Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

```
      NEIC 01 18:45:41.7±1.7,21°.70S×179°.55W,h600km,mb4.6/6,
              Error ellipse: s-maj=75.5km s-min=25.7km az=151.0
       IDC 01 18:45:46.3±2.6,21°.76S×179°.70W,h627km±37km,mb3.5/4,
              mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km
              s-min=20.6km az=159.0
       ISC 01 18:45:43.1±2.7,22°.3S±0°.2×179°.6W±0°.3,h613km±42km,
              n22,σ1ˢ15/21,mb4.4/9,1C,South of Fiji Islands
Code   Station Name       Δ°   AZ°    Phase ID        Time      Res
                                     Op       ISC     h  m  s   ISC
HBZ    Hicks Bay         15.41 186   eP       P      18 48 53.1 -1.7
URZ    Urewera           16.21 189    P       P      18 49 01.5 -0.9
MRZ    Mangatainoka R    18.81 192   eP       P      18 49 26.7  0.0
DIW    D'Urville Isla    19.30 195   eP       P      18 49 27.3 -3.9
CAW    Cannon Point      19.34 192   eP       P      18 49 31.7 +0.1
OTW    Orongorongo Tu    19.52 192   eP       P      18 49 33.0 -0.2
MOW    Moikau            19.61 192   eP       P      18 49 35.5 +1.5
THZ    Tophouse          20.46 196   eP       P      18 49 42.0 +0.2
KHZ    Kahutara          20.93 194    P       P      18 49 46.2 +0.2
ARMA   Armidale          27.03 246   eP       P      18 50 42.4 +2.3
       4.9nm,0.5s,mb4.4
CTA    Charters Tower    31.93 267⇑iP       P      18 51 22.3 +0.4
       13nm,0.5s,mb4.8
STKA   Stephens Creek    35.75 246   eP       P      18 51 55.3 +1.8
       3.1nm,0.4s,mb4.2
ASAR   Alice Springs     42.74 259    P       P      18 52 50.1 +0.3
       9.8nm,0.5s,mb4.6,baz=92,slow=8.2,SNR=47
ASAR                                  S       S      18 58 31.3 -0.1
       1.0nm,0.8s,baz=95,slow=15,SNR=5.7
ASPA   Alice Springs     42.74 259   eP       P      18 52 50.1 +0.2
WRA    Warramunga Arr    42.96 264    P       P      18 52 51.0 -0.7
       1.8nm,0.3s,mb4.0,baz=96,slow=7.8,SNR=93
WRA                                   S       S      18 58 33.0 -1.5
       0.3nm,0.9s,baz=99,slow=14,SNR=3.0
KAKA   Kakadu            46.64 273   eP       P      18 53 18.2 -1.8
       14nm,0.4s,mb4.8
FITZ   Fitzroy Crossi    51.39 264   eP       P      18 53 54.3 -0.7
       12nm,0.3s,mb4.8
MBWA   Marble Bar        56.08 259   eP       P      18 54 27.1 -0.7
       11nm,0.6s,mb4.2
CMAR   Chiang Mai Arr    89.35 290    P       P      18 57 38.1 +1.0
       1.3nm,0.8s,mb3.8,baz=135,slow=3.1,SNR=8.1
ARCES  ARCESS Array B   130.36 349    PKP     PKP    19 03 43.7 -0.5
       0.7nm,0.6s,baz=282,slow=4.2,SNR=3.5
FINES  FINESS Array B   137.02 342    PKP     PKP    19 03 57.3 +0.5
       3.7nm,1.1s,baz=158,slow=3.2,SNR=3.4
MLR    Muntele Rosu     148.85 324    PKPbc   PKP    19 04 22.7 +5.2
       0.2nm,0.7s,baz=1.2,slow=23,SNR=2.3
```

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

*SOF **01** 00:05:13.1, 39°.21N×26°.35E, h5^{km}, MD3.6*
*ISK **01** 00:05:18.7, 39°.48N×26°.01E, h9^{km}, ML3.7/17*
*THE **01** 00:05:20.0, 39°.49N×26°.08E, h10^{km}±1^{km}, ML3.3/13, Error ellipse: s-maj=1.1km s-min=0.5km az=80.0*
*DDA **01** 00:05:20.1±0.0, 39°.51N×26°.10E, h7^{km}±2^{km}, MW3.5*
*IDC **01** 00:05:28.1±8.4, 39°.03N×26°.54E, h77^{km}±79^{km}, mb2.9/2, mbtmp3.2/3, ML3.2/1, MS3.5/1, Error ellipse: s-maj=141.9km s-min=26.5km az=148.0*
ISC 01 00:05:19.9±0.8**, 39°.48N**±0°.02×**26°.09E**±0°.02**, h10**^{km}±5^{km}**, n88, σ1^{s}17**/119**, 13C-8D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GPNR	**Gulpinar-Canak**	**0.04**	**127**	Pg	**Pg**	**00 05 21.5**	**-0.4**
GPNR				Sg	**Sg**	**00 05 23.6**	**+0.2**
PRK	**Paraskevi**	**0.28**	**149**	P	**Pg**	**00 05 26.1**	**+0.6**
PRK				S	**Sb**	**00 05 30.4**	**-1.2**
	21µm,0.3s						
BOZC	**Bozcaada**	**0.36**	**356**	Pg	**Pg**	**00 05 26.9**	**-0.2**
BOZC				Sg	**Sg**	**00 05 32.1**	**+0.3**
EZN	**Ezine**	**0.39**	**28**	P	**Pg**	**00 05 27.5**	**-0.1**
EZN				S	**Sg**	**00 05 32.9**	**+0.2**
	5µm,0.4s						
EZN	**Ezine**	**0.39**	**28**	Pg	**Pg**	**00 05 27.5**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**0.44**	**54**	P	**Pg**	**00 05 28.4**	**-0.1**
BAYC				S	**Sg**	**00 05 34.0**	**-0.3**
ECEA	**Canakkale, Ece**	**0.56**	**7**	P	**Pg**	**00 05 30.8**	**-0.1**
ECEA				S	**Sb**	**00 05 40.0**	**+0.1**
COMU	**Canakkale**	**0.68**	**26**	Pg	**Pg**	**00 05 33.0**	**-0.1**
COMU				Sg	**Sb**	**00 05 43.5**	**+0.1**
GOKA	**anakkale-Gk**	**0.72**	**349**	P	**Pg**	**00 05 33.5**	**-0.3**
GOKA				S	**Sg**	**00 05 43.6**	**+0.3**
GADA	**Gvkgeada**	**0.72**	**348**	Pg	**Pg**	**00 05 33.0**	**-0.9**
GADA				Sg	**Sg**	**00 05 43.5**	**+0.2**
DKL	**Dikili**	**0.76**	**123**	Pg	**Pg**	**00 05 34.7**	**+0.2**
BUHA	**Balikesir, Bur**	**0.77**	**88**	P	**Pg**	**00 05 34.8**	**+0.1**
BUHA				S	**Sn**	**00 05 48.3**	**0.0**
LIA	**Limnos Island**	**0.81**	**301**	P	**Pg**	**00 05 35.5**	**0.0**
LIA				S	**Sg**	**00 05 46.5**	**+0.4**
	7µm,0.4s						
KARB	**zmir-Karabur**	**0.86**	**163**	P	**Pb**	**00 05 36.8**	**0.0**
KARB				S	**Sn**	**00 05 50.2**	**-0.4**
CANM	**Can-anakkale**	**0.91**	**54**	Pg	**Pg**	**00 05 37.4**	**-0.1**
ZEDA	**zmir-Bergama**	**0.93**	**124**	P	**Pb**	**00 05 38.1**	**+0.1**
ZEDA				S	**Sn**	**00 05 52.0**	**-0.2**
GELI	**Tayfur-Gelibol**	**0.96**	**18**	Pg	**Pg**	**00 05 37.9**	**-0.5**
LPK	**Lapseki**	**1.03**	**30**	Pg	**Pg**	**00 05 39.3**	**-0.4**
SMTH	**Samothraki Isl**	**1.07**	**337**	P	**Pg**	**00 05 39.9**	**-0.7**
SMTH				S	**Sg**	**00 05 54.2**	**-0.4**
	1µm,0.4s						
CHOS	**Chios island**	**1.10**	**181**	P	**Pg**	**00 05 40.0**	**-0.9**
CHOS				S	**Sb**	**00 05 55.3**	**0.0**
	3µm,0.4s						
CHOS	**Chios island**	**1.10**	**181**	Pn	**Pg**	**00 05 40.1**	**-0.9**
URLA	**Izmir**	**1.19**	**160**	Pn	**Pb**	**00 05 42.1**	**-0.4**
CAVK	**Edirne/Enez-Ca**	**1.21**	**3**	P	**Pb**	**00 05 42.2**	**-0.6**
CAVK				S	**Sn**	**00 05 59.5**	**+0.3**
ERIK	**Erikli-Kesan**	**1.23**	**15**	Pn	**Pn**	**00 05 42.4**	**-0.7**
ENEZ	**Enez**	**1.25**	**2**	P	**Pn**	**00 05 42.9**	**-0.5**
ENEZ				S	**Sg**	**00 06 00.6**	**+0.4**
	2µm,0.4s						
ENEZ	**Enez**	**1.25**	**2**	Pn	**Pn**	**00 05 42.9**	**-0.5**
STEP	**BALIKESIR_Sava**	**1.27**	**94**	P	**Pg**	**00 05 44.5**	**+0.2**
STEP				S	**Sn**	**00 06 03.0**	**+2.3**
ZEYE	**Izmir, Urla-Ze**	**1.28**	**165**	P	**Pn**	**00 05 43.5**	**-0.4**
ZEYE				S	**Sn**	**00 06 02.2**	**+1.2**
KRBG	**Karabiga-Canak**	**1.30**	**45**	Pn	**Pn**	**00 05 43.9**	**-0.2**
BLCB	**Balcova**	**1.33**	**146**	P	**Pn**	**00 05 44.1**	**-0.3**
BLCB				S	**Sb**	**00 06 01.9**	**+0.1**
BLCB	**Balcova**	**1.33**	**146**	Pn	**Pn**	**00 05 44.3**	**-0.1**
GONE	**Gonen-Balikesi**	**1.35**	**65**	Pn	**Pn**	**00 05 45.1**	**+0.3**
KNL	**Balıkesir**	**1.36**	**54**	P	**Pn**	**00 05 44.9**	**+0.1**
KNL				S	**Sn**	**00 06 03.4**	**+0.5**
BALB	**Balikesir**	**1.40**	**83**	Pn	**Pn**	**00 05 45.5**	**+0.1**
ALN	**Alexandroupoli**	**1.41**	**359**	P	**Pn**	**00 05 44.8**	**-0.8**
ALN				S	**Sn**	**00 06 03.2**	**-1.0**
	888nm,0.5s						
ALN	**Alexandroupoli**	**1.41**	**359**	Pn	**Pn**	**00 05 45.2**	**-0.4**
BKES	**Balkesir-Mer**	**1.45**	**79**	P	**Pb**	**00 05 47.0**	**+0.1**
BKES				S	**Sg**	**00 06 06.7**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.47**	**34**	Pn	**Pn**	**00 05 46.4**	**0.0**
THAS	**Thassos island**	**1.54**	**317**	P	**Pn**	**00 05 47.3**	**0.0**
THAS				S	**Sn**	**00 06 06.7**	**-0.6**
	615nm,0.4s						
EDC	**Edincik**	**1.62**	**57**	Pn	**Pn**	**00 05 48.4**	**0.0**
UKOP	**Uzunkopru-Edir**	**1.69**	**14**	Pn	**Pn**	**00 05 49.4**	**-0.1**
RDO	**Rodhopi**	**1.71**	**346**	P	**Pn**	**00 05 49.2**	**-0.5**
RDO				S	**Sn**	**00 06 11.1**	**-0.6**
	228nm,0.5s						
RDO	**Rodhopi**	**1.71**	**346**	Pn	**Pn**	**00 05 49.2**	**-0.5**
KYMI	**Kymi, Euboea I**	**1.76**	**242**	P	**Pn**	**00 05 49.0**	**-1.5**
KYMI				S	**Sn**	**00 06 13.2**	**+0.3**
	365nm,0.5s						
BAND	**Balkesir-Ban**	**1.78**	**60**	P	**Pn**	**00 05 50.7**	**+0.1**
BAND				S	**Sn**	**00 06 13.5**	**+0.3**
OUR	**Ouranopolis**	**1.83**	**298**	P	**Pn**	**00 05 50.8**	**-0.5**
OUR				S	**Sn**	**00 06 15.1**	**+0.6**
	508nm,0.6s						
SMG	**Samos**	**1.87**	**161**	P	**Pn**	**00 05 51.0**	**-0.9**
SMG				S	**Sn**	**00 06 15.7**	**+0.2**
	2µm,0.4s						
KAVA	**Kavala**	**1.93**	**322**	P	**Pn**	**00 05 52.3**	**-0.5**
KDZ	**Kurdzhali**	**2.22**	**347**	*i* P	**Pn**	**00 05 56.8**	**0.0**
KULA	**Kula-Manisa**	**2.23**	**115**	P	**Pn**	**00 05 57.1**	**+0.2**
KULA				S	**Sn**	**00 06 24.8**	**+0.3**
XOR	**Xorichti**	**2.25**	**268**	P	**Pn**	**00 05 56.1**	**-1.0**
EDRB	**Edirne**	**2.41**	**12**	P	**Pn**	**00 05 58.6**	**-0.8**
EDRB				S	**Sn**	**00 06 28.9**	**0.0**
RZN	**Rozhen**	**2.44**	**335**	*i* P	**Pn**	**00 06 00.0**	**+0.1**
SRS	**Serrai**	**2.51**	**311**	P	**Pn**	**00 06 00.1**	**-0.6**
HORT	**Hortiatis**	**2.55**	**297**	P	**Pn**	**00 06 01.0**	**-0.3**
HORT				S	**Sn**	**00 06 32.1**	**-0.3**
	100nm,0.8s						
MMB	**Musomiste**	**2.77**	**320**	*i* P	**Pn**	**00 06 03.9**	**-0.4**
ISK	**Istanbul-Kandi**	**2.77**	**54**	P	**Pn**	**00 06 03.6**	**-0.7**
PLD	**Plovdiv**	**2.82**	**339**	*i* P	**Pn**	**00 06 05.5**	**+0.5**
VAY	**Valandovo**	**3.25**	**305**	*i* Pn	**Pg**	**00 06 24.0**	**+1.8**
KKB	**Krupnik**	**3.30**	**317**	*i* P	**Pn**	**00 06 11.7**	**+0.1**
STIP	**Stip**	**3.70**	**308**	*i* Pn	**Pn**	**00 06 16.3**	**-0.8**
VTS	**Vitosha**	**3.80**	**326**	*e*P	**Pn**	**00 06 19.0**	**+0.4**
PLVB	**Pleven**	**4.05**	**345**	⇑P	**Pn**	**00 06 25.9**	**+4.0**
RAZG	**Razgrad**	**4.09**	**4**	⇑P	**Pn**	**00 06 22.4**	**0.0**
COPA	**Copaceanca**	**4.69**	**352**	⇓P	**Pn**	**00 06 29.0**	**-1.7**
RASA	**Rasa**	**4.79**	**9**	⇓P	**Pn**	**00 06 31.2**	**-0.8**
ICOR	**Ion Corvin**	**4.80**	**15**	⇓P	**Pn**	**00 06 31.4**	**-0.8**
BOVS	**Bovan**	**5.29**	**323**	⇑P	**Pn**	**00 06 40.2**	**+1.3**
BRTR	**Keskin Array B**	**5.84**	**85**	P	**Pn**	**00 06 48.0**	**+1.4**
	0.7nm,0.3s,baz=253,slow=12,SNR=16						
BRTR				S	**Sn**	**00 07 51.5**	**-2.1**
	1.0nm,0.5s,baz=278,slow=11,SNR=1.7						
	1.5nm,0.4s						
ARR	**Arges**	**5.98**	**350**	⇑P	**Pn**	**00 06 49.7**	**+1.3**
VOIR		**6.00**	**353**	⇓P	**Pn**	**00 06 52.2**	**+3.5**
MLR	**Muntele Rosu**	**6.00**	**359**	⇓P	**Pn**	**00 06 51.6**	**+2.7**
LOT	**Lotru**	**6.20**	**345**	⇓P	**Pn**	**00 06 51.2**	**-0.3**
ODBI	**Odobesti**	**6.32**	**6**	⇑P	**Pn**	**00 06 52.9**	**-0.1**
COVR	**Voineasa-Covas**	**6.36**	**1**	⇑P	**Pn**	**00 06 54.4**	**+0.8**
PLOR	**Plostina**	**6.38**	**4**	⇑P	**Pn**	**00 06 55.9**	**+2.0**
GZR	**Gura Zlata**	**6.39**	**339**	⇑P	**Pn**	**00 06 56.0**	**+1.9**
VRI	**Vrincioaia**	**6.40**	**4**	⇓P	**Pn**	**00 06 57.9**	**+3.8**
DOPR	**Dopca**	**6.50**	**356**	⇓P	**Pn**	**00 06 56.0**	**+0.5**
GHRR		**6.64**	**8**	⇑P	Pn	00 07 03.5	+6.0
BZS	**Buzias**	**6.96**	**333**	⇑P	**Pn**	**00 07 01.4**	**-0.4**
TESR	**Tescani**	**7.04**	**3**	⇑P	**Pn**	**00 07 07.0**	**+4.1**
CJR	**Cluj-Napoca**	**7.45**	**347**	⇑P	Pn	00 07 13.7	+5.1
SEV	**Sevastopol'**	**7.58**	**46**	*e*P	**Pn**	**00 07 10.4**	**+0.1**
SEV				Pm		00 07 16.9	
	comp=Z,1.0nm,0.2s						
SEV				*e*S	**Sn**	**00 08 30.6**	**-5.5**
SEV				Sm		00 08 32.0	
	comp=N,11nm,0.6s						
SEV				Sm		00 08 32.0	
	comp=E,2.0nm,0.3s						
BURAR	**Bucovina Array**	**8.15**	**356**	⇑P	**Pn**	**00 07 20.9**	**+2.6**
EKA	**Eskdalemuir Ar**	**25.10**	**319**	LR	LR	00 21 12.6	
	comp=E,107nm,18.0s,baz=228,slow=37						
TORD	**Torodi Ar. Bea**	**33.93**	**226**	P	**P**	**00 12 03.5**	**+0.3**
	comp=E,0.6nm,0.7s,baz=37,slow=9.1,SNR=6.8						
	comp=E,0.6nm,0.7s						
MKAR	**Makanchi Array**	**40.89**	**61**	P	**P**	**00 13 01.7**	**-0.3**
	comp=E,0.1nm,0.5s,baz=291,slow=7.2,SNR=1.5						
	comp=E,0.1nm,0.5s						

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*ISK **01** 00:14:21.7, 39°.49N×26°.10E, h10^{km}, ML2.5/18*
*DDA **01** 00:14:22.7±0.0, 39°.51N×26°.11E, h7^{km}±1^{km}, ML2.1*
*THE **01** 00:14:22.3, 39°.49N×26°.06E, h8^{km}±1^{km}, ML2.3/7, Error ellipse: s-maj=1.3km s-min=0.6km az=190.0*
ISC 01 00:14:21.2±1.0**, 39°.49N**±0°.02×**25°.99E**±0°.03**, h10**^{km}±7^{km}**, n42, σ0^{s}49**/65**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GPNR	**Gulpinar-Canak**	**0.12**	**108**	Pg	**Pg**	**00 14 23.9**	**-0.1**
GPNR				Sg	**Sg**	**00 14 25.6**	**-0.4**
PRK	**Paraskevi**	**0.33**	**138**	P	**Pg**	**00 14 28.3**	**+0.6**
PRK				S	**Sg**	**00 14 32.7**	**+0.6**
	2µm,0.2s						
BOZC	**Bozcaada**	**0.35**	**8**	Pg	**Pb**	**00 14 29.2**	**-0.3**
BOZC				Sg	**Sb**	**00 14 34.6**	**-0.6**
BOZC	**Bozcaada**	**0.35**	**8**	P	**Pb**	**00 14 29.3**	**-0.3**
BOZC				P	**Pg**	**00 14 29.4**	**+1.2**
BOZC				*i* AML	AML	00 14 34.0	
	comp=N,251nm,0.3s						
BOZC				*i* AML	AML	00 14 34.0	
	comp=N,246nm,0.4s						
BOZC				S	**Sb**	**00 14 34.6**	**-0.6**
BOZC				S	**Sb**	**00 14 34.6**	**-0.6**
BOZC				*i* AML	AML	00 14 35.0	
	comp=E,247nm,0.5s						
BOZC				*i* AML	AML	00 14 35.0	
	comp=E,317nm,0.6s						
EZN	**Ezine**	**0.42**	**38**	P	**Pg**	**00 14 29.8**	**+0.3**
EZN				S	**Sg**	**00 14 35.6**	**+0.5**
EZN	**Ezine**	**0.42**	**38**	Pg	**Pg**	**00 14 29.6**	**+0.1**
EZN				Sg	**Sg**	**00 14 35.4**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**0.50**	**60**	P	**Pg**	**00 14 30.7**	**-0.2**
BAYC				S	**Sg**	**00 14 36.7**	**-0.8**
BAYC				*i* AML	AML	00 14 37.0	
	comp=N,135nm,0.2s						
BAYC				*i* AML	AML	00 14 37.0	
	comp=E,157nm,0.4s						
ECEA	**Canakkale, Ece**	**0.57**	**15**	P	**Pb**	**00 14 33.1**	**-0.1**
ECEA				S	**Sb**	**00 14 41.8**	**+0.4**
ECEA				*i* AML	AML	00 14 42.0	
	comp=N,121nm,0.3s						
ECEA				*i* AML	AML	00 14 44.0	
	comp=E,180nm,0.6s						
AYVA	**Ayvalik**	**0.58**	**108**	P	**Pg**	**00 14 32.3**	**0.0**
AYVA				S	**Sn**	**00 14 44.7**	**-0.3**
AYVA				*i* AML	AML	00 14 46.0	
	comp=N,144nm,0.1s						
GOKA	**anakkale-Gk**	**0.70**	**355**	P	**Pb**	**00 14 35.9**	**+0.5**
GOKA				S	**Sb**	**00 14 45.3**	**+0.1**
GOKA				*i* AML	AML	00 14 47.0	
	comp=N,132nm,0.3s						
GOKA				*i* AML	AML	00 14 50.0	
	comp=E,205nm,0.5s						
GADA	**Gvkgeada**	**0.70**	**355**	Pg	**Pb**	**00 14 35.9**	**+0.4**
COMU	**Canakkale**	**0.71**	**32**	Pg	**Pg**	**00 14 35.1**	**+0.1**
LIA	**Limnos Island**	**0.74**	**303**	P	**Pn**	**00 14 37.8**	**+0.1**
LIA				S	**Sn**	**00 14 49.2**	**+0.2**
	452nm,0.2s						
DKL	**Dikili**	**0.83**	**120**	Pg	**Pg**	**00 14 36.7**	**-0.4**
BUHA	**Balikesir, Bur**	**0.84**	**89**	P	**Pg**	**00 14 37.5**	**+0.1**
BUHA				S	**Sb**	**00 14 49.8**	**+0.5**
BUHA				*i* AML	AML	00 14 51.0	
	comp=N,95nm,0.4s						
BUHA				*i* AML	AML	00 14 52.0	
	comp=E,96nm,0.3s						
CANM	**Can-anakkale**	**0.97**	**57**	Pg	**Pg**	**00 14 39.4**	**-0.5**
GELI	**Tayfur-Gelibol**	**0.98**	**22**	Pg	**Pb**	**00 14 40.3**	**+0.1**
ZEDA	**zmir-Bergama**	**1.00**	**121**	P	**Pb**	**00 14 40.9**	**+0.3**
ZEDA				*i* AML	AML	00 14 55.0	
	comp=N,59nm,0.3s						
ZEDA				S	**Sn**	**00 14 55.1**	**-0.2**
ZEDA				*i* AML	AML	00 14 56.0	
	comp=E,61nm,0.3s						
SMTH	**Samothraki Isl**	**1.04**	**340**	P	**Pn**	**00 14 42.3**	**+0.5**
SMTH				S	**Sn**	**00 14 56.8**	**+0.4**
	75nm,0.1s						
LPK	**Lapseki**	**1.06**	**34**	Pg	**Pg**	**00 14 41.5**	**-0.1**
CHOS	**Chios island**	**1.10**	**177**	P	**Pn**	**00 14 42.6**	**-0.2**
CHOS				S	**Sn**	**00 14 57.8**	**-0.3**
	308nm,0.2s						
CHOS	**Chios island**	**1.10**	**177**	Pn	**Pn**	**00 14 43.4**	**+0.6**
URLA	**Izmir**	**1.23**	**157**	Pn	**Pb**	**00 14 44.2**	**-0.3**
ERIK	**Erikli-Kesan**	**1.25**	**19**	Pn	**Pg**	**00 14 44.8**	**-0.3**
ENEZ	**Enez**	**1.25**	**6**	P	**Pg**	**00 14 45.3**	**+0.1**
ENEZ				S	**Sn**	**00 15 03.0**	**+1.4**
	132nm,0.3s						
ENEZ	**Enez**	**1.25**	**6**	Pn	**Pg**	**00 14 45.5**	**+0.3**
BALY	**Balya**	**1.29**	**78**	P	**Pn**	**00 14 45.1**	**-0.2**
STEP	**BALIKESIR_Sava**	**1.35**	**94**	P	**Pg**	**00 14 47.8**	**+0.8**
KRBG	**Karabiga-Canak**	**1.35**	**48**	Pn	**Pn**	**00 14 46.1**	**0.0**
BLCB	**Balcova**	**1.38**	**143**	P	**Pn**	**00 14 46.2**	**-0.3**
BLCB				S	**Sb**	**00 15 05.0**	**+0.3**
BLCB	**Balcova**	**1.38**	**143**	Pn	**Pn**	**00 14 46.7**	**+0.2**
ALN	**Alexandroupoli**	**1.40**	**2**	P	**Pg**	**00 14 47.9**	**-0.2**
ALN				S	**Sg**	**00 15 06.6**	**+0.3**
	62nm,0.4s						
ALN	**Alexandroupoli**	**1.40**	**2**	Pn	**Pg**	**00 14 47.8**	**-0.3**
ALN				Sn	**Sg**	**00 15 07.2**	**+0.9**
KNL	**Balıkesir**	**1.42**	**56**	P	**Pn**	**00 14 47.3**	**+0.3**
GONE	**Gonen-Balikesi**	**1.42**	**67**	Pn	**Pn**	**00 14 46.8**	**-0.3**
BALB	**Balikesir**	**1.47**	**84**	Pn	**Pn**	**00 14 47.2**	**-0.6**
THAS	**Thassos island**	**1.48**	**319**	P	**Pg**	**00 14 48.8**	**-0.7**
THAS				S	**Sg**	**00 15 08.4**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.50**	**37**	Pn	**Pn**	**00 14 48.4**	**+0.1**
EDC	**Edincik**	**1.68**	**59**	Pn	**Pn**	**00 14 50.5**	**-0.1**
RDO	**Rodhopi**	**1.69**	**348**	P	**Pb**	**00 14 51.9**	**-0.4**
RDO				S	**Sg**	**00 15 14.3**	**-1.1**
	20nm,0.2s						
RDO	**Rodhopi**	**1.69**	**348**	Pn	**Pb**	**00 14 52.1**	**-0.2**
UKOP	**Uzunkopru-Edir**	**1.71**	**17**	Pn	**Pb**	**00 14 51.9**	**-0.7**

IDC 01 00:25:19.5±7.9**, 16°.67S**×**177°.00W, h0**^{km}**, mb3.8**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=368.4km s-min=33.0km az=142.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.19**	**258**	P	P	00 33 45.7	-0.7
	0.1nm,0.4s,baz=94,slow=8.1,SNR=4.7						
	0.1nm,0.4s						
ASAR	**Alice Springs**	**46.43**	**253**	P	P	00 33 48.9	+0.5
	1.6nm,0.3s,baz=85,slow=8.9,SNR=27						
	1.6nm,0.3s						
ILAR	**Eielson Array**	**84.39**	**12**	P	P	00 37 53.9	+0.7
	1.0nm,0.8s,baz=218,slow=5.7,SNR=10						
	1.0nm,0.8s						
GERES	**GERESS Array B**	**146.74**	**347**	PKPbc	PKPdf	00 45 01.1	-0.8
	0.6nm,0.6s,baz=8.1,slow=2.1,SNR=2.6						

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*AEIC **01** 00:38:55.6±1.9, 51°.6N±0°.2×177°.5W±0°.1, h28^{km}±7^{km}, Error ellipse: s-maj=24.9km s-min=5.8km az=161.0*
NEIC 01 00:38:55.2±1.4**, 51°.7N**±0°.2×**177°.6W**±0°.1**, h34**^{km}±7^{km}**, mb3.9**/14**, ML3.5**(AEIC)**, Error ellipse: s-maj=29.1km s-min=6.0km az=162.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIWB	**Kanaga Island**	**0.34**	**58**		Pn	00 39 03.8	-0.1
KIWB				Sg	Sn	00 39 08.5	-0.6
ADK	**Adak**	**0.62**	**70**		Pn	00 39 07.0	-0.5
ADK					Sn	00 39 16.1	-0.1
GSTR	**Great Sitkin T**	**1.05**	**66**	Pn	Pn	00 39 13.5	-0.1
AMKA	**Amchitka**	**1.95**	**262**	Pn	Pn	00 39 25.4	-0.4
SMY	**Shemya**	**5.20**	**285**	Pn	Pn	00 40 11.2	+0.7
NIKH	**Nikolski High**	**5.53**	**73**	Pn	Pn	00 40 17.3	+2.2
UNV	**Unalaska Valle**	**7.09**	**68**	Pn	Pn	00 40 36.0	-0.4
KDAK	**Kodiak Island**	**15.64**	**57**	Pn	Pn	00 42 32.3	-0.5
N19K	**Bonanza Creek**	**15.70**	**45**	P	P	00 42 38.5	+1.2
N19K				IAmb	IAmb	00 43 06.2	
	comp=Z,18nm,1.4s						
HOM	**Homer**	**16.60**	**51**	Pn	Pn	00 42 44.0	-1.0
BRLK	**Bradley Lake**	**17.00**	**51**		Pn	00 42 50.3	+0.3
SKT	**Skwentna**	**17.48**	**44**	Pn	Pn	00 42 54.9	-1.1
SKT				IAmb	IAmb	00 42 58.9	
	comp=Z,12nm,1.3s						
KTH	**Kantishna Hill**	**18.43**	**40**	P	P	00 43 07.3	-0.1
KTH				IAmb	IAmb	00 43 30.6	
	comp=Z,11nm,1.5s						
KNK	**Knik Glacier**	**18.64**	**47**	P	Pn	00 43 10.9	+0.7
KNK				IAmb	IAmb	00 43 17.9	
	comp=Z,33nm,1.4s						
IMAR	**Indian Mountai**	**18.74**	**31**	P	P	00 43 10.7	0.0
SCM	**Sheep Creek Mo**	**19.28**	**46**	P	Pn	00 43 17.5	-0.5
SCM				IAmb	IAmb	00 43 33.4	
	comp=Z,14nm,1.3s						
MCK	**McKinley**	**19.30**	**40**	P	P	00 43 16.8	-0.1
KLU	**Klutina**	**19.83**	**48**	P	P	00 43 22.0	-0.8
KLU				IAmb	IAmb	00 43 25.2	
	comp=Z,7.7nm,1.2s						
H24K	**Noodor Dome**	**20.67**	**35**	P	P	00 43 31.8	0.0
H24K				IAmb	IAmb	00 43 46.3	
	comp=Z,5.1nm,1.4s						
GLB	**Gilahina Butte**	**20.80**	**49**	P	P	00 43 33.5	+0.2
SCRK	**Sand Creek**	**21.42**	**42**	P	P	00 43 39.1	-0.9
J26L	**Joseph Creek**	**21.77**	**41**	P	P	00 43 43.3	-0.4
J26L				IAmb	IAmb	00 43 45.3	
	comp=Z,3.3nm,1.2s						
BMAR	**Burnt Mountain**	**22.58**	**33**	P	P	00 43 52.3	0.0

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*NIED **01** 00:42:44.9, 43°.95N×148°.33E, h0^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}4.17; $M_{\theta\theta}$-2.63; $M_{\phi\phi}$-1.54; $M_{r\theta}$3.35; $M_{\theta\phi}$-1.55; $M_{\phi r}$3.87; Fault plane solution: $M_0$6.46000×10^{15} NP1:ϕ_s44.00000°, δ71.00000°, λ84.00000°. NP2:ϕ_s242.00000°, δ20.00000°, λ107.00000°.*
*JMA **01** 00:42:44.9±0.7, 44°N±2°×14°8E±°, h0^{km}, MD4.8/33, MW4.7/33, SE OFF ETOROFU*
*BJI **01** 00:42:45.0±0.0, 44°.19N×148°.74E, h45^{km}, mb4.9/62, mB4.9/29, Ms4.3/37, Ms7 4.0/38*
*SKHL **01** 00:42:46.6±0.1, 44°.10N×148°.60E, h53^{km}±5^{km}, mb5.0/3*
*MOS **01** 00:42:46.5±1.0, 44°.26N×148°.51E, h44^{km}, mb5.2/64, Error ellipse: s-maj=6.1km s-min=4.4km az=109.2*
*NEIC **01** 00:42:47.8±1.7, 44°.26N±0°.10×148°.5E±0°.1, h37^{km}±6^{km}, mb4.9/181, Error ellipse: s-maj=16.0km s-min=10.5km az=145.0*
*IDC **01** 00:42:50.2±2.0, 44°.40N×148°.43E, h56^{km}±16^{km}, mb4.3/27, mbtmp4.6/36, ML3.9/8, MS3.8/27, Error ellipse: s-maj=16.6km s-min=10.3km az=162.0*
*BGR **01** 00:42:58.1, 46°.26N×147°.48E, h33^{km}, mb5.1*
ISC 01 00:42:47.5±0.3**, 44°.21N**±0°.04×**148°.48E**±0°.04**, h40**^{km}±3^{km}**, h39**^{km}**:pP-P, n821, σ1^{s}16**/852**, mb4.8**/209**, MS4.0**/33**, 41C-46D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.11**	**337**	*d i*PN	**Pn**	**00 43 06.7**	**+0.2**
KUR				*i* S	**Sn**	**00 43 21.8**	**+1.2**
KUR				pmax	pmax		
	comp=Z,5µm,0.6s						
KUR				pmax	pmax		
	comp=N,2µm,0.4s						
KUR				pmax	pmax		
	comp=E,798nm,0.4s						
KUR				smax	smax		
	comp=E,17µm,1.8s						
KUR				smax	smax		
	comp=N,16µm,1.7s						
KUR				smax	smax		
	comp=N,6µm,0.4s						
KUR				smax	smax		
	comp=E,3µm,0.5s						
KUR	**Kuril'sk**	**1.11**	**337**	*e*P	**Pn**	**00 43 06.7**	**+0.2**
KUR				AMB	AMB	00 43 07.2	
	comp=E,5µm,0.6s						
KUR				AMB	AMB	00 43 07.2	
	comp=E,2µm,0.4s						
KUR				AMB	AMB	00 43 07.2	
	comp=E,800nm,0.4s						
KUR				*i* S	**Sn**	**00 43 21.8**	**+1.2**
KUR				A	A	00 43 22.8	
	comp=E,16µm,1.8s						
KUR				A	A	00 43 22.8	
	comp=E,17µm,1.8s						
KUR				A	A	00 43 33.4	
	comp=E,6µm,0.4s						
KUR				A	A	00 43 33.4	
	comp=E,3µm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.89**	**266**	*c i*PN	**Pn**	**00 43 16.6**	**-0.6**
YUK				*e*S	**Sn**	**00 43 40.9**	**+1.1**
YUK				pmax	pmax		
	comp=Z,2µm,0.3s						
YUK				pmax	pmax		
	comp=N,985nm,0.4s						
YUK				pmax	pmax		
	comp=E,2µm,0.4s						
YUK				smax	smax		
	comp=N,5µm,0.5s						
YUK				smax	smax		
	comp=E,7µm,0.6s						
YUK	**Yuzh-Kuril'sk**	**1.89**	**266**	*i* P	**Pn**	**00 43 17.4**	**+0.2**
YUK				AMB	AMB	00 43 23.0	
	comp=E,990nm,0.3s						
YUK				AMB	AMB	00 43 23.0	
	comp=E,2µm,0.3s						
YUK				AMB	AMB	00 43 23.0	
	comp=E,2µm,0.3s						
YUK				*e*S	**Sn**	**00 43 40.5**	**+0.7**
YUK				A	A	00 43 46.5	
	comp=E,5µm,0.6s						
YUK				A	A	00 43 46.5	
	comp=E,7µm,0.6s						
NEM2	**Nemuro 2**	**2.15**	**248**	*e*P	**Pn**	**00 43 19.1**	**-1.7**
NEM2				*e*S	**Sn**	**00 43 45.0**	**-1.2**
NMR	**Nemuro--Hokkai**	**2.16**	**248**	*c i*PN	**Pn**	**00 43 20.4**	**-0.5**
NMR				*e*S	**Sn**	**00 43 47.5**	**+1.1**
NMR	**Nemuro--Hokkai**	**2.16**	**248**	*i* P	**Pn**	**00 43 20.5**	**-0.5**
NMR				AMB	AMB	00 43 23.2	
	comp=E,280nm,0.3s						
NMR				*e*S	**Sn**	**00 43 46.1**	**-0.3**
NMR				A	A	00 43 55.7	
	comp=E,2µm,0.4s						
NMR				A	A	00 43 55.7	
	comp=E,2µm,0.4s						
RUSJ	**Misakicho**	**2.33**	**268**	*c i*PN	**Pn**	**00 43 23.8**	**+0.6**
RUSJ				*e*S	**Sn**	**00 43 53.1**	**+2.6**
JRA	**Rausu**	**2.43**	**265**	*e*P	**Pn**	**00 43 25.0**	**+0.3**
JRA				*e*S	**Sn**	**00 43 55.4**	**+2.2**
JRA	**Rausu**	**2.43**	**265**	A	A	00 43 25.0	
	comp=E,5.0nm,0.6s,comp=E,5.0nm,1.5s						
JNSB	**Nemuroshibetsu**	**2.54**	**261**	*e*P	**Pn**	**00 43 26.1**	**-0.1**
JKHN	**Kushirohamanak**	**2.66**	**246**	*e*P	**Pn**	**00 43 27.7**	**-0.1**
JKHN				*e*S	**Sn**	**00 43 58.8**	**+0.1**
JNK	**Nakash**	**2.79**	**258**	*e*P	**Pn**	**00 43 29.3**	**-0.2**
AKK	**Akkeshi**	**2.90**	**247**	*e*P	**Pn**	**00 43 30.7**	**-0.3**
AKK				AMB	AMB	00 43 32.4	
	comp=E,250nm,0.3s						
AKK				*e*S	**Sn**	**00 44 03.8**	**-0.8**
AKK				A	A	00 44 07.8	
	comp=E,880nm,0.3s						
AKK				A	A	00 44 07.8	
	comp=E,1µm,0.3s						
JAK	**Akkeshi**	**3.00**	**247**	*e*P	**Pn**	**00 43 32.5**	**0.0**
JAK	**Akkeshi**	**3.00**	**247**	A	A	00 43 32.5	
	comp=E,5.0nm,0.9s,comp=E,5.0nm,5.0s						
JTKR	**Abashiri--Toko**	**3.30**	**267**	*e*P	**Pn**	**00 43 37.4**	**+0.8**
JAR	**Ashorobuto**	**3.53**	**257**	*e*P	**Pn**	**00 43 40.4**	**+0.6**
JCH	**Churui**	**4.05**	**249**	*e*P	**Pn**	**00 43 47.4**	**+0.5**
JKK2	**Kamakawa 2**	**4.14**	**267**	*e*P	**Pn**	**00 43 50.5**	**+2.3**
JKA	**Kamikawa-asahi**	**4.23**	**271**	Pn	**Pn**	**00 43 50.9**	**+1.5**
JKA	**Kamikawa-asahi**	**4.23**	**271**	*i* P	**Pn**	**00 43 51.7**	**+2.3**
ASAJ	**Asahikawa**	**4.23**	**271**	P	**Pn**	**00 43 51.7**	**+2.3**
	comp=E,6.8nm,0.3s,baz=85,slow=15,SNR=13						
ASAJ				S	**Sn**	**00 44 40.4**	**+2.8**
	comp=E,73nm,0.5s,baz=180,slow=17,SNR=1.9						
ASAJ				LR	LR	00 45 36.6	
	comp=E,2µm,20.2s,baz=151,slow=40						
	comp=E,21nm,0.4s						
JEM	**Erimo**	**4.47**	**242**	A	A	00 43 52.8	
	comp=E,3.0nm,1.2s,comp=E,4.0nm,1.3s						
ERM	**Erimo**	**4.47**	**242**	Pn	**Pn**	**00 43 53.3**	**+0.6**
ERM	**Erimo**	**4.47**	**242**	*c e*PN	**Pn**	**00 43 54.1**	**+1.4**
ERM				pmax	pmax		
	comp=Z,298nm,0.7s						
JNBK	**Urakawa-nobuka**	**4.61**	**247**	*e*P	**Pn**	**00 43 54.5**	**0.0**
JNBK	**Urakawa-nobuka**	**4.61**	**247**	A	A	00 43 54.5	
	comp=Z,10.0nm,1.0s,comp=Z,4.0nm,1.3s						
JSHD	**Hidakashinhida**	**4.74**	**250**	A	A	00 43 56.9	
	comp=Z,10.0nm,1.2s,comp=Z,7.0nm,5.0s						
JWK2	**Keihoku**	**4.81**	**286**	*e*P	**Pn**	**00 44 00.5**	**+3.2**
YSS	**Yuzh-Sakhalins**	**4.86**	**306**	Pn	**Pn**	**00 43 57.0**	**-1.0**
YSS	**Yuzh-Sakhalins**	**4.86**	**306**	κ *e*PN	**Pn**	**00 43 59.5**	**+1.5**

YSS				*e*S	**Sn**	**00 44 55.4**	**+2.4**
YSS				pmax	pmax		
	comp=Z,200nm,2.7s						
YSS				pmax	pmax		
	comp=E,200nm,2.8s						
YSS				pmax	pmax		
	comp=Z,80nm,0.9s						
YSS				smax	smax		
	comp=N,70nm,0.6s						
YSS				smax	smax		
	comp=E,130nm,0.7s						
YSS				MLR	MLR		
	comp=Z,900nm,15.0s						
YSS				MLR	MLR		
	comp=N,400nm,13.0s						
YSS				MLR	MLR		
	comp=E,900nm,14.0s						
YSS	**Yuzh-Sakhalins**	**4.86**	**306**	*i* P	**Pn**	**00 43 59.8**	**+1.8**
YSS				AMB	AMB	00 44 00.5	
	comp=E,110nm,0.2s						
YSS				AMB	AMB	00 44 04.3	
	comp=E,200nm,2.7s						
YSS				*e*S	**Sn**	**00 44 55.0**	**+2.0**
YSS				A	A	00 44 58.8	
	comp=E,30nm,0.5s						
YSS				A	A	00 44 58.8	
	comp=E,150nm,0.5s						
YSS				AMS	AMS	00 45 51.6	
	comp=E,400nm,14.0s						
YSS				AMS	AMS	00 45 51.6	
	comp=E,900nm,14.0s						
YSS				AMS	AMS	00 45 51.6	
	comp=E,900nm,14.0s						
JIAM	**Iburiatsuma**	**5.03**	**254**	A	A	00 44 01.2	
	comp=E,7.0nm,0.9s,comp=E,9.0nm,1.1s						
JKB	**Kayabe**	**5.93**	**249**	A	A	00 44 13.7	
	comp=E,4.0nm,2.8s,comp=E,3.0nm,9.4s						
JOT	**Ohata**	**6.15**	**245**	*e*P	**Pn**	**00 44 15.6**	**-0.2**
JANG	**Nango**	**6.43**	**236**	*e*P	**Pn**	**00 44 17.4**	**-2.2**
JTM	**Tenmabayashi**	**6.46**	**241**	Pn	**Pn**	**00 44 19.0**	**-0.9**
UGL	**Uglegorsk**	**6.57**	**320**	*e*PN	**Pn**	**00 44 24.3**	**+2.9**
UGL	**Uglegorsk**	**6.57**	**320**	*e*P	**Pn**	**00 44 23.7**	**+2.3**
UGL				AMB	AMB	00 44 26.6	
	comp=E,60nm,0.3s						
UGL				*e*S	**Sn**	**00 45 36.3**	**+1.4**
UGL				A	A	00 45 58.3	
	comp=E,30nm,0.3s						
UGL				A	A	00 45 58.3	
	comp=E,170nm,0.3s						
TYV	**Tymovskoe**	**7.73**	**331**	*e*PN	**Pn**	**00 44 40.7**	**+3.4**
TYV				pmax	pmax		
	comp=Z,19nm,0.8s						
TYV				pmax	pmax		
	comp=Z,200nm,3.1s						
TYV	**Tymovskoe**	**7.73**	**331**	*e*P	**Pn**	**00 44 39.1**	**+1.8**
TYV				AMB	AMB	00 44 43.4	
	comp=Z,20nm,0.6s						
TYV				AMB	AMB	00 44 44.5	
	comp=Z,200nm,3.1s						
TYV				*e*S	**Sn**	**00 46 03.9**	**+0.4**
TYV				A	A	00 46 14.0	
	comp=Z,20nm,0.4s						
TYV				A	A	00 46 14.0	
	comp=Z,40nm,0.4s						
SKR	**Severo-Kuril's**	**8.29**	**36**	*e*PN	**Pn**	**00 44 44.7**	**-0.3**
SKR				pmax	pmax		
	comp=Z,370nm,0.8s						
SKR	**Severo-Kuril's**	**8.29**	**36**	*e*P	**Pn**	**00 44 45.5**	**+0.5**
SKR				AMB	AMB	00 44 46.2	
	comp=Z,370nm,0.7s						
SKR				*e*S	**Sn**	**00 46 15.0**	**-2.2**
SKR				A	A	00 46 24.0	
	comp=Z,390nm,0.6s						
SKR				A	A	00 46 24.0	
	comp=Z,250nm,0.6s						
TEY	**Ternei**	**8.51**	**280**	⇑*e*PN	Pn	00 44 54.6	+6.5
TEY				pmax	pmax		
	comp=E,60nm,0.9s						
TEY				pmax	pmax		
	comp=Z,50nm,0.9s						
TEY				pmax	pmax		
	comp=N,10.0nm,0.8s						
TEY	**Ternei**	**8.51**	**280**	*e*P	**Pn**	**00 44 51.0**	**+2.9**
TEY				AMB	AMB	00 44 55.5	
	comp=N,10.0nm,0.7s						
TEY				AMB	AMB	00 44 55.5	
	comp=N,60nm,0.7s						
TEY				AMB	AMB	00 44 55.5	
	comp=N,60nm,0.7s						
PAU	**Pauzhetka**	**9.16**	**35**	*i* P	**Pn**	**00 44 58.9**	**+1.9**
PAU				AMB	AMB	00 45 00.3	
	comp=N,70nm,0.5s						
PAU				*e*S	**Sn**	**00 46 38.5**	**-0.3**
PAU				A	A	00 46 41.4	
	comp=N,60nm,0.3s						
PAU				A	A	00 46 41.4	
	comp=N,70nm,0.3s						
OKH	**Okha**	**10.03**	**341**	*e*P	**Pn**	**00 45 12.1**	**+3.3**
OKH				AMB	AMB	00 45 13.3	
	comp=N,110nm,0.4s						
OKH				*e*S	**Sn**	**00 47 00.3**	**+0.4**
OKH				AMS	AMS	00 50 07.4	
	comp=N,900nm,15.0s						
OKH				AMS	AMS	00 50 07.4	
	comp=N,600nm,15.0s						
OKH				AMS	AMS	00 50 07.4	
	comp=N,700nm,15.0s						
NKL	**Nikolayevsk**	**10.32**	**333**	*e*P	**Pn**	**00 45 15.8**	**+3.1**
GRNR	**Gornyy**	**10.46**	**313**	⇑*i*PN	Pn	00 45 20.3	+5.5
GRNR				pmax	pmax		
	comp=E,20nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.0s						
GRNR				pmax	pmax		
	comp=N,10.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,320nm,17.0s						
GRNR				MLR	MLR		
	comp=N,160nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,280nm,15.0s						
GRNR	**Gornyy**	**10.46**	**313**	*e*P	**Pn**	**00 45 18.3**	**+3.5**
GRNR				AMB	AMB	00 45 21.1	
	comp=Z,20nm,1.0s						
GRNR				AMB	AMB	00 45 21.1	
	comp=Z,20nm,1.0s						
GRNR				AMS	AMS	00 49 37.1	
	comp=Z,200nm,16.0s						
GRNR				AMS	AMS	00 49 37.1	
	comp=Z,300nm,16.0s						
GRNR				AMS	AMS	00 49 37.1	
	comp=Z,300nm,16.0s						
PEA0B	**Petropavlovsk-**	**10.78**	**31**	Pn	**Pn**	**00 45 19.7**	**+0.6**
PEA0B	**Petropavlovsk-**	**10.78**	**31**	*i* PN	**Pn**	**00 45 20.3**	**+1.1**
PETK	**Petropavlovsk-**	**10.78**	**31**	P	**Pn**	**00 45 19.6**	**+0.4**
	comp=Z,1.7nm,0.3s,baz=210,slow=15,SNR=39						
	comp=Z,6.7nm,0.5s						
PETK	**Petropavlovsk-**	**10.78**	**31**	Pn	**Pn**	**00 45 19.0**	**-0.2**
MJAR	**Matsushiro Arr**	**10.95**	**229**	P	**Pn**	**00 45 24.6**	**+3.1**
	comp=Z,1.0nm,0.3s,baz=64,slow=14,SNR=1.5						
	comp=Z,16nm,0.3s						
PET	**Petropavlovsk**	**11.09**	**34**	*e*PN	Pn	00 45 37.4	+14
PET				*e*S	**Sn**	**00 47 34.5**	**+8.7**
PET				pmax	pmax		
	comp=Z,54nm,0.8s						
PET				MLR	MLR		
	comp=Z,500nm,15.0s						
PET				MLR	MLR		
	comp=Z,2µm,12.0s						
PET	**Petropavlovsk**	**11.09**	**34**	*e*P	**Pn**	**00 45 23.5**	**+0.2**
PET				AMB	AMB	00 45 28.7	
	comp=Z,50nm,0.7s						
PET				*e*S	**Sn**	**00 47 22.4**	**-3.4**
PET				AMS	AMS	00 50 40.0	
	comp=Z,800nm,12.0s						
USA0B	**Ussuriysk Arra**	**11.84**	**276**	Pn	**Pn**	**00 45 33.2**	**-0.4**
USA0B	**Ussuriysk Arra**	**11.84**	**276**	*i* PN	**Pn**	**00 45 33.7**	**+0.1**
USRK	**Ussuriysk Ar.**	**11.84**	**276**	P	**Pn**	**00 45 35.1**	**+1.5**
	comp=Z,0.6nm,0.3s,baz=84,slow=13,SNR=8.3						
	comp=Z,16nm,0.7s						
USRK	**Ussuriysk Ar.**	**11.84**	**276**	Pn	**Pn**	**00 45 33.0**	**-0.6**
KLR	**Kul'dur**	**12.52**	**300**	P	**Pn**	**00 45 44.6**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=106,slow=14,SNR=31						
KLR				LR	LR	00 50 57.4	
	comp=Z,426nm,19.2s,baz=102,slow=39						
	comp=Z,8.7nm,1.2s						
KLR	**Kul'dur**	**12.52**	**300**	*i* PN	**Pn**	**00 45 44.1**	**+1.2**
KLR	**Kul'dur**	**12.52**	**300**	*e*P	**Pn**	**00 45 43.3**	**+0.4**
JHJ	**Hachijo jima 2**	**12.98**	**214**	LR	LR	00 50 46.1	
	comp=Z,33nm,21.4s,baz=82,slow=36						
MDJ	**Mudanjiang**	**13.51**	**278**	P	**Pn**	**00 45 57.2**	**+0.8**
MDJ				pP	P	00 46 04.9	0.0
MDJ				pmax	pmax		
	comp=Z,22nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,110nm,4.5s						
MDJ				LR	LR		
	comp=Z,560nm,17.4s						
MDJ				LR	LR		
	comp=Z,740nm,18.4s						
BNX	**BinXian**	**14.99**	**283**	⇓P	**Pn**	**00 46 18.7**	**+2.3**
BNX				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BNX				pmax	pmax		
	comp=Z,99nm,3.5s						
MA2	**Magadan**	**15.45**	**4**	P	**Pn**	**00 46 22.4**	**+0.1**
	comp=Z,9.0nm,0.6s,baz=181,slow=10,SNR=7.0						
MA2				LR	LR	00 52 11.2	
	comp=Z,203nm,19.2s,baz=228,slow=37						
MA2	**Magadan**	**15.45**	**4**		**Pn**	**00 46 22.8**	**+0.5**
HEH	**HeiHe**	**15.51**	**300**	*e*P	**P**	**00 46 26.4**	**-0.6**
HEH				pmax	pmax		
	comp=Z,17nm,1.2s						
HEH				pmax	pmax		
	comp=Z,340nm,5.2s						
HEH				LR	LR		
	comp=Z,260nm,15.8s						
HEH				LR	LR		
	comp=Z,440nm,17.1s						
HEH				LR	LR		
	comp=Z,680nm,18.4s						
CN2	**Changchun**	**16.57**	**277**	*e*P	**Pn**	**00 46 36.2**	**-0.5**
CN2				sP	sP	00 46 51.6	-1.9
CN2				S	**Sn**	**00 49 36.1**	**-3.4**
CN2				LR	LR		
	comp=Z,180nm,16.0s						
CN2				LR	LR		
	comp=Z,340nm,16.0s						
CN2				LR	LR		
	comp=Z,460nm,18.0s						
ZEA	**Zeya**	**16.82**	**312**	*e*P	**P**	**00 46 43.2**	**+1.6**
ZEA				pmax	pmax		
	comp=N,20nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,100nm,7.4s						
ZEA				MLR	MLR		
	comp=E,200nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,15.0s						
ZEA	**Zeya**	**16.82**	**312**	*e*P	**Pn**	**00 46 38.1**	**-1.7**
ZEA				AMB	AMB	00 46 43.8	
	comp=Z,20nm,0.8s						
ZEA				AMB	AMB	00 46 43.8	
	comp=Z,20nm,0.8s						
ZEA				AMB	AMB	00 46 46.0	
	comp=Z,100nm,7.0s						
ZEA				AMS	AMS	00 53 37.0	
	comp=Z,200nm,15.0s						
ZEA				AMS	AMS	00 53 37.0	
	comp=Z,200nm,15.0s						
KSRS	**Korea Array**	**16.93**	**254**	P	**P**	**00 46 43.6**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=61,slow=12,SNR=19						
KSRS				LR	LR	00 53 32.5	
	comp=Z,310nm,18.6s,baz=65,slow=38						
	comp=Z,6.9nm,0.8s						
KROS	**Kirovskiy**	**17.28**	**314**	*e*P	**Pn**	**00 46 42.7**	**-2.9**
KROS				AMB	AMB	00 46 45.0	
	comp=Z,20nm,0.5s						
JNU	**Nakatsue**	**17.61**	**237**	P	**P**	**00 46 53.1**	**+2.6**
	comp=Z,0.5nm,0.3s,baz=44,slow=7.4,SNR=7.9						
JNU				LR	LR	00 53 42.8	
	comp=Z,219nm,21.4s,baz=40,slow=37						
	comp=Z,24nm,1.1s						
JCJ	**Chichijima**	**17.82**	**199**	LR	LR	00 53 02.8	
	comp=Z,126nm,19.4s,baz=296,slow=34						
SNY	**Shenyang**	**18.34**	**271**	⇑P	**Pn**	**00 47 01.5**	**+2.8**
SNY				LR	LR		
	comp=Z,150nm,11.8s						
SNY				LR	LR		
	comp=Z,450nm,17.8s						
SNY				LR	LR		
	comp=Z,540nm,17.3s						
SEY	**Seymchan**	**18.89**	**6**	P	**P**	**00 47 03.5**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=181,slow=8.6,SNR=28						
	comp=Z,16nm,1.0s						
SEY	**Seymchan**	**18.89**	**6**	c*e*P	**P**	**00 47 03.8**	**-0.5**
SEY				pmax	pmax		
	comp=Z,12nm,0.8s						
SHEM	**Shemya Is, Ala**	**18.93**	**54**	LR	LR	00 53 44.4	
	comp=Z,191nm,20.6s,baz=266,slow=35						
YAK	**Yakutsk**	**20.97**	**335**	P	**P**	**00 47 25.9**	**-0.9**
	comp=Z,8.7nm,0.4s,baz=161,slow=3.6,SNR=5.1						
YAK				LR	LR	00 55 55.1	
	comp=Z,352nm,19.8s,baz=106,slow=38						
	comp=Z,8.7nm,0.4s						
YAK	**Yakutsk**	**20.97**	**335**	*e*P	**P**	**00 47 26.0**	**-0.9**
YAK				*e*		00 47 44.7	
YAK				*e*S	**S**	**00 51 17.7**	**-0.3**
YAK				*e**SS	**sS**	**00 51 33.3**	**+1.1**
YAK				*e*SS	**SnSn**	**00 51 42.1**	**+1.8**
YAK				*e*SSS	SSS	00 51 55.4	
YAK				pmax	pmax		
	comp=Z,81nm,1.0s						
YAK				pmax	pmax		
	comp=N,24nm,1.2s						
YAK				pmax	pmax		
	comp=E,18nm,1.3s						
YAK				pmax	pmax		
	comp=Z,46nm,1.4s						
YAK				pmax	pmax		
	comp=N,35nm,1.3s						
YAK				pmax	pmax		
	comp=E,15nm,1.3s						
YAK				smax	smax		
	comp=E,163nm,5.2s						
YAK				smax	smax		
	comp=N,149nm,4.9s						
XLT	**XiLinHaoTe**	**23.21**	**281**	⇓*i*P	**P**	**00 47 50.9**	**0.0**
XLT				pP	pP	00 48 03.4	+2.4
XLT				sP	sP	00 48 10.1	+4.2
XLT				S	**S**	**00 52 04.0**	**+4.1**
XLT				sS	sS	00 52 18.4	+2.7
XLT				PcS	**PcS**	**00 55 14.3**	**-2.7**
XLT				pmax	pmax		
	comp=N,23nm,0.9s						
XLT				pmax	pmax		
	comp=N,100nm,5.7s						
XLT				LR	LR		
	comp=N,310nm,15.6s						
XLT				LR	LR		
	comp=N,340nm,15.7s						
BJI	**Beijing**	**24.23**	**271**	P	**P**	**00 48 01.2**	**+0.8**
BJI				pmax	pmax		
	comp=N,12nm,0.8s						
BJT	**Baijiatuau**	**24.24**	**271**	P	**P**	**00 47 59.9**	**-0.6**
BJT				IAmb	IAmb	00 48 02.5	
	comp=Z,18nm,0.7s						
BJT	**Baijiatuau**	**24.24**	**271**	P	**P**	**00 47 59.9**	**-0.6**
BJT				pmax	pmax		
	comp=Z,18nm,0.7s						
BOD	**Bodaibo**	**25.27**	**315**	*e*P	**P**	**00 48 07.1**	**-2.6**
BILL	**Bilibino**	**25.66**	**15**	P	**P**	**00 48 11.9**	**-1.2**
BILL	**Bilibino**	**25.66**	**15**	*i* P	**P**	**00 48 10.7**	**-2.4**
BILL				*i*		00 48 49.0	
BILL				*i* PPP	PPP	00 49 00.6	
BILL				*i*		00 51 42.4	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,183nm,16.0s						
NJ2	**Nanjing**	**26.13**	**252**	*e*P	**P**	**00 48 16.7**	**-1.0**
NJ2				pP	**pP**	**00 48 27.7**	**-0.7**
NJ2				sP	**sP**	**00 48 33.2**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,300nm,10.8s						
HNS	**HongShan**	**26.32**	**267**	⇓P	**P**	**00 48 20.0**	**+0.6**
HNS				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC	**Hu-ho-hao-te**	**27.26**	**276**	*e*P	**P**	**00 48 28.2**	**+0.2**
HHC				S	**S**	**00 53 08.0**	**+3.5**
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,220nm,4.6s						
HHC				LR	LR		
	comp=Z,250nm,12.7s						
HHC				LR	LR		
	comp=Z,460nm,13.3s						
HHC				LR	LR		
	comp=Z,540nm,15.2s						
TIY	**Taiyuan**	**27.82**	**269**	*e*P	**P**	**00 48 37.1**	**+4.1**
TIY				pmax	pmax		
	comp=Z,14nm,0.6s						
ULN	**Ulaanbaatar**	**28.74**	**292**	P	**P**	**00 48 40.6**	**-0.6**
ULN	**Ulaanbaatar**	**28.74**	**292**	P	**P**	**00 48 40.6**	**-0.6**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ULN	**Ulaanbaatar**	**28.74**	**292**	*e*P	**P**	**00 48 40.6**	**-0.6**
H11N2	**WAKE ISLAND Hy**	**28.85**	**142**	T	T	01 19 27.6	
	baz=333,slow=76,SNR=355						
H11N1	**WAKE ISLAND Hy**	**28.86**	**142**	T	T	01 19 22.6	
	baz=333,slow=76,SNR=234						
H11N3	**WAKE ISLAND Hy**	**28.87**	**142**	T	T	01 19 22.9	
	baz=333,slow=76,SNR=346						
TIXI	**Tiksi**	**29.11**	**347**	LR	LR	01 00 35.9	
	comp=Z,68nm,20.0s,baz=112,slow=37						
TIXI	**Tiksi**	**29.11**	**347**	*i* P	**P**	**00 48 45.1**	**+1.1**
TIXI				pmax	pmax		
	comp=Z,6.0nm,2.1s						
TIXI	**Tiksi**	**29.11**	**347**	*i* P	**P**	**00 48 45.1**	**+1.1**
SONM	**Songino Array**	**29.18**	**292**	P	**P**	**00 48 45.4**	**+0.4**
	comp=Z,5.1nm,0.9s,baz=85,slow=7.9,SNR=36						
SONM				PcP	**PcP**	**00 51 51.7**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=63,slow=1.6,SNR=2.9						
	comp=Z,5.1nm,0.9s						
SONM	**Songino Array**	**29.18**	**292**	P	**P**	**00 48 44.5**	**-0.6**
SONM	**Songino Array**	**29.18**	**292**	P	**P**	**00 48 44.5**	**-0.6**
SONM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
H11S1	**WAKE ISLAND Hy**	**29.84**	**143**	T	T	01 20 38.9	
	baz=334,slow=76,SNR=447						
H11S3	**WAKE ISLAND Hy**	**29.85**	**143**	T	T	01 20 40.5	
	baz=334,slow=76,SNR=320						
H11S2	**WAKE ISLAND Hy**	**29.86**	**143**	T	T	01 20 43.8	
	baz=334,slow=76,SNR=268						
WHN	**Wuhan**	**30.12**	**255**	⇓P	**P**	**00 48 53.9**	**+0.5**
TNA	**Tin City**	**31.94**	**33**	P	**P**	**00 49 09.6**	**+0.6**
TNA	**Tin City**	**31.94**	**33**	P	**P**	**00 49 09.6**	**+0.6**
	baz=250						
XAN	**Xi'an**	**32.05**	**265**	P	**P**	**00 49 10.2**	**-0.2**
XAN				sP	sP	00 49 28.0	+2.0
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ANM	**Nome**	**32.66**	**35**	P	**P**	**00 49 16.4**	**+1.0**
ANM	**Nome**	**32.66**	**35**	P	**P**	**00 49 16.4**	**+1.0**
ANM				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LZH	**Lanzhou**	**34.71**	**272**	*e*P	**P**	**00 49 34.9**	**+1.2**
LZH				pP	sP	00 49 48.0	-1.3
LZH				sP	pP	00 49 53.3	+8.7
LZH				pmax	pmax		
	comp=Z,71nm,1.4s						
LZH				LR	LR		
	comp=Z,140nm,13.4s						
LZH				LR	LR		
	comp=Z,170nm,13.1s						
LZH				LR	LR		
	comp=Z,220nm,14.4s						
N16K	**Nishlik Lake**	**34.99**	**43**	P	**P**	**00 49 36.4**	**+0.7**
	baz=267						
CHGN	**Chignik**	**35.16**	**51**	P	**P**	**00 49 34.7**	**-2.4**
	baz=273						
P16K	**Nushagak River**	**35.33**	**46**	P	**P**	**00 49 38.1**	**-0.5**
	baz=269						
O17K	**Koliganek Bris**	**35.80**	**45**	P	**P**	**00 49 43.6**	**+1.0**
	baz=269						
GTA	**Gaotai**	**36.16**	**280**	*e*P	**P**	**00 49 47.1**	**+1.0**
GTA				pP	sP	00 49 59.5	-2.3
GTA				sP	pP	00 50 05.2	+8.3
GTA				pmax	pmax		
	comp=Z,12nm,0.7s						
GTA				LR	LR		
	comp=Z,140nm,13.5s						
GTA				LR	LR		
	comp=Z,120nm,12.3s						
GTA				LR	LR		
	comp=Z,170nm,13.1s						
GCSA	**Galena City Sc**	**36.27**	**36**	P	**P**	**00 49 47.0**	**+0.5**
	baz=262						
TTA	**Tatalina**	**36.47**	**39**	P	**P**	**00 49 49.1**	**+0.8**
TTA				IAmb	IAmb	00 49 50.3	
	comp=Z,8.3nm,0.8s						
TTA	**Tatalina**	**36.47**	**39**	P	**P**	**00 49 49.1**	**+0.8**
TTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TTA	**Tatalina**	**36.47**	**39**	P	**P**	**00 49 49.5**	**+1.1**
	baz=266,SNR=5.1						
P18K	**Big Mountain,**	**36.75**	**45**	P	**P**	**00 49 51.5**	**+0.8**
P18K	**Big Mountain,**	**36.75**	**45**	P	**P**	**00 49 51.8**	**+1.0**
	baz=271						
O18K	**Koktuh Hills**	**36.76**	**45**	P	**P**	**00 49 50.8**	**0.0**
O18K	**Koktuh Hills**	**36.76**	**45**	P	**P**	**00 49 51.6**	**+0.9**
	baz=271,SNR=7.1						
Q18K	**Katmai Hardscr**	**36.89**	**47**	P	**P**	**00 49 52.6**	**+0.5**
	baz=272						
L19K	**White Mountain**	**36.96**	**41**	P	**P**	**00 49 53.7**	**+1.2**
	baz=268						
N19K	**Bonanza Creek**	**37.11**	**43**	P	**P**	**00 49 53.1**	**-0.7**
N19K				IAmb	IAmb	00 50 17.9	
	comp=Z,35nm,1.6s						
N19K	**Bonanza Creek**	**37.11**	**43**	P	**P**	**00 49 55.0**	**+1.1**
	baz=270						
M19K	**Big River Lodg**	**37.17**	**41**	P	**P**	**00 49 55.7**	**+1.5**
	baz=269						
K20K	**Telida**	**37.37**	**39**	P	**P**	**00 49 55.9**	**-0.1**
K20K				IAmb	IAmb	00 50 01.0	
	comp=Z,57nm,2.0s						
K20K	**Telida**	**37.37**	**39**	P	**P**	**00 49 57.3**	**+1.4**
	baz=267						
CD2	**Chengdu**	**37.40**	**265**	P	**P**	**00 49 56.6**	**0.0**
L20K	**Farewell, AK**	**37.42**	**40**	P	**P**	**00 49 57.7**	**+1.2**
	baz=268						
A21K	**Barrow**	**37.72**	**26**	P	**P**	**00 49 59.0**	**+0.3**
A21K	**Barrow**	**37.72**	**26**	P	**P**	**00 49 58.8**	**+0.1**
	baz=254						
IMAR	**Indian Mountai**	**37.72**	**34**	P	**P**	**00 49 59.7**	**+0.8**
M20K	**Styx River**	**37.77**	**41**	P	**P**	**00 50 01.0**	**+1.7**
M20K				IAmb	IAmb	00 50 18.9	
	comp=Z,27nm,1.4s						
M20K	**Styx River**	**37.77**	**41**	P	**P**	**00 50 01.1**	**+1.7**
	baz=270						
G21K	**Allakaket**	**37.88**	**34**	P	**P**	**00 50 01.5**	**+1.3**
	baz=263						
OHAK	**Old Harbor**	**37.91**	**49**	P	**P**	**00 49 59.9**	**-0.6**
OHAK	**Old Harbor**	**37.91**	**49**	P	**P**	**00 50 00.3**	**-0.1**
	baz=276						
F21K	**Alatna River**	**37.98**	**32**	P	**P**	**00 50 01.9**	**+0.9**
	baz=263,SNR=8.0						
H21K	**Melozitna Rive**	**38.08**	**35**	P	**P**	**00 50 02.8**	**+0.9**
H21K	**Melozitna Rive**	**38.08**	**35**	P	**P**	**00 50 03.0**	**+1.1**
	baz=265						
CHUM	**Lake Minchumin**	**38.18**	**38**	P	**P**	**00 50 04.1**	**+1.4**
	baz=268						
PPLA	**Purkeypile**	**38.21**	**40**	P	**P**	**00 50 04.4**	**+1.2**
PPLA				IAmb	IAmb	00 50 07.0	
	comp=Z,54nm,1.8s						
PPLA	**Purkeypile**	**38.21**	**40**	P	**P**	**00 50 04.4**	**+1.2**
	baz=269						
N20K	**Mount Spurr**	**38.22**	**42**	P	**P**	**00 50 04.3**	**+1.1**
	baz=272						
SPCR	**Spurr Chakacha**	**38.22**	**42**	P	**P**	**00 50 04.3**	**+1.1**
	baz=272						
KDAK	**Kodiak Island**	**38.23**	**48**	P	**P**	**00 50 02.8**	**-0.4**
KDAK	**Kodiak Island**	**38.23**	**48**	P	**P**	**00 50 02.8**	**-0.4**
KDAK				pmax	pmax		
	comp=Z,128nm,1.6s						
KDAK	**Kodiak Island**	**38.23**	**48**	P	**P**	**00 50 03.8**	**+0.6**
KDAK				pP	**pP**	**00 50 14.5**	**+0.6**
KDAK				sP	**sP**	**00 50 18.7**	**+0.1**
CAST	**Castle Rocks**	**38.27**	**39**	P	**P**	**00 50 05.1**	**+1.6**
CAST				IAmb	IAmb	00 50 06.1	
	comp=Z,9.3nm,0.8s						
CAST	**Castle Rocks**	**38.27**	**39**	P	**P**	**00 50 04.6**	**+1.1**
	baz=269,SNR=6.0						
I21K	**Tanana**	**38.39**	**36**	P	**P**	**00 50 06.0**	**+1.5**

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I21K  Tanana           38.39  36    P      P      00 50 05.9 +1.4
      baz=267
SKT   Skwentna         38.52  41    P      P      00 50 05.1  -0.5
SKT                                 IAmb   IAmb   00 51 22.9
      comp=Z,32nm,1.8s
H22K  Ishtalitna Cre   38.68  35    P      P      00 50 08.6 +1.6
      baz=266
BPAW  Bear Paw Mtn.    38.77  38    P      P      00 50 08.3 +0.5
BPAW                                IAmb   IAmb   00 50 41.8
      comp=Z,34nm,1.9s
BPAW  Bear Paw Mtn.    38.77  38    P      P      00 50 09.2 +1.4
      baz=269
CNPM  China Poot       38.78  45    P      P      00 50 08.1 +0.2
KTH   Kantishna Hill   38.79  39    P      P      00 50 08.4 +0.4
KTH                                 IAmb   IAmb   00 50 50.3
      comp=Z,61nm,1.8s
MLY   Manley           38.91  36    P      P      00 50 10.3 +1.4
MLY   Manley           38.91  36    P      P      00 50 10.0 +1.2
      baz=268,SNR=5.2
BRLK  Bradley Lake     38.94  45    P      P      00 50 09.1  -0.2
D23K  Nanushuk River   39.24  30    P      P      00 50 12.8 +1.3
      baz=263
COLD  Coldfoot         39.25  33    P      P      00 50 12.3 +0.7
      baz=266,SNR=10.0
G23K  Bananza Creek    39.28  33    P      P      00 50 13.0 +1.0
      baz=266
RC01  Rabbit Creek A   39.42  42    P      P      00 50 13.8 +0.6
RC01  Rabbit Creek A   39.42  42    P      P      00 50 14.0 +0.8
      baz=274
O22K  Cooper Landing   39.47  43    P      P      00 50 14.3 +0.7
      baz=274
I23K  Minto, Yukon-K   39.49  36    P      P      00 50 15.2 +1.5
      baz=269
E23K  Chandalar        39.54  31    P      P      00 50 15.3 +1.1
      baz=265
NEA2  Nenana           39.61  37    P      P      00 50 15.5 +0.8
NEA2  Nenana           39.61  37    P      P      00 50 15.9 +1.2
      baz=270,SNR=5.3
PMR   Palmer           39.68  42    P      P      00 50 16.4 +1.1
      baz=274
MCK   McKinley         39.68  38    P      P      00 50 15.7 +0.4
      baz=271
E24K  Your Creek       39.96  31    P      P      00 50 18.9 +1.3
      baz=266
MDM   Murphy Dome      39.97  36    P      P      00 50 18.1 +0.4
KNK   Knik Glacier     40.01  42    P      P      00 50 18.3 +0.2
      baz=274
C24K  Franklin Bluff   40.02  29    P      P      00 50 19.1 +1.1
      baz=264
WRH   Wood River Hil   40.04  37    P      P      00 50 18.6 +0.4
SML   Sawmill          40.04  41    P      P      00 50 19.4 +1.0
SML                                 IAmb   IAmb   00 50 31.4
      comp=Z,19nm,0.8s
SML   Sawmill          40.04  41    P      P      00 50 19.2 +0.7
      baz=274
H24K  Noodor Dome      40.12  35    P      P      00 50 19.7 +0.8
H24K  Noodor Dome      40.12  35    P      P      00 50 20.7 +1.7
      baz=270,SNR=7.2
CCB   Clear Creek Bu   40.16  37    P      P      00 50 19.2   0.0
F24K  Squaw Lake       40.16  32    P      P      00 50 20.3 +1.0
      baz=268,SNR=12
G24K  Hadweenzic Riv   40.29  34    P      P      00 50 22.2 +1.8
      baz=269,SNR=23
POKR  Poker Plat Res   40.31  36    P      P      00 50 21.0 +0.5
POKR                                IAmb   IAmb   00 50 23.0
      comp=Z,22nm,0.8s
POKR  Poker Plat Res   40.31  36    P      P      00 50 22.2 +1.7
      baz=271,SNR=9.8
SCM   Sheep Creek Mo   40.52  41    P      P      00 50 22.1  -0.3
SCM   Sheep Creek Mo   40.52  41    P      P      00 50 22.1  -0.3
SCM                                 pmax   pmax
      comp=Z,101nm,1.9s
SCM   Sheep Creek Mo   40.52  41    P      P      00 50 23.0 +0.7
      baz=275
HDA   Harding Lake     40.53  37    P      P      00 50 22.5 +0.1
HDA                                 IAmb   IAmb   00 50 24.0
      comp=Z,9.2nm,0.7s
HDA   Harding Lake     40.53  37    P      P      00 50 23.3 +0.9
      baz=272,SNR=5.6
ILAR  Eielson Array    40.55  37    P      P      00 50 22.6 +0.1
      comp=Z,3.6nm,0.8s,baz=256,slow=8.1,SNR=33
ILAR                                PcP    PcP    00 52 23.4  -0.7
      comp=Z,0.7nm,0.6s,baz=290,slow=4.3,SNR=4.0
ILAR                                LR     LR     01 09 02.0
      comp=Z,56nm,18.9s,baz=256,slow=39
      comp=Z,3.6nm,0.8s
IL03  Eielson Array    40.56  37    P      P      00 50 22.9 +0.3
D25K  Kavik River      40.80  30    P      P      00 50 25.7 +1.0
      baz=267
QIZ   Qiongzhong       40.83 245    P      P      00 50 25.2  -0.1
QIZ                                 S      S      00 56 34.7 +0.9
QIZ                                 LR     LR
      comp=Z,300nm,12.8s
QIZ                                 LR     LR
      comp=Z,250nm,11.6s
QIZ                                 LR     LR
      comp=Z,240nm,13.7s
G25K  Bearman Lake     40.84  33    P      P      00 50 26.7 +1.9
      baz=270
DGZ   Jazzator, Alta   41.01 300  i P      P      00 50 27.4 +0.7
DGZ                                 pmax   pmax
      comp=Z,14nm,2.9s
F25K  Christian Rive   41.02  32    P      P      00 50 28.1 +1.7
      baz=270,SNR=11
M24K  Tolsona, Glenn   41.03  41    P      P      00 50 27.6 +1.0
M24K  Tolsona, Glenn   41.03  41    P      P      00 50 27.6 +1.0
      baz=276
E25K  Arctic Village   41.06  31    P      P      00 50 28.2 +1.5
      baz=269,SNR=7.4
K24K  Donnelly Dome    41.08  38    P      P      00 50 27.5 +0.6
      baz=274
PRP   Porcupine Dome   41.10  35    P      P      00 50 28.1 +1.0
PRP   Porcupine Dome   41.10  35    P      P      00 50 28.8 +1.7
      baz=272,SNR=8.1
GOMU  GeErMu           41.13 278    P      P      00 50 28.5 +0.5
GOMU                                pmax   pmax
      comp=Z,13nm,0.9s
GOMU                                LR     LR
      comp=Z,230nm,19.4s
GOMU                                LR     LR
      comp=Z,240nm,19.7s
GOMU                                LR     LR
      comp=Z,280nm,19.5s
FYU   Fort Yukon       41.19  34    P      P      00 50 28.4 +0.7
FYU                                 IAmb   IAmb   00 50 30.5
      comp=Z,17nm,0.6s
KLU   Klutina          41.22  42    P      P      00 50 29.2 +1.1
KLU                                 IAmb   IAmb   00 50 53.5
      comp=Z,73nm,1.8s
KLU   Klutina          41.22  42    P      P      00 50 29.4 +1.2
      baz=276
PAX   Paxson           41.28  39    P      P      00 50 29.9 +1.2
      baz=275
C26K  Camden Bay       41.35  29    P      P      00 50 30.6 +1.7
      baz=268
PZH   PanZhiHua        41.40 261    P      P      00 50 30.1   0.0
PZH                                 pmax   pmax
      comp=Z,10.0nm,0.6s
PZH                                 pmax   pmax
      comp=Z,120nm,5.9s
BMAR  Burnt Mountain   41.43  32    P      P      00 50 31.4 +1.6
ZALV  Zalesovo Beam    41.48 307    P      P      00 50 28.9  -1.4
      comp=Z,1.4nm,0.6s,baz=87,slow=6.8,SNR=9.3
ZALV                                PcP    PcP    00 52 27.2   0.0
      comp=Z,5.6nm,0.7s,baz=84,slow=2.6,SNR=17
ZALV                                LR     LR     01 08 58.1
      comp=Z,112nm,18.9s,baz=67,slow=38
      comp=Z,1.4nm,0.6s
ZALV  Zalesovo Beam    41.48 307  i P      P      00 50 31.1 +0.8
ZALV                                pmax   pmax
      comp=Z,1.0nm,0.6s
RIDG  Independent Ri   41.50  38    P      P      00 50 29.6  -0.8
RIDG  Independent Ri   41.50  38    P      P      00 50 31.2 +0.8
      baz=275
KMI   Kunming          41.55 258  ⇑ P      P      00 50 32.0 +0.6
KMI                                 pmax   pmax
      comp=Z,20nm,1.1s
KMI                                 LR     LR
      comp=Z,150nm,16.6s
KMI                                 LR     LR
      comp=Z,150nm,12.8s
KMI                                 LR     LR
      comp=Z,210nm,23.0s
F26K  Sheenjek River   41.59  32    P      P      00 50 32.9 +1.8
      baz=271,SNR=10
G26K  Porcupine Rive   41.75  33    P      P      00 50 34.1 +1.8
      baz=272
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C27K  Jago River       41.76  29    P      P      00 50 33.6 +1.3
      baz=269
SCRK  Sand Creek       41.85  38    P      P      00 50 33.6 +0.2
SCRK                                IAmb   IAmb   00 50 43.6
      comp=Z,44nm,2.0s
SCRK  Sand Creek       41.85  38    P      P      00 50 33.4   0.0
      baz=275
J26L  Joseph Creek     41.99  37    P      P      00 50 34.2  -0.3
J26L  Joseph Creek     41.99  37    P      P      00 50 34.9 +0.4
      baz=275
I26K  Coal Creek Min   42.10  36    P      P      00 50 33.6  -1.6
I26K  Coal Creek Min   42.10  36    P      P      00 50 35.6 +0.5
      baz=274
L26K  Log Cabin Wild   42.24  39    P      P      00 50 38.0 +1.6
      baz=277
M26K  Nabesna, AK      42.48  40    P      P      00 50 39.5 +1.1
M26K  Nabesna, AK      42.48  40    P      P      00 50 40.0 +1.6
      baz=278
E27K  Coleen River     42.54  31    P      P      00 50 40.0 +1.2
      baz=273
G27K  Doyon Strip      42.60  33    P      P      00 50 40.7 +1.4
      baz=274
MCARA McCarthy VSAT    42.61  41    P      P      00 50 40.1 +0.7
K27K  Chicken          42.69  37    P      P      00 50 40.1 +0.1
K27K                                IAmb   IAmb   00 50 42.3
      comp=Z,22nm,1.0s
K27K  Chicken          42.69  37    P      P      00 50 41.5 +1.6
      baz=277
H27K  Steamboat Moun   42.70  34    P      P      00 50 41.8 +1.7
      baz=275
I27K  Kandik River     42.72  35    P      P      00 50 41.3 +1.0
      baz=275
WMQ   Urumqi           42.81 292  e P      P      00 50 41.2  -0.2
WMQ                                 pmax   pmax
      comp=Z,23nm,0.7s
WMQ                                 LR     LR
      comp=Z,52nm,12.5s
WMQ                                 LR     LR
      comp=Z,180nm,11.7s
WMQ                                 LR     LR
      comp=Z,240nm,19.9s
L27K  Beaver Creek,    42.92  39    P      P      00 50 43.4 +1.4
L27K  Beaver Creek,    42.92  39    P      P      00 50 43.8 +1.8
      baz=278
BCAR  Beaver Creek A   42.94  39    P      P      00 50 43.1 +1.0
EGAK  Eagle            42.99  36    P      P      00 50 42.6 +0.2
EGAK                                IAmb   IAmb   00 50 43.9
      comp=Z,16nm,0.8s
EGAK  Eagle            42.99  36    P      P      00 50 43.4 +0.9
      baz=277,SNR=7.5
M27K  Edge Creek, AK   43.00  40    P      P      00 50 42.6  -0.1
M27K                                IAmb   IAmb   00 51 27.5
      comp=Z,23nm,1.4s
M27K  Edge Creek, AK   43.00  40    P      P      00 50 44.0 +1.2
      baz=279
BARN  Barnard Glacie   43.32  42    P      P      00 50 45.4   0.0
BARN                                IAmb   IAmb   00 51 37.9
      comp=Z,55nm,1.6s
BVCY  Beaver Creek     43.46  40    P      P      00 50 47.6 +1.4
      baz=280
YUK3  Moose Creek      43.76  41    P      P      00 50 49.9 +1.0
      baz=280
DAWY  Dawson           43.85  37    P      P      00 50 49.3  -0.2
DAWY  Dawson           43.85  37    P      P      00 50 50.1 +0.7
      baz=279
O28M  Mount Upton      44.08  42    P      P      00 50 52.1 +0.6
      baz=282
I29M  Ogilvie Camp,    44.12  35    P      P      00 50 51.9 +0.4
I29M  Ogilvie Camp,    44.12  35    P      P      00 50 52.8 +1.3
      baz=278,SNR=9.0
YUK8  Steele Glacier   44.18  41    P      P      00 50 53.3 +0.9
      baz=282
PINM  Pinnacle         44.19  43    P      P      00 50 53.4 +1.2
      baz=282
M29M  Somme Creek      44.55  39    P      P      00 50 57.0 +1.9
      baz=281
L29M  L29M             44.57  38    P      P      00 50 56.8 +1.5
      baz=281
EPYK  Eagle Plains     44.61  34    P      P      00 50 55.5   0.0
EPYK                                IAmb   IAmb   00 50 57.9
      comp=Z,25nm,0.8s
EPYK  Eagle Plains     44.61  34    P      P      00 50 57.1 +1.7
      baz=279,SNR=12
YUK4  Talbot Arm       44.69  41    P      P      00 50 58.0 +1.7
      baz=282
PNL   Peninsula        44.70  43    P      P      00 50 58.8 +2.5
      baz=283
K29M  Barlow Dome      44.70  37    P      P      00 50 57.7 +1.3
      baz=281
G30M  tAoh Zraii Nji   44.71  33    P      P      00 50 57.7 +1.4
      baz=279,SNR=17
MK31  Makanchi Array   45.22 298    P      P      00 51 00.5  -0.1
MK31                                IAmb   IAmb   00 51 01.7
      comp=Z,15nm,0.8s
MK31  Makanchi Array   45.22 298    P      P      00 51 00.5  -0.1
MK31                                pmax   pmax
      comp=Z,15nm,0.8s
MKAR  Makanchi Array   45.22 298    P      P      00 51 00.9 +0.4
      comp=Z,14nm,0.7s,baz=77,slow=8.3,SNR=168
      comp=Z,14nm,0.7s
MKAR  Makanchi Array   45.22 298    P      P      00 51 00.7 +0.1
MKAR  Makanchi Array   45.22 298 ce P      P      00 51 01.1 +0.5
MKAR                                pmax   pmax
      comp=Z,14nm,0.7s
MKAR  Makanchi Array   45.22 298  e P      P      00 51 01.1 +0.5
M30M  Minto, Yukon     45.28  39    P      P      00 51 01.6 +0.8
M30M                                IAmb   IAmb   00 51 49.9
      comp=Z,25nm,1.9s
M30M  Minto, Yukon     45.28  39    P      P      00 51 02.4 +1.5
      baz=283
HYT   Haines Junctio   45.35  41    P      P      00 51 03.0 +1.5
HYT   Haines Junctio   45.35  41    P      P      00 51 03.7 +2.2
      baz=284,SNR=8.6
N30M  Aishikik Lake    45.40  41    P      P      00 51 03.5 +1.7
      baz=283
MAKZ  Makanchi         45.41 298    P      P      00 51 02.1   0.0
MAKZ                                IAmb   IAmb   00 51 03.3
      comp=Z,15nm,0.8s
MAKZ  Makanchi         45.41 298    P      P      00 51 02.1   0.0
MAKZ                                pmax   pmax
      comp=Z,15nm,0.8s
MAKZ  Makanchi         45.41 298    P      P      00 51 02.4 +0.3
MAKZ                                pP     pP     00 51 12.6  -0.8
INK   Inuvik           45.52  31    LR     LR     01 11 21.0
      comp=Z,52nm,20.7s,baz=267,slow=38
INK   Inuvik           45.52  31    P      P      00 51 03.8 +1.2
INK                                 IAmb   IAmb   00 51 04.6
      comp=Z,8.9nm,0.7s
INK   Inuvik           45.52  31    P      P      00 51 03.8 +1.2
INK                                 pmax   pmax
      comp=Z,9.0nm,0.7s
INK   Inuvik           45.52  31    P      P      00 51 03.9 +1.3
      baz=280,SNR=13
F31M  Tsiigehtchic     45.59  32    P      P      00 51 04.3 +1.2
      baz=280,SNR=14
P30M  Million Dollar   45.78  42    P      P      00 51 07.3 +2.4
      baz=285
N31M  Braeburn, Yuko   46.00  40    P      P      00 51 08.6 +2.1
      baz=284
O30N  Mendenhall       46.03  41    P      P      00 51 08.2 +1.4
      baz=285
KURK  Kurchatov        46.06 304    P      P      00 51 06.9  -0.2
KURK                                IAmb   IAmb   00 51 07.8
      comp=Z,6.5nm,0.7s
KURK  Kurchatov        46.06 304 ce P      P      00 51 07.2 +0.1
KURK                                pmax   pmax
      comp=Z,5.0nm,0.7s
KURK  Kurchatov        46.06 304  e P      P      00 51 07.2 +0.1
KURK  Kurchatov        46.06 304    P      P      00 51 07.0  -0.1
KURK                                sP     sP     00 51 21.7  -1.3
KURBB Kurchatov Arra   46.15 304    P      P      00 51 07.5  -0.3
      comp=Z,5.3nm,0.6s,baz=72,slow=8.8,SNR=28
KURBB                               PcP    PcP    00 52 43.4 +0.2
      comp=Z,3.8nm,0.6s,baz=78,slow=3.4,SNR=12
KURBB                               LR     LR     01 11 36.0
      comp=Z,127nm,18.3s,baz=155,slow=38
      comp=Z,5.3nm,0.6s
PLBC  Pleasant Camp    46.25  43    P      P      00 51 10.3 +1.9
      baz=286
CRAI  Chiangrai        46.38 255    P      P      00 51 10.2 +0.2
CRAI                                IAmb   IAmb   00 51 22.6
      comp=Z,14nm,0.9s
M31M  Drury Creek, Y   46.46  39    P      P      00 51 11.2 +1.1
M31M                                IAmb   IAmb   00 52 42.0
      comp=Z,44nm,1.9s
M31M  Drury Creek, Y   46.46  39    P      P      00 51 11.4 +1.3
      baz=285
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FARO  Faro, Yukon      46.92  39    P      P      00 51 14.9 +1.2
FARO                                IAmb   IAmb   00 52 49.5
      comp=Z,41nm,2.0s
FARO  Faro, Yukon      46.92  39    P      P      00 51 14.9 +1.2
      baz=286
A36M  Sachs Harbour    47.55  25    P      P      00 51 19.5 +1.1
A36M                                IAmb   IAmb   00 51 20.6
      comp=Z,14nm,0.8s
A36M  Sachs Harbour    47.55  25    P      P      00 51 19.4 +1.0
      baz=284,SNR=9.4
PHRA  Phrae            47.66 253    P      P      00 51 20.7 +0.8
MMPY  Sheldon Lake,    47.75  38    P      P      00 51 22.3 +2.1
      baz=287
P33M  Teslin, Yukon    47.75  41    P      P      00 51 21.7 +1.4
P33M                                IAmb   IAmb   00 51 23.5
      comp=Z,12nm,0.9s
P33M  Teslin, Yukon    47.75  41    P      P      00 51 21.9 +1.6
      baz=288,SNR=5.2
CHTO  Chiang Mai       48.33 255    P      P      00 51 25.0  -0.2
CHTO  Chiang Mai       48.33 255    P      P      00 51 25.0  -0.2
CMAR  Chiang Mai Arr   48.57 254    P      P      00 51 28.2 +1.2
      comp=Z,1.2nm,0.5s,baz=36,slow=7.4,SNR=7.8
CMAR                                LR     LR     01 14 10.3
      comp=Z,99nm,18.6s,baz=120,slow=39
      comp=Z,1.2nm,0.5s
CMAR  Chiang Mai Arr   48.57 254  i P      P      00 51 28.2 +1.2
CMAR                                pmax   pmax
      comp=Z,2.0nm,0.5s
C36M  Paulatuk         48.62  28    P      P      00 51 27.6 +0.9
C36M  Paulatuk         48.62  28    P      P      00 51 27.6 +0.9
      baz=287,SNR=18
S34M  Telegraph Cree   49.33  44    P      P      00 51 34.2 +1.8
      baz=291
WUS   Wushi            49.60 292    P      P      00 51 35.7 +0.9
DLBC  Dease Lake       49.69  43    P      P      00 51 36.6 +1.4
DLBC  Dease Lake       49.69  43    P      P      00 51 37.2 +2.0
      baz=291
BVAR  Borovoye Array   49.95 309    P      P      00 51 37.9 +0.7
      comp=Z,2.5nm,0.6s,baz=81,slow=10,SNR=14
BVAR                                PcP    PcP    00 52 57.1 +0.3
      comp=Z,4.3nm,0.7s,baz=79,slow=3.2,SNR=9.4
      comp=Z,2.5nm,0.6s
BRVK  Borovoye         49.99 310    P      P      00 51 37.0  -0.5
BRVK                                IAmb   IAmb   00 52 58.3
      comp=Z,7.1nm,0.9s
BRVK  Borovoye         49.99 310 ce P      P      00 51 38.6 +1.1
BRVK                                pmax   pmax
      comp=Z,6.0nm,1.3s
BRVK  Borovoye         49.99 310  e P      P      00 51 38.6 +1.1
BRVK  Borovoye         49.99 310    P      P      00 51 38.4 +0.9
BRVK                                pP     pP     00 51 49.2 +0.5
BRVK                                sP     sP     00 51 53.4   0.0
V35K  Ketchikan        50.04  47    P      P      00 51 39.8 +2.1
      baz=293
T35M  Bob Quinn        50.12  45    P      P      00 51 40.8 +2.4
      baz=292
TARG  Taragay, Kyrgy   50.28 293    P      P      00 51 39.4  -0.9
TARG                                IAmb   IAmb   00 51 42.3
      comp=Z,12nm,1.1s
TARG  Taragay, Kyrgy   50.28 293    P      P      00 51 39.4  -0.9
TARG                                pmax   pmax
      comp=Z,13nm,1.1s
TAPN  Taplejung        50.95 272  e P      P      00 51 46.2 +0.8
      comp=Z,18nm,0.7s
ULHL  Ulahol           51.07 295    P      P      00 51 46.9 +0.9
      SNR=11
TKM2  Tokmak 2         51.17 296    P      P      00 51 47.5 +0.8
      SNR=24
GRNB  Grenville Isla   51.52  48    P      P      00 51 49.8 +0.9
USP   Ospenovka        51.71 297    P      P      00 51 51.5 +0.9
      SNR=32
KBK   Karagaybulak     51.72 296    P      P      00 51 51.7 +0.9
      SNR=14
JIRN  Jiri             51.86 273  e P      P      00 51 52.8 +0.5
      comp=Z,56nm,0.9s
GUN   Gumba            51.94 274  e P      P      00 51 53.1 +0.2
      comp=Z,61nm,0.8s
RAMN  Ramite           51.99 272  e P      P      00 51 53.0  -0.1
      comp=Z,82nm,0.9s
AAK   Ala-Archa        52.02 296    P      P      00 51 53.7 +0.6
      SNR=12
AAK   Ala-Archa        52.02 296    P      P      00 51 53.3 +0.3
      comp=Z,5.9nm,0.5s,baz=57,slow=2.0,SNR=34
      comp=Z,5.9nm,0.5s
AAK   Ala-Archa        52.02 296    P      P      00 51 53.0  -0.1
AAK                                 IAmb   IAmb   00 51 54.5
      comp=Z,19nm,1.2s
AAK   Ala-Archa        52.02 296 ce P      P      00 51 53.6 +0.6
AAK                                 pmax   pmax
      comp=Z,21nm,1.7s
AAK   Ala-Archa        52.02 296  e P      P      00 51 53.6 +0.6
AAK   Ala-Archa        52.02 296    P      P      00 51 53.6 +0.6
UCH   Uchtor           52.20 295    P      P      00 51 55.6 +0.8
      SNR=8.8
EUNU  Eureka           52.23  10    P      P      00 51 53.0  -0.9
KKN   Kakani           52.44 274  e P      P      00 51 56.5 +0.1
      comp=Z,55nm,0.9s
EKS2  Erkin-Say        52.47 296    P      P      00 51 56.7 +0.4
      SNR=16
PKI   Pulchoki         52.48 274  e P      P      00 51 56.9 +0.1
      comp=Z,26nm,0.8s
PKIN  Phulchoki        52.48 274  e P      P      00 51 57.0 +0.2
      comp=Z,19nm,0.6s
KSH   Kashi            52.58 292    P      P      00 52 01.6 +4.4
KSH                                 pP     sP     00 52 16.9 +3.7
KSH                                 pmax   pmax
      comp=Z,10.0nm,0.7s
KSH                                 LR     LR
      comp=Z,130nm,14.1s
KSH                                 LR     LR
      comp=Z,200nm,14.5s
KSH                                 LR     LR
      comp=Z,260nm,13.7s
DMN   Daman            52.67 274  e P      P      00 51 58.8 +0.6
      comp=Z,60nm,0.8s
GKN   Gorkha           52.78 275  e P      P      00 51 59.1 +0.3
      comp=Z,34nm,0.7s
AML   Almayashu        52.78 296    P      P      00 51 59.9 +0.9
      SNR=18
DANN  Dangsing         53.20 276  e P      P      00 52 02.8 +0.7
      comp=Z,100nm,0.9s
BBB   Bella Bella      53.25  50    LR     LR     01 15 38.6
      comp=Z,33nm,19.3s,baz=349,slow=37
PMG   Port Moresby     53.38 182    P      P      00 52 05.3 +2.3
      comp=Z,9.6nm,0.6s,baz=21,slow=8.6,SNR=1.5
      comp=Z,9.6nm,0.6s
SVE   Sverdlovsk       53.46 317  e P      P      00 52 03.9 +0.7
SVE                                 pmax   pmax
      comp=Z,11nm,1.1s
SVE   Sverdlovsk       53.46 317  e P      P      00 52 03.9 +0.7
KOLN  Koldanda         53.66 275  e P      P      00 52 05.9 +0.5
      comp=Z,27nm,0.6s
PYUN  Piuthan          53.90 276  e P      P      00 52 07.5 +0.4
      comp=Z,45nm,0.8s
RES   Resolute Bay     54.25  17    P      P      00 52 08.5  -0.2
RES                                 IAmb   IAmb   00 52 10.4
      comp=Z,9.5nm,0.8s
RES   Resolute Bay     54.25  17    P      P      00 52 08.5  -0.2
RES                                 pmax   pmax
      comp=Z,10.0nm,0.9s
KK31  Karatay Array    54.34 298    P      P      00 52 10.1 +0.2
KK31                                IAmb   IAmb   00 52 11.0
      comp=Z,14nm,0.8s
KK31  Karatay Array    54.34 298    P      P      00 52 10.1 +0.2
KK31                                pmax   pmax
      comp=Z,14nm,0.8s
KKAR  Karatay Array    54.34 298    P      P      00 52 09.6  -0.3
KKAR  Karatay Array    54.34 298    P      P      00 52 09.6  -0.3
ARU   Arti             54.66 317    LR     LR     01 18 05.5
      comp=Z,152nm,18.6s,baz=20,slow=39
ARU   Arti             54.66 317    P      P      00 52 11.0  -1.0
ARU                                 IAmb   IAmb   00 52 12.7
      comp=Z,9.8nm,0.8s
ARU   Arti             54.66 317d i P      P      00 52 11.3  -0.7
ARU                                 *PP    pP     00 52 20.6  -2.9
ARU                                 S      S      00 59 49.8 +0.9
ARU                                 SS     SS     01 03 26.0  -5.4
ARU                                 pmax   pmax
      comp=Z,11nm,0.8s
ARU   Arti             54.66 317    P      P      00 52 11.8  -0.2
ARU                                 pP     pP     00 52 22.6  -0.9
YKA   Yellowknife Ar   54.88  34    P      P      00 52 14.6 +1.1
      comp=Z,5.0nm,0.6s,baz=299,slow=7.1,SNR=74
YKA                                 PcP    PcP    00 53 15.1  -0.1
      comp=Z,1.4nm,0.8s,baz=298,slow=3.9,SNR=3.7
      comp=Z,5.0nm,0.6s
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YKA   Yellowknife Ar    54.88  34   P      P      00 52 14.3 +0.8
YKA   Yellowknife Ar    54.88  34 i P      P      00 52 08.6 -4.9
WAPA  Wapiti River      56.43  43   P      P      00 52 24.5 -0.3
WAPA                                IAmb   IAmb   00 52 26.4
      comp=Z,16nm,0.9s
GAR   Garm              56.60 294   P      P      00 52 26.5 +0.2
TULEG Thule             57.21  10  eP      P      00 52 28.7 -1.2
TULEG                               IAmb   IAmb   00 52 29.9
      comp=Z,5.1nm,1.0s
ABKAR Akbulak array     57.52 309   P      P      00 52 32.1 -0.4
CHGR  Chuyangaron       57.54 294   P      P      00 52 32.4 -0.6
CHGR  Chuyangaron       57.54 294   P      P      00 52 32.4 -0.6
CHGR                                pmax   pmax
      comp=Z,41nm,0.8s
NIL   Nilore            57.57 287   P      P      00 52 33.2  0.0
NIL   Nilore            57.57 287   P      P      00 52 33.2  0.0
NIL                                 pmax   pmax
      comp=Z,33nm,0.9s
NIL   Nilore            57.57 287   P      P      00 52 34.4 +1.3
NIL                                 pP     pP     00 52 44.9 +0.2
NIL                                 sP     sP     00 52 48.7 -0.6
KIRV  Kirov             57.81 322   LR     LR     01 19 42.4
      comp=Z,144nm,18.4s,baz=61,slow=38
KIRV  Kirov             57.81 322ceP       P      00 52 35.5 +1.1
ARCES ARCESS Array B    59.14 340   P      P      00 52 42.8 -0.8
      comp=Z,2.5nm,0.7s,baz=49,slow=7.6,SNR=12
ARCES                               LR     LR     01 22 25.3
      comp=Z,84nm,18.7s,baz=298,slow=40
      comp=Z,2.5nm,0.7s
KBL   Kabul             59.93 290   P      P      00 52 48.8 -1.0
KBL                                 IAmb   IAmb   00 52 50.1
      comp=Z,13nm,0.9s
KBL   Kabul             59.93 290   P      P      00 52 48.8 -1.0
KBL                                 pmax   pmax
      comp=Z,13nm,0.9s
KLMR  Klimovskoe        60.55 328  eP      P      00 52 53.2 -0.1
KLMR                                AMP           00 52 54.2
      comp=Z,6.0nm,0.8s
KLMR  Klimovskoe        60.55 328  eP      P      00 52 53.2 -0.1
KLMR                                pmax   pmax
      comp=Z,6.0nm,0.8s
BKNI  Bangkinang        60.64 238   P      P      00 52 55.7 +1.2
F07A  Phinny Hill Vi    61.09  53   P      P      00 52 57.8 +0.6
NEW   Newport           61.31  49   P      P      00 52 59.3 +0.6
      baz=305
SDSI  Sungai Dareh      61.40 236   P      P      00 53 01.8 +2.1
PINE  Pine Mountain     61.71  55   P      P      00 53 02.7 +0.9
PINE                                IAmb   IAmb   00 53 30.1
      comp=Z,14nm,1.1s
BELG  Belogornoye       62.21 317   LR     LR     01 22 38.5
      comp=Z,117nm,18.3s,baz=154,slow=38
WALA  Waterton Lakes    62.56  47   P      P      00 53 07.7 +0.4
MOD   Modoc Plateau     63.20  57   P      P      00 53 12.1 +0.4
MOD                                 IAmb   IAmb   00 53 25.8
      comp=Z,11nm,1.4s
SUMG  Summit            63.41   2 i P      P      00 53 11.0 -1.9
SUMG                                IAmb   IAmb   00 53 14.3
      comp=Z,8.0nm,0.9s
PLID  Pearl Lake        63.80  52   P      P      00 53 15.5 -0.2
PLID                                IAmb   IAmb   00 53 17.2
      comp=Z,11nm,1.4s
WVOR  Wild Horse Val    63.87  55   P      P      00 53 16.0 -0.1
WVOR  Wild Horse Val    63.87  55   P      P      00 53 16.0 -0.1
WVOR                                pmax   pmax
      comp=Z,6.0nm,1.2s
MSO   Missoula          63.89  49   P      P      00 53 16.1  0.0
MSO                                 IAmb   IAmb   00 53 30.5
      comp=Z,14nm,1.4s
MSO   Missoula          63.89  49   P      P      00 53 16.5 +0.4
      baz=308
FFC   Flin Flon         64.76  37   P      P      00 53 21.2 -0.2
FFC                                 IAmb   IAmb   00 53 23.2
      comp=Z,16nm,1.1s
FFC   Flin Flon         64.76  37   P      P      00 53 21.2 -0.2
FFC                                 pmax   pmax
      comp=Z,16nm,1.1s
FFC   Flin Flon         64.76  37   P      P      00 53 22.2 +0.8
FFC                                 pP     pP     00 53 32.3 -0.1
FINES FINESS Array B    64.89 333   P      P      00 53 20.5 -1.7
      comp=Z,7.7nm,0.6s,baz=38,slow=5.9,SNR=37
FINES                               LR     LR     01 23 41.3
      comp=Z,103nm,18.2s,baz=26,slow=38
      comp=Z,7.7nm,0.6s
FINES FINESS Array B    64.89 333   P      P      00 53 21.8 -0.4
FINES FINESS Array B    64.89 333 i P      P      00 53 20.6 -1.6
FINES                               pmax   pmax
      comp=Z,8.0nm,0.6s
GEYT  Alibeck           65.05 299   P      P      00 53 24.3 +0.6
      comp=Z,10.0nm,0.7s,baz=46,slow=4.2,SNR=28
      comp=Z,10.0nm,0.7s
FCC   Fort Churchill    65.14  31   P      P      00 53 23.9 +0.1
FCC   Fort Churchill    65.14  31   P      P      00 53 23.9 +0.1
FCC                                 pmax   pmax
      comp=Z,14nm,0.6s
EGMT  Eagleton          65.38  46   P      P      00 53 25.5 -0.2
EGMT                                IAmb   IAmb   00 53 38.7
      comp=Z,18nm,1.4s
EGMT  Eagleton          65.38  46   P      P      00 53 26.3 +0.5
      baz=309
YERR  Yerington         65.60  59   P      P      00 53 27.2 -0.2
YERR                                IAmb   IAmb   00 53 29.3
      comp=Z,9.7nm,1.2s
HLID  Hailey            65.64  52   P      P      00 53 28.4 +0.8
      baz=309
BOZ   Bozeman (W)       65.92  49   P      P      00 53 29.4 +0.1
BOZ                                 IAmb   IAmb   00 53 42.5
      comp=Z,5.0nm,0.6s
BOZ   Bozeman (W)       65.92  49   P      P      00 53 29.4 +0.1
BOZ                                 pmax   pmax
      comp=Z,5.0nm,0.6s
BOZ   Bozeman (W)       65.92  49   P      P      00 53 30.2 +0.8
      baz=309,SNR=8.7
KVN   Kaiserville       66.26  58   P      P      00 53 31.8 +0.1
KVN                                 IAmb   IAmb   00 53 45.5
      comp=Z,8.1nm,0.9s
KVN   Kaiserville       66.26  58   P      P      00 53 31.8 +0.1
KVN                                 pmax   pmax
      comp=Z,8.0nm,0.9s
LHV   Little Huntoon    66.51  59   P      P      00 53 34.2 +1.2
LHV                                 IAmb   IAmb   00 53 35.5
      comp=Z,8.7nm,0.8s
NVAR  Mina Array Bea    66.52  59   P      P      00 53 34.1 +0.7
      comp=Z,4.9nm,0.8s,baz=292,slow=7.0,SNR=30
      comp=Z,4.9nm,0.8s
NVAR  Mina Array Bea    66.52  59   P      P      00 53 34.0 +0.6
RAF   Rauma             66.57 335  eP      P      00 53 32.3 -0.7
ICESG Greenland Ices    66.86   3 i P      P      00 53 35.5 +0.3
ICESG                               IAmb   IAmb   00 53 36.6
      comp=Z,14nm,0.8s
H17A  Grant Village     67.26  50   P      P      00 53 38.5 +0.5
H17A  Grant Village     67.26  50   P      P      00 53 39.8 +1.8
      baz=310
TPH   Tonopah           67.41  58   P      P      00 53 37.7 -1.3
TPH   Tonopah           67.41  58   P      P      00 53 37.7 -1.3
TPH                                 pmax   pmax
      comp=Z,27nm,0.7s
MOOW  Moose Ponds       67.58  50   P      P      00 53 40.7 +0.6
AAL   Aland             67.78 335  eP      P      00 53 40.0 -0.6
PKM   Mcpherson Peak    67.79  63   P      P      00 53 41.7 +0.2
      baz=309
DGMT  Dagmar            67.91  43   P      P      00 53 42.1 +0.3
      baz=312
GRAC  Grapevine Rang    68.00  59   P      P      00 53 42.9 +0.4
GRAC                                IAmb   IAmb   00 53 44.5
      comp=Z,9.0nm,0.7s
GRAC  Grapevine Rang    68.00  59   P      P      00 53 43.6 +1.0
      baz=310,SNR=7.7
LAO   LASA Array        68.07  46   P      P      00 53 43.7 +0.8
      baz=312
SFJD  Kangerlussuaq     68.17   8   LR     LR     01 24 57.0
      comp=Z,71nm,20.2s,baz=49,slow=37
R11A  Troy Canyon, C    68.23  57   P      P      00 53 44.9 +0.7
      baz=310,SNR=9.0
Q12A  Willow Creek R    68.25  56   P      P      00 53 43.6 -0.6
Q12A                                IAmb   IAmb   00 54 03.2
      comp=Z,6.4nm,0.9s
FRB   Frobisher Bay     68.47  17   LR     LR     01 26 43.6
      comp=Z,85nm,20.3s,baz=5.0,slow=39
MPMC  Manual Prospec    68.52  60   P      P      00 53 46.8 +0.7
      baz=310,SNR=5.2
SPR3  Spring Creek 3    68.57  56   P      P      00 53 46.4 -0.1
WCT   Wildcat Mounta    68.59  59   P      P      00 53 45.9 -0.4
FURC  Furnace Creek,    68.65  60   P      P      00 53 47.4 +0.9
      baz=310
DUG   Dugway, Tooele    68.70  54   P      P      00 53 45.8 -1.2
DUG   Dugway, Tooele    68.70  54   P      P      00 53 45.8 -1.2
DUG                                 pmax   pmax
      comp=Z,5.0nm,1.1s
DUG   Dugway, Tooele    68.70  54   P      P      00 53 47.9 +0.8
      baz=310
TPNV  Topopah Spring    68.72  59   P      P      00 53 46.3 -0.9
TPNV                                IAmb   IAmb   00 53 48.9
      comp=Z,9.6nm,1.1s
TPNV  Topopah Spring    68.72  59   P      P      00 53 46.3 -0.9
TPNV                                pmax   pmax
      comp=Z,10.0nm,1.1s
TPNV  Topopah Spring    68.72  59   P      P      00 53 48.0 +0.8
      baz=310,SNR=7.5
UPP   Uppsala           68.74 336  eP      P      00 53 46.3 -0.4
LRMC  Laurel Mtn Rad    68.76  61   P      P      00 53 47.4 -0.1
      baz=310
BW06  Boulder Array     68.88  51   P      P      00 53 48.1 -0.1
BW06  Boulder Array     68.88  51   P      P      00 53 48.7 +0.5
      baz=311
PD31  Pinedale Array    68.88  51   P      P      00 53 46.9 -1.3
PDAR  Pinedale Array    68.88  51   P      P      00 53 48.5 +0.3
      comp=Z,1.8nm,0.6s,baz=248,slow=2.0,SNR=29
      comp=Z,1.8nm,0.6s
PDAR  Pinedale Array    68.88  51   P      P      00 53 47.6 -0.6
GWY   Greenwater Val    68.95  60   P      P      00 53 48.3 -0.4
GWY                                 IAmb   IAmb   00 53 50.1
      comp=Z,5.0nm,0.7s
QSM   Queen of Sheba    68.96  60   P      P      00 53 48.6 +0.1
QSM                                 IAmb   IAmb   00 53 50.1
      comp=Z,5.8nm,0.8s
GROC  Groznyy           68.99 310  eP      P      00 53 48.6 +0.1
GROC                               e*SP    sP     00 54 02.8 -2.1
GROC                               e              00 54 10.8
GROC                               e              00 56 22.5
GROC                                pmax   pmax
      comp=Z,19nm,0.9s
AKT   Akhty             69.03 308  eP      P      00 53 49.8 +0.8
AKT                                e              00 54 13.7
AKT                                 pmax   pmax
      comp=Z,29nm,0.8s
DY2G  Dye2              69.07   6  eP      P      00 53 49.1 +0.2
DY2G                                IAmb   IAmb   00 53 49.7
      comp=Z,13nm,0.8s
PRN   Pahroc Range      69.16  58   P      P      00 53 50.6 +0.6
NLU   North Lily Min    69.28  54   P      P      00 53 50.9 +0.2
ISAL  Salakas           69.31 329  eP      P      00 53 51.4 +1.1
NC405 NORSAR Array S    69.32 339   P      P      00 53 49.5 -0.9
SHOC  Shoshone, Teco    69.37  60   P      P      00 53 51.6 +0.5
      baz=310
NC204 NORSAR Array S    69.42 340   P      P      00 53 50.5 -0.5
GSC   Goldstone, Bar    69.43  61   P      P      00 53 52.0 +0.4
      baz=310
IIGN  Ignalina          69.44 329  eP      P      00 53 49.9 -1.3
MNK   Minsk             69.45 328 i P      P      00 53 48.1 -3.1
      comp=E,1.0nm,1.1s
MNK                               i P      P      00 53 48.1 -3.1
      comp=N,4.0nm,0.6s
MNK                               i P      P      00 53 48.1 -3.1
      comp=Z,11nm,1.1s,baz=41
MNK                               i PP     PP     00 56 20.0 -4.4
MNK                               i PPP    PPP    00 58 02.2
MNK                               i S      S      01 02 53.4 -2.0
MNK                               i SS     SS     01 07 22.6 +0.4
MNK                               i SSS    SSS    01 10 37.7
MNK                               i LQ     LQ     01 19 38.8
MNK                               i LR     LR     01 23 04.2
MNK                               i LRM    MLR    01 26 17.8
      comp=E,18nm,10.8s
MNK                               i LRM    MLR    01 26 18.5
      comp=N,247nm,13.4s
MNK                               i LRM    MLR    01 26 22.9
      comp=Z,104nm,13.4s
MNK   Minsk             69.45 328 i P      P      00 53 48.1 -3.1
MNK                               i PPP    PPP    00 58 02.1
MNK                               i S      S      01 02 53.4 -2.0
MNK                               i SS     SS     01 07 22.5 +0.4
MNK                                 pmax   pmax
      comp=N,4.0nm,0.6s
MNK                                 pmax   pmax
      comp=E,1.0nm,1.1s
MNK                                 pmax   pmax
      comp=Z,11nm,1.1s
MNK                                 MLR    MLR
      comp=E,18nm,11.0s
MNK                                 MLR    MLR
      comp=N,247nm,13.0s
MNK                                 MLR    MLR
      comp=Z,104nm,13.0s
NB201 NORSAR Array S    69.48 339   P      P      00 53 50.2 -1.2
NB2   NORSAR Subarra    69.51 339   P      P      00 53 50.9 -0.7
      comp=Z,4.7nm,0.5s,baz=30,slow=6.5
NOA   NORSAR Array B    69.51 339   P      P      00 53 51.4 -0.2
      comp=Z,8.2nm,0.6s,baz=32,slow=6.6,SNR=46
NOA                                 LR     LR     01 27 24.6
      comp=Z,63nm,21.8s,baz=15,slow=39
      comp=Z,8.2nm,0.6s
SEKA  Sheki             69.52 308   P      P      00 53 50.3 -1.7
ZKTA  Zakatala          69.56 308   P      P      00 53 51.0 -1.2
NACGM Naroch            69.57 328  eP      P      00 53 51.1 -0.8
      comp=Z,13nm,0.9s,baz=41
BFSC  Mount Baldy Ra    69.57  62   P      P      00 53 53.1 +0.6
      baz=310
HFS   Hagfors           69.63 338   LR     LR     01 29 51.1
      comp=Z,68nm,18.6s,baz=5.0,slow=41
SHPR  Sheep Range       69.67  59   P      P      00 53 52.3 -0.9
MNGR  Mingechevir, A    69.87 308   P      P      00 53 52.9 -1.1
TUQ   Turquoise Moun    69.89  60   P      P      00 53 54.9 +0.5
      baz=310
PCHI  Peechi            69.93 265  eP      P      00 53 55.1 +0.3
HEC   Hector,Ludlow     70.03  61   P      P      00 53 55.2  0.0
      baz=310
CCUT  Cedar City        70.09  57   P      P      00 53 56.1 +0.4
PABE  Paberze           70.14 330  eP      P      00 53 55.3 -0.1
KIV   Kislovodsk        70.16 312 ⇓P       P      00 53 57.4 +1.5
KIV   Kislovodsk        70.16 312   P      P      00 53 56.3 +0.4
KIV   Kislovodsk        70.16 312  eP      P      00 53 57.2 +1.3
KIV                                 pmax   pmax
      comp=Z,32nm,0.9s
KIV                                 MLR    MLR
      comp=Z,123nm,17.0s
KIV   Kislovodsk        70.16 312  eP      P      00 53 57.2 +1.3
KIV   Kislovodsk        70.16 312   P      P      00 53 56.9 +1.0
KIV                                 sP     sP     00 54 11.7 -0.6
KBZ   Khabaz            70.20 312   P      P      00 53 57.0 +1.0
      comp=Z,19nm,0.8s,baz=60,slow=3.9,SNR=69
      comp=Z,19nm,0.8s
KBZ   Khabaz            70.20 312ceP       P      00 53 57.3 +1.3
KBZ                                 pmax   pmax
      comp=Z,21nm,0.8s
KBZ   Khabaz            70.20 312  eP      P      00 53 57.3 +1.3
LKRN  Lenkeran, Azer    70.24 305   P      P      00 53 55.2 -1.1
MURC  Murrieta          70.28  62   P      P      00 53 56.7  0.0
      baz=310
ZEI   Tsey              70.30 311  eP      P      00 53 56.3 -0.6
ZEI                                 pmax   pmax
      comp=Z,15nm,0.8s
ZEI   Tsey              70.30 311  eP      P      00 53 56.3 -0.6
RDMU  Red Mountain      70.32  52   P      P      00 53 57.4 +0.3
RDMU                                IAmb   IAmb   00 54 11.2
      comp=Z,14nm,0.8s
SHA1  Shidzhatmaz       70.33 312 i P      P      00 53 57.4 +0.3
GANJ  Ganja             70.39 308   P      P      00 53 55.9 -1.4
GMRC  Granite Mounta    70.48  60   P      P      00 53 58.3 +0.3
      baz=311
LCMT  Little Creek M    70.51  57   P      P      00 53 58.7 +0.5
ULM   Lac du Bonnet     70.55  38   P      P      00 53 57.8 -0.3
      comp=Z,2.6nm,0.6s,baz=300,slow=6.2,SNR=5.4
      comp=Z,2.6nm,0.6s
P18A  Preston Nutter    70.56  53   P      P      00 53 58.6 -0.1
K22A  Casper            70.62  49   P      P      00 53 59.2 +0.3
      baz=313
ONI   Oni               70.68 311   P      P      00 53 59.9 +0.8
ONI                                 IAmb   IAmb   00 54 01.5
      comp=Z,16nm,0.8s
ONI   Oni               70.68 311   P      P      00 53 59.9 +0.8
ONI                                 pmax   pmax
      comp=Z,16nm,0.8s
PFO   Pinyon Flats O    70.74  62 i P      P      00 53 59.8 +0.2
SRU   San Rafael Swe    70.74  54   P      P      00 53 59.3 -0.4
SRU                                 IAmb   IAmb   00 54 13.5
      comp=Z,11nm,0.9s
SRU   San Rafael Swe    70.74  54   P      P      00 53 59.3 -0.4
SRU                                 pmax   pmax
      comp=Z,11nm,0.9s
KNB   Kanab             70.76  57   P      P      00 54 00.4 +0.6
KNB   Kanab             70.76  57   P      P      00 54 00.4 +0.6
KNB                                 pmax   pmax
      comp=Z,6.0nm,0.9s
RSSD  Black Hills       70.94  47   P      P      00 54 00.2 -0.7
RSSD                                IAmb   IAmb   00 54 13.6
      comp=Z,12nm,1.4s
RSSD  Black Hills       70.94  47   P      P      00 54 00.2 -0.7
RSSD                                pmax   pmax
      comp=Z,12nm,1.4s
RSSD  Black Hills       70.94  47   P      P      00 54 01.1 +0.2
      baz=314
RSSD  Black Hills       70.94  47   P      P      00 54 00.8  0.0
RSSD                                pP     pP     00 54 12.4 +0.4
IRM   Iron Mountain     71.21  61   P      P      00 54 03.0 +0.6
      baz=311
BC3   Big Chuckawall    71.34  61   P      P      00 54 03.7 +0.4
      baz=311
O20A  White River Ci    71.37  52   P      P      00 54 03.7 +0.2
      baz=312
AKH   Akhalkalaki       71.45 310   P      P      00 54 04.7 +0.8
AKH   Akhalkalaki       71.45 310   P      P      00 54 04.7 +0.8
AKH                                 pmax   pmax
      comp=Z,39nm,1.1s
U15A  North Rim         71.47  57   P      P      00 54 04.8 +0.6
U15A                                IAmb   IAmb   00 54 18.8
      comp=Z,8.0nm,1.0s
GNI   Garni             71.61 308   P      P      00 54 05.6 +0.7
GNI                                 IAmb   IAmb   00 54 19.7
      comp=Z,16nm,0.9s
GNI   Garni             71.61 308ceP       P      00 54 07.0 +2.1
GNI                                 pmax   pmax
      comp=Z,21nm,1.3s
GNI   Garni             71.61 308   P      P      00 54 06.7 +1.8
PDMCI Parker Dam,Lak    71.74  60   P      P      00 54 06.2 +0.7
      baz=312
AKASG Malin Array Be    71.77 324   P      P      00 54 05.0 -0.3
      comp=Z,7.5nm,0.7s,baz=38,slow=6.1,SNR=43
      comp=Z,7.5nm,0.7s
AKBB  Malin Array Si    71.77 324   P      P      00 54 04.8 -0.6
AKBB                                IAmb   IAmb   00 54 06.0
      comp=Z,15nm,0.8s
AKBB  Malin Array Si    71.77 324   P      P      00 54 04.8 -0.6
AKBB                                pmax   pmax
      comp=Z,15nm,0.8s
NAX   Nakhchivan        71.84 307   P      P      00 54 05.0 -1.2
AGMN  Agassiz Nation    71.98  39   P      P      00 54 06.4 -0.3
      baz=317
SOC   Sochi             71.98 314  eP      P      00 54 06.0 -0.8
SOC                                e              00 56 45.1
SOC                                ePPP    PPP    00 58 32.5
SOC                                eS      S      01 03 25.2  0.0
SOC                                eSS     SS     01 08 01.6 +0.1
SOC                                 pmax   pmax
      comp=Z,15nm,0.6s
SOC                                 MLR    MLR
      comp=Z,125nm,20.0s
PV10  Paradox Valley    72.09  54   P      P      00 54 07.6 -0.4
PV10                                IAmb   IAmb   00 54 22.2
      comp=Z,16nm,0.8s
GLA   Glamis            72.14  61   P      P      00 54 08.8 +0.9
      baz=312
N23A  Red Feather La    72.14  50   P      P      00 54 08.7 +0.5
      baz=313
PV11  David Mesa, Pa    72.24  54   P      P      00 54 08.8  0.0
PV11                                IAmb   IAmb   00 54 22.3
      comp=Z,8.5nm,0.8s
ANN   Anapa             72.29 316  eP      P      00 54 06.6 -2.0
ANN                                e*PP    pP     00 54 18.5 -1.8
ANN                                e              00 54 24.5
ANN                                eS      S      01 03 26.5 -2.2
ANN                                 pmax   pmax
      comp=Z,12nm,0.5s
PV13  Radium Mtn., P    72.37  54   P      P      00 54 09.4 -0.2
PV13                                IAmb   IAmb   00 54 23.4
      comp=Z,8.4nm,0.8s
WUAZ  Wupatki           72.63  57   P      P      00 54 11.4 +0.3
      baz=312
ISCO  Idaho Springs     73.07  51   P      P      00 54 13.8  0.0
ISCO  Idaho Springs     73.07  51   P      P      00 54 13.8  0.0
ISCO                                pmax   pmax
      comp=Z,4.0nm,1.0s
ISCO  Idaho Springs     73.07  51   P      P      00 54 14.3 +0.5
      baz=314
MVCO  Mesa Verde        73.20  54   P      P      00 54 14.2 -0.2
MVCO  Mesa Verde        73.20  54   P      P      00 54 14.8 +0.4
      baz=313
BSD   Bornholm Skovb    73.50 334  eP      P      00 54 15.5  0.0
BSD                                 IAmb   IAmb   00 54 16.2
      comp=Z,16nm,0.6s
S22A  4UR Ranch, Cre    73.80  53   P      P      00 54 18.9 +0.8
      baz=314
SIM   Simferopol'       73.82 318  eP      P      00 54 18.7 +1.0
SIM                                 pmax   pmax
      comp=Z,35nm,0.9s
GEVA  Gevas             73.82 308   P      P      00 54 17.3 -0.8
GEVA                                IAmb   IAmb   00 54 20.4
      comp=Z,9.3nm,0.9s
Q24A  Divide            73.91  51   P      P      00 54 18.3 -0.4
      baz=314
KOPT  Kop Dagi          74.06 311   P      P      00 54 18.9 -0.6
KOPT                                IAmb   IAmb   00 54 24.1
      comp=Z,13nm,0.8s
WSAR  Wadi Sarin        74.07 287   P      P      00 54 19.8 +0.3
      comp=Z,2.6nm,0.6s,baz=37,slow=5.1,SNR=5.0
      comp=Z,2.6nm,0.6s
SORM  Soroca            74.08 323 ⇑P       P      00 54 18.9 -0.3
SORM  Soroca            74.08 323 ⇑P       P      00 54 18.9 -0.3
OGNE  Ogallala          74.22  48   P      P      00 54 20.1 -0.1
      baz=315
GURO  Guroymak-BITLI    74.23 309   P      P      00 54 21.3 +0.9
GURO                                IAmb   IAmb   00 54 23.0
      comp=Z,18nm,0.8s
GKP   Gorka Klasztor    74.28 332  eP      P      00 54 20.3 +0.1
GKP   Gorka Klasztor    74.28 332  eP      P      00 54 20.4 +0.2
SDCO  Great Sand Dun    74.56  52   P      P      00 54 22.5  0.0
      baz=314
UOSS  Minazif           74.60 290   P      P      00 54 22.5 -0.1
UOSS                                IAmb   IAmb   00 54 23.6
      comp=Z,12nm,0.8s
PURM  Purcari           74.63 321 ⇑P       P      00 54 21.9 -0.4
KIS   Kishinev          74.75 322 ⇑P       P      00 54 23.3 +0.3
KIS   Kishinev          74.75 322 ⇑P       P      00 54 23.3 +0.3
ECSD  EROS Data Cent    74.98  43   P      P      00 54 23.7 -0.7
ECSD                                IAmb   IAmb   00 54 37.6
      comp=Z,13nm,1.2s
ECSD  EROS Data Cent    74.98  43   P      P      00 54 24.6 +0.1
      baz=318
IAS   Iasi              75.15 323 ⇓P       P      00 54 25.3 -0.1
IAS   Iasi              75.15 323 ⇓P       P      00 54 25.3 -0.1
TUC   Tucson            75.16  59   P      P      00 54 24.6 -1.1
TUC   Tucson            75.16  59   P      P      00 54 24.7 -1.1
TUC                                 pmax   pmax
      comp=Z,5.0nm,1.1s
TUC   Tucson            75.16  59   P      P      00 54 26.4 +0.6
      baz=313
T25A  Trinidad          75.60  52   P      P      00 54 28.5 +0.1
      baz=315
DIKM  Dikmen            75.66 315 ⇑P       P      00 54 30.1 +1.7
SPMN  Marine on St.     75.67  40   P      P      00 54 28.4  0.0
      baz=320
BUR08 Bucovina Ar. S    75.81 324   P      P      00 54 29.1 -0.2
BUR08                               IAmb   IAmb   00 54 30.6
      comp=Z,9.3nm,0.7s
BURAR Bucovina Array    75.83 324 ⇑P       P      00 54 30.4 +1.0
BURAR Bucovina Array    75.83 324   P      P      00 54 28.8 -0.5
BURAR                               IAmb   IAmb   00 54 31.0
      comp=Z,14nm,0.8s
BURAR Bucovina Array    75.83 324 ⇑P       P      00 54 30.4 +1.0
OJC   Ojcow             75.88 329  eP      P      00 54 30.0 +0.5
OJC   Ojcow             75.88 329   P      P      00 54 28.9 -0.6
OJC                                 IAmb   IAmb   00 54 31.1
      comp=Z,24nm,1.2s
OJC   Ojcow             75.88 329   P      P      00 54 28.9 -0.6
OJC                                 pmax   pmax
      comp=Z,25nm,1.2s
ANMO  Albuquerque       75.95  55   P      P      00 54 31.3 +0.8
      baz=314
VLDR  Vladesti          75.96 322 ⇓P       P      00 54 30.8 +0.8
STHS  Stebnicka Huta    75.99 328  eP      P      00 54 30.8 +0.6
STHS                                pmax   pmax
      comp=Z,8.0nm,0.7s
STHS  Stebnicka Huta    75.99 328  eP      P      00 54 30.8 +0.6
TESR  Tescani           76.08 323 ⇓P       P      00 54 30.7  0.0
RUE   Ruedersdorf       76.09 333  eP      P      00 54 31.7 +1.1
      comp=Z,23nm,0.7s,baz=30,slow=5.7
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TLCR		76.13	321	⇑P	P	00 54 33.2	+2.2
TLCR		76.13	321	⇑P	P	00 54 33.2	+2.2
I37A	Lemond, Waseca	76.31	41	P	P	00 54 31.9	-0.2
NIE	Niedzica	76.35	328	*e*P	P	00 54 33.9	+1.6
PANC	Panciu	76.35	322	⇓P	P	00 54 33.8	+1.6
ODBI	Odobesti	76.48	322	⇑P	P	00 54 34.8	+1.8
TRPA	Tarpa	76.52	326	⇓P	P	00 54 33.9	+0.8
VRI	Vrincioaia	76.54	322	⇑P	P	00 54 33.9	+0.5
VRI	Vrincioaia	76.54	322	⇑P	P	00 54 33.9	+0.5
TPGR	Topolog	76.57	321	⇓P	P	00 54 34.2	+0.6
PLOR	Plostina	76.59	322	⇓P	P	00 54 33.3	-0.3
PLOR	Plostina	76.59	322	⇓P	P	00 54 33.3	-0.3
KSP	Ksiaz	76.63	331	*e*P	P	00 54 34.2	+0.5
319A	Douglas	76.73	59	P	P	00 54 34.6	-0.2
319A				IAmb	IAmb	00 54 36.4	
	comp=Z,6.6nm,0.8s						
OZUR		76.77	323	⇑P	P	00 54 35.7	+1.0
COVR	Voineasa-Covas	76.79	323	⇑P	P	00 54 35.4	+0.6
121A	Cookes Peak, D	76.84	57	P	P	00 54 36.3	+0.8
	baz=314						
SCHQ	Schefferville	76.86	20	P	P	00 54 35.1	+0.1
	comp=Z,5.3nm,0.6s,baz=337,slow=7.7,SNR=17						
	comp=Z,5.3nm,0.6s						
TIRR	Tirgusor	76.88	320	⇓P	P	00 54 37.0	+1.8
LANS	Liptovska Anna	76.88	328	*e*P	P	00 54 37.2	+1.9
LANS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LANS	Liptovska Anna	76.88	328	*e*P	P	00 54 37.2	+1.9
ILGA	Ilgaz	76.89	315	P	P	00 54 35.0	-0.6
OSTC	Ostas	76.90	331	*e*P	P	00 54 36.1	+0.8
OSTC	Ostas	76.90	331	*e*P	P	00 54 36.1	+0.8
TLBR	Topalu	76.98	321	⇑P	P	00 54 35.0	-0.8
UPC	Upice	77.01	331	*e*P	P	00 54 36.7	+0.8
UPC	Upice	77.01	331	*e*P	P	00 54 36.7	+0.8
FLTG	Flechtingen	77.02	335	*e*P	P	00 54 36.5	+0.7
	comp=Z,22nm,0.8s,baz=30,slow=5.7						
DPC	Dobruska-Polom	77.03	331	*e*P	P	00 54 37.2	+1.1
DPC	Dobruska-Polom	77.03	331	*e*P	P	00 54 37.2	+1.1
DOPR	Dopca	77.05	323	⇓P	P	00 54 37.6	+1.4
NEHR	Nehoiu	77.07	322	⇑P	P	00 54 40.1	+3.7
MORC	Moravsky Berou	77.08	330	⇓P	P	00 54 37.0	+0.6
MORC	Moravsky Berou	77.08	330	P	P	00 54 36.1	-0.3
MORC				IAmb	IAmb	00 54 38.1	
	comp=Z,15nm,0.9s						
MORC	Moravsky Berou	77.08	330	*e*P	P	00 54 36.8	+0.5
MORC	Moravsky Berou	77.08	330	P	P	00 54 36.1	-0.3
MORC				pmax	pmax		
	comp=Z,15nm,0.9s						
MESR	Meseseni	77.13	325	⇓P	P	00 54 37.9	+1.3
MLR	Muntele Rosu	77.18	323	⇓P	P	00 54 38.1	+1.0
MLR	Muntele Rosu	77.18	323	P	P	00 54 37.0	-0.1
MLR				IAmb	IAmb	00 54 39.3	
	comp=Z,10nm,0.8s						
MLR	Muntele Rosu	77.18	323	P	P	00 54 37.0	-0.1
MLR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ISR	Istrita	77.21	322	⇓P	P	00 54 37.9	+0.8
ISR	Istrita	77.21	322	⇓P	P	00 54 37.9	+0.8
CJR	Cluj-Napoca	77.21	325	⇓P	P	00 54 38.2	+1.0
CJR	Cluj-Napoca	77.21	325	⇓P	P	00 54 38.2	+1.0
CLL	Collm	77.34	333	P	P	00 54 37.3	-0.4
CLL	Collm	77.34	333	*i* P	P	00 54 37.7	0.0
	comp=Z,31nm,0.8s						
CLL				*e*pP	pP	00 54 49.0	-0.5
CLL				*e*sP	sP	00 54 54.0	0.0
CLL	Collm	77.34	333	*i* P	P	00 54 37.7	0.0
CLL				*e*		00 54 49.0	
CLL				pmax	pmax		
	comp=Z,31nm,0.8s						
CLL	Collm	77.34	333	*e*P	P	00 54 38.4	+0.7
	comp=Z,30nm,0.8s,baz=30,slow=5.7						
BRG	Berggiesshubel	77.40	332	*e*P	P	00 54 38.2	+0.1
BRG				Amp		00 54 40.0	
	comp=Z,6.1nm,1.0s						
BRG	Berggiesshubel	77.40	332	*e*P	P	00 54 38.2	+0.1
BRG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRG	Berggiesshubel	77.40	332	*e*P	P	00 54 38.9	+0.9
	comp=Z,11nm,1.3s,baz=30,slow=5.7						
BNN	Bunyan	77.40	312	P	P	00 54 39.4	+0.9
ICOR	Ion Corvin	77.42	321	⇑P	P	00 54 39.7	+1.4
PVCC	Panska Ves	77.49	332	*e*P	P	00 54 39.3	+0.8
PVCC	Panska Ves	77.49	332	*e*P	P	00 54 39.3	+0.8
DRGR		77.52	325	⇓P	P	00 54 38.5	-0.4
DRGR		77.52	325	⇓P	P	00 54 38.5	-0.4
FBE	Freiberg	77.56	333	*e*P	P	00 54 40.1	+1.2
	comp=Z,16nm,0.9s,baz=30,slow=5.7						
VOIR		77.61	323	⇓P	P	00 54 40.4	+1.0
VOIR		77.61	323	⇓P	P	00 54 40.4	+1.0
VYHS	Vyhne	77.66	328	*e*P	P	00 54 40.2	+0.6
VYHS				pmax	pmax		
	comp=Z,14nm,1.1s						
VYHS	Vyhne	77.66	328	*e*P	P	00 54 40.2	+0.6
CLZ	Clausthal	77.71	335	*e*P	P	00 54 41.2	+1.3
	comp=Z,18nm,0.8s,baz=30,slow=5.7						
JAVC	Velka Javorina	77.79	329	*e*P	P	00 54 42.0	+1.6
VRAC	Vranov	77.81	330	LR	LR	01 31 42.7	
	comp=Z,88nm,18.9s,baz=337,slow=38						
VRAC	Vranov	77.81	330	*e*P	P	00 54 41.2	+0.8
NEUB	Neuenburg	77.82	334	*e*P	P	00 54 41.3	+0.9
	comp=Z,47nm,1.2s,baz=30,slow=5.7						
ARR	Arges	77.84	323	⇑P	P	00 54 42.4	+1.6
BR131	Keskin Array S	77.91	314	P	P	00 54 41.4	+0.1
BR131				IAmb	IAmb	00 54 43.0	
	comp=Z,13nm,0.9s						
BR131	Keskin Array S	77.91	314	P	P	00 54 41.4	+0.1
BR131				pmax	pmax		
	comp=Z,13nm,0.9s						
BRTR	Keskin Array B	77.91	314	P	P	00 54 42.0	+0.7
	comp=Z,5.6nm,0.7s,baz=44,slow=4.4,SNR=18						
	comp=Z,5.6nm,0.7s						
BRTR	Keskin Array B	77.91	314	P	P	00 54 40.2	-1.1
GOPC	GO Pecny, Ondr	77.93	331	*e*P	P	00 54 41.9	+0.8
GOPC	GO Pecny, Ondr	77.93	331	*e*P	P	00 54 41.9	+0.8
EKA	Eskdalemuir Ar	77.95	344	LR	LR	01 34 37.0	
	comp=Z,109nm,19.3s,baz=194,slow=40						
PRU	Pruhonice	77.95	332	*e*P	P	00 54 42.0	+0.8
PRU	Pruhonice	77.95	332	*e*P	P	00 54 42.0	+0.8
IBBN	Ibbenburen	78.07	337	*e*P	P	00 54 42.8	+1.0
	comp=Z,27nm,0.9s,baz=30,slow=5.7						
KRUC	Moravsky	78.09	330	*e*P	P	00 54 42.6	+0.7
GTTG	Gottingen	78.09	335	*e*P	P	00 54 43.1	+1.2
	comp=Z,17nm,0.8s,baz=30,slow=5.7						
LOT	Lotru	78.15	324	⇑P	P	00 54 40.0	-2.5
DEV	Deva	78.17	325	⇑P	P	00 54 43.2	+0.8
DEV	Deva	78.17	325	⇑P	P	00 54 43.2	+0.8
ANTO	Ankara	78.24	315	⇓P	P	00 54 44.4	+1.3
ANTO	Ankara	78.24	315	P	P	00 54 43.5	+0.5
ANTO	Ankara	78.24	315	P	P	00 54 43.5	+0.5
ANTO				pmax	pmax		
	comp=Z,30nm,0.8s						
BR231	Keskin MP Arra	78.27	315	P	P	00 54 44.2	+1.0
TANN	Tannenbergstha	78.28	333	*e*P	P	00 54 44.0	+0.9
	comp=Z,24nm,1.9s,baz=30,slow=5.7						
WERD	Werda	78.31	333	*e*P	P	00 54 44.2	+1.1
	comp=Z,7.9nm,0.9s,baz=30,slow=5.7						
PLN	Plauen	78.32	333	*e*P	P	00 54 44.3	+1.1
	comp=Z,7.9nm,1.0s,baz=30,slow=5.7						
MODS	Modra-Piesok	78.34	329	*e*P	P	00 54 44.5	+1.1
MODS				pmax	pmax		
	comp=Z,37nm,1.1s						
MODS	Modra-Piesok	78.34	329	*e*P	P	00 54 44.5	+1.1
MOX	Moxa	78.36	334	*e*P	P	00 54 44.5	+1.1
	comp=Z,14nm,1.2s,baz=30,slow=5.7						
GUNZ	Gunzen	78.37	333	*e*P	P	00 54 44.7	+1.2
	comp=Z,9.1nm,0.8s,baz=30,slow=5.7						
WERN	Wernitzgruen	78.42	333	*e*P	P	00 54 45.0	+1.2
	comp=Z,15nm,0.9s,baz=30,slow=5.7						
RAZG	Razgrad	78.43	321	⇑P	P	00 54 44.5	+0.5
NKC	Novy Kostel	78.44	333	*e*P	P	00 54 44.5	+0.6
NKC	Novy Kostel	78.44	333	*e*P	P	00 54 44.5	+0.6
COPA	Copaceanca	78.56	322	⇓P	P	00 54 43.8	-0.9
MDUB	Mudurnu	78.59	316	P	P	00 54 45.2	+0.2
GZR	Gura Zlata	78.61	324	⇓P	P	00 54 45.4	+0.4
GZR	Gura Zlata	78.61	324	⇓P	P	00 54 45.4	+0.4
AMTX	Amarillo	78.76	52	P	P	00 54 46.2	+0.1
	baz=317						
MANZ	Manzenberg	78.77	333	*e*P	P	00 54 46.8	+1.1
	comp=Z,2.4nm,1.1s,baz=30,slow=5.7						
MNTX	Cornudas Mount	78.88	57	P	P	00 54 46.8	+0.2
	baz=315						
ROTZ	Rotzenmuhle	78.92	333	*e*P	P	00 54 48.0	+1.4
	comp=Z,7.0nm,1.9s,baz=30,slow=5.7						
BUG	Bochum--Univer	78.98	336	*e*P	P	00 54 47.8	+1.0
	comp=Z,18nm,1.0s,baz=30,slow=5.7						
KHC	Kasperske Hory	79.01	332	P	P	00 54 47.4	+0.3
KHC	Kasperske Hory	79.01	332	*e*P	P	00 54 48.0	+0.9
KHC	Kasperske Hory	79.01	332	P	P	00 54 47.4	+0.3
KHC				pmax	pmax		
	comp=Z,18nm,0.7s						
CKRC	Cesky Krumlov	79.03	331	*e*P	P	00 54 47.4	+0.3
CKRC	Cesky Krumlov	79.03	331	*e*P	P	00 54 47.4	+0.3
GDL2	Guadalupe Moun	79.13	56	P	P	00 54 47.9	-0.2
GEC2	GERESS Array S	79.22	331	*e*P	P	00 54 49.1	+0.9
	comp=Z,25nm,1.6s,baz=30,slow=5.7						
GERES	GERESS Array B	79.22	331	P	P	00 54 48.7	+0.4
	comp=Z,4.0nm,0.6s,baz=38,slow=5.8,SNR=22						
	comp=Z,4.0nm,0.6s						
GERES	GERESS Array B	79.22	331	P	P	00 54 47.7	-0.6
CONA	Conrad Observa	79.23	330	*e*P	P	00 54 49.3	+0.9
	comp=Z,9.4nm,0.8s						
RONA	Rosalia, Austr	79.27	329	*e*P	P	00 54 49.5	+1.0
	comp=Z,10nm,0.9s						
GRA1	Grafenberg Arr	79.31	333	P	P	00 54 49.0	+0.3
GRF	Grafenberg Arr	79.31	333	P	P	00 54 49.0	+0.3
GRF				pmax	pmax		
	comp=Z,24nm,0.7s						
GRF	Grafenberg Arr	79.31	333	*e*P	P	00 54 50.2	+1.5
	comp=Z,32nm,0.9s,baz=30,slow=5.7						
GRFO	Grafenberg	79.31	333	P	P	00 54 49.0	+0.3
GRFO	Grafenberg	79.31	333	P	P	00 54 49.0	+0.3
GRFO				pmax	pmax		
	comp=Z,23nm,0.8s						
BORA	Eskisehir	79.41	316	P	P	00 54 49.2	-0.2
BORA				IAmb	IAmb	00 54 51.9	
	comp=Z,13nm,1.0s						
PLVB	Pleven	79.42	322	⇓P	P	00 54 48.9	-0.4
MDVR	Moldovita	79.55	325	⇑P	P	00 54 49.8	-0.3
GLMI	Grayling	79.58	35	P	P	00 54 50.2	0.0
	baz=324						
MORH	Mrgy, Hungar	79.62	327	⇓P	P	00 54 49.8	-0.5
TNS	Taunus Mts	79.71	335	*e*P	P	00 54 52.0	+1.1
	comp=Z,12nm,0.8s,baz=30,slow=5.7						
MPEP	Malo Peshtene	79.83	322	*e*P	P	00 54 55.3	+3.7
ARSA	Arzberg	79.93	330	*e*P	P	00 54 52.5	+0.4
	comp=Z,8.5nm,1.1s						
FRGS	Fruska Gora	80.03	326	⇓P	P	00 54 52.8	+0.2
BTNL	Ternell	80.07	337	*d*P	P	00 54 52.2	-0.5
	comp=Z,10nm,1.1s						
MEM	Membach	80.08	337	*d*P	P	00 54 53.1	+0.3
BIOA	Bad Ischl, Aus	80.22	331	*e*P	P	00 54 54.3	+0.6
	comp=Z,11nm,0.9s						
BSTI	Sart Tilman	80.23	337	*d*P	P	00 54 54.8	+1.2
BHOU	Houvegnez	80.31	337	*d*x	x	00 54 57.1	
BCLA	Clavier	80.45	337	*d*P	P	00 54 55.0	+0.2
	comp=Z,8.6nm,0.9s						
BOVS	Bovan	80.48	324	⇑P	P	00 54 53.9	-1.2
WMOK	Wichita Mounta	80.49	50	P	P	00 54 55.5	+0.2
	baz=318						
BGES	Gesves	80.54	337	*d*P	P	00 54 55.1	-0.2
	comp=Z,8.2nm,0.8s						
VTS	Vitosha	80.65	322	P	P	00 54 56.9	+0.7
VTS				IAmb	IAmb	00 54 58.7	
	comp=Z,17nm,0.9s						
VTS	Vitosha	80.65	322	P	P	00 54 56.9	+0.7
VTS				pmax	pmax		
	comp=Z,17nm,0.9s						
VTS	Vitosha	80.65	322	*e*P	P	00 54 56.9	+0.7
BMRD	Maredsous	80.70	337	*d*P	P	00 54 56.6	+0.4
	comp=Z,12nm,0.9s						
RCHB	Rochefort	80.71	337	*d*P	P	00 54 56.3	+0.1
	comp=Z,6.9nm,1.0s						
ALN	Alexandroupoli	80.74	320	P	P	00 54 55.4	-1.1
ALN				IAmb	IAmb	00 54 58.0	
	comp=Z,10nm,0.9s						
ALN	Alexandroupoli	80.74	320	P	P	00 54 55.4	-1.1
ALN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
RDO	Rodhopi	80.78	320	P	P	00 54 56.9	+0.2
RDO				IAmb	IAmb	00 54 58.5	
	comp=Z,15nm,0.9s						
DIVS	Divibare	80.82	325	P	P	00 54 56.5	-0.6
DIVS				IAmb	IAmb	00 54 58.0	
	comp=Z,9.1nm,0.8s						
KBA	Koelnbreinsper	80.85	331	*i* P	P	00 54 58.3	+1.1
	comp=Z,10.0nm,0.7s						
BALB	Balikesir	80.86	318	P	P	00 54 56.8	-0.4
BALB				IAmb	IAmb	00 54 58.6	
	comp=Z,15nm,0.9s						
OBKA	Obir	80.91	330	*e*P	P	00 54 57.8	+0.4
	comp=Z,17nm,0.9s						
S39A	Bolivar	81.17	45	P	P	00 54 57.1	-1.8
S39A				IAmb	IAmb	00 55 11.4	
	comp=Z,9.2nm,1.1s						
TUL1	Leonard	81.24	48	P	P	00 54 59.1	-0.1
	baz=319						
WATA	Walderalm	81.24	332	*i* P	P	00 54 59.8	+0.6
	comp=Z,16nm,0.9s,SNR=8.2						
MMB	Musomiste	81.25	321	*e*P	P	00 55 00.1	+0.8
WTTA	Wattenberg	81.28	332	*e*P	P	00 55 00.2	+0.6
	comp=Z,18nm,0.9s,SNR=10						
RETA	Reutte	81.38	333	*e*P	P	00 55 00.4	+0.5
	comp=Z,11nm,1.0s,SNR=4.7						
MOTA	Moosalm	81.39	332	*e*P	P	00 55 00.7	+0.7
	comp=Z,19nm,0.9s,SNR=11						
MANT	Manisa	81.42	317	P	P	00 54 59.5	-1.0
MANT				IAmb	IAmb	00 55 01.7	
	comp=Z,11nm,0.7s						
SQTA	Sankt Quirin	81.46	332	*e*P	P	00 55 01.2	+0.8
	comp=Z,11nm,0.8s,SNR=4.6						
ABTX	Abilene, Hawle	81.56	52	P	P	00 55 00.8	-0.3
	baz=318						
U38A	Gravette	81.58	47	P	P	00 54 59.7	-1.4
U38A				IAmb	IAmb	00 55 13.6	
	comp=Z,13nm,1.4s						
TX31	Lajitas Ar. Si	81.59	57	P	P	00 55 01.0	-0.4
TX32	Lajitas Array	81.59	57	P	P	00 55 00.9	-0.5
TX32				IAmb	IAmb	00 55 02.7	
	comp=Z,6.4nm,0.7s						
TXAR	Lajitas Array	81.60	57	P	P	00 55 01.9	+0.5
	comp=Z,4.8nm,0.5s,baz=300,slow=3.9,SNR=56						
	comp=Z,4.8nm,0.5s						
TXAR	Lajitas Array	81.60	57	P	P	00 55 00.5	-0.9
FETA	Feichten	81.80	332	*e*P	P	00 55 03.0	+0.8
	comp=Z,6.8nm,0.9s						
DAVA	Damuels	81.85	333	*e*P	P	00 55 02.8	+0.3
	comp=Z,13nm,1.0s						
CCM	Cathedral Cave	81.93	44	P	P	00 55 01.0	-1.9
CCM				IAmb	IAmb	00 55 16.1	
	comp=Z,12nm,1.0s						
CCM	Cathedral Cave	81.93	44	P	P	00 55 01.0	-1.9
CCM				pmax	pmax		
	comp=Z,12nm,1.0s						
CCM	Cathedral Cave	81.93	44	P	P	00 55 02.6	-0.3
	baz=321						
SFIN	Lafayette	82.08	40	P	P	00 55 02.7	-0.9
	baz=323						
ELL	Elmali	82.08	315	P	P	00 55 02.9	-1.0
ELL	Elmali	82.08	315	P	P	00 55 02.9	-1.0
ELL				pmax	pmax		
	comp=Z,191nm,1.9s						
RAYN	Ar Rayn	82.67	296	P	P	00 55 07.1	+0.1
RAYN	Ar Rayn	82.67	296	P	P	00 55 07.1	+0.1
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
LIT	Litokhoron	83.01	321	P	P	00 55 07.7	-0.8
LIT				IAmb	IAmb	00 55 09.4	
	comp=Z,7.7nm,1.0s						
LIT	Litokhoron	83.01	321	P	P	00 55 07.7	-0.8
LIT				pmax	pmax		
	comp=Z,8.0nm,1.0s						
JCT	Junction City	83.05	54	P	P	00 55 08.8	-0.1
	baz=318						
WHTX	Lake Whitney,	83.27	51	P	P	00 55 09.9	-0.1
	baz=319						
MIAR	Mount Ida	83.45	47	P	P	00 55 11.1	+0.2
	baz=320						
LONY	Lake Ozonia	83.61	29	P	P	00 55 10.9	-0.6
	baz=330						
P49A	Miami Univ. Ec	83.83	39	P	P	00 55 12.6	-0.1
	baz=325						
M53A	WI Miller and	84.00	35	P	P	00 55 12.7	-0.8
	baz=327						
ACSO	Alum Creek Sta	84.03	37	P	P	00 55 12.7	-1.0
	baz=326						
WCI	Wyandotte Cave	84.17	40	P	P	00 55 14.3	-0.2
	baz=324						
LPL	La Plagne	84.43	334	*e*P	P	00 55 16.4	+0.5
LPL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
O53A	New Philadelph	84.77	36	P	P	00 55 16.6	-0.8
	baz=327						
PKME	Peaks-Kenny Pk	84.81	26	P	P	00 55 17.5	0.0
	baz=334						
Q51A	Peebles	84.86	38	P	P	00 55 17.2	-0.8
LBNH	Lisbon	84.86	28	P	P	00 55 17.7	-0.2
	baz=332						
833A	Chaparral WMA,	84.89	55	P	P	00 55 18.0	-0.2
	baz=318						
P52A	Corning	84.89	37	P	P	00 55 18.6	+0.6
	baz=326						
WVT	Waverly	85.12	43	P	P	00 55 19.5	+0.2
	baz=323						
BINY	Binghamton	85.20	31	P	P	00 55 19.6	0.0
	baz=330						
MFF	Saint Martin d	85.41	339	*e*P	P	00 55 20.5	0.0
MFF				pmax	pmax		
	comp=Z,67nm,1.7s						
OXF	Oxford	85.63	45	P	P	00 55 22.1	+0.3
	baz=322						
SSPA	Standing Stone	85.81	34	P	P	00 55 22.9	+0.3
	baz=329						
T50A	Nancy	85.83	40	P	P	00 55 22.7	-0.1
MCWV	Mont Chateau	85.84	35	P	P	00 55 23.3	+0.5
	baz=328						
LFF	La Frestale	86.71	338	*e*P	P	00 55 27.9	+0.9
LFF				pmax	pmax		
	comp=Z,18nm,0.8s						
TIGA	Tifton	90.98	42	P	P	00 55 48.4	+1.0
	baz=326						
NHSC	New Hope	91.20	39	P	P	00 55 49.5	+1.2
	baz=328						
KEST	Kesra	92.20	328	P	P	00 55 52.7	-0.4
	comp=Z,2.0nm,0.6s,baz=22,slow=5.4,SNR=6.3						
	comp=Z,2.0nm,0.6s						
ESDC	Sonseca Array	92.87	339	P	P	00 55 55.5	-0.6
	comp=Z,1.5nm,0.8s,baz=13,slow=4.1,SNR=11						
ESDC				LR	LR	01 44 31.3	
	comp=Z,84nm,18.1s,baz=246,slow=40						
	comp=Z,1.5nm,0.8s						
TORD	Torodi Ar. Bea	115.40	324	PKP	PKiKP	01 01 24.4	-0.9
	comp=Z,0.3nm,0.4s,baz=31,slow=1.4,SNR=8.2						
VNDA	Vanda	121.74	177	PKP	PKiKP	01 01 36.0	+0.3
	comp=Z,2.3nm,0.8s,baz=346,slow=4.2,SNR=1.5						
VNDA	Vanda	121.74	177	PKIKP	PKiKP	01 01 36.0	+0.3
DBIC	Dimbokro	123.93	328	PKP	PKPdf	01 01 40.9	-0.8
	comp=Z,1.5nm,0.6s,baz=0.0,slow=3.0,SNR=3.8						
PRPB	Parauapebas	138.86	28	*e*P	PKPdf	01 02 10.8	+0.9
H03N2	Juan Fernandez	142.01	90	T	T	03 41 02.5	
	baz=305,slow=77,SNR=65						
H03N3	Juan Fernandez	142.02	90	T	T	03 41 03.4	
	baz=305,slow=77,SNR=74						
H03N1	Juan Fernandez	142.02	90	T	T	03 41 03.8	
	baz=305,slow=77,SNR=66						
BBRB	Robore, Bolivi	144.92	52	*e*P	PKPdf	01 02 20.8	+0.4
LCO	Las Campanas	145.44	77	PKPdf	PKPdf	01 02 21.5	+0.1
LCO	Las Campanas	145.44	77	PKIKP	PKPdf	01 02 21.5	+0.1
GO04	Tololo Observa	146.06	79	PKPdf	PKPdf	01 02 22.4	0.0
SDBA	SAO DESIDERIO	146.29	24	*e*P	PKPab	01 02 25.8	+0.9
TROLL	Troll, Antarti	147.74	199	PKPbc	PKPbc	01 02 27.5	+0.8
BDFB	Brasilia	148.27	31	PKPbc	PKPbc	01 02 29.8	+0.1
	comp=Z,6.3nm,0.7s,baz=5.1,slow=1.1,SNR=14						
ZON	Zonda	148.33	79		PKPbc	01 02 28.9	-0.5
ZON	Zonda	148.33	79	PKP2	PKPbc	01 02 28.9	-0.5
BO02	Sierra Bellavi	148.54	86	PKPbc	PKPbc	01 02 29.0	-0.9
AQDB	Aquidauana	148.95	48	PKPbc	PKPbc	01 02 30.2	-1.0
SNAA	Sanae	149.18	197	PKPbc	PKPbc	01 02 30.5	+0.2
VNA2	Neumayer--Watz	150.70	196	PKPbc	PKiKP	01 02 34.5	-0.1
	baz=126,slow=7.0						
VNA3	Neumayer Olymp	150.86	194	PKPbc	PKPbc	01 02 34.6	+0.3
PLCA	Paso Flores	151.19	97	PKPbc	PKiKP	01 02 36.5	-0.1
	comp=Z,3.5nm,0.6s,baz=285,slow=4.7,SNR=9.3						

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*NEIC **01** 00:43:20.4±1.6, 10°.59S±0°.10×161°.5E±0°.1, h39^{km}±8^{km}, mb4.4/25, Error ellipse: s-maj=17.9km s-min=11.6km az=53.0*

*IDC **01** 00:43:23.2±2.6, 10°.49S×161°.34E, h67^{km}±21^{km}, mb3.7/6, mbtmp4.1/8, MS3.2/1, Error ellipse: s-maj=25.2km s-min=17.8km az=74.0*

ISC 01 00:43:22.2±0.6, **10°.56S**±0°.08×**161°.34E**±0°.10, **h61**^{km}**, n40,** σ**1^{s}.07**/42, **mb4.2**/18, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.78	309	P	Pn	00 43 49.9	-0.8
	3µm,0.3s,baz=234,slow=7.8,SNR=9.9						
HNR				S	Sn	00 44 12.6	+0.4
	7µm,0.3s,baz=126,slow=20,SNR=12						
HNR	Honiara	1.78	309	Pn	Pn	00 43 49.8	-0.9
HNR				Sn	Sn	00 44 11.4	-0.8
DZM	Mont Dzumac	12.44	157	P	Pn	00 46 18.8	+2.1
	10nm,1.0s,baz=309,slow=20,SNR=8.9						
DZM				LR	LR	00 50 00.4	
	comp=Z,108nm,18.7s,baz=22,slow=32						
MARNC	Mare, Loyalty	12.61	150	Pn	Pn	00 46 15.6	-3.3
CTA	Charters Tower	17.35	235	P	P	00 47 22.6	+1.6
	9.5nm,0.9s,baz=66,slow=11,SNR=5.7						
CTAO	Charters Tower	17.35	235	Pn	Pn	00 47 17.9	-2.4
CTAO				IAmb	IAmb	00 47 31.8	
	comp=Z,31nm,1.4s						
EIDS	Eidsvold	17.65	212		Pn	00 47 22.9	-1.1
WB0	Warramunga Arr	27.54	247	P	P	00 49 04.3	+0.8
WB2	Warramunga Arr	27.62	247	P	P	00 49 04.4	+0.1
WRA	Warramunga Arr	27.63	247	P	P	00 49 05.2	+0.9
	comp=Z,1.6nm,0.5s,baz=76,slow=8.9,SNR=12						
	comp=Z,1.6nm,0.5s						
WRA	Warramunga Arr	27.63	247	P	P	00 49 04.1	-0.2
ASAR	Alice Springs	29.21	240	P	P	00 49 18.2	-0.2
	comp=Z,0.5nm,0.5s,baz=62,slow=10.0,SNR=6.9						
	comp=Z,0.5nm,0.5s						
KNRA	Kununurra	32.11	257	P	P	00 49 44.8	+0.9
BBOO	Buckleboo	32.12	223	P	P	00 49 44.7	+0.8
BBOO				IAmb	IAmb	00 49 46.1	
	comp=Z,7.3nm,1.0s						
INZ	Inchbonnie	33.23	166	P	P	00 49 52.9	-0.6
FITZ	Fitzroy Crossi	35.34	254	P	P	00 50 12.3	+0.2
MJB9	Matsu-Tunnel	51.67	336	P	P	00 52 23.6	+0.6
MJB9				IAmb	IAmb	00 53 04.7	
	comp=Z,5.3nm,0.9s						
SONM	Songino Array	75.77	325	P	P	00 55 02.1	+0.5
	comp=Z,1.1nm,0.6s,baz=140,slow=5.4,SNR=9.6						
	comp=Z,1.1nm,0.6s						
SONM	Songino Array	75.77	325	P	P	00 55 01.2	-0.4
ANM	Nome	79.01	14	P	P	00 55 20.0	+0.8
ANM				IAmb	IAmb	00 55 26.2	
	comp=Z,4.6nm,1.4s						
QSPA	South Pole Qui	79.44	180	P	P	00 55 22.9	+1.0
QSPA				IAmb	IAmb	00 56 05.7	
	comp=Z,4.8nm,1.4s						
M19K	Big River Lodg	80.04	20	P	P	00 55 26.0	+1.1
L19K	White Mountain	80.09	19	P	P	00 55 26.8	+1.6
TTA	Tatalina	80.28	18	P	P	00 55 27.2	+1.0
TTA				IAmb	IAmb	00 55 58.9	
	comp=Z,6.0nm,1.4s						
CAST	Castle Rocks	81.87	19	P	P	00 55 34.9	+0.2
IMAR	Indian Mountai	83.18	17	P	P	00 55 41.5	+0.1
N25K	Chitina, Valde	83.35	23	P	P	00 55 43.8	+1.3
N25K				IAmb	IAmb	00 56 19.6	
	comp=Z,2.4nm,0.9s						
MLY	Manley	83.41	18	P	P	00 55 42.7	+0.1
MLY				IAmb	IAmb	00 55 44.3	
	comp=Z,2.0nm,0.7s						
WRH	Wood River Hil	83.89	20	P	P	00 55 45.3	+0.3
WRH				IAmb	IAmb	00 55 45.8	
	comp=Z,1.5nm,0.6s						
CCB	Clear Creek Bu	84.10	20	P	P	00 55 46.1	0.0
CCB				IAmb	IAmb	00 56 28.5	
	comp=Z,3.9nm,1.2s						
BARN	Barnard Glacie	84.19	24	P	P	00 55 48.0	+1.1
HDA	Harding Lake	84.23	20	P	P	00 55 46.9	+0.1
HDA				IAmb	IAmb	00 56 15.5	
	comp=Z,4.3nm,1.4s						
ILAR	Eielson Array	84.48	20	P	P	00 55 47.8	-0.2
	comp=Z,0.5nm,0.4s,baz=244,slow=4.8,SNR=11						
	comp=Z,0.5nm,0.4s						
ILAR	Eielson Array	84.48	20	P	P	00 55 47.6	-0.4
M27K	Edge Creek, AK	84.83	23	P	P	00 55 51.6	+1.5
M27K				IAmb	IAmb	00 55 51.6	
	comp=Z,4.4nm,1.1s						
SCRK	Sand Creek	84.99	21	P	P	00 55 51.1	+0.4
SCRK				IAmb	IAmb	00 55 52.6	
	comp=Z,1.7nm,0.7s						
MKAR	Makanchi Array	90.23	318	P	P	00 56 15.8	-0.5

	comp=Z,0.5nm,0.6s,baz=100,slow=4.7,SNR=5.2						
	comp=Z,0.5nm,0.6s						
YKA	Yellowknife Ar	96.55	28	P	P	00 56 44.6	-0.3
	comp=Z,0.4nm,0.6s,baz=260,slow=4.6,SNR=3.7						
	comp=Z,0.4nm,0.6s						
CPUP	Villa Florida	127.49	135	PKP	PKiKP	01 02 22.0	+0.4
	comp=Z,2.9nm,0.5s,baz=252,slow=2.7,SNR=7.9						
TORD	Torodi Ar. Bea	159.92	279	PKPab	PKPab	01 03 54.2	-0.9
	comp=Z,0.3nm,0.5s,baz=99,slow=0.7,SNR=2.1						

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*NOU **01** 00:44:03.9, 43.°09S×173.°23E, h8^{km}, MLv3.8/12, Off E. Coast of S. Island, N.Z.*

*WEL **01** 00:44:04.9±0.3, 43˚S±2˚×17˚3E±˚, h12^{km}±2^{km}, M3.7/68, ML3.7/29, MLv3.7/68, Error ellipse: s-maj=0.0km s-min=0.0km az=116.5, confirmed*

ISC 01 00:44:04.1±1.3**, 43.°05S**±0.°04×**173.°20E**±0.°04**, h6**^{km}±12^{km}**, n79, σ0^{s}83**/82**, Off east coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	Greta Valley S	0.14	303	P	Pg	00 44 07.1	+0.1
GVZ				S	Sg	00 44 08.7	-0.3
AMCZ	Amberley	0.42	252	P	Pb	00 44 14.3	+0.4
AMCZ				S	Sb	00 44 21.0	+0.4
KHZ	Kahutara	0.68	22	P	Pb	00 44 18.0	-0.3
KHZ	Kahutara	0.68	22	P	Pb	00 44 17.9	-0.3
LTZ	Lake Taylor	0.73	291	P	Pg	00 44 18.1	0.0
LTZ				S	Sg	00 44 27.3	-0.3
MQZ	McQueen's Vall	0.77	211	P	Pb	00 44 20.5	+0.6
AKCZ	Akaroa Harbour	0.85	194	P	Pn	00 44 22.4	-0.3
OXZ	Oxford	0.89	251	P	Pb	00 44 22.0	0.0
RACZ	Rakaia	1.03	228	P	Pg	00 44 24.2	+0.4
MHCZ	Mount Hutt	1.28	247	P	Pn	00 44 27.4	-1.2
THZ	Tophouse	1.30	350	P	Pn	00 44 27.5	-1.3
INZ	Inchbonnie	1.33	283	P	Pn	00 44 28.0	-1.1
WACZ	Wakanui South	1.33	227	P	Pn	00 44 28.5	-0.7
BSWZ	Blackbirch Sta	1.42	21	P	Pn	00 44 30.2	-0.2
CMWZ	Cape Campbell	1.50	31	P	Pg	00 44 33.7	+0.9
DSZ	Denniston Nort	1.66	321	P	Pn	00 44 32.7	-1.1
MRNZ	Matariki Terra	1.68	349	P	Pn	00 44 33.7	-0.3
RPZ	Rata Peaks	1.70	246	P	Pn	00 44 33.2	-1.1
RPZ	Rata Peaks	1.70	246	P	Pn	00 44 33.4	-0.9
TUWZ	Tuamarina	1.71	19	P	Pn	00 44 33.7	-0.7
ARCZ	Arundel	1.72	238	P	Pn	00 44 33.8	-0.9
WVZ	Waitaha Valley	1.80	268	P	Pn	00 44 35.2	-0.5
NNZ	Nelson	1.83	4	P	Pn	00 44 35.7	-0.4
TCW	Tory Channel	2.00	24	P	Pn	00 44 37.3	-1.1
TKNZ	Takaka Hill	2.02	355	P	Pn	00 44 38.7	0.0
SNZO	South Karori	2.06	33	P	Pn	00 44 38.4	-0.9
TMZ	Timaru	2.08	229	P	Pn	00 44 38.8	-0.7
GCSZ	Gaunt Creek Bo	2.12	262	P	Pn	00 44 39.7	-0.3
PLWZ	Palliser	2.12	47	P	Pn	00 44 39.0	-1.2
QRZ	Quartz Range	2.27	347	P	Pn	00 44 42.6	+0.4
QRZ	Quartz Range	2.27	347	P	Pn	00 44 42.1	-0.1
DUWZ	D'Urville Isla	2.31	14	P	Pn	00 44 42.9	+0.2
PAWZ	Paruwai Farm	2.35	46	P	Pn	00 44 41.8	-1.4
CAW	Cannon Point	2.39	36	P	Pn	00 44 42.5	-1.2
TRWZ	Traveller	2.48	49	P	Pn	00 44 43.7	-1.3
FOZ	Fox Glacier	2.52	258	P	Pn	00 44 45.7	+0.3
KIW	Kapiti Island	2.53	31	P	Pn	00 44 44.7	-1.0
LBZ	Lake Benmore	2.56	237	P	Pn	00 44 45.7	-0.5
OGWZ	Otaki Gorge	2.67	34	P	Pn	00 44 46.3	-1.3
ODZ	Otahua Downs	2.72	222	P	Pn	00 44 47.9	-0.3
ODZ	Otahua Downs	2.72	222	P	Pn	00 44 47.7	-0.5
HOWZ	Holdsworth Sta	2.76	40	P	Pn	00 44 48.5	-0.3
MRZ	Mangatainoka R	2.97	38	P	Pn	00 44 50.1	-1.7
BFZ	Birch Farm	3.28	45	P	Pn	00 44 55.2	-0.8
BFZ	Birch Farm	3.28	45	P	Pn	00 44 54.3	-1.8
JCZ	Jackson Bay	3.37	251	P	Pn	00 44 56.6	-0.7
JCZ	Jackson Bay	3.37	251	P	Pn	00 44 56.9	-0.4
HHSZ	Highcliff Hill	3.39	212	P	Pn	00 44 57.1	-0.5
WKZ	Wanaka	3.50	238	P	Pn	00 44 58.4	-0.7
EAZ	Earnscleugh	3.55	231	P	Pn	00 44 58.9	-0.8
KHEZ	Kahui Hut	3.80	10	P	Pn	00 45 03.8	+0.6
KHEZ	Kahui Hut	3.80	10	P	Pn	00 45 04.5	+1.3
TUZ	Tuapeka	3.87	220	P	Pn	00 45 03.7	-0.3
PKE	Pukeiti	3.89	9	P	Pn	00 45 06.5	+2.0
VRZ	Vera Road	4.09	17	P	Pn	00 45 07.7	+0.5
WNVZ	Wahianoa	4.13	27	P	Pn	00 45 07.9	0.0
FWVZ	Far West T-bar	4.18	26	P	Pn	00 45 10.2	+1.6
NGZ	Ngauruhoe	4.27	26	P	Pn	00 45 09.4	-0.4
SNVZ	South Ngauruho	4.28	26	P	Pn	00 45 11.0	+1.2
OTVZ	Oturere	4.30	26	P	Pn	00 45 09.7	-0.6
NNVZ	North Ngauruho	4.32	26	P	Pn	00 45 11.4	+1.0
TWVZ	Taurewa	4.32	24	P	Pn	00 45 09.8	-0.5
WTVZ	West Tongariro	4.32	26	P	Pn	00 45 11.5	+1.1
MLZ	Mavora Lakes	4.33	236	P	Pn	00 45 09.1	-1.3
ETVZ	East Tongariro	4.34	27	P	Pn	00 45 10.4	-0.3
TMVZ	Te Maari	4.36	27	P	Pn	00 45 10.9	-0.1
NTVZ	North Tongarir	4.37	26	P	Pn	00 45 12.5	+1.4
SYZ	Scrubby Hill	4.53	218	P	Pn	00 45 12.9	-0.2
SYZ	Scrubby Hill	4.53	218	P	Pn	00 45 13.0	-0.1
BKZ	Black Stump Fm	4.61	34	P	Pn	00 45 14.8	+0.5
HIZ	Hauiti	4.70	16	P	Pn	00 45 15.5	0.0
HIZ	Hauiti	4.70	16	P	Pn	00 45 15.6	0.0
DCZ	Deep Cove	4.97	239	P	Pn	00 45 17.6	-1.6
RTZ	Ruatahuna	5.27	34	P	Pn	00 45 23.7	+0.2
TOZ	Tahuroa Road	5.59	19	P	Pn	00 45 27.3	-0.5
URZ	Urewera	5.63	33	P	Pn	00 45 28.5	+0.2
AWAZ	Awhitu Peninsu	6.08	11	P	Pn	00 45 34.5	+0.1
MKAZ	Moumakai	6.12	15	P	Pn	00 45 34.6	-0.5
WIAZ	Waiheke Island	6.42	14	P	Pn	00 45 39.0	-0.1

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*IDC **01** 00:44:06.4±1.1, 36.°34N×141.°24E, h0^{km}, mb3.9/6, mbtmp4.1/9, ML3.9/3, MS3.6/3, Error ellipse: s-maj=26.2km s-min=20.4km az=91.0*

*JMA **01** 00:44:10.9±0.1, 36.°4N±0.°3×141.°1E±0.°9, h46^{km}±1^{km}, MV3.7/35, E OFF IBARAKI PREF*

JMA Felt I J1 at E OFF IBARAKI PREF .

*NIED **01** 00:44:10.9, 36.°38N×141.°05E, h46^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.43; $M_{\theta\theta}$-0.30; $M_{\phi\phi}$2.73; $M_{r\theta}$2.01; $M_{\theta\phi}$-0.96; $M_{\phi r}$2.97; Fault plane solution: $M_0$4.48000×10^{14} NP1: ϕ_s198.00000°, δ73.00000°, λ-65.00000°. NP2: ϕ_s320.00000°, δ30.00000°, λ-145.00000°.*

*NEIC **01** 00:44:14.2±1.8, 36.°30N±0.°06×140.°96E±0.°07, h59^{km}±10^{km}, mb4.2/8 Error ellipse: s-maj=11.0km s-min=5.0km az=223.0*

ISC 01 00:44:10.6±1.3**, 36.°36N**±0.°03×**141.°13E**±0.°06**, h29**^{km}±9^{km}**, n45, σ1^{s}27**/54**, mb4.0**/10**, MS3.7**/3**, 6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	0.44	267	*i* P	Pb	00 44 20.6	+0.6
JHYU				S	Sb	00 44 27.1	+0.6
JHO	Hitachi	0.52	299	⇓*i*P	Pb	00 44 21.1	-0.2
JHO				⇓S	Sb	00 44 28.3	-0.3
JIHU	Itakohorinouch	0.63	231	*i* P	Pb	00 44 23.8	+0.6
JIHU				S	Sn	00 44 32.8	+0.1
CHOJ	Chosi	0.69	199	P	Pb	00 44 24.1	-0.1
JYT	Yasato	0.77	260	*i* P	Pn	00 44 24.5	-1.0
JYT				S	Sb	00 44 33.5	-2.1
ONAJ	Iwakimizuishiy	0.79	340	⇓*i*P	Pn	00 44 24.7	-1.1
ONAJ				⇓S	Sb	00 44 34.6	-1.6
JSMT	Sammumatsuo	0.91	218	P	Pn	00 44 27.4	0.0
JSMT				S	Sn	00 44 39.1	-0.4
JFK	Kawauchi	1.02	348	⇓*i*P	Pn	00 44 28.0	-1.1
JFK				⇓S	Sn	00 44 40.1	-2.3
JOTO	OTAMA OYAMA	1.35	332	*i* P	Pn	00 44 34.0	+0.4
JOTO				S	Sn	00 44 50.4	-0.2
JAG	Ashikaga	1.36	273	*i* P	Pn	00 44 32.9	-0.7
MJAR	Matsushiro Arr	2.36	275	Pn	Pn	00 44 48.2	+0.7
	5.4nm,0.3s,baz=99,slow=15,SNR=110						
MJAR				Sn	Sn	00 45 15.7	+0.2
	3.0nm,0.3s,baz=84,slow=18,SNR=10.0						
	61nm,0.5s						
MAJO	Matsushiro	2.37	275	Pn	Pn	00 44 48.2	+0.8
MJB9	Matsu-Tunnel	2.37	275	Pn	Pn	00 44 48.9	+1.4
JSD	Sado	2.84	307	Pn	Pn	00 44 54.2	+0.2
JGF	Kuroka	3.15	257	Pn	Pn	00 45 00.0	+1.7
JHJ2	Mitsune	3.42	199	Pn	Pn	00 45 02.2	+0.3
JHJ	Hachijo jima 2	3.42	199	Pn	Pn	00 45 02.4	+0.4
	24nm,0.3s,baz=331,slow=21,SNR=10						
JHJ				Sn	Sn	00 45 42.4	+0.9
	37nm,0.3s,baz=229,slow=19,SNR=1.6						
	67nm,0.3s						
INU	Inuyama	3.49	254	Pn	Pn	00 45 03.7	+0.8
JTM	Tenmabayashi	4.42	359	Pn	Pn	00 45 19.1	+3.4
JMN	Monobe	6.50	248	Pn	Pn	00 45 43.5	-0.9
JHS	Saijyo	6.66	261	Pn	Pn	00 45 46.7	+0.1
JCJ	Chichijima	9.28	174	Pn	Pn	00 46 22.1	-0.4
	6.9nm,0.3s,baz=319,slow=20,SNR=1.8						
JCJ				Sn	Sn	00 48 02.5	-3.5
	7.0nm,0.3s,baz=288,slow=20,SNR=2.0						
	63nm,0.6s						
KSAR	Wonju Array Be	10.66	280	Pn	Pn	00 46 41.5	+0.1
KSAR	Wonju Array Be	10.66	280	P	Pn	00 46 41.5	+0.1
KS19	Wonju Array Si	10.68	280	Pn	Pn	00 46 42.6	+0.9
JOW	Kunigami	14.49	233	Pn	Pn	00 47 31.5	-2.2
SONM	Songino Array	27.98	305	P	P	00 50 01.2	+2.4
	1.5nm,0.6s,baz=104,slow=8.3,SNR=4.0						
	1.5nm,0.6s						
SONM	Songino Array	27.98	305		P	00 49 59.0	+0.2
TNA	Tin City	41.55	29	P	P	00 51 58.3	+3.2
TNA				IAmb	IAmb	00 52 08.7	
	comp=Z,3.4nm,1.1s						
ZAA0	Zalesovo Array	42.20	313	P	P	00 52 01.1	+0.5
ZAA0				IAmb	IAmb	00 52 28.5	
	comp=Z,6.4nm,0.8s						
ZALV	Zalesovo Beam	42.20	313	P	P	00 51 59.9	-0.7
	comp=Z,0.7nm,0.4s,baz=103,slow=7.1,SNR=2.4						
	comp=Z,0.7nm,0.4s						
ZALV	Zalesovo Beam	42.20	313	P	P	00 52 00.9	+0.3
MAKZ	Makanchi	44.50	303	P	P	00 52 19.1	-0.2
KURK	Kurchatov	46.17	309	P	P	00 52 30.9	-1.6
K20K	Telida	47.01	34	P	P	00 52 39.6	+0.7
ILAR	Eielson Array	50.18	32	P	P	00 53 03.4	+0.1
	comp=Z,0.7nm,0.7s,baz=276,slow=5.6,SNR=2.6						
	comp=Z,0.7nm,0.7s						
BVAR	Borovoye Array	50.86	313	P	P	00 53 08.4	-0.1
	comp=Z,3.5nm,0.8s,baz=64,slow=6.6,SNR=4.9						
BVAR				LR	LR	01 14 20.4	
	comp=Z,84nm,20.9s,baz=71,slow=36						
	comp=Z,3.5nm,0.8s						
K27K	Chicken	52.32	33	P	P	00 53 20.6	+1.3
K27K				IAmb	IAmb	00 53 31.4	
	comp=Z,5.7nm,1.5s						
WRA	Warramunga Arr	56.37	188	P	P	00 53 47.7	-1.4
	comp=Z,1.1nm,0.5s,baz=13,slow=6.9,SNR=1.4						
	comp=Z,1.1nm,0.5s						
AFI	Afiamalu	66.88	129	LR	LR	01 19 56.9	
	comp=Z,47nm,21.8s,baz=26,slow=32						
LRM	Limekiln Ridge	74.78	44	P	P	00 55 49.1	+0.8
NVAR	Mina Array Bea	75.57	53	P	P	00 55 53.8	+0.9
	comp=Z,0.2nm,0.5s,baz=292,slow=4.8,SNR=2.3						
	comp=Z,0.2nm,0.5s						
NV11	Mina Array Sit	75.67	53	P	P	00 55 54.0	+0.6
NV11				IAmb	IAmb	00 56 11.7	
	comp=Z,2.9nm,1.4s						
PDAR	Pinedale Array	78.30	45	P	P	00 56 08.1	-0.1
PPT	Papeete	84.54	116	LR	LR	01 29 53.7	
	comp=Z,31nm,19.6s,baz=316,slow=32						

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*ISK **01** 00:45:22.7, 39.°50N×26.°03E, h12^{km}, ML2.9/14*

*THE **01** 00:45:23.8, 39.°51N×26.°06E, h11^{km}±1^{km}, ML2.6/11, Error ellipse: s-maj=1.5km s-min=0.7km az=73.0*

*DDA **01** 00:45:24.0±0.0, 39.°51N×26.°10E, h10^{km}, ML2.6*

ISC 01 00:45:23.6±0.8**, 39.°50N**±0.°02×**26.°07E**±0.°03**, h12**^{km}±5^{km}**, n43, σ0^{s}75**/67**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.05	91	P	Pg	00 45 26.0	+0.1
KOCA				S	Sg	00 45 27.6	-0.1
GPNR	Gulpinar-Canak	0.07	134	Pg	Pg	00 45 25.7	-0.3
GPNR				Sg	Sg	00 45 27.7	-0.1
PRK	Paraskevi	0.30	149	P	Pg	00 45 30.0	+0.3
PRK				S	Sg	00 45 34.2	+0.4
	7µm,0.3s						
BOZC	Bozcaada	0.34	358	Pg	Pg	00 45 30.2	-0.3
BOZC				Sg	Sg	00 45 35.6	+0.6
BOZC	Bozcaada	0.34	358	P	Pg	00 45 30.8	+0.3
BOZC				S	Sg	00 45 35.8	+0.8
BOZC				*i* AML	AML	00 45 36.0	
	comp=N,2µm,0.2s						
BOZC				*i* AML	AML	00 45 36.0	
	comp=E,2µm,0.5s						
EZN	Ezine	0.38	31	P	Pg	00 45 31.0	-0.2
EZN				S	Sg	00 45 36.4	+0.2
	1µm,0.4s						
EZN	Ezine	0.38	31	Pg	Pg	00 45 30.9	-0.2
EZN				Sg	Sg	00 45 36.9	+0.7
BAYC	CANAKKALE_Bayr	0.44	57	P	Pg	00 45 30.1	-2.1
BAYC				S	Sg	00 45 38.4	+0.3
ECEA	Canakkale, Ece	0.55	8	P	Pg	00 45 34.7	+0.4
ECEA				S	Sb	00 45 42.9	0.0
ECEA				*i* AML	AML	00 45 43.0	
	comp=N,246nm,0.2s						
ECEA				*i* AML	AML	00 45 43.0	
	comp=E,628nm,0.3s						
COMU	Canakkale	0.67	27	Pg	Pg	00 45 36.7	0.0
COMU				Sg	Sb	00 45 46.8	+0.2
GOKA	anakkale-Gk	0.70	350	P	Pg	00 45 37.3	+0.1
GOKA				S	Sb	00 45 47.6	+0.3
GOKA				*i* AML	AML	00 45 50.0	
	comp=E,231nm,0.2s						
GOKA				*i* AML	AML	00 45 51.0	
	comp=N,417nm,0.2s						
GADA	Gvkgeada	0.70	349	Pg	Pg	00 45 36.7	-0.5
BUHA	Balikesir, Bur	0.78	90	P	Pg	00 45 38.8	+0.1
BUHA				S	Sg	00 45 49.3	+0.5
BUHA				*i* AML	AML	00 45 52.0	
	comp=N,159nm,0.4s						
BUHA				*i* AML	AML	00 45 53.0	
	comp=E,178nm,0.4s						
DKL	Dikili	0.78	123	Pg	Pg	00 45 38.8	+0.1
LIA	Limnos Island	0.79	300	P	Pg	00 45 39.1	+0.2
LIA				S	Sb	00 45 50.4	+0.5
	1µm,0.4s						
KARB	zmir-Karabur	0.88	162	P	Pb	00 45 41.2	+0.4
KARB				S	Sb	00 45 53.1	+0.6
KARB				*i* AML	AML	00 45 55.0	
	comp=N,257nm,0.3s						
KARB				*i* AML	AML	00 45 55.0	
	comp=E,453nm,0.3s						
CANM	Can-anakkale	0.91	56	Pg	Pg	00 45 41.4	+0.2
GELI	Tayfur-Gelibol	0.95	19	Pg	Pg	00 45 41.6	-0.3
ZEDA	zmir-Bergama	0.95	124	P	Pg	00 45 42.0	+0.2
ZEDA				S	Sb	00 45 55.1	+0.6
ZEDA				*i* AML	AML	00 45 57.0	
	comp=N,95nm,0.4s						
ZEDA				*i* AML	AML	00 45 57.0	
	comp=E,230nm,0.3s						
LPK	Lapseki	1.02	31	Pg	Pg	00 45 42.9	-0.3
SMTH	Samothraki Isl	1.05	337	P	Pg	00 45 43.5	-0.4
SMTH				S	Sb	00 45 58.1	+0.6
	165nm,0.1s						
CHOS	Chios island	1.11	181	P	Pb	00 45 44.2	-0.6
CHOS				S	Sn	00 46 00.8	+0.4
	822nm,0.2s						
CHOS	Chios island	1.11	181	Pn	Pb	00 45 44.3	-0.6
URLA	Izmir	1.21	160	Pn	Pn	00 45 45.6	-0.8
ERIK	Erikli-Kesan	1.21	16	Pn	Pn	00 45 45.9	-0.5
ENEZ	Enez	1.23	3	P	Pn	00 45 46.3	-0.4
ENEZ				S	Sg	00 46 03.3	-0.1
	192nm,0.3s						
ENEZ	Enez	1.23	3	Pn	Pn	00 45 46.2	-0.4
KRBG	Karabiga-Canak	1.30	46	Pn	Pn	00 45 47.1	-0.4
BLCB	Balcova	1.35	146	P	Pn	00 45 47.8	-0.5
BLCB				S	Sb	00 46 05.9	-0.1
BLCB	Balcova	1.35	146	Pn	Pn	00 45 48.1	-0.2
GONE	Gonen-Balikesi	1.36	66	Pn	Pn	00 45 48.5	+0.1
ALN	Alexandroupoli	1.39	359	P	Pn	00 45 48.9	0.0
ALN				S	Sn	00 46 07.2	0.0
	110nm,0.5s						
BALB	Balikesir	1.41	84	Pn	Pn	00 45 48.9	-0.1
THAS	Thassos island	1.51	317	P	Pn	00 45 49.9	-0.6
THAS				S	Sn	00 46 08.2	-1.9
	108nm,0.4s						
RDO	Rodhopi	1.69	346	P	Pn	00 45 52.8	-0.2
RDO				S	Sn	00 46 14.0	-0.5
	35nm,0.4s						
OUR	Ouranopolis	1.81	298	P	Pn	00 45 54.0	-0.6
OUR				S	Sn	00 46 15.9	-1.5
	62nm,0.4s						
SMG	Samos	1.89	161	P	Pn	00 45 55.0	-0.7
SMG				S	Sn	00 46 20.2	+0.7
	180nm,0.5s						
KAVA	Kavala	1.91	322	P	Pn	00 45 55.8	-0.2
KDZ	Kurdzhali	2.20	347	*e*P	Pn	00 45 59.8	-0.2
RZN	Rozhen	2.41	335	*e*P	Pn	00 46 03.1	0.0
MMB	Musomiste	2.74	320	*e*P	Pn	00 46 07.7	+0.2
STIP	Stip	3.68	308	*i* Pn	Pn	00 46 20.4	+0.1
MPEP	Malo Peshtene	4.23	336	*e*P	Pn	00 46 31.8	+3.9

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*IDC **01** 00:48:04.7±0.6, 3.°38S×131.°32E, h0^{km}, mb4.1/15, mbtmp4.2/16, ML3.8/1, MS3.9/21, Error ellipse: s-maj=27.2km s-min=14.5km az=71.0*

*NEIC **01** 00:48:09.8±1.2, 3.°46S±0.°07×131.°30E±0.°08, h37^{km}±8^{km}, mb4.4/26, Error ellipse: s-maj=13.3km s-min=9.1km az=123.0*

*DJA **01** 00:48:09.4±0.2, 4˚S±3˚×13˚1E±˚, h81^{km}±7^{km}, M4.6/10, mb4.8/6, mB5.4/3, MLv4.4/10, Mw(mB)4.9/3*

ISC 01 00:48:07.8±0.4**, 3.°52S**±0.°05×**131.°30E**±0.°05**, h24**^{km}**, n119, σ1^{s}77**/98**, mb4.4**/28**, MS3.9**/22**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	1.12	58		Pb	00 48 28.6	+0.1
FAKI	Fak Fak	1.12	58	P	Pb	00 48 29.8	+1.3
FAKI	Fak Fak	1.12	58	P	Pb	00 48 29.4	+0.9
BNDI	Bandanaira	1.71	234	P	Pb	00 48 39.3	+0.7
MSAI	Masohi	2.38	274	P	Pn	00 48 46.3	+1.0
AAI	Ambon	3.11	267	P	Pn	00 48 56.7	+1.4
RKPI	Ransiki, Papua	3.50	55	P	Pn	00 49 02.5	+1.8
NLAI	Namlea	4.21	274	P	Pn	00 49 11.8	+1.4
SAUI	Saumlaki	4.43	180	Pn	Pn	00 49 15.4	+1.8
SAUI	Saumlaki	4.43	180	P	Pn	00 49 15.5	+1.9
SAUI	Saumlaki	4.43	180	P	Pn	00 49 16.2	+2.6
LBMI	Labuha	4.76	307	P	Pn	00 49 17.7	-0.4
SANI	Sanana	5.51	285	P	Pn	00 49 23.3	-5.0
SANI	Sanana	5.51	285	P	Pn	00 49 22.9	-5.4
KDU	Kakadu	9.18	173	P	Pn	00 50 18.3	-0.5
GTOI	Gorontalo	9.26	296	P	Pn	00 50 20.1	+0.2
	11nm,0.7s						
MTN	Manton Dam	9.26	181	Pn	Pn	00 50 19.3	-0.6
MTN	Manton Dam	9.26	181	P	Pn	00 50 20.0	0.0
SOEI	Soe	9.34	228	Pn	Pn	00 50 22.4	+1.3
SOEI	Soe	9.34	228	P	Pn	00 50 20.3	-0.8
SOEI	Soe	9.34	228	P	Pn	00 50 26.0	+4.9
MRSI	Marisa	10.16	293	P	Pn	00 50 37.9	+5.6
KAPI	Kappang	11.61	262	Pn	Pn	00 50 52.3	+0.1
	0.6nm,0.3s,baz=90,slow=19,SNR=1.9						
KAPI				Sn	Sn	00 53 03.0	+1.8
	0.8nm,0.3s,baz=18,slow=19,SNR=1.5						
KAPI				LR	LR	00 55 04.2	
	comp=Z,306nm,20.8s,baz=82,slow=36						
	2.7nm,0.3s						
KAPI	Kappang	11.61	262	Pn	Pn	00 50 51.1	-1.0
KNRA	Kununurra	12.34	192	Pn	Pn	00 50 59.5	-2.5
KNRA	Kununurra	12.34	192	P	Pn	00 50 59.6	-2.5
PLAI	Plampang	14.44	248	P	Pn	00 51 29.8	-1.0
PLAI	Plampang	14.44	248	P	P	00 51 34.4	-3.0
TWSI	Taliwang, Sumb	15.24	249	P	P	00 51 51.3	+5.0
FITZ	Fitzroy Crossi	15.51	201	Pn	Pn	00 51 41.2	-3.9
COEN	Coen	15.65	132	Pn	Pn	00 51 46.4	-0.5
COEN				IAmb	IAmb	00 52 09.5	
	comp=Z,52nm,1.4s						
WB0	Warramunga Arr	16.43	170	Pn	Pn	00 51 54.9	-2.0
WB0				IAmb	IAmb	00 52 10.7	
	comp=Z,48nm,1.4s						
WRAB	Tennant Creek	16.58	170	Pn	Pn	00 51 56.6	-2.2
WRAB				IAmb	IAmb	00 52 04.5	
	comp=Z,16nm,0.8s						
WRA	Warramunga Arr	16.59	170	Pn	Pn	00 51 54.6	-4.4
	comp=Z,1.1nm,0.3s,baz=353,slow=13,SNR=29						
WRA				Sn	Sn	00 54 52.8	-10
	comp=Z,1.7nm,0.3s,baz=334,slow=26,SNR=7.0						
WRA	Warramunga Arr	16.59	170	Pn	Pn	00 51 56.0	-2.9
WB2	Warramunga Arr	16.59	170	Pn	Pn	00 51 54.9	-4.0
WB2				IAmb	IAmb	00 52 12.6	
	comp=Z,21nm,1.1s						
MTKI	Muara Teweh, K	16.59	279	P	P	00 52 03.3	+1.9
WR0	Warramunga Arr	16.64	169	Pn	Pn	00 51 54.9	-4.7
JAGI	Jajag, Banyuwa	17.75	253		Pn	00 52 13.1	-0.3
JAGI				IAmb	IAmb	00 52 21.0	
	comp=Z,15nm,0.6s						
GMJI	Gumukmas	18.38	254	P	Pn	00 52 22.1	+0.9
QIS	Mount Isa	18.77	155	P	Pn	00 52 26.9	+1.0
AS31	Alice Springs	20.18	173		P	00 52 41.3	+0.4
ASAR	Alice Springs	20.18	173	P	P	00 52 41.7	+0.9
	comp=Z,21nm,0.6s,baz=354,slow=11,SNR=206						
ASAR				S	S	00 56 21.6	-4.9
	comp=Z,1.3nm,0.6s,baz=352,slow=27,SNR=4.7						
ASAR				LR	LR	01 02 28.0	
	comp=Z,410nm,19.1s,baz=355,slow=42						
	comp=Z,21nm,0.6s						
AS01	Alice Springs	20.19	173	P	P	00 52 42.2	+1.3
KRVT	Keravat (AS076	20.69	93	LR	LR	01 03 14.5	
	comp=Z,364nm,18.2s,baz=49,slow=44						
PSA00	Pilbara Seismi	21.12	211	P	P	00 52 49.4	-1.5
WRKA	Warakurna	21.59	187	P	P	00 52 56.3	+0.3
CTA	Charters Tower	21.99	140	P	P	00 53 02.2	+1.9
	comp=Z,3.2nm,0.6s,baz=320,slow=12,SNR=2.0						
	comp=Z,3.2nm,0.6s						
BBJI	Bungbulang	23.86	260	P	P	00 53 16.9	-2.8
OOD	Oodnadatta	24.50	171	P	P	00 53 26.7	+1.4
GIRL	Giralia	25.20	220	P	P	00 53 30.8	-0.9
GIRL	Giralia	25.20	220	P	P	00 53 31.5	-0.2
INKA	Innaminka	25.72	160	P	P	00 53 39.6	+3.2
MEEK	Meekatharra	26.00	207	P	P	00 53 38.0	-1.0
MULG	Mulgathing	26.74	175	P	P	00 53 46.8	+1.1
FORT	Forrest	27.29	186	P	P	00 53 50.6	+0.1
FORT	Forrest	27.29	186	P	P	00 53 51.2	+0.7
LCRK	Leigh Creek	27.57	167	P	P	00 53 55.8	+2.7
KMBL	Kambalda	29.09	197	P	P	00 54 06.5	-0.1
MORW	Morawa	29.25	208	P	P	00 54 05.9	-2.2
MORW				IAmb	IAmb	00 54 30.9	
	comp=Z,15nm,1.3s						
MORW	Morawa	29.25	208	P	P	00 54 07.2	-0.9
BBOO	Buckleboo	29.48	172	P	P	00 54 10.7	+0.6
BBOO				IAmb	IAmb	00 54 35.5	
	comp=Z,19nm,1.4s						
BBOO	Buckleboo	29.48	172	P	P	00 54 11.2	+1.2
STKA	Stephens Creek	29.82	162	P	P	00 54 14.5	+1.4
	comp=Z,2.1nm,0.3s,baz=337,slow=9.1,SNR=9.5						
STKA				LR	LR	01 08 08.3	
	comp=Z,366nm,19.8s,baz=341,slow=40						
	comp=Z,2.1nm,0.3s						
STKA	Stephens Creek	29.82	162	P	P	00 54 13.2	+0.1
STKA	Stephens Creek	29.82	162	P	P	00 54 15.5	+2.4
BLDU	Ballidu	30.27	206	P	P	00 54 16.9	-0.2
JOW	Kunigami	30.32	355	LR	LR	01 07 11.6	
	comp=Z,317nm,19.4s,baz=157,slow=38						
KNMB	Chin-men Tao	30.52	336	P	P	00 54 18.1	-1.3
HTT	Hallett	30.60	167	P	P	00 54 21.6	+1.6
KLBR	Kellerberrin	30.70	203	P	P	00 54 20.4	-0.5
CMSA	Cobar Meteorol	30.99	156	P	P	00 54 25.5	+2.1
JNU	Nakatsue	36.45	359	LR	LR	01 08 58.3	
	comp=Z,159nm,21.8s,baz=179,slow=34						
PHRA	Phrae	37.62	307	P	P	00 55 20.6	-0.5
CMAR	Chiang Mai Arr	38.64	306	P	P	00 55 29.6	-0.1
	comp=Z,0.8nm,0.3s,baz=131,slow=6.9,SNR=5.2						
	comp=Z,0.8nm,0.3s						
DZM	Mont Dzumac	38.75	121	*e*LR	LR	01 06 04.1	
	comp=Z,244nm,25.1s						
MJAR	Matsushiro Arr	40.37	9	P	P	00 55 41.9	-2.0
	comp=Z,0.8nm,0.3s,baz=196,slow=8.6,SNR=1.2						
	comp=Z,0.8nm,0.3s						
KSRS	Korea Array	40.89	356	LR	LR	01 13 01.7	
	comp=Z,126nm,19.7s,baz=170,slow=37						
PZH	PanZhiHua	41.33	318	P	P	00 55 53.5	+1.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,110nm,4.9s						
LZH	Lanzhou	47.03	329	*e*P	P	00 56 40.7	+3.1
LZH				pP	sP	00 56 46.9	-0.7
LZH				pmax	pmax		
	comp=Z,12nm,1.5s						
USRK	Ussuriysk Ar.	47.51	1	LR	LR	01 16 31.9	
	comp=Z,81nm,20.1s,baz=152,slow=36						
HHC	Hu-ho-hao-te	47.70	340	*e*P	P	00 56 46.7	+4.0
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,230nm,4.9s						
KLR	Kul'dur	52.54	0	P	P	00 57 18.4	-0.7
	comp=Z,0.3nm,0.2s,baz=180,slow=6.1,SNR=1.9						
	comp=Z,0.3nm,0.2s						
RPZ	Rata Peaks	53.24	145	LR	LR	01 21 14.6	

	comp=Z,133nm,19.7s,baz=305,slow=37						
HEH	HeiHe	53.67	357	eP	P	00 57 35.6	+8.2
HEH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
HEH				pmax	pmax		
	comp=Z,130nm,6.0s						
SONM	Songino Array	55.61	340	P	P	00 57 41.6	-0.1
	comp=Z,0.4nm,0.5s,baz=136,slow=8.8,SNR=4.8						
SONM				LR	LR	01 24 33.5	
	comp=Z,52nm,19.5s,baz=162,slow=40						
	comp=Z,0.4nm,0.5s						
SONM	Songino Array	55.61	340	P	P	00 57 40.9	-0.8
PETK	Petropavlovsk-	60.64	18	LR	LR	01 20 46.2	
	comp=Z,87nm,21.8s,baz=202,slow=32						
WMQ	Urumqi	61.25	325	eP	P	00 58 21.5	+0.4
WMQ				pP	sP	00 58 32.6	+1.4
MA2	Magadan	64.76	11	LR	LR	01 25 03.9	
	comp=Z,35nm,21.4s,baz=140,slow=34						
MK31	Makanchi Array	66.08	325	P	P	00 58 51.6	-1.3
MK31				IAmb	IAmb	00 59 04.7	
	comp=Z,2.0nm,0.9s						
MKAR	Makanchi Array	66.08	325	P	P	00 58 53.1	+0.2
	comp=Z,2.1nm,0.5s,baz=116,slow=8.3,SNR=32						
MKAR				LR	LR	01 28 58.5	
	comp=Z,68nm,20.0s,baz=90,slow=37						
	comp=Z,2.1nm,0.5s						
MKAR	Makanchi Array	66.08	325	P	P	00 58 52.6	-0.2
MAKZ	Makanchi	66.27	325	P	P	00 58 53.7	-0.4
MAKZ				IAmb	IAmb	00 58 55.5	
	comp=Z,2.5nm,0.7s						
KSH	Kashi	66.39	316	P	P	00 58 57.1	+1.9
KSH				pP	sP	00 59 05.5	+0.2
KSH				sP	pP	00 59 09.7	+7.2
KSH				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SHEM	Shemya Is, Ala	66.61	27	LR	LR	01 24 41.9	
	comp=Z,58nm,20.2s,baz=338,slow=33						
SEY	Seymchan	68.17	10	P	P	00 59 06.1	+0.3
	comp=Z,0.7nm,0.4s,baz=180,slow=10,SNR=1.7						
	comp=Z,0.7nm,0.4s						
ZAA0	Zalesovo Array	69.08	333	P	P	00 59 10.8	-0.9
ZAA0				IAmb	IAmb	00 59 22.7	
	comp=Z,2.7nm,0.8s						
ZALV	Zalesovo Beam	69.08	333	P	P	00 59 11.1	-0.5
	comp=Z,1.2nm,0.5s,baz=126,slow=7.1,SNR=9.3						
ZALV				LR	LR	01 32 15.3	
	comp=Z,44nm,18.2s,baz=120,slow=38						
	comp=Z,1.2nm,0.5s						
KBL	Kabul	69.57	309	P	P	00 59 12.9	-2.4
KBL				IAmb	IAmb	00 59 16.2	
	comp=Z,2.1nm,0.7s						
GAR	Garm	70.19	314	P	P	00 59 18.5	-0.5
GAR				IAmb	IAmb	00 59 20.4	
	comp=Z,9.1nm,1.3s						
KURK	Kurchatov	70.27	328	P	P	00 59 19.0	-0.1
KURK				IAmb	IAmb	00 59 30.8	
	comp=Z,6.1nm,0.9s						
TIXI	Tiksi	75.05	359	P	P	00 59 47.1	+0.1
	comp=Z,1.6nm,0.5s,baz=270,slow=23,SNR=5.4						
	comp=Z,1.6nm,0.5s						
VNDA	Vanda	75.73	173	P	P	00 59 52.5	+1.6
	comp=Z,4.3nm,0.9s,baz=324,slow=8.0,SNR=9.6						
	comp=Z,4.3nm,0.9s						
VNDA	Vanda	75.73	173	P	P	00 59 51.6	+0.7
BVAR	Borovoye Array	75.85	327	P	P	00 59 51.6	-0.4
	comp=Z,1.2nm,0.5s,baz=120,slow=10,SNR=5.1						
	comp=Z,1.2nm,0.5s						
BRVK	Borovoye	75.92	327	P	P	00 59 52.5	+0.1
BRVK				IAmb	IAmb	00 59 53.9	
	comp=Z,2.6nm,0.7s						
TBI	Tubuai	78.73	113	eLR	LR	01 24 35.6	
	comp=Z,778nm,28.8s						
TBI				eLR	LR	01 24 35.8	
	comp=Z,2µm,24.2s						
GEYT	Alibeck	78.99	310	P	P	01 00 11.4	+1.3
	comp=Z,0.9nm,0.5s,baz=148,slow=6.0,SNR=2.4						
	comp=Z,0.9nm,0.5s						
ABKAR	Akbulak array	80.62	321	P	P	01 00 17.9	-0.7
KDAK	Kodiak Island	85.59	31	LR	LR	01 32 10.1	
	comp=Z,164nm,21.7s,baz=256,slow=31						
KIRV	Kirov	88.75	329	LR	LR	01 43 55.1	
	comp=Z,60nm,18.4s,baz=49,slow=38						
ILAR	Eielson Array	89.67	25	P	P	01 01 03.5	0.0
	comp=Z,0.3nm,0.6s,baz=271,slow=4.4,SNR=4.4						
ILAR				LR	LR	01 35 29.1	
	comp=Z,76nm,20.1s,baz=243,slow=32						
	comp=Z,0.3nm,0.6s						
SPITS	Spitsbergen Ar	98.42	349	LR	LR	01 48 27.4	
	comp=Z,38nm,21.1s,baz=41,slow=37						
ARCES	ARCESS Array B	98.78	340	P	Pdif	01 01 45.0	-0.2
	comp=Z,7.7nm,1.2s,baz=70,slow=7.8,SNR=3.8						
BBB	Bella Bella	99.26	38	LR	LR	01 39 30.6	
	comp=Z,68nm,21.3s,baz=284,slow=31						
SNAA	Sanae	99.33	193	LR	LR	01 47 47.3	
	comp=Z,80nm,19.5s,baz=153,slow=36						
TORD	Torodi Ar. Bea	129.32	284	PKP	PKiKP	01 07 15.9	-0.2
	comp=Z,0.4nm,0.6s,baz=96,slow=1.8,SNR=4.8						
CPUP	Villa Florida	149.17	165	PKPbc	PKiKP	01 07 56.7	+0.4
	comp=Z,1.1nm,0.5s,baz=249,slow=1.9,SNR=3.7						

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*UCR **01** 01:17:43.5±1.8, 8°.74N×82°.44W, h4^{km}±5^{km}, MW4.3*
*UPA **01** 01:17:43.0±1.4, 8°.73N×82°.40W, h10^{km}±4^{km}, ML4.6, MW4.1*
ISC 01 01:17:41.4±0.9**, 8°.79N**±0°.03×**82°.33W**±0°.02**, h14**^{km}±7^{km}**, n87, σ0^{s}.97**/120**, 11C-13D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNBQ3	Los Naranjos,	0.11	268	⇑iP	Pb	01 17 45.8	+0.3
LNBQ3				eS	Sg	01 17 47.6	+0.5
PTAR3	Potrerillos Ar	0.19	239	⇓iP	Pb	01 17 46.7	-0.1
PTAR3				eS	Sg	01 17 48.9	-0.1
BCO2	Palmira	0.21	249	⇓iP	Pb	01 17 47.0	-0.1
BCO2				AMP		01 17 47.1	
	comp=Z,529µm,0.1s						
BCO2				eS	Sg	01 17 50.0	+0.4
BRU2	Volcan	0.36	270	⇑iP	Pb	01 17 49.3	-0.3
BRU2				AMP		01 17 49.7	
	comp=Z,29µm,0.1s						
BRU2				eS	Sg	01 17 54.2	+0.4
BRU2	Volcan	0.36	270	eP	Pb	01 17 49.3	-0.3
DVD	David	0.38	199	⇑eP	Pb	01 17 50.0	+0.2
DVD				⇑eS	Sb	01 17 55.4	-0.2
CTCR	Cotoan	0.44	283	eP	Pg	01 17 50.5	+0.4
MLIR3	Monte Lirio, C	0.49	270	⇑eP	Pb	01 17 52.1	+0.2
MLIR3				i S	Sb	01 17 59.7	+0.7
LPPC	Paso Canoas	0.57	243	eP	Pg	01 17 53.0	+0.4
LPPC				eS	Sg	01 18 00.6	+0.5
CDITO	Canoas	0.58	248	⇓iP	Pb	01 17 53.4	0.0
CDITO				eS	Sg	01 18 00.4	-0.1
CDITO	Canoas	0.58	248	eP	Pb	01 17 53.4	0.0
LESP3	La Esperanza,	0.60	230	⇓iP	Pg	01 17 53.4	+0.3
LESP3				⇓eP	Pb	01 17 53.5	-0.1
LESP3				eS	Sg	01 18 00.5	-0.5
EDSV	San Vito	0.64	272	eP	Pb	01 17 54.8	+0.4
EDSV				eS	Sb	01 18 04.5	+1.2
CNI2	El Empalme, Bo	0.64	347	⇑iP	Pn	01 17 55.8	-0.3
CNI2				eS	Sn	01 18 06.1	0.0
CCOL	Caracol de Cor	0.74	239	eP	Pg	01 17 55.9	0.0
REME3	Remedios, Chir	0.75	139	⇑iP	Pn	01 17 57.2	-0.4
REME3				i S	Sn	01 18 07.8	-0.9
NANC3	Nancito, Chiri	0.81	133	⇑iP	Pn	01 17 57.9	-0.5
NANC3				i S	Sb	01 18 08.7	+0.7
POTG	Potrero Grande	0.82	288	eP	Pg	01 17 57.2	-0.2
FITO	Golfito	0.83	258	eP	Pg	01 17 56.6	-0.9
EDAD	Golfito	0.84	260	eP	Pg	01 17 56.9	-0.8
EDAD				eS	Sg	01 18 07.5	-1.2
EDP2	Potrero Grande	0.87	285	eP	Pb	01 17 58.5	+0.3
EDP2				eS	Sb	01 18 10.0	+0.3
BRIBI	Bribri	0.97	328	eP	Pn	01 18 02.5	+1.8
EDBA	Buenos Aires	1.00	291	eP	Pn	01 18 01.2	+0.1
EDBA				eS	Sn	01 18 15.4	+0.2
BURE	Buenos Aires	1.07	291	eP	Pb	01 18 01.6	-0.1
SRBA	San Rafael, Bu	1.11	293	eP	Pb	01 18 01.8	-0.7
EDPN	Palmar Norte	1.13	279	eP	Pb	01 18 02.6	-0.1
EDPN				eS	Sg	01 18 17.7	-0.2
PLAN	Los Planes de	1.34	265	eP	Pn	01 18 05.4	-0.4
PEZE	Perez Zeledon,	1.46	294	eP	Pb	01 18 08.1	-0.2
GMAL	Guarumal, Vera	1.49	133	⇓iP	Pb	01 18 08.4	-0.5
GMAL				i S	Sb	01 18 27.5	-0.2
GMAL	Guarumal, Vera	1.49	133	eP	Pb	01 18 08.4	-0.5
MRVA	Moravia de Chi	1.50	313	eP	Pb	01 18 08.9	-0.2
EDDO	Dominical	1.58	287	eP	Pb	01 18 10.5	0.0
EDDO				eS	Sb	01 18 30.3	-0.1
BUS1	Rivas	1.59	298	eP	Pb	01 18 10.4	-0.5
CDM	Cerro de Muert	1.61	298	eP	Pb	01 18 10.7	-0.4
BATAN	Batan	1.66	321	⇓eP	Pb	01 18 11.7	0.0
BATAN				eS	Sb	01 18 32.6	+0.1
BATAN	Batan	1.66	321	eP	Pb	01 18 11.5	-0.3
TURIB	Turrialba	1.74	310	eP	Pb	01 18 12.8	-0.3
IRES	Siquirres	1.74	318	eP	Pb	01 18 13.2	+0.1
RVSTA	Santa Teresita	1.75	312	eP	Pb	01 18 13.4	0.0
LCOCO	El Coco	1.76	317	eP	Pb	01 18 13.6	0.0
LCOCO				eS	Sg	01 18 37.7	-0.5
RVLA	Villa Bonita	1.80	317	eP	Pb	01 18 14.3	+0.1
RVLA				eS	Sb	01 18 37.9	+1.2
VTCV	VTCV, Calle Va	1.82	311	eP	Pb	01 18 14.4	-0.2
PCAYA	Pacayas	1.84	307	eP	Pb	01 18 15.1	+0.1
CVTV	Tajo	1.85	311	eP	Pb	01 18 15.6	+0.5
VTLO	VTLO	1.86	312	eP	Pb	01 18 15.1	-0.2
RAFA	San Farael, Vo	1.86	308	eP	Pb	01 18 15.2	-0.2
LLNJ	Naranjito	1.88	291	eP	Pb	01 18 15.1	-0.4
ICR3	Volcano Irazu	1.89	309	eP	Pb	01 18 16.2	+0.2
HAYA	Volcan Irazu	1.90	308	eP	Pb	01 18 16.1	-0.1
LCR2	La Lucha 2	1.91	300	eP	Pb	01 18 15.4	-0.6
VICA	Volcano Irazu	1.91	308	eP	Pb	01 18 15.9	-0.3
PESE3	Pese, Herrera	1.91	117	⇓iP	Pb	01 18 15.8	-0.2
PESE3				i S	Sb	01 18 40.7	+0.9
ABE2	San Pablo	1.93	298	eP	Pb	01 18 16.0	-0.5
ABE2				eS	Sb	01 18 41.4	+0.8
VIRE	VIRE	1.94	307	eP	Pb	01 18 16.4	-0.3
OCM	Ochomogo	1.95	304	eP	Pb	01 18 16.5	-0.3
PNME	Penonome	2.00	99	⇑eP	Pb	01 18 18.7	+1.1
PNME				eS	Sg	01 18 45.8	-0.1
CVIMO	Finca Echandi	2.01	308	eP	Pb	01 18 17.9	0.0
CORON	Coronado	2.03	305	eP	Pb	01 18 18.4	+0.3
CENT	San Jose	2.06	303	eP	Pb	01 18 18.8	0.0
ACOS	Acosta	2.07	299	eP	Pb	01 18 18.1	-0.7
HDC3	Heredia 3	2.13	304	eP	Pb	01 18 19.7	-0.2
HDC	Heredia	2.13	304	⇓eP	Pb	01 18 20.0	+0.1
HDC				eS	Sb	01 18 47.3	+1.0
HDC	Heredia	2.13	304	eP	Pb	01 18 20.0	+0.1
RIFO	Rio Frio, Sara	2.18	314	eP	Pb	01 18 19.1	-1.6
VTON	El Valle, Cocl	2.20	95	⇑eP	Pb	01 18 21.7	+0.7
VTON				eS	Sg	01 18 51.3	-0.8
AZU	Azuero	2.26	116	⇓iP	Pb	01 18 21.2	-0.9
AZU				eS	Sb	01 18 51.7	+1.7
AZU	Azuero	2.26	116	eP	Pb	01 18 21.2	-0.9
VPTE	Poasito	2.30	307	eP	Pb	01 18 22.6	-0.2
TCS1	Tacares	2.31	303	eP	Pb	01 18 22.5	-0.4
CRPO	Crater poas	2.33	307	eP	Pb	01 18 22.8	-0.7
VPS6	Volcano Poas	2.33	307	eP	Pb	01 18 23.3	-0.2
POA5	Crater Von Fra	2.34	307	eP	Pb	01 18 22.9	-0.7
SPIL	Cristobal, Col	2.41	79	eP	Pb	01 18 25.2	+0.5
MLIR	Monte Lirio	2.48	80	eP	Pb	01 18 26.9	+1.1
BCIP	Isla Barro Col	2.49	81	⇓eP	Pb	01 18 24.6	-1.3
BCIP				eS	Sb	01 18 58.5	+2.1
CPMI	Catarata Coope	2.51	306	eP	Pb	01 18 25.8	-0.6
FRIJ	El Hiral	2.60	80	eP	Pb	01 18 25.6	-2.3
FRIJ				eS	Sn	01 18 56.6	+2.0
GAMB1	Gamboa	2.61	83	eP	Pn	01 18 25.3	+2.1
GAMB1				eS	Sn	01 18 57.0	+2.4
ARRA3	Arraijan, Pana	2.65	86	⇓eP	Pg	01 18 30.9	-1.2
ARRA3				i S	Sb	01 18 58.7	-2.3
SOCE	Pocosol	2.75	305	eP	Pb	01 18 28.8	-1.7
COVE	Coope Vega, Sa	2.80	313	eP	Pb	01 18 29.9	-1.3
VACR	Volcan Arenal	2.85	306	eP	Pb	01 18 30.1	-2.1
ARE1	Arenal 1	2.88	305	eP	Pb	01 18 30.3	-2.3
JTS	Las Juntas de	2.98	300	⇓eP	Pb	01 18 31.6	-2.8
JTS				eS	Sb	01 19 08.4	-2.4
JTS	Las Juntas de	2.98	300	eP	Pb	01 18 31.6	-2.8
CHPO	Chepo, Panama	3.20	83	eP	Pb	01 18 35.4	-2.6
UPD2	Meteti	4.27	93	⇑eP	Pn	01 18 51.1	+5.1

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*ISK **01** 01:23:59.4, 39°.49N×26°.02E, h12^{km}, ML3.1/12*
*THE **01** 01:24:00.7, 39°.50N×26°.07E, h12^{km}, ML2.8/9, Error ellipse: s-maj=1.4km s-min=0.6km az=74.0*
*DDA **01** 01:24:00.3±0.0, 39°.49N×26°.07E, h12^{km}, ML2.7*
ISC 01 01:23:59.9±0.8**, 39°.49N**±0°.02×**26°.08E**±0°.03**, h15**^{km}±5^{km}**, n40, σ0^{s}.41**/64**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.05	75	P	Pg	01 24 02.9	+0.1
KOCA				S	Sg	01 24 04.5	-0.1
GPNR	Gulpinar-Canak	0.06	126	Pg	Pg	01 24 02.5	-0.3
GPNR				Sg	Sg	01 24 04.7	+0.1
PRK	Paraskevi	0.29	148	P	Pb	01 24 06.8	0.0
PRK				S	Sb	01 24 11.3	0.0
	5µm,0.3s						
BOZC	Bozcaada	0.35	357	Pg	Pg	01 24 06.9	-0.3
BOZC				Sg	Sg	01 24 12.4	+0.3
BOZC	Bozcaada	0.35	357	P	Pb	01 24 07.4	-0.5
BOZC				i AML	AML	01 24 12.0	
	comp=N,1µm,0.2s						
BOZC				S	Sb	01 24 12.5	-0.8
BOZC				i AML	AML	01 24 13.0	
	comp=E,854nm,0.3s						
EZN	Ezine	0.39	30	P	Pb	01 24 08.0	-0.5
EZN				S	Sb	01 24 13.7	-0.6
	680nm,0.2s						
EZN	Ezine	0.39	30	Pg	Pb	01 24 08.0	-0.5
EZN				Sg	Sb	01 24 14.2	-0.1
BAYC	CANAKKALE_Bayr	0.44	55	P	Pg	01 24 08.9	+0.1
BAYC				i AML	AML	01 24 15.0	
	comp=E,284nm,0.5s						
BAYC				S	Sb	01 24 15.1	-0.9
BAYC				i AML	AML	01 24 18.0	
	comp=N,306nm,0.5s						
AYVA	Ayvalik	0.51	110	P	Pb	01 24 10.8	+0.2
AYVA				S	Sb	01 24 18.3	+0.5
AYVA				i AML	AML	01 24 25.0	
	comp=N,254nm,0.1s						
ECEA	Canakkale, Ece	0.56	8	P	Pb	01 24 11.4	-0.1
ECEA				S	Sb	01 24 19.8	+0.5
ECEA				i AML	AML	01 24 22.0	
	comp=N,340nm,0.4s						
ECEA				i AML	AML	01 24 23.0	
	comp=E,570nm,0.2s						
COMU	Canakkale	0.68	27	Pg	Pg	01 24 13.2	-0.1
COMU				Sg	Sb	01 24 23.7	+0.9
GOKA	anakkale-Gk	0.71	350	P	Pg	01 24 13.8	-0.1
GOKA				S	Sb	01 24 23.5	-0.2
GOKA				i AML	AML	01 24 27.0	
	comp=E,753nm,0.2s						
GOKA				i AML	AML	01 24 27.0	
	comp=N,752nm,0.5s						
GADA	Gvkgeada	0.71	349	Pg	Pg	01 24 13.6	-0.3
DKL	Dikili	0.77	123	Pg	Pn	01 24 15.7	-0.5
BUHA	Balikesir, Bur	0.78	89	P	Pb	01 24 15.3	+0.2
BUHA				S	Sb	01 24 26.4	+0.9
BUHA				i AML	AML	01 24 30.0	
	comp=N,268nm,0.7s						
BUHA				i AML	AML	01 24 31.0	
	comp=E,367nm,0.4s						
LIA	Limnos Island	0.80	301	P	Pb	01 24 15.9	+0.4
LIA				S	Sn	01 24 27.6	-0.7
	980nm,0.3s						
KARB	zmir-Karabur	0.86	162	P	Pn	01 24 17.2	-0.3
KARB				S	Sn	01 24 29.6	-0.3
KARB				i AML	AML	01 24 31.0	
	comp=N,286nm,0.3s						
KARB				i AML	AML	01 24 31.0	
	comp=E,514nm,0.3s						
CANM	Can-anakkale	0.92	55	Pg	Pn	01 24 18.2	-0.1
ZEDA	zmir-Bergama	0.94	124	P	Pn	01 24 18.7	+0.1
ZEDA				S	Sn	01 24 32.5	+0.8
ZEDA				i AML	AML	01 24 34.0	
	comp=E,250nm,0.3s						
ZEDA				i AML	AML	01 24 34.0	
	comp=N,216nm,0.4s						
GELI	Tayfur-Gelibol	0.96	19	Pg	Pb	01 24 18.3	0.0
LPK	Lapseki	1.03	31	Pg	Pn	01 24 19.8	0.0
SMTH	Samothraki Isl	1.07	337	P	Pb	01 24 20.2	+0.1
SMTH				S	Sb	01 24 33.8	-0.1
	300nm,0.3s						
CHOS	Chios island	1.10	181	P	Pg	01 24 21.0	-0.2
CHOS				S	Sn	01 24 36.0	+0.2
	728nm,0.2s						
CHOS	Chios island	1.10	181	Pn	Pg	01 24 21.0	-0.2
URLA	Izmir	1.20	160	Pn	Pb	01 24 22.4	+0.1
ERIK	Erikli-Kesan	1.23	16	Pn	Pn	01 24 22.4	-0.1
ENEZ	Enez	1.25	3	P	Pb	01 24 23.3	+0.1
ENEZ				S	Sg	01 24 40.5	+0.2
	460nm,0.4s						
ENEZ	Enez	1.25	3	Pn	Pb	01 24 23.2	+0.1
KRBG	Karabiga-Canak	1.30	46	Pn	Pb	01 24 24.2	+0.1
BLCB	Balcova	1.33	145	P	Pb	01 24 24.6	-0.1
BLCB				S	Sg	01 24 42.3	-0.7
BLCB	Balcova	1.33	145	Pn	Pb	01 24 24.8	+0.1
GONE	Gonen-Balikesi	1.36	65	Pn	Pb	01 24 25.2	+0.1
BALB	Balikesir	1.40	83	Pn	Pb	01 24 25.7	-0.1
ALN	Alexandroupoli	1.41	359	P	Pn	01 24 25.2	+0.2
ALN				S	Sb	01 24 44.1	+0.4
	330nm,0.5s						
THAS	Thassos island	1.53	317	P	Pn	01 24 26.3	-0.3
THAS				S	Sn	01 24 46.2	0.0
	118nm,0.3s						
RDO	Rodhopi	1.71	346	P	Pn	01 24 29.6	+0.5
RDO				S	Sn	01 24 50.8	+0.1
OUR	Ouranopolis	1.82	298	P	Pn	01 24 31.0	+0.3
SMG	Samos	1.88	161	P	Pn	01 24 31.9	+0.4
SMG				S	Sb	01 24 56.5	-0.6
	260nm,0.6s						
KAVA	Kavala	1.92	322	P	Pn	01 24 32.1	0.0
STIP	Stip	3.69	308	i Pn	Pn	01 24 57.4	+1.0

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*NEIC **01** 01:28:26.6±1.8, 8°.85N±0°.08×82°.42W±0°.05, h20^{km}±11^{km}, ML3.0/18, Error ellipse: s-maj=12.3km s-min=6.8km az=179.0*
*UCR **01** 01:28:26.9±1.7, 8°.74N×82°.43W, h4^{km}±6^{km}, MW3.7*
*UPA **01** 01:28:26.8±1.8, 8°.76N×82°.38W, h8^{km}±3^{km}, MW3.1*
ISC 01 01:28:27.0±0.8**, 8°.76N**±0°.03×**82°.39W**±0°.02**, h15**^{km}±5^{km}**, n58, σ1^{s}.36**/83**, 8C-10D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNBQ3	Los Naranjos,	0.06	305	⇑eP	Pg	01 28 29.5	-0.6
LNBQ3				eS	Sg	01 28 31.6	-0.6
PTAR3	Potrerillos Ar	0.12	239	⇓eP	Pg	01 28 30.5	-0.2
BCO2	Palmira	0.14	255	⇓iP	Pg	01 28 30.8	-0.2
BCO2				i S	Sg	01 28 34.0	+0.4
BRU2	Volcan	0.30	277	Pg	Pg	01 28 32.9	-0.5
BRU2				Sg	Sg	01 28 37.8	0.0
BRU2				IAML		01 28 38.1	
	comp=N,3µm,0.3s						
BRU2				IAML		01 28 39.3	
	comp=E,3µm,0.3s						
BRU2	Volcan	0.30	277	⇑iP	Pg	01 28 33.1	-0.3
BRU2				eS	Sg	01 28 37.9	+0.1
DVD	David	0.32	191	⇓eP	Pg	01 28 33.8	0.0
DVD				i S	Sb	01 28 41.1	+1.7
MLIR3	Monte Lirio, C	0.43	275	⇑eP	Pb	01 28 36.8	+0.5
MLIR3				i S	Sb	01 28 43.9	+1.2
CDITO	Canoas	0.51	249	Pg	Pg	01 28 37.1	0.0
CDITO				Sg	Sb	01 28 45.1	+0.3
CDITO	Canoas	0.51	249	⇓iP	Pg	01 28 37.2	0.0
CDITO				eS	Sb	01 28 45.4	+0.6
LESP3	La Esperanza,	0.53	229	⇓iP	Pg	01 28 37.2	-0.2
EDSV	San Vito	0.58	276	eP	Pb	01 28 38.9	0.0
EDSV				eS	Sb	01 28 48.5	+1.5
CNI2	El Empalme, Bo	0.67	353	⇑iP	Pg	01 28 39.5	-0.6
CNI2				i S	Sb	01 28 49.9	+0.5
REME3	Remedios, Chir	0.76	133	⇓eP	Pg	01 28 40.5	-1.4
EDAD	Golfito	0.77	262	eP	Pg	01 28 40.8	-1.3
EDAD				eS	Sg	01 28 52.2	-0.1
EDP2	Potrero Grande	0.82	288	eP	Pg	01 28 42.4	-0.6
EDP2				eS	Sg	01 28 53.9	+0.1
NANC3	Nancito, Chiri	0.83	128	⇑iP	Pg	01 28 41.7	-1.4
NANC3				i S	Sg	01 28 52.7	-1.3
SRBA	San Rafael, Bu	1.07	296		Pg	01 28 45.5	-2.2
SRBA					Sg	01 28 59.3	-2.4
SRBA				IAML		01 29 04.5	
	comp=E,467nm,0.2s						
EDPN	Palmar Norte	1.07	281	eS	Sg	01 29 01.6	-0.2
PLAN	Los Planes de	1.28	266	eP	Pn	01 28 49.3	-1.0
PEZE	Perez Zeledon,	1.42	296		Pn	01 28 51.5	-0.8
PEZE	Perez Zeledon,	1.42	296	eP	Pn	01 28 51.9	-0.3
PEZE				eS	Sb	01 29 10.7	-0.3
MRVA	Moravia de Chi	1.48	316	eP	Pn	01 28 52.9	-0.4
GMAL	Guarumal, Vera	1.51	131	⇑eP	Pn	01 28 42.2	-11
GMAL				eS	Sn	01 29 11.9	-1.0
GMAL	Guarumal, Vera	1.51	131	eP	Pn	01 28 51.6	-1.9
BUS1	Rivas	1.56	301	eP	Pn	01 28 54.5	-0.1
CDM	Cerro de Muert	1.57	300	eP	Pn	01 28 54.6	-0.1
BATAN	Batan	1.65	324	⇑eP	Pn	01 28 55.7	+0.3
BATAN				eS	Sg	01 29 19.5	-0.7
RVSTA	Santa Teresita	1.73	314	⇓eP	Pn	01 28 57.3	+0.6
RVSTA				eS	Sb	01 29 21.9	+1.7
LCOCO	El Coco	1.75	319	eP	Pn	01 28 58.3	+1.4
LCOCO				eS	Sb	01 29 21.1	+0.4
RIMA	Rio Macho	1.77	305	Pn	Pn	01 28 55.4	-1.8
RIMA				IAML		01 29 21.9	
	comp=E,135nm,0.2s						
RIMA				IAML		01 29 24.0	
	comp=N,112nm,0.4s						
RVLA	Villa Bonita	1.79	319	eP	Pn	01 28 58.2	+0.9
VTLO	VTLO	1.84	314	eP	Pn	01 28 58.9	+0.6
RAFA	San Farael, Vo	1.84	311	eP	Pn	01 28 58.7	+0.3
ICR3	Volcano Irazu	1.87	311	eP	Pn	01 29 00.5	+1.6
LCR2	La Lucha 2	1.87	302	eP	Pn	01 28 59.2	+0.6
LCR2				eS	Sn	01 29 23.6	+1.5
HAYA	Volcan Irazu	1.88	310	eP	Pn	01 28 60.0	+1.0
VICA	Volcano Irazu	1.88	311	eP	Pn	01 28 60.0	+0.9
ABE2	San Pablo	1.89	300	eP	Pn	01 28 59.9	+0.9
ABE2				eS	Sb	01 29 25.1	+0.1
OCM	Ochomogo	1.92	306	eP	Pn	01 29 00.3	+1.0
PNME	Penonome	2.06	97	eP	Pn	01 29 02.6	+1.5
PNME				eS	Sb	01 29 29.7	+0.2
HDC	Heredia	2.10	306	Pn	Pn	01 28 58.5	-3.3
HDC				IAML		01 29 35.6	
	comp=E,126nm,1.1s						
HDC				IAML		01 29 37.9	
	comp=N,101nm,1.0s						
HDC	Heredia	2.10	306	⇓eP	Pn	01 29 03.1	+1.4
HDC				eS	Sb	01 29 31.7	+0.8
VTON	El Valle, Cocl	2.26	93	⇑eP	Pn	01 29 05.6	+1.7
VTON				i S	Sb	01 29 34.6	-0.7
VPTE	Poasito	2.27	308	eP	Pn	01 29 06.7	+2.5
AZU	Azuero	2.30	114	eP	Pn	01 29 05.2	+0.8
AZU				eS	Sn	01 29 34.4	+1.9
AZU	Azuero	2.30	114	eP	Pn	01 29 04.8	+0.4
JACO	JACO, Garabito	2.41	292	Pn	Pn	01 29 03.3	-2.7
JACO	JACO, Garabito	2.41	292	eP	Pn	01 29 07.5	+1.6
BCIP	Isla Barro Col	2.56	81	Pn	Pn	01 29 07.8	-0.1
BCIP				IAML		01 29 51.3	
	comp=N,72nm,1.1s						
BCIP	Isla Barro Col	2.56	81	⇓eP	Pn	01 29 10.4	+2.6
BCIP				eS	Sn	01 29 39.2	+0.4
FRIJ	El Hiral	2.67	80	eP	Pn	01 29 11.1	+1.6
ARE1	Arenal 1	2.85	307	eP	Pn	01 29 15.1	+3.1
JTS	Las Juntas de	2.95	301	Pn	Pn	01 29 11.5	-1.9
JTS	Las Juntas de	2.95	301	⇓eP	Pn	01 29 15.5	+2.1
JTS				eS	Sb	01 29 55.4	+0.1
JTS	Las Juntas de	2.95	301	eP	Pn	01 29 15.5	+2.1
DUNO	Dulce Nombre,	3.33	293	Pn	Pn	01 29 14.4	-4.2
ORTG	Ortega, Santa	3.42	298	Pn	Pn	01 29 16.1	-3.8
ACON	Acoyapa	4.21	320	Pn	Pn	01 29 27.8	-2.8
ACON				IAML		01 30 26.4	
	comp=E,16nm,1.8s						
ACON				IAML		01 31 09.5	
	comp=N,15nm,1.7s						

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*SNET **01** 01:43:30.8±0.8, 13°.44N×90°.58W, h32^{km}±4^{km}, ML3.0*
*GCG **01** 01:43:34.1±0.4, 13°.65N×90°.73W, h28^{km}±3^{km}, MD3.3*
ISC 01 01:43:29.2±3.0**, 13°.3N**±0°.2×**90°.66W**±0°.08**, h38**^{km}**, n7, σ1^{s}.49**/12**, 1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUBE	Las Nubes	1.06	53	eS	Sn	01 43 59.6	-1.7
LOAL	Lomas de Alarc	1.12	49	eS	Sn	01 44 02.0	-0.7
CEVE	Cerro Verde	1.15	61	⇓iP	Pn	01 43 49.2	+0.2
CEVE				eS	Sn	01 44 03.5	-0.1
FUG	Fuego 3	1.19	351	eP	Pn	01 43 49.7	+0.2
FUG				eS	Sn	01 44 01.6	-2.9
JAYA	Jayaque - finc	1.24	72	eP	Pn	01 43 50.4	+0.3
JAYA				eS	Sn	01 44 05.3	-0.3
NBG	Las Nubes	1.35	13	eP	Pn	01 43 53.2	+1.4
NBG				eS	Sn	01 44 10.5	+1.9
STG3	Santiaguito 3,	1.69	328	eP	Pn	01 43 57.4	+1.0

STG3				*e*S	**Sn**	**01 44 15.8**	**-1.1**

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*AZER **01** 01:50:23.1±1.4, 33°.76N×48°.11E, h10^{km}, Error ellipse: s-maj=18.5km s-min=9.7km az=117.0*
*ISN **01** 01:50:32.7±1.2, 35°.19N×46°.26E, h14^{km}±18^{km}, ML3.2*
*TEH **01** 01:50:33.6, 35°.14N×46°.29E, h9^{km}±48^{km}, ML3.2*
ISC 01 01:50:33.5±0.8, **35°.17N**±0°.02×**46°.26E**±0°.03, **h10**^{km}, **n42, σ1ˢ.92**/53, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDHR	**Dehrash**	**0.48**	**167**	Pg	**Pg**	**01 50 42.5**	**-0.4**
IDHR				Sg	**Sb**	**01 50 50.1**	**-1.3**
IGHG	**Ghaleghazi**	**0.88**	**163**	Pg	**Pb**	**01 50 50.5**	**-0.5**
IGHG				Sg	**Sb**	**01 51 02.8**	**0.0**
KER	**Kermanshah**	**1.06**	**137**	Pg	**Pg**	**01 50 53.2**	**-0.7**
KCHF	**Cheshme Sefid,**	**1.10**	**144**	Pg	**Pn**	**01 50 54.7**	**-0.5**
KCHF				Sg	**Sn**	**01 51 09.4**	**-1.2**
IKOM	**Komasi**	**1.43**	**134**	Pg	**Pb**	**01 50 59.7**	**-0.7**
IBZA	**Bozab**	**1.49**	**117**	Pg	**Pg**	**01 51 02.0**	**-0.2**
ILBA	**Ilam Banvizeh**	**1.54**	**182**	Pg	**Pg**	**01 51 03.3**	**+0.2**
ILBA				Sg	**Sg**	**01 51 23.5**	**+0.4**
IKRK	**Kirkuk**	**1.58**	**279**	*e*Pn	**Pn**	**01 51 02.0**	**+0.4**
IKRK				*e*Sn	**Sb**	**01 51 24.0**	**+1.0**
IKRK				AML	AML	01 51 31.7	
	comp=E,372nm,0.5s						
IKRK				AML	AML	01 51 34.7	
	comp=N,482nm,0.6s						
MAHB	**Mahabad**	**1.65**	**344**	Pg	**Pn**	**01 51 03.9**	**+1.2**
IBDR	**Badra**	**2.07**	**188**	*e*Pn	**Pb**	**01 51 10.0**	**-1.2**
IBDR				*e*Sn	**Sn**	**01 51 35.0**	**+0.8**
IBDR				AML	AML	01 51 48.0	
	comp=N,131nm,0.5s						
IBDR				AML	AML	01 51 54.5	
	comp=E,148nm,0.4s						
IDOB	**Doab**	**2.10**	**130**	Pn	**Pb**	**01 51 11.2**	**-0.7**
IKFM	**Kafar-mosalman**	**2.10**	**141**	Pn	**Pb**	**01 51 11.4**	**-0.3**
HSAM	**Samen**	**2.16**	**116**	Pn	**Pb**	**01 51 11.6**	**-1.2**
IHSH	**Hashtrud**	**2.28**	**21**	Pn	**Pb**	**01 51 13.9**	**-1.0**
HAGD	**Aghdareh**	**2.39**	**98**	Pn	**Pb**	**01 51 14.8**	**-2.0**
BHD	**Baghdad**	**2.45**	**220**	*e*Pn	**Pn**	**01 51 14.0**	**+0.5**
BHD				*e*Sn	**Sn**	**01 51 45.0**	**+1.4**
BHD				AML	AML	01 51 53.9	
	comp=E,227nm,0.4s						
ZNJK	**Zanjan**	**2.47**	**52**	Pn	**Pn**	**01 51 15.0**	**+0.9**
IAZR	**Azarshahr**	**2.51**	**355**	Pn	**Pb**	**01 51 17.4**	**-1.5**
ISRB	**Sarab**	**2.88**	**23**	Pn	**Pn**	**01 51 21.6**	**+1.9**
IRAZ	**Razeghan**	**3.01**	**85**	Pn	**Pn**	**01 51 23.9**	**+2.4**
ASAO	**Ashtian**	**3.16**	**100**	Pn	**Pn**	**01 51 25.3**	**+1.7**
IHRS	**Heris**	**3.20**	**11**	Pn	**Pn**	**01 51 26.8**	**+2.6**
KHMZ	**Khomeyn**	**3.38**	**114**	Pn	**Pn**	**01 51 28.8**	**+2.3**
GIDE	**GILAN DEYLAMAN**	**3.44**	**58**	Pn	**Pn**	**01 51 29.5**	**+2.2**
RAFI	**Al-Rafai**	**3.44**	**182**	*e*Pn	**Pn**	**01 51 28.0**	**+0.9**
RAFI				*e*Sn	**Sn**	**01 52 09.0**	**+1.0**
IMRD	**Marand**	**3.56**	**353**	Pn	**Pn**	**01 51 31.9**	**+2.9**
ORD	**Ordubad**	**3.76**	**357**	P	**Pg**	**01 51 43.5**	**-1.9**
	SNR=6.5						
GAS1	**Astara - Iran**	**3.82**	**32**	Pn	**Pn**	**01 51 35.5**	**+3.1**
THKV	**Tehran--Karaj**	**3.84**	**78**	Pn	**Pn**	**01 51 34.3**	**+1.4**
LRK	**Lerik**	**3.85**	**25**	P	**Pn**	**01 51 36.4**	**+3.5**
LRK				S	**Sg**	**01 52 34.1**	**-3.0**
ASTR	**Astara**	**3.95**	**30**	P	**Pn**	**01 51 36.5**	**+2.4**
	SNR=5.0						
ASTR				S	**Sb**	**01 52 32.2**	**+1.3**
CHTH	**Charan**	**4.04**	**78**	Pn	**Pn**	**01 51 37.2**	**+1.6**
NAX	**Nakhchivan**	**4.04**	**352**	P	**Pg**	**01 51 49.5**	**-1.4**
	SNR=4.8						
NAX				S	Sg	01 52 55.9	+13
YRD	**Yardimli**	**4.06**	**22**	P	**Pn**	**01 51 39.9**	**+4.0**
YRD				S	**Sg**	**01 52 42.2**	**-1.8**
AMIS	**Naft Sefid**	**4.32**	**143**	Pn	**Pn**	**01 51 40.9**	**+1.7**
MAKU	**Maku**	**4.36**	**344**	Pn	**Pn**	**01 51 43.8**	**+3.8**
GLBA	**Clilabad**	**4.41**	**22**	P	**Pn**	**01 51 44.7**	**+4.3**
	SNR=9.4						
QAMS	**Qamsar**	**4.48**	**107**	Pn	**Pn**	**01 51 43.7**	**+2.0**
IPIR	**Pirpir**	**4.58**	**121**	Pn	**Pn**	**01 51 45.1**	**+2.0**
ISFB	**Sefidab**	**4.99**	**98**	Pn	**Pn**	**01 51 50.4**	**+1.8**
KRSH	**Karshahi**	**5.00**	**102**	Pn	**Pn**	**01 51 51.2**	**+2.5**
KLNJ	**Kolanjah**	**6.11**	**131**	Pn	**Pn**	**01 52 05.0**	**+0.8**

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*THE **01** 01:51:21.6, 39°.52N×26°.05E, h10^{km}±1^{km}, ML2.4/8, Error ellipse: s-maj=1.2km s-min=0.6km az=70.0*
*ATH **01** 01:51:21.9, 39°.49N×26°.06E, h17^{km}±2^{km}, ML2.5/8, Error ellipse: s-maj=2.7km s-min=0.8km az=97.0*
*DDA **01** 01:51:21.6±0.0, 39°.51N×26°.09E, h11^{km}, ML2.4*
*ISK **01** 01:51:21.2, 39°.52N×26°.08E, h12^{km}, ML2.7/14*
ISC 01 01:51:21.2±0.8, **39°.51N**±0°.02×**26°.06E**±0°.02, **h14**^{km}±5^{km}, **n49, σ0ˢ.54**/83, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	**Canakkale, Ayv**	**0.06**	**93**	P	**Pg**	**01 51 23.9**	**0.0**
KOCA				S	**Sg**	**01 51 25.7**	**-0.1**
GPNR	**Gulpinar-Canak**	**0.08**	**130**	Pg	**Pg**	**01 51 23.9**	**-0.2**
GPNR				Sg	**Sg**	**01 51 25.9**	**-0.1**
PRK	**Paraskevi**	**0.31**	**147**	P	**Pg**	**01 51 28.0**	**+0.4**
PRK				S	**Sg**	**01 51 32.2**	**+0.3**
	2µm,0.2s						
PRK	**Paraskevi**	**0.31**	**147**	P	**Pg**	**01 51 28.0**	**+0.4**
PRK				S	**Sg**	**01 51 32.1**	**+0.2**
PRK				AML	AML	01 51 33.0	
	comp=N,4478µm,0.2s						
PRK				AML	AML	01 51 33.0	
	comp=E,4792µm,0.2s						
BOZC	**Bozcaada**	**0.34**	**359**	Pg	**Pg**	**01 51 28.3**	**+0.1**
BOZC				Sg	**Sg**	**01 51 33.2**	**+0.4**
BOZC	**Bozcaada**	**0.34**	**359**	P	**Pg**	**01 51 28.2**	**+0.1**
BOZC				*i* AML	AML	01 51 33.0	
	comp=E,923nm,0.5s						
BOZC				*i* AML	AML	01 51 33.0	
	comp=E,1µm,0.4s						
BOZC				S	**Sg**	**01 51 33.4**	**+0.6**
EZN	**Ezine**	**0.38**	**33**	P	**Pg**	**01 51 29.0**	**0.0**
EZN				S	**Sg**	**01 51 34.4**	**+0.3**
EZN	**Ezine**	**0.38**	**33**	Pg	**Pg**	**01 51 28.9**	**0.0**
EZN				Sg	**Sg**	**01 51 34.1**	**0.0**
BAYC	**CANAKKALE_Bayr**	**0.45**	**58**	P	**Pg**	**01 51 30.0**	**-0.1**
BAYC				*i* AML	AML	01 51 36.0	
	comp=E,326nm,0.2s						
BAYC				S	**Sg**	**01 51 36.2**	**+0.1**
BAYC				*i* AML	AML	01 51 37.0	
	comp=E,250nm,0.1s						
AYVA	**Ayvalik**	**0.53**	**112**	P	**Pg**	**01 51 32.0**	**+0.3**
AYVA				S	**Sb**	**01 51 39.3**	**-0.5**
AYVA				*i* AML	AML	01 51 44.0	
	comp=E,230nm,0.3s						
ECEA	**Canakkale, Ece**	**0.55**	**10**	P	**Pg**	**01 51 32.3**	**+0.3**
ECEA				S	**Sb**	**01 51 40.4**	**+0.1**
ECEA				*i* AML	AML	01 51 41.0	
	comp=E,369nm,0.5s						
ECEA				*i* AML	AML	01 51 43.0	
	comp=E,380nm,0.4s						
COMU	**Canakkale**	**0.67**	**28**	Pg	**Pg**	**01 51 34.5**	**+0.1**
GOKA	**anakkale-Gk**	**0.69**	**351**	P	**Pg**	**01 51 35.0**	**+0.2**
GOKA				*i* AML	AML	01 51 45.0	
	comp=E,192nm,0.2s						
GOKA				*i* AML	AML	01 51 48.0	
	comp=E,624nm,0.2s						
GADA	**Gvkgeada**	**0.69**	**350**	Pg	**Pg**	**01 51 34.9**	**+0.1**
LIA	**Limnos Island**	**0.78**	**300**	P	**Pg**	**01 51 36.5**	**+0.1**
LIA				S	**Sg**	**01 51 47.6**	**+1.0**
	comp=E,538nm,0.6s						
LIA	**Limnos Island**	**0.78**	**300**	P	**Pg**	**01 51 36.7**	**+0.3**
LIA				S	**Sg**	**01 51 47.3**	**+0.6**
LIA				AML	AML	01 51 50.3	
	comp=E,979µm,0.3s						
LIA				AML	AML	01 51 51.4	
	comp=N,1262µm,0.4s						
BUHA	**Balikesir, Bur**	**0.79**	**90**	P	**Pg**	**01 51 36.7**	**+0.1**
BUHA				S	**Sb**	**01 51 47.3**	**-0.1**
BUHA				*i* AML	AML	01 51 48.0	
	comp=N,95nm,0.4s						
BUHA				*i* AML	AML	01 51 51.0	
	comp=N,103nm,0.3s						
DKL	**Dikili**	**0.79**	**123**	Pg	**Pg**	**01 51 36.8**	**+0.3**
KARB	**zmir-Karabur**	**0.89**	**162**	P	**Pg**	**01 51 38.7**	**+0.4**
KARB				S	**Sb**	**01 51 50.9**	**+0.8**
KARB				*i* AML	AML	01 51 52.0	
	comp=N,203nm,0.2s						
KARB				*i* AML	AML	01 51 53.0	
	comp=N,189nm,0.2s						
CANM	**Can-anakkale**	**0.92**	**56**	Pg	**Pg**	**01 51 38.9**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.95**	**20**	Pg	**Pg**	**01 51 39.1**	**-0.5**
GELI				Sg	**Sb**	**01 51 52.8**	**+0.9**
LPK	**Lapseki**	**1.02**	**32**	Pg	**Pg**	**01 51 40.7**	**-0.3**
LPK				Sg	**Sn**	**01 51 55.1**	**-0.2**
PSRA	**Psara**	**1.04**	**202**	P	**Pb**	**01 51 41.3**	**+0.4**
PSRA				S	**Sb**	**01 51 54.3**	**-0.1**
PSRA				AML	AML	01 51 59.5	
	comp=N,1288µm,0.2s						
PSRA				AML	AML	01 52 00.6	
	comp=E,1790µm,0.2s						
SMTH	**Samothraki Isl**	**1.04**	**337**	P	**Pb**	**01 51 41.0**	**-0.2**
SMTH				S	**Sb**	**01 51 55.4**	**+0.7**
	comp=E,130nm,0.2s						
SMTH	**Samothraki Isl**	**1.04**	**337**	P	**Pb**	**01 51 41.2**	**0.0**
SMTH				S	**Sb**	**01 51 55.6**	**+0.9**
SMTH				AML	AML	01 51 56.2	
	comp=N,248µm,0.3s						
SMTH				AML	AML	01 51 57.0	
	comp=E,272µm,0.2s						
CHOS	**Chios island**	**1.12**	**180**	P	**Pb**	**01 51 42.0**	**-0.4**
CHOS				S	**Sg**	**01 51 58.4**	**+1.0**
	comp=E,298nm,0.3s						
CHOS	**Chios island**	**1.12**	**180**	P	**Pb**	**01 51 42.2**	**-0.2**
CHOS				S	**Sb**	**01 51 55.8**	**-1.0**
CHOS				AML	AML	01 52 03.1	
	comp=N,475µm,0.2s						
CHOS				AML	AML	01 52 03.1	
	comp=E,732µm,0.2s						
ERIK	**Erikli-Kesan**	**1.22**	**17**	Pn	**Pn**	**01 51 43.7**	**-0.1**
ENEZ	**Enez**	**1.23**	**3**	P	**Pn**	**01 51 44.0**	**-0.1**
ENEZ				S	**Sn**	**01 52 01.2**	**+0.7**
	comp=E,195nm,0.3s						
ENEZ	**Enez**	**1.23**	**3**	Pn	**Pn**	**01 51 44.2**	**+0.1**
KRBG	**Karabiga-Canak**	**1.30**	**47**	Pn	**Pn**	**01 51 45.3**	**+0.3**
BLCB	**Balcova**	**1.36**	**145**	P	**Pn**	**01 51 46.5**	**+0.7**
BLCB				S	**Sg**	**01 52 05.0**	**0.0**
GONE	**Gonen-Balikesi**	**1.37**	**66**	Pn	**Pn**	**01 51 46.4**	**+0.5**
ALN	**Alexandroupoli**	**1.39**	**360**	P	**Pn**	**01 51 46.2**	**0.0**
ALN				S	**Sn**	**01 52 03.9**	**-0.5**
	comp=E,118nm,0.4s						
ALN	**Alexandroupoli**	**1.39**	**360**	Pn	**Pn**	**01 51 46.7**	**+0.5**
ALN	**Alexandroupoli**	**1.39**	**360**	P	**Pn**	**01 51 46.5**	**+0.3**
ALN				S	**Sn**	**01 52 02.7**	**-1.7**
ALN				AML	AML	01 52 06.8	
	comp=E,272µm,0.4s						
ALN				AML	AML	01 52 06.8	
	comp=N,196µm,0.5s						
BALB	**Balikesir**	**1.42**	**84**	Pn	**Pn**	**01 51 46.8**	**+0.2**
THAS	**Thassos island**	**1.50**	**317**	P	**Pn**	**01 51 47.6**	**-0.2**
THAS				S	**Sn**	**01 52 06.8**	**-0.4**
	comp=N,48nm,0.4s						
THAS	**Thassos island**	**1.50**	**317**	P	**Pn**	**01 51 47.8**	**0.0**
THAS				S	**Sn**	**01 52 05.9**	**-1.3**
THAS				AML	AML	01 52 12.4	
	comp=E,101µm,0.3s						
THAS				AML	AML	01 52 12.7	
	comp=N,92µm,0.3s						
EDC	**Edincik**	**1.62**	**58**	Pn	**Pn**	**01 51 49.6**	**+0.1**
UKOP	**Uzunkopru-Edir**	**1.68**	**15**	Pn	**Pn**	**01 51 50.8**	**+0.6**
RDO	**Rodhopi**	**1.69**	**347**	P	**Pn**	**01 51 50.5**	**+0.2**
RDO				S	**Sn**	**01 52 11.2**	**-0.5**
	comp=N,25nm,0.3s						
RDO	**Rodhopi**	**1.69**	**347**	P	**Pn**	**01 51 50.7**	**+0.4**
RDO				S	**Sn**	**01 52 11.1**	**-0.7**
KYMI	**Kymi, Euboea I**	**1.75**	**241**	P	**Pn**	**01 51 50.6**	**-0.7**
OUR	**Ouranopolis**	**1.80**	**298**	P	**Pn**	**01 51 52.2**	**+0.4**
OUR				S	**Sn**	**01 52 13.2**	**-1.3**
OUR	**Ouranopolis**	**1.80**	**298**	P	**Pn**	**01 51 52.0**	**+0.2**
OUR				S	**Sn**	**01 52 13.3**	**-1.2**
OUR				AML	AML	01 52 13.8	
	comp=E,77µm,0.3s						
OUR				AML	AML	01 52 20.4	
	comp=N,60µm,0.5s						
KAVA	**Kavala**	**1.90**	**322**	P	**Pn**	**01 51 52.9**	**-0.3**
KAVA				S	**Sn**	**01 52 15.7**	**-1.3**
DION	**Dionisos Attik**	**2.19**	**230**	P	**Pn**	**01 51 57.4**	**+0.1**
NVR	**Nevrokopi**	**2.49**	**318**	P	**Pn**	**01 52 01.5**	**+0.1**
NVR				S	**Sn**	**01 52 30.9**	**-0.8**

ISK 01 02:13:45.6, 39°.50N×26°.06E, h10^{km}**, ML1.8**/4**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GPNR	**Gulpinar-Canak**	**0.07**	**129**	Pg	Pg	02 13 47.9	+0.2
GPNR				Sg	Sg	02 13 49.8	+0.6
BOZC	**Bozcaada**	**0.34**	**359**	Pg	Pg	02 13 52.8	+0.4
BOZC				Sg	Sg	02 13 58.1	+1.2
EZN	**Ezine**	**0.38**	**32**	Pg	Pg	02 13 53.6	+0.5
EZN				Sg	Sb	02 13 59.4	-1.1
COMU	**Canakkale**	**0.68**	**28**	Pg	Pg	02 13 59.1	+0.4
DKL	**Dikili**	**0.78**	**123**	Pg	Pb	02 14 01.1	-0.2

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*THE **01** 02:14:28.3, 39°.50N×26°.06E, h8^{km}±2^{km}, ML2.3/5, Error ellipse: s-maj=2.8km s-min=0.8km az=129.0*
*ATH **01** 02:14:28.9, 39°.53N×26°.09E, h6^{km}±2^{km}, ML2.2/6, Error ellipse: s-maj=3.5km s-min=0.8km az=231.0*
DDA 01 02:14:29.1±0.0, **39°.53N×26°.12E, h7**^{km}±1^{km}**, ML2.0, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	**Canakkale, Ayv**	**0.04**	**155**	P	Pg	02 14 30.6	+0.1
KOCA				S	Sg	02 14 32.2	+0.7
PRK	**Paraskevi**	**0.31**	**158**	P	Pg	02 14 34.6	-0.6
PRK				S	Sg	02 14 38.9	-0.4
	2µm,0.3s						
PRK	**Paraskevi**	**0.31**	**158**	P	Pg	02 14 34.7	-0.5
PRK				S	Sg	02 14 39.3	0.0
PRK				AML	AML	02 14 39.4	
	comp=E,2882µm,0.3s						
PRK				AML	AML	02 14 40.9	
	comp=N,2269µm,0.2s						
BOZC	**Bozcaada**	**0.31**	**351**	P	Pg	02 14 35.3	+0.1
BOZC				S	Sg	02 14 40.3	+0.9
EZN	**Ezine**	**0.33**	**29**	P	Pg	02 14 35.7	+0.1
EZN				S	Sg	02 14 41.4	+1.4
BAYC	**CANAKKALE_Bayr**	**0.39**	**58**	P	Pg	02 14 36.7	0.0
BAYC				*i* AML	AML	02 14 42.0	
	comp=N,183nm,0.3s						
BAYC				S	Sg	02 14 42.7	+0.8
BAYC				*i* AML	AML	02 14 43.0	
	comp=N,140nm,0.2s						
ECEA	**Canakkale, Ece**	**0.51**	**5**	P	Pg	02 14 39.2	+0.2
ECEA				S	Sb	02 14 48.0	-0.1
ECEA				*i* AML	AML	02 14 51.0	
	comp=N,105nm,0.3s						
ECEA				*i* AML	AML	02 14 53.0	
	comp=N,162nm,0.7s						
LIA	**Limnos Island**	**0.81**	**297**	P	Pg	02 14 43.8	-0.8
LIA				S	Sg	02 14 54.5	-0.6
	comp=N,478nm,0.2s						
LIA	**Limnos Island**	**0.81**	**297**	P	Pg	02 14 44.1	-0.5
LIA				S	Sg	02 14 54.5	-0.6
LIA				AML	AML	02 14 57.1	
	comp=E,731µm,0.3s						
LIA				AML	AML	02 14 57.4	
	comp=N,618µm,0.3s						
SMTH	**Samothraki Isl**	**1.04**	**334**	P	Pg	02 14 48.4	-0.7
SMTH				S	Sg	02 15 02.6	0.0
	comp=N,70nm,0.3s						
SMTH	**Samothraki Isl**	**1.04**	**334**	P	Pg	02 14 48.4	-0.7
SMTH				S	Sg	02 15 02.4	-0.1
SMTH				AML	AML	02 15 03.5	
	comp=E,122µm,0.3s						
SMTH				AML	AML	02 15 05.7	
	comp=N,142µm,0.2s						
PSRA	**Psara**	**1.08**	**204**	P	Pg	02 14 49.8	-0.1
PSRA				S	Sg	02 15 03.3	-0.5
CHOS	**Chios island**	**1.15**	**183**	P	Pg	02 14 49.0	-2.1
CHOS				S	Sg	02 15 03.8	-2.2
	comp=N,178nm,0.4s						
CHOS	**Chios island**	**1.15**	**183**	P	Pg	02 14 50.2	-0.9
CHOS				AML	AML	02 15 08.0	
	comp=E,464µm,0.4s						
CHOS				AML	AML	02 15 09.2	
	comp=N,247µm,0.5s						
ALN	**Alexandroupoli**	**1.36**	**358**	P	Pn	02 14 53.8	-0.7
ALN				S	Sb	02 15 11.6	-1.0
	comp=N,42nm,0.4s						
ALN	**Alexandroupoli**	**1.36**	**358**	P	Pn	02 14 53.9	-0.6
ALN				S	Sb	02 15 12.3	-0.2
ALN				AML	AML	02 15 13.5	
	comp=N,71µm,0.4s						
ALN				AML	AML	02 15 14.0	
	comp=E,95µm,0.4s						
THAS	**Thassos island**	**1.52**	**315**	P	Pn	02 14 54.9	-1.7
THAS				AML	AML	02 15 19.1	
	comp=N,82µm,0.3s						
THAS				AML	AML	02 15 19.3	
	comp=E,66µm,0.4s						
RDO	**Rodhopi**	**1.67**	**345**	P	Pn	02 14 58.0	-0.8
RDO				S	Sn	02 15 18.6	-1.8

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*NEIC **01** 02:32:13.3±1.4, 5°.50S±0°.06×153°.79E±0°.07, h29^{km}±4^{km}, mb4.5/28, Error ellipse: s-maj=12.7km s-min=5.5km az=53.0*
*IDC **01** 02:32:16.4±1.2, 5°.52S×153°.64E, h48^{km}±10^{km}, mb4.1/15, mbtmp4.3/18, ML3.9/2, MS3.6/20, Error ellipse: s-maj=15.0km s-min=8.8km az=54.0*
*DJA **01** 02:32:18.3±0.4, 6°S±4°×15°4E±°, h64^{km}±5^{km}, M4.7/12, mB5.0/3, mb4.5/12, MLv4.9/3, Mw(mB)4.3/3*
ISC 01 02:32:15.5±0.4, **5°.56S**±0°.05×**153°.62E**±0°.06, **h43**^{km}, **n84, σ1ˢ.33**/81, **mb4.4**/32, **MS3.5**/17, **1C-1D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.99**	**313**		**Pn**	**02 32 47.1**	**+0.4**
RABL				Sn	**Sn**	**02 33 11.1**	**+0.7**
KRVT	**Keravat (AS076**	**2.02**	**308**	P	**Pn**	**02 32 46.7**	**-0.4**
	50nm,0.3s,baz=154,slow=3.2,SNR=25						
KRVT				S	**Sn**	**02 33 12.7**	**+1.7**
	3µm,0.6s,baz=271,slow=20,SNR=20						
KRVT				LR	LR	02 33 20.0	
	comp=Z,285nm,18.8s,baz=113,slow=32						
	627nm,0.8s						
HNR	**Honiara**	**7.36**	**122**	P	**Pn**	**02 34 03.1**	**+2.6**
	1µm,0.4s,baz=287,slow=20,SNR=2.3						
HNR				S	**Sn**	**02 35 25.9**	**+3.1**
	820nm,0.3s,baz=215,slow=16,SNR=1.4						
HNR	**Honiara**	**7.36**	**122**	Pn	**Pn**	**02 33 57.6**	**-2.9**
PMG	**Port Moresby**	**7.46**	**239**	P	**Pn**	**02 34 03.2**	**+1.3**
	18nm,0.5s,baz=40,slow=9.5,SNR=3.0						
PMG				S	**Sn**	**02 35 27.1**	**+1.9**
	71nm,0.7s,baz=0.0,slow=20,SNR=6.9						
PMG				LR	LR	02 36 59.9	
	comp=Z,853nm,21.1s,baz=48,slow=38						
PMG	**Port Moresby**	**7.46**	**239**	Pn	**Pn**	**02 34 03.0**	**+1.2**
PATS	**Pohnpei**	**13.17**	**21**	Pn	Pn	02 35 16.5	-3.6
CTA	**Charters Tower**	**16.12**	**206**	P	**P**	**02 36 01.4**	**-0.6**
	0.3nm,0.3s,baz=20,slow=13,SNR=3.3						
CTA				S	**Sn**	**02 38 54.1**	**-3.0**
	15nm,0.9s,baz=4.5,slow=22,SNR=8.3						
CTA				LR	LR	02 42 04.0	
	comp=Z,406nm,18.9s,baz=69,slow=36						
	12nm,1.1s						
CTAO	**Charters Tower**	**16.12**	**206**		**P**	**02 36 01.0**	**-0.9**
EIDS	**Eidsvold**	**19.85**	**187**	P	**P**	**02 36 42.6**	**-0.3**
EIDS				IAmb	IAmb	02 36 46.9	
	comp=Z,22nm,0.9s						
DZM	**Mont Dzumac**	**20.58**	**144**	P	Pn	02 36 52.8	-0.7
	comp=Z,11nm,0.5s,baz=320,slow=16,SNR=16						
	comp=Z,11nm,0.5s						
DZM	**Mont Dzumac**	**20.58**	**144**		**P**	**02 36 51.0**	**0.0**
DZM				IAmb	IAmb	02 37 11.8	
	comp=Z,23nm,0.9s						
GUMO	**Guam**	**20.91**	**336**	P	**P**	**02 36 55.6**	**+1.1**
	comp=Z,60nm,0.7s,baz=191,slow=19,SNR=1.4						
GUMO				LR	LR	02 45 57.9	
	comp=Z,136nm,18.1s,baz=109,slow=39						
	comp=Z,60nm,0.7s						
MTN	**Manton Dam**	**23.33**	**250**	P	**P**	**02 37 17.9**	**-2.3**
MTN				IAmb	IAmb	02 37 33.8	
	comp=Z,17nm,1.1s						
WR0	**Warramunga Arr**	**23.43**	**231**	P	**P**	**02 37 21.1**	**0.0**
WB0	**Warramunga Arr**	**23.44**	**231**	P	**P**	**02 37 21.1**	**0.0**
WB0				IAmb	IAmb	02 37 23.0	
	comp=Z,14nm,1.0s						
WRAB	**Tennant Creek**	**23.57**	**231**	P	**P**	**02 37 21.5**	**-0.8**
WRAB				IAmb	IAmb	02 37 24.1	
	comp=Z,14nm,1.0s						
WB2	**Warramunga Arr**	**23.57**	**231**	P	**P**	**02 37 21.4**	**-1.1**
WB2				IAmb	IAmb	02 37 24.3	
	comp=Z,12nm,0.9s						
WRA	**Warramunga Arr**	**23.58**	**231**	P	**P**	**02 37 22.3**	**-0.3**
	comp=Z,8.4nm,0.9s,baz=56,slow=9.5,SNR=35						
WRA				PcP	**PcP**	**02 41 07.2**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=34,slow=5.0,SNR=1.7						
WRA				ScP	**ScP**	**02 44 43.0**	**+1.1**
	comp=Z,1.0nm,1.0s,baz=53,slow=2.9,SNR=4.5						
WRA				LR	LR	02 46 42.6	
	comp=Z,319nm,19.1s,baz=40,slow=37						
	comp=Z,8.4nm,0.9s						
WRA	**Warramunga Arr**	**23.58**	**231**	P	**P**	**02 37 21.5**	**-1.1**
ARMA	**Armidale**	**24.80**	**184**	P	**P**	**02 37 33.3**	**-0.4**
ARMA				IAmb	IAmb	02 37 37.7	
	comp=Z,19nm,1.1s						
AS31	**Alice Springs**	**26.16**	**225**	P	**P**	**02 37 45.2**	**-0.9**
ASAR	**Alice Springs**	**26.16**	**225**	P	**P**	**02 37 46.8**	**+0.7**
	comp=Z,9.3nm,1.0s,baz=57,slow=8.9,SNR=57						
ASAR				PcP	**PcP**	**02 41 13.7**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=36,slow=3.4,SNR=2.9						
ASAR				ScP	**ScP**	**02 44 51.4**	**+2.2**
	comp=Z,0.8nm,0.9s,baz=58,slow=3.5,SNR=5.2						
ASAR				LR	LR	02 47 52.9	
	comp=Z,405nm,20.4s,baz=62,slow=36						
	comp=Z,9.3nm,1.0s						
ASAR	**Alice Springs**	**26.16**	**225**	P	**P**	**02 37 45.1**	**-1.0**
KNRA	**Kununurra**	**26.39**	**246**	P	**P**	**02 37 47.6**	**-0.5**
H11S3	**WAKE ISLAND Hy**	**27.15**	**28**	T	T	03 06 05.0	
	baz=209,slow=76,SNR=25						
H11S2	**WAKE ISLAND Hy**	**27.16**	**28**	T	T	03 06 09.7	
	baz=209,slow=76,SNR=17						
H11S1	**WAKE ISLAND Hy**	**27.17**	**28**	T	T	03 06 17.8	
	baz=209,slow=76,SNR=15						
STKA	**Stephens Creek**	**28.50**	**202**	P	**P**	**02 38 07.4**	**+0.5**
	comp=Z,2.1nm,0.5s,baz=11,slow=9.9,SNR=5.8						
STKA				LR	LR	02 49 24.3	
	comp=Z,295nm,20.4s,baz=22,slow=36						
	comp=Z,2.1nm,0.5s						
STKA	**Stephens Creek**	**28.50**	**202**	P	**P**	**02 38 07.0**	**+0.1**
FITZ	**Fitzroy Crossi**	**30.03**	**243**	P	**P**	**02 38 20.1**	**-0.6**
KAPI	**Kappang**	**33.73**	**269**	LR	LR	02 53 50.3	
	comp=Z,66nm,21.0s,baz=87,slow=38						
FORT	**Forrest**	**34.73**	**221**	P	**P**	**02 39 00.9**	**-0.8**
URZ	**Urewera**	**38.93**	**150**	P	**P**	**02 39 36.2**	**-1.0**
	comp=Z,1.1nm,0.4s,baz=338,slow=5.4,SNR=2.1						
	comp=Z,1.1nm,0.4s						
QRZ	**Quartz Range**	**38.99**	**157**	P	**P**	**02 39 36.5**	**-1.2**
JOW	**Kunigami**	**40.48**	**324**	LR	LR	02 53 58.2	
	comp=Z,53nm,19.6s,baz=108,slow=32						
JOW	**Kunigami**	**40.48**	**324**	P	**P**	**02 39 49.0**	**-1.3**
JHJ	**Hachijo jima 2**	**40.65**	**342**	LR	LR	02 56 07.1	
	comp=Z,61nm,19.0s,baz=88,slow=35						
JNU	**Nakatsue**	**44.11**	**332**	LR	LR	02 55 44.2	
	comp=Z,42nm,20.6s,baz=138,slow=32						
MJAR	**Matsushiro Arr**	**44.30**	**342**	P	**P**	**02 40 20.1**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=169,slow=8.4,SNR=1.6						
MJAR				LR	LR	02 56 49.0	
	comp=Z,72nm,21.6s,baz=155,slow=33						
	comp=Z,0.6nm,0.3s						
KSRS	**Korea Array**	**49.04**	**333**	P	**P**	**02 40 58.0**	**-0.3**
	comp=Z,2.2nm,0.8s,baz=149,slow=9.1,SNR=8.5						
KSRS				LR	LR	03 01 23.5	
	comp=Z,36nm,18.3s,baz=250,slow=36						
	comp=Z,2.2nm,0.8s						
NJ2	**Nanjing**	**49.94**	**321**	*e*P	**P**	**02 41 06.6**	**+1.3**
NJ2				pP	**pP**	**02 41 16.4**	**+0.2**
NJ2				sP	**sP**	**02 41 20.1**	**-0.6**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,60nm,3.7s						
ASAJ	**Asahikawa**	**50.44**	**350**	LR	LR	02 59 41.5	
	comp=Z,75nm,22.0s,baz=352,slow=33						
USRK	**Ussuriysk Ar.**	**53.23**	**341**	LR	LR	02 59 30.7	
	comp=Z,38nm,21.4s,baz=169,slow=31						
XAN	**Xi'an**	**57.73**	**316**	⇑P	**P**	**02 42 02.3**	**0.0**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KLR	**Kul'dur**	**57.80**	**343**	LR	LR	03 07 49.5	
	comp=Z,32nm,18.7s,baz=182,slow=37						
PEA0B	**Petropavlovsk-**	**58.55**	**3**	P	**P**	**02 42 06.6**	**-1.0**
PETK	**Petropavlovsk-**	**58.55**	**3**	P	**P**	**02 42 09.2**	**+1.7**
	comp=Z,4.6nm,0.9s,baz=169,slow=7.4,SNR=1.8						
PETK				LR	LR	03 03 36.2	

	comp=Z,36nm,21.3s,baz=187,slow=32						
	comp=Z,4.6nm,0.9s						
CM31	**Chiang Mai Arr**	**58.94**	**295**	P	**P**	**02 42 10.8**	**-0.2**
CM31				IAmb	IAmb	02 42 13.3	
	comp=Z,7.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**58.94**	**295**	P	**P**	**02 42 12.3**	**+1.4**
	comp=Z,5.4nm,0.8s,baz=115,slow=5.2,SNR=18						
	comp=Z,5.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**58.94**	**295**	P	**P**	**02 42 11.0**	**+0.1**
PZH	**PanZhiHua**	**59.47**	**305**	P	**P**	**02 42 16.9**	**+2.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,4.5s						
XLT	**XiLinHaoTe**	**59.73**	**329**	⇓*i*P	**P**	**02 42 16.6**	**+0.5**
XLT				pmax	pmax		
	comp=Z,13nm,0.6s						
XLT				pmax	pmax		
	comp=Z,120nm,4.9s						
HHC	**Hu-ho-hao-te**	**60.13**	**324**	*e*P	**P**	**02 42 22.5**	**+3.6**
HHC				pmax	pmax		
	comp=Z,29nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,5.4s						
HIA	**Hailar**	**62.05**	**336**	P	**P**	**02 42 31.6**	**-0.1**
HIA				IAmb	IAmb	02 42 32.5	
	comp=Z,4.1nm,0.8s						
LZH	**Lanzhou**	**62.34**	**316**	*e*P	**P**	**02 42 36.2**	**+2.2**
LZH				pP	pP	02 42 46.8	+1.8
LZH				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MA2	**Magadan**	**64.97**	**358**	LR	LR	03 11 35.7	
	comp=Z,30nm,18.7s,baz=87,slow=36						
GTA	**Gaotai**	**66.76**	**317**	*e*P	**P**	**02 43 04.6**	**+1.8**
GTA				pP	pP	02 43 16.0	+2.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ULN	**Ulaanbaatar**	**67.07**	**328**	P	**P**	**02 43 03.3**	**-1.3**
ULN				IAmb	IAmb	02 43 07.3	
	comp=Z,4.2nm,1.1s						
SHL	**Shillong**	**67.39**	**300**	P	**P**	**02 43 06.6**	**-0.5**
SHL				IAmb	IAmb	02 43 23.5	
	comp=Z,5.1nm,0.8s						
SONM	**Songino Array**	**67.40**	**328**	P	**P**	**02 43 06.7**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=145,slow=5.7,SNR=12						
SONM				LR	LR	03 13 54.2	
	comp=Z,53nm,18.4s,baz=188,slow=37						
	comp=Z,1.7nm,0.8s						
SONM	**Songino Array**	**67.40**	**328**	P	**P**	**02 43 06.4**	**-0.3**
SONM				IAmb	IAmb	02 43 08.8	
	comp=Z,5.6nm,1.4s						
YAK	**Yakutsk**	**69.88**	**348**	LR	LR	03 15 30.6	
	comp=Z,34nm,18.6s,baz=214,slow=37						
WMQ	**Urumqi**	**76.85**	**317**	*e*P	**P**	**02 44 02.2**	**-1.0**
WMQ				sP	sP	02 44 19.4	+0.5
WMQ				pmax	pmax		
	comp=Z,21nm,0.9s						
IMAR	**Indian Mountai**	**80.82**	**19**	P	**P**	**02 44 23.0**	**-1.4**
MK31	**Makanchi Array**	**81.43**	**319**	P	**P**	**02 44 27.6**	**-0.5**
MK31				IAmb	IAmb	02 44 30.4	
	comp=Z,3.5nm,0.8s						
MKAR	**Makanchi Array**	**81.43**	**319**	P	**P**	**02 44 28.1**	**0.0**
	comp=Z,3.9nm,0.8s,baz=99,slow=6.6,SNR=37						
	comp=Z,3.9nm,0.8s						
MKAR	**Makanchi Array**	**81.43**	**319**	P	**P**	**02 44 28.6**	**+0.4**
MAKZ	**Makanchi**	**81.64**	**319**	P	**P**	**02 44 28.6**	**-0.7**
MAKZ				IAmb	IAmb	02 44 31.0	
	comp=Z,6.3nm,0.8s						
ZAA0	**Zalesovo Array**	**82.23**	**326**	P	**P**	**02 44 30.9**	**-1.3**
ZALV	**Zalesovo Beam**	**82.23**	**326**	P	**P**	**02 44 31.0**	**-1.1**
	comp=Z,2.9nm,0.7s,baz=109,slow=6.1,SNR=12						
	comp=Z,2.9nm,0.7s						
ZALV	**Zalesovo Beam**	**82.23**	**326**	P	**P**	**02 44 30.3**	**-1.8**
ILAR	**Eielson Array**	**82.55**	**22**	P	**P**	**02 44 32.4**	**-1.2**
	comp=Z,1.1nm,1.1s,baz=252,slow=5.4,SNR=2.2						
	comp=Z,1.1nm,1.1s						
ILAR	**Eielson Array**	**82.55**	**22**	P	**P**	**02 44 32.2**	**-1.4**
QSPA	**South Pole Qui**	**84.41**	**180**	P	**P**	**02 44 43.7**	**+0.3**
BMAR	**Burnt Mountain**	**84.67**	**20**	P	**P**	**02 44 43.5**	**-1.0**
KURK	**Kurchatov**	**84.86**	**322**	P	**P**	**02 44 45.1**	**-0.6**
TKM2	**Tokmak 2**	**85.04**	**314**	P	**P**	**02 44 48.3**	**+1.2**
	SNR=7.0						
UCH	**Uchtor**	**85.68**	**313**	P	**P**	**02 44 52.9**	**+2.3**
	SNR=7.1						
AAK	**Ala-Archa**	**85.78**	**313**	P	**P**	**02 44 52.2**	**+1.5**
	SNR=5.5						
USP	**Ospenovka**	**85.90**	**314**	P	**P**	**02 44 52.3**	**+1.2**
	SNR=9.9						
AML	**Almayashu**	**86.26**	**313**	P	**P**	**02 44 55.5**	**+2.1**
	SNR=6.5						
YKA	**Yellowknife Ar**	**95.71**	**28**	P	**P**	**02 45 36.1**	**-0.4**
	comp=Z,0.1nm,0.6s,baz=267,slow=4.4,SNR=2.4						
	comp=Z,0.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**151.31**	**287**	PKPbc	**PKPbc**	**02 52 05.3**	**-0.3**
	comp=Z,3.4nm,0.6s,baz=87,slow=2.4,SNR=44						

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*THE **01** 02:39:30.6, 39°.49N×26°.08E, h13^{km}±1^{km}, ML2.3/8, Error ellipse: s-maj=1.7km s-min=0.7km az=84.0*
*DDA **01** 02:39:30.2±0.0, 39°.48N×26°.07E, h10^{km}, ML2.3*
*ISK **01** 02:39:30.0, 39°.51N×26°.05E, h6^{km}, ML2.5/15*
*ATH **01** 02:39:31.1, 39°.49N×26°.05E, h10^{km}±2^{km}, ML2.3/10, Error ellipse: s-maj=2.2km s-min=0.8km az=103.0*
ISC 01 02:39:30.4±0.8**, 39°.49N**±0°.02×**26°.06E**±0°.03**, h11**^{km}±5^{km}**, n47, σ0^{s}.47**/72**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.06**	**79**	P	**Pg**	**02 39 32.6**	**-0.1**
KOCA				S	**Sg**	**02 39 34.0**	**-0.2**
GPNR	**Gulpinar-Canak**	**0.07**	**122**	Pg	**Pg**	**02 39 32.4**	**-0.2**
GPNR				Sg	**Sg**	**02 39 34.1**	**-0.2**
PRK	**Paraskevi**	**0.29**	**146**	P	**Pg**	**02 39 36.5**	**+0.2**
PRK				S	**Sg**	**02 39 40.7**	**+0.4**
	1µm,0.2s						
PRK	**Paraskevi**	**0.29**	**146**	P	**Pg**	**02 39 36.5**	**+0.2**
PRK				S	**Sg**	**02 39 41.3**	**+1.0**
PRK				AML	AML	02 39 41.4	
	comp=E,3118µm,0.3s						
PRK				AML	AML	02 39 41.6	
	comp=N,2192µm,0.2s						
BOZC	**Bozcaada**	**0.35**	**359**	Pg	**Pg**	**02 39 37.6**	**+0.2**
BOZC				Sg	**Sg**	**02 39 42.1**	**0.0**
BOZC	**Bozcaada**	**0.35**	**359**	P	**Pg**	**02 39 37.6**	**+0.2**
BOZC				S	**Sg**	**02 39 42.8**	**+0.7**
BOZC				*i* AML	AML	02 39 43.0	
	comp=N,320nm,0.3s						
BOZC				*i* AML	AML	02 39 43.0	
	comp=N,267nm,0.4s						
EZN	**Ezine**	**0.39**	**31**	P	**Pg**	**02 39 38.1**	**0.0**
EZN				S	**Sg**	**02 39 43.8**	**+0.4**
	comp=N,588nm,0.3s						
EZN	**Ezine**	**0.39**	**31**	Pg	**Pg**	**02 39 38.2**	**+0.1**
EZN				Sg	**Sg**	**02 39 44.1**	**+0.7**
BAYC	**CANAKKALE_Bayr**	**0.45**	**56**	P	**Pg**	**02 39 39.1**	**-0.2**
ECEA	**Canakkale, Ece**	**0.56**	**9**	P	**Pg**	**02 39 41.5**	**+0.3**
ECEA				*i* AML	AML	02 39 50.0	
	comp=N,189nm,0.4s						
ECEA				*i* AML	AML	02 39 50.0	
	comp=N,202nm,0.4s						
ECEA				S	**Sb**	**02 39 50.2**	**0.0**
COMU	**Canakkale**	**0.69**	**28**	Pg	**Pg**	**02 39 43.3**	**-0.4**
GOKA	**anakkale-Gk**	**0.71**	**350**	P	**Pg**	**02 39 44.2**	**+0.1**
GOKA				S	**Sg**	**02 39 54.3**	**+0.9**
GOKA				*i* AML	AML	02 39 56.0	
	comp=N,146nm,0.2s						
GADA	**Gvkgeada**	**0.71**	**350**	Pg	**Pg**	**02 39 43.3**	**-0.8**
GADA				Sg	**Sg**	**02 39 53.8**	**+0.4**
DKL	**Dikili**	**0.78**	**122**	Pg	**Pb**	**02 39 46.1**	**+0.2**
BUHA	**Balikesir, Bur**	**0.79**	**89**	P	**Pg**	**02 39 45.3**	**-0.2**
BUHA				S	**Sg**	**02 39 56.2**	**+0.3**
BUHA				*i* AML	AML	02 39 59.0	
	comp=N,120nm,0.4s						
BUHA				*i* AML	AML	02 40 01.0	
	comp=N,95nm,0.4s						
LIA	**Limnos Island**	**0.79**	**301**	P	**Pg**	**02 39 45.9**	**+0.3**
LIA				S	**Sb**	**02 39 57.6**	**+0.7**
	comp=N,580nm,0.4s						
LIA	**Limnos Island**	**0.79**	**301**	P	**Pg**	**02 39 46.0**	**+0.3**
LIA				S	**Sg**	**02 39 56.6**	**+0.7**
LIA				AML	AML	02 39 59.2	
	comp=E,1105µm,0.5s						
LIA				AML	AML	02 40 00.8	
	comp=N,1199µm,0.3s						
KARB	**zmir-Karabur**	**0.87**	**162**	P	**Pb**	**02 39 47.8**	**+0.3**
KARB				S	**Sb**	**02 39 59.3**	**+0.1**
CANM	**Can-anakkale**	**0.93**	**55**	Pg	**Pg**	**02 39 48.1**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.96**	**19**	Pg	**Pg**	**02 39 48.7**	**-0.2**
PSRA	**Psara**	**1.02**	**202**	P	**Pn**	**02 39 50.9**	**+0.2**
PSRA				S	**Sn**	**02 40 05.0**	**0.0**
PSRA				AML	AML	02 40 08.1	
	comp=N,1584µm,0.2s						
PSRA				AML	AML	02 40 09.1	
	comp=E,1306µm,0.2s						
LPK	**Lapseki**	**1.03**	**31**	Pg	**Pg**	**02 39 49.9**	**-0.3**
SMTH	**Samothraki Isl**	**1.06**	**338**	P	**Pg**	**02 39 50.4**	**-0.4**
SMTH				S	**Sg**	**02 40 04.6**	**0.0**
	comp=E,100nm,0.3s						
SMTH	**Samothraki Isl**	**1.06**	**338**	P	**Pg**	**02 39 50.5**	**-0.4**
SMTH				S	**Sg**	**02 40 05.0**	**+0.4**
SMTH				AML	AML	02 40 07.5	
	comp=E,197µm,0.4s						
SMTH				AML	AML	02 40 08.2	
	comp=N,203µm,0.3s						
CHOS	**Chios island**	**1.10**	**180**	P	**Pb**	**02 39 50.6**	**-0.9**
CHOS				S	**Sg**	**02 40 06.0**	**+0.1**
	comp=N,318nm,0.3s						
CHOS	**Chios island**	**1.10**	**180**	P	**Pb**	**02 39 51.2**	**-0.4**
CHOS				S	**Sg**	**02 40 06.1**	**+0.1**
CHOS				AML	AML	02 40 11.0	
	comp=N,571µm,0.4s						
CHOS				AML	AML	02 40 11.0	
	comp=E,702µm,0.4s						
ERIK	**Erikli-Kesan**	**1.23**	**16**	Pn	**Pn**	**02 39 53.1**	**-0.4**
ENEZ	**Enez**	**1.25**	**3**	Pn	**Pb**	**02 39 54.3**	**+0.4**
KRBG	**Karabiga-Canak**	**1.31**	**46**	Pn	**Pn**	**02 39 54.9**	**+0.3**
GONE	**Gonen-Balikesi**	**1.37**	**66**	Pn	**Pb**	**02 39 55.9**	**-0.1**
ALN	**Alexandroupoli**	**1.41**	**360**	P	**Pn**	**02 39 55.6**	**-0.4**
ALN				S	**Sn**	**02 40 14.3**	**-0.2**
	comp=E,90nm,0.4s						
ALN	**Alexandroupoli**	**1.41**	**360**	Pn	**Pb**	**02 39 56.7**	**+0.1**
ALN	**Alexandroupoli**	**1.41**	**360**	P	**Pn**	**02 39 56.2**	**+0.2**
ALN				S	**Sn**	**02 40 14.7**	**+0.2**
ALN				AML	AML	02 40 16.0	
	comp=E,223µm,0.4s						
ALN				AML	AML	02 40 16.1	
	comp=N,136µm,0.4s						
BALB	**Balikesir**	**1.41**	**83**	Pn	**Pb**	**02 39 56.8**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.47**	**35**	Pn	**Pn**	**02 39 56.5**	**-0.4**
THAS	**Thassos island**	**1.52**	**318**	P	**Pn**	**02 39 57.1**	**-0.4**
THAS				S	**Sn**	**02 40 16.4**	**-0.9**
	comp=N,40nm,0.4s						
THAS	**Thassos island**	**1.52**	**318**	P	**Pn**	**02 39 57.2**	**-0.4**
THAS				AML	AML	02 40 20.7	
	comp=N,80µm,0.3s						
THAS				AML	AML	02 40 20.8	
	comp=E,88µm,0.2s						
EDC	**Edincik**	**1.63**	**58**	Pn	**Pn**	**02 39 59.5**	**+0.5**
UKOP	**Uzunkopru-Edir**	**1.69**	**15**	Pn	**Pn**	**02 40 00.3**	**+0.4**
RDO	**Rodhopi**	**1.70**	**347**	P	**Pn**	**02 39 59.9**	**-0.1**
RDO				S	**Sn**	**02 40 20.6**	**-1.2**
	comp=E,22nm,0.3s						
RDO	**Rodhopi**	**1.70**	**347**	P	**Pn**	**02 40 00.2**	**+0.2**
RDO				AML	AML	02 40 25.2	
	comp=E,45µm,0.2s						
RDO				AML	AML	02 40 29.8	
	comp=N,42µm,0.4s						
KYMI	**Kymi, Euboea I**	**1.75**	**241**	P	**Pn**	**02 39 59.9**	**-0.8**
KYMI				AML	AML	02 40 30.0	
	comp=N,55µm,0.4s						
KYMI				AML	AML	02 40 30.6	
	comp=E,54µm,0.7s						
OUR	**Ouranopolis**	**1.81**	**298**	P	**Pn**	**02 40 02.3**	**+0.8**
SMG	**Samos**	**1.88**	**161**	P	**Pn**	**02 40 02.8**	**+0.3**
SMG				AML	AML	02 40 33.3	
	comp=E,254µm,0.8s						
SMG				AML	AML	02 40 33.7	
	comp=N,186µm,0.5s						
KAVA	**Kavala**	**1.91**	**322**	P	**Pn**	**02 40 02.8**	**-0.2**
KAVA				S	**Sn**	**02 40 25.6**	**-1.5**
NVR	**Nevrokopi**	**2.50**	**319**	P	**Pn**	**02 40 11.6**	**+0.5**
KNT	**Kendrikon**	**2.94**	**306**	P	**Pn**	**02 40 17.4**	**+0.4**

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*IDC **01** 02:48:33.3±0.8, 56°.93S×143°.11W, h0^{km}, mb4.1/5, mbtmp4.1/5, MS4.5/36, Error ellipse: s-maj=46.1km s-min=24.8km az=4.0*
*NEIC **01** 02:48:33.9, 57°.29S×142°.63W, h30^{km}*
*NEIC **01** 02:48:33.9, 57°.19S×142°.63W, h30^{km}, Moment Tensor Solution. Duration: 2^{s}.4 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.11; $M_{\theta\theta}$1.61; $M_{\phi\phi}$-1.50; $M_{r\theta}$1.11; $M_{\theta\phi}$1.22; $M_{\phi r}$0.09; Fault plane solution: $M_0$2.22000×10^{17} NP1: ϕ_s117.12000°, δ81.33000°, λ23.70000°. NP2: ϕ_s23.34000°, δ66.58000°, λ170.54000°. Principal axes: T 2.4797, Plg23.0000°, Azm343.0000°; N -0.5117, Plg65.0000°, Azm136.0000°; P -1.9681, Plg10.0000°, Azm248.0000°;*
*NEIC **01** 02:48:35.8±2.4, 57°.29S±0°.06×142°.6W±0°.2, h21^{km}±4^{km}, mb4.8/27, Ms_20 4.9/53, Mww5.5/12 Error ellipse: s-maj=17.2km s-min=5.9km az=67.0*
*GCMT **01** 02:48:37.8±0.1, 56°.77S±0°.01×142°.18W±0°.01, h19^{km}, MW5.4/138, Moment Tensor Solution. s112,c179; s138,c235; Duration: 1^{s}.2 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.09±.02; $M_{\theta\theta}$1.31±.03; $M_{\phi\phi}$-1.23±.02; $M_{r\theta}$0.17±.04; $M_{\theta\phi}$1.07±.02; $M_{\phi r}$-0.09±.04; Best double couple: $M_0$1.67100×10^{17} NP1: ϕ_s295.00000°, δ89.00000°, λ-6.00000°. NP2: ϕ_s25.00000°, δ84.00000°, λ-179.00000°. Principal axes: T 1.7100, Plg4.0000°, Azm340.0000°; N -0.0820, Plg83.0000°, Azm109.0000°; P -1.6330, Plg5.0000°, Azm250.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 01 02:48:34.0±0.5**, 57°.3S**±0°.2×**142°.64W**±0°.09**, h10**^{km}**, n134, σ1^{s}.62**/60**, mb4.7**/19**, MS4.8**/66**, 1D, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	**Vanda**	**27.59**	**203**	LR	LR	03 03 22.7	
	comp=Z,360nm,20.1s,baz=77,slow=32						
MQZ	**McQueen's Vall**	**30.90**	**277**	IAMs_20	IAMs_20	03 03 52.7	
	comp=Z,3µm,22.0s						
BFZ	**Birch Farm**	**31.08**	**284**	IAMs_20	IAMs_20	03 04 45.7	
	comp=Z,2µm,18.0s						
ODZ	**Otahua Downs**	**31.11**	**273**	IAMs_20	IAMs_20	03 03 29.1	
	comp=Z,2µm,21.0s						
BHW	**Baring Head**	**31.29**	**282**	IAMs_20	IAMs_20	03 04 03.3	
	comp=Z,3µm,21.0s						
MRZ	**Mangatainoka R**	**31.45**	**284**	IAMs_20	IAMs_20	03 04 10.3	
	comp=Z,2µm,20.0s						
SNZO	**South Karori**	**31.45**	**282**	IAMs_20	IAMs_20	03 04 40.5	
	comp=Z,2µm,20.0s						
RPZ	**Rata Peaks**	**31.76**	**275**	LR	LR	03 04 45.5	
	comp=Z,2µm,20.6s,baz=127,slow=31						
BKZ	**Black Stump Fm**	**32.06**	**287**	P	**P**	**02 54 59.7**	**-1.1**
BKZ				IAmb	IAmb	02 55 08.0	
	comp=Z,23nm,1.5s						
MXZ	**Matakaoa Point**	**32.34**	**291**	IAMs_20	IAMs_20	03 04 13.0	
	comp=Z,2µm,19.0s						
URZ	**Urewera**	**32.42**	**288**	LR	LR	03 05 01.0	
	comp=Z,2µm,21.8s,baz=212,slow=31						
FOZ	**Fox Glacier**	**32.55**	**274**	P	**P**	**02 55 05.5**	**+0.6**
QSPA	**South Pole Qui**	**32.90**	**180**	P	**P**	**02 55 12.2**	**+4.2**
	comp=Z,6.2nm,1.1s,baz=60,slow=3.3,SNR=3.6						
QSPA				LR	LR	03 07 06.3	
	comp=Z,997nm,18.2s,baz=68,slow=34						
	comp=Z,6.2nm,1.1s						
QSPA	**South Pole Qui**	**32.90**	**180**	P	**P**	**02 55 08.6**	**+0.5**
QSPA				IAmb	IAmb	02 55 20.1	
	comp=Z,25nm,1.4s						
TBI	**Tubuai**	**34.23**	**349**	*e*S	S	03 00 19.0	-27
	comp=Z,2µm,28.8s						
TBI				*e*LR	LR	03 03 48.3	
	comp=Z,20µm,28.8s						
TBI				*e*LR	LR	03 03 48.6	
	comp=Z,57µm,25.0s						
TBI	**Tubuai**	**34.23**	**349**	*e*T	T	03 30 04.0	
	comp=Z,213nm,0.3s						
PMSA	**Palmer Station**	**36.44**	**135**	LR	LR	03 06 47.6	
	comp=Z,834nm,20.2s,baz=308,slow=30						
OUZ	**Omahuta**	**36.55**	**288**	IAMs_20	IAMs_20	03 07 41.7	
	comp=Z,2µm,18.0s						
RAO	**Raoul Island**	**37.27**	**304**	LR	LR	03 07 57.0	
	comp=Z,360nm,20.7s,baz=152,slow=32						
RAR	**Rarotonga**	**38.14**	**334**	LR	LR	03 06 47.2	
	comp=Z,869nm,19.4s,baz=176,slow=29						
MEH	**Mehetia**	**39.53**	**352**	*e*T	T	03 36 53.3	
	comp=Z,125nm,0.2s						
PPT2	**Papeete2**	**39.94**	**350**	*e*S	S	03 01 46.3	-27
	comp=Z,635nm,26.2s						
PPT2				*e*LR	LR	03 06 26.7	
	comp=Z,3µm,28.2s						
PPT2				*e*LR	LR	03 06 26.8	
	comp=Z,5µm,28.0s						
PPT2	**Papeete2**	**39.94**	**350**	*e*T	T	03 37 10.4	
	comp=Z,12nm,0.3s						
TIAR	**Tiarei**	**39.95**	**350**	*e*T	T	03 37 12.8	
	comp=Z,2.6nm,0.2s						
PPT	**Papeete**	**39.96**	**350**	LR	LR	03 07 58.1	
	comp=Z,950nm,19.4s,baz=197,slow=29						
VAH	**Vaihoa**	**42.11**	**353**	*e*T	T	03 40 03.3	
	comp=Z,91nm,0.3s						
PMOR	**Pomariorio Ree**	**42.36**	**352**	*e*T	T	03 40 12.5	
	comp=Z,5.0nm,0.3s						
H03S2	**Juan Fernandez**	**48.27**	**89**	T	T	03 49 09.2	
	baz=220,slow=74,SNR=68						
H03S1	**Juan Fernandez**	**48.28**	**89**	T	T	03 49 13.0	
	baz=220,slow=74,SNR=59						
H03S3	**Juan Fernandez**	**48.29**	**89**	T	T	03 49 09.7	
	baz=220,slow=74,SNR=68						
SNAA	**Sanae**	**48.32**	**164**	LR	LR	03 15 00.2	
	comp=Z,416nm,21.6s,baz=215,slow=33						
SNAA	**Sanae**	**48.32**	**164**	P	**P**	**02 57 11.7**	**-3.3**
TAOE	**Nuku Hiva Isla**	**48.32**	**3**	*e*S	S	03 03 45.6	-30
	comp=Z,459nm,26.9s						
TAOE				*e*SS	**ScS**	**03 07 14.7**	**+6.1**
	comp=Z,354nm,26.9s						
TAOE				*e*LR	LR	03 10 14.7	
	comp=Z,3µm,28.0s						
H03N3	**Juan Fernandez**	**48.56**	**89**	T	T	03 49 31.9	
	baz=223,slow=72,SNR=347						
H03N2	**Juan Fernandez**	**48.57**	**89**	T	T	03 49 21.6	
	baz=223,slow=72,SNR=356						
H03N1	**Juan Fernandez**	**48.58**	**89**	T	T	03 49 24.6	
	baz=223,slow=72,SNR=150						
AFI	**Afiamalu**	**48.59**	**321**	LR	LR	03 11 49.6	
	comp=Z,548nm,21.8s,baz=156,slow=29						
MSVF	**Nonsavu**	**49.09**	**307**	LR	LR	03 13 18.2	
	comp=Z,466nm,21.0s,baz=152,slow=30						
ELIB	**Princess Elisa**	**50.71**	**174**	*d*P	**P**	**02 57 35.6**	**+2.2**
DZM	**Mont Dzumac**	**50.85**	**292**	*e*LR	LR	03 12 00.5	
	comp=Z,1µm,25.2s						
DZM	**Mont Dzumac**	**50.85**	**292**	LR	LR	03 16 01.7	
	comp=Z,603nm,18.2s,baz=132,slow=33						
BO02	**Sierra Bellavi**	**51.97**	**97**	P	**P**	**02 57 42.9**	**-0.2**
BO02				IAmb	IAmb	02 58 17.6	
	comp=Z,11nm,1.3s						
BO01	**Tunca**	**52.11**	**96**	P	**P**	**02 57 42.2**	**-1.8**
BO01				IAmb	IAmb	02 58 41.0	
	comp=Z,22nm,1.8s						
MT01	**Popeta**	**52.42**	**96**	P	**P**	**02 57 45.6**	**-0.8**
MT01				IAmb	IAmb	02 58 47.8	
	comp=Z,13nm,1.3s						
MT09	**Talagante**	**52.62**	**96**	P	**P**	**02 57 46.5**	**-1.6**
MT09				IAmb	IAmb	02 57 54.0	
	comp=Z,8.0nm,1.1s						
KOUNC	**Koumac, New Ca**	**53.21**	**291**	IAMs_20	IAMs_20	03 13 56.8	
	comp=Z,1µm,21.0s						
STKA	**Stephens Creek**	**56.30**	**262**	P	**P**	**02 58 15.2**	**+0.5**
	comp=Z,0.6nm,0.2s,baz=150,slow=4.0,SNR=4.7						
STKA				LR	LR	03 17 53.9	
	comp=Z,678nm,21.1s,baz=133,slow=31						
	comp=Z,0.6nm,0.2s						
STKA	**Stephens Creek**	**56.30**	**262**	P	**P**	**02 58 14.2**	**-0.5**
CTA	**Charters Tower**	**63.13**	**274**	LR	LR	03 22 59.9	
	comp=Z,331nm,19.0s,baz=116,slow=33						
ITQB	**Itaqui**	**63.49**	**104**	P	**P**	**02 59 04.4**	**+0.3**
HNR	**Honiara**	**64.82**	**293**	LR	LR	03 23 49.1	
	comp=Z,3µm,18.7s,baz=142,slow=33						
MNMC	**Minye Minye**	**64.95**	**87**	P	**P**	**02 59 12.9**	**-1.2**
CPUP	**Villa Florida**	**65.78**	**101**	P	**P**	**02 59 21.1**	**+2.0**
	comp=Z,2.5nm,1.0s,baz=207,slow=7.4,SNR=4.5						
	comp=Z,2.5nm,1.0s						
AS31	**Alice Springs**	**66.93**	**262**	P	**P**	**02 59 25.7**	**-0.9**
ASAR	**Alice Springs**	**66.93**	**262**	P	**P**	**02 59 25.4**	**-1.1**
	comp=Z,2.0nm,0.9s,baz=138,slow=6.2,SNR=13						
ASAR				LR	LR	03 24 25.2	
	comp=Z,527nm,21.5s,baz=147,slow=32						
	comp=Z,2.0nm,0.9s						
ASAR	**Alice Springs**	**66.93**	**262**	P	**P**	**02 59 25.2**	**-1.4**
NNA	**Nana**	**66.97**	**76**	LR	LR	03 21 51.6	
	comp=Z,167nm,21.9s,baz=215,slow=30						
WR0	**Warramunga Arr**	**69.59**	**265**	P	**P**	**02 59 42.2**	**-1.1**
WR0				IAmb	IAmb	02 59 50.8	
	comp=Z,11nm,1.3s						
WB2	**Warramunga Arr**	**69.71**	**265**	P	**P**	**02 59 42.6**	**-1.4**
WB2				IAmb	IAmb	02 59 59.5	
	comp=Z,12nm,1.3s						
WRA	**Warramunga Arr**	**69.71**	**265**	P	**P**	**02 59 42.2**	**-1.8**
	comp=Z,1.4nm,0.8s,baz=148,slow=5.6,SNR=9.6						
WRA				LR	LR	03 26 09.0	
	comp=Z,495nm,21.3s,baz=131,slow=32						
	comp=Z,1.4nm,0.8s						
WRA	**Warramunga Arr**	**69.71**	**265**	P	**P**	**02 59 42.5**	**-1.5**
WRAB	**Tennant Creek**	**69.72**	**265**	P	**P**	**02 59 43.5**	**-0.5**
WB0	**Warramunga Arr**	**69.83**	**265**	P	**P**	**02 59 43.6**	**-1.1**
WB0				IAmb	IAmb	02 59 55.7	
	comp=Z,4.6nm,0.8s						
ATAH	**Atahualpa**	**70.25**	**72**	LR	LR	03 23 12.4	
	comp=Z,245nm,20.0s,baz=229,slow=30						
PMG	**Port Moresby**	**71.46**	**282**	LR	LR	03 27 13.0	
	comp=Z,353nm,20.1s,baz=162,slow=33						
MCRA	**Macar, Loja**	**71.81**	**69**	P	**P**	**02 59 56.0**	**-0.8**
CZSB	**Cruzeiro do Su**	**72.72**	**77**	P	**P**	**03 00 01.5**	**-0.8**
CZSB				IAmb	IAmb	03 00 06.5	
	comp=Z,17nm,1.2s						
KRVT	**Keravat (AS076**	**73.22**	**289**	LR	LR	03 29 32.1	
	comp=Z,174nm,18.2s,baz=288,slow=34						
CHSH	**Refugio Sur-Vo**	**74.82**	**68**	P	**P**	**03 00 13.6**	**-1.6**
CHSH				IAmb	IAmb	03 00 20.1	
	comp=Z,7.1nm,1.0s						
VILB	**Vilhena**	**75.13**	**91**	P	**P**	**03 00 16.5**	**+0.2**
VILB				IAmb	IAmb	03 00 18.5	
	comp=Z,8.5nm,1.0s						
SLOR	**San Lorenzo -**	**75.66**	**68**	P	**P**	**03 00 18.5**	**-1.4**
PSA00	**Pilbara Seismi**	**76.07**	**252**	P	**P**	**03 00 21.2**	**-0.5**
PSA00				IAmb	IAmb	03 00 24.4	
	comp=Z,8.5nm,1.4s						
PULU	**Pululahua**	**76.30**	**68**	P	**P**	**03 00 22.8**	**-0.7**
OTAV	**Otavalo**	**76.52**	**68**	P	**P**	**03 00 24.4**	**-0.4**
OTAV				IAmb	IAmb	03 00 30.3	
	comp=Z,16nm,1.7s						
SAML	**Samuel**	**76.82**	**86**	P	**P**	**03 00 26.6**	**+0.7**
JTS	**Las Juntas de**	**82.13**	**57**	LR	LR	03 27 31.0	
	comp=Z,91nm,21.2s,baz=205,slow=28						
ROSC	**El Rosal**	**82.55**	**69**	LR	LR	03 30 26.8	
	comp=Z,186nm,21.4s,baz=240,slow=30						
SOEI	**Soe**	**83.55**	**262**	IAMs_20	IAMs_20	03 40 08.8	
	comp=Z,660nm,18.0s						
CMIG	**Matias Romero**	**84.02**	**45**	LR	LR	03 29 52.3	
	comp=Z,98nm,20.5s,baz=208,slow=30						
RUSC	**La Rusia**	**84.07**	**70**	P	**P**	**03 01 04.1**	**-1.3**
RUSC				IAmb	IAmb	03 01 13.8	
	comp=Z,6.2nm,1.0s						
LPIG	**La Paz**	**85.48**	**29**	LR	LR	03 30 00.3	
	comp=Z,227nm,19.1s,baz=206,slow=29						
MMRI	**Maumere**	**85.57**	**261**	IAMs_20	IAMs_20	03 37 17.3	
	comp=Z,419nm,20.0s						
SDV	**Santo Domingo**	**87.87**	**70**	LR	LR	03 34 26.4	
	comp=Z,124nm,19.9s,baz=204,slow=31						
SUR	**Sutherland**	**89.62**	**166**	LR	LR	03 35 24.2	
	comp=Z,219nm,21.9s,baz=179,slow=31						
KAPI	**Kappang**	**89.93**	**261**	IAMs_20	IAMs_20	03 38 48.9	
	comp=Z,527nm,20.0s						
GUMO	**Guam**	**92.12**	**292**	LR	LR	03 34 25.0	
	comp=Z,76nm,21.2s,baz=118,slow=30						
TXAR	**Lajitas Array**	**92.30**	**33**	LR	LR	03 33 24.3	
	comp=Z,125nm,21.2s,baz=210,slow=29						
109C	**Camp Elliot, M**	**92.35**	**21**	IAMs_20	IAMs_20	03 30 58.8	
	comp=Z,408nm,18.0s						
PFO	**Pinyon Flats O**	**93.18**	**22**	LR	LR	03 33 15.7	
	comp=Z,366nm,21.0s,baz=194,slow=29						
BOSA	**Boshof**	**93.86**	**169**	LR	LR	03 40 58.9	
	comp=Z,410nm,19.2s,baz=195,slow=33						
HKT	**Hockley**	**95.40**	**39**	IAMs_20	IAMs_20	03 45 41.9	
	comp=Z,397nm,20.0s						
TPNV	**Topopah Spring**	**96.45**	**21**	IAMs_20	IAMs_20	03 35 50.9	
	comp=Z,546nm,20.0s						
ANMO	**Albuquerque**	**96.79**	**29**	LR	LR	03 35 28.2	
	comp=Z,270nm,22.0s,baz=298,slow=29						
DAV	**Davao City (W)**	**96.86**	**272**	LR	LR	03 44 38.6	
	comp=Z,94nm,20.2s,baz=132,slow=35						
LBTB	**Lobatse**	**97.45**	**169**	LR	LR	03 43 24.7	
	comp=Z,363nm,19.2s,baz=167,slow=34						
NVAR	**Mina Array Bea**	**97.51**	**19**	LR	LR	03 35 51.7	

	comp=Z,364nm,20.6s,baz=180,slow=29						
SJG	San Juan	97.97	69	LR	LR	03 40 16.7	
	comp=Z,57nm,21.4s,baz=210,slow=32						
SMRT	St. Maarten	99.49	72	IAMs_20	IAMs_20	03 36 26.9	
	comp=Z,526nm,19.0s						
YBH	Yreka Blue Hor	100.04	15	LR	LR	03 36 49.7	
	comp=Z,402nm,21.0s,baz=178,slow=29						
OK029	Liberty Lake	100.22	36	IAMs_20	IAMs_20	03 40 40.3	
	comp=Z,351nm,21.0s						
ELK	Elko	100.32	21	IAMs_20	IAMs_20	03 36 59.2	
	comp=Z,447nm,18.0s						
OK052	Battle Ridge R	100.61	36	IAMs_20	IAMs_20	03 54 50.6	
	comp=Z,305nm,21.0s						
OK053	SW of W Deep R	100.63	36	IAMs_20	IAMs_20	03 54 49.2	
	comp=Z,327nm,22.0s						
CBKS	Cedar Bluff	102.30	33	IAMs_20	IAMs_20	03 39 01.4	
	comp=Z,462nm,22.0s						
BMO	Blue Mountains	103.92	18	IAMs_20	IAMs_20	03 41 33.6	
	comp=Z,439nm,18.0s						
BCX	Boston College	115.80	51	IAMs_20	IAMs_20	04 02 41.4	
	comp=Z,350nm,21.0s						
ILAR	Eielson Array	121.75	358	PKP	PKiKP	03 07 26.9	+0.2
	comp=Z,2.0nm,0.9s,baz=185,slow=1.8,SNR=14						
ILAR	Eielson Array	121.75	358	PKPdf	PKiKP	03 07 27.1	+0.4
ANM	Nome	122.73	349	PKPdf	PKiKP	03 07 30.1	+1.5
H21K	Melozitna Rive	122.83	355	PKPdf	PKiKP	03 07 29.8	+0.9
IMAR	Indian Mountai	123.21	355	PKPdf	PKiKP	03 07 29.8	+0.3
BMAR	Burnt Mountain	124.38	359	PKPdf	PKiKP	03 07 31.4	-0.5
TORD	Torodi Ar. Bea	128.30	134	PKhKP	PKPpre	03 07 37.1	
	comp=Z,0.2nm,0.8s,baz=76,slow=41,SNR=2.1						
TIXI	Tiksi	142.34	329	IAMs_20	IAMs_20	04 02 37.5	
	comp=Z,249nm,21.0s						
UOSS	Minazif	144.98	211		PKPbc	03 08 09.7	-0.7
RAYN	Ar Rayn	145.79	193		PKPdf	03 08 12.3	-0.3
NIL	Nilore	146.12	241	PKPdf	PKPbc	03 08 12.8	-1.0
SUMG	Summit	147.20	33	*i* P	PKiKP	03 08 23.0	+4.5
ESDC	Sonseca Array	148.08	105	PKP	PKPdf	03 08 15.4	-0.5
	comp=Z,0.7nm,1.0s,baz=246,slow=3.3,SNR=1.9						
ESDC				PKPbc	pPKPbc	03 08 21.0	-0.4
	comp=Z,3.4nm,0.9s,baz=235,slow=3.3,SNR=11						
ESDC	Sonseca Array	148.08	105	PKPbc	PKPbc	03 08 18.9	-0.3
KBL	Kabul	148.82	237	PKPbc	PKiKP	03 08 21.6	-1.2
TARG	Taragay, Kyrgy	150.02	256	PKPbc	PKPbc	03 08 22.2	-2.2
MK31	Makanchi Array	150.96	268	PKPbc	PKPbc	03 08 24.7	-1.3
MKAR	Makanchi Array	150.96	268	PKPbc	PKiKP	03 08 26.4	-0.2
	comp=Z,3.3nm,0.8s,baz=124,slow=3.8,SNR=20						
MKAR	Makanchi Array	150.96	268	PKPbc	PKPbc	03 08 25.1	-0.9
MAKZ	Makanchi	151.14	268	PKPbc	PKPbc	03 08 25.7	-0.7
CHGR	Chuyangaron	152.11	242	PKPbc	PKiKP	03 08 29.0	-0.3
AAK	Ala-Archa	152.41	254	PKPbc	PKPbc	03 08 29.1	-0.5
ZALV	Zalesovo Beam	153.42	283	PKPbc	PKiKP	03 08 33.2	+1.9
	comp=Z,0.8nm,0.6s,baz=134,slow=4.2,SNR=4.2						
ZALV	Zalesovo Beam	153.42	283	PKPbc	PKiKP	03 08 31.4	+0.1
GHAJ	Ghor Haditha	154.02	176	IAMs_20	IAMs_20	04 13 26.5	
	comp=Z,274nm,21.0s						
KKAR	Karatay Array	154.80	250	PKPbc	PKiKP	03 08 34.5	-0.1
CSS	Mathiatis	157.53	171	IAMs_20	IAMs_20	04 15 24.5	
	comp=Z,177nm,20.0s						
CLL	Collm	164.63	102	*e*PKPab	PKPab	03 09 34.0	+1.7
CLL				*e*PSSrev		03 40 24.0	
CLL				*e*PSPSrev		03 41 24.0	
CLL				*e*SSSS		03 44 30.0	
CLL				AMS	AMS	04 29 00.0	
	comp=Z,200nm,19.6s						

IDC 01 03:06:18.3±4.3**, 21°.82S×148°.35E, h0^{km}, mbtmp3.2**/4**, ML3.0**/4**, Error ellipse: s-maj=40.8km s-min=20.1km az=78.0, Queensland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	2.61	311	Pn	Pn	03 07 02.9	+1.1
	2.2nm,0.3s,baz=123,slow=16,SNR=21						
CTA				Pg	Pb	03 07 07.0	+1.0
	6.5nm,0.3s,baz=127,slow=17,SNR=12						
CTA				Lg	Lg	03 07 40.2	
	3.4nm,0.3s,baz=177,slow=18,SNR=6.1						
	5.7nm,0.4s						
STKA	Stephens Creek	11.69	210	Pn	Pn	03 09 05.1	-1.3
	0.1nm,0.3s,baz=30,slow=12,SNR=4.1						
STKA				Sn	Sn	03 11 21.4	+3.8
	0.1nm,0.3s,baz=358,slow=19,SNR=2.1						
STKA				Lg	Lg	03 12 29.1	
	0.1nm,0.3s,baz=342,slow=14,SNR=1.8						
	1.0nm,0.5s						
WRA	Warramunga Arr	13.23	276	Pn	Pn	03 09 26.4	-1.2
	0.1nm,0.3s,baz=101,slow=12,SNR=2.1						
WRA				Lg	Lg	03 13 16.7	
	0.1nm,0.3s,baz=108,slow=28,SNR=7.8						
	0.5nm,0.8s						
I07AU	WARRAMUNGA INF	3.24	276	I	I	04 28 50.0	
	baz=99,slow=311,SNR=2.4						
ASAR	Alice Springs	13.46	259	Pn	Pn	03 09 29.7	-1.0
	0.1nm,0.3s,baz=74,slow=14,SNR=1.6						
ASAR				Sn	Sn	03 12 07.6	+6.6
	0.1nm,0.3s,baz=81,slow=24,SNR=4.1						
ASAR				Lg	Lg	03 13 29.1	
	0.1nm,0.3s,baz=67,slow=31,SNR=4.8						
	0.3nm,0.8s						

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*IDC **01** 03:06:27.0±2.5, 2°.53N×122°.06E, h563^{km}±32^{km}, mb2.8/11, mbtmp3.8/11, Error ellipse: s-maj=32.8km s-min=15.0km az=73.0*

*DJA **01** 03:07:15.9±0.5, 0°N±7°×12°2E±°, h35^{km}±10^{km}, M2.6/6, MLv2.6/6*

ISC 01 03:06:26.1±0.8**, 2°.6N**±0°.1×**122°.2E**±0°.2**, h550^{km}, n14, σ0^{s}.78**/15**, mb3.3**/11**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTOI	Gorontalo	2.12	156	P	P	03 07 36.5	+0.1
MPSI	Mapaga	3.17	225	P	P	03 07 42.6	+0.4
LUWI	Luwuk	3.65	170	P	P	03 07 46.0	+0.5
WRA	Warramunga Arr	25.38	152	P	P	03 11 10.1	-0.2
	0.4nm,0.6s,baz=334,slow=9.4,SNR=2.4						
	0.4nm,0.6s						
ASAR	Alice Springs	28.49	157	P	P	03 11 37.9	+0.3
	0.1nm,0.3s,baz=335,slow=8.2,SNR=1.7						
ASAR				ScP	ScP	03 17 19.3	-1.8
	0.4nm,0.5s,baz=335,slow=2.9,SNR=4.7						
	0.1nm,0.3s						
KSRS	Korea Array	35.11	8	P	P	03 12 34.5	+0.9
	1.2nm,0.6s,baz=184,slow=9.6,SNR=4.3						
	1.2nm,0.6s						
MJAR	Matsushiro Arr	36.90	22	P	P	03 12 48.5	-0.1
	0.7nm,0.3s,baz=140,slow=8.2,SNR=4.7						
	0.7nm,0.3s						
USRK	Ussuriysk Ar.	42.35	11	P	P	03 13 32.9	+0.8
	3.9nm,0.5s,baz=188,slow=6.5,SNR=12						
	3.9nm,0.5s						
SONM	Songino Array	47.09	346	P	P	03 14 09.2	+0.5
	1.0nm,0.6s,baz=163,slow=8.3,SNR=11						
	1.0nm,0.6s						
KLR	Kul'dur	47.19	9	P	P	03 14 09.1	-0.1
	0.5nm,0.4s,baz=217,slow=10.0,SNR=2.2						
	0.5nm,0.4s						
MKAR	Makanchi Array	55.99	328	P	P	03 15 12.8	0.0
	0.5nm,0.4s,baz=124,slow=8.6,SNR=17						
	0.5nm,0.4s						
ZALV	Zalesovo Beam	59.63	335	P	P	03 15 36.0	-1.2
	0.5nm,0.3s,baz=117,slow=8.3,SNR=2.5						
	0.5nm,0.3s						
KURBB	Kurchatov Arra	60.32	330	P	P	03 15 41.5	-0.4
	0.5nm,0.5s,baz=132,slow=6.4,SNR=8.4						
	0.5nm,0.5s						
BVAR	Borovoye Array	65.85	329	P	P	03 16 17.0	-0.3
	0.3nm,0.3s,baz=116,slow=3.4,SNR=2.6						
	0.3nm,0.3s						

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*IDC **01** 03:06:31.8±2.5, 2°.50N×122°.08E, h560^{km}±34^{km}, mb2.8/8, mbtmp3.8/8, Error ellipse: s-maj=38.8km s-min=14.4km az=73.0*

ISC 01 03:06:31.6±1.1**, 2°.5N**±0°.2×**122°.1E**±0°.4**, h559^{km}, n8, σ0^{s}.83**/9**, mb3.4**/8**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.35	152	P	P	03 11 14.8	-0.3
	0.4nm,0.8s,baz=337,slow=9.4,SNR=5.6						
	0.4nm,0.8s						
ASAR	Alice Springs	28.45	157	P	P	03 11 42.7	+0.4
	0.2nm,0.3s,baz=335,slow=8.1,SNR=2.1						
ASAR				ScP	ScP	03 17 24.3	-0.6
	0.4nm,0.5s,baz=335,slow=2.7,SNR=2.9						
	0.2nm,0.3s						
KSRS	Korea Array	35.18	8	P	P	03 12 40.4	+1.1
	0.8nm,0.6s,baz=186,slow=9.9,SNR=2.8						
	0.8nm,0.6s						
MJAR	Matsushiro Arr	36.98	22	P	P	03 12 52.8	-1.4
	0.7nm,0.3s,baz=201,slow=8.5,SNR=2.0						
	0.7nm,0.3s						
USRK	Ussuriysk Ar.	42.42	11	P	P	03 13 38.0	+0.4
	4.3nm,0.5s,baz=192,slow=5.5,SNR=11						
	4.3nm,0.5s						
SONM	Songino Array	47.14	346	P	P	03 14 14.0	+0.1
	1.0nm,0.6s,baz=165,slow=8.8,SNR=8.7						
	1.0nm,0.6s						
MKAR	Makanchi Array	56.02	328	P	P	03 15 17.7	-0.1
	0.5nm,0.4s,baz=125,slow=8.5,SNR=11						
	0.5nm,0.4s						
KURBB	Kurchatov Arra	60.35	330	P	P	03 15 46.5	-0.4
	0.4nm,0.5s,baz=121,slow=7.1,SNR=5.5						
	0.4nm,0.5s						

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*IDC **01** 03:13:38.4±2.6, 36°.42N×71°.30E, h206^{km}±24^{km}, mb3.3/6, mbtmp4.0/12, MS3.8/1, Error ellipse: s-maj=20.9km s-min=15.7km az=167.0*

*NEIC **01** 03:13:41.2±1.4, 36°.60N±0°.08×71°.30E±0°.09, h233^{km}±7^{km}, mb4.1/9, Error ellipse: s-maj=11.4km s-min=10.5km az=170.0*

*NNC **01** 03:13:48.4±5.1, 37°.20N×71°.54E, h251^{km}±56^{km}, mb3.3, mpv4.6, Error ellipse: s-maj=50.7km s-min=26.6km az=10.0*

ISC 01 03:13:41.2±0.5**, 36°.57N**±0°.05×**71°.35E**±0°.06**, h250^{km}, n76, σ1^{s}.82**/82**, mb3.6**/8**, 9C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	Garm	2.56	342		Pn	03 14 27.6	-1.5
CHGR	Chuyangaron	2.71	321	Pn	Pn	03 14 28.8	-1.9
KBL	Kabul	2.76	224	Pn	Pn	03 14 29.9	-1.5
CEP	Cherat	2.78	170	P	Pn	03 14 31.8	+0.2
CEP				S	S	03 15 09.0	-2.3
CHCP	Chirah Chowk	3.30	151	P	Pn	03 14 37.0	-0.1
NIL	Nilore	3.31	151	Pn	Pn	03 14 37.0	-0.2
THW	Thamme Wali	3.78	175	P	Pn	03 14 41.8	-0.8
KSH	Kashi	4.69	50	Pn	Pn	03 14 48.1	-5.1
KSH				Sn	S	03 15 38.3	-12
KSH				pmax	pmax		
	comp=Z,310nm,0.5s						
KSH				smax	smax		
	comp=N,140nm,0.7s						
KSH				smax	smax		
	comp=E,76nm,0.5s						
TAS	Tashkent	5.01	342	Pn	Pn	03 14 55.7	-1.3
AML	Almayashu	5.84	17	P	Pn	03 15 07.2	-0.5
	SNR=556						
UCH	Uchtor	6.16	22	P	Pn	03 15 11.4	-0.2
	SNR=204						
EKS2	Erkin-Say	6.37	16	P	Pn	03 15 14.1	+0.2
	SNR=20						
AAK	Ala-Archa	6.53	21	P	Pn	03 15 16.0	+0.1
	SNR=88						
AAK	Ala-Archa	6.53	21	P	Pn	03 15 16.0	+0.1
	comp=E,76nm,0.4s,baz=197,slow=6.0,SNR=235						
AAK				S	S	03 16 28.8	-3.1
	comp=E,22nm,0.7s,baz=315,slow=23,SNR=14						
AAK	Ala-Archa	6.53	21	Pn	Pn	03 15 15.7	-0.2
KK31	Karatay Array	6.56	355		Pn	03 15 15.6	-0.6
KK31	Karatay Array	6.56	355	⇑P	Pn	03 15 15.4	-0.8
	comp=E,5.3nm,0.3s,baz=175,slow=12,SNR=244						
KK31				⇓S	S	03 16 26.4	-6.0
	comp=E,44nm,0.4s,baz=181,slow=23,SNR=27						
KKAR	Karatay Array	6.56	355	Pn	Pn	03 15 15.0	-1.2
KKAR	Karatay Array	6.56	355		Pn	03 15 15.6	-0.5
KBK	Karagaybulak	6.68	23	P	Pn	03 15 18.3	+0.3
	SNR=55						
ULHL	Ulahol	6.81	32	P	Pn	03 15 19.0	-0.6
	SNR=33						
CHMS	Chumysh	6.93	21	P	Pn	03 15 20.8	-0.2
	SNR=16						
USP	Ospenovka	7.11	19	P	Pn	03 15 22.6	-0.6
	SNR=28						
TKM2	Tokmak 2	7.13	26	P	Pn	03 15 23.7	+0.1
	SNR=156						
TKM2	Tokmak 2	7.13	26	⇓P	Pn	03 15 23.1	-0.5
	comp=E,44nm,0.5s						
TKM2				⇑S	S	03 16 42.7	-3.3
	comp=E,29nm,1.1s						
TARG	Taragay, Kyrgy	7.19	42		Pn	03 15 23.0	-1.5
SMLA	Simla	7.27	137	*e*P	Pn	03 15 25.0	-0.3
SMLA				*e*S	S	03 16 44.2	-4.7
SMLA				IAML		03 16 46.5	
	comp=N,85nm,0.3s						
MDOK	Medeo	7.91	32	⇓P	Pn	03 15 33.3	-0.1
	comp=N,21nm,0.6s						
MDOK				S	S	03 16 58.2	-5.4
KNDC	Almaty	7.92	31	⇑P	Pn	03 15 34.1	+0.7
	comp=N,119nm,0.8s						
PDGK	Podgornoye	9.20	40	⇑P	Pn	03 15 48.5	-1.2
	comp=N,4.7nm,0.6s						
GEYT	Alibeck	10.63	281	P	Pn	03 16 07.3	-0.4
	comp=N,0.9nm,0.4s,baz=87,slow=12,SNR=2.3						
GEYT				S	S	03 18 02.0	-5.0
	comp=N,1.6nm,0.4s,baz=108,slow=14,SNR=2.2						
OTUK	Ortayu	11.69	3	⇑P	Pn	03 16 20.6	-0.2
	comp=N,4.3nm,0.7s						
MAKZ	Makanchi	12.94	34	Pn	Pn	03 16 35.6	-0.6
MAKZ	Makanchi	12.94	34	⇑P	Pn	03 16 36.2	0.0
	comp=N,15nm,0.5s						
PYUN	Piuthan	12.96	127	*e*P	Pn	03 16 36.3	-0.6
MK31	Makanchi Array	13.07	35	P	Pn	03 16 37.5	-0.4
MK31	Makanchi Array	13.07	35	⇓P	Pn	03 16 37.8	0.0
	comp=N,1.5nm,0.3s,baz=224,slow=12,SNR=103						
MKAR	Makanchi Array	13.07	35	P	Pn	03 16 37.7	-0.2
	comp=N,2.9nm,0.4s,baz=217,slow=13,SNR=51						
MKAR	Makanchi Array	13.07	35	Pn	Pn	03 16 37.4	-0.5
DANN	Dangsing	13.29	125	*e*P	Pn	03 16 41.5	+0.4
KOLN	Koldanda	13.58	127	*e*P	Pn	03 16 45.1	+0.6
GKN	Gorkha	14.11	123	*e*P	P	03 16 51.5	+0.1
	comp=N,25nm,0.2s						
PKIN	Phulchoki	14.89	123	*e*P	Pn	03 17 01.4	+1.0
PKI	Pulchoki	14.91	123	*e*P	Pn	03 17 01.2	+0.6
KURBB	Kurchatov Arra	14.97	18	P	P	03 17 00.1	-0.3
	comp=N,1.3nm,0.3s,baz=207,slow=10,SNR=18						
KURBB	Kurchatov Arra	14.97	18	⇑P	Pn	03 17 01.0	+0.3
	comp=N,3.3nm,0.5s						
GUN	Gumba	15.01	121	*e*P	Pn	03 17 02.4	+0.5
	comp=N,34nm,0.4s						
KURK	Kurchatov	15.07	18		P	03 17 01.2	-0.4
AB31	Akbulak array	15.16	330	P	Pn	03 17 02.6	-0.4
	comp=N,2.5nm,0.6s,baz=136,slow=13,SNR=71						
ABKAR	Akbulak array	15.16	330	P	Pn	03 17 03.0	-0.1
ABKAR				IAmb	IAmb	03 17 07.8	
	comp=Z,4.4nm,0.7s						
ABKAR	Akbulak array	15.16	330		Pn	03 17 02.8	-0.3
JIRN	Jiri	15.38	121	*e*P	Pn	03 17 07.4	+1.0
	comp=Z,25nm,0.3s						
RAMN	Ramite	16.11	122	*e*P	Pn	03 17 15.8	+0.8
	comp=Z,14nm,0.3s						
BVA0	Borovoye Array	16.47	358	⇑P	Pn	03 17 19.4	+0.9
	baz=167,slow=11,SNR=10						
BVAR	Borovoye Array	16.47	358	P	Pn	03 17 19.9	+1.3
	comp=Z,2.4nm,0.5s,baz=158,slow=12,SNR=16						
BVAR				S	S	03 20 19.7	+3.6
	comp=Z,1.6nm,0.6s,baz=162,slow=22,SNR=7.5						
BRVK	Borovoye	16.50	358		Pn	03 17 19.7	+0.7
TAPN	Taplejung	16.63	119	*e*P	Pn	03 17 23.2	+2.1
	comp=Z,19nm,0.4s						
AKTO	Aktyubinsk	16.86	329	P	Pn	03 17 23.4	+0.2
	comp=Z,2.9nm,0.4s,baz=142,slow=12,SNR=14						
AKTO				S	S	03 20 28.7	+4.7
	comp=Z,0.7nm,0.5s,baz=153,slow=23,SNR=1.5						
AKTO	Aktyubinsk	16.86	329	⇓P	Pn	03 17 23.3	+0.2
	comp=Z,1.4nm,0.5s						
LSA	Lhasa	17.93	107	P	P	03 17 34.8	+1.3
LSA				IAmb	IAmb	03 17 39.8	
	comp=Z,6.9nm,0.9s						
ZAA0	Zalesovo Array	19.73	24	P	P	03 17 53.6	+1.5
ZAA0				IAmb	IAmb	03 18 09.0	
	comp=Z,5.6nm,1.0s						
ZALV	Zalesovo Beam	19.73	24	P	P	03 17 53.6	+1.5
	comp=Z,4.1nm,0.3s,baz=217,slow=11,SNR=20						
ZALV	Zalesovo Beam	19.73	24	P	P	03 17 53.4	+1.3
SHL	Shillong	20.69	116	P	P	03 18 02.4	-0.4
ELL	Elmali	33.06	283	P	P	03 19 56.5	+2.9
BALB	Balikesir	34.10	289	P	P	03 20 01.2	-1.1
BALB				IAmb	IAmb	03 20 05.1	
	comp=Z,4.8nm,0.8s						
BUR08	Bucovina Ar. S	35.49	303	P	P	03 20 17.0	+2.7
WHN	Wuhan	36.11	87	⇑P	P	03 20 27.4	+7.9
PABE	Paberze	37.06	316	P	P	03 20 26.9	-0.2
PABE				IAmb	IAmb	03 20 33.0	
	comp=Z,3.2nm,0.5s						
FINES	FINESS Array B	37.58	326	P	P	03 20 34.2	+2.7
	comp=Z,1.8nm,0.9s,baz=126,slow=9.7,SNR=4.5						
	comp=Z,1.8nm,0.9s						
HFS	Hagfors	43.18	322	P	P	03 21 20.1	+2.8
	comp=Z,1.1nm,0.6s,baz=109,slow=8.3,SNR=1.4						
	comp=Z,1.1nm,0.6s						
NOA	NORSAR Array B	44.49	323	P	P	03 21 30.1	+2.5
	comp=Z,0.5nm,0.7s,baz=99,slow=7.8,SNR=1.8						
	comp=Z,0.5nm,0.7s						
JNU	Nakatsue	48.30	76	LR	LR	03 47 04.7	
	comp=Z,110nm,21.3s,baz=120,slow=42						
TORD	Torodi Ar. Bea	66.00	269	P	P	03 24 01.4	0.0
	comp=Z,0.5nm,0.6s,baz=53,slow=6.1,SNR=11						
	comp=Z,0.5nm,0.6s						
WRA	Warramunga Arr	81.79	122	P	P	03 25 34.4	+2.0
	comp=Z,0.6nm,0.5s,baz=323,slow=5.1,SNR=3.3						
	comp=Z,0.6nm,0.5s						
ASAR	Alice Springs	84.06	125	P	P	03 25 46.2	+2.2
	comp=Z,0.7nm,0.6s,baz=322,slow=5.9,SNR=2.5						
	comp=Z,0.7nm,0.6s						

DDA 01 03:15:15.4±0.0**, 38°.94N×28°.18E, h7^{km}**±2^{km}**, ML1.2, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	Demirci	0.43	76	P	Pg	03 15 23.4	-0.4
DEMI				*i* AML	AML	03 15 30.0	
	comp=N,26nm,0.3s						
DEMI				*i* AML	AML	03 15 30.0	
	comp=E,19nm,0.2s						
DEMI				S	Sg	03 15 30.4	+1.0
MANT	Manisa	0.54	146	P	Pg	03 15 24.9	-0.8
MANT				S	Sg	03 15 33.9	+1.1
USAK	Uak-Merkez	0.69	109	P	Pg	03 15 29.2	+0.5
USAK				*i* AML	AML	03 15 35.0	
	comp=N,8.4nm,0.2s						
USAK				*i* AML	AML	03 15 35.0	
	comp=E,14nm,0.3s						
USAK				S	Sg	03 15 35.1	-2.6
GDZ	Gediz	1.03	81	P	Pg	03 15 27.8	-7.3
GDZ				S	Sg	03 15 32.8	-16

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*DDA **01** 03:16:14.7±0.0, 39°.51N×26°.11E, h10^{km}, ML1.4*

ISK 01 03:16:14.2, 39°.54N×26°.14E, h3^{km}, ML1.7/11**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.04	184	P	Pg	03 16 16.7	+1.6
KOCA				S	Sg	03 16 18.2	+2.6
GPNR	Gulpinar-Canak	0.08	185	Pg	Pg	03 16 16.5	+0.6
BOZC	Bozcaada	0.31	347	Pg	Pg	03 16 21.3	+1.1
BOZC				Sg	Sb	03 16 26.7	-1.2
BOZC	Bozcaada	0.31	347	P	Pb	03 16 21.5	-1.0
BOZC				S	Sb	03 16 26.9	-1.1
BOZC				*i* AML	AML	03 16 27.0	
	comp=N,55nm,0.2s						
BOZC				*i* AML	AML	03 16 27.0	
	comp=E,52nm,0.2s						
EZN	Ezine	0.32	26	Pg	Pg	03 16 21.3	+0.9
BAYC	CANAKKALE_Bayr	0.37	57	P	Pb	03 16 22.8	-0.7
BAYC				S	Sb	03 16 28.8	-0.9
BAYC				*i* AML	AML	03 16 29.0	
	comp=E,32nm,0.1s						
BAYC				*i* AML	AML	03 16 34.0	
	comp=N,28nm,0.1s						
AYVA	Ayvalik	0.48	118	P	Pb	03 16 25.3	0.0
AYVA				S	Sb	03 16 31.9	-0.9
COMU	Canakkale	0.61	24	Pg	Pb	03 16 26.9	-0.7
GADA	Gvkgeada	0.68	344	Pg	Pg	03 16 27.7	+0.5
DKL	Dikili	0.75	128	Pg	Pb	03 16 29.6	-0.4
CANM	Can-anakkale	0.85	56	Pg	Pb	03 16 31.3	-0.3
GELI	Tayfur-Gelibol	0.90	16	Pg	Pb	03 16 32.2	-0.2
LPK	Lapseki	0.96	30	Pg	Pb	03 16 33.4	-0.1
ERIK	Erikli-Kesan	1.17	14	Pn	Pb	03 16 37.1	+0.1
KRBG	Karabiga-Canak	1.23	46	Pn	Pn	03 16 38.6	+0.3
ALN	Alexandroupoli	1.36	357	Pn	Pb	03 16 40.3	0.0

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*NDI **01** 03:16:51.7±3.0, 12°.15N×93°.24E, h83^{km}±14^{km}, ML4.6, mb4.5(NEIC)*

*NEIC **01** 03:16:52.4±2.0, 12°.21N±0°.08×93°.21E±0°.07, h68^{km}±2^{km}, mb4.5/36, Error ellipse: s-maj=12.6km s-min=8.5km az=138.0*

*IDC **01** 03:16:52.9±2.0, 12°.11N×93°.31E, h85^{km}±15^{km}, mb3.8/19, mbtmp4.1/20, MS3.6/5, Error ellipse: s-maj=22.2km s-min=13.5km az=46.0*

ISC 01 03:16:53.0±0.4**, 12°.22N**±0°.04×**93°.17E**±0°.06**, h85^{km}, n92, σ1^{s}.71**/112**, mb4.3**/36**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	Port Blair	0.69	217	Pn	Pn	03 17 07.1	-1.9
PBA				Sn	Sn	03 17 18.5	-2.4
PBA	Port Blair	0.69	217	*e*P	Pn	03 17 07.1	-1.9
PBA				*e*P	Pn	03 17 07.2	-1.9
PBA				*e*S	Sn	03 17 19.7	-1.2
PBA				*e*S	Sn	03 17 19.9	-1.1
PBA				IAML		03 17 22.1	
	comp=N,16µm,0.3s						
PBA				IAML		03 17 22.1	
	comp=N,16µm,0.3s						
PBA				IAML		03 17 23.3	
	comp=E,23µm,0.3s						
PBA				IAML		03 17 23.3	
	comp=E,22µm,0.2s						
MYB	Mayabunder	0.70	340	*e*P	Pn	03 17 08.6	-0.5
MYB				*e*S	Sn	03 17 22.1	+1.2
DGPR	DIGLIPUR	0.98	347	*e*P	Pn	03 17 10.5	-1.7
DGPR				*e*P	Pn	03 17 10.7	-1.5
DGPR				*e*P	Pn	03 17 10.7	-1.5
DGPR				*e*S	Sn	03 17 25.2	-1.3
DGPR				*e*S	Sn	03 17 25.9	-0.5
DGPR				*e*S	Sn	03 17 26.0	-0.5
DGPR				IAML		03 17 28.9	
	comp=N,15µm,0.5s						
DGPR				IAML		03 17 28.9	
	comp=N,18µm,0.5s						
DGPR				IAML		03 17 28.9	
	comp=N,18µm,0.5s						
DGPR				IAML		03 17 30.2	
	comp=E,9µm,0.4s						
DGPR				IAML		03 17 31.8	
	comp=E,11µm,0.3s						
DGPR				IAML		03 17 31.8	
	comp=E,10µm,0.3s						
SRIT	Nakonsritamara	7.28	119		Pn	03 18 35.8	-1.0
CM31	Chiang Mai Arr	8.34	41	Pn	Pn	03 18 47.9	-3.3
CMAR	Chiang Mai Arr	8.34	41	P	Pn	03 18 51.8	+0.5
	comp=E,9.9nm,0.7s,baz=231,slow=15,SNR=46						
CMAR				S	Sn	03 20 26.0	+2.2
	comp=E,4.3nm,0.7s,baz=232,slow=26,SNR=1.0						
CMAR				LR	LR	03 22 53.3	
	comp=E,50nm,18.4s,baz=205,slow=43						
CMAR	Chiang Mai Arr	8.34	41		Pn	03 18 50.6	-0.6
CHTO	Chiang Mai	8.60	40		Pn	03 18 54.6	-0.2
PHRA	Phrae	9.24	47		Pn	03 19 03.9	+0.4
MND	Mandalay	10.14	16		Pn	03 19 12.7	-3.1
SAIH	SAIHA	10.22	359	*e*P	Pn	03 19 15.8	-1.2
SAIH				*e*P	Pn	03 19 16.4	-0.5
BRDH	Bariadhala	10.50	352	P	Pn	03 19 24.2	+3.5
	comp=E,52nm,0.3s,baz=90,slow=20,SNR=1.7						
BRDH				S	Sn	03 21 10.4	-6.1
	comp=E,55nm,0.3s,baz=90,slow=22,SNR=1.6						
IPM	Ipoh	10.93	134		Pn	03 19 24.2	-2.4
VIS	Vishakhapatnam	10.96	301	*e*P	Pn	03 19 25.3	-1.7
VIS				*e*P	Pn	03 19 25.7	-1.3
VIS				*e*S	Sn	03 21 17.1	-11
VIS				*e*S	Sn	03 21 18.2	-10
VIS				IAML		03 21 20.9	
	comp=N,768nm,0.3s						
VIS				IAML		03 21 21.8	
	comp=E,887nm,0.3s						
RPSI	Rantau Prapat	11.05	148		Pn	03 19 28.7	+0.5
RAGD	RAYAGADA	11.67	308	*e*P	Pn	03 19 36.2	-0.3

RAGD				*e*S	Sn	03 21 35.8	-9.2
RAGD				IAML		03 21 40.8	
	comp=E,58nm,0.8s						
RAGD				IAML		03 21 41.1	
	comp=N,47nm,0.3s						
SHL	**Shillong**	**13.34**	**355**	*e*P	**Pn**	**03 19 59.6**	**+0.6**
KOHI	**KOHIMA**	**13.46**	**4**	*e*P	**Pn**	**03 19 57.3**	**-3.4**
KOHI				*e*P	P	03 19 59.8	-7.1
KOHI				*e*S	Sn	03 22 16.5	-12
RAMN	**Ramite**	**15.90**	**338**	*e*P	**Pn**	**03 20 33.1**	**+1.0**
TAPN	**Taplejung**	**15.90**	**342**	*e*P	**Pn**	**03 20 33.4**	**+1.2**
JBP	**Jabalpur**	**16.61**	**313**	*e*P	**Pn**	**03 20 42.7**	**+2.1**
JBP				*e*x	x	03 20 42.7	
	baz=143,slow=28						
JBP				IAmb	IAmb	03 20 45.1	
	comp=Z,17nm,0.5s						
JBP				*e*S	**Sn**	**03 23 40.0**	**-4.7**
JIRN	**Jiri**	**16.70**	**338**	*e*P	**Pn**	**03 20 43.3**	**+1.2**
PKI	**Pulchoki**	**16.92**	**336**	*e*P	**Pn**	**03 20 46.5**	**+1.7**
PKIN	**Phulchoki**	**16.93**	**336**	*e*P	**Pn**	**03 20 46.5**	**+1.6**
GUN	**Gumba**	**17.04**	**337**	*e*P	**Pn**	**03 20 48.1**	**+1.8**
GKN	**Gorkha**	**17.62**	**334**	*e*P	**Pn**	**03 20 56.5**	**+3.3**
KOLN	**Koldanda**	**17.88**	**331**	*e*P	**Pn**	**03 20 59.4**	**+3.0**
DANN	**Dangsing**	**18.30**	**333**	*e*P	**Pn**	**03 21 05.2**	**+3.6**
PYUN	**Piuthan**	**18.45**	**330**	*e*P	**Pn**	**03 21 08.0**	**+4.8**
ENH	**Enshi**	**23.49**	**38**	P	**P**	**03 21 53.9**	**-1.5**
ENH				IAmb	IAmb	03 21 56.9	
	comp=Z,20nm,0.5s						
KAPI	**Kappang**	**31.49**	**121**	P	**P**	**03 23 06.5**	**-0.5**
KAPI				IAmb	IAmb	03 23 15.8	
	comp=Z,5.0nm,0.5s						
TARG	**Taragay, Kyrgy**	**32.32**	**338**	P	**P**	**03 23 15.2**	**+0.7**
TARG				IAmb	IAmb	03 23 17.6	
	comp=Z,3.3nm,0.6s						
GAR	**Garm**	**33.51**	**327**	P	**P**	**03 23 26.3**	**+1.7**
GAR				IAmb	IAmb	03 23 52.5	
	comp=Z,8.3nm,0.8s						
AAK	**Ala-Archa**	**34.38**	**335**	P	**P**	**03 23 34.1**	**+2.1**
	comp=Z,1.8nm,0.8s,baz=162,slow=9.6,SNR=4.0						
	comp=Z,1.8nm,0.8s						
MK31	**Makanchi Array**	**35.67**	**347**	P	**P**	**03 23 43.7**	**+0.7**
MKAR	**Makanchi Array**	**35.67**	**347**	P	**P**	**03 23 43.9**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=167,slow=8.6,SNR=11						
MKAR				PcP	**PcP**	**03 26 10.6**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=221,slow=4.0,SNR=4.9						
MKAR				ScP	**ScP**	**03 29 46.5**	**-1.8**
	comp=Z,0.4nm,0.7s,baz=139,slow=4.8,SNR=1.9						
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**35.67**	**347**	P	**P**	**03 23 42.9**	**-0.1**
MAKZ	**Makanchi**	**35.75**	**347**	P	**P**	**03 23 44.4**	**+0.8**
KK31	**Karatay Array**	**36.49**	**332**	P	**P**	**03 23 51.5**	**+1.4**
KKAR	**Karatay Array**	**36.49**	**332**	P	**P**	**03 23 51.6**	**+1.5**
KKAR	**Karatay Array**	**36.49**	**332**	P	**P**	**03 23 49.0**	**-1.0**
SONM	**Songino Array**	**37.20**	**15**	P	**P**	**03 23 56.1**	**0.0**
	comp=Z,1.7nm,0.3s,baz=204,slow=7.9,SNR=27						
SONM				PcP	**PcP**	**03 26 15.6**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=209,slow=5.6,SNR=3.0						
SONM				ScP	**ScP**	**03 29 53.4**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=217,slow=3.5,SNR=2.9						
	comp=Z,1.7nm,0.3s						
SONM	**Songino Array**	**37.20**	**15**	P	**P**	**03 23 57.3**	**+1.2**
KSRS	**Korea Array**	**39.96**	**45**	P	**P**	**03 24 17.9**	**-1.3**
	comp=Z,1.7nm,0.7s,baz=237,slow=9.5,SNR=7.6						
	comp=Z,1.7nm,0.7s						
KURBB	**Kurchatov Arra**	**40.13**	**346**	P	**P**	**03 24 21.1**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=164,slow=7.8,SNR=6.4						
KURBB				PcP	**PcP**	**03 26 24.3**	**+1.0**
	comp=Z,0.5nm,0.4s,baz=161,slow=2.7,SNR=5.3						
	comp=Z,0.6nm,0.5s						
KURK	**Kurchatov**	**40.19**	**346**	P	**P**	**03 24 21.9**	**+1.0**
KURK				IAmb	IAmb	03 24 56.6	
	comp=Z,4.3nm,1.2s						
GIRL	**Giralia**	**40.33**	**149**	P	**P**	**03 24 20.9**	**-1.5**
GEYT	**Alibeck**	**40.39**	**316**	P	**P**	**03 24 26.0**	**+3.1**
	comp=Z,2.7nm,0.5s,baz=141,slow=9.6,SNR=6.6						
	comp=Z,2.7nm,0.5s						
ZAA0	**Zalesovo Array**	**42.15**	**353**	P	**P**	**03 24 37.8**	**+0.9**
ZAA0				IAmb	IAmb	03 24 38.6	
	comp=Z,3.4nm,0.6s						
ZALV	**Zalesovo Beam**	**42.15**	**353**	P	**P**	**03 24 37.1**	**+0.2**
	comp=Z,2.1nm,0.3s,baz=177,slow=8.1,SNR=17						
ZALV				ScP	**ScP**	**03 30 14.1**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=162,slow=0.9,SNR=4.5						
	comp=Z,2.1nm,0.3s						
ZALV	**Zalesovo Beam**	**42.15**	**353**	P	**P**	**03 24 37.7**	**+0.7**
FITZ	**Fitzroy Crossi**	**43.98**	**133**	P	**P**	**03 24 50.4**	**-1.8**
BVAR	**Borovoye Array**	**44.60**	**341**	P	**P**	**03 24 57.4**	**+0.7**
	comp=Z,1.0nm,0.4s,baz=133,slow=8.3,SNR=8.6						
	comp=Z,1.0nm,0.4s						
BRVK	**Borovoye**	**44.66**	**340**	P	**P**	**03 24 57.8**	**+0.7**
ABKAR	**Akbulak array**	**46.00**	**330**	P	**P**	**03 25 09.5**	**+1.8**
ABKAR				IAmb	IAmb	03 25 10.2	
	comp=Z,3.4nm,0.8s						
ABKAR	**Akbulak array**	**46.00**	**330**	P	**P**	**03 25 09.2**	**+1.5**
MORW	**Morawa**	**46.61**	**152**	P	**P**	**03 25 12.6**	**-0.3**
MORW				IAmb	IAmb	03 25 29.0	
	comp=Z,19nm,1.5s						
MJAR	**Matsushiro Arr**	**47.08**	**51**	LR	LR	03 46 04.3	
	comp=Z,55nm,18.6s,baz=156,slow=37						
JHJ	**Hachijo jima 2**	**47.32**	**56**	LR	LR	03 46 27.4	
	comp=Z,55nm,21.1s,baz=134,slow=38						
AKTO	**Aktyubinsk**	**47.71**	**330**	P	**P**	**03 25 21.6**	**+0.4**
	comp=Z,2.1nm,0.4s,baz=140,slow=5.4,SNR=6.6						
	comp=Z,2.1nm,0.4s						
RER	**Riviere de l'E**	**49.51**	**228**	P	**P**	**03 25 35.3**	**-0.1**
WB0	**Warramunga Arr**	**51.55**	**128**	P	**P**	**03 25 49.1**	**-1.7**
WB0				IAmb	IAmb	03 25 49.6	
	comp=Z,2.7nm,0.8s						
WRA	**Warramunga Arr**	**51.61**	**128**	P	**P**	**03 25 49.4**	**-1.8**
	comp=Z,2.0nm,0.6s,baz=304,slow=9.0,SNR=8.9						
WRA				PcP	**PcP**	**03 27 03.8**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=328,slow=2.9,SNR=2.4						
WRA				ScP	**ScP**	**03 30 52.4**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=319,slow=3.8,SNR=3.3						
	comp=Z,2.0nm,0.6s						
WRA	**Warramunga Arr**	**51.61**	**128**	P	**P**	**03 25 49.5**	**-1.8**
WRAB	**Tennant Creek**	**51.61**	**128**	P	**P**	**03 25 49.5**	**-1.7**
WRAB				IAmb	IAmb	03 25 50.1	
	comp=Z,6.0nm,1.1s						
WB2	**Warramunga Arr**	**51.62**	**128**	P	**P**	**03 25 49.4**	**-1.9**
WB2				IAmb	IAmb	03 25 50.0	
	comp=Z,5.5nm,1.1s						
WR0	**Warramunga Arr**	**51.78**	**128**	P	**P**	**03 25 50.5**	**-1.9**
WR0				IAmb	IAmb	03 26 00.2	
	comp=Z,4.6nm,1.1s						
ASAR	**Alice Springs**	**53.47**	**132**	P	**P**	**03 26 03.1**	**-1.8**
	comp=Z,1.3nm,0.4s,baz=309,slow=6.6,SNR=12						
ASAR				ScP	**ScP**	**03 31 02.1**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=316,slow=4.7,SNR=4.4						
	comp=Z,1.3nm,0.4s						
ABPO	**Ambohimpanom**	**54.89**	**236**	P	**P**	**03 26 16.1**	**+0.7**
ABPO				IAmb	IAmb	03 26 53.4	
	comp=Z,9.9nm,1.4s						
PMG	**Port Moresby**	**57.79**	**109**	P	**P**	**03 26 37.1**	**+1.1**
BRTR	**Keskin Array B**	**58.92**	**309**	P	**P**	**03 26 44.4**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=122,slow=8.2,SNR=2.7						
	comp=Z,1.1nm,0.5s						
BBOO	**Buckleboo**	**60.67**	**139**	P	**P**	**03 26 54.9**	**-0.6**
TIXI	**Tiksi**	**63.20**	**12**	P	**P**	**03 27 12.1**	**+0.3**
BURAR	**Bucovina Array**	**66.22**	**317**	P	**P**	**03 27 33.7**	**+1.6**
BUR08	**Bucovina Ar. S**	**66.24**	**317**	P	**P**	**03 27 33.5**	**+1.3**
BUR08				IAmb	IAmb	03 27 35.9	
	comp=Z,5.6nm,1.5s						
FIA1	**FINESS Array S**	**68.45**	**332**	P	**P**	**03 27 46.7**	**+1.0**
FIA1				IAmb	IAmb	03 27 55.4	
	comp=Z,16nm,1.4s						
FINES	**FINESS Array B**	**68.45**	**332**	P	**P**	**03 27 45.9**	**+0.2**
	comp=Z,1.9nm,0.8s,baz=82,slow=10.0,SNR=8.4						
	comp=Z,1.9nm,0.8s						
FINES	**FINESS Array B**	**68.45**	**332**	P	**P**	**03 27 46.3**	**+0.6**
LSZ	**Lusaka**	**69.88**	**249**	P	**P**	**03 27 55.6**	**+0.1**
LSZ				IAmb	IAmb	03 28 07.8	
	comp=Z,5.4nm,1.4s						
ARCES	**ARCESS Array B**	**70.88**	**340**	P	**P**	**03 28 01.1**	**+0.6**
	comp=Z,6.5nm,1.1s,baz=99,slow=5.6,SNR=2.0						
	comp=Z,6.5nm,1.1s						
GERES	**GERESS Array B**	**73.98**	**317**	P	**P**	**03 28 20.5**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=58,slow=6.0,SNR=5.1						
	comp=Z,0.7nm,0.6s						
GERES	**GERESS Array B**	**73.98**	**317**	P	**P**	**03 28 19.8**	**+0.3**
HFS	**Hagfors**	**74.25**	**329**	P	**P**	**03 28 19.6**	**-1.1**
	comp=Z,1.6nm,0.7s,baz=105,slow=11,SNR=1.4						
	comp=Z,1.6nm,0.7s						
NOA	**NORSAR Array B**	**75.50**	**330**	P	**P**	**03 28 29.1**	**+1.1**
	comp=Z,0.8nm,1.0s,baz=91,slow=4.5,SNR=1.3						
	comp=Z,0.8nm,1.0s						
KBS	**Kingsbay**	**76.40**	**349**	P	**P**	**03 28 32.7**	**0.0**
BOSA	**Boshof**	**77.11**	**237**	P	**P**	**03 28 38.6**	**+0.9**
BOSA				IAmb	IAmb	03 28 46.3	
	comp=Z,5.5nm,1.1s						
DZM	**Mont Dzumac**	**79.49**	**115**	P	**P**	**03 28 51.2**	**+0.3**
JMIC	**Jan Mayen**	**82.31**	**341**	LR	LR	04 10 49.6	
	comp=Z,86nm,19.2s,baz=310,slow=39						
BORG	**Borgarnes**	**89.08**	**337**	LR	LR	04 10 10.8	
	comp=Z,144nm,21.4s,baz=275,slow=36						
ILAR	**Eielson Array**	**91.10**	**22**	P	**P**	**03 29 47.3**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=307,slow=3.9,SNR=4.6						
	comp=Z,0.5nm,0.8s						
INK	**Inuvik**	**93.10**	**16**	P	**P**	**03 29 57.5**	**+0.4**
	comp=Z,1.0nm,0.4s,baz=332,slow=3.9,SNR=16						
	comp=Z,1.0nm,0.4s						

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*IDC **01** 03:19:09.2±3.7, 0°.10S×123°.03E, h130^{km}±38^{km}, mb3.6/9, mbtmp4.0/10, Error ellipse: s-maj=29.2km s-min=14.0km az=64.0*

*DJA **01** 03:19:11.7±0.3, 0°S±3°×12°3E±°, h138^{km}±5^{km}, M4.3/17, mB5.4/3, mb4.0/8, MLv4.4/17, Mw(mB)4.8/3*

ISC 01 03:19:12.0±0.6**, 0°.18S**±0°.06×**122°.99E**±0°.07**, h162**^{km}**, n33,** σ1^{s}**60**/37**, mb3.9**/9**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	**Gorontalo**	**0.81**	**1**	P	**Pn**	**03 19 35.0**	**-1.5**
GTOI				S	**Sn**	**03 19 53.5**	**-1.9**
LUWI	**Luwuk**	**0.88**	**195**	P	**Pn**	**03 19 35.3**	**-1.7**
LUWI	**Luwuk**	**0.88**	**195**	P	**Pn**	**03 19 35.3**	**-1.7**
LUWI				S	**Sn**	**03 19 52.9**	**-3.4**
MRSI	**Marisa**	**1.24**	**302**	P	**Pn**	**03 19 37.7**	**-2.2**
TOLI2	**Tolitoli**	**2.56**	**300**	P	**Pn**	**03 19 52.5**	**-1.9**
MPSI	**Mapaga**	**3.14**	**279**	P	**Pn**	**03 20 01.8**	**+0.3**
SANI	**Sanana**	**3.52**	**122**	P	**Pn**	**03 20 04.2**	**-2.2**
SANI	**Sanana**	**3.52**	**122**	P	**Pn**	**03 20 03.9**	**-2.5**
TNTI	**Ternate**	**4.47**	**78**	P	**Pn**	**03 20 16.5**	**-2.2**
LBMI	**Labuha**	**4.53**	**96**	P	**Pn**	**03 20 17.7**	**-1.7**
SPSI	**Sidrap Palu**	**4.95**	**221**	P	**Pn**	**03 20 24.9**	**-0.1**
NLAI	**Namlea**	**5.11**	**127**	P	**Pn**	**03 20 26.4**	**-0.6**
	14nm,0.8s,7μm1.0nm						
NLAI				S	**Sn**	**03 21 24.2**	**-1.5**
	14nm,0.8s,7μm1.0nm						
KAPI	**Kappang**	**5.79**	**214**	P	**Pn**	**03 20 34.3**	**-1.7**
	1.9nm,0.3s,baz=32,slow=15,SNR=1.0						
KAPI				S	**Sn**	**03 21 39.6**	**-2.3**
	3.6nm,0.3s,baz=232,slow=19,SNR=1.3						
BKSI	**Bulukumba**	**5.86**	**209**	P	**Pn**	**03 20 35.9**	**-1.0**
	7.5nm,0.6s,0.0nm						
AAI	**Ambon**	**6.26**	**124**	P	**Pn**	**03 20 41.6**	**-0.6**
	38nm,0.5s,2μm0.2nm						
MSAI	**Masohi**	**6.71**	**118**	P	**Pn**	**03 20 47.0**	**-1.3**
	4.2nm,0.5s,0.1nm						
SOEI	**Soe**	**9.60**	**172**	P	**Pn**	**03 21 26.0**	**-0.6**
	14nm,0.7s						
FAKI	**Fak Fak**	**9.64**	**106**	P	**Pn**	**03 21 26.3**	**-0.9**
FAKI	**Fak Fak**	**9.64**	**106**	P	**Pn**	**03 21 26.3**	**-0.9**
MTN	**Manton Dam**	**14.95**	**148**	P	**P**	**03 22 37.6**	**+0.7**
KNRA	**Kununurra**	**16.42**	**160**	P	**Pn**	**03 22 55.9**	**+2.6**
WRAB	**Tennant Creek**	**22.56**	**151**	P	**P**	**03 23 59.9**	**+1.1**
WRA	**Warramunga Arr**	**22.57**	**151**	P	**P**	**03 23 59.5**	**+0.7**
	3.6nm,0.6s,baz=331,slow=10,SNR=60						
	3.6nm,0.6s						
WRKA	**Warakurna**	**25.24**	**169**	P	**P**	**03 24 24.9**	**+1.8**
ASAR	**Alice Springs**	**25.64**	**156**	P	**P**	**03 24 28.1**	**+1.3**
	1.1nm,0.4s,baz=328,slow=8.3,SNR=22						
	1.1nm,0.4s						
CMAR	**Chiang Mai Arr**	**30.03**	**309**	P	**P**	**03 25 07.7**	**+1.8**
	1.1nm,0.5s,baz=144,slow=6.7,SNR=4.9						
	1.1nm,0.5s						
STKA	**Stephens Creek**	**36.10**	**153**	P	**P**	**03 25 59.2**	**+0.9**
	1.1nm,0.6s,baz=336,slow=10,SNR=3.8						
	1.1nm,0.6s						
MJAR	**Matsushiro Arr**	**39.17**	**20**	P	**P**	**03 26 22.9**	**-1.2**
	1.8nm,0.6s,baz=190,slow=9.3,SNR=8.6						
	1.8nm,0.6s						
SONM	**Songino Array**	**49.96**	**345**	P	**P**	**03 27 50.2**	**+0.7**
	2.4nm,0.8s,baz=160,slow=9.3,SNR=15						
	2.4nm,0.8s						
MKAR	**Makanchi Array**	**58.76**	**328**	P	**P**	**03 28 52.6**	**-0.4**
	1.0nm,0.5s,baz=124,slow=8.7,SNR=15						
	1.0nm,0.5s						
PETK	**Petropavlovsk-**	**60.45**	**23**	P	**P**	**03 29 04.7**	**+0.3**
	1.7nm,0.6s,baz=203,slow=7.2,SNR=4.2						
	1.7nm,0.6s						
ZALV	**Zalesovo Beam**	**62.47**	**336**	P	**P**	**03 29 18.1**	**+0.2**
	0.4nm,0.3s,baz=127,slow=6.0,SNR=2.1						
	0.4nm,0.3s						
TORD	**Torodi Ar. Bea**	**120.45**	**285**	PKP	**PKiKP**	**03 37 45.0**	**-0.3**
	0.3nm,0.7s,baz=62,slow=2.0,SNR=4.2						

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*CNRM **01** 03:37:41.8, 34°.96N×5°.83W, h11^{km}, ml2.0*

*INMG **01** 03:37:44.2±1.7, 35°.21N×5°.73W, h24^{km}±11^{km}, ML1.6, Error ellipse: s-maj=6.2km s-min=4.1km az=66.0*

*MDD **01** 03:37:45.0±0.9, 35°.22N×5°.70W, h30^{km}±8^{km}, mb_Lg2.4/6, Error ellipse: s-maj=5.0km s-min=4.3km az=44.0*

*SFS **01** 03:37:44.6, 35°.21N×5°.74W, h28^{km}, ML2.8/6, ML2.8/6, MLv2.8/6*

ISC 01 03:37:42.9±1.5**, 35°.23N**±0°.03×**5°.66W**±0°.04**, h29**^{km}±15^{km}**, n30,** σ1^{s}**24**/50**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHEFC	**Chefchaouen**	**0.29**	**114**	P	**Pn**	**03 37 50.9**	**-0.3**
CHEFC				S	**Sn**	**03 38 00.0**	**+3.3**
CEU	**Ceuta**	**0.71**	**19**	P	**Pn**	**03 37 59.2**	**+2.1**
EMIJ	**Mijas**	**1.52**	**28**	P	**Pn**	**03 38 08.7**	**+0.6**
EMIJ				S	**Sb**	**03 38 29.1**	**-0.2**
EMIJ	**Mijas**	**1.52**	**28**	Pn	**Pn**	**03 38 08.6**	**+0.4**
EMIJ				Sn	**Sb**	**03 38 29.0**	**-0.2**
EMIJ				*i* Vmb_Lg		03 38 40.1	
AKLM	**AKL**	**1.64**	**115**	P	**Pb**	**03 38 12.4**	**-0.2**
AKLM				S	**Sb**	**03 38 32.5**	**-0.4**
IFR	**Ifrane**	**1.76**	**165**	S	**Sn**	**03 38 32.5**	**-0.6**
IFR				P	**Pn**	**03 38 13.0**	**+1.4**
ELGU	**Los Guajares,**	**2.33**	**45**	Sn	**Sn**	**03 38 46.2**	**-0.7**
MD31	**MD31**	**2.47**	**162**	P	Pn	03 38 18.5	-2.7
MD31				S	**Sn**	**03 38 49.2**	**-1.3**
MDT	**Midelt**	**2.56**	**160**	P	Pn	03 38 20.1	-2.5
MDT				S	**Sn**	**03 38 50.7**	**-2.1**
EMIN	**Mina Concepcio**	**2.67**	**343**	Sn	**Sn**	**03 38 54.7**	**-0.5**
EMIN				*i* Vmb_Lg		03 39 01.7	
JBK	**JBK**	**2.70**	**108**	P	**Pn**	**03 38 23.9**	**-0.6**
JBK				S	**Sn**	**03 38 56.6**	**+0.3**
PBDV	**Barranco-do-Ve**	**2.72**	**318**	*e*P	**Pn**	**03 38 24.8**	**+0.1**
PBDV				*e*S	**Sn**	**03 38 56.1**	**-0.6**
PBDV				A	A	03 38 57.9	
	0.9nm,0.1s						
EGRO	**El Granado**	**2.73**	**328**	Pn	**Pn**	**03 38 25.3**	**+0.5**
EGRO				Sn	**Sn**	**03 38 55.6**	**-1.3**
EGRO				*i* Vmb_Lg		03 39 01.2	
PVAQ	**Vaqueiros**	**2.74**	**323**	*e*P	**Pn**	**03 38 25.8**	**+1.0**
PVAQ				*e*S	**Sn**	**03 38 56.9**	**-0.1**
PVAQ				A	A	03 38 59.0	
	1.6nm,0.2s						
ECAB	**El Cabril**	**2.85**	**4**	S	**Sn**	**03 38 58.9**	**-1.0**
ECAB				P	**Pn**	**03 38 27.2**	**+0.7**
ECAB	**El Cabril**	**2.85**	**4**	Pn	**Pn**	**03 38 27.3**	**+0.9**
ECAB				Sn	**Sn**	**03 38 58.3**	**-1.6**
ECAB				*i* Vmb_Lg		03 39 01.7	
EADA	**Adamuz**	**3.06**	**16**	S	**Sn**	**03 39 04.3**	**-0.8**
EADA				P	**Pn**	**03 38 29.8**	**+0.4**
EADA	**Adamuz**	**3.06**	**16**	Pn	**Pn**	**03 38 29.8**	**+0.4**
EADA				Sn	**Sn**	**03 39 03.6**	**-1.5**
EADA				*i* Vmb_Lg		03 39 11.2	
PCVE	**Castro Verde**	**3.07**	**322**	*e*S	**Sn**	**03 39 05.7**	**+0.4**
PBAR	**Barrancos**	**3.15**	**340**	*e*P	**Pn**	**03 38 31.5**	**+1.0**
PBAR				*e*S	**Sn**	**03 39 07.1**	**0.0**
PBAR				A	A	03 39 10.3	
	1.0nm,0.1s						
PBEJ	**Beja**	**3.31**	**328**	*e*S	**Sn**	**03 39 10.8**	**-0.4**
EQES	**Quesada**	**3.31**	**38**	Pn	**Pn**	**03 38 35.1**	**+2.2**
EQES				Sn	**Sn**	**03 39 12.5**	**+1.1**
MESJ	**Messejana**	**3.33**	**322**	*e*S	**Sn**	**03 39 11.2**	**-0.3**
EBAD	**Badajoz**	**3.69**	**343**	S	**Sn**	**03 39 19.3**	**-1.1**
EBAD				P	**Pn**	**03 38 39.0**	**+1.1**
EBAD	**Badajoz**	**3.69**	**343**	Pn	**Pn**	**03 38 39.1**	**+1.2**
EBAD				Sn	**Sn**	**03 39 19.2**	**-1.2**
EBAD				*i* Vmb_Lg		03 39 21.6	
PNCL	**Nicolau / Gran**	**3.69**	**322**	*e*P	**Pn**	**03 38 40.1**	**+2.2**
PNCL				*e*S	**Sn**	**03 39 19.7**	**-0.8**
PSIM	**Granatula de C**	**3.90**	**22**	Pn	**Pn**	**03 38 42.3**	**+1.4**
PSIM				Sn	**Sn**	**03 39 24.1**	**-1.6**
PESTR	**Estremoz**	**3.95**	**338**	*e*S	**Sn**	**03 39 26.3**	**-0.6**
PMTG	**Montargil**	**4.35**	**333**	*e*S	**Sn**	**03 39 36.1**	**-0.6**
PMTG				A	A	03 39 37.5	
	0.7nm,0.3s						
PAB	**San Pablo**	**4.44**	**13**	Pn	**Pn**	**03 38 48.7**	**+0.4**
PAB				Sn	**Sn**	**03 39 36.1**	**-3.0**

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*TEH **01** 04:23:17.2, 38°.87N×43°.59E, h8^{km}±99^{km}, ML2.6*

*ISK **01** 04:23:18.8, 39°.01N×43°.72E, h7^{km}, ML2.4/8*

*DDA **01** 04:23:20.1±0.0, 38°.95N×43°.72E, h7^{km}±2^{km}, ML2.0*

ISC 01 04:23:20.2±1.0**, 38°.98N**±0°.03×**43°.70E**±0°.03**, h10**^{km}±7^{km}**, n19,** σ0^{s}**86**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	**0.10**	**278**	P	**Pg**	**04 23 22.7**	**-0.4**
VMUR				S	**Sg**	**04 23 25.4**	**+0.4**
ERCV	**ERCIS-VAN**	**0.29**	**279**	Pg	**Pg**	**04 23 25.0**	**-1.1**
OZAP	**Van, Ozalp-Mer**	**0.39**	**144**	P	**Pg**	**04 23 27.9**	**0.0**
OZAP				*i* AML	AML	04 23 38.0	
	comp=N,222nm,0.8s						
OZAP				*i* AML	AML	04 23 38.0	
	comp=E,167nm,0.4s						
VANB	**Van**	**0.45**	**213**	Pg	**Pb**	**04 23 30.2**	**-0.2**
DYDN	**Diyadin**	**0.57**	**359**	P	**Pg**	**04 23 31.5**	**+0.1**
DYDN				S	**Sg**	**04 23 40.3**	**+1.4**
DYDN				*i* AML	AML	04 23 41.0	
	comp=N,98nm,0.2s						
DYDN				*i* AML	AML	04 23 42.0	
	comp=E,134nm,0.5s						
ADCV	**BITLIS_Adilcev**	**0.78**	**258**	P	**Pg**	**04 23 35.2**	**-0.1**
ADCV				S	**Sb**	**04 23 47.5**	**+0.7**
ADCV				*i* AML	AML	04 23 48.0	
	comp=N,58nm,0.2s						
ADCV				*i* AML	AML	04 23 48.0	
	comp=E,51nm,0.7s						
AGRB	**Hanur-Agry**	**0.81**	**318**	Pg	**Pg**	**04 23 35.1**	**-0.9**
GEVA	**Gevas**	**0.83**	**218**	P	**Pg**	**04 23 35.7**	**-0.6**
GEVA				*i* AML	AML	04 23 50.0	
	comp=N,28nm,0.7s						
GEVA				*i* AML	AML	04 23 50.0	
	comp=E,38nm,0.6s						
MAKU	**Maku**	**0.85**	**63**	Pg	**Pg**	**04 23 35.6**	**-1.1**
MAKU				Sg	**Sb**	**04 23 49.4**	**+0.6**
AKDM	**Akdamar-Van**	**0.86**	**221**	Pg	**Pg**	**04 23 35.6**	**-1.2**
AKDM				Sg	**Sb**	**04 23 49.7**	**+0.7**
MLAZ	**Malazgirt-MUS**	**0.91**	**281**	Pg	**Pg**	**04 23 36.7**	**-1.1**
IGDI	**IGDIR**	**0.94**	**18**	P	**Pg**	**04 23 38.2**	**-0.1**
IGDI				*i* AML	AML	04 23 56.0	
	comp=N,61nm,0.4s						
TASB	**TASBURUN-IGDIR**	**1.09**	**22**	Pg	**Pg**	**04 23 39.3**	**-1.9**
GURO	**Guroymak-BITLI**	**1.37**	**253**	Pn	**Pn**	**04 23 45.1**	**-0.5**
GURO				Sn	**Sn**	**04 24 04.5**	**+0.6**
IMRD	**Marand**	**1.58**	**99**	Pg	**Pn**	**04 23 48.8**	**+0.3**
ISHB	**Shabestar**	**1.65**	**114**	Pg	**Pn**	**04 23 48.3**	**-1.2**
CUKT	**Cukurca**	**1.73**	**183**	Pn	**Pn**	**04 23 50.6**	**+0.1**
SVAN	**Silvan-Diyarba**	**2.13**	**248**	Pn	**Pn**	**04 23 55.9**	**0.0**
IHRS	**Heris**	**2.69**	**103**	Pn	**Pn**	**04 24 03.9**	**0.0**

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*BJI **01** 04:35:03.2±0.0, 1°.42N×122°.14E, h10^{km}, mb4.7/43, mB4.9/20, Ms4.1/6, Ms7 3.9/5*

*DJA **01** 04:35:09.8±0.3, 2°N±3°×12°2E±°, h10^{km}, M4.6/16, mB5.1/10, mb4.8/16, MLv4.6/12, Mw(mB)4.5/10*

*NEIC **01** 04:35:10.7±1.9, 2°.12N±0°.04×121°.69E±0°.08, h10^{km}±1^{km}, mb4.9/48, Error ellipse: s-maj=13.9km s-min=2.9km az=66.0*

*IDC **01** 04:35:14.2±0.5, 2°.05N×121°.78E, h41^{km}±4^{km}, mb4.1/16, mbtmp4.3/17, ML4.1/1, MS3.4/19, Error ellipse: s-maj=21.9km s-min=9.3km az=76.0*

ISC 01 04:35:12.0±0.5**, 2°.14N**±0°.04×**121°.77E**±0°.06**, h23**^{km}±3^{km}**, h24**^{km}**:pP-P, n140,** σ1^{s}**39**/144**, mb4.7**/46**, MS3.4**/18**, 4C-1D, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOLI2	**Tolitoli**	**1.42**	**224**	Pn	**Pn**	**04 35 33.7**	**-2.6**
TOLI2	**Tolitoli**	**1.42**	**224**	P	**Pn**	**04 35 33.7**	**-2.6**
MRSI	**Marisa**	**1.66**	**174**	P	**Pn**	**04 35 39.0**	**-0.6**
LUWI	**Luwuk**	**3.31**	**162**	Pn	**Pn**	**04 36 03.7**	**+1.3**
LUWI	**Luwuk**	**3.31**	**162**	P	**Pn**	**04 36 03.3**	**+0.9**
SGSI	**Sangihe**	**4.06**	**68**	P	**Pn**	**04 36 09.7**	**-3.0**
MYLDM	**Lahad Datu**	**4.45**	**313**	Pn	**Pn**	**04 36 18.0**	**0.0**
SKMP	**Bagumbayan, Su**	**5.16**	**32**	⇑*e*P	**Pn**	**04 36 26.3**	**-1.5**
SKMP				*e*S	**Sn**	**04 37 21.8**	**-4.9**
TNTI	**Ternate**	**5.76**	**104**	P	**Pn**	**04 36 34.0**	**-2.1**
PAGZ	**Pagadian**	**5.90**	**16**	⇑*e*P	**Pn**	**04 36 36.8**	**-1.2**
PAGZ				*e*S	**Sn**	**04 37 39.3**	**-5.7**
SANI	**Sanana**	**5.92**	**135**	P	**Pn**	**04 36 37.9**	**-0.4**
SANI	**Sanana**	**5.92**	**135**	P	**Pn**	**04 36 37.3**	**-1.0**
	38nm,0.7s,558nm0.2nm						
BKB	**Balikpapan**	**5.92**	**235**	P	**Pn**	**04 36 38.3**	**-0.1**
	101nm,0.5s,13μm0.8nm						
DAV	**Davao City (W)**	**6.20**	**38**	S	**Sn**	**04 37 55.9**	**+3.5**
	127nm,0.3s,baz=58,slow=23,SNR=5.5						
DAV				LR	LR	04 38 37.5	
	comp=Z,314nm,21.8s,baz=323,slow=32						
SPSI	**Sidrap Palu**	**6.38**	**198**	P	**Pn**	**04 36 44.9**	**+0.3**
	100nm,0.9s,1μm0.4nm						
KKM	**Kota Kinabalu**	**6.76**	**305**	Pn	**Pn**	**04 36 49.1**	**-0.8**
KKM	**Kota Kinabalu**	**6.76**	**305**	P	**Pn**	**04 36 49.9**	**-0.1**
KAPI	**Kappang**	**7.38**	**196**	P	**Pn**	**04 36 58.2**	**-0.2**
	3.4nm,0.3s,baz=342,slow=12,SNR=12						
KAPI				S	**Sn**	**04 38 19.3**	**-2.2**
	6.6nm,0.4s,baz=178,slow=21,SNR=1.2						
	9.7nm,0.4s						
KAPI	**Kappang**	**7.38**	**196**	Pn	**Pn**	**04 36 58.0**	**-0.4**
KAPI	**Kappang**	**7.38**	**196**	P	**Pn**	**04 36 58.7**	**+0.3**
NLAI	**Namlea**	**7.54**	**135**	P	**Pn**	**04 37 00.1**	**-0.5**
	18nm,0.6s,3μm0.1nm						
BKSI	**Bulukumba**	**7.59**	**193**	P	**Pn**	**04 37 00.4**	**-0.8**
	25nm,0.7s,362nm0.1nm						
PPR	**Puerto Princes**	**8.17**	**338**	⇓*e*P	**Pn**	**04 37 10.3**	**+1.1**
ENPP	**El Nido**	**9.31**	**346**	⇑*e*P	**Pn**	**04 37 24.3**	**-0.5**
MTN	**Manton Dam**	**17.55**	**148**	P	**Pn**	**04 39 14.9**	**-0.3**
MTN				IAmb	IAmb	04 39 18.5	
	comp=Z,42nm,0.8s						
MTN	**Manton Dam**	**17.55**	**148**	P	**P**	**04 39 16.1**	**-0.1**
MTN	**Manton Dam**	**17.55**	**148**	P	**P**	**04 39 16.6**	**+0.4**
KDU	**Kakadu**	**18.16**	**144**	P	**Pn**	**04 39 22.5**	**-0.3**
CGJI	**Cibinong**	**18.25**	**241**	P	**P**	**04 39 25.1**	**+1.1**
	comp=Z,41nm,1.1s						
MDSI	**Maura Dua**	**18.77**	**249**	P	**Pn**	**04 39 30.6**	**+0.4**
	comp=Z,23nm,1.1s						
KNRA	**Kununurra**	**19.00**	**159**	P	**P**	**04 39 32.1**	**-0.1**
KNRA	**Kununurra**	**19.00**	**159**	P	**P**	**04 39 32.3**	**+0.1**
KNRA	**Kununurra**	**19.00**	**159**	P	**P**	**04 39 32.1**	**-0.1**
FITZ	**Fitzroy Crossi**	**20.46**	**169**	P	**P**	**04 39 47.1**	**-1.0**
FITZ	**Fitzroy Crossi**	**20.46**	**169**	P	**P**	**04 39 47.3**	**-0.8**
FITZ	**Fitzroy Crossi**	**20.46**	**169**	P	**P**	**04 39 47.4**	**-0.7**
SDSI	**Sungai Dareh**	**20.56**	**262**	P	**P**	**04 39 50.0**	**+0.7**
	comp=Z,11nm,0.5s,comp=Z,1μm						
RPSI	**Rantau Prapat**	**22.83**	**272**	P	**P**	**04 40 12.5**	**-1.1**
PSA00	**Pilbara Seismi**	**23.64**	**184**	P	**P**	**04 40 19.8**	**-1.8**
PSA00	**Pilbara Seismi**	**23.64**	**184**	P	P	04 40 33.0	+11
	comp=Z,13nm,0.7s						
WB0	**Warramunga Arr**	**25.05**	**151**	P	**P**	**04 40 33.4**	**-1.3**
WRAB	**Tennant Creek**	**25.17**	**151**	P	**P**	**04 40 34.4**	**-1.4**
WRAB	**Tennant Creek**	**25.17**	**151**	P	**P**	**04 40 35.2**	**-0.6**
WRA	**Warramunga Arr**	**25.17**	**151**	P	**P**	**04 40 35.6**	**-0.2**
	comp=Z,16nm,0.8s,baz=327,slow=10,SNR=68						
WRA				pP	**pwP**	**04 40 46.0**	**-0.8**
	comp=Z,51nm,0.8s,baz=328,slow=11,SNR=38						
	comp=Z,16nm,0.8s						
WRA	**Warramunga Arr**	**25.17**	**151**	P	**P**	**04 40 34.2**	**-1.7**
WB2	**Warramunga Arr**	**25.18**	**151**	P	**P**	**04 40 34.4**	**-1.5**
WR0	**Warramunga Arr**	**25.28**	**151**	P	**P**	**04 40 36.4**	**-0.4**
JOW	**Kunigami**	**25.34**	**14**	LR	LR	04 51 05.7	
	comp=Z,39nm,20.1s,baz=114,slow=37						
CMAR	**Chiang Mai Arr**	**27.64**	**307**	LR	LR	04 52 39.5	
	comp=Z,64nm,20.0s,baz=110,slow=38						
WRKA	**Warakurna**	**27.74**	**167**	P	**P**	**04 40 58.1**	**-0.9**
WRKA	**Warakurna**	**27.74**	**167**	P	**P**	**04 40 58.6**	**-0.4**
AS31	**Alice Springs**	**28.23**	**156**	P	**P**	**04 41 04.0**	**+0.6**
ASAR	**Alice Springs**	**28.24**	**156**	P	**P**	**04 41 03.3**	**-0.1**
	comp=Z,3.6nm,0.6s,baz=322,slow=6.9,SNR=16						
ASAR				pP	**pwP**	**04 41 13.2**	**-1.3**
	comp=Z,7.9nm,0.7s,baz=342,slow=13,SNR=22						
ASAR				LR	LR	04 53 18.9	

	comp=Z,104nm,19.5s,baz=342,slow=38						
	comp=Z,3.6nm,0.6s						
ASAR	Alice Springs	28.24	156	P	P	04 41 03.1	-0.3
QIS	Mount Isa	28.54	143	P	P	04 41 07.2	+1.1
QIS	Mount Isa	28.54	143	P	P	04 41 08.3	+2.2
MEEK	Meekatharra	28.77	186	P	P	04 41 07.2	-0.9
MEEK	Meekatharra	28.77	186	P	P	04 41 17.9	+10
KMI	Kunming	29.31	323	⇑P	P	04 41 13.4	+0.2
KMI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
NJ2	Nanjing	29.89	355	*e*P	P	04 41 20.9	+3.0
NJ2				pP	sP	04 41 25.1	-0.5
NJ2				sP	pwP	04 41 28.0	-1.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,140nm,3.5s						
JNU	Nakatsue	31.99	15	LR	LR	04 54 03.0	
	comp=Z,40nm,21.4s,baz=248,slow=35						
CTA	Charters Tower	32.63	134	LR	LR	04 57 02.4	
	comp=Z,59nm,18.0s,baz=264,slow=40						
OOD	Oodnadatta	32.63	157	P	P	04 41 40.8	-1.4
FORT	Forrest	33.28	170	P	P	04 41 46.7	-1.1
CD2	Chengdu	33.31	331	P	P	04 41 49.7	+1.5
KSRS	Korea Array	35.60	8	P	P	04 42 09.7	+1.9
	comp=Z,1.8nm,0.7s,baz=189,slow=9.3,SNR=6.7						
KSRS				LR	LR	04 56 26.8	
	comp=Z,33nm,21.4s,baz=170,slow=36						
	comp=Z,1.8nm,0.7s						
BRDH	Bariadhala	35.66	307	LR	LR	04 57 27.1	
	comp=Z,103nm,21.5s,baz=96,slow=37						
SHL	Shillong	37.02	312	P	P	04 42 19.2	-1.2
SHL				IAmb	IAmb	04 42 35.2	
	comp=Z,12nm,0.7s						
BBOO	Buckleboo	37.29	160	P	P	04 42 22.4	0.0
BBOO				IAmb	IAmb	04 42 33.0	
	comp=Z,8.9nm,0.8s						
MJAR	Matsushiro Arr	37.46	22	P	P	04 42 23.4	-0.3
	comp=Z,3.4nm,0.8s,baz=190,slow=8.6,SNR=8.0						
MJAR				LR	LR	04 57 18.0	
	comp=Z,36nm,20.0s,baz=249,slow=35						
	comp=Z,3.4nm,0.8s						
LZH	Lanzhou	37.64	336	*e*P	P	04 42 27.8	+2.3
LZH				pP	pwP	04 42 38.6	+1.1
LZH				pmax	pmax		
	comp=Z,19nm,1.6s						
STKA	Stephens Creek	38.71	153	P	P	04 42 34.0	-0.3
	comp=Z,2.3nm,0.3s,baz=313,slow=8.1,SNR=11						
STKA				pP	pwP	04 42 45.1	-0.2
	comp=Z,25nm,0.8s,baz=324,slow=8.1,SNR=12						
STKA				LR	LR	04 58 28.9	
	comp=Z,60nm,21.7s,baz=13,slow=36						
	comp=Z,2.3nm,0.3s						
STKA	Stephens Creek	38.71	153	P	P	04 42 35.1	+0.8
JMM	Marumori	39.62	24	P	P	04 42 41.4	-0.4
JMM				IAmb	IAmb	04 42 43.6	
	comp=Z,30nm,1.1s						
HHC	Hu-ho-hao-te	39.63	348	*e*P	P	04 42 45.0	+3.0
HHC				pmax	pmax		
	comp=Z,26nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,5.9s						
CN2	Changchun	41.62	4	*e*P	P	04 42 57.8	-0.5
CN2				pP	pP	04 43 02.2	-1.7
GTA	Gaotai	42.15	334	*e*P	P	04 43 04.5	+1.6
GTA				sP	pwP	04 43 16.4	+1.4
GTA				PcP	PcP	04 44 57.9	+0.8
GTA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
JTM	Tenmabayashi	42.25	22	P	P	04 43 03.9	+0.4
JTM				IAmb	IAmb	04 43 05.9	
	comp=Z,30nm,1.1s						
USRK	Ussuriysk Ar.	42.86	11	P	P	04 43 09.0	+0.6
	comp=Z,3.9nm,0.8s,baz=201,slow=5.4,SNR=7.4						
USRK				pP	pwP	04 43 21.1	+0.8
	comp=Z,4.1nm,0.7s,baz=182,slow=5.7,SNR=5.9						
USRK				LR	LR	04 59 18.9	
	comp=Z,44nm,21.3s,baz=312,slow=34						
	comp=Z,3.9nm,0.8s						
USRK	Ussuriysk Ar.	42.86	11	P	P	04 43 08.8	+0.5
MDJ	Mudanjiang	42.87	8	P	P	04 43 10.0	+1.6
MDJ				pP	pP	04 43 13.1	-1.0
MDJ				sP	sP	04 43 14.1	-2.1
MDJ				pmax	pmax		
	comp=Z,16nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,130nm,5.4s						
MDJ	Mudanjiang	42.87	8	P	P	04 43 09.1	+0.7
MDJ				IAmb	IAmb	04 43 10.8	
	comp=Z,12nm,0.8s						
ARMA	Armidale	43.11	141	P	P	04 43 12.6	+1.8
ARMA				IAmb	IAmb	04 43 25.2	
	comp=Z,21nm,0.8s						
TOO	Toolangi	45.21	153	P	P	04 43 27.6	+0.1
TOO				IAmb	IAmb	04 43 40.8	
	comp=Z,9.3nm,1.0s						
ASAJ	Asahikawa	45.70	21	LR	LR	05 02 48.2	
	comp=Z,53nm,21.6s,baz=356,slow=36						
ULN	Ulaanbaatar	47.30	347	P	P	04 43 44.9	+1.0
SONM	Songino Array	47.43	346	P	P	04 43 44.6	-0.2
	comp=Z,2.4nm,0.8s,baz=165,slow=7.6,SNR=17						
SONM				pP	pwP	04 43 56.8	-0.2
	comp=Z,2.4nm,0.9s,baz=130,slow=4.4,SNR=7.1						
SONM				PcP	PcP	04 45 15.0	-0.1
	comp=Z,2.2nm,0.8s,baz=160,slow=4.0,SNR=6.7						
	comp=Z,2.4nm,0.8s						
SONM	Songino Array	47.43	346	P	P	04 43 46.3	+1.5
KLR	Kul'dur	47.69	9	P	P	04 43 46.5	-0.1
	comp=Z,1.0nm,0.6s,baz=168,slow=21,SNR=5.2						
	comp=Z,1.0nm,0.6s						
HEH	HeiHe	48.18	5	*e*P	P	04 43 51.2	+0.8
HEH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HEH				pmax	pmax		
	comp=Z,120nm,4.6s						
DGAR	Diego Garcia	50.11	259	P	P	04 44 05.3	-0.5
WMQ	Urumqi	51.34	329	*e*P	P	04 44 17.4	+2.7
KSH	Kashi	55.78	318	P	P	04 44 49.6	+2.2
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MK31	Makanchi Array	56.16	328	P	P	04 44 51.1	+1.2
MKAR	Makanchi Array	56.16	328	P	P	04 44 50.6	+0.7
	comp=Z,4.1nm,0.6s,baz=128,slow=8.6,SNR=12						
MKAR				pP	pwP	04 45 02.6	+0.3
	comp=Z,2.3nm,0.5s,baz=123,slow=8.8,SNR=11						
MKAR				PcP	PcP	04 45 47.3	-0.3
	comp=Z,2.2nm,0.7s,baz=135,slow=3.9,SNR=6.3						
MKAR				LR	LR	05 09 28.2	
	comp=Z,25nm,20.8s,baz=92,slow=36						
	comp=Z,4.1nm,0.6s						
MKAR	Makanchi Array	56.16	328	P	P	04 44 51.1	+1.1
MAKZ	Makanchi	56.34	328	P	P	04 44 49.4	-1.7
AAK	Ala-Archa	58.31	320	LR	LR	05 11 15.1	
	comp=Z,32nm,20.5s,baz=122,slow=37						
KBL	Kabul	58.63	310	P	P	04 45 07.5	-0.3
KBL				IAmb	IAmb	04 45 09.4	
	comp=Z,11nm,0.8s						
GAR	Garm	59.44	315	P	P	04 45 12.7	-0.6
GAR				IAmb	IAmb	04 45 14.9	
	comp=Z,21nm,1.3s						
ZAA0	Zalesovo Array	59.87	336	P	P	04 45 14.9	-0.8
ZAA0				IAmb	IAmb	04 45 28.8	
	comp=Z,6.5nm,0.8s						
ZALV	Zalesovo Beam	59.87	336	P	P	04 45 15.9	+0.1
	comp=Z,3.3nm,0.8s,baz=124,slow=7.4,SNR=18						
ZALV				pP	pwP	04 45 28.1	0.0
	comp=Z,6.1nm,0.8s,baz=120,slow=6.8,SNR=9.6						
ZALV				LR	LR	05 10 30.0	
	comp=Z,31nm,21.4s,baz=356,slow=35						
	comp=Z,3.3nm,0.8s						
ZALV	Zalesovo Beam	59.87	336	P	P	04 45 15.3	-0.4
CHGR	Chuyangaron	60.12	314	P	P	04 45 15.6	-2.3
CHGR				IAmb	IAmb	04 45 19.2	
	comp=Z,14nm,0.9s						
KURK	Kurchatov	60.52	330	P	P	04 45 21.1	+0.8
KK31	Karatay Array	61.10	319	P	P	04 45 24.5	+0.1
KKAR	Karatay Array	61.10	319	P	P	04 45 24.6	+0.1
KKAR	Karatay Array	61.10	319	P	P	04 45 24.7	+0.3
KKAR				IAmb	IAmb	04 45 26.1	
	comp=Z,2.9nm,0.7s						
RPZ	Rata Peaks	63.44	142	LR	LR	05 13 06.6	
	comp=Z,74nm,19.0s,baz=278,slow=36						
RTZ	Ruatahuna	64.94	135	P	P	04 45 51.7	+1.7
BRVK	Borovoye	66.10	329	P	P	04 45 56.2	-1.0
BRVK				IAmb	IAmb	04 45 58.9	
	comp=Z,9.2nm,1.2s						
GEYT	Alibeck	68.08	310	P	P	04 46 11.5	+1.4
	comp=Z,5.3nm,0.9s,baz=130,slow=4.6,SNR=7.3						
	comp=Z,5.3nm,0.9s						
TIXI	Tiksi	69.56	2	P	P	04 46 18.3	-0.3
TIXI				IAmb	IAmb	04 46 19.3	
	comp=Z,18nm,1.3s						
ABKAR	Akbulak array	70.30	322	P	P	04 46 23.5	-0.1
ABKAR	Akbulak array	70.30	322	P	P	04 46 23.4	-0.1
ABKAR				IAmb	IAmb	04 46 25.2	
	comp=Z,30nm,1.9s						
ARU	Arti	73.68	329	P	P	04 46 43.7	0.0
ARU				IAmb	IAmb	04 46 44.8	
	comp=Z,15nm,1.0s						
RAYN	Ar Rayn	76.56	294	P	P	04 47 00.6	-0.4
RAYN				IAmb	IAmb	04 47 01.7	
	comp=Z,15nm,0.8s						
BELG	Belogornoye	78.66	323	LR	LR	05 27 19.2	
	comp=Z,29nm,18.0s,baz=167,slow=40						
GNI	Garni	78.71	310	P	P	04 47 12.8	-0.1
GNI				IAmb	IAmb	04 47 38.9	
	comp=Z,8.0nm,0.8s						
AKH	Akhalkalaki	79.80	312	P	P	04 47 20.0	+1.1
GEVA	Gevas	79.82	308	P	P	04 47 19.5	+0.4
GEVA				IAmb	IAmb	04 47 21.0	
	comp=Z,18nm,0.9s						
ONI	Oni	79.96	313	P	P	04 47 20.1	+0.5
ONI				IAmb	IAmb	04 47 42.2	
	comp=Z,8.3nm,1.2s						
KARS	Kars	80.03	311	P	P	04 47 20.0	-0.1
KBZ	Khabaz	80.48	314	P	P	04 47 22.1	-0.1
	comp=Z,4.7nm,0.9s,baz=96,slow=2.8,SNR=13						
	comp=Z,4.7nm,0.9s						
GURO	Guroymak-BITLI	80.64	309	P	P	04 47 24.2	+0.8
GURO				IAmb	IAmb	04 47 25.7	
	comp=Z,18nm,1.1s						
VNDA	Vanda	82.52	172	LR	LR	05 25 09.6	
	comp=Z,52nm,18.5s,baz=322,slow=36						
KLMR	Klimovskoe	84.36	331	*e*P	P	04 47 39.3	-2.8
KLMR				AMP		04 47 42.9	
	comp=Z,32nm,1.4s						
KLMR				*e*		04 47 53.7	
BRTR	Keskin Array B	87.21	309	P	P	04 47 56.8	-0.1
	comp=Z,1.4nm,0.8s,baz=141,slow=6.8,SNR=4.3						
BRTR				pP	pwP	04 48 09.8	-0.1
	comp=Z,3.1nm,0.8s,baz=124,slow=6.1,SNR=6.4						
	comp=Z,1.4nm,0.8s						
MCK	McKinley	87.79	26	P	P	04 47 59.0	-0.1
MCK				IAmb	IAmb	04 47 59.9	
	comp=Z,13nm,1.3s						
ILAR	Eielson Array	88.66	25	P	P	04 48 01.5	-1.6
	comp=Z,0.5nm,0.7s,baz=242,slow=5.0,SNR=10						
	comp=Z,0.5nm,0.7s						
AKASG	Malin Array Be	89.98	321	P	P	04 48 08.1	-1.4
	comp=Z,0.2nm,0.3s,baz=76,slow=3.8,SNR=2.3						
	comp=Z,0.2nm,0.3s						
I26K	Coal Creek Min	90.20	25	P	P	04 48 11.1	+0.7
I26K				IAmb	IAmb	04 48 11.9	
	comp=Z,6.2nm,0.9s						
ARCES	ARCESS Array B	90.21	340	P	P	04 48 11.2	+0.9
	comp=Z,4.1nm,0.9s,baz=68,slow=12,SNR=1.6						
	comp=Z,4.1nm,0.9s						
BUR08	Bucovina Ar. S	92.87	318	P	P	04 48 23.5	+0.3
NOA	NORSAR Array B	97.96	333	LR	LR	05 35 02.8	
	comp=Z,22nm,21.8s,baz=225,slow=37						
DAG	Danmarks Havn	98.13	351	*i* P	P	04 48 45.0	-1.4
TROLL	Troll, Antarti	100.77	196	P	Pdif	04 49 02.6	+4.1
TORD	Torodi Ar. Bea	118.65	286	PKP	PKPdf	04 53 58.0	-1.2
	comp=Z,1.2nm,0.8s,baz=70,slow=0.9,SNR=7.1						
TXAR	Lajitas Array	126.46	51	PKP	PKiKP	04 54 15.0	+0.5
	comp=Z,0.3nm,0.6s,baz=320,slow=2.4,SNR=3.9						
TXAR				pPKP	sPKPdf	04 54 26.0	+3.4
	comp=Z,0.3nm,0.7s,baz=270,slow=1.8,SNR=3.6						
CPUP	Villa Florida	155.93	182	PKPab	PKPab	04 55 31.6	-0.2
	comp=Z,1.0nm,0.8s,baz=177,slow=6.5,SNR=4.6						

DJA ***01*** *04:41:23.6±2.0, 4°N±6°×9°5E±1°7, h10^{km}, M4.1/6, mb4.3/1, mB5.5/1, MLv4.1/6, Mw(mB)5.0/1*

NEIC ***01*** *04:41:25.4±1.0, 4°.9N±0°.1×94°.6E±0°.1, h47^{km}±8^{km}, mb4.5/23, Error ellipse: s-maj=18.3km s-min=13.6km az=225.0*

IDC ***01*** *04:41:33.1±8.4, 4°.90N×94°.73E, h125^{km}±77^{km}, mb3.8/10, mbtmp4.2/11, Error ellipse: s-maj=39.0km s-min=15.4km az=58.0*

ISC 01 04:41:22.9±0.5**, 4°.70N**±0°.07×**94°.47E**±0°.09**, h35**^{km}**, n52,** σ**0^{s}.91**/49**, mb4.4**/22**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLSI	Meulaboh, Aceh	1.98	102	P	Pn	04 41 54.5	+0.6
LHMI	Lhok Sumawe	2.52	78	Pn	Pn	04 42 01.2	-0.2
LHMI	Lhok Sumawe	2.52	78	P	Pn	04 42 04.6	+3.1
SNSI	Sinabang, Aceh	2.94	141	P	Pn	04 42 07.1	0.0
SNSI				S	Sn	04 42 39.8	-1.4
KCSI	Kotacane, Aceh	3.50	109	P	Pn	04 42 16.0	+1.1
GSI	Gunungsitoli	4.58	137	P	Pn	04 42 28.4	-1.4
RPSI	Rantau Prapat	4.87	114		Pn	04 42 36.2	+2.5
PALK	Pallekele	13.93	281	S	Sn	04 47 00.7	-11
	8.2nm,0.6s,baz=119,slow=19,SNR=2.8						
CMAR	Chiang Mai Arr	14.36	17	P	P	04 44 49.1	-1.3
	4.6nm,0.6s,baz=212,slow=12,SNR=25						
CHTO	Chiang Mai	14.69	17	Pn	Pn	04 44 46.6	-1.8
H08S2	Diego Garcia H	25.12	241	T	T	05 12 22.1	
	baz=60,slow=75,SNR=69						
H08S3	Diego Garcia H	25.12	241	T	T	05 12 40.5	
	baz=60,slow=75,SNR=77						
H08S1	Diego Carcia H	25.14	241	T	T	05 12 34.2	
	baz=60,slow=75,SNR=90						
ENH	Enshi	29.12	27	P	P	04 47 21.0	+0.3
ENH				IAmb	IAmb	04 47 24.9	
	comp=Z,14nm,0.9s						
MK31	Makanchi Array	43.24	348	P	P	04 49 21.0	+0.2
MKAR	Makanchi Array	43.24	348	P	P	04 49 20.6	-0.3
	comp=Z,3.8nm,0.7s,baz=169,slow=8.1,SNR=29						
	comp=Z,3.8nm,0.7s						
MKAR	Makanchi Array	43.24	348	P	P	04 49 20.8	-0.1
MAKZ	Makanchi	43.32	347	P	P	04 49 21.1	-0.4
MAKZ				IAmb	IAmb	04 49 22.2	
	comp=Z,3.6nm,0.8s						
KK31	Karatay Array	43.74	335	P	P	04 49 25.0	+0.1
KKAR	Karatay Array	43.74	335	P	P	04 49 24.7	-0.2
KKAR	Karatay Array	43.74	335	P	P	04 49 24.9	0.0
KKAR				IAmb	IAmb	04 49 26.2	
	comp=Z,2.7nm,0.8s						
SONM	Songino Array	44.18	12	P	P	04 49 27.2	-1.3
	comp=Z,0.5nm,0.6s,baz=191,slow=8.0,SNR=4.8						
	comp=Z,0.5nm,0.6s						
WB0	Warramunga Arr	46.17	123	P	P	04 49 44.5	-0.1
WB0				IAmb	IAmb	04 49 45.6	
	comp=Z,9.4nm,1.4s						
WRA	Warramunga Arr	46.21	123	P	P	04 49 45.0	+0.1
	comp=Z,2.4nm,1.0s,baz=302,slow=9.0,SNR=11						
	comp=Z,2.4nm,1.0s						
WRA	Warramunga Arr	46.21	123	P	P	04 49 44.8	-0.1
WB2	Warramunga Arr	46.22	123	P	P	04 49 44.8	-0.2
WB2				IAmb	IAmb	04 49 46.1	
	comp=Z,11nm,1.4s						
WR0	Warramunga Arr	46.38	123	P	P	04 49 46.6	+0.3
WR0				IAmb	IAmb	04 49 48.0	
	comp=Z,8.6nm,1.1s						
GEYT	Alibeck	46.80	320	P	P	04 49 49.5	+0.2
	comp=Z,3.0nm,0.7s,baz=157,slow=9.4,SNR=5.3						
	comp=Z,3.0nm,0.7s						
ASAR	Alice Springs	47.68	128	P	P	04 49 56.1	-0.3
	comp=Z,0.9nm,0.8s,baz=302,slow=8.6,SNR=7.1						
	comp=Z,0.9nm,0.8s						
KURK	Kurchatov	47.75	346	P	P	04 49 56.9	+0.4
KURK				IAmb	IAmb	04 49 58.6	
	comp=Z,2.2nm,0.8s						
ZAA0	Zalesovo Array	49.73	353	P	P	04 50 11.1	-0.5
ZALV	Zalesovo Beam	49.73	353	P	P	04 50 11.3	-0.3
	comp=Z,3.1nm,0.5s,baz=176,slow=7.2,SNR=19						
	comp=Z,3.1nm,0.5s						
RAYN	Ar Rayn	50.73	297	P	P	04 50 20.3	+0.4
RAYN				IAmb	IAmb	04 50 22.6	
	comp=Z,2.4nm,0.7s						
BRVK	Borovoye	52.15	342	P	P	04 50 29.2	-0.6
BRVK				IAmb	IAmb	04 50 44.3	
	comp=Z,3.1nm,0.8s						
ABKAR	Akbulak array	53.17	332	P	P	04 50 37.7	+0.4
ABKAR	Akbulak array	53.17	332	P	P	04 50 37.8	+0.4
ABKAR				IAmb	IAmb	04 50 39.1	
	comp=Z,6.9nm,1.1s						
CTAO	Charters Tower	56.52	118	P	P	04 51 02.7	+0.5
BRTR	Keskin Array B	64.76	312	P	P	04 51 58.4	+0.1
BORA	Eskisehir	67.17	311	P	P	04 52 13.1	-0.6
BORA				IAmb	IAmb	04 52 14.2	
	comp=Z,3.8nm,0.6s						
TAU	Tasmania Unive	67.23	141	P	P	04 52 14.1	+0.3
MLR	Muntele Rosu	71.67	316	P	P	04 52 41.8	+0.3
MLR				IAmb	IAmb	04 52 43.1	
	comp=Z,3.6nm,0.8s						
BURAR	Bucovina Array	72.61	318	P	P	04 52 47.6	+0.5
BUR08	Bucovina Ar. S	72.63	318	P	P	04 52 47.8	+0.7
BUR08				IAmb	IAmb	04 52 48.6	
	comp=Z,5.1nm,1.3s						
BOSA	Boshof	74.20	239	P	P	04 52 58.7	+2.0
	comp=Z,2.2nm,0.8s,baz=122,slow=9.5,SNR=2.2						
	comp=Z,2.2nm,0.8s						
BOSA	Boshof	74.20	239	P	P	04 52 58.3	+1.5
BOSA				IAmb	IAmb	04 53 37.0	
	comp=Z,10nm,1.3s						
FIA1	FINESS Array S	75.66	333	P	P	04 53 04.1	-0.3
FIA0	FINESS Array S	75.66	333	P	P	04 53 04.3	0.0
FINES	FINESS Array B	75.66	333	P	P	04 53 03.8	-0.6
	comp=Z,2.6nm,1.0s,baz=108,slow=6.2,SNR=7.2						
	comp=Z,2.6nm,1.0s						
FINES	FINESS Array B	75.66	333	P	P	04 53 04.0	-0.4
ARCES	ARCESS Array B	78.34	340	P	P	04 53 19.1	-0.3
	comp=Z,5.9nm,1.0s,baz=108,slow=7.7,SNR=3.1						
	comp=Z,5.9nm,1.0s						
GERES	GERESS Array B	80.40	319	P	P	04 53 31.5	+0.4
	comp=Z,0.8nm,0.4s,baz=113,slow=7.6,SNR=7.1						
	comp=Z,0.8nm,0.4s						
CPUP	Villa Florida	145.50	228	PKPbc	PKPdf	05 00 58.6	+0.4
	comp=Z,1.8nm,0.7s,baz=130,slow=2.2,SNR=7.2						

BGR ***01*** *04:43:17.5, 21°.59S×178°.43W, h450^{km}*

NEIC ***01*** *04:43:26.5±2.0, 21°.3S±0°.1×178°.7W±0°.1, h532^{km}±6^{km}, mb4.8/244, Error ellipse: s-maj=18.1km s-min=14.6km az=124.0*

NOU ***01*** *04:43:26.8, 21°.38S×178°.42W, h550^{km}, mb4.8/56, Fiji Islands Region*

MOS ***01*** *04:43:27.8±0.9, 21°.19S×178°.80W, h556^{km}, mb4.7/24, Error ellipse: s-maj=10.5km s-min=9.7km az=159.5*

IDC ***01*** *04:43:27.9±0.9, 21°.28S×178°.78W, h550^{km}±8^{km}, mb4.0/25, mbtmp4.8/28, Error ellipse: s-maj=11.7km s-min=8.3km az=147.0*

ISC 01 04:43:26.1±0.3**, 21°.31S**±0°.05×**178°.61W**±0°.06**, h536**^{km}**, n639,** σ**1^{s}.34**/593**, mb4.8**/159**, 67C-21D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	Tubou, Lakemba	3.06	356	P	P	04 44 43.9	+3.4
TAVE	Taveuni	4.73	345	P	P	04 44 56.3	+3.3
MSVF	Nonsavu	4.75	318	P	P	04 44 55.4	+2.2
	291nm,0.8s,baz=137,slow=15,SNR=165						
MSVF				S	S	04 46 07.2	+3.0
	60nm,1.0s,baz=304,slow=23,SNR=1.5						
MSVF	Nonsavu	4.75	318	P	P	04 44 54.2	+1.0
MSVF	Nonsavu	4.75	318	P	P	04 44 55.6	+2.4
FUTU	Fugatoga	6.97	4	P	P	04 45 16.0	+2.5
RIZ	Raoul Island	7.93	176	S	S	04 46 59.9	+1.7
RAO	Raoul Island	7.94	176	S	S	04 46 57.4	-0.9
	416nm,0.4s,baz=94,slow=22,SNR=4.5						
GLKZ	Green Lake	7.95	176	P	P	04 45 23.1	+0.3
GLKZ				S	S	04 46 54.2	-4.4
NIUE	Niue	8.45	76	P	P	04 45 29.6	+1.5
AFI	Afiamalu	9.82	43	P	P	04 45 41.0	-1.2
	560nm,0.8s,baz=247,slow=13,SNR=52						
AFI				S	S	04 47 27.2	-6.8
	193nm,0.6s,baz=21,slow=23,SNR=5.8						
DZM	Mont Dzumac	13.91	264	P	P	04 46 24.9	+0.2
	9.3nm,0.8s,baz=78,slow=18,SNR=1.5						
OUZ	Omahuta	15.46	205	P	P	04 46 43.0	+2.6
GRZ	Great Barrier	15.77	198	P	P	04 46 42.8	-0.7
WCZ	Waipu Caves	15.83	201	P	P	04 46 45.6	+1.3
KUZ	Kuaotunu	16.16	197	P	P	04 46 48.3	+0.9
MXZ	Matakaoa Point	16.42	189	P	P	04 46 48.0	-1.9
HAZ	Te Kaha	16.69	190	P	P	04 46 52.8	+0.3
HAZ				S	S	04 49 58.8	+18
PKGZ	Pakihiroa	16.77	189	P	P	04 46 52.9	-0.5
PKGZ				S	S	04 49 56.4	+14
RUGZ	Raukumara Rang	16.91	190	P	P	04 46 54.7	0.0
RUGZ				S	S	04 50 04.4	+19
PUZ	Puketiti	16.93	189	P	P	04 46 54.7	0.0
PUZ				S	S	04 50 01.7	+17
OPRZ	Ohinepanea	17.00	193	P	P	04 46 56.8	+1.4
TWGZ	Tauwhareparae	17.07	189	P	P	04 46 56.7	+0.6
TWGZ				S	S	04 50 10.7	+23
KMRZ	Kaimai	17.14	195	P	P	04 46 58.8	+2.1
TOZ	Tahuroa Road	17.14	196	P	P	04 46 58.2	+1.5
MWZ	Matawai	17.30	190	P	P	04 46 56.9	-1.2
MWZ				S	S	04 50 11.0	+20
URZ	Urewera	17.30	191	P	P	04 46 55.0	-3.1
	45nm,0.5s,baz=23,slow=2.0,SNR=37						
URZ				S	S	04 49 44.2	-6.7
	9.0nm,0.9s,baz=99,slow=13,SNR=2.7						
URZ	Urewera	17.30	191	P	P	04 46 57.1	-1.0
URZ	Urewera	17.30	191	P	P	04 46 55.9	-2.2
URZ				S	S	04 50 11.3	+20
NGRZ	Ngongotaha	17.33	194	P	P	04 47 00.5	+2.0
CNGZ	Carnagh Statio	17.34	188	P	P	04 46 59.1	+0.7
CNGZ				S	S	04 50 11.6	+20
TKGZ	Te Karaka	17.35	189	P	P	04 46 59.2	+0.7
TARZ	Mount Tarawera	17.39	193	P	P	04 46 59.7	+0.6
HLRZ	Highlands Stat	17.44	193	P	P	04 46 59.9	+0.4
RAGZ	Rawiri	17.47	190	P	P	04 46 58.6	-1.2
RAGZ				S	S	04 50 14.3	+20
RAR	Rarotonga	17.56	93	P	P	04 47 02.8	+2.1
	6.2nm,0.4s,baz=173,slow=16,SNR=2.3						
HRRZ	Handcock Road	17.59	193	P	P	04 47 01.1	+0.3
RIGZ	Rimuhau	17.62	189	P	P	04 47 00.8	-0.4
RIGZ				S	S	04 50 16.4	+20
RTZ	Ruatahuna	17.67	191		P	04 46 59.8	-1.8
TLZ	Tolley Road	17.70	195	P	P	04 47 03.9	+2.0
RAHZ	Arahi	17.94	191	P	P	04 47 03.4	-0.6
RAHZ				S	S	04 50 24.5	+23
KNZ	Kokohu	17.95	189	P	P	04 47 03.4	-0.6
KNZ				S	S	04 50 21.2	+20
HIZ	Hauiti	18.05	197	P	P	04 47 06.3	+1.3
HIZ	Hauiti	18.05	197	P	P	04 47 07.1	+2.1
RATZ	Rangitukua	18.16	194	P	P	04 47 05.6	-0.5
NMHZ	Naumai	18.16	192	P	P	04 47 05.2	-0.9
NMHZ				S	S	04 50 29.5	+24
RITZ	Rihia Road	18.24	194	P	P	04 47 05.1	-1.7
KATZ	Kakaramea	18.28	194	P	P	04 47 07.7	+0.4
BKZ	Black Stump Fm	18.29	192	P	P	04 47 05.8	-1.5
BKZ	Black Stump Fm	18.29	192	P	P	04 47 05.0	-2.2
NTVZ	North Tongarir	18.40	194	P	P	04 47 08.0	-0.3
TMVZ	Te Maari	18.41	194	P	P	04 47 07.9	-0.5
ETVZ	East Tongariro	18.43	194	P	P	04 47 08.0	-0.6
TWVZ	Taurewa	18.43	195	P	P	04 47 08.3	-0.3
WTVZ	West Tongariro	18.44	194	P	P	04 47 08.8	+0.1
NNVZ	North Ngauruho	18.45	194	P	P	04 47 08.9	+0.1
OTVZ	Oturere	18.46	194	P	P	04 47 08.5	-0.4
OTVZ				S	S	04 50 44.1	+34
NGZ	Ngauruhoe	18.49	194	P	P	04 47 09.5	+0.3
SNVZ	South Ngauruho	18.49	194	P	P	04 47 08.7	-0.5
MCHZ	McNeill Hill	18.52	192	P	P	04 47 08.1	-1.2
KWHZ	Kaweka Forest	18.55	192	P	P	04 47 08.1	-1.6
TUVZ	Tukino	18.57	194	P	P	04 47 09.4	-0.5
FWVZ	Far West T-bar	18.58	194	P	P	04 47 09.2	-0.8
TRVZ	Turoa	18.62	194	P	P	04 47 09.4	-1.1
WNVZ	Wahianoa	18.64	194	P	P	04 47 09.8	-0.8
VRZ	Vera Road	18.65	196	P	P	04 47 13.0	+2.5
PKVZ	Pokaka	18.66	195	P	P	04 47 10.2	-0.5
MOVZ	Moawhango	18.68	194	P	P	04 47 10.4	-0.4
BHHZ	Black Hill Sta	18.69	193	P	P	04 47 08.3	-2.6
BHHZ				S	S	04 50 40.6	+27
KAHZ	Kahuranaki	18.83	191	P	P	04 47 11.8	-0.4
NEZ	North Egmont	18.97	198	P	P	04 47 16.9	+3.4
KHEZ	Kahui Hut	19.01	198	P	P	04 47 13.1	-0.8
KHEZ	Kahui Hut	19.01	198	P	P	04 47 17.8	+3.9
PNHZ	Pukenui	19.07	192	P	P	04 47 13.3	-1.0
WPHZ	Waipukurau	19.17	192	P	P	04 47 14.6	-0.6
TSZ	Takapari Road	19.26	193	P	P	04 47 15.4	-0.6
PRHZ	Porangahau	19.33	191	P	P	04 47 16.1	-0.6
DVHZ	Dannevirke	19.45	192	P	P	04 47 16.8	-1.0
ANWZ	Angora Road	19.55	191	P	P	04 47 19.1	+0.5
BFZ	Birch Farm	19.80	192	P	P	04 47 20.6	-0.4
BFZ	Birch Farm	19.80	192	P	P	04 47 20.1	-0.9
BFZ	Birch Farm	19.80	192	P	P	04 47 19.4	-1.6
HOWZ	Holdsworth Sta	20.16	193	P	P	04 47 24.0	-0.1

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TCW    Tory Channel      20.74 195  P       P       04 47 30.0 +0.6
QRZ    Quartz Range      20.86 199  P       P       04 47 30.8 +0.2
QRZ    Quartz Range      20.86 199  P       P       04 47 30.8 +0.2
NNZ    Nelson            20.98 197  P       P       04 47 31.0 -0.5
BSWZ   Blackbirch Sta    21.32 196  P       P       04 47 34.3 -0.3
RPZ    Rata Peaks        23.95 199  P       P       04 47 58.3 +0.2
       18nm,0.5s,baz=20,slow=5.5,SNR=20
       18nm,0.5s
JCZ    Jackson Bay       25.00 202  P       P       04 48 07.7 +0.1
ODZ    Otahua Downs      25.28 198  P       P       04 48 09.8 -0.1
MLZ    Mavora Lakes      26.36 201          P       04 48 19.5  0.0
AUWSH  Wavell State H    26.50 251  P       P       04 48 22.1 +1.2
CNB    Canberra Magne    31.31 237  P       P       04 49 03.9 +1.2
CAN    Canberra          31.59 237  P       P       04 49 05.6 +0.5
CAN                                 IAmb    IAmb    04 49 06.6
       comp=Z,25nm,1.0s
CAN    Canberra          31.59 237  P       P       04 49 06.7 +1.6
CAN    Canberra          31.59 237  P       P       04 49 05.6 +0.5
CAN                                 pmax    pmax
       comp=Z,25nm,1.0s
CAN    Canberra          31.59 237  P       P       04 49 05.6 +0.5
CTA    Charters Tower    32.85 266  P       P       04 49 16.1 +0.1
       comp=Z,10nm,0.7s,baz=90,slow=10,SNR=10
       comp=Z,10nm,0.7s
CTAO   Charters Tower    32.85 266  P       P       04 49 15.3 -0.6
CTAO   Charters Tower    32.85 266  P       P       04 49 15.4 -0.6
CTAO                                pmax    pmax
       comp=Z,15nm,1.0s
CTAO   Charters Tower    32.85 266  P       P       04 49 16.3 +0.4
CMSA   Cobar Meteorol    33.42 245  P       P       04 49 21.3 +0.7
TOO    Toolangi          34.96 234  P       P       04 49 33.4 -0.1
TOO                                 IAmb    IAmb    04 49 34.8
       comp=Z,12nm,0.8s
TOO    Toolangi          34.96 234  P       P       04 49 34.2 +0.7
       comp=Z,16nm,0.9s
TOO    Toolangi          34.96 234  P       P       04 49 33.4 -0.1
TOO                                 pmax    pmax
       comp=Z,12nm,0.8s
PMG    Port Moresby      34.98 284  P       P       04 49 33.6 -0.3
       comp=Z,74nm,0.9s,baz=93,slow=5.8,SNR=16
       comp=Z,74nm,0.9s
PMG    Port Moresby      34.98 284  P       P       04 49 34.2 +0.3
PMG    Port Moresby      34.98 284  P       P       04 49 34.4 +0.6
PMG    Port Moresby      34.98 284  P       P       04 49 34.2 +0.3
PMG                                 pmax    pmax
       comp=Z,65nm,0.8s
PMG    Port Moresby      34.98 284  P       P       04 49 34.1 +0.2
MTSU   Mount Surprise    34.99 269  P       P       04 49 34.8 +0.8
       comp=Z,11nm,0.8s
BRAT   Ballarat          36.15 235  P       P       04 49 44.6 +1.4
       comp=Z,12nm,0.9s
STKA   Stephens Creek    36.93 245  P       P       04 49 50.1 +0.3
       comp=Z,8.9nm,0.9s,baz=94,slow=9.3,SNR=13
STKA                                ScP     ScP     04 54 53.6 +0.6
       comp=Z,2.0nm,0.4s,baz=50,slow=10,SNR=5.5
       comp=Z,8.9nm,0.9s
STKA   Stephens Creek    36.93 245  P       P       04 49 50.6 +0.8
STKA   Stephens Creek    36.93 245  P       P       04 49 50.6 +0.8
       comp=Z,3.0nm,0.9s
STKA   Stephens Creek    36.93 245 eP       P       04 49 50.4 +0.6
STKA                                pmax    pmax
       comp=Z,7.0nm,0.7s
COEN   Coen              37.07 275  P       P       04 49 52.1 +0.9
COEN                                IAmb    IAmb    04 49 52.5
       comp=Z,27nm,0.8s
COEN   Coen              37.07 275  P       P       04 49 52.2 +1.0
       comp=Z,40nm,1.0s
HTT    Hallett           39.35 243  P       P       04 50 10.0 +0.5
       comp=Z,19nm,1.0s
BBOO   Buckleboo         41.68 244  P       P       04 50 27.4 -0.6
WAKE   Wake Island       42.84 339  P       P       04 50 37.1 -0.1
WAKE   Wake Island       42.84 339  P       P       04 50 37.5 +0.3
AS01   Alice Springs     43.74 258  P       P       04 50 44.0 -0.4
       comp=Z,18nm,0.7s
AS31   Alice Springs     43.78 258  P       P       04 50 44.6 -0.1
ASAR   Alice Springs     43.78 258  P       P       04 50 44.3 -0.4
       comp=Z,10nm,0.7s,baz=100,slow=7.9,SNR=89
ASAR                                PcP     pP      04 52 19.6 -1.0
       comp=Z,5.2nm,0.7s,baz=105,slow=3.8,SNR=18
ASAR                                ScP     ScP     04 55 21.3 +1.0
       comp=Z,2.4nm,0.8s,baz=100,slow=4.3,SNR=8.4
ASAR                                S       S       04 56 32.9 -3.7
       comp=Z,7.5nm,0.9s,baz=94,slow=16,SNR=32
       comp=Z,10nm,0.7s
WB0    Warramunga Arr    43.91 263  P       P       04 50 45.0 -0.7
WRAB   Tennant Creek     43.92 263  P       P       04 50 47.4 +1.6
WRAB   Tennant Creek     43.92 263 iP       P       04 50 44.3 -1.5
WRAB   Tennant Creek     43.92 263  P       P       04 50 44.7 -1.1
WRA    Warramunga Arr    43.93 263  P       P       04 50 44.9 -1.0
       comp=Z,5.0nm,0.8s,baz=100,slow=8.7,SNR=31
WRA                                 PcP     PcP     04 52 20.1  0.0
       comp=Z,0.8nm,1.0s,baz=93,slow=3.7,SNR=5.1
WRA                                 S       S       04 56 35.1 -3.6
       comp=Z,4.4nm,1.0s,baz=98,slow=14,SNR=7.8
       comp=Z,5.0nm,0.8s
WRA    Warramunga Arr    43.93 263  P       P       04 50 44.7 -1.1
GENI   Genyem            44.20 289  P       P       04 50 47.5 -0.5
HMH    Humu‘ula Sheep    46.53  31  P       P       04 51 07.0 +1.0
KDU    Kakadu            47.40 272  P       P       04 51 13.1 +0.7
       comp=Z,20nm,1.2s
FORT   Forrest           48.45 247  P       P       04 51 19.5 -0.6
WRKA   Warakurna         48.70 255  P       P       04 51 21.7 -0.3
       comp=Z,19nm,0.8s
KNRA   Kununurra         50.04 267  P       P       04 51 31.3 -0.6
KNRA                                IAmb    IAmb    04 51 32.2
       comp=Z,15nm,0.7s
KNRA   Kununurra         50.04 267  P       P       04 51 32.6 +0.7
FITZ   Fitzroy Crossi    52.36 263  P       P       04 51 48.4 -0.3
FITZ   Fitzroy Crossi    52.36 263  P       P       04 51 49.8 +1.1
DRV    Dumont d’Urvil    52.41 199  P       P       04 51 48.4 +0.2
DRV                                 pP      pwP     04 53 31.9 -1.1
SOEI   Soe               55.96 273  P       P       04 52 15.1 +0.8
SOEI                                IAmb    IAmb    04 52 25.1
       comp=Z,42nm,0.8s
SOEI   Soe               55.96 273  P       P       04 52 16.1 +1.8
PSA00  Pilbara Seismi    56.93 258  P       P       04 52 20.2 -0.5
PSA00  Pilbara Seismi    56.93 258  P       P       04 52 20.5 -0.3
VNDA   Vanda             57.06 185  P       P       04 52 22.5 +1.9
       comp=Z,5.3nm,0.7s,baz=358,slow=7.1,SNR=15
       comp=Z,5.3nm,0.7s
VNDA   Vanda             57.06 185  P       P       04 52 22.8 +2.1
VNDA                                IAmb    IAmb    04 53 50.7
       comp=Z,82nm,1.9s
VNDA   Vanda             57.06 185  P       P       04 52 22.8 +2.1
VNDA                                pmax    pmax
       comp=Z,82nm,1.9s
VNDA   Vanda             57.06 185  P       P       04 52 22.6 +1.9
SANI   Sanana            57.18 282  P       P       04 52 22.2 -0.3
       comp=Z,23nm,0.8s
CCD    Concordia, Ant    61.55 194  P       P       04 52 52.0 +0.8
CCD                                 pP      pwP     04 54 40.9 +1.0
KAPI   Kappang           61.79 276 iP       P       04 52 53.7 +0.4
PLAI   Plampang          62.31 271  P       P       04 52 56.6 -0.1
       comp=Z,46nm,1.0s
TOLI2  Tolitoli          63.22 283  P       P       04 53 02.4 -0.2
TOLI2  Tolitoli          63.22 283  P       P       04 53 03.7 +1.2
JAGI   Jajag, Banyuwa    65.81 270  P       P       04 53 17.0 -1.9
JAGI                                IAmb    IAmb    04 53 18.6
       comp=Z,18nm,0.9s
JAGI   Jajag, Banyuwa    65.81 270  P       P       04 53 18.4 -0.6
       comp=Z,25nm,1.1s
QSPA   South Pole Qui    68.77 180  P       P       04 53 36.6 +0.2
QSPA                                IAmb    IAmb    04 53 38.6
       comp=Z,27nm,0.8s
QSPA   South Pole Qui    68.77 180  P       P       04 53 37.6 +1.3
QSPA                                pP      pP      04 55 29.6 +3.5
MJA0   Matsu Arr-Jizo    70.50 324 eP       P       04 53 47.0  0.0
MJA0                                pmax    pmax
       comp=Z,7.0nm,0.8s
MJAR   Matsushiro Arr    70.52 324  P       P       04 53 46.6 -0.5
       comp=Z,6.6nm,0.8s,baz=155,slow=6.5,SNR=13
       comp=Z,6.6nm,0.8s
JSD    Sado              71.60 325  P       P       04 53 52.3 -1.0
JSD                                 IAmb    IAmb    04 53 54.8
       comp=Z,24nm,1.1s
JSD    Sado              71.60 325  P       P       04 53 55.3 +2.0
       comp=Z,25nm,1.2s
JHS    Saijyo            72.34 320  P       P       04 53 57.4 -0.4
JHS                                 IAmb    IAmb    04 53 59.4
       comp=Z,42nm,1.2s
JHS    Saijyo            72.34 320  P       P       04 53 58.5 +0.7
JNU    Nakatsue          72.47 317  P       P       04 53 58.5 -0.1
       comp=Z,9.6nm,0.9s,baz=130,slow=8.8,SNR=4.3
       comp=Z,9.6nm,0.9s
JNU    Nakatsue          72.47 317  P       P       04 53 58.1 -0.5
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JNU    Nakatsue          72.47 317  P       P       04 53 59.4 +0.8
TPUB   Ta-pu             73.94 303  P       P       04 54 06.2 -1.0
TPUB   Ta-pu             73.94 303  P       P       04 54 07.4 +0.3
NIKH   Nikolski High     74.45   6  P       P       04 54 08.9 -0.3
NIKH   Nikolski High     74.45   6  P       P       04 54 09.1 -0.2
YSS    Yuzh-Sakhalins    76.36 334 eP       P       04 54 21.4 +1.3
YSS                                 pmax    pmax
       comp=Z,20nm,1.1s
PEA0B  Petropavlovsk-    76.90 346ceP       P       04 54 22.6 -0.3
PETK   Petropavlovsk-    76.90 346  P       P       04 54 23.1 +0.1
       comp=Z,13nm,0.7s,baz=143,slow=5.0,SNR=20
       comp=Z,13nm,0.7s
KSRS   Korea Array       77.11 319  P       P       04 54 25.1 +0.7
       comp=Z,1.6nm,0.6s,baz=142,slow=6.1,SNR=8.0
       comp=Z,1.6nm,0.6s
KSRS   Korea Array       77.11 319 eP       P       04 54 25.5 +1.1
KSRS                                pmax    pmax
       comp=Z,2.0nm,0.6s
KSAR   Wonju Array Be    77.13 319  P       P       04 54 24.2 -0.3
KSAR   Wonju Array Be    77.13 319  P       P       04 54 24.2 -0.3
BCW    Bitter Crk WRg    79.26  46  P       P       04 54 36.5 +0.3
BCW                                 IAmb    IAmb    04 54 40.2
       comp=Z,33nm,1.2s
USA0B  Ussuriysk Arra    79.31 326  P       P       04 54 35.7 -0.4
USA0B  Ussuriysk Arra    79.31 326  P       P       04 54 35.7 -0.4
USA0B                               pmax    pmax
       comp=Z,25nm,1.1s
USRK   Ussuriysk Ar.     79.31 326  P       P       04 54 37.0 +1.0
       comp=Z,15nm,1.0s,baz=131,slow=4.2,SNR=14
       comp=Z,15nm,1.0s
USRK   Ussuriysk Ar.     79.31 326  P       P       04 54 35.7 -0.4
HOPS   Hopland Field     79.35  41  P       P       04 54 38.0 +1.6
HOPS                                IAmb    IAmb    04 54 40.3
       comp=Z,45nm,1.2s
GDXM   Geysers           79.40  41  P       P       04 54 37.1 +0.3
KMPM   Mount Pierce      79.62  39  P       P       04 54 39.5 +1.6
KMPM                                IAmb    IAmb    04 54 41.3
       comp=Z,67nm,1.0s
KMRM   Mail Ridge        79.74  40  P       P       04 54 40.6 +2.1
VTX    Valle De La Tr    79.81  51  P       P       04 54 40.4 +1.3
TKX    Tecate            79.86  49  P       P       04 54 39.8 +0.5
ELS    Elsinore Mount    79.88  48  P       P       04 54 41.1 +1.6
ESJX   Sierra Juarez     80.02  50  P       P       04 54 42.0 +1.6
KHMM   Horse Mountain    80.14  39  P       P       04 54 42.4 +1.7
KHMM                                IAmb    IAmb    04 54 44.0
       comp=Z,70nm,1.5s
YUH    Yuha Desert       80.39  49  P       P       04 54 43.8 +1.8
YUH                                 IAmb    IAmb    04 54 44.9
       comp=Z,35nm,1.6s
CMB    Columbia Colle    80.44  43  P       P       04 54 42.6 +0.4
CMB    Columbia Colle    80.44  43  P       P       04 54 42.6 +0.4
CMB                                 pmax    pmax
       comp=Z,30nm,1.5s
PFO    Pinyon Flats O    80.53  48  P       P       04 54 44.6 +1.7
       comp=Z,4.3nm,0.8s,baz=266,slow=4.6,SNR=5.4
       comp=Z,4.3nm,0.8s
PFO    Pinyon Flats O    80.53  48  P       P       04 54 44.0 +1.1
PFO    Pinyon Flats O    80.53  48  P       P       04 54 44.0 +1.1
PFO                                 pmax    pmax
       comp=Z,9.0nm,1.1s
PMD    Palm Desert       80.61  48  P       P       04 54 42.1 -1.1
ORV    Oroville          80.66  41  P       P       04 54 43.5 +0.2
ORV    Oroville          80.66  41  P       P       04 54 43.5 +0.2
ORV                                 pmax    pmax
       comp=Z,17nm,1.1s
L02F   Cave Junction     81.02  38  P       P       04 54 45.6 +0.5
L02F                                IAmb    IAmb    04 54 48.4
       comp=Z,40nm,1.3s
MDPB   Devils Postpil    81.04  44  P       P       04 54 46.0 +0.4
MDPB                                IAmb    IAmb    04 54 48.2
       comp=Z,19nm,0.9s
OMMB   Old Mammoth Mi    81.08  44  P       P       04 54 45.8 -0.1
GSC    Goldstone, Bar    81.22  47  P       P       04 54 45.1 -1.3
GSC    Goldstone, Bar    81.22  47  P       P       04 54 45.1 -1.3
GSC                                 pmax    pmax
       comp=Z,16nm,1.1s
YBH    Yreka Blue Hor    81.27  39  P       P       04 54 46.0 -0.5
YBH                                 IAmb    IAmb    04 54 49.6
       comp=Z,28nm,0.8s
YBH    Yreka Blue Hor    81.27  39  P       P       04 54 46.0 -0.5
YBH                                 pmax    pmax
       comp=Z,28nm,0.8s
K02D   Willamette Mer    81.33  38  P       P       04 54 46.8 +0.1
MPK    Martis Peak       81.41  42  P       P       04 54 46.1 -1.4
QSM    Queen of Sheba    81.55  46  P       P       04 54 48.2 +0.3
PIX    Pinacate          81.58  52  P       P       04 54 48.7 +0.5
HUMO   Hull Mountain     81.68  38  P       P       04 54 49.0 +0.6
HUMO                                IAmb    IAmb    04 54 51.9
       comp=Z,53nm,1.2s
YERR   Yerington         81.72  43  P       P       04 54 48.3 -0.7
YERR                                IAmb    IAmb    04 54 51.4
       comp=Z,25nm,0.6s
LHV    Little Huntoon    81.77  44  P       P       04 54 49.4 +0.4
LHV                                 IAmb    IAmb    04 54 52.0
       comp=Z,22nm,0.8s
GRAC   Grapevine Rang    81.80  45  P       P       04 54 50.0 +0.8
GRAC                                IAmb    IAmb    04 54 52.1
       comp=Z,46nm,1.3s
GWY    Greenwater Val    81.81  46  P       P       04 54 49.4  0.0
L04D   Klamath Falls     81.81  39  P       P       04 54 49.3  0.0
DBO    Dodson Butte      81.83  37  P       P       04 54 48.9 -0.4
DBO                                 IAmb    IAmb    04 54 52.4
       comp=Z,19nm,1.0s
BLYC   Blythe            81.97  49  P       P       04 54 50.0 -0.1
BLYC                                IAmb    IAmb    04 54 53.1
       comp=Z,17nm,0.8s
113A   Mohawk Valley,    81.99  50  P       P       04 54 51.0 +0.8
NVAR   Mina Array Bea    82.00  44  P       P       04 54 51.9 +1.5
       comp=Z,15nm,0.7s,baz=224,slow=8.3,SNR=119
       comp=Z,15nm,0.7s
NVAR   Mina Array Bea    82.00  44  P       P       04 54 51.6 +1.2
PAHR   Pah Rah Range     82.06  42  P       P       04 54 52.1 +1.4
PAHR                                IAmb    IAmb    04 54 53.1
       comp=Z,25nm,1.0s
NV11   Mina Array Sit    82.10  44  P       P       04 54 53.6 +2.7
NV11                                IAmb    IAmb    04 54 54.6
       comp=Z,17nm,0.8s
I03D   Drain, OR         82.14  37  P       P       04 54 52.2 +1.5
WCT    Wildcat Mounta    82.17  46  P       P       04 54 52.4 +1.2
214A   Organ Pipe Nat    82.26  51  P       P       04 54 53.6 +1.9
KVN    Kaiserville       82.49  43  P       P       04 54 53.9 +1.0
KVN                                 IAmb    IAmb    04 54 55.1
       comp=Z,20nm,0.8s
KVN    Kaiserville       82.49  43  P       P       04 54 53.9 +1.0
KVN                                 pmax    pmax
       comp=Z,20nm,0.8s
TPH    Tonopah           82.50  44  P       P       04 54 54.5 +1.6
TPH    Tonopah           82.50  44  P       P       04 54 54.6 +1.6
TPH                                 pmax    pmax
       comp=Z,107nm,0.8s
TPNV   Topopah Spring    82.51  46  P       P       04 54 54.7 +1.7
TPNV                                IAmb    IAmb    04 54 55.6
       comp=Z,22nm,0.8s
TPNV   Topopah Spring    82.51  46  P       P       04 54 54.7 +1.7
TPNV                                pmax    pmax
       comp=Z,22nm,0.9s
CN2    Changchun         82.59 323 eP       P       04 54 52.8 -0.2
CN2                                 pmax    pmax
       comp=Z,20nm,1.5s
BUCK   Buck Mountain     82.66  37  P       P       04 54 55.5 +2.0
P18K   Big Mountain,     82.67  12  P       P       04 54 53.8 +0.7
P18K                                IAmb    IAmb    04 54 53.9
       comp=Z,34nm,0.8s
IPM    Ipoh              82.67 278  P       P       04 54 54.4 +0.2
IPM                                 IAmb    IAmb    04 54 55.4
       comp=Z,22nm,0.8s
IPM    Ipoh              82.67 278  P       P       04 54 55.1 +0.9
       comp=Z,35nm,0.9s
I04A   Tendick Farm,     82.73  37  P       P       04 54 54.4 +0.6
V12A   Nelson            82.79  47  P       P       04 54 55.1 +0.8
MOD    Modoc Plateau     82.80  40  P       P       04 54 56.0 +1.6
MOD                                 IAmb    IAmb    04 54 56.9
       comp=Z,19nm,0.8s
KLR    Kul'dur           82.93 330  P       P       04 54 55.0 +0.4
       comp=Z,5.2nm,0.9s,baz=86,slow=6.0,SNR=17
       comp=Z,5.2nm,0.9s
KLR    Kul'dur           82.93 330ceP       P       04 54 55.4 +0.8
KLR                                 pmax    pmax
       comp=Z,8.0nm,1.0s
K05A   Summer Lake       82.95  39  P       P       04 54 57.2 +2.1
K05A                                IAmb    IAmb    04 54 58.1
       comp=Z,49nm,0.9s
S11A   Rachel            83.23  45  IAmb    IAmb    04 54 59.0
       comp=Z,18nm,1.0s
H04A   Detroit Lake      83.41  37  IAmb    IAmb    04 54 59.3
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       comp=Z,32nm,0.7s
PRN    Pahroc Range      83.56  46  IAmb    IAmb    04 55 01.2
       comp=Z,21nm,1.0s
I05D   Terrebonne, OR    83.67  37  IAmb    IAmb    04 55 01.2
       comp=Z,35nm,0.8s
TUC    Tucson            83.92  52  P       P       04 55 00.9 +0.8
TUC                                 IAmb    IAmb    04 55 03.5
       comp=Z,16nm,0.9s
TUC    Tucson            83.92  52  P       P       04 55 00.9 +0.8
TUC                                 pmax    pmax
       comp=Z,16nm,1.0s
RPSI   Rantau Prapat     83.96 275  P       P       04 54 59.5 -1.1
PSI    Prapat            84.00 275  P       P       04 55 00.2 -0.7
PSI    Prapat            84.00 275  P       P       04 54 59.5 -1.4
PSI                                 pmax    pmax
       comp=Z,11nm,0.9s
F04A   Amboy             84.06  36  IAmb    IAmb    04 55 02.3
       comp=Z,20nm,0.6s
N19K   Bonanza Creek     84.13  12  IAmb    IAmb    04 55 01.0
       comp=Z,20nm,0.8s
MA2    Magadan           84.41 345  P       P       04 55 01.3 -0.4
       comp=Z,6.3nm,0.6s,baz=141,slow=9.2,SNR=4.7
       comp=Z,6.3nm,0.6s
MA2    Magadan           84.41 345ceP       P       04 55 00.9 -0.8
MA2                                 pmax    pmax
       comp=Z,38nm,2.0s
I07A   Izee              84.57  38  IAmb    IAmb    04 55 05.8
       comp=Z,19nm,1.0s
319A   Douglas           84.58  53  IAmb    IAmb    04 55 06.8
       comp=Z,37nm,1.0s
Q12A   Willow Creek R    84.59  45  IAmb    IAmb    04 55 07.2
       comp=Z,16nm,1.0s
J08A   Circle Bar Ran    84.75  39  IAmb    IAmb    04 55 06.5
       comp=Z,38nm,1.4s
U15A   North Rim         84.92  48  IAmb    IAmb    04 55 08.0
       comp=Z,24nm,0.7s
M19K   Big River Lodg    85.16  11  IAmb    IAmb    04 55 06.2
       comp=Z,17nm,0.7s
L19K   White Mountain    85.33  11  IAmb    IAmb    04 55 07.8
       comp=Z,43nm,1.1s
M20K   Styx River        85.37  12  IAmb    IAmb    04 55 11.9
       comp=Z,17nm,1.1s
F07A   Phinny Hill Vi    85.41  37  IAmb    IAmb    04 55 09.5
       comp=Z,14nm,0.8s
PKCU   Pink Cliffs       85.43  47  IAmb    IAmb    04 55 11.0
       comp=Z,26nm,0.9s
G08A   Pilot Rock        85.60  38  IAmb    IAmb    04 55 10.5
       comp=Z,23nm,0.9s
HEH    HeiHe             85.69 329 eP       P       04 55 08.7 +0.6
HEH                                 pmax    pmax
       comp=Z,18nm,0.6s
HEH                                 pmax    pmax
       comp=Z,170nm,4.7s
MTPU   Mount Pierson     85.83  47  IAmb    IAmb    04 55 12.8
       comp=Z,11nm,0.8s
LTY    Liberty           85.83  35  IAmb    IAmb    04 55 11.2
       comp=Z,14nm,0.8s
TTA    Tatalina          85.83  10  P       P       04 55 09.1 +0.5
TTA                                 IAmb    IAmb    04 55 10.3
       comp=Z,31nm,1.3s
TTA    Tatalina          85.83  10  P       P       04 55 09.5 +0.9
       comp=Z,20nm,1.2s
TTA    Tatalina          85.83  10  P       P       04 55 09.1 +0.5
TTA                                 pmax    pmax
       comp=Z,31nm,1.3s
PMR    Palmer            85.93  14  IAmb    IAmb    04 55 10.0
       comp=Z,36nm,1.2s
PMR    Palmer            85.93  14  P       P       04 55 08.9 -0.1
HAWA   Hanford           85.93  37  IAmb    IAmb    04 55 12.1
       comp=Z,30nm,0.9s
ENH    Enshi             86.02 304  IAmb    IAmb    04 55 12.0
       comp=Z,19nm,0.7s
ENH    Enshi             86.02 304  P       P       04 55 09.8 -0.4
MVU    Marysvale         86.05  46  IAmb    IAmb    04 55 14.1
       comp=Z,23nm,0.9s
W18A   Petrified Fore    86.06  50  IAmb    IAmb    04 55 13.1
       comp=Z,27nm,1.1s
ZAIG   Zacatecas         86.07  64  IAmb    IAmb    04 55 14.1
       comp=Z,11nm,0.9s
121A   Cookes Peak, D    86.25  53  IAmb    IAmb    04 55 14.8
       comp=Z,23nm,1.4s
E08A   Dider Farm, El    86.25  37  IAmb    IAmb    04 55 13.4
       comp=Z,19nm,0.7s
BMO    Blue Mountains    86.30  39  IAmb    IAmb    04 55 13.5
       comp=Z,12nm,0.8s
MFID   Camas Ranch       86.36  40  IAmb    IAmb    04 55 14.1
       comp=Z,12nm,0.9s
K20K   Telida            86.56  11  IAmb    IAmb    04 55 13.2
       comp=Z,26nm,1.0s
KLU    Klutina           86.58  15  IAmb    IAmb    04 55 13.7
       comp=Z,23nm,0.9s
HMU    Henry Mountain    86.75  47  IAmb    IAmb    04 55 16.2
       comp=Z,28nm,1.8s
E09A   Wood Farm, Sta    86.78  37  IAmb    IAmb    04 55 15.6
       comp=Z,37nm,1.2s
TNA    Tin City          86.98   4  IAmb    IAmb    04 55 15.2
       comp=Z,9.7nm,0.8s
VRDI   Verde Repeater    86.98  16  IAmb    IAmb    04 55 15.2
       comp=Z,20nm,0.9s
SEY    Seymchan          87.03 347  P       P       04 55 14.0 -0.2
       comp=Z,18nm,0.9s,baz=145,slow=6.1,SNR=34
       comp=Z,18nm,0.9s
SEY    Seymchan          87.03 347ceP       P       04 55 13.9 -0.2
SEY                                 pmax    pmax
       comp=Z,33nm,1.2s
GLB    Gilahina Butte    87.07  16  P       P       04 55 14.7 +0.2
GLB                                 IAmb    IAmb    04 55 15.8
       comp=Z,22nm,0.8s
PLID   Pearl Lake        87.19  39  IAmb    IAmb    04 55 17.8
       comp=Z,42nm,1.4s
LLLB   Lillooet          87.28  32  IAmb    IAmb    04 55 17.9
       comp=Z,26nm,1.1s
HLID   Hailey            87.31  41  IAmb    IAmb    04 55 18.9
       comp=Z,15nm,0.9s
TLIG   Tlapa             87.39  70  IAmb    IAmb    04 55 20.2
       comp=Z,14nm,1.1s
C09A   Chrisman Ranch    87.46  36  IAmb    IAmb    04 55 18.7
       comp=Z,24nm,0.8s
SRU    San Rafael Swe    87.49  46  IAmb    IAmb    04 55 19.5
       comp=Z,14nm,0.7s
TCUT   Toone Canyon      87.92  44  IAmb    IAmb    04 55 21.7
       comp=Z,19nm,0.9s
P18A   Preston Nutter    87.93  46  IAmb    IAmb    04 55 21.8
       comp=Z,14nm,1.3s
TX32   Lajitas Array     87.97  58  IAmb    IAmb    04 55 22.6
       comp=Z,19nm,1.0s
TXAR   Lajitas Array     87.97  58  P       P       04 55 21.5 +2.0
       comp=Z,11nm,0.9s,baz=217,slow=5.9,SNR=72
TXAR                                PKKPbc  PKKPbc  05 13 02.0 -0.3
       comp=Z,0.3nm,0.6s,baz=64,slow=2.9,SNR=4.2
       comp=Z,11nm,0.9s
PAX    Paxson            87.97  14  IAmb    IAmb    04 55 19.6
       comp=Z,12nm,0.9s
BSUT   Blindstream Ca    88.05  45  IAmb    IAmb    04 55 22.5
       comp=Z,18nm,1.1s
ZEA    Zeya              88.06 331 eP       P       04 55 19.7 +0.5
ZEA                                 pmax    pmax
       comp=Z,10.0nm,0.7s
M26K   Nabesna, AK       88.09  16  IAmb    IAmb    04 55 21.5
       comp=Z,23nm,0.9s
PV13   Radium Mtn., P    88.18  48  IAmb    IAmb    04 55 22.6
       comp=Z,12nm,1.3s
PV23   Carpenter Ridg    88.19  47  IAmb    IAmb    04 55 22.7
       comp=Z,11nm,0.9s
PV11   David Mesa, Pa    88.22  48  IAmb    IAmb    04 55 22.9
       comp=Z,13nm,1.2s
ANMO   Albuquerque       88.35  51  P       P       04 55 21.6 +0.3
ANMO                                IAmb    IAmb    04 55 23.6
       comp=Z,13nm,1.1s
ANMO   Albuquerque       88.35  51  P       P       04 55 21.6 +0.3
ANMO                                pmax    pmax
       comp=Z,13nm,1.2s
NEW    Newport           88.36  36  P       P       04 55 21.0 +0.2
       comp=Z,5.0nm,0.8s,baz=246,slow=3.9,SNR=10.0
       comp=Z,5.0nm,0.8s
NEW    Newport           88.36  36  IAmb    IAmb    04 55 22.6
       comp=Z,12nm,1.1s
NEW    Newport           88.36  36  P       P       04 55 21.0 +0.2
MENT   Mentasta          88.36  15  P       P       04 55 20.7 +0.2
NEA2   Nenana            88.62  12  IAmb    IAmb    04 55 21.7
       comp=Z,13nm,0.8s
MLY    Manley            88.69  11  IAmb    IAmb    04 55 22.2
       comp=Z,14nm,0.7s
RIDG   Independent Ri    88.78  14  IAmb    IAmb    04 55 23.6
       comp=Z,22nm,0.9s
RDMU   Red Mountain      88.85  45  IAmb    IAmb    04 55 25.6
       comp=Z,10nm,0.8s
H21K   Melozitna Rive    88.90  10  IAmb    IAmb    04 55 24.2
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	comp=Z,14nm,0.8s						
L27K	Beaver Creek,	88.94	16	IAmb	IAmb	04 55 24.7	
	comp=Z,15nm,0.9s						
AHID	Auburn Hatcher	88.95	43	IAmb	IAmb	04 55 26.9	
	comp=Z,13nm,0.8s						
I23K	Minto, Yukon-K	89.06	12	IAmb	IAmb	04 55 28.7	
	comp=Z,17nm,1.2s						
COLA	College	89.11	13	P	P	04 55 23.5	-0.3
COLA	College	89.11	13	P	P	04 55 23.6	-0.3
COLA	College	89.11	13	P	P	04 55 23.5	-0.3
COLA				pmax	pmax		
	comp=Z,47nm,0.8s						
SCRK	Sand Creek	89.18	15	IAmb	IAmb	04 55 25.7	
	comp=Z,12nm,0.8s						
ILAR	Eielson Array	89.22	13	P	P	04 55 23.8	-0.6
	comp=Z,12nm,0.8s,baz=223,slow=5.2,SNR=116						
ILAR				PP	PP	04 59 07.1	+2.0
	comp=Z,0.9nm,0.8s,baz=226,slow=7.4,SNR=4.4						
	comp=Z,12nm,0.8s						
DLMT	Dillon	89.37	40	IAmb	IAmb	04 55 28.1	
	comp=Z,8.4nm,0.9s						
S22A	4UR Ranch, Cre	89.38	49	IAmb	IAmb	04 55 29.3	
	comp=Z,11nm,1.1s						
POKR	Poker Plat Res	89.41	13	IAmb	IAmb	04 55 25.7	
	comp=Z,16nm,0.8s						
O20A	White River Ci	89.53	46	IAmb	IAmb	04 55 28.8	
	comp=Z,9.1nm,0.9s						
MOOW	Moose Ponds	89.67	42	IAmb	IAmb	04 55 29.5	
	comp=Z,34nm,1.9s						
LOHW	Long Hollow	89.69	42	IAmb	IAmb	04 55 29.6	
	comp=Z,12nm,0.7s						
BILL	Bilibino	89.78	354	P	P	04 55 27.1	+0.2
BILL				IAmb	IAmb	04 55 28.2	
	comp=Z,16nm,1.1s						
BILL	Bilibino	89.78	354c	iP	P	04 55 26.8	-0.1
BILL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
RDOG	Red Dog Mine	89.84	6	IAmb	IAmb	04 55 28.7	
	comp=Z,16nm,0.9s						
CMAR	Chiang Mai Arr	89.85	290	P	P	04 55 29.9	+1.5
	comp=Z,6.7nm,0.8s,baz=128,slow=3.1,SNR=34						
	comp=Z,6.7nm,0.8s						
CMAR	Chiang Mai Arr	89.85	290	eP	P	04 55 30.2	+1.8
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BW06	Boulder Array	89.94	43	IAmb	IAmb	04 55 30.2	
	comp=Z,14nm,0.8s						
PD31	Pinedale Array	89.94	43	IAmb	IAmb	04 55 30.2	
	comp=Z,13nm,0.8s						
PDAR	Pinedale Array	89.94	43	P	P	04 55 29.1	+0.6
	comp=Z,12nm,0.7s,baz=212,slow=3.1,SNR=122						
	comp=Z,12nm,0.7s						
YFT	Old Faithful	89.97	42	IAmb	IAmb	04 55 32.3	
	comp=Z,9.2nm,0.8s						
CHTO	Chiang Mai	89.98	290	P	P	04 55 29.5	+0.5
CHTO	Chiang Mai	89.98	290	P	P	04 55 29.5	+0.5
BOZ	Bozeman (W)	90.07	40	IAmb	IAmb	04 55 31.4	
	comp=Z,9.6nm,0.9s						
H17A	Grant Village	90.10	42	IAmb	IAmb	04 55 32.8	
	comp=Z,12nm,1.0s						
PRP	Porcupine Dome	90.16	13	IAmb	IAmb	04 55 29.8	
	comp=Z,30nm,1.5s						
LKWY	Lake	90.30	42	IAmb	IAmb	04 55 33.8	
	comp=Z,9.1nm,1.1s						
MSTX	Muleshoe	90.65	54	IAmb	IAmb	04 55 33.7	
	comp=Z,11nm,0.9s						
COLD	Coldfoot	90.77	11	IAmb	IAmb	04 55 33.2	
	comp=Z,16nm,0.9s						
N23A	Red Feather La	91.43	46	IAmb	IAmb	04 55 50.9	
	comp=Z,33nm,1.9s						
K22A	Casper	91.85	45	IAmb	IAmb	04 55 39.1	
	comp=Z,11nm,1.1s						
YAK	Yakutsk	92.64	338c	eP	P	04 55 40.2	0.0
YAK				pmax	pmax		
	comp=Z,16nm,0.6s						
EPYK	Eagle Plains	92.91	16	IAmb	IAmb	04 55 42.5	
	comp=Z,11nm,0.8s						
RSSD	Black Hills	94.13	44	P	P	04 55 48.2	+0.5
RSSD				IAmb	IAmb	04 55 49.0	
	comp=Z,5.0nm,0.8s						
RSSD	Black Hills	94.13	44	P	P	04 55 48.2	+0.5
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.9s						
INK	Inuvik	95.19	15	P	P	04 55 50.7	-1.0
	comp=Z,4.8nm,0.9s,baz=208,slow=4.2,SNR=14						
INK				PP	PP	04 59 50.4	-0.7
	comp=Z,1.7nm,1.0s,baz=225,slow=8.6,SNR=3.4						
	comp=Z,4.8nm,0.9s						
INK	Inuvik	95.19	15	IAmb	IAmb	04 55 52.3	
	comp=Z,6.9nm,1.1s						
SONM	Songino Array	95.98	319	P	P	04 55 55.1	-0.9
	comp=Z,0.6nm,1.0s,baz=116,slow=3.4,SNR=4.1						
SONM				PP	PP	04 59 58.0	+0.2
	comp=Z,1.5nm,1.1s,baz=110,slow=6.1,SNR=4.6						
	comp=Z,0.6nm,1.0s						
YKA	Yellowknife Ar	97.48	25	P	P	04 56 02.1	+0.1
	comp=Z,1.9nm,0.9s,baz=243,slow=4.6,SNR=20						
YKA				PP	PP	05 00 09.9	+1.3
	comp=Z,1.0nm,1.1s,baz=254,slow=6.4,SNR=4.3						
	comp=Z,1.9nm,0.9s						
TIXI	Tiksi	99.38	345	iP	Pdif	04 56 10.0	-0.3
ZALV	Zalesovo Beam	110.76	321	PKiKP	PKiKP	05 00 56.4	-1.4
	comp=Z,2.2nm,0.6s,baz=128,slow=0.6,SNR=13						
MK31	Makanchi Array	111.33	313	iPKIKP	PKiKP	05 00 57.9	-1.3
MKAR	Makanchi Array	111.33	313	PKiKP	PKiKP	05 00 57.9	-1.3
	comp=Z,1.3nm,0.7s,baz=78,slow=1.5,SNR=17						
MKAR	Makanchi Array	111.33	313c	iPKIKP	PKiKP	05 00 58.0	-1.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	Kurchatov	114.20	317c	iPKIKP	PKPdf	05 01 03.7	-0.8
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURBB	Kurchatov Arra	114.25	317	PKP	PKPdf	05 01 03.4	-1.2
	comp=Z,2.3nm,0.7s,baz=102,slow=1.9,SNR=20						
KURBB				PP	PP	05 02 07.4	-3.0
	comp=Z,0.6nm,0.7s,baz=92,slow=6.7,SNR=4.6						
KSH	Kashi	114.88	305	PKP	PKiKP	05 01 06.5	+0.1
FRB	Frobisher Bay	117.76	28	PKP	PKPdf	05 01 10.0	-0.9
	comp=Z,2.3nm,0.5s,baz=265,slow=1.9,SNR=8.6						
NEEM	North Greenlan	118.48	11	eP	PKPdf	05 01 12.2	-0.3
KULLO	Kullorsuaq	118.56	15	eP	PKiKP	05 01 12.3	+0.1
NOR	Nord	119.19	3	eP	PKPdf	05 01 13.0	-0.4
NOR				ePP	PP	05 02 25.9	-17
BRVK	Borovoye	119.39	320	PKPdf	PKPdf	05 01 13.8	-0.7
BRVK	Borovoye	119.39	320c	iPKIKP	PKPdf	05 01 13.9	-0.5
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
UPNV	Upernavik	119.60	17	eP	PKPdf	05 01 13.7	-0.5
KBL	Kabul	119.77	298	PKPdf	PKPdf	05 01 15.6	-0.4
KBL	Kabul	119.77	298	PKIKP	PKPdf	05 01 15.6	-0.4
KBS	Kingsbay	122.12	358	eP	PKiKP	05 01 19.1	-0.2
KBS	Kingsbay	122.12	358	ePKPdf	PKiKP	05 01 19.5	+0.3
SPA0	Spitsbergen Ar	122.63	356	ePKPdf	PKPdf	05 01 19.8	-0.2
SPITS	Spitsbergen Ar	122.63	356	PKP	PKPdf	05 01 19.5	-0.5
	comp=Z,17nm,0.7s,baz=120,slow=2.3,SNR=19						
SPITS	Spitsbergen Ar	122.63	356	PKIKP	PKPdf	05 01 19.9	-0.1
SPB2	Spitsbergen Ar	122.63	356	PKPdf	PKiKP	05 01 20.1	-0.1
DAG	Danmarks Havn	123.59	5	iP	PKPdf	05 01 20.0	-1.9
SFJD	Kangerlussuaq	123.90	22	PKP	PKPdf	05 01 22.0	-0.6
	comp=Z,5.1nm,0.6s,baz=203,slow=1.8,SNR=5.9						
SFJD	Kangerlussuaq	123.90	22	eP	PKPdf	05 01 21.7	-0.9
SUMG	Summit	124.06	13	iP	PKPdf	05 01 22.0	-1.4
ARU	Arti	125.53	325	PKPdf	PKPdf	05 01 25.3	-0.8
ARU	Arti	125.53	325	iPKIKP	PKPdf	05 01 25.7	-0.4
ARU						05 07 49.2	
ARU				SP	SP	05 12 31.5	-2.6
DY2G	Dye2	125.66	21	⇓iP	PKPdf	05 01 26.4	0.0
DBG	Daneborg	125.70	7	eP	PKiKP	05 01 26.1	-0.3
GEYT	Alibeck	128.73	302	PKP	PKPdf	05 01 32.3	-0.6
	comp=Z,4.6nm,0.8s,baz=151,slow=3.4,SNR=7.1						
SCO	Scoresbysund	128.90	10	eP	PKiKP	05 01 32.6	-0.2
HAMF	Hammerfest	128.92	351	ePKPdf	PKPdf	05 01 32.1	-0.1
KIRV	Kirov	129.37	330c	iPKIKP	PKiKP	05 01 34.3	+0.2
ARA0	ARCESS Array S	129.60	349	ePKPdf	PKPdf	05 01 33.5	-0.1
ARCES	ARCESS Array B	129.60	349	PKP	PKPdf	05 01 32.6	-0.9
	comp=Z,7.6nm,0.6s,baz=4.8,slow=1.1,SNR=42						
ARCES	ARCESS Array B	129.60	349	ePKIKP	PKPdf	05 01 33.0	-0.5
ARCES				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KTK1	Kautokeino	130.45	350	ePKPdf	PKPdf	05 01 34.6	-0.6
TRO	Tromso	130.51	352	ePKPdf	PKPdf	05 01 34.8	-0.4
KLMR	Klimovskoe	132.38	336	ePKPdf	PKPdf	05 01 38.2	-0.8
KLMR				AMP		05 01 39.8	
	comp=Z,11nm,0.8s						
KLMR				ePP	PP	05 04 13.0	+3.0
KLMR	Klimovskoe	132.38	336	ePKIKP	PKPdf	05 01 38.2	-0.8
KLMR				e		05 04 13.0	
KLMR				pmax	pmax		
	comp=Z,11nm,0.8s						
BELG	Belogornoye	132.90	323	iPKIKP	PKPdf	05 01 39.6	-0.6
MOR8	Moi Rana	134.36	353	ePKPdf	PKPdf	05 01 42.5	-0.1
FINES	FINESS Array B	136.38	343	PKhKP	PKPpre	05 01 33.3	
	comp=Z,7.9nm,1.2s,baz=48,slow=2.1,SNR=5.4						
FINES				PKP	PKPdf	05 01 45.4	-1.1
	comp=Z,6.2nm,0.7s,baz=64,slow=3.2,SNR=12						
FINES				SKPbc	SKPbc	05 04 28.2	-0.3
	comp=Z,5.6nm,0.8s,baz=46,slow=6.0,SNR=9.4						
OBN	Obninsk	137.18	331	iPKIKP	PKPdf	05 01 47.3	-0.8
OBN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ZEI	Tsey	138.63	311	iPKIKP	PKPdf	05 01 52.3	+0.8
ZEI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GNI	Garni	138.74	307c	iPKIKP	PKiKP	05 01 53.1	-0.9
GNI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KBZ	Khabaz	139.03	313	ePKIKP	PKiKP	05 01 57.3	+3.1
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
RAYN	Ar Rayn	139.28	282		PKPdf	05 01 52.4	-0.6
RAYN	Ar Rayn	139.28	282	PKIKP	PKPdf	05 01 52.4	-0.6
NB2	NORSAR Subarra	139.71	353	PKP	PKPdf	05 01 45.0	-7.6
	comp=Z,2.3nm,0.7s,baz=16,slow=3.2						
NB2				SKPa	SKPbc	05 04 38.4	+0.5
	comp=Z,1.1nm,0.8s,baz=10,slow=2.9						
NOA	NORSAR Array B	139.71	353	PKhKP	PKPpre	05 01 44.5	
	comp=Z,1.1nm,0.5s,baz=50,slow=1.7,SNR=14						
NOA				PKP	PKiKP	05 01 54.2	-1.0
	comp=Z,2.8nm,0.7s,baz=19,slow=4.0,SNR=6.8						
NOA				SKPbc	SKPbc	05 04 37.5	-0.4
	comp=Z,2.7nm,1.1s,baz=6.3,slow=4.0,SNR=4.3						
NOA	NORSAR Array B	139.71	353	ePKIKP	PKPdf	05 01 52.9	+0.3
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NC602	NORSAR Array S	139.96	352	e	PKPdf	05 01 46.2	-6.8
HFS	Hagfors	140.24	350	PKhKP	PKPpre	05 01 46.3	
	comp=Z,8.8nm,0.5s,baz=66,slow=3.7,SNR=55						
HFS				SKPbc	SKPbc	05 04 38.9	-0.3
	comp=Z,4.8nm,0.8s,baz=36,slow=3.5,SNR=3.8						
SKAR	Skarslia	140.36	355	ePKPdf	PKPdf	05 01 49.2	-4.6
IDID	Didziasalis	141.09	337	eP	PKPdf	05 01 47.6	-7.6
ISAL	Salakas	141.11	338	eP	PKPdf	05 01 50.3	-4.9
VIKU	Vikbolandet	141.23	347	eP	PKPdf	05 01 48.9	-6.5
IIGN	Ignalina	141.25	337	eP	PKPdf	05 01 48.7	-6.8
KONO	Kongsberg	141.25	353	ePKPdf	PKPdf	05 01 52.1	-3.3
ODD1	Odda	141.25	356	ePKPdf	PKPdf	05 01 51.0	-4.4
NACGM	Naroch	141.39	337	ePKP	PKPdf	05 01 50.6	-5.1
	comp=Z,22nm,1.0s,baz=38						
BLS5	Blasjo	141.75	356	ePKPdf	PKPdf	05 01 52.4	-3.9
PABE	Paberze	141.90	339	eP	PKPdf	05 01 53.3	-3.3
PBUR	Paburge	142.11	341	eP	PKPdf	05 01 53.5	-3.5
LODK	Lodwar	142.50	246		PKPdf	05 01 56.7	-2.4
SNART	Snartemo	142.77	355	ePKPdf	PKPdf	05 01 55.6	-2.5
AKASG	Malin Array Be	143.43	330	PKP	PKPab	05 01 56.9	-0.9
	comp=Z,35nm,0.5s,baz=42,slow=4.3,SNR=306						
AKASG				SKPbc	SKPbc	05 04 47.1	-0.4
	comp=Z,2.4nm,0.9s,baz=42,slow=2.6,SNR=6.7						
MCD	Coleburn Disti	143.61	4	eP	PKPab	05 01 57.8	-0.5
KPL	Plockton	143.64	6	eP	PKPab	05 01 56.9	-1.5
DEL	Delary	143.68	348	eP	PKPab	05 01 58.0	-0.6
MBAR	Mbarara	144.00	236c	iPKIKP	PKPdf	05 02 02.3	+0.4
MBAR				pmax	pmax		
	comp=Z,30nm,1.7s						
INVG	Invergeldie, C	144.69	5	eP	PKPdf	05 02 00.5	-1.0
LAWE	Loch Awe, Argy	144.73	7	eP	PKPdf	05 02 01.0	-0.5
BSD	Bornholm Skovb	144.74	347	eP	PKPbc	05 02 01.9	0.0
BSD	Bornholm Skovb	144.74	347	iP	PKPdf	05 02 01.3	-0.3
PGBU	Glenifferbraes	145.26	6	eP	PKPdf	05 02 02.7	+0.3
ESY	Stoneypath	145.31	4	eP	PKPdf	05 02 02.5	-0.1
EBL	Broad Law	145.42	4	eP	PKPbc	05 02 03.9	-0.1
SORM	Soroca	145.58	327	⇑P	PKPbc	05 02 04.3	-0.4
SORM	Soroca	145.58	327	⇑PKIKP	PKPbc	05 02 04.3	-0.4
CLGH	Cloghs, Cushen	145.80	8	eP	PKPbc	05 02 05.4	+0.2
PURM	Purcari	145.81	324	⇑P	PKPbc	05 02 05.3	-0.1
EKA	Eskdalemuir Ar	145.85	5	PKPbc	PKPbc	05 02 05.0	-0.2
	comp=Z,26nm,0.7s,baz=339,slow=2.7,SNR=57						
GKP	Gorka Klasztor	145.85	343	ePKP	PKPbc	05 02 05.5	+0.2
GKP	Gorka Klasztor	145.85	343	eP	PKPab	05 02 07.0	0.0
ESK	Eskdalemuir	145.86	5	eP	PKPdf	05 02 03.8	+0.2
ESK	Eskdalemuir	145.86	5		PKPdf	05 02 04.1	+0.6
ESK	Eskdalemuir	145.86	5	PKIKP	PKPdf	05 02 04.1	+0.6
NEWG	New Galloway	145.97	6	eP	PKPdf	05 02 04.1	+0.4
BEL	Belsk	146.00	338	ePKP	PKPbc	05 02 06.1	+0.3
GAL1	Galloway	146.17	6	eP	PKPdf	05 02 04.4	+0.4
LVV	L'vov	146.37	333	ePKP2	PKPbc	05 02 06.5	-0.4
EDMD	Edmundbyers	146.43	4	eP	PKPbc	05 02 05.9	-1.0
KESW	Keswick, Cumbr	146.59	5	eP	PKPdf	05 02 05.3	+0.5
IOMK	Kirk Michael	146.79	6	eP	PKPbc	05 02 07.0	-0.9
VASR	Vaslui	146.85	326	⇓P	PKiKP	05 02 10.0	-0.3
WIM	Isle of Man	146.89	7	eP	PKPbc	05 02 07.0	-1.1
BR131	Keskin Array S	146.94	311		PKPbc	05 02 08.5	-0.5
BR131	Keskin Array S	146.94	311	PKP2	PKPbc	05 02 08.5	-0.5
BRTR	Keskin Array B	146.94	311	PKPbc	PKPbc	05 02 08.4	-0.5
	comp=Z,11nm,0.7s,baz=132,slow=4.1,SNR=24						
VLDR	Vladesti	147.21	325	⇑P	PKiKP	05 02 10.0	-1.0
TLCR		147.22	323	⇑P	PKPbc	05 02 09.5	+0.2
TLCR		147.22	323	⇑PKP2	PKPbc	05 02 09.5	+0.2
SCTR	Scanteiesti	147.37	324	⇑P	PKiKP	05 02 10.5	-0.9
GHRR		147.43	325	⇑P	PKiKP	05 02 11.0	-0.4
RUE	Ruedersdorf	147.44	346	ePKPbc	PKPbc	05 02 10.2	+0.6
	baz=17,slow=2.3						
BUR01	Bucovina Ar. S	147.47	329	⇓P	PKiKP	05 02 11.3	-0.3
ANTO	Ankara	147.48	312	⇑P	PKPbc	05 02 10.1	-0.2
ANTO	Ankara	147.48	312		PKPbc	05 02 10.1	-0.2
ANTO	Ankara	147.48	312	PKP2	PKPbc	05 02 10.1	-0.2
TESR	Tescani	147.53	327	⇑P	PKPbc	05 02 10.4	+0.3
CFR	Carcaliu	147.60	324	⇓P	PKPbc	05 02 09.2	-1.1
CFR	Carcaliu	147.60	324	⇓PKIKP	PKPbc	05 02 09.2	-1.1
TPGR	Topolog	147.64	323	⇑P	PKPbc	05 02 10.9	+0.5
OJC	Ojcow	147.69	338	ePKP	PKPbc	05 02 10.4	0.0
YRC	Rhoscolyn	147.78	7	eP	PKPbc	05 02 10.2	-0.2
STHS	Stebnicka Huta	147.81	335	ePKP2	PKPbc	05 02 10.6	-0.1
STHS	Stebnicka Huta	147.81	335	ePKP	PKPbc	05 02 10.6	-0.1
TIRR	Tirgusor	147.88	322	⇑P	PKPbc	05 02 11.1	+0.1
TIRR	Tirgusor	147.88	322	⇑PKP2	PKPbc	05 02 11.1	+0.1
VRI	Vrincioaia	147.92	326	⇑P	PKPbc	05 02 11.2	+0.1
VRI	Vrincioaia	147.92	326	⇑PKP2	PKPbc	05 02 11.2	+0.1
PLOR	Plostina	147.97	326	⇑P	PKPbc	05 02 11.3	0.0
PLOR	Plostina	147.97	326	⇑PKP2	PKPbc	05 02 11.3	0.0
HARR	Harsova	148.02	323	⇑P	PKiKP	05 02 12.2	-0.5
HARR	Harsova	148.02	323	⇑PKP2	PKiKP	05 02 12.2	-0.5
RETH	Rethem/Aller,	148.03	351	ePKPbc	PKiKP	05 02 11.7	-0.7
	baz=17,slow=2.3						
FLTG	Flechtingen	148.10	349	ePKPbc	PKPbc	05 02 11.6	+0.3
	baz=17,slow=2.3						
FLTG				ePKPab	PKPab	05 02 16.2	+0.1
	baz=16,slow=4.2						
NRDL	Niedersach Rie	148.14	350	ePKPbc	PKiKP	05 02 12.0	-0.6
	baz=17,slow=2.3						
NRDL				ePKPab	PKPab	05 02 16.5	+0.3
	baz=16,slow=4.2						
MANR	Mangalia	148.17	321	⇓P	PKPbc	05 02 11.6	-0.1
NIE	Niedzica	148.17	336	ePKP	PKiKP	05 02 13.1	+0.2
COVR	Voineasa-Covas	148.21	326	⇓P	PKPbc	05 02 11.0	-0.8
OZUR		148.25	327	⇓P	PKPdf	05 02 09.5	+1.7
FOEL	Foel Wylfa	148.27	5	eP	PKPbc	05 02 11.3	-0.5
KSP	Ksiaz	148.28	342	ePKP	PKiKP	05 02 12.4	-0.7
TRPA	Tarpa	148.30	333	⇑P	PKiKP	05 02 12.4	-0.7
ASSE	Asse, Remlinge	148.40	349	ePKPbc	PKiKP	05 02 12.7	-0.5
	baz=17,slow=2.3						
ISR	Istrita	148.51	325	⇓P	PKiKP	05 02 13.5	-0.3
DOPR	Dopca	148.54	327	⇓P	PKiKP	05 02 14.4	+0.6
OSTC	Ostas	148.56	342	ePKPDF	PKPdf	05 02 08.9	+0.7
OSTC				⇑ePKP	PKiKP	05 02 13.3	-0.4
OSTC				ePKPAB	PKPab	05 02 18.3	+0.2
OSTC	Ostas	148.56	342	ePKHKP	PKPpre	05 02 08.9	
OSTC				e		05 02 18.3	
MLR	Muntele Rosu	148.58	326	⇓P	PKiKP	05 02 15.0	+1.0
MLR	Muntele Rosu	148.58	326	⇓PKP2	PKiKP	05 02 15.0	+1.0
OKC	Ostrava-Krasne	148.58	339	⇑ePKP	PKiKP	05 02 13.0	-0.7
OKC	Ostrava-Krasne	148.58	339	ePKP2	PKiKP	05 02 13.0	-0.7
UPC	Upice	148.66	342	⇑ePKP	PKiKP	05 02 13.4	-0.5
UPC				ePKPAB	PKPab	05 02 19.2	+0.7
UPC	Upice	148.66	342	ePKP2	PKiKP	05 02 13.4	-0.5
IBBN	Ibbenburen	148.66	352	ePKPbc	PKiKP	05 02 13.2	-0.6
	baz=17,slow=2.3						
IBBN				ePKPab	PKPab	05 02 19.0	+0.5
	baz=16,slow=4.2						
LANS	Liptovska Anna	148.70	337	ePKP2	PKiKP	05 02 14.3	+0.3
LANS	Liptovska Anna	148.70	337	ePKP	PKiKP	05 02 14.3	+0.3
LANS				e		05 02 20.7	
CLL	Collm	148.71	346	⇓iPKPbc	PKPbc	05 02 12.9	0.0
	comp=Z,64nm,1.1s						
CLL				⇑iPKPab	PKPab	05 02 18.5	-0.2
	comp=Z,20nm,0.7s						
CLL				ePKSdf	PKSdf	05 05 45.0	+1.9
CLL	Collm	148.71	346	⇓iPKHKP	PKPpre	05 02 12.9	
CLL				i		05 02 18.5	
CLL				pmax	pmax		
	comp=Z,64nm,1.1s						
CLL				pmax	pmax		
	comp=Z,20nm,0.7s						
CLL	Collm	148.71	346	ePKPbc	PKiKP	05 02 13.3	-0.6
	baz=17,slow=2.3						
CLL				ePKPab	PKPab	05 02 19.0	+0.4
	baz=16,slow=4.2						
DPC	Dobruska-Polom	148.71	341	⇑ePKP	PKiKP	05 02 13.7	-0.3
DPC				ePKPAB	PKPab	05 02 19.3	+0.5
DPC	Dobruska-Polom	148.71	341	ePKP2	PKiKP	05 02 13.7	-0.3
CLZ	Clausthal	148.73	349	ePKPbc	PKiKP	05 02 13.7	-0.3
	baz=17,slow=2.3						
CLZ				ePKPab	PKPab	05 02 19.5	+0.7
	baz=16,slow=4.2						
MORC	Moravsky Berou	148.84	340	⇑P	PKiKP	05 02 14.7	+0.4
MORC	Moravsky Berou	148.84	340	ePKP	PKPbc	05 02 13.1	-0.2
MORC	Moravsky Berou	148.84	340	⇑PKP2	PKiKP	05 02 14.7	+0.4
CJR	Cluj-Napoca	148.89	330	⇓P	PKiKP	05 02 15.0	+0.5
BRG	Berggiesshubel	148.89	345	iPKP	PKiKP	05 02 13.8	-0.5
BRG				Amp		05 02 14.3	
	comp=Z,27nm,0.8s						
BRG	Berggiesshubel	148.89	345	P	PKPab	05 02 19.8	+0.4
BRG				Amp		05 02 20.4	
	comp=Z,20nm,0.9s						
BRG	Berggiesshubel	148.89	345	P	PKPab	05 02 30.4	+11
BRG				Amp		05 02 31.0	
	comp=Z,4.7nm,0.7s						
BRG	Berggiesshubel	148.89	345	iPKP2	PKiKP	05 02 13.8	-0.5
BRG				pmax	pmax		
	comp=Z,27nm,0.8s						
BRG	Berggiesshubel	148.89	345	ePKPbc	PKiKP	05 02 14.0	-0.3
	baz=17,slow=2.3						
FBE	Freiberg	148.99	345	ePKPbc	PKiKP	05 02 14.5	0.0
	baz=17,slow=2.3						
FBE				ePKPab	PKPab	05 02 20.7	+0.9
	baz=16,slow=4.2						
PVCC	Panska Ves	149.04	344	⇑ePKP	PKiKP	05 02 14.4	-0.2
PVCC	Panska Ves	149.04	344	ePKP2	PKiKP	05 02 14.4	-0.2
NEUB	Neuenburg	149.07	347	ePKPbc	PKiKP	05 02 14.3	-0.4
	baz=17,slow=2.3						
NEUB				ePKPab	PKPab	05 02 20.7	+0.6
	baz=16,slow=4.2						
VOIR		149.08	327	⇑P	PKPbc	05 02 14.2	+0.1
VOIR		149.08	327	⇑PKHKP	PKPpre	05 02 14.2	
GTTG	Gottingen	149.08	350	ePKPbc	PKiKP	05 02 14.4	-0.3
	baz=17,slow=2.3						
GTTG				ePKPab	PKPab	05 02 20.8	+0.6
	baz=16,slow=4.2						
MARR	Marisel-Cluj	149.14	330	⇑P	PKiKP	05 02 15.9	+0.8
MCH1	Michaelchurch	149.18	5	eP	PKPbc	05 02 13.0	-1.0
MTUR	Matau	149.22	326	⇑P	PKPab	05 02 18.7	-2.4
MTUR	Matau	149.22	326	⇑PKP2	PKPab	05 02 18.7	-2.4
DRGR		149.24	331	⇑P	PKPbc	05 02 14.1	-0.3
DRGR		149.24	331	⇑PKHKP	PKPpre	05 02 14.1	
ARR	Arges	149.34	327	⇑P	PKiKP	05 02 15.6	+0.1
MONM	Monmouth	149.35	5	eP	PKPbc	05 02 13.6	-0.8
VYHS	Vyhne	149.48	337	ePKHKP	PKPpre	05 02 15.3	
VYHS				e		05 02 23.0	
VYHS	Vyhne	149.48	337	ePKP	PKiKP	05 02 15.2	-0.4
VYHS				e		05 02 23.0	
GOPC	GO Pecny, Ondr	149.54	343	⇑ePKP	PKiKP	05 02 15.4	-0.3
GOPC	GO Pecny, Ondr	149.54	343	ePKHKP	PKPpre	05 02 15.4	
PRU	Pruhonice	149.54	343	⇑ePKP	PKiKP	05 02 15.2	-0.5
PRU	Pruhonice	149.54	343	ePKHKP	PKPpre	05 02 15.2	
VRAC	Vranov	149.55	340	⇑P	PKiKP	05 02 15.6	-0.1
VRAC	Vranov	149.55	340	PKPbc	PKiKP	05 02 15.2	-0.6
	comp=Z,15nm,1.0s,baz=352,slow=0.9,SNR=14						
VRAC				PKPab	PKPab	05 02 23.1	+0.9
	comp=Z,9.3nm,0.7s,baz=43,slow=4.3,SNR=9.5						
VRAC	Vranov	149.55	340	ePKP	PKPbc	05 02 15.0	0.0
PSZ	Piszkesteto	149.55	335	⇑P	PKPbc	05 02 13.5	-1.7
PSZ	Piszkesteto	149.55	335	⇑PKHKP	PKPpre	05 02 13.5	
BUG	Bochum--Univer	149.57	353	ePKPbc	PKiKP	05 02 15.3	-0.4
	baz=17,slow=2.3						
JAVC	Velka Javorina	149.58	339	ePKP	PKiKP	05 02 16.2	+0.3
MOX	Moxa	149.63	347	ePKPbc	PKiKP	05 02 15.6	-0.2
	baz=17,slow=2.3						
MOX				ePKPab	PKPab	05 02 22.9	+0.4
	baz=16,slow=4.2						
KASTN	Kahler Asten	149.66	351	ePKPbc	PKiKP	05 02 15.7	-0.2
	baz=17,slow=2.3						
KASTN				ePKPab	PKPab	05 02 22.9	+0.3
	baz=16,slow=4.2						
TANN	Tannenbergstha	149.66	346	ePKPbc	PKiKP	05 02 15.8	-0.2
	baz=17,slow=2.3						
PLN	Plauen	149.67	346	ePKPbc	PKiKP	05 02 15.8	-0.2
	baz=17,slow=2.3						
WERD	Werda	149.67	346	ePKPbc	PKiKP	05 02 15.8	-0.2
	baz=17,slow=2.3						
LOT	Lotru	149.72	328	⇓P	PKiKP	05 02 16.2	-0.2
HUMR	Humele	149.73	325	⇓P	PKiKP	05 02 16.5	+0.3
GUNZ	Gunzen	149.74	346	ePKPbc	PKiKP	05 02 16.2	0.0
	baz=17,slow=2.3						
GUNZ				ePKPab	PKPab	05 02 23.9	+0.9
	baz=16,slow=4.2						
WERN	Wernitzgruen	149.80	346	ePKPbc	PKiKP	05 02 16.4	+0.1
	baz=17,slow=2.3						
WERN				ePKPab	PKPab	05 02 24.2	+0.9
	baz=16,slow=4.2						
KRUC	Moravsky	149.83	340	ePKP	PKPbc	05 02 15.4	-0.2
NKC	Novy Kostel	149.84	346	⇑ePKP	PKiKP	05 02 16.3	0.0
NKC				ePKPAB	PKPab	05 02 23.9	+0.5
NKC	Novy Kostel	149.84	346	ePKHKP	PKPpre	05 02 16.3	
NKC				e		05 02 23.9	
SMOL	Smolenice	149.96	338	ePKHKP	PKPpre	05 02 16.9	
WOL	Wolverton	149.98	3	eP	PKPbc	05 02 15.2	-0.7
SIRR	Siria	150.11	331	⇑P	PKPbc	05 02 16.5	0.0
MODS	Modra-Piesok	150.13	338	ePKHKP	PKPpre	05 02 17.3	
MODS				e		05 02 25.6	
MODS	Modra-Piesok	150.13	338	ePKP	PKiKP	05 02 17.3	+0.3
MODS				e		05 02 25.6	
MANZ	Manzenberg	150.15	346	ePKPbc	PKiKP	05 02 17.0	0.0
	baz=17,slow=2.3						
GZR	Gura Zlata	150.24	329	⇑P	PKPbc	05 02 16.5	-0.3
SRO	Srobarova	150.24	337	ePKIKP	PKiKP	05 02 17.2	0.0
SRO				e		05 02 26.2	
SRO	Srobarova	150.24	337	ePKP	PKiKP	05 02 17.2	0.0
SRO				e		05 02 26.2	
SURR	Surduc	150.28	330	⇑P	PKiKP	05 02 16.9	-0.4
ROTZ	Rotzenmuhle	150.33	346	ePKPbc	PKiKP	05 02 17.3	0.0
	baz=17,slow=2.3						
SBD	Saint Breward	150.41	8	eP	PKPbc	05 02 15.7	-1.2
AHRW	Bad Neuenahr-A	150.48	353	ePKPbc	PKiKP	05 02 17.7	+0.1
	baz=17,slow=2.3						
SRE	Strehaia	150.56	327	⇑P	PKiKP	05 02 18.1	+0.1
SRE	Strehaia	150.56	327	⇑PKIKP	PKiKP	05 02 18.1	+0.1
KHC	Kasperske Hory	150.58	344	ePKPDF	PKPdf	05 02 11.4	0.0
KHC				⇑ePKP	PKiKP	05 02 17.7	-0.2
KHC				ex	x	05 02 27.0	
KHC	Kasperske Hory	150.58	344	ePKIKP	PKPdf	05 02 11.4	0.0
KHC				e		05 02 27.0	
TNS	Taunus Mts	150.61	351	ePKPbc	PKiKP	05 02 18.0	0.0
	baz=17,slow=2.3						
TNS				ePKPab	PKPab	05 02 27.1	+0.4
	baz=16,slow=4.2						
GRF	Grafenberg Arr	150.62	347	ePKPbc	PKiKP	05 02 18.1	+0.1
	baz=17,slow=2.3						
GRF				ePKPab	PKPab	05 02 27.6	+0.9
	baz=16,slow=4.2						
BZS	Buzias	150.62	330	⇓P	PKPbc	05 02 17.5	-0.1
BZS	Buzias	150.62	330	⇓PKIKP	PKPbc	05 02 17.5	-0.1
CKRC	Cesky Krumlov	150.67	342	⇑ePKP	PKiKP	05 02 18.2	+0.1
CKRC	Cesky Krumlov	150.67	342	ePKIKP	PKiKP	05 02 18.2	+0.1
HERR	Herculane	150.79	328	⇑P	PKPbc	05 02 16.8	-1.2
GEC2	GERESS Array S	150.81	343	ePKPbc	PKiKP	05 02 18.4	-0.1
	baz=17,slow=2.3						
GERES	GERESS Array B	150.81	343	PKPbc	PKPbc	05 02 18.0	-0.1
	comp=Z,13nm,0.8s,baz=43,slow=2.0,SNR=5.8						
GERES	GERESS Array B	150.81	343	ePKIKP	PKPbc	05 02 15.3	-2.8
GERES				pmax	pmax		
	comp=Z,13nm,0.8s						
CONA	Conrad Observa	150.99	340	ePKiKP	PKiKP	05 02 18.7	-0.2
	comp=Z,15nm,0.6s,SNR=11						
BANR	Banloc	151.02	331	⇓P	PKiKP	05 02 18.7	-0.2

RONA	**Rosalia, Austr**	**151.05**	**339**	*e*PKiKP	**PKiKP**	**05 02 18.8**	**-0.2**
	comp=Z,24nm,0.5s,SNR=13						
MORH	**Mrgy, Hungar**	**151.44**	**334**	⇑P	**PKPbc**	**05 02 18.7**	**-0.7**
WLF	**Walferdange**	**151.45**	**354**	*e*PKPbc	**PKiKP**	**05 02 20.4**	**+0.7**
	baz=17,slow=2.3						
WLF				*e*PKPab	**PKPab**	**05 02 31.0**	**+0.9**
	baz=16,slow=4.2						
ARSA	**Arzberg**	**151.70**	**339**	*i* PKP	**PKPbc**	**05 02 19.4**	**-0.7**
	comp=Z,3.2nm,0.8s						
FRGS	**Fruska Gora**	**151.79**	**332**	⇑P	**PKPbc**	**05 02 19.8**	**-0.4**
BIOA	**Bad Ischl, Aus**	**151.88**	**342**	*i* PKP	**PKPbc**	**05 02 19.8**	**-0.6**
	comp=Z,10nm,0.8s						
STU	**Stuttgart**	**151.89**	**349**	*e*PKPbc	**PKiKP**	**05 02 20.9**	**+0.3**
	baz=17,slow=2.3						
STU				*e*PKPab	**PKPab**	**05 02 32.3**	**+0.2**
	baz=16,slow=4.2						
VTS	**Vitosha**	**151.95**	**324**	⇑P	**PKiKP**	**05 02 21.8**	**+0.7**
VTS	**Vitosha**	**151.95**	**324**	⇑PKIKP	**PKiKP**	**05 02 21.8**	**+0.7**
BOVS	**Bovan**	**152.04**	**327**	⇓P	**PKPbc**	**05 02 19.8**	**-1.0**
FUR	**Furstenfeldbru**	**152.05**	**346**	*e*PKPbc	**PKiKP**	**05 02 21.1**	**+0.2**
	baz=17,slow=2.3						
KOGS	**Kog**	**152.15**	**338**	*i* PKPbc	**PKPbc**	**05 02 20.4**	**-0.6**
SOKA	**Soboth**	**152.36**	**340**	*e*PKP	**PKPbc**	**05 02 21.1**	**-0.5**
	comp=Z,20nm,1.2s						
BFO	**Black Forest**	**152.47**	**350**		**PKiKP**	**05 02 21.9**	**+0.1**
BFO					**PKPab**	**05 02 34.4**	**-0.2**
BFO	**Black Forest**	**152.47**	**350**	PKIKP	**PKiKP**	**05 02 21.9**	**+0.1**
BFO						05 02 34.4	
BFO	**Black Forest**	**152.47**	**350**	*e*PKPbc	**PKiKP**	**05 02 21.9**	**+0.1**
	baz=17,slow=2.3						
BFO				*e*PKPab	**PKPab**	**05 02 34.8**	**+0.2**
	baz=16,slow=4.2						
KBA	**Koelnbreinsper**	**152.52**	**342**	*e*PKP	**PKPbc**	**05 02 21.2**	**-0.9**
	comp=Z,12nm,0.8s						
WATA	**Walderalm**	**152.75**	**345**	*e*PKP	**PKPbc**	**05 02 21.9**	**-0.6**
	comp=Z,18nm,1.1s						
UBR	**Ueberruh**	**152.76**	**347**	*e*PKPbc	**PKiKP**	**05 02 22.4**	**-0.1**
	baz=17,slow=2.3						
RETA	**Reutte**	**152.80**	**346**	*i* PKP	**PKPbc**	**05 02 22.1**	**-0.4**
	comp=Z,10nm,0.9s						
WTTA	**Wattenberg**	**152.80**	**345**	*e*PKiKP	**PKPbc**	**05 02 22.3**	**-0.3**
	comp=Z,21nm,0.8s,SNR=5.0						
MYKA	**Terra Mystica**	**152.84**	**341**	*e*PKP	**PKPbc**	**05 02 21.8**	**-0.8**
	comp=Z,9.4nm,0.7s						
MOTA	**Moosalm**	**152.86**	**345**	*i* PKP	**PKPbc**	**05 02 22.2**	**-0.5**
	comp=Z,21nm,1.0s						
SQTA	**Sankt Quirin**	**152.95**	**345**	*i* PKiKP	**PKPbc**	**05 02 22.8**	**-0.1**
	comp=Z,11nm,0.7s						
ABTA	**Abfaltersbach**	**153.05**	**343**	*i* PKP	**PKPbc**	**05 02 22.4**	**-0.7**
	comp=Z,17nm,0.7s						
CRNS	**Crni Vrh**	**153.14**	**340**	*i* PKPbc	**PKPbc**	**05 02 22.6**	**-0.6**
FETA	**Feichten**	**153.25**	**346**	*e*PKiKP	**PKiKP**	**05 02 23.6**	**-0.1**
	comp=Z,12nm,0.9s						
BOJS	**Bojanci**	**153.31**	**338**	*i* PKPbc	**PKiKP**	**05 02 23.6**	**0.0**
DAVOX	**Davos/Dischmat**	**153.66**	**347**	PKP	**PKPdf**	**05 02 16.1**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=28,slow=10,SNR=3.9						
DAVOX				PKPbc	**PKPbc**	**05 02 24.3**	**-0.3**
	comp=Z,16nm,0.8s,baz=83,slow=0.8,SNR=17						
DAVOX				PKPab	**PKPab**	**05 02 39.7**	**-0.2**
	comp=Z,12nm,0.7s,baz=358,slow=6.4,SNR=9.2						
ESDC	**Sonseca Array**	**161.13**	**13**	PKPab	**PKPab**	**05 03 12.3**	**+0.1**
	comp=Z,7.2nm,1.0s,baz=339,slow=3.8,SNR=19						
ESDC	**Sonseca Array**	**161.13**	**13**	PKPab	**PKPab**	**05 03 11.9**	**-0.3**
KEST	**Kesra**	**164.03**	**336**	PKPab	**PKPab**	**05 03 25.5**	**+0.3**
	comp=Z,9.2nm,0.8s,baz=326,slow=4.0,SNR=7.8						
DBIC	**Dimbokro**	**164.25**	**157**	PKP	**PKPdf**	**05 02 28.3**	**-0.8**
	comp=Z,3.0nm,1.1s,baz=210,slow=2.7,SNR=4.8						
DBIC	**Dimbokro**	**164.25**	**157**	⇑PKIKP	**PKPdf**	**05 02 28.1**	**-1.0**
TORD	**Torodi Ar. Bea**	**171.88**	**182**	PKP	**PKPdf**	**05 02 32.8**	**-1.4**
	comp=Z,2.4nm,0.9s,baz=18,slow=1.0,SNR=12						

ISK 01 05:00:05.6,39°.53N×26°.17E,h10km,ML1.5/7,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GPNR	**Gulpinar-Canak**	**0.08**	**199**	Pg	Pg	05 00 08.2	+0.3
GPNR				Sg	Sg	05 00 10.1	+0.6
EZN	**Ezine**	**0.32**	**23**	Pg	Pg	05 00 12.7	+0.7
BOZC	**Bozcaada**	**0.32**	**344**	Pg	Pg	05 00 12.4	+0.3
BOZC				Sg	Sg	05 00 17.5	+1.1
GELI	**Tayfur-Gelibol**	**0.90**	**15**	Pg	Pb	05 00 23.2	-0.1
LPK	**Lapseki**	**0.96**	**28**	Pg	Pg	05 00 24.1	+0.1
CHOS	**Chios island**	**1.15**	**184**	Pn	Pn	05 00 27.9	+0.1
ERIK	**Erikli-Kesan**	**1.17**	**13**	Pn	Pg	05 00 28.2	+0.1
ERIK				Sn	Sn	05 00 44.9	+0.9

IDC ***01*** *05:00:34.6±4.3,7°.67S×127°.45E,h143km±40km,mb3.8/9, mbtmp4.3/11,MS3.0/2,Error ellipse: s-maj=43.2km s-min=11.8km az=71.0*

NEIC ***01*** *05:00:37.1±1.8,7°.67S±0°.07×127°.59E±0°.07,h167km±8km, mb4.5/23,Error ellipse: s-maj=11.4km s-min=9.7km az=212.0*

DJA ***01*** *05:00:37.2±0.2,8°S±3°×12°7E±°,h184km±6km,M4.6/12, mb4.6/9,mB5.0/6,MLv4.8/12,Mw(mB)4.3/6,MwMwp4.9/1, Mwp5.2/1*

ISC 01 05:00:36.8±0.4**,7°.72S**±0°.05×**127°.49E**±0°.06**,h162km,n100, σ1.41**/100**,mb4.4**/22**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**3.77**	**237**		**Pn**	**05 01 37.1**	**+2.5**
SOEI	**Soe**	**3.77**	**237**	P	**Pn**	**05 01 37.7**	**+3.1**
SOEI	**Soe**	**3.77**	**237**	P	**Pn**	**05 01 37.1**	**+2.5**
SAUI	**Saumlaki**	**3.78**	**94**	Pn	**Pn**	**05 01 32.8**	**-1.8**
SAUI	**Saumlaki**	**3.78**	**94**	P	**Pn**	**05 01 35.6**	**+1.0**
SAUI	**Saumlaki**	**3.78**	**94**	P	**Pn**	**05 01 35.4**	**+0.8**
AAI	**Ambon**	**4.07**	**10**	P	**Pn**	**05 01 40.2**	**+1.9**
NLAI	**Namlea**	**4.47**	**355**	P	**Pn**	**05 01 46.6**	**+3.0**
MSAI	**Masohi**	**4.58**	**18**	P	**Pn**	**05 01 46.6**	**+1.7**
MMRI	**Maumere**	**5.28**	**260**	Pn	**Pn**	**05 01 55.1**	**+1.0**
MMRI	**Maumere**	**5.28**	**260**	P	**Pn**	**05 01 54.7**	**+0.6**
	88nm,0.6s,0.6nm						
SANI	**Sanana**	**5.83**	**345**	P	**Pn**	**05 02 03.7**	**+2.2**
SANI	**Sanana**	**5.83**	**345**	P	**Pn**	**05 02 03.2**	**+1.7**
	42nm,0.7s,552nm0.1nm						
MTN	**Manton Dam**	**6.22**	**145**	Pn	**Pn**	**05 02 06.3**	**-0.3**
MTN	**Manton Dam**	**6.22**	**145**	P	**Pn**	**05 02 06.6**	**0.0**
FAKI	**Fak Fak**	**6.72**	**45**	Pn	**Pn**	**05 02 12.1**	**-1.2**
FAKI	**Fak Fak**	**6.72**	**45**	P	**Pn**	**05 02 14.6**	**+1.3**
FAKI	**Fak Fak**	**6.72**	**45**	P	**Pn**	**05 02 15.0**	**+1.7**
	141nm,0.6s,2µm0.7nm						
KDU	**Kakadu**	**6.95**	**136**	P	**Pn**	**05 02 15.9**	**-0.4**
BASI	**Baing, Sumba**	**7.27**	**250**	P	**Pn**	**05 02 20.6**	**+0.2**
	85nm,0.7s,2µm1.1nm						
KNRA	**Kununurra**	**8.00**	**171**	Pn	**Pn**	**05 02 29.4**	**-0.8**
KNRA	**Kununurra**	**8.00**	**171**	P	**Pn**	**05 02 29.7**	**-0.5**
LUWI	**Luwuk**	**8.14**	**324**	Pn	**Pn**	**05 02 31.9**	**-0.1**
PLAI	**Plampang**	**9.68**	**263**	P	**Pn**	**05 02 52.2**	**-0.2**
FITZ	**Fitzroy Crossi**	**10.47**	**190**	Pn	**Pn**	**05 03 00.8**	**-2.1**
TWSI	**Taliwang, Sumb**	**10.55**	**264**	P	**Pn**	**05 03 02.6**	**-1.3**
	18nm,0.6s,711nm3µm						
TOLI2	**Tolitoli**	**11.04**	**322**	Pn	**Pn**	**05 03 10.6**	**+0.3**
JAGI	**Jajag, Banyuwa**	**13.23**	**266**	P	**P**	**05 03 42.5**	**-0.1**
WB0	**Warramunga Arr**	**13.71**	**151**	Pn	**Pn**	**05 03 42.2**	**-2.5**
WRAB	**Tennant Creek**	**13.84**	**152**		**Pn**	**05 03 43.6**	**-2.6**
WRA	**Warramunga Arr**	**13.84**	**152**	P	**Pn**	**05 03 44.0**	**-2.3**
	13nm,0.3s,baz=319,slow=14,SNR=180						
WRA				S	Sn	05 06 10.5	-9.5
	19nm,0.6s,baz=335,slow=22,SNR=6.7						
WB2	**Warramunga Arr**	**13.85**	**152**	Pn	**Pn**	**05 03 43.7**	**-2.7**
WR0	**Warramunga Arr**	**13.95**	**151**		**Pn**	**05 03 44.8**	**-2.9**
PSA00	**Pilbara Seismi**	**15.62**	**207**		**P**	**05 04 08.8**	**-0.3**
PSA00				IAmb	IAmb	05 04 10.7	
	comp=Z,13nm,0.7s						
PSA00	**Pilbara Seismi**	**15.62**	**207**	P	**P**	**05 04 10.4**	**+1.3**
COEN	**Coen**	**16.60**	**113**		**P**	**05 04 19.6**	**-0.4**
COEN	**Coen**	**16.60**	**113**	P	**Pn**	**05 04 21.6**	**+1.3**
UGM	**Wanagama**	**16.81**	**268**	P	**P**	**05 04 22.7**	**+0.3**
AS31	**Alice Springs**	**17.00**	**159**		**P**	**05 04 24.2**	**-0.2**
ASAR	**Alice Springs**	**17.00**	**160**	P	**Pn**	**05 04 25.2**	**+0.1**
	comp=Z,23nm,0.4s,baz=336,slow=11,SNR=178						
ASAR				S	**S**	**05 07 31.8**	**-1.7**
	comp=Z,16nm,0.9s,baz=339,slow=22,SNR=12						
ASAR				LR	LR	05 12 16.2	
	comp=Z,52nm,18.3s,baz=326,slow=41						
ASAR	**Alice Springs**	**17.00**	**160**		**P**	**05 04 23.6**	**-0.8**
AS01	**Alice Springs**	**17.02**	**159**	P	**Pn**	**05 04 25.8**	**+0.4**
WRKA	**Warakurna**	**17.23**	**178**	P	**Pn**	**05 04 28.4**	**+0.5**
QIS	**Mount Isa**	**17.32**	**139**	P	**Pn**	**05 04 29.5**	**+0.5**
SBUM	**Sibu**	**18.28**	**303**	P	**P**	**05 04 38.6**	**+0.2**
SBUM				IAmb	IAmb	05 04 42.5	
	comp=Z,20nm,0.9s						
CMJI	**Cimerak**	**18.87**	**269**	P	**P**	**05 04 43.5**	**-1.3**
	comp=Z,28nm,1.0s						
GIRL	**Giralia**	**19.56**	**219**	P	**Pn**	**05 04 54.9**	**-0.4**
BBJI	**Bungbulang**	**19.67**	**269**	P	**Pn**	**05 04 56.2**	**-0.6**
	comp=Z,22nm,0.7s						
MEEK	**Meekatharra**	**20.62**	**203**	P	**P**	**05 05 05.4**	**+1.9**
OOD	**Oodnadatta**	**21.42**	**160**	P	**P**	**05 05 13.3**	**+1.3**
CTA	**Charters Tower**	**21.94**	**126**	LR	LR	05 14 07.0	
	comp=Z,42nm,21.5s,baz=270,slow=37						
FORT	**Forrest**	**22.94**	**179**	P	**P**	**05 05 26.1**	**-0.9**
FORT				IAmb	IAmb	05 05 29.7	
	comp=Z,19nm,0.7s						
FORT	**Forrest**	**22.94**	**179**	P	**P**	**05 05 28.5**	**+1.5**
MULG	**Mulgathing**	**23.27**	**166**	P	**P**	**05 05 31.4**	**+1.4**
MORW	**Morawa**	**23.82**	**205**	P	**P**	**05 05 35.9**	**+1.0**
MORW	**Morawa**	**23.82**	**205**	P	**P**	**05 05 36.7**	**+1.7**
KMBL	**Kambalda**	**24.10**	**192**	P	**P**	**05 05 40.2**	**+2.7**
BLDU	**Ballidu**	**24.91**	**203**	P	**P**	**05 05 46.2**	**+1.3**
BBOO	**Buckleboo**	**26.20**	**163**	P	**P**	**05 05 56.1**	**-0.3**
BBOO				IAmb	IAmb	05 06 18.0	
	comp=Z,10nm,1.1s						
BBOO	**Buckleboo**	**26.20**	**163**	P	**P**	**05 05 57.8**	**+1.3**
STKA	**Stephens Creek**	**27.39**	**153**	P	**P**	**05 06 08.1**	**+0.9**
	comp=Z,1.6nm,0.5s,baz=319,slow=12,SNR=4.7						
	comp=Z,1.6nm,0.5s						
STKA	**Stephens Creek**	**27.39**	**153**	P	**P**	**05 06 05.6**	**-1.5**
IPM	**Ipoh**	**29.06**	**294**	P	**P**	**05 06 21.7**	**-0.4**
IPM				IAmb	IAmb	05 06 42.9	
	comp=Z,12nm,1.0s						
CMSA	**Cobar Meteorol**	**29.15**	**147**	P	**P**	**05 06 24.1**	**+1.4**
RPSI	**Rantau Prapat**	**30.32**	**289**	P	**P**	**05 06 32.8**	**-0.5**
RPSI				IAmb	IAmb	05 06 34.5	
	comp=Z,8.2nm,0.8s						
ARPS	**Mount Arapiles**	**31.73**	**158**	P	**P**	**05 06 46.8**	**+1.4**
CAN	**Canberra**	**33.81**	**147**	P	**P**	**05 07 04.2**	**+0.6**
CAN				IAmb	IAmb	05 07 22.5	
	comp=Z,24nm,1.3s						
CMAR	**Chiang Mai Arr**	**38.34**	**313**	P	**P**	**05 07 42.1**	**-0.2**
	comp=Z,1.4nm,0.4s,baz=144,slow=6.8,SNR=8.9						
	comp=Z,1.4nm,0.4s						
PZH	**PanZhiHua**	**42.22**	**325**	P	**P**	**05 08 16.3**	**+2.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,50nm,4.9s						
KSRS	**Korea Array**	**44.94**	**0**	P	**P**	**05 08 35.1**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=185,slow=12,SNR=1.8						
	comp=Z,0.5nm,0.3s						
LZH	**Lanzhou**	**48.92**	**334**	*e*P	**P**	**05 09 10.9**	**+4.2**
LZH				pP	pwP	05 09 47.0	-0.7
LZH				sP	sP	05 10 05.0	+5.7
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
HHC	**Hu-ho-hao-te**	**50.51**	**344**	*e*P	**P**	**05 09 19.4**	**+0.9**
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,5.4s						
USRK	**Ussuriysk Ar.**	**51.84**	**4**	P	**P**	**05 09 29.0**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=210,slow=11,SNR=1.2						
	comp=Z,0.6nm,0.5s						
KHZ	**Kahutara**	**53.20**	**138**	P	**P**	**05 09 38.3**	**0.0**
GTA	**Gaotai**	**53.45**	**333**	*e*P	**P**	**05 09 40.3**	**-0.1**
GTA				sP	sP	05 10 30.7	-2.6
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SONM	**Songino Array**	**58.38**	**343**	P	**P**	**05 10 14.7**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=159,slow=7.4,SNR=6.4						
	comp=Z,0.5nm,0.5s						
SONM	**Songino Array**	**58.38**	**343**	P	**P**	**05 10 14.8**	**-0.5**
WMQ	**Urumqi**	**62.68**	**329**	*e*P	**P**	**05 10 46.8**	**+2.4**
MK31	**Makanchi Array**	**67.50**	**328**	P	**P**	**05 11 15.3**	**0.0**
MKAR	**Makanchi Array**	**67.50**	**328**	P	**P**	**05 11 14.4**	**-0.9**
	comp=Z,2.3nm,0.6s,baz=127,slow=7.8,SNR=34						
	comp=Z,2.3nm,0.6s						
MKAR	**Makanchi Array**	**67.50**	**328**	P	**P**	**05 11 14.9**	**-0.5**
AAK	**Ala-Archa**	**69.51**	**321**	P	**P**	**05 11 27.9**	**-0.2**
ZAA0	**Zalesovo Array**	**71.16**	**335**	P	**P**	**05 11 37.2**	**-0.4**
ZAA0				IAmb	IAmb	05 11 49.9	
	comp=Z,5.3nm,0.5s						
ZALV	**Zalesovo Beam**	**71.16**	**335**	P	**P**	**05 11 36.0**	**-1.6**
	comp=Z,2.2nm,0.4s,baz=131,slow=5.0,SNR=11						
	comp=Z,2.2nm,0.4s						
ZALV	**Zalesovo Beam**	**71.16**	**335**	P	**P**	**05 11 37.1**	**-0.5**
KURK	**Kurchatov**	**71.86**	**330**		**P**	**05 11 41.4**	**-0.5**
KURK				IAmb	IAmb	05 11 42.2	
	comp=Z,4.5nm,0.6s						
VNDA	**Vanda**	**72.04**	**173**	P	**P**	**05 11 43.4**	**+0.8**
	comp=Z,3.6nm,0.9s,baz=325,slow=9.6,SNR=16						
	comp=Z,3.6nm,0.9s						
VNDA	**Vanda**	**72.04**	**173**	P	**P**	**05 11 43.4**	**+0.8**
VNDA				IAmb	IAmb	05 11 48.2	
	comp=Z,17nm,1.4s						
KKAR	**Karatay Array**	**72.27**	**320**	P	**P**	**05 11 43.9**	**-0.6**
UOSS	**Minazif**	**76.55**	**298**	P	**P**	**05 12 07.5**	**-2.2**
VOI	**Vohitsoka**	**78.56**	**249**	P	**P**	**05 12 21.8**	**+0.7**
VOI				IAmb	IAmb	05 12 46.8	
	comp=Z,21nm,1.4s						
ABKAR	**Akbulak array**	**81.54**	**322**	P	**P**	**05 12 35.2**	**-1.1**
QSPA	**South Pole Qui**	**82.26**	**180**	P	**P**	**05 12 40.3**	**+0.4**
	comp=Z,4.0nm,0.7s,baz=311,slow=1.2,SNR=22						
	comp=Z,4.0nm,0.7s						
QSPA	**South Pole Qui**	**82.26**	**180**	P	**P**	**05 12 40.5**	**+0.6**
QSPA				IAmb	IAmb	05 12 41.4	
	comp=Z,4.3nm,0.8s						
RAYN	**Ar Rayn**	**85.77**	**294**	P	**P**	**05 12 56.9**	**-1.5**
RAYN				IAmb	IAmb	05 12 59.5	
	comp=Z,7.2nm,1.4s						
ARCES	**ARCESS Array B**	**101.38**	**339**	PKiKP	**PKiKP**	**05 18 31.4**	**-1.2**
	comp=Z,4.8nm,1.1s,baz=87,slow=4.3,SNR=6.4						
YKA	**Yellowknife Ar**	**109.49**	**26**	PKiKP	**PKiKP**	**05 18 46.5**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=286,slow=1.7,SNR=6.5						
TORD	**Torodi Ar. Bea**	**126.50**	**281**	PKP	**PKPdf**	**05 19 21.0**	**-0.6**
	comp=Z,3.0nm,1.1s,baz=73,slow=1.8,SNR=10						
TXAR	**Lajitas Array**	**127.43**	**59**	PKP	**PKPdf**	**05 19 22.9**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=220,slow=2.4,SNR=2.8						
CPUP	**Villa Florida**	**145.83**	**172**	PKPbc	**PKPab**	**05 19 58.3**	**0.0**
	comp=Z,1.7nm,0.4s,baz=176,slow=4.1,SNR=7.6						

DDA ***01*** *05:01:10.2±0.0,39°.59N×26°.13E,h7km±3km,ML1.1*

ISK 01 05:01:08.4,39°.50N×26°.10E,h11km,ML1.6/9**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GPNR	**Gulpinar-Canak**	**0.05**	**149**	Pg	Pg	05 01 10.9	+0.3
GPNR				Sg	Sg	05 01 12.8	+0.6
BOZC	**Bozcaada**	**0.34**	**354**	Pg	Pg	05 01 15.8	+0.5
BOZC	**Bozcaada**	**0.34**	**354**	P	Pg	05 01 15.3	0.0
BOZC				S	Sg	05 01 19.2	-0.6
EZN	**Ezine**	**0.37**	**29**	Pg	Pg	05 01 16.1	+0.4
EZN				Sg	Sb	05 01 21.9	-0.8
BAYC	**CANAKKALE_Bayr**	**0.42**	**55**	P	Pg	05 01 17.2	+0.4
BAYC				S	Sg	05 01 22.6	+0.3
BAYC				*i* AML	AML	05 01 23.0	
	comp=N,15nm,0.2s						
BAYC				*i* AML	AML	05 01 24.0	
	comp=E,16nm,0.2s						
ECEA	**Canakkale, Ece**	**0.55**	**6**	P	Pb	05 01 19.5	-0.4
ECEA				S	Sb	05 01 27.8	+0.1
ECEA				*i* AML	AML	05 01 31.0	
	comp=E,15nm,0.4s						
COMU	**Canakkale**	**0.66**	**26**	Pg	Pb	05 01 21.7	-0.3
COMU				Sg	Sb	05 01 32.2	+1.0
BUHA	**Balikesir, Bur**	**0.76**	**90**	P	Pn	05 01 24.8	-0.2
BUHA				S	Sb	05 01 34.5	+0.5
BUHA				*i* AML	AML	05 01 36.0	
	comp=N,8.5nm,0.4s						
BUHA				*i* AML	AML	05 01 38.0	
	comp=E,8.5nm,0.4s						
GELI	**Tayfur-Gelibol**	**0.94**	**18**	Pg	Pb	05 01 27.1	+0.4
LPK	**Lapseki**	**1.01**	**30**	Pg	Pb	05 01 28.1	+0.2
CHOS	**Chios island**	**1.11**	**182**	Pn	Pn	05 01 30.2	+0.2
URLA	**Izmir**	**1.21**	**161**	Pn	Pg	05 01 31.4	-0.2
ERIK	**Erikli-Kesan**	**1.21**	**15**	Pn	Pg	05 01 31.6	-0.1
ERIK				Sn	Sn	05 01 48.4	+0.8
KRBG	**Karabiga-Canak**	**1.28**	**46**	Pn	Pb	05 01 32.7	+0.2

IDC ***01*** *05:01:02.8±0.8,7°.73S×129°.33E,h0km,mb4.4/11, mbtmp4.4/11,MS3.3/1,Error ellipse: s-maj=43.4km s-min=18.7km az=75.0*

NEIC ***01*** *05:01:17.7±2.0,7°.84S±0°.08×129°.72E±0°.09,h142km±6km, mb4.4/17,Error ellipse: s-maj=14.8km s-min=8.7km az=126.0*

ISC 01 05:01:12.7±0.5**,7°.70S**±0°.07×**129°.4E**±0°.1**,h79km,n40, σ1.87**/38**,mb4.4**/16**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.90**	**99**	Pn	**Pn**	**05 01 47.2**	**+3.9**
FAKI	**Fak Fak**	**5.53**	**31**	Pn	Pn	05 02 37.3	+4.8
KNRA	**Kununurra**	**7.95**	**184**	Pn	**Pn**	**05 03 09.7**	**+4.1**
FITZ	**Fitzroy Crossi**	**10.97**	**199**	Pn	**Pn**	**05 03 48.6**	**+1.9**
WRA	**Warramunga Arr**	**13.08**	**159**	Sn	**Sn**	**05 06 34.6**	**-4.6**
	6.6nm,0.3s,baz=336,slow=22,SNR=4.8						
PSA00	**Pilbara Seismi**	**16.59**	**213**	P	**Pn**	**05 05 00.7**	**+0.3**
PSA00	**Pilbara Seismi**	**16.59**	**213**	P	**Pn**	**05 05 02.3**	**+1.9**
PSA00				IAmb	IAmb	05 05 06.5	
	comp=Z,15nm,0.9s						
SBUM	**Sibu**	**19.88**	**300**	P	**Pn**	**05 05 40.0**	**-0.1**
SBUM				IAmb	IAmb	05 05 44.2	
	comp=Z,11nm,0.9s						
GIRL	**Giralia**	**20.82**	**223**	P	**P**	**05 05 50.2**	**+2.3**
GIRL				IAmb	IAmb	05 05 57.1	
	comp=Z,28nm,1.0s						
BBOO	**Buckleboo**	**25.74**	**167**	P	**P**	**05 06 30.9**	**-5.0**
BBOO				IAmb	IAmb	05 06 38.0	
	comp=Z,7.9nm,0.7s						
STKA	**Stephens Creek**	**26.61**	**156**	P	**P**	**05 06 42.2**	**-1.5**
	comp=Z,5.8nm,0.5s,baz=332,slow=10,SNR=8.1						
STKA				LR	LR	05 18 53.9	
	comp=Z,58nm,18.6s,baz=347,slow=40						
	comp=Z,5.8nm,0.5s						
STKA	**Stephens Creek**	**26.61**	**156**	P	**P**	**05 06 40.8**	**-2.9**
JOW	**Kunigami**	**34.34**	**358**	P	**P**	**05 07 52.0**	**+0.1**
	comp=Z,9.6nm,0.6s,baz=173,slow=8.5,SNR=5.0						
	comp=Z,9.6nm,0.6s						
JOW	**Kunigami**	**34.34**	**358**	P	**P**	**05 07 52.1**	**+0.1**
JOW				IAmb	IAmb	05 07 56.3	
	comp=Z,7.9nm,1.1s						
CMAR	**Chiang Mai Arr**	**39.73**	**311**	P	**P**	**05 08 37.4**	**-0.4**
	comp=Z,2.4nm,0.3s,baz=149,slow=6.9,SNR=5.3						
	comp=Z,2.4nm,0.3s						
MJAR	**Matsushiro Arr**	**44.78**	**10**	P	**P**	**05 09 17.9**	**-0.7**
	comp=Z,1.9nm,0.6s,baz=181,slow=9.0,SNR=5.0						
	comp=Z,1.9nm,0.6s						
KSRS	**Korea Array**	**44.94**	**358**	P	**P**	**05 09 20.2**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=171,slow=8.6,SNR=4.9						
	comp=Z,1.6nm,0.6s						
DSZ	**Denniston Nort**	**50.51**	**139**	P	P	05 09 57.5	-5.4
DSZ				IAmb	IAmb	05 10 06.2	
	comp=Z,12nm,1.0s						
USRK	**Ussuriysk Ar.**	**51.71**	**2**	P	**P**	**05 10 11.8**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=177,slow=5.5,SNR=5.1						
	comp=Z,1.8nm,0.6s						
USRK	**Ussuriysk Ar.**	**51.71**	**2**	P	**P**	**05 10 10.3**	**-1.5**
LSA	**Lhasa**	**52.30**	**317**	P	**P**	**05 10 16.2**	**-0.8**
ULN	**Ulaanbaatar**	**58.74**	**343**	P	**P**	**05 11 03.3**	**+0.8**
ULN				IAmb	IAmb	05 11 09.2	
	comp=Z,1.3nm,0.7s						
SONM	**Songino Array**	**58.91**	**342**	P	**P**	**05 11 03.7**	**0.0**
	comp=Z,1.3nm,0.6s,baz=161,slow=6.9,SNR=6.6						
	comp=Z,1.3nm,0.6s						
SONM	**Songino Array**	**58.91**	**342**	P	**P**	**05 11 01.6**	**-2.0**
SONM				IAmb	IAmb	05 11 05.3	
	comp=Z,1.3nm,0.7s						
KSH	**Kashi**	**68.13**	**318**	P	**P**	**05 12 05.0**	**+0.4**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MK31	**Makanchi Array**	**68.48**	**327**	P	**P**	**05 12 06.5**	**0.0**
MKAR	**Makanchi Array**	**68.48**	**327**	P	**P**	**05 12 06.4**	**-0.1**
	comp=Z,7.9nm,0.4s,baz=127,slow=7.9,SNR=47						
	comp=Z,7.9nm,0.4s						
MKAR	**Makanchi Array**	**68.48**	**327**		**P**	**05 12 06.5**	**0.0**
MAKZ	**Makanchi**	**68.66**	**327**		**P**	**05 12 07.6**	**0.0**
MAKZ				IAmb	IAmb	05 12 08.8	
	comp=Z,4.8nm,0.5s						
ZALV	**Zalesovo Beam**	**71.94**	**334**	P	**P**	**05 12 27.6**	**+0.1**
	comp=Z,2.0nm,0.4s,baz=140,slow=7.2,SNR=1.7						
	comp=Z,2.0nm,0.4s						
KURK	**Kurchatov**	**72.80**	**329**	P	**P**	**05 12 32.0**	**-0.6**
KK31	**Karatay Array**	**73.47**	**319**	P	**P**	**05 12 36.2**	**-0.6**
KKAR	**Karatay Array**	**73.47**	**319**	P	**P**	**05 12 36.2**	**-0.6**
QSPA	**South Pole Qui**	**82.28**	**180**	P	**P**	**05 13 26.0**	**+0.6**
	comp=Z,2.3nm,0.8s,baz=260,slow=4.2,SNR=2.7						
	comp=Z,2.3nm,0.8s						
QSPA	**South Pole Qui**	**82.28**	**180**	P	**P**	**05 13 24.2**	**-1.2**
ABKAR	**Akbulak array**	**82.68**	**322**	P	**P**	**05 13 26.7**	**-0.9**
ILAR	**Eielson Array**	**94.23**	**25**	P	**P**	**05 14 22.6**	**0.0**
	comp=Z,0.3nm,0.8s,baz=248,slow=4.9,SNR=3.1						
	comp=Z,0.3nm,0.8s						
TXAR	**Lajitas Array**	**125.80**	**59**	PKP	**PKiKP**	**05 20 08.7**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=219,slow=3.9,SNR=6.2						
TORD	**Torodi Ar. Bea**	**128.35**	**281**	PKP	**PKPdf**	**05 20 11.9**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=78,slow=1.9,SNR=4.2						
PLCA	**Paso Flores**	**128.42**	**161**	PKP	**PKiKP**	**05 20 13.4**	**+2.0**
	comp=Z,3.5nm,1.1s,baz=66,slow=1.6,SNR=3.1						

IDC ***01*** *05:04:20.8±5.0,15°.06N×92°.67W,h0km,mb3.4/2, mbtmp3.3/4,ML3.3/2,MS2.4/1,Error ellipse: s-maj=159.4km s-min=28.3km az=35.0*

MEX ***01*** *05:04:21.9±0.5,14°.67N×93°.10W,h91km±19km,MD4.0*

ISC 01 05:04:20.1±1.7**,14°.63N**±0°.07×**93°.17W**±0°.04**,h11km**±10km**, n21,σ2.26**/36**,Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.92**	**72**	*i* P	**Pn**	**05 04 38.1**	**-0.7**
THIG				*e*S	**Sn**	**05 04 51.5**	**-0.5**
PATR	**El Naranjo**	**1.02**	**62**	*e*P	**Pg**	**05 04 39.7**	**-0.1**
PATR				*e*S	**Sn**	**05 04 54.9**	**-0.2**
PCIG		**1.07**	**357**	*i* P	**Pg**	**05 04 41.0**	**+0.4**
PCIG				*e*S	**Sg**	**05 04 55.1**	**+0.5**
PAVE	**Pavencul**	**1.11**	**60**	*e*P	**Pg**	**05 04 41.2**	**-0.3**
PAVE				*e*S	**Sg**	**05 04 56.3**	**+0.3**
CHUJ	**Union Juarez**	**1.12**	**66**	*e*P	**Pg**	**05 04 41.3**	**-0.4**
CHUJ				*e*S	**Sg**	**05 04 55.5**	**-0.9**
CCIG	**Comitan**	**1.92**	**31**	*e*P	**Pg**	**05 04 56.0**	**-0.9**
CCIG				*e*S	**Sg**	**05 05 22.7**	**+0.8**
TGBT	**Tuxtla Gutierr**	**2.13**	**2**	*e*P	**Pn**	**05 04 53.4**	**-2.3**
TGBT				*e*S	**Sn**	**05 05 20.6**	**-1.5**
TGIG		**2.14**	**1**	*e*P	**Pb**	**05 04 58.2**	**-0.6**
TGIG				*e*S	**Sb**	**05 05 25.7**	**+0.4**
NILT	**Santiago Nilte**	**2.38**	**324**	*e*P	**Pn**	**05 04 58.3**	**-0.7**
NILT				*e*S	**Sn**	**05 05 28.9**	**+0.8**
CMIG	**Matias Romero**	**2.95**	**326**	Pn	**Pn**	**05 05 07.7**	**+0.8**
	5.1nm,0.3s,baz=159,slow=12,SNR=103						
CMIG				Sn	**Sn**	**05 05 44.8**	**+2.4**
	11nm,0.3s,baz=71,slow=5.8,SNR=6.6						
CMIG				Lg	Lg	05 05 54.4	
	18nm,0.3s,baz=210,slow=18,SNR=7.7						
	9.7nm,0.3s						
CMIG	**Matias Romero**	**2.95**	**326**	*e*P	**Pn**	**05 05 07.6**	**+0.7**
CMIG				*e*S	**Sn**	**05 05 44.4**	**+2.1**
HUIG	**Huatulco**	**3.06**	**292**	*e*P	**Pn**	**05 05 06.5**	**-1.8**
HUIG				*e*S	**Sn**	**05 05 42.3**	**-2.6**
NEUV	**Arroyo Zacate**	**3.98**	**321**	*e*P	**Pn**	**05 05 21.3**	**+0.3**
NEUV				*e*S	**Sn**	**05 06 10.6**	**+3.1**
PEIG	**Puerto Escondi**	**4.07**	**290**	*e*P	**Pn**	**05 05 21.7**	**-0.7**
PEIG				*e*S	Sn	05 06 00.4	-10
PMUV	**Sontecomapan**	**4.32**	**335**	*e*P	**Pn**	**05 05 25.4**	**-0.3**
PMUV				*e*S	**Sn**	**05 06 09.8**	**-6.4**
SCIG	**Sabancuy**	**4.71**	**23**	*e*P	**Pn**	**05 05 32.6**	**+1.5**
SCIG				*e*S	**Sn**	**05 06 23.8**	**-1.9**
JAUV	**Jalcomulco**	**5.85**	**324**	*e*P	**Pn**	**05 05 46.6**	**-0.2**
JAUV				*e*S	**Sn**	**05 06 46.1**	**-8.0**
JTS	**Las Juntas de**	**9.11**	**117**	LR	LR	05 09 33.1	
	comp=Z,25nm,21.7s,baz=30,slow=35						
TXAR	**Lajitas Array**	**17.56**	**328**	P	**P**	**05 08 26.9**	**+0.9**
	baz=148,slow=16,SNR=2.4						
	0.2nm,0.7s						
NVAR	**Mina Array Bea**	**32.48**	**322**	P	**P**	**05 10 53.7**	**+2.8**
	0.3nm,0.6s,baz=114,slow=8.0,SNR=1.9						
	0.3nm,0.6s						
YKA	**Yellowknife Ar**	**50.16**	**347**	P	**P**	**05 13 15.1**	**-0.2**
	0.4nm,0.7s,baz=153,slow=7.5,SNR=6.7						
	0.4nm,0.7s						

MAN ***01*** *05:10:49.3,13°.83N×120°.53E,h117km,mb4.8,ML3.7, MS3.7*

IDC ***01*** *05:10:53.7±3.5,13°.87N×120°.78E,h180km±34km, mb4.0/24,mbtmp4.5/26,Error ellipse: s-maj=17.9km s-min=8.9km az=62.0*

NEIC ***01*** *05:10:55.9±1.7,13°.89N±0°.09×120°.6E±0°.1,h190km±7km, mb4.5/66,Error ellipse: s-maj=16.9km s-min=12.7km*

az=89.0

DJA ***01*** *05:10:59.9±1.7, 14°N±6°×12°1E±1°1, h232^{km}±19^{km}, M4.4/12, mB5.1/5, mb4.4/12, Mw(mB)4.4/5*

ISC 01 05:10:48.5±0.3, **13°.85N**±0°.03×**120°.53E**±0°.04, **h120**^{km}, **n163,** σ**1^s.61**/178, **mb4.5**/64, **12C-14D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.30	248	⇑*i*P	Pn	05 11 07.7	+2.3
LUBP				*e*S	Sn	05 11 20.9	+2.7
MACP	Maragondon, Ca	0.45	23	⇑*i*P	Pn	05 11 07.7	+1.6
MACP				*e*S	Sn	05 11 21.3	+1.9
TGY	Tagaytay City	0.47	57	⇓*e*P	Pn	05 11 09.1	+2.8
TGY				*i*S	Sn	05 11 22.9	+3.1
PGP	Puerto Galera	0.53	130	⇑*i*P	Pn	05 11 08.3	+1.6
PGP				*i*S	Sn	05 11 21.9	+1.5
QVP	Quezon City--P	0.90	31	⇓*i*P	Pn	05 11 11.8	+2.3
QVP				*e*S	Sn	05 11 28.6	+3.2
LQP	Lukban	1.01	75	⇓*i*P	Pn	05 11 12.9	+2.0
LQP				*e*S	Sn	05 11 30.4	+2.7
BOAC	Boac	1.33	107	⇑*e*P	Pn	05 11 15.9	+1.9
BOAC				*e*S	Sn	05 11 34.4	+1.1
SJMP	San Jose	1.49	157	⇓*e*P	Pn	05 11 17.4	+1.6
SJMP				*e*S	Sn	05 11 37.5	+0.9
PCPH	Palayan	1.79	18	⇓*e*P	Pn	05 11 20.1	+0.7
PCPH				*e*S	Sn	05 11 45.5	+2.6
BUSP	Coron	1.86	190	⇑*e*P	Pn	05 11 21.7	+1.4
BUSP				*e*S	Sn	05 11 45.6	+1.1
SCZP	Santa Cruz	2.01	343	⇓*e*P	Pn	05 11 24.3	+2.2
SCZP				*e*S	Sn	05 11 46.1	-1.6
OTRP	Odiongan	2.07	135	⇑*e*P	Pn	05 11 24.1	+1.3
OTRP				*e*S	Sn	05 11 49.5	+0.4
BALP	Baler	2.14	28	⇓*e*P	Pn	05 11 25.5	+1.9
BALP				*e*S	Sn	05 11 53.4	+2.8
JCNP	Jose Panganiba	2.15	78	⇓*i*P	Pn	05 11 25.4	+1.6
JCNP				*e*S	Sn	05 12 04.6	+14
IBAJ	Ibajay, Aklan	2.57	141	⇑*e*P	Pn	05 11 30.8	+1.6
BOLP	Bolinao	2.59	347	⇑*e*P	Pn	05 11 31.9	+2.4
BOLP				*e*S	Sn	05 12 02.5	+1.6
ENPP	El Nido	2.84	203	⇑*e*P	Pn	05 11 35.0	+2.2
ENPP				*e*S	Sn	05 12 07.5	+0.8
CUYO	Cuyo Island	3.02	171	⇓*i*P	Pn	05 11 36.5	+1.4
CUYO				*e*S	Sn	05 12 11.1	+0.1
RCP	Roxas	3.13	136	⇓*e*P	Pn	05 11 38.9	+2.3
PVCP	Virac	3.53	94	⇓*e*P	Pn	05 11 43.8	+2.1
GUIM	Jordan	3.78	148	⇑*e*P	Pn	05 11 47.7	+2.6
GUIM				*e*S	Sn	05 12 16.5	-12
CVP	Callao Caves	4.03	18	⇓*e*P	Pn	05 11 49.7	+1.2
APYP	Conner	4.05	10	⇑*e*P	Pn	05 11 51.3	+2.6
CNP	Catarman	4.24	108	⇑*e*P	Pn	05 11 55.2	+4.0
MYLDM	Lahad Datu	8.84	193		Pn	05 13 00.4	+7.0
MPSI	Mapaga	13.44	183	P	P	05 14 01.7	+2.2
	6.0nm,0.9s						
SBUM	Sibu	13.99	217		P	05 14 06.6	+0.9
JOW	Kunigami	14.81	28	P	P	05 14 14.3	-0.4
	26nm,1.0s,baz=192,slow=10,SNR=6.0						
JOW	Kunigami	14.81	28	P	P	05 14 15.6	+0.9
SPSI	Sidrap Palu	17.71	183	P	Pn	05 14 51.6	+3.9
	9.8nm,0.6s						
BBKI	Banjar Baru	18.10	199	P	Pn	05 14 56.3	+3.9
KAPI	Kappang	18.75	182	P	Pn	05 15 01.4	+1.3
	9.7nm,0.5s,baz=26,slow=19,SNR=9.2						
KAPI	Kappang	18.75	182	P	P	05 14 60.0	+1.7
KAPI				IAmb	IAmb	05 15 02.5	
	comp=Z,11nm,0.7s						
BKSI	Bulukumba	19.05	181	P	Pn	05 15 06.3	+2.8
	comp=Z,7.7nm,1.2s						
ENH	Enshi	19.27	330	P	P	05 15 04.8	+1.0
ENH				IAmb	IAmb	05 15 13.7	
	comp=Z,10nm,0.6s						
PHRA	Phrae	20.04	286	P	P	05 15 14.5	+2.2
CRAI	Chiangrai	20.28	291	P	P	05 15 16.8	+1.9
CMAR	Chiang Mai Arr	21.23	285	P	P	05 15 27.5	+2.4
	comp=Z,2.5nm,0.3s,baz=94,slow=7.5,SNR=11						
	comp=Z,2.5nm,0.3s						
CMAR	Chiang Mai Arr	21.23	285	P	P	05 15 27.7	+2.6
CHTO	Chiang Mai	21.29	286	P	P	05 15 27.7	+2.0
PLAI	Plampang	22.69	187	P	P	05 15 41.4	+1.2
	comp=Z,41nm,0.7s,comp=Z,865nm						
XAN	Xi'an	22.70	334	⇓P	P	05 15 40.2	+0.1
XAN				pmax	pmax		
	comp=Z,19nm,0.8s						
TWSI	Taliwang, Sumb	22.73	189	P	P	05 15 40.8	+0.3
	comp=Z,10nm,0.6s,comp=Z,739nm						
JAGI	Jajag, Banyuwa	23.06	196	P	P	05 15 44.0	+0.3
JAGI				IAmb	IAmb	05 15 47.2	
	comp=Z,14nm,0.8s						
JAGI	Jajag, Banyuwa	23.06	196	P	P	05 15 45.7	+2.0
	comp=Z,19nm,0.8s						
JMN	Monobe	23.21	29	P	P	05 15 44.8	-0.2
TNCH	TengChong	23.51	302	⇓P	P	05 15 48.4	+0.4
TNCH				pmax	pmax		
	comp=Z,120nm,4.8s						
SDSI	Sungai Dareh	23.96	234	P	P	05 15 53.8	+1.9
	comp=Z,11nm,0.6s						
RPSI	Rantau Prapat	24.05	244	P	P	05 15 54.1	+1.4
RPSI				IAmb	IAmb	05 15 54.8	
	comp=Z,5.2nm,0.6s						
KSRS	Korea Array	24.42	14	P	P	05 15 54.0	-1.8
	comp=Z,1.4nm,0.7s,baz=192,slow=9.8,SNR=5.3						
	comp=Z,1.4nm,0.7s						
BJT	Baijiatuau	26.35	352	P	P	05 16 14.4	+1.1
BJT				IAmb	IAmb	05 16 14.6	
	comp=Z,7.9nm,0.5s						
LZH	Lanzhou	26.74	329	*e*P	P	05 16 19.1	+2.1
LZH				pmax	pmax		
	comp=Z,18nm,1.5s						
SHL	Shillong	29.31	298	P	P	05 16 40.6	+0.5
SHL				IAmb	IAmb	05 16 41.4	
	comp=Z,9.7nm,0.7s						
GTA	Gaotai	31.33	328	*e*P	P	05 16 59.0	+1.3
GTA				sP	pP	05 17 11.8	-12
GTA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
USRK	Ussuriysk Ar.	31.80	16	P	P	05 16 59.3	-2.2
	comp=Z,1.8nm,0.7s,baz=200,slow=6.9,SNR=5.1						
	comp=Z,1.8nm,0.7s						
USRK	Ussuriysk Ar.	31.80	16	P	P	05 17 00.7	-0.8
ODAN	Odare	33.55	298	*e*P	P	05 17 18.4	+1.0
	comp=Z,30nm,0.7s						
RAMN	Ramite	34.25	298	*e*P	P	05 17 24.9	+1.4
	comp=Z,25nm,0.8s						
JIRN	Jiri	34.80	299	*e*P	P	05 17 29.6	+1.3
	comp=Z,38nm,0.5s						
GUN	Gumba	35.13	299	*e*P	P	05 17 32.2	+1.1
	comp=Z,21nm,0.5s						
PSA00	Pilbara Seismi	35.20	181	P	P	05 17 30.6	-0.7
PSA00				IAmb	IAmb	05 17 31.1	
	comp=Z,11nm,0.8s						
PKI	Pulchoki	35.44	298	*e*P	P	05 17 34.4	+0.7
PKIN	Phulchoki	35.45	298	*e*P	P	05 17 34.2	+0.4
ULN	Ulaanbaatar	35.72	344	P	P	05 17 36.3	+0.6
ULN				IAmb	IAmb	05 17 36.8	
	comp=Z,9.8nm,1.2s						
SONM	Songino Array	35.87	344	P	P	05 17 36.9	0.0
	comp=Z,5.5nm,0.6s,baz=164,slow=10,SNR=56						
	comp=Z,5.5nm,0.6s						
SONM	Songino Array	35.87	344	P	P	05 17 37.3	+0.4
SONM				IAmb	IAmb	05 17 38.5	
	comp=Z,6.3nm,0.6s						
WB0	Warramunga Arr	36.08	157	P	P	05 17 36.5	-2.3
WB0				IAmb	IAmb	05 17 46.0	
	comp=Z,9.3nm,1.4s						
WRAB	Tennant Creek	36.22	158	P	P	05 17 37.8	-2.2
WRAB				IAmb	IAmb	05 17 47.8	
	comp=Z,13nm,1.5s						
WRA	Warramunga Arr	36.22	158	P	P	05 17 37.5	-2.6
	comp=Z,1.3nm,0.4s,baz=343,slow=8.7,SNR=26						
	comp=Z,1.3nm,0.4s						
WRA	Warramunga Arr	36.22	158	P	P	05 17 37.2	-2.9
WB2	Warramunga Arr	36.23	158	P	P	05 17 38.1	-1.9
WR0	Warramunga Arr	36.31	157	P	P	05 17 38.9	-1.9
HEH	HeiHe	36.74	7	*e*P	P	05 17 44.2	+0.1
HEH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HEH				pmax	pmax		
	comp=Z,110nm,4.8s						
GIRL	Giralia	36.79	190	P	P	05 17 44.6	-0.1
KOLN	Koldanda	37.04	298	*e*P	P	05 17 48.3	+1.1
DANN	Dangsing	37.05	299	*e*P	P	05 17 47.7	+0.3
	comp=Z,17nm,0.6s						
PYUN	Piuthan	37.65	298	*e*P	P	05 17 53.0	+0.7
	comp=Z,8.6nm,0.5s						
AS31	Alice Springs	39.51	161	P	P	05 18 07.4	-0.3
ASAR	Alice Springs	39.51	161	P	P	05 18 06.1	-1.6
	comp=Z,2.4nm,0.5s,baz=337,slow=6.9,SNR=28						
	comp=Z,2.4nm,0.5s						
ASAR	Alice Springs	39.51	161	P	P	05 18 07.0	-0.7
CTAO	Charters Tower	42.16	143	P	P	05 18 28.6	-0.9
CTAO				IAmb	IAmb	05 18 36.5	
	comp=Z,20nm,1.5s						
MORW	Morawa	42.88	186	P	P	05 18 34.3	-0.8
FORT	Forrest	44.95	171	P	P	05 18 50.4	-1.3
FORT				IAmb	IAmb	05 18 56.0	
	comp=Z,13nm,1.0s						
MK31	Makanchi Array	45.82	324	P	P	05 18 59.3	+0.9
MKAR	Makanchi Array	45.82	324	P	P	05 18 59.3	+0.9
	comp=Z,4.3nm,0.6s,baz=124,slow=9.0,SNR=55						
	comp=Z,4.3nm,0.6s						
MKAR	Makanchi Array	45.82	324	P	P	05 18 59.4	+1.0
MAKZ	Makanchi	46.01	323	P	P	05 19 00.8	+0.9
KSH	Kashi	46.68	312	P	P	05 19 04.4	-1.0
KSH				S	S	05 25 41.6	-4.4
ULHL	Ulahol	47.51	315	P	P	05 19 13.4	+1.6
	SNR=19						
TKM2	Tokmak 2	48.21	316	P	P	05 19 18.5	+1.3
	SNR=7.5						
KBK	Karagaybulak	48.55	315	P	P	05 19 21.6	+1.8
	SNR=8.2						
UCH	Uchtor	48.69	315	P	P	05 19 23.1	+1.9
	SNR=17						
BBOO	Buckleboo	48.71	163	P	P	05 19 18.9	-2.0
BBOO				IAmb	IAmb	05 19 27.3	
	comp=Z,20nm,1.4s						
AAK	Ala-Archa	48.85	315	P	P	05 19 22.8	+0.7
ZAA0	Zalesovo Array	48.85	333	P	P	05 19 21.6	-0.1
ZAA0				IAmb	IAmb	05 19 21.7	
	comp=Z,8.2nm,0.4s						
ZALV	Zalesovo Beam	48.85	333	P	P	05 19 21.3	-0.4
	comp=Z,8.0nm,0.4s,baz=122,slow=7.0,SNR=53						
	comp=Z,8.0nm,0.4s						
ZALV	Zalesovo Beam	48.85	333	P	P	05 19 21.6	-0.1
USP	Ospenovka	49.08	316	P	P	05 19 24.6	+0.9
	SNR=8.4						
EKS2	Erkin-Say	49.35	315	P	P	05 19 27.4	+1.5
	SNR=6.3						
STKA	Stephens Creek	49.75	156	P	P	05 19 27.2	-1.6
	comp=Z,0.9nm,0.4s,baz=338,slow=5.7,SNR=3.3						
	comp=Z,0.9nm,0.4s						
STKA	Stephens Creek	49.75	156	P	P	05 19 27.6	-1.1
KURBB	Kurchatov Arra	49.98	326	P	P	05 19 31.0	+0.7
	comp=Z,16nm,0.8s,baz=132,slow=8.0,SNR=57						
	comp=Z,16nm,0.8s						
KURK	Kurchatov	49.98	326	P	P	05 19 30.7	+0.4
KBL	Kabul	50.69	303	P	P	05 19 36.8	+0.5
KBL				IAmb	IAmb	05 19 37.8	
	comp=Z,5.1nm,0.6s						
GAR	Garm	50.70	309	P	P	05 19 36.5	+0.4
GAR				IAmb	IAmb	05 19 37.7	
	comp=Z,16nm,1.0s						
CHGR	Chuyangaron	51.49	309	P	P	05 19 41.4	-0.6
CHGR				IAmb	IAmb	05 19 44.2	
	comp=Z,14nm,0.7s						
KK31	Karatay Array	51.76	314	P	P	05 19 44.2	+0.3
KK31				IAmb	IAmb	05 19 45.2	
	comp=Z,6.8nm,0.9s						
KKAR	Karatay Array	51.76	314	P	P	05 19 44.4	+0.6
KKAR				IAmb	IAmb	05 19 45.2	
	comp=Z,6.8nm,0.9s						
BVAR	Borovoye Array	55.56	326	P	P	05 20 11.7	+0.3
	comp=Z,7.6nm,0.7s,baz=111,slow=8.1,SNR=37						
	comp=Z,7.6nm,0.7s						
BRVK	Borovoye	55.63	326	P	P	05 20 12.3	+0.5
DZM	Mont Dzumac	57.45	128	P	P	05 20 24.5	-0.7
	comp=Z,6.4nm,0.6s,baz=250,slow=12,SNR=8.9						
	comp=Z,6.4nm,0.6s						
GEYT	Alibeck	59.92	306	P	P	05 20 43.0	+0.9
	comp=Z,4.1nm,0.6s,baz=158,slow=4.2,SNR=9.4						
	comp=Z,4.1nm,0.6s						
ABKAR	Akbulak array	60.52	319	P	P	05 20 45.9	0.0
ABKAR	Akbulak array	60.52	319	IAmb	IAmb	05 20 46.7	
	comp=Z,8.6nm,0.6s						
BILL	Bilibino	61.62	18	P	P	05 20 52.2	-0.8
BILL				IAmb	IAmb	05 20 53.0	
	comp=Z,6.9nm,0.7s						
AKTO	Aktyubinsk	62.00	320	P	P	05 20 55.9	-0.1
	comp=Z,6.3nm,0.5s,baz=99,slow=8.0,SNR=15						
	comp=Z,6.3nm,0.5s						
ARU	Arti	63.17	327	P	P	05 21 02.7	-0.9
	comp=Z,8.5nm,0.4s,baz=132,slow=6.2,SNR=18						
	comp=Z,8.5nm,0.4s						
ARU	Arti	63.17	327	P	P	05 21 02.9	-0.7
MSVF	Nonsavu	64.84	117	P	P	05 21 15.6	+0.4
	comp=Z,1.6nm,0.4s,baz=281,slow=11,SNR=5.2						
KIRV	Kirov	68.45	328	P	P	05 21 36.8	-0.6
	comp=Z,9.3nm,0.5s,baz=55,slow=7.0,SNR=1.8						
	comp=Z,9.3nm,0.5s						
BELG	Belogornoye	68.72	321	P	P	05 21 37.9	-1.3
	comp=Z,22nm,0.7s,baz=136,slow=0.6,SNR=17						
	comp=Z,22nm,0.7s						
RAYN	Ar Rayn	71.06	290	P	P	05 21 53.8	-0.3
RAYN				IAmb	IAmb	05 21 55.3	
	comp=Z,7.3nm,0.9s						
AKH	Akhalkalaki	71.30	309	P	P	05 21 55.4	0.0
KBZ	Khabaz	71.67	312	P	P	05 21 56.8	-0.5
	comp=Z,3.0nm,0.9s,baz=119,slow=5.6,SNR=7.1						
	comp=Z,3.0nm,0.9s						
KIV	Kislovodsk	71.81	312	P	P	05 21 58.4	+0.1
GURO	Guroymak-BITLI	72.58	306	P	P	05 22 03.4	+0.4
GURO				IAmb	IAmb	05 22 04.9	
	comp=Z,8.5nm,0.5s						
KLMR	Klimovskoe	73.64	330	*e*P	P	05 22 06.3	-2.4
KLMR				AMP		05 22 07.5	
	comp=Z,23nm,1.9s						
BKZ	Black Stump Fm	74.15	138	P	P	05 22 10.9	-1.1
BKZ				IAmb	IAmb	05 22 36.8	
	comp=Z,15nm,1.4s						
TTA	Tatalina	74.80	28	P	P	05 22 15.2	-0.3
K20K	Telida	75.67	28	P	P	05 22 20.5	+0.1
K20K				IAmb	IAmb	05 22 37.8	
	comp=Z,12nm,1.5s						
IMAR	Indian Mountai	75.72	25	P	P	05 22 20.2	-0.4
CAST	Castle Rocks	76.56	28	P	P	05 22 25.4	-0.1
CAST				IAmb	IAmb	05 22 25.9	
	comp=Z,12nm,0.8s						
BPAW	Bear Paw Mtn.	77.00	27	P	P	05 22 26.6	-1.2
MCK	McKinley	77.94	27	P	P	05 22 32.0	-1.1
MCK				IAmb	IAmb	05 22 32.7	
	comp=Z,8.4nm,0.6s						
PMR	Palmer	78.10	29	P	P	05 22 32.8	-1.2
PMR				IAmb	IAmb	05 22 32.8	
	comp=Z,4.9nm,0.9s						
KEV	Kevo	78.34	339	P	P	05 22 34.2	-0.9
ILAR	Eielson Array	78.69	26	P	P	05 22 34.6	-2.5
	comp=Z,0.6nm,0.6s,baz=274,slow=4.2,SNR=10.0						
	comp=Z,0.6nm,0.6s						
ARA0	ARCESS Array S	78.89	339	*e*P	P	05 22 37.4	-0.8
ARCES	ARCESS Array B	78.89	339	P	P	05 22 37.2	-1.0
	comp=Z,2.6nm,0.4s,baz=76,slow=7.0,SNR=45						
	comp=Z,2.6nm,0.4s						
ARCES	ARCESS Array B	78.89	339	P	P	05 22 37.6	-0.6
ARCES				IAmb	IAmb	05 22 47.6	
	comp=Z,17nm,1.3s						
BRTR	Keskin Array B	78.93	308	P	P	05 22 36.1	-3.1
	comp=Z,1.1nm,0.5s,baz=314,slow=38,SNR=3.2						
BRTR	Keskin Array B	78.93	308	P	P	05 22 40.4	+1.2
BMAR	Burnt Mountain	79.20	23	P	P	05 22 39.6	-0.4
SPB2	Spitsbergen Ar	79.41	348	P	P	05 22 40.3	-0.6
SPB2				IAmb	IAmb	05 22 58.4	
	comp=Z,17nm,1.0s						
SPA0	Spitsbergen Ar	79.42	348	*e*P	P	05 22 40.2	-0.7
SPA0				IAmb	IAmb	05 22 41.5	
	comp=Z,9.8nm,1.1s						
M24K	Tolsona, Glenn	79.42	29	P	P	05 22 41.4	+0.1
KTK1	Kautokeino	79.78	339	*e*P	P	05 22 41.9	-1.2
KTK1				IAmb	IAmb	05 22 44.2	
	comp=Z,65nm,1.7s						
FIA1	FINESS Array S	80.08	331	P	P	05 22 43.6	-1.1
FINES	FINESS Array B	80.08	331	P	P	05 22 43.4	-1.3
	comp=Z,1.4nm,0.6s,baz=63,slow=6.4,SNR=15						
	comp=Z,1.4nm,0.6s						
FINES	FINESS Array B	80.08	331	P	P	05 22 43.7	-1.0
AKASG	Malin Array Be	80.25	320	P	P	05 22 44.2	-1.6
	comp=Z,0.2nm,0.3s,baz=72,slow=4.6,SNR=5.9						
	comp=Z,0.2nm,0.3s						
JETT	Jettan, Norway	80.64	339	*e*P	P	05 22 47.5	-0.2
JETT				IAmb	IAmb	05 22 48.0	
	comp=Z,94nm,1.7s						
STEI	Steigen	82.91	338	*e*P	P	05 22 58.1	-1.5
STEI				IAmb	IAmb	05 23 01.4	
	comp=Z,207nm,2.1s						
INK	Inuvik	83.02	21	P	P	05 22 59.1	-1.0
INK				IAmb	IAmb	05 22 59.7	
	comp=Z,5.1nm,0.9s						
FAUS	Fauske	83.08	338	*e*P	P	05 22 58.9	-1.5
ALN	Alexandroupoli	84.41	311	P	P	05 23 06.8	-0.9
C36M	Paulatuk	85.72	19	P	P	05 23 13.0	-0.7
NC405	NORSAR Array S	86.80	333	P	P	05 23 17.8	-1.4
NC602	NORSAR Array S	87.03	332	*e*P	P	05 23 19.1	-1.2
NB2	NORSAR Subarra	87.06	333	P	P	05 23 17.6	-2.9
	comp=Z,1.4nm,1.0s,baz=64,slow=4.8						
NB2	NORSAR Subarra	87.06	333	P	P	05 23 17.6	-2.9
	slow=4.8						
NOA	NORSAR Array B	87.06	333	P	P	05 23 17.5	-2.9
	comp=Z,0.9nm,0.7s,baz=68,slow=4.7,SNR=5.8						
	comp=Z,0.9nm,0.7s						
YKA	Yellowknife Ar	92.70	22	P	P	05 23 45.8	-1.0
	comp=Z,0.4nm,0.4s,baz=305,slow=4.4,SNR=9.1						
	comp=Z,0.4nm,0.4s						

JMA ***01*** *05:17:57.3±0.3, 32°N±3°×13°8E±°, h405^{km}, MV3.8/35, FAR S OFF TOKAI DISTRICT*

IDC ***01*** *05:17:58.3±1.1, 32°.22N×137°.73E, h393^{km}±13^{km}, mb3.0/10, mbtmp3.7/12, Error ellipse: s-maj=31.9km s-min=15.5km az=69.0*

ISC 01 05:17:58.3±0.9, **32°.36N**±0°.09×**137°.88E**±0°.08, **h400**^{km}, **n26,** σ**1^s.37**/31, **mb3.2**/10, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	1.77	64	P	Pn	05 18 53.6	+0.8
	100nm,0.6s,baz=70,slow=21,SNR=6.6						
JHJ				S	S	05 19 34.0	-2.9
	120nm,0.7s,baz=235,slow=23,SNR=2.3						
JHJ2	Mitsune	1.79	65	*e*P	Pn	05 18 53.5	+0.6
JTNC	Tanabenakahech	2.40	308	P	Pn	05 18 56.3	-0.6
JAI	Aioi	3.21	297	P	Pn	05 19 02.6	-0.6
BSO3	Boso 3	3.28	41	P	Pn	05 19 02.7	-0.6
BSO1	Boso 1	3.45	48	P	Pn	05 19 03.9	-0.7
BSO1				S	S	05 19 57.5	-1.0
JMN	Monobe	3.63	293	P	Pn	05 19 06.5	-0.4
JRY	Ryogami san	3.74	13	P	Pn	05 19 09.1	+1.2
JRY				*e*S	S	05 20 04.0	-0.4
MJAR	Matsushiro Arr	4.18	4	P	Pn	05 19 12.5	+0.5
	1.9nm,0.5s,baz=187,slow=11,SNR=4.6						
JAG	Ashikaga	4.25	17	P	Pn	05 19 12.3	-0.4
JTO	Tosashimizu	4.32	278	P	Pn	05 19 12.3	-1.0
JHS	Saijyo	4.76	305	P	Pn	05 19 17.9	+0.1
JHO	Hitachi	4.78	27	P	Pn	05 19 17.3	-0.7
JHO				S	S	05 20 19.3	-3.5
JFK	Kawauchi	5.56	25	*e*P	Pn	05 19 25.4	-0.7
JFK				S	S	05 20 34.0	-3.7
JNU	Nakatsue	5.95	279	P	Pn	05 19 28.9	-1.4
	6.5nm,0.6s,baz=94,slow=8.3,SNR=6.4						
JSJ	Shimokoshiki	6.97	267	P	Pn	05 19 40.4	-1.1
SONM	Songino Array	28.37	312	P	P	05 23 18.6	+0.9
	0.4nm,0.8s,baz=115,slow=6.8,SNR=2.5						
	0.4nm,0.8s						
ZALV	Zalesovo Beam	43.09	316	P	P	05 25 21.3	+0.7
	0.8nm,0.3s,baz=74,slow=8.1,SNR=2.9						
	0.8nm,0.3s						
MKAR	Makanchi Array	44.30	306	P	P	05 25 30.9	+0.5
	0.5nm,0.5s,baz=90,slow=9.2,SNR=7.7						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	46.73	311	P	P	05 25 49.1	+0.2
	0.4nm,0.3s,baz=95,slow=7.1,SNR=4.6						
	0.4nm,0.3s						
BVAR	Borovoye Array	51.67	315	P	P	05 26 26.3	+0.4
	0.5nm,0.4s,baz=84,slow=5.9,SNR=3.5						
	0.5nm,0.4s						
WRA	Warramunga Arr	52.12	184	P	P	05 26 28.6	-0.9
	0.2nm,0.3s,baz=0.7,slow=7.7,SNR=6.3						
	0.2nm,0.3s						
ASAR	Alice Springs	55.84	184	P	P	05 26 56.0	-0.1
	0.4nm,0.8s,baz=17,slow=13,SNR=1.9						
	0.4nm,0.8s						
ARCES	ARCESS Array B	67.33	339	P	P	05 28 12.9	+1.7
	2.8nm,1.0s,baz=90,slow=5.4,SNR=1.6						
	2.8nm,1.0s						
FINES	FINESS Array B	71.57	332	P	P	05 28 38.0	+1.0
	0.7nm,0.5s,baz=35,slow=5.1,SNR=8.6						
	0.7nm,0.5s						
AKASG	Malin Array Be	76.17	322	P	P	05 29 04.0	+0.6
	0.3nm,0.3s,baz=50,slow=5.8,SNR=4.7						
	0.3nm,0.3s						

TUL ***01*** *05:25:22.6±0.7, 36°.44N±0°.01×98°.79W±0°.03, h7^{km}±7^{km}, ML3.4, mb_Lg2.9/66(NEIC), ML3.2/20(NEIC), Error ellipse: s-maj=3.2km s-min=1.4km az=83.0*

ANF ***01*** *05:25:23.3±0.4, 36°.40N×98°.80W, h7^{km}±4^{km}, ML3.6/11, Error ellipse: s-maj=5.3km s-min=3.9km az=95.0*

NEIC ***01*** *05:25:23.2±0.7, 36°.431N±0°.009×98°.79W±0°.02, h4^{km}±6^{km}, Error ellipse: s-maj=2.4km s-min=1.2km az=97.0*

ISC 01 05:25:22.7±1.1, **36°.43N**±0°.02×**98°.76W**±0°.02, **h3**^{km}±10^{km}, **n86,** σ**0^s.83**/67, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.20	255	Pg	Pg	05 25 26.7	+0.1
U32A				Sg	Sg	05 25 29.7	+0.5
U32A				IAML		05 25 30.1	
	comp=N,5μm,0.4s						
U32A	Winter Ranch,	0.20	255	P	Pg	05 25 26.7	+0.1
	baz=73						
U32A				S	Sg	05 25 29.4	+0.2
	baz=73						
NOKA	Waynoka	0.24	326	Pg	Pg	05 25 27.5	+0.1
NOKA				Sg	Sg	05 25 31.1	+0.5
NOKA				IAML		05 25 31.3	
	comp=N,8μm,0.3s						
OK035	E0210 Rd and N	0.28	9	Pg	Pg	05 25 28.4	+0.3
OK035				Sg	Sg	05 25 32.6	+0.9
OK035				IAML		05 25 32.9	
	comp=N,4μm,0.3s						
OK032	Salt Plains WL	0.58	50		Pg	05 25 33.9	+0.1
OK032				Sg	Sg	05 25 42.0	+0.7
OK032				IAML		05 25 42.3	
	comp=N,2μm,0.2s						
OK032				IAML		05 25 43.3	
	comp=N,2μm,0.1s						
CROK	Carrier	0.63	83		Pg	05 25 35.1	+0.2
CROK				Sg	Sg	05 25 44.0	+1.0
CROK				IAML		05 25 46.0	
	comp=E,1μm,0.2s						
CROK				IAML		05 25 46.7	
	comp=N,998nm,0.3s						
ELIS	Ellis County	0.65	236	Pg	Pg	05 25 35.3	+0.2
CSTR	Hydro, Custer	0.79	176	Pg	Pg	05 25 37.7	-0.1
KAN14	Manchester OK	0.83	51		Pg	05 25 38.1	-0.5
GC02	Grant County #	0.84	60	Pg	Pg	05 25 38.6	-0.2
KAN17	Caldwell West	1.01	52	Pg	Pg	05 25 41.6	-0.4
KAN12	Harper NE Stat	1.06	35		Pg	05 25 42.4	-0.6
KAN06	Argonia West S	1.09	41		Pg	05 25 43.0	-0.6
KAN06				IAML		05 25 59.1	
	comp=N,650nm,0.1s						
KAN06				IAML		05 26 00.0	
	comp=E,644nm,0.1s						
KAN09	Caldwell North	1.16	52	Pg	Pg	05 25 44.4	-0.5
KS21	Milan North St	1.23	46	Pg	Pb	05 25 45.6	-0.9
OK029	Liberty Lake	1.23	121		Pn	05 25 44.8	-2.0
BLOK	Blackwell	1.29	75	Pg	Pn	05 25 46.7	-0.9
OK025	Westminster Rd	1.43	126	Pg	Pn	05 25 48.9	-0.7
OK050	Pawnee Station	1.44	91		Pn	05 25 49.2	-0.4
OK046	Pawnee Station	1.50	91	Pg	Pn	05 25 50.1	-0.4
FNO	Franklin	1.61	136		Pn	05 25 52.3	+0.3
OK053	SW of W Deep R	1.65	104		Pn	05 25 52.3	-0.3
OK030	Cody Creek RV	1.68	107		Pn	05 25 52.7	-0.2
QUOK	Quay	1.68	98		Pn	05 25 53.2	+0.3
WMOK	Wichita Mounta	1.69	181		Pn	05 25 52.3	-0.8
WMOK	Wichita Mounta	1.69	181	P	Pn	05 25 52.5	-0.6
	baz=360						
WMOK				S	Sn	05 26 15.3	0.0
	baz=360						
T35A	Sooner Cattle	1.87	74	Pn	Pn	05 25 56.4	+0.8
T35A				IAmb_Lg		05 26 22.5	
	comp=Z,51nm,0.9s						
T35B	Sooner Cattle	1.87	74	P	Pn	05 25 56.4	+0.8
	baz=256						
T35B				S	Sb	05 26 21.6	+0.2
	baz=256						
DEOK	Depew	1.93	107		Pn	05 25 56.9	+0.5
X34A	Smith Ranch, M	1.98	157		Pn	05 25 58.1	+1.1
R32A	Long Quarter,	1.99	1		Pn	05 25 57.4	+0.1

R32A	Long Quarter,	1.99	1	P	Pn	05 25 57.7	+0.5
	baz=182						
R32A				S	Sb	05 26 23.7	-1.0
	baz=182						
W35A	Tecumseh	2.00	129	Pn	Pb	05 25 58.8	-0.9
TUL1	Leonard	2.46	101		Pn	05 26 03.5	-0.1
TUL1				IAmb_Lg		05 26 41.2	
	comp=Z,37nm,0.8s						
TUL1	Leonard	2.46	101	P	Pn	05 26 04.1	+0.4
	baz=283						
TUL1				S	Sn	05 26 35.3	+1.0
	baz=283						
CBKS	Cedar Bluff	2.50	342		Pn	05 26 06.0	+1.7
CBKS	Cedar Bluff	2.50	342	P	Pn	05 26 04.5	+0.2
	baz=162						
CBKS				S	Sn	05 26 36.6	+1.3
	baz=162						
WTFS	Witchita Falls	2.67	175	Pn	Pn	05 26 07.2	+0.6
WTFS				IAmb_Lg		05 26 54.2	
	comp=Z,12nm,0.7s						
LOOK	Love County	2.76	152		Pn	05 26 08.6	+0.8
LOOK				IAmb_Lg		05 26 56.9	
	comp=Z,36nm,0.8s						
AMTX	Amarillo	2.83	238		Pn	05 26 10.1	+1.1
AMTX				IAmb_Lg		05 26 59.1	
	comp=Z,61nm,0.8s						
AMTX	Amarillo	2.83	238	P	Pn	05 26 09.6	+0.6
	baz=56						
AMTX				S	Sn	05 26 45.0	+1.4
	baz=56						
RLO	Rose Lookout	3.03	94	IAmb_Lg		05 27 07.6	
	comp=Z,29nm,0.8s						
KSU1	Kansas State U	3.16	32		Pn	05 26 13.8	+0.4
KSU1	Kansas State U	3.16	32	P	Pn	05 26 14.1	+0.7
	baz=213						
X37A	Clayton	3.32	123		Pn	05 26 15.4	-0.2
X37A	Clayton	3.32	123	P	Pn	05 26 15.9	+0.4
	baz=305						
Z35A	Perchaven, San	3.33	158		Pn	05 26 16.2	+0.5
Z35A	Perchaven, San	3.33	158	P	Pn	05 26 15.9	+0.2
	baz=338						
FW03	Perrin-Whitt E	3.43	170	IAmb_Lg		05 27 09.4	
	comp=Z,8.5nm,0.9s						
U38A	Gravette	3.53	89		Pn	05 26 19.2	+0.8
U38A				IAmb_Lg		05 27 14.0	
	comp=Z,26nm,0.7s						
U38A	Gravette	3.53	89	P	Pn	05 26 19.0	+0.6
	baz=271						
FW06	Azle	3.59	164	IAmb_Lg		05 27 20.9	
	comp=Z,18nm,0.9s						
FW07	Weatherford	3.81	168	IAmb_Lg		05 27 32.6	
	comp=Z,15nm,0.8s						
ABTX	Abilene, Hawle	3.87	191		Pn	05 26 22.6	-0.5
HHAR	Hobbs	3.90	91		Pn	05 26 23.7	+0.3
KSCO	Kaye Shedlock'	4.00	311	IAmb_Lg		05 27 37.9	
	comp=Z,28nm,0.8s						
POST	Post	4.04	215	IAmb_Lg		05 27 32.1	
	comp=Z,23nm,0.8s						
MSTX	Muleshoe	4.10	234	IAmb_Lg		05 27 41.0	
	comp=Z,28nm,0.8s						
FW13	Cleburne	4.22	164	IAmb_Lg		05 27 46.1	
	comp=Z,14nm,0.8s						
FW14	Alvarado	4.23	162	IAmb_Lg		05 27 42.9	
	comp=Z,20nm,0.8s						
FW16	Waxahatchie	4.23	158	IAmb_Lg		05 27 41.0	
	comp=Z,27nm,0.7s						
N33A	J Bar K, Exete	4.42	13	IAmb_Lg		05 27 53.7	
	comp=Z,19nm,0.8s						
Z38A	Mt. Pleasant	4.43	134	IAmb_Lg		05 27 49.6	
	comp=Z,34nm,0.8s						
S39A	Bolivar	4.53	72	IAmb_Lg		05 27 54.3	
	comp=Z,26nm,0.8s						
T25A	Trinidad	4.59	281		Pn	05 26 29.7	-3.5
MIAR	Mount Ida	4.63	112	IAmb_Lg		05 28 02.3	
	comp=Z,30nm,1.2s						
BGNE	Belgrade	4.99	5		Pn	05 26 38.0	-0.5
BGNE				IAmb_Lg		05 28 07.3	
	comp=Z,19nm,0.8s						
P38A	Dawn	5.21	51		Pn	05 26 40.7	-0.9
P38A				IAmb_Lg		05 28 23.3	
	comp=Z,16nm,0.8s						
R40A	Maddies Statio	5.50	68	IAmb_Lg		05 28 24.9	
	comp=Z,20nm,0.8s						
SDCO	Great Sand Dun	5.54	286		Pn	05 26 47.0	+0.6
Q24A	Divide	5.66	298	IAmb_Lg		05 28 22.4	
	comp=Z,19nm,0.9s						
JCT	Junction City	6.00	189	IAmb_Lg		05 28 45.4	
	comp=Z,23nm,0.9s						
K31A	O'Neill	6.18	0	IAmb_Lg		05 28 47.8	
	comp=Z,22nm,0.7s						
CCM	Cathedral Cave	6.21	73	IAmb_Lg		05 28 43.9	
	comp=Z,23nm,0.7s						
PBMO	Poplar Bluff	6.71	85	IAmb_Lg		05 29 00.1	
	comp=Z,26nm,0.7s						
FVM	French Village	6.83	74	IAmb_Lg		05 29 03.8	
	comp=Z,15nm,0.8s						
SCIA	State Center	6.96	37	IAmb_Lg		05 29 12.1	
	comp=Z,26nm,0.7s						
SMCO	Snowmass	7.05	295	IAmb_Lg		05 29 10.0	
	comp=Z,22nm,0.8s						
SLM	Saint Louis	7.12	69	IAmb_Lg		05 29 08.0	
	comp=Z,23nm,0.8s						
PHWY	Pilot Hill	7.13	315	IAmb_Lg		05 29 22.9	
	comp=Z,12nm,0.8s						
N23A	Red Feather La	7.17	311	IAmb_Lg		05 29 14.6	
	comp=Z,21nm,1.1s						
S44A	Carbondale	7.71	78	IAmb_Lg		05 29 28.8	
	comp=Z,18nm,0.9s						
SUSD	Miller	8.00	359	IAmb_Lg		05 29 54.2	
	comp=Z,11nm,0.8s						
833A	Chaparral WMA,	8.10	184	IAmb_Lg		05 29 44.2	
	comp=Z,11nm,1.1s						
K22A	Casper	8.63	318	IAmb_Lg		05 30 08.7	
	comp=Z,12nm,0.9s						
RSSD	Black Hills	8.67	334	IAmb_Lg		05 30 06.2	
	comp=Z,8.6nm,0.8s						

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*IDC **01** 05:42:45.8±1.1,25°.68N×142°.20E,h0^{km},mb3.7/7, mbtmp3.7/7,MS3.0/1,Error ellipse: s-maj=51.5km s-min=16.4km az=90.0*

ISC 01 05:42:50.8±1.2**,25°.6N**±0°.1×**142°.2E**±0°.3**,h35^{km},n12,** σ**1^s.30**/9**,mb3.6**/7**,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.47	360	LR	LR	05 43 04.8	
	comp=Z,50nm,20.6s,baz=50,slow=13						
JCJ				Pn	Pn	05 43 14.8	0.0
	73nm,0.3s,baz=157,slow=18,SNR=50						
JCJ				Sn	Sn	05 43 35.0	+2.1
	115nm,0.3s,baz=270,slow=24,SNR=21						
KSRS	Korea Array	16.92	318	LR	LR	05 52 55.9	
	comp=Z,48nm,19.0s,baz=140,slow=36						
H11N2	WAKE ISLAND Hy	23.52	99	T	T	06 11 46.6	
	baz=288						
H11N1	WAKE ISLAND Hy	23.52	99	T	T	06 11 48.5	
	baz=288						
H11N3	WAKE ISLAND Hy	23.54	99	T	T	06 11 45.6	
	baz=288						
KLR	Kul'dur	24.94	344	P	P	05 48 09.1	-1.5
	1.7nm,0.7s,baz=153,slow=10,SNR=7.1						
	1.7nm,0.7s						
WRA	Warramunga Arr	45.92	190	P	P	05 51 11.8	+1.5
	1.5nm,0.5s,baz=11,slow=8.5,SNR=16						
	1.5nm,0.5s						
ASAR	Alice Springs	49.65	190	P	P	05 51 39.5	+0.4
	0.3nm,0.6s,baz=15,slow=11,SNR=4.6						
	0.3nm,0.6s						
ZALV	Zalesovo Beam	50.61	320	P	P	05 51 45.6	-0.5
	0.3nm,0.4s,baz=104,slow=12,SNR=1.8						
	0.3nm,0.4s						
MKAR	Makanchi Array	51.42	311	P	P	05 51 52.7	+0.3
	0.3nm,0.8s,baz=83,slow=8.4,SNR=3.6						
	0.3nm,0.8s						
YKA	Yellowknife Ar	73.44	28	P	P	05 54 18.5	-0.7
	0.2nm,0.5s,baz=294,slow=6.3,SNR=4.1						
	0.2nm,0.5s						
FINES	FINESS Array B	79.27	334	P	P	05 54 51.8	-0.5
	1.4nm,0.6s,baz=64,slow=6.3,SNR=8.7						
	1.4nm,0.6s						

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*ISK **01** 05:58:29.9,39°.49N×26°.04E,h10^{km},ML2.8/17*

*THE **01** 05:58:30.7,39°.49N×26°.04E,h9^{km}±1^{km},ML2.6/10,Error ellipse: s-maj=1.7km s-min=0.8km az=84.0*

*DDA **01** 05:58:30.8±0.0,39°.49N×26°.08E,h9^{km},ML2.8*

*ATH **01** 05:58:31.3,39°.50N×26°.11E,h13^{km}±1^{km},ML2.6/7,Error ellipse: s-maj=2.1km s-min=0.7km az=71.0*

ISC 01 05:58:30.5±0.8**,39°.49N**±0°.02×**26°.06E**±0°.02**,h11^{km}**±5^{km}**,** **n63,**σ**0^s.46**/101**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.07	78	P	Pg	05 58 32.9	0.0
KOCA				S	Sg	05 58 34.3	-0.3
GPNR	Gulpinar-Canak	0.07	119	Pg	Pg	05 58 32.5	-0.3
GPNR				Sg	Sg	05 58 34.3	-0.3
PRK	Paraskevi	0.29	145	P	Pg	05 58 36.9	+0.4
PRK				S	Sg	05 58 40.8	+0.3
	2µm,0.4s						
PRK	Paraskevi	0.29	145	P	Pg	05 58 37.0	+0.4
PRK				S	Sg	05 58 41.3	+0.8
PRK				AML	AML	05 58 41.7	
	comp=E,4934µm,0.5s						
PRK				AML	AML	05 58 41.9	
	comp=N,3780µm,0.3s						
BOZC	Bozcaada	0.35	360	Pg	Pg	05 58 37.8	+0.2
BOZC				Sg	Sg	05 58 43.2	+0.9
BOZC	Bozcaada	0.35	360	P	Pg	05 58 37.8	+0.2
BOZC				S	Sg	05 58 43.3	+0.9
EZN	Ezine	0.40	32	P	Pg	05 58 38.5	+0.1
EZN				S	Sg	05 58 43.8	+0.2
EZN	Ezine	0.40	32	Pg	Pg	05 58 38.3	-0.1
EZN				Sg	Sg	05 58 44.5	+0.9
BAYC	CANAKKALE_Bayr	0.46	56	P	Pg	05 58 39.4	-0.1
BAYC				S	Sg	05 58 45.7	+0.1
AYVA	Ayvalik	0.52	110	P	Pg	05 58 40.9	+0.2
AYVA				S	Sg	05 58 48.5	+0.8
ECEA	Canakkale, Ece	0.56	9	P	Pg	05 58 41.9	+0.4
ECEA				S	Sb	05 58 50.2	-0.2
COMU	Canakkale	0.69	28	Pg	Pg	05 58 43.8	-0.1
COMU				Sg	Sb	05 58 54.2	+0.1
GOKA	anakkale-Gk	0.71	351	P	Pg	05 58 44.5	+0.2
GOKA				S	Sg	05 58 54.1	+0.5
GOKA				*i* AML	AML	05 58 58.0	
	comp=N,414nm,0.2s						
GADA	Gvkgeada	0.71	350	Pg	Pg	05 58 44.0	-0.3
DKL	Dikili	0.78	122	Pg	Pb	05 58 46.4	+0.3
LIA	Limnos Island	0.79	302	P	Pg	05 58 46.1	+0.4
LIA				S	Sb	05 58 57.2	+0.3
	comp=N,595nm,0.2s						
LIA	Limnos Island	0.79	302	P	Pb	05 58 46.6	+0.4
LIA				S	Sb	05 58 58.0	+1.1
LIA				AML	AML	05 59 00.3	
	comp=E,1223µm,0.2s						
LIA				AML	AML	05 59 02.1	
	comp=N,1143µm,0.3s						
BUHA	Balikesir, Bur	0.79	89	P	Pg	05 58 45.5	-0.3
BUHA				S	Sg	05 58 55.8	-0.3
KARB	zmir-Karabur	0.87	161	P	Pb	05 58 48.0	+0.4
KARB				S	Sb	05 58 59.7	+0.4
CANM	Can-anakkale	0.93	56	Pg	Pg	05 58 48.4	0.0
ZEDA	zmir-Bergama	0.95	123	P	Pb	05 58 49.0	+0.1
ZEDA				S	Sb	05 59 02.2	+0.6
GELI	Tayfur-Gelibol	0.96	19	Pg	Pg	05 58 48.7	-0.4
PSRA	Psara	1.02	202	P	Pn	05 58 51.1	+0.4
PSRA				S	Sn	05 59 04.6	-0.4
PSRA				AML	AML	05 59 09.4	
	comp=E,2658µm,0.3s						
PSRA				AML	AML	05 59 09.8	
	comp=N,2005µm,0.2s						
LPK	Lapseki	1.04	31	Pg	Pg	05 58 49.9	-0.6
SMTH	Samothraki Isl	1.06	338	P	Pg	05 58 50.5	-0.4
SMTH				S	Sb	05 59 05.0	+0.2
	comp=N,130nm,0.2s						
SMTH	Samothraki Isl	1.06	338	P	Pg	05 58 50.9	0.0
SMTH				S	Sb	05 59 05.3	+0.5
SMTH				AML	AML	05 59 07.9	
	comp=E,232µm,0.2s						
SMTH				AML	AML	05 59 08.5	
	comp=N,289µm,0.3s						
CHOS	Chios island	1.10	180	P	Pb	05 58 51.3	-0.3
CHOS				S	Sb	05 59 06.4	+0.4
	comp=N,522nm,0.3s						
CHOS	Chios island	1.10	180	Pn	Pb	05 58 51.4	-0.2
CHOS	Chios island	1.10	180	P	Pg	05 58 51.9	+0.2
CHOS				S	Sb	05 59 06.5	+0.6
CHOS				AML	AML	05 59 10.9	
	comp=E,1136µm,0.4s						
CHOS				AML	AML	05 59 11.2	
	comp=N,955µm,0.3s						
URLA	Izmir	1.20	159	Pn	Pb	05 58 52.9	-0.4
URLA	Izmir	1.20	159	P	Pb	05 58 52.7	-0.6
URLA				S	Sb	05 59 08.9	0.0
URLA				*i* AML	AML	05 59 15.0	
	comp=N,202nm,0.5s						
CAVK	Edirne/Enez-Ca	1.20	4	P	Pn	05 58 52.8	-0.5
CAVK				S	Sn	05 59 09.8	+0.2
ERIK	Erikli-Kesan	1.23	16	Pn	Pn	05 58 53.4	-0.2
BALY	Balya	1.23	78	P	Pn	05 58 53.9	+0.1
BALY				S	Sb	05 59 10.0	+0.2
ENEZ	Enez	1.25	3	P	Pn	05 58 53.7	-0.2
ENEZ				S	Sg	05 59 10.8	+0.1
	comp=N,272nm,0.5s						
ENEZ	Enez	1.25	3	Pn	Pn	05 58 53.7	-0.2
STEP	BALIKESIR_Sava	1.29	94	P	Pn	05 58 53.8	-0.8
STEP				S	Sg	05 59 13.4	+1.3
ZEYE	Izmir, Urla-Ze	1.30	164	P	Pn	05 58 54.3	-0.2
ZEYE				S	Sb	05 59 11.7	+0.2
KRBG	Karabiga-Canak	1.31	46	Pn	Pn	05 58 54.9	+0.1
BLCB	Balcova	1.34	145	P	Pg	05 58 56.2	-0.1
BLCB				S	Sg	05 59 13.6	-0.2
BLCB	Balcova	1.34	145	Pn	Pb	05 58 55.7	0.0
GONE	Gonen-Balikesi	1.37	66	Pn	Pn	05 58 55.8	+0.2
KNL	Balıkesir	1.38	55	P	Pn	05 58 55.9	+0.3
KNL				S	Sg	05 59 14.6	-0.2
KNL				*i* AML	AML	05 59 17.0	
	comp=N,201nm,0.7s						
ALN	Alexandroupoli	1.41	360	P	Pn	05 58 56.0	-0.1
ALN				S	Sg	05 59 15.4	-0.4
	comp=N,188nm,0.6s						
ALN	Alexandroupoli	1.41	360	Pn	Pn	05 58 55.9	-0.1
ALN	Alexandroupoli	1.41	360	P	Pn	05 58 55.5	-0.6
ALN				AML	AML	05 59 16.9	
	comp=E,399µm,0.7s						
ALN				AML	AML	05 59 16.9	
	comp=N,354µm,0.4s						
BALB	Balikesir	1.42	83	Pn	Pn	05 58 56.3	+0.1
KESN	Edirne-Kesan	1.42	20	P	Pn	05 58 56.7	+0.1
KESN				S	Sg	05 59 16.0	-0.3
RKY	Sarkoy-Tekirda	1.47	35	Pn	Pn	05 58 57.1	0.0
AKS	Akhisar	1.50	113	Pn	Pn	05 58 57.4	+0.1
THAS	Thassos island	1.52	318	P	Pn	05 58 57.3	-0.3
THAS				S	Sn	05 59 16.5	-0.8
	comp=N,62nm,0.4s						
THAS	Thassos island	1.52	318	P	Pn	05 58 57.7	+0.2
THAS				S	Sn	05 59 16.4	-0.8
THAS				AML	AML	05 59 20.5	
	comp=E,116µm,0.4s						
THAS				AML	AML	05 59 21.0	
	comp=N,132µm,0.4s						
MRMT	Marmara Adasi	1.62	46	Pn	Pn	05 58 59.2	+0.1
EDC	Edincik	1.63	58	Pn	Pn	05 58 59.4	+0.2
UKOP	Uzunkopru-Edir	1.70	15	Pn	Pn	05 59 00.6	+0.6
RDO	Rodhopi	1.70	347	P	Pn	05 59 01.1	+1.0
RDO				S	Sn	05 59 20.6	-1.3
	comp=N,30nm,0.4s						
RDO	Rodhopi	1.70	347	Pn	Pn	05 59 00.0	-0.1
RDO	Rodhopi	1.70	347	P	Pn	05 59 00.2	+0.1
KYMI	Kymi, Euboea I	1.75	241	P	Pn	05 59 00.0	-0.7
KYMI				S	Sn	05 59 22.3	-0.7
	comp=N,50nm,0.5s						
OUR	Ouranopolis	1.81	299	P	Pn	05 59 00.8	-0.7
SMG	Samos	1.88	161	P	Pn	05 59 01.7	-0.9
SMG				S	Sn	05 59 26.2	-0.1
	comp=N,232nm,0.6s						
SMG	Samos	1.88	161	P	Pn	05 59 02.5	-0.1
KAVA	Kavala	1.91	322	P	Pn	05 59 03.4	+0.4

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*IDC **01** 05:59:45.6±1.6,5°.61S×151°.17E,h50^{km}±14^{km},mb3.8/11, mbtmp4.1/12,ML2.3/1,MS3.8/4,Error ellipse: s-maj=29.7km s-min=14.2km az=117.0*

*NEIC **01** 05:59:46.3±1.0,5°.89S±0°.07×151°.6E±0°.1,h67^{km}±11^{km}, mb4.3/15,Error ellipse: s-maj=22.1km s-min=5.0km az=115.0*

ISC 01 05:59:45.0±0.6**,5°.85S**±0°.08×**151°.5E**±0°.1**,h50^{km},n48,** σ**1^s.47**/51**,mb4.2**/19**,MS3.4**/3**,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.61	18	P	Pn	06 00 11.9	+0.7
	3µm,0.3s,baz=164,slow=1.5,SNR=224						
KRVT				S	Sn	06 00 33.9	+3.1
	11µm,0.5s,baz=311,slow=22,SNR=28						
RABL	Rabaul	1.77	21		Pn	06 00 15.0	+1.7
PMG	Port Moresby	5.58	230	P	Pn	06 01 05.6	0.0
	6.1nm,0.3s,baz=43,slow=11,SNR=10						
PMG				S	Sn	06 02 10.2	+1.6
	60nm,0.6s,baz=97,slow=13,SNR=4.4						
	92nm,0.9s						
PMG	Port Moresby	5.58	230	Pn	Pn	06 01 06.8	+1.2
PMG	Port Moresby	5.58	230	P	Pn	06 01 06.8	+1.2
PMG	Port Moresby	5.58	230	P	Pn	06 01 06.9	+1.2
HNR	Honiara	9.07	114	LR	LR	06 04 56.8	
	comp=Z,5µm,21.4s,baz=285,slow=33						
COEN	Coen	11.51	225	Pn	Pn	06 02 27.4	+0.5
QIS	Mount Isa	18.64	217	P	Pn	06 03 59.9	+0.3
KOUNC	Koumac, New Ca	19.16	141	P	P	06 04 03.1	-1.4
KOUNC				IAmb	IAmb	06 04 24.9	
	comp=Z,37nm,1.3s						
RMQ	Roma	20.69	187	P	P	06 04 23.7	+2.6
	comp=Z,22nm,1.0s						
MTN	Manton Dam	21.27	249	P	P	06 04 27.4	-0.1
MTN				IAmb	IAmb	06 04 50.1	
	comp=Z,24nm,1.4s						
MTN	Manton Dam	21.27	249	P	P	06 04 29.3	+1.8
DZM	Mont Dzumac	21.64	140	P	P	06 04 29.1	-2.3
WB0	Warramunga Arr	21.65	229	P	P	06 04 31.0	-0.5
WB0				IAmb	IAmb	06 04 52.4	
	comp=Z,14nm,1.1s						
WR0	Warramunga Arr	21.66	228	P	P	06 04 30.9	-0.7
QLP	Quilpie	21.76	198	P	P	06 04 34.1	+1.6
WRAB	Tennant Creek	21.79	228	P	P	06 04 32.4	-0.5
WRAB				IAmb	IAmb	06 04 53.1	
	comp=Z,11nm,0.8s						
WRAB	Tennant Creek	21.79	228	P	P	06 04 34.5	+1.6
WB2	Warramunga Arr	21.79	228	P	P	06 04 32.6	-0.4
WB2				IAmb	IAmb	06 04 53.2	
	comp=Z,9.1nm,0.8s						
WRA	Warramunga Arr	21.80	228	P	P	06 04 32.0	-1.1
	comp=Z,3.4nm,1.0s,baz=53,slow=11,SNR=12						
WRA				PcP	PcP	06 08 33.2	+1.2
	comp=Z,2.1nm,1.2s,baz=50,slow=2.4,SNR=7.7						
WRA				ScP	ScP	06 12 06.6	+1.3
	comp=Z,2.9nm,1.0s,baz=50,slow=2.9,SNR=8.9						
WRA				LR	LR	06 14 28.9	
	comp=Z,102nm,18.2s,baz=46,slow=41						
	comp=Z,3.4nm,1.0s						
WRA	Warramunga Arr	21.80	228	P	P	06 04 32.0	-1.1
INKA	Innaminka	24.06	204	P	P	06 04 57.3	+1.6
	comp=Z,19nm,0.8s						
KNRA	Kununurra	24.37	245	P	P	06 04 58.6	-0.2
KNRA				IAmb	IAmb	06 05 17.1	
	comp=Z,15nm,1.1s						
KNRA	Kununurra	24.37	245	P	P	06 05 02.6	+3.9
AS01	Alice Springs	24.49	222	P	P	06 05 01.4	+1.6
AS31	Alice Springs	24.52	222	P	P	06 05 00.5	+0.5
ASAR	Alice Springs	24.52	222	P	P	06 04 59.7	-0.4
	comp=Z,2.9nm,0.8s,baz=57,slow=9.2,SNR=23						
ASAR				ScP	ScP	06 12 13.5	+1.1
	comp=Z,0.6nm,0.6s,baz=40,slow=3.3,SNR=5.8						
ASAR				LR	LR	06 14 35.9	
	comp=Z,122nm,20.1s,baz=52,slow=36						
	comp=Z,2.9nm,0.8s						
ASAR	Alice Springs	24.52	222	P	P	06 04 59.2	-0.9
STKA	Stephens Creek	27.51	199	P	P	06 05 28.7	+1.8
	comp=Z,4.1nm,0.8s,baz=4.5,slow=6.7,SNR=7.5						
	comp=Z,4.1nm,0.8s						
FITZ	Fitzroy Crossi	28.04	242	P	P	06 05 31.2	-0.6
MSVF	Nonsavu	28.48	117	LR	LR	06 16 45.3	
	comp=Z,84nm,19.2s,baz=183,slow=35						
PSA00	Pilbara Seismi	34.41	240	P	P	06 06 26.7	-1.1
PSA00				IAmb	IAmb	06 06 44.0	
	comp=Z,4.3nm,1.2s						
KLR	Kul'dur	57.50	345	P	P	06 09 27.5	-1.6
	comp=Z,0.9nm,0.6s,baz=164,slow=2.8,SNR=5.1						
	comp=Z,0.9nm,0.6s						
SONM	Songino Array	66.54	329	P	P	06 10 29.3	-0.7
	comp=Z,2.1nm,0.9s,baz=143,slow=4.5,SNR=12						
	comp=Z,2.1nm,0.9s						
SONM	Songino Array	66.54	329	P	P	06 10 29.8	-0.1
SONM				IAmb	IAmb	06 10 31.0	
	comp=Z,3.1nm,1.0s						
MK31	Makanchi Array	80.28	319	P	P	06 11 49.1	-1.6
MK31				IAmb	IAmb	06 11 50.0	
	comp=Z,2.5nm,1.4s						
MKAR	Makanchi Array	80.28	319	P	P	06 11 48.8	-2.0
	comp=Z,1.0nm,1.0s,baz=102,slow=6.1,SNR=6.0						
	comp=Z,1.0nm,1.0s						
ZALV	Zalesovo Beam	81.32	327	P	P	06 11 54.1	-2.0
	comp=Z,1.0nm,0.6s,baz=103,slow=6.7,SNR=5.3						
	comp=Z,1.0nm,0.6s						
ILAR	Eielson Array	83.61	22	P	P	06 12 06.2	-1.5
	comp=Z,1.0nm,0.8s,baz=247,slow=4.9,SNR=12						
	comp=Z,1.0nm,0.8s						
KURBB	Kurchatov Arra	83.84	322	P	P	06 12 07.7	-1.6
	comp=Z,0.7nm,0.2s,baz=106,slow=4.0,SNR=2.0						
	comp=Z,0.7nm,0.2s						
QSPA	South Pole Qui	84.12	180	P	P	06 12 09.8	-0.8
BVAR	Borovoye Array	89.32	323	P	P	06 12 34.2	-1.8
	comp=Z,1.7nm,0.9s,baz=121,slow=5.6,SNR=5.9						
	comp=Z,1.7nm,0.9s						
NVAR	Mina Array Bea	93.73	52	P	P	06 12 58.9	+1.8
	comp=Z,1.4nm,0.8s,baz=247,slow=5.7,SNR=9.2						
	comp=Z,1.4nm,0.8s						
PDAR	Pinedale Array	100.49	48	P	Pdif	06 13 27.2	-0.3
	comp=Z,0.4nm,0.7s,baz=212,slow=1.4,SNR=4.4						
GERES	GERESS Array B	124.27	328	PKP	PKPdf	06 18 38.4	-0.2
	comp=Z,0.6nm,0.6s,baz=50,slow=3.1,SNR=3.5						
TORD	Torodi Ar. Bea	149.40	286	PKPbc	PKPbc	06 19 29.0	-0.7
	comp=Z,8.8nm,0.8s,baz=75,slow=2.9,SNR=47						
BDFB	Brasilia	151.18	138	PKPbc	PKPbc	06 19 35.2	+1.1
	comp=Z,1.4nm,0.5s,baz=218,slow=12,SNR=3.8						

IDC 01 05:59:54.2±590.0**,29°.75N**×**133°.51E,h0^{km},Error ellipse: s-maj=221.2km s-min=134.6km az=62.0,Southeast of Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I30JP	ISUMI INFRASON	7.99	44	I	I	06 56 10.0	
	baz=229,slow=296,SNR=2.1						
I45RU	USSURIYSK INFR	14.48	356	I	I	07 33 31.1	
	baz=178,slow=327,SNR=0.9						

IDC 01 06:00:02.6±9.5**,32°.49S**×**179°.96W,h297^{km}**±104^{km}**,** **mb3.1**/2**,mbtmp3.7**/3**,Error ellipse: s-maj=111.1km s-min=50.0km az=2.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.24	202	P	Pn	06 01 35.8	+1.2
	1.8nm,0.3s,baz=183,slow=5.7,SNR=3.2						
URZ				S	S	06 02 48.0	-0.8
	6.3nm,0.3s,baz=164,slow=20,SNR=12						
ASAR	Alice Springs	41.38	270	P	P	06 07 20.8	+0.2
	0.7nm,0.5s,baz=99,slow=7.4,SNR=1.1						
	0.7nm,0.5s						
WRA	Warramunga Arr	42.57	275	P	P	06 07 29.9	-0.3
	0.6nm,0.3s,baz=112,slow=7.6,SNR=4.7						
	0.6nm,0.3s						
FINES	FINESS Array B	146.48	338	PKPbc	PKPbc	06 19 07.3	-1.0
	0.7nm,0.3s,baz=46,slow=4.8,SNR=5.5						

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*TIR **01** 06:07:40.0,39°.96N×19°.72E,h5^{km},Md2.7*

*ATH **01** 06:07:43.2,39°.96N×19°.80E,h10^{km}±2^{km},ML1.5/2,Error ellipse: s-maj=3.7km s-min=1.5km az=129.0*

ISC 01 06:07:41.0±2.7**,39°.97N**±0°.07×**19°.7E**±0°.1**,h7^{km}**±13^{km}**,n12,** σ**0^s.72**/18**,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRN	Sarande	0.23	111	P	Pg	06 07 44.6	-1.0
	baz=111						
SRN				S	Sg	06 07 48.5	-0.2
	baz=111						
KEK	Kerkira	0.26	166	P	Pb	06 07 48.2	+0.2
KEK				S	Sb	06 07 52.1	-0.7
KEK				AML	AML	06 07 58.0	
	comp=E,464µm,0.2s						
KEK				AML	AML	06 07 58.5	
	comp=N,400µm,0.3s						

KASA	Kassiopi	0.28	142	P	Pb	06 07 47.6	-0.7
KASA				S	Sg	06 07 51.5	+1.4
IGT	Igoumenitsa	0.64	132	P	Pg	06 07 53.6	+0.3
	baz=132						
IGT				S	Sb	06 08 03.8	+0.1
	baz=132						
IGT	Igoumenitsa	0.64	132	P	Pg	06 07 53.8	+0.5
IGT				S	Sb	06 08 02.5	-1.2
IGT				AML	AML	06 08 07.6	
	comp=N,68μm,0.2s						
IGT				AML	AML	06 08 09.3	
	comp=E,120μm,0.5s						
LSK	Leskovik	0.70	74	P	Pg	06 07 54.0	-0.5
	baz=74						
LSK				S	Sb	06 08 06.4	+0.9
	baz=74						
JAN	Janina	0.93	109	P	Pb	06 07 59.9	+0.5
PENT	Pentalofos	1.11	78	P	Pn	06 08 03.1	-0.1
TSLK	Tsoukalades, L	1.35	147	P	Pb	06 08 06.9	+0.2
LKD2	Lefkada island	1.38	148	P	Pb	06 08 07.3	+0.1
FNA	Florina	1.51	57	P	Pn	06 08 08.7	+0.2
EVGI	Lefkada island	1.53	151	P	Pb	06 08 09.5	-0.2

MOS ***01*** *06:08:51.5±0.8, 21°.65N×143°.18E, h289km, mb5.3/51, Error ellipse: s-maj=8.9km s-min=4.3km az=116.2*

BJI ***01*** *06:08:52.6±0.0, 21°.85N×143°.01E, h285km, mb4.7/68, mB4.6/40*

NEIC ***01*** *06:08:53.6±1.7, 21°.64N±0°.06×143°.19E±0°.10, h294km±5km, mb5.1/383, Error ellipse: s-maj=13.3km s-min=9.2km az=83.0*

GCMT ***01*** *06:08:53.6±0.5, 21°.73N±0°.05×142°.92E±0°.04, h295km±2km, MW5.2/60, Moment Tensor Solution. s60,c74; Duration: 1s0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.76±.04; $M_{\theta\theta}$-0.19±.07; $M_{\phi\phi}$-0.57±.06; $M_{r\theta}$-0.05±.06; $M_{\theta\phi}$-0.44±.06; $M_{\phi r}$0.07±.07; Best double couple: $M_0$0.81700×10^{17} NP1:ϕ_s26.00000°, δ46.00000°, λ80.00000°. NP2:ϕ_s220.00000°, δ44.00000°, λ100.00000°. Principal axes: T 0.7730, Plg83.0000°, Azm221.0000°; N 0.0910, Plg7.0000°, Azm33.0000°; P -0.8620, Plg1.0000°, Azm123.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

IDC ***01*** *06:08:55.6±0.8, 21°.67N×143°.17E, h318km±7km, mb4.6/40, mbtmp5.3/46 Error ellipse: s-maj=9.6km s-min=6.3km az=78.0*

JMA ***01*** *06:08:58.6±0.3, 22°N±2°×14°3E±°, h321km±2km, MD5.5/30, MW5.1/30, IOTO ISLANDS REGION*

ISC 01 06:08:53.6±0.3**, 21°.69N**±0°.03×**143°.16E**±0°.04**, h300**km±2km**, h300**km**:pP-P, n1125,** σ**1s30**/1053**, mb5.1**/340**, 40C-28D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	5.00	350	P	Pn	06 10 12.3	+1.3
JHH2				S	S	06 11 11.0	-2.3
JHH2	Haha-jima-NKT2	5.00	350	A	A	06 10 12.3	
	comp=E,21nm,1.2s,comp=E,26nm,2.4s						
JCJ	Chichijima	5.45	351	P	Pn	06 10 18.9	+2.6
	1μm,0.5s,baz=234,slow=4.7,SNR=53						
JCJ				S	S	06 11 23.0	+0.1
	2μm,0.6s,baz=286,slow=23,SNR=8.2						
JCJ	Chichijima	5.45	351		Pn	06 10 17.1	+0.8
JCJ				Sn	S	06 11 21.1	-1.8
JCJ	Chichijima	5.45	351	P	Pn	06 10 17.4	+1.1
CBIJ	Chichi jima	5.45	351	⇓P	Pn	06 10 17.1	+0.8
CBIJ				⇓eS	S	06 11 20.2	-2.8
CBIJ	Chichi jima	5.45	351	A	A	06 10 17.1	
	comp=E,20nm,4.9s,comp=E,13nm,2.3s						
GUMO	Guam	8.22	168	P	Pn	06 10 51.4	+1.4
	1μm,1.0s,baz=164,slow=1.8,SNR=24						
GUMO	Guam	8.22	168		Pn	06 10 48.0	-2.0
GUMO	Guam	8.22	168	P	Pn	06 10 53.1	+3.1
GUMO	Guam	8.22	168	P	Pn	06 10 48.0	-2.0
JKDJ	Kitadaitoujima	11.66	294	P	Pn	06 11 32.1	+0.1
JMZ	Minamidaito 2	11.68	293	Pn	Pn	06 11 31.6	-0.6
JMZ	Minamidaito 2	11.68	293	P	P	06 11 34.2	+0.2
JMZ	Minamidaito 2	11.68	293	P	Pn	06 11 32.8	+0.5
JHCJ	Hachijojimakas	11.72	346	P	Pn	06 11 32.3	-0.4
JHJ2	Mitsune	11.76	346		Pn	06 11 33.5	+0.4
JHJ2	Mitsune	11.76	346	P	P	06 11 36.2	+1.5
JHJ2	Mitsune	11.76	346	P	Pn	06 11 33.2	+0.2
JHJ	Hachijo jima 2	11.77	346	P	Pn	06 11 33.3	0.0
	253nm,0.3s,baz=188,slow=15,SNR=8.5						
JHJ				S	S	06 13 40.9	-3.5
	203nm,0.5s,baz=150,slow=20,SNR=2.2						
JMKN	Mikurajimanish	12.56	346	P	Pn	06 11 42.8	0.0
BSO1	Boso 1	13.06	352	P	P	06 11 49.6	+1.1
JIM2	Oshima 3	13.39	347	A	A	06 11 53.1	
	comp=E,6.0nm,1.7s,comp=E,5.0nm,1.1s						
TATJ	Tateyama 2	13.60	349	A	A	06 11 55.6	
	comp=E,11nm,1.4s,comp=E,6.0nm,2.6s						
JSG	Sagara	13.65	342	P	Pn	06 11 56.4	+0.4
JSG	Sagara	13.65	342	P	Pn	06 11 59.1	+3.1
	526nm,0.8s						
JKUC	kamogawauchiur	13.67	350	A	A	06 11 56.4	
	comp=N,5.0nm,5.9s						
JTNC	Tanabenakahech	13.80	333	P	Pn	06 11 59.6	+1.9
JIE	Ise	13.87	337	P	Pn	06 11 59.6	+1.1
JIE				eS	S	06 14 28.9	-2.3
JOD2	Odawara 2	13.99	346	P	Pn	06 12 00.8	+0.9
JOD2				S	S	06 14 29.6	-4.0
JAMN	Amaminishikomi	14.26	300	eP	Pn	06 12 06.0	+2.8
JTO	Tosashimizu	14.43	323	P	Pn	06 12 07.4	+2.2
JTO				S	S	06 14 46.3	+3.5
JOW	Kunigami	14.51	294	P	Pn	06 12 07.1	+0.8
	56nm,0.6s,baz=127,slow=11,SNR=16						
JOW	Kunigami	14.51	294		Pn	06 12 06.2	0.0
JOW	Kunigami	14.51	294	P	Pn	06 12 08.5	+2.2
JOW	Kunigami	14.51	294	P	Pn	06 12 08.4	+2.2
JMN	Monobe	14.53	328	P	Pn	06 12 07.0	+0.6
JMN	Monobe	14.53	328	P	Pn	06 12 09.1	+2.7
JMN	Monobe	14.53	328	A	A	06 12 06.8	
	comp=E,2.0nm,3.5s,comp=E,3.0nm,3.5s						
INU	Inuyama	14.63	340	P	Pn	06 12 07.2	-0.4
INU	Inuyama	14.63	340	P	Pn	06 12 08.0	+0.4
JRY	Ryogami san	14.75	346	P	Pn	06 12 09.1	0.0
JGF	Kuroka	14.76	341	P	P	06 12 07.9	-0.1
JGF	Kuroka	14.76	341	P	Pn	06 12 09.5	+0.3
JSU	Suzuyama	14.98	313	Pn	Pn	06 12 12.9	+1.2
JSU	Suzuyama	14.98	313	P	Pn	06 12 12.9	+1.2
JNA	Nagahama	15.13	324	A	A	06 12 14.0	
	comp=E,2.0nm,5.5s,comp=E,1.0nm,4.4s						
MJAR	Matsushiro Arr	15.41	345	P	P	06 12 15.7	+0.5
	45nm,0.6s,baz=165,slow=9.7,SNR=88						
MJAR				S	S	06 15 00.7	-1.8
	17nm,0.5s,baz=112,slow=4.8,SNR=5.9						
MAJO	Matsushiro	15.41	345	P	Pn	06 12 16.4	-0.4
MAJO	Matsushiro	15.41	345	P	Pn	06 12 16.7	-0.1
MAJO	Matsushiro	15.41	345	P	Pn	06 12 16.4	-0.4
MJB9	Matsu-Tunnel	15.42	345		Pn	06 12 17.5	+0.7
JSB	Shiboa	15.48	350	A	A	06 12 18.0	
	comp=E,3.0nm,2.4s,comp=E,4.0nm,1.2s						
JHM	Kurahashi	15.54	325	A	A	06 12 18.9	
	comp=E,5.0nm,2.6s,comp=E,2.0nm,3.6s						
JSJ	Shimokoshiki	15.59	312	P	Pn	06 12 18.8	0.0
JNU	Nakatsue	15.75	319	P	Pn	06 12 21.8	+1.0
	95nm,0.7s,baz=120,slow=6.8,SNR=68						
JNU				S	S	06 15 11.4	+2.1
	62nm,1.1s,baz=29,slow=21,SNR=9.0						
JNU	Nakatsue	15.75	319	P	Pn	06 12 20.9	+0.1
JNU	Nakatsue	15.75	319	P	Pn	06 12 22.0	+1.2
JHS	Saijyo	15.92	329	P	Pn	06 12 23.4	+0.7
JHS	Saijyo	15.92	329	P	Pn	06 12 23.7	+0.9
JHS	Saijyo	15.92	329	P	Pn	06 12 23.4	+0.7
JHS				S	S	06 15 14.5	+1.8
JFY	Yanaizu	15.95	350	A	A	06 12 23.3	
	comp=E,2.0nm,3.8s,comp=E,2.0nm,2.0s						
JMST	Minamisoumatoc	16.10	353	A	A	06 12 25.0	
	comp=E,5.0nm,5.2s,comp=E,3.0nm,3.8s						
JHIK	Hikimi	16.16	325	A	A	06 12 25.8	
	comp=E,2.0nm,2.9s,comp=E,5.0nm,3.6s						
JMM	Marumori	16.25	353	P	Pn	06 12 26.8	+0.3
JMM	Marumori	16.25	353	P	Pn	06 12 27.0	+0.5
JYS	Shirataka	16.69	351	A	A	06 12 31.2	
	comp=E,4.0nm,4.5s,comp=E,4.0nm,3.1s						
JHGM	Hagimishima	16.78	324	A	A	06 12 32.3	
	comp=N,2.0nm,6.3s						
JSD	Sado	16.83	347	P	P	06 12 31.6	+1.1
JSD	Sado	16.83	347	P	P	06 12 31.7	+1.2
JMK	Ichinoseki	17.29	355	P	Pn	06 12 37.6	-1.0
JYK	Kaneyama	17.34	353	A	A	06 12 38.0	
	comp=E,2.0nm,5.0s,comp=E,2.0nm,7.1s						
JTU	Tsushima	17.61	320	P	P	06 12 40.5	+1.5
JTU	Tsushima	17.61	320	P	Pn	06 12 41.5	-0.9
JRG	Rokugo	17.78	354	A	A	06 12 42.6	
	comp=E,2.0nm,2.5s,comp=E,2.0nm,5.5s						
JOG3	Oga3	18.50	350	A	A	06 12 48.7	
	comp=E,2.0nm,6.0s,comp=E,2.0nm,5.3s						
JTM	Tenmabayashi	19.12	355	P	P	06 12 56.6	+1.5
JTM	Tenmabayashi	19.12	355	P	Pn	06 12 58.9	-0.8
PVCP	Virac	19.81	249	⇓eP	P	06 13 03.7	+1.1
TJN	Taejon	20.08	320	P	P	06 13 07.0	+1.7
TJN	Taejon	20.08	320	P	P	06 13 07.0	+1.7
TATO	Taipei	20.17	284	P	P	06 13 07.1	+0.8
GLSP	General Luna,	20.20	237	⇓eP	P	06 13 06.8	0.0
YHNB	Yeheng	20.25	283	P	P	06 13 06.9	-0.3
YHNB	Yeheng	20.25	283	P	P	06 13 08.6	+1.4
ERM	Erimo	20.26	360	P	P	06 13 09.5	+2.5
ERM	Erimo	20.26	360	P	Pn	06 13 09.9	-2.8
ERM	Erimo	20.26	360	P	P	06 13 09.5	+2.5
JEM	Erimo	20.27	360	P	Pn	06 13 09.9	-2.8
YULB	Yu-li	20.27	279	P	Pn	06 13 10.5	-2.5
KSRS	Korea Array	20.51	323	P	P	06 13 10.4	+0.8
	22nm,0.7s,baz=145,slow=9.3,SNR=78						
KSRS				S	S	06 16 39.3	-0.9
	5.6nm,1.0s,baz=153,slow=17,SNR=5.5						
KSRS				PcP	PcP	06 17 08.2	+0.6
	3.7nm,0.8s,baz=162,slow=1.2,SNR=5.4						
KSRS				ScP	ScP	06 20 14.6	-0.6
	4.8nm,1.0s,baz=141,slow=2.2,SNR=12						
	22nm,0.7s						
KSAR	Wonju Array Be	20.52	323	P	P	06 13 09.0	-0.7
KSAR	Wonju Array Be	20.52	323	P	P	06 13 09.0	-0.7
KS19	Wonju Array Si	20.57	323	P	P	06 13 11.1	+0.9
SSLB	Suanglung	20.59	280	P	P	06 13 10.3	-0.3
SSLB	Suanglung	20.59	280	P	P	06 13 12.3	+1.7
	95nm,0.9s						
JCNP	Jose Panganiba	20.80	253	⇑eP	P	06 13 14.4	+1.7
JCH	Churui	20.86	0	eP	P	06 13 14.7	+1.7
APYP	Conner	20.97	263	⇓eP	P	06 13 14.5	+0.2
MSLP	Maasin	20.99	240	⇓eP	P	06 13 14.4	-0.2
MSLP	Maasin	20.99	240	⇑eP	P	06 13 14.8	+0.3
BIPH	Bislig	21.04	233	⇑iP	P	06 13 15.1	+0.1
TABP	Talibon, Bohol	21.44	240	⇑eP	P	06 13 18.8	+0.1
SAMP	Sagada Mountai	21.49	262	⇑eP	P	06 13 20.0	+0.8
LQP	Lukban	21.90	253	⇓eP	P	06 13 23.4	+0.4
RCP	Roxas	21.98	246	⇓eP	P	06 13 24.4	+0.8
TBP	Tagbilaran	22.05	240	eP	P	06 13 24.2	-0.1
CGP	Cagayan de Oro	22.13	236	⇓eP	P	06 13 25.2	+0.3
BUKP	Musuan	22.21	235	⇓eP	P	06 13 26.4	+0.6
BUKP	Musuan	22.21	235	⇓eP	P	06 13 27.5	+1.8
OTRP	Odiongan	22.22	249	⇑eP	P	06 13 27.1	+1.4
DAV	Davao City (W)	22.35	232	P	P	06 13 27.4	+0.4
	241nm,0.5s,baz=70,slow=8.5,SNR=4.2						
	241nm,0.5s						
DAV	Davao City (W)	22.35	232	P	P	06 13 27.3	+0.3
ASAJ	Asahikawa	22.37	359	P	P	06 13 27.8	+1.0
	8.6nm,0.4s,baz=231,slow=11,SNR=8.4						
	8.6nm,0.4s						
MACP	Maragondon, Ca	22.57	255	⇓eP	P	06 13 29.9	+0.9
GUIM	Jordan	22.59	244	⇑eP	P	06 13 30.1	+1.0
SJMP	San Jose	22.96	250	⇑eP	P	06 13 35.6	+3.1
CNOP	Candoni, Negro	22.97	242	⇑eP	P	06 13 32.1	-0.5
LUBP	Lubang	23.20	254	⇑eP	P	06 13 35.5	+0.8
CTBH	Cotabato--PC H	23.25	235	⇓eP	P	06 13 36.2	+1.1
SKMP	Bagumbayan, Su	23.48	233	⇑eP	P	06 13 37.7	+0.4
PAGZ	Pagadian	23.52	237	⇓eP	P	06 13 38.4	+0.8
CUYO	Cuyo Island	23.80	247	⇓eP	P	06 13 40.6	+0.4
NJ2	Nanjing	23.96	301	⇓P	P	06 13 41.8	+0.4
NJ2				sP	sP	06 15 10.5	+0.6
NJ2				PcP	PcP	06 17 14.7	0.0
NJ2				pmax	pmax		
	comp=Z,16nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,150nm,4.9s						
USA0B	Ussuriysk Arra	24.28	340	P	P	06 13 45.2	+1.1
USA0B	Ussuriysk Arra	24.28	340	P	P	06 13 45.2	+1.1
USA0B				pmax	pmax		
	comp=Z,13nm,0.7s						
USRK	Ussuriysk Ar.	24.28	340	P	P	06 13 45.0	+0.9
	comp=Z,12nm,0.6s,baz=161,slow=8.5,SNR=39						
	comp=Z,12nm,0.6s						
USRK	Ussuriysk Ar.	24.28	340	P	P	06 13 45.2	+1.1
USRK	Ussuriysk Ar.	24.28	340	P	P	06 13 45.2	+1.1
ENPP	El Nido	25.00	249	⇓eP	P	06 13 51.9	+0.9
YSS	Yuzh-Sakhalins	25.20	359	eP	P	06 13 55.4	+3.0
YSS				eS	S	06 17 56.0	+1.1
YSS				smax	smax		
	comp=N,200nm,5.7s						
MDJ	Mudanjiang	25.46	337	P	P	06 13 56.4	+1.7
MDJ				pP	pP	06 14 50.0	+1.2
MDJ				sP	sP	06 15 24.3	-1.1
MDJ				S	S	06 18 00.5	+1.5
MDJ				pmax	pmax		
	comp=N,19nm,1.0s						
MDJ				pmax	pmax		
	comp=N,140nm,5.3s						
MDJ	Mudanjiang	25.46	337	P	P	06 13 57.1	+2.4
	comp=N,22nm,1.1s						
SNY	Shenyang	25.97	325	⇓P	P	06 13 58.7	-0.6
SNY				S	S	06 18 11.3	+4.2
SNY				pmax	pmax		
	comp=N,22nm,0.9s						
SNY				LR	LR		
	comp=N,190nm,10.7s						
SNY				LR	LR		
	comp=N,230nm,12.6s						
SNY				LR	LR		
	comp=N,230nm,17.8s						
CN2	Changchun	26.50	330	eP	P	06 14 04.8	+0.8
CN2				PcP	PcP	06 17 20.1	-0.1
CN2				S	S	06 18 14.9	-0.5
BNX	BinXian	27.23	335	⇓P	P	06 14 11.7	+1.2
BNX				pP	pP	06 15 06.7	0.0
BNX				sP	sP	06 15 41.2	-0.2
BNX				S	S	06 18 32.5	+5.6
BNX				sS	sS	06 20 06.5	-2.9
BNX				pmax	pmax		
	comp=N,19nm,0.6s						
BNX				pmax	pmax		
	comp=N,130nm,3.5s						
WHN	Wuhan	27.27	295	⇓P	P	06 14 11.5	+0.5
GTOI	Gorontalo	28.71	226	P	P	06 14 23.3	-0.6
	comp=N,43nm,1.1s,comp=N,406nm						
KLR	Kul'dur	28.94	344	P	P	06 14 26.6	+1.0
	comp=N,81nm,0.6s,baz=154,slow=7.3,SNR=362						
KLR				PcP	PcP	06 17 26.2	+0.1
	comp=N,16nm,0.7s,baz=218,slow=1.5,SNR=6.1						
	comp=N,81nm,0.6s						
KLR	Kul'dur	28.94	344	ceP	P	06 14 26.5	+1.0
KLR				pmax	pmax		
	comp=Z,79nm,0.7s						
SANI	Sanana	28.96	218	P	P	06 14 24.5	-1.6
SANI	Sanana	28.96	218	P	P	06 14 24.2	-1.9
	comp=Z,24nm,0.7s						
MYLDM	Lahad Datu	28.98	239	P	P	06 14 26.8	+0.5
HNS	HongShan	29.14	309	⇑P	P	06 14 28.3	+0.8
HNS				pP	pP	06 15 24.7	+0.6
HNS				PcP	PcP	06 17 28.2	+1.3
HNS				S	S	06 18 57.3	+0.3
HNS				pmax	pmax		
	comp=Z,66nm,0.9s						
MRSI	Marisa	29.55	227	P	P	06 14 31.8	+0.5
	comp=Z,166nm,1.1s,comp=Z,2μm						
LYN	LuoYang	29.82	302	eP	P	06 14 22.8	-11
LYN				sP	PP	06 15 54.8	+7.0
LYN				PcP	PcP	06 17 19.6	-9.1
LYN				S	S	06 18 59.4	-8.4
LYN				sS	ScP	06 20 33.5	-8.4
LYN				pmax	pmax		
	comp=Z,20nm,0.7s						
TOLI2	Tolitoli	29.90	230	P	P	06 14 33.3	-1.1
TOLI2				IAmb	IAmb	06 14 37.1	
	comp=Z,61nm,0.8s						
TOLI2	Tolitoli	29.90	230	P	P	06 14 35.1	+0.7
LUWI	Luwuk	30.12	224	P	P	06 14 34.2	-2.1
LUWI	Luwuk	30.12	224	P	P	06 14 36.0	-0.3
	comp=Z,149nm,1.3s						
LUWI	Luwuk	30.12	224	P	P	06 14 35.8	-0.5
	comp=Z,151nm,1.3s						
KKM	Kota Kinabalu	30.35	243	P	P	06 14 38.4	-0.1
KKM				IAmb	IAmb	06 14 40.6	
	comp=Z,60nm,0.9s						
KKM	Kota Kinabalu	30.35	243	P	P	06 14 39.0	+0.5
MPSI	Mapaga	31.07	230	P	P	06 14 44.5	-0.1
	comp=Z,31nm,0.8s,comp=Z,2μm						
HEH	HeiHe	31.09	340	eP	P	06 14 45.0	+0.6
HEH				pP	pP	06 15 43.0	+1.7
HEH				sP	sP	06 16 14.5	-1.3
HEH				S	S	06 19 32.0	+4.9
HEH				pmax	pmax		
	comp=Z,82nm,1.1s						
HEH				pmax	pmax		
	comp=Z,130nm,5.7s						
PMG	Port Moresby	31.15	172	ceP	P	06 14 46.3	+1.0
PMG				pmax	pmax		
	comp=Z,62nm,2.5s						
ENH	Enshi	31.36	293	P	P	06 14 47.2	+0.1
XAN	Xi'an	32.52	300	P	P	06 14 57.3	+0.2
XAN				PcP	PcP	06 17 36.8	+0.7
XAN				S	S	06 19 48.0	-1.8
XAN				sS	sS	06 21 31.2	-2.2
XAN				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC	Hu-ho-hao-te	32.82	313	eP	P	06 15 00.1	+0.4
HHC				S	S	06 19 52.8	-1.6
HHC				pmax	pmax		
	comp=Z,24nm,0.9s						
HHC				pmax	pmax		
	comp=Z,260nm,4.3s						
HIA	Hailar	33.21	332	IAmb	IAmb	06 15 05.1	
	comp=Z,32nm,0.7s						
HIA	Hailar	33.21	332	P	P	06 15 04.1	+1.3
HIA	Hailar	33.21	332	P	P	06 15 03.9	+1.1
HIA				pP	pwP	06 16 02.3	-1.3
PEA0B	Petropavlovsk-	33.29	16	P	P	06 15 02.9	-0.5
PEA0B				IAmb	IAmb	06 15 31.8	
	comp=Z,102nm,1.5s						
PEA0B	Petropavlovsk-	33.29	16	P	P	06 15 02.9	-0.5
PEA0B				pmax	pmax		
	comp=Z,102nm,1.5s						
PETK	Petropavlovsk-	33.29	16	P	P	06 15 04.1	+0.7
	comp=Z,12nm,0.8s,baz=160,slow=4.7,SNR=8.3						
PETK				PcP	PcP	06 17 36.0	-1.8
	comp=Z,6.6nm,0.7s,baz=205,slow=6.6,SNR=5.2						
	comp=Z,12nm,0.8s						
PETK	Petropavlovsk-	33.29	16	P	P	06 15 03.9	+0.5
GYA	Guiyang	33.59	285	⇓iP	P	06 15 07.3	+0.8
GYA				pmax	pmax		
	comp=Z,19nm,0.9s						
ZEA	Zeya	34.22	343	eP	P	06 15 12.1	+0.8
ZEA				e		06 24 58.1	
ZEA				pmax	pmax		
	comp=E,10.0nm,1.2s						
ZEA				pmax	pmax		
	comp=N,20nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.9s						
SPSI	Sidrap Palu	34.28	225	P	P	06 15 12.5	+0.2
	comp=Z,248nm,0.6s,comp=Z,3μm						
BKB	Balikpapan	34.33	232	P	P	06 15 14.8	+2.0
BKB	Balikpapan	34.33	232	P	P	06 15 14.2	+1.4
	comp=Z,714nm,0.9s,comp=Z,6μm						
DLV	T Lat	34.51	259	P	P	06 15 16.1	+1.6
BKSI	Bulukumba	35.08	223	P	P	06 15 19.5	+0.3
	comp=Z,42nm,0.9s,comp=Z,592nm						
KAPI	Kappang	35.08	224	P	P	06 15 19.5	+0.4
KAPI				IAmb	IAmb	06 15 20.8	
	comp=Z,48nm,0.8s						
KAPI	Kappang	35.08	224	P	P	06 15 20.1	+0.9
KAPI	Kappang	35.08	224	i P	P	06 15 19.5	+0.4
KAPI				pmax	pmax		
	comp=Z,53nm,0.8s						
KAPI	Kappang	35.08	224	P	P	06 15 20.3	+1.2
KAPI	Kappang	35.08	224	P	P	06 15 19.5	+0.4
COEN	Coen	35.43	180	P	P	06 15 22.5	+0.5
COEN				IAmb	IAmb	06 15 24.2	
	comp=Z,40nm,1.0s						
COEN	Coen	35.43	180	P	P	06 15 22.9	+0.8
BSSI	Bau Bau, Buton	35.49	221	P	P	06 15 23.3	+0.7
	comp=Z,109nm,0.9s,comp=Z,1μm						
SBUM	Sibu	35.65	242	P	P	06 15 25.5	+1.4
SBUM				IAmb	IAmb	06 15 26.3	
	comp=Z,40nm,0.7s						
KDU	Kakadu	35.74	198	P	P	06 15 24.2	-0.5
MTN	Manton Dam	36.30	200	P	P	06 15 28.4	-0.9
MTN				IAmb	IAmb	06 15 29.4	
	comp=Z,33nm,0.7s						
MTN	Manton Dam	36.30	200	P	P	06 15 28.5	-0.9
SOEI	Soe	36.34	213	P	P	06 15 29.0	-0.9
SOEI	Soe	36.34	213	P	P	06 15 28.6	-1.3
	comp=Z,38nm,0.6s						
CD2	Chengdu	36.34	293	P	P	06 15 29.5	-0.3
LZH	Lanzhou	37.03	302	P	P	06 15 36.6	+1.0
LZH				sP	PP	06 17 05.7	-1.5
LZH				PcP	PcP	06 17 50.1	+0.6
LZH				S	S	06 20 57.1	-1.7
LZH				sS	sS	06 22 41.7	-2.1
LZH				pmax	pmax		
	comp=Z,58nm,1.3s						
LZH				LR	LR		
	comp=Z,270nm,13.7s						
LZH				LR	LR		
	comp=Z,140nm,14.1s						
LZH				LR	LR		
	comp=Z,230nm,15.1s						
KMI	Kunming	37.16	283	⇑P	P	06 15 37.2	+0.3
KMI				S	S	06 21 00.7	-0.3
KMI				pmax	pmax		
	comp=Z,17nm,1.3s						
KMI				LR	LR		
	comp=Z,97nm,14.1s						
KMI				LR	LR		
	comp=Z,160nm,19.9s						
BBKI	Banjar Baru	37.33	231	P	P	06 15 38.3	+0.2
NONG	Nongkai	37.73	272	P	P	06 15 43.1	+1.6
KSM	Kuching	37.78	242	P	P	06 15 41.9	0.0
KSM	Kuching	37.78	242	P	P	06 15 42.3	+0.4
PZH	PanZhiHua	38.00	286	P	P	06 15 44.2	+0.5
PZH				sP	sP	06 17 14.9	-0.8
PZH				S	S	06 21 10.4	-3.0
PZH				sS	sS	06 23 01.0	+2.2
PZH				pmax	pmax		
	comp=Z,30nm,0.8s						
PZH				pmax	pmax		
	comp=Z,110nm,4.9s						
MA2	Magadan	38.23	6	P	P	06 15 45.9	+0.9
	comp=Z,17nm,0.6s,baz=188,slow=8.7,SNR=12						
	comp=Z,17nm,0.6s						
MA2	Magadan	38.23	6	P	P	06 15 45.7	+0.6
MA2	Magadan	38.23	6	P	P	06 15 46.6	+1.5
MA2	Magadan	38.23	6	ceP	P	06 15 45.0	-0.1
MA2				pmax	pmax		
	comp=Z,31nm,1.0s						
MA2	Magadan	38.23	6	P	P	06 15 46.1	+1.0
BASI	Baing, Sumba	38.69	217	P	P	06 15 47.8	-1.6
	comp=Z,440nm,1.1s,comp=Z,4μm						
ULN	Ulaanbaatar	38.96	321	P	P	06 15 52.2	+0.8
ULN	Ulaanbaatar	38.96	321	P	P	06 15 52.2	+0.8
ULN				pmax	pmax		
	comp=Z,15nm,0.9s						
ULN	Ulaanbaatar	38.96	321	P	P	06 15 52.6	+1.2
ULN	Ulaanbaatar	38.96	321	P	P	06 15 52.5	+1.0
ULN				sP	sP	06 17 22.5	-2.6
PBKI	Pangkalan Bun	39.20	236	P	P	06 15 54.4	+0.8
	comp=Z,247nm,0.9s,comp=Z,8μm						
PLAI	Plampang	39.25	222	P	P	06 15 53.3	-0.7
PLAI	Plampang	39.25	222	P	P	06 15 52.9	-1.1
	comp=Z,224nm,0.9s,comp=Z,2μm						
SONM	Songino Array	39.33	320	P	P	06 15 55.2	+0.8
	comp=Z,14nm,0.6s,baz=129,slow=8.7,SNR=81						
SONM				PcP	PcP	06 17 54.2	-2.2
	comp=Z,13nm,1.0s,baz=135,slow=4.9,SNR=7.5						
SONM				S	S	06 21 31.8	-0.9
	comp=Z,1.2nm,0.8s,baz=104,slow=10,SNR=1.9						
SONM				PKiKP	PKiKP	06 25 06.7	-1.1
	comp=Z,0.5nm,0.6s,baz=130,slow=1.3,SNR=4.8						
	comp=Z,14nm,0.6s						
KNRA	Kununurra	39.73	202	P	P	06 15 57.2	-0.6
KNRA				IAmb	IAmb	06 15 58.5	
	comp=Z,78nm,0.7s						
KNRA	Kununurra	39.73	202	P	P	06 15 57.8	-0.1
TWSI	Taliwang, Sumb	39.75	223	P	P	06 15 57.7	-0.4
	comp=Z,71nm,1.2s,comp=Z,1μm						
CRAI	Chiangrai	39.89	276	P	P	06 15 59.9	+0.5
SRBI	Singaraja	40.35	226	P	P	06 16 03.9	+0.9
	comp=Z,43nm,0.8s,comp=Z,920nm						
PHRA	Phrae	40.35	273	P	P	06 16 03.2	+0.1
NAYO	Nakonayok	40.37	267	P	P	06 16 04.5	+1.3

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ABJI  Asem Bagus      40.80 227   P      P       06 16 08.1 +1.5
      comp=Z,142nm,1.1s,comp=Z,2µm
GTA   Gaotai          40.86 306  eP      P       06 16 07.8 +0.7
GTA                               pP     pwP     06 17 09.0  -1.6
GTA                               sP     sP      06 17 41.8 +1.2
GTA                               PcP    PcP     06 18 02.6 +1.1
GTA                               S      S       06 21 54.0  -1.6
GTA                               pmax   pmax
      comp=Z,14nm,1.2s
GTA                               pmax   pmax
      comp=Z,89nm,6.0s
GTA                               LR     LR
      comp=Z,160nm,13.9s
GTA                               LR     LR
      comp=Z,260nm,17.9s
GTA                               LR     LR
      comp=Z,190nm,18.3s
BLJI  Banyuglugur     41.20 228   P      P       06 16 11.0 +1.1
      comp=Z,233nm,0.8s,comp=Z,2µm
JAGI  Jajag, Banyuwa  41.34 227   P      P       06 16 10.2  -0.9
JAGI                              IAmb   IAmb    06 16 11.5
      comp=Z,85nm,0.9s
JAGI  Jajag, Banyuwa  41.34 227   P      P       06 16 10.8  -0.3
JAGI  Jajag, Banyuwa  41.34 227   P      P       06 16 10.3  -0.8
      comp=Z,118nm,0.9s,comp=Z,1µm
YAK   Yakutsk         41.37 350   P      P       06 16 10.8 +0.1
      comp=Z,55nm,0.5s,baz=346,slow=0.9,SNR=24
      comp=Z,55nm,0.5s
YAK   Yakutsk         41.37 350   P      P       06 16 10.7 +0.1
YAK   Yakutsk         41.37 350c iP      P       06 16 10.7 +0.1
YAK                              e               06 17 49.6
YAK                              e               06 18 01.1
YAK                              eS      S       06 21 59.5  -2.5
YAK                               pmax   pmax
      comp=Z,151nm,0.9s
YAK                               pmax   pmax
      comp=N,24nm,1.0s
YAK                               pmax   pmax
      comp=E,7.0nm,0.9s
YAK                               pmax   pmax
      comp=Z,177nm,4.8s
YAK                               pmax   pmax
      comp=N,65nm,3.7s
YAK                               pmax   pmax
      comp=E,52nm,3.2s
YAK                               smax   smax
      comp=E,144nm,1.9s
YAK                               smax   smax
      comp=N,112nm,1.4s
YAK   Yakutsk         41.37 350   P      P       06 16 10.7 +0.1
CHTO  Chiang Mai      41.48 274   P      P       06 16 12.9 +0.7
CHTO  Chiang Mai      41.48 274   P      P       06 16 12.9 +0.7
CM31  Chiang Mai Arr  41.56 274   P      P       06 16 15.0 +2.2
      SNR=5.4
CMAR  Chiang Mai Arr  41.56 274   P      P       06 16 13.8 +1.0
      comp=N,5.8nm,0.6s,baz=58,slow=7.8,SNR=45
CMAR                              PcP    PcP     06 18 04.7 +0.7
      comp=N,1.6nm,0.3s,baz=101,slow=1.4,SNR=8.5
      comp=N,5.8nm,0.6s
CMAR  Chiang Mai Arr  41.56 274   P      P       06 16 13.6 +0.8
CTAO  Charters Tower  41.63 176   P      P       06 16 13.1  -0.2
CTAO  Charters Tower  41.63 176   P      P       06 16 14.2 +0.9
CTAO  Charters Tower  41.63 176   P      P       06 16 13.1  -0.2
CTAO                              pmax   pmax
      comp=Z,45nm,1.1s
CTAO  Charters Tower  41.63 176   P      P       06 16 13.7 +0.4
CTAO                              sP     sP      06 17 47.6 +1.6
GMJI  Gumukmas        41.68 228   P      P       06 16 13.8  0.0
      comp=Z,72nm,1.0s,comp=Z,932nm
SEY   Seymchan        41.69   6   P      P       06 16 14.3 +1.1
      comp=Z,22nm,0.8s,baz=181,slow=7.0,SNR=49
SEY                               PcP    PcP     06 18 04.0 +0.5
      comp=Z,3.8nm,0.6s,baz=171,slow=3.6,SNR=5.2
      comp=Z,22nm,0.8s
SEY   Seymchan        41.69   6ceP       P       06 16 14.7 +1.5
SEY                               pmax   pmax
      comp=Z,37nm,1.3s
BOD   Bodaibo         41.84 337  eP      P       06 16 14.9 +0.4
BOD                               pmax   pmax
      comp=Z,13nm,1.7s
QIS   Mount Isa       42.13 185   P      P       06 16 17.6 +0.3
WRAB  Tennant Creek   42.26 192   P      P       06 16 17.8  -0.5
WRAB                              IAmb   IAmb    06 16 19.2
      comp=Z,99nm,0.7s
WRAB  Tennant Creek   42.26 192   P      P       06 16 18.4 +0.1
WRAB  Tennant Creek   42.26 192ceP       P       06 16 18.3  0.0
WRAB                              pmax   pmax
      comp=Z,172nm,1.3s
WRAB  Tennant Creek   42.26 192   P      P       06 16 18.0  -0.3
WB2   Warramunga Arr  42.27 192   IAmb   IAmb    06 16 19.3
      comp=Z,103nm,0.8s
WRA   Warramunga Arr  42.27 192   P      P       06 16 18.0  -0.4
      comp=Z,66nm,0.7s,baz=14,slow=8.6,SNR=202
WRA                               PcP    PcP     06 18 05.8  -0.4
      comp=Z,5.9nm,0.7s,baz=14,slow=5.0,SNR=6.7
WRA                               ScP    ScP     06 21 27.3  -0.5
      comp=Z,6.2nm,1.0s,baz=9.9,slow=4.4,SNR=12
WRA                               S      S       06 22 12.6  -3.6
      comp=Z,6.2nm,1.2s,baz=16,slow=15,SNR=9.0
WRA                               PKiKP  PKiKP   06 25 09.6  -1.3
      comp=Z,0.9nm,0.6s,baz=329,slow=1.6,SNR=5.8
      comp=Z,66nm,0.7s
ZAK   Zakamensk       42.34 322  eP      P       06 16 18.8  0.0
ZAK                              e               06 22 16.2
ZAK                               pmax   pmax
      comp=Z,38nm,1.2s
NGJI  Ngawi           42.44 231   P      P       06 16 21.7 +1.8
      comp=Z,70nm,0.9s
PWJI  Pagerwojo       42.65 230   P      P       06 16 20.8  -0.7
      comp=Z,286nm,0.9s,comp=Z,2µm
TPRI  Tanjung Pinang  42.93 246   P      P       06 16 26.0 +2.2
      comp=Z,136nm,0.9s
FITZ  Fitzroy Crossi  43.11 205   P      P       06 16 24.9  -0.2
ADK   Adak            43.20  36   P      P       06 16 26.7 +1.3
PPBI  Pangkal Pinang  43.26 241   P      P       06 16 26.7 +0.2
UGM   Wanagama        43.48 231   P      P       06 16 27.1  -1.2
UGM                               IAmb   IAmb    06 16 28.8
      comp=Z,151nm,1.0s
UGM   Wanagama        43.48 231   P      P       06 16 27.9  -0.4
UGM   Wanagama        43.48 231   P      P       06 16 28.2  -0.1
      comp=Z,180nm,1.2s
MND   Mandalay        43.53 280   P      P       06 16 29.4 +0.8
DSRI  Dabo            43.62 245   P      P       06 16 31.2 +1.8
      comp=Z,61nm,1.2s
SURA  Surathani       43.62 260   P      P       06 16 31.4 +2.0
SRIT  Nakonsritamara  43.86 260   IAmb   IAmb    06 16 34.0
      comp=Z,48nm,0.8s
SRIT  Nakonsritamara  43.86 260   P      P       06 16 33.6 +2.4
MOY   Mondy           44.21 323  eP      P       06 16 34.3 +0.7
MOY                               pmax   pmax
      comp=Z,35nm,1.6s
KPJI  Karang Pucung   44.27 233   P      P       06 16 33.9  -0.5
      comp=Z,128nm,1.1s,comp=Z,1µm
IPM   Ipoh            44.27 253   P      P       06 16 34.6 +0.1
IPM                               IAmb   IAmb    06 16 36.6
      comp=Z,64nm,1.0s
IPM   Ipoh            44.27 253   P      P       06 16 35.9 +1.4
GOMU  GeErMu          44.27 300   P      P       06 16 36.0 +1.3
GOMU                              PcP    PcP     06 18 14.0 +0.6
GOMU                              S      S       06 22 45.2  -0.5
GOMU                              pmax   pmax
      comp=Z,32nm,0.8s
GOMU                              pmax   pmax
      comp=Z,95nm,5.9s
CBJI  Citeko          45.25 236   P      P       06 16 43.0 +0.8
      comp=Z,100nm,0.4s
BBJI  Bungbulang      45.31 234   P      P       06 16 40.9  -1.8
AS01  Alice Springs   45.97 192   P      P       06 16 47.5  -0.1
ASAR  Alice Springs   45.98 192   P      P       06 16 47.5  -0.2
      comp=Z,14nm,0.7s,baz=12,slow=9.8,SNR=140
ASAR                              PcP    PcP     06 18 18.5  -0.4
      comp=Z,5.1nm,0.9s,baz=1.4,slow=3.9,SNR=6.7
ASAR                              ScP    ScP     06 21 42.2  -0.8
      comp=Z,1.8nm,0.9s,baz=1.3,slow=3.3,SNR=6.5
ASAR                              S      S       06 23 06.3  -3.2
      comp=Z,5.0nm,0.9s,baz=21,slow=19,SNR=19
      comp=Z,14nm,0.7s
MDSI  Maura Dua       46.20 240   P      P       06 16 48.8  -0.7
      comp=Z,40nm,1.1s
BKNI  Bangkinang      46.22 248   P      P       06 16 52.4 +2.7
BKNI  Bangkinang      46.22 248   P      P       06 16 52.7 +3.0
      comp=Z,156nm,1.1s
CGJI  Cibinong        46.27 237   P      P       06 16 48.3  -1.8
      comp=Z,185nm,1.0s,comp=Z,2µm
SDSI  Sungai Dareh    46.53 247   P      P       06 16 52.8 +0.7
      comp=Z,66nm,1.2s,comp=Z,7µm
PSI   Prapat          46.89 253   P      P       06 16 56.0 +0.9
SHL   Shillong        46.91 285   P      P       06 16 55.0  -0.1
SHL   Shillong        46.91 285   P      P       06 16 55.0  -0.1
SHL                               pmax   pmax
      comp=Z,36nm,1.1s
SHL   Shillong        46.91 285   P      P       06 16 55.2 +0.1
      SNR=8.2
MASI  Maura Aman, Be  47.02 243   P      P       06 16 57.0 +1.0
      comp=Z,106nm,1.2s,comp=Z,2µm
LSA   Lhasa           47.22 291   P      P       06 16 59.0 +1.2
LSA                               pmax   pmax
      comp=Z,34nm,0.9s
LSA   Lhasa           47.22 291   P      P       06 16 59.6 +1.8
LSA   Lhasa           47.22 291   P      P       06 16 59.4 +1.6
LSA   Lhasa           47.22 291   P      P       06 16 59.3 +1.5
PDSI  Padang          47.34 247   P      P       06 16 58.3  -0.1
      comp=Z,46nm,0.8s
KCSI  Kotacane, Aceh  47.60 254   P      P       06 17 00.2  -0.1
      comp=Z,48nm,1.3s
NIKH  Nikolski High   48.00  37   P      P       06 17 03.5 +0.7
      baz=248
QLP   Quilpie         48.00 179   P      P       06 17 02.8  -0.3
RMQ   Roma            48.20 173   P      P       06 17 04.9 +0.3
BILL  Bilibino        48.53  11   P      P       06 17 07.3 +0.8
BILL                              IAmb   IAmb    06 17 08.7
      comp=Z,78nm,0.7s
BILL  Bilibino        48.53  11d iP      P       06 17 07.5 +0.9
BILL                             i *PP   pP      06 18 07.1  -0.3
BILL                             i               06 18 26.4
BILL                              pmax   pmax
      comp=Z,110nm,1.0s
BILL  Bilibino        48.53  11   P      P       06 17 07.8 +1.2
BILL                              pP     pP      06 18 08.5 +1.0
WRKA  Warakurna       48.64 198   P      P       06 17 07.8  -0.2
PSA00 Pilbara Seismi  48.65 209   IAmb   IAmb    06 17 09.0
      comp=Z,27nm,0.9s
PSA00 Pilbara Seismi  48.65 209   P      P       06 17 07.9  -0.2
XMI   Christmas Isla  48.72 233   P      P       06 17 07.7  -1.1
SPIA  Saint Paul Isl  48.98  32   P      P       06 17 11.6 +1.5
      baz=244
INKA  Innaminka       49.20 183   P      P       06 17 11.8  -0.3
UNV   Unalaska Valle  49.62  37   IAmb   IAmb    06 17 17.4
      comp=Z,96nm,0.8s
UNV   Unalaska Valle  49.62  37   P      P       06 17 16.5 +1.4
      baz=250,SNR=5.1
OOD   Oodnadatta      49.72 189   P      P       06 17 16.1  0.0
AKUT  Akutan          50.13  37   P      P       06 17 20.1 +1.3
TAPN  Taplejung       50.43 288  eP      P       06 17 22.6 +0.7
      comp=Z,48nm,0.6s
WMQ   Urumqi          50.57 309 ⇑P       P       06 17 23.8 +1.4
WMQ                               PcP    PcP     06 18 36.0 +0.6
WMQ                               pmax   pmax
      comp=Z,45nm,1.1s
WMQ                               pmax   pmax
      comp=Z,160nm,4.9s
WMQ                               LR     LR
      comp=Z,50nm,19.7s
TIXI  Tiksi           50.65 354   P      P       06 17 22.4  0.0
      comp=Z,20nm,0.8s,baz=90,slow=24,SNR=24
TIXI                              S      S       06 24 12.2  -1.2
      comp=Z,1.9nm,0.6s,baz=90,slow=24,SNR=11
      comp=Z,20nm,0.8s
TIXI  Tiksi           50.65 354   P      P       06 17 22.0  -0.4
TIXI  Tiksi           50.65 354ceP       P       06 17 22.6 +0.2
TIXI                              pmax   pmax
      comp=Z,28nm,1.0s
TIXI  Tiksi           50.65 354   P      P       06 17 22.5  0.0
ODAN  Odare           50.77 288  eP      P       06 17 24.7 +0.4
AULRC Lightning Ridg  51.04 175   P      P       06 17 25.4  -0.4
RAMN  Ramite          51.46 288  eP      P       06 17 29.9 +0.5
FALS  False Pass      51.66  36   P      P       06 17 30.6 +0.4
      baz=252
DGZ   Jazzator, Alta  51.72 317⇑iP       P       06 17 32.3 +1.4
DGZ                               pmax   pmax
      comp=Z,47nm,1.2s
JIRN  Jiri            51.73 289  eP      P       06 17 32.1 +0.5
      comp=Z,78nm,0.7s
GUN   Gumba           51.98 289  eP      P       06 17 34.0 +0.6
LCRK  Leigh Creek     52.06 185   P      P       06 17 33.6 +0.3
GIRL  Giralia         52.31 214   P      P       06 17 36.6 +1.3
MULG  Mulgathing      52.41 190   P      P       06 17 35.9  0.0
PKI   Pulchoki        52.43 289  eP      P       06 17 36.5  -0.2
PKIN  Phulchoki       52.44 289  eP      P       06 17 36.7  0.0
KKN   Kakani          52.52 289  eP      P       06 17 37.3 +0.1
S12K  Black Hills     52.66  36   P      P       06 17 37.7 +0.2
      baz=253
DMN   Daman           52.70 289  eP      P       06 17 38.7 +0.2
      comp=Z,20nm,0.4s
CMSA  Cobar Meteorol  52.98 177   P      P       06 17 40.5 +0.5
AUPHS Peel High Scho  53.01 172   P      P       06 17 40.5 +0.2
ZSN   Zaisan          53.02 314  eP      P       06 17 41.3 +1.1
      baz=314
ZSN   Zaisan          53.02 314  eP      P       06 17 41.3 +1.1
GKN   Gorkha          53.06 289  eP      P       06 17 41.3 +0.3
STKA  Stephens Creek  53.29 182   P      P       06 17 41.7  -0.5
      comp=Z,33nm,0.7s,baz=351,slow=8.1,SNR=83
STKA                              S      S       06 24 46.6  -3.4
      comp=Z,0.9nm,0.3s,baz=129,slow=17,SNR=3.7
      comp=Z,33nm,0.7s
STKA  Stephens Creek  53.29 182   P      P       06 17 42.0  -0.2
SDPT  Sand Point      53.42  36   P      P       06 17 43.5 +0.6
      baz=254
MEEK  Meekatharra     53.61 208   P      P       06 17 44.3  -0.4
DANN  Dangsing        53.78 290  eP      P       06 17 47.3 +0.9
      comp=Z,139nm,0.3s
AUDCS Dubbo College   53.87 174   P      P       06 17 47.0 +0.6
TNA   Tin City        53.95  23   P      P       06 17 48.3 +1.7
      baz=240,SNR=38
KOLN  Koldanda        54.00 289  eP      P       06 17 48.2 +0.3
FORT  Forrest         54.15 196   P      P       06 17 47.9  -0.5
FORT                              IAmb   IAmb    06 17 49.7
      comp=Z,92nm,0.8s
FORT  Forrest         54.15 196   P      P       06 17 48.6 +0.1
ZAA0  Zalesovo Array  54.20 322   P      P       06 17 48.5  -0.1
ZAA0                              IAmb   IAmb    06 17 50.0
      comp=Z,58nm,0.8s
ZALV  Zalesovo Beam   54.20 322   P      P       06 17 48.9 +0.3
      comp=Z,58nm,0.8s,baz=98,slow=6.4,SNR=189
ZALV                              PcP    PcP     06 18 48.4  -0.4
      comp=Z,39nm,0.9s,baz=108,slow=3.8,SNR=13
ZALV                              ScP    ScP     06 22 17.2  -0.6
      comp=Z,1.0nm,0.7s,baz=124,slow=7.2,SNR=1.9
ZALV                              S      S       06 24 59.5  -2.3
      comp=Z,1.3nm,0.7s,baz=109,slow=17,SNR=6.3
      comp=Z,58nm,0.8s
ANM   Nome            54.43  25   IAmb   IAmb    06 17 53.0
      comp=Z,52nm,1.0s
PYUN  Piuthan         54.49 290  eP      P       06 17 51.8 +0.4
BBOO  Buckleboo       54.62 187   P      P       06 17 51.9 +0.1
WHYH  Whyalla         54.68 186   P      P       06 17 53.2 +1.0
MK31  Makanchi Array  54.69 313⇑iP       P       06 17 53.0 +0.7
MKAR  Makanchi Array  54.69 313   P      P       06 17 53.0 +0.8
      comp=Z,16nm,0.7s,baz=91,slow=8.9,SNR=183
MKAR                              PcP    PcP     06 18 50.3  -0.6
      comp=Z,19nm,0.7s,baz=86,slow=5.9,SNR=15
MKAR                              ScP    ScP     06 22 20.0  -0.2
      comp=Z,1.8nm,0.8s,baz=92,slow=5.8,SNR=4.4
MKAR                              S      S       06 25 07.5  -1.1
      comp=Z,5.8nm,1.0s,baz=93,slow=18,SNR=16
      comp=Z,16nm,0.7s
MKAR  Makanchi Array  54.69 313   P      P       06 17 52.9 +0.6
CHGN  Chignik         54.79  36   IAmb   IAmb    06 17 53.9
      comp=Z,68nm,0.6s
CHGN  Chignik         54.79  36   P      P       06 17 53.5 +0.7
      baz=256,SNR=5.7
MAKZ  Makanchi        54.90 313   P      P       06 17 54.6 +0.8
MAKZ  Makanchi        54.90 313   P      P       06 17 54.6 +0.8
MAKZ                              pmax   pmax
      comp=Z,31nm,0.8s
MAKZ  Makanchi        54.90 313   P      P       06 17 54.6 +0.8
MAKZ                              PcP    PcP     06 18 51.5  -0.3
HTT   Hallett         54.96 184   P      P       06 17 54.6 +0.3
P16K  Nushagak River  55.71  32   P      P       06 18 00.8 +1.5
      baz=254,SNR=14
N16K  Nishlik Lake    55.74  31   P      P       06 18 01.4 +1.9
      baz=253
O16K  Kokwok River B  55.82  32   P      P       06 18 01.5 +1.5
      baz=254
R17K  Ugashik Creek   56.19  34   P      P       06 18 03.7 +1.1
      baz=257
Q16K  King Salmon     56.29  33   P      P       06 18 04.1 +0.8
      baz=256
O17K  Koliganek Bris  56.35  32   P      P       06 18 04.7 +1.0
      baz=255,SNR=21
SEM   Semipalatinsk   56.40 317  eP      P       06 18 04.4  -0.2
      baz=317
SEM   Semipalatinsk   56.40 317  eP      P       06 18 04.3  -0.2
SHLS  Shalkode        56.50 308  eP      P       06 18 04.0  -1.2
      baz=308
SHLS  Shalkode        56.50 308  eP      P       06 18 04.0  -1.2
P17K  Kvichak River   56.53  32   P      P       06 18 06.3 +1.3
      baz=256
Q17K  Contact Creek   56.59  34   P      P       06 18 05.8 +0.2
      baz=257
WUS   Wushi           56.67 306   P      P       06 18 07.6 +1.0
WUS                               PcP    PcP     06 18 59.1 +0.2
UZB   Uzynbulak       56.82 308  eP      P       06 18 08.4 +0.9
      baz=308
UZB   Uzynbulak       56.82 308  eP      P       06 18 08.3 +0.8
MORW  Morawa          56.84 208   P      P       06 18 06.9  -0.6
MORW  Morawa          56.84 208   P      P       06 18 07.5  0.0
RDOG  Red Dog Mine    56.88  21   P      P       06 18 08.7 +1.4
      baz=244,SNR=16
CAN   Canberra        56.97 174   P      P       06 18 09.4 +1.0
CAN   Canberra        56.97 174   P      P       06 18 09.0 +0.6
CAN                               PcP    PcP     06 19 00.7 +0.9
KPKS  Kokpek          57.07 308⇑iP       P       06 18 10.2 +0.9
      baz=308
KPKS  Kokpek          57.07 308c iP      P       06 18 10.1 +0.9
Q18K  Katmai Hardscr  57.12  33   P      P       06 18 09.2  -0.1
      baz=257,SNR=11
P18K  Big Mountain,   57.18  32   P      P       06 18 10.0 +0.4
      baz=257
ZHN   Zhinishke       57.25 308  eP      P       06 18 11.4 +0.9
      baz=308
ZHN   Zhinishke       57.25 308  eP      P       06 18 11.4 +0.9
SATY  Saty            57.27 308  eP      P       06 18 11.8 +1.1
      baz=308
SATY  Saty            57.27 308  eP      P       06 18 11.8 +1.1
O18K  Koktuh Hills    57.30  32   P      P       06 18 11.8 +1.4
      baz=256,SNR=11
KURK  Kurchatov       57.47 317   P      P       06 18 12.1 +0.4
KURK                              IAmb   IAmb    06 18 13.2
      comp=Z,57nm,0.8s
KURK  Kurchatov       57.47 317   P      P       06 18 12.5 +0.8
KURK                                             06 19 01.3
KURK                              S      S       06 25 43.4  -1.4
KURK  Kurchatov       57.47 317   P      P       06 18 12.1 +0.4
KURK  Kurchatov       57.47 317   P      P       06 18 12.0 +0.4
KURK                              PcP    PcP     06 19 01.4  -0.3
KURK                              pP     pP      06 19 14.3  -1.6
KURK                              pwP    pwP     06 19 24.4 +5.4
KURBB Kurchatov Arra  57.52 317   P      P       06 18 12.5 +0.5
      comp=Z,56nm,0.7s,baz=95,slow=7.6,SNR=275
KURBB                             PcP    PcP     06 19 01.3  -0.5
      comp=Z,7.0nm,0.6s,baz=93,slow=4.2,SNR=6.0
KURBB                             S      S       06 25 43.4  -2.0
      comp=Z,0.7nm,0.2s,baz=234,slow=7.9,SNR=1.7
      comp=Z,56nm,0.7s
TTA   Tatalina        57.71  28   P      P       06 18 13.8 +0.5
TTA   Tatalina        57.71  28   P      P       06 18 14.5 +1.2
TTA   Tatalina        57.71  28   P      P       06 18 13.8 +0.5
TTA                               pmax   pmax
      comp=Z,39nm,1.1s
TTA   Tatalina        57.71  28   P      P       06 18 14.5 +1.2
      baz=254,SNR=19
OHAK  Old Harbor      57.74  35   P      P       06 18 14.5 +1.0
      baz=260
O19K  Port Alsworth   57.81  32   P      P       06 18 15.3 +1.4
      baz=257
N19K  Bonanza Creek   57.87  31   IAmb   IAmb    06 18 17.2
      comp=Z,69nm,0.8s
N19K  Bonanza Creek   57.87  31   P      P       06 18 16.1 +1.6
      baz=256
Q19K  Cape Douglas,   57.88  33   P      P       06 18 14.4  0.0
      baz=258
GCSA  Galena City Sc  57.88  26   P      P       06 18 15.3 +1.1
      baz=252
BLDU  Ballidu         57.88 207   P      P       06 18 14.6  -0.2
L19K  White Mountain  58.03  29   IAmb   IAmb    06 18 18.1
      comp=Z,50nm,1.0s
L19K  White Mountain  58.03  29   P      P       06 18 17.1 +1.6
      baz=255
ARPS  Mount Arapiles  58.16 181   P      P       06 18 16.9 +0.4
M19K  Big River Lodg  58.17  30   P      P       06 18 18.1 +1.7
      baz=256
KDAK  Kodiak Island   58.22  35   P      P       06 18 17.7 +1.0
KDAK                              IAmb   IAmb    06 18 19.7
      comp=Z,68nm,1.1s
KDAK  Kodiak Island   58.22  35   P      P       06 18 17.7 +1.0
KDAK                              pmax   pmax
      comp=Z,68nm,1.1s
KDAK  Kodiak Island   58.22  35   P      P       06 18 17.8 +1.0
P19K  Oil Pt          58.23  32   P      P       06 18 17.7 +0.9
      baz=258
MDOK  Medeo           58.26 308 i P      P       06 18 19.0 +1.4
      baz=308
MDOK  Medeo           58.26 308 i P      P       06 18 18.9 +1.4
CHKK  Chushkaly       58.30 309  eP      P       06 18 18.4 +0.8
      baz=309
CHKK  Chushkaly       58.30 309  eP      P       06 18 18.3 +0.7
KLBR  Kellerberrin    58.31 205   P      P       06 18 17.6  -0.1
TNSS  Tian-Shan       58.34 308  eP      P       06 18 19.5 +1.1
      baz=308
TNSS  Tian-Shan       58.34 308  eP      P       06 18 19.5 +1.1
AAA   Alma-Ata        58.36 308  eP      P       06 18 19.8 +1.7
      comp=Z,78nm,0.8s,baz=308
AAA   Alma-Ata        58.36 308  eP      P       06 18 19.8 +1.7
AAA                               pmax   pmax
      comp=Z,78nm,0.8s
Q20K  Shuyak Island   58.46  34   P      P       06 18 18.9 +0.6
      baz=260
L20K  Farewell, AK    58.54  29   P      P       06 18 20.6 +1.6
      baz=256,SNR=13
O20K  Slope Mountain  58.62  32   P      P       06 18 20.2 +0.6
      baz=259
K20K  Telida          58.68  28   IAmb   IAmb    06 18 22.9
      comp=Z,60nm,0.9s
K20K  Telida          58.68  28   P      P       06 18 21.8 +1.9
      baz=255
M20K  Styx River      58.75  30   IAmb   IAmb    06 18 25.3
      comp=Z,34nm,0.8s
M20K  Styx River      58.75  30   P      P       06 18 22.1 +1.7
      baz=257
KUU   Kurty           58.77 309  eP      P       06 18 21.9 +1.0
      comp=Z,71nm,0.8s,baz=309
KUU   Kurty           58.77 309  eP      P       06 18 21.8 +1.0
KUU                               pmax   pmax
      comp=Z,71nm,0.8s
ULHL  Ulahol          58.88 307   P      P       06 18 23.0 +1.1
      SNR=11
BRAT  Ballarat        58.93 179   P      P       06 18 22.9 +1.1
TOO   Toolangi        58.99 178   P      P       06 18 22.5 +0.2
TOO   Toolangi        58.99 178   P      P       06 18 23.3 +1.0
TOO   Toolangi        58.99 178   P      P       06 18 22.5 +0.2
TOO                               pmax   pmax
      comp=Z,30nm,0.9s
N20K  Mount Spurr     59.04  31   P      P       06 18 23.8 +1.4
      baz=258,SNR=7.4
SPCR  Spurr Chakacha  59.04  31   P      P       06 18 23.9 +1.4
      baz=258,SNR=5.5
KSH   Kashi           59.22 304   P      P       06 18 28.0 +3.9
KSH                               S      S       06 26 13.2 +5.2
KSH                               pmax   pmax
      comp=Z,28nm,0.9s
KSH                               LR     LR
      comp=Z,730nm,20.9s
KSH                               LR     LR
      comp=Z,460nm,20.4s
TKM2  Tokmak 2        59.33 308   P      P       06 18 26.4 +1.4
      SNR=34
PPLA  Purkeypile      59.40  29   IAmb   IAmb    06 18 27.7
      comp=Z,140nm,1.6s
PPLA  Purkeypile      59.40  29   P      P       06 18 25.9 +1.0
      baz=258,SNR=8.8
BRLK  Bradley Lake    59.42  32   IAmb   IAmb    06 18 25.9
      comp=Z,61nm,0.7s
BRSE  Bradley Lake S  59.49  33   P      P       06 18 25.6 +0.1
      baz=261
SKT   Skwentna        59.51  30   IAmb   IAmb    06 18 27.0
      comp=Z,55nm,0.8s
SKT   Skwentna        59.51  30   P      P       06 18 26.0 +0.4
      baz=259,SNR=18
CAST  Castle Rocks    59.56  28   P      P       06 18 27.3 +1.4
      baz=257,SNR=65
CHUM  Lake Minchumin  59.56  28   P      P       06 18 27.4 +1.6
      baz=257,SNR=19
G21K  Allakaket       59.74  24   P      P       06 18 28.5 +1.5
      baz=254
SUA   Susitna One     59.78  31   IAmb   IAmb    06 18 29.3
      comp=Z,40nm,0.8s
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SUA   Susitna One       59.78  31    P      P      06 18 27.6 +0.1
      baz=260,SNR=7.4
H21K  Melozitna Rive    59.79  26    P      P      06 18 29.1 +1.8
      baz=255,SNR=75
KBK   Karagaybulak      59.82 308    P      P      06 18 29.6 +1.3
      SNR=8.6
F21K  Alatna River      59.94  24    P      P      06 18 29.6 +1.2
      baz=254
CHMS  Chumysh           59.95 308    P      P      06 18 29.9 +1.0
      SNR=10
I21K  Tanana            60.00  26    P      P      06 18 30.5 +1.7
      baz=256
SGDS  Sogindy           60.02 309⇑iP    P      06 18 30.1 +0.7
      baz=308
SGDS  Sogindy           60.02 309c iP   P      06 18 30.1 +0.7
KTH   Kantishna Hill    60.10  28    IAmb   IAmb   06 18 32.2
      comp=Z,45nm,1.0s
O22K  Cooper Landing    60.11  32    P      P      06 18 30.0 +0.5
      baz=261,SNR=17
USP   Ospenovka         60.12 308    P      P      06 18 31.0 +0.9
      SNR=24
M22K  Willow            60.12  30    P      P      06 18 29.7 +0.1
      baz=260,SNR=8.4
AAK   Ala-Archa         60.16 308    P      P      06 18 31.3 +0.8
      SNR=13
AAK   Ala-Archa         60.16 308    P      P      06 18 31.4 +1.0
      comp=Z,7.2nm,0.4s,baz=96,slow=6.6,SNR=19
AAK                                  PcP    PcP    06 19 12.8  0.0
      comp=Z,5.4nm,0.5s,baz=130,slow=4.6,SNR=5.7
      comp=Z,7.2nm,0.4s
AAK   Ala-Archa         60.16 308    P      P      06 18 31.0 +0.5
AAK   Ala-Archa         60.16 308ceP    P      06 18 31.6 +1.1
AAK                                  pmax   pmax
      comp=Z,31nm,1.7s
AAK   Ala-Archa         60.16 308  i P      P      06 18 31.4 +1.0
      SNR=17
AAK   Ala-Archa         60.16 308    P      P      06 18 31.1 +0.6
AAK   Ala-Archa         60.16 308    P      P      06 18 31.3 +0.8
AAK                                  PcP    PcP    06 19 12.9 +0.1
UCH   Uchtor            60.16 307    P      P      06 18 32.7 +1.8
      SNR=43
CUT   Chulitna          60.17  30    IAmb   IAmb   06 18 31.2
      comp=Z,56nm,0.8s
CUT   Chulitna          60.17  30    P      P      06 18 29.9  0.0
      baz=260,SNR=6.2
BPAW  Bear Paw Mtn.     60.18  28    P      P      06 18 31.3 +1.2
      baz=258,SNR=48
SEW   Seward            60.19  32    P      P      06 18 30.5 +0.5
      baz=262,SNR=9.4
RC01  Rabbit Creek A    60.20  31    P      P      06 18 30.6 +0.4
      baz=261,SNR=9.8
A21K  Barrow            60.22  19    P      P      06 18 31.3 +1.2
      baz=248
BTLS  Baital            60.38 310⇑iP    P      06 18 32.7 +0.9
      baz=310
BTLS  Baital            60.38 310c iP   P      06 18 32.6 +0.9
H22K  Ishtalitna Cre    60.42  25    P      P      06 18 33.4 +1.7
      baz=257
MLY   Manley            60.48  26    IAmb   IAmb   06 18 34.7
      comp=Z,55nm,0.9s
MLY   Manley            60.48  26    P      P      06 18 33.7 +1.5
      baz=258,SNR=52
PMR   Palmer            60.56  31    IAmb   IAmb   06 18 33.8
      comp=Z,53nm,0.8s
PMR   Palmer            60.56  31    P      P      06 18 33.1 +0.5
PMR   Palmer            60.56  31    P      P      06 18 32.8 +0.2
      baz=261,SNR=13
G22K  Bettles           60.61  24    P      P      06 18 34.3 +1.4
      baz=256
HYB   Hyderabad         60.66 278  eP      P      06 18 34.5 +0.5
EKS2  Erkin-Say         60.68 308    P      P      06 18 35.1 +1.2
      SNR=16
AML   Almayashu         60.78 307    P      P      06 18 36.4 +1.5
      SNR=28
PWL   Port Wells        60.84  31    P      P      06 18 35.0 +0.5
      baz=262,SNR=9.9
KNK   Knik Glacier      60.86  31    P      P      06 18 35.3 +0.7
      baz=262,SNR=22
SML   Sawmill           60.97  30    P      P      06 18 36.0 +0.5
      baz=262,SNR=22
MCK   McKinley          61.00  28    IAmb   IAmb   06 18 37.0
      comp=Z,55nm,0.8s
MCK   McKinley          61.00  28    P      P      06 18 35.8 +0.2
      baz=260,SNR=29
I23K  Minto, Yukon-K    61.08  26    IAmb   IAmb   06 18 39.3
      comp=Z,50nm,0.8s
I23K  Minto, Yukon-K    61.08  26    P      P      06 18 37.4 +1.4
      baz=259,SNR=39
NEA2  Nenana            61.10  27    IAmb   IAmb   06 18 38.4
      comp=Z,51nm,1.1s
NEA2  Nenana            61.10  27    P      P      06 18 37.1 +0.9
      baz=260,SNR=12
G23K  Bananza Creek     61.13  25    P      P      06 18 38.1 +1.7
      baz=257
H23K  Yukon River       61.14  26    IAmb   IAmb   06 18 39.3
      comp=Z,54nm,0.9s
COLD  Coldfoot          61.18  24    IAmb   IAmb   06 18 39.6
      comp=Z,42nm,0.9s
COLD  Coldfoot          61.18  24    P      P      06 18 38.2 +1.6
      baz=257,SNR=45
P23K  Montague Islan    61.19  32    P      P      06 18 37.9 +1.0
      baz=264
BRZS  Berezniki         61.24 316  eP      P      06 18 37.8 +0.4
      baz=316
BRZS  Berezniki         61.24 316  eP      P      06 18 37.8 +0.4
M23K  Glacier View      61.26  30    P      P      06 18 38.0 +0.7
      baz=262,SNR=12
D23K  Nanushuk River    61.42  22    P      P      06 18 40.3 +2.1
      baz=256
SCM   Sheep Creek Mo    61.45  30    P      P      06 18 39.7 +1.1
      baz=263,SNR=15
WRH   Wood River Hil    61.49  27    P      P      06 18 39.2 +0.4
E23K  Chandalar         61.58  23    P      P      06 18 41.6 +2.1
      baz=257
TCOL  CIGO, UAF Yank    61.66  27    IAmb   IAmb   06 18 42.9
      comp=Z,37nm,0.7s
TCOL  CIGO, UAF Yank    61.66  27    P      P      06 18 40.3 +0.5
      baz=260,SNR=9.5
COLA  College           61.66  27    P      P      06 18 40.7 +0.9
COLA                                 IAmb   IAmb   06 18 42.9
      comp=Z,37nm,0.7s
COLA  College           61.66  27    P      P      06 18 40.8 +0.9
COLA  College           61.66  27    P      P      06 18 40.7 +0.9
COLA                                 pmax   pmax
      comp=Z,37nm,0.7s
COLA  College           61.66  27    P      P      06 18 40.1 +0.3
      baz=260
COLA  College           61.66  27    P      P      06 18 40.2 +0.3
PALK  Pallekele         61.78 267    P      P      06 18 41.3 -0.3
      comp=Z,24nm,0.9s,baz=220,slow=5.1,SNR=5.4
      comp=Z,24nm,0.9s
PALK  Pallekele         61.78 267    P      P      06 18 41.4 -0.3
PALK  Pallekele         61.78 267    P      P      06 18 41.8 +0.1
H24K  Noodor Dome       61.81  26    IAmb   IAmb   06 18 43.4
      comp=Z,38nm,0.8s
H24K  Noodor Dome       61.81  26    P      P      06 18 42.0 +1.1
      baz=260,SNR=41
POKR  Poker Plat Res    61.88  27    P      P      06 18 41.7 +0.4
      baz=261,SNR=12
HDA   Harding Lake      61.97  28    IAmb   IAmb   06 18 42.8
      comp=Z,39nm,0.7s
HDA   Harding Lake      61.97  28    P      P      06 18 41.8 -0.2
      baz=262,SNR=25
E24K  Your Creek        62.00  23    P      P      06 18 43.8 +1.6
      baz=258
NIL   Nilore            62.02 297    P      P      06 18 43.2 +0.3
NIL   Nilore            62.02 297    P      P      06 18 43.2 +0.3
NIL                                  pmax   pmax
      comp=Z,82nm,1.1s
NIL   Nilore            62.02 297    P      P      06 18 44.2 +1.3
NIL   Nilore            62.02 297    P      P      06 18 44.0 +1.0
M24K  Tolsona, Glenn    62.02  30    IAmb   IAmb   06 19 30.6
      comp=Z,46nm,1.0s
M24K  Tolsona, Glenn    62.02  30    P      P      06 18 43.5 +1.0
      baz=264
IL31                    62.05  27    IAmb   IAmb   06 18 43.2
      comp=Z,54nm,0.8s
ILAR  Eielson Array     62.05  27    P      P      06 18 42.1 -0.4
      comp=Z,47nm,0.9s,baz=259,slow=5.3,SNR=342
      comp=Z,47nm,0.9s
EYAK  Cordova Ski Ar    62.07  32    P      P      06 18 43.9 +1.3
      baz=265
KLU   Klutina           62.08  31    P      P      06 18 44.0 +1.1
      baz=264,SNR=14
F24K  Squaw Lake        62.12  24    P      P      06 18 44.8 +1.8
      baz=259,SNR=30
G24K  Hadweenzic Riv    62.12  25    P      P      06 18 44.9 +1.9
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      baz=260,SNR=34
C24K  Franklin Bluff    62.28  21    P      P      06 18 45.3 +1.5
      baz=257
K24K  Donnelly Dome     62.40  28    P      P      06 18 45.4 +0.5
      baz=263,SNR=17
PAX   Paxson            62.44  29    IAmb   IAmb   06 18 47.1
      comp=Z,28nm,0.7s
PAX   Paxson            62.44  29    P      P      06 18 46.0 +0.7
      baz=264,SNR=18
DZA   Taraz             62.46 308  eP      P      06 18 46.5 +0.8
      baz=308
DZA   Taraz             62.46 308  eP      P      06 18 46.4 +0.8
HARP  HAARP             62.53  30    P      P      06 18 46.8 +1.1
      baz=264
BVAR  Borovoye Array    62.66 319    P      P      06 18 47.5 +0.7
      comp=Z,87nm,0.5s,baz=91,slow=7.7,SNR=370
BVAR                                 S      S      06 26 49.3 -1.3
      comp=Z,6.4nm,0.9s,baz=89,slow=9.3,SNR=13
      comp=Z,87nm,0.5s
G25K  Bearman Lake      62.67  25    P      P      06 18 48.0 +1.5
      baz=261
N25K  Chitina, Valde    62.72  31    IAmb   IAmb   06 18 49.3
      comp=Z,22nm,0.7s
N25K  Chitina, Valde    62.72  31    P      P      06 18 48.4 +1.3
      baz=265,SNR=7.6
BRVK  Borovoye          62.73 320    P      P      06 18 47.7 +0.6
BRVK  Borovoye          62.73 320    P      P      06 18 47.7 +0.6
BRVK                                 pmax   pmax
      comp=Z,86nm,0.8s
BRVK  Borovoye          62.73 320    P      P      06 18 48.2 +1.0
BRVK  Borovoye          62.73 320    P      P      06 18 47.8 +0.6
BRVK                                 PcP    PcP    06 19 22.7 -0.1
BRVK                                 pP     pP     06 19 54.2 +1.8
PRP   Porcupine Dome    62.73  26    P      P      06 18 46.6 -0.5
PRP   Porcupine Dome    62.73  26    P      P      06 18 46.4 -0.7
      baz=262,SNR=12
RIDG  Independent Ri    62.80  28    P      P      06 18 47.8 +0.2
RIDG  Independent Ri    62.80  28    P      P      06 18 47.7 +0.2
      baz=264,SNR=29
F25K  Christian Rive    62.98  24    P      P      06 18 50.5 +1.9
      baz=261
D25K  Kavik River       63.00  22    P      P      06 18 50.1 +1.4
      baz=260
KK31  Karatay Array     63.04 308    IAmb   IAmb   06 18 51.4
      comp=Z,58nm,0.8s
KKAR  Karatay Array     63.04 308    IAmb   IAmb   06 18 51.4
      comp=Z,58nm,0.8s
GLB   Gilahina Butte    63.08  31    IAmb   IAmb   06 18 51.5
      comp=Z,75nm,1.2s
E25K  Arctic Village    63.09  23    P      P      06 18 51.3 +2.0
      baz=261,SNR=47
DOT   Dot Lake          63.14  29    IAmb   IAmb   06 18 51.4
      comp=Z,81nm,1.3s
SCRK  Sand Creek        63.21  28    P      P      06 18 50.8 +0.6
      baz=264,SNR=54
MENT  Mentasta          63.24  29    P      P      06 18 51.8 +1.4
VRDI  Verde Repeater    63.24  31    IAmb   IAmb   06 18 52.6
      comp=Z,28nm,0.9s
L26K  Log Cabin Wild    63.41  29    IAmb   IAmb   06 18 53.7
      comp=Z,28nm,0.7s
L26K  Log Cabin Wild    63.41  29    P      P      06 18 52.5 +1.0
      baz=266,SNR=14
J26L  Joseph Creek      63.44  28    P      P      06 18 52.1 +0.3
      baz=265
MCARA McCarthy VSAT     63.45  31    IAmb   IAmb   06 18 54.4
      comp=Z,51nm,0.8s
MCARA McCarthy VSAT     63.45  31    P      P      06 18 52.8 +1.0
      baz=267,SNR=9.2
M26K  Nabesna, AK       63.53  30    P      P      06 18 53.3 +1.0
      baz=266
F26K  Sheenjek River    63.56  24    P      P      06 18 54.6 +2.2
      baz=262
G26K  Porcupine Rive    63.61  25    P      P      06 18 54.5 +1.8
      baz=263,SNR=39
C26K  Camden Bay        63.61  22    P      P      06 18 54.7 +2.2
      baz=261
I26K  Coal Creek Min    63.69  27    P      P      06 18 53.0 -0.3
      baz=265
CHM   Chimkent          63.79 308  eP      P      06 18 55.5 +1.1
      comp=Z,30nm,0.6s,baz=308
CHM   Chimkent          63.79 308  eP      P      06 18 55.4 +1.1
CHM                                  pmax   pmax
      comp=Z,30nm,0.6s
C27K  Jago River        63.98  22    P      P      06 18 56.7 +1.7
      baz=262
M27K  Edge Creek, AK    64.05  30    IAmb   IAmb   06 18 57.5
      comp=Z,30nm,1.0s
M27K  Edge Creek, AK    64.05  30    P      P      06 18 56.7 +0.9
      baz=267,SNR=9.1
K27K  Chicken           64.05  28    IAmb   IAmb   06 18 58.1
      comp=Z,106nm,1.9s
K27K  Chicken           64.05  28    P      P      06 18 57.0 +1.4
      baz=266
L27K  Beaver Creek,     64.11  29    P      P      06 18 57.1 +1.1
      baz=267,SNR=16
I27K  Kandik River      64.35  26    P      P      06 18 58.4 +0.8
      baz=266
G27K  Doyon Strip       64.43  25    P      P      06 18 59.5 +1.5
      baz=265
H27K  Steamboat Moun    64.44  26    P      P      06 18 59.8 +1.7
      baz=266,SNR=100
EGAK  Eagle             64.49  27    IAmb   IAmb   06 19 00.1
      comp=Z,56nm,1.5s
EGAK  Eagle             64.49  27    P      P      06 18 58.7 +0.3
      baz=267,SNR=9.4
BVCY  Beaver Creek      64.52  30    P      P      06 18 59.9 +1.2
      baz=268,SNR=6.0
E27K  Coleen River      64.57  24    P      P      06 19 00.7 +1.8
      baz=265
YUK3  Moose Creek       64.70  31    P      P      06 19 01.2 +1.1
      baz=269,SNR=18
PINM  Pinnacle          64.78  33    P      P      06 19 01.4 +1.0
      baz=270
O28M  Mount Upton       64.81  32    P      P      06 19 02.2 +1.3
      baz=270,SNR=15
YUK8  Steele Glacier    65.02  31    P      P      06 19 03.7 +1.4
      baz=270,SNR=10
PNL   Peninsula         65.21  33    P      P      06 19 04.4 +1.3
      baz=271
DAWY  Dawson            65.23  28    IAmb   IAmb   06 19 05.5
      comp=Z,29nm,0.8s
DAWY  Dawson            65.23  28    P      P      06 19 04.6 +1.4
      baz=269,SNR=22
KBL   Kabul             65.32 299    P      P      06 19 04.9 +0.3
KBL   Kabul             65.32 299    P      P      06 19 04.9 +0.3
KBL                                  pmax   pmax
      comp=Z,54nm,0.8s
KBL   Kabul             65.32 299    P      P      06 19 04.8 +0.3
      SNR=25
YUK4  Talbot Arm        65.56  31    P      P      06 19 07.5 +1.9
      baz=271,SNR=24
O29M  Mount Kennedy     65.61  32    P      P      06 19 07.6 +1.8
      baz=271,SNR=13
M29M  Somme Creek       65.64  30    P      P      06 19 07.5 +1.6
      baz=270
YUK6  Outpost Mounta    65.71  32    P      P      06 19 08.3 +1.7
      baz=271,SNR=5.8
I29M  Ogilvie Camp,     65.72  27    P      P      06 19 07.2 +0.9
      baz=269,SNR=23
J29M  Klondike Camp     65.75  28    IAmb   IAmb   06 19 09.2
      comp=Z,44nm,0.8s
J29M  Klondike Camp     65.75  28    P      P      06 19 08.0 +1.4
      baz=270
L29M  L29M              65.79  29    P      P      06 19 08.6 +1.8
      baz=270
K29M  Barlow Dome       66.06  28    P      P      06 19 10.0 +1.4
      baz=270,SNR=22
HYT   Haines Junctio    66.13  32    IAmb   IAmb   06 19 12.0
      comp=Z,50nm,0.9s
HYT   Haines Junctio    66.13  32    P      P      06 19 10.7 +1.6
      baz=272,SNR=13
N30M  Aishikik Lake     66.31  31    P      P      06 19 11.9 +1.7
      baz=272
EPYK  Eagle Plains      66.38  26    P      P      06 19 11.9 +1.4
      baz=270,SNR=59
M30M  Minto, Yukon      66.41  30    IAmb   IAmb   06 19 13.4
      comp=Z,20nm,0.8s
M30M  Minto, Yukon      66.41  30    P      P      06 19 12.2 +1.4
      baz=272,SNR=13
P30M  Million Dollar    66.43  33    P      P      06 19 13.0 +2.1
      baz=273
G30M  tAoh Zraii Nji    66.58  25    P      P      06 19 12.7 +1.0
      baz=270,SNR=63
PLBC  Pleasant Camp     66.76  33    P      P      06 19 14.3 +1.4
      baz=273,SNR=8.8
MAYO  Mayo, Yukon       66.79  29    P      P      06 19 14.7 +1.6
      baz=272
O30N  Mendenhall        66.82  32    P      P      06 19 14.6 +1.2
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      baz=273,SNR=5.2
S31K  Pelican           66.93  35    P      P      06 19 15.6 +1.6
      baz=274
N31M  Braeburn, Yuko    66.94  31    P      P      06 19 15.8 +1.7
      baz=273,SNR=10
OMRZ  Omania            67.17 152    P      P      06 19 17.2 +1.5
WHRZ  Whale Island      67.23 151    P      P      06 19 22.4 +6.4
SKAG  Skagway           67.29  33    P      P      06 19 17.7 +1.5
      baz=274
VRZ   Vera Road         67.34 154    P      P      06 19 17.4 +0.6
F31M  Tsiigehtchic      67.53  24    P      P      06 19 18.0 +0.4
      baz=272,SNR=24
M31M  Drury Creek, Y    67.55  30    IAmb   IAmb   06 19 20.1
      comp=Z,37nm,1.1s
M31M  Drury Creek, Y    67.55  30    P      P      06 19 19.0 +1.2
      baz=274,SNR=15
INK   Inuvik            67.58  24    IAmb   IAmb   06 19 19.4
      comp=Z,37nm,0.8s
INK   Inuvik            67.58  24    P      P      06 19 18.2 +0.4
      baz=272,SNR=52
KATZ  Kakaramea         67.60 153    P      P      06 19 20.0 +1.4
BESE  Bessie Mountai    67.61  34    IAmb   IAmb   06 19 20.9
      comp=Z,46nm,0.9s
URZ   Urewera           67.62 152    P      P      06 19 18.1 -0.4
URZ   Urewera           67.62 152    P      P      06 19 18.4 -0.1
WTVZ  West Tongariro    67.68 153    P      P      06 19 19.8 +0.8
NTVZ  North Tongarir    67.70 153    P      P      06 19 20.5 +1.4
NNVZ  North Ngauruho    67.70 153    P      P      06 19 20.4 +1.2
TMVZ  Te Maari          67.73 153    P      P      06 19 20.9 +1.6
NGZ   Ngauruhoe         67.73 153    P      P      06 19 20.4 +1.0
SNVZ  South Ngauruho    67.76 153    P      P      06 19 20.7 +1.2
R32K  Eaglecrest        67.81  34    P      P      06 19 21.1 +1.6
      baz=275,SNR=5.3
TRVZ  Turoa             67.81 153    P      P      06 19 20.7 +0.7
RTZ   Ruatahuna         67.86 152    IAmb   IAmb   06 19 20.9
      comp=Z,35nm,0.7s
RTZ   Ruatahuna         67.86 152    P      P      06 19 19.8 -0.3
WNVZ  Wahianoa          67.86 153    P      P      06 19 21.3 +1.1
MWZ   Matawai           67.87 151    P      P      06 19 20.4 +0.3
JIS   Juneau Island     67.88  34    IAmb   IAmb   06 19 22.7
      comp=Z,54nm,1.0s
JIS   Juneau Island     67.88  34    P      P      06 19 21.5 +1.6
QRZ   Quartz Range      67.93 156    IAmb   IAmb   06 19 22.3
      comp=Z,33nm,1.0s
RAGZ  Rawiri            67.95 152    P      P      06 19 20.9 +0.3
FARO  Faro, Yukon       68.03  30    P      P      06 19 22.1 +1.3
      baz=275,SNR=11
SVE   Sverdlovsk        68.07 324deP    P      06 19 21.8 +0.7
SVE                                  pmax   pmax
      comp=Z,100nm,0.9s
P32M  Atlin             68.10  33    P      P      06 19 22.7 +1.4
      baz=276,SNR=6.1
BKZ   Black Stump Fm    68.10 153    P      P      06 19 21.1 -0.5
BKZ                                  IAmb   IAmb   06 19 22.1
      comp=Z,64nm,1.5s
BKZ   Black Stump Fm    68.10 153    P      P      06 19 20.9 -0.7
BKZ   Black Stump Fm    68.10 153    P      P      06 19 21.9 +0.4
RAHZ  Arahi             68.15 152    P      P      06 19 22.5 +0.6
NMHZ  Naumai            68.18 152    P      P      06 19 23.2 +1.1
BHHZ  Black Hill Sta    68.19 153    P      P      06 19 19.3 -2.8
N32M  Quiet Lake        68.26  31    P      P      06 19 23.7 +1.4
      baz=276
RIGZ  Rimuhau           68.28 151    P      P      06 19 22.3 -0.3
KWHZ  Kaweka Forest     68.29 153    P      P      06 19 23.1 +0.4
P33M  Teslin, Yukon     68.48  32    IAmb   IAmb   06 19 26.1
      comp=Z,36nm,1.1s
P33M  Teslin, Yukon     68.48  32    P      P      06 19 24.8 +1.0
      baz=276,SNR=8.1
PNHZ  Pukenui           68.60 153    P      P      06 19 24.6  0.0
U33K  Whale Pass        68.81  37    P      P      06 19 27.0 +1.3
      baz=277
T33K  Petersburg        68.81  36    P      P      06 19 27.1 +1.4
      baz=277
KIW   Kapiti Island     68.88 155    P      P      06 19 25.8 -0.4
Q32M  Nakina River      68.91  34    P      P      06 19 27.8 +1.3
      baz=277
DVHZ  Dannevirke        68.91 153    P      P      06 19 26.4 -0.1
HMDM  Hanimaadhoo       68.95 269    P      P      06 19 28.6 +1.3
MRZ   Mangatainoka R    68.98 154    IAmb   IAmb   06 19 27.0
      comp=Z,52nm,1.3s
MRZ   Mangatainoka R    68.98 154    P      P      06 19 26.6 -0.2
PRHZ  Porangahau        69.08 153    P      P      06 19 19.6 -7.9
WRAK  Wrangell Islan    69.20  36    P      P      06 19 29.4 +1.4
      baz=278
INZ   Inchbonnie        69.20 158    IAmb   IAmb   06 19 28.6
      comp=Z,28nm,1.0s
ARU   Arti              69.26 324    P      P      06 19 28.7 +0.2
      comp=Z,27nm,0.4s,baz=106,slow=3.4,SNR=67
      comp=Z,27nm,0.4s
ARU   Arti              69.26 324    P      P      06 19 28.3 -0.1
ARU   Arti              69.26 324c iP   P      06 19 28.4 -0.1
ARU                                                06 19 47.0
ARU                                  *PP    pwP    06 20 37.1 -2.1
ARU                                  S      S      06 28 11.7 +2.0
ARU                                  SS     SS     06 32 46.8 +4.4
ARU                                  pmax   pmax
      comp=Z,80nm,0.9s
ARU   Arti              69.26 324    P      P      06 19 28.5 +0.1
MTW   Mount Morrison    69.36 154    P      P      06 19 28.6 -0.6
FOZ   Fox Glacier       69.37 160    P      P      06 19 29.4 +0.3
FOZ                                  IAmb   IAmb   06 19 30.6
      comp=Z,38nm,1.1s
PLWZ  Palliser          69.61 155    P      P      06 19 30.4 -0.4
S34M  Telegraph Cree    69.64  35    P      P      06 19 32.5 +1.8
      baz=278,SNR=6.6
V35K  Ketchikan         69.77  37    P      P      06 19 32.7 +1.2
      baz=279
OXZ   Oxford            69.94 158    IAmb   IAmb   06 19 32.9
      comp=Z,23nm,0.7s
RPZ   Rata Peaks        69.94 159    IAmb   IAmb   06 19 33.0
      comp=Z,36nm,0.8s
A36M  Sachs Harbour     70.05  19    P      P      06 19 33.5 +0.5
      baz=278
DLBC  Dease Lake        70.14  34    IAmb   IAmb   06 19 36.8
      comp=Z,33nm,0.9s
DLBC  Dease Lake        70.14  34    P      P      06 19 35.4 +1.6
      baz=279,SNR=8.0
T35M  Bob Quinn         70.26  35    P      P      06 19 35.9 +1.3
      baz=279
WTLY  Watson Lake, Y    70.49  32    P      P      06 19 37.2 +1.3
      baz=280,SNR=5.5
AKTO  Aktyubinsk        70.56 317    P      P      06 19 36.4 -0.1
      comp=Z,21nm,0.8s,baz=83,slow=5.4,SNR=64
      comp=Z,21nm,0.8s
C36M  Paulatuk          70.87  22    P      P      06 19 38.3 +0.3
      baz=280
LIRD  Liard River Hi    71.96  33    P      P      06 19 45.7 +1.1
      baz=282
WRGLY Wrigley           72.37  28    P      P      06 19 48.4 +1.5
      baz=283,SNR=5.1
KOTAN Kotaneelee Air    72.81  32    P      P      06 19 50.7 +1.1
      baz=284,SNR=10
FLDN  Fort Liard        73.07  31    P      P      06 19 52.2 +1.2
      baz=284
GEYT  Alibeck           73.23 305    P      P      06 19 53.4 +0.8
      comp=Z,28nm,0.9s,baz=101,slow=1.5,SNR=39
      comp=Z,28nm,0.9s
KIRV  Kirov             73.67 327    P      P      06 19 55.4 +0.8
      comp=Z,42nm,0.4s,baz=38,slow=1.4,SNR=20
      comp=Z,42nm,0.4s
NGCH  Negor - Chabah    74.14 291    P      P      06 19 59.8 +1.8
DGAR  Diego Garcia      75.07 256    P      P      06 20 06.6 +3.2
EUNU  Eureka            75.11   8    IAmb   IAmb   06 20 03.3
      comp=Z,30nm,0.7s
HOPEN Hopen             75.28 348  eP      P      06 20 04.5 +1.1
HOPEN                                IAmb   IAmb   06 20 05.7
      comp=Z,37nm,0.9s
SPA0  Spitsbergen Ar    75.83 350  eP      P      06 20 07.3 +0.7
SPA0                                 IAmb   IAmb   06 20 08.8
      comp=Z,29nm,1.1s
KBS   Kingsbay          75.99 351    P      P      06 20 08.3 +0.8
KBS                                  IAmb   IAmb   06 20 09.2
      comp=Z,50nm,1.3s
KBS   Kingsbay          75.99 351ceP    P      06 20 09.1 +1.6
KBS                                  pmax   pmax
      comp=Z,32nm,1.3s
KBS   Kingsbay          75.99 351  i P      P      06 20 08.0 +0.5
KBS   Kingsbay          75.99 351  eP      P      06 20 08.0 +0.5
KBS                                  IAmb   IAmb   06 20 08.6
      comp=Z,16nm,0.7s
BELG  Belogornoye       76.39 321    P      P      06 20 10.8 +0.7
      comp=Z,162nm,0.8s,baz=295,slow=1.1,SNR=70
      comp=Z,162nm,0.8s
NOR   Nord              76.40 357  i P      P      06 20 10.3 +0.5
NOR                                  IAmb   IAmb   06 20 12.9
      comp=Z,4.9nm,0.4s
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YKA	**Yellowknife Ar**	**76.47**	**28**	P	**P**	**06 20 10.8**	**+0.4**
	comp=Z,48nm,0.6s,baz=290,slow=5.4,SNR=522						
	comp=Z,48nm,0.6s						
LLLB	**Lillooet**	**76.58**	**41**	IAmb	IAmb	06 20 13.8	
	comp=Z,36nm,0.9s						
JLN	**Jalan Bani Buh**	**76.61**	**289**	P	**P**	**06 20 12.6**	**+0.6**
HSPB	**Hornsund (broa**	**76.74**	**349**	*e*P	**P**	**06 20 12.4**	**+0.7**
LVZ	**Lovozero**	**76.80**	**338**	P	**P**	**06 20 11.7**	**-0.5**
LVZ	**Lovozero**	**76.80**	**338**	*ce*P	**P**	**06 20 13.1**	**+0.9**
LVZ				pmax	pmax		
	comp=Z,139nm,1.7s						
WBK	**Wadi Bani Khal**	**76.86**	**289**	P	**P**	**06 20 13.9**	**+0.5**
WSAR	**Wadi Sarin**	**76.96**	**290**	P	**P**	**06 20 14.2**	**+0.3**
	comp=Z,12nm,0.8s,baz=104,slow=4.2,SNR=6.9						
	comp=Z,12nm,0.8s						
ADZR	**Andozero**	**77.05**	**334**	*e*P	**P**	**06 20 13.1**	**-0.5**
ADZR				pmax	pmax		
	comp=Z,72nm,0.8s						
RES	**Resolute Bay**	**77.08**	**13**	IAmb	IAmb	06 20 15.2	
	comp=Z,46nm,0.8s						
BIDO	**Bidbid**	**77.31**	**290**	P	**P**	**06 20 17.1**	**+1.3**
	SNR=5.6						
APA	**Apatity**	**77.37**	**338**	⇓*i*P	**P**	**06 20 13.5**	**-1.8**
APA				*i*		06 20 29.0	
APA				pmax	pmax		
	comp=Z,12nm,0.7s						
APA				MLR	MLR		
	comp=Z,700nm,16.0s						
VADS	**Vadso**	**77.47**	**341**	*e*P	**P**	**06 20 16.8**	**+0.9**
VADS				IAmb	IAmb	06 20 17.3	
	comp=Z,119nm,0.9s						
B06A	**Marblemount**	**77.48**	**43**	P	**P**	**06 20 16.9**	**+0.6**
B06A				IAmb	IAmb	06 20 18.3	
	comp=Z,31nm,1.2s						
SMDO	**Samad**	**77.52**	**290**	P	**P**	**06 20 17.8**	**+0.7**
D05A	**Enumclaw**	**77.58**	**44**	IAmb	IAmb	06 20 19.8	
	comp=Z,72nm,1.3s						
JMDO	**Jabal Madar**	**77.69**	**289**	P	**P**	**06 20 18.6**	**+0.6**
F04A	**Amboy**	**77.69**	**45**	IAmb	IAmb	06 20 19.8	
	comp=Z,42nm,0.9s						
KLMR	**Klimovskoe**	**77.70**	**331**	*e*P	**P**	**06 20 14.8**	**-2.4**
KLMR				AMP		06 20 18.4	
	comp=Z,56nm,1.1s						
KLMR				*e*PcP	**PcP**	**06 20 23.5**	**-2.6**
KLMR				*e*PP	**PP**	**06 23 14.3**	**-2.3**
KLMR	**Klimovskoe**	**77.70**	**331**	*e*P	**P**	**06 20 14.8**	**-2.4**
KLMR				*e*		06 20 23.5	
KLMR				*e*		06 23 14.3	
KLMR				pmax	pmax		
	comp=Z,56nm,1.1s						
I03D	**Drain, OR**	**77.77**	**48**	IAmb	IAmb	06 20 20.6	
	comp=Z,37nm,0.9s						
HOQ	**Hoqain**	**78.00**	**291**	P	**P**	**06 20 20.8**	**+1.1**
	SNR=6.8						
L02F	**Cave Junction**	**78.11**	**49**	IAmb	IAmb	06 20 22.5	
	comp=Z,26nm,0.9s						
BANOM	**Banah**	**78.14**	**293**	*i* P	**P**	**06 20 21.2**	**+0.8**
	SNR=9.2						
BANOM	**Banah**	**78.14**	**293**	P	**P**	**06 20 21.5**	**+1.1**
SHME	**Shamm**	**78.23**	**293**	*i* P	**P**	**06 20 22.0**	**+1.1**
	SNR=14						
SHME	**Shamm**	**78.23**	**293**	P	**P**	**06 20 22.4**	**+1.5**
	SNR=5.8						
H04A	**Detroit Lake**	**78.25**	**47**	IAmb	IAmb	06 20 22.8	
	comp=Z,49nm,1.0s						
KMPM	**Mount Pierce**	**78.25**	**51**	IAmb	IAmb	06 20 23.8	
	comp=Z,55nm,1.0s						
MHTO	**MHTO**	**78.25**	**288**	P	**P**	**06 20 21.6**	**+0.6**
	SNR=12						
MDH	**Madha**	**78.33**	**293**	P	**P**	**06 20 22.1**	**+0.7**
MDH	**Madha**	**78.33**	**293**	P	**P**	**06 20 22.5**	**+1.1**
KEV	**Kevo**	**78.36**	**341**	P	**P**	**06 20 21.1**	**+0.4**
KEV	**Kevo**	**78.36**	**341**	P	**P**	**06 20 21.1**	**+0.4**
KEV				pmax	pmax		
	comp=Z,93nm,0.7s						
BSY	**Bisya**	**78.36**	**290**	P	**P**	**06 20 22.3**	**+0.6**
	SNR=5.8						
HOOD	**Mount Hood Mea**	**78.40**	**46**	IAmb	IAmb	06 20 23.9	
	comp=Z,42nm,0.9s						
LTY	**Liberty**	**78.41**	**44**	IAmb	IAmb	06 20 23.4	
	comp=Z,36nm,1.2s						
MASF	**Masafi**	**78.43**	**293**	P	**P**	**06 20 23.3**	**+1.3**
	SNR=8.5						
MSFE	**Esma-Masafi**	**78.43**	**293**	*i* P	**P**	**06 20 23.2**	**+1.2**
	SNR=9.5						
SOHO	**SOHO**	**78.50**	**291**	*i* P	**P**	**06 20 22.7**	**+0.4**
	SNR=16						
SOHO	**SOHO**	**78.50**	**291**	P	**P**	**06 20 23.2**	**+0.8**
UOSS	**Minazif**	**78.53**	**292**	P	**P**	**06 20 22.8**	**+0.3**
UOSS				IAmb	IAmb	06 20 23.7	
	comp=Z,26nm,0.8s						
UOSS	**Minazif**	**78.53**	**292**	*i* P	**P**	**06 20 22.9**	**+0.4**
	SNR=14						
UOSS	**Minazif**	**78.53**	**292**	P	**P**	**06 20 23.1**	**+0.6**
KMRM	**Mail Ridge**	**78.61**	**51**	IAmb	IAmb	06 20 25.5	
	comp=Z,27nm,0.8s						
HATD	**Hatta, Dubai**	**78.63**	**292**	*i* P	**P**	**06 20 23.7**	**+0.6**
	SNR=12						
HATD	**Hatta, Dubai**	**78.63**	**292**	P	**P**	**06 20 23.8**	**+0.8**
	SNR=7.2						
ASHO	**Ashiyiah**	**78.73**	**292**	*i* P	**P**	**06 20 23.9**	**+0.2**
	SNR=17						
ASHO	**Ashiyiah**	**78.73**	**292**	P	**P**	**06 20 24.5**	**+0.8**
	SNR=10.0						
ARQ	**Araqi**	**78.77**	**291**	P	**P**	**06 20 24.6**	**+0.8**
	SNR=7.4						
HAMF	**Hammerfest**	**78.82**	**343**	*e*P	**P**	**06 20 23.8**	**+0.6**
YBH	**Yreka Blue Hor**	**78.84**	**50**	IAmb	IAmb	06 20 26.5	
	comp=Z,28nm,0.9s						
B08A	**Colville Reser**	**78.88**	**42**	IAmb	IAmb	06 20 26.0	
	comp=Z,50nm,1.0s						
ARA0	**ARCESS Array S**	**78.92**	**341**	*e*P	**P**	**06 20 24.5**	**+0.7**
ARA0				IAmb	IAmb	06 20 25.2	
	comp=Z,108nm,0.7s						
ARCES	**ARCESS Array B**	**78.92**	**341**	P	**P**	**06 20 24.2**	**+0.5**
	comp=Z,95nm,0.7s,baz=73,slow=8.3,SNR=303						
ARCES				PKiKP	**PKiKP**	**06 25 55.3**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=13,slow=1.2,SNR=7.2						
ARCES				PKKPbc	**PKKPbc**	**06 39 13.2**	**-3.1**
	comp=Z,1.8nm,0.8s,baz=243,slow=3.5,SNR=7.7						
	comp=Z,95nm,0.7s						
I05D	**Terrebonne, OR**	**78.93**	**47**	IAmb	IAmb	06 20 26.6	
	comp=Z,84nm,1.7s						
DQM	**DQM**	**78.97**	**287**	P	**P**	**06 20 26.0**	**+1.0**
	SNR=6.3						
NAZ	**Nazwa, Dubai**	**78.98**	**293**	P	**P**	**06 20 25.7**	**+0.7**
FAQ	**Al Faqa, Dubai**	**79.12**	**292**	*i* P	**P**	**06 20 26.1**	**+0.4**
	SNR=7.2						
FAQ	**Al Faqa, Dubai**	**79.12**	**292**	P	**P**	**06 20 26.2**	**+0.5**
ALNE	**Al Ain**	**79.20**	**292**	P	**P**	**06 20 27.2**	**+1.0**
ALNE	**Al Ain**	**79.20**	**292**	P	**P**	**06 20 27.0**	**+0.8**
	SNR=8.2						
F07A	**Phinny Hill Vi**	**79.35**	**45**	IAmb	IAmb	06 20 28.9	
	comp=Z,48nm,1.3s						
ASUD	**Al Ashush, Dub**	**79.38**	**292**	P	**P**	**06 20 28.1**	**+1.0**
ASUD	**Al Ashush, Dub**	**79.38**	**292**	P	**P**	**06 20 28.0**	**+0.9**
HAWA	**Hanford**	**79.43**	**44**	IAmb	IAmb	06 20 29.2	
	comp=Z,25nm,1.0s						
D08A	**Wollman Farm,**	**79.60**	**44**	IAmb	IAmb	06 20 29.9	
	comp=Z,47nm,1.0s						
AJN	**Ajban**	**79.70**	**292**	P	**P**	**06 20 29.6**	**+0.8**
E08A	**Dider Farm, El**	**79.70**	**44**	IAmb	IAmb	06 20 30.6	
	comp=Z,37nm,1.2s						
GDXM	**Geysers**	**79.74**	**52**	IAmb	IAmb	06 20 31.5	
	comp=Z,32nm,1.1s						
C09A	**Chrisman Ranch**	**79.74**	**43**	IAmb	IAmb	06 20 30.6	
	comp=Z,34nm,0.8s						
AKT	**Akhty**	**79.84**	**311**	*e*P	**P**	**06 20 29.8**	**+0.4**
AKT				*e*		06 20 35.8	
AKT				*e**PP	**pP**	**06 21 38.6**	**+0.5**
AKT				pmax	pmax		
	comp=Z,104nm,1.1s						
KTK1	**Kautokeino**	**79.88**	**342**	*e*P	**P**	**06 20 29.2**	**+0.2**
KTK1				IAmb	IAmb	06 20 29.9	
	comp=Z,52nm,0.8s						
LKRN	**Lenkeran, Azer**	**80.02**	**308**	P	**P**	**06 20 30.5**	**+0.2**
TULEG	**Thule**	**80.07**	**7**	*i* P	**P**	**06 20 30.2**	**+0.4**
TULEG				IAmb	IAmb	06 20 31.0	
	comp=Z,51nm,0.7s						
UMZA	**Um Al Zommool**	**80.15**	**291**	P	**P**	**06 20 32.2**	**+1.0**
G08A	**Pilot Rock**	**80.19**	**45**	IAmb	IAmb	06 20 33.3	
	comp=Z,26nm,1.2s						
VRH	**Novokhopyorsk**	**80.24**	**321**	*e*P	**P**	**06 20 31.1**	**0.0**
VRH				pmax	pmax		
	comp=Z,50nm,0.7s						
E09A	**Wood Farm, Sta**	**80.29**	**44**	IAmb	IAmb	06 20 33.7	
	comp=Z,38nm,0.9s						
NEW	**Newport**	**80.30**	**42**	IAmb	IAmb	06 20 33.5	
	comp=Z,36nm,0.8s						
NEW	**Newport**	**80.30**	**42**	P	**P**	**06 20 32.5**	**+0.9**
	baz=292,SNR=39						
SEKA	**Sheki**	**80.31**	**310**	P	**P**	**06 20 32.2**	**+0.3**
JETT	**Jettan, Norway**	**80.37**	**343**	*e*P	**P**	**06 20 32.0**	**+0.4**
JETT				IAmb	IAmb	06 20 32.6	
	comp=Z,98nm,0.7s						
ORV	**Oroville**	**80.43**	**51**	IAmb	IAmb	06 20 34.2	
	comp=Z,35nm,1.1s						
ZKTA	**Zakatala**	**80.57**	**311**	P	**P**	**06 20 34.0**	**+0.8**
GROC	**Groznyy**	**80.59**	**313**	*e*P	**P**	**06 20 33.6**	**+0.4**
GROC				*e**PP	**pP**	**06 21 39.6**	**-2.3**
GROC				pmax	pmax		
	comp=Z,175nm,1.3s						
MOS	**Moscow**	**80.67**	**326**	*e*P	**P**	**06 20 32.8**	**-0.5**
MOS				*e**PP	**pP**	**06 21 36.9**	**-5.3**
MOS				*e*S	**S**	**06 30 14.1**	**-0.9**
MOS				pmax	pmax		
	comp=Z,82nm,1.0s						
NEEM	**North Greenlan**	**80.72**	**3**	*e*P	**P**	**06 20 33.7**	**+0.1**
NEEM				IAmb	IAmb	06 20 34.9	
	comp=Z,39nm,0.7s						
TRO	**Tromso**	**80.73**	**343**	*e*P	**P**	**06 20 33.4**	**0.0**
TRO				IAmb	IAmb	06 20 34.1	
	comp=Z,61nm,0.8s						
MZWR	**Madinat Zayed**	**80.92**	**292**	P	**P**	**06 20 35.3**	**0.0**
GANJ	**Ganja**	**81.13**	**310**	P	**P**	**06 20 36.5**	**+0.3**
DAG	**Danmarks Havn**	**81.14**	**356**	*i* P	**P**	**06 20 35.0**	**-0.4**
DAG				IAmb	IAmb	06 20 36.2	
	comp=Z,20nm,1.1s						
J08A	**Circle Bar Ran**	**81.22**	**47**	IAmb	IAmb	06 20 38.8	
	comp=Z,36nm,0.9s						
LPSR	**Galich'ya Gora**	**81.27**	**323**	*e*P	**P**	**06 20 37.1**	**+0.5**
LPSR				pmax	pmax		
	comp=Z,150nm,0.8s						
SAO	**San Andreas Ge**	**81.44**	**54**	P	**P**	**06 20 38.4**	**+0.6**
SAO				IAmb	IAmb	06 20 39.7	
	comp=Z,43nm,1.3s						
SAO	**San Andreas Ge**	**81.44**	**54**	P	**P**	**06 20 38.4**	**+0.6**
SAO				pmax	pmax		
	comp=Z,43nm,1.3s						
WVOR	**Wild Horse Val**	**81.44**	**48**	IAmb	IAmb	06 20 39.8	
	comp=Z,21nm,1.0s						
WVOR					pwP	06 21 48.2	-2.6
BMO	**Blue Mountains**	**81.44**	**45**	IAmb	IAmb	06 20 39.7	
	comp=Z,31nm,0.8s						
BMO					pP	06 21 46.5	-0.2
OBN	**Obninsk**	**81.48**	**326**	P	**P**	**06 20 37.5**	**-0.1**
	comp=Z,4.2nm,0.3s,baz=278,slow=2.1,SNR=16						
	comp=Z,4.2nm,0.3s						
OBN	**Obninsk**	**81.48**	**326**	*c i*P	**P**	**06 20 37.7**	**+0.1**
OBN				*i* *PP	**pP**	**06 21 44.8**	**-1.8**
OBN				pmax	pmax		
	comp=Z,66nm,1.0s						
PLTX	**Planet X, Gerl**	**81.49**	**50**	IAmb	IAmb	06 20 40.1	
	comp=Z,52nm,1.2s						
VORR	**Voronezh**	**81.50**	**322**	*e*P	**P**	**06 20 38.6**	**+0.8**
VORR				pmax	pmax		
	comp=Z,157nm,0.5s						
MZR	**Muzera**	**81.52**	**291**	*i* P	**P**	**06 20 39.0**	**+0.5**
	SNR=21						
MZR	**Muzera**	**81.52**	**291**	P	**P**	**06 20 39.2**	**+0.7**
	SNR=12						
VSR	**Storozhevoye**	**81.71**	**322**	*e*P	**P**	**06 20 39.0**	**+0.1**
VSR				pmax	pmax		
	comp=Z,140nm,0.6s						
GHWR	**Ruwais**	**81.71**	**292**	P	**P**	**06 20 40.1**	**+0.7**
VORD	**Divnogorie**	**81.74**	**322**	*e*P	**P**	**06 20 39.1**	**+0.1**
VORD				pmax	pmax		
	comp=Z,90nm,0.6s						
CMB	**Columbia Colle**	**81.78**	**52**	IAmb	IAmb	06 20 41.5	
	comp=Z,38nm,0.8s						
PAHR	**Pah Rah Range**	**81.91**	**51**	IAmb	IAmb	06 20 42.2	
	comp=Z,26nm,1.1s						
NCK	**Nalchik**	**81.98**	**314**	⇓*i*P	**P**	**06 20 41.7**	**+1.2**
DMTO	**DMTO**	**82.02**	**286**	P	**P**	**06 20 41.3**	**+0.2**
ZEI	**Tsey**	**82.04**	**313**	*e*P	**P**	**06 20 36.8**	**-4.2**
ZEI				pmax	pmax		
	comp=Z,110nm,1.4s						
YERR	**Yerington**	**82.28**	**51**	IAmb	IAmb	06 20 44.3	
	comp=Z,28nm,0.9s						
PUL	**Pulkovo**	**82.28**	**332**	*ce*P	**P**	**06 20 42.9**	**+1.3**
PUL				pmax	pmax		
	comp=Z,109nm,0.7s						
KBZ	**Khabaz**	**82.36**	**314**	P	**P**	**06 20 43.2**	**+0.8**
	comp=Z,105nm,0.9s,baz=85,slow=4.1,SNR=219						
KIV	**Kislovodsk**	**82.41**	**314**	P	**P**	**06 20 43.7**	**+0.9**
KIV	**Kislovodsk**	**82.41**	**314**	*e*P	**P**	**06 20 43.8**	**+1.0**
KIV				*e*S	**S**	**06 30 34.1**	**+0.6**
KIV				pmax	pmax		
	comp=Z,112nm,1.1s						
KIV				pmax	pmax		
	comp=Z,13nm,3.6s						
KIV				MLR	MLR		
	comp=Z,42nm,19.0s						
KIV	**Kislovodsk**	**82.41**	**314**	*i* P	**P**	**06 20 43.3**	**+0.5**
	SNR=12						
KIV	**Kislovodsk**	**82.41**	**314**	P	**P**	**06 20 44.0**	**+1.2**
GNI	**Garni**	**82.44**	**310**	P	**P**	**06 20 44.1**	**+1.0**
GNI	**Garni**	**82.44**	**310**	*ce*P	**P**	**06 20 44.6**	**+1.5**
GNI				pmax	pmax		
	comp=Z,101nm,1.7s						
GNI	**Garni**	**82.44**	**310**	P	**P**	**06 20 44.6**	**+1.5**
GNI	**Garni**	**82.44**	**310**	P	**P**	**06 20 44.7**	**+1.6**
DOK	**Doka**	**82.44**	**287**	P	**P**	**06 20 43.5**	**+0.2**
	SNR=11						
SHA1	**Shidzhatmaz**	**82.52**	**314**	*i* P	**P**	**06 20 43.6**	**+0.1**
NEY	**Neytrino**	**82.66**	**314**	*i* P	**P**	**06 20 44.4**	**+0.2**
NEY				pmax	pmax		
	comp=Z,16nm,1.0s						
SLWR	**Sila**	**82.69**	**293**	P	**P**	**06 20 45.3**	**+0.8**
RBK	**Rabkut**	**82.76**	**286**	P	**P**	**06 20 45.3**	**+0.2**
	SNR=6.5						
AKH	**Akhalkalaki**	**82.84**	**312**	P	**P**	**06 20 44.0**	**-1.2**
MSO	**Missoula**	**82.84**	**42**	P	**P**	**06 20 45.0**	**0.0**
	baz=294,SNR=6.0						
STEI	**Steigen**	**82.86**	**343**	*e*P	**P**	**06 20 44.4**	**-0.1**
STEI				IAmb	IAmb	06 20 45.2	
	comp=Z,93nm,0.7s						
MFID	**Camas Ranch**	**82.98**	**46**	IAmb	IAmb	06 20 47.8	
	comp=Z,50nm,1.1s						
MFID					pP	06 21 55.0	+0.1
WHFO	**Wadi Hawf**	**83.01**	**286**	P	**P**	**06 20 46.3**	**0.0**
SMMC	**Simmler**	**83.06**	**55**	P	**P**	**06 20 46.9**	**+0.7**
	baz=292						
KULLO	**Kullorsuaq**	**83.06**	**5**	*e*P	**P**	**06 20 45.7**	**+0.3**
KULLO				IAmb	IAmb	06 20 46.5	
	comp=Z,25nm,0.8s						
KVN	**Kaiserville**	**83.08**	**51**	IAmb	IAmb	06 20 48.3	
	comp=Z,57nm,1.4s						
LHV	**Little Huntoon**	**83.08**	**52**	IAmb	IAmb	06 20 48.7	
	comp=Z,26nm,0.9s						
VOG	**Valley Oaks Go**	**83.15**	**54**	P	**P**	**06 20 46.8**	**+0.2**
	baz=292						
NVAR	**Mina Array Bea**	**83.16**	**51**	P	**P**	**06 20 47.9**	**+0.9**
	comp=Z,26nm,0.7s,baz=273,slow=5.6,SNR=251						
	comp=Z,26nm,0.7s						
FINES	**FINESS Array B**	**83.18**	**334**	P	**P**	**06 20 45.5**	**-0.7**
	comp=Z,21nm,0.4s,baz=70,slow=4.8,SNR=227						
FINES				S	**S**	**06 30 32.1**	**-8.1**
	comp=Z,4.1nm,1.1s,baz=359,slow=13,SNR=4.1						
	comp=Z,21nm,0.4s						
LOF	**Lofoten**	**83.19**	**343**	*e*P	**P**	**06 20 46.3**	**+0.1**
FAUS	**Fauske**	**83.22**	**342**	*e*P	**P**	**06 20 46.1**	**-0.2**
FAUS				IAmb	IAmb	06 20 46.9	
	comp=Z,111nm,1.2s						
NV11	**Mina Array Sit**	**83.27**	**51**	IAmb	IAmb	06 20 50.7	
	comp=Z,22nm,0.9s						
PKM	**Mcpherson Peak**	**83.35**	**55**	P	**P**	**06 20 48.8**	**+0.9**
	baz=292						
VES	**Vestal, Richgr**	**83.55**	**54**	P	**P**	**06 20 48.6**	**-0.1**
	baz=292,SNR=10						
SBC	**Santa Barbara**	**83.59**	**56**	P	**P**	**06 20 49.9**	**+1.1**
	baz=292						
DBG	**Daneborg**	**83.62**	**356**	*i* P	**P**	**06 20 48.2**	**-0.1**
DBG				IAmb	IAmb	06 20 48.4	
	comp=Z,43nm,1.6s						
ABTO	**Aybut**	**83.63**	**286**	P	**P**	**06 20 49.6**	**+0.2**
BCW	**Bitter Crk WRg**	**83.64**	**55**	IAmb	IAmb	06 20 51.6	
	comp=Z,30nm,1.0s						
TIN	**Tinemaha, Big**	**83.73**	**53**	P	**P**	**06 20 50.5**	**+0.8**
	baz=292						
Q09A	**Carvers**	**83.82**	**51**	IAmb	IAmb	06 20 52.1	
	comp=Z,28nm,0.9s						
HLID	**Hailey**	**83.86**	**46**	IAmb	IAmb	06 20 52.4	
	comp=Z,26nm,1.1s						
HLID	**Hailey**	**83.86**	**46**	P	**P**	**06 20 50.9**	**+0.6**
	baz=294,SNR=31						
CWC	**Cottonwood Cre**	**84.08**	**53**	P	**P**	**06 20 51.6**	**+0.1**
	baz=292						
ISA	**Isabella, Lake**	**84.08**	**54**	P	**P**	**06 20 51.4**	**-0.1**
	baz=292						
LRM	**Limekiln Ridge**	**84.20**	**43**		pwP	06 22 01.7	-4.0
MOR8	**Moi Rana**	**84.29**	**341**	*e*P	**P**	**06 20 50.5**	**-1.3**
MOR8				IAmb	IAmb	06 20 51.1	
	comp=Z,81nm,0.8s						
DLMT	**Dillon**	**84.30**	**43**	IAmb	IAmb	06 20 54.3	
	comp=Z,66nm,1.4s						
GEVA	**Gevas**	**84.35**	**309**	IAmb	IAmb	06 20 54.6	
	comp=Z,28nm,1.2s						
GRAC	**Grapevine Rang**	**84.40**	**53**	IAmb	IAmb	06 20 55.1	
	comp=Z,48nm,1.4s						
GRAC	**Grapevine Rang**	**84.40**	**53**	P	**P**	**06 20 53.7**	**+0.7**
	baz=293						
ELK	**Elko**	**84.44**	**48**	IAmb	IAmb	06 20 55.4	
	comp=Z,48nm,1.1s						
KONS	**Konsvik**	**84.45**	**342**	*e*P	**P**	**06 20 52.1**	**-0.4**
SOC	**Sochi**	**84.53**	**315**	*e*P	**P**	**06 20 52.5**	**-0.9**
SOC				*e*		06 24 09.2	
SOC				*e*PPP	PPP	06 26 07.1	
SOC				*e*S	**S**	**06 30 46.2**	**-8.2**
SOC				*e*SS	**SS**	**06 36 30.2**	**-1.8**
SOC				*e*SSS	SSS	06 40 06.5	
VSU	**Vasula**	**84.55**	**332**	*i* P	**P**	**06 20 52.8**	**-0.3**
VSU				pmax	pmax		
	comp=Z,167nm,1.3s						
VSU	**Vasula**	**84.55**	**332**	*e*P	**P**	**06 20 53.0**	**-0.1**
MEF	**Metsahovi**	**84.55**	**334**	*e*P	**P**	**06 20 53.0**	**-0.1**
STOK	**Stokkvaagen**	**84.60**	**342**	*e*P	**P**	**06 20 53.2**	**0.0**
CCAC	**Calif City Air**	**84.62**	**54**	IAmb	IAmb	06 20 56.1	
	comp=Z,29nm,0.8s						
MPMC	**Manual Prospec**	**84.67**	**53**	P	**P**	**06 20 55.3**	**+0.8**
	baz=293,SNR=38						
DECC	**Green Verdugo**	**84.72**	**55**	P	**P**	**06 20 54.9**	**+0.3**
	baz=293						
EDW2	**Edwards Air Fo**	**84.74**	**55**	P	**P**	**06 20 55.5**	**+0.7**
	baz=293,SNR=12						
LRMC	**Laurel Mtn Rad**	**84.75**	**54**	P	**P**	**06 20 55.5**	**+0.7**
	baz=293,SNR=34						
BOZ	**Bozeman (W)**	**84.81**	**43**	IAmb	IAmb	06 20 56.7	
	comp=Z,24nm,0.7s						
BOZ	**Bozeman (W)**	**84.81**	**43**	P	**P**	**06 20 55.8**	**+0.8**
	baz=296,SNR=44						
UPNV	**Upernavik**	**84.87**	**6**	*e*P	**P**	**06 20 55.1**	**+0.6**
	comp=Z,19nm,0.6s						
UPNV				IAmb	IAmb	06 20 55.6	
	comp=Z,19nm,0.6s						
EGMT	**Eagleton**	**84.90**	**40**	P	**P**	**06 20 55.8**	**+0.5**
	baz=297,SNR=22						
FURC	**Furnace Creek,**	**84.97**	**53**	P	**P**	**06 20 56.6**	**+0.9**
	baz=293,SNR=23						
CIS	**Catalina Islan**	**84.99**	**56**	P	**P**	**06 20 56.1**	**+0.2**
	baz=293						
WCT	**Wildcat Mounta**	**85.02**	**52**	IAmb	IAmb	06 20 58.0	
	comp=Z,28nm,0.9s						
RAF	**Rauma**	**85.12**	**335**	*e*P	**P**	**06 20 55.5**	**-0.4**
R11A	**Troy Canyon, C**	**85.16**	**51**	IAmb	IAmb	06 20 58.9	
	comp=Z,30nm,1.1s						
R11A	**Troy Canyon, C**	**85.16**	**51**	P	**P**	**06 20 57.4**	**+0.5**
	baz=294,SNR=56						
QSM	**Queen of Sheba**	**85.17**	**53**	IAmb	IAmb	06 20 58.6	
	comp=Z,45nm,1.0s						
GWY	**Greenwater Val**	**85.23**	**53**	IAmb	IAmb	06 20 59.0	
	comp=Z,37nm,0.9s						
TPNV	**Topopah Spring**	**85.24**	**52**	P	**P**	**06 20 58.1**	**+0.9**
	baz=294,SNR=46						
BFSC	**Mount Baldy Ra**	**85.24**	**55**	P	**P**	**06 20 57.6**	**+0.3**
	baz=293						
Q12A	**Willow Creek R**	**85.42**	**50**	IAmb	IAmb	06 21 04.6	
	comp=Z,39nm,1.0s						
GSC	**Goldstone, Bar**	**85.47**	**54**	IAmb	IAmb	06 21 00.2	
	comp=Z,37nm,1.1s						
GSC	**Goldstone, Bar**	**85.47**	**54**	P	**P**	**06 20 58.9**	**+0.6**
	baz=293,SNR=22						
ANN	**Anapa**	**85.50**	**317**	*e*P	**P**	**06 20 55.1**	**-3.0**
ANN				*e**PP	**pP**	**06 22 06.1**	**-1.6**
ANN				*e*S	**SKSac**	**06 30 49.3**	**-5.0**
ANN				pmax	pmax		
	comp=Z,26nm,0.8s						
SHOC	**Shoshone, Teco**	**85.64**	**53**	P	**P**	**06 20 59.8**	**+0.8**
	baz=294,SNR=20						
ELS	**Elsinore Mount**	**85.65**	**56**	IAmb	IAmb	06 21 00.7	
	comp=Z,74nm,1.9s						
MTSE	**Matsula**	**85.67**	**333**	*e*P	**P**	**06 20 59.2**	**+0.6**
HVU	**Hansel Valley**	**85.70**	**47**	IAmb	IAmb	06 21 01.6	
	comp=Z,34nm,1.1s						
SPR3	**Spring Creek 3**	**85.79**	**50**	IAmb	IAmb	06 21 02.3	
	comp=Z,31nm,1.2s						
SPR3					pwP	06 22 11.0	-2.8
YNR	**Norris Junctio**	**85.81**	**43**		pwP	06 22 12.5	-1.7
YFT	**Old Faithful**	**85.82**	**44**	IAmb	IAmb	06 21 05.4	
	comp=Z,33nm,0.9s						
YFT					pwP	06 22 11.7	-2.6
FFC	**Flin Flon**	**85.84**	**32**	P	**P**	**06 20 59.3**	**-0.3**
FFC				pP	**pP**	**06 22 09.1**	**-0.1**
FFC	**Flin Flon**	**85.84**	**32**	P	**P**	**06 20 59.3**	**-0.3**
FFC				*PP	**pP**	**06 22 09.1**	**-0.1**
FFC				pmax	pmax		
	comp=Z,53nm,0.8s						
MURC	**Murrieta**	**85.85**	**56**	P	**P**	**06 21 00.4**	**+0.2**
	baz=293,SNR=8.2						
YUF	**Upper Falls**	**85.91**	**43**	IAmb	IAmb	06 21 03.5	
	comp=Z,29nm,1.0s						
PRN	**Pahroc Range**	**85.93**	**51**	IAmb	IAmb	06 21 02.6	
	comp=Z,34nm,1.0s						
SUMG	**Summit**	**85.97**	**0**	*i* P	**P**	**06 21 01.0**	**+0.6**
SUMG				IAmb	IAmb	06 21 02.1	
	comp=Z,21nm,0.8s						
H17A	**Grant Village**	**86.01**	**44**	IAmb	IAmb	06 21 04.9	
	comp=Z,28nm,1.1s						
H17A					pwP	06 22 13.5	-1.8
H17A	**Grant Village**	**86.01**	**44**	P	**P**	**06 21 03.6**	**+2.6**
	baz=296,SNR=29						
HEC	**Hector,Ludlow**	**86.02**	**54**	P	**P**	**06 21 01.6**	**+0.6**
	baz=294,SNR=10						
LKWY	**Lake**	**86.05**	**43**	IAmb	IAmb	06 21 05.1	
	comp=Z,36nm,1.1s						
FLWY	**Flagg Ranch**	**86.07**	**44**	IAmb	IAmb	06 21 04.6	
	comp=Z,43nm,1.1s						
TUQ	**Turquoise Moun**	**86.08**	**53**	P	**P**	**06 21 02.0**	**+0.6**
	baz=294,SNR=29						
SPUT	**South Promonto**	**86.13**	**47**	IAmb	IAmb	06 21 03.5	
	comp=Z,29nm,1.0s						
YMP	**Mirror Lake Pl**	**86.13**	**43**	IAmb	IAmb	06 21 04.6	
	comp=Z,44nm,0.9s						
MNK	**Minsk**	**86.17**	**328**	*i* P	**P**	**06 20 59.9**	**-1.3**
	comp=E,5.0nm,1.4s						
MNK				*i* P	**P**	**06 20 59.9**	**-1.3**
	comp=N,48nm,1.1s						
MNK				*i* P	**P**	**06 20 59.9**	**-1.3**
	comp=Z,54nm,1.2s,baz=57						
MNK				*i* pP	**pP**	**06 22 11.7**	**+0.8**
MNK				*i* PP	**PP**	**06 24 23.8**	**-2.1**
MNK				*i* PPP	PPP	06 26 20.5	
MNK				*i* S	**SKSac**	**06 30 55.9**	**-2.2**
MNK				*i* sS	**sS**	**06 33 06.6**	**-7.6**
MNK				*i* SS	**SS**	**06 36 55.5**	**+0.3**
MNK				*i* SSS	SSS	06 40 31.6	
MNK				*i* LRM	MLR	07 00 04.2	
	comp=E,85nm,14.5s						
MNK				*i* LRM	MLR	07 00 10.9	
	comp=N,571nm,12.9s						
MNK				*i* LRM	MLR	07 00 12.2	
	comp=Z,107nm,10.9s						
MNK	**Minsk**	**86.17**	**328**	*i* P	**P**	**06 20 59.9**	**-1.3**
MNK				*i* *PP	**pP**	**06 22 11.7**	**+0.8**
MNK				*i*		06 24 23.7	
MNK				*i* PPP	PPP	06 26 20.5	
MNK				*i* S	**SKSac**	**06 30 55.8**	**-2.2**
MNK				*i* SS	**SS**	**06 36 55.5**	**+0.3**
MNK				*i* SSS	SSS	06 40 31.6	
MNK				pmax	pmax		
	comp=E,5.0nm,1.4s						
MNK				pmax	pmax		
	comp=Z,54nm,1.2s						
MNK				pmax	pmax		
	comp=N,48nm,1.0s						
MNK				MLR	MLR		
	comp=E,85nm,15.0s						
MNK				MLR	MLR		

	comp=N,571nm,13.0s						
MNK				MLR	MLR		
	comp=Z,107nm,11.0s						
NSS	**Namsos**	**86.19**	**341**	*e*P	**P**	**06 21 00.5**	**-0.6**
NSS				IAmb	IAmb	06 21 01.1	
	comp=Z,56nm,0.8s						
109C	**Camp Elliot, M**	**86.20**	**56**	IAmb	IAmb	06 21 03.3	
	comp=Z,24nm,1.0s						
109C	**Camp Elliot, M**	**86.20**	**56**	P	**P**	**06 21 02.4**	**+0.5**
	baz=293						
IDID	**Didziasalis**	**86.28**	**329**	*e*P	**P**	**06 20 58.3**	**-3.4**
SNOW	**Snow King Moun**	**86.31**	**45**	IAmb	IAmb	06 21 04.2	
	comp=Z,34nm,1.7s						
DUG	**Dugway, Tooele**	**86.35**	**48**	IAmb	IAmb	06 21 04.5	
	comp=Z,31nm,0.8s						
DUG	**Dugway, Tooele**	**86.35**	**48**	P	**P**	**06 21 03.2**	**+0.6**
	baz=295,SNR=39						
AHID	**Auburn Hatcher**	**86.40**	**45**	IAmb	IAmb	06 21 04.7	
	comp=Z,24nm,1.1s						
PFO	**Pinyon Flats O**	**86.41**	**55**	P	**P**	**06 21 02.9**	**-0.1**
PFO				IAmb	IAmb	06 21 04.6	
	comp=Z,35nm,0.9s						
PFO	**Pinyon Flats O**	**86.41**	**55**	*i* P	**P**	**06 21 03.2**	**+0.2**
PFO				pmax	pmax		
	comp=Z,65nm,0.9s						
PFO	**Pinyon Flats O**	**86.41**	**55**	P	**P**	**06 21 03.3**	**+0.2**
	baz=294,SNR=18						
TPFO	**Pinon Flats**	**86.41**	**55**	P	**P**	**06 21 03.3**	**+0.2**
	baz=294,SNR=17						
ISAL	**Salakas**	**86.43**	**330**	*e*P	**P**	**06 21 03.1**	**+0.7**
PMD	**Palm Desert**	**86.45**	**55**	IAmb	IAmb	06 21 04.6	
	comp=Z,37nm,0.8s						
NACGM	**Naroch**	**86.48**	**329**	*e*P	**P**	**06 21 02.3**	**-0.4**
	comp=N,1µm,0.9s						
IIGN	**Ignalina**	**86.50**	**329**	*e*P	**P**	**06 21 01.5**	**-1.3**
RLMT	**Red Lodge**	**86.52**	**43**	IAmb	IAmb	06 21 06.8	
	comp=Z,27nm,0.7s						
RLMT	**Red Lodge**	**86.52**	**43**	P	**P**	**06 21 04.6**	**+1.2**
	baz=297,SNR=42						
GMRC	**Granite Mounta**	**86.54**	**54**	P	**P**	**06 21 04.4**	**+0.8**
	baz=294,SNR=31						
HWUT	**Hardware Ranch**	**86.60**	**46**	IAmb	IAmb	06 21 05.6	
	comp=Z,34nm,1.1s						
HWUT					pwP	06 22 14.1	-3.7
BELC	**Belle Mtn. Jos**	**86.60**	**55**	P	**P**	**06 21 04.4**	**+0.4**
	baz=294,SNR=16						
BAR	**Barrett**	**86.61**	**56**	IAmb	IAmb	06 21 05.4	
	comp=Z,25nm,1.2s						
MONP2	**Monument Peak**	**86.72**	**56**	P	**P**	**06 21 04.9**	**+0.3**
	baz=294,SNR=15						
V12A	**Nelson**	**86.76**	**53**	IAmb	IAmb	06 21 06.7	
	comp=Z,27nm,0.8s						
NLU	**North Lily Min**	**86.97**	**48**	IAmb	IAmb	06 21 07.4	
	comp=Z,15nm,0.9s						
FCC	**Fort Churchill**	**87.05**	**26**	pP	pP	06 22 13.8	-1.2
IKP	**In-Ko-Pah, Jac**	**87.06**	**56**	P	**P**	**06 21 06.6**	**+0.5**
	baz=294,SNR=6.5						
CCUT	**Cedar City**	**87.09**	**51**	IAmb	IAmb	06 21 08.5	
	comp=Z,21nm,1.2s						
RMX	**La Rumorosa**	**87.10**	**56**	IAmb	IAmb	06 21 08.4	
	comp=Z,21nm,1.0s						
BC3	**Big Chuckawall**	**87.16**	**55**	P	**P**	**06 21 07.3**	**+0.7**
	baz=294,SNR=27						
SWSC	**Sam W. Stewart**	**87.18**	**56**	P	**P**	**06 21 07.0**	**+0.5**
	baz=294,SNR=5.3						
IRM	**Iron Mountain**	**87.19**	**54**	P	**P**	**06 21 07.4**	**+0.8**
	baz=294,SNR=24						
YUH	**Yuha Desert**	**87.21**	**56**	IAmb	IAmb	06 21 08.3	
	comp=Z,20nm,0.9s						
MPU	**Maple Canyon**	**87.25**	**48**	IAmb	IAmb	06 21 08.7	
	comp=Z,19nm,1.1s						
MPU					pwP	06 22 17.1	-4.1
NEE2	**Needles Airpor**	**87.33**	**54**	P	**P**	**06 21 07.9**	**+0.7**
	baz=294						
LCMT	**Little Creek M**	**87.40**	**51**	IAmb	IAmb	06 21 09.8	
	comp=Z,20nm,0.9s						
BW06	**Boulder Array**	**87.41**	**45**	P	**P**	**06 21 07.8**	**+0.1**
	baz=297						
PDAR	**Pinedale Array**	**87.41**	**45**	P	**P**	**06 21 07.3**	**-0.4**
	comp=Z,2.9nm,0.8s,baz=203,slow=1.8,SNR=22						
	comp=Z,2.9nm,0.8s						
UPP	**Uppsala**	**87.45**	**336**	*e*P	**P**	**06 21 06.7**	**-0.5**
PABE	**Paberze**	**87.47**	**330**	*e*P	**P**	**06 21 07.3**	**0.0**
SCO	**Scoresbysund**	**87.48**	**355**	IAmb	IAmb	06 21 08.7	
	comp=Z,23nm,1.1s						
SCO	**Scoresbysund**	**87.48**	**355**	*e*P	**P**	**06 21 07.1**	**0.0**
SCO				IAmb	IAmb	06 21 09.0	
	comp=Z,26nm,1.2s						
AKASG	**Malin Array Be**	**87.50**	**324**	P	**P**	**06 21 06.5**	**-1.2**
	comp=Z,10.0nm,0.6s,baz=51,slow=4.8,SNR=93						
	comp=Z,10.0nm,0.6s						
SIM	**Simferopol'**	**87.52**	**318**	*e*P	**P**	**06 21 07.8**	**-0.1**
SIM				pmax	pmax		
	comp=Z,75nm,1.1s						
LAO	**LASA Array**	**87.64**	**40**	pwP	pwP	06 22 19.6	-3.3
LAO	**LASA Array**	**87.64**	**40**	P	**P**	**06 21 09.4**	**+0.9**
	baz=299,SNR=12						
LAO	**LASA Array**	**87.64**	**40**	P	**P**	**06 21 09.6**	**+1.0**
	baz=299						
BLYC	**Blythe**	**87.83**	**55**	IAmb	IAmb	06 21 11.6	
	comp=Z,27nm,1.0s						
GLA	**Glamis**	**87.88**	**55**	P	**P**	**06 21 10.9**	**+1.0**
	baz=294,SNR=8.7						
PDMCI	**Parker Dam,Lak**	**87.88**	**54**	P	**P**	**06 21 10.7**	**+0.9**
	baz=295,SNR=24						
PKCU	**Pink Cliffs**	**87.89**	**50**	IAmb	IAmb	06 21 13.2	
	comp=Z,27nm,1.4s						
DGMT	**Dagmar**	**87.94**	**38**	IAmb	IAmb	06 21 11.1	
	comp=Z,20nm,0.9s						
DGMT	**Dagmar**	**87.94**	**38**	P	**P**	**06 21 10.1**	**+0.3**
	baz=301,SNR=6.8						
DGMT	**Dagmar**	**87.94**	**38**	P	**P**	**06 21 09.8**	**0.0**
	baz=301						
Q16A	**Castle Valley**	**88.05**	**49**	IAmb	IAmb	06 21 12.8	
	comp=Z,18nm,0.8s						
Q16A					pwP	06 22 21.1	-3.5
P17A	**Butcher Ranch,**	**88.10**	**48**	IAmb	IAmb	06 21 12.8	
	comp=Z,19nm,0.9s						
P17A					pwP	06 22 21.9	-2.8
RAYN	**Ar Rayn**	**88.16**	**294**	P	**P**	**06 21 10.4**	**-1.0**
RAYN				IAmb	IAmb	06 21 12.1	
	comp=Z,22nm,0.8s						
RAYN	**Ar Rayn**	**88.16**	**294**	P	**P**	**06 21 10.4**	**-1.0**
RAYN				pmax	pmax		
	comp=Z,22nm,0.9s						
RAYN	**Ar Rayn**	**88.16**	**294**	*i* P	**P**	**06 21 11.5**	**+0.1**
	SNR=6.0						
RAYN	**Ar Rayn**	**88.16**	**294**	P	**P**	**06 21 11.6**	**+0.1**
U15A	**North Rim**	**88.34**	**51**	IAmb	IAmb	06 21 14.5	
	comp=Z,25nm,1.2s						
RDMU	**Red Mountain**	**88.41**	**47**	IAmb	IAmb	06 21 14.1	
	comp=Z,23nm,1.0s						
RDMU					pP	06 22 23.0	+0.5
SRU	**San Rafael Swe**	**88.42**	**48**	IAmb	IAmb	06 21 13.9	
	comp=Z,23nm,0.7s						
SFX	**San Felipe**	**88.70**	**57**	IAmb	IAmb	06 21 15.5	
	comp=Z,30nm,1.1s						
VIKU	**Vikbolandet**	**88.71**	**335**	*e*P	**P**	**06 21 12.4**	**-0.7**
HMU	**Henry Mountain**	**88.79**	**49**	IAmb	IAmb	06 21 15.6	
	comp=Z,15nm,0.8s						
113A	**Mohawk Valley,**	**88.81**	**55**	IAmb	IAmb	06 21 16.1	
	comp=Z,15nm,0.9s						
DOMB	**Dombas**	**88.91**	**340**	*e*P	**P**	**06 21 13.6**	**-0.5**
NB2	**NORSAR Subarra**	**88.94**	**339**	P	**P**	**06 21 13.1**	**-1.2**
	comp=Z,44nm,1.0s,baz=46,slow=5.1						
NB2	**NORSAR Subarra**	**88.94**	**339**	P	**P**	**06 21 13.1**	**-1.2**
	slow=5.1						
NOA	**NORSAR Array B**	**88.94**	**339**	P	**P**	**06 21 13.2**	**-1.1**
	comp=Z,18nm,0.9s,baz=48,slow=4.6,SNR=41						
NOA				PP	**PP**	**06 24 45.6**	**-2.2**
	comp=Z,1.0nm,0.7s,baz=47,slow=8.8,SNR=3.5						
	comp=Z,18nm,0.9s						
GAZ	**Gaziantep**	**89.03**	**310**	IAmb	IAmb	06 21 16.2	
	comp=Z,23nm,1.0s						
NC602	**NORSAR Array S**	**89.05**	**338**	*e*P	**P**	**06 21 14.3**	**-0.5**
WUAZ	**Wupatki**	**89.41**	**52**	IAmb	IAmb	06 21 19.3	
	comp=Z,21nm,1.1s						
WUAZ					pwP	06 22 29.1	-2.4
WUAZ	**Wupatki**	**89.41**	**52**	P	**P**	**06 21 18.4**	**+1.2**
	baz=296,SNR=10.0						
K22A	**Casper**	**89.43**	**44**	P	**P**	**06 21 17.5**	**+0.4**
	baz=299,SNR=6.6						
K22A	**Casper**	**89.43**	**44**	P	**P**	**06 21 16.8**	**-0.3**
	baz=299						
ICESG	**Greenland Ices**	**89.46**	**1**	*e*P	**P**	**06 21 17.1**	**+0.2**
ICESG				IAmb	IAmb	06 21 18.4	
	comp=Z,50nm,1.4s						
O20A	**White River Ci**	**89.51**	**47**	IAmb	IAmb	06 21 19.0	
	comp=Z,22nm,0.9s						
O20A	**White River Ci**	**89.51**	**47**	P	**P**	**06 21 17.8**	**+0.3**
	baz=298,SNR=18						
MSEY	**Mahe Island**	**89.56**	**265**	P	**P**	**06 21 19.6**	**+1.5**
214A	**Organ Pipe Nat**	**89.89**	**56**	IAmb	IAmb	06 21 21.6	
	comp=Z,28nm,1.1s						
214A	**Organ Pipe Nat**	**89.89**	**56**	P	**P**	**06 21 20.0**	**+0.7**
	baz=296,SNR=12						
PV13	**Radium Mtn., P**	**90.04**	**49**	IAmb	IAmb	06 21 21.5	
	comp=Z,18nm,0.8s						
SKAR	**Skarslia**	**90.17**	**340**	*e*P	**P**	**06 21 19.0**	**-1.0**
RSSD	**Black Hills**	**90.27**	**42**	P	**P**	**06 21 21.1**	**0.0**
RSSD				IAmb	IAmb	06 21 22.2	
	comp=Z,18nm,0.6s						
RSSD	**Black Hills**	**90.27**	**42**	P	**P**	**06 21 21.1**	**0.0**
RSSD				pmax	pmax		
	comp=Z,18nm,0.6s						
RSSD	**Black Hills**	**90.27**	**42**	P	**P**	**06 21 21.0**	**0.0**
	baz=301						
RSSD	**Black Hills**	**90.27**	**42**	P	**P**	**06 21 21.1**	**0.0**
	baz=301						
BR131	**Keskin Array S**	**90.33**	**313**	IAmb	IAmb	06 21 21.5	
	comp=Z,22nm,0.8s						
BR131	**Keskin Array S**	**90.33**	**313**	P	**P**	**06 21 20.9**	**-0.4**
	SNR=6.0						
BRTR	**Keskin Array B**	**90.33**	**313**	P	**P**	**06 21 20.8**	**-0.6**
	comp=Z,11nm,0.8s,baz=105,slow=2.9,SNR=26						
	comp=Z,11nm,0.8s						
BRTR	**Keskin Array B**	**90.33**	**313**	*i* P	**P**	**06 21 20.7**	**-0.6**
BRTR				pmax	pmax		
	comp=Z,12nm,0.8s						
HYA	**Hoyanger**	**90.47**	**341**	*e*P	**P**	**06 21 22.6**	**+1.4**
N23A	**Red Feather La**	**90.67**	**45**	P	**P**	**06 21 24.2**	**+1.2**
	baz=300,SNR=10						
MVCO	**Mesa Verde**	**90.71**	**49**	P	**P**	**06 21 23.6**	**+0.3**
	baz=298						
W18A	**Petrified Fore**	**90.79**	**52**	P	**P**	**06 21 24.6**	**+1.0**
	baz=297,SNR=6.0						
ANTO	**Ankara**	**90.83**	**314**	P	**P**	**06 21 22.1**	**-1.5**
MDND	**Maddock**	**90.86**	**37**	P	**P**	**06 21 24.0**	**+0.5**
	baz=304,SNR=12						
MDND	**Maddock**	**90.86**	**37**	P	**P**	**06 21 23.7**	**+0.3**
	baz=304						
E28A	**Huff**	**90.95**	**38**	P	**P**	**06 21 24.4**	**+0.5**
	baz=303						
TUC	**Tucson**	**91.28**	**54**	P	**P**	**06 21 26.1**	**+0.3**
TUC	**Tucson**	**91.28**	**54**	P	**P**	**06 21 26.1**	**+0.3**
TUC				pmax	pmax		
	comp=Z,17nm,1.3s						
TUC	**Tucson**	**91.28**	**54**	P	**P**	**06 21 27.0**	**+1.2**
	baz=297						
ODD1	**Odda**	**91.30**	**340**	*e*P	**P**	**06 21 25.4**	**+0.2**
ISCO	**Idaho Springs**	**91.44**	**46**	IAmb	IAmb	06 21 28.7	
	comp=Z,16nm,0.9s						
ISCO	**Idaho Springs**	**91.44**	**46**	P	**P**	**06 21 27.5**	**+0.8**
	baz=300,SNR=11						
ISCO	**Idaho Springs**	**91.44**	**46**	P	**P**	**06 21 27.0**	**+0.3**
	baz=300						
ULM	**Lac du Bonnet**	**91.46**	**33**	P	**P**	**06 21 26.0**	**-0.1**
	comp=Z,7.5nm,0.8s,baz=304,slow=5.0,SNR=12						
	comp=Z,7.5nm,0.8s						
S22A	**4UR Ranch, Cre**	**91.62**	**48**	P	**P**	**06 21 28.4**	**+0.9**
	baz=299,SNR=15						
Q24A	**Divide**	**92.17**	**46**	P	**P**	**06 21 30.6**	**+0.6**
	baz=300,SNR=6.3						
SDCO	**Great Sand Dun**	**92.53**	**48**	P	**P**	**06 21 32.0**	**+0.3**
	baz=300,SNR=7.3						
SDCO	**Great Sand Dun**	**92.53**	**48**	P	**P**	**06 21 32.0**	**+0.3**
	baz=300						
AGMN	**Agassiz Nation**	**92.64**	**35**	IAmb	IAmb	06 21 32.5	
	comp=Z,15nm,1.1s						
AGMN	**Agassiz Nation**	**92.64**	**35**	P	**P**	**06 21 31.4**	**-0.3**
	baz=307						
AGMN	**Agassiz Nation**	**92.64**	**35**	P	**P**	**06 21 31.1**	**-0.5**
	baz=307						
OJC	**Ojcow**	**92.69**	**328**	*e*P	**P**	**06 21 31.0**	**-0.8**
SUSD	**Miller**	**93.16**	**39**	IAmb	IAmb	06 21 34.9	
	comp=Z,24nm,0.9s						
SUSD	**Miller**	**93.16**	**39**	P	**P**	**06 21 34.1**	**0.0**
	baz=305						
SUSD	**Miller**	**93.16**	**39**	P	**P**	**06 21 33.9**	**-0.3**
	baz=305						
OGNE	**Ogallala**	**93.19**	**44**	P	**P**	**06 21 34.3**	**-0.2**
	baz=302						
ANMO	**Albuquerque**	**93.24**	**50**	P	**P**	**06 21 35.2**	**+0.2**
ANMO					**pP**	**06 22 45.5**	**+0.3**
ANMO	**Albuquerque**	**93.24**	**50**	*ce*P	**P**	**06 21 35.9**	**+1.0**
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ANMO	**Albuquerque**	**93.24**	**50**	P	**P**	**06 21 35.5**	**+0.6**
	baz=299						
ANMO	**Albuquerque**	**93.24**	**50**	P	**P**	**06 21 35.7**	**+0.8**
	baz=299						
Y22A	**Socorro**	**93.36**	**52**	P	**P**	**06 21 36.1**	**+0.6**
	baz=299						
121A	**Cookes Peak, D**	**93.43**	**53**	IAmb	IAmb	06 21 38.3	
	comp=Z,21nm,1.3s						
121A					pwP	06 22 48.5	-1.6
121A	**Cookes Peak, D**	**93.43**	**53**	P	**P**	**06 21 36.6**	**+0.8**
	baz=298,SNR=7.0						
121A	**Cookes Peak, D**	**93.43**	**53**	P	**P**	**06 21 37.1**	**+1.3**
	baz=298						
T25A	**Trinidad**	**93.59**	**48**	P	**P**	**06 21 37.2**	**+0.7**
	baz=301						
B35A	**Bob, Littlefor**	**93.73**	**34**	P	**P**	**06 21 36.9**	**+0.3**
	baz=309						
KSCO	**Kaye Shedlock'**	**93.83**	**45**	P	**P**	**06 21 37.7**	**+0.2**
	baz=302						
KSCO	**Kaye Shedlock'**	**93.83**	**45**	P	**P**	**06 21 37.8**	**+0.3**
	baz=302						
F33A	**5 Mile Ranch,**	**93.88**	**37**	IAmb	IAmb	06 21 38.5	
	comp=Z,14nm,1.0s						
F33A	**5 Mile Ranch,**	**93.88**	**37**	P	**P**	**06 21 37.3**	**-0.1**
	baz=307						
KSP	**Ksiaz**	**93.99**	**329**	*e*P	**P**	**06 21 37.4**	**-0.4**
VYHS	**Vyhne**	**94.27**	**327**	*e*P	**P**	**06 21 39.2**	**+0.1**
VYHS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VYHS	**Vyhne**	**94.27**	**327**	*e*P	**P**	**06 21 39.1**	**0.0**
DPC	**Dobruska-Polom**	**94.31**	**329**	*e*P	**P**	**06 21 39.0**	**-0.3**
DPC	**Dobruska-Polom**	**94.31**	**329**	*e*P	**P**	**06 21 39.0**	**-0.3**
ECSD	**EROS Data Cent**	**94.94**	**39**	IAmb	IAmb	06 22 54.3	
	comp=Z,15nm,1.6s						
ECSD	**EROS Data Cent**	**94.94**	**39**	P	**P**	**06 21 42.2**	**-0.1**
	baz=306						
ECSD	**EROS Data Cent**	**94.94**	**39**	P	**P**	**06 21 42.2**	**-0.1**
	baz=306						
BRG	**Berggiesshubel**	**95.06**	**330**	*e*P	**P**	**06 21 43.2**	**+0.5**
BRG				Amp		06 21 44.0	
	comp=Z,13nm,1.1s						
BRG	**Berggiesshubel**	**95.06**	**330**	*e*P	**P**	**06 21 43.1**	**+0.5**
BRG				pmax	pmax		
	comp=Z,13nm,1.1s						
ATD	**Arta Tunnel**	**95.18**	**284**	P	**P**	**06 21 45.2**	**+1.3**
CLL	**Collm**	**95.19**	**331**	⇓*i*P	**P**	**06 21 42.8**	**-0.4**
	comp=Z,23nm,1.3s						
CLL	**Collm**	**95.19**	**331**	⇓*i*P	**P**	**06 21 42.8**	**-0.4**
CLL				pmax	pmax		
	comp=Z,23nm,1.3s						
VTS	**Vitosha**	**95.43**	**320**	IAmb	IAmb	06 21 46.4	
	comp=Z,11nm,1.0s						
MNTX	**Cornudas Mount**	**95.61**	**53**	P	**P**	**06 21 46.0**	**+0.4**
	baz=300,SNR=5.5						
MNTX	**Cornudas Mount**	**95.61**	**53**	P	**P**	**06 21 45.2**	**-0.4**
	baz=300						
SPMN	**Marine on St.**	**96.19**	**36**	P	**P**	**06 21 48.2**	**+0.3**
	baz=309						
CKRC	**Cesky Krumlov**	**96.31**	**329**	*e*P	**P**	**06 21 48.1**	**-0.3**
CKRC	**Cesky Krumlov**	**96.31**	**329**	*e*P	**P**	**06 21 48.1**	**-0.3**
KHC	**Kasperske Hory**	**96.44**	**329**	*e*P	**P**	**06 21 48.6**	**-0.4**
KHC	**Kasperske Hory**	**96.44**	**329**	*e*P	**P**	**06 21 48.6**	**-0.4**
GERES	**GERESS Array B**	**96.58**	**329**	P	**P**	**06 21 49.0**	**-0.7**
	comp=Z,2.0nm,0.6s,baz=43,slow=4.5,SNR=11						
GERES				PKiKP	**PKiKP**	**06 26 25.2**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=213,slow=32,SNR=2.6						
	comp=Z,2.0nm,0.6s						
LIT	**Litokhoron**	**97.36**	**318**	IAmb	IAmb	06 21 53.0	
	comp=Z,23nm,1.4s						
KSU1	**Kansas State U**	**97.67**	**43**	P	Pdif	06 21 55.0	+0.3
	baz=306						
TX31	**Lajitas Ar. Si**	**98.07**	**54**	IAmb	IAmb	06 21 58.5	
	comp=Z,17nm,1.2s						
TX31	**Lajitas Ar. Si**	**98.07**	**54**	P	Pdif	06 21 56.9	+0.1
	baz=300						
TXAR	**Lajitas Array**	**98.07**	**54**	P	**P**	**06 21 56.6**	**-0.3**
	comp=Z,2.3nm,0.9s,baz=285,slow=2.5,SNR=12						
TXAR				PKKP	**PKKPbc**	**06 38 28.9**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=134,slow=5.2,SNR=7.7						
	comp=Z,2.3nm,0.9s						
WMOK	**Wichita Mounta**	**98.73**	**47**	P	Pdif	06 21 59.4	-0.1
	baz=304						
CCM	**Cathedral Cave**	**101.64**	**41**	P	**Pdif**	**06 22 12.3**	**-0.1**
	baz=310						
MIAR	**Mount Ida**	**102.33**	**45**	P	**Pdif**	**06 22 15.1**	**-0.4**
	baz=307						
MVO	**Moncorvo**	**111.61**	**336**	*e*PKP	**PKiKP**	**06 26 54.0**	**+1.1**
ESDC	**Sonseca Array**	**111.67**	**333**	PKiKP	**PKiKP**	**06 26 52.9**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=6.2,slow=2.1,SNR=4.9						
ESDC				PP	**PP**	**06 27 37.2**	**-1.6**
	comp=Z,2.5nm,0.9s,baz=27,slow=6.9,SNR=7.7						
ESDC				PKKPab	**PKKPab**	**06 37 57.5**	**-3.1**
	comp=Z,1.3nm,0.8s,baz=245,slow=4.6,SNR=5.8						
MTE	**Manteigas**	**112.47**	**336**	*e*PKP	**PKiKP**	**06 26 55.4**	**+0.9**
PCBR	**Castelo Branco**	**112.93**	**336**	*e*PKP	**PKiKP**	**06 26 55.1**	**-0.2**
PMRV	**Marv??o**	**113.25**	**336**	*e*PKP	**PKiKP**	**06 26 55.2**	**-0.8**
PESTR	**Estremoz**	**113.82**	**335**	*e*PKP	**PKiKP**	**06 26 58.4**	**+1.3**
PMTG	**Montargil**	**113.89**	**336**	*e*PKP	**PKiKP**	**06 26 57.8**	**+0.6**
PBAR	**Barrancos**	**114.20**	**335**	*e*PKP	PKPdf	06 26 58.5	+0.7
EVO	**Evora**	**114.27**	**335**	*e*PKP	PKPdf	06 26 58.2	+0.3
PBEJ	**Beja**	**114.65**	**335**	*e*PKP	PKPdf	06 26 59.6	+0.9
PNCL	**Nicolau / Gran**	**114.84**	**336**	*e*PKP	PKPdf	06 27 00.3	+1.3
LSZ	**Lusaka**	**118.37**	**264**		**PKiKP**	**06 27 06.7**	**+0.2**
LSZ	**Lusaka**	**118.37**	**264**	PKIKP	**PKiKP**	**06 27 06.7**	**+0.2**
ELIB	**Princess Elisa**	**119.56**	**198**	*d*PKPdf	**PKiKP**	**06 27 07.7**	**+0.4**
SNAA	**Sanae**	**126.34**	**193**	P	**PKPdf**	**06 27 20.2**	**0.0**
VNA2	**Neumayer--Watz**	**127.83**	**192**	P	**PKPdf**	**06 27 23.0**	**+0.1**
	baz=142,slow=2.0						
VNA3	**Neumayer Olymp**	**127.98**	**191**	P	**PKiKP**	**06 27 23.5**	**-0.3**
TORD	**Torodi Ar. Bea**	**128.73**	**309**	PKP	**PKPdf**	**06 27 25.4**	**-0.8**
	comp=Z,6.7nm,0.7s,baz=22,slow=2.2,SNR=33						
TORD				PP	**PP**	**06 29 36.2**	**+0.4**
	comp=Z,1.9nm,0.8s,baz=36,slow=5.6,SNR=5.1						
TORD				SKKPbc	SKKPbc	06 40 06.0	-0.6
	comp=Z,1.3nm,0.9s,baz=239,slow=3.2,SNR=5.2						
OTAV	**Otavalo**	**133.93**	**67**		**PKPdf**	**06 27 35.5**	**-1.3**
OTAV	**Otavalo**	**133.93**	**67**	PKIKP	**PKPdf**	**06 27 35.5**	**-1.3**
OTAV	**Otavalo**	**133.93**	**67**	*e*P	**PKPdf**	**06 27 35.6**	**-1.1**
DBIC	**Dimbokro**	**137.84**	**308**	PKP	**PKPdf**	**06 27 42.6**	**-0.8**
	comp=Z,7.1nm,0.7s,baz=81,slow=4.2,SNR=8.6						
KIC	**Kosan Boka**	**137.96**	**308**	⇑*e*P	PKPdf	06 27 35.4	-8.2
	comp=Z,2.7nm,0.5s						
TIC	**Toumodi**	**137.97**	**309**	⇑*e*P	PKPdf	06 27 34.8	-8.9
	comp=Z,44nm,0.5s						
LIC	**Lamto**	**138.26**	**308**	⇑*e*P	**PKPdf**	**06 27 37.0**	**-7.2**
	comp=Z,13nm,0.7s						
TBTG	**Tabatinga, AM**	**143.51**	**66**	*e*P	PKPbc	06 27 52.3	+0.5
SGCB	**S£o Gabriel d**	**143.57**	**58**	*e*P	PKPab	06 27 50.6	-0.4
PLCA	**Paso Flores**	**145.77**	**131**	PKPbc	**PKPdf**	**06 27 57.3**	**+0.5**
	comp=Z,93nm,1.1s,baz=245,slow=3.3,SNR=92						
PLCA	**Paso Flores**	**145.77**	**131**	PKPab	**PKPab**	**06 27 58.5**	**-0.3**
PLCA	**Paso Flores**	**145.77**	**131**	PKP2	**PKPab**	**06 27 58.5**	**-0.3**
BOAV	**Boa Vista**	**146.69**	**47**	*e*P	**PKPdf**	**06 27 59.7**	**+0.7**
TEFE	**Tefe**	**147.51**	**60**	*e*P	**PKPdf**	**06 28 00.7**	**+0.3**
ETMB	**Extrema**	**149.43**	**72**	*e*P	**PKPdf**	**06 28 03.2**	**-0.3**
MACA	**Manacapuru-AM**	**150.40**	**55**	*e*P	**PKPdf**	**06 28 05.0**	**-0.1**
SAML	**Samuel**	**151.67**	**67**		**PKPdf**	**06 28 07.0**	**0.0**
SAML	**Samuel**	**151.67**	**67**	PKPdf	**PKPdf**	**06 28 06.5**	**-0.4**
SAML	**Samuel**	**151.67**	**67**	PKIKP	**PKPdf**	**06 28 06.6**	**-0.4**
CPUP	**Villa Florida**	**160.72**	**108**	PKP	**PKPdf**	**06 28 17.7**	**-0.6**
	comp=Z,3.0nm,0.9s,baz=338,slow=1.2,SNR=5.7						
CPUP				PKPab	**PKPab**	**06 29 01.2**	**-1.0**
	comp=Z,5.9nm,1.1s,baz=263,slow=4.5,SNR=4.6						
CPUP	**Villa Florida**	**160.72**	**108**	PKPab	**PKPab**	**06 29 02.6**	**+0.4**
BDFB	**Brasilia**	**167.82**	**62**	PKP	**PKPdf**	**06 28 24.6**	**-0.4**
	comp=Z,7.8nm,0.9s,baz=113,slow=0.4,SNR=9.8						

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*ISK **01** 06:10:20.6, 39˚.48N×26˚.18E, h5^{km}, ML2.5/18*
*DDA **01** 06:10:21.4±0.0, 39˚.50N×26˚.20E, h10^{km}, ML2.4*
*THE **01** 06:10:21.7, 39˚.49N×26˚.17E, h8^{km}±2^{km}, ML2.1/6, Error ellipse: s-maj=2.2km s-min=0.7km az=116.0*
*ATH **01** 06:10:22.0, 39˚.49N×26˚.15E, h12^{km}±2^{km}, ML2.1/6, Error ellipse: s-maj=3.6km s-min=1.1km az=244.0*
ISC 01 06:10:21.6±0.8**, 39˚.50N**±0˚.02×**26˚.18E**±0˚.02**, h11**^{km}±5^{km}**,**
n46, σ0.^{s}53/70**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.03**	**275**	P	**Pg**	**06 10 23.7**	**0.0**
KOCA				S	**Sg**	**06 10 25.4**	**+0.3**
GPNR	**Gulpinar-Canak**	**0.06**	**218**	Pg	**Pg**	**06 10 23.1**	**-0.7**
PRK	**Paraskevi**	**0.26**	**164**	P	**Pg**	**06 10 27.2**	**+0.2**
PRK				S	**Sg**	**06 10 31.3**	**+0.7**
	808nm,0.2s						
PRK	**Paraskevi**	**0.26**	**164**	P	**Pg**	**06 10 27.2**	**+0.2**
PRK				S	**Sg**	**06 10 31.4**	**+0.8**
PRK				AML	AML	06 10 31.6	
	comp=N,1484µm,0.2s						
PRK				AML	AML	06 10 31.6	
	comp=E,1722µm,0.2s						
EZN	**Ezine**	**0.35**	**19**	P	**Pg**	**06 10 28.7**	**+0.2**
EZN				S	**Sg**	**06 10 33.7**	**+0.5**
	comp=E,395nm,0.3s						
EZN	**Ezine**	**0.35**	**19**	Pg	**Pg**	**06 10 28.3**	**-0.2**
EZN				Sg	**Sg**	**06 10 33.9**	**+0.7**
BOZC	**Bozcaada**	**0.35**	**344**	Pg	**Pg**	**06 10 28.7**	**0.0**
BOZC				Sg	**Sg**	**06 10 34.2**	**+0.7**
BAYC	**CANAKKALE_Bayr**	**0.37**	**50**	P	**Pg**	**06 10 28.9**	**-0.2**
BAYC				S	**Sg**	**06 10 34.0**	**0.0**
ECEA	**Canakkale, Ece**	**0.54**	**360**	P	**Pg**	**06 10 32.2**	**0.0**
ECEA				S	**Sg**	**06 10 40.0**	**+0.5**
ECEA				*i* AML	AML	06 10 40.0	
	comp=E,141nm,0.2s						
COMU	**Canakkale**	**0.64**	**21**	Pg	**Pg**	**06 10 33.9**	**-0.2**
BUHA	**Balikesir, Bur**	**0.70**	**90**	P	**Pg**	**06 10 34.8**	**-0.3**
BUHA				S	**Sg**	**06 10 44.4**	**+0.2**
DKL	**Dikili**	**0.71**	**127**	Pg	**Pg**	**06 10 34.5**	**-0.8**
GADA	**Gvkgeada**	**0.72**	**343**	Pg	**Pg**	**06 10 35.4**	**-0.2**
CANM	**Can-anakkale**	**0.85**	**53**	Pg	**Pg**	**06 10 37.6**	**-0.4**
KARB	**zmir-Karabur**	**0.85**	**168**	P	**Pg**	**06 10 37.8**	**-0.3**
KARB				S	**Sb**	**06 10 50.5**	**+0.6**
KARB				*i* AML	AML	06 10 51.0	
	comp=E,125nm,0.5s						
KARB				*i* AML	AML	06 10 51.0	
	comp=E,108nm,0.3s						
LIA	**Limnos Island**	**0.86**	**298**	P	**Pg**	**06 10 38.5**	**+0.2**
LIA				S	**Sb**	**06 10 50.8**	**+0.6**
	comp=E,122nm,0.3s						
LIA	**Limnos Island**	**0.86**	**298**	P	**Pg**	**06 10 38.3**	**0.0**
LIA				S	**Sg**	**06 10 49.6**	**+0.1**
LIA				AML	AML	06 10 51.4	
	comp=N,243µm,0.4s						
LIA				AML	AML	06 10 51.7	
	comp=E,244µm,0.3s						
ZEDA	**zmir-Bergama**	**0.88**	**127**	P	**Sb**	**06 10 51.9**	**+1.3**
GELI	**Tayfur-Gelibol**	**0.93**	**14**	Pg	**Pg**	**06 10 39.2**	**-0.3**
GELI				Sg	**Sb**	**06 10 52.8**	**+0.8**
LPK	**Lapseki**	**0.98**	**27**	Pg	**Pg**	**06 10 40.1**	**-0.4**
LPK				Sg	**Sn**	**06 10 54.5**	**-0.7**
PSRA	**Psara**	**1.07**	**207**	P	**Pb**	**06 10 42.0**	**-0.1**
SMTH	**Samothraki Isl**	**1.09**	**333**	P	**Pb**	**06 10 42.0**	**-0.5**
SMTH				S	**Sb**	**06 10 57.2**	**+0.5**
	comp=E,55nm,0.3s						
SMTH	**Samothraki Isl**	**1.09**	**333**	P	**Pb**	**06 10 41.8**	**-0.7**
SMTH				S	**Sg**	**06 10 56.2**	**-0.6**
SMTH				AML	AML	06 10 59.4	
	comp=N,118µm,0.2s						
SMTH				AML	AML	06 10 59.4	
	comp=E,73µm,0.3s						
CHOS	**Chios island**	**1.11**	**185**	P	**Pb**	**06 10 42.1**	**-0.9**
CHOS				S	**Sb**	**06 10 57.3**	**-0.2**
	comp=E,110nm,0.3s						
CHOS	**Chios island**	**1.11**	**185**	Pn	**Pb**	**06 10 42.0**	**-0.9**
CHOS	**Chios island**	**1.11**	**185**	P	**Pb**	**06 10 42.1**	**-0.9**
CHOS				S	**Sb**	**06 10 57.1**	**-0.4**
CHOS				AML	AML	06 11 00.3	
	comp=E,271µm,0.2s						
CHOS				AML	AML	06 11 00.6	
	comp=N,174µm,0.4s						
URLA	**Izmir**	**1.18**	**164**	Pn	**Pb**	**06 10 43.2**	**-0.9**
URLA				Sn	**Sg**	**06 10 59.9**	**+0.2**
CAVK	**Edirne/Enez-Ca**	**1.19**	**360**	P	**Pb**	**06 10 43.3**	**-0.9**
CAVK				S	**Sg**	**06 11 00.2**	**+0.2**
CAVK				*i* AML	AML	06 11 07.0	
	comp=N,72nm,1.0s						
ERIK	**Erikli-Kesan**	**1.20**	**12**	Pn	**Pn**	**06 10 43.6**	**-0.7**
STEP	**BALIKESIR_Sava**	**1.20**	**95**	P	**Pb**	**06 10 44.1**	**-0.2**
STEP				S	**Sn**	**06 11 02.1**	**+1.4**
ENEZ	**Enez**	**1.23**	**359**	Pn	**Pn**	**06 10 44.9**	**+0.1**

KRBG	**Karabiga-Canak**	**1.24**	**44**	Pn	**Pn**	**06 10 44.7**	**-0.2**
GONE	**Gonen-Balikesi**	**1.28**	**64**	Pn	**Pn**	**06 10 45.6**	**+0.1**
KNL	**Balıkesir**	**1.29**	**53**	P	**Pn**	**06 10 45.0**	**-0.6**
KNL				S	**Sg**	**06 11 03.9**	**+0.6**
KNL				*i* AML	AML	06 11 04.0	
	comp=N,114nm,0.7s						
KNL				*i* AML	AML	06 11 08.0	
	comp=N,101nm,0.7s						
BLCB	**Balcova**	**1.30**	**148**	Pn	**Pn**	**06 10 45.7**	**0.0**
BALB	**Balikesir**	**1.32**	**83**	Pn	**Pn**	**06 10 45.9**	**-0.1**
BKES	**Balkesir-Mer**	**1.37**	**80**	P	**Sg**	**06 11 06.0**	**+0.2**
ALN	**Alexandroupoli**	**1.40**	**356**	P	**Pn**	**06 10 47.4**	**+0.3**
ALN				S	**Sb**	**06 11 05.9**	**+0.3**
	comp=N,50nm,0.3s						
ALN	**Alexandroupoli**	**1.40**	**356**	Pn	**Pn**	**06 10 47.3**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.41**	**33**	Pn	**Pn**	**06 10 47.5**	**+0.2**
EDC	**Edincik**	**1.55**	**56**	Pn	**Pn**	**06 10 49.3**	**+0.2**
UKOP	**Uzunkopru-Edir**	**1.66**	**12**	Pn	**Pn**	**06 10 51.1**	**+0.4**
RDO	**Rodhopi**	**1.72**	**344**	P	**Pn**	**06 10 51.2**	**-0.2**
RDO				S	**Sn**	**06 11 13.2**	**-0.1**
RDO	**Rodhopi**	**1.72**	**344**	Pn	**Pn**	**06 10 51.9**	**+0.5**
RDO	**Rodhopi**	**1.72**	**344**	P	**Pn**	**06 10 51.7**	**+0.3**
RDO				AML	AML	06 11 20.2	
	comp=E,40µm,0.3s						
RDO				AML	AML	06 11 20.4	
	comp=N,20µm,0.2s						
SMG	**Samos**	**1.86**	**164**	P	**Pn**	**06 10 53.8**	**+0.4**
SMG				AML	AML	06 11 23.7	
	comp=E,122µm,0.5s						
SMG				AML	AML	06 11 24.3	
	comp=N,120µm,0.3s						

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*ISK **01** 06:27:13.6,39°.49N×26°.02E,h6^{km},ML2.8/19*
*ATH **01** 06:27:14.9,39°.51N×26°.15E,h15^{km}±1^{km},ML2.7/7,Error ellipse: s-maj=3.0km s-min=0.8km az=80.0*
*DDA **01** 06:27:14.5±0.0,39°.50N×26°.11E,h10^{km},ML2.6*
*THE **01** 06:27:14.5,39°.48N×26°.06E,h8^{km}±1^{km},ML2.6/9,Error ellipse: s-maj=1.3km s-min=0.6km az=234.0*
ISC 01 06:27:14.4±0.8**,39°.50N**±0°.02×**26°.08E**±0°.02**,h11**^{km}±5^{km}**,n52,**σ**0^{s}.68**/81**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	**Canakkale, Ayv**	**0.05**	**85**	P	**Pg**	**06 27 16.6**	**0.0**
KOCA				S	**Sg**	**06 27 18.0**	**-0.1**
GPNR	**Gulpinar-Canak**	**0.06**	**133**	Pg	**Pg**	**06 27 16.2**	**-0.4**
GPNR				Sg	**Sg**	**06 27 18.1**	**-0.1**
PRK	**Paraskevi**	**0.29**	**149**	P	**Pg**	**06 27 20.6**	**+0.3**
PRK				S	**Sg**	**06 27 24.3**	**0.0**
	3µm,0.2s						
PRK	**Paraskevi**	**0.29**	**149**	P	**Pg**	**06 27 20.7**	**+0.3**
PRK				S	**Sg**	**06 27 25.1**	**+0.8**
PRK				AML	AML	06 27 25.4	
	comp=E,7196µm,0.2s						
PRK				AML	AML	06 27 25.6	
	comp=N,5148µm,0.2s						
BOZC	**Bozcaada**	**0.34**	**357**	Pg	**Pg**	**06 27 21.1**	**-0.2**
BOZC				Sg	**Sg**	**06 27 26.6**	**+0.7**
BOZC	**Bozcaada**	**0.34**	**357**	P	**Pg**	**06 27 21.4**	**+0.1**
BOZC				S	**Sg**	**06 27 26.6**	**+0.7**
BOZC				*i* AML	AML	06 27 27.0	
	comp=N,496nm,0.4s						
EZN	**Ezine**	**0.38**	**30**	P	**Pg**	**06 27 22.2**	**+0.3**
EZN				S	**Sb**	**06 27 28.0**	**-1.1**
	comp=N,708nm,0.2s						
EZN	**Ezine**	**0.38**	**30**	Pg	**Pg**	**06 27 22.1**	**+0.2**
EZN				Sg	**Sb**	**06 27 28.3**	**-0.8**
BAYC	**CANAKKALE_Bayr**	**0.44**	**56**	P	**Pg**	**06 27 22.8**	**-0.3**
BAYC				S	**Sg**	**06 27 28.9**	**+0.1**
AYVA	**Ayvalik**	**0.51**	**111**	P	**Pg**	**06 27 24.2**	**-0.2**
AYVA				S	**Sb**	**06 27 36.8**	**+3.9**
ECEA	**Canakkale, Ece**	**0.55**	**8**	P	**Pg**	**06 27 25.2**	**+0.1**
ECEA				S	**Sb**	**06 27 34.0**	**-0.1**
ECEA				*i* AML	AML	06 27 34.0	
	comp=N,299nm,0.3s						
ECEA				*i* AML	AML	06 27 34.0	
	comp=N,358nm,0.4s						
COMU	**Canakkale**	**0.67**	**27**	Pg	**Pg**	**06 27 27.7**	**+0.2**
COMU				Sg	**Sb**	**06 27 37.9**	**+0.3**
GOKA	**anakkale-Gk**	**0.70**	**349**	P	**Pg**	**06 27 27.6**	**-0.4**
GOKA				S	**Sb**	**06 27 38.5**	**+0.1**
GOKA				*i* AML	AML	06 27 41.0	
	comp=N,282nm,0.5s						
GOKA				*i* AML	AML	06 27 42.0	
	comp=N,315nm,0.2s						
GADA	**Gvkgeada**	**0.70**	**349**	Pg	**Pg**	**06 27 27.8**	**-0.3**
DKL	**Dikili**	**0.77**	**123**	Pg	**Pb**	**06 27 29.5**	**-0.3**
DKL				Sg	**Sb**	**06 27 41.1**	**+0.8**
LIA	**Limnos Island**	**0.80**	**300**	P	**Pg**	**06 27 30.1**	**+0.3**
LIA				S	**Sg**	**06 27 41.3**	**+1.1**
	comp=N,660nm,0.4s						
LIA	**Limnos Island**	**0.80**	**300**	P	**Pb**	**06 27 30.7**	**+0.4**
LIA				S	**Sb**	**06 27 42.3**	**+1.2**
LIA				AML	AML	06 27 44.7	
	comp=E,1284µm,0.2s						
LIA				AML	AML	06 27 44.8	
	comp=N,1524µm,0.3s						
CANM	**Can-anakkale**	**0.91**	**55**	Pg	**Pb**	**06 27 32.3**	**+0.1**
ZEDA	**zmir-Bergama**	**0.94**	**124**	P	**Pb**	**06 27 32.5**	**-0.3**
ZEDA				S	**Sb**	**06 27 45.7**	**+0.5**
GELI	**Tayfur-Gelibol**	**0.95**	**19**	Pg	**Pg**	**06 27 32.5**	**-0.2**
LPK	**Lapseki**	**1.02**	**31**	Pg	**Pb**	**06 27 34.2**	**+0.1**
PSRA	**Psara**	**1.03**	**203**	P	**Pg**	**06 27 34.4**	**+0.1**
PSRA				S	**Sb**	**06 27 49.1**	**+1.2**
PSRA				AML	AML	06 27 52.1	
	comp=N,2888µm,0.2s						
PSRA				AML	AML	06 27 53.1	
	comp=E,1919µm,0.2s						
SMTH	**Samothraki Isl**	**1.06**	**337**	P	**Pg**	**06 27 34.6**	**-0.1**
SMTH				S	**Sb**	**06 27 49.1**	**+0.5**
	comp=E,122nm,0.2s						
SMTH	**Samothraki Isl**	**1.06**	**337**	P	**Pg**	**06 27 34.7**	**-0.1**
SMTH				S	**Sg**	**06 27 48.7**	**+0.2**
SMTH				AML	AML	06 27 51.3	
	comp=N,271µm,0.3s						
SMTH				AML	AML	06 27 51.5	
	comp=E,232µm,0.2s						
CHOS	**Chios island**	**1.11**	**181**	P	**Pg**	**06 27 35.1**	**-0.6**
CHOS				S	**Sg**	**06 27 50.0**	**-0.2**
	comp=E,528nm,0.3s						
CHOS	**Chios island**	**1.11**	**181**	Pn	**Pg**	**06 27 35.2**	**-0.5**
CHOS	**Chios island**	**1.11**	**181**	P	**Pg**	**06 27 35.3**	**-0.5**
CHOS				S	**Sg**	**06 27 50.1**	**0.0**
CHOS				AML	AML	06 27 55.0	
	comp=N,971µm,0.3s						
CHOS				AML	AML	06 27 55.0	
	comp=E,1145µm,0.3s						
URLA	**Izmir**	**1.21**	**160**	Pn	**Pb**	**06 27 36.8**	**-0.5**
BALY	**Balya**	**1.22**	**78**	P	**Pg**	**06 27 37.6**	**-0.2**
BALY				S	**Sn**	**06 27 53.6**	**-0.3**
BALY				*i* AML	AML	06 27 55.0	
	comp=E,188nm,0.6s						
BALY				*i* AML	AML	06 27 55.0	
	comp=E,89nm,0.6s						
ERIK	**Erikli-Kesan**	**1.22**	**16**	Pn	**Pn**	**06 27 36.9**	**-0.5**
ENEZ	**Enez**	**1.24**	**3**	P	**Pn**	**06 27 37.7**	**0.0**
ENEZ				S	**Sn**	**06 27 55.0**	**+0.6**
	comp=E,290nm,0.3s						
ENEZ	**Enez**	**1.24**	**3**	Pn	**Pb**	**06 27 37.9**	**+0.1**
KRBG	**Karabiga-Canak**	**1.30**	**46**	Pn	**Pn**	**06 27 38.5**	**0.0**
BLCB	**Balcova**	**1.34**	**146**	P	**Pn**	**06 27 39.1**	**0.0**
BLCB				S	**Sb**	**06 27 56.8**	**0.0**
BLCB	**Balcova**	**1.34**	**146**	Pn	**Pb**	**06 27 39.5**	**-0.1**
GONE	**Gonen-Balikesi**	**1.36**	**66**	Pn	**Pg**	**06 27 39.9**	**-0.5**
ALN	**Alexandroupoli**	**1.40**	**359**	P	**Pn**	**06 27 40.0**	**+0.2**
ALN				S	**Sb**	**06 27 58.6**	**+0.2**
	comp=E,155nm,0.5s						
ALN	**Alexandroupoli**	**1.40**	**359**	Pn	**Pn**	**06 27 40.1**	**+0.2**
ALN	**Alexandroupoli**	**1.40**	**359**	P	**Pn**	**06 27 39.1**	**-0.7**
ALN				AML	AML	06 27 60.0	
	comp=E,398µm,0.5s						
ALN				AML	AML	06 28 00.6	
	comp=N,221µm,0.6s						
BALB	**Balikesir**	**1.40**	**84**	Pn	**Pb**	**06 27 40.6**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.46**	**35**	Pn	**Pb**	**06 27 41.3**	**-0.3**
THAS	**Thassos island**	**1.52**	**317**	P	**Pn**	**06 27 40.6**	**-0.9**
THAS				S	**Sn**	**06 27 59.4**	**-1.9**
	comp=N,58nm,0.2s						
THAS	**Thassos island**	**1.52**	**317**	P	**Pn**	**06 27 41.3**	**-0.3**
THAS				AML	AML	06 28 04.8	
	comp=E,116µm,0.2s						
THAS				AML	AML	06 28 06.3	
	comp=N,107µm,0.2s						
EDC	**Edincik**	**1.61**	**58**	Pn	**Pb**	**06 27 43.7**	**-0.5**
UKOP	**Uzunkopru-Edir**	**1.68**	**14**	Pn	**Pn**	**06 27 44.3**	**+0.5**
RDO	**Rodhopi**	**1.70**	**346**	P	**Pn**	**06 27 44.3**	**+0.3**
RDO				S	**Sn**	**06 28 05.4**	**-0.3**
RDO	**Rodhopi**	**1.70**	**346**	Pn	**Pn**	**06 27 44.3**	**+0.3**
RDO	**Rodhopi**	**1.70**	**346**	P	**Pn**	**06 27 43.5**	**-0.5**
KYMI	**Kymi, Euboea I**	**1.76**	**241**	P	**Pn**	**06 27 43.8**	**-1.1**
OUR	**Ouranopolis**	**1.81**	**298**	P	**Pn**	**06 27 45.6**	**0.0**
SMG	**Samos**	**1.88**	**161**	P	**Pn**	**06 27 46.6**	**0.0**
SMG				S	**Sn**	**06 28 09.9**	**-0.4**
	comp=N,175nm,0.5s						
KAVA	**Kavala**	**1.92**	**322**	P	**Pn**	**06 27 46.9**	**-0.1**

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*MOS **01** 06:43:02.1±0.9,37°.56N×141°.44E,h44^{km},mb5.2/52,Error ellipse: s-maj=6.4km s-min=4.0km az=111.2*
*BJI **01** 06:43:02.0±0.0,37°.52N×141°.52E,h58^{km},mb4.9/68, mB4.9/46,Ms4.4/60,Ms7 4.3/60*
*NIED **01** 06:43:04.0,37°.52N×141°.45E,h49^{km},MW4.9,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}1.95; $M_{\theta\theta}$-0.43; $M_{\phi\phi}$-1.52; $M_{r\theta}$0.87; $M_{\theta\phi}$-0.65; $M_{\phi r}$2.03; Fault plane solution: $M_0$2.90000×10^{16} NP1:ϕ_s24.00000°, δ70.00000°,λ89.00000°. NP2:ϕ_s206.00000°,δ20.00000°, λ92.00000°.*
*JMA **01** 06:43:04.0±0.1,37°.5N±0°.2×141°.5E±0°.5,h49^{km}±1^{km}, MD4.9/40,MW4.9/40,E OFF FUKUSHIMA PREF*
JMA Felt III J1 at E OFF FUKUSHIMA PREF .
*BGR **01** 06:43:04.7,37°.31N×140°.68E,h33^{km},mb5.2,Ms4.3*
*IDC **01** 06:43:04.8±0.4,37°.53N×141°.38E,h53^{km}±2^{km},mb4.5/38, mbtmp4.8/47,MS4.1/59,Error ellipse: s-maj=10.0km s-min=8.4km az=108.0*
*NEIC **01** 06:43:05.5±2.0,37°.57N±0°.06×141°.41E±0°.10,h54^{km}±5^{km}, mb5.0/195,Error ellipse: s-maj=11.5km s-min=7.8km az=114.0*
*GCMT **01** 06:43:06.5±0.3,37°.63N±0°.02×141°.48E±0°.03,h46^{km}±1^{km}, MW5.0/86,Moment Tensor Solution. s60,c72; s86,c131; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.32±.20; $M_{\theta\theta}$-1.17±.13; $M_{\phi\phi}$-3.14±.12; $M_{r\theta}$1.33±.11; $M_{\theta\phi}$-0.78±.09; $M_{\phi r}$2.33±.11; Best double couple: $M_0$4.70100×10^{16} NP1:ϕ_s25.00000°,δ62.00000°,λ94.00000°. NP2: ϕ_s196.00000°,δ28.00000°,λ83.00000°. Principal axes: T 5.1700, Plg72.0000°, Azm304.0000°; N -0.9290, Plg3.0000°, Azm203.0000°; P -4.2310, Plg17.0000°, Azm112.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 01 06:43:04.5±0.3**,37°.51N**±0°.03×**141°.46E**±0°.03**,h52**^{km}±1^{km}**, h52**^{km}**:pP-P,n904,**σ**1^{s}.38**/833**,mb4.9**/202**,MS4.2**/77**, 24C-47D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.49**	**253**	P	**Pn**	**06 43 15.0**	**-0.8**
JFK				S	**Sn**	**06 43 22.6**	**-1.4**
JFK	**Kawauchi**	**0.49**	**253**	A	A	06 43 15.0	
	comp=E,190nm,1.0s,comp=E,131nm,3.2s						
JMST	**Minamisoumatoc**	**0.50**	**295**	P	**Pn**	**06 43 14.9**	**-1.0**
JMST				S	**Sn**	**06 43 22.9**	**-1.2**
JMST	**Minamisoumatoc**	**0.50**	**295**	A	A	06 43 14.9	
	comp=E,110nm,1.7s,comp=E,52nm,0.7s						
JMM	**Marumori**	**0.64**	**304**		**Pn**	**06 43 17.0**	**-0.6**
JMM	**Marumori**	**0.64**	**304**	P	**Pn**	**06 43 17.1**	**-0.4**
JMM	**Marumori**	**0.64**	**304**	⇓P	**Pn**	**06 43 16.8**	**-0.7**
JMM				⇓S	**Sn**	**06 43 26.1**	**-0.9**
JMM	**Marumori**	**0.64**	**304**	A	A	06 43 16.8	
	comp=E,163nm,1.6s,comp=E,52nm,0.4s						
ONAJ	**Iwakimizuishiy**	**0.67**	**232**	⇓P	**Pn**	**06 43 17.2**	**-0.8**
ONAJ				⇓S	**Sn**	**06 43 26.5**	**-1.3**
ONAJ	**Iwakimizuishiy**	**0.67**	**232**	A	A	06 43 17.2	
	comp=E,280nm,0.3s,comp=E,223nm,0.3s						
JIKH	**Ishinomakikobu**	**0.80**	**0**	P	**Pn**	**06 43 18.8**	**-0.8**
JIKH				S	**Sn**	**06 43 29.2**	**-1.4**
JIKH	**Ishinomakikobu**	**0.80**	**0**	A	A	06 43 18.8	
	comp=E,145nm,1.2s,comp=E,45nm,3.0s						
JFFD	**Fukushimafurud**	**0.83**	**240**	A	A	06 43 19.6	
	comp=E,74nm,1.0s,comp=E,62nm,2.9s						
JOTO	**OTAMA OYAMA**	**0.90**	**273**	P	**Pn**	**06 43 20.8**	**-0.2**
JOTO				S	**Sn**	**06 43 32.8**	**-0.2**
JOTO	**OTAMA OYAMA**	**0.90**	**273**	A	A	06 43 20.8	
	comp=E,136nm,1.9s,comp=E,129nm,1.4s						
JIO	**Ouri**	**0.94**	**355**	P	**Pn**	**06 43 20.9**	**-0.6**
JIO				S	**Sn**	**06 43 33.1**	**-1.0**
JIO	**Ouri**	**0.94**	**355**	A	A	06 43 20.9	
	comp=E,76nm,1.4s,comp=E,24nm,2.8s						
JOU	**Okura**	**1.06**	**324**	*i* P	**Pn**	**06 43 22.4**	**-0.7**
JOU	**Okura**	**1.06**	**324**	A	A	06 43 22.4	
	comp=E,63nm,2.9s,comp=E,63nm,2.9s						
JYAR	**Yonezawaarcadi**	**1.12**	**291**	A	A	06 43 23.5	
	comp=E,57nm,1.2s,comp=E,53nm,1.3s						
JHO	**Hitachi**	**1.15**	**219**	A	A	06 43 24.1	
	comp=E,15nm,1.2s,comp=E,32nm,4.5s						
JOFO	**Osakifurukawao**	**1.17**	**339**	A	A	06 43 24.2	
	comp=E,161nm,3.5s,comp=E,177nm,2.1s						
JKMT	**Kesennumamotoy**	**1.30**	**1**	A	A	06 43 26.0	
	comp=E,25nm,2.8s,comp=E,12nm,2.3s						
JYS	**Shirataka**	**1.31**	**303**	*i* P	**Pn**	**06 43 26.5**	**0.0**
JYS				*e*S	**Sn**	**06 43 42.4**	**-0.5**
JYS	**Shirataka**	**1.31**	**303**	A	A	06 43 26.5	
	comp=E,32nm,1.1s,comp=E,35nm,2.0s						
JSB	**Shiboa**	**1.34**	**247**	A	A	06 43 26.8	
	comp=E,54nm,3.8s,comp=E,51nm,2.3s						
JHYU	**Hitachinakayam**	**1.36**	**211**	A	A	06 43 27.2	
	comp=E,18nm,3.6s,comp=E,24nm,0.4s						
JFY	**Yanaizu**	**1.40**	**266**	⇓*i*P	**Pn**	**06 43 27.5**	**-0.2**
JFY	**Yanaizu**	**1.40**	**266**	A	A	06 43 27.5	
	comp=E,20nm,3.3s,comp=E,18nm,4.1s						
JMK	**Ichinoseki**	**1.45**	**353**	*i* P	**Pn**	**06 43 27.9**	**-0.4**
JMK				S	**Sn**	**06 43 45.4**	**-0.9**
JMK	**Ichinoseki**	**1.45**	**353**	A	A	06 43 27.9	
	comp=E,29nm,1.4s,comp=E,14nm,1.2s						
OFUJ	**Ofunato**	**1.57**	**6**	A	A	06 43 30.0	
	comp=E,22nm,2.8s,comp=E,12nm,0.5s						
JYT	**Yasato**	**1.63**	**219**	A	A	06 43 31.1	
	comp=E,33nm,0.3s,comp=E,30nm,0.5s						
JYK	**Kaneyama**	**1.65**	**329**	⇓*i*P	**Pn**	**06 43 31.0**	**-0.1**
JYK	**Kaneyama**	**1.65**	**329**	A	A	06 43 31.0	
	comp=E,18nm,2.8s,comp=E,16nm,3.0s						
JIHU	**Itakohorinouch**	**1.71**	**206**	A	A	06 43 32.2	
	comp=E,69nm,1.5s,comp=E,69nm,1.7s						
JNS	**Sasagawa**	**1.73**	**281**	A	A	06 43 32.2	
	comp=E,12nm,2.9s,comp=E,7.0nm,1.3s						
JYA	**Atsumi**	**1.75**	**309**	A	A	06 43 32.5	
	comp=E,26nm,0.7s,comp=E,25nm,0.8s						
CHOJ	**Chosi**	**1.87**	**195**	A	A	06 43 34.4	
	comp=E,20nm,1.0s,comp=E,17nm,1.0s						
JKT	**Katashina**	**1.92**	**248**	A	A	06 43 35.0	
	comp=E,10.0nm,7.9s,comp=E,12nm,4.4s						
JYYZ	**Yamagatayuza**	**1.92**	**322**	A	A	06 43 35.0	
	comp=E,37nm,6.2s,comp=E,51nm,4.0s						
JUON	**Uonuma**	**1.94**	**262**	A	A	06 43 35.2	
	comp=E,7.0nm,5.6s,comp=E,9.0nm,1.7s						
JAG	**Ashikaga**	**1.94**	**237**	A	A	06 43 35.4	
	comp=E,7.0nm,3.6s,comp=E,9.0nm,3.1s						
JOM	**Ohasama**	**1.96**	**356**	A	A	06 43 35.5	
	comp=E,24nm,2.2s,comp=E,11nm,0.7s						
JAW	**Awa shima**	**1.98**	**299**	A	A	06 43 35.9	
	comp=E,11nm,3.6s,comp=E,9.0nm,7.0s						
JRG	**Rokugo**	**1.99**	**341**	A	A	06 43 35.9	
	comp=E,17nm,2.3s,comp=E,17nm,1.9s						
JSMT	**Sammumatsuo**	**2.04**	**204**	A	A	06 43 36.8	
	comp=E,39nm,1.6s,comp=E,44nm,2.8s						
MIYJ	**Miyakonagasawa**	**2.08**	**8**	A	A	06 43 37.2	
	comp=E,11nm,1.5s,comp=E,9.0nm,0.9s						
JIZZ	**Izumozaki**	**2.19**	**271**	A	A	06 43 38.8	
	comp=E,27nm,4.4s,comp=E,25nm,4.8s						
JYW	**Yuwa**	**2.25**	**335**	A	A	06 43 39.7	
	comp=E,37nm,1.5s,comp=E,39nm,2.8s						
JSZI	**Iwateshizukuis**	**2.26**	**350**	A	A	06 43 40.2	
	comp=E,33nm,2.3s,comp=E,32nm,1.9s						
TOK	**Tokyo**	**2.28**	**217**	A	A	06 43 40.2	
	comp=E,36nm,0.9s,comp=E,33nm,0.7s						
JCN	**Nagara**	**2.32**	**206**	A	A	06 43 40.9	
	comp=E,39nm,3.0s,comp=E,39nm,3.1s						
JHU	**Hanno**	**2.41**	**227**	A	A	06 43 42.0	
	comp=E,10.0nm,1.2s,comp=E,10.0nm,1.5s						
JTH	**Tanohata**	**2.44**	**7**	A	A	06 43 42.4	
	comp=E,15nm,1.9s,comp=E,8.0nm,0.9s						
JGK	**Kuni**	**2.45**	**248**	A	A	06 43 42.5	
	comp=E,13nm,4.2s,comp=E,18nm,5.8s						
JKZ	**Kuzumaki**	**2.47**	**358**	A	A	06 43 42.8	
	comp=E,21nm,2.7s,comp=E,21nm,1.2s						
JRY	**Ryogami san**	**2.54**	**235**	A	A	06 43 43.9	
	comp=E,6.0nm,2.0s,comp=E,9.0nm,3.0s						
JKUC	**kamogawauchiur**	**2.56**	**204**	A	A	06 43 44.2	
	comp=E,16nm,3.5s,comp=E,16nm,2.2s						
JSD	**Sado**	**2.59**	**283**	Pn	**Pn**	**06 43 43.7**	**-0.2**
JSD	**Sado**	**2.59**	**283**	P	**Pn**	**06 43 43.8**	**-0.1**
JSGW	**Sagamiharawaka**	**2.63**	**224**	A	A	06 43 45.2	
	comp=E,13nm,3.1s,comp=E,13nm,1.4s						
JJN	**Nakama**	**2.66**	**262**	A	A	06 43 45.5	
	comp=E,12nm,3.0s,comp=E,11nm,3.2s						
JKEN	**Kujiedanarisaw**	**2.70**	**4**	A	A	06 43 46.0	
	comp=E,40nm,0.9s,comp=E,35nm,0.9s						
JYO	**Yokosk**	**2.70**	**213**	A	A	06 43 46.2	
	comp=E,21nm,2.7s,comp=E,16nm,1.1s						
JAH	**Hinai**	**2.75**	**347**	A	A	06 43 46.7	
	comp=E,21nm,2.5s,comp=E,9.0nm,1.6s						
MJAR	**Matsushiro Arr**	**2.77**	**251**	P	**Pn**	**06 43 47.3**	**+0.8**
	47nm,0.3s,baz=71,slow=13,SNR=223						
MJAR				S	**Sn**	**06 44 19.9**	**+1.1**
	204nm,0.6s,baz=260,slow=31,SNR=6.4						
MJAR				LR	LR	06 45 10.5	
	comp=Z,6µm,20.0s,baz=40,slow=46						
MAJO	**Matsushiro**	**2.78**	**251**	Pn	**Pn**	**06 43 47.2**	**+0.7**
MAJO	**Matsushiro**	**2.78**	**251**	P	**Pn**	**06 43 47.9**	**+1.4**
MAJO	**Matsushiro**	**2.78**	**251**	*d i*P	**Pn**	**06 43 47.6**	**+1.1**
MJB9	**Matsu-Tunnel**	**2.78**	**251**	Pn	**Pn**	**06 43 48.3**	**+1.8**
TATJ	**Tateyama 2**	**2.78**	**208**	A	A	06 43 47.4	
	comp=E,36nm,2.8s,comp=E,54nm,2.5s						
JANG	**Nango**	**2.86**	**1**	A	A	06 43 48.2	
	comp=E,14nm,1.9s,comp=E,14nm,2.8s						
JNG	**Nsakai**	**2.91**	**249**	A	A	06 43 49.0	
	comp=E,4.0nm,8.4s,comp=E,8.0nm,5.7s						
JNTW	**Noshirotokiwa**	**2.94**	**340**	A	A	06 43 49.2	
	comp=E,48nm,3.8s,comp=E,34nm,4.4s						
JOD2	**Odawara 2**	**2.95**	**221**	A	A	06 43 49.8	
	comp=E,9.0nm,1.8s,comp=E,13nm,1.6s						
JOG3	**Oga3**	**3.04**	**323**	A	A	06 43 46.4	
	comp=E,12nm,3.3s,comp=E,12nm,3.2s						
JYN	**Shimob**	**3.09**	**230**	A	A	06 43 51.8	
	comp=E,19nm,2.1s,comp=E,13nm,1.7s						
JNT	**Takato**	**3.13**	**240**	A	A	06 43 52.2	
	comp=E,5.0nm,5.4s,comp=E,6.0nm,4.2s						
JFNN	**Fujinakano**	**3.22**	**225**	A	A	06 43 53.5	
	comp=E,17nm,2.8s,comp=E,12nm,1.8s						
JHTM	**Izuhatsuma**	**3.23**	**219**	A	A	06 43 53.7	
	comp=E,22nm,1.0s,comp=E,22nm,1.3s						
JIM2	**Oshima 3**	**3.24**	**211**	A	A	06 43 53.8	
	comp=E,10.0nm,2.2s,comp=E,10.0nm,1.2s						
JHHS	**Hirosakihyakuz**	**3.25**	**345**	A	A	06 43 53.8	
	comp=E,25nm,4.5s,comp=E,24nm,2.2s						
JIW	**Iwasaki**	**3.28**	**340**	A	A	06 43 54.2	
	comp=E,8.0nm,4.0s,comp=E,7.0nm,5.0s						
JTM	**Tenmabayashi**	**3.28**	**355**	Pn	**Pn**	**06 43 53.7**	**+0.3**
JTM	**Tenmabayashi**	**3.28**	**355**	P	**Pn**	**06 43 54.2**	**+0.8**
JTM	**Tenmabayashi**	**3.28**	**355**	A	A	06 43 54.2	
	comp=E,16nm,3.0s,comp=E,6.0nm,3.7s						
JTT	**Ttatey**	**3.42**	**256**	A	A	06 43 56.4	
	comp=E,7.0nm,2.2s,comp=E,6.0nm,3.1s						
JTHY	**Toshimahigashi**	**3.46**	**211**	A	A	06 43 57.0	
	comp=E,10.0nm,5.0s,comp=E,8.0nm,5.7s						
JIZS	**Izushimoda**	**3.48**	**218**	A	A	06 43 57.2	
	comp=E,4.0nm,1.3s,comp=E,5.0nm,1.1s						
JARK	**Aomorirokkasho**	**3.49**	**359**	A	A	06 43 57.2	
	comp=E,10.0nm,1.0s,comp=E,9.0nm,1.9s						
SHZ3	**Shizuoka 3**	**3.58**	**228**	A	A	06 43 58.7	
	comp=E,7.0nm,2.6s,comp=E,7.0nm,1.3s						
JNY	**Yasuok**	**3.61**	**235**	A	A	06 43 59.0	
	comp=E,9.0nm,4.4s,comp=E,13nm,1.6s						
JSI2	**Shiura 2**	**3.63**	**347**	A	A	06 43 59.2	
	comp=E,8.0nm,3.7s,comp=E,7.0nm,1.0s						
JAHD	**Aomorihigashid**	**3.75**	**359**	A	A	06 44 00.8	
	comp=E,32nm,1.9s,comp=E,30nm,1.4s						
JGF	**Kuroka**	**3.81**	**241**	Pn	**Pn**	**06 44 01.9**	**+1.2**
JGF	**Kuroka**	**3.81**	**241**	P	**Pn**	**06 44 02.9**	**+2.2**
JOT	**Ohata**	**3.88**	**355**	A	A	06 44 02.7	
	comp=E,6.0nm,5.3s,comp=E,5.0nm,4.1s						
JSG	**Sagara**	**3.88**	**224**		**Pn**	**06 44 03.6**	**+2.0**
JSG	**Sagara**	**3.88**	**224**	P	Pn	06 44 08.1	+6.5
JAO	**Obara**	**4.06**	**238**	A	A	06 44 05.4	
	comp=E,4.0nm,3.0s,comp=E,4.0nm,7.0s						
JSR	**Shiriuchi**	**4.09**	**349**	A	A	06 44 05.7	
	comp=E,6.0nm,4.0s,comp=E,5.0nm,3.6s						
INU	**Inuyama**	**4.18**	**240**	Pn	**Pn**	**06 44 07.1**	**+1.4**
INU	**Inuyama**	**4.18**	**240**	P	**Pn**	**06 44 07.9**	**+2.2**
JICN	**Ichinomiyachia**	**4.33**	**241**	A	A	06 44 09.1	
	comp=E,8.0nm,1.9s,comp=E,12nm,2.2s						
JHJ2	**Mitsune**	**4.59**	**197**		**Pn**	**06 44 11.3**	**0.0**
JHJ	**Hachijo jima 2**	**4.59**	**198**	P	**Pn**	**06 44 10.7**	**-0.7**
	410nm,0.3s,baz=317,slow=14,SNR=42						
JHJ				S	**Sn**	**06 45 01.6**	**-1.9**
	1µm,0.3s,baz=58,slow=22,SNR=8.6						
JHJ				LR	LR	06 46 24.0	
	comp=Z,1µm,18.8s,baz=49,slow=43						
JYM2	**Yakumo 2**	**4.67**	**350**	A	A	06 44 13.8	
	comp=E,3.0nm,2.4s,comp=E,5.0nm,2.3s						
ERM	**Erimo**	**4.68**	**16**	Pn	**Pn**	**06 44 12.3**	**-0.3**
ERM	**Erimo**	**4.68**	**16**	P	**Pn**	**06 44 14.1**	**+1.5**
ERM	**Erimo**	**4.68**	**16**	P	**Pn**	**06 44 12.3**	**-0.3**
JEM	**Erimo**	**4.69**	**16**	P	**Pn**	**06 44 14.1**	**+1.5**
JNBK	**Urakawa-nobuka**	**4.87**	**11**	A	A	06 44 16.5	
	comp=E,6.0nm,1.0s,comp=E,8.0nm,4.3s						
JIE	**Ise**	**4.95**	**232**	A	A	06 44 17.9	
	comp=E,3.0nm,4.3s,comp=E,3.0nm,5.4s						
JOB	**Onbets**	**5.68**	**18**	A	A	06 44 28.0	
	comp=E,5.0nm,2.5s,comp=E,8.0nm,2.7s						
ASAJ	**Asahikawa**	**6.65**	**7**	P	**Pn**	**06 44 38.6**	**-1.0**
	16nm,0.5s,baz=212,slow=6.3,SNR=9.1						
ASAJ				S	**Sn**	**06 45 53.3**	**-0.7**
	43nm,0.7s,baz=218,slow=19,SNR=1.3						
JKA	**Kamikawa-asahi**	**6.65**	**7**	Pn	**Pn**	**06 44 38.6**	**-1.0**
NMR	**Nemuro--Hokkai**	**6.70**	**28**	⇑*i*P	**Pn**	**06 44 37.8**	**-2.4**
NMR				*i* S	**Sn**	**06 45 48.5**	**-6.5**
RUSJ	**Misakicho**	**7.18**	**22**	*e*P	**Pn**	**06 44 46.3**	**-0.6**
RUSJ				*e*S	**Sn**	**06 46 03.8**	**-3.2**
JHS	**Saijyo**	**7.19**	**252**		**Pn**	**06 44 49.6**	**+2.5**
JHS	**Saijyo**	**7.19**	**252**	P	**Pn**	**06 44 49.9**	**+2.9**
	249nm,1.2s						
JMN	**Monobe**	**7.23**	**241**		**Pn**	**06 44 49.2**	**+1.5**
JMN	**Monobe**	**7.23**	**241**	P	**Pn**	**06 44 49.9**	**+2.2**
	82nm,0.9s						
YUK	**Yuzh-Kuril'sk**	**7.32**	**26**	*e*P	**Pn**	**06 44 47.3**	**-1.4**
YUK				*i* S	**Sn**	**06 46 05.3**	**-5.1**
YUK				pmax	pmax		
	comp=E,212nm,0.3s						
YUK				pmax	pmax		
	comp=Z,318nm,0.3s						
YUK				pmax	pmax		
	comp=N,120nm,0.4s						
TEY	**Ternei**	**8.36**	**336**	*e*P	**Pn**	**06 45 03.5**	**+0.6**
TEY				*e*		06 46 36.8	
KUR	**Kuril'sk**	**9.09**	**30**	*e*P	Pn	06 45 18.1	+5.2
KUR				*e*S	**Sn**	**06 46 48.5**	**-5.3**
KUR				pmax	pmax		
	comp=E,33nm,0.8s						
KUR				pmax	pmax		
	comp=Z,133nm,0.8s						
KUR				smax	smax		
	comp=N,243nm,0.6s						
KUR				smax	smax		
	comp=E,140nm,0.6s						
YSS	**Yuzh-Sakhalins**	**9.48**	**5**	Pn	**Pn**	**06 45 18.6**	**+0.2**
YSS	**Yuzh-Sakhalins**	**9.48**	**5**	P	**Pn**	**06 45 19.5**	**+1.2**
	comp=E,72nm,0.8s						
YSS	**Yuzh-Sakhalins**	**9.48**	**5**	⇑*e*P	**Pn**	**06 45 18.8**	**+0.5**
YSS				*e*S	**Sn**	**06 47 01.8**	**-1.6**
YSS				pmax	pmax		
	comp=Z,50nm,0.7s						
YSS				smax	smax		
	comp=N,40nm,1.0s						
YSS				MLR	MLR		
	comp=Z,600nm,15.0s						
YSS				MLR	MLR		
	comp=N,400nm,14.0s						
JNU	**Nakatsue**	**9.69**	**246**	P	**Pn**	**06 45 21.6**	**+0.3**
	comp=N,5.9nm,0.4s,baz=50,slow=12,SNR=8.1						
JNU				LR	LR	06 49 31.3	
	comp=N,2µm,20.4s,baz=58,slow=40						
JNU	**Nakatsue**	**9.69**	**246**		**Pn**	**06 45 23.8**	**+2.6**
JNU	**Nakatsue**	**9.69**	**246**	P	**Pn**	**06 45 24.1**	**+2.8**
	comp=N,80nm,1.1s						
USRK	**Ussuriysk Ar.**	**9.80**	**316**	P	**Pn**	**06 45 23.0**	**+0.4**
	comp=N,30nm,1.0s,baz=127,slow=14,SNR=55						
USRK				LR	LR	06 48 56.7	
	comp=N,2µm,19.0s,baz=126,slow=36						
USRK	**Ussuriysk Ar.**	**9.80**	**316**		**Pn**	**06 45 22.5**	**-0.1**

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USRK  Ussuriysk Ar.     9.80 316   P      Pn      06 45 23.0 +0.4
USA0B Ussuriysk Arra    9.80 316          Pn      06 45 22.1  -0.6
USA0B Ussuriysk Arra    9.80 316⇓eP       Pn      06 45 23.4 +0.8
JCJ   Chichijima       10.40 176   P      Pn      06 45 30.9  -0.1
      comp=N,98nm,0.4s,baz=266,slow=20,SNR=13
JCJ                                S      Sn      06 47 17.6  -8.6
      comp=N,173nm,0.3s,baz=255,slow=21,SNR=9.0
KSRS  Korea Array      10.76 274   P      Pn      06 45 39.1 +3.3
      comp=N,27nm,0.9s,baz=92,slow=13,SNR=52
KSRS                               LR     LR      06 49 28.2
      comp=N,1µm,20.3s,baz=85,slow=36
KSAR  Wonju Array Be   10.79 274          Pn      06 45 37.4 +1.1
KSAR  Wonju Array Be   10.79 274   P      Pn      06 45 37.4 +1.1
KS19  Wonju Array Si   10.80 274          Pn      06 45 38.2 +1.8
JSU   Suzuyama         10.87 240          Pn      06 45 39.6 +2.2
JSU   Suzuyama         10.87 240   P      Pn      06 45 41.0 +3.6
      comp=N,52nm,1.0s
TJN   Taejon           11.34 269          Pn      06 45 44.6 +0.9
TJN   Taejon           11.34 269   P      Pn      06 45 44.6 +0.9
MDJ   Mudanjiang       11.42 312   P      Pn      06 45 47.1 +2.3
MDJ                                sP             06 46 02.7
MDJ                                S      Sn      06 47 57.3 +6.5
MDJ                                pmax   pmax
      comp=N,39nm,1.1s
MDJ                                pmax   pmax
      comp=N,120nm,4.8s
MDJ                                LR     LR
      comp=N,600nm,22.8s
MDJ                                LR     LR
      comp=N,970nm,21.7s
MDJ                                LR     LR
      comp=N,2µm,21.7s
MDJ   Mudanjiang       11.42 312   Pn     Pn      06 45 49.0 +4.2
INCN  Inchon           11.78 274   P      Pn      06 45 52.8 +3.0
BNX   BinXian          13.33 312  ⇓P      Pn      06 46 10.0  -0.9
BNX                                pP     P       06 46 18.4  -0.6
BNX                                PP     PnPn    06 46 21.6 +2.7
BNX                                sP             06 46 25.6
BNX                                S      Sn      06 48 36.4  -1.0
BNX                                sS     S       06 48 51.0  -8.1
BNX                                pmax   pmax
      comp=N,3.0nm,0.5s
BNX                                pmax   pmax
      comp=N,89nm,3.7s
BNX                                LR     LR
      comp=N,480nm,18.8s
BNX                                LR     LR
      comp=N,620nm,24.1s
BNX                                LR     LR
      comp=N,1µm,19.1s
TYV   Tymovskoe        13.38   3  eP      Pn      06 46 10.2  -1.2
TYV                               eS      Sn      06 48 36.6  -1.8
TYV                                pmax   pmax
      comp=Z,11nm,1.0s
TYV                                pmax   pmax
      comp=Z,100nm,2.6s
TYV                                smax   smax
      comp=E,900nm,4.8s
KLR   Kul'dur          13.66 332   P      Pn      06 46 15.7 +0.3
      comp=E,2.4nm,0.7s,baz=144,slow=11,SNR=7.9
KLR                                LR     LR      06 51 30.6
      comp=E,868nm,18.3s,baz=146,slow=37
CN2   Changchun        13.67 302  eP      Pn      06 46 16.0 +0.4
CN2                                S      Sn      06 48 44.7  -1.1
CN2                                pmax   pmax
      comp=E,10.0nm,1.0s
CN2                                LR     LR
      comp=E,370nm,16.0s
CN2                                LR     LR
      comp=E,610nm,16.0s
CN2                                LR     LR
      comp=E,750nm,17.0s
GRNR  Gornyy           13.73 346⇑iP       Pn      06 46 14.0  -2.3
GRNR                               pmax   pmax
      comp=Z,4.0nm,0.9s
GRNR                               MLR    MLR
      comp=E,270nm,17.0s
GRNR                               MLR    MLR
      comp=Z,560nm,17.0s
SNY   Shenyang         14.43 293  ⇓P      Pn      06 46 26.7 +1.1
SNY                                S      Sn      06 49 08.4 +4.3
SNY                                pmax   pmax
      comp=Z,20nm,1.1s
SNY                                LR     LR
      comp=Z,790nm,15.6s
SNY                                LR     LR
      comp=Z,1µm,17.8s
SNY                                LR     LR
      comp=Z,2µm,16.3s
JOW   Kunigami         15.41 230   P      Pn      06 46 37.6  -0.9
      comp=Z,26nm,0.8s,baz=73,slow=14,SNR=5.3
JOW                                LR     LR      06 52 13.0
      comp=Z,288nm,21.8s,baz=67,slow=36
JOW   Kunigami         15.41 230   Pn     Pn      06 46 40.1 +1.6
OKH   Okha             16.07   3 deP      Pn      06 46 46.0  -0.8
OKH                               eS      Sn      06 49 36.5  -7.3
OKH                                MLR    MLR
      comp=N,600nm,14.0s
HEH   HeiHe            16.23 326  eP      Pn      06 46 47.7  -1.2
HEH                                pmax   pmax
      comp=N,6.0nm,0.9s
HEH                                pmax   pmax
      comp=N,170nm,3.9s
HEH                                LR     LR
      comp=N,340nm,17.5s
HEH                                LR     LR
      comp=N,630nm,16.6s
HEH                                LR     LR
      comp=N,950nm,19.9s
SKR   Severo-Kuril's   16.82  34  eP      P       06 47 12.0   +14
SKR                                pmax   pmax
      comp=Z,123nm,1.0s
SKR                                MLR    MLR
      comp=Z,300nm,18.0s
ZEA   Zeya             18.97 333  eP      P       06 47 21.0  -0.3
ZEA                                pmax   pmax
      comp=E,20nm,0.9s
ZEA                                pmax   pmax
      comp=Z,40nm,0.9s
ZEA                                pmax   pmax
      comp=N,30nm,0.8s
ZEA                                pmax   pmax
      comp=Z,100nm,5.4s
ZEA                                MLR    MLR
      comp=N,300nm,16.0s
ZEA                                MLR    MLR
      comp=E,200nm,16.0s
ZEA                                MLR    MLR
      comp=Z,300nm,15.0s
PETK  Petropavlovsk-   19.26  31   P      P       06 47 24.3  -0.1
      comp=Z,9.4nm,0.9s,baz=209,slow=15,SNR=6.3
PETK                               LR     LR      06 54 32.8
      comp=Z,183nm,20.9s,baz=221,slow=36
PETK  Petropavlovsk-   19.26  31   P      Pn      06 47 26.3 +0.4
PETK  Petropavlovsk-   19.26  31   P      Pn      06 47 26.3 +0.4
NJ2   Nanjing          19.33 260  eP      P       06 47 26.2 +0.8
NJ2                                pmax   pmax
      comp=Z,13nm,0.5s
NJ2                                pmax   pmax
      comp=Z,160nm,5.5s
PET   Petropavlovsk    19.59  32  eP      Pn      06 47 29.6  -0.2
PET                               eS      S       06 50 53.8   -12
PET                                pmax   pmax
      comp=Z,18nm,0.9s
PET                                MLR    MLR
      comp=Z,600nm,17.0s
PET                                MLR    MLR
      comp=Z,1µm,15.0s
HIA   Hailar           19.60 314⇓eP       P       06 47 29.0 +0.8
HIA                                pmax   pmax
      comp=Z,16nm,1.7s
BJI   Beijing          19.86 285   P      P       06 47 30.2  -0.9
BJT   Baijiatuau       19.86 285   P      P       06 47 31.0  -0.2
BJT   Baijiatuau       19.86 285   P      P       06 47 31.0  -0.2
BJT                                pmax   pmax
      comp=Z,21nm,1.0s
XLT   XiLinHaoTe       20.23 296⇓iP       P       06 47 33.3  -1.9
XLT                                sP     sP      06 47 51.3  -2.4
XLT                                S      S       06 51 12.8  -6.4
XLT                                pmax   pmax
      comp=Z,44nm,0.9s
XLT                                pmax   pmax
      comp=Z,160nm,5.5s
XLT                                LR     LR
      comp=Z,600nm,16.5s
XLT                                LR     LR
      comp=Z,700nm,16.0s
TATO  Taipei           21.11 239   P      P       06 47 49.9 +5.2
HNS   HongShan         21.22 278  ⇓P      P       06 47 43.5  -2.3
HNS                                sP     sP      06 48 03.1  -1.3
HNS                                S      S       06 51 32.0  -6.7
HNS                                SS     SnSn    06 52 10.9 +7.3
HNS                                pmax   pmax
      comp=Z,100nm,0.9s
HNS                                LR     LR
      comp=Z,320nm,15.1s
HNS                                LR     LR
      comp=Z,720nm,18.3s
HNS                                LR     LR
      comp=Z,660nm,16.7s
YHNB  Yeheng           21.38 239   P      P       06 47 46.0  -1.8
NACB  Ninganchiao      21.57 238   P      P       06 47 48.3  -1.4
SSLB  Suanglung        22.26 238   P      P       06 47 54.3  -2.8
TWG   Pinlang          22.84 236   P      P       06 48 03.2  -0.1
TWG                                IAmb   IAmb    06 48 05.5
      comp=Z,74nm,1.2s
MA2   Magadan          22.88  12   P      P       06 48 03.0  -0.4
      comp=Z,14nm,0.8s,baz=209,slow=9.4,SNR=7.5
MA2                                LR     LR      06 57 10.8
      comp=Z,109nm,19.1s,baz=148,slow=37
      comp=Z,14nm,0.8s
MA2   Magadan          22.88  12   P      P       06 48 02.6  -0.7
MA2   Magadan          22.88  12⇑eP       P       06 48 05.3 +2.0
MA2                                pmax   pmax
      comp=Z,19nm,0.7s
HHC   Hu-ho-hao-te     23.36 288  eP      P       06 48 06.4  -2.0
HHC                                S      S       06 52 16.6  -0.8
HHC                                pmax   pmax
      comp=Z,31nm,1.0s
HHC                                pmax   pmax
      comp=Z,250nm,4.6s
HHC                                LR     LR
      comp=Z,410nm,13.5s
HHC                                LR     LR
      comp=Z,610nm,12.9s
HHC                                LR     LR
      comp=Z,820nm,14.0s
WHN   Wuhan            23.47 261  ⇑P      P       06 48 09.3   0.0
WHN                                S      S       06 52 17.9  -1.1
WHN                                LR     LR
      comp=Z,600nm,9.6s
WHN                                LR     LR
      comp=Z,1µm,14.2s
WHN                                LR     LR
      comp=Z,2µm,25.1s
LYN   LuoYang          23.59 272⇓iP       P       06 47 59.8   -11
LYN                                sP     pP      06 48 18.1  -5.2
LYN                                pmax   pmax
      comp=Z,47nm,0.9s
GUMO  Guam             24.02 172   LR     LR      06 58 25.0
      comp=Z,115nm,20.4s,baz=44,slow=38
BTO   Baotou           24.54 287  eP      P       06 48 19.0  -0.3
BTO                                S      S       06 52 36.3  -0.1
BTO                                LR     LR
      comp=Z,1µm,16.3s
BTO                                LR     LR
      comp=Z,1µm,18.8s
YAK   Yakutsk          25.61 347   P      P       06 48 27.7  -0.9
      comp=Z,56nm,0.7s,baz=167,slow=2.6,SNR=24
YAK                                LR     LR      06 58 58.8
      comp=Z,513nm,18.7s,baz=164,slow=37
      comp=Z,56nm,0.7s
YAK   Yakutsk          25.61 347   P      P       06 48 27.8  -0.9
YAK   Yakutsk          25.61 347c iP      P       06 48 27.6  -0.9
YAK                               e*PP    pP      06 48 43.4 +1.6
YAK                               e               06 49 06.2
YAK                               eS      S       06 52 51.0  -1.7
YAK                               e*SS    sS      06 53 14.9  -0.3
YAK                               eSS     SnSn    06 53 56.2 +5.5
YAK                                pmax   pmax
      comp=Z,125nm,0.9s
YAK                                pmax   pmax
      comp=N,28nm,1.0s
YAK                                pmax   pmax
      comp=E,17nm,1.1s
YAK                                pmax   pmax
      comp=Z,454nm,6.9s
YAK                                pmax   pmax
      comp=N,159nm,4.3s
YAK                                pmax   pmax
      comp=E,192nm,4.5s
YAK                                smax   smax
      comp=N,324nm,3.7s
YAK                                smax   smax
      comp=E,143nm,3.5s
SEY   Seymchan         26.32  11   P      P       06 48 34.8  -0.2
      comp=E,18nm,1.0s,baz=198,slow=8.2,SNR=21
SEY                                LR     LR      07 00 34.2
      comp=E,187nm,20.2s,baz=116,slow=40
      comp=E,18nm,1.0s
SEY   Seymchan         26.32  11⇓eP       P       06 48 35.6 +0.6
SEY                                pmax   pmax
      comp=Z,42nm,1.3s
XAN   Xi'an            26.55 272   P      P       06 48 36.2  -1.3
XAN                                pP     pP      06 48 50.2  -0.5
XAN                                S      S       06 53 04.8  -3.5
XAN                                pmax   pmax
      comp=Z,16nm,1.1s
XAN                                LR     LR
      comp=Z,240nm,17.5s
XAN                                LR     LR
      comp=Z,170nm,17.5s
XAN                                LR     LR
      comp=Z,360nm,17.1s
ULN   Ulaanbaatar      27.12 303   P      P       06 48 42.2  -0.4
ULN   Ulaanbaatar      27.12 303   P      P       06 48 42.2  -0.4
ULN                                pmax   pmax
      comp=Z,14nm,0.8s
ULN   Ulaanbaatar      27.12 303   P      P       06 48 41.9  -0.7
BOD   Bodaibo          27.15 327  eP      P       06 48 41.9  -0.6
BOD                                pmax   pmax
      comp=Z,35nm,0.8s
ENH   Enshi            27.41 264   P      P       06 48 44.7  -0.6
SONM  Songino Array    27.55 303   P      P       06 48 45.7  -0.7
      comp=Z,9.6nm,0.6s,baz=104,slow=8.5,SNR=64
SONM                               PcP    PcP     06 52 02.1  -1.0
      comp=Z,1.2nm,0.5s,baz=124,slow=3.2,SNR=3.5
SONM                               LR     LR      06 59 58.8
      comp=Z,216nm,20.2s,baz=114,slow=37
      comp=Z,9.6nm,0.6s
SONM  Songino Array    27.55 303   P      P       06 48 45.9  -0.5
SONM  Songino Array    27.55 303   P      P       06 48 45.9  -0.5
SONM                               pmax   pmax
      comp=Z,28nm,1.2s
H11N2 WAKE ISLAND Hy   28.36 122   T      T       07 18 30.5
      baz=314,slow=75
H11N1 WAKE ISLAND Hy   28.37 122   T      T       07 18 26.9
      baz=314,slow=75
H11N3 WAKE ISLAND Hy   28.38 122   T      T       07 18 31.9
      baz=314,slow=75
GULI  GuiLin           29.07 254  ⇓P      P       06 49 05.4 +5.5
GULI                               S      S       06 53 58.4   +10
GULI                               pmax   pmax
      comp=Z,40nm,1.0s
GULI                               LR     LR
      comp=N,250nm,19.0s
GULI                               LR     LR
      comp=E,240nm,17.4s
GULI                               LR     LR
      comp=Z,300nm,23.9s
H11S1 WAKE ISLAND Hy   29.09 124   T      T       07 19 27.2
      baz=316,slow=74
H11S3 WAKE ISLAND Hy   29.09 124   T      T       07 19 28.9
      baz=316,slow=74
H11S2 WAKE ISLAND Hy   29.11 124   T      T       07 19 31.1
      baz=316
ZAK   Zakamensk        30.00 308  eP      P       06 49 07.9  -0.2
ZAK                                pmax   pmax
      comp=Z,7.0nm,1.4s
LZH   Lanzhou          30.02 279  eP      P       06 49 07.0  -1.6
LZH                                pP     pP      06 49 17.7  -4.2
LZH                                S      S       06 54 03.2 +0.1
LZH                                pmax   pmax
      comp=Z,30nm,1.4s
LZH                                pmax   pmax
      comp=Z,210nm,7.6s
LZH                                LR     LR
      comp=Z,320nm,13.7s
LZH                                LR     LR
      comp=Z,530nm,14.4s
LZH                                LR     LR
      comp=Z,650nm,15.1s
GYA   Guiyang          31.34 260⇓iP       P       06 49 19.5  -0.7
GYA                                pP     sP      06 49 36.9  -2.9
GYA                                pmax   pmax
      comp=Z,67nm,1.0s
GYA                                LR     LR
      comp=Z,490nm,22.7s
MOY   Mondy            31.66 310  eP      P       06 49 22.4  -0.3
CD2   Chengdu          31.71 269   P      P       06 49 22.2  -1.1
CD2                                sP     sP      06 49 41.4  -1.5
CD2                                S      S       06 54 28.9  -0.5
CD2                                pmax   pmax
      comp=Z,20nm,0.6s
CD2                                LR     LR
      comp=Z,390nm,16.7s
CD2                                LR     LR
      comp=Z,380nm,16.7s
CD2                                LR     LR
      comp=Z,430nm,17.6s
GTA   Gaotai           32.46 286  eP      P       06 49 29.0  -0.9
GTA                                pP     pP      06 49 41.2  -2.1
GTA                                sP     sP      06 49 46.5  -3.0
GTA                                PcP    PcP     06 52 17.1 +1.1
GTA                                S      S       06 54 41.4 +0.3
GTA                                pmax   pmax
      comp=Z,7.0nm,1.0s
GTA                                pmax   pmax
      comp=Z,100nm,5.2s
GTA                                LR     LR
      comp=Z,180nm,17.5s
GTA                                LR     LR
      comp=Z,390nm,17.9s
GTA                                LR     LR
      comp=Z,470nm,21.9s
BILL  Bilibino         33.56  17 i P      P       06 49 51.6   +13
BILL                             i                06 50 53.3
BILL                             i                06 51 07.7
BILL                             i                06 52 16.3
BILL                               pmax   pmax
      comp=Z,12nm,1.1s
BILL                               MLR    MLR
      comp=Z,90nm,18.0s
BILL  Bilibino         33.56  17   P      P       06 49 39.5 +0.5
BILL                               pP     pP      06 49 52.6 +0.2
BILL                               sP     sP      06 49 57.3  -1.3
TIXI  Tiksi            34.82 353   LR     LR      07 05 13.8
      comp=Z,229nm,18.1s,baz=72,slow=38
TIXI  Tiksi            34.82 353   P      P       06 49 49.2  -0.6
TIXI  Tiksi            34.82 353⇑eP       P       06 49 49.3  -0.5
TIXI                               pmax   pmax
      comp=Z,11nm,1.0s
TIXI  Tiksi            34.82 353   P      P       06 49 49.2  -0.6
KMI   Kunming          35.07 261  ⇑P      P       06 49 51.9  -0.9
KMI                                pP     pP      06 50 08.1 +1.8
KMI                                pmax   pmax
      comp=Z,30nm,1.1s
KMI                                pmax   pmax
      comp=Z,170nm,3.2s
KMI                                LR     LR
      comp=Z,280nm,16.7s
KMI                                LR     LR
      comp=Z,380nm,19.3s
KMI                                LR     LR
      comp=Z,530nm,26.1s
KMI   Kunming          35.07 261   P      P       06 49 52.4  -0.5
KMI                                pP     pP      06 50 05.5  -0.8
KMI                                sP     sP      06 50 10.8  -1.7
PZH   PanZhiHua        35.19 264   P      P       06 49 52.9  -0.8
PZH                                S      S       06 55 21.8  -1.7
PZH                                pmax   pmax
      comp=Z,20nm,0.7s
PZH                                pmax   pmax
      comp=Z,120nm,6.3s
PZH                                LR     LR
      comp=Z,680nm,20.4s
PZH                                LR     LR
      comp=Z,840nm,20.0s
PZH                                LR     LR
      comp=Z,900nm,19.8s
GOMU  GeErMu           37.05 283   P      P       06 50 10.1 +0.3
GOMU                               PcP    PcP     06 52 30.5 +0.8
GOMU                               S      S       06 55 49.0  -3.2
GOMU                               pmax   pmax
      comp=Z,18nm,0.8s
GOMU                               LR     LR
      comp=Z,170nm,20.2s
GOMU                               LR     LR
      comp=Z,220nm,21.8s
GOMU                               LR     LR
      comp=Z,320nm,21.8s
MYLDM Lahad Datu       38.41 219   P      P       06 50 22.1 +1.1
TNCH  TengChong        38.44 264  eP      P       06 50 21.9 +0.4
TNCH                               pmax   pmax
      comp=Z,310nm,3.8s
UNV   Unalaska Valle   38.90  48   P      P       06 50 25.1 +0.4
      baz=267
CRAI  Chiangrai        39.53 256   P      P       06 50 30.7 +0.3
CRAI                               IAmb   IAmb    06 50 35.8
      comp=Z,18nm,1.2s
DGZ   Jazzator, Alta   40.14 305c iP      P       06 50 36.0 +0.7
DGZ                                pmax   pmax
      comp=Z,74nm,1.0s
TNA   Tin City         40.42  30   P      P       06 50 38.9 +1.7
TNA                                IAmb   IAmb    06 50 40.2
      comp=Z,16nm,1.0s
TNA   Tin City         40.42  30   P      P       06 50 38.7 +1.5
      baz=252,SNR=21
GTOI  Gorontalo        40.45 209   P      P       06 50 37.8  -0.2
WMQ   Urumqi           40.66 296  eP      P       06 50 40.6 +1.0
WMQ                                pP     sP      06 50 57.3  -2.1
WMQ                                pmax   pmax
      comp=Z,35nm,1.1s
WMQ                                pmax   pmax
      comp=Z,110nm,4.5s
WMQ                                LR     LR
      comp=Z,140nm,14.5s
WMQ                                LR     LR
      comp=Z,190nm,23.3s
WMQ                                LR     LR
      comp=Z,490nm,24.7s
CHTO  Chiang Mai       41.45 255   P      P       06 50 45.4  -0.8
CHTO  Chiang Mai       41.45 255   P      P       06 50 45.4  -0.8
ZAA0  Zalesovo Array   41.62 312   P      P       06 50 46.7  -0.5
ZAA0                               IAmb   IAmb    06 50 48.1
      comp=Z,36nm,1.1s
ZALV  Zalesovo Beam    41.62 312   P      P       06 50 46.6  -0.6
      comp=Z,12nm,0.8s,baz=91,slow=7.4,SNR=52
ZALV                               pP     pP      06 51 01.6 +0.6
      comp=Z,20nm,0.9s,baz=91,slow=7.3,SNR=7.7
ZALV                               PcP    PcP     06 52 42.0  -1.3
      comp=Z,5.2nm,0.7s,baz=115,slow=3.2,SNR=3.7
ZALV                               LR     LR      07 08 46.7
      comp=Z,419nm,18.2s,baz=79,slow=37
      comp=Z,12nm,0.8s
ZALV  Zalesovo Beam    41.62 312 i P      P       06 50 47.2   0.0
ZALV                               pmax   pmax
      comp=Z,31nm,1.1s
CMAR  Chiang Mai Arr   41.65 255   P      P       06 50 47.4  -0.6
      comp=Z,1.7nm,0.4s,baz=51,slow=5.5,SNR=5.5
CMAR                               LR     LR      07 09 07.8
      comp=Z,175nm,20.3s,baz=70,slow=38
      comp=Z,1.7nm,0.4s
CMAR  Chiang Mai Arr   41.65 255   P      P       06 50 48.1 +0.2
CMAR  Chiang Mai Arr   41.65 255 i P      P       06 50 48.4 +0.5
CMAR                               pmax   pmax
      comp=Z,2.0nm,0.3s
ZSN   Zaisan           42.06 302  eP      P       06 50 51.4 +0.5
      comp=Z,19nm,0.9s,baz=302
ZSN                               esP     sP      06 51 14.3 +3.5
      baz=302
ZSN                               eS      S       06 57 06.9 +0.6
      baz=302
ZSN   Zaisan           42.06 302  eP      P       06 50 51.3 +0.4
ZSN                               eS      S       06 57 06.9 +0.6
ZSN                                pmax   pmax
      comp=Z,19nm,0.9s
LSA   Lhasa            42.20 275   P      P       06 50 54.0 +1.1
LSA                                pmax   pmax
      comp=Z,6.0nm,0.4s
LSA   Lhasa            42.20 275   P      P       06 50 53.7 +0.9
RDOG  Red Dog Mine     43.06  27   P      P       06 50 59.8 +1.0
RDOG  Red Dog Mine     43.06  27   P      P       06 51 00.2 +1.4
      baz=254
SHL   Shillong         43.45 269   P      P       06 51 01.6  -1.0
SHL                                IAmb   IAmb    06 51 07.0
      comp=Z,14nm,0.6s
SHL   Shillong         43.45 269   P      P       06 51 01.7  -1.0
```

SHL				pmax	pmax		
	comp=Z,14nm,0.6s						
SHL	**Shillong**	**43.45**	**269**	P	**P**	**06 51 04.3**	**+1.7**
	SNR=5.3						
MK31	**Makanchi Array**	**43.90**	**302**	P	**P**	**06 51 05.3**	**-0.4**
MK31				IAmb	IAmb	06 51 25.5	
	comp=Z,34nm,0.9s						
MK31	**Makanchi Array**	**43.90**	**302**	P	**P**	**06 51 05.4**	**-0.4**
MK31				pmax	pmax		
	comp=Z,34nm,1.0s						
MKAR	**Makanchi Array**	**43.90**	**302**	P	**P**	**06 51 05.7**	**-0.2**
	comp=Z,15nm,0.7s,baz=88,slow=9.3,SNR=139						
MKAR				pP	**pP**	**06 51 20.1**	**+0.4**
	comp=Z,24nm,1.0s,baz=75,slow=29,SNR=13						
MKAR				LR	LR	07 09 47.9	
	comp=Z,184nm,21.8s,baz=86,slow=37						
	comp=Z,15nm,0.7s						
MKAR	**Makanchi Array**	**43.90**	**302**	P	**P**	**06 51 05.5**	**-0.3**
R16K	**Pilot Point**	**44.05**	**43**	P	**P**	**06 51 07.9**	**+1.2**
	baz=270						
MAKZ	**Makanchi**	**44.11**	**302**	P	**P**	**06 51 07.4**	**-0.1**
MAKZ				IAmb	IAmb	06 51 27.2	
	comp=Z,42nm,1.0s						
MAKZ	**Makanchi**	**44.11**	**302**	P	**P**	**06 51 07.4**	**-0.1**
MAKZ	**Makanchi**	**44.11**	**302**	P	**P**	**06 51 07.2**	**-0.3**
MAKZ				pP	**pP**	**06 51 19.9**	**-1.4**
MAKZ				sP	**sP**	**06 51 26.3**	**-1.1**
SEM	**Semipalatinsk**	**44.68**	**307**	*e*P	**P**	**06 51 11.2**	**-1.1**
	comp=Z,30nm,1.3s,baz=307						
SEM	**Semipalatinsk**	**44.68**	**307**	*e*P	**P**	**06 51 11.2**	**-1.1**
SEM				pmax	pmax		
	comp=Z,30nm,1.3s						
TTA	**Tatalina**	**45.01**	**35**	P	**P**	**06 51 15.7**	**+1.1**
	baz=266						
BRDH	**Bariadhala**	**45.06**	**265**	LR	LR	07 10 57.1	
	comp=Z,291nm,19.4s,baz=102,slow=37						
KURK	**Kurchatov**	**45.67**	**308**	P	**P**	**06 51 19.0**	**-0.8**
KURK	**Kurchatov**	**45.67**	**308**	*c i*P	**P**	**06 51 19.2**	**-0.6**
KURK				pmax	pmax		
	comp=Z,55nm,1.3s						
KURK	**Kurchatov**	**45.67**	**308**	P	**P**	**06 51 19.6**	**-0.2**
KURK	**Kurchatov**	**45.67**	**308**	P	**P**	**06 51 19.4**	**-0.4**
KURK				pP	**pP**	**06 51 31.7**	**-1.9**
KURK				sP	**sP**	**06 51 38.0**	**-1.8**
O19K	**Port Alsworth**	**45.73**	**39**	P	**P**	**06 51 21.2**	**+1.0**
	baz=270						
KURBB	**Kurchatov Arra**	**45.74**	**308**	LR	LR	07 11 09.7	
	comp=Z,450nm,19.7s,baz=216,slow=37						
K20K	**Telida**	**45.91**	**34**	IAmb	IAmb	06 51 39.1	
	comp=Z,19nm,1.2s						
K20K	**Telida**	**45.91**	**34**	P	**P**	**06 51 22.9**	**+1.3**
	baz=268						
TAPN	**Taplejung**	**45.95**	**274**	*e*P	**P**	**06 51 22.8**	**+0.1**
L20K	**Farewell, AK**	**45.97**	**36**	P	**P**	**06 51 23.4**	**+1.3**
	baz=268						
A21K	**Barrow**	**46.01**	**23**	P	**P**	**06 51 23.1**	**+0.9**
	baz=257						
IMAR	**Indian Mountai**	**46.22**	**31**	P	**P**	**06 51 24.9**	**+1.0**
M20K	**Styx River**	**46.31**	**37**	P	**P**	**06 51 24.9**	**+0.1**
	baz=270						
G21K	**Allakaket**	**46.37**	**30**	P	**P**	**06 51 26.1**	**+1.0**
	baz=265						
ODAN	**Odare**	**46.42**	**273**	*e*P	**P**	**06 51 25.3**	**-1.0**
	comp=Z,81nm,1.3s						
F21K	**Alatna River**	**46.44**	**29**	P	**P**	**06 51 26.7**	**+1.0**
	baz=264						
H21K	**Melozitna Rive**	**46.59**	**31**	P	**P**	**06 51 28.1**	**+1.3**
	baz=266						
SHLS	**Shalkode**	**46.65**	**297**	*e*P	**P**	**06 51 25.3**	**-2.5**
	baz=297						
SHLS	**Shalkode**	**46.65**	**297**	*e*P	**P**	**06 51 25.3**	**-2.5**
CHUM	**Lake Minchumin**	**46.72**	**34**	P	**P**	**06 51 29.2**	**+1.3**
	baz=269						
KDAK	**Kodiak Island**	**46.72**	**42**	LR	LR	07 10 45.9	
	comp=Z,163nm,20.6s,baz=254,slow=36						
KDAK	**Kodiak Island**	**46.72**	**42**	P	**P**	**06 51 28.5**	**+0.6**
KDAK				pP	**pP**	**06 51 41.6**	**-0.2**
PPLA	**Purkeypile**	**46.76**	**35**	P	**P**	**06 51 29.0**	**+0.7**
	baz=270						
N20K	**Mount Spurr**	**46.76**	**38**	P	**P**	**06 51 29.2**	**+0.9**
	baz=271						
SPCR	**Spurr Chakacha**	**46.76**	**38**	P	**P**	**06 51 29.1**	**+0.8**
	baz=271						
CAST	**Castle Rocks**	**46.81**	**34**	P	**P**	**06 51 29.9**	**+1.2**
CAST	**Castle Rocks**	**46.81**	**34**	P	**P**	**06 51 29.7**	**+1.0**
	baz=269						
KAPI	**Kappang**	**46.89**	**210**	P	**P**	**06 51 30.0**	**+0.3**
KAPI				IAmb	IAmb	06 52 02.1	
	comp=Z,41nm,1.1s						
KAPI	**Kappang**	**46.89**	**210**	P	**P**	**06 51 30.0**	**+0.3**
KAPI				pmax	pmax		
	comp=Z,41nm,1.2s						
KAPI	**Kappang**	**46.89**	**210**	P	P	06 51 37.8	+8.1
I21K	**Tanana**	**46.91**	**32**	P	**P**	**06 51 30.0**	**+0.8**
	baz=268						
UZB	**Uzynbulak**	**46.96**	**297**	*e*P	**P**	**06 51 29.9**	**-0.4**
	baz=297						
UZB	**Uzynbulak**	**46.96**	**297**	*e*P	**P**	**06 51 29.8**	**-0.4**
RAMN	**Ramite**	**47.01**	**274**	*e*P	**P**	**06 51 30.7**	**-0.2**
	comp=Z,88nm,1.0s						
JIRN	**Jiri**	**47.01**	**275**	*e*P	**P**	**06 51 31.3**	**+0.2**
SKT	**Skwentna**	**47.07**	**36**	P	**P**	**06 51 31.6**	**+0.9**
	baz=271						
HOM	**Homer**	**47.09**	**40**	P	**P**	**06 51 32.0**	**+1.2**
	baz=273						
KPKS	**Kokpek**	**47.12**	**298**	*e*P	**P**	**06 51 31.3**	**-0.1**
	baz=298						
KPKS	**Kokpek**	**47.12**	**298**	*e*P	**P**	**06 51 31.3**	**-0.1**
GUN	**Gumba**	**47.15**	**275**	*e*P	**P**	**06 51 32.0**	**-0.1**
	comp=Z,35nm,0.4s						
H22K	**Ishtalitna Cre**	**47.19**	**31**	P	**P**	**06 51 32.7**	**+1.1**
	baz=268						
G22K	**Bettles**	**47.19**	**30**	P	**P**	**06 51 32.9**	**+1.4**
	baz=266						
BPAW	**Bear Paw Mtn.**	**47.31**	**34**	P	**P**	**06 51 33.6**	**+1.1**
BPAW	**Bear Paw Mtn.**	**47.31**	**34**	P	**P**	**06 51 33.8**	**+1.3**
	baz=270						
WUS	**Wushi**	**47.36**	**295**	P	**P**	**06 51 34.1**	**+0.7**
WUS				pP	**pP**	**06 51 46.9**	**-0.5**
WUS				sP	**sP**	**06 51 52.6**	**-0.8**
SATY	**Saty**	**47.42**	**297**	*e*P	**P**	**06 51 33.9**	**0.0**
	baz=297						
SATY	**Saty**	**47.42**	**297**	*e*P	**P**	**06 51 33.8**	**0.0**
MLY	**Manley**	**47.43**	**32**	P	**P**	**06 51 34.7**	**+1.3**
MLY				IAmb	IAmb	06 51 51.4	
	comp=Z,14nm,1.0s						
MLY	**Manley**	**47.43**	**32**	P	**P**	**06 51 34.3**	**+0.9**
	baz=269,SNR=5.9						
D23K	**Nanushuk River**	**47.65**	**27**	P	**P**	**06 51 36.3**	**+1.3**
	baz=265						
PKI	**Pulchoki**	**47.67**	**275**	*e*P	**P**	**06 51 35.4**	**-0.8**
	comp=Z,16nm,0.6s						
KKN	**Kakani**	**47.67**	**275**	*e*P	**P**	**06 51 35.7**	**-0.4**
	comp=Z,84nm,0.9s						
PKIN	**Phulchoki**	**47.68**	**275**	*e*P	**P**	**06 51 35.6**	**-0.6**
COLD	**Coldfoot**	**47.72**	**29**	P	**P**	**06 51 36.5**	**+0.9**
COLD	**Coldfoot**	**47.72**	**29**	P	**P**	**06 51 37.0**	**+1.4**
	baz=267						
M22K	**Willow**	**47.74**	**37**	P	**P**	**06 51 37.5**	**+1.6**
	baz=272						
G23K	**Bananza Creek**	**47.77**	**30**	P	**P**	**06 51 37.6**	**+1.6**
	baz=268						
DMN	**Daman**	**47.89**	**275**	*e*P	**P**	**06 51 37.1**	**-0.7**
RC01	**Rabbit Creek A**	**47.96**	**38**	P	**P**	**06 51 38.6**	**+1.0**
	baz=274						
BWN	**Browne**	**47.97**	**33**	P	**P**	**06 51 39.7**	**+2.1**
E23K	**Chandalar**	**47.98**	**28**	P	**P**	**06 51 38.7**	**+0.9**
	baz=267,SNR=25						
I23K	**Minto, Yukon-K**	**48.01**	**32**	P	**P**	**06 51 39.8**	**+1.9**
	baz=270						
GKN	**Gorkha**	**48.09**	**276**	*e*P	**P**	**06 51 39.1**	**-0.1**
	comp=Z,144nm,1.0s						
CHKK	**Chushkaly**	**48.20**	**299**	*e*P	**P**	**06 51 39.4**	**-0.3**
	baz=299						
CHKK	**Chushkaly**	**48.20**	**299**	*e*P	**P**	**06 51 39.4**	**-0.3**
MCK	**McKinley**	**48.22**	**34**	P	**P**	**06 51 40.5**	**+1.0**
	baz=272						
PMR	**Palmer**	**48.22**	**37**	P	**P**	**06 51 40.6**	**+1.0**
	baz=274						
MDOK	**Medeo**	**48.35**	**298**	*e*P	**P**	**06 51 41.2**	**+0.2**
	baz=298						
MDOK	**Medeo**	**48.35**	**298**	*e*P	**P**	**06 51 41.2**	**+0.2**
C24K	**Franklin Bluff**	**48.41**	**26**	P	**P**	**06 51 42.1**	**+1.3**
	baz=267,SNR=30						
E24K	**Your Creek**	**48.41**	**28**	P	**P**	**06 51 42.5**	**+1.5**
	baz=268						
MDM	**Murphy Dome**	**48.49**	**32**	IAmb	IAmb	06 51 59.0	
	comp=Z,25nm,1.0s						
WRH	**Wood River Hil**	**48.57**	**33**	IAmb	IAmb	06 51 59.6	
	comp=Z,10.0nm,1.0s						
F24K	**Squaw Lake**	**48.62**	**29**	P	**P**	**06 51 44.1**	**+1.5**
	baz=269						
H24K	**Noodor Dome**	**48.62**	**31**	IAmb	IAmb	06 52 00.5	
	comp=Z,13nm,0.9s						
H24K	**Noodor Dome**	**48.62**	**31**	P	**P**	**06 51 44.8**	**+2.1**
	baz=271						
DANN	**Dangsing**	**48.63**	**277**	*e*P	**P**	**06 51 43.6**	**+0.1**
	comp=Z,184nm,0.9s						
KUU	**Kurty**	**48.64**	**299**	*e*P	**P**	**06 51 42.6**	**-0.5**
	comp=Z,8.1nm,0.7s,baz=299						
KUU	**Kurty**	**48.64**	**299**	*e*P	**P**	**06 51 42.6**	**-0.5**
KUU				pmax	pmax		
	comp=Z,8.0nm,0.7s						
COLA	**College**	**48.66**	**32**	*ce*P	**P**	**06 51 44.0**	**+1.2**
COLA				pmax	pmax		
	comp=Z,18nm,2.2s						
COLA	**College**	**48.66**	**32**	P	**P**	**06 51 44.0**	**+1.2**
COLA				pP	**pP**	**06 51 56.7**	**-0.1**
COLA				sP	**sP**	**06 52 03.2**	**+0.4**
G24K	**Hadweenzic Riv**	**48.78**	**30**	P	**P**	**06 51 45.0**	**+1.2**
	baz=270						
POKR	**Poker Plat Res**	**48.83**	**32**	P	**P**	**06 51 45.8**	**+1.6**
	baz=272,SNR=9.1						
M23K	**Glacier View**	**48.88**	**37**	P	**P**	**06 51 46.7**	**+2.1**
	baz=274						
KOLN	**Koldanda**	**49.01**	**276**	*e*P	**P**	**06 51 46.3**	**-0.1**
	comp=Z,164nm,1.5s						
SCM	**Sheep Creek Mo**	**49.06**	**36**	P	**P**	**06 51 47.6**	**+1.5**
	baz=275						
HDA	**Harding Lake**	**49.06**	**33**	IAmb	IAmb	06 52 02.7	
	comp=Z,20nm,1.0s						
HDA	**Harding Lake**	**49.06**	**33**	P	**P**	**06 51 47.0**	**+1.0**
	baz=273,SNR=5.8						
IL31		**49.07**	**33**	IAmb	IAmb	06 52 02.9	
	comp=Z,18nm,0.8s						
ILAR	**Eielson Array**	**49.07**	**33**	P	**P**	**06 51 46.6**	**+0.5**
	comp=Z,6.5nm,0.8s,baz=270,slow=6.4,SNR=71						
ILAR				pP	**pP**	**06 52 00.8**	**+0.7**
	comp=Z,14nm,0.8s,baz=268,slow=5.7,SNR=22						
	comp=Z,6.5nm,0.8s						
P23K	**Montague Islan**	**49.20**	**39**	P	**P**	**06 51 47.8**	**+0.7**
	baz=276						
D25K	**Kavik River**	**49.21**	**27**	P	**P**	**06 51 48.8**	**+1.7**
	baz=269,SNR=32						
G25K	**Bearman Lake**	**49.33**	**30**	P	**P**	**06 51 49.9**	**+2.0**
	baz=272						
PYUN	**Piuthan**	**49.34**	**277**	*e*P	**P**	**06 51 48.8**	**-0.1**
	comp=Z,198nm,1.0s						
TKM2	**Tokmak 2**	**49.44**	**298**	P	**P**	**06 51 50.1**	**+0.7**
	SNR=27						
F25K	**Christian Rive**	**49.48**	**29**	P	**P**	**06 51 51.0**	**+1.8**
	baz=271						
E25K	**Arctic Village**	**49.50**	**28**	P	**P**	**06 51 51.2**	**+1.9**
	baz=271,SNR=8.8						
BRZS	**Berezniki**	**49.54**	**308**	⇑*i*P	**P**	**06 51 49.5**	**-0.4**
	baz=308						
BRZS	**Berezniki**	**49.54**	**308**	*c i*P	**P**	**06 51 49.4**	**-0.4**
M24K	**Tolsona, Glenn**	**49.58**	**36**	P	**P**	**06 51 51.2**	**+1.2**
	baz=276						
PRP	**Porcupine Dome**	**49.61**	**32**	IAmb	IAmb	06 52 08.5	
	comp=Z,17nm,1.0s						
PRP	**Porcupine Dome**	**49.61**	**32**	P	**P**	**06 51 52.0**	**+1.7**
	baz=273						
K24K	**Donnelly Dome**	**49.61**	**34**	P	**P**	**06 51 50.5**	**+0.3**
	baz=274,SNR=5.2						
C26K	**Camden Bay**	**49.73**	**26**	P	**P**	**06 51 52.5**	**+1.6**
	baz=270,SNR=9.1						
KLU	**Klutina**	**49.76**	**37**	P	**P**	**06 51 52.6**	**+1.2**
	baz=276						
BTLS	**Baital**	**49.90**	**301**	⇑*i*P	**P**	**06 51 52.2**	**-0.4**
	baz=301						
BTLS	**Baital**	**49.90**	**301**	*c i*P	**P**	**06 51 52.2**	**-0.4**
SGDS	**Sogindy**	**49.95**	**299**	*e*P	**P**	**06 51 53.2**	**0.0**
	baz=299						
SGDS	**Sogindy**	**49.95**	**299**	*e*P	**P**	**06 51 53.1**	**0.0**
EYAK	**Cordova Ski Ar**	**49.95**	**38**	P	**P**	**06 51 53.8**	**+1.1**
	baz=277						
KBK	**Karagaybulak**	**49.97**	**298**	P	**P**	**06 51 53.8**	**+0.4**
	SNR=20						
RIDG	**Independent Ri**	**50.03**	**34**	P	**P**	**06 51 54.4**	**+0.9**
	baz=275						
F26K	**Sheenjek River**	**50.05**	**29**	P	**P**	**06 51 55.7**	**+2.2**
	baz=273						
USP	**Ospenovka**	**50.10**	**299**	P	**P**	**06 51 54.2**	**0.0**
	SNR=14						
C27K	**Jago River**	**50.15**	**26**	P	**P**	**06 51 55.8**	**+1.7**
	baz=271						
G26K	**Porcupine Rive**	**50.23**	**30**	P	**P**	**06 51 56.9**	**+2.1**
	baz=274						
KSH	**Kashi**	**50.24**	**294**	P	**P**	**06 51 59.5**	**+4.0**
KSH				sP	sP	06 52 17.8	+2.2
KSH				PP	**PP**	**06 53 58.5**	**+7.5**
KSH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KSH				LR	LR		
	comp=Z,310nm,18.7s						
KSH				LR	LR		
	comp=Z,340nm,18.2s						
KSH				LR	LR		
	comp=Z,560nm,15.2s						
BVAR	**Borovoye Array**	**50.28**	**312**	P	**P**	**06 51 55.1**	**-0.3**
	comp=Z,4.8nm,0.5s,baz=84,slow=9.4,SNR=22						
BVAR				PcP	**PcP**	**06 53 13.1**	**-0.5**
	comp=Z,6.0nm,0.6s,baz=70,slow=5.4,SNR=3.8						
BVAR				LR	LR	07 14 15.9	
	comp=Z,348nm,19.0s,baz=83,slow=37						
	comp=Z,4.8nm,0.5s						
AAK	**Ala-Archa**	**50.30**	**298**	P	**P**	**06 51 56.1**	**+0.2**
	SNR=15						
AAK	**Ala-Archa**	**50.30**	**298**	P	**P**	**06 51 55.6**	**-0.3**
	comp=Z,12nm,0.8s,baz=116,slow=5.1,SNR=30						
AAK				LR	LR	07 14 40.1	
	comp=Z,528nm,19.1s,baz=72,slow=38						
	comp=Z,12nm,0.8s						
AAK	**Ala-Archa**	**50.30**	**298**	P	**P**	**06 51 55.6**	**-0.3**
AAK				IAmb	IAmb	06 51 58.4	
	comp=Z,10nm,0.7s						
AAK	**Ala-Archa**	**50.30**	**298**	*c i*P	**P**	**06 51 55.9**	**0.0**
AAK				pmax	pmax		
	comp=Z,12nm,0.8s						
AAK	**Ala-Archa**	**50.30**	**298**	*i* P	**P**	**06 51 55.9**	**0.0**
	SNR=19						
AAK	**Ala-Archa**	**50.30**	**298**	P	**P**	**06 51 55.7**	**-0.1**
AAK	**Ala-Archa**	**50.30**	**298**	P	**P**	**06 51 55.8**	**-0.1**
AAK				pP	**pP**	**06 52 09.1**	**-0.8**
AAK				sP	**sP**	**06 52 14.9**	**-1.0**
BRVK	**Borovoye**	**50.33**	**312**	P	**P**	**06 51 55.3**	**-0.5**
BRVK				IAmb	IAmb	06 52 15.2	
	comp=Z,11nm,0.8s						
BRVK	**Borovoye**	**50.33**	**312**	*c i*P	**P**	**06 51 55.6**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,34nm,2.5s						
BRVK	**Borovoye**	**50.33**	**312**	P	**P**	**06 51 55.6**	**-0.2**
BRVK	**Borovoye**	**50.33**	**312**	P	**P**	**06 51 55.7**	**-0.1**
BRVK				pP	**pP**	**06 52 08.5**	**-1.3**
BRVK				sP	**sP**	**06 52 14.7**	**-1.2**
SCRK	**Sand Creek**	**50.39**	**33**	P	**P**	**06 51 57.0**	**+0.8**
	baz=276,SNR=9.8						
DOT	**Dot Lake**	**50.39**	**34**	P	**P**	**06 51 56.7**	**+0.5**
DOT					**pP**	**06 52 10.9**	**+0.8**
DOT				IAmb	IAmb	06 52 14.3	
	comp=Z,9.0nm,0.9s						
UCH	**Uchtor**	**50.41**	**298**	P	**P**	**06 51 57.3**	**+0.2**
	SNR=8.5						
J26L	**Joseph Creek**	**50.52**	**33**	P	**P**	**06 51 57.8**	**+0.6**
	baz=276						
I26K	**Coal Creek Min**	**50.62**	**32**	P	**P**	**06 51 57.8**	**+0.1**
	baz=276						
L26K	**Log Cabin Wild**	**50.78**	**35**	P	**P**	**06 51 60.0**	**+0.9**
	baz=277						
EKS2	**Erkin-Say**	**50.79**	**298**	P	**P**	**06 51 59.6**	**0.0**
	SNR=12						
E27K	**Coleen River**	**50.98**	**28**	P	**P**	**06 52 02.0**	**+1.5**
	baz=274						
AML	**Almayashu**	**51.02**	**298**	P	**P**	**06 52 02.3**	**+0.7**
	SNR=22						
M26K	**Nabesna, AK**	**51.02**	**35**	P	**P**	**06 52 02.4**	**+1.4**
	baz=278						
G27K	**Doyon Strip**	**51.08**	**30**	P	**P**	**06 52 03.3**	**+2.0**
	baz=276						
MCARA	**McCarthy VSAT**	**51.16**	**37**	P	**P**	**06 52 03.4**	**+1.5**
	baz=279						
H27K	**Steamboat Moun**	**51.19**	**30**	P	**P**	**06 52 03.9**	**+1.7**
	baz=276						
K27K	**Chicken**	**51.22**	**33**	IAmb	IAmb	06 52 21.1	
	comp=Z,24nm,1.1s						
K27K	**Chicken**	**51.22**	**33**	P	**P**	**06 52 03.7**	**+1.4**
	baz=278						
I27K	**Kandik River**	**51.22**	**31**	P	**P**	**06 52 03.8**	**+1.4**
	baz=277						
L27K	**Beaver Creek,**	**51.46**	**35**	IAmb	IAmb	06 52 22.4	
	comp=Z,19nm,1.0s						
L27K	**Beaver Creek,**	**51.46**	**35**	P	**P**	**06 52 05.6**	**+1.4**
	baz=278						
EGAK	**Eagle**	**51.52**	**32**	P	**P**	**06 52 05.7**	**+1.2**
	baz=278						
M27K	**Edge Creek, AK**	**51.54**	**35**	IAmb	IAmb	06 52 22.5	
	comp=Z,21nm,1.1s						
M27K	**Edge Creek, AK**	**51.54**	**35**	P	**P**	**06 52 06.6**	**+1.6**
	baz=279						
BVCY	**Beaver Creek**	**52.00**	**35**	P	**P**	**06 52 09.7**	**+1.5**
	baz=280						
PSI	**Prapat**	**52.07**	**239**	P	**P**	**06 52 08.4**	**-1.0**
PSI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
RPSI	**Rantau Prapat**	**52.15**	**239**	P	**P**	**06 52 08.4**	**-1.4**
RPSI				IAmb	IAmb	06 52 28.9	
	comp=Z,10nm,0.8s						
YUK3	**Moose Creek**	**52.30**	**36**	P	**P**	**06 52 11.7**	**+1.0**
	baz=281						
DAWY	**Dawson**	**52.38**	**33**	P	**P**	**06 52 12.0**	**+1.0**
DAWY	**Dawson**	**52.38**	**33**	P	**P**	**06 52 11.8**	**+0.8**
	baz=280						
DZA	**Taraz**	**52.42**	**299**	*e*P	**P**	**06 52 11.5**	**-0.1**
	baz=299						
DZA	**Taraz**	**52.42**	**299**	*e*P	**P**	**06 52 11.5**	**-0.1**
I29M	**Ogilvie Camp,**	**52.62**	**31**	P	**P**	**06 52 14.6**	**+1.8**
	baz=280,SNR=8.5						
KK31	**Karatay Array**	**52.92**	**300**	IAmb	IAmb	06 52 35.2	
	comp=Z,25nm,1.0s						
KKAR	**Karatay Array**	**52.92**	**300**	IAmb	IAmb	06 52 35.2	
	comp=Z,25nm,1.0s						
EPYK	**Eagle Plains**	**53.09**	**30**	P	**P**	**06 52 17.9**	**+1.7**
	baz=280,SNR=21						
M29M	**Somme Creek**	**53.09**	**35**	P	**P**	**06 52 17.6**	**+1.3**
	baz=282						
L29M	**L29M**	**53.11**	**34**	P	**P**	**06 52 18.7**	**+2.3**
	baz=282						
G30M	**tAoh Zraii Nji**	**53.18**	**29**	P	**P**	**06 52 18.6**	**+1.7**
	baz=280						
K29M	**Barlow Dome**	**53.23**	**33**	P	**P**	**06 52 19.3**	**+1.9**
	baz=281						
YUK4	**Talbot Arm**	**53.24**	**36**	P	**P**	**06 52 18.8**	**+1.2**
	baz=282						
YUK6	**Outpost Mounta**	**53.46**	**37**	P	**P**	**06 52 20.7**	**+1.5**
	baz=283						
CHM	**Chimkent**	**53.81**	**299**	*e*P	**P**	**06 52 21.9**	**0.0**
	baz=299						
CHM	**Chimkent**	**53.81**	**299**	*e*P	**P**	**06 52 21.8**	**0.0**
M30M	**Minto, Yukon**	**53.82**	**35**	P	**P**	**06 52 22.8**	**+1.1**
M30M				pP	**pP**	**06 52 37.5**	**+1.7**
M30M				IAmb	IAmb	06 52 40.1	
	comp=Z,11nm,0.8s						
M30M	**Minto, Yukon**	**53.82**	**35**	P	**P**	**06 52 23.9**	**+2.3**
	baz=283						
HYT	**Haines Junctio**	**53.89**	**37**	P	**P**	**06 52 24.8**	**+2.5**
	baz=284						
N30M	**Aishikik Lake**	**53.94**	**36**	P	**P**	**06 52 24.5**	**+2.0**
	baz=284						
INK	**Inuvik**	**53.94**	**27**	LR	LR	07 17 08.3	
	comp=Z,34nm,18.2s,baz=315,slow=38						
INK	**Inuvik**	**53.94**	**27**	IAmb	IAmb	06 52 42.6	
	comp=Z,13nm,0.9s						
INK	**Inuvik**	**53.94**	**27**	P	**P**	**06 52 23.5**	**+1.2**
	baz=282,SNR=11						
F31M	**Tsiigehtchic**	**54.04**	**28**	P	**P**	**06 52 24.4**	**+1.3**
	baz=282,SNR=7.0						
KNRA	**Kununurra**	**54.24**	**195**	P	**P**	**06 52 25.7**	**+0.7**
KNRA				pP	**pP**	**06 52 37.7**	**-1.5**
NIL	**Nilore**	**54.50**	**288**	P	**P**	**06 52 27.6**	**+0.6**
NIL	**Nilore**	**54.50**	**288**	P	**P**	**06 52 27.6**	**+0.6**
NIL				pmax	pmax		
	comp=Z,36nm,1.1s						
NIL	**Nilore**	**54.50**	**288**	P	**P**	**06 52 27.7**	**+0.6**
NIL	**Nilore**	**54.50**	**288**	P	**P**	**06 52 27.4**	**+0.4**
NIL				pP	**pP**	**06 52 41.0**	**-0.2**
NIL				sP	**sP**	**06 52 46.6**	**-0.7**
N31M	**Braeburn, Yuko**	**54.55**	**36**	P	**P**	**06 52 28.9**	**+2.0**
	baz=285						
SVE	**Sverdlovsk**	**54.81**	**318**	*de*P	**P**	**06 52 29.3**	**+0.5**
SVE				pmax	pmax		
	comp=Z,42nm,1.0s						
M31M	**Drury Creek, Y**	**55.00**	**35**	P	**P**	**06 52 31.3**	**+1.1**
	baz=285						
FARO	**Faro, Yukon**	**55.46**	**35**	P	**P**	**06 52 35.2**	**+1.7**
	baz=286						
CHGR	**Chuyangaron**	**55.49**	**295**	P	**P**	**06 52 34.2**	**0.0**
CHGR				pmax	pmax		
	comp=Z,172nm,0.9s						
A36M	**Sachs Harbour**	**55.80**	**22**	IAmb	IAmb	06 52 38.3	
	comp=Z,17nm,0.8s						
A36M	**Sachs Harbour**	**55.80**	**22**	P	**P**	**06 52 37.3**	**+1.6**
	baz=286,SNR=20						
ARU	**Arti**	**56.03**	**318**	P	**P**	**06 52 37.0**	**-0.5**
	comp=Z,14nm,0.5s,baz=70,slow=3.4,SNR=30						
ARU				LR	LR	07 18 54.8	
	comp=Z,349nm,18.1s,baz=70,slow=38						
	comp=Z,14nm,0.5s						
ARU	**Arti**	**56.03**	**318**	P	**P**	**06 52 37.1**	**-0.5**
ARU	**Arti**	**56.03**	**318**	*d i*P	**P**	**06 52 37.2**	**-0.4**
ARU				*PP	**pP**	**06 52 52.8**	**+1.0**
ARU						06 53 31.9	
ARU				S	**S**	**07 00 23.0**	**+1.1**
ARU				SS	**SS**	**07 04 05.3**	**-2.7**
ARU				pmax	pmax		
	comp=Z,39nm,0.9s						
ARU	**Arti**	**56.03**	**318**	P	**P**	**06 52 37.5**	**0.0**
ARU				pP	**pP**	**06 52 50.5**	**-1.4**
ARU				sP	**sP**	**06 52 56.5**	**-1.3**
P33M	**Teslin, Yukon**	**56.29**	**37**	P	**P**	**06 52 41.6**	**+2.1**
P33M				pP	**pP**	**06 52 55.9**	**+2.1**
P33M				IAmb	IAmb	06 53 00.7	
	comp=Z,27nm,1.2s						
P33M	**Teslin, Yukon**	**56.29**	**37**	P	**P**	**06 52 41.0**	**+1.5**
	baz=288						
C36M	**Paulatuk**	**56.98**	**25**	IAmb	IAmb	06 53 05.4	
	comp=Z,14nm,0.9s						
C36M	**Paulatuk**	**56.98**	**25**	P	**P**	**06 52 45.1**	**+1.0**
	baz=289,SNR=13						
KBL	**Kabul**	**57.28**	**291**	P	**P**	**06 52 46.7**	**-0.4**
KBL				IAmb	IAmb	06 52 48.1	
	comp=Z,25nm,1.0s						
KBL	**Kabul**	**57.28**	**291**	P	**P**	**06 52 46.7**	**-0.4**
KBL				pmax	pmax		
	comp=Z,25nm,1.0s						
KBL	**Kabul**	**57.28**	**291**	P	**P**	**06 52 46.6**	**-0.4**
	SNR=12						
FITZ	**Fitzroy Crossi**	**57.28**	**198**	P	**P**	**06 52 47.0**	**+0.2**
WB0	**Warramunga Arr**	**57.36**	**188**	P	**P**	**06 52 46.2**	**-1.1**
WRAB	**Tennant Creek**	**57.53**	**188**	*ce*P	**P**	**06 52 48.3**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,17nm,1.3s						
WRAB	**Tennant Creek**	**57.53**	**188**	P	**P**	**06 52 48.3**	**-0.3**
WRAB				pP	**pP**	**06 53 00.9**	**-2.0**
WB2	**Warramunga Arr**	**57.54**	**188**	P	**P**	**06 52 48.1**	**-0.5**
WB2				IAmb	IAmb	06 53 03.8	
	comp=Z,16nm,0.8s						
WRA	**Warramunga Arr**	**57.54**	**188**	P	**P**	**06 52 48.0**	**-0.6**
	comp=Z,7.3nm,0.7s,baz=4.5,slow=7.2,SNR=84						
WRA				pP	**pP**	**06 53 02.7**	**-0.2**
	comp=Z,8.0nm,0.4s,baz=4.8,slow=7.3,SNR=16						
	comp=Z,7.3nm,0.7s						
WRA	**Warramunga Arr**	**57.54**	**188**	P	**P**	**06 52 47.6**	**-1.0**
WRA	**Warramunga Arr**	**57.54**	**188**	*i* P	**P**	**06 52 48.4**	**-0.2**
WRA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ABKAR	**Akbulak array**	**57.66**	**310**	P	**P**	**06 52 49.1**	**-0.2**
HYB	**Hyderabad**	**58.25**	**268**	*e*P	**P**	**06 52 53.8**	**-0.1**
AKTO	**Aktyubinsk**	**58.38**	**312**	P	**P**	**06 52 53.7**	**-0.6**
	comp=Z,9.7nm,0.6s,baz=69,slow=9.0,SNR=21						
	comp=Z,9.7nm,0.6s						
ALE	**Alert**	**59.63**	**4**	P	**P**	**06 53 02.8**	**+0.3**
ALE				pP	**pP**	**06 53 17.0**	**+0.1**
ALE				sP	**sP**	**06 53 22.6**	**-0.2**
EUNU	**Eureka**	**59.71**	**9**	IAmb	IAmb	06 53 03.6	
	comp=Z,11nm,0.8s						
KIRV	**Kirov**	**59.89**	**323**	P	**P**	**06 53 04.6**	**+0.1**
	comp=Z,28nm,0.5s,baz=49,slow=4.2,SNR=15						
KIRV				LR	LR	07 19 08.2	

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            comp=Z,150nm,20.8s,baz=70,slow=36
            comp=Z,28nm,0.5s
SPA0  Spitsbergen Ar    60.06 349  eP     P      06 53 05.9 +0.4
SPITS Spitsbergen Ar    60.06 349  LR     LR     07 20 41.6
            comp=Z,140nm,21.3s,baz=21,slow=38
KBS   Kingsbay          60.19 350⥣eP     P      06 53 05.7  -0.7
KBS                                pmax   pmax
            comp=Z,12nm,0.8s
KBS   Kingsbay          60.19 350 i P     P      06 53 06.5 +0.2
KBS   Kingsbay          60.19 350  P      P      06 53 07.3 +1.0
KBS                                pP     pP     06 53 20.7  -0.1
KBS                                sP     sP     06 53 26.5  -0.3
NOR   Nord              60.58 356 i P     P      06 53 08.5  -0.5
NOR                                IAmb   IAmb   06 53 12.1
            comp=Z,9.7nm,1.0s
HSPB  Hornsund (broa    60.99 348 i P     P      06 53 12.5 +0.7
AS31  Alice Springs     61.26 188  P      P      06 53 14.6 +0.3
AS31                               pP     pP     06 53 29.5 +0.8
ASAR  Alice Springs     61.27 188  P      P      06 53 14.4 +0.1
            comp=Z,4.9nm,0.8s,baz=11,slow=6.6,SNR=50
ASAR                               pP     pP     06 53 29.4 +0.7
            comp=Z,7.0nm,0.8s,baz=1.7,slow=6.6,SNR=16
ASAR                               PKP2bc        07 22 38.8
            comp=Z,0.9nm,1.0s,baz=155,slow=3.1,SNR=4.1
            comp=Z,4.9nm,0.8s
RES   Resolute Bay      62.13  14  P      P      06 53 19.3  -0.2
RES                                IAmb   IAmb   06 53 20.7
            comp=Z,11nm,0.9s
RES   Resolute Bay      62.13  14  P      P      06 53 19.3  -0.2
RES                                pmax   pmax
            comp=Z,11nm,1.0s
VADS  Vadso             62.13 339  eP     P      06 53 20.0 +0.4
PSA00 Pilbara Seismi    62.19 203  P      P      06 53 20.5  -0.1
APA   Apatity           62.27 336⥥iP     P      06 53 35.6  +15
APA                                pmax   pmax
            comp=Z,10.0nm,1.1s
APA                                MLR    MLR
            comp=Z,600nm,14.0s
ADZR  Andozero          62.36 331  eP     P      06 53 18.5  -2.7
ADZR                               pmax   pmax
            comp=Z,30nm,1.0s
PALK  Pallekele         62.51 257  P      P      06 53 25.9 +3.0
KLMR  Klimovskoe        63.37 328  eP     P      06 53 26.3  -1.7
KLMR                               AMP           06 53 29.0
            comp=Z,42nm,1.6s
KLMR                               epP    pP     06 53 38.8  -3.7
KLMR                               ePP    PP     06 55 45.7  -1.6
KLMR  Klimovskoe        63.37 328  eP     P      06 53 26.3  -1.7
KLMR                               e*PP   pP     06 53 38.7  -3.7
KLMR                               e             06 55 45.6
KLMR                               pmax   pmax
            comp=Z,42nm,1.6s
YKA   Yellowknife Ar    63.38  30  P      P      06 53 28.3 +0.3
            comp=Z,3.9nm,0.7s,baz=301,slow=6.7,SNR=55
YKA                                pP     pP     06 53 43.0 +0.5
            comp=Z,3.6nm,0.7s,baz=302,slow=6.5,SNR=13
            comp=Z,3.9nm,0.7s
YKA   Yellowknife Ar    63.38  30 i P     P      06 53 28.5 +0.5
YKA                                pmax   pmax
            comp=Z,4.0nm,0.7s
BELG  Belogornoye       63.48 317  P      P      06 53 28.6  -0.1
            comp=Z,26nm,0.8s,baz=195,slow=3.9,SNR=12
BELG                               LR     LR     07 22 20.4
            comp=Z,80nm,18.7s,baz=117,slow=37
            comp=Z,26nm,0.8s
BELG  Belogornoye       63.48 317deP     P      06 53 27.9  -0.9
BELG                               pmax   pmax
            comp=Z,10.0nm,1.1s
ARA0  ARCESS Array S    63.56 339  eP     P      06 53 29.8 +0.7
ARCES ARCESS Array B    63.56 339  P      P      06 53 29.3 +0.1
            comp=Z,5.1nm,0.8s,baz=52,slow=7.9,SNR=11
ARCES                              pP     pP     06 53 44.0 +0.4
            comp=Z,5.3nm,0.9s,baz=64,slow=7.5,SNR=3.0
ARCES                              LR     LR     07 23 50.7
            comp=Z,152nm,20.9s,baz=61,slow=38
            comp=Z,5.1nm,0.8s
GEYT  Alibeck           63.64 299  P      P      06 53 30.4 +0.2
            comp=Z,15nm,0.9s,baz=54,slow=2.8,SNR=20
GEYT                               pP     pP     06 53 45.6 +0.9
            comp=Z,2.4nm,0.3s,baz=24,slow=5.4,SNR=3.7
            comp=Z,15nm,0.9s
DZM   Mont Dzumac       63.77 154  eLR    LR     07 12 39.5
            comp=Z,303nm,26.5s
DZM   Mont Dzumac       63.77 154  pP     pP     06 53 48.1 +2.5
KTK1  Kautokeino        64.52 339  eP     P      06 53 36.0 +0.5
MSVF  Nonsavu           64.85 141  LR     LR     07 18 13.8
            comp=Z,117nm,20.1s,baz=27,slow=32
NEEM  North Greenlan    65.05   3 i P     P      06 53 39.4 +0.3
NEEM                               IAmb   IAmb   06 53 39.6
            comp=Z,27nm,1.2s
DAG   Danmarks Havn     65.30 355 i P     P      06 53 40.3   0.0
DAG                                IAmb   IAmb   06 53 41.0
            comp=Z,16nm,1.0s
MOS   Moscow            66.89 323  eP     P      06 53 50.2  -0.6
MOS                                pmax   pmax
            comp=Z,70nm,1.3s
AFI   Afiamalu          67.41 130  LR     LR     07 17 00.4
            comp=Z,98nm,21.5s,baz=312,slow=30
STEI  Steigen           67.43 341  eP     P      06 53 54.1 +0.1
NGCH  Negor - Chabah    67.72 285  P      P      06 53 56.8 +0.2
OBN   Obninsk           67.73 323  P      P      06 53 56.1   0.0
            comp=Z,5.8nm,0.4s,baz=31,slow=24,SNR=4.7
OBN                                LR     LR     07 24 40.3
            comp=Z,27nm,19.4s,baz=158,slow=37
            comp=Z,5.8nm,0.4s
OBN   Obninsk           67.73 323 i P     P      06 53 55.5  -0.7
OBN                               i              06 54 14.1
OBN                                pmax   pmax
            comp=Z,23nm,1.2s
OBN                                MLR    MLR
            comp=Z,140nm,16.0s
DBG   Daneborg          67.79 355  eP     P      06 53 55.9  -0.4
DBG                                IAmb   IAmb   06 53 56.9
            comp=Z,9.1nm,1.3s
FAUS  Fauske            67.81 340  eP     P      06 53 57.2 +0.7
FIA1  FINESS Array S    68.41 332  P      P      06 53 59.6  -0.7
FIA1                               IAmb   IAmb   06 54 00.8
            comp=Z,27nm,0.9s
FINES FINESS Array B    68.41 332  P      P      06 54 00.2  -0.1
            comp=Z,14nm,0.7s,baz=29,slow=9.7,SNR=47
FINES                              pP     pP     06 54 15.6 +0.7
            comp=Z,7.4nm,0.7s,baz=33,slow=7.8,SNR=4.9
FINES                              LR     LR     07 26 15.5
            comp=Z,218nm,18.5s,baz=60,slow=38
            comp=Z,14nm,0.7s
FINES FINESS Array B    68.41 332  P      P      06 53 59.2  -1.1
AKT   Akhty             68.82 306  eP     P      06 54 03.0  -0.4
AKT                                e*PP   pP     06 54 19.2 +1.1
AKT                                e             06 54 27.1
AKT                                pmax   pmax
            comp=Z,25nm,1.1s
STKA  Stephens Creek    69.03 180  P      P      06 54 05.1 +0.7
            comp=Z,4.0nm,0.7s,baz=348,slow=7.3,SNR=9.8
            comp=Z,4.0nm,0.7s
STKA  Stephens Creek    69.03 180  P      P      06 54 04.8 +0.4
STKA                               pP     pP     06 54 19.7 +0.6
STKA  Stephens Creek    69.03 180⥥eP     P      06 54 04.6 +0.2
FORT  Forrest           69.08 192  P      P      06 54 05.0 +0.2
SEKA  Sheki             69.31 306  P      P      06 54 06.9 +0.5
ZKTA  Zakatala          69.44 307  P      P      06 54 07.9 +0.7
NEW   Newport           69.76  44  LR     LR     07 21 26.1
            comp=Z,26nm,22.0s,baz=318,slow=33
NEW   Newport           69.76  44  P      P      06 54 09.0   0.0
NEW                                pP     pP     06 54 24.7 +1.0
NEW                                IAmb   IAmb   06 54 25.8
            comp=Z,26nm,1.4s
NEW   Newport           69.76  44  P      P      06 54 10.4 +1.3
            baz=304
YBH   Yreka Blue Hor    70.02  52  LR     LR     07 19 39.5
            comp=Z,55nm,22.0s,baz=314,slow=31
YBH   Yreka Blue Hor    70.02  52  P      P      06 54 11.6 +0.7
YBH                                pP     pP     06 54 27.6 +2.1
VSU   Vasula            70.06 329⥥iP     P      06 54 10.1  -0.5
VSU                                pmax   pmax
            comp=Z,99nm,1.2s
GANJ  Ganja             70.17 306  P      P      06 54 11.9 +0.3
SUMG  Summit            70.21 360 i P     P      06 54 12.3 +0.5
SUMG                               IAmb   IAmb   06 54 14.0
            comp=Z,15nm,0.9s
RAF   Rauma             70.26 333  eP     P      06 54 11.6  -0.1
ZEI   Tsey              70.52 309  eP     P      06 54 11.9  -2.1
ZEI                                pmax   pmax
            comp=Z,13nm,1.4s
K05A  Summer Lake       70.61  51  P      P      06 54 16.7 +2.1
K05A                               pP     pP     06 54 30.3 +1.1
KBZ   Khabaz            70.62 311  P      P      06 54 14.2  -0.1
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            comp=Z,12nm,0.9s,baz=50,slow=4.6,SNR=26
KBZ                                LR     LR     07 30 03.7
            comp=Z,156nm,18.3s,baz=70,slow=40
            comp=Z,12nm,0.9s
KBZ   Khabaz            70.62 311c iP     P      06 54 14.4 +0.2
KBZ                                pmax   pmax
            comp=Z,26nm,1.1s
KIV   Kislovodsk        70.62 311  P      P      06 54 14.7 +0.3
KIV   Kislovodsk        70.62 311  P      P      06 54 15.7 +1.3
KIV   Kislovodsk        70.62 311  eP     P      06 54 14.8 +0.3
KIV                                pmax   pmax
            comp=Z,43nm,1.1s
KIV                                MLR    MLR
            comp=Z,95nm,18.0s
KIV   Kislovodsk        70.62 311 i P     P      06 54 15.7 +1.3
            SNR=6.5
KIV   Kislovodsk        70.62 311  P      P      06 54 13.5  -0.9
KIV   Kislovodsk        70.62 311  P      P      06 54 15.4 +1.0
KIV                                pP     pP     06 54 29.7 +0.5
KIV                                sP     PcP    06 54 35.4 +0.1
JLN   Jalan Bani Buh    70.77 283  P      P      06 54 15.1  -0.5
WSAR  Wadi Sarin        70.78 285  P      P      06 54 15.7 +0.1
            comp=Z,9.0nm,0.8s,baz=105,slow=7.7,SNR=5.2
WSAR                               LR     LR     07 30 52.9
            comp=Z,78nm,19.7s,baz=101,slow=41
            comp=Z,9.0nm,0.8s
WSAR  Wadi Sarin        70.78 285  P      P      06 54 16.0 +0.4
NSS   Namsos            70.85 339  eP     P      06 54 15.5 +0.2
WBK   Wadi Bani Khal    70.86 284  P      P      06 54 16.8 +0.7
ONI   Oni               70.91 309  IAmb   IAmb   06 54 36.8
            comp=Z,13nm,0.9s
MTSE  Matsula           71.05 331  eP     P      06 54 17.1 +0.5
BANOM Banah             71.09 288 i P     P      06 54 17.8 +0.3
            SNR=9.8
BANOM Banah             71.09 288  P      P      06 54 18.0 +0.5
SHME  Shamm             71.14 289 i P     P      06 54 17.9 +0.2
            SNR=10
SHME  Shamm             71.14 289  P      P      06 54 18.0 +0.2
SMDO  Samad             71.32 285  P      P      06 54 19.7 +0.6
MDH   Madha             71.43 288  P      P      06 54 19.0  -0.6
MOD   Modoc Plateau     71.44  51  IAmb   IAmb   06 54 36.6
            comp=Z,14nm,1.1s
GNI   Garni             71.45 307  P      P      06 54 19.6   0.0
            comp=Z,3.1nm,0.4s,baz=151,slow=1.8,SNR=6.9
GNI                                LR     LR     07 28 22.1
            comp=Z,149nm,18.8s,baz=59,slow=38
            comp=Z,3.1nm,0.4s
GNI   Garni             71.45 307c iP     P      06 54 20.1 +0.5
GNI                                pmax   pmax
            comp=Z,20nm,1.3s
GNI   Garni             71.45 307  P      P      06 54 19.3  -0.3
MASF  Masafi            71.50 288  P      P      06 54 19.6  -0.4
MSFE  Esma-Masafi       71.50 288 i P     P      06 54 20.3 +0.3
            SNR=7.1
AKH   Akhalkalaki       71.54 308  P      P      06 54 21.3 +1.2
AKH                                pmax   pmax
            comp=Z,24nm,0.8s
BMO   Blue Mountains    71.58  47  IAmb   IAmb   06 54 37.3
            comp=Z,15nm,1.2s
HOQ   Hoqain            71.60 286  P      P      06 54 20.5  -0.1
SCO   Scoresbysund      71.64 354  eP     P      06 54 20.4 +0.4
SCO                                IAmb   IAmb   06 54 22.1
            comp=Z,17nm,1.2s
JMDO  Jabal Madar       71.66 284  P      P      06 54 20.8  -0.2
UOSS  Minazif           71.70 288  P      P      06 54 20.7  -0.4
UOSS                               IAmb   IAmb   06 54 21.8
            comp=Z,21nm,0.8s
UOSS  Minazif           71.70 288 i P     P      06 54 20.9  -0.2
            SNR=9.5
UOSS  Minazif           71.70 288  P      P      06 54 21.0  -0.2
UOSS  Minazif           71.70 288  P      P      06 54 20.8  -0.3
UOSS                               pP     pP     06 54 34.9  -1.0
J08A  Circle Bar Ran    71.73  49  IAmb   IAmb   06 54 38.6
            comp=Z,14nm,1.0s
UMQ   Umm Al-Quwin      71.79 288  P      P      06 54 22.3 +0.7
HATD  Hatta, Dubai      71.82 288 i P     P      06 54 22.1 +0.3
            SNR=9.5
HATD  Hatta, Dubai      71.82 288  P      P      06 54 22.1 +0.3
            SNR=5.7
SOHO  SOHO              71.89 287 i P     P      06 54 22.1  -0.1
            SNR=7.5
SOHO  SOHO              71.89 287  P      P      06 54 22.4 +0.1
ASHO  Ashiyiah          71.95 288 i P     P      06 54 22.5  -0.2
            SNR=9.8
ASHO  Ashiyiah          71.95 288  P      P      06 54 22.7   0.0
            SNR=5.3
MNK   Minsk             72.12 326 i P     P      06 54 22.3  -0.8
            comp=E,4.0nm,0.7s
MNK                               i P     P      06 54 22.3  -0.8
            comp=N,28nm,0.7s
MNK                               i P     P      06 54 22.3  -0.8
            comp=Z,35nm,0.9s,baz=50
MNK                               i pP    pP     06 54 39.3 +1.4
MNK                               i PP    PP     06 57 02.4  -0.9
MNK                               i PPP   PPP    06 58 46.1
MNK                               i S     S      07 03 39.5  -1.6
MNK                               i sS    sS     07 04 08.8 +2.9
MNK                               i SS    SS     07 08 18.3 +0.1
MNK                               i SSS   SSS    07 11 39.7
MNK                               i LR    LR     07 26 43.1
MNK                               i LRM   MLR    07 28 09.8
            comp=E,73nm,15.7s
MNK                               i LRM   MLR    07 28 24.9
            comp=N,886nm,16.9s
MNK                               i LRM   MLR    07 29 10.8
            comp=Z,172nm,13.7s
MNK   Minsk             72.12 326 i P     P      06 54 22.3  -0.8
MNK                               i *PP   pP     06 54 39.3 +1.4
MNK                               i              06 57 02.3
MNK                               i PPP   PPP    06 58 46.0
MNK                               i S     S      07 03 39.4  -1.6
MNK                               i *SS   sS     07 04 08.7 +2.9
MNK                               i SS    SS     07 08 18.2 +0.1
MNK                                pmax   pmax
            comp=N,28nm,0.7s
MNK                                pmax   pmax
            comp=E,4.0nm,0.7s
MNK                                pmax   pmax
            comp=Z,35nm,0.9s
MNK                                MLR    MLR
            comp=E,73nm,16.0s
MNK                                MLR    MLR
            comp=N,886nm,17.0s
MNK                                MLR    MLR
            comp=Z,172nm,14.0s
BSY   Bisya             72.15 285  P      P      06 54 23.9   0.0
WVOR  Wild Horse Val    72.16  50  IAmb   IAmb   06 54 41.0
            comp=Z,12nm,1.0s
PLID  Pearl Lake        72.20  47  P      P      06 54 24.3 +0.2
FAQ   Al Faqa, Dubai    72.27 288  P      P      06 54 24.4  -0.1
FAQ   Al Faqa, Dubai    72.27 288  P      P      06 54 24.5  -0.1
ARQ   Araqi             72.34 286  P      P      06 54 25.5 +0.5
            SNR=5.4
NACGM Naroch            72.34 327  eP     P      06 54 22.0  -2.5
            comp=Z,29nm,0.8s,baz=49
MSO   Missoula          72.35  44  P      P      06 54 26.1 +1.2
            baz=306
ALNE  Al Ain            72.53 287  P      P      06 54 26.4 +0.3
MHTO  MHTO              72.53 283  P      P      06 54 26.4 +0.2
            SNR=11
ASUD  Al Ashush, Dub    72.53 288  P      P      06 54 26.5 +0.4
ASUD  Al Ashush, Dub    72.53 288  P      P      06 54 26.6 +0.5
KAAM  Kaadhehdhoo       72.72 257  P      P      06 54 31.0 +3.7
CAN   Canberra          72.80 174  pP     pP     06 54 41.5  -0.5
MPK   Martis Peak       73.07  53  P      P      06 54 30.4 +0.9
MPK                                pP     PcP    06 54 45.4  -0.7
MPK                                IAmb   IAmb   06 54 46.7
            comp=Z,24nm,1.0s
PABE  Paberze           73.15 328  eP     P      06 54 29.6 +0.3
PAHR  Pah Rah Range     73.25  53  IAmb   IAmb   06 54 47.4
            comp=Z,15nm,0.9s
MFID  Camas Ranch       73.28  48  IAmb   IAmb   06 54 47.5
            comp=Z,11nm,0.8s
FFC   Flin Flon         73.28  33  P      P      06 54 30.5 +0.5
FFC                                IAmb   IAmb   06 54 46.3
            comp=Z,11nm,0.9s
FFC   Flin Flon         73.28  33  P      P      06 54 30.5 +0.5
FFC                                pmax   pmax
            comp=Z,11nm,0.9s
DQM   DQM               73.46 283  P      P      06 54 31.4  -0.3
NC405 NORSAR Array S    73.55 337  P      P      06 54 31.0  -0.5
FCC   Fort Churchill    73.56  27  P      P      06 54 31.2  -0.3
FCC   Fort Churchill    73.56  27  P      P      06 54 31.2  -0.3
FCC                                pmax   pmax
            comp=Z,9.0nm,0.9s
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CMB   Columbia Colle    73.56  55  P      P      06 54 33.4 +1.3
CMB                                IAmb   IAmb   06 54 49.1
            comp=Z,16nm,1.0s
CMB   Columbia Colle    73.56  55  P      P      06 54 33.4 +1.3
CMB                                pmax   pmax
            comp=Z,16nm,1.0s
DOMB  Dombas            73.61 339  eP     P      06 54 32.2 +0.3
HFS   Hagfors           73.67 336  LR     LR     07 29 46.5
            comp=Z,293nm,19.0s,baz=41,slow=38
ICESG Greenland Ices    73.71   0  eP     P      06 54 33.9 +1.2
ICESG                              IAmb   IAmb   06 54 34.7
            comp=Z,15nm,1.0s
YERR  Yerington         73.75  53  IAmb   IAmb   06 54 50.6
            comp=Z,20nm,1.0s
NB2   NORSAR Subarra    73.76 337  P      P      06 54 32.8   0.0
            comp=Z,3.0nm,0.6s,baz=40,slow=6.2
NB2   NORSAR Subarra    73.76 337  P      P      06 54 32.8   0.0
            slow=6.2
NOA   NORSAR Array B    73.76 337  P      P      06 54 32.5  -0.3
            comp=Z,8.1nm,0.8s,baz=39,slow=5.9,SNR=20
NOA                                pP     pP     06 54 47.0  -0.6
            comp=Z,5.2nm,0.8s,baz=39,slow=5.9,SNR=3.4
NOA                                LR     LR     07 30 20.8
            comp=Z,208nm,19.4s,baz=45,slow=38
            comp=Z,8.1nm,0.8s
VIKU  Vikbolandet       73.86 333  eP     P      06 54 33.2  -0.1
EGMT  Eagleton          73.89  41  IAmb   IAmb   06 54 51.1
            comp=Z,22nm,0.8s
EGMT  Eagleton          73.89  41  P      P      06 54 35.1 +1.2
            baz=309,SNR=6.2
NC602 NORSAR Array S    73.89 337  eP     P      06 54 33.0  -0.5
AKASG Malin Array Be    73.94 322  P      P      06 54 33.4  -0.6
            comp=Z,8.2nm,0.5s,baz=45,slow=6.0,SNR=58
AKASG                              pP     PcP    06 54 50.0 +0.9
            comp=Z,14nm,0.8s,baz=44,slow=6.1,SNR=6.4
AKASG                              LR     LR     07 30 08.0
            comp=Z,205nm,18.2s,baz=52,slow=38
            comp=Z,8.2nm,0.5s
DLMT  Dillon            73.98  45  IAmb   IAmb   06 54 52.1
            comp=Z,15nm,0.8s
HLID  Hailey            74.02  47  P      P      06 54 36.4 +1.5
            baz=307,SNR=6.2
GURO  Guroymak-BITLI    74.08 306  IAmb   IAmb   06 54 56.4
            comp=Z,12nm,0.9s
JRN   Qarnain Island    74.23 289  P      P      06 54 35.1  -1.0
BOZ   Bozeman (W)       74.37  44  IAmb   IAmb   06 54 54.3
            comp=Z,11nm,0.8s
BOZ   Bozeman (W)       74.37  44  P      P      06 54 38.1 +1.3
            baz=308,SNR=13
KVN   Kaiserville       74.44  53  IAmb   IAmb   06 54 54.6
            comp=Z,20nm,1.0s
LHV   Little Huntoon    74.65  54  IAmb   IAmb   06 54 56.8
            comp=Z,33nm,1.1s
NVAR  Mina Array Bea    74.67  53  P      P      06 54 40.7 +1.9
            comp=Z,3.6nm,0.8s,baz=286,slow=5.4,SNR=26
NVAR                               pP     pP     06 54 54.6 +1.1
            comp=Z,10nm,0.8s,baz=283,slow=6.2,SNR=27
NVAR                               LR     LR     07 21 40.8
            comp=Z,40nm,21.3s,baz=266,slow=31
            comp=Z,3.6nm,0.8s
GHWR  Ruwais            74.76 289  P      P      06 54 38.6  -0.5
OSL   Oslo              74.77 337  eP     P      06 54 39.3 +0.7
TOO   Toolangi          74.81 177         pP     06 54 55.2 +1.5
MZR   Muzera            74.84 287  P      P      06 54 39.4  -0.4
SIM   Simferopol'       75.01 315  eP     P      06 54 41.1 +0.8
SIM                                pmax   pmax
            comp=Z,23nm,0.8s
SAKB  Bahrain           75.37 292  P      P      06 54 41.7  -1.0
SFJD  Kangerlussuaq     75.41   5  LR     LR     07 28 44.8
            comp=Z,60nm,21.5s,baz=333,slow=36
VES   Vestal, Richgr    75.68  56  P      P      06 54 45.3 +1.0
            baz=306,SNR=5.3
H17A  Grant Village     75.70  45  IAmb   IAmb   06 55 04.1
            comp=Z,25nm,0.9s
H17A  Grant Village     75.70  45  P      P      06 54 47.9 +3.2
            baz=309,SNR=10
FLWY  Flagg Ranch       75.83  45  IAmb   IAmb   06 55 03.6
            comp=Z,12nm,1.0s
RLMT  Red Lodge         75.97  44  P      P      06 54 47.3 +1.2
            baz=310
CWC   Cottonwood Cre    75.99  55  P      P      06 54 46.7 +0.4
            baz=306
SORM  Soroca            76.05 321 ⥣P     P      06 54 45.7  -0.4
SORM  Soroca            76.05 321  P      P      06 54 45.7  -0.4
REDW  Red Top Meadow    76.19  46  IAmb   IAmb   06 55 05.0
            comp=Z,15nm,1.1s
FRB   Frobisher Bay     76.30  13  LR     LR     07 31 11.6
            comp=Z,68nm,19.4s,baz=343,slow=38
R11A  Troy Canyon, C    76.44  52  IAmb   IAmb   06 55 06.1
            comp=Z,13nm,0.9s
R11A  Troy Canyon, C    76.44  52  P      P      06 54 50.4 +1.5
            baz=307,SNR=7.5
DGMT  Dagmar            76.44  39  IAmb   IAmb   06 55 05.6
            comp=Z,24nm,0.9s
DGMT  Dagmar            76.44  39  P      P      06 54 49.2 +0.7
            baz=312
DGMT  Dagmar            76.44  39  P      P      06 54 48.6 +0.1
            baz=312
Q12A  Willow Creek R    76.49  51  IAmb   IAmb   06 55 06.6
            comp=Z,17nm,1.0s
LAO   LASA Array        76.59  41  P      P      06 54 50.3 +0.9
            baz=311
LAO   LASA Array        76.59  41  P      P      06 54 50.3 +0.9
            baz=311
MPMC  Manual Prospec    76.60  55  P      P      06 54 50.7 +1.0
            baz=307,SNR=5.2
DMTO  DMTO              76.73 282  P      P      06 54 49.9  -0.6
FURC  Furnace Creek,    76.76  54  P      P      06 54 51.7 +1.3
            baz=307
LRMC  Laurel Mtn Rad    76.81  55  P      P      06 54 52.5 +1.5
            baz=307,SNR=5.8
DOK   Doka              76.85 283  P      P      06 54 50.2  -1.0
TPNV  Topopah Spring    76.86  53  IAmb   IAmb   06 55 08.4
            comp=Z,18nm,0.9s
TPNV  Topopah Spring    76.86  53  P      P      06 54 52.7 +1.4
            baz=307,SNR=5.4
HWUT  Hardware Ranch    76.88  47  IAmb   IAmb   06 55 08.8
            comp=Z,20nm,1.1s
EDW2  Edwards Air Fo    76.97  56  P      P      06 54 52.9 +1.2
            baz=307
DUG   Dugway, Tooele    77.02  49  IAmb   IAmb   06 55 09.5
            comp=Z,9.9nm,0.8s
DUG   Dugway, Tooele    77.02  49  P      P      06 54 53.5 +1.5
            baz=308
GWY   Greenwater Val    77.05  54  IAmb   IAmb   06 55 09.3
            comp=Z,19nm,1.0s
QSM   Queen of Sheba    77.06  55  IAmb   IAmb   06 55 09.2
            comp=Z,26nm,0.9s
BORG  Borgarnes         77.18 353  LR     LR     07 30 08.3
            comp=Z,87nm,19.5s,baz=22,slow=37
BW06  Boulder Array     77.31  46  IAmb   IAmb   06 55 10.8
            comp=Z,7.0nm,0.7s
BW06  Boulder Array     77.31  46  P      P      06 54 54.6 +0.9
            baz=310,SNR=6.5
PD31  Pinedale Array    77.31  46  IAmb   IAmb   06 55 10.4
            comp=Z,14nm,1.3s
PDAR  Pinedale Array    77.31  46  P      P      06 54 54.5 +0.9
            comp=Z,2.3nm,0.7s,baz=279,slow=2.5,SNR=27
PDAR                               pP     pP     06 55 09.2 +0.6
            comp=Z,6.0nm,0.6s,baz=276,slow=1.5,SNR=23
            comp=Z,2.3nm,0.7s
PRN   Pahroc Range      77.35  53  IAmb   IAmb   06 55 13.6
            comp=Z,11nm,0.9s
SHOC  Shoshone, Teco    77.48  54  P      P      06 54 55.7 +1.2
            baz=308
GSC   Goldstone, Bar    77.50  55  P      P      06 54 55.8 +1.1
            baz=307
WHFO  Wadi Hawf         77.53 283  P      P      06 54 53.5  -1.5
GIRR  Girov             77.77 321 ⥥P     P      06 54 56.5 +0.6
MPU   Maple Canyon      77.83  49  IAmb   IAmb   06 55 14.0
            comp=Z,22nm,1.3s
BURAR Bucovina Array    77.96 322 ⥥P     P      06 54 57.8 +0.7
BURAR Bucovina Array    77.96 322  IAmb   IAmb   06 55 18.8
            comp=Z,8.9nm,0.9s
BURAR Bucovina Array    77.96 322  P      P      06 54 57.8 +0.7
BIZ   Bicaz             77.98 321 ⥥P     P      06 54 57.7 +0.7
TUQ   Turquoise Moun    77.99  55  P      P      06 54 58.6 +1.2
            baz=308,SNR=8.0
TESR  Tescani           77.99 320 ⥥P     P      06 54 56.9  -0.2
BSUT  Blindstream Ca    78.03  48  pP     pP     06 55 14.2 +1.4
HEC   Hector,Ludlow     78.09  55  P      P      06 54 58.8 +0.8
            baz=308,SNR=5.3
PANC  Panciu            78.17 319 ⥣P     P      06 54 59.4 +1.3
ABTO  Aybut             78.22 283  P      P      06 54 58.0  -0.9
MURC  Murrieta          78.26  57  P      P      06 54 59.5 +0.5
            baz=307
ODBI  Odobesti          78.29 319 ⥥P     P      06 54 59.1 +0.3
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VRI	Vrincioaia	78.39	320	⇓P	P	06 55 00.4	+1.1
VRI	Vrincioaia	78.39	320	P	P	06 55 00.4	+1.1
PLOR	Plostina	78.44	320	P	P	06 55 00.6	+0.9
PLOR	Plostina	78.44	320	P	P	06 55 00.5	+0.9
V12A	Nelson	78.50	54	P	P	06 55 01.9	+1.6
V12A				pP	pP	06 55 16.3	+1.1
GMRC	Granite Mounta	78.56	55	P	P	06 55 01.6	+0.9
	baz=308,SNR=5.2						
BR131	Keskin Array S	78.56	311	⇓*e*P	P	06 55 01.0	+0.4
BRTR	Keskin Array B	78.56	311	P	P	06 55 01.1	+0.4
	comp=Z,3.5nm,0.9s,baz=104,slow=5.2,SNR=8.3						
BRTR				pP	pP	06 55 15.2	-0.4
	comp=Z,5.3nm,1.0s,baz=103,slow=4.4,SNR=4.8						
BRTR				LR	LR	07 34 23.7	
	comp=Z,83nm,18.2s,baz=55,slow=39						
	comp=Z,3.5nm,0.9s						
STHS	Stebnicka Huta	78.59	325	*e*P	P	06 55 00.8	+0.4
STHS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
STHS	Stebnicka Huta	78.59	325	*e*P	P	06 55 00.8	+0.4
BISRR	Bisoca	78.61	319	⇓P	P	06 55 01.4	+0.7
OJC	Ojcow	78.66	326	*e*P	P	06 55 01.4	+0.6
OJC				*e*L	L	07 32 47.2	
	comp=Z,181nm,18.2s						
P17A	Butcher Ranch,	78.71	49	IAmb	IAmb	06 55 18.9	
	comp=Z,39nm,1.4s						
OZUR		78.71	320	⇓P	P	06 55 02.6	+1.4
MTPU	Mount Pierson	78.74	51	IAmb	IAmb	06 55 19.9	
	comp=Z,12nm,1.0s						
PFO	Pinyon Flats O	78.75	56	LR	LR	07 23 05.4	
	comp=Z,140nm,20.5s,baz=292,slow=30						
ARCR	ARCALIA	78.75	322	⇓P	P	06 55 02.9	+1.6
TPFO	Pinon Flats	78.75	56	P	P	06 55 02.8	+1.1
	baz=308						
109C	Camp Elliot, M	78.75	57	P	P	06 55 02.5	+0.9
	baz=308						
Q16A	Castle Valley	78.80	49	IAmb	IAmb	06 55 19.6	
	comp=Z,18nm,1.3s						
BELC	Belle Mtn. Jos	78.81	56	P	P	06 55 02.9	+0.8
	baz=308						
TRPA	Tarpa	78.90	323	⇓P	P	06 55 03.2	+1.2
ANTO	Ankara	78.97	312	P	P	06 55 01.5	-1.3
KNB	Kanab	78.99	52		pP	06 55 20.1	+2.2
KNB				IAmb	IAmb	06 55 20.9	
	comp=Z,20nm,1.2s						
ISR	Istrita	78.99	319	⇓P	P	06 55 02.6	-0.2
ISR	Istrita	78.99	319	P	P	06 55 02.5	-0.2
DOPR	Dopca	79.00	320	⇓P	P	06 55 04.0	+1.3
MLR	Muntele Rosu	79.04	320	⇓P	P	06 55 02.9	-0.2
MLR	Muntele Rosu	79.04	320	P	P	06 55 03.4	+0.3
	comp=Z,2.9nm,0.4s,baz=20,slow=2.0,SNR=3.7						
MLR				LR	LR	07 33 15.8	
	comp=Z,302nm,18.4s,baz=48,slow=38						
	comp=Z,2.9nm,0.4s						
SRU	San Rafael Swe	79.07	49	IAmb	IAmb	06 55 20.6	
	comp=Z,27nm,1.3s						
K22A	Casper	79.08	44	IAmb	IAmb	06 55 20.2	
	comp=Z,16nm,1.1s						
K22A	Casper	79.08	44	P	P	06 55 03.7	+0.3
	baz=312						
K22A	Casper	79.08	44	P	P	06 55 03.9	+0.4
	baz=312						
ULM	Lac du Bonnet	79.08	33	P	P	06 55 03.5	+0.4
	comp=Z,3.9nm,0.9s,baz=290,slow=7.5,SNR=4.7						
ULM				pP	pP	06 55 18.2	+0.3
	comp=Z,5.8nm,0.7s,baz=314,slow=5.5,SNR=6.3						
	comp=Z,3.9nm,0.9s						
ULM	Lac du Bonnet	79.08	33	pP	pP	06 55 18.7	+0.7
MDND	Maddock	79.11	37	P	P	06 55 03.9	+0.7
	baz=315						
MDND	Maddock	79.11	37	P	P	06 55 03.4	+0.2
	baz=315						
MONP2	Monument Peak	79.21	57	P	P	06 55 05.3	+1.0
	baz=308						
IRM	Iron Mountain	79.28	55	P	P	06 55 05.4	+0.9
	baz=308						
BC3	Big Chuckawall	79.38	56	P	P	06 55 06.0	+0.8
	baz=308						
RSSD	Black Hills	79.45	42	P	P	06 55 06.2	+0.8
	baz=313						
RSSD	Black Hills	79.45	42	P	P	06 55 05.6	+0.2
	baz=313						
E28A	Huff	79.47	38	P	P	06 55 04.5	-0.8
	baz=314						
VOIR		79.54	320	⇓P	P	06 55 06.2	+0.4
VOIR		79.54	320	P	P	06 55 06.1	+0.4
LANS	Liptovska Anna	79.59	326	*e*P	P	06 55 07.0	+1.1
LANS				pmax	pmax		
	comp=Z,9.0nm,1.6s						
LANS	Liptovska Anna	79.59	326	*e*P	P	06 55 06.9	+1.1
SWSC	Sam W. Stewart	79.59	56	P	P	06 55 06.6	+0.5
	baz=308						
HMU	Henry Mountain	79.69	50	IAmb	IAmb	06 55 24.1	
	comp=Z,48nm,1.4s						
U15A	North Rim	79.69	52	IAmb	IAmb	06 55 24.7	
	comp=Z,14nm,1.0s						
KSP	Ksiaz	79.71	328	*e*P	P	06 55 07.1	+0.6
KSP				*e*L	L	07 33 17.6	
	comp=Z,203nm,21.1s						
O20A	White River Ci	79.76	47	P	P	06 55 07.5	+0.3
	baz=311						
ARR	Arges	79.80	320	⇓P	P	06 55 08.6	+1.5
PDMCI	Parker Dam,Lak	79.84	55	P	P	06 55 08.6	+1.1
	baz=309,SNR=5.6						
MORC	Moravsky Berou	79.98	327	⇓P	P	06 55 08.9	+0.9
MORC	Moravsky Berou	79.98	327	*e*P	P	06 55 08.3	+0.3
MORC	Moravsky Berou	79.98	327	P	P	06 55 08.9	+0.9
DPC	Dobruska-Polom	80.07	328	*e*P	P	06 55 09.4	+0.9
DPC	Dobruska-Polom	80.07	328	*e*P	P	06 55 09.4	+0.9
GLA	Glamis	80.17	56	P	P	06 55 10.2	+0.9
	baz=309						
VYHS	Vyhne	80.35	325	*e*P	P	06 55 10.7	+0.7
VYHS				pmax	pmax		
	comp=Z,14nm,1.3s						
VYHS	Vyhne	80.35	325	*e*P	P	06 55 10.7	+0.7
RAR	Rarotonga	80.41	126	LR	LR	07 24 21.4	
	comp=Z,142nm,19.9s,baz=330,slow=31						
RAYN	Ar Rayn	80.51	292	P	P	06 55 10.8	-0.5
RAYN				IAmb	IAmb	06 55 12.2	
	comp=Z,15nm,1.2s						
RAYN	Ar Rayn	80.51	292	P	P	06 55 10.8	-0.5
RAYN				pmax	pmax		
	comp=Z,15nm,1.2s						
RAYN	Ar Rayn	80.51	292	*i* P	P	06 55 11.2	-0.2
	SNR=7.5						
RAYN	Ar Rayn	80.51	292	P	P	06 55 11.1	-0.2
AGMN	Agassiz Nation	80.52	35	P	P	06 55 11.0	+0.1
	baz=317						
AGMN	Agassiz Nation	80.52	35	P	P	06 55 11.0	+0.1
	baz=317						
N23A	Red Feather La	80.57	45	P	P	06 55 12.1	+0.4
	baz=312						
JAVC	Velka Javorina	80.60	326	*e*P	P	06 55 12.3	+0.9
BRG	Berggiesshubel	80.66	329	*e*P	P	06 55 12.2	+0.6
BRG				Amp		06 55 12.5	
	comp=Z,11nm,1.0s						
BRG	Berggiesshubel	80.66	329	*e*P	P	06 55 12.1	+0.6
BRG				pmax	pmax		
	comp=Z,11nm,1.0s						
CLL	Collm	80.70	330	*i* P	P	06 55 11.7	-0.1
	comp=Z,18nm,1.0s						
CLL				*e*x	x	06 55 40.0	
CLL	Collm	80.70	330	*i* P	P	06 55 11.7	-0.1
CLL				pmax	pmax		
	comp=Z,18nm,1.0s						
VRAC	Vranov	80.74	327	*e*P	P	06 55 12.8	+0.7
WUAZ	Wupatki	80.84	52	IAmb	IAmb	06 55 30.6	
	comp=Z,20nm,1.1s						
WUAZ	Wupatki	80.84	52	P	P	06 55 14.3	+1.3
	baz=310,SNR=5.5						
KRUC	Moravsky	81.01	327	*e*P	P	06 55 13.6	+0.1
113A	Mohawk Valley,	81.04	56		pP	06 55 30.1	+1.3
GOPC	GO Pecny, Ondr	81.05	328	*e*P	P	06 55 14.5	+0.8
GOPC	GO Pecny, Ondr	81.05	328	*e*P	P	06 55 14.5	+0.8
PRU	Pruhonice	81.09	329	*e*P	P	06 55 14.4	+0.5
PRU	Pruhonice	81.09	329	*e*P	P	06 55 14.4	+0.5
BZS	Buzias	81.13	322	⇑P	P	06 55 13.9	-0.3
BZS	Buzias	81.13	322	P	P	06 55 13.9	-0.3
MODS	Modra-Piesok	81.14	326	*e*P	P	06 55 15.9	+1.7
MODS	Modra-Piesok	81.14	326	*e*P	P	06 55 15.9	+1.7
HERR	Herculane	81.26	321	⇓P	P	06 55 14.9	+0.1
B35A	Bob, Littlefor	81.43	34	P	P	06 55 16.2	+0.4
	baz=319						
ISCO	Idaho Springs	81.49	46	P	P	06 55 17.1	+0.4
	baz=312						
MVCO	Mesa Verde	81.52	49	IAmb	IAmb	06 55 34.0	
	comp=Z,13nm,1.1s						
MVCO	Mesa Verde	81.52	49	P	P	06 55 18.2	+1.5
	baz=311						
MMAI	Mount Meron Ar	81.72	305	P	P	06 55 17.8	+0.2
	comp=Z,7.7nm,0.8s,baz=31,slow=5.3,SNR=5.4						
MMAI				pP	pP	06 55 32.8	+0.1
	comp=Z,8.8nm,0.8s,baz=60,slow=3.5,SNR=2.8						
MMAI				LR	LR	07 34 22.3	
	comp=Z,161nm,21.1s,baz=49,slow=38						
	comp=Z,7.7nm,0.8s						
SUSD	Miller	81.84	39	P	P	06 55 18.7	+0.7
	baz=316						
SUSD	Miller	81.84	39	P	P	06 55 18.2	+0.2
	baz=316						
RONA	Rosalia, Austr	82.08	326	*i* P	P	06 55 19.8	+0.6
	comp=Z,17nm,1.6s						
CONA	Conrad Observa	82.10	326	*e*P	P	06 55 20.1	+0.7
	comp=Z,12nm,1.1s						
F33A	5 Mile Ranch,	82.13	37	IAmb	IAmb	06 55 36.4	
	comp=Z,19nm,1.1s						
F33A	5 Mile Ranch,	82.13	37	P	P	06 55 20.1	+0.7
	baz=317						
KHC	Kasperske Hory	82.16	328	*e*P	P	06 55 20.1	+0.5
KHC				*e*x	x	06 55 30.5	
KHC				*e*x	x	06 55 51.0	
KHC	Kasperske Hory	82.16	328	*e*P	P	06 55 20.1	+0.5
KHC				*e*		06 55 30.5	
S22A	4UR Ranch, Cre	82.16	48	P	P	06 55 22.3	+2.2
	baz=312,SNR=8.8						
RDO	Rodhopi	82.25	317	IAmb	IAmb	06 55 40.9	
	comp=Z,10nm,1.0s						
Q24A	Divide	82.32	46	P	P	06 55 21.7	+0.7
	baz=313						
GERES	GERESS Array B	82.32	328	P	P	06 55 20.6	0.0
	comp=Z,2.8nm,0.8s,baz=55,slow=5.1,SNR=9.1						
GERES				pP	pP	06 55 34.4	-1.1
	comp=Z,1.6nm,0.6s,baz=28,slow=6.0,SNR=4.2						
GERES				LR	LR	07 35 25.4	
	comp=Z,177nm,18.2s,baz=38,slow=38						
	comp=Z,2.8nm,0.8s						
VTS	Vitosha	82.44	319	⇓P	P	06 55 21.5	+0.1
VTS	Vitosha	82.44	319	IAmb	IAmb	06 55 43.1	
	comp=Z,12nm,1.1s						
VTS	Vitosha	82.44	319	P	P	06 55 21.4	+0.1
GRF	Grafenberg Arr	82.67	330	*e*P	P	06 55 23.0	+0.7
	comp=Z,16nm,1.0s,baz=42,slow=4.5						
GRF				*e*L	L	07 40 43.0	
	comp=Z,119nm,19.8s						
EKA	Eskdalemuir Ar	82.69	341	LR	LR	07 35 25.6	
	comp=Z,208nm,19.1s,baz=28,slow=38						
SDCO	Great Sand Dun	82.94	47	P	P	06 55 25.5	+1.3
	baz=313						
SDCO	Great Sand Dun	82.94	47	P	P	06 55 24.7	+0.4
	baz=313						
BIOA	Bad Ischl, Aus	83.25	327	*e*P	P	06 55 23.1	-2.2
	comp=Z,4.7nm,0.6s						
K31A	O'Neill	83.25	40	P	P	06 55 26.1	+0.7
	baz=316						
TUC	Tucson	83.27	54	P	P	06 55 27.1	+1.4
	baz=310						
SOKA	Soboth	83.42	326	*e*P	P	06 55 26.7	+0.4
	comp=Z,9.5nm,1.0s						
ECSD	EROS Data Cent	83.52	38	IAmb	IAmb	06 55 43.5	
	comp=Z,8.3nm,0.8s						
ECSD	EROS Data Cent	83.52	38	P	P	06 55 26.8	0.0
	baz=317,SNR=6.6						
ECSD	EROS Data Cent	83.52	38	P	P	06 55 26.7	0.0
	baz=317						
E38A	The Farm, Brul	83.72	34	P	P	06 55 27.9	+0.2
	baz=320						
KBA	Koelnbreinsper	83.85	327	*i* P	P	06 55 29.5	+0.9
	comp=Z,7.5nm,0.9s						
T25A	Trinidad	83.99	47	IAmb	IAmb	06 55 46.8	
	comp=Z,18nm,1.2s						
T25A	Trinidad	83.99	47	P	P	06 55 30.8	+1.2
	baz=313,SNR=9.1						
MYKA	Terra Mystica	84.07	327	*e*P	P	06 55 27.4	-2.2
	comp=Z,11nm,1.1s						
EIL	Elat	84.15	303	P	P	06 55 30.1	0.0
	comp=Z,11nm,0.9s,baz=340,slow=8.6,SNR=6.6						
EIL				LR	LR	07 36 35.1	
	comp=Z,95nm,21.2s,baz=107,slow=38						
	comp=Z,11nm,0.9s						
ANMO	Albuquerque	84.25	50	P	P	06 55 32.4	+1.5
ANMO				IAmb	IAmb	06 55 49.1	
	comp=Z,11nm,1.1s						
ANMO	Albuquerque	84.25	50	P	P	06 55 32.4	+1.5
ANMO				pmax	pmax		
	comp=Z,11nm,1.1s						
ANMO	Albuquerque	84.25	50	P	P	06 55 32.3	+1.5
	baz=312						
ANMO	Albuquerque	84.25	50	P	P	06 55 33.0	+2.1
	baz=312						
PMOR	Pomariorio Ree	84.34	114	*e*T	T	08 27 44.6	
	comp=Z,22nm,0.2s						
MOTA	Moosalm	84.58	329	*e*P	P	06 55 31.1	-1.2
	comp=Z,2.9nm,0.5s						
BMRD	Maredsous	84.59	334	*d*P	P	06 55 32.2	+0.2
BMRD				*d*pP	pP	06 55 46.8	-0.3
RETA	Reutte	84.61	329	*i* P	P	06 55 32.8	+0.5
	comp=Z,25nm,1.5s						
Y22A	Socorro	84.62	51	P	P	06 55 33.3	+0.6
	baz=312						
LIT	Litokhoron	84.63	318	IAmb	IAmb	06 55 52.7	
	comp=Z,21nm,0.8s						
SQTA	Sankt Quirin	84.64	328	*i* P	P	06 55 32.8	+0.3
	comp=Z,3.0nm,0.6s						
PPT2	Papeete2	84.83	117	*e*S	S	07 05 58.0	-0.1
	comp=Z,49nm,25.5s						
PPT2				*e*SS	SS	07 11 33.9	+2.1
	comp=Z,139nm,27.5s						
PPT2	Papeete2	84.83	117	*e*LR	LR	07 21 49.5	
	comp=Z,258nm,27.2s						
PPT2				*e*LR	LR	07 22 12.3	
	comp=Z,289nm,26.0s						
PPT2	Papeete2	84.83	117	*e*T	T	08 28 22.0	
	comp=Z,3.2nm,0.3s						
319A	Douglas	84.85	54	IAmb	IAmb	06 55 51.1	
	comp=Z,18nm,1.1s						
I37B	Waseca	84.86	36	P	P	06 55 33.9	+0.4
	baz=319						
SCHQ	Schefferville	84.87	16	P	P	06 55 33.2	-0.1
	comp=Z,3.1nm,0.8s,baz=351,slow=6.2,SNR=4.1						
SCHQ				pP	pP	06 55 48.2	-0.2
	comp=Z,5.5nm,0.7s,baz=321,slow=5.9,SNR=5.8						
SCHQ				LR	LR	07 35 31.7	
	comp=Z,94nm,20.3s,baz=22,slow=37						
	comp=Z,3.1nm,0.8s						
TIAR	Tiarei	84.97	116	*e*T	T	08 28 37.7	
	comp=Z,1.6nm,0.2s						
FETA	Feichten	85.00	329	*i* P	P	06 55 34.2	-0.1
	comp=Z,5.4nm,0.9s						
121A	Cookes Peak, D	85.04	52	IAmb	IAmb	06 55 52.4	
	comp=Z,16nm,1.1s						
121A	Cookes Peak, D	85.04	52	P	P	06 55 36.1	+1.3
	baz=312						
121A	Cookes Peak, D	85.04	52	P	P	06 55 35.4	+0.5
	baz=312						
DAVA	Damuels	85.13	329	*i* P	P	06 55 34.7	-0.4
	comp=Z,12nm,1.0s						
RPZ	Rata Peaks	85.19	159	LR	LR	07 27 22.5	
	comp=Z,183nm,21.4s,baz=312,slow=31						
FUORN	Ofenpass-Fuorn	85.51	329	IAmb	IAmb	06 55 38.3	
	comp=Z,15nm,1.1s						
DAVOX	Davos/Dischmat	85.54	329	LR	LR	07 37 19.3	
	comp=Z,247nm,18.9s,baz=56,slow=38						
MEH	Mehetia	86.09	116	*e*T	T	08 29 58.9	
	comp=Z,28nm,0.3s						
TAOE	Nuku Hiva Isla	86.25	104	*e*LR	LR	07 23 03.5	
	comp=Z,302nm,23.7s						
IDI	Anoyia	86.69	313	P	P	06 55 42.4	-0.4
	comp=Z,9.6nm,0.7s,baz=14,slow=4.2,SNR=4.6						
	comp=Z,9.6nm,0.7s						
KSU1	Kansas State U	86.93	41	IAmb	IAmb	06 55 44.9	
	comp=Z,12nm,0.8s						
KSU1	Kansas State U	86.93	41	P	P	06 55 43.8	-0.1
	baz=318						
KSU1	Kansas State U	86.93	41	P	P	06 55 43.1	-0.7
	baz=318						
I42A	Draeger Farm,	87.01	34	P	P	06 55 44.3	+0.2
	baz=322						
MNTX	Cornudas Mount	87.11	52	P	P	06 55 45.6	+0.8
	baz=313						
AMTX	Amarillo	87.14	47	P	P	06 55 46.1	+1.1
	baz=315						
AMTX	Amarillo	87.14	47	P	P	06 55 46.0	+0.9
	baz=315						
L40A	Anamosa	87.38	36	P	P	06 55 46.2	+0.3
	baz=321						
N38A	Joes South For	87.38	38	P	P	06 55 46.6	+0.6
	baz=320						
GLMI	Grayling	88.08	31	P	P	06 55 50.1	+0.8
	baz=325						
GLMI	Grayling	88.08	31	P	P	06 55 50.1	+0.8
	baz=325						
P38A	Dawn	88.12	39	P	P	06 55 49.8	+0.3
	baz=320						
TBI	Tubuai	88.74	121	*e*SS	SS	07 12 16.5	-12
	comp=Z,297nm,26.2s						
TBI	Tubuai	88.74	121	*e*LR	LR	07 24 13.7	
	comp=Z,4µm,23.2s						
TBI				*e*LR	LR	07 24 14.0	
	comp=Z,1µm,29.5s						
TBI	Tubuai	88.74	121	*e*T	T	08 33 21.0	
	comp=Z,50nm,0.3s						
WMOK	Wichita Mounta	88.92	46	IAmb	IAmb	06 56 44.9	
	comp=Z,6.0nm,0.8s						
WMOK	Wichita Mounta	88.92	46	P	P	06 55 54.2	+0.7
	baz=316						
WMOK	Wichita Mounta	88.92	46	P	P	06 55 53.9	+0.5
	baz=316						
P40A	Paris	88.93	38	P	P	06 55 53.8	+0.5
	baz=320						
J47A	Sunmer	89.30	32	P	P	06 55 55.8	+0.8
	baz=325						
J47A				P	P	06 55 55.8	+0.8
	baz=325						
M44A	Midewin, Midew	89.38	35	P	P	06 55 54.7	-0.7
	baz=323						
TUL1	Leonard	89.72	43	P	P	06 55 55.3	-1.9
	baz=318						
R40A	Maddies Statio	89.77	39	P	P	06 55 57.5	+0.2
	baz=320						
TX31	Lajitas Ar. Si	89.80	52	P	P	06 55 58.8	+1.0
	baz=314						
TX32	Lajitas Array	89.80	52	IAmb	IAmb	06 56 14.7	
	comp=Z,6.7nm,0.9s						
TXAR	Lajitas Array	89.80	52	P	P	06 55 58.6	+0.9
	comp=Z,3.6nm,0.7s,baz=298,slow=3.2,SNR=43						
TXAR				pP	pP	06 56 13.0	+0.1
	comp=Z,4.3nm,0.6s,baz=290,slow=3.0,SNR=18						
	comp=Z,3.6nm,0.7s						
ABTX	Abilene, Hawle	89.94	48	IAmb	IAmb	06 56 15.2	
	comp=Z,11nm,0.9s						
ABTX	Abilene, Hawle	89.94	48	P	P	06 55 58.8	+0.6
	baz=316						
ABTX	Abilene, Hawle	89.94	48	P	P	06 55 59.3	+1.1
	baz=316						
P43A	Skaggs, Pawnee	90.07	37	P	P	06 55 59.4	+0.7
	baz=322						
U38A	Gravette	90.08	42	P	P	06 55 59.4	+0.5
	baz=319						
HPIG		90.16	55	IAmb	IAmb	06 56 16.7	
	comp=Z,4.9nm,0.8s						
SADO	Sadowa	90.26	28	LR	LR	07 39 14.1	
	comp=Z,47nm,19.9s,baz=310,slow=37						
CCM	Cathedral Cave	90.47	39	P	P	06 56 00.4	-0.2
	baz=321						
CCM	Cathedral Cave	90.47	39	P	P	06 56 00.8	+0.2
	baz=321						
L48A	N Adams	90.52	32	P	P	06 56 01.2	+0.4
	baz=325						
L48A				P	P	06 56 01.2	+0.4
	baz=325						
SFIN	Lafayette	90.62	35	P	P	06 56 01.5	+0.3
	baz=324						
SFIN	Lafayette	90.62	35	P	P	06 56 01.7	+0.5
	baz=324						
VAE	Valguarnera	90.79	321	LR	LR	07 42 39.1	
	comp=Z,138nm,18.7s,baz=78,slow=39						
Z35A	Perchaven, San	90.81	46	P	P	06 56 02.9	+0.6
	baz=317						
N47A	Urbana	90.84	34	P	P	06 56 02.7	+0.4
	baz=324						
N47A				P	P	06 56 02.7	+0.4
	baz=324						
X37A	Clayton	90.93	44	P	P	06 56 03.4	+0.6
	baz=318						
T42A	Van Buren	91.34	39	P	P	06 56 05.0	+0.4
	baz=321						
JCT	Junction City	91.38	49	IAmb	IAmb	06 56 21.6	
	comp=Z,7.6nm,0.9s						
JCT	Junction City	91.38	49	P	P	06 56 04.6	-0.4
	baz=316						
JCT	Junction City	91.38	49	P	P	06 56 05.2	+0.2
	baz=316						
O48B	Farmland	91.59	34	P	P	06 56 06.0	+0.3
	baz=325						
WHTX	Lake Whitney,	91.67	47	P	P	06 56 06.4	+0.2
	baz=317						
WHTX	Lake Whitney,	91.67	47	P	P	06 56 07.1	+0.8
	baz=317						
MIAR	Mount Ida	91.94	43	pP	pP	06 56 23.6	+0.9
MIAR	Mount Ida	91.94	43	P	P	06 56 07.9	+0.4
	baz=320						
MIAR	Mount Ida	91.94	43	P	P	06 56 07.6	+0.2
	baz=320						
LONY	Lake Ozonia	91.99	25	P	P	06 56 07.4	-0.1
	baz=332						
KEST	Kesra	94.66	323	LR	LR	07 44 21.0	
	comp=Z,131nm,18.8s,baz=247,slow=39						
ESDC	Sonseca Array	96.88	334	LR	LR	07 44 47.8	
	comp=Z,240nm,18.5s,baz=14,slow=38						
TORD	Torodi Ar. Bea	117.02	315	PKP	PKPdf	07 01 42.9	-1.1
	comp=Z,0.7nm,0.6s,baz=19,slow=2.9,SNR=6.2						
TORD				pPKP	pPKPdf	07 01 59.2	-0.5
	comp=Z,0.3nm,0.4s,baz=52,slow=3.8,SNR=2.6						
ELIB	Princess Elisa	133.86	202	*d*PKP	PKiKP	07 02 17.1	+1.2
ELIB				*d*pPKP	pPKPdf	07 02 33.0	+2.7
H03N2	Juan Fernandez	147.03	95	T	T	09 47 05.6	
	baz=291,slow=76						
H03N3	Juan Fernandez	147.05	95	T	T	09 47 00.0	
	baz=291,slow=76						
H03N1	Juan Fernandez	147.05	95	T	T	09 47 06.7	
	baz=291,slow=76						

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*FUNV **01** 06:44:05.4, 8°.08N×72°.01W, h13^{km}, MW3.0*
*RSNC **01** 06:44:05.2±0.5, 8°.02N×72°.03W, h0^{km}±5^{km}, ML1.6*
ISC 01 06:44:03.0±2.6, **8°.06N**±0°.07×**71°.98W**±0°.05, **h7**^{km}±19^{km},
n12, σ1^{s}00/21, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	0.38	239	*e*P	Pb	06 44 12.5	+0.3
CAPV				*e*S	Sb	06 44 18.6	+0.1
PAMC	Pamplona, Colo	1.01	225	*e*P	Pb	06 44 22.7	-0.4
PAMC				*e*S	Sb	06 44 36.5	-0.3
PAMC				*i*		06 44 38.1	
	comp=Z,23nm,0.1s						
SOCV	Socops	1.14	79	*e*P	Pn	06 44 26.5	+1.1
SOCV				*e*S	Sn	06 44 42.6	+1.3
TAMC	Tame, Arauca	1.63	173	*e*P	Pn	06 44 32.8	+0.6
TAMC				*e*S	Sg	06 44 55.1	-0.3
TAMC				*i*		06 45 00.1	
	comp=Z,14nm,0.2s						
BARC	Barichara	1.88	219	*e*P	Pb	06 44 37.3	-0.6
BARC				*e*S	Sn	06 45 00.1	+0.1
BARC				*i*		06 45 03.6	
	comp=Z,8.5nm,0.5s						
BRRC	Barranca, Sant	1.96	241	*e*P	Pn	06 44 37.4	+0.7
BRRC				*e*S	Sb	06 45 03.0	-0.7
BRRC				*i*		06 45 07.4	
	comp=Z,2.4nm,0.2s						
RUSC	La Rusia	2.42	207	*e*P	Pn	06 44 44.7	+1.3
RUSC				*e*S	Sb	06 45 17.3	0.0
RUSC				*i*		06 45 23.6	
	comp=Z,2.3nm,0.2s						
CURV	Curarigua	2.78	46	*e*P	Pn	06 44 48.8	+0.7
CURV				*e*S	Sn	06 45 22.2	+0.1
PTBC	PUERTO BERRIO,	2.88	239	*e*S	Sn	06 45 23.5	-0.9
PTBC				*i*		06 45 34.8	
	comp=Z,2.0nm,0.2s						
MAPV	Macapo	3.90	63	*e*P	Pn	06 45 03.2	-0.2
BAUV	El Baul	4.00	77	*e*P	Pn	06 45 06.2	+1.4
BAUV				*e*S	Sn	06 45 49.2	-2.7
BENV	Beln	4.72	66	*e*P	Pn	06 45 15.1	+0.3

ROM 01 06:53:00.8±0.1, **42°.726N**±0°.004×**13°.263E**±0°.005,
h13^{km}, **ML1.3**/3, **1C-3D, Error ellipse: s-maj=0.4km**
s-min=0.1km az=235.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1214	Arquata del Tr	0.05	310	P	Pg	06 53 03.7	+0.3
T1214				S	Sg	06 53 05.4	+0.1
SMA1	SAN MARTINO	0.11	151	⇑P	Pg	06 53 04.3	+0.4
SMA1				S	Sg	06 53 06.2	+0.1
T1218	Civita (PG)	0.12	243	P	Pg	06 53 04.5	+0.4
T1218				S	Sg	06 53 06.9	+0.4
NRCA	Norcia	0.15	314	P	Pg	06 53 04.3	-0.2
NRCA				S	Sg	06 53 07.6	+0.5
NRCA				AML	AML		
	comp=N,106µm,0.7s						
NRCA				AML	AML		
	comp=E,168µm,0.3s						
T1212	Cascia, Frazio	0.16	279	P	Pg	06 53 05.1	+0.5
T1212				S	Sg	06 53 08.1	+0.8
MMO1	Montemonaco	0.18	15	P	Pg	06 53 05.5	+0.5
MMO1				S	Sb	06 53 08.7	-0.8
MC2	Monte Cornacci	0.19	344	S	Sg	06 53 09.1	+0.8
LNSS	Leonessa	0.21	233	P	Pg	06 53 05.8	+0.5
LNSS				S	Sg	06 53 09.4	+0.9
LNSS				AML	AML		
	comp=E,144µm,1.0s						
LNSS				AML	AML		
	comp=N,153µm,1.6s						
LNSS				AML	AML		
	comp=E,144µm,1.0s						
LNSS				AML	AML		
	comp=N,153µm,0.4s						
RM33	Pellescritta (	0.22	189	P	Pg	06 53 06.0	+0.4
RM33				S	Sg	06 53 09.7	+0.8
T1216	Preci, Frazion	0.24	313	⇓P	Pg	06 53 06.3	+0.3
T1217	Poggiodomo (PG	0.24	267	P	Pg	06 53 06.5	+0.5
T1215	Vallo di Nera,	0.30	285	⇓P	Pg	06 53 07.5	+0.5
T1211	Morro Reatino	0.36	237	⇓P	Pg	06 53 08.4	+0.4

ISK 01 06:53:38.6, 39°.53N×26°.05E, h3^{km}, ML1.6/3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GPNR	Gulpinar-Canak	0.10	137	Pg	Pg	06 53 41.1	+0.6
GPNR				Sg	Sg	06 53 43.0	+1.2
BOZC	Bozcaada	0.32	1	Pg	Pg	06 53 45.6	+0.9
BOZC				Sg	Sb	06 53 50.9	-1.6
CANM	Can-anakkale	0.91	58	Pg	Pb	06 53 56.9	-0.2
CANM				Sg	Sb	06 54 10.2	+0.5
CHOS	Chios island	1.14	180	Pn	Pb	06 54 01.2	+0.2
CHOS				Sn	Sn	06 54 17.7	0.0

BJI ***01*** *06:59:35.0±0.0, 6°.83S×130°.43E, h147^{km}, mb5.5/79, mB5.2/51*

MOS ***01*** *06:59:39.5±0.9, 6°.35S×130°.04E, h145^{km}, mb5.4/53, Error ellipse: s-maj=8.7km s-min=4.9km az=122.2*

NEIC ***01*** *06:59:40.3, 6°.36S×130°.02E, h127^{km}*

NEIC ***01*** *06:59:40.3, 6°.46S×130°.43E, h130^{km}, Moment Tensor Solution. Duration: 2^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.24; M$_{\theta\theta}$-0.66; M$_{\phi\phi}$0.42; M$_{r\theta}$0.18; M$_{\theta\phi}$-0.16; M$_{\phi r}$0.85; Fault plane solution: M$_0$1.01000×10^{17} NP1:ϕ$_s$34.93000°, δ81.01000°, λ53.19000°. NP2:ϕ$_s$293.14000°, δ37.74000°, λ165.21000°. Principal axes: T 1.1900, Plg42.0000°, Azm270.0000°; N -0.3500, Plg36.0000°, Azm42.0000°; P -0.8400, Plg27.0000°, Azm153.0000°;*

NEIC ***01*** *06:59:41.4±1.9, 6°.37S±0°.06×130°.04E±0°.03, h141^{km}±1^{km}, mb5.5/120, Mww5.3/17 Error ellipse: s-maj=10.8km s-min=4.4km az=196.0*

IDC ***01*** *06:59:41.3±0.7, 6°.40S×129°.99E, h151^{km}±5^{km}, mb4.9/34, mbtmp5.3/38, MS3.9/21, Error ellipse: s-maj=10.2km s-min=6.8km az=54.0*

DJA ***01*** *06:59:41.7±0.1, 6°S±1°×13°0E±°, h155^{km}±2^{km}, M5.3/95, mB5.8/60, mb5.6/95, MLv5.9/17, Mw5.3/65, Mw(mB)5.3/60, MwMwp5.1/17, Mwp5.3/17*

GCMT ***01*** *06:59:44.4±0.2, 6°.37S±0°.01×130°.13E±0°.01, h152^{km}±1^{km}, MW5.3/129, Moment Tensor Solution. s99,c134; s129,c206; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.36±.02; M$_{\theta\theta}$-0.24±.03; M$_{\phi\phi}$-0.12±.03; M$_{r\theta}$0.26±.02; M$_{\theta\phi}$0.01±.03; M$_{\phi r}$1.15±.02; Best double couple: M$_0$1.20300×10^{17} NP1:ϕ$_s$13.00000°, δ84.00000°, λ89.00000°. NP2:ϕ$_s$199.00000°, δ6.00000°, λ96.00000°. Principal axes: T 1.3220, Plg51.0000°, Azm282.0000°; N -0.2380, Plg1.0000°, Azm13.0000°; P -1.0850, Plg39.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

KLM ***01*** *06:59:44, 6°.26S×130°.21E, h177^{km}, mb5.8*

ISC 01 06:59:41.2±0.3, **6°.40S**±0°.03×**130°.02E**±0°.03, **h151**^{km}±2^{km}, **h151**^{km}**:pP-P, n791,** σ**1^{s}39**/864, **mb5.4**/181, **44C-19D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	1.87	356	P	Pn	07 00 16.4	+1.5
BNDI	Bandanaira	1.87	356	P	Pn	07 00 16.2	+1.3
BNDI				S	Sn	07 00 43.2	+2.4
SAUI	Saumlaki	2.02	141		Pn	07 00 16.1	-0.4
SAUI	Saumlaki	2.02	141	P	Pn	07 00 17.2	+0.6
SAUI	Saumlaki	2.02	141	P	Pn	07 00 16.8	+0.2
SAUI				S	Sn	07 00 44.7	+0.9
MSAI	Masohi	3.23	340	P	Pn	07 00 33.4	+1.9
MSAI				S	Sn	07 01 12.2	+1.7
AAI	Ambon	3.25	326	P	Pn	07 00 33.6	+1.7
AAI				S	Sn	07 01 13.6	+2.5
FAKI	Fak Fak	4.11	33	Pn	Pn	07 00 40.5	-2.5
FAKI	Fak Fak	4.11	33	P	Pn	07 00 41.4	-1.6
FAKI	Fak Fak	4.11	33	P	Pn	07 00 41.1	-1.9
NLAI	Namlea	4.28	317	P	Pn	07 00 47.4	+2.2
SANI	Sanana	5.91	317	P	Pn	07 01 08.5	+1.8
SANI	Sanana	5.91	317	P	Pn	07 01 07.8	+1.1
	340nm,0.9s,6µm1.8nm						
LBMI	Labuha	6.25	336	P	Pn	07 01 12.1	+0.7
	1µm,1.7s,15µm6.8nm						
RKPI	Ransiki, Papua	6.39	41	P	Pn	07 01 12.4	-0.8
	4µm,0.5s,47µm7µm50nm						
MTN	Manton Dam	6.49	170	P	Pn	07 01 12.9	-1.6
	baz=6.5,SNR=477						
MTN	Manton Dam	6.49	170	Pn	Pn	07 01 13.8	-0.7
MTN	Manton Dam	6.49	170	P	Pn	07 01 13.2	-1.3
SOEI	Soe	6.60	239	Pn	Pn	07 01 16.0	-0.1
SOEI	Soe	6.60	239	P	Pn	07 01 16.9	+0.9
SOEI	Soe	6.60	239	P	Pn	07 01 16.0	-0.1
	2µm,0.8s,16µm11µm31nm						
KDU	Kakadu	6.70	159	P	Pn	07 01 15.2	-2.0
	baz=6.7,SNR=1000						
KDU	Kakadu	6.70	159	P	Pn	07 01 15.5	-1.7
TNTI	Ternate	7.60	340	Pn	Pn	07 01 28.8	-0.6
TNTI	Ternate	7.60	340	P	Pn	07 01 30.2	+0.8
TNTI	Ternate	7.60	340	P	Pn	07 01 30.2	+0.8
	176nm,0.8s,2µm0.7nm						
SRPI	Serui, Papua	7.67	54	P	Pn	07 01 30.2	0.0
	379nm,0.5s,7µm5.5nm						
MMRI	Maumere	8.03	253	Pn	Pn	07 01 35.6	+0.6
MMRI	Maumere	8.03	253	P	Pn	07 01 36.5	+1.5
MMRI	Maumere	8.03	253	P	Pn	07 01 35.2	+0.2
	450nm,0.9s,6µm5µm						
LUWI	Luwuk	8.98	306	Pn	Pn	07 01 49.9	+2.2
LUWI	Luwuk	8.98	306	P	Pn	07 01 50.9	+3.2
LUWI	Luwuk	8.98	306	P	Pn	07 01 50.5	+2.8
	458nm,1.3s,6µm						
KNRA	Kununurra	9.30	188	P	Pn	07 01 48.9	-3.0
	baz=9.3,SNR=916						
KNRA	Kununurra	9.30	188	Pn	Pn	07 01 49.0	-2.9
KNRA	Kununurra	9.30	188	P	Pn	07 01 49.4	-2.5
BSSI	Bau Bau, Buton	9.48	271	P	Pn	07 01 56.8	+2.5
SMPI	Sarmi	9.71	64	P	Pn	07 01 57.3	-0.2
	380nm,1.1s						
BKSI	Bulukumba	9.90	276	P	Pn	07 02 01.5	+1.5
BASI	Baing, Sumba	10.08	247	P	Pn	07 02 02.2	-0.2
	522nm,0.6s,7µm4µm						
KAPI	Kappang	10.31	277	P	Pn	07 02 04.2	-1.2
	17nm,0.7s,baz=96,slow=7.1,SNR=25						
KAPI	Kappang	10.31	277	Pn	Pn	07 02 06.7	+1.3
KAPI	Kappang	10.31	277	P	Pn	07 02 07.9	+2.5
	228nm,1.2s						
KAPI	Kappang	10.31	277	P	Pn	07 01 57.5	-7.8
SPSI	Sidrap Palu	10.49	283	P	Pn	07 02 10.2	+2.4
MRSI	Marisa	10.57	310	P	Pn	07 02 11.3	+2.5
GENI	Genyem	10.80	70	P	Pn	07 02 12.2	+0.3
GENI	Genyem	10.80	70	P	Pn	07 02 11.1	-0.8
	292nm,0.5s,4µm						
SGSI	Sangihe	10.98	336	P	Pn	07 02 14.1	-0.1
	327nm,0.6s						
TOLI2	Tolitoli	11.87	309		Pn	07 02 27.4	+1.6
TOLI2	Tolitoli	11.87	309	P	Pn	07 02 28.1	+2.3
	412nm,1.1s						
MPSI	Mapaga	12.12	303	P	Pn	07 02 31.2	+2.1
PLAI	Plampang	12.37	258	P	Pn	07 02 30.4	-2.0
PLAI	Plampang	12.37	258	P	Pn	07 02 30.0	-2.4
	219nm,0.6s,3µm2µm						
FITZ	Fitzroy Crossi	12.38	200	P	Pn	07 02 29.5	-3.0
	baz=12						
FITZ	Fitzroy Crossi	12.38	200		Pn	07 02 30.0	-2.5
TWSI	Taliwang, Sumb	13.23	259	P	Pn	07 02 41.1	-2.3
	183nm,0.7s,2µm						
WB0	Warramunga Arr	13.95	163		Pn	07 02 49.0	-3.5
SKMP	Bagumbayan, Su	13.95	337	⇑eP	Pn	07 02 52.4	-0.2
SKMP				eS	S	07 05 35.3	-1.8
WRAB	Tennant Creek	14.09	163	d iP	Pn	07 02 49.5	-4.8
WRA	Warramunga Arr	14.10	163	P	Pn	07 02 50.3	-4.1
	71nm,0.6s,baz=350,slow=12,SNR=161						
WRA				S	Sn	07 05 18.3	-12
	296nm,0.7s,baz=347,slow=22,SNR=17						
WRA				LR	LR	07 09 09.7	
	comp=Z,1µm,19.9s,baz=337,slow=40						
WRA	Warramunga Arr	14.10	163	P	Pn	07 02 50.4	-4.0
DAV	Davao City (W)	14.10	342	P	Pn	07 02 55.5	+1.1
	115nm,0.3s,baz=52,slow=12,SNR=1.1						
DAV				S	Sn	07 05 35.1	+4.2
	223nm,0.4s,baz=243,slow=16,SNR=1.8						
SRBI	Singaraja	14.78	263	P	Pn	07 03 03.6	+0.6
DNP	Denpasar	14.85	260	P	Pn	07 03 04.1	+0.2
IGBI	Denpasar	14.94	260	P	Pn	07 03 05.0	+0.1
	237nm,0.8s,3µm						
COEN	Coen	14.96	121	P	Pn	07 03 02.2	-3.0
	baz=15,SNR=37						
COEN	Coen	14.96	121		Pn	07 03 05.1	-0.1
COEN	Coen	14.96	121	P	Pn	07 03 04.7	-0.5
BBKI	Banjar Baru	15.40	280	P	P	07 03 13.5	+1.5
ABJI	Asem Bagus	15.73	264	P	Pn	07 03 14.6	-0.1
	676nm,1.0s,6µm						
JAGI	Jajag, Banyuwa	15.87	262	P	Pn	07 03 14.4	-2.0
JAGI	Jajag, Banyuwa	15.87	262	P	Pn	07 03 15.2	-1.2
JAGI	Jajag, Banyuwa	15.87	262	P	Pn	07 03 13.7	-2.7
	305nm,0.6s,3µm2µm						
MTKI	Muara Teweh, K	16.03	289	P	P	07 03 20.2	+1.2
	523nm,0.9s,17µm5µm						
MYLDM	Lahad Datu	16.27	315	P	P	07 03 23.3	+1.8
BLJI	Banyuglugur	16.35	264	P	Pn	07 03 22.1	-0.3
	2µm,0.6s,13µm3µm						
GMJI	Gumukmas	16.54	263	P	P	07 03 21.7	-2.9
	203nm,0.8s,2µm						
QIS	Mount Isa	16.86	147	P	P	07 03 26.9	-1.2
	baz=17,SNR=162						
QIS	Mount Isa	16.86	147	P	P	07 03 27.0	-1.1
PMG	Port Moresby	17.23	101	P	Pn	07 03 34.3	+1.2
	764nm,1.0s,baz=291,slow=7.8,SNR=96						
PMG				S	S	07 06 35.3	-9.0
	62nm,0.6s,baz=202,slow=22,SNR=7.4						
PMG				LR	LR	07 10 44.4	
	comp=Z,621nm,21.6s,baz=275,slow=38						
PMG	Port Moresby	17.23	101	P	Pn	07 03 33.5	+0.5
PMG	Port Moresby	17.23	101	P	Pn	07 03 34.7	+1.7
PMG	Port Moresby	17.23	101	P	Pn	07 03 34.6	+1.6
PMG	Port Moresby	17.23	101	⇑eP	P	07 03 32.4	+0.2
BWJI	Bawean	17.27	271	P	Pn	07 03 33.5	0.0
	1µm,1.2s,14µm5µm						
GRJI	Gresik	17.43	267	P	P	07 03 33.5	-0.8
	403nm,1.0s,4µm2µm						
SPMM	Sapulut	17.46	309	P	Pn	07 03 37.0	+1.2
AS31	Alice Springs	17.57	168	P	P	07 03 35.5	-0.3
ASAR	Alice Springs	17.57	168	P	P	07 03 36.0	+0.2
	172nm,0.8s,baz=352,slow=10,SNR=799						
ASAR				S	S	07 06 39.1	-12
	154nm,0.9s,baz=357,slow=26,SNR=7.8						
ASAR				LR	LR	07 11 05.2	
	comp=Z,708nm,20.6s,baz=344,slow=39						
ASAR				ScP	ScP	07 11 28.2	-1.1
	35nm,0.8s,baz=329,slow=1.5,SNR=4.7						
ASAR	Alice Springs	17.57	168	P	P	07 03 35.5	-0.3
AS01	Alice Springs	17.57	168	P	P	07 03 36.1	+0.2
PSA00	Pilbara Seismi	18.01	212	P	P	07 03 40.7	+0.1
PSA00	Pilbara Seismi	18.01	212	P	P	07 03 39.6	-1.0
PSA00	Pilbara Seismi	18.01	212	P	Pn	07 03 41.4	-0.8
TBJI	Tambak Boyo	18.06	268	P	P	07 03 40.6	-0.6
	635nm,0.8s,7µm						
MTSU	Mount Surprise	18.18	131	P	Pn	07 03 43.4	-0.8
	baz=18,SNR=188						
MTSU	Mount Surprise	18.18	131	P	Pn	07 03 43.5	-0.8
NGJI	Ngawi	18.45	266	P	Pn	07 03 46.7	-0.7
	312nm,0.9s,4µm						
KKM	Kota Kinabalu	18.51	312	P	P	07 03 46.6	+0.3
KKM	Kota Kinabalu	18.51	312	P	Pn	07 03 47.8	-0.5
WRKA	Warakurna	18.60	185	P	P	07 03 47.5	+0.4
	baz=19,SNR=570						
WRKA	Warakurna	18.60	185	P	P	07 03 47.7	+0.6
PBKI	Pangkalan Bun	18.66	281	P	P	07 03 47.9	+0.2
	1µm,1.1s						
UWJI	Ujung Watu	18.95	269	P	P	07 03 51.0	0.0
	350nm,1.5s						
CUYO	Cuyo Island	19.34	332	⇑eP	Pn	07 03 57.6	-0.2
UGM	Wanagama	19.40	264	P	P	07 03 54.2	-1.7
UGM	Wanagama	19.40	264	P	P	07 03 56.0	+0.1
UGM	Wanagama	19.40	264	P	P	07 03 55.8	-0.1
	193nm,0.7s,3µm3µm						
SMRI	Semarang	19.45	267	P	P	07 03 56.9	+0.4
SMRI	Semarang	19.45	267	P	P	07 03 56.4	0.0
	379nm,0.9s,6µm5µm						
YOGI	Yogyakarta	19.62	265	P	P	07 03 57.9	-0.4
	328nm,1.4s,3µm						
SBUM	Sibu	19.83	296	P	P	07 04 01.5	+1.1
SBUM	Sibu	19.83	296	P	Pn	07 04 03.0	-0.6
ENPP	El Nido	20.43	329	⇓eP	P	07 04 08.4	+1.6
TV1H	Townsville Har	20.73	130	P	P	07 04 11.0	+1.0
BUSP	Coron	20.73	332	⇓eP	Pn	07 04 12.7	-1.6
CTA	Charters Tower	20.82	132	P	P	07 04 11.9	+0.9
	209nm,0.9s,baz=309,slow=11,SNR=101						
CTA				S	S	07 07 58.1	+2.9
	29nm,0.9s,baz=341,slow=18,SNR=2.2						
	209nm,0.9s						
CTAO	Charters Tower	20.82	132	P	P	07 04 11.5	+0.5
CTAO	Charters Tower	20.82	132	P	P	07 04 11.9	+0.9
CTAO	Charters Tower	20.82	132	P	P	07 04 11.5	+0.5
KPJI	Karang Pucung	20.96	266	P	P	07 04 10.5	-2.0
	453nm,0.8s,5µm7µm						
KSM	Kuching	21.18	291	P	P	07 04 14.2	-0.7
KSM	Kuching	21.18	291	P	P	07 04 16.1	+1.2
	197nm,1.1s						
KSM	Kuching	21.18	291	P	P	07 04 17.0	+2.1
BOAC	Boac	21.34	338	⇓eP	P	07 04 18.1	+1.5
JCJI	Jatiwangi	21.61	269	P	P	07 04 19.4	-0.2
	830nm,1.5s,15µm						
OOD	Oodnadatta	21.94	166	P	P	07 04 22.2	-0.6
	326nm,0.7s						
KRVT	Keravat (AS076	22.01	86	P	P	07 04 24.2	+0.5
	433nm,0.9s,baz=243,slow=2.4,SNR=30						
	433nm,0.9s						
LQP	Lukban	22.05	338	⇓eP	P	07 04 24.5	+0.3
RABL	Rabaul	22.16	85	P	P	07 04 25.8	+0.6
RABL	Rabaul	22.16	85	P	P	07 04 26.7	+1.5
GIRL	Giralia	22.19	222	P	P	07 04 26.2	+0.9
	baz=22,SNR=60						
GIRL	Giralia	22.19	222	P	P	07 04 26.2	+0.9
GIRL	Giralia	22.19	222	P	P	07 04 26.3	+0.9
BBJI	Bungbulang	22.23	266	P	P	07 04 23.8	-2.2
LUBP	Lubang	22.24	334	⇓iP	P	07 04 27.4	+1.6
MACP	Maragondon, Ca	22.51	336	⇑eP	P	07 04 28.6	+0.1
TPI	Tanjungpandan	22.58	278	P	P	07 04 29.9	+0.6
	313nm,0.9s,3µm						
QVP	Quezon City--P	22.72	337	⇑eP	P	07 04 32.4	+1.9
MEEK	Meekatharra	22.87	207	P	P	07 04 32.1	+0.2
	baz=23,SNR=41						
MEEK	Meekatharra	22.87	207	P	P	07 04 32.3	+0.5
CBJI	Citeko	23.02	269	P	P	07 04 31.9	-1.4
	2µm,0.8s,13µm						
SKJI	Sukabumi	23.31	267	P	P	07 04 34.5	-1.5
	976nm,0.7s,7µm						
INKA	Innaminka	23.54	156	P	P	07 04 38.9	+1.0
BALP	Baler	23.54	339	⇑eP	P	07 04 38.3	+0.3
SBJI	Serang	23.75	269	P	P	07 04 39.9	-0.1
	437nm,1.2s						
MULG	Mulgathing	24.05	171	P	P	07 04 43.2	+0.6
CGJI	Cibinong	24.17	268	P	P	07 04 42.3	-1.5
	1µm,0.9s,13µm						
PPBI	Pangkal Pinang	24.18	279	P	P	07 04 43.9	0.0
	240nm,1.1s,19µm						
QLP	Quilpie	24.21	148	P	P	07 04 44.5	+0.5
	baz=24,SNR=32						
QLP	Quilpie	24.21	148	P	P	07 04 44.6	+0.6
FORT	Forrest	24.32	184	P	P	07 04 45.1	+0.2
	baz=24,SNR=40						
FORT	Forrest	24.32	184	P	P	07 04 44.8	-0.1
FORT				IAmb	IAmb	07 05 22.4	
	comp=Z,137nm,0.7s						
FORT	Forrest	24.32	184	P	P	07 04 45.3	+0.4
XMI	Christmas Isla	24.39	259	P	P	07 04 45.6	-0.3
GUMO	Guam	24.74	37	P	P	07 04 48.9	0.0
	comp=Z,87nm,0.6s,baz=38,slow=22,SNR=4.3						
	comp=Z,87nm,0.6s						
BOLP	Bolinao	24.75	336	⇑eP	P	07 04 48.5	-0.4
BOLP				i S	S	07 08 53.3	-6.9
KLI	Kotabumi	25.09	272	P	P	07 04 52.6	+0.5
	comp=Z,284nm,1.0s,comp=Z,19µm						
LCRK	Leigh Creek	25.13	163	P	P	07 04 53.1	+0.8
PMBI	Palembang	25.40	277	P	P	07 04 59.1	+4.2
	comp=Z,2µm,1.0s						
PMBI	Palembang	25.40	277	P	P	07 04 57.7	+2.8
	comp=Z,2µm,1.0s						
KASI	Kota Agung	25.40	271	P	P	07 04 53.6	-1.3
	comp=Z,335nm,1.0s,comp=Z,3µm						
MDSI	Maura Dua	25.79	273	P	P	07 04 58.4	-0.1
	comp=Z,92nm,1.2s,comp=Z,2µm						
LWLI	Liwa	25.87	272	P	P	07 04 58.8	-0.5
	comp=Z,259nm,0.8s						
RK1H	Rockhampton Ha	25.95	133	P	P	07 05 00.8	+1.0
KMBL	Kambalda	25.98	196	P	P	07 05 00.3	+0.3
	baz=26,SNR=56						
KMBL	Kambalda	25.98	196	P	P	07 05 00.3	+0.3
DSRI	Dabo	26.06	282	P	P	07 05 00.9	0.0
	comp=Z,82nm,1.0s,comp=Z,5µm						
MORW	Morawa	26.13	209	P	P	07 05 01.4	0.0
	baz=26,SNR=26						
MORW	Morawa	26.13	209	P	P	07 05 01.2	-0.1
MORW				IAmb	IAmb	07 05 39.0	
	comp=Z,185nm,1.4s						
MORW	Morawa	26.13	209	P	P	07 05 01.6	+0.3
TPRI	Tanjung Pinang	26.47	285	P	P	07 05 05.5	+0.9
	comp=Z,106nm,0.9s						
LHSI	Lahat	26.51	274	P	P	07 05 04.6	-0.4
	comp=Z,156µm,0.9s						
GD1S	Gladstone Soft	26.71	133	P	P	07 05 07.9	+1.3
	comp=Z,122nm,0.7s						
RMQ	Roma	26.79	140	P	P	07 05 08.1	+0.7
	baz=27,SNR=29						
RMQ	Roma	26.79	140	P	P	07 05 08.3	+0.9
BBOO	Buckleboo	26.87	169	P	P	07 05 08.0	0.0
	baz=27,SNR=28						
BBOO	Buckleboo	26.87	169	P	P	07 05 07.7	-0.3
BBOO				IAmb	IAmb	07 06 00.3	
	comp=Z,214nm,1.6s						
BBOO	Buckleboo	26.87	169	P	P	07 05 08.1	+0.2
	comp=Z,59nm,0.8s						
MNAI	Manna	27.02	273	P	P	07 05 09.6	+0.1
MNAI	Manna	27.02	273	P	P	07 05 11.3	+1.8
	comp=Z,389nm,0.9s						
BLDU	Ballidu	27.14	206	P	P	07 05 10.5	+0.2
	baz=27,SNR=33						
BLDU	Ballidu	27.14	206	P	P	07 05 10.8	+0.4
BTDF	Bukit Timah Da	27.31	286	P	P	07 05 15.5	+3.4
	comp=Z,41nm,0.8s						
MYKOM	Kota Tinggi	27.36	286	P	P	07 05 12.7	+0.1
MYKOM				IAmb	IAmb	07 05 17.4	
	comp=Z,75nm,0.7s						
WHYH	Whyalla	27.41	166	P	P	07 05 13.5	+0.8
STKA	Stephens Creek	27.55	158	P	P	07 05 14.2	+0.1
	comp=Z,30nm,0.6s,baz=329,slow=9.5,SNR=72						
	comp=Z,30nm,0.6s						
STKA	Stephens Creek	27.55	158	P	P	07 05 14.2	+0.1
	baz=28,SNR=24						
STKA	Stephens Creek	27.55	158	P	P	07 05 13.4	-0.7
STKA	Stephens Creek	27.55	158	P	P	07 05 14.3	+0.2
STKA	Stephens Creek	27.55	158	P	P	07 05 13.4	-0.7
STKA				pmax	pmax		
	comp=Z,18nm,1.1s						
KLBR	Kellerberrin	27.56	203	P	P	07 05 14.4	+0.3
	baz=28,SNR=31						
KLBR	Kellerberrin	27.56	203	P	P	07 05 14.7	+0.6
EIDS	Eidsvold	27.59	135	P	P	07 05 14.5	0.0
	baz=28,SNR=6.7						
EIDS	Eidsvold	27.59	135	P	P	07 05 14.2	-0.3
EIDS	Eidsvold	27.59	135	P	P	07 05 14.7	+0.2
MASI	Maura Aman, Be	27.87	275	P	P	07 05 17.2	+0.1
	comp=Z,120nm,1.1s,comp=Z,1µm						
DLV	T Lat	28.12	310	P	P	07 05 20.3	+0.8
HTT	Hallett	28.13	164	P	P	07 05 19.4	+0.2
	baz=28,SNR=14						
HTT	Hallett	28.13	164	P	P	07 05 20.2	+0.9
AULRC	Lightning Ridg	28.49	146	P	P	07 05 22.9	+0.5
MUN	Mundaring	28.53	205	P	P	07 05 23.0	+0.3
	baz=29,SNR=10						
MUN	Mundaring	28.53	205	P	P	07 05 23.1	+0.3
CMSA	Cobar Meteorol	28.99	152	P	P	07 05 27.3	+0.5
	baz=29,SNR=122						
CMSA	Cobar Meteorol	28.99	152	P	P	07 05 27.4	+0.6
SDSI	Sungai Dareh	29.04	280	P	P	07 05 26.5	-0.9
	comp=Z,258nm,1.0s,comp=Z,3µm						
JRMM	Jerantut	29.34	290	P	P	07 05 31.0	+0.9
BKNI	Bangkinang	29.68	282	P	P	07 05 36.8	+3.6
	comp=Z,306nm,1.3s						
BKNI	Bangkinang	29.68	282	P	P	07 05 33.8	+0.6
	comp=Z,301nm,1.1s						
HNR	Honiara	29.79	98	P	P	07 05 34.0	-0.1
	comp=Z,3µm,0.8s,baz=207,slow=2.8,SNR=7.0						
HNR				LR	LR	07 18 41.2	
	comp=Z,4µm,18.6s,baz=278,slow=38						
HNR	Honiara	29.79	98	P	P	07 05 33.7	-0.4
HNR	Honiara	29.79	98	P	P	07 05 34.3	+0.2
HNR	Honiara	29.79	98	P	P	07 05 33.7	-0.4
HNR				pmax	pmax		
	comp=Z,300nm,0.9s						
AUBSH	Beerwah State	29.83	136	P	P	07 05 34.4	+0.1
PDSI	Padang	29.99	279	P	P	07 05 34.8	-1.1
	comp=Z,136nm,1.1s						
AUWSH	Wavell State H	30.24	136	P	P	07 05 38.3	+0.4
RKGY	Rocky Gully	30.54	201	P	P	07 05 42.3	+1.8
	baz=31,SNR=14						
RKGY	Rocky Gully	30.54	201	P	P	07 05 42.2	+1.8
IPM	Ipoh	30.90	290	P	P	07 05 42.3	-1.6
IPM				IAmb	IAmb	07 05 47.7	
	comp=Z,31nm,0.6s						
IPM	Ipoh	30.90	290	P	P	07 05 43.6	-0.3
	comp=Z,44nm,1.1s						
IPM	Ipoh	30.90	290	P	P	07 05 47.0	+3.1
AUDCS	Dubbo College	31.01	148	P	P	07 05 45.5	+0.9
PATS	Pohnpei	31.14	66	P	P	07 05 46.9	+0.8
	baz=31,SNR=4.5						
PATS	Pohnpei	31.14	66	P	P	07 05 47.2	+1.2
SSLB	Suanglung	31.29	344	P	P	07 05 44.8	-2.4
SSLB	Suanglung	31.29	344	P	P	07 05 47.0	-0.1
ARMA	Armidale	31.35	142	P	P	07 05 49.2	+1.4
	baz=31,SNR=23						
ARMA	Armidale	31.35	142	P	P	07 05 48.9	+1.1
ARMA				IAmb	IAmb	07 05 50.2	
	comp=Z,68nm,0.9s						
ARMA	Armidale	31.35	142	P	P	07 05 49.0	+1.2
AUPHS	Peel High Scho	31.40	144	P	P	07 05 49.0	+0.9
ARPS	Mount Arapiles	32.10	162	P	P	07 05 55.1	+1.0
	baz=32,SNR=69						
ARPS	Mount Arapiles	32.10	162	P	P	07 05 55.2	+1.1
QIZ	Qiongzhong	32.16	322	P	P	07 05 55.1	+0.2
QIZ				PP	PP	07 07 11.7	+1.1
QIZ				S	S	07 10 59.8	+3.2
QIZ				pmax	pmax		
	comp=Z,91nm,1.1s						
QIZ				LR	LR		
	comp=Z,300nm,13.6s						
QIZ	Qiongzhong	32.16	322	IAmb	IAmb	07 05 56.3	
	comp=Z,106nm,1.1s						
QIZ	Qiongzhong	32.16	322	P	P	07 05 55.2	+0.4
QIZ	Qiongzhong	32.16	322	P	P	07 05 55.0	+0.2
RPSI	Rantau Prapat	32.34	285	P	P	07 05 55.0	-1.5
RPSI				IAmb	IAmb	07 05 59.9	
	comp=Z,98nm,0.8s						
PSI	Prapat	32.37	285	P	P	07 05 55.2	-1.7
PSI	Prapat	32.37	285	P	P	07 05 55.0	-1.9
PSI				pmax	pmax		
	comp=Z,98nm,0.8s						
YNG	Young	32.55	151	P	P	07 05 59.5	+1.4
KNMB	Chin-men Tao	32.71	340	P	P	07 05 58.6	-1.0
KNMB				IAmb	IAmb	07 06 01.0	

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                comp=Z,96nm,0.9s
JOW    Kunigami          33.08 357  P     P         07 06 02.5  -0.2
JOW                                 IAmb  IAmb      07 06 04.3
                comp=Z,38nm,0.7s
GSI    Gunungsitoli      33.28 282  P     P         07 06 03.5  -1.2
GSI    Gunungsitoli      33.28 282  P     P         07 06 03.0  -1.7
                comp=Z,321nm,1.0s,comp=Z,3µm
SYDH   Sydney Hard Ro    33.31 148  P     P         07 06 06.3  +1.6
BRAT   Ballarat          33.49 160  P     P         07 06 08.1  +1.9
RIV    Riverview         33.59 147  P     P         07 06 09.2  +2.1
                baz=34
CAN    Canberra          33.66 151  P     P         07 06 08.4  +0.6
CAN                                 IAmb  IAmb      07 06 10.5
                comp=Z,136nm,0.8s
CAN    Canberra          33.66 151  P     P         07 06 09.0  +1.2
CAN    Canberra          33.66 151  P     P         07 06 08.4  +0.6
CAN                                 pmax  pmax
                comp=Z,136nm,0.8s
CAN    Canberra          33.66 151  P     P         07 06 09.1  +1.3
KCSI   Kotacane, Aceh    33.67 286  P     P         07 06 05.5  -2.6
                comp=Z,36nm,0.7s
SRIT   Nakonsritamara    33.79 296  P     P         07 06 08.8  -0.3
SRIT                                IAmb  IAmb      07 06 10.1
                comp=Z,68nm,0.8s
SRIT   Nakonsritamara    33.79 296  P     P         07 06 09.7  +0.6
CNB    Canberra Magne    33.83 151  P     P         07 06 11.2  +1.9
WOLH   Wollongong Har    33.88 148  P     P         07 06 12.1  +2.5
                comp=Z,118nm,0.8s
SURA   Surathani         34.01 297  P     P         07 06 11.7  +0.7
TOO    Toolangi          34.07 158  P     P         07 06 13.3  +2.0
                baz=34,SNR=21
TOO    Toolangi          34.07 158  P     P         07 06 12.9  +1.6
TOO                                 IAmb  IAmb      07 06 14.5
                comp=Z,56nm,0.9s
TOO    Toolangi          34.07 158  P     P         07 06 13.5  +2.2
TOO    Toolangi          34.07 158  P     P         07 06 12.9  +1.6
TOO                                 pmax  pmax
                comp=Z,56nm,1.0s
GEXS   Deakin Univers    34.20 160  P     P         07 06 15.7  +3.4
AUSMG  Snowy Mountain    34.38 153  P     P         07 06 15.9  +1.9
SNSI   Sinabang, Aceh    34.76 284  P     P         07 06 18.9  +1.4
                comp=Z,88nm,1.0s
LHMI   Lhok Sumawe       34.98 289  P     P         07 06 18.7  -0.6
LHMI   Lhok Sumawe       34.98 289  P     P         07 06 18.1  -1.2
                comp=Z,382nm,0.9s,comp=Z,3µm
NAYO   Nakonayok         35.13 306  P     P         07 06 20.8  +0.2
MILA   Mila              35.15 153  P     P         07 06 22.6  +2.0
                baz=35,SNR=4.6
MILA   Mila              35.15 153  P     P         07 06 22.2  +1.6
MLSI   Meulaboh, Aceh    35.20 287  P     P         07 06 18.6  -2.6
                comp=Z,167nm,0.6s
JCJ    Chichijima        35.32  19  P     P         07 06 22.2  +0.1
                comp=Z,114nm,0.6s,baz=279,slow=19,SNR=6.5
JCJ                                 LR    LR        07 18 20.4
                comp=Z,140nm,20.9s,baz=176,slow=32
                comp=Z,114nm,0.6s
NONG   Nongkai           35.98 313  P     P         07 06 28.1  +0.3
KOUNC  Koumac, New Ca    36.06 116  P     P         07 06 27.9  -0.6
KOUNC                               IAmb  IAmb      07 06 30.2
                comp=Z,49nm,0.9s
KOUNC  Koumac, New Ca    36.06 116  P     P         07 06 29.4  +0.9
GULI   GuiLin            36.85 329 ⇑P     P         07 06 40.8  +5.7
GULI                                S     S         07 12 10.4  +1.8
GULI                                pmax  pmax
                comp=Z,40nm,1.2s
GULI                                LR    LR
                comp=Z,170nm,14.1s
GULI                                LR    LR
                comp=Z,240nm,15.2s
GULI                                LR    LR
                comp=Z,330nm,17.3s
SRDT   SRDT              36.94 304  P     P         07 06 37.2  +1.2
JSU    Suzuyama          37.70   1  P     P         07 06 43.3  +1.1
AULHS  Lilydale High     37.94 159  P     P         07 06 45.8  +1.7
CORO   Coronation Par    38.09 159  P     P         07 06 47.7  +2.4
NOUC   Port Laguerre     38.33 118  P     P         07 06 48.3  +0.6
NOUC   Port Laguerre     38.33 118  P     P         07 06 48.1  +0.4
NOUC                                pP    pP        07 07 21.1  +1.7
PHRA   Phrae             38.41 311  P     P         07 06 48.9  +0.6
DZM    Mont Dzumac       38.45 118 eP     P         07 06 49.0  +0.3
                comp=Z,177nm,1.4s
DZM    Mont Dzumac       38.45 118 eLR    LR        07 17 29.2
                comp=Z,642nm,26.1s
DZM    Mont Dzumac       38.45 118  P     P         07 06 49.0  +0.3
                comp=Z,42nm,1.0s,baz=254,slow=9.8,SNR=16
                comp=Z,42nm,1.0s
DZM    Mont Dzumac       38.45 118  P     P         07 06 49.6  +0.8
DZM                                 IAmb  IAmb      07 06 50.7
                comp=Z,91nm,1.2s
DZM    Mont Dzumac       38.45 118  P     P         07 06 49.7  +0.9
DZM    Mont Dzumac       38.45 118  P     P         07 06 49.5  +0.8
YATNC  Mamie plateau,    38.84 117  P     P         07 06 53.5  +1.6
OUENC  Ouen Island, N    38.91 118  IAmb  IAmb      07 06 54.7
                comp=Z,87nm,1.1s
OUENC  Ouen Island, N    38.91 118  P     P         07 06 53.9  +1.4
MOO    Moorlands         38.98 160  P     P         07 06 54.4  +1.7
                baz=39,SNR=20
MOO    Moorlands         38.98 160  P     P         07 06 55.1  +2.3
JNU    Nakatsue          39.32   1  P     P         07 06 55.4  -0.3
                comp=Z,14nm,0.8s,baz=351,slow=0.9,SNR=9.4
JNU                                 LR    LR        07 22 13.0
                comp=Z,166nm,19.8s,baz=196,slow=34
                comp=Z,14nm,0.8s
JNU    Nakatsue          39.32   1  P     P         07 06 55.3  -0.3
JNU    Nakatsue          39.32   1  P     P         07 06 56.1  +0.4
CM31   Chiang Mai Arr    39.37 309  IAmb  IAmb      07 06 58.2
                comp=Z,192nm,1.2s
CM31   Chiang Mai Arr    39.37 309  P     P         07 06 57.0  +0.7
                SNR=40
CMAR   Chiang Mai Arr    39.37 309  P     P         07 06 56.8  +0.4
                comp=Z,61nm,0.9s,baz=141,slow=7.4,SNR=192
CMAR                                PcP   PcP       07 09 01.9   0.0
                comp=Z,13nm,0.9s,baz=157,slow=3.1,SNR=7.0
CMAR                                ScP   ScP       07 12 35.9  -0.6
                comp=Z,3.1nm,0.4s,baz=165,slow=3.7,SNR=13
CMAR                                LR    LR        07 25 57.8
                comp=Z,67nm,18.1s,baz=130,slow=40
                comp=Z,61nm,0.9s
CMAR   Chiang Mai Arr    39.37 309 i P    P         07 06 56.7  +0.4
CMAR                                pmax  pmax
                comp=Z,43nm,0.8s
CRAI   Chiangrai         39.37 313  IAmb  IAmb      07 06 58.0
                comp=Z,142nm,1.4s
TAU    Tasmania Unive    39.44 160  P     P         07 06 57.6  +1.1
TAU                                 IAmb  IAmb      07 06 59.4
                comp=Z,54nm,1.1s
TAU    Tasmania Unive    39.44 160  P     P         07 06 58.6  +2.1
TAU    Tasmania Unive    39.44 160  P     P         07 06 57.6  +1.1
TAU                                 pmax  pmax
                comp=Z,54nm,1.1s
TAU    Tasmania Unive    39.44 160  P     P         07 06 58.8  +2.2
CHTO   Chiang Mai        39.58 310  P     P         07 06 58.1  +0.1
CHTO   Chiang Mai        39.58 310  P     P         07 06 58.1  +0.1
CHTO                                pmax  pmax
                comp=Z,9.0nm,1.2s
MARNC  Mare, Loyalty     39.68 116  P     P         07 07 01.8  +2.9
                comp=Z,2.2nm,1.3s
WHN    Wuhan             39.69 339 ⇑P     P         07 06 59.9  +1.2
WHN                                 pP    pwP       07 07 33.6  -2.8
WHN                                 S     S         07 12 52.2  +1.1
WHN                                 sS    sS        07 13 46.6  -1.0
WHN                                 pmax  pmax
                comp=Z,360nm,1.0s
NJ2    Nanjing           39.70 345 ⇑P     P         07 06 59.4  +0.6
NJ2                                 pP    pP        07 07 28.7  -1.8
NJ2                                 ScP   ScP       07 12 37.6  +0.2
NJ2                                 pmax  pmax
                comp=Z,37nm,0.6s
NJ2                                 pmax  pmax
                comp=Z,220nm,3.7s
GYA    Guiyang           39.75 326⇓iP     P         07 07 00.2  +0.7
GYA                                 pP    pP        07 07 28.7  -2.3
GYA                                 S     S         07 12 50.9  -1.5
GYA                                 SS    SS        07 15 58.9  +4.2
GYA                                 pmax  pmax
                comp=Z,79nm,0.9s
JMN    Monobe            40.08   5  P     P         07 07 02.6  +0.6
JMN                                 IAmb  IAmb      07 07 03.7
                comp=Z,44nm,0.7s
JMN    Monobe            40.08   5  P     P         07 07 03.0  +1.0
JHJ    Hachijo jima 2    40.38  13  LR    LR        07 21 57.0
                comp=Z,301nm,18.2s,baz=260,slow=33
KMI    Kunming           41.07 321 ⇑P     P         07 07 11.7  +1.2
KMI                                 pP    pP        07 07 39.8  -2.4
KMI                                 S     S         07 13 08.7  -3.5
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KMI                                 pmax  pmax
                comp=Z,79nm,1.3s
KMI                                 LR    LR
                comp=Z,110nm,12.5s
KMI                                 LR    LR
                comp=Z,170nm,14.3s
KMI                                 LR    LR
                comp=Z,250nm,18.5s
KMI    Kunming           41.07 321  P     P         07 07 11.6  +1.1
JHS    Saijyo            41.28   4  P     P         07 07 12.9  +1.1
ENH    Enshi             41.45 333  IAmb  IAmb      07 07 14.2
                comp=Z,54nm,0.7s
ENH    Enshi             41.45 333  P     P         07 07 13.2   0.0
ENH    Enshi             41.45 333  P     P         07 07 12.9  -0.3
INU    Inuyama           42.05   9  P     P         07 07 19.4  +1.4
                comp=Z,25nm,0.7s
JGF    Kuroka            42.35   9  P     P         07 07 19.9  -0.6
JGF    Kuroka            42.35   9  P     P         07 07 20.7  +0.2
TJN    Taejon            42.63 357  P     P         07 07 22.3  -0.3
TJN                                 IAmb  IAmb      07 07 24.7
                comp=Z,171nm,1.0s
TJN    Taejon            42.63 357  P     P         07 07 23.5  +0.8
TJN    Taejon            42.63 357  P     P         07 07 22.3  -0.3
TJN                                 pmax  pmax
                comp=Z,171nm,1.0s
PZH    PanZhiHua         42.68 321  P     P         07 07 23.4  -0.1
PZH                                 pmax  pmax
                comp=Z,140nm,0.9s
PZH                                 pmax  pmax
                comp=Z,130nm,3.5s
PZH                                 LR    LR
                comp=Z,480nm,20.1s
PZH                                 LR    LR
                comp=Z,450nm,19.0s
PZH                                 LR    LR
                comp=Z,640nm,18.6s
MJAR   Matsushiro Arr    43.40  10  P     P         07 07 27.9  -1.0
                comp=Z,33nm,0.7s,baz=186,slow=9.4,SNR=98
MJAR                                ScP   ScP       07 12 51.9  -0.3
                comp=Z,2.1nm,0.3s,baz=190,slow=4.5,SNR=7.0
MJAR                                LR    LR        07 24 29.4
                comp=Z,177nm,20.8s,baz=196,slow=34
                comp=Z,33nm,0.7s
MAJO   Matsushiro        43.41  10  P     P         07 07 27.7  -1.3
MAJO                                IAmb  IAmb      07 07 29.3
                comp=Z,59nm,0.7s
MAJO   Matsushiro        43.41  10  P     P         07 07 28.2  -0.8
                comp=Z,78nm,0.7s
MAJO   Matsushiro        43.41  10  P     P         07 07 27.7  -1.3
MAJO                                pmax  pmax
                comp=Z,59nm,0.7s
MAJO   Matsushiro        43.41  10  P     P         07 07 28.1  -0.9
MAJO                                ScP   ScP       07 12 53.5  +1.4
MJB9   Matsu-Tunnel      43.41  10  IAmb  IAmb      07 07 30.2
                comp=Z,57nm,0.7s
MND    Mandalay          43.60 311  P     P         07 07 30.8   0.0
KSAR   Wonju Array Be    43.66 358  P     P         07 07 30.9  -0.1
KSAR   Wonju Array Be    43.66 358  P     P         07 07 30.9  -0.1
KSRS   Korea Array       43.67 358  P     P         07 07 31.1  +0.1
                comp=Z,6.9nm,0.5s,baz=174,slow=9.2,SNR=26
KSRS                                PcP   PP        07 09 16.6  +0.7
                comp=Z,2.0nm,0.7s,baz=184,slow=3.5,SNR=5.4
KSRS                                ScP   ScP       07 12 52.6  -0.6
                comp=Z,4.5nm,0.8s,baz=179,slow=3.8,SNR=9.5
KSRS                                LR    LR        07 24 48.3
                comp=Z,98nm,21.5s,baz=185,slow=34
                comp=Z,6.9nm,0.5s
KS19   Wonju Array Si    43.72 358  P     P         07 07 32.1  +0.6
TNCH   TengChong         43.77 317 ⇑P     P         07 07 32.8  +0.5
TNCH                                sP    sP        07 08 21.0  +0.3
TNCH                                pmax  pmax
                comp=Z,490nm,3.8s
LYN    LuoYang           43.98 339⇑iP     P         07 07 33.8  +0.2
LYN                                 pP    pwP       07 08 08.7  -2.8
LYN                                 ScP   ScP       07 12 55.0  +0.5
LYN                                 S     S         07 13 50.4  -3.8
LYN                                 ScS   SS        07 17 17.8  +0.7
LYN                                 pmax  pmax
                comp=Z,44nm,1.2s
WAKE   Wake Island       44.20  54  P     P         07 07 36.3  +0.8
CD2    Chengdu           44.81 327  P     P         07 07 39.9  -0.4
CD2                                 pP    pP        07 08 12.1  -0.4
CD2                                 sP    sP        07 08 26.0  -2.9
CD2                                 S     S         07 14 10.2  +3.7
CD2                                 pmax  pmax
                comp=Z,80nm,0.8s
CD2                                 pmax  pmax
                comp=Z,180nm,4.9s
CD2                                 LR    LR
                comp=Z,260nm,14.7s
CD2                                 LR    LR
                comp=Z,230nm,15.7s
CD2                                 LR    LR
                comp=Z,230nm,16.2s
JSD    Sado              44.87   9  P     P         07 07 39.9  -0.7
JSD    Sado              44.87   9  P     P         07 07 40.8  +0.2
XAN    Xi'an             44.91 335 ⇑P     P         07 07 40.2  -0.8
XAN                                 pP    pP        07 08 13.7  +0.4
XAN                                 ScP   ScP       07 12 58.4   0.0
XAN                                 S     S         07 14 01.1  -6.6
XAN                                 ScS   ScS       07 17 22.0  -0.8
XAN                                 pmax  pmax
                comp=Z,72nm,1.2s
XAN                                 pmax  pmax
                comp=Z,270nm,9.2s
XAN    Xi'an             44.91 335  P     P         07 07 40.5  -0.5
XAN                                 ScP   ScP       07 12 58.6  +0.2
JMM    Marumori          45.17  12  IAmb  IAmb      07 07 47.8
                comp=Z,76nm,0.7s
JMM    Marumori          45.17  12  P     P         07 07 43.7  +0.8
HNS    HongShan          45.86 343 ⇓P     P         07 07 48.0  -0.4
HNS                                 pP    pP        07 08 21.7  +0.8
HNS                                 ScP   ScP       07 13 02.2   0.0
HNS                                 S     S         07 14 17.1  -4.0
HNS                                 pmax  pmax
                comp=Z,73nm,1.1s
TIY    Taiyuan           46.85 341 eP     P         07 07 56.9  +0.7
TIY                                 S     S         07 14 33.0  -2.5
TIY                                 pmax  pmax
                comp=Z,29nm,0.6s
TIY                                 pmax  pmax
                comp=Z,190nm,4.3s
BJT    Baijiatuau        47.93 346  IAmb  IAmb      07 08 05.8
                comp=Z,60nm,1.0s
BJT    Baijiatuau        47.93 346  P     P         07 08 04.5  +0.1
BJT    Baijiatuau        47.93 346  P     P         07 08 04.7  +0.3
BJT                                 pP    pP        07 08 38.0  +0.9
BJI    Beijing           47.95 346  P     P         07 08 04.6  +0.1
BJI                                 pP    pP        07 08 38.5  +1.3
BJI                                 PcP   PcP       07 09 32.0  +1.6
BJI                                 S     S         07 14 51.5  +0.8
BJI                                 pmax  pmax
                comp=Z,33nm,1.1s
MSVF   Nonsavu           48.17 108  P     P         07 08 07.3  +0.6
                comp=Z,18nm,0.9s,baz=242,slow=6.3,SNR=5.7
                comp=Z,18nm,0.9s
MSVF   Nonsavu           48.17 108  P     P         07 08 07.6  +0.8
MSVF   Nonsavu           48.17 108  P     P         07 08 08.4  +1.7
MSVF   Nonsavu           48.17 108  P     P         07 08 07.6  +0.8
MSVF                                pmax  pmax
                comp=Z,47nm,1.1s
MSVF   Nonsavu           48.17 108  P     P         07 08 07.6  +0.8
MSVF                                ScP   ScP       07 13 12.1  -0.4
FUNA   Funafuti          48.78  96  P     P         07 08 10.1  -1.3
SHL    Shillong          48.82 312  IAmb  IAmb      07 08 12.3
                comp=Z,127nm,1.0s
SHL    Shillong          48.82 312  P     P         07 08 11.4  -0.2
                SNR=41
LZH    Lanzhou           48.89 332 eP     P         07 08 13.0  +0.9
LZH                                 pP    pP        07 08 42.6  -2.2
LZH                                 ScP   ScP       07 13 15.4  +0.1
LZH                                 S     S         07 14 59.3  -5.2
LZH                                 pmax  pmax
                comp=Z,110nm,1.4s
LZH                                 pmax  pmax
                comp=Z,520nm,5.6s
LZH                                 LR    LR
                comp=Z,260nm,15.5s
LZH                                 LR    LR
                comp=Z,210nm,13.1s
LZH                                 LR    LR
                comp=Z,140nm,14.7s
HHC    Hu-ho-hao-te      49.99 342 eP     P         07 08 20.9  +0.7
HHC                                 S     S         07 15 16.9  -2.6
HHC                                 sS    sS        07 16 16.5  -1.5
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HHC                                 ScS   ScS       07 17 53.6  -2.7
HHC                                 SS    SS        07 18 50.1  -4.5
HHC                                 pmax  pmax
                comp=Z,95nm,1.1s
HHC                                 pmax  pmax
                comp=Z,290nm,5.1s
CN2    Changchun         50.14 356  P     P         07 08 21.0  -0.2
CN2                                 PcP   PcP       07 09 38.9  +0.5
CN2                                 ScP   ScP       07 13 19.7  -0.5
CN2                                 S     S         07 15 22.4  +1.2
CN2                                 pmax  pmax
                comp=Z,20nm,1.3s
CN2                                 pmax  pmax
                comp=Z,300nm,4.0s
BTO    Baotou            50.27 340 eP     P         07 08 23.2  +0.9
BTO                                 S     S         07 15 23.9  +0.6
BTO                                 LR    LR
                comp=Z,370nm,6.4s
BTO                                 LR    LR
                comp=Z,510nm,11.6s
USA0B  Ussuriysk Arra    50.40   2c iP    P         07 08 23.5  +0.4
USRK   Ussuriysk Ar.     50.40   2  P     P         07 08 23.6  +0.5
                comp=Z,15nm,0.7s,baz=182,slow=6.7,SNR=28
                comp=Z,15nm,0.7s
JCZ    Jackson Bay       50.55 144  P     P         07 08 26.1  +1.6
RVAZ   Riverhead Bore    50.61 133  P     P         07 08 25.7  +0.9
MDJ    Mudanjiang        50.79 360  P     P         07 08 26.8  +0.8
MDJ                                 pP    pP        07 08 59.0  -0.4
MDJ                                 sP    sP        07 09 12.0  -3.7
MDJ                                 S     S         07 15 30.1   0.0
MDJ                                 pmax  pmax
                comp=Z,26nm,0.7s
MDJ                                 pmax  pmax
                comp=Z,200nm,4.7s
MDJ    Mudanjiang        50.79 360  P     P         07 08 26.9  +0.9
MDJ    Mudanjiang        50.79 360  P     P         07 08 26.6  +0.6
MDJ                                 pP    pP        07 08 59.1  -0.3
FOZ    Fox Glacier       50.85 143  P     P         07 08 27.4  +0.9
FOZ                                 IAmb  IAmb      07 08 29.1
                comp=Z,55nm,0.9s
PALK   Pallekele         51.04 285  P     P         07 08 27.4  -1.1
                comp=Z,44nm,1.0s,baz=209,slow=8.1,SNR=15
                comp=Z,44nm,1.0s
PALK   Pallekele         51.04 285  P     P         07 08 27.6  -0.9
PALK                                IAmb  IAmb      07 08 32.4
                comp=Z,83nm,1.1s
PALK   Pallekele         51.04 285  P     P         07 08 27.6  -0.9
PALK                                pmax  pmax
                comp=Z,83nm,1.1s
PALK   Pallekele         51.04 285  P     P         07 08 27.9  -0.6
PALK   Pallekele         51.04 285  P     P         07 08 27.4  -1.1
KUZ    Kuaotunu          51.43 133  P     P         07 08 32.3  +1.3
LBZ    Lake Benmore      51.55 144  P     P         07 08 32.3  +0.5
LBZ                                 IAmb  IAmb      07 08 33.7
                comp=Z,67nm,0.8s
ASAJ   Asahikawa         51.55  12  LR    LR        07 29 17.9
                comp=Z,109nm,20.5s,baz=177,slow=34
XLT    XiLinHaoTe        51.63 347⇑iP     P         07 08 32.9  +0.5
XLT                                 pP    pP        07 09 06.8  +1.2
XLT                                 ScP   ScP       07 13 26.3  -0.4
XLT                                 S     S         07 15 41.6  -0.4
XLT                                 pmax  pmax
                comp=Z,44nm,1.1s
RPZ    Rata Peaks        51.69 143  P     P         07 08 33.1  +0.2
                comp=Z,78nm,1.0s,baz=332,slow=1.5,SNR=26
                comp=Z,78nm,1.0s
LSA    Lhasa             51.78 316  P     P         07 08 35.1  +0.8
LSA                                 pmax  pmax
                comp=Z,210nm,0.8s
LSA    Lhasa             51.78 316  P     P         07 08 35.1  +0.8
LSA    Lhasa             51.78 316  P     P         07 08 35.3  +1.1
LSA    Lhasa             51.78 316  P     P         07 08 35.4  +1.1
BNX    BinXian           51.96 358 ⇑P     P         07 08 33.7  -1.0
BNX                                 pP    pP        07 09 06.4  -1.6
BNX                                 sP    sP        07 09 22.2  -2.0
BNX                                 PP    PP        07 10 34.7  +0.3
BNX                                 S     S         07 15 42.8  -3.4
BNX                                 sS    sS        07 16 43.5  -1.6
BNX                                 pmax  pmax
                comp=Z,13nm,1.5s
BNX                                 pmax  pmax
                comp=Z,150nm,6.6s
TRVZ   Turoa             52.40 136  P     P         07 08 41.3  +2.9
WNVZ   Wahianoa          52.45 136  P     P         07 08 40.2  +1.4
BHHZ   Black Hill Sta    52.84 136  P     P         07 08 42.2  +0.7
ODAN   Odare             52.88 311 eP     P         07 08 42.1  -0.1
TAPN   Taplejung         52.91 311 eP     P         07 08 42.5  +0.1
BKZ    Black Stump Fm    53.00 135  IAmb  IAmb      07 08 43.9
                comp=Z,36nm,0.8s
BKZ    Black Stump Fm    53.00 135  P     P         07 08 43.1  +0.4
BKZ    Black Stump Fm    53.00 135  P     P         07 08 43.3  +0.6
TSZ    Takapari Road     53.02 136  P     P         07 08 43.5  +0.7
MRZ    Mangatainoka R    53.04 137  IAmb  IAmb      07 08 46.4
                comp=Z,45nm,1.1s
URZ    Urewera           53.06 134  P     P         07 08 42.8  -0.2
                comp=Z,14nm,0.7s,baz=12,slow=3.5,SNR=14
                comp=Z,14nm,0.7s
URZ    Urewera           53.06 134  P     P         07 08 43.5  +0.5
URZ    Urewera           53.06 134  P     P         07 08 43.2  +0.2
KWHZ   Kaweka Forest     53.06 135  P     P         07 08 44.0  +0.9
RTZ    Ruatahuna         53.11 134  P     P         07 08 43.5   0.0
MTHZ   Maungataniwha     53.11 135  P     P         07 08 43.0  -0.4
NMHZ   Naumai            53.19 135  P     P         07 08 45.7  +1.6
HAZ    Te Kaha           53.34 133  P     P         07 08 45.5  +0.5
RUGZ   Raukumara Rang    53.35 133  P     P         07 08 45.4  +0.2
RAGZ   Rawiri            53.37 134  P     P         07 08 43.7  -1.8
MWZ    Matawai           53.39 134  P     P         07 08 46.0  +0.5
GTA    Gaotai            53.46 331 ⇑P     P         07 08 46.8  +0.7
GTA                                 pP    pP        07 09 20.6  +1.1
GTA                                 ScP   ScP       07 13 34.8  -0.1
GTA                                 S     S         07 16 04.2  -2.9
GTA                                 ScS   ScS       07 18 20.0  -0.6
GTA                                 pmax  pmax
                comp=Z,62nm,0.9s
GTA                                 pmax  pmax
                comp=Z,210nm,4.8s
GTA                                 LR    LR
                comp=Z,160nm,14.7s
GTA                                 LR    LR
                comp=Z,320nm,17.1s
GTA                                 LR    LR
                comp=Z,810nm,13.1s
BFZ    Birch Farm        53.50 137  P     P         07 08 47.2  +1.0
RAMN   Ramite            53.53 310 eP     P         07 08 47.3  +0.4
                comp=Z,731nm,0.7s
PKGZ   Pakihiroa         53.61 133  P     P         07 08 48.5  +1.4
RIGZ   Rimuhau           53.71 134  P     P         07 08 48.6  +0.8
GOMU   GeErMu            53.72 325  P     P         07 08 49.1  +0.8
GOMU                                pmax  pmax
                comp=Z,16nm,1.2s
PUZ    Puketiti          53.81 133  P     P         07 08 49.3  +0.8
JIRN   Jiri              54.21 311 eP     P         07 08 52.0   0.0
                comp=Z,269nm,0.7s
YSS    Yuzh-Sakhalins    54.31  11  P     P         07 08 52.2  +0.3
YSS    Yuzh-Sakhalins    54.31  11  P     P         07 08 52.1  +0.2
YSS    Yuzh-Sakhalins    54.31  11 eP     P         07 08 52.4  +0.5
YSS                                e*SP   sP        07 09 40.3  -1.8
YSS                                eS     S         07 16 14.3  -3.7
YSS                                eSS    SS        07 20 04.0  +1.5
YSS                                 pmax  pmax
                comp=Z,20nm,0.6s
YSS                                 smax  smax
                comp=N,100nm,3.9s
YSS                                 MLR   MLR
                comp=Z,200nm,14.0s
YSS    Yuzh-Sakhalins    54.31  11  P     P         07 08 52.0  +0.1
GUN    Gumba             54.58 311 eP     P         07 08 54.7  +0.1
                comp=Z,603nm,0.7s
PKI    Pulchoki          54.76 310 eP     P         07 08 55.6  -0.3
                comp=Z,165nm,0.7s
PKIN   Phulchoki         54.77 310 eP     P         07 08 55.4  -0.5
                comp=Z,154nm,0.6s
KKN    Kakani            54.97 310 eP     P         07 08 57.2  -0.1
DMN    Daman             55.01 310 eP     P         07 08 57.6   0.0
                comp=Z,434nm,1.0s
KLR    Kul'dur           55.42   1  LR    LR        07 32 36.7
                comp=Z,86nm,21.1s,baz=217,slow=36
KLR    Kul'dur           55.42   1c iP    P         07 09 00.3  +0.5
KLR                                 pmax  pmax
                comp=Z,45nm,1.7s
GKN    Gorkha            55.56 310 eP     P         07 09 01.3  -0.2
PCHI   Peechi            56.02 287⇑eP     P         07 09 04.5  -0.3
PCHI                               eS     S         07 16 41.9   0.0
HYB    Hyderabad         56.07 296⇑eP     P         07 09 04.2  -0.9
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HYB				IVmB_BB		07 09 04.7	
	comp=Z,787nm,1.6s						
KOLN	**Koldanda**	**56.24**	**309**	*e*P	**P**	**07 09 06.4**	**+0.1**
DANN	**Dangsing**	**56.41**	**310**	*e*P	**P**	**07 09 07.5**	**-0.1**
	comp=Z,354nm,0.9s						
HEH	**HeiHe**	**56.47**	**358**	*e*P	**P**	**07 09 07.0**	**-0.2**
HEH				pP	**pP**	**07 09 40.1**	**-1.0**
HEH				S	**S**	**07 16 45.0**	**-1.5**
HEH				ScS	**ScS**	**07 18 37.2**	**-4.2**
HEH				pmax	pmax		
	comp=Z,53nm,1.2s						
HEH				pmax	pmax		
	comp=Z,170nm,6.3s						
PYUN	**Piuthan**	**56.87**	**309**	*e*P	**P**	**07 09 10.8**	**0.0**
	comp=Z,860nm,1.0s						
DGAR	**Diego Garcia**	**57.12**	**265**	P	**P**	**07 09 12.8**	**+0.2**
DGAR	**Diego Garcia**	**57.12**	**265**	P	**P**	**07 09 12.8**	**+0.2**
DGAR				pmax	pmax		
	comp=Z,365nm,1.2s						
DGAR	**Diego Garcia**	**57.12**	**265**	P	**P**	**07 09 13.3**	**+0.8**
DGAR	**Diego Garcia**	**57.12**	**265**	P	**P**	**07 09 13.4**	**+0.8**
GRNR	**Gornyy**	**57.21**	**5**	*e*P	P	07 09 06.1	-6.4
KAAM	**Kaadhehdhoo**	**57.32**	**275**	P	**P**	**07 09 14.9**	**+0.9**
KAAM	**Kaadhehdhoo**	**57.32**	**275**	P	**P**	**07 09 14.4**	**+0.4**
AFI	**Afiamalu**	**57.66**	**102**	LR	LR	07 33 59.6	
	comp=Z,81nm,19.3s,baz=248,slow=36						
AFI	**Afiamalu**	**57.66**	**102**	P	**P**	**07 09 17.2**	**+0.8**
AFI	**Afiamalu**	**57.66**	**102**	P	**P**	**07 09 17.2**	**+0.8**
AFI				pmax	pmax		
	comp=Z,169nm,1.1s						
ULN	**Ulaanbaatar**	**57.71**	**342**	P	**P**	**07 09 16.7**	**+0.5**
ULN				IAmb	IAmb	07 09 18.6	
	comp=Z,64nm,0.8s						
ULN	**Ulaanbaatar**	**57.71**	**342**	P	**P**	**07 09 16.7**	**+0.5**
ULN				pmax	pmax		
	comp=Z,65nm,0.9s						
ULN	**Ulaanbaatar**	**57.71**	**342**	P	**P**	**07 09 17.6**	**+1.4**
ULN	**Ulaanbaatar**	**57.71**	**342**	P	**P**	**07 09 17.2**	**+1.0**
ULN				pP	**pP**	**07 09 51.2**	**+1.1**
SONM	**Songino Array**	**57.89**	**341**	P	**P**	**07 09 18.1**	**+0.7**
	comp=Z,24nm,0.9s,baz=155,slow=5.7,SNR=133						
SONM				pP	**pP**	**07 09 53.8**	**+2.4**
	comp=Z,6.0nm,1.0s,baz=194,slow=5.4,SNR=1.5						
SONM				LR	LR	07 38 00.1	
	comp=Z,80nm,18.6s,baz=164,slow=40						
SONM				PKPPKP	**P'P'df**	**07 38 59.1**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=29,slow=3.4,SNR=3.7						
SONM				PKP2bc		07 39 11.6	
	comp=Z,0.6nm,0.9s,baz=336,slow=3.3,SNR=3.7						
	comp=Z,24nm,0.9s						
SONM	**Songino Array**	**57.89**	**341**	IAmb	IAmb	07 09 19.8	
	comp=Z,44nm,1.1s						
TYV	**Tymovskoe**	**58.07**	**9**	*e*P	**P**	**07 09 19.9**	**+1.4**
TYV				*e*S	**S**	**07 17 10.5**	**+3.0**
TYV				pmax	pmax		
	comp=Z,13nm,0.7s						
TYV				pmax	pmax		
	comp=Z,100nm,2.6s						
TYV				smax	smax		
	comp=N,300nm,4.4s						
TYV				smax	smax		
	comp=E,300nm,4.4s						
HMDM	**Hanimaadhoo**	**58.20**	**282**	P	**P**	**07 09 18.0**	**-2.1**
ZEA	**Zeya**	**59.96**	**358**	*e*P	**P**	**07 09 32.0**	**+0.6**
ZEA				pmax	pmax		
	comp=N,20nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.2s						
DRV	**Dumont d'Urvil**	**60.56**	**175**	P	**P**	**07 09 35.7**	**+0.4**
ZAK	**Zakamensk**	**61.11**	**341**	*e*P	**P**	**07 09 39.9**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,30nm,1.2s						
IRK	**Irkutsk**	**62.42**	**342**	*e*P	**P**	**07 09 48.8**	**+0.8**
IRK				pmax	pmax		
	comp=Z,100nm,2.0s						
WMQ	**Urumqi**	**62.91**	**327**	*e*P	**P**	**07 09 52.6**	**+1.0**
WMQ				ScP	**ScP**	**07 14 16.6**	**+0.1**
WMQ				pmax	pmax		
	comp=Z,150nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,2µm,5.5s						
MOY	**Mondy**	**62.97**	**340**	*e*P	**P**	**07 09 53.1**	**+1.3**
MOY				pmax	pmax		
	comp=Z,121nm,1.8s						
PEA0B	**Petropavlovsk-**	**63.76**	**18**	*d i*P	**P**	**07 09 57.9**	**+1.1**
PETK	**Petropavlovsk-**	**63.76**	**18**	P	**P**	**07 09 57.5**	**+0.7**
	comp=Z,32nm,0.8s,baz=188,slow=6.0,SNR=19						
	comp=Z,32nm,0.8s						
PET	**Petropavlovsk**	**63.98**	**19**	⇓*e*P	**P**	**07 09 58.9**	**+0.6**
PET				pmax	pmax		
	comp=Z,49nm,1.4s						
BOD	**Bodaibo**	**65.31**	**351**	*e*P	**P**	**07 10 07.6**	**+0.8**
BOD				pmax	pmax		
	comp=Z,57nm,1.6s						
ROCAM	**Rodrigues Isla**	**65.91**	**251**	P	**P**	**07 10 12.7**	**+1.3**
WUS	**Wushi**	**66.34**	**320**	P	**P**	**07 10 14.9**	**+0.9**
ZSN	**Zaisan**	**66.78**	**328**	⇑*i*P	**P**	**07 10 17.3**	**+0.8**
	baz=328						
ZSN	**Zaisan**	**66.78**	**328**	*c i*P	**P**	**07 10 17.3**	**+0.8**
NIL	**Nilore**	**66.84**	**311**	P	**P**	**07 10 17.6**	**+0.4**
NIL	**Nilore**	**66.84**	**311**	P	**P**	**07 10 17.6**	**+0.4**
NIL				pmax	pmax		
	comp=Z,116nm,0.7s						
NIL	**Nilore**	**66.84**	**311**	P	**P**	**07 10 18.1**	**+0.9**
NIL	**Nilore**	**66.84**	**311**	P	**P**	**07 10 17.5**	**+0.3**
DGZ	**Jazzator, Alta**	**66.99**	**331**	*c i*P	**P**	**07 10 18.7**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,114nm,1.0s						
SHLS	**Shalkode**	**67.26**	**322**	⇑*i*P	**P**	**07 10 19.4**	**-0.4**
	comp=Z,87nm,1.0s,baz=322						
SHLS	**Shalkode**	**67.26**	**322**	*c i*P	**P**	**07 10 19.3**	**-0.4**
SHLS				pmax	pmax		
	comp=Z,87nm,1.0s						
TARG	**Taragay, Kyrgy**	**67.52**	**320**	IAmb	IAmb	07 10 33.9	
	comp=Z,80nm,1.2s						
UZB	**Uzynbulak**	**67.53**	**322**	⇑*i*P	**P**	**07 10 22.4**	**+1.0**
	comp=Z,83nm,1.2s,baz=322						
UZB	**Uzynbulak**	**67.53**	**322**	*c i*P	**P**	**07 10 22.4**	**+1.0**
UZB				pmax	pmax		
	comp=Z,83nm,1.2s						
KSH	**Kashi**	**67.59**	**317**	P	**P**	**07 10 23.3**	**+1.4**
KSH				S	**S**	**07 19 07.5**	**+0.5**
KSH				ScS	**ScS**	**07 20 06.8**	**+0.5**
KSH				pmax	pmax		
	comp=Z,110nm,0.9s						
KSH				LR	LR		
	comp=Z,290nm,22.9s						
KSH				LR	LR		
	comp=Z,190nm,21.7s						
MK31	**Makanchi Array**	**67.74**	**327**	*c i*P	**P**	**07 10 23.4**	**+0.8**
MKAR	**Makanchi Array**	**67.74**	**327**	P	**P**	**07 10 23.4**	**+0.9**
	comp=Z,122nm,0.7s,baz=124,slow=7.8,SNR=999						
MKAR				pP	**pP**	**07 10 59.2**	**+1.7**
	comp=Z,16nm,0.8s,baz=114,slow=5.9,SNR=1.6						
	comp=Z,122nm,0.7s						
MKAR	**Makanchi Array**	**67.74**	**327**	P	**P**	**07 10 23.6**	**+1.0**
MKAR	**Makanchi Array**	**67.74**	**327**	*i* P	**P**	**07 10 23.3**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,124nm,0.7s						
MA2	**Magadan**	**67.81**	**11**	LR	LR	07 39 32.8	
	comp=Z,54nm,21.1s,baz=119,slow=35						
MA2	**Magadan**	**67.81**	**11**	*ce*P	**P**	**07 10 23.3**	**+0.6**
MA2				pmax	pmax		
	comp=Z,33nm,1.6s						
ZHN	**Zhinishke**	**67.90**	**322**	*e*P	**P**	**07 10 24.6**	**+0.9**
	comp=Z,48nm,1.0s,baz=322						
ZHN	**Zhinishke**	**67.90**	**322**	*e*P	**P**	**07 10 24.6**	**+0.9**
ZHN				pmax	pmax		
	comp=Z,48nm,1.0s						
KPKS	**Kokpek**	**67.91**	**322**	⇑*i*P	**P**	**07 10 24.7**	**+0.9**
	comp=Z,95nm,0.9s,baz=322						
KPKS	**Kokpek**	**67.91**	**322**	*c i*P	**P**	**07 10 24.6**	**+0.9**
KPKS				pmax	pmax		
	comp=Z,95nm,0.9s						
MAKZ	**Makanchi**	**67.92**	**327**	P	**P**	**07 10 24.6**	**+0.9**
MAKZ	**Makanchi**	**67.92**	**327**	P	**P**	**07 10 24.6**	**+0.9**
MAKZ				pmax	pmax		
	comp=Z,145nm,0.9s						
MAKZ	**Makanchi**	**67.92**	**327**	P	**P**	**07 10 24.4**	**+0.7**
MAKZ				pP	**pP**	**07 10 59.9**	**+1.3**
YAK	**Yakutsk**	**68.23**	**360**	*c i*P	**P**	**07 10 25.3**	**+0.1**
YAK				*e**PP	**pP**	**07 10 59.5**	**-0.9**
YAK				*e*		07 12 58.2	
YAK				*e*PPP	PPP	07 14 38.8	
YAK				*e*S	**S**	**07 19 12.7**	**-0.6**
YAK				*e*		07 20 06.8	
YAK				*e*SS	**SS**	**07 23 40.2**	**+0.6**
YAK				pmax	pmax		
	comp=Z,92nm,1.1s						
YAK				pmax	pmax		
	comp=N,34nm,1.1s						
YAK				pmax	pmax		
	comp=E,12nm,1.3s						
YAK				pmax	pmax		
	comp=N,69nm,2.9s						
YAK				pmax	pmax		
	comp=Z,89nm,3.2s						
YAK				pmax	pmax		
	comp=E,78nm,3.3s						
YAK				smax	smax		
	comp=E,356nm,1.9s						
YAK				smax	smax		
	comp=N,141nm,1.3s						
TNSS	**Tian-Shan**	**68.75**	**321**	*e*P	**P**	**07 10 31.3**	**+1.9**
	baz=321						
TNSS	**Tian-Shan**	**68.75**	**321**	*e*P	**P**	**07 10 31.3**	**+1.9**
MDOK	**Medeo**	**68.75**	**321**	*i* P	**P**	**07 10 30.2**	**+1.1**
	baz=321						
MDOK	**Medeo**	**68.75**	**321**	*i* P	**P**	**07 10 30.2**	**+1.1**
CCD	**Concordia, Ant**	**68.76**	**182**	P	**P**	**07 10 29.6**	**+0.7**
ULHL	**Ulahol**	**68.79**	**320**	P	**P**	**07 10 30.5**	**+1.1**
	SNR=44						
AAA	**Alma-Ata**	**68.86**	**321**	*e*P	**P**	**07 10 30.9**	**+1.2**
	baz=321						
AAA	**Alma-Ata**	**68.86**	**321**	*e*P	**P**	**07 10 30.8**	**+1.2**
CHKK	**Chushkaly**	**69.15**	**322**	*e*P	**P**	**07 10 32.0**	**+0.6**
	baz=322						
CHKK	**Chushkaly**	**69.15**	**322**	*e*P	**P**	**07 10 32.0**	**+0.6**
TKM2	**Tokmak 2**	**69.54**	**320**	P	**P**	**07 10 35.1**	**+1.1**
	SNR=156						
KUU	**Kurty**	**69.57**	**322**	*e*P	**P**	**07 10 35.0**	**+1.0**
	baz=322						
KUU	**Kurty**	**69.57**	**322**	*e*P	**P**	**07 10 34.9**	**+1.0**
SHEM	**Shemya Is, Ala**	**69.74**	**27**	LR	LR	07 37 40.8	
	comp=N,56nm,19.9s,baz=100,slow=33						
KBK	**Karagaybulak**	**69.82**	**320**	P	**P**	**07 10 36.9**	**+1.2**
	SNR=31						
UCH	**Uchtor**	**69.89**	**319**	P	**P**	**07 10 38.0**	**+1.5**
	SNR=264						
AAK	**Ala-Archa**	**70.10**	**320**	P	**P**	**07 10 38.8**	**+1.3**
	SNR=149						
AAK	**Ala-Archa**	**70.10**	**320**	P	**P**	**07 10 38.7**	**+1.3**
AAK	**Ala-Archa**	**70.10**	**320**	P	**P**	**07 10 38.7**	**+1.3**
AAK				pmax	pmax		
	comp=Z,157nm,0.9s						
AAK	**Ala-Archa**	**70.10**	**320**	*i* P	**P**	**07 10 38.6**	**+1.2**
	SNR=191						
AAK	**Ala-Archa**	**70.10**	**320**	P	**P**	**07 10 39.0**	**+1.5**
AAK	**Ala-Archa**	**70.10**	**320**	P	**P**	**07 10 38.7**	**+1.3**
CHMS	**Chumysh**	**70.12**	**320**	P	**P**	**07 10 38.2**	**+0.8**
	SNR=34						
AML	**Almayashu**	**70.38**	**319**	P	**P**	**07 10 40.8**	**+1.4**
	SNR=300						
KBL	**Kabul**	**70.40**	**310**	P	**P**	**07 10 40.0**	**+0.6**
KBL				IAmb	IAmb	07 10 41.1	
	comp=Z,86nm,0.9s						
KBL	**Kabul**	**70.40**	**310**	P	**P**	**07 10 40.0**	**+0.6**
KBL				pmax	pmax		
	comp=Z,86nm,1.0s						
KBL	**Kabul**	**70.40**	**310**	P	**P**	**07 10 40.0**	**+0.6**
	SNR=38						
USP	**Ospenovka**	**70.41**	**320**	P	**P**	**07 10 40.2**	**+1.1**
	SNR=233						
SGDS	**Sogindy**	**70.42**	**320**	⇑*i*P	**P**	**07 10 40.0**	**+0.7**
	comp=Z,41nm,0.8s,baz=320						
SGDS	**Sogindy**	**70.42**	**320**	*c i*P	**P**	**07 10 39.9**	**+0.7**
SGDS				pmax	pmax		
	comp=Z,41nm,0.8s						
EKS2	**Erkin-Say**	**70.58**	**319**	P	**P**	**07 10 41.8**	**+1.6**
	SNR=128						
SEM	**Semipalatinsk**	**71.00**	**329**	*e*P	**P**	**07 10 42.8**	**0.0**
	comp=Z,53nm,1.0s,baz=329						
SEM	**Semipalatinsk**	**71.00**	**329**	*e*P	**P**	**07 10 42.7**	**0.0**
SEM				pmax	pmax		
	comp=Z,53nm,1.0s						
ZAA0	**Zalesovo Array**	**71.06**	**334**	P	**P**	**07 10 42.7**	**-0.1**
ZAA0				IAmb	IAmb	07 10 43.7	
	comp=Z,72nm,1.1s						
ZALV	**Zalesovo Beam**	**71.06**	**334**	P	**P**	**07 10 42.4**	**-0.3**
	comp=Z,58nm,1.0s,baz=108,slow=4.8,SNR=130						
ZALV				pP	**pP**	**07 11 18.1**	**0.0**
	comp=Z,18nm,0.9s,baz=113,slow=3.9,SNR=3.0						
ZALV				LR	LR	07 45 01.0	
	comp=Z,38nm,18.9s,baz=122,slow=38						
	comp=Z,58nm,1.0s						
SEY	**Seymchan**	**71.22**	**11**	⇑*e*P	**P**	**07 10 44.4**	**+0.9**
SEY				pmax	pmax		
	comp=Z,28nm,1.3s						
BTLS	**Baital**	**71.57**	**322**	⇑*i*P	**P**	**07 10 46.7**	**+0.7**
	comp=Z,44nm,0.9s,baz=322						
BTLS	**Baital**	**71.57**	**322**	*c i*P	**P**	**07 10 46.7**	**+0.7**
BTLS				pmax	pmax		
	comp=Z,44nm,0.9s						
CHGR	**Chuyangaron**	**71.94**	**314**	P	**P**	**07 10 49.0**	**+0.5**
KURK	**Kurchatov**	**72.02**	**329**	P	**P**	**07 10 49.4**	**+0.9**
KURK				IAmb	IAmb	07 10 50.4	
	comp=Z,112nm,1.0s						
KURK	**Kurchatov**	**72.02**	**329**	*c i*P	**P**	**07 10 48.8**	**+0.2**
KURK				pmax	pmax		
	comp=Z,163nm,1.3s						
KURK	**Kurchatov**	**72.02**	**329**	P	**P**	**07 10 49.4**	**+0.9**
DZA	**Taraz**	**72.28**	**319**	*e*P	**P**	**07 10 51.1**	**+0.8**
	comp=Z,70nm,1.0s,baz=319						
DZA	**Taraz**	**72.28**	**319**	*e*P	**P**	**07 10 51.1**	**+0.8**
DZA				pmax	pmax		
	comp=Z,70nm,1.0s						
KK31	**Karatay Array**	**72.91**	**319**	IAmb	IAmb	07 10 56.0	
	comp=Z,176nm,1.1s						
KKAR	**Karatay Array**	**72.91**	**319**	P	**P**	**07 10 54.8**	**+0.8**
KKAR				IAmb	IAmb	07 10 56.0	
	comp=Z,176nm,1.1s						
KKAR	**Karatay Array**	**72.91**	**319**	P	**P**	**07 10 54.8**	**+0.8**
KKAR				pmax	pmax		
	comp=Z,176nm,1.1s						
TAS	**Tashkent**	**72.95**	**317**	P	**P**	**07 10 55.9**	**+1.6**
TAS	**Tashkent**	**72.95**	**317**	P	**P**	**07 10 55.9**	**+1.6**
TAS				pmax	pmax		
	comp=Z,478nm,0.9s						
VNDA	**Vanda**	**73.03**	**173**	P	**P**	**07 10 54.4**	**+0.2**
	comp=Z,7.7nm,0.8s,baz=300,slow=6.9,SNR=8.3						
VNDA				LR	LR	07 42 25.0	
	comp=Z,97nm,19.4s,baz=344,slow=35						
	comp=Z,7.7nm,0.8s						
VNDA	**Vanda**	**73.03**	**173**	P	**P**	**07 10 55.0**	**+0.8**
VNDA	**Vanda**	**73.03**	**173**	P	**P**	**07 10 55.0**	**+0.8**
VNDA				pmax	pmax		
	comp=Z,65nm,1.8s						
CHM	**Chimkent**	**73.17**	**318**	*e*P	**P**	**07 10 56.9**	**+1.3**
	baz=318						
CHM	**Chimkent**	**73.17**	**318**	*e*P	**P**	**07 10 56.8**	**+1.3**
NGCH	**Negor - Chabah**	**73.93**	**299**	P	**P**	**07 11 02.3**	**+2.0**
	SNR=5.7						
MSEY	**Mahe Island**	**74.16**	**267**	P	**P**	**07 11 02.3**	**+0.3**
MSEY				IAmb	IAmb	07 11 03.8	
	comp=Z,72nm,1.1s						
MSEY	**Mahe Island**	**74.16**	**267**	P	**P**	**07 11 02.3**	**+0.3**
MSEY				pmax	pmax		
	comp=Z,72nm,1.1s						
MSEY	**Mahe Island**	**74.16**	**267**	P	**P**	**07 11 02.4**	**+0.3**
MSEY	**Mahe Island**	**74.16**	**267**	P	**P**	**07 11 02.7**	**+0.7**
JLN	**Jalan Bani Buh**	**74.67**	**295**	P	**P**	**07 11 05.4**	**+0.7**
	SNR=9.1						
BRZS	**Berezniki**	**74.83**	**326**	⇑*i*P	**P**	**07 11 05.6**	**+0.5**
	baz=326						
BRZS	**Berezniki**	**74.83**	**326**	*c i*P	**P**	**07 11 05.6**	**+0.5**
WBK	**Wadi Bani Khal**	**75.17**	**295**	P	**P**	**07 11 09.0**	**+1.4**
	SNR=9.0						
MAW	**Mawson**	**75.51**	**201**	P	**P**	**07 11 09.4**	**+0.9**
	comp=Z,33nm,0.7s,baz=96,slow=10,SNR=15						
	comp=Z,33nm,0.7s						
MAW	**Mawson**	**75.51**	**201**	P	**P**	**07 11 09.5**	**+0.9**
	baz=75,SNR=7.7						
MAW	**Mawson**	**75.51**	**201**	P	**P**	**07 11 10.0**	**+1.4**
MAW	**Mawson**	**75.51**	**201**	P	**P**	**07 11 10.0**	**+1.4**
MAW				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WSAR	**Wadi Sarin**	**75.62**	**296**	P	**P**	**07 11 11.4**	**+1.3**
	SNR=12						
MHTO	**MHTO**	**75.72**	**293**	P	**P**	**07 11 11.0**	**+0.3**
	SNR=25						
DQM	**DQM**	**75.88**	**292**	P	**P**	**07 11 12.4**	**+0.8**
	SNR=12						
JMDO	**Jabal Madar**	**75.90**	**295**	P	**P**	**07 11 12.6**	**+0.8**
	SNR=12						
SMDO	**Samad**	**76.10**	**296**	P	**P**	**07 11 13.8**	**+0.8**
	SNR=13						
BIDO	**Bidbid**	**76.14**	**296**	P	**P**	**07 11 14.1**	**+1.0**
	SNR=31						
BSY	**Bisya**	**76.80**	**295**	P	**P**	**07 11 17.8**	**+0.9**
	SNR=11						
HOQ	**Hoqain**	**76.88**	**296**	P	**P**	**07 11 18.5**	**+1.3**
	SNR=28						
JASK	**Jask - Hormozg**	**76.92**	**298**	P	**P**	**07 11 19.4**	**+2.0**
	SNR=14						
ARQ	**Araqi**	**77.53**	**296**	P	**P**	**07 11 21.7**	**+0.8**
	SNR=11						
BRVK	**Borovoye**	**77.64**	**328**	P	**P**	**07 11 21.4**	**+0.6**
BRVK				IAmb	IAmb	07 11 22.4	
	comp=Z,69nm,1.0s						
BRVK	**Borovoye**	**77.64**	**328**	P	**P**	**07 11 21.4**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,69nm,1.0s						
BRVK	**Borovoye**	**77.64**	**328**	P	**P**	**07 11 21.6**	**+0.8**
SOHO	**SOHO**	**77.70**	**296**	*i* P	**P**	**07 11 22.0**	**+0.2**
	SNR=30						
SOHO	**SOHO**	**77.70**	**296**	P	**P**	**07 11 22.5**	**+0.8**
DMTO	**DMTO**	**77.85**	**290**	P	**P**	**07 11 23.2**	**+0.5**
TIXI	**Tiksi**	**77.90**	**360**	P	**P**	**07 11 21.7**	**-0.2**
TIXI	**Tiksi**	**77.90**	**360**	*d i*P	**P**	**07 11 22.1**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,18nm,0.8s						
MDH	**Madha**	**78.17**	**297**	*i* P	**P**	**07 11 23.8**	**-0.6**
	SNR=10						
MDH	**Madha**	**78.17**	**297**	P	**P**	**07 11 24.2**	**-0.1**
UOSS	**Minazif**	**78.17**	**297**	P	**P**	**07 11 25.0**	**+0.6**
UOSS				IAmb	IAmb	07 11 25.7	
	comp=Z,65nm,0.9s						
UOSS	**Minazif**	**78.17**	**297**	*i* P	**P**	**07 11 24.3**	**-0.1**
	SNR=26						
UOSS	**Minazif**	**78.17**	**297**	P	**P**	**07 11 24.7**	**+0.3**
HATD	**Hatta, Dubai**	**78.21**	**297**	*i* P	**P**	**07 11 25.2**	**+0.6**
	SNR=18						
HATD	**Hatta, Dubai**	**78.21**	**297**	P	**P**	**07 11 25.6**	**+1.0**
	SNR=17						
ASHO	**Ashiyiah**	**78.24**	**297**	*i* P	**P**	**07 11 25.3**	**+0.5**
	SNR=11						
ASHO	**Ashiyiah**	**78.24**	**297**	P	**P**	**07 11 25.6**	**+0.8**
	SNR=22						
MSFE	**Esma-Masafi**	**78.30**	**297**	*i* P	**P**	**07 11 26.0**	**+0.9**
	SNR=42						
BANOM	**Banah**	**78.30**	**298**	*i* P	**P**	**07 11 26.1**	**+0.9**
	SNR=41						
BANOM	**Banah**	**78.30**	**298**	P	**P**	**07 11 26.6**	**+1.4**
	SNR=20						
MASF	**Masafi**	**78.30**	**297**	P	**P**	**07 11 26.4**	**+1.3**
	SNR=25						
ALNE	**Al Ain**	**78.38**	**296**	*i* P	**P**	**07 11 25.9**	**+0.4**
	SNR=12						
ALNE	**Al Ain**	**78.38**	**296**	P	**P**	**07 11 26.3**	**+0.7**
	SNR=19						
SHME	**Shamm**	**78.47**	**298**	*i* P	**P**	**07 11 26.9**	**+0.9**
	SNR=35						
SHME	**Shamm**	**78.47**	**298**	P	**P**	**07 11 27.9**	**+1.9**
	SNR=14						
RBK	**Rabkut**	**78.50**	**289**	P	**P**	**07 11 28.0**	**+1.6**
	SNR=11						
BILL	**Bilibino**	**78.53**	**13**	*i* P	**P**	**07 11 29.2**	**+3.8**
BILL				*i*		07 14 32.3	
UMZA	**Um Al Zommool**	**78.63**	**295**	P	**P**	**07 11 27.2**	**+0.3**
NAZ	**Nazwa, Dubai**	**78.66**	**297**	*i* P	**P**	**07 11 27.4**	**+0.3**
	SNR=8.6						
NAZ	**Nazwa, Dubai**	**78.66**	**297**	P	**P**	**07 11 27.9**	**+0.9**
	SNR=14						
FAQ	**Al Faqa, Dubai**	**78.67**	**297**	*i* P	**P**	**07 11 27.4**	**+0.3**
	SNR=29						
FAQ	**Al Faqa, Dubai**	**78.67**	**297**	P	**P**	**07 11 28.0**	**+0.8**
	SNR=15						
UMQ	**Umm Al-Quwin**	**78.78**	**297**	P	**P**	**07 11 29.3**	**+1.7**
DOK	**Doka**	**78.78**	**290**	P	**P**	**07 11 28.0**	**+0.2**
	SNR=13						
TBI	**Tubuai**	**78.81**	**112**	*e*LR	LR	07 36 10.8	
	comp=Z,1µm,38.0s						
TBI				*e*LR	LR	07 36 11.0	
	comp=Z,2µm,30.2s						
ASUD	**Al Ashush, Dub**	**78.88**	**297**	*i* P	**P**	**07 11 29.0**	**+0.7**
	SNR=24						
ASUD	**Al Ashush, Dub**	**78.88**	**297**	P	**P**	**07 11 29.6**	**+1.4**
	SNR=10						
SBV	**Sambava**	**78.94**	**258**	P	**P**	**07 11 28.8**	**0.0**
PPT2	**Papeete2**	**78.97**	**107**	*e*LR	LR	07 36 14.9	
	comp=Z,301nm,39.0s						
PPT2				*e*LR	LR	07 36 15.2	
	comp=Z,162nm,38.5s						
WHFO	**Wadi Hawf**	**78.99**	**290**	P	**P**	**07 11 29.1**	**+0.1**
	SNR=13						
AJN	**Ajban**	**79.17**	**296**	*i* P	**P**	**07 11 30.0**	**+0.1**
	SNR=7.1						
AJN	**Ajban**	**79.17**	**296**	P	**P**	**07 11 30.8**	**+1.0**
	SNR=7.8						
ABTO	**Aybut**	**79.33**	**289**	P	**P**	**07 11 31.9**	**+1.0**
	SNR=16						
GEYT	**Alibeck**	**79.85**	**310**	P	**P**	**07 11 34.1**	**+0.9**
	comp=Z,44nm,0.9s,baz=156,slow=4.0,SNR=74						
	comp=Z,44nm,0.9s						
MZWR	**Madinat Zayed**	**80.00**	**295**	P	**P**	**07 11 35.0**	**+0.7**
MZR	**Muzera**	**80.21**	**295**	*i* P	**P**	**07 11 35.9**	**+0.5**
	SNR=29						
MZR	**Muzera**	**80.21**	**295**	P	**P**	**07 11 36.4**	**+0.9**
	SNR=26						
GHWR	**Ruwais**	**80.94**	**295**	P	**P**	**07 11 40.3**	**+0.9**
ABPO	**Ambohimpanom**	**81.15**	**252**	P	**P**	**07 11 41.5**	**+0.7**
ABPO				IAmb	IAmb	07 11 42.7	
	comp=Z,91nm,1.6s						
ABPO	**Ambohimpanom**	**81.15**	**252**	P	**P**	**07 11 41.5**	**+0.7**
ABPO				pmax	pmax		
	comp=Z,91nm,1.6s						
JRN	**Qarnain Island**	**81.15**	**296**	P	**P**	**07 11 41.0**	**+0.6**
	SNR=7.6						
OPO	**Ambohidratompo**	**81.22**	**252**	P	**P**	**07 11 41.8**	**+0.7**
	comp=Z,33nm,0.9s,baz=89,slow=4.1,SNR=30						
	comp=Z,33nm,0.9s						
VOI	**Vohitsoka**	**81.38**	**249**	IAmb	IAmb	07 11 43.6	
	comp=Z,89nm,1.0s						
VOI	**Vohitsoka**	**81.38**	**249**	P	**P**	**07 11 42.7**	**+0.8**
VOI	**Vohitsoka**	**81.38**	**249**	P	**P**	**07 11 43.0**	**+1.1**
	SNR=6.4						
SLWR	**Sila**	**82.02**	**295**	P	**P**	**07 11 45.7**	**+0.7**
ABKAR	**Akbulak array**	**82.06**	**322**	P	**P**	**07 11 45.2**	**+0.5**
SMRA	**Abu-Samra**	**82.92**	**296**	P	**P**	**07 11 50.5**	**+0.8**
SHMA	**Al-Shehemyia**	**83.00**	**297**	P	**P**	**07 11 51.0**	**+1.0**
SAKB	**Bahrain**	**83.40**	**297**	P	**P**	**07 11 53.0**	**+0.9**
QSPA	**South Pole Qui**	**83.57**	**180**	P	**P**	**07 11 51.9**	**-0.4**
	comp=Z,12nm,0.8s,baz=308,slow=1.4,SNR=66						
	comp=Z,12nm,0.8s						
QSPA	**South Pole Qui**	**83.57**	**180**	P	**P**	**07 11 52.3**	**-0.1**
AKTO	**Aktyubinsk**	**83.62**	**322**	LR	LR	07 52 37.4	
	comp=Z,64nm,20.2s,baz=8.5,slow=38						
SVE	**Sverdlovsk**	**84.27**	**329**	*de*P	**P**	**07 11 55.8**	**-0.1**
SVE				pmax	pmax		
	comp=Z,118nm,1.3s						
TNA	**Tin City**	**84.66**	**22**	P	**P**	**07 11 58.7**	**+1.1**
TNA	**Tin City**	**84.66**	**22**	P	**P**	**07 11 58.7**	**+1.1**
	baz=242						
ANM	**Nome**	**85.17**	**23**	P	**P**	**07 12 01.5**	**+1.3**
	baz=244						
ARU	**Arti**	**85.21**	**328**	P	**P**	**07 12 00.7**	**+0.1**
ARU				IAmb	IAmb	07 12 01.7	
	comp=Z,62nm,1.1s						
ARU	**Arti**	**85.21**	**328**	*c i*P	**P**	**07 12 00.4**	**-0.2**
ARU				S	**SKSac**	**07 22 10.2**	**-1.0**
ARU				SS	**SS**	**07 28 01.3**	**+5.6**
ARU				pmax	pmax		
	comp=Z,75nm,1.2s						
N16K	**Nishlik Lake**	**86.43**	**28**	P	**P**	**07 12 08.3**	**+1.8**
	baz=250						
O17K	**Koliganek Bris**	**87.00**	**29**	P	**P**	**07 12 10.4**	**+1.2**
	baz=252						
LKRN	**Lenkeran, Azer**	**87.17**	**309**	P	**P**	**07 12 11.8**	**+1.2**
RAYN	**Ar Rayn**	**87.52**	**294**	P	**P**	**07 12 13.6**	**+0.9**
RAYN	**Ar Rayn**	**87.52**	**294**	P	**P**	**07 12 13.6**	**+0.9**
RAYN				pmax	pmax		
	comp=Z,145nm,1.0s						
RAYN	**Ar Rayn**	**87.52**	**294**	*i* P	**P**	**07 12 12.9**	**+0.3**
	SNR=20						
RAYN	**Ar Rayn**	**87.52**	**294**	P	**P**	**07 12 13.8**	**+1.1**
AKT	**Akhty**	**88.45**	**312**	*e*P	**P**	**07 12 17.4**	**+0.7**
AKT				*e**PP	**pP**	**07 12 54.1**	**+0.7**

AKT				e		07 15 48.1	
AKT				pmax	pmax		
	comp=Z,57nm,1.0s						
TTA	Tatalina	88.45	26	P	P	07 12 17.8	+1.6
	baz=253						
ATD	Arta Tunnel	88.51	282	P	P	07 12 18.3	+0.8
	comp=Z,2.4nm,0.9s,baz=72,slow=2.6,SNR=9.4						
	comp=Z,2.4nm,0.9s						
ATD	Arta Tunnel	88.51	282	P	P	07 12 18.8	+1.3
ATD				IAmb	IAmb	07 12 20.8	
	comp=Z,86nm,1.0s						
ATD	Arta Tunnel	88.51	282	P	P	07 12 17.6	+0.1
KDAK	Kodiak Island	88.70	32	LR	LR	07 49 30.6	
	comp=Z,76nm,19.9s,baz=272,slow=34						
L19K	White Mountain	88.75	27	P	P	07 12 19.5	+1.9
	baz=254						
SEKA	Sheki	88.80	312	P	P	07 12 19.9	+1.6
MNGR	Mingechevir, A	88.81	311	P	P	07 12 20.9	+2.6
TAOE	Nuku Hiva Isla	88.86	99	eLR	LR	07 40 50.2	
	comp=Z,410nm,24.1s						
MAK	Makhachkala	88.86	313	eP	P	07 12 16.9	-1.6
MAK				e*PP	pP	07 12 55.8	+0.4
MAK				e*SP	sP	07 13 11.1	+0.4
MAK				e		07 15 55.1	
MAK				e		07 22 31.7	
MAK				pmax	pmax		
	comp=Z,161nm,1.0s						
ELIB	Princess Elisa	89.06	197	dP	P	07 12 20.0	+0.9
	comp=Z,32nm,0.9s						
ELIB				dx	x	07 12 20.6	
ZKTA	Zakatala	89.30	312	P	P	07 12 21.9	+1.3
GANJ	Ganja	89.36	311	P	P	07 12 21.9	+0.9
GROC	Groznyy	90.14	313	eP	P	07 12 24.3	-0.2
GROC				e*PP	pP	07 13 01.0	-0.4
GROC				e		07 15 59.1	
GROC				eS	SKSac	07 22 41.0	-0.5
GROC				pmax	pmax		
	comp=Z,113nm,1.3s						
CHUM	Lake Minchumin	90.31	26	P	P	07 12 25.2	+0.5
	baz=256						
BELG	Belogornoye	90.40	323	deP	P	07 12 26.2	+0.8
BELG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GNI	Garni	90.48	310	c iP	P	07 12 27.2	+0.9
GNI				pmax	pmax		
	comp=Z,30nm,1.6s						
GNI	Garni	90.48	310	P	P	07 12 27.3	+0.9
GNI	Garni	90.48	310	P	P	07 12 27.5	+1.1
KIRV	Kirov	90.54	329	ceP	P	07 12 24.4	-1.5
I21K	Tanana	90.76	24	P	P	07 12 27.1	+0.3
	baz=256						
MLY	Manley	91.24	25	P	P	07 12 29.1	0.0
	baz=258						
G22K	Bettles	91.35	23	P	P	07 12 29.5	0.0
	baz=257						
ZEI	Tsey	91.46	313	eP	P	07 12 30.2	-0.7
ZEI				pmax	pmax		
	comp=Z,26nm,1.4s						
GEVA	Gevas	91.55	308	IAmb	IAmb	07 12 33.4	
	comp=Z,61nm,1.0s						
AKH	Akhalkalaki	91.59	311	P	P	07 12 32.6	+1.1
KIBK	Kibwezi	91.70	267	IAmb	IAmb	07 12 34.6	
	comp=Z,41nm,1.2s						
KIBK	Kibwezi	91.70	267	P	P	07 12 33.7	+1.2
	SNR=8.7						
I23K	Minto, Yukon-K	91.83	25	IAmb	IAmb	07 13 27.4	
	comp=Z,43nm,1.8s						
I23K	Minto, Yukon-K	91.83	25	P	P	07 12 32.1	+0.3
	baz=259						
G23K	Bananza Creek	91.88	23	P	P	07 12 32.7	+0.6
	baz=258						
COLD	Coldfoot	91.92	23	P	P	07 12 32.9	+0.7
	baz=258						
E23K	Chandalar	92.30	22	P	P	07 12 34.7	+0.7
	baz=259						
KBZ	Khabaz	92.30	314	P	P	07 12 34.1	-0.3
	comp=Z,5.1nm,0.9s,baz=142,slow=3.0,SNR=9.2						
	comp=Z,5.1nm,0.9s						
KBZ	Khabaz	92.30	314	⇓eP	P	07 12 34.5	+0.1
KBZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GURO	Guroymak-BITLI	92.37	308	IAmb	IAmb	07 12 37.3	
	comp=Z,37nm,1.0s						
KIV	Kislovodsk	92.48	314	eP	P	07 12 36.8	+1.4
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
H24K	Noodor Dome	92.57	24	IAmb	IAmb	07 13 14.9	
	comp=Z,28nm,1.7s						
H24K	Noodor Dome	92.57	24	P	P	07 12 35.6	+0.3
	baz=260						
KMBO	Kilima Mbogo	92.63	269	P	P	07 12 35.5	-1.4
	comp=Z,0.1nm,0.4s,baz=61,slow=23,SNR=7.5						
KMBO	Kilima Mbogo	92.63	269	P	P	07 12 37.8	+0.8
KMBO				IAmb	IAmb	07 12 39.1	
	comp=Z,39nm,1.2s						
KMBO	Kilima Mbogo	92.63	269	P	P	07 12 37.8	+0.8
KMBO				pmax	pmax		
	comp=Z,39nm,1.3s						
KMBO	Kilima Mbogo	92.63	269	i P	P	07 12 37.6	+0.7
	SNR=15						
KMBO	Kilima Mbogo	92.63	269	P	P	07 12 38.1	+1.1
ILAR	Eielson Array	92.80	25	P	P	07 12 34.6	-1.7
	comp=Z,1.6nm,0.6s,baz=262,slow=4.4,SNR=26						
ILAR				PP	PP	07 16 19.0	-1.5
	comp=Z,1.4nm,1.0s,baz=252,slow=6.8,SNR=4.7						
ILAR				PKKP	PKKPdf	07 29 46.9	-0.5
	comp=Z,0.8nm,0.9s,baz=343,slow=1.9,SNR=5.5						
ILAR				LR	LR	07 50 17.5	
	comp=Z,43nm,19.9s,baz=268,slow=33						
	comp=Z,1.6nm,0.6s						
F24K	Squaw Lake	92.85	22	P	P	07 12 37.2	+0.7
	baz=260						
G24K	Hadweenzic Riv	92.87	23	P	P	07 12 37.1	+0.5
	baz=261						
D25K	Kavik River	93.68	21	P	P	07 12 40.6	+0.3
	baz=262						
KOPT	Kop Dagi	93.70	310	IAmb	IAmb	07 12 43.7	
	comp=Z,85nm,1.9s						
F25K	Christian Rive	93.71	22	P	P	07 12 41.3	+0.8
	baz=262						
BMAR	Burnt Mountain	94.10	23	P	P	07 12 43.0	+0.7
J26L	Joseph Creek	94.19	26	P	P	07 12 42.7	-0.1
	baz=264						
G26K	Porcupine Rive	94.35	23	P	P	07 12 44.3	+1.0
	baz=264						
SOC	Sochi	94.58	313	eP	P	07 12 42.7	-2.3
SOC				e		07 16 32.1	
SOC				ePPP	PPP	07 18 34.4	
SOC				eS	SKSac	07 23 03.1	-3.1
SOC				eSS	SS	07 30 09.5	-2.1
SOC				eSSS	SSS	07 33 55.9	
K27K	Chicken	94.79	26	IAmb	IAmb	07 14 32.6	
	comp=Z,20nm,1.6s						
L27K	Beaver Creek,	94.82	27	P	P	07 12 46.3	+0.6
	baz=266						
LODK	Lodwar	95.00	273	P	P	07 12 48.6	+0.9
I27K	Kandik River	95.11	25	P	P	07 12 47.7	+0.8
	baz=266						
KLMR	Klimovskoe	95.79	331	eP	P	07 12 46.4	-3.6
KLMR				AMP		07 12 50.6	
	comp=Z,40nm,1.8s						
KLMR				ePP	PP	07 16 40.9	-2.9
KLMR	Klimovskoe	95.79	331	eP	P	07 12 46.4	-3.6
KLMR				e		07 16 40.9	
KLMR				pmax	pmax		
	comp=Z,40nm,1.8s						
DAWY	Dawson	95.97	26	IAmb	IAmb	07 12 55.3	
	comp=Z,14nm,1.2s						
DAWY	Dawson	95.97	26	P	P	07 12 51.4	+0.5
	baz=268						
ASF	Jabal al Asfar	96.00	302	P	P	07 12 51.9	0.0
	comp=Z,13nm,0.9s,baz=32,slow=7.5,SNR=6.4						
	comp=Z,13nm,0.9s						
SNAA	Sanae	96.24	193	P	P	07 12 52.0	-0.1
	comp=Z,6.4nm,0.8s,baz=18,slow=0.9,SNR=7.6						
	comp=Z,6.4nm,0.8s						
SNAA	Sanae	96.24	193	⇓eP	P	07 12 53.2	+1.1
SNAA				pmax	pmax		
	comp=Z,61nm,3.2s						
OBN	Obninsk	97.18	325	i P	P	07 12 54.6	-1.9
OBN				i *PP	pP	07 13 30.4	-3.1
OBN				pmax	pmax		
	comp=Z,17nm,1.2s						
MMAI	Mount Meron Ar	97.31	302	P	Pdif	07 12 57.9	+0.1
	comp=Z,9.4nm,1.0s,baz=98,slow=8.9,SNR=4.8						
	comp=Z,9.4nm,1.0s						
EIL	Elat	97.53	299	P	P	07 12 57.6	-1.0
	comp=Z,8.6nm,1.0s,baz=326,slow=6.7,SNR=4.4						
	comp=Z,8.6nm,1.0s						
APA	Apatity	98.41	337	⇓iP	Pdif	07 13 18.3	+17
APA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,700nm,16.0s						
BR131	Keskin Array S	98.96	309	P	P	07 13 04.3	-0.8
BRTR	Keskin Array B	98.96	309	P	P	07 13 03.8	-1.3
	comp=Z,2.2nm,0.8s,baz=99,slow=7.6,SNR=5.7						
	comp=Z,2.2nm,0.8s						
BRTR	Keskin Array B	98.96	309	i P	P	07 13 04.3	-0.8
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MBAR	Mbarara	99.16	268	P	Pdif	07 13 06.0	-0.5
ANTO	Ankara	99.61	309	P	Pdif	07 13 07.7	-0.1
LSZ	Lusaka	99.65	253	P	Pdif	07 13 08.3	-0.3
	comp=Z,4.5nm,0.7s,baz=132,slow=5.3,SNR=3.0						
	comp=Z,4.5nm,0.7s						
BOSA	Boshof	99.78	240	P	Pdif	07 13 08.4	-0.6
	comp=Z,3.9nm,0.9s,baz=102,slow=3.8,SNR=4.9						
BOSA				LR	LR	07 54 53.0	
	comp=Z,39nm,18.1s,baz=7.0,slow=33						
	comp=Z,3.9nm,0.9s						
LBTB	Lobatse	100.25	243	P	Pdif	07 13 11.1	0.0
	comp=Z,8.4nm,0.9s,baz=126,slow=5.2,SNR=8.3						
ARCES	ARCESS Array B	101.03	340	P	Pdif	07 13 12.2	-1.2
	comp=Z,5.9nm,0.9s,baz=72,slow=4.0,SNR=6.4						
AKASG	Malin Array Be	101.76	320	P	Pdif	07 13 15.7	-1.4
	comp=Z,0.5nm,0.5s,baz=73,slow=3.4,SNR=5.2						
FINES	FINESS Array B	102.25	331	P	Pdif	07 13 16.9	-2.1
	comp=Z,2.1nm,0.9s,baz=93,slow=3.8,SNR=3.8						
FINES	FINESS Array B	102.25	331	i P	Pdif	07 13 17.8	-1.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SUR	Sutherland	102.57	235	P	Pdif	07 13 21.3	-0.1
NACGM	Naroch	102.82	325	eP	Pdif	07 13 21.4	-0.2
	comp=Z,9.0nm,0.8s,baz=82						
RES	Resolute Bay	107.09	11	PKKPbc	PKKPbc	07 29 04.6	-4.7
	comp=Z,0.4nm,0.5s,baz=86,slow=10,SNR=4.0						
YKA	Yellowknife Ar	107.21	26	PKiKP	PKiKP	07 17 47.1	-2.1
	comp=Z,0.4nm,0.5s,baz=282,slow=1.8,SNR=9.4						
YKA				SKiKP	SKiKP	07 21 09.7	-0.9
	comp=Z,1.3nm,0.9s,baz=279,slow=1.9,SNR=7.1						
YKA				PKKPbc	PKKPbc	07 29 05.7	-2.9
	comp=Z,1.2nm,0.7s,baz=109,slow=3.1,SNR=14						
YKA				PKKPab	PKKPdf	07 29 19.2	-1.6
	comp=Z,0.7nm,0.7s,baz=109,slow=3.2,SNR=5.5						
NVAR	Mina Array Bea	110.91	51	PP	PP	07 18 35.5	-1.9
	comp=Z,0.7nm,0.9s,baz=263,slow=7.3,SNR=3.9						
NVAR				SKP		07 21 18.6	
	comp=Z,0.2nm,0.3s,baz=264,slow=3.2,SNR=4.2						
NVAR				PKKPbc	PKKPbc	07 28 55.6	-0.6
	comp=Z,0.7nm,0.7s,baz=93,slow=4.7,SNR=5.1						
NVAR				PKKPab	PKKPab	07 29 05.8	+0.2
	comp=Z,1.3nm,0.7s,baz=106,slow=6.5,SNR=9.5						
CLL	Collm	111.69	323	ePKiKP	PKiKP	07 17 58.0	0.0
	comp=Z,6.0nm,0.8s						
CLL	Collm	111.69	323	ePKIKP	PKiKP	07 17 58.0	0.0
CLL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KHC	Kasperske Hory	111.98	321	ePP	PP	07 18 49.5	+5.2
GERES	GERESS Array B	111.98	320	PKiKP	PKiKP	07 17 58.5	-0.2
	comp=Z,2.1nm,0.7s,baz=57,slow=3.6,SNR=11						
GERES				PP	PP	07 18 42.2	-2.1
	comp=Z,1.8nm,0.9s,baz=62,slow=3.6,SNR=3.9						
WTTA	Wattenberg	113.76	319	i PKP	PKiKP	07 18 02.2	-0.1
	comp=Z,5.6nm,0.4s						
FETA	Feichten	114.42	319	i PKP	PKiKP	07 18 03.8	+0.2
	comp=Z,1.0nm,0.5s						
DAVA	Damuels	114.89	320	i PKP	PKiKP	07 18 04.4	0.0
	comp=Z,4.6nm,0.3s						
DAVOX	Davos/Dischmat	115.05	319	PKP	PKiKP	07 18 04.5	-0.3
	comp=Z,2.6nm,0.3s,baz=142,slow=5.7,SNR=6.6						
PDAR	Pinedale Array	116.46	45	PKP	PKPdf	07 18 07.2	-0.5
	comp=Z,0.3nm,0.6s,baz=298,slow=1.9,SNR=4.2						
PDAR				SKP	SKPbc	07 21 28.5	
	comp=Z,2.4nm,0.9s,baz=222,slow=2.2,SNR=9.0						
PDAR				PKKPbc	PKKPbc	07 28 36.4	-1.3
	comp=Z,1.0nm,0.7s,baz=117,slow=4.8,SNR=8.7						
PDAR				PKKPab	PKKPab	07 28 41.2	+0.1
	comp=Z,1.3nm,0.7s,baz=121,slow=6.2,SNR=9.5						
PDAR				SKKPbc	SKKPbc	07 32 06.5	-3.9
	comp=Z,0.3nm,0.5s,baz=116,slow=4.1,SNR=4.1						
BMRD	Maredsous	116.93	324	dPKPdf	PKiKP	07 18 08.6	+0.6
KEST	Kesra	118.48	307	PKP	PKiKP	07 18 12.4	+0.7
	comp=Z,6.8nm,0.9s,baz=311,slow=5.7,SNR=5.0						
KEST				PP	PP	07 19 28.1	-2.4
	comp=Z,10.0nm,0.9s,baz=187,slow=1.3,SNR=4.9						
RSSD	Black Hills	119.80	42		PKiKP	07 18 14.6	+0.4
RSSD	Black Hills	119.80	42	PKIKP	PKiKP	07 18 14.6	+0.4
RSSD	Black Hills	119.80	42	P	PKiKP	07 18 15.6	+1.4
	baz=292						
ULM	Lac du Bonnet	121.94	33	PKP	PKPdf	07 18 17.2	-0.5
	comp=Z,2.0nm,0.5s,baz=26,slow=0.7,SNR=4.8						
ULM				PKKPbc	PKKPab	07 28 15.7	-0.9
	comp=Z,0.9nm,0.4s,baz=112,slow=6.6,SNR=4.9						
TXAR	Lajitas Array	124.61	59	PKP	PKPdf	07 18 23.4	-0.3
	comp=Z,0.2nm,0.5s,baz=149,slow=2.6,SNR=5.4						
TXAR				SKP	SKPbc	07 21 45.0	
	comp=Z,1.3nm,1.0s,baz=270,slow=1.8,SNR=3.9						
TXAR				PKKPab	PKKPab	07 28 06.0	+0.2
	comp=Z,0.9nm,0.9s,baz=101,slow=6.6,SNR=5.3						
ESDC	Sonseca Array	127.09	316	PKP	PKPdf	07 18 27.7	-0.3
	comp=Z,2.3nm,0.9s,baz=16,slow=3.2,SNR=8.1						
ESDC				PP	PP	07 20 27.9	-0.2
	comp=Z,4.6nm,0.9s,baz=74,slow=7.8,SNR=4.6						
ESDC	Sonseca Array	127.09	316	PKPdf	PKPdf	07 18 28.1	+0.1
JCT	Junction City	127.55	56		PKPdf	07 18 28.8	-0.4
JCT	Junction City	127.55	56	PKIKP	PKPdf	07 18 28.8	-0.4
TORD	Torodi Ar. Bea	128.71	282	PKP	PKPdf	07 18 31.5	-0.2
	comp=Z,8.7nm,0.7s,baz=71,slow=1.9,SNR=44						
PCBR	Castelo Branco	129.41	318	ePKPdf	PKiKP	07 18 33.4	+0.3
PLCA	Paso Flores	129.43	160	PKP	PKPdf	07 18 31.0	-1.5
	comp=Z,2.9nm,1.0s,baz=302,slow=2.9,SNR=2.9						
SCHQ	Schefferville	129.84	13	PKP	PKPdf	07 18 32.9	+0.2
	comp=Z,5.2nm,1.0s,baz=56,slow=3.6,SNR=3.8						
S39A	Bolivar	129.85	45	PKPdf	PKPdf	07 18 32.9	-0.4
PBAR	Barrancos	129.91	316	eSKP	SKPbc	07 21 41.4	-0.7
PMTG	Montargil	130.29	317	epPKPdf	pPKPdf	07 19 09.9	-3.3
PMTG				eSKPdf	SKiKP	07 22 00.3	+3.3
MDT	Midelt	130.37	308	PKP	PKiKP	07 18 35.0	-0.4
	comp=Z,3.9nm,0.8s,baz=49,slow=3.0,SNR=5.4						
MDT				SKPbc	SKPab	07 21 43.9	-0.1
	comp=Z,10.0nm,0.9s,baz=69,slow=6.9,SNR=9.0						
EVO	Evora	130.41	316	eSKP	SKPbc	07 21 43.2	-0.7
PBEJ	Beja	130.56	316	eSKP	SKPbc	07 21 44.0	-0.5
PVAQ	Vaqueiros	130.75	315	eSKP	SKPbc	07 21 45.5	+0.3
PCVE	Castro Verde	130.87	315	eSKP	SKPbc	07 21 45.2	-0.4
MESJ	Messejana	130.89	316	eSKP	SKPbc	07 21 45.0	-0.7
PBDV	Barranco-do-Ve	130.97	315	ePKPdf	PKiKP	07 18 36.3	-0.1
PBDV				eSKP	SKPbc	07 21 45.7	-0.3
MORF	Marmelete	131.45	315	eSKP	SKPbc	07 21 48.1	+0.3
DBIC	Dimbokro	135.18	273	PKP	PKPdf	07 18 43.6	-0.4
	comp=Z,9.2nm,0.6s,baz=106,slow=2.8,SNR=9.7						
DBIC				SKPbc	SKPbc	07 21 59.7	-1.3
	comp=Z,14nm,0.8s,baz=119,slow=5.9,SNR=12						
CFA	Coronel Fontan	138.38	156	PKP	PKPdf	07 18 47.6	-1.8
	comp=Z,1.2nm,0.4s,baz=218,slow=4.1,SNR=7.0						
CFA				SKPbc	SKPbc	07 22 09.3	-0.8
	comp=Z,12nm,0.8s,baz=240,slow=4.1,SNR=20						
ITQB	Itaqui	143.57	170	PKPdf	PKPab	07 18 55.9	+0.3
MATN	Matagalpa	144.01	77		PKPab	07 18 57.8	+0.1
BOAB	BOACO BROADBAN	144.31	78	PKPdf	PKPdf	07 19 00.2	-0.2
BBTS	Babate	146.15	287	PKPbc	PKPdf	07 19 03.5	-0.1
	comp=Z,268nm,1.1s,baz=330,slow=23,SNR=14						
ITAB	Concordia	146.50	177		PKPdf	07 19 04.6	+0.7
CPUP	Villa Florida	146.69	168	PKPbc	PKPdf	07 19 04.8	+0.5
	comp=Z,16nm,1.1s,baz=199,slow=1.8,SNR=28						
PB16	IPOC Station P	148.77	142		PKPdf	07 19 09.7	+1.1
GCUF	Volcan Galeras	152.22	100	eP	PKiKP	07 19 21.8	+0.6
BBAC	Balboa, Cauca	152.47	98	eP	PKPbc	07 19 20.3	-0.7
POPC	Popayan, Colom	153.12	97	eP	PKPbc	07 19 22.4	-0.1
YOTC	Yotoco, Valle	153.64	94	eP	PKPbc	07 19 23.5	0.0
CBOC	Ciudad Bolivar	154.11	90	eP	PKPdf	07 19 20.1	+3.8
GARC	Garzon, Huila	154.22	98	eP	PKPab	07 19 42.5	+3.1
ORTC	Ortega, Tolima	154.72	94	eP	PKPdf	07 19 17.7	+0.7
PTBC	PUERTO BERRIO,	155.68	88	eP	PKPab	07 19 45.8	+0.5
ROSC	El Rosal	155.73	92	PKPab	PKPab	07 19 46.1	+0.1
	comp=Z,13nm,0.7s,baz=131,slow=20,SNR=5.7						
MACC	Macarena, Meta	155.83	99	eP	PKPab	07 19 47.2	+1.3
CHIC	Chingaza	156.29	93	eP	PKPdf	07 19 16.3	-3.3
RUSC	La Rusia	157.03	90	eP	PKPab	07 19 52.8	+1.1
BDFB	Brasilia	158.01	185	PKP	PKPdf	07 19 21.1	-0.2
	comp=Z,1.1nm,0.7s,baz=174,slow=0.4,SNR=4.2						
BDFB				PKPab	PKPab	07 19 53.6	-1.4
	comp=Z,1.7nm,0.7s,baz=82,slow=4.6,SNR=3.2						

MAN 01 07:01:46.5, 11°.93N×126°.23E, h31^{km}, mb5.0, ML3.9, MS4.0, 16C-11D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	Catarman	1.64	291	⇑eP	Pn	07 02 13.5	+0.3
CNP				eS	Sn	07 02 33.0	-0.2
OCLP	Ormoc	1.81	242	⇑eP	Pn	07 02 16.4	+0.8
OCLP				eS	Sn	07 02 39.0	+1.4
GLSP	General Luna,	2.13	183	⇓eP	Pn	07 02 19.8	-0.2
GLSP				eS	Sn	07 02 43.9	-1.5
MSLP	Maasin	2.23	217	⇓eP	Pn	07 02 21.9	+0.5
MSLP				eS	Sn	07 02 49.1	+1.2
SCPH	Surigao	2.25	199	⇑eP	Pn	07 02 21.4	-0.2
SCPH				eS	Sn	07 02 47.3	-1.0
TABP	Talibon, Bohol	2.61	226	⇑eP	Pn	07 02 26.6	0.0
PVCP	Virac	2.62	310	⇓eP	Pn	07 02 27.4	+0.6
PVCP				eS	Sb	07 03 14.0	+9.4
LLP	Lapu-Lapu	2.74	235	⇓eP	Pn	07 02 31.3	+2.9
LLP				eS	Sb	07 03 07.0	-1.0
GHBP	Garcia Hernand	2.95	220	⇑eP	Pn	07 02 30.9	-0.4
GHBP				i S	Sb	07 03 15.4	+1.2
BUTP	Butuan	3.00	192	⇑eP	Pn	07 02 33.7	+1.8
TBP	Tagbilaran	3.22	227	eP	Pn	07 02 36.9	+2.0
RCP	Roxas	3.43	264	⇓eP	Pn	07 02 39.0	+1.0
BIPH	Bislig	3.72	178	⇓iP	Pb	07 02 51.0	-0.5
BIPH				eS	Sb	07 03 46.4	+10
CGP	Cagayan de Oro	3.77	204	⇓eP	Pb	07 02 47.6	-4.8
CGP				eS	Sn	07 03 24.2	-1.6
GUIM	Jordan	3.80	250	⇑eP	Pn	07 02 43.2	+0.3
GUIM				eS	Sn	07 03 22.9	-3.7
IBAJ	Ibajay, Aklan	3.98	269	⇓eP	Pb	07 02 55.4	-0.5
CNOP	Candoni, Negro	4.10	240	⇑eP	Pn	07 02 47.9	+0.8
CNOP				eS	Sn	07 03 36.7	+2.8
OTRP	Odiongan	4.14	276	⇑eP	Pn	07 02 48.9	+1.3
BUKP	Musuan	4.18	196	⇑eP	Pn	07 02 50.4	+2.1
GQP	Guinayangan	4.18	298	⇓eP	Pb	07 02 57.8	-1.6
DCPH	Dipolog City	4.37	221	⇓eP	Pn	07 02 50.7	0.0
PAGZ	Pagadian	4.93	215	⇓eP	Pn	07 03 00.0	+1.5
SJMP	San Jose	5.03	277	⇑eP	Pn	07 03 03.9	+4.0
SJMP				eS	Sb	07 04 12.2	-1.6
CTBH	Cotabato--PC H	5.07	203	⇑iP	Pn	07 03 05.9	+5.5
QVP	Quezon City--P	5.75	298	⇑eP	Pb	07 03 27.8	+1.6
CAUP	Cauayan	6.57	320	⇑eP	Pn	07 03 23.5	+2.5
CAUP				eS	Sb	07 04 50.2	-7.8
SAMP	Sagada Mountai	7.27	315	⇑eP	Pn	07 03 33.2	+2.5
SAMP				eS	Sn	07 04 50.7	-1.6
PPR	Puerto Princes	7.67	255	⇑iP	Pb	07 04 00.5	+1.7

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*DDA **01** 07:04:32.8±0.0, 39°.52N×26°.20E, h10^{km}, ML2.7*
*ISK **01** 07:04:32.2, 39°.51N×26°.21E, h8^{km}, ML2.9/25*
*THE **01** 07:04:33.0, 39°.51N×26°.16E, h7^{km}±1^{km}, ML2.5/8, Error ellipse: s-maj=1.3km s-min=0.6km az=110.0*
*ATH **01** 07:04:33.6, 39°.50N×26°.14E, h10^{km}±1^{km}, ML2.7/6, Error ellipse: s-maj=1.9km s-min=0.7km az=84.0*
ISC 01 07:04:32.8±0.8**, 39°.52N**±0°.02×**26°.19E**±0°.02**, h14**^{km}±5^{km}**, n60, σ0^{s}.49**/87**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.04	249	P	Pg	07 04 35.1	-0.2
KOCA				S	Sg	07 04 36.6	-0.5
PRK	Paraskevi	0.28	167	P	Pg	07 04 38.9	+0.3
PRK				S	Sg	07 04 43.2	+0.7
	3µm,0.6s						
PRK	Paraskevi	0.28	167	P	Pg	07 04 39.0	+0.3
PRK				S	Sg	07 04 43.3	+0.8
PRK				AML	AML	07 04 43.5	
	comp=E,4294µm,0.2s						
PRK				AML	AML	07 04 45.7	
	comp=N,4862µm,0.3s						
EZN	Ezine	0.33	19	P	Pg	07 04 39.6	+0.1
EZN				S	Sg	07 04 44.4	+0.5
	comp=N,2µm,0.4s						
EZN	Ezine	0.33	19	Pg	Pg	07 04 39.7	+0.2
EZN				Sg	Sg	07 04 44.5	+0.5
BOZC	Bozcaada	0.34	342	Pg	Pg	07 04 39.8	+0.1
BOZC				Sg	Sg	07 04 44.9	+0.4
BAYC	CANAKKALE_Bayr	0.35	51	P	Pg	07 04 39.8	-0.2
BAYC				S	Sg	07 04 44.7	-0.2
BAYC				i AML	AML	07 04 45.0	
	comp=N,782nm,0.3s						
ECEA	Canakkale, Ece	0.53	359	P	Pg	07 04 43.3	+0.2
ECEA				S	Sb	07 04 51.2	0.0
COMU	Canakkale	0.62	21	Pg	Pg	07 04 44.9	0.0
BUHA	Balikesir, Bur	0.69	91	P	Pg	07 04 46.0	-0.1
BUHA				S	Sb	07 04 55.9	0.0
GOKA	anakkale-Gk	0.71	342	P	Pb	07 04 46.3	-0.6
GOKA				S	Sg	07 04 56.5	+0.6
GADA	Gvkgeada	0.71	342	Pg	Pb	07 04 46.8	-0.1
DKL	Dikili	0.71	129	Pg	Pg	07 04 46.8	+0.2
CANM	Can-anakkale	0.83	53	Pg	Pb	07 04 48.2	-0.7
LIA	Limnos Island	0.86	296	P	Pb	07 04 49.6	0.0
LIA				S	Sb	07 05 01.1	+0.1
	comp=N,545nm,0.4s						
LIA	Limnos Island	0.86	296	P	Pb	07 04 49.5	0.0
LIA				S	Sb	07 05 00.9	-0.1
LIA				AML	AML	07 05 02.9	
	comp=E,1401µm,0.4s						
LIA				AML	AML	07 05 06.0	
	comp=N,863µm,0.4s						
KARB	zmir-Karabur	0.87	168	P	Pb	07 04 49.5	-0.1
KARB				S	Sn	07 05 02.8	-0.3
KARB				i AML	AML	07 05 04.0	
	comp=N,278nm,0.5s						
ZEDA	zmir-Bergama	0.88	128	P	Pg	07 04 49.7	-0.2
ZEDA				S	Sn	07 05 03.5	+0.2
GELI	Tayfur-Gelibol	0.91	14	Pg	Pg	07 04 50.2	-0.1
LPK	Lapseki	0.96	27	Pg	Pg	07 04 51.1	-0.2
SMTH	Samothraki Isl	1.08	332	P	Pb	07 04 52.8	-0.4
SMTH				S	Sn	07 05 07.6	-0.7
	comp=N,148nm,0.3s						
SMTH	Samothraki Isl	1.08	332	P	Pn	07 04 53.6	+0.1
SMTH				S	Sg	07 05 08.6	+0.9
SMTH				AML	AML	07 05 09.8	
	comp=N,277µm,0.3s						
SMTH				AML	AML	07 05 10.1	
	comp=E,337µm,0.4s						
PSRA	Psara	1.09	207	P	Pn	07 04 53.7	+0.1
PSRA				S	Sn	07 05 08.0	-0.5
PSRA				AML	AML	07 05 12.2	
	comp=E,1884µm,0.3s						
PSRA				AML	AML	07 05 14.3	
	comp=N,1746µm,0.2s						
CHOS	Chios island	1.13	185	P	Pn	07 04 53.8	-0.5
CHOS				S	Sg	07 05 09.7	+0.3
	comp=N,538nm,0.4s						
CHOS	Chios island	1.13	185	Pn	Pb	07 04 54.2	0.0
CHOS	Chios island	1.13	185	P	Pb	07 04 54.2	0.0
CHOS				S	Sn	07 05 09.3	-0.3
CHOS				AML	AML	07 05 12.4	
	comp=E,1243µm,0.4s						
CHOS				AML	AML	07 05 12.4	
	comp=N,913µm,0.4s						
CAVK	Edirne/Enez-Ca	1.17	359	P	Pn	07 04 54.4	-0.4
CAVK				S	Sg	07 05 10.7	0.0
ERIK	Erikli-Kesan	1.18	12	Pn	Pb	07 04 54.8	-0.1
STEP	BALIKESIR_Sava	1.19	96	P	Pg	07 04 55.3	-0.4
STEP				S	Sg	07 05 13.4	+2.2
URLA	Izmir	1.20	165	Pn	Pn	07 04 54.6	-0.5
ENEZ	Enez	1.22	359	Pn	Pb	07 04 55.6	0.0
KRBG	Karabiga-Canak	1.22	44	Pn	Pg	07 04 55.7	-0.6
GONE	Gonen-Balikesi	1.27	65	Pn	Pb	07 04 56.2	-0.2
ZEYE	Izmir, Urla-Ze	1.30	169	P	Pn	07 04 55.9	-0.6
ZEYE				S	Sg	07 05 13.9	-0.7
ZEYE				i AML	AML	07 05 19.0	
	comp=N,148nm,0.3s						
BLCB	Balcova	1.31	149	P	Pn	07 04 56.3	-0.3
BLCB				S	Sg	07 05 15.0	0.0
BLCB	Balcova	1.31	149	Pn	Pb	07 04 57.2	0.0
BALB	Balikesir	1.31	84	Pn	Pb	07 04 56.7	-0.5
ALN	Alexandroupoli	1.38	355	P	Pb	07 04 58.1	-0.3
ALN				S	Sb	07 05 16.3	+0.4
	comp=N,168nm,0.4s						
ALN	Alexandroupoli	1.38	355	Pn	Pb	07 04 58.3	-0.1
ALN	Alexandroupoli	1.38	355	P	Pb	07 04 58.5	+0.1
ALN				S	Sb	07 05 16.3	+0.4

ALN				AML	AML	07 05 17.7	
	comp=E,270µm,0.4s						
ALN				AML	AML	07 05 18.4	
	comp=N,400µm,0.4s						
RKY	Sarkoy-Tekirda	1.39	33	Pn	Pb	07 04 58.3	-0.3
AKS	Akhisar	1.41	116	Pn	Pb	07 04 58.4	-0.5
EDC	Edincik	1.53	57	Pn	Pb	07 05 00.4	-0.5
THAS	Thassos island	1.57	314	P	Pn	07 05 00.3	+0.1
THAS				S	Sb	07 05 21.3	+0.1
	comp=N,60nm,0.5s						
THAS	Thassos island	1.57	314	P	Pn	07 05 00.2	+0.1
UKOP	Uzunkopru-Edir	1.65	12	Pn	Pb	07 05 02.1	-0.8
RDO	Rodhopi	1.70	343	P	Pn	07 05 02.5	+0.5
RDO				S	Sb	07 05 24.8	-0.3
	comp=N,52nm,0.8s						
RDO	Rodhopi	1.70	343	Pn	Pb	07 05 03.2	-0.6
RDO	Rodhopi	1.70	343	P	Pb	07 05 02.7	-1.1
KCTX	Karacabey (Bur	1.83	65	Pn	Pn	07 05 04.1	+0.3
KYMI	Kymi, Euboea I	1.85	242	P	Pn	07 05 04.0	-0.1
SMG	Samos	1.88	164	P	Pn	07 05 03.7	-0.7
SMG	Samos	1.88	164	P	Pn	07 05 05.1	+0.7
DST	Dursunbey	1.88	87	Pn	Pn	07 05 05.1	+0.6
OUR	Ouranopolis	1.88	296	Pn	Pn	07 05 05.5	+1.0
KAVA	Kavala	1.96	320	P	Pn	07 05 06.1	+0.6
GCAM	G?zelcaml?	1.99	155	Pn	Pn	07 05 06.7	+0.7
EREA	Eretria	2.07	239	P	Pn	07 05 07.1	-0.1
KULA	Kula-Manisa	2.17	117	Pn	Pn	07 05 09.1	+0.6
SIMA	Simav-Kutahya	2.21	100	Pn	Pn	07 05 09.6	+0.5

IDC 01 07:16:26.7±9.6, 19°.43S×170°.02E, h146^{km}±57^{km}, mb3.5/3, mbtmp4.0/3, Error ellipse: s-maj=126.3km s-min=78.9km az=133.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.25	231	P	Pn	07 17 30.3	+0.1
	5.1nm,0.9s,baz=307,slow=20,SNR=1.6						
DZM				S	Sn	07 18 19.9	+0.3
	5.0nm,1.0s,baz=135,slow=19,SNR=1.2						
STKA	Stephens Creek	28.36	238	P	P	07 22 07.0	-0.2
	1.2nm,0.5s,baz=94,slow=9.3,SNR=2.9 1.2nm,0.5s						
WRA	Warramunga Arr	33.56	263	P	P	07 22 52.9	-0.1
	0.3nm,0.4s,baz=93,slow=7.4,SNR=7.9 0.3nm,0.4s						
ASAR	Alice Springs	33.79	256	P	P	07 22 55.1	0.0
	2.0nm,0.5s,baz=87,slow=9.8,SNR=35 2.0nm,0.5s						

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*IDC **01** 07:17:25.6±1.7, 22°.74S×174°.38W, h0^{km}, mb3.9/3, mbtmp4.2/5, ML3.8/2, Error ellipse: s-maj=63.3km s-min=27.9km az=149.0*

ISC 01 07:17:25.0±0.9, 22°.8S±0°.1×174°.3W±0°.1, h10^{km}, n7, σ5^{s}.76/9, mb4.0/3, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	9.15	15	Pn	Pn	07 19 39.3	+2.1
	1.6nm,0.3s,baz=198,slow=20,SNR=1.6						
AFI				Sn	Sn	07 21 11.9	-8.4
	1.9nm,0.3s,baz=307,slow=20,SNR=1.5 18nm,0.7s						
RAR	Rarotonga	13.54	86	Pn	Pn	07 20 38.2	+1.0
	3.0nm,0.3s,baz=246,slow=8.7,SNR=6.3						
RAR				Sn	Sn	07 22 56.3	-12
	1.2nm,0.3s,baz=120,slow=20,SNR=1.3 9.8nm,0.4s						
URZ	Urewera	17.09	204	S	Sn	07 24 24.4	-10
	1.7nm,0.6s,baz=98,slow=17,SNR=1.2						
STKA	Stephens Creek	40.01	247	P	P	07 25 02.4	+2.2
	0.8nm,0.4s,baz=104,slow=14,SNR=4.6 0.8nm,0.4s						
ASAR	Alice Springs	47.41	258	P	P	07 26 00.8	+0.9
	1.4nm,0.7s,baz=99,slow=7.1,SNR=14						
ASAR				PcP	PcP	07 27 35.2	+4.7
	0.4nm,0.5s,baz=111,slow=4.2,SNR=2.6 1.4nm,0.7s						
WRA	Warramunga Arr	47.75	263	P	P	07 26 02.4	-0.2
	0.9nm,0.6s,baz=102,slow=8.4,SNR=9.6 0.9nm,0.6s						
AKASG	Malin Array Be	146.67	333	PKPbc	PKPab	07 37 07.7	-0.2
	1.6nm,0.7s,baz=40,slow=3.9,SNR=7.0						

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*SJA **01** 07:42:36.0±0.7, 22°.92S×69°.09W, h103^{km}±3^{km}, ML3.9, MW3.8, Hypocentre not reviewed by the ISC*

*NEIC **01** 07:42:36.7±1.5, 22°.91S±0°.06×69°.1W±0°.1, h105^{km}±9^{km}, mb4.2/5, ML4.0(GUC), Error ellipse: s-maj=17.8km s-min=7.9km az=95.0*

*GUC **01** 07:42:37.6±0.8, 22°.90S×69°.09W, h101^{km}±4^{km}, ML4.0*

*VAO **01** 07:42:39.5±0.7, 22°.69S×68°.59W, h72^{km}±7^{km}, mb4.1*

ISC 01 07:42:36.4±0.7, 22°.95S±0°.04×69°.03W±0°.06, h101^{km}±6^{km}, n50, σ1^{s}.14/60, 3C-7D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.35	18	Pn	Pn	07 42 52.5	+0.6
LVC	Limon Verde	0.35	18	*e*P	Pn	07 42 51.7	-0.2
LVC				*i* S	Sn	07 43 02.9	-0.5
LVC	Limon Verde	0.35	18	*e*P	Pn	07 42 52.4	+0.5
LVC	Limon Verde	0.35	18	*e*P		07 42 52.4	
LVC				*e*S		07 43 03.8	
PB15	IPOC Station P	0.48	237		Pn	07 42 53.3	+0.9
PB15	IPOC Station P	0.48	237	⇓*i*P	Pn	07 42 53.3	+0.9
PB15				*i* S	Sn	07 43 05.1	+0.7
PB15	IPOC Station P	0.48	237	*e*P		07 42 53.0	
PB15				*e*S		07 43 05.4	
PB06	IPOC Station P	0.55	296		Pn	07 42 53.2	+0.4
PB06	IPOC Station P	0.55	296	⇓*i*P	Pn	07 42 53.3	+0.4
PB06				*i* S	Sn	07 43 05.0	-0.3
PB06				IAML		07 43 05.9	
	comp=E,11µm,0.1s						
PB06	IPOC Station P	0.55	296	*e*P		07 42 53.0	
PB06				*e*S		07 43 05.1	
PB06				IAML		07 43 07.3	
	comp=Z,4µm,0.1s						
PB03	IPOC Station P	1.12	323	Pn	Pn	07 42 57.8	-0.6
PB03	IPOC Station P	1.12	323	⇓*i*P	Pn	07 42 58.7	+0.3
PB03				*i* S	Sn	07 43 14.4	-0.6
PB03				IAML		07 43 15.0	
	comp=E,4µm,0.1s						
PB03	IPOC Station P	1.12	323	*e*P		07 42 58.7	
PB03				*e*S		07 43 14.6	
PB03				IAML		07 43 15.1	
	comp=Z,3µm,0.3s						
PB09	IPOC Station P	1.16	350		Pn	07 42 59.2	+0.3
PB09	IPOC Station P	1.16	350	⇓*i*P	Pn	07 42 60.0	+1.0
PB09				*i* S	Sn	07 43 16.3	+0.4
PB09				IAML		07 43 18.1	
	comp=E,6µm,0.8s						
PB09	IPOC Station P	1.16	350	*e*P		07 42 59.0	
PB09				*e*S		07 43 16.4	
PB09				IAML		07 43 17.5	
	comp=Z,4µm,0.5s						
PB04	IPOC Station P	1.20	300	Pn	Pn	07 42 59.5	+0.2
PB04	IPOC Station P	1.20	300	⇑*i*P	Pn	07 42 59.5	+0.2
PB04				*i* S	Sn	07 43 16.1	-0.5
PB04				IAML		07 43 18.7	
	comp=N,3µm,0.4s						
PB04	IPOC Station P	1.20	300	*e*P		07 42 59.0	
PB04				*e*S		07 43 16.7	
PB04				IAML		07 43 19.3	
	comp=Z,2µm,0.1s						
PB07	IPOC Station P	1.45	327	Pn	Pn	07 43 01.9	-0.4
PB07	IPOC Station P	1.45	327	⇓*i*P	Pn	07 43 02.6	+0.3
PB07				*i* S	Sn	07 43 21.2	-0.8
PB07				IAML		07 43 23.0	
	comp=E,2µm,0.1s						
PB07	IPOC Station P	1.45	327	*e*P		07 43 02.4	
PB07				*e*S		07 43 21.8	
PB07				IAML		07 43 26.2	
	comp=Z,867nm,0.3s						
PB10	IPOC Station P	1.51	248	Pn	Pn	07 43 03.2	+0.4
PB10	IPOC Station P	1.51	248	⇑*i*P	Pn	07 43 03.2	+0.4
PB10				IAML		07 43 30.2	
	comp=E,784nm,0.2s						
PB10	IPOC Station P	1.51	248	*e*P		07 43 02.0	
PB10				*e*S		07 43 23.0	
PB10				IAML		07 43 26.3	
	comp=Z,573nm,0.5s						
PB02	IPOC Station P	1.81	334		Pn	07 43 06.8	+0.1
PB02	IPOC Station P	1.81	334	⇓*i*P	Pn	07 43 06.9	+0.2
PB02				*i* S	Sn	07 43 29.3	-0.4
PB02				IAML		07 43 30.9	
	comp=E,3µm,0.2s						
PB02	IPOC Station P	1.81	334	*e*P		07 43 06.0	
PB02				*e*S		07 43 29.8	
PB02				IAML		07 43 38.2	
	comp=Z,2µm,0.3s						
PB01	IPOC Station P	1.94	347		Pn	07 43 08.4	0.0
PB01	IPOC Station P	1.94	347	⇓*i*P	Pn	07 43 08.8	+0.4
PB01				*i* S	Sn	07 43 32.9	+0.1
PB01				IAML		07 43 34.2	
	comp=E,2µm,0.1s						
PB01	IPOC Station P	1.94	347	*e*P		07 43 08.0	
PB01				*e*S		07 43 33.6	
PB01				IAML		07 43 34.5	
	comp=Z,2µm,0.2s						
PB14	IPOC Station P	2.09	217	Pn	Pn	07 43 11.4	+0.9
PB14	IPOC Station P	2.09	217	*e*P		07 43 10.0	
PB14				*e*S		07 43 37.4	
PB14				IAML		07 43 38.1	
	comp=Z,634nm,0.4s						
TA01	Diego Aracena	2.60	336	Pn	Pn	07 43 15.7	-1.2
TA01	Diego Aracena	2.60	336	*e*P		07 43 16.0	
TA01				*e*S		07 43 37.2	
TA01				IAML		07 43 53.7	
	comp=Z,242nm,0.4s						
TA02	Huaiquique	2.85	339		Pn	07 43 19.2	-1.0
TA02	Huaiquique	2.85	339	*e*P		07 43 19.4	
TA02				*e*S		07 43 41.2	
TA02				IAML		07 44 06.5	
	comp=Z,292nm,0.1s						
PB11	IPOC Station P	3.23	349	Pn	Pn	07 43 24.3	-1.0
PB11	IPOC Station P	3.23	349	*e*P		07 43 24.6	
PB11				*e*S		07 43 47.2	
PB11				IAML		07 44 29.7	
	comp=Z,193nm,0.7s						
GO01	Chusmiza	3.27	357		Pn	07 43 26.1	-0.1
YJA	Yavi	3.34	77	*e*P		07 43 30.0	
HJA	Humahuaca	3.34	95	*e*P		07 43 30.0	
PSGCX	Pisagua	3.49	343	Pn	Pn	07 43 26.7	-2.1
PSGCX	Pisagua	3.49	343	*e*P		07 43 26.7	
PSGCX				*e*S		07 43 57.2	
PSGCX				IAML		07 43 57.8	
	comp=Z,118nm,0.3s						
AC01	Pan de Azucar	3.49	204	Pn	Pn	07 43 28.8	0.0
AC01	Pan de Azucar	3.49	204	⇑*i*P	Pn	07 43 28.2	-0.6
AC01				*i* S	Sn	07 44 07.5	-1.8
AC01	Pan de Azucar	3.49	204	*e*P		07 43 28.4	
AC01				*e*S		07 44 08.3	
AC01				IAML		07 44 30.7	
	comp=Z,221nm,0.3s						
MNMC	Minye Minye	3.83	352		Pn	07 43 32.7	-1.0
MNMCX	Minye Minye	3.83	352	*e*P		07 43 32.9	
MNMCX				*e*S		07 44 31.2	
ASTB	Santa Barbara	4.32	104	*e*P		07 43 37.2	
PB12	IPOC Station P	4.48	344	*e*P		07 43 40.0	
PB18	Visviri	5.35	355	Pn	Pn	07 43 52.6	-1.8
AC05	El Transito	5.97	191		Pn	07 44 02.0	-0.4
LCO	Las Campanas	6.22	194	Pn	Pn	07 44 04.1	-1.8
CO01	Juntas del Tor	7.07	188		Pn	07 44 18.0	+0.6
CO05	La Serena	7.22	195	Pn	Pn	07 44 18.3	-0.9
GO04	Tololo Observa	7.37	192	Pn	Pn	07 44 19.6	-1.8
BBSD	Serra de San D	9.77	56	*e*P	Pn	07 44 51.4	-2.6
BBRB	Robore, Bolivi	9.81	63	*e*P	Pn	07 44 50.7	-3.8
PTLB	Pontes e Lacer	11.95	53	Pn	Pn	07 45 23.0	-0.5
CZSB	Cruzeiro do Su	15.54	346	P	Pn	07 46 10.5	+0.6
CZSB				IAmb	IAmb	07 46 14.9	
	comp=Z,28nm,0.8s						
TRQA	Tornquist	16.23	160	P	P	07 46 21.4	+1.8
TRQA				IAmb	IAmb	07 46 58.5	
	comp=Z,11nm,1.2s						
SNDB	Serra Nova Dou	20.11	60	*e*P	P	07 47 01.4	-0.9
IPMB	Ipameri, GO	20.12	80	*e*P	P	07 47 03.4	+1.0
VAO	Valinhos	20.32	94	*e*P	P	07 47 05.2	+0.7
BDFB	Brasilia	21.11	74	P	P	07 47 14.1	+0.9
BDFB	Brasilia	21.11	74	*e*P	P	07 47 13.4	+0.2
ITTB	Itaituba	22.51	37	*e*P	P	07 47 27.2	-0.6
MALB	Monte Alegre	25.40	36	*e*P	P	07 47 57.5	+3.0
RUSC	La Rusia	28.94	352	P	P	07 48 28.1	+1.4
RUSC				IAmb	IAmb	07 48 36.9	
	comp=Z,7.2nm,1.3s						
SDD	Santo Domingo	41.16	359	P	P	07 50 09.8	-1.1

IDC 01 07:48:36.2±2.6, 53°.91N×86°.67E, h0^{km}, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=21.1km s-min=12.8km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.10	273	I	I	07 56 50.0	
	baz=89,slow=335,SNR=2.8						
ZALV	Zalesovo Beam	1.10	273	Pg	Pg	07 48 56.8	-0.4
	0.9nm,0.3s,baz=92,slow=11,SNR=10						
ZALV				Lg	Lg	07 49 12.0	
	1.8nm,0.3s,baz=94,slow=29,SNR=17						
KURBB	Kurchatov Arra	5.98	240	Pn	Pn	07 50 07.0	+1.0
	0.1nm,0.3s,baz=54,slow=14,SNR=2.5						
KURBB				Lg	Lg	07 51 46.8	
	baz=53,slow=22 0.6nm,0.3s						
MKAR	Makanchi Array	7.65	203	Pn	Pn	07 50 30.1	+1.2
	0.2nm,0.3s,baz=24,slow=12,SNR=8.0						
MKAR				Lg	Lg	07 52 38.2	
	baz=24,slow=33 0.2nm,0.3s						

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*ISK **01** 07:48:58.6, 39°.50N×26°.06E, h12^{km}, ML2.6/9*

*DDA **01** 07:48:59.5±0.0, 39°.51N×26°.10E, h10^{km}, ML2.1*

ISC 01 07:48:59.0±0.9, 39°.49N±0°.02×26°.07E±0°.04, h12^{km}±5^{km}, n28, σ0^{s}.36/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.05	76	P	Pg	07 49 01.4	0.0
KOCA				S	Sg	07 49 02.9	-0.2
GPNR	Gulpinar-Canak	0.06	125	Pg	Pg	07 49 01.2	-0.2
GPNR				Sg	Sg	07 49 03.1	0.0
SIGR	SIGRI	0.33	211	Pg	Pg	07 49 04.8	-0.8
SIGR				Sg	Sg	07 49 10.9	+0.9
BOZC	Bozcaada	0.35	358	Pg	Pg	07 49 06.0	-0.1
BOZC				Sg	Sg	07 49 11.2	+0.4
BOZC	Bozcaada	0.35	358	P	Pg	07 49 06.1	0.0
BOZC				*i* AML	AML	07 49 11.0	
	comp=E,420nm,0.5s						
BOZC				S	Sg	07 49 11.3	+0.4
EZN	Ezine	0.39	30	Pg	Pg	07 49 06.9	+0.1
EZN				Sg	Sg	07 49 12.3	+0.3
BAYC	CANAKKALE_Bayr	0.45	55	P	Pg	07 49 07.6	-0.2
BAYC				S	Sg	07 49 13.6	-0.1
AYVA	Ayvalik	0.51	110	P	Pg	07 49 09.3	+0.2
AYVA				S	Sb	07 49 16.6	-0.7
ECEA	Canakkale, Ece	0.56	8	P	Pg	07 49 10.1	+0.2
ECEA				S	Sb	07 49 18.2	-0.5
ECEA				*i* AML	AML	07 49 19.0	
	comp=E,114nm,0.1s						
COMU	Canakkale	0.68	27	Pg	Pg	07 49 12.4	+0.1
COMU				Sg	Sb	07 49 22.2	-0.1
GADA	Gvkgeada	0.71	349	Pg	Pg	07 49 12.7	-0.2
DKL	Dikili	0.77	123	Pg	Pg	07 49 14.0	+0.1
BUHA	Balikesir, Bur	0.78	89	P	Pg	07 49 13.2	-0.9
BUHA				S	Sb	07 49 25.1	+0.1
KARB	zmir-Karabur	0.87	162	P	Pb	07 49 16.5	+0.5
KARB				S	Sg	07 49 27.5	+0.5
KARB				*i* AML	AML	07 49 30.0	
	comp=E,76nm,0.3s						
CANM	Can-anakkale	0.92	55	Pg	Pb	07 49 16.7	-0.2
ZEDA	zmir-Bergama	0.94	123	P	Pb	07 49 17.5	+0.3
ZEDA				S	Sn	07 49 31.5	+0.1
ZEDA				*i* AML	AML	07 49 33.0	
	comp=E,59nm,0.3s						
GELI	Tayfur-Gelibol	0.96	19	Pg	Pg	07 49 17.3	-0.2
LPK	Lapseki	1.03	31	Pg	Pg	07 49 18.6	-0.2
CHOS	Chios island	1.10	181	Pn	Pb	07 49 20.1	+0.1
URLA	Izmir	1.20	160	Pn	Pn	07 49 21.2	-0.4
ERIK	Erikli-Kesan	1.23	16	Pn	Pn	07 49 21.9	-0.1
KRBG	Karabiga-Canak	1.30	46	Pn	Pn	07 49 23.1	+0.1
BLCB	Balcova	1.34	145	Pn	Pn	07 49 23.6	+0.1
GONE	Gonen-Balikesi	1.36	65	Pn	Pn	07 49 23.9	+0.1
BALB	Balikesir	1.41	83	Pn	Pn	07 49 24.3	-0.1
ALN	Alexandroupoli	1.41	359	Pn	Pn	07 49 24.3	-0.1
RKY	Sarkoy-Tekirda	1.47	35	Pn	Pn	07 49 25.3	0.0
EDC	Edincik	1.62	58	Pn	Pn	07 49 27.6	+0.2

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*ISK **01** 07:49:26.2, 39°.51N×26°.04E, h9^{km}, ML2.9/17*

*DDA **01** 07:49:27.1±0.0, 39°.51N×26°.09E, h10^{km}, MW3.3*

*ATH **01** 07:49:27.4, 39°.49N×26°.05E, h11^{km}±1^{km}, ML2.8/9, Error ellipse: s-maj=1.7km s-min=0.7km az=169.0*

*THE **01** 07:49:27.0, 39°.49N×26°.06E, h12^{km}±1^{km}, ML2.9/7, Error ellipse: s-maj=1.2km s-min=0.6km az=135.0*

ISC 01 07:49:26.9±0.8, 39°.50N±0°.01×26°.06E±0°.02, h10^{km}±5^{km}, n59, σ0^{s}.67/92, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.06	86	P	Pg	07 49 29.1	+0.2
KOCA				S	Sg	07 49 30.6	+0.2
GPNR	Gulpinar-Canak	0.07	127	Pg	Pg	07 49 28.8	-0.2
GPNR				Sg	Sg	07 49 30.7	+0.1
PRK	Paraskevi	0.30	147	P	Pg	07 49 33.1	+0.3
PRK				S	Sg	07 49 37.7	+0.8
	9µm,0.2s						
PRK	Paraskevi	0.30	147	P	Pg	07 49 33.2	+0.3
PRK				S	Sg	07 49 37.9	+1.0
PRK				AML	AML	07 49 38.0	
	comp=E,20501µm,0.2s						
PRK				AML	AML	07 49 38.1	
	comp=N,13862µm,0.3s						
SIGR	SIGRI	0.33	209	P	Pg	07 49 33.6	+0.2
SIGR				S	Sg	07 49 38.1	+0.4
	comp=N,4µm,0.2s						
SIGR	SIGRI	0.33	209	Pg	Pg	07 49 33.3	-0.1
SIGR				Sg	Sg	07 49 38.3	+0.6
SIGR	SIGRI	0.33	209	P	Pg	07 49 33.6	+0.2
SIGR				S	Sg	07 49 38.4	+0.6
SIGR				AML	AML	07 49 38.7	
	comp=N,10475µm,0.3s						
SIGR				AML	AML	07 49 39.1	
	comp=E,7060µm,0.2s						
BOZC	Bozcaada	0.34	359	Pg	Pg	07 49 33.4	-0.3
BOZC				Sg	Sg	07 49 38.5	+0.2
EZN	Ezine	0.39	32	P	Pg	07 49 34.4	-0.1
EZN				S	Sg	07 49 39.9	+0.3
EZN	Ezine	0.39	32	Pg	Pg	07 49 34.4	-0.1
EZN				Sg	Sg	07 49 40.2	+0.6
BAYC	CANAKKALE_Bayr	0.45	57	P	Pg	07 49 35.2	-0.4
BAYC				S	Sg	07 49 41.3	-0.2
ECEA	Canakkale, Ece	0.55	9	P	Pg	07 49 37.7	+0.1
ECEA				S	Sb	07 49 45.8	-0.8
ECEA				*i* AML	AML	07 49 46.0	
	comp=E,520nm,0.2s						
COMU	Canakkale	0.68	28	Pg	Pg	07 49 39.8	-0.2
COMU				Sg	Sb	07 49 49.7	-0.6
GOKA	anakkale-Gk	0.70	350	P	Pg	07 49 40.5	+0.1
GOKA				S	Sg	07 49 50.2	+0.6
GOKA				*i* AML	AML	07 49 51.0	
	comp=E,375nm,0.2s						
GADA	Gvkgeada	0.70	350	Pg	Pg	07 49 40.1	-0.3
GADA				Sg	Sg	07 49 50.1	+0.5
DKL	Dikili	0.78	123	Pg	Pg	07 49 42.2	+0.3
LIA	Limnos Island	0.79	301	P	Pg	07 49 42.4	+0.3
LIA				S	Sb	07 49 53.4	+0.1
	comp=E,1µm,0.3s						
LIA	Limnos Island	0.79	301	P	Pg	07 49 42.3	+0.3
LIA				S	Sb	07 49 52.9	-0.5
LIA				AML	AML	07 49 55.7	
	comp=N,2063µm,0.3s						
LIA				AML	AML	07 49 56.3	
	comp=E,2641µm,0.3s						
BUHA	Balikesir, Bur	0.79	89	P	Pg	07 49 41.7	-0.3
BUHA				S	Sn	07 49 55.1	-0.8
KARB	zmir-Karabur	0.88	162	P	Pg	07 49 44.1	+0.4
KARB				S	Sg	07 49 55.6	+0.4
KARB				*i* AML	AML	07 49 58.0	
	comp=E,450nm,0.3s						
CANM	Can-anakkale	0.92	56	Pg	Pg	07 49 44.6	0.0
ZEDA	zmir-Bergama	0.95	124	P	Pg	07 49 45.4	+0.3
ZEDA				S	Sb	07 49 59.2	+1.1
ZEDA				*i* AML	AML	07 50 00.0	
	comp=E,282nm,0.3s						
GELI	Tayfur-Gelibol	0.95	19	Pg	Pg	07 49 44.8	-0.4
LPK	Lapseki	1.03	31	Pg	Pg	07 49 46.3	-0.3
PSRA	Psara	1.03	202	P	Pg	07 49 46.8	+0.2
PSRA				S	Sg	07 50 00.5	+0.4
PSRA				AML	AML	07 50 04.7	
	comp=N,2065µm,0.2s						
PSRA				AML	AML	07 50 05.9	
	comp=E,4098µm,0.3s						
SMTH	Samothraki Isl	1.05	337	P	Pg	07 49 46.7	-0.4
SMTH				S	Sb	07 50 01.5	+0.4
	comp=E,148nm,0.1s						
SMTH	Samothraki Isl	1.05	337	P	Pg	07 49 47.1	0.0
SMTH				S	Sb	07 50 01.5	+0.4
SMTH				AML	AML	07 50 03.4	
	comp=E,239µm,0.2s						
SMTH				AML	AML	07 50 04.4	
	comp=N,350µm,0.3s						
CHOS	Chios island	1.11	180	P	Pb	07 49 47.2	-1.0
CHOS				S	Sb	07 50 02.3	-0.4
	comp=N,772nm,0.3s						
CHOS	Chios island	1.11	180	Pn	Pb	07 49 47.6	-0.6
CHOS	Chios island	1.11	180	P	Pb	07 49 47.9	-0.3
CHOS				S	Sb	07 50 02.5	-0.2
CHOS				AML	AML	07 50 07.2	
	comp=E,1735µm,0.2s						
CHOS				AML	AML	07 50 07.5	
	comp=N,1384µm,0.4s						
CAVK	Edirne/Enez-Ca	1.20	4	SPECP		07 49 49.0	
CAVK				P	Pb	07 49 49.0	-0.6
CAVK				S	Sn	07 50 07.6	+1.6
CAVK				*i* AML	AML	07 50 21.0	
	comp=N,93nm,0.9s						
URLA	Izmir	1.21	160	Pn	Pn	07 49 48.9	-1.0
ERIK	Erikli-Kesan	1.22	16	Pn	Pn	07 49 49.2	-0.8
ENEZ	Enez	1.24	3	Pn	Pn	07 49 49.9	-0.3
STEP	BALIKESIR_Sava	1.29	95	SPECP		07 49 51.0	
STEP				P	Pb	07 49 51.6	+0.4
STEP				S	Sg	07 50 10.1	+1.8
STEP				*i* AML	AML	07 50 13.0	
	comp=N,92nm,0.4s						
KRBG	Karabiga-Canak	1.30	46	Pn	Pn	07 49 50.8	-0.3
BLCB	Balcova	1.35	145	P	Pn	07 49 50.5	-1.3
BLCB				S	Sb	07 50 09.1	-0.4
BLCB	Balcova	1.35	145	Pn	Pn	07 49 51.7	-0.1
GONE	Gonen-Balikesi	1.37	66	Pn	Pn	07 49 52.1	+0.1
ALN	Alexandroupoli	1.40	360	P	Pn	07 49 52.1	-0.3
ALN				S	Sn	07 50 10.5	-0.4
ALN	Alexandroupoli	1.40	360	Pn	Pn	07 49 52.1	-0.3
ALN	Alexandroupoli	1.40	360	P	Pn	07 49 52.1	-0.3
ALN				S	Sn	07 50 10.6	-0.4
ALN				AML	AML	07 50 12.4	
	comp=E,253µm,0.4s						
ALN				AML	AML	07 50 18.3	
	comp=N,157µm,0.8s						
BALB	Balikesir	1.41	84	Pn	Pn	07 49 52.6	0.0
RKY	Sarkoy-Tekirda	1.47	35	Pn	Pn	07 49 53.4	0.0
THAS	Thassos island	1.51	318	P	Pn	07 49 53.1	-0.9
THAS				S	Sn	07 50 12.2	-1.5
	comp=N,102nm,0.3s						
THAS	Thassos island	1.51	318	P	Pn	07 49 53.5	-0.5
THAS				AML	AML	07 50 18.0	
	comp=N,237µm,0.3s						
THAS				AML	AML	07 50 18.2	
	comp=E,168µm,0.4s						
EDC	Edincik	1.62	58	Pn	Pn	07 49 55.7	+0.1
RDO	Rodhopi	1.69	347	P	Pn	07 49 56.2	-0.3
RDO				S	Sn	07 50 17.2	-1.0
RDO	Rodhopi	1.69	347	P	Pn	07 49 56.4	0.0
KYMI	Kymi, Euboea I	1.75	241	P	Pn	07 49 56.5	-0.8
OUR	Ouranopolis	1.80	298	P	Pn	07 49 57.8	-0.1
OUR	Ouranopolis	1.80	298	P	Pn	07 49 57.9	-0.1
SMG	Samos	1.89	161	P	Pn	07 49 59.6	+0.4
SMG				S	Sn	07 50 22.6	-0.5
	comp=E,200nm,0.4s						
SMG	Samos	1.89	161	P	Pn	07 49 59.1	-0.1
SMG				AML	AML	07 50 29.7	
	comp=E,421µm,0.5s						
SMG				AML	AML	07 50 32.2	
	comp=N,376µm,0.4s						
KAVA	Kavala	1.91	322	P	Pn	07 49 59.2	-0.3
KDZ	Kurdzhali	2.20	347	*i* P	Pn	07 50 03.4	-0.2
RZN	Rozhen	2.42	335	*i* P	Pn	07 50 06.8	+0.2
MMB	Musomiste	2.74	320	*i* P	Pn	07 50 11.1	+0.1

MPEP	**Malo Peshtene**	**4.23**	**336**	*i* P	**Pg**	**07 50 51.2**	**+3.4**

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*NNC **01** 08:10:42.0±3.6, 54°.29N×87°.01E, h0^{km}, mb3.5, mpv2.6, Error ellipse: s-maj=29.8km s-min=19.8km az=10.0, Suspected Mining explosion.*

*IDC **01** 08:10:42.8±2.6, 54°.27N×87°.00E, h0^{km}, mbtmp2.9/3, ML2.5/3, Error ellipse: s-maj=22.9km s-min=14.7km az=68.0*

ISC 01 08:10:43.4±4.1, **54°.3N**±0°.2×**86°.8E**±0°.2, **h0^{km}, n9,** σ1^{s}.**56**/14, **6C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.22**	**253**	I	I	08 20 01.3	
	0.1nm,1.0s,baz=75,slow=333,SNR=12						
ZAA0	**Zalesovo Array**	**1.22**	**253**	⇑P	**Pg**	**08 11 05.7**	**-1.2**
	0.1nm,0.1s						
ZAA0				⇓S	**Sn**	**08 11 25.5**	**+0.6**
	4.5nm,0.8s						
ZALV	**Zalesovo Beam**	**1.22**	**253**	Pg	**Pb**	**08 11 06.3**	**-1.1**
	1.7nm,0.3s,baz=71,slow=16,SNR=25						
ZALV				Lg	Lg	08 11 25.5	
	1.5nm,0.3s,baz=78,slow=27,SNR=11						
KURK	**Kurchatov**	**6.16**	**237**	⇑Pn	**Pn**	**08 12 16.5**	**+0.9**
	0.8nm,0.7s						
KURK				⇑Sn	**Sn**	**08 13 29.8**	**+3.2**
	0.5nm,0.5s						
KURK				⇓Lg	Lg	08 14 01.0	
	3.4nm,1.1s						
KURBB	**Kurchatov Arra**	**6.26**	**237**	Pn	**Pn**	**08 12 18.1**	**+1.1**
	0.1nm,0.3s,baz=55,slow=14,SNR=10						
KURBB				Sn	**Sn**	**08 13 29.7**	**+0.5**
	baz=60,slow=15,SNR=1.2						
KURBB				Lg	Lg	08 14 03.5	
	baz=57,slow=31,SNR=2.6						
	0.9nm,0.6s						
KURBB	**Kurchatov Arra**	**6.26**	**237**	⇑Pn	**Pn**	**08 12 18.5**	**+1.5**
	1.5nm,0.7s						
KURBB				⇑Sn	**Sn**	**08 13 28.9**	**-0.3**
	1.0nm,0.5s						
KURBB				⇓Lg	Lg	08 14 03.3	
	3.0nm,0.7s						
MK31	**Makanchi Array**	**8.06**	**203**	⇓Pn	**Pn**	**08 12 44.2**	**+2.4**
	baz=26,slow=13,SNR=6.7						
MK31				⇑Sn	**Sn**	**08 14 12.4**	**-1.2**
	0.5nm,0.8s						
MK31				⇓Lg	Lg	08 14 59.5	
	2.4nm,0.9s,baz=246,slow=25,SNR=2.8						
MKAR	**Makanchi Array**	**8.06**	**203**	Pn	**Pn**	**08 12 42.6**	**+0.8**
	0.1nm,0.3s,baz=26,slow=13,SNR=4.3						
MKAR				Sn	**Sn**	**08 14 12.5**	**-1.1**
	baz=19,slow=27,SNR=2.8						
MKAR				Lg	Lg	08 14 54.1	
	baz=20,slow=32						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**9.82**	**269**	Pn	**Pn**	**08 13 05.8**	**0.0**
	baz=58,slow=17,SNR=2.7						
	0.4nm,0.4s						

ROM 01 08:18:15.8±0.2, **42°.51N**±0°.01×**13°.28E**±0°.01, **h13^{km}**±1^{km}, **ML1.4**/4, **2C-2D, Error ellipse: s-maj=1.1km s-min=1.0km az=273.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.05**	**275**	P	Pg	08 18 18.6	+0.2
RM33				S	Sg	08 18 20.5	+0.3
RM33				AML	AML		
	comp=N,14500µm,0.4s						
RM33				AML	AML		
	comp=E,21250µm,0.3s						
RM33				AML	AML		
	comp=N,14950µm,0.4s						
RM33				AML	AML		
	comp=E,21200µm,0.3s						
RM33				AML	AML		
	comp=E,20300µm,0.3s						
RM33				AML	AML		
	comp=E,499µm,1.1s						
RM33				AML	AML		
	comp=E,454µm,0.4s						
RM33				AML	AML		
	comp=N,323µm,0.7s						
T1247	**Pizzolo (AQ)**	**0.07**	**166**	P	Pg	08 18 18.7	+0.2
T1247				S	Sg	08 18 20.7	+0.3
T1247				AML	AML		
	comp=E,13350µm,0.2s						
T1247				AML	AML		
	comp=E,19300µm,0.1s						
T1247				AML	AML		
	comp=N,36000µm,0.2s						
T1247				AML	AML		
	comp=N,718µm,0.2s						
T1247				AML	AML		
	comp=E,459µm,1.2s						
SMA1	**SAN MARTINO**	**0.13**	**19**	P	Pb	08 18 20.3	0.0
SMA1				S	Sg	08 18 21.7	-0.2
SMA1				AML	AML		
	comp=N,28650µm,0.3s						
SMA1				AML	AML		
	comp=E,35300µm,0.3s						
SMA1				AML	AML		
	comp=E,80µm,0.9s						
SMA1				AML	AML		
	comp=N,74µm,2.8s						
LNSS	**Leonessa**	**0.20**	**299**	P	Pg	08 18 20.8	+0.4
LNSS				AML	AML		
	comp=E,5490µm,1.2s						
LNSS				AML	AML		
	comp=N,4270µm,0.3s						
T1222	**Castel Sant'An**	**0.20**	**240**	⇑P	Pg	08 18 20.3	-0.1
T1222				AML	AML		
	comp=N,2070µm,0.3s						
T1222				AML	AML		
	comp=E,3785µm,0.9s						
T1222				AML	AML		
	comp=N,1960µm,0.2s						
T1222				AML	AML		
	comp=E,3920µm,0.9s						
T1222				AML	AML		
	comp=N,2075µm,0.3s						
T1222				AML	AML		
	comp=E,3785µm,0.9s						
T1222				AML	AML		
	comp=N,2070µm,0.3s						
T1222				AML	AML		
	comp=N,1955µm,0.3s						
GIGS	**Gran Sasso**	**0.22**	**104**	P	Pg	08 18 21.2	+0.5
GIGS				AML	AML		
	comp=E,806µm,0.2s						
GIGS				AML	AML		
	comp=E,806µm,0.2s						
GIGS				AML	AML		
	comp=N,1600µm,0.2s						
T1214	**Arquata del Tr**	**0.26**	**349**	AML	AML		
	comp=E,1340µm,1.7s						
T1214				AML	AML		
	comp=E,1410µm,0.3s						
T1214				AML	AML		
	comp=N,1360µm,1.0s						
T1214				AML	AML		
	comp=E,1340µm,0.3s						
T1214				AML	AML		
	comp=N,1345µm,0.6s						
T1214				AML	AML		
	comp=E,1410µm,0.3s						
T1214				AML	AML		
	comp=N,1360µm,1.0s						
T1214				AML	AML		
	comp=E,1340µm,0.3s						
T1214				AML	AML		
	comp=E,1410µm,1.7s						
T1214				AML	AML		
	comp=N,1360µm,1.0s						
FIAM	**Fiamignano**	**0.26**	**207**	⇓P	Pg	08 18 21.3	-0.1
FIAM				AML	AML		
	comp=E,2410µm,0.6s						
FIAM				AML	AML		
	comp=N,1610µm,0.6s						
FIAM				AML	AML		
	comp=E,2405µm,0.6s						
T1212	**Cascia, Frazio**	**0.30**	**325**	⇓P	Pg	08 18 22.5	+0.4
T1212				AML	AML		
	comp=N,2065µm,0.7s						
T1212				AML	AML		
	comp=E,1845µm,0.6s						
T1212				AML	AML		
	comp=N,2130µm,0.7s						
T1212				AML	AML		
	comp=E,1850µm,0.6s						
T1211	**Morro Reatino**	**0.31**	**275**	⇑P	Pg	08 18 22.3	0.0
T1211				AML	AML		
	comp=E,1031µm,0.5s						
T1211				AML	AML		
	comp=E,1058µm,0.5s						
T1211				AML	AML		
	comp=N,2340µm,0.2s						
T1211				AML	AML		
	comp=E,1032µm,0.5s						
T1211				AML	AML		
	comp=N,2330µm,0.2s						
T1211				AML	AML		
	comp=E,1060µm,0.5s						
T1211				AML	AML		
	comp=E,1034µm,0.5s						
T1211				AML	AML		
	comp=N,2330µm,0.2s						
T1211				AML	AML		
	comp=E,1057µm,0.5s						
T1211				AML	AML		
	comp=N,2340µm,0.2s						
T1217	**Poggiodomo (PG**	**0.33**	**309**	S	Sg	08 18 27.4	+0.3
T1217				AML	AML		
	comp=E,1625µm,0.5s						
T1217				AML	AML		
	comp=N,1180µm,1.0s						
T1217				AML	AML		
	comp=E,1430µm,0.5s						
T1217				AML	AML		
	comp=N,1275µm,1.0s						
ARRO	**Arrone**	**0.39**	**281**	P	Pg	08 18 21.3	-2.3
ARRO				AML	AML		
	comp=N,786µm,1.0s						
ARRO				AML	AML		
	comp=E,1305µm,0.6s						
CESX	**Cesi**	**0.53**	**282**	S	Sg	08 18 33.4	+0.3
CESX				AML	AML		
	comp=E,356µm,0.5s						
CESX				AML	AML		
	comp=N,364µm,0.7s						
FDMO	**Fiordimonte**	**0.55**	**345**	S	Sg	08 18 34.5	+0.5
FDMO				AML	AML		
	comp=E,396µm,0.7s						
FDMO				AML	AML		
	comp=N,334µm,0.2s						
GUMA	**Gualdo di Mace**	**0.56**	**4**	S	Sb	08 18 35.4	-0.1
GUMA				AML	AML		
	comp=E,4150µm,0.6s						
GUMA				AML	AML		
	comp=N,13250µm,0.2s						
GUMA				AML	AML		
	comp=E,2630µm,0.4s						
GUMA				AML	AML		
	comp=N,2350µm,0.6s						
CESI	**CESI - Serrava**	**0.57**	**331**	S	Sg	08 18 34.9	+0.3
CESI				AML	AML		
	comp=N,766µm,1.3s						
CESI				AML	AML		
	comp=E,592µm,0.5s						
CSP1	**Cessapalombo**	**0.59**	**355**	S	Sg	08 18 34.6	-0.7
CSP1				AML	AML		
	comp=E,460µm,0.9s						
CSP1				AML	AML		
	comp=N,600µm,0.3s						
CSP1				AML	AML		
	comp=N,600µm,0.3s						
CERT	**Cerreto**	**0.60**	**202**	AML	AML		
	comp=E,496µm,0.4s						
CERT				AML	AML		
	comp=N,316µm,0.9s						
MOMA	**Monte Martano**	**0.60**	**300**	S	Sg	08 18 35.4	-0.2
MOMA				AML	AML		
	comp=E,454µm,0.2s						
MOMA				AML	AML		
	comp=N,416µm,0.3s						
SRES	**S.Oreste - Sor**	**0.63**	**245**	AML	AML		
	comp=E,208µm,0.6s						
SRES				AML	AML		
	comp=E,208µm,1.4s						
SRES				AML	AML		
	comp=N,192µm,0.7s						
RCAV	**Rocca di Cave**	**0.70**	**201**	S	Sg	08 18 36.1	-2.6
RCAV				AML	AML		
	comp=N,424µm,1.3s						
RCAV				AML	AML		
	comp=E,462µm,0.7s						
RCAV				AML	AML		
	comp=N,424µm,1.3s						
ASSB	**Assisi San Ben**	**0.70**	**320**	S	Sg	08 18 37.6	-1.2
ASSB				AML	AML		
	comp=E,317µm,1.0s						
ASSB				AML	AML		
	comp=N,288µm,0.3s						
GIUL	**Giuliano Di Ro**	**0.95**	**181**	S	Sg	08 18 43.1	-3.3
PE3	**Peglio**	**1.32**	**335**	S	Sg	08 19 01.1	+2.6
CPGN	**Carpegna, Ital**	**1.47**	**332**	P	Pn	08 18 42.7	+0.4

ROM 01 08:18:23.3±0.1, **42°.478N**±0°.003×**13°.260E**±0°.004, **h14^{km}, ML2.6**/7, **1C, Error ellipse: s-maj=0.4km s-min=0.1km az=231.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.05**	**313**	P	Pg	08 18 26.3	+0.2
RM33				S	Sg	08 18 28.1	+0.2
T1247	**Pizzolo (AQ)**	**0.05**	**141**	P	Pg	08 18 26.3	+0.3
T1247				S	Sg	08 18 28.2	+0.4
CAMP	**Campotosto**	**0.12**	**62**	P	Pg	08 18 27.0	+0.1
CAMP				S	Sg	08 18 29.5	+0.2
CAMP				AML	AML		
	comp=E,4140µm,0.6s						
CAMP				AML	AML		
	comp=N,5740µm,0.5s						
CAMP				AML	AML		
	comp=N,5740µm,1.5s						
CAMP				AML	AML		
	comp=E,4140µm,1.4s						
AQU	**L'Aquila**	**0.16**	**140**	P	Pb	08 18 27.8	-0.4
AQU				S	Sg	08 18 30.6	+0.6
AQU				AML	AML		
	comp=E,2400µm,0.3s						
AQU				AML	AML		
	comp=E,2330µm,0.3s						
AQU				AML	AML		
	comp=N,2545µm,0.7s						
AQU				AML	AML		
	comp=N,2465µm,0.7s						
SMA1	**SAN MARTINO**	**0.16**	**20**	P	Pg	08 18 27.8	+0.4
SMA1				S	Sb	08 18 30.9	-0.7
T1222	**Castel Sant'An**	**0.18**	**245**	⇑P	Pg	08 18 27.9	+0.4
T1222				AML	AML		
	comp=N,2070µm,0.3s						
T1222				AML	AML		
	comp=E,3785µm,0.9s						
T1222				AML	AML		
	comp=N,1960µm,0.2s						
T1222				AML	AML		
	comp=E,3920µm,0.9s						
T1222				AML	AML		
	comp=E,3785µm,0.9s						
T1222				AML	AML		
	comp=N,2070µm,0.3s						
T1222				AML	AML		
	comp=N,1955µm,0.3s						
T1246	**Crognaleto (TE**	**0.20**	**58**	P	Pg	08 18 28.0	0.0
T1246				S	Sg	08 18 31.1	0.0
LNSS	**Leonessa**	**0.20**	**308**	P	Pg	08 18 28.3	+0.3
LNSS				S	Sb	08 18 32.1	-0.7
T1218	**Civita (PG)**	**0.22**	**331**	P	Pg	08 18 28.6	+0.3
T1218				S	Sg	08 18 32.4	+0.8
T1218				AML	AML		
	comp=E,5110µm,0.4s						
T1218				AML	AML		
	comp=N,10395µm,0.2s						
T1218				AML	AML		
	comp=E,4890µm,0.4s						
T1218				AML	AML		
	comp=N,10450µm,0.2s						
GIGS	**Gran Sasso**	**0.23**	**97**	P	Pg	08 18 28.4	0.0
GIGS				S	Sg	08 18 32.2	+0.4
FIAM	**Fiamignano**	**0.23**	**207**	P	Pg	08 18 28.8	+0.3
FIAM				S	Sg	08 18 32.7	+0.7
T1214	**Arquata del Tr**	**0.28**	**352**	P	Pg	08 18 29.6	+0.2
T1214				S	Sb	08 18 34.3	-0.8
T1214				AML	AML		
	comp=E,1410µm,0.3s						
T1214				AML	AML		
	comp=N,1355µm,1.0s						
T1214				AML	AML		
	comp=E,1345µm,0.3s						
T1214				AML	AML		
	comp=N,1345µm,0.6s						
T1211	**Morro Reatino**	**0.30**	**281**	P	Pg	08 18 29.9	+0.2
T1211				S	Sb	08 18 34.9	-0.7
T1212	**Cascia, Frazio**	**0.32**	**330**	P	Pg	08 18 30.1	+0.2
T1212				S	Sg	08 18 35.0	+0.7
T1212				AML	AML		
	comp=E,1845µm,0.6s						
T1212				AML	AML		
	comp=N,2130µm,0.7s						
T1212				AML	AML		
	comp=E,1850µm,0.6s						
T1212				AML	AML		
	comp=N,2065µm,0.7s						
FAGN	**Fagnano**	**0.32**	**131**	P	Pb	08 18 30.5	-0.4
T1217	**Poggiodomo (PG**	**0.34**	**314**	P	Pg	08 18 30.4	+0.1
T1217				S	Sb	08 18 35.8	-0.8
NRCA	**Norcia**	**0.37**	**343**	P	Pg	08 18 31.0	+0.1
NRCA				S	Sg	08 18 36.8	+0.8
ARRO	**Arrone**	**0.38**	**286**	P	Pg	08 18 31.1	+0.1
ARRO				S	Sb	08 18 37.1	-0.5
T1241	**Roccafluvione,**	**0.40**	**18**	P	Pg	08 18 31.5	+0.1
T1241				S	Sg	08 18 37.5	+0.7
T1241				AML	AML		
	comp=E,1081µm,0.3s						
T1241				AML	AML		
	comp=N,994µm,0.8s						
T1241				AML	AML		
	comp=E,963µm,0.3s						
T1241				AML	AML		
	comp=N,944µm,0.4s						
MMO1	**Montemonaco**	**0.42**	**7**	P	Pg	08 18 31.9	+0.1
MMO1				S	Sb	08 18 38.5	-0.6
T1215	**Vallo di Nera,**	**0.43**	**318**	P	Pg	08 18 32.0	0.0
T1215				S	Sb	08 18 38.8	-0.5
MC2	**Monte Cornacci**	**0.44**	**353**	P	Pg	08 18 32.3	+0.2
MC2				S	Sb	08 18 39.5	-0.1
VCEL	**Villa Celiera**	**0.44**	**101**	P	Pg	08 18 32.1	0.0
VCEL				S	Sb	08 18 39.7	+0.3
T1216	**Preci, Frazion**	**0.45**	**337**	P	Pg	08 18 32.5	+0.2
T1216				S	Sb	08 18 39.4	-0.3
T0110	**Collepietro**	**0.46**	**123**	P	Pg	08 18 32.5	0.0
T0110				S	Sb	08 18 39.7	-0.3
PTQR	**Pietraquaria**	**0.47**	**167**	P	Pg	08 18 32.8	+0.1
PTQR				S	Sg	08 18 36.3	-2.6
OFFI	**Offida**	**0.56**	**34**	P	Pb	08 18 35.1	+0.2
CERT	**Cerreto**	**0.57**	**201**	AML	AML		
	comp=E,496µm,0.4s						
CERT				AML	AML		
	comp=N,316µm,0.9s						
SRES	**S.Oreste - Sor**	**0.60**	**247**	AML	AML		
	comp=N,192µm,0.7s						
SRES				AML	AML		
	comp=E,207µm,1.4s						
INTR	**Introdacqua**	**0.67**	**134**	P	Pg	08 18 35.8	-0.6
INTR				S	Sb	08 18 46.8	+0.8
LPEL	**Lama dei Pelig**	**0.81**	**122**	P	Pg	08 18 38.1	-1.0
LPEL				S	Sg	08 18 49.8	+0.1
LPEL				AML	AML		
	comp=E,605µm,0.2s						
LPEL				AML	AML		
	comp=N,485µm,0.1s						
CING	**Cingoli**	**0.90**	**357**	P	Pg	08 18 40.6	-0.1
CING				AML	AML		
	comp=N,185µm,1.1s						
CING				AML	AML		
	comp=E,180µm,0.4s						
CING				AML	AML		
	comp=N,185µm,0.9s						
PP3	**Marolino**	**0.94**	**16**	S	Sb	08 18 53.4	-0.2
GSCL	**Gusciola**	**2.70**	**315**	S	Sn	08 19 38.1	-0.8
NDIM	**Novi di Modena**	**2.96**	**325**	S	Sg	08 19 55.3	-3.0
MNTV	**Mantova**	**3.21**	**327**	S	Sg	08 20 04.7	-1.8
VLO	**Vlora**	**5.10**	**111**	P	Pg	08 19 58.0	-2.9

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*UUSS **01** 08:34:46.5±1.2, 38°.03N±0°.01×112°.47W±0°.02, h5^{km}±6^{km}, ML3.0/12, ML3.0/75(NEIC), Error ellipse: s-maj=2.4km s-min=1.6km az=103.0*

*ANF **01** 08:34:46.7±0.3, 38°.03N×112°.45W, h5^{km}, ML3.2/16, Error ellipse: s-maj=3.8km s-min=3.0km az=158.0*

*NEIC **01** 08:34:46.7±1.2, 38°.014N±0°.006×112°.49W±0°.02, h1^{km}±8^{km}, Error ellipse: s-maj=2.3km s-min=0.9km az=100.0*

ISC 01 08:34:47.0±0.8, **38°.02N**±0°.02×**112°.49W**±0°.02, **h10^{km}, n75,** σ1^{s}.**55**/88, **Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTPU	**Mount Pierson**	**0.25**	**84**		**Pg**	**08 34 50.8**	**-1.3**
MTPU	**Mount Pierson**	**0.25**	**84**	Sg	**Sg**	**08 34 54.3**	**-1.3**
MTPU				IAML		08 34 54.5	
	comp=N,4µm,0.3s						
MTPU				IAML		08 34 55.4	
	comp=E,3µm,0.5s						
DWU	**Dry Willow Pea**	**0.41**	**283**		**Pg**	**08 34 54.9**	**-0.1**
BHU	**Blowhard Mount**	**0.51**	**214**		**Pg**	**08 34 57.0**	**0.0**
BHU					**Sb**	**08 35 05.1**	**-0.8**
MVU	**Marysvale**	**0.54**	**24**		**Pg**	**08 34 56.8**	**-0.6**
MVU				Sg	**Sg**	**08 35 04.8**	**+0.2**
BTU	**Barney Top**	**0.56**	**118**		**Pg**	**08 34 57.1**	**-0.8**
MSU	**Marysvale**	**0.56**	**27**		**Pg**	**08 34 56.9**	**-0.9**
NMUT	**North Mineral**	**0.57**	**331**		**Pg**	**08 34 57.5**	**-0.7**
PKCU	**Pink Cliffs**	**0.59**	**166**		**Pg**	**08 34 58.0**	**-0.4**
PKCU				Sg	**Sg**	**08 35 06.0**	**-0.2**
TCRU	**Three Creeks R**	**0.59**	**4**		**Pg**	**08 34 58.0**	**-0.6**
TCRU				Sg	**Sg**	**08 35 06.1**	**-0.4**
TCRU				IAML		08 35 06.7	
	comp=E,2µm,0.4s						
TCRU				IAML		08 35 07.5	
	comp=N,2µm,0.4s						
SZCU	**Shurtz Canyon**	**0.63**	**228**		**Pg**	**08 34 58.7**	**-0.6**
SZCU				Sg	**Sg**	**08 35 07.6**	**+0.1**
ARUT	**Antelope Range**	**0.78**	**253**		**Pb**	**08 35 02.2**	**-0.6**
IMU	**Iron Mountain**	**0.81**	**320**		**Pg**	**08 35 02.4**	**-0.1**
ZNPU	**Zion National**	**0.83**	**217**		**Pg**	**08 35 02.6**	**-0.4**
CCUT	**Cedar City**	**0.83**	**236**		**Pg**	**08 35 02.6**	**-0.4**
CCUT				Sg	**Sg**	**08 35 13.7**	**-0.1**
CCUT				IAML		08 35 14.7	
	comp=E,310nm,0.5s						
EKU	**East Kanab**	**0.94**	**180**		**Pg**	**08 35 04.2**	**-0.9**
MMU	**Miners Mountai**	**0.96**	**79**		**Pg**	**08 35 03.8**	**-1.7**
WCU	**Willow Creek**	**1.00**	**18**		**Pg**	**08 35 05.8**	**-0.4**
KNB	**Kanab**	**1.03**	**195**		**Pg**	**08 35 05.6**	**-1.2**
KNB				IAML		08 35 23.3	
	comp=N,222nm,0.2s						
KNB				IAML		08 35 24.8	
	comp=E,222nm,0.5s						
LCMT	**Little Creek M**	**1.17**	**211**		**Pb**	**08 35 08.1**	**-1.2**
LCMT				IAML		08 35 26.8	
	comp=N,595nm,0.1s						
Q16A	**Castle Valley**	**1.37**	**49**		**Pn**	**08 35 11.7**	**-0.7**
PGAZ	**Page**	**1.38**	**143**		**Pn**	**08 35 11.7**	**-0.7**
FLU	**Fool Peak**	**1.38**	**10**		**Pn**	**08 35 12.1**	**-0.5**
HMU	**Henry Mountain**	**1.39**	**93**		**Pn**	**08 35 11.5**	**-1.1**
HMU	**Henry Mountain**	**1.39**	**93**	IAML		08 35 34.4	
	comp=N,443nm,0.7s						
ICU	**Indian Springs**	**1.43**	**233**		**Pg**	**08 35 13.8**	**-0.6**
U15A	**North Rim**	**1.59**	**174**		**Pn**	**08 35 15.7**	**+0.2**
U15A	**North Rim**	**1.59**	**174**	IAML		08 35 39.3	
	comp=E,287nm,0.7s						
TMUT	**Trail Mountain**	**1.63**	**38**		**Pn**	**08 35 15.8**	**-0.2**
TMUT				IAML		08 35 39.5	
	comp=N,247nm,0.4s						
TMUT				IAML		08 35 42.5	
	comp=E,160nm,0.8s						
SPR3	**Spring Creek 3**	**1.74**	**305**		**Pn**	**08 35 17.2**	**-0.4**
SPR3				IAML		08 35 43.5	
	comp=E,127nm,0.6s						
SPR3				IAML		08 35 45.6	
	comp=N,156nm,0.3s						
FSU	**Fish Springs**	**1.84**	**338**		**Pn**	**08 35 18.5**	**-0.3**
SRU	**San Rafael Swe**	**1.89**	**54**	Pn	**Pn**	**08 35 20.0**	**+0.5**
SRU				IAML		08 35 47.3	

	comp=N,199nm,0.4s						
SRU				IAML		08 35 48.5	
	comp=E,185nm,0.4s						
NLU	North Lily Min	1.96	9		Pn	08 35 20.5	0.0
P17A	Butcher Ranch,	2.00	43	IAML		08 35 50.0	
	comp=E,76nm,0.4s						
P17A				IAML		08 35 50.0	
	comp=N,86nm,0.4s						
Q12A	Willow Creek R	2.10	300		Pn	08 35 22.8	+0.5
Q12A				IAML		08 35 55.5	
	comp=N,228nm,0.7s						
Q12A				IAML		08 35 59.3	
	comp=E,166nm,0.7s						
MPU	Maple Canyon	2.11	18	Pn	Pn	08 35 22.9	+0.4
WMUT	West Mountain	2.12	14		Pg	08 35 26.4	-1.3
DUG	Dugway, Tooele	2.19	354	Pn	Pn	08 35 23.3	-0.3
DUG				IAML		08 35 58.0	
	comp=E,59nm,0.8s						
DUG	Dugway, Tooele	2.19	354	P	Pn	08 35 23.3	-0.3
	baz=173,SNR=14						
DUG				Sb	Sg	08 35 56.1	-1.3
	baz=173						
BCE	Book Cliffs Ea	2.28	45		Pb	08 35 27.6	-0.8
ROA	Roan Cliffs	2.34	45		Pb	08 35 29.2	-0.2
R11A	Troy Canyon, C	2.46	279		Pn	08 35 27.5	+0.2
R11A				IAML		08 36 07.0	
	comp=N,80nm,0.3s						
R11A				IAML		08 36 07.1	
	comp=E,75nm,0.3s						
R11A	Troy Canyon, C	2.46	279	P	Pn	08 35 27.4	+0.2
	baz=96						
R11A				Sb	Sg	08 36 04.5	-1.5
	baz=96						
R19A	Curley Farm, L	2.56	83		Pb	08 35 32.1	-1.0
SHPR	Sheep Range	2.61	235		Pn	08 35 30.5	+1.2
WUAZ	Wupatki	2.65	160	P	Pn	08 35 31.6	+1.7
	baz=341,SNR=56						
WUAZ				Sb	Sb	08 36 07.9	+0.6
	baz=341						
HTU	Hoyt Peak	2.83	20		Pb	08 35 38.4	+0.6
BGU	Big Grassy Mou	2.94	352		Pn	08 35 34.0	+0.2
V12A	Nelson	2.97	220		Pn	08 35 35.8	+1.7
V12A				IAML		08 36 24.9	
	comp=E,34nm,0.5s						
TPNV	Topopah Spring	3.17	252		Pn	08 35 38.1	+1.0
TPNV				IAML		08 36 24.7	
	comp=E,78nm,0.8s						
TPNV	Topopah Spring	3.17	252	P	Pn	08 35 37.9	+0.8
	baz=69						
MVCO	Mesa Verde	3.27	103	Pn	Pn	08 35 40.5	+2.0
MVCO	Mesa Verde	3.27	103	P	Pn	08 35 40.0	+1.5
	baz=286,SNR=42						
MVCO				Sb	Sb	08 36 26.9	+1.7
	baz=286						
ELK	Elko	3.46	323		Pn	08 35 43.4	+2.3
W18A	Petrified Fore	3.65	142		Pn	08 35 45.9	+2.3
W18A	Petrified Fore	3.65	142	P	Pn	08 35 45.6	+1.9
	baz=324,SNR=14						
W18A				Sb	Sb	08 36 37.5	+1.6
	baz=324						
NEE2	Needles Airpor	3.67	209	Sb	Sg	08 36 40.7	-4.1
	baz=27						
SHOC	Shoshone, Teco	3.69	236	P	Pn	08 35 45.6	+1.5
	baz=54,SNR=8.2						
TPH	Tonopah	3.73	272		Pn	08 35 45.3	+0.5
HVU	Hansel Valley	3.77	357		Pn	08 35 45.5	+0.3
HVU				IAML		08 36 49.2	
	comp=E,15nm,0.5s						
HVU				IAML		08 36 49.4	
	comp=N,18nm,0.5s						
TUQ	Turquoise Moun	3.77	228	P	Pn	08 35 46.0	+0.7
	baz=46,SNR=7.0						
TUQ				Sb	Sg	08 36 43.7	-4.4
	baz=46						
GWY	Greenwater Val	3.81	243		Pn	08 35 46.8	+1.1
GWY				IAML		08 36 51.9	
	comp=E,30nm,0.5s						
GWY				IAML		08 36 54.1	
	comp=N,22nm,0.6s						
O20A	White River Ci	3.93	56	Sb	Sb	08 36 46.6	+2.5
	baz=239						
X18A	Snowflake	4.04	149		Pn	08 35 50.7	+1.6
QSM	Queen of Sheba	4.06	241		Pn	08 35 49.9	+0.8
QSM				IAML		08 37 10.1	
	comp=N,12nm,0.9s						
GMRC	Granite Mounta	4.11	219	P	Pn	08 35 52.0	+2.0
	baz=37						
GMRC				Sb	Sg	08 36 54.0	-5.0
	baz=37						
GSC	Goldstone, Bar	4.40	233		Pn	08 35 54.8	+1.0
GSC				IAML		08 37 17.0	
	comp=N,10nm,1.1s						
GSC				IAML		08 37 23.8	
	comp=E,15nm,2.1s						
GSC	Goldstone, Bar	4.40	233	P	Pn	08 35 54.9	+1.0
	baz=51						
IRM	Iron Mountain	4.41	210	P	Pn	08 35 55.1	+1.2
	baz=28,SNR=5.8						
IRM				Sb	Sb	08 37 02.2	+4.5
	baz=28						
HEC	Hector,Ludlow	4.44	225	Pb	Pb	08 36 07.5	+2.4
	baz=43						
HEC				Sb	Sg	08 37 04.4	-5.1
	baz=43						
MPMC	Manual Prospec	4.45	245	P	Pn	08 35 55.5	+0.8
	baz=62,SNR=9.1						
S22A	4UR Ranch, Cre	4.49	92	Pb	Pb	08 36 06.7	+0.7
	baz=275,SNR=7.4						
S22A				Sb	Sb	08 37 03.0	+2.6
	baz=275						
KVN	Kaiserville	4.52	285		Pn	08 35 55.9	+0.4
KVN				IAML		08 37 13.9	
	comp=E,18nm,0.7s						
KVN				IAML		08 37 14.3	
	comp=N,19nm,0.6s						
ANMO	Albuquerque	5.75	120	Pn	Pn	08 36 12.7	+0.2
ANMO	Albuquerque	5.75	120	P	Pn	08 36 13.0	+0.5
	baz=304						

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*IDC **01** 08:35:20.2±2.8, 53°.52N×87°.58E, h0^{km}, mbtmp2.9/2, ML2.4/2, Error ellipse: s-maj=22.9km s-min=14.2km az=66.0*

*NNC **01** 08:35:20.7±2.3, 53°.46N×87°.48E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=17.0km s-min=10.2km az=65.0, Suspected Mining explosion.*

ISC 01 08:35:18.9±3.2, **53°.6N**±0°.1×**87°.6E**±0°.2, **h0**^{km}, **n8**, σ**1**^{s}**14**/13, **4C-6D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.68	282	I	I	08 47 40.0	
	baz=102,slow=337,SNR=3.5						
ZAA0	Zalesovo Array	1.68	282	⇑P	Pb	08 35 50.0	-0.7
	0.3nm,0.4s						
ZAA0				⇑S	Sg	08 36 13.5	+0.8
	1.2nm,0.5s						
ZALV	Zalesovo Beam	1.68	282	Pg	Pn	08 35 49.7	+0.2
	1.4nm,0.3s,baz=103,slow=17,SNR=16						
ZALV				Lg	Lg	08 36 13.9	
	0.6nm,0.3s,baz=106,slow=26,SNR=3.6						
KURK	Kurchatov	6.25	246	⇓Pn	Pn	08 36 52.2	-0.1
	1.4nm,0.7s						
KURK				⇓Sn	Sn	08 38 02.0	-2.4
	2.9nm,1.2s						
KURK				⇓Lg	Lg	08 38 33.7	
	7.5nm,0.9s						
KURBB	Kurchatov Arra	6.35	245	Pn	Pn	08 36 55.0	+1.4
	baz=61,slow=14,SNR=5.3						
KURBB				Sn	Sn	08 38 07.4	+0.7
	baz=70,slow=10,SNR=1.2						
KURBB				Lg	Lg	08 38 36.1	
	baz=62,slow=31,SNR=5.5						
	1.0nm,0.7s						
KURBB	Kurchatov Arra	6.35	245	⇑Pn	Pn	08 36 54.2	+0.6
	1.5nm,0.8s						
KURBB				⇑Sn	Sn	08 38 07.2	+0.5
	1.9nm,0.7s						
KURBB				⇓Lg	Lg	08 38 37.2	
	7.7nm,0.8s						
MK31	Makanchi Array	7.65	209	⇓Pn	Pn	08 37 11.7	+0.2
	0.9nm,0.8s,baz=28,slow=10,SNR=7.0						
MK31				Sn	Sn	08 38 39.1	+0.2
	0.3nm,0.5s,baz=154,slow=64,SNR=4.3						
MK31				⇓Lg	Lg	08 39 17.0	
	2.8nm,0.9s,baz=36,slow=30,SNR=5.0						
MKAR	Makanchi Array	7.65	209	Pn	Pn	08 37 12.5	+1.0
	0.1nm,0.3s,baz=27,slow=11,SNR=8.3						
MKAR				Sn	Sn	08 38 37.4	-1.5
	0.1nm,0.3s,baz=32,slow=23,SNR=3.7						
MKAR				Lg	Lg	08 39 15.6	
	baz=24,slow=22,SNR=11						
	0.6nm,0.8s						

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*ISK **01** 08:41:14.7, 39°.49N×26°.07E, h11^{km}, ML2.8/19*

*DDA **01** 08:41:15.3±0.0, 39°.49N×26°.06E, h10^{km}, ML2.7*

*THE **01** 08:41:15.6, 39°.50N×26°.05E, h12^{km}±1^{km}, ML2.5/9, Error ellipse: s-maj=1.1km s-min=0.6km az=133.0*

*ATH **01** 08:41:15.8, 39°.50N×26°.05E, h12^{km}±1^{km}, ML2.6/5, Error ellipse: s-maj=2.1km s-min=0.9km az=238.0*

ISC 01 08:41:15.3±0.8, **39°.50N**±0°.01×**26°.06E**±0°.02, **h11**^{km}±5^{km}, **n59**, σ**0**^{s}**49**/96, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.06	87	P	Pg	08 41 17.7	+0.1
KOCA				S	Sg	08 41 19.2	-0.1
GPNR	Gulpinar-Canak	0.07	127	Pg	Pg	08 41 17.4	-0.3
GPNR				Sg	Sg	08 41 19.3	-0.1
PRK	Paraskevi	0.30	147	P	Pg	08 41 21.7	+0.3
PRK				S	Sg	08 41 26.2	+0.7
	3µm,0.2s						
PRK	Paraskevi	0.30	147	P	Pg	08 41 21.7	+0.3
PRK				S	Sg	08 41 26.2	+0.7
PRK				AML	AML	08 41 26.7	
	comp=E,5218µm,0.2s						
PRK				AML	AML	08 41 26.8	
	comp=N,5122µm,0.2s						
SIGR	SIGRI	0.33	209	P	Pg	08 41 22.1	+0.2
SIGR				S	Sg	08 41 26.7	+0.4
	comp=N,1µm,0.3s						
SIGR	SIGRI	0.33	209	Pg	Pg	08 41 22.1	+0.2
SIGR				Sg	Sg	08 41 26.6	+0.3
SIGR	SIGRI	0.33	209	P	Pg	08 41 22.0	+0.1
SIGR				S	Sg	08 41 26.5	+0.2
SIGR				AML	AML	08 41 27.1	
	comp=N,2691µm,0.4s						
SIGR				AML	AML	08 41 27.8	
	comp=E,2118µm,0.4s						
BOZC	Bozcaada	0.34	359	Pg	Pg	08 41 22.4	+0.2
BOZC				Sg	Sg	08 41 27.5	+0.8
BOZC	Bozcaada	0.34	359	P	Pg	08 41 22.4	+0.2
BOZC				S	Sg	08 41 27.6	+0.8
EZN	Ezine	0.39	32	P	Pg	08 41 23.1	+0.2
EZN				S	Sg	08 41 28.8	+0.7
	comp=E,750nm,0.2s						
EZN	Ezine	0.39	32	Pg	Pg	08 41 23.1	+0.2
EZN				Sg	Sg	08 41 28.7	+0.7
BAYC	CANAKKALE_Bayr	0.45	57	P	Pg	08 41 23.9	-0.2
BAYC				S	Sg	08 41 30.3	+0.2
AYVA	Ayvalik	0.53	111	P	Pg	08 41 25.6	+0.1
AYVA				S	Sg	08 41 33.4	+0.9
ECEA	Canakkale, Ece	0.55	9	P	Pg	08 41 26.4	+0.4
ECEA				S	Sb	08 41 34.8	-0.1
COMU	Canakkale	0.68	28	Pg	Pg	08 41 28.3	-0.2
GOKA	anakkale-Gk	0.70	350	P	Pg	08 41 29.0	+0.1
GOKA				S	Sg	08 41 38.9	+0.8
GOKA				*i* AML	AML	08 41 45.0	
	comp=E,255nm,0.2s						
GADA	Gvkgeada	0.70	350	Pg	Pg	08 41 28.8	-0.1
DKL	Dikili	0.78	123	Pg	Pg	08 41 29.9	-0.5
LIA	Limnos Island	0.78	301	P	Pg	08 41 30.9	+0.5
LIA				S	Sb	08 41 42.0	+0.4
	comp=E,702nm,0.5s						
LIA	Limnos Island	0.78	301	P	Pg	08 41 31.0	+0.5
LIA				S	Sg	08 41 41.3	+0.6
LIA				AML	AML	08 41 43.4	
	comp=E,1405µm,0.3s						
LIA				AML	AML	08 41 45.8	
	comp=N,1347µm,0.3s						
BUHA	Balikesir, Bur	0.79	90	P	Pg	08 41 30.4	-0.2
BUHA				S	Sn	08 41 43.1	-1.0
KARB	zmir-Karabur	0.88	162	P	Pb	08 41 32.7	+0.2
KARB				S	Sb	08 41 44.4	+0.2
KARB				*i* AML	AML	08 41 47.0	
	comp=N,202nm,0.4s						
CANM	Can-anakkale	0.92	56	Pg	Pg	08 41 32.7	-0.3
GELI	Tayfur-Gelibol	0.95	19	Pg	Pg	08 41 33.4	-0.3
ZEDA	zmir-Bergama	0.95	124	P	Pb	08 41 34.2	+0.4
ZEDA				S	Sn	08 41 48.2	+0.1
LPK	Lapseki	1.02	32	Pg	Pb	08 41 34.7	-0.4
PSRA	Psara	1.03	202	P	Pb	08 41 35.3	+0.2
SMTH	Samothraki Isl	1.05	337	P	Pb	08 41 35.2	-0.3
SMTH				S	Sb	08 41 49.6	+0.3
	comp=N,140nm,0.3s						
SMTH	Samothraki Isl	1.05	337	P	Pb	08 41 35.2	-0.3
SMTH				S	Sb	08 41 49.2	-0.1
SMTH				AML	AML	08 41 51.9	
	comp=N,249µm,0.2s						
SMTH				AML	AML	08 41 52.1	
	comp=E,284µm,0.4s						
CHOS	Chios island	1.11	180	P	Pb	08 41 36.1	-0.5
CHOS				S	Sb	08 41 51.0	0.0
	comp=E,392nm,0.4s						
CHOS	Chios island	1.11	180	Pn	Pb	08 41 36.2	-0.4
CHOS	Chios island	1.11	180	P	Pb	08 41 36.0	-0.5
CHOS				S	Sg	08 41 51.3	+0.1
CHOS				AML	AML	08 41 54.9	
	comp=E,875µm,0.2s						
CHOS				AML	AML	08 41 57.8	
	comp=N,506µm,0.2s						
CAVK	Edirne/Enez-Ca	1.19	4	P	Pn	08 41 37.1	-0.9
CAVK				S	Sn	08 41 54.8	+0.7
URLA	Izmir	1.21	160	Pn	Pn	08 41 37.7	-0.5
URLA	Izmir	1.21	160	P	Pn	08 41 37.5	-0.7
URLA				S	Sb	08 41 54.0	+0.1
ERIK	Erikli-Kesan	1.22	16	Pn	Pn	08 41 37.9	-0.4
BALY	Balya	1.23	78	P	Pn	08 41 38.5	+0.1
BALY				S	Sn	08 41 55.8	+0.7
BALY				*i* AML	AML	08 41 59.0	
	comp=N,144nm,0.6s						
ENEZ	Enez	1.24	3	Pn	Pn	08 41 38.3	-0.2
STEP	BALIKESIR_Sava	1.29	95	P	Pg	08 41 41.3	+1.2
STEP				S	Sg	08 41 58.5	+1.7
KRBG	Karabiga-Canak	1.30	46	Pn	Pn	08 41 39.1	-0.3
ZEYE	Izmir, Urla-Ze	1.31	164	P	Pn	08 41 38.0	-1.4
ZEYE				S	Sn	08 41 56.9	+0.1
BLCB	Balcova	1.35	145	P	Pn	08 41 40.4	+0.3
BLCB				S	Sb	08 41 57.7	-0.2
BLCB	Balcova	1.35	145	Pn	Pn	08 41 39.8	-0.3
KNL	Balıkesir	1.37	55	P	Pn	08 41 40.3	0.0
KNL				S	Sg	08 41 59.2	-0.1
KNL				*i* AML	AML	08 42 03.0	
	comp=N,133nm,0.7s						
GONE	Gonen-Balikesi	1.37	66	Pn	Pn	08 41 40.1	-0.2
ALN	Alexandroupoli	1.40	360	P	Pn	08 41 40.4	-0.3
ALN				S	Sn	08 41 58.7	-0.4
	comp=N,130nm,0.5s						
ALN	Alexandroupoli	1.40	360	Pn	Pn	08 41 40.6	-0.1
ALN	Alexandroupoli	1.40	360	P	Pn	08 41 40.5	-0.1
KESN	Edirne-Kesan	1.41	20	P	Pn	08 41 41.2	0.0
KESN				S	Sg	08 42 00.7	0.0
BALB	Balikesir	1.42	84	Pn	Pn	08 41 40.5	-0.4
BKES	Balkesir-Mer	1.46	80	P	Pg	08 41 43.3	-0.1
BKES				S	Sg	08 42 02.0	-0.3
RKY	Sarkoy-Tekirda	1.46	36	Pn	Pn	08 41 41.5	-0.2
THAS	Thassos island	1.51	318	P	Pn	08 41 41.9	-0.3
THAS				S	Sn	08 42 00.5	-1.4
	comp=N,52nm,0.3s						
THAS	Thassos island	1.51	318	P	Pn	08 41 41.9	-0.3
EDC	Edincik	1.62	58	Pn	Pn	08 41 43.7	-0.2
UKOP	Uzunkopru-Edir	1.69	15	Pn	Pn	08 41 44.7	0.0
RDO	Rodhopi	1.69	347	P	Pn	08 41 44.4	-0.4
RDO				S	Sn	08 42 06.3	-0.1
RDO	Rodhopi	1.69	347	Pn	Pn	08 41 44.9	+0.1
SMG	Samos	1.89	161	P	Pn	08 41 47.7	+0.2
SMG				S	Sn	08 42 10.8	-0.5
	comp=N,110nm,0.6s						

IDC 01 08:43:25.6±2.8, **54°.19N**×**87°.04E, h0**^{km}, **mbtmp2.6**/2, **ML2.4**/2, **Error ellipse: s-maj=22.7km s-min=15.3km az=65.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.33	261	I	I	08 53 25.0	
	baz=80,slow=332,SNR=2.9						
ZALV	Zalesovo Beam	1.33	261	Pg	Pg	08 43 49.3	-1.7
	0.7nm,0.3s,baz=77,slow=13,SNR=13						
ZALV				Lg	Lg	08 44 08.0	
	1.0nm,0.3s,baz=82,slow=30,SNR=6.9						
KURBB	Kurchatov Arra	6.31	239	Pn	Pn	08 45 01.1	+1.4
	baz=55,slow=13,SNR=2.8						
KURBB				Sn	Sn	08 46 11.6	-0.9
	0.1nm,0.3s,baz=110,slow=28,SNR=4.9						
KURBB				Lg	Lg	08 46 45.6	
	0.1nm,0.3s,baz=36,slow=41,SNR=4.5						
	0.5nm,0.6s						
MKAR	Makanchi Array	8.00	204	Pn	Pn	08 45 24.1	+1.2
	0.1nm,0.3s,baz=27,slow=13,SNR=6.9						
MKAR				Sn	Sn	08 46 53.9	-0.2
	0.1nm,0.3s,baz=25,slow=25,SNR=7.5						
MKAR				Lg	Lg	08 47 40.7	
	baz=29,slow=37,SNR=3.4						
	0.1nm,0.3s						

IDC 01 08:43:46.2±3.1, **4°.90N**×**124°.55E, h0**^{km}, **mb3.4**/4, **mbtmp3.4**/4, **Error ellipse: s-maj=420.4km s-min=24.5km az=65.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.50	159	P	P	08 49 25.9	+0.4
	0.2nm,0.3s,baz=338,slow=8.9,SNR=2.3						
	0.2nm,0.3s						
ASAR	Alice Springs	29.83	163	P	P	08 49 54.9	-0.3
	0.1nm,0.3s,baz=338,slow=7.1,SNR=4.7						
	0.1nm,0.3s						
MKAR	Makanchi Array	55.36	326	P	P	08 53 22.6	+0.6
	0.3nm,0.4s,baz=126,slow=7.7,SNR=2.4						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	59.59	328	P	P	08 53 51.1	-0.6
	0.3nm,0.5s,baz=134,slow=7.0,SNR=3.5						
	0.3nm,0.5s						

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*NNC **01** 08:47:16.6±0.7, 50°.31N×73°.38E, h0^{km}, mb3.4, mpv3.1, Error ellipse: s-maj=7.3km s-min=5.6km az=137.0, Suspected Mining explosion.*

*IDC **01** 08:47:22.6±1.6, 50°.25N×73°.75E, h0^{km}, mbtmp2.8/4, ML2.1/4, Error ellipse: s-maj=24.3km s-min=8.9km az=26.0*

ISC 01 08:47:17.2±1.2, **50°.29N**±0°.06×**73°.27E**±0°.06, **h0**^{km}, **n11**, σ**0**^{s}**85**/11, **4C-4D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OTUK	Ortayu	2.14	197	⇓Pg	Pb	08 47 56.4	-0.4
	6.2nm,0.5s						
OTUK				⇑Lg	Lg	08 48 25.8	
	23nm,0.9s						
BVA0	Borovoye Array	3.27	328	Pg	Pb	08 48 16.7	+0.6
	2.0nm,0.6s,baz=143,slow=16,SNR=18						
BVA0				⇑Lg	Lg	08 49 00.0	
	8.3nm,0.6s,baz=140,slow=24,SNR=6.6						
BVAR	Borovoye Array	3.27	328	Pn	Pb	08 48 16.9	+0.8
	0.2nm,0.3s,baz=141,slow=16,SNR=20						
BVAR				Sn	Sg	08 49 01.0	-1.4
	0.3nm,0.3s,baz=137,slow=28,SNR=10						
BVAR				Rg	Rg	08 49 29.7	
	4.0nm,0.7s,baz=145,slow=42,SNR=2.0						
	4.2nm,0.6s						
KURBB	Kurchatov Arra	3.38	82	Pn	Pn	08 48 12.2	+1.1
	0.3nm,0.3s,baz=266,slow=17,SNR=4.2						
KURBB				Pg	Pb	08 48 17.5	-0.3
	0.2nm,0.3s,baz=270,slow=15,SNR=12						
KURBB				Lg	Lg	08 48 58.9	
	0.5nm,0.3s,baz=352,slow=17,SNR=17						
	1.8nm,0.2s						
KURBB	Kurchatov Arra	3.38	82	⇓Pg	Pb	08 48 17.6	-0.3
	6.4nm,0.6s						
KURBB				⇓Lg	Lg	08 49 02.2	
	33nm,0.7s						
KURK	Kurchatov	3.44	81	⇓Pg	Pb	08 48 18.1	-0.8
	5.6nm,0.9s						
KURK				⇑Lg	Lg	08 49 01.9	
	23nm,0.7s						
MK31	Makanchi Array	6.93	117	⇑Lg	Lg	08 50 50.0	
	4.0nm,0.6s,baz=308,slow=26,SNR=5.4						
MKAR	Makanchi Array	6.93	117	Pn	Pn	08 49 00.3	+0.3
	baz=311,slow=9.2,SNR=2.5						
MKAR				Pg	Pb	08 49 18.0	-0.4
	0.1nm,0.3s,baz=298,slow=14,SNR=7.2						
MKAR				Lg	Lg	08 50 48.8	
	0.1nm,0.3s,baz=118,slow=16,SNR=4.3						
	0.2nm,0.6s						
AAK	Ala-Archa	7.70	173	Lg	Lg	08 51 16.9	
	0.2nm,0.3s,baz=36,slow=3.8,SNR=3.6						
I46RU	ZALESOVO INFRA	7.99	58	I	I	09 33 10.0	
	baz=246,slow=323,SNR=5.4						
ZALV	Zalesovo Beam	7.99	58	Pn	Pn	08 49 15.1	+0.7
	0.1nm,0.3s,baz=242,slow=13,SNR=1.7						
ZALV				Lg	Lg	08 51 29.1	
	0.1nm,0.3s,baz=240,slow=23,SNR=1.1						
	0.4nm,0.4s						

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*BJI **01** 09:08:12.1±0.0, 49°.73N×29°.07W, h7^{km}, mb4.7/39, mB5.3/18, Ms5.0/15, Ms7 4.7/14*

*IDC **01** 09:08:13.7±0.5, 49°.58N×28°.57W, h0^{km}, mb4.3/41, mbtmp4.3/43, ML4.0/2, MS4.4/82, Error ellipse: s-maj=13.3km s-min=9.2km az=7.0*

*MOS **01** 09:08:13.6±1.0, 49°.59N×28°.54W, h10^{km}, mb4.8/56, MS4.4/12, Error ellipse: s-maj=7.8km s-min=5.8km az=64.3*

*IGIL **01** 09:08:15.8, 49°.57N×28°.55W, h10^{km}, Mb4.7*

*NEIC **01** 09:08:15.5±1.3, 49°.59N±0°.10×28°.5W±0°.1, h10^{km}±1^{km}, mb4.8/293, Error ellipse: s-maj=16.7km s-min=13.9km az=175.0*

*GCMT **01** 09:08:15.5±0.1, 49°.64N±0°.02×28°.40W±0°.01, h12^{km}, MW5.1/134, Moment Tensor Solution. s58,c79; s134,c213; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-5.24±.11; M$_{\theta\theta}$-0.03±.12; M$_{\phi\phi}$5.27±.08; M$_{r\theta}$1.47±.37; M$_{\theta\phi}$0.45±.09; M$_{\phi r}$-0.29±.27; Best double couple: M$_{0}$5.47600×10^{16} NP1:ϕ_s350.00000°, δ48.00000°, λ-110.00000°. NP2:ϕ_s199.00000°, δ46.00000°, λ-69.00000°. Principal axes: T 5.3110, Plg1.0000°, Azm95.0000°; N 0.3330, Plg15.0000°, Azm4.0000°; P -5.6400, Plg75.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 09:08:15.3±0.5, **49°.54N**±0°.05×**28°.55W**±0°.04, **h11**^{km}±3^{km}, **h11**^{km}**:pP-P, n669**, σ**1**^{s}**22**/531, **mb4.8**/235, **MS4.5**/111, **6C-24D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DSB	Dublin	14.32	67	Pn	Pn	09 11 36.4	-1.4
CLGH	Cloghs, Cushen	14.77	59	*e*P	Pn	09 11 41.7	-2.3
CCA1	Carnmenellis	15.05	79	*e*P	Pn	09 11 50.1	+2.4
RSBS	Rosebush, Pemb	15.25	72	*e*P	Pn	09 11 49.1	-1.2
LAWE	Loch Awe, Argy	15.46	55	*e*P	Pn	09 11 54.2	+1.1
KPL	Plockton	15.66	51	*e*P	Pn	09 11 57.1	+1.4
BORG	Borgarnes	15.72	11	Pn	Pn	09 11 54.3	-2.1
	0.1nm,0.3s,baz=6.1,slow=14,SNR=2.4						
BORG				LR	LR	09 16 03.1	
	comp=Z,793nm,20.2s,baz=199,slow=30						
	7.8nm,1.0s						
DYA	Yadsworthy	15.85	77	*e*P	Pn	09 11 56.6	-1.5
PGAV	Gavieira, Arco	16.02	111	*e*P	Pn	09 11 59.5	-1.1
PGAV				A	A	09 14 02.8	
	102nm,1.7s						
INVG	Invergeldie, C	16.23	56	*e*P	Pn	09 12 03.3	+0.3
PCAB	Cabril	16.32	111	*e*P	Pn	09 12 02.4	-1.9
PCAB				A	A	09 12 09.9	
	82nm,1.7s						
MONM	Monmouth	16.45	72	*e*P	Pn	09 12 05.7	-0.1
ESK	Eskdalemuir	16.45	60	Pn	Pn	09 12 03.2	-2.7
ESK	Eskdalemuir	16.45	60	P	Pn	09 12 03.2	-2.7
ESK				pmax	pmax		
	comp=Z,33nm,1.1s						
EKA	Eskdalemuir Ar	16.48	60	Pn	Pn	09 12 04.5	-1.7
	baz=251,slow=13						
EKA				Sn	Sn	09 14 55.1	-14
	baz=256,slow=26						
EKA				LR	LR	09 17 20.6	
	comp=Z,2µm,18.2s,baz=251,slow=33						
	comp=Z,1.8nm,0.6s						
EBL	Broad Law	16.63	58	*e*P	Pn	09 12 08.2	+0.1

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POLO  Lamas de Olo     16.66 111 eP    Pn     09 12 07.3 -1.4
POLO                             A     A      09 12 25.6
      comp=Z,59nm,1.7s
PVIS  Viseu            17.00 113 eP    Pn     09 12 12.2 -0.7
PVIS                             A     A      09 12 26.3
      comp=Z,62nm,1.8s
PBRG  Braganca         17.05 109 eP    Pn     09 12 13.6  0.0
PBRG                             A     A      09 12 20.9
      comp=Z,51nm,1.9s
PCAS  Casmilo, Conde   17.06 116 eP    Pn     09 12 14.5 +0.8
PCAS                             A     A      09 12 25.3
      comp=Z,116nm,1.7s
EDMD  Edmundbyers      17.09  62 eP    Pn     09 12 13.8 -0.1
MVO   Moncorvo         17.25 111 eP    Pn     09 12 15.9 -0.2
MVO                              A     A      09 12 59.1
      comp=Z,59nm,1.8s
MTE   Manteigas        17.40 114 Pn    Pn     09 12 16.2 -1.8
MTE   Manteigas        17.40 114 eP    Pn     09 12 16.5 -1.5
MTE                              A     A      09 12 24.0
      comp=Z,68nm,1.5s
PCBR  Castelo Branco   17.80 115 eP    P      09 12 23.7 +0.2
PCBR                             A     A      09 12 40.1
      comp=Z,66nm,1.7s
PMTG  Montargil        17.87 118 eP    Pn     09 12 23.9 +0.2
PMTG                             A     A      09 12 34.0
      comp=Z,87nm,1.7s
PMRV  Marv??o          18.11 116 eP    P      09 12 27.1  0.0
PMRV                             A     A      09 12 34.7
      comp=Z,52nm,1.8s
PNCL  Nicolau / Gran   18.36 121 P     Pn     09 12 29.6 -0.1
PNCL  Nicolau / Gran   18.36 121 eP    P      09 12 30.4 +0.7
PNCL                             A     A      09 12 46.7
      comp=Z,59nm,1.7s
PESTR Estremoz         18.37 118 P     Pn     09 12 29.6 -0.3
MESJ  Messejana        18.72 121 P     P      09 12 32.2 -1.5
MESJ  Messejana        18.72 121 eP    Pn     09 12 34.5 +0.4
MESJ  Messejana        18.72 121 eP    Pn     09 12 34.8 +0.7
MESJ                             A     A      09 12 41.8
      comp=Z,44nm,1.7s
MESJ  Messejana        18.72 121 eP    Pn     09 12 34.5 +0.4
MESJ                             IAmb  IAmb   09 12 41.3
      comp=Z,83nm,1.9s
EBAD  Badajoz          18.78 117 P     P      09 12 34.2 -0.2
DRLN  Deer Lake        18.80 280 P     P      09 12 34.5 -0.1
MORF  Marmelete        18.87 123 eP    Pn     09 12 36.2 +0.3
MORF  Marmelete        18.87 123 eP    Pn     09 12 36.2 +0.3
MORF                             IAmb  IAmb   09 12 37.0
      comp=Z,150nm,2.1s
PCVE  Castro Verde     18.97 121 P     Pn     09 12 37.1  0.0
PCVE  Castro Verde     18.97 121 eP    Pn     09 12 37.9 +0.8
PCVE                             A     A      09 13 09.0
      comp=Z,44nm,1.6s
PBAR  Barrancos        19.16 118 P     Pn     09 12 39.3 -0.1
PBAR  Barrancos        19.16 118 eP    Pn     09 12 39.6 +0.2
PBAR                             A     A      09 14 07.0
      comp=Z,30nm,1.7s
MFF   Saint Martin d   19.16  88 eP    Pn     09 12 39.5 +0.1
MFF                              pmax  pmax
      comp=Z,62nm,1.4s
DY2G  Dye2             19.27 338 eP    Pn     09 12 40.7 -0.1
PBDV  Barranco-do-Ve   19.31 122 eP    Pn     09 12 41.8 +0.6
PBDV                             A     A      09 12 46.6
      comp=Z,64nm,1.7s
PVAQ  Vaqueiros        19.31 121 P     P      09 12 40.0 -0.3
PVAQ  Vaqueiros        19.31 121 P     P      09 12 39.8 -0.4
PVAQ  Vaqueiros        19.31 121 eP    P      09 12 40.7 +0.5
PVAQ                             A     A      09 12 43.4
      comp=Z,36nm,1.4s
EGRO  El Granado       19.35 120 P     P      09 12 40.3 -0.3
PAB   San Pablo        19.86 111 P     P      09 12 45.2 -1.1
PAB   San Pablo        19.86 111 P     P      09 12 45.2 -1.1
PAB                              pmax  pmax
      comp=Z,35nm,1.3s
ESBB  Sonseca Array    20.01 110 P     P      09 12 47.2 -0.8
ESDC  Sonseca Array    20.01 110 P     P      09 12 48.0 +0.1
      comp=Z,3.1nm,1.0s,baz=313,slow=12,SNR=8.2
ESDC                             LR    LR     09 19 00.7
      comp=Z,2µm,19.9s,baz=290,slow=32
ECAB  El Cabril        20.16 116 P     P      09 12 50.1 +0.5
CLF   Chambon-Foret    20.30  82 P     P      09 12 50.2 -0.6
CLF                              IAmb  IAmb   09 13 05.7
      comp=Z,74nm,1.1s
ICESG Greenland Ices   20.34 349 eP    P      09 12 51.5 -0.1
ICESG                            IAmb  IAmb   09 12 57.2
      comp=Z,24nm,0.9s
EADA  Adamuz           20.60 114 P     P      09 12 54.5 +0.2
ESPR  Espera           20.74 119 P     P      09 12 56.4 +0.7
SFJD  Kangerlussuaq    20.78 335 P     P      09 12 56.0  0.0
      comp=Z,11nm,1.0s,baz=134,slow=8.6,SNR=2.9
SFJD                             LR    LR     09 19 16.7
      comp=Z,1µm,21.1s,baz=135,slow=32
      comp=Z,11nm,1.0s
SFJD  Kangerlussuaq    20.78 335 P     P      09 12 56.0  0.0
SFJD  Kangerlussuaq    20.78 335 eP    Pn     09 12 57.3 -1.1
SNF   Seneffe          21.03  75 dx    x      09 13 02.3
CAF   Calviac          21.21  91 eP    P      09 13 03.8 +2.9
CAF                              pmax  pmax
      comp=Z,70nm,1.4s
SCO   Scoresbysund     21.24   6 P     P      09 13 01.6 +0.7
SCO   Scoresbysund     21.24   6 P     P      09 13 01.6 +0.7
SCO                              pmax  pmax
      comp=Z,27nm,0.9s
SCO   Scoresbysund     21.24   6 i P   P      09 13 05.5 +4.6
SCO                              IAmb  IAmb   09 13 06.4
      comp=Z,26nm,0.9s
DOU   Dourbes          21.30  76 dP    P      09 12 58.9 -2.8
DOU                              dPP   PnPn   09 13 19.0 -2.2
BMRD  Maredsous        21.37  75 dP    P      09 13 04.3 +1.9
      comp=Z,17nm,0.9s
BMRD                             dx    x      09 13 15.7
RCHB  Rochefort        21.69  75 dx    x      09 13 07.1
ECEU  Ceuta            21.70 120 P     P      09 13 08.2 +2.1
BSTI  Sart Tilman      21.82  74 dx    x      09 13 11.9
MEM   Membach          22.09  74 dP    P      09 13 09.6 -0.7
BHOU  Houvegnez        22.14  75 dP    P      09 13 09.7 -1.1
BTNL  Ternell          22.17  74 dP    P      09 13 10.7 -0.4
      comp=Z,30nm,0.9s
GBN   Guysborough      22.55 272 P     P      09 13 15.8 +0.6
GBN                              IAmb  IAmb   09 13 23.2
      comp=Z,58nm,1.2s
ILULI Ilulissat        22.56 339 P     P      09 13 14.2 -0.7
ILULI                            IAmb  IAmb   09 13 17.2
      comp=Z,51nm,1.3s
ILULI Ilulissat        22.56 339 P     P      09 13 14.3 -0.7
ILULI                            pmax  pmax
      comp=Z,51nm,1.3s
ILULI Ilulissat        22.56 339 eP    P      09 13 15.9 +0.9
ILULI                            IAmb  IAmb   09 13 17.5
      comp=Z,65nm,1.3s
ECH   Echery           23.39  80 P     P      09 13 23.4 -0.5
ECH                              IAmb  IAmb   09 13 31.6
      comp=Z,35nm,1.3s
ECH   Echery           23.39  80 P     P      09 13 23.4 -0.5
ECH                              pmax  pmax
      comp=Z,35nm,1.3s
JMIC  Jan Mayen        23.46  16 LR    LR     09 20 08.5
      comp=Z,404nm,20.2s,baz=202,slow=30
SUMG  Summit           23.54 353 i P   P      09 13 26.2 +0.7
SUMG                             IAmb  IAmb   09 13 29.2
      comp=Z,45nm,1.3s
IFR   Ifrane           23.60 124 P     P      09 13 26.0 -0.2
SCHQ  Schefferville    23.84 298 P     P      09 13 28.0 -0.2
      comp=Z,5.7nm,0.8s,baz=93,slow=8.7,SNR=10.0
SCHQ                             LR    LR     09 21 16.5
      comp=Z,1µm,19.7s,baz=86,slow=33
      comp=Z,5.7nm,0.8s
SCHQ  Schefferville    23.84 298 P     P      09 13 27.8 -0.4
LPL   La Plagne        24.02  86 eP    P      09 13 29.2 -1.1
LPL                              pmax  pmax
      comp=Z,7.0nm,0.8s
SENIN Lac Senin/Sane   24.08  84 P     P      09 13 30.7 -0.1
BNI   Bardonecchia     24.17  87       P      09 13 31.1 -0.4
BNI   Bardonecchia     24.17  87 P     P      09 13 31.1 -0.4
BNI                              pmax  pmax
      comp=Z,15nm,1.3s
MDT   Midelt           24.42 124 P     P      09 13 34.3 +0.4
      comp=Z,10nm,0.8s,baz=297,slow=5.7,SNR=20
      comp=Z,10nm,0.8s
NUUG  Nuugaatsiaq      24.80 342 eP    P      09 13 37.0 +0.2
NUUG                             IAmb  IAmb   09 13 39.2
      comp=Z,20nm,1.1s
NC204 NORSAR Array S   24.80  47 P     P      09 13 35.5 -1.5
BATG  Bathurst New B   24.83 279 P     P      09 13 37.5 +0.2
NB2   NORSAR Subarra   24.98  48 P     P      09 13 39.3 +0.7
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      comp=Z,8.7nm,1.1s,baz=268,slow=6.2
NOA   NORSAR Array B   24.98  48 P     P      09 13 38.0 -0.6
      comp=Z,2.4nm,0.9s,baz=262,slow=10,SNR=6.6
NOA                              LR    LR     09 22 47.7
      comp=Z,934nm,18.1s,baz=265,slow=35
      comp=Z,2.4nm,0.9s
NOA   NORSAR Array B   24.98  48 P     P      09 13 38.0 -0.6
NB201 NORSAR Array S   25.02  47 P     P      09 13 39.4 +0.5
DBG   Daneborg         25.11   5 eP    P      09 13 41.1 +1.5
DBG                              IAmb  IAmb   09 13 41.6
      comp=Z,9.5nm,0.8s
NC405 NORSAR Array S   25.23  47 P     P      09 13 40.5 -0.3
GRFO  Grafenberg       25.57  74 P     P      09 13 42.9 -1.1
GRFO                             IAmb  IAmb   09 13 58.6
      comp=Z,32nm,1.0s
GRFO  Grafenberg       25.57  74 P     P      09 13 42.9 -1.1
GRFO                             pmax  pmax
      comp=Z,33nm,1.0s
GRA1  Grafenberg Arr   25.57  74 P     P      09 13 42.7 -1.3
GRA1                             IAmb  IAmb   09 13 58.7
      comp=Z,33nm,1.0s
GRF   Grafenberg Arr   25.57  74 P     P      09 13 42.7 -1.3
GRF                              pmax  pmax
      comp=Z,33nm,1.0s
DAVOX Davos/Dischmat   25.60  81 P     P      09 13 44.8 +0.2
      comp=Z,4.1nm,1.0s,baz=304,slow=14,SNR=2.0
DAVOX                            LR    LR     09 23 26.4
      comp=Z,2µm,18.6s,baz=272,slow=36
      comp=Z,4.1nm,1.0s
FRB   Frobisher Bay    25.64 319 P     P      09 13 44.3 -0.2
      comp=Z,11nm,1.0s,baz=91,slow=9.9,SNR=16
FRB                              LR    LR     09 21 18.7
      comp=Z,868nm,21.0s,baz=104,slow=31
      comp=Z,11nm,1.0s
FUORN Ofenpass-Fuorn   25.90  82 P     P      09 13 47.4  0.0
FUORN                            IAmb  IAmb   09 13 57.5
      comp=Z,22nm,1.4s
HFS   Hagfors          26.08  50 P     P      09 13 48.1 -0.5
      comp=Z,1.0nm,0.6s,baz=232,slow=7.1,SNR=1.0
HFS                              LR    LR     09 23 31.1
      comp=Z,839nm,18.2s,baz=270,slow=35
      comp=Z,1.0nm,0.6s
NKC   Novy Kostel      26.19  73 AMS   AMS    09 23 20.0
      comp=Z,2µm,17.9s
CLL   Collm            26.29  70 ePx   Px     09 13 55.0
CLL                              ex    x      09 14 01.0
CLL                              eS    S      09 18 30.0 +7.3
CLL                              eSS   SnSn   09 19 30.0 +7.9
CLL                              AMS   AMS    09 23 00.0
CLL                              AMS   AMS    09 23 00.0
      comp=Z,1µm,18.0s
CLL   Collm            26.29  70 eP    P      09 13 55.0 +4.5
CLL                              e            09 14 01.0
CLL                              MLR   MLR
      comp=Z,1µm,18.0s
D62A  Allapoint, All   26.82 280 P     P      09 13 54.9 -0.5
BRG   Berggiesshubel   26.96  71 eP    P      09 14 02.4 +5.8
BRG                              Amp          09 14 03.5
      comp=Z,11nm,1.2s
BRG                              Amp          09 24 18.0
      comp=N,0.6nm,14.2s
BRG                              Amp          09 24 26.0
      comp=Z,1.5nm,16.8s
BRG                              Amp          09 24 31.0
      comp=E,1.0nm,14.7s
BRG   Berggiesshubel   26.96  71 eP    P      09 14 02.3 +5.8
BRG                              pmax  pmax
      comp=Z,11nm,1.2s
BRG                              MLR   MLR
      comp=N,642nm,14.2s
BRG                              MLR   MLR
      comp=Z,1µm,16.8s
BRG                              MLR   MLR
      comp=E,1µm,14.7s
KHC   Kasperske Hory   27.20  75 eP    P      09 14 02.6 +3.8
KHC                              AMS   AMS    09 23 50.0
      comp=E,2µm,22.5s
KHC   Kasperske Hory   27.20  75⇓eP    P      09 14 00.7 +1.9
KHC                              pmax  pmax
      comp=Z,49nm,2.8s
E62A  Clayton Lake     27.29 280 P     P      09 13 59.1 -0.5
GEC2  GERESS Array S   27.36  75 P     P      09 14 00.2 -0.1
GERES GERESS Array B   27.36  75 P     P      09 14 00.9 +0.5
      comp=Z,1.5nm,1.0s,baz=282,slow=8.1,SNR=6.1
GERES                            LR    LR     09 24 24.4
      comp=Z,1µm,20.0s,baz=278,slow=36
      comp=Z,1.5nm,1.0s
GERES GERESS Array B   27.36  75 P     P      09 14 00.2 -0.1
PVCC  Panska Ves       27.43  71 AMS   AMS    09 24 20.0
      comp=Z,2µm,18.6s
PRU   Pruhonice        27.56  72 AMS   AMS    09 24 20.0
      comp=Z,2µm,15.5s
DAG   Danmarks Havn    27.61   5 i P   P      09 14 02.3 +0.1
DAG                              IAmb  IAmb   09 14 03.9
      comp=Z,11nm,0.7s
CLUD  Cludinico        27.65  80 IAmb  IAmb   09 14 15.3
      comp=Z,33nm,1.4s
GOPC  GO Pecny, Ondr   27.73  72 AMS   AMS    09 24 30.0
      comp=Z,2µm,18.4s
CKRC  Cesky Krumlov    27.75  75 AMS   AMS    09 23 50.0
      comp=Z,2µm,21.4s
KULLO Kullorsuaq       27.87 344 eP    P      09 14 05.1 +0.6
KULLO                            IAmb  IAmb   09 14 06.4
      comp=Z,15nm,1.1s
UPC   Upice            28.33  71 AMS   AMS    09 25 10.0
      comp=Z,2µm,20.1s
OSTC  Ostas            28.44  71 eP    P      09 14 15.8 +5.9
OSTC                             AMS   AMS    09 25 10.0
      comp=Z,1µm,16.8s
OSTC  Ostas            28.44  71 eP    P      09 14 15.8 +5.9
OSTC                             MLR   MLR
      comp=Z,1µm,16.8s
G62A  West of Eustis   28.48 277 P     P      09 14 10.3 +0.1
G62A                             IAmb  IAmb   09 14 12.9
      comp=Z,15nm,1.1s
DPC   Dobruska-Polom   28.56  71 AMS   AMS    09 25 20.0
      comp=Z,1µm,15.9s
MURB  Monte Urbino     28.74  87 P     P      09 14 12.1 -0.5
KRLC  Kraliky          28.92  71 AMS   AMS    09 25 30.0
      comp=Z,1µm,16.8s
VRAC  Vranov           29.03  73 P     P      09 14 15.1  0.0
      comp=Z,26nm,0.9s,baz=200,slow=8.2,SNR=16
VRAC                             LR    LR     09 25 16.3
      comp=Z,1µm,19.7s,baz=287,slow=35
NEEM  North Greenlan   29.31 350 eP    P      09 14 18.3 +0.7
NEEM                             IAmb  IAmb   09 14 19.6
      comp=Z,11nm,0.8s
MORC  Moravsky Berou   29.48  72 P     P      09 14 18.2 -0.8
MORC                             IAmb  IAmb   09 14 26.9
      comp=Z,20nm,1.4s
MORC  Moravsky Berou   29.48  72 ePG   P      09 14 21.0 +1.9
MORC  Moravsky Berou   29.48  72 P     P      09 14 18.3 -0.8
MORC                             pmax  pmax
      comp=Z,20nm,1.4s
MODS  Modra-Piesok     29.76  74 eP    P      09 14 24.7 +3.1
MODS  Modra-Piesok     29.76  74 eP    P      09 14 24.7 +3.1
OKC   Ostrava-Krasne   29.84  71 AMS   AMS    09 26 00.0
      comp=Z,1µm,16.7s
TRQ   Mont Tremblant   30.66 282 P     P      09 14 29.7 +0.1
VYHS  Vyhne            30.70  74 eP    P      09 14 35.9 +6.0
VYHS  Vyhne            30.70  74 eP    P      09 14 35.9 +6.0
KEST  Kesra            30.76 102 P     P      09 14 31.2 +0.7
      comp=Z,7.1nm,0.8s,baz=272,slow=4.1,SNR=6.8
KEST                             LR    LR     09 25 56.8
      comp=Z,758nm,20.3s,baz=246,slow=34
      comp=Z,7.1nm,0.8s
KEST  Kesra            30.76 102 P     P      09 14 31.1 +0.6
KEST                             IAmb  IAmb   09 14 44.1
      comp=Z,22nm,1.2s
L61B  Northampton      31.10 274 P     P      09 14 32.9 -0.5
      baz=61
LONY  Lake Ozonia      31.34 279 P     P      09 14 36.4 +0.8
LONY                             IAmb  IAmb   09 14 47.8
      comp=Z,15nm,1.2s
LONY  Lake Ozonia      31.34 279 P     P      09 14 34.9 -0.6
      baz=64
TULEG Thule            31.35 343 eP    P      09 14 36.2 +0.9
TULEG                            IAmb  IAmb   09 14 37.3
      comp=Z,9.6nm,0.8s
PSZ   Piszkesteto      31.56  74 P     P      09 14 38.0 +0.4
PSZ   Piszkesteto      31.56  74 P     P      09 14 38.0 +0.4
PSZ                              pmax  pmax
      comp=Z,37nm,1.5s
FINES FINESS Array B   32.16  47 P     P      09 14 41.8 -0.7
      comp=Z,3.5nm,0.7s,baz=256,slow=7.7,SNR=7.4
FINES                            LR    LR     09 26 42.4
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      comp=Z,1µm,19.8s,baz=268,slow=34
      comp=Z,3.5nm,0.7s
FINES FINESS Array B   32.16  47 P     P      09 14 42.3 -0.2
FINES FINESS Array B   32.16  47 P     P      09 14 42.3 -0.2
ARCES ARCESS Array B   32.36  32 P     P      09 14 43.9 -0.3
      comp=Z,7.6nm,0.7s,baz=261,slow=5.8,SNR=25
ARCES                            LR    LR     09 27 11.8
      comp=Z,220nm,18.2s,baz=272,slow=35
      comp=Z,7.6nm,0.7s
ARCES ARCESS Array B   32.36  32 P     P      09 14 44.3  0.0
ARCES                            IAmb  IAmb   09 15 11.1
      comp=Z,17nm,1.1s
ARCES ARCESS Array B   32.36  32 P     P      09 14 44.3  0.0
ARCES                            pmax  pmax
      comp=Z,17nm,1.2s
NOR   Nord             32.41   3 eP    P      09 14 44.1 -0.4
NOR                              IAmb  IAmb   09 14 46.2
      comp=Z,18nm,1.2s
VSU   Vasula           32.81  53⇓eP    P      09 14 48.4 +0.1
VSU                              pmax  pmax
      comp=Z,31nm,0.8s
KEV   Kevo             32.91  32 P     P      09 14 49.1 +0.1
KEV   Kevo             32.91  32 P     P      09 14 49.1 +0.1
KEV                              pmax  pmax
      comp=Z,47nm,1.3s
VAE   Valguarnera      32.97  95 LR    LR     09 27 31.8
      comp=Z,228nm,18.5s,baz=316,slow=35
SPB2  Spitsbergen Ar   33.12  15 P     P      09 14 50.6 -0.3
SPITS Spitsbergen Ar   33.12  15 P     P      09 14 50.0 -0.8
      comp=Z,9.6nm,0.8s,baz=190,slow=9.2,SNR=4.6
SPITS                            LR    LR     09 24 48.7
      comp=Z,200nm,21.1s,baz=206,slow=30
      comp=Z,9.6nm,0.8s
DELO  Deloro Mine      33.34 280 P     P      09 14 53.6 +0.6
DELO                             IAmb  IAmb   09 15 03.0
      comp=Z,13nm,1.1s
BINY  Binghamton       33.36 276 P     P      09 14 52.9 -0.4
      baz=60
K57A  Scipio Center    33.45 277 P     P      09 14 54.5 +0.4
K57A                             IAmb  IAmb   09 15 04.3
      comp=Z,18nm,1.1s
KSPA  Keystone Colle   33.54 275 P     P      09 14 55.2 +0.3
KSPA                             IAmb  IAmb   09 14 56.9
      comp=Z,25nm,1.2s
NACGM Naroch           33.55  59 eP    P      09 14 58.6 +3.8
      comp=Z,8.0nm,0.8s,baz=284
SADO  Sadowa           34.20 282 LR    LR     09 27 41.5
      comp=Z,1µm,19.6s,baz=94,slow=34
MNK   Minsk            34.27  60 i P   P      09 15 00.0 -1.0
      comp=E,2.0nm,0.8s
MNK                              i P   P      09 15 00.0 -1.0
      comp=N,20nm,1.1s
MNK                              i P   P      09 15 00.0 -1.0
      comp=Z,6.0nm,0.7s,baz=285
MNK                              i PP  PnPn   09 16 13.7 -1.4
MNK                              i PPP PPP    09 16 25.9
MNK                              i S   S      09 20 28.3 +0.6
MNK                              i SS  SnSn   09 22 37.7 +1.4
MNK                              i SSS SSS    09 22 54.1
MNK                              i LQ  LQ     09 24 35.0
MNK                              i LR  LR     09 26 32.0
MNK                              i LRM MLR    09 28 39.1
      comp=Z,545nm,17.9s
MNK                              i LRM MLR    09 28 54.4
      comp=E,87nm,16.0s
MNK                              i LRM MLR    09 29 55.1
      comp=N,711nm,17.2s
MNK   Minsk            34.27  60 i P   P      09 15 00.0 -1.0
MNK                              i            09 16 13.6
MNK                              i S   S      09 20 28.3 +0.6
MNK                              i SS  SnSn   09 22 37.7 +1.4
MNK                              pmax  pmax
      comp=Z,6.0nm,0.7s
MNK                              pmax  pmax
      comp=E,2.0nm,0.8s
MNK                              pmax  pmax
      comp=N,20nm,1.1s
MNK                              MLR   MLR
      comp=Z,545nm,18.0s
MNK                              MLR   MLR
      comp=E,87nm,16.0s
MNK                              MLR   MLR
      comp=N,711nm,17.0s
BUR08 Bucovina Ar. S   34.98  72 P     P      09 15 07.7 +0.3
BUR08                            IAmb  IAmb   09 15 14.8
      comp=Z,12nm,1.0s
APA   Apatity          35.10  36⇓iP    P      09 15 05.7 -2.4
APA                              pmax  pmax
      comp=Z,6.0nm,0.8s
APA                              MLR   MLR
      comp=Z,300nm,12.0s
SDMD  Soldier's Deli   35.36 272 P     P      09 15 11.1 +0.5
SSPA  Standing Stone   35.39 275 P     P      09 15 11.2 +0.4
      baz=58
M55A  Ridgway          35.53 276 IAmb  IAmb   09 15 13.9
      comp=Z,18nm,1.2s
BBTS  Babate           36.15 160 LR    LR     09 27 27.0
      comp=Z,561nm,19.7s,baz=16,slow=32
EUNU  Eureka           36.16 346 P     P      09 15 17.4 +0.4
EUNU                             IAmb  IAmb   09 15 20.1
      comp=Z,18nm,1.2s
AKASG Malin Array Be   36.25  65 P     P      09 15 16.4 -1.7
      comp=Z,1.8nm,0.6s,baz=288,slow=8.3,SNR=6.5
AKASG                            LR    LR     09 30 47.5
      comp=Z,1µm,19.0s,baz=283,slow=37
      comp=Z,1.8nm,0.6s
AKASG Malin Array Be   36.25  65 P     P      09 15 17.9 -0.2
AKASG Malin Array Be   36.25  65 P     P      09 15 17.9 -0.2
AKASG                            pmax  pmax
      comp=Z,2.0nm,1.0s
AKBB  Malin Array Si   36.25  65⇓eP    P      09 15 18.2 +0.1
AKBB                             pmax  pmax
      comp=Z,13nm,1.3s
MLR   Muntele Rosu     36.35  75 P     P      09 15 19.8 +0.5
      comp=Z,1.3nm,0.6s,baz=147,slow=11,SNR=2.0
MLR                              LR    LR     09 29 31.1
      comp=Z,809nm,21.8s,baz=306,slow=35
      comp=Z,1.3nm,0.6s
M53A  WI Miller and    36.78 278 P     P      09 15 22.8  0.0
      baz=59
RES   Resolute Bay     36.79 336 P     P      09 15 22.1 -0.2
      comp=Z,2.6nm,0.9s,baz=78,slow=9.5,SNR=5.0
RES                              LR    LR     09 29 24.0
      comp=Z,568nm,18.1s,baz=98,slow=35
      comp=Z,2.6nm,0.9s
Q56A  Snyder Ridge,    37.09 273 P     P      09 15 26.1 +0.7
Q56A                             IAmb  IAmb   09 15 36.1
      comp=Z,19nm,1.0s
MCWV  Mont Chateau     37.18 275 P     P      09 15 25.6 -0.6
      baz=57
N53A  Lisbon           37.21 277 IAmb  IAmb   09 15 52.4
      comp=Z,17nm,1.0s
O54A  Avella           37.24 276 P     P      09 15 27.7 +1.0
GLMI  Grayling         37.64 285 P     P      09 15 30.0 -0.1
      baz=62
S57A  Dark Hollow, R   37.65 271 P     P      09 15 31.1 +0.9
O53A  New Philadelph   37.75 276 P     P      09 15 31.3 +0.3
O53A                             IAmb  IAmb   09 15 33.4
      comp=Z,28nm,1.2s
O53A  New Philadelph   37.75 276 P     P      09 15 30.9 -0.1
      baz=58
TAM   Tamanrasset      37.80 122 P     P      09 15 32.3 +0.6
TAM   Tamanrasset      37.80 122 P     P      09 15 32.3 +0.6
TAM                              pmax  pmax
      comp=Z,10.0nm,1.4s
FCC   Fort Churchill   37.99 310 P     P      09 15 32.9 +0.2
FCC   Fort Churchill   37.99 310 P     P      09 15 32.9 +0.2
FCC                              pmax  pmax
      comp=Z,17nm,1.3s
R55A  Marlinton        38.11 273 IAmb  IAmb   09 15 37.1
      comp=Z,18nm,1.2s
RDO   Rodhopi          38.20  82 P     P      09 15 33.6 -1.1
RDO                              IAmb  IAmb   09 15 58.7
      comp=Z,13nm,0.4s
O52A  Adamsville       38.22 277 IAmb  IAmb   09 15 38.9
      comp=Z,17nm,0.9s
P53A  Whipple          38.27 275 IAmb  IAmb   09 15 38.5
      comp=Z,41nm,1.3s
P52A  Corning          38.67 276 IAmb  IAmb   09 15 47.6
      comp=Z,19nm,1.1s
P52A  Corning          38.67 276 P     P      09 15 39.0 +0.2
      baz=57
KLMR  Klimovskoe       38.68  47 eP    P      09 15 36.3 -2.3
KLMR                             AMP          09 15 39.7
      comp=Z,31nm,1.8s
KLMR                             ePcP  PcP    09 17 49.2 -1.0
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KLMR                              LQ      LQ     09 26 06.9
KLMR                              LQ      LQ     09 26 06.9
KLMR                              LR      LR     09 28 51.3
KLMR                              AMP            09 31 05.8
      comp=Z,687nm,15.0s
KLMR  Klimovskoe        38.68  47 eP      P      09 15 36.2 -2.3
KLMR                              e              09 17 49.1
KLMR                              pmax    pmax
      comp=Z,31nm,1.8s
KLMR                              MLR     MLR
      comp=Z,687nm,15.0s
OBN   Obninsk           38.88  56 LR      LR     09 30 12.8
      comp=Z,129nm,22.0s,baz=286,slow=34
ACSO  Alum Creek Sta    38.90 277 IAmb    IAmb   09 15 43.0
      comp=Z,20nm,1.0s
ACSO  Alum Creek Sta    38.90 277 P       P      09 15 40.7  0.0
      baz=57
BLA   Blacksburg        38.92 272 P       P      09 15 40.8 -0.2
      baz=54
Q52A  Bidwell           39.13 275 IAmb    IAmb   09 15 44.6
      comp=Z,27nm,1.1s
O49A  Covington         39.80 278 IAmb    IAmb   09 15 50.0
      comp=Z,34nm,1.5s
O48B  Farmland          40.29 279 P       P      09 15 52.2 -0.1
      baz=57
EYMN  Ely               40.46 293 P       P      09 15 53.4 -0.2
      baz=63
KMSC  Kings Mountain    40.74 270 P       P      09 15 56.5 +0.5
      baz=52
R50A  Paris             40.85 276 P       P      09 15 57.5 +0.6
R50A                              IAmb    IAmb   09 15 59.5
      comp=Z,22nm,1.2s
L44A  Lake County Fo    41.03 283 P       P      09 15 58.4 +0.1
      baz=58
NHSC  New Hope          41.24 266 P       P      09 16 00.7 +0.5
      baz=50
TZTN  Tazewell          41.34 273 P       P      09 16 02.1 +1.1
TZTN  Tazewell          41.34 273 P       P      09 16 01.3 +0.3
      baz=54
SFIN  Lafayette         41.47 280 P       P      09 16 01.7 -0.2
      baz=57
B35A  Bob, Littlefor    41.60 294 P       P      09 16 03.6 +0.6
BLO   Bloomington       41.77 278 P       P      09 16 04.3 -0.1
BLO   Bloomington       41.77 278 P       P      09 16 04.3 -0.1
BLO                               pmax    pmax
      comp=Z,17nm,1.2s
V52A  Sevierville       41.79 272 P       P      09 16 05.3 +0.6
BG3   Lake Jocassee     41.87 271 IAmb    IAmb   09 16 08.6
      comp=Z,18nm,1.1s
ULM   Lac du Bonnet     42.02 298 P       P      09 16 05.4 -0.9
      comp=Z,5.4nm,0.7s,baz=60,slow=7.1,SNR=8.3
ULM                               LR      LR     09 31 34.6
      comp=Z,515nm,21.3s,baz=77,slow=33
      comp=Z,5.4nm,0.7s
TKL   Tuckaleechee C    42.02 272 LR      LR     09 33 18.5
      comp=Z,821nm,19.6s,baz=70,slow=36
WCI   Wyandotte Cave    42.15 277 P       P      09 16 08.3 +0.7
WCI                               IAmb    IAmb   09 16 09.5
      comp=Z,16nm,1.1s
WCI   Wyandotte Cave    42.15 277 P       P      09 16 08.3 +0.7
WCI                               pmax    pmax
      comp=Z,16nm,1.1s
WCI   Wyandotte Cave    42.15 277 P       P      09 16 08.0 +0.4
      baz=55
H05N1 Guadeloupe/Mar    42.32 230 T       T      10 01 00.6
      SNR=18
SPMN  Marine on St.     42.54 290 P       P      09 16 10.7  0.0
      baz=60
AGMN  Agassiz Nation    42.90 295 P       P      09 16 12.9 -0.6
      baz=62
CLTN  Cedars of Leba    43.42 275 IAmb    IAmb   09 16 19.7
      comp=Z,12nm,0.7s
FFC   Flin Flon         43.46 306 P       P      09 16 18.3 +0.3
FFC   Flin Flon         43.46 306 P       P      09 16 18.3 +0.3
FFC                               pmax    pmax
      comp=Z,12nm,1.3s
SJG   San Juan          43.50 237 LR      LR     09 30 42.9
      comp=Z,184nm,21.0s,baz=50,slow=31
ANN   Anapa             43.82  70 eP      P      09 16 17.2 -3.8
ANN                               e*PP    pP     09 16 19.9 -3.5
ANN                               eS      S      09 22 46.5 -4.9
ANN                               pmax    pmax
      comp=Z,18nm,0.7s
ANN                               MLR     MLR
      comp=Z,1µm,20.0s
V48A  Smith Brothers    43.95 274 IAmb    IAmb   09 16 24.8
      comp=Z,24nm,1.3s
TORD  Torodi Ar. Bea    43.97 135 P       P      09 16 21.1 -1.4
      comp=Z,1.9nm,0.6s,baz=338,slow=8.1,SNR=18
TORD                              LR      LR     09 33 39.4
      comp=Z,823nm,18.3s,baz=334,slow=35
      comp=Z,1.9nm,0.6s
KIRV  Kirov             44.16  47 LR      LR     09 34 31.1
      comp=Z,911nm,18.6s,baz=296,slow=36
BRTR  Keskin Array B    44.16  78 P       P      09 16 24.3 +0.2
      comp=Z,1.1nm,0.6s,baz=297,slow=6.3,SNR=2.1
BRTR                              LR      LR     09 35 51.1
      comp=Z,356nm,18.4s,baz=301,slow=38
      comp=Z,1.1nm,0.6s
S44A  Carbondale        44.37 278 IAmb    IAmb   09 16 27.6
      comp=Z,24nm,1.1s
WVT   Waverly           44.37 276 P       P      09 16 25.9 +0.4
WVT   Waverly           44.37 276 P       P      09 16 25.9 +0.4
WVT                               pmax    pmax
      comp=Z,11nm,1.2s
WVT   Waverly           44.37 276 P       P      09 16 25.5  0.0
      baz=53
FVM   French Village    44.95 280 IAmb    IAmb   09 16 31.9
      comp=Z,21nm,1.2s
PLAL  Pickwick Lake     45.22 275 IAmb    IAmb   09 16 34.5
      comp=Z,14nm,1.4s
CCM   Cathedral Cave    45.44 280 P       P      09 16 34.3 +0.3
CCM                               IAmb    IAmb   09 16 35.9
      comp=Z,29nm,1.4s
CCM   Cathedral Cave    45.44 280 P       P      09 16 34.3 +0.3
CCM                               pmax    pmax
      comp=Z,29nm,1.4s
CCM   Cathedral Cave    45.44 280 P       P      09 16 34.3 +0.3
      baz=54
ECSD  EROS Data Cent    45.65 290 P       P      09 16 36.6 +1.0
ECSD                              IAmb    IAmb   09 16 45.7
      comp=Z,12nm,1.1s
ECSD  EROS Data Cent    45.65 290 P       P      09 16 35.6  0.0
      baz=58,SNR=5.8
LRAL  Lakeview Retre    45.73 272 P       P      09 16 36.9 +0.6
LRAL                              IAmb    IAmb   09 16 38.9
      comp=Z,13nm,1.3s
LRAL  Lakeview Retre    45.73 272 P       P      09 16 36.3  0.0
      baz=51
A36M  Sachs Harbour     45.78 334 IAmb    IAmb   09 16 37.7
      comp=Z,9.5nm,1.1s
A36M  Sachs Harbour     45.78 334 P       P      09 16 35.2 -1.1
      baz=64
W45A  Hickory Valley    45.84 275 P       P      09 16 37.5 +0.3
SOC   Sochi             45.85  70 eP      P      09 16 37.4 +0.2
SOC                               e              09 18 25.2
SOC                               ePPP    PPP    09 19 04.7
SOC                               eS      S      09 23 23.9 +2.9
SOC                               MLR     MLR
      comp=Z,309nm,20.0s
T42A  Van Buren         45.94 279 IAmb    IAmb   09 16 42.3
      comp=Z,9.3nm,0.7s
BELG  Belogornoye       45.98  56 P       P      09 16 37.7 -0.3
      comp=Z,4.5nm,0.8s,baz=78,slow=6.9,SNR=2.6
BELG                              LR      LR     09 35 10.6
      comp=Z,471nm,21.5s,baz=321,slow=35
      comp=Z,4.5nm,0.8s
BELG  Belogornoye       45.98  56⇓eP      P      09 16 39.6 +1.6
BELG                              pmax    pmax
      comp=Z,4.0nm,2.0s
P38A  Dawn              45.99 283 IAmb    IAmb   09 16 40.3
      comp=Z,21nm,1.3s
YKA   Yellowknife Ar    46.15 320 P       P      09 16 39.3 +0.1
      comp=Z,3.8nm,0.9s,baz=64,slow=7.8,SNR=32
YKA                               PcP     PcP    09 18 14.1 -0.9
      comp=Z,1.5nm,0.7s,baz=64,slow=3.7,SNR=14
YKA                               LR      LR     09 33 29.1
      comp=Z,297nm,20.7s,baz=62,slow=33
      comp=Z,3.8nm,0.9s
YKA   Yellowknife Ar    46.15 320 i P     P      09 16 40.0 +0.7
YKA                               pmax    pmax
      comp=Z,4.0nm,0.9s
OXF   Oxford            46.38 275 P       P      09 16 41.9 +0.5
      baz=52
LCAR  Lake Charles      46.56 278 IAmb    IAmb   09 16 44.2
      comp=Z,13nm,1.2s
SUSD  Miller            46.69 292 P       P      09 16 43.8  0.0
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      baz=57
BRAL  Brewton           46.96 270 P       P      09 16 46.8 +0.7
      baz=49
S39A  Bolivar           46.98 281 IAmb    IAmb   09 16 53.5
      comp=Z,14nm,1.3s
DBIC  Dimbokro          47.15 147 P       P      09 16 48.5 +0.8
      comp=Z,2.5nm,0.7s,baz=108,slow=16,SNR=3.2
DBIC                              LR      LR     09 34 10.6
      comp=Z,734nm,21.6s,baz=343,slow=33
      comp=Z,2.5nm,0.7s
KIV   Kislovodsk        47.46  68 eP      P      09 16 49.2 -0.7
KIV                               pmax    pmax
      comp=Z,6.0nm,1.1s
KIV                               MLR     MLR
      comp=Z,368nm,17.0s
DGMT  Dagmar            47.64 299 IAmb    IAmb   09 17 00.1
      comp=Z,10.0nm,0.9s
DGMT  Dagmar            47.64 299 P       P      09 16 50.8 -0.4
      baz=58
KBZ   Khabaz            47.71  68 P       P      09 16 53.5 +1.8
      comp=Z,2.6nm,0.9s,baz=278,slow=5.6,SNR=5.1
KBZ                               LR      LR     09 38 21.5
      comp=Z,360nm,18.4s,baz=304,slow=38
      comp=Z,2.6nm,0.9s
KBZ   Khabaz            47.71  68⇓eP      P      09 16 53.9 +2.2
KBZ                               pmax    pmax
      comp=Z,4.0nm,1.0s
KSU1  Kansas State U    48.24 285 P       P      09 16 55.6 -0.3
      baz=54
VBMS  Vicksburg         48.54 273 P       P      09 16 58.2 -0.1
      baz=50
MDP   Montagnes des     48.75 213 LR      LR     09 33 34.5
      comp=Z,78nm,18.2s,baz=336,slow=31
ZEI   Tsey              48.85  69 eP      P      09 17 02.2 +1.4
ZEI                               pmax    pmax
      comp=Z,10.0nm,1.7s
MIAR  Mount Ida         49.05 278 P       P      09 17 02.4 +0.1
      baz=51
MMAI  Mount Meron Ar    49.33  84 P       P      09 17 04.3 -0.1
      comp=Z,1.7nm,0.5s,baz=119,slow=46,SNR=1.5
      comp=Z,1.7nm,0.5s
ARU   Arti              49.53  47 P       P      09 17 05.9 +0.3
      comp=Z,2.6nm,0.3s,baz=314,slow=6.5,SNR=9.6
ARU                               LR      LR     09 37 48.8
      comp=Z,760nm,18.2s,baz=294,slow=36
      comp=Z,2.6nm,0.3s
ARU   Arti              49.53  47 P       P      09 17 04.8 -0.7
ARU                               IAmb    IAmb   09 17 06.7
      comp=Z,6.7nm,0.7s
ARU   Arti              49.53  47c iP     P      09 17 06.1 +0.5
ARU                                              09 18 27.1
ARU                                              09 18 53.7
ARU                               S       S      09 24 15.5 +2.7
ARU                               SS      SS     09 27 43.7 -0.5
ARU                               pmax    pmax
      comp=Z,25nm,1.9s
ARU                               MLR     MLR
      comp=Z,725nm,18.0s
LAO   LASA Array        49.75 298 P       P      09 17 08.1 +0.6
LAO                               IAmb    IAmb   09 17 18.1
      comp=Z,16nm,0.8s
LAO   LASA Array        49.75 298 P       P      09 17 07.7 +0.2
      baz=56,SNR=7.9
RSSD  Black Hills       49.91 294 P       P      09 17 09.4 +0.4
      baz=55
INK   Inuvik            50.08 332 LR      LR     09 36 34.6
      comp=Z,874nm,21.1s,baz=54,slow=34
INK   Inuvik            50.08 332 P       P      09 17 09.1 -0.4
INK   Inuvik            50.08 332 P       P      09 17 09.1 -0.4
INK                               pmax    pmax
      comp=Z,6.0nm,1.1s
INK   Inuvik            50.08 332 P       P      09 17 09.1 -0.4
      baz=55
F31M  Tsiigehtchic      50.65 331 P       P      09 17 14.2 +0.3
      baz=54,SNR=16
GNI   Garni             50.89  71 LR      LR     09 41 52.2
      comp=Z,205nm,18.2s,baz=320,slow=40
GNI   Garni             50.89  71⇑eP      P      09 17 17.7 +1.4
GNI                               pmax    pmax
      comp=Z,5.0nm,0.6s
MAK   Makhachkala       50.92  67 eP      P      09 17 13.1 -3.2
MAK                               ePPP    PPP    09 20 10.3
MAK                               eS      S      09 24 28.0 -4.5
MAK                               eSS     SS     09 28 03.2 -3.6
MAK                               eSSS    SSS    09 29 43.1
MAK                               MLR     MLR
      comp=Z,644nm,17.0s
EGMT  Eagleton          51.01 301 IAmb    IAmb   09 17 26.9
      comp=Z,16nm,0.9s
EGMT  Eagleton          51.01 301 P       P      09 17 17.1 +0.1
      baz=56,SNR=7.3
EIL   Elat              51.20  88 LR      LR     09 42 56.4
      comp=Z,154nm,18.4s,baz=302,slow=41
KOTAN Kotaneelee Air    51.28 320 P       P      09 17 17.3 -1.4
      baz=56
BRLDA Berland Lookou    51.62 311 IAmb    IAmb   09 17 23.2
      comp=Z,21nm,1.2s
G30M  tAoh Zraii Nji    51.70 331 P       P      09 17 20.9 -0.9
      baz=52
KSCO  Kaye Shedlock'    52.05 288 P       P      09 17 24.8 -0.2
      baz=52
BAUV  El Baul           52.13 233 P       P      09 17 26.6 +1.0
C27K  Jago River        52.14 336 P       P      09 17 24.3 -0.8
      baz=48,SNR=5.8
EPYK  Eagle Plains      52.23 331 IAmb    IAmb   09 17 27.9
      comp=Z,20nm,1.2s
EPYK  Eagle Plains      52.23 331 P       P      09 17 25.1 -0.7
      baz=51,SNR=5.5
K22A  Casper            52.24 294 P       P      09 17 26.9 +0.5
K22A  Casper            52.24 294 P       P      09 17 26.0 -0.4
      baz=54,SNR=9.7
C26K  Camden Bay        52.26 337 P       P      09 17 25.2 -0.7
      baz=48
RLMT  Red Lodge         52.39 298 IAmb    IAmb   09 17 36.9
      comp=Z,26nm,1.4s
RLMT  Red Lodge         52.39 298 P       P      09 17 27.2 -0.3
      baz=54,SNR=7.9
E27K  Coleen River      52.52 334 P       P      09 17 26.8 -1.2
      baz=49,SNR=8.8
AKTO  Aktyubinsk        52.54  54 P       P      09 17 28.4 +0.2
      comp=Z,3.6nm,0.7s,baz=305,slow=6.2,SNR=15
AKTO                              LR      LR     09 39 50.7
      comp=Z,381nm,18.9s,baz=304,slow=36
      comp=Z,3.6nm,0.7s
WALA  Waterton Lakes    52.69 304 IAmb    IAmb   09 17 30.7
      comp=Z,14nm,0.8s
FW13  Cleburne          52.93 278 IAmb    IAmb   09 17 39.8
      comp=Z,29nm,1.3s
N23A  Red Feather La    52.94 292 P       P      09 17 31.6 -0.1
      baz=53,SNR=17
D25K  Kavik River       53.04 337 P       P      09 17 30.7 -1.1
      baz=46
YMP   Mirror Lake Pl    53.13 298 IAmb    IAmb   09 17 42.5
      comp=Z,18nm,1.1s
WHTX  Lake Whitney,     53.18 278 IAmb    IAmb   09 17 36.0
      comp=Z,8.9nm,0.8s
WHTX  Lake Whitney,     53.18 278 P       P      09 17 33.8 +0.6
      baz=49
C24K  Franklin Bluff    53.34 338 P       P      09 17 33.8 -0.1
      baz=44
I29M  Ogilvie Camp,     53.38 331 IAmb    IAmb   09 17 35.7
      comp=Z,8.4nm,0.8s
I29M  Ogilvie Camp,     53.38 331 P       P      09 17 34.2 -0.1
      baz=50,SNR=7.0
ISCO  Idaho Springs     53.41 291 P       P      09 17 35.2 -0.1
      baz=52
G27K  Doyon Strip       53.46 333 P       P      09 17 34.5 -0.4
      baz=48,SNR=7.4
BOZ   Bozeman (W)       53.46 300 P       P      09 17 35.4  0.0
      baz=53,SNR=9.8
HKT   Hockley           53.47 275 i P     P      09 17 35.4 +0.1
HKT                               pmax    pmax
      comp=Z,10.0nm,1.3s
F26K  Sheenjek River    53.57 335 P       P      09 17 35.3 -0.4
      baz=47
H17A  Grant Village     53.57 298 P       P      09 17 36.3  0.0
      baz=53
Q24A  Divide            53.64 290 P       P      09 17 37.4 +0.4
      baz=52
E25K  Arctic Village    53.67 336 P       P      09 17 36.2 -0.2
      baz=46
FARO  Faro, Yukon       53.67 326 P       P      09 17 36.3 -0.2
      baz=51
YFT   Old Faithful      53.69 298 IAmb    IAmb   09 17 40.1
      comp=Z,12nm,1.1s
MAYO  Mayo, Yukon       53.71 328 P       P      09 17 36.8  0.0
      baz=50
H27K  Steamboat Moun    53.80 332 P       P      09 17 37.6 +0.2
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      baz=48
A21K  Barrow            53.92 342 P       P      09 17 37.4 -0.7
      baz=39
PD31  Pinedale Array    53.96 296 IAmb    IAmb   09 17 39.6
      comp=Z,6.5nm,0.8s
PDAR  Pinedale Array    53.96 296 P       P      09 17 38.4 -0.8
      comp=Z,6.7nm,0.9s,baz=64,slow=7.5,SNR=48
PDAR                              LR      LR     09 39 00.2
      comp=Z,330nm,19.1s,baz=70,slow=34
      comp=Z,6.7nm,0.9s
BW06  Boulder Array     53.96 296 IAmb    IAmb   09 17 39.6
      comp=Z,7.4nm,0.8s
BW06  Boulder Array     53.96 296 P       P      09 17 38.5 -0.6
      baz=52,SNR=14
G26K  Porcupine Rive    53.98 334 P       P      09 17 37.8 -0.8
      baz=47
MSO   Missoula          54.02 302 P       P      09 17 39.0 -0.3
      baz=53
AMTX  Amarillo          54.03 284 P       P      09 17 39.5  0.0
      baz=50
F25K  Christian Rive    54.05 335 P       P      09 17 38.9 -0.3
      baz=46,SNR=5.6
MOOW  Moose Ponds       54.06 298 IAmb    IAmb   09 17 48.0
      comp=Z,13nm,1.3s
M31M  Drury Creek, Y    54.07 326 P       P      09 17 38.9 -0.5
      baz=51
K29M  Barlow Dome       54.11 329 P       P      09 17 39.0 -0.8
      baz=49
DLMT  Dillon            54.14 300 IAmb    IAmb   09 17 48.3
      comp=Z,10nm,1.1s
ABTX  Abilene, Hawle    54.18 280 P       P      09 17 40.2 -0.4
ABTX                              IAmb    IAmb   09 17 43.5
      comp=Z,5.7nm,0.7s
ABTX  Abilene, Hawle    54.18 280 P       P      09 17 41.5 +0.9
      baz=49
SNOW  Snow King Moun    54.24 297 P       P      09 17 41.1 -0.1
SNOW                              IAmb    IAmb   09 17 50.4
      comp=Z,14nm,1.1s
ABKAR Akbulak array     54.24  54 P       P      09 17 40.6 -0.1
N32M  Quiet Lake        54.25 325 P       P      09 17 40.2 -0.6
      baz=51
I27K  Kandik River      54.26 332 P       P      09 17 40.3 -0.4
      baz=48,SNR=6.1
T25A  Trinidad          54.32 287 P       P      09 17 42.2 +0.4
      baz=51,SNR=12
D23K  Nanushuk River    54.38 338 P       P      09 17 40.9 -0.6
      baz=43
E24K  Your Creek        54.47 336 P       P      09 17 42.1 -0.2
      baz=44
DAWY  Dawson            54.58 330 P       P      09 17 43.9 +0.7
DAWY                              IAmb    IAmb   09 17 44.9
      comp=Z,9.0nm,1.1s
DAWY  Dawson            54.58 330 P       P      09 17 42.5 -0.6
      baz=48,SNR=7.2
MCMT  McKenzie Canyo    54.61 300 P       P      09 17 44.0 +0.1
SDCO  Great Sand Dun    54.61 289 P       P      09 17 43.3 -0.8
      baz=51
EGAK  Eagle             54.67 331 P       P      09 17 43.3 -0.4
      baz=47
M30M  Minto, Yukon      54.68 327 IAmb    IAmb   09 17 45.9
      comp=Z,7.7nm,0.8s
M30M  Minto, Yukon      54.68 327 P       P      09 17 43.6 -0.2
      baz=49
F24K  Squaw Lake        54.72 336 P       P      09 17 44.1  0.0
      baz=44
P33M  Teslin, Yukon     54.74 324 P       P      09 17 43.9 -0.5
      baz=50
DLBC  Dease Lake        54.75 321 LR      LR     09 38 58.9
      comp=Z,250nm,19.9s,baz=98,slow=34
DLBC  Dease Lake        54.75 321 P       P      09 17 42.9 -1.6
      baz=51
G25K  Bearman Lake      54.77 334 P       P      09 17 43.3 -1.0
      baz=45
E23K  Chandalar         54.78 337 P       P      09 17 43.1 -1.4
      baz=43
O20A  White River Ci    54.79 293 IAmb    IAmb   09 17 47.7
      comp=Z,15nm,1.1s
O20A  White River Ci    54.79 293 P       P      09 17 45.1 -0.1
      baz=52,SNR=6.4
L29M  L29M              54.80 328 P       P      09 17 44.4 -0.3
      baz=48
AHID  Auburn Hatcher    54.86 297 IAmb    IAmb   09 17 56.2
      comp=Z,11nm,1.2s
NEW   Newport           54.88 305 LR      LR     09 39 16.8
      comp=Z,418nm,18.2s,baz=54,slow=34
NEW   Newport           54.88 305 P       P      09 17 45.5  0.0
      baz=53
I26K  Coal Creek Min    54.93 332 IAmb    IAmb   09 17 55.5
      comp=Z,13nm,1.1s
I26K  Coal Creek Min    54.93 332 P       P      09 17 45.2 -0.3
      baz=46
N31M  Braeburn, Yuko    55.03 326 P       P      09 17 46.3 -0.1
      baz=49
G24K  Hadweenzic Riv    55.20 335 P       P      09 17 46.9 -0.6
      baz=44
MSTX  Muleshoe          55.30 283 IAmb    IAmb   09 17 49.9
      comp=Z,17nm,1.1s
MSTX  Muleshoe          55.30 283 P       P      09 17 48.3 -0.5
      baz=50
Q32M  Nakina River      55.33 322 P       P      09 17 46.2 -2.6
      baz=50
M29M  Somme Creek       55.35 328 P       P      09 17 47.0 -1.8
      baz=48
S22A  4UR Ranch, Cre    55.43 290 P       P      09 17 47.9 -2.1
      baz=50
K27K  Chicken           55.48 331 P       P      09 17 48.6 -0.9
      baz=46
PRP   Porcupine Dome    55.49 333 P       P      09 17 47.5 -2.2
      baz=45
N30M  Aishikik Lake     55.53 326 P       P      09 17 50.1 +0.1
      baz=48
COLD  Coldfoot          55.54 336 P       P      09 17 48.6 -1.3
      baz=42
J26L  Joseph Creek      55.62 332 P       P      09 17 48.9 -1.8
      baz=46
O30N  Mendenhall        55.62 325 P       P      09 17 48.2 -2.4
      baz=49
JCT   Junction City     55.69 278 IAmb    IAmb   09 17 54.0
      comp=Z,6.4nm,0.8s
JCT   Junction City     55.69 278 P       P      09 17 49.8 -1.8
      baz=48
T35M  Bob Quinn         55.76 320 P       P      09 17 49.8 -1.9
      baz=50
HWUT  Hardware Ranch    55.85 296 IAmb    IAmb   09 17 54.3
      comp=Z,14nm,0.8s
G23K  Bananza Creek     55.88 336 P       P      09 17 50.7 -1.8
      baz=42
H24K  Noodor Dome       55.94 334 IAmb    IAmb   09 17 54.9
      comp=Z,9.4nm,1.1s
H24K  Noodor Dome       55.94 334 P       P      09 17 50.3 -2.5
      baz=43
B08A  Colville Reser    55.99 306 IAmb    IAmb   09 17 54.1
      comp=Z,8.0nm,0.9s
BSUT  Blindstream Ca    56.05 294 IAmb    IAmb   09 18 11.3
      comp=Z,17nm,1.5s
L27K  Beaver Creek,     56.07 330 P       P      09 17 52.1 -1.7
      baz=46
HYT   Haines Junctio    56.10 326 P       P      09 17 52.8 -1.4
      baz=48
G22K  Bettles           56.11 337 P       P      09 17 52.3 -1.7
      baz=41
SCRK  Sand Creek        56.12 331 IAmb    IAmb   09 17 56.4
      comp=Z,10nm,0.9s
SCRK  Sand Creek        56.12 331 P       P      09 17 53.6 -0.7
      baz=45,SNR=9.4
YUK4  Talbot Arm        56.16 327 P       P      09 17 52.1 -2.6
      baz=47
PLID  Pearl Lake        56.22 302 IAmb    IAmb   09 17 57.0
      comp=Z,8.4nm,1.1s
HLID  Hailey            56.27 299 IAmb    IAmb   09 18 06.2
      comp=Z,10.0nm,1.2s
HLID  Hailey            56.27 299 P       P      09 17 54.8 -1.0
      baz=51,SNR=11
P18A  Preston Nutter    56.31 293 IAmb    IAmb   09 18 06.5
      comp=Z,16nm,1.0s
YUK6  Outpost Mounta    56.33 327 P       P      09 17 54.4 -1.5
      baz=47
POKR  Poker Plat Res    56.34 334 IAmb    IAmb   09 17 57.8
      comp=Z,18nm,1.2s
POKR  Poker Plat Res    56.34 334 P       P      09 17 54.3 -1.3
      baz=43
P30M  Million Dollar    56.37 325 P       P      09 17 54.8 -1.3
      baz=48
DOT   Dot Lake          56.37 331 IAmb    IAmb   09 17 58.6
      comp=Z,16nm,1.5s
F21K  Alatna River      56.39 337 P       P      09 17 54.3 -1.8
      baz=40,SNR=5.8
ILAR  Eielson Array     56.43 333 P       P      09 17 56.5 +0.1
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	comp=Z,2.9nm,0.9s,baz=42,slow=5.1,SNR=24						
ILAR				PcP	PcP	09 18 53.3	+0.1
	comp=Z,1.9nm,1.1s,baz=38,slow=3.4,SNR=2.6						
ILAR				LR	LR	09 40 35.9	
	comp=Z,470nm,20.1s,baz=60,slow=34						
	comp=Z,2.9nm,0.9s						
HVU	Hansel Valley	56.45	297	IAmb	IAmb	09 17 58.5	
	comp=Z,13nm,1.3s						
YUK3	Moose Creek	56.50	328	P	P	09 17 56.4	-0.8
	baz=46						
COLA	College	56.63	334	⇓eP	P	09 17 59.1	+1.4
COLA				pmax	pmax		
	comp=Z,25nm,2.9s						
R32K	Eaglecrest	56.67	323	P	P	09 17 56.8	-1.3
	baz=48						
MDM	Murphy Dome	56.68	334	IAmb	IAmb	09 18 08.0	
	comp=Z,9.9nm,1.2s						
P17A	Butcher Ranch,	56.71	293	IAmb	IAmb	09 18 08.0	
	comp=Z,25nm,1.4s						
HDA	Harding Lake	56.71	333	IAmb	IAmb	09 18 00.0	
	comp=Z,7.7nm,0.9s						
HDA	Harding Lake	56.71	333	P	P	09 17 56.7	-1.6
	baz=43						
MVCO	Mesa Verde	56.79	290	IAmb	IAmb	09 18 20.2	
	comp=Z,15nm,1.1s						
MVCO	Mesa Verde	56.79	290	P	P	09 18 00.3	+0.7
	baz=50,SNR=6.6						
K24K	Donnelly Dome	56.80	332	P	P	09 17 58.9	-0.1
	baz=44,SNR=5.1						
SRU	San Rafael Swe	56.81	293	IAmb	IAmb	09 18 10.9	
	comp=Z,7.8nm,0.7s						
O29M	Mount Kennedy	56.84	326	P	P	09 17 59.2	-0.3
	baz=47						
I23K	Minto, Yukon-K	56.86	334	IAmb	IAmb	09 18 01.4	
	comp=Z,14nm,1.1s						
I23K	Minto, Yukon-K	56.86	334	P	P	09 17 58.9	-0.5
	baz=42,SNR=6.3						
833A	Chaparral WMA,	56.87	276	IAmb	IAmb	09 18 01.4	
	comp=Z,17nm,1.1s						
833A	Chaparral WMA,	56.87	276	P	P	09 18 00.4	+0.4
	baz=47						
MPU	Maple Canyon	56.89	294	IAmb	IAmb	09 18 09.8	
	comp=Z,7.5nm,1.0s						
M26K	Nabesna, AK	56.92	330	P	P	09 17 59.5	-0.4
	baz=45						
G21K	Allakaket	56.94	337	P	P	09 17 59.5	-0.4
	baz=40						
ANMO	Albuquerque	56.99	287	LR	LR	09 41 39.4	
	comp=Z,665nm,19.3s,baz=158,slow=35						
ANMO	Albuquerque	56.99	287	P	P	09 18 01.2	+0.2
ANMO				IAmb	IAmb	09 18 10.9	
	comp=Z,12nm,1.4s						
ANMO	Albuquerque	56.99	287	P	P	09 18 01.2	+0.2
ANMO				pmax	pmax		
	comp=Z,12nm,1.5s						
ANMO	Albuquerque	56.99	287	P	P	09 18 01.2	+0.2
	baz=49						
WRH	Wood River Hil	57.00	333	P	P	09 18 00.6	+0.2
WRH				IAmb	IAmb	09 18 10.2	
	comp=Z,22nm,1.4s						
BRVK	Borovoye	57.01	45	P	P	09 17 59.5	-1.1
BRVK	Borovoye	57.01	45	P	P	09 17 59.5	-1.1
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
R31K	City Hall, Gus	57.06	323	P	P	09 17 59.5	-1.3
	baz=48						
BVAR	Borovoye Array	57.08	45	P	P	09 18 01.3	+0.2
	comp=Z,4.6nm,0.6s,baz=312,slow=6.0,SNR=23						
BVAR				LR	LR	09 42 19.8	
	comp=Z,450nm,18.3s,baz=301,slow=36						
	comp=Z,4.6nm,0.6s						
BMO	Blue Mountains	57.09	302	P	P	09 18 00.9	-0.5
BMO	Blue Mountains	57.09	302	P	P	09 18 00.9	-0.5
BMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TMUT	Trail Mountain	57.10	294	IAmb	IAmb	09 18 11.2	
	comp=Z,14nm,1.1s						
BGU	Big Grassy Mou	57.14	296	IAmb	IAmb	09 18 03.6	
	comp=Z,12nm,1.4s						
MFID	Camas Ranch	57.17	300	IAmb	IAmb	09 18 09.9	
	comp=Z,11nm,1.4s						
NLU	North Lily Min	57.19	295	IAmb	IAmb	09 18 04.6	
	comp=Z,13nm,1.3s						
NEA2	Nenana	57.20	334	IAmb	IAmb	09 18 04.0	
	comp=Z,19nm,1.2s						
NEA2	Nenana	57.20	334	P	P	09 18 01.5	-0.2
	baz=42						
PAX	Paxson	57.31	331	P	P	09 18 02.8	+0.1
	baz=44						
Q16A	Castle Valley	57.32	293	IAmb	IAmb	09 18 12.6	
	comp=Z,20nm,1.3s						
MLY	Manley	57.34	335	IAmb	IAmb	09 18 05.3	
	comp=Z,18nm,1.4s						
MLY	Manley	57.34	335	P	P	09 18 02.3	-0.6
	baz=41						
LTY	Liberty	57.38	306	IAmb	IAmb	09 18 04.4	
	comp=Z,16nm,1.1s						
H21K	Melozitna Rive	57.42	336	P	P	09 18 03.2	-0.1
	baz=40						
DUG	Dugway, Tooele	57.48	295	IAmb	IAmb	09 18 06.5	
	comp=Z,12nm,0.8s						
DUG	Dugway, Tooele	57.48	295	P	P	09 18 05.0	+0.7
	baz=50,SNR=15						
I21K	Tanana	57.57	335	IAmb	IAmb	09 18 06.2	
	comp=Z,10.0nm,0.9s						
I21K	Tanana	57.57	335	P	P	09 18 04.5	+0.2
	baz=40						
G08A	Pilot Rock	57.71	303	IAmb	IAmb	09 18 06.6	
	comp=Z,11nm,1.3s						
MCK	McKinley	57.80	333	P	P	09 18 06.2	+0.2
	baz=42						
RDOG	Red Dog Mine	57.87	341	P	P	09 18 06.2	-0.3
	baz=33						
BBB	Bella Bella	57.91	314	LR	LR	09 41 41.0	
	comp=Z,374nm,18.8s,baz=37,slow=35						
N25K	Chitina, Valde	58.02	330	P	P	09 18 07.7	0.0
	baz=44						
TIXI	Tiksi	58.05	8	P	P	09 18 07.8	+0.1
TIXI	Tiksi	58.05	8	⇓eP	P	09 18 09.2	+1.5
TIXI				pmax	pmax		
	comp=Z,14nm,1.8s						
BPAW	Bear Paw Mtn.	58.12	334	P	P	09 18 09.0	+0.7
BPAW				IAmb	IAmb	09 18 17.9	
	comp=Z,12nm,1.3s						
BPAW	Bear Paw Mtn.	58.12	334	P	P	09 18 08.1	-0.2
	baz=40						
TCRU	Three Creeks R	58.28	294	IAmb	IAmb	09 18 19.8	
	comp=Z,13nm,1.1s						
MNTX	Cornudas Mount	58.45	283	P	P	09 18 11.1	0.0
	baz=48						
KLU	Klutina	58.53	330	P	P	09 18 10.3	-1.0
	baz=43						
ELK	Elko	58.54	297	LR	LR	09 42 23.8	
	comp=Z,471nm,18.1s,baz=58,slow=35						
ELK	Elko	58.54	297	IAmb	IAmb	09 18 13.9	
	comp=Z,5.7nm,0.9s						
CHUM	Lake Minchumin	58.66	334	P	P	09 18 11.3	-0.8
	baz=39						
J08A	Circle Bar Ran	58.69	301	IAmb	IAmb	09 18 14.7	
	comp=Z,19nm,1.5s						
M23K	Glacier View	58.89	331	P	P	09 18 13.0	-0.7
	baz=42						
ROSC	El Rosal	58.91	236	P	P	09 18 15.9	+1.0
	comp=Z,3.2nm,0.3s,baz=48,slow=10,SNR=5.7						
ROSC				LR	LR	09 39 24.2	
	comp=Z,290nm,22.0s,baz=38,slow=32						
	comp=Z,3.2nm,0.3s						
W18A	Petrified Fore	58.91	289	P	P	09 18 14.5	+0.1
	baz=48						
TX31	Lajitas Ar. Si	58.94	280	IAmb	IAmb	09 18 24.2	
	comp=Z,17nm,1.2s						
TXAR	Lajitas Array	58.94	280	P	P	09 18 14.7	0.0
	comp=Z,2.1nm,0.7s,baz=58,slow=7.6,SNR=15						
TXAR				LR	LR	09 42 38.2	
	comp=Z,893nm,21.8s,baz=54,slow=35						
	comp=Z,2.1nm,0.7s						
CAST	Castle Rocks	58.95	334	IAmb	IAmb	09 18 15.7	
	comp=Z,15nm,1.3s						
CAST	Castle Rocks	58.95	334	P	P	09 18 13.3	-0.8
	baz=39						
SPR3	Spring Creek 3	59.14	295	IAmb	IAmb	09 18 19.4	
	comp=Z,16nm,1.4s						
GCSA	Galena City Sc	59.20	337	P	P	09 18 15.4	-0.4
	baz=36						
KNK	Knik Glacier	59.40	331	P	P	09 18 17.0	-0.3
	baz=41						
121A	Cookes Peak, D	59.41	285	P	P	09 18 18.5	+0.6
	baz=48						

Q12A	Willow Creek R	59.41	295	IAmb	IAmb	09 18 31.1	
	comp=Z,17nm,1.2s						
X18A	Snowflake	59.43	289	IAmb	IAmb	09 18 19.9	
	comp=Z,9.4nm,1.3s						
PMR	Palmer	59.48	331	P	P	09 18 16.7	-1.0
	baz=40						
K20K	Telida	59.56	335	IAmb	IAmb	09 18 20.4	
	comp=Z,11nm,1.1s						
K20K	Telida	59.56	335	P	P	09 18 17.8	-0.6
	baz=38						
U15A	North Rim	59.61	292	IAmb	IAmb	09 18 21.1	
	comp=Z,6.0nm,0.9s						
WUAZ	Wupatki	59.65	290	P	P	09 18 20.2	+0.6
	baz=48,SNR=8.0						
PWL	Port Wells	59.78	331	P	P	09 18 19.7	-0.2
	baz=41						
SKT	Skwentna	59.91	333	P	P	09 18 20.8	0.0
SKT				IAmb	IAmb	09 18 21.8	
	comp=Z,8.5nm,0.9s						
SKT	Skwentna	59.91	333	P	P	09 18 20.6	-0.1
	baz=39						
RC01	Rabbit Creek A	60.05	331	P	P	09 18 20.8	-0.9
	baz=40						
L20K	Farewell, AK	60.20	334	P	P	09 18 21.9	-0.8
	baz=38						
R11A	Troy Canyon, C	60.31	295	IAmb	IAmb	09 18 32.3	
	comp=Z,12nm,1.5s						
R11A	Troy Canyon, C	60.31	295	P	P	09 18 24.4	+0.3
	baz=48,SNR=10						
GEYT	Alibeck	60.37	65	P	P	09 18 24.9	+0.6
	comp=Z,1.0nm,0.4s,baz=292,slow=7.6,SNR=1.6						
	comp=Z,1.0nm,0.4s						
K05A	Summer Lake	60.44	302	P	P	09 18 25.0	+0.1
M20K	Styx River	60.46	333	P	P	09 18 23.3	-1.3
	baz=38						
O22K	Cooper Landing	60.52	331	P	P	09 18 24.8	-0.1
MOD	Modoc Plateau	60.66	301	IAmb	IAmb	09 18 28.6	
	comp=Z,20nm,1.5s						
JTS	Las Juntas de	60.70	250	LR	LR	09 40 27.4	
	comp=Z,106nm,21.5s,baz=22,slow=32						
L19K	White Mountain	60.72	334	P	P	09 18 26.5	+0.2
	baz=37						
N20K	Mount Spurr	60.73	332	P	P	09 18 26.3	-0.1
	baz=38						
SPCR	Spurr Chakacha	60.73	332	P	P	09 18 26.2	-0.2
	baz=38						
TNA	Tin City	61.04	342	P	P	09 18 29.1	+0.8
TNA	Tin City	61.04	342	P	P	09 18 29.3	+1.0
	baz=29,SNR=6.5						
319A	Douglas	61.13	285	IAmb	IAmb	09 18 39.4	
	comp=Z,18nm,1.3s						
SHPR	Sheep Range	61.28	293	P	P	09 18 30.4	-0.3
TUC	Tucson	61.44	287	P	P	09 18 31.8	+0.1
TUC				IAmb	IAmb	09 18 41.1	
	comp=Z,8.4nm,1.3s						
TUC	Tucson	61.44	287	P	P	09 18 31.8	+0.1
TUC				pmax	pmax		
	comp=Z,8.0nm,1.3s						
TUC	Tucson	61.44	287	P	P	09 18 32.3	+0.7
	baz=47						
W13A	Hualapai Mount	61.46	292	IAmb	IAmb	09 18 40.8	
	comp=Z,8.7nm,1.2s						
PAHR	Pah Rah Range	61.61	299	IAmb	IAmb	09 18 35.3	
	comp=Z,12nm,1.1s						
TPNV	Topopah Spring	61.63	295	IAmb	IAmb	09 18 42.3	
	comp=Z,14nm,1.4s						
TPNV	Topopah Spring	61.63	295	P	P	09 18 33.2	+0.1
	baz=48						
NV11	Mina Array Sit	61.76	297	IAmb	IAmb	09 18 37.0	
	comp=Z,14nm,1.4s						
NVAR	Mina Array Bea	61.84	297	P	P	09 18 34.4	-0.2
	comp=Z,0.9nm,0.7s,baz=57,slow=7.9,SNR=7.1						
NVAR				LR	LR	09 44 37.4	
	comp=Z,344nm,18.1s,baz=32,slow=35						
	comp=Z,0.9nm,0.7s						
CMIG	Matias Romero	61.85	263	LR	LR	09 43 40.2	
	comp=Z,319nm,21.0s,baz=41,slow=34						
WCT	Wildcat Mounta	61.96	295	IAmb	IAmb	09 18 37.0	
	comp=Z,10nm,1.4s						
LHV	Little Huntoon	62.08	297	IAmb	IAmb	09 18 45.6	
	comp=Z,7.9nm,1.2s						
YBH	Yreka Blue Hor	62.11	302	LR	LR	09 44 11.4	
	comp=Z,379nm,18.2s,baz=41,slow=35						
NEE2	Needles Airpor	62.13	292	P	P	09 18 36.6	+0.4
	baz=47						
PDMCI	Parker Dam,Lak	62.15	291	P	P	09 18 37.2	+0.8
	baz=47,SNR=9.8						
BILL	Bilibino	62.22	354	i P	P	09 18 36.9	+0.6
BILL				i		09 18 43.0	
BILL				i		09 19 21.1	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,87nm,15.0s						
GRAC	Grapevine Rang	62.26	295	P	P	09 18 37.6	+0.5
	baz=47,SNR=8.4						
RAYN	Ar Rayn	62.27	86	P	P	09 18 37.9	+0.6
RAYN				IAmb	IAmb	09 18 44.1	
	comp=Z,6.6nm,1.1s						
RAYN	Ar Rayn	62.27	86	P	P	09 18 37.9	+0.6
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
L02F	Cave Junction	62.32	303	P	P	09 18 37.0	-0.4
L02F				IAmb	IAmb	09 18 51.4	
	comp=Z,12nm,1.1s						
FURC	Furnace Creek,	62.32	295	P	P	09 18 37.8	+0.4
	baz=47						
SHOC	Shoshone, Teco	62.36	294	P	P	09 18 37.9	+0.2
	baz=47						
KURK	Kurchatov	62.40	43	P	P	09 18 37.8	+0.1
KURK	Kurchatov	62.40	43	P	P	09 18 37.8	+0.1
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURBB	Kurchatov Arra	62.42	43	P	P	09 18 38.0	+0.1
	comp=Z,2.3nm,0.7s,baz=320,slow=7.0,SNR=24						
KURBB				LR	LR	09 45 03.1	
	comp=Z,512nm,21.3s,baz=276,slow=35						
	comp=Z,2.3nm,0.7s						
TUQ	Turquoise Moun	62.46	293	P	P	09 18 39.1	+0.5
	baz=47						
ZAA0	Zalesovo Array	62.66	38	P	P	09 18 38.8	-0.7
ZALV	Zalesovo Beam	62.66	38	P	P	09 18 39.4	0.0
	comp=Z,1.5nm,0.6s,baz=320,slow=8.5,SNR=6.9						
ZALV				LR	LR	09 47 06.1	
	comp=Z,254nm,18.2s,baz=298,slow=37						
	comp=Z,1.5nm,0.6s						
ZALV	Zalesovo Beam	62.66	38	P	P	09 18 39.2	-0.3
ZALV	Zalesovo Beam	62.66	38	i P	P	09 18 40.9	+1.4
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
QSM	Queen of Sheba	62.67	294	P	P	09 18 39.9	0.0
QSM				IAmb	IAmb	09 18 50.1	
	comp=Z,8.6nm,1.0s						
O18K	Koktuh Hills	62.70	333	P	P	09 18 39.1	-0.5
O18K	Koktuh Hills	62.70	333	P	P	09 18 39.5	-0.1
	baz=36						
GMRC	Granite Mounta	62.74	292	P	P	09 18 41.4	+0.9
	baz=47,SNR=12						
OMMB	Old Mammoth Mi	62.80	297	IAmb	IAmb	09 18 43.8	
	comp=Z,11nm,1.4s						
IRM	Iron Mountain	62.86	292	P	P	09 18 42.0	+0.9
	baz=47,SNR=8.9						
214A	Organ Pipe Nat	62.93	288	P	P	09 18 42.3	+0.6
	baz=46						
113A	Mohawk Valley,	62.97	290	IAmb	IAmb	09 18 50.4	
	comp=Z,11nm,1.4s						
MPMC	Manual Prospec	62.97	295	P	P	09 18 42.0	-0.1
	baz=47,SNR=15						
CWC	Cottonwood Cre	63.06	295	P	P	09 18 42.6	-0.1
	baz=47						
GSC	Goldstone, Bar	63.08	294	P	P	09 18 42.9	+0.2
	baz=47,SNR=15						
HEC	Hector,Ludlow	63.12	293	P	P	09 18 43.7	+0.8
	baz=47,SNR=14						
BC3	Big Chuckawall	63.39	291	P	P	09 18 44.8	0.0
	baz=46						
GLA	Glamis	63.42	290	P	P	09 18 44.5	-0.4
	baz=46						
LRMC	Laurel Mtn Rad	63.48	294	P	P	09 18 45.7	+0.3
	baz=46,SNR=11						
BELC	Belle Mtn. Jos	63.48	292	P	P	09 18 45.9	+0.5
	baz=46						
KDAK	Kodiak Island	63.55	330	LR	LR	09 45 11.0	
	comp=Z,241nm,18.7s,baz=66,slow=35						
O16K	Kokwok River B	63.75	334	P	P	09 18 46.3	-0.2
	baz=34						
ISA	Isabella, Lake	63.83	295	P	P	09 18 48.1	+0.5
	baz=46						

BBRC	Big Bear Solar	63.86	293	P	P	09 18 48.8	+0.8
	baz=46						
PMD	Palm Desert	63.96	292	IAmb	IAmb	09 18 50.9	
	comp=Z,16nm,1.4s						
PFO	Pinyon Flats O	64.03	292	LR	LR	09 47 15.6	
	comp=Z,279nm,19.2s,baz=66,slow=37						
PFO	Pinyon Flats O	64.03	292	P	P	09 18 48.8	-0.3
PFO				IAmb	IAmb	09 18 57.9	
	comp=Z,13nm,1.2s						
PFO	Pinyon Flats O	64.03	292	⇑eP	P	09 18 49.9	+0.9
PFO				pmax	pmax		
	comp=Z,19nm,1.3s						
PFO	Pinyon Flats O	64.03	292	P	P	09 18 49.3	+0.2
	baz=46						
TPFO	Pinon Flats	64.03	292	P	P	09 18 49.3	+0.2
	baz=46						
VES	Vestal, Richgr	64.06	295	P	P	09 18 48.4	-0.6
	baz=46						
EDW2	Edwards Air Fo	64.08	294	P	P	09 18 49.2	0.0
	baz=46						
SWSC	Sam W. Stewart	64.09	291	P	P	09 18 49.7	+0.5
	baz=46						
BFSC	Mount Baldy Ra	64.32	293	P	P	09 18 51.0	+0.1
	baz=46						
IKP	In-Ko-Pah, Jac	64.48	291	P	P	09 18 51.7	-0.2
	baz=46						
MURC	Murrieta	64.48	292	P	P	09 18 51.5	-0.3
	baz=46						
MONP2	Monument Peak	64.50	291	P	P	09 18 53.1	+0.8
	baz=46						
ELS	Elsinore Mount	64.59	293	IAmb	IAmb	09 19 00.6	
	comp=Z,11nm,1.2s						
OTAV	Otavalo	64.99	238	P	P	09 18 56.6	+0.7
OTAV				IAmb	IAmb	09 19 06.4	
	comp=Z,11nm,1.4s						
OTAV	Otavalo	64.99	238	P	P	09 18 56.6	+0.7
OTAV				pmax	pmax		
	comp=Z,11nm,1.4s						
SAML	Samuel	65.65	218	P	P	09 18 59.3	-0.2
SAML				IAmb	IAmb	09 19 00.6	
	comp=Z,10nm,1.3s						
SAML	Samuel	65.65	218	P	P	09 18 59.3	-0.2
SAML				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SLOR	San Lorenzo -	65.82	237	P	P	09 19 01.5	+0.3
SLOR				IAmb	IAmb	09 19 10.9	
	comp=Z,8.0nm,1.2s						
AAK	Ala-Archa	66.20	52	P	P	09 19 03.8	+0.8
	comp=Z,0.9nm,0.5s,baz=286,slow=4.8,SNR=8.8						
AAK				LR	LR	09 48 03.9	
	comp=Z,372nm,18.5s,baz=324,slow=36						
	comp=Z,0.9nm,0.5s						
AAK	Ala-Archa	66.20	52	P	P	09 19 03.0	0.0
AAK	Ala-Archa	66.20	52	c iP	P	09 19 05.2	+2.2
AAK				pmax	pmax		
	comp=Z,13nm,2.0s						
PORT	Chimborazo Vol	66.58	237	IAmb	IAmb	09 19 11.4	
	comp=Z,15nm,1.3s						
MAKZ	Makanchi	66.77	44	P	P	09 19 05.7	-0.7
MAKZ	Makanchi	66.77	44	P	P	09 19 05.7	-0.7
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LPIG	La Paz	66.83	280	LR	LR	09 48 30.1	
	comp=Z,742nm,18.4s,baz=34,slow=36						
MK31	Makanchi Array	66.92	44	d iP	P	09 19 07.6	+0.2
MKAR	Makanchi Array	66.92	44	P	P	09 19 07.7	+0.3
	comp=Z,3.8nm,0.7s,baz=327,slow=6.1,SNR=39						
MKAR				LR	LR	09 47 35.7	
	comp=Z,540nm,21.7s,baz=336,slow=35						
	comp=Z,3.8nm,0.7s						
MKAR	Makanchi Array	66.92	44	P	P	09 19 06.3	-1.1
DGZ	Jazzator, Alta	66.94	39	d iP	P	09 19 08.9	+1.3
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BDFB	Brasilia	67.14	200	P	P	09 19 09.2	+0.2
	comp=Z,6.2nm,1.1s,baz=22,slow=8.6,SNR=5.4						
BDFB				LR	LR	09 43 12.3	
	comp=Z,243nm,21.9s,baz=327,slow=31						
	comp=Z,6.2nm,1.1s						
BDFB	Brasilia	67.14	200	P	P	09 19 09.3	+0.3
BDFB	Brasilia	67.14	200	P	P	09 19 09.4	+0.3
BDFB				pmax	pmax		
	comp=Z,18nm,1.4s						
ETMB	Extrema	67.68	221	P	P	09 19 12.0	-0.5
ETMB				IAmb	IAmb	09 19 13.0	
	comp=Z,9.7nm,1.4s						
SEY	Seymchan	67.87	360	⇓eP	P	09 19 14.0	+0.9
SEY				pmax	pmax		
	comp=Z,26nm,2.5s						
UOSS	Minazif	68.14	77	P	P	09 19 14.9	-0.5
VILB	Vilhena	68.18	213	P	P	09 19 16.2	+0.6
TARG	Taragay, Kyrgy	68.55	51	IAmb	IAmb	09 19 22.7	
	comp=Z,4.7nm,0.8s						
BOD	Bodaibo	68.65	20	eP	P	09 19 17.3	-0.7
BOD				pmax	pmax		
	comp=Z,18nm,1.9s						
SPIA	Saint Paul Isl	69.03	339	P	P	09 19 20.9	+0.5
	baz=26						
KSH	Kashi	69.24	53	P	P	09 19 25.0	+2.8
KSH				sP	pwP	09 19 32.3	+3.6
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KSH				LR	LR		
	comp=Z,230nm,18.6s						
KSH				LR	LR		
	comp=Z,320nm,17.3s						
KSH				LR	LR		
	comp=Z,330nm,19.2s						
ATD	Arta Tunnel	69.25	97	LR	LR	09 51 00.6	
	comp=Z,8.5nm,18.3s,baz=12,slow=37						
PTLB	Pontes e Lacer	70.12	211	P	P	09 19 28.4	+0.8
PTLB				IAmb	IAmb	09 19 30.4	
	comp=Z,11nm,1.2s						
WSAR	Wadi Sarin	70.91	76	LR	LR	09 56 37.8	
	comp=Z,93nm,18.7s,baz=332,slow=41						
MBAR	Mbarara	71.05	115	LR	LR	09 50 38.5	
	comp=Z,358nm,20.4s,baz=326,slow=36						
ATAH	Atahualpa	71.14	233	LR	LR	09 49 10.8	
	comp=Z,149nm,21.1s,baz=16,slow=34						
MA2	Magadan	71.24	0	LR	LR	09 50 58.1	
	comp=Z,107nm,18.6s,baz=78,slow=36						
MA2	Magadan	71.24	0	⇓eP	P	09 19 34.7	+0.8
MA2				pmax	pmax		
	comp=Z,18nm,1.4s						
SIV	San Ignacio	71.30	213	LR	LR	09 46 28.9	
	comp=Z,143nm,20.2s,baz=39,slow=32						
WMQ	Urumqi	71.64	43	eP	P	09 19 38.3	+1.6
WMQ				pP	pwP	09 19 43.5	+0.2
WMQ				pmax	pmax		
	comp=Z,13nm,1.5s						
WMQ				LR	LR		
	comp=Z,560nm,15.3s						
WMQ				LR	LR		
	comp=Z,600nm,18.1s						
WMQ				LR	LR		
	comp=Z,560nm,24.7s						
NNA	Nana	74.48	229	LR	LR	09 50 52.1	
	comp=Z,80nm,21.7s,baz=10,slow=34						
ZEA	Zeya	75.09	15	eP	P	09 19 56.3	-0.5
SONM	Songino Array	75.49	30	P	P	09 19 59.8	+0.4
	comp=Z,2.7nm,0.8s,baz=316,slow=6.0,SNR=30						
SONM				LR	LR	09 55 12.4	
	comp=Z,162nm,19.0s,baz=346,slow=37						
	comp=Z,2.7nm,0.8s						
SONM	Songino Array	75.49	30	P	P	09 19 59.5	+0.1
SONM	Songino Array	75.49	30	P	P	09 19 59.5	+0.1
SONM				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ULN	Ulaanbaatar	75.67	29	P	P	09 20 01.0	+0.6
ULN				IAmb	IAmb	09 20 08.9	
	comp=Z,13nm,1.3s						
ULN	Ulaanbaatar	75.67	29	P	P	09 20 01.0	+0.6
ULN				pmax	pmax		
	comp=Z,13nm,1.3s						
SHEM	Shemya Is, Ala	76.31	346	LR	LR	09 55 22.1	
	comp=Z,83nm,20.1s,baz=95,slow=37						
PB16	IPOC Station P	76.70	220	IAmb	IAmb	09 20 21.2	
	comp=Z,10.0nm,1.2s						
PETK	Petropavlovsk-	77.59	356	P	P	09 20 11.3	+0.4
	comp=Z,5.3nm,1.0s,baz=31,slow=9.2,SNR=2.3						
PETK				LR	LR	09 55 39.3	
	comp=Z,98nm,19.0s,baz=25,slow=37						
	comp=Z,5.3nm,1.0s						
GO01	Chusmiza	77.76	219	IAmb	IAmb	09 20 22.4	
	comp=Z,9.5nm,1.1s						
HEH	HeiHe	78.47	15	eP	P	09 20 15.8	-0.1
HEH				pmax	pmax		

	comp=Z,8.0nm,0.8s						
HEH				pmax	pmax		
	comp=Z,110nm,7.2s						
CPUP	**Villa Florida**	**79.76**	**206**	LR	LR	09 52 03.3	
	comp=Z,89nm,20.6s,baz=18,slow=33						
CPUP	**Villa Florida**	**79.76**	**206**	P	**P**	**09 20 23.0**	**-0.1**
CPUP	**Villa Florida**	**79.76**	**206**	P	**P**	**09 20 23.0**	**-0.1**
CPUP				pmax	pmax		
	comp=Z,7.0nm,1.4s						
KLR	**Kul'dur**	**80.16**	**13**	⇑*e*P	**P**	**09 20 25.2**	**0.0**
KLR				pmax	pmax		
	comp=Z,7.0nm,1.3s						
LVC	**Limon Verde**	**80.29**	**217**	LR	LR	09 52 27.8	
	comp=Z,178nm,21.0s,baz=352,slow=33						
GTA	**Gaotai**	**80.42**	**38**	*e*P	**P**	**09 20 27.4**	**+0.5**
GTA				pP	**pwP**	**09 20 33.0**	**-0.5**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				LR	LR		
	comp=Z,210nm,18.3s						
GTA				LR	LR		
	comp=Z,220nm,16.3s						
GTA				LR	LR		
	comp=Z,290nm,19.5s						
BTO	**Baotou**	**83.11**	**30**	*e*P	**P**	**09 20 41.0**	**0.0**
BTO				S	**S**	**09 31 01.3**	**+0.7**
BTO				LR	LR		
	comp=Z,700nm,13.1s						
BTO				LR	LR		
	comp=Z,710nm,14.3s						
HHC	**Hu-ho-hao-te**	**83.39**	**29**	*e*P	**P**	**09 20 41.0**	**-1.5**
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,5.5s						
HHC				LR	LR		
	comp=Z,250nm,14.6s						
HHC				LR	LR		
	comp=Z,320nm,15.9s						
HHC				LR	LR		
	comp=Z,290nm,16.5s						
YSS	**Yuzh-Sakhalins**	**83.59**	**6**	⇑*e*P	**P**	**09 20 46.9**	**+3.7**
YSS				pmax	pmax		
	comp=Z,35nm,1.7s						
CN2	**Changchun**	**84.30**	**19**	P	**P**	**09 20 47.1**	**+0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MDJ	**Mudanjiang**	**84.30**	**15**	P	**P**	**09 20 46.4**	**-0.5**
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,250nm,3.9s						
LZH	**Lanzhou**	**84.89**	**37**	*e*P	**P**	**09 20 51.5**	**+1.2**
LZH				pP	**pwP**	**09 20 57.8**	**+0.9**
LZH				sP	sP	09 21 02.9	+9.0
LZH				pmax	pmax		
	comp=Z,8.0nm,1.4s						
USA0B	**Ussuriysk Arra**	**85.11**	**14**	⇓*e*P	**P**	**09 20 51.1**	**+0.1**
USRK	**Ussuriysk Ar.**	**85.11**	**14**	P	**P**	**09 20 51.2**	**+0.2**
	comp=Z,4.0nm,0.7s,baz=351,slow=3.6,SNR=11						
	comp=Z,4.0nm,0.7s						
CFA	**Coronel Fontan**	**88.16**	**213**	LR	LR	09 57 34.3	
	comp=Z,150nm,21.9s,baz=66,slow=34						
LBTB	**Lobatse**	**88.45**	**133**	LR	LR	09 59 19.7	
	comp=Z,155nm,21.5s,baz=340,slow=35						
CD2	**Chengdu**	**89.38**	**39**	*e*P	**P**	**09 21 09.9**	**-2.1**
BRDH	**Bariadhala**	**90.67**	**53**	LR	LR	10 04 15.6	
	comp=Z,150nm,20.3s,baz=230,slow=37						
KSRS	**Korea Array**	**90.91**	**19**	P	**P**	**09 21 18.0**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=352,slow=4.2,SNR=3.1						
KSRS				LR	LR	10 04 34.5	
	comp=Z,46nm,18.7s,baz=25,slow=37						
	comp=Z,1.0nm,0.7s						
KSRS	**Korea Array**	**90.91**	**19**	P	**P**	**09 21 18.0**	**-0.9**
BOSA	**Boshof**	**91.33**	**135**	LR	LR	10 01 00.6	
	comp=Z,256nm,20.3s,baz=340,slow=35						
PZH	**PanZhiHua**	**92.34**	**43**	P	**P**	**09 21 25.8**	**-0.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,80nm,4.5s						
SUR	**Sutherland**	**92.60**	**140**	LR	LR	09 58 57.9	
	comp=Z,166nm,21.9s,baz=336,slow=33						
NJ2	**Nanjing**	**93.75**	**27**	*e*P	**P**	**09 21 30.7**	**-1.4**
NJ2				pP	**sP**	**09 21 37.0**	**+1.3**
NJ2				sP	**pwP**	**09 21 38.1**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,170nm,4.4s						
OPO	**Ambohidratompo**	**95.05**	**113**	LR	LR	10 03 27.0	
	comp=Z,133nm,21.6s,baz=172,slow=35						
PALK	**Pallekele**	**96.76**	**71**	LR	LR	10 10 08.7	
	comp=Z,78nm,18.6s,baz=89,slow=38						
PLCA	**Paso Flores**	**97.20**	**211**	LR	LR	10 04 57.8	
	comp=Z,74nm,18.6s,baz=47,slow=35						
CMAR	**Chiang Mai Arr**	**97.91**	**49**	LR	LR	10 09 20.9	
	comp=Z,128nm,20.3s,baz=315,slow=38						
TAOE	**Nuku Hiva Isla**	**110.67**	**281**	*e*LR	LR	09 59 32.4	
	comp=Z,261nm,25.8s						
PPT2	**Papeete2**	**123.24**	**282**	*e*LR	LR	10 05 21.6	
	comp=Z,264nm,23.0s						
PPT2				*e*LR	LR	10 05 22.4	
	comp=Z,236nm,29.0s						
ELIB	**Princess Elisa**	**126.55**	**162**	*d*PP	PP	09 29 14.9	+0.7
TBI	**Tubuai**	**127.34**	**277**	*e*LR	LR	10 07 15.6	
	comp=Z,698nm,23.0s						
TBI				*e*LR	LR	10 07 16.9	
	comp=Z,4µm,22.0s						
WRA	**Warramunga Arr**	**147.46**	**31**	PKPbc	**PKPdf**	**09 27 57.9**	**+1.1**
	comp=Z,2.3nm,0.6s,baz=343,slow=3.0,SNR=23						
DZM	**Mont Dzumac**	**150.13**	**331**	*e*LR	LR	10 17 47.0	
	comp=Z,205nm,27.9s						
ASAR	**Alice Springs**	**150.73**	**34**	PKPbc	**PKPbc**	**09 28 06.7**	**-0.9**
	comp=Z,6.9nm,0.7s,baz=346,slow=1.9,SNR=74						
VNDA	**Vanda**	**151.63**	**185**	PKPbc	**PKiKP**	**09 28 09.1**	**+0.8**
	comp=Z,2.5nm,0.7s,baz=192,slow=2.2,SNR=6.5						

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*NEIC **01** 09:10:47.2±2.3,12°.19S±0°.08×77°.40W±0°.07,h35^{km}±2^{km}, mb4.1/3,Error ellipse: s-maj=13.6km s-min=12.0km az=160.0*

ISC 01 09:10:47.8±1.2,12°.12S±0°.09×77°.3W±0°.1,h51^{km},n19, σ1^{s}.40/20,Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**0.42**	**72**		**Pn**	**09 10 59.4**	**+1.1**
NNA					**Sn**	**09 11 06.2**	**+0.4**
CZSB	**Cruzeiro do Su**	**6.25**	**46**		**Pn**	**09 12 19.0**	**+1.5**
MCRA	**Macar, Loja**	**8.15**	**341**	Pn	**Pn**	**09 12 42.5**	**-1.1**
PB16	**IPOC Station P**	**9.70**	**131**	Pn	**Pn**	**09 13 04.6**	**-0.7**
PSGCX	**Pisagua**	**10.11**	**138**	Pn	**Pn**	**09 13 11.1**	**+0.6**
MNMC	**Minye Minye**	**10.14**	**134**	Pn	**Pn**	**09 13 10.0**	**-1.1**
PB11	**IPOC Station P**	**10.54**	**137**	Pn	**Pn**	**09 13 16.2**	**-0.2**
CHSH	**Refugio Sur-Vo**	**10.68**	**351**	Pn	**Pn**	**09 13 19.8**	**+1.1**
PORT	**Chimborazo Vol**	**10.69**	**352**	Pn	**Pn**	**09 13 23.4**	**+4.4**
TBTG	**Tabatinga, AM**	**10.72**	**43**	Pn	**Pn**	**09 13 19.8**	**+1.1**
ETMB	**Extrema**	**11.08**	**79**	Pn	**Pn**	**09 13 24.1**	**+0.5**
SLOR	**San Lorenzo -**	**11.38**	**354**	Pn	**Pn**	**09 13 28.2**	**0.0**
PB03	**IPOC Station P**	**12.20**	**145**	Pn	**Pn**	**09 13 40.0**	**+1.0**
TULM	**Tulcn-Chalpat**	**12.76**	**358**	Pn	**Pn**	**09 13 46.7**	**-0.4**
SAML	**Samuel**	**14.19**	**79**	Pn	**Pn**	**09 14 05.6**	**-0.4**
LCO	**Las Campanas**	**17.88**	**161**		**Pn**	**09 14 54.1**	**+0.8**
LCO				IAmb	IAmb	09 15 01.4	
	comp=Z,20nm,1.4s						
RIMA	**Rio Macho**	**22.71**	**343**	P	**P**	**09 15 44.6**	**-1.2**
RIMA				IAmb	IAmb	09 16 07.0	
	comp=Z,6.5nm,1.1s						
BAUV	**El Baul**	**22.84**	**24**	P	**P**	**09 15 45.9**	**-0.9**
BAUV				IAmb	IAmb	09 15 58.2	
	comp=Z,32nm,1.5s						
PZH	**PanZhiHua**	**165.66**	**4**	PKP	**PKPdf**	**09 30 47.7**	**0.0**

VIE 01 09:13:05.7,47°.07N×9°.52E,h0^{km},mb2.2/1,ml1.4/4 6 km ENE of Sargans Suspected Mining explosion., Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAVA	**Damuels**	**0.33**	**48**	*i* Pg	Pg	09 13 12.7	+0.6
	1.1nm,0.1s						
DAVA				*i* Sg	Sg	09 13 17.4	+1.1
	3.9nm,0.2s						
FETA	**Feichten**	**0.83**	**93**	*e*Sg	Sg	09 13 33.2	+0.9
	0.4nm,0.3s						
MOTA	**Moosalm**	**1.11**	**75**	*i* Pg	Pb	09 13 27.7	-0.3
	0.3nm,0.1s						
MOTA				*e*Sg	Sg	09 13 41.6	+0.1
	1.0nm,0.1s						
WTTA	**Wattenberg**	**1.46**	**81**	*e*Sg	Sn	09 13 53.8	+0.5
	2.3nm,0.3s						

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*IDC **01** 09:14:48.5±1.4,50°.06N×28°.72W,h0^{km},mb3.3/5, mbtmp3.3/5,Error ellipse: s-maj=50.6km s-min=30.5km az=32.0*

ISC 01 09:14:50.0±1.2,50°.0N±0°.3×28°.7W±0°.2,h10^{km},n7,σ1^{s}.06/6, mb3.3/5,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**44.41**	**135**	P	**P**	**09 23 01.2**	**+0.3**
	0.2nm,0.5s,baz=331,slow=8.5,SNR=1.7						
	0.2nm,0.5s						
YKA	**Yellowknife Ar**	**45.69**	**320**	P	**P**	**09 23 11.5**	**+1.0**
	0.2nm,0.6s,baz=75,slow=7.8,SNR=1.6						
	0.2nm,0.6s						
PDAR	**Pinedale Array**	**53.64**	**295**	P	**P**	**09 24 11.1**	**-0.5**
	0.3nm,0.7s,baz=64,slow=8.1,SNR=3.4						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**66.64**	**44**	P	**P**	**09 25 41.2**	**+0.7**
	0.5nm,0.8s,baz=316,slow=5.1,SNR=3.9						
	0.5nm,0.8s						
SONM	**Songino Array**	**75.11**	**29**	P	**P**	**09 26 31.1**	**-0.9**
	0.1nm,0.5s,baz=324,slow=7.1,SNR=1.9						
	0.1nm,0.5s						
H09N1	**TRISTAN DA CUN**	**87.94**	**167**	T	T	11 05 08.7	
	SNR=16						
ASAR	**Alice Springs**	**150.38**	**34**	PKPbc	**PKPbc**	**09 34 40.8**	**-0.8**
	0.4nm,0.7s,baz=343,slow=2.4,SNR=5.7						

IDC 01 09:17:25.5±7.0,51°.59N×38°.31E,h0^{km},mbtmp3.6/1, ML2.5/1,Error ellipse: s-maj=102.4km s-min=58.6km az=55.0,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**5.19**	**353**	I	I	09 51 20.0	
	0.1nm,0.9s,baz=172,slow=304,SNR=3.6						
FINES	**FINESS Array B**	**11.94**	**331**	Pn	Pn	09 20 11.8	-5.0
	0.1nm,0.3s,baz=138,slow=13,SNR=5.7						
FINES				Sn	Sn	09 22 19.9	-11
	0.1nm,0.3s,baz=143,slow=21,SNR=1.4						
	1.4nm,0.8s						
I31KZ	**AKTYUBINSK INF**	**12.48**	**88**	I	I	10 35 10.0	
	baz=283,slow=325,SNR=8.3						
I46RU	**ZALESOVO INFRA**	**27.85**	**67**	I	I	12 08 30.0	
	baz=288,slow=325,SNR=4.2						

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*ISU **01** 09:29:42.5,41°.35N×69°.20E,h29^{km}*

*SOME **01** 09:29:43.1,40°.88N×69°.83E,h5^{km}*

*NNC **01** 09:29:44.2±2.4,40°.85N×69°.89E,h0^{km},mb3.4,mpv3.2, Error ellipse: s-maj=16.8km s-min=9.1km az=42.0*

*KRNET **01** 09:29:46.5±0.1,41°.06N×69°.94E,h13^{km},mb3.1*

ISC 01 09:29:46.5±1.0,41°.02N±0°.03×69°.75E±0°.04,h10^{km},n28, σ1^{s}.72/42,19C-2D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YBZ	**Yangibazar**	**0.31**	**336**	P	**Pg**	**09 29 50.2**	**-2.5**
YBZ				S	**Sg**	**09 29 56.0**	**-0.9**
KUMR	**Kumaryk**	**0.43**	**300**	P	**Pn**	**09 29 59.7**	**+0.9**
TAS	**Tashkent**	**0.46**	**311**	⇑*e*P	**Pn**	**09 29 57.6**	**-1.6**
	baz=99						
TAS				⇑*e*S	**Sb**	**09 30 05.5**	**+1.9**
	baz=99						
CHMG	**Chimgan**	**0.56**	**20**	P	**Pg**	**09 29 55.5**	**-2.0**
CHMG				S	**Sg**	**09 30 05.1**	**+0.2**
CHRV	**Charvak**	**0.64**	**14**	P	**Pg**	**09 29 56.7**	**-2.2**
IUG	**Iuzhnay**	**1.14**	**10**	P	**Pn**	**09 30 08.5**	**-0.2**
	75nm,0.1s						
IUG				S	**Sn**	**09 30 27.8**	**+3.3**
	158nm,0.4s						
IUG	**Iuzhnay**	**1.14**	**10**	*e*P	**Pn**	**09 30 08.5**	**-0.2**
	75nm,0.1s						
IUG				*e*S	**Sn**	**09 30 27.8**	**+3.3**
	158nm,0.4s						
TRKS	**Terek-Say**	**1.16**	**64**	⇑*e*P	**Pn**	**09 30 05.9**	**-3.1**
	baz=66						
TRKS				⇑*e*S	**Sb**	**09 30 20.3**	**-3.7**
	baz=66						
BTK	**Batken**	**1.26**	**140**	⇑*e*P	**Pn**	**09 30 09.7**	**-0.6**
	baz=46						
BTK				⇑*e*S	**Sb**	**09 30 26.3**	**-0.5**
	baz=46						
CHMI	**Chimion**	**1.54**	**119**	P	**Pb**	**09 30 14.5**	**-0.8**
CHMI				S	**Sg**	**09 30 38.1**	**+1.9**
FRG	**Fergana**	**1.68**	**112**	P	**Pb**	**09 30 17.2**	**-0.3**
FRG				S	**Sg**	**09 30 42.2**	**+1.8**
ARK	**Arkit**	**1.83**	**64**	⇑*e*P	**Pn**	**09 30 18.4**	**+0.2**
	baz=63						
ARK				⇑*e*S	**Sn**	**09 30 41.5**	**-0.1**
	baz=63						
KK31	**Karatay Array**	**2.15**	**15**	⇑Pg	**Pb**	**09 30 24.8**	**-0.9**
	4.8nm,0.5s,baz=202,slow=14,SNR=64						
KK31				Lg	Lg	09 30 54.7	
	12nm,0.4s,baz=192,slow=19,SNR=19						
KKAR	**Karatay Array**	**2.15**	**15**	⇑*e*P	**Pb**	**09 30 24.8**	**-0.9**
	baz=12						
KKAR				⇑*e*S	**Sb**	**09 30 52.9**	**+0.4**
	baz=12						
DRK	**Karamyk**	**2.20**	**134**	⇑*i*P	**Pb**	**09 30 25.5**	**-1.1**
	baz=37						
DRK				⇑*i*S	**Sb**	**09 30 54.3**	**+0.3**
	baz=37						
OHH	**Osh**	**2.36**	**101**	⇑*i*P	**Pn**	**09 30 26.9**	**+1.5**
	baz=3.0						
OHH				⇑*i*S	**Sn**	**09 30 56.0**	**+1.6**
	baz=3.0						
MRKS	**Merke**	**3.11**	**55**	Pg	**Pb**	**09 30 41.2**	**-0.8**
	5.2nm,0.6s						
MRKS				Lg	Lg	09 31 23.7	
	7.8nm,0.3s						
MRKS	**Merke**	**3.11**	**55**	*e*Pg	**Pb**	**09 30 41.2**	**-0.8**
	5.2nm,0.6s						
MRKS				*e*Lg	Lg	09 31 23.7	
	7.8nm,0.3s						
AML	**Almayashu**	**3.16**	**68**	⇑Pg	**Pb**	**09 30 43.5**	**+0.5**
	0.2nm,0.5s						
AML				⇓Lg	Lg	09 31 25.7	
	0.7nm,0.5s						
AML	**Almayashu**	**3.16**	**68**	⇑*e*P	**Pn**	**09 30 38.1**	**+1.4**
	baz=68						
AML				⇑*e*S	**Sn**	**09 31 15.7**	**+1.1**
	baz=68						
SGDS	**Sogindy**	**4.36**	**55**	Pg	**Pb**	**09 31 03.1**	**-0.1**
	1.1nm,0.3s						
SGDS				Lg	Lg	09 32 01.3	
	3.3nm,0.4s						
TKM2	**Tokmak 2**	**4.75**	**65**	⇑Pg	**Pb**	**09 31 11.5**	**+1.5**
	1.4nm,0.6s						
TKM2				⇓Lg	Lg	09 32 14.2	
	2.2nm,0.5s						
DGS	**Degeres**	**5.00**	**62**	Pg	**Pb**	**09 31 13.9**	**-0.2**
	2.9nm,0.5s						
DGS				Lg	Lg	09 32 19.4	
	2.6nm,0.4s						
DGS	**Degeres**	**5.00**	**62**	*e*Pg	**Pb**	**09 31 13.9**	**-0.2**
	2.9nm,0.5s						
DGS				*e*Lg	Lg	09 32 19.4	
	2.6nm,0.4s						
KST	**Kastek**	**5.05**	**64**	Pg	**Pb**	**09 31 16.7**	**+1.6**
	1.8nm,0.5s						
KST				Lg	Lg	09 32 24.2	
	3.0nm,0.4s						
KST	**Kastek**	**5.05**	**64**	*e*Pg	**Pb**	**09 31 16.7**	**+1.6**
	1.8nm,0.5s						
KST				*e*Lg	Lg	09 32 24.2	
	3.0nm,0.4s						
BTLS	**Baital**	**5.10**	**37**	Pg	**Pb**	**09 31 19.0**	**+3.1**
	1.2nm,0.3s						
BTLS				Lg	Lg	09 32 28.0	
	3.6nm,0.5s						
BTLS	**Baital**	**5.10**	**37**	*e*Pg	**Pb**	**09 31 19.0**	**+3.1**
	1.2nm,0.3s						
BTLS				*e*Lg	Lg	09 32 28.0	
	3.6nm,0.5s						

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*IDC **01** 09:32:43.5±2.2,53°.92N×86°.55E,h0^{km},mbtmp3.1/3, ML2.7/3,Error ellipse: s-maj=17.9km s-min=10.7km az=66.0*

*NNC **01** 09:32:44.7±4.4,53°.93N×86°.56E,h0^{km},mb2.9,mpv2.7, Error ellipse: s-maj=32.8km s-min=18.2km az=40.0, Suspected Mining explosion.*

ISC 01 09:32:43.0±3.8,54°.0N±0°.2×86°.6E±0°.2,h0^{km},n9,σ2^{s}.36/15, 6C-4D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.05**	**267**	I	I	09 40 50.0	
	baz=90,slow=334,SNR=0.2						
ZAA0	**Zalesovo Array**	**1.05**	**267**	⇑P	**Pg**	**09 33 03.0**	**-0.2**
	0.5nm,0.5s						
ZAA0				⇓S	**Sb**	**09 33 18.9**	**+0.4**
	4.8nm,0.7s						
ZALV	**Zalesovo Beam**	**1.05**	**267**	Pg	**Pg**	**09 33 02.1**	**-1.1**
	1.2nm,0.3s,baz=90,slow=17,SNR=13						
ZALV				Lg	Lg	09 33 17.2	
	4.2nm,0.3s,baz=94,slow=30,SNR=23						
KURK	**Kurchatov**	**5.90**	**239**	⇑Pn	**Pn**	**09 34 15.6**	**+4.0**
	1.0nm,0.7s						
KURK				⇑Sn	**Sn**	**09 35 22.2**	**+2.4**
	1.0nm,0.7s						
KURK				⇓Lg	Lg	09 35 48.0	
	1.9nm,0.6s						
KURBB	**Kurchatov Arra**	**6.00**	**239**	Pn	**Pn**	**09 34 12.9**	**0.0**
	0.1nm,0.3s,baz=56,slow=13,SNR=13						
KURBB				Sn	**Sn**	**09 35 22.6**	**+0.3**
	baz=65,slow=35,SNR=2.5						
KURBB				Lg	Lg	09 35 50.0	
	0.1nm,0.3s,baz=47,slow=27,SNR=3.6						
	1.3nm,0.5s						
KURBB	**Kurchatov Arra**	**6.00**	**239**	⇓Pn	**Pn**	**09 34 16.1**	**+3.1**
	2.6nm,0.7s						
KURBB				⇑Sn	**Sn**	**09 35 23.8**	**+1.5**
	4.0nm,0.6s						
KURBB				⇑Lg	Lg	09 35 51.2	
	7.4nm,0.7s						
MK31	**Makanchi Array**	**7.73**	**203**	Pn	**Pn**	**09 34 37.6**	**+0.9**
	0.4nm,0.5s,baz=56,slow=6.8,SNR=6.1						
MK31				⇑Sn	**Sn**	**09 36 03.1**	**-1.9**
	0.2nm,0.5s						
MK31				⇓Lg	Lg	09 36 44.5	
	1.1nm,0.7s,baz=31,slow=30,SNR=2.7						
MKAR	**Makanchi Array**	**7.73**	**203**	Pn	**Pn**	**09 34 36.7**	**0.0**
	0.2nm,0.3s,baz=22,slow=12,SNR=9.7						
MKAR				Sn	**Sn**	**09 36 02.9**	**-2.1**
	0.2nm,0.3s,baz=18,slow=25,SNR=5.2						
MKAR				Lg	Lg	09 36 45.1	
	baz=17,slow=38						
	0.6nm,0.5s						
BVAR	**Borovoye Array**	**9.71**	**271**	Pn	**Pn**	**09 35 04.2**	**+0.3**
	0.1nm,0.3s,baz=74,slow=15,SNR=2.4						
BVAR				Sn	**Sn**	**09 36 48.8**	**-4.7**
	baz=228,slow=40,SNR=1.5						
	0.4nm,0.5s						

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*IDC **01** 09:41:40.0±0.8,47°.34N×153°.85E,h0^{km},mb3.8/16, mbtmp3.8/20,ML3.2/3,Error ellipse: s-maj=20.6km s-min=15.8km az=127.0*

*MOS **01** 09:41:44.5±1.2,47°.30N×154°.06E,h49^{km},mb4.5/6,Error ellipse: s-maj=11.3km s-min=7.3km az=75.1*

*SKHL **01** 09:41:44.9±0.3,47°.20N×154°.30E,h61^{km}±4^{km},mb4.8/11*

ISC 01 09:41:44.4±0.7,47°.26N±0°.07×154°.14E±0°.07,h31^{km},n66, σ1^{s}.87/71,mb3.9/20,2C-6D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.67**	**20**	*e*PN	**Pn**	**09 42 39.0**	**0.0**
SKR				*e*S	**Sn**	**09 43 18.4**	**-2.8**
SKR				pmax	pmax		
	comp=Z,76nm,0.4s						
SKR				smax	smax		
	comp=N,224nm,0.6s						
SKR				smax	smax		
	comp=E,297nm,0.6s						
SKR	**Severo-Kuril's**	**3.67**	**20**	*e*P	**Pn**	**09 42 39.0**	**0.0**
SKR				AMB	AMB	09 42 40.2	
	comp=E,80nm,0.4s						
SKR				*e*S	**Sn**	**09 43 19.4**	**-1.8**
SKR				A	A	09 43 22.1	
	comp=E,220nm,0.5s						
SKR				A	A	09 43 22.1	
	comp=E,300nm,0.5s						
PAU	**Pauzhetka**	**4.56**	**22**	*e*P	**Pn**	**09 42 52.2**	**+0.9**
PAU				AMB	AMB	09 42 54.1	
	comp=E,80nm,0.4s						
PAU				*e*S	**Sn**	**09 43 42.8**	**-0.4**
PAU				A	A	09 43 45.6	
	comp=E,120nm,0.3s						
PAU				A	A	09 43 45.6	
	comp=E,90nm,0.3s						
KUR	**Kuril'sk**	**4.80**	**247**	*e*PN	**Pn**	**09 42 56.9**	**+2.4**
KUR				*e*S	**Sn**	**09 43 50.6**	**+1.6**
KUR				pmax	pmax		
	comp=Z,55nm,0.5s						
KUR				pmax	pmax		
	comp=N,25nm,0.2s						
KUR				pmax	pmax		
	comp=E,19nm,0.2s						
KUR				smax	smax		
	comp=E,62nm,0.6s						
KUR				smax	smax		
	comp=N,38nm,0.2s						
KUR	**Kuril'sk**	**4.80**	**247**	*e*P	**Pn**	**09 42 56.3**	**+1.8**
KUR				AMB	AMB	09 43 06.0	
	comp=N,60nm,0.5s						
KUR				*e*S	**Sn**	**09 43 50.1**	**+1.1**
KUR				A	A	09 44 00.8	
	comp=N,80nm,0.4s						
KUR				A	A	09 44 00.8	
	comp=N,80nm,0.4s						
SHO	**Shikotan**	**6.15**	**239**	*e*P	**Pn**	**09 43 14.9**	**+1.9**
SHO				AMB	AMB	09 43 16.5	
	comp=N,20nm,0.2s						
SHO				*e*S	**Sn**	**09 44 22.4**	**+0.2**
SHO				A	A	09 44 37.5	
	comp=N,30nm,0.2s						
SHO				A	A	09 44 37.5	
	comp=N,50nm,0.2s						
PEA0B	**Petropavlovsk-**	**6.29**	**20**	⇓*e*PN	**Pn**	**09 43 16.4**	**+1.4**
PETK	**Petropavlovsk-**	**6.29**	**20**	Pn	**Pn**	**09 43 14.8**	**-0.1**
	comp=N,0.6nm,0.3s,baz=103,slow=22,SNR=20						
PETK				Sn	**Sn**	**09 44 33.3**	**+7.6**
	baz=176,slow=26						
	comp=N,2.6nm,0.6s						
PET	**Petropavlovsk**	**6.46**	**25**	*e*P	**Pn**	**09 43 18.6**	**+1.3**
PET				AMB	AMB	09 43 20.1	
	comp=N,20nm,0.4s						
PET				*e*S	**Sn**	**09 44 28.0**	**-1.9**
PET				A	A	09 44 32.0	
	comp=N,20nm,0.2s						
PET				A	A	09 44 32.0	
	comp=N,90nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**6.63**	**244**	*e*PN	**Pn**	**09 43 20.9**	**+1.2**
YUK				pmax	pmax		
	comp=E,9.0nm,0.2s						
YUK				pmax	pmax		
	comp=Z,80nm,0.2s						
YUK				pmax	pmax		
	comp=N,21nm,0.1s						
YUK	**Yuzh-Kuril'sk**	**6.63**	**244**	*e*P	**Pn**	**09 43 21.3**	**+1.6**
YUK				AMB	AMB	09 43 24.6	
	comp=N,80nm,0.5s						
YUK				*e*S	**Sn**	**09 44 33.4**	**-0.8**
YUK				A	A	09 44 55.1	
	comp=N,80nm,0.7s						
YUK				A	A	09 44 55.1	
	comp=N,150nm,0.7s						
RUSJ	**Misakicho**	**6.98**	**246**	*e*PN	**Pn**	**09 43 28.0**	**+3.6**
NMR	**Nemuro--Hokkai**	**7.09**	**240**	*e*PN	**Pn**	**09 43 24.8**	**-1.1**
NMR	**Nemuro--Hokkai**	**7.09**	**240**	*i* P	**Pn**	**09 43 25.1**	**-0.8**
YSS	**Yuzh-Sakhalins**	**7.78**	**272**	*e*PN	**Pn**	**09 43 39.5**	**+4.2**
YSS				*e*S	**Sn**	**09 45 04.9**	**+2.7**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS	**Yuzh-Sakhalins**	**7.78**	**272**	*e*P	**Pn**	**09 43 37.8**	**+2.5**
YSS				AMB	AMB	09 43 39.0	
	comp=Z,20nm,0.7s						
YSS				*e*S	**Sn**	**09 45 02.3**	**+0.1**
YSS				A	A	09 45 13.0	
	comp=Z,30nm,0.5s						
YSS				A	A	09 45 13.0	

	comp=Z,30nm,0.5s						
AKK	**Akkeshi**	**7.82**	**241**	*e*P	**Pn**	**09 43 37.1**	**+1.1**
AKK				AMB	AMB	09 43 40.2	
	comp=Z,30nm,0.4s						
TYV	**Tymovskoe**	**8.36**	**300**	*e*PN	**Pn**	**09 43 47.4**	**+4.0**
TYV				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TYV				pmax	pmax		
	comp=Z,100nm,3.0s						
TYV	**Tymovskoe**	**8.36**	**300**	*e*P	**Pn**	**09 43 46.1**	**+2.7**
TYV				AMB	AMB	09 43 50.2	
	comp=Z,20nm,0.7s						
TYV				AMB	AMB	09 43 51.3	
	comp=Z,100nm,3.0s						
TYV				*e*S	**Sn**	**09 45 16.4**	**-0.2**
ASAJ	**Asahikawa**	**8.67**	**253**	Pn	**Pn**	**09 43 50.0**	**+2.4**
	comp=Z,0.3nm,0.3s,baz=281,slow=23,SNR=1.6						
ERM	**Erimo**	**9.42**	**240**	⇓*e*PN	**Pn**	**09 43 58.0**	**+0.1**
MA2	**Magadan**	**12.50**	**352**	Pn	**Pn**	**09 44 40.7**	**+0.7**
	comp=Z,8.3nm,0.5s,baz=174,slow=12,SNR=8.1						
MA2	**Magadan**	**12.50**	**352**	⇓*e*PN	**Pn**	**09 44 41.6**	**+1.6**
MA2	**Magadan**	**12.50**	**352**	*e*P	**Pn**	**09 44 41.6**	**+1.6**
KLR	**Kul'dur**	**15.04**	**286**	Pn	**Pn**	**09 45 10.6**	**-4.0**
	comp=Z,0.1nm,0.3s,baz=111,slow=20,SNR=1.7						
	comp=Z,0.5nm,0.6s						
SEY	**Seymchan**	**15.74**	**357**	Pn	**Pn**	**09 45 24.2**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=360,slow=24,SNR=4.2						
	comp=Z,1.5nm,0.5s						
YAK	**Yakutsk**	**20.29**	**326**	⇓*e*P	**P**	**09 46 16.7**	**-0.5**
YAK				pmax	pmax		
	comp=Z,14nm,0.5s						
YAK	**Yakutsk**	**20.29**	**326**	*e*P	**P**	**09 46 16.7**	**-0.5**
KSRS	**Korea Array**	**21.62**	**253**	P	**P**	**09 46 30.6**	**-1.2**
	comp=Z,1.4nm,0.7s,baz=62,slow=10,SNR=4.7						
	comp=Z,1.4nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**29.36**	**155**	T	T	10 19 34.6	
	baz=340,slow=74						
H11N1	**WAKE ISLAND Hy**	**29.38**	**155**	T	T	10 19 42.8	
	baz=340						
H11N3	**WAKE ISLAND Hy**	**29.38**	**155**	T	T	10 19 06.3	
	baz=340,slow=74						
H11S1	**WAKE ISLAND Hy**	**30.47**	**156**	T	T	10 20 17.9	
	baz=343,slow=76,SNR=559						
H11S3	**WAKE ISLAND Hy**	**30.48**	**156**	T	T	10 20 18.6	
	baz=343,slow=76,SNR=664						
H11S2	**WAKE ISLAND Hy**	**30.48**	**156**	T	T	10 20 26.8	
	baz=343,slow=76,SNR=485						
SONM	**Songino Array**	**31.83**	**289**	P	**P**	**09 48 04.4**	**-2.0**
	comp=Z,0.3nm,0.6s,baz=88,slow=8.8,SNR=3.0						
	comp=Z,0.3nm,0.6s						
COLA	**College**	**35.30**	**39**	⇓*e*P	**P**	**09 48 37.3**	**+1.2**
COLA				pmax	pmax		
	comp=Z,31nm,2.9s						
ILAR	**Eielson Array**	**35.72**	**39**	P	**P**	**09 48 39.4**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=259,slow=7.5,SNR=4.2						
	comp=Z,0.4nm,0.8s						
INK	**Inuvik**	**40.85**	**33**	P	**P**	**09 49 23.8**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=323,slow=7.1,SNR=6.9						
	comp=Z,0.7nm,0.5s						
MK31	**Makanchi Array**	**47.33**	**297**	⇓*e*P	**P**	**09 50 13.8**	**-1.3**
MKAR	**Makanchi Array**	**47.33**	**297**	P	**P**	**09 50 13.0**	**-2.1**
	comp=Z,0.7nm,0.7s,baz=60,slow=6.2,SNR=6.5						
	comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**47.33**	**297**	*e*P	**P**	**09 50 14.0**	**-1.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**47.33**	**297**	*e*P	**P**	**09 50 14.0**	**-1.1**
KURK	**Kurchatov**	**47.67**	**304**	⇑*e*P	**P**	**09 50 16.2**	**-1.4**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KURK	**Kurchatov**	**47.67**	**304**	*e*P	**P**	**09 50 16.2**	**-1.4**
KURBB	**Kurchatov Arra**	**47.76**	**304**	P	**P**	**09 50 16.4**	**-1.9**
	comp=Z,1.6nm,0.6s,baz=70,slow=8.5,SNR=7.7						
	comp=Z,1.6nm,0.6s						
YKA	**Yellowknife Ar**	**50.10**	**37**	P	**P**	**09 50 36.2**	**+0.2**
	comp=Z,0.8nm,0.9s,baz=297,slow=7.6,SNR=5.2						
	comp=Z,0.8nm,0.9s						
BVAR	**Borovoye Array**	**51.08**	**309**	P	**P**	**09 50 42.3**	**-1.3**
	comp=Z,0.9nm,0.3s,baz=66,slow=12,SNR=6.4						
	comp=Z,0.9nm,0.3s						
ARU	**Arti**	**55.11**	**318**	*c i*P	**P**	**09 51 12.1**	**-1.1**
ARU				S	**S**	**09 58 51.7**	**-1.9**
ARU				SS	**SS**	**10 02 38.8**	**+1.8**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.8s						
ARU	**Arti**	**55.11**	**318**	*i* P	**P**	**09 51 12.1**	**-1.1**
FINES	**FINESS Array B**	**63.88**	**335**	P	**P**	**09 52 12.3**	**-1.2**
	comp=Z,1.3nm,0.4s,baz=38,slow=7.5,SNR=20						
	comp=Z,1.3nm,0.4s						
FINES	**FINESS Array B**	**63.88**	**335**	*i* P	**P**	**09 52 12.8**	**-0.8**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NB2	**NORSAR Subarra**	**67.97**	**342**	P	**P**	**09 52 40.1**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**67.97**	**342**	P	**P**	**09 52 39.6**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=28,slow=6.6,SNR=4.7						
	comp=Z,1.1nm,0.7s						
NOA	**NORSAR Array B**	**67.97**	**342**	*e*P	**P**	**09 52 39.9**	**-0.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**69.22**	**200**	P	**P**	**09 52 48.5**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=26,slow=6.6,SNR=1.4						
	comp=Z,0.2nm,0.5s						
AKASG	**Malin Array Be**	**71.51**	**327**	P	**P**	**09 53 00.6**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=31,slow=6.4,SNR=4.5						
	comp=Z,0.6nm,0.3s						
AKASG	**Malin Array Be**	**71.51**	**327**	*i* P	**P**	**09 53 01.1**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAR	**Alice Springs**	**72.91**	**199**	P	**P**	**09 53 11.6**	**+1.1**
	comp=Z,0.7nm,0.9s,baz=14,slow=7.5,SNR=5.0						
	comp=Z,0.7nm,0.9s						
TXAR	**Lajitas Array**	**76.63**	**61**	P	**P**	**09 53 33.0**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=298,slow=4.5,SNR=5.6						
	comp=Z,0.4nm,0.6s						
MLR	**Muntele Rosu**	**77.05**	**325**	P	**P**	**09 53 34.5**	**+0.1**
	comp=Z,2.7nm,0.5s,baz=214,slow=3.5,SNR=4.4						
GERES	**GERESS Array B**	**78.31**	**335**	P	**P**	**09 53 41.1**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=60,slow=5.8,SNR=2.1						
	comp=Z,0.5nm,0.5s						
BRTR	**Keskin Array B**	**78.50**	**317**	P	**P**	**09 53 42.5**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=64,slow=6.6,SNR=2.8						
	comp=Z,1.0nm,0.6s						
H03N2	**Juan Fernandez**	**138.05**	**90**	T	T	12 34 49.1	
	baz=308,slow=77,SNR=4.8						
H03N1	**Juan Fernandez**	**138.07**	**90**	T	T	12 34 31.4	
	baz=308,slow=77,SNR=6.3						
H03N3	**Juan Fernandez**	**138.07**	**91**	T	T	12 34 45.7	
	baz=308,slow=77,SNR=6.3						

IDC ***01*** *09:44:59.8±1.4, 64°.61N×18°.24W, h0*^{km}*, mb3.3/5, mbtmp3.3/5, MS3.5/1, Error ellipse: s-maj=39.4km s-min=30.6km az=26.0*

ISC 01 09:45:01.1±1.2**, 64°.4N**±0°.1×**18°.4W**±0°.2**, h10**^{km}**, n7,** σ**1**^{s}**.19**/7**, mb3.4**/5**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCO	**Scoresbysund**	**6.22**	**349**	*i* P	**Pn**	**09 46 33.0**	**+0.2**
NOR	**Nord**	**17.26**	**1**	*e*S	**S**	**09 52 23.9**	**+1.5**
ILAR	**Eielson Array**	**45.70**	**332**	P	**P**	**09 53 21.1**	**-0.4**
	0.2nm,0.8s,baz=9.9,slow=7.3,SNR=3.8						
	0.2nm,0.8s						
KURBB	**Kurchatov Arra**	**48.61**	**57**	P	**P**	**09 53 43.8**	**-0.5**
	0.3nm,0.3s,baz=327,slow=6.8,SNR=4.2						
	0.3nm,0.3s						
PDAR	**Pinedale Array**	**52.90**	**293**	P	**P**	**09 54 16.7**	**-0.4**
	0.1nm,0.5s,baz=60,slow=5.3,SNR=1.6						
	0.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**53.10**	**155**	P	**P**	**09 54 19.6**	**+1.1**
	0.5nm,0.8s,baz=352,slow=8.7,SNR=2.2						
	0.5nm,0.8s						
MKAR	**Makanchi Array**	**53.18**	**57**	P	**P**	**09 54 17.6**	**-1.2**
	0.4nm,0.8s,baz=326,slow=5.9,SNR=3.6						
MKAR				LR	LR	10 17 01.8	
	comp=Z,40nm,18.0s,baz=52,slow=36						
	0.4nm,0.8s						

IDC 01 09:47:12.4±3.0**, 53°.48N**×**87°.58E, h0**^{km}**, mbtmp2.9**/2**, ML2.6**/2**, Error ellipse: s-maj=25.7km s-min=15.4km az=59.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.71**	**287**	I	I	09 59 30.0	
	baz=102,slow=341,SNR=2.1						
ZALV	**Zalesovo Beam**	**1.71**	**287**	Pg	Pn	09 47 42.9	-0.6
	2.3nm,0.3s,baz=104,slow=20,SNR=12						
ZALV				Lg	Lg	09 48 07.9	
	3.8nm,0.3s,baz=102,slow=24,SNR=11						
KURBB	**Kurchatov Arra**	**6.27**	**247**	Pn	Pn	09 48 47.0	+0.9
	0.1nm,0.3s,baz=61,slow=14,SNR=2.2						
KURBB				Sn	Sn	09 49 55.7	-2.7
	baz=69,slow=28,SNR=3.5						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**7.50**	**209**	Pn	Pn	09 49 04.7	+1.6
	0.2nm,0.3s,baz=29,slow=13,SNR=6.8						
MKAR				Lg	Lg	09 51 08.2	
	baz=26,slow=30,SNR=1.6						
	0.2nm,0.3s						

IDC ***01*** *10:01:17.0±0.7, 55°.16S×30°.51W, h0*^{km}*, mb4.2/10, mbtmp4.2/10, MS3.5/4, Error ellipse: s-maj=24.0km s-min=17.8km az=33.0*

NEIC ***01*** *10:01:22.3±1.3, 55°.31S±0°.02×30°.8W±0°.2, h34*^{km}*±7*^{km}*, mb4.6/23, Error ellipse: s-maj=20.3km s-min=2.2km az=85.0*

ISC 01 10:01:18.1±0.6**, 55°.25S**±0°.10×**30°.60W**±0°.10**, h10**^{km}**, n43,** σ**0**^{s}**.72**/40**, mb4.5**/19**, MS3.4**/4**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.55**	**283**		**Pn**	**10 02 13.7**	**+0.6**
SNAA	**Sanae**	**20.28**	**155**	P	**P**	**10 05 53.9**	**+0.4**
	3.5nm,0.8s,baz=303,slow=14,SNR=2.7						
	3.5nm,0.8s						
SNAA	**Sanae**	**20.28**	**155**	P	**P**	**10 05 53.3**	**-0.2**
SMAI	**San Martin Ant**	**21.16**	**218**	P	**P**	**10 06 01.1**	**-1.9**
SMAI				IAmb	IAmb	10 06 13.1	
	comp=Z,44nm,1.5s						
MG05	**Puerto Natales**	**24.92**	**261**	P	**P**	**10 06 40.9**	**-0.1**
GO09	**Cerro Castillo**	**25.00**	**262**	P	**P**	**10 06 41.8**	**0.0**
GO08	**Villa O'Higgin**	**26.46**	**267**	P	**P**	**10 06 54.9**	**-0.1**
GO08				IAmb	IAmb	10 07 15.3	
	comp=Z,52nm,1.4s						
TRQA	**Tornquist**	**27.23**	**296**	P	**P**	**10 07 01.6**	**-0.5**
PLTB	**Pedras Altas**	**28.55**	**316**	P	**P**	**10 07 13.6**	**-0.2**
PLCA	**Paso Flores**	**29.95**	**282**	LR	LR	10 19 47.7	
	comp=Z,70nm,18.2s,baz=160,slow=37						
CPUP	**Villa Florida**	**34.85**	**315**	P	**P**	**10 08 09.0**	**-0.2**
	comp=Z,2.8nm,0.7s,baz=149,slow=9.1,SNR=7.9						
	comp=Z,2.8nm,0.7s						
CPUP	**Villa Florida**	**34.85**	**315**	P	**P**	**10 08 10.3**	**+1.1**
CPUP				IAmb	IAmb	10 08 21.3	
	comp=Z,3.8nm,0.7s						
QSPA	**South Pole Qui**	**35.00**	**180**	P	**P**	**10 08 11.6**	**+1.2**
	comp=Z,2.8nm,0.5s,baz=330,slow=0.9,SNR=63						
QSPA				LR	LR	10 22 27.3	
	comp=Z,121nm,19.4s,baz=214,slow=36						
	comp=Z,2.8nm,0.5s						
QSPA	**South Pole Qui**	**35.00**	**180**	P	**P**	**10 08 11.8**	**+1.4**
QSPA				IAmb	IAmb	10 08 12.9	
	comp=Z,7.1nm,1.1s						
MT09	**Talagante**	**35.22**	**291**	P	**P**	**10 08 12.2**	**-0.4**
MT09				IAmb	IAmb	10 08 12.3	
	comp=Z,11nm,1.2s						
CFA	**Coronel Fontan**	**35.47**	**296**	P	**P**	**10 08 14.5**	**-0.1**
	comp=Z,4.1nm,0.8s,baz=151,slow=9.5,SNR=8.2						
CFA				LR	LR	10 23 12.9	
	comp=Z,59nm,20.5s,baz=130,slow=37						
	comp=Z,4.1nm,0.8s						
MT02	**Curacav**	**35.70**	**291**	P	**P**	**10 08 16.7**	**+0.2**
MT02				IAmb	IAmb	10 08 25.8	
	comp=Z,9.5nm,1.2s						
VA03	**San Esteban**	**35.77**	**292**	P	**P**	**10 08 18.0**	**+0.8**
VA03				IAmb	IAmb	10 08 30.4	
	comp=Z,6.7nm,0.8s						
VA06	**Catapilco**	**36.32**	**292**	P	**P**	**10 08 21.5**	**-0.3**
VA06				IAmb	IAmb	10 08 23.5	
	comp=Z,15nm,1.1s						
GO04	**Tololo Observa**	**37.94**	**295**	P	**P**	**10 08 34.8**	**-1.1**
PB15	**IPOC Station P**	**43.00**	**302**	P	**P**	**10 09 16.1**	**-1.6**
LVC	**Limon Verde**	**43.23**	**303**	P	**P**	**10 09 19.8**	**0.0**
	comp=Z,3.1nm,0.6s,baz=55,slow=5.1,SNR=3.6						
	comp=Z,3.1nm,0.6s						
LVC	**Limon Verde**	**43.23**	**303**	P	**P**	**10 09 19.5**	**-0.4**
LVC				IAmb	IAmb	10 09 46.4	
	comp=Z,9.2nm,0.6s						
PTLB	**Pontes e Lacer**	**45.40**	**320**	P	**P**	**10 09 37.4**	**+0.6**
PTLB				IAmb	IAmb	10 09 38.2	
	comp=Z,4.0nm,0.6s						
SIV	**San Ignacio**	**45.65**	**317**	P	**P**	**10 09 38.8**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=122,slow=12,SNR=4.6						
	comp=Z,0.8nm,0.6s						
PB11	**IPOC Station P**	**46.03**	**304**	P	**P**	**10 09 40.8**	**-1.1**
PB11				IAmb	IAmb	10 09 48.6	
	comp=Z,15nm,1.2s						
MNMC	**Minye Minye**	**46.54**	**305**		**P**	**10 09 46.3**	**+0.2**
MNMC				IAmb	IAmb	10 09 48.8	
	comp=Z,8.8nm,0.8s						
VNDA	**Vanda**	**47.27**	**184**	P	**P**	**10 09 50.4**	**-0.4**
VNDA				IAmb	IAmb	10 09 54.3	
	comp=Z,4.9nm,1.1s						
BOSA	**Boshof**	**47.69**	**80**	P	**P**	**10 09 54.1**	**-0.6**
	comp=Z,2.2nm,0.7s,baz=198,slow=8.6,SNR=5.9						
BOSA				LR	LR	10 26 32.5	
	comp=Z,46nm,20.2s,baz=358,slow=32						
	comp=Z,2.2nm,0.7s						
LBTB	**Lobatse**	**50.67**	**77**	P	**P**	**10 10 17.4**	**-0.3**
	comp=Z,3.4nm,0.7s,baz=220,slow=7.0,SNR=5.8						
	comp=Z,3.4nm,0.7s						
SAML	**Samuel**	**52.89**	**318**	P	**P**	**10 10 34.2**	**+0.1**
ETMB	**Extrema**	**53.30**	**314**	P	**P**	**10 10 37.9**	**+0.7**
BOAV	**Boa Vista**	**62.50**	**326**	P	**P**	**10 11 41.3**	**-0.3**
DBIC	**Dimbokro**	**65.31**	**28**	P	**P**	**10 11 59.5**	**-0.7**
	comp=Z,2.7nm,0.9s,baz=71,slow=7.0,SNR=2.3						
	comp=Z,2.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.37**	**33**	P	**P**	**10 12 50.5**	**+0.6**
	comp=Z,3.4nm,0.7s,baz=201,slow=6.5,SNR=23						
	comp=Z,3.4nm,0.7s						
NVAR	**Mina Array Bea**	**119.31**	**296**	PKP	**PKiKP**	**10 20 08.1**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=146,slow=5.1,SNR=2.2						
FINES	**FINESS Array B**	**124.60**	**29**	PKP	**PKPdf**	**10 20 16.4**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=129,slow=2.7,SNR=6.6						
ARCES	**ARCESS Array B**	**130.93**	**23**	PKP	**PKPdf**	**10 20 28.3**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=58,slow=3.0,SNR=8.3						
YKA	**Yellowknife Ar**	**134.30**	**320**	PKP	**PKPdf**	**10 20 34.6**	**0.0**
	comp=Z,0.4nm,0.6s,baz=130,slow=2.5,SNR=9.0						
ZALV	**Zalesovo Beam**	**143.76**	**65**	PKhKP	PKPpre	10 20 49.0	
	comp=Z,0.7nm,0.4s,baz=245,slow=2.3,SNR=5.0						
INK	**Inuvik**	**143.97**	**322**	PKP	PKPbc	10 20 50.6	+0.6
	comp=Z,1.1nm,0.6s,baz=344,slow=4.7,SNR=7.4						
ILAR	**Eielson Array**	**148.15**	**313**	PKPbc	**PKPbc**	**10 21 03.0**	**+0.4**
	comp=Z,4.5nm,0.7s,baz=128,slow=1.8,SNR=51						
SONM	**Songino Array**	**152.62**	**88**	PKPab	**PKPab**	**10 21 24.5**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=219,slow=3.7,SNR=4.4						

THE ***01*** *10:02:08.9, 39°.50N×26°.06E, h9*^{km}*±1*^{km}*, ML2.7/8, Error ellipse: s-maj=1.3km s-min=0.6km az=242.0*

ISK ***01*** *10:02:08.3, 39°.50N×26°.06E, h13*^{km}*, ML2.8/16*

DDA ***01*** *10:02:09.1±0.0, 39°.52N×26°.09E, h10*^{km}*±1*^{km}*, ML2.8*

ATH ***01*** *10:02:09.3, 39°.49N×26°.05E, h13*^{km}*±1*^{km}*, ML2.8/5, Error ellipse: s-maj=2.1km s-min=1.0km az=244.0*

ISC 01 10:02:08.8±0.8**, 39°.50N**±0°.02×**26°.06E**±0°.02**, h12**^{km}±5^{km}**, n50,** σ**0**^{s}**.40**/79**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	**Canakkale, Ayv**	**0.06**	**90**	P	**Pg**	**10 02 11.3**	**+0.1**
KOCA				S	**Sg**	**10 02 12.8**	**-0.2**
GPNR	**Gulpinar-Canak**	**0.07**	**129**	Pg	**Pg**	**10 02 11.1**	**-0.2**
GPNR				Sg	**Sg**	**10 02 13.2**	**+0.1**
PRK	**Paraskevi**	**0.30**	**147**	P	**Pg**	**10 02 15.3**	**+0.3**
PRK				S	**Sg**	**10 02 19.7**	**+0.6**
	3µm,0.3s						
PRK	**Paraskevi**	**0.30**	**147**	P	**Pg**	**10 02 15.2**	**+0.3**
PRK				S	**Sg**	**10 02 19.3**	**+0.2**
PRK				AML	AML	10 02 20.1	
	comp=E,7356µm,0.3s						
PRK				AML	AML	10 02 21.7	
	comp=N,3914µm,0.4s						
SIGR	**SIGRI**	**0.33**	**209**	P	**Pg**	**10 02 15.7**	**+0.2**
SIGR				S	**Sg**	**10 02 20.4**	**+0.5**
	comp=N,2µm,0.2s						
SIGR	**SIGRI**	**0.33**	**209**	Pg	**Pg**	**10 02 15.4**	**0.0**
SIGR				Sg	**Sg**	**10 02 20.6**	**+0.7**
SIGR	**SIGRI**	**0.33**	**209**	P	**Pg**	**10 02 15.6**	**+0.2**
SIGR				S	**Sg**	**10 02 19.9**	**0.0**
SIGR				AML	AML	10 02 20.8	
	comp=N,5086µm,0.3s						
SIGR				AML	AML	10 02 21.2	
	comp=E,4227µm,0.2s						
BOZC	**Bozcaada**	**0.34**	**359**	Pg	**Pg**	**10 02 15.7**	**+0.1**
BOZC				Sg	**Sg**	**10 02 20.9**	**+0.7**
EZN	**Ezine**	**0.38**	**32**	P	**Pg**	**10 02 16.4**	**0.0**
EZN				S	**Sg**	**10 02 21.7**	**+0.2**
	comp=E,732nm,0.3s						
EZN	**Ezine**	**0.38**	**32**	Pg	**Pg**	**10 02 16.5**	**0.0**
EZN				Sg	**Sg**	**10 02 22.3**	**+0.8**
BAYC	**CANAKKALE_Bayr**	**0.45**	**57**	P	**Pg**	**10 02 17.0**	**-0.6**
BAYC				S	**Sg**	**10 02 23.1**	**-0.4**
ECEA	**Canakkale, Ece**	**0.55**	**9**	P	**Pg**	**10 02 19.8**	**+0.3**
ECEA				S	**Sb**	**10 02 28.1**	**0.0**
COMU	**Canakkale**	**0.68**	**28**	Pg	**Pg**	**10 02 21.9**	**0.0**
GOKA	**anakkale-Gk**	**0.70**	**350**	P	**Pg**	**10 02 22.4**	**+0.1**
GOKA				S	**Sg**	**10 02 31.8**	**+0.3**
GOKA				*i* AML	AML	10 02 35.0	
	comp=E,588nm,0.2s						
GADA	**Gvkgeada**	**0.70**	**350**	Pg	**Pg**	**10 02 22.3**	**0.0**
LIA	**Limnos Island**	**0.78**	**301**	P	**Pg**	**10 02 24.4**	**+0.4**
LIA				S	**Sg**	**10 02 34.6**	**+0.4**
	comp=E,1µm,0.3s						
LIA	**Limnos Island**	**0.78**	**301**	P	**Pg**	**10 02 24.3**	**+0.4**
LIA				S	**Sg**	**10 02 34.4**	**+0.2**
LIA				AML	AML	10 02 37.4	
	comp=E,1674µm,0.4s						
LIA				AML	AML	10 02 37.6	
	comp=N,2351µm,0.4s						
DKL	**Dikili**	**0.79**	**123**	Pg	**Pg**	**10 02 23.9**	**0.0**
BUHA	**Balikesir, Bur**	**0.79**	**90**	P	**Pg**	**10 02 24.0**	**0.0**
BUHA				S	**Sg**	**10 02 34.5**	**+0.2**
KARB	**zmir-Karabur**	**0.88**	**162**	P	**Pg**	**10 02 25.9**	**+0.1**
KARB				S	**Sg**	**10 02 37.5**	**+0.2**
KARB				*i* AML	AML	10 02 40.0	
	comp=N,178nm,0.6s						
CANM	**Can-anakkale**	**0.92**	**56**	Pg	**Pg**	**10 02 26.5**	**0.0**
CANM				Sg	**Sb**	**10 02 39.9**	**+1.1**
GELI	**Tayfur-Gelibol**	**0.95**	**19**	Pg	**Pg**	**10 02 26.7**	**-0.4**
ZEDA	**zmir-Bergama**	**0.95**	**124**	P	**Pb**	**10 02 27.8**	**+0.6**
ZEDA				S	**Sn**	**10 02 41.3**	**-0.2**
LPK	**Lapseki**	**1.02**	**32**	Pg	**Pb**	**10 02 28.1**	**-0.3**
PSRA	**Psara**	**1.03**	**202**	P	**Pg**	**10 02 29.1**	**+0.4**
SMTH	**Samothraki Isl**	**1.05**	**337**	P	**Pb**	**10 02 28.7**	**-0.2**
SMTH				S	**Sg**	**10 02 43.1**	**+0.4**
	comp=N,205nm,0.3s						
SMTH	**Samothraki Isl**	**1.05**	**337**	P	**Pb**	**10 02 28.6**	**-0.3**
CHOS	**Chios island**	**1.11**	**180**	P	**Pb**	**10 02 29.5**	**-0.5**
CHOS				S	**Sg**	**10 02 45.4**	**+0.7**
	comp=N,540nm,0.3s						
CHOS	**Chios island**	**1.11**	**180**	Pn	**Pb**	**10 02 29.8**	**-0.2**
CHOS	**Chios island**	**1.11**	**180**	P	**Pb**	**10 02 29.5**	**-0.5**
CHOS				S	**Sb**	**10 02 43.9**	**-0.5**
CHOS				AML	AML	10 02 48.5	
	comp=E,1238µm,0.4s						
CHOS				AML	AML	10 02 49.5	
	comp=N,935µm,0.3s						
CAVK	**Edirne/Enez-Ca**	**1.19**	**4**	P	**Pn**	**10 02 31.0**	**-0.2**
CAVK				S	**Sg**	**10 02 47.5**	**+0.3**
URLA	**Izmir**	**1.21**	**160**	Pn	**Pn**	**10 02 31.0**	**-0.6**
ERIK	**Erikli-Kesan**	**1.22**	**16**	Pn	**Pn**	**10 02 31.3**	**-0.3**
ENEZ	**Enez**	**1.23**	**3**	P	**Pn**	**10 02 31.6**	**-0.2**
ENEZ				S	**Sg**	**10 02 49.4**	**+0.8**
	comp=N,250nm,0.3s						
STEP	**BALIKESIR_Sava**	**1.29**	**95**	P	**Pb**	**10 02 33.3**	**+0.3**
STEP				S	**Sn**	**10 02 50.4**	**+0.6**
KRBG	**Karabiga-Canak**	**1.30**	**47**	Pn	**Pn**	**10 02 32.8**	**0.0**
BLCB	**Balcova**	**1.35**	**145**	P	**Pn**	**10 02 32.7**	**-0.7**
BLCB				S	**Sb**	**10 02 51.2**	**-0.1**
BLCB	**Balcova**	**1.35**	**145**	Pn	**Pn**	**10 02 33.4**	**0.0**
GONE	**Gonen-Balikesi**	**1.37**	**66**	Pn	**Pn**	**10 02 33.4**	**-0.2**
ALN	**Alexandroupoli**	**1.39**	**360**	P	**Pn**	**10 02 33.7**	**-0.3**
ALN				S	**Sn**	**10 02 52.4**	**+0.1**
	comp=N,88nm,0.4s						
ALN	**Alexandroupoli**	**1.39**	**360**	Pn	**Pn**	**10 02 33.9**	**-0.1**
ALN	**Alexandroupoli**	**1.39**	**360**	P	**Pn**	**10 02 33.9**	**-0.1**
ALN				AML	AML	10 02 54.6	
	comp=E,201µm,0.4s						
ALN				AML	AML	10 02 55.9	
	comp=N,151µm,0.3s						
BALB	**Balikesir**	**1.41**	**84**	Pn	**Pn**	**10 02 34.1**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.46**	**36**	Pn	**Pn**	**10 02 35.0**	**0.0**
THAS	**Thassos island**	**1.51**	**317**	P	**Pn**	**10 02 35.1**	**-0.5**
THAS				S	**Sn**	**10 02 54.3**	**-0.8**
THAS	**Thassos island**	**1.51**	**317**	P	**Pn**	**10 02 35.1**	**-0.5**
RDO	**Rodhopi**	**1.69**	**347**	P	**Pn**	**10 02 38.4**	**+0.3**
RDO				S	**Sn**	**10 02 58.8**	**-0.8**
RDO	**Rodhopi**	**1.69**	**347**	Pn	**Pn**	**10 02 38.3**	**+0.2**
RDO	**Rodhopi**	**1.69**	**347**	P	**Pn**	**10 02 38.4**	**+0.3**
KAVA	**Kavala**	**1.91**	**322**	P	**Pn**	**10 02 40.7**	**-0.3**

IDC 01 10:05:01.2±2.1**, 7°.28S**×**129°.16E, h0**^{km}**, mb3.4**/1**, mbtmp3.6**/3**, ML3.8**/2**, Error ellipse: s-maj=112.3km s-min=32.2km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.56**	**159**	Pn	Pn	10 08 14.7	-0.2
	0.6nm,0.3s,baz=337,slow=13,SNR=22						
WRA				Sn	Sn	10 10 35.3	-11
	0.3nm,0.3s,baz=330,slow=22,SNR=3.9						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**16.92**	**165**	Pn	Pn	10 08 59.9	+0.2
	0.3nm,0.3s,baz=347,slow=11,SNR=21						
ASAR				Sn	Sn	10 11 55.3	-13
	0.1nm,0.3s,baz=358,slow=30,SNR=1.6						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**68.00**	**327**	P	P	10 16 02.4	0.0
	0.1nm,0.3s,baz=121,slow=7.1,SNR=5.1						
	0.1nm,0.3s						

IDC 01 10:09:29.6±2.8**, 3°.78N**×**126°.16E, h0**^{km}**, mb3.2**/3**, mbtmp3.2**/3**, Error ellipse: s-maj=268.4km s-min=28.8km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.91**	**161**	P	P	10 14 54.0	-0.5
	0.3nm,0.6s,baz=340,slow=10,SNR=3.4						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**28.31**	**165**	P	P	10 15 25.7	+0.5
	0.1nm,0.5s,baz=341,slow=8.2,SNR=1.4						
	0.1nm,0.5s						
MKAR	**Makanchi Array**	**57.19**	**325**	P	P	10 19 18.5	0.0
	0.2nm,0.4s,baz=109,slow=7.8,SNR=4.6						
	0.2nm,0.4s						

IDC 01 10:14:43.0±7.5**, 18°.72S**×**177°.04W, h0**^{km}**, mb3.4**/2**, mbtmp3.4**/2**, Error ellipse: s-maj=324.0km s-min=119.0km az=152.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.77**	**260**	P	P	10 23 06.9	+0.1
	0.1nm,0.3s,baz=96,slow=8.4,SNR=1.8						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**45.83**	**255**	P	P	10 23 06.9	-0.3
	0.7nm,0.8s,baz=87,slow=8.3,SNR=9.9						
	0.7nm,0.8s						
AKASG	**Malin Array Be**	**141.88**	**333**	PKP	PKPdf	10 34 16.0	-0.7
	0.8nm,0.4s,baz=38,slow=3.6,SNR=8.6						

PGC 01 10:20:31.6±0.7**, 48°.80N**×**129°.29W, h10**^{km}**, MLSn2.9**/21**, Mw3.5**/21**, 249km west of Tofino, Bc Vancouver Island, Canada Region, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NCHR	**NEPTUNE Canada**	**0.84**	**170**	P	Pg	10 20 46.7	-0.9
NCHR				S	Sg	10 20 56.8	-1.7
KEMF	**NEPTUNE Canada**	**0.86**	**171**	P	Pg	10 20 47.1	-1.0
KEMF				S	Sg	10 20 57.2	-2.1
EDB	**Eliza Dome**	**1.78**	**52**	Pn	Pn	10 21 00.3	-2.0
EDB				Sn	Sn	10 21 20.4	-4.6
ETB	**Estevan Point**	**1.90**	**71**	Pn	Pn	10 21 02.7	-1.3
HOLB	**Holberg**	**1.99**	**22**	Pn	Pn	10 21 03.1	-2.1
HOLB				Sn	Sn	10 21 27.0	-3.3
PACB	**Port Alice, BC**	**2.01**	**35**	Pn	Pn	10 21 03.2	-2.3
PACB				Sn	Sn	10 21 25.5	-5.2
NCBC	**Barkley Canyon**	**2.10**	**99**	Sn	Sn	10 21 31.0	-1.8

MAYB	Maynard	2.12	40	Pn	Pn	10 21 05.1	-2.0
MAYB				Sn	Sn	10 21 28.4	-5.1
WOSB	Woss	2.24	51	Pn	Pn	10 21 07.5	-1.2
WOSB				Sn	Sn	10 21 33.0	-3.4
GDR	Gold River	2.35	64	Pn	Pn	10 21 08.6	-1.5
B012	Ucluelet	2.48	86	Sn	Sn	10 21 38.5	-3.8
OZB	Mount Ozzard	2.51	85	Pn	Pn	10 21 11.0	-1.5
OZB				Sn	Sn	10 21 39.0	-4.2
BTB	Buttle Lake	2.56	73	Pn	Pn	10 21 12.4	-0.8
SPLB	Strathcona Par	2.62	64	Pn	Pn	10 21 12.0	-1.8
SPLB				Sn	Sn	10 21 43.5	-2.2
NCRB	Newcastle Ridg	2.65	51	Pn	Pn	10 21 13.7	-0.7
NCRB				Sn	Sn	10 21 42.9	-3.7
BFSB	Bamfield	2.75	88	Pn	Pn	10 21 14.1	-1.5
BFSB				Sn	Sn	10 21 45.5	-3.3
B928	Bamfield	2.75	88	Pn	Pn	10 21 14.1	-1.5
B928				Sn	Sn	10 21 45.0	-3.8
CBB	Campbell River	2.84	63	Pn	Pn	10 21 16.1	-0.9
CBB				Sn	Sn	10 21 48.5	-2.8
B927	Port Alberni	2.98	80	Pn	Pn	10 21 17.7	-1.1
MGB	Mount Grey	3.04	84	Pn	Pn	10 21 18.7	-1.1
MGB				Sn	Sn	10 21 52.8	-3.5
PFB	Port Renfrew	3.22	92	Pn	Pn	10 21 21.0	-1.2
PFB				Sn	Sn	10 21 56.9	-3.7
CLRS	Cowichan Lake	3.41	88	Pn	Pn	10 21 23.7	-1.1
CLRS				Sn	Sn	10 22 02.2	-3.0
BBB	Bella Bella	3.47	12	Pn	Pn	10 21 24.7	-0.9
BBB				Sn	Sn	10 22 01.7	-5.0
SYMB	Survey Mountai	3.65	92	Pn	Pn	10 21 27.4	-0.7
SYMB				Sn	Sn	10 22 08.5	-2.7
PGC	Sidney	3.87	90	Sn	Sn	10 22 14.1	-2.4
BIB	Bowen Island	3.98	79	Pn	Pn	10 21 32.4	-0.1
WPB	Watts Point	4.08	76	Pn	Pn	10 21 34.2	+0.3
HNBB	Haney	4.45	81	Pn	Pn	10 21 39.3	+0.3
HWKB	Hawksbury Isla	4.81	1	Sn	Sn	10 22 36.4	-3.3
LLLB	Lillooet	5.14	67	Pn	Pn	10 21 49.0	+0.5
KITB	Kitimat	5.30	4	Pn	Pn	10 21 51.3	+0.6
PNT	Penticton	6.38	82	Pn	Pn	10 22 06.9	+1.3
FSJB	Fort St James	6.46	27	Pn	Pn	10 22 07.6	+0.9
FSB	Fort Saint Jam	6.47	27	Pn	Pn	10 22 07.8	+1.0
MNB	Mounoet Dainar	7.74	60	Pn	Pn	10 22 25.8	+1.4
NBC5	NorthernBC 5	9.59	22	Pn	Pn	10 22 51.2	+1.5
FNBB	Fort Nelson	10.76	18	Pn	Pn	10 23 06.6	+1.0

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*BGR **01** 10:39:41.2,51°.21N×172°.69W,h33^{km},mb5.1,Ms4.1*

*BJI **01** 10:39:45.7±0.0,52°.49N×173°.22W,h55^{km},mb5.0/67, mB5.1/39,Ms4.7/44,Ms7 4.4/47*

*MOS **01** 10:39:46.7±1.0,52°.25N×173°.39W,h53^{km},mb5.2/52, MS4.3/7,Error ellipse: s-maj=7.5km s-min=4.9km az=100.8*

*NEIC **01** 10:39:48.4,51°.97N×173°.36W,h60^{km},Moment Tensor Solution. Duration: 2^{s}1 Moment tensor: Scale 10^{16}Nm; M$_{rr}$7.13; M$_{\theta\theta}$-6.58; M$_{\phi\phi}$-0.55; M$_{r\theta}$1.16; M$_{\theta\phi}$-1.64; M$_{\phi r}$1.94; Fault plane solution: M$_0$7.41000×10^{16} NP1:ϕ_s64.15000°, δ52.55000°,λ75.73000°. NP2:ϕ_s266.84000°,δ39.70000°, λ107.84000°. Principal axes: T 7.6309, Plg77.0000°, Azm284.0000°; N -0.4491, Plg11.0000°, Azm73.0000°; P -7.1818, Plg7.0000°, Azm164.0000°;*

*IDC **01** 10:39:48.5±0.3,52°.20N×173°.43W,h57^{km}±2^{km},mb4.7/36, mbtmp5.0/39,MS4.1/90 Error ellipse: s-maj=9.3km s-min=7.0km az=152.0*

*NEIC **01** 10:39:48.5±1.9,52°.17N±0°.09×173°.37W±0°.08,h52^{km}±4^{km}, mb5.5/697,ML5.6/6,Mwb5.2/40,Mww5.2/13,ML5.2(AEIC), Error ellipse: s-maj=12.6km s-min=6.4km az=166.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$8.95; M$_{\theta\theta}$-8.45; M$_{\phi\phi}$-0.50; M$_{r\theta}$1.34; M$_{\theta\phi}$-1.25; M$_{\phi r}$0.99; Fault plane solution: M$_0$8.95000×10^{16} NP1: ϕ_s265.88000°,δ40.43000°,λ97.11000°. NP2:ϕ_s76.57000°, δ49.94000°,λ83.98000°. Principal axes: T 9.1349, Plg83.0000°, Azm307.0000°; N -0.3742, Plg5.0000°, Azm80.0000°; P -8.7607, Plg5.0000°, Azm171.0000°;*

*NEIC **01** 10:39:48.5,52°.12N×173°.36W,h53^{km}*

*NEIC **01** 10:39:48.4,52°.17N×173°.36W,h60^{km}*

*AEIC **01** 10:39:49.2±2.3,52°.12N±0°.06×173°.32W±0°.08,h63^{km}±4^{km}, Error ellipse: s-maj=9.7km s-min=4.3km az=141.0*

*GCMT **01** 10:39:50.5±0.1,52°.12N±0°.01×173°.21W±0°.02,h58^{km}, MW5.2/134,Moment Tensor Solution. s113,c172; s134,c224; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.81±.02; M$_{\theta\theta}$-0.69±.01; M$_{\phi\phi}$-0.11±.01; M$_{r\theta}$0.07±.01; M$_{\theta\phi}$-0.32±.01; M$_{\phi r}$0.19±.01; Best double couple: M$_0$0.85200×10^{17} NP1:ϕ_s56.00000°,δ51.00000°, λ77.00000°. NP2:ϕ_s256.00000°,δ41.00000°,λ105.00000°. Principal axes: T 0.8510, Plg79.0000°, Azm270.0000°; N 0.0010, Plg10.0000°, Azm64.0000°; P -0.8520, Plg5.0000°, Azm155.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 10:39:48.6±0.2,**52°.16N**±0°.04×**173°.37W**±0°.03,**h58**^{km}±1^{km}, **h58**^{km}**:pP-P,n1641,**σ**1^{s}12**/1538,**mb5.5**/470,**MS4.2**/117, **35C-24D,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSTR	Great Sitkin T	1.66	269	Pn	Pn	10 40 17.3	+2.0
ADK	Adak	2.07	264		Pn	10 40 22.6	+1.8
ADK				Sn	Sn	10 40 47.7	+2.2
ADK				IAML		10 40 49.9	
	33µm,0.7s						
ADK				IAML		10 40 50.4	
	45µm,0.7s						
ADK	Adak	2.07	264	P	Pn	10 40 23.0	+2.1
ADK	Adak	2.07	264	P	Pn	10 40 22.6	+1.8
ADK				S	Sn	10 40 48.7	+3.2
CLES	Cleveland East	2.22	71	Pn	Pn	10 40 23.7	+0.7
CLES				IAML		10 41 02.1	
	comp=E,43µm,0.9s						
CLES				IAML		10 41 03.5	
	comp=N,49µm,0.5s						
KIWB	Kanaga Island	2.36	264		Pn	10 40 26.9	+2.0
NIKH	Nikolski High	2.87	72	Pn	Pn	10 40 33.5	+1.6
NIKH	Nikolski High	2.87	72		Sn	10 41 06.0	+0.9
NIKH	Nikolski High	2.87	72	P	Pn	10 40 34.0	+2.2
NIKH	Nikolski High	2.87	72	P	Pn	10 40 33.7	+1.9
	baz=254,SNR=207						
NIKH				S	Sn	10 41 07.0	+1.8
	baz=254						
UNV	Unalaska Valle	4.47	65	Pn	Pn	10 40 56.2	+2.4
UNV	Unalaska Valle	4.47	65	P	Pn	10 40 56.4	+2.6
	baz=250,SNR=100						
UNV				S	Sn	10 41 48.9	+4.4
	baz=250						
AKUT	Akutan	4.98	64	Pn	Pn	10 41 04.0	+3.3
AKUT				IAML		10 42 20.6	
	comp=N,3µm,0.8s						
AKUT	Akutan	4.98	64	P	Pn	10 41 03.8	+3.1
SPIA	Saint Paul Isl	5.34	19		Pn	10 41 08.9	+3.3
SPIA	Saint Paul Isl	5.34	19	P	Pn	10 41 09.0	+3.4
SPIA	Saint Paul Isl	5.34	19	P	Pn	10 41 08.7	+3.1
	baz=201,SNR=19						
SPIA				S	Sn	10 42 06.4	+0.8
	baz=201						
FALS	False Pass	6.52	62	Pn	Pn	10 41 24.6	+2.9
FALS	False Pass	6.52	62	P	Pn	10 41 24.5	+2.8
FALS	False Pass	6.52	62	P	Pn	10 41 24.3	+2.5
	baz=249,SNR=9.2						
S12K	Black Hills	7.56	58	P	Pn	10 41 38.3	+2.3
	baz=246						
S12K				S	Sn	10 43 00.2	+0.1
	baz=246						
SHEM	Shemya Is, Ala	7.68	279	P	Pn	10 41 38.0	+0.3
	comp=N,191nm,0.6s,baz=58,slow=5.5,SNR=17						
SHEM				S	Sn	10 42 57.4	-5.7
	comp=N,75nm,0.7s,baz=252,slow=23,SNR=0.9						
SMY	Shemya	7.68	279	Pn	Pn	10 41 38.5	+0.9
SMY	Shemya	7.68	279	P	Pn	10 41 39.3	+1.7
SMY	Shemya	7.68	279	P	Pn	10 41 38.5	+0.9
SDPT	Sand Point	8.28	62	Pn	Pn	10 41 46.1	+0.4
SDPT	Sand Point	8.28	62	P	Pn	10 41 46.7	+0.9
SDPT	Sand Point	8.28	62	P	Pn	10 41 47.0	+1.2
	baz=252						
CHGN	Chignik	9.68	59		Pn	10 42 05.4	+0.4
CHGN	Chignik	9.68	59	P	Pn	10 42 06.6	+1.6
	baz=251						
R16K	Pilot Point	10.58	53	P	Pn	10 42 20.3	+3.2
	baz=246						
P16K	Nushagak River	11.07	46	P	Pn	10 42 27.6	+3.7
	baz=238,SNR=32						
R17K	Ugashik Creek	11.20	54	P	Pn	10 42 28.1	+2.5
	baz=248						
O16K	Kokwok River B	11.34	43	P	Pn	10 42 31.3	+3.7
	baz=235						
Q16K	King Salmon	11.50	49	P	Pn	10 42 33.9	+4.2
	baz=242,SNR=25						
N16K	Nishlik Lake	11.59	38	P	Pn	10 42 35.1	+4.0
	baz=230						
Q17K	Contact Creek	11.69	52	P	Pn	10 42 35.7	+3.3
	baz=246,SNR=22						
P17K	Kvichak River	11.85	47	P	Pn	10 42 38.1	+3.6
	baz=241						
O17K	Koliganek Bris	11.86	44	P	Pn	10 42 38.1	+3.5
	baz=237,SNR=11						
Q18K	Katmai Hardscr	12.26	51	P	Pn	10 42 42.5	+2.2
	baz=246,SNR=13						
P18K	Big Mountain,	12.49	47		Pn	10 42 45.6	+2.3
P18K	Big Mountain,	12.49	47	P	Pn	10 42 45.3	+2.0
	baz=242						
OHAK	Old Harbor	12.65	59		Pn	10 42 45.4	-0.1
OHAK	Old Harbor	12.65	59	P	Pn	10 42 46.1	+0.6
OHAK	Old Harbor	12.65	59	P	Pn	10 42 46.4	+1.0
	baz=255						
O18K	Koktuh Hills	12.72	46	Pn	Pn	10 42 46.9	+0.5
O18K	Koktuh Hills	12.72	46	P	Pn	10 42 47.9	+1.5
	baz=240,SNR=8.1						
Q19K	Cape Douglas,	13.03	51		Pn	10 42 51.2	+0.6
Q19K	Cape Douglas,	13.03	51	P	Pn	10 42 51.9	+1.3
	baz=247,SNR=12						
ANM	Nome	13.11	15	P	P	10 42 55.9	-4.1
	baz=202						
KDAK	Kodiak Island	13.17	57	P	Pn	10 42 50.3	-2.2
	comp=N,16nm,0.3s,baz=279,slow=4.7,SNR=42						
KDAK				S	Sn	10 45 07.6	-10
	comp=N,12nm,0.8s,baz=322,slow=13,SNR=1.2						
KDAK				LR	LR	10 48 49.4	
	comp=N,2µm,19.9s,baz=263,slow=41						
KDAK	Kodiak Island	13.17	57	Pn	Pn	10 42 51.2	-1.3
KDAK	Kodiak Island	13.17	57	P	Pn	10 42 51.2	-1.3
SVW2	Sparrevohn	13.22	40		Pn	10 42 56.3	+3.1
SVW2	Sparrevohn	13.22	40	P	P	10 42 57.7	-3.6
O19K	Port Alsworth	13.27	45	P	Pn	10 42 56.3	+2.4
	baz=241						
N19K	Bonanza Creek	13.51	43	P	Pn	10 43 00.7	+3.4
	baz=238						
P19K	Oil Pt	13.52	48	P	P	10 43 01.5	-3.1
	baz=245						
Q20K	Shuyak Island	13.52	53	P	Pn	10 42 57.9	+0.6
	baz=250						
TNA	Tin City	13.72	10	Pn	P	10 43 03.4	-3.3
TNA	Tin City	13.72	10	P	Pn	10 43 02.6	+2.7
	baz=194,SNR=141						
O20K	Slope Mountain	13.97	47	P	Pn	10 43 05.0	+1.5
	baz=244						
RSO	Redoubt South	14.09	46		Pn	10 43 04.7	-0.4
L19K	White Mountain	14.14	38	P	P	10 43 08.5	-3.0
	baz=233						
M19K	Big River Lodg	14.15	39	P	P	10 43 08.8	-2.8
	baz=235						
TTA	Tatalina	14.20	34	Pn	Pn	10 43 06.1	-0.3
TTA	Tatalina	14.20	34	P	P	10 43 09.6	-2.6
TTA	Tatalina	14.20	34	P	Pn	10 43 06.1	-0.3
TTA	Tatalina	14.20	34	P	Pn	10 43 09.1	+2.8
	baz=228,SNR=66						
HOM	Homer	14.26	50	Pn	Pn	10 43 06.9	-0.2
HOM	Homer	14.26	50	P	Pn	10 43 08.6	+1.5
	baz=248						
CNPM	China Poot	14.40	51		Pn	10 43 08.9	-0.2
M20K	Styx River	14.63	40	P	P	10 43 15.2	-1.9
	baz=237						
BRLK	Bradley Lake	14.65	50		Pn	10 43 12.2	-0.1
N20K	Mount Spurr	14.67	44	P	P	10 43 15.0	-2.4
	baz=241,SNR=11						
SPCR	Spurr Chakacha	14.67	44	P	P	10 43 15.7	-1.7
	baz=241,SNR=6.1						
L20K	Farewell, AK	14.68	38	P	P	10 43 16.1	-1.5
	baz=234						
BRSE	Bradley Lake S	14.71	50	P	Pn	10 43 15.5	+2.3
	baz=249,SNR=9.3						
CAPN	Captain Cook N	14.93	46	P	P	10 43 18.7	-1.5
	baz=244						
K20K	Telida	15.14	35	IAmb	IAmb	10 43 27.1	
	comp=Z,310nm,1.6s						
K20K	Telida	15.14	35	P	P	10 43 21.9	-0.7
	baz=231,SNR=50						
GCSA	Galena City Sc	15.21	28	P	P	10 43 22.6	-0.7
	baz=222,SNR=65						
SKT	Skwentna	15.33	42	P	P	10 43 24.2	-0.6
	baz=240,SNR=19						
SUA	Susitna One	15.41	44	P	Pn	10 43 23.6	+1.4
	baz=243						
SEW	Seward	15.45	50	Pn	Pn	10 43 21.0	-1.6
SEW	Seward	15.45	50	P	Pn	10 43 23.0	+0.4
	baz=249						
O22K	Cooper Landing	15.46	48	IAmb	IAmb	10 43 28.8	
	comp=Z,205nm,0.5s						
O22K	Cooper Landing	15.46	48	P	Pn	10 43 24.1	+1.4
	baz=248,SNR=25						
PPLA	Purkeypile	15.56	38	P	P	10 43 26.8	-0.6
	baz=236,SNR=24						
RC01	Rabbit Creek A	15.69	46	P	P	10 43 27.9	-0.8
	baz=246,SNR=15						
M22K	Willow	15.81	44		Pn	10 43 28.1	+0.9
M22K	Willow	15.81	44	P	Pn	10 43 28.3	+1.1
	baz=243						
CAST	Castle Rocks	15.90	37	P	P	10 43 30.8	-0.2
	baz=234,SNR=88						
CUT	Chulitna	16.06	41		Pn	10 43 31.0	+0.7
CUT	Chulitna	16.06	41	P	P	10 43 33.1	+0.4
	baz=241,SNR=5.8						
CHUM	Lake Minchumin	16.09	35	P	P	10 43 33.5	+0.4
	baz=233,SNR=32						
PMR	Palmer	16.17	45		Pn	10 43 32.5	+0.8
PMR	Palmer	16.17	45	P	P	10 43 34.4	+0.5
PMR	Palmer	16.17	45	P	Pn	10 43 32.5	+0.8
PMR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PMR	Palmer	16.17	45	P	Pn	10 43 32.5	+0.8
	baz=245						
PWL	Port Wells	16.23	48	Pn	Pn	10 43 32.1	-0.4
PWL	Port Wells	16.23	48	P	Pn	10 43 32.2	-0.4
	baz=249						
P23K	Montague Islan	16.39	51	P	Pn	10 43 33.9	-0.6
	baz=253						
KNK	Knik Glacier	16.39	46		Pn	10 43 34.7	+0.2
KNK	Knik Glacier	16.39	46	P	Pn	10 43 35.4	+0.9
	baz=247,SNR=11						
SML	Sawmill	16.60	45	P	Pn	10 43 37.5	+0.3
	baz=246,SNR=9.8						
BPAW	Bear Paw Mtn.	16.69	36	P	P	10 43 40.6	+0.8
	baz=235,SNR=66						
RDOG	Red Dog Mine	16.73	14	P	P	10 43 40.0	-0.1
RDOG	Red Dog Mine	16.73	14	P	P	10 43 40.9	+0.7
	baz=203,SNR=14						
Q23K	Middleton Isla	16.75	54	P	Pn	10 43 39.5	+0.5
	baz=256						
M23K	Glacier View	16.86	45	P	P	10 43 41.3	-0.4
	baz=247,SNR=41						
PET	Petropavlovsk	16.98	284	*e*P	P	10 43 42.6	-0.4
PET				*e*S	Sn	10 46 39.9	-10
PET				pmax	pmax		
	comp=Z,45nm,0.7s						
PET				MLR	MLR		
	comp=Z,400nm,17.0s						
I21K	Tanana	17.01	32	P	P	10 43 44.7	+1.5
	baz=230						
IMAR	Indian Mountai	17.01	28	P	P	10 43 45.4	+2.1
SCM	Sheep Creek Mo	17.05	45	P	Pn	10 43 42.7	-0.1
SCM	Sheep Creek Mo	17.05	45	P	Pn	10 43 42.7	-0.1
SCM				pmax	pmax		
	comp=Z,104nm,0.7s						
SCM	Sheep Creek Mo	17.05	45	P	Pn	10 43 43.2	+0.4
	baz=247,SNR=22						
H21K	Melozitna Rive	17.07	30	P	P	10 43 45.2	+1.3
	baz=227						
MCK	McKinley	17.25	38	P	P	10 43 45.7	-0.3
	baz=239,SNR=34						
BWN	Browne	17.28	37	IAmb	IAmb	10 43 55.8	
	comp=Z,140nm,0.5s						
MLY	Manley	17.33	33	P	P	10 43 48.9	+2.1
	baz=232,SNR=157						
EYAK	Cordova Ski Ar	17.34	50	P	P	10 43 47.1	+0.2
	baz=253						
G21K	Allakaket	17.46	27	P	P	10 43 50.7	+2.5
	baz=224,SNR=38						
PEA0B	Petropavlovsk-	17.54	285	P	P	10 43 49.2	0.0
PEA0B	Petropavlovsk-	17.54	285	⇑*e*P	Pn	10 43 46.8	-2.0
PETK	Petropavlovsk-	17.54	285	P	Pn	10 43 47.3	-1.5
	comp=Z,6.1nm,1.0s,baz=85,slow=13,SNR=2.8						
PETK				PcP	PcP	10 48 25.9	+0.3
	comp=Z,8.9nm,0.7s,baz=117,slow=0.8,SNR=9.8						
PETK				pPcP		10 48 40.9	
	comp=Z,9.7nm,0.8s,baz=55,slow=2.0,SNR=5.7						
PETK				LR	LR	10 50 36.3	
	comp=Z,124nm,18.8s,baz=90,slow=37						
PETK				ScP	ScP	10 51 55.2	-0.2
	comp=Z,7.2nm,0.9s,baz=108,slow=4.8,SNR=3.8						
KLU	Klutina	17.55	47	P	P	10 43 49.4	+0.1
	baz=250,SNR=14						
NEA2	Nenana	17.66	36	P	P	10 43 50.9	+0.4
NEA2	Nenana	17.66	36	P	P	10 43 50.4	0.0
	baz=236,SNR=24						
M24K	Tolsona, Glenn	17.66	45	P	Pn	10 43 49.1	-1.1
M24K	Tolsona, Glenn	17.66	45	P	P	10 43 51.1	+0.5
	baz=248,SNR=13						
H22K	Ishtalitna Cre	17.67	30	P	P	10 43 52.6	+2.1
	baz=229						
I23K	Minto, Yukon-K	17.87	34	P	P	10 43 55.1	+2.4
I23K				IAmb	IAmb	10 43 56.6	
	comp=Z,208nm,0.7s						
I23K	Minto, Yukon-K	17.87	34	P	P	10 43 54.3	+1.6
	baz=235,SNR=188						
WRH	Wood River Hil	17.95	37	P	P	10 43 53.2	-0.4
F21K	Alatna River	17.98	25	P	Pn	10 43 56.5	+2.3
	baz=223						
CCB	Clear Creek Bu	18.15	37	P	P	10 43 55.3	-0.4
MDM	Murphy Dome	18.16	35	P	Pn	10 43 56.6	+0.3
N25K	Chitina, Valde	18.19	47	P	P	10 43 55.5	-0.9
N25K	Chitina, Valde	18.19	47	P	P	10 43 55.4	-1.0
	baz=252,SNR=9.8						
HARP	HAARP	18.21	45	P	P	10 43 55.8	-0.8
	baz=248						
TCOL	CIGO, UAF Yank	18.25	36	P	P	10 43 56.9	0.0
	baz=238,SNR=8.1						
COLA	College	18.25	36	P	Pn	10 43 57.1	-0.2
COLA	College	18.25	36	P	Pn	10 43 57.2	-0.2
COLA	College	18.25	36	P	Pn	10 43 57.1	-0.2
COLA	College	18.25	36	P	P	10 43 56.6	-0.3
	baz=238						
PAX	Paxson	18.29	43	P	Pn	10 43 58.6	+0.6
	baz=246,SNR=12						
G22K	Bettles	18.32	28	P	Pn	10 43 58.6	+0.5
	baz=227						
HDA	Harding Lake	18.35	38	IAmb	IAmb	10 44 00.5	
	comp=Z,334nm,1.4s						
HDA	Harding Lake	18.35	38	P	P	10 43 57.6	-0.4
	baz=240,SNR=121						
K24K	Donnelly Dome	18.52	40	P	P	10 43 60.0	+0.1
	baz=244,SNR=76						
POKR	Poker Plat Res	18.53	36	P	P	10 44 00.1	+0.1
POKR	Poker Plat Res	18.53	36	P	P	10 43 59.7	-0.3
	baz=238,SNR=38						
ILAR	Eielson Array	18.55	37	P	P	10 43 59.5	-0.7
	comp=Z,75nm,0.7s,baz=243,slow=10.0,SNR=235						
ILAR				PcP	PcP	10 48 27.1	0.0
	comp=Z,9.0nm,0.6s,baz=271,slow=3.3,SNR=18						
ILAR				ScP	ScP	10 51 55.9	-1.5
	comp=Z,1.8nm,0.7s,baz=268,slow=3.2,SNR=8.7						
ILAR				LR	LR	10 52 01.5	
	comp=Z,1µm,18.4s,baz=224,slow=40						
G23K	Bananza Creek	18.61	30	P	Pn	10 44 02.3	+0.5
	baz=230						
BILL	Bilibino	18.71	336		Pn	10 44 05.1	+2.2
BILL				IAmb	IAmb	10 44 07.2	
	comp=Z,124nm,0.7s						
BILL	Bilibino	18.71	336	*d i*P	Pn	10 44 05.2	+2.3
BILL				*i* S	S	10 47 31.7	+0.1
BILL				pmax	pmax		
	comp=Z,120nm,0.9s						
BILL				MLR	MLR		
	comp=Z,318nm,15.0s						
H24K	Noodor Dome	18.77	33	IAmb	IAmb	10 44 06.0	
	comp=Z,247nm,0.9s						
H24K	Noodor Dome	18.77	33	P	Pn	10 44 04.2	+0.5
	baz=235,SNR=241						
MCARA	McCarthy VSAT	18.85	49	P	P	10 44 04.0	+0.5
	baz=254,SNR=9.2						
RIDG	Independent Ri	18.86	41	IAmb	IAmb	10 44 06.3	
	comp=Z,115nm,0.6s						
RIDG	Independent Ri	18.86	41	P	Pn	10 44 04.5	-0.3
	baz=245,SNR=45						
COLD	Coldfoot	18.90	28	P	Pn	10 44 06.4	+1.3
	baz=228,SNR=65						
DOT	Dot Lake	19.15	42	P	P	10 44 07.2	+0.4
DOT				IAmb	IAmb	10 44 09.4	
	comp=Z,103nm,0.6s						
SCRK	Sand Creek	19.31	41	P	P	10 44 08.6	-0.1
SCRK				IAmb	IAmb	10 44 10.4	
	comp=Z,176nm,0.6s						
SCRK	Sand Creek	19.31	41	P	P	10 44 08.4	-0.3
	baz=246,SNR=96						
G24K	Hadweenzic Riv	19.41	32	P	Pn	10 44 11.4	+0.2
	baz=234						
PRP	Porcupine Dome	19.43	36	P	P	10 44 08.8	-1.1
	baz=240,SNR=33						
E23K	Chandalar	19.63	27	P	Pn	10 44 13.6	-0.3
	baz=228						
M27K	Edge Creek, AK	19.64	46	P	P	10 44 11.9	-0.4
	baz=253						
J26L	Joseph Creek	19.70	40	P	P	10 44 13.0	+0.2
	baz=245						
F24K	Squaw Lake	19.77	29	P	Pn	10 44 15.4	-0.1
	baz=231,SNR=51						
G25K	Bearman Lake	19.89	32	P	Pn	10 44 16.2	-0.7
	baz=236,SNR=30						
PINM	Pinnacle	19.91	54	P	P	10 44 14.9	-0.2
	baz=261,SNR=5.6						
E24K	Your Creek	19.95	28	P	Pn	10 44 17.5	-0.2
	baz=229						
D23K	Nanushuk River	19.98	24	P	Pn	10 44 17.4	-0.5
	baz=224						
O28M	Mount Upton	20.05	52	P	P	10 44 16.7	-0.2
	baz=259						
FYU	Fort Yukon	20.07	33	P	P	10 44 16.9	+0.1
FYU				IAmb	IAmb	10 44 33.3	
	comp=Z,325nm,1.2s						
K27K	Chicken	20.11	42	P	P	10 44 17.6	+0.4
	baz=248						
BVCY	Beaver Creek	20.11	47	P	Pn	10 44 19.6	0.0
	baz=254,SNR=39						
YUK3	Moose Creek	20.13	49	P	P	10 44 16.9	-0.8
	baz=256,SNR=17						
I26K	Coal Creek Min	20.20	38	P	P	10 44 17.8	-0.4
	baz=244						
PNL	Peninsula	20.28	55	P	P	10 44 19.5	+0.4
PNL	Peninsula	20.28	55	P	P	10 44 19.1	0.0
	baz=263,SNR=9.6						
YUK8	Steele Glacier	20.35	50	P	P	10 44 20.3	+0.2
	baz=258,SNR=16						
F25K	Christian Rive	20.51	31	P	P	10 44 22.8	+1.2
	baz=235						
A21K	Barrow	20.64	15	P	Pn	10 44 24.2	-1.4
A21K				IAmb	IAmb	10 44 28.2	
	comp=Z,153nm,0.8s						
A21K	Barrow	20.64	15	P	P	10 44 24.0	+1.1
	baz=210,SNR=13						
EGAK	Eagle	20.76	40	P	P	10 44 24.4	+0.2
	baz=248,SNR=308						
G26K	Porcupine Rive	20.76	33	P	P	10 44 24.5	+0.3
	baz=239						
O29M	Mount Kennedy	20.77	53	P	P	10 44 24.4	-0.1
	baz=262						
E25K	Arctic Village	20.84	29	P	P	10 44 26.3	+1.1
	baz=234,SNR=79						
YUK4	Talbot Arm	20.89	50	P	P	10 44 26.2	+0.3
	baz=259						
I27K	Kandik River	20.91	38	P	P	10 44 25.6	-0.3
	baz=245						
YUK6	Outpost Mounta	20.96	52	P	P	10 44 26.4	-0.3
	baz=261,SNR=9.1						
C24K	Franklin Bluff	21.01	24	P	P	10 44 27.6	+0.7
	baz=226						
SEY	Seymchan	21.02	314	P	P	10 44 27.9	+0.9
	comp=Z,19nm,0.9s,baz=112,slow=10,SNR=36						
SEY				PcP	PcP	10 48 32.1	+0.5
	comp=Z,23nm,0.7s,baz=131,slow=4.5,SNR=13						
SEY				pPcP		10 48 47.5	
	comp=Z,8.9nm,0.7s,baz=209,slow=3.4,SNR=4.0						
SEY				LR	LR	10 52 14.5	
	comp=Z,871nm,21.8s,baz=123,slow=36						
	comp=Z,19nm,0.9s						
SEY	Seymchan	21.02	314	⇓*e*P	P	10 44 28.7	+1.6
SEY				pmax	pmax		

	comp=Z,94nm,1.5s						
F26K	**Sheenjek River**	**21.04**	**31**	P	**P**	**10 44 28.5**	**+1.2**
	baz=237,SNR=163						
M29M	**Somme Creek**	**21.20**	**47**	P	**P**	**10 44 28.6**	**-0.5**
	baz=257						
H27K	**Steamboat Moun**	**21.21**	**36**	P	**P**	**10 44 28.6**	**-0.6**
	baz=244						
MA2	**Magadan**	**21.22**	**305**	P	**P**	**10 44 29.7**	**+0.4**
	comp=Z,5.6nm,0.7s,baz=107,slow=12,SNR=4.0						
MA2				PcP	**PcP**	**10 48 32.0**	**0.0**
	comp=Z,15nm,0.7s,baz=109,slow=5.2,SNR=6.4						
MA2				LR	LR	10 52 06.4	
	comp=Z,877nm,20.6s,baz=116,slow=35						
	comp=Z,5.6nm,0.7s						
MA2	**Magadan**	**21.22**	**305**	P	**P**	**10 44 30.0**	**+0.7**
MA2	**Magadan**	**21.22**	**305**	P	**P**	**10 44 32.3**	**+3.0**
MA2	**Magadan**	**21.22**	**305**	⇓*e*P	**P**	**10 44 31.1**	**+1.8**
MA2				pmax	pmax		
	comp=Z,53nm,1.3s						
DAWY	**Dawson**	**21.23**	**43**	P	**P**	**10 44 29.2**	**-0.2**
	baz=252,SNR=39						
D25K	**Kavik River**	**21.35**	**26**	P	**P**	**10 44 31.4**	**+0.8**
	baz=230						
HYT	**Haines Junctio**	**21.36**	**52**	P	**P**	**10 44 30.5**	**-0.3**
HYT	**Haines Junctio**	**21.36**	**52**	P	**P**	**10 44 30.3**	**-0.5**
	baz=262,SNR=13						
G27K	**Doyon Strip**	**21.43**	**35**	P	**P**	**10 44 30.2**	**-1.2**
	baz=242						
L29M	**L29M**	**21.51**	**46**	P	**P**	**10 44 31.9**	**-0.4**
	baz=256						
P30M	**Million Dollar**	**21.55**	**54**	P	**P**	**10 44 32.0**	**-0.7**
	baz=264						
N30M	**Aishikik Lake**	**21.65**	**50**	P	**P**	**10 44 32.7**	**-1.1**
	baz=261						
PLBC	**Pleasant Camp**	**21.80**	**56**	P	**P**	**10 44 34.5**	**-0.8**
	baz=267						
S31K	**Pelican**	**21.83**	**60**	P	**P**	**10 44 36.1**	**+0.4**
	baz=271,SNR=8.8						
J29M	**Klondike Camp**	**21.84**	**42**	IAmb	IAmb	10 44 54.6	
	comp=Z,75nm,0.6s						
J29M	**Klondike Camp**	**21.84**	**42**	P	**P**	**10 44 36.7**	**+0.8**
	baz=252						
K29M	**Barlow Dome**	**21.96**	**44**	P	**P**	**10 44 36.5**	**-0.7**
	baz=255						
M30M	**Minto, Yukon**	**21.98**	**47**	P	**P**	**10 44 37.4**	**0.0**
	baz=258,SNR=14						
O30N	**Mendenhall**	**22.04**	**52**	P	**P**	**10 44 38.4**	**+0.3**
	baz=264,SNR=7.2						
I29M	**Ogilvie Camp,**	**22.09**	**40**	P	**P**	**10 44 38.0**	**-0.5**
I29M				IAmb	IAmb	10 44 40.8	
	comp=Z,243nm,1.3s						
I29M	**Ogilvie Camp,**	**22.09**	**40**	P	**P**	**10 44 37.6**	**-0.9**
	baz=250,SNR=118						
E27K	**Coleen River**	**22.12**	**32**	P	**P**	**10 44 39.2**	**+0.4**
	baz=239						
C26K	**Camden Bay**	**22.13**	**26**	P	**P**	**10 44 39.8**	**+1.0**
	baz=231						
N31M	**Braeburn, Yuko**	**22.28**	**51**	P	**P**	**10 44 40.9**	**+0.3**
	baz=262						
C27K	**Jago River**	**22.28**	**27**	P	**P**	**10 44 40.7**	**+0.2**
	baz=233						
SKAG	**Skagway**	**22.32**	**56**	P	**P**	**10 44 40.9**	**-0.2**
SKAG	**Skagway**	**22.32**	**56**	P	**P**	**10 44 40.8**	**-0.2**
SKAG	**Skagway**	**22.32**	**56**	P	**P**	**10 44 40.3**	**-0.7**
	baz=268,SNR=11						
SIT	**Sitka**	**22.36**	**62**	P	**P**	**10 44 40.7**	**-0.7**
SIT				IAmb	IAmb	10 44 44.0	
	comp=Z,116nm,0.9s						
SIT	**Sitka**	**22.36**	**62**	P	**P**	**10 44 43.1**	**+1.7**
SIT	**Sitka**	**22.36**	**62**	P	**P**	**10 44 40.7**	**-0.7**
SIT				pmax	pmax		
	comp=Z,116nm,0.9s						
SIT	**Sitka**	**22.36**	**62**	P	**P**	**10 44 41.1**	**-0.3**
	baz=274,SNR=6.4						
BESE	**Bessie Mountai**	**22.55**	**58**	P	**P**	**10 44 44.0**	**+0.3**
MAYO	**Mayo, Yukon**	**22.60**	**45**	P	**P**	**10 44 44.3**	**+0.3**
	baz=257,SNR=6.8						
R32K	**Eaglecrest**	**22.74**	**59**	P	**P**	**10 44 45.0**	**-0.4**
	baz=271						
S32K	**Killisnoo**	**22.74**	**61**	P	**P**	**10 44 45.6**	**+0.2**
	baz=273						
JIS	**Juneau Island**	**22.81**	**59**	IAmb	IAmb	10 45 02.4	
	comp=Z,82nm,0.6s						
JIS	**Juneau Island**	**22.81**	**59**	P	**P**	**10 44 46.5**	**+0.4**
M31M	**Drury Creek, Y**	**23.03**	**49**	P	**P**	**10 44 47.6**	**-0.8**
M31M	**Drury Creek, Y**	**23.03**	**49**	P	**P**	**10 44 48.2**	**-0.2**
	baz=262,SNR=11						
EPYK	**Eagle Plains**	**23.05**	**38**	P	**P**	**10 44 48.3**	**-0.4**
EPYK				IAmb	IAmb	10 44 49.6	
	comp=Z,71nm,0.7s						
EPYK	**Eagle Plains**	**23.05**	**38**	P	**P**	**10 44 47.8**	**-0.9**
	baz=250,SNR=56						
P32M	**Atlin**	**23.15**	**56**	P	**P**	**10 44 49.0**	**-0.7**
	baz=269						
G30M	**tAoh Zraii Nji**	**23.45**	**37**	P	**P**	**10 44 51.2**	**-1.2**
	baz=249						
FARO	**Faro, Yukon**	**23.51**	**49**	P	**P**	**10 44 53.0**	**0.0**
FARO	**Faro, Yukon**	**23.51**	**49**	P	**P**	**10 44 53.3**	**+0.2**
	baz=263,SNR=5.6						
N32M	**Quiet Lake**	**23.54**	**52**	P	**P**	**10 44 52.8**	**-0.5**
	baz=266,SNR=12						
P33M	**Teslin, Yukon**	**23.62**	**54**	P	**P**	**10 44 53.5**	**-0.6**
	baz=268,SNR=11						
U33K	**Whale Pass**	**23.66**	**64**	P	**P**	**10 44 54.4**	**0.0**
	baz=277						
T33K	**Petersburg**	**23.67**	**63**	P	**P**	**10 44 55.8**	**+1.3**
	baz=276,SNR=22						
CRAG	**Craig**	**23.75**	**66**	P	**P**	**10 44 56.2**	**+0.9**
	baz=279						
Q32M	**Nakina River**	**23.90**	**57**	P	**P**	**10 44 58.0**	**+1.2**
	baz=272						
WRAK	**Wrangell Islan**	**24.05**	**64**	IAmb	IAmb	10 45 01.3	
	comp=Z,132nm,0.8s						
WRAK	**Wrangell Islan**	**24.05**	**64**	P	**P**	**10 44 59.4**	**+1.5**
	baz=277,SNR=9.8						
F31M	**Tsiigehtchic**	**24.52**	**36**	P	**P**	**10 45 01.4**	**-0.7**
	baz=251,SNR=118						
S34M	**Telegraph Cree**	**24.55**	**60**	P	**P**	**10 45 03.8**	**+1.3**
	baz=275,SNR=9.7						
V35K	**Ketchikan**	**24.62**	**66**	P	**P**	**10 45 03.1**	**0.0**
	baz=280,SNR=6.9						
INK	**Inuvik**	**24.89**	**34**	P	**P**	**10 45 05.3**	**-0.1**
	comp=Z,113nm,0.7s,baz=240,slow=8.3,SNR=428						
INK				pP	**pP**	**10 45 20.4**	**+1.1**
	comp=Z,71nm,0.8s,baz=205,slow=12,SNR=9.6						
INK				PcP	**PcP**	**10 48 40.0**	**+0.5**
	comp=Z,29nm,0.7s,baz=307,slow=1.5,SNR=12						
INK				pPcP		10 48 55.7	
	comp=Z,19nm,1.0s,baz=247,slow=2.2,SNR=3.8						
INK				LR	LR	10 55 49.6	
	comp=Z,732nm,21.6s,baz=243,slow=39						
	comp=Z,113nm,0.7s						
INK	**Inuvik**	**24.89**	**34**	P	**P**	**10 45 05.9**	**+0.5**
INK				IAmb	IAmb	10 45 06.3	
	comp=Z,106nm,0.7s						
INK	**Inuvik**	**24.89**	**34**	P	**P**	**10 45 05.9**	**+0.5**
INK				pmax	pmax		
	comp=Z,106nm,0.7s						
INK	**Inuvik**	**24.89**	**34**	P	**P**	**10 45 05.0**	**-0.4**
	baz=250,SNR=131						
DLBC	**Dease Lake**	**25.09**	**58**	P	**P**	**10 45 08.9**	**+1.4**
	comp=Z,41nm,0.5s,baz=269,slow=6.9,SNR=167						
DLBC				pP	**pP**	**10 45 22.8**	**+1.3**
	comp=Z,79nm,0.7s,baz=288,slow=11,SNR=18						
DLBC				PcP	**PcP**	**10 48 41.4**	**+1.1**
	comp=Z,8.6nm,0.6s,baz=116,slow=0.8,SNR=4.5						
DLBC				LR	LR	10 56 02.5	
	comp=Z,414nm,20.3s,baz=282,slow=39						
	comp=Z,41nm,0.5s						
DLBC	**Dease Lake**	**25.09**	**58**	P	**P**	**10 45 09.5**	**+2.0**
DLBC				IAmb	IAmb	10 45 25.3	
	comp=Z,105nm,0.9s						
DLBC	**Dease Lake**	**25.09**	**58**	P	**P**	**10 45 09.0**	**+1.5**
	baz=274,SNR=21						
T35M	**Bob Quinn**	**25.13**	**62**	P	**P**	**10 45 09.9**	**+2.2**
	baz=277,SNR=28						
WTLY	**Watson Lake, Y**	**25.63**	**54**	P	**P**	**10 45 12.8**	**+0.5**
	baz=272						
GRNB	**Grenville Isla**	**25.88**	**69**	IAmb	IAmb	10 45 20.0	
	comp=Z,117nm,1.0s						
LIRD	**Liard River Hi**	**27.04**	**56**	P	**P**	**10 45 25.2**	**+0.3**
	baz=275						
BBB	**Bella Bella**	**27.41**	**72**	P	**P**	**10 45 29.8**	**+1.4**
	comp=Z,35nm,1.0s,baz=293,slow=10,SNR=3.2						
BBB				pP	**pP**	**10 45 42.0**	**-0.6**
	comp=Z,74nm,1.0s,baz=271,slow=6.6,SNR=6.6						
BBB				LR	LR	10 54 00.9	
	comp=Z,213nm,21.4s,baz=288,slow=31						
	comp=Z,35nm,1.0s						
KOTAN	**Kotaneelee Air**	**28.00**	**54**	P	**P**	**10 45 34.1**	**+0.6**
	baz=276,SNR=8.2						
WRGLY	**Wrigley**	**28.11**	**47**	P	**P**	**10 45 35.0**	**+0.5**
	baz=270,SNR=6.5						
C36M	**Paulatuk**	**28.47**	**34**	P	**P**	**10 45 37.4**	**-0.2**
	baz=258,SNR=43						
YSS	**Yuzh-Sakhalins**	**28.59**	**277**	*e*P	**P**	**10 45 41.9**	**+3.0**
YSS				*e*		10 46 46.7	
YSS				*e*S	**S**	**10 50 25.0**	**+2.1**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,500nm,15.0s						
A36M	**Sachs Harbour**	**28.77**	**29**	IAmb	IAmb	10 45 42.1	
	comp=Z,77nm,0.8s						
A36M	**Sachs Harbour**	**28.77**	**29**	P	**P**	**10 45 40.9**	**+0.7**
	baz=252,SNR=64						
ASAJ	**Asahikawa**	**30.07**	**272**	LR	LR	10 56 27.4	
	comp=Z,346nm,22.0s,baz=74,slow=33						
JEM	**Erimo**	**30.86**	**268**	P	**P**	**10 46 00.0**	**+1.0**
ERM	**Erimo**	**30.86**	**268**	P	**P**	**10 46 01.1**	**+2.1**
ERM				IAmb	IAmb	10 46 02.7	
	comp=Z,77nm,0.7s						
ERM	**Erimo**	**30.86**	**268**	P	**P**	**10 46 00.5**	**+1.5**
ERM	**Erimo**	**30.86**	**268**	P	**P**	**10 46 01.1**	**+2.1**
ERM				pmax	pmax		
	comp=Z,77nm,0.7s						
ERM	**Erimo**	**30.86**	**268**	P	**P**	**10 45 59.9**	**+0.9**
ERM				pP	**pP**	**10 46 14.8**	**+1.3**
ERM				sP	**sP**	**10 46 21.1**	**+0.8**
ERM				PcP	**PcP**	**10 48 56.0**	**+1.5**
CLRS	**Cowichan Lake**	**31.02**	**76**	IAmb	IAmb	10 46 03.1	
	comp=Z,58nm,0.9s						
YAK	**Yakutsk**	**31.45**	**311**	LR	LR	10 59 15.4	
	comp=Z,774nm,18.8s,baz=96,slow=37						
YAK	**Yakutsk**	**31.45**	**311**	*e*P	**P**	**10 46 00.3**	**-3.7**
YAK				*e*		10 48 55.3	
YAK				pmax	pmax		
	comp=Z,11nm,0.8s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				MLR	MLR		
	comp=Z,902nm,21.0s						
YAK				MLR	MLR		
	comp=E,570nm,21.0s						
PGC	**Sidney**	**31.50**	**76**	P	**P**	**10 46 06.1**	**+1.5**
WAPA	**Wapiti River**	**31.53**	**63**	P	**P**	**10 46 06.0**	**+1.2**
WAPA				IAmb	IAmb	10 46 06.8	
	comp=Z,115nm,0.7s						
LLLB	**Lillooet**	**31.62**	**72**	IAmb	IAmb	10 46 22.8	
	comp=Z,75nm,1.1s						
TIXI	**Tiksi**	**31.65**	**329**	LR	LR	10 59 50.0	
	comp=Z,712nm,20.8s,baz=58,slow=38						
TIXI	**Tiksi**	**31.65**	**329**	P	**P**	**10 46 06.6**	**+1.0**
TIXI	**Tiksi**	**31.65**	**329**	P	**P**	**10 46 06.7**	**+1.0**
B04A	**Port Angeles**	**31.73**	**77**	IAmb	IAmb	10 46 10.5	
	comp=Z,50nm,0.9s						
NLWA	**Neilton Lookou**	**31.81**	**79**	IAmb	IAmb	10 46 10.5	
	comp=Z,49nm,0.9s						
HILA	**High Level**	**31.81**	**56**	P	**P**	**10 46 07.2**	**0.0**
YKA	**Yellowknife Ar**	**32.22**	**48**	P	**P**	**10 46 10.3**	**-0.5**
	comp=Z,13nm,0.6s,baz=275,slow=9.6,SNR=212						
YKA				PcP	**PcP**	**10 48 58.3**	**+0.5**
	comp=Z,12nm,0.8s,baz=282,slow=2.3,SNR=16						
YKA				pPcP		10 49 14.0	
	comp=Z,9.8nm,0.9s,baz=279,slow=2.5,SNR=6.9						
YKA				ScP	**ScP**	**10 52 36.3**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=289,slow=3.1,SNR=6.6						
YKA				PKiKP	**PKiKP**	**10 56 23.9**	**-1.2**
	comp=Z,0.7nm,0.7s,baz=253,slow=0.9,SNR=7.7						
YKA				LR	LR	11 00 55.2	
	comp=Z,884nm,18.9s,baz=296,slow=39						
YKA				P3KPbc		11 17 36.4	
	comp=Z,0.7nm,0.8s,baz=98,slow=5.5,SNR=9.2						
	comp=Z,13nm,0.6s						
E03A	**Lebam**	**32.39**	**80**	IAmb	IAmb	10 46 15.4	
	comp=Z,66nm,0.8s						
B06A	**Marblemount**	**32.73**	**75**	IAmb	IAmb	10 46 31.2	
	comp=Z,74nm,1.0s						
BRLDA	**Berland Lookou**	**32.90**	**64**	IAmb	IAmb	10 46 19.0	
	comp=Z,107nm,0.9s						
F04D	**Rainier, OR**	**32.95**	**80**	IAmb	IAmb	10 46 20.1	
	comp=Z,109nm,0.7s						
LON	**Longmire**	**33.35**	**78**	IAmb	IAmb	10 46 24.1	
	comp=Z,42nm,0.7s						
F04A	**Amboy**	**33.38**	**80**	IAmb	IAmb	10 46 23.6	
	comp=Z,80nm,0.7s						
COR	**Corvallis**	**33.52**	**83**	P	**P**	**10 46 23.9**	**+1.5**
COR				pP	**pP**	**10 46 38.0**	**+1.2**
COR				sP	**sP**	**10 46 44.2**	**+0.6**
HOOD	**Mount Hood Mea**	**34.15**	**81**	IAmb	IAmb	10 46 32.1	
	comp=Z,38nm,0.8s						
H04A	**Detroit Lake**	**34.16**	**82**	IAmb	IAmb	10 46 44.6	
	comp=Z,119nm,1.1s						
KLR	**Kul'dur**	**34.19**	**287**	LR	LR	11 01 58.4	
	comp=Z,222nm,18.8s,baz=64,slow=39						
KLR	**Kul'dur**	**34.19**	**287**	⇑*e*P	**P**	**10 46 27.1**	**-1.0**
KLR				pmax	pmax		
	comp=Z,9.0nm,1.3s						
DBO	**Dodson Butte**	**34.34**	**85**	IAmb	IAmb	10 46 46.2	
	comp=Z,62nm,1.4s						
JMM	**Marumori**	**34.80**	**264**	IAmb	IAmb	10 46 35.3	
	comp=Z,84nm,0.9s						
JMM	**Marumori**	**34.80**	**264**	P	**P**	**10 46 33.9**	**+0.5**
I05D	**Terrebonne, OR**	**34.85**	**82**	IAmb	IAmb	10 46 36.6	
	comp=Z,58nm,0.9s						
F07A	**Phinny Hill Vi**	**34.91**	**79**	IAmb	IAmb	10 46 36.9	
	comp=Z,72nm,0.8s						
ZEA	**Zeya**	**34.91**	**297**	*e*P	**P**	**10 46 34.0**	**-0.2**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEA				MLR	MLR		
	comp=E,300nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,17.0s						
D08A	**Wollman Farm,**	**34.94**	**76**	IAmb	IAmb	10 46 36.5	
	comp=Z,72nm,0.7s						
C09A	**Chrisman Ranch**	**34.97**	**75**	IAmb	IAmb	10 46 36.9	
	comp=Z,84nm,0.7s						
J04A	**Umpqua Nationa**	**34.97**	**84**	P	**P**	**10 46 37.4**	**+2.2**
J04A				IAmb	IAmb	10 46 52.2	
	comp=Z,63nm,0.8s						
E08A	**Dider Farm, El**	**35.13**	**77**	IAmb	IAmb	10 46 52.1	
	comp=Z,88nm,1.2s						
KHMM	**Horse Mountain**	**35.31**	**89**	P	**P**	**10 46 38.8**	**+0.8**
KHMM				IAmb	IAmb	10 46 54.7	
	comp=Z,36nm,0.8s						
KMPM	**Mount Pierce**	**35.34**	**89**	IAmb	IAmb	10 46 55.5	
	comp=Z,56nm,0.9s						
PINE	**Pine Mountain**	**35.39**	**82**	P	**P**	**10 46 38.1**	**-0.6**
PINE				IAmb	IAmb	10 46 56.1	
	comp=Z,84nm,1.2s						
NEW	**Newport**	**35.43**	**73**	LR	LR	10 58 25.6	
	comp=Z,196nm,21.4s,baz=303,slow=32						
NEW	**Newport**	**35.43**	**73**	IAmb	IAmb	10 46 54.5	
	comp=Z,105nm,0.8s						
NEW	**Newport**	**35.43**	**73**	P	**P**	**10 46 39.8**	**+0.9**
	baz=298,SNR=66						
YBH	**Yreka Blue Hor**	**35.44**	**87**	LR	LR	10 57 55.1	
	comp=Z,355nm,21.4s,baz=310,slow=31						
YBH	**Yreka Blue Hor**	**35.44**	**87**	P	**P**	**10 46 41.1**	**+2.0**
YBH	**Yreka Blue Hor**	**35.44**	**87**	P	**P**	**10 46 41.1**	**+2.0**
YBH				pmax	pmax		
	comp=Z,26nm,1.2s						
K04D	**Chiloquin, OR**	**35.53**	**85**	IAmb	IAmb	10 46 56.3	
	comp=Z,82nm,1.2s						
E09A	**Wood Farm, Sta**	**35.67**	**77**	IAmb	IAmb	10 46 57.1	
	comp=Z,118nm,1.2s						
KMRM	**Mail Ridge**	**35.71**	**89**	IAmb	IAmb	10 46 58.3	
	comp=Z,47nm,0.7s						
G08A	**Pilot Rock**	**35.80**	**79**	P	**P**	**10 46 43.1**	**+0.9**
G08A				IAmb	IAmb	10 46 57.8	
	comp=Z,51nm,1.2s						
H11N2	**WAKE ISLAND Hy**	**35.85**	**213**	T	T	11 24 46.8	
	baz=21,slow=76,SNR=8383						
H11N3	**WAKE ISLAND Hy**	**35.86**	**213**	T	T	11 24 50.3	
	baz=21,slow=76,SNR=7761						
H11N1	**WAKE ISLAND Hy**	**35.87**	**213**	T	T	11 24 48.2	
	baz=21,slow=76,SNR=6362						
K05A	**Summer Lake**	**36.00**	**84**	P	**P**	**10 46 45.6**	**+1.6**
K05A				IAmb	IAmb	10 47 00.8	
	comp=Z,102nm,1.2s						
I07A	**Izee**	**36.11**	**81**	P	**P**	**10 46 46.1**	**+1.3**
I07A				IAmb	IAmb	10 47 00.9	
	comp=Z,79nm,1.1s						
JSD	**Sado**	**36.25**	**267**	P	**P**	**10 46 46.5**	**+0.6**
JSD				IAmb	IAmb	10 46 47.8	
	comp=Z,119nm,0.9s						
JSD	**Sado**	**36.25**	**267**	P	**P**	**10 46 46.4**	**+0.6**
HEH	**HeiHe**	**36.26**	**291**	*e*P	**P**	**10 46 44.3**	**-1.5**
HEH				pmax	pmax		
	comp=Z,16nm,0.7s						
HEH				pmax	pmax		
	comp=Z,120nm,4.7s						
HEH				LR	LR		
	comp=Z,240nm,16.9s						
HEH				LR	LR		
	comp=Z,300nm,16.1s						
HEH				LR	LR		
	comp=Z,370nm,15.7s						
USA0B	**Ussuriysk Arra**	**36.52**	**280**	P	**P**	**10 46 47.5**	**-0.6**
USA0B	**Ussuriysk Arra**	**36.52**	**280**	P	**P**	**10 46 47.5**	**-0.6**
USA0B				pmax	pmax		
	comp=Z,21nm,1.5s						
USRK	**Ussuriysk Ar.**	**36.52**	**280**	P	**P**	**10 46 47.8**	**-0.3**
	comp=Z,3.3nm,0.6s,baz=60,slow=8.8,SNR=15						
USRK				PcP	**PcP**	**10 49 11.4**	**+0.9**
	comp=Z,36nm,0.7s,baz=73,slow=2.3,SNR=51						
USRK				pPcP		10 49 27.0	
	comp=Z,15nm,0.7s,baz=45,slow=4.3,SNR=10						
USRK				LR	LR	11 00 41.1	
	comp=Z,356nm,22.0s,baz=53,slow=34						
	comp=Z,3.3nm,0.6s						
USRK	**Ussuriysk Ar.**	**36.52**	**280**	P	**P**	**10 46 48.1**	**0.0**
MOD	**Modoc Plateau**	**36.82**	**85**	IAmb	IAmb	10 47 07.4	
	comp=Z,89nm,1.4s						
WALA	**Waterton Lakes**	**36.94**	**71**	P	**P**	**10 46 52.6**	**+0.7**
WALA				IAmb	IAmb	10 47 07.6	
	comp=Z,122nm,1.2s						
BMO	**Blue Mountains**	**37.03**	**78**	IAmb	IAmb	10 47 08.4	
	comp=Z,47nm,1.1s						
H11S1	**WAKE ISLAND Hy**	**37.05**	**212**	T	T	11 26 09.7	
	baz=20,slow=76						
H11S2	**WAKE ISLAND Hy**	**37.07**	**212**	T	T	11 26 05.5	
	baz=20,slow=76,SNR=8600						
H11S3	**WAKE ISLAND Hy**	**37.07**	**212**	T	T	11 26 05.6	
	baz=20,slow=76,SNR=3158						
J08A	**Circle Bar Ran**	**37.13**	**81**	IAmb	IAmb	10 46 55.9	
	comp=Z,56nm,0.8s						
MJAR	**Matsushiro Arr**	**37.23**	**265**	P	**P**	**10 46 55.1**	**+0.8**
	comp=Z,42nm,0.7s,baz=49,slow=7.2,SNR=125						
MJAR				PcP	**PcP**	**10 49 13.0**	**+0.1**
	comp=Z,18nm,0.8s,baz=71,slow=2.2,SNR=15						
MJAR				pPcP		10 49 29.0	
	comp=Z,11nm,0.8s,baz=66,slow=2.1,SNR=6.6						
MJAR				ScP	**ScP**	**10 52 55.3**	**+0.6**
	comp=Z,1.6nm,0.9s,baz=40,slow=3.2,SNR=4.4						
MJAR				LR	LR	11 00 29.5	
	comp=Z,274nm,20.4s,baz=69,slow=33						
	comp=Z,42nm,0.7s						
MAJO	**Matsushiro**	**37.23**	**265**	P	**P**	**10 46 55.4**	**+1.1**
MAJO	**Matsushiro**	**37.23**	**265**	P	**P**	**10 46 55.2**	**+0.9**
MAJO	**Matsushiro**	**37.23**	**265**	*c i*P	**P**	**10 46 55.4**	**+1.1**
MAJO				pmax	pmax		
	comp=Z,154nm,1.0s						
MAJO	**Matsushiro**	**37.23**	**265**	P	**P**	**10 46 55.5**	**+1.2**
MAJO				pP	**pP**	**10 47 09.9**	**+0.9**
MAJO				sP	**sP**	**10 47 16.0**	**+0.2**
MAJO				PcP	**PcP**	**10 49 13.3**	**+0.4**
WVOR	**Wild Horse Val**	**37.54**	**83**	IAmb	IAmb	10 46 59.6	
	comp=Z,54nm,0.9s						
RES	**Resolute Bay**	**37.61**	**25**	LR	LR	11 06 08.2	
	comp=Z,390nm,18.7s,baz=344,slow=42						
RES	**Resolute Bay**	**37.61**	**25**	P	**P**	**10 46 56.7**	**-0.3**
RES	**Resolute Bay**	**37.61**	**25**	P	**P**	**10 46 56.7**	**-0.3**
RES				pmax	pmax		
	comp=Z,9.0nm,0.5s						
PLID	**Pearl Lake**	**37.69**	**77**	P	**P**	**10 46 58.5**	**+0.1**
MDJ	**Mudanjiang**	**37.74**	**282**	P	**P**	**10 46 59.3**	**+0.8**
MDJ				sP	sP	10 47 21.8	+1.9
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,170nm,4.6s						
MDJ				LR	LR		
	comp=Z,500nm,22.2s						
MDJ				LR	LR		
	comp=Z,700nm,23.3s						
MSO	**Missoula**	**38.02**	**74**	P	**P**	**10 47 01.7**	**+0.7**
MSO				IAmb	IAmb	10 47 16.3	
	comp=Z,108nm,1.1s						
MSO	**Missoula**	**38.02**	**74**	P	**P**	**10 47 01.3**	**+0.4**
	baz=301,SNR=58						
PLTX	**Planet X, Gerl**	**38.03**	**86**	IAmb	IAmb	10 47 18.1	
	comp=Z,51nm,0.7s						
JGF	**Kuroka**	**38.37**	**264**	IAmb	IAmb	10 47 06.4	
	comp=Z,100nm,0.7s						
JGF	**Kuroka**	**38.37**	**264**	P	**P**	**10 47 05.3**	**+1.4**
BNX	**BinXian**	**38.46**	**285**	⇓P	**P**	**10 47 06.4**	**+1.9**
BNX				pmax	pmax		
	comp=Z,16nm,0.7s						
BNX				pmax	pmax		
	comp=Z,260nm,5.6s						
MPK	**Martis Peak**	**38.53**	**88**	IAmb	IAmb	10 47 21.6	
	comp=Z,60nm,1.2s						
JHJ	**Hachijo jima 2**	**38.56**	**259**	LR	LR	10 59 48.1	
	comp=Z,223nm,21.9s,baz=77,slow=31						
MFID	**Camas Ranch**	**38.70**	**80**	IAmb	IAmb	10 47 08.6	
	comp=Z,32nm,0.8s						
INU	**Inuyama**	**38.74**	**264**	IAmb	IAmb	10 47 08.6	
	comp=Z,48nm,1.0s						
INU	**Inuyama**	**38.74**	**264**	P	**P**	**10 47 07.7**	**+0.7**
INU	**Inuyama**	**38.74**	**264**	P	**P**	**10 47 07.2**	**+0.3**
INU				pP	**pP**	**10 47 22.4**	**+0.7**
INU				PcP	**PcP**	**10 49 17.9**	**+0.4**
YERR	**Yerington**	**39.20**	**88**	IAmb	IAmb	10 47 28.2	
	comp=Z,46nm,1.1s						
HLID	**Hailey**	**39.48**	**78**	IAmb	IAmb	10 47 15.4	
	comp=Z,41nm,0.8s						
HLID	**Hailey**	**39.48**	**78**	P	**P**	**10 47 14.2**	**+0.9**
	baz=304,SNR=74						
DLMT	**Dillon**	**39.58**	**75**	IAmb	IAmb	10 47 30.0	
	comp=Z,37nm,0.8s						
BBGB	**Big Mountain B**	**39.61**	**92**	IAmb	IAmb	10 47 18.5	
	comp=Z,56nm,0.9s						
MCMT	**McKenzie Canyo**	**39.72**	**76**	P	**P**	**10 47 16.3**	**+0.9**
EGMT	**Eagleton**	**39.86**	**70**	IAmb	IAmb	10 47 35.1	
	comp=Z,88nm,0.8s						
EGMT	**Eagleton**	**39.86**	**70**	P	**P**	**10 47 16.5**	**+0.3**
	baz=301,SNR=41						
PMPB	**Monarch Peak**	**39.99**	**92**	IAmb	IAmb	10 47 27.3	
	comp=Z,39nm,0.9s						
BOZ	**Bozeman (W)**	**40.03**	**74**	IAmb	IAmb	10 47 19.4	
	comp=Z,83nm,0.7s						
BOZ	**Bozeman (W)**	**40.03**	**74**	P	**P**	**10 47 17.9**	**+0.1**
	baz=302,SNR=156						
NVAR	**Mina Array Bea**	**40.12**	**88**	P	**P**	**10 47 19.6**	**+0.8**
	comp=Z,9.5nm,0.8s,baz=296,slow=7.8,SNR=79						
NVAR				PcP	**PcP**	**10 49 23.4**	**+1.3**
	comp=Z,8.0nm,0.6s,baz=223,slow=31,SNR=20						
NVAR				pPcP		10 49 39.2	
	comp=Z,7.4nm,0.7s,baz=296,slow=2.7,SNR=5.5						
NVAR				ScP	**ScP**	**10 53 06.4**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=292,slow=4.8,SNR=4.1						
NVAR				PKiKP	**PKiKP**	**10 56 32.1**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=20,slow=1.1,SNR=2.8						
NVAR				LR	LR	11 00 51.3	
	comp=Z,205nm,21.9s,baz=326,slow=31						
	comp=Z,9.5nm,0.8s						
BOD	**Bodaibo**	**40.19**	**308**	*e*P	**P**	**10 47 17.8**	**-1.0**
BOD				pmax	pmax		
	comp=Z,18nm,1.8s						
ELK	**Elko**	**40.60**	**83**	LR	LR	11 01 08.1	
	comp=Z,259nm,21.2s,baz=328,slow=32						
CN2	**Changchun**	**40.68**	**283**	P	**P**	**10 47 24.8**	**+1.8**
CN2				S	**S**	**10 53 29.8**	**+1.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=Z,300nm,17.0s						
CN2				LR	LR		
	comp=Z,200nm,17.0s						
CN2				LR	LR		
	comp=Z,400nm,24.0s						
VOG	**Valley Oaks Go**	**40.79**	**91**	P	**P**	**10 47 24.1**	**+0.2**
	baz=310						
FFC	**Flin Flon**	**40.91**	**57**	P	**P**	**10 47 24.7**	**-0.1**
FFC				IAmb	IAmb	10 47 40.2	
	comp=Z,35nm,0.7s						
FFC	**Flin Flon**	**40.91**	**57**	P	**P**	**10 47 24.7**	**-0.1**
FFC				pmax	pmax		

	comp=Z,35nm,0.7s						
FFC	**Flin Flon**	**40.91**	**57**	P	**P**	**10 47 24.5**	**-0.3**
FFC				pP	**pP**	**10 47 39.3**	**0.0**
FFC				sP	**sP**	**10 47 45.0**	**-0.9**
FFC				PcP	**PcP**	**10 49 24.7**	**+0.5**
FFC				ScP	**ScP**	**10 53 09.2**	**+0.7**
YMR	**Madison River**	**40.93**	**75**	IAmb	IAmb	10 47 41.0	
	comp=Z,128nm,1.0s						
TPH	**Tonopah**	**41.01**	**87**	IAmb	IAmb	10 47 43.0	
	comp=Z,171nm,1.2s						
TIN	**Tinemaha, Big**	**41.03**	**89**	P	**P**	**10 47 27.4**	**+1.2**
	baz=310						
YNM	**Yellowstone No**	**41.05**	**75**	IAmb	IAmb	10 47 30.4	
	comp=Z,63nm,0.8s						
SMMC	**Simmler**	**41.07**	**93**	P	**P**	**10 47 27.8**	**+1.4**
	baz=311,SNR=5.5						
YNR	**Norris Junctio**	**41.07**	**75**	IAmb	IAmb	10 47 43.3	
	comp=Z,136nm,1.0s						
YFT	**Old Faithful**	**41.13**	**75**	IAmb	IAmb	10 47 29.8	
	comp=Z,50nm,0.7s						
YUF	**Upper Falls**	**41.17**	**75**	IAmb	IAmb	10 47 43.2	
	comp=Z,62nm,0.9s						
ALE	**Alert**	**41.24**	**11**	P	**P**	**10 47 27.6**	**+0.4**
ALE				pP	**pP**	**10 47 42.4**	**+0.6**
ALE				PcP	**PcP**	**10 49 24.2**	**-0.6**
VES	**Vestal, Richgr**	**41.29**	**91**	P	**P**	**10 47 28.9**	**+0.8**
	baz=311,SNR=21						
H17A	**Grant Village**	**41.31**	**75**	IAmb	IAmb	10 47 46.2	
	comp=Z,226nm,1.3s						
H17A	**Grant Village**	**41.31**	**75**	P	**P**	**10 47 30.6**	**+2.1**
	baz=304,SNR=109						
LKWY	**Lake**	**41.32**	**75**	IAmb	IAmb	10 47 31.6	
	comp=Z,106nm,0.7s						
JHS	**Saijyo**	**41.37**	**267**	P	**P**	**10 47 30.0**	**+1.2**
JHS	**Saijyo**	**41.37**	**267**	P	**P**	**10 47 30.0**	**+1.2**
YMP	**Mirror Lake Pl**	**41.37**	**74**	IAmb	IAmb	10 47 45.5	
	comp=Z,121nm,1.3s						
FLWY	**Flagg Ranch**	**41.41**	**75**	IAmb	IAmb	10 47 46.1	
	comp=Z,77nm,0.8s						
PKM	**Mcpherson Peak**	**41.47**	**93**	P	**P**	**10 47 30.8**	**+1.1**
	baz=312,SNR=6.8						
HVU	**Hansel Valley**	**41.49**	**80**	IAmb	IAmb	10 47 31.9	
	comp=Z,61nm,0.7s						
JCJ	**Chichijima**	**41.50**	**250**	LR	LR	11 00 51.3	
	comp=Z,326nm,20.8s,baz=47,slow=30						
CWC	**Cottonwood Cre**	**41.52**	**90**	P	**P**	**10 47 30.6**	**+0.4**
	baz=310						
MOOW	**Moose Ponds**	**41.57**	**76**	P	**P**	**10 47 31.5**	**+0.8**
GRAC	**Grapevine Rang**	**41.60**	**89**	P	**P**	**10 47 32.0**	**+1.3**
	baz=310,SNR=11						
RLMT	**Red Lodge**	**41.68**	**73**	IAmb	IAmb	10 47 48.1	
	comp=Z,164nm,0.9s						
RLMT	**Red Lodge**	**41.68**	**73**	P	**P**	**10 47 32.2**	**+0.7**
	baz=304,SNR=115						
REDW	**Red Top Meadow**	**41.73**	**76**	IAmb	IAmb	10 47 48.8	
	comp=Z,116nm,1.4s						
SNOW	**Snow King Moun**	**41.73**	**76**	IAmb	IAmb	10 47 48.8	
	comp=Z,75nm,1.3s						
JMN	**Monobe**	**41.75**	**265**	P	**P**	**10 47 33.5**	**+1.6**
JMN				IAmb	IAmb	10 47 34.6	
	comp=Z,110nm,1.1s						
JMN	**Monobe**	**41.75**	**265**	P	**P**	**10 47 33.7**	**+1.8**
ISA	**Isabella, Lake**	**41.78**	**91**	P	**P**	**10 47 32.8**	**+0.6**
	baz=311,SNR=6.0						
SBC	**Santa Barbara**	**41.82**	**93**	P	**P**	**10 47 32.5**	**0.0**
	baz=312						
R11A	**Troy Canyon, C**	**41.84**	**86**	P	**P**	**10 47 33.7**	**+0.9**
	baz=309,SNR=41						
Q12A	**Willow Creek R**	**41.88**	**84**	IAmb	IAmb	10 47 53.0	
	comp=Z,74nm,1.2s						
ARVC	**Arvin**	**41.91**	**92**	P	**P**	**10 47 33.5**	**+0.3**
	baz=311						
AHID	**Auburn Hatcher**	**41.92**	**77**	IAmb	IAmb	10 47 49.3	
	comp=Z,74nm,1.1s						
MPMC	**Manual Prospec**	**42.13**	**90**	P	**P**	**10 47 35.9**	**+0.7**
	baz=311,SNR=21						
SCZ2	**Santa Cruz Isl**	**42.17**	**94**	P	**P**	**10 47 36.3**	**+1.0**
	baz=312						
S11A	**Rachel**	**42.19**	**87**	IAmb	IAmb	10 48 07.4	
	comp=Z,98nm,1.6s						
FURC	**Furnace Creek,**	**42.25**	**89**	P	**P**	**10 47 36.7**	**+0.8**
	baz=310,SNR=23						
OSI	**Osito Audit: C**	**42.32**	**92**	P	**P**	**10 47 37.4**	**+0.8**
	baz=312						
TPNV	**Topopah Spring**	**42.32**	**88**	P	**P**	**10 47 37.8**	**+1.1**
	baz=310,SNR=45						
LRMC	**Laurel Mtn Rad**	**42.39**	**91**	P	**P**	**10 47 37.5**	**+0.2**
	baz=311,SNR=7.7						
DUG	**Dugway, Tooele**	**42.41**	**82**	IAmb	IAmb	10 47 54.0	
	comp=Z,101nm,1.1s						
DUG	**Dugway, Tooele**	**42.41**	**82**	P	**P**	**10 47 38.6**	**+1.2**
	baz=307,SNR=75						
EDW2	**Edwards Air Fo**	**42.59**	**91**	P	**P**	**10 47 39.3**	**+0.5**
	baz=312,SNR=7.7						
LAO	**LASA Array**	**42.60**	**70**	IAmb	IAmb	10 47 54.7	
	comp=Z,102nm,1.3s						
LAO	**LASA Array**	**42.60**	**70**	P	**P**	**10 47 39.3**	**+0.5**
	baz=303,SNR=25						
LAO	**LASA Array**	**42.60**	**70**	P	**P**	**10 47 39.8**	**+1.0**
	baz=303,SNR=25						
TCUT	**Toone Canyon**	**42.71**	**79**	IAmb	IAmb	10 47 55.7	
	comp=Z,73nm,0.8s						
PRN	**Pahroc Range**	**42.77**	**86**	IAmb	IAmb	10 47 43.4	
	comp=Z,46nm,0.9s						
DECC	**Green Verdugo**	**42.80**	**92**	P	**P**	**10 47 40.9**	**+0.5**
	baz=312						
DGMT	**Dagmar**	**42.80**	**66**	IAmb	IAmb	10 47 55.7	
	comp=Z,228nm,1.6s						
DGMT	**Dagmar**	**42.80**	**66**	P	**P**	**10 47 40.7**	**+0.4**
	baz=302,SNR=14						
DGMT	**Dagmar**	**42.80**	**66**	P	**P**	**10 47 40.7**	**+0.4**
	baz=302,SNR=14						
BW06	**Boulder Array**	**42.85**	**76**	IAmb	IAmb	10 47 42.6	
	comp=Z,125nm,0.8s						
BW06	**Boulder Array**	**42.85**	**76**	P	**P**	**10 47 41.8**	**+0.8**
	baz=306,SNR=218						
PD31	**Pinedale Array**	**42.85**	**76**	IAmb	IAmb	10 47 42.6	
	comp=Z,110nm,0.8s						
PDAR	**Pinedale Array**	**42.85**	**76**	P	**P**	**10 47 41.7**	**+0.7**
	comp=Z,103nm,0.6s,baz=302,slow=4.3,SNR=1158						
PDAR				pP	**pP**	**10 47 55.9**	**0.0**
	comp=Z,78nm,0.5s,baz=300,slow=3.4,SNR=25						
PDAR				ScP	**ScP**	**10 53 16.9**	**+0.1**
	comp=Z,1.2nm,1.0s,baz=267,slow=3.6,SNR=3.1						
PDAR				PKiKP	**PKiKP**	**10 56 33.3**	**-1.3**
	comp=Z,0.5nm,0.9s,baz=221,slow=1.0,SNR=2.8						
PDAR				LR	LR	11 03 01.4	
	comp=Z,135nm,21.7s,baz=315,slow=32						
FCC	**Fort Churchill**	**42.94**	**49**	IAmb	IAmb	10 47 41.8	
	comp=Z,37nm,0.6s						
KSRS	**Korea Array**	**42.98**	**274**	P	**P**	**10 47 42.1**	**+0.3**
	comp=Z,7.8nm,0.6s,baz=56,slow=7.5,SNR=41						
KSRS				PcP	**PcP**	**10 49 32.2**	**+1.0**
	comp=Z,26nm,0.7s,baz=69,slow=3.8,SNR=41						
KSRS				pPcP		10 49 47.6	
	comp=Z,12nm,0.7s,baz=75,slow=3.8,SNR=8.9						
KSRS				ScP	**ScP**	**10 53 16.6**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=63,slow=5.1,SNR=2.8						
KSRS				LR	LR	11 04 33.4	
	comp=Z,125nm,21.6s,baz=60,slow=35						
	comp=Z,7.8nm,0.6s						
SHOC	**Shoshone, Teco**	**42.98**	**89**	P	**P**	**10 47 43.2**	**+1.3**
	baz=311,SNR=10						
NLU	**North Lily Min**	**43.00**	**81**	IAmb	IAmb	10 47 44.2	
	comp=Z,45nm,0.8s						
GSC	**Goldstone, Bar**	**43.04**	**90**	IAmb	IAmb	10 47 44.5	
	comp=Z,62nm,1.0s						
GSC	**Goldstone, Bar**	**43.04**	**90**	P	**P**	**10 47 43.7**	**+1.2**
	baz=311,SNR=64						
TULEG	**Thule**	**43.15**	**19**	P	**P**	**10 47 43.2**	**+0.5**
TULEG	**Thule**	**43.15**	**19**	*e*P	**P**	**10 47 42.6**	**-0.1**
TULEG				IAmb	IAmb	10 47 43.6	
	comp=Z,13nm,0.8s						
TULEG				*e*PcP	**PcP**	**10 49 31.0**	**-0.2**
FMP	**Fort Macarthur**	**43.18**	**93**	P	**P**	**10 47 43.9**	**+0.4**
	baz=312						
BFSC	**Mount Baldy Ra**	**43.22**	**92**	P	**P**	**10 47 44.4**	**+0.4**
	baz=312,SNR=23						
MPU	**Maple Canyon**	**43.23**	**81**	P	**P**	**10 47 44.8**	**+0.6**
CIS	**Catalina Islan**	**43.32**	**93**	P	**P**	**10 47 45.1**	**+0.5**
	baz=313						
TUQ	**Turquoise Moun**	**43.50**	**89**	P	**P**	**10 47 47.1**	**+0.9**
	baz=311,SNR=16						
HEC	**Hector,Ludlow**	**43.65**	**90**	P	**P**	**10 47 48.1**	**+0.8**
	baz=312,SNR=15						
BBRC	**Big Bear Solar**	**43.66**	**91**	P	**P**	**10 47 48.2**	**+0.5**
	baz=312,SNR=8.0						
MVU	**Marysvale**	**43.82**	**83**	IAmb	IAmb	10 48 06.1	
	comp=Z,101nm,0.8s						
TMUT	**Trail Mountain**	**43.94**	**81**	IAmb	IAmb	10 47 52.2	
	comp=Z,74nm,0.8s						
MURC	**Murrieta**	**43.94**	**92**	P	**P**	**10 47 50.1**	**+0.5**
	baz=313,SNR=8.9						
JNU	**Nakatsue**	**44.00**	**267**	LR	LR	11 04 56.6	
	comp=Z,274nm,21.9s,baz=46,slow=34						
JNU	**Nakatsue**	**44.00**	**267**	P	**P**	**10 47 51.3**	**+1.1**
TJN	**Taejon**	**44.01**	**273**	IAmb	IAmb	10 47 52.4	
	comp=Z,119nm,0.6s						
TJN	**Taejon**	**44.01**	**273**	P	**P**	**10 47 51.3**	**+1.2**
TJN	**Taejon**	**44.01**	**273***c*	*i*P	**P**	**10 47 50.9**	**+0.8**
GMRC	**Granite Mounta**	**44.09**	**90**	P	**P**	**10 47 51.8**	**+0.8**
	baz=312,SNR=33						
P17A	**Butcher Ranch,**	**44.11**	**81**	IAmb	IAmb	10 48 07.1	
	comp=Z,46nm,0.9s						
RDMU	**Red Mountain**	**44.15**	**79**	IAmb	IAmb	10 47 53.5	
	comp=Z,115nm,0.8s						
Q16A	**Castle Valley**	**44.19**	**82**	IAmb	IAmb	10 48 08.7	
	comp=Z,154nm,1.5s						
P18A	**Preston Nutter**	**44.32**	**80**	IAmb	IAmb	10 48 09.0	
	comp=Z,74nm,1.0s						
PFO	**Pinyon Flats O**	**44.38**	**92**	LR	LR	11 02 47.3	
	comp=Z,163nm,20.6s,baz=292,slow=31						
PFO	**Pinyon Flats O**	**44.38**	**92**	P	**P**	**10 47 54.0**	**+0.7**
PFO	**Pinyon Flats O**	**44.38**	**92**	P	**P**	**10 47 54.0**	**+0.7**
PFO				pmax	pmax		
	comp=Z,18nm,1.1s						
PFO	**Pinyon Flats O**	**44.38**	**92**	P	**P**	**10 47 53.6**	**+0.3**
	baz=312,SNR=11						
PFO	**Pinyon Flats O**	**44.38**	**92**	P	**P**	**10 47 54.0**	**+0.7**
PFO				pP	**pP**	**10 48 08.0**	**-0.2**
PFO				PcP	**PcP**	**10 49 36.8**	**+0.5**
PFO				ScP	**ScP**	**10 53 22.6**	**-0.5**
TPFO	**Pinon Flats**	**44.39**	**92**	P	**P**	**10 47 53.6**	**+0.3**
	baz=312,SNR=11						
BELC	**Belle Mtn. Jos**	**44.40**	**91**	P	**P**	**10 47 54.0**	**+0.6**
	baz=312,SNR=22						
SRU	**San Rafael Swe**	**44.47**	**81**	IAmb	IAmb	10 47 56.8	
	comp=Z,71nm,0.8s						
109C	**Camp Elliot, M**	**44.47**	**93**	P	**P**	**10 47 54.8**	**+0.9**
	baz=313,SNR=9.3						
K22A	**Casper**	**44.73**	**75**	IAmb	IAmb	10 48 11.0	
	comp=Z,87nm,0.9s						
K22A	**Casper**	**44.73**	**75**	P	**P**	**10 47 56.0**	**0.0**
	baz=306,SNR=40						
K22A	**Casper**	**44.73**	**75**	P	**P**	**10 47 56.1**	**+0.1**
	baz=306,SNR=40						
NEE2	**Needles Airpor**	**44.74**	**89**	P	**P**	**10 47 56.6**	**+0.6**
	baz=312						
IRM	**Iron Mountain**	**44.83**	**90**	P	**P**	**10 47 57.1**	**+0.4**
	baz=312,SNR=21						
MONP2	**Monument Peak**	**44.89**	**92**	P	**P**	**10 47 58.1**	**+0.7**
	baz=313,SNR=16						
RWWY	**Rawlins**	**44.89**	**76**	IAmb	IAmb	10 47 58.5	
	comp=Z,80nm,0.8s						
BC3	**Big Chuckawall**	**44.97**	**91**	P	**P**	**10 47 58.2**	**+0.2**
	baz=312,SNR=9.6						
HMU	**Henry Mountain**	**45.07**	**83**	IAmb	IAmb	10 48 15.4	
	comp=Z,82nm,0.8s						
U15A	**North Rim**	**45.09**	**85**	IAmb	IAmb	10 48 01.5	
	comp=Z,132nm,1.6s						
O20A	**White River Ci**	**45.22**	**79**	P	**P**	**10 48 00.6**	**+0.6**
	baz=308,SNR=157						
SWSC	**Sam W. Stewart**	**45.24**	**92**	P	**P**	**10 48 00.5**	**+0.6**
	baz=313,SNR=5.7						
IKP	**In-Ko-Pah, Jac**	**45.25**	**92**	P	**P**	**10 48 00.9**	**+0.8**
	baz=313,SNR=15						
RSSD	**Black Hills**	**45.32**	**71**	P	**P**	**10 48 00.6**	**-0.2**
RSSD				IAmb	IAmb	10 49 40.7	
	comp=Z,34nm,0.7s						
RSSD	**Black Hills**	**45.32**	**71**	P	**P**	**10 48 00.6**	**-0.2**
RSSD				pmax	pmax		
	comp=Z,34nm,0.7s						
RSSD	**Black Hills**	**45.32**	**71**	P	**P**	**10 48 00.7**	**-0.1**
	baz=306						
RSSD	**Black Hills**	**45.32**	**71**	P	**P**	**10 48 00.6**	**-0.2**
	baz=306,SNR=26						
RSSD	**Black Hills**	**45.32**	**71**	P	**P**	**10 48 00.8**	**-0.1**
RSSD				pP	**pP**	**10 48 15.1**	**-0.5**
RSSD				PcP	**PcP**	**10 49 39.9**	**+0.4**
PDMCI	**Parker Dam,Lak**	**45.35**	**89**	P	**P**	**10 48 01.4**	**+0.7**
	baz=312,SNR=21						
JSU	**Suzuyama**	**45.37**	**266**	IAmb	IAmb	10 48 03.1	
	comp=Z,101nm,1.2s						
JSU	**Suzuyama**	**45.37**	**266**	P	**P**	**10 48 01.8**	**+0.8**
BLYC	**Blythe**	**45.48**	**90**	IAmb	IAmb	10 48 03.6	
	comp=Z,33nm,0.8s						
MDND	**Maddock**	**45.71**	**65**	P	**P**	**10 48 04.0**	**+0.5**
	baz=304,SNR=7.4						
MDND	**Maddock**	**45.71**	**65**	P	**P**	**10 48 04.3**	**+0.8**
	baz=304,SNR=7.4						
GLA	**Glamis**	**45.77**	**91**	IAmb	IAmb	10 48 05.9	
	comp=Z,35nm,0.9s						
GLA	**Glamis**	**45.77**	**91**	P	**P**	**10 48 05.0**	**+0.9**
	baz=313,SNR=10.0						
PV23	**Carpenter Ridg**	**45.80**	**81**	IAmb	IAmb	10 48 20.1	
	comp=Z,80nm,1.1s						
E28A	**Huff**	**45.83**	**67**	P	**P**	**10 48 04.9**	**+0.5**
	baz=305,SNR=17						
PV10	**Paradox Valley**	**45.83**	**81**	IAmb	IAmb	10 48 21.2	
	comp=Z,80nm,0.8s						
NEEM	**North Greenlan**	**45.84**	**15**	*e*P	**P**	**10 48 04.7**	**+0.2**
NEEM				IAmb	IAmb	10 48 05.2	
	comp=Z,64nm,0.7s						
NEEM				*e*PcP	**PcP**	**10 49 40.6**	**-0.2**
NOR	**Nord**	**45.89**	**5**	*e*P	**P**	**10 48 04.2**	**-0.3**
NOR				IAmb	IAmb	10 48 06.8	
	comp=Z,8.0nm,1.0s						
NOR				*e*PcP	**PcP**	**10 49 40.2**	**-0.3**
DL2	**Dalian**	**45.91**	**280**	*e*P	**P**	**10 48 03.9**	**-1.2**
DL2				pmax	pmax		
	comp=Z,29nm,0.8s						
PV11	**David Mesa, Pa**	**45.98**	**81**	IAmb	IAmb	10 48 22.5	
	comp=Z,77nm,0.7s						
PV07	**Paradox Valley**	**46.03**	**81**	IAmb	IAmb	10 48 08.4	
	comp=Z,42nm,0.9s						
N23A	**Red Feather La**	**46.13**	**76**	IAmb	IAmb	10 48 23.6	
	comp=Z,123nm,1.1s						
N23A	**Red Feather La**	**46.13**	**76**	P	**P**	**10 48 07.9**	**+0.6**
	baz=308,SNR=30						
XLT	**XiLinHaoTe**	**46.16**	**289**	*e*P	**P**	**10 48 07.9**	**+0.7**
XLT				PcP	**PcP**	**10 49 42.6**	**+0.4**
XLT				PP	**PP**	**10 50 00.2**	**+4.1**
XLT				S	**S**	**10 54 43.0**	**-6.0**
XLT				pmax	pmax		
	comp=Z,8.0nm,1.0s						
XLT				pmax	pmax		
	comp=Z,93nm,5.7s						
XLT				LR	LR		
	comp=Z,23nm,20.3s						
XLT				LR	LR		
	comp=Z,220nm,21.8s						
XLT				LR	LR		
	comp=Z,230nm,22.8s						
PV15	**Paradox Valley**	**46.19**	**81**	IAmb	IAmb	10 48 23.5	
	comp=Z,87nm,1.1s						
WUAZ	**Wupatki**	**46.25**	**86**	IAmb	IAmb	10 48 10.2	
	comp=Z,117nm,1.6s						
WUAZ	**Wupatki**	**46.25**	**86**	P	**P**	**10 48 09.3**	**+1.2**
	baz=311,SNR=33						
ULM	**Lac du Bonnet**	**46.40**	**60**	P	**P**	**10 48 08.5**	**-0.3**
	comp=Z,69nm,0.5s,baz=305,slow=7.8,SNR=129						
ULM				pP	**pP**	**10 48 22.8**	**-1.1**
	comp=Z,15nm,0.5s,baz=302,slow=9.2,SNR=5.0						
ULM				LR	LR	11 07 34.2	
	comp=Z,188nm,20.8s,baz=302,slow=36						
	comp=Z,69nm,0.5s						
SMCO	**Snowmass**	**46.58**	**79**	IAmb	IAmb	10 48 12.1	
	comp=Z,24nm,0.7s						
KULLO	**Kullorsuaq**	**46.65**	**19**	*e*P	**P**	**10 48 10.6**	**+0.1**
KULLO				IAmb	IAmb	10 48 11.3	
	comp=Z,15nm,0.9s						
MVCO	**Mesa Verde**	**46.91**	**82**	P	**P**	**10 48 13.8**	**+0.5**
	baz=310,SNR=25						
ISCO	**Idaho Springs**	**47.01**	**77**	P	**P**	**10 48 14.9**	**+0.7**
	baz=309,SNR=17						
ISCO	**Idaho Springs**	**47.01**	**77**	P	**P**	**10 48 14.9**	**+0.7**
	baz=309,SNR=17						
W18A	**Petrified Fore**	**47.51**	**85**	IAmb	IAmb	10 48 34.8	
	comp=Z,51nm,1.1s						
W18A	**Petrified Fore**	**47.51**	**85**	P	**P**	**10 48 19.1**	**+1.0**
	baz=312,SNR=8.0						
AGMN	**Agassiz Nation**	**47.52**	**62**	P	**P**	**10 48 17.2**	**-0.4**
	baz=305,SNR=50						
AGMN	**Agassiz Nation**	**47.52**	**62**	P	**P**	**10 48 17.2**	**-0.4**
	baz=306,SNR=50						
D32A	**Dogwood Acres,**	**47.56**	**64**	IAmb	IAmb	10 48 18.4	
	comp=Z,83nm,0.9s						
D32B	**Dogwood Acres,**	**47.56**	**64**	P	**P**	**10 48 17.5**	**-0.5**
	baz=306,SNR=7.0						
S22A	**4UR Ranch, Cre**	**47.58**	**80**	IAmb	IAmb	10 48 35.7	
	comp=Z,65nm,1.3s						
S22A	**4UR Ranch, Cre**	**47.58**	**80**	P	**P**	**10 48 19.9**	**+1.3**
	baz=310,SNR=49						
214A	**Organ Pipe Nat**	**47.75**	**90**	P	**P**	**10 48 20.4**	**+0.7**
	baz=314,SNR=15						
X18A	**Snowflake**	**47.77**	**86**	IAmb	IAmb	10 48 37.2	
	comp=Z,41nm,1.3s						
Q24A	**Divide**	**47.81**	**78**	IAmb	IAmb	10 48 22.1	
	comp=Z,23nm,0.7s						
Q24A	**Divide**	**47.81**	**78**	P	**P**	**10 48 21.1**	**+0.7**
	baz=310,SNR=17						
SUSD	**Miller**	**48.07**	**68**	P	**P**	**10 48 21.7**	**-0.2**
	baz=307,SNR=9.7						
SUSD	**Miller**	**48.07**	**68**	P	**P**	**10 48 21.5**	**-0.5**
	baz=307,SNR=9.7						
UPNV	**Upernavik**	**48.08**	**21**	*e*P	**P**	**10 48 21.9**	**+0.2**
UPNV				IAmb	IAmb	10 48 22.8	
	comp=Z,29nm,0.7s						
SDCO	**Great Sand Dun**	**48.38**	**79**	IAmb	IAmb	10 48 26.8	
	comp=Z,53nm,0.8s						
SDCO	**Great Sand Dun**	**48.38**	**79**	P	**P**	**10 48 25.6**	**+0.9**
	baz=310,SNR=67						
SDCO	**Great Sand Dun**	**48.38**	**79**	P	**P**	**10 48 25.8**	**+1.0**
	baz=310,SNR=67						
OGNE	**Ogallala**	**48.42**	**74**	P	**P**	**10 48 25.5**	**+0.6**
	baz=309,SNR=12						
OGNE	**Ogallala**	**48.42**	**74**	P	**P**	**10 48 25.8**	**+0.9**
	baz=309,SNR=12						
B35A	**Bob, Littlefor**	**48.64**	**61**	P	**P**	**10 48 25.8**	**-0.5**
	baz=306,SNR=25						
F33A	**5 Mile Ranch,**	**48.73**	**65**	IAmb	IAmb	10 48 27.3	
	comp=Z,55nm,1.2s						
F33A	**5 Mile Ranch,**	**48.73**	**65**	P	**P**	**10 48 26.4**	**-0.6**
	baz=307,SNR=6.9						
TUC	**Tucson**	**48.76**	**88**	P	**P**	**10 48 28.2**	**+0.8**
TUC	**Tucson**	**48.76**	**88**	P	**P**	**10 48 28.3**	**+0.8**
TUC				pmax	pmax		
	comp=Z,24nm,1.0s						
TUC	**Tucson**	**48.76**	**88**	P	**P**	**10 48 28.3**	**+0.8**
	baz=313						
TUC	**Tucson**	**48.76**	**88**	P	**P**	**10 48 28.3**	**+0.8**
TUC				pP	**pP**	**10 48 42.5**	**-0.1**
TUC				sP	**sP**	**10 48 49.4**	**+0.2**
TUC				PcP	**PcP**	**10 49 52.4**	**+0.7**
ULN	**Ulaanbaatar**	**48.90**	**298**	P	**P**	**10 48 28.5**	**0.0**
ULN	**Ulaanbaatar**	**48.90**	**298**	P	**P**	**10 48 28.5**	**0.0**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ULN	**Ulaanbaatar**	**48.90**	**298**	P	**P**	**10 48 28.7**	**+0.3**
ULN				PcP	**PcP**	**10 49 51.9**	**-0.1**
KBS	**Kingsbay**	**49.13**	**359**	*i* P	**P**	**10 48 30.4**	**+0.8**
KBS	**Kingsbay**	**49.13**	**359**	*e*P	**P**	**10 48 30.4**	**+0.8**
KBS				IAmb	IAmb	10 48 33.0	
	comp=Z,15nm,0.8s						
KBS	**Kingsbay**	**49.13**	**359**	P	**P**	**10 48 32.0**	**+2.4**
KBS				pP	**pP**	**10 48 46.9**	**+2.3**
KBS				sP	**sP**	**10 48 53.3**	**+2.2**
KBS				PcP	**PcP**	**10 49 52.4**	**+0.3**
SONM	**Songino Array**	**49.27**	**299**	P	**P**	**10 48 31.5**	**+0.2**
	comp=Z,4.6nm,0.7s,baz=55,slow=6.8,SNR=28						
SONM				PcP	**PcP**	**10 49 53.4**	**0.0**
	comp=Z,6.2nm,0.7s,baz=88,slow=2.0,SNR=8.0						
SONM				ScP	**ScP**	**10 53 42.1**	**-1.2**
	comp=Z,1.6nm,0.9s,baz=54,slow=3.3,SNR=4.9						
SONM				LR	LR	11 09 40.2	
	comp=Z,689nm,20.5s,baz=46,slow=36						
	comp=Z,4.6nm,0.7s						
SONM	**Songino Array**	**49.27**	**299**	P	**P**	**10 48 31.5**	**+0.2**
KSCO	**Kaye Shedlock’**	**49.30**	**76**	P	**P**	**10 48 32.6**	**+1.0**
	baz=310,SNR=29						
KSCO	**Kaye Shedlock’**	**49.30**	**76**	P	**P**	**10 48 32.6**	**+1.0**
	baz=310,SNR=29						
K31A	**O'Neill**	**49.30**	**70**	IAmb	IAmb	10 48 46.6	
	comp=Z,66nm,0.8s						
K31A	**O'Neill**	**49.30**	**70**	P	**P**	**10 48 31.6**	**+0.1**
	baz=308,SNR=6.4						
ZAK	**Zakamensk**	**49.40**	**303**	*e*P	**P**	**10 48 31.9**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
T25A	**Trinidad**	**49.43**	**79**	P	**P**	**10 48 33.9**	**+1.1**
	baz=311,SNR=115						
NUUG	**Nuugaatsiaq**	**49.60**	**21**	*e*P	**P**	**10 48 33.8**	**+0.5**
NUUG				IAmb	IAmb	10 48 34.5	
	comp=Z,7.3nm,0.6s						
ANMO	**Albuquerque**	**49.64**	**83**	LR	LR	11 07 11.1	
	comp=Z,172nm,21.4s,baz=40,slow=33						
ANMO	**Albuquerque**	**49.64**	**83**	P	**P**	**10 48 34.7**	**+0.4**
ANMO	**Albuquerque**	**49.64**	**83**	P	**P**	**10 48 34.7**	**+0.4**
ANMO				pmax	pmax		
	comp=Z,28nm,1.2s						
ANMO	**Albuquerque**	**49.64**	**83**	P	**P**	**10 48 34.9**	**+0.6**
	baz=312						
ANMO	**Albuquerque**	**49.64**	**83**	P	**P**	**10 48 34.9**	**+0.6**
	baz=312,SNR=41						
ANMO	**Albuquerque**	**49.64**	**83**	P	**P**	**10 48 34.9**	**+0.6**
ANMO				pP	**pP**	**10 48 49.3**	**-0.2**
ANMO				PcP	**PcP**	**10 49 56.2**	**+1.3**
DUN6	**Lazy B Ranch**	**49.64**	**87**	IAmb	IAmb	10 48 51.2	
	comp=Z,123nm,1.6s						
SPA0	**Spitsbergen Ar**	**49.78**	**357**	*e*P	**P**	**10 48 34.5**	**-0.2**
SPA0				IAmb	IAmb	10 48 37.2	
	comp=Z,14nm,0.8s						
SPITS	**Spitsbergen Ar**	**49.78**	**357**	LR	LR	11 08 47.6	
	comp=Z,328nm,22.0s,baz=338,slow=35						
SPB2	**Spitsbergen Ar**	**49.79**	**357**	P	**P**	**10 48 34.6**	**0.0**
SPB2				IAmb	IAmb	10 48 57.9	
	comp=Z,42nm,1.0s						
MOY	**Mondy**	**49.80**	**306**	*e*P	**P**	**10 48 33.7**	**-1.5**
MOY				pmax	pmax		
	comp=Z,11nm,1.4s						
ECSD	**EROS Data Cent**	**49.84**	**67**	P	**P**	**10 48 34.4**	**-1.1**
ECSD				IAmb	IAmb	10 48 49.8	
	comp=Z,24nm,0.9s						
ECSD	**EROS Data Cent**	**49.84**	**67**	P	**P**	**10 48 34.6**	**-0.9**
	baz=308,SNR=29						
ECSD	**EROS Data Cent**	**49.84**	**67**	P	**P**	**10 48 34.6**	**-0.9**
	baz=308,SNR=29						
Y22D	**IRIS PASSCAL I**	**49.94**	**84**	IAmb	IAmb	10 48 53.4	
	comp=Z,64nm,0.9s						
Y22D	**IRIS PASSCAL I**	**49.94**	**84**	P	**P**	**10 48 37.9**	**+1.3**
	baz=312						
Y22F	**Passcal Instru**	**49.94**	**84**	P	**P**	**10 48 37.8**	**+1.3**
	baz=312						
Y22A	**Socorro**	**50.00**	**84**	P	**P**	**10 48 38.5**	**+1.4**
	baz=313,SNR=46						
JOW	**Kunigami**	**50.03**	**263**	LR	LR	11 08 39.8	
	comp=Z,49nm,21.7s,baz=342,slow=35						
BNM	**Barren Site**	**50.06**	**84**	P	**P**	**10 48 39.1**	**+1.5**
BNM				PcP	**PcP**	**10 49 58.2**	**+1.6**
EYMN	**Ely**	**50.08**	**60**	IAmb	IAmb	10 48 37.7	
	comp=Z,109nm,1.1s						
EYMN	**Ely**	**50.08**	**60**	P	**P**	**10 48 36.8**	**-0.5**
	baz=307,SNR=8.8						
EYMN	**Ely**	**50.08**	**60**	P	**P**	**10 48 36.8**	**-0.5**
	baz=307,SNR=8.8						
F36A	**Milaca**	**50.25**	**63**	IAmb	IAmb	10 48 39.0	
	comp=Z,55nm,1.1s						
F36A	**Milaca**	**50.25**	**63**	P	**P**	**10 48 37.8**	**-0.8**
	baz=308,SNR=17						
319A	**Douglas**	**50.33**	**88**	IAmb	IAmb	10 48 56.3	
	comp=Z,96nm,1.9s						
DAG	**Danmarks Havn**	**50.33**	**7**	*i* P	**P**	**10 48 38.2**	**-0.6**
DAG				IAmb	IAmb	10 48 39.7	
	comp=Z,16nm,1.0s						
BGNE	**Belgrade**	**50.41**	**71**	P	**P**	**10 48 39.7**	**-0.1**
	baz=309,SNR=9.5						
BGNE	**Belgrade**	**50.41**	**71**	P	**P**	**10 48 39.9**	**0.0**
	baz=310,SNR=9.5						
121A	**Cookes Peak, D**	**50.45**	**86**	P	**P**	**10 48 41.5**	**+1.0**
	baz=313,SNR=18						
121A	**Cookes Peak, D**	**50.45**	**86**	P	**P**	**10 48 41.5**	**+1.0**
	baz=314,SNR=18						
FRB	**Frobisher Bay**	**50.54**	**34**	LR	LR	11 11 41.1	
	comp=Z,601nm,18.6s,baz=328,slow=38						
HHC	**Hu-ho-hao-te**	**50.68**	**289**	*e*P	**P**	**10 48 43.3**	**+1.3**
HHC				pmax	pmax		
	comp=Z,26nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,4.1s						
HHC				LR	LR		
	comp=Z,350nm,17.8s						
HHC				LR	LR		

	comp=Z,380nm,17.1s						
HHC				LR	LR		
	comp=Z,350nm,16.5s						
E38A	**The Farm, Brul**	**50.87**	**62**	P	**P**	**10 48 42.7**	**-0.5**
	baz=308,SNR=12						
GUMO	**Guam**	**50.90**	**237**	P	**P**	**10 48 41.8**	**-2.0**
	comp=Z,138nm,0.6s,baz=189,slow=5.1,SNR=11						
GUMO				LR	LR	11 08 06.4	
	comp=Z,74nm,21.0s,baz=82,slow=33						
GUMO	**Guam**	**50.90**	**237**	P	**P**	**10 48 42.2**	**-1.6**
GUMO				pP	**pP**	**10 48 57.2**	**-1.8**
SPMN	**Marine on St.**	**51.05**	**64**	IAmb	IAmb	10 48 45.2	
	comp=Z,86nm,1.2s						
SPMN	**Marine on St.**	**51.05**	**64**	P	**P**	**10 48 44.2**	**-0.4**
	baz=309,SNR=15						
SPMN	**Marine on St.**	**51.05**	**64**	P	**P**	**10 48 44.1**	**-0.4**
	baz=309,SNR=15						
HNS	**HongShan**	**51.05**	**283**	⇑P	**P**	**10 48 46.0**	**+1.3**
HNS				pP	**pP**	**10 49 01.0**	**+1.1**
HNS				PcP	**PcP**	**10 50 00.4**	**+0.6**
HNS				*e*S	**S**	**10 55 59.3**	**+1.6**
HNS				pmax	pmax		
	comp=Z,24nm,0.7s						
HNS				LR	LR		
	comp=Z,190nm,17.5s						
HNS				LR	LR		
	comp=Z,500nm,23.1s						
HNS				LR	LR		
	comp=Z,420nm,22.3s						
HOPEN	**Hopen**	**51.06**	**355**	*e*P	**P**	**10 48 45.1**	**+0.8**
HOPEN				IAmb	IAmb	10 48 47.9	
	comp=Z,52nm,1.2s						
L34A	**Svendsen Farm,**	**51.08**	**69**	P	**P**	**10 48 44.3**	**-0.6**
	baz=310,SNR=16						
CBKS	**Cedar Bluff**	**51.14**	**74**	P	**P**	**10 48 46.2**	**+0.7**
	baz=311,SNR=23						
CBKS	**Cedar Bluff**	**51.14**	**74**	P	**P**	**10 48 46.2**	**+0.7**
	baz=311,SNR=23						
N33B	**J Bar K, Exete**	**51.24**	**71**	P	**P**	**10 48 45.9**	**-0.2**
	baz=310,SNR=6.2						
I37B	**Waseca**	**51.47**	**65**	P	**P**	**10 48 47.7**	**-0.1**
	baz=309,SNR=21						
SUMG	**Summit**	**51.67**	**16**	*i* P	**P**	**10 48 49.6**	**+0.3**
SUMG				IAmb	IAmb	10 48 49.9	
	comp=Z,30nm,1.1s						
SUMG				*e*PcP	**PcP**	**10 50 02.5**	**+0.3**
BTO	**Baotou**	**51.73**	**289**	*e*P	**P**	**10 48 49.8**	**-0.1**
BTO				S	**S**	**10 56 07.3**	**0.0**
BTO				LR	LR		
	comp=Z,1µm,14.7s						
BTO				LR	LR		
	comp=Z,900nm,13.3s						
KIDD	**KIDD Seismic O**	**51.76**	**86**	P	**P**	**10 48 51.0**	**+0.7**
	baz=314,SNR=8.2						
ILULI	**Ilulissat**	**51.80**	**23**	*e*PcP	**PcP**	**10 50 01.9**	**-0.1**
R32A	**Long Quarter,**	**52.01**	**74**	P	**P**	**10 48 51.9**	**0.0**
	baz=311,SNR=33						
NJ2	**Nanjing**	**52.13**	**275**	⇓P	**P**	**10 48 53.2**	**+0.4**
NJ2				pP	**pP**	**10 49 10.3**	**+2.2**
NJ2				sP	**sP**	**10 49 18.0**	**+3.3**
NJ2				pmax	pmax		
	comp=Z,21nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,98nm,4.3s						
D41A	**Chassel**	**52.19**	**60**	P	**P**	**10 48 53.3**	**+0.2**
	baz=309						
TIY	**Taiyuan**	**52.20**	**285**	*e*P	**P**	**10 48 56.7**	**+3.3**
TIY				pmax	pmax		
	comp=Z,12nm,0.7s						
TIY				LR	LR		
	comp=Z,150nm,15.8s						
TIY				LR	LR		
	comp=Z,180nm,15.8s						
TIY				LR	LR		
	comp=Z,140nm,16.5s						
N35A	**Tabor**	**52.21**	**70**	P	**P**	**10 48 53.4**	**+0.1**
	baz=310,SNR=26						
G40A	**Rib Lake**	**52.45**	**62**	IAmb	IAmb	10 48 55.4	
	comp=Z,52nm,0.8s						
G40A	**Rib Lake**	**52.45**	**62**	P	**P**	**10 48 54.4**	**-0.6**
	baz=310,SNR=10						
COWI	**Conover**	**52.49**	**61**	IAmb	IAmb	10 48 55.4	
	comp=Z,56nm,0.9s						
COWI	**Conover**	**52.49**	**61**	P	**P**	**10 48 54.7**	**-0.7**
	baz=310						
MNTX	**Cornudas Mount**	**52.50**	**85**	P	**P**	**10 48 56.5**	**+0.9**
	baz=314,SNR=39						
MNTX	**Cornudas Mount**	**52.50**	**85**	P	**P**	**10 48 56.5**	**+0.9**
	baz=314,SNR=39						
DBG	**Daneborg**	**52.52**	**9**	*i* P	**P**	**10 48 54.5**	**-0.7**
DBG				IAmb	IAmb	10 48 56.0	
	comp=Z,15nm,1.1s						
MSTX	**Muleshoe**	**52.54**	**81**	IAmb	IAmb	10 48 58.1	
	comp=Z,96nm,0.9s						
MSTX	**Muleshoe**	**52.54**	**81**	P	**P**	**10 48 56.4**	**+0.4**
	baz=313,SNR=37						
MSTX	**Muleshoe**	**52.54**	**81**	P	**P**	**10 48 56.2**	**+0.2**
	baz=313,SNR=37						
AMTX	**Amarillo**	**52.58**	**79**	P	**P**	**10 48 56.8**	**+0.5**
	baz=313						
AMTX	**Amarillo**	**52.58**	**79**	P	**P**	**10 48 56.8**	**+0.5**
	baz=313,SNR=30						
K38A	**Parkersburg**	**52.70**	**66**	IAmb	IAmb	10 48 57.4	
	comp=Z,114nm,1.4s						
K38A	**Parkersburg**	**52.70**	**66**	P	**P**	**10 48 56.5**	**-0.5**
	baz=310,SNR=6.8						
KSU1	**Kansas State U**	**52.80**	**72**	IAmb	IAmb	10 48 58.1	
	comp=Z,84nm,0.8s						
KSU1	**Kansas State U**	**52.80**	**72**	P	**P**	**10 48 57.1**	**-0.6**
	baz=311,SNR=27						
KSU1	**Kansas State U**	**52.80**	**72**	P	**P**	**10 48 57.1**	**-0.6**
	baz=311,SNR=27						
SCIA	**State Center**	**52.93**	**67**	P	**P**	**10 48 58.2**	**-0.4**
	baz=310,SNR=7.2						
SCIA	**State Center**	**52.93**	**67**	P	**P**	**10 48 58.5**	**-0.1**
	baz=311,SNR=7.2						
I40A	**Norwalk**	**53.10**	**64**	IAmb	IAmb	10 49 00.8	
	comp=Z,46nm,0.8s						
I40A	**Norwalk**	**53.10**	**64**	P	**P**	**10 48 59.2**	**-0.6**
	baz=310,SNR=7.4						
U32A	**Winter Ranch,**	**53.19**	**76**	P	**P**	**10 49 00.9**	**+0.2**
	baz=312,SNR=39						
F42A	**Maple Grove Fa**	**53.25**	**61**	P	**P**	**10 49 00.9**	**0.0**
	baz=310,SNR=7.8						
OK032	**Salt Plains WL**	**53.38**	**75**	IAmb	IAmb	10 49 02.7	
	comp=Z,77nm,1.0s						
KAN01	**Argonia South**	**53.41**	**75**	IAmb	IAmb	10 49 16.9	
	comp=Z,75nm,1.1s						
KAN14	**Manchester OK**	**53.42**	**75**	IAmb	IAmb	10 49 02.2	
	comp=Z,24nm,0.8s						
E43A	**Lone Tree Farm**	**53.46**	**59**	P	**P**	**10 49 01.8**	**-0.6**
	baz=310,SNR=13						
SFJD	**Kangerlussuaq**	**53.60**	**24**	LR	LR	11 13 52.0	
	comp=Z,255nm,21.3s,baz=328,slow=38						
SFJD	**Kangerlussuaq**	**53.60**	**24**	*e*P	**P**	**10 49 03.9**	**+0.8**
N38A	**Joes South For**	**53.64**	**68**	P	**P**	**10 49 03.4**	**-0.5**
	baz=311,SNR=19						
POST	**Post**	**53.93**	**81**	IAmb	IAmb	10 49 07.5	
	comp=Z,102nm,0.9s						
JFWS	**Jewell Farm**	**53.94**	**64**	IAmb	IAmb	10 49 06.3	
	comp=Z,53nm,0.8s						
JFWS	**Jewell Farm**	**53.94**	**64**	P	**P**	**10 49 04.8**	**-1.2**
	baz=311,SNR=15						
JFWS	**Jewell Farm**	**53.94**	**64**	P	**P**	**10 49 04.8**	**-1.2**
	baz=311,SNR=15						
ODSA	**Odessa**	**53.95**	**82**	IAmb	IAmb	10 49 08.0	
	comp=Z,178nm,1.6s						
L40A	**Anamosa**	**53.95**	**66**	IAmb	IAmb	10 49 06.8	
	comp=Z,34nm,0.8s						
L40A	**Anamosa**	**53.95**	**66**	P	**P**	**10 49 05.0**	**-1.1**
	baz=311,SNR=9.3						
BLOK	**Blackwell**	**54.00**	**75**	IAmb	IAmb	10 49 07.1	
	comp=Z,69nm,0.8s						
I42A	**Draeger Farm,**	**54.04**	**63**	IAmb	IAmb	10 49 07.1	
	comp=Z,63nm,0.8s						
I42A	**Draeger Farm,**	**54.04**	**63**	P	**P**	**10 49 06.2**	**-0.5**
	baz=311,SNR=8.8						
P38A	**Dawn**	**54.24**	**70**	P	**P**	**10 49 07.4**	**-0.8**
	baz=312,SNR=42						
H43A	**Windswept, Lux**	**54.28**	**62**	P	**P**	**10 49 08.0**	**-0.5**
	baz=311						
LYN	**LuoYang**	**54.30**	**282**	⇑*i*P	**P**	**10 49 10.2**	**+1.4**
LYN				PcP	**PcP**	**10 50 12.3**	**+0.1**
LYN				pmax	pmax		
	comp=Z,21nm,1.0s						
LYN				LR	LR		
	comp=Z,280nm,20.2s						
LYN				LR	LR		
	comp=Z,190nm,21.8s						
LYN				LR	LR		
	comp=Z,360nm,24.5s						
T35A	**Sooner Cattle**	**54.31**	**74**	IAmb	IAmb	10 49 09.3	
	comp=Z,63nm,0.8s						
T35B	**Sooner Cattle**	**54.31**	**74**	P	**P**	**10 49 08.3**	**-0.5**
	baz=312,SNR=22						
ICESG	**Greenland Ices**	**54.38**	**19**	*i* P	**P**	**10 49 09.2**	**-0.1**
ICESG				IAmb	IAmb	10 49 09.9	
	comp=Z,22nm,0.6s						
WMOK	**Wichita Mounta**	**54.43**	**77**	IAmb	IAmb	10 49 11.1	
	comp=Z,84nm,0.8s						
WMOK	**Wichita Mounta**	**54.43**	**77**	P	**P**	**10 49 10.2**	**+0.4**
	baz=313,SNR=69						
WMOK	**Wichita Mounta**	**54.43**	**77**	P	**P**	**10 49 09.7**	**-0.1**
	baz=313,SNR=69						
QUOK	**Quay**	**54.70**	**75**	IAmb	IAmb	10 49 12.2	
	comp=Z,58nm,0.8s						
OK025	**Westminster Rd**	**54.72**	**76**	IAmb	IAmb	10 49 12.7	
	comp=Z,67nm,0.8s						
OK053	**SW of W Deep R**	**54.76**	**75**	IAmb	IAmb	10 49 12.7	
	comp=Z,74nm,0.8s						
L42A	**Oliver, Polo**	**54.86**	**65**	IAmb	IAmb	10 49 13.0	
	comp=Z,48nm,0.9s						
L42A	**Oliver, Polo**	**54.86**	**65**	P	**P**	**10 49 11.6**	**-1.1**
	baz=312,SNR=7.4						
E46A	**Sault Ste Mari**	**54.88**	**58**	IAmb	IAmb	10 49 13.4	
	comp=Z,73nm,0.7s						
E46A	**Sault Ste Mari**	**54.88**	**58**	P	**P**	**10 49 12.6**	**-0.2**
	baz=311,SNR=9.5						
LPIG	**La Paz**	**54.91**	**95**	LR	LR	11 07 17.6	
	comp=Z,139nm,21.5s,baz=276,slow=30						
G45A	**Suttons Bay**	**55.04**	**60**	IAmb	IAmb	10 49 14.3	
	comp=Z,84nm,0.8s						
N41A	**Harden Midland**	**55.05**	**67**	P	**P**	**10 49 13.2**	**-0.9**
	baz=312,SNR=11						
DY2G	**Dye2**	**55.09**	**23**	*e*P	**P**	**10 49 13.8**	**-0.5**
DY2G				*e*PcP	**PcP**	**10 50 14.6**	**-0.4**
X34A	**Smith Ranch, M**	**55.09**	**77**	IAmb	IAmb	10 49 16.4	
	comp=Z,62nm,0.8s						
K43A	**Burlington**	**55.14**	**64**	IAmb	IAmb	10 49 14.8	
	comp=Z,95nm,1.1s						
K43A	**Burlington**	**55.14**	**64**	P	**P**	**10 49 13.9**	**-0.8**
	baz=312,SNR=5.6						
P40A	**Paris**	**55.16**	**69**	P	**P**	**10 49 14.2**	**-0.7**
	baz=312,SNR=66						
TX31	**Lajitas Ar. Si**	**55.21**	**86**	IAmb	IAmb	10 49 16.5	
	comp=Z,81nm,0.8s						
TX31	**Lajitas Ar. Si**	**55.21**	**86**	P	**P**	**10 49 16.1**	**+0.6**
	baz=315,SNR=89						
TX32	**Lajitas Array**	**55.21**	**86**	IAmb	IAmb	10 49 16.5	
	comp=Z,28nm,0.8s						
TXAR	**Lajitas Array**	**55.21**	**86**	P	**P**	**10 49 15.9**	**+0.4**
	comp=Z,20nm,0.7s,baz=298,slow=5.0,SNR=298						
TXAR				pP	**pP**	**10 49 30.2**	**-0.7**
	comp=Z,11nm,0.5s,baz=307,slow=5.6,SNR=10						
TXAR				PcP	**PcP**	**10 50 16.8**	**+0.9**
	comp=Z,10nm,0.8s,baz=246,slow=1.2,SNR=4.7						
TXAR				pPcP		10 50 32.4	
	comp=Z,13nm,0.9s,baz=290,slow=3.7,SNR=3.8						
TXAR				ScP	**ScP**	**10 54 09.2**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=298,slow=2.7,SNR=3.8						
TXAR				LR	LR	11 10 32.6	
	comp=Z,148nm,21.3s,baz=316,slow=33						
TXAR				PKP2bc		11 19 33.3	
	comp=Z,0.8nm,0.9s,baz=126,slow=6.1,SNR=3.6						
	comp=Z,20nm,0.7s						
WTFS	**Witchita Falls**	**55.29**	**78**	IAmb	IAmb	10 49 17.0	
	comp=Z,84nm,0.7s						
ABTX	**Abilene, Hawle**	**55.37**	**80**	P	**P**	**10 49 16.9**	**+0.4**
	baz=314,SNR=32						
ABTX	**Abilene, Hawle**	**55.37**	**80**	P	**P**	**10 49 17.0**	**+0.5**
	baz=314,SNR=32						
I45A	**Fountain**	**55.40**	**61**	P	**P**	**10 49 16.1**	**-0.4**
	baz=312						
I45A				P	**P**	**10 49 16.1**	**-0.4**
	baz=312						
TUL1	**Leonard**	**55.42**	**74**	IAmb	IAmb	10 49 17.5	
	comp=Z,89nm,0.9s						
TUL1	**Leonard**	**55.42**	**74**	P	**P**	**10 49 16.6**	**-0.2**
	baz=313,SNR=31						
TUL1	**Leonard**	**55.42**	**74**	P	**P**	**10 49 16.6**	**-0.2**
	baz=313,SNR=31						
SLBS	**Sierra La Lagu**	**55.44**	**95**	P	**P**	**10 49 17.0**	**-0.2**
SLBS				IAmb	IAmb	10 49 18.7	
	comp=Z,24nm,0.8s						
SLBS	**Sierra La Lagu**	**55.44**	**95**	P	**P**	**10 49 17.7**	**+0.6**
SLBS				pP	**pP**	**10 49 32.5**	**-0.1**
SLBS				PcP	**PcP**	**10 50 18.0**	**+1.2**
S39A	**Bolivar**	**55.66**	**71**	P	**P**	**10 49 16.5**	**-2.0**
S39A				IAmb	IAmb	10 49 17.4	
	comp=Z,32nm,0.7s						
S39A	**Bolivar**	**55.66**	**71**	P	**P**	**10 49 16.5**	**-2.0**
	baz=313,SNR=28						
RLO	**Rose Lookout**	**55.70**	**74**	IAmb	IAmb	10 49 18.8	
	comp=Z,76nm,0.5s						
L44A	**Lake County Fo**	**55.72**	**64**	IAmb	IAmb	10 49 19.1	
	comp=Z,94nm,0.9s						
L44A	**Lake County Fo**	**55.72**	**64**	P	**P**	**10 49 18.0**	**-0.9**
	baz=312						
GLMI	**Grayling**	**55.74**	**59**	P	**P**	**10 49 18.8**	**-0.2**
	baz=312,SNR=11						
GLMI	**Grayling**	**55.74**	**59**	P	**P**	**10 49 18.8**	**-0.2**
	baz=312,SNR=11						
YHNB	**Yeheng**	**55.84**	**267**	IAmb	IAmb	10 49 21.1	
	comp=Z,22nm,0.6s						
R40A	**Maddies Statio**	**55.87**	**70**	P	**P**	**10 49 18.4**	**-1.6**
	baz=313,SNR=78						
ZAA0	**Zalesovo Array**	**55.88**	**316**	P	**P**	**10 49 19.0**	**-0.9**
ZALV	**Zalesovo Beam**	**55.88**	**316**	P	**P**	**10 49 19.1**	**-0.8**
	comp=Z,1.3nm,0.5s,baz=40,slow=7.8,SNR=8.7						
ZALV				PcP	**PcP**	**10 50 17.7**	**-0.2**
	comp=Z,2.8nm,0.6s,baz=32,slow=4.9,SNR=5.1						
ZALV				PKiKP	**PKiKP**	**10 56 46.1**	**-1.5**
	comp=Z,0.5nm,0.2s,baz=162,slow=1.4,SNR=3.8						
ZALV				LR	LR	11 13 45.6	
	comp=Z,277nm,21.8s,baz=48,slow=36						
	comp=Z,1.3nm,0.5s						
ZALV	**Zalesovo Beam**	**55.88**	**316**	P	**P**	**10 49 19.3**	**-0.6**
ZALV	**Zalesovo Beam**	**55.88**	**316**	*i* P	**P**	**10 49 20.1**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
U38A	**Gravette**	**55.89**	**73**	IAmb	IAmb	10 49 20.1	
	comp=Z,50nm,0.8s						
U38A	**Gravette**	**55.89**	**73**	P	**P**	**10 49 19.3**	**-0.8**
	baz=313,SNR=38						
LOOK	**Love County**	**55.91**	**77**	P	**P**	**10 49 21.0**	**+0.6**
SCO	**Scoresbysund**	**55.93**	**11**	P	**P**	**10 49 19.1**	**-0.8**
SCO				IAmb	IAmb	10 49 38.1	
	comp=Z,59nm,2.0s						
SCO	**Scoresbysund**	**55.93**	**11**	P	**P**	**10 49 19.1**	**-0.8**
SCO				pmax	pmax		
	comp=Z,59nm,2.0s						
SCO	**Scoresbysund**	**55.93**	**11**	*i* P	**P**	**10 49 19.9**	**0.0**
SCO				IAmb	IAmb	10 49 20.9	
	comp=Z,8.0nm,0.7s						
WHN	**Wuhan**	**55.94**	**277**	⇑P	**P**	**10 49 22.6**	**+2.0**
WHN				PcP	**PcP**	**10 50 18.8**	**+0.3**
WHN				S	**S**	**10 57 05.9**	**+1.8**
WHN				LR	LR		
	comp=Z,810nm,20.6s						
FW03	**Perrin-Whitt E**	**56.03**	**78**	P	**P**	**10 49 21.5**	**+0.3**
FW03				IAmb	IAmb	10 49 23.4	
	comp=Z,390nm,1.5s						
HDIL	**Hopedale**	**56.04**	**66**	IAmb	IAmb	10 49 22.0	
	comp=Z,46nm,0.7s						
HDIL	**Hopedale**	**56.04**	**66**	P	**P**	**10 49 20.3**	**-0.8**
	baz=312,SNR=16						
HDIL	**Hopedale**	**56.04**	**66**	P	**P**	**10 49 20.3**	**-0.8**
	baz=312,SNR=16						
NACB	**Ninganchiao**	**56.07**	**266**	IAmb	IAmb	10 49 22.5	
	comp=Z,48nm,1.0s						
NACB	**Ninganchiao**	**56.07**	**266**	P	**P**	**10 49 21.7**	**+0.1**
M44A	**Midewin, Midew**	**56.18**	**65**	P	**P**	**10 49 21.3**	**-0.8**
	baz=312,SNR=6.3						
HHAR	**Hobbs**	**56.26**	**73**	IAmb	IAmb	10 49 22.6	
	comp=Z,41nm,0.7s						
Z35A	**Perchaven, San**	**56.32**	**78**	P	**P**	**10 49 23.6**	**+0.3**
	baz=314,SNR=11						
FW06	**Azle**	**56.38**	**78**	IAmb	IAmb	10 49 25.1	
	comp=Z,169nm,0.7s						
FW07	**Weatherford**	**56.43**	**79**	IAmb	IAmb	10 49 25.6	
	comp=Z,165nm,0.7s						
P43A	**Skaggs, Pawnee**	**56.53**	**67**	IAmb	IAmb	10 49 25.6	
	comp=Z,51nm,0.6s						
P43A	**Skaggs, Pawnee**	**56.53**	**67**	P	**P**	**10 49 24.0**	**-0.7**
	baz=313,SNR=20						
X37A	**Clayton**	**56.57**	**75**		**P**	**10 49 25.4**	**+0.3**
X37A	**Clayton**	**56.57**	**75**	P	**P**	**10 49 25.5**	**+0.3**
	baz=314,SNR=82						
CCM	**Cathedral Cave**	**56.62**	**69**	P	**P**	**10 49 23.9**	**-1.5**
CCM				IAmb	IAmb	10 49 24.9	
	comp=Z,41nm,1.1s						
CCM	**Cathedral Cave**	**56.62**	**69**	P	**P**	**10 49 23.9**	**-1.5**
CCM				pmax	pmax		
	comp=Z,41nm,1.1s						
CCM	**Cathedral Cave**	**56.62**	**69**	P	**P**	**10 49 23.6**	**-1.7**
	baz=313						
CCM	**Cathedral Cave**	**56.62**	**69**	P	**P**	**10 49 24.0**	**-1.3**
	baz=313,SNR=20						
CCM	**Cathedral Cave**	**56.62**	**69**	P	**P**	**10 49 23.8**	**-1.5**
CCM				PcP	**PcP**	**10 50 20.9**	**-0.1**
JMIC	**Jan Mayen**	**56.68**	**6**	LR	LR	11 13 13.3	
	comp=Z,130nm,21.8s,baz=10,slow=35						
J47A	**Sunmer**	**56.69**	**61**	IAmb	IAmb	10 49 26.4	
	comp=Z,66nm,0.8s						
J47A	**Sunmer**	**56.69**	**61**	P	**P**	**10 49 25.3**	**-0.5**
	baz=313,SNR=9.0						
J47A				P	**P**	**10 49 25.3**	**-0.5**
	baz=313,SNR=9.0						
L46A	**Eue Claire**	**56.72**	**63**	P	**P**	**10 49 25.4**	**-0.6**
	baz=313,SNR=6.1						
L46A				P	**P**	**10 49 25.4**	**-0.6**
	baz=313,SNR=6.1						
SSLB	**Suanglung**	**56.75**	**267**	P	**P**	**10 49 26.7**	**+0.2**
JCT	**Junction City**	**56.77**	**82**	P	**P**	**10 49 26.1**	**-0.4**
	baz=315,SNR=24						
JCT	**Junction City**	**56.77**	**82**	P	**P**	**10 49 26.0**	**-0.6**
	baz=315,SNR=24						
O44A	**Mansfield**	**56.77**	**66**	IAmb	IAmb	10 49 27.1	
	comp=Z,27nm,0.7s						
O44A	**Mansfield**	**56.77**	**66**	P	**P**	**10 49 25.6**	**-0.9**
	baz=313,SNR=7.7						
XAN	**Xi'an**	**56.78**	**284**	P	**P**	**10 49 26.2**	**-0.4**
XAN				PcP	**PcP**	**10 50 20.1**	**-1.8**
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
XAN				LR	LR		
	comp=Z,210nm,17.8s						
XAN				LR	LR		
	comp=Z,280nm,20.6s						
XAN				LR	LR		
	comp=Z,420nm,20.9s						
SLM	**Saint Louis**	**56.80**	**68**	IAmb	IAmb	10 49 41.2	
	comp=Z,39nm,0.7s						
YULB	**Yu-li**	**56.83**	**266**	IAmb	IAmb	10 49 30.2	
	comp=Z,51nm,0.8s						
YULB	**Yu-li**	**56.83**	**266**	P	**P**	**10 49 27.4**	**+0.4**
U40A	**Yellville**	**56.84**	**72**	P	**P**	**10 49 25.8**	**-1.2**
	baz=314,SNR=37						
U40A				P	**P**	**10 49 25.8**	**-1.2**
	baz=314,SNR=37						
FW13	**Cleburne**	**56.89**	**79**	IAmb	IAmb	10 49 28.9	
	comp=Z,188nm,0.8s						
VADS	**Vadso**	**56.91**	**351**	*e*P	**P**	**10 49 27.7**	**+0.8**
VADS				IAmb	IAmb	10 49 28.8	
	comp=Z,32nm,0.7s						
FW14	**Alvarado**	**57.00**	**78**	IAmb	IAmb	10 49 29.6	
	comp=Z,158nm,0.8s						
FW16	**Waxahatchie**	**57.12**	**78**	IAmb	IAmb	10 49 30.4	
	comp=Z,76nm,0.7s						
WHTX	**Lake Whitney,**	**57.13**	**79**	P	**P**	**10 49 29.6**	**+0.5**
	baz=315,SNR=41						
WHTX	**Lake Whitney,**	**57.13**	**79**	P	**P**	**10 49 29.0**	**-0.1**
	baz=315,SNR=41						
FVM	**French Village**	**57.14**	**69**	P	**P**	**10 49 28.1**	**-1.0**
	baz=313,SNR=47						
SCHQ	**Schefferville**	**57.24**	**41**	P	**P**	**10 49 28.4**	**-1.1**
	comp=Z,13nm,0.6s,baz=320,slow=7.0,SNR=48						
SCHQ				LR	LR	11 16 25.4	
	comp=Z,276nm,18.6s,baz=1.5,slow=38						
	comp=Z,13nm,0.6s						
SCHQ	**Schefferville**	**57.24**	**41**	P	**P**	**10 49 28.5**	**-1.0**
I49A	**Point Hope**	**57.28**	**59**	P	**P**	**10 49 29.0**	**-0.9**
	baz=313						
I49A				P	**P**	**10 49 29.0**	**-0.9**
	baz=313						
TPUB	**Ta-pu**	**57.30**	**266**	IAmb	IAmb	10 49 33.2	
	comp=Z,74nm,0.9s						
TPUB	**Ta-pu**	**57.30**	**266**	P	**P**	**10 49 30.5**	**+0.1**
Q44A	**Meyer Farm, Va**	**57.31**	**67**	P	**P**	**10 49 29.2**	**-1.0**
Q44A				IAmb	IAmb	10 49 30.4	
	comp=Z,54nm,0.9s						
Q44A	**Meyer Farm, Va**	**57.31**	**67**	P	**P**	**10 49 29.7**	**-0.6**
	baz=313,SNR=11						
TWGBT	**Beinan**	**57.39**	**266**	P	**P**	**10 49 30.9**	**0.0**
SFIN	**Lafayette**	**57.39**	**65**	P	**P**	**10 49 30.2**	**-0.5**
	baz=313,SNR=11						
SFIN	**Lafayette**	**57.39**	**65**	P	**P**	**10 49 30.3**	**-0.5**
	baz=313,SNR=11						
T42A	**Van Buren**	**57.41**	**70**	IAmb	IAmb	10 49 29.8	
	comp=Z,38nm,0.6s						
T42A	**Van Buren**	**57.41**	**70**	P	**P**	**10 49 29.0**	**-1.9**
	baz=314,SNR=27						
KEV	**Kevo**	**57.49**	**352**	P	**P**	**10 49 32.0**	**+1.0**
KEV				pP	**pP**	**10 49 47.2**	**+1.0**
KEV				PcP	**PcP**	**10 50 23.8**	**-0.1**
DGZ	**Jazzator, Alta**	**57.65**	**311**	*ce*P	**P**	**10 49 32.7**	**+0.1**
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MIAR	**Mount Ida**	**57.67**	**74**	P	**P**	**10 49 32.8**	**0.0**
	baz=314,SNR=120						
MIAR	**Mount Ida**	**57.67**	**74**	P	**P**	**10 49 32.8**	**0.0**
	baz=314,SNR=120						
Z38A	**Mt. Pleasant**	**57.73**	**76**	P	**P**	**10 49 33.5**	**+0.2**
	baz=315,SNR=18						
L48A	**N Adams**	**57.78**	**62**	IAmb	IAmb	10 49 33.9	
	comp=Z,69nm,0.8s						
L48A	**N Adams**	**57.78**	**62**	P	**P**	**10 49 32.9**	**-0.6**
	baz=313,SNR=9.1						
L48A				P	**P**	**10 49 32.9**	**-0.6**
	baz=313,SNR=9.1						
N47A	**Urbana**	**57.82**	**64**	IAmb	IAmb	10 49 33.6	
	comp=Z,72nm,0.8s						
N47A	**Urbana**	**57.82**	**64**	P	**P**	**10 49 32.5**	**-1.3**
	baz=314,SNR=16						
N47A				P	**P**	**10 49 32.5**	**-1.3**
	baz=314,SNR=16						
ARA0	**ARCESS Array S**	**57.83**	**352**	*e*P	**P**	**10 49 33.1**	**-0.4**
ARCES	**ARCESS Array B**	**57.83**	**352**	P	**P**	**10 49 32.6**	**-0.8**
	comp=Z,12nm,0.6s,baz=15,slow=7.7,SNR=47						
ARCES				pP	**pP**	**10 49 49.3**	**+0.5**
	comp=Z,5.6nm,0.6s,baz=22,slow=6.8,SNR=4.1						
ARCES				PcP	**PcP**	**10 50 24.6**	**-0.7**
	comp=Z,20nm,0.7s,baz=17,slow=5.1,SNR=10						
ARCES				PKiKP	**PKiKP**	**10 56 48.8**	**-0.7**
	comp=Z,2.6nm,0.8s,baz=27,slow=2.4,SNR=5.2						
ARCES				LR	LR	11 14 09.5	
	comp=Z,341nm,21.9s,baz=353,slow=36						
	comp=Z,12nm,0.6s						
ARCES	**ARCESS Array B**	**57.83**	**352**	P	**P**	**10 49 32.9**	**-0.5**
ARCES				IAmb	IAmb	10 50 25.6	
	comp=Z,21nm,0.8s						
ARCES	**ARCESS Array B**	**57.83**	**352**	P	**P**	**10 49 32.9**	**-0.5**
ARCES				pmax	pmax		
	comp=Z,21nm,0.8s						
P46A	**Rosedale**	**57.85**	**66**	P	**P**	**10 49 33.4**	**-0.6**
	baz=314,SNR=7.8						
435B	**Jarrell**	**57.90**	**80**	P	**P**	**10 49 34.9**	**+0.4**
	baz=315						
435B	**Jarrell**	**57.90**	**80**	P	**P**	**10 49 35.4**	**+0.9**
	baz=315						
WHAR	**Wooly Hollow**	**57.91**	**73**	P	**P**	**10 49 33.5**	**-1.0**
WHAR				IAmb	IAmb	10 49 34.6	
	comp=Z,49nm,1.1s						
OLIL	**Olney**	**57.95**	**67**	P	**P**	**10 49 34.1**	**-0.6**
	baz=314,SNR=6.5						
AAM	**Ann Arbor**	**57.96**	**61**	IAmb	IAmb	10 49 35.3	
	comp=Z,52nm,0.7s						
AAM	**Ann Arbor**	**57.96**	**61**	P	**P**	**10 49 34.0**	**-0.7**
	baz=313						
AAM	**Ann Arbor**	**57.96**	**61**	P	**P**	**10 49 34.5**	**-0.2**
	baz=314						
S44A	**Carbondale**	**58.01**	**68**	IAmb	IAmb	10 49 35.1	
	comp=Z,48nm,0.7s						
S44A	**Carbondale**	**58.01**	**68**	P	**P**	**10 49 33.9**	**-1.2**
	baz=314,SNR=10						
LCAR	**Lake Charles**	**58.04**	**71**	IAmb	IAmb	10 49 34.7	
	comp=Z,28nm,1.0s						
LCAR	**Lake Charles**	**58.04**	**71**	P	**P**	**10 49 33.8**	**-1.5**
	baz=314,SNR=20						
237A	**Washetta, Mont**	**58.12**	**78**	P	**P**	**10 49 36.3**	**+0.4**
	baz=315,SNR=12						

X40A	**Basin Creek Fa**	**58.15**	**74**	P	**P**	**10 49 35.2**	**-1.0**
	baz=314,SNR=25						
X40A				P	**P**	**10 49 35.2**	**-1.0**
	baz=314,SNR=25						
JETT	**Jettan, Norway**	**58.17**	**354**	*e*P	**P**	**10 49 36.6**	**+0.7**
TRO	**Tromso**	**58.18**	**355**	*e*P	**P**	**10 49 36.5**	**+0.6**
TRO				IAmb	IAmb	10 49 43.0	
	comp=Z,68nm,1.2s						
UALR	**University of**	**58.24**	**73**	IAmb	IAmb	10 49 37.8	
	comp=Z,36nm,0.7s						
GTA	**Gaotai**	**58.36**	**295**	*e*P	**P**	**10 49 37.5**	**-0.2**
GTA				pP	pP	10 49 53.3	+0.1
GTA				sP	sP	10 50 00.9	+1.2
GTA				PcP	**PcP**	**10 50 28.2**	**+0.1**
GTA				sS	sS	10 58 04.7	+4.0
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GTA				LR	LR		
	comp=Z,200nm,18.7s						
GTA				LR	LR		
	comp=Z,360nm,17.1s						
GTA				LR	LR		
	comp=Z,460nm,19.1s						
LZH	**Lanzhou**	**58.36**	**289**	*e*P	**P**	**10 49 39.0**	**+1.2**
LZH				pP	sP	10 49 56.6	-3.3
LZH				sP	pP	10 50 02.5	+9.2
LZH				PcP	**PcP**	**10 50 28.8**	**+0.6**
LZH				pmax	pmax		
	comp=Z,31nm,1.5s						
LZH				LR	LR		
	comp=Z,170nm,14.1s						
LZH				LR	LR		
	comp=Z,190nm,14.4s						
LZH				LR	LR		
	comp=Z,200nm,15.1s						
LVZ	**Lovozero**	**58.44**	**348**	P	**P**	**10 49 38.4**	**+0.7**
LVZ				IAmb	IAmb	10 49 39.6	
	comp=Z,44nm,0.8s						
LVZ	**Lovozero**	**58.44**	**348**	*ce*P	**P**	**10 49 38.3**	**+0.6**
LVZ				pmax	pmax		
	comp=Z,65nm,1.7s						
LVZ	**Lovozero**	**58.44**	**348**	P	**P**	**10 49 38.4**	**+0.7**
LVZ				pP	**pP**	**10 49 53.7**	**+0.6**
KTK1	**Kautokeino**	**58.52**	**353**	*e*P	**P**	**10 49 38.6**	**+0.4**
KTK1				IAmb	IAmb	10 49 40.6	
	comp=Z,13nm,0.7s						
BLO	**Bloomington**	**58.54**	**65**	IAmb	IAmb	10 49 39.7	
	comp=Z,50nm,0.8s						
O48B	**Farmland**	**58.55**	**64**	P	**P**	**10 49 37.4**	**-1.4**
	baz=314,SNR=42						
O48B	**Farmland**	**58.55**	**64**	P	**P**	**10 49 37.5**	**-1.3**
	baz=314,SNR=42						
833A	**Chaparral WMA,**	**58.55**	**83**	P	**P**	**10 49 39.5**	**+0.5**
	baz=316,SNR=28						
833A	**Chaparral WMA,**	**58.55**	**83**	P	**P**	**10 49 39.4**	**+0.3**
	baz=316,SNR=28						
N49A	**Columbus Grove**	**58.62**	**63**	IAmb	IAmb	10 49 39.6	
	comp=Z,50nm,0.7s						
N49A	**Columbus Grove**	**58.62**	**63**	P	**P**	**10 49 38.7**	**-0.7**
	baz=314,SNR=15						
N49A				P	**P**	**10 49 38.7**	**-0.7**
	baz=314,SNR=15						
SADO	**Sadowa**	**58.63**	**56**	LR	LR	11 16 45.8	
	comp=Z,193nm,18.5s,baz=318,slow=38						
SADO	**Sadowa**	**58.63**	**56**	IAmb	IAmb	10 49 39.7	
	comp=Z,47nm,0.7s						
HBAR	**Harrisburg**	**58.68**	**71**	P	**P**	**10 49 39.3**	**-0.5**
	baz=314,SNR=5.4						
T45B	**Paducah**	**58.83**	**69**	P	**P**	**10 49 40.5**	**-0.4**
	baz=314						
IVI	**Ivigtut**	**58.84**	**28**	P	**P**	**10 49 40.1**	**-0.4**
APA	**Apatity**	**58.91**	**348**	⇓*i*P	**P**	**10 49 38.6**	**-2.3**
APA				*i*		10 50 28.0	
APA				*i*		10 51 56.4	
APA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
APA				MLR	MLR		
	comp=Z,500nm,16.0s						
M50A	**Fremont**	**58.91**	**61**	IAmb	IAmb	10 49 42.0	
	comp=Z,43nm,0.8s						
M50A	**Fremont**	**58.91**	**61**	P	**P**	**10 49 40.8**	**-0.5**
	baz=314,SNR=5.6						
M50A				P	**P**	**10 49 40.8**	**-0.5**
	baz=314,SNR=5.6						
P48A	**Milroy**	**58.95**	**65**	P	**P**	**10 49 40.6**	**-1.1**
	baz=314,SNR=18						
P48A				P	**P**	**10 49 40.6**	**-1.1**
	baz=314,SNR=18						
NATX	**Nacogdoches**	**58.98**	**77**	P	**P**	**10 49 42.4**	**+0.5**
	baz=315,SNR=9.4						
NATX	**Nacogdoches**	**58.98**	**77**	P	**P**	**10 49 42.5**	**+0.6**
	baz=315,SNR=9.4						
Z41A	**Richland Creek**	**59.03**	**75**	P	**P**	**10 49 42.5**	**+0.2**
	baz=315,SNR=7.7						
Z41A				P	**P**	**10 49 42.5**	**+0.2**
	baz=315,SNR=7.7						
O49A	**Covington**	**59.05**	**63**	P	**P**	**10 49 41.4**	**-1.0**
	baz=314,SNR=6.9						
O49A				P	**P**	**10 49 41.4**	**-1.0**
	baz=314,SNR=6.9						
ENH	**Enshi**	**59.09**	**281**	IAmb	IAmb	10 50 31.9	
	comp=Z,63nm,1.5s						
ENH	**Enshi**	**59.09**	**281**	P	**P**	**10 49 43.6**	**+0.8**
ENH	**Enshi**	**59.09**	**281**	P	**P**	**10 49 43.2**	**+0.4**
ENH				pP	**pP**	**10 49 59.7**	**+1.4**
735A	**Kenedy**	**59.14**	**82**	P	**P**	**10 49 44.7**	**+1.6**
	baz=316,SNR=7.1						
CCAR	**Cane Creek**	**59.18**	**73**	P	**P**	**10 49 43.8**	**+0.5**
	baz=315,SNR=5.4						
P49A	**Miami Univ. Ec**	**59.29**	**64**	IAmb	IAmb	10 49 43.9	
	comp=Z,50nm,0.8s						
P49A	**Miami Univ. Ec**	**59.29**	**64**	P	**P**	**10 49 42.7**	**-1.3**
	baz=314,SNR=13						
P49A	**Miami Univ. Ec**	**59.29**	**64**	P	**P**	**10 49 43.0**	**-1.1**
	baz=314,SNR=13						
WCI	**Wyandotte Cave**	**59.32**	**66**	P	**P**	**10 49 43.5**	**-0.8**
WCI				IAmb	IAmb	10 49 44.6	
	comp=Z,49nm,0.9s						
WCI	**Wyandotte Cave**	**59.32**	**66**	P	**P**	**10 49 43.5**	**-0.8**
WCI				pmax	pmax		
	comp=Z,49nm,0.9s						
WCI	**Wyandotte Cave**	**59.32**	**66**	P	**P**	**10 49 43.4**	**-0.8**
	baz=314						
WCI	**Wyandotte Cave**	**59.32**	**66**	P	**P**	**10 49 43.7**	**-0.5**
	baz=314,SNR=11						
WCI	**Wyandotte Cave**	**59.32**	**66**	P	**P**	**10 49 43.6**	**-0.8**
WCI				pP	**pP**	**10 49 58.4**	**-1.2**
HKT	**Hockley**	**59.56**	**79**	P	**P**	**10 49 46.5**	**+0.6**
HKT	**Hockley**	**59.56**	**79**	P	**P**	**10 49 46.5**	**+0.6**
HKT				pmax	pmax		
	comp=Z,147nm,1.5s						
HKT	**Hockley**	**59.56**	**79**	P	**P**	**10 49 46.5**	**+0.6**
HKT				pP	**pP**	**10 50 01.1**	**-0.3**
DELO	**Deloro Mine**	**59.58**	**56**	IAmb	IAmb	10 49 46.8	
	comp=Z,54nm,0.9s						
N51A	**Ashland**	**59.61**	**61**	P	**P**	**10 49 45.6**	**-0.6**
	baz=315,SNR=11						
N51A				P	**P**	**10 49 45.6**	**-0.6**
	baz=315,SNR=11						
M52A	**Chesterland**	**59.72**	**60**	P	**P**	**10 49 46.7**	**-0.3**
	baz=315,SNR=5.8						
M52A				P	**P**	**10 49 46.7**	**-0.3**
	baz=315,SNR=5.8						
T47A	**Sharon Grove**	**59.73**	**68**	P	**P**	**10 49 46.8**	**-0.3**
	baz=315,SNR=33						
ACSO	**Alum Creek Sta**	**59.76**	**62**	P	**P**	**10 49 46.5**	**-0.7**
	baz=315,SNR=8.6						
ACSO	**Alum Creek Sta**	**59.76**	**62**	P	**P**	**10 49 46.7**	**-0.6**
	baz=315,SNR=8.6						
W45A	**Hickory Valley**	**59.82**	**71**	P	**P**	**10 49 47.7**	**0.0**
	baz=315,SNR=16						
TRQ	**Mont Tremblant**	**59.91**	**52**	IAmb	IAmb	10 49 47.9	
	comp=Z,44nm,0.9s						
R49A	**Shelbyville**	**59.91**	**65**	IAmb	IAmb	10 50 03.2	
	comp=Z,38nm,1.3s						
WVT	**Waverly**	**59.92**	**69**	P	**P**	**10 49 47.8**	**-0.5**
WVT				IAmb	IAmb	10 49 49.0	
	comp=Z,22nm,0.7s						
WVT	**Waverly**	**59.92**	**69**	P	**P**	**10 49 47.8**	**-0.5**
WVT				pmax	pmax		
	comp=Z,22nm,0.7s						
WVT	**Waverly**	**59.92**	**69**	P	**P**	**10 49 47.9**	**-0.5**
	baz=315						
WVT	**Waverly**	**59.92**	**69**	P	**P**	**10 49 47.9**	**-0.5**
	baz=315,SNR=15						
WVT	**Waverly**	**59.92**	**69**	P	**P**	**10 49 47.9**	**-0.5**
WVT				pP	**pP**	**10 50 03.0**	**-0.8**
LATQ	**La Tuque**	**59.93**	**51**	IAmb	IAmb	10 49 48.7	
	comp=Z,49nm,1.2s						
ERPA	**Erie**	**60.04**	**59**	P	**P**	**10 49 49.1**	**0.0**
ERPA	**Erie**	**60.04**	**59**	P	**P**	**10 49 49.0**	**-0.2**
	baz=315,SNR=9.3						
ERPA	**Erie**	**60.04**	**59**	P	**P**	**10 49 49.3**	**+0.1**
	baz=315,SNR=9.3						
STEI	**Steigen**	**60.05**	**356**	*e*P	**P**	**10 49 48.1**	**-0.7**
STEI				IAmb	IAmb	10 49 48.4	
	comp=Z,42nm,1.2s						
OXF	**Oxford**	**60.14**	**71**	P	**P**	**10 49 49.5**	**-0.4**
	baz=315,SNR=33						
OXF	**Oxford**	**60.14**	**71**	P	**P**	**10 49 49.7**	**-0.2**
	baz=315,SNR=33						
M53A	**WI Miller and**	**60.16**	**60**	P	**P**	**10 49 49.6**	**-0.3**
	baz=315,SNR=15						
P51A	**Williamsport**	**60.24**	**63**	IAmb	IAmb	10 50 36.4	
	comp=Z,36nm,0.8s						
143A	**Socs Landing,**	**60.25**	**74**	P	**P**	**10 49 51.1**	**+0.4**
	baz=316,SNR=7.4						
ALLY	**Alegheny Colle**	**60.29**	**59**	P	**P**	**10 49 51.0**	**+0.1**
	baz=315,SNR=12						
J55A	**Hilton**	**60.37**	**57**	P	**P**	**10 49 51.4**	**+0.1**
	baz=315,SNR=9.0						
J55A				P	**P**	**10 49 51.4**	**+0.1**
	baz=315,SNR=9.0						
SEM	**Semipalatinsk**	**60.38**	**315**	*e*P	**P**	**10 49 51.6**	**-0.1**
	baz=315						
SEM	**Semipalatinsk**	**60.38**	**315**	*e*P	**P**	**10 49 51.5**	**-0.1**
R50A	**Paris**	**60.39**	**65**	IAmb	IAmb	10 49 52.5	
	comp=Z,88nm,1.3s						
R50A	**Paris**	**60.39**	**65**	P	**P**	**10 49 51.2**	**-0.4**
	baz=315,SNR=18						
R50A				P	**P**	**10 49 51.2**	**-0.4**
	baz=315,SNR=18						
Q51A	**Peebles**	**60.41**	**64**	P	**P**	**10 49 51.5**	**-0.2**
	baz=315,SNR=26						
Q51A				P	**P**	**10 49 51.5**	**-0.2**
	baz=315,SNR=26						
ZSN	**Zaisan**	**60.44**	**310**	*e*P	**P**	**10 49 51.7**	**-0.2**
	comp=Z,6.6nm,0.9s,baz=310						
ZSN	**Zaisan**	**60.44**	**310**	*e*P	**P**	**10 49 51.6**	**-0.2**
ZSN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
O52A	**Adamsville**	**60.47**	**62**	P	**P**	**10 49 51.4**	**-0.6**
	baz=315,SNR=22						
O52A				P	**P**	**10 49 51.4**	**-0.6**
	baz=315,SNR=22						
N53A	**Lisbon**	**60.52**	**61**	IAmb	IAmb	10 49 53.0	
	comp=Z,68nm,1.0s						
N53A	**Lisbon**	**60.52**	**61**	P	**P**	**10 49 52.2**	**-0.2**
	baz=315,SNR=9.3						
N53A				P	**P**	**10 49 52.2**	**-0.2**
	baz=315,SNR=9.3						
Y45A	**Yeager Farm, C**	**60.52**	**72**	P	**P**	**10 49 52.0**	**-0.5**
	baz=315,SNR=14						
WVNY	**West Valley, N**	**60.57**	**58**	IAmb	IAmb	10 49 53.7	
	comp=Z,66nm,0.8s						
WVNY	**West Valley, N**	**60.57**	**58**	P	**P**	**10 49 52.8**	**+0.1**
	baz=315,SNR=8.5						
441A	**DeRidder**	**60.58**	**77**	P	**P**	**10 49 53.7**	**+0.7**
	baz=316,SNR=5.9						
FAUS	**Fauske**	**60.60**	**356**	*e*P	**P**	**10 49 52.8**	**+0.3**
FAUS				IAmb	IAmb	10 49 55.5	
	comp=Z,93nm,1.6s						
P52A	**Corning**	**60.64**	**62**	IAmb	IAmb	10 49 54.2	
	comp=Z,103nm,1.6s						
P52A	**Corning**	**60.64**	**62**	P	**P**	**10 49 52.4**	**-0.9**
	baz=315,SNR=6.0						
342B	**Flagon Creek P**	**60.65**	**76**	P	**P**	**10 49 54.2**	**+0.7**
	baz=316,SNR=14						
ZAIG	**Zacatecas**	**60.65**	**90**	P	**P**	**10 49 53.8**	**-0.1**
MMNY	**Mt. Morris Dam**	**60.70**	**57**	P	**P**	**10 49 53.6**	**0.0**
MMNY				IAmb	IAmb	10 49 54.4	
	comp=Z,81nm,1.0s						
O53A	**New Philadelph**	**60.71**	**61**	IAmb	IAmb	10 49 54.2	
	comp=Z,75nm,1.2s						
O53A	**New Philadelph**	**60.71**	**61**	P	**P**	**10 49 53.0**	**-0.8**
	baz=315,SNR=11						
V48A	**Smith Brothers**	**60.77**	**69**	IAmb	IAmb	10 49 54.5	
	comp=Z,60nm,1.4s						
V48A	**Smith Brothers**	**60.77**	**69**	P	**P**	**10 49 53.4**	**-0.8**
	baz=315,SNR=16						
U49A	**Red Boiling Sp**	**60.82**	**67**	IAmb	IAmb	10 49 55.2	
	comp=Z,58nm,1.3s						
U49A	**Red Boiling Sp**	**60.82**	**67**	P	**P**	**10 49 54.1**	**-0.4**
	baz=315,SNR=15						
J56A	**Wolcott**	**60.85**	**56**	P	**P**	**10 49 54.2**	**-0.4**
	baz=316,SNR=20						
J56A				P	**P**	**10 49 54.2**	**-0.4**
	baz=316,SNR=20						
KURK	**Kurchatov**	**60.86**	**316**	P	**P**	**10 49 54.5**	**0.0**
KURK	**Kurchatov**	**60.86**	**316**	P	**P**	**10 49 54.5**	**0.0**
KURK				pmax	pmax		
	comp=Z,12nm,0.7s						
KURK	**Kurchatov**	**60.86**	**316**	P	**P**	**10 49 54.4**	**-0.2**
BMNY	**Brushton-Moira**	**60.92**	**54**	P	**P**	**10 49 54.0**	**-1.0**
	baz=316,SNR=16						
WCNY	**West Carthage**	**60.96**	**55**	P	**P**	**10 49 54.7**	**-0.7**
	baz=316,SNR=11						
KURBB	**Kurchatov Arra**	**60.96**	**316**	LR	LR	11 18 28.1	
	comp=Z,330nm,18.6s,baz=359,slow=38						
T50A	**Nancy**	**60.99**	**66**	IAmb	IAmb	10 49 56.3	
	comp=Z,120nm,1.6s						
T50A	**Nancy**	**60.99**	**66**	P	**P**	**10 49 55.2**	**-0.5**
	baz=315						
T50A				P	**P**	**10 49 55.2**	**-0.5**
	baz=315						
LONY	**Lake Ozonia**	**61.04**	**54**	IAmb	IAmb	10 49 55.6	
	comp=Z,30nm,0.7s						
LONY	**Lake Ozonia**	**61.04**	**54**	P	**P**	**10 49 54.6**	**-1.3**
	baz=316,SNR=11						
Q52A	**Bidwell**	**61.05**	**63**	IAmb	IAmb	10 49 56.5	
	comp=Z,42nm,0.9s						
Q52A	**Bidwell**	**61.05**	**63**	P	**P**	**10 49 55.3**	**-0.7**
	baz=315,SNR=9.7						
Q52A				P	**P**	**10 49 55.3**	**-0.7**
	baz=315,SNR=9.7						
VBMS	**Vicksburg**	**61.12**	**74**	P	**P**	**10 49 56.7**	**+0.1**
	baz=316,SNR=23						
VBMS	**Vicksburg**	**61.12**	**74**	P	**P**	**10 49 56.9**	**+0.3**
	baz=316,SNR=23						
M55A	**Ridgway**	**61.15**	**59**	P	**P**	**10 49 56.8**	**+0.1**
	baz=316,SNR=31						
M55A				P	**P**	**10 49 56.8**	**+0.1**
	baz=316,SNR=31						
P53A	**Whipple**	**61.15**	**62**	IAmb	IAmb	10 49 57.4	
	comp=Z,58nm,0.8s						
P53A	**Whipple**	**61.15**	**62**	P	**P**	**10 49 56.4**	**-0.4**
	baz=316,SNR=14						
P53A				P	**P**	**10 49 56.4**	**-0.4**
	baz=316,SNR=14						
J57A	**Williamstown**	**61.19**	**56**	P	**P**	**10 49 56.8**	**-0.1**
	baz=316,SNR=18						
J57A				P	**P**	**10 49 56.8**	**-0.1**
	baz=316,SNR=18						
O54A	**Avella**	**61.21**	**61**	P	**P**	**10 49 56.7**	**-0.4**
	baz=316,SNR=19						
O54A				P	**P**	**10 49 56.7**	**-0.4**
	baz=316,SNR=19						
S51A	**Beattyville**	**61.25**	**65**	IAmb	IAmb	10 50 40.5	
	comp=Z,29nm,0.8s						
S51A	**Beattyville**	**61.25**	**65**	P	**P**	**10 49 57.0**	**-0.5**
	baz=316,SNR=12						
S51A				P	**P**	**10 49 57.0**	**-0.5**
	baz=316,SNR=12						
L56A	**Greenwood**	**61.30**	**58**	P	**P**	**10 49 58.1**	**+0.3**
	baz=316,SNR=42						
L56A				P	**P**	**10 49 58.1**	**+0.3**
	baz=316,SNR=42						
FRNY	**Flat Rock**	**61.37**	**53**	P	**P**	**10 49 56.7**	**-1.5**
	baz=316						
K57A	**Scipio Center**	**61.41**	**56**	P	**P**	**10 49 57.8**	**-0.7**
	baz=316,SNR=28						
BORG	**Borgarnes**	**61.43**	**13**	LR	LR	11 18 54.5	
	comp=Z,66nm,18.4s,baz=337,slow=38						
344A	**Westbrook Farm**	**61.54**	**75**	P	**P**	**10 50 00.0**	**+0.6**
	baz=316,SNR=19						
X48A	**Hartselle**	**61.56**	**70**	IAmb	IAmb	10 49 59.4	
	comp=Z,44nm,1.0s						
X48A	**Hartselle**	**61.56**	**70**	P	**P**	**10 49 58.6**	**-1.0**
	baz=316,SNR=18						
J58A	**Remsen**	**61.59**	**55**	IAmb	IAmb	10 50 00.5	
	comp=Z,83nm,1.1s						
J58A	**Remsen**	**61.59**	**55**	P	**P**	**10 49 59.3**	**-0.4**
	baz=316,SNR=22						
J58A				P	**P**	**10 49 59.3**	**-0.4**
	baz=316,SNR=22						
ADZR	**Andozero**	**61.64**	**345**	*e*P	**P**	**10 49 58.6**	**-1.0**
ADZR				*e**PP	**pP**	**10 50 14.7**	**-0.4**
ADZR				pmax	pmax		
	comp=Z,24nm,0.6s						
SWET	**Sewanee**	**61.65**	**68**	IAmb	IAmb	10 49 59.7	
	comp=Z,21nm,0.7s						
R53A	**Hurricane**	**61.67**	**63**	P	**P**	**10 50 00.2**	**0.0**
	baz=316,SNR=21						
R53A				P	**P**	**10 50 00.2**	**0.0**
	baz=316,SNR=21						
146A	**Union**	**61.68**	**72**	P	**P**	**10 50 00.2**	**-0.2**
	baz=316,SNR=27						
NCB	**Newcomb**	**61.68**	**54**	IAmb	IAmb	10 50 00.6	
	comp=Z,25nm,0.8s						
NCB	**Newcomb**	**61.68**	**54**	P	**P**	**10 50 00.1**	**-0.2**
	baz=316,SNR=10						
WMQ	**Urumqi**	**61.69**	**306**	*e*P	**P**	**10 50 00.0**	**-0.4**
WMQ				pP	sP	10 50 19.4	-3.1
WMQ				PcP	**PcP**	**10 50 41.3**	**0.0**
WMQ				pmax	pmax		
	comp=Z,19nm,0.9s						
WMQ				LR	LR		
	comp=Z,300nm,19.7s						
WMQ				LR	LR		
	comp=Z,190nm,20.7s						
WMQ				LR	LR		
	comp=Z,490nm,24.5s						
Q54A	**Coxs Mills**	**61.81**	**62**	IAmb	IAmb	10 50 02.1	
	comp=Z,67nm,0.9s						
Q54A	**Coxs Mills**	**61.81**	**62**	P	**P**	**10 50 00.8**	**-0.5**
	baz=316,SNR=19						
Q54A				P	**P**	**10 50 00.8**	**-0.5**
	baz=316,SNR=19						
MOR8	**Moi Rana**	**61.84**	**356**	*e*P	**P**	**10 50 00.8**	**-0.2**
Z47A	**Carrollton**	**61.86**	**71**	P	**P**	**10 50 01.2**	**-0.4**
	baz=316,SNR=58						
MCWV	**Mont Chateau**	**61.87**	**61**	P	**P**	**10 50 01.5**	**-0.1**
	baz=316,SNR=15						
MCWV	**Mont Chateau**	**61.87**	**61**	P	**P**	**10 50 01.3**	**-0.3**
	baz=316,SNR=15						
D62A	**Allapoint, All**	**61.90**	**49**	IAmb	IAmb	10 50 01.9	
	comp=Z,89nm,1.8s						
D62A	**Allapoint, All**	**61.90**	**49**	P	**P**	**10 50 00.3**	**-1.3**
	baz=318,SNR=6.7						
D62A				P	**P**	**10 50 00.3**	**-1.3**
	baz=318,SNR=6.7						
J59A	**Piesco**	**61.91**	**55**	IAmb	IAmb	10 50 02.0	
	comp=Z,36nm,0.7s						
J59A	**Piesco**	**61.91**	**55**	P	**P**	**10 50 01.1**	**-0.7**
	baz=316,SNR=15						
J59A				P	**P**	**10 50 01.1**	**-0.7**
	baz=316,SNR=15						
W50A	**Signal Mountai**	**62.02**	**68**	IAmb	IAmb	10 50 03.1	
	comp=Z,54nm,0.9s						
W50A	**Signal Mountai**	**62.02**	**68**	P	**P**	**10 50 02.0**	**-0.7**
	baz=316,SNR=23						
E62A	**Clayton Lake**	**62.02**	**49**	P	**P**	**10 50 01.8**	**-0.7**
E62A	**Clayton Lake**	**62.02**	**49**	P	**P**	**10 50 01.5**	**-1.0**
	baz=318						
E62A				P	**P**	**10 50 01.5**	**-1.0**
	baz=318						
TZTN	**Tazewell**	**62.06**	**66**	P	**P**	**10 50 02.8**	**-0.1**
TZTN				IAmb	IAmb	10 50 03.8	
	comp=Z,38nm,0.8s						
TZTN	**Tazewell**	**62.06**	**66**	P	**P**	**10 50 02.7**	**-0.3**
	baz=316,SNR=10						
TZTN	**Tazewell**	**62.06**	**66**	P	**P**	**10 50 02.6**	**-0.3**
	baz=316,SNR=10						
BINY	**Binghamton**	**62.07**	**57**	P	**P**	**10 50 03.1**	**+0.2**
	baz=316,SNR=41						
BINY	**Binghamton**	**62.07**	**57**	P	**P**	**10 50 03.2**	**+0.3**
	baz=316,SNR=41						
CD2	**Chengdu**	**62.07**	**285**	P	**P**	**10 50 02.5**	**-0.6**
CD2				pP	pP	10 50 18.3	-0.5
CD2				S	**S**	**10 58 20.4**	**-3.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
CD2				pmax	pmax		
	comp=Z,100nm,6.9s						
CD2				LR	LR		
	comp=Z,200nm,20.0s						
CD2				LR	LR		
	comp=Z,270nm,17.7s						
CD2				LR	LR		
	comp=Z,310nm,20.4s						
M57A	**Sunshine Farm,**	**62.10**	**58**	P	**P**	**10 50 02.9**	**-0.2**
	baz=316,SNR=29						
M57A				P	**P**	**10 50 02.9**	**-0.2**
	baz=316,SNR=29						
MK31	**Makanchi Array**	**62.12**	**311**	P	**P**	**10 50 02.2**	**-1.0**
MK31	**Makanchi Array**	**62.12**	**311**	*c i*P	**P**	**10 50 02.2**	**-1.0**
MKAR	**Makanchi Array**	**62.12**	**311**	P	**P**	**10 50 02.5**	**-0.7**
	comp=Z,3.0nm,0.6s,baz=52,slow=6.1,SNR=44						
MKAR				LR	LR	11 17 23.0	
	comp=Z,268nm,21.1s,baz=38,slow=36						
MKAR				PKPPKP	**P'P'df**	**11 19 10.8**	**-3.8**
	comp=Z,0.5nm,0.8s,baz=157,slow=1.1,SNR=4.5						
	comp=Z,3.0nm,0.6s						
MKAR	**Makanchi Array**	**62.12**	**311**	P	**P**	**10 50 02.4**	**-0.9**
V51A	**Loudon**	**62.13**	**67**	IAmb	IAmb	10 50 03.7	
	comp=Z,96nm,1.4s						
V51A	**Loudon**	**62.13**	**67**	P	**P**	**10 50 02.9**	**-0.5**
	baz=316,SNR=12						
VT1	**Waterbury**	**62.15**	**53**	IAmb	IAmb	10 50 04.2	
	comp=Z,42nm,1.4s						
SSPA	**Standing Stone**	**62.21**	**59**	P	**P**	**10 50 03.7**	**-0.1**
SSPA	**Standing Stone**	**62.21**	**59**	P	**P**	**10 50 03.7**	**-0.1**
	baz=316						
SSPA	**Standing Stone**	**62.21**	**59**	P	**P**	**10 50 03.7**	**-0.1**
	baz=316,SNR=33						
SSPA	**Standing Stone**	**62.21**	**59**	P	**P**	**10 50 03.7**	**-0.1**
MAKZ	**Makanchi**	**62.26**	**311**	P	**P**	**10 50 03.0**	**-1.1**
MAKZ	**Makanchi**	**62.26**	**311**	P	**P**	**10 50 03.0**	**-1.1**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAKZ	**Makanchi**	**62.26**	**311**	P	**P**	**10 50 03.3**	**-0.8**
CPCT	**Cooper Cave**	**62.29**	**67**	IAmb	IAmb	10 50 04.2	
	comp=Z,20nm,0.7s						
346A	**Big Creek Wild**	**62.34**	**74**	P	**P**	**10 50 04.8**	**0.0**
	baz=316,SNR=10						
F62A	**Pittston Farm,**	**62.35**	**50**	IAmb	IAmb	10 50 45.1	
	comp=Z,42nm,1.5s						
Y49A	**Blount Mountai**	**62.35**	**70**	IAmb	IAmb	10 50 04.4	
	comp=Z,25nm,0.7s						
Y49A	**Blount Mountai**	**62.35**	**70**	P	**P**	**10 50 03.9**	**-1.0**
	baz=316,SNR=12						
ACCN	**Adirondack Com**	**62.39**	**54**	IAmb	IAmb	10 50 05.4	
	comp=Z,44nm,0.8s						
ACCN	**Adirondack Com**	**62.39**	**54**	P	**P**	**10 50 04.4**	**-0.6**
	baz=317,SNR=17						
BVAR	**Borovoye Array**	**62.40**	**322**	LR	LR	11 20 10.0	
	comp=Z,311nm,18.6s,baz=47,slow=39						
S54A	**Dingess, Beckl**	**62.40**	**63**	IAmb	IAmb	10 50 06.3	
	comp=Z,73nm,0.9s						
S54A	**Dingess, Beckl**	**62.40**	**63**	P	**P**	**10 50 04.9**	**-0.3**
	baz=316,SNR=22						
S54A				P	**P**	**10 50 04.9**	**-0.3**
	baz=316,SNR=22						
BRVK	**Borovoye**	**62.41**	**322**	*c i*P	**P**	**10 50 04.7**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,19nm,1.3s						
BRVK	**Borovoye**	**62.41**	**322**	P	**P**	**10 50 04.8**	**-0.2**
BRVK				pP	**pP**	**10 50 20.1**	**-0.4**
HCNY	**Howe Caverns**	**62.52**	**55**	P	**P**	**10 50 05.9**	**0.0**
	baz=317,SNR=41						
V52A	**Sevierville**	**62.53**	**66**	IAmb	IAmb	10 50 06.7	
	comp=Z,38nm,0.8s						
V52A	**Sevierville**	**62.53**	**66**	P	**P**	**10 50 05.8**	**-0.3**
	baz=316,SNR=17						
L59A	**Walton**	**62.56**	**56**	P	**P**	**10 50 05.0**	**-1.2**
	baz=317,SNR=71						
L59A				P	**P**	**10 50 05.0**	**-1.2**
	baz=317,SNR=71						
TKL	**Tuckaleechee C**	**62.56**	**67**	LR	LR	11 16 05.0	
	comp=Z,193nm,21.8s,baz=310,slow=35						
TKL	**Tuckaleechee C**	**62.56**	**67**	IAmb	IAmb	10 50 06.8	
	comp=Z,37nm,0.9s						
TKL	**Tuckaleechee C**	**62.56**	**67**	P	**P**	**10 50 05.7**	**-0.6**
	baz=316,SNR=15						
G62A	**West of Eustis**	**62.58**	**51**	IAmb	IAmb	10 50 06.5	
	comp=Z,25nm,0.7s						
G62A	**West of Eustis**	**62.58**	**51**	P	**P**	**10 50 05.6**	**-0.7**
	baz=318,SNR=7.4						
G62A				P	**P**	**10 50 05.6**	**-0.7**
	baz=318,SNR=7.4						
LRAL	**Lakeview Retre**	**62.60**	**71**	IAmb	IAmb	10 50 06.5	

	comp=Z,34nm,0.9s						
LRAL	Lakeview Retre	62.60	71	P	P	10 50 05.4	-1.1
	baz=316,SNR=21						
LRAL	Lakeview Retre	62.60	71	P	P	10 50 05.5	-1.1
	baz=316,SNR=21						
LBNH	Lisbon	62.62	52	IAmb	IAmb	10 50 06.8	
	comp=Z,20nm,0.9s						
LBNH	Lisbon	62.62	52	P	P	10 50 05.6	-1.0
	baz=317						
LBNH	Lisbon	62.62	52	P	P	10 50 05.4	-1.1
	baz=317						
KSPA	Keystone Colle	62.65	57	P	P	10 50 06.9	+0.2
	baz=317,SNR=36						
Q56A	Snyder Ridge,	62.66	61	IAmb	IAmb	10 50 07.9	
	comp=Z,42nm,1.0s						
Q56A	Snyder Ridge,	62.66	61	P	P	10 50 06.7	-0.2
	baz=316,SNR=8.1						
Q56A				P	P	10 50 06.7	-0.2
	baz=316,SNR=8.1						
N58A	Sunbury	62.67	58	P	P	10 50 06.9	0.0
	baz=317,SNR=26						
N58A				P	P	10 50 06.9	0.0
	baz=317,SNR=26						
R55A	Marlinton	62.71	62	P	P	10 50 07.3	+0.1
	baz=316,SNR=11						
R55A				P	P	10 50 07.3	+0.1
	baz=316,SNR=11						
X51A	Calhoun	62.73	68	IAmb	IAmb	10 50 07.9	
	comp=Z,80nm,1.3s						
X51A	Calhoun	62.73	68	P	P	10 50 06.9	-0.5
	baz=316,SNR=9.1						
X51A				P	P	10 50 06.9	-0.5
	baz=316,SNR=9.1						
H62A	Milan	62.75	52	IAmb	IAmb	10 50 07.7	
	comp=Z,29nm,0.7s						
H62A	Milan	62.75	52	P	P	10 50 06.6	-0.8
	baz=318,SNR=11						
H62A				P	P	10 50 06.6	-0.8
	baz=318,SNR=11						
W52A	Murphy	62.88	67	IAmb	IAmb	10 50 08.4	
	comp=Z,37nm,0.7s						
W52A	Murphy	62.88	67	P	P	10 50 08.0	-0.5
	baz=316,SNR=16						
J61A	Chester	62.97	54	IAmb	IAmb	10 50 09.4	
	comp=Z,25nm,0.8s						
J61A	Chester	62.97	54	P	P	10 50 08.5	-0.3
	baz=317,SNR=7.0						
J61A				P	P	10 50 08.5	-0.3
	baz=317,SNR=7.0						
P57A	Homestead Farm	62.97	60	P	P	10 50 08.9	-0.1
	baz=317,SNR=29						
P57A				P	P	10 50 08.9	-0.1
	baz=317,SNR=29						
U54A	Nelsons Funny	63.04	65	IAmb	IAmb	10 50 10.8	
	comp=Z,72nm,1.1s						
U54A	Nelsons Funny	63.04	65	P	P	10 50 09.2	-0.3
	baz=316,SNR=12						
U54A				P	P	10 50 09.2	-0.3
	baz=316,SNR=12						
V53A	Saluda	63.10	66	IAmb	IAmb	10 50 10.9	
	comp=Z,60nm,1.2s						
V53A	Saluda	63.10	66	P	P	10 50 09.7	-0.2
	baz=316,SNR=13						
V53A				P	P	10 50 09.7	-0.2
	baz=316,SNR=13						
F64A	Sherman	63.13	49	IAmb	IAmb	10 50 25.7	
	comp=Z,34nm,1.2s						
F64A	Sherman	63.13	49	P	P	10 50 08.9	-1.0
	baz=318						
F64A				P	P	10 50 08.9	-1.0
	baz=318						
PKME	Peaks-Kenny Pk	63.13	50	P	P	10 50 08.8	-1.1
	baz=318						
I62A	Tamworth	63.18	52	P	P	10 50 08.9	-1.3
	baz=318						
I62A				P	P	10 50 08.9	-1.3
	baz=318						
BLA	Blacksburg	63.31	63	P	P	10 50 11.4	+0.1
	baz=317,SNR=14						
BLA	Blacksburg	63.31	63	P	P	10 50 11.1	-0.2
	baz=317,SNR=14						
NPNY	Mohonk Preserv	63.34	56	P	P	10 50 11.3	0.0
	baz=317,SNR=22						
I63A	Otisfield	63.41	52	IAmb	IAmb	10 50 31.6	
	comp=Z,73nm,1.6s						
GOMU	GeErMu	63.42	295	P	P	10 50 12.8	+0.4
GOMU				pP	pP	10 50 30.5	+2.4
GOMU				PcP	PcP	10 50 49.5	+0.6
GOMU				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GOMU				pmax	pmax		
	comp=Z,120nm,5.0s						
GOMU				LR	LR		
	comp=Z,280nm,20.0s						
GOMU				LR	LR		
	comp=Z,250nm,18.3s						
GOMU				LR	LR		
	comp=Z,400nm,20.1s						
Z51A	Franklin	63.45	69	IAmb	IAmb	10 50 12.1	
	comp=Z,83nm,1.0s						
Z51A	Franklin	63.45	69	P	P	10 50 11.3	-0.9
	baz=317,SNR=17						
KRVT	Keravat (AS076	63.46	219	P	P	10 50 11.6	-0.8
	comp=Z,36nm,0.9s,baz=226,slow=18,SNR=4.7						
KRVT				pP	pP	10 50 28.6	+0.6
	comp=Z,40nm,0.7s,baz=73,slow=6.8,SNR=3.3						
KRVT				LR	LR	11 12 48.8	
	comp=Z,117nm,20.1s,baz=184,slow=31						
KRVT				PKPPKP		11 19 09.9	
	comp=Z,23nm,0.6s,baz=194,slow=4.2,SNR=2.6						
	comp=Z,36nm,0.9s						
MVL	Millersville	63.48	58	IAmb	IAmb	10 50 13.0	
	comp=Z,68nm,0.8s						
BG3	Lake Jocassee	63.52	67	IAmb	IAmb	10 50 13.5	
	comp=Z,54nm,0.9s						
GYA	Guiyang	63.56	280	⇑*i*P	P	10 50 14.3	+1.2
GYA				pP	pP	10 50 27.2	-1.6
GYA				sP	sP	10 50 36.5	+1.2
GYA				S	S	10 58 42.2	-0.2
GYA				pmax	pmax		
	comp=Z,37nm,0.8s						
GYA				pmax	pmax		
	comp=Z,150nm,5.0s						
GYA				LR	LR		
	comp=Z,320nm,26.3s						
L61B	Northampton	63.56	54	IAmb	IAmb	10 50 13.2	
	comp=Z,22nm,0.8s						
L61B	Northampton	63.56	54	P	P	10 50 12.0	-0.8
	baz=318,SNR=5.2						
L61B	Northampton	63.56	54	P	P	10 50 12.3	-0.5
	baz=318,SNR=5.2						
ODNJ	Ogdensburg	63.59	57	P	P	10 50 12.9	-0.1
	baz=317,SNR=40						
K62A	Royalston	63.63	54	IAmb	IAmb	10 50 13.9	
	comp=Z,40nm,0.9s						
K62A	Royalston	63.63	54	P	P	10 50 13.1	-0.1
	baz=318,SNR=5.9						
K62A				P	P	10 50 13.1	-0.1
	baz=318,SNR=5.9						
ARU	Arti	63.64	331	LR	LR	11 22 26.9	
	comp=Z,228nm,18.1s,baz=26,slow=40						
ARU	Arti	63.64	331	P	P	10 50 12.7	-0.4
ARU	Arti	63.64	331	*c i*P	P	10 50 13.0	-0.1
ARU				*PP	pP	10 50 25.3	-3.3
ARU						10 50 48.7	
ARU						10 52 31.6	
ARU				S	S	10 58 43.9	+1.5
ARU				SS	SS	11 02 51.3	+1.7
ARU				pmax	pmax		
	comp=Z,12nm,0.9s						
ARU	Arti	63.64	331	P	P	10 50 12.9	-0.1
ARU				pP	pP	10 50 28.6	+0.1
SDMD	Soldier’s Deli	63.65	59	IAmb	IAmb	10 50 14.1	
	comp=Z,53nm,0.9s						
SDMD	Soldier’s Deli	63.65	59	P	P	10 50 13.3	-0.1
	baz=317,SNR=24						
BRNY	Black Rk. Fore	63.65	56	P	P	10 50 13.6	+0.2
	baz=317,SNR=24						
KSCT	Kent School, K	63.69	55	IAmb	IAmb	10 50 14.4	
	comp=Z,29nm,0.7s						
Y52A	Lilburn	63.70	68	IAmb	IAmb	10 50 14.3	
	comp=Z,59nm,0.9s						
Y52A	Lilburn	63.70	68	P	P	10 50 13.3	-0.5
	baz=317,SNR=20						
Y52A				P	P	10 50 13.3	-0.5
	baz=317,SNR=20						
S57A	Dark Hollow, R	63.72	62	IAmb	IAmb	10 50 15.2	
	comp=Z,50nm,0.9s						
S57A	Dark Hollow, R	63.72	62	P	P	10 50 14.0	+0.1
	baz=317,SNR=18						
S57A				P	P	10 50 14.0	+0.1
	baz=317,SNR=18						
TRNY	Table Rock, Ra	63.74	56	IAmb	IAmb	10 50 14.8	
	comp=Z,69nm,0.7s						
250A	Grady	63.79	71	P	P	10 50 14.2	-0.2
	baz=317,SNR=15						
V55A	Taylorsville	63.86	65	IAmb	IAmb	10 50 16.0	
	comp=Z,50nm,1.1s						
V55A	Taylorsville	63.86	65	P	P	10 50 15.0	+0.1
	baz=317,SNR=12						
V55A				P	P	10 50 15.0	+0.1
	baz=317,SNR=12						
BRZS	Berezniki	63.88	319	*e*P	P	10 50 14.1	-0.8
	baz=319						
BRZS	Berezniki	63.88	319	*e*P	P	10 50 14.0	-0.8
BRNJ	Basking Ridge	63.91	57	P	P	10 50 15.4	+0.4
	baz=317,SNR=39						
WUPA	West Chester U	63.92	58	IAmb	IAmb	10 50 16.5	
	comp=Z,33nm,0.5s						
BRAL	Brewton	63.92	72	P	P	10 50 15.4	+0.1
	baz=317,SNR=9.6						
BRAL	Brewton	63.92	72	P	P	10 50 15.6	+0.3
	baz=317,SNR=9.6						
TUPA	Temple Univers	63.96	58	P	P	10 50 15.6	+0.1
	baz=317,SNR=38						
U56A	King	63.96	64	IAmb	IAmb	10 50 16.8	
	comp=Z,84nm,1.2s						
U56A	King	63.96	64	P	P	10 50 15.5	-0.1
	baz=317,SNR=7.1						
U56A				P	P	10 50 15.5	-0.1
	baz=317,SNR=7.1						
PAL	Palisades	64.01	56	P	P	10 50 16.0	+0.3
PAL	Palisades	64.01	56	P	P	10 50 16.0	+0.3
PAL	Palisades	64.01	56	P	P	10 50 15.4	-0.3
	baz=318,SNR=18						
PAL	Palisades	64.01	56	P	P	10 50 15.8	+0.1
	baz=318,SNR=18						
HRV	Adam Dziewonsk	64.08	54	P	P	10 50 15.7	-0.5
	baz=318						
T57A	Hurt	64.11	63	IAmb	IAmb	10 50 17.4	
	comp=Z,38nm,0.8s						
T57A	Hurt	64.11	63	P	P	10 50 15.8	-0.6
	baz=317,SNR=12						
T57A				P	P	10 50 15.8	-0.6
	baz=317,SNR=12						
FOR	Fordham	64.12	56	P	P	10 50 16.5	0.0
	baz=318,SNR=26						
R58B	Mineral	64.15	61	IAmb	IAmb	10 50 18.0	
	comp=Z,57nm,0.8s						
R58B	Mineral	64.15	61	P	P	10 50 17.0	+0.3
	baz=317,SNR=21						
R58B				P	P	10 50 17.0	+0.3
	baz=317,SNR=21						
WSPT	Westport, CT	64.18	56	IAmb	IAmb	10 50 17.5	
	comp=Z,58nm,0.8s						
152A	Waverly Hall	64.19	70	IAmb	IAmb	10 50 16.6	
	comp=Z,55nm,0.8s						
152A	Waverly Hall	64.19	70	P	P	10 50 15.9	-1.1
	baz=317,SNR=30						
CBN	Corbin Frederi	64.25	60	P	P	10 50 17.1	-0.2
	baz=317,SNR=6.3						
CBN	Corbin Frederi	64.25	60	P	P	10 50 17.7	+0.4
	baz=317,SNR=6.3						
KIRV	Kirov	64.26	337	LR	LR	11 19 50.8	
	comp=Z,176nm,21.8s,baz=37,slow=37						
KIRV	Kirov	64.26	337	*c i*P	P	10 50 17.0	-0.1
UCCT	U. Connecticut	64.28	55	IAmb	IAmb	10 50 18.1	
	comp=Z,24nm,0.8s						
N62A	Caumsett State	64.29	56	P	P	10 50 17.8	+0.3
	baz=318,SNR=5.8						
N62A				P	P	10 50 17.8	+0.3
	baz=318,SNR=5.8						
WES	Weston	64.29	54	IAmb	IAmb	10 50 39.9	
	comp=Z,32nm,1.0s						
KLMR	Klimovskoe	64.30	343	*e*P	P	10 50 15.5	-1.8
KLMR				AMP		10 50 16.9	
	comp=Z,19nm,1.6s						
KLMR				*e*PP	PP	10 52 37.1	-1.5
KLMR				LQ	LQ	11 09 09.2	
KLMR				LQ	LQ	11 09 09.2	
KLMR				LR	LR	11 12 18.1	
KLMR	Klimovskoe	64.30	343	*e*P	P	10 50 15.5	-1.8
KLMR				*e*		10 52 37.1	
KLMR				pmax	pmax		
	comp=Z,19nm,1.6s						
KMSC	Kings Mountain	64.31	65	IAmb	IAmb	10 50 18.7	
	comp=Z,94nm,1.1s						
KMSC	Kings Mountain	64.31	65	P	P	10 50 17.5	-0.4
	baz=317,SNR=22						
KMSC	Kings Mountain	64.31	65	P	P	10 50 17.7	-0.1
	baz=317,SNR=22						
HODGE	Hodges	64.45	67	IAmb	IAmb	10 50 19.4	
	comp=Z,71nm,0.8s						
M63A	Gales Ferry	64.66	55	IAmb	IAmb	10 50 20.4	
	comp=Z,54nm,0.8s						
M63A	Gales Ferry	64.66	55	P	P	10 50 19.9	0.0
	baz=318						
M63A				P	P	10 50 19.9	0.0
	baz=318						
352A	Blakely	64.93	71	P	P	10 50 21.3	-0.6
	baz=317,SNR=31						
JSC	Jenkinsville	64.98	66	IAmb	IAmb	10 50 23.1	
	comp=Z,142nm,1.5s						
JSC	Jenkinsville	64.98	66	P	P	10 50 22.2	+0.1
	baz=317,SNR=17						
W57A	Gilead	65.05	64	IAmb	IAmb	10 50 37.9	
	comp=Z,25nm,0.9s						
W57A	Gilead	65.05	64	P	P	10 50 22.3	-0.3
	baz=317,SNR=6.7						
W57A				P	P	10 50 22.3	-0.3
	baz=317,SNR=6.7						
T59A	Double "B" Far	65.05	61	P	P	10 50 22.4	-0.2
	baz=318,SNR=26						
T59A				P	P	10 50 22.4	-0.2
	baz=318,SNR=26						
V58A	Windy Hill, Pi	65.07	63	IAmb	IAmb	10 50 24.0	
	comp=Z,96nm,1.3s						
V58A	Windy Hill, Pi	65.07	63	P	P	10 50 22.3	-0.4
	baz=318,SNR=10						
V58A				P	P	10 50 22.3	-0.4
	baz=318,SNR=10						
154A	Montrose	65.15	68	P	P	10 50 22.4	-0.9
	baz=317,SNR=18						
BIRD	Birdtown, Kers	65.16	65	IAmb	IAmb	10 50 24.2	
	comp=Z,72nm,1.3s						
BIRD	Birdtown, Kers	65.16	65	P	P	10 50 23.4	0.0
	baz=318,SNR=10						
T60A	Surry	65.37	61	P	P	10 50 24.4	-0.2
	baz=318,SNR=5.3						
T60A				P	P	10 50 24.4	-0.2
	baz=318,SNR=5.3						
U59A	Littleton	65.38	62	IAmb	IAmb	10 50 26.1	
	comp=Z,26nm,0.8s						
U59A	Littleton	65.38	62	P	P	10 50 25.1	+0.4
	baz=318,SNR=7.9						
U59A				P	P	10 50 25.1	+0.4
	baz=318,SNR=7.9						
HAW	Hawthorne Fire	65.46	67	P	P	10 50 25.1	-0.1
	baz=318,SNR=18						
HNR	Honiara	65.50	209	P	P	10 50 26.3	+0.7
	comp=Z,1µm,0.8s,baz=212,slow=4.8,SNR=2.2						
HNR				pP	pP	10 50 41.3	0.0
	comp=Z,2µm,0.8s,baz=241,slow=4.4,SNR=3.0						
HNR				LR	LR	11 13 33.5	
	comp=Z,2µm,22.0s,baz=39,slow=31						
Y57A	Sumter	65.66	66	IAmb	IAmb	10 50 27.5	
	comp=Z,60nm,0.8s						
Y57A	Sumter	65.66	66	P	P	10 50 26.8	+0.2
	baz=318,SNR=6.1						
Y57A				P	P	10 50 26.8	+0.2
	baz=318,SNR=6.1						
FINES	FINESS Array B	65.68	350	P	P	10 50 25.2	-1.1
	comp=Z,8.9nm,0.6s,baz=3.7,slow=7.3,SNR=28						
FINES				pP	pP	10 50 41.6	-0.2
	comp=Z,6.2nm,0.6s,baz=23,slow=6.2,SNR=6.5						
FINES				PKiKP	PKiKP	10 56 59.2	-0.4
	comp=Z,1.3nm,0.7s,baz=54,slow=2.6,SNR=3.4						
FINES				PKPPKP	P'P'df	11 18 60.0	-9.3
	comp=Z,4.2nm,1.0s,baz=126,slow=2.4,SNR=2.4						
FINES				LR	LR	11 19 33.4	
	comp=Z,192nm,21.6s,baz=32,slow=36						
	comp=Z,8.9nm,0.6s						
FINES	FINESS Array B	65.68	350	*i* P	P	10 50 24.7	-1.6
FINES				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TIGA	Tifton	65.74	70	IAmb	IAmb	10 50 26.8	
	comp=Z,36nm,0.8s						
TIGA	Tifton	65.74	70	P	P	10 50 26.2	-0.8
	baz=318,SNR=7.5						
TIGA	Tifton	65.74	70	P	P	10 50 26.3	-0.8
	baz=318,SNR=7.5						
X58A	Rowland	65.85	64	IAmb	IAmb	10 50 29.0	
	comp=Z,85nm,1.3s						
255A	Hazlehurst	66.02	69	P	P	10 50 28.5	-0.4
	baz=318,SNR=11						
CNNC	Cliffs of the	66.15	63	P	P	10 50 29.6	-0.1
	baz=318						
Y58A	Scranton	66.15	65	IAmb	IAmb	10 50 31.0	
	comp=Z,112nm,1.1s						
553A	Crawfordville	66.17	71	P	P	10 50 30.0	+0.1
	baz=318,SNR=13						
SHLS	Shalkode	66.18	310	*e*P	P	10 50 28.7	-1.3
	comp=Z,8.5nm,0.7s,baz=310						
SHLS	Shalkode	66.18	310	*e*P	P	10 50 28.7	-1.3
SHLS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KPKS	Kokpek	66.31	311	*e*P	P	10 50 30.5	-0.3
	baz=311						
KPKS	Kokpek	66.31	311	*e*P	P	10 50 30.5	-0.3
NHSC	New Hope	66.45	66	P	P	10 50 32.1	+0.5
	baz=318,SNR=9.5						
NHSC	New Hope	66.45	66	P	P	10 50 32.3	+0.6
	baz=318,SNR=9.5						
PZH	PanZhiHua	66.50	283	P	P	10 50 32.8	+0.6
PZH				S	S	10 59 18.7	+0.2
PZH				pmax	pmax		
	comp=Z,50nm,1.1s						
PZH				pmax	pmax		
	comp=Z,130nm,5.0s						
PZH				LR	LR		
	comp=Z,490nm,25.3s						
PZH				LR	LR		
	comp=Z,430nm,25.3s						
PZH				LR	LR		
	comp=Z,1µm,29.4s						
RAF	Rauma	66.52	352	*e*P	P	10 50 31.4	-0.2
SATY	Saty	66.75	311	*e*P	P	10 50 33.7	0.0
	baz=311						
SATY	Saty	66.75	311	*e*P	P	10 50 33.6	0.0
NC303	NORSAR Array S	66.90	358	IAmb	IAmb	10 52 15.3	
	comp=Z,133nm,2.0s						
DAV	Davao City (W)	66.91	251	LR	LR	11 15 52.8	
	comp=Z,117nm,20.3s,baz=348,slow=32						
KMI	Kunming	66.92	282	⇑P	P	10 50 35.3	+0.3
KMI				pP	pP	10 50 51.5	+0.7
KMI				PcP	PcP	10 51 03.7	+0.4
KMI				pmax	pmax		
	comp=Z,16nm,1.2s						
KMI				pmax	pmax		
	comp=Z,110nm,3.7s						
KMI				LR	LR		
	comp=Z,190nm,20.6s						
KMI				LR	LR		
	comp=Z,160nm,17.9s						
KMI				LR	LR		
	comp=Z,360nm,38.6s						
HYA	Hoyanger	67.02	0	*e*P	P	10 50 35.9	+1.2
TLIG	Tlapa	67.03	91	P	P	10 50 35.4	-0.3
KUU	Kurty	67.06	313	*e*P	P	10 50 34.5	-0.9
	comp=Z,12nm,1.4s,baz=313						
KUU	Kurty	67.06	313	*e*P	P	10 50 34.5	-0.9
KUU				pmax	pmax		
	comp=Z,12nm,1.4s						
MEF	Metsahovi	67.06	350	*e*P	P	10 50 34.6	-0.5
NB2	NORSAR Subarra	67.09	358	P	P	10 50 34.6	-0.7
	comp=Z,3.4nm,0.5s,baz=4.2,slow=6.9						
NB2	NORSAR Subarra	67.09	358	P	P	10 50 34.6	-0.7
	slow=6.9						
NOA	NORSAR Array B	67.09	358	P	P	10 50 34.9	-0.5
	comp=Z,3.3nm,0.5s,baz=3.5,slow=6.4,SNR=22						
NOA				pP	pP	10 50 52.0	+1.0
	comp=Z,5.6nm,0.8s,baz=2.3,slow=6.3,SNR=6.7						
NOA				LR	LR	11 18 23.8	
	comp=Z,58nm,21.9s,baz=0.0,slow=34						
	comp=Z,3.3nm,0.5s						
TAOE	Nuku Hiva Isla	67.12	144	*e*LR	LR	11 10 54.5	
	comp=Z,479nm,24.3s						
TAOE	Nuku Hiva Isla	67.12	144	*e*T	T	12 03 32.7	
	comp=Z,71nm,0.2s						
QIZ	Qiongzhong	67.14	272	P	P	10 50 37.9	+1.7
QIZ	Qiongzhong	67.14	272	P	P	10 50 38.0	+1.8
GENI	Genyem	67.14	232	P	P	10 50 38.0	+1.8
456A	Hilliard	67.17	69	P	P	10 50 36.1	-0.1
	baz=318,SNR=10						
BTLS	Baital	67.18	315	*e*P	P	10 50 35.8	-0.4
	baz=315						
BTLS	Baital	67.18	315	*e*P	P	10 50 35.7	-0.4
MDOK	Medeo	67.30	312	*e*P	P	10 50 36.8	-0.4
	baz=312						
MDOK	Medeo	67.30	312	*e*P	P	10 50 36.7	-0.4
NC602	NORSAR Array S	67.38	357	*e*P	P	10 50 37.4	+0.2
AAL	Aland	67.50	353	*e*P	P	10 50 37.6	-0.2
SKAR	Skarslia	67.50	359	*e*P	P	10 50 37.8	-0.2
WUS	Wushi	67.80	309	P	P	10 50 40.5	+0.2
656A	Willston	67.88	70	IAmb	IAmb	10 50 41.5	
	comp=Z,60nm,0.7s						
656A	Willston	67.88	70	P	P	10 50 40.9	+0.2
	baz=318,SNR=7.0						
HFS	Hagfors	67.91	356	LR	LR	11 22 04.3	
	comp=Z,67nm,18.6s,baz=4.0,slow=37						
TKM2	Tokmak 2	68.15	312	P	P	10 50 43.1	+0.5
	SNR=7.9						
SGDS	Sogindy	68.17	313	*e*P	P	10 50 42.6	+0.1
	baz=313						
SGDS	Sogindy	68.17	313	*e*P	P	10 50 42.6	+0.1
ODD1	Odda	68.28	0	*e*P	P	10 50 42.7	-0.2
USP	Ospenovka	68.38	313	P	P	10 50 44.0	+0.2
	SNR=14						
VSU	Vasula	68.52	349	*c i*P	P	10 50 44.9	+0.6
VSU				pmax	pmax		
	comp=Z,52nm,0.8s						
VSU	Vasula	68.52	349	*e*P	P	10 50 43.5	-0.8
MTSE	Matsula	68.60	350	*e*P	P	10 50 45.0	+0.2
KBK	Karagaybulak	68.66	313	P	P	10 50 45.6	-0.1
	SNR=6.4						
AAK	Ala-Archa	68.88	313	P	P	10 50 47.3	+0.2
	SNR=14						
AAK	Ala-Archa	68.88	313	LR	LR	11 22 20.3	
	comp=Z,266nm,21.5s,baz=26,slow=37						
AAK	Ala-Archa	68.88	313	P	P	10 50 47.1	+0.2
AAK	Ala-Archa	68.88	313	*c i*P	P	10 50 47.2	+0.2
AAK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
AAK	Ala-Archa	68.88	313	P	P	10 50 47.2	+0.2
AKTO	Aktyubinsk	68.91	328	LR	LR	11 25 05.5	
	comp=Z,297nm,19.6s,baz=67,slow=40						
UCH	Uchtor	69.19	313	P	P	10 50 49.6	+0.3
	SNR=5.4						
ABKAR	Akbulak array	69.27	326	P	P	10 50 49.0	-0.1
VIKU	Vikbolandet	69.39	354	*e*P	P	10 50 49.8	+0.1
DWPF	Disney Wildern	69.46	71	P	P	10 50 50.5	-0.1
DWPF	Disney Wildern	69.46	71	P	P	10 50 50.9	+0.3
	baz=319						
DWPF	Disney Wildern	69.46	71	P	P	10 50 51.3	+0.6
	baz=319,SNR=5.6						
DWPF	Disney Wildern	69.46	71	P	P	10 50 51.0	+0.3
DWPF				pP	pP	10 51 06.1	-0.3
TNCH	TengChong	69.52	285	P	P	10 50 52.8	+1.5
AML	Almayashu	69.64	313	P	P	10 50 53.0	+1.0
	SNR=13						
CMIG	Matias Romero	69.65	88	LR	LR	11 17 06.7	
	comp=Z,197nm,22.0s,baz=312,slow=32						
HOMB	Homborsund	69.91	359	*e*P	P	10 50 53.7	+0.8
MSVF	Nonsavu	70.00	189	P	P	10 50 54.4	+0.4
	comp=Z,16nm,0.9s,baz=324,slow=5.1,SNR=4.4						
	comp=Z,16nm,0.9s						
PMG	Port Moresby	70.05	222	P	P	10 50 54.0	-0.2
	comp=Z,40nm,0.9s,baz=30,slow=4.6,SNR=10						
PMG				LR	LR	11 15 26.3	
	comp=Z,165nm,21.8s,baz=1.0,slow=30						
	comp=Z,40nm,0.9s						
PMG	Port Moresby	70.05	222	P	P	10 50 54.1	-0.2
PMG				IAmb	IAmb	10 50 55.7	
	comp=Z,90nm,1.2s						
PMG	Port Moresby	70.05	222	P	P	10 50 54.4	+0.2
PMG	Port Moresby	70.05	222	P	P	10 50 54.3	+0.1
PMG	Port Moresby	70.05	222	P	P	10 50 54.1	-0.2
PMG				pmax	pmax		
	comp=Z,90nm,1.2s						
PMG	Port Moresby	70.05	222	P	P	10 50 54.0	-0.2
DZA	Taraz	70.08	315	*e*P	P	10 50 54.6	+0.3
	baz=315						

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DZA   Taraz              70.08 315 eP      P       10 50 54.5 +0.3
OBN   Obninsk            70.24 342  LR     LR      11 26 31.6
      comp=Z,71nm,19.7s,baz=8.5,slow=40
OBN   Obninsk            70.24 342  P      P       10 50 57.5 +2.6
OBN                                 IAmb   IAmb    10 50 59.0
      comp=Z,43nm,0.4s
OBN   Obninsk            70.24 342 i P     P       10 50 52.9 -2.0
OBN                                i *PP   pP      10 51 10.1 -0.6
OBN                                 pmax   pmax
      comp=Z,15nm,1.5s
OBN                                 MLR    MLR
      comp=Z,290nm,19.0s
KK31  Karatay Array      70.26 316  P      P       10 50 54.7 -0.6
KK31  Karatay Array      70.26 316  P      P       10 50 54.7 -0.6
KK31                                pmax   pmax
      comp=Z,5.0nm,0.8s
KKAR  Karatay Array      70.26 316  P      P       10 50 54.7 -0.6
KKAR  Karatay Array      70.26 316  P      P       10 50 54.7 -0.6
BELG  Belogornoye        70.27 335  LR     LR      11 24 38.6
      comp=Z,298nm,21.9s,baz=344,slow=38
BELG  Belogornoye        70.27 335c iP     P       10 50 54.2 -1.0
BELG                                pmax   pmax
      comp=Z,6.0nm,1.0s
LSA   Lhasa              70.30 293  P      P       10 50 57.0 +0.7
LSA                                 pmax   pmax
      comp=Z,21nm,0.8s
LSA   Lhasa              70.30 293  P      P       10 50 57.0 +0.7
LSA   Lhasa              70.30 293  P      P       10 50 57.0 +0.7
LSA                                 pmax   pmax
      comp=Z,17nm,0.7s
LSA   Lhasa              70.30 293  P      P       10 50 58.4 +2.1
PMOR  Pomariorio Ree     70.44 154 eT      T       12 07 50.3
      comp=Z,44nm,0.2s
KSH   Kashi              70.66 310  P      P       10 51 01.3 +3.3
KSH                                 pP     PcP     10 51 16.8 -1.9
KSH                                 S      S       11 00 12.1 +4.5
KSH                                 sS     sS      11 00 33.8 +0.3
KSH                                 pmax   pmax
      comp=Z,16nm,0.7s
KSH                                 LR     LR
      comp=Z,250nm,24.5s
KSH                                 LR     LR
      comp=Z,310nm,20.2s
KSH                                 LR     LR
      comp=Z,440nm,20.3s
VAH   Vaihoa             70.74 154 eP      P       10 50 59.3 +0.9
      comp=Z,115nm,1.1s
060A  Indiantown         70.89  71  P      P       10 50 59.7 +0.4
      baz=320
CHM   Chimkent           71.29 316 eP      P       10 51 00.2 -1.4
      baz=316
CHM   Chimkent           71.29 316 eP      P       10 51 00.2 -1.4
TEIG  Tepich             71.32  81  P      P       10 51 03.0 +0.9
TEIG  Tepich             71.32  81  P      P       10 51 01.8 -0.2
TEIG                                pP     pP      10 51 17.0 -0.9
TEIG                                sP     sP      10 51 23.3 -1.1
FAKI  Fak Fak            71.43 239  P      P       10 51 02.8 +0.1
FAKI                                IAmb   IAmb    10 51 19.1
      comp=Z,58nm,1.1s
PBUR  Paburge            71.44 351 eP      P       10 51 04.9 +2.7
061Z  Ochoppi            71.46  72  P      P       10 51 03.4 +0.6
061Z  Ochoppi            71.46  72  P      P       10 51 03.4 +0.6
      baz=320
DEL   Delary             71.57 356 eP      P       10 51 01.8 -1.2
IIGN  Ignalina           71.63 348 eP      P       10 51 02.4 -1.0
PABE  Paberze            71.74 350  P      P       10 51 04.6 +0.6
PABE                                IAmb   IAmb    10 51 23.4
      comp=Z,41nm,0.7s
PABE  Paberze            71.74 350 eP      P       10 51 04.3 +0.3
CCIG  Comitan            71.96  87  IAmb   IAmb    10 51 08.1
      comp=Z,71nm,1.6s
NONG  Nongkai            71.98 276  P      P       10 51 07.1 +1.0
NACGM Naroch             71.99 348 eP      P       10 51 04.6 -0.9
      comp=Z,8.0nm,0.7s,baz=13
CRAI  Chiangrai          72.03 280  IAmb   IAmb    10 51 08.6
      comp=Z,39nm,0.8s
LBMI  Labuha             72.10 244  P      P       10 51 07.1 +0.3
      comp=Z,65nm,1.3s
MNK   Minsk              72.24 347 i P     P       10 51 04.4 -2.6
      comp=E,3.0nm,1.0s
MNK                                i P     P       10 51 04.4 -2.6
      comp=N,36nm,1.0s
MNK                                i P     P       10 51 04.4 -2.6
      comp=Z,11nm,1.0s,baz=14
MNK                                i pP    pP      10 51 20.9 -2.0
MNK                                i PP    PP      10 53 46.4 -1.0
MNK                                i PPP   PPP     10 55 30.0
MNK                                i S     S       11 00 23.2 -1.8
MNK                                i sS    sS      11 00 51.5 +0.4
MNK                                i SS    SS      11 05 03.1 +0.9
MNK                                i SSS   SSS     11 08 22.4
MNK                                i LQ    LQ      11 18 02.4
MNK                                i LR    LR      11 21 03.6
MNK                                i LRM   MLR     11 23 42.6
      comp=Z,253nm,21.6s
MNK                                i LRM   MLR     11 23 47.1
      comp=E,150nm,18.4s
MNK                                i LRM   MLR     11 23 52.2
      comp=N,1µm,15.9s
MNK   Minsk              72.24 347 i P     P       10 51 04.4 -2.6
MNK                                i *PP   pP      10 51 20.8 -2.0
MNK                                i               10 53 46.3
MNK                                i PPP   PPP     10 55 30.0
MNK                                i S     S       11 00 23.2 -1.8
MNK                                i *SS   sS      11 00 51.5 +0.4
MNK                                i SS    SS      11 05 03.1 +0.9
MNK                                 pmax   pmax
      comp=E,3.0nm,1.0s
MNK                                 pmax   pmax
      comp=N,36nm,1.0s
MNK                                 pmax   pmax
      comp=Z,11nm,1.0s
MNK                                 MLR    MLR
      comp=Z,253nm,22.0s
MNK                                 MLR    MLR
      comp=E,150nm,18.0s
MNK                                 MLR    MLR
      comp=N,1µm,16.0s
PPT   Papeete            72.46 156  P      P       10 51 08.8  0.0
      comp=N,24nm,0.8s,baz=225,slow=21,SNR=2.1
PPT                                 LR     LR      11 13 51.6
      comp=N,256nm,21.7s,baz=340,slow=28
      comp=N,24nm,0.8s
PPT2  Papeete2           72.48 156 eP      P       10 51 11.5 +2.6
      comp=N,63nm,28.0s
PPT2                               eS      S       11 00 29.6 +1.1
      comp=N,191nm,37.2s
PPT2                               eSS     SS      11 05 10.7 +1.9
      comp=N,245nm,34.5s
PPT2                               eLR     LR      11 13 22.2
      comp=N,264nm,24.2s
PPT2                               eLR     LR      11 13 23.8
      comp=N,354nm,24.5s
PPT2  Papeete2           72.48 156 eT      T       12 10 19.6
      comp=N,8.0nm,0.3s
TIAR  Tiarei             72.51 156 eT      T       12 10 22.8
      comp=N,1.8nm,0.3s
SOR   Soroa              72.55  75  IAmb   IAmb    10 51 10.7
      comp=Z,81nm,1.3s
EKA   Eskdalemuir Ar     72.56   6  LR     LR      11 21 00.5
      comp=Z,62nm,21.8s,baz=342,slow=34
MYLDM Lahad Datu         72.59 256  IAmb   IAmb    10 52 20.4
      comp=Z,56nm,1.0s
PETF  Flores             72.87  84  IAmb   IAmb    10 51 12.9
      comp=Z,80nm,1.5s
SHL   Shillong           73.02 290  IAmb   IAmb    10 51 13.6
      comp=Z,93nm,1.7s
SHL   Shillong           73.02 290  P      P       10 51 11.7 -0.7
SHL                                 pmax   pmax
      comp=Z,17nm,0.8s
MND   Mandalay           73.23 284  P      P       10 51 13.2 -0.3
DLV   T  Lat             73.39 268  P      P       10 51 15.7 +1.0
GAR   Garm               73.68 313  IAmb   IAmb    10 51 17.9
      comp=Z,46nm,1.2s
CHTO  Chiang Mai         73.97 280  P      P       10 51 17.8 -0.1
CHTO  Chiang Mai         73.97 280  P      P       10 51 17.8 -0.1
RAR   Rarotonga          74.02 167  LR     LR      11 15 19.7
      comp=Z,373nm,21.2s,baz=326,slow=29
TAPN  Taplejung          74.04 294 eP      P       10 51 18.4 -0.1
SANI  Sanana             74.11 245  P      P       10 51 18.3 -0.3
SANI  Sanana             74.11 245  P      P       10 51 17.9 -0.7
      comp=Z,83nm,0.9s,comp=Z,1µm
CM31  Chiang Mai Arr     74.25 280  P      P       10 51 20.0 +0.5
CMAR  Chiang Mai Arr     74.25 280  P      P       10 51 19.7 +0.2
      comp=Z,20nm,0.7s,baz=26,slow=6.8,SNR=80
CMAR                                pP     pP      10 51 35.0 -0.5
      comp=Z,9.2nm,0.8s,baz=22,slow=6.0,SNR=3.9
CMAR                                LR     LR      11 27 44.7
      comp=Z,38nm,18.6s,baz=60,slow=39
      comp=Z,20nm,0.7s
CMAR  Chiang Mai Arr     74.25 280  P      P       10 51 20.0 +0.5
CMAR  Chiang Mai Arr     74.25 280 i P     P       10 51 20.1 +0.6
CMAR                                pmax   pmax
      comp=Z,21nm,0.7s
MRSI  Marisa             74.35 250  P      P       10 51 20.1 +0.1
      comp=Z,87nm,1.0s,comp=Z,1µm
CHGR  Chuyangaron        74.48 314  P      P       10 51 20.5 -0.1
CHGR                                IAmb   IAmb    10 51 22.3
      comp=Z,41nm,0.9s
CHGR  Chuyangaron        74.48 314  P      P       10 51 20.5 -0.1
CHGR                                pmax   pmax
      comp=Z,41nm,0.9s
TOLI2 Tolitoli           74.51 251  P      P       10 51 20.4 -0.6
TOLI2                               IAmb   IAmb    10 51 21.7
      comp=Z,47nm,1.0s
TOLI2 Tolitoli           74.51 251  P      P       10 51 20.7 -0.2
ODAN  Odare              74.59 294 eP      P       10 51 20.7 -1.0
GUN   Gumba              74.63 296 eP      P       10 51 21.7 -0.3
      comp=Z,76nm,0.8s
JIRN  Jiri               74.65 295 eP      P       10 51 22.2 +0.1
      comp=Z,39nm,0.6s
RAMN  Ramite             74.97 294 eP      P       10 51 23.6 -0.2
KKN   Kakani             75.05 296 eP      P       10 51 24.2 -0.1
LUWI  Luwuk              75.10 248  P      P       10 51 23.6 -0.8
LUWI  Luwuk              75.10 248  P      P       10 51 23.6 -0.8
      comp=Z,226nm,0.9s,comp=Z,4µm
PKI   Pulchoki           75.15 296 eP      P       10 51 24.4 -0.6
PKIN  Phulchoki          75.15 296 eP      P       10 51 24.3 -0.6
GKN   Gorkha             75.24 297 eP      P       10 51 24.9 -0.4
      comp=Z,33nm,0.6s
DMN   Daman              75.29 296 eP      P       10 51 25.8 +0.1
BBSR  BB Station         75.35  56  P      P       10 51 25.5 -0.2
      baz=323
BRDH  Bariadhala         75.38 288  LR     LR      11 29 02.3
      comp=Z,113nm,20.1s,baz=42,slow=39
DANN  Dangsing           75.45 297 eP      P       10 51 26.6 -0.1
      comp=Z,58nm,0.7s
MPSI  Mapaga             75.65 251  P      P       10 51 27.3 -0.2
      comp=Z,84nm,1.0s,comp=Z,1µm
AKASG Malin Array Be     75.74 345  P      P       10 51 26.5 -1.0
      comp=Z,2.3nm,0.4s,baz=17,slow=6.3,SNR=20
AKASG                               pP     pP      10 51 43.3 -0.1
      comp=Z,5.5nm,0.5s,baz=17,slow=5.9,SNR=10.0
AKASG                               PKiKP  PKiKP   10 57 13.4 -0.8
      comp=Z,1.3nm,0.6s,baz=20,slow=2.0,SNR=6.8
AKASG                               LR     LR      11 29 35.5
      comp=Z,221nm,20.2s,baz=10,slow=40
      comp=Z,2.3nm,0.4s
AKBB  Malin Array Si     75.74 345⇑iP      P       10 51 25.7 -1.8
AKBB                                pmax   pmax
      comp=Z,23nm,2.0s
NAYO  Nakonayok          75.97 275  P      P       10 51 30.3 +0.9
KOLN  Koldanda           75.99 297 eP      P       10 51 28.7 -0.9
      comp=Z,62nm,1.4s
DZM   Mont Dzumac        76.00 199 eLR     LR      11 15 02.0
      comp=Z,449nm,31.9s
DZM   Mont Dzumac        76.00 199  P      P       10 51 30.1 +0.7
      comp=Z,35nm,1.0s,baz=30,slow=12,SNR=9.5
      comp=Z,35nm,1.0s
DZM   Mont Dzumac        76.00 199  P      P       10 51 29.6 +0.3
DZM                                 IAmb   IAmb    10 51 31.7
      comp=Z,78nm,1.3s
DZM   Mont Dzumac        76.00 199  P      P       10 51 31.0 +1.7
PYUN  Piuthan            76.07 298 eP      P       10 51 29.7 -0.4
      comp=Z,50nm,0.9s
TGUH  Tegucigalpa,Un     76.65  84 eP      P       10 51 35.1 +1.7
NIL   Nilore             76.67 308  P      P       10 51 33.1 -0.1
NIL                                 IAmb   IAmb    10 51 34.7
      comp=Z,26nm,0.9s
NIL   Nilore             76.67 308  P      P       10 51 33.1 -0.1
NIL                                 pmax   pmax
      comp=Z,26nm,0.9s
CLL   Collm              76.76 356 i P     P       10 51 33.6 +0.3
      comp=Z,7.0nm,0.8s
CLL                                epP     pP      10 51 48.0 -1.2
CLL                                eS      S       11 01 18.0 +2.4
CLL                                eSP     SPn     11 01 54.0 +2.1
CLL                                eSS     SS      11 06 24.0  +13
CLL   Collm              76.76 356 i P     P       10 51 33.6 +0.3
CLL                                e*PP    pP      10 51 48.0 -1.2
CLL                                 pmax   pmax
      comp=Z,7.0nm,0.8s
BRG   Berggiesshubel     77.15 355 i P     P       10 51 35.4 -0.2
BRG                                 Amp            10 51 37.3
      comp=Z,14nm,1.1s
BRG                                 pP     pP      10 51 50.4 -1.1
BRG                                 Amp            10 51 54.3
      comp=Z,5.0nm,0.6s
BRG   Berggiesshubel     77.15 355 i P     P       10 51 35.3 -0.2
BRG                                                10 51 50.3
BRG                                 pmax   pmax
      comp=Z,14nm,1.1s
MOX   Moxa               77.48 357  P      P       10 51 36.6 -0.8
MOX                                 pmax   pmax
      comp=Z,12nm,1.0s
DPC   Dobruska-Polom     77.53 354 eP      P       10 51 37.5 -0.2
DPC                                epP     pP      10 51 54.4 +0.7
DPC   Dobruska-Polom     77.53 354 eP      P       10 51 37.5 -0.2
DPC                                e*PP    pP      10 51 54.4 +0.7
KRLC  Kraliky            77.77 353 eP      P       10 51 39.9 +0.8
KRLC  Kraliky            77.77 353 eP      P       10 51 39.9 +0.8
NKC   Novy Kostel        77.86 356 eP      P       10 51 39.8 +0.3
NKC                                epP     pP      10 51 55.9 +0.4
NKC   Novy Kostel        77.86 356 eP      P       10 51 39.8 +0.3
NKC                                e*PP    pP      10 51 55.9 +0.4
KBL   Kabul              77.93 312  P      P       10 51 39.2 -1.2
KBL   Kabul              77.93 312  P      P       10 51 39.2 -1.2
KBL                                 pmax   pmax
      comp=Z,12nm,0.9s
PRU   Pruhonice          78.00 355 eP      P       10 51 40.8 +0.5
PRU   Pruhonice          78.00 355 eP      P       10 51 40.8 +0.5
MORC  Moravsky Berou     78.01 353 ⇓P      P       10 51 41.4 +0.9
MORC  Moravsky Berou     78.01 353 eP      P       10 51 40.1 -0.3
MORC  Moravsky Berou     78.01 353  P      P       10 51 41.3 +0.9
STHS  Stebnicka Huta     78.03 350 eP      P       10 51 41.0 +0.5
STHS                                pmax   pmax
      comp=Z,7.0nm,0.9s
STHS  Stebnicka Huta     78.03 350 eP      P       10 51 41.0 +0.5
TBI   Tubuai             78.05 158 eLR     LR      11 15 58.7
      comp=Z,7µm,23.5s
TBI                                eLR     LR      11 15 58.9
      comp=Z,2µm,25.0s
TBI   Tubuai             78.05 158 eT      T       12 17 17.7
      comp=Z,27nm,0.2s
SORM  Soroca             78.37 345 ⇑P      P       10 51 41.9 -0.5
SORM  Soroca             78.37 345  P      P       10 51 41.8 -0.5
GRF   Grafenberg Arr     78.45 357 eP      P       10 51 42.5 -0.3
      comp=Z,22nm,1.1s,baz=2.7,slow=4.7
GRF                                eL      L       11 21 10.7
      comp=Z,105nm,21.6s
LANS  Liptovska Anna     78.47 351 eP      P       10 51 44.0 +1.0
LANS                                pmax   pmax
      comp=Z,5.0nm,0.7s
LANS  Liptovska Anna     78.47 351 eP      P       10 51 44.0 +1.0
SBUM  Sibu               78.53 259  P      P       10 51 43.6 -0.1
VRAC  Vranov             78.55 353 ⇓P      P       10 51 43.6 +0.2
VRAC  Vranov             78.55 353  LR     LR      11 28 49.7
      comp=Z,57nm,20.5s,baz=10,slow=38
VRAC  Vranov             78.55 353 eP      P       10 51 43.2 -0.2
VRAC  Vranov             78.55 353  P      P       10 51 43.5 +0.2
KRUC  Moravsky           78.81 353 eP      P       10 51 44.2 -0.6
MAK   Makhachkala        78.87 331 eP      P       10 51 43.7 -1.5
MAK                                e*PP    pP      10 51 59.6 -1.7
MAK                                e*SP    sP      10 52 06.3 -1.4
MAK                                eS      S       11 01 38.3 -0.3
MAK                                 pmax   pmax
      comp=Z,121nm,1.0s
BOAB  BOACO BROADBAN78.88  84       IAmb   IAmb    10 51 46.6
      comp=Z,43nm,1.0s
KHC   Kasperske Hory     78.91 355 eP      P       10 51 45.6 +0.2
KHC                                epP     pP      10 52 02.3 +1.0
KHC   Kasperske Hory     78.91 355⇓iP      P       10 51 45.5 +0.2
KHC                                 pmax   pmax
      comp=Z,59nm,1.7s
JAVC  Velka Javorina     78.92 353 eP      P       10 51 46.0 +0.6
MTSU  Mount Surprise     79.08 221  P      P       10 51 46.9 +0.4
TV1H  Townsville Har     79.13 218  P      P       10 51 46.9 +0.2
TRPA  Tarpa              79.16 349 ⇓P      P       10 51 46.8 +0.1
VYHS  Vyhne              79.18 352 eP      P       10 51 46.4 -0.4
VYHS                                pmax   pmax
      comp=Z,40nm,2.3s
VYHS  Vyhne              79.18 352 eP      P       10 51 46.4 -0.4
GERES GERESS Array B     79.19 355  P      P       10 51 46.5 -0.5
      comp=Z,3.8nm,0.7s,baz=17,slow=4.9,SNR=20
GERES                               pP     pP      10 52 03.2 +0.2
      comp=Z,2.4nm,0.7s,baz=20,slow=4.4,SNR=5.9
      comp=Z,3.8nm,0.7s
SPSI  Sidrap Palu        79.20 249  P      P       10 51 46.6 -0.7
      comp=Z,15nm,1.1s
KIV   Kislovodsk         79.33 334 eP      P       10 51 47.8  0.0
KIV                                 pmax   pmax
      comp=Z,12nm,1.1s
KIV                                 MLR    MLR
      comp=Z,135nm,19.0s
BURAR Bucovina Array     79.33 347 ⇑P      P       10 51 47.7 -0.1
BURAR Bucovina Array     79.33 347  P      P       10 51 47.1 -0.6
BURAR Bucovina Array     79.33 347  P      P       10 51 47.7 -0.1
MODS  Modra-Piesok       79.43 353 eP      P       10 51 49.0 +0.8
MODS                                pmax   pmax
      comp=Z,82nm,1.8s
MODS  Modra-Piesok       79.43 353 eP      P       10 51 49.0 +0.8
KBZ   Khabaz             79.48 334  P      P       10 51 48.0 -0.5
      comp=Z,5.0nm,0.8s,baz=82,slow=0.9,SNR=14
KBZ                                 LR     LR      11 31 34.2
      comp=Z,167nm,21.7s,baz=11,slow=39
      comp=Z,5.0nm,0.8s
KBZ   Khabaz             79.48 334c iP     P       10 51 48.3 -0.2
KBZ                                 pmax   pmax
      comp=Z,8.0nm,0.9s
KDU   Kakadu             79.63 234  P      P       10 51 49.2 -0.3
GEYT  Alibeck            79.69 321  P      P       10 51 49.3 -0.5
      comp=Z,7.5nm,1.1s,baz=293,slow=4.2,SNR=7.8
      comp=Z,7.5nm,1.1s
ANN   Anapa              79.83 338 eP      P       10 51 47.6 -2.8
ANN                                e               10 51 55.0
ANN                                e*PP    pP      10 52 03.2 -3.1
ANN                                e               10 54 50.2
ANN                                eS      S       11 01 45.6 -3.1
ANN                                eSS     SS      11 06 57.1 -0.2
ANN                                 pmax   pmax
      comp=Z,31nm,1.1s
ESPN  Las Esperanzas     79.91  83  IAmb   IAmb    10 52 07.4
      comp=Z,75nm,1.1s
ARCR  ARCALIA            79.97 348 ⇑P      P       10 51 52.1 +1.0
CONA  Conrad Observa     79.97 354 eP      P       10 51 51.6 +0.4
      comp=Z,8.8nm,1.0s
KAPI  Kappang            80.06 248  LR     LR      11 25 48.2
      comp=Z,38nm,19.3s,baz=20,slow=34
KAPI  Kappang            80.06 248  P      P       10 51 51.6 -0.4
KAPI  Kappang            80.06 248  P      P       10 51 53.1 +1.1
KAPI  Kappang            80.06 248  P      P       10 51 51.6 -0.4
KAPI                                pmax   pmax
      comp=Z,22nm,1.0s
ZEI   Tsey               80.08 333 eP      P       10 51 50.7 -1.3
ZEI                                 pmax   pmax
      comp=Z,6.0nm,0.7s
CTA   Charters Tower     80.09 218  P      P       10 51 51.9  0.0
      comp=Z,32nm,1.0s,baz=25,slow=6.6,SNR=19
CTA                                 pP     pP      10 52 07.8 -0.4
      comp=Z,14nm,0.7s,baz=14,slow=7.6,SNR=6.0
CTA                                 LR     LR      11 22 40.4
      comp=Z,70nm,20.6s,baz=78,slow=32
      comp=Z,32nm,1.0s
CTA   Charters Tower     80.09 218  P      P       10 51 52.6 +0.6
CTAO  Charters Tower     80.09 218  P      P       10 51 52.3 +0.3
BKSI  Bulukumba          80.10 248  P      P       10 51 52.3 +0.1
      comp=Z,76nm,1.0s,comp=Z,717nm
BKSI                                pP     pP      10 52 07.2 -1.2
      comp=Z,76nm,1.0s,comp=Z,717nm
AKT   Akhty              80.15 330 eP      P       10 51 51.9 -0.5
AKT                                e*PP    pP      10 52 08.0 -0.5
AKT                                e*SP    sP      10 52 16.0 +1.1
AKT                                 pmax   pmax
      comp=Z,23nm,1.0s
RONA  Rosalia, Austr     80.17 353 eP      P       10 51 53.0 +0.8
      comp=Z,9.7nm,1.1s
BIOA  Bad Ischl, Aus     80.34 355 eP      P       10 51 54.7 +1.6
      comp=Z,9.4nm,0.8s
ZKTA  Zakatala           80.35 331  P      P       10 51 54.1 +0.8
MTN   Manton Dam         80.43 235  IAmb   IAmb    10 52 10.1
      comp=Z,69nm,0.6s
MTN   Manton Dam         80.43 235  P      P       10 51 53.8 -0.1
SOC   Sochi              80.44 336 eP      P       10 51 53.2 -0.5
SOC                                e               10 54 57.7
SOC                                eS      S       11 01 56.0 +0.9
SOC                                eSS     SS      11 07 08.9 +2.5
SOC                                eSSS    SSS     11 10 30.3
KSM   Kuching            80.46 260  P      P       10 51 55.5 +1.3
DRGR                     80.46 349 ⇑P      P       10 51 52.9 -1.0
DRGR                     80.46 349  P      P       10 51 52.9 -1.0
ORTG  Ortega, Santa      80.62  85  IAmb   IAmb    10 52 11.7
      comp=Z,49nm,1.0s
VLDR  Vladesti           80.64 345 ⇑P      P       10 51 54.6 -0.1
ARSA  Arzberg            80.67 354 i P     P       10 51 56.3 +1.4
      comp=Z,9.6nm,0.9s
OZUR                     80.74 347 ⇓P      P       10 51 55.5 +0.2
WATA  Walderalm          80.79 357 eP      P       10 51 54.8 -0.9
      comp=Z,9.5nm,1.1s
MOTA  Moosalm            80.80 357 eP      P       10 51 56.3 +0.6
      comp=Z,15nm,1.2s
DUNO  Dulce Nombre,      80.82  85  IAmb   IAmb    10 52 13.1
      comp=Z,100nm,1.5s
VRI   Vrincioaia         80.83 346 ⇓P      P       10 51 55.5 -0.3
VRI   Vrincioaia         80.83 346  P      P       10 51 55.5 -0.3
WTTA  Wattenberg         80.86 357 i P     P       10 51 57.0 +0.9
      comp=Z,3.2nm,0.6s
DAVA  Damuels            80.89 358 i P     P       10 51 57.6 +1.3
      comp=Z,6.7nm,0.9s
SQTA  Sankt Quirin       80.92 357 i P     P       10 51 56.5 +0.1
      comp=Z,12nm,0.8s
DOPR  Dopca              80.93 347 ⇓P      P       10 51 56.9 +0.6
COVR  Voineasa-Covas     80.93 346 ⇓P      P       10 51 56.9 +0.6
KBA   Koelnbreinsper     80.97 355 i P     P       10 51 57.2 +0.5
      comp=Z,25nm,0.7s
JTS   Las Juntas de      80.99  85  LR     LR      11 28 29.4
      comp=Z,40nm,20.2s,baz=312,slow=36
SURA  Surathani          81.00 273  P      P       10 51 58.4 +1.3
FETA  Feichten           81.13 357 eP      P       10 51 57.9 +0.4
      comp=Z,4.5nm,0.7s
RAO   Raoul Island       81.16 184  LR     LR      11 20 08.1
      comp=Z,316nm,21.8s,baz=106,slow=30
CFR   Carcaliu           81.28 345 ⇑P      P       10 51 59.3 +1.1
CFR   Carcaliu           81.28 345  P      P       10 51 59.2 +1.1
MLR   Muntele Rosu       81.31 346 ⇓P      P       10 51 59.2 +0.6
MLR   Muntele Rosu       81.31 346  LR     LR      11 31 10.4
      comp=Z,129nm,22.0s,baz=12,slow=38
MLR   Muntele Rosu       81.31 346  P      P       10 51 59.1 +0.6
ABTA  Abfaltersbach      81.34 356 eP      P       10 51 57.6 -0.9
      comp=Z,7.4nm,0.6s
GANJ  Ganja              81.34 331  P      P       10 51 58.9 +0.3
DAVOX Davos/Dischmat     81.39 358  LR     LR      11 28 37.6
      comp=Z,78nm,21.0s,baz=80,slow=36
MYKA  Terra Mystica      81.40 355 i P     P       10 52 00.6 +1.8
      comp=Z,8.2nm,1.0s
SOEI  Soe                81.43 242  P      P       10 51 58.8 -0.6
SOEI                                IAmb   IAmb    10 52 20.6
      comp=Z,41nm,0.8s
SOEI  Soe                81.43 242  P      P       10 51 59.5 +0.1
SOEI  Soe                81.43 242  P      P       10 51 59.0 -0.4
      comp=Z,72nm,1.2s
MFF   Saint Martin d     81.44   5 eP      P       10 51 58.9 -0.1
MFF                                 pmax   pmax
      comp=Z,190nm,2.2s
SRIT  Nakonsritamara     81.46 273  P      P       10 52 01.2 +1.7
OBKA  Obir               81.47 354 i P     P       10 52 00.3 +1.1
      comp=Z,16nm,0.9s
VOIR                     81.49 347 ⇑P      P       10 52 00.5 +1.1
VOIR                     81.49 347  P      P       10 52 00.5 +1.1
TPGR  Topolog            81.55 345 ⇑P      P       10 51 59.5 -0.1
SURR  Surduc             81.56 349 ⇑P      P       10 51 59.7 +0.1
ARR   Arges              81.62 347 ⇑P      P       10 52 00.6 +0.6
JACO  JACO, Garabito     81.66  85  IAmb   IAmb    10 52 02.3
      comp=Z,78nm,1.2s
BZS   Buzias             81.75 349 ⇑P      P       10 52 00.5 -0.2
BZS   Buzias             81.75 349  P      P       10 52 00.4 -0.2
HARR  Harsova            81.79 345 ⇓P      P       10 52 01.5 +0.6
HARR  Harsova            81.79 345  P      P       10 52 01.4 +0.6
GD1S  Gladstone Soft     81.79 212  P      P       10 52 02.4 +1.5
TIRR  Tirgusor           81.94 344 ⇓P      P       10 52 01.8 +0.2
TIRR  Tirgusor           81.94 344  IAmb   IAmb    10 52 03.5
      comp=Z,66nm,0.8s
TIRR  Tirgusor           81.94 344  P      P       10 52 01.8 +0.2
SKLT  Songkhla           81.94 271  P      P       10 52 03.4 +1.3
GNI   Garni              82.27 331  LR     LR      11 35 45.8
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           comp=Z,80nm,18.2s,baz=46,slow=41
GNI   Garni              82.27 331 ceP    P        10 52 03.6 -0.1
GNI                                pmax   pmax
           comp=Z,15nm,1.7s
SDDR  Presa de Saban     82.37  69 IAmb   IAmb     10 52 05.8
           comp=Z,84nm,1.5s
HERR  Herculane          82.38 349 ⇑P     P        10 52 03.6 -0.4
FRGS  Fruska Gora        82.39 351 ⇓P     P        10 52 03.6 -0.5
MDVR  Moldovita          82.56 349 ⇓P     P        10 52 04.2 -0.7
TEOL  Teolo              82.76 356 IAmb   IAmb     10 52 07.9
           comp=Z,49nm,0.7s
SRBA  San Rafael, Bu     82.79  84 IAmb   IAmb     10 52 08.7
           comp=Z,58nm,1.7s
LFF   La Frestale        83.14   4 eP     P        10 52 10.4 +2.5
LFF                                pmax   pmax
           comp=Z,66nm,1.4s
QIS   Mount Isa          83.20 224 P      P        10 52 08.1 -0.2
EIDS  Eidsvold           83.24 212 P      P        10 52 08.8 +0.4
EIDS                               IAmb   IAmb     10 52 10.3
           comp=Z,38nm,1.3s
EIDS  Eidsvold           83.24 212 P      P        10 52 08.5 +0.1
PRD   Provadia           83.33 345 eP     P        10 52 09.6 +0.8
PLVB  Pleven             83.56 347 ⇓P     P        10 52 11.4 +1.4
CDITO Canoas             83.60  84 IAmb   IAmb     10 52 28.6
           comp=Z,126nm,1.5s
BOVS  Bovan              83.69 349 ⇓P     P        10 52 09.7 -1.1
MPEP  Malo Peshtene      83.71 348 eP     P        10 52 13.6 +2.7
IPM   Ipoh               83.79 269 P      P        10 52 12.0 +0.3
KNRA  Kununurra          84.03 235 IAmb   IAmb     10 52 13.7
           comp=Z,34nm,0.9s
KNRA  Kununurra          84.03 235 P      P        10 52 12.7 +0.1
PLAI  Plampang           84.29 248 P      P        10 52 12.5 -1.6
PLAI  Plampang           84.29 248 P      P        10 52 12.0 -2.1
           comp=Z,45nm,1.3s,comp=Z,569nm
PGB   Panagyurishte      84.45 347 eP     P        10 52 15.9 +1.2
VTS   Vitosha            84.51 348 ⇓P     P        10 52 15.6 +0.5
VTS   Vitosha            84.51 348 IAmb   IAmb     10 52 17.3
           comp=Z,41nm,1.7s
VTS   Vitosha            84.51 348 P      P        10 52 15.6 +0.5
VTS   Vitosha            84.51 348 eP     P        10 52 14.4 -0.7
WB0   Warramunga Arr     84.81 228 IAmb   IAmb     10 52 17.3
           comp=Z,75nm,1.6s
WR0   Warramunga Arr     84.91 228 IAmb   IAmb     10 52 32.5
           comp=Z,22nm,0.6s
WRAB  Tennant Creek      84.98 228 P      P        10 52 16.8 -0.6
WRAB                               IAmb   IAmb     10 52 18.2
           comp=Z,64nm,1.4s
WRAB  Tennant Creek      84.98 228 P      P        10 52 16.9 -0.5
WRAB  Tennant Creek      84.98 228c iP    P        10 52 16.9 -0.5
WRAB                               pmax   pmax
           comp=Z,45nm,1.3s
WB2   Warramunga Arr     84.98 228 IAmb   IAmb     10 52 18.3
           comp=Z,91nm,1.5s
WRA   Warramunga Arr     84.99 228 P      P        10 52 17.1 -0.4
           comp=Z,14nm,0.7s,baz=32,slow=5.7,SNR=75
WRA                                pP     pP       10 52 32.6 -1.2
           comp=Z,15nm,0.5s,baz=36,slow=6.0,SNR=17
WRA                                PKiKP  PKiKP    10 57 27.7 -1.6
           comp=Z,0.3nm,0.6s,baz=351,slow=1.5,SNR=1.5
WRA                                PKPPKP P'P'df   11 18 21.3 -7.2
           comp=Z,1.0nm,1.1s,baz=200,slow=2.5,SNR=3.3
WRA                                LR     LR       11 24 57.2
           comp=Z,136nm,21.9s,baz=8.0,slow=32
           comp=Z,14nm,0.7s
RMQ   Roma               85.05 214 P      P        10 52 18.2 +0.6
PDG   Podgorica          85.15 351 ⇑P     P        10 52 18.6 +0.5
SRBI  Singaraja          85.17 250 P      P        10 52 17.2 -1.3
           comp=Z,22nm,1.5s
MMB   Musomiste          85.45 347 eP     P        10 52 20.8 +1.1
BRTR  Keskin Array B     85.51 339 P      P        10 52 20.2  0.0
           comp=Z,5.4nm,0.9s,baz=57,slow=4.6,SNR=12
BRTR                               LR     LR       11 36 56.4
           comp=Z,81nm,18.9s,baz=44,slow=40
           comp=Z,5.4nm,0.9s
CRPR  Cabo Rojo, PR      85.53  66 IAmb   IAmb     10 52 21.9
           comp=Z,60nm,1.0s
RDO   Rodhopi            85.63 346 IAmb   IAmb     10 52 21.8
           comp=Z,41nm,0.8s
NVR   Nevrokopi          85.67 347 P      P        10 52 21.3 +0.5
PBRG  Braganca           85.69  10 eP     P        10 52 20.9  0.0
CELP  Cerrillos          85.78  66 IAmb   IAmb     10 52 22.8
           comp=Z,39nm,0.8s
BNN   Bunyan             85.85 338 IAmb   IAmb     10 52 23.6
           comp=Z,48nm,1.0s
KNT   Kendrikon          85.98 348 P      P        10 52 21.8 -0.5
SJG   San Juan           85.99  66 LR     LR       11 31 01.3
           comp=Z,98nm,20.8s,baz=182,slow=36
SJG   San Juan           85.99  66 P      P        10 52 23.3 +0.7
SJG                                IAmb   IAmb     10 52 24.1
           comp=Z,39nm,0.8s
SJG   San Juan           85.99  66 P      P        10 52 23.3 +0.7
SJG                                pmax   pmax
           comp=Z,39nm,0.8s
BORA  Eskisehir          86.02 342 P      P        10 52 23.1 +0.5
BORA                               IAmb   IAmb     10 52 23.6
           comp=Z,16nm,0.7s
PVRL  Vila Real          86.11  11 eP     P        10 52 23.2 +0.2
PVRL                               A      A        10 52 34.7
           comp=Z,63nm,2.0s
GRG   Griva              86.25 348 P      P        10 52 23.5 -0.2
PAYG  Puerto Ayora       86.27  96 P      P        10 52 24.0 -0.1
PAYG                               IAmb   IAmb     10 52 26.5
           comp=Z,72nm,1.5s
MVO   Moncorvo           86.29  10 eP     P        10 52 23.9  0.0
PSI   Prapat             86.40 270 P      P        10 52 25.6 +0.8
PSI   Prapat             86.40 270 P      P        10 52 25.3 +0.5
RPSI  Rantau Prapat      86.48 270 P      P        10 52 25.3 +0.2
FNA   Florina            86.55 349 IAmb   IAmb     10 52 26.4
           comp=Z,13nm,0.6s
PVIS  Viseu              86.64  11 eP     P        10 52 25.4 -0.2
PVIS                               A      A        10 52 44.4
           comp=Z,49nm,1.9s
QLP   Quilpie            86.75 217 P      P        10 52 26.9 +0.9
MTE   Manteigas          86.99  11 eP     P        10 52 26.1 -1.2
HYB   Hyderabad          87.03 295 IVmB_BB         10 52 27.2
           comp=Z,199nm,1.0s
HYB                                eP     P        10 52 27.3 -0.5
BKNI  Bangkinang         87.03 267 P      P        10 52 29.9 +2.1
BKNI  Bangkinang         87.03 267 P      P        10 52 29.6 +1.8
SJCC  San Jacinto, C     87.25  78 eP     P        10 52 26.0 -2.9
PCBR  Castelo Branco     87.55  11 eP     P        10 52 29.2 -0.7
FITZ  Fitzroy Crossi     87.66 236 P      P        10 52 30.5 -0.1
FITZ  Fitzroy Crossi     87.66 236 P      P        10 52 30.8 +0.3
URIC  Uribia, Colomb     87.72  74 IAmb   IAmb     10 52 33.7
           comp=Z,39nm,0.9s
ARMA  Armidale           87.77 210 IAmb   IAmb     10 52 33.7
           comp=Z,97nm,1.6s
ARMA  Armidale           87.77 210 P      P        10 52 32.4 +1.5
APAC  Apartado, Choc     87.97  80 eP     P        10 52 34.0 +1.7
AULRC Lightning Ridg     88.02 213 P      P        10 52 32.4 +0.4
ESDC  Sonseca Array      88.07   8 P      P        10 52 31.8 -0.7
           comp=Z,4.2nm,0.8s,baz=342,slow=4.5,SNR=14
           comp=Z,4.2nm,0.8s
AS01  Alice Springs      88.40 227 P      P        10 52 34.3 +0.3
GSI   Gunungsitoli       88.40 270 P      P        10 52 35.5 +1.2
AS31  Alice Springs      88.42 227 IAmb   IAmb     10 52 50.8
           comp=Z,13nm,0.6s
ASAR  Alice Springs      88.42 227 P      P        10 52 34.5 +0.4
           comp=Z,36nm,0.8s,baz=31,slow=5.0,SNR=352
ASAR                               pP     pP       10 52 49.9 -0.7
           comp=Z,30nm,0.5s,baz=24,slow=4.8,SNR=20
ASAR                               PKiKP  PKiKP    10 57 34.7 -0.1
           comp=Z,0.4nm,0.8s,baz=39,slow=2.3,SNR=2.3
ASAR                               PKKP   PKKPdf   11 10 09.9 -0.5
           comp=Z,0.2nm,0.7s,baz=197,slow=1.9,SNR=2.0
ASAR                               PKPPKP P'P'df   11 18 16.9 -5.1
           comp=Z,0.4nm,0.7s,baz=186,slow=2.4,SNR=5.6
ASAR                               LR     LR       11 28 22.8
           comp=Z,108nm,20.7s,baz=36,slow=33
           comp=Z,36nm,0.8s
PESTR Estremoz           88.50  11 eP     P        10 52 33.3 -1.2
AUPHS Peel High Scho     88.63 210 P      P        10 52 36.1 +1.2
UREC  San Jos de Ur      88.72  79 eP     P        10 52 35.9  0.0
DBBC  Dabeiba            88.89  80 eP     P        10 52 38.5 +1.7
INKA  Innaminka          89.12 220 P      P        10 52 38.5 +1.2
KLV   Kalavryta, Ach     89.15 348 P      P        10 52 36.1 -1.5
PBAR  Barrancos          89.25  11 eP     P        10 52 37.6 -0.4
PBAR                               A      A        10 52 40.3
           comp=Z,32nm,1.4s
ZARC  Zaragoza, Cauc     89.33  79 eP     P        10 52 37.8 -1.0
CBOC  Ciudad Bolivar     89.92  81 eP     P        10 52 38.7 -2.9
HELC  Santa Helena       89.95  80 eP     P        10 52 45.1 +3.1
ITM   Ithomi             90.03 348 IAmb   IAmb     10 52 42.1
           comp=Z,15nm,0.6s
PTBC  PUERTO BERRIO,     90.33  79 eP     P        10 52 43.1 -0.3
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BRRC  Barranca, Sant     90.33  78 eP     P        10 52 40.7 -2.6
AUDCS Dubbo College      90.39 211 P      P        10 52 44.2 +1.1
URZ   Urewera            90.43 187 LR     LR       11 25 48.2
           comp=Z,188nm,21.1s,baz=101,slow=30
PAMC  Pamplona, Colo     90.75  77 eP     P        10 52 44.7 -1.2
SDV   Santo Domingo      90.76  75 LR     LR       11 33 33.7
           comp=Z,51nm,22.0s,baz=9.5,slow=36
SDV   Santo Domingo      90.76  75 P      P        10 52 46.1 +0.4
SDV   Santo Domingo      90.76  75 eP     P        10 52 46.3 +0.7
SDV   Santo Domingo      90.76  75 eP     P        10 52 46.3 +0.7
BARC  Barichara          91.05  78 eP     P        10 52 46.9 -0.2
YOTC  Yotoco, Valle      91.19  82 eP     P        10 52 47.0 -0.5
OOD   Oodnadatta         91.24 223 P      P        10 52 47.5 +0.4
ANIL  Santa Ana          91.36  81 eP     P        10 52 49.7 +1.2
IDI   Anoyia             91.46 345 LR     LR       11 39 30.9
           comp=Z,58nm,19.4s,baz=44,slow=39
MMAI  Mount Meron Ar     91.52 336 LR     LR       11 42 30.2
           comp=Z,58nm,18.0s,baz=294,slow=41
JAMC  Jamundi, Valle     91.59  83 eP     P        10 52 46.9 -2.6
RUSC  La Rusia           91.67  78 eP     P        10 52 48.8 -1.4
ROSC  El Rosal           91.75  80 P      P        10 52 50.2 -0.3
           comp=Z,6.3nm,0.3s,baz=328,slow=20,SNR=2.1
ROSC                               pP     pP       10 53 06.8 -0.1
           comp=Z,7.2nm,0.4s,baz=43,slow=8.8,SNR=1.9
ROSC                               LR     LR       11 33 35.9
           comp=Z,41nm,21.9s,baz=290,slow=35
           comp=Z,6.3nm,0.3s
ORTC  Ortega, Tolima     91.92  81 eP     P        10 52 48.7 -2.1
TAMC  Tame, Arauca       92.01  77 eP     P        10 52 55.6 +4.3
POPC  Popayan, Colom     92.12  83 eP     P        10 52 49.0 -3.0
BBAC  Balboa, Cauca      92.18  84 eP     P        10 52 52.0 -0.2
WRKA  Warakurna          92.19 231 P      P        10 52 51.8 +0.1
CHIC  Chingaza           92.27  80 eP     P        10 52 50.9 -2.0
WSAR  Wadi Sarin         92.28 313 LR     LR       11 40 13.4
           comp=Z,129nm,19.4s,baz=60,slow=39
FLF1  Flavio Alfaro-     92.45  87 eP     P        10 52 50.8 -2.5
STKA  Stephens Creek     92.50 217 P      P        10 52 53.0 +0.1
           comp=Z,24nm,0.9s,baz=351,slow=6.3,SNR=36
STKA                               pP     pP       10 53 08.6 -0.8
           comp=Z,27nm,0.9s,baz=357,slow=8.8,SNR=14
STKA                               LR     LR       11 29 02.2
           comp=Z,151nm,21.2s,baz=27,slow=32
           comp=Z,24nm,0.9s
STKA  Stephens Creek     92.50 217 P      P        10 52 53.4 +0.5
LCRK  Leigh Creek        92.53 220 P      P        10 52 53.6 +0.6
PAC1  Pacto, Paraso      92.61  86 eP     P        10 52 50.8 -3.3
CMBC  Cumbal             92.67  85 eP     P        10 52 56.1 +1.3
GCUF  Volcan Galeras     92.74  84 eP     P        10 52 55.1  0.0
CUSE  Cuicocha Este      92.82  86 eP     P        10 52 53.2 -2.2
OTAV  Otavalo            92.84  86 P      P        10 52 55.7 +0.2
OTAV                               IAmb   IAmb     10 52 57.5
           comp=Z,16nm,0.8s
OTAV  Otavalo            92.84  86 P      P        10 52 55.7 +0.2
OTAV                               pmax   pmax
           comp=Z,16nm,0.9s
OTAV  Otavalo            92.84  86 eP     P        10 52 57.6 +2.1
OTAV  Otavalo            92.84  86 eP     P        10 52 56.5 +0.9
OTAV  Otavalo            92.84  86 eP     P        10 52 56.2 +0.7
GARC  Garzon, Huila      93.12  82 eP     P        10 52 57.0 +0.3
BONI  La Bonita          93.24  85 eP     P        10 52 58.6 +1.4
FLOC  Florencia          93.50  83 eP     P        10 52 55.2 -2.8
PSA00 Pilbara Seismi     93.55 239 IAmb   IAmb     10 53 13.7
           comp=Z,16nm,0.7s
PSA00 Pilbara Seismi     93.55 239 IAmb   IAmb     10 53 13.6
           comp=Z,10nm,0.7s
SLOR  San Lorenzo -      93.57  87 IAmb   IAmb     10 53 01.3
           comp=Z,16nm,1.0s
PIAT  Ana Tenorio        93.92  87 eP     P        10 53 00.2 -0.2
PALK  Pallekele          93.94 287 LR     LR       11 38 55.8
           comp=Z,40nm,20.1s,baz=136,slow=38
MDT   Midelt             94.81   9 LR     LR       11 34 45.2
           comp=Z,58nm,21.7s,baz=340,slow=35
EIL   Elat               94.82 336 LR     LR       11 43 11.2
           comp=Z,64nm,18.1s,baz=302,slow=40
HTT   Hallett            94.90 218 P      P        10 53 04.3 +0.4
MCRA  Macar, Loja        95.52  90 IAmb   IAmb     10 53 24.2
           comp=Z,13nm,1.4s
MCRA  Macar, Loja        95.52  90 eP     P        10 53 09.5 +2.2
RPZ   Rata Peaks         96.44 191 LR     LR       11 30 04.2
           comp=Z,150nm,20.8s,baz=22,slow=31
RPN   Rapa Nui           96.71 126 LR     LR       11 26 06.5
           comp=Z,77nm,21.1s,baz=338,slow=29
RAYN  Ar Rayn            97.33 324 P      P        10 53 14.4 -1.1
RAYN  Ar Rayn            97.33 324 P      P        10 53 14.4 -1.1
RAYN                               pmax   pmax
           comp=Z,5.0nm,1.1s
SGCB  S£o Gabriel d     100.08  77 eP     Pdif     10 53 27.5 -0.2
SGCB  S£o Gabriel d     100.08  77 eP     Pdif     10 53 26.9 -0.8
TORD  Torodi Ar. Bea    114.82   5 PKP    PKiKP    10 58 21.9 -0.9
           comp=Z,4.2nm,0.6s,baz=348,slow=2.4,SNR=39
TORD                               pPKP   pPKiKP   10 58 37.9 -1.9
           comp=Z,1.4nm,0.5s,baz=1.0,slow=1.7,SNR=3.5
TORD                               SKP             11 01 52.7
           comp=Z,0.7nm,0.6s,baz=349,slow=2.3,SNR=3.0
TORD                               PKKPbc PKKPbc   11 08 57.8 +0.1
           comp=Z,1.5nm,0.7s,baz=181,slow=2.6,SNR=7.4
SIV   San Ignacio       116.13  82 PKP    PKPdf    10 58 24.5 -0.6
           comp=Z,3.2nm,0.9s,baz=162,slow=0.9,SNR=10
SIV                                pPKP   pPKPdf   10 58 40.8 -1.4
           comp=Z,2.6nm,0.8s,baz=332,slow=1.9,SNR=4.5
LVC   Limon Verde       116.31  93 PKKPbc PKKPbc   11 08 52.0 -0.9
           comp=Z,4.0nm,0.8s,baz=90,slow=4.0,SNR=2.5
H03N2 Juan Fernandez    118.16 109 T      T        13 07 29.2
           baz=317,slow=77,SNR=43
H03N1 Juan Fernandez    118.17 109 T      T        13 07 41.6
           baz=317,slow=77,SNR=50
H03N3 Juan Fernandez    118.17 109 T      T        13 07 30.2
           baz=317,slow=77,SNR=37
DBIC  Dimbokro          120.58  13 PKP    PKPdf    10 58 32.9 -0.9
           comp=Z,6.1nm,0.4s,baz=40,slow=1.8,SNR=20
DBIC                               pPKP   pPKPdf   10 58 48.6 -2.2
           comp=Z,5.5nm,0.7s,baz=151,slow=0.5,SNR=3.7
DBIC                               PKKPbc PKKPbc   11 08 36.1 -1.0
           comp=Z,2.3nm,0.6s,baz=142,slow=3.7,SNR=4.1
DBIC  Dimbokro          120.58  13        PKPdf    10 58 33.5 -0.4
PP1B  Ponte de Pedra    121.13  78 eP     PKiKP    10 58 35.3 +0.5
PANT  Pantanal (Braz    121.14  81 eP     PKiKP    10 58 35.0 +0.2
BDQN  Bodoquena, MS     122.17  82 eP     PKPdf    10 58 36.7 +0.1
RVDE  Rio Verde (Bra    122.19  79 eP     PKPdf    10 58 36.6 -0.1
ROC1  El Roble          122.51 103        PKiKP    10 58 37.4  0.0
MURT  Porto Murtinho    122.55  84 eP     PKPdf    10 58 37.0 -0.3
AQDB  Aquidauana        122.83  81 eP     PKPdf    10 58 37.7 -0.2
SDBA  SAO DESIDERIO     122.86  66 eP     PKPdf    10 58 37.7 -0.5
KMBO  Kilima Mbogo      123.05 323 PKP    PKPdf    10 58 38.0 -0.9
           comp=Z,0.3nm,0.8s,baz=216,slow=24,SNR=3.6
KMBO  Kilima Mbogo      123.05 323 PKPdf  PKiKP    10 58 39.6 +0.5
KMBO  Kilima Mbogo      123.05 323 PKIKP  PKiKP    10 58 39.6 +0.5
CFA   Coronel Fontan    123.23 100 PKP    PKPdf    10 58 37.5 -0.9
           comp=Z,6.1nm,0.6s,baz=290,slow=3.3,SNR=5.9
CFA                                PKKPbc PKKPbc   11 08 26.7 -0.4
           comp=Z,2.5nm,0.7s,baz=136,slow=4.3,SNR=3.8
C2SB  Chapadao do Su    123.26  77 eP     PKPdf    10 58 38.9 +0.1
BDFB  Brasilia          123.67  71 PKP    PKPdf    10 58 39.0 -0.7
           comp=Z,13nm,0.8s,baz=233,slow=1.9,SNR=15
BDFB                               pPKP   pPKPdf   10 58 56.2 -0.6
           comp=Z,4.8nm,0.7s,baz=123,slow=18,SNR=3.4
BDFB  Brasilia          123.67  71 PKPdf  PKiKP    10 58 40.0  0.0
BDFB  Brasilia          123.67  71 eP     PKiKP    10 58 39.9  0.0
TICA  Tres Isletas      124.33  90 eP     PKiKP    10 58 41.0 +0.2
ESFA  Espinillo Form    124.46  87 eP     PKPdf    10 58 41.0 +0.1
MBAR  Mbarara           124.78 330        PKiKP    10 58 42.3 -0.1
MBAR  Mbarara           124.78 330 PKIKP  PKiKP    10 58 42.3 -0.1
VACA  Villa Angela C    125.04  91 eP     PKiKP    10 58 42.5 +0.3
JANB  Januaria          125.33  67 eP     PKPdf    10 58 42.7 -0.2
IPMB  Ipameri, GO       125.40  73 eP     PKPdf    10 58 42.6 -0.3
ITRB  Iturama           125.46  76 eP     PKPdf    10 58 43.1 +0.2
CPUP  Villa Florida     126.17  87 PKP    PKPdf    10 58 43.8 -0.3
           comp=Z,7.1nm,0.7s,baz=308,slow=2.0,SNR=20
CPUP                               pPKP   pPKPdf   10 59 00.0 -1.2
           comp=Z,6.5nm,0.7s,baz=336,slow=1.2,SNR=5.4
CPUP  Villa Florida     126.17  87 eP     PKPdf    10 58 44.0 -0.1
PCMB  Pacaembu          126.38  78 eP     PKPdf    10 58 44.8 +0.2
MCR1  Marechal Candi    126.82  83 eP     PKPdf    10 58 45.6 +0.2
PMNB  Patos De Minas    126.88  71 eP     PKPdf    10 58 45.8  0.0
BB19B Bebedouro         127.60  75 eP     PKiKP    10 58 47.4 -0.2
MECA  Mercedes          127.78  91 eP     PKPdf    10 58 47.2 +0.2
PLCA  Paso Flores       128.02 110 PKP    PKPdf    10 58 47.1 -0.1
           comp=Z,20nm,1.0s,baz=263,slow=2.7,SNR=25
PLCA                               pPKP   pPKPdf   10 59 03.6 -0.8
           comp=Z,17nm,1.0s,baz=272,slow=3.3,SNR=7.7
PLCA  Paso Flores       128.02 110 eP     PKiKP    10 58 47.7 -0.2
PTGB  Pitanga           128.22  82 eP     PKPdf    10 58 48.2  0.0
CMC01 Camacan, BA       128.25  62 eP     PKPdf    10 58 48.3  0.0
AZCA  Azaras, Argent    128.26  88 eP     PKPdf    10 58 48.0 -0.1
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FRBT  Francisco Belt    128.53  83 eP     PKPdf    10 58 49.0 +0.3
FRTB  Fartura           128.71  78 eP     PKiKP    10 58 49.5 -0.2
ITQB  Itaqui            128.99  90 eP     PKPdf    10 58 49.6 +0.2
CRSM  Crissiumal (Br    129.03  86 eP     PKPdf    10 58 49.4 -0.2
GUA01 Guaratinga, BA    129.09  64 eP     PKPdf    10 58 50.0 +0.1
GUA01 Guaratinga, BA    129.09  64 eP     PKPdf    10 58 50.0 +0.1
RCLB  Rio Claro- Sao    129.23  76 eP     PKPdf    10 58 50.2 +0.1
BSCB  Bom Sucesso       129.77  72 eP     PKPdf    10 58 51.4 +0.2
VAO   Valinhos          130.01  76 eP     PKPdf    10 58 51.4 -0.2
ITAB  Concordia         130.02  84 eP     PKPdf    10 58 51.5 +0.1
SJMB  Sao Joao De Ma    130.03  67 eP     PKPdf    10 58 51.6 -0.1
SJMB  Sao Joao De Ma    130.03  67 eP     PKPdf    10 58 51.8 +0.1
SPB   Sao Paulo         130.18  76 eP     PKiKP    10 58 52.3 -0.3
VNDA  Vanda             130.33 187 PKP    PKPdf    10 58 50.6 +0.1
           comp=Z,1.7nm,0.8s,baz=111,slow=18,SNR=1.4
VNDA                               SKPbc  SKPab    11 02 07.2 -1.3
           comp=Z,4.4nm,0.8s,baz=343,slow=1.6,SNR=6.5
RODS  Rosario do Sul    130.35  89 eP     PKiKP    10 58 52.7 -0.1
TIJ01 Guaruva-PR        130.52  79 eP     PKPdf    10 58 53.0 +0.4
ALGR  Alto Alegre (B    130.59  86 eP     PKPdf    10 58 52.4 -0.2
PET01 Itanhaem-SP       130.80  77 eP     PKiKP    10 58 53.5 -0.3
ABR01 Abrolhos, BA      130.82  63 eP     PKiKP    10 58 53.8 -0.3
PARB  Paraibuna         131.06  75 eP     PKiKP    10 58 54.2 -0.3
CPSB  Cacapava Do Su    131.47  88 eP     PKiKP    10 58 54.6 -0.4
VAS01 Vassouras-RJ      131.54  72 eP     PKPdf    10 58 54.8 +0.3
ALF01 Guarapari-ES      131.81  68 eP     PKPdf    10 58 55.3 +0.3
DUB01 Friburgo-RJ       132.01  70 eP     PKPdf    10 58 55.8 +0.4
CNLB  Canela            132.29  85 eP     PKPdf    10 58 56.2 +0.4
PLTB  Pedras Altas      132.31  89 PKPdf  PKiKP    10 58 56.3 -0.4
PLTB  Pedras Altas      132.31  89 eP     PKPdf    10 58 56.0 +0.3
VOI   Vohitsoka         136.83 299 PKPdf  PKiKP    10 59 05.7 -0.7
VOI   Vohitsoka         136.83 299 PKP    PKiKP    10 59 06.1 -0.3
MAW   Mawson            149.18 218 PKPbc  PKPbc    10 59 29.2 +0.3
           comp=Z,48nm,0.8s,baz=119,slow=3.0,SNR=18
MAW                                pPKPbc pPKPbc   10 59 45.2 -0.7
           comp=Z,48nm,0.8s,baz=235,slow=0.9,SNR=6.8
MAW   Mawson            149.18 218        PKiKP    10 59 29.7 -0.3
LBTB  Lobatse           149.29 325 PKPdf  PKPdf    10 59 25.9 -0.4
LBTB                               PKPbc  PKiKP    10 59 31.3 -0.5
LBTB  Lobatse           149.29 325 PKIKP  PKPdf    10 59 25.9 -0.4
LBTB                               PKP    PKiKP    10 59 31.3 -0.5
BOSA  Boshof            152.69 322 PKP    PKPdf    10 59 31.9 +0.4
           comp=Z,8.5nm,0.6s,baz=36,slow=0.8,SNR=22
BOSA                               PKPbc  PKPbc    10 59 38.5  0.0
           comp=Z,26nm,0.5s,baz=26,slow=2.2,SNR=46
BOSA  Boshof            152.69 322 PKPdf  PKPdf    10 59 31.1 -0.3
BOSA                               PKPbc  PKiKP    10 59 38.7  0.0
ELIB  Princess Elisa    158.82 194 dPKPdf PKPdf    10 59 38.4 +0.2
ELIB                               dPKP   PKPab    11 00 12.9 -1.7
SNAA  Sanae             159.97 171        PKPab    11 00 19.1 -0.4
SNAA  Sanae             159.97 171 PKP2   PKPab    11 00 19.1 -0.4
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IDC 01 10:44:22.6±6.3**, 10°.54S**×**161°.34E, h53**km±49km**, mb3.3**/4**, mbtmp3.6**/4**, MS3.2**/1**, Error ellipse: s-maj=44.2km s-min=27.8km az=108.0, Bougainville-Solomon Islands region**

```
Code  Station Name        Δ°  AZ°   Phase ID         Time      Res
                                    Op     ISC       h  m  s   ISC
HNR   Honiara            1.76 309   P      Pn        10 44 50.4 -0.3
           2μm,0.3s,baz=186,slow=4.0,SNR=15
HNR                                 S      Sn        10 45 12.2 +0.3
           6μm,0.3s,baz=67,slow=14,SNR=9.6
DZM   Mont Dzumac       12.47 158   LR     LR        10 51 16.9
           comp=Z,114nm,18.5s,baz=181,slow=33
WRA   Warramunga Arr    27.64 247   P      P         10 50 05.3 -0.2
           0.8nm,0.7s,baz=76,slow=9.4,SNR=7.4
           0.8nm,0.7s
ASAR  Alice Springs     29.22 240   P      P         10 50 19.6 +0.1
           0.2nm,0.6s,baz=61,slow=9.8,SNR=4.6
           0.2nm,0.6s
SONM  Songino Array     75.74 325   P      P         10 56 03.2 +0.4
           0.5nm,0.6s,baz=135,slow=6.2,SNR=3.7
           0.5nm,0.6s
ILAR  Eielson Array     84.46  20   P      P         10 56 49.0 -0.2
           0.3nm,0.5s,baz=244,slow=4.8,SNR=5.0
           0.3nm,0.5s
```

IDC 01 10:46:10.7±5.3**, 17°.82S**×**179°.78E, h558**km±25km**, mb2.9**/2**, mbtmp3.9**/2**, Error ellipse: s-maj=122.4km s-min=66.1km az=105.0, Fiji Islands**

```
Code  Station Name        Δ°  AZ°   Phase ID         Time      Res
                                    Op     ISC       h  m  s   ISC
MSVF  Nonsavu            1.65 273   P      P         10 47 19.8  0.0
           7.1nm,0.6s,baz=89,slow=24,SNR=5.4
WRA   Warramunga Arr    42.95 260   P      P         10 53 21.9 +0.6
           0.5nm,0.6s,baz=92,slow=8.1,SNR=4.5
           0.5nm,0.6s
ASAR  Alice Springs     43.16 254   P      P         10 53 21.6 -1.3
           4.0nm,1.0s,baz=94,slow=9.1,SNR=1.2
           4.0nm,1.0s
AKASG Malin Array Be   139.66 331   PKP    PKPdf     11 04 35.0 -0.2
           0.4nm,0.4s,baz=54,slow=4.7,SNR=5.1
```

IDC ***01*** *11:15:01.5±0.8, 15°.15S×173°.62W, h0km, mb4.2/7, mbtmp4.3/8, ML5.5/1, MS3.7/22, Error ellipse: s-maj=33.8km s-min=19.2km az=134.0*

NEIC ***01*** *11:15:05.8±1.2, 15°.14S±0°.07×173°.43W±0°.06, h35km±2km, mb4.3/10, Error ellipse: s-maj=13.2km s-min=6.9km az=30.0*

ISC 01 11:15:05.3±0.7**, 15°.17S**±0°.07×**173°.36W**±0°.09**, h30**km**, n47,** σ**1s.59**/26**, mb4.3**/12**, MS3.9**/20**, Tonga Islands**

```
Code  Station Name        Δ°  AZ°   Phase ID         Time      Res
                                    Op     ISC       h  m  s   ISC
AFI   Afiamalu           1.98  51   Pn     Pn        11 15 37.8 +1.0
           2μm,0.3s,baz=243,slow=9.0,SNR=1486
AFI                                 Sn     Sn        11 15 58.0 -2.7
           2μm,0.3s,baz=57,slow=22,SNR=9.3
AFI                                 LR     LR        11 16 20.5
           comp=Z,880nm,20.5s,baz=204,slow=36
           3μm,0.3s
AFI   Afiamalu           1.98  51   Pn     Pn        11 15 37.5 +0.7
AFI                                 Sn     Sn        11 15 58.2 -2.5
NIUE  Niue               5.08 140   Pn     Pn        11 16 20.9 +1.4
NIUE                                Sn     Sn        11 17 14.8 -2.4
MSVF  Nonsavu            8.63 252   LR     LR        11 19 59.0
           comp=Z,344nm,21.6s,baz=199,slow=35
RAR   Rarotonga         14.23 117   Pn     Pn        11 18 24.8 -0.1
URZ   Urewera           24.49 198   P      P         11 20 21.7 -0.2
           6.8nm,0.8s,baz=3.4,slow=3.8,SNR=3.8
           6.8nm,0.8s
QRZ   Quartz Range      28.36 203   P      P         11 20 56.6 -0.1
INZ   Inchbonnie        30.41 202   P      P         11 21 13.4 -1.4
H11S2 WAKE ISLAND Hy    38.79 329   T      T         12 03 12.5
           baz=146,slow=75,SNR=8.3
H11S3 WAKE ISLAND Hy    38.80 329   T      T         12 03 14.7
           baz=146,slow=75,SNR=11
H11S1 WAKE ISLAND Hy    38.81 329   T      T         12 03 17.4
           baz=146,slow=75,SNR=9.9
H11N3 WAKE ISLAND Hy    39.73 330   T      T         12 04 22.3
           baz=151,slow=75
H11N1 WAKE ISLAND Hy    39.74 330   T      T         12 04 24.2
           baz=151
H11N2 WAKE ISLAND Hy    39.75 330   T      T         12 04 24.3
           baz=151,slow=75
WR0   Warramunga Arr    49.74 257   P      P         11 23 54.2 -1.1
WR0                                 IAmb   IAmb      11 24 01.1
           comp=Z,2.3nm,1.1s
WB0   Warramunga Arr    49.90 257   P      P         11 23 55.2 -1.3
WB0                                 IAmb   IAmb      11 23 55.6
           comp=Z,4.4nm,1.1s
WB2   Warramunga Arr    49.92 257   P      P         11 23 54.9 -1.8
WB2                                 IAmb   IAmb      11 23 56.9
           comp=Z,5.5nm,1.1s
WRAB  Tennant Creek     49.93 257   P      P         11 23 55.0 -1.8
WRAB                                IAmb   IAmb      11 24 06.5
           comp=Z,2.1nm,0.9s
WRA   Warramunga Arr    49.94 257   P      P         11 23 55.5 -1.3
           comp=Z,2.0nm,1.0s,baz=90,slow=7.0,SNR=13
WRA                                 LR     LR        11 42 52.3
           comp=Z,71nm,18.0s,baz=96,slow=34
           comp=Z,2.0nm,1.0s
WRA   Warramunga Arr    49.94 257   P      P         11 23 55.1 -1.7
AS31  Alice Springs     50.22 252   P      P         11 23 57.3 -1.6
AS31                                IAmb   IAmb      11 23 58.2
           comp=Z,2.3nm,0.8s
ASAR  Alice Springs     50.22 252   P      P         11 23 57.4 -1.6
           comp=Z,8.7nm,0.9s,baz=84,slow=8.6,SNR=62
ASAR                                LR     LR        11 43 39.4
           comp=Z,58nm,21.4s,baz=88,slow=34
```

	comp=Z,8.7nm,0.9s						
ASAR	**Alice Springs**	**50.22**	**252**	P	**P**	**11 23 56.9**	**-2.0**
VNDA	**Vanda**	**63.61**	**186**	P	**P**	**11 25 34.1**	**+1.2**
	comp=Z,2.7nm,0.9s,baz=45,slow=7.1,SNR=3.9						
	comp=Z,2.7nm,0.9s						
VNDA	**Vanda**	**63.61**	**186**	P	**P**	**11 25 32.5**	**-0.4**
SHEM	**Shemya Is, Ala**	**68.48**	**352**	LR	LR	11 49 59.2	
	comp=Z,56nm,20.6s,baz=102,slow=31						
PFO	**Pinyon Flats O**	**72.74**	**47**	LR	LR	11 52 23.5	
	comp=Z,83nm,20.4s,baz=257,slow=31						
LPIG	**La Paz**	**72.88**	**58**	LR	LR	11 49 41.2	
	comp=Z,43nm,19.3s,baz=10.0,slow=28						
YBH	**Yreka Blue Hor**	**73.39**	**37**	LR	LR	11 51 10.2	
	comp=Z,66nm,20.3s,baz=250,slow=30						
NVAR	**Mina Array Bea**	**74.13**	**42**	P	**P**	**11 26 41.4**	**+2.2**
	comp=Z,1.5nm,0.9s,baz=225,slow=8.9,SNR=8.3						
NVAR				LR	LR	11 50 40.2	
	comp=Z,65nm,20.4s,baz=211,slow=29						
	comp=Z,1.5nm,0.9s						
KDAK	**Kodiak Island**	**74.69**	**11**	LR	LR	11 52 04.5	
	comp=Z,63nm,21.9s,baz=207,slow=30						
QSPA	**South Pole Qui**	**74.87**	**180**	P	**P**	**11 26 44.1**	**+1.1**
	comp=Z,7.0nm,1.0s,baz=36,slow=3.9,SNR=15						
	comp=Z,7.0nm,1.0s						
QSPA	**South Pole Qui**	**74.87**	**180**	P	**P**	**11 26 43.1**	**+0.1**
QSPA				IAmb	IAmb	11 26 46.0	
	comp=Z,7.3nm,0.9s						
USRK	**Ussuriysk Ar.**	**77.23**	**323**	LR	LR	11 54 28.3	
	comp=Z,50nm,20.9s,baz=121,slow=31						
ELK	**Elko**	**77.39**	**41**	LR	LR	11 53 21.8	
	comp=Z,51nm,20.2s,baz=230,slow=30						
MA2	**Magadan**	**79.96**	**342**	LR	LR	11 57 01.1	
	comp=Z,30nm,21.0s,baz=104,slow=32						
TXAR	**Lajitas Array**	**80.45**	**56**	LR	LR	11 57 30.1	
	comp=Z,48nm,18.4s,baz=14,slow=32						
NEW	**Newport**	**80.50**	**34**	LR	LR	11 57 44.5	
	comp=Z,49nm,19.2s,baz=168,slow=32						
ANMO	**Albuquerque**	**80.62**	**50**	LR	LR	11 55 33.6	
	comp=Z,53nm,18.2s,baz=28,slow=30						
DLBC	**Dease Lake**	**81.47**	**21**	LR	LR	11 56 12.0	
	comp=Z,53nm,19.6s,baz=116,slow=30						
PDAR	**Pinedale Array**	**82.07**	**42**	LR	LR	11 58 48.1	
	comp=Z,61nm,20.4s,baz=66,slow=32						
ILAR	**Eielson Array**	**82.21**	**11**	LR	LR	11 55 35.1	
	comp=Z,63nm,20.3s,baz=212,slow=30						
YAK	**Yakutsk**	**88.92**	**337**	LR	LR	12 00 11.3	
	comp=Z,22nm,21.1s,baz=64,slow=30						
YKA	**Yellowknife Ar**	**89.87**	**23**	P	**P**	**11 28 02.4**	**+1.5**
	comp=Z,0.3nm,0.8s,baz=250,slow=5.2,SNR=2.7						
	comp=Z,0.3nm,0.8s						
ULM	**Lac du Bonnet**	**93.73**	**39**	LR	LR	12 04 06.5	
	comp=Z,80nm,19.4s,baz=342,slow=31						
SONM	**Songino Array**	**94.70**	**318**	LR	LR	12 10 32.4	
	comp=Z,25nm,18.4s,baz=294,slow=35						
BRTR	**Keskin Array B**	**146.00**	**321**	PKPbc	**PKPab**	**11 34 42.8**	**-0.4**
	comp=Z,1.9nm,0.8s,baz=63,slow=3.5,SNR=5.0						

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*VIE **01** 11:23:08.3, 50°.26N×18°.73E, h0^{km}, mb2.5/3, ml2.4/3 18 km W of Katowice Suspected Mining induced.*

*PRU **01** 11:23:09.1±0.0, 50°.22N×18°.68E, h0^{km}*

ISC 01 11:23:07.7±0.9**, 50°.26N**±0°.04×**18°.82E**±0°.03**, h0**^{km}**, n23, σ0^{s}.85**/39**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.60**	**226**	*e*PG	**Pg**	**11 23 19.4**	**+0.2**
OJC	**Ojcow**	**0.63**	**93**	*e*Pg	**Pb**	**11 23 21.4**	**-0.3**
OJC				*e*Sg	**Sb**	**11 23 30.5**	**-0.5**
MORC	**Moravsky Berou**	**0.95**	**240**	*e*PG	**Pg**	**11 23 25.6**	**-0.4**
MORC				*e*SG	**Sg**	**11 23 37.9**	**-0.4**
LANS	**Liptovska Anna**	**1.19**	**159**	*e*PG	**Pb**	**11 23 31.1**	**0.0**
LANS				*e*SG	**Sb**	**11 23 47.1**	**+0.1**
LANS				*e*LG	Lg	11 23 48.8	
NIE	**Niedzica**	**1.27**	**131**	*e*Pg	**Pn**	**11 23 33.7**	**+0.8**
NIE				*e*Sg	**Sn**	**11 23 51.5**	**+0.8**
KRLC	**Kraliky**	**1.32**	**263**	*e*PG	**Pg**	**11 23 32.0**	**-1.0**
KRLC				*e*SG	**Sg**	**11 23 48.9**	**-1.3**
	comp=Z,56nm,0.5s						
JAVC	**Velka Javorina**	**1.58**	**209**	*e*PN	**Pg**	**11 23 38.1**	**0.0**
DPC	**Dobruska-Polom**	**1.60**	**274**	*e*PG	**Pn**	**11 23 37.5**	**+0.1**
DPC				*e*SG	**Sn**	**11 23 58.1**	**-0.7**
	comp=Z,38nm,0.2s						
OSTC	**Ostas**	**1.69**	**281**	*e*PG	**Pn**	**11 23 38.4**	**-0.2**
OSTC				*e*SG	**Sn**	**11 24 01.1**	**+0.2**
	comp=Z,18nm,0.4s						
KSP	**Ksiaz**	**1.71**	**291**	*e*Pg	**Pg**	**11 23 40.8**	**+0.2**
KSP				*e*Sg	**Sg**	**11 24 03.0**	**+0.3**
VRAC	**Vranov**	**1.73**	**237**	*e*PN	**Pn**	**11 23 39.1**	**+0.1**
VRAC				*e*SG	**Sn**	**11 24 00.5**	**-1.2**
VYHS	**Vyhne**	**1.76**	**180**	*e*PN	**Pn**	**11 23 39.3**	**-0.2**
VYHS				*e*SN	**Sn**	**11 24 02.6**	**-0.1**
STHS	**Stebnicka Huta**	**1.78**	**117**	*e*PN	**Pg**	**11 23 41.5**	**-0.4**
STHS				*e*SN	**Sb**	**11 24 04.4**	**+0.2**
STHS				*e*LG	Lg	11 24 15.3	
CHVC	**Chvalec**	**1.80**	**282**	*e*PG	**Pn**	**11 23 40.1**	**+0.1**
CHVC				*e*SG	**Sn**	**11 24 03.6**	**0.0**
	comp=Z,15nm,0.6s						
UPC	**Upice**	**1.81**	**279**	*e*SG	**Sb**	**11 24 04.8**	**-0.2**
	comp=Z,17nm,0.4s						
KRUC	**Moravsky**	**1.98**	**234**	*e*PN	**Pn**	**11 23 43.2**	**+0.8**
KRUC				*e*SG	**Sn**	**11 24 08.4**	**+0.5**
GOPC	**GO Pecny, Ondr**	**2.62**	**264**	*e*SG	**Sb**	**11 24 28.1**	**-0.1**
	comp=Z,16nm,0.6s						
PRU	**Pruhonice**	**2.77**	**266**	*e*SG	**Sb**	**11 24 32.7**	**+0.3**
	comp=Z,8.6nm,0.4s						
CONA	**Conrad Observa**	**3.03**	**221**	*e*Pn	**Pn**	**11 23 56.6**	**-0.4**
	0.9nm,0.3s						
CONA				*e*Sn	**Sn**	**11 24 34.0**	**-0.1**
	4.6nm,0.4s						
BRG	**Berggiesshubel**	**3.17**	**283**	Pg	**Pg**	**11 24 10.4**	**+2.0**
BRG				Sg	**Sg**	**11 24 48.3**	**-1.2**
BRG				Amp		11 24 54.1	
	comp=Z,7.4nm,0.4s						
CKRC	**Cesky Krumlov**	**3.27**	**246**	*e*SG	**Sb**	**11 24 48.2**	**+1.3**
	comp=Z,9.9nm,0.4s						
KHC	**Kasperske Hory**	**3.58**	**254**	*e*PG	**Pb**	**11 24 11.0**	**-1.0**
KHC				*e*SG	**Sb**	**11 24 58.8**	**+2.8**
	comp=Z,13nm,0.5s						
ARSA	**Arzberg**	**3.71**	**217**	*e*Sn	**Sn**	**11 24 52.2**	**+1.4**
	comp=Z,2.7nm,0.4s						

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*IDC **01** 11:31:45.3±1.3, 17°.57N×120°.82E, h0^{km}, mb3.7/4, mbtmp3.7/4, MS3.1/2, Error ellipse: s-maj=68.4km s-min=23.1km az=76.0*

*MAN **01** 11:31:51.3, 17°.80N×120°.41E, h24^{km}, mb4.7, ML3.6, MS3.6*

ISC 01 11:31:51.9±1.1**, 17°.80N**±0°.03×**120°.45E**±0°.05**, h28**^{km}±8^{km}**, n21, σ1^{s}.45**/33**, mb3.5**/3**, 10C-6D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.12**	**6**	⇓*e*P	**Pn**	**11 31 57.9**	**-0.2**
SIPP				*i* S	**Sb**	**11 32 02.1**	**+1.4**
SAMP	**Sagada Mountai**	**0.84**	**149**	⇑*e*P	**Pb**	**11 32 06.6**	**-1.3**
SAMP				*e*S	**Sb**	**11 32 18.4**	**-0.5**
PACPP	**Pamplona Cagay**	**1.08**	**53**	⇑*i*P	**Pn**	**11 32 10.5**	**-0.8**
PACPP				*i* S	**Sb**	**11 32 24.2**	**-1.6**
CVP	**Callao Caves**	**1.31**	**94**	⇓*i*P	**Pn**	**11 32 14.9**	**+0.5**
CVP				*i* S	**Sn**	**11 32 31.5**	**+0.4**
BOLP	**Bolinao**	**1.50**	**200**	⇑*e*P	**Pn**	**11 32 15.9**	**-1.1**
BOLP				*e*S	**Sb**	**11 32 36.2**	**-1.5**
CAUP	**Cauayan**	**1.57**	**123**	⇓*e*P	**Pb**	**11 32 19.7**	**-0.6**
CAUP				*e*S	**Sb**	**11 32 41.7**	**+2.0**
SGCP	**Gonzaga**	**1.58**	**74**	⇑*e*P	**Pn**	**11 32 18.7**	**+0.5**
SGCP				*e*S	**Sb**	**11 32 39.4**	**-0.8**
SMPP	**San Manuel, Pa**	**1.66**	**172**	⇑*e*P	**Pn**	**11 32 18.0**	**-1.1**
SMPP				*e*S	**Sn**	**11 32 38.2**	**-1.3**
CICP	**Calayan Island**	**1.76**	**34**	⇑*e*P	**Pn**	**11 32 20.3**	**-0.3**
CICP				*e*S	**Sb**	**11 32 46.2**	**+1.1**
BALP	**Baler**	**2.32**	**152**	⇑*i*P	**Pn**	**11 32 29.5**	**+1.3**
BALP				*e*S	**Sb**	**11 32 58.7**	**-2.5**
BBP	**Basco**	**3.00**	**28**	⇑*e*P	**Pn**	**11 32 37.7**	**+0.1**
BBP				*e*S	**Sn**	**11 33 14.3**	**+1.8**
QVP	**Quezon City--P**	**3.20**	**170**	⇑*e*P	**Pn**	**11 32 40.7**	**+0.2**
QVP				*e*S	**Sn**	**11 33 20.5**	**+2.7**
MACP	**Maragondon, Ca**	**3.53**	**176**	⇓*e*P	**Pn**	**11 32 46.4**	**+1.5**
MACP				*e*S	**Sn**	**11 33 27.9**	**+2.2**
LQP	**Lukban**	**3.81**	**164**	⇓*e*P	**Pn**	**11 32 50.6**	**+1.6**
LUBP	**Lubang**	**4.05**	**183**	⇓*e*P	**Pn**	**11 32 54.5**	**+2.4**
LUBP				*e*S	**Sn**	**11 33 40.2**	**+1.7**
JCNP	**Jose Panganiba**	**4.11**	**148**	⇑*e*P	**Pn**	**11 32 53.5**	**+0.7**
JCNP				*e*S	**Sn**	**11 33 39.6**	**-0.4**
KSRS	**Korea Array**	**20.66**	**17**	P	**P**	**11 36 27.8**	**-1.6**
	2.0nm,0.8s,baz=199,slow=12,SNR=6.5						
	2.0nm,0.8s						
ASAJ	**Asahikawa**	**32.19**	**31**	LR	LR	11 51 03.6	
	comp=Z,37nm,21.9s,baz=130,slow=36						
WRA	**Warramunga Arr**	**39.91**	**159**	P	P	11 39 18.1	-5.7
	0.6nm,0.6s,baz=341,slow=9.0,SNR=14						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**42.65**	**321**	P	**P**	**11 39 46.7**	**+0.6**
	0.2nm,0.7s,baz=120,slow=8.8,SNR=2.6						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**43.26**	**162**	P	P	11 39 46.2	-5.0
	1.4nm,0.3s,baz=339,slow=7.0,SNR=114						
ASAR				LR	LR	11 58 04.0	
	comp=Z,29nm,21.8s,baz=227,slow=37						
	1.4nm,0.3s						

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*ISN **01** 11:42:46.9±1.0, 31°.62N×47°.42E, h6^{km}±13^{km}, ML2.7*

*TEH **01** 11:42:48.0, 31°.66N×47°.42E, h10^{km}±92^{km}, ML2.8*

ISC 01 11:42:48.9±1.3**, 31°.59N**±0°.09×**47°.36E**±0°.05**, h10**^{km}**, n14, σ0^{s}.75**/19**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAFI	**Al-Rafai**	**1.07**	**278**	*e*Pg	**Pg**	**11 43 09.0**	**-0.5**
RAFI				*e*Sg	**Sn**	**11 43 24.0**	**-0.8**
RAFI				AML	AML	11 43 45.4	
	comp=N,332nm,0.3s						
RAFI				AML	AML	11 43 53.7	
	comp=E,311nm,0.4s						
AMIS	**Naft Sefid**	**1.65**	**87**	Pg	**Pn**	**11 43 18.3**	**+0.4**
AMIS				Sg	**Sg**	**11 43 41.8**	**0.0**
IBDR	**Badra**	**1.94**	**322**	*e*Pn	**Pn**	**11 43 22.0**	**+0.1**
IBDR				*e*Sn	**Sb**	**11 43 48.0**	**-0.7**
IBDR				AML	AML	11 44 23.3	
	comp=E,47nm,0.7s						
IBDR				AML	AML	11 44 26.4	
	comp=N,48nm,0.9s						
ILBA	**Ilam Banvizeh**	**2.25**	**335**	Pn	**Pn**	**11 43 26.8**	**+0.5**
IGHG	**Ghaleghazi**	**2.82**	**347**	Pn	**Pn**	**11 43 34.6**	**+0.4**
HSAM	**Samen**	**2.82**	**21**	Pn	**Pn**	**11 43 34.1**	**-0.1**
BHD	**Baghdad**	**3.03**	**304**	*e*Pn	**Pn**	**11 43 37.0**	**+0.2**
BHD				*e*Sn	**Sn**	**11 44 15.0**	**+1.8**
IPIR	**Pirpir**	**3.19**	**69**	Pn	**Pn**	**11 43 40.0**	**+0.6**
ILIN	**Lien**	**3.34**	**354**	Pn	**Pn**	**11 43 41.6**	**+0.2**
IRAM	**Ramesheh**	**4.29**	**86**	Pn	**Pn**	**11 43 55.4**	**+1.0**
IRAZ	**Razeghan**	**4.37**	**29**	Pn	**Pn**	**11 43 56.0**	**+0.5**
IZEF	**Zefreh**	**4.41**	**71**	Pn	**Pn**	**11 43 55.8**	**-0.4**
IKRK	**Kirkuk**	**4.56**	**327**	*e*Pn	**Pn**	**11 43 59.0**	**+1.0**
IKRK				*e*Sn	**Sn**	**11 44 51.0**	**-0.1**
KRSH	**Karshahi**	**4.67**	**58**	Pn	**Pn**	**11 43 58.7**	**-0.9**

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*IDC **01** 11:54:32.6±4.5, 2°.76S×139°.77E, h0^{km}, mb3.2/2, mbtmp3.5/3, ML3.9/1, Error ellipse: s-maj=169.4km s-min=31.4km az=88.0*

ISC 01 11:54:41.8±1.0**, 3°.42S**±0°.09×**139°.7E**±0°.1**, h10**^{km}**, n10, σ2^{s}.62**/11**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.97**	**32**	P	**Pg**	**11 54 59.4**	**-1.1**
FAKI	**Fak Fak**	**7.41**	**274**	P	**Pn**	**11 56 29.7**	**-0.4**
KDU	**Kakadu**	**11.63**	**217**	P	**Pn**	**11 57 29.7**	**+1.8**
KNRA	**Kununurra**	**16.22**	**221**	P	**P**	**11 58 33.1**	**0.0**
WRAB	**Tennant Creek**	**17.21**	**197**	P	**Pn**	**11 58 43.8**	**+1.4**
WRA	**Warramunga Arr**	**17.22**	**197**	P	**Pn**	**11 58 42.8**	**+0.2**
	0.4nm,0.3s,baz=17,slow=12,SNR=24						
WRA				S	**Sn**	**12 01 48.1**	**-6.2**
	0.6nm,0.6s,baz=8.4,slow=22,SNR=4.6						
	2.2nm,0.7s						
AS01	**Alice Springs**	**20.86**	**195**	P	**P**	**11 59 25.9**	**+1.8**
	2.4nm,1.3s						
ASAR	**Alice Springs**	**20.88**	**195**	P	**P**	**11 59 23.7**	**-0.6**
	0.6nm,0.6s,baz=26,slow=9.9,SNR=12						
ASAR				S	**S**	**12 03 17.1**	**-0.1**
	0.9nm,1.2s,baz=21,slow=24,SNR=2.6						
	0.6nm,0.6s						
QLP	**Quilpie**	**23.44**	**170**	P	**P**	**11 59 53.9**	**+2.5**
MKAR	**Makanchi Array**	**70.93**	**322**	P	P	12 05 49.3	-10
	0.1nm,0.5s,baz=97,slow=12,SNR=2.2						
	0.1nm,0.5s						

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*SJA **01** 12:08:09.9±1.5, 21°.14S×68°.47W, h100^{km}, ML3.7, MW3.8, Hypocentre not reviewed by the ISC*

*VAO **01** 12:08:10.2±0.4, 21°.02S×68°.47W, h87^{km}, mb3.9*

*GUC **01** 12:08:10.9±0.8, 21°.19S×68°.56W, h124^{km}±6^{km}, ML3.7*

ISC 01 12:08:09.7±0.8**, 21°.17S**±0°.04×**68°.53W**±0°.08**, h124**^{km}±11^{km}**, n31, σ0^{s}.96**/45**, 7C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.91**	**278**	⇓*i*P	**Pn**	**12 08 31.7**	**+0.4**
PB01				*i* S	**Sn**	**12 08 47.5**	**0.0**
PB01				IAML		12 08 49.3	
	comp=N,2µm,0.1s						
PB01	**IPOC Station P**	**0.91**	**278**	*e*P		12 08 31.0	
PB01				IAML		12 08 49.9	
	comp=Z,866nm,0.3s						
PB09	**IPOC Station P**	**0.91**	**227**	⇑*i*P	**Pn**	**12 08 32.5**	**+1.0**
PB09				*i* S	**Sn**	**12 08 48.8**	**+0.9**
PB09				IAML		12 08 50.3	
	comp=N,1µm,0.6s						
PB09	**IPOC Station P**	**0.91**	**227**	*e*P		12 08 31.0	
PB09				IAML		12 08 49.8	
	comp=Z,694nm,0.4s						
PB02	**IPOC Station P**	**1.29**	**263**	⇓*i*P	**Pn**	**12 08 35.7**	**+0.6**
PB02				*i* S	**Sn**	**12 08 54.0**	**-0.3**
PB02				IAML		12 08 54.8	
	comp=N,3µm,0.4s						
PB02	**IPOC Station P**	**1.29**	**263**	*e*P		12 08 35.0	
PB02				*e*S		12 08 54.8	
PB02				IAML		12 08 56.1	
	comp=Z,2µm,0.3s						
PB07	**IPOC Station P**	**1.38**	**246**	⇑*i*P	**Pn**	**12 08 36.6**	**+0.3**
PB07				*i* S	**Sn**	**12 08 56.0**	**-0.5**
PB07				IAML		12 08 57.3	
	comp=N,3µm,0.3s						
PB07	**IPOC Station P**	**1.38**	**246**	*e*P		12 08 36.7	
PB07				IAML		12 08 57.2	
	comp=Z,1µm,0.4s						
PB07				*e*S		12 08 57.2	
PB03	**IPOC Station P**	**1.44**	**232**	⇑*i*P	**Pn**	**12 08 37.2**	**+0.4**
PB03				*i* S	**Sn**	**12 08 56.9**	**-0.6**
PB03	**IPOC Station P**	**1.44**	**232**	*e*P		12 08 37.2	
PB03				*e*S		12 08 57.4	
PB03				IAML		12 08 58.7	
	comp=Z,997nm,0.2s						
LVC	**Limon Verde**	**1.48**	**194**	⇑*i*P	**Pn**	**12 08 38.3**	**+0.8**
LVC				*i* S	**Sn**	**12 08 58.9**	**+0.2**
LVC				IAML		12 09 00.1	
	comp=Z,960nm,0.3s						
LVC	**Limon Verde**	**1.48**	**194**	*e*P	**Pn**	**12 08 38.1**	**+0.6**
LVC	**Limon Verde**	**1.48**	**194**	*e*P		12 08 38.3	
LVC				*e*S		12 09 00.1	
TA01	**Diego Aracena**	**1.66**	**291**	*e*P	**Pn**	**12 08 39.4**	**+0.2**
TA01				*i* S	**Sn**	**12 09 01.4**	**-0.3**
TA01				IAML		12 09 03.4	
	comp=N,589nm,0.6s						
TA01	**Diego Aracena**	**1.66**	**291**	*e*P		12 08 39.6	
TA01				*e*S		12 09 02.5	
TA01				IAML		12 09 03.1	
	comp=Z,312nm,0.4s						
TA02	**Huaiquique**	**1.75**	**300**	*e*P	**Pn**	**12 08 40.0**	**-0.3**
TA02				*i* S	**Sn**	**12 09 03.2**	**-0.4**
TA02	**Huaiquique**	**1.75**	**300**	*e*P		12 08 40.8	
TA02				*e*S		12 09 03.5	
TA02				IAML		12 09 06.5	
	comp=Z,452nm,0.1s						
PB11	**IPOC Station P**	**1.76**	**323**	⇑*i*P	**Pn**	**12 08 41.2**	**+0.6**
PB11				*i* S	**Sn**	**12 09 04.2**	**+0.2**
PB11				IAML		12 09 05.8	
	comp=E,1µm,0.3s						
PB11	**IPOC Station P**	**1.76**	**323**	*e*P		12 08 41.2	
PB11				*e*S		12 09 04.5	
PB11				*e*S		12 09 06.0	
PB11				IAML		12 09 07.5	
	comp=Z,353nm,0.2s						
PB06	**IPOC Station P**	**1.81**	**212**	⇑*i*P	**Pn**	**12 08 41.7**	**+0.5**
PB06				*i* S	**Sn**	**12 09 05.1**	**-0.2**
PB06				IAML		12 09 06.1	
	comp=E,507nm,0.3s						
PB06	**IPOC Station P**	**1.81**	**212**	*e*P		12 08 41.6	
PB06				*e*S		12 09 06.0	
PB06				IAML		12 09 06.2	
	comp=Z,239nm,0.3s						
PB04	**IPOC Station P**	**1.90**	**232**	*e*P	**Pn**	**12 08 42.1**	**-0.2**
PB04				IAML		12 09 13.6	
	comp=N,909nm,0.1s						
PB04	**IPOC Station P**	**1.90**	**232**	*e*P		12 08 42.5	
PB04				*e*S		12 09 06.2	
PB04				IAML		12 09 11.9	
	comp=Z,314nm,0.2s						
PSGC	**Pisagua**	**2.17**	**316**	*e*P	**Pn**	**12 08 45.3**	**-0.2**
PSGC				*e*S	**Sn**	**12 09 11.8**	**-1.1**
PSGC				IAML		12 09 15.0	
	comp=N,259nm,0.5s						
PSGCX	**Pisagua**	**2.17**	**316**	*e*P		12 08 45.6	
PSGCX				*e*S		12 09 13.4	
PSGCX				IAML		12 09 15.5	
	comp=Z,193nm,0.7s						
PB15	**IPOC Station P**	**2.21**	**203**	*e*P	**Pn**	**12 08 46.5**	**+0.4**
PB15				*i* S	**Sn**	**12 09 15.0**	**+0.9**
PB15	**IPOC Station P**	**2.21**	**203**	*e*P		12 08 46.7	
PB15				*e*S		12 09 15.4	
PB15				IAML		12 09 18.3	
	comp=Z,921nm,0.2s						
MNMC	**Minye Minye**	**2.26**	**333**	⇑*i*P	**Pn**	**12 08 48.0**	**+1.0**
MNMC				*i* S	**Sn**	**12 09 16.8**	**+1.4**
MNMC				IAML		12 09 18.6	
	comp=N,1µm,0.4s						
MNMCX	**Minye Minye**	**2.26**	**333**	*e*P		12 08 48.2	
MNMCX				*e*S		12 09 17.5	
MNMCX				IAML		12 09 18.9	
	comp=Z,438nm,0.3s						
PB16	**IPOC Station P**	**2.97**	**342**	*e*P	**Pn**	**12 08 57.6**	**+1.4**
PB16				*i* S	**Sn**	**12 09 33.2**	**+1.2**
PB16				IAML		12 09 36.8	
	comp=E,126nm,0.4s						
PB16	**IPOC Station P**	**2.97**	**342**	*e*P		12 08 58.1	
PB16				*e*S		12 09 34.5	
YJA	**Yavi**	**2.98**	**110**	*e*P		12 08 58.8	
PB10	**IPOC Station P**	**3.00**	**218**	*e*P		12 08 55.7	
PB10				*e*S		12 09 27.6	
PB12	**IPOC Station P**	**3.06**	**326**	*e*P		12 08 56.8	
PB12				*e*S		12 09 33.0	
AP01	**Chacalluta**	**3.27**	**328**	*e*P		12 08 39.8	
AP01				IAML		12 09 06.1	
	comp=Z,286nm,0.2s						
HJA	**Humahuaca**	**3.53**	**126**	*e*P		12 09 05.0	
PB14	**IPOC Station P**	**3.85**	**206**	*e*P		12 09 06.9	
PB14	**IPOC Station P**	**3.85**	**206**	*e*P	**Pn**	**12 09 06.7**	**-1.0**
BBSD	**Serra de San D**	**8.46**	**63**	*e*P	**Pn**	**12 10 07.2**	**-2.3**
BBRB	**Robore, Bolivi**	**8.70**	**72**	*e*P	**Pn**	**12 10 10.6**	**-2.1**
PTLB	**Pontes e Lacer**	**10.57**	**59**	*e*P	**Pn**	**12 10 36.5**	**-1.4**
PANT	**Pantanal (Braz**	**11.40**	**81**	*e*P	**Pn**	**12 10 48.8**	**-0.1**
ETMB	**Extrema**	**11.50**	**12**	*e*P	**Pn**	**12 10 48.6**	**-1.7**
PDRB	**Porto dos Gac**	**14.77**	**52**	*e*P	**Pn**	**12 11 32.5**	**0.0**
TEFE	**Tefe**	**17.96**	**13**	*e*P	**Pn**	**12 12 11.0**	**-0.6**
SNDB	**Serra Nova Dou**	**18.86**	**64**	*e*P	**Pn**	**12 12 20.7**	**-1.6**
NPGB	**Novo Progresso**	**18.96**	**44**	*e*P	**Pn**	**12 12 23.6**	**+0.1**
MACA	**Manacapuru-AM**	**19.46**	**24**	*e*P	**Pn**	**12 12 29.1**	**-0.2**
SGCB	**S£o Gabriel d**	**20.97**	**4**	*e*P	**P**	**12 12 42.9**	**-0.2**
OTAV	**Otavalo**	**23.38**	**334**	*e*P	**P**	**12 13 10.1**	**+2.1**
BOAV	**Boa Vista**	**24.70**	**19**	*e*P	**P**	**12 13 19.9**	**+0.5**
MCPB	**Macapa, AP**	**26.20**	**40**	*e*P	**P**	**12 13 34.2**	**+1.1**

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*JMA **01** 12:09:05.5±0.2, 35°.7N±0°.6×14°1E±°, h35^{km}±1^{km}, MV3.3/36, NEAR CHOSHI CITY*

JMA Felt I J1 at NEAR CHOSHI CITY .

*IDC **01** 12:09:06.7±2.4, 35°.68N×140°.98E, h52^{km}±22^{km}, mb3.2/6, mbtmp3.5/9, ML3.0/3, MS3.1/6, Error ellipse: s-maj=23.1km s-min=9.5km az=72.0*

ISC 01 12:09:04.6±1.2**, 35°.68N**±0°.05×**141°.13E**±0°.07**, h33**^{km}±6^{km}**, n41, σ1^{s}.59**/30**, mb3.5**/6**, 4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.22**	**276**	*i* P	**Pb**	**12 09 11.5**	**+0.2**
CHOJ				S	**Sb**	**12 09 15.8**	**-0.1**
JSMT	**Sammumatsuo**	**0.56**	**267**	⇓*i*P	**Pb**	**12 09 15.7**	**-0.4**
JIHU	**Itakohorinouch**	**0.57**	**301**	*i* P	**Pb**	**12 09 15.9**	**-0.4**
JHYU	**Hitachinakayam**	**0.79**	**327**	P	**Pn**	**12 09 19.0**	**-0.5**
JCN	**Nagara**	**0.80**	**251**	⇓*i*P	**Pn**	**12 09 20.1**	**+0.5**
JYT	**Yasato**	**0.94**	**306**	⇓P	**Pn**	**12 09 20.3**	**-1.1**
BSO3	**Boso 3**	**1.01**	**210**	P	**Pn**	**12 09 22.6**	**+0.4**
BSO1	**Boso 1**	**1.03**	**187**	P	**Pb**	**12 09 23.3**	**-0.3**
JHO	**Hitachi**	**1.03**	**334**	⇓*i*P	**Pn**	**12 09 22.3**	**-0.5**
JAG	**Ashikaga**	**1.55**	**299**	P	**Pn**	**12 09 29.0**	**-0.9**
MJAR	**Matsushiro Arr**	**2.52**	**291**	P	**Pn**	**12 09 43.9**	**+0.7**
	1.0nm,0.3s,baz=93,slow=13,SNR=49						
MJAR				S	**Sn**	**12 10 11.7**	**-1.1**
	16nm,0.6s,baz=98,slow=18,SNR=5.6						
MJAR				LR	LR	12 10 49.3	
	comp=Z,342nm,19.2s,baz=145,slow=43						
	7.6nm,0.4s						
MAJO	**Matsushiro**	**2.52**	**291**	P	**Pn**	**12 09 45.8**	**+2.5**
JHJ	**Hachijo jima 2**	**2.79**	**204**	P	**Pn**	**12 09 48.3**	**+1.4**
	4.9nm,0.3s,baz=353,slow=12,SNR=1.7						
JHJ				S	**Sn**	**12 10 20.4**	**+1.0**
	86nm,0.3s,baz=72,slow=22,SNR=7.7						
	76nm,0.6s						
JGF	**Kuroka**	**3.07**	**270**	P	**Pn**	**12 09 53.3**	**+2.4**
JSD	**Sado**	**3.29**	**317**	P	**Pn**	**12 09 56.1**	**+2.2**
INU	**Inuyama**	**3.37**	**266**	P	**Pn**	**12 09 58.4**	**+3.5**
JTM	**Tenmabayashi**	**5.10**	**359**	P	**Pn**	**12 10 20.9**	**+2.2**
ERM	**Erimo**	**6.52**	**13**	P	**Pn**	**12 10 38.8**	**+0.6**
JEM	**Erimo**	**6.52**	**13**	P	**Pn**	**12 10 40.3**	**+2.1**
JHS	**Saijyo**	**6.58**	**266**	P	**Pn**	**12 10 42.7**	**+3.6**
ASAJ	**Asahikawa**	**8.50**	**7**	P	**Pn**	**12 11 06.5**	**+1.1**
	0.4nm,0.3s,baz=260,slow=16,SNR=6.2						
	1.1nm,0.3s						
JNU	**Nakatsue**	**8.85**	**256**	LR	LR	12 15 03.6	
	comp=Z,219nm,18.8s,baz=66,slow=41						
KSRS	**Korea Array**	**10.77**	**283**	LR	LR	12 15 45.8	
	comp=Z,98nm,20.7s,baz=90,slow=37						
KLR	**Kul'dur**	**15.19**	**336**	LR	LR	12 18 17.2	
	comp=Z,48nm,18.5s,baz=62,slow=36						
H11N2	**WAKE ISLAND Hy**	**27.68**	**118**	T	T	12 43 51.7	
	baz=311,slow=75,SNR=24						
H11N1	**WAKE ISLAND Hy**	**27.69**	**118**	T	T	12 43 52.0	
	baz=311,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy**	**27.70**	**118**	T	T	12 43 52.8	
	baz=311,slow=75,SNR=31						
H11S1	**WAKE ISLAND Hy**	**28.34**	**120**	T	T	12 44 45.4	
	baz=312,slow=75,SNR=36						
H11S3	**WAKE ISLAND Hy**	**28.34**	**120**	T	T	12 44 43.6	
	baz=312,slow=75,SNR=39						
H11S2	**WAKE ISLAND Hy**	**28.36**	**120**	T	T	12 44 46.5	
	baz=312,slow=75,SNR=38						
SONM	**Songino Array**	**28.37**	**306**	P	**P**	**12 14 55.1**	**-0.7**
	0.2nm,0.5s,baz=111,slow=8.2,SNR=2.4						
SONM				LR	LR	12 26 29.2	
	comp=Z,39nm,19.0s,baz=230,slow=37						
	0.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**40.95**	**257**	LR	LR	12 35 17.1	
	comp=Z,30nm,19.0s,baz=275,slow=38						
ZALV	**Zalesovo Beam**	**42.67**	**313**	P	**P**	**12 16 56.8**	**-1.2**
	0.3nm,0.3s,baz=38,slow=7.5,SNR=3.7						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**44.66**	**303**	P	**P**	**12 17 12.9**	**-1.2**
	0.7nm,0.7s,baz=88,slow=8.6,SNR=7.7						
	0.7nm,0.7s						
ILAR	**Eielson Array**	**50.76**	**32**	P	**P**	**12 18 01.9**	**+0.7**
	0.3nm,0.9s,baz=266,slow=6.2,SNR=2.0						
	0.3nm,0.9s						
WRA	**Warramunga Arr**	**55.69**	**188**	P	**P**	**12 18 37.1**	**-0.8**
	1.5nm,1.0s,baz=8.5,slow=7.4,SNR=6.9						
	1.5nm,1.0s						
ASAR	**Alice Springs**	**59.42**	**188**	P	**P**	**12 19 04.7**	**+0.7**
	0.3nm,0.9s,baz=18,slow=12,SNR=1.5						
	0.3nm,0.9s						
SUMG	**Summit**	**72.04**	**360**	*i* P	P	12 20 34.0	+8.7
H03N2	**Juan Fernandez**	**147.09**	**98**	T	T	15 13 14.0	
	baz=290,slow=76,SNR=3.9						
H03N3	**Juan Fernandez**	**147.10**	**98**	T	T	15 13 14.3	
	baz=290,slow=76,SNR=4.5						
H03N1	**Juan Fernandez**	**147.10**	**98**	T	T	15 13 15.3	
	baz=290,slow=76,SNR=3.9						

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*IDC **01** 12:24:41.8±1.8, 5°.76S×151°.35E, h63^{km}±12^{km}, mb3.5/8, mbtmp3.8/9, MS2.9/2, Error ellipse: s-maj=49.8km*

s-min=9.0km az=125.0

ISC 01 12:24:39.0±1.2,**5°.9S**±0°.2×**151°.6E**±0°.2,**h41^{km},n12,**
σ**1^s.48**/13,**mb3.6**/8,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.65	15	P	Pn	12 25 07.4	+1.8
	1µm,0.3s,baz=275,slow=1.2,SNR=171						
KRVT				S	Sn	12 25 27.6	+1.9
	1µm,0.5s,baz=334,slow=18,SNR=6.5						
KRVT				LR	LR	12 25 34.3	
	comp=Z,141nm,20.5s,baz=333,slow=33						
PMG	Port Moresby	5.60	231	P	Pn	12 26 02.1	+2.2
	11nm,0.3s,baz=48,slow=6.7,SNR=20						
PMG				S	Sn	12 27 03.2	+0.2
	36nm,0.6s,baz=52,slow=16,SNR=9.7						
WRA	Warramunga Arr	21.81	229	P	P	12 29 27.8	-0.2
	0.4nm,0.4s,baz=53,slow=10,SNR=7.6						
	0.4nm,0.4s						
ASAR	Alice Springs	24.52	222	P	P	12 29 56.4	+1.4
	0.8nm,0.7s,baz=57,slow=8.8,SNR=11						
ASAR				LR	LR	12 39 04.2	
	comp=Z,44nm,19.1s,baz=124,slow=35						
	0.8nm,0.7s						
CMAR	Chiang Mai Arr	57.28	296	LR	LR	13 02 10.8	
	comp=Z,6.1nm,18.0s,baz=215,slow=40						
PETK	Petropavlovsk-	59.03	4	P	P	12 34 33.6	-1.0
	6.1nm,1.1s,baz=161,slow=8.0,SNR=5.7						
	6.1nm,1.1s						
SONM	Songino Array	66.64	329	P	P	12 35 25.0	-0.5
	0.5nm,0.6s,baz=144,slow=5.0,SNR=5.5						
	0.5nm,0.6s						
ZALV	Zalesovo Beam	81.42	327	P	P	12 36 50.2	-1.4
	0.2nm,0.3s,baz=75,slow=6.1,SNR=2.2						
	0.2nm,0.3s						
ILAR	Eielson Array	83.64	22	P	P	12 37 01.7	-1.2
	0.4nm,0.7s,baz=258,slow=5.2,SNR=8.3						
	0.4nm,0.7s						
KURBB	Kurchatov Arra	83.94	322	P	P	12 37 03.2	-1.6
	0.2nm,0.3s,baz=100,slow=4.8,SNR=3.1						
	0.2nm,0.3s						
NVAR	Mina Array Bea	93.71	52	P	P	12 37 52.7	+0.7
	0.6nm,0.8s,baz=266,slow=5.9,SNR=4.3						
	0.6nm,0.8s						
TORD	Torodi Ar. Bea	149.49	286	PKPbc	PKPbc	12 44 24.7	-0.3
	4.0nm,0.7s,baz=72,slow=3.1,SNR=22						

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*UPP **01** 12:28:09.9±2.3,63°.82N×27°.97E,h0^{km},ML2.0*
*HEL **01** 12:28:09.3±0.2,64°.12N×28°.26E,h0^{km},ML2.3,Explosion*
*IDC **01** 12:28:11.1±1.3,63°.90N×28°.54E,h0^{km},mbtmp3.0/4,*
ML2.4/4,Error ellipse: s-maj=18.0km s-min=7.5km
az=100.0
*BER **01** 12:28:14.9±1.6,64°.02N×27°.96E,h0^{km},ML1.9,Suspected*
explosion

ISC 01 12:28:09.8±0.8,**64°.00N**±0°.03×**28°.12E**±0°.03,**h0^{km},n54,**
σ**1^s.91**/89,**Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RMF	Romuvaara	0.82	74	PB	Pg	12 28 25.3	-0.3
RMF				MSG		12 28 32.4	
	comp=Z,44nm,0.2s						
RMF				SB	Sg	12 28 32.6	-3.6
OUL	Oulu	1.45	320	PN	Pn	12 28 36.5	-0.8
OUL				SN	Sg	12 28 57.7	+1.3
OUF	Merijarvi	1.53	285	PG	Pn	12 28 37.3	-1.0
	baz=95						
OUF				MSG		12 28 56.0	
	comp=Z,32nm,0.2s						
OUF				SN	Sn	12 28 59.5	+0.7
OBF4	Vikkela, Lumij	1.54	303	PN	Pn	12 28 37.8	-0.7
	baz=117						
OBF4				MSG		12 28 55.4	
	comp=Z,31nm,0.2s						
OBF0	Syolatti, Pyha	1.77	288	PG	Pn	12 28 41.5	-0.1
OBF0				MSG		12 29 02.7	
	comp=Z,41nm,0.2s						
OBF0				SG	Sg	12 29 07.0	+0.5
JOF	Joensuu	1.80	126	PG	Pn	12 28 41.8	-0.2
JOF				SG	Sn	12 29 06.7	+1.2
KAF	Kangasniemi	2.07	204	PB	Pn	12 28 46.2	+0.5
KAF				MSG		12 29 14.3	
	comp=Z,42nm,0.2s						
KAF				SN	Sb	12 29 14.6	+0.3
OBF8	Ulkokalla	2.08	281	PG	Pn	12 28 46.7	+1.0
	baz=97						
OBF8				MSG		12 29 12.0	
	comp=Z,18nm,0.2s						
OBF8				SG	Sg	12 29 16.2	-0.1
KEF	Keuruu	2.36	220	PB	Pn	12 28 51.6	+1.9
KEF				SN	Sb	12 29 22.4	-0.4
KEF				MSG		12 29 22.9	
	comp=Z,21nm,0.2s						
RUF	Ruokolahti	2.61	171	PB	Pn	12 28 55.4	+2.2
RUF				MSG		12 29 29.4	
	comp=Z,18nm,0.2s						
RUF				SB	Sb	12 29 30.3	+0.3
VAF	Ylistaro	2.62	251	PB	Pn	12 28 55.4	+2.1
VAF				MSG		12 29 29.4	
	comp=Z,13nm,0.2s						
VAF				SB	Sb	12 29 30.3	0.0
TOF	Tornio	2.64	324	PG	Pn	12 28 54.2	+0.7
	baz=138						
TOF				MSG		12 29 25.2	
	comp=Z,5.2nm,0.2s						
TOF				SG	Sn	12 29 28.3	+2.2
FIA0	FINESS Array S	2.73	201	PN	Pn	12 28 56.9	+2.1
	baz=14						
FIA0				SN	Sn	12 29 30.7	+2.2
FIA0				MSG		12 29 33.5	
	comp=Z,12nm,0.2s						
FINES	FINESS Array B	2.73	201	Pn	Pn	12 28 56.9	+2.1
	comp=Z,1.6nm,0.3s,baz=22,slow=16,SNR=45						
FINES				Pg	Pb	12 28 59.0	-0.4
	comp=Z,1.6nm,0.3s,baz=28,slow=16,SNR=9.9						
FINES				Sn	Sb	12 29 31.6	-1.9
	comp=Z,3.1nm,0.3s,baz=21,slow=27,SNR=30						
	comp=Z,3.1nm,0.3s						
KALU	Kalix	2.76	315	P	Pn	12 28 56.4	+1.2
KALU				S	Sn	12 29 31.9	+2.9
KALU	Kalix	2.76	315	PG	Pn	12 28 58.0	+2.8
KALU				SG	Sn	12 29 31.8	+2.7
BURU	Burvik	3.00	284	P	Pn	12 28 58.2	-0.3
BURU	Burvik	3.00	284	PB	Pn	12 28 58.9	+0.4
BURU				SB	Sn	12 29 37.0	+2.0
SJUU	Sjulsmark	3.18	301	P	Pn	12 29 01.4	+0.5
SJUU				S	Sn	12 29 40.7	+1.3
ODEU	Stanfors	3.26	281	P	Pn	12 29 01.6	-0.5
UMAU	Umeaa	3.29	271	P	Pn	12 29 02.1	-0.4
UMAU	Umeaa	3.29	271	PN	Pn	12 29 02.2	-0.2
UMAU				SG	Sb	12 29 50.6	+1.2
VJF	Virojoki	3.48	185	SB	Sb	12 29 54.9	-0.2
ERTU	Ertsjaerv	3.58	318	P	Pn	12 29 07.7	+1.3
ERTU				S	Sn	12 29 51.8	+2.6
ERTU	Ertsjaerv	3.58	318	PB	Pn	12 29 07.6	+1.2
ERTU				SB	Sn	12 29 52.1	+2.8
PVF	Pernaja	3.62	198	PB	Pb	12 29 12.4	-2.3
PVF				SG	Sg	12 30 06.4	+0.3
KLF	Kolari	3.68	334	PB	Pn	12 29 08.9	+1.1
	baz=147						
KLF				SB	Sn	12 29 53.4	+1.7
PAJU	Pajala	3.68	328	P	Pn	12 29 09.5	+1.6
PAJU	Pajala	3.68	328	PB	Pn	12 29 09.5	+1.6
PAJU				SB	Sn	12 29 53.6	+1.6
HARU	Harads	3.72	309	P	Pn	12 29 09.5	+1.1
SVAU	Svanoeiden	3.77	281	P	Pn	12 29 08.8	-0.2
LILU	Lilltraesk	3.79	294	P	Pn	12 29 09.2	0.0
VRF	Varrio	3.81	9	PG	Pn	12 29 13.3	+3.6
MEF	Metsahovi	4.18	206	SG	Sg	12 30 24.5	+0.6
RAF	Rauma	4.20	227	PN	Pn	12 29 18.0	+3.1
	baz=40						
RAF				SG	Sg	12 30 22.4	-2.0
HEF	Hetta	4.78	340	*e*P	Pn	12 29 26.3	+3.3
HEF				*e*S	Sn	12 30 18.5	-0.5
HEF	Hetta	4.78	340	PB	Pn	12 29 26.3	+3.3
KTK1	Kautokeino	5.40	341	*e*P	Pn	12 29 33.5	+2.1
KTK1				*e*S	Sn	12 30 30.9	-3.3
KTK1				IAML		12 30 39.1	
	comp=Z,1.9nm,0.3s						
ARA0	ARCESS Array S	5.66	351	*e*P	Pn	12 29 37.6	+2.7
ARA0				*e*S	Sn	12 30 39.8	-0.7
ARA0				IAML		12 30 47.0	
	comp=Z,2.5nm,0.3s						
ARCES	ARCESS Array B	5.66	351	Pn	Pn	12 29 37.2	+2.2
	comp=Z,0.2nm,0.3s,baz=164,slow=14,SNR=25						
ARCES				Sn	Sn	12 30 41.4	+1.0
	comp=Z,0.5nm,0.3s,baz=170,slow=23,SNR=8.2						
ARCES				Lg	Lg	12 31 10.8	
	comp=Z,0.4nm,0.3s,baz=154,slow=33,SNR=6.2						
	comp=Z,1.3nm,0.7s						
KEV	Kevo	5.80	356	*e*P	Pn	12 29 38.4	+1.5
KEV				*e*S	Sn	12 30 41.4	-2.6
KIF	Kilpisjarvi	5.81	333	*e*P	Pn	12 29 40.7	+3.6
KIF				*e*S	Sn	12 30 41.8	-2.5
VADS	Vadso	6.17	4	*e*P	Pn	12 29 44.1	+2.1
VADS				IAML		12 30 44.2	
	comp=Z,5.1nm,0.6s						
MOR8	Moi Rana	6.18	297	*e*P	Pn	12 29 41.7	-0.4
MOR8				*e*S	Sn	12 30 47.2	-6.2
MOR8				IAML		12 30 55.1	
	comp=Z,1.0nm,0.2s						
FAUS	Fauske	6.29	308	*e*P	Pn	12 29 45.5	+1.9
FAUS				IAML		12 31 05.2	
	comp=Z,2.4nm,0.5s						
JETT	Jettan, Norway	6.35	335	*e*P	Pn	12 29 47.0	+2.4
JETT				IAML		12 31 04.6	
	comp=Z,3.7nm,0.2s						
STEI	Steigen	6.57	313	*e*P	Pn	12 29 49.4	+2.0
STEI				*e*S	Sn	12 30 59.6	-3.3
STOK	Stokkvaagen	6.77	297	*e*P	Pn	12 29 52.0	+1.7
KONS	Konsvik	6.78	298	*e*P	Pn	12 29 51.9	+1.6
HFS	Hagfors	7.80	247	Pn	Pn	12 30 05.8	+1.4
	comp=Z,0.2nm,0.3s,baz=63,slow=12,SNR=5.3						
HFS				Sn	Sn	12 31 32.1	-1.2
	comp=Z,0.2nm,0.3s,baz=49,slow=27,SNR=1.5						
	comp=Z,1.3nm,0.7s						
NB201	NORSAR Array S	8.32	257	*e*P	Pn	12 30 12.1	+0.6
NOA	NORSAR Array B	8.36	257	Pn	Pn	12 30 13.3	+1.3
	baz=57,slow=15,SNR=2.3						
NOA				Sn	Sn	12 31 44.4	-2.5
	baz=44,slow=26,SNR=1.3						
	comp=Z,0.2nm,0.3s						
NC204	NORSAR Array S	8.44	259	*e*P	Pn	12 30 13.8	+0.6
NBO00	NORSAR Array S	8.55	258	*e*P	Pn	12 30 14.8	+0.1

MAN 01 12:39:50.5,17°.50N×121°.38E,h31^{km},mb3.7,ML2.5,
MS2.0,4C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAMP	Sagada Mountai	0.61	227⇑	*e*P	Pn	12 40 03.6	+0.5
SAMP				*e*S	Sn	12 40 12.9	+0.9
CAUP	Cauayan	0.70	142⇑	*e*P	Pn	12 40 04.7	+0.4
CAUP				*e*S	Sn	12 40 15.9	+1.9
SGCP	Gonzaga	0.98	41⇑	*e*P	Pn	12 40 07.9	-0.2
SGCP				*e*S	Sb	12 40 25.4	+3.9
BALP	Baler	1.76	174⇑	*e*P	Pn	12 40 19.9	+1.0
BALP				*e*S	Sn	12 40 40.4	+0.1

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*ISK **01** 13:11:14.9,39°.54N×26°.07E,h2^{km},ML2.8/19*
*THE **01** 13:11:15.6,39°.50N×26°.05E,h10^{km}±1^{km},ML2.6/9,Error*
ellipse: s-maj=2.0km s-min=0.9km az=187.0
*DDA **01** 13:11:15.3±0.0,39°.50N×26°.08E,h7^{km}±2^{km},ML2.6*
*ATH **01** 13:11:15.8,39°.49N×26°.06E,h13^{km}±1^{km},ML2.7/8,Error*
ellipse: s-maj=1.9km s-min=0.8km az=225.0

ISC 01 13:11:15.4±0.8,**39°.50N**±0°.01×**26°.05E**±0°.02,**h11^{km}**±6^{km},
n56,σ**0^s.55**/94,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GPNR	Gulpinar-Canak	0.08	124	Pg	Pg	13 11 17.5	-0.3
GPNR				Sg	Sg	13 11 19.2	-0.4
PRK	Paraskevi	0.31	145	P	Pg	13 11 21.8	+0.2
PRK				S	Sg	13 11 25.7	-0.1
	3µm,0.3s						
PRK	Paraskevi	0.31	145	P	Pg	13 11 21.7	+0.2
PRK				S	Sg	13 11 25.4	-0.4
PRK				AML	AML	13 11 26.6	
	comp=E,7120µm,0.3s						
PRK				AML	AML	13 11 28.2	
	comp=N,5059µm,0.4s						
SIGR	SIGRI	0.33	207	P	Pg	13 11 22.2	+0.3
SIGR				S	Sg	13 11 26.9	+0.6
	comp=N,2µm,0.2s						
SIGR	SIGRI	0.33	207	P	Pg	13 11 22.2	+0.3
SIGR				S	Sg	13 11 26.8	+0.6
SIGR				AML	AML	13 11 27.3	
	comp=N,4103µm,0.3s						
SIGR				AML	AML	13 11 27.7	
	comp=E,3224µm,0.2s						
BOZC	Bozcaada	0.34	1	Pg	Pg	13 11 22.5	+0.3
BOZC				Sg	Sg	13 11 27.5	+0.7
EZN	Ezine	0.39	34	P	Pg	13 11 23.0	-0.1
EZN				S	Sg	13 11 28.6	+0.3
	comp=E,648nm,0.1s						
EZN	Ezine	0.39	34	Pg	Pg	13 11 22.8	-0.3
EZN				Sg	Sg	13 11 28.5	+0.3
BAYC	CANAKKALE_Bayr	0.46	58	P	Pg	13 11 23.9	-0.5
BAYC				*i* AML	AML	13 11 30.0	
	comp=E,316nm,0.5s						
BAYC				*i* AML	AML	13 11 30.0	
	comp=E,300nm,0.3s						
BAYC				S	Sg	13 11 30.0	-0.3
ECEA	Canakkale, Ece	0.55	10	P	Pg	13 11 26.4	+0.3
ECEA				*i* AML	AML	13 11 35.0	
	comp=E,344nm,0.3s						
ECEA				S	Sb	13 11 35.1	+0.2
ECEA				*i* AML	AML	13 11 36.0	
	comp=E,327nm,0.2s						
COMU	Canakkale	0.68	29	Pg	Pg	13 11 28.4	-0.2
COMU				Sg	Sg	13 11 37.9	+0.3
GOKA	anakkale-Gk	0.70	351	P	Pg	13 11 29.0	+0.1
GOKA				S	Sb	13 11 39.0	-0.1
GOKA				*i* AML	AML	13 11 42.0	
	comp=E,407nm,0.2s						
GOKA				*i* AML	AML	13 11 42.0	
	comp=E,314nm,0.2s						
GADA	Gvkgeada	0.70	351	Pg	Pg	13 11 28.9	0.0
LIA	Limnos Island	0.77	301	P	Pg	13 11 30.9	+0.5
LIA				S	Sb	13 11 42.0	+0.6
	comp=E,815nm,0.3s						
LIA	Limnos Island	0.77	301	P	Pg	13 11 30.9	+0.5
LIA				S	Sb	13 11 41.8	+0.4
LIA				AML	AML	13 11 44.1	
	comp=N,1699µm,0.4s						
LIA				AML	AML	13 11 44.8	
	comp=E,1545µm,0.3s						
DKL	Dikili	0.79	122	Pg	Pb	13 11 31.3	+0.1
DKL				Sg	Sn	13 11 43.6	-0.7
BUHA	Balikesir, Bur	0.80	90	P	Pg	13 11 30.3	-0.4
BUHA				S	Sg	13 11 41.2	0.0
KARB	zmir-Karabur	0.88	161	P	Pg	13 11 32.5	+0.1
KARB				S	Sb	13 11 44.7	+0.1
KARB				*i* AML	AML	13 11 46.0	
	comp=E,262nm,0.4s						
CANM	Can-anakkale	0.93	56	Pg	Pg	13 11 33.0	-0.3
CANM				Sg	Sn	13 11 46.8	-0.9
GELI	Tayfur-Gelibol	0.95	20	Pg	Pg	13 11 33.4	-0.4
GELI				Sg	Sb	13 11 46.9	+0.3
ZEDA	zmir-Bergama	0.96	123	P	Pb	13 11 34.4	+0.3
ZEDA				S	Sn	13 11 48.2	-0.3
ZEDA				*i* AML	AML	13 11 49.0	
	comp=E,161nm,0.3s						
ZEDA				*i* AML	AML	13 11 53.0	
	comp=E,136nm,0.5s						
LPK	Lapseki	1.03	32	Pg	Pg	13 11 34.6	-0.6
LPK				Sg	Sb	13 11 49.4	+0.6
PSRA	Psara	1.03	202	P	Pb	13 11 35.7	+0.5
PSRA				S	Sg	13 11 48.2	-0.4
PSRA				AML	AML	13 11 52.3	
	comp=N,1320µm,0.2s						
PSRA				AML	AML	13 11 54.5	
	comp=E,1560µm,0.3s						
SMTH	Samothraki Isl	1.05	338	P	Pg	13 11 35.4	-0.1
SMTH				S	Sg	13 11 49.7	+0.6
	comp=E,178nm,0.2s						
SMTH	Samothraki Isl	1.05	338	P	Pg	13 11 35.4	-0.1
SMTH				S	Sg	13 11 49.5	+0.3
SMTH				AML	AML	13 11 50.5	
	comp=E,320µm,0.4s						
SMTH				AML	AML	13 11 50.6	
	comp=N,383µm,0.1s						
CHOS	Chios island	1.11	180	P	Pg	13 11 36.1	-0.7
CHOS				S	Sg	13 11 51.2	0.0
	comp=N,470nm,0.2s						
CHOS	Chios island	1.11	180	P	Pg	13 11 36.0	-0.8
CHOS				S	Sg	13 11 50.9	-0.4
CHOS				AML	AML	13 11 55.6	
	comp=E,1044µm,0.2s						
CHOS				AML	AML	13 11 56.1	
	comp=N,847µm,0.3s						
CAVK	Edirne/Enez-Ca	1.19	4	P	Pb	13 11 37.7	-0.3
CAVK				S	Sn	13 11 54.7	+0.5
CAVK				*i* AML	AML	13 11 59.0	
	comp=N,94nm,0.4s						
CAVK				*i* AML	AML	13 11 59.0	
	comp=N,113nm,0.4s						
ERIK	Erikli-Kesan	1.22	17	Pn	Pn	13 11 37.9	-0.5
ENEZ	Enez	1.24	4	P	Pn	13 11 38.6	0.0
ENEZ				S	Sb	13 11 54.3	-0.4
	comp=N,285nm,0.5s						
ENEZ	Enez	1.24	4	Pn	Pn	13 11 38.6	0.0
STEP	BALIKESIR_Sava	1.30	95	P	Pn	13 11 39.3	-0.3
STEP				S	Sn	13 11 58.3	+1.3
STEP				*i* AML	AML	13 12 00.0	
	comp=N,114nm,0.6s						
STEP				*i* AML	AML	13 12 01.0	
	comp=N,95nm,0.4s						
ZEYE	Izmir, Urla-Ze	1.31	164	P	Pn	13 11 39.5	-0.1
ZEYE				S	Sg	13 11 58.3	+0.8
ZEYE				*i* AML	AML	13 12 01.0	
	comp=N,135nm,0.4s						
ZEYE				*i* AML	AML	13 12 02.0	
	comp=N,97nm,0.4s						
KRBG	Karabiga-Canak	1.31	47	Pn	Pn	13 11 39.3	-0.3
BLCB	Balcova	1.36	145	P	Pg	13 11 41.8	+0.3
BLCB				S	Sb	13 11 58.0	-0.2
BLCB	Balcova	1.36	145	Pn	Pg	13 11 41.7	+0.3
KNL	Balıkesir	1.37	56	P	Pn	13 11 40.6	+0.1
KNL				S	Sg	13 11 59.1	-0.5
KNL				*i* AML	AML	13 12 00.0	
	comp=N,171nm,0.5s						
KNL				*i* AML	AML	13 12 01.0	
	comp=N,396nm,0.6s						
GONE	Gonen-Balikesi	1.38	66	Pn	Pb	13 11 40.9	-0.2
ALN	Alexandroupoli	1.39	0	P	Pn	13 11 40.6	-0.1
ALN				S	Sb	13 11 59.4	+0.2
	comp=N,160nm,0.5s						
ALN	Alexandroupoli	1.39	0	P	Pn	13 11 40.7	-0.1
ALN				S	Sb	13 11 59.0	-0.2
ALN				AML	AML	13 12 01.1	
	comp=E,427µm,0.4s						
ALN				AML	AML	13 12 06.8	
	comp=N,210µm,0.6s						
BALB	Balikesir	1.43	84	Pn	Pb	13 11 42.0	+0.1
RKY	Sarkoy-Tekirda	1.47	36	Pn	Pn	13 11 42.1	+0.2
BKES	Balkesir-Mer	1.47	80	P	Pg	13 11 43.5	-0.1
BKES				S	Sg	13 12 02.6	-0.2
BKES				*i* AML	AML	13 12 03.0	
	comp=N,108nm,0.4s						
THAS	Thassos island	1.50	318	P	Pn	13 11 41.9	-0.3
THAS				S	Sn	13 12 00.7	-1.1
	comp=N,70nm,0.3s						
THAS	Thassos island	1.50	318	P	Pn	13 11 41.5	-0.7
THAS				S	Sn	13 12 00.5	-1.3
THAS				AML	AML	13 12 05.8	
	comp=N,143µm,0.4s						
THAS				AML	AML	13 12 05.9	
	comp=E,139µm,0.3s						
DGB	zmir	1.59	155	P	Pb	13 11 45.2	+0.5
DGB				S	Sg	13 12 06.7	+0.3
DGB				*i* AML	AML	13 12 12.0	
	comp=E,36nm,0.5s						
EDC	Edincik	1.63	58	Pn	Pb	13 11 45.2	-0.3
RDO	Rodhopi	1.69	347	Pn	Pn	13 11 46.0	+1.2
KYMI	Kymi, Euboea I	1.75	241	P	Pn	13 11 44.4	-1.2
OUR	Ouranopolis	1.79	298	Pn	Pb	13 11 48.1	-0.1
OUR	Ouranopolis	1.79	298	P	Pn	13 11 45.1	-1.1
KAVA	Kavala	1.90	322	P	Pn	13 11 47.6	-0.1
KCTX	Karacabey (Bur	1.94	66	Pn	Pn	13 11 49.1	+0.8
ORLT	Orhaneli	2.26	75	Pn	Pn	13 11 54.1	+1.3
SLVT	Silivri	2.39	43	Pn	Pn	13 11 55.8	+1.3
EDRB	Edirne	2.40	13	Pn	Pn	13 11 56.0	+1.3

TAP 01 13:36:49.4,24°.41N×121°.81E,h13^{km},ML3.0,8C-8D,B,
Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EWUT	Wuta	0.04	321	*i* P	Pg	13 36 52.0	+0.2
	baz=321						
EWUT				*i* S	Sg	13 36 53.5	+0.1
	baz=321						
ENA	Nanau	0.06	285⇑	*i*P	Pg	13 36 52.2	+0.2
	baz=285						
ENA				*i* S	Sg	13 36 53.7	-0.1
	baz=285						
EHP	Heping Village	0.12	211	P	Pg	13 36 53.0	+0.4
	baz=207						
EHP				S	Sg	13 36 55.3	+0.4
	baz=207						
TWC	Suao	0.20	11⇓	*i*P	Pg	13 36 54.1	+0.3
	baz=7.0						
TWC				*i* S	Sg	13 36 56.9	+0.1
	baz=7.0						
NDS	Dongshan	0.24	339⇑	*i*P	Pg	13 36 55.0	+0.5
	baz=339						
NDS				*i* S	Sg	13 36 58.3	+0.4
	baz=339						
LATG	Datong	0.28	296⇑	*i*P	Pg	13 36 55.9	+0.5
	baz=296						
LATG				*i* S	Sg	13 36 59.8	+0.4
	baz=296						
ETL	Fush Village	0.30	214⇓	*i*P	Pg	13 36 55.8	+0.1
	baz=214						
ETL				S	Sg	13 37 00.5	+0.6
	baz=214						
NACB	Ninganchiao	0.31	219⇓	*i*P	Pg	13 36 55.7	0.0
	baz=210						
NACB				*i* S	Sg	13 37 00.3	+0.4
	baz=210						
ENTT	Nioudou	0.32	316⇑	*i*P	Pb	13 36 56.5	-0.5
	baz=316						
ENTT				*e*S	Sg	13 37 00.1	-0.1
	baz=316						
TWE	Neicheng	0.33	337⇑	*i*P	Pg	13 36 56.7	+0.5
	baz=339						
TWE				*e*S	Sg	13 37 01.1	+0.3
	baz=339						
ILA	Ilan	0.36	351	*e*P	Pg	13 36 55.5	-1.2
	baz=344						
ILA				S	Sb	13 37 02.4	-0.8
	baz=344						
ETLH	Xiulin Townshi	0.36	236⇓	*i*P	Pg	13 36 56.9	+0.1
	baz=236						
ETLH				S	Sg	13 37 02.2	+0.6
	baz=236						
TWD	Chiawan	0.38	210⇓	*i*P	Pg	13 36 57.1	0.0
	baz=209						
TWD				*e*S	Sg	13 37 02.3	+0.1
	baz=209						
NNSB	Datong	0.39	272⇑	*i*P	Pg	13 36 57.7	+0.5
	baz=273						
NNSB				S	Sg	13 37 02.7	+0.2
	baz=273						
NNSH	Datong	0.39	272	*e*P	Pg	13 36 57.7	+0.5
	baz=273						
NNSH				*e*S	Sg	13 37 02.7	+0.2
	baz=273						
NNS	Nan Shan	0.40	274	P	Pg	13 36 57.8	+0.4
	baz=274						
NNS				S	Sg	13 37 02.9	+0.1
	baz=274						
FUSB	Fushanzhiwuyua	0.40	330	P	Pb	13 36 58.0	-0.4
	baz=320						
FUSB				*e*S	Sg	13 37 03.0	+0.1
	baz=320						
EGS		0.45	15	*e*P	Pb	13 36 58.8	-0.4
	baz=22						
EGS				*e*S	Sb	13 37 05.0	-0.7
	baz=22						
NWLT	Wulai	0.46	323	*e*P	Pb	13 36 59.1	-0.3
	baz=316						
NWLT				*e*S	Sg	13 37 04.8	+0.2
	baz=316						
YHNB	Yeheng	0.47	303⇑	*i*P	Pb	13 36 59.5	-0.2
	baz=303						
YHNB				S	Sg	13 37 05.7	+0.6
	baz=303						
HWA	Hwalien	0.47	203	*e*P	Pb	13 36 59.4	-0.2
	baz=211						

HWA				eS	Sb	13 37 06.8	+0.4
	baz=211						
NSK	**Sanguang**	0.49	303	⇑iP	Pb	13 36 59.6	-0.3
	baz=303						
NSK				S	Sg	13 37 05.9	+0.4
	baz=303						
TIPB	**Shuangxi**	0.56	2	eP	Pb	13 37 00.7	-0.4
	baz=2.0						
TIPB				eS	Sg	13 37 07.6	-0.2
	baz=2.0						
WHF	**Hehuan Shan**	0.56	242	⇓iP	Pg	13 37 00.7	+0.2
	baz=242						
WHF				i S	Sg	13 37 08.5	+0.4
	baz=242						
TWT	**Tachien**	0.60	255	P	Pb	13 37 01.9	+0.1
	baz=247						
TWT				S	Sb	13 37 10.3	0.0
	baz=247						
TWA	**Mucha**	0.60	340	eP	Pb	13 37 02.2	+0.4
	baz=329						
TWA				eS	Sg	13 37 09.6	+0.4
	baz=329						
TDCB	**Techi**	0.61	255	eP	Pb	13 37 02.0	-0.1
	baz=248						
TDCB				eS	Sg	13 37 09.9	+0.3
	baz=248						
TWB1	**Santiao Chiao**	0.62	15	eP	Pg	13 37 01.6	+0.2
	baz=16						
TWB1				eS	Sg	13 37 09.6	0.0
	baz=16						
NWF	**Wu-fen Shan**	0.66	358	eP	Pg	13 37 01.2	-1.0
	baz=349						
NWF				eS	Sg	13 37 11.1	+0.2
	baz=349						
NFF	**Wufeng Townshi**	0.67	289	eP	Pb	13 37 03.1	+0.2
	baz=296						
NFF				eS	Sg	13 37 11.4	+0.3
	baz=296						
CHGB	**Renai**	0.68	239	⇓P	Pg	13 37 02.9	+0.2
	baz=239						
CHGB				S	Sb	13 37 12.3	-0.3
	baz=239						
SXI1	**Grass Mountain**	0.68	5	eP	Pb	13 37 03.3	0.0
	baz=9.0						
SXI1				eS	Sg	13 37 12.0	+0.3
	baz=9.0						
ESL	**Shilin**	0.69	210	⇓iP	Pg	13 37 02.4	-0.4
	baz=218						
ESL				eS	Sg	13 37 12.0	+0.2
	baz=218						
OWD	**Renai**	0.73	232	eP	Pg	13 37 03.7	0.0
	baz=226						
OWD				eS	Sg	13 37 13.3	-0.1
	baz=226						
WUSB	**Renai**	0.76	237	eP	Pg	13 37 04.3	+0.2
	baz=237						
WUSB				eS	Sb	13 37 14.9	+0.1
	baz=237						
LIOB	**Emei**	0.76	288	eP	Pn	13 37 05.4	-0.5
	baz=288						
LIOB				eS	Sb	13 37 15.4	+0.7
	baz=288						
YM01	**YM01**	0.76	344	eP	Pn	13 37 05.3	-0.6
	baz=343						
YM01				eS	Sb	13 37 14.6	-0.3
	baz=343						
NSTT	**Nanjuang**	0.77	287	eP	Pb	13 37 05.1	+0.5
	baz=287						
NSTT				eS	Sb	13 37 15.2	+0.2
	baz=287						
TWS1	**Kuangyinshan**	0.77	333	eP	Pn	13 37 06.0	0.0
	baz=333						
TWS1				eS	Sn	13 37 17.0	-0.5
	baz=333						
WHP	**Taichung City**	0.80	261	eP	Pb	13 37 05.8	+0.6
	baz=260						
WHP				eS	Sb	13 37 16.0	0.0
	baz=260						
ANP	**Anpu**	0.81	341	eP	Pn	13 37 06.3	-0.4
	baz=342						
EGFH	**Guangfu**	0.82	205	eP	Pg	13 37 05.0	-0.2
	baz=211						
EGFH				eS	Sb	13 37 16.5	+0.1
	baz=211						
WCS	**Beigang Elemen**	0.89	247	eP	Pb	13 37 07.0	+0.2
	baz=238						
WCS				eS	Sg	13 37 18.2	-0.1
	baz=238						
VWDT	**VWDT**	0.90	223	eP	Pg	13 37 06.6	-0.1
	baz=216						
VWDT				eS	Sb	13 37 19.3	+0.6
	baz=216						
NHW	**Xinwu Township**	0.91	311	eP	Pb	13 37 07.5	+0.4
	baz=311						
NHW				eS	Sn	13 37 22.1	+1.1
	baz=311						
NMLH	**Miaoli**	0.94	278	eP	Pn	13 37 09.4	+1.1
	baz=277						
TWQ1	**Liyutan**	0.95	266	eP	Pn	13 37 08.7	+0.2
	baz=266						
TWQ1				eS	Sb	13 37 20.7	+0.5
	baz=266						
NSY	**Sanyi**	0.95	270	eP	Pn	13 37 09.9	+1.3
	baz=270						
NSY				eS	Sn	13 37 22.0	-0.1
	baz=270						
HGSD	**Ruisui**	0.98	201	eP	Pn	13 37 08.7	-0.2
	baz=215						
SMLT	**Sun Moon Lake**	0.98	238	eP	Pg	13 37 08.5	+0.1
	baz=237						
SMLT				eS	Sn	13 37 22.4	-0.5
	baz=237						
SSLB	**Suanglung**	1.00	232	eP	Pb	13 37 08.3	-0.3
	baz=232						
SSLB				eS	Sb	13 37 21.1	-0.6
	baz=232						
TYC	**Yuchr**	1.00	240	eP	Pb	13 37 08.7	0.0
	baz=240						
TYC				eS	Sn	13 37 22.7	-0.5
	baz=240						
EHY	**Hungye**	1.01	206	eP	Pb	13 37 08.3	-0.4
	baz=211						
EHY				eS	Sg	13 37 22.0	+0.1
	baz=211						
YOJ	**Yonaguni jima**	1.10	87	eP	Pb	13 37 10.0	-0.3
	baz=88						
YULB	**Yu-li**	1.12	205	eP	Pn	13 37 10.7	-0.1
	baz=215						
YULB				eS	Sb	13 37 25.3	+0.2
	baz=215						
WJS	**Zhushan**	1.15	239	eP	Pg	13 37 12.6	+1.0
	baz=235						
WJS				eS	Sn	13 37 28.8	+1.9
	baz=235						
EYUL	**Yuli**	1.15	203	eP	Pg	13 37 11.5	-0.1
	baz=213						
TWF1	**Yuli**	1.15	204	P	Pg	13 37 11.8	+0.2
	baz=214						
TWF1				eS	Sn	13 37 26.9	0.0
	baz=214						
ALS	**Alishan**	1.28	226	eP	Pg	13 37 14.0	-0.1
	baz=224						
CHN5	**Tsauling**	1.31	232	eP	Pg	13 37 15.4	+0.7
	baz=232						
CHN5				eS	Sg	13 37 35.1	+3.3
	baz=232						
WDLH	**Douliu**	1.37	238	eP	Pg	13 37 16.5	+0.8
	baz=237						
EHD	**Haiduan**	1.37	204	eP	Pb	13 37 15.0	0.0
	baz=217						
EHD				eS	Sg	13 37 33.8	+0.1
	baz=217						
WRL	**Guolierlin Hig**	1.40	249	eP	Pg	13 37 16.0	-0.4
	baz=248						
ELDTW	**Lidau**	1.42	211	eP	Pb	13 37 15.7	-0.1
	baz=212						
ELDTW				eS	Sg	13 37 35.0	-0.1
	baz=212						
WCKO	**Fanlu**	1.47	229	eP	Pg	13 37 18.2	+0.6
	baz=214						
CHN4	**Tsaushan**	1.53	227	P	Pg	13 37 19.2	+0.3
	baz=212						
TPUB	**Ta-pu**	1.54	225	eP	Pg	13 37 19.2	+0.1
	baz=209						
STYH	**Taoyuan**	1.56	218	eP	Pg	13 37 18.8	-0.5
	baz=209						
STYH				eS	Sg	13 37 39.7	+0.1
	baz=209						
WTP	**Ta-pu**	1.59	224	eP	Pg	13 37 20.3	+0.3
	baz=213						
WTP				eS	Sg	13 37 42.5	+1.7
	baz=213						
TWK	**Hsinying**	1.66	227	eP	Pg	13 37 21.4	+0.1
	baz=213						
TWK				eS	Sg	13 37 44.4	+1.5
	baz=213						
CHN1	**Nanshi**	1.69	224	eP	Pg	13 37 22.5	+0.6
	baz=234						
CHN1				eS	Sg	13 37 45.8	+1.8
	baz=234						
SGST	**Jiashian**	1.74	221	eP	Pb	13 37 21.4	+0.3
	baz=208						

JMA 01 13:37:44.4±0.2, 24°.5N±0°.3×124°.0E±0°.2, h1km±2km, MV0.4/6, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIJ	**Ishigaki jima**	0.19	122	eP	Pg	13 37 48.5	+0.4
JIJ				S	Sg	13 37 51.1	+0.5
JKRS	**Kuro-shima**	0.23	170	eP	Pg	13 37 49.3	+0.5
JKRS				eS	Sg	13 37 52.9	+1.1
IRIF	**Iriomote-Funau**	0.25	238	eP	Pg	13 37 49.6	+0.4
IRIF				S	Sg	13 37 53.3	+0.9
JISG	**Ishigakijimahi**	0.34	69	eP	Pg	13 37 51.5	+0.6
HATJ	**Hateruma jima**	0.43	200	eS	Sg	13 37 59.1	+0.8

IDC 01 13:44:53.3±2.5, 6°.24S×130°.13E, h0km, mb3.4/1, mbtmp3.4/3, ML3.6/2, MS3.0/2, Error ellipse: s-maj=148.8km s-min=33.1km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	10.40	276	LR	LR	13 51 12.6	
	comp=Z,40nm,20.2s,baz=92,slow=36						
WRA	**Warramunga Arr**	14.22	164	Pn	Pn	13 48 15.2	-1.0
	0.2nm,0.3s,baz=346,slow=13,SNR=7.4						
WRA				Sn	Sn	13 50 51.1	-3.7
	0.4nm,0.3s,baz=345,slow=23,SNR=7.8						
	0.4nm,0.4s						
ASAR	**Alice Springs**	17.70	169	P	P	13 49 02.2	-0.3
	0.2nm,0.3s,baz=350,slow=14,SNR=16						
ASAR				S	Sn	13 52 15.7	-3.8
	1.1nm,0.8s,baz=356,slow=27,SNR=7.1						
	0.5nm,0.5s						
MSVF	**Nonsavu**	48.11	108	LR	LR	14 11 35.4	
	comp=Z,38nm,18.6s,baz=174,slow=33						
MKAR	**Makanchi Array**	67.67	327	P	P	13 55 52.3	0.0
	0.2nm,0.7s,baz=130,slow=7.6,SNR=2.6						
	0.2nm,0.7s						

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*BJI **01** 14:25:46.0±0.0, 22°.10N×143°.20E, h10km, mb4.6/20, mB4.9/5, Ms4.4/1*

*IDC **01** 14:25:55.3±5.1, 22°.03N×143°.07E, h75km±47km, mb3.9/26, mbtmp4.2/27, ML2.6/1, MS3.4/35, Error ellipse: s-maj=18.8km s-min=11.0km az=84.0*

*NEIC **01** 14:26:00.2±1.6, 22°.11N±0°.09×143°.09E±0°.09, h113km±7km, mb4.6/41, Error ellipse: s-maj=13.8km s-min=11.9km az=219.0*

ISC 01 14:25:58.1±0.5, 22°.07N±0°.07×143°.1E±0°.1, h100km, n114, σ0s.78/83, mb4.4/45, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	5.08	351	LR	LR	14 28 16.3	
	comp=Z,51nm,21.8s,baz=118,slow=28						
JCJ	**Chichijima**	5.08	351	Pn	**Pn**	**14 27 13.3**	**+1.5**
GUMO	**Guam**	8.60	168	LR	LR	14 30 37.7	
	comp=Z,245nm,20.2s,baz=350,slow=33						
JHJ2	**Mitsune**	11.38	346	Pn	**Pn**	**14 28 37.6**	**+0.2**
JOW	**Kunigami**	14.30	292	LR	LR	14 33 41.7	
	comp=Z,202nm,19.4s,baz=73,slow=33						
MJAR	**Matsushiro Arr**	15.04	345	P	**Pn**	**14 29 24.6**	**-0.7**
	baz=158,slow=11,SNR=4.0						
MJAR				LR	LR	14 34 50.2	
	comp=Z,229nm,20.3s,baz=148,slow=36						
	1.8nm,0.9s						
JNU	**Nakatsue**	15.43	318	LR	LR	14 34 22.4	
	comp=Z,89nm,20.8s,baz=168,slow=33						
JHS	**Saijyo**	15.57	328		**Pn**	**14 29 32.1**	**+0.1**
JHS				IAmb	IAmb	14 29 41.1	
	comp=Z,48nm,1.5s						
JSD	**Sado**	16.45	346		**Pn**	**14 29 43.4**	**+0.5**
YULB	**Yu-li**	20.15	278	P	Pn	14 30 26.8	-0.4
YULB				IAmb	IAmb	14 30 34.2	
	comp=Z,48nm,1.5s						
KSRS	**Korea Array**	20.17	323	P	Pn	14 30 26.7	-0.6
	comp=Z,4.4nm,0.8s,baz=146,slow=7.3,SNR=12						
KSRS				LR	LR	14 37 18.7	
	comp=Z,112nm,20.4s,baz=145,slow=34						
KSAR	**Wonju Array Be**	20.18	323	P	Pn	14 30 27.4	-0.1
TWG	**Pinlang**	20.37	276	P	Pn	14 30 29.3	-0.4
TWG				IAmb	IAmb	14 30 38.7	
	comp=Z,32nm,1.1s						
SSLB	**Suanglung**	20.46	279	P	Pn	14 30 29.9	-1.0
SSLB				IAmb	IAmb	14 30 38.6	
	comp=Z,34nm,1.1s						
ASAJ	**Asahikawa**	22.00	359	LR	LR	14 40 01.8	
	comp=Z,38nm,21.7s,baz=194,slow=38						
H11N1	**WAKE ISLAND Hy**	22.35	92	T	T	14 53 59.1	
	baz=280,slow=75,SNR=22						
H11N2	**WAKE ISLAND Hy**	22.36	92	T	T	14 53 59.3	
	baz=280,slow=75,SNR=16						
H11N3	**WAKE ISLAND Hy**	22.37	92	T	T	14 54 00.5	
	baz=280,slow=75,SNR=15						
H11S3	**WAKE ISLAND Hy**	22.41	95	T	T	14 54 06.1	
	baz=283,slow=75,SNR=152						
H11S1	**WAKE ISLAND Hy**	22.42	95	T	T	14 54 08.4	
	baz=283,slow=75,SNR=130						
H11S2	**WAKE ISLAND Hy**	22.43	95	T	T	14 54 07.6	
	baz=283,slow=75,SNR=82						
DAV	**Davao City (W)**	22.53	231	LR	LR	14 37 37.4	
	comp=Z,213nm,21.0s,baz=48,slow=31						
USRK	**Ussuriysk Ar.**	23.91	340	P	**P**	**14 31 02.2**	**-0.3**
	comp=Z,3.9nm,1.0s,baz=147,slow=11,SNR=4.1						
	comp=Z,3.9nm,1.0s						
USRK	**Ussuriysk Ar.**	23.91	340	P	**P**	**14 31 01.6**	**-0.9**
KLR	**Kul'dur**	28.56	344	P	**P**	**14 31 44.5**	**0.0**
	comp=Z,6.4nm,1.0s,baz=152,slow=8.4,SNR=14						
KLR				LR	LR	14 43 14.8	
	comp=Z,74nm,20.4s,baz=142,slow=36						
	comp=Z,6.4nm,1.0s						
MYLDM	**Lahad Datu**	29.12	238	P	**P**	**14 31 50.6**	**+0.9**
HEH	**HeiHe**	30.72	340	eP	**P**	**14 32 02.9**	**-0.5**
HEH				pmax	pmax		
	comp=Z,15nm,1.0s						
HEH				pmax	pmax		
	comp=Z,83nm,4.4s						
PMG	**Port Moresby**	31.53	172	P	**P**	**14 32 10.7**	**-0.2**
	comp=Z,8.7nm,0.7s,baz=340,slow=10,SNR=3.9						
	comp=Z,8.7nm,0.7s						
PMG	**Port Moresby**	31.53	172	P	**P**	**14 32 10.9**	**0.0**
PMG				IAmb	IAmb	14 32 11.4	
	comp=Z,26nm,1.4s						
PETK	**Petropavlovsk-**	32.95	16	LR	LR	14 43 59.5	
	comp=Z,94nm,20.6s,baz=193,slow=33						
KAPI	**Kappang**	35.31	223	LR	LR	14 44 55.0	
	comp=Z,43nm,21.9s,baz=52,slow=32						
HNR	**Honiara**	35.40	150	LR	LR	14 46 16.4	
	comp=Z,877nm,20.2s,baz=288,slow=34						
LZH	**Lanzhou**	36.78	301	eP	**P**	**14 32 57.0**	**+0.6**
LZH				pmax	pmax		
	comp=Z,19nm,1.5s						
MA2	**Magadan**	37.87	6	LR	LR	14 50 12.8	
	comp=Z,22nm,19.1s,baz=106,slow=38						
ULN	**Ulaanbaatar**	38.63	321	P	**P**	**14 33 11.2**	**-0.5**
ULN				IAmb	IAmb	14 33 19.6	
	comp=Z,8.8nm,1.1s						
SHEM	**Shemya Is, Ala**	38.74	30	LR	LR	14 47 34.2	
	comp=Z,38nm,20.4s,baz=32,slow=34						
SONM	**Songino Array**	39.00	320	P	**P**	**14 33 14.5**	**-0.4**
	comp=Z,1.8nm,0.5s,baz=131,slow=7.5,SNR=19						
SONM				LR	LR	14 50 22.8	
	comp=Z,74nm,18.4s,baz=116,slow=38						
	comp=Z,1.8nm,0.5s						
SONM	**Songino Array**	39.00	320	P	**P**	**14 33 14.3**	**-0.5**
SONM				IAmb	IAmb	14 33 22.6	
	comp=Z,7.6nm,1.1s						
KNRA	**Kununurra**	40.05	202	P	**P**	**14 33 24.9**	**+1.3**
KNRA				IAmb	IAmb	14 33 36.1	
	comp=Z,6.6nm,1.0s						
GTA	**Gaotai**	40.59	305	eP	**P**	**14 33 27.8**	**-0.3**
GTA				sP	pP	14 33 41.0	-9.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.6s						
TNCH	**TengChong**	40.83	283	eP	**P**	**14 33 29.4**	**-1.0**
TNCH				pmax	pmax		
	comp=Z,120nm,4.3s						
YAK	**Yakutsk**	40.99	350	LR	LR	14 50 17.8	
	comp=Z,57nm,20.9s,baz=222,slow=36						
SEY	**Seymchan**	41.33	6	P	**P**	**14 33 33.5**	**-0.2**
	comp=Z,2.6nm,1.0s,baz=140,slow=5.7,SNR=5.9						
	comp=Z,2.6nm,1.0s						
CHTO	**Chiang Mai**	41.39	274	P	**P**	**14 33 35.2**	**+0.4**
CMAR	**Chiang Mai Arr**	41.47	273	P	**P**	**14 33 35.5**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=55,slow=8.0,SNR=6.5						
CMAR				LR	LR	14 49 01.6	
	comp=Z,66nm,22.0s,baz=65,slow=33						
	comp=Z,0.6nm,0.5s						
CMAR	**Chiang Mai Arr**	41.47	273	P	**P**	**14 33 35.3**	**-0.2**
CTA	**Charters Tower**	42.01	176	P	**P**	**14 33 39.3**	**-0.4**
	comp=Z,15nm,1.1s,baz=14,slow=7.4,SNR=5.4						
CTA				LR	LR	14 48 53.4	
	comp=Z,45nm,21.0s,baz=322,slow=33						
	comp=Z,15nm,1.1s						
CTAO	**Charters Tower**	42.01	176	P	**P**	**14 33 40.2**	**+0.5**
CTAO				IAmb	IAmb	14 33 42.0	
	comp=Z,18nm,1.1s						
WB2	**Warramunga Arr**	42.62	192	P	**P**	**14 33 44.3**	**-0.3**
WRA	**Warramunga Arr**	42.62	192	P	**P**	**14 33 43.3**	**-1.4**
	comp=Z,2.7nm,0.6s,baz=12,slow=8.6,SNR=15						
WRA				LR	LR	14 49 53.9	
	comp=Z,51nm,21.9s,baz=348,slow=34						
	comp=Z,2.7nm,0.6s						
WRA	**Warramunga Arr**	42.62	192	P	**P**	**14 33 44.7**	**0.0**
FITZ	**Fitzroy Crossi**	43.42	205	P	**P**	**14 33 52.2**	**+1.1**
GOMU	**GeErMu**	44.03	300	P	**P**	**14 33 57.9**	**+1.5**
GOMU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AS31	**Alice Springs**	46.33	192	P	**P**	**14 34 14.1**	**-0.1**
ASAR	**Alice Springs**	46.33	192	P	**P**	**14 34 12.9**	**-1.2**
	comp=Z,1.9nm,0.7s,baz=12,slow=7.1,SNR=31						
ASAR				LR	LR	14 51 58.9	
	comp=Z,86nm,21.9s,baz=5.0,slow=34						
	comp=Z,1.9nm,0.7s						
ASAR	**Alice Springs**	46.33	192	P	**P**	**14 34 13.6**	**-0.5**
DZM	**Mont Dzumac**	49.43	151	LR	LR	14 53 44.8	
	comp=Z,46nm,21.3s,baz=18,slow=34						
TIXI	**Tiksi**	50.28	354	LR	LR	14 57 27.7	
	comp=Z,18nm,20.5s,baz=5.0,slow=38						
STKA	**Stephens Creek**	53.66	182	P	**P**	**14 35 08.7**	**-0.7**
	comp=Z,2.6nm,0.7s,baz=334,slow=8.3,SNR=6.7						
STKA				LR	LR	15 00 20.4	
	comp=Z,42nm,18.4s,baz=23,slow=38						
	comp=Z,2.6nm,0.7s						
ZAA0	**Zalesovo Array**	53.87	322	P	**P**	**14 35 10.4**	**-0.3**
ZALV	**Zalesovo Beam**	53.87	322	P	**P**	**14 35 10.0**	**-0.8**
	comp=Z,5.6nm,0.8s,baz=100,slow=7.7,SNR=20						
ZALV				LR	LR	14 58 25.6	
	comp=Z,48nm,19.3s,baz=74,slow=36						
	comp=Z,5.6nm,0.8s						
ZALV	**Zalesovo Beam**	53.87	322	P	**P**	**14 35 10.3**	**-0.5**
MK31	**Makanchi Array**	54.39	312	P	**P**	**14 35 14.4**	**-0.3**
MKAR	**Makanchi Array**	54.39	312	P	**P**	**14 35 14.9**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=93,slow=9.0,SNR=17						
MKAR				PcP	**PcP**	**14 36 17.4**	**0.0**
	comp=Z,1.4nm,0.9s,baz=90,slow=5.2,SNR=4.6						
MKAR				LR	LR	15 00 47.7	
	comp=Z,40nm,18.4s,baz=78,slow=38						
	comp=Z,1.5nm,0.7s						
MKAR	**Makanchi Array**	54.39	312	P	**P**	**14 35 14.4**	**-0.3**
MAKZ	**Makanchi**	54.60	312	P	**P**	**14 35 16.4**	**+0.2**
AFI	**Afiamalu**	56.89	125	LR	LR	14 56 04.0	
	comp=Z,33nm,18.6s,baz=160,slow=32						
KURK	**Kurchatov**	57.15	317	P	**P**	**14 35 33.8**	**-0.5**
TARG	**Taragay, Kyrgy**	57.45	306	P	**P**	**14 35 37.7**	**+0.6**
TARG				IAmb	IAmb	14 35 46.9	
	comp=Z,9.0nm,1.0s						
NRIK	**Noril'sk**	57.62	340	P	**P**	**14 35 36.9**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=107,slow=6.3,SNR=2.1						
NRIK				LR	LR	15 02 02.3	
	comp=Z,52nm,19.2s,baz=178,slow=38						
	comp=Z,2.2nm,0.6s						
KSH	**Kashi**	58.95	304	P	**P**	**14 35 50.6**	**+3.3**
KSH				sP	pP	14 35 58.3	-13
KSH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AAK	**Ala-Archa**	59.88	307	LR	LR	15 03 17.7	
	comp=Z,26nm,19.7s,baz=93,slow=37						
PALK	**Pallekele**	61.74	266	LR	LR	15 03 08.8	
	comp=Z,18nm,19.0s,baz=131,slow=36						
ILAR	**Eielson Array**	61.75	27	P	**P**	**14 36 05.2**	**-0.6**
	comp=Z,1.0nm,1.0s,baz=267,slow=5.2,SNR=7.8						
	comp=Z,1.0nm,1.0s						
NIL	**Nilore**	61.79	297	P	**P**	**14 36 06.8**	**+0.2**
BRVK	**Borovoye**	62.40	319	P	**P**	**14 36 09.9**	**-0.4**
KK31	**Karatay Array**	62.76	308	P	**P**	**14 36 12.8**	**-0.1**
KK31				IAmb	IAmb	14 36 21.9	
	comp=Z,9.2nm,1.0s						
KKAR	**Karatay Array**	62.76	308	P	**P**	**14 36 12.5**	**-0.4**
KKAR				IAmb	IAmb	14 36 21.9	
	comp=Z,9.2nm,1.0s						
GAR	**Garm**	63.38	304	P	**P**	**14 36 16.8**	**-0.4**
CHGR	**Chuyangaron**	64.32	303	P	**P**	**14 36 23.3**	**-0.1**
KBL	**Kabul**	65.09	299	P	**P**	**14 36 28.5**	**-0.1**
INK	**Inuvik**	67.26	24	P	**P**	**14 36 42.0**	**+0.4**
	comp=Z,2.7nm,1.1s,baz=261,slow=10,SNR=4.7						
	comp=Z,2.7nm,1.1s						
ARU	**Arti**	68.92	324	LR	LR	15 08 22.1	
	comp=Z,35nm,19.4s,baz=228,slow=37						
ARU	**Arti**	68.92	324	P	**P**	**14 36 51.9**	**-0.2**
ARU				IAmb	IAmb	14 37 00.6	
	comp=Z,12nm,1.1s						
ABKAR	**Akbulak array**	69.23	316	P	**P**	**14 36 53.6**	**-0.6**
BSWZ	**Blackbirch Sta**	69.57	156	P	**P**	**14 36 57.0**	**+0.8**
OXZ	**Oxford**	70.31	158	P	**P**	**14 37 01.1**	**+0.4**
GEYT	**Alibeck**	72.97	305	P	**P**	**14 37 18.1**	**+1.0**
	comp=Z,2.8nm,0.8s,baz=273,slow=2.7,SNR=7.1						
	comp=Z,2.8nm,0.8s						
BELG	**Belogornoye**	76.05	321	LR	LR	15 12 53.3	
	comp=Z,52nm,18.3s,baz=130,slow=37						
YKA	**Yellowknife Ar**	76.17	28	P	**P**	**14 37 35.5**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=290,slow=5.5,SNR=9.0						
	comp=Z,1.1nm,0.8s						
ARCES	**ARCESS Array B**	78.55	341	P	**P**	**14 37 48.2**	**0.0**
	comp=Z,2.1nm,0.7s,baz=17,slow=5.3,SNR=4.5						
	comp=Z,2.1nm,0.7s						
OBN	**Obninsk**	81.13	326	LR	LR	15 15 56.8	
	comp=Z,13nm,20.5s,baz=164,slow=37						
KBZ	**Khabaz**	82.05	314	P	**P**	**14 38 08.5**	**+1.1**
	comp=Z,8.7nm,0.9s,baz=165,slow=0.9,SNR=20						
	comp=Z,8.7nm,0.9s						
ONI	**Oni**	82.12	313	P	**P**	**14 38 08.3**	**+0.4**
ONI				IAmb	IAmb	14 38 18.0	
	comp=Z,19nm,1.4s						
FINES	**FINESS Array B**	82.81	334	P	**P**	**14 38 10.9**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=67,slow=5.0,SNR=6.2						
	comp=Z,0.6nm,0.4s						
NVAR	**Mina Array Bea**	82.98	51	P	**P**	**14 38 14.0**	**+1.3**
	comp=Z,2.5nm,0.8s,baz=267,slow=5.8,SNR=20						
NVAR				LR	LR	15 07 12.1	
	comp=Z,61nm,21.0s,baz=296,slow=30						
	comp=Z,2.5nm,0.8s						
NVAR	**Mina Array Bea**	82.98	51	P	**P**	**14 38 13.7**	**+1.0**
GURO	**Guroymak-BITLI**	84.70	309	P	**P**	**14 38 21.8**	**+0.5**
GURO				IAmb	IAmb	14 38 23.2	
	comp=Z,5.9nm,1.0s						
GWY	**Greenwater Val**	85.06	53	P	**P**	**14 38 23.9**	**+0.7**
GWY				IAmb	IAmb	14 38 34.1	
	comp=Z,8.1nm,1.3s						
TPNV	**Topopah Spring**	85.06	52	P	**P**	**14 38 23.1**	**-0.1**
YMR	**Madison River**	85.42	43	P	**P**	**14 38 25.7**	**+0.8**
YMR				IAmb	IAmb	14 38 28.0	
	comp=Z,4.8nm,0.7s						
FFC	**Flin Flon**	85.56	32	P	**P**	**14 38 26.0**	**+0.9**
FFC				IAmb	IAmb	14 38 35.9	
	comp=Z,16nm,1.2s						
SPR3	**Spring Creek 3**	85.60	50	P	**P**	**14 38 25.5**	**-0.6**
FLWY	**Flagg Ranch**	85.85	44	P	**P**	**14 38 27.0**	**-0.1**
FLWY				IAmb	IAmb	14 38 30.2	
	comp=Z,7.3nm,1.1s						
NACGM	**Naroch**	86.13	329	eP	**P**	**14 38 27.8**	**0.0**
	comp=Z,17nm,1.1s,baz=56						
AKASG	**Malin Array Be**	87.16	324	P	**P**	**14 38 32.3**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=49,slow=5.9,SNR=6.9						
	comp=Z,0.9nm,0.6s						
PDAR	**Pinedale Array**	87.19	45	P	**P**	**14 38 35.1**	**+1.5**

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         comp=Z,0.6nm,0.9s,baz=316,slow=4.1,SNR=4.5
PDAR                                  LR      LR       15 11 21.6
         comp=Z,52nm,19.3s,baz=334,slow=31
         comp=Z,0.6nm,0.9s
KNB      Kanab              87.52  51  P       P        14 38 36.9 +1.6
KNB                                    IAmb    IAmb     14 38 38.0
         comp=Z,7.5nm,0.8s
BRTR     Keskin Array B     90.03 313  P       P        14 38 46.4 -0.6
         comp=Z,2.3nm,0.8s,baz=94,slow=5.0,SNR=5.0
         comp=Z,2.3nm,0.8s
BRTR     Keskin Array B     90.03 313  P       P        14 38 46.1 -0.9
FRB      Frobisher Bay      90.96  13  P       P        14 38 50.1 -0.4
         comp=Z,2.1nm,0.8s,baz=106,slow=7.3,SNR=4.5
         comp=Z,2.1nm,0.8s
ANMO     Albuquerque        93.05  50  LR      LR       15 15 49.0
         comp=Z,43nm,20.2s,baz=48,slow=32
VYHS     Vyhne              93.92 327  eP      P        14 39 03.8 -0.8
TXAR     Lajitas Array      97.91  54  P       P        14 39 21.9 -1.3
         comp=Z,0.3nm,0.8s,baz=348,slow=3.8,SNR=2.6
TXAR                                   LR      LR       15 21 05.5
         comp=Z,20nm,18.9s,baz=325,slow=34
         comp=Z,0.3nm,0.8s
```

*JMA **01** 14:45:08.8±0.4, 35°N±1°×14°2E±°, h44^{km}±2^{km}, MV2.8/24, FAR SE OFF BOSO PEN*
*IDC **01** 14:45:16.6±1.4, 33°.81N×138°.13E, h0^{km}, mb3.6/2, mbtmp3.6/2, ML2.0/1, MS2.9/1, Error ellipse: s-maj=29.6km s-min=22.2km az=76.0*
ISC 01 14:45:13.0±1.5**, 34°.67N**±0°.06×**141°.4E**±0°.1**, h35^{km}, n12, σ1^{s}33**/17**, Off east coast of Honshu**

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Code     Station Name        Δ°   AZ°   Phase ID          Time      Res
                                       Op      ISC      h  m  s    ISC
BSO1     Boso 1              0.37 268  P       Pn       14 45 20.0 -1.2
BSO1                                   eX               14 45 26.7
BSO3     Boso 3              0.76 280  eP      Pn       14 45 26.2 -0.8
BSO3                                   eS      Sn       14 45 38.6 +1.4
BSO4     Boso 4              0.95 290  P       Pn       14 45 29.0 -0.7
BSO4                                   eS      Sn       14 45 43.7 +1.7
JKUC     kamogawauchiur      1.12 296  P       Pn       14 45 30.8 -1.3
JKUC                                   eS      Sn       14 45 47.9 +1.6
CHOJ     Chosi               1.13 336  eP      Pn       14 45 31.1 -1.3
CHOJ                                   eS      Sn       14 45 47.0 +0.4
JIM2     Oshima 3            1.64 272  eP      Pn       14 45 38.2 -1.1
JMKN     Mikurajimanish      1.70 244  eP      Pn       14 45 39.4 -0.8
JHJ      Hachijo jima 2      2.06 222  Pn      Pn       14 45 45.7 +0.6
         22nm,0.3s,baz=334,slow=18,SNR=15
JHJ                                    Sn      Sn       14 46 07.6 -2.0
         13nm,0.3s,baz=52,slow=21,SNR=1.6
MJAR     Matsushiro Arr      3.22 306  Pn      Pn       14 46 01.6 +0.5
         0.3nm,0.3s,baz=99,slow=15,SNR=16
MJAR                                   Sn      Sn       14 46 36.2 -2.0
         0.2nm,0.3s,baz=143,slow=15,SNR=5.3
PETK     Petropavlovsk-     21.76  27  LR      LR       15 00 10.6
         comp=Z,28nm,19.5s,baz=161,slow=38
WRA      Warramunga Arr     54.72 188  P       P        14 54 39.5 +0.6
         0.3nm,0.3s,baz=1.4,slow=7.5,SNR=13
         0.3nm,0.3s
ASAR     Alice Springs      58.45 188  P       P        14 55 06.1 +0.7
         0.4nm,0.9s,baz=0.4,slow=6.0,SNR=7.9
         0.4nm,0.9s
```

IDC 01 14:49:15.7±2.0**, 17°.98N×145°.39E, h0^{km}, mb3.4**/3**, mbtmp3.4**/3**, MS2.9**/1**, Error ellipse: s-maj=323.3km s-min=27.6km az=111.0, Mariana Islands**

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Code     Station Name        Δ°   AZ°   Phase ID          Time      Res
                                       Op      ISC      h  m  s    ISC
KSRS     Korea Array        24.73 325  LR      LR       15 04 06.9
         comp=Z,24nm,18.9s,baz=130,slow=36
WRA      Warramunga Arr     39.22 197  P       P        14 56 46.3 +0.4
         0.4nm,0.6s,baz=19,slow=8.6,SNR=3.7
         0.4nm,0.6s
ASAR     Alice Springs      42.89 196  P       P        14 57 15.6 -0.5
         0.2nm,0.5s,baz=17,slow=6.5,SNR=11
         0.2nm,0.5s
ILAR     Eielson Array      64.41  26  P       P        14 59 53.5  0.0
         0.5nm,1.0s,baz=251,slow=5.8,SNR=5.3
         0.5nm,1.0s
```

NOU 01 15:05:27.1, 23°.01S×170°.23E, h0^{km}, MLv4.0/11**, Southeast of Loyalty Islands, Southeast of Loyalty Islands**

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Code     Station Name        Δ°   AZ°   Phase ID          Time      Res
                                       Op      ISC      h  m  s    ISC
MARNC    Mare, Loyalty       2.54 306  P       Pn       15 06 09.4 -0.2
PINNC    Pines Island,       2.60 278  P       Pn       15 06 10.7 +0.3
OUENC    Ouen Island, N      3.18 280  P       Pn       15 06 18.1 -0.4
YATNC    Mamie plateau,      3.23 286  P       Pn       15 06 19.0 -0.1
LIFNC    LIFOU               3.56 308  P       Pn       15 06 23.9 +0.3
ONTNC    Ouen Toro           3.56 281  P       Pn       15 06 24.1 +0.5
DZM      Mont Dzumac         3.62 284  P       Pn       15 06 23.5 -1.1
NOUC     Port Laguerre       3.74 283  P       Pn       15 06 25.0 -1.1
KOUNC    Koumac, New Ca      6.04 293  P       Pn       15 06 57.9 +0.1
NFK      Norfolk Island      6.35 198  P       Pn       15 07 01.8 -0.2
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*MOS **01** 15:08:00.4±1.0, 51°.74N×175°.27W, h48^{km}, mb4.8/39, Error ellipse: s-maj=7.7km s-min=6.1km az=75.5*
*BJI **01** 15:08:01.4±0.0, 52°.39N×175°.66W, h47^{km}, mb4.8/46, mB5.0/18, Ms4.2/3, Ms7 4.0/5*
*IDC **01** 15:08:01.7±1.7, 51°.71N×175°.27W, h42^{km}±14^{km}, mb4.1/31, mbtmp4.3/33, ML4.4/3, MS3.6/61, Error ellipse: s-maj=15.1km s-min=9.0km az=167.0*
*AEIC **01** 15:08:01.9±1.5, 51°.8N±0°.1×175°.37W±0°.04, h56^{km}±5^{km}, Error ellipse: s-maj=15.5km s-min=2.9km az=174.0*
*NEIC **01** 15:08:02.6±1.4, 51°.8N±0°.1×175°.35W±0°.06, h53^{km}±6^{km}, mb4.9/284, ML4.7(AEIC), Error ellipse: s-maj=14.8km s-min=5.7km az=175.0*
ISC 01 15:08:01.4±0.5**, 51°.67N**±0°.06×**175°.27W**±0°.03**, h44^{km}**±3^{km}**, h44^{km}:pP-P, n785, σ1^{s}21**/729**, mb4.8**/188**, MS3.7**/66**, 18C-13D, Andreanof Islands**

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Code     Station Name        Δ°   AZ°   Phase ID          Time      Res
                                       Op      ISC      h  m  s    ISC
ADK      Adak                0.91 284          Pn       15 08 17.7  0.0
ADK                                    Sn      Sn       15 08 29.5 -0.1
ADK      Adak                0.91 284  P       Pn       15 08 17.8  0.0
ADK      Adak                0.91 284  P       Pn       15 08 17.7  0.0
ADK                                    S       Sn       15 08 29.8 +0.2
KIWB     Kanaga Island       1.18 280  Pn      Pn       15 08 21.6 +0.1
AMKA     Amchitka            3.41 267  Pn      Pn       15 08 52.4 +0.4
CLES     Cleveland East      3.50  69  Pn      Pn       15 08 54.1 +0.8
NIKH     Nikolski High       4.14  69          Sn       15 09 51.1 +1.8
NIKH     Nikolski High       4.14  69  Pn      Pn       15 09 02.2 +0.1
NIKH     Nikolski High       4.14  69  P       Pn       15 09 02.6 +0.5
NIKH     Nikolski High       4.14  69  P       Pn       15 09 03.0 +0.9
         baz=256
UNV      Unalaska Valle      5.75  64  Pn      Pn       15 09 25.3 +1.2
UNV      Unalaska Valle      5.75  64  P       Pn       15 09 26.3 +2.2
         baz=253
SPIA     Saint Paul Isl      6.24  26  Pn      Pn       15 09 34.2 +3.4
SPIA     Saint Paul Isl      6.24  26  P       Pn       15 09 34.6 +3.7
SPIA     Saint Paul Isl      6.24  26  P       Pn       15 09 33.5 +2.6
         baz=211,SNR=20
AKUT     Akutan              6.25  63  Pn      Pn       15 09 30.8 -0.2
SHEM     Shemya Is, Ala      6.62 283  P       Pn       15 09 36.8 +0.7
         48nm,0.3s,baz=88,slow=1.9,SNR=16
SHEM                                   S       Sn       15 10 51.9 +1.7
         236nm,1.2s,baz=320,slow=17,SNR=1.4
SHEM                                   LR      LR       15 12 20.8
         comp=Z,627nm,19.4s,baz=110,slow=39
SMY      Shemya              6.62 283  Pn      Pn       15 09 36.0 -0.1
SMY      Shemya              6.62 283  P       Pn       15 09 36.9 +0.8
SMY      Shemya              6.62 283  P       Pn       15 09 36.0 -0.1
FALS     False Pass          7.79  61  Pn      Pn       15 09 50.8 -1.2
FALS     False Pass          7.79  61  P       Pn       15 09 52.3 +0.2
         baz=252
SDPT     Sand Point          9.55  62  Pn      Pn       15 10 16.0 -0.1
SDPT     Sand Point          9.55  62  P       Pn       15 10 17.5 +1.4
SDPT     Sand Point          9.55  62  P       Pn       15 10 17.0 +0.9
         baz=254
P16K     Nushagak River     12.26  46  P       Pn       15 10 53.7 +0.5
         baz=241
R17K     Ugashik Creek      12.44  54  P       Pn       15 10 54.1 -1.5
         baz=250
O16K     Kokwok River B     12.50  44  P       Pn       15 10 56.7 +0.2
         baz=239
Q17K     Contact Creek      12.91  52  P       Pn       15 11 03.1 +0.9
         baz=248
O17K     Koliganek Bris     13.03  44  P       Pn       15 11 04.3 +0.6
         baz=240
P17K     Kvichak River      13.04  47  P       Pn       15 11 03.9  0.0
         baz=244
Q18K     Katmai Hardscr     13.49  51  P       Pn       15 11 10.3 +0.3
         baz=248
P18K     Big Mountain,      13.69  48  Pn      Pn       15 11 13.7 +1.0
P18K     Big Mountain,      13.69  48  P       Pn       15 11 13.0 +0.3
         baz=245
O18K     Koktuh Hills       13.90  46  Pn      Pn       15 11 16.7 +1.1
O18K     Koktuh Hills       13.90  46  P       Pn       15 11 15.3 -0.3
         baz=243
OHAK     Old Harbor         13.91  58  Pn      Pn       15 11 16.2 +0.5
OHAK     Old Harbor         13.91  58  P       Pn       15 11 17.3 +1.6
OHAK     Old Harbor         13.91  58  P       Pn       15 11 14.9 -0.8
         baz=256
ANM      Nome               13.92  18  Pn      Pn       15 11 15.3 -0.5
ANM      Nome               13.92  18  P       Pn       15 11 15.3 -0.5
ANM      Nome               13.92  18  P       Pn       15 11 15.1 -0.7
         baz=207
Q19K     Cape Douglas,      14.25  51  Pn      Pn       15 11 20.4 +0.1
Q19K     Cape Douglas,      14.25  51  P       Pn       15 11 19.8 -0.6
         baz=249
SVW2     Sparrevohn         14.36  41  Pn      Pn       15 11 22.2 +0.5
KDAK     Kodiak Island      14.42  56  P       Pn       15 11 20.1 -2.4
         4.0nm,0.3s,baz=328,slow=5.3,SNR=43
KDAK                                   S       Sn       15 13 59.4 -1.5
         5.3nm,0.7s,baz=280,slow=15,SNR=1.3
KDAK     Kodiak Island      14.42  56  Pn      Pn       15 11 22.4 -0.2
KDAK     Kodiak Island      14.42  56  P       Pn       15 11 22.4 -0.2
TNA      Tin City           14.43  12  Pn      Pn       15 11 21.6 -0.9
TNA      Tin City           14.43  12  P       Pn       15 11 23.4 +0.8
         baz=199,SNR=40
O19K     Port Alsworth      14.46  46  Pn      Pn       15 11 24.4 +1.5
O19K     Port Alsworth      14.46  46  P       Pn       15 11 22.0 -1.0
         baz=244
N19K     Bonanza Creek      14.68  43  Pn      Pn       15 11 27.3 +1.2
N19K     Bonanza Creek      14.68  43  P       Pn       15 11 25.1 -0.9
         baz=241
P19K     Oil Pt             14.72  49  Pn      Pn       15 11 28.9 +2.3
P19K     Oil Pt             14.72  49  P       Pn       15 11 26.4 -0.2
         baz=247
Q20K     Shuyak Island      14.76  53  P       Pn       15 11 27.0  0.0
         baz=252
O20K     Slope Mountain     15.18  48  P       Pn       15 11 32.3 -0.3
         baz=247
L19K     White Mountain     15.25  38  P       P        15 11 38.1 +0.4
L19K     White Mountain     15.25  38  P       Pn       15 11 32.4 -1.1
         baz=236
TTA      Tatalina           15.27  35  P       P        15 11 37.6 -0.3
TTA      Tatalina           15.27  35  P       P        15 11 37.7 -0.3
TTA                                    pmax    pmax
         comp=Z,34nm,1.3s
TTA      Tatalina           15.27  35  P       Pn       15 11 32.9 -0.9
         baz=232,SNR=13
M19K     Big River Lodg     15.28  40  P       P        15 11 38.1 +0.1
HOM      Homer              15.47  50  Pn      Pn       15 11 37.1 +0.8
CNPM     China Poot         15.62  50          Pn       15 11 37.2 -1.1
CNPM                                   IAmb    IAmb     15 11 46.2
         comp=Z,29nm,0.7s
M20K     Styx River         15.78  41  P       P        15 11 43.8 +0.2
M20K     Styx River         15.78  41  P       Pn       15 11 38.3 -2.1
         baz=240
L20K     Farewell, AK       15.79  38  P       Pn       15 11 38.4 -2.1
         baz=237
N20K     Mount Spurr        15.84  44  P       Pn       15 11 40.2 -0.9
         baz=244
SPCR     Spurr Chakacha     15.84  44  P       Pn       15 11 40.7 -0.4
         baz=244
BRLK     Bradley Lake       15.87  50          Pn       15 11 40.6 -0.9
BRLK                                   IAmb    IAmb     15 11 49.6
         comp=Z,104nm,1.7s
SPU      Mount Spurr        15.90  44  P       P        15 11 44.5 -0.4
BRSE     Bradley Lake S     15.93  50  P       Pn       15 11 41.6 -0.7
         baz=251
GCSA     Galena City Sc     16.20  29  P       Pn       15 11 43.1 -2.5
         baz=225,SNR=8.9
K20K     Telida             16.23  36          P        15 11 49.1 +0.6
K20K     Telida             16.23  36  P       Pn       15 11 42.9 -3.1
         baz=234,SNR=7.7
SKT      Skwentna           16.48  42  P       P        15 11 52.2 +0.8
SKT                                    IAmb    IAmb     15 11 55.4
         comp=Z,67nm,1.6s
SKT      Skwentna           16.48  42  P       Pn       15 11 46.8 -2.4
         baz=242,SNR=7.9
PEA0B    Petropavlovsk-     16.53 286  Pn      Pn       15 11 48.8 -1.1
PEA0B                                  IAmb    IAmb     15 11 51.4
         comp=Z,74nm,1.3s
PEA0B    Petropavlovsk-     16.53 286  P       Pn       15 11 48.8 -1.1
PEA0B                                  pmax    pmax
         comp=Z,74nm,1.3s
PETK     Petropavlovsk-     16.53 286  P       P        15 11 51.8 -0.1
         comp=Z,1.1nm,0.3s,baz=95,slow=15,SNR=40
PETK                                   PcP     PcP      15 16 39.1 +0.5
         comp=Z,1.6nm,0.6s,baz=97,slow=1.3,SNR=7.2
PETK                                   LR      LR       15 17 36.3
         comp=Z,221nm,21.7s,baz=98,slow=35
         comp=Z,4.9nm,0.5s
SUA      Susitna One        16.59  44  Pn      Pn       15 11 50.8 +0.2
SUA      Susitna One        16.59  44  P       Pn       15 11 48.9 -1.8
         baz=245
O22K     Cooper Landing     16.66  48  Pn      Pn       15 11 51.0 -0.4
O22K                                   IAmb    IAmb     15 12 01.0
         comp=Z,65nm,0.3s
O22K     Cooper Landing     16.66  48  P       Pn       15 11 50.1 -1.4
         baz=250
SEW      Seward             16.66  50          Pn       15 11 49.5 -1.9
SEW                                    IAmb    IAmb     15 11 54.3
         comp=Z,128nm,1.8s
SEW      Seward             16.66  50  P       Pn       15 11 50.0 -1.5
         baz=252
PPLA     Purkeypile         16.68  39          Pn       15 11 52.8 +1.0
PPLA                                   IAmb    IAmb     15 11 59.9
         comp=Z,104nm,1.8s
PPLA     Purkeypile         16.68  39  P       Pn       15 11 50.5 -1.3
         baz=239
RC01     Rabbit Creek A     16.88  46  Pn      Pn       15 11 54.5 +0.3
RC01     Rabbit Creek A     16.88  46  P       Pn       15 11 52.4 -1.9
         baz=248
M22K     Willow             16.98  44  P       Pn       15 11 53.1 -2.3
         baz=245
CAST     Castle Rocks       17.00  37          P        15 11 58.4 +1.3
CAST     Castle Rocks       17.00  37  P       Pn       15 11 53.2 -2.5
         baz=237,SNR=9.7
CHUM     Lake Minchumin     17.17  36  P       Pn       15 11 55.7 -2.0
         baz=236,SNR=7.1
CUT      Chulitna           17.21  42          P        15 11 59.4 +0.1
CUT      Chulitna           17.21  42  P       Pn       15 11 56.6 -1.6
         baz=243
PMR      Palmer             17.35  45  Pn      Pn       15 11 57.5 -2.4
PMR      Palmer             17.35  45  P       Pn       15 11 57.5 -2.4
PMR                                    pmax    pmax
         comp=Z,52nm,2.0s
PWL      Port Wells         17.44  48  Pn      Pn       15 11 59.1 -2.0
PWL      Port Wells         17.44  48  P       Pn       15 11 59.2 -1.9
         baz=251
RDOG     Red Dog Mine       17.50  16          P        15 12 03.4 +0.8
KTH      Kantishna Hill     17.51  38          P        15 12 03.9 +1.1
KTH                                    IAmb    IAmb     15 12 09.9
         comp=Z,63nm,1.0s
KNK      Knik Glacier       17.58  46  Pn      Pn       15 12 01.3 -1.6
KNK                                    IAmb    IAmb     15 12 11.6
         comp=Z,87nm,1.8s
KNK      Knik Glacier       17.58  46  P       Pn       15 12 01.2 -1.6
         baz=249
BPAW     Bear Paw Mtn.      17.78  36          P        15 12 06.7 +1.0
BPAW     Bear Paw Mtn.      17.78  36  P       Pn       15 12 05.3  0.0
         baz=237,SNR=19
SML      Sawmill            17.78  45          P        15 12 05.8  0.0
SML      Sawmill            17.78  45  P       P        15 12 05.8  0.0
SML      Sawmill            17.78  45  P       Pn       15 12 05.6 +0.2
         baz=248
IMAR     Indian Mountai     18.01  29          P        15 12 09.7 +1.5
M23K     Glacier View       18.04  45  P       P        15 12 08.1 -0.5
         baz=249,SNR=9.3
I21K     Tanana             18.05  33  P       P        15 12 07.9 -0.7
I21K     Tanana             18.05  33  P       Pn       15 12 09.2 +0.6
         baz=233
H21K     Melozitna Rive     18.09  31  P       Pn       15 12 09.2 +0.2
H21K     Melozitna Rive     18.09  31  P       Pn       15 12 11.0 +1.9
         baz=230
SCM      Sheep Creek Mo     18.23  45  P       P        15 12 10.5 -0.3
SCM      Sheep Creek Mo     18.23  45  P       P        15 12 10.5 -0.3
SCM                                    pmax    pmax
         comp=Z,17nm,0.9s
SCM      Sheep Creek Mo     18.23  45  P       P        15 12 10.0 -0.7
         baz=249
RND      Reindeer           18.25  40  P       Pn       15 12 11.2 +0.1
RND      Reindeer           18.25  40  P       Pn       15 12 11.2 +0.1
RND                                    pmax    pmax
         comp=Z,14nm,1.0s
MCK      McKinley           18.37  39  P       Pn       15 12 12.8 +0.3
MCK      McKinley           18.37  39  P       Pn       15 12 12.8 +0.3
MCK                                    pmax    pmax
         comp=Z,17nm,0.8s
MCK      McKinley           18.37  39  P       P        15 12 12.3 +0.1
         baz=242,SNR=11
BWN      Browne             18.38  37  P       Pn       15 12 13.3 +0.6
BWN                                    IAmb    IAmb     15 12 19.4
         comp=Z,194nm,1.6s
MLY      Manley             18.39  34  P       Pn       15 12 13.4 +0.6
MLY                                    IAmb    IAmb     15 12 19.8
         comp=Z,80nm,1.7s
MLY      Manley             18.39  34  P       P        15 12 11.0 -1.4
         baz=235,SNR=22
G21K     Allakaket          18.44  28  P       P        15 12 12.6 -0.3
         baz=227
EYAK     Cordova Ski Ar     18.55  50  P       P        15 12 13.8 -0.3
         baz=255
DIV      Divide             18.71  48          P        15 12 16.2 +0.3
BILL     Bilibino           18.71 338  P       Pn       15 12 16.4 -0.1
BILL                                   IAmb    IAmb     15 12 22.8
         comp=Z,48nm,1.1s
BILL     Bilibino           18.71 338d iP      Pn       15 12 18.5 +1.9
BILL                                   pmax    pmax
         comp=Z,54nm,1.3s
BILL                                   MLR     MLR
         comp=Z,57nm,16.0s
KLU      Klutina            18.75  47  P       P        15 12 14.9 -1.5
KLU      Klutina            18.75  47  P       P        15 12 15.6 -0.8
         baz=252
NEA2     Nenana             18.75  36  P       P        15 12 16.3  0.0
NEA2     Nenana             18.75  36  P       Pn       15 12 16.8 -0.3
         baz=239,SNR=11
M24K     Tolsona, Glenn     18.84  45  P       P        15 12 17.4  0.0
M24K     Tolsona, Glenn     18.84  45  P       P        15 12 17.2 -0.1
         baz=250
I23K     Minto, Yukon-K     18.94  35  P       P        15 12 17.1 -1.2
I23K                                   IAmb    IAmb     15 12 25.6
         comp=Z,124nm,1.6s
I23K     Minto, Yukon-K     18.94  35  P       P        15 12 17.8 -0.6
         baz=237,SNR=38
F21K     Alatna River       18.94  26  P       P        15 12 18.0 -0.4
         baz=226
WRH      Wood River Hil     19.05  37  P       P        15 12 19.1 -0.5
CCB      Clear Creek Bu     19.25  37  P       P        15 12 21.2 -0.5
MDM      Murphy Dome        19.25  36  P       P        15 12 21.7 -0.1
TCOL     CIGO, UAF Yank     19.34  36  P       P        15 12 22.8 +0.1
TCOL     CIGO, UAF Yank     19.34  36  P       P        15 12 22.2 -0.5
         baz=240
COLA     College            19.34  36  P       P        15 12 22.7  0.0
COLA     College            19.34  36  P       Pn       15 12 26.1 +2.0
COLA     College            19.34  36c iP      Pn       15 12 24.4 +0.3
COLA                                   pmax    pmax
         comp=Z,26nm,1.3s
COLA     College            19.34  36  P       P        15 12 22.0 -0.7
         baz=240
HARP     HAARP              19.39  45  P       P        15 12 22.7 -0.6
         baz=251
N25K     Chitina, Valde     19.39  47  P       P        15 12 22.9 -0.6
N25K     Chitina, Valde     19.39  47  P       P        15 12 22.7 -0.7
         baz=254
PAX      Paxson             19.46  43  P       P        15 12 24.1  0.0
PAX      Paxson             19.46  43  P       P        15 12 24.1  0.0
PAX                                    pmax    pmax
         comp=Z,12nm,0.8s
PAX      Paxson             19.46  43  P       P        15 12 23.7 -0.4
         baz=249,SNR=7.1
HDA      Harding Lake       19.46  38  P       P        15 12 23.6 -0.4
HDA                                    IAmb    IAmb     15 12 26.6
         comp=Z,34nm,0.6s
HDA      Harding Lake       19.46  38  P       P        15 12 22.4 -1.6
         baz=243,SNR=35
POKR     Poker Plat Res     19.62  36  P       P        15 12 25.9 +0.1
POKR     Poker Plat Res     19.62  36  P       P        15 12 25.3 -0.6
         baz=240,SNR=8.0
G23K     Bananza Creek      19.63  30  P       P        15 12 26.0  0.0
         baz=233
IL31                        19.65  37  P       P        15 12 24.9 -1.2
IL31                                   IAmb    IAmb     15 12 29.6
         comp=Z,16nm,0.4s
ILAR     Eielson Array      19.65  37  P       P        15 12 25.1 -1.1
         comp=Z,1.4nm,0.3s,baz=243,slow=10,SNR=46
ILAR                                   PcP     PcP      15 16 44.0 +0.4
         comp=Z,0.4nm,0.5s,baz=264,slow=3.3,SNR=3.0
ILAR                                   ScP     ScP      15 20 16.3 +0.5
         comp=Z,0.2nm,0.4s,baz=260,slow=3.3,SNR=4.7
         comp=Z,4.7nm,0.5s
ILAR     Eielson Array      19.65  37  P       P        15 12 24.9 -1.2
K24K     Donnelly Dome      19.66  41  P       P        15 12 26.3 +0.1
         baz=246,SNR=18
GLB      Gilahina Butte     19.70  48  P       P        15 12 24.5 -2.3
H24K     Noodor Dome        19.84  34  P       P        15 12 28.8 +0.6
H24K                                   IAmb    IAmb     15 12 34.5
         comp=Z,24nm,0.7s
H24K     Noodor Dome        19.84  34  P       P        15 12 29.1 +0.9
         baz=238
COLD     Coldfoot           19.90  29  P       Pn       15 12 30.0 -0.7
COLD                                   IAmb    IAmb     15 12 37.1
         comp=Z,39nm,1.1s
COLD     Coldfoot           19.90  29  P       P        15 12 29.5 +0.7
         baz=231,SNR=26
RIDG     Independent Ri     20.01  41  P       P        15 12 30.2 +0.1
RIDG                                   IAmb    IAmb     15 12 37.0
         comp=Z,31nm,0.9s
RIDG     Independent Ri     20.01  41  P       P        15 12 30.7 +0.6
         baz=248,SNR=18
MCARA    McCarthy VSAT      20.05  49  P       Pn       15 12 31.9 -0.7
         baz=256
MENT     Mentasta           20.19  44  P       P        15 12 31.7 -0.4
DOT      Dot Lake           20.30  42  P       P        15 12 32.9 -0.3
DOT                                    IAmb    IAmb     15 12 38.2
         comp=Z,41nm,0.7s
M26K     Nabesna, AK        20.34  46  P       P        15 12 33.9 +0.1
M26K     Nabesna, AK        20.34  46  P       P        15 12 33.0 -0.8
         baz=253
L26K     Log Cabin Wild     20.38  44  P       P        15 12 34.3 +0.1
L26K     Log Cabin Wild     20.38  44  P       P        15 12 33.5 -0.7
         baz=251
G24K     Hadweenzic Riv     20.45  32  P       P        15 12 33.0 -1.8
         baz=237,SNR=30
SCRK     Sand Creek         20.45  41  P       P        15 12 34.3 -0.7
SCRK                                   IAmb    IAmb     15 12 39.7
         comp=Z,74nm,0.9s
SCRK     Sand Creek         20.45  41  P       P        15 12 34.6 -0.3
         baz=248,SNR=64
PRP      Porcupine Dome     20.52  36  P       P        15 12 35.2 -0.4
PRP      Porcupine Dome     20.52  36  P       P        15 12 34.5 -1.1
         baz=242,SNR=5.1
SEY      Seymchan           20.54 316  P       Pn       15 12 37.4 -0.9
         comp=Z,22nm,1.0s,baz=84,slow=11,SNR=13
SEY                                    PcP     PcP      15 16 45.9 +0.7
         comp=Z,2.8nm,0.7s,baz=97,slow=5.1,SNR=5.3
SEY                                    LR      LR       15 20 24.0
         comp=Z,329nm,20.5s,baz=118,slow=36
         comp=Z,22nm,1.0s
MA2      Magadan            20.55 306  P       P        15 12 37.0 +1.1
         comp=Z,10nm,1.0s,baz=114,slow=12,SNR=3.3
MA2                                    LR      LR       15 20 00.9
         comp=Z,160nm,20.7s,baz=106,slow=35
         comp=Z,10nm,1.0s
MA2      Magadan            20.55 306deP       Pn       15 12 38.5 +0.1
MA2                                    pmax    pmax
         comp=Z,56nm,1.1s
E23K     Chandalar          20.60  28  P       P        15 12 35.5 -1.0
         baz=230
F24K     Squaw Lake         20.79  30  P       P        15 12 37.5 -0.9
         baz=234,SNR=40
J26L     Joseph Creek       20.83  40  P       P        15 12 38.6 -0.3
J26L     Joseph Creek       20.83  40  P       P        15 12 39.5 +0.5
         baz=247
M27K     Edge Creek, AK     20.83  46  P       P        15 12 39.8 +0.7
M27K     Edge Creek, AK     20.83  46  P       P        15 12 39.8 +0.7
         baz=255,SNR=6.9
D23K     Nanushuk River     20.92  25  P       P        15 12 40.3 +0.5
         baz=227
G25K     Bearman Lake       20.94  33  P       P        15 12 41.3 +1.2
         baz=238
E24K     Your Creek         20.94  28  P       P        15 12 41.2 +1.1
         baz=232
L27K     Beaver Creek,      21.05  44  P       P        15 12 41.3 -0.1
L27K     Beaver Creek,      21.05  44  P       P        15 12 40.9 -0.5
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      baz=253
BCAR  Beaver Creek A    21.07  44  P       P       15 12 40.9 -0.7
FYU   Fort Yukon        21.13  34  P       P       15 12 41.9 -0.2
FYU                                IAmb    IAmb    15 12 57.4
      comp=Z,39nm,1.2s
PCA   Pinnacle          21.14  53  P       P       15 12 40.4 -2.0
PCA                                IAmb    IAmb    15 13 01.4
      comp=Z,83nm,1.5s
PINM  Pinnacle          21.14  53  P       P       15 12 42.3 -0.1
      baz=262
K27K  Chicken           21.26  42  P       P       15 12 43.4 -0.1
K27K                               IAmb    IAmb    15 12 52.6
      comp=Z,34nm,0.8s
K27K  Chicken           21.26  42  P       P       15 12 43.0 -0.5
      baz=250
O28M  Mount Upton       21.28  51  P       P       15 12 43.3 -0.8
      baz=261
BVCY  Beaver Creek      21.30  46  P       P       15 12 44.5 +0.4
      baz=256,SNR=11
I26K  Coal Creek Min    21.31  38  P       P       15 12 43.7 -0.4
I26K  Coal Creek Min    21.31  38  P       P       15 12 43.5 -0.6
      baz=246
YUK3  Moose Creek       21.34  48  P       P       15 12 45.0 +0.3
      baz=258,SNR=7.9
A21K  Barrow            21.44  16  P       P       15 12 45.0 -0.3
      baz=213
PNL   Peninsula         21.52  54  P       P       15 12 48.6 +2.2
F25K  Christian Rive    21.54  31  P       P       15 12 47.1 +0.5
      baz=237
YUK8  Steele Glacier    21.57  50  P       P       15 12 47.6 +0.4
      baz=260
BMAR  Burnt Mountain    21.80  32  P       P       15 12 49.8 +0.5
G26K  Porcupine Rive    21.82  34  P       P       15 12 48.6 -0.9
      baz=241
E25K  Arctic Village    21.85  30  P       P       15 12 51.4 +1.5
      baz=236,SNR=38
EGAK  Eagle             21.89  40  P       P       15 12 50.2 -0.1
EGAK                               IAmb    IAmb    15 12 54.5
      comp=Z,26nm,0.6s
EGAK  Eagle             21.89  40  P       P       15 12 50.8 +0.5
      baz=250,SNR=24
C24K  Franklin Bluff    21.95  25  P       P       15 12 51.8 +1.0
      baz=228
O29M  Mount Kennedy     22.00  53  P       P       15 12 51.9 +0.3
      baz=264
I27K  Kandik River      22.02  38  P       P       15 12 51.5 -0.2
      baz=247
F26K  Sheenjek River    22.08  32  P       P       15 12 53.0 +0.8
      baz=239,SNR=10
YUK4  Talbot Arm        22.11  50  P       P       15 12 53.8 +0.9
      baz=261
YUK6  Outpost Mounta    22.19  51  P       P       15 12 53.5 -0.2
      baz=262
H27K  Steamboat Moun    22.30  36  P       P       15 12 53.7 -1.1
      baz=246
D25K  Kavik River       22.32  27  P       P       15 12 54.1 -0.8
      baz=233
DAWY  Dawson            22.39  43  P       P       15 12 55.3 -0.4
DAWY                               IAmb    IAmb    15 13 02.5
      comp=Z,18nm,0.9s
DAWY  Dawson            22.39  43  P       P       15 12 55.1 -0.6
      baz=254,SNR=14
M29M  Somme Creek       22.40  47  P       P       15 12 55.1 -0.8
      baz=259
G27K  Doyon Strip       22.50  35  P       P       15 12 55.5 -1.4
      baz=245
HYT   Haines Junctio    22.59  51  P       P       15 12 57.2 -0.8
      baz=264
L29M  L29M              22.69  45  P       P       15 12 57.8 -1.2
      baz=257
N30M  Aishikik Lake     22.87  50  P       P       15 13 00.4 -0.4
      baz=262
PLBC  Pleasant Camp     23.04  55  P       P       15 13 02.3 -0.2
      baz=268
C26K  Camden Bay        23.09  26  P       P       15 13 03.8 +0.9
      baz=234
K29M  Barlow Dome       23.13  44  P       P       15 13 03.3 -0.2
      baz=256
E27K  Coleen River      23.16  32  P       P       15 13 04.0 +0.4
      baz=242
M30M  Minto, Yukon      23.18  47  P       P       15 13 02.9 -1.0
M30M                               IAmb    IAmb    15 13 10.7
      comp=Z,36nm,1.8s
I29M  Ogilvie Camp,     23.23  40  P       P       15 13 03.6 -0.7
I29M                               IAmb    IAmb    15 13 18.7
      comp=Z,13nm,0.7s
I29M  Ogilvie Camp,     23.23  40  P       P       15 13 03.7 -0.7
      baz=252,SNR=16
C27K  Jago River        23.26  28  P       P       15 13 04.6  0.0
      baz=236
EPYK  Eagle Plains      24.16  38  P       P       15 13 13.0 -0.1
EPYK  Eagle Plains      24.16  38  P       P       15 13 13.1  0.0
      baz=252,SNR=5.9
M31M  Drury Creek, Y    24.23  48  P       P       15 13 13.8  0.0
M31M  Drury Creek, Y    24.23  48  P       P       15 13 12.1 -1.7
      baz=263
G30M  tAoh Zraii Nji    24.55  37  P       P       15 13 15.4 -1.3
      baz=251
FARO  Faro, Yukon       24.72  48  P       P       15 13 18.1 -0.1
FARO                               IAmb    IAmb    15 13 26.6
      comp=Z,32nm,1.8s
N32M  Quiet Lake        24.76  51  P       P       15 13 17.2 -1.4
      baz=267
P33M  Teslin, Yukon     24.86  53  P       P       15 13 18.9 -0.6
      baz=269
U33K  Whale Pass        24.93  63  P       P       15 13 19.6 -0.5
      baz=278
CRAG  Craig             25.03  65  P       P       15 13 22.6 +1.7
CRAG                               IAmb    IAmb    15 13 28.5
      comp=Z,125nm,1.5s
CRAG  Craig             25.03  65  P       P       15 13 24.7 +3.7
CRAG  Craig             25.03  65  P       P       15 13 20.5 -0.5
      baz=279
Q32M  Nakina River      25.15  56  P       P       15 13 19.1 -3.2
      baz=272
WRAK  Wrangell Islan    25.32  62  P       P       15 13 21.0 -2.7
      baz=278
F31M  Tsiigehtchic      25.61  36  P       P       15 13 24.3 -1.8
      baz=253
V35K  Ketchikan         25.90  65  P       P       15 13 27.8 -1.0
      baz=281
INK   Inuvik            25.96  34  P       P       15 13 29.6 +0.4
      comp=Z,3.7nm,0.4s,baz=223,slow=7.6,SNR=33
INK                                PcP     PcP     15 16 57.2 +0.8
      comp=Z,1.6nm,0.4s,baz=294,slow=3.1,SNR=6.0
      comp=Z,3.7nm,0.4s
INK   Inuvik            25.96  34  P       P       15 13 29.5 +0.2
INK   Inuvik            25.96  34  P       P       15 13 29.5 +0.2
INK                                pmax    pmax
      comp=Z,5.0nm,0.7s
INK   Inuvik            25.96  34  P       P       15 13 25.8 -3.4
      baz=252,SNR=7.8
DLBC  Dease Lake        26.35  57  P       P       15 13 34.3 +1.2
      comp=Z,3.7nm,0.6s,baz=310,slow=7.7,SNR=5.2
DLBC                               LR      LR      15 24 51.9
      comp=Z,136nm,18.1s,baz=290,slow=38
      comp=Z,3.7nm,0.6s
DLBC  Dease Lake        26.35  57  P       P       15 13 33.9 +0.8
DLBC  Dease Lake        26.35  57  P       P       15 13 32.1 -1.0
      baz=275
T35M  Bob Quinn         26.39  61  P       P       15 13 32.0 -1.4
      baz=278
YSS   Yuzh-Sakhalins    27.48 277  P       P       15 13 42.7 -0.5
YSS                                IAmb    IAmb    15 13 45.6
      comp=Z,18nm,0.8s
YSS   Yuzh-Sakhalins    27.48 277 eP       P       15 13 44.1 +0.9
YSS                                pmax    pmax
      comp=Z,20nm,0.8s
YSS                                MLR     MLR
      comp=Z,300nm,11.0s
YSS                                MLR     MLR
      comp=E,300nm,14.0s
BBB   Bella Bella       28.68  70  LR      LR      15 22 59.6
      comp=E,78nm,19.7s,baz=302,slow=31
JKA   Kamikawa-asahi    28.91 272  P       P       15 13 56.5 +0.6
JKA                                IAmb    IAmb    15 14 24.6
      comp=Z,42nm,1.4s
ASAJ  Asahikawa         28.91 272  P       P       15 13 56.4 +0.5
      comp=Z,8.4nm,0.7s,baz=61,slow=7.2,SNR=9.0
ASAJ                               LR      LR      15 24 33.5
      comp=Z,48nm,21.5s,baz=98,slow=34
      comp=Z,8.4nm,0.7s
ASAJ  Asahikawa         28.91 272  P       P       15 13 56.6 +0.6
ASAJ                               pmax    pmax
      comp=Z,42nm,1.4s
C36M  Paulatuk          29.54  34  P       P       15 13 59.5 -1.8
      baz=260
ERM   Erimo             29.67 268  P       P       15 14 02.3 -0.3
ERM                                IAmb    IAmb    15 14 09.1
      comp=Z,28nm,1.2s
ERM   Erimo             29.67 268  P       P       15 14 04.7 +2.0
ERM   Erimo             29.67 268⇓eP       P       15 14 03.8 +1.1
ERM                                pmax    pmax
      comp=Z,30nm,1.2s
JEM   Erimo             29.67 268  P       P       15 14 04.7 +2.0
A36M  Sachs Harbour     29.76  29  P       P       15 14 03.1 -0.1
A36M                               IAmb    IAmb    15 14 04.9
      comp=Z,10nm,0.8s
A36M  Sachs Harbour     29.76  29  P       P       15 14 01.8 -1.4
      baz=254
YAK   Yakutsk           30.88 311  LR      LR      15 26 43.0
      comp=Z,172nm,19.8s,baz=78,slow=36
YAK   Yakutsk           30.88 311  P       P       15 14 12.1 -1.1
YAK                                IAmb    IAmb    15 14 25.4
      comp=Z,12nm,0.8s
YAK   Yakutsk           30.88 311 eP       P       15 14 11.7 -1.5
YAK                               e                15 17 08.5
YAK                                pmax    pmax
      comp=Z,10.0nm,0.8s
TIXI  Tiksi             31.48 330  P       P       15 14 18.6 +0.2
      comp=Z,0.8nm,0.4s,baz=270,slow=20,SNR=5.4
TIXI                               LR      LR      15 28 03.6
      comp=Z,85nm,18.6s,baz=46,slow=38
      comp=Z,0.8nm,0.4s
TIXI  Tiksi             31.48 330  P       P       15 14 18.0 -0.4
TIXI                               IAmb    IAmb    15 14 44.3
      comp=Z,10nm,0.2s
TIXI  Tiksi             31.48 330⇑eP       P       15 14 18.8 +0.5
TIXI                               pmax    pmax
      comp=Z,4.0nm,1.4s
CLRS  Cowichan Lake     32.28  74  P       P       15 14 27.3 +1.7
HILA  High Level        33.06  55  P       P       15 14 32.6 +0.3
KLR   Kul'dur           33.21 287  LR      LR      15 27 58.4
      comp=Z,92nm,21.4s,baz=68,slow=36
KLR   Kul'dur           33.21 287d iP      P       15 14 33.7 -0.1
KLR                                pmax    pmax
      comp=Z,9.0nm,0.6s
YKA   Yellowknife Ar    33.42  47  P       P       15 14 35.4  0.0
      comp=Z,0.8nm,0.4s,baz=275,slow=8.5,SNR=16
YKA                                PcP     PcP     15 17 16.6 +0.9
      comp=Z,1.0nm,0.5s,baz=283,slow=3.0,SNR=16
YKA                                ScP     ScP     15 20 56.5 +0.2
      comp=Z,0.2nm,0.6s,baz=287,slow=3.2,SNR=3.8
YKA                                LR      LR      15 29 36.2
      comp=Z,154nm,20.2s,baz=292,slow=39
      comp=Z,0.8nm,0.4s
YKA   Yellowknife Ar    33.42  47 i P      P       15 14 36.4 +1.0
YKA                                pmax    pmax
      comp=Z,1.0nm,0.3s
B06A  Marblemount       34.00  74  P       P       15 14 41.0 +0.4
B06A                               IAmb    IAmb    15 14 42.5
      comp=Z,8.6nm,0.5s
ZEA   Zeya              34.08 297 eP       P       15 14 50.1 +8.8
LON   Longmire          34.61  77  P       P       15 14 47.5 +1.5
LON                                IAmb    IAmb    15 15 16.3
      comp=Z,28nm,1.8s
LON   Longmire          34.61  77  P       P       15 14 47.5 +1.5
LON                                pmax    pmax
      comp=Z,28nm,1.8s
F04A  Amboy             34.63  78  P       P       15 14 46.7 +0.6
F04A                               IAmb    IAmb    15 14 50.4
      comp=Z,57nm,1.7s
I02E  Swisshome, OR     34.67  82  P       P       15 14 46.6 +0.1
H11N2 WAKE ISLAND Hy    34.81 210  T       T       15 51 28.0
      baz=18,slow=76,SNR=2773
H11N3 WAKE ISLAND Hy    34.82 210  T       T       15 51 37.1
      baz=18,slow=76,SNR=3682
H11N1 WAKE ISLAND Hy    34.83 210  T       T       15 51 36.7
      baz=18,slow=76,SNR=4549
JSD   Sado              35.04 266  P       P       15 14 49.6 -0.2
JSD                                IAmb    IAmb    15 14 52.8
      comp=Z,13nm,0.5s
JSD   Sado              35.04 266  P       P       15 14 50.4 +0.7
HEH   HeiHe             35.34 291 eP       P       15 14 50.6 -1.5
HEH                                pmax    pmax
      comp=Z,4.0nm,0.5s
HEH                                pmax    pmax
      comp=Z,97nm,5.1s
USA0B Ussuriysk Arra    35.44 279  P       P       15 14 52.2 -0.9
USA0B                              IAmb    IAmb    15 14 54.2
      comp=Z,25nm,1.4s
USA0B Ussuriysk Arra    35.44 279  P       P       15 14 52.2 -0.9
USA0B                              pmax    pmax
      comp=Z,25nm,1.4s
USRK  Ussuriysk Ar.     35.44 279  P       P       15 14 53.0  0.0
      comp=Z,7.9nm,0.5s,baz=56,slow=9.9,SNR=40
USRK                               PcP     PcP     15 17 22.5 +0.7
      comp=Z,1.5nm,0.5s,baz=91,slow=2.8,SNR=2.1
USRK                               LR      LR      15 28 19.4
      comp=Z,95nm,21.4s,baz=39,slow=34
      comp=Z,7.9nm,0.5s
USRK  Ussuriysk Ar.     35.44 279  P       P       15 14 52.2 -0.9
G05A  Wamic             35.64  79  P       P       15 14 55.8 +0.8
MJAR  Matsushiro Arr    36.01 264  P       P       15 14 58.5 +0.4
      comp=Z,2.5nm,0.7s,baz=41,slow=6.9,SNR=7.3
MJAR                               LR      LR      15 27 27.8
      comp=Z,89nm,21.9s,baz=67,slow=32
      comp=Z,2.5nm,0.7s
MAJO  Matsushiro        36.01 264  P       P       15 14 59.1 +1.0
MAJO  Matsushiro        36.01 264ceP       P       15 14 58.7 +0.6
MAJO                               pmax    pmax
      comp=Z,13nm,1.3s
MAJO  Matsushiro        36.01 264  P       P       15 14 58.8 +0.7
MAJO                               pP      pP      15 15 09.9 +0.4
MAJO                               sP      sP      15 15 14.5  0.0
H11S1 WAKE ISLAND Hy    36.02 210  T       T       15 53 17.1
      baz=19,slow=76,SNR=3170
H11S2 WAKE ISLAND Hy    36.04 210  T       T       15 53 14.3
      baz=19,slow=76,SNR=2903
H11S3 WAKE ISLAND Hy    36.04 210  T       T       15 53 13.3
      baz=19,slow=76,SNR=1103
HAWA  Hanford           36.16  76  P       P       15 15 00.5 +1.3
HAWA                               IAmb    IAmb    15 15 02.5
      comp=Z,11nm,0.7s
D08A  Wollman Farm,     36.20  74  P       P       15 15 00.2 +0.6
D08A                               IAmb    IAmb    15 15 01.6
      comp=Z,6.3nm,0.9s
C09A  Chrisman Ranch    36.24  73  P       P       15 15 00.1 +0.2
C09A                               IAmb    IAmb    15 15 11.2
      comp=Z,10nm,0.5s
YBH   Yreka Blue Hor    36.65  85  LR      LR      15 26 40.4
      comp=Z,105nm,21.1s,baz=313,slow=30
MDJ   Mudanjiang        36.69 281  P       P       15 15 03.0 -0.8
MDJ                                sP      sP      15 15 22.9 +2.1
MDJ                                pmax    pmax
      comp=Z,7.0nm,0.9s
MDJ                                pmax    pmax
      comp=Z,120nm,3.7s
MDJ                                LR      LR
      comp=Z,260nm,21.7s
NEW   Newport           36.70  72  LR      LR      15 27 56.1
      comp=Z,81nm,18.7s,baz=308,slow=33
NEW   Newport           36.70  72  P       P       15 15 04.8 +0.9
NEW                                IAmb    IAmb    15 15 06.6
      comp=Z,9.2nm,0.7s
NEW   Newport           36.70  72  P       P       15 15 04.8 +0.9
NEW                                pmax    pmax
      comp=Z,9.0nm,0.7s
NEW   Newport           36.70  72  P       P       15 15 01.8 -2.1
      baz=298,SNR=10
J05D  Fort Rock, OR     36.71  81  P       P       15 15 05.2 +1.0
JGF   Kuroka            37.14 263  P       P       15 15 08.1 +0.3
JGF                                IAmb    IAmb    15 15 23.5
      comp=Z,18nm,1.2s
JGF   Kuroka            37.14 263  P       P       15 15 09.6 +1.8
K05A  Summer Lake       37.23  82  P       P       15 15 09.3 +0.7
K05A                               IAmb    IAmb    15 15 23.2
      comp=Z,50nm,2.0s
I07A  Izee              37.35  79  P       P       15 15 09.3 -0.2
I07A                               IAmb    IAmb    15 15 31.4
      comp=Z,19nm,1.6s
BMO   Blue Mountains    38.28  77  P       P       15 15 16.4 -1.0
BMO   Blue Mountains    38.28  77  P       P       15 15 16.4 -1.0
BMO                                pmax    pmax
      comp=Z,5.0nm,1.1s
J08A  Circle Bar Ran    38.37  79  P       P       15 15 18.4 +0.2
J08A                               IAmb    IAmb    15 15 31.7
      comp=Z,6.0nm,0.7s
RES   Resolute Bay      38.56  25  LR      LR      15 34 19.8
      comp=Z,59nm,19.4s,baz=23,slow=41
WVOR  Wild Horse Val    38.78  81  P       P       15 15 22.3 +0.7
WVOR                               IAmb    IAmb    15 15 39.1
      comp=Z,7.8nm,0.8s
WVOR  Wild Horse Val    38.78  81  P       P       15 15 22.3 +0.7
WVOR                               pmax    pmax
      comp=Z,8.0nm,0.8s
PLID  Pearl Lake        38.95  76  P       P       15 15 23.5 +0.3
MSO   Missoula          39.28  72  P       P       15 15 26.5 +0.7
MSO                                IAmb    IAmb    15 15 27.4
      comp=Z,25nm,1.4s
MSO   Missoula          39.28  72  P       P       15 15 23.6 -2.2
      baz=301,SNR=7.3
PAHR  Pah Rah Range     39.89  85  P       P       15 15 31.7 +0.8
MFID  Camas Ranch       39.95  78  P       P       15 15 31.8 +0.4
JHS   Saijyo            40.16 266  P       P       15 15 35.3 +2.2
JCJ   Chichijima        40.23 249  LR      LR      15 29 06.6
      comp=Z,44nm,20.1s,baz=228,slow=31
JCJ   Chichijima        40.23 249  P       P       15 15 33.7  0.0
JCJ   Chichijima        40.23 249  P       P       15 15 34.3 +0.6
      comp=Z,194nm,1.3s
HRY   Holter Researc    40.59  71  P       P       15 15 36.1 -0.5
HLID  Hailey            40.73  77  P       P       15 15 38.0 +0.1
HLID  Hailey            40.73  77  P       P       15 15 36.9 -1.0
      baz=304,SNR=8.6
MCMT  McKenzie Canyo    40.98  74  P       P       15 15 39.8 -0.3
KVN   Kaiserville       41.08  85  P       P       15 15 40.7 -0.1
KVN   Kaiserville       41.08  85  P       P       15 15 40.7 -0.1
KVN                                pmax    pmax
      comp=Z,3.0nm,0.7s
EGMT  Eagleton          41.13  68  P       P       15 15 40.5 -0.5
EGMT                               IAmb    IAmb    15 16 03.9
      comp=Z,7.7nm,0.8s
EGMT  Eagleton          41.13  68  P       P       15 15 38.9 -2.1
      baz=301
BOZ   Bozeman (W)       41.30  72  P       P       15 15 42.7 +0.2
BOZ                                IAmb    IAmb    15 15 43.8
      comp=Z,8.4nm,0.5s
BOZ   Bozeman (W)       41.30  72  P       P       15 15 42.7 +0.2
BOZ                                pmax    pmax
      comp=Z,8.0nm,0.5s
BOZ   Bozeman (W)       41.30  72  P       P       15 15 40.5 -2.0
      baz=303,SNR=10
NVAR  Mina Array Bea    41.33  86  P       P       15 15 43.4 +0.5
      comp=Z,1.0nm,0.8s,baz=295,slow=9.0,SNR=6.6
NVAR                               PcP     PcP     15 17 40.9 +0.3
      comp=Z,0.4nm,0.6s,baz=285,slow=1.8,SNR=4.0
NVAR                               ScP     ScP     15 21 27.2 +0.5
      comp=Z,0.7nm,0.8s,baz=300,slow=3.3,SNR=4.1
NVAR                               LR      LR      15 31 40.7
      comp=Z,54nm,18.7s,baz=299,slow=34
      comp=Z,1.0nm,0.8s
NVAR  Mina Array Bea    41.33  86  P       P       15 15 42.7 -0.2
QLMT  Earthquake Lak    41.83  73  P       P       15 15 45.7 -1.2
KSRS  Korea Array       41.83 273  P       P       15 15 47.6 +0.9
      comp=Z,9.5nm,0.9s,baz=55,slow=7.6,SNR=18
KSRS                               LR      LR      15 32 43.5
      comp=Z,24nm,20.4s,baz=50,slow=35
      comp=Z,9.5nm,0.9s
ELK   Elko              41.83  81  LR      LR      15 29 43.3
      comp=Z,83nm,21.6s,baz=329,slow=31
KSAR  Wonju Array Be    41.86 273  P       P       15 15 46.9 -0.1
KSAR  Wonju Array Be    41.86 273  P       P       15 15 46.9 -0.1
FFC   Flin Flon         42.17  56  P       P       15 15 49.1 -0.2
FFC                                IAmb    IAmb    15 15 51.2
      comp=Z,15nm,1.4s
FFC   Flin Flon         42.17  56  P       P       15 15 49.1 -0.2
FFC                                pmax    pmax
      comp=Z,15nm,1.4s
FFC   Flin Flon         42.17  56  P       P       15 15 49.6 +0.3
YMR   Madison River     42.20  73  P       P       15 15 49.9  0.0
YMR                                IAmb    IAmb    15 15 51.9
      comp=Z,7.8nm,0.8s
TPH   Tonopah           42.22  85  P       P       15 15 50.9 +0.8
TPH                                IAmb    IAmb    15 16 07.9
      comp=Z,36nm,1.2s
TPH   Tonopah           42.22  85  P       P       15 15 50.9 +0.8
TPH                                pmax    pmax
      comp=Z,36nm,1.2s
YNR   Norris Junctio    42.34  73  P       P       15 15 51.5 +0.4
YNR                                IAmb    IAmb    15 15 53.6
      comp=Z,8.6nm,0.9s
H17A  Grant Village     42.58  73  P       P       15 15 53.7 +0.6
H17A                               IAmb    IAmb    15 15 56.3
      comp=Z,23nm,1.4s
H17A  Grant Village     42.58  73  P       P       15 15 51.6 -1.5
      baz=304,SNR=10
LKWY  Lake              42.59  73  P       P       15 15 53.9 +0.7
LKWY                               IAmb    IAmb    15 15 56.2
      comp=Z,9.9nm,0.7s
LKWY  Lake              42.59  73  P       P       15 15 53.9 +0.7
LKWY                               pmax    pmax
      comp=Z,10.0nm,0.7s
FLWY  Flagg Ranch       42.68  74  P       P       15 15 53.0 -0.8
HVU   Hansel Valley     42.74  78  P       P       15 15 54.1 -0.2
HVU   Hansel Valley     42.74  78  P       P       15 15 54.1 -0.2
HVU                                pmax    pmax
      comp=Z,4.0nm,0.7s
JNU   Nakatsue          42.80 266  LR      LR      15 31 55.1
      comp=Z,80nm,21.1s,baz=52,slow=34
TJN   Taejon            42.86 272⇓eP       P       15 15 57.1 +2.0
R11A  Troy Canyon, C    43.06  84  P       P       15 15 56.9 -0.1
R11A  Troy Canyon, C    43.06  84  P       P       15 15 55.0 -1.9
      baz=308
MPMC  Manual Prospec    43.32  88  P       P       15 15 56.1 -3.0
      baz=310
SPR3  Spring Creek 3    43.44  82  P       P       15 16 00.5 +0.3
TPNV  Topopah Spring    43.52  86  P       P       15 16 00.4 -0.3
TPNV  Topopah Spring    43.52  86  P       P       15 16 00.4 -0.3
TPNV                               pmax    pmax
      comp=Z,8.0nm,0.9s
TPNV  Topopah Spring    43.52  86  P       P       15 15 59.2 -1.5
      baz=310
DUG   Dugway, Tooele    43.65  80  P       P       15 16 01.2 -0.4
DUG   Dugway, Tooele    43.65  80  P       P       15 16 01.2 -0.4
DUG                                pmax    pmax
      comp=Z,5.0nm,0.6s
DUG   Dugway, Tooele    43.65  80  P       P       15 15 59.6 -2.0
      baz=307
LAO   LASA Array        43.88  68  P       P       15 16 02.9 -0.4
LAO                                IAmb    IAmb    15 16 07.6
      comp=Z,9.9nm,0.9s
LAO   LASA Array        43.88  68  P       P       15 16 01.8 -1.5
      baz=303,SNR=7.0
SNCC  San Nicolas Is    43.89  92  P       P       15 16 04.6 +1.2
      baz=312
TCUT  Toone Canyon      43.96  78  P       P       15 16 04.6 +0.4
TCUT                               IAmb    IAmb    15 16 22.7
      comp=Z,7.2nm,0.7s
PRN   Pahroc Range      43.98  84  P       P       15 16 04.5 +0.2
PRN                                IAmb    IAmb    15 16 22.2
      comp=Z,8.2nm,0.7s
DGMT  Dagmar            44.07  65  IAmb    IAmb    15 16 06.6
      comp=Z,38nm,1.3s
DGMT  Dagmar            44.07  65  P       P       15 16 03.6 -1.2
      baz=302
BW06  Boulder Array     44.11  75  IAmb    IAmb    15 16 07.1
      comp=Z,15nm,0.7s
BW06  Boulder Array     44.11  75  P       P       15 16 04.2 -1.2
      baz=306,SNR=28
PD31  Pinedale Array    44.11  75  IAmb    IAmb    15 16 07.1
      comp=Z,13nm,0.7s
PDAR  Pinedale Array    44.11  75  P       P       15 16 06.2 +0.8
      comp=Z,13nm,0.6s,baz=308,slow=4.0,SNR=163
PDAR                               LR      LR      15 32 02.6
      comp=Z,56nm,21.3s,baz=357,slow=33
      comp=Z,13nm,0.6s
FCC   Fort Churchill    44.15  48  P       P       15 16 04.8 -0.4
FCC   Fort Churchill    44.15  48  P       P       15 16 04.8 -0.4
FCC                                pmax    pmax
      comp=Z,5.0nm,1.1s
GSC   Goldstone, Bar    44.23  88  P       P       15 16 07.1 +0.8
GSC                                IAmb    IAmb    15 16 24.0
      comp=Z,6.6nm,0.8s
GSC   Goldstone, Bar    44.23  88  P       P       15 16 07.1 +0.8
GSC                                pmax    pmax
      comp=Z,7.0nm,0.8s
GSC   Goldstone, Bar    44.23  88  P       P       15 16 05.6 -0.7
      baz=311
RRX   Edison Barstow    44.39  89  P       P       15 16 06.8 -0.7
      baz=311
BFSC  Mount Baldy Ra    44.39  90  P       P       15 16 06.9 -0.8
      baz=312
BSUT  Blindstream Ca    44.70  78  P       P       15 16 11.2 +0.9
CCUT  Cedar City        44.93  83  P       P       15 16 12.4 +0.4
MVU   Marysvale         45.05  81  P       P       15 16 13.3 +0.4
MVU                                IAmb    IAmb    15 16 34.5
      comp=Z,16nm,0.9s
MSU   Marysvale         45.06  81  P       P       15 16 13.9 +0.8
MSU   Marysvale         45.06  81  P       P       15 16 13.9 +0.8
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MURC  Murrieta          45.10  90   P     P     15 16 13.1 -0.1
      baz=312
TMUT  Trail Mountain    45.18  80   P     P     15 16 12.0 -2.0
TMUT                                IAmb  IAmb  15 16 39.6
      comp=Z,5.5nm,0.7s
NRIK  Noril'sk          45.26 330   P     P     15 16 13.9  0.0
      comp=Z,2.4nm,0.5s,baz=96,slow=9.6,SNR=4.0
      comp=Z,2.4nm,0.5s
NRIK  Noril'sk          45.26 330ceP    P     15 16 15.4 +1.5
NRIK                                pmax  pmax
      comp=Z,6.0nm,1.0s
Q16A  Castle Valley     45.43  80   P     P     15 16 15.6 -0.4
PFO   Pinyon Flats O    45.55  90   LR    LR    15 31 09.0
      comp=Z,67nm,21.1s,baz=289,slow=30
PFO   Pinyon Flats O    45.55  90   P     P     15 16 13.7 -3.2
      baz=312
TPFO  Pinon Flats       45.56  90   P     P     15 16 14.1 -2.8
      baz=312
BELC  Belle Mtn. Jos    45.58  89   P     P     15 16 15.3 -1.8
      baz=312
SRU   San Rafael Swe    45.71  79   P     P     15 16 17.6 -0.5
SRU                                 IAmb  IAmb  15 16 31.9
      comp=Z,5.8nm,0.7s
SRU   San Rafael Swe    45.71  79   P     P     15 16 17.6 -0.5
SRU                                 pmax  pmax
      comp=Z,6.0nm,0.7s
K22A  Casper            45.99  73   IAmb  IAmb  15 16 21.4
      comp=Z,8.4nm,0.8s
K22A  Casper            45.99  73   P     P     15 16 18.7 -1.5
      baz=306,SNR=5.1
BC3   Big Chuckawall    46.15  89   P     P     15 16 21.3 -0.2
      baz=312
HMU   Henry Mountain    46.31  81   P     P     15 16 22.0 -0.9
HMU                                 IAmb  IAmb  15 16 43.6
      comp=Z,7.9nm,0.6s
U15A  North Rim         46.31  84   IAmb  IAmb  15 16 40.9
      comp=Z,9.1nm,1.1s
O20A  White River Ci    46.47  77   IAmb  IAmb  15 16 42.7
      comp=Z,14nm,0.7s
O20A  White River Ci    46.47  77   P     P     15 16 23.0 -1.1
      baz=308,SNR=8.2
NOR   Nord              46.47   4  eP     P     15 16 23.7 +0.3
RSSD  Black Hills       46.60  70   P     P     15 16 25.6 +0.5
RSSD                                IAmb  IAmb  15 16 28.1
      comp=Z,5.8nm,0.5s
RSSD  Black Hills       46.60  70   P     P     15 16 25.6 +0.5
RSSD                                pmax  pmax
      comp=Z,6.0nm,0.5s
RSSD  Black Hills       46.60  70   P     P     15 16 22.6 -2.4
      baz=306
RSSD  Black Hills       46.60  70   P     P     15 16 25.5 +0.5
NEEM  North Greenlan    46.61  14  eP     P     15 16 24.7 -0.1
NEEM                                IAmb  IAmb  15 16 25.4
      comp=Z,6.3nm,0.7s
MDND  Maddock           46.99  63   P     P     15 16 27.3 -0.5
MDND  Maddock           46.99  63   P     P     15 16 27.7 -0.1
      baz=305,SNR=10
PV21  Cone Mtn., Par    47.00  79   P     P     15 16 26.7 -1.6
PV21                                IAmb  IAmb  15 16 37.1
      comp=Z,5.3nm,0.6s
PV14  Lion Creek, Pa    47.09  79   P     P     15 16 29.6 +0.6
PV14                                IAmb  IAmb  15 16 37.2
      comp=Z,5.7nm,0.8s
PV17  East Wray Mesa    47.18  79   P     P     15 16 30.8 +1.1
PV17                                IAmb  IAmb  15 16 36.0
      comp=Z,8.5nm,0.5s
PV03  Paradox Valley    47.27  79   P     P     15 16 30.1 -0.3
PV03                                IAmb  IAmb  15 16 37.0
      comp=Z,6.9nm,0.6s
PV13  Radium Mtn., P    47.34  79   P     P     15 16 31.2 +0.2
PV13                                IAmb  IAmb  15 16 38.1
      comp=Z,14nm,0.6s
N23A  Red Feather La    47.39  75   P     P     15 16 27.9 -3.5
      baz=308
WUAZ  Wupatki           47.46  84   P     P     15 16 28.4 -3.5
      baz=311
ULM   Lac du Bonnet     47.66  59   P     P     15 16 32.9 -0.1
      comp=Z,6.9nm,0.5s,baz=301,slow=7.9,SNR=14
      comp=Z,6.9nm,0.5s
ULM   Lac du Bonnet     47.66  59   P     P     15 16 32.7 -0.3
ULM                                 IAmb  IAmb  15 16 33.8
      comp=Z,7.7nm,0.6s
ULM   Lac du Bonnet     47.66  59   P     P     15 16 32.7 -0.3
ULM                                 pmax  pmax
      comp=Z,8.0nm,0.6s
MVCO  Mesa Verde        48.14  80   P     P     15 16 38.2 +1.0
MVCO                                IAmb  IAmb  15 17 11.9
      comp=Z,3.6nm,0.7s
MVCO  Mesa Verde        48.14  80   P     P     15 16 35.1 -2.1
      baz=310
SONM  Songino Array     48.47 298   P     P     15 16 39.4  0.0
      comp=Z,0.5nm,0.5s,baz=58,slow=5.8,SNR=8.7
SONM                                PcP   PcP   15 18 04.3 -0.6
      comp=Z,4.3nm,0.7s,baz=78,slow=2.3,SNR=16
SONM                                ScP   ScP   15 21 57.2 +1.3
      comp=Z,0.7nm,0.8s,baz=72,slow=4.2,SNR=4.6
SONM                                LR    LR    15 37 50.6
      comp=Z,90nm,20.3s,baz=23,slow=37
      comp=Z,0.5nm,0.5s
SONM  Songino Array     48.47 298   P     P     15 16 37.8 -1.6
SONM                                IAmb  IAmb  15 18 05.8
      comp=Z,4.6nm,0.9s
SONM  Songino Array     48.47 298   P     P     15 16 37.8 -1.6
SONM                                pmax  pmax
      comp=Z,5.0nm,0.9s
AGMN  Agassiz Nation    48.78  61   P     P     15 16 40.4 -1.3
      baz=306,SNR=10
S22A  4UR Ranch, Cre    48.82  78   P     P     15 16 41.9 -0.6
S22A  4UR Ranch, Cre    48.82  78   P     P     15 16 40.9 -1.5
      baz=310
UPNV  Upernavik         48.95  20  eP     P     15 16 43.0 +0.4
UPNV                                IAmb  IAmb  15 16 43.2
      comp=Z,11nm,0.5s
Q24A  Divide            49.07  76   P     P     15 16 42.4 -2.0
      baz=310
SUSD  Miller            49.34  67   P     P     15 16 45.1 -0.9
SUSD  Miller            49.34  67   P     P     15 16 44.1 -1.9
      baz=307
SDCO  Great Sand Dun    49.63  77   P     P     15 16 48.9 +0.3
      baz=310,SNR=5.7
OGNE  Ogallala          49.69  72   P     P     15 16 47.4 -1.5
      baz=309
HHC   Hu-ho-hao-te      49.72 288  eP     P     15 16 46.2 -2.8
HHC                                 pmax  pmax
      comp=Z,52nm,0.7s
HHC                                 pmax  pmax
      comp=Z,120nm,5.5s
B35A  Bob, Littlefor    49.90  60   IAmb  IAmb  15 16 50.8
      comp=Z,11nm,0.7s
TUC   Tucson            49.96  87   P     P     15 16 49.5 -1.4
      baz=313
F33A  5 Mile Ranch,     50.00  64   P     P     15 16 50.0 -1.0
F33A                                IAmb  IAmb  15 16 51.5
      comp=Z,11nm,1.0s
HNS   HongShan          50.01 282 ⇑P     P     15 16 52.6 +1.4
HNS                                 pmax  pmax
      comp=Z,33nm,1.0s
SPITS Spitsbergen Ar    50.22 357   LR    LR    15 38 27.2
      comp=Z,105nm,20.2s,baz=320,slow=36
KSCO  Kaye Shedlock'    50.56  74   P     P     15 16 54.4 -1.1
      baz=310
T25A  Trinidad          50.69  77   P     P     15 16 57.2 +0.6
T25A                                IAmb  IAmb  15 17 13.4
      comp=Z,12nm,0.8s
T25A  Trinidad          50.69  77   P     P     15 16 56.2 -0.4
      baz=311,SNR=8.0
ANMO  Albuquerque       50.87  81   LR    LR    15 35 39.4
      comp=Z,60nm,21.6s,baz=63,slow=33
DAG   Danmarks Havn     50.97   7  i P    P     15 16 57.0 -0.8
ECSD  EROS Data Cent    51.11  66   P     P     15 16 57.5 -2.0
      baz=309
EYMN  Ely               51.34  59   P     P     15 17 01.7 +0.6
EYMN  Ely               51.34  59   P     P     15 16 58.2 -2.9
      baz=308
F36A  Milaca            51.52  62   IAmb  IAmb  15 17 03.0
      comp=Z,7.5nm,0.7s
121A  Cookes Peak, D    51.67  84   P     P     15 17 00.5 -3.5
      baz=313
SPMN  Marine on St.     52.32  62   IAmb  IAmb  15 17 08.8
      comp=Z,14nm,0.5s
SPMN  Marine on St.     52.32  62   P     P     15 17 06.7 -1.7
      baz=309
CBKS  Cedar Bluff       52.41  73   P     P     15 17 06.7 -2.6
      baz=311
SUMG  Summit            52.46  15  eP     P     15 17 10.0 +0.5
DBG   Daneborg          53.19   8  eP     P     15 17 13.7 -0.7
LYN   LuoYang           53.25 281 ⇓P     P     15 17 16.0 +0.6
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LYN                                 pmax  pmax
      comp=Z,39nm,0.5s
R32A  Long Quarter,     53.28  72   P     P     15 17 16.0 +0.4
R32A                                IAmb  IAmb  15 19 09.4
      comp=Z,20nm,0.7s
G40A  Rib Lake          53.71  61   P     P     15 17 17.9 -0.8
G40A                                IAmb  IAmb  15 17 19.4
      comp=Z,35nm,1.2s
MNTX  Cornudas Mount    53.72  83   P     P     15 17 17.9 -1.1
      baz=314
COWI  Conover           53.76  59   P     P     15 17 18.3 -0.7
COWI                                IAmb  IAmb  15 17 19.4
      comp=Z,14nm,0.7s
MSTX  Muleshoe          53.78  79   P     P     15 17 18.1 -1.3
      baz=313
AMTX  Amarillo          53.83  78   P     P     15 17 19.8  0.0
      baz=313
KSU1  Kansas State U    54.07  70   P     P     15 17 18.4 -2.9
      baz=311
SCIA  State Center      54.20  66   P     P     15 17 19.9 -2.3
      baz=311
SFJD  Kangerlussuaq     54.53  23   LR    LR    15 43 28.7
      comp=Z,58nm,19.7s,baz=280,slow=39
SFJD  Kangerlussuaq     54.53  23   P     P     15 17 23.8 -0.4
SFJD  Kangerlussuaq     54.53  23   P     P     15 17 23.8 -0.4
SFJD                                pmax  pmax
      comp=Z,70nm,2.0s
SFJD  Kangerlussuaq     54.53  23  eP     P     15 17 24.1 -0.1
SFJD  Kangerlussuaq     54.53  23   P     P     15 17 23.8 -0.4
SFJD                                pP    pP    15 17 36.2 -0.4
SFJD                                sP    sP    15 17 40.9 -0.8
E43A  Lone Tree Farm    54.72  58   P     P     15 17 26.5 +0.5
JFWS  Jewell Farm       55.21  63   P     P     15 17 26.8 -2.8
      baz=311
ICESG Greenland Ices    55.21  18  eP     P     15 17 29.1 -0.5
ICESG                               IAmb  IAmb  15 17 29.6
      comp=Z,6.3nm,0.4s
I42A  Draeger Farm,     55.31  61   P     P     15 17 30.0 -0.2
ZALV  Zalesovo Beam     55.41 315   P     P     15 17 31.0 +0.2
      comp=Z,0.6nm,0.4s,baz=43,slow=6.4,SNR=3.4
ZALV                                PcP   PcP   15 18 31.2 +0.6
      comp=Z,2.9nm,0.7s,baz=34,slow=3.8,SNR=9.8
ZALV                                LR    LR    15 43 03.1
      comp=Z,86nm,18.6s,baz=52,slow=38
      comp=Z,0.6nm,0.4s
SSLB  Suanglung         55.54 265   P     P     15 17 33.4 +1.2
H43A  Windswept, Lux    55.55  60   P     P     15 17 32.1 +0.1
YULB  Yu-li             55.61 265   P     P     15 17 34.7 +2.0
WMOK  Wichita Mounta    55.69  76   P     P     15 17 32.7 -0.5
      baz=313
XAN   Xi'an             55.76 283   P     P     15 17 34.1 +0.5
XAN                                 pP    pP    15 17 48.5 +2.5
XAN                                 pmax  pmax
      comp=Z,12nm,1.1s
XAN   Xi'an             55.76 283   P     P     15 17 33.9 +0.2
DY2G  Dye2              55.99  22  eP     P     15 17 34.5 -0.6
DY2G                                IAmb  IAmb  15 17 35.3
      comp=Z,13nm,0.3s
LPIG  La Paz            56.04  93   LR    LR    15 39 17.5
      comp=Z,38nm,18.2s,baz=32,slow=34
TPUB  Ta-pu             56.10 265   P     P     15 17 38.8 +2.6
E46A  Sault Ste Mari    56.13  56   P     P     15 17 35.4 -0.7
E46A                                IAmb  IAmb  15 17 37.3
      comp=Z,20nm,0.8s
L42A  Oliver, Polo      56.13  64   P     P     15 17 35.4 -0.8
L42A                                IAmb  IAmb  15 17 36.8
      comp=Z,16nm,0.8s
K43A  Burlington        56.41  62   P     P     15 17 37.0 -1.1
TX31  Lajitas Ar. Si    56.43  84   IAmb  IAmb  15 17 46.5
      comp=Z,16nm,1.1s
TX32  Lajitas Array     56.43  84   P     P     15 17 38.0 -0.6
TX32                                IAmb  IAmb  15 17 46.5
      comp=Z,5.2nm,1.1s
TXAR  Lajitas Array     56.43  84   P     P     15 17 38.8 +0.3
      comp=Z,1.2nm,0.5s,baz=306,slow=5.1,SNR=14
TXAR                                LR    LR    15 38 57.8
      comp=Z,38nm,21.0s,baz=350,slow=33
      comp=Z,1.2nm,0.5s
ABTX  Abilene, Hawle    56.61  78   P     P     15 17 37.0 -2.7
      baz=314
SCO   Scoresbysund      56.64  10   P     P     15 17 39.4 +0.1
SCO   Scoresbysund      56.64  10   P     P     15 17 39.4 +0.1
SCO                                 pmax  pmax
      comp=Z,1.0nm,0.9s
SCO   Scoresbysund      56.64  10  i P    P     15 17 39.5 +0.1
SCO                                 IAmb  IAmb  15 17 40.5
      comp=Z,7.3nm,1.2s
TUL1  Leonard           56.69  73   P     P     15 17 37.3 -2.9
      baz=313
L44A  Lake County Fo    56.99  62   P     P     15 17 39.1 -3.2
      baz=312
DGZ   Jazzator, Alta    57.06 310⇑iP    P     15 17 42.9  0.0
DGZ                                 pmax  pmax
      comp=Z,1.0nm,0.5s
R40A  Maddies Statio    57.14  68   P     P     15 17 41.9 -1.5
R40A                                IAmb  IAmb  15 17 43.0
      comp=Z,11nm,0.5s
JMIC  Jan Mayen         57.28   5   LR    LR    15 43 13.7
      comp=Z,34nm,19.0s,baz=351,slow=37
HDIL  Hopedale          57.31  65   P     P     15 17 41.8 -2.7
      baz=313
LZH   Lanzhou           57.40 288  eP     P     15 17 44.9 -0.6
LZH                                 pP    pP    15 17 58.0 +0.2
LZH                                 sP    sP    15 18 06.1 +3.3
LZH                                 PcP   PcP   15 18 39.7 +0.8
LZH                                 pmax  pmax
      comp=Z,9.0nm,1.4s
X37A  Clayton           57.84  74   P     P     15 17 48.7 +0.4
X37A                                IAmb  IAmb  15 17 50.6
      comp=Z,13nm,0.6s
CCM   Cathedral Cave    57.89  68   P     P     15 17 47.9 -0.8
      baz=313
ENH   Enshi             58.02 279   P     P     15 17 48.6 -1.1
ENH   Enshi             58.02 279   P     P     15 17 51.5 +1.8
      comp=Z,24nm,0.7s
ENH   Enshi             58.02 279   P     P     15 17 49.2 -0.5
ENH                                 pP    pP    15 18 01.4 -0.7
ARCES ARCESS Array B    58.15 352   P     P     15 17 49.9 -0.1
      comp=Z,0.8nm,0.5s,baz=18,slow=8.3,SNR=8.0
ARCES                               PcP   PcP   15 18 41.2 +0.1
      comp=Z,1.2nm,0.4s,baz=20,slow=5.4,SNR=9.1
ARCES                               LR    LR    15 47 11.3
      comp=Z,29nm,18.1s,baz=306,slow=40
      comp=Z,0.8nm,0.5s
SCHQ  Schefferville     58.38  40   P     P     15 17 51.5 -0.4
      comp=Z,3.3nm,0.6s,baz=314,slow=7.9,SNR=8.8
SCHQ                                PcP   PcP   15 18 42.5 +0.2
      comp=Z,1.4nm,0.5s,baz=8.8,slow=3.7,SNR=4.0
SCHQ                                LR    LR    15 44 26.2
      comp=Z,96nm,18.0s,baz=138,slow=37
      comp=Z,3.3nm,0.6s
SCHQ  Schefferville     58.38  40   P     P     15 17 50.9 -1.0
SCHQ                                IAmb  IAmb  15 19 50.4
      comp=Z,36nm,2.0s
WHTX  Lake Whitney,     58.38  77   P     P     15 17 52.5 +0.4
WHTX  Lake Whitney,     58.38  77   P     P     15 17 51.0 -1.2
      baz=315
FVM   French Village    58.41  67   IAmb  IAmb  15 17 53.0
      comp=Z,11nm,0.6s
SFIN  Lafayette         58.66  63   P     P     15 17 52.8 -1.1
      baz=314
T42A  Van Buren         58.68  69   P     P     15 17 52.5 -1.7
T42A                                IAmb  IAmb  15 18 16.8
      comp=Z,32nm,1.9s
MIAR  Mount Ida         58.94  72   IAmb  IAmb  15 17 57.1
      comp=Z,9.3nm,0.7s
MIAR  Mount Ida         58.94  72   P     P     15 17 52.4 -3.6
      baz=314
AAM   Ann Arbor         59.22  60   P     P     15 17 55.8 -2.1
      baz=314
OLIL  Olney             59.23  65   P     P     15 17 57.8 -0.2
833A  Chaparral WMA,    59.78  82   P     P     15 18 00.5 -1.4
      baz=316
O48B  Farmland          59.82  62   P     P     15 18 00.7 -1.3
      baz=314,SNR=9.2
N49A  Columbus Grove    59.89  61   P     P     15 18 02.2 -0.3
P48A  Milroy            60.22  63   P     P     15 18 03.4 -1.4
KURK  Kurchatov         60.39 315   P     P     15 18 05.0 -0.7
KURK                                IAmb  IAmb  15 18 07.4
      comp=Z,7.2nm,0.5s
KURK  Kurchatov         60.39 315   P     P     15 18 05.0 -0.7
KURK                                pmax  pmax
      comp=Z,7.0nm,0.5s
KURK  Kurchatov         60.39 315   P     P     15 18 04.9 -0.8
KURBB Kurchatov Arra    60.49 315   LR    LR    15 46 06.1
      comp=Z,113nm,18.4s,baz=172,slow=38
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P49A  Miami Univ. Ec    60.56  63   P     P     15 18 06.5 -0.6
P49A  Miami Univ. Ec    60.56  63   P     P     15 18 04.7 -2.4
      baz=315
WCI   Wyandotte Cave    60.60  65   P     P     15 18 07.0 -0.4
      baz=315
WCI   Wyandotte Cave    60.60  65   P     P     15 18 08.4 +1.1
DELO  Deloro Mine       60.83  54   P     P     15 18 09.3 +0.5
DELO                                IAmb  IAmb  15 18 10.0
      comp=Z,25nm,1.1s
N51A  Ashland           60.88  60   P     P     15 18 09.3 +0.1
T47A  Sharon Grove      61.01  66   P     P     15 18 08.9 -1.3
T47A                                IAmb  IAmb  15 18 10.7
      comp=Z,11nm,0.6s
WMQ   Urumqi            61.01 305  eP     P     15 18 10.9 +0.7
WMQ                                 pmax  pmax
      comp=Z,16nm,0.9s
ACSO  Alum Creek Sta    61.03  61   P     P     15 18 07.4 -2.8
      baz=315
WVT   Waverly           61.19  67   P     P     15 18 11.6 +0.2
      baz=315
WVT   Waverly           61.19  67   P     P     15 18 11.9 +0.4
ERPA  Erie              61.30  58   P     P     15 18 11.4 -0.7
      baz=315
MEDO  Medina            61.36  56   P     P     15 18 13.2 +0.8
OXF   Oxford            61.42  70   P     P     15 18 11.7 -1.3
OXF   Oxford            61.42  70   P     P     15 18 11.7 -1.3
OXF   Oxford            61.42  70   P     P     15 18 13.0  0.0
      baz=315
M53A  WI Miller and     61.42  59   P     P     15 18 12.2 -0.7
      baz=315,SNR=5.7
ALLY  Alegheny Colle    61.55  58   P     P     15 18 14.1 +0.3
MK31  Makanchi Array    61.55 310   P     P     15 18 11.9 -1.9
MK31  Makanchi Array    61.55 310   P     P     15 18 11.9 -1.9
MK31                                pmax  pmax
      comp=Z,1.0nm,0.8s
MKAR  Makanchi Array    61.55 310   P     P     15 18 12.5 -1.3
      comp=Z,1.0nm,0.3s,baz=45,slow=6.9,SNR=34
MKAR                                LR    LR    15 45 28.0
      comp=Z,66nm,21.2s,baz=43,slow=36
      comp=Z,1.0nm,0.3s
MKAR  Makanchi Array    61.55 310  i P    P     15 18 12.3 -1.5
MKAR                                pmax  pmax
      comp=Z,1.0nm,0.3s
J55A  Hilton            61.62  55   P     P     15 18 14.8 +0.7
R50A  Paris             61.66  63   P     P     15 18 13.9 -0.6
R50A                                IAmb  IAmb  15 18 15.9
      comp=Z,7.5nm,0.6s
Q51A  Peebles           61.68  62   P     P     15 18 15.2 +0.5
MAKZ  Makanchi          61.69 310   P     P     15 18 12.5 -2.2
MAKZ  Makanchi          61.69 310   P     P     15 18 12.5 -2.2
MAKZ                                pmax  pmax
      comp=Z,2.0nm,0.8s
MAKZ  Makanchi          61.69 310   P     P     15 18 13.8 -0.9
MAKZ                                pP    pP    15 18 26.1 -1.2
MAKZ                                sP    sP    15 18 30.8 -1.5
PLAL  Pickwick Lake     61.86  68   P     P     15 18 15.7 -0.2
PLAL                                IAmb  IAmb  15 18 16.4
      comp=Z,9.7nm,0.7s
P52A  Corning           61.91  61   P     P     15 18 14.2 -2.1
      baz=316
O53A  New Philadelph    61.98  60   P     P     15 18 16.5 -0.2
      baz=316
BVAR  Borovoye Array    62.06 321   LR    LR    15 47 34.6
      comp=Z,175nm,19.3s,baz=41,slow=38
BRVK  Borovoye          62.08 322   P     P     15 18 15.9 -1.2
BRVK                                IAmb  IAmb  15 18 19.9
      comp=Z,3.4nm,0.7s
BRVK  Borovoye          62.08 322ceP    P     15 18 17.6 +0.5
BRVK                                pmax  pmax
      comp=Z,6.0nm,1.3s
BRVK  Borovoye          62.08 322   P     P     15 18 18.1 +0.9
J56A  Wolcott           62.10  55   P     P     15 18 17.6 +0.2
T50A  Nancy             62.27  65   P     P     15 18 18.0 -0.6
T50A                                IAmb  IAmb  15 18 21.8
      comp=Z,5.6nm,0.6s
LONY  Lake Ozonia       62.27  52   P     P     15 18 18.2 -0.4
      baz=316
M55A  Ridgway           62.41  57   P     P     15 18 18.8 -0.8
P53A  Whipple           62.42  61   P     P     15 18 19.4 -0.2
GYA   Guiyang           62.47 278⇓iP    P     15 18 20.9 +0.6
GYA                                 pmax  pmax
      comp=Z,22nm,1.0s
GOMU  GeErMu            62.56 294   P     P     15 18 21.3 +0.2
GOMU                                PcP   PcP   15 19 02.0 +2.2
GOMU                                pmax  pmax
      comp=Z,2.0nm,1.0s
GOMU                                pmax  pmax
      comp=Z,110nm,5.1s
NCB   Newcomb           62.92  53   P     P     15 18 22.6 -0.4
NCB                                 IAmb  IAmb  15 18 26.1
      comp=Z,22nm,1.4s
D62A  Allapoint, All    63.10  47   P     P     15 18 23.6 -0.5
D62A                                IAmb  IAmb  15 19 04.3
      comp=Z,22nm,1.4s
MCWV  Mont Chateau      63.13  59   P     P     15 18 23.8 -0.6
      baz=316,SNR=5.9
E62A  Clayton Lake      63.23  48   P     P     15 18 24.2 -0.8
BINY  Binghamton        63.32  55   P     P     15 18 26.0 +0.4
      baz=317,SNR=7.6
TZTN  Tazewell          63.33  64   P     P     15 18 22.3 -3.5
      baz=316
SSPA  Standing Stone    63.47  58   P     P     15 18 27.2 +0.6
SSPA  Standing Stone    63.47  58   P     P     15 18 24.0 -2.5
      baz=317
SSPA  Standing Stone    63.47  58   P     P     15 18 27.2 +0.6
ARU   Arti              63.49 330   LR    LR    15 49 31.4
      comp=Z,44nm,18.8s,baz=328,slow=39
ARU   Arti              63.49 330   P     P     15 18 25.4 -1.0
ARU                                 IAmb  IAmb  15 18 27.8
      comp=Z,5.3nm,0.5s
ARU   Arti              63.49 330c iP    P     15 18 27.2 +0.8
ARU                                             15 19 00.2
ARU                                 S     S     15 27 00.9 +4.9
ARU                                 SS    SS    15 31 02.6 +0.1
ARU                                 pmax  pmax
      comp=Z,3.0nm,0.5s
ARU   Arti              63.49 330   P     P     15 18 26.7 +0.3
CPCT  Cooper Cave       63.57  66   P     P     15 18 26.1 -1.2
CPCT                                IAmb  IAmb  15 18 27.7
      comp=Z,6.4nm,0.5s
G62A  West of Eustis    63.80  50   P     P     15 18 28.7  0.0
L59A  Walton            63.81  55   IAmb  IAmb  15 18 31.4
      comp=Z,17nm,0.9s
TKL   Tuckaleechee C    63.84  65   LR    LR    15 45 48.2
      comp=Z,68nm,19.8s,baz=281,slow=36
KSPA  Keystone Colle    63.90  56   P     P     15 18 30.0 +0.6
KSPA                                IAmb  IAmb  15 18 30.5
      comp=Z,20nm,0.9s
Q56A  Snyder Ridge,     63.93  60   IAmb  IAmb  15 18 31.1
      comp=Z,16nm,0.8s
N58A  Sunbury           63.93  57   IAmb  IAmb  15 18 31.1
      comp=Z,19nm,0.8s
R55A  Marlinton         63.98  61   P     P     15 18 30.1 +0.1
R55A                                IAmb  IAmb  15 18 31.8
      comp=Z,26nm,1.0s
F63A  Nahmakanta, Br    64.11  48   P     P     15 18 30.1 -0.6
F63A                                IAmb  IAmb  15 18 36.2
      comp=Z,25nm,1.4s
KIRV  Kirov             64.24 336   LR    LR    15 48 45.8
      comp=Z,48nm,19.4s,baz=2.4,slow=38
KIRV  Kirov             64.24 336c iP    P     15 18 32.8 +1.5
BATG  Bathurst New B    64.31  46   P     P     15 18 31.5 -0.5
BATG                                IAmb  IAmb  15 20 10.8
      comp=Z,38nm,1.7s
PKME  Peaks-Kenny Pk    64.35  49   P     P     15 18 31.9 -0.3
PKME  Peaks-Kenny Pk    64.35  49   P     P     15 18 28.8 -3.4
      baz=319
V53A  Saluda            64.37  64   P     P     15 18 33.2 +0.5
V53A                                IAmb  IAmb  15 19 43.9
      comp=Z,25nm,1.6s
HNR   Honiara           64.50 207   LR    LR    15 42 02.3
      comp=Z,551nm,20.1s,baz=24,slow=32
BLA   Blacksburg        64.59  62   P     P     15 18 30.8 -3.2
      baz=317
I63A  Otisfield         64.64  51   P     P     15 18 34.5 +0.3
MVL   Millersville      64.73  57   IAmb  IAmb  15 18 43.0
      comp=Z,22nm,0.9s
BG3   Lake Jocassee     64.80  65   IAmb  IAmb  15 18 36.4
      comp=Z,8.8nm,0.5s
L61B  Northampton       64.80  53   P     P     15 18 34.7 -0.6
      baz=318
ODNJ  Ogdensburg        64.84  55   P     P     15 18 36.2 +0.6
ODNJ                                IAmb  IAmb  15 18 36.7
      comp=Z,14nm,0.9s
SDMD  Soldier's Deli    64.91  58   IAmb  IAmb  15 18 37.2
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	comp=Z,13nm,0.9s						
S57A	Dark Hollow, R	64.99	60	IAmb	IAmb	15 18 38.4	
	comp=Z,17nm,0.9s						
BRNJ	Basking Ridge	65.16	55	P	P	15 18 38.3	+0.8
PAL	Palisades	65.25	55	P	P	15 18 37.8	-0.4
	baz=318						
PZH	PanZhiHua	65.46	282	P	P	15 18 40.7	+0.8
PZH				pmax	pmax		
	comp=Z,30nm,0.6s						
PZH				pmax	pmax		
	comp=Z,140nm,5.9s						
KMSC	Kings Mountain	65.58	64	P	P	15 18 40.5	0.0
KMSC				IAmb	IAmb	15 18 43.0	
	comp=Z,19nm,1.1s						
HODGE	Hodges	65.73	65	P	P	15 18 41.4	0.0
HODGE				IAmb	IAmb	15 19 18.7	
	comp=Z,10nm,0.8s						
KMI	Kunming	65.86	280	⇑P	P	15 18 43.2	+0.6
KMI				pP	sP	15 18 58.9	-1.3
KMI				pmax	pmax		
	comp=Z,20nm,0.8s						
KMI	Kunming	65.86	280	P	P	15 18 43.5	+0.8
FINES	FINESS Array B	65.95	349	P	P	15 18 41.8	-0.6
	comp=Z,1.8nm,0.7s,baz=4.5,slow=6.1,SNR=9.1						
FINES				LR	LR	15 52 15.4	
	comp=Z,47nm,18.1s,baz=344,slow=40						
	comp=Z,1.8nm,0.7s						
FINES	FINESS Array B	65.95	349	P	P	15 18 41.4	-0.9
FINES	FINESS Array B	65.95	349	*i* P	P	15 18 41.5	-0.9
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
LMN	Caledonia Moun	65.95	46	P	P	15 18 42.0	-0.7
T59A	Double "B" Far	66.32	60	P	P	15 18 45.2	0.0
TAOE	Nuku Hiva Isla	67.44	142	*e*T	T	16 32 33.0	
	comp=Z,33nm,0.2s						
NB2	NORSAR Subarra	67.52	357	P	P	15 18 52.4	-0.1
	comp=Z,0.8nm,0.5s,baz=5.8,slow=6.5						
NOA	NORSAR Array B	67.52	357	P	P	15 18 52.4	-0.1
	comp=Z,1.1nm,0.6s,baz=15,slow=20,SNR=10.0						
NOA				LR	LR	15 48 34.6	
	comp=Z,26nm,20.7s,baz=335,slow=36						
	comp=Z,1.1nm,0.6s						
HFS	Hagfors	68.31	355	LR	LR	15 48 09.2	
	comp=Z,44nm,21.0s,baz=352,slow=35						
AAK	Ala-Archa	68.34	312	LR	LR	15 51 14.7	
	comp=Z,45nm,19.1s,baz=26,slow=38						
AAK	Ala-Archa	68.34	312	P	P	15 18 57.2	-0.9
AAK	Ala-Archa	68.34	312	⇓*e*P	P	15 18 58.4	+0.3
AAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
AAK	Ala-Archa	68.34	312	P	P	15 18 58.0	-0.1
TNCH	TengChong	68.50	283	⇑P	P	15 19 00.5	+1.2
TNCH				pP	pP	15 19 13.4	+1.4
TNCH				sP	sP	15 19 20.7	+3.7
TNCH				S	S	15 27 50.0	-8.2
TNCH				sS	sS	15 28 19.6	0.0
TNCH				pmax	pmax		
	comp=Z,25nm,0.9s						
TNCH				pmax	pmax		
	comp=Z,89nm,4.1s						
TNCH				LR	LR		
	comp=Z,93nm,6.3s						
AKTO	Aktyubinsk	68.69	327	LR	LR	15 51 46.1	
	comp=Z,70nm,20.0s,baz=195,slow=38						
ABKAR	Akbulak array	69.00	325	P	P	15 19 00.9	-1.0
KK31	Karatay Array	69.78	315	IAmb	IAmb	15 19 08.4	
	comp=Z,4.5nm,0.5s						
KKAR	Karatay Array	69.78	315	IAmb	IAmb	15 19 08.4	
	comp=Z,4.5nm,0.5s						
KSH	Kashi	70.06	309	P	P	15 19 11.8	+3.0
KSH				sP	sP	15 19 28.2	+1.6
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FAKI	Fak Fak	70.17	237	P	P	15 19 08.8	-0.7
FAKI				IAmb	IAmb	15 19 10.8	
	comp=Z,13nm,0.7s						
FAKI	Fak Fak	70.17	237	P	P	15 19 09.9	+0.4
BELG	Belogornoye	70.20	334	LR	LR	15 52 47.5	
	comp=Z,66nm,20.4s,baz=276,slow=38						
BELG	Belogornoye	70.20	334	⇓*e*P	P	15 19 09.8	+0.7
BELG				pmax	pmax		
	comp=Z,3.0nm,1.9s						
OBN	Obninsk	70.34	341	LR	LR	15 52 55.9	
	comp=Z,14nm,21.9s,baz=358,slow=38						
PMOR	Pomariorio Ree	70.54	152	*e*T	T	16 36 31.4	
	comp=Z,12nm,0.2s						
CMIG	Matias Romero	70.85	87	LR	LR	15 46 09.0	
	comp=Z,52nm,21.5s,baz=346,slow=32						
CRAI	Chiangrai	70.95	279	P	P	15 19 13.5	-0.7
CRAI				IAmb	IAmb	15 19 16.7	
	comp=Z,29nm,1.2s						
PABE	Paberze	72.00	349	P	P	15 19 19.3	-0.7
PABE				IAmb	IAmb	15 19 21.0	
	comp=Z,14nm,0.7s						
SHL	Shillong	72.07	289	P	P	15 19 21.0	-0.2
SHL				pmax	pmax		
	comp=Z,17nm,0.6s						
NACGM	Naroch	72.22	347	*e*P	P	15 19 16.5	-4.8
	comp=Z,7.0nm,0.8s,baz=14						
PHRA	Phrae	72.34	278	P	P	15 19 23.1	+0.5
MNK	Minsk	72.45	346	*i* LRM	MLR	15 54 21.2	
	comp=N,247nm,11.5s						
MNK	Minsk	72.45	346	*i* P	P	15 19 20.4	-2.3
MNK				*i* *PP	pP	15 19 34.4	-1.0
MNK				*i*		15 22 02.0	
MNK				*i* PPP	PPP	15 23 47.1	
MNK				*i* S	S	15 28 39.3	-3.6
MNK				*i* *SS	sS	15 29 06.9	+2.4
MNK				*i* SS	SS	15 33 22.4	+1.7
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,21nm,0.7s						
MNK				MLR	MLR		
	comp=Z,37nm,12.0s						
MNK				MLR	MLR		
	comp=E,12nm,16.0s						
MNK				MLR	MLR		
	comp=N,247nm,12.0s						
MNK	Minsk	72.45	346	*i* P	P	15 19 20.4	-2.3
	comp=E,2.0nm,0.9s						
MNK	Minsk	72.45	346	*i* P	P	15 19 20.4	-2.3
	comp=N,21nm,0.7s						
MNK	Minsk	72.45	346	*i* P	P	15 19 20.4	-2.3
	comp=Z,9.0nm,0.9s,baz=15						
MNK	Minsk	72.45	346	*i* pP	pP	15 19 34.5	-1.0
MNK	Minsk	72.45	346	*i* PP	PP	15 22 02.1	-1.3
MNK	Minsk	72.45	346	*i* PPP	PPP	15 23 47.1	
MNK	Minsk	72.45	346	*i* S	S	15 28 39.4	-3.6
MNK	Minsk	72.45	346	*i* sS	sS	15 29 06.9	+2.4
MNK	Minsk	72.45	346	*i* SS	SS	15 33 22.5	+1.8
MNK	Minsk	72.45	346	*i* SSS	SSS	15 36 42.0	
MNK	Minsk	72.45	346	*i* LQ	LQ	15 46 07.3	
MNK	Minsk	72.45	346	*i* LR	LR	15 51 22.9	
MNK	Minsk	72.45	346	*i* LRM	MLR	15 53 34.6	
	comp=Z,37nm,12.1s						
MNK	Minsk	72.45	346	*i* LRM	MLR	15 53 39.7	
	comp=E,12nm,16.0s						
PPT	Papeete	72.51	154	LR	LR	15 44 47.4	
	comp=E,110nm,21.3s,baz=338,slow=30						
PPT2	Papeete2	72.53	154	*e*LR	LR	15 41 39.4	
	comp=E,141nm,25.0s						
PPT2				*e*LR	LR	15 41 40.3	
	comp=E,108nm,22.2s						
PPT2	Papeete2	72.53	154	*e*T	T	16 39 02.0	
	comp=E,26nm,0.3s						
TIAR	Tiarei	72.56	154	*e*T	T	16 39 06.6	
	comp=E,1.8nm,0.2s						
SANI	Sanana	72.84	243	P	P	15 19 26.0	+0.5
CHTO	Chiang Mai	72.89	279	P	P	15 19 25.9	0.0
CHTO	Chiang Mai	72.89	279	P	P	15 19 25.9	0.0
TAPN	Taplejung	73.15	293	*e*P	P	15 19 28.1	+0.4
	comp=E,25nm,0.6s						
GAR	Garm	73.15	312	IAmb	IAmb	15 20 14.2	
	comp=Z,11nm,0.7s						
CMAR	Chiang Mai Arr	73.16	278	P	P	15 19 28.4	+0.8
	comp=Z,1.6nm,0.4s,baz=24,slow=6.9,SNR=23						
CMAR				LR	LR	15 54 36.9	
	comp=Z,17nm,19.2s,baz=95,slow=38						
	comp=Z,1.6nm,0.4s						
ODAN	Odare	73.71	293	*e*P	P	15 19 30.9	0.0
GUN	Gumba	73.77	294	*e*P	P	15 19 31.8	+0.4
	comp=Z,86nm,0.5s						
JIRN	Jiri	73.78	294	*e*P	P	15 19 31.9	+0.4
	comp=Z,56nm,0.6s						
LUWI	Luwuk	73.83	247	P	P	15 19 30.9	-0.5
LUWI	Luwuk	73.83	247	P	P	15 19 32.3	+0.9
LUWI	Luwuk	73.83	247	P	P	15 19 31.0	-0.4
RAR	Rarotonga	73.83	165	LR	LR	15 46 34.3	
	comp=Z,124nm,19.9s,baz=318,slow=31						
CHGR	Chuyangaron	73.96	313	P	P	15 19 32.0	-0.1
CHGR				pmax	pmax		
	comp=Z,12nm,0.6s						
RAMN	Ramite	74.09	293	*e*P	P	15 19 33.3	+0.1
	comp=Z,48nm,0.4s						
KKN	Kakani	74.20	295	*e*P	P	15 19 33.7	-0.1
PKI	Pulchoki	74.30	295	*e*P	P	15 19 34.3	-0.2
	comp=Z,15nm,0.6s						
PKIN	Phulchoki	74.30	295	*e*P	P	15 19 34.4	0.0
	comp=Z,12nm,0.4s						
BRDH	Bariadhala	74.40	287	LR	LR	15 56 05.6	
	comp=Z,50nm,18.0s,baz=4.5,slow=39						
GKN	Gorkha	74.40	295	*e*P	P	15 19 34.8	0.0
	comp=Z,27nm,0.4s						
DMN	Daman	74.44	295	*e*P	P	15 19 35.6	+0.4
	comp=Z,14nm,0.4s						
DANN	Dangsing	74.62	296	*e*P	P	15 19 36.4	+0.1
	comp=Z,15nm,0.3s						
DZM	Mont Dzumac	75.16	198	*e*LR	LR	15 42 52.5	
	comp=Z,78nm,28.0s						
KOLN	Koldanda	75.16	296	*e*P	P	15 19 39.3	0.0
PYUN	Piuthan	75.25	297	*e*P	P	15 19 39.7	-0.1
	comp=Z,22nm,0.4s						
AKASG	Malin Array Be	75.91	344	P	P	15 19 42.2	-0.7
	comp=Z,1.2nm,0.4s,baz=18,slow=6.1,SNR=7.5						
AKASG				LR	LR	15 59 03.3	
	comp=Z,48nm,18.0s,baz=6.0,slow=40						
	comp=Z,1.2nm,0.4s						
AKBB	Malin Array Si	75.91	344	P	P	15 19 41.2	-1.7
AKBB				IAmb	IAmb	15 20 13.9	
	comp=Z,7.3nm,1.1s						
AKBB	Malin Array Si	75.91	344	⇑*e*P	P	15 19 42.4	-0.5
AKBB				pmax	pmax		
	comp=Z,15nm,2.0s						
CLL	Collm	77.16	355	*e*P	P	15 19 50.0	0.0
	comp=Z,4.0nm,0.6s						
CLL	Collm	77.16	355	*e*P	P	15 19 50.0	0.0
CLL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TBI	Tubuai	78.06	156	*e*LR	LR	15 44 13.8	
	comp=Z,425nm,26.5s						
TBI				*e*LR	LR	15 44 13.9	
	comp=Z,2μm,23.2s						
TBI	Tubuai	78.06	156	*e*T	T	16 46 00.7	
	comp=Z,6.1nm,0.2s						
SORM	Soroca	78.54	344	⇑P	P	15 19 57.1	-0.6
CTA	Charters Tower	78.99	217	P	P	15 20 00.5	+0.1
	comp=Z,2.8nm,0.6s,baz=26,slow=4.5,SNR=8.3						
	comp=Z,2.8nm,0.6s						
CTA	Charters Tower	78.99	217	P	P	15 20 00.3	-0.1
	comp=Z,15nm,2.1s						
CTAO	Charters Tower	78.99	217	P	P	15 20 00.5	+0.1
	comp=Z,12nm,2.1s						
GEYT	Alibeck	79.33	320	P	P	15 20 03.1	+0.9
	comp=Z,1.9nm,0.6s,baz=299,slow=3.1,SNR=4.9						
	comp=Z,1.9nm,0.6s						
KBZ	Khabaz	79.40	333	LR	LR	15 58 59.4	
	comp=Z,60nm,21.6s,baz=26,slow=38						
BUR08	Bucovina Ar. S	79.52	346	P	P	15 20 02.5	-0.8
BUR08				IAmb	IAmb	15 20 05.2	
	comp=Z,7.7nm,1.2s						
BURAR	Bucovina Array	79.54	346	⇓P	P	15 20 03.4	0.0
BURAR	Bucovina Array	79.54	346	P	P	15 20 02.6	-0.8
BURAR	Bucovina Array	79.54	346	P	P	15 20 02.6	-0.8
BURAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GERES	GERESS Array B	79.57	354	P	P	15 20 03.3	-0.2
	comp=Z,0.7nm,0.6s,baz=12,slow=6.8,SNR=4.9						
	comp=Z,0.7nm,0.6s						
DOPR	Dopca	81.12	346	⇓P	P	15 20 13.4	+1.6
MLR	Muntele Rosu	81.50	345	⇑P	P	15 20 14.8	+0.8
MLR	Muntele Rosu	81.50	345	LR	LR	15 58 50.3	
	comp=Z,46nm,21.8s,baz=352,slow=37						
MLR	Muntele Rosu	81.50	345	P	P	15 20 14.3	+0.4
MLR				IAmb	IAmb	15 21 10.5	
	comp=Z,30nm,2.0s						
MLR	Muntele Rosu	81.50	345	P	P	15 20 14.3	+0.4
MLR				pmax	pmax		
	comp=Z,30nm,2.0s						
VOIR		81.69	346	⇑P	P	15 20 15.9	+1.0
SURR	Surduc	81.80	348	⇑P	P	15 20 15.4	+0.1
DAVOX	Davos/Dischmat	81.83	356	LR	LR	15 55 04.3	
	comp=Z,30nm,21.9s,baz=274,slow=34						
GZR	Gura Zlata	82.07	347	⇑P	P	15 20 16.9	0.0
TIRR	Tirgusor	82.08	343	P	P	15 20 16.8	0.0
TIRR	Tirgusor	82.08	343	P	P	15 20 16.8	0.0
TIRR				pmax	pmax		
	comp=Z,57nm,1.2s						
GNI	Garni	82.13	330	LR	LR	16 03 05.6	
	comp=Z,35nm,18.4s,baz=35,slow=40						
JTS	Las Juntas de	82.21	83	LR	LR	15 57 36.8	
	comp=Z,23nm,18.1s,baz=108,slow=36						
WB0	Warramunga Arr	83.61	227	P	P	15 20 24.2	-0.8
WB0				IAmb	IAmb	15 23 12.7	
	comp=Z,6.9nm,0.7s						
WR0	Warramunga Arr	83.71	227	P	P	15 20 24.3	-1.2
WR0				IAmb	IAmb	15 23 19.1	
	comp=Z,5.9nm,0.8s						
PLVB	Pleven	83.76	346	⇓P	P	15 20 26.4	+0.8
WRAB	Tennant Creek	83.78	227	P	P	15 20 24.2	-1.6
WRAB				IAmb	IAmb	15 23 27.4	
	comp=Z,14nm,1.2s						
WRAB	Tennant Creek	83.78	227	P	P	15 20 25.6	-0.2
WRAB	Tennant Creek	83.78	227	P	P	15 20 24.2	-1.6
WRAB				pmax	pmax		
	comp=Z,14nm,1.3s						
WB2	Warramunga Arr	83.78	227	P	P	15 20 24.6	-1.2
WB2				IAmb	IAmb	15 23 27.4	
	comp=Z,7.1nm,0.7s						
WRA	Warramunga Arr	83.79	227	P	P	15 20 25.3	-0.6
	comp=Z,3.9nm,0.9s,baz=34,slow=5.9,SNR=18						
WRA				LR	LR	15 55 08.0	
	comp=Z,24nm,19.1s,baz=40,slow=34						
	comp=Z,3.9nm,0.9s						
WRA	Warramunga Arr	83.79	227	*i* P	P	15 20 25.2	-0.6
WRA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
VTS	Vitosha	84.72	346	⇑P	P	15 20 31.7	+1.0
VTS	Vitosha	84.72	346	P	P	15 20 30.2	-0.5
VTS				IAmb	IAmb	15 22 04.2	
	comp=Z,19nm,1.8s						
VTS	Vitosha	84.72	346	P	P	15 20 30.2	-0.5
VTS				pmax	pmax		
	comp=Z,19nm,1.8s						
PSI	Prapat	85.21	268	P	P	15 20 33.1	-0.3
PSI				pmax	pmax		
	comp=Z,14nm,1.1s						
RPSI	Rantau Prapat	85.30	268	P	P	15 20 33.1	-0.6
RPSI				IAmb	IAmb	15 20 36.7	
	comp=Z,14nm,1.1s						
BRTR	Keskin Array B	85.55	338	LR	LR	16 04 56.2	
	comp=Z,45nm,19.1s,baz=286,slow=40						
BKNI	Bangkinang	85.82	265	P	P	15 20 38.4	+2.1
UGM	Wanagama	86.51	253	P	P	15 20 39.9	+0.2
AS01	Alice Springs	87.21	225	P	P	15 20 42.5	-0.3
	comp=Z,6.5nm,0.9s						
AS31	Alice Springs	87.23	225	P	P	15 20 43.0	+0.1
ASAR	Alice Springs	87.23	225	P	P	15 20 43.2	+0.2
	comp=Z,4.4nm,0.8s,baz=22,slow=5.4,SNR=59						
	comp=Z,4.4nm,0.8s						
ASAR	Alice Springs	87.23	225	P	P	15 20 42.5	-0.4
ESDC	Sonseca Array	88.71	7	P	P	15 20 50.1	+0.1
	comp=Z,0.4nm,0.4s,baz=355,slow=3.2,SNR=3.4						
	comp=Z,0.4nm,0.4s						
OOD	Oodnadatta	90.08	222	P	P	15 20 57.2	+1.0
WRKA	Warakurna	90.97	229	P	P	15 21 01.4	+0.9
LCRK	Leigh Creek	91.40	219	P	P	15 21 03.1	+0.8
STKA	Stephens Creek	91.41	216	P	P	15 21 02.8	+0.4
	comp=Z,3.6nm,0.6s,baz=348,slow=5.8,SNR=14						
	comp=Z,3.6nm,0.6s						
STKA	Stephens Creek	91.41	216	P	P	15 21 02.7	+0.4
	comp=Z,1.6nm,1.9s						
PALK	Pallekele	92.94	285	LR	LR	16 08 44.9	
	comp=Z,15nm,18.7s,baz=141,slow=39						
GHSS	Government Hou	95.23	217	P	P	15 21 18.9	-0.9
RPN	Rapa Nui	97.39	125	LR	LR	15 56 10.6	
	comp=Z,37nm,19.4s,baz=174,slow=30						
TORD	Torodi Ar. Bea	115.40	3	PKP	PKiKP	15 26 38.1	-0.3
	comp=Z,1.5nm,0.6s,baz=350,slow=2.6,SNR=15						
TORD				PKKPbc	PKKPbc	15 37 08.4	-1.8
	comp=Z,0.3nm,0.5s,baz=184,slow=2.3,SNR=5.4						
H03N2	Juan Fernandez	119.12	108	T	T	17 38 16.8	
	baz=317,slow=77,SNR=223						
H03N1	Juan Fernandez	119.13	108	T	T	17 37 49.8	
	baz=317,slow=77,SNR=204						
H03N3	Juan Fernandez	119.13	108	T	T	17 37 51.1	
	baz=317,slow=77,SNR=186						
DBIC	Dimbokro	121.31	11	PKP	PKPdf	15 26 49.6	-0.2
	comp=Z,1.7nm,0.3s,baz=322,slow=2.0,SNR=11						
CPUP	Villa Florida	127.37	86	PKP	PKPdf	15 27 00.8	-0.1
	comp=Z,1.4nm,0.5s,baz=313,slow=4.8,SNR=4.0						
PLCA	Paso Flores	128.96	109	PKP	PKPdf	15 27 03.9	+0.3
	comp=Z,3.8nm,0.9s,baz=91,slow=2.4,SNR=5.5						
MAW	Mawson	148.07	218	PKPbc	PKPbc	15 27 40.8	+0.2
	comp=Z,16nm,0.7s,baz=137,slow=1.9,SNR=9.8						
BOSA	Boshof	152.32	318	PKPbc	PKiKP	15 27 52.7	+0.2
	comp=Z,12nm,0.5s,baz=20,slow=2.2,SNR=60						
ELIB	Princess Elisa	158.04	195	*d*PKP	PKPab	15 28 24.3	-1.4

*NNC **01** 15:11:46.2±7.2, 37°.25N×70°.84E, h0^{km}, mb3.7, mpv3.4,*
Error ellipse: s-maj=71.3km s-min=39.8km az=153.0
ISC 01 15:11:45.2±3.7**, 36°.8N**±0°.2×**71°.1E**±0°.1**, h88^{km}, n9,**
σ0^{s}.93/12**, 3C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.69	20	P	Pn	15 13 08.2	+0.7
	SNR=26						
AML	Almayashu	5.69	20	⇓P	Pn	15 13 08.0	+0.5
	0.3nm,0.3s						
AML				⇑S	Sn	15 14 11.7	+0.1
	2.2nm,0.7s						
UCH	Uchtor	6.03	25	P	Pn	15 13 13.0	+0.8
	SNR=13						
EKS2	Erkin-Say	6.21	19	P	Pn	15 13 14.9	+0.7
	SNR=5.7						
KK31	Karatay Array	6.30	356	⇓P	Pn	15 13 16.9	+1.4
	5.5nm,0.3s,baz=178,slow=13,SNR=48						
KK31				⇑S	Sn	15 14 25.4	-0.6
	1.8nm,0.5s,baz=181,slow=24,SNR=3.8						
AAK	Ala-Archa	6.39	23	P	Pn	15 13 18.4	+1.5
	SNR=8.9						
USP	Ospenovka	6.97	21	P	Pn	15 13 24.9	+0.4
	SNR=6.9						
TKM2	Tokmak 2	7.03	28	⇑P	Pn	15 13 25.2	-0.4
	1.4nm,0.5s						
TKM2				⇓S	Sn	15 14 43.5	-0.4
	0.8nm,0.6s						
AB31	Akbulak array	14.84	330	P	Pn	15 15 09.4	-0.9
	0.4nm,0.3s,baz=134,slow=14,SNR=31						

PRU 01 15:17:15.9±0.0**, 50°.22N**×**18°.60E, h0^{km}, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.48	218	*e*PG	Pg	15 17 24.8	-0.3
OKC				*e*SG	Sg	15 17 31.2	-0.1
	comp=Z,7.8nm,0.4s						
OJC	Ojcow	0.77	90	*e*Pg	Pg	15 17 29.7	-0.9
OJC				*e*Sg	Sg	15 17 39.8	-0.9
MORC	Moravsky Berou	0.81	237	*e*PG	Pg	15 17 30.5	-1.0
MORC				*e*SG	Sg	15 17 41.6	-0.4
KRLC	Kraliky	1.18	264	*e*PG	Pg	15 17 37.1	-1.4
KRLC				*e*SG	Sg	15 17 53.0	-0.7
LANS	Liptovska Anna	1.21	152	*e*PG	Pg	15 17 38.3	-0.8
LANS				*e*SG	Sg	15 17 54.9	+0.2
LANS				*e*LG	Lg	15 17 57.6	
DPC	Dobruska-Polom	1.47	276	*e*PG	Pn	15 17 43.3	-0.4
DPC				*e*SG	Sg	15 18 02.7	-0.3
VYHS	Vyhne	1.73	175	*e*PN	Pn	15 17 46.1	-1.2
VYHS				*e*SN	Sn	15 18 08.3	-1.8
STHS	Stebnicka Huta	1.89	114	*e*PN	Pn	15 17 50.0	+0.5
KHC	Kasperske Hory	3.44	253	*e*SG	Sg	15 19 04.7	-1.6

*DJA **01** 15:17:38.6±0.5, 8°S±5°×12°6E±°, h263^{km}±10^{km}, M4.1/6,*
mb4.4/2, mB4.6/2, MLv4.0/6, Mw(mB)3.8/2
*IDC **01** 15:17:40.2±1.7, 9°.07S×126°.59E, h0^{km}, mb3.5/2,*
mbtmp3.6/4, ML3.9/2, Error ellipse: s-maj=136.2km
s-min=28.9km az=57.0
ISC 01 15:17:44.3±1.3**, 8°.9S**±0°.1×**127°.2E**±0°.1**, h35^{km}, n6, σ2^{s}.69**/8**,**
Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	2.98	254	P	Pn	15 18 29.5	+0.2
SOEI				S	Sn	15 19 04.4	+0.5
SAUI	Saumlaki	4.19	77	P	Pn	15 18 54.7	+9.0
WRA	Warramunga Arr	12.96	148	Pn	Pn	15 20 48.2	+2.2
	0.7nm,0.3s,baz=319,slow=13,SNR=18						
WRA				Sn	Sn	15 23 09.1	-0.1
	0.6nm,0.3s,baz=318,slow=24,SNR=7.8						
	1.1nm,0.3s						
ASAR	Alice Springs	16.01	157	Pn	Pn	15 21 28.8	+1.8
	0.3nm,0.3s,baz=330,slow=11,SNR=11						
ASAR				Sn	Sn	15 24 18.4	-5.1
	0.1nm,0.3s,baz=330,slow=24,SNR=4.1						
	0.6nm,0.5s						
CMAR	Chiang Mai Arr	38.94	314	P	P	15 25 05.9	-1.2
	0.5nm,0.7s,baz=148,slow=7.1,SNR=4.5						
	0.5nm,0.7s						
MKAR	Makanchi Array	68.34	329	P	P	15 28 42.1	0.0
	0.3nm,0.5s,baz=124,slow=7.5,SNR=10.0						
	0.3nm,0.5s						

BER 01 15:28:10.7±1.0**, 59°.73N**×**10°.85E, h0^{km}, ML0.7,**
Suspected explosion, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STRU	Stroemstad	0.71	166	*e*P	Pg	15 28 23.4	-0.9
STRU				*e*S	Sg	15 28 33.3	-0.3
NC602	NORSAR Array S	1.07	18	*e*P	Pg	15 28 29.2	-2.0
NC602				*e*S	Sg	15 28 43.5	-1.5
NC602				IAML		15 28 47.3	
	comp=Z,2.4nm,0.2s						
NAO01	NORSAR Array S	1.12	1	*e*P	Pg	15 28 31.1	-1.0
NAO01				*e*S	Sg	15 28 46.6	-0.1
NBO00	NORSAR Array S	1.31	358	*e*P	Pg	15 28 33.8	-2.0
NBO00				*e*S	Sg	15 28 51.4	-1.3
NB201	NORSAR Array S	1.35	9	*e*P	Pg	15 28 34.5	-1.9
NB201				*e*S	Sg	15 28 53.0	-0.9
NB201				IAML		15 28 54.3	
	comp=Z,2.2nm,0.3s						
SKAR	Skarslia	1.59	308	*e*S	Sn	15 28 58.3	-3.2

DNK 01 15:28:55.1±0.4**, 58°.40N**×**8°.68E, h20^{km}**±10^{km}**, Southern**
Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOMB	Homborsund	0.16	215	*i* P	Pb	15 28 59.3	-1.1
HOMB				*e*S	Sb	15 29 02.7	-1.4
SNART	Snartemo	0.78	266	*i* P	Pb	15 29 09.2	-0.7
SNART				*i* S	Sb	15 29 19.4	-0.6
STRU	Stroemstad	1.45	63	*e*P	Pn	15 29 20.5	+0.4
STRU				*e*S	Sn	15 29 38.8	+0.3

HEL 01 15:30:38.9±0.2**, 67°.69N**×**33°.99E, h0^{km}, ML1.5,**
Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVZ	Lovozero	0.33	49	PG	Pg	15 30 44.6	-0.6
LVZ				SG	Sg	15 30 49.4	-0.1
VRF	Varrio	1.67	274	PG	Pn	15 31 08.6	-0.7
VRF				MSG		15 31 28.9	
	comp=Z,4.3nm,0.2s						
VRF				SN	Sn	15 31 30.8	-0.6
OLKF	Oulanka, Finla	2.26	235	PB	Pn	15 31 18.3	+0.8
OLKF				MSG		15 31 45.8	
	comp=Z,1.4nm,0.2s						
OLKF				SG	Sb	15 31 49.0	-0.1
RNF	Rovaniemi	3.29	255	PN	Pn	15 31 31.9	+0.3
ARA0	ARCESS Array S	3.62	305	PN	Pn	15 31 36.2	+0.1
	baz=120						

*IDC **01** 15:30:42.8±1.1, 35°.54N×27°.33E, h0^{km}, mb3.4/4,*
mbtmp3.4/7, ML3.4/3, Error ellipse: s-maj=36.0km

s-min=16.8km az=175.0
*THE **01** 15:30:43.3, 35°.26N×27°.14E, h0^{km}±1^{km}, ML3.3/5, Error ellipse: s-maj=2.6km s-min=0.8km az=143.0*
*ATH **01** 15:30:43.3, 35°.25N×27°.20E, h4^{km}±1^{km}, ML3.3/9, Error ellipse: s-maj=2.2km s-min=0.9km az=322.0*
*ISK **01** 15:30:43.1, 35°.28N×27°.18E, h7^{km}, ML3.3/19*
*DDA **01** 15:30:45.3±0.0, 35°.37N×27°.16E, h8^{km}±2^{km}, MW3.6*
ISC 01 15:30:43.3±1.2**, 35°.25N**±0°.04×**27°.17E**±0°.03**, h9**^{km}±8^{km}**, n78, σ1^{s}.34**/107**, mb3.3**/4**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.29**	**359**	P	**Pg**	**15 30 49.0**	**-0.2**
KARP				S	**Sg**	**15 30 53.7**	**+0.6**
	8µm,0.2s						
KARP	**Karpathos**	**0.29**	**359**	Pg	**Pg**	**15 30 48.8**	**-0.4**
KARP				Sg	**Sg**	**15 30 53.5**	**+0.4**
KARP	**Karpathos**	**0.29**	**359**	P	**Pg**	**15 30 49.0**	**-0.2**
KARP				S	**Sg**	**15 30 53.4**	**+0.2**
KARP				AML	AML	15 30 55.2	
	comp=N,14210µm,0.3s						
KARP				AML	AML	15 30 55.4	
	comp=E,19842µm,0.2s						
ZKR	**Zakros**	**0.79**	**260**	P	**Pg**	**15 30 58.0**	**-0.4**
ZKR				S	**Sb**	**15 31 11.3**	**+1.3**
	comp=E,3µm,0.4s						
ZKR	**Zakros**	**0.79**	**260**	Pg	**Pg**	**15 30 58.2**	**-0.2**
ZKR				Sg	**Sb**	**15 31 11.0**	**+1.0**
ZKR	**Zakros**	**0.79**	**260**	P	**Pg**	**15 30 58.0**	**-0.4**
ZKR				S	**Sg**	**15 31 10.0**	**+1.2**
ZKR				AML	AML	15 31 12.0	
	comp=E,8742µm,0.4s						
ZKR				AML	AML	15 31 12.4	
	comp=N,4322µm,0.3s						
STIA	**Sitia Lasithi**	**0.88**	**267**	P	**Pg**	**15 30 59.9**	**-0.3**
STIA				S	**Sb**	**15 31 13.7**	**+1.1**
STIA	**Sitia Lasithi**	**0.88**	**267**	P	**Pg**	**15 30 59.8**	**-0.4**
STIA				S	**Sb**	**15 31 13.3**	**+0.7**
STIA				AML	AML	15 31 18.7	
	comp=N,5802µm,0.7s						
STIA				AML	AML	15 31 19.3	
	comp=E,5726µm,0.8s						
FRMA	**Ierapetra Chan**	**1.20**	**259**	P	**Pg**	**15 31 03.5**	**-2.7**
FRMA				S	**Sg**	**15 31 19.9**	**-1.9**
	comp=E,560nm,0.5s						
FRMA	**Ierapetra Chan**	**1.20**	**259**	P	**Pg**	**15 31 03.5**	**-2.7**
FRMA				S	**Sg**	**15 31 20.6**	**-1.2**
FRMA				AML	AML	15 31 30.9	
	comp=E,3023µm,0.4s						
FRMA				AML	AML	15 31 31.9	
	comp=N,3750µm,0.4s						
ARG	**Arkhangelos**	**1.24**	**39**	P	**Pg**	**15 31 06.1**	**-0.9**
ARG				S	**Sn**	**15 31 24.1**	**+0.4**
	comp=N,1µm,0.5s						
ARG	**Arkhangelos**	**1.24**	**39**	Pn	**Pb**	**15 31 06.7**	**-0.2**
ARG	**Arkhangelos**	**1.24**	**39**	P	**Pg**	**15 31 06.2**	**-0.9**
ARG				S	**Sb**	**15 31 23.2**	**+0.2**
ARG				AML	AML	15 31 28.7	
	comp=E,2806µm,0.3s						
ARG				AML	AML	15 31 29.2	
	comp=N,2467µm,0.7s						
NISR	**Nisiros**	**1.36**	**359**	P	**Pn**	**15 31 08.1**	**-0.3**
NISR				S	**Sn**	**15 31 28.0**	**+1.5**
	comp=N,882nm,0.5s						
NISR	**Nisiros**	**1.36**	**359**	P	**Pn**	**15 31 08.0**	**-0.3**
NISR				S	**Sg**	**15 31 25.4**	**-1.6**
NISR				AML	AML	15 31 33.1	
	comp=N,1221µm,0.6s						
NISR				AML	AML	15 31 34.6	
	comp=E,2308µm,0.5s						
KOSK	**Kos Island**	**1.50**	**354**	Pn	**Pn**	**15 31 10.9**	**+0.5**
KOSK	**Kos Island**	**1.50**	**354**	P	**Pn**	**15 31 09.1**	**-1.3**
KOSK				S	**Sn**	**15 31 30.3**	**+0.1**
DAT	**Datca**	**1.51**	**13**	P	**Pn**	**15 31 10.1**	**-0.5**
DAT				S	**Sg**	**15 31 31.2**	**-0.7**
DAT	**Datca**	**1.51**	**13**	Pn	**Pn**	**15 31 10.2**	**-0.4**
HRKL	**Herakleio**	**1.69**	**273**	Pn	**Pn**	**15 31 14.1**	**+1.1**
HRKL	**Herakleio**	**1.69**	**273**	P	**Pn**	**15 31 13.9**	**+1.0**
KSTL	**Kastelli Herak**	**1.71**	**272**	P	**Pn**	**15 31 10.6**	**-2.7**
KSTL				S	**Sn**	**15 31 30.1**	**-5.2**
KSTL	**Kastelli Herak**	**1.71**	**272**	P	**Pn**	**15 31 11.1**	**-2.2**
KSTL				AML	AML	15 31 38.6	
	comp=N,1468µm,0.5s						
KSTL				AML	AML	15 31 45.1	
	comp=E,821µm,0.8s						
TURN	**Turunc**	**1.75**	**30**	Pn	**Pn**	**15 31 14.1**	**+0.2**
TURN	**Turunc**	**1.75**	**30**	SPECP		15 31 13.0	
TURN				P	**Pn**	**15 31 14.0**	**+0.1**
TURN				S	**Sn**	**15 31 35.6**	**-0.7**
TURN				*i* AML	AML	15 31 42.0	
	comp=E,218nm,0.4s						
TURN				*i* AML	AML	15 31 45.0	
	comp=E,199nm,0.4s						
THR8	**Santorini-Mono**	**1.79**	**311**	P	**Pn**	**15 31 14.2**	**-0.1**
THR8	**Santorini-Mono**	**1.79**	**311**	P	**Pn**	**15 31 13.9**	**-0.4**
THR6	**Thira Island,**	**1.81**	**308**	P	**Pn**	**15 31 13.4**	**-1.2**
THR6	**Thira Island,**	**1.81**	**308**	P	**Pn**	**15 31 14.3**	**-0.3**
BDRM	**Kayabasi**	**1.82**	**7**	P	**Pn**	**15 31 14.1**	**-0.7**
BDRM				S	**Sn**	**15 31 37.2**	**-0.9**
BDRM				*i* AML	AML	15 31 43.0	
	comp=E,80nm,0.9s						
THR3	**Thira Island,**	**1.84**	**309**	P	**Pn**	**15 31 14.7**	**-0.3**
THR3	**Thira Island,**	**1.84**	**309**	P	**Pn**	**15 31 14.9**	**-0.1**
IDI	**Anoyia**	**1.86**	**272**	Pn	**Pn**	**15 31 17.1**	**+1.7**
	comp=E,11nm,0.3s,baz=77,slow=17,SNR=46						
IDI				Sn	**Sg**	**15 31 44.8**	**+1.7**
	comp=E,19nm,0.3s,baz=322,slow=19,SNR=4.6						
	comp=E,43nm,0.3s						
IDI	**Anoyia**	**1.86**	**272**	P	**Pn**	**15 31 16.3**	**+0.9**
IDI	**Anoyia**	**1.86**	**272**	Pn	**Pn**	**15 31 16.6**	**+1.2**
IDI	**Anoyia**	**1.86**	**272**	P	**Pn**	**15 31 16.1**	**+0.7**
IDI				S	**Sn**	**15 31 39.6**	**+0.5**
IDI				AML	AML	15 31 47.1	
	comp=E,495µm,0.4s						
IDI				AML	AML	15 31 55.1	
	comp=N,598µm,0.6s						
DALY	**Dalyan (Mula)**	**1.97**	**37**	Pn	**Pn**	**15 31 17.7**	**+0.8**
IZZE	**Mula-Seydike**	**2.05**	**54**	SPECP		15 31 18.0	
IZZE				P	**Pn**	**15 31 18.6**	**+0.6**
FETY	**Fethiye**	**2.08**	**48**	Pn	**Pn**	**15 31 19.1**	**+0.7**
YER	**Yerkesik**	**2.08**	**25**	P	**Pn**	**15 31 19.3**	**+0.8**
YER	**Yerkesik**	**2.08**	**25**	Pn	**Pn**	**15 31 19.1**	**+0.6**
YER	**Yerkesik**	**2.08**	**25**	P	**Pn**	**15 31 19.1**	**+0.6**
YER				S	**Sn**	**15 31 44.3**	**-0.3**
YER				*i* AML	AML	15 31 52.0	
	comp=N,24nm,0.5s						
YER				*i* AML	AML	15 31 58.0	
	comp=N,20nm,0.5s						
MLSB	**Milas**	**2.10**	**13**	Pn	**Pn**	**15 31 19.2**	**+0.6**
KSL	**Kastellorizon**	**2.16**	**65**	P	**Pn**	**15 31 20.1**	**+0.6**
KSL				S	**Sn**	**15 31 46.9**	**+0.5**
KSL	**Kastellorizon**	**2.16**	**65**	P	**Pn**	**15 31 20.1**	**+0.6**
MULA	**Mugla, Merkez-**	**2.21**	**25**	P	**Pn**	**15 31 21.7**	**+1.5**
MULA				S	**Sn**	**15 31 47.3**	**-0.3**
MULA				*i* AML	AML	15 31 55.0	
	comp=N,76nm,0.6s						
MULA				*i* AML	AML	15 32 02.0	
	comp=N,126nm,0.6s						
AKAS	**Kas**	**2.21**	**63**	Pn	**Pn**	**15 31 20.9**	**+0.6**
AKAS	**Kas**	**2.21**	**63**	SPECP		15 31 21.0	
AKAS				P	**Pn**	**15 31 21.3**	**+1.0**
CAME	**Cameli-Denizli**	**2.42**	**45**	Pn	**Pn**	**15 31 24.1**	**+1.0**
GCAM	**G?zelcaml?**	**2.44**	**1**	Pn	**Pn**	**15 31 24.6**	**+1.3**
SMG	**Samos**	**2.47**	**354**	P	**Pn**	**15 31 22.7**	**-0.9**
CAEL	**Denizli, Camel**	**2.55**	**42**	SPECP		15 31 25.0	
CAEL				P	**Pn**	**15 31 25.5**	**+0.5**
CAEL				S	**Sg**	**15 32 07.1**	**+1.8**
CAEL				*i* AML	AML	15 32 17.0	
	comp=N,214nm,0.7s						
CAEL				*i* AML	AML	15 32 26.0	
	comp=N,186nm,0.9s						
GVDS	**Gavdos**	**2.56**	**262**	Pn	**Pn**	**15 31 26.9**	**+2.0**
GVD	**Gavdhos**	**2.56**	**262**	Pn	**Pn**	**15 31 26.5**	**+1.6**
IMMV	**Iera Moni Meta**	**2.61**	**275**	Pn	**Pn**	**15 31 27.1**	**+1.5**
IMMV	**Iera Moni Meta**	**2.61**	**275**	P	**Pn**	**15 31 27.2**	**+1.5**
IMMV				AML	AML	15 32 15.2	
	comp=N,521µm,0.5s						
IMMV				AML	AML	15 32 23.1	
	comp=E,450µm,1.2s						
TAVA	**DENIZLI_Tavas**	**2.62**	**32**	SPECP		15 31 27.0	
TAVA				P	**Pn**	**15 31 27.3**	**+1.4**
TAVA				S	**Sb**	**15 32 00.8**	**-2.0**
TAVA				*i* AML	AML	15 32 08.0	
	comp=E,88nm,0.4s						
TAVA				*i* AML	AML	15 32 09.0	
	comp=E,94nm,0.5s						
ELL	**Elmali**	**2.68**	**55**	Pn	**Pn**	**15 31 27.6**	**+0.9**
GOLH	**Golhisar**	**2.77**	**44**	P	**Pn**	**15 31 29.4**	**+1.5**
GOLH				S	**Sb**	**15 32 05.8**	**-1.4**
GOLH				*i* AML	AML	15 32 17.0	
	comp=E,50nm,0.5s						
GOLH				*i* AML	AML	15 32 30.0	
	comp=E,87nm,0.7s						
APMY	**Acipayam-Deniz**	**2.81**	**37**	Pn	**Pn**	**15 31 29.2**	**+0.8**
KNDR	**Palaiochora Ch**	**2.85**	**271**	Pn	**Pn**	**15 31 31.5**	**+2.6**
KORT	**Korkueli**	**3.11**	**55**	Pn	**Pn**	**15 31 33.8**	**+1.1**
ANKY	**Antikythira Is**	**3.21**	**282**	P	**Pn**	**15 31 33.8**	**-0.1**
CHOS	**Chios island**	**3.25**	**344**	P	**Pn**	**15 31 34.1**	**-0.5**
KTHA	**Kythira Island**	**3.48**	**288**	Pn	**Pn**	**15 31 39.1**	**+1.4**
KTHA	**Kythira Island**	**3.48**	**288**	P	**Pn**	**15 31 38.6**	**+0.9**
KTHR	**Kythira**	**3.53**	**288**	P	**Pn**	**15 31 38.4**	**+0.1**
VLI	**Veliai**	**3.73**	**294**	P	**Pn**	**15 31 41.3**	**+0.3**
AKMS	**Akamas**	**4.24**	**92**	P	**Pn**	**15 31 47.6**	**-0.5**
ITM	**Ithomi**	**4.65**	**296**	Pn	**Pn**	**15 31 56.1**	**+2.4**
ASGA	**Asgata**	**5.01**	**94**	P	**Pn**	**15 31 58.2**	**-0.5**
MMAI	**Mount Meron Ar**	**7.19**	**106**	Pn	**Pn**	**15 32 27.7**	**-0.9**
	comp=E,1.7nm,0.3s,baz=299,slow=16,SNR=4.7						
MMAI				Sn	**Sn**	**15 33 49.2**	**-1.2**
	comp=E,2.4nm,0.3s,baz=306,slow=27,SNR=4.0						
	comp=E,0.7nm,0.2s						
EIL	**Elat**	**8.62**	**128**	Pn	**Pn**	**15 32 50.0**	**+1.8**
	comp=E,0.2nm,0.3s,baz=343,slow=7.6,SNR=2.2						
EIL				Sn	**Sn**	**15 34 21.8**	**-3.7**
	comp=E,0.8nm,0.3s,baz=172,slow=22,SNR=2.2						
	comp=E,1.7nm,0.5s						
ASF	**Jabal al Asfar**	**8.67**	**108**	Sn	**Sn**	**15 34 27.8**	**+0.9**
	comp=E,0.3nm,0.3s,baz=152,slow=19,SNR=1.6						
ESDC	**Sonseca Array**	**25.03**	**289**	P	**P**	**15 36 08.4**	**+0.7**
	comp=E,0.3nm,0.5s,baz=84,slow=8.6,SNR=2.1						
	comp=E,0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**31.83**	**233**	P	**P**	**15 37 12.6**	**+4.0**
	comp=E,0.3nm,0.4s,baz=41,slow=9.0,SNR=3.0						
	comp=E,0.3nm,0.4s						
MKAR	**Makanchi Array**	**42.35**	**57**	P	**P**	**15 38 36.7**	**-0.9**
	comp=E,0.3nm,0.6s,baz=270,slow=6.8,SNR=6.4						
	comp=E,0.3nm,0.6s						
SONM	**Songino Array**	**58.15**	**51**	P	**P**	**15 40 36.4**	**-1.1**
	comp=E,0.2nm,0.6s,baz=295,slow=8.7,SNR=3.4						
	comp=E,0.2nm,0.6s						

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*JMA **01** 15:38:28.1±0.5, 35°N±1°×14°2E±°, h43^{km}±2^{km}, MV2.7/32, FAR SE OFF BOSO PEN*
*IDC **01** 15:38:35.8±1.7, 33°.84N×138°.01E, h0^{km}, mb3.5/2, mbtmp3.5/2, ML1.9/1, MS3.0/1, Error ellipse: s-maj=31.9km s-min=27.6km az=64.0*
ISC 01 15:38:32.4±1.6**, 34°.70N**±0°.06×**141°.5E**±0°.1**, h35**^{km}**, n15, σ1^{s}.25**/19**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.43**	**264**	P	**Pn**	**15 38 39.8**	**-1.7**
BSO3	**Boso 3**	**0.82**	**277**	P	**Pn**	**15 38 45.9**	**-1.3**
BSO4	**Boso 4**	**1.00**	**287**	P	**Pn**	**15 38 48.7**	**-1.1**
KTR	**Katsuura**	**1.07**	**295**	P	**Pn**	**15 38 49.8**	**-1.1**
KTR				*e*S	**Sn**	**15 39 06.5**	**+2.0**
CHOJ	**Chosi**	**1.13**	**333**	P	**Pn**	**15 38 50.5**	**-1.2**
CHOJ				*e*S	**Sn**	**15 39 06.7**	**+0.7**
JKUC	**kamogawauchiur**	**1.16**	**294**	P	**Pn**	**15 38 50.4**	**-1.7**
JIM2	**Oshima 3**	**1.70**	**271**	*e*P	**Pn**	**15 38 57.8**	**-1.8**
JIM2				*e*S	**Sn**	**15 39 20.1**	**-0.1**
JMKN	**Mikurajimanish**	**1.77**	**244**	P	**Pn**	**15 38 59.3**	**-1.2**
JOD2	**Odawara 2**	**2.06**	**287**	P	**Pn**	**15 39 04.3**	**-0.2**
JOD2				*e*S	**Sn**	**15 39 30.8**	**+1.8**
JHJ	**Hachijo jima 2**	**2.12**	**223**	Pn	**Pn**	**15 39 05.5**	**+0.1**
	11nm,0.3s,baz=352,slow=6.3,SNR=6.1						
JHJ				Sn	**Sn**	**15 39 30.9**	**+0.3**
	15nm,0.3s,baz=78,slow=23,SNR=1.6						
JIZS	**Izushimoda**	**2.16**	**271**	*e*P	**Pn**	**15 39 05.4**	**-0.4**
MJAR	**Matsushiro Arr**	**3.25**	**305**	Pn	**Pn**	**15 39 20.5**	**-0.3**
	0.2nm,0.3s,baz=112,slow=16,SNR=12						
PETK	**Petropavlovsk-**	**21.70**	**27**	LR	LR	15 52 48.8	
	comp=Z,40nm,20.8s,baz=53,slow=36						
WRA	**Warramunga Arr**	**54.76**	**188**	P	**P**	**15 47 59.0**	**+0.4**
	0.7nm,0.8s,baz=1.1,slow=7.5,SNR=7.4						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**58.49**	**188**	P	**P**	**15 48 25.4**	**+0.3**
	0.4nm,0.8s,baz=360,slow=5.9,SNR=4.8						
	0.4nm,0.8s						

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*NSSP **01** 16:04:38.5, 38°.87N×43°.38E, h13^{km}, Ms2.9*
*ISK **01** 16:04:40.3, 38°.86N×43°.54E, h5^{km}, ML2.8/12*
*DDA **01** 16:04:41.7±0.0, 38°.90N×43°.52E, h13^{km}, ML2.9*
*TEH **01** 16:04:42.3, 38°.84N×43°.60E, h10^{km}±224^{km}, ML2.8*
ISC 01 16:04:41.2±1.1**, 38°.84N**±0°.02×**43°.54E**±0°.02**, h3**^{km}±10^{km}**, n39, σ0^{s}.82**/54**, 5C-5D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	**0.15**	**10**	P	**Pg**	**16 04 44.6**	**+0.3**
VMUR				S	**Sg**	**16 04 47.4**	**+1.0**
VMUR				*i* AML	AML	16 04 48.0	
	comp=N,9µm,0.2s						
VMUR				*i* AML	AML	16 04 48.0	
	comp=E,1µm,0.2s						
ERCV	**ERCIS-VAN**	**0.24**	**319**	Pg	**Pg**	**16 04 45.9**	**0.0**
VANB	**Van**	**0.27**	**206**	Pg	**Pb**	**16 04 48.9**	**+0.2**
OZAP	**Van, Ozalp-Mer**	**0.40**	**116**	P	**Pb**	**16 04 50.3**	**-0.7**
OZAP				S	**Sb**	**16 04 57.5**	**-0.1**
ADCV	**BITLIS_Adilcev**	**0.64**	**268**	P	**Pg**	**16 04 54.0**	**+0.6**
ADCV				S	**Sb**	**16 05 03.8**	**-0.5**
ADCV				*i* AML	AML	16 05 04.0	
	comp=E,1µm,0.5s						
ADCV				*i* AML	AML	16 05 05.0	
	comp=N,806nm,0.4s						
GEVA	**Gevas**	**0.65**	**216**	P	**Pg**	**16 04 53.8**	**+0.2**
AKDM	**Akdamar-Van**	**0.67**	**221**	Pg	**Pg**	**16 04 54.4**	**+0.3**
DYDN	**Diyadin**	**0.71**	**9**	P	**Pg**	**16 04 54.8**	**-0.1**
MLAZ	**Malazgirt-MUS**	**0.83**	**292**	Pg	**Pg**	**16 04 57.5**	**+0.4**
MLAZ				Sg	**Sb**	**16 05 09.8**	**-0.1**
AGRB	**Hanur-Agry**	**0.85**	**330**	Pg	**Pg**	**16 04 56.8**	**-0.7**
AGRB				Sg	**Sb**	**16 05 09.9**	**-0.7**
MAKU	**Maku**	**1.03**	**60**	Pg	**Pg**	**16 05 01.0**	**0.0**
MAKU				Sg	**Sb**	**16 05 16.1**	**+0.4**
IGDI	**IGDIR**	**1.11**	**22**	P	**Pg**	**16 05 02.1**	**-0.5**
IGDI				S	**Sg**	**16 05 16.6**	**-0.3**
PERV	**Siirt/Pervari-**	**1.19**	**222**	P	**Pn**	**16 05 05.9**	**+1.1**
PERV				*i* AML	AML	16 05 28.0	
	comp=E,222nm,0.5s						
PERV				*i* AML	AML	16 05 29.0	
	comp=N,213nm,0.5s						
BLIS	**Bitlis-Merkez**	**1.19**	**250**	P	**Pg**	**16 05 03.4**	**-0.6**
BLIS				S	**Sg**	**16 05 18.6**	**-0.9**
BLIS				*i* AML	AML	16 05 22.0	
	comp=N,261nm,0.6s						
BLIS				*i* AML	AML	16 05 24.0	
	comp=E,213nm,0.4s						
GURO	**Guroymak-BITLI**	**1.21**	**257**	Pn	**Pg**	**16 05 03.9**	**-0.6**
EKAR	**Karacoban**	**1.22**	**290**	P	**Pg**	**16 05 04.9**	**+0.3**
EKAR				*i* AML	AML	16 05 31.0	
	comp=E,392nm,0.6s						
EKAR				*i* AML	AML	16 05 35.0	
	comp=N,253nm,0.8s						
TASB	**TASBURUN-IGDIR**	**1.27**	**25**	Pn	**Pg**	**16 05 05.3**	**-0.2**
VNNZ	**Vanand**	**1.28**	**10**	⇑*i*P	**Pg**	**16 05 05.0**	**-0.8**
VNNZ				⇓*i*S	**Sn**	**16 05 24.1**	**+0.3**
EATA	**Eleskirt**	**1.30**	**322**	P	**Pg**	**16 05 05.2**	**-1.1**
EATA				S	**Sg**	**16 05 21.6**	**-1.6**
METS	**Metsamor**	**1.38**	**18**	⇑*i*P	**Pn**	**16 05 06.9**	**-0.4**
METS				⇑*i*S	**Sn**	**16 05 26.8**	**+0.7**
NRKZ	**NAREK**	**1.45**	**37**	⇓*i*P	**Pn**	**16 05 08.2**	**-0.2**
NRKZ				⇑*i*S	**Sn**	**16 05 29.6**	**+1.7**
DIGO	**Kars**	**1.58**	**355**	P	**Pb**	**16 05 10.9**	**-0.3**
DIGO				*i* AML	AML	16 05 43.0	
	comp=N,128nm,0.9s						
DIGO				*i* AML	AML	16 05 43.0	
	comp=E,146nm,1.0s						
GNI	**Garni**	**1.61**	**35**	⇓*i*P	**Pb**	**16 05 11.2**	**-0.4**
GNI				⇓*i*S	**Sg**	**16 05 34.8**	**+1.9**
GNI	**Garni**	**1.61**	**35**	Pn	**Pn**	**16 05 10.6**	**0.0**
VRTB	**Varto-Mus**	**1.65**	**282**	Pn	**Pn**	**16 05 11.6**	**+0.4**
VRTB	**Varto-Mus**	**1.65**	**282**	P	**Pn**	**16 05 11.4**	**+0.1**
VRTB				S	**Sn**	**16 05 32.6**	**-0.5**
VRTB				*i* AML	AML	16 05 45.0	
	comp=E,134nm,0.6s						
VRTB				*i* AML	AML	16 05 53.0	
	comp=N,191nm,0.8s						
IMRD	**Marand**	**1.70**	**94**	Pg	**Pb**	**16 05 12.9**	**-0.2**
ISHB	**Shabestar**	**1.72**	**108**	Pg	**Pb**	**16 05 12.7**	**-0.9**
KAPZ	**Kaputan**	**1.73**	**31**	⇓*i*P	**Pg**	**16 05 14.2**	**-0.3**
KAPZ				⇑*i*S	**Sg**	**16 05 39.3**	**+2.4**
KOPR	**Koprukoy-ERZUR**	**1.74**	**312**	Pn	**Pn**	**16 05 12.9**	**+0.4**
HOMI	**Horasan**	**1.75**	**314**	P	**Pb**	**16 05 13.9**	**-0.1**
HOMI				*i* AML	AML	16 05 45.0	
	comp=E,78nm,0.9s						
BOZK	**Kars-Merkez-Bo**	**1.80**	**346**	P	**Pb**	**16 05 14.9**	**-0.1**
KARS	**Kars**	**1.82**	**349**	Pn	**Pn**	**16 05 13.5**	**-0.1**
EAK	**Akyaka**	**1.85**	**2**	P	**Pg**	**16 05 16.7**	**+0.1**
SENK	**Senkaya-Erzuru**	**1.95**	**332**	Pn	**Pn**	**16 05 15.4**	**0.0**
SVAN	**Silvan-Diyarba**	**1.96**	**250**	Pn	**Pn**	**16 05 16.1**	**+0.8**
BNGB	**Bingl**	**2.23**	**275**	Pn	**Pn**	**16 05 19.9**	**+0.7**
IAZR	**Azarshahr**	**2.25**	**120**	Pn	**Pg**	**16 05 23.9**	**-0.4**
IHRS	**Heris**	**2.79**	**100**	Pn	**Pb**	**16 05 29.5**	**-2.4**

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*ISK **01** 16:07:18.6, 39°.50N×26°.07E, h11^{km}, ML3.0/18*
*THE **01** 16:07:19.3, 39°.50N×26°.06E, h12^{km}±1^{km}, ML2.9/9, Error ellipse: s-maj=1.3km s-min=0.6km az=98.0*
*DDA **01** 16:07:19.4±0.0, 39°.52N×26°.11E, h10^{km}, MW3.2*
ISC 01 16:07:19.0±0.8**, 39°.50N**±0°.02×**26°.06E**±0°.02**, h12**^{km}±5^{km}**, n51, σ0^{s}.46**/90**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.06**	**85**	P	**Pg**	**16 07 21.3**	**-0.1**
KOCA				S	**Sg**	**16 07 22.9**	**-0.3**
GPNR	**Gulpinar-Canak**	**0.07**	**125**	Pg	**Pg**	**16 07 21.1**	**-0.4**
GPNR				Sg	**Sg**	**16 07 23.5**	**+0.3**
PRK	**Paraskevi**	**0.30**	**146**	P	**Pg**	**16 07 25.2**	**+0.1**
PRK				S	**Sg**	**16 07 29.9**	**+0.7**
	7µm,0.4s						
SIGR	**SIGRI**	**0.33**	**209**	P	**Pg**	**16 07 25.9**	**+0.3**
SIGR				S	**Sg**	**16 07 30.9**	**+1.0**
	4µm,0.3s						
SIGR	**SIGRI**	**0.33**	**209**	Pg	**Pg**	**16 07 25.7**	**+0.1**
SIGR				Sg	**Sg**	**16 07 30.9**	**+1.0**
BOZC	**Bozcaada**	**0.34**	**359**	Pg	**Pg**	**16 07 26.0**	**0.0**
BOZC				Sg	**Sg**	**16 07 31.4**	**+0.8**
BOZC	**Bozcaada**	**0.34**	**359**	P	**Pg**	**16 07 26.2**	**+0.2**
BOZC				P	**Pg**	**16 07 26.2**	**+0.2**
BOZC				S	**Sg**	**16 07 30.8**	**+0.2**
BOZC				S	**Sg**	**16 07 30.9**	**+0.2**
BOZC				*i* AML	AML	16 07 31.0	
	comp=N,2µm,0.3s						
BOZC				*i* AML	AML	16 07 31.0	
	comp=E,2µm,0.5s						
BOZC				*i* AML	AML	16 07 31.0	
	comp=E,2µm,0.5s						
BOZC				*i* AML	AML	16 07 32.0	
	comp=N,2µm,0.3s						
EZN	**Ezine**	**0.39**	**32**	P	**Pg**	**16 07 26.8**	**0.0**
EZN				S	**Sg**	**16 07 32.4**	**+0.5**
EZN	**Ezine**	**0.39**	**32**	Pg	**Pg**	**16 07 26.3**	**-0.5**
EZN				Sg	**Sg**	**16 07 32.3**	**+0.4**
BAYC	**CANAKKALE_Bayr**	**0.45**	**57**	P	**Pg**	**16 07 27.5**	**-0.3**
BAYC				S	**Sg**	**16 07 33.4**	**-0.5**
BAYC				*i* AML	AML	16 07 34.0	
	comp=N,454nm,0.6s						
BAYC				*i* AML	AML	16 07 34.0	
	comp=E,454nm,0.6s						
AYVA	**Ayvalik**	**0.53**	**111**	P	**Pg**	**16 07 29.5**	**+0.2**
AYVA				*i* AML	AML	16 07 42.0	
	comp=N,414nm,0.4s						
AYVA				*i* AML	AML	16 07 46.0	
	comp=E,276nm,0.3s						
ECEA	**Canakkale, Ece**	**0.56**	**9**	SPECP	Pg	16 07 30.0	+0.1
ECEA				P	**Pg**	**16 07 30.0**	**+0.1**
ECEA				S	**Sb**	**16 07 38.4**	**-0.2**
ECEA				*i* AML	AML	16 07 39.0	
	comp=E,668nm,0.3s						
ECEA				*i* AML	AML	16 07 44.0	
	comp=N,435nm,0.4s						
COMU	**Canakkale**	**0.68**	**28**	Pg	**Pg**	**16 07 32.3**	**0.0**
COMU				Sg	**Sb**	**16 07 42.1**	**-0.2**
GOKA	**anakkale-Gk**	**0.70**	**351**	SPECP		16 07 32.0	
GOKA				P	**Pg**	**16 07 32.6**	**-0.1**
GOKA				S	**Sb**	**16 07 42.9**	**0.0**
GOKA				*i* AML	AML	16 07 46.0	
	comp=E,492nm,0.2s						
GOKA				*i* AML	AML	16 07 49.0	
	comp=N,488nm,0.6s						
GADA	**Gvkgeada**	**0.70**	**350**	Pg	**Pg**	**16 07 32.2**	**-0.5**
GADA				Sg	**Sb**	**16 07 42.9**	**0.0**
DKL	**Dikili**	**0.78**	**123**	Pg	**Pg**	**16 07 34.2**	**0.0**
LIA	**Limnos Island**	**0.79**	**301**	P	**Pg**	**16 07 34.7**	**+0.5**
LIA				S	**Sb**	**16 07 45.8**	**+0.6**
	2µm,0.4s						
BUHA	**Balikesir, Bur**	**0.79**	**89**	SPECP		16 07 34.0	
BUHA				P	**Pg**	**16 07 34.1**	**-0.1**
BUHA				S	**Sb**	**16 07 46.3**	**+1.0**
BUHA				*i* AML	AML	16 07 48.0	
	comp=N,296nm,0.7s						
BUHA				*i* AML	AML	16 07 49.0	
	comp=E,326nm,0.4s						
KARB	**zmir-Karabur**	**0.88**	**162**	SPECP		16 07 36.0	
KARB				P	**Pb**	**16 07 36.6**	**+0.5**
KARB				S	**Sg**	**16 07 47.8**	**+0.5**
KARB				*i* AML	AML	16 07 50.0	
	comp=N,392nm,0.4s						
KARB				*i* AML	AML	16 07 50.0	
	comp=E,607nm,0.3s						
CANM	**Can-anakkale**	**0.92**	**56**	Pg	**Pg**	**16 07 36.4**	**-0.4**
ZEDA	**zmir-Bergama**	**0.95**	**123**	SPECP		16 07 37.0	
ZEDA				P	**Pb**	**16 07 37.9**	**+0.4**
ZEDA				S	**Sb**	**16 07 50.2**	**+0.2**
ZEDA				*i* AML	AML	16 07 52.0	
	comp=N,310nm,0.5s						
ZEDA				*i* AML	AML	16 07 53.0	
	comp=E,374nm,0.4s						
GELI	**Tayfur-Gelibol**	**0.96**	**19**	Pg	**Pg**	**16 07 37.2**	**-0.2**
LPK	**Lapseki**	**1.03**	**31**	Pg	**Pg**	**16 07 38.8**	**0.0**
SMTH	**Samothraki Isl**	**1.05**	**338**	P	**Pb**	**16 07 39.1**	**-0.1**
SMTH				S	**Sg**	**16 07 53.1**	**0.0**
	200nm,0.3s						
CHOS	**Chios island**	**1.11**	**180**	P	**Pb**	**16 07 39.7**	**-0.5**
CHOS				S	**Sb**	**16 07 54.9**	**+0.3**
	1µm,0.4s						
CHOS	**Chios island**	**1.11**	**180**	Pn	**Pb**	**16 07 39.9**	**-0.3**
URLA	**Izmir**	**1.21**	**160**	Pn	**Pn**	**16 07 41.4**	**-0.4**
URLA				Sn	**Sg**	**16 07 58.3**	**+0.3**
URLA	**Izmir**	**1.21**	**160**	SPECP		16 07 41.0	
URLA				P	**Pn**	**16 07 41.2**	**-0.7**
URLA				S	**Sb**	**16 07 57.5**	**0.0**
URLA				*i* AML	AML	16 08 00.0	
	comp=E,250nm,0.6s						
URLA				*i* AML	AML	16 08 03.0	
	comp=N,315nm,0.5s						
ERIK	**Erikli-Kesan**	**1.22**	**16**	Pn	**Pn**	**16 07 41.6**	**-0.4**
ERIK				Sn	**Sn**	**16 07 58.9**	**+0.4**
BALY	**Balya**	**1.23**	**78**	SPECP		16 07 41.0	
BALY				P	**Pn**	**16 07 41.8**	**-0.3**
BALY				S	**Sg**	**16 07 58.5**	**-0.1**
BALY				*i* AML	AML	16 08 00.0	
	comp=N,260nm,0.7s						
BALY				*i* AML	AML	16 08 03.0	
	comp=E,122nm,0.5s						
ENEZ	**Enez**	**1.24**	**3**	Pn	**Pn**	**16 07 42.1**	**-0.1**
STEP	**BALIKESIR_Sava**	**1.29**	**95**	SPECP		16 07 42.0	
STEP				P	**Pn**	**16 07 42.9**	**-0.1**
STEP				S	**Sb**	**16 08 00.1**	**+0.2**
STEP				*i* AML	AML	16 08 04.0	
	comp=N,139nm,0.4s						
STEP				*i* AML	AML	16 08 04.0	
	comp=E,144nm,0.6s						
ZEYE	**Izmir, Urla-Ze**	**1.30**	**164**	SPECP		16 07 42.0	
ZEYE				P	**Pn**	**16 07 42.6**	**-0.5**
ZEYE				S	**Sg**	**16 08 01.8**	**+0.8**
ZEYE				*i* AML	AML	16 08 03.0	
	comp=E,343nm,0.4s						
ZEYE				*i* AML	AML	16 08 08.0	
	comp=N,210nm,0.3s						
KRBG	**Karabiga-Canak**	**1.31**	**46**	Pn	**Pn**	**16 07 43.1**	**0.0**
KRBG				Sn	**Sn**	**16 08 00.9**	**+0.3**
BLCB	**Balcova**	**1.35**	**145**	Pn	**Pn**	**16 07 43.7**	**0.0**
KNL	**Balıkesir**	**1.37**	**55**	SPECP		16 07 44.0	
KNL				P	**Pn**	**16 07 44.1**	**+0.1**
KNL				S	**Sn**	**16 08 02.7**	**+0.6**
KNL				*i* AML	AML	16 08 03.0	
	comp=N,233nm,0.6s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KNL				*i* AML	AML	16 08 04.0	
	comp=E,347nm,0.4s						
GONE	**Gonen-Balikesi**	1.37	66	Pn	Pn	16 07 43.9	-0.1
ALN	**Alexandroupoli**	1.40	360	P	Pn	16 07 44.4	0.0
ALN				S	Sn	16 08 02.4	-0.4
	152nm,0.6s						
ALN	**Alexandroupoli**	1.40	360	Pn	Pn	16 07 44.5	0.0
KESN	**Edirne-Kesan**	1.41	20	SPECP		16 07 44.0	
KESN				P	Pn	16 07 44.9	0.0
KESN				S	Sn	16 08 04.2	+0.6
KESN				*i* AML	AML	16 08 06.0	
	comp=N,155nm,0.4s						
KESN				*i* AML	AML	16 08 06.0	
	comp=E,152nm,0.6s						
BALB	**Balikesir**	1.42	84	Pn	Pn	16 07 44.5	-0.1
BKES	**Balkesir-Mer**	1.47	80	SPECP		16 07 45.0	
BKES				P	Pb	16 07 46.0	-0.3
BKES				S	Sg	16 08 06.2	0.0
BKES				*i* AML	AML	16 08 07.0	
	comp=E,127nm,0.3s						
BKES				*i* AML	AML	16 08 45.0	
	comp=N,4.0nm,1.9s						
RKY	**Sarkoy-Tekirda**	1.47	35	Pn	Pn	16 07 45.4	0.0
THAS	**Thassos island**	1.51	318	P	Pn	16 07 45.6	-0.3
THAS				S	Sn	16 08 04.8	-0.8
	155nm,0.3s						
DGB	**zmir**	1.58	156	SPECP		16 07 45.0	
DGB				P	Pn	16 07 45.8	-1.1
DGB				S	Sg	16 08 09.2	-0.6
DGB				*i* AML	AML	16 08 15.0	
	comp=N,64nm,0.5s						
DGB				*i* AML	AML	16 08 15.0	
	comp=E,68nm,0.5s						
UKOP	**Uzunkopru-Edir**	1.69	15	Pn	Pn	16 07 48.8	+0.4
RDO	**Rodhopi**	1.69	347	P	Pn	16 07 48.8	+0.3
RDO				S	Sn	16 08 10.5	+0.4
KYMI	**Kymi, Euboea I**	1.75	241	P	Pn	16 07 48.0	-1.2
KYMI				S	Sn	16 08 10.4	-1.1
OUR	**Ouranopolis**	1.80	298	Pn	Pn	16 07 50.2	+0.3
SMG	**Samos**	1.89	161	P	Pn	16 07 50.6	-0.5
SMG				S	Sn	16 08 15.2	+0.3
	332nm,0.5s						
KAVA	**Kavala**	1.91	322	P	Pn	16 07 51.5	+0.1
KAVA				S	Sn	16 08 14.1	-1.3
	128nm,0.2s						

DDA ***01*** *16:08:07.8±0.0, 39°.51N×26°.12E, h10^{km}, ML2.5*
ISK ***01*** *16:08:07.6, 39°.50N×26°.05E, h11^{km}, ML2.7/15*
THE ***01*** *16:08:08.3, 39°.51N×26°.05E, h2^{km}±2^{km}, ML2.6/6, Error ellipse: s-maj=2.6km s-min=0.6km az=189.0*
ISC 01 16:08:07.9±0.8**, 39°.51N**±0°.02×**26°.07E**±0°.03**, h11**^{km}±5^{km}**, n33, σ0^{s}.37**/57**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	0.05	98	P	Pg	16 08 10.0	-0.1
KOCA				S	Sg	16 08 11.3	-0.4
GPNR	**Gulpinar-Canak**	0.07	139	Pg	Pg	16 08 10.2	-0.1
PRK	**Paraskevi**	0.30	150	P	Pg	16 08 14.2	+0.2
PRK				S	Sg	16 08 18.7	+0.6
	4μm,0.3s						
BOZC	**Bozcaada**	0.33	357	Pg	Pg	16 08 14.8	+0.2
BOZC				Sg	Sb	16 08 20.2	-1.0
BOZC	**Bozcaada**	0.33	357	P	Pg	16 08 14.7	+0.2
BOZC				P	Pg	16 08 14.8	+0.2
BOZC				S	Sg	16 08 19.5	+0.4
BOZC				S	Sg	16 08 19.5	+0.4
BOZC				*i* AML	AML	16 08 20.0	
	comp=E,780nm,0.2s						
SIGR	**SIGRI**	0.34	210	P	Pg	16 08 14.9	+0.2
SIGR				S	Sg	16 08 19.7	+0.5
	2μm,0.2s						
SIGR	**SIGRI**	0.34	210	Pg	Pg	16 08 14.7	0.0
SIGR				Sg	Sg	16 08 19.8	+0.5
EZN	**Ezine**	0.37	32	P	Pg	16 08 15.5	+0.3
EZN				S	Sg	16 08 21.0	+0.7
EZN	**Ezine**	0.37	32	Pg	Pg	16 08 15.6	+0.3
EZN				Sg	Sb	16 08 21.5	-0.8
BAYC	**CANAKKALE_Bayr**	0.43	57	P	Pg	16 08 16.1	-0.3
BAYC				S	Sg	16 08 21.4	-0.8
AYVA	**Ayvalik**	0.52	113	P	Pb	16 08 19.1	+0.1
AYVA				S	Sg	16 08 24.9	0.0
ECEA	**Canakkale, Ece**	0.54	8	P	Pg	16 08 18.6	+0.2
ECEA				S	Sg	16 08 26.1	+0.5
ECEA				*i* AML	AML	16 08 27.0	
	comp=E,296nm,0.3s						
COMU	**Canakkale**	0.67	28	Pg	Pg	16 08 21.2	+0.4
COMU				Sg	Sb	16 08 31.3	+0.5
GOKA	**anakkale-Gk**	0.69	349	P	Pg	16 08 21.3	-0.1
GOKA				S	Sg	16 08 30.0	-0.4
GOKA				*i* AML	AML	16 08 32.0	
	comp=N,171nm,0.3s						
GOKA				*i* AML	AML	16 08 36.0	
	comp=E,195nm,0.7s						
GADA	**Gvkgeada**	0.69	349	Pg	Pg	16 08 21.3	0.0
BUHA	**Balikesir, Bur**	0.78	90	P	Pb	16 08 23.9	+0.5
DKL	**Dikili**	0.78	124	Pg	Pb	16 08 23.4	0.0
LIA	**Limnos Island**	0.79	300	P	Pb	16 08 23.5	-0.1
LIA				S	Sb	16 08 33.7	-0.6
	692nm,0.3s						
KARB	**zmir-Karabur**	0.89	163	P	Pg	16 08 24.5	-0.4
KARB				S	Sg	16 08 36.2	-0.3
KARB				*i* AML	AML	16 08 39.0	
	comp=N,160nm,0.2s						
KARB				*i* AML	AML	16 08 39.0	
	comp=E,238nm,0.3s						
CANM	**Can-anakkale**	0.91	56	Pg	Pb	16 08 25.9	+0.3
CANM				Sg	Sn	16 08 39.1	-0.5
GELI	**Tayfur-Gelibol**	0.94	19	Pg	Pg	16 08 26.0	0.0
GELI				Sg	Sn	16 08 40.1	-0.3
ZEDA	**zmir-Bergama**	0.95	124	P	Pg	16 08 26.1	-0.1
ZEDA				S	Sg	16 08 38.7	+0.1
ZEDA				*i* AML	AML	16 08 41.0	
	comp=N,110nm,0.5s						
ZEDA				*i* AML	AML	16 08 41.0	
	comp=E,144nm,0.4s						
LPK	**Lapseki**	1.01	31	Pg	Pb	16 08 27.7	+0.3
SMTH	**Samothraki Isl**	1.05	337	P	Pb	16 08 28.1	+0.1
SMTH				S	Sn	16 08 43.0	-0.1
	105nm,0.2s						
CHOS	**Chios island**	1.12	181	P	Pn	16 08 29.6	0.0
CHOS				S	Sn	16 08 45.4	+0.4
	502nm,0.3s						
CHOS	**Chios island**	1.12	181	Pn	Pn	16 08 29.5	0.0
CHOS				Sn	Sn	16 08 45.3	+0.3
ERIK	**Erikli-Kesan**	1.21	16	Pn	Pn	16 08 30.7	0.0
URLA	**Izmir**	1.22	160	Pn	Pn	16 08 30.9	+0.1
ENEZ	**Enez**	1.23	3	Pn	Pb	16 08 31.1	0.0
KRBG	**Karabiga-Canak**	1.29	46	Pn	Pn	16 08 32.1	+0.3
BLCB	**Balcova**	1.35	146	Pn	Pn	16 08 32.9	+0.2
ALN	**Alexandroupoli**	1.39	359	P	Pg	16 08 34.2	-0.3
ALN				S	Sg	16 08 52.7	+0.2
	60nm,0.7s						
RKY	**Sarkoy-Tekirda**	1.45	35	Pn	Pn	16 08 34.3	+0.2

WEL ***01*** *16:17:00, 42°.96S×173°.09E, h6^{km}, ML4.7, Mw4.5, Moment Tensor Solution. s11 Moment tensor: Scale 10^{15}Nm; M_{rr}6.21; $M_{\theta\theta}$-3.15; $M_{\phi\phi}$-3.06; $M_{r\theta}$-1.45; $M_{\theta\phi}$-3.33; $M_{\phi r}$-0.96; Fault plane solution: $M_0$6.56000×10^{15} NP1:ϕ_s42.00000°, δ38.00000°, λ85.00000°. NP2: ϕ_s228.00000°, δ53.00000°, λ94.00000°. Principal axes: T -666.4800, Plg82.0000°, Azm157.0000°; N 21.1900, Plg3.0000°, Azm45.0000°; P 645.3000, Plg8.0000°, Azm315.0000°;*
NEIC ***01*** *16:17:41.9±1.6, 43°.04S±0°.03×173°.26E±0°.05, h7^{km}±4^{km}, mb4.6/20, Mwr4.5/46 Error ellipse: s-maj=6.6km s-min=2.6km az=124.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}5.70; $M_{\theta\theta}$-3.16; $M_{\phi\phi}$-2.55; $M_{r\theta}$-0.84; $M_{\theta\phi}$-3.19; $M_{\phi r}$-1.48; Fault plane solution: $M_0$6.13000×10^{15} NP1:ϕ_s222.50000°, δ52.94000°, λ83.52000°. NP2:ϕ_s53.17000°, δ37.55000°, λ98.49000°. Principal axes: T 5.9679, Plg81.0000°, Azm103.0000°; N 0.3033, Plg5.0000°, Azm226.0000°; P -6.2712, Plg8.0000°, Azm317.0000°;*
IDC ***01*** *16:17:41.4±1.0, 43°.02S×173°.11E, h0^{km}, mb4.2/4, mbtmp4.2/4, MS3.7/6 Error ellipse: s-maj=41.7km s-min=14.3km az=153.0*
NEIC ***01*** *16:17:41.8, 43°.05S×173°.28E, h6^{km}*
NOU ***01*** *16:17:43.0, 43°.06S×173°.29E, h12^{km}, MLv4.9/16, Off E. Coast of S. Island, N.Z.*
WEL ***01*** *16:17:44.1±0.4, 43°S±3°×17°3E±°, h9^{km}±3^{km}, M4.7/144, ML4.9/12, MLv4.7/144, Error ellipse: s-maj=0.0km s-min=0.0km az=117.2, confirmed*
ISC 01 16:17:42.6±1.0**, 43°.01S**±0°.03×**173°.21E**±0°.04**, h11**^{km}±5^{km}**, n242, σ1^{s}.17**/244**, mb4.4**/15**, MS3.5**/6**, Off east coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	**Greta Valley S**	0.14	290	Pg	Pg	16 17 46.0	+0.1
GVZ				Sg	Sg	16 17 47.5	-0.6
GVZ	**Greta Valley S**	0.14	290	P	Pg	16 17 46.0	+0.1
GVZ				S	Sg	16 17 47.8	-0.3
AMCZ	**Amberley**	0.44	248	Pg	Pb	16 17 53.0	+0.5
AMCZ				Sg	Sb	16 17 59.5	+0.5
AMCZ	**Amberley**	0.44	248	P	Pb	16 17 53.2	+0.7
KHZ	**Kahutara**	0.64	22	Pg	Pb	16 17 56.5	+0.6
KHZ				Sg	Sb	16 18 05.1	+0.3
KHZ	**Kahutara**	0.64	22	P	Pb	16 17 56.6	+0.7
KHZ	**Kahutara**	0.64	22	P	Pb	16 17 56.8	+0.9
KHZ				S	Sb	16 18 06.0	+1.2
LTZ	**Lake Taylor**	0.73	288	Pg	Pg	16 17 56.6	-0.1
LTZ				Sg	Sg	16 18 05.9	-0.4
LTZ	**Lake Taylor**	0.73	288	P	Pg	16 17 56.8	+0.1
MQZ	**McQueen's Vall**	0.80	210		Pb	16 17 59.2	+0.6
MQZ				Sg	Sb	16 18 11.1	+1.6
MQZ	**McQueen's Vall**	0.80	210	P	Pb	16 17 59.3	+0.7
AKCZ	**Akaroa Harbour**	0.89	194	P	Pn	16 18 01.2	+0.2
OXZ	**Oxford**	0.91	250	Pg	Pg	16 18 00.6	+0.4
OXZ				Sg	Sg	16 18 12.8	+0.7
OXZ	**Oxford**	0.91	250	P	Pg	16 18 00.7	+0.5
RACZ	**Rakaia**	1.06	227	P	Pg	16 18 03.1	+0.1
THZ	**Tophouse**	1.27	350		Pn	16 18 06.2	-0.1
THZ	**Tophouse**	1.27	350	P	Pn	16 18 06.3	-0.1
MHCZ	**Mount Hutt**	1.31	246	P	Pn	16 18 06.2	-0.7
INZ	**Inchbonnie**	1.33	282	Pn	Pn	16 18 06.8	-0.4
INZ	**Inchbonnie**	1.33	282	P	Pn	16 18 06.8	-0.4
WACZ	**Wakanui South**	1.36	227	P	Pn	16 18 07.4	-0.2
BSWZ	**Blackbirch Sta**	1.39	21		Pb	16 18 08.8	+0.2
BSWZ	**Blackbirch Sta**	1.39	21	P	Pb	16 18 08.9	+0.4
CMWZ	**Cape Campbell**	1.47	31	Pn	Pb	16 18 10.0	+0.1
CMWZ	**Cape Campbell**	1.47	31	P	Pb	16 18 10.3	+0.4
DSZ	**Denniston Nort**	1.64	320	Pn	Pn	16 18 11.2	-0.3
DSZ	**Denniston Nort**	1.64	320	P	Pn	16 18 11.4	-0.1
MRNZ	**Matariki Terra**	1.65	348	Pn	Pn	16 18 11.6	0.0
MRNZ	**Matariki Terra**	1.65	348	P	Pn	16 18 12.2	+0.7
TUWZ	**Tuamarina**	1.67	19	Pn	Pn	16 18 12.2	+0.3
TUWZ	**Tuamarina**	1.67	19	P	Pn	16 18 12.4	+0.6
RPZ	**Rata Peaks**	1.72	245	Pg	Pn	16 18 12.1	-0.4
	104nm,0.3s,baz=225,slow=0.1,SNR=1655						
RPZ				Lg	Lg	16 18 32.9	
	523nm,0.3s,baz=167,slow=1.7,SNR=7.8						
RPZ				LR	LR	16 18 40.7	
	comp=Z,570nm,21.4s,baz=205,slow=36						
RPZ	**Rata Peaks**	1.72	245	Pn	Pn	16 18 12.0	-0.6
RPZ	**Rata Peaks**	1.72	245	P	Pn	16 18 12.3	-0.3
RPZ	**Rata Peaks**	1.72	245	P	Pn	16 18 12.1	-0.4
ARCZ	**Arundel**	1.75	237	P	Pn	16 18 12.7	-0.3
NNZ	**Nelson**	1.80	4	Pn	Pn	16 18 14.0	+0.4
NNZ	**Nelson**	1.80	4	P	Pn	16 18 14.4	+0.8
WVZ	**Waitaha Valley**	1.82	267	P	Pn	16 18 13.9	+0.1
TCW	**Tory Channel**	1.97	24	Pn	Pn	16 18 15.9	0.0
TCW	**Tory Channel**	1.97	24	P	Pn	16 18 16.1	+0.2
TKNZ	**Takaka Hill**	1.99	354	Pn	Pn	16 18 16.8	+0.6
TKNZ	**Takaka Hill**	1.99	354	P	Pn	16 18 17.4	+1.2
BHW	**Baring Head**	2.02	38	Pn	Pn	16 18 16.8	+0.1
SNZO	**South Karori**	2.03	34	Pn	Pn	16 18 16.9	+0.1
SNZO	**South Karori**	2.03	34	P	Pn	16 18 17.4	+0.6
WEL	**Wellington**	2.08	34	P	Pn	16 18 17.8	+0.4
PLWZ	**Palliser**	2.09	47	Pn	Pn	16 18 17.3	-0.4
PLWZ	**Palliser**	2.09	47	P	Pn	16 18 17.7	+0.1
TMZ	**Timaru**	2.11	229	P	Pn	16 18 17.6	-0.2
GCSZ	**Gaunt Creek Bo**	2.13	261	P	Pn	16 18 18.6	+0.4
QRZ	**Quartz Range**	2.25	347	Pn	Pn	16 18 20.4	+0.7
QRZ	**Quartz Range**	2.25	347	P	Pn	16 18 21.4	+1.7
QRZ	**Quartz Range**	2.25	347	P	Pn	16 18 20.3	+0.6
DUWZ	**D'Urville Isla**	2.27	14	P	Pn	16 18 20.7	+0.6
CAW	**Cannon Point**	2.35	37	P	Pn	16 18 21.3	+0.1
TRWZ	**Traveller**	2.45	50	P	Pn	16 18 22.5	0.0
KIW	**Kapiti Island**	2.50	31	P	Pn	16 18 23.6	+0.4
MTW	**Mount Morrison**	2.52	43	P	Pn	16 18 23.2	-0.3
FOZ	**Fox Glacier**	2.54	257	Pn	Pn	16 18 24.3	+0.7
FOZ	**Fox Glacier**	2.54	257	P	Pn	16 18 24.4	+0.7
LBZ	**Lake Benmore**	2.59	237	Pn	Pn	16 18 24.5	0.0
LBZ	**Lake Benmore**	2.59	237	P	Pn	16 18 24.4	0.0
OGWZ	**Otaki Gorge**	2.64	34	P	Pn	16 18 25.2	0.0
HOWZ	**Holdsworth Sta**	2.72	40	P	Pn	16 18 26.2	-0.1
ODZ	**Otahua Downs**	2.75	222	Pn	Pn	16 18 26.4	-0.2
ODZ	**Otahua Downs**	2.75	222	P	Pn	16 18 26.8	+0.2
ODZ	**Otahua Downs**	2.75	222	P	Pn	16 18 26.5	-0.2
TMWZ	**Te Maipa**	2.76	47	P	Pn	16 18 26.5	-0.3
MRZ	**Mangatainoka R**	2.94	38	Pn	Pn	16 18 28.9	-0.4
MRZ	**Mangatainoka R**	2.94	38	P	Pn	16 18 28.9	-0.4
TIWZ	**Tintock**	3.00	43	P	Pn	16 18 29.8	-0.3
CPWZ	**Castlepoint**	3.06	48	P	Pn	16 18 31.6	+0.7
PRWZ	**Pori Road**	3.21	41	P	Pn	16 18 32.5	-0.5
POWZ	**Post Office Ro**	3.24	37	P	Pn	16 18 33.5	0.0
BFZ	**Birch Farm**	3.25	45	Pn	Pn	16 18 32.9	-0.7
BFZ	**Birch Farm**	3.25	45	P	Pn	16 18 32.3	-1.3
BFZ	**Birch Farm**	3.25	45	P	Pn	16 18 32.7	-0.8
JCZ	**Jackson Bay**	3.39	250	P	Pn	16 18 35.6	+0.1
JCZ	**Jackson Bay**	3.39	250	P	Pn	16 18 35.5	-0.1
HHSZ	**Highcliff Hill**	3.43	212	P	Pn	16 18 36.0	+0.1
DVHZ	**Dannevirke**	3.50	40	P	Pn	16 18 35.8	-1.2
WAZ	**Wanganui**	3.52	23	P	Pn	16 18 39.2	+2.0
WKZ	**Wanaka**	3.53	238	Pn	Pn	16 18 37.1	-0.3
WKZ	**Wanaka**	3.53	238	P	Pn	16 18 36.8	-0.6
ANWZ	**Angora Road**	3.53	45	P	Pn	16 18 36.9	-0.5
EAZ	**Earnscleugh**	3.58	230	P	Pn	16 18 37.7	-0.4
TSZ	**Takapari Road**	3.60	36	P	Pn	16 18 37.7	-0.8
NMEZ	**Namu Road**	3.63	8	P	Pn	16 18 41.6	+2.8
LREZ	**Lake Rotokare**	3.66	15	P	Pn	16 18 41.9	+2.7
PRHZ	**Porangahau**	3.76	44	P	Pn	16 18 39.8	-0.7
KHEZ	**Kahui Hut**	3.77	10	P	Pn	16 18 43.2	+2.5
KHEZ	**Kahui Hut**	3.77	10	P	Pn	16 18 43.2	+2.5
NBEZ	**Newall Road No**	3.77	8	P	Pn	16 18 42.8	+2.1
NEZ	**North Egmont**	3.80	10	P	Pn	16 18 43.1	+1.9
WPHZ	**Waipukurau**	3.81	40	P	Pn	16 18 42.3	+1.0
PNHZ	**Pukenui**	3.83	37	P	Pn	16 18 40.6	-0.9
PKE	**Pukeiti**	3.86	9	P	Pn	16 18 44.3	+2.3
DREZ	**Durham Road**	3.89	11	P	Pn	16 18 44.5	+2.1
TUZ	**Tuapeka**	3.90	220	P	Pn	16 18 42.7	+0.2
MTVZ	**Mangateitei**	4.01	26	P	Pn	16 18 45.4	+1.4
MHEZ	**Mangahewa**	4.02	12	P	Pn	16 18 47.0	+2.8
PXZ	**Pawanui**	4.05	44	P	Pn	16 18 45.3	+0.8
PKVZ	**Pokaka**	4.05	24	P	Pn	16 18 45.8	+1.1
VRZ	**Vera Road**	4.06	17	P	Pn	16 18 46.2	+1.6
MOVZ	**Moawhango**	4.08	29	P	Pn	16 18 45.3	+0.3
WNVZ	**Wahianoa**	4.10	27	P	Pn	16 18 46.5	+1.1
TRVZ	**Turoa**	4.11	26	P	Pn	16 18 46.5	+1.0
BHHZ	**Black Hill Sta**	4.12	32	P	Pn	16 18 45.4	-0.2
DRZ	**Dome Shelter**	4.13	26	P	Pn	16 18 48.9	+2.9
WHVZ	**Whangaehu Hut**	4.14	26	P	Pn	16 18 47.0	+1.1
FWVZ	**Far West T-bar**	4.15	26	P	Pn	16 18 47.2	+1.0
MSZ	**Milford Sound**	4.17	245	P	Pn	16 18 45.3	-0.9
TUVZ	**Tukino**	4.17	27	P	Pn	16 18 47.3	+0.9
KAHZ	**Kahuranaki**	4.24	42	P	Pn	16 18 47.8	+0.7
NGZ	**Ngauruhoe**	4.24	26	P	Pn	16 18 48.0	+0.7
SNVZ	**South Ngauruho**	4.24	26	P	Pn	16 18 48.3	+1.0
OTVZ	**Oturere**	4.27	27	P	Pn	16 18 48.6	+0.8
NNVZ	**North Ngauruho**	4.28	26	P	Pn	16 18 48.5	+0.6
TWVZ	**Taurewa**	4.28	24	P	Pn	16 18 48.4	+0.6
WTVZ	**West Tongariro**	4.29	26	P	Pn	16 18 48.5	+0.5
ETVZ	**East Tongariro**	4.31	27	P	Pn	16 18 49.0	+0.8
KRVZ	**Karewarewa**	4.33	26	P	Pn	16 18 49.5	+1.1
TMVZ	**Te Maari**	4.33	27	P	Pn	16 18 49.3	+0.9
KWHZ	**Kaweka Forest**	4.33	35	P	Pn	16 18 50.7	+2.3
NTVZ	**North Tongarir**	4.33	26	P	Pn	16 18 49.8	+1.3
MLZ	**Mavora Lakes**	4.35	236	Pn	Pn	16 18 47.9	-0.8
MLZ	**Mavora Lakes**	4.35	236	P	Pn	16 18 47.9	-0.8
MCHZ	**McNeill Hill**	4.43	38	P	Pn	16 18 48.8	-1.0
KATZ	**Kakaramea**	4.45	26	P	Pn	16 18 52.0	+1.8
RITZ	**Rihia Road**	4.50	27	P	Pn	16 18 52.6	+1.8
SYZ	**Scrubby Hill**	4.56	218	P	Pn	16 18 51.9	+0.4
SYZ	**Scrubby Hill**	4.56	218	P	Pn	16 18 51.8	+0.3
BKZ	**Black Stump Fm**	4.57	34	Pn	Pn	16 18 51.7	-0.1
BKZ	**Black Stump Fm**	4.57	34	P	Pn	16 18 50.3	-1.5
RATZ	**Rangitukua**	4.57	26	P	Pn	16 18 53.7	+1.9
HIZ	**Hauiti**	4.67	16	Pn	Pn	16 18 54.1	+1.2
HIZ	**Hauiti**	4.67	16	P	Pn	16 18 54.2	+1.2
HIZ	**Hauiti**	4.67	16	P	Pn	16 18 54.2	+1.2
WATZ	**Wairara**	4.71	25	P	Pn	16 18 56.0	+2.4
ARHZ	**Aropaoanui**	4.71	39	P	Pn	16 18 54.4	+0.8
WHZ	**Wether Hill Ro**	4.74	231	Pn	Pn	16 18 52.4	-1.6
WHZ	**Wether Hill Ro**	4.74	231	P	Pn	16 18 52.6	-1.4
NMHZ	**Naumai**	4.76	36	P	Pn	16 18 56.1	+1.7
WHTZ	**Whakaora**	4.82	27	P	Pn	16 18 58.7	+3.6
MTHZ	**Maungataniwha**	4.98	35	P	Pn	16 18 57.6	+0.2
DCZ	**Deep Cove**	5.00	239	Pn	Pn	16 18 56.1	-1.4
DCZ	**Deep Cove**	5.00	239	P	Pn	16 18 56.5	-0.9
TLZ	**Tolley Road**	5.00	21	P	Pn	16 18 57.9	+0.3
RAHZ	**Arahi**	5.04	37	P	Pn	16 18 58.6	+0.5
PRRZ	**Plateau Road**	5.12	29	P	Pn	16 18 58.8	-0.4
KNZ	**Kokohu**	5.22	42	P	Pn	16 19 00.0	-0.6
MHGZ	**Mahia Peninsul**	5.24	44	P	Pn	16 19 01.2	+0.3
RTZ	**Ruatahuna**	5.24	34	Pn	Pn	16 19 00.7	-0.3
RTZ	**Ruatahuna**	5.24	34	P	Pn	16 19 00.5	-0.5
SNGZ	**Shannon Statio**	5.26	38	P	Pn	16 19 00.7	-0.5
MUGZ	**Murupara**	5.28	32	P	Pn	16 19 02.4	+1.0
APZ	**The Paps**	5.32	222	P	Pn	16 19 01.7	-0.3
NGRZ	**Ngongotaha**	5.40	26	P	Pn	16 19 06.2	+3.0
OMRZ	**Omania**	5.46	27	P	Pn	16 19 09.6	+5.6
RIGZ	**Rimuhau**	5.51	40	P	Pn	16 19 03.6	-1.1
RAGZ	**Rawiri**	5.53	37	P	Pn	16 19 05.6	+0.7
TOZ	**Tahuroa Road**	5.56	19	P	Pn	16 19 05.7	+0.4
KMRZ	**Kaimai**	5.57	23	P	Pn	16 19 10.0	+4.6
URZ	**Urewera**	5.60	33	Pn	Pn	16 19 03.1	-2.7
	3.0nm,0.3s,baz=320,slow=8.8,SNR=25						
URZ				Sn	Sn	16 20 06.8	-3.4
	12nm,0.3s,baz=176,slow=15,SNR=9.1						
URZ	**Urewera**	5.60	33	P	Pn	16 19 04.7	-1.1
URZ	**Urewera**	5.60	33	P	Pn	16 19 04.3	-1.5
PYZ	**Puysegur Point**	5.63	234	Pn	Pn	16 19 05.0	-1.2
PYZ	**Puysegur Point**	5.63	234	P	Pn	16 19 07.6	+1.4
PYZ	**Puysegur Point**	5.63	234	P	Pn	16 19 06.7	+0.5
MARZ	**Manawahe**	5.67	29	P	Pn	16 19 06.4	-0.5
TKGZ	**Te Karaka**	5.77	39	P	Pn	16 19 06.3	-1.9
TGRZ	**Tauranga**	5.77	25	P	Pn	16 19 08.9	+0.7
TWGZ	**Tauwhareparae**	6.04	38	P	Pn	16 19 11.7	-0.3
AWAZ	**Awhitu Peninsu**	6.04	11	P	Pn	16 19 13.1	+1.2
RUGZ	**Raukumara Rang**	6.08	35	P	Pn	16 19 11.5	-1.1
MKAZ	**Moumakai**	6.09	15	P	Pn	16 19 13.2	+0.7
WTAZ	**Waiatarua**	6.16	10	P	Pn	16 19 15.3	+1.7
MYRZ	**Mayor Island**	6.18	23	P	Pn	16 19 15.1	+1.3
ETAZ	**East Tamaki Re**	6.20	13	P	Pn	16 19 15.2	+1.2
EPAZ	**Eden Park BICE**	6.24	11	P	Pn	16 19 17.2	+2.6
PUZ	**Puketiti**	6.25	40	P	Pn	16 19 14.8	0.0
HAZ	**Te Kaha**	6.30	35	P	Pn	16 19 14.0	-1.5
RVAZ	**Riverhead Bore**	6.32	10	P	Pn	16 19 16.8	+1.1
MBAZ	**Motutapu North**	6.37	12	P	Pn	16 19 17.6	+1.2
WIAZ	**Waiheke Island**	6.39	14	P	Pn	16 19 17.7	+1.1
KUZ	**Kuaotunu**	6.55	18	P	Pn	16 19 18.6	-0.3
KUZ	**Kuaotunu**	6.55	18	P	Pn	16 19 18.7	-0.3
MXZ	**Matakaoa Point**	6.69	37	Pn	Pn	16 19 19.6	-1.2
MXZ	**Matakaoa Point**	6.69	37	P	Pn	16 19 20.2	-0.6
MXZ	**Matakaoa Point**	6.69	37	P	Pn	16 19 20.4	-0.4
GRZ	**Great Barrier**	6.97	15	P	Pn	16 19 23.9	-0.8
WCZ	**Waipu Caves**	7.12	7	P	Pn	16 19 28.4	+1.7
CTZ	**Chatham Island**	7.45	99	P	Pn	16 19 31.9	+0.8
CTZ	**Chatham Island**	7.45	99	P	Pn	16 19 31.8	+0.6
OUZ	**Omahuta**	7.79	2	P	Pn	16 19 37.4	+1.5
ARMA	**Armidale**	21.32	299	P	P	16 22 28.3	-1.2
ARMA				IAmb	IAmb	16 22 35.3	
	comp=Z,25nm,1.4s						
DZM	**Mont Dzumac**	21.63	343	LR	LR	16 30 03.7	
	comp=Z,148nm,18.9s,baz=200,slow=34						
TOO	**Toolangi**	21.78	275	P	P	16 22 32.8	-1.7
TOO				IAmb	IAmb	16 23 16.4	
	comp=Z,17nm,1.4s						
STKA	**Stephens Creek**	27.30	283	LR	LR	16 32 36.4	
	comp=Z,107nm,20.6s,baz=157,slow=33						
STKA	**Stephens Creek**	27.30	283	P	P	16 23 25.0	-2.2
CTA	**Charters Tower**	32.16	307	LR	LR	16 36 13.6	
	comp=Z,83nm,19.6s,baz=104,slow=35						
FUNA	**Funafuti**	34.75	10	P	P	16 24 32.1	-0.8
HNR	**Honiara**	35.41	337	P	P	16 24 37.4	-1.2
AS31	**Alice Springs**	37.66	288	P	P	16 24 56.7	-1.2
ASAR	**Alice Springs**	37.66	288	P	P	16 24 57.1	-0.8
	comp=Z,4.1nm,0.9s,baz=126,slow=7.0,SNR=39						
ASAR				PcP	PcP	16 27 15.1	-0.2
	comp=Z,1.0nm,0.8s,baz=138,slow=4.0,SNR=5.1						
ASAR				LR	LR	16 40 05.3	
	comp=Z,86nm,18.2s,baz=151,slow=36						
	comp=Z,4.1nm,0.9s						
ASAR	**Alice Springs**	37.66	288	P	P	16 24 56.7	-1.2
COEN	**Coen**	38.80	309	P	P	16 25 05.1	-2.4
COEN				IAmb	IAmb	16 25 22.6	
	comp=Z,12nm,1.1s						
WR0	**Warramunga Arr**	39.71	293	P	P	16 25 14.5	-0.6
WR0				IAmb	IAmb	16 25 43.8	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	39.85	293	P	P	16 25 15.5	-0.7
WRAB	**Tennant Creek**	39.85	293	P	P	16 25 15.4	-0.9
WRAB				IAmb	IAmb	16 25 21.1	
	comp=Z,9.6nm,1.4s						
WRA	**Warramunga Arr**	39.85	293	P	P	16 25 16.3	0.0
	comp=Z,1.9nm,0.5s,baz=128,slow=8.3,SNR=16						
WRA				LR	LR	16 40 44.8	
	comp=Z,104nm,20.6s,baz=166,slow=35						
	comp=Z,1.9nm,0.5s						
WRA	**Warramunga Arr**	39.85	293	P	P	16 25 16.1	-0.2
WB0	**Warramunga Arr**	39.94	293	P	P	16 25 16.4	-0.6
WB0				IAmb	IAmb	16 25 21.7	
	comp=Z,9.3nm,1.4s						
MTN	**Manton Dam**	47.07	297	P	P	16 26 14.5	0.0
QSPA	**South Pole Qui**	47.11	180	P	P	16 26 16.1	+1.7
QSPA				IAmb	IAmb	16 26 35.7	
	comp=Z,11nm,1.1s						
FITZ	**Fitzroy Crossi**	47.12	287	P	P	16 26 13.9	-1.0
MORW	**Morawa**	47.42	268	P	P	16 26 16.4	-0.7
MORW				IAmb	IAmb	16 26 18.9	
	comp=Z,13nm,1.2s						
PSA00	**Pilbara Seismi**	49.02	278	P	P	16 26 29.2	-0.4
PSA00				IAmb	IAmb	16 27 02.3	
	comp=Z,17nm,1.3s						
FAKI	**Fak Fak**	54.02	306	P	P	16 27 06.4	-0.6
FAKI				IAmb	IAmb	16 27 13.0	
	comp=Z,13nm,1.0s						
SNAA	**Sanae**	65.59	181	P	P	16 28 26.9	+0.9
KKM	**Kota Kinabalu**	70.96	298	P	P	16 28 59.6	-0.8
PLCA	**Paso Flores**	78.73	136	LR	LR	16 56 43.1	
	comp=Z,140nm,19.4s,baz=77,slow=30						
KSRS	**Korea Array**	90.06	326	P	P	16 30 42.8	+0.8
	comp=Z,1.6nm,0.6s,baz=148,slow=4.5,SNR=4.7						
	comp=Z,1.6nm,0.6s						
CMAR	**Chiang Mai Arr**	91.44	294	P	P	16 30 50.4	+1.4
	comp=Z,0.7nm,0.9s,baz=169,slow=3.9,SNR=5.2						
	comp=Z,0.7nm,0.9s						
PZH	**PanZhiHua**	95.33	301	P	P	16 31 08.3	+1.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,110nm,5.7s						
WMQ	**Urumqi**	115.31	307	*e*P	PKPdf	16 36 23.9	+0.1
YKA	**Yellowknife Ar**	119.86	31	PKP	PKPdf	16 36 32.0	+0.2
	comp=Z,1.7nm,0.8s,baz=235,slow=1.7,SNR=16						
MKAR	**Makanchi Array**	120.13	307	PKP	PKPdf	16 36 32.3	-0.7
	comp=Z,1.1nm,0.9s,baz=45,slow=1.9,SNR=9.2						
KSH	**Kashi**	120.15	297	PKP	PKiKP	16 36 38.1	+4.6
NRIK	**Noril'sk**	128.01	333	PKP	PKPdf	16 36 47.7	+0.4
	comp=Z,1.8nm,0.4s,baz=61,slow=3.5,SNR=4.0						
DBIC	**Dimbokro**	143.76	183	PKP	PKPab	16 37 15.9	+0.9
	comp=Z,1.4nm,0.4s,baz=191,slow=3.6,SNR=3.6						
KBZ	**Khabaz**	144.31	289	PKP	PKPbc	16 37 17.5	+0.9
	comp=Z,2.4nm,0.9s,baz=90,slow=1.0,SNR=5.5						
DAG	**Danmarks Havn**	145.77	5	*i* P	PKPdf	16 37 19.0	-0.8
KLMR	**Klimovskoe**	147.22	319	AMP		16 37 28.5	
	comp=Z,46nm,1.7s						
KLMR	**Klimovskoe**	147.22	319	*e*PKPdf	PKPdf	16 37 20.4	-0.7
ARCES	**ARCESS Array B**	148.69	339	PKPbc	PKPbc	16 37 28.3	-0.4
	comp=Z,1.9nm,0.4s,baz=54,slow=3.0,SNR=26						
TORD	**Torodi Ar. Bea**	149.35	196	PKPbc	PKPbc	16 37 32.9	+1.0
	comp=Z,1.3nm,0.4s,baz=180,slow=0.4,SNR=4.0						
BRTR	**Keskin Array B**	149.69	278	PKPbc	PKPbc	16 37 33.0	+0.7
	comp=Z,5.7nm,0.8s,baz=151,slow=5.7,SNR=13						
SCO	**Scoresbysund**	151.41	11	*i* P	PKiKP	16 37 36.2	+0.6
FINES	**FINESS Array B**	153.14	325	PKPbc	PKPbc	16 37 39.7	+0.4
	comp=Z,3.3nm,0.8s,baz=37,slow=4.8,SNR=7.4						
AKASG	**Malin Array Be**	154.41	300	PKPbc	PKPbc	16 37 42.3	0.0
	comp=Z,1.3nm,0.8s,baz=73,slow=1.9,SNR=2.5						

NOU 01 16:18:28.2, 20°.99S×169°.96E, h78^{km}, MLv4.3/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.86	254	P	Pn	16 18 57.9	-0.3
PINNC	Pines Island,	2.84	235	P	Pn	16 19 11.7	+0.4
YATNC	Mamie plateau,	3.05	249	P	Pn	16 19 13.1	-1.1
OUENC	Ouen Island, N	3.23	243	P	Pn	16 19 17.2	+0.6
RTV	Rentapao	3.50	335	P	Pn	16 19 20.8	+0.5
ONTNC	Ouen Toro	3.52	247	P	Pn	16 19 20.8	+0.3
NOUC	Port Laguerre	3.58	251	P	Pn	16 19 21.5	+0.1
DVP	Devils Point	3.65	332	P	Pn	16 19 23.4	+1.0
KOUNC	Koumac, New Ca	5.33	274	P	Pn	16 19 45.8	+0.6

WEL 01 16:20:28.2±0.3, 43°S±3°×17°3E±°, h8^{km}±3^{km}, M3.6/23, ML3.8/17, MLv3.6/23, Error ellipse: s-maj=0.0km s-min=0.0km az=117.1, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	Greta Valley S	0.06	264	P	Pg	16 20 30.1	+0.1
GVZ				S	Sg	16 20 31.8	+0.5
AMCZ	Amberley	0.40	237	P	Pb	16 20 37.3	-0.3
KHZ	Kahutara	0.63	30	P	Pg	16 20 40.8	+0.5
KHZ				S	Sb	16 20 50.1	-0.3
LTZ	Lake Taylor	0.65	286	P	Pg	16 20 40.9	+0.3
LTZ				S	Sb	16 20 50.3	-0.7
MQZ	McQueen’s Vall	0.82	204	P	Pg	16 20 43.5	-0.4
MQZ				S	Sb	16 20 56.1	+0.2
OXZ	Oxford	0.87	245	P	Pg	16 20 45.0	+0.1
AKCZ	Akaroa Harbour	0.92	189	P	Pg	16 20 45.5	-0.5
RACZ	Rakaia	1.04	223	P	Pg	16 20 47.8	-0.5
THZ	Tophouse	1.21	353	P	Pg	16 20 50.5	-0.9
INZ	Inchbonnie	1.25	280	P	Pg	16 20 52.2	-0.1
MHCZ	Mount Hutt	1.27	243	P	Pn	16 20 50.4	-1.9
WACZ	Wakanui South	1.35	223	P	Pn	16 20 51.7	-1.7
BSWZ	Blackbirch Sta	1.37	25	P	Pn	16 20 53.2	-0.5
CMWZ	Cape Campbell	1.46	34	P	Pb	16 20 55.7	+0.1
DSZ	Denniston Nort	1.56	321	P	Pn	16 20 55.7	-0.5
MRNZ	Matariki Terra	1.58	350	P	Pb	16 20 57.6	-0.2
TUWZ	Tuamarina	1.65	22	P	Pn	16 20 56.6	-0.9
WVZ	Waitaha Valley	1.75	265	P	Pn	16 20 58.7	-0.1
NNZ	Nelson	1.75	7	P	Pn	16 20 58.7	-0.3
TKNZ	Takaka Hill	1.93	357	P	Pn	16 21 01.6	+0.2
CAW	Cannon Point	2.35	39	P	Pn	16 21 05.5	-1.7
PKE	Pukeiti	3.82	10	P	Pn	16 21 28.4	+1.0
AWAZ	Awhitu Peninsu	6.01	12	P	Pn	16 21 57.3	0.0

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*IDC **01** 16:20:59.9±1.5, 11°.67N×92°.28E, h0^{km}, mb3.8/8, mbtmp3.7/9, ML3.0/1, Error ellipse: s-maj=45.8km s-min=19.6km az=64.0*

*NDI **01** 16:21:03.5±0.5, 11°.90N×92°.14E, h10^{km}, ML3.9, mb4.1(NEIC)*

*NEIC **01** 16:21:04.7±1.0, 11°.7N±0°.1×92°.24E±0°.08, h30^{km}±8^{km}, mb4.1/12, Error ellipse: s-maj=16.9km s-min=11.5km az=187.0*

ISC 01 16:21:04.0±0.8, 11°.67N±0°.09×92°.22E±0°.08, h29^{km}, n36, σ0^{s}.79/34, mb4.0/15, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	Port Blair	0.52	91		Pn	16 21 15.7	+0.2
PBA	Port Blair	0.52	91	*e*P	Pn	16 21 15.9	+0.4
PBA				*e*S	Sn	16 21 24.9	+1.6
PBA				IAML		16 21 25.6	
	comp=N,4µm,0.3s						
PBA				IAML		16 21 26.2	
	comp=E,8µm,0.5s						
DGPR	DIGLIPUR	1.66	25	*e*P	Pn	16 21 30.4	-0.8
DGPR				*e*S	Sn	16 21 50.9	-0.5
DGPR				IAML		16 22 04.1	
	comp=N,2µm,0.6s						
DGPR				IAML		16 22 04.2	
	comp=E,2µm,0.6s						
CM31	Chiang Mai Arr	9.37	43	Pn	Pn	16 23 17.3	+0.1
CMAR	Chiang Mai Arr	9.37	43	Pn	Pn	16 23 16.5	-0.7
	baz=227,slow=13,SNR=2.0						
	comp=E,0.4nm,0.6s						
CMAR	Chiang Mai Arr	9.37	43	Pn	Pn	16 23 16.3	-0.9
CHTO	Chiang Mai	9.62	42		Pn	16 23 22.3	+1.6
VIS	Vishakhapatnam	10.49	306	*e*S	Sn	16 25 18.1	-11
PALK	Pallekele	12.17	250	Pn	Pn	16 23 55.7	+0.1
ENH	Enshi	24.49	38	P	P	16 26 19.4	-1.5
ENH				IAmb	IAmb	16 26 28.1	
	comp=Z,14nm,1.3s						
H08S3	Diego Garcia H	27.43	227	T	T	16 55 22.2	
	baz=45,slow=76,SNR=19						
H08S2	Diego Garcia H	27.44	227	T	T	16 55 23.7	
	baz=45,slow=76,SNR=19						
H08S1	Diego Carcia H	27.45	227	T	T	16 55 22.2	
	baz=45,slow=76,SNR=14						
GTA	Gaotai	28.44	12	*e*P	P	16 26 58.2	+1.7
GTA				sP	sP	16 27 08.5	+0.1
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MK31	Makanchi Array	36.00	348	P	P	16 28 02.7	+0.2
MK31				IAmb	IAmb	16 28 03.8	
	comp=Z,1.7nm,0.9s						
MKAR	Makanchi Array	36.00	348	P	P	16 28 03.2	+0.6
	comp=Z,1.4nm,0.7s,baz=170,slow=8.6,SNR=16						
	comp=Z,1.4nm,0.7s						
MKAR	Makanchi Array	36.00	348	P	P	16 28 02.1	-0.4
MAKZ	Makanchi	36.08	348	P	P	16 28 03.4	+0.2
MAKZ				IAmb	IAmb	16 28 05.2	
	comp=Z,2.8nm,1.4s						
KKAR	Karatay Array	36.54	333	P	P	16 28 07.2	+0.1
KKAR				IAmb	IAmb	16 28 27.3	
	comp=Z,1.8nm,1.1s						
SONM	Songino Array	37.97	16	P	P	16 28 19.5	+0.2
	comp=Z,0.7nm,0.6s,baz=210,slow=6.9,SNR=8.3						
	comp=Z,0.7nm,0.6s						
SONM	Songino Array	37.97	16	P	P	16 28 19.5	+0.2
KS19	Wonju Array Si	40.98	45	P	P	16 28 44.0	-0.6
KSRS	Korea Array	41.00	45	P	P	16 28 43.6	-1.0
	comp=Z,1.2nm,0.5s,baz=237,slow=8.6,SNR=8.9						
	comp=Z,1.2nm,0.5s						
ZALV	Zalesovo Beam	42.58	354	P	P	16 28 57.5	+0.2
	comp=Z,1.1nm,0.6s,baz=168,slow=7.6,SNR=6.5						
	comp=Z,1.1nm,0.6s						
ZALV	Zalesovo Beam	42.58	354	P	P	16 28 57.2	-0.1
WB0	Warramunga Arr	51.97	127	P	P	16 30 09.2	-1.7
WRA	Warramunga Arr	52.02	127	P	P	16 30 11.3	-0.1
	comp=Z,0.5nm,0.5s,baz=306,slow=8.3,SNR=12						
	comp=Z,0.5nm,0.5s						
WRA	Warramunga Arr	52.02	127	P	P	16 30 11.2	-0.1
WRAB	Tennant Creek	52.02	127	P	P	16 30 11.1	-0.2
WB2	Warramunga Arr	52.03	127	P	P	16 30 11.0	-0.4
WB2				IAmb	IAmb	16 30 27.1	
	comp=Z,3.4nm,1.1s						
WR0	Warramunga Arr	52.19	127	P	P	16 30 11.8	-0.7
WR0				IAmb	IAmb	16 30 14.4	
	comp=Z,2.2nm,1.0s						
AS31	Alice Springs	53.80	131	P	P	16 30 23.4	-1.0
ASAR	Alice Springs	53.80	131	P	P	16 30 24.5	0.0
	comp=Z,0.2nm,0.5s,baz=307,slow=7.0,SNR=14						
	comp=Z,0.2nm,0.5s						
ASAR	Alice Springs	53.80	131	P	P	16 30 24.0	-0.5
ARCES	ARCESS Array B	71.08	340	P	P	16 32 19.6	+0.4
	comp=Z,2.4nm,1.0s,baz=116,slow=6.1,SNR=4.5						
	comp=Z,2.4nm,1.0s						
ILAR	Eielson Array	91.95	22	P	P	16 34 09.7	0.0
	comp=Z,0.3nm,0.7s,baz=319,slow=4.2,SNR=4.7						
	comp=Z,0.3nm,0.7s						

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*KNET **01** 16:25:19.1±0.3, 42°.94N×74°.49E, h21^{km}±3^{km}, ml1.1, Error ellipse: s-maj=2.1km s-min=1.7km az=148.0*

*SOME **01** 16:25:19.8, 42°.97N×74°.45E, h15^{km}*

*NNC **01** 16:25:19.1±0.3, 42°.94N×74°.46E, h0^{km}, mb2.6, mpv2.5, Error ellipse: s-maj=3.8km s-min=2.2km az=155.0*

ISC 01 16:25:19.2±1.0, 42°.94N±0°.03×74°.46E±0°.02, h14^{km}±9^{km}, n30, σ0^{s}.45/55, 15C-7D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHMS	Chumysh	0.22	73	⇓P	Pb	16 25 24.9	-0.1
	SNR=39						
CHMS				⇑S	Sb	16 25 28.5	-0.5
	25nm,0.1s						
AAK	Ala-Archa	0.30	175	⇑P	Pb	16 25 26.6	+0.2
	4.0nm,0.2s,SNR=12						
AAK				⇑S	Sb	16 25 31.5	+0.3
	53nm,0.5s						
USP	Ospenovka	0.33	5	⇓P	Pb	16 25 26.6	-0.3
	2.5nm,0.1s,SNR=36						
USP				⇑S	Sb	16 25 31.5	-0.7
	40nm,0.2s						
KBK	Karagaybulak	0.46	128	⇓P	Pb	16 25 29.3	+0.3
	4.1nm,0.1s,SNR=36						
KBK				⇑S	Sb	16 25 35.4	-0.3
	9.7nm,0.1s						
SGDS	Sogindy	0.53	14	P	Pb	16 25 30.0	-0.3
	2.6nm,0.1s						
SGDS				S	Sg	16 25 37.1	+0.3
	24nm,0.1s						
EKS2	Erkin-Say	0.57	242	⇑P	Pb	16 25 31.2	+0.2
	2.8nm,0.1s,SNR=22						
EKS2				⇓S	Sb	16 25 39.4	+0.4
	5.8nm,0.1s						
UCH	Uchtor	0.71	177	⇑P	Pb	16 25 33.8	+0.3
	1.1nm,0.2s,SNR=6.5						
UCH				⇑S	Sb	16 25 43.4	+0.2
	7.7nm,0.3s						
TKM2	Tokmak 2	0.84	91	⇓P	Pg	16 25 35.2	-0.2
	1.2nm,0.1s,SNR=14						
TKM2				⇓S	Sb	16 25 46.5	-0.2
	13nm,0.1s						
TKM2	Tokmak 2	0.84	91	⇑P	Pg	16 25 34.9	-0.5
	0.2nm,0.2s						
TKM2				⇑S	Sg	16 25 46.3	-0.1
	2.3nm,0.3s						
MRKS	Merke	0.93	259	P	Pg	16 25 37.2	+0.1
	1.2nm,0.1s						
MRKS				S	Sg	16 25 49.3	+0.1
	8.1nm,0.3s						
MRKS	Merke	0.93	259	*e*P	Pg	16 25 37.2	+0.1
	1.2nm,0.1s						
MRKS				*e*S	Sg	16 25 49.3	+0.1
	8.1nm,0.3s						
AML	Almayashu	0.98	215	⇑P	Pn	16 25 38.6	-0.3
	1.3nm,0.2s						
AML	Almayashu	0.98	215	⇑P	Pb	16 25 38.2	0.0
AML				⇑S	Sn	16 25 51.9	-0.8
	0.2nm,0.5s						
DGS	Degeres	1.01	72	P	Pg	16 25 38.6	-0.1
	1.7nm,0.2s						
DGS				S	Sg	16 25 51.7	-0.2
	15nm,0.3s						
DGS	Degeres	1.01	72	*e*P	Pg	16 25 38.6	-0.1
	1.7nm,0.2s						
DGS				*e*S	Sg	16 25 51.7	-0.2
	15nm,0.3s						
KST	Kastek	1.11	84	P	Pg	16 25 40.7	+0.1
	1.2nm,0.1s						
KST				S	Sn	16 25 55.3	-0.1
	5.9nm,0.4s						
KST	Kastek	1.11	84	*e*P	Pg	16 25 40.7	+0.1
	1.2nm,0.1s						
KST				*e*S	Sn	16 25 55.4	-0.1
	5.9nm,0.4s						
KRBS	Karabastau	1.17	49	P	Pg	16 25 41.4	-0.3
	1.1nm,0.1s						
KRBS				S	Sg	16 25 56.9	-0.1
	2.9nm,0.1s						
KRBS	Karabastau	1.17	49	*e*P	Pg	16 25 41.4	-0.3
	1.1nm,0.1s						
KRBS				*e*S	Sg	16 25 56.9	-0.1
	2.9nm,0.1s						
KUU	Kurty	1.67	54	P	Pb	16 25 50.0	+0.3
	1.3nm,0.1s						
KUU				S	Sb	16 26 11.4	+0.8
	5.6nm,0.3s						
KUU	Kurty	1.67	54	*e*P	Pb	16 25 50.0	+0.3
	1.3nm,0.1s						
KUU				*e*S	Sb	16 26 11.4	+0.8
	5.6nm,0.3s						
KTBS	Karatobe	1.80	64	P	Pb	16 25 52.3	+0.4
	1.5nm,0.3s						
KTBS				S	Sb	16 26 15.3	+1.1
	8.3nm,0.5s						
KTBS	Karatobe	1.80	64	*e*P	Pb	16 25 52.3	+0.4
	1.5nm,0.3s						
KTBS				*e*S	Sb	16 26 15.3	+1.1
	8.3nm,0.5s						
TNSS	Tian-Shan	1.83	86	P	Pg	16 25 54.0	-0.3
TNSS				S	Sg	16 26 18.0	-0.1
TNSS	Tian-Shan	1.83	86	*e*P	Pg	16 25 54.0	-0.3
TNSS				*e*S	Sg	16 26 18.0	-0.1
MDOK	Medeo	1.91	82	⇓Pg	Pb	16 25 53.7	-0.2
	1.1nm,0.6s						
MDOK				Pg	Pb	16 25 54.4	+0.5
	1.2nm,0.2s						
MDOK				Lg	Lg	16 26 19.0	
	5.7nm,0.3s						
MDOK				⇑Lg	Lg	16 26 20.0	
	2.7nm,0.4s						
MDOK	Medeo	1.91	82	*e*P	Pb	16 25 54.4	+0.5
	1.2nm,0.2s						
MDOK				*e*S	Sb	16 26 19.0	+1.3
	5.7nm,0.3s						
BTLS	Baital	2.13	352	Pg	Pb	16 25 58.0	+0.5
	0.4nm,0.1s						
BTLS				Lg	Lg	16 26 25.1	
	3.1nm,0.4s						
BTLS	Baital	2.13	352	*e*Pg	Pb	16 25 58.0	+0.5
	0.4nm,0.1s						
BTLS				*e*Lg	Lg	16 26 25.1	
	3.1nm,0.4s						
KK31	Karatay Array	2.90	275	⇑Lg	Lg	16 26 47.7	
	0.2nm,0.3s,baz=335,slow=40,SNR=4.2						

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*NOU **01** 16:47:46.5, 10°.71S×161°.98E, h0^{km}, mb4.9/19, Solomon Islands*

*BJI **01** 16:47:47.4±0.0, 11°.01S×161°.65E, h32^{km}, mb4.7/13, mB5.1/7, Ms4.4/1, Ms7 4.4/2*

*NEIC **01** 16:47:48.8±1.4, 10°.80S±0°.08×161°.95E±0°.10, h40^{km}±7^{km}, mb4.9/59, Error ellipse: s-maj=14.7km s-min=10.8km az=60.0*

*GCMT **01** 16:47:50.8±0.4, 10°.84S±0°.02×161°.76E±0°.02, h35^{km}±1^{km}, MW4.9/65, Moment Tensor Solution. s20,c22; s65,c81; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.98±.24; $M_{\theta\theta}$-0.62±.16; $M_{\phi\phi}$-1.36±.15; $M_{r\theta}$-0.36±.13; $M_{\theta\phi}$2.04±.08; $M_{\phi r}$-1.31±.14; Best double couple: $M_0$2.99500×10^{16} NP1:ϕ_s168.00000°, δ61.00000°, λ127.00000°. NP2: ϕ_s290.00000°, δ45.00000°, λ42.00000°. Principal axes: T 2.8050, Plg57.0000°, Azm129.0000°; N 0.3840, Plg32.0000°, Azm328.0000°; P -3.1860, Plg9.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **01** 16:47:51.4±2.5, 10°.83S×161°.83E, h65^{km}±20^{km}, mb3.7/13, mbtmp4.1/16, MS3.9/37 Error ellipse: s-maj=21.6km s-min=13.6km az=80.0*

ISC 01 16:47:48.6±0.4, 10°.80S±0°.05×161°.93E±0°.06, h36^{km}, n179, σ1^{s}.62/145, mb4.8/57, MS4.0/39, 3D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.38	305	P	Pn	16 48 25.4	+0.3
	27µm,0.6s,baz=172,slow=6.9,SNR=225						
HNR				S	Sn	16 48 55.9	+2.9
	30µm,0.3s,baz=134,slow=20,SNR=5.4						
HNR	Honiara	2.38	305	Pn	Pn	16 48 24.3	-0.8
HNR	Honiara	2.38	305	P	Pn	16 48 26.5	+1.4
DVP	Devils Point	9.17	139	P	Pn	16 50 00.6	+2.2
RTV	Rentapao	9.38	139	P	Pn	16 50 04.4	+3.2
KOUNC	Koumac, New Ca	9.96	167	Pn	Pn	16 50 08.4	-0.8
KOUNC	Koumac, New Ca	9.96	167	P	Pn	16 50 12.0	+2.8
KRVT	Keravat (AS076	11.74	303	LR	LR	16 55 29.3	
	comp=Z,1µm,21.9s,baz=267,slow=39						
NOUC	Port Laguerre	11.99	160	P	Pn	16 50 38.2	+1.1
DZM	Mont Dzumac	12.01	159	*e*LR	LR	16 53 22.7	
	comp=Z,2µm,24.8s						
DZM	Mont Dzumac	12.01	159	P	Pn	16 50 39.7	+2.2
	3.4nm,0.3s,baz=29,slow=8.2,SNR=83						
DZM				S	Sn	16 52 45.6	-4.7
	5.1nm,0.8s,baz=312,slow=23,SNR=1.4						
DZM				LR	LR	16 54 24.9	
	comp=Z,917nm,21.1s,baz=6.0,slow=33						
DZM	Mont Dzumac	12.01	159	Pn	Pn	16 50 37.1	-0.3
DZM	Mont Dzumac	12.01	159	P	Pn	16 50 40.2	+2.8
MARNC	Mare, Loyalty	12.13	152	Pn	Pn	16 50 38.0	-0.9
MARNC	Mare, Loyalty	12.13	152	P	Pn	16 50 41.6	+2.7
YATNC	Mamie plateau,	12.16	158	P	Pn	16 50 41.0	+1.6
ONTNC	Ouen Toro	12.23	160	Pn	Pn	16 50 39.8	-0.6
ONTNC	Ouen Toro	12.23	160	P	Pn	16 50 44.0	+3.6
OUENC	Ouen Island, N	12.47	158	Pn	Pn	16 50 42.9	-0.7
OUENC	Ouen Island, N	12.47	158	P	Pn	16 50 46.6	+3.0
PINNC	Pines Island,	12.88	157	Pn	Pn	16 50 48.7	-0.5
PINNC	Pines Island,	12.88	157	P	Pn	16 50 52.0	+2.8
PMG	Port Moresby	14.61	274	P	Pn	16 51 14.3	+1.4
	19nm,1.1s,baz=90,slow=13,SNR=4.6						
PMG				LR	LR	16 56 44.9	
	comp=Z,1µm,19.3s,baz=101,slow=37						
PMG	Port Moresby	14.61	274	Pn	Pn	16 51 12.2	-0.7
TARA	Tarawa	16.29	43		Pn	16 51 35.8	+1.0
TARA				IAmb	IAmb	16 51 40.3	
	comp=Z,74nm,0.8s						
RK1H	Rockhampton Ha	16.61	220	P	P	16 51 40.9	0.0
MSVF	Nonsavu	17.07	116	LR	LR	16 57 27.5	
	comp=Z,411nm,20.8s,baz=324,slow=34						
CTA	Charters Tower	17.70	237	P	Pn	16 51 52.5	+0.1
	comp=Z,34nm,0.8s,baz=69,slow=12,SNR=24						
CTA				LR	LR	16 58 01.7	
	comp=Z,432nm,19.9s,baz=63,slow=35						
CTAO	Charters Tower	17.70	237		Pn	16 51 51.1	-1.3
CTAO				IAmb	IAmb	16 51 58.0	
	comp=Z,62nm,1.1s						
CTAO	Charters Tower	17.70	237	P	P	16 51 54.9	+1.9
EIDS	Eidsvold	17.77	214	P	P	16 51 56.4	+2.7
	baz=18,SNR=5.9						
EIDS	Eidsvold	17.77	214		Pn	16 51 52.3	-1.0
PATS	Pohnpei	17.89	348		P	16 51 55.7	+0.6
PATS				IAmb	IAmb	16 51 59.9	
	comp=Z,301nm,1.5s						
MTSU	Mount Surprise	18.54	245	P	Pn	16 52 05.2	+2.5
	baz=19,SNR=13						
MTSU	Mount Surprise	18.54	245	P	Pn	16 52 06.4	+3.7
COEN	Coen	18.59	258	P	Pn	16 52 04.6	+1.3
	baz=19,SNR=7.0						
COEN	Coen	18.59	258	Pn	Pn	16 52 04.9	+1.6
RMQ	Roma	19.95	217	P	Pn	16 52 20.6	+1.0
	baz=21,SNR=24						
RMQ	Roma	19.95	217	P	Pn	16 52 21.9	+2.3
ARMA	Armidale	21.75	205	P	P	16 52 37.1	0.0
QLP	Quilpie	22.92	224	P	P	16 52 51.8	+2.3
	baz=24,SNR=7.2						
QIS	Mount Isa	23.56	243	P	P	16 52 56.1	+0.1
	baz=24,SNR=5.9						
AFI	Afiamalu	25.86	100	LR	LR	17 01 45.2	
	comp=Z,714nm,19.4s,baz=256,slow=32						
RAO	Raoul Island	26.29	137	LR	LR	17 02 25.8	
	comp=Z,192nm,18.1s,baz=132,slow=33						
CAN	Canberra	27.10	204	P	P	16 53 25.7	-2.5
CAN				IAmb	IAmb	16 53 30.5	
	comp=Z,37nm,1.4s						
WR0	Warramunga Arr	27.90	248	P	P	16 53 34.1	-1.3
WB0	Warramunga Arr	27.98	248	P	P	16 53 34.4	-1.9
WB0				IAmb	IAmb	16 53 45.1	
	comp=Z,39nm,1.4s						
WRAB	Tennant Creek	28.07	248	P	P	16 53 35.8	-1.1
WRAB				IAmb	IAmb	16 53 56.5	
	comp=Z,27nm,1.4s						
WB2	Warramunga Arr	28.07	248	P	P	16 53 35.8	-1.2
WRA	Warramunga Arr	28.08	248	P	P	16 53 35.5	-1.6
	comp=Z,2.7nm,0.8s,baz=69,slow=7.5,SNR=13						
	comp=Z,2.7nm,0.8s						
WRA	Warramunga Arr	28.08	248	P	P	16 53 35.0	-2.1
STKA	Stephens Creek	28.16	219	P	P	16 53 37.1	-0.6
	comp=Z,1.1nm,0.5s,baz=37,slow=14,SNR=2.4						
STKA				LR	LR	17 04 51.8	
	comp=Z,854nm,18.8s,baz=38,slow=36						
	comp=Z,1.1nm,0.5s						
STKA	Stephens Creek	28.16	219	P	P	16 53 39.9	+2.3
	baz=29,SNR=5.1						
STKA	Stephens Creek	28.16	219	P	P	16 53 37.0	-0.6
KDU	Kakadu	28.90	263	P	P	16 53 43.3	-1.1
	baz=29,SNR=3.8						
GUMO	Guam	29.56	325	LR	LR	17 04 49.3	
	comp=Z,332nm,21.7s,baz=144,slow=34						
AS31	Alice Springs	29.60	241	P	P	16 53 48.7	-1.9
ASAR	Alice Springs	29.60	241	P	P	16 53 48.9	-1.7
	comp=Z,1.5nm,0.6s,baz=63,slow=9.8,SNR=19						
	comp=Z,1.5nm,0.6s						
ASAR	Alice Springs	29.60	241	P	P	16 53 48.7	-1.9
TOO	Toolangi	30.48	206	P	P	16 53 59.8	+1.6
	baz=31,SNR=5.3						
TOO	Toolangi	30.48	206	P	P	16 53 58.4	+0.2
URZ	Urewera	30.54	156	LR	LR	17 04 44.9	
	comp=Z,332nm,19.9s,baz=64,slow=33						
RTZ	Ruatahuna	30.80	157	P	P	16 54 01.7	+0.7
HTT	Hallett	30.87	220	P	P	16 54 03.2	+1.5
	baz=32,SNR=3.8						
BKZ	Black Stump Fm	31.09	158	P	P	16 54 04.7	+1.1
BKZ				IAmb	IAmb	16 54 18.9	
	comp=Z,26nm,1.5s						
TCW	Tory Channel	32.19	162	P	P	16 54 12.8	-0.3
TUWZ	Tuamarina	32.29	163	P	P	16 54 14.8	+0.8
BBOO	Buckleboo	32.34	223	P	P	16 54 14.6	0.0
BBOO				IAmb	IAmb	16 54 24.6	
	comp=Z,14nm,0.9s						
KNRA	Kununurra	32.63	258	P	P	16 54 16.6	-0.7
	baz=33,SNR=7.9						
KNRA	Kununurra	32.63	258	P	P	16 54 16.1	-1.2
KNRA				IAmb	IAmb	16 54 27.2	
	comp=Z,29nm,0.8s						
RPZ	Rata Peaks	33.73	168	LR	LR	17 08 34.6	
	comp=Z,233nm,18.0s,baz=332,slow=37						
RPZ	Rata Peaks	33.73	168	P	P	16 54 25.8	-0.9
RPZ				IAmb	IAmb	16 55 14.3	
	comp=Z,45nm,1.5s						
WRKA	Warakurna	34.88	241	P	P	16 54 36.8	-0.1
	baz=36,SNR=6.1						
LBMI	Labuha	35.67	284	P	P	16 54 46.3	+2.6
FITZ	Fitzroy Crossi	35.84	254	P	P	16 54 42.7	-2.4
SANI	Sanana	36.72	281	P	P	16 54 53.1	+0.4
	comp=Z,42nm,1.2s,comp=Z,572nm						
RAR	Rarotonga	38.14	111	LR	LR	17 08 00.7	
	comp=Z,97nm,21.3s,baz=230,slow=32						
MMRI	Maumere	39.17	270	P	P	16 55 11.3	-2.1
	comp=Z,31nm,0.9s						
DAV	Davao City (W)	40.31	295	LR	LR	17 13 18.5	
	comp=Z,80nm,18.0s,baz=90,slow=38						
PSA00	Pilbara Seismi	41.69	250	P	P	16 55 33.3	-0.8
KAPI	Kappang	42.14	274	LR	LR	17 14 42.5	
	comp=Z,70nm,20.8s,baz=100,slow=38						
JCJ	Chichijima	42.26	333	LR	LR	17 11 34.8	
	comp=Z,150nm,20.2s,baz=117,slow=34						
TOLI2	Tolitoli	42.60	284	P	P	16 55 39.1	-2.6
MPSI	Mapaga	43.23	282	P	P	16 55 41.6	-5.1
	comp=Z,9.6nm,0.9s						
MEEK	Meekatharra	43.71	243	P	P	16 55 51.3	+0.7
	baz=44,SNR=5.7						
TWSI	Taliwang, Sumb	44.41	269	P	P	16 55 54.0	-2.3
	comp=Z,14nm,0.8s						
MYLDM	Lahad Datu	46.06	288	P	P	16 56 09.9	+0.5
MYLDM				IAmb	IAmb	16 56 29.7	
	comp=Z,25nm,1.0s						
IGBI	Denpasar	46.11	268	P	P	16 56 07.5	-2.3
	comp=Z,23nm,0.6s						
MORW	Morawa	46.48	240	P	P	16 56 13.4	+0.9
	baz=47,SNR=3.6						
MORW	Morawa	46.48	240	P	P	16 56 11.4	-1.1
MORW				IAmb	IAmb	16 56 21.1	
	comp=Z,11nm,0.8s						
JAGI	Jajag, Banyuwa	47.13	268	P	P	16 56 15.7	-2.0
JAGI				IAmb	IAmb	16 56 26.7	
	comp=Z,33nm,1.1s						
JAGI	Jajag, Banyuwa	47.13	268	P	P	16 56 14.0	-3.8
	comp=Z,32nm,0.7s						
PPT	Papeete	47.39	104	LR	LR	17 13 29.4	
	comp=Z,142nm,18.3s,baz=264,slow=32						
PPT2	Papeete2	47.39	104	*e*LR	LR	17 09 46.7	
	comp=Z,300nm,28.8s						
PPT2				*e*LR	LR	17 09 46.8	
	comp=Z,451nm,26.0s						
TBI	Tubuai	47.90	112	*e*LR	LR	17 10 00.6	
	comp=Z,1µm,32.2s						
TBI				*e*LR	LR	17 10 01.0	
	comp=Z,3µm,24.0s						
JHJ	Hachijo jima 2	48.51	335	LR	LR	17 16 24.8	
	comp=Z,75nm,20.4s,baz=18,slow=35						
PWJI	Pagerwojo	49.49	269	P	P	16 56 32.7	-3.3
	comp=Z,15nm,0.8s						
JOW	Kunigami	49.67	319	LR	LR	17 16 29.2	
	comp=Z,86nm,21.3s,baz=341,slow=35						
JMN	Monobe	51.70	330	P	P	16 56 51.6	-0.7
MJAR	Matsushiro Arr	52.12	336	P	P	16 56 54.9	-0.5

	comp=Z,0.8nm,0.5s,baz=165,slow=7.9,SNR=2.2						
MJAR				LR	LR	17 18 15.3	
	comp=Z,61nm,21.6s,baz=136,slow=35						
	comp=Z,0.8nm,0.5s						
JMM	**Marumori**	**52.30**	**339**	P	**P**	**16 56 55.9**	**-0.8**
JTM	**Tenmabayashi**	**54.83**	**341**	P	**P**	**16 57 14.3**	**-0.8**
JTM				IAmb	IAmb	16 59 03.9	
	comp=Z,28nm,1.2s						
ERM	**Erimo**	**55.31**	**343**	P	**P**	**16 57 18.1**	**-0.5**
CGJI	**Cibinong**	**55.69**	**269**	P	**P**	**16 57 18.4**	**-3.5**
	comp=Z,53nm,0.9s						
TAOE	**Nuku Hiva Isla**	**57.03**	**94**	*e*LR	LR	17 14 14.7	
	comp=Z,316nm,25.3s						
JKA	**Kamikawa-asahi**	**57.41**	**344**	P	**P**	**16 57 33.2**	**-0.3**
LWLI	**Liwa**	**57.54**	**271**	P	**P**	**16 57 34.2**	**-1.0**
KSRS	**Korea Array**	**57.63**	**328**	P	**P**	**16 57 34.0**	**-1.2**
	comp=Z,1.1nm,0.8s,baz=148,slow=21,SNR=1.7						
KSRS				LR	LR	17 20 37.7	
	comp=Z,85nm,20.6s,baz=135,slow=34						
	comp=Z,1.1nm,0.8s						
DRV	**Dumont d'Urvil**	**57.73**	**190**	P	**P**	**16 57 34.7**	**-0.8**
DRV				pP	**pP**	**16 57 44.8**	**-0.8**
DRV				sP	**pwP**	**16 57 49.3**	**+0.3**
NJ2	**Nanjing**	**59.26**	**318**	*e*P	P	16 57 56.2	+9.5
NJ2				pP	sP	16 58 11.0	+9.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,210nm,4.2s						
USA0B	**Ussuriysk Arra**	**61.12**	**336**	P	**P**	**16 57 58.2**	**-1.0**
USRK	**Ussuriysk Ar.**	**61.12**	**336**	P	**P**	**16 57 59.2**	**0.0**
	comp=Z,1.4nm,0.7s,baz=143,slow=5.3,SNR=4.6						
USRK				LR	LR	17 22 26.8	
	comp=Z,45nm,21.0s,baz=158,slow=34						
	comp=Z,1.4nm,0.7s						
USRK	**Ussuriysk Ar.**	**61.12**	**336**	P	**P**	**16 57 58.3**	**-0.9**
CN2	**Changchun**	**63.67**	**331**	P	P	16 58 24.3	+8.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SHEM	**Shemya Is, Ala**	**64.13**	**8**	LR	LR	17 20 32.3	
	comp=Z,94nm,19.6s,baz=70,slow=31						
LYN	**LuoYang**	**65.04**	**316**	*e*P	**P**	**16 58 25.6**	**+0.2**
LYN				pP	pP	16 58 38.1	+1.5
LYN				sP	sP	16 58 41.1	+0.3
LYN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LYN				pmax	pmax		
	comp=Z,150nm,3.5s						
LYN				LR	LR		
	comp=Z,140nm,16.5s						
LYN				LR	LR		
	comp=Z,130nm,18.1s						
GSI	**Gunungsitoli**	**65.11**	**277**	P	**P**	**16 58 25.0**	**-1.3**
HNS	**HongShan**	**65.24**	**320**	⇓P	P	16 58 35.3	+8.6
HNS				pmax	pmax		
	comp=Z,11nm,1.2s						
VNDA	**Vanda**	**66.71**	**180**	P	**P**	**16 58 35.9**	**+0.4**
	comp=Z,5.4nm,0.7s,baz=342,slow=6.6,SNR=20						
VNDA				LR	LR	17 23 08.0	
	comp=Z,81nm,19.6s,baz=354,slow=32						
	comp=Z,5.4nm,0.7s						
VNDA	**Vanda**	**66.71**	**180**	P	**P**	**16 58 35.9**	**+0.4**
VNDA				IAmb	IAmb	16 58 36.8	
	comp=Z,8.0nm,0.9s						
VNDA	**Vanda**	**66.71**	**180**	P	**P**	**16 58 36.4**	**+0.9**
VNDA				sP	**sP**	**16 58 52.1**	**+4.4**
XAN	**Xi'an**	**67.22**	**314**	⇓P	P	16 58 47.8	+8.3
XAN				pP	sP	16 58 54.6	-0.2
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
XAN				LR	LR		
	comp=N,130nm,17.5s						
XAN				LR	LR		
	comp=E,150nm,19.0s						
XAN				LR	LR		
	comp=Z,190nm,20.0s						
CCD	**Concordia, Ant**	**67.77**	**190**	P	**P**	**16 58 43.0**	**+0.2**
CCD				pP	**pP**	**16 58 54.0**	**+1.2**
HEH	**HeiHe**	**67.86**	**337**	*e*P	P	16 58 50.3	+7.2
HEH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HEH				pmax	pmax		
	comp=Z,180nm,4.4s						
CRAI	**Chiangrai**	**67.95**	**297**	P	**P**	**16 58 42.7**	**-1.7**
CRAI				IAmb	IAmb	16 58 53.9	
	comp=Z,5.1nm,0.7s						
XLT	**XiLinHaoTe**	**68.53**	**326**	⇓*i*P	P	16 58 56.1	+8.5
XLT				pmax	pmax		
	comp=Z,22nm,1.4s						
XLT				pmax	pmax		
	comp=Z,120nm,5.4s						
CMAR	**Chiang Mai Arr**	**68.59**	**295**	P	**P**	**16 58 47.8**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=126,slow=5.2,SNR=4.8						
CMAR				LR	LR	17 30 59.6	
	comp=Z,20nm,18.1s,baz=100,slow=38						
	comp=Z,0.4nm,0.7s						
CHTO	**Chiang Mai**	**68.72**	**295**	P	**P**	**16 58 48.0**	**-1.2**
PZH	**PanZhiHua**	**69.20**	**304**	P	**P**	**16 58 55.1**	**+2.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,70nm,4.1s						
LZH	**Lanzhou**	**71.85**	**314**	*e*P	P	16 59 18.0	+10
LZH				pP	sP	16 59 22.4	-1.2
LZH				pmax	pmax		
	comp=Z,6.0nm,1.5s						
LZH				LR	LR		
	comp=N,120nm,15.5s						
LZH				LR	LR		
	comp=E,140nm,15.5s						
LZH				LR	LR		
	comp=Z,190nm,15.1s						
ULN	**Ulaanbaatar**	**75.94**	**325**	P	**P**	**16 59 31.4**	**-0.5**
ULN				IAmb	IAmb	16 59 41.8	
	comp=Z,15nm,1.1s						
GTA	**Gaotai**	**76.22**	**315**	*e*P	P	16 59 42.7	+9.1
GTA				pP	sP	16 59 58.6	+10
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GTA				LR	LR		
	comp=N,67nm,16.7s						
GTA				LR	LR		
	comp=E,93nm,19.1s						
GTA				LR	LR		
	comp=Z,130nm,19.5s						
SONM	**Songino Array**	**76.29**	**325**	P	**P**	**16 59 33.6**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=144,slow=5.6,SNR=15						
	comp=Z,1.4nm,0.7s						
SONM	**Songino Array**	**76.29**	**325**	P	**P**	**16 59 33.2**	**-0.6**
SONM				IAmb	IAmb	16 59 43.6	
	comp=Z,12nm,1.1s						
P18K	**Big Mountain,**	**77.95**	**21**	P	**P**	**16 59 41.8**	**-1.1**
BILL	**Bilibino**	**78.70**	**2**	P	**P**	**16 59 46.1**	**-0.6**
BILL				IAmb	IAmb	16 59 57.1	
	comp=Z,19nm,1.1s						
QSPA	**South Pole Qui**	**79.20**	**180**	LR	LR	17 31 15.5	
	comp=Z,90nm,19.4s,baz=78,slow=33						
QSPA	**South Pole Qui**	**79.20**	**180**	P	**P**	**16 59 48.2**	**-1.6**
QSPA				IAmb	IAmb	17 00 37.3	
	comp=Z,44nm,1.9s						
BRLK	**Bradley Lake**	**79.78**	**22**	P	**P**	**16 59 53.1**	**+0.2**
M19K	**Big River Lodg**	**80.07**	**19**	P	**P**	**16 59 53.9**	**-0.4**
CAST	**Castle Rocks**	**81.90**	**19**	P	**P**	**17 00 03.5**	**-0.5**
CAST				IAmb	IAmb	17 00 14.4	
	comp=Z,39nm,1.7s						
KTH	**Kantishna Hill**	**82.37**	**19**	P	**P**	**17 00 06.3**	**-0.3**
RDOG	**Red Dog Mine**	**82.56**	**13**	P	**P**	**17 00 06.4**	**-1.0**
RDOG				IAmb	IAmb	17 00 18.7	
	comp=Z,13nm,1.2s						
BPAW	**Bear Paw Mtn.**	**82.73**	**19**	P	**P**	**17 00 07.8**	**-0.6**
BPAW				IAmb	IAmb	17 00 20.0	
	comp=Z,17nm,1.4s						
MCK	**McKinley**	**83.15**	**20**	P	**P**	**17 00 08.7**	**-1.8**
MCK				IAmb	IAmb	17 00 22.5	
	comp=Z,29nm,1.3s						
I21K	**Tanana**	**83.17**	**18**	P	**P**	**17 00 10.9**	**+0.3**
IMAR	**Indian Mountai**	**83.23**	**17**	P	**P**	**17 00 10.9**	**0.0**
H21K	**Melozitna Rive**	**83.27**	**17**	P	**P**	**17 00 11.7**	**+0.5**
H21K				IAmb	IAmb	17 00 23.5	
	comp=Z,22nm,1.6s						
NEA2	**Nenana**	**83.68**	**19**	P	**P**	**17 00 12.5**	**-0.7**
NEA2				IAmb	IAmb	17 00 23.6	
	comp=Z,15nm,1.4s						
WRH	**Wood River Hil**	**83.91**	**19**	P	**P**	**17 00 13.3**	**-1.1**
WRH				IAmb	IAmb	17 01 56.2	
	comp=Z,24nm,1.8s						
RPN	**Rapa Nui**	**84.04**	**116**	LR	LR	17 29 56.3	
	comp=Z,106nm,21.0s,baz=236,slow=30						
CCB	**Clear Creek Bu**	**84.12**	**19**	P	**P**	**17 00 14.3**	**-1.2**
CCB				IAmb	IAmb	17 00 46.6	
	comp=Z,30nm,2.0s						
HDA	**Harding Lake**	**84.25**	**20**	P	**P**	**17 00 15.6**	**-0.6**
HDA				IAmb	IAmb	17 00 17.5	
	comp=Z,6.7nm,0.9s						
ILAR	**Eielson Array**	**84.50**	**20**	P	**P**	**17 00 16.1**	**-1.3**
	comp=Z,1.0nm,0.9s,baz=255,slow=4.9,SNR=10						
ILAR				LR	LR	17 33 52.4	
	comp=Z,146nm,19.0s,baz=241,slow=33						
	comp=Z,1.0nm,0.9s						
ILAR	**Eielson Array**	**84.50**	**20**	P	**P**	**17 00 17.2**	**-0.2**
RIDG	**Independent Ri**	**84.55**	**21**	P	**P**	**17 00 18.4**	**+0.6**
DOT	**Dot Lake**	**84.77**	**21**	P	**P**	**17 00 19.2**	**+0.3**
DOT				IAmb	IAmb	17 00 20.3	
	comp=Z,7.0nm,1.0s						
M27K	**Edge Creek, AK**	**84.82**	**23**	P	**P**	**17 00 19.7**	**+0.4**
SCRK	**Sand Creek**	**85.00**	**21**	P	**P**	**17 00 20.6**	**+0.5**
SCRK				IAmb	IAmb	17 00 33.9	
	comp=Z,5.8nm,1.0s						
BCAR	**Beaver Creek A**	**85.26**	**22**	P	**P**	**17 00 21.4**	**0.0**
I26K	**Coal Creek Min**	**86.08**	**20**	P	**P**	**17 00 24.6**	**-0.7**
WMQ	**Urumqi**	**86.29**	**316**	*e*P	**P**	**17 00 26.9**	**0.0**
YBH	**Yreka Blue Hor**	**86.42**	**47**	LR	LR	17 37 47.0	
	comp=Z,44nm,18.0s,baz=292,slow=35						
BBB	**Bella Bella**	**86.52**	**35**	LR	LR	17 31 04.0	
	comp=Z,56nm,21.9s,baz=310,slow=30						
BMAR	**Burnt Mountain**	**86.91**	**18**	P	**P**	**17 00 29.0**	**-0.4**
DLBC	**Dease Lake**	**88.00**	**29**	LR	LR	17 34 05.5	
	comp=Z,153nm,18.7s,baz=288,slow=32						
NVAR	**Mina Array Bea**	**88.75**	**51**	P	**P**	**17 00 40.0**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=227,slow=9.4,SNR=5.4						
	comp=Z,0.6nm,0.8s						
PFO	**Pinyon Flats O**	**89.02**	**56**	LR	LR	17 32 25.4	
	comp=Z,151nm,20.9s,baz=262,slow=30						
MKAR	**Makanchi Array**	**90.80**	**317**	P	**P**	**17 00 46.7**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=97,slow=6.5,SNR=5.3						
	comp=Z,0.3nm,0.5s						
INK	**Inuvik**	**90.91**	**20**	LR	LR	17 37 05.8	
	comp=Z,169nm,20.4s,baz=242,slow=32						
ELK	**Elko**	**91.60**	**49**	LR	LR	17 33 35.2	
	comp=Z,69nm,21.8s,baz=196,slow=30						
KSH	**Kashi**	**93.69**	**309**	P	**P**	**17 01 05.4**	**+3.5**
KSH				pP	sP	17 01 16.5	-1.1
KSH				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NRIK	**Noril'sk**	**94.60**	**340**	LR	LR	17 44 24.8	
	comp=Z,38nm,20.0s,baz=139,slow=36						
AAK	**Ala-Archa**	**95.35**	**312**	LR	LR	17 45 42.9	
	comp=Z,24nm,20.6s,baz=54,slow=36						
YKA	**Yellowknife Ar**	**96.48**	**28**	P	**P**	**17 01 13.3**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=256,slow=4.7,SNR=10						
	comp=Z,0.7nm,0.7s						
SNAA	**Sanae**	**97.08**	**185**	LR	LR	17 42 59.4	
	comp=Z,48nm,19.8s,baz=187,slow=34						
TXAR	**Lajitas Array**	**99.01**	**62**	LR	LR	17 37 13.7	
	comp=Z,91nm,21.8s,baz=278,slow=30						
ARCES	**ARCESS Array B**	**115.13**	**344**	PKP	**PKiKP**	**17 06 23.8**	**-1.7**
	comp=Z,1.8nm,0.8s,baz=48,slow=1.8,SNR=5.0						
CLL	**Collm**	**132.31**	**334**	*i* PKPdf	**PKiKP**	**17 06 59.6**	**-0.4**

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*SNET **01** 16:51:15.1±1.8, 14°.15N×89°.77W, h2^{km}, ML3.5*

*GCG **01** 16:51:18.3±0.5, 14°.12N×89°.85W, h0^{km}±297^{km}, MD3.3*

ISC 01 16:51:16.9±1.0**, 14°.11N**±0°.04×**89°.75W**±0°.04**, h12**^{km}±7^{km}**,**
n14, σ0^{s}.37/23**, 4D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLOZ	**Alcaldia de Sa**	**0.09**	**204**	⇓*i*P	**Pg**	**16 51 19.6**	**-0.2**
SLOZ				*e*S	**Sg**	**16 51 21.6**	**-0.2**
NUBE	**Las Nubes**	**0.21**	**189**	⇓*i*P	**Pg**	**16 51 21.7**	**+0.1**
NUBE				*e*S	**Sg**	**16 51 25.0**	**+0.2**
RTR	**El Retiro**	**0.23**	**156**	⇓*i*P	**Pg**	**16 51 22.1**	**+0.1**
SBLS	**San Blas**	**0.29**	**156**	⇓*i*P	**Pg**	**16 51 23.0**	**-0.1**
CEVE	**Cerro Verde**	**0.30**	**157**	*i* P	**Pg**	**16 51 23.4**	**+0.1**
CEVE				*e*S	**Sb**	**16 51 29.6**	**+0.1**
CEDA	**San Andres**	**0.46**	**132**	*e*P	**Pg**	**16 51 25.6**	**-0.3**
CEDA				*e*S	**Sg**	**16 51 32.8**	**+0.7**
MTO3	**Montecristo**	**0.47**	**52**	*i* P	**Pg**	**16 51 26.1**	**-0.1**
MTO3				*e*S	**Sg**	**16 51 32.9**	**+0.3**
JAYA	**Jayaque - finc**	**0.54**	**148**	*i* P	**Pg**	**16 51 27.5**	**0.0**
BOQS	**Boqueron**	**0.59**	**130**	*e*P	**Pg**	**16 51 28.1**	**-0.3**
ESQI	**Esquipulas**	**0.59**	**41**	*i* P	**Pg**	**16 51 28.6**	**0.0**
ESQI				*e*S	**Sg**	**16 51 36.9**	**+0.5**
NBG	**Las Nubes**	**0.75**	**309**	*e*P	**Pn**	**16 51 33.0**	**-0.6**
NBG				*e*S	**Sn**	**16 51 45.0**	**0.0**
LFRS	**El Faro**	**0.82**	**126**	*i* P	**Pg**	**16 51 32.1**	**-0.7**
PCG	**Pacaya**	**0.88**	**289**	*e*P	**Pn**	**16 51 35.1**	**-0.2**
PCG				*e*S	**Sn**	**16 51 47.8**	**-0.3**
FUG	**Fuego 3**	**1.11**	**288**	*e*P	**Pn**	**16 51 38.7**	**+0.3**
FUG				*e*S	**Sn**	**16 51 54.5**	**+0.6**

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*IDC **01** 16:51:51.6±2.4, 6°.15S×148°.69E, h56^{km}±24^{km}, mb4.0/5, mbtmp4.5/8, ML4.9/2, Error ellipse: s-maj=42.4km s-min=13.9km az=121.0*

*NEIC **01** 16:51:52.2±1.5, 6°.26S±0°.10×148°.8E±0°.1, h63^{km}±7^{km}, mb4.9/42, Error ellipse: s-maj=18.7km s-min=9.9km az=127.0*

*DJA **01** 16:51:52.2±0.7, 6°S±6°×14°9E±°, h65^{km}±10^{km}, M5.0/15, mB5.5/4, mb4.8/15, MLv5.0/2, Mw(mB)5.0/4*

ISC 01 16:51:52.6±0.4**, 6°.22S**±0°.06×**148°.67E**±0°.07**, h65**^{km}**, n109,**
σ1^{s}.12/110**, mb4.9**/33**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.50**	**205**	P	**Pn**	**16 52 44.8**	**+0.2**
	180nm,0.3s,baz=50,slow=5.5,SNR=298						
PMG				S	**Sn**	**16 53 26.3**	**+1.4**
	636nm,0.3s,baz=173,slow=15,SNR=16						
PMG	**Port Moresby**	**3.50**	**205**	P	**Pn**	**16 52 44.8**	**+0.2**
PMG	**Port Moresby**	**3.50**	**205**	P	**Pn**	**16 52 45.0**	**+0.4**
KRVT	**Keravat (AS076**	**3.85**	**61**	P	**Pn**	**16 52 47.6**	**-1.7**
	27nm,0.3s,baz=199,slow=1.4,SNR=39						
	57nm,0.3s						
RABL	**Rabaul**	**4.02**	**60**	Pn	**Pn**	**16 52 50.4**	**-1.3**
RABL	**Rabaul**	**4.02**	**60**	P	**Pn**	**16 52 51.7**	**0.0**
COEN	**Coen**	**9.40**	**215**	Pn	**Pn**	**16 54 05.1**	**-0.3**
COEN	**Coen**	**9.40**	**215**	P	**Pn**	**16 54 05.0**	**-0.3**
MTSU	**Mount Surprise**	**12.58**	**199**	P	**Pn**	**16 54 49.0**	**+0.2**
CTAO	**Charters Tower**	**13.98**	**189**	Pn	**Pn**	**16 55 05.5**	**-2.1**
FAKI	**Fak Fak**	**16.69**	**281**		**P**	**16 55 43.4**	**-0.3**
QIS	**Mount Isa**	**16.75**	**211**	P	**P**	**16 55 43.9**	**-0.4**
KDU	**Kakadu**	**17.21**	**247**	P	**Pn**	**16 55 47.7**	**-1.1**
MTN	**Manton Dam**	**18.50**	**248**	P	**P**	**16 56 03.6**	**0.0**
MTN	**Manton Dam**	**18.50**	**248**	P	**P**	**16 56 03.9**	**+0.3**
WB0	**Warramunga Arr**	**19.34**	**225**	P	**P**	**16 56 12.7**	**-0.1**
WB0				IAmb	IAmb	16 56 14.5	
	comp=Z,22nm,0.8s						
WR0	**Warramunga Arr**	**19.36**	**224**	P	**P**	**16 56 13.0**	**-0.1**
WRAB	**Tennant Creek**	**19.48**	**224**	P	**P**	**16 56 13.8**	**-0.6**
WRAB				IAmb	IAmb	16 56 16.2	
	comp=Z,36nm,0.6s						
WRAB	**Tennant Creek**	**19.48**	**224**	P	**P**	**16 56 14.1**	**-0.3**
	comp=Z,48nm,0.7s						
WB2	**Warramunga Arr**	**19.48**	**224**	P	**P**	**16 56 14.3**	**-0.1**
WB2				IAmb	IAmb	16 56 16.3	
	comp=Z,42nm,0.5s						
WRA	**Warramunga Arr**	**19.49**	**224**	P	**P**	**16 56 14.2**	**-0.3**
	comp=Z,6.9nm,0.3s,baz=51,slow=11,SNR=64						
	comp=Z,24nm,0.4s						
WRA	**Warramunga Arr**	**19.49**	**224**		**P**	**16 56 14.0**	**-0.5**
RMQ	**Roma**	**20.15**	**180**	P	**P**	**16 56 22.5**	**+0.8**
QLP	**Quilpie**	**20.69**	**191**	P	Pn	16 56 29.2	-1.1
KNRA	**Kununurra**	**21.66**	**243**	P	**P**	**16 56 37.2**	**-0.8**
KNRA				IAmb	IAmb	16 56 43.0	
	comp=Z,27nm,0.5s						
KNRA	**Kununurra**	**21.66**	**243**	P	**P**	**16 56 38.1**	**+0.1**
AS01	**Alice Springs**	**22.39**	**218**	P	**P**	**16 56 45.5**	**-0.3**
	comp=Z,27nm,0.7s						
AS31	**Alice Springs**	**22.42**	**218**	P	**P**	**16 56 45.5**	**-0.6**
ASAR	**Alice Springs**	**22.42**	**218**	P	**P**	**16 56 46.5**	**+0.4**
	comp=Z,14nm,0.5s,baz=57,slow=9.6,SNR=130						
	comp=Z,14nm,0.5s						
ASAR	**Alice Springs**	**22.42**	**218**	P	**P**	**16 56 45.6**	**-0.5**
INKA	**Innaminka**	**22.69**	**198**	P	**P**	**16 56 50.0**	**+1.2**
DZM	**Mont Dzumac**	**23.31**	**134**	P	**P**	**16 56 57.7**	**+2.5**
ARMA	**Armidale**	**24.23**	**174**	P	**P**	**16 57 02.7**	**-0.8**
ARMA				IAmb	IAmb	16 57 12.5	
	comp=Z,42nm,1.6s						
ARMA	**Armidale**	**24.23**	**174**	P	**P**	**16 57 04.5**	**+1.0**
SOEI	**Soe**	**24.41**	**260**	P	**P**	**16 57 06.0**	**+0.6**
SOEI				IAmb	IAmb	16 57 17.0	
	comp=Z,68nm,1.4s						
SOEI	**Soe**	**24.41**	**260**	P	**P**	**16 57 06.5**	**+1.1**
SOEI	**Soe**	**24.41**	**260**	P	**P**	**16 57 00.6**	**-4.8**
OOD	**Oodnadatta**	**24.75**	**208**	P	**P**	**16 57 08.8**	**+0.7**
TARA	**Tarawa**	**25.36**	**74**	P	**P**	**16 57 16.4**	**+2.6**
FITZ	**Fitzroy Crossi**	**25.38**	**240**	P	**P**	**16 57 14.6**	**+0.6**
FITZ	**Fitzroy Crossi**	**25.38**	**240**	P	**P**	**16 57 14.9**	**+0.9**
LCRK	**Leigh Creek**	**26.03**	**201**	P	**P**	**16 57 21.2**	**+1.5**
MMRI	**Maumere**	**26.32**	**263**	P	**P**	**16 57 21.4**	**-1.1**
MMRI	**Maumere**	**26.32**	**263**	P	**P**	**16 57 22.5**	**0.0**
MMRI	**Maumere**	**26.32**	**263**	P	**P**	**16 57 21.4**	**-1.1**
	comp=Z,93nm,0.8s,comp=Z,1μm						
STKA	**Stephens Creek**	**26.37**	**194**	P	**P**	**16 57 24.1**	**+1.3**
	comp=Z,3.5nm,0.8s,baz=5.9,slow=10,SNR=5.5						
	comp=Z,3.5nm,0.8s						
STKA	**Stephens Creek**	**26.37**	**194**	P	**P**	**16 57 21.2**	**-1.5**
STKA	**Stephens Creek**	**26.37**	**194**	P	**P**	**16 57 24.5**	**+1.7**
WRKA	**Warakurna**	**27.03**	**224**	P	**P**	**16 57 29.2**	**+0.3**
MULG	**Mulgathing**	**27.60**	**208**	P	**P**	**16 57 33.8**	**-0.1**
HTT	**Hallett**	**28.55**	**197**	P	**P**	**16 57 43.7**	**+1.4**
BBOO	**Buckleboo**	**28.95**	**202**	P	**P**	**16 57 45.2**	**-0.6**
BBOO				IAmb	IAmb	16 58 17.9	
	comp=Z,22nm,1.3s						
PLAI	**Plampang**	**30.73**	**263**	P	**P**	**16 58 00.3**	**-1.5**
PLAI	**Plampang**	**30.73**	**263**	P	**P**	**16 58 01.3**	**-0.5**
	comp=Z,29nm,0.8s						
FORT	**Forrest**	**31.16**	**216**	P	**P**	**16 58 03.7**	**-1.7**
FORT				IAmb	IAmb	16 58 06.5	
	comp=Z,21nm,0.7s						
FORT	**Forrest**	**31.16**	**216**	P	**P**	**16 58 05.9**	**+0.5**
TWSI	**Taliwang, Sumb**	**31.61**	**263**	P	**P**	**16 58 07.9**	**-1.7**
	comp=Z,10nm,1.3s						
PSA00	**Pilbara Seismi**	**31.78**	**238**	P	**P**	**16 58 09.8**	**-1.2**
PSA00				IAmb	IAmb	16 59 06.9	
	comp=Z,59nm,2.0s						
IGBI	**Denpasar**	**33.33**	**263**	P	**P**	**16 58 24.2**	**-0.4**
	comp=Z,30nm,0.4s,comp=Z,846nm						
JAGI	**Jajag, Banyuwa**	**34.30**	**264**	P	**P**	**16 58 31.2**	**-1.9**
JAGI				IAmb	IAmb	16 58 35.1	
	comp=Z,18nm,1.0s						
JAGI	**Jajag, Banyuwa**	**34.30**	**264**	P	**P**	**16 58 32.7**	**-0.4**
MEEK	**Meekatharra**	**35.09**	**231**	P	**P**	**16 58 40.8**	**+1.0**
KMBL	**Kambalda**	**35.42**	**222**	P	**P**	**16 58 44.1**	**+1.6**
UGM	**Wanagama**	**37.88**	**265**	P	**P**	**16 59 02.5**	**-1.3**
UGM	**Wanagama**	**37.88**	**265**	P	**P**	**16 59 02.9**	**-0.9**
MORW	**Morawa**	**38.28**	**230**	P	**P**	**16 59 07.1**	**+0.2**
MORW				IAmb	IAmb	16 59 08.8	
	comp=Z,20nm,1.3s						
MORW	**Morawa**	**38.28**	**230**	P	**P**	**16 59 07.4**	**+0.5**
KLBR	**Kellerberrin**	**38.37**	**225**	P	**P**	**16 59 07.6**	**0.0**
BLDU	**Ballidu**	**38.58**	**227**	P	**P**	**16 59 09.7**	**+0.3**
MUN	**Mundaring**	**39.68**	**226**	P	**P**	**16 59 18.8**	**+0.3**
BBJI	**Bungbulang**	**40.73**	**266**	P	**P**	**16 59 27.1**	**-0.5**
MIDW	**Midway**	**47.38**	**42**	P	**P**	**17 00 18.7**	**-1.8**
GSI	**Gunungsitoli**	**51.55**	**277**	P	**P**	**17 00 51.6**	**-1.0**
GSI				IAmb	IAmb	17 01 22.8	
	comp=Z,30nm,1.4s						
XAN	**Xi'an**	**54.91**	**320**	P	P	17 01 22.1	+5.2
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PZH	**PanZhiHua**	**55.90**	**308**	P	**P**	**17 01 25.2**	**+1.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,40nm,3.6s						
TNCH	**TengChong**	**57.81**	**305**	*e*P	**P**	**17 01 38.7**	**+0.8**
TNCH				pP	pP	17 01 53.8	-1.1
TNCH				pmax	pmax		
	comp=Z,6.0nm,0.4s						
LZH	**Lanzhou**	**59.47**	**318**	*e*P	**P**	**17 01 52.6**	**+3.4**
LZH				pP	pP	17 02 00.7	-5.5
LZH				sP	sP	17 02 06.3	-7.2
LZH				pmax	pmax		
	comp=Z,8.0nm,1.3s						
PEA0B	**Petropavlovsk-**	**59.60**	**6**	P	**P**	**17 01 49.9**	**+0.4**
PETK	**Petropavlovsk-**	**59.60**	**6**	P	**P**	**17 01 49.4**	**-0.1**
	comp=Z,4.1nm,0.9s,baz=172,slow=8.0,SNR=11						
	comp=Z,4.1nm,0.9s						
PETK	**Petropavlovsk-**	**59.60**	**6**	P	**P**	**17 01 50.0**	**+0.5**
DRV	**Dumont d'Urvil**	**60.64**	**184**	P	**P**	**17 01 56.5**	**+0.1**
HIA	**Hailar**	**60.75**	**339**	P	**P**	**17 01 58.6**	**+1.1**
HIA				pP	**pP**	**17 02 13.4**	**-1.3**
SONM	**Songino Array**	**65.41**	**330**	P	**P**	**17 02 28.8**	**+0.2**
CASY	**Casey**	**65.49**	**196**	P	**P**	**17 02 27.8**	**-0.8**
PALK	**Pallekele**	**69.12**	**280**	P	**P**	**17 02 51.8**	**-0.7**
CCD	**Concordia, Ant**	**70.35**	**187**	P	**P**	**17 02 59.6**	**+0.1**
CCD				pP	**pP**	**17 03 13.8**	**-1.6**
VNDA	**Vanda**	**71.60**	**177**	P	**P**	**17 03 06.9**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=335,slow=8.5,SNR=1.8						
	comp=Z,0.9nm,0.5s						
VNDA	**Vanda**	**71.60**	**177**	P	**P**	**17 03 06.4**	**-0.1**
VNDA				IAmb	IAmb	17 03 55.8	
	comp=Z,32nm,1.9s						
WMQ	**Urumqi**	**74.04**	**319**	*e*P	**P**	**17 03 24.0**	**+2.3**
BILL	**Bilibino**	**75.12**	**7**	P	**P**	**17 03 28.4**	**+1.1**
BILL				IAmb	IAmb	17 04 59.3	
	comp=Z,14nm,1.8s						
MKAR	**Makanchi Array**	**78.73**	**320**	P	**P**	**17 03 48.1**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=102,slow=6.4,SNR=1.8						
MAKZ	**Makanchi**	**78.93**	**320**	P	**P**	**17 03 49.3**	**+0.1**
ZAA0	**Zalesovo Array**	**80.08**	**327**	P	**P**	**17 03 56.0**	**+0.7**
ZALV	**Zalesovo Beam**	**80.08**	**327**	P	**P**	**17 03 53.7**	**-1.5**
CNPM	**China Poot**	**80.79**	**27**	P	**P**	**17 03 58.8**	**-0.1**
M20K	**Styx River**	**81.17**	**24**	P	**P**	**17 04 01.4**	**+0.4**
M20K				IAmb	IAmb	17 05 51.7	
	comp=Z,40nm,2.0s						
K20K	**Telida**	**81.59**	**23**	P	**P**	**17 04 03.5**	**+0.4**
K20K				IAmb	IAmb	17 06 04.5	
	comp=Z,41nm,1.9s						
SUA	**Susitna One**	**81.95**	**25**	P	**P**	**17 04 04.0**	**-1.2**
PPLA	**Purkeypile**	**82.07**	**23**	P	**P**	**17 04 04.7**	**-1.1**
CAST	**Castle Rocks**	**82.38**	**23**	P	**P**	**17 04 06.5**	**-0.7**
CAST				IAmb	IAmb	17 06 22.2	
	comp=Z,36nm,2.0s						
KTH	**Kantishna Hill**	**82.90**	**23**	P	**P**	**17 04 09.1**	**-0.9**
RND	**Reindeer**	**83.65**	**24**	P	**P**	**17 04 13.7**	**-0.2**
RND				IAmb	IAmb	17 07 02.9	
	comp=Z,44nm,1.9s						
QSPA	**South Pole Qui**	**83.75**	**180**	P	**P**	**17 04 14.2**	**-0.2**
QSPA				IAmb	IAmb	17 04 39.8	
	comp=Z,22nm,1.8s						
MCK	**McKinley**	**83.77**	**23**	P	**P**	**17 04 13.8**	**-0.6**
MCK				IAmb	IAmb	17 07 09.5	
	comp=Z,45nm,2.0s						
M24K	**Tolsona, Glenn**	**84.18**	**25**	P	**P**	**17 04 17.0**	**+0.5**
I23K	**Minto, Yukon-K**	**84.27**	**22**	P	**P**	**17 04 16.5**	**-0.3**
I23K				IAmb	IAmb	17 06 26.4	
	comp=Z,36nm,1.9s						
CCB	**Clear Creek Bu**	**84.62**	**23**	P	**P**	**17 04 17.8**	**-0.9**
CCB				IAmb	IAmb	17 06 31.5	
	comp=Z,12nm,1.7s						
ILAR	**Eielson Array**	**85.03**	**23**	P	**P**	**17 04 19.7**	**-1.1**
	comp=Z,1.1nm,0.7s,baz=245,slow=5.1,SNR=14						
	comp=Z,1.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**146.75**	**284**	PKPbc	**PKPbc**	**17 11 27.6**	**-0.7**
	comp=Z,1.1nm,0.3s,baz=90,slow=2.8,SNR=34						

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*WEL **01** 17:03:06.1±0.5, 33°S±8°×18°0W±2°0, h267^{km}±12^{km}, M3.8/30, mB4.4/18, ML4.7/40, MLv4.5/30, Mw(mB)3.6/18, Error ellipse: s-maj=0.0km s-min=0.0km az=111.0, confirmed*

*NOU **01** 17:03:30.4, 34°.56S×178°.82E, h338^{km}, MLv4.3/9, South of Kermadec Islands*

ISC 01 17:03:05.0±1.5**, 32°.3S**±0°.1×**179°.3E**±0°.2**, h250**^{km}**, n65,**
σ1^{s}.67/79**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.85**	**39**	P	**Pn**	**17 04 06.0**	**-1.2**
GLKZ				S	**S**	**17 04 54.8**	**-1.6**
MXZ	**Matakaoa Point**	**5.33**	**188**	P	**Pn**	**17 04 28.9**	**+4.2**
MXZ	**Matakaoa Point**	**5.33**	**188**	P	**Pn**	**17 04 28.2**	**+3.5**
MXZ				S	**S**	**17 05 29.6**	**+1.3**
WMGZ	**Waiomatatini S**	**5.57**	**187**	P	**Pn**	**17 04 29.0**	**+1.3**
WMGZ				S	**S**	**17 05 35.2**	**+1.5**
HAZ	**Te Kaha**	**5.60**	**192**	P	**Pn**	**17 04 29.2**	**+1.1**
HAZ				S	**S**	**17 05 35.6**	**+1.2**
PKGZ	**Pakihiroa**	**5.68**	**190**	P	**Pn**	**17 04 29.4**	**+0.3**
PKGZ				S	**S**	**17 05 34.9**	**-1.4**
RUGZ	**Raukumara Rang**	**5.82**	**193**	P	**Pn**	**17 04 32.7**	**+1.8**

RUGZ				S	S	17 05 38.7	-0.9
PUZ	Puketiti	5.83	188	P	Pn	17 04 33.1	+2.1
PUZ				S	S	17 05 39.4	-0.5
TWGZ	Tauwhareparae	5.97	190	P	Pn	17 04 36.1	+3.3
TWGZ				S	S	17 05 44.4	+1.4
OPRZ	Ohinepanea	5.98	201	P	Pn	17 04 38.4	+5.5
MWZ	Matawai	6.20	193	P	Pn	17 04 35.5	-0.1
MWZ				S	S	17 05 48.0	-0.2
URZ	Urewera	6.22	196	P	Pn	17 04 37.9	+2.1
URZ	Urewera	6.22	196	P	Pn	17 04 35.9	+0.1
URZ				S	S	17 05 49.2	+0.7
CNGZ	Carnagh Statio	6.25	188	P	Pn	17 04 36.6	+0.4
TKGZ	Te Karaka	6.25	190	P	Pn	17 04 35.8	-0.4
TKGZ				S	S	17 05 49.4	+0.2
RAGZ	Rawiri	6.38	193	P	Pn	17 04 40.6	+2.7
RAGZ				S	S	17 05 53.6	+1.2
MUGZ	Murupara	6.51	198	P	Pn	17 04 41.9	+2.4
RIGZ	Rimuhau	6.53	191	P	Pn	17 04 41.0	+1.3
RIGZ				S	S	17 05 55.1	-0.4
RTZ	Ruatahuna	6.59	196	P	Pn	17 04 39.9	-0.7
RTZ				S	S	17 05 55.6	-1.5
SNGZ	Shannon Statio	6.67	193	P	Pn	17 04 41.8	+0.3
SNGZ				S	S	17 05 58.6	-0.3
TLZ	Tolley Road	6.76	206	P	Pn	17 04 48.4	+5.7
KNZ	Kokohu	6.85	191	P	Pn	17 04 43.8	+0.2
KNZ				S	S	17 06 01.3	-1.5
MTHZ	Maungataniwha	6.85	196	P	Pn	17 04 46.1	+2.3
MTHZ				S	S	17 05 60.0	-3.0
RAHZ	Arahi	6.86	195	P	Pn	17 04 45.0	+1.2
MHGZ	Mahia Peninsul	6.94	189	P	Pn	17 04 45.8	+0.9
WHHZ	Waihua	6.98	193	P	Pn	17 04 47.3	+1.9
NMHZ	Naumai	7.09	196	P	Pn	17 04 48.4	+1.6
RATZ	Rangitukua	7.16	203	P	Pn	17 04 50.5	+2.8
HIZ	Hauiti	7.19	209	P	Pn	17 04 50.9	+2.9
HIZ	Hauiti	7.19	209	P	Pn	17 04 53.3	+5.4
ARHZ	Aropaoanui	7.21	194	P	Pn	17 04 48.9	+0.7
BKZ	Black Stump Fm	7.23	198	P	Pn	17 04 49.3	+0.7
BKZ	Black Stump Fm	7.23	198	P	Pn	17 04 48.8	+0.2
NTVZ	North Tongarir	7.41	202	P	Pn	17 04 53.0	+2.1
TMVZ	Te Maari	7.41	202	P	Pn	17 04 52.6	+1.7
ETVZ	East Tongariro	7.43	202	P	Pn	17 04 53.0	+1.9
MCHZ	McNeill Hill	7.45	196	P	Pn	17 04 52.0	+0.8
WTVZ	West Tongariro	7.45	203	P	Pn	17 04 53.2	+1.8
NNVZ	North Ngauruho	7.46	203	P	Pn	17 04 53.4	+1.9
TWVZ	Taurewa	7.46	204	P	Pn	17 04 53.6	+2.1
OTVZ	Oturere	7.47	202	P	Pn	17 04 53.3	+1.7
SNVZ	South Ngauruho	7.50	202	P	Pn	17 04 53.5	+1.5
NGZ	Ngauruhoe	7.50	203	P	Pn	17 04 54.1	+2.0
CKHZ	Cape Kidnapper	7.57	193	P	Pn	17 04 53.1	+0.3
FWVZ	Far West T-bar	7.59	203	P	Pn	17 04 54.6	+1.3
TRVZ	Turoa	7.63	202	P	Pn	17 04 53.7	0.0
WNVZ	Wahianoa	7.64	202	P	Pn	17 04 54.8	+1.0
BHHZ	Black Hill Sta	7.65	199	P	Pn	17 04 53.5	-0.4
MOVZ	Moawhango	7.66	201	P	Pn	17 04 54.3	+0.3
PKVZ	Pokaka	7.69	204	P	Pn	17 04 55.7	+1.4
KAHZ	Kahuranaki	7.74	194	P	Pn	17 04 55.1	+0.1
VRZ	Vera Road	7.75	207	P	Pn	17 04 58.5	+3.4
PXZ	Pawanui	7.97	194	P	Pn	17 04 57.4	-0.4
PNHZ	Pukenui	8.01	197	P	Pn	17 04 57.0	-1.4
WPHZ	Waipukurau	8.10	196	P	Pn	17 04 59.2	-0.3
PRHZ	Porangahau	8.25	194	P	Pn	17 05 00.7	-0.6
DVHZ	Dannevirke	8.38	197	P	Pn	17 05 02.0	-1.1
ANWZ	Angora Road	8.47	195	P	Pn	17 05 02.8	-1.3
BFZ	Birch Farm	8.73	195	P	Pn	17 05 05.9	-1.5
BFZ	Birch Farm	8.73	195	P	Pn	17 05 05.7	-1.7
CPWZ	Castlepoint	8.96	195	P	Pn	17 05 09.8	-0.5
SNZO	South Karori	9.73	201	P	Pn	17 05 18.8	-1.2
QRZ	Quartz Range	10.11	211	P	Pn	17 05 23.4	-1.4
KHZ	Kahutara	11.10	203	P	Pn	17 05 34.0	-3.2
RPZ	Rata Peaks	13.12	207	P	Pn	17 05 59.8	-2.5

*IDC **01** 17:10:52.0±1.2,39°.72N×30°.19W,h0^{km},mb3.9/18, mbtmp3.9/18,MS3.6/25,Error ellipse: s-maj=35.7km s-min=18.4km az=179.0*

*NEIC **01** 17:10:51.1±1.3,38°.9N±0°.1×29°.81W±0°.08,h13^{km}±4^{km}, mb4.5/28,Error ellipse: s-maj=17.5km s-min=9.2km az=173.0*

*SVSA **01** 17:10:53.0±1.1,39°.36N×29°.90W,h10^{km},ML3.7(INMG), Error ellipse: s-maj=5.9km s-min=2.1km az=29.0*

ISC 01 17:10:49.7±1.5,**39°.12N**±0°.09×**29°.87W**±0°.04,**h3**^{km}±10^{km}, **n99**,σ1^{s}**63**/94,**mb4.4**/28,**MS3.5**/25,**Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCAPE	Capelo, Faial	0.97	122	eS	Sn	17 11 22.6	-1.7
PCED	Cedros	1.03	118	eP	Pn	17 11 10.7	-0.3
PCED				eS	Sn	17 11 23.9	-2.1
PCED				A	A	17 11 26.4	
	547nm,0.3s						
CALA	Caldeira	1.06	120	eP	Pn	17 11 11.8	+0.4
CALA				eS	Sn	17 11 25.9	-0.8
CALA				A	A	17 11 29.1	
	2μm,0.4s						
H07S1	FLORES T-PHASE	1.07	285	eP	Pb	17 11 09.7	-1.1
H07S1				eS	Sb	17 11 20.5	-4.7
H07S1				A	A	17 11 22.0	
	858nm,0.5s						
PFCBR	Castelo Branco	1.08	123	eP	Pn	17 11 11.8	+0.2
PFCBR				eS	Sn	17 11 25.7	-1.4
PFCBR				A	A	17 11 28.1	
	160nm,0.3s						
PRIB2	Ribeirinha	1.11	118	eP	Pg	17 11 11.8	+0.8
PRIB2				eS	Sn	17 11 26.0	-1.9
PRIB2				A	A	17 11 28.2	
	917nm,0.3s						
H07N1	FLORES T-PHASE	1.13	301	eP	Pn	17 11 08.2	-4.2
H07N1				eS	Sb	17 11 19.6	-7.2
H07N1				A	A	17 11 21.9	
	2μm,0.4s						
HOR	Horta	1.13	121	eP	Pg	17 11 12.5	+1.1
HOR				eS	Sn	17 11 26.8	-1.6
HOR				A	A	17 11 29.6	
	2μm,0.3s						
PMAD	Madalena	1.21	118	eS	Sg	17 11 28.4	-0.2
PCAN	Candelaria	1.26	121	eP	Pg	17 11 14.2	+0.3
PCAN				eS	Sg	17 11 30.5	+0.3
PCAN				A	A	17 11 33.4	
	509nm,0.5s						
PICO	Pico	1.28	118	eP	Pg	17 11 14.7	+0.4
PICO				eS	Sg	17 11 31.0	+0.1
PICO				A	A	17 11 32.6	
	1μm,0.3s						
ROSA	Rosais	1.33	107	Pn	Pn	17 11 13.8	-1.4
ROSA				Sn	Sb	17 11 30.6	-2.1
ROSA	Rosais	1.33	107	eP	Pn	17 11 14.3	-0.8
ROSA				eS	Sb	17 11 30.6	-2.1
ROSA				A	A	17 11 33.7	
	582nm,0.5s						
PROQ	S£o Roque	1.35	116	eS	Sg	17 11 32.0	-0.9
PPNO	Prainha do Nor	1.41	117	eP	Pb	17 11 16.1	-0.5
PPNO				eS	Sb	17 11 33.8	-1.2
PPNO				A	A	17 11 37.4	
	506nm,0.3s						
SRBC	Serra Branca	1.43	93	eS	Sn	17 11 31.2	-4.5
SRBC				A	A	17 11 34.4	
	243nm,0.4s						
PMAN	Manadas	1.47	109	eP	Pb	17 11 16.9	-0.7
PMAN				eS	Sn	17 11 33.7	-3.1
PMAN				A	A	17 11 35.6	
	497nm,0.3s						
PGRA	Graciosa	1.47	93	eS	Sn	17 11 32.3	-4.5
PGRA				A	A	17 11 34.6	
	370nm,0.5s						
PID	Ribeirinha	1.52	116	eP	Pb	17 11 17.5	-1.1
PID				eS	Sn	17 11 36.0	-2.2
PID				A	A	17 11 41.9	
	378nm,0.5s						
PSBA	Serra de Santa	2.01	99	eP	Pn	17 11 23.8	-0.8
PSBA				eS	Sn	17 11 46.0	-4.3
PSBA				A	A	17 11 49.7	
	117nm,0.5s						
ADH	Angra Heroismo	2.11	102	eP	Pn	17 11 24.2	-1.6
ADH				eS	Sn	17 11 48.5	-4.0
ADH				A	A	17 11 50.1	
	106nm,0.5s						
PAGU	Agualva, Azore	2.12	99	eP	Pn	17 11 25.1	-0.9
PAGU				eS	Sn	17 11 49.0	-3.9
PAGU				A	A	17 11 52.0	
	244nm,0.5s						
PSCM	Serra do Cume	2.19	100	eP	Pn	17 11 26.3	-0.6
PSCM				eS	Sn	17 11 50.8	-3.7
PSCM				A	A	17 11 54.1	
	114nm,0.7s						
PSET	Sete Cidades	3.50	110	eP	Pn	17 11 45.1	+0.1
PDA	Ponta Delgada	3.58	111	eP	Pn	17 11 46.1	+0.1
PDA				eS	Sn	17 12 25.7	-3.0
PDA				A	A	17 12 29.3	
	52nm,0.4s						
PSMA	Santa Maria	4.30	118	eP	Pn	17 11 56.3	+0.4
PSMN	Pico do Norte,	4.34	118	eP	Pn	17 11 56.8	+0.3
ESDC	Sonseca Array	20.01	80	P	Pn	17 15 29.4	+4.2
	1.6nm,0.8s,baz=277,slow=9.2,SNR=9.2						
ESDC				LR	LR	17 21 58.9	
	comp=Z,111nm,18.2s,baz=248,slow=33						
	1.6nm,0.8s						
MDT	Midelt	21.36	99	LR	LR	17 21 08.9	
	comp=Z,58nm,20.2s,baz=336,slow=28						
BORG	Borgarnes	26.16	8	LR	LR	17 23 35.5	
	comp=Z,72nm,19.9s,baz=225,slow=30						
SCHQ	Schefferville	29.29	315	LR	LR	17 26 24.7	
	comp=Z,87nm,20.2s,baz=80,slow=32						
SFJD	Kangerlussuaq	30.27	344	LR	LR	17 26 13.0	
	comp=Z,83nm,19.5s,baz=142,slow=31						
GERES	GERESS Array B	32.43	58	P	P	17 17 23.8	+2.9
	0.5nm,0.7s,baz=253,slow=9.9,SNR=2.9						
GERES				LR	LR	17 28 42.7	
	comp=Z,36nm,20.1s,baz=290,slow=33						
	0.5nm,0.7s						
NOA	NORSAR Array B	33.46	35	P	P	17 17 30.2	+0.5
	1.0nm,0.7s,baz=246,slow=7.6,SNR=3.2						
	1.0nm,0.7s						
FRB	Frobisher Bay	33.60	330	LR	LR	17 27 09.9	
	comp=Z,93nm,21.3s,baz=201,slow=30						
HFS	Hagfors	34.30	38	LR	LR	17 29 43.6	
	comp=Z,62nm,18.7s,baz=231,slow=33						
VRAC	Vranov	34.33	57	LR	LR	17 30 47.6	
	comp=Z,40nm,18.7s,baz=290,slow=35						
VAE	Valguarnera	34.53	78	LR	LR	17 30 42.8	
	comp=Z,277nm,19.0s,baz=340,slow=34						
SADO	Sadowa	36.62	295	LR	LR	17 31 45.7	
	comp=Z,91nm,19.7s,baz=120,slow=35						
TORD	Torodi Ar. Bea	38.03	124	P	P	17 18 16.3	+7.0
	0.7nm,0.9s,baz=316,slow=8.0,SNR=2.8						
TORD				LR	LR	17 33 32.8	
	comp=Z,71nm,18.1s,baz=270,slow=35						
	0.7nm,0.9s						
DBIC	Dimbokro	39.40	139	LR	LR	17 32 53.0	
	comp=Z,120nm,20.1s,baz=307,slow=33						
FINES	FINESS Array B	40.50	38	P	P	17 18 29.4	-0.1
	2.9nm,0.7s,baz=270,slow=7.4,SNR=7.1						
	2.9nm,0.7s						
FINES	FINESS Array B	40.50	38	P	P	17 18 29.2	-0.2
AKASG	Malin Array Be	42.35	54	P	P	17 18 44.9	+0.1
	0.7nm,0.5s,baz=276,slow=8.2,SNR=4.1						
AKASG				LR	LR	17 35 55.5	
	comp=Z,52nm,18.9s,baz=240,slow=36						
	0.7nm,0.5s						
IDI	Anoyia	43.23	77	LR	LR	17 35 12.2	
	comp=Z,46nm,18.6s,baz=272,slow=34						
ULM	Lac du Bonnet	46.78	306	LR	LR	17 37 39.9	
	comp=Z,113nm,18.9s,baz=27,slow=35						
R40A	Maddies Statio	47.83	290	P	P	17 19 28.6	+0.1
BRTR	Keskin Array B	48.12	68	LR	LR	17 38 41.7	
	comp=Z,23nm,18.0s,baz=266,slow=35						
S39A	Bolivar	48.82	289	P	P	17 19 36.2	-0.1
S39A				IAmb	IAmb	17 19 43.7	
	comp=Z,6.7nm,1.1s						
KBZ	Khabaz	53.14	60	P	P	17 20 11.2	+2.6
	comp=Z,1.5nm,0.9s,baz=212,slow=4.9,SNR=3.2						
	comp=Z,1.5nm,0.9s						
YKA	Yellowknife Ar	53.87	325	P	P	17 20 11.9	-1.8
	comp=Z,0.2nm,0.6s,baz=71,slow=7.7,SNR=2.9						
	comp=Z,0.2nm,0.6s						
TBTG	Tabatinga, AM	56.74	230	P	P	17 20 33.1	-1.8
ARU	Arti	57.70	41	P	P	17 20 41.1	-0.1
	comp=Z,1.1nm,0.3s,baz=0.7,slow=2.5,SNR=4.9						
	comp=Z,1.1nm,0.3s						
ARU	Arti	57.70	41	P	P	17 20 41.3	+0.1
ARU				IAmb	IAmb	17 20 42.8	
	comp=Z,5.1nm,1.0s						
PD31	Pinedale Array	58.15	301	P	P	17 20 43.8	-1.2
PDAR	Pinedale Array	58.15	301	P	P	17 20 43.9	-1.1
	comp=Z,0.9nm,0.8s,baz=74,slow=6.3,SNR=7.3						
PDAR				LR	LR	17 44 57.2	
	comp=Z,79nm,18.6s,baz=1.0,slow=36						
	comp=Z,0.9nm,0.8s						
PDAR	Pinedale Array	58.15	301	P	P	17 20 44.0	-0.9
YMR	Madison River	58.25	304	P	P	17 20 45.7	0.0
O20A	White River Ci	58.42	298	P	P	17 20 46.1	-0.7
RDMU	Red Mountain	59.13	299	P	P	17 20 51.9	+0.1
RDMU				IAmb	IAmb	17 20 53.1	
	comp=Z,2.6nm,0.7s						
ANMO	Albuquerque	59.57	292	LR	LR	17 45 56.5	
	comp=Z,80nm,18.1s,baz=60,slow=36						
AKTO	Aktyubinsk	59.91	48	P	P	17 20 58.0	+1.4
	comp=Z,2.9nm,0.8s,baz=296,slow=6.1,SNR=6.4						
	comp=Z,2.9nm,0.8s						
HWUT	Hardware Ranch	60.01	301	P	P	17 20 58.0	+0.3
HWUT				IAmb	IAmb	17 20 58.7	
	comp=Z,3.5nm,0.8s						
CMIG	Matias Romero	60.15	268	LR	LR	17 43 37.1	
	comp=Z,53nm,21.9s,baz=345,slow=33						
TXAR	Lajitas Array	60.28	285	P	P	17 21 00.1	+0.4
	comp=Z,0.7nm,0.7s,baz=73,slow=7.4,SNR=8.0						
	comp=Z,0.7nm,0.7s						
TXAR	Lajitas Array	60.28	285	P	P	17 21 00.2	+0.5
TX31	Lajitas Ar. Si	60.28	285	P	P	17 21 00.1	+0.4
TX32	Lajitas Array	60.28	285	P	P	17 20 59.7	0.0
NEW	Newport	60.50	310	LR	LR	17 45 46.0	
	comp=Z,107nm,19.4s,baz=128,slow=35						
TMUT	Trail Mountain	60.84	299	P	P	17 21 04.4	+0.8
PLID	Pearl Lake	61.27	306	P	P	17 21 05.5	-0.9
PLID				IAmb	IAmb	17 21 15.5	
	comp=Z,3.8nm,1.1s						
ABKAR	Akbulak array	61.55	48	P	P	17 21 09.0	+1.1
NRIK	Noril'sk	62.59	21	P	P	17 21 14.8	+0.2
	comp=Z,0.9nm,0.3s,baz=315,slow=6.6,SNR=3.7						
	comp=Z,0.9nm,0.3s						
NRIK	Noril'sk	62.59	21	P	P	17 21 15.9	+1.3
NRIK				IAmb	IAmb	17 21 17.3	
	comp=Z,3.0nm,0.9s						
ELK	Elko	62.85	302	P	P	17 21 17.6	+0.5
ELK				IAmb	IAmb	17 21 18.1	
	comp=Z,3.1nm,1.1s						
CCUT	Cedar City	63.17	298	P	P	17 21 20.2	+1.0
ATAH	Atahualpa	64.30	236	LR	LR	17 48 20.4	
	comp=Z,90nm,20.2s,baz=88,slow=35						
PRN	Pahroc Range	64.40	298	P	P	17 21 27.2	-0.1
PRN				IAmb	IAmb	17 21 35.7	
	comp=Z,5.8nm,1.2s						
BVAR	Borovoye Array	65.35	41	P	P	17 21 34.3	+1.3
	comp=Z,0.5nm,0.5s,baz=272,slow=8.1,SNR=3.3						
	comp=Z,0.5nm,0.5s						
TPH	Tonopah	65.53	300	P	P	17 21 35.1	+0.4
KVN	Kaiserville	65.61	301	P	P	17 21 35.6	+0.5
KVN				IAmb	IAmb	17 21 36.0	
	comp=Z,3.2nm,1.0s						
IMAR	Indian Mountai	66.68	338	P	P	17 21 43.0	+1.7
YBH	Yreka Blue Hor	67.18	306	LR	LR	17 50 20.2	
	comp=Z,54nm,19.4s,baz=64,slow=36						
PFO	Pinyon Flats O	67.37	296	LR	LR	17 49 14.8	
	comp=Z,46nm,18.4s,baz=42,slow=34						
MBAR	Mbarara	67.96	110	LR	LR	17 50 55.5	
	comp=Z,57nm,18.8s,baz=32,slow=35						
KURBB	Kurchatov Arra	70.85	40	P	P	17 22 08.1	+0.6
	comp=Z,1.7nm,0.9s,baz=311,slow=6.8,SNR=9.8						
	comp=Z,1.7nm,0.9s						
ZAA0	Zalesovo Array	71.65	34	P	P	17 22 12.6	+0.3
ZAA0				IAmb	IAmb	17 22 14.0	
	comp=Z,3.0nm,0.9s						
ZALV	Zalesovo Beam	71.65	34	P	P	17 22 12.9	+0.6
	comp=Z,2.0nm,0.8s,baz=308,slow=7.3,SNR=8.9						
	comp=Z,2.0nm,0.8s						
ZALV	Zalesovo Beam	71.65	34	P	P	17 22 13.2	+0.8
CHGR	Chuyangaron	72.82	54	P	P	17 22 18.5	-1.3
CHGR				IAmb	IAmb	17 22 32.1	
	comp=Z,4.4nm,1.0s						
MAKZ	Makanchi	75.06	41	P	P	17 22 33.5	+0.8
MK31	Makanchi Array	75.23	41	P	P	17 22 34.5	+0.8
MK31				IAmb	IAmb	17 22 35.4	
	comp=Z,3.4nm,0.9s						
MKAR	Makanchi Array	75.23	41	P	P	17 22 34.7	+1.1
	comp=Z,3.5nm,0.8s,baz=319,slow=5.5,SNR=40						
	comp=Z,3.5nm,0.8s						
MKAR	Makanchi Array	75.23	41	P	P	17 22 33.9	+0.3
TARG	Taragay, Kyrgy	76.12	47	P	P	17 22 40.0	+0.7
TARG				IAmb	IAmb	17 22 43.1	
	comp=Z,4.5nm,1.3s						
SONM	Songino Array	85.09	28	P	P	17 23 28.0	+1.1
	comp=Z,1.4nm,0.9s,baz=315,slow=5.1,SNR=12						
	comp=Z,1.4nm,0.9s						
SONM	Songino Array	85.09	28	P	P	17 23 27.2	+0.3
SONM				IAmb	IAmb	17 23 28.8	
	comp=Z,2.9nm,1.1s						
ULN	Ulaanbaatar	85.30	27	P	P	17 23 29.5	+1.5
ASAR	Alice Springs	159.34	47	PKPab	PKPab	17 31 27.9	+0.7
	comp=Z,0.7nm,0.9s,baz=339,slow=4.6,SNR=5.6						

*IDC **01** 17:27:49.3±7.6,21°.91N×142°.12E,h0^{km},mb3.5/6, mbtmp3.5/6,MS2.6/1,Error ellipse: s-maj=319.5km s-min=22.3km az=75.0*

ISC 01 17:27:53.7±10.0,**22°.0N**±0°.8×**14°2E**±°,**h35**^{km},**n10**,σ**0**^{s}**54**/6, **mb3.4**/6,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	23.09	94	T	T	17 56 05.4	
	baz=283,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	23.09	94	T	T	17 56 06.3	
	baz=283,slow=75,SNR=8.0						
H11S2	WAKE ISLAND Hy	23.10	94	T	T	17 56 05.3	
	baz=283,slow=75,SNR=6.9						
SONM	Songino Array	38.65	321	P	P	17 35 13.7	-0.2
	0.2nm,0.5s,baz=107,slow=7.8,SNR=1.9						
	0.2nm,0.5s						
CMAR	Chiang Mai Arr	40.79	273	LR	LR	17 52 25.6	
	comp=Z,7.6nm,19.1s,baz=295,slow=36						
WRA	Warramunga Arr	42.38	191	P	P	17 35 45.4	+0.6
	0.6nm,0.7s,baz=11,slow=8.6,SNR=5.1						
	0.6nm,0.7s						
ASAR	Alice Springs	46.09	191	P	P	17 36 13.9	-0.7
	0.2nm,0.7s,baz=16,slow=13,SNR=7.8						
	0.2nm,0.7s						
MKAR	Makanchi Array	53.95	313	P	P	17 37 14.2	+0.1
	0.2nm,0.7s,baz=90,slow=7.2,SNR=2.9						
	0.2nm,0.7s						
KURBB	Kurchatov Arra	56.81	317	P	P	17 37 34.5	0.0
	0.5nm,0.2s,baz=95,slow=7.5,SNR=4.8						
	0.5nm,0.2s						
BVAR	Borovoye Array	61.97	319	P	P	17 38 10.3	+0.2
	0.6nm,0.5s,baz=90,slow=8.1,SNR=4.7						
	0.6nm,0.5s						

*IDC **01** 17:30:27.5±1.9,5°.60N×126°.07E,h0^{km},mb3.6/5, mbtmp3.6/5,Error ellipse: s-maj=192.2km s-min=21.1km az=65.0*

*MAN **01** 17:30:32.8,5°.64N×126°.49E,h1^{km},mb4.7,ML3.6,MS3.5*

ISC 01 17:30:31.0±1.8,**5°.50N**±0°.06×**126°.34E**±0°.06,**h17**^{km}±10^{km}, **n18**,σ1^{s}**86**/28,**mb3.6**/5,**8C-5D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	1.44	357	⇑eP	Pg	17 30 58.1	-0.7
MATI				eS	Sg	17 31 16.7	-0.8
GSPH	General Santos	1.50	293	⇓iP	Pg	17 30 59.0	-1.0
GSPH				i S	Sg	17 31 21.9	+2.3
KCP	Kidapawan	1.94	320	⇑iP	Pb	17 31 06.2	+0.1
KCP				i S	Sg	17 31 34.9	+1.1
SKMP	Bagumbayan, Su	2.05	300	⇑eP	Pg	17 31 10.4	-0.1
SKMP				eS	Sg	17 31 37.9	+0.7
CDOP	Cateel, Davao	2.27	2	⇓eP	Pb	17 31 09.8	-1.8
CDOP				eS	Sn	17 31 34.9	-0.4
BIPH	Bislig	2.67	0	⇓eP	Pn	17 31 15.5	+2.3
BIPH				eS	Sn	17 31 44.8	-0.3
BUKP	Musuan	2.68	332	⇑eP	Pb	17 31 17.6	-1.0
BUKP				eS	Sb	17 31 50.2	-1.1
CTBH	Cotabato--PC H	2.69	309	⇑iP	Pb	17 31 18.3	-0.5
TASP	Talacogon, Agu	2.98	350	⇑eP	Pb	17 31 23.9	+0.3
TASP				i S	Sg	17 32 06.7	-0.1
CGP	Cagayan de Oro	3.36	331	⇓eP	Pg	17 31 40.8	+5.3
CGP				eS	Sb	17 32 09.8	-0.9
PAGZ	Pagadian	3.75	309	⇑eP	Pn	17 31 24.7	-3.4
PAGZ				eS	Sb	17 32 26.0	+4.0
GLSP	General Luna,	4.26	357	⇑eP	Pn	17 31 38.0	+2.9
GLSP				eS	Sn	17 32 26.5	+2.0
MSLP	Maasin	4.83	342	⇓eP	Pn	17 31 45.5	+2.6
WRA	Warramunga Arr	26.48	163	P	P	17 36 07.9	+0.3
	0.6nm,0.6s,baz=342,slow=10,SNR=4.8						
	0.6nm,0.6s						
ASAR	Alice Springs	29.92	166	P	P	17 36 38.5	+0.2
	0.2nm,0.6s,baz=352,slow=7.7,SNR=5.3						
	0.2nm,0.6s						
STKA	Stephens Creek	39.91	160	P	P	17 38 05.7	+1.4
	1.0nm,0.7s,baz=337,slow=15,SNR=1.6						
	1.0nm,0.7s						
MKAR	Makanchi Array	55.89	325	P	P	17 40 05.4	-2.6
	0.2nm,0.3s,baz=118,slow=8.2,SNR=9.1						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	60.05	327	P	P	17 40 34.5	-2.5
	0.3nm,0.2s,baz=124,slow=6.9,SNR=1.8						
	0.3nm,0.2s						

*NEIC **01** 17:38:04.8±2.6,50°.64N±0°.10×174°.4W±0°.1,h10^{km}±1^{km}, mb4.1/64,ML3.9(AEIC),Error ellipse: s-maj=16.4km s-min=10.5km az=190.0*

*IDC **01** 17:38:09.6±0.8,51°.56N×174°.63W,h0^{km},mb3.9/21, mbtmp3.9/22,ML4.1/1,MS3.5/15,Error ellipse: s-maj=26.7km s-min=13.4km az=170.0*

*AEIC **01** 17:38:12.2±4.4,51°.4N±0°.1×174°.57W±0°.09,h3^{km}±4^{km}, Error ellipse: s-maj=15.1km s-min=8.1km az=174.0*

ISC 01 17:38:09.6±0.6,**51°.3N**±0°.1×**174°.44W**±0°.04,**h10**^{km},**n138**, σ**1**^{s}**51**/113,**mb4.2**/36,**MS3.5**/13,**Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSTR	Great Sitkin T	1.29	309		Pg	17 38 34.1	-0.3
ADK	Adak	1.52	294		Pn	17 38 37.4	+0.5
ADK				Sn	Sb	17 38 57.3	0.0
KIWB	Kanaga Island	1.78	290		Pb	17 38 41.8	-0.6
CLES	Cleveland East	3.20	59	Pn	Pb	17 39 04.9	-1.6
NIKH	Nikolski High	3.83	62	Pn	Pn	17 39 08.2	-0.4
AMKA	Amchitka	3.93	274		Pb	17 39 16.6	-2.3
UNV	Unalaska Valle	5.48	59		Pn	17 39 31.8	+0.6
SPIA	Saint Paul Isl	6.39	21	Pn	Pn	17 39 47.0	+3.2
P18K	Big Mountain,	13.57	46	Pn	Pn	17 41 22.1	0.0
O18K	Koktuh Hills	13.81	44	Pn	Pn	17 41 27.9	+2.7
Q19K	Cape Douglas,	14.10	49	Pn	Pn	17 41 30.9	+1.6
KDAK	Kodiak Island	14.22	54	Pn	Pn	17 41 29.1	-1.7
	0.3nm,0.3s,baz=214,slow=3.9,SNR=20						
KDAK				LR	LR	17 47 58.1	
	comp=Z,195nm,18.5s,baz=256,slow=42						
KDAK	Kodiak Island	14.22	54	Pn	Pn	17 41 30.8	0.0
SVW2	Sparrevohn	14.32	39	Pn	Pn	17 41 36.1	+3.8
N19K	Bonanza Creek	14.61	42	Pn	Pn	17 41 38.6	+2.3
TNA	Tin City	14.70	11		Pn	17 41 38.9	+1.5
TNA				IAmb	IAmb	17 41 52.4	
	comp=Z,4.8nm,0.7s						
RSO	Redoubt South	15.18	44	Pn	Pn	17 41 45.6	+1.6
L19K	White Mountain	15.24	37	P	P	17 41 51.0	+1.3
M19K	Big River Lodg	15.25	38	Pn	Pn	17 41 46.0	+1.2
TTA	Tatalina	15.30	33	P	P	17 41 50.6	+0.2
TTA				IAmb	IAmb	17 41 53.1	
	comp=Z,12nm,1.2s						
CNPM	China Poot	15.48	49	Pn	Pn	17 41 47.2	-0.5
BRLK	Bradley Lake	15.73	48	Pn	Pn	17 41 50.7	-0.4
BRLK				IAmb	IAmb	17 42 02.9	
	comp=Z,36nm,1.2s						
M20K	Styx River	15.74	39	Pn	Pn	17 41 51.1	-0.1
K20K	Telida	16.25	34	Pn	Pn	17 41 59.1	+1.4
SKT	Skwentna	16.43	41	Pn	Pn	17 42 00.5	+0.4
SKT				IAmb	IAmb	17 42 20.8	
	comp=Z,16nm,1.4s						
SUA	Susitna One	16.51	43	Pn	Pn	17 42 02.0	+0.8
PET	Petropavlovsk	16.57	287	Pn	Pn	17 41 58.3	-3.5
PPLA	Purkeypile	16.66	37	P	Pn	17 42 04.5	+1.4
PPLA				IAmb	IAmb	17 42 11.6	
	comp=Z,12nm,1.0s						
CAST	Castle Rocks	17.00	36		Pn	17 42 06.0	-1.2
PETK	Petropavlovsk-	17.14	287	Pn	P	17 42 11.1	+0.5
	comp=Z,0.3nm,0.3s,baz=94,slow=13,SNR=1.8						
KTH	Kantishna Hill	17.51	36	P	P	17 42 15.8	+1.0
KTH					pP	17 42 16.5	+0.3
KTH				IAmb	IAmb	17 42 32.3	
	comp=Z,14nm,1.1s						
BPAW	Bear Paw Mtn.	17.79	35	P	P	17 42 19.2	+1.3
IMAR	Indian Mountai	18.10	28	P	P	17 42 22.3	+1.1
I21K	Tanana	18.11	31	P	P	17 42 22.8	+1.5
H21K	Melozitna Rive	18.16	29	P	P	17 42 23.0	+1.1

MCK	**McKinley**	**18.35**	**37**	P	**Pn**	**17 42 23.5**	**-0.5**
MCK				IAmb	IAmb	17 42 35.5	
	comp=Z,13nm,1.3s						
MLY	**Manley**	**18.43**	**33**	P	**P**	**17 42 27.7**	**+2.8**
MLY				IAmb	IAmb	17 42 29.5	
	comp=Z,10.0nm,1.1s						
NEA2	**Nenana**	**18.76**	**35**	P	**Pn**	**17 42 29.8**	**+0.9**
I23K	**Minto, Yukon-K**	**18.97**	**33**	P	**Pn**	**17 42 33.7**	**+2.3**
I23K				IAmb	IAmb	17 42 35.4	
	comp=Z,9.5nm,0.9s						
WRH	**Wood River Hil**	**19.05**	**36**	P	**Pn**	**17 42 34.4**	**+2.0**
CCB	**Clear Creek Bu**	**19.25**	**36**	P	**Pn**	**17 42 35.4**	**+0.6**
BILL	**Bilibino**	**19.26**	**338**	P	**Pn**	**17 42 35.1**	**+0.2**
BILL				IAmb	IAmb	17 42 48.2	
	comp=Z,8.3nm,0.9s						
MDM	**Murphy Dome**	**19.26**	**35**	P	**Pn**	**17 42 36.0**	**+1.0**
N25K	**Chitina, Valde**	**19.28**	**46**	P	**Pn**	**17 42 35.5**	**+0.3**
N25K				IAmb	IAmb	17 42 54.9	
	comp=Z,25nm,1.4s						
PAX	**Paxson**	**19.39**	**42**	P	**Pn**	**17 42 36.7**	**0.0**
PAX				IAmb	IAmb	17 43 00.9	
	comp=Z,10.0nm,1.3s						
HDA	**Harding Lake**	**19.45**	**37**	P	**P**	**17 42 36.2**	**+0.2**
HDA				IAmb	IAmb	17 42 37.8	
	comp=Z,22nm,1.4s						
POKR	**Poker Plat Res**	**19.64**	**35**	P	**P**	**17 42 38.9**	**+0.8**
POKR				IAmb	IAmb	17 42 46.5	
	comp=Z,5.9nm,0.8s						
IL31		**19.66**	**36**	P	**P**	**17 42 38.6**	**+0.4**
IL31				IAmb	IAmb	17 42 51.6	
	comp=Z,8.9nm,1.3s						
ILAR	**Eielson Array**	**19.66**	**36**	P	**P**	**17 42 37.7**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=226,slow=8.4,SNR=33						
ILAR				LR	LR	17 50 19.4	
	comp=Z,113nm,18.8s,baz=190,slow=37						
	comp=Z,1.0nm,0.4s						
ILAR	**Eielson Array**	**19.66**	**36**	P	**P**	**17 42 38.4**	**+0.2**
H24K	**Noodor Dome**	**19.87**	**33**	P	**P**	**17 42 40.7**	**0.0**
H24K				IAmb	IAmb	17 42 46.4	
	comp=Z,7.2nm,0.8s						
RIDG	**Independent Ri**	**19.97**	**40**	P	**Pn**	**17 42 43.6**	**+0.1**
RIDG				IAmb	IAmb	17 42 49.9	
	comp=Z,26nm,1.4s						
COLD	**Coldfoot**	**19.99**	**28**	P	**P**	**17 42 42.7**	**+0.8**
DOT	**Dot Lake**	**20.25**	**41**	P	**P**	**17 42 44.5**	**-0.3**
M26K	**Nabesna, AK**	**20.25**	**45**		Pn	17 42 46.8	0.0
M26K				IAmb	IAmb	17 42 49.1	
	comp=Z,17nm,1.4s						
SCRK	**Sand Creek**	**20.41**	**40**	P	**P**	**17 42 45.3**	**-1.3**
SCRK				IAmb	IAmb	17 42 50.9	
	comp=Z,11nm,0.9s						
J26L	**Joseph Creek**	**20.80**	**39**	P	**P**	**17 42 49.2**	**-1.5**
J26L				IAmb	IAmb	17 42 51.3	
	comp=Z,15nm,0.8s						
TOLK	**Toolik Lake Re**	**21.12**	**25**	P	**P**	**17 42 54.8**	**+0.6**
TOLK				IAmb	IAmb	17 42 55.8	
	comp=Z,9.6nm,0.9s						
MA2	**Magadan**	**21.19**	**307**	LR	LR	17 50 48.9	
	comp=Z,86nm,19.0s,baz=136,slow=36						
I26K	**Coal Creek Min**	**21.30**	**37**	P	**P**	**17 42 55.6**	**-0.6**
I26K				IAmb	IAmb	17 43 17.7	
	comp=Z,5.4nm,0.8s						
EGAK	**Eagle**	**21.86**	**39**	P	**P**	**17 43 01.6**	**-0.5**
EGAK				IAmb	IAmb	17 43 18.3	
	comp=Z,12nm,0.8s						
DAWY	**Dawson**	**22.33**	**42**	P	**P**	**17 43 07.3**	**+0.1**
DAWY				IAmb	IAmb	17 43 30.7	
	comp=Z,13nm,1.5s						
INK	**Inuvik**	**25.99**	**34**	P	**P**	**17 43 42.5**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=245,slow=10,SNR=6.2						
INK				LR	LR	17 55 22.2	
	comp=Z,107nm,18.4s,baz=299,slow=40						
	comp=Z,2.0nm,0.8s						
DLBC	**Dease Lake**	**26.13**	**57**	P	**P**	**17 43 46.1**	**+2.6**
	comp=Z,6.8nm,1.1s,baz=204,slow=6.1,SNR=4.1						
	comp=Z,6.8nm,1.1s						
YAK	**Yakutsk**	**31.53**	**312**	LR	LR	17 57 11.6	
	comp=Z,72nm,19.4s,baz=76,slow=36						
TIXI	**Tiksi**	**32.07**	**330**	LR	LR	17 58 28.3	
	comp=Z,49nm,18.6s,baz=103,slow=38						
YKA	**Yellowknife Ar**	**33.30**	**47**	P	**P**	**17 44 47.1**	**0.0**
	comp=Z,0.4nm,0.8s,baz=288,slow=8.2,SNR=3.6						
YKA				LR	LR	17 59 56.5	
	comp=Z,138nm,18.7s,baz=282,slow=39						
	comp=Z,0.4nm,0.8s						
KLR	**Kul'dur**	**33.82**	**288**	P	**P**	**17 44 51.9**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=75,slow=8.5,SNR=8.2						
	comp=Z,1.5nm,0.6s						
BRLDA	**Berland Lookou**	**33.89**	**62**	P	P	17 44 47.0	-5.3
JOHN	**Johnston Islan**	**34.69**	**172**	P	P	17 44 48.4	-11
H11N2	**WAKE ISLAND Hy**	**34.75**	**212**	T	T	18 22 38.8	
	baz=20,slow=76,SNR=22						
H11N3	**WAKE ISLAND Hy**	**34.76**	**212**	T	T	18 22 41.0	
	baz=20,slow=76,SNR=15						
H11N1	**WAKE ISLAND Hy**	**34.77**	**212**	T	T	18 22 37.6	
	baz=20,slow=76,SNR=30						
B08A	**Colville Reser**	**34.97**	**73**	P	**P**	**17 45 01.0**	**-0.7**
B08A				IAmb	IAmb	17 45 18.0	
	comp=Z,5.6nm,1.1s						
RIM	**Rim**	**35.23**	**148**	P	P	17 44 54.1	-10
H11S1	**WAKE ISLAND Hy**	**35.95**	**211**	T	T	18 24 09.6	
	baz=20,slow=76,SNR=26						
H11S2	**WAKE ISLAND Hy**	**35.97**	**211**	T	T	18 24 10.8	
	baz=20,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy**	**35.97**	**212**	T	T	18 24 11.5	
	baz=20,slow=76,SNR=4.8						
USRK	**Ussuriysk Ar.**	**36.01**	**280**	P	**P**	**17 45 10.9**	**+0.3**
	comp=Z,4.1nm,0.7s,baz=56,slow=10.0,SNR=8.0						
	comp=Z,4.1nm,0.7s						
USRK	**Ussuriysk Ar.**	**36.01**	**280**	P	P	17 45 06.0	-4.6
RES	**Resolute Bay**	**38.69**	**25**	LR	LR	18 04 34.8	
	comp=Z,46nm,18.7s,baz=20,slow=41						
MFID	**Camas Ranch**	**39.53**	**78**	P	**P**	**17 45 38.1**	**-2.4**
MFID				IAmb	IAmb	17 45 48.7	
	comp=Z,3.9nm,0.6s						
NVAR	**Mina Array Bea**	**40.84**	**86**	P	**P**	**17 45 55.6**	**+4.1**
	comp=Z,0.3nm,0.6s,baz=294,slow=6.8,SNR=2.8						
	comp=Z,0.3nm,0.6s						
KSRS	**Korea Array**	**42.37**	**274**	P	**P**	**17 46 05.3**	**+1.5**
	comp=Z,1.4nm,0.9s,baz=52,slow=8.1,SNR=2.1						
	comp=Z,1.4nm,0.9s						
DUG	**Dugway, Tooele**	**43.21**	**80**	P	**P**	**17 46 08.1**	**-2.8**
DUG				IAmb	IAmb	17 46 27.1	
	comp=Z,3.4nm,0.9s						
PRN	**Pahroc Range**	**43.50**	**85**	P	P	17 46 06.5	-6.7
PRN				IAmb	IAmb	17 46 30.8	
	comp=Z,2.5nm,0.9s						
PDAR	**Pinedale Array**	**43.71**	**75**	P	**P**	**17 46 16.8**	**+1.8**
	comp=Z,0.6nm,0.7s,baz=289,slow=4.5,SNR=5.9						
	comp=Z,0.6nm,0.7s						
PDAR	**Pinedale Array**	**43.71**	**75**	P	P	17 46 10.8	-4.2
ULM	**Lac du Bonnet**	**47.42**	**59**	P	**P**	**17 46 44.5**	**+0.6**
	comp=Z,2.0nm,0.6s,baz=307,slow=11,SNR=3.5						
	comp=Z,2.0nm,0.6s						
SONM	**Songino Array**	**49.11**	**299**	P	**P**	**17 46 57.3**	**+0.1**
	comp=Z,0.5nm,0.9s,baz=67,slow=7.3,SNR=4.3						
	comp=Z,0.5nm,0.9s						
TUC	**Tucson**	**49.46**	**87**	P	P	17 46 53.3	-6.7
TUC				IAmb	IAmb	17 47 09.8	
	comp=Z,4.0nm,1.4s						
LYN	**LuoYang**	**53.84**	**282**	*e*P	**P**	**17 47 34.5**	**+2.0**
LYN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TX31	**Lajitas Ar. Si**	**55.95**	**84**	P	P	17 47 41.7	-6.3
TX32	**Lajitas Array**	**55.95**	**84**	P	P	17 47 41.4	-6.6
TX32				IAmb	IAmb	17 47 58.5	
	comp=Z,3.2nm,1.4s						
TXAR	**Lajitas Array**	**55.95**	**84**	P	**P**	**17 47 49.5**	**+1.5**
	comp=Z,0.2nm,0.6s,baz=126,slow=45,SNR=2.4						
	comp=Z,0.2nm,0.6s						
TXAR	**Lajitas Array**	**55.95**	**84**		P	17 47 41.7	-6.3
ZALV	**Zalesovo Beam**	**56.05**	**316**	LR	LR	18 13 13.7	
	comp=Z,50nm,18.5s,baz=9.0,slow=38						
MIAR	**Mount Ida**	**58.56**	**73**	P	**P**	**17 48 03.1**	**-3.2**
ARCES	**ARCESS Array B**	**58.61**	**352**	P	**P**	**17 48 05.8**	**-0.4**
	comp=Z,3.0nm,0.8s,baz=16,slow=6.8,SNR=1.8						
ARCES				LR	LR	18 15 53.2	
	comp=Z,46nm,19.0s,baz=281,slow=39						
	comp=Z,3.0nm,0.8s						
KURK	**Kurchatov**	**61.03**	**316**	P	**P**	**17 48 23.0**	**0.0**
KURBB	**Kurchatov Arra**	**61.13**	**316**	LR	LR	18 16 34.3	
	comp=Z,62nm,18.5s,baz=140,slow=38						
WMQ	**Urumqi**	**61.66**	**305**	*e*P	**P**	**17 48 27.7**	**+0.2**
MK31	**Makanchi Array**	**62.20**	**311**	P	**P**	**17 48 30.2**	**-0.8**
MK31				IAmb	IAmb	17 48 33.1	
	comp=Z,1.3nm,1.1s						
MKAR	**Makanchi Array**	**62.20**	**311**	P	**P**	**17 48 30.7**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=48,slow=5.5,SNR=21						
MKAR				LR	LR	18 15 35.8	
	comp=Z,32nm,19.6s,baz=356,slow=36						
	comp=Z,1.1nm,0.6s						
MAKZ	**Makanchi**	**62.34**	**311**	P	**P**	**17 48 31.2**	**-0.7**
MAKZ				IAmb	IAmb	17 48 59.6	
	comp=Z,2.9nm,1.4s						
BVAR	**Borovoye Array**	**62.69**	**322**	P	**P**	**17 48 34.3**	**+0.1**
	comp=Z,1.4nm,0.4s,baz=47,slow=6.4,SNR=10						
	comp=Z,1.4nm,0.4s						
L59A	**Walton**	**63.61**	**55**	P	**P**	**17 48 39.9**	**-0.6**
ARU	**Arti**	**64.08**	**330**	P	**P**	**17 48 41.5**	**-1.8**
PZH	**PanZhiHua**	**66.05**	**283**	P	P	17 48 52.0	-4.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,30nm,4.0s						
FINES	**FINESS Array B**	**66.43**	**349**	P	**P**	**17 48 57.2**	**-1.2**
	comp=Z,1.8nm,0.9s,baz=72,slow=6.2,SNR=3.4						
	comp=Z,1.8nm,0.9s						
FINES	**FINESS Array B**	**66.43**	**349**	P	**P**	**17 48 56.5**	**-1.9**
NC204	**NORSAR Array S**	**67.71**	**357**	P	**P**	**17 49 06.3**	**-0.4**
NC405	**NORSAR Array S**	**67.84**	**357**	P	**P**	**17 49 06.6**	**-0.8**
NOA	**NORSAR Array B**	**67.94**	**357**	P	**P**	**17 49 07.6**	**-0.5**
	comp=Z,1.5nm,0.8s,baz=4.3,slow=6.3,SNR=3.9						
	comp=Z,1.5nm,0.8s						
AKTO	**Aktyubinsk**	**69.30**	**327**	LR	LR	18 24 26.1	
	comp=Z,38nm,18.0s,baz=322,slow=40						
ABKAR	**Akbulak array**	**69.62**	**325**	P	**P**	**17 49 16.0**	**-2.7**
TNTI	**Ternate**	**70.04**	**245**	P	P	17 49 14.7	-7.0
KKAR	**Karatay Array**	**70.42**	**315**	P	**P**	**17 49 19.7**	**-4.0**
KSH	**Kashi**	**70.71**	**309**	P	**P**	**17 49 30.2**	**+4.5**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**73.73**	**279**	P	**P**	**17 49 44.8**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=26,slow=6.6,SNR=4.8						
	comp=Z,0.4nm,0.3s						
TAPN	**Taplejung**	**73.78**	**293**	*e*P	**P**	**17 49 45.8**	**+1.4**
	comp=Z,17nm,0.8s						
GUN	**Gumba**	**74.40**	**295**	*e*P	**P**	**17 49 49.7**	**+1.6**
	comp=Z,26nm,0.6s						
JIRN	**Jiri**	**74.41**	**295**	*e*P	**P**	**17 49 49.8**	**+1.6**
	comp=Z,31nm,0.7s						
RAMN	**Ramite**	**74.72**	**294**	*e*P	**P**	**17 49 51.0**	**+1.1**
	comp=Z,30nm,0.7s						
PKI	**Pulchoki**	**74.93**	**295**	*e*P	**P**	**17 49 52.1**	**+0.9**
	comp=Z,16nm,1.0s						
PKIN	**Phulchoki**	**74.93**	**295**	*e*P	**P**	**17 49 52.4**	**+1.3**
GKN	**Gorkha**	**75.03**	**296**	*e*P	**P**	**17 49 52.5**	**+0.9**
	comp=Z,17nm,0.7s						
DMN	**Daman**	**75.07**	**295**	*e*P	**P**	**17 49 53.1**	**+1.2**
	comp=Z,20nm,1.0s						
DANN	**Dangsing**	**75.26**	**297**	*e*P	**P**	**17 49 54.3**	**+1.3**
	comp=Z,32nm,0.8s						
PYUN	**Piuthan**	**75.88**	**297**	*e*P	**P**	**17 49 57.5**	**+1.0**
	comp=Z,42nm,1.0s						
NIL	**Nilore**	**76.68**	**308**	P	**P**	**17 49 60.0**	**-0.8**
KBL	**Kabul**	**78.01**	**311**	P	**P**	**17 50 08.4**	**0.0**
GERES	**GERESS Array B**	**80.00**	**355**	P	**P**	**17 50 19.0**	**0.0**
	comp=Z,0.6nm,0.8s,baz=35,slow=5.4,SNR=3.4						
	comp=Z,0.6nm,0.8s						
BURAR	**Bucovina Array**	**80.04**	**347**	P	**P**	**17 50 18.1**	**-1.1**
WRA	**Warramunga Arr**	**83.91**	**228**	P	**P**	**17 50 40.6**	**+1.1**
	comp=Z,0.7nm,1.2s,baz=33,slow=6.0,SNR=1.8						
	comp=Z,0.7nm,1.2s						
ASAR	**Alice Springs**	**87.33**	**226**	P	**P**	**17 50 58.4**	**+1.8**
	comp=Z,0.3nm,0.7s,baz=26,slow=4.6,SNR=4.1						
ASAR				LR	LR	18 25 28.1	
	comp=Z,17nm,19.6s,baz=354,slow=32						
	comp=Z,0.3nm,0.7s						
ESDC	**Sonseca Array**	**89.03**	**7**	P	**P**	**17 51 03.9**	**-0.9**
	comp=Z,1.1nm,0.8s,baz=343,slow=5.1,SNR=5.8						
	comp=Z,1.1nm,0.8s						
EIL	**Elat**	**95.33**	**335**	LR	LR	18 42 33.5	
	comp=Z,29nm,18.0s,baz=265,slow=41						

IDC 01 17:44:29.2±9.0**, 5°.98S×155°.29E, h0^{km}, mb3.2**/3**, mbtmp3.2**/3**, Error ellipse: s-maj=261.3km s-min=39.7km az=107.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.64**	**234**	P	P	17 49 53.1	+1.3
	0.2nm,0.4s,baz=59,slow=9.3,SNR=2.2						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**27.07**	**227**	P	P	17 50 12.8	-1.0
	0.1nm,0.4s,baz=58,slow=9.1,SNR=6.2						
	0.1nm,0.4s						
SONM	**Songino Array**	**68.64**	**327**	P	P	17 55 34.5	0.0
	0.2nm,0.6s,baz=116,slow=6.6,SNR=2.8						
	0.2nm,0.6s						

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*ISK **01** 17:51:05.3, 39°.51N×26°.04E, h6^{km}, ML3.2/23*

*DDA **01** 17:51:06.6±0.0, 39°.50N×26°.09E, h9^{km}, ML3.1*

*ATH **01** 17:51:06.3, 39°.50N×26°.07E, h13^{km}±1^{km}, ML2.9/13, Error ellipse: s-maj=1.5km s-min=0.7km az=228.0*

*THE **01** 17:51:06.4, 39°.50N×26°.08E, h11^{km}±1^{km}, ML3.0/7, Error ellipse: s-maj=1.6km s-min=0.7km az=151.0*

ISC 01 17:51:05.2±0.8**, 39°.49N**±0°.01×**26°.06E**±0°.02**, h14**^{km}±5^{km}**, n87, σ1^{s}.07**/127**, 2C-4D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	**Canakkale, Ayv**	**0.06**	**75**	P	**Pg**	**17 51 08.2**	**+0.4**
KOCA				S	**Sg**	**17 51 09.5**	**-0.2**
GPNR	**Gulpinar-Canak**	**0.06**	**119**	Pg	**Pg**	**17 51 07.9**	**0.0**
GPNR				Sg	**Sg**	**17 51 09.8**	**+0.1**
PRK	**Paraskevi**	**0.29**	**146**	P	**Pb**	**17 51 12.3**	**+0.2**
PRK				S	**Sb**	**17 51 16.9**	**+0.1**
	8µm,0.5s						
PRK	**Paraskevi**	**0.29**	**146**	P	**Pb**	**17 51 12.3**	**+0.2**
PRK				S	**Sb**	**17 51 16.1**	**-0.8**
PRK				AML	AML	17 51 17.1	
	comp=E,18982µm,0.4s						
PRK				AML	AML	17 51 18.7	
	comp=N,13004µm,0.5s						
SIGR	**SIGRI**	**0.32**	**210**	P	**Pb**	**17 51 12.8**	**+0.2**
SIGR				S	**Sb**	**17 51 18.0**	**+0.3**
	comp=N,4µm,0.2s						
SIGR	**SIGRI**	**0.32**	**210**	Pg	**Pb**	**17 51 12.4**	**-0.2**
SIGR				Sg	**Sb**	**17 51 17.6**	**-0.1**
SIGR	**SIGRI**	**0.32**	**210**	P	**Pb**	**17 51 13.0**	**+0.3**
SIGR				S	**Sb**	**17 51 17.7**	**+0.1**
SIGR				AML	AML	17 51 18.2	
	comp=N,8869µm,0.3s						
SIGR				AML	AML	17 51 18.6	
	comp=E,5118µm,0.2s						
BOZC	**Bozcaada**	**0.35**	**359**	Pg	**Pg**	**17 51 12.5**	**+0.1**
BOZC	**Bozcaada**	**0.35**	**359**	P	**Pb**	**17 51 12.9**	**-0.4**
BOZC				P	**Pb**	**17 51 13.0**	**-0.4**
BOZC				S	**Sg**	**17 51 17.6**	**+0.3**
BOZC				S	**Sg**	**17 51 17.6**	**+0.3**
EZN	**Ezine**	**0.40**	**31**	P	**Pb**	**17 51 13.5**	**-0.5**
EZN				S	**Sb**	**17 51 19.2**	**-0.7**
EZN	**Ezine**	**0.40**	**31**	Pg	**Pg**	**17 51 13.3**	**+0.2**
EZN				Sg	**Sb**	**17 51 19.3**	**-0.7**
BAYC	**CANAKKALE_Bayr**	**0.45**	**56**	P	**Pg**	**17 51 14.3**	**+0.1**
BAYC				S	**Sg**	**17 51 19.7**	**-0.6**
AYVA	**Ayvalik**	**0.52**	**110**	P	**Pb**	**17 51 16.1**	**+0.1**
AYVA				S	**Sg**	**17 51 21.9**	**-0.4**
ECEA	**Canakkale, Ece**	**0.56**	**9**	P	**Pb**	**17 51 16.7**	**-0.2**
ECEA				S	**Sb**	**17 51 24.6**	**-0.2**
COMU	**Canakkale**	**0.69**	**27**	Pg	**Pb**	**17 51 18.9**	**-0.1**
COMU				Sg	**Sb**	**17 51 28.8**	**+0.4**
GOKA	**anakkale-Gk**	**0.71**	**350**	P	**Pb**	**17 51 19.5**	**+0.1**
GOKA				*i* AML	AML	17 51 33.0	
	comp=E,846nm,0.3s						
GOKA				*i* AML	AML	17 51 34.0	
	comp=E,854nm,0.5s						
GADA	**Gvkgeada**	**0.71**	**350**	Pg	**Pb**	**17 51 19.1**	**-0.3**
DKL	**Dikili**	**0.77**	**122**	Pg	**Pn**	**17 51 21.4**	**-0.3**
BUHA	**Balikesir, Bur**	**0.79**	**89**	P	**Pb**	**17 51 20.8**	**+0.2**
BUHA				S	**Sg**	**17 51 30.9**	**+0.2**
BUHA				*i* AML	AML	17 51 36.0	
	comp=E,722nm,0.5s						
LIA	**Limnos Island**	**0.79**	**301**	P	**Pn**	**17 51 21.6**	**-0.4**
LIA				S	**Sn**	**17 51 33.9**	**+0.3**
	comp=E,2µm,0.4s						
LIA	**Limnos Island**	**0.79**	**301**	P	**Pn**	**17 51 21.7**	**-0.2**
LIA				S	**Sb**	**17 51 32.0**	**+0.6**
LIA				AML	AML	17 51 34.5	
	comp=E,4612µm,0.4s						
LIA				AML	AML	17 51 35.0	
	comp=N,4900µm,0.3s						
KARB	**zmir-Karabur**	**0.86**	**162**	P	**Pn**	**17 51 23.1**	**+0.1**
KARB				S	**Sn**	**17 51 34.3**	**-1.0**
KARB				*i* AML	AML	17 51 36.0	
	comp=N,756nm,0.4s						
KARB				*i* AML	AML	17 51 37.0	
	comp=N,677nm,0.3s						
CANM	**Can-anakkale**	**0.93**	**55**	Pg	**Pn**	**17 51 23.6**	**-0.2**
CANM				Sg	**Sn**	**17 51 37.0**	**+0.1**
ZEDA	**zmir-Bergama**	**0.94**	**123**	P	**Pn**	**17 51 24.0**	**0.0**
ZEDA				S	**Sb**	**17 51 35.5**	**-0.2**
ZEDA				*i* AML	AML	17 51 39.0	
	comp=N,425nm,0.4s						
GELI	**Tayfur-Gelibol**	**0.96**	**19**	Pg	**Pb**	**17 51 23.9**	**+0.2**
PSRA	**Psara**	**1.02**	**203**	P	**Pn**	**17 51 26.0**	**+0.9**
PSRA				S	**Sn**	**17 51 40.6**	**+1.4**
PSRA				AML	AML	17 51 45.3	
	comp=E,4214µm,0.2s						
PSRA				AML	AML	17 51 45.8	
	comp=N,3415µm,0.2s						
LPK	**Lapseki**	**1.03**	**31**	Pg	**Pn**	**17 51 25.4**	**+0.1**
SMTH	**Samothraki Isl**	**1.06**	**338**	P	**Pn**	**17 51 25.9**	**+0.1**
SMTH				S	**Sn**	**17 51 40.6**	**+0.2**
	comp=N,380nm,0.4s						
SMTH	**Samothraki Isl**	**1.06**	**338**	P	**Pn**	**17 51 25.9**	**+0.1**
SMTH				S	**Sb**	**17 51 39.4**	**+0.1**
SMTH				AML	AML	17 51 41.2	
	comp=E,812µm,0.4s						
SMTH				AML	AML	17 51 41.3	
	comp=N,710µm,0.4s						
CHOS	**Chios island**	**1.10**	**180**	P	**Pn**	**17 51 26.7**	**+0.4**
CHOS				S	**Sn**	**17 51 41.5**	**+0.3**
	comp=N,2µm,0.4s						
CHOS	**Chios island**	**1.10**	**180**	Pn	**Pn**	**17 51 27.3**	**+1.1**
CHOS	**Chios island**	**1.10**	**180**	P	**Pn**	**17 51 26.6**	**+0.4**
CHOS				S	**Sn**	**17 51 41.2**	**-0.1**
CHOS				AML	AML	17 51 45.7	
	comp=E,3883µm,0.4s						
CHOS				AML	AML	17 51 46.8	
	comp=N,2610µm,0.5s						
URLA	**Izmir**	**1.20**	**160**	Pn	**Pg**	**17 51 28.6**	**+0.3**
URLA	**Izmir**	**1.20**	**160**	P	**Pg**	**17 51 28.0**	**-0.2**
URLA				S	**Sn**	**17 51 43.4**	**-0.2**
URLA				*i* AML	AML	17 51 47.0	
	comp=N,461nm,0.6s						
URLA				*i* AML	AML	17 51 48.0	
	comp=N,491nm,0.4s						
CAVK	**Edirne/Enez-Ca**	**1.21**	**4**	P	**Pg**	**17 51 28.4**	**0.0**
CAVK				*i* AML	AML	17 51 45.0	
	comp=N,336nm,1.0s						
CAVK				*i* AML	AML	17 51 52.0	
	comp=N,430nm,0.8s						
BALY	**Balya**	**1.23**	**78**	P	**Pg**	**17 51 28.8**	**0.0**
BALY				S	**Sb**	**17 51 43.9**	**0.0**
BALY				*i* AML	AML	17 51 46.0	
	comp=N,541nm,0.6s						
ERIK	**Erikli-Kesan**	**1.23**	**16**	Pn	**Pb**	**17 51 28.4**	**+0.1**
ENEZ	**Enez**	**1.25**	**3**	Pn	**Pg**	**17 51 29.0**	**-0.3**
STEP	**BALIKESIR_Sava**	**1.29**	**94**	P	**Pg**	**17 51 29.6**	**-0.4**
STEP				*i* AML	AML	17 51 50.0	
	comp=N,243nm,0.7s						
STEP				*i* AML	AML	17 51 57.0	
	comp=N,305nm,1.0s						
KRBG	**Karabiga-Canak**	**1.31**	**46**	Pn	**Pg**	**17 51 29.9**	**-0.5**
BLCB	**Balcova**	**1.34**	**145**	P	**Pg**	**17 51 32.0**	**+1.1**
BLCB				S	**Sg**	**17 51 48.1**	**-0.2**
BLCB	**Balcova**	**1.34**	**145**	Pn	**Pg**	**17 51 31.4**	**+0.5**
GONE	**Gonen-Balikesi**	**1.37**	**65**	Pn	**Pg**	**17 51 31.4**	**-0.1**
KNL	**Balıkesir**	**1.37**	**55**	P	**Pn**	**17 51 30.0**	**+0.1**
KNL				S	**Sb**	**17 51 48.6**	**+0.5**
KNL				*i* AML	AML	17 51 50.0	
	comp=N,508nm,0.6s						
ALN	**Alexandroupoli**	**1.41**	**359**	P	**Pb**	**17 51 31.2**	**-0.1**
ALN				S	**Sb**	**17 51 49.8**	**+0.7**
	comp=N,208nm,0.4s						
ALN	**Alexandroupoli**	**1.41**	**359**	Pn	**Pb**	**17 51 31.5**	**+0.2**
ALN	**Alexandroupoli**	**1.41**	**359**	P	**Pb**	**17 51 31.0**	**-0.2**
ALN				S	**Sn**	**17 51 48.3**	**-0.5**
ALN				AML	AML	17 51 51.2	
	comp=N,347µm,0.4s						
ALN				AML	AML	17 51 51.8	
	comp=E,479µm,0.4s						
BALB	**Balikesir**	**1.41**	**83**	Pn	**Pg**	**17 51 31.9**	**-0.4**
KESN	**Edirne-Kesan**	**1.42**	**19**	P	**Pn**	**17 51 31.1**	**+0.2**
KESN				S	**Sn**	**17 51 49.3**	**-0.3**
KESN				*i* AML	AML	17 51 51.0	
	comp=E,560nm,0.5s						
KESN				*i* AML	AML	17 51 58.0	
	comp=E,281nm,0.5s						
BKES	**Balkesir-Mer**	**1.46**	**80**	P	**Pb**	**17 51 32.5**	**+0.4**
BKES				*i* AML	AML	17 51 54.0	
	comp=E,232nm,0.4s						
RKY	**Sarkoy-Tekirda**	**1.47**	**35**	Pn	**Pb**	**17 51 32.6**	**+0.2**
RKY				Sn	**Sg**	**17 51 52.8**	**+0.1**
THAS	**Thassos island**	**1.52**	**318**	P	**Pb**	**17 51 32.5**	**-0.7**
THAS				S	**Sb**	**17 51 52.6**	**+0.3**
	comp=E,222nm,0.3s						
THAS	**Thassos island**	**1.52**	**318**	P	**Pb**	**17 51 32.5**	**-0.7**
THAS				S	**Sn**	**17 51 51.3**	**-0.3**
THAS				AML	AML	17 51 56.9	
	comp=N,530µm,0.3s						
THAS				AML	AML	17 51 57.1	
	comp=E,357µm,0.4s						
DGB	**zmir**	**1.57**	**156**	P	**Pn**	**17 51 32.7**	**+0.1**
UKOP	**Uzunkopru-Edir**	**1.70**	**15**	Pn	**Pb**	**17 51 35.7**	**-0.5**
RDO	**Rodhopi**	**1.71**	**347**	P	**Pb**	**17 51 35.4**	**-0.9**
RDO				S	**Sb**	**17 51 57.3**	**-0.3**
RDO	**Rodhopi**	**1.71**	**347**	Pn	**Pb**	**17 51 35.6**	**-0.7**
RDO	**Rodhopi**	**1.71**	**347**	P	**Pb**	**17 51 35.4**	**-0.9**
KYMI	**Kymi, Euboea I**	**1.75**	**241**	P	**Pn**	**17 51 35.3**	**+0.2**
KYMI				S	**Sn**	**17 51 57.0**	**-0.2**
KYMI				AML	AML	17 52 05.8	
	comp=E,314µm,0.4s						
KYMI				AML	AML	17 52 05.9	
	comp=N,293µm,0.9s						
BAND	**Balkesir-Ban**	**1.79**	**60**	P	**Pn**	**17 51 35.7**	**0.0**
DURS	**Dursunbey**	**1.87**	**86**	P	**Pn**	**17 51 37.8**	**+1.0**
DURS				S	**Sn**	**17 52 00.5**	**+0.2**
SMG	**Samos**	**1.88**	**161**	P	**Pn**	**17 51 37.2**	**+0.3**
SMG				AML	AML	17 52 08.9	
	comp=E,1594µm,0.5s						
SMG				AML	AML	17 52 09.4	
	comp=N,1197µm,0.5s						
TKR	**Tekirdag**	**1.88**	**36**	Pn	**Pb**	**17 51 38.5**	**-0.8**
KAVA	**Kavala**	**1.92**	**322**	P	**Pn**	**17 51 38.2**	**+0.8**
KCTX	**Karacabey (Bur**	**1.93**	**65**	Pn	**Pb**	**17 51 39.2**	**-0.9**
KVLA	**Kavala**	**1.94**	**319**	P	**Pb**	**17 51 39.1**	**-1.1**
EREA	**Eretria**	**1.97**	**238**	P	**Pn**	**17 51 38.3**	**+0.1**
EREA				AML	AML	17 52 13.6	
	comp=N,253µm,0.4s						
EREA				AML	AML	17 52 20.1	
	comp=E,178µm,0.8s						
GCAM	**G?zelcaml?**	**2.00**	**152**	Pn	**Pb**	**17 51 40.7**	**-0.7**
CRLT	**Corlu**	**2.08**	**37**	Pn	**Pb**	**17 51 41.3**	**-1.4**
DION	**Dionisos Attik**	**2.18**	**230**	P	**Pn**	**17 51 42.1**	**+1.0**
KDZ	**Kurdzhali**	**2.22**	**347**	*i* P	**Pn**	**17 51 42.5**	**+0.9**
KULA	**Kula-Manisa**	**2.24**	**115**	Pn	**Pb**	**17 51 44.1**	**-1.5**
VLY	**Voula,Athens**	**2.41**	**228**	P	**Pb**	**17 51 46.3**	**-2.0**
RZN	**Rozhen**	**2.43**	**335**	*i* P	**Pn**	**17 51 45.8**	**+1.2**
APE	**Apeiranthos**	**2.45**	**190**	P	**Pn**	**17 51 44.6**	**-0.1**
SRS	**Serrai**	**2.50**	**312**	P	**Pn**	**17 51 45.9**	**+0.5**
SRS				AML	AML	17 52 27.6	
	comp=E,188µm,0.5s						
SRS				AML	AML	17 52 27.6	
	comp=N,123µm,0.8s						
NVR	**Nevrokopi**	**2.51**	**319**	P	**Pn**	**17 51 47.0**	**+1.4**
NVR				AML	AML	17 52 28.6	
	comp=E,99µm,0.5s						
NVR				AML	AML	17 52 30.9	
	comp=N,79µm,0.5s						
DIM	**Dimitrovgrad**	**2.59**	**351**	P	**Pb**	**17 51 49.7**	**-1.7**
JMB	**Yambol**	**3.00**	**7**	P	**Pn**	**17 51 55.0**	**+2.6**
STIP	**Stip**	**3.69**	**308**	*i* Pn	**Pn**	**17 52 02.6**	**+0.9**
MPEP	**Malo Peshtene**	**4.24**	**336**	P	**Pn**	**17 52 13.7**	**+4.3**
PUNG	**Punghina**	**5.33**	**335**	⇓P	**Pb**	**17 52 33.3**	**-4.7**
MLR	**Muntele Rosu**	**6.00**	**359**	⇓P	**Pn**	**17 52 37.6**	**+3.9**
BISRR	**Bisoca**	**6.08**	**4**	⇑P	**Pn**	**17 52 39.4**	**+4.7**
SLCR	**Slobozia Conac**	**6.23**	**11**	⇓P	**Pn**	**17 52 34.6**	**-2.1**
PLOR	**Plostina**	**6.38**	**4**	⇑P	**Pn**	**17 52 41.6**	**+2.8**
TESR	**Tescani**	**7.04**	**3**	⇓P	**Pn**	**17 52 49.0**	**+1.3**

*IDC **01** 18:04:07.1±3.2, 0°.52S×132°.17E, h0^{km}, mb3.4/3, mbtmp3.4/4, ML3.4/1, MS3.2/1, Error ellipse: s-maj=139.5km s-min=24.3km az=68.0*
*DJA **01** 18:04:15.3±0.4, 1°S±3°×13°1E±°, h10^{km}, M3.6/6, MLv3.6/6*
ISC 01 18:04:11.0±1.0**, 0°.8S**±0°.1×**131°.47E**±0°.06**, h10^{km}, n10, σ1^{s}.46**/11**, mb3.4**/3**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	2.27	160	P	Pn	18 04 49.0	+0.3
RKPI	**Ransiki, Papua**	2.81	105	P	Pg	18 05 04.2	-0.7
RKPI				S	Sg	18 05 42.3	+1.0
MSAI	**Masohi**	3.61	225	P	Pn	18 05 09.2	+2.2
LBMI	**Labuha**	3.97	272	P	Pn	18 05 11.9	-0.2
AAI	**Ambon**	4.37	228	P	Pn	18 05 18.3	+0.7
AAI				S	Sn	18 06 06.8	-1.8
WRA	**Warramunga Arr**	19.26	172	P	P	18 08 35.1	-0.9
	0.1nm,0.3s,baz=351,slow=11,SNR=5.8						
	0.5nm,0.5s						
ASAR	**Alice Springs**	22.88	174	P	P	18 09 14.6	-0.5
	1.0nm,0.8s,baz=351,slow=11,SNR=15						
	1.0nm,0.8s						
JOW	**Kunigami**	27.61	354	LR	LR	18 19 33.8	
	comp=Z,59nm,21.7s,baz=53,slow=34						
CMAR	**Chiang Mai Arr**	37.25	303	P	P	18 11 25.2	+2.0
	0.3nm,0.4s,baz=120,slow=8.6,SNR=2.2						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	63.93	325	P	P	18 14 43.1	-1.3
	0.4nm,0.7s,baz=124,slow=8.1,SNR=4.2						
	0.4nm,0.7s						

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*ISK **01** 18:09:24.8, 39°.51N×26°.06E, h10^{km}, ML2.8/19*
*DDA **01** 18:09:25.5±0.0, 39°.53N×26°.12E, h9^{km}, ML2.7*
*ATH **01** 18:09:25.6, 39°.51N×26°.07E, h7^{km}±2^{km}, ML2.6/9, Error ellipse: s-maj=2.5km s-min=0.7km az=224.0*
*THE **01** 18:09:25.4, 39°.50N×26°.06E, h12^{km}±1^{km}, ML2.5/7, Error ellipse: s-maj=1.4km s-min=0.6km az=117.0*
ISC 01 18:09:25.2±0.8**, 39°.51N**±0°.01×**26°.09E**±0°.02**, h12^{km}**±5^{km}**, n59, σ0^{s}.49**/92**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	0.04	102	P	Pg	18 09 27.5	0.0
KOCA				S	Sg	18 09 28.8	-0.4
GPNR	**Gulpinar-Canak**	0.07	147	Pg	Pg	18 09 27.6	-0.1
PRK	**Paraskevi**	0.30	151	P	Pg	18 09 31.6	+0.3
PRK				S	Sg	18 09 36.2	+0.8
	3μm,0.4s						
PRK	**Paraskevi**	0.30	151	P	Pg	18 09 31.6	+0.3
PRK				S	Sg	18 09 35.7	+0.3
PRK				AML	AML	18 09 36.3	
	comp=E,6321μm,0.3s						
PRK				AML	AML	18 09 37.9	
	comp=N,5300μm,0.5s						
BOZC	**Bozcaada**	0.33	356	Pg	Pg	18 09 32.0	+0.1
BOZC				Sg	Sg	18 09 37.0	+0.6
BOZC	**Bozcaada**	0.33	356	P	Pg	18 09 32.1	+0.1
BOZC				P	Pb	18 09 32.2	-0.8
BOZC				S	Sg	18 09 36.2	-0.1
BOZC				S	Sg	18 09 36.3	-0.1
SIGR	**SIGRI**	0.35	211	P	Pg	18 09 32.2	0.0
SIGR				S	Sg	18 09 37.5	+0.6
	comp=N,738nm,0.2s						
SIGR	**SIGRI**	0.35	211	Pg	Pg	18 09 32.2	0.0
SIGR				Sg	Sg	18 09 37.3	+0.4
SIGR	**SIGRI**	0.35	211	P	Pg	18 09 32.2	0.0
SIGR				S	Sg	18 09 37.1	+0.2
SIGR				AML	AML	18 09 37.4	
	comp=N,1769μm,0.3s						
SIGR				AML	AML	18 09 37.8	
	comp=E,1170μm,0.2s						
EZN	**Ezine**	0.36	30	P	Pg	18 09 32.7	+0.2
EZN				S	Sg	18 09 38.4	+1.0
	comp=E,472nm,0.2s						
EZN	**Ezine**	0.36	30	Pg	Pg	18 09 32.6	+0.1
BAYC	**CANAKKALE_Bayr**	0.42	57	P	Pg	18 09 33.5	-0.1
BAYC				S	Sg	18 09 38.9	-0.3
AYVA	**Ayvalik**	0.51	113	P	Pg	18 09 35.2	0.0
AYVA				S	Sg	18 09 40.6	-1.3
ECEA	**Canakkale, Ece**	0.54	7	P	Pg	18 09 36.1	+0.4
ECEA				S	Sg	18 09 43.3	+0.4
COMU	**Canakkale**	0.66	27	Pg	Pg	18 09 38.1	+0.1
GOKA	**anakkale-Gk**	0.69	349	P	Pg	18 09 38.7	0.0
GOKA				S	Sg	18 09 46.8	-1.0
GOKA				i AML	AML	18 09 53.0	
	comp=E,312nm,0.6s						
GOKA				i AML	AML	18 09 56.0	
	comp=E,326nm,0.2s						
GADA	**Gvkgeada**	0.69	348	Pg	Pg	18 09 38.7	0.0
BUHA	**Balikesir, Bur**	0.77	90	P	Pg	18 09 40.0	-0.1
BUHA				S	Sg	18 09 49.8	-0.3
BUHA				i AML	AML	18 09 55.0	
	comp=E,240nm,0.6s						
DKL	**Dikili**	0.77	124	Pg	Pg	18 09 40.7	+0.6
LIA	**Limnos Island**	0.80	299	P	Pg	18 09 40.8	+0.2
LIA				S	Sg	18 09 51.1	0.0
	comp=E,640nm,0.4s						
LIA	**Limnos Island**	0.80	299	P	Pg	18 09 40.1	-0.5
LIA				S	Sg	18 09 50.9	-0.1
LIA				AML	AML	18 09 53.7	
	comp=E,1436μm,0.4s						
LIA				AML	AML	18 09 54.1	
	comp=N,1113μm,0.3s						
KARB	**zmir-Karabur**	0.88	163	P	Pg	18 09 42.5	+0.2
KARB				i AML	AML	18 09 55.0	
	comp=N,222nm,0.4s						
KARB				i AML	AML	18 09 56.0	
	comp=N,239nm,0.3s						
CANM	**Can-anakkale**	0.90	56	Pg	Pg	18 09 42.9	+0.4
GELI	**Tayfur-Gelibol**	0.94	18	Pg	Pg	18 09 43.2	0.0
ZEDA	**zmir-Bergama**	0.94	125	P	Pg	18 09 43.1	-0.2
ZEDA				S	Sg	18 09 55.2	-0.4
ZEDA				i AML	AML	18 09 58.0	
	comp=N,152nm,0.5s						
LPK	**Lapseki**	1.00	31	Pg	Pg	18 09 44.5	-0.1
PSRA	**Psara**	1.05	203	P	Pg	18 09 45.5	+0.1
PSRA				S	Sb	18 09 59.8	+0.9
PSRA				AML	AML	18 10 03.0	
	comp=N,851μm,0.3s						
PSRA				AML	AML	18 10 04.8	
	comp=E,1127μm,0.2s						
SMTH	**Samothraki Isl**	1.05	336	P	Pg	18 09 45.2	-0.3
SMTH				S	Sb	18 09 59.6	+0.6
	comp=E,122nm,0.2s						
SMTH	**Samothraki Isl**	1.05	336	P	Pg	18 09 45.1	-0.3
SMTH				S	Sb	18 09 59.5	+0.5
SMTH				AML	AML	18 10 00.0	
	comp=E,241μm,0.2s						
SMTH				AML	AML	18 10 02.6	
	comp=N,249μm,0.2s						
CHOS	**Chios island**	1.12	181	P	Pb	18 09 45.9	-0.6
CHOS				S	Sg	18 10 00.9	-0.5
	comp=N,422nm,0.4s						
CHOS	**Chios island**	1.12	181	Pn	Pb	18 09 46.5	0.0
CHOS	**Chios island**	1.12	181	P	Pb	18 09 46.7	+0.2
CHOS				S	Sg	18 10 01.6	+0.1
CHOS				AML	AML	18 10 04.9	
	comp=E,1047μm,0.4s						
CHOS				AML	AML	18 10 06.1	
	comp=N,653μm,0.4s						
CAVK	**Edirne/Enez-Ca**	1.18	3	P	Pb	18 09 47.3	-0.1
CAVK				S	Sb	18 10 02.0	-0.8
CAVK				i AML	AML	18 10 05.0	
	comp=N,134nm,1.0s						
ERIK	**Erikli-Kesan**	1.20	16	Pn	Pn	18 09 47.4	-0.4
BALY	**Balya**	1.21	79	P	Pn	18 09 47.9	0.0
BALY				S	Sb	18 10 02.7	-0.8
BALY				i AML	AML	18 10 05.0	
	comp=N,152nm,0.4s						
URLA	**Izmir**	1.22	161	Pn	Pn	18 09 47.5	-0.5
URLA	**Izmir**	1.22	161	P	Pn	18 09 47.1	-0.9
URLA				S	Sb	18 10 02.7	-1.1
URLA				i AML	AML	18 10 06.0	
	comp=N,127nm,0.6s						
URLA				i AML	AML	18 10 07.0	
	comp=N,164nm,0.3s						
ENEZ	**Enez**	1.23	2	Pn	Pn	18 09 48.3	+0.2
STEP	**BALIKESIR_Sava**	1.27	96	P	Pn	18 09 49.5	+0.7
STEP				S	Sb	18 10 05.7	+0.3
STEP				i AML	AML	18 10 10.0	
	comp=N,111nm,0.4s						
KRBG	**Karabiga-Canak**	1.28	46	Pn	Pn	18 09 49.1	+0.2
ZEYE	**Izmir, Urla-Ze**	1.31	166	P	Pn	18 09 49.6	+0.3
ZEYE				S	Sb	18 10 05.3	-1.1
ZEYE				i AML	AML	18 10 12.0	
	comp=N,112nm,0.4s						
ZEYE				i AML	AML	18 10 12.0	
	comp=N,125nm,0.5s						
KNL	**Balıkesir**	1.34	55	P	Pn	18 09 50.1	+0.4
KNL				S	Sb	18 10 08.0	+0.6
KNL				i AML	AML	18 10 09.0	
	comp=N,193nm,0.6s						
KNL				i AML	AML	18 10 10.0	
	comp=N,335nm,0.6s						
GONE	**Gonen-Balikesi**	1.34	66	Pn	Pn	18 09 49.9	+0.2
BLCB	**Balcova**	1.35	146	Pn	Pn	18 09 50.4	+0.6
ALN	**Alexandroupoli**	1.39	359	P	Pn	18 09 50.3	0.0
ALN				S	Sb	18 10 08.2	-0.4
	comp=N,88nm,0.4s						
ALN	**Alexandroupoli**	1.39	359	Pn	Pn	18 09 50.5	+0.2
ALN	**Alexandroupoli**	1.39	359	P	Pn	18 09 50.5	+0.2
ALN				S	Sb	18 10 08.6	0.0
ALN				AML	AML	18 10 10.4	
	comp=N,152μm,0.4s						
ALN				AML	AML	18 10 11.0	
	comp=E,201μm,0.4s						
KESN	**Edirne-Kesan**	1.39	19	P	Pn	18 09 50.6	-0.1
KESN				i AML	AML	18 10 10.0	
	comp=E,215nm,0.5s						
KESN				i AML	AML	18 10 13.0	
	comp=E,163nm,0.4s						
BALB	**Balikesir**	1.39	84	Pn	Pn	18 09 51.0	+0.6
BKES	**Balkesir-Mer**	1.44	81	P	Pn	18 09 51.8	+0.8
BKES				i AML	AML	18 10 14.0	
	comp=E,93nm,0.2s						
RKY	**Sarkoy-Tekirda**	1.44	35	Pn	Pn	18 09 51.8	+0.7
THAS	**Thassos island**	1.52	317	P	Pn	18 09 52.1	0.0
THAS				AML	AML	18 10 16.0	
	comp=N,177μm,0.3s						
THAS				AML	AML	18 10 16.2	
	comp=E,103μm,0.4s						
EDC	**Edincik**	1.60	58	Pn	Pn	18 09 54.2	+0.9
UKOP	**Uzunkopru-Edir**	1.67	14	Pn	Pn	18 09 54.9	+0.7
RDO	**Rodhopi**	1.69	346	P	Pn	18 09 54.7	+0.3
RDO				S	Sn	18 10 16.2	+0.3
RDO	**Rodhopi**	1.69	346	Pn	Pn	18 09 55.1	+0.7
RDO	**Rodhopi**	1.69	346	P	Pn	18 09 54.7	+0.3
SMG	**Samos**	1.89	162	P	Pn	18 09 57.6	+0.4
SMG				AML	AML	18 10 28.1	
	comp=E,364μm,0.5s						
SMG				AML	AML	18 10 29.9	
	comp=N,328μm,0.3s						
KAVA	**Kavala**	1.91	321	P	Pn	18 09 57.7	+0.2

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*NOU **01** 18:13:28.6, 18°.04S×177°.77W, h582^{km}, mb4.7/72, Fiji Islands Region*
*IDC **01** 18:13:29.2±1.3, 18°.02S×178°.00W, h572^{km}±14^{km}, mb3.8/17, mbtmp4.7/19, Error ellipse: s-maj=17.3km s-min=11.9km az=145.0*
*NEIC **01** 18:13:29.4±2.1, 18°.0S±0°.1×177°.9W±0°.1, h574^{km}±8^{km}, mb4.3/129, Error ellipse: s-maj=19.8km s-min=16.2km az=151.0*
ISC 01 18:13:29.7±0.4**, 18°.02S**±0°.08×**177°.92W**±0°.06**, h590^{km}, n351, σ1^{s}.47**/348**, mb4.4**/95**, 6C-7D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	0.88	256	P	P	18 14 38.5	-1.2
TAVE	**Taveuni**	2.30	304	P	P	18 14 43.4	-1.1
MSVF	**Nonsavu**	3.85	274	P	P	18 14 53.0	-0.6
	451nm,0.7s,baz=120,slow=6.3,SNR=276						
MSVF	**Nonsavu**	3.85	274	P	P	18 14 52.8	-0.7
MSVF	**Nonsavu**	3.85	274	P	P	18 14 53.1	-0.4
AFI	**Afiamalu**	7.18	56	P	P	18 15 18.1	-3.1
	133nm,0.5s,baz=78,slow=0.2,SNR=22						
AFI				S	S	18 16 46.8	-5.6
	22nm,0.5s,baz=333,slow=22,SNR=1.9						
NIUE	**Niue**	7.65	99	P	P	18 15 23.9	-1.5
NIUE	**Niue**	7.65	99	P	P	18 15 24.4	-1.0
RTV	**Rentapao**	13.00	269	P	P	18 16 19.6	+0.9
DVP	**Devils Point**	13.23	269	P	P	18 16 22.0	+1.0
	1μm,0.8s						
MARNC	**Mare, Loyalty**	13.67	253	P	P	18 16 22.6	-2.9
MARNC	**Mare, Loyalty**	13.67	253	P	P	18 16 23.5	-2.0
PINNC	**Pines Island,**	14.47	249	P	P	18 16 31.6	-1.6
PINNC	**Pines Island,**	14.47	249	P	P	18 16 32.0	-1.2
OUENC	**Ouen Island, N**	14.96	250	P	P	18 16 36.1	-1.8
OUENC	**Ouen Island, N**	14.96	250	P	P	18 16 37.9	+0.1
DZM	**Mont Dzumac**	15.23	252	P	P	18 16 39.8	-0.7
	18nm,0.5s,baz=135,slow=21,SNR=41						
DZM	**Mont Dzumac**	15.23	252	P	P	18 16 39.8	-0.7
DZM				IAmb	IAmb	18 16 43.4	
	comp=Z,19nm,0.6s						
DZM	**Mont Dzumac**	15.23	252	P	P	18 16 40.5	-0.1
ONTNC	**Ouen Toro**	15.28	251	P	P	18 16 40.4	-0.5
ONTNC				IAmb	IAmb	18 17 07.8	
	comp=Z,36nm,1.1s						
ONTNC	**Ouen Toro**	15.28	251	P	P	18 16 41.7	+0.9
NOUC	**Port Laguerre**	15.37	252	P	P	18 16 41.2	-0.5
KOUNC	**Koumac, New Ca**	16.99	259	P	P	18 16 57.4	+0.8
KOUNC	**Koumac, New Ca**	16.99	259	P	P	18 16 57.7	+1.1
OUZ	**Omahuta**	18.72	202	P	P	18 17 11.5	-0.7
WMGZ	**Waiomatatini S**	19.99	189	P	P	18 17 40.4	+17
PKGZ	**Pakihiroa**	20.10	189	P	P	18 17 38.1	+13
RUGZ	**Raukumara Rang**	20.24	190	P	P	18 17 34.6	+8.5
PUZ	**Puketiti**	20.26	189	P	P	18 17 38.8	+13
MWZ	**Matawai**	20.63	190	P	P	18 17 35.3	+5.8
URZ	**Urewera**	20.63	191	P	P	18 17 27.7	-1.7
	comp=Z,17nm,0.3s,baz=53,slow=4.6,SNR=4.6						
	comp=Z,17nm,0.3s						
URZ	**Urewera**	20.63	191	P	P	18 17 28.2	-1.2
URZ	**Urewera**	20.63	191	P	P	18 17 32.5	+3.1
CNGZ	**Carnagh Statio**	20.67	189	P	P	18 17 40.6	+11
TKGZ	**Te Karaka**	20.68	189	P	P	18 17 37.5	+7.7
RAGZ	**Rawiri**	20.80	190	P	P	18 17 35.3	+4.2
MUGZ	**Murupara**	20.90	192	P	P	18 17 32.5	+0.6
RIGZ	**Rimuhau**	20.95	189	P	P	18 17 38.4	+6.0
RTZ	**Ruatahuna**	21.00	191	P	P	18 17 33.6	+0.8
SNGZ	**Shannon Statio**	21.10	190	P	P	18 17 36.3	+2.7
MTHZ	**Maungataniwha**	21.25	191	P	P	18 17 34.6	-0.5
RAHZ	**Arahi**	21.27	191	P	P	18 17 36.3	+1.1
KNZ	**Kokohu**	21.28	189	P	P	18 17 39.2	+4.0
MHGZ	**Mahia Peninsul**	21.37	189	P	P	18 17 41.7	+5.6
ARHZ	**Aropaoanui**	21.62	191	P	P	18 17 38.4	+0.1
BKZ	**Black Stump Fm**	21.62	192	P	P	18 17 36.0	-2.4
BKZ	**Black Stump Fm**	21.62	192	P	P	18 17 35.9	-2.4
NTVZ	**North Tongarir**	21.73	194	P	P	18 17 36.7	-2.8
TMVZ	**Te Maari**	21.74	193	P	P	18 17 36.4	-3.1
ETVZ	**East Tongariro**	21.76	193	P	P	18 17 36.6	-3.1
TWVZ	**Taurewa**	21.76	194	P	P	18 17 36.5	-3.1
OTVZ	**Oturere**	21.79	194	P	P	18 17 37.0	-3.1
SNVZ	**South Ngauruho**	21.82	194	P	P	18 17 37.2	-3.1
KWHZ	**Kaweka Forest**	21.89	192	P	P	18 17 38.6	-2.2
TUVZ	**Tukino**	21.90	193	P	P	18 17 37.6	-3.4
WNVZ	**Wahianoa**	21.97	194	P	P	18 17 37.9	-3.6
VRZ	**Vera Road**	21.97	195	P	P	18 17 39.8	-1.7
PKVZ	**Pokaka**	21.99	194	P	P	18 17 38.2	-3.4
CKHZ	**Cape Kidnapper**	22.00	190	P	P	18 17 42.0	+0.3
MOVZ	**Moawhango**	22.01	193	P	P	18 17 38.0	-3.9
BHHZ	**Black Hill Sta**	22.02	192	P	P	18 17 38.4	-3.6
MTVZ	**Mangateitei**	22.05	194	P	P	18 17 38.6	-3.6
KAHZ	**Kahuranaki**	22.16	191	P	P	18 17 42.7	-0.5
PXZ	**Pawanui**	22.39	191	P	P	18 17 44.5	-0.6
PNHZ	**Pukenui**	22.40	192	P	P	18 17 42.6	-2.7
TSZ	**Takapari Road**	22.59	192	P	P	18 17 43.7	-3.3
PRHZ	**Porangahau**	22.66	191	P	P	18 17 46.5	-1.1
DVHZ	**Dannevirke**	22.78	192	P	P	18 17 45.9	-2.8
HNR	**Honiara**	23.11	289	P	P	18 17 51.3	-0.6
	comp=Z,384nm,0.7s,baz=165,slow=20,SNR=1.6						
BFZ	**Birch Farm**	23.14	191	P	P	18 17 50.9	-0.9
BFZ	**Birch Farm**	23.14	191	P	P	18 17 50.3	-1.5
MRZ	**Mangatainoka R**	23.25	193	P	P	18 17 49.8	-3.0
TIWZ	**Tintock**	23.30	192	P	P	18 17 51.0	-2.3
OGWZ	**Otaki Gorge**	23.49	193	P	P	18 17 52.4	-2.4
HOWZ	**Holdsworth Sta**	23.49	193	P	P	18 17 52.2	-2.7
KIW	**Kapiti Island**	23.59	194	P	P	18 17 52.9	-2.8
CAW	**Cannon Point**	23.79	193	P	P	18 17 55.4	-2.2
BHW	**Baring Head**	24.12	193	P	P	18 17 59.4	-1.1
QRZ	**Quartz Range**	24.17	198	P	P	18 17 59.4	-1.5
PLWZ	**Palliser**	24.19	193	P	P	18 17 59.9	-1.2
PLWZ	**Palliser**	24.19	193	P	P	18 17 59.8	-1.4
NNZ	**Nelson**	24.30	196	P	P	18 18 00.7	-1.3
DSZ	**Denniston Nort**	25.23	198	P	P	18 18 06.5	-3.8
INZ	**Inchbonnie**	26.23	198	P	P	18 18 16.5	-2.6
RPZ	**Rata Peaks**	27.25	198	P	P	18 18 28.1	+0.1
	comp=Z,2.8nm,0.6s,baz=5.1,slow=16,SNR=1.3						
	comp=Z,2.8nm,0.6s						
RPZ	**Rata Peaks**	27.25	198	P	P	18 18 27.8	-0.2
RPZ				IAmb	IAmb	18 18 35.7	
	comp=Z,20nm,1.3s						
FOZ	**Fox Glacier**	27.46	200	P	P	18 18 29.3	-0.5
FOZ				IAmb	IAmb	18 18 35.1	
	comp=Z,21nm,1.1s						
LBZ	**Lake Benmore**	28.12	198	P	P	18 18 33.9	-1.7
JCZ	**Jackson Bay**	28.28	200	P	P	18 18 36.6	-0.5
WKZ	**Wanaka**	28.88	199	P	P	18 18 40.2	-2.0
MLZ	**Mavora Lakes**	29.65	200	P	P	18 18 48.7	-0.1
EIDS	**Eidsvold**	29.67	250	P	P	18 18 48.7	-0.5
EIDS	**Eidsvold**	29.67	250	P	P	18 18 48.9	-0.3
DCZ	**Deep Cove**	30.06	201	P	P	18 18 52.3	0.0
ARMA	**Armidale**	30.29	240	P	P	18 18 55.5	+0.9
ARMA	**Armidale**	30.29	240	P	P	18 18 55.2	+0.6
RMQ	**Roma**	31.90	249	P	P	18 19 08.7	+0.4
RABL	**Rabaul**	32.34	292	P	P	18 19 12.3	+0.1
RABL	**Rabaul**	32.34	292	P	P	18 19 12.2	+0.1
KRVT	**Keravat (AS076**	32.41	291	P	P	18 19 11.5	-1.2
	comp=Z,30nm,0.6s,baz=312,slow=7.2,SNR=2.8						
	comp=Z,30nm,0.6s						
CNB	**Canberra Magne**	33.73	233	P	P	18 19 24.5	+0.8
CTA	**Charters Tower**	33.89	261	P	P	18 19 25.0	-0.1
	comp=Z,16nm,0.6s,baz=99,slow=9.6,SNR=35						
	comp=Z,16nm,0.6s						
CTA	**Charters Tower**	33.89	261	P	P	18 19 25.1	-0.1
CTAO	**Charters Tower**	33.89	261	P	P	18 19 25.0	-0.1
CTAO	**Charters Tower**	33.89	261	P	P	18 19 25.0	-0.1
CAN	**Canberra**	34.01	233	P	P	18 19 26.4	+0.4
CAN	**Canberra**	34.01	233	P	P	18 19 26.6	+0.6
MILA	**Mila**	34.57	230	P	P	18 19 31.2	+0.6
PMG	**Port Moresby**	34.94	279	P	P	18 19 34.8	+0.9
PMG	**Port Moresby**	34.94	279	P	P	18 19 34.8	+0.9
CMSA	**Cobar Meteorol**	35.50	241	P	P	18 19 38.6	+0.2
MTSU	**Mount Surprise**	35.86	264	P	P	18 19 41.2	-0.3
QLP	**Quilpie**	35.93	249	P	P	18 19 41.9	-0.1
GLAD	**Gladstone**	37.10	225	P	P	18 19 51.7	+0.4
TOO	**Toolangi**	37.46	231	P	P	18 19 55.0	+0.6
TOO	**Toolangi**	37.46	231	P	P	18 19 55.1	+0.7
COEN	**Coen**	37.57	270	P	P	18 19 56.1	+0.6
COEN	**Coen**	37.57	270	P	P	18 19 56.1	+0.6
BRAT	**Ballarat**	38.62	232	P	P	18 20 05.1	+1.5
STKA	**Stephens Creek**	38.98	241	P	P	18 20 07.4	+0.6
	comp=Z,20nm,0.5s,baz=92,slow=10,SNR=58						
	comp=Z,20nm,0.5s						
STKA	**Stephens Creek**	38.98	241	P	P	18 20 07.6	+0.9
STKA				IAmb	IAmb	18 20 08.5	
	comp=Z,8.0nm,1.0s						
STKA	**Stephens Creek**	38.98	241	P	P	18 20 07.7	+0.9
INKA	**Innaminka**	39.14	248	P	P	18 20 09.0	+1.0
ARPS	**Mount Arapiles**	39.96	234	P	P	18 20 14.8	+0.3
HTT	**Hallett**	41.49	240	P	P	18 20 27.3	+0.6
LCRK	**Leigh Creek**	41.63	244	P	P	18 20 28.1	+0.4
OOD	**Oodnadatta**	43.61	248	P	P	18 20 44.1	+0.9
BBOO	**Buckleboo**	43.76	241	P	P	18 20 44.7	+0.3
BBOO	**Buckleboo**	43.76	241	P	P	18 20 44.5	+0.1
WR0	**Warramunga Arr**	44.88	260	P	P	18 20 52.5	-0.7
WR0				IAmb	IAmb	18 20 53.4	
	comp=Z,26nm,1.5s						
WB0	**Warramunga Arr**	45.04	260	P	P	18 20 53.6	-0.8
WB2	**Warramunga Arr**	45.06	260	P	P	18 20 53.0	-1.5
WRAB	**Tennant Creek**	45.06	260	P	P	18 20 53.8	-0.8
WRAB	**Tennant Creek**	45.06	260	P	P	18 20 54.0	-0.5
WRA	**Warramunga Arr**	45.07	260	P	P	18 20 53.9	-0.7
	comp=Z,12nm,0.5s,baz=96,slow=7.3,SNR=202						
WRA				ScP	ScP	18 25 23.2	+3.7
	comp=Z,0.7nm,0.8s,baz=92,slow=3.5,SNR=3.4						
	comp=Z,12nm,0.5s						
WRA	**Warramunga Arr**	45.07	260	P	P	18 20 53.3	-1.3
AS01	**Alice Springs**	45.17	254	P	P	18 20 55.5	+0.2
MULG	**Mulgathing**	45.19	245	P	P	18 20 55.4	+0.1
AS31	**Alice Springs**	45.21	254	P	P	18 20 55.6	0.0
AS31				IAmb	IAmb	18 20 56.8	
	comp=Z,15nm,0.7s						
ASAR	**Alice Springs**	45.21	254	P	P	18 20 55.7	+0.1
	comp=Z,63nm,0.8s,baz=86,slow=8.8,SNR=1022						
ASAR				ScP	ScP	18 25 24.1	+4.0
	comp=Z,0.7nm,0.7s,baz=98,slow=3.9,SNR=4.8						
ASAR				S	S	18 26 52.1	-1.6
	comp=Z,1.7nm,0.8s,baz=89,slow=15,SNR=14						
	comp=Z,63nm,0.8s						
ASAR	**Alice Springs**	45.21	254	P	P	18 20 55.9	+0.2
KDU	**Kakadu**	48.02	269	P	P	18 21 16.7	-0.1
GUMO	**Guam**	48.31	308	P	P	18 21 18.4	-0.5
GUMO	**Guam**	48.31	308	P	P	18 21 20.7	+1.8
MTN	**Manton Dam**	49.26	268	P	P	18 21 25.7	-0.3
MTN				IAmb	IAmb	18 21 26.2	
	comp=Z,19nm,0.8s						
WRKA	**Warakurna**	50.25	252	P	P	18 21 33.3	+0.1
FORT	**Forrest**	50.38	245	P	P	18 21 33.6	-0.4
FORT	**Forrest**	50.38	245	P	P	18 21 33.6	-0.4
KNRA	**Kununurra**	50.94	264	P	P	18 21 38.0	-0.2
KNRA				IAmb	IAmb	18 21 38.8	
	comp=Z,21nm,0.7s						
KNRA	**Kununurra**	50.94	264	P	P	18 21 38.1	-0.2
FAKI	**Fak Fak**	51.06	281	P	P	18 21 39.0	-0.1
FAKI				IAmb	IAmb	18 22 11.6	
	comp=Z,24nm,1.2s						
FAKI	**Fak Fak**	51.06	281	P	P	18 21 39.1	-0.1
FITZ	**Fitzroy Crossi**	53.47	261	P	P	18 21 56.5	+0.3
AAI	**Ambon**	54.60	278	P	P	18 22 03.6	-0.7
	comp=Z,43nm,0.4s,comp=Z,769nm						
NLAI	**Namlea**	55.77	279	P	P	18 22 11.1	-1.3
	comp=Z,13nm,0.6s						
LBMI	**Labuha**	56.30	282	P	P	18 22 15.6	-0.4
	comp=Z,28nm,1.1s,comp=Z,983nm						
SOEI	**Soe**	56.54	270	P	P	18 22 19.1	+1.3
SOEI	**Soe**	56.54	270	P	P	18 22 19.6	+1.8
SOEI	**Soe**	56.54	270	P	P	18 22 17.9	+0.1
	comp=Z,56nm,1.1s						
TNTI	**Ternate**	56.94	283	P	P	18 22 19.4	-1.0
	comp=Z,23nm,1.0s						
SANI	**Sanana**	57.22	279	P	P	18 22 21.7	-0.6
	comp=Z,26nm,0.9s,comp=Z,418nm						
PSA00	**Pilbara Seismi**	58.33	255	P	P	18 22 29.0	-0.7
PSA00				IAmb	IAmb	18 22 30.4	
	comp=Z,14nm,0.9s						
PSA00	**Pilbara Seismi**	58.33	255	P	P	18 22 29.8	+0.1
MMRI	**Maumere**	58.76	271	P	P	18 22 32.2	-0.6
MMRI				IAmb	IAmb	18 22 33.3	
	comp=Z,18nm,0.8s						
MMRI	**Maumere**	58.76	271	P	P	18 22 32.2	-0.6
	comp=Z,28nm,0.8s						
MEEK	**Meekatharra**	58.83	249	P	P	18 22 32.2	-0.9
	comp=Z,18nm,0.9s						
KLBR	**Kellerberrin**	59.20	244	P	P	18 22 35.3	-0.1
BLDU	**Ballidu**	60.15	245	P	P	18 22 41.6	-0.2
VNDA	**Vanda**	60.37	185	P	P	18 22 43.7	+1.4
	comp=Z,2.2nm,1.2s,baz=337,slow=17,SNR=1.7						
	comp=Z,2.2nm,1.2s						
VNDA	**Vanda**	60.37	185	P	P	18 22 42.7	+0.3
MORW	**Morawa**	60.86	246	P	P	18 22 44.1	-2.3
MORW				IAmb	IAmb	18 23 16.6	
	comp=Z,23nm,1.4s						
MORW	**Morawa**	60.86	246	P	P	18 22 46.4	0.0
PLAI	**Plampang**	62.96	269	P	P	18 23 00.3	0.0
PLAI	**Plampang**	62.96	269	P	P	18 23 00.2	0.0
	comp=Z,37nm,1.0s						
TOLI2	**Tolitoli**	63.19	281	P	P	18 23 01.1	-0.6
TOLI2				IAmb	IAmb	18 23 22.7	
	comp=Z,8.1nm,1.0s						
TOLI2	**Tolitoli**	63.19	281	P	P	18 23 02.6	+0.9
GIRL	**Giralia**	63.31	253	P	P	18 23 01.9	-0.4
GIRL	**Giralia**	63.31	253	P	P	18 23 03.8	+1.5
MPSI	**Mapaga**	63.75	280	P	P	18 23 04.7	-0.6
	comp=Z,15nm,0.9s						
TWSI	**Taliwang, Sumb**	63.83	269	P	P	18 23 06.0	+0.2
	comp=Z,33nm,1.0s						
IGBI	**Denpasar**	65.46	268	P	P	18 23 14.4	-1.6
	comp=Z,36nm,0.8s						
JAGI	**Jajag, Banyuwa**	66.50	268	P	P	18 23 21.7	-0.9
JAGI				IAmb	IAmb	18 23 22.4	
	comp=Z,22nm,0.9s						
JAGI	**Jajag, Banyuwa**	66.50	268	P	P	18 23 21.8	-0.7
JAGI	**Jajag, Banyuwa**	66.50	268	P	P	18 23 21.0	-1.5
	comp=Z,33nm,0.8s						
GMJI	**Gumukmas**	67.23	268	P	P	18 23 26.4	-0.6
	comp=Z,21nm,0.8s						
KKM	**Kota Kinabalu**	69.22	284	P	P	18 23 39.8	+0.7
KKM				IAmb	IAmb	18 23 55.3	

	comp=Z,20nm,1.0s						
UGM	Wanagama	70.11	268	P	P	18 23 44.6	+0.3
UGM	Wanagama	70.11	268	P	P	18 23 44.7	+0.3
UGM	Wanagama	70.11	268	P	P	18 23 44.3	0.0
	comp=Z,53nm,1.0s						
UNV	Unalaska Valle	72.24	7	P	P	18 23 54.7	-1.1
SSLB	Suanglung	72.69	303	P	P	18 23 58.5	-0.7
SSLB				IAmb	IAmb	18 24 23.6	
	comp=Z,20nm,1.2s						
SSLB	Suanglung	72.69	303	P	P	18 23 58.6	-0.5
	comp=Z,20nm,1.5s						
TPUB	Ta-pu	72.71	302	P	P	18 23 58.3	-0.9
CGJI	Cibinong	75.07	268	P	P	18 24 12.1	-0.7
	comp=Z,24nm,1.4s						
KASI	Kota Agung	76.52	269	P	P	18 24 19.7	-1.1
	comp=Z,20nm,0.8s						
MDSI	Maura Dua	77.13	269	P	P	18 24 23.6	-0.5
YUH	Yuha Desert	77.77	50	P	P	18 24 28.9	+1.8
YBH	Yreka Blue Hor	78.32	39	P	P	18 24 31.4	+1.5
	comp=Z,2.5nm,0.6s,baz=172,slow=1.8,SNR=3.2						
	comp=Z,2.5nm,0.6s						
YBH	Yreka Blue Hor	78.32	39	P	P	18 24 31.3	+1.3
K02D	Willamette Mer	78.34	38	P	P	18 24 30.6	+0.6
KDAK	Kodiak Island	78.40	14	P	P	18 24 31.6	+1.8
KDAK				IAmb	IAmb	18 24 31.9	
	comp=Z,45nm,1.4s						
MPK	Martis Peak	78.55	42	P	P	18 24 32.9	+1.4
MPK				IAmb	IAmb	18 24 34.1	
	comp=Z,19nm,1.2s						
HUMO	Hull Mountain	78.70	38	P	P	18 24 34.0	+2.1
HUMO				IAmb	IAmb	18 25 15.2	
	comp=Z,13nm,1.5s						
L04D	Klamath Falls	78.85	39	P	P	18 24 33.8	+0.9
YERR	Yerington	78.88	43	P	P	18 24 34.5	+1.3
YERR				IAmb	IAmb	18 24 35.7	
	comp=Z,6.5nm,0.8s						
LHV	Little Huntoon	78.95	44	P	P	18 24 34.7	+1.4
NVAR	Mina Array Bea	79.18	44	P	P	18 24 36.5	+1.7
	comp=Z,3.4nm,0.7s,baz=224,slow=9.2,SNR=21						
	comp=Z,3.4nm,0.7s						
NVAR	Mina Array Bea	79.18	44	P	P	18 24 36.0	+1.2
PAHR	Pah Rah Range	79.19	42	P	P	18 24 36.2	+1.4
NV11	Mina Array Sit	79.28	44	P	P	18 24 36.6	+1.4
P18K	Big Mountain,	79.34	12	P	P	18 24 34.9	+0.1
P18K				IAmb	IAmb	18 25 17.6	
	comp=Z,19nm,1.2s						
BLYC	Blythe	79.34	49	P	P	18 24 36.0	+0.6
BLYC				IAmb	IAmb	18 24 38.4	
	comp=Z,5.5nm,0.8s						
WCT	Wildcat Mounta	79.42	46	P	P	18 24 35.3	-0.6
KVN	Kaiserville	79.66	43	P	P	18 24 38.0	+0.8
TPH	Tonopah	79.70	44	P	P	18 24 38.7	+1.2
TPH				IAmb	IAmb	18 24 40.1	
	comp=Z,22nm,1.0s						
I04A	Tendick Farm,	79.74	37	P	P	18 24 38.3	+0.9
TPNV	Topopah Spring	79.76	46	P	P	18 24 39.1	+1.3
O18K	Koktuh Hills	79.77	11	P	P	18 24 37.5	+0.4
O18K				IAmb	IAmb	18 24 38.0	
	comp=Z,12nm,0.8s						
MOD	Modoc Plateau	79.87	40	P	P	18 24 39.0	+0.8
MOD				IAmb	IAmb	18 24 40.7	
	comp=Z,6.1nm,0.7s						
K05A	Summer Lake	79.99	39	P	P	18 24 40.8	+1.9
K05A				IAmb	IAmb	18 24 41.9	
	comp=Z,17nm,1.1s						
J05D	Fort Rock, OR	80.12	38	P	P	18 24 41.4	+1.9
H04A	Detroit Lake	80.40	37	P	P	18 24 41.2	+0.5
H04A				IAmb	IAmb	18 24 42.5	
	comp=Z,5.7nm,0.5s						
S11A	Rachel	80.47	45	P	P	18 24 41.5	+0.1
S11A				IAmb	IAmb	18 24 44.1	
	comp=Z,15nm,1.1s						
PINE	Pine Mountain	80.59	38	P	P	18 24 43.6	+1.6
PINE				IAmb	IAmb	18 24 45.0	
	comp=Z,10nm,0.9s						
PRN	Pahroc Range	80.82	46	P	P	18 24 42.5	-0.8
PRN				IAmb	IAmb	18 24 46.4	
	comp=Z,7.6nm,0.9s						
R11A	Troy Canyon, C	80.94	45	P	P	18 24 44.5	+0.6
WVOR	Wild Horse Val	81.19	40	P	P	18 24 46.5	+1.4
WVOR				IAmb	IAmb	18 24 47.7	
	comp=Z,9.0nm,1.1s						
TUC	Tucson	81.40	52	P	P	18 24 47.7	+1.4
I07A	Izee	81.60	38	P	P	18 24 48.7	+1.6
I07A				IAmb	IAmb	18 24 49.8	
	comp=Z,6.3nm,0.8s						
Q12A	Willow Creek R	81.81	45	P	P	18 24 49.5	+1.2
Q12A				IAmb	IAmb	18 24 50.9	
	comp=Z,15nm,1.4s						
J08A	Circle Bar Ran	81.81	39	P	P	18 24 49.2	+1.1
J08A				IAmb	IAmb	18 24 50.8	
	comp=Z,12nm,1.2s						
LCMT	Little Creek M	81.86	47	P	P	18 24 50.0	+1.4
CCUT	Cedar City	82.05	46	P	P	18 24 51.4	+1.8
CCUT				IAmb	IAmb	18 24 52.8	
	comp=Z,5.2nm,0.9s						
319A	Douglas	82.12	54	P	P	18 24 52.3	+2.3
319A				IAmb	IAmb	18 24 53.6	
	comp=Z,10nm,0.9s						
SPR3	Spring Creek 3	82.12	45	P	P	18 24 49.2	-0.9
SPR3				IAmb	IAmb	18 24 52.2	
	comp=Z,9.3nm,1.5s						
KNB	Kanab	82.16	47	P	P	18 24 52.0	+1.9
KNB				IAmb	IAmb	18 24 53.1	
	comp=Z,4.4nm,0.8s						
U15A	North Rim	82.25	48	P	P	18 24 53.0	+2.3
U15A				IAmb	IAmb	18 24 53.9	
	comp=Z,8.9nm,0.8s						
ELK	Elko	82.42	43	P	P	18 24 52.3	+0.9
WUAZ	Wupatki	82.47	49	P	P	18 24 53.3	+1.6
G08A	Pilot Rock	82.61	38	P	P	18 24 53.3	+1.1
G08A				IAmb	IAmb	18 24 54.6	
	comp=Z,4.2nm,0.7s						
HAWA	Hanford	82.92	36	P	P	18 24 55.0	+1.5
HAWA				IAmb	IAmb	18 24 56.0	
	comp=Z,5.9nm,0.8s						
MTPU	Mount Pierson	83.10	46	P	P	18 24 57.6	+2.5
MTPU				IAmb	IAmb	18 24 58.1	
	comp=Z,4.2nm,0.8s						
BMO	Blue Mountains	83.34	39	P	P	18 24 56.6	+0.8
MFID	Camas Ranch	83.45	40	P	P	18 24 57.9	+1.5
D08A	Wollman Farm,	83.64	36	P	P	18 24 58.1	+1.1
D08A				IAmb	IAmb	18 24 59.1	
	comp=Z,7.0nm,0.9s						
CAST	Castle Rocks	83.64	11	P	P	18 24 55.6	-1.2
CAST				IAmb	IAmb	18 24 57.2	
	comp=Z,4.7nm,0.7s						
N25K	Chitina, Valde	83.68	15	P	P	18 24 57.6	+0.6
N25K				IAmb	IAmb	18 24 58.6	
	comp=Z,5.6nm,0.7s						
M24K	Tolsona, Glenn	83.73	14	P	P	18 24 58.1	+0.9
GLB	Gilahina Butte	83.75	16	P	P	18 24 57.8	+0.5
GLB				IAmb	IAmb	18 25 17.7	
	comp=Z,14nm,1.2s						
MCARA	McCarthy VSAT	83.90	16	P	P	18 24 58.2	+0.2
MCARA				IAmb	IAmb	18 25 27.6	
	comp=Z,22nm,1.2s						
KTH	Kantishna Hill	83.99	12	P	P	18 24 58.0	-0.5
KTH				IAmb	IAmb	18 25 31.5	
	comp=Z,13nm,1.4s						
BARN	Barnard Glacie	84.00	17	P	P	18 24 59.4	+0.7
BARN				IAmb	IAmb	18 25 43.9	
	comp=Z,24nm,1.4s						
B08A	Colville Reser	84.16	35	P	P	18 24 59.9	+0.3
PLID	Pearl Lake	84.25	39	P	P	18 25 01.2	+0.8
HLID	Hailey	84.41	41	P	P	18 25 02.0	+0.8
BPAW	Bear Paw Mtn.	84.47	12	P	P	18 25 00.3	-0.4
MCK	McKinley	84.55	13	P	P	18 25 01.0	-0.2
MCK				IAmb	IAmb	18 25 11.3	
	comp=Z,13nm,1.4s						
SRU	San Rafael Swe	84.76	46	P	P	18 25 02.3	-0.7
SRU				IAmb	IAmb	18 25 05.3	
	comp=Z,3.3nm,0.7s						
M27K	Edge Creek, AK	85.02	16	P	P	18 25 05.0	+1.4
M27K				IAmb	IAmb	18 25 05.8	
	comp=Z,7.7nm,1.1s						
BSUT	Blindstream Ca	85.27	45	P	P	18 25 07.5	+1.8
WRH	Wood River Hil	85.38	12	P	P	18 25 05.4	+0.3
WRH				IAmb	IAmb	18 25 32.1	
	comp=Z,6.1nm,1.4s						
RIDG	Independent Ri	85.45	14	P	P	18 25 07.0	+1.4
RIDG				IAmb	IAmb	18 25 44.2	
	comp=Z,10nm,1.5s						
DOT	Dot Lake	85.56	14	P	P	18 25 06.7	+0.7
H21K	Melozitna Rive	85.57	10	P	P	18 25 06.5	+0.5
CCB	Clear Creek Bu	85.59	13	P	P	18 25 06.2	+0.1
CCB				IAmb	IAmb	18 25 06.6	
	comp=Z,11nm,1.5s						
BCAR	Beaver Creek A	85.63	16	P	P	18 25 07.7	+1.3
TX31	Lajitas Ar. Si	85.66	57	P	P	18 25 07.3	-0.1
TX32	Lajitas Array	85.66	57	P	P	18 25 06.5	-1.0
TX32				IAmb	IAmb	18 25 11.2	
	comp=Z,8.0nm,0.9s						
TXAR	Lajitas Array	85.66	57	P	P	18 25 10.1	+2.7
	comp=Z,4.9nm,0.7s,baz=218,slow=6.1,SNR=39						
	comp=Z,4.9nm,0.7s						
IMAR	Indian Mountai	85.71	10	P	P	18 25 07.2	+0.6
ANMO	Albuquerque	85.80	51	P	P	18 25 09.8	+1.6
SCRK	Sand Creek	85.85	14	P	P	18 25 07.3	-0.3
IL31		85.89	13	P	P	18 25 07.4	-0.1
IL31				IAmb	IAmb	18 25 08.4	
	comp=Z,9.8nm,1.4s						
ILAR	Eielson Array	85.89	13	P	P	18 25 07.5	0.0
	comp=Z,1.0nm,0.4s,baz=219,slow=5.2,SNR=23						
	comp=Z,1.0nm,0.4s						
ILAR	Eielson Array	85.89	13		P	18 25 07.7	+0.1
MCMT	McKenzie Canyo	86.02	40	P	P	18 25 10.8	+1.8
J26L	Joseph Creek	86.40	14	P	P	18 25 11.2	+1.2
J26L				IAmb	IAmb	18 25 13.1	
	comp=Z,5.1nm,0.9s						
M30M	Minto, Yukon	86.60	18	P	P	18 25 11.8	+0.8
M30M				IAmb	IAmb	18 25 12.0	
	comp=Z,12nm,1.4s						
S22A	4UR Ranch, Cre	86.73	49	P	P	18 25 13.5	+1.0
S22A				IAmb	IAmb	18 25 15.2	
	comp=Z,4.8nm,1.1s						
QLMT	Earthquake Lak	86.90	41	P	P	18 25 14.9	+1.8
FLWY	Flagg Ranch	87.00	42	P	P	18 25 15.4	+1.8
FLWY				IAmb	IAmb	18 25 16.5	
	comp=Z,4.0nm,0.8s						
DAWY	Dawson	87.07	16	P	P	18 25 14.1	+0.9
BW06	Boulder Array	87.11	43	P	P	18 25 14.4	+0.2
BW06				IAmb	IAmb	18 25 16.1	
	comp=Z,3.4nm,1.0s						
PD31	Pinedale Array	87.11	43	P	P	18 25 14.7	+0.5
PDAR	Pinedale Array	87.11	43	P	P	18 25 15.4	+1.3
	comp=Z,1.8nm,0.7s,baz=214,slow=2.3,SNR=20						
	comp=Z,1.8nm,0.7s						
PDAR	Pinedale Array	87.11	43	P	P	18 25 15.2	+1.1
BMAR	Burnt Mountain	88.67	12	P	P	18 25 21.2	+0.7
ELIB	Princess Elisa	89.10	186	*d*P	P	18 25 23.5	+0.7
	comp=Z,6.7nm,0.7s						
CMAR	Chiang Mai Arr	89.36	290	P	P	18 25 26.2	+1.4
	comp=Z,0.6nm,0.7s,baz=101,slow=4.6,SNR=4.7						
	comp=Z,0.6nm,0.7s						
AMTX	Amarillo	89.37	53	P	P	18 25 25.7	+1.0
AMTX				IAmb	IAmb	18 25 26.3	
	comp=Z,4.8nm,0.6s						
PZH	PanZhiHua	89.62	298	P	P	18 25 28.0	+2.0
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.0s						
PLCA	Paso Flores	90.92	134	P	P	18 25 33.1	+1.3
	comp=Z,1.3nm,0.6s,baz=267,slow=5.1,SNR=5.8						
	comp=Z,1.3nm,0.6s						
RSSD	Black Hills	91.32	44	P	P	18 25 33.2	-0.4
RSSD				IAmb	IAmb	18 25 35.5	
	comp=Z,3.0nm,0.7s						
INK	Inuvik	91.87	15	P	P	18 25 35.5	+0.3
	comp=Z,2.4nm,0.9s,baz=250,slow=2.3,SNR=6.3						
	comp=Z,2.4nm,0.9s						
INK	Inuvik	91.87	15	P	P	18 25 35.5	+0.3
YKA	Yellowknife Ar	94.24	25	P	P	18 25 46.6	+0.4
	comp=Z,1.0nm,0.8s,baz=243,slow=4.5,SNR=11						
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	94.24	25	P	P	18 25 47.1	+0.9
MKAR	Makanchi Array	109.55	314	PKiKP	PKiKP	18 30 54.0	-0.1
	comp=Z,0.3nm,0.4s,baz=179,slow=0.7,SNR=11						
MKAR				PKKPbc	PKKPbc	18 42 01.5	+0.1
	comp=Z,0.1nm,100.0s,baz=274,slow=2.3,SNR=4.8						
BVAR	Borovoye Array	117.22	321	PKP	PKiKP	18 31 08.8	+0.2
	comp=Z,1.0nm,0.4s,baz=116,slow=4.0,SNR=4.2						
ARU	Arti	123.20	326	PKP	PKiKP	18 31 20.1	-0.1
	comp=Z,0.7nm,0.4s,baz=312,slow=4.0,SNR=4.2						
ARCES	ARCESS Array B	126.51	350	PKP	PKPdf	18 31 26.0	+0.1
	comp=Z,0.6nm,0.4s,baz=26,slow=2.3,SNR=15						
FINES	FINESS Array B	133.42	344	PKhKP	PKPpre	18 31 34.2	
	comp=Z,0.6nm,0.6s,baz=0.0,slow=2.8,SNR=1.1						
AKASG	Malin Array Be	140.87	333	PKhKP	PKPpre	18 31 47.3	
	comp=Z,0.2nm,0.4s,baz=39,slow=3.5,SNR=4.8						
VLDR	Vladesti	144.86	328	⇓P	PKPdf	18 32 00.5	+0.1
BRTR	Keskin Array B	145.19	315	PKPbc	PKPab	18 32 03.4	-0.3
	comp=Z,2.2nm,0.8s,baz=132,slow=3.7,SNR=4.6						
TPGR	Topolog	145.35	326	⇑P	PKPab	18 32 04.3	+0.3
VRI	Vrincioaia	145.51	329	⇓P	PKPab	18 32 04.1	-0.5
OSTC	Ostas	145.63	344	*e*PKP	PKPab	18 32 04.9	0.0
CLL	Collm	145.67	348	*i* PKPbc	PKPbc	18 32 04.1	+0.8
	comp=Z,10.0nm,0.9s						
UPC	Upice	145.72	344	*e*PKP	PKPab	18 32 04.9	-0.3
DPC	Dobruska-Polom	145.79	344	*e*PKP	PKPab	18 32 05.1	-0.5
BRG	Berggiesshubel	145.88	347	*i* PKP	PKPab	18 32 05.3	-0.5
BRG				Amp		18 32 05.9	
	comp=Z,5.4nm,0.7s						
LANS	Liptovska Anna	145.91	340	*e*PKP	PKPab	18 32 06.0	-0.1
KRLC	Kraliky	145.91	343	*e*PKP	PKPab	18 32 05.3	-0.8
MORC	Moravsky Berou	145.96	342	⇓P	PKPbc	18 32 04.5	+0.3
PVCC	Panska Ves	146.06	346	*e*PKP	PKPbc	18 32 05.5	+1.1
DOPR	Dopca	146.08	330	⇑P	PKPab	18 32 06.0	-0.9
MLR	Muntele Rosu	146.17	329	⇑P	PKiKP	18 32 07.1	-0.2
MARR	Marisel-Cluj	146.56	333	⇑P	PKiKP	18 32 07.4	-0.7
PRU	Pruhonice	146.57	345	*e*PKP	PKiKP	18 32 06.9	-1.0
VOIR		146.64	330	⇓P	PKiKP	18 32 07.6	-0.7
VRAC	Vranov	146.66	343	⇑P	PKPdf	18 32 02.4	-0.9
VYHS	Vyhne	146.69	340	*e*PKP	PKiKP	18 32 07.2	-1.0
NKC	Novy Kostel	146.80	348	*e*PKP	PKiKP	18 32 07.5	-0.9
ARR	Arges	146.88	330	⇓P	PKiKP	18 32 08.1	-0.6
MODS	Modra-Piesok	147.29	341	*e*PKP	PKiKP	18 32 09.3	-0.1
KHC	Kasperske Hory	147.60	346	PKPbc	PKiKP	18 32 09.8	-0.3
KHC	Kasperske Hory	147.60	346	*e*PKP	PKiKP	18 32 09.7	-0.4
KHC				*e*x	x	18 32 14.4	
CKRC	Cesky Krumlov	147.71	345	*e*PKP	PKiKP	18 32 10.1	-0.2
GEC2	GERESS Array S	147.84	346	PKPbc	PKiKP	18 32 10.3	-0.4
GERES	GERESS Array B	147.84	346	PKPbc	PKiKP	18 32 10.2	-0.4
	comp=Z,2.6nm,0.5s,baz=34,slow=3.4,SNR=21						
CONA	Conrad Observa	148.11	342	*e*PKiKP	PKiKP	18 32 11.2	0.0
	comp=Z,2.7nm,0.6s						
RONA	Rosalia, Austr	148.19	342	*i* PKP	PKiKP	18 32 11.3	0.0
	comp=Z,2.6nm,0.7s						
HERR	Herculane	148.27	332	⇓P	PKPbc	18 32 10.9	+0.6
BIOA	Bad Ischl, Aus	148.93	345	*i* PKiKP	PKiKP	18 32 13.2	+0.3
	comp=Z,3.8nm,0.8s						
SOKA	Soboth	149.48	342	*i* PKP	PKiKP	18 32 14.2	+0.1
	comp=Z,4.9nm,1.3s						
KBA	Koelnbreinsper	149.57	345	*i* PKP	PKiKP	18 32 14.3	-0.1
	comp=Z,3.8nm,0.6s						
VTS	Vitosha	149.60	328	⇑P	PKiKP	18 32 15.9	+1.3
WATA	Walderalm	149.74	347	*i* PKP	PKPbc	18 32 13.5	-0.5
	comp=Z,6.0nm,0.5s						
RETA	Reutte	149.76	348	*i* PKP	PKiKP	18 32 14.7	+0.1
	comp=Z,2.0nm,0.5s						
OBKA	Obir	149.78	343	*e*PKP	PKiKP	18 32 14.4	-0.3
	comp=Z,5.5nm,1.4s						
WTTA	Wattenberg	149.79	347	*e*PKP	PKiKP	18 32 15.0	+0.2
	comp=Z,9.4nm,0.6s						
MOTA	Moosalm	149.83	348	*i* PKiKP	PKiKP	18 32 15.2	+0.3
	comp=Z,4.5nm,0.8s						
MYKA	Terra Mystica	149.91	344	*i* PKP	PKPbc	18 32 14.6	+0.3
	comp=Z,4.3nm,0.5s						
SQTA	Sankt Quirin	149.93	348	*i* PKP	PKiKP	18 32 15.2	+0.2
	comp=Z,5.5nm,0.6s						
ABTA	Abfaltersbach	150.08	346	*i* PKP	PKiKP	18 32 15.1	-0.2
	comp=Z,7.4nm,0.6s,SNR=7.7						
FETA	Feichten	150.21	348	*i* PKiKP	PKiKP	18 32 16.3	+0.6
	comp=Z,4.3nm,0.9s						
STAL	STALIGIAL	150.49	345		PKiKP	18 32 16.3	+0.2
CIMO	Cimolais	150.51	345		PKiKP	18 32 16.0	-0.2
FUORN	Ofenpass-Fuorn	150.69	348		PKiKP	18 32 17.6	+0.8
TORD	Torodi Ar. Bea	175.14	176	PKP	PKPdf	18 32 33.0	-0.5
	comp=Z,0.6nm,1.0s,baz=318,slow=1.6,SNR=4.8						

IDC 01 18:18:20.7±4.8**,17.°23S**×**174.°48W,h0km,mb4.3**/4**,**
mbtmp4.3/4**,Error ellipse: s-maj=164.2km**
s-min=93.8km az=166.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CTA	Charters Tower	37.26	259	P	P	18 25 35.6	+1.1
	5.4nm,0.8s,baz=88,slow=12,SNR=7.8						
	5.4nm,0.8s						
STKA	Stephens Creek	42.24	241	P	P	18 26 16.7	+0.8
	1.6nm,0.7s,baz=87,slow=12,SNR=3.1						
	1.6nm,0.7s						
WRA	Warramunga Arr	48.44	258	P	P	18 27 04.2	-1.0
	1.9nm,0.4s,baz=96,slow=7.3,SNR=37						
	1.9nm,0.4s						
ASAR	Alice Springs	48.58	253	P	P	18 27 05.4	-0.9
	4.7nm,0.7s,baz=91,slow=7.8,SNR=53						
ASAR				PcP	PcP	18 28 32.1	0.0
	0.4nm,0.4s,baz=103,slow=3.8,SNR=5.5						
	4.7nm,0.7s						

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*IDC **01** 18:20:40.0±1.4,12.°13N×143.°17E,h0km,mb3.5/5,*
mbtmp3.5/6,ML3.7/1,Error ellipse: s-maj=85.1km
s-min=20.4km az=120.0
ISC 01 18:20:44.8±1.2**,12.°1N**±0.°3×**143.°2E**±0.°4**,h31km,n9,**
σ**0ˢ.91**/7**,mb3.6**/5**,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GUMO	Guam	2.19	47	Pn	Pn	18 21 19.0	-0.1
	23nm,0.3s,baz=20,slow=0.1,SNR=3.1						
GUMO				Sn	Sn	18 21 44.9	-0.3
	16nm,0.3s,baz=12,slow=23,SNR=1.9						
	54nm,0.3s						
H11N1	WAKE ISLAND Hy	23.98	69	T	T	18 50 49.6	
	baz=255,slow=75,SNR=6.7						
H11N2	WAKE ISLAND Hy	23.99	69	T	T	18 50 44.7	
	baz=255,slow=75,SNR=4.8						
H11N3	WAKE ISLAND Hy	24.00	69	T	T	18 50 50.2	
	baz=255,slow=75,SNR=8.1						
WRA	Warramunga Arr	33.02	195	P	P	18 27 16.8	-0.7
	0.9nm,0.8s,baz=23,slow=9.9,SNR=4.3						
	0.9nm,0.8s						
ASAR	Alice Springs	36.70	194	P	P	18 27 49.2	+0.1
	0.2nm,0.7s,baz=21,slow=13,SNR=1.4						
	0.2nm,0.7s						
ILAR	Eielson Array	70.59	25	P	P	18 31 55.8	-1.0
	0.3nm,0.5s,baz=248,slow=6.3,SNR=5.7						
	0.3nm,0.5s						
YKA	Yellowknife Ar	84.91	27	P	P	18 33 17.0	+0.5
	0.1nm,0.5s,baz=284,slow=4.0,SNR=2.8						
	0.1nm,0.5s						
NVAR	Mina Array Bea	89.11	51	P	P	18 33 39.0	+1.2
	0.4nm,0.6s,baz=263,slow=5.9,SNR=3.5						
	0.4nm,0.6s						

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*IDC **01** 18:46:16.7±13.0,24.°60S×69.°33W,h0km,mb3.7/1,*
mbtmp3.7/1,Error ellipse: s-maj=1008.0km
s-min=123.8km az=179.0
*GUC **01** 18:46:26.8±0.7,24.°59S×69.°64W,h108km±6km,ML3.6*
*SJA **01** 18:46:27.4±0.7,24.°59S×69.°51W,h75km,ML3.6,MW3.7,*
Hypocentre not reviewed by the ISC
ISC 01 18:46:28.0±1.0**,24.°57S**±0.°04×**69.°65W**±0.°09**,h95km**±10km**,**
n19,σ**0ˢ.64**/27**,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PB14	IPOC Station P	0.69	265	*e*P	Pn	18 46 45.1	-0.1
PB14				*i* S	Sn	18 46 58.1	0.0
PB14				IAML		18 47 00.5	
	comp=E,1μm,0.3s						
PB14	IPOC Station P	0.69	265	*i* P		18 46 45.2	
PB14				*e*S		18 46 58.8	
PB14				IAML		18 46 59.8	
	comp=Z,1μm,0.2s						
PB10	IPOC Station P	1.34	322	*e*P	Pn	18 46 51.9	-0.2
PB10				*i* S	Sn	18 47 10.7	+0.5
PB10				IAML		18 47 15.2	
	comp=E,924nm,0.2s						
PB10	IPOC Station P	1.34	322	*i* P		18 46 52.8	
PB10				*e*S		18 47 12.0	
PB10				IAML		18 47 15.4	
	comp=Z,817nm,0.5s						
PB15	IPOC Station P	1.36	7	*e*P	Pn	18 46 52.7	+0.1
PB15				*i* S	Sn	18 47 11.8	+0.7
PB15	IPOC Station P	1.36	7	*i* P		18 46 53.0	
PB15				*e*S		18 47 12.0	
PB15				IAML		18 47 15.5	
	comp=Z,5μm,0.2s						
AC01	Pan de Azucar	1.79	208	*e*P	Pn	18 46 56.9	-0.9
AC01				*i* S	Sn	18 47 20.0	-0.3
AC01				IAML		18 47 23.7	
	comp=E,846nm,0.3s						
AC01	Pan de Azucar	1.79	208	*i* P		18 46 56.9	
AC01				*e*S		18 47 16.4	
AC01				IAML		18 47 23.4	
	comp=Z,405nm,0.3s						
PB06	IPOC Station P	1.86	2	*e*P	Pn	18 46 58.5	-0.3
PB06				*i* S	Sn	18 47 22.6	+0.5
PB06				IAML		18 47 27.6	
	comp=N,527nm,0.5s						
PB06	IPOC Station P	1.86	2	*e*P		18 46 58.9	
PB06				IAML		18 47 27.1	
	comp=Z,403nm,0.1s						
LVC	Limon Verde	2.06	19	*e*P	Pn	18 47 00.8	-0.9
LVC				*i* S	Sn	18 47 27.1	-0.1
LVC	Limon Verde	2.06	19	*e*P		18 47 01.8	
LVC				IAML		18 47 54.3	
	comp=Z,196nm,0.4s						
PB04	IPOC Station P	2.27	348	*e*P	Pn	18 47 03.9	-0.3
PB04				*i* S	Sn	18 47 32.5	+0.7
PB04				IAML		18 47 38.8	
	comp=N,494nm,0.4s						
PB04	IPOC Station P	2.27	348	*e*P		18 47 03.9	
PB04				*e*S		18 47 31.6	
PB04				IAML		18 47 36.6	
	comp=Z,329nm,0.2s						
AC02	Maricunga	2.31	168	*e*P	Pn	18 47 05.3	+0.4
AC02				*i* S	Sn	18 47 32.5	-0.6
AC02				IAML		18 47 37.2	
	comp=E,618nm,0.3s						
AC02	Maricunga	2.31	168	*e*P		18 47 05.2	
AC02				IAML		18 47 38.6	
	comp=Z,159nm,0.1s						
PB03	IPOC Station P	2.51	358	*e*P	Pn	18 47 07.0	-0.3
PB03				*i* S	Sn	18 47 36.7	-0.7
PB03				IAML		18 47 44.0	
	comp=E,315nm,0.4s						
PB03	IPOC Station P	2.51	358	*e*Pg		18 47 06.0	
PB03				IAML		18 47 43.8	
	comp=Z,234nm,0.2s						
PB09	IPOC Station P	2.79	8	*e*P	Pn	18 47 10.9	-0.1
PB07	IPOC Station P	2.84	356	*e*P	Pn	18 47 11.2	-0.5
PB07	IPOC Station P	2.84	356	*e*P		18 47 11.2	
PB07				IAML		18 48 12.5	
	comp=Z,222nm,0.4s						
GO03	Copiap	3.06	190	*e*P		18 47 13.4	
PB02	IPOC Station P	3.24	356	*e*P		18 47 16.4	
PB02				IAML		18 48 16.2	
	comp=Z,256nm,0.3s						
PB02	IPOC Station P	3.24	356	*e*P	Pn	18 47 16.3	-0.7
PB02				*i* S	Sn	18 47 53.5	-1.4
PB01	IPOC Station P	3.51	2	*e*P	Pn	18 47 20.0	-0.7
PB01				*i* S	Sn	18 48 01.3	0.0
PB01	IPOC Station P	3.51	2	*e*P		18 47 20.1	
PB01				IAML		18 48 29.0	
	comp=Z,112nm,0.2s						
H03N1	Juan Fernandez	11.99	220	T	T	19 01 18.3	
	baz=43,slow=72,SNR=33						
H03N2	Juan Fernandez	12.00	220	T	T	19 01 17.8	
	baz=43,slow=72,SNR=31						
H03N3	Juan Fernandez	12.01	220	T	T	19 01 29.9	
	baz=43,slow=72,SNR=16						
TORD	Torodi Ar. Bea	79.03	70	P	P	18 58 21.8	-0.4
	comp=Z,0.5nm,0.7s,baz=239,slow=5.3,SNR=2.8						
	comp=Z,0.5nm,0.7s						
ZALV	Zalesovo Beam	145.00	26	PKP	PKPdf	19 05 54.9	+1.1
	comp=Z,1.2nm,0.5s,baz=314,slow=3.4,SNR=3.1						
MKAR	Makanchi Array	148.48	38	PKPbc	PKPbc	19 06 04.2	+0.6
	comp=Z,0.2nm,0.6s,baz=290,slow=1.6,SNR=3.6						

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*ISK **01** 18:50:14.4,39.°50N×26.°04E,h10km,ML2.6/18*
*ATH **01** 18:50:15.3,39.°50N×26.°05E,h10km±3km,ML2.7/4,Error*
ellipse: s-maj=3.5km s-min=1.0km az=213.0
*DDA **01** 18:50:15.2±0.0,39.°52N×26.°11E,h9km,ML2.5*
*THE **01** 18:50:15.0,39.°50N×26.°05E,h5km±2km,ML2.6/6,Error*
ellipse: s-maj=2.0km s-min=0.6km az=181.0
ISC 01 18:50:14.4±0.8**,39.°52N**±0.°01×**26.°08E**±0.°02**,h14km**±5km**,**
n56,σ**0ˢ.57**/86**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	**Canakkale, Ayv**	**0.04**	**109**	P	**Pg**	**18 50 17.2**	**+0.2**
KOCA				S	**Sg**	**18 50 18.4**	**-0.4**
GPNR	**Gulpinar-Canak**	**0.07**	**147**	Pg	**Pg**	**18 50 17.1**	**-0.1**
GPNR				Sg	**Sg**	**18 50 18.9**	**-0.2**
PRK	**Paraskevi**	**0.31**	**151**	P	**Pg**	**18 50 21.3**	**+0.6**
PRK				S	**Sg**	**18 50 26.1**	**+1.1**
	3μm,0.2s						
PRK	**Paraskevi**	**0.31**	**151**	P	**Pg**	**18 50 21.1**	**+0.4**
PRK				S	**Sg**	**18 50 25.7**	**+0.7**
PRK				AML	AML	18 50 26.3	
	comp=N,6523μm,0.2s						
PRK				AML	AML	18 50 26.4	
	comp=E,7080μm,0.2s						
BOZC	**Bozcaada**	**0.33**	**356**	Pg	**Pg**	**18 50 21.7**	**+0.6**
BOZC				Sg	**Sb**	**18 50 27.0**	**-0.2**
BOZC	**Bozcaada**	**0.33**	**356**	P	**Pg**	**18 50 21.7**	**+0.6**
BOZC				P	**Pg**	**18 50 21.7**	**+0.6**
BOZC				S	**Sb**	**18 50 26.5**	**-0.7**
BOZC				S	**Sg**	**18 50 26.7**	**+1.0**
BOZC				*i* AML	AML	18 50 27.0	
	comp=E,808nm,0.2s						
BOZC				*i* AML	AML	18 50 27.0	
	comp=E,846nm,0.5s						
BOZC				*i* AML	AML	18 50 27.0	
	comp=E,691nm,0.2s						
BOZC				*i* AML	AML	18 50 27.0	
	comp=E,862nm,0.5s						
SIGR	**SIGRI**	**0.35**	**210**	P	**Pg**	**18 50 21.7**	**+0.1**
SIGR				S	**Sg**	**18 50 26.4**	**0.0**
	comp=E,2μm,0.2s						
SIGR	**SIGRI**	**0.35**	**210**	Pg	**Pg**	**18 50 21.4**	**-0.1**
SIGR				Sg	**Sg**	**18 50 26.5**	**0.0**
SIGR	**SIGRI**	**0.35**	**210**	P	**Pg**	**18 50 21.6**	**+0.1**
SIGR				S	**Sg**	**18 50 26.3**	**0.0**
SIGR				AML	AML	18 50 26.7	
	comp=N,3636μm,0.3s						
SIGR				AML	AML	18 50 27.1	
	comp=E,2720μm,0.2s						
EZN	**Ezine**	**0.36**	**31**	P	**Pb**	**18 50 22.6**	**0.0**
EZN				S	**Sb**	**18 50 28.2**	**0.0**
	comp=E,532nm,0.1s						
EZN	**Ezine**	**0.36**	**31**	Pg	**Pb**	**18 50 22.6**	**0.0**
EZN				Sg	**Sb**	**18 50 28.5**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**0.42**	**58**	P	**Pb**	**18 50 23.4**	**-0.3**
BAYC				S	**Sg**	**18 50 29.0**	**+0.4**
AYVA	**Ayvalik**	**0.52**	**114**	P	**Pb**	**18 50 25.4**	**+0.2**
AYVA				S	**Sb**	**18 50 32.1**	**-0.4**
ECEA	**Canakkale, Ece**	**0.53**	**8**	P	**Pg**	**18 50 25.9**	**+1.0**
ECEA				S	**Sb**	**18 50 33.6**	**+0.5**
ECEA				*i* AML	AML	18 50 36.0	
	comp=E,286nm,0.6s						
COMU	**Canakkale**	**0.66**	**27**	Pg	**Pn**	**18 50 28.2**	**-1.2**
COMU				Sg	**Sn**	**18 50 38.1**	**-1.4**
GOKA	**anakkale-Gk**	**0.69**	**349**	P	**Pg**	**18 50 28.5**	**+0.7**
GOKA				*i* AML	AML	18 50 41.0	
	comp=E,211nm,0.4s						
GOKA				*i* AML	AML	18 50 45.0	
	comp=E,195nm,0.2s						
GADA	**Gvkgeada**	**0.69**	**348**	Pg	**Pg**	**18 50 28.4**	**+0.6**
BUHA	**Balikesir, Bur**	**0.77**	**91**	P	**Pg**	**18 50 29.9**	**+0.6**
BUHA				S	**Sb**	**18 50 39.2**	**-0.7**
DKL	**Dikili**	**0.78**	**125**	Pg	**Pg**	**18 50 30.2**	**+0.7**
LIA	**Limnos Island**	**0.79**	**299**	P	**Pb**	**18 50 30.2**	**+0.2**
LIA				S	**Sg**	**18 50 41.5**	**+1.3**
	comp=E,420nm,0.2s						
LIA	**Limnos Island**	**0.79**	**299**	P	**Pb**	**18 50 30.2**	**+0.2**
LIA				S	**Sb**	**18 50 40.1**	**-0.5**
LIA				AML	AML	18 50 42.9	
	comp=E,929μm,0.3s						
LIA				AML	AML	18 50 43.8	
	comp=N,774μm,0.3s						
KARB	**zmir-Karabur**	**0.89**	**163**	P	**Pg**	**18 50 32.1**	**+0.5**
KARB				S	**Sb**	**18 50 43.4**	**0.0**
KARB				*i* AML	AML	18 50 46.0	
	comp=N,152nm,0.2s						
KARB				*i* AML	AML	18 50 46.0	
	comp=N,173nm,0.3s						
CANM	**Can-anakkale**	**0.90**	**56**	Pg	**Pn**	**18 50 32.8**	**+0.2**
GELI	**Tayfur-Gelibol**	**0.93**	**19**	Pg	**Pg**	**18 50 32.7**	**+0.3**
ZEDA	**zmir-Bergama**	**0.95**	**125**	P	**Pg**	**18 50 33.6**	**+0.9**
LPK	**Lapseki**	**1.00**	**31**	Pg	**Pg**	**18 50 34.3**	**+0.6**
SMTH	**Samothraki Isl**	**1.04**	**336**	P	**Pg**	**18 50 34.8**	**+0.3**
SMTH				S	**Sg**	**18 50 49.1**	**+0.9**
SMTH	**Samothraki Isl**	**1.04**	**336**	P	**Pg**	**18 50 34.7**	**+0.2**
PSRA	**Psara**	**1.05**	**203**	P	**Pn**	**18 50 35.1**	**+0.3**
CHOS	**Chios island**	**1.13**	**181**	P	**Pn**	**18 50 35.5**	**-0.4**
CHOS				S	**Sb**	**18 50 50.5**	**+0.2**
	comp=N,335nm,0.2s						
CHOS	**Chios island**	**1.13**	**181**	Pn	**Pb**	**18 50 35.9**	**+0.1**
CHOS	**Chios island**	**1.13**	**181**	P	**Pn**	**18 50 35.4**	**-0.4**
CHOS				AML	AML	18 50 53.9	
	comp=E,805μm,0.3s						
CHOS				AML	AML	18 50 55.5	
	comp=N,541μm,0.2s						
CAVK	**Edirne/Enez-Ca**	**1.18**	**3**	P	**Pg**	**18 50 37.2**	**+0.2**
ERIK	**Erikli-Kesan**	**1.20**	**16**	Pn	**Pg**	**18 50 37.4**	**-0.1**
BALY	**Balya**	**1.21**	**79**	P	**Pg**	**18 50 37.7**	**0.0**
BALY				S	**Sn**	**18 50 52.8**	**-0.4**
BALY				*i* AML	AML	18 50 55.0	
	comp=N,118nm,0.4s						
ENEZ	**Enez**	**1.22**	**3**	P	**Pg**	**18 50 38.0**	**+0.2**
ENEZ				S	**Sg**	**18 50 55.5**	**+1.7**
	comp=N,128nm,0.3s						
ENEZ	**Enez**	**1.22**	**3**	Pn	**Pg**	**18 50 38.1**	**+0.2**
URLA	**Izmir**	**1.22**	**161**	Pn	**Pn**	**18 50 37.1**	**-0.1**
URLA	**Izmir**	**1.22**	**161**	P	**Pn**	**18 50 36.7**	**-0.4**
URLA				S	**Sb**	**18 50 52.6**	**-0.4**
URLA				*i* AML	AML	18 50 56.0	
	comp=N,69nm,0.4s						
URLA				*i* AML	AML	18 50 56.0	
	comp=N,76nm,0.4s						
STEP	**BALIKESIR_Sava**	**1.27**	**96**	P	**Pg**	**18 50 39.3**	**+0.4**
KRBG	**Karabiga-Canak**	**1.28**	**46**	Pn	**Pg**	**18 50 38.9**	**-0.1**
ZEYE	**Izmir, Urla-Ze**	**1.32**	**165**	P	**Pb**	**18 50 39.6**	**+0.6**
ZEYE				S	**Sn**	**18 50 55.2**	**-0.5**
ZEYE				*i* AML	AML	18 50 59.0	
	comp=N,75nm,0.3s						
ZEYE				*i* AML	AML	18 51 00.0	
	comp=N,81nm,0.4s						
KNL	**Balıkesir**	**1.34**	**55**	P	**Pb**	**18 50 39.2**	**-0.1**
GONE	**Gonen-Balikesi**	**1.34**	**66**	Pn	**Pg**	**18 50 40.3**	**0.0**
BLCB	**Balcova**	**1.35**	**146**	Pn	**Pb**	**18 50 39.9**	**+0.3**
ALN	**Alexandroupoli**	**1.38**	**359**	P	**Pb**	**18 50 39.8**	**-0.2**
ALN				S	**Sg**	**18 51 00.2**	**+1.3**
ALN	**Alexandroupoli**	**1.38**	**359**	Pn	**Pb**	**18 50 40.4**	**+0.4**
ALN	**Alexandroupoli**	**1.38**	**359**	P	**Pb**	**18 50 40.0**	**0.0**
KESN	**Edirne-Kesan**	**1.39**	**19**	P	**Pb**	**18 50 40.6**	**+0.2**
KESN				S	**Sg**	**18 50 58.6**	**-0.6**
KESN				*i* AML	AML	18 51 03.0	
	comp=N,62nm,0.2s						
BALB	**Balikesir**	**1.39**	**84**	Pn	**Pb**	**18 50 40.7**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.44**	**35**	Pn	**Pb**	**18 50 41.5**	**+0.4**
BKES	**Balkesir-Mer**	**1.44**	**81**	P	**Pg**	**18 50 41.9**	**-0.2**
BKES				S	**Sb**	**18 50 59.7**	**+0.4**
UKOP	**Uzunkopru-Edir**	**1.66**	**14**	Pn	**Pb**	**18 50 44.5**	**-0.4**
RDO	**Rodhopi**	**1.68**	**346**	Pn	**Pb**	**18 50 44.6**	**-0.5**
RDO	**Rodhopi**	**1.68**	**346**	P	**Pb**	**18 50 44.4**	**-0.8**
KYMI	**Kymi, Euboea I**	**1.78**	**241**	P	**Pn**	**18 50 44.3**	**-0.5**

DJA ***01*** *18:53:15.2±1.4, 3°N±4°×9°5E±°, h21^{km}±11^{km}, M3.8/6, mb4.0/1, MLv3.8/6*

NEIC ***01*** *18:53:17.3±0.3, 2°.97N±0°.08×95°.7E±0°.2, h28^{km}±9^{km}, mb4.0/7, Error ellipse: s-maj=23.0km s-min=10.8km az=75.0*

IDC ***01*** *18:53:31.6±12.0, 3°.44N×95°.42E, h134^{km}±102^{km}, mb3.5/6, mbtmp3.9/7, ML3.9/1, MS3.0/3, Error ellipse: s-maj=106.0km s-min=19.7km az=59.0*

ISC 01 18:53:16.6±0.9**, 3°.02N**±0°.06×**95°.7E**±0°.1**, h27^{km}, n33,** σ**1^{s}11**/27**, mb4.0**/10**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	**0.89**	**133**	P	**Pb**	**18 53 33.6**	**+0.2**
SNSI				S	**Sn**	**18 53 46.5**	**+1.2**
MLSI	**Meulaboh, Aceh**	**1.44**	**30**	P	**Pb**	**18 53 43.7**	**+1.0**
MLSI				S	Sb	18 54 11.5	+11
KCSI	**Kotacane, Aceh**	**2.15**	**76**	P	**Pb**	**18 53 55.5**	**+0.6**
LHMI	**Lhok Sumawe**	**2.53**	**30**	Pn	**Pb**	**18 53 59.0**	**-2.5**
LHMI	**Lhok Sumawe**	**2.53**	**30**	P	**Pb**	**18 54 00.6**	**-0.8**
GSI	**Gunungsitoli**	**2.55**	**132**	Pn	**Pn**	**18 53 56.6**	**+0.4**
GSI	**Gunungsitoli**	**2.55**	**132**	P	**Pn**	**18 53 56.4**	**+0.2**
GSI				S	**Sn**	**18 54 25.5**	**-0.9**
RPSI	**Rantau Prapat**	**3.26**	**96**	Pn	**Pn**	**18 54 06.5**	**+0.6**
PBSI	**Pulau Batu**	**4.01**	**140**	P	**Pn**	**18 54 15.8**	**-0.5**
PBSI				S	**Sn**	**18 54 58.6**	**-3.9**
IPM	**Ipoh**	**5.53**	**75**	Pn	**Pn**	**18 54 36.7**	**-0.5**
PALK	**Pallekele**	**15.50**	**286**	LR	LR	19 02 11.4	
	comp=Z,26nm,19.5s,baz=259,slow=34						
CM31	**Chiang Mai Arr**	**15.67**	**12**	P	**P**	**18 57 00.1**	**+0.5**
CMAR	**Chiang Mai Arr**	**15.67**	**12**	P	**P**	**18 57 00.6**	**+1.0**
	0.2nm,0.3s,baz=201,slow=11,SNR=30						
CMAR				LR	LR	19 04 05.0	
	comp=Z,34nm,18.1s,baz=190,slow=41						
	3.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**15.67**	**12**	P	**P**	**18 57 00.1**	**+0.5**
H08S2	**Diego Garcia H**	**25.44**	**245**	T	T	19 24 47.5	
	baz=66,slow=76,SNR=22						
H08S3	**Diego Garcia H**	**25.44**	**245**	T	T	19 24 47.5	
	baz=66,slow=76,SNR=20						
H08S1	**Diego Carcia H**	**25.46**	**245**	T	T	19 24 48.9	
	baz=66,slow=76,SNR=31						
LSA	**Lhasa**	**26.88**	**351**	P	**P**	**18 58 55.8**	**0.0**
LSA				IAmb	IAmb	18 58 57.6	
	comp=Z,2.1nm,0.8s						
H01W3	**Cape Leeuwin H**	**41.50**	**157**	T	T	19 45 14.7	
	baz=332,slow=76,SNR=7.7						
H01W2	**Cape Leeuwin H**	**41.51**	**157**	T	T	19 45 12.3	
	baz=332,slow=76,SNR=8.9						
H01W1	**Cape Leeuwin H**	**41.51**	**157**	T	T	19 44 58.4	
	baz=332,slow=76,SNR=6.2						
WRA	**Warramunga Arr**	**44.29**	**123**	P	P	19 01 31.9	+7.4
	comp=Z,0.3nm,0.6s,baz=305,slow=8.9,SNR=2.7						
	comp=Z,0.3nm,0.6s						
MK31	**Makanchi Array**	**45.13**	**347**	P	**P**	**19 01 31.1**	**+0.4**
MK31				IAmb	IAmb	19 01 31.7	
	comp=Z,1.5nm,0.7s						
MKAR	**Makanchi Array**	**45.13**	**347**	P	**P**	**19 01 31.0**	**+0.2**
	comp=Z,1.7nm,0.5s,baz=167,slow=7.9,SNR=19						
	comp=Z,1.7nm,0.5s						
MAKZ	**Makanchi**	**45.22**	**347**	P	**P**	**19 01 31.6**	**+0.2**
MAKZ				IAmb	IAmb	19 01 32.5	
	comp=Z,2.0nm,0.7s						
SONM	**Songino Array**	**45.59**	**10**	P	**P**	**19 01 35.3**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=187,slow=9.1,SNR=15						
SONM				PcP	**PcP**	**19 03 13.2**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=181,slow=5.3,SNR=2.2						
	comp=Z,1.4nm,0.7s						
SONM	**Songino Array**	**45.59**	**10**	P	**P**	**19 01 34.8**	**+0.2**
SONM				IAmb	IAmb	19 01 35.7	
	comp=Z,2.0nm,1.0s						
ASAR	**Alice Springs**	**45.70**	**128**	P	P	19 01 42.9	+7.3
	comp=Z,0.2nm,0.6s,baz=307,slow=8.0,SNR=2.3						
	comp=Z,0.2nm,0.6s						
KURK	**Kurchatov**	**49.66**	**346**	P	**P**	**19 02 05.9**	**0.0**
KURK				IAmb	IAmb	19 02 12.3	
	comp=Z,2.1nm,1.1s						
ZAA0	**Zalesovo Array**	**51.54**	**352**	P	**P**	**19 02 20.4**	**+0.3**
ZALV	**Zalesovo Beam**	**51.54**	**352**	P	**P**	**19 02 20.4**	**+0.4**
	comp=Z,4.7nm,0.6s,baz=182,slow=6.8,SNR=24						
	comp=Z,4.7nm,0.6s						
BRTR	**Keskin Array B**	**66.77**	**312**	LR	LR	19 34 26.9	
	comp=Z,28nm,21.8s,baz=342,slow=37						
ARCES	**ARCESS Array B**	**80.32**	**340**	P	**P**	**19 05 24.6**	**-0.4**
	comp=Z,3.1nm,1.0s,baz=69,slow=4.9,SNR=4.1						
	comp=Z,3.1nm,1.0s						

IDC 01 18:55:14.3±1.9**, 49°.42S**×**125°.56E, h0^{km}, mb3.8**/4**, mbtmp3.9**/4**, Error ellipse: s-maj=108.1km s-min=25.9km az=102.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W1	**Cape Leeuwin H**	**16.77**	**326**	T	T	19 16 56.5	
	baz=156,slow=79,SNR=3.1						
H01W2	**Cape Leeuwin H**	**16.77**	**326**	T	T	19 17 02.4	
	baz=156,slow=79,SNR=4.0						
H01W3	**Cape Leeuwin H**	**16.79**	**326**	T	T	19 16 50.7	
	baz=156,slow=79,SNR=4.4						
STKA	**Stephens Creek**	**21.25**	**40**	P	P	19 00 00.8	-1.1
	3.9nm,0.7s,baz=213,slow=12,SNR=8.5						
	3.9nm,0.7s						
ASAR	**Alice Springs**	**26.53**	**17**	P	P	19 00 53.8	+0.2
	1.7nm,0.6s,baz=193,slow=8.6,SNR=22						
	1.7nm,0.6s						
WRA	**Warramunga Arr**	**30.24**	**17**	P	P	19 01 26.6	-0.1
	0.3nm,0.5s,baz=190,slow=11,SNR=32						
	0.3nm,0.5s						
QSPA	**South Pole Qui**	**40.70**	**180**	P	P	19 02 55.8	-0.5
	2.2nm,1.1s,baz=37,slow=5.5,SNR=3.2						
	2.2nm,1.1s						
YKA	**Yellowknife Ar**	**145.24**	**45**	PKPbc	PKPab	19 14 52.3	0.0
	0.4nm,0.5s,baz=260,slow=3.5,SNR=5.9						

WEL 01 19:00:54.4±0.5**, 40°S**±3°×**17°7E**±°**, h39^{km}**±5^{km}**, M3.0**/75**, ML3.1**/12**, MLv3.0**/75**, Error ellipse: s-maj=0.0km s-min=0.0km az=120.9, confirmed, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WPHZ	**Waipukurau**	**0.16**	**226**	P	Pn	19 01 03.0	-0.1
WPHZ				S	Sn	19 01 09.5	-1.1
PXZ	**Pawanui**	**0.22**	**110**	P	Pn	19 01 03.0	+0.5
PXZ				S	Sn	19 01 09.4	+0.2
KAHZ	**Kahuranaki**	**0.27**	**54**	P	Pn	19 01 03.8	+1.2
KAHZ				S	Sn	19 01 11.2	+2.1
PNHZ	**Pukenui**	**0.30**	**278**	P	Pn	19 01 04.1	+1.4
PNHZ				S	Sn	19 01 11.0	+1.8
PRHZ	**Porangahau**	**0.31**	**173**	P	Pn	19 01 04.0	+1.2
PRHZ				S	Sn	19 01 11.5	+2.3
DVHZ	**Dannevirke**	**0.47**	**223**	P	Pn	19 01 05.7	+1.0
DVHZ				S	Sn	19 01 14.0	+2.1
CKHZ	**Cape Kidnapper**	**0.48**	**52**	P	Pn	19 01 05.8	+1.0
CKHZ				S	Sn	19 01 14.3	+2.2
TSZ	**Takapari Road**	**0.49**	**258**	P	Pn	19 01 06.1	+1.1
TSZ				S	Sn	19 01 14.6	+2.1
ANWZ	**Angora Road**	**0.51**	**190**	P	Pn	19 01 06.2	+0.9
ANWZ				S	Sn	19 01 15.2	+2.4
MCHZ	**McNeill Hill**	**0.52**	**9**	P	Pn	19 01 06.7	+1.4
MCHZ				S	Sn	19 01 15.6	+2.5
KWHZ	**Kaweka Forest**	**0.55**	**346**	P	Pn	19 01 06.8	+1.0
KWHZ				S	Sn	19 01 15.8	+2.0
BHHZ	**Black Hill Sta**	**0.62**	**319**	P	Pn	19 01 08.0	+1.2
BHHZ				S	Sn	19 01 17.3	+1.7
ARHZ	**Aropaoanui**	**0.76**	**25**	P	Pn	19 01 09.6	+1.0
ARHZ				S	Sn	19 01 21.1	+2.2
PRWZ	**Pori Road**	**0.76**	**218**	P	Pn	19 01 09.7	+1.0
PRWZ				S	Sn	19 01 21.0	+2.0
POWZ	**Post Office Ro**	**0.77**	**235**	P	Pn	19 01 09.5	+0.8
BFZ	**Birch Farm**	**0.77**	**200**	P	Pn	19 01 09.1	+0.3
BFZ				S	Sn	19 01 20.5	+1.3
BKZ	**Black Stump Fm**	**0.79**	**355**	P	Pn	19 01 10.0	+0.9
MOVZ	**Moawhango**	**0.85**	**310**	P	Pn	19 01 11.5	+1.6
NMHZ	**Naumai**	**0.87**	**11**	P	Pn	19 01 11.4	+1.1
TIWZ	**Tintock**	**0.98**	**213**	P	Pn	19 01 12.1	+0.5
WNVZ	**Wahianoa**	**0.99**	**309**	P	Pn	19 01 14.0	+2.0
CPWZ	**Castlepoint**	**1.00**	**197**	P	Pn	19 01 12.6	+0.8
TUVZ	**Tukino**	**1.00**	**313**	P	Pn	19 01 14.1	+2.1
WHHZ	**Waihua**	**1.01**	**30**	P	Pn	19 01 12.7	+0.6
WHVZ	**Whangaehu Hut**	**1.02**	**311**	P	Pn	19 01 14.4	+2.0
MTVZ	**Mangateitei**	**1.03**	**303**	P	Pn	19 01 14.6	+2.2
TRVZ	**Turoa**	**1.04**	**309**	P	Pn	19 01 14.2	+1.5
MRZ	**Mangatainoka R**	**1.04**	**227**	P	Pn	19 01 12.8	+0.3
SNVZ	**South Ngauruho**	**1.06**	**316**	P	Pn	19 01 14.7	+1.8
FWVZ	**Far West T-bar**	**1.06**	**311**	P	Pn	19 01 14.8	+1.8
ETVZ	**East Tongariro**	**1.06**	**320**	P	Pn	19 01 14.7	+1.8
OTVZ	**Oturere**	**1.07**	**318**	P	Pn	19 01 15.0	+2.1
TMVZ	**Te Maari**	**1.08**	**321**	P	Pn	19 01 14.9	+1.7
NGZ	**Ngauruhoe**	**1.09**	**315**	P	Pn	19 01 15.1	+1.8
RAHZ	**Arahi**	**1.11**	**21**	P	Pn	19 01 14.1	+0.7
NTVZ	**North Tongarir**	**1.11**	**320**	P	Pn	19 01 15.2	+1.7
NNVZ	**North Ngauruho**	**1.12**	**317**	P	Pn	19 01 15.5	+1.8
MTHZ	**Maungataniwha**	**1.12**	**10**	P	Pn	19 01 14.1	+0.5
RITZ	**Rihia Road**	**1.13**	**330**	P	Pn	19 01 15.7	+2.0
KRVZ	**Karewarewa**	**1.13**	**319**	P	Pn	19 01 15.5	+1.7
WTVZ	**West Tongariro**	**1.14**	**317**	P	Pn	19 01 15.7	+1.8
PKVZ	**Pokaka**	**1.17**	**304**	P	Pn	19 01 16.3	+2.1
KATZ	**Kakaramea**	**1.20**	**324**	P	Pn	19 01 16.5	+1.7
HOWZ	**Holdsworth Sta**	**1.25**	**221**	P	Pn	19 01 15.2	-0.1
KNZ	**Kokohu**	**1.25**	**42**	P	Pn	19 01 15.3	-0.1
TWVZ	**Taurewa**	**1.25**	**314**	P	Pn	19 01 17.0	+1.5
RATZ	**Rangitukua**	**1.26**	**330**	P	Pn	19 01 18.3	+2.8
TMWZ	**Te Maipa**	**1.27**	**205**	P	Pn	19 01 15.2	-0.4
MHGZ	**Mahia Peninsul**	**1.30**	**52**	P	Pn	19 01 16.1	+0.1
SNGZ	**Shannon Statio**	**1.31**	**27**	P	Pn	19 01 16.5	+0.3
RTZ	**Ruatahuna**	**1.37**	**13**	P	Pn	19 01 17.5	+0.4
OGWZ	**Otaki Gorge**	**1.38**	**231**	P	Pn	19 01 17.2	0.0
MTW	**Mount Morrison**	**1.46**	**214**	P	Pn	19 01 17.5	-0.7
PRRZ	**Plateau Road**	**1.46**	**354**	P	Pn	19 01 18.8	+0.6
MUGZ	**Murupara**	**1.48**	**6**	P	Pn	19 01 19.0	+0.4
RIGZ	**Rimuhau**	**1.54**	**36**	P	Pn	19 01 19.3	-0.2
KIW	**Kapiti Island**	**1.57**	**234**	P	Pn	19 01 19.8	+0.1
RAGZ	**Rawiri**	**1.59**	**24**	P	Pn	19 01 20.1	0.0
TRWZ	**Traveller**	**1.59**	**205**	P	Pn	19 01 19.1	-1.0
CAW	**Cannon Point**	**1.63**	**225**	P	Pn	19 01 20.2	-0.4
TARZ	**Mount Tarawera**	**1.72**	**358**	P	Pn	19 01 22.6	+0.7
URZ	**Urewera**	**1.74**	**14**	P	Pn	19 01 21.9	-0.2
MWZ	**Matawai**	**1.78**	**25**	P	Pn	19 01 22.2	-0.4
TKGZ	**Te Karaka**	**1.80**	**33**	P	Pn	19 01 22.5	-0.4
PLWZ	**Palliser**	**1.90**	**212**	P	Pn	19 01 22.9	-1.5
TCW	**Tory Channel**	**2.16**	**234**	P	Pn	19 01 27.0	-0.8
RUGZ	**Raukumara Rang**	**2.16**	**23**	P	Pn	19 01 27.6	-0.4
DUWZ	**D'Urville Isla**	**2.21**	**247**	P	Pn	19 01 28.1	-0.4
PKGZ	**Pakihiroa**	**2.37**	**30**	P	Pn	19 01 30.4	-0.4
HAZ	**Te Kaha**	**2.39**	**23**	P	Pn	19 01 30.1	-0.8
TUWZ	**Tuamarina**	**2.49**	**233**		Pn	19 01 31.1	-1.3
TUWZ	**Tuamarina**	**2.49**	**233**	P	Pn	19 01 31.3	-1.1
WMGZ	**Waiomatatini S**	**2.57**	**34**	P	Pn	19 01 32.5	-0.9
MXZ	**Matakaoa Point**	**2.74**	**30**	P	Pn	19 01 35.6	-0.2
CTZ	**Chatham Island**	**6.32**	**129**	P	Pn	19 02 25.1	+0.1

WEL ***01*** *19:01:00, 42°.96S×173°.10E, h6^{km}, ML5.2, Mw4.8, Moment Tensor Solution. s13 Moment tensor: Scale 10^{16}Nm; M_{rr}2.12; $M_{\theta\theta}$-0.47; $M_{\phi\phi}$-1.65; $M_{r\theta}$-0.60; $M_{\theta\phi}$-1.02; $M_{\phi r}$0.03; Fault plane solution: $M_0$2.26000×10^{16} NP1:ϕ_s16.00000°, δ43.00000°, λ69.00000°. NP2: ϕ_s224.00000°, δ50.00000°, λ108.00000°. Principal axes: T -2253.2700, Plg75.0000°, Azm197.0000°; N -11.0500, Plg14.0000°, Azm31.0000°; P 2264.3300, Plg4.0000°, Azm301.0000°;*

IDC ***01*** *19:01:00.7±0.5, 42°.85S×173°.20E, h0^{km}, mb4.7/12, mbtmp4.7/13, ML4.2/1, MS4.0/31 Error ellipse: s-maj=17.7km s-min=16.3km az=94.0*

NOU ***01*** *19:01:00.4, 43°.32S×173°.66E, h0^{km}, mb4.9/56, Off E. Coast of S. Island, N.Z.*

BJI ***01*** *19:01:01.0±0.0, 42°.84S×173°.28E, h11^{km}, mb5.1/14, mB5.8/3*

NEIC ***01*** *19:01:01.6±1.4, 43°.03S±0°.05×173°.20E±0°.07, h8^{km}±2^{km}, mb5.0/31, Mwr4.8/36, Mww4.8/12, Error ellipse: s-maj=8.8km s-min=5.9km az=139.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}2.04; $M_{\theta\theta}$-0.60; $M_{\phi\phi}$-1.44; $M_{r\theta}$-0.32; $M_{\theta\phi}$-1.02; $M_{\phi r}$0.14; Fault plane solution: $M_0$2.11000×10^{16} NP1:ϕ_s223.36000°, δ46.70000°, λ103.30000°. NP2:ϕ_s24.34000°, δ44.90000°, λ76.28000°. Principal axes: T 2.0954, Plg80.0000°, Azm209.0000°; N 0.0291, Plg10.0000°, Azm34.0000°; P -2.1245, Plg1.0000°, Azm304.0000°;*

GCMT ***01*** *19:01:01.0±0.4, 43°.19S±0°.03×173°.04E±0°.03, h12^{km}, MW4.8/70, Moment Tensor Solution. s24,c30; s70,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.24±.09; $M_{\theta\theta}$-0.71±.08; $M_{\phi\phi}$-1.53±.07; $M_{r\theta}$-0.14±.26; $M_{\theta\phi}$-0.91±.06; $M_{\phi r}$0.30±.26; Best double couple: $M_0$2.20100×10^{16} NP1:ϕ_s26.00000°, δ48.00000°, λ81.00000°. NP2: ϕ_s219.00000°, δ43.00000°, λ100.00000°. Principal axes: T 2.2800, Plg83.0000°, Azm233.0000°; N -0.1580, Plg7.0000°, Azm32.0000°; P -2.1220, Plg2.0000°, Azm123.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***01*** *19:01:01.2, 43°.06S×173°.07E, h12^{km}, Moment Tensor Solution. Duration: 1^{s}4 Moment tensor: Scale 10^{16}Nm; M_{rr}2.06; $M_{\theta\theta}$-0.36; $M_{\phi\phi}$-1.69; $M_{r\theta}$0.13; $M_{\theta\phi}$-0.86; $M_{\phi r}$0.01; Fault plane solution: $M_0$2.09000×10^{16} NP1:ϕ_s29.28000°, δ45.99000°, λ94.51000°. NP2:ϕ_s202.81000°, δ44.19000°, λ85.35000°. Principal axes: T 2.0628, Plg87.0000°, Azm11.0000°; N 0.0518, Plg3.0000°, Azm206.0000°; P -2.1146, Plg1.0000°, Azm116.0000°;*

NEIC ***01*** *19:01:01.2, 43°.06S×173°.20E, h12^{km}*

WEL ***01*** *19:01:02.7±0.3, 43°S±3°×17°3E±°, h12^{km}±3^{km}, M5.2/104, ML5.2/16, MLv5.2/104, Error ellipse: s-maj=0.0km s-min=0.0km az=122.5, confirmed*

NEIC ***01*** *19:01:02, 43°.01S×173°.18E, h10^{km}*

ISC 01 19:01:01.6±0.8**, 43°.01S**±0°.03×**173°.22E**±0°.03**, h5^{km}**±4^{km}**, n343,** σ**1^{s}73**/324**, mb5.1**/54**, MS4.0**/35**, Off east coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVZ	**Greta Valley S**	**0.14**	**287**		**Pg**	**19 01 04.6**	**+0.2**
GVZ	**Greta Valley S**	**0.14**	**287**	P	**Pg**	**19 01 04.6**	**+0.2**
AMCZ	**Amberley**	**0.45**	**248**		**Pg**	**19 01 10.7**	**+0.5**
AMCZ	**Amberley**	**0.45**	**248**	P	**Pb**	**19 01 11.6**	**-0.4**
AMCZ				S	**Sb**	**19 01 18.3**	**-0.7**
KHZ	**Kahutara**	**0.64**	**22**		**Pb**	**19 01 15.7**	**+0.5**
KHZ	**Kahutara**	**0.64**	**22**	P	**Pb**	**19 01 15.7**	**+0.5**
LTZ	**Lake Taylor**	**0.73**	**288**	Pg	**Pg**	**19 01 15.4**	**-0.2**
LTZ	**Lake Taylor**	**0.73**	**288**	P	**Pg**	**19 01 15.4**	**-0.2**
LTZ				S	**Sg**	**19 01 24.7**	**-0.4**
MQZ	**McQueen's Vall**	**0.81**	**210**	Pg	**Pb**	**19 01 17.7**	**-0.5**
MQZ	**McQueen's Vall**	**0.81**	**210**	P	**Pb**	**19 01 18.0**	**-0.2**
AKCZ	**Akaroa Harbour**	**0.89**	**194**	P	**Pb**	**19 01 19.9**	**+0.3**
OXZ	**Oxford**	**0.92**	**249**		**Pg**	**19 01 19.3**	**+0.1**
OXZ	**Oxford**	**0.92**	**249**	P	**Pg**	**19 01 19.4**	**+0.1**
RACZ	**Rakaia**	**1.06**	**227**	P	**Pg**	**19 01 21.6**	**-0.4**
THZ	**Tophouse**	**1.27**	**349**		**Pg**	**19 01 25.0**	**-0.8**
THZ	**Tophouse**	**1.27**	**349**	P	**Pg**	**19 01 25.1**	**-0.7**
MHCZ	**Mount Hutt**	**1.31**	**246**	P	**Pn**	**19 01 24.9**	**-1.8**
INZ	**Inchbonnie**	**1.33**	**282**		**Pn**	**19 01 25.0**	**-1.9**
INZ	**Inchbonnie**	**1.33**	**282**	P	**Pn**	**19 01 25.3**	**-1.7**
WACZ	**Wakanui South**	**1.37**	**227**	P	**Pn**	**19 01 25.9**	**-1.5**
BSWZ	**Blackbirch Sta**	**1.38**	**21**		**Pn**	**19 01 27.6**	**0.0**
BSWZ	**Blackbirch Sta**	**1.38**	**21**	P	**Pb**	**19 01 27.8**	**-0.1**
CMWZ	**Cape Campbell**	**1.46**	**31**		**Pn**	**19 01 28.7**	**0.0**
CMWZ	**Cape Campbell**	**1.46**	**31**	P	**Pb**	**19 01 29.2**	**0.0**
DSZ	**Denniston Nort**	**1.64**	**320**	Pn	**Pn**	**19 01 30.2**	**-1.0**
DSZ	**Denniston Nort**	**1.64**	**320**	P	**Pn**	**19 01 30.1**	**-1.0**
MRNZ	**Matariki Terra**	**1.65**	**348**		**Pn**	**19 01 30.7**	**-0.5**
MRNZ	**Matariki Terra**	**1.65**	**348**	P	**Pn**	**19 01 31.1**	**-0.1**
RPZ	**Rata Peaks**	**1.73**	**245**	Pn	**Pn**	**19 01 30.7**	**-1.6**
	209nm,0.3s,baz=96,slow=1.8,SNR=1203						
RPZ				Sn	**Sn**	**19 01 55.3**	**+0.5**
	352nm,0.3s,baz=246,slow=6.5,SNR=5.3						
RPZ				LR	LR	19 01 59.2	
	comp=Z,3μm,19.7s,baz=173,slow=33						
RPZ	**Rata Peaks**	**1.73**	**245**	Pn	**Pn**	**19 01 30.6**	**-1.7**
RPZ	**Rata Peaks**	**1.73**	**245**	P	**Pn**	**19 01 31.4**	**-1.0**
RPZ	**Rata Peaks**	**1.73**	**245**	P	**Pn**	**19 01 30.8**	**-1.6**
ARCZ	**Arundel**	**1.76**	**237**	P	**Pn**	**19 01 31.2**	**-1.6**
NNZ	**Nelson**	**1.79**	**4**		**Pn**	**19 01 33.1**	**-0.2**
NNZ	**Nelson**	**1.79**	**4**	P	**Pn**	**19 01 33.3**	**+0.1**
WVZ	**Waitaha Valley**	**1.82**	**267**	P	**Pn**	**19 01 32.3**	**-1.3**
TCW	**Tory Channel**	**1.96**	**24**		**Pn**	**19 01 34.8**	**-0.7**
TKNZ	**Takaka Hill**	**1.98**	**354**		**Pn**	**19 01 35.8**	**-0.1**
TKNZ	**Takaka Hill**	**1.98**	**354**	P	**Pn**	**19 01 36.4**	**+0.5**
BHW	**Baring Head**	**2.02**	**38**	Pn	**Pn**	**19 01 35.7**	**-0.6**
SNZO	**South Karori**	**2.03**	**34**	Pn	**Pn**	**19 01 35.8**	**-0.6**
SNZO	**South Karori**	**2.03**	**34**	P	**Pn**	**19 01 36.5**	**+0.1**
WEL	**Wellington**	**2.07**	**34**	P	**Pn**	**19 01 36.8**	**-0.2**
PLWZ	**Palliser**	**2.09**	**47**	Pn	**Pn**	**19 01 36.5**	**-0.9**
TMZ	**Timaru**	**2.11**	**229**	P	**Pn**	**19 01 36.1**	**-1.5**
GCSZ	**Gaunt Creek Bo**	**2.14**	**261**	P	**Pn**	**19 01 37.0**	**-1.0**
MSWZ	**Moikau Station**	**2.19**	**44**		**Pn**	**19 01 38.2**	**-0.5**
QRZ	**Quartz Range**	**2.24**	**347**		**Pn**	**19 01 39.3**	**-0.1**
QRZ	**Quartz Range**	**2.24**	**347**	P	**Pn**	**19 01 40.4**	**+1.0**
QRZ	**Quartz Range**	**2.24**	**347**	P	**Pn**	**19 01 39.2**	**-0.1**
DUWZ	**D'Urville Isla**	**2.27**	**14**	P	**Pn**	**19 01 40.1**	**+0.3**
CAW	**Cannon Point**	**2.35**	**37**	P	**Pn**	**19 01 40.4**	**-0.4**
FOZ	**Fox Glacier**	**2.54**	**257**	Pn	**Pn**	**19 01 42.9**	**-0.6**
FOZ	**Fox Glacier**	**2.54**	**257**	P	**Pn**	**19 01 43.0**	**-0.5**
LBZ	**Lake Benmore**	**2.59**	**237**	Pn	**Pn**	**19 01 42.9**	**-1.4**
LBZ	**Lake Benmore**	**2.59**	**237**	P	**Pn**	**19 01 42.9**	**-1.4**
HOWZ	**Holdsworth Sta**	**2.72**	**40**	P	**Pb**	**19 01 48.7**	**-2.0**
ODZ	**Otahua Downs**	**2.75**	**221**	Pn	**Pn**	**19 01 45.0**	**-1.4**

ODZ	Otahua Downs	2.75	221	P	Pn	19 01 45.4	-1.0
ODZ	Otahua Downs	2.75	221	P	Pn	19 01 45.0	-1.4
MRZ	Mangatainoka R	2.94	38	Pn	Pn	19 01 47.9	-1.1
MRZ	Mangatainoka R	2.94	38	P	Pn	19 01 48.4	-0.6
BFZ	Birch Farm	3.25	45		Pn	19 01 52.7	-0.5
BFZ	Birch Farm	3.25	45	P	Pn	19 01 55.8	+2.6
BFZ	Birch Farm	3.25	45	P	Pn	19 01 52.8	-0.4
JCZ	Jackson Bay	3.39	250	P	Pn	19 01 54.2	-1.1
JCZ	Jackson Bay	3.39	250	P	Pn	19 01 53.8	-1.5
HHSZ	Highcliff Hill	3.43	212	P	Pn	19 01 54.4	-1.3
WKZ	Wanaka	3.54	238	Pn	Pn	19 01 55.3	-1.9
WKZ	Wanaka	3.54	238	P	Pn	19 01 55.9	-1.3
EAZ	Earnscleugh	3.59	230	P	Pn	19 01 56.1	-1.8
NMEZ	Namu Road	3.63	8	P	Pn	19 02 01.0	+2.5
LREZ	Lake Rotokare	3.66	15	P	Pb	19 02 02.8	-3.9
KHEZ	Kahui Hut	3.76	9	P	Pn	19 02 04.0	+3.6
KHEZ	Kahui Hut	3.76	9	P	Pn	19 02 02.6	+2.2
NBEZ	Newall Road No	3.77	8	P	Pn	19 02 02.2	+1.8
PKE	Pukeiti	3.86	9	P	Pn	19 02 03.3	+1.7
DREZ	Durham Road	3.89	11	P	Pn	19 02 03.5	+1.5
TUZ	Tuapeka	3.91	220	P	Pn	19 02 01.2	-1.1
MHEZ	Mangahewa	4.02	12	P	Pn	19 02 06.5	+2.6
PKVZ	Pokaka	4.05	24	P	Pn	19 02 05.3	+1.0
VRZ	Vera Road	4.05	17	P	Pn	19 02 05.6	+1.3
WNVZ	Wahianoa	4.09	27	P	Pn	19 02 06.1	+1.1
TRVZ	Turoa	4.10	26	P	Pn	19 02 05.5	+0.3
DRZ	Dome Shelter	4.13	26	P	Pn	19 02 08.0	+2.4
WHVZ	Whangaehu Hut	4.13	26	P	Pn	19 02 06.2	+0.6
FWVZ	Far West T-bar	4.14	26	P	Pn	19 02 06.2	+0.5
MSZ	Milford Sound	4.17	245	P	Pn	19 02 03.8	-2.2
NGZ	Ngauruhoe	4.23	26	P	Pn	19 02 07.2	+0.3
SNVZ	South Ngauruho	4.24	26	P	Pn	19 02 07.4	+0.4
NNVZ	North Ngauruho	4.28	26	P	Pn	19 02 09.2	+1.7
TWVZ	Taurewa	4.28	24	P	Pn	19 02 07.6	+0.1
WTVZ	West Tongariro	4.28	26	P	Pn	19 02 08.2	+0.6
ETVZ	East Tongariro	4.30	27	P	Pn	19 02 08.6	+0.7
KRVZ	Karewarewa	4.32	26	P	Pn	19 02 08.5	+0.4
TMVZ	Te Maari	4.32	27	P	Pn	19 02 08.5	+0.4
NTVZ	North Tongarir	4.33	26	P	Pn	19 02 08.6	+0.4
MLZ	Mavora Lakes	4.36	236	Pn	Pn	19 02 06.3	-2.2
MLZ	Mavora Lakes	4.36	236	P	Pn	19 02 06.5	-2.1
KATZ	Kakaramea	4.45	26	P	Pn	19 02 11.3	+1.5
RITZ	Rihia Road	4.50	27	P	Pn	19 02 12.0	+1.5
BKZ	Black Stump Fm	4.57	34	Pn	Pn	19 02 11.4	0.0
BKZ	Black Stump Fm	4.57	34	P	Pn	19 02 11.5	0.0
BKZ	Black Stump Fm	4.57	34	P	Pn	19 02 11.9	+0.4
RATZ	Rangitukua	4.57	26	P	Pn	19 02 13.3	+1.9
SYZ	Scrubby Hill	4.57	218	P	Pn	19 02 09.9	-1.4
SYZ	Scrubby Hill	4.57	218	P	Pn	19 02 10.3	-1.1
HIZ	Hauiti	4.66	16	Pn	Pn	19 02 13.0	+0.4
HIZ	Hauiti	4.66	16	P	Pn	19 02 13.4	+0.8
HIZ	Hauiti	4.66	16	P	Pn	19 02 13.5	+0.8
WATZ	Wairara	4.70	25	P	Pn	19 02 14.3	+1.1
WHZ	Wether Hill Ro	4.75	231	Pn	Pn	19 02 11.0	-2.8
WHZ	Wether Hill Ro	4.75	231	P	Pn	19 02 11.2	-2.7
TLZ	Tolley Road	5.00	21	P	Pn	19 02 17.6	+0.3
DCZ	Deep Cove	5.00	239	Pn	Pn	19 02 14.5	-2.8
DCZ	Deep Cove	5.00	239	P	Pn	19 02 15.0	-2.3
ALRZ	Allen Road	5.04	29	P	Pn	19 02 17.3	-0.5
PRRZ	Plateau Road	5.11	29	P	Pn	19 02 18.6	-0.2
HRRZ	Handcock Road	5.17	28	P	Pn	19 02 22.6	+2.9
RTZ	Ruatahuna	5.24	34	Pn	Pn	19 02 20.3	-0.3
APZ	The Paps	5.33	222	P	Pn	19 02 19.7	-2.1
UTU	Utuhina	5.33	26	P	Pn	19 02 24.6	+2.7
NGRZ	Ngongotaha	5.40	26	P	Pn	19 02 23.8	+0.9
OMRZ	Omania	5.46	27	P	Pn	19 02 25.5	+1.9
KARZ	Kaharoa	5.49	26	P	Pn	19 02 29.8	+5.8
TOZ	Tahuroa Road	5.55	19	P	Pn	19 02 24.8	-0.1
KMRZ	Kaimai	5.56	23	P	Pn	19 02 27.8	+2.7
URZ	Urewera	5.59	33	Pn	Pn	19 02 24.1	-1.3
	8.4nm,0.3s,baz=322,slow=7.5,SNR=7.7						
URZ				Sn	Sn	19 03 26.5	-3.6
	8.9nm,0.3s,baz=82,slow=7.4,SNR=4.6						
	16nm,0.3s						
URZ	Urewera	5.59	33	P	Pn	19 02 23.9	-1.5
PYZ	Puysegur Point	5.63	234	Pn	Pn	19 02 23.3	-2.7
PYZ	Puysegur Point	5.63	234	P	Pn	19 02 24.8	-1.2
MWZ	Matawai	5.70	36	P	Pn	19 02 25.7	-1.3
TWGZ	Tauwhareparae	6.04	38	P	Pn	19 02 30.9	-0.7
AWAZ	Awhitu Peninsu	6.04	11	P	Pn	19 02 32.0	+0.5
RUGZ	Raukumara Rang	6.08	35	P	Pn	19 02 32.2	0.0
MKAZ	Moumakai	6.08	15	P	Pn	19 02 32.0	-0.1
WTAZ	Waiatarua	6.16	10	P	Pn	19 02 34.6	+1.4
MYRZ	Mayor Island	6.17	23	P	Pn	19 02 34.5	+1.1
ETAZ	East Tamaki Re	6.19	13	P	Pn	19 02 34.5	+0.8
EPAZ	Eden Park BICE	6.24	11	P	Pn	19 02 34.1	-0.2
HAZ	Te Kaha	6.30	35	P	Pn	19 02 34.5	-0.6
MBAZ	Motutapu North	6.37	12	P	Pn	19 02 37.2	+1.1
WIAZ	Waiheke Island	6.38	14	P	Pn	19 02 36.6	+0.3
WMGZ	Waiomatatini S	6.53	39	P	Pn	19 02 37.1	-1.2
KUZ	Kuaotunu	6.55	18	P	Pn	19 02 38.2	-0.3
KUZ	Kuaotunu	6.55	18	P	Pn	19 02 37.9	-0.6
MXZ	Matakaoa Point	6.69	37	Pn	Pn	19 02 39.3	-1.1
MXZ	Matakaoa Point	6.69	37	P	Pn	19 02 39.4	-1.1
MXZ	Matakaoa Point	6.69	37	P	Pn	19 02 39.5	-1.0
GRZ	Great Barrier	6.97	15	P	Pn	19 02 45.8	+1.5
WCZ	Waipu Caves	7.12	7	P	Pn	19 02 47.4	+1.1
CTZ	Chatham Island	7.44	99	P	Pn	19 02 50.6	-0.2
OUZ	Omahuta	7.79	2	P	Pn	19 02 56.2	+0.7
GLAD	Gladstone	18.83	268	P	Pn	19 05 28.5	+5.9
	33nm,1.0s						
AULHS	Lilydale High	19.34	266	P	Pn	19 05 28.7	-0.1
CORO	Coronation Par	19.35	266	P	Pn	19 05 31.7	+2.8
AUSMG	Snowy Mountain	20.00	281	P	Pn	19 05 39.5	+2.7
CAN	Canberra	20.24	284		P	19 05 36.2	-1.5
CAN	Canberra	20.24	284	P	Pn	19 05 44.8	+5.2
YNG	Young	21.19	286	P	P	19 05 54.4	+6.5
ARMA	Armidale	21.32	299	P	P	19 05 47.8	-1.7
ARMA	Armidale	21.32	299	P	P	19 05 55.2	+5.8
AUPHS	Peel High Scho	21.35	296	P	P	19 05 53.8	+4.1
YATNC	Mamie plateau,	21.55	344	P	P	19 05 57.4	+5.6
	43nm,1.2s						
DZM	Mont Dzumac	21.63	343	*e*Pn	P	19 05 53.6	+0.8
	110nm,1.1s						
DZM				*e*S	S	19 09 49.1	-3.8
	360nm,23.7s						
DZM				*e*LR	LR	19 11 03.5	
	comp=Z,558nm,22.3s						
DZM	Mont Dzumac	21.63	343	P	P	19 05 52.8	0.0
	21nm,1.1s,baz=145,slow=14,SNR=4.6						
DZM				LR	LR	19 13 31.4	
	comp=Z,422nm,18.7s,baz=174,slow=35						
	21nm,1.1s						
DZM	Mont Dzumac	21.63	343	P	P	19 05 51.3	-1.5
DZM				IAmb	IAmb	19 06 00.2	
	comp=Z,42nm,1.0s						
DZM	Mont Dzumac	21.63	343	P	P	19 05 56.6	+3.8
TOO	Toolangi	21.79	275	P	P	19 05 54.0	-0.4
TOO	Toolangi	21.79	275	P	P	19 05 59.3	+5.0
	comp=Z,21nm,2.8s						
AUDCS	Dubbo College	22.17	291	P	P	19 06 03.2	+4.7
	comp=Z,16nm,1.2s						
BRAT	Ballarat	22.93	274	P	P	19 06 09.8	+3.3
	comp=Z,18nm,1.1s						
KOUNC	Koumac, New Ca	23.61	339	P	P	19 06 12.6	-0.9
KOUNC	Koumac, New Ca	23.61	339	P	P	19 06 16.4	+2.9
AULRC	Lightning Ridg	24.34	296	P	P	19 06 22.6	+2.2
CMSA	Cobar Meteorol	24.61	289	P	P	19 06 24.1	+1.3
MSVF	Nonsavu	25.53	11	P	P	19 06 28.8	-2.4
	comp=Z,6.6nm,0.6s,baz=269,slow=23,SNR=2.4						
MSVF				LR	LR	19 15 56.2	
	comp=Z,718nm,18.1s,baz=197,slow=35						
	comp=Z,6.6nm,0.6s						
MSVF	Nonsavu	25.53	11	P	P	19 06 30.7	-0.6
MSVF				IAmb	IAmb	19 06 35.5	
	comp=Z,46nm,1.3s						
MSVF	Nonsavu	25.53	11	P	P	19 06 33.3	+2.0
RMQ	Roma	25.86	302	P	P	19 06 39.6	+5.4
STKA	Stephens Creek	27.30	283	P	P	19 06 46.5	-0.7
	comp=Z,5.2nm,0.8s,baz=109,slow=9.8,SNR=10.0						
STKA				PcP	PcP	19 10 08.2	+1.6
	comp=Z,5.4nm,1.0s,baz=152,slow=3.0,SNR=4.4						
STKA				LR	LR	19 15 54.5	
	comp=Z,448nm,21.7s,baz=140,slow=33						
	comp=Z,5.2nm,0.8s						
STKA	Stephens Creek	27.30	283	P	P	19 06 46.5	-0.7
STKA	Stephens Creek	27.30	283	P	P	19 06 52.6	+5.4
QLP	Quilpie	28.70	295	P	P	19 07 01.2	+1.5
INKA	Innaminka	30.32	290	P	P	19 07 18.3	+4.3
LCRK	Leigh Creek	30.50	283	P	P	19 07 18.5	+2.8
BBOO	Buckleboo	30.81	277	P	P	19 07 17.3	-1.0
BBOO				IAmb	IAmb	19 07 21.6	
	comp=Z,17nm,1.1s						
BBOO	Buckleboo	30.81	277	P	P	19 07 19.3	+0.9
RAR	Rarotonga	31.32	55	LR	LR	19 18 39.0	
	comp=Z,154nm,19.1s,baz=231,slow=34						
CTA	Charters Tower	32.16	307	P	P	19 07 29.1	-1.2
	comp=Z,14nm,0.9s,baz=348,slow=5.7,SNR=6.7						
CTA				LR	LR	19 19 32.0	
	comp=Z,326nm,19.4s,baz=116,slow=35						
	comp=Z,14nm,0.9s						
CTAO	Charters Tower	32.16	307	P	P	19 07 29.3	-1.0
CTAO				IAmb	IAmb	19 07 34.1	
	comp=Z,23nm,1.1s						
MULG	Mulgathing	33.59	279	P	P	19 07 48.3	+5.5
OOD	Oodnadatta	33.84	284	P	P	19 07 47.9	+3.0
MTSU	Mount Surprise	34.82	306	P	P	19 07 56.8	+3.3
	comp=Z,11nm,1.0s						
VNDA	Vanda	34.93	184	P	P	19 07 56.5	+2.7
	comp=Z,3.3nm,1.0s,baz=82,slow=3.5,SNR=3.6						
	comp=Z,3.3nm,1.0s						
SBA	Scott Base	35.05	182	P	P	19 07 53.3	-1.6
SBA				IAmb	IAmb	19 08 54.1	
	comp=Z,45nm,1.4s						
HNR	Honiara	35.41	337	LR	LR	19 21 12.3	
	comp=Z,4µm,18.7s,baz=161,slow=34						
QIS	Mount Isa	35.93	298	P	P	19 08 02.8	-0.3
TBI	Tubuai	36.49	70	*e*LR	LR	19 17 56.7	
	comp=Z,497nm,23.8s						
TBI				*e*LR	LR	19 17 56.8	
	comp=Z,2µm,22.5s						
TBI	Tubuai	36.49	70	*e*T	T	19 46 14.2	
	comp=Z,30nm,0.3s						
AS01	Alice Springs	37.63	288	P	P	19 08 16.9	-0.7
	comp=Z,25nm,1.1s						
AS31	Alice Springs	37.66	288	P	P	19 08 16.2	-1.7
ASAR	Alice Springs	37.66	288	P	P	19 08 16.2	-1.6
	comp=Z,18nm,0.9s,baz=128,slow=7.8,SNR=32						
ASAR				PcP	PcP	19 10 34.1	-1.2
	comp=Z,3.6nm,0.9s,baz=134,slow=3.8,SNR=7.1						
ASAR				PKiKP	PKiKP	19 17 52.5	+1.1
	comp=Z,0.6nm,1.0s,baz=138,slow=1.5,SNR=4.3						
ASAR				LR	LR	19 22 43.5	
	comp=Z,414nm,21.2s,baz=150,slow=35						
	comp=Z,18nm,0.9s						
FORT	Forrest	37.70	274	P	P	19 08 16.9	-1.2
FORT				IAmb	IAmb	19 08 21.3	
	comp=Z,48nm,1.1s						
FORT	Forrest	37.70	274	P	P	19 08 20.8	+2.8
COEN	Coen	38.80	309	P	P	19 08 26.5	-0.9
COEN				IAmb	IAmb	19 08 32.2	
	comp=Z,38nm,1.4s						
WR0	Warramunga Arr	39.71	293	P	P	19 08 34.2	-0.8
WR0				IAmb	IAmb	19 08 50.4	
	comp=Z,9.4nm,0.5s						
WB2	Warramunga Arr	39.85	293	P	P	19 08 35.0	-1.2
WB2				IAmb	IAmb	19 08 38.3	
	comp=Z,12nm,0.9s						
WRAB	Tennant Creek	39.86	293	P	P	19 08 35.0	-1.3
WRAB				IAmb	IAmb	19 08 38.3	
	comp=Z,12nm,0.8s						
WRAB	Tennant Creek	39.86	293	P	P	19 08 35.2	-1.0
WRA	Warramunga Arr	39.86	293	P	P	19 08 34.7	-1.5
	comp=Z,9.2nm,1.0s,baz=130,slow=7.8,SNR=21						
WRA				PcP	PcP	19 10 42.6	+0.5
	comp=Z,4.1nm,1.0s,baz=124,slow=3.7,SNR=6.0						
WRA				LR	LR	19 24 02.2	
	comp=Z,433nm,20.7s,baz=147,slow=35						
	comp=Z,9.2nm,1.0s						
WRA	Warramunga Arr	39.86	293	P	P	19 08 34.7	-1.5
WB0	Warramunga Arr	39.94	293	P	P	19 08 34.8	-2.2
WB0				IAmb	IAmb	19 08 40.8	
	comp=Z,11nm,0.8s						
PPT2	Papeete2	40.41	63	*e*S	S	19 14 50.4	+0.5
	comp=Z,61nm,23.8s						
PPT2				*e*LR	LR	19 19 40.6	
	comp=Z,238nm,28.8s						
PPT2				*e*LR	LR	19 19 46.5	
	comp=Z,263nm,26.8s						
PPT	Papeete	40.43	63	LR	LR	19 20 02.1	
	comp=Z,128nm,22.0s,baz=191,slow=28						
PMG	Port Moresby	40.49	318	P	P	19 08 40.8	-0.6
	comp=Z,48nm,1.0s,baz=171,slow=5.9,SNR=13						
PMG				LR	LR	19 23 08.1	
	comp=Z,438nm,21.8s,baz=140,slow=33						
	comp=Z,48nm,1.0s						
PMG	Port Moresby	40.49	318	P	P	19 08 40.3	-1.2
PMG				IAmb	IAmb	19 08 45.8	
	comp=Z,53nm,1.0s						
PMG	Port Moresby	40.49	318	P	P	19 08 44.6	+3.2
TVO	Taravao	40.49	63	*e*T	T	19 51 20.6	
	comp=Z,2.9nm,0.3s						
WRKA	Warakurna	40.78	281	P	P	19 08 43.2	-0.7
KMBL	Kambalda	41.92	269	P	P	19 08 57.6	+4.4
	comp=Z,21nm,0.9s						
KRVT	Keravat (AS076	42.89	328	LR	LR	19 24 24.2	
	comp=Z,140nm,20.7s,baz=294,slow=33						
RABL	Rabaul	42.94	328	P	P	19 09 00.7	-0.9
RABL	Rabaul	42.94	328	P	P	19 09 04.9	+3.3
VAH	Vaihoa	43.40	63	*e*T	T	19 55 07.2	
	comp=Z,5.3nm,0.2s						
KDU	Kakadu	46.32	298	P	P	19 09 31.4	+2.9
KNRA	Kununurra	46.62	292	P	P	19 09 30.8	-0.1
KNRA				IAmb	IAmb	19 09 34.1	
	comp=Z,20nm,0.8s						
KNRA	Kununurra	46.62	292	P	P	19 09 33.5	+2.6
MEEK	Meekatharra	46.89	272	P	P	19 09 32.2	-0.8
MTN	Manton Dam	47.07	297	P	P	19 09 33.5	-0.9
MTN				IAmb	IAmb	19 09 38.0	
	comp=Z,13nm,0.7s						
MTN	Manton Dam	47.07	297	P	P	19 09 36.6	+2.1
FITZ	Fitzroy Crossi	47.12	287	P	P	19 09 33.0	-1.8
FITZ	Fitzroy Crossi	47.12	287	P	P	19 09 34.7	-0.1
QSPA	South Pole Qui	47.12	180	P	P	19 09 36.5	+2.0
	comp=Z,8.3nm,0.9s,baz=3.7,slow=2.1,SNR=12						
QSPA				LR	LR	19 27 55.9	
	comp=Z,160nm,19.0s,baz=46,slow=34						
	comp=Z,8.3nm,0.9s						
MORW	Morawa	47.42	268		P	19 09 36.1	-1.1
MORW				IAmb	IAmb	19 09 40.0	
	comp=Z,33nm,1.4s						
MORW	Morawa	47.42	268	P	P	19 09 41.0	+3.9
	comp=Z,20nm,1.4s						
GIRL	Giralia	52.46	273	P	P	19 10 14.1	-1.4
TAOE	Nuku Hiva Isla	53.01	64	*e*LR	LR	19 25 36.0	
	comp=Z,259nm,24.6s						
SOEI	Soe	53.90	293	P	P	19 10 26.6	+0.4
	comp=Z,22nm,0.9s						
FAKI	Fak Fak	54.02	306	P	P	19 10 25.4	-1.6
FAKI				IAmb	IAmb	19 11 44.0	
	comp=Z,31nm,1.2s						
FAKI	Fak Fak	54.02	306	P	P	19 10 25.3	-1.6
	comp=Z,21nm,1.3s						
NLAI	Namlea	56.92	301	P	P	19 10 47.1	-0.8
BELA	Belgrano 2	58.18	173	P	P	19 10 57.1	+1.1
SANI	Sanana	58.54	301	P	P	19 10 57.9	-1.3
	comp=Z,27nm,0.9s,comp=Z,340nm						
LBMI	Labuha	58.69	303	P	P	19 11 00.1	-0.2
	comp=Z,65nm,1.7s,comp=Z,1µm						
TWSI	Taliwang, Sumb	59.70	288	P	P	19 11 04.5	-2.8
	comp=Z,25nm,0.9s						
BKSI	Bulukumba	59.92	293	P	P	19 11 07.8	-1.0
	comp=Z,14nm,0.9s						
KAPI	Kappang	60.40	293	P	P	19 11 12.9	+0.8
	comp=Z,16nm,1.0s,baz=302,slow=4.2,SNR=4.6						
KAPI				LR	LR	19 37 51.0	
	comp=Z,124nm,19.8s,baz=153,slow=37						
	comp=Z,16nm,1.0s						
SPSI	Sidrap Palu	61.15	294	P	P	19 11 16.3	-0.9
	comp=Z,16nm,0.9s						
LUWI	Luwuk	61.36	299	P	P	19 11 18.9	+0.3
	comp=Z,111nm,1.0s,comp=Z,1µm						
GUMO	Guam	62.03	328	LR	LR	19 39 29.0	
	comp=Z,38nm,18.0s,baz=126,slow=37						
ABJI	Asem Bagus	62.22	286	P	P	19 11 23.5	-0.9
	comp=Z,27nm,0.9s						
GMJI	Gumukmas	62.44	285	P	P	19 11 24.4	-1.6
	comp=Z,27nm,1.1s						
GMJI				pP	sP	19 11 27.6	-0.3
	comp=Z,27nm,1.1s						
BLJI	Banyuglugur	62.70	286	P	P	19 11 26.4	-1.3
	comp=Z,33nm,0.7s						
RPN	Rapa Nui	63.23	103	LR	LR	19 32 37.3	
	comp=Z,100nm,21.7s,baz=190,slow=30						
PWJI	Pagerwojo	63.78	284	P	P	19 11 36.0	+1.2
	comp=Z,18nm,1.5s						
MPSI	Mapaga	64.27	297	P	P	19 11 37.1	-0.9
	comp=Z,21nm,1.5s						
TOLI2	Tolitoli	64.28	298	P	P	19 11 37.0	-1.0
UGM	Wanagama	64.77	283	P	P	19 11 40.4	-1.0
	comp=Z,41nm,1.1s						
BBKI	Banjar Baru	64.87	290	P	P	19 11 42.0	0.0
	comp=Z,38nm,1.6s						
SNAA	Sanae	65.59	181	LR	LR	19 39 32.1	
	comp=Z,93nm,19.0s,baz=188,slow=35						
DAV	Davao City (W)	65.96	307	P	P	19 11 48.3	-0.7
	comp=Z,77nm,0.3s,baz=153,slow=7.9,SNR=5.4						
DAV				LR	LR	19 41 57.7	
	comp=Z,63nm,18.5s,baz=124,slow=37						
DAV	Davao City (W)	65.96	307	P	P	19 11 48.3	-0.7
KPJI	Karang Pucung	66.31	283	P	P	19 11 49.7	-1.6
	comp=Z,27nm,1.1s						
CNJI	Cibinong	67.61	281	P	P	19 11 59.4	-0.2
CGJI	Cibinong	69.12	281	P	P	19 12 08.7	-0.4
	comp=Z,17nm,1.1s						
KKM	Kota Kinabalu	70.96	298	P	P	19 12 19.7	-0.7
MDSI	Maura Dua	71.67	281	P	P	19 12 23.1	-1.6
	comp=Z,17nm,1.1s,comp=Z,2µm						
PLCA	Paso Flores	78.73	136	LR	LR	19 39 17.7	
	comp=Z,130nm,19.8s,baz=177,slow=29						
GSI	Gunungsitoli	80.42	281	P	P	19 13 14.8	+0.2
GSI				IAmb	IAmb	19 13 18.3	
	comp=Z,36nm,1.1s						
GSI	Gunungsitoli	80.42	281	P	P	19 13 11.7	-2.8
	comp=Z,32nm,1.2s						
KCSI	Kotacane, Aceh	81.81	283	P	P	19 13 19.7	-2.2
	comp=Z,15nm,0.9s						
MLSI	Meulaboh, Aceh	83.30	282	P	P	19 13 29.2	-0.5
CFA	Coronel Fontan	86.83	131	LR	LR	19 43 45.2	
	comp=Z,65nm,21.4s,baz=152,slow=30						
NJ2	Nanjing	89.77	316	*e*P	P	19 14 06.3	+5.4
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,350nm,4.1s						
KSRS	Korea Array	90.05	326	P	P	19 14 02.2	+0.1
	comp=Z,8.3nm,0.9s,baz=144,slow=5.6,SNR=12						
KSRS				LR	LR	19 52 07.5	
	comp=Z,29nm,20.4s,baz=155,slow=34						
	comp=Z,8.3nm,0.9s						
KSAR	Wonju Array Be	90.06	326	P	P	19 14 03.0	+0.9
ASAJ	Asahikawa	90.97	338	LR	LR	19 51 08.7	
	comp=Z,78nm,21.2s,baz=172,slow=33						
CMAR	Chiang Mai Arr	91.44	294	P	P	19 14 08.8	-0.2
	comp=Z,3.5nm,1.0s,baz=157,slow=3.5,SNR=17						
CMAR				LR	LR	19 59 46.4	
	comp=Z,24nm,19.2s,baz=150,slow=39						
	comp=Z,3.5nm,1.0s						
CMAR	Chiang Mai Arr	91.44	294	P	P	19 14 09.0	0.0
LVC	Limon Verde	93.27	125	LR	LR	19 47 08.1	
	comp=Z,88nm,20.7s,baz=279,slow=30						
USRK	Ussuriysk Ar.	94.33	332	LR	LR	19 59 09.5	
	comp=Z,14nm,18.0s,baz=155,slow=37						
PZH	PanZhiHua	95.33	301	P	P	19 14 27.0	+0.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,140nm,5.1s						
NNA	Nana	96.00	112	LR	LR	19 49 13.8	
	comp=Z,105nm,19.4s,baz=202,slow=30						
CN2	Changchun	96.42	327	P	P	19 14 25.8	-5.5
XAN	Xi'an	96.58	311	P	P	19 14 31.4	-0.9
XAN				pP	sP	19 14 35.9	+1.6
XAN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PETK	Petropavlovsk-	96.67	351	LR	LR	19 51 50.0	
	comp=Z,57nm,19.8s,baz=133,slow=32						
PALK	Pallekele	96.74	274	LR	LR	19 56 43.6	
	comp=Z,98nm,19.0s,baz=244,slow=35						
CPUP	Villa Florida	96.80	136	LR	LR	19 50 24.7	
	comp=Z,100nm,19.7s,baz=144,slow=31						
LPIG	La Paz	96.85	63	LR	LR	19 49 27.4	
	comp=Z,44nm,19.8s,baz=27,slow=30						
CD2	Chengdu	97.25	306	P	P	19 14 35.1	-0.4
ATAH	Atahualpa	98.38	108	LR	LR	19 50 32.2	
	comp=Z,57nm,20.2s,baz=87,slow=30						
BRDH	Bariadhala	99.28	292	LR	LR	20 01 40.0	
	comp=Z,69nm,22.0s,baz=92,slow=37						
PFO	Pinyon Flats O	99.69	53	LR	LR	19 52 29.3	
	comp=Z,65nm,19.8s,baz=186,slow=31						
LZH	Lanzhou	100.91	309	*e*P	Pdif	19 14 51.4	-0.4
LZH				pP	sP	19 14 57.7	+3.7
LZH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SONM	Songino Array	107.92	319	Pdiff	Pdif	19 15 21.5	-1.2
	comp=Z,0.2nm,0.5s,baz=100,slow=22,SNR=2.2						
SONM				PKKPbc	PKKPbc	19 30 44.3	+1.5
	comp=Z,0.4nm,0.8s,baz=340,slow=1.7,SNR=4.1						
ILAR	Eielson Array	111.89	17	PKiKP	PKiKP	19 19 35.3	-1.3
	comp=Z,2.0nm,1.1s,baz=279,slow=2.6,SNR=7.3						
ILAR				PKKPbc	PKKPab	19 30 37.3	+2.3
	comp=Z,1.0nm,0.9s,baz=10,slow=5.5,SNR=9.3						
WMQ	Urumqi	115.31	307	*e*PKP	PKiKP	19 19 44.2	+0.3
INK	Inuvik	117.89	20	PKP	PKPdf	19 19 46.5	-1.4
	comp=Z,5.4nm,1.0s,baz=206,slow=2.7,SNR=10						
YKA	Yellowknife Ar	119.85	31	PKP	PKPdf	19 19 50.9	-1.0
	comp=Z,8.4nm,1.0s,baz=226,slow=1.7,SNR=25						
YKA				PKKPbc	PKKPbc	19 30 02.8	+0.7
	comp=Z,0.9nm,0.9s,baz=46,slow=4.3,SNR=6.3						
MKAR	Makanchi Array	120.13	307	PKP	PKPdf	19 19 51.5	-1.5
	comp=Z,4.9nm,1.0s,baz=144,slow=1.1,SNR=17						
KSH	Kashi	120.15	297	PKP	PKiKP	19 19 54.3	+0.8
ULM	Lac du Bonnet	121.91	49	PKP	PKPdf	19 19 55.1	-1.2
	comp=Z,8.4nm,1.1s,baz=131,slow=0.7,SNR=5.7						
ZALV	Zalesovo Beam	122.42	316	PKP	PKPdf	19 19 54.8	-2.3
	comp=Z,1.9nm,0.9s,baz=117,slow=2.0,SNR=7.8						
KURBB	Kurchatov Arra	124.20	310	PKP	PKPdf	19 19 58.9	-1.8
	comp=Z,8.1nm,1.0s,baz=119,slow=1.7,SNR=17						
NRIK	Noril'sk	128.00	333	PKP	PKPdf	19 20 05.9	-1.5
	comp=Z,3.8nm,0.6s,baz=122,slow=1.9,SNR=7.9						
GEYT	Alibeck	131.46	287	PKP	PKPdf	19 20 15.4	+0.4
	comp=Z,3.1nm,1.0s,baz=320,slow=20,SNR=5.5						
DBIC	Dimbokro	143.77	183	PKP	PKPbc	19 20 35.5	-0.2
	comp=Z,1.8nm,0.4s,baz=224,slow=2.8,SNR=11						
HOPEN	Hopen	143.81	348	*e*PKPdf	PKPdf	19 20 36.4	-0.1
KBZ	Khabaz	144.32	289	PKP	PKPbc	19 20 36.6	0.0
	comp=Z,9.4nm,1.0s,baz=197,slow=4.1,SNR=7.5						
ILULI	Ilulissat	145.31	26	*e*P	PKPbc	19 20 38.1	-0.9
DAG	Danmarks Havn	145.76	5	*i* P	PKPdf	19 20 38.0	-1.8
SFJD	Kangerlussuaq	146.40	29	*e*P	PKPdf	19 20 40.8	-0.3
SUMG	Summit	146.74	17	*i* P	PKPbc	19 20 43.4	-0.5
KLMR	Klimovskoe	147.22	319	*e*PKPdf	PKPdf	19 20 42.3	-0.4
KLMR				AMP		19 20 47.9	
	comp=Z,73nm,1.1s						
KLMR						19 25 03.3	
KLMR						19 25 03.3	
VADS	Vadso	147.28	338	*e*PKPdf	PKPdf	19 20 42.5	0.0
DBG	Daneborg	148.01	7	*e*P	PKPbc	19 20 45.5	-1.3
DY2G	Dye2	148.19	29	*e*P	PKPbc	19 20 46.4	-1.4
ARA0	ARCESS Array S	148.69	339	*e*pPKPdf	PKPbc	19 20 47.5	-1.1
ARCES	ARCESS Array B	148.69	339	PKPbc	PKPbc	19 20 47.3	-1.4
	comp=Z,16nm,0.8s,baz=57,slow=3.3,SNR=32						
ICESG	Greenland Ices	148.82	22	*e*P	PKPdf	19 20 47.4	+1.8
TORD	Torodi Ar. Bea	149.36	196	PKPbc	PKPbc	19 20 51.5	-0.5
	comp=Z,16nm,1.2s,baz=265,slow=0.9,SNR=25						
IVI	Ivigtut	149.44	39	*e*P	PKiKP	19 20 51.4	-0.5
KTK1	Kautokeino	149.64	339	*e*pPKPdf	PKPbc	19 20 49.9	-1.2
BRTR	Keskin Array B	149.69	278	PKPbc	PKPbc	19 20 51.4	-0.9
	comp=Z,25nm,1.0s,baz=146,slow=5.1,SNR=27						
TRO	Tromso	150.23	342	*e*pPKPdf	pPKPdf	19 20 50.4	+1.5
NRS	Narsarsuaq	150.72	38	*e*P	PKPbc	19 20 54.0	+0.2
ISOG	Isortoq, Green	151.21	27	*e*P	PKPbc	19 20 54.0	-0.8
SCO	Scoresbysund	151.41	11	*e*P	PKPbc	19 20 54.7	-0.5
STEI	Steigen	152.41	342	*e*PKPbc	PKiKP	19 20 58.0	+0.2
LOF	Lofoten	152.61	344	*e*PKPbc	PKiKP	19 20 59.2	+1.0
FAUS	Fauske	152.84	341	*e*PKPbc	PKiKP	19 20 58.6	-0.1
FINES	FINESS Array B	153.14	325	PKPbc	PKPbc	19 20 58.5	-0.8
	comp=Z,5.3nm,1.0s,baz=64,slow=3.2,SNR=3.8						
AKASG	Malin Array Be	154.41	300	PKPbc	PKPbc	19 21 01.5	-0.9
	comp=Z,4.9nm,0.9s,baz=73,slow=2.6,SNR=12						
AKASG				PKPab	pPKPab	19 21 17.7	-0.6
	comp=Z,6.0nm,0.9s,baz=72,slow=4.3,SNR=8.7						
NB2	NORSAR Subarra	158.95	335	PKP	PKPab	19 21 34.3	-1.7
	comp=Z,9.6nm,1.4s,baz=38,slow=4.4						
NOA	NORSAR Array B	158.95	335	PKPab	PKPab	19 21 34.0	-2.1
	comp=Z,2.6nm,0.9s,baz=40,slow=4.6,SNR=5.4						
NC602	NORSAR Array S	159.08	334	*e*pPKPdf	pPKPdf	19 21 02.5	+1.2
VYHS	Vyhne	161.34	296	*e*PKP	PKPdf	19 21 08.0	+5.3
MODS	Modra-Piesok	162.39	296	*e*PKP	PKPdf	19 21 06.6	+2.8
CLL	Collm	164.23	309	*e*PKPdf	PKPdf	19 21 07.0	+1.6
CLL				*e*PKPab	PKPab	19 22 00.0	+0.6
	comp=Z,16nm,1.2s						
GERES	GERESS Array B	164.62	299	PKP	PKPdf	19 21 05.8	-0.2
	comp=Z,0.2nm,0.4s,baz=346,slow=3.5,SNR=1.9						
GERES				PKPab	PKPab	19 22 00.5	-0.9

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,0.2nm,0.3s,baz=160,slow=24,SNR=2.1						
KEST	Kesra	165.57	245	PKPab	PKPab	19 22 06.6	+0.7
	comp=Z,10nm,1.0s,baz=261,slow=5.4,SNR=6.2						
ESDC	Sonseca Array	176.05	213	PKP	PKPdf	19 21 12.4	-0.2
	comp=Z,1.5nm,1.0s,baz=326,slow=9.7,SNR=8.0						

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*DJA **01** 19:02:22.9±0.8, 3°S±3°×12°9E±°, h24^{km}±7^{km}, M3.5/12, mb4.0/3, MLv3.3/12*

*IDC **01** 19:02:24.6±2.4, 3°.66S×128°.04E, h0^{km}, mb3.6/2, mbtmp3.7/3, ML3.6/1, Error ellipse: s-maj=181.0km s-min=29.6km az=67.0*

ISC 01 19:02:23.2±1.1**, 2°.62S**±0°.07×**129°.28E**±0°.05**, h35**^{km}**, n13, σ2^{s}.01**/16**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.80	206	P	Pn	19 02 37.2	-0.8
MSAI				S	Sn	19 02 49.3	+0.6
AAI	Ambon	1.52	226	P	Pn	19 02 49.3	+1.4
BNDI	Bandanaira	1.99	162	P	Pn	19 02 56.4	+2.1
NLAI	Namlea	2.26	254	P	Pn	19 02 59.2	+1.1
NLAI				S	Sn	19 03 27.5	+2.7
LBMI	Labuha	2.66	318	P	Pn	19 03 04.2	+0.7
FAKI	Fak Fak	2.98	96	P	Pn	19 03 08.9	+0.9
FAKI				S	Sn	19 03 44.4	+1.9
SANI	Sanana	3.34	280	P	Pn	19 03 11.6	-1.3
SANI				S	Sn	19 03 49.6	-1.8
RKPI	Ransiki, Papua	5.01	77	P	Pn	19 03 38.1	+2.1
	30nm,0.7s,0.2nm						
GTOI	Gorontalo	7.06	297	P	Pn	19 04 07.7	+3.7
	6.7nm,1.0s,0.0nm						
MRSI	Marisa	7.96	293	P	Pn	19 04 17.2	+0.7
WRA	Warramunga Arr	17.91	164	P	Pn	19 06 27.0	-2.7
	0.2nm,0.3s,baz=341,slow=12,SNR=16						
	1.0nm,0.5s						
ASAR	Alice Springs	21.39	168	P	P	19 07 06.8	-1.3
	3.6nm,0.5s,baz=349,slow=11,SNR=91						
	3.6nm,0.5s						
MKAR	Makanchi Array	64.20	326	P	P	19 13 02.4	+7.9
	0.2nm,0.7s,baz=116,slow=6.6,SNR=1.9						
	0.2nm,0.7s						

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*NOU **01** 19:10:14.6, 43°.01S×172°.98E, h0^{km}, MLv3.5/8, South Island, New Zealand*

*WEL **01** 19:10:14.8±0.4, 43°S±3°×17°3E±°, h9^{km}±2^{km}, M3.3/13, ML3.4/14, MLv3.3/13, Error ellipse: s-maj=0.0km s-min=0.0km az=127.5, confirmed*

ISC 01 19:10:15.1±1.0**, 43°.00S**±0°.03×**173°.01E**±0°.04**, h8**^{km}±7^{km}**, n46, σ1^{s}.12**/52**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	Greta Valley S	0.04	38	S	Sg	19 10 18.2	+0.4
AMCZ	Amberley	0.32	235	P	Pg	19 10 21.7	+0.4
AMCZ				S	Sb	19 10 29.6	+1.2
LTZ	Lake Taylor	0.58	291	P	Pb	19 10 27.6	0.0
LTZ				S	Sb	19 10 36.5	+0.5
KHZ	Kahutara	0.70	34	P	Pg	19 10 27.9	-0.7
KHZ	Kahutara	0.70	34	P	Pg	19 10 27.6	-1.0
KHZ				S	Sg	19 10 37.7	0.0
MQZ	McQueen's Vall	0.76	200	P	Pb	19 10 31.1	+0.5
MQZ				S	Sb	19 10 42.2	+1.2
OXZ	Oxford	0.78	245	P	Pb	19 10 31.7	+0.7
OXZ				S	Sn	19 10 44.3	-0.2
AKCZ	Akaroa Harbour	0.88	184	P	Pb	19 10 32.3	-0.4
INZ	Inchbonnie	1.18	283	P	Pg	19 10 36.4	-1.3
MHCZ	Mount Hutt	1.18	242	P	Pg	19 10 37.2	-0.5
THZ	Tophouse	1.23	357	P	Pg	19 10 37.6	-1.2
THZ				S	Sg	19 10 53.9	-0.9
WACZ	Wakanui South	1.27	221	P	Pn	19 10 38.4	-0.8
DSZ	Denniston Nort	1.53	324	P	Pn	19 10 42.9	0.0
RPZ	Rata Peaks	1.59	243	P	Pn	19 10 43.2	-0.5
RPZ	Rata Peaks	1.59	243	P	Pn	19 10 43.1	-0.6
MRNZ	Matariki Terra	1.61	353	P	Pn	19 10 44.0	+0.1
NNZ	Nelson	1.80	9	P	Pn	19 10 44.5	-1.9
GCSZ	Gaunt Creek Bo	1.99	260	P	Pn	19 10 49.7	+0.6
TMZ	Timaru	2.01	226	P	Pn	19 10 48.7	-0.6
TCW	Tory Channel	2.02	28	P	Pn	19 10 48.9	-0.6
SNZO	South Karori	2.10	37	P	Pn	19 10 51.0	+0.3
PLWZ	Palliser	2.19	50	P	Pn	19 10 49.6	-2.4
QRZ	Quartz Range	2.20	351	P	Pn	19 10 52.2	+0.2
QRZ	Quartz Range	2.20	351	P	Pn	19 10 51.2	-0.8
DUWZ	D'Urville Isla	2.30	18	P	Pn	19 10 53.2	-0.2
LBZ	Lake Benmore	2.47	235	P	Pn	19 10 55.5	-0.3
ODZ	Otahua Downs	2.66	219	P	Pn	19 10 57.8	-0.6
ODZ	Otahua Downs	2.66	219	P	Pn	19 10 57.5	-0.8
OGWZ	Otaki Gorge	2.71	37	P	Pn	19 10 58.7	-0.4
JCZ	Jackson Bay	3.25	249	P	Pn	19 11 06.9	+0.3
JCZ	Jackson Bay	3.25	249	P	Pn	19 11 06.7	+0.2
BFZ	Birch Farm	3.35	47	P	Pn	19 11 09.6	+1.8
WKZ	Wanaka	3.41	236	P	Pn	19 11 08.2	-0.5
EAZ	Earnscleugh	3.48	229	P	Pn	19 11 08.7	-0.8
TUZ	Tuapeka	3.82	218	P	Pn	19 11 13.8	-0.4
PKE	Pukeiti	3.87	11	P	Pn	19 11 17.3	+2.3
VRZ	Vera Road	4.09	20	P	Pn	19 11 19.6	+1.6
WNVZ	Wahianoa	4.16	29	P	Pn	19 11 18.4	-0.6
TRVZ	Turoa	4.16	28	P	Pn	19 11 20.5	+1.3
MLZ	Mavora Lakes	4.24	234	P	Pn	19 11 18.9	-1.2
NGZ	Ngauruhoe	4.29	28	P	Pn	19 11 25.1	+4.2
SNVZ	South Ngauruho	4.29	28	P	Pn	19 11 22.2	+1.2
ETVZ	East Tongariro	4.36	29	P	Pn	19 11 22.8	+0.9
TMVZ	Te Maari	4.38	29	P	Pn	19 11 22.9	+0.8
SYZ	Scrubby Hill	4.49	217	P	Pn	19 11 23.1	-0.3
SYZ	Scrubby Hill	4.49	217	P	Pn	19 11 22.9	-0.5

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*ISK **01** 19:10:30.6, 39°.51N×26°.04E, h6^{km}, ML2.5/17*

*ATH **01** 19:10:31.7, 39°.49N×26°.05E, h12^{km}±2^{km}, ML2.5/4, Error ellipse: s-maj=3.1km s-min=1.1km az=212.0*

*DDA **01** 19:10:31.5±0.0, 39°.51N×26°.10E, h10^{km}, ML2.2*

*THE **01** 19:10:31.4, 39°.50N×26°.05E, h5^{km}±2^{km}, ML2.4/5, Error ellipse: s-maj=2.3km s-min=0.6km az=186.0*

ISC 01 19:10:31.2±0.8**, 39°.50N**±0°.02×**26°.06E**±0°.02**, h10**^{km}±6^{km}**, n50, σ0^{s}.46**/79**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.06	89	P	Pg	19 10 33.5	+0.1
GPNR	Gulpinar-Canak	0.07	128	Pg	Pg	19 10 33.1	-0.3
GPNR				Sg	Sg	19 10 34.9	-0.1
PRK	Paraskevi	0.30	147	P	Pg	19 10 37.5	+0.2
PRK				S	Sg	19 10 42.3	+0.9
	2µm,0.2s						
PRK	Paraskevi	0.30	147	P	Pg	19 10 37.5	+0.2
PRK				S	Sg	19 10 42.1	+0.8
PRK				AML	AML	19 10 42.4	
	comp=E,4390µm,0.2s						
PRK				AML	AML	19 10 42.5	
	comp=N,4484µm,0.2s						
SIGR	SIGRI	0.33	209	P	Pg	19 10 37.9	+0.1
SIGR				S	Sg	19 10 42.6	+0.5
	comp=N,955nm,0.3s						
SIGR	SIGRI	0.33	209	Pg	Pg	19 10 37.6	-0.2
SIGR				Sg	Sg	19 10 42.8	+0.7
SIGR	SIGRI	0.33	209	P	Pg	19 10 37.9	+0.1
SIGR				S	Sg	19 10 42.4	+0.3
SIGR				AML	AML	19 10 42.9	
	comp=N,2205µm,0.3s						
SIGR				AML	AML	19 10 43.6	
	comp=E,1606µm,0.3s						
BOZC	Bozcaada	0.34	359	Pg	Pg	19 10 37.8	-0.2
BOZC				Sg	Sg	19 10 42.9	+0.3
BOZC	Bozcaada	0.34	359	P	Pg	19 10 38.1	+0.1
BOZC				P	Pg	19 10 38.1	+0.1
BOZC				*i* AML	AML	19 10 43.0	
	comp=E,411nm,0.5s						
BOZC				*i* AML	AML	19 10 43.0	
	comp=E,402nm,0.4s						
BOZC				*i* AML	AML	19 10 43.0	
	comp=E,409nm,0.2s						
BOZC				*i* AML	AML	19 10 43.0	
	comp=E,445nm,0.2s						
BOZC				S	Sg	19 10 43.4	+0.9
BOZC				S	Sg	19 10 43.5	+0.9
EZN	Ezine	0.39	32	P	Pg	19 10 38.7	-0.1
EZN				S	Sg	19 10 44.7	+0.8
EZN	Ezine	0.39	32	Pg	Pg	19 10 38.6	-0.2
EZN				Sg	Sg	19 10 44.6	+0.7
BAYC	CANAKKALE_Bayr	0.45	57	P	Pg	19 10 39.7	-0.3
BAYC				S	Sg	19 10 45.9	0.0
BAYC				*i* AML	AML	19 10 46.0	
	comp=E,130nm,0.4s						
BAYC				*i* AML	AML	19 10 46.0	
	comp=E,149nm,0.3s						
AYVA	Ayvalik	0.53	111	P	Pg	19 10 41.9	+0.4
AYVA				S	Sg	19 10 48.8	+0.4
AYVA				*i* AML	AML	19 10 54.0	
	comp=E,65nm,0.6s						
AYVA				*i* AML	AML	19 10 55.0	
	comp=E,107nm,0.3s						
COMU	Canakkale	0.68	28	Pg	Pg	19 10 44.1	-0.3
GOKA	anakkale-Gk	0.70	351	P	Pg	19 10 45.0	+0.2
GOKA				S	Sg	19 10 54.6	+0.7
GOKA				*i* AML	AML	19 10 57.0	
	comp=E,162nm,0.4s						
GOKA				*i* AML	AML	19 10 58.0	
	comp=E,138nm,0.2s						
GADA	Gvkgeada	0.70	350	Pg	Pg	19 10 44.5	-0.3
LIA	Limnos Island	0.78	301	P	Pg	19 10 46.6	+0.2
LIA				S	Sb	19 10 57.8	+0.2
	comp=E,325nm,0.3s						
LIA	Limnos Island	0.78	301	P	Pg	19 10 46.5	+0.2
LIA				S	Sb	19 10 57.8	+0.2
LIA				AML	AML	19 10 59.2	
	comp=E,731µm,0.3s						
LIA				AML	AML	19 11 01.2	
	comp=N,553µm,0.3s						
DKL	Dikili	0.79	123	Pg	Pg	19 10 46.4	0.0
BUHA	Balikesir, Bur	0.79	90	P	Pg	19 10 46.4	0.0
BUHA				S	Sg	19 10 56.7	0.0
BUHA				*i* AML	AML	19 11 00.0	
	comp=N,56nm,0.8s						
BUHA				*i* AML	AML	19 11 01.0	
	comp=N,75nm,0.5s						
KARB	zmir-Karabur	0.88	162	P	Pg	19 10 48.6	+0.4
KARB				S	Sg	19 11 00.3	+0.7
KARB				*i* AML	AML	19 11 02.0	
	comp=N,96nm,0.4s						
KARB				*i* AML	AML	19 11 02.0	
	comp=N,91nm,0.2s						
CANM	Can-anakkale	0.92	56	Pg	Pg	19 10 48.9	-0.1
CANM				Sg	Sb	19 11 02.2	+0.6
GELI	Tayfur-Gelibol	0.95	20	Pg	Pg	19 10 49.2	-0.3
ZEDA	zmir-Bergama	0.95	124	P	Pg	19 10 49.8	+0.2
ZEDA				S	Sg	19 11 02.8	+0.7
ZEDA				*i* AML	AML	19 11 04.0	
	comp=N,50nm,0.4s						
ZEDA				*i* AML	AML	19 11 05.0	
	comp=N,73nm,0.2s						
LPK	Lapseki	1.02	32	Pg	Pg	19 10 50.5	-0.4
PSRA	Psara	1.03	202	P	Pg	19 10 51.4	+0.3
SMTH	Samothraki Isl	1.05	337	P	Pg	19 10 51.1	-0.3
SMTH				S	Sb	19 11 05.4	0.0
	comp=N,50nm,0.2s						
SMTH	Samothraki Isl	1.05	337	P	Pg	19 10 51.1	-0.3
CHOS	Chios island	1.11	180	P	Pb	19 10 51.9	-0.7
CHOS				S	Sg	19 11 06.9	-0.2
	comp=N,225nm,0.3s						
CHOS	Chios island	1.11	180	Pn	Pb	19 10 52.4	-0.2
CHOS	Chios island	1.11	180	P	Pb	19 10 51.8	-0.8
CHOS				AML	AML	19 11 10.2	
	comp=E,537µm,0.3s						
CHOS				AML	AML	19 11 11.7	
	comp=N,372µm,0.3s						
URLA	Izmir	1.21	160	Pn	Pn	19 10 53.5	-0.8
URLA	Izmir	1.21	160	P	Pn	19 10 53.3	-1.0
URLA				S	Sb	19 11 09.6	-0.4
URLA				*i* AML	AML	19 11 12.0	
	comp=N,63nm,0.3s						
URLA				*i* AML	AML	19 11 14.0	
	comp=N,56nm,0.4s						
ERIK	Erikli-Kesan	1.22	17	Pn	Pn	19 10 53.7	-0.7
BALY	Balya	1.23	78	P	Pn	19 10 54.6	+0.1
BALY				S	Sb	19 11 10.3	-0.2
BALY				*i* AML	AML	19 11 12.0	
	comp=N,80nm,0.5s						
BALY				*i* AML	AML	19 11 16.0	
	comp=N,36nm,0.3s						
ENEZ	Enez	1.24	3	P	Pn	19 10 54.5	-0.1
ENEZ				S	Sn	19 11 12.0	+0.7
ENEZ	Enez	1.24	3	Pn	Pn	19 10 54.5	-0.1
KRBG	Karabiga-Canak	1.30	47	Pn	Pn	19 10 55.4	-0.1
BLCB	Balcova	1.35	145	Pn	Pn	19 10 56.6	+0.4
GONE	Gonen-Balikesi	1.37	66	Pn	Pn	19 10 56.7	+0.3
ALN	Alexandroupoli	1.40	360	P	Pn	19 10 56.6	-0.2
ALN	Alexandroupoli	1.40	360	Pn	Pn	19 10 56.9	+0.1
ALN	Alexandroupoli	1.40	360	P	Pn	19 10 56.6	-0.2
KESN	Edirne-Kesan	1.41	20	P	Pn	19 10 56.8	-0.5
KESN				S	Sb	19 11 15.5	-0.4
KESN				*i* AML	AML	19 11 19.0	
	comp=N,38nm,0.3s						
KESN				*i* AML	AML	19 11 24.0	
	comp=N,40nm,0.4s						
BALB	Balikesir	1.42	84	Pn	Pn	19 10 57.3	+0.3
BKES	Balkesir-Mer	1.46	80	P	Pg	19 10 59.7	+0.4
BKES				S	Sn	19 11 17.2	+0.3
BKES				*i* AML	AML	19 11 21.0	
	comp=N,27nm,0.5s						
RKY	Sarkoy-Tekirda	1.46	36	Pn	Pn	19 10 57.9	+0.1
UKOP	Uzunkopru-Edir	1.68	15	Pn	Pn	19 11 01.1	+0.4
RDO	Rodhopi	1.69	347	Pn	Pn	19 11 01.1	+0.3
DURS	Dursunbey	1.87	86	P	Pn	19 11 04.4	+1.0
DURS				S	Sn	19 11 26.2	-0.9
DURS				*i* AML	AML	19 11 33.0	
	comp=N,14nm,0.5s						
DURS				*i* AML	AML	19 11 34.0	
	comp=N,13nm,0.5s						

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*NOU **01** 19:21:30.9, 43°.10S×173°.20E, h6^{km}, MLv3.5/8, Off E. Coast of S. Island, N.Z.*

*WEL **01** 19:21:31.8, 43°S±5°×17°3E±°, h19^{km}±13^{km}, M2.9/25, ML3.1/27, MLv2.9/25, Error ellipse: s-maj=0.0km s-min=0.0km az=86.6*

ISC 01 19:21:30.7±1.8**, 43°.07S**±0°.05×**173°.20E**±0°.05**, h5**^{km}±17^{km}**, n60, σ0^{s}.87**/59**, Off east coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	Greta Valley S	0.15	309	P	Pg	19 21 33.8	0.0
AMCZ	Amberley	0.41	254	P	Pb	19 21 41.0	+0.4
KHZ	Kahutara	0.70	21	P	Pb	19 21 45.2	-0.1
KHZ	Kahutara	0.70	21	P	Pb	19 21 45.2	-0.1
LTZ	Lake Taylor	0.74	292	P	Pg	19 21 44.7	-0.1
MQZ	McQueen's Vall	0.75	211	P	Pn	19 21 47.4	-0.6
AKCZ	Akaroa Harbour	0.83	194	P	Pn	19 21 49.6	+0.4
OXZ	Oxford	0.89	252	P	Pg	19 21 42.8	-5.0
RACZ	Rakaia	1.01	229	P	Pn	19 21 51.6	0.0
MHCZ	Mount Hutt	1.28	248	P	Pn	19 21 54.2	-1.0
THZ	Tophouse	1.32	351	P	Pn	19 21 54.6	-1.3
WACZ	Wakanui South	1.32	228	P	Pn	19 21 55.4	-0.4
INZ	Inchbonnie	1.33	284	P	Pn	19 21 54.9	-1.0
BSWZ	Blackbirch Sta	1.44	21	P	Pn	19 21 57.3	-0.1
CMWZ	Cape Campbell	1.52	30	P	Pb	19 21 59.2	-0.1
DSZ	Denniston Nort	1.67	322	P	Pn	19 21 59.6	-1.1
RPZ	Rata Peaks	1.69	247	P	Pn	19 22 00.2	-0.8
RPZ	Rata Peaks	1.69	247	P	Pn	19 22 00.0	-0.9
MRNZ	Matariki Terra	1.70	349	P	Pn	19 22 00.7	-0.4
ARCZ	Arundel	1.71	238	P	Pn	19 22 00.5	-0.8
TUWZ	Tuamarina	1.73	19	P	Pn	19 22 01.1	-0.3
WVZ	Waitaha Valley	1.80	269	P	Pn	19 22 02.3	-0.2
NNZ	Nelson	1.85	4	P	Pn	19 22 03.1	0.0
TCW	Tory Channel	2.02	24	P	Pn	19 22 04.5	-0.9
TKNZ	Takaka Hill	2.04	355	P	Pn	19 22 05.9	+0.2
TMZ	Timaru	2.06	230	P	Pn	19 22 06.0	-0.1
SNZO	South Karori	2.08	33	P	Pn	19 22 05.6	-0.7
GCSZ	Gaunt Creek Bo	2.11	262	P	Pn	19 22 06.5	-0.2
PLWZ	Palliser	2.14	46	P	Pn	19 22 06.2	-0.9
QRZ	Quartz Range	2.29	347	P	Pn	19 22 09.4	+0.2
QRZ	Quartz Range	2.29	347	P	Pn	19 22 08.8	-0.4
DUWZ	D'Urville Isla	2.33	14	P	Pn	19 22 09.3	-0.4
CAW	Cannon Point	2.40	36	P	Pn	19 22 09.8	-0.9
FOZ	Fox Glacier	2.51	258	P	Pn	19 22 12.7	+0.6
KIW	Kapiti Island	2.55	31	P	Pn	19 22 12.0	-0.7
LBZ	Lake Benmore	2.55	238	P	Pn	19 22 12.6	-0.2
OGWZ	Otaki Gorge	2.69	34	P	Pn	19 22 13.6	-1.0
ODZ	Otahua Downs	2.70	222	P	Pn	19 22 14.7	-0.1
ODZ	Otahua Downs	2.70	222	P	Pn	19 22 14.6	-0.1
MRZ	Mangatainoka R	2.99	37	P	Pn	19 22 17.7	-1.1
BFZ	Birch Farm	3.29	45	P	Pn	19 22 23.6	+0.6
BFZ	Birch Farm	3.29	45	P	Pn	19 22 21.5	-1.5
JCZ	Jackson Bay	3.36	251	P	Pn	19 22 23.8	-0.2
EAZ	Earnscleugh	3.54	231	P	Pn	19 22 26.0	-0.3
KHEZ	Kahui Hut	3.82	10	P	Pn	19 22 31.4	+1.2
KHEZ	Kahui Hut	3.82	10	P	Pn	19 22 33.0	+2.7
MTVZ	Mangateitei	4.06	26	P	Pn	19 22 35.5	+2.0
PKVZ	Pokaka	4.11	24	P	Pn	19 22 35.7	+1.5
VRZ	Vera Road	4.11	17	P	Pn	19 22 35.0	+0.8
WNVZ	Wahianoa	4.15	27	P	Pn	19 22 34.7	-0.2
TUVZ	Tukino	4.22	27	P	Pn	19 22 37.7	+1.8
SNVZ	South Ngauruho	4.29	26	P	Pn	19 22 37.3	+0.4
OTVZ	Oturere	4.32	26	P	Pn	19 22 38.5	+1.3
NNVZ	North Ngauruho	4.33	26	P	Pn	19 22 37.9	+0.5
TWVZ	Taurewa	4.33	24	P	Pn	19 22 38.6	+1.2
ETVZ	East Tongariro	4.36	27	P	Pn	19 22 37.8	0.0
TMVZ	Te Maari	4.38	26	P	Pn	19 22 37.9	0.0
NTVZ	North Tongarir	4.38	26	P	Pn	19 22 39.0	+0.9
HIZ	Hauiti	4.72	16	P	Pn	19 22 43.4	+0.9
HIZ	Hauiti	4.72	16	P	Pn	19 22 42.9	+0.4

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*IDC **01** 19:22:53.5±1.9, 6°.33S×129°.60E, h0^{km}, mb3.9/2, mbtmp3.9/4, ML4.1/2, MS3.4/4, Error ellipse: s-maj=144.9km s-min=28.9km az=70.0*

ISC 01 19:23:13.6±1.3**, 7°.41S**±0°.10×**129°.13E**±0°.09**, h200**^{km}**, n15, σ2^{s}.23**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.23	105	P	Pn	19 23 53.5	-1.0
SOEI	Soe	5.34	244	P	Pn	19 24 31.6	-0.9
FAKI	Fak Fak	5.43	35	P	Pn	19 24 25.4	-8.2
MTN	Manton Dam	5.75	160	P	Pn	19 24 39.3	+1.7
KDU	Kakadu	6.20	148	P	Pn	19 24 44.5	+1.1
KNRA	Kununurra	8.23	182	P	Pn	19 25 10.9	+1.1
PLAI	Plampang	11.33	262	P	Pn	19 25 45.9	-4.1
WRA	Warramunga Arr	13.45	158	Pn	Pn	19 26 17.2	+0.5
	1.1nm,0.3s,baz=344,slow=13,SNR=28						
WRA				Sn	S	19 28 43.3	-3.4
	1.4nm,0.3s,baz=333,slow=25,SNR=7.7						
	1.5nm,0.3s						
ASAR	Alice Springs	16.80	165	P	Pn	19 27 02.0	+4.3
	0.5nm,0.3s,baz=341,slow=9.9,SNR=58						
ASAR				S	Sn	19 30 06.5	-0.5
	0.5nm,0.3s,baz=321,slow=15,SNR=6.8						
	1.0nm,0.4s						
USRK	Ussuriysk Ar.	51.43	3	LR	LR	19 50 11.7	
	comp=Z,17nm,20.3s,baz=146,slow=32						
MKAR	Makanchi Array	68.09	327	P	P	19 33 51.5	-0.3
	0.5nm,0.5s,baz=126,slow=8.0,SNR=12						
	0.5nm,0.5s						
YAK	Yakutsk	69.23	0	LR	LR	20 08 15.7	
	comp=Z,23nm,18.0s,baz=217,slow=40						
ZALV	Zalesovo Beam	71.57	334	P	P	19 34 11.3	-1.4
	1.0nm,0.7s,baz=135,slow=6.5,SNR=4.8						
	1.0nm,0.7s						
WSAR	Wadi Sarin	75.27	296	LR	LR	20 10 48.0	
	comp=Z,51nm,19.9s,baz=176,slow=38						
BRTR	Keskin Array B	98.90	309	LR	LR	20 30 20.8	
	comp=Z,25nm,18.6s,baz=166,slow=41						

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*HVO **01** 19:44:52.9±0.4, 18°.2N±0°.1×155°.0W±0°.1, h15^{km}±10^{km}, ML2.5/1, ML3.1/34(NEIC), Error ellipse: s-maj=20.5km s-min=14.8km az=161.0*

NEIC 01 19:44:52.1±0.5**, 18°.4N**±0°.1×**155°.14W**±0°.07**, h17**^{km}±19^{km}**, Error ellipse: s-maj=22.9km s-min=4.7km az=160.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTC	Hot Caves	0.91	344		Pn	19 45 10.5	+0.3
HLP	Hilina Pali	0.95	350		Pn	19 45 11.1	+0.3
HLP					Sg	19 45 23.6	+0.3
HLP	Hilina Pali	0.95	350	IAML		19 45 45.1	
	comp=N,428nm,3.1s						
KHU	Kahuku	1.00	333		Pg	19 45 11.6	0.0
KHU	Kahuku	1.00	333	IAML		19 45 48.8	
	comp=E,316nm,3.0s						
KHU				IAML		19 45 55.3	
	comp=N,316nm,3.6s						
PUH	Pauahi	1.02	356		Pb	19 45 11.4	0.0
PUH	Pauahi	1.02	356	IAML		19 45 46.6	
	comp=N,317nm,3.5s						
KNHH	Kane Nui o Ham	1.02	358		Pb	19 45 11.5	+0.1
STCH	Steam Cracks	1.03	1		Pb	19 45 11.5	0.0
STCH	Steam Cracks	1.03	1	IAML		19 45 21.9	
	comp=N,344nm,0.9s						
STCH				IAML		19 45 53.6	
	comp=E,310nm,0.7s						
SDHHI	Sand Hill	1.04	352		Pn	19 45 11.9	-0.1
RIM	Rim	1.05	353		Pn	19 45 12.0	-0.1
RIM	Rim	1.05	353	IAML		19 45 49.3	
	comp=E,299nm,1.4s						
AIN	Ainahou	1.06	343		Pg	19 45 12.8	+0.1
AIN	Ainahou	1.06	343		Sn	19 45 27.5	+0.8
AIN	Ainahou	1.06	343	IAML		19 45 24.7	
	comp=E,216nm,3.0s						
AIN	Ainahou	1.06	343	IAML		19 46 03.5	
	comp=N,283nm,3.0s						
UWE	Uwekahuna	1.07	352		Pb	19 45 12.3	0.0
UWB	Uwekahuna B	1.07	353		Pb	19 45 12.2	-0.2
SBLHI	Steaming Bluff	1.08	353		Pb	19 45 12.3	-0.1
RSD	Rainshed	1.11	353		Pb	19 45 12.8	-0.3
RSD	Rainshed	1.11	353	IAML		19 45 39.0	
	comp=E,257nm,3.0s						
MLH	Mauna Loa	1.16	348	Pn	Pb	19 45 13.9	0.0
MLH				IAML		19 45 26.7	
	comp=E,223nm,3.2s						
MLH				IAML		19 45 38.8	
	comp=N,291nm,2.6s						
MWH	Moku'aweowe	1.21	339	Pn	Pn	19 45 14.3	-0.4
MWH				IAML		19 45 53.1	
	comp=N,273nm,2.6s						
MLOA	Mauna Loa Obse	1.25	341	Pn	Pn	19 45 15.2	0.0
MLOA				IAML		19 45 29.0	
	comp=N,285nm,2.2s						
MLOA				IAML		19 45 32.9	
	comp=E,248nm,3.1s						
HMH	Humu'ula Sheep	1.29	345	Pn	Pb	19 45 15.8	-0.2
HMH				IAML		19 45 30.3	
	comp=E,233nm,3.6s						
HMH				IAML		19 45 58.0	
	comp=N,210nm,3.7s						
KHLU	Kahalu`u	1.43	330		Pn	19 45 17.3	0.0
KHLU	Kahalu`u	1.43	330	IAML		19 45 34.5	
	comp=N,180nm,2.1s						
HPAH	Hawaii Prepara	1.75	343		Pn	19 45 21.7	-0.1
HPAH					Sn	19 45 43.1	-0.6
HPAH	Hawaii Prepara	1.75	343	IAML		19 45 59.8	
	comp=N,145nm,3.4s						

WEL 01 19:47:37.2±0.5**, 43°S**±3°×**17°3E**±°**, h11**^{km}±3^{km}**, M3.3**/13**, ML3.5**/13**, MLv3.3**/13**, Error ellipse: s-maj=0.0km s-min=0.0km az=120.5, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	Greta Valley S	0.05	278	P	Pg	19 47 39.3	-0.1
GVZ				S	Sg	19 47 41.0	+0.2
AMCZ	Amberley	0.38	238	P	Pb	19 47 46.4	+0.3
AMCZ				S	Sb	19 47 53.0	+1.0
LTZ	Lake Taylor	0.64	287	P	Pb	19 47 50.1	-0.3
LTZ				S	Sb	19 47 59.3	0.0
KHZ	Kahutara	0.65	30	P	Pb	19 47 50.2	-0.3
KHZ				S	Sb	19 47 59.3	-0.2
MQZ	McQueen's Vall	0.80	204	P	Pg	19 47 52.7	0.0
OXZ	Oxford	0.85	245	P	Pb	19 47 54.1	+0.1
OXZ				S	Sb	19 48 06.4	+1.0
AKCZ	Akaroa Harbour	0.91	189	P	Pg	19 47 54.6	-0.1
AKCZ				S	Sb	19 48 07.7	+0.5
RACZ	Rakaia	1.03	222	P	Pg	19 47 56.6	-0.4
THZ	Tophouse	1.22	353	P	Pn	19 47 59.8	-0.5
THZ				S	Sb	19 48 15.4	-0.6
INZ	Inchbonnie	1.24	281	P	Pn	19 48 00.5	0.0
INZ				S	Sn	19 48 17.4	+0.2
MHCZ	Mount Hutt	1.25	243	P	Pn	19 47 59.7	-1.0
MHCZ				S	Sb	19 48 16.0	-0.9
WACZ	Wakanui South	1.33	223	P	Pn	19 48 00.7	-1.0
WACZ				S	Sb	19 48 18.2	-1.1
BSWZ	Blackbirch Sta	1.38	25	P	Pn	19 48 02.5	0.0
BSWZ				S	Sn	19 48 20.7	0.0
DSZ	Denniston Nort	1.56	322	P	Pn	19 48 04.8	-0.1
MRNZ	Matariki Terra	1.59	351	P	Pn	19 48 05.8	+0.5

RPZ	Rata Peaks	1.66	243	P	Pn	19 48 05.4	-0.9
TUWZ	Tuamarina	1.67	22	P	Pn	19 48 06.1	-0.2
ARCZ	Arundel	1.70	235	P	Pn	19 48 06.0	-0.9
WVZ	Waitaha Valley	1.73	266	P	Pn	19 48 07.6	+0.4
NNZ	Nelson	1.77	7	P	Pn	19 48 07.9	+0.2
TKNZ	Takaka Hill	1.94	357	P	Pn	19 48 11.1	+0.9
TCW	Tory Channel	1.97	27	P	Pn	19 48 09.7	-0.8
GCSZ	Gaunt Creek Bo	2.06	259	P	Pn	19 48 11.8	+0.1
TMZ	Timaru	2.07	226	P	Pn	19 48 11.2	-0.7
PLWZ	Palliser	2.13	50	P	Pn	19 48 11.3	-1.5
QRZ	Quartz Range	2.19	349	P	Pn	19 48 14.1	+0.6
DUWZ	D'Urville Isla	2.26	16	P	Pn	19 48 14.8	+0.3
FOZ	Fox Glacier	2.46	256	P	Pn	19 48 17.8	+0.6
KIW	Kapiti Island	2.51	33	P	Pn	19 48 17.1	-0.9
LBZ	Lake Benmore	2.54	235	P	Pn	19 48 18.0	-0.4
OGWZ	Otaki Gorge	2.65	36	P	Pn	19 48 18.7	-1.3
ODZ	Otahua Downs	2.72	220	P	Pn	19 48 19.9	-1.0
BFZ	Birch Farm	3.28	47	P	Pn	19 48 26.5	-2.1
JCZ	Jackson Bay	3.32	249	P	Pn	19 48 29.2	-0.1
WKZ	Wanaka	3.48	236	P	Pn	19 48 31.0	-0.3
EAZ	Earnscleugh	3.54	229	P	Pn	19 48 31.1	-1.1
KHEZ	Kahui Hut	3.74	11	P	Pn	19 48 37.7	+2.8
PKE	Pukeiti	3.84	10	P	Pn	19 48 38.3	+2.1
VRZ	Vera Road	4.05	19	P	Pn	19 48 40.2	+1.2
PKVZ	Pokaka	4.05	26	P	Pn	19 48 41.6	+2.3
WNVZ	Wahianoa	4.10	28	P	Pn	19 48 40.3	+0.2
TRVZ	Turoa	4.11	28	P	Pn	19 48 40.0	-0.2
NGZ	Ngauruhoe	4.24	27	P	Pn	19 48 41.7	-0.2
SNVZ	South Ngauruho	4.24	28	P	Pn	19 48 42.1	+0.1
OTVZ	Oturere	4.27	28	P	Pn	19 48 42.0	-0.4
TWVZ	Taurewa	4.28	25	P	Pn	19 48 42.8	+0.4
NNVZ	North Ngauruho	4.29	27	P	Pn	19 48 43.9	+1.4
WTVZ	West Tongariro	4.29	27	P	Pn	19 48 43.9	+1.4
MLZ	Mavora Lakes	4.31	235	P	Pn	19 48 41.8	-0.9
ETVZ	East Tongariro	4.31	28	P	Pn	19 48 43.1	+0.2
TMVZ	Te Maari	4.33	28	P	Pn	19 48 43.0	-0.1
NTVZ	North Tongarir	4.33	28	P	Pn	19 48 43.3	+0.1
MKAZ	Moumakai	6.07	16	P	Pn	19 49 06.8	-0.1
ETAZ	East Tamaki Re	6.17	14	P	Pn	19 49 14.0	+5.7

TUL ***01*** *19:49:55.3±0.3, 36°.483N±0°.008×98°.76W±0°.02, h5^{km}±4^{km}, ML3.1, mb_Lg3.0/39(NEIC), ML3.0/20(NEIC), Error ellipse: s-maj=2.4km s-min=0.9km az=112.0*

ANF ***01*** *19:49:55.8±0.4, 36°.43N×98°.73W, h5^{km}, ML3.6/7, Error ellipse: s-maj=5.8km s-min=4.6km az=135.0*

NEIC ***01*** *19:49:55.9±0.5, 36°.48N±0°.01×98°.78W±0°.02, h5^{km}±1^{km}, Error ellipse: s-maj=3.3km s-min=2.0km az=275.0*

ISC 01 19:49:55.8±1.0**, 36°.47N**±0°.02×**98°.73W**±0°.02**, h1**^{km}±8^{km}**, n72,** σ**0**^{s}**.74**/66**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK038	West end E0370	0.01	287	Pg	Pg	19 49 55.6	-0.6
NOKA	Waynoka	0.23	314	Pg	Pg	19 49 59.9	-0.3
NOKA				Sg	Sg	19 50 02.8	-0.4
NOKA				IAML		19 50 03.5	
	comp=E,3µm,0.2s						
NOKA				IAML		19 50 03.5	
	comp=N,4µm,0.2s						
OK035	E0210 Rd and N	0.23	3	Pg	Pg	19 50 00.3	0.0
OK035				Sg	Sg	19 50 04.3	+0.9
OK035				IAML		19 50 04.6	
	comp=N,4µm,0.3s						
OK035				IAML		19 50 05.7	
	comp=N,2µm,0.2s						
U32A	Winter Ranch,	0.24	247	Pg	Pg	19 50 00.0	-0.4
U32A	Winter Ranch,	0.24	247	P	Pg	19 49 59.8	-0.6
	baz=62						
OK032	Salt Plains WL	0.53	51		Pg	19 50 06.1	+0.2
OK032				Sg	Sg	19 50 13.4	+0.6
OK032				IAML		19 50 20.8	
	comp=N,1µm,0.3s						
OK032				IAML		19 50 23.3	
	comp=N,1µm,0.2s						
CROK	Carrier	0.60	87	Pg	Pg	19 50 07.6	+0.3
CROK				IAML		19 50 28.9	
	comp=N,1µm,0.3s						
ELIS	Ellis County	0.69	234	Pg	Pg	19 50 08.3	-0.7
ELIS				IAML		19 50 21.5	
	comp=E,790nm,0.3s						
ELIS				IAML		19 50 24.0	
	comp=N,681nm,0.2s						
KAN14	Manchester OK	0.78	52		Pg	19 50 10.6	-0.1
GC02	Grant County #	0.79	61	Pg	Pg	19 50 10.9	-0.1
CSTR	Hydro, Custer	0.83	178	Pg	Pg	19 50 11.1	-0.5
CSTR				Sg	Sg	19 50 23.2	+0.8
KAN17	Caldwell West	0.96	53		Pg	19 50 13.4	-0.7
KAN08	Anthony NE Sta	0.96	39	Pg	Pg	19 50 13.9	-0.4
KAN12	Harper NE Stat	1.01	35		Pg	19 50 15.0	-0.1
KAN01	Argonia South	1.03	49		Pg	19 50 15.2	-0.3
KAN06	Argonia West S	1.04	42		Pg	19 50 15.1	-0.6
KAN09	Caldwell North	1.11	53		Pg	19 50 16.5	-0.6
KAN13	South Haven SW	1.14	61	Pg	Pg	19 50 17.0	-0.6
KS21	Milan North St	1.18	46		Pg	19 50 17.7	-0.6
KS20	Mayfield South	1.21	51		Pg	19 50 18.3	-0.6
OK029	Liberty Lake	1.23	123		Pg	19 50 18.4	-1.0
BLOK	Blackwell	1.25	76		Pg	19 50 19.0	-0.7
OK050	Pawnee Station	1.41	93		Pn	19 50 21.8	-0.8
OK025	Westminster Rd	1.44	128		Pn	19 50 22.1	-0.8
OK045	Pawnee Station	1.45	91		Pn	19 50 22.7	-0.5
OK046	Pawnee Station	1.47	92		Pn	19 50 22.9	-0.5
OK033	Mehan	1.51	106		Pn	19 50 23.4	-0.5
OK044	Pawnee Station	1.56	93		Pn	19 50 24.4	-0.2
OK031	S. Brethren Rd	1.61	108		Pn	19 50 25.0	-0.4
OK031				IAmb_Lg		19 50 48.3	
	comp=Z,70nm,0.7s						
FNO	Franklin	1.62	138		Pn	19 50 25.3	-0.2
OK052	Battle Ridge R	1.63	107		Pn	19 50 25.2	-0.4
OK053	SW of W Deep R	1.63	106		Pn	19 50 25.3	-0.4
QUOK	Quay	1.66	100	Pn	Pn	19 50 25.9	0.0
OK030	Cody Creek RV	1.66	109		Pn	19 50 25.8	-0.3
OK034	N. Norfolk Rd.	1.69	105	Pn	Pn	19 50 26.2	-0.3
WMOK	Wichita Mounta	1.73	181	Pn	Pn	19 50 26.6	-0.5
WMOK	Wichita Mounta	1.73	181	P	Pn	19 50 26.2	-0.8
	baz=0.5						
WMOK				S	Sn	19 50 49.2	-0.6
	baz=0.5						
T35A	Sooner Cattle	1.83	75	Pn	Pn	19 50 28.9	+0.5
T35A				IAmb_Lg		19 50 56.1	
	comp=Z,72nm,0.7s						
T35B	Sooner Cattle	1.83	75	P	Pn	19 50 27.9	-0.5
	baz=257						
T35B				S	Sn	19 50 52.5	+0.2
	baz=257						
DEOK	Depew	1.91	109	Pn	Pn	19 50 29.7	+0.3
R32A	Long Quarter,	1.94	0		Pn	19 50 29.8	-0.2
R32A	Long Quarter,	1.94	0	P	Pb	19 50 30.6	-1.4
	baz=181						
R32A				S	Sn	19 50 53.6	-1.5
	baz=181						
W35A	Tecumseh	2.00	131		Pn	19 50 30.9	+0.2
X34A	Smith Ranch, M	2.01	158	Pn	Pn	19 50 31.4	+0.7
X34A				IAmb_Lg		19 51 03.7	
	comp=Z,92nm,0.8s						
TUL1	Leonard	2.44	102	Pn	Pn	19 50 36.8	+0.1
TUL1				IAmb_Lg		19 51 14.2	
	comp=Z,65nm,0.9s						
TUL1	Leonard	2.44	102	P	Pn	19 50 36.5	-0.3
	baz=284						
TUL1				S	Sn	19 51 07.5	+0.3
	baz=284						
WTFS	Witchita Falls	2.71	175	Pn	Pn	19 50 40.5	+0.1
WTFS				IAmb_Lg		19 51 26.5	
	comp=Z,16nm,0.7s						
LOOK	Love County	2.78	152	IAmb_Lg		19 51 31.4	
	comp=Z,36nm,1.0s						
AMTX	Amarillo	2.88	237	Pn	Pn	19 50 43.3	+0.4
AMTX	Amarillo	2.88	237	P	Pn	19 50 41.5	-1.4
	baz=55						
RLO	Rose Lookout	3.01	95	IAmb_Lg		19 51 30.8	
	comp=Z,36nm,0.8s						
X37A	Clayton	3.32	124	Pn	Pn	19 50 47.4	-1.5
X37A				IAmb_Lg		19 51 46.3	
	comp=Z,46nm,0.8s						
X37A	Clayton	3.32	124	P	Pn	19 50 47.7	-1.2
	baz=305						
X37A				S	Sn	19 51 29.4	+0.4
	baz=305						
FW06	Azle	3.62	164	Pn	Pn	19 50 52.8	-0.2
FW07	Weatherford	3.84	168	IAmb_Lg		19 51 59.4	
	comp=Z,17nm,0.9s						
HHAR	Hobbs	3.87	91		Pn	19 50 56.5	+0.1
HHAR				IAmb_Lg		19 52 00.5	
	comp=Z,48nm,0.7s						
KSCO	Kaye Shedlock'	4.00	310	IAmb_Lg		19 52 02.2	
	comp=Z,25nm,0.8s						
POST	Post	4.10	215	IAmb_Lg		19 52 13.8	
	comp=Z,19nm,0.9s						
MSTX	Muleshoe	4.15	234	IAmb_Lg		19 52 10.9	
	comp=Z,43nm,1.0s						
Z38A	Mt. Pleasant	4.44	135	IAmb_Lg		19 52 27.4	
	comp=Z,28nm,0.9s						
S39A	Bolivar	4.49	73	Pn	Pn	19 51 04.9	0.0
MIAR	Mount Ida	4.62	113	Pn	Pn	19 51 06.9	+0.2
MIAR				IAmb_Lg		19 52 31.1	
	comp=Z,24nm,1.0s						
P38A	Dawn	5.17	51	IAmb_Lg		19 52 47.0	
	comp=Z,20nm,1.0s						
FCAR	Ozark Folk Cen	5.37	94	IAmb_Lg		19 52 46.3	
	comp=Z,35nm,0.8s						
R40A	Maddies Statio	5.45	69	IAmb_Lg		19 52 53.6	
	comp=Z,24nm,0.7s						
UALR	University of	5.47	106	IAmb_Lg		19 52 54.9	
	comp=Z,24nm,0.9s						
SDCO	Great Sand Dun	5.56	285	Pn	Pn	19 51 19.3	-0.6
Q24A	Divide	5.67	298	Pg	Pb	19 51 38.8	+3.1
L34A	Svendsen Farm,	5.78	18	IAmb_Lg		19 53 04.9	
	comp=Z,32nm,0.7s						
BRIGG	Briggsdale	6.00	315	IAmb_Lg		19 53 07.9	
	comp=Z,23nm,0.9s						
JCT	Junction City	6.05	189	IAmb_Lg		19 53 14.1	
	comp=Z,17nm,0.7s						
P40A	Paris	6.09	58	IAmb_Lg		19 53 22.6	
	comp=Z,18nm,0.8s						

IDC ***01*** *20:11:44.4±4.4, 45°.02N×27°.56E, h0^{km}, mb3.3/1, mbtmp3.2/3, ML2.8/2, Error ellipse: s-maj=178.0km s-min=23.3km az=111.0*

SOF ***01*** *20:11:47.2, 45°.24N×27°.26E, h10^{km}, MD3.1*

SIGU ***01*** *20:11:47.0±0.1, 45°.3N±0°.6×27°.2E±0°.7, h5^{km}, mb3.0/6, MD3.3/6*

MCSM ***01*** *20:11:47.6±0.5, 45°N±3°×2°7E±°, h7^{km}±3^{km}, ML3.1*

BUC ***01*** *20:11:48.0±0.1, 45°.24N×27°.21E, h9^{km}±1^{km}, ml3.0/62, Error ellipse: s-maj=0.9km s-min=0.9km az=158.0*

CFUSG ***01*** *20:11:48.9, 45°.20N×27°.30E, h10^{km}, mb2.9/2, Romania Magtype MSH 3.5 from 2 stations*

ISC 01 20:11:47.4±0.9**, 45°.24N**±0°.01×**27°.23E**±0°.01**, h12**^{km}±7^{km}**, n103,** σ**1**^{s}**.28**/162**, 52C-53D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRER		0.22	308	⇓P	Pg	20 11 51.5	-0.7
GRER				⇓S	Sg	20 11 56.0	+0.6
PGOR	Pogoanele	0.38	207	⇓P	Pg	20 11 55.1	+0.2
PGOR				⇑S	Sb	20 12 02.0	+0.2
TUDR		0.47	42	⇓P	Pg	20 11 57.2	+0.5
TUDR				⇑S	Sb	20 12 04.9	+0.4
BISRR	Bisoca	0.47	310	⇑P	Pg	20 11 57.1	+0.4
BISRR				⇑S	Sb	20 12 05.4	+0.6
SCHL	Schela	0.50	59	⇓P	Pb	20 11 57.9	-0.3
SCHL				⇓S	Sb	20 12 06.2	+0.9
ISR	Istrita	0.50	256	⇓P	Pg	20 11 56.8	-0.4
ISR				⇑S	Sb	20 12 05.3	-0.2
SLCR	Slobozia Conac	0.52	48	⇑P	Pg	20 11 58.0	+0.4
SLCR				⇑S	Sb	20 12 06.7	+0.8
ODBI	Odobesti	0.53	347	⇓S	Sg	20 12 05.3	+0.4
GISR	Galati	0.62	71	⇓P	Pg	20 11 59.7	+0.3
GISR				⇓S	Sb	20 12 09.3	+0.6
PANC	Panciu	0.63	355	⇑P	Pb	20 12 00.7	+0.3
PANC				⇑S	Sg	20 12 08.5	+0.5
AMRR	Amara	0.64	173	⇓P	Pg	20 11 59.8	0.0
AMRR				⇓S	Sb	20 12 09.6	+0.2
CFR	Carcaliu	0.65	96	⇓P	Pg	20 12 00.3	+0.3
CFR				⇑S	Sb	20 12 09.8	+0.2
TATR	Tatarca	0.68	58	⇑P	Pg	20 12 00.7	+0.1
TATR				⇓S	Sb	20 12 11.3	+0.7
NEHR	Nehoiu	0.68	286	⇓P	Pb	20 12 01.2	-0.1
SCTR	Scanteiesti	0.69	51	⇓P	Pg	20 12 01.2	+0.3
SCTR				⇓S	Sb	20 12 11.9	+0.9
VRI	Vrincioaia	0.71	331	⇓P	Pg	20 12 01.6	+0.3
VRI				⇓S	Sb	20 12 12.8	+1.2
VRI	Vrincioaia	0.71	331	Pg	Pg	20 12 01.3	0.0
VRI				Sg	Sg	20 12 10.6	0.0
PLOR	Plostina	0.73	327	⇑P	Pg	20 12 01.7	+0.2
PLOR				⇑S	Sb	20 12 12.9	+0.8
PLOR	Plostina	0.73	327	Pg	Pg	20 12 01.8	+0.2
GIUM	Giurgiulesti	0.73	70	⇓P	Pg	20 12 01.9	+0.3
GIUM				⇑S	Sb	20 12 13.1	+1.0
GIUM	Giurgiulesti	0.73	70	*e*P	Pg	20 12 01.9	+0.3
HARR	Harsova	0.75	138	⇑P	Pg	20 12 01.6	-0.3
LEHL	Lehliu	0.82	201	⇑P	Pg	20 12 03.7	+0.4
LEHL				⇑S	Sg	20 12 14.6	+0.6
GHRR		0.83	9	⇑P	Pb	20 12 03.9	+0.1
GHRR				⇓S	Sn	20 12 16.3	-0.8
SECR		0.85	256	⇓P	Pb	20 12 04.6	+0.5
SECR				⇑S	Sg	20 12 15.3	+0.5
VLDR	Vladesti	0.85	45	⇓P	Pg	20 12 03.8	0.0
VLDR				⇓S	Sb	20 12 16.4	+0.9
SULR		0.89	231	⇓P	Pg	20 12 04.9	+0.3
SULR				⇓S	Sb	20 12 17.3	+0.6
PLAR	PLOIESTI	0.91	249	⇓P	Pb	20 12 05.7	+0.5
PLAR				⇓S	Sn	20 12 18.6	-0.5
TLBR	Topalu	0.91	140	⇑P	Pg	20 12 05.0	+0.1
TLBR				⇓S	Sn	20 12 19.7	+0.6
TPGR	Topolog	0.93	114	⇑P	Pg	20 12 05.3	-0.1
TPGR				⇑S	Sn	20 12 19.8	+0.1
MLR	Muntele Rosu	0.94	286	⇓P	Pg	20 12 05.5	0.0
MLR				⇓S	Sb	20 12 19.3	+1.2
MLR	Muntele Rosu	0.94	286	Pg	Pg	20 12 05.2	-0.3
COVR	Voineasa-Covas	0.94	310	⇑P	Pg	20 12 05.4	-0.1
COVR				⇓S	Sg	20 12 17.9	+0.2
RASA	Rasa	1.03	183	⇑P	Pg	20 12 07.8	+0.6
RASA				⇓S	Sb	20 12 21.4	+0.7
BIR	Birlad	1.06	15	⇑P	Pb	20 12 07.2	-0.5
BIR				⇓S	Sn	20 12 22.5	-0.4
CVDA	Cernavoda	1.08	147	⇑P	Pn	20 12 08.6	+0.3
CVDA				⇑S	Sn	20 12 25.3	+2.0
TLCR		1.12	92	⇓P	Pb	20 12 08.8	0.0
TLCR				⇓S	Sn	20 12 25.5	+1.1
TIRR	Tirgusor	1.15	133	⇓S	Sn	20 12 25.6	+0.5
ICOR	Ion Corvin	1.20	160	⇑S	Sn	20 12 28.0	+1.8
BUC1	Bucharest	1.24	224	⇓S	Sn	20 12 28.4	+1.2
JURR	Jurilovca	1.27	112	⇑P	Pn	20 12 11.2	+0.3
OZUR		1.32	311	⇑S	Sg	20 12 29.9	-0.1
TESR	Tescani	1.33	343	⇑S	Sg	20 12 30.7	+0.4
SGRR	Singureni	1.36	222	⇑P	Pn	20 12 12.1	-0.1
SGRR				⇓S	Sg	20 12 31.4	+0.3
MFTR	Murfatlar	1.36	141	⇑P	Pn	20 12 12.5	+0.2
MFTR				⇓S	Sg	20 12 32.8	+1.4
LEOM	Leova	1.42	30	⇑P	Pg	20 12 14.6	-0.1
LEOM				⇑S	Sg	20 12 33.3	+0.1
LEOM	Leova	1.42	30	*i* P	Pg	20 12 14.6	-0.1
LEOM				*i* S	Sg	20 12 33.3	+0.1
VASR	Vaslui	1.45	16	⇓S	Sb	20 12 33.4	+0.5
DOPR	Dopca	1.48	300	⇑S	Sg	20 12 35.3	+0.3
TSCT	Constanta Port	1.49	136	⇓P	Pb	20 12 15.1	+0.1
TSCT				⇓S	Sg	20 12 36.2	+0.9
MTUR	Matau	1.53	270	⇑P	Pn	20 12 15.1	+0.4
EFOR	EFORIE	1.54	139	⇓P	Pb	20 12 15.9	+0.1
EFOR				⇑S	Sg	20 12 36.7	-0.2
VOIR		1.55	278	⇑P	Pn	20 12 14.7	-0.2
VOIR				⇑S	Sg	20 12 36.9	-0.3
STFAR	Stefanesti-Arg	1.65	257	⇓P	Pn	20 12 17.2	+1.0
PSN	Preselentsi	1.71	156	P	Pn	20 12 17.7	+0.7
HUMR	Humele	1.75	247	⇑P	Pn	20 12 18.0	+0.4
HUMR				⇑S	Sb	20 12 42.7	+1.3
RAZG	Razgrad	1.75	197	⇑P	Pn	20 12 18.5	+0.8
RAZG				⇑S	Sb	20 12 42.1	+0.6
COPA	Copaceanca	1.81	233	⇑S	Sb	20 12 44.2	+1.0
ARR	Arges	1.83	275	⇓P	Pn	20 12 20.1	+1.3
ARR				⇓S	Sb	20 12 45.0	+1.1
BIZ	Bicaz	1.87	336	⇓S	Sb	20 12 45.7	+0.9
IAS	Iasi	1.96	7	⇑S	Sb	20 12 48.2	+0.7
KALB	Balgarevo	2.03	155	⇑S	Sb	20 12 49.0	-0.3
PRD	Provadia	2.05	176	P	Pn	20 12 22.9	+1.2
ZIMR		2.07	221	⇓S	Sb	20 12 50.9	+0.3
KIS	Kishinev	2.08	32	*e*P	Pg	20 12 26.5	-0.7
	8.0nm,0.1s						
KIS				*e*S	Sb	20 12 51.0	+0.2
	150nm,0.4s						
KIS	Kishinev	2.08	32	*e*P	Pg	20 12 26.5	-0.7
KIS				Pm		20 12 27.0	
KIS				*e*S	Sb	20 12 51.0	+0.2
KIS				Sm		20 12 51.2	
KIS				m		20 12 52.5	
ROIA	ROIAK	2.15	177	P	Pn	20 12 25.0	+1.8
SZH	Strazhica	2.18	206	P	Pb	20 12 25.7	-1.2
PLVB	Pleven	2.63	226	⇑P	Pn	20 12 29.6	-0.2
BURAR	Bucovina Array	2.75	330	⇑P	Pn	20 12 32.5	+1.1
NE56	Odesa	2.94	59	Pn	Pn	20 12 35.7	+1.8
NE56				Sn	Sb	20 13 12.6	-2.9
SORM	Soroca	2.99	15	*e*P	Pn	20 12 34.0	-0.7
MPEP	Malo Peshtene	3.13	234	*i* P	Pn	20 12 38.5	+1.8
GZR	Gura Zlata	3.14	274	⇑P	Pn	20 12 37.0	+0.2
GZR				⇓S	Sn	20 13 16.1	+1.8
MARR	Marisel-Cluj	3.20	298	⇓S	Sn	20 13 17.6	+1.8
NDNU	Novodnistrovsk	3.35	2	*e*P	Pn	20 12 41.3	+1.6
NDNU				*i* S	Sn	20 13 22.3	+2.9
KMPD	K-Podol'skiy	3.36	351	Pg	Pg	20 12 52.0	+0.2
KMPD				Pn	Pn	20 12 40.6	+0.8
KMPD	K-Podol'skiy	3.36	351	*e*P	Pn	20 12 42.2	+2.5
KMPD				*i* S	Sn	20 13 22.4	+2.8
KSV	Kosov	3.41	335	⇑*i*P	Pn	20 12 42.4	+1.9
KSV				Pm		20 12 43.8	
KSV				*i* S	Sn	20 13 24.0	+3.1
KSV				Sm		20 13 56.4	
HERR	Herculane	3.43	266	⇓S	Sn	20 13 23.2	+2.0
VTS	Vitosha	3.90	229	⇑P	Pn	20 12 47.8	+0.5
BZS	Buzias	3.97	277	⇓P	Pn	20 12 47.6	-0.5
HORU	Horodok	4.01	352	*e*P	Pn	20 12 50.7	+2.0
HORU				*e*S	Sn	20 13 38.9	+3.3
RDO	Rodhopi	4.28	197	Pn	Pn	20 12 52.8	+0.5
ALN	Alexandroupoli	4.43	192	Pn	Pn	20 12 54.6	+0.2
SEV	Sevastopol'	4.63	96	*e*P	Pn	20 12 58.6	+1.4
SEV				Pm		20 13 04.1	
SEV				*e*S	Sn	20 13 51.8	+1.0
SEV				Sm		20 13 52.8	
SEV	Sevastopol'	4.63	96	*e*P	Pn	20 12 58.6	+1.4
SEV				Pm		20 13 04.1	
	comp=Z,9.0nm,0.4s						
SEV				*e*S	Sn	20 13 51.8	+1.0
SEV				Sm		20 13 52.8	
	comp=N,19nm,0.5s						
SEV				Sm		20 13 52.8	
	comp=E,8.0nm,0.4s						
LUBAR	Lubar, Ukraine	4.69	4	Pn	Pn	20 12 58.0	-0.1
LUBAR				pP	Pn	20 13 00.1	+2.0
SIM	Simferopol'	4.89	91	*e*P	Pn	20 13 02.2	+1.5
SIM				*e*S	Sn	20 13 58.3	+1.1
SIM				Sm		20 14 00.3	
	comp=N,7.0nm,0.3s						
SIM				Sm		20 14 00.3	
	comp=E,10.0nm,0.5s						
SIM	Simferopol'	4.89	91	*e*P	Pn	20 13 02.2	+1.5
SIM				*e*S	Sn	20 13 58.3	+1.1
SIM				Sm		20 14 00.3	
STIP	Stip	5.10	228	*i* Pn	Pn	20 13 00.4	-3.3
ALU	Alushta	5.12	94	*e*S	Sn	20 14 05.0	+2.0
ALU				Sm		20 14 07.8	
	comp=N,11nm,0.4s						
ALU	Alushta	5.12	94	*e*S	Sn	20 14 05.0	+2.0
ALU				Sm		20 14 07.8	
AK13	Malin Array Si	5.51	12	Pn	Pn	20 13 09.8	+0.5
SUDU	Sudak	5.52	91	*e*P	Pn	20 13 10.8	+1.4
SUDU				Pm		20 13 11.7	
	comp=Z,9.0nm,0.4s						
SUDU				*e*S	Sn	20 14 13.0	+0.3
SUDU				Sm		20 14 15.7	
	comp=N,29nm,0.7s,comp=E,63nm,0.7s						
SUDU	Sudak	5.52	91	*e*P	Pn	20 13 10.8	+1.4
SUDU				Pm		20 13 11.7	
SUDU				*e*S	Sn	20 14 13.0	+0.3
SUDU				Sm		20 14 15.7	
AK16	Malin Array Si	5.57	12	Pn	Pn	20 13 11.7	+1.6
AKASG	Malin Array Be	5.62	13	Pn	Pn	20 13 11.4	+0.6
	comp=E,0.7nm,0.3s,baz=197,slow=11,SNR=3.9						
AKASG				Sn	Sn	20 14 10.8	-4.5
	comp=E,2.1nm,0.3s,baz=200,slow=21,SNR=5.4						
AKASG				Lg	Lg	20 14 40.8	
	comp=E,2.9nm,0.3s,baz=199,slow=28,SNR=6.6 comp=E,0.2nm,0.3s						
MI28	Mi28,Pidlybu	5.70	3	Pn	Pn	20 13 12.3	+0.5
MI28				pP	Pn	20 13 14.5	+2.7
FEO	Feodosiya	5.78	89	*e*S	Sn	20 14 23.0	+3.8
FEO				Sm		20 14 23.7	
	comp=N,15nm,0.3s						
FEO				Sm		20 14 23.7	
	comp=E,15nm,0.3s						
FEO	Feodosiya	5.78	89	*e*S	Sn	20 14 23.0	+3.8
FEO				Sm		20 14 23.7	
FINES	FINESS Array B	16.24	358	Pn	Pn	20 15 29.9	-5.3
	comp=E,0.1nm,0.3s,baz=167,slow=13,SNR=1.7 comp=E,2.2nm,0.9s						
TORD	Torodi Ar. Bea	38.65	222	P	P	20 19 09.4	-1.4
	comp=E,0.2nm,0.5s,baz=30,slow=8.0,SNR=2.2 comp=E,0.2nm,0.5s						

ANF ***01*** *20:18:38.2±0.2, 33°.14N×115°.87W, h14^{km}±2^{km}, ML3.4/18, Error ellipse: s-maj=1.7km s-min=1.4km az=120.0*

NEIC ***01*** *20:18:38.9±1.7, 33°.138N±0°.009×115°.887W±0°.006, h5^{km}±1^{km}, Error ellipse: s-maj=2.9km s-min=1.5km az=201.0*

PAS ***01*** *20:18:39.1±1.5, 33°.134N±0°.006×115°.86W±0°.01, h12^{km}±3^{km}, ML3.6/221, ML3.4/46(NEIC), Error ellipse: s-maj=1.5km s-min=0.7km az=71.0*

ECX ***01*** *20:18:39.8±0.5, 33°.11N×115°.90W, h2^{km}±2^{km}, MD3.3, ML3.5, Fault plane solution: NP1:ϕ_s36.00000°, δ78.00000°, λ-22.00000°.*

ISC 01 20:18:38.5±0.8**, 33°.12N**±0°.01×**115°.87W**±0°.01**, h18**^{km}±4^{km}**, n152,** σ**0**^{s}**.82**/216**, 11C-9D, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERRC	Elmore Ranch	0.04	101		Pg	20 18 41.3	-0.3
ERRC					Sg	20 18 43.5	-0.3
SUP	Superstition M	0.17	168		Pg	20 18 43.0	0.0
SUP					Sg	20 18 46.0	-0.1
SALN	Salton City	0.19	327		Pg	20 18 43.1	-0.1
SALN					Sg	20 18 46.4	0.0
SWSC	Sam W. Stewart	0.19	163		Pg	20 18 43.3	+0.1
SWSC					Sg	20 18 46.4	-0.1
SWSC	Sam W. Stewart	0.19	163	⇓*i*P	Pg	20 18 43.3	+0.1
SWSC				*e*S	Sg	20 18 46.3	-0.1
SWSC	Sam W. Stewart	0.19	163	P	Pg	20 18 43.3	+0.1
	baz=343						
SWSC				S	Sg	20 18 46.4	-0.1
	baz=343						
CLI2	Calipatria 2	0.24	90		Pg	20 18 44.8	+0.8
CLI2					Sg	20 18 49.6	+1.8
CRR	Carrizo Plain	0.25	200		Pb	20 18 44.5	+0.2
CRR					Sg	20 18 48.7	+0.6
BOMB	Bombay Beach	0.27	25		Pg	20 18 44.5	+0.1
BOMB					Sb	20 18 48.8	+0.1
COK2	Cook Ranch 2	0.30	157		Pb	20 18 45.7	+0.5
COK2					Sb	20 18 51.1	+1.5
COK2	Cook Ranch 2	0.30	157	⇓*i*P	Pb	20 18 45.7	+0.5
SLH	Sleepy Hollow	0.33	282		Pg	20 18 45.7	+0.1
SLH					Sg	20 18 50.6	+0.2
SLH	Sleepy Hollow	0.33	282	⇑*i*P	Pg	20 18 45.7	+0.1
SLH				*i* S	Sb	20 18 50.9	-0.1
IMPE	Imperial	0.34	131		Pb	20 18 46.9	+0.9
IMPE					Sn	20 18 53.1	-1.7
WESC	Westside Schoo	0.38	163		Pb	20 18 47.2	+0.5
WESC					Sb	20 18 53.7	+1.4
WESC	Westside Schoo	0.38	163	⇓*i*P	Pb	20 18 47.2	+0.5
DREC	Desert Rsrch C	0.47	132		Pn	20 18 49.4	-1.0
DREC					Sn	20 18 57.9	-0.3
DREC	Desert Rsrch C	0.47	132	*e*P	Pn	20 18 49.3	-1.0
YUH	Yuha Desert	0.48	186	Pg	Pg	20 18 48.2	+0.1
YUH				IAML		20 18 56.2	
	comp=N,2µm,0.2s						
YUH	Yuha Desert	0.48	186		Sb	20 18 55.5	+0.5
YUH2	Yuha Desert	0.48	186	⇓*e*P	Pb	20 18 48.4	+0.1
YUH2				*e*S	Sb	20 18 55.1	+0.1
BORC	Borrego Spring	0.48	287		Pg	20 18 48.1	-0.2
BORC					Sg	20 18 54.6	-0.3
CEA0	Mexicali	0.50	161	*e*P	Pb	20 18 48.9	+0.2
CEA0				*e*S	Sb	20 18 56.4	+0.9
IKP	In-Ko-Pah, Jac	0.52	204		Pb	20 18 49.0	0.0
IKP					Sb	20 18 56.2	+0.1

IKP	**In-Ko-Pah, Jac**	**0.52**	**204**	⇓*e*P	**Pb**	**20 18 49.0**	**0.0**
IKP				*e*S	**Sb**	**20 18 56.2**	**+0.1**
IKP	**In-Ko-Pah, Jac**	**0.52**	**204**	P	**Pb**	**20 18 49.0**	**0.0**
	baz=22						
IKP				S	**Sb**	**20 18 56.3**	**+0.2**
	baz=22						
MONP2	**Monument Peak**	**0.52**	**244**		**Pg**	**20 18 49.0**	**0.0**
MONP2					**Sg**	**20 18 55.9**	**-0.2**
MONP2	**Monument Peak**	**0.52**	**244**	⇑*e*P	**Pg**	**20 18 49.1**	**0.0**
MONP2				*e*S	**Sg**	**20 18 56.0**	**-0.1**
MONP2	**Monument Peak**	**0.52**	**244**	P	**Pg**	**20 18 49.1**	**0.0**
	baz=61						
MONP2				S	**Sg**	**20 18 55.9**	**-0.2**
	baz=61						
CTCC	**Cactus City**	**0.54**	**349**		**Pg**	**20 18 49.1**	**-0.3**
CTCC					**Sb**	**20 18 57.5**	**+0.7**
RMX	**La Rumorosa**	**0.55**	**199**		**Pb**	**20 18 50.1**	**+0.5**
RMX				IAML		20 18 59.4	
	comp=N,2µm,0.5s						
RMX				IAML		20 18 59.5	
	comp=E,3µm,0.2s						
RMX	**La Rumorosa**	**0.55**	**199**		**Sb**	**20 18 58.2**	**+1.0**
RMX	**La Rumorosa**	**0.55**	**199**	⇓*i*P	**Pb**	**20 18 50.3**	**+0.7**
RMX				*e*S	**Sb**	**20 18 58.2**	**+1.0**
RMX				⇓*e*		20 18 59.5	
RMX				IAML		20 18 59.5	
	comp=E,3µm,0.3s						
UABX	**UABC, Campus M**	**0.61**	**144**		**Pg**	**20 18 50.7**	**+0.2**
UABX	**UABC, Campus M**	**0.61**	**144**		**Sn**	**20 19 01.3**	**-0.2**
JUEM	**Julian Eagle M**	**0.62**	**266**		**Pg**	**20 18 50.8**	**+0.1**
JUEM					**Sb**	**20 18 59.0**	**0.0**
BC3	**Big Chuckawall**	**0.63**	**33**		**Pb**	**20 18 50.8**	**-0.2**
BC3					**Sb**	**20 18 59.4**	**-0.1**
BC3	**Big Chuckawall**	**0.63**	**33**	P	**Pb**	**20 18 50.8**	**-0.2**
	baz=215						
BC3				S	**Sb**	**20 18 59.4**	**-0.1**
	baz=215						
MATG	**Mataguay Scout**	**0.66**	**277**		**Pb**	**20 18 51.5**	**0.0**
MATG					**Sb**	**20 19 00.1**	**-0.3**
MATG	**Mataguay Scout**	**0.66**	**277**	⇑*i*P	**Pb**	**20 18 51.5**	**0.0**
MATG				*i* S	**Sb**	**20 19 00.0**	**-0.3**
COA	**Coachella**	**0.68**	**112**		**Pg**	**20 18 51.7**	**0.0**
COA					Pn	20 19 02.4	+9.3
COA	**Coachella**	**0.68**	**112**	⇑*i*P	**Pg**	**20 18 51.7**	**0.0**
COA				*i* S	**Sn**	**20 19 02.4**	**-0.7**
PMD	**Palm Desert**	**0.68**	**321**		**Pb**	**20 18 51.2**	**-0.5**
PMD				IAML		20 19 00.1	
	comp=N,1µm,0.2s						
PMD				IAML		20 19 00.5	
	comp=E,2µm,0.1s						
PMD	**Palm Desert**	**0.68**	**321**		**Sb**	**20 18 59.8**	**-1.0**
TPFO	**Pinon Flats**	**0.69**	**314**	P	**Pb**	**20 18 51.7**	**-0.2**
	baz=134						
TPFO				S	**Sb**	**20 19 00.7**	**-0.6**
	baz=134						
XPFO	**Pion Flat**	**0.69**	**315**		**Pb**	**20 18 51.8**	**-0.3**
XPFO					**Sb**	**20 19 00.7**	**-0.6**
PFO	**Pinyon Flats O**	**0.70**	**315**	Pg	**Pb**	**20 18 51.6**	**-0.5**
PFO				IAML		20 19 01.5	
	comp=E,2µm,0.3s						
PFO				IAML		20 19 01.5	
	comp=E,2µm,0.4s						
PFO	**Pinyon Flats O**	**0.70**	**315**		**Pb**	**20 18 51.9**	**-0.2**
PFO					Pn	20 19 00.8	+7.3
PFO	**Pinyon Flats O**	**0.70**	**315**	P	**Pb**	**20 18 51.9**	**-0.2**
	baz=134						
PFO				S	**Sb**	**20 19 00.8**	**-0.6**
	baz=134						
FRD	**Ford Ranch, An**	**0.72**	**301**		**Pb**	**20 18 52.4**	**-0.1**
FRD					**Sb**	**20 19 02.0**	**-0.1**
FRD	**Ford Ranch, An**	**0.72**	**301**		**Pb**	**20 18 52.4**	**-0.1**
FRD					**Sb**	**20 19 01.9**	**-0.1**
SNDA	**J Saunders Pla**	**0.76**	**305**		**Pg**	**20 18 53.4**	**+0.1**
SNDA					**Sg**	**20 19 03.9**	**+0.4**
RUN	**Ruthven**	**0.76**	**101**		**Pb**	**20 18 52.8**	**-0.3**
RUN					**Sg**	**20 19 03.5**	**0.0**
BZNA	**Buzz No.'s Pla**	**0.77**	**299**		**Pb**	**20 18 53.2**	**-0.1**
BZNA					**Sb**	**20 19 03.4**	**-0.1**
DNR	**Dunn Ranch,Anz**	**0.78**	**305**		**Pg**	**20 18 53.7**	**0.0**
DNR					**Sg**	**20 19 04.2**	**0.0**
BAR	**Barrett**	**0.81**	**237**		**Pb**	**20 18 54.0**	**0.0**
BAR				IAML		20 19 05.5	
	comp=N,2µm,0.4s						
BAR				IAML		20 19 07.2	
	comp=E,2µm,0.4s						
BAR	**Barrett**	**0.81**	**237**		**Sb**	**20 19 04.5**	**-0.1**
BAR	**Barrett**	**0.81**	**237**	⇑*e*P	**Pb**	**20 18 54.0**	**0.0**
BAR				*e*S	**Sb**	**20 19 04.3**	**-0.3**
BAR				IAML		20 19 05.1	
	comp=N,2µm,0.2s						
BAR				⇑*e*		20 19 05.1	
BAR				⇑*e*		20 19 07.0	
BAR				IAML		20 19 07.0	
	comp=E,2µm,0.2s						
YUCAX	**Ej. Yucat¡n**	**0.83**	**128**	*e*S	**Sn**	**20 19 06.5**	**-0.4**
EMSC	**East Mesa**	**0.83**	**117**		**Pb**	**20 18 54.0**	**-0.4**
EMSC					**Sg**	**20 19 05.7**	**-0.1**
EMSC	**East Mesa**	**0.83**	**117**	*e*P	**Pb**	**20 18 54.4**	**0.0**
EMSC				*e*S	**Sn**	**20 19 06.6**	**-0.4**
TKX	**Tecate**	**0.83**	**229**		**Pg**	**20 18 54.6**	**-0.1**
TKX	**Tecate**	**0.83**	**229**		**Sb**	**20 19 05.1**	**-0.2**
TKX	**Tecate**	**0.83**	**229**	*e*P	**Pb**	**20 18 54.3**	**-0.1**
TKX				*e*S	**Sb**	**20 19 05.1**	**-0.2**
CPBX	**Cerro Prieto**	**0.85**	**146**		**Pb**	**20 18 54.6**	**0.0**
CPBX	**Cerro Prieto**	**0.85**	**146**		**Sg**	**20 19 06.7**	**+0.5**
CPBX	**Cerro Prieto**	**0.85**	**146**	*e*P	**Pb**	**20 18 54.6**	**0.0**
CPBX				*e*S	**Sg**	**20 19 06.7**	**+0.5**
CPBX				⇓*e*		20 19 09.7	
CPBX				IAML		20 19 09.7	
	comp=N,4µm,0.2s						
CPBX				IAML		20 19 13.2	
	comp=E,5µm,0.2s						
CPBX				⇑*e*		20 19 13.2	
CRY	**Cary Ranch**	**0.85**	**301**		**Pg**	**20 18 55.0**	**-0.1**
CRY					**Sb**	**20 19 06.0**	**0.0**
EML	**El Monte Cty P**	**0.86**	**255**		**Pb**	**20 18 54.7**	**-0.1**
EML					**Sb**	**20 19 05.7**	**-0.2**
EML	**El Monte Cty P**	**0.86**	**255**	⇑*e*P	**Pb**	**20 18 54.7**	**-0.1**
EML				*e*S	**Sb**	**20 19 05.7**	**-0.2**
PLM	**Palomar**	**0.87**	**286**		**Pb**	**20 18 54.9**	**-0.2**
PLM					**Sg**	**20 19 07.2**	**+0.2**
GVDA	**Garner Valley**	**0.87**	**309**		**Pg**	**20 18 55.3**	**-0.1**
GVDA					**Sb**	**20 19 06.4**	**0.0**
GLA	**Glamis**	**0.88**	**94**		**Pb**	**20 18 54.5**	**-0.6**
GLA				IAML		20 19 14.7	
	comp=E,1µm,0.5s						
GLA				IAML		20 19 19.5	
	comp=N,841nm,0.7s						
GLA	**Glamis**	**0.88**	**94**		**Sb**	**20 19 06.3**	**-0.2**
GLA	**Glamis**	**0.88**	**94**	⇑*i*P	**Pb**	**20 18 54.6**	**-0.5**
GLA				*e*S	**Sg**	**20 19 06.8**	**-0.3**
GLA				IAML		20 19 14.7	
	comp=E,1µm,0.5s						
GLA				⇓*e*		20 19 14.7	
GLA	**Glamis**	**0.88**	**94**	P	**Pb**	**20 18 54.6**	**-0.5**
	baz=276						
BELC	**Belle Mtn. Jos**	**0.88**	**353**		**Pb**	**20 18 54.8**	**-0.5**
BELC					**Sb**	**20 19 06.5**	**-0.3**
BELC	**Belle Mtn. Jos**	**0.88**	**353**	P	**Pb**	**20 18 54.8**	**-0.5**
	baz=173						
BELC				S	**Sb**	**20 19 06.4**	**-0.3**
	baz=173						
DPP	**Dos Picos Cty**	**0.91**	**262**		**Pb**	**20 18 55.8**	**0.0**
DUZA	**Dulzura**	**0.92**	**236**		**Pb**	**20 18 55.9**	**0.0**
EW2	**E Wide Canyon**	**0.93**	**331**		**Pb**	**20 18 55.6**	**-0.5**
SDRC	**San Diego Road**	**0.98**	**247**	*e*P	**Pb**	**20 18 56.8**	**-0.1**
SDRC				*e*S	**Sb**	**20 19 09.6**	**0.0**
SDRC				*e*		20 19 10.4	
SDRC				IAML		20 19 10.4	
	comp=N,1µm,0.3s						
SDRC				⇑*e*		20 19 10.8	
SDRC				IAML		20 19 10.8	
	comp=E,1µm,0.3s						
TPC	**Twentynine Pal**	**0.99**	**351**		**Pb**	**20 18 56.5**	**-0.6**
DEVC	**Devers**	**1.01**	**324**		**Pn**	**20 18 57.7**	**0.0**
OLP	**Otay Lakes Par**	**1.03**	**240**		**Pb**	**20 18 57.9**	**+0.1**
OLP	**Otay Lakes Par**	**1.03**	**240**	*e*P	**Pb**	**20 18 57.5**	**-0.3**
OLP				*e*S	**Sb**	**20 19 10.9**	**-0.1**
BLAC	**Blackrock camp**	**1.04**	**335**		**Pb**	**20 18 57.1**	**-0.9**
MTRP	**Mission Trails**	**1.05**	**254**		**Pn**	**20 18 58.3**	**+0.1**
POB	**Polly Butte**	**1.05**	**303**		**Pb**	**20 18 57.9**	**-0.3**
CBX	**Cerro Bola**	**1.05**	**220**		**Pb**	**20 18 58.1**	**-0.2**
CBX				IAML		20 19 14.9	
	comp=E,922nm,0.3s						
CBX				IAML		20 19 15.7	
	comp=N,788nm,0.4s						
CBX	**Cerro Bola**	**1.05**	**220**	*e*P	**Pb**	**20 18 58.0**	**-0.2**
CBX				*e*S	**Sn**	**20 19 12.3**	**-0.4**
109C	**Camp Elliot, M**	**1.07**	**258**		**Pn**	**20 18 58.5**	**0.0**
109C	**Camp Elliot, M**	**1.07**	**258**	P	**Pn**	**20 18 58.4**	**0.0**
	baz=76						
109C				S	**Sb**	**20 19 12.1**	**+0.1**
	baz=76						
CPE	**Camp Elliot**	**1.07**	**258**		**Pn**	**20 18 58.5**	**0.0**
DGR	**Domenigoni Val**	**1.09**	**299**		**Pn**	**20 18 59.0**	**+0.1**
BACC	**Bachelor Mtn.**	**1.10**	**297**		**Pn**	**20 18 59.1**	**+0.2**
HMTC	**Hemet**	**1.12**	**302**		**Pb**	**20 18 59.5**	**+0.3**
ESJX	**Sierra Juarez**	**1.12**	**184**		**Pb**	**20 18 58.8**	**-0.6**
ESJX				IAML		20 19 15.3	
	comp=E,570nm,0.2s						
GORC	**Green Oak Ranc**	**1.15**	**272**		**Pb**	**20 18 59.8**	**+0.1**
TJX	**Tijuana**	**1.17**	**239**		**Pn**	**20 18 59.7**	**-0.2**
IRM	**Iron Mountain**	**1.19**	**30**		**Pn**	**20 19 00.4**	**+0.1**
IRM	**Iron Mountain**	**1.19**	**30**	P	**Pn**	**20 19 00.4**	**+0.1**
	baz=211						
IRM				S	**Sn**	**20 19 16.1**	**0.0**
	baz=211						
MURC	**Murrieta**	**1.21**	**293**		**Pb**	**20 19 01.1**	**+0.3**
MURC	**Murrieta**	**1.21**	**293**	P	**Pb**	**20 19 01.1**	**+0.3**
	baz=112						
MURC				S	**Sn**	**20 19 16.6**	**+0.1**
	baz=112						
BLYC	**Blythe**	**1.28**	**61**	Pn	**Pn**	**20 19 00.5**	**-1.0**
BLYC				IAML		20 19 21.6	
	comp=E,567nm,0.6s						
SJX	**San Joaquin**	**1.36**	**183**	*e*P	**Pn**	**20 18 58.8**	**-3.7**
CFT	**Crafton Hills**	**1.38**	**312**		**Pg**	**20 19 04.7**	**-0.4**
ELS	**Elsinore Mount**	**1.41**	**292**		**Pn**	**20 19 03.5**	**+0.2**
ELS				IAML		20 19 24.2	
	comp=N,443nm,0.2s						
SVD	**Seven Oaks Dam**	**1.42**	**314**		**Pg**	**20 19 05.8**	**-0.1**
CCX	**Cicese**	**1.42**	**209**		**Pb**	**20 19 04.1**	**-0.4**
BBRC	**Big Bear Solar**	**1.44**	**323**		**Pb**	**20 19 05.2**	**+0.4**
BBRC	**Big Bear Solar**	**1.44**	**323**	P	**Pb**	**20 19 05.2**	**+0.4**
	baz=142						
BBRC				S	**Sb**	**20 19 23.7**	**+0.8**
	baz=142						
SIL	**Silver Peak**	**1.46**	**327**		**Pb**	**20 19 05.7**	**+0.5**
GMRC	**Granite Mounta**	**1.67**	**6**	P	**Pb**	**20 19 09.3**	**+0.6**
	baz=186						
VTX	**Valle De La Tr**	**1.73**	**178**		**Pn**	**20 19 08.1**	**+0.4**
113A	**Mohawk Valley,**	**1.80**	**101**	Pn	**Pn**	**20 19 07.4**	**-1.2**
BFSC	**Mount Baldy Ra**	**1.86**	**307**	P	**Pb**	**20 19 12.7**	**+0.6**
	baz=126						
RRX	**Edison Barstow**	**1.98**	**332**	Sb	**Sg**	**20 19 41.7**	**-0.7**
	baz=151						
CIS	**Catalina Islan**	**2.15**	**278**	Pb	**Pb**	**20 19 17.1**	**+0.1**
	baz=96						
PASC	**Pasadena Art C**	**2.20**	**299**		**Pb**	**20 19 18.6**	**+0.8**
PASC				IAML		20 19 47.3	
	comp=N,210nm,0.3s						
PASC				IAML		20 19 48.6	
	comp=E,197nm,0.4s						
SFX	**San Felipe**	**2.25**	**157**	Pg	**Pb**	**20 19 20.0**	**+1.4**
GSC	**Goldstone, Bar**	**2.31**	**341**	Pn	**Pn**	**20 19 14.9**	**-0.7**
DECC	**Green Verdugo**	**2.35**	**299**	Sb	**Sb**	**20 19 50.8**	**+1.9**
	baz=118						
EDW2	**Edwards Air Fo**	**2.49**	**315**	P	**Pb**	**20 19 24.3**	**+1.7**
	baz=134						
EDW2				Sb	**Sb**	**20 19 55.4**	**+2.4**
	baz=134						
Y14A	**Wickenburg**	**2.52**	**70**		**Pn**	**20 19 18.8**	**+0.2**
Y14A				Pg	**Pb**	**20 19 24.7**	**+1.5**
PIX	**Pinacate**	**2.56**	**127**		**Pn**	**20 19 17.6**	**-1.5**
W13A	**Hualapai Mount**	**2.56**	**39**		**Pn**	**20 19 20.4**	**+1.0**
CCAC	**Calif City Air**	**2.70**	**319**		**Pb**	**20 19 27.9**	**+1.6**
CCAC				IAML		20 20 05.6	
	comp=N,264nm,0.6s						
V12A	**Nelson**	**2.73**	**18**	Pn	**Pn**	**20 19 21.7**	**+0.3**
V12A					**Pb**	**20 19 28.3**	**+1.5**
214A	**Organ Pipe Nat**	**2.83**	**113**		**Pn**	**20 19 21.7**	**-1.1**
QSM	**Queen of Sheba**	**2.95**	**344**		**Pn**	**20 19 24.0**	**-0.4**
GWY	**Greenwater Val**	**3.13**	**348**	Pn	**Pn**	**20 19 26.5**	**-0.5**
ISA	**Isabella, Lake**	**3.33**	**320**		**Pb**	**20 19 38.3**	**+1.3**
SHPR	**Sheep Range**	**3.42**	**10**		**Pn**	**20 19 31.2**	**+0.1**
BCW	**Bitter Crk WRg**	**3.46**	**303**		**Pn**	**20 19 31.8**	**+0.3**
BCW				IAML		20 20 29.8	
	comp=E,109nm,0.5s						
BCW				IAML		20 20 33.3	
	comp=N,77nm,0.5s						
TPNV	**Topopah Spring**	**3.83**	**355**	Pn	**Pn**	**20 19 37.0**	**+0.3**
PRN	**Pahroc Range**	**4.33**	**9**	Pn	**Pn**	**20 19 44.4**	**+1.0**
WUAZ	**Wupatki**	**4.42**	**56**	Pn	**Pn**	**20 19 44.9**	**+0.2**
U15A	**North Rim**	**4.42**	**41**		**Pn**	**20 19 46.5**	**+1.6**
LCMT	**Little Creek M**	**4.43**	**28**		**Pn**	**20 19 45.5**	**+0.5**
KNB	**Kanab**	**4.62**	**32**		**Pn**	**20 19 48.8**	**+1.3**
X18A	**Snowflake**	**5.12**	**72**	Pn	**Pn**	**20 19 55.5**	**+1.1**
OMMB	**Old Mammoth Mi**	**5.16**	**331**		**Pb**	**20 20 10.3**	**+2.0**
MDPB	**Devils Postpil**	**5.21**	**331**		**Pb**	**20 20 13.6**	**+4.4**
R11A	**Troy Canyon, C**	**5.22**	**2**		**Pg**	**20 20 14.6**	**-3.8**
LHV	**Little Huntoon**	**5.55**	**338**		**Pb**	**20 20 18.2**	**+3.5**
MTPU	**Mount Pierson**	**5.75**	**30**		**Pn**	**20 20 01.8**	**-1.5**
Q12A	**Willow Creek R**	**5.96**	**8**	Pg	**Pg**	**20 20 32.2**	**-0.4**
SPR3	**Spring Creek 3**	**5.99**	**12**	Pg	**Pb**	**20 20 22.1**	**-0.4**
121A	**Cookes Peak, D**	**6.83**	**93**		**Pn**	**20 20 18.5**	**+0.7**
SRU	**San Rafael Swe**	**7.37**	**34**		**Pn**	**20 20 23.6**	**-1.7**
PV23	**Carpenter Ridg**	**7.70**	**44**	Pn	**Pn**	**20 20 30.4**	**+0.5**

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*IDC **01** 20:25:12.5±1.4, 8°.22S×155°.84E, h0^{km}, mb3.9/5, mbtmp3.9/5, ML5.4/1, Error ellipse: s-maj=33.7km s-min=25.9km az=117.0*

*NEIC **01** 20:25:13.3±1.2, 8°.20S±0°.07×156°.2E±0°.1, h10^{km}±1^{km}, mb4.4/10, Error ellipse: s-maj=24.6km s-min=11.1km az=86.0*

ISC 01 20:25:10.9±0.7**, 8°.4S**±0°.2×**156°.51E**±0°.07**, h10**^{km}**, n19,** σ**0^s.86**/20**, mb4.2**/10**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.55**	**107**	Pn	**Pg**	**20 26 18.4**	**-0.6**
	199nm,0.3s,baz=303,slow=3.6,SNR=3.9						
HNR				Sn	**Sg**	**20 27 06.0**	**+0.9**
	149nm,0.3s,baz=127,slow=11,SNR=7.2						
HNR	**Honiara**	**3.55**	**107**	Pn	**Pb**	**20 26 13.5**	**-0.4**
WR0	**Warramunga Arr**	**24.18**	**239**	P	**P**	**20 30 27.1**	**-0.6**
WB0	**Warramunga Arr**	**24.22**	**240**		**P**	**20 30 27.8**	**-0.3**
WB0				IAmb	IAmb	20 30 30.4	
	comp=Z,24nm,1.3s						
WRAB	**Tennant Creek**	**24.33**	**239**	P	**P**	**20 30 28.6**	**-0.6**
WRAB				IAmb	IAmb	20 30 30.6	
	comp=Z,11nm,0.9s						
WB2	**Warramunga Arr**	**24.33**	**239**		**P**	**20 30 28.7**	**-0.5**
WB2				IAmb	IAmb	20 30 30.7	
	comp=Z,13nm,1.1s						
WRA	**Warramunga Arr**	**24.34**	**239**	P	**P**	**20 30 29.0**	**-0.3**
	comp=Z,3.9nm,0.7s,baz=62,slow=9.7,SNR=14						
	comp=Z,3.9nm,0.7s						
ASAR	**Alice Springs**	**26.45**	**232**	P	**P**	**20 30 47.0**	**-1.3**
	comp=Z,0.7nm,0.8s,baz=63,slow=9.2,SNR=8.0						
	comp=Z,0.7nm,0.8s						
ASAR	**Alice Springs**	**26.45**	**232**	P	**P**	**20 30 46.8**	**-1.6**
STKA	**Stephens Creek**	**27.18**	**209**	P	**P**	**20 30 55.5**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=30,slow=12,SNR=5.3						
	comp=Z,1.1nm,0.5s						
STKA	**Stephens Creek**	**27.18**	**209**	P	**P**	**20 30 56.9**	**+2.1**
SHL	**Shillong**	**71.29**	**301**	P	**P**	**20 36 31.2**	**-0.1**
SHL				IAmb	IAmb	20 36 32.2	
	comp=Z,6.5nm,1.1s						
SONM	**Songino Array**	**71.31**	**327**	P	**P**	**20 36 31.6**	**+0.6**
	comp=Z,1.2nm,1.0s,baz=133,slow=6.2,SNR=6.4						
	comp=Z,1.2nm,1.0s						
SONM	**Songino Array**	**71.31**	**327**	P	**P**	**20 36 31.2**	**+0.2**
SONM				IAmb	IAmb	20 36 37.5	
	comp=Z,2.9nm,1.4s						
BILL	**Bilibino**	**76.55**	**4**	P	**P**	**20 37 01.4**	**+0.4**
MK31	**Makanchi Array**	**85.43**	**318**	P	**P**	**20 37 48.5**	**-0.5**
MK31				IAmb	IAmb	20 37 55.0	
	comp=Z,2.6nm,1.4s						
MKAR	**Makanchi Array**	**85.43**	**318**	P	**P**	**20 37 49.0**	**0.0**
	comp=Z,1.4nm,0.9s,baz=106,slow=5.4,SNR=11						
	comp=Z,1.4nm,0.9s						
MKAR	**Makanchi Array**	**85.43**	**318**	P	**P**	**20 37 48.2**	**-0.7**
MAKZ	**Makanchi**	**85.64**	**318**	P	**P**	**20 37 50.0**	**0.0**

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*IDC **01** 20:30:28.0±1.2, 15°.51S×165°.58E, h0^{km}, mb3.7/5, mbtmp3.7/6, ML3.5/1, Error ellipse: s-maj=36.5km s-min=25.8km az=127.0*

ISC 01 20:30:33.3±1.1**, 15°.5S**±0°.1×**165°.6E**±0°.2**, h35**^{km}**, n6,** σ**0^s.95**/7**, mb3.6**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.55**	**173**	Pn	**Pn**	**20 32 06.3**	**-1.1**
	1.1nm,0.3s,baz=106,slow=6.6,SNR=31						
DZM				Sn	**Sn**	**20 33 22.2**	**+1.2**
	0.9nm,0.3s,baz=127,slow=24,SNR=1.8						
	3.0nm,0.5s						
WRA	**Warramunga Arr**	**30.03**	**257**	P	**P**	**20 36 39.8**	**+0.5**
	0.5nm,1.0s,baz=88,slow=9.3,SNR=2.7						
	0.5nm,1.0s						
ASAR	**Alice Springs**	**30.85**	**250**	P	**P**	**20 36 46.0**	**-0.4**
	0.6nm,0.6s,baz=74,slow=9.3,SNR=13						
	0.6nm,0.6s						
ILAR	**Eielson Array**	**87.80**	**18**	P	**P**	**20 43 18.6**	**+0.1**
	0.5nm,0.7s,baz=234,slow=6.0,SNR=6.4						
	0.5nm,0.7s						
NVAR	**Mina Array Bea**	**89.05**	**50**	P	**P**	**20 43 25.5**	**+0.3**
	0.3nm,0.8s,baz=243,slow=4.0,SNR=2.1						
	0.3nm,0.8s						
YKA	**Yellowknife Ar**	**99.02**	**28**	P	**Pdif**	**20 44 09.5**	**-0.6**
	0.2nm,0.6s,baz=258,slow=4.5,SNR=3.9						
	0.2nm,0.6s						

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*IDC **01** 20:33:13.5±0.6, 8°.29S×156°.36E, h0^{km}, mb4.5/19, mbtmp4.5/22, ML3.8/3, MS3.9/29, Error ellipse: s-maj=18.4km s-min=13.6km az=79.0*

*DJA **01** 20:33:14.1±0.6, 8°S±4°×15°7E±°, h20^{km}±3^{km}, M4.8/20, mB5.3/6, mb4.8/20, MLv4.9/1, Mw(mB)4.7/6*

*BJI **01** 20:33:14.5±0.0, 8°.06S×156°.68E, h20^{km}, mb4.6/42, mB5.1/21, Ms4.7/5*

*GCMT **01** 20:33:16.8±0.3, 8°.44S±0°.02×156°.49E±0°.02, h19^{km}±1^{km}, MW4.8/79, Moment Tensor Solution. s20,c23; s79,c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.34±.11; $M_{\theta\theta}$-0.10±.09; $M_{\phi\phi}$-0.24±.08; $M_{r\theta}$-0.09±.18; $M_{\theta\phi}$2.05±.08; $M_{\phi r}$-0.53±.18; Best double couple: $M_0$2.12900×10^{16} NP1:ϕ_s180.00000°, δ85.00000°, λ164.00000°. NP2: ϕ_s272.00000°, δ74.00000°, λ6.00000°. Principal axes: T 1.9930, Plg15.0000°, Azm135.0000°; N 0.2690, Plg73.0000°, Azm341.0000°; P -2.2640, Plg7.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **01** 20:33:16.8±1.9, 8°.31S±0°.09×156°.27E±0°.05, h18^{km}±5^{km}, mb4.9/45 Error ellipse: s-maj=13.5km s-min=7.2km az=183.0*

ISC 01 20:33:16.8±0.3**, 8°.27S**±0°.06×**156°.41E**±0°.05**, h21**^{km}**, n168,** σ**1^s.42**/149**, mb4.8**/58**, MS3.9**/31**, 3C-1D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.68**	**108**	Pn	**Pb**	**20 34 16.5**	**-4.8**
	211nm,0.3s,baz=202,slow=1.7,SNR=2.3						
HNR				Sn	**Sb**	**20 35 06.5**	**+1.0**
	612nm,0.3s,baz=258,slow=20,SNR=4.3						
HNR				LR	LR	20 35 35.2	
	comp=Z,33µm,18.5s,baz=270,slow=38						
HNR	**Honiara**	**3.68**	**108**	Pn	**Pn**	**20 34 13.9**	**+1.4**
HNR	**Honiara**	**3.68**	**108**	P	Pb	20 34 26.9	+5.7
RABL	**Rabaul**	**5.85**	**314**	Pn	**Pn**	**20 34 41.1**	**-1.3**
RABL	**Rabaul**	**5.85**	**314**	P	**Pb**	**20 34 58.3**	**+0.1**
KRVT	**Keravat (AS076**	**5.87**	**312**	Pn	**Pn**	**20 34 39.5**	**-3.2**
	6.1nm,0.3s,baz=337,slow=10,SNR=4.6						
KRVT				Sn	**Sn**	**20 35 50.1**	**+0.7**
	3.2nm,0.3s,baz=214,slow=22,SNR=1.8						
	19nm,0.4s						
PMG	**Port Moresby**	**9.21**	**262**	LR	LR	20 38 59.1	
	comp=Z,2µm,18.1s,baz=78,slow=38						
TV1H	**Townsville Har**	**14.36**	**219**	P	**Pn**	**20 36 39.6**	**+0.6**
MTSU	**Mount Surprise**	**15.31**	**229**	P	**Pn**	**20 36 54.4**	**+2.6**
CTA	**Charters Tower**	**15.31**	**219**	Pn	**Pn**	**20 36 50.7**	**-1.2**
	0.2nm,0.3s,baz=50,slow=10,SNR=3.5						
	10nm,1.0s						
CTAO	**Charters Tower**	**15.31**	**219**	Pn	**Pn**	**20 36 49.1**	**-2.8**
CTAO	**Charters Tower**	**15.31**	**219**	P	**Pn**	**20 36 53.5**	**+1.6**
DZM	**Mont Dzumac**	**16.78**	**146**	*e*Pn	**Pn**	**20 37 10.5**	**-0.2**
	93nm,1.7s						
DZM				*e*LR	LR	20 41 04.4	
	comp=Z,1µm,25.9s						
DZM	**Mont Dzumac**	**16.78**	**146**	Pn	**Pn**	**20 37 11.5**	**+0.7**
	0.2nm,0.3s,baz=339,slow=13,SNR=4.3						
	8.8nm,1.1s						
DZM	**Mont Dzumac**	**16.78**	**146**	Pn	**Pn**	**20 37 10.5**	**-0.2**
ONTNC	**Ouen Toro**	**16.98**	**146**	Pn	**Pn**	**20 37 11.4**	**-1.7**
ONTNC				IAmb	IAmb	20 37 17.8	
	comp=Z,148nm,1.8s						
EIDS	**Eidsvold**	**17.75**	**196**	P	**Pn**	**20 37 23.4**	**+0.8**
EIDS	**Eidsvold**	**17.75**	**196**	P	**Pn**	**20 37 23.2**	**+0.5**
RMQ	**Roma**	**19.52**	**201**	P	**P**	**20 37 43.5**	**+0.6**
QIS	**Mount Isa**	**20.32**	**231**	P	**P**	**20 37 51.4**	**-0.3**
QLP	**Quilpie**	**21.57**	**211**	P	**P**	**20 38 05.3**	**+0.2**
AULRC	**Lightning Ridg**	**22.49**	**200**	P	**P**	**20 38 13.8**	**-1.2**
MSVF	**Nonsavu**	**23.07**	**116**	P	**P**	**20 38 21.8**	**+0.6**
	comp=Z,12nm,0.9s,baz=279,slow=23,SNR=2.4						
MSVF				LR	LR	20 46 28.7	
	comp=Z,175nm,19.3s,baz=148,slow=34						
	comp=Z,12nm,0.9s						
MSVF	**Nonsavu**	**23.07**	**116**	P	**P**	**20 38 24.7**	**+3.5**
RKPI	**Ransiki, Papua**	**23.13**	**286**	P	**P**	**20 38 23.4**	**+1.5**
	comp=Z,33nm,0.9s						
KDU	**Kakadu**	**23.93**	**257**	P	**P**	**20 38 29.9**	**+0.2**
WR0	**Warramunga Arr**	**24.14**	**239**	P	**P**	**20 38 30.1**	**-1.5**
WB0	**Warramunga Arr**	**24.19**	**239**	P	**P**	**20 38 31.0**	**-1.0**
WRAB	**Tennant Creek**	**24.29**	**239**	P	**P**	**20 38 31.4**	**-1.7**
WRAB	**Tennant Creek**	**24.29**	**239**	P	**P**	**20 38 32.0**	**-1.0**
WB2	**Warramunga Arr**	**24.30**	**239**	P	**P**	**20 38 31.4**	**-1.6**
WRA	**Warramunga Arr**	**24.31**	**239**	P	**P**	**20 38 32.1**	**-1.0**
	comp=Z,32nm,1.2s,baz=65,slow=10.0,SNR=32						
	comp=Z,32nm,1.2s						
WRA	**Warramunga Arr**	**24.31**	**239**	P	**P**	**20 38 30.9**	**-2.2**
INKA	**Innaminka**	**24.38**	**215**	P	**P**	**20 38 32.8**	**-0.8**
GUMO	**Guam**	**24.55**	**332**	LR	LR	20 47 03.7	
	comp=Z,138nm,20.6s,baz=138,slow=34						
FAKI	**Fak Fak**	**24.61**	**281**	P	**P**	**20 38 37.5**	**+1.5**
	comp=Z,37nm,1.2s						
CMSA	**Cobar Meteorol**	**25.21**	**202**	P	**P**	**20 38 40.2**	**-1.0**
MTN	**Manton Dam**	**25.25**	**257**	P	**P**	**20 38 40.1**	**-1.6**
MTN				IAmb	IAmb	20 38 45.9	
	comp=Z,40nm,1.5s						
MTN	**Manton Dam**	**25.25**	**257**	P	**P**	**20 38 43.6**	**+1.9**
AS01	**Alice Springs**	**26.40**	**232**	P	**P**	**20 38 51.3**	**-0.8**
ASAR	**Alice Springs**	**26.44**	**232**	P	**P**	**20 38 50.5**	**-2.0**
	comp=Z,2.1nm,0.8s,baz=62,slow=8.9,SNR=15						
	comp=Z,2.1nm,0.8s						
ASAR	**Alice Springs**	**26.44**	**232**	P	**P**	**20 38 49.7**	**-2.7**
STKA	**Stephens Creek**	**27.23**	**208**	P	**P**	**20 39 00.6**	**+1.1**
	comp=Z,4.3nm,0.8s,baz=43,slow=15,SNR=9.8						
STKA				LR	LR	20 49 15.6	
	comp=Z,375nm,20.4s,baz=27,slow=35						
	comp=Z,4.3nm,0.8s						
STKA	**Stephens Creek**	**27.23**	**208**	P	**P**	**20 38 57.2**	**-2.3**
STKA	**Stephens Creek**	**27.23**	**208**	P	**P**	**20 38 59.1**	**-0.4**
LCRK	**Leigh Creek**	**27.86**	**215**	P	**P**	**20 39 04.8**	**-0.3**
KNRA	**Kununurra**	**28.00**	**252**	P	**P**	**20 39 04.8**	**-1.7**
KNRA	**Kununurra**	**28.00**	**252**	P	**P**	**20 39 06.5**	**0.0**
LBMI	**Labuha**	**29.78**	**283**	P	**P**	**20 39 23.9**	**+1.5**
	comp=Z,59nm,1.2s						
SANI	**Sanana**	**30.90**	**280**	P	**P**	**20 39 36.4**	**+4.1**
WRKA	**Warakurna**	**31.56**	**235**	P	**P**	**20 39 36.3**	**-1.8**
AFI	**Afiamalu**	**31.70**	**103**	LR	LR	20 50 25.2	
	comp=Z,183nm,18.2s,baz=322,slow=32						
RAO	**Raoul Island**	**31.90**	**134**	LR	LR	20 51 17.7	
	comp=Z,222nm,18.3s,baz=124,slow=34						
DAV	**Davao City (W)**	**34.31**	**296**	LR	LR	20 54 51.2	
	comp=Z,153nm,18.1s,baz=120,slow=38						
URZ	**Urewera**	**35.22**	**151**	LR	LR	20 53 25.7	
	comp=Z,288nm,18.0s,baz=48,slow=34						
MPSI	**Mapaga**	**37.38**	**281**	P	**P**	**20 40 28.3**	**-0.2**
	comp=Z,12nm,1.1s						
RPZ	**Rata Peaks**	**37.56**	**162**	P	**P**	**20 40 28.6**	**-1.0**
	comp=Z,11nm,0.8s,baz=64,slow=4.2,SNR=4.9						
RPZ				LR	LR	20 53 24.0	
	comp=Z,316nm,20.8s,baz=346,slow=32						
	comp=Z,11nm,0.8s						
JCJ	**Chichijima**	**37.76**	**339**	LR	LR	20 52 57.3	

	comp=Z,129nm,21.4s,baz=120,slow=31						
PLAI	Plampang	38.19	266	P	P	20 40 36.8	+1.4
	comp=Z,17nm,1.1s						
JHJ	Hachijo jima 2	44.10	340	LR	LR	20 58 40.5	
	comp=Z,68nm,19.6s,baz=66,slow=35						
RAR	Rarotonga	44.13	112	LR	LR	20 56 16.3	
	comp=Z,151nm,19.1s,baz=292,slow=31						
JMN	Monobe	46.93	334	P	P	20 41 45.1	-1.0
MJAR	Matsushiro Arr	47.74	340	P	P	20 41 51.0	-1.4
	comp=Z,2.5nm,0.8s,baz=162,slow=7.3,SNR=5.5						
	comp=Z,2.5nm,0.8s						
JNU	Nakatsue	47.80	331	P	P	20 41 52.9	0.0
	comp=Z,25nm,0.9s,baz=91,slow=6.0,SNR=6.4						
JNU				LR	LR	21 00 38.5	
	comp=Z,36nm,19.6s,baz=175,slow=34						
	comp=Z,25nm,0.9s						
CGJI	Cibinong	50.29	268	P	P	20 42 10.4	-1.9
	comp=Z,45nm,0.8s						
MDSI	Maura Dua	52.01	271	P	P	20 42 23.9	-1.4
	comp=Z,11nm,1.5s						
KSRS	Korea Array	52.72	332	P	P	20 42 30.4	+0.4
	comp=Z,3.9nm,1.0s,baz=157,slow=7.2,SNR=6.0						
	comp=Z,3.9nm,1.0s						
KSAR	Wonju Array Be	52.73	331	P	P	20 42 29.1	-1.0
PPT	Papeete	53.30	106	LR	LR	21 02 26.9	
	comp=Z,30nm,18.2s,baz=228,slow=33						
PPT2	Papeete2	53.30	106	eS	S	20 50 07.9	+2.1
	comp=Z,59nm,24.0s						
PPT2				eLR	LR	20 58 02.2	
	comp=Z,105nm,24.0s						
PPT2				eLR	LR	20 58 02.9	
	comp=Z,112nm,30.0s						
TBI	Tubuai	53.89	113	eLR	LR	20 58 17.7	
	comp=Z,980nm,28.8s						
TBI				eLR	LR	20 58 18.0	
	comp=Z,4µm,24.5s						
SDSI	Sungai Dareh	55.23	275	P	P	20 42 48.2	-0.7
	comp=Z,14nm,1.1s						
USRK	Ussuriysk Ar.	56.71	339	P	P	20 42 59.4	+0.6
	comp=Z,8.9nm,1.0s,baz=133,slow=8.5,SNR=8.3						
USRK				LR	LR	21 03 49.2	
	comp=Z,54nm,21.4s,baz=113,slow=32						
	comp=Z,8.9nm,1.0s						
USRK	Ussuriysk Ar.	56.71	339	P	P	20 42 56.6	-2.3
MDJ	Mudanjiang	57.94	338	P	P	20 43 10.2	+2.6
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,180nm,4.1s						
CN2	Changchun	58.94	334	P	P	20 43 14.8	+0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BNX	BinXian	59.72	337	⇑P	P	20 43 19.6	-0.3
BNX				pmax	pmax		
	comp=Z,15nm,1.4s						
BNX				pmax	pmax		
	comp=Z,150nm,3.5s						
PETK	Petropavlovsk-	61.15	1	P	P	20 43 30.5	+0.9
	comp=Z,3.6nm,0.8s,baz=159,slow=6.2,SNR=2.1						
	comp=Z,3.6nm,0.8s						
KMI	Kunming	61.89	304	⇑P	P	20 43 36.1	+0.7
KMI				pP	pP	20 43 42.5	+1.5
KMI				pmax	pmax		
	comp=Z,8.0nm,1.6s						
CRAI	Chiangrai	61.96	298	P	P	20 43 36.0	+0.3
CRAI				IAmb	IAmb	20 43 37.5	
	comp=Z,14nm,1.1s						
CMAR	Chiang Mai Arr	62.59	296	P	P	20 43 41.0	+1.0
	comp=Z,2.7nm,0.9s,baz=120,slow=4.7,SNR=14						
CMAR				LR	LR	21 09 59.5	
	comp=Z,36nm,20.7s,baz=125,slow=35						
	comp=Z,2.7nm,0.9s						
CMAR	Chiang Mai Arr	62.59	296	P	P	20 43 39.7	-0.3
CHTO	Chiang Mai	62.72	296	P	P	20 43 39.9	-0.9
PZH	PanZhiHua	63.29	305	P	P	20 43 47.6	+3.0
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=Z,100nm,4.5s						
XLT	XiLinHaoTe	63.47	328	⇓iP	P	20 43 46.4	+1.0
XLT				sP	sP	20 43 54.6	+1.7
XLT				S	S	20 52 17.8	+0.3
XLT				pmax	pmax		
	comp=Z,10.0nm,1.2s						
XLT				pmax	pmax		
	comp=Z,120nm,6.8s						
XLT				LR	LR		
	comp=Z,370nm,22.8s						
HEH	HeiHe	63.51	340	eP	P	20 43 45.3	-0.1
HEH				pmax	pmax		
	comp=Z,19nm,1.1s						
HEH				pmax	pmax		
	comp=Z,95nm,4.3s						
TNCH	TengChong	65.34	302	⇑P	P	20 43 58.2	0.0
TNCH				S	S	20 52 35.4	-6.2
TNCH				pmax	pmax		
	comp=Z,13nm,1.3s						
TNCH				pmax	pmax		
	comp=Z,81nm,6.0s						
TNCH				LR	LR		
	comp=Z,96nm,4.3s						
TNCH				LR	LR		
	comp=Z,120nm,5.9s						
LZH	Lanzhou	66.20	315	eP	P	20 44 08.0	+4.5
LZH				pP	pwP	20 44 14.9	+1.1
LZH				pmax	pmax		
	comp=Z,7.0nm,1.4s						
VNDA	Vanda	69.28	179	P	P	20 44 21.6	-0.4
	comp=Z,2.2nm,0.9s,baz=348,slow=9.0,SNR=3.7						
	comp=Z,2.2nm,0.9s						
GTA	Gaotai	70.62	317	eP	P	20 44 31.8	+0.8
GTA				pP	pP	20 44 36.2	-0.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
ULN	Ulaanbaatar	70.83	327	P	P	20 44 32.6	+0.5
ULN				IAmb	IAmb	20 44 34.2	
	comp=Z,9.6nm,1.1s						
SHL	Shillong	71.14	301	P	P	20 44 34.5	-0.1
SONM	Songino Array	71.16	327	P	P	20 44 34.7	+0.6
	comp=Z,5.7nm,0.9s,baz=135,slow=5.6,SNR=35						
	comp=Z,5.7nm,0.9s						
SONM	Songino Array	71.16	327	P	P	20 44 34.2	+0.1
SONM				IAmb	IAmb	20 44 35.9	
	comp=Z,8.0nm,1.0s						
LSA	Lhasa	73.14	304	P	P	20 44 46.8	0.0
LSA				pmax	pmax		
	comp=Z,11nm,1.1s						
LSA	Lhasa	73.14	304	P	P	20 44 47.2	+0.3
TAPN	Taplejung	75.25	301	eP	P	20 44 59.4	+0.4
	comp=Z,49nm,1.1s						
ODAN	Odare	75.38	300	eP	P	20 44 59.8	+0.2
RAMN	Ramite	76.08	300	eP	P	20 45 03.7	0.0
BILL	Bilibino	76.45	4	P	P	20 45 04.5	0.0
BILL				IAmb	IAmb	20 45 06.2	
	comp=Z,13nm,1.0s						
JIRN	Jiri	76.64	301	eP	P	20 45 06.4	-0.5
GUN	Gumba	76.97	301	eP	P	20 45 08.6	-0.2
	comp=Z,35nm,1.1s						
PKI	Pulchoki	77.28	301	eP	P	20 45 09.7	-0.8
	comp=Z,46nm,1.3s						
PKIN	Phulchoki	77.29	301	eP	P	20 45 10.3	-0.2
	comp=Z,36nm,1.2s						
KKN	Kakani	77.45	301	eP	P	20 45 11.3	0.0
DMN	Daman	77.54	301	eP	P	20 45 12.2	+0.3
	comp=Z,78nm,1.1s						
KDAK	Kodiak Island	77.71	25	LR	LR	21 18 59.5	
	comp=Z,67nm,18.1s,baz=238,slow=35						
GKN	Gorkha	78.05	301	eP	P	20 45 14.6	0.0
	comp=Z,73nm,1.2s						
KOLN	Koldanda	78.87	300	eP	P	20 45 18.9	-0.3
	comp=Z,101nm,1.7s						
DANN	Dangsing	78.89	301	eP	P	20 45 18.8	-0.6
	comp=Z,98nm,1.5s						
PYUN	Piuthan	79.48	301	eP	P	20 45 21.8	-0.7
	comp=Z,56nm,1.1s						
WMQ	Urumqi	80.71	317	eP	P	20 45 28.1	-0.5
WMQ				pP	pP	20 45 32.5	-1.9
WMQ				sP	pwP	20 45 42.0	+2.8
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,230nm,5.7s						
MAW	Mawson	83.76	203	LR	LR	21 19 29.4	
	comp=Z,62nm,19.1s,baz=103,slow=33						
ILAR	Eielson Array	84.05	21	P	P	20 45 44.2	-1.3
	comp=Z,1.6nm,1.0s,baz=264,slow=4.7,SNR=9.0						
	comp=Z,1.6nm,1.0s						
MK31	Makanchi Array	85.28	318	P	P	20 45 51.6	-0.6
MK31				IAmb	IAmb	20 45 53.3	
	comp=Z,8.1nm,0.9s						
MKAR	Makanchi Array	85.28	318	P	P	20 45 52.1	-0.1
	comp=Z,7.7nm,0.8s,baz=107,slow=5.6,SNR=74						
MKAR				LR	LR	21 22 25.3	
	comp=Z,40nm,21.6s,baz=72,slow=35						
	comp=Z,7.7nm,0.8s						
MKAR	Makanchi Array	85.28	318	P	P	20 45 51.9	-0.4
MAKZ	Makanchi	85.49	318	P	P	20 45 52.3	-0.9
MAKZ				IAmb	IAmb	20 45 54.3	
	comp=Z,12nm,1.0s						
ZAA0	Zalesovo Array	86.02	326	P	P	20 45 54.0	-1.7
ZALV	Zalesovo Beam	86.02	326	P	P	20 45 54.8	-0.8
	comp=Z,2.9nm,0.9s,baz=108,slow=4.8,SNR=11						
	comp=Z,2.9nm,0.9s						
ZALV	Zalesovo Beam	86.02	326	P	P	20 45 54.3	-1.3
KSH	Kashi	87.90	310	P	P	20 46 07.7	+2.4
KSH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
YBH	Yreka Blue Hor	88.70	48	LR	LR	21 18 22.3	
	comp=Z,116nm,21.4s,baz=289,slow=30						
NIL	Nilore	88.88	304	P	P	20 46 05.3	-4.7
NIL				IAmb	IAmb	20 46 10.5	
	comp=Z,8.3nm,0.9s						
AAK	Ala-Archa	89.64	313	LR	LR	21 27 10.4	
	comp=Z,31nm,20.6s,baz=56,slow=36						
NRIK	Noril'sk	90.39	341	LR	LR	21 27 44.7	
	comp=Z,56nm,19.4s,baz=130,slow=36						
NVAR	Mina Array Bea	91.41	52	P	P	20 46 23.2	+1.3
	comp=Z,4.8nm,1.1s,baz=245,slow=5.7,SNR=15						
NVAR				LR	LR	21 22 12.8	
	comp=Z,80nm,18.7s,baz=267,slow=32						
	comp=Z,4.8nm,1.1s						
NVAR	Mina Array Bea	91.41	52	P	P	20 46 22.7	+0.8
NV11	Mina Array Sit	91.53	52	P	P	20 46 23.4	+1.0
NV11				IAmb	IAmb	20 46 27.1	
	comp=Z,11nm,1.3s						
KVN	Kaiserville	91.67	51	P	P	20 46 23.9	+0.8
KVN				IAmb	IAmb	20 46 27.6	
	comp=Z,8.6nm,1.3s						
PFO	Pinyon Flats O	92.15	57	LR	LR	21 20 44.3	
	comp=Z,136nm,20.1s,baz=254,slow=31						
QSM	Queen of Sheba	92.16	54	P	P	20 46 26.8	+1.6
QSM				IAmb	IAmb	20 47 21.8	
	comp=Z,8.3nm,1.2s						
TPH	Tonopah	92.20	52	P	P	20 46 25.8	+0.2
GWY	Greenwater Val	92.35	54	P	P	20 46 26.5	+0.3
GWY				IAmb	IAmb	20 46 47.9	
	comp=Z,6.8nm,1.3s						
WCT	Wildcat Mounta	92.48	53	P	P	20 46 27.5	+0.8
WCT				IAmb	IAmb	20 46 30.7	
	comp=Z,11nm,1.3s						
KK31	Karatay Array	92.60	313	P	P	20 46 26.3	-0.8
KK31				IAmb	IAmb	20 46 28.4	
	comp=Z,9.5nm,1.7s						
KKAR	Karatay Array	92.60	313	P	P	20 46 26.3	-0.8
KKAR	Karatay Array	92.60	313	P	P	20 46 26.0	-1.1
KKAR				IAmb	IAmb	20 46 28.4	
	comp=Z,9.5nm,1.7s						
TPNV	Topopah Spring	92.80	53	P	P	20 46 30.0	+1.7
R11A	Troy Canyon, C	93.51	52	P	P	20 46 32.1	+0.5
SHPR	Sheep Range	93.60	54		P	20 46 33.0	+1.0
SHPR				IAmb	IAmb	20 46 41.0	
	comp=Z,8.5nm,1.8s						
NEW	Newport	93.76	42	LR	LR	21 24 16.0	
	comp=Z,88nm,18.1s,baz=236,slow=33						
PRN	Pahroc Range	93.81	53	P	P	20 46 33.0	0.0
C36M	Paulatuk	94.00	20	P	P	20 46 32.9	0.0
C36M				IAmb	IAmb	20 46 33.5	
	comp=Z,10nm,1.3s						
ELK	Elko	94.09	50	LR	LR	21 22 16.9	
	comp=Z,36nm,19.5s,baz=240,slow=31						
ELK	Elko	94.09	50	P	P	20 46 35.4	+1.1
ELK				IAmb	IAmb	20 46 37.0	
	comp=Z,6.2nm,1.4s						
BVAR	Borovoye Array	94.15	323	LR	LR	21 26 40.0	
	comp=Z,40nm,22.0s,baz=71,slow=34						
SPR3	Spring Creek 3	94.57	51	P	P	20 46 37.7	+1.1
SPR3				IAmb	IAmb	20 46 41.1	
	comp=Z,7.0nm,1.2s						
LPIG	La Paz	96.31	67	LR	LR	21 25 11.6	
	comp=Z,70nm,18.6s,baz=16,slow=32						
YKA	Yellowknife Ar	96.80	28	P	P	20 46 45.4	-0.4
	comp=Z,2.4nm,1.1s,baz=265,slow=4.8,SNR=14						
	comp=Z,2.4nm,1.1s						
YKA	Yellowknife Ar	96.80	28	P	P	20 46 46.0	+0.2
PDAR	Pinedale Array	98.51	48	P	P	20 46 54.5	+0.1
	comp=Z,0.3nm,0.5s,baz=254,slow=1.7,SNR=4.0						
PDAR				LR	LR	21 26 18.4	
	comp=Z,64nm,19.7s,baz=302,slow=32						
	comp=Z,0.3nm,0.5s						
GERES	GERESS Array B	128.86	329	PKP	PKPdf	20 52 23.9	+0.8
	comp=Z,0.7nm,0.8s,baz=267,slow=7.4,SNR=4.1						
ESDC	Sonseca Array	144.13	334	PKP	PKPab	20 52 49.4	+0.3
	comp=Z,2.6nm,1.1s,baz=41,slow=1.8,SNR=9.8						
PCBR	Castelo Branco	145.42	338	ePKPab	PKPab	20 52 54.4	+0.7
PMRV	Marv??o	145.74	337	ePKPab	PKPbc	20 52 55.2	+0.6
BDFB	Brasilia	146.09	134	PKPbc	PKPdf	20 52 55.8	+0.2
	comp=Z,2.9nm,0.7s,baz=170,slow=1.0,SNR=4.3						
PSBE	So Bento	146.18	339	ePKPab	PKPbc	20 52 56.5	+0.5
PMTG	Montargil	146.37	338	ePKPab	PKPdf	20 52 56.3	+1.0
PBAR	Barrancos	146.69	336	ePKPab	PKPbc	20 52 58.0	+0.5
EVO	Evora	146.76	337	ePKPab	PKPbc	20 52 57.8	+0.1
PBEJ	Beja	147.14	337	ePKPab	PKPbc	20 52 59.8	+1.0
PNCL	Nicolau / Gran	147.32	338	ePKPab	PKPbc	20 53 00.2	+0.9
MESJ	Messejana	147.44	337	ePKPab	PKPbc	20 53 00.6	+1.0
PCVE	Castro Verde	147.55	337	ePKPab	PKPbc	20 53 00.8	+0.9
PVAQ	Vaqueiros	147.62	336	ePKPab	PKPbc	20 53 01.1	+1.0
MORF	Marmelete	148.08	337	ePKPab	PKPbc	20 53 01.7	+0.3
TORD	Torodi Ar. Bea	154.69	283	PKPbc	PKiKP	20 53 18.3	+0.9
	comp=Z,0.9nm,1.0s,baz=24,slow=1.5,SNR=4.8						

IDC 01 20:52:59.5±3.9**, 6°.68S×148°.32E, h0^{km}, mb3.0**/1**,**
mbtmp3.2/2**, ML3.4**/1**, Error ellipse: s-maj=134.3km**
s-min=50.2km az=117.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.92	225	P	Pn	20 57 22.8	+0.1
	0.1nm,0.3s,baz=50,slow=11,SNR=5.3						
	0.3nm,0.3s						
ASAR	Alice Springs	21.85	218	P	P	20 57 53.4	-0.5
	0.2nm,0.3s,baz=53,slow=8.6,SNR=2.7						
	0.2nm,0.3s						
TORD	Torodi Ar. Bea	146.53	284	PKPbc	PKPdf	21 12 43.1	+0.5
	0.2nm,0.5s,baz=91,slow=3.6,SNR=1.9						

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*IDC **01** 20:59:49.9±0.8, 56°.06N×164°.98E, h0^{km}, mb3.6/14,*
mbtmp3.7/16, ML3.7/2, MS3.5/8, Error ellipse:
s-maj=25.4km s-min=13.5km az=156.0
*KRSC **01** 20:59:49.3±0.9, 55°.92N×165°.21E, h54^{km}±15^{km}, Ml4.2*
*MOS **01** 20:59:52.3±0.9, 55°.90N×165°.06E, h47^{km}, mb3.8/1, Error*
ellipse: s-maj=8.7km s-min=6.0km az=46.3
ISC 01 20:59:49.4±3.3**, 55°.95N**±0°.05×**165°.14E**±0°.05**, h2^{km}**±21^{km}**,**
n99, σ1^{s}.21/98**, mb3.6**/14**, MS3.5**/8**, Komandorsky Islands**
region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.88	147	PN	Pb	21 00 06.5	-0.9
BKI				S	Sn	21 00 19.0	-3.1
BKI	Bering	0.88	147	eP	Pb	21 00 06.5	-0.9
BKI				eS	Sn	21 00 19.0	-3.1
KBTR	Krutoberegovo	1.33	282	PN	Pn	21 00 12.4	-2.6
KBTR	Krutoberegovo	1.33	282	eP	Pn	21 00 12.4	-2.6
KBG	Krutoberegovo	1.40	284	PN	Pn	21 00 13.7	-2.3
KBG				S	Sn	21 00 31.9	-3.1
KBG	Krutoberegovo	1.40	284	eP	Pn	21 00 13.7	-2.3
KBG				eS	Sn	21 00 31.9	-3.1
SMKR	Semkarok	2.15	289	PN	Pn	21 00 25.7	-0.6
SMKR				S	Sn	21 00 52.2	-1.3
SMKR	Semkarok	2.15	289	eP	Pn	21 00 25.7	-0.6
SMKR				eS	Sn	21 00 52.2	-1.3
SRKR	Sorokina	2.33	289	PN	Pn	21 00 28.4	-0.4
SRKR	Sorokina	2.33	289	eP	Pn	21 00 28.4	-0.4
BZGR	Bezymyannyi-Gr	2.50	272	PN	Pn	21 00 31.3	+0.1
BZGR	Bezymyannyi-Gr	2.50	272	eP	Pn	21 00 31.3	+0.1
LGNR	Loginova	2.50	275	PN	Pn	21 00 31.8	+0.4
LGNR	Loginova	2.50	275	eP	Pn	21 00 31.8	+0.4
KLY	Klyuchi	2.54	280	PN	Pn	21 00 29.8	-1.8
KLY	Klyuchi	2.54	280	eP	Pn	21 00 29.8	-1.8
BZP	Bezymyannyi-Pe	2.59	271	eP	Pn	21 00 32.3	-0.2
BZWR	Bezymyannyi-We	2.61	272	PN	Pn	21 00 33.1	+0.3
BZWR	Bezymyannyi-We	2.61	272	eP	Pn	21 00 33.1	+0.3
BZMR	Bezymyannaya	2.62	272	PN	Pn	21 00 33.0	+0.2
BZMR	Bezymyannaya	2.62	272	eP	Pn	21 00 33.0	+0.2
KIRR	Kirishev	2.70	272	PN	Pn	21 00 34.4	+0.4
KIRR	Kirishev	2.70	272	eP	Pn	21 00 34.4	+0.4
KPT	Kopyto	2.77	272	PN	Pn	21 00 35.3	+0.4
KPT	Kopyto	2.77	272	eP	Pn	21 00 35.3	+0.4
KMNR	Kamenistaya	2.77	268	PN	Pn	21 00 35.4	+0.5
KMNR	Kamenistaya	2.77	268	eP	Pn	21 00 35.4	+0.5
TUMD	Tumrok D	2.79	257	eP	Pn	21 00 35.2	+0.1
TUMD				eS	Sn	21 01 09.2	-0.2
TUMR	Tumrok	2.91	259	PN	Pn	21 00 35.2	-1.6
TUMR				S	Sn	21 01 09.2	-3.2
TUMR	Tumrok	2.91	259	eP	Pn	21 00 37.5	+0.7
SRDR	Sredinnyy	3.06	279	PN	Pn	21 00 39.6	+0.8
SRDR	Sredinnyy	3.06	279	eP	Pn	21 00 39.6	+0.8
OSSR	Ossora	3.50	342	PN	Pn	21 00 43.8	-0.9
OSSR	Ossora	3.50	342	eP	Pn	21 00 43.8	-0.9
ESO	Esso	3.62	272	PN	Pn	21 00 48.4	+1.8
ESO	Esso	3.62	272	eP	Pn	21 00 48.4	+1.8
KRER	Koryakskii	4.56	237	PN	Pn	21 00 59.7	+0.1
KRER	Koryakskii	4.56	237	eP	Pn	21 00 59.7	+0.1
SMAR	Somma	4.56	237	PN	Pn	21 00 59.4	-0.2
SMAR	Somma	4.56	237	eP	Pn	21 00 59.4	-0.2
KRX	Arik	4.58	238	PN	Pn	21 01 00.3	+0.6
KRX	Arik	4.58	238	eP	Pn	21 01 00.3	+0.6
UGLR	Uglovaya	4.59	236	PN	Pn	21 00 59.7	-0.1
UGLR	Uglovaya	4.59	236	eP	Pn	21 00 59.7	-0.1
AVH	Avacha	4.59	237	PN	Pn	21 01 00.5	+0.6
AVH	Avacha	4.59	237	eP	Pn	21 01 00.5	+0.6
KOK	Koryaka	4.62	238	PN	Pn	21 01 00.9	+0.6
KOK	Koryaka	4.62	238	eP	Pn	21 01 00.9	+0.6
GNL	Ganaly	4.74	245	PN	Pn	21 01 02.6	+0.7
GNL	Ganaly	4.74	245	eP	Pn	21 01 02.6	+0.7
PET	Petropavlovsk	4.78	235	ePN	Pn	21 01 02.1	-0.3
PET				pmax	pmax		
	comp=Z,42nm,0.5s						
PET				pmax	pmax		
	comp=N,68nm,0.8s						
PET	Petropavlovsk	4.78	235	eP	Pn	21 01 02.3	-0.1
KRMR	Karymshinskiy	5.15	236	PN	Pn	21 01 07.7	+0.2
KRMR				S	Sn	21 02 05.6	-1.8
KRMR	Karymshinskiy	5.15	236	eP	Pn	21 01 07.7	+0.2
KRMR				eS	Sn	21 02 05.6	-1.8
PETK	Petropavlovsk-	5.18	240	Pn	Pn	21 01 07.4	-0.6
	comp=N,2.0nm,0.3s,baz=74,slow=17,SNR=25						
PETK				Sn	Sn	21 02 07.7	-0.6
	comp=N,1.2nm,0.3s,baz=321,slow=16,SNR=2.1						
	comp=N,3.1nm,0.4s						
RUS	Russkaya	5.25	231	PN	Pn	21 01 08.1	-0.7
RUS	Russkaya	5.25	231	eP	Pn	21 01 08.1	-0.7
MTVR	Mutnovka	5.36	233	PN	Pn	21 01 10.2	-0.3
MTVR	Mutnovka	5.36	233	eP	Pn	21 01 10.2	-0.3
GRL	Gorelyy	5.36	234	PN	Pn	21 01 10.7	+0.2
GRL	Gorelyy	5.36	234	eP	Pn	21 01 10.7	+0.2
APC	Apacha	5.56	240	PN	Pn	21 01 14.7	+1.7
APC	Apacha	5.56	240	eP	Pn	21 01 14.7	+1.7
KDTR	Khodutka, Kamc	5.88	228	PN	Pn	21 01 16.6	-0.9
KDTR	Khodutka, Kamc	5.88	228	eP	Pn	21 01 16.6	-0.9
KMSK	Kamenskaya	6.56	4	PN	Pn	21 01 27.2	+0.3
KMSK	Kamenskaya	6.56	4	eP	Pn	21 01 27.2	+0.3
PAU	Pauzhetka	6.67	231	PN	Pn	21 01 30.0	+1.6
PAU	Pauzhetka	6.67	231	eP	Pn	21 01 30.0	+1.6
SKR	Severo-Kuril's	7.55	229	PN	Pn	21 01 40.4	+0.1
SKR	Severo-Kuril's	7.55	229	eP	Pn	21 01 40.4	+0.1
ASAJ	Asahikawa	18.60	240	P	Pn	21 04 09.0	+1.1
	comp=N,1.2nm,0.3s,baz=58,slow=9.4,SNR=16						
	comp=N,5.9nm,0.5s						
KLR	Kul'dur	21.21	266	P	P	21 04 36.0	-0.2
	comp=N,0.7nm,0.6s,baz=62,slow=10,SNR=4.1						
	comp=N,0.7nm,0.6s						
KLR	Kul'dur	21.21	266	P	P	21 04 36.0	-0.2
TIXI	Tiksi	21.90	330	P	P	21 04 43.5	+0.1
	comp=N,2.1nm,0.7s,baz=270,slow=23,SNR=12						
	comp=N,2.1nm,0.7s						
USRK	Ussuriysk Ar.	24.06	255	LR	LR	21 15 19.4	
	comp=N,87nm,18.5s,baz=80,slow=39						
ILAR	Eielson Array	24.71	50	P	P	21 05 11.6	-0.1
	comp=N,0.8nm,0.8s,baz=263,slow=8.0,SNR=8.6						
	comp=N,0.8nm,0.8s						
MJAR	Matsushiro Arr	26.62	235	P	P	21 05 30.5	+1.4
	comp=N,1.9nm,0.8s,baz=42,slow=7.5,SNR=3.3						
	comp=N,1.9nm,0.8s						
KSRS	Korea Array	31.00	249	LR	LR	21 18 02.5	
	comp=N,30nm,21.0s,baz=125,slow=35						
SONM	Songino Array	36.14	282	P	P	21 06 52.3	-0.6
	comp=N,0.6nm,0.4s,baz=67,slow=8.0,SNR=14						
	comp=N,0.6nm,0.4s						
H11N2	WAKE ISLAND Hy	36.18	177	T	T	21 44 50.1	
	baz=359,slow=76,SNR=179						
H11N3	WAKE ISLAND Hy	36.20	177	T	T	21 44 51.1	
	baz=359,slow=76,SNR=148						
H11N1	WAKE ISLAND Hy	36.20	177	T	T	21 45 03.0	
	baz=359,slow=76,SNR=162						
H11S1	WAKE ISLAND Hy	37.39	178	T	T	21 46 27.1	
	baz=352,slow=74						
H11S3	WAKE ISLAND Hy	37.41	178	T	T	21 46 28.7	
	baz=352,slow=74						
H11S2	WAKE ISLAND Hy	37.41	178	T	T	21 46 31.9	
	baz=352						
YKA	Yellowknife Ar	39.06	47	P	P	21 07 17.7	+0.5
	comp=N,0.8nm,0.5s,baz=298,slow=7.9,SNR=7.3						
	comp=N,0.8nm,0.5s						
MKAR	Makanchi Array	49.55	296	P	P	21 08 40.5	-0.9
	comp=N,0.5nm,0.4s,baz=52,slow=6.9,SNR=21						
	comp=N,0.5nm,0.4s						
NVAR	Mina Array Bea	52.09	76	P	P	21 09 02.3	+1.4
	comp=N,0.5nm,0.7s,baz=289,slow=2.8,SNR=4.3						
	comp=N,0.5nm,0.7s						
PDAR	Pinedale Array	53.61	66	P	P	21 09 13.7	+1.6
	comp=N,0.2nm,0.5s,baz=343,slow=4.7,SNR=3.2						
	comp=N,0.2nm,0.5s						
FINES	FINESS Array B	58.61	338	P	P	21 09 46.5	-0.7
	comp=N,1.9nm,0.9s,baz=353,slow=10,SNR=2.4						
	comp=N,1.9nm,0.9s						
CMAR	Chiang Mai Arr	61.60	261	P	P	21 10 08.8	+0.5
	comp=N,0.9nm,0.8s,baz=17,slow=7.7,SNR=4.7						
CMAR				LR	LR	21 39 43.9	
	comp=N,25nm,18.8s,baz=185,slow=39						
	comp=N,0.9nm,0.8s						
SCHQ	Schefferville	61.72	31	LR	LR	21 39 29.8	
	comp=N,38nm,21.9s,baz=242,slow=39						
HNR	Honiara	65.28	186	LR	LR	21 36 52.8	
	comp=N,289nm,20.0s,baz=356,slow=34						
TXAR	Lajitas Array	66.87	72	P	P	21 10 43.7	+0.7
	comp=N,0.2nm,0.5s,baz=303,slow=5.0,SNR=2.4						
	comp=N,0.2nm,0.5s						
AKASG	Malin Array Be	67.60	331	LR	LR	21 42 57.3	
	comp=N,43nm,19.0s,baz=21,slow=38						
MLR	Muntele Rosu	73.26	331	LR	LR	21 45 53.5	
	comp=N,67nm,18.2s,baz=345,slow=38						
WRA	Warramunga Arr	79.96	209	P	P	21 12 00.4	+0.5
	comp=N,0.2nm,0.6s,baz=17,slow=6.1,SNR=1.7						
	comp=N,0.2nm,0.6s						
ASAR	Alice Springs	83.63	209	P	P	21 12 20.5	+1.4
	comp=N,0.3nm,0.8s,baz=13,slow=4.2,SNR=2.1						
ASAR				LR	LR	21 46 30.6	
	comp=N,14nm,20.6s,baz=194,slow=34						
	comp=N,0.3nm,0.8s						

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*IDC **01** 21:02:53.9±2.2, 43°.71N×105°.45W, h0^{km}, mb3.8/2,*
mbtmp3.6/5, ML3.3/3, Error ellipse: s-maj=67.7km
s-min=9.1km az=150.0
*NEIC **01** 21:02:55.2±2.1, 43°.66N±0°.05×105°.22W±0°.07, h0^{km}±2^{km},*
ML2.9/32, Error ellipse: s-maj=10.9km s-min=6.2km
az=318.0
ISC 01 21:02:54.2±1.0**, 43°.67N**±0°.07×**105°.21W**±0°.08**, h0^{km}, n32,**
σ1^{s}.05/31**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.96	61		Pb	21 03 13.8	-0.1
K22A	Casper	1.40	224	Pn	Pn	21 03 20.5	-0.7
K22A				IAML		21 03 45.1	
	comp=N,151nm,0.6s						
PHWY	Pilot Hill	2.37	185	Pn	Pn	21 03 35.4	+0.8
RWWY	Rawlins	2.47	217	Pn	Pn	21 03 37.3	+1.3
N23A	Red Feather La	2.82	191	Pn	Pn	21 03 41.7	+0.9
LAO	LASA Array	3.11	347	Pn	Pn	21 03 45.4	+0.8
PD31	Pinedale Array	3.31	256	Pn	Pn	21 03 47.4	-0.1
PDAR	Pinedale Array	3.31	256	Pn	Pn	21 03 48.0	+0.5
	comp=N,3.3nm,0.3s,baz=68,slow=15,SNR=39						

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PDAR                                Lg     Lg       21 04 31.8
      comp=N,3.9nm,0.3s,baz=54,slow=27,SNR=5.6
      comp=N,3.7nm,0.4s
PDAR  Pinedale Array      3.31 256  Pn     Pn       21 03 48.1 +0.7
H17A  Grant Village       3.94 283         Pn       21 03 57.0 +0.8
H17A                                IAML            21 05 00.6
      comp=N,16nm,0.7s
FLWY  Flagg Ranch         3.99 278         Pn       21 03 58.5 +1.6
FLWY                                IAML            21 05 19.6
      comp=N,15nm,2.0s
FLWY                                IAML            21 05 24.9
      comp=N,14nm,1.9s
MOOW  Moose Ponds         4.02 273         Pn       21 03 57.9 +0.6
REDW  Red Top Meadow      4.12 268         Pn       21 03 58.8 +0.2
REDW                                IAML            21 05 41.6
      comp=N,15nm,1.1s
AHID  Auburn Hatcher      4.40 260         Pn       21 04 03.5 +1.0
AHID                                IAML            21 05 20.5
      comp=N,14nm,0.9s
AHID                                IAML            21 05 34.7
      comp=N,12nm,3.6s
YHL   Hebgen Lake         4.45 287  Pn     Pn       21 04 05.2 +1.8
RDMU  Red Mountain        4.48 228         Pn       21 04 05.0 +1.3
RDMU                                IAML            21 05 24.4
      comp=E,13nm,1.3s
RDMU                                IAML            21 05 28.1
      comp=N,12nm,0.9s
DGMT  Dagmar              4.86   8         Pn       21 04 10.9 +2.3
HWUT  Hardware Ranch      5.12 248         Pn       21 04 11.7 -0.7
HWUT                                IAML            21 05 45.8
      comp=N,8.8nm,1.2s
BSUT  Blindstream Ca      5.18 235  Pn     Pn       21 04 13.1 -0.3
BSUT                                IAML            21 05 46.5
      comp=E,6.5nm,4.4s
BSUT                                IAML            21 06 37.4
      comp=N,6.0nm,4.9s
P18A  Preston Nutter      5.53 225         Pn       21 04 17.5 -0.5
SPUT  South Promonto      5.85 249  Pn     Pn       21 04 22.3 -0.1
HVU   Hansel Valley       5.88 254         Pn       21 04 23.3 +0.4
SRU   San Rafael Swe      6.06 223  Pn     Pn       21 04 26.5 +1.3
PV13  Radium Mtn., P      6.14 208  Pn     Pn       21 04 27.8 +1.4
ECSD  EROS Data Cent      6.23  86  Pn     Pn       21 04 27.9 +0.5
BGU   Big Grassy Mou      6.42 247  Pn     Pn       21 04 31.4 +1.3
HMU   Henry Mountain      7.10 218         Pn       21 04 39.8 +0.2
I10CA LAC DU BONNET       9.06  41  I      I        22 02 20.0
      baz=222,slow=326,SNR=2.6
ULM   Lac du Bonnet       9.16  41  Pn     Pn       21 05 06.4 -1.2
      comp=N,1.0nm,0.3s,baz=226,slow=10,SNR=6.3
ULM                                 Lg     Lg       21 07 37.9
      comp=N,0.2nm,0.3s,baz=135,slow=20,SNR=1.4
      comp=N,2.5nm,0.3s
NVAR  Mina Array Bea     11.19 247  Pn     Pn       21 05 36.7 +1.2
      comp=N,0.1nm,0.3s,baz=57,slow=12,SNR=3.5
      comp=N,0.4nm,0.6s
ZALV  Zalesovo Beam      82.38 354  P      P        21 15 16.8 -1.0
      comp=N,0.4nm,0.6s,baz=349,slow=4.4,SNR=2.1
      comp=N,0.4nm,0.6s
MKAR  Makanchi Array     89.68 355  P      P        21 15 53.4 -0.6
      comp=N,0.4nm,0.7s,baz=1.3,slow=3.6,SNR=4.3
      comp=N,0.4nm,0.7s
```

IDC 01 21:09:27.5±3.6,**3°.38S**×**131°.34E,h0km,mb3.2**/2,
mbtmp3.2/3,**ML3.1**/1,**Error ellipse: s-maj=234.9km**
s-min=31.3km az=72.0,Irian Jaya region

```
Code  Station Name        Δ°   AZ°  Phase ID           Time     Res
                                    Op     ISC       h  m  s    ISC
WRA   Warramunga Arr     16.72 170  Pn     P        21 13 25.0 -0.8
      0.1nm,0.3s,baz=352,slow=11,SNR=2.1
WRA                                 Sn     Sn       21 16 14.2  -16
      baz=358,slow=23,SNR=2.1
      0.2nm,0.4s
ASAR  Alice Springs      20.32 173  P      P        21 14 04.7 -0.7
      0.8nm,0.6s,baz=358,slow=9.1,SNR=13
      0.8nm,0.6s
MKAR  Makanchi Array     65.98 325  P      P        21 20 15.9  0.0
      0.1nm,0.6s,baz=140,slow=7.4,SNR=2.0
      0.1nm,0.6s
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*AEIC **01** 22:02:28.9±1.5,52°.0N±0°.1×176°.25E±0°.09,h71km±7km,*
Error ellipse: s-maj=16.8km s-min=6.3km az=200.0
*NEIC **01** 22:02:29.6±1.4,51°.9N±0°.1×176°.25E±0°.04,h58km±8km,*
mb4.2/48,ML4.0(AEIC),Error ellipse: s-maj=17.3km
s-min=3.4km az=185.0
*IDC **01** 22:02:30.6±2.1,51°.98N×176°.30E,h66km±15km,mb3.8/22,*
mbtmp4.1/25,MS3.0/13,Error ellipse: s-maj=22.1km
s-min=11.0km az=171.0
ISC 01 22:02:28.8±0.6,**51°.9N**±0°.1×**176°.19E**±0°.04,**h50km,n113,**
σ**1s.19**/101,**mb4.2**/42,**MS3.1**/11,**Rat Islands**

```
Code  Station Name        Δ°   AZ°  Phase ID           Time     Res
                                    Op     ISC       h  m  s    ISC
SHEM  Shemya Is, Ala      1.52 304  P      Pn       22 02 55.3 +1.7
      611nm,0.3s,baz=116,slow=2.5,SNR=109
SHEM                                S      Sn       22 03 15.2 +3.0
      2µm,0.3s,baz=281,slow=20,SNR=48
SMY   Shemya              1.52 304  Pn     Pn       22 02 55.3 +1.7
SMY                                 Sn     Sn       22 03 14.7 +2.5
AMKA  Amchitka            2.01 104  Pn     Pn       22 03 00.2 -0.1
AMKA                                Sn     Sn       22 03 25.0 +0.8
KIWB  Kanaga Island       4.13  88         Pn       22 03 30.2 +0.9
ADK   Adak                4.42  88  Pn     Pn       22 03 34.0 +0.8
GSTR  Great Sitkin T      4.79  85  Pn     Pn       22 03 39.2 +0.8
NIKH  Nikolski High       9.20  77  Pn     Pn       22 04 39.9 +1.2
UNV   Unalaska Valle     10.64  73  Pn     Pn       22 04 59.2 +0.8
PEA0B Petropavlovsk-     11.33 283  Pn     Pn       22 05 09.9 +2.0
PETK  Petropavlovsk-     11.33 283  P      Pn       22 05 09.8 +1.9
      1.6nm,0.5s,baz=94,slow=16,SNR=2.5
PETK                                S      Sn       22 07 05.1 -7.9
      1.8nm,0.4s,baz=248,slow=8.7,SNR=6.3
PETK                                LR     LR       22 09 49.4
      comp=Z,32nm,19.0s,baz=83,slow=38
PETK  Petropavlovsk-     11.33 283  Pn     Pn       22 05 09.4 +1.5
TNA   Tin City           15.90  25         P        22 06 11.9 +0.1
MA2   Magadan            16.16 308  LR     LR       22 11 43.8
      comp=Z,32nm,18.7s,baz=113,slow=34
SEY   Seymchan           16.80 320  P      P        22 06 20.9 -0.9
      0.3nm,0.3s,baz=58,slow=23,SNR=1.3
BILL  Bilibino           16.89 347         P        22 06 23.2 +0.5
P18K  Big Mountain,      17.67  54         P        22 06 32.3 +0.8
P18K                                IAmb   IAmb     22 06 41.4
      comp=Z,26nm,1.4s
N19K  Bonanza Creek      18.38  50  P      Pn       22 06 41.1 +1.3
N19K                                IAmb   IAmb     22 06 48.3
      comp=Z,12nm,0.8s
TTA   Tatalina           18.43  42         Pn       22 06 40.9 +0.6
P19K  Oil Pt             18.72  54  P      P        22 06 42.8 -0.2
KDAK  Kodiak Island      18.80  60  P      P        22 06 43.2 -0.6
      comp=Z,7.7nm,0.3s,baz=239,slow=5.7,SNR=30
KDAK  Kodiak Island      18.80  60  P      P        22 06 43.0 -0.8
ILSW  Iliamna Southw     18.83  53  P      Pn       22 06 45.9 +0.6
ILSW                                IAmb   IAmb     22 06 55.4
      comp=Z,33nm,1.1s
RDOG  Red Dog Mine       19.10  24  P      Pn       22 06 47.3 -0.9
CNPM  China Poot         19.70  54  P      P        22 06 53.5 -0.2
CNPM                                IAmb   IAmb     22 07 08.2
      comp=Z,22nm,1.1s
CAST  Castle Rocks       20.26  43  P      P        22 06 59.9 +0.1
CAST                                IAmb   IAmb     22 07 16.4
      comp=Z,9.0nm,1.2s
SUA   Susitna One        20.30  49  P      P        22 07 00.0 -0.3
SUA                                 IAmb   IAmb     22 07 06.6
      comp=Z,9.1nm,0.7s
IMAR  Indian Mountai     20.66  36  P      P        22 07 04.3 +0.3
SEW   Seward             20.68  53  P      P        22 07 03.8 -0.4
KTH   Kantishna Hill     20.80  43  P      P        22 07 05.2 -0.4
H21K  Melozitna Rive     20.86  37  P      P        22 07 05.7 -0.4
PWL   Port Wells         21.34  51  P      P        22 07 11.6 +0.3
PWL                                 IAmb   IAmb     22 07 14.4
      comp=Z,16nm,0.8s
SML   Sawmill            21.50  49  P      P        22 07 13.7 +0.6
SML                                 IAmb   IAmb     22 07 16.8
      comp=Z,13nm,0.8s
NEA2  Nenana             21.91  41  P      P        22 07 17.6 +0.2
NEA2                                IAmb   IAmb     22 07 20.8
      comp=Z,8.8nm,0.6s
SCM   Sheep Creek Mo     21.98  49  P      P        22 07 18.1 -0.2
WRH   Wood River Hil     22.27  42  P      P        22 07 20.3 -0.9
CCB   Clear Creek Bu     22.44  42  P      P        22 07 22.1 -1.0
H24K  Noodor Dome        22.80  39  P      P        22 07 26.7 -0.3
IL31                     22.85  42  P      P        22 07 26.4 -1.1
ILAR  Eielson Array      22.85  42  P      P        22 07 26.6 -0.9
      comp=Z,0.8nm,0.5s,baz=265,slow=6.0,SNR=24
      comp=Z,0.8nm,0.5s
TOLK  Toolik Lake Re     23.36  31  P      P        22 07 32.4 -0.1
TOLK                                IAmb   IAmb     22 07 35.9
      comp=Z,7.8nm,0.9s
ASAJ  Asahikawa          23.62 264  P      P        22 07 36.6 +1.6
      comp=Z,6.0nm,0.8s,baz=56,slow=2.5,SNR=4.4
      comp=Z,6.0nm,0.8s
DOT   Dot Lake           23.79  45  P      P        22 07 35.6 -1.0
SCRK  Sand Creek         23.88  44  P      P        22 07 36.6 -0.9
SCRK                                IAmb   IAmb     22 07 39.2
      comp=Z,4.3nm,0.4s
FYU   Fort Yukon         24.05  38  P      P        22 07 39.4 +0.5
FYU                                 IAmb   IAmb     22 07 47.5
      comp=Z,3.9nm,0.7s
J26L  Joseph Creek       24.17  43  P      P        22 07 38.7 -1.4
J26L                                IAmb   IAmb     22 07 42.0
      comp=Z,5.7nm,0.8s
BCAR  Beaver Creek A     24.71  47  P      P        22 07 44.8 -0.2
EGAK  Eagle              25.24  43  P      P        22 07 49.1 -0.6
EGAK                                IAmb   IAmb     22 08 03.3
      comp=Z,5.4nm,0.9s
DAWY  Dawson             25.90  45  P      P        22 07 55.9 +0.2
DAWY                                IAmb   IAmb     22 07 58.4
      comp=Z,4.5nm,0.7s
I29M  Ogilvie Camp,      26.53  42  P      P        22 08 00.8 -0.6
I29M                                IAmb   IAmb     22 08 17.3
      comp=Z,3.4nm,0.8s
HYT   Haines Junctio     26.62  52  P      P        22 08 02.8 +0.4
KLR   Kul'dur            28.02 282  P      P        22 08 15.7 +0.8
      comp=Z,1.1nm,0.5s,baz=57,slow=7.8,SNR=7.6
KLR                                 LR     LR       22 19 14.5
      comp=Z,25nm,21.0s,baz=58,slow=36
      comp=Z,1.1nm,0.5s
TIXI  Tiksi              28.65 331  LR     LR       22 18 45.8
      comp=Z,34nm,21.9s,baz=65,slow=34
INK   Inuvik             28.85  36  P      P        22 08 21.7 -0.3
      comp=Z,0.4nm,0.4s,baz=269,slow=11,SNR=5.3
      comp=Z,0.4nm,0.4s
INK   Inuvik             28.85  36  P      P        22 08 21.3 -0.7
H11N2 WAKE ISLAND Hy     32.93 196  T      T        22 44 20.0
      baz=11,slow=76,SNR=281
H11N3 WAKE ISLAND Hy     32.94 196  T      T        22 44 18.9
      baz=11,slow=76,SNR=300
H11N1 WAKE ISLAND Hy     32.95 196  T      T        22 44 20.8
      baz=11,slow=76,SNR=306
H11S1 WAKE ISLAND Hy     34.16 196  T      T        22 45 54.7
      baz=10,slow=76
H11S3 WAKE ISLAND Hy     34.17 196  T      T        22 45 55.9
      baz=10,slow=76
H11S2 WAKE ISLAND Hy     34.17 196  T      T        22 45 56.0
      baz=10,slow=76
KSRS  Korea Array        36.53 266  LR     LR       22 23 24.6
      comp=Z,7.6nm,21.7s,baz=165,slow=34
YKA   Yellowknife Ar     37.12  46  P      P        22 09 34.0  0.0
      comp=Z,0.5nm,0.5s,baz=287,slow=8.4,SNR=7.1
YKA                                 LR     LR       22 25 43.1
      comp=Z,31nm,18.1s,baz=314,slow=38
      comp=Z,0.5nm,0.5s
JNU   Nakatsue           37.58 258  LR     LR       22 23 19.4
      comp=Z,18nm,21.1s,baz=222,slow=33
YBH   Yreka Blue Hor     41.87  79  LR     LR       22 24 11.8
      comp=Z,34nm,20.7s,baz=7.5,slow=31
ULN   Ulaanbaatar        43.20 293  P      P        22 10 24.7  0.0
ULN                                 IAmb   IAmb     22 10 26.4
      comp=Z,1.9nm,0.7s
SONM  Songino Array      43.59 294  P      P        22 10 28.8 +0.9
      comp=Z,2.0nm,0.5s,baz=66,slow=7.1,SNR=29
SONM                                LR     LR       22 29 18.0
      comp=Z,28nm,21.3s,baz=12,slow=37
      comp=Z,2.0nm,0.5s
SONM  Songino Array      43.59 294  P      P        22 10 27.9 +0.1
SONM                                IAmb   IAmb     22 10 29.1
      comp=Z,1.6nm,0.6s
ELK   Elko               46.97  75  LR     LR       22 27 12.7
      comp=Z,40nm,21.5s,baz=83,slow=32
PDAR  Pinedale Array     49.09  70  P      P        22 11 11.9 +0.7
      comp=Z,0.2nm,0.4s,baz=298,slow=3.2,SNR=4.3
      comp=Z,0.2nm,0.4s
SPB2  Spitsbergen Ar     49.59 355  P      P        22 11 13.7 -0.5
ZALV  Zalesovo Beam      51.36 311  PcP    PcP      22 12 41.9  0.0
      comp=Z,0.4nm,0.5s,baz=54,slow=2.6,SNR=3.9
FRB   Frobisher Bay      54.16  30  P      P        22 11 47.0 -1.3
      comp=Z,2.7nm,0.4s,baz=309,slow=8.0,SNR=13
      comp=Z,2.7nm,0.4s
KURK  Kurchatov          56.35 311  P      P        22 12 03.8 -0.5
KURBB Kurchatov Arra     56.46 311  P      P        22 12 05.4 +0.3
      comp=Z,3.5nm,0.7s,baz=46,slow=6.4,SNR=34
      comp=Z,3.5nm,0.7s
ARCES ARCESS Array B     56.98 348  P      P        22 12 08.0 -0.6
      comp=Z,4.1nm,1.1s,baz=24,slow=8.5,SNR=7.3
      comp=Z,4.1nm,1.1s
MK31  Makanchi Array     57.22 305  P      P        22 12 09.8 -0.8
MK31                                IAmb   IAmb     22 12 10.7
      comp=Z,1.8nm,1.0s
MKAR  Makanchi Array     57.22 305  P      P        22 12 10.0 -0.6
      comp=Z,1.3nm,0.4s,baz=54,slow=6.0,SNR=54
      comp=Z,1.3nm,0.4s
MKAR  Makanchi Array     57.22 305  P      P        22 12 10.0 -0.6
MAKZ  Makanchi           57.37 306  P      P        22 12 11.4 -0.2
MAKZ                                IAmb   IAmb     22 12 11.8
      comp=Z,2.2nm,0.7s
BVAR  Borovoye Array     58.42 317  P      P        22 12 19.0 +0.1
      comp=Z,2.3nm,0.4s,baz=52,slow=7.3,SNR=34
      comp=Z,2.3nm,0.4s
BRVK  Borovoye           58.44 317  P      P        22 12 19.1 +0.1
PZH   PanZhiHua          60.18 276  P      P        22 12 32.0 +0.4
PZH                                 pmax   pmax
      comp=Z,10.0nm,0.5s
PZH                                 pmax   pmax
      comp=Z,80nm,4.4s
ARU   Arti               60.45 326  P      P        22 12 32.5 -0.3
SCHQ  Schefferville      61.47  36  P      P        22 12 38.1 -1.7
      comp=Z,1.9nm,0.8s,baz=302,slow=9.5,SNR=1.7
      comp=Z,1.9nm,0.8s
TX31  Lajitas Ar. Si     61.63  78  P      P        22 12 41.1 -0.3
TXAR  Lajitas Array      61.63  78  P      P        22 12 41.0 -0.4
      comp=Z,1.1nm,0.7s,baz=299,slow=4.1,SNR=9.6
      comp=Z,1.1nm,0.7s
TXAR  Lajitas Array      61.63  78  P      P        22 12 40.5 -0.8
TARG  Taragay, Kyrgy     63.07 304  P      P        22 12 52.0 +0.8
TARG                                IAmb   IAmb     22 13 03.3
      comp=Z,3.2nm,1.5s
AAK   Ala-Archa          64.08 307  P      P        22 12 58.1 +0.5
      comp=Z,1.3nm,0.5s,baz=86,slow=3.0,SNR=11
AAK                                 LR     LR       22 42 38.0
      comp=Z,30nm,19.0s,baz=358,slow=38
      comp=Z,1.3nm,0.5s
AAK   Ala-Archa          64.08 307  P      P        22 12 58.0 +0.4
AAK                                 IAmb   IAmb     22 12 58.9
      comp=Z,2.3nm,0.9s
FIA1  FINESS Array S     64.51 345  P      P        22 12 58.2 -1.6
FINES FINESS Array B     64.51 345  P      P        22 12 59.0 -0.8
      comp=Z,0.7nm,0.4s,baz=19,slow=6.4,SNR=16
      comp=Z,0.7nm,0.4s
ABKAR Akbulak array      65.57 320  P      P        22 13 07.2 +0.3
ABKAR Akbulak array      65.57 320  P      P        22 13 07.0 +0.1
ABKAR                               IAmb   IAmb     22 13 08.3
      comp=Z,2.8nm,1.1s
KKAR  Karatay Array      65.68 309  P      P        22 13 07.7  0.0
KKAR  Karatay Array      65.68 309  P      P        22 13 07.6 -0.1
KKAR                                IAmb   IAmb     22 13 08.3
      comp=Z,2.0nm,0.8s
NC204 NORSAR Array S     66.57 352  P      P        22 13 12.4 -0.7
NB2   NORSAR Subarra     66.76 352  P      P        22 13 13.7 -0.7
      comp=Z,0.6nm,0.6s,baz=8.2,slow=6.5
NOA   NORSAR Array B     66.76 352  P      P        22 13 13.5 -0.9
      comp=Z,1.8nm,0.8s,baz=11,slow=6.5,SNR=5.5
      comp=Z,1.8nm,0.8s
CMAR  Chiang Mai Arr     67.86 272  P      P        22 13 22.7 +0.8
      comp=Z,1.5nm,0.3s,baz=29,slow=6.1,SNR=4.4
CMAR                                LR     LR       22 44 50.8
      comp=Z,8.0nm,20.5s,baz=190,slow=37
      comp=Z,1.5nm,0.3s
AKASG Malin Array Be     74.00 339  P      P        22 13 58.1 -0.5
      comp=Z,1.6nm,0.5s,baz=23,slow=6.4,SNR=5.7
      comp=Z,1.6nm,0.5s
GEYT  Alibeck            75.52 314  P      P        22 14 08.8 +1.0
      comp=Z,1.2nm,0.6s,baz=21,slow=4.9,SNR=4.6
      comp=Z,1.2nm,0.6s
GNI   Garni              79.06 324  LR     LR       22 54 09.4
      comp=Z,33nm,18.3s,baz=306,slow=39
KBA   Koelnbreinsper     80.30 348 iP      P        22 14 35.4 +1.1
      comp=Z,4.8nm,0.6s
WRA   Warramunga Arr     80.33 220  P      P        22 14 34.0 -0.4
      comp=Z,0.5nm,0.6s,baz=29,slow=5.0,SNR=2.0
      comp=Z,0.5nm,0.6s
SOKA  Soboth             80.47 347 iP      P        22 14 36.0 +0.9
      comp=Z,1.4nm,0.5s
OBKA  Obir               80.70 347 eP      P        22 14 36.7 +0.4
      comp=Z,2.6nm,0.5s
ASAR  Alice Springs      83.86 218  P      P        22 14 52.6 -0.3
      comp=Z,0.4nm,0.4s,baz=3.4,slow=4.6,SNR=2.4
      comp=Z,0.4nm,0.4s
TORD  Torodi Ar. Bea    115.04 354  PKP    PKiKP    22 21 03.4 -1.0
      comp=Z,0.3nm,0.7s,baz=18,slow=1.4,SNR=5.1
DBIC  Dimbokro          121.65   1  PKP    PKPdf    22 21 16.3 -0.8
      comp=Z,1.3nm,0.6s,baz=355,slow=1.8,SNR=4.3
H03N2 Juan Fernandez    124.30 102  T      T        00 38 44.4
      baz=314,slow=77,SNR=4.6
H03N1 Juan Fernandez    124.32 102  T      T        00 38 45.2
      baz=314,slow=77,SNR=5.8
H03N3 Juan Fernandez    124.32 102  T      T        00 38 47.3
      baz=314,slow=77,SNR=4.4
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*DJA **01** 22:04:30.8±0.1,6°S±2°×11°3E±°,h593km±2km,M4.4/43,*
mb4.6/43,mB5.0/24,MLv4.8/30,Mw(mB)4.3/24,
MwMwp4.9/1,Mwp5.2/1
*NEIC **01** 22:04:31.1±2.3,6°.12S±0°.08×113°.08E±0°.10,h584km±6km,*
mb4.6/98,Error ellipse: s-maj=14.1km s-min=11.6km
az=63.0
*IDC **01** 22:04:32.1±0.7,6°.03S×113°.10E,h605km±6km,mb3.9/32,*
mbtmp4.9/33,Error ellipse: s-maj=11.3km s-min=6.7km
az=57.0
ISC 01 22:04:30.9±0.4,**6°.14S**±0°.05×**113°.07E**±0°.05,**h597km**±4km,
h599km:pP-P,n401,σ**1s.07**/433,**mb4.5**/79,**2C-1D,Jawa**

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Code  Station Name        Δ°   AZ°  Phase ID           Time     Res
                                    Op     ISC       h  m  s    ISC
BWJI  Bawean              0.50 304  P      P        22 05 40.2 -0.9
GRJI  Gresik              0.97 217  P      P        22 05 42.5 +0.7
TBJI  Tambak Boyo         1.39 241  P      P        22 05 43.4 +0.5
BLJI  Banyuglugur         1.68 162  P      P        22 05 44.2 +0.4
ABJI  Asem Bagus          2.01 145  P      P        22 05 45.8 +0.8
NGJI  Ngawi               2.02 233  P      P        22 05 46.6 +1.6
UWJI  Ujung Watu          2.13 262  P      P        22 05 45.8 +0.3
UWJI                                S      S        22 06 46.4 +0.2
PWJI  Pagerwojo           2.26 214  P      P        22 05 45.7 -0.4
PWJI                                S      S        22 06 45.6 -1.6
JAGI  Jajag, Banyuwa      2.55 155  P      P        22 05 46.4 -1.1
JAGI  Jajag, Banyuwa      2.55 155  P      P        22 05 46.8 -0.7
JAGI  Jajag, Banyuwa      2.55 155  P      P        22 05 46.5 -1.0
JAGI                                S      S        22 06 46.2 -3.6
SMRI  Semarang            2.77 251  P      P        22 05 49.3 +0.7
SMRI  Semarang            2.77 251  P      P        22 05 49.4 +0.8
SMRI  Semarang            2.77 251  P      P        22 05 49.3 +0.7
SMRI                                S      S        22 06 52.2 +0.4
SRBI  Singaraja           2.87 132  P      P        22 05 49.3 +0.2
SRBI                                S      S        22 06 52.0 -0.8
UGM   Wanagama            3.09 235  P      P        22 05 50.0 -0.4
UGM   Wanagama            3.09 235  P      P        22 05 50.4  0.0
UGM   Wanagama            3.09 235  P      P        22 05 50.1 -0.3
UGM                                 S      S        22 06 52.4 -2.7
BBKI  Banjar Baru         3.19  34  P      P        22 05 51.4 +0.4
YOGI  Yogyakarta          3.23 239  P      P        22 05 51.0 -0.2
YOGI                                S      S        22 06 53.6 -2.9
DNP   Denpasar            3.29 140  P      P        22 05 51.3 -0.3
IGBI  Denpasar            3.36 143  P      P        22 05 50.9 -1.1
IGBI                                S      S        22 06 54.0 -4.0
PBKI  Pangkalan Bun       3.69 338  P      P        22 05 55.0 +0.9
KPJI  Karang Pucung       4.28 254  P      P        22 05 58.3 +0.1
KPJI                                S      S        22 07 08.9 -0.5
TWSI  Taliwang, Sumb      4.58 125  P      P        22 05 58.7 -1.7
TWSI                                S      S        22 07 07.9 -5.4
JCJI  Jatiwangi           4.79 266  P      P        22 06 02.9 +0.9
CMJI  Cimerak             4.88 250  P      P        22 06 01.1 -1.6
PLAI  Plampang            5.37 120  P      P        22 06 04.6 -2.1
PLAI  Plampang            5.37 120  P      P        22 06 04.4 -2.3
BBJI  Bungbulang          5.54 256  P      P        22 06 07.3 -0.9
CNJI  Cibinong            6.02 259  P      P        22 06 10.8 -1.3
      155nm,1.2s,3µm1.5nm
BKB   Balikpapan          6.16  38  P      P        22 06 15.7 +2.3
BKB   Balikpapan          6.16  38  P      P        22 06 16.8 +3.4
BKB   Balikpapan          6.16  38  P      P        22 06 16.4 +3.0
      761nm,0.8s,6µm2.5nm
CBJI  Citeko              6.19 267  P      P        22 06 12.4 -1.2
      233nm,0.8s,5µm1.4nm
TPI   Tanjungpandan       6.36 302  P      P        22 06 15.6 +0.4
      99nm,0.8s
SKJI  Sukabumi            6.53 262  P      P        22 06 15.2 -1.5
KAPI  Kappang             6.74  81  P      P        22 06 17.8 -0.7
      14nm,0.3s,baz=236,slow=6.6,SNR=6.2
KAPI                                S      S        22 07 47.4 +0.9
      7.8nm,0.7s,baz=164,slow=22,SNR=1.1
KAPI  Kappang             6.74  81  P      P        22 06 17.6 -1.0
KAPI  Kappang             6.74  81  P      P        22 06 18.0 -0.5
SPSI  Sidrap Palu         7.01  72  P      P        22 06 21.0  0.0
      45nm,1.2s,0.1nm
BKSI  Bulukumba           7.06  84  P      P        22 06 21.2 -0.2
      24nm,0.8s,606nm0.2nm
CGJI  Cibinong            7.35 266  P      P        22 06 22.4 -1.7
      146nm,1.0s,8µm1.9nm
BSSI  Bau Bau, Buton      7.37  90  P      P        22 06 24.7 +0.4
      37nm,0.8s,0.2nm
PPBI  Pangkal Pinang      7.97 299  P      P        22 06 30.1 +0.2
      73nm,1.0s,4µm0.2nm
KSM   Kuching             8.05 340  P      P        22 06 31.1 +0.4
KSM   Kuching             8.05 340  P      P        22 06 31.9 +1.2
BASI  Baing, Sumba        8.46 119  P      P        22 06 33.0 -1.6
      122nm,1.2s
XMI   Christmas Isla      8.47 239  P      P        22 06 34.2 -0.5
KASI  Kota Agung          8.56 274  P      P        22 06 33.7 -1.8
      57nm,0.9s
SBUM  Sibu                8.57 354  P      P        22 06 36.2 +0.5
PMBI  Palembang           8.87 291  P      P        22 06 39.4 +0.8
MDSI  Maura Dua           9.01 280  P      P        22 06 39.3 -0.6
      9.2nm,1.1s
LWLI  Liwa                9.04 277  P      P        22 06 39.3 -1.1
      51nm,0.8s,2µm
MPSI  Mapaga              9.37  47  P      P        22 06 44.2 +0.7
      286nm,0.7s,2µm
MMRI  Maumere             9.42 106  P      P        22 06 44.7 +0.7
      34nm,0.9s
DSRI  Dabo               10.17 303  P      P        22 06 52.4 +1.0
      13nm,0.9s
MNAI  Manna              10.23 279  P      P        22 06 51.4 -0.6
MNAI  Manna              10.23 279  P      P        22 06 51.6 -0.4
MNAI  Manna              10.23 279  P      P        22 06 51.3 -0.7
      71nm,0.9s
TOLI2 Tolitoli           10.54  47  P      P        22 06 55.4 +0.4
TOLI2 Tolitoli           10.54  47  P      P        22 06 55.5 +0.4
LUWI  Luwuk              10.92  63  P      P        22 06 59.3 +0.4
LUWI  Luwuk              10.92  63  P      P        22 06 59.7 +0.8
      122nm,0.8s,16µm
MRSI  Marisa             11.02  54  P      P        22 06 58.7 -1.2
      76nm,1.0s,646nm
TPRI  Tanjung Pinang     11.04 309  P      P        22 07 01.3 +1.2
      62nm,1.1s
SOEI  Soe                11.65 109  P      P        22 07 06.4  0.0
SOEI  Soe                11.65 109  P      P        22 07 03.9 -2.5
      30nm,0.9s
GTOI  Gorontalo          11.98  56  P      P        22 07 07.8 -1.8
      68nm,0.9s,578nm
MYLDM Lahad Datu         12.48  26  P      P        22 07 17.0 +2.5
KKM   Kota Kinabalu      12.50  15  P      P        22 07 13.8 -1.1
KKM   Kota Kinabalu      12.50  15  P      P        22 07 14.1 -0.8
SDSI  Sungai Dareh       12.72 294  P      P        22 07 16.6 -0.4
      14nm,0.8s
PPSI  Pulau Pagai        13.45 284  P      P        22 07 24.0 -0.5
      50nm,1.2s
NLAI  Namlea             14.27  79  P      P        22 07 33.8 +1.2
      22nm,0.7s
LBMI  Labuha             15.40  70  P      P        22 07 45.1 +2.1
      81nm,0.8s
TNTI  Ternate            15.83  65  P      P        22 07 48.1 +1.1
TNTI  Ternate            15.83  65  P      P        22 07 48.5 +1.5
      85nm,1.1s,1µm
IPM   Ipoh               16.00 311  P      P        22 07 49.0 +0.4
IPM                                 IAmb   IAmb     22 07 52.5
      comp=Z,21nm,1.2s
GIRL  Giralia            16.45 176  P      P        22 07 53.8 +1.3
GIRL  Giralia            16.45 176  P      P        22 07 53.8 +1.3
RPSI  Rantau Prapat      16.63 301  P      P        22 07 55.2 +0.9
RPSI                                IAmb   IAmb     22 07 56.6
      comp=Z,20nm,0.6s
PSA00 Pilbara Seismi     16.69 158  P      P        22 07 54.9 +0.2
PSA00 Pilbara Seismi     16.69 158  P      P        22 07 55.1 +0.4
PSA00                               IAmb   IAmb     22 07 56.8
      comp=Z,41nm,0.8s
PSA00 Pilbara Seismi     16.69 158  P      P        22 07 55.2 +0.5
PSI   Prapat             16.69 302  P      P        22 07 55.3 +0.3
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FITZ  Fitzroy Crossi    17.08 135  P      P       22 07 59.1 +0.7
FITZ  Fitzroy Crossi    17.08 135  P      P       22 07 58.6 +0.3
      comp=Z,5.1nm,0.8s
GSI   Gunungsitoli      17.15 295  P      P       22 07 59.0 -0.1
GSI                                IAmb   IAmb    22 08 06.9
      comp=Z,17nm,0.8s
GSI   Gunungsitoli      17.15 295  P      P       22 07 59.9 +0.8
KNRA  Kununurra         18.07 123  P      P       22 08 07.7 +0.3
KNRA  Kununurra         18.07 123  P      P       22 08 07.7 +0.3
SWI   Sorong            18.89  75  P      P       22 08 15.5 +0.6
      comp=Z,46nm,0.8s
MTN   Manton Dam        19.01 112  P      P       22 08 16.1 +0.1
MTN                                IAmb   IAmb    22 08 17.6
      comp=Z,32nm,1.4s
MTN   Manton Dam        19.01 112  P      P       22 08 16.2 +0.2
FAKI  Fak Fak           19.38  81  P      P       22 08 20.1 +0.8
FAKI                               IAmb   IAmb    22 08 21.3
      comp=Z,35nm,1.2s
FAKI  Fak Fak           19.38  81  P      P       22 08 20.3 +0.9
KDU   Kakadu            20.20 110  P      P       22 08 26.6 -0.2
MEEK  Meekatharra       21.06 166  P      P       22 08 35.0 +0.6
MORW  Morawa            22.98 173  P      P       22 08 52.3 +0.9
MORW  Morawa            22.98 173  P      P       22 08 52.3 +0.9
WRKA  Warakurna         23.79 144  P      P       22 08 59.1 +0.4
BLDU  Ballidu           24.59 172  P      P       22 09 06.3 +0.7
WRA   Warramunga Arr    24.80 126  P      P       22 09 08.2 +0.5
      comp=Z,3.3nm,0.4s,baz=308,slow=9.3,SNR=22
WRA                                PcP    PcP     22 12 22.8 -0.2
      comp=Z,3.6nm,0.7s,baz=305,slow=1.9,SNR=10
WRA                                S      S       22 12 46.5 -3.2
      comp=Z,5.8nm,0.9s,baz=293,slow=17,SNR=12
WRA                                ScP    ScP     22 15 06.2 -0.1
      comp=Z,4.8nm,0.6s,baz=323,slow=2.1,SNR=19
      comp=Z,3.3nm,0.4s
WRAB  Tennant Creek     24.81 126  P      P       22 09 08.2 +0.4
WRAB                               IAmb   IAmb    22 09 09.0
      comp=Z,6.3nm,0.6s
WRAB  Tennant Creek     24.81 126  P      P       22 09 08.1 +0.4
KLBR  Kellerberrin      25.70 171  P      P       22 09 16.1 +0.7
MUN   Mundaring         25.88 174  P      P       22 09 17.9 +1.0
KMBL  Kambalda          26.42 163  P      P       22 09 22.1 +0.3
AS31  Alice Springs     26.56 133  P      P       22 09 23.6 +0.5
AS31                               IAmb   IAmb    22 09 24.5
      comp=Z,3.9nm,0.5s
ASAR  Alice Springs     26.56 133  P      P       22 09 23.8 +0.7
      comp=Z,6.4nm,0.4s,baz=312,slow=8.8,SNR=122
ASAR                               PcP    PcP     22 12 27.6 +0.5
      comp=Z,4.0nm,0.6s,baz=332,slow=2.0,SNR=23
ASAR                               S      S       22 13 14.6 -2.4
      comp=Z,6.9nm,0.9s,baz=310,slow=16,SNR=17
ASAR                               ScP    ScP     22 15 11.6 +0.2
      comp=Z,4.9nm,0.8s,baz=327,slow=2.2,SNR=17
ASAR                               ScS    ScS     22 19 00.9 -2.4
      comp=Z,0.3nm,0.5s,baz=293,slow=4.8,SNR=2.1
      comp=Z,6.4nm,0.4s
ASAR  Alice Springs     26.56 133  P      P       22 09 23.7 +0.7
ASAR                               PcP    PcP     22 12 27.2 +0.1
AS01  Alice Springs     26.59 133  P      P       22 09 23.8 +0.4
PBA   Port Blair        26.86 311  P      P       22 09 26.3 +0.5
GENI  Genyem            27.24  84  P      P       22 09 31.2 +2.0
PHRA  Phrae             27.56 333  P      P       22 09 32.5 +0.6
CMAR  Chiang Mai Arr    28.13 331  P      P       22 09 38.4 +1.5
      comp=Z,2.9nm,0.8s,baz=162,slow=6.9,SNR=17
CMAR                               ScP    ScP     22 15 15.9 -0.4
      comp=Z,1.6nm,0.3s,baz=198,slow=3.0,SNR=5.2
      comp=Z,2.9nm,0.8s
CMAR  Chiang Mai Arr    28.13 331  P      P       22 09 37.7 +0.9
FORT  Forrest           28.27 152  P      P       22 09 38.9 +1.0
FORT  Forrest           28.27 152  P      P       22 09 39.0 +1.2
RKGY  Rocky Gully       28.56 173  P      P       22 09 41.9 +1.6
CRAI  Chiangrai         29.02 335  P      P       22 09 45.5 +0.9
QIS   Mount Isa         29.45 122  P      P       22 09 48.8 +0.5
COEN  Coen              30.61 107  P      P       22 09 58.4 +0.1
COEN                               IAmb   IAmb    22 09 59.3
      comp=Z,18nm,0.7s
SSLB  Suanglung         30.72  14  P      P       22 09 59.9 +0.8
MULG  Mulgathing        31.09 143  P      P       22 10 02.9 +0.8
NACB  Ninganchiao       31.25  15  P      P       22 10 03.2 -0.3
NACB                               IAmb   IAmb    22 10 26.8
      comp=Z,20nm,0.9s
NACB  Ninganchiao       31.25  15  P      P       22 10 03.4 -0.1
YHNB  Yeheng            31.67  14  P      P       22 10 07.9 +0.7
YHNB  Yeheng            31.67  14  P      P       22 10 08.2 +1.0
YOJ   Yonaguni jima     31.92  17  P      P       22 10 08.9 -0.2
KMI   Kunming           32.66 342 ⇑P      P       22 10 19.4 +3.7
KMI                                pmax   pmax
      comp=Z,12nm,0.8s
MTSU  Mount Surprise    32.72 114  P      P       22 10 17.3 +1.1
LCRK  Leigh Creek       33.81 139  P      P       22 10 26.3 +1.2
PMG   Port Moresby      33.92  98  P      P       22 10 27.3 +1.1
      comp=Z,23nm,0.6s,baz=266,slow=3.0,SNR=10
      comp=Z,23nm,0.6s
PMG   Port Moresby      33.92  98  P      P       22 10 27.0 +0.8
TNCH  TengChong         34.06 336⇑eP      P       22 10 29.3 +1.8
TNCH                               pP     PP      22 12 08.6 -2.1
TNCH                               pmax   pmax
      comp=Z,8.0nm,0.9s
BBOO  Buckleboo         34.09 144  P      P       22 10 27.7 +0.3
BBOO                               IAmb   IAmb    22 10 28.5
      comp=Z,11nm,0.5s
BBOO  Buckleboo         34.09 144  P      P       22 10 27.9 +0.5
PZH   PanZhiHua         34.26 342  P      P       22 10 31.1 +2.1
PZH                                pmax   pmax
      comp=Z,10.0nm,0.9s
PZH                                pmax   pmax
      comp=Z,80nm,4.4s
CTAO  Charters Tower    35.07 116  P      P       22 10 36.6 +0.9
CTAO                               IAmb   IAmb    22 10 37.9
      comp=Z,12nm,0.9s
HTT   Hallett           36.24 142  P      P       22 10 46.4 +1.2
ENH   Enshi             36.36 355  P      P       22 10 46.6 +0.4
ENH   Enshi             36.36 355  P      P       22 10 47.1 +0.9
STKA  Stephens Creek    36.95 137  P      P       22 10 52.1 +1.0
      comp=Z,4.0nm,0.3s,baz=317,slow=7.5,SNR=17
      comp=Z,4.0nm,0.3s
STKA  Stephens Creek    36.95 137  P      P       22 10 51.9 +0.8
STKA  Stephens Creek    36.95 137  P      P       22 10 52.2 +1.1
SHL   Shillong          37.65 328  P      P       22 10 56.9 -0.1
CMSA  Cobar Meteorol    39.61 134  P      P       22 11 14.2 +1.7
ARPS  Mount Arapiles    40.25 143  P      P       22 11 18.7 +1.2
EIDS  Eidsvold          41.06 122  P      P       22 11 24.9 +0.8
ODAN  Odare             41.17 324 eP      P       22 11 25.5 +0.3
      comp=Z,89nm,0.9s
TAPN  Taplejung         41.35 325 eP      P       22 11 27.6 +0.9
LSA   Lhasa             41.39 331  P      P       22 11 28.2 +1.0
LSA                                pmax   pmax
      comp=Z,21nm,0.8s
LSA   Lhasa             41.39 331  P      P       22 11 27.8 +0.6
LSA                                IAmb   IAmb    22 11 29.5
      comp=Z,15nm,0.9s
RAMN  Ramite            41.70 323 eP      P       22 11 29.7 +0.3
      comp=Z,46nm,0.9s
JIRN  Jiri              42.47 324 eP      P       22 11 36.2 +0.6
      comp=Z,146nm,0.6s
GUN   Gumba             42.84 324 eP      P       22 11 38.8 +0.4
      comp=Z,104nm,0.6s
PKI   Pulchoki          42.87 323 eP      P       22 11 38.4 -0.2
      comp=Z,39nm,0.7s
PKIN  Phulchoki         42.88 323 eP      P       22 11 38.5 -0.1
      comp=Z,44nm,0.8s
TOO   Toolangi          42.99 141  P      P       22 11 40.3 +1.2
YNG   Young             43.01 135  P      P       22 11 40.9 +1.6
DMN   Daman             43.08 322 eP      P       22 11 40.4 +0.2
      comp=Z,82nm,0.7s
KKN   Kakani            43.11 323 eP      P       22 11 40.1 -0.2
      comp=Z,56nm,0.8s
HNS   HongShan          43.34   2 ⇓P      P       22 11 41.5 -0.1
HNS                                pmax   pmax
      comp=Z,9.0nm,0.7s
ARMA  Armidale          43.51 129  P      P       22 11 45.0 +1.7
ARMA                               IAmb   IAmb    22 12 06.3
      comp=Z,24nm,1.5s
GKN   Gorkha            43.65 322 eP      P       22 11 44.5  0.0
      comp=Z,75nm,0.4s
KOLN  Koldanda          44.12 321 eP      P       22 11 48.2  0.0
JMN   Monobe            44.28  25  P      P       22 11 49.1 +0.1
DANN  Dangsing          44.44 322 eP      P       22 11 50.7  0.0
      comp=Z,130nm,0.6s
PYUN  Piuthan           44.74 321 eP      P       22 11 52.8 -0.1
JHS   Saijyo            45.07  23  P      P       22 11 54.9 -0.1
JHS                                IAmb   IAmb    22 11 56.0
      comp=Z,19nm,0.8s
JHS   Saijyo            45.07  23  P      P       22 11 55.2 +0.2
KSAR  Wonju Array Be    45.50  17  P      P       22 11 59.2 +1.0
KSRS  Korea Array       45.53  17  P      P       22 11 59.3 +0.9
      comp=Z,10nm,0.7s,baz=203,slow=8.0,SNR=26
KSRS                               PcP    PcP     22 13 24.8 +0.5
      comp=Z,2.1nm,0.6s,baz=190,slow=3.4,SNR=3.9
      comp=Z,10nm,0.7s
BJT   Baijiatuau        46.01   3  P      P       22 12 01.7 -0.3
BJT                                IAmb   IAmb    22 12 03.0
      comp=Z,11nm,0.6s
BJT   Baijiatuau        46.01   3  P      P       22 12 02.7 +0.6
BJI   Beijing           46.04   3  P      P       22 12 02.4 +0.2
BJI                                PcP    PcP     22 13 27.2 +1.2
BJI                                pmax   pmax
      comp=Z,7.0nm,0.6s
HNR   Honiara           46.53  97  P      P       22 12 07.1 +0.7
      comp=Z,1µm,0.6s,baz=216,slow=2.4,SNR=4.4
BTO   Baotou            46.60 357 eP      P       22 12 07.7 +1.1
JGF   Kuroka            47.38  27  P      P       22 12 11.7 -0.8
JGF                                IAmb   IAmb    22 12 12.1
      comp=Z,37nm,1.5s
JGF   Kuroka            47.38  27  P      P       22 12 12.0 -0.5
MAJO  Matsushiro        48.55  27  P      P       22 12 20.2 -0.9
MAJO                               IAmb   IAmb    22 12 22.1
      comp=Z,11nm,0.8s
MJAR  Matsushiro Arr    48.55  27  P      P       22 12 20.1 -1.0
      comp=Z,11nm,0.7s,baz=200,slow=7.9,SNR=24
MJAR                               PcP    PcP     22 13 36.2 +1.0
      comp=Z,4.3nm,0.8s,baz=204,slow=4.9,SNR=5.0
      comp=Z,11nm,0.7s
MJB9  Matsu-Tunnel      48.55  27  P      P       22 12 20.9 -0.2
MJB9                               IAmb   IAmb    22 12 23.1
      comp=Z,10nm,0.7s
JSD   Sado              49.81  26  P      P       22 12 29.8 -0.5
JSD   Sado              49.81  26  P      P       22 12 30.0 -0.3
XLT   XiLinHaoTe        49.88   3 eP      P       22 12 31.3 +0.5
XLT                                pmax   pmax
      comp=Z,14nm,0.8s
XLT                                pmax   pmax
      comp=Z,110nm,5.5s
JMM   Marumori          50.82  28  P      P       22 12 37.0 -0.6
JMM   Marumori          50.82  28  P      P       22 12 37.4 -0.3
CN2   Changchun         50.95  12  P      P       22 12 35.6 -2.9
CN2                                pmax   pmax
      comp=Z,10.0nm,0.5s
MDJ   Mudanjiang        52.66  15  P      P       22 12 50.8 +0.1
MDJ                                PcP    PcP     22 13 48.5 -2.0
MDJ                                pmax   pmax
      comp=Z,21nm,0.7s
MDJ                                pmax   pmax
      comp=Z,240nm,5.4s
MDJ   Mudanjiang        52.66  15  P      P       22 12 50.6 -0.1
MDJ                                IAmb   IAmb    22 12 51.4
      comp=Z,15nm,0.9s
USA0B Ussuriysk Arra    52.93  17  P      P       22 12 52.7 +0.1
USA0B                              IAmb   IAmb    22 12 53.5
      comp=Z,27nm,0.8s
USRK  Ussuriysk Ar.     52.93  17  P      P       22 12 52.6 -0.1
      comp=Z,22nm,0.7s,baz=197,slow=4.9,SNR=42
      comp=Z,22nm,0.7s
JTM   Tenmabayashi      53.30  26  P      P       22 12 55.1 -0.2
JTM                                IAmb   IAmb    22 12 55.7
      comp=Z,32nm,0.8s
NOUC  Port Laguerre     53.72 113  P      P       22 12 58.9 +0.2
DZM   Mont Dzumac       53.84 113  P      P       22 12 57.2 -2.5
ONTNC Ouen Toro         53.89 113  P      P       22 12 59.6 -0.3
      comp=Z,42nm,0.9s
ULN   Ulaanbaatar       54.03 355  P      P       22 13 00.7 +0.2
ULN                                IAmb   IAmb    22 13 01.8
      comp=Z,15nm,0.7s
SONM  Songino Array     54.06 354  P      P       22 13 01.1 +0.4
      comp=Z,19nm,0.6s,baz=176,slow=8.9,SNR=156
SONM                               PcP    PcP     22 13 56.4 +0.4
      comp=Z,2.8nm,0.7s,baz=166,slow=4.7,SNR=6.1
SONM                               ScP    ScP     22 16 57.2 -0.3
      comp=Z,0.6nm,0.7s,baz=170,slow=4.5,SNR=3.9
      comp=Z,19nm,0.6s
SONM  Songino Array     54.06 354  P      P       22 13 00.8 +0.1
SONM                               IAmb   IAmb    22 13 01.9
      comp=Z,18nm,0.7s
NIL   Nilore            54.66 319  P      P       22 13 03.8 -1.3
NIL                                IAmb   IAmb    22 13 04.7
      comp=Z,24nm,0.6s
WMQ   Urumqi            54.76 338 eP      P       22 13 06.5 +0.9
WMQ                                pmax   pmax
      comp=Z,24nm,0.7s
WMQ                                LR     LR
      comp=Z,77nm,24.9s
ERM   Erimo             55.22  27  P      P       22 13 08.8  0.0
ERM                                IAmb   IAmb    22 13 28.5
      comp=Z,45nm,1.1s
ASAJ  Asahikawa         56.66  25  P      P       22 13 18.6 -0.1
      comp=Z,7.3nm,0.4s,baz=264,slow=5.0,SNR=13
      comp=Z,7.3nm,0.4s
JKA   Kamikawa-asahi    56.67  25  P      P       22 13 18.7  0.0
KLR   Kul'dur           57.50  14  P      P       22 13 23.5 -0.7
      comp=Z,6.3nm,0.5s,baz=198,slow=5.2,SNR=47
KLR                                PcP    PcP     22 14 09.7 +0.3
      comp=Z,1.4nm,0.7s,baz=260,slow=5.8,SNR=4.6
      comp=Z,6.3nm,0.5s
TARG  Taragay, Kyrgy    57.50 329  P      P       22 13 25.7 +0.8
HEH   HeiHe             57.52  11 eP      P       22 13 24.0 -0.3
HEH                                pP     pP      22 15 19.4 +1.0
HEH                                S      S       22 20 36.0 -1.3
HEH                                pmax   pmax
      comp=Z,32nm,0.7s
HEH                                pmax   pmax
      comp=Z,140nm,5.3s
KBL   Kabul             57.98 317  P      P       22 13 27.4 -0.6
YSS   Yuzh-Sakhalins    59.04  23  P      P       22 13 34.7 +0.1
YSS                                IAmb   IAmb    22 13 35.5
      comp=Z,77nm,1.2s
MK31  Makanchi Array    59.35 336  P      P       22 13 37.0 +0.2
MKAR  Makanchi Array    59.35 336  P      P       22 13 36.9 +0.1
      comp=Z,12nm,0.4s,baz=148,slow=7.4,SNR=160
MKAR                               PcP    PcP     22 14 17.0 +0.1
      comp=Z,3.0nm,0.8s,baz=110,slow=7.1,SNR=4.8
MKAR                               pP     pP      22 15 33.1 +1.1
      comp=Z,1.5nm,0.8s,baz=136,slow=5.7,SNR=2.7
MKAR                               ScP    ScP     22 17 20.9 +0.1
      comp=Z,0.5nm,0.7s,baz=125,slow=6.9,SNR=2.9
MKAR                               S      S       22 20 59.0 -1.6
      comp=Z,0.8nm,1.0s,baz=156,slow=13,SNR=6.1
      comp=Z,12nm,0.4s
MAKZ  Makanchi          59.49 336  P      P       22 13 37.6 -0.1
TKM2  Tokmak 2          59.50 329  P      P       22 13 38.3 +0.3
      SNR=17
UCH   Uchtor            59.58 328  P      P       22 13 39.4 +0.5
      SNR=7.6
KBK   Karagaybulak      59.65 328  P      P       22 13 39.9 +0.9
      SNR=26
AAK   Ala-Archa         59.87 328  P      P       22 13 40.9 +0.4
      SNR=12
AAK   Ala-Archa         59.87 328  P      P       22 13 41.2 +0.7
      comp=Z,9.8nm,0.8s,baz=144,slow=5.7,SNR=33
AAK                                PcP    PcP     22 14 20.0 +0.7
      comp=Z,1.5nm,0.8s,baz=209,slow=7.1,SNR=3.7
      comp=Z,9.8nm,0.8s
AAK   Ala-Archa         59.87 328  P      P       22 13 40.9 +0.4
AML   Almayashu         59.95 327  P      P       22 13 41.8 +0.5
      SNR=14
EKS2  Erkin-Say         60.27 327  P      P       22 13 43.9 +0.8
      SNR=11
USP   Ospenovka         60.31 328  P      P       22 13 43.4 +0.2
      SNR=10
CHGR  Chuyangaron       60.35 321  P      P       22 13 42.6 -1.0
CHGR                               IAmb   IAmb    22 14 22.6
      comp=Z,23nm,0.8s
WSAR  Wadi Sarin        60.65 301  P      P       22 13 45.5 -0.3
      comp=Z,8.9nm,0.7s,baz=134,slow=7.4,SNR=8.4
      comp=Z,8.9nm,0.7s
TAS   Tashkent          61.91 324  P      P       22 13 53.6 -0.1
KK31  Karatay Array     62.35 326  P      P       22 13 55.7 -0.8
KKAR  Karatay Array     62.35 326  P      P       22 13 55.8 -0.7
KKAR  Karatay Array     62.35 326  P      P       22 13 55.8 -0.7
KKAR                               IAmb   IAmb    22 13 57.7
      comp=Z,4.3nm,0.8s
UOSS  Minazif           63.33 302  P      P       22 14 02.0 -1.1
UOSS                               IAmb   IAmb    22 14 03.2
      comp=Z,20nm,1.5s
THZ   Tophouse          63.62 134  P      P       22 14 05.5 +0.8
THZ                                IAmb   IAmb    22 14 06.1
      comp=Z,18nm,0.7s
KURBB Kurchatov Arra    63.91 336  P      P       22 14 06.2  0.0
      comp=Z,7.3nm,0.8s,baz=152,slow=4.9,SNR=45
KURBB                              PcP    PcP     22 14 35.6 +0.2
      comp=Z,2.9nm,0.7s,baz=144,slow=3.2,SNR=9.0
KURBB                              pP     pP      22 16 05.1 +1.1
      comp=Z,2.2nm,1.1s,baz=143,slow=5.1,SNR=4.4
      comp=Z,7.3nm,0.8s
KURK  Kurchatov         63.94 336  P      P       22 14 06.6 +0.2
KURK                               IAmb   IAmb    22 14 07.3
      comp=Z,12nm,0.8s
MQZ   McQueen’s Vall    64.01 136  P      P       22 14 07.8 +0.8
MQZ                                IAmb   IAmb    22 14 15.6
      comp=Z,58nm,1.5s
MSVF  Nonsavu           64.34 107  P      P       22 14 09.9 +0.2
MSVF                               IAmb   IAmb    22 14 13.7
      comp=Z,23nm,1.2s
ZAA0  Zalesovo Array    64.40 342  P      P       22 14 08.7 -0.5
ZAA0                               IAmb   IAmb    22 14 09.5
      comp=Z,12nm,0.7s
ZALV  Zalesovo Beam     64.40 342  P      P       22 14 08.6 -0.6
      comp=Z,12nm,0.5s,baz=145,slow=4.9,SNR=74
ZALV                               PcP    PcP     22 14 36.2 -1.2
      comp=Z,2.0nm,0.5s,baz=188,slow=3.1,SNR=4.0
ZALV                               pP     pP      22 16 09.1 +1.9
      comp=Z,3.9nm,0.7s,baz=136,slow=3.8,SNR=8.2
ZALV                               S      S       22 21 59.0 -2.9
      comp=Z,0.3nm,0.3s,baz=139,slow=6.8,SNR=3.7
      comp=Z,12nm,0.5s
ZALV  Zalesovo Beam     64.40 342  P      P       22 14 08.8 -0.5
BKZ   Black Stump Fm    65.63 130  P      P       22 14 17.3 -0.1
VOI   Vohitsoka         65.74 249  P      P       22 14 18.9 +0.4
BFZ   Birch Farm        65.78 132  P      P       22 14 19.0 +0.8
RTZ   Ruatahuna         65.88 130  P      P       22 14 19.2 +0.2
RTZ                                IAmb   IAmb    22 14 19.8
      comp=Z,14nm,0.7s
URZ   Urewera           65.91 129  P      P       22 14 19.2 +0.1
MXZ   Matakaoa Point    66.70 128  P      P       22 14 24.7 +0.7
GEYT  Alibeck           67.27 315  P      P       22 14 28.1 +0.7
      comp=Z,17nm,0.7s,baz=152,slow=6.7,SNR=41
      comp=Z,17nm,0.7s
BVAR  Borovoye Array    69.09 334  P      P       22 14 38.0 -0.1
      comp=Z,12nm,0.7s,baz=141,slow=8.4,SNR=64
      comp=Z,12nm,0.7s
BRVK  Borovoye          69.16 334  P      P       22 14 38.2 -0.3
BRVK                               IAmb   IAmb    22 14 39.3
      comp=Z,14nm,1.1s
YAK   Yakutsk           69.17   8  P      P       22 14 38.2 -0.1
      comp=Z,32nm,0.6s,baz=182,slow=0.6,SNR=20
      comp=Z,32nm,0.6s
YAK   Yakutsk           69.17   8  P      P       22 14 38.2 -0.1
PEA0B Petropavlovsk-    70.00  27  P      P       22 14 44.0 +0.4
PETK  Petropavlovsk-    70.00  27  P      P       22 14 43.5 -0.1
      comp=Z,8.5nm,0.5s,baz=202,slow=1.6,SNR=11
      comp=Z,8.5nm,0.5s
ABKAR Akbulak array     71.90 327  P      P       22 14 54.6 -0.1
ABKAR Akbulak array     71.90 327  P      P       22 14 54.6 -0.1
ABKAR                              IAmb   IAmb    22 14 55.5
      comp=Z,28nm,0.8s
MA2   Magadan           72.00  19  P      P       22 14 55.5 +0.4
      comp=Z,24nm,0.8s,baz=201,slow=4.7,SNR=16
      comp=Z,24nm,0.8s
MA2   Magadan           72.00  19  P      P       22 14 55.2 +0.1
MA2                                IAmb   IAmb    22 14 56.5
      comp=Z,23nm,0.8s
RAYN  Ar Rayn           72.18 297  P      P       22 14 56.1 -0.8
RAYN                               IAmb   IAmb    22 14 57.2
      comp=Z,9.5nm,0.9s
SEY   Seymchan          75.08  17  P      P       22 15 12.8 +0.4
      comp=Z,14nm,0.5s,baz=224,slow=5.0,SNR=70
      comp=Z,14nm,0.5s
VNDA  Vanda             75.75 170  P      P       22 15 17.0 +1.1
      comp=Z,1.0nm,0.4s,baz=315,slow=6.3,SNR=10.0
      comp=Z,1.0nm,0.4s
VNDA  Vanda             75.75 170  P      P       22 15 16.6 +0.7
KMBO  Kilima Mbogo      75.78 270  P      P       22 15 18.1 +0.4
ARU   Arti              76.56 332  P      P       22 15 20.4 -0.4
ARU                                IAmb   IAmb    22 15 21.5
      comp=Z,41nm,1.4s
NRIK  Noril'sk          77.34 351  P      P       22 15 24.5 -0.1
      comp=Z,5.9nm,0.6s,baz=147,slow=5.2,SNR=12
      comp=Z,5.9nm,0.6s
NRIK  Noril'sk          77.34 351  P      P       22 15 24.6 -0.1
NRIK                               IAmb   IAmb    22 15 25.6
      comp=Z,22nm,1.2s
LODK  Lodwar            78.17 275  P      P       22 15 30.4 -0.1
TIXI  Tiksi             78.33   5  P      P       22 15 29.2 -0.8
      comp=Z,28nm,0.7s,baz=270,slow=4.2,SNR=112
      comp=Z,28nm,0.7s
TIXI  Tiksi             78.33   5  P      P       22 15 29.1 -0.8
TIXI                               IAmb   IAmb    22 15 30.1
      comp=Z,31nm,0.8s
GEVA  Gevas             78.36 311  P      P       22 15 31.5 +0.5
GEVA                               IAmb   IAmb    22 15 32.6
      comp=Z,13nm,1.0s
AKH   Akhalkalaki       78.99 314  P      P       22 15 35.4 +1.0
AKH                                IAmb   IAmb    22 15 36.6
      comp=Z,30nm,0.9s
KARS  Kars              79.05 313  P      P       22 15 35.8 +1.2
GURO  Guroymak-BITLI    79.20 311  P      P       22 15 35.9 +0.5
ONI   Oni               79.39 315  P      P       22 15 36.2 -0.1
KBZ   Khabaz            80.14 316  P      P       22 15 40.6 +0.6
      comp=Z,5.6nm,0.8s,baz=106,slow=4.5,SNR=15
      comp=Z,5.6nm,0.8s
KIV   Kislovodsk        80.35 316  P      P       22 15 41.5 +0.2
KOPT  Kop Dagi          80.76 312  P      P       22 15 43.9 +0.2
KOPT                               IAmb   IAmb    22 15 50.0
      comp=Z,8.5nm,0.7s
MBAR  Mbarara           82.32 270  P      P       22 15 52.1  0.0
MBAR                               IAmb   IAmb    22 15 53.8
      comp=Z,8.3nm,0.8s
BILL  Bilibino          82.78  18  P      P       22 15 52.6 -0.4
ADK   Adak              82.82  36  P      P       22 15 53.0 -0.5
LSZ   Lusaka            83.49 255  P      P       22 15 58.2 +0.3
LSZ                                IAmb   IAmb    22 15 59.3
      comp=Z,9.4nm,0.8s
QSPA  South Pole Qui    83.84 180  P      P       22 15 58.8 +0.3
BNN   Bunyan            83.96 310  P      P       22 15 59.9 +0.2
BNN                                IAmb   IAmb    22 16 01.3
      comp=Z,22nm,1.0s
BOSA  Boshof            85.19 242  P      P       22 16 06.2 +0.3
      comp=Z,3.9nm,0.9s,baz=170,slow=6.7,SNR=4.4
      comp=Z,3.9nm,0.9s
BR131 Keskin Array S    85.81 311  P      P       22 16 09.1 +0.4
BR131                              IAmb   IAmb    22 16 09.4
      comp=Z,20nm,0.9s
BRTR  Keskin Array B    85.81 311  P      P       22 16 08.4 -0.2
      comp=Z,8.0nm,0.8s,baz=130,slow=5.6,SNR=20
      comp=Z,8.0nm,0.8s
BRTR  Keskin Array B    85.81 311  P      P       22 16 08.3 -0.3
KLMR  Klimovskoe        87.41 332 eP      P       22 16 11.4 -4.0
KLMR                               AMP            22 16 15.1
      comp=Z,9.0nm,0.7s
KLMR                              epP     pP      22 18 20.5 -3.4
AKASG Malin Array Be    90.81 321  P      P       22 16 30.7 -0.8
      comp=Z,1.9nm,0.7s,baz=81,slow=4.6,SNR=10.0
      comp=Z,1.9nm,0.7s
FINES FINESS Array B    93.91 331  P      P       22 16 45.1 -0.3
      comp=Z,4.0nm,0.7s,baz=108,slow=6.2,SNR=17
FINES                              PKiKP  PKiKP   22 21 25.2 -0.6
      comp=Z,1.9nm,1.1s,baz=122,slow=2.5,SNR=4.0
      comp=Z,4.0nm,0.7s
ARCES ARCESS Array B    94.85 339  P      P       22 16 48.0 -1.6
      comp=Z,3.1nm,1.0s,baz=57,slow=8.8,SNR=4.9
      comp=Z,3.1nm,1.0s
ILAR  Eielson Array     99.80  25  P      Pdif    22 17 10.3 -1.4
      comp=Z,0.2nm,0.7s,baz=294,slow=4.8,SNR=2.5
      comp=Z,0.2nm,0.7s
TORD  Torodi Ar. Bea   112.16 282  PKiKP  PKiKP   22 22 00.1 -0.5
      comp=Z,2.3nm,0.8s,baz=65,slow=1.6,SNR=19
TORD                               SKP            22 24 39.3
      comp=Z,0.4nm,0.5s,baz=69,slow=2.7,SNR=5.0
YKA   Yellowknife Ar   113.88  22  PKiKP  PKiKP   22 22 02.3 -0.1
      comp=Z,1.8nm,0.6s,baz=315,slow=1.7,SNR=25
ESDC  Sonseca Array    114.61 311  PKP    PKiKP   22 22 04.8 +0.1
      comp=Z,0.8nm,0.7s,baz=17,slow=3.1,SNR=7.0
DBIC  Dimbokro         118.35 274  PKP    PKPdf   22 22 12.3 -0.2
      comp=Z,3.3nm,0.6s,baz=103,slow=1.2,SNR=6.8
J04A  Umpqua Nationa   119.17  43         PKiKP   22 22 13.9 +0.3
J05D  Fort Rock, OR    119.75  43  PKPdf  PKiKP   22 22 15.4 +0.7
K05A  Summer Lake      120.19  44         PKiKP   22 22 16.4 +0.8
PLID  Pearl Lake       122.44  39  PKPdf  PKiKP   22 22 20.0  0.0
MSO   Missoula         122.87  37  PKPdf  PKPdf   22 22 20.4  0.0
KVN   Kaiserville      123.51  47         PKiKP   22 22 22.8 +0.5
NVAR  Mina Array Bea   123.59  47  PKP    PKiKP   22 22 23.7 +1.2
      comp=Z,2.4nm,0.8s,baz=257,slow=2.1,SNR=10
FFC   Flin Flon        123.97  24  PKPdf  PKiKP   22 22 22.6 +0.2
MCMT  McKenzie Canyo   124.53  38         PKiKP   22 22 24.5 +0.3
EGMT  Eagleton         124.63  34         PKiKP   22 22 24.6 +0.5
ELK   Elko             124.85  44         PKiKP   22 22 26.0 +1.0
REDW  Red Top Meadow   126.51  39         PKiKP   22 22 28.4 +0.2
DUG   Dugway, Tooele   126.76  43         PKiKP   22 22 29.8 +1.1
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PDAR	Pinedale Array	127.63	39	PKP	PKiKP	22 22 30.6	+0.1
	comp=Z,0.7nm,0.5s,baz=127,slow=1.8,SNR=10						
ULM	Lac du Bonnet	129.79	24	PKP	PKPdf	22 22 33.8	+0.5
	comp=Z,1.8nm,0.6s,baz=304,slow=0.9,SNR=4.2						
SCHQ	Schefferville	131.44	360	PKP	PKiKP	22 22 37.8	+0.3
	comp=Z,2.0nm,0.5s,baz=297,slow=1.3,SNR=11						
ECSD	EROS Data Cent	134.37	30		PKPdf	22 22 42.6	+0.3
TXAR	Lajitas Array	138.38	52	PKhKP	PKPpre	22 22 41.2	
	comp=Z,1.0nm,0.6s,baz=231,slow=4.5,SNR=7.8						
BLOK	Blackwell	138.83	38		PKPdf	22 22 51.7	+1.1
U40A	Yellville	141.68	35	P	PKPdf	22 22 51.8	-4.0
	baz=316,SNR=6.1						
U40A				P	PKPdf	22 22 51.8	-4.0
	baz=316,SNR=6.1						
T42A	Van Buren	142.16	32	P	PKPdf	22 22 53.5	-3.1
	baz=319,SNR=21						
MIAR	Mount Ida	142.52	37	P	PKPdf	22 22 55.2	-2.1
	baz=313,SNR=7.8						
WHAR	Wooly Hollow	142.76	35	PKPdf	PKPdf	22 22 55.3	-2.4
LCAR	Lake Charles	142.83	33		PKPdf	22 22 55.6	-2.2
LCAR	Lake Charles	142.83	33	P	PKPdf	22 22 55.6	-2.2
	baz=318,SNR=30						
P48A	Milroy	142.87	24	P	PKPdf	22 22 55.6	-2.2
	baz=329,SNR=6.2						
P48A				P	PKPdf	22 22 55.6	-2.2
	baz=329,SNR=6.2						
HCNY	Howe Caverns	142.99	9	P	PKPdf	22 22 56.4	-1.5
	baz=348,SNR=5.5						
P49A	Miami Univ. Ec	143.08	23	PKPdf	PKPab	22 22 56.1	+0.1
P49A	Miami Univ. Ec	143.08	23	P	PKPbc	22 22 56.5	0.0
	baz=330,SNR=11						
ACSO	Alum Creek Sta	143.12	21	P	PKPbc	22 22 56.9	+0.3
	baz=333,SNR=6.5						
N53A	Lisbon	143.30	18	P	PKPbc	22 22 57.6	+0.5
	baz=337,SNR=5.4						
N53A				P	PKPbc	22 22 57.6	+0.5
	baz=337,SNR=5.4						
K62A	Royalston	143.32	7		PKPbc	22 22 57.8	+0.7
L59A	Walton	143.38	10	P	PKPbc	22 22 58.0	+0.6
	baz=346,SNR=7.1						
L59A				P	PKPbc	22 22 58.0	+0.6
	baz=346,SNR=7.1						
WCI	Wyandotte Cave	143.53	26		PKPbc	22 22 58.0	+0.1
WCI	Wyandotte Cave	143.53	26	P	PKPbc	22 22 58.2	+0.3
	baz=326,SNR=22						
HRV	Adam Dziewonsk	143.55	6		PKPbc	22 22 58.0	+0.2
O52A	Adamsville	143.61	19		PKPab	22 22 58.1	+0.1
O52A	Adamsville	143.61	19	P	PKPbc	22 22 58.2	+0.1
	baz=335,SNR=11						
O52A				P	PKPbc	22 22 58.2	+0.1
	baz=335,SNR=11						
O53A	New Philadelph	143.69	19		PKPbc	22 22 57.9	-0.4
GO04	Tololo Observa	143.71	174	PKPbc	PKPbc	22 22 59.1	+0.1
P51A	Williamsport	143.75	21	P	PKPbc	22 22 58.5	0.0
	baz=332,SNR=10						
P51A				P	PKPbc	22 22 58.5	0.0
	baz=332,SNR=10						
M57A	Sunshine Farm,	143.78	13	P	PKPdf	22 22 59.2	-0.2
	baz=343,SNR=16						
M57A				P	PKPdf	22 22 59.2	-0.2
	baz=343,SNR=16						
KSPA	Keystone Colle	143.86	11		PKPab	22 22 59.0	0.0
KSPA	Keystone Colle	143.86	11	P	PKPab	22 22 59.2	+0.3
	baz=345,SNR=6.3						
P52A	Corning	143.94	20		PKPbc	22 22 59.0	-0.1
NPNY	Mohonk Preserv	143.95	9	P	PKPdf	22 23 00.2	+0.6
	baz=348,SNR=5.6						
R49A	Shelbyville	143.96	25	P	PKPab	22 22 59.6	+0.2
	baz=328,SNR=14						
R49A				P	PKPab	22 22 59.6	+0.2
	baz=328,SNR=14						
O54A	Avella	144.01	18	P	PKPdf	22 22 59.9	+0.1
	baz=337,SNR=13						
O54A				P	PKPdf	22 22 59.9	+0.1
	baz=337,SNR=13						
Q51A	Peebles	144.05	22	P	PKPbc	22 22 59.6	+0.2
	baz=332,SNR=15						
Q51A				P	PKPbc	22 22 59.6	+0.2
	baz=332,SNR=15						
T47A	Sharon Grove	144.19	28	P	PKPab	22 23 00.5	+0.2
	baz=324,SNR=11						
SSPA	Standing Stone	144.27	14		PKPbc	22 23 00.0	-0.1
SSPA	Standing Stone	144.27	14	P	PKPab	22 23 00.5	0.0
	baz=341,SNR=9.2						
BRNY	Black Rk. Fore	144.31	9	P	PKPab	22 23 01.9	+1.3
	baz=348,SNR=6.0						
R50A	Paris	144.32	24	P	PKPab	22 23 01.6	+0.8
	baz=330,SNR=7.4						
R50A				P	PKPab	22 23 01.6	+0.8
	baz=330,SNR=7.4						
P53A	Whipple	144.33	19	P	PKPab	22 23 00.9	+0.1
	baz=335,SNR=15						
P53A				P	PKPab	22 23 00.9	+0.1
	baz=335,SNR=15						
N58A	Sunbury	144.35	13	P	PKPdf	22 23 00.6	+0.3
	baz=343,SNR=8.9						
N58A				P	PKPdf	22 23 00.6	+0.3
	baz=343,SNR=8.9						
Q52A	Bidwell	144.50	21	P	PKPab	22 23 01.6	+0.1
	baz=333,SNR=5.4						
Q52A				P	PKPab	22 23 01.6	+0.1
	baz=333,SNR=5.4						
WVT	Waverly	144.52	30	PKPdf	PKPbc	22 23 01.2	+0.2
WVT	Waverly	144.52	30	P	PKPbc	22 23 01.3	+0.4
	baz=322,SNR=31						
ODNJ	Ogdensburg	144.53	10	P	PKPab	22 23 01.4	-0.1
	baz=347,SNR=6.3						
MCWV	Mont Chateau	144.65	17		PKPbc	22 23 01.4	+0.1
LCO	Las Campanas	144.87	174		PKPab	22 23 03.2	-0.2
OXF	Oxford	144.94	33		PKPbc	22 23 02.0	-0.3
OXF	Oxford	144.94	33	P	PKPbc	22 23 02.6	+0.3
	baz=319,SNR=8.1						
Q54A	Coxs Mills	144.96	19		PKPdf	22 23 01.8	+0.4
Q54A	Coxs Mills	144.96	19	P	PKPbc	22 23 02.7	+0.5
	baz=336,SNR=12						
Q54A				P	PKPbc	22 23 02.7	+0.5
	baz=336,SNR=12						
S51A	Beattyville	145.16	23	P	PKPbc	22 23 03.0	+0.1
	baz=330,SNR=8.0						
S51A				P	PKPbc	22 23 03.0	+0.1
	baz=330,SNR=8.0						
R53A	Hurricane	145.17	21	P	PKPbc	22 23 03.2	+0.3
	baz=333,SNR=12						
R53A				P	PKPbc	22 23 03.2	+0.3
	baz=333,SNR=12						
U49A	Red Boiling Sp	145.19	27	P	PKPbc	22 23 03.4	+0.4
	baz=326,SNR=18						
PLAL	Pickwick Lake	145.29	31		PKPbc	22 23 02.8	-0.5
V48A	Smith Brothers	145.32	29	P	PKPbc	22 23 03.5	+0.1
	baz=324,SNR=10						
P57A	Homestead Farm	145.33	15		PKPbc	22 23 03.5	+0.2
P57A	Homestead Farm	145.33	15	P	PKPbc	22 23 03.7	+0.4
	baz=340,SNR=9.5						
P57A				P	PKPbc	22 23 03.7	+0.4
	baz=340,SNR=9.5						
Y45A	Yeager Farm, C	145.35	34	P	PKPab	22 23 04.5	-0.4
	baz=318,SNR=10.0						
Q56A	Snyder Ridge,	145.42	17	P	PKPbc	22 23 04.2	+0.6
	baz=338,SNR=5.6						
Q56A				P	PKPbc	22 23 04.2	+0.6
	baz=338,SNR=5.6						
TZTN	Tazewell	146.12	24		PKPbc	22 23 05.4	-0.3
TZTN	Tazewell	146.12	24	P	PKPbc	22 23 06.1	+0.5
	baz=330,SNR=5.7						
SWET	Sewanee	146.18	29		PKPbc	22 23 05.3	-0.6
X48A	Hartselle	146.24	31		PKPbc	22 23 05.0	-1.1
X48A	Hartselle	146.24	31	P	PKPbc	22 23 05.6	-0.4
	baz=322,SNR=9.9						
CPUP	Villa Florida	146.41	196	PKPbc	PKPbc	22 23 07.5	+0.8
	comp=Z,9.9nm,0.7s,baz=130,slow=2.2,SNR=23						
CPUP				SKPbc	SKiKP	22 25 49.5	+0.4
	comp=Z,2.6nm,0.5s,baz=178,slow=1.4,SNR=4.7						
V51A	Loudon	146.41	26	P	PKPbc	22 23 07.0	+0.5
	baz=328,SNR=8.7						
W50A	Signal Mountai	146.48	28	P	PKPbc	22 23 06.9	+0.2
	baz=326,SNR=5.8						
CPCT	Cooper Cave	146.63	27		PKPbc	22 23 07.1	0.0
V52A	Sevierville	146.71	25		PKPbc	22 23 07.3	+0.1
V52A	Sevierville	146.71	25	P	PKPbc	22 23 08.0	+0.7
	baz=329,SNR=17						
TKL	Tuckaleechee C	146.78	26		PKPbc	22 23 07.3	-0.2
TKL	Tuckaleechee C	146.78	26	P	PKPbc	22 23 08.1	+0.7
	baz=328,SNR=9.5						
Y49A	Blount Mountai	147.03	31	P	PKPbc	22 23 08.3	+0.1
	baz=323,SNR=15						
V53A	Saluda	147.18	24	P	PKPbc	22 23 09.2	+0.7
	baz=330,SNR=21						
V53A				P	PKPbc	22 23 09.2	+0.7
	baz=330,SNR=21						
W52A	Murphy	147.20	26	P	PKPbc	22 23 09.3	+0.7
	baz=328,SNR=5.7						
T57A	Hurt	147.28	18		PKPbc	22 23 08.6	-0.1
T57A	Hurt	147.28	18	P	PKPbc	22 23 09.2	+0.5
	baz=337,SNR=5.2						
T57A				P	PKPbc	22 23 09.2	+0.5
	baz=337,SNR=5.2						
LRAL	Lakeview Retre	147.37	32		PKPbc	22 23 09.4	+0.4
V55A	Taylorsville	147.64	22		PKPbc	22 23 09.8	+0.1
V55A	Taylorsville	147.64	22	P	PKPbc	22 23 10.1	+0.4
	baz=333,SNR=6.6						
V55A				P	PKPbc	22 23 10.1	+0.4
	baz=333,SNR=6.6						
CASEE	Lake Jocassee	147.71	25	P	PKiKP	22 23 10.8	-0.5
	baz=329,SNR=7.1						
T59A	Double "B" Far	147.81	16		PKPbc	22 23 10.4	+0.4
T59A	Double "B" Far	147.81	16	P	PKiKP	22 23 10.8	-0.6
	baz=340,SNR=11						
T59A				P	PKiKP	22 23 10.8	-0.6
	baz=340,SNR=11						
Y52A	Lilburn	148.16	28	P	PKiKP	22 23 12.1	-0.2
	baz=326,SNR=11						
Y52A				P	PKiKP	22 23 12.1	-0.2
	baz=326,SNR=11						
KMSC	Kings Mountain	148.23	23		PKPbc	22 23 11.3	+0.1
KMSC	Kings Mountain	148.23	23	P	PKPbc	22 23 11.6	+0.4
	baz=332,SNR=6.8						
W57A	Gilead	148.71	21		PKPbc	22 23 12.2	-0.2
AQDB	Aquidauana	151.34	202		PKPbc	22 23 18.9	-0.1
BDFB	Brasilia	151.38	221	PKPbc	PKiKP	22 23 20.0	+0.4
	comp=Z,12nm,0.5s,baz=134,slow=2.3,SNR=22						
BDFB	Brasilia	151.38	221		PKiKP	22 23 19.7	+0.2
PB03	IPOC Station P	151.85	174		PKiKP	22 23 20.6	+0.2

JMA ***01*** *22:07:29.2±0.3, 42°.8N±0°.8×14°6E±°, h29^{km}±2^{km}, MV3.1/29, OFF NEMURO PENINSULA*

SKHL ***01*** *22:07:31.0±0.2, 42°.80N×146°.30E, h33^{km}±2^{km}, mb4.2/3*

ISC 01 22:07:30.2±3.2, **42°.87N**±0°.10×**146°.34E**±0°.08, **h24**^{km}±20^{km}, **n14,** σ**0^{s}.93**/24, **Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.66	319	P	Pn	22 07 42.8	-1.3
NMR	Nemuro--Hokkai	0.67	319	*i* P	Pn	22 07 42.9	-1.3
NMR				AMB	AMB	22 07 43.2	
	90nm,0.3s						
NMR				*i* S	Sb	22 07 51.8	-0.4
NMR				A	A	22 07 53.1	
	410nm,0.2s						
NMR				A	A	22 07 53.1	
	430nm,0.2s						
JKHN	Kushirohamanak	0.89	284	*i* P	Pn	22 07 46.4	-0.9
JKHN				*e*S	Sb	22 07 59.2	+0.7
SHO	Shikotan	1.06	20	*i* P	Pn	22 07 49.6	0.0
SHO				AMB	AMB	22 07 49.9	
	60nm,0.2s						
SHO				*e*S	Sn	22 08 03.8	+0.1
SHO				A	A	22 08 07.6	
	240nm,0.3s						
SHO				A	A	22 08 07.6	
	310nm,0.3s						
AKK	Akkeshi	1.11	278	*i* P	Pn	22 07 49.4	-0.8
AKK				*e*S	Sn	22 08 03.3	-1.5
JAK	Akkeshi	1.21	277	*e*P	Pn	22 07 50.9	-0.8
JAK				*e*S	Sn	22 08 07.1	-0.2
YUK	Yuzh-Kuril'sk	1.22	344	*i* P	Pn	22 07 51.5	-0.2
YUK				AMB	AMB	22 07 55.5	
	170nm,0.4s						
YUK				*e*S	Sn	22 08 06.7	-0.8
YUK				A	A	22 08 10.9	
	260nm,0.2s						
YUK				A	A	22 08 10.9	
	320nm,0.2s						
JNK	Nakash	1.39	302	*e*P	Pn	22 07 53.7	-0.3
JNK				*e*S	Sn	22 08 11.4	-0.2
JRA	Rausu	1.39	321	*e*P	Pn	22 07 54.5	+0.4
JRA				*e*S	Sn	22 08 12.2	+0.6
JOB	Onbets	1.84	272	*e*P	Pn	22 07 59.9	-0.4
JAR	Ashorobuto	1.93	284	*e*P	Pn	22 08 01.3	-0.2
JAR				*e*S	Sn	22 08 25.9	+0.8
JTKR	Abashiri--Toko	2.09	303	*e*P	Pn	22 08 04.6	+1.0
JTKR				*e*S	Sn	22 08 31.1	+2.3
JCH	Churui	2.21	264	*e*P	Pn	22 08 06.1	+0.8
KUR	Kuril'sk	2.61	24	*e*S	Sn	22 08 42.0	+0.2
KUR				A	A	22 08 44.1	
	10.0nm,0.2s						
KUR				A	A	22 08 44.1	
	10.0nm,0.2s						

IDC ***01*** *22:28:10.1±2.0, 24°.53S×112°.17W, h0^{km}, mb3.7/3, mbtmp3.7/3, MS3.6/7, Error ellipse: s-maj=142.2km s-min=64.1km az=86.0*

ISC 01 22:28:11.1±2.0, **24°.6S**±0°.5×**11°2W**±°, **h10**^{km}, **n23,** σ**1^{s}.09**/8, **mb3.8**/3, **MS3.6**/7, **Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03N2	Juan Fernandez	30.27	115	T	T	23 06 16.4	
	baz=282,slow=75,SNR=5.9						
H03N3	Juan Fernandez	30.28	115	T	T	23 06 15.9	
	baz=282,slow=75,SNR=7.6						
H03N1	Juan Fernandez	30.28	115	T	T	23 06 22.1	
	baz=282,slow=75,SNR=7.8						
NNA	Nana	35.70	76	LR	LR	22 45 57.9	
	comp=Z,106nm,20.2s,baz=336,slow=30						
ATAH	Atahualpa	36.68	67	LR	LR	22 46 19.2	
	comp=Z,130nm,21.2s,baz=104,slow=30						
LVC	Limon Verde	39.57	96	LR	LR	22 47 02.9	
	comp=Z,98nm,19.5s,baz=350,slow=29						
RAR	Rarotonga	43.81	264	LR	LR	22 49 19.3	
	comp=Z,76nm,21.3s,baz=118,slow=29						
SJG	San Juan	61.75	51	LR	LR	22 59 54.5	
	comp=Z,78nm,20.7s,baz=111,slow=31						
NVAR	Mina Array Bea	62.96	355	P	P	22 38 39.3	+1.2
	0.8nm,0.7s,baz=187,slow=9.5,SNR=7.3						
	0.8nm,0.7s						
RPZ	Rata Peaks	64.15	232	LR	LR	23 01 59.1	
	comp=Z,40nm,18.0s,baz=136,slow=32						
MSVF	Nonsavu	64.84	261	LR	LR	23 03 28.9	
	comp=Z,28nm,19.2s,baz=156,slow=33						
PDAR	Pinedale Array	67.07	2	P	P	22 39 04.0	-0.8
	0.4nm,0.6s,baz=171,slow=6.4,SNR=3.0						
	0.4nm,0.6s						
YKA	Yellowknife Ar	86.81	359	P	P	22 40 55.1	0.0
	0.3nm,0.7s,baz=166,slow=5.3,SNR=5.2						
	0.3nm,0.7s						
H11S2	WAKE ISLAND Hy	89.84	290	T	T	00 20 35.7	
	baz=116,slow=75,SNR=29						
H11S1	WAKE ISLAND Hy	89.85	290	T	T	00 20 39.1	
	baz=116,slow=75,SNR=33						
H11S3	WAKE ISLAND Hy	89.86	290	T	T	00 20 43.6	
	baz=116,slow=75,SNR=23						
H11N3	WAKE ISLAND Hy	90.20	292	T	T	00 21 04.3	
	baz=117						
H11N1	WAKE ISLAND Hy	90.22	292	T	T	00 21 08.4	
	baz=117						
H11N2	WAKE ISLAND Hy	90.22	292	T	T	00 21 09.4	
	baz=117						
SONM	Songino Array	141.76	317	PKP	PKiKP	22 47 45.3	-0.6
	0.6nm,1.0s,baz=101,slow=2.9,SNR=4.2						
ZALV	Zalesovo Beam	148.05	341	PKPbc	PKPbc	22 47 55.7	-0.9
	1.2nm,0.7s,baz=30,slow=3.9,SNR=5.3						
KBZ	Khabaz	152.07	41	PKPbc	PKiKP	22 48 07.4	+0.4
	1.6nm,0.8s,baz=140,slow=6.0,SNR=5.2						
MKAR	Makanchi Array	155.01	336	PKP	PKPdf	22 48 05.7	+1.4
	0.2nm,0.7s,baz=20,slow=4.6,SNR=2.2						
MKAR				PKPbc	PKPbc	22 48 13.2	
	0.3nm,0.8s,baz=63,slow=0.3,SNR=2.8						
MKAR				PKPab	PKPab	22 48 27.8	-0.7
	0.3nm,0.9s,baz=5.7,slow=1.4,SNR=2.4						

IDC ***01*** *22:28:56.4±1.0, 55°.72S×25°.21W, h0^{km}, mb4.2/4, mbtmp4.2/4, MS3.7/8, Error ellipse: s-maj=35.1km s-min=31.4km az=34.0*

NEIC ***01*** *22:28:59.1±1.6, 56°.0S±0°.2×25°.50W±0°.10, h10^{km}±2^{km}, mb4.5/13, Error ellipse: s-maj=28.3km s-min=6.2km az=15.0*

ISC 01 22:28:58.0±0.8, **55°.8S**±0°.1×**25°.2W**±0°.1, **h10**^{km}, **n28,** σ**0^{s}.91**/20, **mb4.4**/10, **MS3.7**/8, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	6.67	279	Pn	Pn	22 30 35.6	-0.4
SNAA	Sanae	18.50	158	P	P	22 33 13.4	-0.5
PMSA	Palmer Station	20.89	229	LR	LR	22 40 10.4	
	comp=Z,169nm,21.2s,baz=105,slow=32						
BELA	Belgrano 2	22.38	185	P	P	22 33 54.1	-1.8
BELA				IAmb	IAmb	22 34 01.2	
	comp=Z,18nm,1.2s						
TRQA	Tornquist	30.29	290	P	P	22 35 09.0	-0.1
TRQA				IAmb	IAmb	22 35 12.5	
	comp=Z,9.5nm,1.0s						
PLTB	Pedras Altas	31.22	309	P	P	22 35 17.5	+0.2
PLCA	Paso Flores	33.08	278	LR	LR	22 49 46.1	
	comp=Z,139nm,18.5s,baz=92,slow=38						
QSPA	South Pole Qui	34.41	180	P	P	22 35 45.6	+0.4
QSPA				IAmb	IAmb	22 35 52.5	
	comp=Z,4.3nm,0.8s						
CPUP	Villa Florida	37.54	308	P	P	22 36 11.0	-1.0
	comp=Z,1.0nm,0.3s,baz=158,slow=11,SNR=1.1						
	comp=Z,1.0nm,0.3s						
MT09	Talagante	38.33	286	P	P	22 36 18.5	-0.3
CFA	Coronel Fontan	38.52	291	P	P	22 36 19.7	-0.7
	comp=Z,4.0nm,0.5s,baz=151,slow=9.2,SNR=9.0						
	comp=Z,4.0nm,0.5s						
MT02	Curacav	38.80	286	P	P	22 36 22.0	-0.7
MT02				IAmb	IAmb	22 36 37.1	
	comp=Z,12nm,1.4s						
SUR	Sutherland	39.50	73	LR	LR	22 48 10.4	
	comp=Z,165nm,18.4s,baz=214,slow=29						
CO01	Juntas del Tor	40.78	290	P	P	22 36 39.8	+0.4
AC02	Maricunga	42.80	294	P	P	22 36 56.9	+0.7
AC02				IAmb	IAmb	22 37 00.2	
	comp=Z,15nm,1.4s						
BOSA	Boshof	44.83	74	LR	LR	22 51 27.1	
	comp=Z,111nm,20.3s,baz=197,slow=30						
VNDA	Vanda	46.83	182	P	P	22 37 28.2	+1.0
	comp=Z,0.8nm,0.5s,baz=177,slow=6.4,SNR=3.2						
	comp=Z,0.8nm,0.5s						
VNDA	Vanda	46.83	182	P	P	22 37 29.1	+1.9
VNDA				IAmb	IAmb	22 37 37.1	
	comp=Z,5.7nm,1.4s						
LBTB	Lobatse	47.87	71	LR	LR	22 52 32.4	
	comp=Z,51nm,21.9s,baz=222,slow=30						
PTLB	Pontes e Lacer	47.94	314	P	P	22 37 37.0	+0.4
PTLB				IAmb	IAmb	22 37 38.1	
	comp=Z,9.2nm,1.3s						
SIV	San Ignacio	48.27	311	LR	LR	22 59 47.0	
	comp=Z,63nm,18.2s,baz=82,slow=38						
GO01	Chusmiza	48.80	300	P	P	22 37 45.0	+1.3
TORD	Torodi Ar. Bea	72.33	28	P	P	22 40 23.4	-0.3
	comp=Z,2.9nm,0.7s,baz=202,slow=6.1,SNR=33						
	comp=Z,2.9nm,0.7s						
ASAR	Alice Springs	98.84	161	LR	LR	23 24 22.1	
	comp=Z,40nm,21.3s,baz=172,slow=34						
EIL	Elat	99.33	50	LR	LR	23 23 30.7	
	comp=Z,32nm,19.9s,baz=290,slow=33						
YKA	Yellowknife Ar	136.77	317	PKP	PKPdf	22 48 19.6	+0.6
	comp=Z,0.1nm,0.4s,baz=113,slow=2.5,SNR=4.0						
SONM	Songino Array	149.59	85	PKPbc	PKPbc	22 48 45.8	-0.9
	comp=Z,0.8nm,0.7s,baz=222,slow=4.1,SNR=7.0						
ILAR	Eielson Array	150.81	312	PKPbc	PKPbc	22 48 48.9	-0.2
	comp=Z,1.3nm,0.8s,baz=124,slow=1.5,SNR=11						

IDC 01 22:38:57.1±2.3, **6°.86S**×**128°.80E, h0**^{km}**, mb3.1**/1, **mbtmp3.1**/3, **ML3.1**/2, **Error ellipse: s-maj=123.4km s-min=33.7km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.07	158	Pn	Pn	22 42 19.8	+1.9
	0.1nm,0.3s,baz=337,slow=13,SNR=5.2						
WRA				Sn	Sn	22 44 42.0	-13
	baz=356,slow=22,SNR=2.8						
	0.2nm,0.7s						
ASAR	Alice Springs	17.41	164	P	Pn	22 43 00.1	-1.6
	0.1nm,0.3s,baz=346,slow=11,SNR=5.0						
	0.2nm,0.4s						
LZH	Lanzhou	48.73	333	*e*P	P	22 47 51.1	+7.3
LZH				pP		22 47 57.4	
LZH				pmax	pmax		
	comp=Z,18nm,1.6s						
MKAR	Makanchi Array	67.46	327	P	P	22 49 54.9	+0.1
	comp=Z,0.1nm,0.5s,baz=120,slow=5.9,SNR=1.8						
	comp=Z,0.1nm,0.5s						

VAO 01 22:46:33.9±0.4, **0°.61N**×**50°.18W, h0**^{km}**, mbR3.8, Brazil**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCPB	Macapa, AP	2.11	243	*e*P	Pn	22 47 10.4	-0.1
MCPB				*e*S	Sn	22 47 38.2	+0.8
TMAB	Tom-Au,PA,Br	3.62	145	*e*P	Pn	22 47 31.3	0.0
TMAB				*e*S	Sn	22 48 14.8	+0.1
MALB	Monte Alegre	4.76	239	*e*P	Pn	22 47 46.8	-0.1
MALB				*e*S	Sn	22 48 43.4	+0.5
PRPB	Parauapebas	6.74	177	*e*P	Pn	22 48 14.2	-0.1
ITTB	Itaituba	7.43	228	*e*P	Pn	22 48 24.1	+0.4
NPGB	Novo Progresso	9.19	214	*e*P	Pn	22 48 48.2	+0.3
SMTB	Santa Maria do	9.75	165	*e*P	Pn	22 48 55.4	-0.2
SMTB				*e*S	Sn	22 50 46.7	+0.7
BOAV	Boa Vista	10.49	280	*e*P	Pn	22 49 04.1	-1.6
MACA	Manacapuru-AM	11.15	250	*e*P	Pn	22 49 15.2	+0.5
MACA				*e*S	Sn	22 51 20.2	0.0
SNDB	Serra Nova Dou	12.55	185	*e*P	Pn	22 49 33.8	-0.1
SNDB				*e*S	Sn	22 51 54.7	+0.2
CLDB	Colider	12.70	206	*e*P	Pn	22 49 36.1	+0.2
CLDB				*e*S	Sn	22 51 58.9	+0.7
NBCL	Cascavel-CE	12.81	112	*e*P	Pn	22 49 37.8	+0.3
NBCL				*e*S	Sn	22 52 01.7	+0.7
PDRB	Porto dos Gac	13.77	208	*e*P	Pn	22 49 50.5	-0.1
PDRB				*e*S	Sn	22 52 24.9	+0.4
SDBA	SAO DESIDERIO	13.95	158	*e*P	Pn	22 49 51.4	-1.7
SDBA				*e*S	Sn	22 52 29.4	+0.5
TEFE	Tefe	15.01	254	*e*P	Pn	22 50 07.3	-0.3
SAML	Samuel	16.06	233	*e*P	Pn	22 50 21.4	+0.1
BDFB	Brasilia	16.29	173	*e*P	Pn	22 50 24.7	+0.4
SALV	Santo Antonio	17.28	198	*e*P	Pn	22 50 36.9	0.0
PTLB	Pontes e Lacer	18.25	209	*e*P	P	22 50 48.9	-0.1
SJMB	Sao Joao De Ma	21.13	156	*e*P	P	22 51 20.3	-0.2

JMA 01 23:07:16.0±0.1, **24°.3N**±0°.6×**123°.4E**±0°.3, **h20**^{km}±2^{km}, **MV2.1**/9, **NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.28	74	P	Pb	23 07 22.2	-0.2
IRIF				S	Sg	23 07 27.0	+0.2
HATJ	Hateruma jima	0.40	120	*e*P	Pg	23 07 24.0	-0.4
HATJ				S	Sg	23 07 29.9	-0.1
YOJ	Yonaguni jima	0.43	298	P	Pg	23 07 24.9	-0.2
YOJ				*e*S	Sg	23 07 30.8	-0.3
JYNG	Yonagunijimaku	0.48	294	P	Pb	23 07 25.6	-0.2
JYNG				*e*S	Sb	23 07 32.1	-0.4
JKRS	Kuro-shima	0.53	92	P	Pg	23 07 26.8	0.0
JKRS				S	Sg	23 07 34.4	+0.5
JIJ	Ishigaki jima	0.66	81	P	Pb	23 07 28.4	-0.5
JIJ				S	Sb	23 07 37.2	-0.3
JISG	Ishigakijimahi	0.87	68	P	Pb	23 07 32.1	-0.3
JISG				*e*S	Sb	23 07 44.0	+0.4
JTJ	Tarama	1.22	72	*e*S	Sg	23 07 55.0	-0.7

TAP 01 23:08:07.8, 24°.86N×**122°.08E, h7**^{km}**, ML2.2, 3C, D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		0.13	265	*i* P	Pg	23 08 11.1	+0.5
	baz=264						
EGS				*e*S	Sg	23 08 12.9	+0.4
	baz=264						
TWB1	Santiao Chiao	0.17	332	⇑*i*P	Pg	23 08 12.0	+0.7
	baz=334						
TWB1				S	Sg	23 08 14.6	+1.0
	baz=334						
NTC	Toucheng	0.23	270	*e*P	Pg	23 08 13.1	+0.9
	baz=269						
TIPB	Shuangxi	0.26	297	⇑*i*P	Pg	23 08 13.5	+0.7
	baz=297						
TIPB				*e*S	Sg	23 08 16.9	+0.6

	baz=297						
SXI1	Grass Mountain	0.30	322	⇑*i*P	Pb	23 08 14.6	-0.9
	baz=332						
SXI1				S	Sb	23 08 19.4	-1.4
	baz=332						
TWC	Suao	0.32	220	*e*P	Pg	23 08 14.1	+0.1
	baz=218						
TWC				*e*S	Sg	23 08 17.5	-0.8
	baz=218						
NWF	Wu-fen Shan	0.34	309	*e*P	Pg	23 08 15.2	+0.7
	baz=297						
NWF				*e*S	Sg	23 08 20.3	+1.2
	baz=297						
NDS	Dongshan	0.40	236	*e*P	Pb	23 08 18.2	+1.1
	baz=235						
TWE	Neicheng	0.40	250	*e*P	Pg	23 08 15.5	+0.1
	baz=248						
FUSB	Fushanzhiwuyua	0.46	258	*e*P	Pg	23 08 16.6	+0.1
	baz=257						
TWA	Mucha	0.47	286	*e*P	Pg	23 08 17.4	+0.6
	baz=286						
TWA				*e*S	Sg	23 08 23.3	+0.4
	baz=286						
EWUT	Wuta	0.49	214	*e*P	Pg	23 08 17.9	+0.7
	baz=203						
ENTT	Nioudou	0.51	245	*e*P	Pg	23 08 18.0	+0.3
	baz=244						
ENTT				*e*S	Sg	23 08 24.3	-0.1
	baz=244						
ENA	Nanau	0.52	216	*e*P	Pg	23 08 18.5	+0.6
	baz=205						
NWLT	Wulai	0.53	262	*e*P	Pg	23 08 18.0	0.0
	baz=261						
YM01	YM01	0.54	302	*e*P	Pb	23 08 19.3	-0.4
	baz=301						
LATG	Datong	0.59	238	*e*P	Pg	23 08 19.9	+0.6
	baz=247						
ANP	Anpu	0.60	303	*e*P	Pb	23 08 20.5	-0.2
	baz=292						
TWS1	Kuangyinshan	0.65	292	*e*P	Pb	23 08 21.6	+0.2
	baz=292						
NTST	Danshui	0.65	298	*e*P	Pb	23 08 21.3	-0.1
	baz=298						
YHNB	Yeheng	0.66	254	*e*P	Pg	23 08 20.4	-0.2
	baz=264						
NSK	Sanguang	0.68	255	*e*P	Pg	23 08 20.6	-0.3
	baz=263						
NNSB	Datong	0.76	236	*e*P	Pg	23 08 22.5	+0.1
	baz=235						
ETL	Fush Village	0.81	211	*e*P	Pg	23 08 23.3	0.0
	baz=202						
NACB	Ninganchiao	0.81	213	*e*P	Pg	23 08 23.3	0.0
	baz=202						
NACB				*e*S	Sg	23 08 33.2	-0.6
	baz=202						
ETLH	Xiulin Townshi	0.84	220	*e*P	Pg	23 08 24.3	+0.3
	baz=219						

IDC 01 23:18:50.8±4.5**, 50°.50S×139°.51E, h0^{km}, mb3.5**/2**, mbtmp3.5**/3**, ML3.6**/1**, MS3.1**/2**, Error ellipse: s-maj=201.3km s-min=50.5km az=102.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	18.67	6	P	Pn	23 23 10.5	0.0
	0.1nm,0.3s,baz=169,slow=10,SNR=1.6						
STKA				LR	LR	23 29 39.8	
	comp=Z,55nm,20.4s,baz=203,slow=35						
	0.5nm,0.4s						
H01W1	Cape Leeuwin H	24.13	301	T	T	23 49 15.5	
	baz=139,slow=75,SNR=43						
H01W2	Cape Leeuwin H	24.14	301	T	T	23 49 22.8	
	baz=139,slow=75,SNR=53						
H01W3	Cape Leeuwin H	24.15	301	T	T	23 49 24.3	
	baz=139,slow=75,SNR=53						
ASAR	Alice Springs	27.14	349	P	P	23 24 35.5	-0.1
	0.2nm,0.3s,baz=169,slow=9.8,SNR=2.0						
	0.2nm,0.3s						
WRA	Warramunga Arr	30.76	350	P	P	23 25 07.7	-0.1
	0.4nm,0.7s,baz=178,slow=8.3,SNR=3.5						
	0.4nm,0.7s						
KAPI	Kappang	48.27	333	LR	LR	23 49 33.2	
	comp=Z,18nm,19.0s,baz=186,slow=38						
ARCES	ARCESS Array B	144.26	327	PKP	PKPbc	23 38 25.5	0.0
	1.9nm,0.8s,baz=100,slow=3.0,SNR=5.9						
GERES	GERESS Array B	145.54	289	PKPbc	PKPdf	23 38 30.0	-0.1
	0.3nm,0.5s,baz=116,slow=4.5,SNR=2.2						

IDC 01 23:38:10.0±4.4**, 23°.78N×94°.46E, h125^{km}**±43^{km}**, mb3.0**/2**, mbtmp3.4**/3**, Error ellipse: s-maj=165.1km s-min=24.4km az=59.0, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	6.75	141	P	Pn	23 39 46.7	0.0
	1.6nm,0.3s,baz=316,slow=13,SNR=8.2						
MKAR	Makanchi Array	24.96	340	P	P	23 43 21.8	0.0
	0.7nm,0.5s,baz=151,slow=9.6,SNR=18						
	0.7nm,0.5s						
WRA	Warramunga Arr	58.30	135	P	P	23 47 51.9	-0.1
	0.2nm,0.7s,baz=315,slow=7.8,SNR=1.3						
	0.2nm,0.7s						

*ISK **01** 23:47:38.5, 39°.52N×26°.03E, h6^{km}, ML2.7/24*
*DDA **01** 23:47:39.4±0.0, 39°.52N×26°.08E, h9^{km}, ML2.5*
*THE **01** 23:47:39.2, 39°.49N×26°.02E, h8^{km}±1^{km}, ML2.5/8, Error ellipse: s-maj=1.8km s-min=0.7km az=134.0*
*ATH **01** 23:47:39.7, 39°.49N×26°.03E, h12^{km}±2^{km}, ML2.5/5, Error ellipse: s-maj=2.4km s-min=1.0km az=227.0*
ISC 01 23:47:39.1±0.8**, 39°.51N**±0°.02×**26°.03E**±0°.02**, h9^{km}**±6^{km}**, n62, σ0^{s}.50**/92**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.09	94	P	Pg	23 47 41.4	0.0
KOCA				S	Sg	23 47 42.9	-0.2
GPNR	Gulpinar-Canak	0.10	122	Pg	Pg	23 47 41.2	-0.3
GPNR				Sg	Sg	23 47 43.3	0.0
PRK	Paraskevi	0.32	144	P	Pg	23 47 45.5	0.0
PRK				S	Sg	23 47 49.8	0.0
	2µm,0.3s						
PRK	Paraskevi	0.32	144	P	Pg	23 47 45.6	0.0
PRK				S	Sg	23 47 50.2	+0.4
PRK				AML	AML	23 47 50.6	
	comp=E,3202µm,0.3s						
PRK				AML	AML	23 47 50.8	
	comp=N,3436µm,0.3s						
SIGR	SIGRI	0.32	204	P	Pg	23 47 45.7	+0.2
SIGR				S	Sg	23 47 50.6	+0.8
	comp=N,1µm,0.3s						
SIGR	SIGRI	0.32	204	Pg	Pg	23 47 45.6	+0.1
SIGR				Sg	Sg	23 47 50.8	+1.0
SIGR	SIGRI	0.32	204	P	Pg	23 47 45.8	+0.2
SIGR				S	Sg	23 47 50.6	+0.8
SIGR				AML	AML	23 47 50.9	
	comp=N,2872µm,0.3s						
SIGR				AML	AML	23 47 51.0	
	comp=E,2594µm,0.3s						
EZN	Ezine	0.39	36	P	Pg	23 47 46.8	0.0
EZN				S	Sg	23 47 52.7	+0.7
	comp=E,718nm,0.2s						
EZN	Ezine	0.39	36	Pg	Pg	23 47 46.5	-0.3
EZN				Sg	Sg	23 47 52.4	+0.4
BAYC	CANAKKALE_Bayr	0.47	60	P	Pg	23 47 47.8	-0.3
BAYC				S	Sg	23 47 53.9	-0.4
BAYC				*i* AML	AML	23 47 54.0	
	comp=E,343nm,0.4s						
BAYC				*i* AML	AML	23 47 54.0	
	comp=E,335nm,0.3s						
ECEA	Canakkale, Ece	0.55	12	P	Pg	23 47 49.8	+0.1
ECEA				*i* AML	AML	23 47 58.0	
	comp=E,516nm,0.6s						
ECEA				*i* AML	AML	23 47 58.0	
	comp=E,427nm,0.5s						
ECEA				S	Sb	23 47 58.6	-0.1
AYVA	Ayvalik	0.55	111	P	Pg	23 47 49.7	-0.1
COMU	Canakkale	0.68	30	Pg	Pg	23 47 52.1	-0.2
GOKA	anakkale-Gk	0.69	352	P	Pg	23 47 52.5	+0.2
GOKA				S	Sb	23 48 02.5	-0.3
GOKA				*i* AML	AML	23 48 06.0	
	comp=E,293nm,0.3s						
GOKA				*i* AML	AML	23 48 06.0	
	comp=E,330nm,0.5s						
GADA	Gvkgeada	0.69	352	Pg	Pg	23 47 52.1	-0.3
LIA	Limnos Island	0.76	301	P	Pg	23 47 54.3	+0.6
LIA				S	Sb	23 48 04.6	-0.2
	comp=E,440nm,0.3s						
LIA	Limnos Island	0.76	301	P	Pg	23 47 54.2	+0.6
LIA				S	Sb	23 48 05.4	+0.6
DKL	Dikili	0.81	122	Pg	Pg	23 47 54.5	-0.2
BUHA	Balikesir, Bur	0.81	90	P	Pg	23 47 54.2	-0.6
BUHA				S	Sg	23 48 05.3	-0.1
BUHA				*i* AML	AML	23 48 09.0	
	comp=E,148nm,0.5s						
BUHA				*i* AML	AML	23 48 10.0	
	comp=E,198nm,0.2s						
KARB	zmir-Karabur	0.90	160	P	Pg	23 47 56.8	+0.5
KARB				S	Sg	23 48 08.6	+0.6
KARB				*i* AML	AML	23 48 10.0	
	comp=E,180nm,0.5s						
KARB				*i* AML	AML	23 48 11.0	
	comp=E,191nm,0.2s						
CANM	Can-anakkale	0.94	57	Pg	Pg	23 47 56.8	-0.3
GELI	Tayfur-Gelibol	0.95	21	Pg	Pg	23 47 57.1	-0.3
ZEDA	zmir-Bergama	0.98	123	P	Pb	23 47 58.6	+0.4
ZEDA				S	Sb	23 48 12.2	+1.0
PSRA	Psara	1.03	201	P	Pg	23 47 59.4	+0.5
LPK	Lapseki	1.03	33	Pg	Pg	23 47 58.6	-0.3
SMTH	Samothraki Isl	1.03	339	P	Pg	23 47 59.0	+0.1
SMTH				S	Sn	23 48 14.1	-0.2
	comp=E,108nm,0.2s						
SMTH	Samothraki Isl	1.03	339	P	Pg	23 47 59.0	+0.1
SMTH				S	Sb	23 48 13.1	+0.3
SMTH				AML	AML	23 48 14.5	
	comp=E,224µm,0.1s						
SMTH				AML	AML	23 48 16.1	
	comp=N,194µm,0.2s						
CHOS	Chios island	1.12	179	P	Pg	23 47 59.9	-0.7
CHOS				S	Sg	23 48 14.9	-0.2
	comp=N,480nm,0.2s						
CHOS	Chios island	1.12	179	Pn	Pg	23 48 00.2	-0.4
CHOS	Chios island	1.12	179	P	Pg	23 47 60.0	-0.7
CHOS				S	Sg	23 48 15.2	+0.1
CHOS				AML	AML	23 48 19.9	
	comp=N,755µm,0.2s						
CHOS				AML	AML	23 48 19.9	
	comp=E,1175µm,0.2s						
CAVK	Edirne/Enez-Ca	1.19	5	P	Pb	23 48 01.7	-0.1
ERIK	Erikli-Kesan	1.22	18	Pn	Pb	23 48 01.7	-0.6
URLA	Izmir	1.23	159	Pn	Pn	23 48 01.6	-0.8
ENEZ	Enez	1.23	5	P	Pn	23 48 02.2	-0.2
ENEZ				S	Sn	23 48 20.2	+1.1
	comp=E,215nm,0.3s						
ENEZ	Enez	1.23	5	Pn	Pn	23 48 02.2	-0.2
BALY	Balya	1.25	79	P	Pn	23 48 02.3	-0.5
BALY				S	Sb	23 48 18.7	-0.4
BALY				*i* AML	AML	23 48 20.0	
	comp=E,180nm,0.7s						
BALY				*i* AML	AML	23 48 20.0	
	comp=E,103nm,0.6s						
KRBG	Karabiga-Canak	1.32	47	Pn	Pn	23 48 03.7	+0.1
STEP	BALIKESIR_Sava	1.32	95	P	Pn	23 48 03.7	+0.1
STEP				S	Sg	23 48 22.1	+0.6
STEP				*i* AML	AML	23 48 25.0	
	comp=E,84nm,0.3s						
STEP				*i* AML	AML	23 48 28.0	
	comp=E,79nm,0.5s						
BLCB	Balcova	1.37	144	Pn	Pn	23 48 04.7	+0.3
ALN	Alexandroupoli	1.39	1	P	Pn	23 48 04.3	-0.3
ALN				S	Sg	23 48 24.0	+0.3
	comp=E,128nm,0.4s						
ALN	Alexandroupoli	1.39	1	Pn	Pn	23 48 04.6	0.0
ALN	Alexandroupoli	1.39	1	P	Pn	23 48 04.6	0.0
ALN				S	Sn	23 48 23.2	+0.2
ALN				AML	AML	23 48 24.9	
	comp=E,232µm,0.4s						
ALN				AML	AML	23 48 24.9	
	comp=N,283µm,0.4s						
GONE	Gonen-Balikesi	1.39	67	Pn	Pn	23 48 04.9	+0.3
KESN	Edirne-Kesan	1.41	21	P	Pn	23 48 05.0	-0.2
KESN				S	Sg	23 48 24.8	+0.3
KESN				*i* AML	AML	23 48 26.0	
	comp=N,110nm,0.2s						
KESN				*i* AML	AML	23 48 27.0	
	comp=N,101nm,0.2s						
BALB	Balikesir	1.44	84	Pn	Pn	23 48 05.4	+0.1
RKY	Sarkoy-Tekirda	1.47	37	Pn	Pn	23 48 05.9	+0.1
BKES	Balkesir-Mer	1.49	81	P	Pn	23 48 06.7	+0.7
BKES				S	Sb	23 48 26.2	+0.3
BKES				*i* AML	AML	23 48 28.0	
	comp=N,72nm,0.4s						
EDC	Edincik	1.64	59	Pn	Pn	23 48 08.3	+0.2
RDO	Rodhopi	1.68	347	Pn	Pn	23 48 08.8	+0.2
RDO	Rodhopi	1.68	347	P	Pn	23 48 08.7	+0.1
UKOP	Uzunkopru-Edir	1.68	16	Pn	Pn	23 48 08.8	+0.2
KYMI	Kymi, Euboea I	1.73	240	P	Pn	23 48 08.2	-1.1
KYMI				S	Sn	23 48 29.9	-1.7
KYMI	Kymi, Euboea I	1.73	240	P	Pn	23 48 08.1	-1.2
TKR	Tekirdag	1.88	38	Pn	Pn	23 48 11.5	+0.2
DURS	Dursunbey	1.90	86	P	Pn	23 48 11.7	0.0
DURS				S	Sn	23 48 34.8	-0.8
DURS				*i* AML	AML	23 48 42.0	
	comp=N,35nm,0.4s						
KCTX	Karacabey (Bur	1.95	66	Pn	Pn	23 48 12.5	+0.2
EREA	Eretria	1.96	237	P	Pn	23 48 11.6	-0.9
GCAM	G?zelcaml?	2.04	152	Pn	Pn	23 48 14.0	+0.5
CRLT	Corlu	2.08	38	Pn	Pn	23 48 14.6	+0.5
ORLT	Orhaneli	2.28	75	Pn	Pn	23 48 17.4	+0.6
KULA	Kula-Manisa	2.28	115	Pn	Pn	23 48 17.6	+0.7
SIMA	Simav-Kutahya	2.33	100	Pn	Pn	23 48 18.3	+0.6

IDC 02 00:01:44.5±6.6**, 22°.78S×148°.19E, h0^{km}, mbtmp2.7**/2**, ML2.4**/2**, Error ellipse: s-maj=68.1km s-min=40.7km az=79.0, Queensland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	3.23	326	Pn	Pn	00 02 36.1	-0.3
	0.5nm,0.3s,baz=147,slow=18,SNR=6.5						
CTA				Pg	Pb	00 02 43.2	+0.5
	1.0nm,0.3s,baz=147,slow=20,SNR=7.9						
CTA				Sn	Sn	00 03 17.3	+1.6
	0.9nm,0.3s,baz=208,slow=12,SNR=6.4						
CTA				Lg	Lg	00 03 27.6	
	5.2nm,0.3s,baz=57,slow=20,SNR=12						
CTA				Rg	Rg	00 03 46.8	
	46nm,0.9s,baz=22,slow=9.3,SNR=6.4						
	1.3nm,0.3s						
ASAR	Alice Springs	13.16	263	Sn	Sn	00 07 10.5	-10
	baz=85,slow=21,SNR=2.9						
ASAR				Lg	Lg	00 08 49.6	
	0.1nm,0.3s,baz=65,slow=29,SNR=5.8						
WRA	Warramunga Arr	13.21	280	Pn	Pn	00 04 53.6	+0.1
	baz=98,slow=12,SNR=2.3						
WRA				Lg	Lg	00 08 49.6	
	0.1nm,0.3s,baz=106,slow=29,SNR=6.8						
	0.1nm,0.6s						
I07AU	WARRAMUNGA INF	13.22	280	I	I	01 21 30.0	
	0.1nm,0.6s,baz=104,slow=308,SNR=7.6						
I04AU	SHANNON INFRAS	30.18	240	I	I	03 05 00.0	
	baz=71,slow=312,SNR=1.2						

*ISK **02** 00:05:39.9, 39°.52N×26°.04E, h7^{km}, ML3.1/27*
*DDA **02** 00:05:40.8±0.0, 39°.50N×26°.12E, h10^{km}, ML2.8*
*THE **02** 00:05:40.6, 39°.51N×26°.05E, h8^{km}±1^{km}, ML3.0/10, Error ellipse: s-maj=1.4km s-min=0.6km az=183.0*
*ATH **02** 00:05:41.0, 39°.50N×26°.07E, h12^{km}±3^{km}, ML3.2/3, Error ellipse: s-maj=3.4km s-min=1.1km az=194.0*
*SOF **02** 00:05:42.3, 39°.63N×25°.99E, h20^{km}, MD3.1*
ISC 02 00:05:40.5±0.8**, 39°.51N**±0°.01×**26°.05E**±0°.02**, h10^{km}**±5^{km}**, n82, σ0^{s}.66**/118**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.07	94	P	Pg	00 05 42.8	0.0
KOCA				S	Sg	00 05 44.4	0.0
GPNR	Gulpinar-Canak	0.09	127	Pg	Pg	00 05 42.5	-0.4
GPNR				Sg	Sg	00 05 44.3	-0.3
PRK	Paraskevi	0.31	146	P	Pg	00 05 46.8	0.0
PRK				S	Sg	00 05 51.0	0.0
	13µm,0.3s						
PRK	Paraskevi	0.31	146	P	Pg	00 05 46.9	0.0
PRK				S	Sg	00 05 51.1	+0.1
PRK				AML	AML	00 05 51.6	
	comp=N,26221µm,0.5s						
PRK				AML	AML	00 05 51.9	
	comp=E,23915µm,0.2s						
SIGR	SIGRI	0.33	207	P	Pg	00 05 47.4	+0.3
SIGR				S	Sg	00 05 52.1	+0.6
	comp=E,3µm,0.4s						
SIGR	SIGRI	0.33	207	Pg	Pg	00 05 47.4	+0.3
SIGR				Sg	Sg	00 05 52.3	+0.8
SIGR	SIGRI	0.33	207	P	Pg	00 05 47.5	+0.3
SIGR				S	Sg	00 05 52.3	+0.8
SIGR				AML	AML	00 05 52.6	
	comp=E,5416µm,0.2s						
SIGR				AML	AML	00 05 53.0	
	comp=N,5314µm,0.2s						
EZN	Ezine	0.39	34	P	Pg	00 05 48.0	-0.2
EZN				S	Sg	00 05 53.6	+0.4
	comp=N,1µm,0.4s						
EZN	Ezine	0.39	34	Pg	Pg	00 05 47.9	-0.2
EZN				Sg	Sg	00 05 53.4	+0.2
BAYC	CANAKKALE_Bayr	0.45	59	P	Pg	00 05 48.9	-0.5
BAYC				S	Sg	00 05 54.7	-0.7
BAYC				*i* AML	AML	00 05 55.0	
	comp=N,625nm,0.5s						
BAYC				*i* AML	AML	00 05 55.0	
	comp=N,580nm,0.3s						
AYVA	Ayvalik	0.54	111	P	Pg	00 05 50.5	-0.5
AYVA				S	Sg	00 05 57.8	-0.3
AYVA				*i* AML	AML	00 06 02.0	
	comp=N,271nm,0.3s						
AYVA				*i* AML	AML	00 06 03.0	
	comp=N,756nm,0.8s						
ECEA	Canakkale, Ece	0.55	10	P	Pg	00 05 51.5	+0.3
ECEA				S	Sb	00 05 59.9	-0.2
ECEA				*i* AML	AML	00 06 00.0	
	comp=N,852nm,0.4s						
ECEA				*i* AML	AML	00 06 00.0	
	comp=N,597nm,0.5s						
COMU	Canakkale	0.68	29	Pg	Pg	00 05 53.2	-0.4
COMU				Sg	Sg	00 06 03.4	+0.9
GOKA	anakkale-Gk	0.69	351	P	Pg	00 05 54.1	+0.2
GOKA				S	Sg	00 06 03.8	+0.9
GADA	Gvkgeada	0.69	351	Pg	Pg	00 05 53.7	-0.2
LIA	Limnos Island	0.77	301	P	Pb	00 05 56.1	+0.1
LIA				S	Sg	00 06 06.2	+0.7
	comp=N,2µm,0.3s						
LIA	Limnos Island	0.77	301	P	Pb	00 05 56.2	+0.2
LIA				AML	AML	00 06 09.2	
	comp=E,4162µm,0.2s						
LIA				AML	AML	00 06 09.4	
	comp=N,5130µm,0.4s						
DKL	Dikili	0.80	123	Pg	Pg	00 05 56.1	+0.2
BUHA	Balikesir, Bur	0.80	90	P	Pg	00 05 55.2	-0.8
BUHA				S	Sg	00 06 06.2	-0.2
BUHA				*i* AML	AML	00 06 09.0	
	comp=N,213nm,0.5s						
BUHA				*i* AML	AML	00 06 10.0	
	comp=N,218nm,0.3s						
KARB	zmir-Karabur	0.89	161	P	Pg	00 05 57.7	0.0
KARB				S	Sg	00 06 09.5	+0.3
KARB				*i* AML	AML	00 06 11.0	
	comp=N,563nm,0.4s						
KARB				*i* AML	AML	00 06 12.0	
	comp=N,565nm,0.2s						
CANM	Can-anakkale	0.93	57	Pg	Pb	00 05 58.8	+0.1
GELI	Tayfur-Gelibol	0.95	20	Pg	Pg	00 05 58.4	-0.4
ZEDA	zmir-Bergama	0.97	124	P	Pg	00 05 58.6	-0.5
ZEDA				S	Sg	00 06 11.4	-0.3
ZEDA				*i* AML	AML	00 06 13.0	
	comp=N,569nm,0.4s						
ZEDA				*i* AML	AML	00 06 14.0	
	comp=N,307nm,0.4s						
LPK	Lapseki	1.02	32	Pg	Pg	00 05 59.9	-0.3
LPK				Sg	Sb	00 06 14.2	+0.3
PSRA	Psara	1.03	201	P	Pn	00 06 01.0	-0.1
SMTH	Samothraki Isl	1.04	338	P	Pg	00 06 00.4	-0.2
SMTH				S	Sb	00 06 14.8	+0.4
	comp=N,478nm,0.4s						
SMTH	Samothraki Isl	1.04	338	P	Pg	00 06 00.3	-0.3
CHOS	Chios island	1.12	180	P	Pb	00 06 01.1	-0.9
CHOS				S	Sb	00 06 17.1	+0.4
	comp=N,838nm,0.3s						
CHOS	Chios island	1.12	180	Pn	Pb	00 06 01.5	-0.5
CHOS	Chios island	1.12	180	P	Pb	00 06 01.0	-1.1
CAVK	Edirne/Enez-Ca	1.19	5	P	Pb	00 06 03.3	+0.1
CAVK				S	Sg	00 06 19.3	+0.5
CAVK				*i* AML	AML	00 06 20.0	
	comp=N,281nm,0.8s						
CAVK				*i* AML	AML	00 06 20.0	
	comp=N,341nm,0.9s						
ERIK	Erikli-Kesan	1.22	17	Pn	Pn	00 06 02.9	-0.7
URLA	Izmir	1.22	159	P	Pn	00 06 02.8	-0.9
URLA				S	Sb	00 06 19.0	-0.6
URLA				*i* AML	AML	00 06 20.0	
	comp=N,258nm,0.4s						
URLA				*i* AML	AML	00 06 21.0	
	comp=N,269nm,0.4s						
ENEZ	Enez	1.23	4	P	Pn	00 06 03.5	-0.4
ENEZ				S	Sn	00 06 20.7	+0.2
	comp=N,775nm,0.4s						
ENEZ	Enez	1.23	4	Pn	Pn	00 06 03.4	-0.4
BALY	Balya	1.24	79	P	Pn	00 06 03.8	-0.2
BALY				S	Sb	00 06 19.2	-0.9
BALY				*i* AML	AML	00 06 21.0	
	comp=N,384nm,0.5s						
BALY				*i* AML	AML	00 06 24.0	
	comp=N,111nm,0.4s						
STEP	BALIKESIR_Sava	1.30	95	P	Pg	00 06 05.9	+0.3
STEP				S	Sg	00 06 23.4	+0.9
STEP				*i* AML	AML	00 06 25.0	
	comp=N,179nm,0.4s						
STEP				*i* AML	AML	00 06 29.0	
	comp=N,174nm,0.5s						
KRBG	Karabiga-Canak	1.31	47	Pn	Pn	00 06 04.3	-0.6
ZEYE	Izmir, Urla-Ze	1.32	164	P	Pn	00 06 03.8	-1.2
ZEYE				S	Sb	00 06 22.1	-0.1
ZEYE				*i* AML	AML	00 06 26.0	
	comp=N,384nm,0.2s						
ZEYE				*i* AML	AML	00 06 27.0	
	comp=N,268nm,0.5s						
BLCB	Balcova	1.36	145	P	Pn	00 06 04.8	-0.8
BLCB	Balcova	1.36	145	Pn	Pn	00 06 04.9	-0.7
GONE	Gonen-Balikesi	1.38	66	Pn	Pn	00 06 06.0	+0.2
ALN	Alexandroupoli	1.39	0	P	Pn	00 06 06.1	+0.1
ALN				S	Sn	00 06 23.4	-1.0
	comp=N,288nm,0.4s						
ALN	Alexandroupoli	1.39	0	Pn	Pb	00 06 06.6	0.0
ALN	Alexandroupoli	1.39	0	P	Pn	00 06 06.0	0.0
KESN	Edirne-Kesan	1.40	20	P	Pn	00 06 06.0	-0.5
KESN				S	Sb	00 06 25.0	-0.2
KESN				*i* AML	AML	00 06 26.0	
	comp=N,222nm,0.3s						
BALB	Balikesir	1.43	84	Pn	Pn	00 06 06.7	+0.2
RKY	Sarkoy-Tekirda	1.47	36	Pn	Pn	00 06 06.9	-0.2
BKES	Balkesir-Mer	1.47	81	P	Pb	00 06 08.0	0.0
BKES				S	Sn	00 06 26.5	0.0
BKES				*i* AML	AML	00 06 31.0	
	comp=N,134nm,0.5s						
THAS	Thassos island	1.50	318	P	Pn	00 06 06.9	-0.6
THAS				S	Sn	00 06 26.4	-0.6
	comp=N,338nm,0.4s						
THAS	Thassos island	1.50	318	P	Pn	00 06 06.7	-0.8
AKS	Akhisar	1.51	114	Pn	Pn	00 06 07.4	-0.3
DGB	zmir	1.59	155	P	Pn	00 06 09.2	+0.4
DGB				S	Sb	00 06 30.9	+0.7
DGB				*i* AML	AML	00 06 36.0	
	comp=N,69nm,0.7s						
DGB				*i* AML	AML	00 06 37.0	
	comp=N,66nm,0.5s						
EDC	Edincik	1.63	58	Pn	Pn	00 06 09.7	+0.4
GOMA	Golmarmara-Man	1.66	118	Pn	Pn	00 06 10.4	+0.7
UKOP	Uzunkopru-Edir	1.68	15	Pn	Pn	00 06 10.8	+0.8
RDO	Rodhopi	1.68	347	P	Pn	00 06 09.9	-0.1
RDO	Rodhopi	1.68	347	Pn	Pn	00 06 10.2	+0.2
RDO	Rodhopi	1.68	347	P	Pn	00 06 10.0	-0.1
OUR	Ouranopolis	1.79	298	P	Pn	00 06 11.4	-0.1
OUR	Ouranopolis	1.79	298	Pn	Pn	00 06 11.3	-0.1
OUR	Ouranopolis	1.79	298	P	Pn	00 06 11.3	-0.1
TKR	Tekirdag	1.87	37	Pn	Pn	00 06 12.9	+0.3
DURS	Dursunbey	1.88	86	P	Pn	00 06 13.2	+0.4
SMG	Samos	1.90	161	P	Pn	00 06 12.0	-1.0
SMG				S	Sn	00 06 37.5	+0.5
	comp=N,358nm,0.4s						
KCTX	Karacabey (Bur	1.93	66	Pn	Pn	00 06 13.8	+0.3
DST	Dursunbey	1.99	86	Pn	Pn	00 06 15.2	+0.9

GCAM	**G?zelcaml?**	**2.03**	**152**	Pn	**Pn**	**00 06 15.4**	**+0.6**
GCAM	**G?zelcaml?**	**2.03**	**152**	P	**Pb**	**00 06 18.0**	**+0.5**
GCAM				S	**Sb**	**00 06 44.2**	**+1.4**
GCAM				*i* AML	AML	00 06 45.0	
	comp=N,155nm,1.0s						
GCAM				*i* AML	AML	00 06 45.0	
	comp=N,90nm,1.0s						
CRLT	**Corlu**	**2.07**	**38**	Pn	**Pn**	**00 06 15.9**	**+0.5**
DEMI	**Demirci**	**2.12**	**102**	P	**Pn**	**00 06 16.8**	**+0.6**
KDZ	**Kurdzhali**	**2.19**	**348**	P	**Pn**	**00 06 17.3**	**+0.2**
KULA	**Kula-Manisa**	**2.27**	**115**	Pn	**Pn**	**00 06 17.9**	**-0.2**
SIMA	**Simav-Kutahya**	**2.32**	**100**	Pn	**Pn**	**00 06 19.3**	**+0.4**
RZN	**Rozhen**	**2.40**	**336**	P	**Pn**	**00 06 20.6**	**+0.5**
KIRK	**Kırklareli**	**2.41**	**19**	P	**Pb**	**00 06 24.3**	**+0.3**
KIRK				S	**Sb**	**00 06 54.3**	**+0.6**
KIRK				*i* AML	AML	00 06 56.0	
	comp=N,26nm,0.5s						
KIRK				*i* AML	AML	00 06 57.0	
	comp=N,32nm,0.6s						
SOH	**Sokhos**	**2.44**	**303**	P	**Pn**	**00 06 20.8**	**+0.2**
VIZE	**Kirklareli, Vi**	**2.48**	**33**	P	**Pb**	**00 06 25.4**	**+0.2**
DIM	**Dimitrovgrad**	**2.57**	**351**	P	**Pb**	**00 06 26.0**	**-0.7**
MMB	**Musomiste**	**2.73**	**320**	P	**Pn**	**00 06 24.4**	**0.0**
STIP	**Stip**	**3.66**	**308**	*i* Pn	**Pn**	**00 06 36.6**	**-0.6**
STIP				*i* Sn	**Sg**	**00 07 34.9**	**-3.2**
MPEP	**Malo Peshtene**	**4.22**	**336**	P	**Pn**	**00 06 47.9**	**+3.0**

NNC 02 00:09:59.0±9.0, 37°.56N×71°.13E, h0^{km}, mb3.5, mpv3.1, 1C-3D, Error ellipse: s-maj=96.8km s-min=57.2km az=153.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**4.66**	**350**	Pg	Pn	00 11 12.3	+1.7
	3.0nm,0.3s						
IUG				Lg	Lg	00 12 10.1	
	9.0nm,0.3s						
AML	**Almayashu**	**4.97**	**23**	⇓P	Pn	00 11 13.5	-1.8
	0.2nm,0.5s						
AML				⇓S	Sn	00 12 10.9	-2.7
	1.4nm,0.4s						
MRKS	**Merke**	**5.42**	**17**	Pg	Pn	00 11 20.0	-1.1
	2.7nm,0.4s						
MRKS				Lg	Lg	00 12 23.2	
	15nm,0.5s						
KK31	**Karatay Array**	**5.55**	**355**	⇑P	Pn	00 11 24.0	+1.1
	0.6nm,0.2s,baz=173,slow=11,SNR=38						
KK31				⇓S	Sn	00 12 28.9	+1.4
	2.9nm,0.3s,baz=177,slow=22,SNR=21						

DJA 02 00:13:29.2±0.6, 9°S±6°×12°0E±°, h128^{km}±11^{km}, M3.8/7, mb4.0/3, mB4.9/2, MLv3.8/7, Mw(mB)4.2/2, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BASI	**Baing, Sumba**	**1.45**	**175**	P	Pn	00 13 56.5	-0.1
BASI				S	Sn	00 14 17.6	+0.2
MMRI	**Maumere**	**1.77**	**86**	P	Pn	00 14 00.8	+0.5
MMRI				S	Sn	00 14 24.5	+0.4
PLAI	**Plampang**	**2.64**	**269**	P	Pn	00 14 12.5	+1.4
PLAI				S	Sn	00 14 44.6	+1.2
TWSI	**Taliwang, Sumb**	**3.53**	**270**	P	Pn	00 14 23.8	+1.1
TWSI				S	Sn	00 15 04.6	+0.6
SOEI	**Soe**	**3.89**	**105**	P	Pn	00 14 28.4	+0.8
IGBI	**Denpasar**	**5.24**	**269**	P	Pn	00 14 45.1	-0.4
	22nm,0.8s,2µm0.2nm						
JAGI	**Jajag, Banyuwa**	**6.24**	**272**	P	Pn	00 14 57.5	-1.4

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*IDC **02** 00:17:15.4±1.0, 44°.23N×81°.24E, h0^{km}, mb3.6/6, mbtmp3.6/13, ML3.1/6, MS3.1/1, Error ellipse: s-maj=13.9km s-min=9.1km az=123.0*
*NNC **02** 00:17:17.6±0.5, 44°.30N×81°.21E, h0^{km}, mb4.5, mpv4.3, Error ellipse: s-maj=6.8km s-min=2.2km az=127.0*
*SOME **02** 00:17:18.0, 44°.27N×81°.13E, h10^{km}, MS2.9*
ISC 02 00:17:17.3±1.4, 44°.29N±0°.04×81°.17E±0°.04, h4^{km}±9^{km}, n101, σ2^{s}.07/129, mb3.6/6, 25C-11D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	**Jarkent**	**0.99**	**273**	P	**Pb**	**00 17 37.9**	**+0.9**
	447nm,0.2s						
DJR				S	**Sb**	**00 17 52.5**	**+2.2**
	895nm,0.2s						
DJR	**Jarkent**	**0.99**	**273**	*e*P	**Pb**	**00 17 37.9**	**+0.9**
	188nm,0.1s						
DJR				*e*S	**Sb**	**00 17 52.5**	**+2.2**
	784nm,0.1s						
PDGK	**Podgornoye**	**1.55**	**232**	P	**Pn**	**00 17 47.0**	**+1.3**
	208nm,0.3s						
PDGK				S	**Sg**	**00 18 07.6**	**+0.7**
	520nm,0.6s						
PDGK	**Podgornoye**	**1.55**	**232**	⇑P	**Pn**	**00 17 46.2**	**+0.6**
	91nm,0.2s						
PDGK				⇑S	**Sg**	**00 18 07.2**	**+0.3**
	868nm,0.5s						
SHLS	**Shalkode**	**1.68**	**228**	P	**Pn**	**00 17 44.9**	**-2.5**
	559nm,0.2s						
SHLS				S	**Sn**	**00 18 05.0**	**-4.4**
	5µm,0.4s						
SHLS	**Shalkode**	**1.68**	**228**	⇑*i*Pg	**Pn**	**00 17 44.9**	**-2.5**
	baz=219						
SHLS	**Shalkode**	**1.68**	**228**	*e*P	**Pn**	**00 17 44.9**	**-2.5**
	445nm,0.1s						
SHLS				*e*S	**Sn**	**00 18 05.0**	**-4.4**
	5µm,0.2s						
UZB	**Uzynbulak**	**1.93**	**234**	Pg	**Pn**	**00 17 53.0**	**+2.0**
	388nm,0.3s						
UZB				Lg	Lg	00 18 18.7	
	1µm,0.3s						
UZB	**Uzynbulak**	**1.93**	**234**	*e*P	**Pn**	**00 17 52.3**	**+1.4**
	388nm,0.3s						
UZB				*e*S	**Sn**	**00 18 17.2**	**+1.6**
	1µm,0.3s						
BLB	**Baldybastay**	**1.94**	**265**	Pg	**Pb**	**00 17 54.7**	**+1.5**
	781nm,0.3s						
BLB				Lg	Lg	00 18 21.2	
	2µm,0.3s						
KPKS	**Kokpek**	**1.97**	**246**	Pg	**Pb**	**00 17 54.5**	**+0.7**
	251nm,0.2s						
KPKS				Lg	Lg	00 18 20.5	
	1µm,0.3s						
KPKS	**Kokpek**	**1.97**	**246**	⇑*i*Pn	**Pn**	**00 17 53.1**	**+1.6**
	baz=246						
KPKS				*i* Pg	**Pb**	**00 17 53.9**	**+0.1**
	baz=246						
KPKS	**Kokpek**	**1.97**	**246**	*e*P	**Pn**	**00 17 53.1**	**+1.6**
	254nm,0.1s						
KPKS				*e*S	**Sn**	**00 18 19.0**	**+2.3**
	1µm,0.2s						
TDK	**Taldyqorghan**	**2.09**	**291**	Pg	**Pb**	**00 17 56.1**	**+0.3**
	454nm,0.3s						
TDK				Lg	Lg	00 18 23.2	
	4µm,0.6s						
TDK	**Taldyqorghan**	**2.09**	**291**	*i* Pn	**Pn**	**00 17 52.9**	**-0.2**
	baz=291						
TDK				*i* Pg	**Pb**	**00 17 56.0**	**+0.3**
	baz=291						
TDK	**Taldyqorghan**	**2.09**	**291**	*e*Pg	**Pn**	**00 17 55.8**	**+2.7**
	454nm,0.3s						
TDK				*e*Lg	Lg	00 18 23.6	
	4µm,0.6s						
ZHN	**Zhinishke**	**2.27**	**241**	Pg	**Pb**	**00 17 60.0**	**+1.0**
	170nm,0.3s						
ZHN				Lg	Lg	00 18 29.7	
	1µm,0.2s						
ZHN	**Zhinishke**	**2.27**	**241**	⇑*i*Pn	**Pn**	**00 17 57.1**	**+1.4**
	baz=241						
ZHN				*i* Pg	**Pb**	**00 17 59.2**	**+0.3**
	baz=241						
ZHN	**Zhinishke**	**2.27**	**241**	*e*Pg	**Pb**	**00 17 59.8**	**+0.8**
	170nm,0.3s						
ZHN				*e*Lg	Lg	00 18 29.7	
	1µm,0.2s						
KURS	**Kuram**	**2.31**	**251**	Pg	**Pb**	**00 18 00.5**	**+1.0**
	56nm,0.3s						
KURS				Lg	Lg	00 18 30.9	
	133nm,0.3s						
KURS	**Kuram**	**2.31**	**251**	*e*Pg	**Pb**	**00 17 59.4**	**-0.1**
	56nm,0.3s						
KURS				*e*Lg	Lg	00 18 29.6	
	140nm,0.2s						
SATY	**Saty**	**2.35**	**239**	Pg	**Pb**	**00 18 01.0**	**+0.8**
	146nm,0.2s						
SATY				Lg	Lg	00 18 31.5	
	1µm,0.3s						
SATY	**Saty**	**2.35**	**239**	⇑*i*Pn	**Pn**	**00 17 58.2**	**+1.4**
	baz=239						
SATY				*i* Pg	**Pb**	**00 17 59.4**	**-0.8**
	baz=239						
SATY	**Saty**	**2.35**	**239**	*e*Pg	**Pb**	**00 18 01.0**	**+0.8**
	146nm,0.2s						
SATY				*e*Lg	Lg	00 18 31.5	
	1µm,0.3s						
ARXS	**Arharly**	**2.40**	**269**	Pg	**Pb**	**00 18 02.7**	**+1.6**
	233nm,0.3s						
ARXS				Lg	Lg	00 18 34.9	
	616nm,0.3s						
ARXS	**Arharly**	**2.40**	**269**	*e*Pg	**Pb**	**00 18 02.7**	**+1.6**
	66nm,0.1s						
ARXS				*e*Lg	Lg	00 18 34.9	
	598nm,0.2s						
MAKZ	**Makanchi**	**2.58**	**12**	⇑Pn	**Pn**	**00 18 01.0**	**+1.2**
	1.8nm,0.2s						
MAKZ				⇑Pg	**Pb**	**00 18 04.8**	**+0.7**
	39nm,0.6s						
MAKZ				⇑Lg	Lg	00 18 37.8	
	122nm,0.3s						
MK31	**Makanchi Array**	**2.63**	**17**	Pn	**Pn**	**00 18 01.5**	**+1.0**
	1.1nm,0.1s,baz=202,slow=14,SNR=532						
MK31				⇑Pg	**Pb**	**00 18 06.6**	**+1.7**
	23nm,0.3s,baz=196,slow=16,SNR=7.1						
MK31				⇓Lg	Lg	00 18 39.5	
	101nm,0.3s,baz=195,slow=29,SNR=21						
MKAR	**Makanchi Array**	**2.63**	**17**	Pn	**Pn**	**00 18 01.6**	**+1.1**
	6.3nm,0.3s,baz=203,slow=13,SNR=114						
MKAR				Lg	Lg	00 18 40.1	
	107nm,0.3s,baz=196,slow=31,SNR=21						
	17nm,0.3s						
CHKK	**Chushkaly**	**3.04**	**263**	Pg	**Pb**	**00 18 13.1**	**+1.2**
	140nm,0.4s						
CHKK				Lg	Lg	00 18 52.5	
	471nm,0.4s						
CHKK	**Chushkaly**	**3.04**	**263**	*e*Pn	**Pn**	**00 18 07.5**	**+1.4**
	baz=263						
CHKK				*i* Pb	**Pb**	**00 18 11.3**	**-0.7**
	baz=263						
CHKK				*i* Pg	**Pb**	**00 18 13.2**	**+1.2**
	baz=263						
CHKK	**Chushkaly**	**3.04**	**263**	*e*Pg	**Pb**	**00 18 13.1**	**+1.2**
	34nm,0.1s						
CHKK				*e*Lg	Lg	00 18 52.5	
	471nm,0.2s						
KOTS	**Kotyrbulak**	**3.12**	**252**	Pg	**Pb**	**00 18 14.4**	**+1.1**
	186nm,0.4s						
KOTS				Lg	Lg	00 18 55.4	
	364nm,0.5s						
KOTS	**Kotyrbulak**	**3.12**	**252**	*e*Pg	**Pb**	**00 18 14.4**	**+1.1**
	27nm,0.1s						
KOTS				*e*Lg	Lg	00 18 55.4	
	298nm,0.1s						
MDOK	**Medeo**	**3.19**	**251**	⇑Pn	**Pn**	**00 18 09.5**	**+1.2**
	25nm,0.5s						
MDOK				Pg	**Pb**	**00 18 17.2**	**+2.7**
	204nm,0.5s						
MDOK				⇑Pg	**Pg**	**00 18 18.2**	**-0.1**
	139nm,0.5s						
MDOK				Lg	Lg	00 18 59.2	
	119nm,0.5s						
MDOK				⇓Lg	Lg	00 19 02.2	
	179nm,0.6s						
MDOK	**Medeo**	**3.19**	**251**	*i* Pn	**Pn**	**00 18 09.7**	**+1.4**
	baz=251						
KNDC	**Almaty**	**3.23**	**252**	⇓Pn	**Pn**	**00 18 10.0**	**+1.3**
	13nm,0.3s						
KNDC				⇑Pg	**Pb**	**00 18 17.8**	**+2.7**
	145nm,0.5s						
KNDC				⇓Lg	Lg	00 19 03.9	
	487nm,0.7s						
AAA	**Alma-Ata**	**3.26**	**252**	Pg	**Pb**	**00 18 17.2**	**+1.4**
	157nm,0.4s						
AAA				Lg	Lg	00 18 59.2	
	144nm,0.4s						
AAA	**Alma-Ata**	**3.26**	**252**	*e*Pg	**Pb**	**00 18 17.6**	**+1.9**
	baz=252						
AAA	**Alma-Ata**	**3.26**	**252**	*e*Pg	**Pb**	**00 18 17.2**	**+1.4**
	40nm,0.1s						
AAA				*e*Lg	Lg	00 18 59.2	
	137nm,0.1s						
KTBS	**Karatobe**	**3.29**	**261**	Pg	**Pb**	**00 18 19.2**	**+3.1**
	40nm,0.4s						
KTBS				Lg	Lg	00 19 02.7	
	1µm,0.5s						
KTBS	**Karatobe**	**3.29**	**261**	*e*Pg	**Pb**	**00 18 19.2**	**+3.1**
	41nm,0.2s						
KTBS				*e*Lg	Lg	00 19 02.7	
	1µm,0.3s						
TNSS	**Tian-Shan**	**3.31**	**249**	Pg	**Pb**	**00 18 19.0**	**+2.3**
	66nm,0.4s						
TNSS				Lg	Lg	00 19 02.3	
	73nm,0.5s						
TNSS	**Tian-Shan**	**3.31**	**249**	*e*Pn	**Pn**	**00 18 11.6**	**+1.4**
	baz=249						
TNSS				*i* Pg	**Pg**	**00 18 20.1**	**-0.6**
	baz=249						
TNSS	**Tian-Shan**	**3.31**	**249**	*e*Pg	**Pb**	**00 18 19.0**	**+2.3**
	66nm,0.4s						
TNSS				*e*Lg	Lg	00 19 02.3	
	56nm,0.2s						
KUU	**Kurty**	**3.50**	**265**	Pg	**Pb**	**00 18 21.0**	**+1.2**
	74nm,0.6s						
KUU				Lg	Lg	00 19 05.8	
	281nm,0.4s						
KUU	**Kurty**	**3.50**	**265**	⇑*i*Pn	**Pn**	**00 18 14.0**	**+1.6**
	baz=265						
KUU				*e*Pg	**Pb**	**00 18 22.3**	**+2.5**
	baz=265						
KUU	**Kurty**	**3.50**	**265**	*e*Pg	**Pb**	**00 18 21.0**	**+1.2**
	25nm,0.3s						
KUU				*e*Lg	Lg	00 19 05.8	
	206nm,0.3s						
IZV	**Izvestkoviy**	**3.53**	**251**	Pg	**Pb**	**00 18 21.9**	**+1.5**
	9.5nm,0.2s						
IZV				Lg	Lg	00 19 08.2	
	242nm,0.5s						
IZV	**Izvestkoviy**	**3.53**	**251**	*e*Pg	**Pb**	**00 18 21.9**	**+1.5**
	9.5nm,0.2s						
IZV				*e*Lg	Lg	00 19 08.2	
	75nm,0.3s						
MTBS	**Maitube**	**3.62**	**253**	Pg	**Pb**	**00 18 25.2**	**+3.3**
	127nm,0.4s						
MTBS				Lg	Lg	00 19 13.8	
	465nm,0.4s						
MTBS	**Maitube**	**3.62**	**253**	*e*Pg	**Pb**	**00 18 25.2**	**+3.3**
	127nm,0.2s						
MTBS				*e*Lg	Lg	00 19 13.8	
	247nm,0.1s						
KST	**Kastek**	**3.97**	**254**	Pg	**Pb**	**00 18 30.8**	**+2.9**
	101nm,0.6s						
KST				Lg	Lg	00 19 22.6	
	111nm,0.5s						
KST	**Kastek**	**3.97**	**254**	*e*Pg	**Pb**	**00 18 30.8**	**+2.9**
	101nm,0.6s						
KST				*e*Lg	Lg	00 19 22.6	
	111nm,0.2s						
KRBS	**Karabastau**	**4.01**	**263**	Pg	**Pb**	**00 18 30.5**	**+2.1**
	42nm,0.3s						
KRBS				Lg	Lg	00 19 22.2	
	1.0nm,0.3s						
KRBS	**Karabastau**	**4.01**	**263**	*e*Pg	**Pb**	**00 18 30.5**	**+2.1**
	24nm,0.2s						
KRBS				*e*Lg	Lg	00 19 22.2	
	45nm,0.0s						
DGS	**Degeres**	**4.04**	**257**	Pg	**Pb**	**00 18 31.9**	**+2.8**
	71nm,0.6s						
DGS				Lg	Lg	00 19 24.9	
	145nm,0.5s						
DGS	**Degeres**	**4.04**	**257**	*e*Pg	**Pb**	**00 18 31.9**	**+2.8**
	68nm,0.2s						
DGS				*e*Lg	Lg	00 19 24.9	
	145nm,0.5s						
ZSN	**Zaisan**	**4.08**	**38**	Pg	**Pb**	**00 18 30.8**	**+1.1**
	23nm,0.3s						
ZSN	**Zaisan**	**4.08**	**38**	*e*Pn	**Pn**	**00 18 23.1**	**+2.7**
	baz=38						
ZSN				*i* Pg	**Pb**	**00 18 33.0**	**+3.3**
	baz=38						
ZSN	**Zaisan**	**4.08**	**38**	*e*Pg	**Pb**	**00 18 30.8**	**+1.1**
	10nm,0.2s						
ZSN				*e*Lg	Lg	00 19 22.6	
	280nm,0.3s						
ULHL	**Ulahol**	**4.13**	**242**	⇑P	**Pn**	**00 18 23.3**	**+2.0**
	9.6nm,0.2s,SNR=14						
TKM2	**Tokmak 2**	**4.27**	**253**	⇑P	**Pn**	**00 18 24.8**	**+1.6**
	11nm,0.2s,SNR=38						
TKM2	**Tokmak 2**	**4.27**	**253**	Pn	**Pn**	**00 18 25.1**	**+1.9**
TKM2				Pg	**Pb**	**00 18 36.5**	**+3.5**
TKM2				Sn	**Sn**	**00 19 14.9**	**+1.4**
TKM2				Lg	Lg	00 19 34.1	
SGDS	**Sogindy**	**4.80**	**262**	Pg	Pb	00 18 46.3	+4.4
	18nm,0.4s						
SGDS				Lg	Lg	00 19 49.3	
	90nm,0.6s						
SGDS	**Sogindy**	**4.80**	**262**	*e*Pn	**Pn**	**00 18 31.6**	**+1.3**
	baz=262						
SGDS				*e*Pg	**Pb**	**00 18 45.6**	**+3.7**
	baz=262						
KBK	**Karagaybulak**	**4.81**	**252**	⇑P	**Pn**	**00 18 33.1**	**+2.5**
	20nm,0.2s,SNR=26						
CHMS	**Chumysh**	**4.83**	**257**	⇑P	**Pn**	**00 18 32.1**	**+1.4**
	22nm,0.2s,SNR=20						
USP	**Ospenovka**	**4.93**	**260**	⇑P	**Pn**	**00 18 33.6**	**+1.5**
	4.0nm,0.1s,SNR=25						
AAK	**Ala-Archa**	**5.13**	**254**	P	**Pn**	**00 18 37.1**	**+2.2**
	SNR=6.5						
AAK	**Ala-Archa**	**5.13**	**254**	Pn	**Pn**	**00 18 36.4**	**+1.5**
	2.4nm,0.3s,baz=97,slow=5.5,SNR=36						
AAK				Pg	**Pb**	**00 18 50.1**	**+2.5**
	4.7nm,0.3s,baz=80,slow=11,SNR=19						
AAK				Lg	Lg	00 19 59.3	
	2.9nm,0.3s,baz=1.2,slow=23,SNR=7.3						
	4.4nm,0.3s						
BTLS	**Baital**	**5.13**	**281**	Pg	**Pg**	**00 18 52.9**	**-2.7**
	19nm,0.5s						
BTLS				Lg	Lg	00 20 00.9	
	35nm,0.8s						
BTLS	**Baital**	**5.13**	**281**	*e*Pn	**Pn**	**00 18 36.0**	**+1.2**
	baz=281						
BTLS	**Baital**	**5.13**	**281**	*e*Pg	**Pg**	**00 18 52.9**	**-2.7**
	5.5nm,0.1s						
BTLS				*e*Lg	Lg	00 20 00.9	
	28nm,0.3s						
UCH	**Uchtor**	**5.28**	**249**	P	**Pn**	**00 18 40.0**	**+2.8**
	SNR=9.2						
EKS2	**Erkin-Say**	**5.62**	**256**	P	**Pn**	**00 18 43.6**	**+2.0**
	SNR=19						
AML	**Almayashu**	**5.87**	**251**	P	**Pn**	**00 18 48.5**	**+3.1**
	SNR=7.6						
AML	**Almayashu**	**5.87**	**251**	⇑Pn	**Pn**	**00 18 48.1**	**+2.8**
	0.3nm,0.6s						
AML				⇑Pg	**Pg**	**00 19 06.4**	**-3.3**
	5.2nm,0.9s						
AML				⇓Sn	**Sg**	**00 20 23.1**	**-2.6**
	6.6nm,0.7s						
MRKS	**Merke**	**5.97**	**258**	Lg	Lg	00 20 26.8	
	40nm,0.7s						
MRKS	**Merke**	**5.97**	**258**	*e*Pg	Pb	00 19 07.4	+5.5
	11nm,0.3s						
MRKS				*e*Lg	Lg	00 20 26.8	
	26nm,0.2s						
SEM	**Semipalatinsk**	**6.15**	**355**	*e*Pg	Pb	00 19 10.8	+5.7
	baz=355						
KURBB	**Kurchatov Arra**	**6.58**	**345**	Pn	**Pn**	**00 18 54.7**	**0.0**
	0.3nm,0.3s,baz=174,slow=12,SNR=10						
KURBB				Sn	**Sn**	**00 20 10.1**	**-0.1**
	0.8nm,0.3s,baz=146,slow=21,SNR=5.6						
KURBB				Lg	Lg	00 20 47.1	
	1.5nm,0.3s,baz=167,slow=30,SNR=2.9						
	1.0nm,0.3s						
KURBB	**Kurchatov Arra**	**6.58**	**345**	⇑P	**Pn**	**00 18 57.9**	**+3.2**
	5.7nm,0.7s						
DZA	**Taraz**	**7.28**	**262**	*e*P	Pg	00 19 31.8	-4.8
	20nm,0.2s						
DZA				*e*S	**Sg**	**00 21 07.2**	**-3.6**
	44nm,0.1s						
OTUK	**Ortayu**	**7.28**	**306**	⇑Pn	**Pn**	**00 19 06.0**	**+1.6**
	2.3nm,0.6s						
OTUK				⇓Pg	**Pg**	**00 19 33.9**	**-2.8**
	3.8nm,0.5s						
OTUK				⇑Lg	Lg	00 21 07.0	
	77nm,0.6s						
KK31	**Karatay Array**	**7.81**	**265**	⇓Pn	**Pn**	**00 19 13.1**	**+1.4**
	1.2nm,0.6s,baz=75,slow=12,SNR=7.6						
KK31				⇓Pg	Pb	00 19 40.5	+7.3
	1.6nm,0.3s,baz=72,slow=17,SNR=10						
KK31				Lg	Lg	00 21 25.3	
	17nm,0.6s,baz=73,slow=29,SNR=7.3						
BRZS	**Berezniki**	**8.12**	**318**	*e*Pn	**Pn**	**00 19 15.9**	**+0.2**
	baz=318						
IUG	**Iuzhnay**	**8.41**	**259**	*e*Pn	**Pn**	**00 19 20.8**	**+0.8**
	baz=259						
ZALV	**Zalesovo Beam**	**9.96**	**13**	Pn	**Pn**	**00 19 39.6**	**-1.4**
	0.6nm,0.3s,baz=193,slow=16,SNR=4.1						
ZALV				Sn	**Sn**	**00 21 35.4**	**+2.3**
	0.4nm,0.3s,baz=200,slow=16,SNR=2.0						
ZALV				Lg	Lg	00 22 30.9	
	0.2nm,0.3s,baz=189,slow=27,SNR=3.6						
	0.9nm,0.4s						
BVA0	**Borovoye Array**	**11.27**	**325**	⇓Pn	**Pn**	**00 20 02.8**	**+3.9**
	4.8nm,1.5s,baz=129,slow=12,SNR=11						
BVA0				Pg		00 20 11.1	
	0.1nm,0.2s,baz=122,slow=13,SNR=6.0						
BVA0				⇑Sn	**Sn**	**00 22 00.4**	**-4.8**
	3.3nm,0.8s,baz=128,slow=26,SNR=3.8						
BVA0				⇓Lg	Lg	00 22 50.4	
	22nm,0.8s,baz=128,slow=26,SNR=3.8						
BVAR	**Borovoye Array**	**11.27**	**325**	Pn	**Pn**	**00 19 59.4**	**+0.5**
	0.1nm,0.3s,baz=135,slow=14,SNR=13						
BVAR				Sn	**Sn**	**00 22 01.3**	**-3.8**
	0.1nm,0.3s,baz=124,slow=28,SNR=4.3						
BVAR				Lg	Lg	00 23 16.0	
	0.3nm,0.3s,baz=136,slow=27,SNR=6.0						
	0.7nm,0.4s						
AB31	**Akbulak array**	**15.35**	**296**	⇓P	**Pn**	**00 20 53.2**	**-1.3**
	1.5nm,0.8s,baz=108,slow=7.8,SNR=4.4						
AKTO	**Aktyubinsk**	**16.81**	**300**	Pn	**Pn**	**00 21 09.4**	**-3.9**
	0.9nm,0.4s,baz=102,slow=9.1,SNR=1.3						
AKTO				Lg	Lg	00 26 13.1	
	baz=336,slow=6.5,SNR=2.5						
SONM	**Songino Array**	**17.84**	**70**	P	**Pn**	**00 21 26.4**	**+0.1**
	baz=268,slow=11,SNR=2.4						
	0.7nm,0.7s						
KIRV	**Kirov**	**24.12**	**318**	LR	LR	00 32 49.2	
	comp=Z,40nm,19.3s,baz=329,slow=38						
FINES	**FINESS Array B**	**36.12**	**318**	P	**P**	**00 24 19.7**	**-0.2**
	2.6nm,1.1s,baz=98,slow=10,SNR=1.9						
	2.6nm,1.1s						
ARCES	**ARCESS Array B**	**37.45**	**331**	P	**P**	**00 24 31.1**	**-0.1**
	2.1nm,0.9s,baz=85,slow=10,SNR=5.1						
	2.1nm,0.9s						
NOA	**NORSAR Array B**	**43.30**	**318**	P	**P**	**00 25 19.3**	**-0.5**
	0.4nm,0.4s,baz=75,slow=8.7,SNR=3.9						
	0.4nm,0.4s						
ILAR	**Eielson Array**	**64.98**	**21**	P	**P**	**00 27 56.0**	**-1.7**
	0.3nm,0.8s,baz=317,slow=4.9,SNR=2.5						
	0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.43**	**272**	P	**P**	**00 28 49.2**	**-1.6**
	0.4nm,0.5s,baz=36,slow=4.6,SNR=6.0						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**80.27**	**130**	P	**P**	**00 29 28.6**	**-0.6**
	0.1nm,0.5s,baz=338,slow=5.4,SNR=2.5						
	0.1nm,0.5s						

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*KNET **02** 00:22:25.4±0.5, 43°.59N×77°.72E, h10^{km}±4^{km}, ml3.2, Error ellipse: s-maj=9.5km s-min=4.6km az=147.0*
*NNC **02** 00:22:26.0±0.2, 43°.46N×77°.84E, h0^{km}, mb3.8, mpv4.1, Error ellipse: s-maj=3.9km s-min=1.0km az=167.0*
*KRNET **02** 00:22:26.5±0.1, 43°.45N×77°.83E, h23^{km}, mb3.8*
*SOME **02** 00:22:26.8, 43°.45N×77°.77E, h10^{km}*
ISC 02 00:22:26.7±1.0, 43°.46N±0°.02×77°.81E±0°.01, h5^{km}±9^{km}, n95, σ1^{s}.35/181, 39C-28D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURS	**Kuram**	**0.27**	**83**	P	**Pb**	**00 22 32.4**	**-1.6**
	556nm,0.3s						
KURS				S	**Sb**	**00 22 36.6**	**-2.3**
	174nm,0.2s						
KURS	**Kuram**	**0.27**	**83**	*e*P	**Pb**	**00 22 32.4**	**-1.6**
	baz=81						
KURS				*e*S	**Sb**	**00 22 36.6**	**-2.3**
	baz=81						
KURS	**Kuram**	**0.27**	**83**	*e*P	**Pb**	**00 22 32.4**	**-1.6**
	556nm,0.3s						
KURS				*e*S	**Sb**	**00 22 36.6**	**-2.3**
	174nm,0.2s						
ZHN	**Zhinishke**	**0.54**	**122**	P	**Pg**	**00 22 36.8**	**-0.3**
	77nm,0.1s						
ZHN				S	**Sg**	**00 22 43.9**	**-0.3**
	9µm,0.2s						

ZHN	**Zhinishke** baz=22	0.54	122	*e*P	Pg	00 22 36.8	-0.3
ZHN	baz=22			*e*S	Sg	00 22 43.9	-0.3
ZHN	**Zhinishke** 77nm,0.1s	0.54	122	*e*P	Pg	00 22 36.8	-0.3
ZHN	9μm,0.2s			*e*S	Sg	00 22 43.9	-0.3
KOTS	**Kotyrbulak** 198nm,0.1s	0.55	246	P	Pg	00 22 37.9	+0.5
KOTS	1μm,0.2s			S	Sg	00 22 45.9	+1.3
KOTS	**Kotyrbulak** baz=48	0.55	246	*e*P	Pg	00 22 37.9	+0.5
KOTS	baz=48			*e*S	Sg	00 22 45.9	+1.3
KOTS	**Kotyrbulak** 155nm,0.1s	0.55	246	*e*P	Pg	00 22 37.9	+0.5
KOTS	1μm,0.2s			*e*S	Sg	00 22 45.9	+1.3
SATY	**Saty** 279nm,0.1s	0.59	132	P	Pg	00 22 37.9	-0.2
SATY	6μm,0.1s			S	Sg	00 22 45.8	0.0
SATY	**Saty** baz=32	0.59	132	*e*P	Pg	00 22 37.9	-0.2
SATY	baz=32			*e*S	Sg	00 22 45.8	0.0
SATY	**Saty** 279nm,0.1s	0.59	132	*e*P	Pg	00 22 37.9	-0.2
SATY	6μm,0.1s			*e*S	Sg	00 22 45.8	0.0
MDOK	**Medeo** 72nm,0.4s	0.63	242	⇓P	Pg	00 22 38.7	-0.1
MDOK	366nm,0.5s			⇑S	Sg	00 22 47.5	+0.6
KPKS	**Kokpek** 419nm,0.2s	0.64	89	P	Pg	00 22 38.8	-0.2
KPKS	922nm,0.2s			S	Sg	00 22 47.2	-0.1
KPKS	**Kokpek** baz=88	0.64	89	*e*P	Pg	00 22 38.8	-0.2
KPKS	baz=88			*e*S	Sg	00 22 47.3	-0.1
KPKS	**Kokpek** 419nm,0.1s	0.64	89	*e*P	Pg	00 22 38.8	-0.2
KPKS	922nm,0.2s			*e*S	Sg	00 22 47.2	-0.1
KNDC	**Almaty** 208nm,0.2s	0.66	249	⇑P	Pg	00 22 39.7	+0.3
KNDC	373nm,0.8s			⇑S	Sb	00 22 49.1	-1.0
ANVS	**Anan'yevo** baz=90	0.68	189	⇑*i*P	Pg	00 22 39.3	-0.5
ANVS	baz=90			⇑*i*S	Sg	00 22 48.4	-0.2
AAA	**Alma-Ata** 1μm,0.2s	0.69	249	P	Pb	00 22 40.7	-0.7
AAA	90nm,0.1s			S	Sb	00 22 50.7	-0.6
AAA	**Alma-Ata** 1μm,0.1s	0.69	249	*e*P	Pb	00 22 40.7	-0.7
AAA	380nm,0.1s			*e*S	Sb	00 22 50.7	-0.6
CHKK	**Chushkaly** 35nm,0.1s	0.71	304	P	Pg	00 22 40.4	0.0
CHKK	1μm,0.3s			S	Sg	00 22 50.1	+0.4
CHKK	**Chushkaly** baz=4.0	0.71	304	*e*P	Pg	00 22 40.4	0.0
CHKK	baz=4.0			*e*S	Sg	00 22 50.1	+0.4
CHKK	**Chushkaly** 33nm,0.1s	0.71	304	*e*P	Pg	00 22 40.4	0.0
CHKK	1μm,0.1s			*e*S	Sg	00 22 50.1	+0.4
TNSS	**Tian-Shan** 92nm,0.1s	0.75	237	P	Pg	00 22 41.1	-0.1
TNSS	125nm,0.2s			S	Sg	00 22 51.6	+0.6
TNSS	**Tian-Shan** baz=38	0.75	237	*e*P	Pg	00 22 41.1	-0.1
TNSS	baz=38			*e*S	Sg	00 22 51.6	+0.6
TNSS	**Tian-Shan** 68nm,0.1s	0.75	237	*e*P	Pg	00 22 41.1	-0.1
TNSS	125nm,0.2s			*e*S	Sg	00 22 51.6	+0.6
ARXS	**Arharly** 197nm,0.5s	0.76	1	P	Pg	00 22 41.2	0.0
ARXS	676nm,0.3s			S	Sg	00 22 51.6	+0.5
ARXS	**Arharly** 187nm,0.1s	0.76	1	*e*P	Pg	00 22 41.2	0.0
ARXS	676nm,0.3s			*e*S	Sg	00 22 51.6	+0.5
BLB	**Baldybastay** 173nm,0.1s	0.81	37	P	Pg	00 22 41.7	-0.4
BLB	2μm,0.2s			S	Sg	00 22 52.4	-0.2
KTBS	**Karatobe** 89nm,0.2s	0.85	288	P	Pg	00 22 43.1	0.0
KTBS	3μm,0.3s			S	Sg	00 22 54.9	+0.7
KTBS	**Karatobe** baz=88	0.85	288	*e*P	Pg	00 22 43.1	0.0
KTBS	baz=88			*e*S	Sg	00 22 54.9	+0.7
KTBS	**Karatobe** 89nm,0.2s	0.85	288	*e*P	Pg	00 22 43.1	0.0
KTBS	3μm,0.3s			*e*S	Sg	00 22 54.9	+0.7
UZB	**Uzynbulak** 83nm,0.2s	0.94	109	P	Pg	00 22 43.9	-0.9
UZB	624nm,0.2s			S	Sg	00 22 56.0	-1.0
UZB	**Uzynbulak** baz=9.0	0.94	109	*e*P	Pg	00 22 43.9	-0.9
UZB	baz=9.0			*e*S	Sg	00 22 56.0	-1.0
UZB	**Uzynbulak** 83nm,0.2s	0.94	109	*e*P	Pg	00 22 43.9	-0.9
UZB	624nm,0.2s			*e*S	Sg	00 22 56.0	-1.0
IZV	**Izvestkoviy** 62nm,0.1s	0.97	245	P	Pn	00 22 47.8	+0.7
IZV	281nm,0.1s			S	Sn	00 23 01.6	+0.3
MTBS	**Maitube** 133nm,0.3s	1.06	252	P	Pg	00 22 46.5	-0.5
MTBS	384nm,0.2s			S	Sg	00 23 01.0	+0.3
MTBS	**Maitube** baz=53	1.06	252	*e*P	Pg	00 22 46.5	-0.5
MTBS	baz=53			*e*S	Sg	00 23 01.0	+0.3
MTBS	**Maitube** 133nm,0.3s	1.06	252	*e*P	Pg	00 22 46.5	-0.5
MTBS	384nm,0.2s			*e*S	Sg	00 23 01.0	+0.3
PRZ	**Przheval'sk** baz=56	1.07	156	⇑*i*P	Pg	00 22 46.0	-1.2
PRZ	baz=56			⇑*i*S	Sg	00 22 59.4	-1.6
KUU	**Kurty** 51nm,0.2s	1.15	293	P	Pb	00 22 48.0	-1.1
KUU	638nm,0.2s			S	Sb	00 23 03.3	-1.0
KUU	**Kurty** baz=93	1.15	293	*e*P	Pb	00 22 48.0	-1.1
KUU	baz=93			*e*S	Sb	00 23 03.3	-1.0
KUU	**Kurty** 51nm,0.2s	1.15	293	*e*P	Pb	00 22 48.0	-1.1
KUU	638nm,0.2s			*e*S	Sb	00 23 03.3	-1.0
PDGK	**Podgornoye** 86nm,0.3s	1.23	95	P	Pb	00 22 48.9	-1.7
PDGK	142nm,0.3s			S	Sb	00 23 05.0	-1.8
PDGK	**Podgornoye** 53nm,0.3s	1.23	95	⇓P	Pb	00 22 48.8	-1.7
PDGK	211nm,0.5s			⇓S	Sb	00 23 04.9	-1.9
SHLS	**Shalkode** 58nm,0.4s	1.25	103	P	Pg	00 22 54.7	+4.1
SHLS	163nm,0.4s			S	Sn	00 23 14.7	+6.6
SHLS	**Shalkode** baz=0.0	1.25	103	*e*P	Pg	00 22 54.5	+3.9
SHLS	baz=0.0			*e*S	Sn	00 23 14.8	+6.7
SHLS	**Shalkode** 58nm,0.4s	1.25	103	*e*P	Pg	00 22 54.5	+3.9
SHLS	664nm,0.1s			*e*S	Sn	00 23 14.7	+6.6
KDJ	**Kajisay** baz=0.0	1.40	199	⇓*i*P	Pn	00 22 52.6	-0.5
KDJ	baz=0.0			⇓*i*S	Sb	00 23 10.8	-0.9
KST	**Kastek** 130nm,0.2s	1.41	254	P	Pb	00 22 53.1	-0.5
KST	289nm,0.3s			S	Sb	00 23 11.7	-0.2
KST	**Kastek** baz=54	1.41	254	*e*P	Pn	00 22 52.4	-0.7
KST	baz=54			*e*S	Sn	00 23 11.0	-1.1
KST	**Kastek** 130nm,0.2s	1.41	254	*e*P	Pn	00 22 52.4	-0.7
KST	289nm,0.3s			*e*S	Sn	00 23 11.1	-1.1
DGS	**Degeres** 222nm,0.2s	1.50	262	P	Pb	00 22 54.3	-0.7
DGS	283nm,0.4s			S	Sb	00 23 13.9	-0.5
DGS	**Degeres** baz=63	1.50	262	*e*P	Pn	00 22 53.9	-0.5
DGS	baz=63			*e*S	Sn	00 23 13.7	-0.6
DGS	**Degeres** 188nm,0.1s	1.50	262	*e*P	Pn	00 22 53.9	-0.5
DGS	284nm,0.4s			*e*S	Sn	00 23 13.7	-0.6
KRBS	**Karabastau** 114nm,0.3s	1.57	280	P	Pb	00 22 55.4	-0.8
KRBS	308nm,0.2s			S	Sb	00 23 15.9	-0.4
KRBS	**Karabastau** baz=80	1.57	280	*e*P	Pn	00 22 55.1	-0.1
KRBS	baz=80			*e*S	Sn	00 23 15.4	-0.6
KRBS	**Karabastau** 114nm,0.3s	1.57	280	*e*P	Pn	00 22 55.1	-0.1
KRBS	308nm,0.2s			*e*S	Sn	00 23 15.3	-0.6
TDK	**Taldyqorghan** 204nm,0.6s	1.60	15	P	Pn	00 22 55.0	-0.7
TDK	985nm,0.4s			S	Sn	00 23 15.3	-1.5
ULHL	**Ulahol** 56nm,0.2s,SNR=38	1.67	224	⇑P	Pb	00 22 57.4	-0.7
ULHL	**Ulahol** baz=25	1.67	224	⇓*i*P	Pn	00 22 56.7	-0.1
ULHL	baz=25			⇓*i*S	Sn	00 23 18.1	-0.6
BOOM	**Boomskoye usch** baz=36	1.68	235	⇓*i*P	Pn	00 22 56.7	-0.1
BOOM	baz=36			⇓*i*S	Sn	00 23 18.4	-0.4
DJR	**Jarkent** 36nm,0.3s	1.68	58	P	Pb	00 22 57.2	-0.9
DJR	777nm,0.5s			S	Sb	00 23 19.1	-0.5
DJR	**Jarkent** 15nm,0.1s	1.68	58	*e*P	Pb	00 22 56.8	-1.4
DJR	777nm,0.5s			*e*S	Sb	00 23 18.5	-1.1
TKM2	**Tokmak 2** 48nm,0.1s,SNR=184	1.70	252	⇑P	Pn	00 22 57.3	+0.1
TKM2	197nm,0.1s			⇑S	Sg	00 23 21.0	-0.4
TKM2	**Tokmak 2** 41nm,0.3s	1.70	252	⇑P	Pn	00 22 57.2	0.0
TKM2	128nm,0.5s			⇑S	Sb	00 23 20.7	+0.3
TKM2	**Tokmak 2** baz=53	1.70	252	⇑*i*P	Pn	00 22 57.4	+0.1
TKM2	baz=53			⇑*i*S	Sb	00 23 19.7	-0.7
KBK	**Karagaybulak** 42nm,0.1s,SNR=19	2.24	250	⇑P	Pn	00 23 05.7	+1.1
KBK	119nm,0.2s			⇑S	Sb	00 23 36.7	+0.8
KBK	**Karagaybulak** baz=50	2.24	250	⇓*i*P	Pn	00 23 05.2	+0.6
KBK	baz=50			⇓*i*S	Sn	00 23 32.7	0.0
CHMS	**Chumysh** 29nm,0.2s,SNR=27	2.28	259	⇓P	Pn	00 23 05.2	+0.3
CHMS	120nm,0.2s			⇓S	Sb	00 23 37.2	+0.4
CHMS	**Chumysh** baz=60	2.28	259	⇓*i*P	Pn	00 23 05.6	+0.6
CHMS	baz=60			⇓*i*S	Sn	00 23 33.5	0.0
SGDS	**Sogindy** 13nm,0.3s	2.31	271	Pg	Pb	00 23 08.3	-0.6
SGDS	42nm,0.4s			Lg	Lg	00 23 37.9	
FRU1	**Bishkek** baz=56	2.41	256	⇑*i*P	Pn	00 23 07.5	+0.6
FRU1	baz=56			⇑*i*S	Sn	00 23 36.8	0.0
USP	**Ospenovka** 21nm,0.2s,SNR=15	2.42	267	⇓P	Pn	00 23 06.9	-0.1
USP	75nm,0.2s			⇓S	Sb	00 23 39.8	-1.0
USP	**Ospenovka** baz=67	2.42	267	⇓*i*P	Pn	00 23 07.6	+0.7
USP	baz=67			⇓*i*S	Sn	00 23 37.2	+0.3
NRN	**Naryn** baz=15	2.42	214	⇑*i*P	Pn	00 23 08.2	+0.9
NRN	baz=15			⇑*i*S	Sn	00 23 37.7	+0.3
AAK	**Ala-Archa** 46nm,0.4s,SNR=12	2.56	252	⇓P	Pn	00 23 10.2	+1.2
AAK	64nm,0.4s			⇑S	Sb	00 23 45.0	-0.1
AAK	**Ala-Archa** baz=53	2.56	252	⇑*i*P	Pn	00 23 09.5	+0.5
AAK	baz=53			⇑*i*S	Sn	00 23 40.3	-0.3
UCH	**Uchtor** 16nm,0.3s,SNR=7.3	2.71	244	⇑P	Pn	00 23 12.8	+1.4
UCH	**Uchtor** baz=45	2.71	244	⇓*i*P	Pn	00 23 11.9	+0.5
UCH	baz=45			⇓*i*S	Sn	00 23 44.3	-0.5
ARLS	**Aral** baz=40	3.02	239	⇓*i*P	Pn	00 23 15.9	+0.6
ARLS	baz=40			⇓*i*S	Sn	00 23 51.3	-0.7
EKS2	**Erkin-Say** 4.2nm,0.1s,SNR=5.2	3.06	256	⇑P	Pn	00 23 16.0	+0.3
EKS2	**Erkin-Say** baz=57	3.06	256	⇑*i*P	Pn	00 23 16.4	+0.6
EKS2	baz=57			⇑*i*S	Sn	00 23 52.2	-0.6
BTLS	**Baital** 7.2nm,0.5s	3.13	302	*e*Pg	Pb	00 23 22.5	-0.3
BTLS	24nm,0.4s			*e*Lg	Lg	00 24 02.3	
AML	**Almayashu** 0.2nm,0.3s	3.30	248	⇑Pn	Pn	00 23 21.4	+1.9
AML	0.8nm,0.4s			⇓Pg	Pg	00 23 28.9	-1.1
AML	1.7nm,0.4s			⇑Sn	Sn	00 24 01.6	+2.4
AML	**Almayashu** baz=48	3.30	248	⇓*i*P	Pn	00 23 20.1	+0.7
AML	baz=48			⇓*i*S	Sn	00 23 58.5	-0.7
MRKS	**Merke** 20nm,0.4s	3.43	260	Pg	Pb	00 23 28.9	+1.0
MRKS	32nm,0.6s			Lg	Lg	00 24 13.1	
MRKS	**Merke** 20nm,0.2s	3.43	260	*e*Pg	Pb	00 23 28.9	+1.0
MRKS	32nm,0.6s			*e*Lg	Lg	00 24 13.1	
MAKZ	**Makanchi**	4.46	40	Pn	Pn	00 23 36.9	+1.8
MAKZ				Pg	Pb	00 23 46.5	+0.9
MAKZ				Lg	Lg	00 24 47.4	
MK31	**Makanchi Array** 0.5nm,0.3s,baz=219,slow=16,SNR=2.6	4.61	42	⇑Pn	Pn	00 23 37.7	+0.7
MK31	0.8nm,0.3s,baz=227,slow=14,SNR=4.3			⇑Pg	Pb	00 23 47.8	-0.1
MK31	4.9nm,0.5s,baz=217,slow=27,SNR=7.0			⇓Lg	Lg	00 24 53.0	
ARK	**Arkit** baz=51	4.62	251	⇑*i*P	Pn	00 23 38.1	+0.9
ARK	baz=51			⇑*i*S	Sn	00 24 29.6	-1.7
TRKS	**Terek-Say** baz=50	5.29	251	⇑*i*P	Pn	00 23 47.3	+0.8
TRKS	baz=50			⇑*i*S	Sn	00 24 45.8	-2.1
KK31	**Karatay Array** 11nm,0.8s,baz=85,slow=14,SNR=8.7	5.34	269	⇑Pg	Pb	00 24 04.1	+3.6
KK31	6.6nm,0.5s,baz=81,slow=27,SNR=6.8			Lg	Lg	00 25 17.0	
KKAR	**Karatay Array** baz=69	5.34	269	⇑*i*P	Pn	00 23 48.0	+1.0
KKAR	baz=69			⇑*i*S	Sn	00 24 46.6	-2.2
OTUK	**Ortayu** 17nm,0.5s	6.12	323	⇑Lg	Lg	00 25 37.4	

*TUL **02** 00:30:40.6±0.5, 35°.84N±0°.02×96°.65W±0°.04, h6^{km}±5^{km}, ML3.3, mb_Lg3.1/94(NEIC), ML3.3/42(NEIC), Error ellipse: s-maj=4.9km s-min=2.2km az=104.0*

*NEIC **02** 00:30:41.3±0.4, 35°.84N±0°.02×96°.65W±0°.02, h4^{km}±5^{km}, Error ellipse: s-maj=2.4km s-min=2.3km az=79.0*

*ANF **02** 00:30:41.3±0.2, 35°.88N×96°.64W, h5^{km}, ML3.9/14, Error ellipse: s-maj=2.8km s-min=2.1km az=9.0*

ISC 02 00:30:41.2±0.9**, 35°.84N**±0°.02×**96°.65W**±0°.02**, h8**^{km}±7^{km}**, n119, σ0^{s}54**/102**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEOK	**Depew**	0.12	90	Pg	Pg	00 30 43.5	-0.3
DEOK				Sg	Sg	00 30 45.6	0.0
DEOK	comp=E,12μm,0.1s			IAML		00 30 45.7	
OK030	**Cody Creek RV**	0.14	307		Pg	00 30 43.8	-0.3
OK034	**N. Norfolk Rd.**	0.18	342		Pg	00 30 44.6	-0.2
OK034				Sg	Sg	00 30 47.3	+0.1
OK034	comp=E,11μm,0.3s			IAML		00 30 47.6	
OK031	**S. Brethren Rd**	0.19	305		Pg	00 30 44.8	-0.3
OK031				Sg	Sg	00 30 47.8	0.0
OK031	comp=E,8μm,0.5s			IAML		00 30 49.6	
OK031	comp=E,5μm,0.5s			IAML		00 30 49.8	
OK052	**Battle Ridge R**	0.20	320		Pg	00 30 45.0	-0.2
OK052				Sg	Sg	00 30 48.1	+0.2
OK053	**SW of W Deep R**	0.21	326		Pg	00 30 45.1	-0.2
OK053				Sg	Sg	00 30 48.3	+0.1
OK053	comp=E,8μm,0.5s			IAML		00 30 50.2	
OK033	**Mehan**	0.31	310	Pg	Pg	00 30 47.0	-0.3
OK033	comp=E,4μm,0.6s			IAML		00 30 55.0	
QUOK	**Quay**	0.33	351	Pg	Pg	00 30 47.5	-0.2
QUOK				Sg	Sg	00 30 52.3	+0.2
QUOK	comp=E,4μm,0.4s			IAML		00 30 54.0	
OK011	**Prague**	0.36	185	Pg	Pg	00 30 47.9	-0.3
OK005	**Luther M Schoo**	0.48	247	Pg	Pg	00 30 50.2	-0.3
OK044	**Pawnee Station**	0.54	347		Pg	00 30 51.3	-0.4
OK044	comp=E,1μm,0.4s			IAML		00 31 00.6	
OK044	comp=E,2μm,0.4s			IAML		00 31 02.2	
OK046	**Pawnee Station**	0.59	339	Pg	Pg	00 30 52.2	-0.4
OK046	comp=E,1μm,0.3s			IAML		00 31 00.6	
OK046	comp=E,2μm,0.5s			IAML		00 31 03.8	
OK050	**Pawnee Station**	0.61	334		Pg	00 30 52.6	-0.4
OK050	comp=E,1μm,0.3s			IAML		00 31 02.8	
OK050	comp=E,2μm,0.4s			IAML		00 31 02.8	
OK025	**Westminster Rd**	0.62	245	Pg	Pg	00 30 52.5	-0.7
OK025	comp=E,1μm,0.4s			IAML		00 31 01.6	
OK045	**Pawnee Station**	0.64	340		Pg	00 30 53.1	-0.5
OK029	**Liberty Lake**	0.66	266	Pg	Pg	00 30 53.2	-0.6
OK029	comp=Z,182nm,0.8s			IAmb_Lg		00 31 01.9	
TUL1	**Leonard**	0.70	84		Pg	00 30 54.0	-0.6
TUL1	comp=N,1μm,0.3s			IAML		00 31 05.2	
TUL1	**Leonard** baz=265,SNR=141	0.70	84	P	Pg	00 30 54.0	-0.6
TUL1	baz=265			S	Sg	00 31 03.2	-0.5
W35A	**Tecumseh**	0.71	195	Pg	Pg	00 30 54.0	-0.9
W35A	comp=Z,148nm,0.8s			IAmb_Lg		00 31 03.9	
FNO	**Franklin**	0.85	227	Pg	Pg	00 30 56.5	-1.0
FNO	comp=Z,140nm,0.9s			IAmb_Lg		00 31 07.5	
FNO	comp=E,989nm,0.5s			IAML		00 31 08.6	
BLOK	**Blackwell**	1.02	334	Pg	Pg	00 30 60.0	-0.9
T35A	**Sooner Cattle**	1.08	6		Pg	00 31 00.7	-1.2
T35A	comp=N,770nm,0.2s			IAML		00 31 15.9	
T35A	comp=E,912nm,0.4s			IAML		00 31 17.7	
T35B	**Sooner Cattle** baz=186	1.08	6	P	Pg	00 31 00.7	-1.2
T35B	baz=186			S	Sg	00 31 15.5	-0.4
CROK	**Carrier**	1.27	302		Pg	00 31 04.2	-1.3
CROK	comp=N,808nm,0.3s			IAML		00 31 24.9	
CROK	comp=E,715nm,0.3s			IAML		00 31 30.6	
KAN13	**South Haven SW**	1.35	330		Pn	00 31 05.6	-0.8
RLO	**Rose Lookout**	1.35	76		Pn	00 31 05.7	-0.8
GC02	**Grant County #**	1.41	316		Pn	00 31 06.4	-0.7
KAN17	**Caldwell West** comp=Z,267nm,0.8s	1.50	323	IAmb_Lg		00 31 30.7	
KAN09	**Caldwell North**	1.51	329		Pn	00 31 08.4	-0.2
KAN14	**Manchester OK**	1.54	317		Pn	00 31 08.7	-0.3
KS20	**Mayfield South**	1.56	332		Pn	00 31 09.3	-0.1
X34A	**Smith Ranch, M**	1.57	218		Pn	00 31 09.5	0.0
X34A	comp=Z,70nm,1.0s			IAmb_Lg		00 31 30.2	
KAN01	**Argonia South**	1.59	326		Pn	00 31 09.4	-0.2
OK032	**Salt Plains WL**	1.59	308		Pn	00 31 09.5	-0.1
KAN05	**Bluff City Nor**	1.60	322		Pn	00 31 09.9	0.0
X37A	**Clayton**	1.63	140		Pn	00 31 10.4	+0.2
X37A	**Clayton** baz=321,SNR=93	1.63	140	P	Pn	00 31 10.5	+0.3
X37A	baz=321			S	Sb	00 31 33.1	+0.9
KS21	**Milan North St**	1.66	331		Pn	00 31 10.8	+0.2
CSTR	**Hydro, Custer**	1.67	264	Pn	Pn	00 31 11.0	+0.2
KAN06	**Argonia West S**	1.71	326	Pn	Pn	00 31 11.4	+0.1
KAN08	**Anthony NE Sta**	1.75	323	Pn	Pn	00 31 12.1	+0.2
OK038	**West end E0370**	1.81	291		Pn	00 31 11.9	-0.9
KAN12	**Harper NE Stat**	1.81	324		Pn	00 31 13.1	+0.3
OK035	**E0210 Rd and N**	1.88	298		Pn	00 31 13.2	-0.4
LOOK	**Love County**	1.90	194		Pn	00 31 14.5	+0.6
LOOK	comp=Z,73nm,0.7s			IAmb_Lg		00 31 44.9	
U38A	**Gravette**	1.92	71	Pn	Pn	00 31 14.8	+0.5
U38A	comp=Z,156nm,0.7s			IAmb_Lg		00 31 44.6	
U38A	**Gravette** baz=253,SNR=92	1.92	71	P	Pn	00 31 14.7	+0.5
U38A	baz=253			S	Sb	00 31 41.0	+0.3
U32A	**Winter Ranch,**	1.98	286		Pn	00 31 14.9	-0.1
U32A	**Winter Ranch,** baz=105,SNR=23	1.98	286	P	Pn	00 31 15.1	+0.1
U32A	baz=105			S	Sb	00 31 43.4	+1.0
NOKA	**Waynoka**	2.01	294		Pn	00 31 15.8	+0.3
NOKA	comp=Z,83nm,0.9s			IAmb_Lg		00 31 45.0	
WMOK	**Wichita Mounta**	2.06	238		Pn	00 31 16.7	+0.5

WMOK	**Wichita Mounta**	2.06	238	P	Pn	00 31 16.7	+0.5
	baz=57,SNR=37						
WMOK				S	Sb	00 31 44.6	-0.2
	baz=57						
HHAR	**Hobbs**	2.24	78		Pn	00 31 18.9	+0.4
ELIS	**Ellis County**	2.26	276	Pn	Pn	00 31 19.3	+0.4
WTFS	**Witchita Falls**	2.56	216	Pn	Pn	00 31 23.6	+0.6
Z35A	**Perchaven, San**	2.56	191		Pn	00 31 22.6	-0.3
MIAR	**Mount Ida**	2.83	116	Pn	Pn	00 31 27.4	+0.7
MIAR	**Mount Ida**	2.83	116	P	Pn	00 31 27.5	+0.8
	baz=298,SNR=28						
Z38A	**Mt. Pleasant**	2.92	152	IAmb_Lg		00 32 15.5	
	comp=Z,66nm,0.7s						
FW06	**Azle**	2.96	195		Pn	00 31 29.1	+0.6
FW06				IAmb_Lg		00 32 13.1	
	comp=Z,21nm,0.8s						
FW03	**Perrin-Whitt E**	3.03	203	IAmb_Lg		00 32 23.3	
	comp=Z,28nm,1.0s						
R32A	**Long Quarter,**	3.06	328		Pn	00 31 30.5	+0.6
R32A	**Long Quarter,**	3.06	328	P	Pn	00 31 30.0	+0.1
	baz=147						
R32A				S	Sn	00 32 07.1	+0.4
	baz=147						
U40A	**Yellville**	3.11	79	P	Pn	00 31 31.6	+0.9
	baz=262,SNR=14						
U40A				P	Pn	00 31 31.6	+0.9
	baz=262,SNR=14						
S39A	**Bolivar**	3.24	54		Pn	00 31 32.6	+0.2
S39A	**Bolivar**	3.24	54	P	Pn	00 31 32.8	+0.4
	baz=236,SNR=42						
KSU1	**Kansas State U**	3.25	1		Pn	00 31 32.1	-0.4
KSU1				IAmb_Lg		00 32 30.4	
	comp=Z,46nm,0.9s						
FW07	**Weatherford**	3.27	197	IAmb_Lg		00 32 31.3	
	comp=Z,25nm,0.8s						
X40A	**Basin Creek Fa**	3.40	112		Pn	00 31 34.0	-0.6
X40A	**Basin Creek Fa**	3.40	112	P	Pn	00 31 35.2	+0.6
	baz=295,SNR=8.6						
X40A				P	Pn	00 31 35.2	+0.6
	baz=295,SNR=8.6						
FW14	**Alvarado**	3.46	188	IAmb_Lg		00 32 40.4	
	comp=Z,14nm,0.7s						
FW13	**Cleburne**	3.54	191		Pn	00 31 35.2	-1.3
FW13				IAmb_Lg		00 32 42.6	
	comp=Z,14nm,1.1s						
WHAR	**Wooly Hollow**	3.59	98	Pn	Pn	00 31 37.4	+0.2
WHAR				IAmb_Lg		00 32 40.1	
	comp=Z,39nm,1.1s						
WLAR	**White Oak Lake**	3.62	125	Pn	Pn	00 31 36.9	-0.7
WLAR				IAmb_Lg		00 32 45.3	
	comp=Z,31nm,0.7s						
FCAR	**Ozark Folk Cen**	3.67	88		Pn	00 31 38.6	+0.3
FCAR				IAmb_Lg		00 32 42.7	
	comp=Z,44nm,0.7s						
UALR	**University of**	3.68	106		Pn	00 31 38.9	+0.5
UALR				IAmb_Lg		00 32 43.6	
	comp=Z,28nm,0.8s						
CBKS	**Cedar Bluff**	3.85	321		Pn	00 31 41.1	+0.2
CBKS				IAmb_Lg		00 32 51.3	
	comp=Z,49nm,0.9s						
ABTX	**Abilene, Hawle**	4.06	219		Pn	00 31 43.2	-0.5
Z41A	**Richland Creek**	4.09	128	Pn	Pn	00 31 43.7	-0.3
AMTX	**Amarillo**	4.22	258	Pn	Pn	00 31 46.7	+0.7
AMTX				IAmb_Lg		00 32 60.0	
	comp=Z,45nm,0.8s						
AMTX	**Amarillo**	4.22	258	S	Sn	00 32 36.3	+0.7
	baz=75						
R40A	**Maddies Statio**	4.27	54		Pn	00 31 46.7	+0.2
R40A				IAmb_Lg		00 32 58.2	
	comp=Z,56nm,0.8s						
R40A	**Maddies Statio**	4.27	54	P	Pn	00 31 46.7	+0.2
	baz=236,SNR=9.3						
NATX	**Nacogdoches**	4.39	157	IAmb_Lg		00 33 06.5	
	comp=Z,22nm,0.7s						
LCAR	**Lake Charles**	4.46	85		Pn	00 31 49.1	0.0
LCAR				IAmb_Lg		00 33 11.4	
	comp=Z,38nm,0.8s						
P38A	**Dawn**	4.51	32	Pn	Pn	00 31 49.7	-0.1
P38A	**Dawn**	4.51	32	P	Pn	00 31 50.3	+0.5
	baz=214						
T42A	**Van Buren**	4.63	74		Pn	00 31 51.2	-0.3
T42A				IAmb_Lg		00 33 04.4	
	comp=Z,39nm,0.7s						
T42A	**Van Buren**	4.63	74	P	Pn	00 31 51.8	+0.4
	baz=257						
CCM	**Cathedral Cave**	4.86	61		Pn	00 31 54.6	0.0
CCM	**Cathedral Cave**	4.86	61	P	Pn	00 31 54.9	+0.3
	baz=244						
POST	**Post**	4.87	237	IAmb_Lg		00 33 21.2	
	comp=Z,21nm,0.9s						
N33A	**J Bar K, Exete**	4.93	353	IAmb_Lg		00 33 28.8	
	comp=Z,43nm,0.8s						
N35A	**Tabor**	5.07	9	IAmb_Lg		00 33 28.3	
	comp=Z,67nm,0.7s						
PBMO	**Poplar Bluff**	5.11	78	IAmb_Lg		00 33 28.1	
	comp=Z,70nm,0.7s						
P40A	**Paris**	5.18	43	Pn	Pn	00 32 00.1	+1.1
P40A				IAmb_Lg		00 33 30.5	
	comp=Z,51nm,0.7s						
143A	**Socs Landing,**	5.35	124	IAmb_Lg		00 33 42.3	
	comp=Z,18nm,0.8s						
FVM	**French Village**	5.42	65	Pn	Pn	00 32 02.1	-0.3
FVM				IAmb_Lg		00 33 38.6	
	comp=Z,65nm,0.9s						
N38A	**Joes South For**	5.62	27	IAmb_Lg		00 33 49.1	
	comp=Z,45nm,0.8s						
BGNE	**Belgrade**	5.68	348	IAmb_Lg		00 33 50.5	
	comp=Z,62nm,0.8s						
KSCO	**Kaye Shedlock’**	5.71	305	IAmb_Lg		00 33 56.8	
	comp=Z,21nm,0.8s						
CGM3	**Cape Girardeau**	5.81	73	IAmb_Lg		00 33 49.6	
	comp=Z,25nm,0.8s						
JCT	**Junction City**	5.97	207	IAmb_Lg		00 33 51.7	
	comp=Z,19nm,0.8s						
OXF	**Oxford**	6.07	101	IAmb_Lg		00 34 05.3	
	comp=Z,23nm,0.8s						
L34A	**Svendsen Farm,**	6.12	2	IAmb_Lg		00 34 03.2	
	comp=Z,59nm,0.9s						
W45A	**Hickory Valley**	6.12	94	IAmb_Lg		00 34 05.8	
	comp=Z,41nm,0.9s						
T25A	**Trinidad**	6.39	284	IAmb_Lg		00 34 05.2	
	comp=Z,21nm,0.8s						
OGNE	**Ogallala**	6.62	322	IAmb_Lg		00 34 10.6	
	comp=Z,39nm,0.8s						
SCIA	**State Center**	6.62	23	IAmb_Lg		00 34 18.5	
	comp=Z,33nm,0.8s						
PLAL	**Pickwick Lake**	7.05	95	IAmb_Lg		00 34 31.5	
	comp=Z,13nm,0.7s						
WVT	**Waverly**	7.15	85	IAmb_Lg		00 34 34.0	
	comp=Z,13nm,0.7s						
L40A	**Anamosa**	7.51	33	IAmb_Lg		00 34 45.0	
	comp=Z,24nm,0.7s						
BRIGG	**Briggsdale**	7.67	310	IAmb_Lg		00 34 55.1	
	comp=Z,16nm,0.8s						
JFWS	**Jewell Farm**	8.62	33	IAmb_Lg		00 35 21.0	
	comp=Z,21nm,0.8s						
SUSD	**Miller**	8.77	349	IAmb_Lg		00 35 28.0	
	comp=Z,26nm,1.2s						
SFIN	**Lafayette**	8.78	56	IAmb_Lg		00 35 24.6	
	comp=Z,27nm,0.8s						
N23A	**Red Feather La**	8.87	307	IAmb_Lg		00 35 44.2	
	comp=Z,18nm,0.8s						
I40A	**Norwalk**	9.28	28	IAmb_Lg		00 35 44.1	
	comp=Z,17nm,0.7s						
F33A	**5 Mile Ranch,**	9.99	1	IAmb_Lg		00 36 05.8	
	comp=Z,11nm,1.1s						

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*SOME **02** 00:36:39.4, 39°.72N×75°.32E, h0^{km}*

*KRNET **02** 00:36:45.6±0.1, 39°.81N×75°.51E, mb3.4*

*IDC **02** 00:36:45.5±2.0, 39°.78N×74°.68E, h0^{km}, mb3.9/2, mbtmp3.6/4, ML3.1/2, Error ellipse: s-maj=38.5km s-min=19.6km az=113.0*

*NNC **02** 00:36:46.1±1.8, 39°.80N×75°.64E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=15.5km s-min=9.4km az=137.0*

ISC 02 00:36:44.1±3.0**, 39°.61N**±0°.08×**75°.46E**±0°.04**, h7**^{km}±20^{km}**, n72, σ1^{s}.76**/91**, 25C-14D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	**Naryn**	1.87	13	⇑*i*P	Pn	00 37 16.3	-0.6
	baz=12						
NRN				⇑*i*S	Sn	00 37 38.6	-2.4
	baz=12						
OHH	**Osh**	2.25	295	⇓*i*P	Pn	00 37 25.2	+3.4
	baz=90						
OHH				⇓*i*S	Sb	00 37 54.1	+1.0
	baz=90						
ARLS	**Aral**	2.41	339	⇓*i*P	Pn	00 37 25.7	+1.5
	baz=37						
ARLS				⇓*i*S	Sn	00 37 54.8	+0.8
	baz=37						
ULHL	**Ulahol**	2.71	12	P	Pb	00 37 31.5	-1.5
	SNR=17						
ULHL	**Ulahol**	2.71	12	⇓*e*P	Pn	00 37 29.3	+1.1
	baz=13						
ULHL				⇓*e*S	Sn	00 38 01.2	-0.1
	baz=13						
UCH	**Uchtor**	2.72	345	P	Pn	00 37 30.5	+1.9
	SNR=31						
UCH	**Uchtor**	2.72	345	⇑*i*P	Pn	00 37 30.1	+1.5
	baz=43						
UCH				⇑*i*S	Sn	00 38 02.2	+0.3
	baz=43						
KDJ	**Kajisay**	2.84	27	⇑*e*P	Pn	00 37 31.5	+1.4
	baz=28						
KDJ				⇑*i*S	Sn	00 38 05.1	+0.5
	baz=28						
AML	**Almayashu**	2.86	333	P	Pn	00 37 32.6	+2.1
	SNR=17						
AML	**Almayashu**	2.86	333	⇓Pn	Pn	00 37 31.9	+1.5
	1.3nm,0.6s						
AML				⇑Sn	Sb	00 38 09.6	-1.3
	7.7nm,0.7s						
AML	**Almayashu**	2.86	333	⇑*i*P	Pn	00 37 32.2	+1.7
	baz=30						
AML				⇑*i*S	Sn	00 38 06.5	+1.2
	baz=30						
BOOM	**Boomskoye usch**	2.91	7	⇑*i*P	Pn	00 37 32.2	+1.2
	baz=7.0						
BOOM				⇑*i*S	Sn	00 38 06.5	+0.3
	baz=7.0						
KBK	**Karagaybulak**	3.07	353	P	Pn	00 37 35.5	+2.3
	SNR=30						
KBK	**Karagaybulak**	3.07	353	⇑*i*P	Pn	00 37 34.8	+1.6
	baz=52						
KBK				⇑*i*S	Sn	00 38 10.2	-0.1
	baz=52						
AAK	**Ala-Archa**	3.12	347	P	Pn	00 37 35.9	+2.1
	SNR=35						
AAK	**Ala-Archa**	3.12	347	Pn	Pn	00 37 36.2	+2.4
	7.5nm,0.3s,baz=179,slow=13,SNR=95						
AAK				Lg	Lg	00 38 15.2	
	4.6nm,0.3s,baz=41,slow=19,SNR=5.0						
	20nm,0.5s						
AAK	**Ala-Archa**	3.12	347	⇑*i*P	Pn	00 37 35.4	+1.6
	baz=45						
AAK				⇑*i*S	Sn	00 38 11.7	+0.3
	baz=45						
FRU1	**Bishkek**	3.26	349	⇓*i*P	Pn	00 37 37.7	+1.9
	baz=48						
FRU1				⇓*i*S	Sn	00 38 15.6	+0.7
	baz=48						
EKS2	**Erkin-Say**	3.31	338	P	Pn	00 37 38.8	+2.4
	SNR=8.8						
EKS2	**Erkin-Say**	3.31	338	⇑*i*P	Pn	00 37 38.3	+1.9
	baz=36						
EKS2				⇑*i*S	Sn	00 38 16.6	+0.6
	baz=36						
TKM2	**Tokmak 2**	3.31	2	P	Pn	00 37 38.8	+2.2
	SNR=28						
TKM2	**Tokmak 2**	3.31	2	⇓Pn	Pn	00 37 37.1	+0.5
	6.1nm,0.5s						
TKM2				⇓Pg	Pb	00 37 43.8	+0.4
	9.2nm,0.4s						
TKM2				⇑Sn	Sb	00 38 26.5	+2.5
	68nm,0.5s						
TKM2	**Tokmak 2**	3.31	2	⇑*i*P	Pn	00 37 37.8	+1.2
	baz=1.0						
TKM2				⇑*i*S	Sn	00 38 15.9	-0.5
	baz=1.0						
CHMS	**Chumysh**	3.43	351	P	Pn	00 37 40.4	+2.4
	SNR=11						
CHMS	**Chumysh**	3.43	351	⇑*e*P	Pn	00 37 39.3	+1.2
	baz=50						
CHMS				⇑*i*S	Sn	00 38 18.7	-0.3
	baz=50						
KST	**Kastek**	3.46	6	Pg	Pb	00 37 43.2	-2.6
	13nm,0.5s						
KST				Lg	Lg	00 38 29.8	
	56nm,0.5s						
KST	**Kastek**	3.46	6	*e*Pg	Pb	00 37 43.1	-2.6
	13nm,0.5s						
KST				*e*Lg	Lg	00 38 29.9	
	56nm,0.5s						
MRKS	**Merke**	3.56	333	Pg	Pn	00 37 42.6	+2.7
	7.8nm,0.6s						
MRKS				Lg	Lg	00 38 28.3	
	30nm,0.6s						
MRKS	**Merke**	3.56	333	*e*Pg	Pn	00 37 42.6	+2.7
	7.8nm,0.6s						
MRKS				*e*Lg	Lg	00 38 28.3	
	30nm,0.6s						
ANVS	**Anan'yevo**	3.59	27	⇑*i*P	Pn	00 37 41.6	+1.3
	baz=28						
ANVS				⇑*i*S	Sn	00 38 22.7	-0.3
	baz=28						
MTBS	**Maitube**	3.60	11	Pg	Pb	00 37 45.9	-2.2
	6.6nm,0.6s						
MTBS				Lg	Lg	00 38 34.1	
	18nm,0.4s						
MTBS	**Maitube**	3.60	11	*e*Pg	Pb	00 37 45.9	-2.2
	6.6nm,0.6s						
MTBS				*e*Lg	Lg	00 38 33.8	
	25nm,0.2s						
TNSS	**Tian-Shan**	3.61	18	Pg	Pb	00 37 45.9	-2.5
	23nm,0.5s						
TNSS				Lg	Lg	00 38 33.6	
	12nm,0.7s						
TNSS	**Tian-Shan**	3.61	18	*e*Pg	Pb	00 37 45.9	-2.5
	23nm,0.2s						
TNSS				*e*Lg	Lg	00 38 33.6	
	12nm,0.7s						
DGS	**Degeres**	3.64	4	Pg	Pb	00 37 46.8	-2.1
	14nm,0.7s						
DGS				Lg	Lg	00 38 35.4	
	69nm,0.5s						
DGS	**Degeres**	3.64	4	*e*Pg	Pb	00 37 46.8	-2.1
	14nm,0.7s						
DGS				*e*Lg	Lg	00 38 35.4	
	69nm,0.3s						
USP	**Ospenovka**	3.73	349	P	Pn	00 37 44.0	+1.9
	SNR=8.8						
USP	**Ospenovka**	3.73	349	⇓*i*P	Pn	00 37 43.7	+1.6
	baz=48						
USP				⇓*i*S	Sn	00 38 26.0	-0.3
	baz=48						
MDOK	**Medeo**	3.75	18	⇑P	Pn	00 37 46.7	+4.2
	9.9nm,0.8s						
MDOK				Pg	Pb	00 37 48.5	-2.3
	8.5nm,0.6s						
MDOK				Lg	Lg	00 38 38.8	
	27nm,0.8s						
MDOK				⇓S	Sb	00 38 40.0	+3.5
	41nm,0.7s						
AAA	**Alma-Ata**	3.77	16	Pg	Pb	00 37 49.3	-1.6
	18nm,0.2s						
AAA				Lg	Lg	00 38 39.3	
	63nm,0.4s						
AAA	**Alma-Ata**	3.77	16	*e*Pg	Pb	00 37 49.3	-1.6
	18nm,0.2s						
AAA				*e*Lg	Lg	00 38 39.3	
	63nm,0.4s						
KOTS	**Kotyrbulak**	3.83	18	Pg	Pb	00 37 50.3	-1.8
	11nm,0.6s						
KOTS				Lg	Lg	00 38 41.7	
	100nm,0.7s						
KOTS	**Kotyrbulak**	3.83	18	*e*Pg	Pb	00 37 50.3	-1.8
	11nm,0.6s						
KOTS				*e*Lg	Lg	00 38 41.7	
	100nm,0.7s						
SGDS	**Sogindy**	3.89	351	Pg	Pb	00 37 51.1	-2.1
	1.8nm,0.3s						
SGDS				Lg	Lg	00 38 42.7	
	38nm,0.7s						
KRBS	**Karabastau**	4.09	2	Pg	Pb	00 37 54.7	-1.8
	6.9nm,0.4s						
KRBS				Lg	Lg	00 38 48.9	
	22nm,0.6s						
KRBS	**Karabastau**	4.09	2	*e*Pg	Pb	00 37 54.7	-1.8
	6.9nm,0.4s						
KRBS				*e*Lg	Lg	00 38 48.9	
	22nm,0.6s						
SATY	**Saty**	4.10	32	Pg	Pb	00 37 55.9	-0.8
	3.7nm,0.5s						
SATY				Lg	Lg	00 38 50.8	
	14nm,0.5s						
SATY	**Saty**	4.10	32	*e*Pg	Pb	00 37 55.5	-1.2
	2.5nm,0.1s						
SATY				*e*Lg	Lg	00 38 50.3	
	14nm,0.5s						
KTBS	**Karatobe**	4.21	12	Pg	Pb	00 37 57.0	-1.5
	6.0nm,0.7s						
KTBS				Lg	Lg	00 38 52.7	
	60nm,0.6s						
KTBS	**Karatobe**	4.21	12	*e*Pg	Pb	00 37 57.0	-1.5
	6.0nm,0.7s						
KTBS				*e*Lg	Lg	00 38 52.7	
	60nm,0.6s						
ZHN	**Zhinishke**	4.21	31	Pg	Pb	00 37 57.5	-1.0
	3.9nm,0.5s						
ZHN				Lg	Lg	00 38 53.5	
	20nm,0.6s						
ZHN	**Zhinishke**	4.21	31	*e*Pg	Pb	00 37 57.5	-1.0
	3.9nm,0.5s						
ZHN				*e*Lg	Lg	00 38 53.5	
	20nm,0.3s						
KUU	**Kurty**	4.34	8	Pg	Pb	00 37 59.0	-1.7
	4.5nm,0.9s						
KUU				Lg	Lg	00 38 56.1	
	12nm,0.6s						
KUU	**Kurty**	4.34	8	*e*Pg	Pb	00 37 59.0	-1.7
	1.1nm,0.2s						
KUU				*e*Lg	Lg	00 38 56.1	
	22nm,0.3s						
KURS	**Kuram**	4.38	27	Pg	Pb	00 38 00.6	-0.9
	5.2nm,1.1s						
KURS				Lg	Lg	00 38 58.8	
	8.1nm,1.0s						
KURS	**Kuram**	4.38	27	*e*Pg	Pb	00 38 00.6	-0.9
	4.6nm,0.4s						
KURS				*e*Lg	Lg	00 38 58.9	
	8.3nm,0.3s						
CHKK	**Chushkaly**	4.40	15	Pg	Pb	00 38 00.4	-1.3
	3.1nm,0.5s						
CHKK				Lg	Lg	00 38 59.0	
	27nm,0.7s						
CHKK	**Chushkaly**	4.40	15	*e*Pg	Pb	00 38 00.4	-1.3
	3.1nm,0.5s						
CHKK				*e*Lg	Lg	00 38 59.0	
	27nm,0.7s						
UZB	**Uzynbulak**	4.44	36	Pg	Pb	00 38 02.0	-0.5
	5.2nm,0.3s						
UZB				Lg	Lg	00 39 01.1	
	7.2nm,1.0s						
UZB	**Uzynbulak**	4.44	36	*e*Pg	Pb	00 38 02.0	-0.5
	5.2nm,0.3s						
UZB				*e*Lg	Lg	00 39 01.1	
	8.4nm,0.4s						
KPKS	**Kokpek**	4.55	31	Pg	Pb	00 38 03.1	-1.4
	4.2nm,0.5s						
KPKS				Lg	Lg	00 39 03.3	
	44nm,0.5s						
KPKS	**Kokpek**	4.55	31	*e*Pg	Pb	00 38 03.1	-1.4
	4.2nm,0.1s						
KPKS				*e*Lg	Lg	00 39 03.3	
	44nm,0.5s						
PDGK	**Podgornoye**	4.80	38	Pg	Pb	00 38 08.0	-0.6
	1.6nm,0.7s						
PDGK				Lg	Lg	00 39 11.4	
	6.7nm,0.9s						
IUG	**Iuzhnay**	4.83	303	Pg	Pb	00 38 07.8	-1.4
	5.1nm,0.3s						
IUG	**Iuzhnay**	4.83	303	*e*Pg	Pb	00 38 07.5	-1.7
	5.1nm,0.3s						
IUG				*e*Lg	Lg	00 39 10.9	
	23nm,0.3s						
BLB	**Baldybastay**	5.02	26	Pg	Pb	00 38 10.0	-2.4
	5.9nm,0.6s						
BLB				Lg	Lg	00 39 17.6	
	8.5nm,0.7s						
BTLS	**Baital**	5.53	350	*e*Pg	Pb	00 38 20.1	-0.8
	1.1nm,0.3s						
BTLS				*e*Lg	Lg	00 39 32.8	
	6.4nm,0.6s						
DJR	**Jarkent**	5.72	33	*e*Pg	Pb	00 38 26.1	+1.8
	1.2nm,0.2s						
DJR				*e*Lg	Lg	00 39 42.6	
	3.9nm,0.2s						
MKAR	**Makanchi Array**	8.74	33	Pn	Pn	00 38 56.3	+5.3
	0.1nm,0.3s,baz=214,slow=14,SNR=4.3						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	11.23	10	Lg	Lg	00 42 42.1	
	baz=198,slow=27,SNR=5.4						
ARCES	**ARCESS Array B**	39.72	335	P	P	00 44 15.1	-1.6
	3.6nm,0.9s,baz=111,slow=6.6,SNR=3.6						
	3.6nm,0.9s						
TORD	**Torodi Ar. Bea**	69.27	270	P	P	00 47 50.9	-1.3
	0.2nm,0.4s,baz=51,slow=5.8,SNR=7.2						
	0.2nm,0.4s						

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*IDC **02** 00:37:45.9±2.6, 36°.33N×70°.91E, h174^{km}±25^{km}, mb3.3/11, mbtmp3.8/17, MS2.6/1, Error ellipse: s-maj=18.8km s-min=13.0km az=14.0*

*NEIC **02** 00:37:49.6±1.7, 36°.60N±0°.07×70°.95E±0°.07, h193^{km}±5^{km}, mb4.2/10, Error ellipse: s-maj=10.2km s-min=8.1km az=174.0*

*NNC **02** 00:37:52.7±2.0, 37°.15N×70°.86E, h0^{km}, mb4.6, mpv4.2, Error ellipse: s-maj=26.9km s-min=13.6km az=70.0*

ISC 02 00:37:47.8±0.4**, 36°.51N**±0°.04×**71°.02E**±0°.05**, h188**^{km}**, n62, σ1^{s}.89**/71**, mb3.7**/12**, 2C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	**Kabul**	2.54	220		Pn	00 38 33.7	+2.0
CHGR	**Chuyangaron**	2.60	326	Pn	Pn	00 38 32.7	+0.4
NIL	**Nilore**	3.39	147		Pn	00 38 44.3	+2.7
JMU	**Jammu**	4.96	139	*e*S	Sn	00 39 54.6	-4.6
TAS	**Tashkent**	4.99	345	Pn	Pn	00 39 02.1	+0.3
THN	**Thein Dam**	5.62	135	*e*P	Pn	00 39 11.8	+1.9
THN				*e*S	Sn	00 40 14.0	-0.8
THN				IAML		00 40 16.8	
	comp=E,191nm,0.4s						
IUG	**Iuzhnay**	5.68	353	Lg	Lg	00 40 12.3	
	comp=E,263nm,0.5s						
AML	**Almayashu**	5.99	19	⇓P	Pn	00 39 15.1	+0.1
	comp=E,4.4nm,0.6s						
AML				⇑S	Sn	00 40 20.3	-3.6
	comp=E,32nm,0.7s						
DZA	**Taraz**	6.38	2	Pg	Pn	00 39 19.7	-0.2
	comp=E,70nm,0.4s						
MRKS	**Merke**	6.46	15	Pg	Pn	00 39 20.8	-0.1
	comp=E,25nm,0.4s						
MRKS				Lg	Lg	00 40 30.4	
	comp=E,110nm,0.5s						
KK31	**Karatay Array**	6.60	357		Pn	00 39 22.0	-0.7
KK31	**Karatay Array**	6.60	357	⇑P	Pn	00 39 22.3	-0.4
	comp=E,4.0nm,0.5s,baz=177,slow=13,SNR=11						
KK31				⇓S	Sn	00 40 32.1	-5.6
	comp=E,28nm,0.4s						
KKAR	**Karatay Array**	6.60	357		Pn	00 39 22.1	-0.5
KKAR	**Karatay Array**	6.60	357		Pn	00 39 21.9	-0.8
AAK	**Ala-Archa**	6.68	23	P	Pn	00 39 24.0	+0.1
	comp=E,10nm,0.6s,baz=197,slow=6.2,SNR=2.2						
AAK				S	Sn	00 40 37.4	-2.5
	comp=E,12nm,0.6s,baz=158,slow=21,SNR=6.1						
AAK	**Ala-Archa**	6.68	23	Pn	Pn	00 39 23.6	-0.3
BHK	**Bhakra**	6.78	137	*e*P	Pn	00 39 25.7	+0.6
BHK				*e*S	Sn	00 40 40.2	-1.8
SMLA	**Simla**	7.41	135	*e*P	Pn	00 39 34.1	+0.7
SMLA				*e*S	Sn	00 40 53.7	-3.4
SMLA				IAML		00 40 57.4	
	comp=E,138nm,0.4s						
SMLA				IAML		00 40 59.0	
	comp=N,169nm,0.4s						
TARG	**Taragay, Kyrgy**	7.42	43	Pn	Pn	00 39 33.0	-0.7
KUDL	**Kundal**	9.54	149	*e*P	Pn	00 40 00.6	-0.6
KUDL				*e*S	Sn	00 41 39.9	-7.8
GEYT	**Alibeck**	10.39	282	P	Pn	00 40 10.8	-1.5
	comp=N,1.0nm,0.4s,baz=112,slow=11,SNR=5.8						
GEYT				S	Sn	00 42 04.2	-3.7
	comp=N,2.4nm,0.4s,baz=328,slow=28,SNR=6.1						
AJM	**Ajmer**	10.47	162	*e*P	Pn	00 40 13.6	+0.2
AJM				*e*S	Sn	00 42 05.5	-4.5
PYUN	**Piuthan**	13.14	126	*e*P	Pn	00 40 46.7	-1.0
MAKZ	**Makanchi**	13.14	35		Pn	00 40 47.1	-0.2
MKAR	**Makanchi Array**	13.28	36	P	Pn	00 40 48.5	-0.5
	comp=N,0.4nm,0.4s,baz=206,slow=13,SNR=4.5						
DANN	**Dangsing**	13.48	123	*e*P	Pn	00 40 52.0	-0.1

GKN	**Gorkha**	**14.30**	**123**	*e*P	**Pn**	**00 41 01.8**	**-0.3**
BHPL	**Bhopal**	**14.34**	**156**	*e*P	**P**	**00 41 07.1**	**+2.9**
ABKAR	**Akbulak array**	**15.08**	**331**	P	**Pn**	**00 41 11.1**	**-0.3**
ABKAR	**Akbulak array**	**15.08**	**331**		**Pn**	**00 41 12.3**	**+0.9**
PKIN	**Phulchoki**	**15.09**	**122**	*e*P	**P**	**00 41 12.3**	**-0.4**
PKI	**Pulchoki**	**15.10**	**122**	*e*P	**P**	**00 41 12.6**	**-0.3**
	comp=N,79nm,1.0s						
KURBB	**Kurchatov Arra**	**15.11**	**19**	P	**Pn**	**00 41 12.5**	**+0.9**
	comp=N,0.5nm,0.3s,baz=206,slow=10,SNR=1.9						
KURBB				S	**Sn**	**00 44 03.1**	**+2.7**
	comp=N,0.3nm,0.3s,baz=214,slow=30,SNR=1.0						
GUN	**Gumba**	**15.21**	**120**	*e*P	**P**	**00 41 13.7**	**-0.5**
RAMN	**Ramite**	**16.31**	**121**	*e*P	**Pn**	**00 41 26.3**	**-0.4**
	comp=N,26nm,0.5s						
BVAR	**Borovoye Array**	**16.52**	**359**	P	**Pn**	**00 41 29.5**	**+0.8**
	comp=N,0.3nm,0.3s,baz=160,slow=10.0,SNR=4.2						
BRVK	**Borovoye**	**16.56**	**358**	P	**P**	**00 41 29.1**	**+0.6**
AKTO	**Aktyubinsk**	**16.78**	**330**	P	**P**	**00 41 31.7**	**+0.8**
	comp=N,1.3nm,0.3s,baz=174,slow=15,SNR=4.1						
AKTO				LR	LR	00 48 01.3	
	comp=N,23nm,20.3s,baz=188,slow=36						
TAPN	**Taplejung**	**16.84**	**118**	*e*P	**Pn**	**00 41 32.9**	**-0.2**
	comp=N,27nm,0.4s						
UOSS	**Minazif**	**17.15**	**232**	P	**Pn**	**00 41 37.9**	**+1.3**
UOSS				IAmb	IAmb	00 41 51.9	
	comp=Z,6.5nm,1.1s						
LSA	**Lhasa**	**18.17**	**106**	P	**P**	**00 41 46.7**	**-0.1**
LSA				IAmb	IAmb	00 41 51.8	
	comp=Z,4.5nm,0.6s						
ZAA0	**Zalesovo Array**	**19.90**	**24**	P	**P**	**00 42 06.0**	**+1.3**
ZALV	**Zalesovo Beam**	**19.90**	**24**	P	**P**	**00 42 05.3**	**+0.6**
	comp=Z,1.1nm,0.4s,baz=223,slow=12,SNR=8.7						
	comp=Z,1.1nm,0.4s						
ZALV	**Zalesovo Beam**	**19.90**	**24**	P	**P**	**00 42 05.9**	**+1.2**
RAYN	**Ar Rayn**	**25.52**	**247**	P	**P**	**00 42 59.4**	**+0.3**
RAYN				IAmb	IAmb	00 43 05.4	
	comp=Z,3.4nm,0.6s						
SONM	**Songino Array**	**28.32**	**55**	P	**P**	**00 43 24.8**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=257,slow=10,SNR=2.0						
	comp=Z,0.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**30.45**	**119**	P	**P**	**00 43 43.5**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=309,slow=9.2,SNR=5.6						
	comp=Z,0.5nm,0.3s						
ELL	**Elmali**	**32.81**	**283**	P	**P**	**00 44 04.6**	**+1.0**
AKASG	**Malin Array Be**	**32.95**	**309**	P	**P**	**00 44 05.5**	**+1.1**
	comp=Z,1.2nm,0.6s,baz=83,slow=7.7,SNR=2.5						
	comp=Z,1.2nm,0.6s						
FINES	**FINESS Array B**	**37.48**	**326**	P	**P**	**00 44 43.7**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=117,slow=8.9,SNR=9.4						
	comp=Z,0.6nm,0.3s						
FINES	**FINESS Array B**	**37.48**	**326**	P	**P**	**00 44 43.6**	**+0.6**
ARCES	**ARCESS Array B**	**41.14**	**338**	P	**P**	**00 45 13.8**	**+0.7**
	comp=Z,1.8nm,0.8s,baz=110,slow=7.8,SNR=7.7						
	comp=Z,1.8nm,0.8s						
ARCES	**ARCESS Array B**	**41.14**	**338**	P	**P**	**00 45 13.7**	**+0.5**
ARCES				IAmb	IAmb	00 45 16.3	
	comp=Z,21nm,1.4s						
GSI	**Gunungsitoli**	**42.79**	**139**	P	**P**	**00 45 28.7**	**+1.6**
NB201	**NORSAR Array S**	**44.34**	**323**	P	**P**	**00 45 39.2**	**+0.2**
NB201				IAmb	IAmb	00 45 40.1	
	comp=Z,38nm,1.4s						
NB2	**NORSAR Subarra**	**44.38**	**323**	P	**P**	**00 45 39.6**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=98,slow=7.9						
NOA	**NORSAR Array B**	**44.38**	**323**	P	**P**	**00 45 39.6**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=103,slow=7.3,SNR=4.6						
	comp=Z,0.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**65.73**	**269**	P	**P**	**00 48 10.9**	**-1.8**
	comp=Z,0.5nm,0.4s,baz=47,slow=5.8,SNR=16						
	comp=Z,0.5nm,0.4s						
BMAR	**Burnt Mountain**	**72.93**	**14**	P	**P**	**00 48 57.5**	**+1.4**
YKA	**Yellowknife Ar**	**81.23**	**3**	P	**P**	**00 49 42.8**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=350,slow=5.3,SNR=4.8						
	comp=Z,0.2nm,0.5s						
WRA	**Warramunga Arr**	**81.98**	**122**	P	**P**	**00 49 46.2**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=326,slow=4.8,SNR=11						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**84.25**	**125**	P	**P**	**00 49 57.8**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=314,slow=5.4,SNR=6.3						
	comp=Z,0.5nm,0.6s						

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*TIF **02** 01:00:49.6, 41°.71N×46°.45E, h18^{km}±1^{km}*

*DRS **02** 01:00:49.9±0.0, 41°.67N×46°.49E, h16^{km}*

*NORS **02** 01:00:50.0±0.0, 41°.81N×46°.47E, h8^{km}, MPVA3.3*

ISC 02 01:00:49.2±1.1**, 41°.67N**±0°.04×**46°.49E**±0°.02**, h14**^{km}±9^{km}**,**
n24, σ**0^{s}71**/47**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LGD	**Lagodekhi**	**0.25**	**311**	P	**Pg**	**01 00 54.8**	**+0.2**
LGD				S	**Sb**	**01 00 58.7**	**-1.0**
DDFL	**Dedoflistskaro**	**0.36**	**231**	P	**Pn**	**01 00 59.6**	**-0.4**
KMKR	**Kumukh**	**0.65**	**44**	*i* Pg	**Pg**	**01 01 01.7**	**-0.2**
	32nm,0.1s						
KMKR				*e*Sg	**Sg**	**01 01 10.3**	**-0.1**
	8.0nm,0.4s						
GNBR	**Gunib**	**0.80**	**26**	*i* Pg	**Pg**	**01 01 04.4**	**-0.4**
	41nm,0.4s						
GNBR				*e*Sg	**Sg**	**01 01 15.0**	**-0.3**
	8.0nm,0.1s						
XNZR	**Khunzakh**	**0.88**	**10**	*i* Pg	**Pb**	**01 01 06.4**	**0.0**
	97nm,0.3s						
XNZR				*e*Sg	**Sb**	**01 01 17.8**	**-0.3**
	46nm,0.3s						
AKT	**Akhty**	**0.95**	**101**	*i* Pg	**Pb**	**01 01 06.9**	**-0.5**
	14nm,0.2s						
AKT				*e*Sg	**Sb**	**01 01 20.1**	**+0.2**
	65nm,0.4s						
URKR	**Urkarakh**	**0.98**	**59**	*e*Pg	**Pb**	**01 01 07.8**	**-0.3**
	25nm,0.3s						
URKR				*e*Sg	**Sb**	**01 01 21.0**	**+0.1**
	39nm,0.4s						
ARKR	**Arakani**	**1.00**	**22**	*e*Pg	**Pb**	**01 01 07.9**	**-0.4**
	1.0nm,0.6s						
ARKR				*e*Sg	**Sb**	**01 01 21.2**	**-0.2**
	61nm,0.5s						
BTLR	**Botlikh**	**1.01**	**349**	*e*Pg	**Pb**	**01 01 08.3**	**-0.2**
	10.0nm,0.4s						
BTLR				*e*Sg	**Sn**	**01 01 22.3**	**-0.8**
	48nm,0.5s						
UNCR	**Uncukul**	**1.07**	**12**	*i* Pg	**Pb**	**01 01 09.2**	**-0.2**
	25nm,0.4s						
UNCR				*e*Sg	**Sn**	**01 01 23.7**	**-0.6**
	20nm,0.2s						
KRNR	**Karanay**	**1.20**	**15**	*i* Pg	**Pn**	**01 01 11.3**	**-0.2**
	8.0nm,0.4s						
KRNR				*e*Sg	**Sg**	**01 01 27.6**	**-0.2**
	89nm,0.4s						
KSMR	**Kasumkent**	**1.23**	**93**	*e*Pg	**Pn**	**01 01 12.1**	**+0.1**
	1.0nm,0.2s						
KSMR				*e*Sg	**Sb**	**01 01 28.8**	**+1.0**
	82nm,0.5s						
BUJR	**Buynaksk**	**1.24**	**21**	*e*Pg	**Pb**	**01 01 12.4**	**+0.1**
	23nm,0.3s						
BUJR				*e*Sg	**Sg**	**01 01 29.5**	**+0.2**
	13nm,0.4s						
DBC	**Dubki**	**1.37**	**10**	*i* Pg	**Pb**	**01 01 15.0**	**+0.3**
	8.0nm,0.1s						
DBC				*e*Sg	**Sg**	**01 01 32.8**	**-0.6**
	57nm,0.2s						
SHTL	**Shatili**	**1.40**	**315**	P	**Pn**	**01 01 14.7**	**+0.3**
SHTL				S	**Sg**	**01 01 33.8**	**-0.6**
DLMR	**Dylym**	**1.40**	**4**	*e*Pg	**Pb**	**01 01 15.4**	**+0.3**
	10.0nm,0.4s						
DLMR				*e*Sg	**Sg**	**01 01 34.5**	**+0.1**
	72nm,0.4s						
DRN	**Derbent**	**1.42**	**75**	*e*Pg	**Pn**	**01 01 15.4**	**+0.9**
	18nm,0.3s						
DRN				*e*Sg	**Sb**	**01 01 34.1**	**+0.8**
	72nm,0.4s						
GROC	**Groznyy**	**1.61**	**342**	*e*Pg	**Pg**	**01 01 20.4**	**+0.1**
GROC				*e*Sg	**Sg**	**01 01 43.4**	**+2.2**
GUDG	**Gudauri**	**1.70**	**299**	P	**Pb**	**01 01 20.2**	**-0.1**
GUDG				S	**Sg**	**01 01 43.8**	**0.0**
DMNI	**Dmanisi**	**1.76**	**260**	P	**Pn**	**01 01 20.4**	**+1.0**
DMNI				S	**Sb**	**01 01 44.0**	**+0.7**
TRLG	**Trialeti**	**1.80**	**267**	P	**Pn**	**01 01 21.2**	**+1.4**
TRLG				S	**Sb**	**01 01 45.2**	**+0.8**
BRNG	**Burnasheti**	**2.00**	**270**	P	**Pb**	**01 01 24.9**	**-0.4**
BRNG				S	**Sg**	**01 01 52.0**	**-1.5**
LACR	**Lac**	**2.00**	**306**	*e*Pg	**Pb**	**01 01 26.0**	**+0.7**
LACR				*e*Sg	**Sg**	**01 01 53.4**	**-0.1**
ZEI	**Tsey**	**2.22**	**301**	*e*Pg	**Pb**	**01 01 29.5**	**+0.3**
ZEI				*e*Sg	**Sg**	**01 01 59.0**	**-1.8**

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*ISK **02** 01:16:31.1, 41°.93N×35°.60E, h7^{km}, ML2.8/6*

*DDA **02** 01:16:33.7±0.0, 41°.87N×35°.66E, h13^{km}±1^{km}, ML3.0*

*CFUSG **02** 01:16:34.1, 42°.10N×35°.60E, h10^{km}, mb2.1/6, Black sea Magtype MSH 3.0 from 5 stations*

ISC 02 01:16:31.9±1.6**, 41°.92N**±0°.03×**35°.71E**±0°.03**, h12**^{km}±12^{km}**,**
n32, σ**1^{s}01**/50**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SINO	**SINOP_Merkez**	**0.39**	**285**	P	**Pb**	**01 16 41.2**	**+0.4**
SINO				P	**Pb**	**01 16 41.2**	**+0.4**
SINO				S	**Sb**	**01 16 46.4**	**-0.3**
SINO				S	**Sb**	**01 16 46.4**	**-0.3**
SINO				*i* AML	AML	01 16 47.0	
	comp=N,2µm,0.2s						
SINO				*i* AML	AML	01 16 47.0	
	comp=E,2µm,0.2s						
SINO				*i* AML	AML	01 16 47.0	
	comp=N,2µm,0.2s						
SINO				*i* AML	AML	01 16 47.0	
	comp=E,2µm,0.2s						
SAMS	**Samsun-Alacam**	**0.66**	**147**	P	**Pb**	**01 16 45.6**	**+0.2**
SAMS				S	**Sb**	**01 16 54.5**	**0.0**
SAMS				*i* AML	AML	01 16 55.0	
	comp=N,859nm,0.7s						
SAMS				*i* AML	AML	01 16 55.0	
	comp=E,789nm,0.6s						
HAVZ	**Havza**	**0.84**	**179**	P	**Pb**	**01 16 49.1**	**+0.6**
HAVZ				*i* AML	AML	01 17 04.0	
	comp=E,389nm,0.5s						
KVT	**Kavak**	**0.87**	**163**	Pg	**Pb**	**01 16 49.2**	**+0.1**
KVT				Sg	**Sn**	**01 17 02.2**	**-0.5**
YARM	**Yarimca-Ladik(**	**1.00**	**175**	Pg	**Pg**	**01 16 50.9**	**-0.3**
YARM				Sg	**Sn**	**01 17 05.6**	**-0.2**
KIZO	**Buyukkizoglu-L**	**1.03**	**170**	Pg	**Pg**	**01 16 51.7**	**-0.1**
KIZO				Sg	**Sb**	**01 17 06.1**	**+0.9**
KAGI	**orum-Kargı**	**1.21**	**230**	P	**Pn**	**01 16 54.9**	**+0.3**
KAGI				S	**Sb**	**01 17 09.5**	**-0.7**
AMSY	**Amasya-Merkez**	**1.28**	**176**	P	**Pn**	**01 16 55.7**	**-0.1**
AMSY				*i* AML	AML	01 17 17.0	
	comp=N,485nm,0.4s						
AMSY				*i* AML	AML	01 17 18.0	
	comp=E,489nm,0.4s						
CTAK	**Corum_Osmancik**	**1.44**	**209**	P	**Pn**	**01 16 58.6**	**+0.5**
TOKT	**Tokat**	**1.72**	**158**	Pn	**Pb**	**01 17 02.9**	**-0.5**
TOKT				Sn	**Sb**	**01 17 25.8**	**+0.8**
ILGA	**Ilgaz**	**1.73**	**241**	P	**Pn**	**01 17 02.8**	**+0.8**
ILGA				*i* AML	AML	01 17 28.0	
	comp=N,101nm,0.4s						
COAL	**Corum-Alaca**	**1.75**	**198**	P	**Pb**	**01 17 03.3**	**-0.7**
COAL				S	**Sn**	**01 17 24.6**	**+0.2**
CKRK	**Yozgat, Cekere**	**1.85**	**185**	P	**Pb**	**01 17 04.8**	**-0.9**
ORDU	**Ordu-Boztepe**	**1.86**	**119**	P	**Pb**	**01 17 05.3**	**-0.6**
ORDU				S	**Sn**	**01 17 25.5**	**-1.6**
ORDU				*i* AML	AML	01 17 34.0	
	comp=N,84nm,0.6s						
PELI	**Kastamonı-Ara**	**1.90**	**252**	P	**Pn**	**01 17 04.4**	**+0.2**
CORM	**Corum**	**1.92**	**205**	Pn	**Pn**	**01 17 04.6**	**+0.1**
CORM				Sn	**Sn**	**01 17 29.7**	**+1.1**
RSDY	**Resadiye-TOKAT**	**1.95**	**141**	Pn	**Pb**	**01 17 06.5**	**-0.9**
CANT	**Cankiri**	**2.05**	**231**	Pn	**Pn**	**01 17 05.9**	**-0.3**
CIDE	**Kastamonu/Cide**	**2.06**	**270**	P	**Pn**	**01 17 06.7**	**+0.4**
HACI	**Hacifakili, Ak**	**2.21**	**180**	P	**Pn**	**01 17 08.9**	**+0.3**
SVSK	**Karacayir**	**2.23**	**154**	Pn	**Pn**	**01 17 09.7**	**+1.1**
ELDT	**Eldivan**	**2.23**	**231**	P	**Pn**	**01 17 09.8**	**+0.9**
YOZ	**Yozgat**	**2.29**	**188**	Pn	**Pn**	**01 17 10.6**	**+0.9**
DELI	**KIRIKKALE**	**2.35**	**216**	P	**Pn**	**01 17 11.4**	**+1.0**
KBUK	**KARABUK-Merkez**	**2.41**	**255**	P	**Pb**	**01 17 15.1**	**-0.1**
BTIN	**Bartın**	**2.60**	**265**	P	**Pn**	**01 17 15.7**	**+1.9**
YAL	**Yalta**	**2.81**	**337**	*e*P	**Pn**	**01 17 16.1**	**-0.5**
YAL				Pm		01 17 19.0	
	comp=Z,3.0nm,0.2s						
YAL				*e*S	**Sn**	**01 17 47.7**	**-2.7**
YAL				Sm		01 17 50.7	
	comp=N,11nm,0.2s,comp=E,17nm,0.2s						
ALU	**Alushta**	**2.92**	**341**	*e*P	**Pn**	**01 17 19.0**	**+0.8**
ALU				Pm		01 17 19.2	
	comp=Z,3.0nm,0.3s						
ALU				*e*S	**Sn**	**01 17 52.4**	**-0.8**
ALU				Sm		01 17 55.0	
	comp=N,19nm,0.3s,comp=E,6.0nm,0.3s						
SUDU	**Sudak**	**3.02**	**350**	*e*P	**Pn**	**01 17 20.7**	**+1.2**
SUDU				Pm		01 17 24.2	
	comp=Z,22nm,0.3s						
SUDU				*e*S	**Sn**	**01 17 56.3**	**+0.8**
SUDU				Sm		01 17 57.6	
	comp=N,10.0nm,0.3s						
SUDU				Sm		01 17 57.6	
	comp=E,9.0nm,0.3s						
SEV	**Sevastopol'**	**3.02**	**331**	*e*P	**Pn**	**01 17 18.8**	**-0.7**
SEV				Pm		01 17 19.1	
	comp=Z,1.0nm,0.3s						
SEV				*e*S	**Sn**	**01 17 53.1**	**-2.5**
SEV				Sm		01 17 54.7	
	comp=N,7.0nm,0.2s						
SEV				Sm		01 17 54.7	
	comp=E,4.0nm,0.2s						
FEO	**Feodosiya**	**3.11**	**356**	*e*P	**Pn**	**01 17 23.1**	**+2.4**
FEO				Pm		01 17 23.9	
	comp=Z,9.0nm,0.3s						
FEO				*e*S	**Sn**	**01 17 59.6**	**+1.8**
FEO				Sm		01 17 59.9	
	comp=N,4.0nm,0.3s						
FEO				Sm		01 17 59.9	
	comp=E,8.0nm,0.3s						
SIM	**Simferopol'**	**3.24**	**340**	*e*P	**Pn**	**01 17 23.4**	**+0.8**
SIM				Pm		01 17 26.4	
	comp=Z,9.0nm,0.4s						
SIM				*e*S	**Sn**	**01 18 00.2**	**-1.0**
SIM				Sm		01 18 00.5	
	comp=N,25nm,0.5s						
SIM				Sm		01 18 00.5	
	comp=E,12nm,0.3s						

IDC 02 01:23:29.1±47.0**, 15°.15S**×**174°.65W, h0**^{km}**, mb4.0**/3**,**
mbtmp4.0/3**, Error ellipse: s-maj=898.8km**
s-min=191.8km az=77.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**43.12**	**239**	P	P	01 31 31.2	-0.2
	1.2nm,0.6s,baz=86,slow=13,SNR=3.2						
	1.2nm,0.6s						
WRA	**Warramunga Arr**	**48.72**	**257**	P	P	01 32 16.2	+0.4
	0.3nm,0.6s,baz=90,slow=7.3,SNR=3.1						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**49.04**	**252**	P	P	01 32 17.9	-0.4
	3.3nm,0.4s,baz=89,slow=8.2,SNR=68						
	3.3nm,0.4s						

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*BJI **02** 01:27:34.0±0.0, 20°.43N×120°.16E, h6^{km}, mb4.3/43, mB4.6/22, ML4.2/1, Ms4.1/31, Ms7 3.9/30*

*NEIC **02** 01:27:35.9±1.0, 20°.39N±0°.08×120°.3E±0°.1, h10^{km}±1^{km}, mb4.7/51, Error ellipse: s-maj=18.4km s-min=13.3km az=278.0*

*MAN **02** 01:27:37.5, 20°.39N×120°.33E, h88^{km}, mb5.1, ML4.0, MS4.1*

*IDC **02** 01:27:41.3±4.1, 20°.36N×120°.20E, h54^{km}±37^{km}, mb4.1/19, mbtmp4.3/21, ML4.1/2, MS3.3/18, Error ellipse: s-maj=19.0km s-min=12.2km az=69.0*

ISC 02 01:27:37.0±0.7**, 20°.40N**±0°.03×**120°.26E**±0°.04**, h19**^{km}±2^{km}**,**
n133, σ**1^{s}43**/154**, mb4.6**/53**, MS3.4**/21**, 14C-3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBP	**Basco**	**1.60**	**88**	⇑*e*P	**Pn**	**01 28 03.8**	**-0.3**
BBP				*i* S	**Sn**	**01 28 24.7**	**+0.4**
BBP	**Basco**	**1.60**	**88**	⇑*e*P	**Pn**	**01 28 04.0**	**-0.1**
BBP				*i* S	**Sn**	**01 28 24.9**	**+0.7**
CICP	**Calayan Island**	**1.61**	**134**	⇑*e*P	**Pn**	**01 28 03.9**	**-0.4**
CICP				*i* S	**Sb**	**01 28 25.8**	**-0.1**
PACPP	**Pamplona Cagay**	**2.18**	**152**	*e*P	**Pn**	**01 28 11.7**	**-0.5**
PACPP				*i* S	**Sn**	**01 28 37.5**	**-1.3**
SIPP	**Brgy, Tapao**	**2.47**	**176**	⇓*i*P	**Pn**	**01 28 16.2**	**+0.1**
SIPP				*i* S	**Sb**	**01 28 51.7**	**+1.1**
TWG	**Pinlang**	**2.53**	**17**		**Pn**	**01 28 16.6**	**-0.4**
SGCP	**Gonzaga**	**2.73**	**141**	⇑*e*P	**Pn**	**01 28 19.9**	**+0.2**
SGCP				*e*S	**Sn**	**01 28 52.4**	**+0.2**
TPUB	**Ta-pu**	**2.91**	**7**	Pn	**Pn**	**01 28 20.5**	**-1.8**
CVP	**Callao Caves**	**3.06**	**151**	⇑*i*P	**Pn**	**01 28 25.9**	**+1.6**
CVP				*i* S	**Sn**	**01 29 01.1**	**+0.8**
YULB	**Yu-li**	**3.13**	**18**		**Pn**	**01 28 24.6**	**-0.8**
SAMP	**Sagada Mountai**	**3.35**	**169**	⇓*e*P	**Pn**	**01 28 28.4**	**+0.1**
SAMP				*e*S	**Sn**	**01 29 07.2**	**-0.4**
SSLB	**Suanglung**	**3.44**	**11**		**Pn**	**01 28 28.3**	**-1.2**
CAUP	**Cauayan**	**3.74**	**156**	⇑*e*P	**Pn**	**01 28 36.9**	**+3.2**
NACB	**Ninganchiao**	**3.96**	**18**		**Pn**	**01 28 36.8**	**+0.1**
BOLP	**Bolinao**	**4.01**	**185**	⇑*e*P	**Pn**	**01 28 38.8**	**+1.5**
BOLP				*e*S	**Sn**	**01 29 21.5**	**-2.2**
YHNB	**Yeheng**	**4.38**	**13**	Pn	**Pn**	**01 28 42.2**	**-0.3**
SCZP	**Santa Cruz**	**4.61**	**184**	⇑*e*P	**Pn**	**01 28 48.7**	**+3.1**
BALP	**Baler**	**4.79**	**165**	⇑*e*P	**Pn**	**01 28 50.2**	**+2.1**
BALP				*e*S	**Sn**	**01 29 46.6**	**+3.4**
PCPH	**Palayan**	**4.87**	**170**	⇑*e*P	Pb	01 28 55.4	-6.3
JCNP	**Jose Panganiba**	**6.50**	**159**	⇑*e*P	**Pn**	**01 29 12.5**	**+0.9**
QIZ	**Qiongzhong**	**9.91**	**264**	P	**Pn**	**01 29 57.4**	**-1.0**
QIZ				S	**Sn**	**01 31 50.4**	**+1.3**
QIZ				LR	LR		
	comp=N,510nm,9.6s						
QIZ				LR	LR		
	comp=E,760nm,8.4s						
QIZ				LR	LR		
	comp=Z,940nm,10.0s						
NJ2	**Nanjing**	**11.68**	**354**	*e*P	**Pn**	**01 30 23.1**	**+0.5**
NJ2				pP		01 30 27.2	
NJ2				sP		01 30 31.6	
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
GYA	**Guiyang**	**13.86**	**298**	*e*P	**P**	**01 30 58.5**	**-2.2**
GYA				pmax	pmax		
	comp=Z,22nm,0.7s						
GYA				LR	LR		
	comp=N,440nm,8.1s						
GYA				LR	LR		
	comp=E,470nm,13.3s						
GYA				LR	LR		
	comp=Z,620nm,10.6s						
LYN	**LuoYang**	**15.70**	**336**	⇑P	**P**	**01 31 22.4**	**+1.4**
LYN				PP	**pwP**	**01 31 33.3**	**+3.0**
LYN				pmax	pmax		
	comp=Z,20nm,0.9s						
LYN				pmax	pmax		
	comp=Z,120nm,5.2s						
LYN				LR	LR		
	comp=N,320nm,8.9s						
LYN				LR	LR		
	comp=E,170nm,8.4s						
LYN				LR	LR		
	comp=Z,280nm,8.8s						
JNU	**Nakatsue**	**15.81**	**35**	P	**P**	**01 31 23.3**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=201,slow=8.6,SNR=2.0						
JNU				LR	LR	01 37 19.9	
	comp=Z,105nm,21.4s,baz=228,slow=36						
	comp=Z,13nm,0.6s						
XAN	**Xi'an**	**16.91**	**326**	⇑P	**P**	**01 31 34.7**	**+0.2**
XAN				pP	pP	01 31 38.8	0.0
XAN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
XAN				LR	LR		
	comp=Z,270nm,10.2s						
XAN				LR	LR		
	comp=Z,280nm,10.2s						
XAN				LR	LR		
	comp=Z,300nm,13.0s						
HNS	**HongShan**	**17.62**	**345**	⇑P	**Pn**	**01 31 42.4**	**+1.0**
HNS				pmax	pmax		
	comp=Z,28nm,1.0s						
HNS				LR	LR		
	comp=Z,410nm,14.3s						
HNS				LR	LR		
	comp=Z,330nm,9.6s						
HNS				LR	LR		
	comp=Z,340nm,15.1s						
PZH	**PanZhiHua**	**18.04**	**293**	P	**Pn**	**01 31 46.3**	**-0.5**
PZH				S	**Sn**	**01 35 07.2**	**-0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,150nm,5.9s						
PZH				LR	LR		
	comp=Z,770nm,16.7s						
PZH				LR	LR		
	comp=Z,300nm,18.0s						
PZH				LR	LR		
	comp=Z,430nm,16.6s						
CD2	**Chengdu**	**18.17**	**308**	P	**Pn**	**01 31 47.7**	**-0.6**
CD2				sP	pP	01 31 51.9	-1.0
CD2				S	**Sn**	**01 35 11.7**	**+1.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CD2				pmax	pmax		
	comp=Z,120nm,5.2s						
CD2				LR	LR		
	comp=Z,540nm,9.1s						
CD2				LR	LR		
	comp=Z,590nm,9.2s						
CD2				LR	LR		
	comp=Z,310nm,10.0s						
KSRS	**Korea Array**	**18.26**	**20**	P	**P**	**01 31 51.6**	**+2.3**
	comp=Z,0.2nm,0.3s,baz=198,slow=12,SNR=5.0						
KSRS				LR	LR	01 40 20.4	
	comp=Z,86nm,18.2s,baz=205,slow=42						
	comp=Z,3.3nm,0.9s						
PHRA	**Phrae**	**18.98**	**268**		**P**	**01 31 56.8**	**-0.6**
TOLI2	**Tolitoli**	**19.17**	**178**	P	**P**	**01 31 57.9**	**-1.6**
BJT	**Baijiatuau**	**19.87**	**351**		**P**	**01 32 06.1**	**-0.9**
BJI	**Beijing**	**19.89**	**351**	P	**P**	**01 32 08.4**	**+1.2**
BJI				sP	**sP**	**01 32 13.2**	**-0.3**
BJI				pmax	pmax		
	comp=Z,12nm,0.9s						
CMAR	**Chiang Mai Arr**	**20.20**	**268**	P	Pn	01 32 11.7	-1.0
	comp=Z,1.0nm,0.3s,baz=74,slow=9.8,SNR=4.9						
CMAR				LR	LR	01 39 52.3	
	comp=Z,199nm,20.1s,baz=80,slow=36						
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**20.20**	**268**	P	**P**	**01 32 10.1**	**-0.6**
INU	**Inuyama**	**20.96**	**41**		**P**	**01 32 18.0**	**-0.9**
INU				IAmb	IAmb	01 32 27.2	
	comp=Z,46nm,1.4s						
LZH	**Lanzhou**	**21.25**	**321**	*e*P	**P**	**01 32 23.5**	**+1.4**
LZH				pP	sP	01 32 29.6	+1.0
LZH				sP	pwP	01 32 34.1	+2.4
LZH				pmax	pmax		
	comp=Z,19nm,1.6s						
LZH				LR	LR		
	comp=Z,290nm,15.5s						
LZH				LR	LR		
	comp=Z,240nm,14.3s						
LZH				LR	LR		
	comp=Z,330nm,12.7s						
JGF	**Kuroka**	**21.34**	**41**	P	**P**	**01 32 22.9**	**0.0**
JHJ	**Hachijo jima 2**	**21.51**	**50**	LR	LR	01 39 52.9	
	comp=Z,114nm,21.9s,baz=213,slow=34						
HHC	**Hu-ho-hao-te**	**21.70**	**342**	*e*P	**P**	**01 32 29.9**	**+3.1**
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,270nm,5.0s						
HHC				LR	LR		
	comp=Z,510nm,12.6s						
HHC				LR	LR		
	comp=Z,210nm,14.4s						
HHC				LR	LR		
	comp=Z,360nm,11.4s						
MJAR	**Matsushiro Arr**	**22.47**	**40**	P	**P**	**01 32 35.8**	**+0.7**
	comp=Z,2.9nm,0.6s,baz=241,slow=8.5,SNR=7.6						
MJAR				LR	LR	01 41 30.5	
	comp=Z,34nm,20.2s,baz=240,slow=37						
	comp=Z,2.9nm,0.6s						
XLT	**XiLinHaoTe**	**23.70**	**352**	*e*P	**P**	**01 32 47.2**	**-0.4**
XLT				pP	pP	01 32 51.6	-0.7
XLT				sP	sP	01 32 53.9	-0.3
XLT				S	**S**	**01 36 59.3**	**-2.4**
XLT				pmax	pmax		
	comp=Z,12nm,0.9s						
XLT				pmax	pmax		
	comp=Z,140nm,3.9s						
XLT				LR	LR		
	comp=Z,240nm,15.1s						
XLT				LR	LR		
	comp=Z,170nm,10.6s						
GUMO	**Guam**	**24.47**	**102**	LR	LR	01 41 08.0	
	comp=Z,62nm,21.9s,baz=129,slow=33						
KAPI	**Kappang**	**25.25**	**181**	LR	LR	01 45 20.0	
	comp=Z,36nm,19.9s,baz=358,slow=42						
MDJ	**Mudanjiang**	**25.37**	**16**	P	**P**	**01 33 03.1**	**+0.3**

MDJ				PP	**PnPn**	**01 33 38.7**	**+0.7**
MDJ				PcP	**PcP**	**01 36 34.4**	**-0.7**
MDJ				S	**S**	**01 37 31.5**	**+3.2**
MDJ				SS	**SnSn**	**01 38 26.4**	**+5.7**
MDJ				ScP	**ScP**	**01 40 13.1**	**-0.4**
MDJ				PcS	**PcS**	**01 40 14.5**	**-0.9**
MDJ				pmax	pmax		
	comp=Z,18nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,280nm,3.7s						
MDJ	**Mudanjiang**	**25.37**	**16**	P	**P**	**01 33 02.6**	**-0.2**
MDJ				IAmb	IAmb	01 33 06.6	
	comp=Z,25nm,1.1s						
USRK	**Ussuriysk Ar.**	**25.67**	**20**	P	**P**	**01 33 07.8**	**+2.2**
	comp=Z,5.5nm,0.8s,baz=217,slow=9.2,SNR=7.5						
	comp=Z,5.5nm,0.8s						
GTA	**Gaotai**	**25.84**	**322**	*e*P	**P**	**01 33 07.3**	**-0.1**
GTA				pP	pP	01 33 11.8	-0.3
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				LR	LR		
	comp=Z,110nm,9.2s						
GTA				LR	LR		
	comp=Z,150nm,11.1s						
GTA				LR	LR		
	comp=Z,130nm,8.2s						
BRDH	**Bariadhala**	**26.70**	**280**	LR	LR	01 45 56.3	
	comp=Z,77nm,19.6s,baz=89,slow=41						
RPSI	**Rantau Prapat**	**27.25**	**233**	P	**P**	**01 33 19.1**	**-1.0**
RPSI				IAmb	IAmb	01 33 25.9	
	comp=Z,16nm,1.3s						
GOMU	**GeErMu**	**27.27**	**311**	P	**P**	**01 33 19.5**	**-1.1**
GOMU				S	**S**	**01 37 56.7**	**-2.6**
GOMU				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GOMU				LR	LR		
	comp=Z,140nm,8.8s						
BKNI	**Bangkinang**	**27.41**	**226**	P	**P**	**01 33 21.6**	**0.0**
ULN	**Ulaanbaatar**	**29.42**	**342**	P	**P**	**01 33 40.1**	**+0.8**
SONM	**Songino Array**	**29.59**	**341**	P	**P**	**01 33 41.0**	**+0.2**
	comp=Z,3.4nm,0.7s,baz=159,slow=10,SNR=30						
SONM				LR	LR	01 46 10.7	
	comp=Z,36nm,18.4s,baz=11,slow=38						
	comp=Z,3.4nm,0.7s						
SONM	**Songino Array**	**29.59**	**341**	P	**P**	**01 33 41.0**	**+0.2**
ASAJ	**Asahikawa**	**30.09**	**33**	LR	LR	01 46 47.6	
	comp=Z,81nm,19.8s,baz=214,slow=38						
KLR	**Kul'dur**	**30.20**	**15**	LR	LR	01 45 44.0	
	comp=Z,60nm,20.2s,baz=194,slow=36						
HEH	**HeiHe**	**30.33**	**9**	*e*P	**P**	**01 33 47.4**	**+0.2**
HEH				pmax	pmax		
	comp=Z,6.0nm,1.4s						
MTN	**Manton Dam**	**34.72**	**161**	P	**P**	**01 34 23.9**	**-2.0**
MTN				IAmb	IAmb	01 34 30.0	
	comp=Z,11nm,1.3s						
WMQ	**Urumqi**	**35.78**	**318**	*e*P	**P**	**01 34 37.4**	**+2.5**
FITZ	**Fitzroy Crossi**	**38.62**	**172**	P	**P**	**01 34 57.4**	**-1.7**
PALK	**Pallekele**	**40.44**	**257**	LR	LR	01 52 54.4	
	comp=Z,38nm,18.6s,baz=178,slow=38						
MK31	**Makanchi Array**	**40.55**	**319**	P	**P**	**01 35 15.7**	**+0.6**
MKAR	**Makanchi Array**	**40.55**	**319**	P	**P**	**01 35 15.3**	**+0.3**
	comp=Z,8.4nm,0.9s,baz=114,slow=9.9,SNR=55						
MKAR				PcP	**PcP**	**01 37 16.7**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=91,slow=4.9,SNR=6.1						
MKAR				LR	LR	01 52 07.8	
	comp=Z,38nm,19.5s,baz=256,slow=36						
	comp=Z,8.4nm,0.9s						
MKAR	**Makanchi Array**	**40.55**	**319**	P	**P**	**01 35 15.7**	**+0.7**
MAKZ	**Makanchi**	**40.75**	**319**	P	**P**	**01 35 16.7**	**0.0**
COEN	**Coen**	**40.90**	**145**	P	**P**	**01 35 17.3**	**-0.9**
COEN				IAmb	IAmb	01 35 23.4	
	comp=Z,18nm,1.4s						
YAK	**Yakutsk**	**42.11**	**7**	LR	LR	01 55 58.4	
	comp=Z,57nm,18.3s,baz=245,slow=40						
WB0	**Warramunga Arr**	**42.25**	**160**	P	**P**	**01 35 28.5**	**-0.6**
WB0				IAmb	IAmb	01 35 29.4	
	comp=Z,13nm,1.1s						
KSH	**Kashi**	**42.35**	**307**	P	**P**	**01 35 33.0**	**+2.9**
KSH				S	**S**	**01 41 57.3**	**+6.8**
KSH				sS	sS	01 42 02.8	+4.1
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WRAB	**Tennant Creek**	**42.39**	**160**	P	**P**	**01 35 29.8**	**-0.5**
WRAB				IAmb	IAmb	01 35 30.7	
	comp=Z,17nm,1.1s						
WRA	**Warramunga Arr**	**42.39**	**160**	P	**P**	**01 35 29.7**	**-0.7**
	comp=Z,9.9nm,0.9s,baz=341,slow=9.0,SNR=45						
WRA				PcP	**PcP**	**01 37 23.1**	**-0.5**
	comp=Z,3.0nm,0.6s,baz=346,slow=3.5,SNR=12						
	comp=Z,9.9nm,0.9s						
WRA	**Warramunga Arr**	**42.39**	**160**	P	**P**	**01 35 29.3**	**-1.1**
WB2	**Warramunga Arr**	**42.40**	**160**	P	**P**	**01 35 29.7**	**-0.7**
WB2				IAmb	IAmb	01 35 30.7	
	comp=Z,18nm,1.0s						
ZAA0	**Zalesovo Array**	**43.01**	**330**	P	**P**	**01 35 34.5**	**-0.6**
ZAA0				IAmb	IAmb	01 35 35.8	
	comp=Z,9.9nm,0.8s						
ZALV	**Zalesovo Beam**	**43.01**	**330**	P	**P**	**01 35 34.9**	**-0.1**
	comp=Z,7.7nm,0.7s,baz=117,slow=8.1,SNR=38						
ZALV				LR	LR	01 54 16.4	
	comp=Z,50nm,20.5s,baz=338,slow=37						
	comp=Z,7.7nm,0.7s						
ZALV	**Zalesovo Beam**	**43.01**	**330**	P	**P**	**01 35 34.6**	**-0.4**
PETK	**Petropavlovsk-**	**43.49**	**32**	LR	LR	01 54 12.7	
	comp=Z,46nm,18.2s,baz=283,slow=36						
AAK	**Ala-Archa**	**44.22**	**311**	LR	LR	01 56 44.8	
	comp=Z,75nm,18.9s,baz=110,slow=39						
KURK	**Kurchatov**	**44.51**	**323**	P	**P**	**01 35 46.1**	**-1.0**
KURK				IAmb	IAmb	01 35 48.4	
	comp=Z,18nm,1.2s						
MA2	**Magadan**	**44.80**	**22**	LR	LR	01 55 14.4	
	comp=Z,64nm,20.5s,baz=214,slow=37						
AS31	**Alice Springs**	**45.77**	**162**	P	**P**	**01 35 57.3**	**-0.1**
ASAR	**Alice Springs**	**45.77**	**162**	P	**P**	**01 35 57.4**	**-0.1**
	comp=Z,7.0nm,0.9s,baz=332,slow=6.7,SNR=58						
ASAR				PcP	**PcP**	**01 37 35.3**	**+0.3**
	comp=Z,1.9nm,0.9s,baz=352,slow=2.5,SNR=4.7						
	comp=Z,7.0nm,0.9s						
KK31	**Karatay Array**	**47.17**	**310**	P	**P**	**01 36 08.2**	**-0.1**
KKAR	**Karatay Array**	**47.17**	**310**	P	**P**	**01 36 08.2**	**-0.1**
MORW	**Morawa**	**49.34**	**185**	P	**P**	**01 36 24.2**	**-0.9**
MORW				IAmb	IAmb	01 36 43.1	
	comp=Z,13nm,1.2s						
BRVK	**Borovoye**	**50.18**	**323**	P	**P**	**01 36 31.0**	**-0.3**
BRVK				IAmb	IAmb	01 36 32.8	
	comp=Z,6.3nm,0.8s						
TIXI	**Tiksi**	**51.51**	**3**	P	**P**	**01 36 41.3**	**+0.3**
NRIK	**Noril'sk**	**52.84**	**346**	P	**P**	**01 36 51.2**	**+0.3**
	comp=Z,9.6nm,0.7s,baz=130,slow=7.7,SNR=20						
	comp=Z,9.6nm,0.7s						
NRIK	**Noril'sk**	**52.84**	**346**	P	**P**	**01 36 50.8**	**-0.1**
ABKAR	**Akbulak array**	**55.52**	**316**	P	**P**	**01 37 10.4**	**-0.4**
ABKAR				IAmb	IAmb	01 37 12.0	
	comp=Z,8.4nm,1.4s						
BILL	**Bilibino**	**55.52**	**19**	P	**P**	**01 37 11.0**	**+0.5**
BILL				IAmb	IAmb	01 37 12.3	
	comp=Z,3.6nm,0.6s						
STKA	**Stephens Creek**	**55.85**	**158**	P	**P**	**01 37 13.6**	**+0.4**
	comp=Z,3.8nm,0.6s,baz=349,slow=7.6,SNR=8.1						
	comp=Z,3.8nm,0.6s						
STKA	**Stephens Creek**	**55.85**	**158**	P	**P**	**01 37 13.4**	**+0.1**
GEYT	**Alibeck**	**56.04**	**303**	P	**P**	**01 37 15.1**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=89,slow=6.4,SNR=6.4						
	comp=Z,1.8nm,0.7s						
ARU	**Arti**	**57.65**	**325**	P	**P**	**01 37 25.5**	**-0.2**
ARU				IAmb	IAmb	01 37 26.5	
	comp=Z,7.3nm,0.7s						
ANM	**Nome**	**65.06**	**27**	P	**P**	**01 38 16.1**	**+0.3**
ANM				IAmb	IAmb	01 38 18.7	
	comp=Z,4.8nm,0.9s						
ONI	**Oni**	**66.94**	**309**	P	**P**	**01 38 27.9**	**-0.5**
ONI				IAmb	IAmb	01 38 30.8	
	comp=Z,5.2nm,1.0s						
AKH	**Akhalkalaki**	**67.06**	**307**	P	**P**	**01 38 30.2**	**+0.9**
KBZ	**Khabaz**	**67.21**	**310**	P	**P**	**01 38 29.8**	**-0.1**
	comp=Z,3.7nm,0.9s,baz=67,slow=7.7,SNR=6.8						
	comp=Z,3.7nm,0.9s						
GEVA	**Gevas**	**67.83**	**304**	P	**P**	**01 38 33.9**	**-0.3**
GEVA				IAmb	IAmb	01 38 35.9	
	comp=Z,4.9nm,1.0s						
KLMR	**Klimovskoe**	**67.92**	**329**	*e*P	**P**	**01 38 30.8**	**-3.3**
KLMR				AMP		01 38 34.5	
	comp=Z,23nm,1.3s						
GURO	**Guroymak-BITLI**	**68.59**	**304**	P	**P**	**01 38 39.4**	**+0.5**
GURO				IAmb	IAmb	01 38 41.0	
	comp=Z,4.8nm,1.1s						
RAYN	**Ar Rayn**	**68.66**	**288**	P	**P**	**01 38 38.5**	**-1.1**
RAYN				IAmb	IAmb	01 38 40.5	
	comp=Z,6.9nm,0.9s						
O18K	**Koktuh Hills**	**69.87**	**32**	P	**P**	**01 38 47.2**	**+0.9**
P18K	**Big Mountain,**	**69.91**	**33**	P	**P**	**01 38 47.0**	**+0.4**
IMAR	**Indian Mountai**	**69.94**	**26**	P	**P**	**01 38 47.4**	**+0.8**
K20K	**Telida**	**70.05**	**29**	P	**P**	**01 38 48.5**	**+1.1**
K20K				IAmb	IAmb	01 39 00.9	
	comp=Z,9.7nm,1.4s						
CAST	**Castle Rocks**	**70.93**	**28**	P	**P**	**01 38 53.7**	**+0.9**
CAST				IAmb	IAmb	01 38 54.7	
	comp=Z,7.6nm,1.0s						
KDAK	**Kodiak Island**	**71.49**	**34**	P	**P**	**01 38 56.3**	**+0.1**
SML	**Sawmill**	**72.91**	**30**	P	**P**	**01 39 04.6**	**-0.1**
ILAR	**Eielson Array**	**72.96**	**27**	P	**P**	**01 39 04.7**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=271,slow=4.8,SNR=7.9						
	comp=Z,0.8nm,0.6s						
FINES	**FINESS Array B**	**74.28**	**330**	P	**P**	**01 39 12.7**	**+0.1**
	comp=Z,5.2nm,0.8s,baz=98,slow=9.8,SNR=14						
	comp=Z,5.2nm,0.8s						
I26K	**Coal Creek Min**	**74.38**	**26**	P	**P**	**01 39 13.6**	**+0.4**
I26K				IAmb	IAmb	01 39 14.8	
	comp=Z,5.0nm,0.8s						
MNK	**Minsk**	**75.01**	**323**	*i* P	**P**	**01 39 14.5**	**-2.5**
	comp=E,1.0nm,1.0s						
MNK				*i* P	**P**	**01 39 14.5**	**-2.5**
	comp=N,40nm,0.8s						
MNK				*i* P	**P**	**01 39 14.5**	**-2.5**
	comp=Z,13nm,0.9s,baz=256						
MNK				*i* PcP	**pwP**	**01 39 27.9**	**+0.8**
MNK				*i* PP	**PP**	**01 42 02.0**	**-2.6**
MNK				*i* PPP	PPP	01 43 47.8	
MNK				*i* S	**S**	**01 48 53.0**	**-0.8**
MNK				*i* ScS	**SKKSac**	**01 49 26.7**	**+1.4**
MNK				*i* SS	**SS**	**01 53 42.5**	**+0.5**
MNK				*i* SSS	SSS	01 57 04.8	
MNK				*i* LQ	LQ	02 07 15.8	
MNK				*i* LR	LR	02 12 58.5	
MNK				*i* LRM	MLR	02 14 33.1	
	comp=Z,45nm,14.1s						
MNK				*i* LRM	MLR	02 14 45.9	
	comp=E,7.0nm,13.4s						
MNK				*i* LRM	MLR	02 15 01.3	
	comp=N,287nm,14.1s						
AKASG	**Malin Array Be**	**75.13**	**319**	P	**P**	**01 39 17.0**	**-0.8**
	comp=N,1.9nm,0.6s,baz=63,slow=5.4,SNR=7.8						
	comp=N,1.9nm,0.6s						
M26K	**Nabesna, AK**	**75.21**	**29**	P	**P**	**01 39 19.0**	**+0.9**
NACGM	**Naroch**	**75.53**	**323**	⇓*i*P	**P**	**01 39 20.0**	**+0.1**
	comp=Z,33nm,1.0s,baz=75						
L27K	**Beaver Creek,**	**75.55**	**28**	P	**P**	**01 39 21.3**	**+1.3**
L27K				IAmb	IAmb	01 39 22.5	
	comp=Z,7.1nm,0.8s						
DAWY	**Dawson**	**76.29**	**26**	P	**P**	**01 39 24.8**	**+0.5**
DAWY				IAmb	IAmb	01 39 26.0	
	comp=Z,5.0nm,0.8s						
INK	**Inuvik**	**77.04**	**21**	P	**P**	**01 39 28.4**	**0.0**
	comp=Z,2.2nm,0.8s,baz=293,slow=5.5,SNR=11						
	comp=Z,2.2nm,0.8s						
C36M	**Paulatuk**	**79.65**	**19**	P	**P**	**01 39 43.1**	**+0.4**
C36M				IAmb	IAmb	01 39 44.2	
	comp=Z,4.8nm,0.8s						
NOA	**NORSAR Array B**	**81.16**	**332**	P	**P**	**01 39 50.0**	**-1.2**
	comp=Z,0.9nm,0.7s,baz=64,slow=5.2,SNR=3.0						
	comp=Z,0.9nm,0.7s						
VTS	**Vitosha**	**81.43**	**312**	P	**P**	**01 39 54.6**	**+1.5**
VTS				IAmb	IAmb	01 39 55.4	
	comp=Z,8.4nm,0.8s						
VYHS	**Vyhne**	**82.24**	**319**	*e*P	**P**	**01 39 57.6**	**+0.6**
BRG	**Berggiesshubel**	**84.20**	**322**	*e*P	**P**	**01 40 07.8**	**+0.8**
BRG				Amp		01 40 10.6	
	comp=Z,15nm,1.6s						
CLL	**Collm**	**84.55**	**323**	*e*P	**P**	**01 40 09.0**	**+0.2**
GERES	**GERESS Array B**	**85.21**	**321**	P	**P**	**01 40 12.8**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=48,slow=8.1,SNR=5.1						
	comp=Z,0.8nm,0.7s						
YKA	**Yellowknife Ar**	**86.78**	**22**	P	**P**	**01 40 20.3**	**+0.6**
	comp=Z,4.7nm,1.0s,baz=312,slow=4.6,SNR=44						
	comp=Z,4.7nm,1.0s						
YKA	**Yellowknife Ar**	**86.78**	**22**	P	**P**	**01 40 20.1**	**+0.5**
STAL	**STALIGIAL**	**86.95**	**319**	P	**P**	**01 40 18.9**	**-2.0**
TXAR	**Lajitas Array**	**114.90**	**42**	PKP	**PKiKP**	**01 46 17.6**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=343,slow=1.2,SNR=4.3						

IDC 02 01:50:03.5±1.5**, 9°.41S**×**126°.06E, h0**^{km}**, mb3.6**/3**, mbtmp3.6**/5**, ML3.8**/2**, Error ellipse: s-maj=136.2km s-min=26.3km az=61.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.18**	**144**	Pn	Pn	01 53 11.9	-0.1
	0.6nm,0.3s,baz=317,slow=13,SNR=22						
WRA				Sn	Sn	01 55 35.4	-4.1
	0.7nm,0.3s,baz=323,slow=25,SNR=6.3						
	0.9nm,0.3s						
ASAR	**Alice Springs**	**16.04**	**153**	Pn	Pn	01 53 51.9	+1.3
	0.3nm,0.3s,baz=325,slow=12,SNR=7.8						
ASAR				Sn	Sn	01 56 47.8	-1.5
	0.2nm,0.3s,baz=328,slow=17,SNR=6.5						
	0.4nm,0.3s						
SONM	**Songino Array**	**59.60**	**345**	P	P	02 00 09.0	-0.3
	0.1nm,0.4s,baz=145,slow=5.3,SNR=2.2						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**68.19**	**329**	P	P	02 01 06.5	+0.7
	0.5nm,0.6s,baz=123,slow=7.8,SNR=7.5						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**72.09**	**336**	P	P	02 01 28.6	-0.8
	0.4nm,0.5s,baz=122,slow=7.1,SNR=2.0						
	0.4nm,0.5s						

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*IDC **02** 02:05:07.1±2.4, 25°.98S×178°.52W, h364^{km}±29^{km}, mb3.5/3, mbtmp4.6/7, Error ellipse: s-maj=33.5km s-min=17.8km az=89.0*

ISC 02 02:05:07.0±0.8**, 25°.93S**±0°.06×**178°.1W**±0°.1**, h400**^{km}**, n27,** σ**1^{s}49**/42**, mb3.7**/3**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.32**	**178**	P	Pn	02 06 17.9	+5.1
GLKZ				S	**S**	**02 07 06.5**	**+0.4**
MSVF	**Nonsavu**	**8.92**	**335**	P	**Pn**	**02 07 10.8**	**-1.9**
	11nm,0.5s,baz=152,slow=7.7,SNR=15						
MSVF				S	**S**	**02 08 54.2**	**-1.7**
	3.6nm,0.7s,baz=165,slow=20,SNR=1.7						
GRZ	**Great Barrier**	**11.69**	**207**	P	**Pn**	**02 07 47.1**	**+2.7**
OUZ	**Omahuta**	**11.72**	**216**	P	**Pn**	**02 07 47.4**	**+2.6**
WCZ	**Waipu Caves**	**11.91**	**211**	P	**Pn**	**02 07 50.6**	**+3.6**
MXZ	**Matakaoa Point**	**12.00**	**194**	P	**P**	**02 07 47.1**	**+0.6**
MXZ				S	**S**	**02 09 55.5**	**-2.9**
KUZ	**Kuaotunu**	**12.02**	**205**	P	**Pn**	**02 07 51.4**	**+3.2**
WMGZ	**Waiomatatini S**	**12.23**	**193**	P	**Pn**	**02 07 51.6**	**+1.0**
WMGZ				S	**S**	**02 10 01.1**	**-1.8**
WIAZ	**Waiheke Island**	**12.29**	**207**	P	**Pn**	**02 07 53.6**	**+2.2**
HAZ	**Te Kaha**	**12.31**	**196**	P	**P**	**02 07 50.1**	**+0.2**
HAZ				S	**S**	**02 10 05.1**	**+0.5**
PKGZ	**Pakihiroa**	**12.37**	**194**	P	**Pn**	**02 07 51.9**	**-0.4**
PKGZ				S	**S**	**02 10 04.2**	**-1.7**
PUZ	**Puketiti**	**12.50**	**194**	P	**P**	**02 07 51.3**	**-0.7**
PUZ				S	**S**	**02 10 06.5**	**-2.0**
RUGZ	**Raukumara Rang**	**12.53**	**196**	P	**Pn**	**02 07 54.8**	**+0.5**
TWGZ	**Tauwhareparae**	**12.66**	**194**	P	**Pn**	**02 07 54.9**	**-0.8**
TWGZ				S	**S**	**02 10 11.4**	**-0.5**
CNGZ	**Carnagh Statio**	**12.91**	**193**	P	**P**	**02 07 56.2**	**-0.3**
CNGZ				S	**S**	**02 10 17.4**	**+0.7**
MWZ	**Matawai**	**12.92**	**196**	P	**Pn**	**02 07 59.0**	**+0.3**
MWZ				S	**S**	**02 10 16.0**	**-1.0**
TKGZ	**Te Karaka**	**12.94**	**195**	P	**Pn**	**02 08 00.1**	**+1.2**
TKGZ				S	**S**	**02 10 15.5**	**-1.9**
URZ	**Urewera**	**12.96**	**197**	P	**P**	**02 07 58.0**	**+1.0**
	35nm,0.3s,baz=4.6,slow=2.9,SNR=83						
URZ				S	**S**	**02 10 17.5**	**-0.2**
	15nm,0.5s,baz=320,slow=23,SNR=16						
URZ	**Urewera**	**12.96**	**197**	P	**Pn**	**02 07 58.6**	**-0.4**
URZ				S	**S**	**02 10 16.9**	**-0.7**
RAGZ	**Rawiri**	**13.10**	**196**	P	**P**	**02 07 57.7**	**-1.0**
RAGZ				S	**S**	**02 10 21.0**	**+0.2**
RIGZ	**Rimuhau**	**13.22**	**194**	P	**Pn**	**02 08 01.1**	**-1.0**
RIGZ				S	**S**	**02 10 23.1**	**+0.1**
AFI	**Afiamalu**	**13.33**	**27**	P	**Pn**	**02 08 05.3**	**+1.5**
	21nm,0.4s,baz=196,slow=20,SNR=6.1						
AFI				S	**S**	**02 10 26.6**	**+0.8**
	7.8nm,0.3s,baz=221,slow=19,SNR=1.8						
RPZ	**Rata Peaks**	**19.84**	**204**	P	**P**	**02 09 09.3**	**-0.4**
	7.3nm,0.6s,baz=32,slow=2.6,SNR=9.0						
STKA	**Stephens Creek**	**35.67**	**251**	P	**P**	**02 11 29.6**	**+0.3**
	2.0nm,0.3s,baz=88,slow=8.8,SNR=9.0						
	2.0nm,0.3s						
ASAR	**Alice Springs**	**43.48**	**262**	P	**P**	**02 12 32.7**	**-0.3**
	1.9nm,0.5s,baz=88,slow=6.9,SNR=40						
	1.9nm,0.5s						
WRA	**Warramunga Arr**	**44.06**	**268**	P	**P**	**02 12 36.5**	**-1.1**
	1.6nm,0.5s,baz=99,slow=6.9,SNR=28						
	1.6nm,0.5s						
NOA	**NORSAR Array B**	**144.34**	**352**	PKP	**PKiKP**	**02 24 00.4**	**+1.0**
	1.1nm,0.7s,baz=14,slow=2.3,SNR=2.6						

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*MOS **02** 02:11:26.6±0.9, 59°.63N×152°.85W, h59^{km}, mb5.5/61, Error ellipse: s-maj=8.3km s-min=3.8km az=92.6*

*BJI **02** 02:11:26.1±0.0, 59°.83N×153°.32W, h53^{km}, mb5.5/84, mB5.4/60, Ms5.1/77, Ms7 4.8/73*

*ANF **02** 02:11:30.5±0.1, 59°.63N×152°.66W, h75^{km}±1^{km}, ML5.8/59, Error ellipse: s-maj=1.6km s-min=1.1km az=149.0*

*AEIC **02** 02:11:30.7±1.7, 59°.58N±0°.04×152°.66W±0°.06, h78^{km}±4^{km}, ML5.5, mb5.5/452(NEIC), ML5.7/94(NEIC), Mwb5.6/33(NEIC), Mwr5.6/92(NEIC), Mww5.6/113(NEIC), Error ellipse: s-maj=5.1km s-min=4.4km az=163.0*

*NEIC **02** 02:11:30.1±1.7, 59°.59N±0°.04×152°.65W±0°.04, h82^{km}±1^{km}, Error ellipse: s-maj=6.0km s-min=3.7km az=170.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.55; $M_{\theta\theta}$-2.81; $M_{\phi\phi}$1.26; $M_{r\theta}$-0.49; $M_{\theta\phi}$-0.01; $M_{\phi r}$1.53; Fault plane solution: $M_0$2.92000×10^{17} NP1:ϕ_s56.03000°, δ52.14000°, λ33.49000°. NP2:ϕ_s303.93000°, δ64.18000°, λ137.01000°. Principal axes: T 2.9677, Plg48.0000°, Azm264.0000°; N -0.0965, Plg41.0000°, Azm99.0000°; P -2.8713, Plg7.0000°, Azm3.0000°; Moment Tensor Solution. Moment tensor: Scale 10^{17} Nm; M_{rr}1.59; $M_{\theta\theta}$-2.61; $M_{\phi\phi}$1.03; $M_{r\theta}$0.04; $M_{\theta\phi}$-0.32; $M_{\phi r}$1.33; Fault plane solution: $M_0$2.66000×10^{17} NP1:ϕ_s297.30000°, δ54.76000°, λ140.69000°. NP2:ϕ_s52.58000°, δ58.84000°, λ42.40000°. Principal axes: T 2.6765, Plg51.0000°, Azm267.0000°; N -0.0278, Plg39.0000°, Azm82.0000°; P -2.6487, Plg2.0000°, Azm174.0000°;*

*IDC **02** 02:11:30.1±0.4, 59°.68N×152°.86W, h77^{km}±3^{km}, mb4.9/36, mbtmp5.2/39, MS4.3/88 Error ellipse: s-maj=7.0km s-min=5.7km az=79.0*

*NEIC **02** 02:11:30.7, 59°.59N×152°.61W, h77^{km}*

*NEIC **02** 02:11:30.7, 59°.59N×152°.61W, h70^{km}*

*NEIC **02** 02:11:30.7, 59°.59N×152°.61W, h70^{km}, Moment Tensor Solution. Duration: 3^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}1.19; $M_{\theta\theta}$-2.57; $M_{\phi\phi}$1.38; $M_{r\theta}$-0.58; $M_{\theta\phi}$-0.25; $M_{\phi r}$1.48; Fault plane solution: $M_0$2.74000×10^{17} NP1: ϕ_s302.99000°, δ67.52000°, λ140.38000°. NP2: ϕ_s50.55000°, δ53.90000°, λ28.24000°. Principal axes: T 2.8243, Plg43.0000°, Azm262.0000°; N -0.1682, Plg45.0000°, Azm98.0000°; P -2.6561, Plg8.0000°, Azm360.0000°;*

*NEIC **02** 02:11:31, 59°.61N×152°.51W, h57^{km}*

*GCMT **02** 02:11:33.1±0.1, 59°.65N±0°.01×152°.59W±0°.01, h92^{km}, MW5.6/147, Moment Tensor Solution. s147,c263; s145,c287; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M_{rr}1.22±.03; $M_{\theta\theta}$-3.09±.04; $M_{\phi\phi}$1.87±.04; $M_{r\theta}$-0.40±.03; $M_{\theta\phi}$-0.29±.03; $M_{\phi r}$1.56±.02; Best double couple: $M_0$3.15300×10^{17} NP1:ϕ_s305.00000°, δ67.00000°, λ147.00000°. NP2:ϕ_s49.00000°, δ60.00000°, λ27.00000°. Principal axes: T 3.1750, Plg39.0000°, Azm264.0000°; N -0.0440, Plg50.0000°, Azm94.0000°; P -3.1320, Plg5.0000°, Azm358.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **02** 02:11:35.8, 60°.04N×152°.35W, h83^{km}±3^{km}, mb5.4*

ISC 02 02:11:30.3±0.2**, 59°.63N**±0°.03×**152°.74W**±0°.02**, h81**^{km}±1^{km}**, h80**^{km}**:pP-P, n1565,** σ**1^{s}31**/1628**, mb5.5**/455**, 52C-56D, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
P19K	**Oil Pt**	**0.25**	**277**	Pn	**Pn**	**02 11 42.2**	**-0.2**
P19K	**Oil Pt**	**0.25**	**277**	P	**Pn**	**02 11 42.2**	**-0.2**
	baz=102,SNR=1000						
P19K				S	**Sn**	**02 11 51.8**	**+0.4**
	baz=102						
ILSW	**Iliamna Southw**	**0.41**	**331**		**Pn**	**02 11 43.1**	**-0.5**
ILSW				Sn	**Sn**	**02 11 53.9**	**+0.5**
ILSW				IAML		02 11 54.9	
	comp=E,343µm,0.7s						
ILSW				IAML		02 11 56.4	
	comp=N,244µm,0.7s						
O20K	**Slope Mountain**	**0.46**	**7**	P	**Pn**	**02 11 43.9**	**0.0**
	baz=181,SNR=1000						
O20K				S	**Sn**	**02 11 55.3**	**+1.4**
	baz=181						
HOM	**Homer**	**0.56**	**86**		**Pn**	**02 11 44.0**	**-0.5**
HOM				IAML		02 11 58.3	
	comp=N,406µm,0.4s						
HOM	**Homer**	**0.56**	**86**	P	**Pn**	**02 11 44.1**	**-0.5**
	baz=262,SNR=1000						
HOM				S	**Sn**	**02 11 56.3**	**+1.1**
	baz=262						
CNPM	**China Poot**	**0.77**	**97**		**Pn**	**02 11 45.7**	**-1.1**
CNPM				Sn	**Sn**	**02 11 58.5**	**-0.6**
CNPM				IAML		02 11 60.0	
	comp=E,241µm,0.5s						
CNPM				IAML		02 12 02.4	
	comp=N,223µm,0.6s						
Q19K	**Cape Douglas,**	**0.84**	**214**	Pn	**Pn**	**02 11 46.5**	**-1.0**
Q19K				Sn	**Sn**	**02 12 01.0**	**+0.6**
Q19K	**Cape Douglas,**	**0.84**	**214**	P	**Pn**	**02 11 46.6**	**-0.9**
	baz=38,SNR=1000						
Q19K				S	**Sn**	**02 12 01.0**	**+0.6**
	baz=38						
RSO	**Redoubt South**	**0.84**	**360**		**Pn**	**02 11 47.6**	**-0.1**
BRLK	**Bradley Lake**	**0.95**	**81**		**Pn**	**02 11 47.5**	**-1.3**
BRLK					**Sn**	**02 12 01.9**	**-0.7**
BRLK				IAML		02 12 03.4	
	comp=E,129µm,0.6s						
BRLK				IAML		02 12 03.9	
	comp=N,112µm,0.7s						
RDJH	**Redoubt Jeurge**	**0.97**	**358**		**Pn**	**02 11 49.0**	**-0.1**
RDJH					**Sn**	**02 12 04.6**	**+1.4**
O19K	**Port Alsworth**	**0.98**	**306**		**Pn**	**02 11 50.0**	**+0.9**
O19K				IAML		02 12 10.7	
	comp=N,99µm,0.5s						
O19K	**Port Alsworth**	**0.98**	**306**	P	**Pn**	**02 11 49.0**	**0.0**
	baz=125,SNR=1000						
O19K				S	**Sn**	**02 12 04.6**	**+1.5**
	baz=125						
BRSE	**Bradley Lake S**	**1.02**	**83**		**Pn**	**02 11 48.2**	**-1.4**
BRSE	**Bradley Lake S**	**1.02**	**83**	P	**Pn**	**02 11 48.2**	**-1.4**
	baz=262,SNR=1000						
BRSE				S	**Sn**	**02 12 03.1**	**-1.0**
	baz=262						
Q20K	**Shuyak Island**	**1.03**	**170**	P	**Pn**	**02 11 48.9**	**-0.9**
	baz=353,SNR=1000						
Q20K				S	**Sn**	**02 12 03.6**	**-0.7**
	baz=353						
O18K	**Koktuh Hills**	**1.27**	**282**		**Pn**	**02 11 52.3**	**-0.4**
O18K				IAML		02 12 12.3	
	comp=E,49µm,1.1s						
O18K	**Koktuh Hills**	**1.27**	**282**	P	**Pn**	**02 11 52.3**	**-0.4**
	baz=101,SNR=743						
O18K				S	**Sn**	**02 12 10.7**	**+1.2**
	baz=101						
P18K	**Big Mountain,**	**1.29**	**261**	Pn	**Pn**	**02 11 52.2**	**-0.7**
P18K	**Big Mountain,**	**1.29**	**261**	P	**Pn**	**02 11 52.2**	**-0.7**
	baz=80,SNR=544						
P18K				S	**Sn**	**02 12 10.5**	**+0.5**
	baz=80						
CAPN	**Captain Cook N**	**1.40**	**34**		**Pn**	**02 11 55.3**	**+1.1**
CAPN	**Captain Cook N**	**1.40**	**34**	P	**Pn**	**02 11 55.4**	**+1.2**
	baz=213,SNR=420						
N19K	**Bonanza Creek**	**1.48**	**325**		**Pn**	**02 11 55.5**	**+0.1**
N19K				IAML		02 12 17.6	
	comp=N,42µm,0.8s						
N19K	**Bonanza Creek**	**1.48**	**325**	P	**Pn**	**02 11 55.7**	**+0.3**
	baz=142,SNR=1000						
N19K				S	**Sn**	**02 12 14.4**	**0.0**
	baz=142						
Q18K	**Katmai Hardscr**	**1.52**	**231**	P	**Pn**	**02 11 55.4**	**-0.7**
	baz=51,SNR=1000						
Q18K				S	**Sn**	**02 12 14.8**	**-0.7**

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      baz=51
SLKM  Skilak Lake        1.54  54       Pn    02 11 55.1 -1.1
SPU   Mount Spurr        1.60  12       Pn    02 11 56.9 -0.1
N20K  Mount Spurr        1.60   9  P    Pn    02 11 57.0  0.0
      baz=188,SNR=1000
SPCR  Spurr Chakacha     1.60   9  P    Pn    02 11 57.0  0.0
      baz=188,SNR=1000
SEW   Seward             1.73  72  Pn   Pn    02 11 57.5 -1.1
SEW   Seward             1.73  72  P    Pn    02 11 57.4 -1.2
      baz=253,SNR=798
SEW                                S    Sn    02 12 17.8 -2.2
      baz=253
O22K  Cooper Landing     1.74  59       Pn    02 11 58.1 -0.6
O22K  Cooper Landing     1.74  59  P    Pn    02 11 58.0 -0.7
      baz=240,SNR=1000
O22K                               S    Sn    02 12 18.7 -1.6
      baz=240
KDAK  Kodiak Island      1.85 177  P    Pn    02 11 58.9 -1.2
      comp=N,22µm,0.4s,baz=9.0,slow=11,SNR=6532
KDAK                               S    Sn    02 12 22.8 -0.1
      comp=N,10µm,0.4s,baz=99,slow=23,SNR=10
KDAK                               LR   LR    02 12 53.6
      comp=N,13µm,21.5s,baz=81,slow=44
KDAK  Kodiak Island      1.85 177  Pn   Pn    02 11 58.6 -1.6
P17K  Kvichak River      1.94 259  P    Pn    02 12 01.5 +0.2
      baz=77,SNR=1000
P17K                               S    Sn    02 12 26.0 +1.0
      baz=77
FIS   Fire Island        1.97  38       Pn    02 12 02.5 +0.8
SVW2  Sparrevohn         2.04 318       Pn    02 12 02.6 -0.2
SVW2  Sparrevohn         2.04 318  P    Pn    02 12 03.9 +1.2
SUA   Susitna One        2.09  27       Pn    02 12 03.6 +0.1
SUA                                IAML       02 12 36.0
      comp=N,55µm,1.2s
SUA   Susitna One        2.09  27  P    Pn    02 12 03.8 +0.3
      baz=207,SNR=1000
SUA                                S    Sn    02 12 28.4 -0.5
      baz=207
RC01  Rabbit Creek A     2.10  44       Pn    02 12 02.8 -0.7
RC01                               IAML       02 12 32.5
      comp=E,42µm,0.4s
RC01                               IAML       02 12 49.8
      comp=N,37µm,1.6s
RC01  Rabbit Creek A     2.10  44  P    Pn    02 12 02.8 -0.7
      baz=225,SNR=1000
RC01                               S    Sn    02 12 27.7 -1.0
      baz=225
Q17K  Contact Creek      2.13 231  P    Pn    02 12 03.6 -0.4
      baz=50,SNR=1000
Q17K                               S    Sn    02 12 29.4 -0.3
      baz=50
O17K  Koliganek Bris     2.21 276  P    Pn    02 12 05.3 +0.4
      baz=93
O17K                               S    Sn    02 12 32.4 +1.0
      baz=93
Q16K  King Salmon        2.23 246  P    Pn    02 12 05.6 +0.4
      baz=64,SNR=1000
Q16K                               S    Sn    02 12 33.0 +1.2
      baz=64
M20K  Styx River         2.27 355  P    Pn    02 12 06.4 +0.5
      baz=174
M19K  Big River Lodg     2.43 341  P    Pn    02 12 08.1 +0.2
      baz=159
OHAK  Old Harbor         2.43 187       Pn    02 12 05.8 -2.0
OHAK                               IAML       02 12 48.5
      comp=E,17µm,1.3s
OHAK  Old Harbor         2.43 187  P    Pn    02 12 07.2 -0.6
OHAK  Old Harbor         2.43 187  P    Pn    02 12 05.9 -1.9
      baz=7.9,SNR=977
SKT   Skwentna           2.44  14       Pn    02 12 07.7 -0.3
SKT                                IAML       02 13 02.1
      comp=E,18µm,0.7s
SKT   Skwentna           2.44  14  P    Pn    02 12 07.8 -0.2
      baz=193,SNR=1000
M22K  Willow             2.50  30  P    Pn    02 12 08.6 -0.1
      baz=211,SNR=507
PWL   Port Wells         2.52  59  P    Pn    02 12 07.6 -1.6
      baz=241,SNR=546
PMR   Palmer             2.66  41       Pn    02 12 10.8 -0.1
PMR                                IAML       02 13 07.9
      comp=N,28µm,1.4s
PMR                                IAML       02 13 11.8
      comp=E,19µm,1.6s
PMR   Palmer             2.66  41  P    Pn    02 12 12.3 +1.4
PMR   Palmer             2.66  41  P    Pn    02 12 10.8 -0.1
PMR   Palmer             2.66  41  P    Pn    02 12 09.8 -1.2
      baz=222,SNR=371
PMR                                S    Sn    02 12 41.3 -0.9
      baz=222
O16K  Kokwok River B     2.72 272  P    Pn    02 12 12.1 +0.3
      baz=88
P23K  Montague Islan     2.72  80  P    Pn    02 12 11.0 -0.9
      baz=263,SNR=89
P23K                               S    Sn    02 12 41.7 -2.1
      baz=263
P16K  Nushagak River     2.75 260  P    Pn    02 12 13.1 +0.8
      baz=76,SNR=1000
R17K  Ugashik Creek      2.76 225  P    Pn    02 12 12.6 +0.3
      baz=44
L19K  White Mountain     2.77 339  Pn   Pn    02 12 12.7 +0.2
L19K  White Mountain     2.77 339  P    Pn    02 12 12.8 +0.4
      baz=156,SNR=1000
KNK   Knik Glacier       2.78  48       Pn    02 12 12.1 -0.5
KNK                                IAML       02 12 55.1
      comp=N,29µm,0.9s
KNK                                IAML       02 13 11.9
      comp=E,44µm,1.4s
KNK   Knik Glacier       2.78  48  P    Pn    02 12 11.3 -1.3
      baz=230,SNR=302
GHO   Glory Hole Cre     2.86  39       Pn    02 12 13.5 -0.2
GHO                                IAML       02 13 12.7
      comp=E,37µm,1.3s
GHO                                IAML       02 13 12.9
      comp=N,36µm,1.5s
CUT   Chulitna           3.04  22       Pn    02 12 16.5 +0.4
CUT                                IAML       02 13 35.5
      comp=N,34µm,1.4s
CUT   Chulitna           3.04  22  P    Pn    02 12 16.0 -0.1
      baz=203,SNR=1000
SML   Sawmill            3.08  43       Pn    02 12 16.4 -0.3
SML                                IAML       02 13 19.1
      comp=E,30µm,1.3s
SML   Sawmill            3.08  43  P    Pn    02 12 15.6 -1.1
SML   Sawmill            3.08  43  P    Pn    02 12 15.7 -1.1
      baz=225,SNR=419
N16K  Nishlik Lake       3.14 288  P    Pn    02 12 18.2 +0.7
      baz=104
Q23K  Middleton Isla     3.26  91  Pn   Pn    02 12 17.4 -1.7
Q23K                               IAML       02 12 58.2
      comp=N,17µm,0.9s
Q23K                               IAML       02 12 58.8
      comp=E,11µm,0.8s
Q23K  Middleton Isla     3.26  91  P    Pn    02 12 17.7 -1.4
      baz=276
R16K  Pilot Point        3.26 233  P    Pn    02 12 19.5 +0.4
      baz=50,SNR=88
MID   Middleton Isla     3.27  91  Pn   Pn    02 12 16.8 -2.4
MID                                IAML       02 12 58.2
      comp=N,15µm,0.9s
MID                                IAML       02 12 58.8
      comp=E,12µm,1.1s
MID   Middleton Isla     3.27  91  P    Pn    02 12 18.2 -1.0
MID   Middleton Isla     3.27  91  P    Pn    02 12 16.8 -2.4
M23K  Glacier View       3.29  46  P    Pn    02 12 18.4 -1.1
      baz=230,SNR=416
PPLA  Purkeypile         3.29   4       Pn    02 12 20.4 +0.7
PPLA  Purkeypile         3.29   4  P    Pn    02 12 20.3 +0.6
      baz=184,SNR=1000
SCM   Sheep Creek Mo     3.46  48  IAML       02 13 39.5
      comp=N,23µm,1.6s
SCM   Sheep Creek Mo     3.46  48  P    Pn    02 12 20.5 -1.4
SCM   Sheep Creek Mo     3.46  48  P    Pn    02 12 20.9 -1.0
      baz=232,SNR=382
EYAK  Cordova Ski Ar     3.62  72  P    Pn    02 12 23.1 -0.9
EYAK  Cordova Ski Ar     3.62  72  P    Pn    02 12 21.8 -2.2
      baz=257,SNR=133
TTA   Tatalina           3.67 336       Pn    02 12 24.8  0.0
TTA   Tatalina           3.67 336  P    Pn    02 12 24.9 +0.1
TTA   Tatalina           3.67 336  P    Pn    02 12 24.8 +0.1
TTA   Tatalina           3.67 336  P    Pn    02 12 24.8 +0.1
      baz=153,SNR=1000
DIV   Divide             3.77  63       Pn    02 12 24.2 -1.9
K20K  Telida             3.80 351  P    Pn    02 12 26.8 +0.4
      baz=169,SNR=1000
CAST  Castle Rocks       3.82   4       Pn    02 12 26.8  0.0
CAST  Castle Rocks       3.82   4  P    Pn    02 12 26.7  0.0
      baz=184,SNR=1000
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KLU   Klutina            3.85  58  IAML       02 13 12.7
      comp=E,16µm,0.5s
KLU   Klutina            3.85  58  P    Pn    02 12 25.5 -1.7
      baz=243,SNR=991
KTH   Kantishna Hill     4.04  12  IAML       02 14 03.5
      comp=E,12µm,1.6s
KTH                                IAML       02 14 04.0
      comp=N,15µm,1.2s
M24K  Tolsona, Glenn     4.06  49  P    Pn    02 12 29.1 -1.0
      baz=234,SNR=509
RND   Reindeer           4.23  24  IAML       02 13 39.9
      comp=E,9µm,1.6s
RND                                IAML       02 14 04.3
      comp=N,8µm,1.8s
CHUM  Lake Minchumin     4.28   3       Pn    02 12 32.9  0.0
CHUM  Lake Minchumin     4.28   3  P    Pn    02 12 32.8  0.0
      baz=182,SNR=1000
N25K  Chitina, Valde     4.48  60  IAML       02 13 25.8
      comp=E,6µm,0.6s
N25K                               IAML       02 13 25.9
      comp=N,8µm,0.6s
N25K  Chitina, Valde     4.48  60  P    Pn    02 12 34.2 -1.5
      baz=246,SNR=264
CHGN  Chignik            4.50 225       Pn    02 12 35.5 -0.4
CHGN                               IAML       02 13 27.1
      comp=E,4µm,0.6s
CHGN                               IAML       02 13 30.9
      comp=N,4µm,0.8s
CHGN  Chignik            4.50 225  P    Pn    02 12 36.3 +0.4
      baz=41,SNR=40
MCK   McKinley           4.50  22  P    Pn    02 12 36.0  0.0
      baz=205,SNR=1000
BPAW  Bear Paw Mtn.      4.57  10  IAML       02 14 09.5
      comp=N,3µm,1.8s
BPAW                               IAML       02 14 20.7
      comp=E,4µm,1.9s
BPAW  Bear Paw Mtn.      4.57  10  P    Pn    02 12 36.5 -0.4
      baz=190,SNR=1000
HARP  HAARP              4.62  50  P    Pn    02 12 37.0 -0.6
      baz=236,SNR=112
GLB   Gilahina Butte     4.77  64  IAML       02 13 32.3
      comp=E,3µm,0.5s
GLB                                IAML       02 13 34.1
      comp=N,5µm,0.5s
PAX   Paxson             4.85  43  P    Pn    02 12 39.8 -1.0
PAX   Paxson             4.85  43  P    Pn    02 12 39.8 -1.0
      baz=229,SNR=977
VRDI  Verde Repeater     4.88  67  IAML       02 13 37.3
      comp=N,4µm,0.5s
MCARA McCarthy VSAT      5.12  66       Pn    02 12 43.9 -0.5
MCARA                              IAML       02 14 01.1
      comp=E,6µm,0.6s
MCARA                              IAML       02 14 47.6
      comp=N,7µm,1.5s
MCARA McCarthy VSAT      5.12  66  P    Pn    02 12 42.9 -1.4
      baz=253,SNR=182
CYK   Cape Yakataga      5.19  81       Pn    02 12 44.5 -0.8
NEA2  Nenana             5.28  17       Pn    02 12 46.2 -0.3
NEA2                               IAML       02 14 28.8
      comp=E,3µm,1.4s
NEA2                               IAML       02 14 48.8
      comp=N,2µm,2.1s
NEA2  Nenana             5.28  17  P    Pn    02 12 45.8 -0.7
      baz=200,SNR=1000
KIAG  Kiagna River       5.33  71       Pn    02 12 45.2 -2.2
WRH   Wood River Hil     5.33  22  IAML       02 14 29.0
      comp=E,4µm,1.9s
WRH                                IAML       02 14 31.0
      comp=N,3µm,1.6s
K24K  Donnelly Dome      5.34  35  P    Pn    02 12 47.3 -0.1
      baz=221,SNR=1000
BALM  Baldy              5.36  70       Pn    02 12 45.6 -2.1
MENT  Mentasta           5.47  49  P    Pn    02 12 49.7 +0.5
GCSA  Galena City Sc     5.49 341  P    Pn    02 12 49.7 +0.3
      baz=157,SNR=811
M26K  Nabesna, AK        5.50  55  P    Pn    02 12 48.5 -1.1
      baz=243
MLY   Manley             5.51   9  P    Pn    02 12 49.5 -0.2
      baz=190,SNR=1000
HDA   Harding Lake       5.52  27  P    Pn    02 12 49.1 -0.7
      baz=212,SNR=1000
RIDG  Independent Ri     5.58  39  P    Pn    02 12 49.8 -0.9
      baz=225,SNR=1000
I21K  Tanana             5.59   3  P    Pn    02 12 51.1 +0.4
      baz=183,SNR=1000
L26K  Log Cabin Wild     5.66  49  P    Pn    02 12 51.3 -0.6
      baz=236,SNR=166
TCOL  CIGO, UAF Yank     5.74  21  P    Pn    02 12 52.2 -0.5
      baz=205,SNR=833
I53US FAIRBANKS INFR     5.74  21  I    I     02 39 40.0
      baz=210,slow=342,SNR=2.7
COLA  College            5.74  21       Pn    02 12 52.4 -0.4
COLA  College            5.74  21  P    Pn    02 12 52.3 -0.5
COLA  College            5.74  21ceP    Pn    02 12 52.4 -0.4
COLA  College            5.74  21  P    Pn    02 12 52.3 -0.5
      baz=205
I23K  Minto, Yukon-K     5.76  14  P    Pn    02 12 52.6 -0.5
      baz=197,SNR=1000
ILAR  Eielson Array      5.84  25  P    Pn    02 12 53.1 -1.1
      comp=N,1µm,0.7s,baz=209,slow=13,SNR=1232
ILAR                               S    Sn    02 13 57.9 -1.8
      comp=N,778nm,0.8s,baz=210,slow=20,SNR=11
ILAR                               LR   LR    02 15 18.4
      comp=N,7µm,22.0s,baz=200,slow=39
ILAR                               ScP  ScP   02 23 15.1  0.0
      comp=N,3.2nm,0.8s,baz=273,slow=2.8,SNR=7.2
M27K  Edge Creek, AK     5.95  58  P    Pn    02 12 54.8 -1.1
      baz=247,SNR=167
SDPT  Sand Point         5.98 228  Pn   Pn    02 12 56.3 +0.2
SDPT  Sand Point         5.98 228  P    Pn    02 12 56.9 +0.8
SDPT  Sand Point         5.98 228  P    Pn    02 12 56.3 +0.2
      baz=42,SNR=20
SCRK  Sand Creek         6.02  40  P    Pn    02 12 55.6 -1.1
      baz=227,SNR=604
POKR  Poker Plat Res     6.04  22  P    Pn    02 12 56.6 -0.3
      baz=206,SNR=966
SAMH  Samovar Hills      6.05  80       Pn    02 12 56.1 -1.0
H21K  Melozitna Rive     6.06 360  P    Pn    02 12 57.2  0.0
      baz=179
L27K  Beaver Creek,      6.28  52  P    Pn    02 12 60.0 -0.2
      baz=241
PCA   Pinnacle           6.31  80       Pn    02 12 59.2 -1.5
PINM  Pinnacle           6.31  80  P    Pn    02 12 60.0 -0.7
      baz=271,SNR=188
H22K  Ishtalitna Cre     6.32   5  P    Pn    02 13 00.8  0.0
      baz=186
S12K  Black Hills        6.36 236  P    Pn    02 13 03.0 +1.7
      baz=48,SNR=9.4
O28M  Mount Upton        6.36  74  P    Pn    02 13 01.6 -0.1
      baz=265,SNR=1000
H23K  Yukon River        6.39  12  P    Pn    02 13 01.5 -0.2
      baz=194
IMAR  Indian Mountai     6.40 356  Pn   Pn    02 13 01.6 -0.2
YUK3  Moose Creek        6.40  65  P    Pn    02 13 01.8 -0.3
      baz=255,SNR=723
BVCY  Beaver Creek       6.42  59  P    Pn    02 13 02.1  0.0
      baz=249,SNR=214
J26L  Joseph Creek       6.52  37  P    Pn    02 13 03.2 -0.3
      baz=225,SNR=916
H24K  Noodor Dome        6.62  18  P    Pn    02 13 04.3 -0.6
      baz=201
BCPM  Bancas Point       6.63  82       Pn    02 13 03.9 -1.0
YUK8  Steele Glacier     6.63  70  P    Pn    02 13 05.4 +0.2
      baz=261,SNR=1000
YKU2  Yakutat            6.64  85  Pn   Pn    02 13 04.8 -0.4
YKU2  Yakutat            6.64  85  P    Pn    02 13 06.1 +1.0
K27K  Chicken            6.71  44  P    Pn    02 13 05.0 -1.0
      baz=233
PNL   Peninsula          6.77  84  P    Pn    02 13 06.7 -0.1
PNL   Peninsula          6.77  84  P    Pn    02 13 05.2 -1.6
      baz=275,SNR=277
PRP   Porcupine Dome     6.79  26  P    Pn    02 13 06.5 -0.6
      baz=212,SNR=1000
G21K  Allakaket          6.93 357  P    Pn    02 13 09.6 +0.6
      baz=176
O29M  Mount Kennedy      7.14  78  P    Pn    02 13 11.3 -0.8
      baz=270,SNR=513
YUK4  Talbot Arm         7.17  70  P    Pn    02 13 12.5  0.0
      baz=261,SNR=402
G23K  Bananza Creek      7.22   9  P    Pn    02 13 13.2 +0.2
      baz=191
I26K  Coal Creek Min     7.22  34  P    Pn    02 13 12.6 -0.4
      baz=222
YUK6  Outpost Mounta     7.27  73  P    Pn    02 13 14.1 +0.2
      baz=265,SNR=419
EGAK  Eagle              7.48  41  P    Pn    02 13 15.7 -0.8
      baz=231,SNR=583
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M29M  Somme Creek        7.49  62  P    Pn    02 13 17.2 +0.5
      baz=254
G24K  Hadweenzic Riv     7.49  16  P    Pn    02 13 16.3 -0.3
      baz=200
FALS  False Pass         7.50 235  P    Pn    02 13 19.4 +2.5
FALS  False Pass         7.50 235  P    Pn    02 13 18.1 +1.2
      baz=46
F21K  Alatna River       7.63 358  P    Pn    02 13 19.8 +1.1
      baz=177
HYT   Haines Junctio     7.68  74  P    Pn    02 13 19.5 +0.1
      baz=267,SNR=306
ANM   Nome               7.72 315       Pn    02 13 20.7 +1.0
ANM   Nome               7.72 315  P    Pn    02 13 20.7 +1.0
ANM   Nome               7.72 315  P    Pn    02 13 21.1 +1.4
      baz=124
COLD  Coldfoot           7.72   7  P    Pn    02 13 19.6 -0.2
      baz=189,SNR=1000
DAWY  Dawson             7.72  49  P    Pn    02 13 19.2 -0.6
      baz=240,SNR=149
G25K  Bearman Lake       7.76  20  P    Pn    02 13 19.3 -1.0
      baz=205,SNR=888
L29M  L29M               7.84  57  P    Pn    02 13 21.4  0.0
      baz=250,SNR=149
I27K  Kandik River       7.88  36  P    Pn    02 13 21.2 -0.9
      baz=225
N30M  Aishikik Lake      7.93  70  P    Pn    02 13 21.4 -1.4
      baz=263,SNR=836
P30M  Million Dollar     7.96  80  P    Pn    02 13 22.4 -0.7
      baz=273
F24K  Squaw Lake         8.21  13  P    Pn    02 13 25.8 -0.7
      baz=197
M30M  Minto, Yukon       8.27  62  P    Pn    02 13 26.8 -0.5
      baz=256,SNR=349
PLBC  Pleasant Camp      8.32  84  P    Pn    02 13 27.6 -0.4
      baz=278,SNR=380
J29M  Klondike Camp      8.36  48  P    Pn    02 13 28.9 +0.3
      baz=241,SNR=50
H27K  Steamboat Moun     8.36  33  P    Pn    02 13 27.7 -0.8
      baz=222
K29M  Barlow Dome        8.36  53  P    Pn    02 13 28.3 -0.4
      baz=246
O30N  Mendenhall         8.37  75  P    Pn    02 13 28.5 -0.3
      baz=269,SNR=228
G26K  Porcupine Rive     8.38  25  P    Pn    02 13 28.0 -0.7
      baz=212
N31M  Braeburn, Yuko     8.56  70  P    Pn    02 13 30.9 -0.4
      baz=264,SNR=782
E23K  Chandalar          8.58   8  P    Pn    02 13 31.5  0.0
      baz=190,SNR=784
F25K  Christian Rive     8.59  18  P    Pn    02 13 30.7 -1.0
      baz=204
BMAR  Burnt Mountain     8.63  21       Pn    02 13 31.2 -1.0
E24K  Your Creek         8.69  11  P    Pn    02 13 32.8 -0.2
      baz=194
S31K  Pelican            8.73  94  P    Pn    02 13 31.1 -2.5
      baz=288,SNR=32
G27K  Doyon Strip        8.76  30  P    Pn    02 13 33.1 -0.9
      baz=219
I29M  Ogilvie Camp,      8.80  43       Pn    02 13 32.2 -2.4
I29M  Ogilvie Camp,      8.80  43  P    Pn    02 13 33.7 -0.9
      baz=235,SNR=125
SKAG  Skagway            8.85  84  P    Pn    02 13 35.2  0.0
SKAG  Skagway            8.85  84  P    Pn    02 13 34.5 -0.7
      baz=278,SNR=270
R31K  City Hall, Gus     8.85  91  P    Pn    02 13 35.2 -0.1
      baz=285,SNR=22
F26K  Sheenjek River     8.95  22  P    Pn    02 13 35.2 -1.3
      baz=209
MAYO  Mayo, Yukon        8.95  56  P    Pn    02 13 37.0 +0.4
      baz=251,SNR=54
AKUT  Akutan             9.00 238       Pn    02 13 38.4 +1.2
AKUT  Akutan             9.00 238  P    Pn    02 13 39.2 +1.9
E25K  Arctic Village     9.09  17  P    Pn    02 13 37.3 -1.2
      baz=203,SNR=338
TOLK  Toolik Lake Re     9.16   7  P    Pn    02 13 40.2 +0.9
      baz=190,SNR=1000
TNA   Tin City           9.17 317       Pn    02 13 40.8 +1.3
TNA   Tin City           9.17 317  P    Pn    02 13 41.0 +1.5
      baz=123,SNR=1000
BESE  Bessie Mountai     9.26  89       Pn    02 13 40.7 -0.2
M31M  Drury Creek, Y     9.30  66  P    Pn    02 13 40.5 -0.8
      baz=262,SNR=291
D23K  Nanushuk River     9.42   5  P    Pn    02 13 44.1 +1.2
      baz=186,SNR=1000
SPIA  Saint Paul Isl     9.51 263       Pn    02 13 44.9 +0.8
SPIA  Saint Paul Isl     9.51 263  P    Pn    02 13 45.4 +1.2
      baz=68,SNR=14
SIT   Sitka              9.51  98  P    Pn    02 13 41.9 -2.3
SIT   Sitka              9.51  98  P    Pn    02 13 42.3 -1.9
      baz=293,SNR=45
R32K  Eaglecrest         9.51  90  P    Pn    02 13 44.3 +0.1
      baz=286,SNR=100
UNV   Unalaska Valle     9.51 239       Pn    02 13 44.6 +0.3
UNV   Unalaska Valle     9.51 239  P    Pn    02 13 44.7 +0.4
      baz=47,SNR=17
RDOG  Red Dog Mine       9.56 336       Pn    02 13 46.2 +1.4
RDOG  Red Dog Mine       9.56 336  P    Pn    02 13 46.5 +1.6
      baz=147,SNR=264
JIS   Juneau Island      9.58  90       Pn    02 13 44.8 -0.3
JIS   Juneau Island      9.58  90  P    Pn    02 13 45.1  0.0
P32M  Atlin              9.64  82  P    Pn    02 13 45.5 -0.6
      baz=278,SNR=155
S32K  Killisnoo          9.73  95  P    Pn    02 13 46.4 -0.9
      baz=290,SNR=132
FARO  Faro, Yukon        9.79  66  P    Pn    02 13 47.7 -0.3
      baz=263,SNR=191
N32M  Quiet Lake         9.85  73  P    Pn    02 13 48.1 -0.7
      baz=269
E27K  Coleen River       9.88  25  P    Pn    02 13 47.5 -1.7
      baz=215,SNR=450
EPYK  Eagle Plains       9.91  40  P    Pn    02 13 47.3 -2.4
      baz=234,SNR=166
P33M  Teslin, Yukon     10.02  78  P    Pn    02 13 50.2 -1.0
      baz=275,SNR=381
D25K  Kavik River       10.11  13  P    Pn    02 13 51.8 -0.5
      baz=198,SNR=658
C24K  Franklin Bluff    10.28   8  P    Pn    02 13 54.9 +0.3
      baz=191
G30M  tAoh Zraii Nji    10.44  38  P    Pn    02 13 55.2 -1.6
      baz=232,SNR=157
Q32M  Nakina River      10.49  85  P    Pn    02 13 57.0 -0.7
      baz=282
C27K  Jago River        10.74  17  P    Pn    02 14 00.6 -0.4
      baz=205
MMPY  Sheldon Lake,     10.79  65  P    Pn    02 14 01.3 -0.4
      baz=263,SNR=121
T33K  Petersburg        10.80  96  P    Pn    02 14 00.8 -0.9
      baz=293,SNR=16
C26K  Camden Bay        10.85  14  P    Pn    02 14 01.2 -1.1
      baz=201
U33K  Whale Pass        11.01 100  P    Pn    02 14 02.4 -2.2
      baz=297,SNR=106
NIKH  Nikolski High     11.14 240  P    Pn    02 14 07.2 +0.8
NIKH  Nikolski High     11.14 240  P    Pn    02 14 08.2 +1.8
      baz=47
WRAK  Wrangell Islan    11.27  98       Pn    02 14 06.9 -1.2
WRAK  Wrangell Islan    11.27  98  P    Pn    02 14 07.2 -0.9
      baz=295,SNR=72
CRAG  Craig             11.32 103       Pn    02 14 06.3 -2.6
CRAG  Craig             11.32 103  P    Pn    02 14 06.2 -2.6
CRAG  Craig             11.32 103  P    Pn    02 14 07.3 -1.5
      baz=300,SNR=22
S34M  Telegraph Cree    11.34  89  P    Pn    02 14 09.0 -0.1
      baz=288,SNR=328
F31M  Tsiigehtchic      11.49  39  P    Pn    02 14 09.7 -1.4
      baz=236,SNR=332
DLBC  Dease Lake        11.75  86  P    Pn    02 14 14.4 -0.4
      comp=N,274nm,0.4s,baz=280,slow=8.6,SNR=301
DLBC                               S    Sn    02 16 23.1 -0.8
      comp=N,89nm,0.5s,baz=165,slow=20,SNR=3.0
DLBC                               LR   LR    02 18 58.2
      comp=N,3µm,22.0s,baz=291,slow=38
DLBC  Dease Lake        11.75  86  P    Pn    02 14 14.3 -0.4
      baz=285,SNR=246
A21K  Barrow            11.85 354       Pn    02 14 13.7 -2.3
A21K  Barrow            11.85 354  P    Pn    02 14 14.0 -1.9
      baz=170,SNR=96
WTLY  Watson Lake, Y    12.03  77       Pn    02 14 16.6 -1.8
WTLY  Watson Lake, Y    12.03  77  P    Pn    02 14 18.3 -0.1
      baz=278,SNR=71
INK   Inuvik            12.06  36  P    Pn    02 14 17.1 -1.7
      comp=N,210nm,0.8s,baz=223,slow=15,SNR=131
INK                                LR   LR    02 19 25.8
      comp=N,4µm,18.4s,baz=226,slow=40
INK   Inuvik            12.06  36  Pn   Pn    02 14 16.8 -2.0
INK   Inuvik            12.06  36  P    Pn    02 14 17.0 -1.7
      baz=233,SNR=292
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T35M  Bob Quinn        12.11  93   P       Pn      02 14 20.7 +1.2
      baz=292,SNR=136
V35K  Ketchikan        12.14 102   P       Pn      02 14 19.3 -0.6
      baz=299,SNR=42
LIRD  Liard River Hi   13.49  79   P       Pn      02 14 39.1 +1.0
      baz=282,SNR=210
GRNB  Grenville Isla   13.74 105           Pn      02 14 39.3 -2.0
HG4B  Hotspring        14.08 112           Pn      02 14 43.4 -2.3
KOTAN Kotaneelee Air   14.37  76   P       Pn      02 14 50.0 +0.6
      baz=280,SNR=380
WRGLY Wrigley          14.40  63   P       Pn      02 14 50.3 +0.6
      baz=269,SNR=39
FLDN  Fort Liard       14.63  75   P       Pn      02 14 54.6 +1.8
      baz=280,SNR=30
ADK   Adak             15.48 250           Pn      02 15 03.9 +0.2
ADK   Adak             15.48 250   P       P       02 15 05.1 -1.3
ADK   Adak             15.48 250   P       Pn      02 15 03.9 +0.2
C36M  Paulatuk         15.55  39   P       Pn      02 15 00.5 -3.9
      baz=245,SNR=248
BBB   Bella Bella      15.62 108   P       Pn      02 15 05.5  0.0
      comp=N,30nm,0.5s,baz=292,slow=10,SNR=22
BBB                                S       Sn      02 17 56.4 -1.1
      comp=N,17nm,0.4s,baz=188,slow=19,SNR=4.7
BBB                                LR      LR      02 20 11.0
      comp=N,2µm,20.8s,baz=318,slow=33
KIWB  Kanaga Island    15.72 251   P       Pn      02 15 07.6 +0.8
A36M  Sachs Harbour    16.51  30           Pn      02 15 14.5 -2.0
A36M  Sachs Harbour    16.51  30   P       Pn      02 15 13.9 -2.5
      baz=235,SNR=641
HILA  High Level       18.25  78   P       P       02 15 37.2 +0.3
YKA   Yellowknife Ar   18.49  65   P       P       02 15 39.1 -0.4
      comp=N,73nm,0.7s,baz=274,slow=9.8,SNR=312
YKA                                pP      pP      02 15 55.3 -0.3
      comp=N,100nm,0.7s,baz=278,slow=11,SNR=11
YKA                                PcP     PcP     02 20 06.3 +0.5
      comp=N,7.2nm,0.8s,baz=260,slow=1.4,SNR=3.7
YKA                                LR      LR      02 22 55.0
      comp=N,3µm,20.9s,baz=276,slow=37
YKA                                ScP     ScP     02 23 34.8 +1.0
      comp=N,10nm,0.7s,baz=284,slow=1.9,SNR=14
SHEM  Shemya Is, Ala   19.54 264   P       P       02 15 51.5 +0.4
      comp=N,544nm,0.5s,baz=58,slow=4.1,SNR=22
SHEM                               LR      LR      02 23 55.7
      comp=N,1µm,20.2s,baz=92,slow=38
SMY   Shemya           19.54 264   P       P       02 15 52.0 +0.9
SMY   Shemya           19.54 264   P       Pn      02 15 52.4 -0.7
SMY   Shemya           19.54 264   P       P       02 15 52.0 +0.9
BILL  Bilibino         19.56 313           P       02 15 51.6 +0.4
BILL  Bilibino         19.56 313d iP       P       02 15 51.8 +0.6
BILL                             i S       S       02 19 27.2 -0.3
BILL                               pmax    pmax
      comp=Z,165nm,1.7s
BILL                               MLR     MLR
      comp=Z,964nm,15.0s
NLWA  Neilton Lookou   20.89 113   P       P       02 16 07.0 +1.2
LON   Longmire         22.32 111   IAmb    IAmb    02 16 43.9
      comp=Z,316nm,1.8s
B08A  Colville Reser   22.39 105   P       P       02 16 23.4 +1.7
B08A                               IAmb    IAmb    02 16 42.0
      comp=Z,177nm,1.4s
LTY   Liberty          22.50 109   IAmb    IAmb    02 16 45.3
      comp=Z,312nm,1.6s
NEW   Newport          23.54 103   P       P       02 16 33.8 +0.7
      comp=Z,30nm,0.7s,baz=311,slow=8.9,SNR=68
NEW                                pP      pP      02 16 50.4 -0.1
      comp=Z,23nm,0.6s,baz=321,slow=9.7,SNR=7.1
NEW                                LR      LR      02 25 01.8
      comp=Z,2µm,18.8s,baz=296,slow=34
      comp=Z,30nm,0.7s
NEW   Newport          23.54 103   IAmb    IAmb    02 16 54.5
      comp=Z,496nm,1.8s
NEW   Newport          23.54 103   P       P       02 16 34.5 +1.4
      baz=312,SNR=39
HAWA  Hanford          23.66 109   P       P       02 16 35.4 +1.2
HAWA                               IAmb    IAmb    02 16 57.0
      comp=Z,219nm,1.5s
G05A  Wamic            23.67 113   IAmb    IAmb    02 17 00.9
      comp=Z,202nm,1.5s
H04A  Detroit Lake     23.69 115   IAmb    IAmb    02 16 56.0
      comp=Z,220nm,1.2s
E08A  Dider Farm, El   23.82 108   IAmb    IAmb    02 16 58.3
      comp=Z,148nm,1.2s
F07A  Phinny Hill Vi   23.84 111   IAmb    IAmb    02 16 58.9
      comp=Z,257nm,1.4s
E09A  Wood Farm, Sta   24.25 107   IAmb    IAmb    02 17 01.3
      comp=Z,432nm,1.7s
I05D  Terrebonne, OR   24.34 115   IAmb    IAmb    02 17 03.9
      comp=Z,361nm,1.4s
RES   Resolute Bay     25.56  31   P       P       02 16 50.3 -0.7
      comp=Z,45nm,0.6s,baz=256,slow=11,SNR=157
RES                                LR      LR      02 26 54.5
      comp=Z,748nm,21.0s,baz=260,slow=36
      comp=Z,45nm,0.6s
RES   Resolute Bay     25.56  31   P       P       02 16 50.3 -0.7
YBH   Yreka Blue Hor   25.78 121   P       P       02 16 54.8 +1.3
      comp=Z,16nm,0.9s,baz=325,slow=6.1,SNR=29
YBH                                pP      pP      02 17 12.6 +0.6
      comp=Z,54nm,0.8s,baz=340,slow=4.5,SNR=22
YBH                                LR      LR      02 25 33.3
      comp=Z,967nm,20.6s,baz=312,slow=33
      comp=Z,16nm,0.9s
SEY   Seymchan         25.89 301   P       P       02 16 53.6 -0.6
      comp=Z,27nm,0.8s,baz=88,slow=8.9,SNR=44
SEY                                PcP     PcP     02 20 20.8 +0.1
      comp=Z,27nm,0.8s,baz=115,slow=4.0,SNR=7.5
SEY                                LR      LR      02 27 19.7
      comp=Z,1µm,19.5s,baz=78,slow=37
      comp=Z,27nm,0.8s
SEY   Seymchan         25.89 301c iP       P       02 16 54.1 -0.1
SEY                                pmax    pmax
      comp=Z,61nm,1.1s
MSO   Missoula         26.09 102   IAmb    IAmb    02 17 20.4
      comp=Z,148nm,1.1s
MSO   Missoula         26.09 102   P       P       02 16 56.9 +0.6
      baz=314
J08A  Circle Bar Ran   26.43 113   IAmb    IAmb    02 17 22.9
      comp=Z,216nm,1.8s
WVOR  Wild Horse Val   27.06 114   IAmb    IAmb    02 17 30.4
      comp=Z,152nm,1.6s
PET   Petropavlovsk    27.21 278   P       P       02 17 05.5 -0.6
PET   Petropavlovsk    27.21 278   P       P       02 17 07.5 +1.4
PET   Petropavlovsk    27.21 278  eP       P       02 17 06.3 +0.2
PET                               eS       S       02 21 39.5 +0.7
PET                                pmax    pmax
      comp=Z,312nm,1.4s
PET                                MLR     MLR
      comp=Z,900nm,15.0s
FFC   Flin Flon        27.38  78   P       P       02 17 07.5 -0.1
FFC   Flin Flon        27.38  78   P       P       02 17 07.5 -0.1
FFC                                pmax    pmax
      comp=Z,95nm,1.2s
EGMT  Eagleton         27.39  96   IAmb    IAmb    02 17 31.9
      comp=Z,226nm,1.4s
EGMT  Eagleton         27.39  96   P       P       02 17 08.5 +0.6
      baz=311,SNR=15
PEA0B Petropavlovsk-   27.64 279   P       P       02 17 09.2 -0.8
PEA0B                              IAmb    IAmb    02 17 11.3
      comp=Z,176nm,0.8s
PEA0B Petropavlovsk-   27.64 279deP        P       02 17 09.2 -0.8
PETK  Petropavlovsk-   27.64 279   P       P       02 17 09.9 -0.1
      comp=Z,125nm,0.7s,baz=70,slow=12,SNR=134
PETK                               PcP     PcP     02 20 25.2 +0.1
      comp=Z,18nm,0.8s,baz=143,slow=5.4,SNR=5.4
PETK                               ScP     ScP     02 23 57.8 -0.3
      comp=Z,15nm,0.9s,baz=96,slow=4.6,SNR=8.3
PETK                               LR      LR      02 27 43.6
      comp=Z,564nm,20.9s,baz=70,slow=35
      comp=Z,125nm,0.7s
PETK  Petropavlovsk-   27.64 279   P       P       02 17 09.3 -0.6
PETK                                       PcP     02 20 25.1 +0.1
MA2   Magadan          27.85 295   P       P       02 17 12.0 +0.2
      comp=Z,166nm,0.9s,baz=70,slow=9.5,SNR=74
MA2                                PcP     PcP     02 20 25.0 -0.4
      comp=Z,22nm,0.7s,baz=103,slow=3.8,SNR=6.1
MA2                                LR      LR      02 28 35.6
      comp=Z,525nm,19.8s,baz=76,slow=37
      comp=Z,166nm,0.9s
MA2   Magadan          27.85 295   P       P       02 17 11.8  0.0
MA2   Magadan          27.85 295   P       P       02 17 12.3 +0.5
MA2   Magadan          27.85 295c iP       P       02 17 12.2 +0.5
MA2                                pmax    pmax
      comp=Z,316nm,1.0s
EUNU  Eureka           27.92  20   P       P       02 17 11.8 -0.5
ORV   Oroville         28.09 122   P       P       02 17 15.6 +1.5
ORV   Oroville         28.09 122   P       P       02 17 15.6 +1.5
ORV                                pmax    pmax
      comp=Z,18nm,1.2s
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BOZ   Bozeman (W)      28.10 101   P       P       02 17 15.7 +1.4
      baz=315,SNR=13
HLID  Hailey           28.21 108   P       P       02 17 16.8 +1.4
      baz=318,SNR=10
MPK   Martis Peak      28.95 120   IAmb    IAmb    02 17 45.8
      comp=Z,131nm,1.4s
YMR   Madison River    29.09 102   IAmb    IAmb    02 17 46.5
      comp=Z,121nm,1.1s
FCC   Fort Churchill   29.21  66   P       P       02 17 23.8  0.0
FCC                                IAmb    IAmb    02 17 47.4
      comp=Z,110nm,0.8s
FCC   Fort Churchill   29.21  66   P       P       02 17 23.8  0.0
FCC                                pmax    pmax
      comp=Z,110nm,0.9s
H17A  Grant Village    29.48 102   P       P       02 17 28.0 +1.3
      baz=316,SNR=9.4
RLMT  Red Lodge        29.62 100   IAmb    IAmb    02 17 51.6
      comp=Z,285nm,1.6s
RLMT  Red Lodge        29.62 100   P       P       02 17 29.7 +1.9
      baz=315,SNR=10
FLWY  Flagg Ranch      29.65 103   IAmb    IAmb    02 18 02.2
      comp=Z,322nm,1.8s
CMB   Columbia Colle   29.84 122   P       P       02 17 30.1 +0.4
CMB   Columbia Colle   29.84 122   P       P       02 17 30.1 +0.4
CMB                                pmax    pmax
      comp=Z,35nm,1.4s
SKR   Severo-Kuril’s   29.85 276  eP       P       02 17 29.4 -0.1
SKR                                pmax    pmax
      comp=Z,302nm,0.8s
SKR                                pmax    pmax
      comp=Z,200nm,4.6s
SKR                                MLR     MLR
      comp=Z,400nm,15.0s
MOOW  Moose Ponds      29.87 103   IAmb    IAmb    02 17 53.1
      comp=Z,117nm,1.8s
DGMT  Dagmar           29.92  90   P       P       02 17 31.2 +0.9
DGMT  Dagmar           29.92  90   P       P       02 17 31.5 +1.2
      baz=310
DGMT  Dagmar           29.92  90   P       P       02 17 31.6 +1.3
      baz=310
ELK   Elko             29.97 112   LR      LR      02 28 31.8
      comp=Z,919nm,21.1s,baz=318,slow=34
LAO   LASA Array       30.07  95   IAmb    IAmb    02 17 53.9
      comp=Z,144nm,1.4s
LAO   LASA Array       30.07  95   P       P       02 17 32.9 +1.2
      baz=313,SNR=6.4
LAO   LASA Array       30.07  95   P       P       02 17 33.5 +1.9
      baz=313,SNR=6.4
SNOW  Snow King Moun   30.07 104   IAmb    IAmb    02 17 56.5
      comp=Z,47nm,0.7s
NVAR  Mina Array Bea   30.43 119   P       P       02 17 37.1 +2.1
      comp=Z,9.0nm,0.8s,baz=311,slow=8.7,SNR=59
NVAR                               pP      pP      02 17 55.6 +1.9
      comp=Z,22nm,0.9s,baz=312,slow=9.4,SNR=10
NVAR                               PcP     PcP     02 20 33.1 +0.5
      comp=Z,3.3nm,0.7s,baz=310,slow=2.8,SNR=3.5
NVAR                               ScP     ScP     02 24 07.9 +0.5
      comp=Z,3.6nm,0.8s,baz=291,slow=2.7,SNR=8.2
NVAR                               LR      LR      02 27 54.5
      comp=Z,989nm,21.2s,baz=330,slow=32
      comp=Z,9.0nm,0.8s
NVAR  Mina Array Bea   30.43 119   P       P       02 17 36.5 +1.4
BW06  Boulder Array    31.18 103   P       P       02 17 43.4 +1.7
      baz=318,SNR=19
PDAR  Pinedale Array   31.18 103   P       P       02 17 43.6 +1.9
      comp=Z,6.7nm,0.6s,baz=317,slow=5.1,SNR=60
PDAR                               pP      pP      02 18 01.9 +1.5
      comp=Z,12nm,0.7s,baz=317,slow=6.3,SNR=9.5
PDAR                               PcP     PcP     02 20 35.5 +0.9
      comp=Z,2.5nm,0.8s,baz=0.0,slow=4.0,SNR=2.2
PDAR                               ScP     ScP     02 24 09.3 -0.6
      comp=Z,2.6nm,0.8s,baz=40,slow=2.3,SNR=5.4
PDAR                               LR      LR      02 29 26.2
      comp=Z,817nm,19.9s,baz=332,slow=34
      comp=Z,6.7nm,0.6s
PDAR  Pinedale Array   31.18 103   P       P       02 17 42.2 +0.5
ALE   Alert            31.42  15   P       P       02 17 42.0 -1.2
ALE                                pP      pP      02 18 03.5 +1.6
ALE                                ScP     ScP     02 24 09.4 -0.4
DUG   Dugway, Tooele   31.55 110   P       P       02 17 46.6 +1.7
      baz=322,SNR=20
TIN   Tinemaha, Big    31.60 120   P       P       02 17 47.0 +1.8
      baz=327
VOG   Valley Oaks Go   31.71 122   P       P       02 17 47.9 +1.8
      baz=328
R11A  Troy Canyon, C   31.72 115   P       P       02 17 48.0 +1.6
      baz=324,SNR=36
TULEG Thule            31.80  26 i P       P       02 17 46.4 -0.1
TULEG                              IAmb    IAmb    02 17 50.1
      comp=Z,36nm,0.6s
TIXI  Tiksi            31.86 324   LR      LR      02 30 48.6
      comp=Z,508nm,19.9s,baz=96,slow=36
TIXI  Tiksi            31.86 324   P       P       02 17 46.4 -0.7
TIXI  Tiksi            31.86 324⇑iP        P       02 17 46.6 -0.5
TIXI                               pmax    pmax
      comp=Z,23nm,1.7s
TIXI  Tiksi            31.86 324   P       P       02 17 46.9 -0.2
TIXI                               pP      pP      02 18 07.6 +1.6
TIXI                               sP      sP      02 18 17.9 +2.4
TIXI                               PcP     PcP     02 20 35.0 -0.6
TIXI                               ScP     ScP     02 24 09.6 -1.8
GRAC  Grapevine Rang   32.03 119   P       P       02 17 51.8 +2.8
      baz=326,SNR=23
CWC   Cottonwood Cre   32.18 121   P       P       02 17 52.5 +2.1
      baz=327
VES   Vestal, Richgr   32.25 122   P       P       02 17 52.7 +1.9
      baz=328
BSUT  Blindstream Ca   32.27 107   IAmb    IAmb    02 18 16.8
      comp=Z,66nm,1.1s
TPNV  Topopah Spring   32.57 118   IAmb    IAmb    02 18 16.8
      comp=Z,202nm,1.9s
TPNV  Topopah Spring   32.57 118   P       P       02 17 55.7 +1.9
      baz=326,SNR=40
MDND  Maddock          32.66  87   P       P       02 17 55.1 +0.8
      baz=311,SNR=7.6
MDND  Maddock          32.66  87   P       P       02 17 56.4 +2.0
      baz=311,SNR=7.6
ISA   Isabella, Lake   32.66 122   P       P       02 17 56.4 +1.9
      baz=328
FURC  Furnace Creek,   32.69 119   P       P       02 17 56.8 +2.2
      baz=327,SNR=9.9
PKM   Mcpherson Peak   32.75 124   P       P       02 17 56.7 +1.3
      baz=329,SNR=10
MPMC  Manual Prospec   32.76 120   P       P       02 17 57.7 +2.2
      baz=327,SNR=23
K22A  Casper           32.77 100   IAmb    IAmb    02 18 17.7
      comp=Z,153nm,1.7s
K22A  Casper           32.77 100   P       P       02 17 56.8 +1.2
      baz=317
K22A  Casper           32.77 100   P       P       02 17 57.1 +1.6
      baz=317
RDMU  Red Mountain     32.83 106   IAmb    IAmb    02 18 30.1
      comp=Z,57nm,1.1s
E28A  Huff             32.95  90   P       P       02 17 59.2 +2.2
      baz=313,SNR=5.2
RSSD  Black Hills      32.96  96   P       P       02 17 57.1 -0.1
RSSD                               IAmb    IAmb    02 18 26.7
      comp=Z,59nm,0.7s
RSSD  Black Hills      32.96  96   P       P       02 17 57.1 -0.1
RSSD                               pmax    pmax
      comp=Z,59nm,0.7s
RSSD  Black Hills      32.96  96   P       P       02 17 58.0 +0.8
      baz=316
RSSD  Black Hills      32.96  96   P       P       02 17 58.0 +0.8
      baz=315,SNR=30
RSSD  Black Hills      32.96  96   P       P       02 17 58.7 +1.4
RSSD                               pP      pP      02 18 18.2 +2.2
RSSD                               ScP     ScP     02 24 15.2 -0.7
ULM   Lac du Bonnet    33.00  81   P       P       02 17 58.3 +1.1
      comp=Z,13nm,0.9s,baz=306,slow=8.8,SNR=11
ULM                                pP      pP      02 18 16.8 +0.7
      comp=Z,24nm,0.7s,baz=303,slow=10,SNR=12
ULM                                ScP     ScP     02 24 14.8 -0.9
      comp=Z,8.1nm,0.8s,baz=136,slow=18,SNR=3.1
ULM                                LR      LR      02 31 35.3
      comp=Z,991nm,20.3s,baz=310,slow=36
      comp=Z,13nm,0.9s
ULM   Lac du Bonnet    33.00  81   IAmb    IAmb    02 18 18.6
      comp=Z,67nm,1.1s
TMUT  Trail Mountain   33.02 109   IAmb    IAmb    02 18 23.1
      comp=Z,66nm,1.0s
LRMC  Laurel Mtn Rad   33.16 121   P       P       02 18 00.3 +1.4
      baz=328,SNR=14
Q16A  Castle Valley    33.34 110   IAmb    IAmb    02 18 26.2
      comp=Z,107nm,1.0s
SHOC  Shoshone, Teco   33.43 119   P       P       02 18 02.6 +1.4
      baz=327,SNR=11
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EDW2  Edwards Air Fo   33.53 122   P       P       02 18 03.0 +0.9
      baz=328
GSC   Goldstone, Bar   33.69 120   P       P       02 18 04.4 +0.8
      baz=328,SNR=18
O20A  White River Ci   33.81 105   IAmb    IAmb    02 18 34.9
      comp=Z,64nm,0.7s
O20A  White River Ci   33.81 105   P       P       02 18 05.0 +0.4
      baz=320,SNR=16
TUQ   Turquoise Moun   33.97 119   P       P       02 18 07.4 +1.4
      baz=327,SNR=5.9
BFSC  Mount Baldy Ra   34.22 122   P       P       02 18 09.6 +1.5
      baz=329,SNR=5.8
AGMN  Agassiz Nation   34.26  83   IAmb    IAmb    02 18 29.5
      comp=Z,112nm,1.4s
AGMN  Agassiz Nation   34.26  83   P       P       02 18 08.5 +0.4
      baz=311,SNR=10
AGMN  Agassiz Nation   34.26  83   P       P       02 18 09.3 +1.2
      baz=311,SNR=10
HEC   Hector,Ludlow    34.30 120   P       P       02 18 10.9 +2.1
      baz=328
HMU   Henry Mountain   34.32 110   IAmb    IAmb    02 18 32.8
      comp=Z,43nm,1.0s
N23A  Red Feather La   34.37 102   P       P       02 18 09.6  0.0
      baz=319,SNR=5.7
GMRC  Granite Mounta   34.63 119   P       P       02 18 13.5 +1.8
      baz=328,SNR=20
PV10  Paradox Valley   34.79 108   IAmb    IAmb    02 18 43.8
      comp=Z,114nm,1.4s
U15A  North Rim        34.81 114   IAmb    IAmb    02 18 36.7
      comp=Z,69nm,1.4s
PV15  Paradox Valley   35.09 107   IAmb    IAmb    02 18 44.9
      comp=Z,93nm,1.0s
NEE2  Needles Airpor   35.11 118   P       P       02 18 18.3 +2.6
      baz=327
NEEM  North Greenlan   35.13  22 i P       P       02 18 14.3 -1.4
NEEM                               IAmb    IAmb    02 18 16.4
      comp=Z,131nm,0.9s
BELC  Belle Mtn. Jos   35.15 120   P       P       02 18 17.6 +1.4
      baz=328,SNR=11
KULLO Kullorsuaq       35.24  27 i P       P       02 18 17.2 +1.0
KULLO                              IAmb    IAmb    02 18 17.8
      comp=Z,134nm,0.8s
PFO   Pinyon Flats O   35.27 121   LR      LR      02 30 08.5
      comp=Z,821nm,20.8s,baz=324,slow=32
PFO   Pinyon Flats O   35.27 121   P       P       02 18 18.0 +0.8
PFO                                IAmb    IAmb    02 18 40.9
      comp=Z,66nm,1.3s
PFO   Pinyon Flats O   35.27 121d iP       P       02 18 18.9 +1.7
PFO                                pmax    pmax
      comp=Z,14nm,0.9s
PFO   Pinyon Flats O   35.27 121   P       P       02 18 18.3 +1.1
      baz=329
PFO   Pinyon Flats O   35.27 121   P       P       02 18 19.2 +2.0
PFO                                pP      pP      02 18 37.7 +1.5
PFO                                ScP     ScP     02 24 24.5 +0.3
PMD   Palm Desert      35.28 121   IAmb    IAmb    02 18 40.6
      comp=Z,58nm,1.2s
TPFO  Pinon Flats      35.28 121   P       P       02 18 18.3 +1.1
      baz=329
B35A  Bob, Littlefor   35.29  82   P       P       02 18 16.5 -0.6
      baz=311
SUSD  Miller           35.31  91   P       P       02 18 17.9 +0.6
      baz=315
ISCO  Idaho Springs    35.37 103   P       P       02 18 19.2 +1.1
      baz=320
ISCO  Idaho Springs    35.37 103   P       P       02 18 20.8 +2.6
      baz=320
IRM   Iron Mountain    35.39 119   P       P       02 18 20.0 +1.9
      baz=328,SNR=16
109C  Camp Elliot, M   35.61 123   P       P       02 18 22.9 +2.9
      baz=330
BC3   Big Chuckawall   35.68 120   P       P       02 18 22.3 +1.7
      baz=328,SNR=6.0
F33A  5 Mile Ranch,    35.69  87   P       P       02 18 21.3 +0.8
      baz=314
PDMCI Parker Dam,Lak   35.72 118   P       P       02 18 23.7 +2.9
      baz=327,SNR=7.7
YAK   Yakutsk          35.80 308   LR      LR      02 34 15.9
      comp=Z,871nm,20.0s,baz=63,slow=38
YAK   Yakutsk          35.80 308   P       P       02 18 21.1 -0.1
YAK   Yakutsk          35.80 308c iP       P       02 18 20.6 -0.6
YAK                               e*PP     pP      02 18 41.1 +0.7
YAK                               e                02 19 45.3
YAK                               e                02 20 46.8
YAK                               eS       S       02 23 51.0 -1.3
YAK                               e                02 28 25.5
YAK                                pmax    pmax
      comp=Z,202nm,0.9s
YAK                                pmax    pmax
      comp=E,78nm,1.2s
YAK                                pmax    pmax
      comp=N,49nm,1.2s
YAK                                pmax    pmax
      comp=Z,317nm,3.2s
YAK                                pmax    pmax
      comp=N,176nm,3.3s
YAK                                pmax    pmax
      comp=E,185nm,3.0s
YAK                                smax    smax
      comp=N,159nm,2.2s
YAK                                smax    smax
      comp=E,214nm,2.0s
YAK                                MLR     MLR
      comp=Z,1µm,24.0s
YAK                                MLR     MLR
      comp=N,991nm,23.0s
YAK                                MLR     MLR
      comp=E,605nm,23.0s
YAK   Yakutsk          35.80 308   P       P       02 18 21.1 -0.1
YAK                                pP      pP      02 18 41.8 +1.4
MONP2 Monument Peak    35.91 122   P       P       02 18 25.0 +2.2
      baz=329,SNR=6.3
MVCO  Mesa Verde       35.98 109   IAmb    IAmb    02 18 47.3
      comp=Z,58nm,1.2s
MVCO  Mesa Verde       35.98 109   P       P       02 18 24.1 +0.7
      baz=323,SNR=9.5
WUAZ  Wupatki          35.98 113   P       P       02 18 25.6 +2.3
      baz=325,SNR=30
NKL   Nikolayevsk      35.98 290  eP       P       02 18 19.7 -3.2
NKL                               eS       S       02 23 54.0 -1.3
NKL                                pmax    pmax
      comp=N,202nm,0.9s
NKL                                pmax    pmax
      comp=E,298nm,0.9s
NKL                                pmax    pmax
      comp=Z,973nm,0.9s
NKL                                smax    smax
      comp=E,346nm,4.7s
NKL                                smax    smax
      comp=N,141nm,1.6s
NKL                                MLR     MLR
      comp=E,21µm,26.0s
NKL                                MLR     MLR
      comp=N,10µm,29.0s
NKL                                MLR     MLR
      comp=Z,12µm,27.0s
BLYC  Blythe           36.01 119   IAmb    IAmb    02 18 47.6
      comp=Z,111nm,1.1s
SWSC  Sam W. Stewart   36.13 121   P       P       02 18 26.2 +1.9
      baz=329
Q24A  Divide           36.24 103   P       P       02 18 26.7 +1.1
      baz=321,SNR=8.0
IKP   In-Ko-Pah, Jac   36.25 122   P       P       02 18 28.1 +2.6
      baz=329
S22A  4UR Ranch, Cre   36.36 106   IAmb    IAmb    02 19 09.5
      comp=Z,54nm,1.4s
S22A  4UR Ranch, Cre   36.36 106   P       P       02 18 28.5 +1.8
      baz=322,SNR=8.9
UPNV  Upernavik        36.41  30 i P       P       02 18 27.2 +0.8
UPNV                               IAmb    IAmb    02 18 27.8
      comp=Z,162nm,0.8s
TYV   Tymovskoe        36.45 286  eP       P       02 18 27.2 +0.3
TYV                               eS       S       02 24 05.6 +3.1
TYV                                pmax    pmax
      comp=Z,1µm,2.6s
TYV                                pmax    pmax
      comp=Z,342nm,0.9s
TYV                                smax    smax
      comp=E,500nm,6.1s
GLA   Glamis           36.47 120   P       P       02 18 28.6 +1.3
      baz=328
EYMN  Ely              36.69  81   P       P       02 18 29.5 +0.5
      baz=312,SNR=5.2
EYMN  Ely              36.69  81   P       P       02 18 30.4 +1.4
      baz=312,SNR=5.2
ECSD  EROS Data Cent   37.00  90   P       P       02 18 31.5 -0.2
      baz=316,SNR=6.3
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ECSD	**EROS Data Cent**	37.00	90	P	P	02 18 31.2	-0.5
	baz=316,SNR=6.3						
SDCO	**Great Sand Dun**	37.01	105	P	P	02 18 33.3	+1.1
	baz=322,SNR=24						
SDCO	**Great Sand Dun**	37.01	105	P	P	02 18 33.7	+1.5
	baz=322,SNR=24						
NOR	**Nord**	37.05	10	eP	P	02 18 31.4	-0.3
W18A	**Petrified Fore**	37.07	112	P	P	02 18 34.2	+1.6
	baz=325						
F36A	**Milaca**	37.08	85	P	P	02 18 33.5	+1.2
	baz=314,SNR=6.9						
113A	**Mohawk Valley,**	37.18	119	IAmb	IAmb	02 18 57.3	
	comp=Z,54nm,1.2s						
FRB	**Frobisher Bay**	37.42	47	LR	LR	02 33 54.3	
	comp=Z,1µm,18.6s,baz=304,slow=36						
KSCO	**Kaye Shedlock'**	37.46	101	IAmb	IAmb	02 18 59.1	
	comp=Z,72nm,0.7s						
KSCO	**Kaye Shedlock'**	37.46	101	P	P	02 18 37.2	+1.5
	baz=320						
E38A	**The Farm, Brul**	37.56	82	P	P	02 18 36.0	-0.4
	baz=313,SNR=7.8						
KUR	**Kuril'sk**	37.60	275c	iP	P	02 18 36.7	0.0
KUR				pmax	pmax		
	comp=Z,1µm,1.1s						
NUUG	**Nuugaatsiaq**	37.86	31	i P	P	02 18 39.2	+0.7
NUUG				IAmb	IAmb	02 18 40.1	
	comp=Z,88nm,1.0s						
SPMN	**Marine on St.**	37.88	85	IAmb	IAmb	02 19 02.2	
	comp=Z,33nm,0.8s						
SPMN	**Marine on St.**	37.88	85	P	P	02 18 39.5	+0.4
	baz=314,SNR=8.4						
SPMN	**Marine on St.**	37.88	85	P	P	02 18 39.0	-0.1
	baz=314,SNR=8.4						
UGL	**Uglegorsk**	37.90	284	eP	P	02 18 39.5	+0.3
UGL				e		02 18 55.3	
UGL				e		02 19 04.0	
UGL				pmax	pmax		
	comp=Z,230nm,0.9s						
BGNE	**Belgrade**	37.91	94	P	P	02 18 40.1	+0.6
	baz=318,SNR=14						
BGNE	**Belgrade**	37.91	94	P	P	02 18 40.1	+0.6
	baz=318,SNR=14						
T25A	**Trinidad**	38.02	104	IAmb	IAmb	02 19 04.0	
	comp=Z,121nm,1.8s						
T25A	**Trinidad**	38.02	104	P	P	02 18 42.5	+1.8
	baz=322						
214A	**Organ Pipe Nat**	38.29	118	P	P	02 18 44.5	+1.8
	baz=328,SNR=7.2						
L34A	**Svendsen Farm,**	38.40	92	IAmb	IAmb	02 19 26.2	
	comp=Z,47nm,0.7s						
L34A	**Svendsen Farm,**	38.40	92	P	P	02 18 43.6	+0.1
	baz=317,SNR=6.4						
I37B	**Waseca**	38.44	87	P	P	02 18 44.3	+0.5
	baz=315,SNR=14						
N33B	**J Bar K, Exete**	38.76	94	P	P	02 18 47.6	+1.1
	baz=318						
ANMO	**Albuquerque**	38.78	109	LR	LR	02 33 47.6	
	comp=Z,454nm,21.2s,baz=53,slow=34						
ANMO	**Albuquerque**	38.78	109	P	P	02 18 47.5	+0.5
ANMO				IAmb	IAmb	02 19 11.7	
	comp=Z,73nm,1.8s						
ANMO	**Albuquerque**	38.78	109	P	P	02 18 47.5	+0.5
ANMO				pmax	pmax		
	comp=Z,73nm,1.8s						
ANMO	**Albuquerque**	38.78	109	P	P	02 18 48.9	+2.0
	baz=324						
ANMO	**Albuquerque**	38.78	109	P	P	02 18 49.1	+2.1
	baz=324,SNR=11						
ANMO	**Albuquerque**	38.78	109	P	P	02 18 49.1	+2.1
ANMO				pP	pP	02 19 08.7	+2.6
ANMO				PcP	PcP	02 20 57.6	+0.8
ANMO				ScP	S	02 24 38.0	-0.4
TUC	**Tucson**	38.91	116	P	P	02 18 50.0	+2.1
	baz=327						
TUC	**Tucson**	38.91	116	P	P	02 18 50.4	+2.5
TUC				pP	pP	02 19 09.3	+2.2
TUC				ScP	ScP	02 24 38.1	+0.3
YSS	**Yuzh-Sakhalins**	38.99	281	P	P	02 18 47.9	-0.4
YSS	**Yuzh-Sakhalins**	38.99	281	P	P	02 18 49.6	+1.3
YSS	**Yuzh-Sakhalins**	38.99	281α	iP	P	02 18 48.7	+0.4
YSS				e*SP	sP	02 19 15.3	-1.6
YSS				e		02 20 19.3	
YSS				eS	S	02 24 39.5	-1.4
YSS				pmax	pmax		
	comp=Z,1µm,3.2s						
YSS				pmax	pmax		
	comp=N,600nm,3.5s						
YSS				pmax	pmax		
	comp=E,600nm,2.3s						
YSS				pmax	pmax		
	comp=Z,170nm,0.8s						
YSS				MLR	MLR		
	comp=Z,600nm,15.0s						
YSS				MLR	MLR		
	comp=N,400nm,16.0s						
YSS				MLR	MLR		
	comp=E,400nm,16.0s						
YSS	**Yuzh-Sakhalins**	38.99	281	P	P	02 18 48.7	+0.4
CBKS	**Cedar Bluff**	39.06	98	IAmb	IAmb	02 19 19.9	
	comp=Z,78nm,0.9s						
CBKS	**Cedar Bluff**	39.06	98	P	P	02 18 49.6	+0.5
	baz=320,SNR=7.8						
CBKS	**Cedar Bluff**	39.06	98	P	P	02 18 51.1	+2.0
	baz=320,SNR=7.8						
G40A	**Rib Lake**	39.17	83	IAmb	IAmb	02 19 12.6	
	comp=Z,55nm,0.6s						
Y22A	**Socorro**	39.35	110	P	P	02 18 54.6	+2.9
	baz=325,SNR=10						
YUK	**Yuzh-Kuril'sk**	39.46	275d	iP	P	02 18 52.4	+0.1
GRNR	**Gornyy**	39.53	290⇑	iP	P	02 18 52.1	-0.8
GRNR				eS	S	02 24 51.1	+2.0
GRNR				pmax	pmax		
	comp=N,80nm,0.7s						
GRNR				pmax	pmax		
	comp=E,90nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,250nm,0.7s						
GRNR				smax	smax		
	comp=N,3.0nm,0.8s						
N35A	**Tabor**	39.59	92	IAmb	IAmb	02 19 17.9	
	comp=Z,106nm,1.0s						
N35A	**Tabor**	39.59	92	P	P	02 18 54.8	+1.4
	baz=318,SNR=6.1						
ILULI	**Ilulissat**	39.83	33	P	P	02 18 55.3	+0.2
ILULI	**Ilulissat**	39.83	33	P	P	02 18 55.3	+0.2
ILULI				pmax	pmax		
	comp=Z,33nm,1.0s						
F42A	**Maple Grove Fa**	39.87	81	P	P	02 18 57.6	+1.9
	baz=314						
R32A	**Long Quarter,**	39.87	97	P	P	02 18 57.4	+1.6
	baz=320,SNR=6.3						
I40A	**Norwalk**	39.93	85	IAmb	IAmb	02 19 38.4	
	comp=Z,38nm,0.8s						
E43A	**Lone Tree Farm**	40.01	79	P	P	02 18 56.9	+0.1
E43A	**Lone Tree Farm**	40.01	79	P	P	02 18 58.2	+1.4
	baz=314						
121A	**Cookes Peak, D**	40.12	112	P	P	02 18 59.8	+1.7
	baz=326,SNR=14						
121A	**Cookes Peak, D**	40.12	112	P	P	02 19 01.2	+3.1
	baz=326,SNR=14						
KHU	**Kahuku**	40.38	184	P	P	02 18 60.0	-0.4
KHU	**Kahuku**	40.38	184	P	P	02 19 00.0	-0.4
KHU				pmax	pmax		
	comp=Z,476nm,1.5s						
KSU1	**Kansas State U**	40.42	95	IAmb	IAmb	02 19 21.9	
	comp=Z,162nm,1.4s						
KSU1	**Kansas State U**	40.42	95	P	P	02 18 60.0	-0.3
	baz=320,SNR=9.1						
KSU1	**Kansas State U**	40.42	95	P	P	02 19 01.2	+0.9
	baz=319,SNR=9.1						
SUMG	**Summit**	40.69	25	eP	P	02 19 02.2	-0.4
SUMG				IAmb	IAmb	02 19 03.4	
	comp=Z,97nm,0.9s						
I42A	**Draeger Farm,**	40.80	83	P	P	02 19 04.7	+1.4
	baz=316						
JFWS	**Jewell Farm**	40.82	85	IAmb	IAmb	02 19 25.9	
	comp=Z,52nm,0.6s						
JFWS	**Jewell Farm**	40.82	85	P	P	02 19 02.5	-1.1
	baz=316,SNR=11						
JFWS	**Jewell Farm**	40.82	85	P	P	02 19 03.2	-0.3
	baz=316,SNR=11						
DAG	**Danmarks Havn**	40.83	15	eP	P	02 19 02.5	-0.7
DAG				IAmb	IAmb	02 19 05.4	
	comp=Z,85nm,0.5s						
N38A	**Joes South For**	40.86	90	IAmb	IAmb	02 19 25.0	
	comp=Z,45nm,0.8s						
N38A	**Joes South For**	40.86	90	P	P	02 19 03.0	-0.9
	baz=318,SNR=7.0						
L40A	**Anamosa**	40.95	87	IAmb	IAmb	02 19 06.0	
	comp=Z,64nm,0.7s						
L40A	**Anamosa**	40.95	87	P	P	02 19 04.1	-0.6
	baz=317,SNR=15						
JKA	**Kamikawa-asahi**	41.05	278	P	P	02 19 04.8	-0.7
ASAJ	**Asahikawa**	41.05	278	P	P	02 19 05.6	+0.1
	comp=Z,116nm,0.7s,baz=54,slow=10,SNR=66						
ASAJ				LR	LR	02 37 06.2	
	comp=Z,383nm,18.8s,baz=54,slow=38						
	comp=Z,116nm,0.7s						
ASAJ	**Asahikawa**	41.05	278	P	P	02 19 04.8	-0.6
ASAJ				pmax	pmax		
	comp=Z,125nm,0.7s						
NOKA	**Waynoka**	41.14	99	IAmb	IAmb	02 19 36.7	
	comp=Z,61nm,0.9s						
AMTX	**Amarillo**	41.16	104	IAmb	IAmb	02 19 38.5	
	comp=Z,128nm,1.4s						
AMTX	**Amarillo**	41.16	104	P	P	02 19 07.5	+1.0
	baz=323						
AMTX	**Amarillo**	41.16	104	P	P	02 19 08.7	+2.2
	baz=323						
U32A	**Winter Ranch,**	41.31	100	P	P	02 19 08.3	+0.6
	baz=322						
KAN01	**Argonia South**	41.33	98	IAmb	IAmb	02 19 37.9	
	comp=Z,41nm,0.7s						
ELIS	**Ellis County**	41.35	100	IAmb	IAmb	02 19 30.9	
	comp=Z,101nm,1.4s						
E46A	**Sault Ste Mari**	41.35	77	P	P	02 19 07.5	-0.3
E46A				IAmb	IAmb	02 19 29.7	
	comp=Z,74nm,0.8s						
E46A	**Sault Ste Mari**	41.35	77	P	P	02 19 07.9	+0.1
	baz=314,SNR=6.4						
MSTX	**Muleshoe**	41.35	106	IAmb	IAmb	02 19 36.0	
	comp=Z,50nm,0.9s						
MSTX	**Muleshoe**	41.35	106	P	P	02 19 08.1	0.0
	baz=324,SNR=7.9						
MSTX	**Muleshoe**	41.35	106	P	P	02 19 10.3	+2.1
	baz=324,SNR=7.9						
KS20	**Mayfield South**	41.37	98	IAmb	IAmb	02 19 32.5	
	comp=Z,116nm,1.6s						
KBS	**Kingsbay**	41.39	4	P	P	02 19 08.9	+1.1
KBS				IAmb	IAmb	02 19 14.1	
	comp=Z,54nm,0.8s						
KBS	**Kingsbay**	41.39	4	P	P	02 19 08.9	+1.1
KBS				pmax	pmax		
	comp=Z,54nm,0.8s						
KBS	**Kingsbay**	41.39	4	eP	P	02 19 08.7	+0.9
KBS	**Kingsbay**	41.39	4	eP	P	02 19 08.5	+0.7
KBS				IAmb	IAmb	02 19 14.2	
	comp=Z,50nm,0.7s						
KBS	**Kingsbay**	41.39	4	P	P	02 19 10.2	+2.4
KBS				ScP	ScP	02 24 46.6	+0.1
SFJD	**Kangerlussuaq**	41.41	36	LR	LR	02 35 59.5	
	comp=Z,500nm,18.8s,baz=312,slow=36						
SFJD	**Kangerlussuaq**	41.41	36	P	P	02 19 07.6	-0.5
SFJD	**Kangerlussuaq**	41.41	36	P	P	02 19 07.6	-0.5
SFJD				pmax	pmax		
	comp=Z,160nm,0.8s						
SFJD	**Kangerlussuaq**	41.41	36	eP	P	02 19 08.0	-0.1
SFJD				IAmb	IAmb	02 19 09.8	
	comp=Z,153nm,0.7s						
SFJD	**Kangerlussuaq**	41.41	36	P	P	02 19 07.9	-0.1
SFJD				pP	pP	02 19 29.7	+2.3
SFJD				ScP	ScP	02 24 47.0	+0.2
KAN09	**Caldwell North**	41.41	98	IAmb	IAmb	02 19 38.1	
	comp=Z,64nm,1.1s						
KAN13	**South Haven SW**	41.58	98	IAmb	IAmb	02 19 31.9	
	comp=Z,194nm,1.6s						
P38A	**Dawn**	41.58	92	IAmb	IAmb	02 19 31.1	
	comp=Z,59nm,1.1s						
P38A	**Dawn**	41.58	92	P	P	02 19 10.2	+0.3
	baz=319,SNR=8.2						
HSIG		41.63	119	IAmb	IAmb	02 19 34.7	
	comp=Z,92nm,1.2s						
L42A	**Oliver, Polo**	41.78	86	IAmb	IAmb	02 19 32.3	
	comp=Z,47nm,0.9s						
L42A	**Oliver, Polo**	41.78	86	P	P	02 19 12.0	+0.6
	baz=317						
ZEA	**Zeya**	41.83	299	eP	P	02 19 11.0	-0.6
ZEA				eS	S	02 25 23.0	0.0
ZEA				pmax	pmax		
	comp=E,30nm,0.9s						
ZEA				pmax	pmax		
	comp=N,20nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,120nm,1.1s						
ZEA				smax	smax		
	comp=N,200nm,15.3s						
ZEA				MLR	MLR		
	comp=E,300nm,18.0s						
BLOK	**Blackwell**	41.91	98	IAmb	IAmb	02 19 34.6	
	comp=Z,129nm,1.5s						
K43A	**Burlington**	41.95	84	P	P	02 19 14.0	+1.2
	baz=317						
MNTX	**Cornudas Mount**	41.95	110	P	P	02 19 13.8	+0.8
	baz=326,SNR=14						
MNTX	**Cornudas Mount**	41.95	110	P	P	02 19 15.3	+2.4
	baz=326,SNR=14						
N41A	**Harden Midland**	42.13	88	IAmb	IAmb	02 19 50.1	
	comp=Z,54nm,0.9s						
N41A	**Harden Midland**	42.13	88	P	P	02 19 14.8	+0.5
	baz=318						
T35A	**Sooner Cattle**	42.14	97	IAmb	IAmb	02 19 51.0	
	comp=Z,48nm,0.9s						
T35B	**Sooner Cattle**	42.14	97	P	P	02 19 15.5	+1.0
	baz=321,SNR=6.5						
SPA0	**Spitsbergen Ar**	42.28	3	eP	P	02 19 13.9	-1.2
SPA0				IAmb	IAmb	02 19 17.3	
	comp=Z,54nm,0.5s						
SPITS	**Spitsbergen Ar**	42.28	3	LR	LR	02 35 24.8	
	comp=Z,421nm,19.8s,baz=318,slow=34						
SPITS	**Spitsbergen Ar**	42.28	3	P	P	02 19 13.8	-1.3
SPITS				pmax	pmax		
	comp=Z,55nm,0.6s						
GLMI	**Grayling**	42.28	79	P	P	02 19 16.5	+1.0
	baz=316						
SPB2	**Spitsbergen Ar**	42.29	3	IAmb	IAmb	02 19 38.1	
	comp=Z,60nm,0.6s						
JEM	**Erimo**	42.29	275	P	P	02 19 16.7	+1.2
ERM	**Erimo**	42.29	275	P	P	02 19 15.7	+0.1
ERM	**Erimo**	42.29	275	P	P	02 19 16.6	+1.0
ERM	**Erimo**	42.29	275	P	P	02 19 15.7	+0.1
ERM				pmax	pmax		
	comp=Z,229nm,0.8s						
ERM	**Erimo**	42.29	275	P	P	02 19 15.5	0.0
ERM				PcP	PcP	02 21 08.6	+0.9
OK045	**Pawnee Station**	42.30	98	IAmb	IAmb	02 19 59.1	
	comp=Z,77nm,1.6s						
P40A	**Paris**	42.41	90	IAmb	IAmb	02 19 44.3	
	comp=Z,37nm,0.7s						
P40A	**Paris**	42.41	90	P	P	02 19 16.1	-0.4
	baz=319,SNR=9.0						
L44A	**Lake County Fo**	42.54	84	P	P	02 19 16.7	-0.9
	baz=317						
DBG	**Daneborg**	42.67	17	eP	P	02 19 17.6	-0.6
DBG				IAmb	IAmb	02 19 21.2	
	comp=Z,46nm,0.5s						
POST	**Post**	42.71	105	IAmb	IAmb	02 19 53.8	
	comp=Z,67nm,0.9s						
WMOK	**Wichita Mounta**	42.71	101	P	P	02 19 20.2	+1.1
	baz=323,SNR=19						
WMOK	**Wichita Mounta**	42.71	101	P	P	02 19 19.4	+0.3
	baz=323,SNR=19						
OK052	**Battle Ridge R**	42.72	98	IAmb	IAmb	02 19 40.5	
	comp=Z,146nm,1.8s						
OK034	**N. Norfolk Rd.**	42.75	98	IAmb	IAmb	02 19 41.1	
	comp=Z,128nm,1.8s						
OK025	**Westminster Rd**	42.77	99	IAmb	IAmb	02 19 41.7	
	comp=Z,47nm,0.6s						
KLR	**Kul'dur**	42.80	291	P	P	02 19 18.9	-0.7
	comp=Z,178nm,0.8s,baz=46,slow=8.0,SNR=486						
KLR				LR	LR	02 40 06.8	
	comp=Z,309nm,18.7s,baz=46,slow=40						
	comp=Z,178nm,0.8s						
KLR	**Kul'dur**	42.80	291c	iP	P	02 19 19.2	-0.4
KLR				pmax	pmax		
	comp=Z,512nm,1.7s						
ICESG	**Greenland Ices**	42.92	29	eP	P	02 19 21.2	+0.4
ICESG				IAmb	IAmb	02 19 21.7	
	comp=Z,185nm,0.7s						
NUUK	**Nuuk**	42.97	39	i P	P	02 19 22.1	+1.4
NUUK				IAmb	IAmb	02 19 22.8	
	comp=Z,124nm,0.9s						
DEOK	**Depew**	42.99	98	IAmb	IAmb	02 19 43.1	
	comp=Z,113nm,1.7s						
DY2G	**Dye2**	43.03	34	eP	P	02 19 21.5	-0.1
DY2G				IAmb	IAmb	02 19 23.2	
	comp=Z,63nm,0.6s						
HDIL	**Hopedale**	43.04	87	IAmb	IAmb	02 19 23.3	
	comp=Z,68nm,0.6s						
HDIL	**Hopedale**	43.04	87	P	P	02 19 21.0	-0.6
	baz=318,SNR=12						
HDIL	**Hopedale**	43.04	87	P	P	02 19 20.6	-1.1
	baz=318,SNR=12						
S39A	**Bolivar**	43.16	93	P	P	02 19 21.3	-1.3
	baz=320,SNR=7.6						
R40A	**Maddies Statio**	43.24	92	IAmb	IAmb	02 19 52.6	
	comp=Z,36nm,0.8s						
R40A	**Maddies Statio**	43.24	92	P	P	02 19 22.4	-0.8
	baz=320,SNR=15						
TUL1	**Leonard**	43.29	97	IAmb	IAmb	02 19 45.2	
	comp=Z,135nm,1.7s						
TUL1	**Leonard**	43.29	97	P	P	02 19 22.6	-1.1
	baz=322,SNR=5.6						
TUL1	**Leonard**	43.29	97	P	P	02 19 24.5	+0.8
	baz=322,SNR=5.6						
J47A	**Sunmer**	43.33	81	P	P	02 19 23.1	-0.9
	baz=317						
J47A				P	P	02 19 23.1	-0.9
	baz=317						
W35A	**Tecumseh**	43.34	99		P	02 19 23.8	-0.4
W35A				IAmb	IAmb	02 19 59.7	
	comp=Z,45nm,0.8s						
TEY	**Ternei**	43.39	283⇓	eP	P	02 19 23.4	-1.0
TEY				pmax	pmax		
	comp=Z,100nm,3.0s						
TEY				pmax	pmax		
	comp=N,30nm,0.7s						
TEY				pmax	pmax		
	comp=E,40nm,0.7s						
TEY				pmax	pmax		
	comp=Z,70nm,0.7s						
HSPB	**Hornsund (broa**	43.43	4	eP	P	02 19 25.8	+1.4
RLO	**Rose Lookout**	43.48	96	IAmb	IAmb	02 20 00.9	
	comp=Z,64nm,1.1s						
U38A	**Gravette**	43.59	95	IAmb	IAmb	02 19 56.2	
	comp=Z,69nm,0.7s						
U38A	**Gravette**	43.59	95	P	P	02 19 25.8	-0.3
	baz=321,SNR=11						
P43A	**Skaggs, Pawnee**	43.61	88	IAmb	IAmb	02 19 27.5	
	comp=Z,43nm,0.6s						
P43A	**Skaggs, Pawnee**	43.61	88	P	P	02 19 25.8	-0.4
	baz=319,SNR=9.7						
SCHQ	**Schefferville**	43.66	57	P	P	02 19 26.6	+0.1
	comp=Z,14nm,0.7s,baz=321,slow=7.6,SNR=25						
SCHQ				pP	pP	02 19 46.0	0.0
	comp=Z,137nm,0.9s,baz=316,slow=12,SNR=30						
SCHQ				LR	LR	02 38 03.6	
	comp=Z,829nm,18.3s,baz=312,slow=36						
	comp=Z,14nm,0.7s						
O44A	**Mansfield**	43.76	87	P	P	02 19 27.5	+0.1
	baz=319						
CCM	**Cathedral Cave**	43.94	91	P	P	02 19 28.6	-0.3
CCM	**Cathedral Cave**	43.94	91	P	P	02 19 28.6	-0.3
CCM				pmax	pmax		
	comp=Z,23nm,0.9s						
CCM	**Cathedral Cave**	43.94	91	P	P	02 19 28.8	-0.1
	baz=320						
CCM	**Cathedral Cave**	43.94	91	P	P	02 19 28.0	-0.9
	baz=320,SNR=5.4						
CCM	**Cathedral Cave**	43.94	91	P	P	02 19 28.5	-0.3
CCM				pP	pP	02 19 49.5	+1.1
CCM				ScP	ScP	02 24 56.5	-1.0
ABTX	**Abilene, Hawle**	43.98	104	P	P	02 19 28.6	-0.8
	baz=324,SNR=7.7						
ABTX	**Abilene, Hawle**	43.98	104	P	P	02 19 30.6	+1.3
	baz=324,SNR=7.7						
HOPEN	**Hopen**	44.11	1	eP	P	02 19 31.2	+1.4
HOPEN				IAmb	IAmb	02 19 32.0	
	comp=Z,32nm,0.7s						
HEH	**HeiHe**	44.12	295	eP	P	02 19 28.1	-2.1
HEH				PcP	PcP	02 21 12.7	-1.1
HEH				PP	PP	02 21 15.4	+1.3
HEH				ScP	ScP	02 24 56.1	-1.9
HEH				S	S	02 25 51.7	-4.9
HEH				ScS	SS	02 29 16.9	+0.7
HEH				pmax	pmax		
	comp=Z,380nm,0.8s						
JTM	**Tenmabayashi**	44.26	275	P	P	02 19 32.1	+0.7
SFIN	**Lafayette**	44.29	85	IAmb	IAmb	02 19 53.3	
	comp=Z,84nm,1.3s						
SFIN	**Lafayette**	44.29	85	P	P	02 19 31.2	-0.4
	baz=318						
NRIK	**Noril'sk**	44.29	334	P	P	02 19 31.0	-0.3
	comp=Z,21nm,0.6s,baz=50,slow=5.9,SNR=32						
NRIK				pP	pP	02 19 50.4	-0.8
	comp=Z,29nm,0.6s,baz=38,slow=12,SNR=5.7						
NRIK				ScP	ScP	02 24 57.5	-1.0
	comp=Z,7.9nm,0.9s,baz=44,slow=5.7,SNR=5.6						
NRIK				LR	LR	02 41 37.5	
	comp=Z,897nm,19.4s,baz=44,slow=41						
	comp=Z,21nm,0.6s						
NRIK	**Noril'sk**	44.29	334	P	P	02 19 31.2	-0.1
NRIK				IAmb	IAmb	02 19 53.7	
	comp=Z,31nm,0.6s						
NRIK	**Noril'sk**	44.29	334c	iP	P	02 19 31.4	+0.1
NRIK				pmax	pmax		
	comp=Z,27nm,0.8s						
FVM	**French Village**	44.41	90	P	P	02 19 33.3	+0.7
	baz=320						
Q44A	**Meyer Farm, Va**	44.42	88	IAmb	IAmb	02 19 54.8	
	comp=Z,47nm,0.8s						
Q44A	**Meyer Farm, Va**	44.42	88	P	P	02 19 33.1	+0.4
	baz=319,SNR=5.4						
FW03	**Perrin-Whitt E**	44.43	102	IAmb	IAmb	02 19 55.4	
	comp=Z,37nm,0.6s						
U40A	**Yellville**	44.43	94	P	P	02 19 32.6	-0.3
	baz=321,SNR=10.0						
U40A				P	P	02 19 32.6	-0.3
	baz=321,SNR=10.0						
L48A	**N Adams**	44.47	82	IAmb	IAmb	02 19 57.4	
	comp=Z,58nm,0.8s						
X37A	**Clayton**	44.54	98	IAmb	IAmb	02 20 15.5	
	comp=Z,191nm,1.9s						
X37A	**Clayton**	44.54	98	P	P	02 19 33.7	0.0
	baz=322,SNR=6.4						
BOD	**Bodaibo**	44.59	310	eP	P	02 19 32.4	-1.5
BOD				pmax	pmax		
	comp=Z,166nm,0.9s						
Z35A	**Perchaven, San**	44.60	101	IAmb	IAmb	02 20 10.3	
	comp=Z,50nm,0.9s						
TX31	**Lajitas Ar. Si**	44.73	110	IAmb	IAmb	02 20 00.4	
	comp=Z,76nm,1.0s						
TX31	**Lajitas Ar. Si**	44.73	110	P	P	02 19 36.7	+1.3
	baz=327,SNR=18						
TXAR	**Lajitas Array**	44.73	110	P	P	02 19 36.6	+1.2
	comp=Z,5.2nm,0.9s,baz=326,slow=6.4,SNR=39						
TXAR				pP	pP	02 19 54.8	-0.1
	comp=Z,20nm,0.9s,baz=321,slow=6.9,SNR=13						
TXAR				ScP	ScP	02 25 01.4	+0.4
	comp=Z,3.8nm,0.9s,baz=306,slow=2.8,SNR=6.4						
TXAR				LR	LR	02 37 28.0	
	comp=Z,479nm,21.0s,baz=315,slow=35						
	comp=Z,5.2nm,0.9s						
FW06	**Azle**	44.73	101	IAmb	IAmb	02 19 58.0	
	comp=Z,190nm,1.9s						
T42A	**Van Buren**	44.80	92	P	P	02 19 35.1	-0.6
	baz=321,SNR=6.9						
P46A	**Rosedale**	44.80	86	IAmb	IAmb	02 20 24.1	
	comp=Z,52nm,0.8s						
P46A	**Rosedale**	44.80	86	P	P	02 19 35.7	-0.1
	baz=319,SNR=8.9						
FW07	**Weatherford**	44.84	102	IAmb	IAmb	02 20 16.4	
	comp=Z,33nm,0.7s						
OLIL	**Olney**	45.02	88	IAmb	IAmb	02 19 58.9	
	comp=Z,71nm,0.9s						
OLIL	**Olney**	45.02	88	P	P	02 19 37.3	-0.2
	baz=320,SNR=11						
SADO	**Sadowa**	45.03	75	LR	LR	02 39 02.9	
	comp=Z,2µm,18.3s,baz=327,slow=37						
S44A	**Carbondale**	45.22	90	P	P	02 19 39.6	+0.5
	baz=320,SNR=5.8						
FW13	**Cleburne**	45.30	102	IAmb	IAmb	02 20 20.0	
	comp=Z,46nm,0.8s						
PBMO	**Poplar Bluff**	45.33	91	P	P	02 19 40.2	+0.2
	baz=321						
N49A	**Columbus Grove**	45.35	82	IAmb	IAmb	02 20 08.4	
	comp=Z,73nm,1.1s						
O48B	**Farmland**	45.36	84	P	P	02 19 38.9	-1.3
	baz=319,SNR=7.8						
O48B	**Farmland**	45.36	84	P	P	02 19 39.3	-0.9
	baz=319,SNR=7.8						
MIAR	**Mount Ida**	45.48	96	IAmb	IAmb	02 20 09.9	
	comp=Z,40nm,0.9s						

MIAR	Mount Ida	45.48	96		P	P	02 19 41.0	-0.2
	baz=322,SNR=7.5							
MIAR	Mount Ida	45.48	96		P	P	02 19 41.1	-0.1
	baz=322,SNR=7.5							
BLO	Bloomington	45.48	86		IAmb	IAmb	02 19 42.6	
	comp=Z,47nm,0.7s							
LCAR	Lake Charles	45.51	93		P	P	02 19 41.0	-0.5
	baz=321,SNR=7.0							
WHTX	Lake Whitney,	45.57	102		P	P	02 19 41.9	-0.1
	baz=324							
WHTX	Lake Whitney,	45.57	102		P	P	02 19 43.3	+1.4
	baz=324							
SCO	Scoresbysund	45.61	21		IAmb	IAmb	02 20 13.6	
	comp=Z,97nm,1.5s							
SCO	Scoresbysund	45.61	21	i	P	P	02 19 41.8	+0.1
SCO					IAmb	IAmb	02 19 42.4	
	comp=Z,161nm,2.0s							
JCT	Junction City	45.65	106		P	P	02 19 43.6	+1.0
	baz=326,SNR=25							
JCT	Junction City	45.65	106		P	P	02 19 43.2	+0.6
	baz=326,SNR=25							
ISOG	Isortoq, Green	45.75	32	i	P	P	02 19 42.2	-0.7
ISOG					IAmb	IAmb	02 19 43.0	
	comp=Z,70nm,0.8s							
P48A	Milroy	45.82	85		IAmb	IAmb	02 20 04.6	
	comp=Z,51nm,1.1s							
P48A	Milroy	45.82	85		P	P	02 19 42.8	-1.0
	baz=319,SNR=9.9							
P48A					P	P	02 19 42.8	-1.0
	baz=319,SNR=9.9							
USIN	University of	45.82	88		IAmb	IAmb	02 20 11.8	
	comp=Z,49nm,0.7s							
O49A	Covington	45.83	83		IAmb	IAmb	02 20 13.2	
	comp=Z,36nm,0.8s							
O49A	Covington	45.83	83		P	P	02 19 42.7	-1.2
	baz=319							
O49A					P	P	02 19 42.7	-1.2
	baz=319							
ANGG	Ammassalik, Gr	46.05	31	i	P	P	02 19 45.0	-0.2
ANGG					IAmb	IAmb	02 19 45.3	
	comp=Z,122nm,0.8s							
T45B	Paducah	46.05	90		P	P	02 19 46.4	+0.7
	baz=321							
LPIG	La Paz	46.17	121		LR	LR	02 37 04.1	
	comp=Z,382nm,19.5s,baz=320,slow=33							
IVI	Ivigtut	46.24	40	i	P	P	02 19 47.9	+1.1
IVI					IAmb	IAmb	02 19 48.6	
	comp=Z,64nm,0.8s							
IVI	Ivigtut	46.24	40		P	P	02 19 48.0	+1.2
IVI					pP	pP	02 20 08.9	+2.5
USA0B	Ussuriysk Arra	46.27	286		IAmb	IAmb	02 19 47.4	
	comp=Z,62nm,0.8s							
USA0B	Ussuriysk Arra	46.27	286	c i	P	P	02 19 46.2	-1.0
USRK	Ussuriysk Ar.	46.27	286		P	P	02 19 45.8	-1.4
	comp=Z,56nm,0.7s,baz=52,slow=8.0,SNR=120							
USRK					ScP	ScP	02 25 07.3	+0.3
	comp=Z,2.3nm,0.7s,baz=72,slow=2.8,SNR=4.9							
USRK					LR	LR	02 39 26.8	
	comp=Z,378nm,21.1s,baz=33,slow=36							
	comp=Z,56nm,0.7s							
WCI	Wyandotte Cave	46.32	87		P	P	02 19 48.1	+0.4
WCI					IAmb	IAmb	02 20 17.6	
	comp=Z,41nm,0.9s							
WCI	Wyandotte Cave	46.32	87		P	P	02 19 48.1	+0.4
WCI					pmax	pmax		
	comp=Z,41nm,0.9s							
WCI	Wyandotte Cave	46.32	87		P	P	02 19 47.4	-0.3
	baz=320							
WCI	Wyandotte Cave	46.32	87		P	P	02 19 48.6	+0.9
	baz=320,SNR=5.6							
WCI	Wyandotte Cave	46.32	87		P	P	02 19 48.3	+0.6
WCI					pP	pP	02 20 08.8	+1.5
ACSO	Alum Creek Sta	46.47	82		IAmb	IAmb	02 20 10.5	
	comp=Z,48nm,1.1s							
ACSO	Alum Creek Sta	46.47	82		P	P	02 19 48.1	-0.8
	baz=319							
ACSO	Alum Creek Sta	46.47	82		P	P	02 19 49.1	+0.2
	baz=319							
435B	Jarrell	46.49	103		IAmb	IAmb	02 20 14.3	
	comp=Z,67nm,0.9s							
435B	Jarrell	46.49	103		P	P	02 19 50.0	+0.8
	baz=325							
JMM	Marumori	46.60	273		P	P	02 19 50.6	+0.6
SLBS	Sierra La Lagu	46.70	121		P	P	02 19 52.4	+1.5
M53A	WI Miller and	46.73	79		P	P	02 19 51.1	+0.2
	baz=318							
R49A	Shelbyville	46.84	86		P	P	02 19 51.2	-0.6
	baz=320,SNR=5.3							
R49A					P	P	02 19 51.2	-0.6
	baz=320,SNR=5.3							
T47A	Sharon Grove	46.86	88		P	P	02 19 52.3	+0.3
	baz=321,SNR=7.4							
P51A	Williamsport	47.00	83		IAmb	IAmb	02 20 14.3	
	comp=Z,38nm,0.8s							
P51A	Williamsport	47.00	83		P	P	02 19 52.2	-0.8
	baz=319							
P51A					P	P	02 19 52.2	-0.8
	baz=319							
WVNY	West Valley, N	47.03	77		IAmb	IAmb	02 20 15.6	
	comp=Z,90nm,0.8s							
N53A	Lisbon	47.12	80		IAmb	IAmb	02 20 15.8	
	comp=Z,78nm,0.9s							
MDJ	Mudanjiang	47.13	288		P	P	02 19 53.4	-0.6
MDJ					PP	PP	02 21 45.1	-0.1
MDJ					ScP	ScP	02 25 09.4	-1.2
MDJ					PcS	PcS	02 25 19.2	-0.3
MDJ					S	S	02 26 41.4	+1.4
MDJ					ScS	ScS	02 29 39.2	-0.5
MDJ					pmax	pmax		
	comp=Z,120nm,0.9s							
MDJ					pmax	pmax		
	comp=Z,480nm,3.8s							
MDJ					LR	LR		
	comp=Z,820nm,22.8s							
MDJ					LR	LR		
	comp=Z,610nm,17.3s							
MDJ					LR	LR		
	comp=Z,1μm,24.8s							
MDJ	Mudanjiang	47.13	288		IAmb	IAmb	02 19 54.7	
	comp=Z,93nm,0.9s							
MDJ	Mudanjiang	47.13	288		P	P	02 19 54.2	+0.2
MDJ	Mudanjiang	47.13	288		P	P	02 19 53.4	-0.6
O52A	Adamsville	47.14	81		IAmb	IAmb	02 20 22.4	
	comp=Z,61nm,0.8s							
WVT	Waverly	47.16	90		P	P	02 19 54.6	+0.3
WVT	Waverly	47.16	90		P	P	02 19 54.6	+0.3
WVT					pmax	pmax		
	comp=Z,27nm,0.9s							
WVT	Waverly	47.16	90		P	P	02 19 54.2	-0.1
	baz=321							
WVT	Waverly	47.16	90		P	P	02 19 54.0	-0.3
	baz=321,SNR=7.4							
WVT	Waverly	47.16	90		P	P	02 19 54.9	+0.6
WVT					pP	pP	02 20 15.1	+1.2
NRS	Narsarsuaq	47.17	39	i	P	P	02 19 54.5	+0.5
NRS					IAmb	IAmb	02 19 55.2	
	comp=Z,60nm,0.9s							
Q51A	Peebles	47.20	84		P	P	02 19 54.0	-0.7
	baz=320,SNR=12							
Q51A					P	P	02 19 54.0	-0.7
	baz=320,SNR=12							
W45A	Hickory Valley	47.22	92		P	P	02 19 55.9	+1.1
	baz=322							
BMNY	Brushton-Moira	47.24	72		P	P	02 19 55.2	+0.4
	baz=317,SNR=11							
JMIC	Jan Mayen	47.27	15		LR	LR	02 39 14.9	
	comp=Z,164nm,20.6s,baz=342,slow=35							
R50A	Paris	47.27	85		IAmb	IAmb	02 20 18.0	
	comp=Z,59nm,0.8s							
R50A	Paris	47.27	85		P	P	02 19 55.1	-0.1
	baz=320,SNR=18							
R50A					P	P	02 19 55.1	-0.1
	baz=320,SNR=18							
WCNY	West Carthage	47.31	73		P	P	02 19 55.2	-0.3
	baz=318,SNR=5.5							
O53A	New Philadelph	47.35	81		IAmb	IAmb	02 20 17.2	
	comp=Z,40nm,0.9s							
O53A	New Philadelph	47.35	81		P	P	02 19 54.3	-1.5
	baz=319							
BNX	BinXian	47.35	290	⇓	P	P	02 19 54.7	-1.0
BNX					pP	pP	02 20 12.3	-3.2
BNX					S	S	02 26 39.8	-3.4
BNX					sS	sS	02 27 10.2	-6.6
BNX					pmax	pmax		
	comp=Z,260nm,1.0s							
BNX					pmax	pmax		
	comp=Z,400nm,4.3s							
BNX					LR	LR		
	comp=Z,430nm,16.8s							
BNX					LR	LR		
	comp=Z,770nm,15.2s							
BNX					LR	LR		
	comp=Z,630nm,28.2s							
P52A	Corning	47.35	82		IAmb	IAmb	02 20 19.4	
	comp=Z,72nm,1.4s							
P52A	Corning	47.35	82		P	P	02 19 55.4	-0.4
	baz=319							
LONY	Lake Ozonia	47.36	72		IAmb	IAmb	02 20 17.5	
	comp=Z,93nm,1.1s							
LONY	Lake Ozonia	47.36	72		P	P	02 19 56.1	+0.3
	baz=318							
OXF	Oxford	47.62	93		P	P	02 19 58.5	+0.6
	baz=322,SNR=13							
OXF	Oxford	47.62	93		P	P	02 19 59.0	+1.1
	baz=322,SNR=13							
M55A	Ridgway	47.66	78		P	P	02 19 58.4	+0.3
	baz=319							
M55A					P	P	02 19 58.4	+0.3
	baz=319							
FRNY	Flat Rock	47.68	71		P	P	02 19 58.2	-0.1
	baz=318,SNR=5.5							
L56A	Greenwood	47.75	76		P	P	02 19 59.8	+0.9
	baz=318,SNR=7.9							
L56A					P	P	02 19 59.8	+0.9
	baz=318,SNR=7.9							
JSD	Sado	47.76	275		P	P	02 19 59.5	+0.6
Q52A	Bidwell	47.80	83		IAmb	IAmb	02 20 21.2	
	comp=Z,57nm,0.6s							
Q52A	Bidwell	47.80	83		P	P	02 19 59.5	+0.3
	baz=320							
Q52A					P	P	02 19 59.5	+0.3
	baz=320							
O54A	Avella	47.82	80		P	P	02 19 58.7	-0.7
	baz=319,SNR=8.0							
O54A					P	P	02 19 58.7	-0.7
	baz=319,SNR=8.0							
K57A	Scipio Center	47.82	75		P	P	02 20 00.4	+1.0
	baz=318							
P53A	Whipple	47.84	82		IAmb	IAmb	02 20 21.0	
	comp=Z,97nm,1.1s							
P53A	Whipple	47.84	82		P	P	02 19 59.0	-0.6
	baz=320,SNR=5.9							
P53A					P	P	02 19 59.0	-0.6
	baz=320,SNR=5.9							
U49A	Red Boiling Sp	47.90	88		IAmb	IAmb	02 21 51.5	
	comp=Z,54nm,0.9s							
U49A	Red Boiling Sp	47.90	88		P	P	02 20 00.8	+0.8
	baz=321,SNR=7.7							
CLTN	Cedars of Leba	47.95	89		IAmb	IAmb	02 20 29.7	
	comp=Z,55nm,1.0s							
J58A	Remsen	47.95	73		P	P	02 20 01.2	+0.8
	baz=318,SNR=7.7							
J58A					P	P	02 20 01.2	+0.8
	baz=318,SNR=7.7							
V48A	Smith Brothers	47.97	89		IAmb	IAmb	02 20 29.4	
	comp=Z,61nm,1.0s							
V48A	Smith Brothers	47.97	89		P	P	02 20 01.4	+0.8
	baz=321,SNR=17							
T50A	Nancy	47.98	86		IAmb	IAmb	02 20 24.0	
	comp=Z,61nm,0.8s							
T50A	Nancy	47.98	86		P	P	02 20 01.7	+0.9
	baz=321							
T50A					P	P	02 20 01.7	+0.9
	baz=321							
NCB	Newcomb	48.02	72		P	P	02 20 01.5	+0.6
	baz=318							
HKT	Hockley	48.04	102		P	P	02 20 03.1	+2.0
	baz=325							
HKT	Hockley	48.04	102		P	P	02 20 02.9	+1.8
HKT					pP	pP	02 20 23.3	+2.5
Y45A	Yeager Farm, C	48.06	93		IAmb	IAmb	02 20 31.2	
	comp=Z,65nm,0.7s							
Y45A	Yeager Farm, C	48.06	93		P	P	02 20 03.4	+2.1
	baz=322							
S51A	Beattyville	48.14	85		P	P	02 20 02.0	+0.2
	baz=320,SNR=11							
S51A					P	P	02 20 02.0	+0.2
	baz=320,SNR=11							
D62A	Allapoint, All	48.17	66		P	P	02 20 02.5	+0.5
	baz=317,SNR=6.6							
D62A					P	P	02 20 02.5	+0.5
	baz=317,SNR=6.6							
E62A	Clayton Lake	48.29	66		P	P	02 20 03.7	+0.7
	baz=318,SNR=5.4							
E62A					P	P	02 20 03.7	+0.7
	baz=318,SNR=5.4							
HIA	Hailar	48.30	299		IAmb	IAmb	02 20 03.9	
	comp=Z,87nm,0.9s							
HIA	Hailar	48.30	299		P	P	02 20 02.7	-0.3
	comp=Z,130nm,1.1s							
HIA	Hailar	48.30	299	c i	P	P	02 20 02.7	-0.3
HIA					pmax	pmax		
	comp=Z,104nm,0.9s							
HIA	Hailar	48.30	299		P	P	02 20 02.7	-0.3
R53A	Hurricane	48.44	83		IAmb	IAmb	02 20 25.9	
	comp=Z,73nm,1.0s							
R53A	Hurricane	48.44	83		P	P	02 20 04.4	+0.3
	baz=320,SNR=6.8							
R53A					P	P	02 20 04.4	+0.3
	baz=320,SNR=6.8							
VT1	Waterbury	48.46	71		P	pP	02 20 25.8	+1.8
	baz=318,SNR=11							
BINY	Binghamton	48.48	75		P	P	02 20 04.6	+0.1
	baz=319,SNR=8.8							
BINY	Binghamton	48.48	75		P	P	02 20 05.8	+1.3
	baz=319,SNR=8.8							
MCWV	Mont Chateau	48.48	80		IAmb	IAmb	02 20 26.4	
	comp=Z,77nm,0.9s							
MCWV	Mont Chateau	48.48	80		P	P	02 20 04.1	-0.4
	baz=320							
MCWV	Mont Chateau	48.48	80		P	P	02 20 05.3	+0.8
	baz=320							
Q54A	Coxs Mills	48.50	82		IAmb	IAmb	02 20 30.7	
	comp=Z,43nm,0.8s							
Q54A	Coxs Mills	48.50	82		P	P	02 20 04.4	-0.2
	baz=320							
Q54A					P	P	02 20 04.4	-0.2
	baz=320							
M57A	Sunshine Farm,	48.56	77		IAmb	IAmb	02 20 27.4	
	comp=Z,59nm,0.8s							
M57A	Sunshine Farm,	48.56	77		P	P	02 20 05.7	+0.6
	baz=319							
M57A					P	P	02 20 05.7	+0.6
	baz=319							
342A	Flagon Creek P	48.64	98		IAmb	IAmb	02 20 35.8	
	comp=Z,58nm,0.8s							
SSPA	Standing Stone	48.72	78		P	P	02 20 06.8	+0.6
SSPA	Standing Stone	48.72	78		P	P	02 20 05.7	-0.6
	baz=319							
SSPA	Standing Stone	48.72	78		P	P	02 20 07.5	+1.2
	baz=319							
SSPA	Standing Stone	48.72	78		P	P	02 20 07.4	+1.1
SSPA					pP	pP	02 20 27.3	+1.2
ACCN	Adirondack Com	48.72	72		P	P	02 20 06.9	+0.6
	baz=318							
SWET	Sewanee	48.83	89		IAmb	IAmb	02 20 29.4	
	comp=Z,54nm,0.7s							
G62A	West of Eustis	48.86	68		P	P	02 20 07.1	-0.2
	baz=318							
G62A					P	P	02 20 07.1	-0.2
	baz=318							
X48A	Hartselle	48.87	91		P	P	02 20 07.3	-0.2
	baz=322,SNR=6.8							
VBMS	Vicksburg	48.88	95		P	P	02 20 08.1	+0.5
	baz=323							
HCNY	Howe Caverns	48.88	73		P	P	02 20 07.7	+0.2
	baz=319,SNR=11							
LBNH	Lisbon	48.92	70		P	P	02 20 08.0	+0.1
	baz=318							
MAJO	Matsushiro	48.94	274		P	P	02 20 07.6	-0.4
MAJO	Matsushiro	48.94	274		P	P	02 20 09.1	+1.1
MAJO	Matsushiro	48.94	274	c i	P	P	02 20 07.9	-0.1
MAJO					pmax	pmax		
	comp=Z,161nm,0.9s							
MAJO	Matsushiro	48.94	274		P	P	02 20 07.9	-0.1
MAJO					pP	pP	02 20 29.0	+1.1
MJAR	Matsushiro Arr	48.94	274		P	P	02 20 08.0	0.0
	comp=Z,24nm,0.7s,baz=16,slow=5.8,SNR=65							
MJAR					PcP	PcP	02 21 30.6	-0.5
	comp=Z,12nm,0.9s,baz=13,slow=2.8,SNR=6.2							
MJAR					ScP	ScP	02 25 18.2	-0.2
	comp=Z,3.1nm,0.9s,baz=3.0,slow=3.1,SNR=4.3							
MJAR					LR	LR	02 40 49.7	
	comp=Z,270nm,20.8s,baz=48,slow=36							
	comp=Z,24nm,0.7s							
CIT	Chita	48.94	305		eP	P	02 20 05.0	-2.9
CIT					e		02 20 24.9	
CIT					e		02 22 02.8	
CIT					pmax	pmax		
	comp=Z,396nm,2.0s							
L59A	Walton	48.95	74		P	P	02 20 09.4	+1.3
	baz=319,SNR=6.0							
L59A					P	P	02 20 09.4	+1.3
	baz=319,SNR=6.0							
TZTN	Tazewell	49.01	86		IAmb	IAmb	02 20 37.5	
	comp=Z,72nm,0.9s							
TZTN	Tazewell	49.01	86		P	P	02 20 09.1	+0.5
	baz=321,SNR=5.2							
TZTN	Tazewell	49.01	86		P	P	02 20 09.2	+0.6
	baz=321,SNR=5.2							
H62A	Milan	49.04	69		P	P	02 20 08.9	+0.2
	baz=318,SNR=12							
H62A					P	P	02 20 08.9	+0.2
	baz=318,SNR=12							
KSPA	Keystone Colle	49.07	75		P	P	02 20 09.6	+0.6
KSPA	Keystone Colle	49.07	75		P	P	02 20 10.0	+1.0
	baz=319							
N58A	Sunbury	49.15	77		IAmb	IAmb	02 20 31.9	
	comp=Z,66nm,0.8s							
HNH	Hanover	49.15	71		P	pP	02 20 31.5	+2.1
	baz=318,SNR=9.8							
W50A	Signal Mountai	49.16	88		IAmb	IAmb	02 21 55.8	
	comp=Z,58nm,1.1s							
F63A	Nahmakanta, Br	49.17	67		P	P	02 20 10.0	+0.3
	baz=318,SNR=13							
F63A					P	P	02 20 10.0	+0.3
	baz=318,SNR=13							
S54A	Dingess, Beckl	49.17	83		IAmb	IAmb	02 20 31.5	
	comp=Z,50nm,0.9s							
V51A	Loudon	49.18	87		IAmb	IAmb	02 20 33.7	
	comp=Z,46nm,0.6s							
V51A	Loudon	49.18	87		P	P	02 20 10.7	+0.9
	baz=321							
146A	Union	49.28	94		P	P	02 20 12.3	+1.6
	baz=323,SNR=11							
Q56A	Snyder Ridge,	49.28	80		IAmb	IAmb	02 20 32.7	
	comp=Z,67nm,0.8s							
Q56A	Snyder Ridge,	49.28	80		P	P	02 20 11.6	+0.9
	baz=320							
Q56A					P	P	02 20 11.6	+0.9
	baz=320							
J61A	Chester	49.29	72		P	P	02 20 11.4	+0.8
	baz=319,SNR=11							
J61A					P	P	02 20 11.4	+0.8
	baz=319,SNR=11							
Z47A	Carrollton	49.34	92		P	P	02 20 11.7	+0.6
	baz=323,SNR=14							
R55A	Marlinton	49.40	82		IAmb	IAmb	02 20 33.7	
	comp=Z,60nm,0.9s							
R55A	Marlinton	49.40	82		P	P	02 20 12.7	+1.2
	baz=320							
R55A					P	P	02 20 12.7	+1.2
	baz=320							
F64A	Sherman	49.40	66		P	P	02 20 10.7	-0.7
	baz=318,SNR=13							
F64A					P	P	02 20 10.7	-0.7
	baz=318,SNR=13							
PKME	Peaks-Kenny Pk	49.41	68		P	P	02 20 10.2	-1.3
	baz=318							
V52A	Sevierville	49.53	86		IAmb	IAmb	02 20 34.6	
	comp=Z,47nm,0.7s							
V52A	Sevierville	49.53	86		P	P	02 20 13.3	+0.8
	baz=321							
P57A	Homestead Farm	49.53	79		P	P	02 20 12.3	-0.2
	baz=320,SNR=8.0							
P57A					P	P	02 20 12.3	-0.2
	baz=320,SNR=8.0							
TKL	Tuckaleechee C	49.58	87		LR	LR	02 41 42.5	
	comp=Z,670nm,20.0s,baz=332,slow=36							
TKL	Tuckaleechee C	49.58	87		IAmb	IAmb	02 20 41.2	
	comp=Z,42nm,0.8s							
FFD	Franklin Falls	49.63	71		P	pP	02 20 36.0	+3.0
	baz=319,SNR=7.1							
Y49A	Blount Mountai	49.66	90		P	P	02 20 14.0	+0.4
	baz=322,SNR=7.8							
WAKE	Wake Island	49.67	234		P	P	02 20 12.9	-0.9
WAKE	Wake Island	49.67	234		P	P	02 20 13.6	-0.1
I63A	Otisfield	49.71	69		P	P	02 20 14.5	+0.8
	baz=319							
I63A					P	P	02 20 14.5	+0.8
	baz=319							
NPNY	Mohonk Preserv	49.72	74		P	pP	02 20 36.1	+2.4
	baz=319,SNR=7.0							
CN2	Changchun	49.73	290		eP	P	02 20 12.0	-1.9
CN2					ePP	PP	02 22 08.0	-0.8
CN2					eS	S	02 27 13.1	-3.5
CN2					ScS	ScS	02 29 53.2	-4.0
CN2					pmax	pmax		
	comp=Z,1μm,2.5s							
CN2					LR	LR		
	comp=Z,500nm,22.0s							
CN2					LR	LR		
	comp=Z,390nm,22.0s							
CN2					LR	LR		
	comp=Z,680nm,23.0s							
WVL	Waterville	49.76	68		P	pP	02 20 36.4	+2.5
	baz=319,SNR=10.0							
X51A	Calhoun	49.89	89		P	P	02 20 15.7	+0.4
	baz=322							
X51A					P	P	02 20 15.7	+0.4
	baz=322							
U54A	Nelsons Funny	49.90	84		IAmb	IAmb	02 20 37.7	
	comp=Z,54nm,0.8s							
U54A	Nelsons Funny	49.90	84		P	P	02 20 16.7	+1.3
	baz=321							
U54A					P	P	02 20 16.7	+1.3
	baz=321							
W52A	Murphy	49.95	87		IAmb	IAmb	02 20 37.8	
	comp=Z,39nm,0.8s							
W52A	Murphy	49.95	87		P	P	02 20 16.6	+0.8
	baz=322							
K62A	Royalston	49.96	72		P	P	02 20 16.7	+1.0
	baz=319,SNR=11							
K62A					P	P	02 20 16.7	+1.0
	baz=319,SNR=11							
HAMF	Hammerfest	50.00	2		eP	P	02 20 16.2	+0.6
ODNJ	Ogdensburg	50.00	75		P	P	02 20 16.9	+0.8
	baz=320,SNR=6.6							
LRAL	Lakeview Retre	50.01	92		IAmb	IAmb	02 20 46.2	
	comp=Z,38nm,0.8s							
LRAL	Lakeview Retre	50.01	92		P	P	02 20 14.5	-1.6
	baz=323							
BRNY	Black Rk. Fore	50.04	74		P	P	02 20 16.4	0.0
	baz=320,SNR=6.2							
V53A	Saluda	50.06	86		P	P	02 20 16.8	+0.2
	baz=322,SNR=8.6							
V53A					P	P	02 20 16.8	+0.2
	baz=322,SNR=8.6							
BLA	Blacksburg	50.07	83		P	P	02 20 16.1	-0.6
	baz=321,SNR=5.8							
BLA	Blacksburg	50.07	83		P	P	02 20 17.6	+0.9
	baz=321,SNR=5.8							
JGF	Kuroka	50.10	274		P	P	02 20 18.2	+1.3
WUPA	West Chester U	50.38	77		IAmb	IAmb	02 20 41.4	
	comp=Z,47nm,0.7s							
PAL	Palisades	50.40	74		P	P	02 20 18.7	-0.4
	baz=320							
HRV	Adam Dziewonsk	50.40	71		P	P	02 20 17.8	-1.3
	baz=319							
HRV	Adam Dziewonsk	50.40	71		P	P	02 20 21.4	+2.4
HRV					pP	pP	02 20 40.9	+2.0
TUPA	Temple Univers	50.41	76		P	P	02 20 20.5	+1.3
	baz=320,SNR=6.6							
INU	Inuyama	50.47	274		IAmb	IAmb	02 20 22.5	
	comp=Z,48nm,0.9s							
INU	Inuyama	50.47	274		P	P	02 20 20.0	+0.4
	comp=Z,61nm,0.9s							
INU	Inuyama	50.47	274		P	P	02 20 19.4	-0.2
BG3	Lake Jocassee	50.53	87		IAmb	IAmb	02 22 01.5	
	comp=Z,66nm,1.1s							
VADS	Vadso	50.54	359		eP	P	02 20 21.4	+1.7
VADS					IAmb	IAmb	02 20 21.5	
	comp=Z,34nm,0.8s							
WES	Weston	50.61	71		P	pP	02 20 42.4	+2.0
	baz=320,SNR=12							
BORG	Borgarnes	50.67	25		LR	LR	02 43 48.3	
	comp=Z,218nm,20.5s,baz=334,slow=38							
BORG	Borgarnes	50.67	25		P	P	02 20 21.2	+0.5
EMMW	East Machias	50.68	67		P	pP	02 20 42.9	+1.9
	baz=319,SNR=9.8							
Z51A	Franklin	50.71	90		P	P	02 20 21.6	+0.1
	baz=323							

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V55A   Taylorsville      50.73  84   IAmb    IAmb    02 20 43.8
       comp=Z,37nm,0.8s
V55A   Taylorsville      50.73  84   P       P       02 20 22.7 +1.1
       baz=322
V55A                                 P       P       02 20 22.7 +1.1
       baz=322
U56A   King              50.76  83   P       P       02 20 23.0 +1.1
       baz=321
U56A                                 P       P       02 20 23.0 +1.1
       baz=321
R58B   Mineral           50.77  80   IAmb    IAmb    02 20 44.4
       comp=Z,85nm,1.0s
JHJ    Hachijo jima 2    50.82 270   LR      LR      02 39 44.5
       comp=Z,146nm,21.9s,baz=88,slow=33
T57A   Hurt              50.82  82   IAmb    IAmb    02 20 44.8
       comp=Z,36nm,0.7s
T57A   Hurt              50.82  82   P       P       02 20 22.9 +0.6
       baz=321
T57A                                 P       P       02 20 22.9 +0.6
       baz=321
CBN    Corbin Frederi    50.83  79   P       P       02 20 22.6 +0.3
       baz=321
TRO    Tromso            50.90   4  eP       P       02 20 24.1 +1.7
TRO                                  IAmb    IAmb    02 20 24.3
       comp=Z,20nm,0.9s
KEV    Kevo              50.91   0   P       P       02 20 22.2 -0.3
KEV                                  pP      pP      02 20 43.9 +1.4
JETT   Jettan, Norway    51.02   3  eP       P       02 20 23.5 +0.1
JETT                                 IAmb    IAmb    02 20 25.1
       comp=Z,24nm,0.9s
ARA0   ARCESS Array S    51.13   1  eP       P       02 20 23.7 -0.5
ARCES  ARCESS Array B    51.13   1   P       P       02 20 23.8 -0.4
       comp=Z,10nm,0.5s,baz=356,slow=5.5,SNR=41
ARCES                                pP      pP      02 20 41.7 -2.4
       comp=Z,12nm,0.6s,baz=15,slow=7.5,SNR=5.8
ARCES                                PcP     PcP     02 21 38.1 -0.4
       comp=Z,16nm,0.8s,baz=7.0,slow=11,SNR=4.5
ARCES                                ScP     ScP     02 25 26.5 -0.8
       comp=Z,7.0nm,0.9s,baz=352,slow=5.5,SNR=3.6
ARCES                                LR      LR      02 44 06.4
       comp=Z,127nm,20.1s,baz=340,slow=38
       comp=Z,10nm,0.5s
ARCES  ARCESS Array B    51.13   1   P       P       02 20 23.6 -0.6
ARCES                                IAmb    IAmb    02 21 53.2
       comp=Z,101nm,1.9s
ARCES  ARCESS Array B    51.13   1   P       P       02 20 23.6 -0.6
ARCES                                pmax    pmax
       comp=Z,101nm,2.0s
KMSC   Kings Mountain    51.22  85   IAmb    IAmb    02 20 47.3
       comp=Z,37nm,0.9s
KMSC   Kings Mountain    51.22  85   P       P       02 20 25.5 +0.2
       baz=322
PAULI  Pauline           51.23  86   IAmb    IAmb    02 20 53.6
       comp=Z,44nm,0.7s
HODGE  Hodges            51.47  87   IAmb    IAmb    02 20 49.2
       comp=Z,50nm,0.7s
BRAL   Brewton           51.47  93   P       P       02 20 27.1 -0.1
       baz=324
KTK1   Kautokeino        51.63   2  eP       P       02 20 27.3 -0.6
KTK1                                 IAmb    IAmb    02 20 29.2
       comp=Z,11nm,0.9s
W57A   Gilead            51.89  84   IAmb    IAmb    02 20 52.2
       comp=Z,60nm,0.8s
U59A   Littleton         52.06  81   IAmb    IAmb    02 20 54.0
       comp=Z,64nm,0.8s
SNY    Shenyang          52.12 290  ⇑P       P       02 20 31.6 -0.3
SNY                                  S       S       02 27 45.9 -3.7
SNY                                  pmax    pmax
       comp=Z,280nm,1.0s
SNY                                  pmax    pmax
       comp=Z,1µm,3.5s
SNY                                  LR      LR
       comp=Z,650nm,15.9s
SNY                                  LR      LR
       comp=Z,800nm,17.5s
SNY                                  LR      LR
       comp=Z,930nm,24.6s
LOF    Lofoten           52.15   6  eP       P       02 20 31.9 +0.1
352A   Blakely           52.30  91   P       P       02 20 33.5 +0.1
       baz=324
STEI   Steigen           52.44   6  eP       P       02 20 33.4 -0.5
STEI                                 IAmb    IAmb    02 20 35.5
       comp=Z,40nm,1.1s
IRK    Irkutsk           52.48 311  eP       P       02 20 33.6 -0.9
IRK                                  pmax    pmax
       comp=Z,150nm,3.1s
LVZ    Lovozero          52.66 356   P       P       02 20 35.5 -0.1
LVZ                                  IAmb    IAmb    02 21 19.1
       comp=Z,58nm,1.2s
LVZ    Lovozero          52.66 356c iP       P       02 20 37.0 +1.4
LVZ                                  pmax    pmax
       comp=Z,70nm,1.8s
LVZ    Lovozero          52.66 356   P       P       02 20 36.5 +0.9
LVZ                                  pP      pP      02 20 57.4 +1.7
LVZ                                  sP      sP      02 21 08.3 +3.5
JHS    Saijyo            52.72 277   P       P       02 20 36.6 +0.2
FAUS   Fauske            52.99   6  eP       P       02 20 37.4 -0.5
FAUS                                 IAmb    IAmb    02 20 40.4
       comp=Z,14nm,0.7s
APA    Apatity           53.03 357⇓iP       P       02 20 38.1 -0.1
APA                                 i S      S       02 28 00.0 -1.4
APA                                 i PS     PKiKP   02 28 28.0 +5.3
JMN    Monobe            53.34 275   IAmb    IAmb    02 20 44.6
       comp=Z,61nm,0.9s
JMN    Monobe            53.34 275   P       P       02 20 42.0 +1.0
KSRS   Korea Array       53.39 283   P       P       02 20 41.5 +0.3
       comp=Z,91nm,0.9s,baz=41,slow=6.9,SNR=97
KSRS                                 ScP     ScP     02 25 38.4 +0.8
       comp=Z,4.6nm,0.8s,baz=37,slow=3.7,SNR=5.3
KSRS                                 LR      LR      02 43 08.3
       comp=Z,181nm,21.9s,baz=45,slow=36
       comp=Z,91nm,0.9s
KSAR   Wonju Array Be    53.42 283   P       P       02 20 41.4 -0.1
KSAR   Wonju Array Be    53.42 283   P       P       02 20 41.4 -0.1
KONS   Konsvik           53.75   7  eP       P       02 20 46.3 +2.8
INCN   Inchon            54.00 284   P       P       02 20 45.6 -0.2
INCN   Inchon            54.00 284   P       P       02 20 47.0 +1.2
INCN   Inchon            54.00 284   P       P       02 20 45.6 -0.2
INCN                                 pmax    pmax
       comp=Z,125nm,0.8s
INCN   Inchon            54.00 284   P       P       02 20 46.2 +0.4
XLT    XiLinHaoTe        54.02 297⇑iP       P       02 20 45.9  0.0
XLT                                  pP      pP      02 21 04.4 -1.7
XLT                                  S       S       02 28 13.2 -2.4
XLT                                  pmax    pmax
       comp=Z,83nm,1.0s
XLT                                  pmax    pmax
       comp=Z,560nm,3.6s
XLT                                  LR      LR
       comp=Z,640nm,15.5s
XLT                                  LR      LR
       comp=Z,450nm,16.1s
MOR8   Moi Rana          54.15   6  eP       P       02 20 45.0 -1.5
MOR8                                 IAmb    IAmb    02 20 48.5
       comp=Z,16nm,0.9s
MOY    Mondy             54.18 312  eP       P       02 20 47.9 +0.8
MOY                                  pmax    pmax
       comp=Z,15nm,2.6s
ZAK    Zakamensk         54.34 310  eP       P       02 20 47.6 -0.6
ZAK                                  pmax    pmax
       comp=Z,19nm,1.3s
JCJ    Chichijima        54.47 263   P       P       02 20 50.0 +0.7
       comp=Z,128nm,0.6s,baz=130,slow=18,SNR=6.0
JCJ                                  LR      LR      02 42 05.6
       comp=Z,164nm,21.2s,baz=104,slow=34
       comp=Z,128nm,0.6s
TJN    Taejon            54.51 283   P       P       02 20 50.6 +1.1
TJN    Taejon            54.51 283c iP       P       02 20 50.0 +0.5
ULN    Ulaanbaatar       54.82 306   P       P       02 20 51.4 -0.4
ULN                                  IAmb    IAmb    02 20 53.5
       comp=Z,47nm,1.1s
ULN    Ulaanbaatar       54.82 306   P       P       02 20 51.4 -0.4
ULN                                  pmax    pmax
       comp=Z,47nm,1.1s
ULN    Ulaanbaatar       54.82 306   P       P       02 20 52.3 +0.5
ULN                                  ScP     ScP     02 25 43.2 -0.7
SONM   Songino Array     55.12 306   P       P       02 20 54.0 +0.1
       comp=Z,54nm,0.9s,baz=46,slow=5.5,SNR=276
SONM                                 ScP     ScP     02 25 45.9 +0.6
       comp=Z,6.0nm,0.8s,baz=45,slow=3.9,SNR=6.9
SONM                                 LR      LR      02 46 23.4
       comp=Z,799nm,18.2s,baz=34,slow=38
       comp=Z,54nm,0.9s
SONM   Songino Array     55.12 306   P       P       02 20 53.8 -0.1
SONM   Songino Array     55.12 306   P       P       02 20 53.8 -0.1
SONM                                 pmax    pmax
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       comp=Z,125nm,1.1s
DL2    Dalian            55.33 289   P       P       02 20 55.8 +0.5
DL2                                  S       S       02 28 34.5 +1.5
DL2                                  pmax    pmax
       comp=Z,55nm,0.9s
DL2                                  LR      LR
       comp=Z,430nm,13.8s
DL2                                  LR      LR
       comp=Z,340nm,10.5s
DL2                                  LR      LR
       comp=Z,630nm,19.8s
JNU    Nakatsue          55.33 277   LR      LR      02 44 16.4
       comp=Z,166nm,21.4s,baz=44,slow=36
NSS    Namsos            55.62   8  eP       P       02 20 57.1  0.0
NSS                                  IAmb    IAmb    02 21 00.4
       comp=Z,24nm,0.8s
ADZR   Andozero          56.48 354  eP       P       02 21 03.6 +0.4
ADZR                                 pmax    pmax
       comp=Z,26nm,0.7s
BJI    Beijing           57.01 294   P       P       02 21 07.1 -0.2
BJI                                  pP      pP      02 21 24.5 -3.2
BJI                                  sP      sP      02 21 30.3 -6.4
BJI                                  S       S       02 28 53.9 -1.3
BJI                                  ScS     ScS     02 30 45.4 -3.2
BJI                                  pmax    pmax
       comp=Z,46nm,0.9s
BJT    Baijiatuau        57.03 294   P       P       02 21 08.8 +1.4
BJT    Baijiatuau        57.03 294   P       P       02 21 07.2 -0.2
AKN    Aaknes            57.53  11  eP       P       02 21 10.7 +0.1
ZAA0   Zalesovo Array    57.76 324   P       P       02 21 12.1 -0.2
ZAA0                                 IAmb    IAmb    02 21 14.0
       comp=Z,53nm,0.9s
ZALV   Zalesovo Beam     57.76 324   P       P       02 21 11.7 -0.6
       comp=Z,50nm,0.7s,baz=30,slow=7.1,SNR=177
ZALV                                 ScP     ScP     02 25 56.0 -0.6
       comp=Z,3.3nm,0.9s,baz=29,slow=3.3,SNR=4.2
ZALV                                 LR      LR      02 47 32.5
       comp=Z,216nm,20.1s,baz=24,slow=38
       comp=Z,50nm,0.7s
ZALV   Zalesovo Beam     57.76 324   P       P       02 21 11.8 -0.5
ZALV   Zalesovo Beam     57.76 324  i P      P       02 21 12.3  0.0
ZALV                                 pmax    pmax
       comp=Z,50nm,0.7s
DOMB   Dombas            57.85  10  eP       P       02 21 12.0 -1.0
DOMB                                 IAmb    IAmb    02 21 12.6
       comp=Z,23nm,0.8s
HHC    Hu-ho-hao-te      58.47 298  eP       P       02 21 17.8 +0.1
HHC                                  S       S       02 29 13.9 -0.7
HHC                                  SS      SS      02 33 10.0 +2.6
HHC                                  pmax    pmax
       comp=Z,160nm,1.0s
HHC                                  pmax    pmax
       comp=Z,190nm,5.4s
HHC                                  LR      LR
       comp=Z,920nm,20.6s
HHC                                  LR      LR
       comp=Z,1µm,20.4s
HHC                                  LR      LR
       comp=Z,1µm,19.4s
NC405  NORSAR Array S    58.99   9   IAmb    IAmb    02 21 47.1
       comp=Z,35nm,0.8s
ASK    Askoy             59.00  13  eP       P       02 21 20.7 -0.2
ASK                                  IAmb    IAmb    02 21 20.8
       comp=Z,107nm,1.0s
NB2    NORSAR Subarra    59.02   9   P       P       02 21 20.1 -1.0
       comp=Z,21nm,0.9s,baz=352,slow=6.9
NB2    NORSAR Subarra    59.02   9   P       P       02 21 20.1 -1.0
       slow=6.9
NOA    NORSAR Array B    59.02   9   P       P       02 21 19.9 -1.2
       comp=Z,7.9nm,0.8s,baz=352,slow=6.8,SNR=35
NOA                                  pP      pP      02 21 39.1 -2.4
       comp=Z,9.6nm,0.7s,baz=351,slow=6.9,SNR=6.6
NOA                                  ScP     ScP     02 26 01.1 -1.0
       comp=Z,4.9nm,1.0s,baz=353,slow=5.2,SNR=3.9
NOA                                  LR      LR      02 48 39.2
       comp=Z,72nm,20.3s,baz=340,slow=38
       comp=Z,7.9nm,0.8s
SKAR   Skarslia          59.13  11  eP       P       02 21 21.7 -0.1
NAO01  NORSAR Array S    59.19   9   P       P       02 21 21.9 -0.3
NAO01                                IAmb    IAmb    02 22 04.8
       comp=Z,54nm,1.1s
FIA1   FINESS Array S    59.26   1   P       P       02 21 22.4 -0.2
FIA1                                 IAmb    IAmb    02 21 49.3
       comp=Z,53nm,1.0s
FINES  FINESS Array B    59.26   1   P       P       02 21 22.3 -0.3
       comp=Z,7.3nm,0.6s,baz=0.9,slow=8.6,SNR=54
FINES                                pP      pP      02 21 38.6 -4.4
       comp=Z,15nm,0.8s,baz=14,slow=7.3,SNR=6.0
FINES                                ScP     ScP     02 26 01.9 -1.1
       comp=Z,12nm,0.8s,baz=9.2,slow=6.0,SNR=9.5
FINES                                LR      LR      02 51 46.2
       comp=Z,114nm,18.4s,baz=19,slow=41
       comp=Z,7.3nm,0.6s
FINES  FINESS Array B    59.26   1   P       P       02 21 22.4 -0.2
CMIG   Matias Romero     59.33 110   LR      LR      02 45 46.6
       comp=Z,312nm,21.6s,baz=314,slow=35
NC602  NORSAR Array S    59.35   9  eP       P       02 21 23.6 +0.3
BTO    Baotou            59.36 299  eP       P       02 21 22.5 -1.3
BTO                                  S       S       02 29 22.0 -4.1
BTO                                  LR      LR
       comp=Z,1µm,21.9s
BTO                                  LR      LR
       comp=Z,1µm,17.9s
KLMR   Klimovskoe        59.48 353  eP       P       02 21 25.0 +0.9
KLMR                                eP       P       02 21 25.0 +0.9
KLMR                                eP       P       02 21 25.0 +0.9
KLMR                                 AMP             02 21 41.9
       comp=Z,52nm,1.7s
KLMR                                e                02 21 47.4
KLMR                                e                02 26 00.6
KLMR                                eS       S       02 29 24.5 -2.3
KLMR                                eS       S       02 29 24.5 -2.3
KLMR                                 LR      LR      02 41 06.7
KLMR                                 AMP             02 45 47.3
       comp=Z,711nm,21.0s
KLMR   Klimovskoe        59.48 353  eP       P       02 21 25.0 +0.9
KLMR                                e                02 21 47.4
KLMR                                eS       S       02 29 24.4 -2.3
KLMR                                 pmax    pmax
       comp=Z,52nm,1.7s
RAF    Rauma             59.61   3  eP       P       02 21 24.5 -0.5
ODD1   Odda              59.72  12  eP       P       02 21 25.0 -0.9
HNS    HongShan          59.81 293  ⇑P       P       02 21 26.8  0.0
HNS                                  S       S       02 29 32.6 +0.9
HNS                                  pmax    pmax
       comp=Z,100nm,1.1s
HNS                                  LR      LR
       comp=Z,470nm,19.1s
HNS                                  LR      LR
       comp=Z,690nm,18.6s
HNS                                  LR      LR
       comp=Z,510nm,20.7s
TEIG   Tepich            59.89 102   P       P       02 21 27.6 +0.1
TEIG                                 pP      pP      02 21 47.6 -0.3
HFS    Hagfors           60.11   8   LR      LR      02 46 58.9
       comp=Z,187nm,21.9s,baz=356,slow=35
BLS5   Blasjo            60.18  12  eP       P       02 21 29.1 +0.1
KONO   Kongsberg         60.26  10   P       P       02 21 29.6  0.0
KONO   Kongsberg         60.26  10   P       P       02 21 29.6  0.0
KONO                                 pmax    pmax
       comp=Z,166nm,2.0s
KONO   Kongsberg         60.26  10  eP       P       02 21 29.3 -0.2
KONO   Kongsberg         60.26  10   P       P       02 21 29.3 -0.2
KONO                                 pP      pP      02 21 50.3 +0.3
KONO                                 sP      sP      02 22 00.6 +1.6
AAL    Aland             60.40   4  eP       P       02 21 29.9 -0.5
MEF    Metsahovi         60.47   2  eP       P       02 21 33.6 +2.6
KPL    Plockton          60.51  20  eP       P       02 21 31.0 -0.3
DGZ    Jazzator, Alta    60.60 320c iP       P       02 21 32.5 +0.3
DGZ                                  pmax    pmax
       comp=Z,52nm,1.7s
TIY    Taiyuan           60.61 295  eP       P       02 21 32.6 +0.2
TIY                                  S       S       02 29 42.3 +0.1
TIY                                  ScS     SKKSac  02 31 11.5 -3.9
TIY                                  pmax    pmax
       comp=Z,26nm,0.5s
TIY                                  LR      LR
       comp=Z,370nm,11.2s
TIY                                  LR      LR
       comp=Z,570nm,13.5s
TIY                                  LR      LR
       comp=Z,420nm,14.1s
UPP    Uppsala           60.62   6  eP       P       02 21 34.3 +2.4
MCD    Coleburn Disti    60.67  18  eP       P       02 21 32.7 +0.3
KIRV   Kirov             60.85 347   LR      LR      02 50 23.2
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       comp=Z,334nm,21.4s,baz=20,slow=38
KIRV   Kirov             60.85 347c iP       P       02 21 33.6 +0.1
SVE    Sverdlovsk        60.91 340  eP       P       02 21 34.3 +0.3
SVE                                  pmax    pmax
       comp=Z,37nm,1.3s
HOMB   Homborsund        61.52  11  eP       P       02 21 38.5 +0.4
HOMB   Homborsund        61.52  11  eP       P       02 21 38.4 +0.3
LAWE   Loch Awe, Argy    61.58  20  eP       P       02 21 37.2 -1.3
LAWE                                 IAmb    IAmb    02 21 39.0
       comp=Z,45nm,0.7s
ARU    Arti              61.65 341   LR      LR      02 50 06.1
       comp=Z,418nm,21.7s,baz=16,slow=38
ARU    Arti              61.65 341   P       P       02 21 38.7 -0.2
ARU                                  IAmb    IAmb    02 22 23.2
       comp=Z,43nm,1.3s
ARU    Arti              61.65 341d iP       P       02 21 38.8 -0.2
ARU                                  *PP     pP      02 21 56.7 -2.9
ARU                                                  02 22 18.8
ARU                                  S       S       02 29 56.2 +1.6
ARU                                  SS      SS      02 34 01.9 +5.8
ARU                                  pmax    pmax
       comp=Z,21nm,0.9s
ARU                                  MLR     MLR
       comp=Z,587nm,22.0s
ARU    Arti              61.65 341   P       P       02 21 37.8 -1.2
INVG   Invergeldie, C    61.65  19  eP       P       02 21 38.6 -0.4
INVG                                 IAmb    IAmb    02 21 39.8
       comp=Z,27nm,0.7s
EDU    Dundee            61.70  18  eP       P       02 21 39.0 -0.4
JOW    Kunigami          61.74 275   P       P       02 21 40.0  0.0
       comp=Z,201nm,0.9s,baz=45,slow=8.3,SNR=14
       comp=Z,201nm,0.9s
JOW    Kunigami          61.74 275   P       P       02 21 40.5 +0.5
JOW    Kunigami          61.74 275   P       P       02 21 41.1 +1.0
VIKU   Vikbolandet       61.92   6  eP       P       02 21 40.7  0.0
MTSE   Matsula           61.97   2  eP       P       02 21 42.2 +1.1
PGBU   Glenifferbraes    62.16  20  eP       P       02 21 41.9 -0.5
PGBU                                 IAmb    IAmb    02 21 43.9
       comp=Z,53nm,0.8s
NJ2    Nanjing           62.17 286  ⇑P       P       02 21 42.3 -0.5
NJ2                                  pP      pP      02 22 02.4 -1.0
NJ2                                  PP      PP      02 24 02.8 +2.7
NJ2                                  pmax    pmax
       comp=Z,130nm,1.0s
NJ2                                  pmax    pmax
       comp=Z,550nm,4.7s
NJ2                                  LR      LR
       comp=Z,760nm,20.4s
NJ2                                  LR      LR
       comp=Z,680nm,24.6s
NJ2                                  LR      LR
       comp=Z,1µm,23.7s
VSU    Vasula            62.25   0ceP       P       02 21 43.5 +0.5
VSU                                  pmax    pmax
       comp=Z,67nm,0.9s
VSU    Vasula            62.25   0  eP       P       02 21 44.2 +1.2
EDI    Edinburgh         62.27  19  eP       P       02 21 42.2 -1.0
EDI                                  IAmb    IAmb    02 21 43.1
       comp=Z,43nm,1.0s
KURK   Kurchatov         62.41 326   P       P       02 21 43.8 -0.4
KURK                                 IAmb    IAmb    02 21 45.2
       comp=Z,42nm,1.0s
KURK   Kurchatov         62.41 326   P       P       02 21 43.8 -0.4
KURK                                 pmax    pmax
       comp=Z,42nm,1.0s
KURK   Kurchatov         62.41 326   P       P       02 21 43.8 -0.4
KURK                                 pP      pP      02 22 06.9 +1.8
EBL    Broad Law         62.44  19  eP       P       02 21 44.4  0.0
BRVK   Borovoye          62.46 332   P       P       02 21 44.5 +0.1
BRVK                                 IAmb    IAmb    02 21 46.3
       comp=Z,38nm,0.8s
BRVK   Borovoye          62.46 332   P       P       02 21 44.5 +0.1
BRVK                                 pmax    pmax
       comp=Z,38nm,0.8s
BRVK   Borovoye          62.46 332   P       P       02 21 44.6 +0.1
BVAR   Borovoye Array    62.46 332   LR      LR      02 51 36.5
       comp=Z,220nm,21.0s,baz=21,slow=39
KURBB  Kurchatov Arra    62.52 326   LR      LR      02 51 56.6
       comp=Z,586nm,19.5s,baz=64,slow=39
BORU   Boraas            62.52   9  eP       P       02 21 44.9 +0.1
ONAU   Onsala            62.69   9  eP       P       02 21 45.7 -0.2
ESK    Eskdalemuir       62.85  19  eP       P       02 21 46.2 -0.8
ESK                                  IAmb    IAmb    02 21 47.2
       comp=Z,53nm,1.0s
ESK    Eskdalemuir       62.85  19   P       P       02 21 46.1 -0.9
ESK                                  IAmb    IAmb    02 21 47.9
       comp=Z,41nm,0.7s
ESK    Eskdalemuir       62.85  19   P       P       02 21 46.1 -0.9
ESK                                  pmax    pmax
       comp=Z,41nm,0.7s
ESK    Eskdalemuir       62.85  19   P       P       02 21 46.2 -0.8
ESK                                  pP      pP      02 22 09.4 +1.8
NEWG   New Galloway      62.87  20  eP       P       02 21 46.9 -0.3
SLIT   Slitere, Latvi    63.02   3  eP       P       02 21 51.1 +3.0
GAL1   Galloway          63.03  20  eP       P       02 21 47.4 -0.8
GAL1                                 IAmb    IAmb    02 21 48.7
       comp=Z,64nm,0.6s
FABU   Falkenberg        63.15   9  eP       P       02 21 48.5 -0.5
LYN    LuoYang           63.18 293  ⇑P       P       02 21 49.4 -0.1
LYN                                  S       S       02 30 10.8 -3.6
LYN                                  SS      SS      02 34 22.9 +1.8
LYN                                  pmax    pmax
       comp=Z,170nm,0.9s
LYN                                  pmax    pmax
       comp=Z,630nm,4.1s
LYN                                  LR      LR
       comp=Z,300nm,15.3s
LYN                                  LR      LR
       comp=Z,260nm,15.3s
LYN                                  LR      LR
       comp=Z,380nm,18.2s
MUD    Monsted U'grnd    63.38  11  eP       P       02 21 50.6 +0.2
MUD                                  IAmb    IAmb    02 21 51.9
       comp=Z,28nm,0.9s
EDMD   Edmundbyers       63.52  18  eP       P       02 21 51.4 -0.1
KESW   Keswick, Cumbr    63.57  19  eP       P       02 21 51.3 -0.5
KESW                                 IAmb    IAmb    02 21 52.6
       comp=Z,46nm,0.7s
IOMK   Kirk Michael      63.63  20  eP       P       02 21 52.1 -0.1
DEL    Delary            63.76   8  eP       P       02 21 53.0  0.0
DEL    Delary            63.76   8  i P      P       02 21 53.1 +0.1
BLEU   Blekinge          64.06   7  i P      P       02 21 54.8 -0.1
BJUU   Bjuv              64.09   9  i P      P       02 21 55.3 +0.1
DSB    Dublin            64.27  22   P       P       02 21 56.6 +0.2
HPK    Haverah Park      64.42  18  eP       P       02 21 57.5 +0.2
HPK                                  IAmb    IAmb    02 21 58.1
       comp=Z,51nm,0.7s
WME    Myndd Eilian      64.51  20  eP       P       02 21 57.7 -0.2
GUMO   Guam              64.53 253   LR      LR      02 49 04.1
       comp=Z,70nm,19.2s,baz=82,slow=35
LUNU   Lund              64.56   9  i P      P       02 21 58.1 -0.1
MOS    Moscow            64.69 354  eP       P       02 22 04.4 +5.3
MOS                                 e*PP     pP      02 22 22.6 +2.8
MOS                                 eS       S       02 30 41.6 +9.2
MOS                                 e*SS     sS      02 31 14.7 +6.5
MOS                                  pmax    pmax
       comp=Z,28nm,0.9s
GTA    Gaotai            64.75 305  eP       P       02 21 59.5 -0.4
GTA                                  S       S       02 30 30.8 -3.2
GTA                                  ScS     SKSac   02 31 43.8 -3.1
GTA                                  SS      SS      02 34 41.7 -3.8
GTA                                  pmax    pmax
       comp=Z,84nm,1.0s
GTA                                  pmax    pmax
       comp=Z,210nm,7.6s
GTA                                  LR      LR
       comp=Z,470nm,15.1s
GTA                                  LR      LR
       comp=Z,480nm,14.3s
GTA                                  LR      LR
       comp=Z,840nm,15.1s
MK31   Makanchi Array    64.81 322   P       P       02 21 59.1 -1.0
MK31   Makanchi Array    64.81 322   P       P       02 21 59.1 -1.0
MK31                                 pmax    pmax
       comp=Z,14nm,0.9s
MKAR   Makanchi Array    64.81 322   P       P       02 21 58.4 -1.7
       comp=Z,15nm,0.7s,baz=38,slow=5.6,SNR=162
MKAR                                 LR      LR      02 51 40.3
       comp=Z,330nm,21.3s,baz=27,slow=37
       comp=Z,15nm,0.7s
MKAR   Makanchi Array    64.81 322   P       P       02 21 59.0 -1.0
MKAR   Makanchi Array    64.81 322  i P      P       02 21 58.7 -1.4
MKAR                                 pmax    pmax
       comp=Z,17nm,0.8s
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MAKZ  Makanchi         64.89 322   P       P       02 21 59.8 -0.8
MAKZ  Makanchi         64.89 322   P       P       02 21 59.8 -0.8
MAKZ                               pmax    pmax
      comp=Z,24nm,0.9s
MAKZ  Makanchi         64.89 322   P       P       02 22 00.7 +0.1
MAKZ                               pP      pP      02 22 22.7 +1.3
ISAL  Salakas          65.15   1  eP       P       02 22 04.8 +2.8
FOEL  Foel Wylfa       65.18  20  eP       P       02 22 02.0 -0.4
FOEL                               IAmb    IAmb    02 22 03.1
      comp=Z,45nm,0.6s
BSD   Bornholm Skovb   65.19   8  eP       P       02 22 02.1 -0.2
PABE  Paberze          65.19   2   P       P       02 22 01.8 -0.5
PABE  Paberze          65.19   2  eP       P       02 22 03.1 +0.8
XAN   Xi'an            65.25 295 ⇑P        P       02 22 02.1 -1.0
XAN                                S       S       02 30 36.4 -3.7
XAN                                pmax    pmax
      comp=Z,80nm,1.5s
XAN                                pmax    pmax
      comp=Z,450nm,6.3s
XAN                                LR      LR
      comp=Z,440nm,17.5s
XAN                                LR      LR
      comp=Z,400nm,18.4s
XAN                                LR      LR
      comp=Z,560nm,18.4s
XAN   Xi'an            65.25 295   P       P       02 22 02.2 -0.9
OBN   Obninsk          65.37 354   LR      LR      02 54 18.4
      comp=Z,68nm,21.2s,baz=358,slow=39
OBN   Obninsk          65.37 354⇓iP        P       02 22 03.7 +0.2
OBN                               e*PP     pP      02 22 18.4 -5.8
OBN                               i                02 22 31.1
OBN                               ePPP     PPP     02 26 08.0
OBN                               i S      S       02 30 40.1 -0.7
OBN                               e*SS     sS      02 31 17.6 +1.0
OBN                               e                02 31 51.6
OBN                                pmax    pmax
      comp=Z,13nm,0.6s
OBN                                MLR     MLR
      comp=Z,327nm,19.0s
IIGN  Ignalina         65.37   1  eP       P       02 22 06.3 +2.8
IDID  Didziasalis      65.41   0  eP       P       02 22 06.3 +2.6
WHN   Wuhan            65.59 289 ⇑P        P       02 22 04.6 -0.7
WHN                                pP      pP      02 22 23.5 -2.5
WHN                                S       S       02 30 41.9 -2.3
WHN                                pmax    pmax
      comp=Z,170nm,0.9s
WHN                                LR      LR
      comp=Z,2µm,22.7s
WMQ   Urumqi           65.62 316  eP       P       02 22 06.5 +1.1
WMQ                                PcP     PcP     02 22 41.1 +4.8
WMQ                                S       S       02 30 44.0 -0.4
WMQ                                pmax    pmax
      comp=Z,65nm,1.1s
WMQ                                pmax    pmax
      comp=Z,150nm,4.1s
WMQ                                LR      LR
      comp=Z,440nm,17.1s
WMQ                                LR      LR
      comp=Z,550nm,21.7s
WMQ                                LR      LR
      comp=Z,550nm,23.3s
RGN   Rugen            65.63   9   P       P       02 22 06.0 +0.8
RGN                                IAmb    IAmb    02 22 57.9
      comp=Z,101nm,1.0s
RSBS  Rosebush, Pemb   65.81  21  eP       P       02 22 06.7 +0.3
RSBS                               IAmb    IAmb    02 22 07.5
      comp=Z,60nm,0.8s
NACGM Naroch           65.82   0  eP       P       02 22 07.3 +0.9
      comp=E,474nm,1.1s
LZH   Lanzhou          65.82 300  eP       P       02 22 06.5 -0.5
LZH                                pP      pP      02 22 26.0 -1.7
LZH                                S       S       02 30 43.6 -3.7
LZH                                SS      SS      02 35 02.0 -0.4
LZH                                pmax    pmax
      comp=E,290nm,1.5s
LZH                                pmax    pmax
      comp=E,730nm,4.1s
LZH                                LR      LR
      comp=E,520nm,15.5s
LZH                                LR      LR
      comp=E,880nm,16.1s
LZH                                LR      LR
      comp=E,690nm,17.5s
KLNR  Kaliningrad      65.98   4c iP       P       02 22 07.8 +0.4
KLNR                               pmax    pmax
      comp=Z,107nm,0.9s
MCH1  Michaelchurch    66.08  20  eP       P       02 22 08.0 -0.1
MCH1                               IAmb    IAmb    02 22 08.8
      comp=Z,110nm,0.9s
MNK   Minsk            66.22 360  i P      P       02 22 10.1 +1.1
      comp=E,1.0nm,0.9s
MNK                               i P      P       02 22 10.1 +1.1
      comp=N,32nm,0.9s
MNK                               i P      P       02 22 10.1 +1.1
      comp=Z,38nm,0.9s,baz=180
MNK                               i pP     pP      02 22 27.6 -2.1
MNK                               i PcP    sP      02 22 38.5 -0.1
MNK                               i PP     PP      02 24 35.5 +0.6
MNK                               i PPP    PPP     02 26 10.9
MNK                               i S      S       02 30 53.4 +2.1
MNK                               i sS     sS      02 31 25.3 -1.9
MNK                               i ScS    ScS     02 31 59.0 +1.5
MNK                               i SS     SS      02 35 11.6 +4.3
MNK                               i SSS    SSS     02 38 21.9
MNK                               i LQ     LQ      02 46 32.9
MNK                               i LR     LR      02 49 22.2
MNK                               i LRM    MLR     02 52 21.7
      comp=Z,233nm,20.4s
MNK                               i LRM    MLR     02 52 52.4
      comp=E,14nm,16.0s
MNK                               i LRM    MLR     02 53 32.6
      comp=N,1µm,19.2s
MNK   Minsk            66.22 360  i P      P       02 22 10.0 +1.1
MNK                               i *PP    pP      02 22 27.6 -2.1
MNK                               i                02 22 38.5
MNK                               i                02 24 35.5
MNK                               i PPP    PPP     02 26 10.8
MNK                               i S      S       02 30 53.3 +2.1
MNK                               i *SS    sS      02 31 25.3 -1.9
MNK                               i                02 31 59.0
MNK                               i SS     SS      02 35 11.5 +4.3
MNK                                pmax    pmax
      comp=E,1.0nm,0.9s
MNK                                pmax    pmax
      comp=N,32nm,0.9s
MNK                                pmax    pmax
      comp=Z,38nm,0.9s
MNK                                MLR     MLR
      comp=Z,233nm,20.0s
MNK                                MLR     MLR
      comp=E,14nm,16.0s
MNK                                MLR     MLR
      comp=N,1µm,19.0s
STRD  Stroud           66.43  19  eP       P       02 22 10.7 +0.3
STRD                               IAmb    IAmb    02 22 14.2
      comp=Z,65nm,0.8s
ELMS  Elmsett, Ipswi   66.63  17  eP       P       02 22 11.6  0.0
ELMS                               IAmb    IAmb    02 22 12.1
      comp=Z,80nm,0.6s
RETH  Rethem/Aller,    67.06  12  eP       P       02 22 15.4 +1.1
      comp=Z,20nm,0.8s,baz=352,slow=6.2
RETH                              epP      pP      02 22 37.5 +2.3
      baz=352,slow=6.1
BELG  Belogornoye      67.13 347   LR      LR      02 54 03.7
      comp=Z,337nm,21.1s,baz=339,slow=38
BELG  Belogornoye      67.13 347ceP        P       02 22 15.9 +1.1
BELG                               pmax    pmax
      comp=Z,9.0nm,0.9s
GKP   Gorka Klasztor   67.17   7  eP       P       02 22 15.7 +0.7
GKP   Gorka Klasztor   67.17   7  eP       P       02 22 14.9 -0.1
NACB  Ninganchiao      67.31 279   P       P       02 22 16.4 +0.1
      comp=Z,71nm,1.0s
IBBN  Ibbenburen       67.31  13  eP       P       02 22 17.1 +1.1
      comp=Z,30nm,0.9s,baz=352,slow=6.2
IBBN                              epP      pP      02 22 39.1 +2.3
      baz=352,slow=6.1
NRDL  Niedersach Rie   67.38  11  eP       P       02 22 17.4 +1.1
      comp=Z,29nm,0.9s,baz=352,slow=6.2
AKTO  Aktyubinsk       67.49 339   LR      LR      02 57 44.9
      comp=Z,250nm,18.6s,baz=10,slow=41
FLTG  Flechtingen      67.65  11  eP       P       02 22 18.5 +0.4
      comp=Z,24nm,1.2s,baz=352,slow=6.2
RUE   Ruedersdorf      67.72   9  eP       P       02 22 19.6 +1.1
RUE   Ruedersdorf      67.72   9  eP       P       02 22 19.6 +1.1
      comp=Z,61nm,0.8s,baz=352,slow=6.2
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ASSE  Asse, Remlinge   67.80  11  eP       P       02 22 19.9 +1.0
      comp=Z,20nm,1.1s,baz=352,slow=6.2
SSLB  Suanglung        67.95 280   P       P       02 22 19.5 -0.9
SSLB                               IAmb    IAmb    02 22 23.8
      comp=Z,79nm,1.0s
SSLB  Suanglung        67.95 280   P       P       02 22 20.7 +0.3
CLZ   Clausthal        68.05  11  eP       P       02 22 22.0 +1.3
      comp=Z,50nm,0.7s,baz=352,slow=6.2
CLZ                               epP      pP      02 22 42.8 +1.3
      baz=352,slow=6.1
BUG   Bochum--Univer   68.11  13  eP       P       02 22 21.7 +0.8
      comp=Z,46nm,0.7s,baz=352,slow=6.2
BUG                               epP      pP      02 22 43.8 +2.0
      baz=352,slow=6.1
ENH   Enshi            68.13 293   IAmb    IAmb    02 22 22.5
      comp=Z,56nm,0.9s
ENH   Enshi            68.13 293   P       P       02 22 22.3 +0.8
ENH   Enshi            68.13 293   P       P       02 22 20.7 -0.8
CNSH  ChangSha         68.24 289 ⇓P        P       02 22 21.8 -0.3
CNSH                               S       S       02 31 13.3 -2.8
CNSH                               pmax    pmax
      comp=Z,79nm,0.7s
CNSH                               LR      LR
      comp=Z,450nm,21.2s
CNSH                               LR      LR
      comp=Z,520nm,19.7s
CNSH                               LR      LR
      comp=Z,740nm,27.2s
GTTG  Gottingen        68.30  12  eP       P       02 22 23.5 +1.3
      comp=Z,63nm,0.9s,baz=352,slow=6.2
GTTG                              epP      pP      02 22 44.3 +1.3
      baz=352,slow=6.1
KASTN Kahler Asten     68.48  13  eP       P       02 22 24.3 +1.0
      comp=Z,14nm,0.8s,baz=352,slow=6.2
TPUB  Ta-pu            68.52 279   IAmb    IAmb    02 22 25.9
      comp=Z,64nm,1.0s
BEBN  Eben Emael       68.55  15  dP       P       02 22 24.1 +0.4
BEBN                              dx       x       02 22 38.5
VORR  Voronezh         68.64 352  eP       P       02 22 24.3 +0.1
VORR                               pmax    pmax
      comp=Z,31nm,0.4s
BSTI  Sart Tilman      68.75  15  dP       P       02 22 24.5 -0.4
BSTI                              dpP      pP      02 22 44.8 -1.0
MEM   Membach          68.78  14  dP       P       02 22 25.3 +0.2
MEM                               dpP      pP      02 22 45.3 -0.7
MEM                               dPcP     PcP     02 22 48.7 -0.6
NEUB  Neuenburg        68.81  10  eP       P       02 22 26.2 +0.9
      comp=Z,42nm,0.7s,baz=352,slow=6.2
NEUB                              epP      PcP     02 22 48.5 -0.9
      baz=352,slow=6.1
BTNL  Ternell          68.81  14  dP       P       02 22 25.9 +0.5
BTNL                              dpP      pP      02 22 46.0 -0.3
CLL   Collm            68.82  10   P       P       02 22 25.4  0.0
CLL   Collm            68.82  10  i P      P       02 22 25.3 -0.1
      comp=Z,17nm,1.0s
CLL                               epP      PcP     02 22 48.0 -1.4
CLL                               esP      sP      02 22 55.0 -0.1
CLL                               i x      x       02 23 06.4
CLL                               epPP             02 25 16.0
CLL                               eS       S       02 31 23.0 +0.6
CLL                               ePS      PnS     02 32 05.0 +7.7
CLL                               eSS      SS      02 35 52.0 +4.5
CLL                               eSSS     SSS     02 39 18.0
CLL                               ex       x       02 40 05.0
CLL                               ePKPPKPdfP'P'df  02 50 37.0 -4.3
CLL   Collm            68.82  10  i P      P       02 22 25.3 -0.1
CLL                               e*PP     PcP     02 22 48.0 -1.4
CLL                               eS       S       02 31 23.0 +0.6
CLL                                pmax    pmax
      comp=Z,17nm,1.0s
CLL   Collm            68.82  10  eP       P       02 22 26.0 +0.6
      comp=Z,17nm,1.0s,baz=352,slow=6.2
CLL                               epP      PcP     02 22 48.1 -1.3
      baz=352,slow=6.1
BCLA  Clavier          68.87  15  dP       P       02 22 26.1 +0.4
BCLA                              dx       x       02 22 40.7
BCLA                              dPcP     PcP     02 22 49.1 -0.6
BGES  Gesves           68.88  15  dP       P       02 22 26.0 +0.2
      comp=Z,21nm,0.6s
BGES                              dpP      pP      02 22 45.3 -1.4
VRH   Novokhopyorsk    68.91 350  eP       P       02 22 22.7 -3.2
VRH                                pmax    pmax
      comp=Z,10.0nm,0.8s
BMRD  Maredsous        68.92  15  dP       P       02 22 26.4 +0.4
BMRD                              dpP      pP      02 22 46.5 -0.3
BMRD                              dPcP     PcP     02 22 49.5 -0.4
AHRW  Bad Neuenahr-A   68.97  14  eP       P       02 22 27.5 +1.1
      comp=Z,15nm,0.8s,baz=352,slow=6.2
AHRW                              epP      pP      02 22 48.2 +0.9
      baz=352,slow=6.1
TAOE  Nuku Hiva Isla   69.00 167  eS       S       02 31 25.8 +0.4
      comp=Z,294nm,25.9s
TAOE  Nuku Hiva Isla   69.00 167  eLR      LR      02 43 26.7
      comp=Z,1µm,31.2s
UBBA  Unterbreizbach   69.03  12  epP      pP      02 22 48.7 +1.2
      baz=352,slow=6.1
BHOU  Houvegnez        69.03  14  dP       P       02 22 27.2 +0.4
BHOU                              dpP      pP      02 22 47.3 -0.3
VSR   Storozhevoye     69.09 352  eP       P       02 22 25.5 -1.6
VSR                                pmax    pmax
      comp=Z,7.0nm,0.9s
DOU   Dourbes          69.09  15  dP       P       02 22 26.4 -0.7
DOU                               dpP      pP      02 22 47.0 -1.0
RCHB  Rochefort        69.12  15  dP       P       02 22 27.6 +0.3
RCHB                              dpP      pP      02 22 47.3 -0.9
RCHB                              dPcP     PcP     02 22 50.2 -0.5
FBE   Freiberg         69.23   9  eP       P       02 22 29.1 +1.2
      comp=Z,26nm,1.0s,baz=352,slow=6.2
BRG   Berggiesshubel   69.33   9  i P      P       02 22 29.1 +0.5
BRG                                Amp             02 22 29.8
      comp=Z,24nm,1.0s
BRG   Berggiesshubel   69.33   9   P       P       02 22 36.1 +7.6
BRG                                Amp             02 22 43.2
      comp=Z,9.9nm,0.9s
BRG   Berggiesshubel   69.33   9   Amp             02 22 56.6
      comp=Z,26nm,1.1s
BRG   Berggiesshubel   69.33   9   Amp             02 23 11.6
      comp=Z,46nm,1.3s
BRG   Berggiesshubel   69.33   9  i P      P       02 22 29.0 +0.5
BRG                                                02 22 51.6
BRG                                S       S       02 31 30.0 +1.6
BRG                                pmax    pmax
      comp=Z,24nm,1.0s
BRG   Berggiesshubel   69.33   9  eP       P       02 22 29.5 +0.9
      comp=Z,24nm,1.0s,baz=352,slow=6.2
BRG   Berggiesshubel   69.33   9   P       pP      02 22 51.7 +2.2
BRG   Berggiesshubel   69.33   9   P       sP      02 23 10.7  +12
VORD  Divnogorie       69.33 352  eP       P       02 22 26.4 -2.2
VORD                               pmax    pmax
      comp=Z,10.0nm,0.8s
MOX   Moxa             69.36  11   P       P       02 22 29.1 +0.3
MOX                                pmax    pmax
      comp=Z,63nm,0.7s
MOX   Moxa             69.36  11  eP       P       02 22 29.7 +0.9
      comp=Z,34nm,0.7s,baz=352,slow=6.2
MOX                               epP      pP      02 22 50.6 +0.9
      baz=352,slow=6.1
TNS   Taunus Mts       69.45  13  eP       P       02 22 30.3 +0.9
      comp=Z,21nm,0.7s,baz=352,slow=6.2
TNS                               epP      pP      02 22 51.1 +0.8
      baz=352,slow=6.1
SDDR  Presa de Saban   69.52  87   P       P       02 22 29.8 -0.4
SDDR                               IAmb    IAmb    02 22 54.5
      comp=Z,56nm,1.0s
KSP   Ksiaz            69.53   7  eP       P       02 22 30.5 +0.7
GOMU  GeErMu           69.54 307   P       P       02 22 30.5 -0.1
GOMU                               S       S       02 31 30.8 -1.4
GOMU                               ScS     SKSac   02 32 22.5 -1.4
GOMU                               SS      SS      02 35 59.4 -0.8
GOMU                               pmax    pmax
      comp=Z,47nm,0.9s
GOMU                               pmax    pmax
      comp=Z,150nm,6.6s
GOMU                               LR      LR
      comp=Z,510nm,18.9s
GOMU                               LR      LR
      comp=Z,290nm,18.6s
GOMU                               LR      LR
      comp=Z,690nm,21.8s
PLN   Plauen           69.56  10  eP       P       02 22 31.0 +1.0
      comp=Z,24nm,1.0s,baz=352,slow=6.2
WERD  Werda            69.61  10  eP       P       02 22 31.4 +1.0
      comp=Z,10nm,0.8s,baz=352,slow=6.2
WERD                              epP      PcP     02 22 52.1 -0.7
      baz=352,slow=6.1
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TANN  Tannenbergstha   69.66  10  eP       P       02 22 31.8 +1.1
      comp=Z,13nm,1.0s,baz=352,slow=6.2
GUNZ  Gunzen           69.70  10  eP       P       02 22 31.9 +1.0
      comp=Z,17nm,1.0s,baz=352,slow=6.2
PVCC  Panska Ves       69.72   9  eP       P       02 22 30.9 -0.1
PVCC                              epP      pP      02 22 51.2 -0.7
PVCC  Panska Ves       69.72   9  eP       P       02 22 30.9 -0.1
PVCC                              e                02 22 51.2
WLF   Walferdange      69.72  14   P       P       02 22 31.2 +0.2
WLF                                IAmb    IAmb    02 22 53.9
      comp=Z,55nm,1.2s
WLF   Walferdange      69.72  14   P       P       02 22 31.2 +0.2
WLF                                pmax    pmax
      comp=Z,55nm,1.2s
WLF   Walferdange      69.72  14  dP       P       02 22 28.1 -2.9
WLF                               dpP      pP      02 22 51.4 -0.5
WLF   Walferdange      69.72  14  epP      pP      02 22 53.1 +1.2
      baz=352,slow=6.1
CHVC  Chvalec          69.77   8  eP       P       02 22 31.4 +0.1
CHVC  Chvalec          69.77   8  eP       P       02 22 31.4 +0.1
WERN  Wernitzgruen     69.78  10  eP       P       02 22 32.6 +1.2
      comp=Z,33nm,1.2s,baz=352,slow=6.2
OSTC  Ostas            69.81   7  eP       P       02 22 31.9 +0.3
OSTC                              ex       x       02 22 52.0
OSTC  Ostas            69.81   7  eP       P       02 22 31.9 +0.3
OSTC                              e                02 22 52.0
NKC   Novy Kostel      69.84  10  eP       P       02 22 31.9 +0.1
NKC                               epP      PcP     02 22 55.1 +1.3
NKC   Novy Kostel      69.84  10  eP       P       02 22 31.9 +0.1
NKC                               e                02 22 55.1
UPC   Upice            69.84   8  eP       P       02 22 32.3 +0.5
UPC                               epP      pP      02 22 51.3 -1.4
UPC   Upice            69.84   8  eP       P       02 22 32.3 +0.5
UPC                               e                02 22 51.3
JTS   Las Juntas de    70.01 104   LR      LR      02 56 48.2
      comp=Z,203nm,20.8s,baz=320,slow=39
AKASG Malin Array Be   70.02 359   P       P       02 22 31.6 -1.1
      comp=Z,3.9nm,0.5s,baz=3.2,slow=6.3,SNR=21
AKASG                              LR      LR      02 51 50.7
      comp=Z,272nm,21.7s,baz=13,slow=35
      comp=Z,3.9nm,0.5s
AKASG Malin Array Be   70.02 359   P       P       02 22 32.5 -0.2
AKASG                              IAmb    IAmb    02 23 00.7
      comp=Z,81nm,1.2s
AKASG Malin Array Be   70.02 359   P       P       02 22 32.6 -0.2
AKASG                              pmax    pmax
      comp=Z,81nm,1.3s
AKBB  Malin Array Si   70.02 359   P       P       02 22 31.9 -0.9
AKBB                               IAmb    IAmb    02 23 00.7
      comp=Z,134nm,1.4s
AKBB  Malin Array Si   70.02 359⇓iP        P       02 22 32.9 +0.1
AKBB                               pmax    pmax
      comp=Z,13nm,0.8s
DPC   Dobruska-Polom   70.02   7  eP       P       02 22 33.0 +0.1
DPC                               epP      pP      02 22 53.6 -0.2
DPC   Dobruska-Polom   70.02   7  eP       P       02 22 33.0 +0.1
DPC                               e                02 22 53.6
MANZ  Manzenberg       70.05  10  eP       P       02 22 33.9 +0.9
      comp=Z,10nm,1.9s,baz=352,slow=6.2
CD2   Chengdu          70.23 297   P       P       02 22 33.5 -1.0
CD2                                PP      PP      02 25 09.7 -0.6
CD2                                S       S       02 31 35.5 -4.2
CD2                                SKS     SKKSac  02 32 29.1 +0.6
CD2                                pmax    pmax
      comp=Z,120nm,0.8s
CD2                                pmax    pmax
      comp=Z,270nm,4.4s
CD2                                LR      LR
      comp=Z,550nm,19.1s
CD2                                LR      LR
      comp=Z,450nm,16.7s
CD2                                LR      LR
      comp=Z,350nm,20.1s
PRU   Pruhonice        70.26   9  eP       P       02 22 34.0 -0.3
PRU                               ex       x       02 22 41.5
PRU   Pruhonice        70.26   9  eP       P       02 22 34.0 -0.3
GRA1  Grafenberg Arr   70.26  11   P       P       02 22 34.3  0.0
GRF   Grafenberg Arr   70.26  11   P       P       02 22 34.3  0.0
GRF                                pmax    pmax
      comp=Z,23nm,0.7s
GRF   Grafenberg Arr   70.26  11  eP       P       02 22 35.5 +1.2
      comp=Z,31nm,1.0s,baz=352,slow=6.2
GRFO  Grafenberg       70.26  11   P       P       02 22 34.8 +0.5
GRFO  Grafenberg       70.26  11   P       P       02 22 34.8 +0.5
GRFO                               pmax    pmax
      comp=Z,23nm,0.8s
ROTZ  Rotzenmuhle      70.28  10  eP       P       02 22 35.6 +1.2
      comp=Z,5.3nm,0.9s,baz=352,slow=6.2
KRLC  Kraliky          70.33   7  eP       P       02 22 35.2 +0.4
KRLC                              epP      pP      02 22 55.4 -0.3
KRLC  Kraliky          70.33   7  eP       P       02 22 35.2 +0.4
KRLC                              e                02 22 55.4
OJC   Ojcow            70.34   5  eP       P       02 22 35.2 +0.4
OJC   Ojcow            70.34   5   P       P       02 22 35.3 +0.4
OJC                                IAmb    IAmb    02 23 22.0
      comp=Z,76nm,1.7s
OJC   Ojcow            70.34   5   P       P       02 22 35.3 +0.4
OJC                                pmax    pmax
      comp=Z,76nm,1.7s
GOPC  GO Pecny, Ondr   70.35   9  eP       P       02 22 35.0 +0.1
GOPC                              epP      PcP     02 22 58.3 +2.3
GOPC  GO Pecny, Ondr   70.35   9  eP       P       02 22 35.0 +0.1
GOPC                              e                02 22 58.3
TKM2  Tokmak 2         70.35 324   P       P       02 22 36.0 +0.7
      SNR=30
USP   Ospenovka        70.36 325   P       P       02 22 36.0 +0.9
      SNR=23
CHMS  Chumysh          70.53 325   P       P       02 22 37.2 +1.1
      SNR=18
OKC   Ostrava-Krasne   70.64   6  eP       P       02 22 37.0 +0.4
OKC                               ex       x       02 22 54.1
OKC   Ostrava-Krasne   70.64   6  eP       P       02 22 37.0 +0.4
OKC                               e                02 22 54.1
HDC   Heredia          70.67 104  eP       P       02 22 37.2 -0.2
MORC  Moravsky Berou   70.67   7 ⇓P        P       02 22 36.0 -0.8
MORC  Moravsky Berou   70.67   7   P       P       02 22 37.0 +0.1
MORC  Moravsky Berou   70.67   7  eP       P       02 22 37.2 +0.3
MORC  Moravsky Berou   70.67   7   P       P       02 22 37.0 +0.1
MORC                               pmax    pmax
      comp=Z,19nm,1.0s
ULHL  Ulahol           70.78 324   P       P       02 22 38.9 +1.0
      SNR=6.7
CLF   Chambon-Foret    70.78  17   P       P       02 22 37.9 +0.5
CLF                                IAmb    IAmb    02 23 01.3
      comp=Z,50nm,0.8s
CLF   Chambon-Foret    70.78  17   P       P       02 22 38.0 +0.5
CLF                                pP      pP      02 23 00.6 +2.1
KBK   Karagaybulak     70.79 325   P       P       02 22 39.0 +1.2
      SNR=24
WUS   Wushi            70.80 321   P       P       02 22 38.8 +0.9
LVV   L'vov            70.88   2  eP       P       02 22 38.7 +0.6
LVV                               e                02 23 03.5
LVV                               eS       S       02 31 44.9 -1.7
LVV                                pmax    pmax
      comp=Z,20nm,1.4s
AAK   Ala-Archa        70.94 325   P       P       02 22 39.5 +0.7
      SNR=20
AAK   Ala-Archa        70.94 325   P       P       02 22 38.6 -0.2
      comp=Z,12nm,0.7s,baz=31,slow=5.9,SNR=57
AAK                                LR      LR      02 56 44.3
      comp=Z,430nm,20.7s,baz=18,slow=38
      comp=Z,12nm,0.7s
AAK   Ala-Archa        70.94 325   P       P       02 22 39.1 +0.4
AAK   Ala-Archa        70.94 325c iP       P       02 22 39.3 +0.6
AAK                                pmax    pmax
      comp=Z,17nm,0.9s
AAK   Ala-Archa        70.94 325   P       P       02 22 39.4 +0.6
STU   Stuttgart        70.96  13  eP       P       02 22 39.6 +1.0
      comp=Z,48nm,0.9s,baz=352,slow=6.2
TREC  Trest            71.02   8  eP       P       02 22 38.9  0.0
TREC  Trest            71.02   8  eP       P       02 22 38.9  0.0
KHC   Kasperske Hory   71.03   9   P       P       02 22 39.6 +0.6
KHC   Kasperske Hory   71.03   9  eP       P       02 22 39.4 +0.4
KHC                               ex       x       02 22 57.9
KHC   Kasperske Hory   71.03   9ceP        P       02 22 40.1 +1.1
KHC                                pmax    pmax
      comp=Z,51nm,0.9s
VRAC  Vranov           71.08   7 ⇑P        P       02 22 39.9 +0.5
VRAC  Vranov           71.08   7   LR      LR      02 55 14.8
      comp=Z,103nm,20.8s,baz=354,slow=37
VRAC  Vranov           71.08   7  eP       P       02 22 39.8 +0.5
EKS2  Erkin-Say        71.12 326   P       P       02 22 41.0 +1.2
      SNR=34
NIE   Niedzica         71.17   5  eP       P       02 22 41.4 +1.5
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STHS	Stebnicka Huta	71.21	4	eP	P	02 22 40.1	0.0
STHS				e		02 23 01.5	
STHS				pmax	pmax		
	comp=Z,13nm,0.9s						
STHS	Stebnicka Huta	71.21	4	eP	P	02 22 40.1	0.0
STHS				e		02 23 01.5	
ECH	Echery	71.27	14	P	P	02 22 40.7	+0.2
ECH	Echery	71.27	14	P	P	02 22 40.7	+0.2
ECH				pmax	pmax		
	comp=Z,20nm,0.8s						
ECH	Echery	71.27	14	P	P	02 22 40.8	+0.2
ECH				pP	pP	02 23 02.3	+0.8
BFO	Black Forest	71.30	13	P	P	02 22 41.0	+0.3
BFO				IAmb	IAmb	02 23 08.0	
	comp=Z,62nm,1.6s						
BFO	Black Forest	71.30	13	P	P	02 22 41.0	+0.3
BFO				pmax	pmax		
	comp=Z,62nm,1.6s						
BFO	Black Forest	71.30	13	eP	P	02 22 41.5	+0.8
	comp=Z,21nm,0.9s,baz=352,slow=6.2						
BFO				epP	pP	02 23 03.6	+1.9
	baz=352,slow=6.1						
BFO	Black Forest	71.30	13	P	P	02 22 40.9	+0.3
BFO				pP	pP	02 23 02.4	+0.8
KRUC	Moravsky	71.31	8	eP	P	02 22 41.1	+0.4
GEC2	GERESS Array S	71.32	9	P	P	02 22 41.1	+0.2
GEC2	GERESS Array S	71.32	9	eP	P	02 22 41.8	+0.9
	comp=Z,15nm,1.0s,baz=352,slow=6.2						
GERES	GERESS Array B	71.32	9	P	P	02 22 40.6	-0.3
	comp=Z,5.2nm,0.7s,baz=0.0,slow=5.3,SNR=30						
GERES				pP	PcP	02 22 58.3	-1.9
	comp=Z,3.5nm,0.6s,baz=347,slow=4.0,SNR=5.4						
GERES				LR	LR	02 55 14.1	
	comp=Z,119nm,20.7s,baz=40,slow=37						
	comp=Z,5.2nm,0.7s						
GERES	GERESS Array B	71.32	9	P	P	02 22 40.9	0.0
GERES	GERESS Array B	71.32	9	P	P	02 22 40.9	0.0
LANS	Liptovska Anna	71.40	5	eP	P	02 22 42.2	+0.9
LANS				e		02 23 04.0	
LANS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LANS	Liptovska Anna	71.40	5	eP	P	02 22 42.2	+0.9
LANS				e		02 23 04.0	
CKRC	Cesky Krumlov	71.40	9	eP	P	02 22 40.8	-0.5
CKRC	Cesky Krumlov	71.40	9	eP	P	02 22 40.8	-0.5
FUNA	Funafuti	71.54	209	P	P	02 22 42.8	+0.4
JAVC	Velka Javorina	71.59	7	eP	P	02 22 43.9	+1.4
KK31	Karatay Array	71.62	328	P	P	02 22 42.3	-0.4
KK31	Karatay Array	71.62	328	P	P	02 22 42.3	-0.4
KK31				pmax	pmax		
	comp=Z,13nm,0.8s						
KKAR	Karatay Array	71.62	328	P	P	02 22 42.1	-0.6
KKAR	Karatay Array	71.62	328	P	P	02 22 42.1	-0.6
AML	Almayashu	71.63	325	P	P	02 22 44.2	+1.0
	SNR=35						
MFF	Saint Martin d	71.78	20	eP	P	02 22 43.4	-0.1
MFF				pmax	pmax		
	comp=Z,33nm,0.9s						
FUR	Furstenfeldbru	71.78	11	eP	P	02 22 44.5	+1.0
	comp=Z,39nm,0.8s,baz=352,slow=6.2						
GULI	GuiLin	71.90	289	⇑P	P	02 22 48.9	+4.3
GULI				S	S	02 31 57.6	-1.4
GULI				pmax	pmax		
	comp=Z,70nm,0.8s						
GULI				LR	LR		
	comp=Z,340nm,21.6s						
GULI				LR	LR		
	comp=Z,490nm,20.6s						
GULI				LR	LR		
	comp=Z,630nm,28.1s						
SMOL	Smolenice	71.92	7	eP	P	02 22 45.6	+1.2
SMOL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
VYHS	Vyhne	72.02	6	eP	P	02 22 45.5	+0.5
VYHS				e		02 23 06.2	
VYHS				pmax	pmax		
	comp=Z,16nm,1.1s						
VYHS	Vyhne	72.02	6	eP	P	02 22 45.4	+0.5
VYHS				e		02 23 06.2	
MODS	Modra-Piesok	72.05	7	eP	P	02 22 46.0	+0.8
MODS				e		02 23 06.6	
MODS				pmax	pmax		
	comp=Z,46nm,1.1s						
MODS	Modra-Piesok	72.05	7	eP	P	02 22 46.0	+0.8
MODS				e		02 23 06.6	
KECS	Kecovo	72.11	5	e	pP	02 23 07.9	+1.3
UBR	Ueberruh	72.14	12	eP	P	02 22 46.9	+1.1
	comp=Z,20nm,0.8s,baz=352,slow=6.2						
RJOB	Jochberg	72.34	10	eP	P	02 22 48.0	+1.0
	comp=Z,25nm,0.8s,baz=352,slow=6.2						
RETA	Reutte	72.40	12	i P	P	02 22 47.9	+0.6
	comp=Z,14nm,1.3s						
CONA	Conrad Observa	72.40	8	i P	P	02 22 48.0	+0.7
	comp=Z,20nm,0.9s,SNR=9.5						
BIOA	Bad Ischl, Aus	72.46	10	i P	P	02 22 48.2	+0.5
	comp=Z,11nm,0.7s,SNR=5.8						
DAVA	Damuels	72.50	12	i P	P	02 22 48.8	+0.7
	comp=Z,7.7nm,0.8s						
TRPA	Tarpa	72.53	3	⇓P	P	02 22 47.9	-0.1
MOTA	Moosalm	72.57	11	i P	P	02 22 49.1	+0.6
	comp=Z,32nm,1.3s,SNR=8.8						
SORM	Soroca	72.60	359	⇓P	P	02 22 48.2	-0.2
WATA	Walderalm	72.63	11	i P	P	02 22 49.4	+0.6
	comp=Z,29nm,0.8s,SNR=9.4						
RONA	Rosalia, Austr	72.66	8	i P	P	02 22 48.7	-0.2
	comp=Z,12nm,0.9s						
GYA	Guiyang	72.67	293	⇑P	P	02 22 48.7	-0.6
GYA				PP	PP	02 25 29.7	-1.7
GYA				S	S	02 32 04.9	-3.1
GYA				pmax	pmax		
	comp=Z,75nm,0.9s						
GYA				pmax	pmax		
	comp=Z,510nm,3.5s						
GYA				LR	LR		
	comp=Z,470nm,18.2s						
GYA				LR	LR		
	comp=Z,260nm,15.5s						
GYA				LR	LR		
	comp=Z,580nm,23.1s						
SRO	Srobarova	72.67	6	eP	P	02 22 50.2	+1.4
SRO	Srobarova	72.67	6	eP	P	02 22 50.2	+1.4
SQTA	Sankt Quirin	72.71	11	i P	P	02 22 50.1	+0.9
	comp=Z,44nm,0.9s,SNR=12						
WTTA	Wattenberg	72.71	11	i P	P	02 22 49.8	+0.6
	comp=Z,27nm,0.7s,SNR=13						
GCPR	Guaynabo City	72.72	83	P	P	02 22 49.2	-0.3
GCPR				IAmb	IAmb	02 23 11.8	
	comp=Z,71nm,1.1s						
FETA	Feichten	72.86	12	i P	P	02 22 51.0	+0.8
	comp=Z,27nm,1.0s,SNR=7.4						
DAVOX	Davos/Dischmat	73.00	12	LR	LR	02 59 26.0	
	comp=Z,133nm,18.1s,baz=334,slow=39						
KBA	Koelnbreinsper	73.05	10	i P	P	02 22 52.1	+0.8
	comp=Z,67nm,1.1s,SNR=25						
ARSA	Arzberg	73.05	8	i P	P	02 22 52.0	+0.9
	comp=Z,13nm,0.9s,SNR=6.9						
BUR08	Bucovina Ar. S	73.08	1	P	P	02 22 51.4	0.0
BURAR	Bucovina Array	73.11	1	⇓P	P	02 22 52.6	+1.1
BURAR	Bucovina Array	73.11	1	P	P	02 22 52.2	+0.6
SENIN	Lac Senin/Sane	73.11	14	P	P	02 22 51.9	+0.2
SENIN				IAmb	IAmb	02 23 19.4	
	comp=Z,99nm,1.1s						
ABTA	Abfaltersbach	73.30	11	i P	P	02 22 54.1	+1.4
	comp=Z,16nm,1.2s						
KSH	Kashi	73.35	323	P	P	02 22 57.1	+3.9
KSH				PP	PP	02 25 42.8	+6.0
KSH				S	SKiKP	02 32 18.7	+2.8
KSH				SKS	SKKSac	02 32 52.8	+0.6
KSH				pmax	pmax		
	comp=Z,20nm,0.9s						
KSH				pmax	pmax		
	comp=Z,190nm,6.2s						
KSH				LR	LR		
	comp=Z,440nm,14.1s						
KSH				LR	LR		
	comp=Z,730nm,17.2s						
KSH				LR	LR		
	comp=Z,440nm,17.2s						
MYKA	Terra Mystica	73.52	10	i P	P	02 22 54.1	+0.2
	comp=Z,13nm,1.1s,SNR=6.2						
MESR	Meseseni	73.53	3	⇑P	P	02 22 49.2	-4.7
LFF	La Frestale	73.54	19	eP	P	02 22 54.1	+0.1
LFF				pmax	pmax		
	comp=Z,24nm,0.8s						
SOKA	Soboth	73.58	9	i P	P	02 22 55.6	+1.3
	comp=Z,22nm,1.2s,SNR=7.5						
ARCR	ARCALIA	73.62	2	⇓P	P	02 22 55.7	+1.3
PERS	Pernice	73.63	9	eP	P	02 22 55.5	+0.9
OBKA	Obir	73.71	9	i P	P	02 22 55.5	+0.4
	comp=Z,57nm,0.7s,SNR=24						
CIMO	Cimolais	73.73	11	IAmb	IAmb	02 23 27.9	
	comp=Z,7.8nm,0.8s						
CAF	Calviac	73.77	18	eP	P	02 22 55.1	-0.3
CAF				pmax	pmax		
	comp=Z,31nm,1.2s						
GORS	Gorjuse	73.86	10	i P	P	02 22 55.9	-0.1
CADS	Cadrg	73.92	10	eP	P	02 22 56.0	-0.3
MARR	Marisel-Cluj	74.00	3	⇑P	P	02 22 57.7	+0.8
SABO	M.te Sabotino	74.16	10	IAmb	IAmb	02 22 58.1	
	comp=Z,21nm,0.9s						
SALO	Salr	74.22	12	IAmb	IAmb	02 22 59.0	
	comp=Z,30nm,0.7s						
TESR	Tescani	74.22	0	⇑P	P	02 23 08.7	+11
MORH	Mrgy, Hungar	74.28	6	⇓P	P	02 22 57.0	-1.2
BNI	Bardonecchia	74.32	15	P	P	02 22 58.9	+0.2
BNI				IAmb	IAmb	02 23 52.4	
	comp=Z,53nm,1.4s						
BNI	Bardonecchia	74.32	15	P	P	02 22 58.9	+0.2
BNI				pmax	pmax		
	comp=Z,53nm,1.4s						
SIRR	Siria	74.37	4	⇑P	P	02 22 58.0	-0.9
PMOR	Pomariorio Ree	74.47	175	eT	T	03 41 20.7	
	comp=Z,34nm,0.3s						
TEOL	Teolo	74.59	11	IAmb	IAmb	02 23 01.5	
	comp=Z,62nm,0.8s						
PGAV	Gavieira, Arco	74.61	27	eP	P	02 23 01.3	+0.9
PGAV				A	A	02 23 24.8	
	comp=Z,99nm,1.8s						
GHRR		74.67	360	⇓P	P	02 22 52.5	-8.0
DOPR	Dopca	74.76	1	⇓P	P	02 23 01.0	-0.1
BOJS	Bojanci	74.77	9	eP	P	02 23 01.2	+0.1
VRI	Vrincioaia	74.87	0	⇑P	P	02 23 02.1	+0.3
PLOR	Plostina	74.88	0	⇓P	P	02 23 05.1	+3.2
AFI	Afiamalu	74.88	199	LR	LR	02 48 05.2	
	comp=Z,414nm,22.0s,baz=36,slow=29						
COVR	Voineasa-Covas	74.89	1	⇑P	P	02 23 03.9	+2.1
VLDR	Vladesti	74.89	359	⇑P	P	02 23 01.8	0.0
SURR	Surduc	74.90	4	⇑P	P	02 23 01.4	-0.4
PZH	PanZhiHua	74.90	297	P	P	02 23 01.1	-1.3
PZH				PP	PP	02 25 51.7	+1.3
PZH				S	S	02 32 27.8	-5.4
PZH				sS	SKSac	02 33 01.7	-2.2
PZH				pmax	pmax		
	comp=Z,60nm,0.9s						
PZH				pmax	pmax		
	comp=Z,350nm,3.5s						
PZH				LR	LR		
	comp=Z,860nm,23.5s						
PZH				LR	LR		
	comp=Z,760nm,22.1s						
PZH				LR	LR		
	comp=Z,1µm,22.0s						
PCAB	Cabril	74.91	27	eP	P	02 23 03.3	+1.2
PCAB				epP	pP	02 23 22.6	-0.6
BZS	Buzias	75.02	4	⇑P	P	02 23 02.2	-0.4
GZR	Gura Zlata	75.28	3	⇑P	P	02 23 03.8	-0.3
VOIR		75.28	2	⇓P	P	02 23 03.0	-1.2
POLO	Lamas de Olo	75.29	27	eP	P	02 23 05.0	+0.7
POLO				A	A	02 23 27.7	
	comp=Z,33nm,1.6s						
PTO	Porto	75.32	27	eP	P	02 23 05.0	+0.6
PTO				epP	pP	02 23 25.7	+0.2
PTO				A	A	02 23 28.3	
	comp=Z,88nm,1.5s						
PTO				esP	sP	02 23 34.5	+0.2
ARR	Arges	75.35	2	⇓P	P	02 23 05.5	+1.0
PVRL	Vila Real	75.40	27	eP	P	02 23 06.2	+1.3
PVRL				A	A	02 23 28.4	
	comp=Z,66nm,1.5s						
FRGS	Fruska Gora	75.40	5	⇓P	P	02 23 05.1	+0.4
CFR	Carcaliu	75.56	359	⇓P	P	02 23 05.6	0.0
KMI	Kunming	75.63	295	⇑P	P	02 23 05.5	-1.2
KMI				S	S	02 32 36.2	-5.2
KMI				SKS	SKSac	02 33 07.8	-1.8
KMI				pmax	pmax		
	comp=Z,22nm,1.7s						
KMI				pmax	pmax		
	comp=Z,220nm,4.5s						
KMI				LR	LR		
	comp=Z,350nm,22.6s						
KMI				LR	LR		
	comp=Z,480nm,22.2s						
KMI				LR	LR		
	comp=Z,430nm,24.0s						
MVO	Moncorvo	75.66	26	eP	P	02 23 07.5	+1.1
MVO				epP	pP	02 23 26.8	-0.8
MVO				A	A	02 23 51.3	
	comp=Z,57nm,1.4s						
MDVR	Moldovita	75.85	4	⇓P	P	02 23 02.4	-5.1
PVIS	Viseu	75.89	27	eP	P	02 23 07.9	+0.2
PVIS				A	A	02 24 23.2	
	comp=Z,55nm,1.7s						
KIV	Kislovodsk	76.00	349	⇑P	P	02 23 06.5	-1.8
KIV	Kislovodsk	76.00	349	eP	P	02 23 10.3	+2.0
KIV				eS	S	02 32 48.4	+3.7
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
HARR	Harsova	76.04	360	⇑P	P	02 23 09.9	+1.5
CHGR	Chuyangaron	76.14	327	IAmb	IAmb	02 23 37.0	
	comp=Z,70nm,0.8s						
CHGR	Chuyangaron	76.14	327	P	P	02 23 08.7	-0.5
CHGR				pmax	pmax		
	comp=Z,104nm,0.8s						
KBZ	Khabaz	76.20	348	P	P	02 23 08.9	-0.4
	comp=Z,1.8nm,0.7s,baz=1.1,slow=9.7,SNR=9.9						
KBZ				LR	LR	02 58 25.2	
	comp=Z,173nm,21.7s,baz=6.0,slow=37						
	comp=Z,1.8nm,0.7s						
KBZ	Khabaz	76.20	348	⇑eP	P	02 23 10.2	+0.9
KBZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MTE	Manteigas	76.27	27	IAmb	IAmb	02 23 11.7	
	comp=Z,35nm,0.7s						
MTE	Manteigas	76.27	27	eP	P	02 23 11.0	+1.1
MTE				epP	pP	02 23 31.4	+0.3
MTE				A	A	02 23 37.3	
	comp=Z,67nm,1.4s						
NCK	Nalchik	76.36	348	⇓eP	P	02 23 10.5	+0.2
NCK				pmax	pmax		
	comp=Z,23nm,0.8s						
PCAS	Casmilo, Conde	76.38	27	eP	P	02 23 11.7	+1.3
PCAS				epP	pP	02 23 31.6	0.0
PCAS				A	A	02 23 34.3	
	comp=Z,84nm,1.6s						
GROC	Groznyy	76.40	346	eP	P	02 23 08.9	-1.6
GROC				e		02 23 19.7	
GROC				e*SP	pP	02 23 35.7	+4.0
GROC				eS	S	02 32 46.6	-2.3
GROC				e		02 33 12.5	
GROC				pmax	pmax		
	comp=Z,73nm,1.2s						
MAK	Makhachkala	76.42	345	eP	P	02 23 09.0	-1.6
MAK				e*PP	pP	02 23 29.0	-2.8
MAK				eS	S	02 32 47.9	-1.2
MAK				e*SS	sS	02 33 25.3	-0.4
MAK				pmax	pmax		
	comp=Z,272nm,1.4s						
MAK				MLR	MLR		
	comp=Z,419nm,17.0s						
SOC	Sochi	76.64	351	eP	P	02 23 07.1	-4.7
SOC				e		02 26 06.0	
SOC				ePPP	PPP	02 27 55.5	
SOC				eS	S	02 32 45.6	-5.9
SOC				eSSS	SSS	02 41 14.8	
SOC				MLR	MLR		
	comp=Z,351nm,22.0s						
NEY	Neytrino	76.70	348	⇓eP	P	02 23 15.2	+2.8
NEY				pmax	pmax		
	comp=Z,2.0nm,0.7s						
LSA	Lhasa	76.70	307	P	P	02 23 13.0	0.0
LSA				pmax	pmax		
	comp=Z,55nm,0.9s						
LSA	Lhasa	76.70	307	IAmb	IAmb	02 23 15.7	
	comp=Z,32nm,0.8s						
MURB	Monte Urbino	76.75	11	IAmb	IAmb	02 23 40.1	
	comp=Z,38nm,0.9s						
PCBR	Castelo Branco	76.82	27	eP	P	02 23 13.8	+0.9
PCBR				A	A	02 23 53.1	
	comp=Z,66nm,1.6s						
PSBE	So Bento	76.82	28	eP	P	02 23 14.0	+1.0
PSBE				A	A	02 23 36.6	
	comp=Z,76nm,1.5s						
PPT	Papeete	76.96	177	LR	LR	02 48 50.1	
	comp=Z,579nm,19.5s,baz=358,slow=29						
PPT2	Papeete2	76.98	177	eP	P	02 23 15.7	+1.8
	comp=Z,64nm,26.0s						
PPT2				eS	S	02 32 56.3	+0.7
	comp=Z,293nm,25.0s						
PPT2				eSS	SS	02 37 55.6	+1.0
	comp=Z,172nm,24.0s						
PPT2				eLR	LR	02 47 08.7	
	comp=Z,1µm,24.8s						
PPT2				eLR	LR	02 47 08.9	
	comp=Z,871nm,32.5s						
BOVS	Bovan	77.00	4	⇑P	P	02 23 12.8	-1.0
KRVT	Keravat (AS076	77.01	237	LR	LR	02 59 49.5	
	comp=Z,64nm,18.4s,baz=165,slow=38						
ZEI	Tsey	77.03	348	eP	P	02 23 15.7	+1.4
ZEI				pmax	pmax		
	comp=Z,11nm,1.0s						
PMRV	Marv??o	77.23	27	eP	P	02 23 15.8	+0.5
PMRV				A	A	02 23 38.6	
	comp=Z,42nm,1.4s						
PMAFR	Mafra	77.24	28	P	P	02 23 15.0	-0.2
PMAFR	Mafra	77.24	28	eP	P	02 23 16.0	+0.7
PMAFR				epP	pP	02 23 36.1	-0.4
PMAFR				A	A	02 23 39.3	
	comp=Z,127nm,1.3s						
NRCA	Norcia	77.24	11	IAmb	IAmb	02 23 56.8	
	comp=Z,43nm,1.1s						
UCM	Universidad Co	77.28	23	P	P	02 23 16.3	+0.7
LATE	Laterza	77.33	12	IAmb	IAmb	02 23 55.0	
	comp=Z,39nm,0.9s						
PMTG	Montargil	77.38	28	eP	P	02 23 16.7	+0.6
PMTG				epP	pP	02 23 37.0	-0.3
PMTG				A	A	02 23 39.1	
	comp=Z,56nm,1.6s						
CESX	Cesi	77.41	11	IAmb	IAmb	02 23 57.6	
	comp=Z,96nm,1.8s						
QIZ	Qiongzhong	77.46	286	P	P	02 23 17.3	+0.5
QIZ				PP	PP	02 26 13.0	+1.0
QIZ				S	S	02 33 03.5	+2.4
QIZ				SS	SS	02 38 03.4	+2.6
QIZ				pmax	pmax		
	comp=Z,230nm,4.3s						
QIZ				LR	LR		
	comp=Z,300nm,12.9s						
QIZ				LR	LR		
	comp=Z,320nm,16.7s						
QIZ				LR	LR		
	comp=Z,570nm,29.4s						
LIS	Lisbon	77.49	28	eP	P	02 23 17.2	+0.5
LIS	Lisbon	77.49	28	eP	P	02 23 17.2	+0.5
LIS				IAmb	IAmb	02 23 21.1	
	comp=Z,42nm,0.8s						
PESTR	Estremoz	77.72	27	P	P	02 23 18.7	+0.7
PESTR	Estremoz	77.72	27	P	P	02 23 17.5	-0.5
PESTR	Estremoz	77.72	27	eP	P	02 23 18.6	+0.7
PESTR				A	A	02 23 45.9	
	comp=Z,47nm,1.8s						
ESDC	Sonseca Array	77.75	24	P	P	02 23 17.5	-0.7
	comp=Z,19nm,1.0s,baz=342,slow=4.5,SNR=67						
ESDC				pP	pP	02 23 39.5	+0.1
	comp=Z,21nm,1.1s,baz=339,slow=5.5,SNR=5.9						
	comp=Z,19nm,1.0s						
ESDC	Sonseca Array	77.75	24	P	P	02 23 18.0	-0.2
PAB	San Pablo	77.79	24	P	P	02 23 19.0	+0.6
PAB	San Pablo	77.79	24	P	P	02 23 19.5	+1.0
PAB	San Pablo	77.79	24	P	P	02 23 19.0	+0.6
PAB				pmax	pmax		
	comp=Z,41nm,1.4s						
ZKTA	Zakatala	77.84	345	P	P	02 23 21.0	+2.4
AKT	Akhty	77.84	344	eP	P	02 23 18.3	-0.5
AKT				e		02 23 27.1	
AKT				e*PP	pP	02 23 37.4	-2.6
AKT				e*SP	sP	02 23 45.6	-3.2
AKT				pmax	pmax		
	comp=Z,15nm,0.8s						
EVO	Evora	77.94	28	P	P	02 23 17.5	-1.7
EVO	Evora	77.94	28	eP	P	02 23 20.0	+0.8
EVO				A	A	02 23 43.0	
	comp=Z,59nm,1.5s						
EBAD	Badajoz	77.96	27	P	P	02 23 19.5	+0.3
VTS	Vitosha	78.06	3	⇑P	P	02 23 21.4	+1.4
SEKA	Sheki	78.18	345	P	P	02 23 22.9	+2.3
PNCL	Nicolau / Gran	78.22	28	P	P	02 23 19.9	-0.8
PNCL	Nicolau / Gran	78.22	28	eP	P	02 23 21.7	+1.0
PNCL				epP	pP	02 23 41.7	-0.3
PNCL				A	A	02 23 44.1	
	comp=Z,81nm,1.6s						
SDV	Santo Domingo	78.40	92	P	P	02 23 21.9	-0.3
SDV				IAmb	IAmb	02 24 46.4	
	comp=Z,44nm,0.7s						
SDV	Santo Domingo	78.40	92	eP	P	02 23 20.7	-1.6
ECHE	Chera	78.42	22	P	P	02 23 21.2	-0.7
PBEJ	Beja	78.46	28	eP	P	02 23 23.2	+1.1
PBEJ				A	A	02 23 45.3	
	comp=Z,31nm,1.5s						
HNR	Honiara	78.48	228	LR	LR	02 52 34.4	
	comp=Z,3µm,22.0s,baz=10,slow=31						
PBAR	Barrancos	78.51	27	P	P	02 23 21.2	-1.2
PBAR	Barrancos	78.51	27	eP	P	02 23 23.0	+0.7
PBAR				epP	pP	02 23 45.0	+1.4
PBAR				A	A	02 23 46.6	
	comp=Z,73nm,1.4s						
MESJ	Messejana	78.55	28	eP	P	02 23 23.1	+0.5
MESJ	Messejana	78.55	28	eP	P	02 23 23.4	+0.8
MESJ				A	A	02 24 44.5	
	comp=Z,31nm,1.4s						
MESJ	Messejana	78.55	28	eP	P	02 23 23.1	+0.5
MESJ				IAmb	IAmb	02 23 24.8	
	comp=Z,23nm,1.2s						
MNGR	Mingechevir, A	78.63	345	P	P	02 23 25.4	+2.5
PTEO	Sao Teotonio	78.71	28	eP	P	02 23 24.6	+1.2
PTEO				A	A	02 24 03.1	
	comp=Z,92nm,1.4s						
PCVE	Castro Verde	78.79	28	P	P	02 23 24.6	+0.7
PCVE	Castro Verde	78.79	28	eP	P	02 23 24.7	+0.8
GANJ	Ganja	78.85	345	P	P	02 23 26.7	+2.5
DIKM	Dikmen	78.87	354	⇓P	P	02 23 26.0	+1.7
ETOS	Mallorca	78.92	19	P	P	02 23 24.2	-0.4
STIP	Stip	78.95	4	i Pn	P	02 23 24.7	0.0
MORF	Marmelete	78.96	28	IAmb	IAmb	02 23 48.4	
	comp=Z,110nm,1.6s						
MORF	Marmelete	78.96	28	eP	P	02 23 25.3	+0.4
MORF	Marmelete	78.96	28	eP	P	02 23 25.8	+0.9
MORF				A	A	02 23 48.3	
	comp=Z,86nm,1.6s						
MORF	Marmelete	78.96	28	eP	P	02 23 25.3	+0.4
MORF				IAmb	IAmb	02 23 26.6	
	comp=Z,27nm,0.9s						
ECAB	El Cabril	78.97	26	P	P	02 23 23.6	-1.3
EMIN	Mina Concepcio	78.98	27	P	P	02 23 24.8	-0.1
EGRO	El Granado	79.02	27	P	P	02 23 24.2	-0.9
EADA	Adamuz	79.06	25	P	P	02 23 24.8	-0.6
PFVI	Vila Bisbo	79.08	29	eP	P	02 23 26.4	+0.9
PVAQ	Vaqueiros	79.09	28	P	P	02 23 26.7	+1.2
PVAQ	Vaqueiros	79.09	28	eP	P	02 23 26.7	+1.2
PVAQ				A	A	02 23 49.9	
	comp=Z,61nm,1.3s						
PBDV	Barranco-do-Ve	79.19	28	eP	P	02 23 26.6	+0.5
PBDV				A	A	02 23 53.0	
	comp=Z,71nm,1.3s						
KARS	Kars	79.25	348	IAmb	IAmb	02 24 26.3	
	comp=Z,74nm,1.0s						
GEYT	Alibeck	79.50	336	P	P	02 23 27.7	-0.2
	comp=Z,4.5nm,0.6s,baz=358,slow=4.3,SNR=11						
	comp=Z,4.5nm,0.6s						
GNI	Garni	79.54	346	P	P	02 23 28.8	+0.7
GNI				IAmb	IAmb	02 24 30.5	
	comp=Z,83nm,1.6s						
GNI	Garni	79.54	346	ceP	P	02 23 29.2	+1.1
GNI				pmax	pmax		
	comp=Z,11nm,1.0s						
NIL	Nilore	79.60	322	P	P	02 23 29.5	+1.1
NIL				IAmb	IAmb	02 23 56.6	
	comp=Z,59nm,1.4s						
NIL	Nilore	79.60	322	P	P	02 23 29.5	+1.1
NIL				pmax	pmax		
	comp=Z,59nm,1.4s						
DAV	Davao City (W)	79.73	266	LR	LR	02 54 52.8	
	comp=Z,258nm,21.7s,baz=22,slow=33						
YSA	Yasawairara	79.79	209	P	P	02 23 31.9	+2.5
	comp=Z,91nm,1.5s						

ROSC	El Rosal	79.99	98	LR	LR	03 04 42.0	
	comp=Z,118nm,18.4s,baz=30,slow=40						
KBL	Kabul	80.02	326	P	P	02 23 31.3	+0.4
KBL	Kabul	80.02	326	P	P	02 23 31.3	+0.4
KBL				pmax	pmax		
	comp=Z,14nm,1.2s						
SHL	Shillong	80.04	304	P	P	02 23 29.3	-1.8
TAPN	Taplejung	80.17	308	eP	P	02 23 31.5	-0.4
	comp=Z,141nm,0.9s						
GUN	Gumba	80.39	310	eP	P	02 23 32.7	-0.5
	comp=Z,122nm,1.0s						
NAX	Nakhchivan	80.41	346	P	P	02 23 35.0	+2.3
LKRN	Lenkeran, Azer	80.41	343	P	P	02 23 35.1	+2.5
EMAL	Malaga-Limoner	80.45	25	P	P	02 23 32.8	0.0
JIRN	Jiri	80.50	310	eP	P	02 23 33.3	-0.5
	comp=Z,258nm,1.0s						
MSVF	Nonsavu	80.67	208	LR	LR	02 52 36.1	
	comp=Z,280nm,20.4s,baz=10,slow=31						
MSVF	Nonsavu	80.67	208	P	P	02 23 34.2	0.0
MSVF				IAmb	IAmb	02 23 37.3	
	comp=Z,100nm,1.1s						
MSVF	Nonsavu	80.67	208	P	P	02 23 36.4	+2.2
MSVF	Nonsavu	80.67	208	P	P	02 23 34.2	0.0
MSVF				pmax	pmax		
	comp=Z,100nm,1.2s						
RAR	Rarotonga	80.75	187	P	P	02 23 35.3	+1.0
	comp=Z,16nm,0.8s,baz=238,slow=8.9,SNR=3.6						
RAR				LR	LR	02 54 21.4	
	comp=Z,169nm,18.9s,baz=9.5,slow=32						
	comp=Z,16nm,0.8s						
ANTO	Ankara	80.76	356	⇑P	P	02 23 34.7	+0.1
ANTO	Ankara	80.76	356	P	P	02 23 35.3	+0.7
ANTO	Ankara	80.76	356	P	P	02 23 35.3	+0.7
ANTO				pmax	pmax		
	comp=Z,31nm,1.1s						
GKN	Gorkha	80.79	311	eP	P	02 23 34.5	-0.6
DANN	Dangsing	80.81	312	eP	P	02 23 35.0	-0.3
	comp=Z,284nm,0.9s						
GENI	Genyem	80.86	249	P	P	02 23 37.5	+2.2
	comp=Z,296nm,2.0s						
GENI	Genyem	80.86	249	P	P	02 23 35.8	+0.5
	comp=Z,295nm,2.0s						
BR131	Keskin Array S	80.87	355	deP	P	02 23 35.8	+0.5
BRTR	Keskin Array B	80.87	355	P	P	02 23 35.3	+0.1
	comp=Z,2.6nm,0.8s,baz=19,slow=4.2,SNR=6.9						
	comp=Z,2.6nm,0.8s						
BRTR	Keskin Array B	80.87	355	P	P	02 23 34.9	-0.4
BRTR	Keskin Array B	80.87	355	i P	P	02 23 35.5	+0.2
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PKIN	Phulchoki	80.88	310	eP	P	02 23 35.0	-0.7
	comp=Z,105nm,1.2s						
PKI	Pulchoki	80.88	310	eP	P	02 23 34.7	-1.1
	comp=Z,100nm,1.1s						
CRAI	Chiangrai	80.94	295	IAmb	IAmb	02 23 37.1	
	comp=Z,40nm,0.8s						
DMN	Daman	80.97	310	eP	P	02 23 35.0	-1.1
RAMN	Ramite	80.97	309	eP	P	02 23 35.3	-0.8
	comp=Z,188nm,0.9s						
SMPI	Sarmi	81.02	250	P	P	02 23 36.2	+0.1
	comp=Z,263nm,1.0s,comp=Z,3µm						
CEU	Ceuta	81.07	26	P	P	02 23 36.5	+0.3
PYUN	Piuthan	81.33	312	eP	P	02 23 37.2	-0.8
	comp=Z,164nm,0.9s						
NONG	Nongkai	81.52	291	P	P	02 23 39.5	+0.7
GEVA	Gevas	81.54	347	IAmb	IAmb	02 24 21.6	
	comp=Z,66nm,1.5s						
BNN	Bunyan	81.62	353	IAmb	IAmb	02 24 23.0	
	comp=Z,67nm,0.9s						
TULM	Tulcn-Chalpat	81.80	103	IAmb	IAmb	02 24 12.3	
	comp=Z,65nm,0.9s						
CHEFC	Chefchaouen	81.83	27	P	P	02 23 42.2	+1.9
OTAV	Otavalo	81.89	103	P	P	02 23 41.1	-0.2
OTAV	Otavalo	81.89	103	P	P	02 23 41.1	-0.2
OTAV				pmax	pmax		
	comp=Z,18nm,0.8s						
OTAV	Otavalo	81.89	103	eP	P	02 23 41.0	-0.3
VAE	Valguarnera	82.67	10	LR	LR	03 01 17.4	
	comp=Z,86nm,22.0s,baz=12,slow=36						
BRDH	Bariadhala	82.69	303	LR	LR	03 02 50.2	
	comp=Z,412nm,21.4s,baz=176,slow=37						
TBI	Tubuai	82.71	177	eS	S	02 33 56.3	+0.8
	comp=Z,1µm,25.5s						
TBI	Tubuai	82.71	177	eLR	LR	02 49 47.9	
	comp=Z,5µm,33.8s						
TBI				eLR	LR	02 49 48.0	
	comp=Z,14µm,24.2s						
AKLM	AKL	82.73	25	P	P	02 23 45.0	0.0
TAF	Taforalt	82.75	24	P	P	02 23 47.0	+1.9
RKPI	Ransiki, Papua	82.80	255	P	P	02 23 45.7	+0.2
	comp=Z,66nm,0.9s						
CHTO	Chiang Mai	82.83	295	P	P	02 23 44.1	-1.6
CHTO	Chiang Mai	82.83	295	P	P	02 23 44.1	-1.6
CHTO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AVE	Averroes	83.08	29	P	P	02 23 45.1	-1.7
CM31	Chiang Mai Arr	83.14	295	P	P	02 23 46.2	-1.0
CM31				IAmb	IAmb	02 23 48.6	
	comp=Z,42nm,0.9s						
CMAR	Chiang Mai Arr	83.14	295	P	P	02 23 46.2	-1.1
	comp=Z,34nm,0.9s,baz=12,slow=5.7,SNR=66						
CMAR				LR	LR	03 03 29.1	
	comp=Z,183nm,21.2s,baz=30,slow=38						
	comp=Z,34nm,0.9s						
CMAR	Chiang Mai Arr	83.14	295	P	P	02 23 46.4	-0.9
CMAR	Chiang Mai Arr	83.14	295	P	P	02 23 46.4	-0.9
CHSH	Refugio Sur-Vo	83.18	105	P	P	02 23 47.2	-0.9
CHSH				IAmb	IAmb	02 24 13.0	
	comp=Z,77nm,1.4s						
JBK	JBK	83.18	24	P	P	02 23 49.0	+1.4
DVP	Devils Point	83.37	217	P	P	02 23 49.5	+1.3
	comp=Z,2µm,0.9s						
IFR	Ifrane	83.41	27	P	P	02 23 49.3	+0.7
PMG	Port Moresby	83.68	239	LR	LR	02 55 23.6	
	comp=Z,173nm,21.7s,baz=52,slow=32						
PMG	Port Moresby	83.68	239	P	P	02 23 49.5	-0.4
PMG	Port Moresby	83.68	239	P	P	02 23 49.6	-0.3
	comp=Z,148nm,1.4s						
PMG	Port Moresby	83.68	239	P	P	02 23 49.5	-0.4
PMG				pmax	pmax		
	comp=Z,283nm,1.4s						
KEST	Kesra	83.84	15	P	P	02 23 50.5	-0.2
	comp=Z,22nm,0.8s,baz=277,slow=1.1,SNR=68						
KEST				LR	LR	03 04 53.1	
	comp=Z,153nm,20.6s,baz=320,slow=38						
	comp=Z,22nm,0.8s						
KEST	Kesra	83.84	15	P	P	02 23 51.3	+0.5
KEST				IAmb	IAmb	02 24 37.7	
	comp=Z,28nm,0.8s						
DLV	T Lat	84.19	284	P	P	02 23 54.8	+1.9
	comp=Z,84nm,1.6s						
MDT	Midelt	84.20	27	LR	LR	03 02 22.0	
	comp=Z,145nm,20.0s,baz=352,slow=36						
MDT	Midelt	84.20	27	P	P	02 23 53.7	+1.1
MYLDM	Lahad Datu	84.94	272	IAmb	IAmb	02 24 02.9	
	comp=Z,82nm,1.6s						
FAKI	Fak Fak	84.97	256	IAmb	IAmb	02 23 56.4	
	comp=Z,63nm,0.9s						
FAKI	Fak Fak	84.97	256	P	P	02 23 56.0	-0.5
	comp=Z,101nm,1.6s						
FAKI	Fak Fak	84.97	256	P	P	02 23 55.5	-1.0
	comp=Z,101nm,1.6s,comp=Z,2µm						
GOLM	Goulmima	85.19	27	P	P	02 23 59.3	+1.7
KKM	Kota Kinabalu	85.36	274	P	P	02 23 58.2	-0.4
KKM				IAmb	IAmb	02 24 01.0	
	comp=Z,35nm,0.9s						
KKM	Kota Kinabalu	85.36	274	P	P	02 24 00.8	+2.1
	comp=Z,53nm,1.4s						
LBMI	Labuha	85.36	261	P	P	02 23 57.2	-1.3
	comp=Z,116nm,1.1s,comp=Z,1µm						
IDI	Anoyia	85.42	2	LR	LR	03 02 18.6	
	comp=Z,71nm,21.7s,baz=302,slow=36						
TZRR	Tazzarine	85.92	28	P	P	02 24 03.1	+1.8
GTOI	Gorontalo	86.54	265	P	P	02 24 03.6	-0.7
	comp=Z,5.7nm,0.9s						
ZGR	Zagora	86.55	28	P	P	02 24 06.0	+1.6
MSAI	Masohi	86.98	258	P	P	02 24 06.0	-0.4
	comp=Z,9.9nm,0.6s						
KOUNC	Koumac, New Ca	87.25	220	P	P	02 24 07.7	+0.2
KOUNC	Koumac, New Ca	87.25	220	P	P	02 24 09.8	+2.3
	comp=Z,76nm,1.6s						
TOLI2	Tolitoli	87.26	268	P	P	02 24 06.8	-1.1
SANI	Sanana	87.33	261	P	P	02 24 04.5	-3.7
	comp=Z,18nm,0.7s,comp=Z,828nm						
MMAI	Mount Meron Ar	87.46	353	LR	LR	03 07 10.6	
	comp=Z,70nm,21.8s,baz=304,slow=38						
AAI	Ambon	87.64	259	P	P	02 24 08.7	-0.9
	comp=Z,125nm,0.9s						
SGCB	S£o Gabriel d	87.93	94	eP	P	02 24 10.1	-0.9
DZM	Mont Dzumac	87.99	217	eP	P	02 24 12.8	+1.7
	comp=Z,89nm,23.2s						
DZM	Mont Dzumac	87.99	217	eS	S	02 34 47.9	+0.1
	comp=Z,145nm,27.4s						
DZM	Mont Dzumac	87.99	217	eLR	LR	02 52 16.5	
	comp=Z,642nm,25.6s						
DZM	Mont Dzumac	87.99	217	LR	LR	03 02 36.1	
	comp=Z,119nm,18.9s,baz=24,slow=35						
DZM	Mont Dzumac	87.99	217	P	P	02 24 11.6	+0.5
DZM				IAmb	IAmb	02 24 13.6	
	comp=Z,50nm,1.4s						
DZM	Mont Dzumac	87.99	217	P	P	02 24 13.4	+2.3
	comp=Z,26nm,1.3s						
ATAH	Atahualpa	88.29	107	LR	LR	03 06 20.9	
	comp=Z,89nm,18.0s,baz=349,slow=37						
MPSI	Mapaga	88.37	268	P	P	02 24 09.3	-3.8
	comp=Z,18nm,1.0s						
BOAV	Boa Vista	89.08	87	eP	P	02 24 16.3	-0.2
COEN	Coen	89.47	241	P	P	02 24 17.4	-0.7
	comp=Z,100nm,1.0s						
TBTG	Tabatinga, AM	89.96	98	eP	P	02 24 19.7	-0.8
SBUM	Sibu	90.46	276	IAmb	IAmb	02 24 25.7	
	comp=Z,16nm,0.8s						
MDP	Montagnes des	90.73	79	LR	LR	03 04 04.3	
	comp=Z,315nm,21.4s,baz=348,slow=35						
EIL	Elat	90.81	353	LR	LR	03 12 26.8	
	comp=Z,61nm,19.6s,baz=36,slow=40						
SURA	Surathani	90.90	290	P	P	02 24 27.0	+2.1
CZSB	Cruzeiro do Su	91.60	102	eP	P	02 24 27.8	-0.3
TEFE	Tefe	92.04	93	eP	P	02 24 29.6	-0.5
KSM	Kuching	92.26	277	P	P	02 24 33.0	+1.8
	comp=Z,27nm,1.0s						
TV1H	Townsville Har	92.62	235	P	P	02 24 33.8	+1.2
	comp=Z,52nm,1.1s						
MTSU	Mount Surprise	92.67	238	P	P	02 24 33.3	+0.4
	comp=Z,52nm,1.0s						
HYB	Hyderabad	92.70	312	eP	P	02 24 34.0	+0.7
KAPI	Kappang	93.02	265	LR	LR	03 03 47.5	
	comp=Z,36nm,21.7s,baz=30,slow=34						
BKSI	Bulukumba	93.10	265	P	P	02 24 33.1	-1.9
	comp=Z,25nm,1.5s,comp=Z,383nm						
NNA	Nana	93.24	108	LR	LR	03 08 09.6	
	comp=Z,81nm,19.2s,baz=328,slow=36						
KDU	Kakadu	93.31	251	P	P	02 24 35.0	-0.9
	comp=Z,180nm,1.0s						
WSAR	Wadi Sarin	93.51	331	LR	LR	03 14 43.3	
	comp=Z,143nm,18.4s,baz=30,slow=41						
RPN	Rapa Nui	93.53	142	LR	LR	02 56 44.4	
	comp=Z,134nm,20.1s,baz=324,slow=29						
CTA	Charters Tower	93.58	235	LR	LR	03 00 54.8	
	comp=Z,112nm,20.9s,baz=54,slow=32						
CTAO	Charters Tower	93.58	235	P	P	02 24 37.0	0.0
CTAO	Charters Tower	93.58	235	P	P	02 24 37.7	+0.6
	comp=Z,74nm,1.4s						
CTAO	Charters Tower	93.58	235	P	P	02 24 37.1	0.0
CTAO				pmax	pmax		
	comp=Z,63nm,1.0s						
MACA	Manacapuru-AM	93.75	90	eP	P	02 24 37.4	-0.7
MTN	Manton Dam	94.09	252	P	P	02 24 38.6	-0.9
	comp=Z,100nm,1.5s						
MCPB	Macapa, AP	95.72	81	eP	P	02 24 46.6	-0.5
RAYN	Ar Rayn	95.81	343	P	P	02 24 47.1	-0.4
RAYN				IAmb	IAmb	02 25 14.3	
	comp=Z,7.6nm,0.8s						
RAYN	Ar Rayn	95.81	343	P	P	02 24 47.1	-0.4
RAYN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MALB	Monte Alegre	95.89	84	eP	P	02 24 47.4	-0.4
ETMB	Extrema	96.64	98	eP	P	02 24 49.2	-2.0
PSI	Prapat	96.77	287	P	P	02 24 52.4	+0.4
	comp=Z,25nm,0.8s						
PSI	Prapat	96.77	287	P	P	02 24 50.9	-1.1
PSI				pmax	pmax		
	comp=Z,18nm,0.9s						
RPSI	Rantau Prapat	96.86	287	P	P	02 24 50.9	-1.4
RPSI				IAmb	IAmb	02 24 53.6	
	comp=Z,18nm,0.9s						
QIS	Mount Isa	96.87	241	P	P	02 24 51.2	-0.9
	comp=Z,20nm,1.4s						
ITTB	Itaituba	97.29	86	eP	P	02 24 53.5	-0.7
SAML	Samuel	97.42	95	eP	P	02 24 53.6	-1.1
KNRA	Kununurra	97.68	252	IAmb	IAmb	02 24 55.7	
	comp=Z,24nm,1.1s						
KNRA	Kununurra	97.68	252	P	P	02 24 55.1	-0.7
	comp=Z,24nm,1.3s						
BBTS	Babate	97.96	43	LR	LR	03 05 25.8	
	comp=Z,252nm,19.2s,baz=23,slow=33						
WR0	Warramunga Arr	98.64	245	IAmb	IAmb	02 24 59.2	
	comp=Z,11nm,1.0s						
WRAB	Tennant Creek	98.71	245	P	P	02 24 59.5	-0.9
	comp=Z,22nm,1.9s						
WRAB	Tennant Creek	98.71	245	c iP	P	02 24 58.8	-1.6
WRAB				pmax	pmax		
	comp=Z,21nm,1.2s						
WB2	Warramunga Arr	98.71	245	IAmb	IAmb	02 25 00.3	
	comp=Z,17nm,1.0s						
WRA	Warramunga Arr	98.72	245	P	P	02 24 59.0	-1.4
	comp=Z,5.7nm,0.8s,baz=34,slow=5.7,SNR=37						
WRA				LR	LR	03 06 14.4	
	comp=Z,102nm,20.6s,baz=24,slow=33						
	comp=Z,5.7nm,0.8s						
WRA	Warramunga Arr	98.72	245	P	P	02 24 58.4	-2.0
WRA	Warramunga Arr	98.72	245	P	P	02 24 58.4	-2.0
WRA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
PCHI	Peechi	99.84	311	eP	Pdif	02 24 55.1	-11
PCHI				ex	x	02 33 00.5	
QLP	Quilpie	100.19	234	P	Pdif	02 25 08.3	+1.5
	comp=Z,20nm,1.9s						
URZ	Urewera	100.67	204	P	Pdif	02 25 07.5	-1.1
	comp=Z,16nm,2.9s						
FITZ	Fitzroy Crossi	101.27	254	P	Pdif	02 25 10.9	-0.9
	comp=Z,1.9nm,1.1s						
ASAR	Alice Springs	102.14	244	P	Pdif	02 25 15.0	-0.6
	comp=Z,2.9nm,0.9s,baz=31,slow=4.2,SNR=16						
TORD	Torodi Ar. Bea	104.59	26	Pdiff	Pdif	02 25 26.4	-0.4
	comp=Z,0.4nm,0.8s,baz=185,slow=0.8,SNR=2.4						
TORD				PP	PKiKP	02 29 42.4	+0.2
	comp=Z,1.7nm,0.8s,baz=340,slow=7.4,SNR=5.3						
TORD				PKKPbc	PKKPbc	02 41 09.7	+1.2
	comp=Z,3.3nm,0.9s,baz=182,slow=2.1,SNR=14						
CPSB	Cacapava Do Su	120.31	99	eP	PKPdf	02 30 10.9	-0.6
PLCA	Paso Flores	120.49	119	PKP	PKiKP	02 30 11.7	0.0
	comp=Z,3.7nm,1.1s,baz=309,slow=6.5,SNR=2.9						
PLCA				pPKP	pPKPdf	02 30 34.6	+0.5
	comp=Z,2.8nm,0.8s,baz=285,slow=4.4,SNR=3.7						
PLCA				PKKPab	PKKPab	02 40 19.0	+1.9
	comp=Z,2.4nm,1.0s,baz=104,slow=1.0,SNR=3.0						
PLCA	Paso Flores	120.49	119	eP	PKPdf	02 30 10.9	-0.7
CNLB	Canela	120.73	96	eP	PKPdf	02 30 11.9	-0.4
KMBO	Kilima Mbogo	121.14	348	PKP	PKPdf	02 30 12.7	-1.3
	comp=Z,0.1nm,0.4s,baz=30,slow=24,SNR=6.0						
KMBO	Kilima Mbogo	121.14	348	PKPdf	PKiKP	02 30 14.2	+0.1
KMBO	Kilima Mbogo	121.14	348	PKIKP	PKiKP	02 30 14.2	+0.1
PLTB	Pedras Altas	121.33	100	eP	PKiKP	02 30 13.7	+0.2
TRQA	Tornquist	122.28	111	eP	PKPdf	02 30 14.7	-0.3
OPO	Ambohidratompo	136.54	332	PKP	PKPdf	02 30 42.3	-0.6
	comp=Z,10.0nm,0.8s,baz=356,slow=1.7,SNR=9.3						
OPO				SKPbc	SKPbc	02 34 07.1	-0.7
	comp=Z,17nm,1.0s,baz=348,slow=3.4,SNR=12						
ABPO	Ambohimpanom	136.96	332	PKPdf	PKPdf	02 30 42.9	-0.7
ABPO	Ambohimpanom	136.96	332	PKIKP	PKPdf	02 30 42.9	-0.7
VNDA	Vanda	139.73	194	PKP	PKPdf	02 30 47.0	+0.2
	comp=Z,2.4nm,0.8s,baz=8.7,slow=4.3,SNR=4.1						
VNDA				SKPbc	SKPbc	02 34 14.7	-0.1
	comp=Z,4.6nm,0.9s,baz=322,slow=3.2,SNR=5.1						
VNDA	Vanda	139.73	194	PKIKP	PKPdf	02 30 47.0	+0.2
VOI	Vohitsoka	139.84	331	PKP	PKiKP	02 30 50.6	-0.6
PMSA	Palmer Station	140.64	138	eP	PKPdf	02 30 47.6	-1.0
MUSN	Musina, Limpop	142.65	356	i P	PKPdf	02 30 50.8	-3.0
MOPA	Mopani	143.80	354	i P	PKPab	02 30 51.7	-1.1
LBTB	Lobatse	145.39	3	PKPbc	PKPdf	02 30 58.0	-0.6
	comp=Z,117nm,0.7s,baz=348,slow=2.7,SNR=154						
LBTB				SKPbc	SKPbc	02 34 30.7	0.0
	comp=Z,19nm,0.9s,baz=15,slow=1.3,SNR=7.4						
LBTB	Lobatse	145.39	3	i P	PKPdf	02 30 57.9	-0.6
LBTB	Lobatse	145.39	3	PKIKP	PKPdf	02 30 58.0	-0.6
BOSA	Boshof	148.97	3	PKP	PKPdf	02 31 04.0	-0.4
	comp=Z,32nm,0.7s,baz=7.8,slow=2.4,SNR=67						
BOSA				PKPbc	PKPbc	02 31 08.2	-0.3
	comp=Z,32nm,0.7s,baz=4.2,slow=3.7,SNR=40						
BOSA	Boshof	148.97	3	PKPdf	PKPdf	02 31 04.2	-0.2
BOSA	Boshof	148.97	3	i P	PKPdf	02 31 05.0	+0.6
QSPA	South Pole Qui	149.42	180	PKP	PKPdf	02 31 01.2	-2.6
	comp=Z,8.7nm,1.0s,baz=350,slow=0.5,SNR=12						
QSPA				PKPbc	PKPbc	02 31 08.6	+0.3
	comp=Z,33nm,0.8s,baz=56,slow=1.7,SNR=32						
QSPA				pPKPab	sPKPdf	02 31 33.3	-1.6
	comp=Z,45nm,0.7s,baz=45,slow=1.9,SNR=5.6						
SUR	Sutherland	152.41	12	PKP	PKPdf	02 31 09.4	-0.3
	comp=Z,4.5nm,0.9s,baz=9.5,slow=6.1,SNR=2.1						
SUR				PKPbc	PKPbc	02 31 16.5	-0.1
	comp=Z,5.3nm,0.6s,baz=6.9,slow=2.6,SNR=10.0						
VNA3	Neumayer Olymp	161.15	143	PKPab	PKPab	02 32 02.9	-0.6
VNA2	Neumayer--Watz	161.96	143	PKPab	PKPab	02 32 05.7	-1.3
	baz=312,slow=6.0						
MAW	Mawson	162.52	228	PKPab	PKPab	02 32 10.0	+0.5
	comp=Z,94nm,1.1s,baz=113,slow=7.7,SNR=4.6						
MAW	Mawson	162.52	228	PKP2	PKPab	02 32 10.0	+0.5
SNAA	Sanae	162.96	147	PKPab	PKPab	02 32 10.9	-0.6
SNAA	Sanae	162.96	147	PKPab	PKPab	02 32 10.8	-0.7
	comp=Z,3.3nm,0.6s,baz=236,slow=7.6,SNR=7.4						
TROLL	Troll, Antarti	164.16	152	PKPab	PKPab	02 32 16.9	0.0
ELIB	Princess Elisa	167.53	174	dPKP	PKPab	02 32 31.4	-0.3

ISK 02 02:20:28.3, 39°.51N×26°.08E, h6^{km}±1^{km}, ML1.9/5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GPNR	Gulpinar-Canak	0.07	143	Pg	Pg	02 20 30.4	+0.4
BOZC	Bozcaada	0.33	357	Pg	Pg	02 20 35.2	+0.5
BOZC				Sg	Sg	02 20 40.3	+1.2
SIGR	SIGRI	0.35	210	Pg	Pg	02 20 35.6	+0.6
EZN	Ezine	0.37	32	Pg	Pg	02 20 35.9	+0.5
EZN				Sg	Sg	02 20 41.5	+1.3
COMU	Canakkale	0.66	27	Pg	Pg	02 20 41.5	+0.5
COMU				Sg	Sb	02 20 51.1	-0.6

ROM 02 02:20:55.4±0.1, 42°.790N±0°.003×13°.198E±0°.004, h6^{km}, ML1.1/3, 1C, Error ellipse: s-maj=0.3km s-min=0.0km az=167.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	Arquata del Tr	0.03	166	P	Pg	02 20 56.7	-0.1
T1214				S	Sg	02 20 57.6	-0.3
T1214				AML	AML		
	comp=E,436µm,1.5s						
T1214				AML	AML		
	comp=N,337µm,1.4s						
T1214				AML	AML		
	comp=E,437µm,1.5s						
T1214				AML	AML		
	comp=N,340µm,1.4s						
T1214				AML	AML		
	comp=E,382µm,1.3s						
T1214				AML	AML		
	comp=N,338µm,1.4s						
T1214				AML	AML		
	comp=E,437µm,0.5s						
T1214				AML	AML		
	comp=N,340µm,0.6s						
T1214				AML	AML		
	comp=E,382µm,0.7s						
T1214				AML	AML		
	comp=N,338µm,0.6s						
NRCA	Norcia	0.07	305	⇑P	Pg	02 20 57.6	+0.3
NRCA				S	Sg	02 20 59.1	+0.5
NRCA				AML	AML		
	comp=E,528µm,0.8s						
NRCA				AML	AML		
	comp=N,446µm,0.2s						
T1212	Cascia, Frazio	0.12	251	P	Pg	02 20 58.4	+0.5
T1212				S	Sg	02 21 00.7	+0.9
T1218	Civita (PG)	0.14	207	P	Pg	02 20 58.7	+0.5
T1218				S	Sg	02 21 01.2	+1.1
T1218				AML	AML		
	comp=N,78µm,2.4s						
T1218				AML	AML		
	comp=N,77µm,0.9s						
MMO1	Montemonaco	0.14	41	P	Pg	02 20 58.7	+0.3
MMO1				S	Sg	02 21 01.4	+0.9
T1216	Preci, Frazion	0.17	307	AML	AML		
	comp=N,57µm,1.6s						
T1216				AML	AML		
	comp=E,63µm,1.6s						
T1241	Roccafluvione,	0.18	69	P	Pg	02 20 59.8	+0.7
T1241				S	Sg	02 21 02.9	+1.3
SMA1	SAN MARTINO	0.19	148	P	Pg	02 20 59.4	+0.2
SMA1				S	Sg	02 21 02.9	+1.2
T1217	Poggiodomo (PG	0.21	248	P	Pg	02 21 00.1	+0.6
T1217				S	Sg	02 21 03.8	+1.4
T1215	Vallo di Nera,	0.24	273	P	Pg	02 21 00.7	+0.5
T1215				S	Sg	02 21 04.8	+1.4
RM33	Pellescritta (	0.28	178	P	Pg	02 21 01.6	+0.7
RM33				S	Sg	02 21 06.1	+1.5
TERO	Teramo	0.34	119	P	Pg	02 21 02.2	+0.1

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*ISK **02** 02:21:31.5, 39°.51N×26°.10E, h7^{km}, ML2.2/15*

*DDA **02** 02:21:32.0±0.0, 39°.53N×26°.05E, h6^{km}±1^{km}, ML1.7*

ISC 02 02:21:31.7±1.0, 39°.50N±0°.02×26°.09E±0°.04, h12^{km}±6^{km}, n25, σ0ˢ.36/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.04	93	P	Pg	02 21 34.1	+0.1
KOCA				S	Sg	02 21 35.4	-0.2
GPNR	Gulpinar-Canak	0.06	143	Pg	Pg	02 21 34.0	-0.1
BOZC	Bozcaada	0.34	356	Pg	Pg	02 21 38.8	+0.2
BOZC				Sg	Sg	02 21 43.9	+0.8
BOZC	Bozcaada	0.34	356	P	Pg	02 21 38.5	-0.1
BOZC				P	Pg	02 21 38.7	+0.2
BOZC				i AML	AML	02 21 44.0	
	comp=E,76nm,0.9s						
BOZC				i AML	AML	02 21 49.0	
	comp=N,91nm,1.1s						
BOZC				i AML	AML	02 21 49.0	
	comp=N,107nm,0.9s						
SIGR	SIGRI	0.34	211	Pg	Pg	02 21 38.8	+0.2
EZN	Ezine	0.37	30	Pg	Pg	02 21 39.3	+0.1
EZN				Sg	Sg	02 21 44.6	+0.5
BAYC	CANAKKALE_Bayr	0.43	56	P	Pg	02 21 40.1	-0.1
BAYC				S	Sg	02 21 45.4	-0.5
AYVA	Ayvalik	0.51	112	P	Pb	02 21 43.3	+0.7
AYVA				i AML	AML	02 21 56.0	
	comp=E,51nm,1.3s						
COMU	Canakkale	0.67	27	Pg	Pg	02 21 44.7	0.0
COMU				Sg	Sb	02 21 54.4	-0.1
GOKA	anakkale-Gk	0.70	349	P	Pg	02 21 45.3	0.0
GOKA				S	Sg	02 21 54.0	-0.5
GOKA				i AML	AML	02 21 59.0	
	comp=E,30nm,0.3s						
GOKA				i AML	AML	02 22 06.0	
	comp=N,64nm,1.6s						
GADA	Gvkgeada	0.70	348	Pg	Pg	02 21 45.1	-0.2
BUHA	Balikesir, Bur	0.77	90	P	Pb	02 21 47.8	+0.8
BUHA				S	Sg	02 21 56.1	-0.6
BUHA				i AML	AML	02 22 00.0	
	comp=N,22nm,0.5s						
BUHA				i AML	AML	02 22 01.0	
	comp=E,23nm,0.6s						
DKL	Dikili	0.77	124	Pg	Pb	02 21 47.4	+0.4
KARB	zmir-Karabur	0.88	163	P	Pb	02 21 49.1	+0.3
CANM	Can-anakkale	0.90	55	Pg	Pg	02 21 49.1	0.0
ZEDA	zmir-Bergama	0.94	125	P	Pn	02 21 50.6	-0.1
ZEDA				S	Sg	02 22 01.9	-0.1
ZEDA				i AML	AML	02 22 05.0	
	comp=N,24nm,0.3s						
GELI	Tayfur-Gelibol	0.94	18	Pg	Pg	02 21 49.9	0.0
LPK	Lapseki	1.01	31	Pg	Pb	02 21 51.3	+0.1
CHOS	Chios island	1.12	181	Pn	Pb	02 21 53.1	+0.1
ERIK	Erikli-Kesan	1.21	16	Pn	Pn	02 21 54.2	-0.3
URLA	Izmir	1.21	161	Pn	Pn	02 21 54.1	-0.4
ENEZ	Enez	1.23	2	Pn	Pg	02 21 55.9	+0.5
KRBG	Karabiga-Canak	1.29	46	Pn	Pb	02 21 56.1	+0.2
ALN	Alexandroupoli	1.39	359	Pn	Pb	02 21 57.8	+0.1
RKY	Sarkoy-Tekirda	1.45	35	Pn	Pb	02 21 58.5	-0.2

RSNC 02 02:22:38.2±0.9, 5°.27N×73°.74W, h149^{km}±4^{km}, ML3.3, Mw3.7, 12C-5D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHIC	Chingaza	0.63	179	⇑iP	Pn	02 23 00.7	-0.1

CHIC				*e*S	Sn	02 23 17.4	-0.5
CHIC				*i*		02 23 20.3	
	comp=Z,403nm,0.2s						
ROSC	**El Rosal**	**0.72**	**234**	⇑*i*P	Pn	02 23 02.3	+1.1
ROSC				*e*S	Sn	02 23 20.5	+1.8
ROSC				*i*		02 23 23.7	
	comp=Z,476nm,0.3s						
RUSC	**La Rusia**	**0.90**	**46**	⇓*i*P	Pn	02 23 02.9	+0.2
RUSC				*e*S	Sn	02 23 21.4	+0.1
RUSC				*i*		02 23 22.8	
	comp=Z,212nm,0.3s						
VILC	**Villavicencio,**	**1.15**	**178**	⇑*i*P	Pn	02 23 04.0	-0.4
VILC				*e*S	Sn	02 23 24.0	-0.4
NORC	**Norcasia**	**1.16**	**285**	⇑*i*P	Pn	02 23 04.0	-0.4
NORC				*e*S	Sn	02 23 23.9	-0.5
NORC				*i*		02 23 25.2	
	comp=Z,358nm,0.1s						
BARC	**Barichara**	**1.43**	**23**	*e*P	Pn	02 23 06.9	-0.3
BARC				*e*S	Sn	02 23 27.9	-1.6
BARC				*i*		02 23 35.8	
	comp=Z,288nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.45**	**331**	⇑*i*P	Pn	02 23 06.2	-1.1
PTBC				*e*S	Sn	02 23 28.1	-1.4
PTBC				*i*		02 23 31.3	
	comp=Z,149nm,0.4s						
ANIL	**Santa Ana**	**1.83**	**245**	⇑*i*P	Pn	02 23 11.4	-0.2
ANIL				*e*S	Sn	02 23 37.5	+0.3
ANIL				*i*		02 23 38.7	
	comp=Z,305nm,0.2s						
BRRC	**Barranca, Sant**	**1.83**	**1**	⇑*e*P	Pn	02 23 11.2	-0.2
BRRC				*e*S	Sn	02 23 36.3	-0.6
BRRC				*i*		02 23 40.5	
	comp=Z,161nm,0.3s						
PTGC	**Puerto Gaitan,**	**1.92**	**123**	⇓*i*P	Pn	02 23 11.8	-0.5
PTGC				*e*S	Sn	02 23 36.7	-1.9
PTGC				*i*		02 23 40.4	
	comp=Z,178nm,0.4s						
PRAC	**Prado**	**1.92**	**217**	⇑*i*P	Pn	02 23 09.7	-2.8
PRAC				*e*S	Sn	02 23 35.2	-3.5
PRAC				*i*		02 23 38.7	
	comp=Z,411nm,0.4s						
HELC	**Santa Helena**	**2.00**	**297**	*e*P	Pn	02 23 13.4	-0.3
HELC				*e*S	Sn	02 23 40.0	-0.9
HELC				*i*		02 23 43.4	
	comp=Z,279nm,0.3s						
ORTC	**Ortega, Tolima**	**2.02**	**228**	⇑*i*P	Pn	02 23 13.2	-0.4
ORTC				*e*S	Sn	02 23 39.8	-0.9
ORTC				*i*		02 23 44.7	
	comp=Z,171nm,0.3s						
TAMC	**Tame, Arauca**	**2.26**	**59**	⇓*e*P	Pn	02 23 16.4	-0.1
TAMC				*e*S	Sn	02 23 44.2	-1.6
TAMC				*i*		02 23 47.0	
	comp=Z,98nm,0.4s						
PAMC	**Pamplona, Colo**	**2.31**	**27**	⇓*i*P	Pn	02 23 17.9	+0.4
PAMC				*e*S	Sn	02 23 47.5	-0.1
PAMC				*i*		02 23 49.7	
	comp=Z,119nm,0.3s						
CBOC	**Ciudad Bolivar**	**2.34**	**285**	*e*P	Pn	02 23 17.5	-0.1
CBOC				*e*S	Sn	02 23 47.6	-0.2
CBOC				*i*		02 23 54.8	
	comp=Z,44nm,0.4s						
ZARC	**Zaragoza, Cauc**	**2.48**	**333**	⇓*i*P	Pn	02 23 17.1	-2.0
ZARC				*e*S	Sn	02 23 47.9	-2.6
ZARC				*i*		02 23 57.2	
	comp=Z,138nm,0.3s						
YOTC	**Yotoco, Valle**	**2.89**	**244**	*e*P	Pn	02 23 23.3	-1.0
YOTC				*e*S	Sn	02 24 00.6	+0.7
DBBC	**Dabeiba**	**3.01**	**305**	*e*P	Pn	02 23 25.5	-0.3
DBBC				*e*S	Sn	02 24 02.2	-0.4
DBBC				*i*		02 24 05.6	
	comp=Z,92nm,0.4s						
UREC	**San Jos de Ur**	**3.05**	**324**	*e*P	Pn	02 23 23.6	-2.5
UREC				*e*S	Sn	02 24 00.0	-3.3
UREC				*i*		02 24 01.7	
	comp=Z,133nm,0.2s						
BETC	**Betania**	**3.08**	**214**	*e*P	Pn	02 23 25.6	-1.0
BETC				*e*S	Sn	02 24 02.0	-2.0
BETC				*i*		02 24 04.9	
	comp=Z,40nm,0.5s						
MACC	**Macarena, Meta**	**3.10**	**182**	⇑*i*P	Pn	02 23 25.4	-1.5
MACC				*e*S	Sn	02 24 01.6	-3.0
MACC				*i*		02 24 04.0	
	comp=Z,79nm,0.4s						
GARC	**Garzon, Huila**	**3.52**	**210**	⇑*i*P	Pn	02 23 31.5	-1.0
PIZC	**Pizarro, Choco**	**3.62**	**265**	*e*P	Pn	02 23 35.0	+1.5
MALC	**Bahia Malaga**	**3.79**	**251**	*e*P	Pn	02 23 36.7	+0.9
MALC				*e*S	Sn	02 24 20.8	+0.4
POPC	**Popayan, Colom**	**3.99**	**227**	*e*P	Pn	02 23 38.5	0.0
FLOC	**Florencia**	**4.13**	**208**	⇑*i*P	Pn	02 23 39.6	-0.5
LCBC	**Los crdobas,**	**4.42**	**324**	*e*P	Pn	02 23 42.1	-1.8
LCBC				*e*S	Sn	02 24 34.6	-0.6
LCBC				*i*		02 24 37.4	
	comp=Z,36nm,0.3s						
ARGC	**Ariguani, Magd**	**4.59**	**354**	*e*P	Pn	02 23 45.5	-0.7
ARGC				*e*S	Sn	02 24 39.1	-0.2
ARGC				*i*		02 24 55.8	
	comp=Z,18nm,0.3s						
BBAC	**Balboa, Cauca**	**4.76**	**227**	*e*P	Pn	02 23 49.5	+0.9
BBAC				*e*S	Sn	02 24 41.4	-2.1
SJCC	**San Jacinto, C**	**4.82**	**343**	*e*P	Pn	02 23 46.1	-3.2
SJCC				*e*S	Sn	02 24 39.2	-5.5
SJCC				*i*		02 24 42.3	
	comp=Z,45nm,0.4s						
CRJC	**Cerrejon, Guaj**	**5.78**	**8**	*e*P	Pn	02 23 59.8	-2.3
CRJC				*i*		02 25 08.5	
	comp=Z,32nm,0.2s						
SMRC	**Santa Marta, M**	**5.88**	**355**	*e*P	Pn	02 24 03.9	+0.5
SMRC				*e*S	Sn	02 25 07.1	-2.9
SMRC				*i*		02 25 08.6	
	comp=Z,13nm,0.3s						

IDC 02 02:28:16.8±1.9**, 0°.91N×125°.01E, h0^{km}, mb3.4**/3**,**
mbtmp3.5/3**, Error ellipse: s-maj=186.0km**
s-min=26.2km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.65**	**157**	P	P	02 33 19.5	-0.3
	0.6nm,0.4s,baz=334,slow=11,SNR=9.6						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**25.91**	**161**	P	P	02 33 51.1	+0.2
	0.4nm,0.4s,baz=348,slow=7.5,SNR=6.8						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**58.93**	**327**	P	P	02 38 17.9	0.0
	0.2nm,0.5s,baz=116,slow=7.3,SNR=4.8						
	0.2nm,0.5s						

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*THE **02** 02:34:51.8, 39°.50N×26°.05E, h8^{km}±1^{km}, ML2.7/8, Error*
ellipse: s-maj=1.9km s-min=0.6km az=158.0
*ISK **02** 02:34:51.2, 39°.51N×26°.04E, h7^{km}, ML2.8/25*
*ATH **02** 02:34:52.1, 39°.50N×26°.06E, h11^{km}±2^{km}, ML2.8/3, Error*
ellipse: s-maj=3.2km s-min=1.1km az=222.0
*DDA **02** 02:34:52.1±0.0, 39°.53N×26°.13E, h9^{km}, ML2.9*
ISC 02 02:34:51.6±0.8**, 39°.51N**±0°.01×**26°.06E**±0°.02**, h11**^{km}±5^{km}**,**
n62, σ0^{s}.54/91**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.07**	**94**	P	**Pg**	**02 34 54.2**	**+0.2**
KOCA				S	**Sg**	**02 34 55.1**	**-0.5**
GPNR	**Gulpinar-Canak**	**0.08**	**130**	Pg	**Pg**	**02 34 54.0**	**-0.1**
GPNR				Sg	**Sg**	**02 34 55.9**	**0.0**
PRK	**Paraskevi**	**0.31**	**147**	P	**Pg**	**02 34 58.3**	**+0.4**
PRK				S	**Sg**	**02 35 02.1**	**+0.1**
	3µm,0.2s						
PRK	**Paraskevi**	**0.31**	**147**	P	**Pg**	**02 34 58.2**	**+0.3**
PRK				S	**Sg**	**02 35 02.4**	**+0.4**
PRK				AML	AML	02 35 03.4	
	comp=E,5300µm,0.3s						
PRK				AML	AML	02 35 03.5	
	comp=N,5612µm,0.2s						
SIGR	**SIGRI**	**0.33**	**208**	P	**Pg**	**02 34 58.4**	**+0.1**
SIGR				S	**Sg**	**02 35 03.3**	**+0.6**
	comp=N,2µm,0.2s						
SIGR	**SIGRI**	**0.33**	**208**	Pg	**Pg**	**02 34 58.5**	**+0.1**
SIGR				Sg	**Sg**	**02 35 03.3**	**+0.6**
SIGR	**SIGRI**	**0.33**	**208**	P	**Pg**	**02 34 58.4**	**+0.1**
SIGR				S	**Sg**	**02 35 03.0**	**+0.2**
SIGR				AML	AML	02 35 03.6	
	comp=N,2797µm,0.3s						
SIGR				AML	AML	02 35 04.1	
	comp=E,4541µm,0.2s						
BOZC	**Bozcaada**	**0.34**	**360**	Pg	**Pg**	**02 34 58.6**	**+0.2**
BOZC				Sg	**Sg**	**02 35 03.7**	**+0.8**
BOZC	**Bozcaada**	**0.34**	**360**	P	**Pg**	**02 34 58.4**	**0.0**
BOZC				P	**Pg**	**02 34 58.5**	**+0.2**
BOZC				*i* AML	AML	02 35 03.0	
	comp=E,1µm,0.3s						
BOZC				S	**Sg**	**02 35 03.1**	**+0.2**
BOZC				*i* AML	AML	02 35 04.0	
	comp=E,2µm,0.3s						
BOZC				*i* AML	AML	02 35 04.0	
	comp=E,2µm,0.4s						
BOZC				*i* AML	AML	02 35 04.0	
	comp=E,2µm,0.2s						
EZN	**Ezine**	**0.38**	**33**	P	**Pg**	**02 34 59.3**	**+0.1**
EZN				S	**Sg**	**02 35 05.0**	**+0.7**
	comp=E,1µm,0.3s						
EZN	**Ezine**	**0.38**	**33**	Pg	**Pg**	**02 34 59.4**	**+0.2**
EZN				Sg	**Sg**	**02 35 04.9**	**+0.7**
BAYC	**CANAKKALE_Bayr**	**0.45**	**58**	P	**Pg**	**02 35 00.3**	**-0.1**
BAYC				S	**Sg**	**02 35 05.2**	**-1.2**
AYVA	**Ayvalik**	**0.53**	**112**	P	**Pg**	**02 35 02.3**	**+0.3**
ECEA	**Canakkale, Ece**	**0.55**	**10**	P	**Pg**	**02 35 02.3**	**+0.1**
ECEA				S	**Sg**	**02 35 09.8**	**+0.3**
ECEA				*i* AML	AML	02 35 11.0	
	comp=E,863nm,0.5s						
ECEA				*i* AML	AML	02 35 13.0	
	comp=E,814nm,0.3s						
COMU	**Canakkale**	**0.67**	**28**	Pg	**Pg**	**02 35 04.8**	**+0.1**
GOKA	**anakkale-Gk**	**0.69**	**351**	P	**Pg**	**02 35 05.1**	**+0.1**
GOKA				S	**Sg**	**02 35 13.7**	**-0.5**
GOKA				*i* AML	AML	02 35 18.0	
	comp=E,725nm,0.3s						
GOKA				*i* AML	AML	02 35 19.0	
	comp=E,674nm,0.2s						
GADA	**Gvkgeada**	**0.69**	**350**	Pg	**Pg**	**02 35 04.9**	**-0.2**
LIA	**Limnos Island**	**0.78**	**300**	P	**Pg**	**02 35 06.8**	**+0.2**
LIA				S	**Sb**	**02 35 18.1**	**+0.4**
	comp=E,1µm,0.3s						
LIA	**Limnos Island**	**0.78**	**300**	P	**Pg**	**02 35 06.9**	**+0.2**
LIA				S	**Sb**	**02 35 18.2**	**+0.5**
LIA				AML	AML	02 35 20.2	
	comp=N,1850µm,0.3s						
LIA				AML	AML	02 35 20.6	
	comp=E,2417µm,0.3s						
DKL	**Dikili**	**0.79**	**123**	Pg	**Pg**	**02 35 07.3**	**+0.4**
BUHA	**Balikesir, Bur**	**0.79**	**90**	P	**Pg**	**02 35 06.9**	**0.0**
BUHA				S	**Sg**	**02 35 16.5**	**-0.7**
KARB	**zmir-Karabur**	**0.89**	**162**	P	**Pg**	**02 35 08.9**	**+0.2**
KARB				S	**Sg**	**02 35 20.3**	**+0.1**
KARB				*i* AML	AML	02 35 23.0	
	comp=E,313nm,0.2s						
CANM	**Can-anakkale**	**0.92**	**56**	Pg	**Pg**	**02 35 09.2**	**-0.2**
GELI	**Tayfur-Gelibol**	**0.95**	**20**	Pg	**Pg**	**02 35 09.7**	**-0.2**
ZEDA	**zmir-Bergama**	**0.96**	**124**	P	**Pg**	**02 35 10.3**	**+0.2**
ZEDA				S	**Sg**	**02 35 23.1**	**+0.5**
LPK	**Lapseki**	**1.02**	**32**	Pg	**Pg**	**02 35 10.9**	**-0.4**
PSRA	**Psara**	**1.04**	**202**	P	**Pg**	**02 35 12.1**	**+0.5**
SMTH	**Samothraki Isl**	**1.04**	**337**	P	**Pg**	**02 35 11.4**	**-0.3**
SMTH				S	**Sg**	**02 35 25.8**	**+0.5**
	comp=E,198nm,0.1s						
SMTH	**Samothraki Isl**	**1.04**	**337**	P	**Pg**	**02 35 11.4**	**-0.3**
CHOS	**Chios island**	**1.12**	**180**	P	**Pg**	**02 35 12.4**	**-0.7**
CHOS				S	**Sg**	**02 35 27.5**	**-0.2**
	comp=E,585nm,0.3s						
CHOS	**Chios island**	**1.12**	**180**	Pn	**Pg**	**02 35 12.6**	**-0.5**
CHOS	**Chios island**	**1.12**	**180**	P	**Pg**	**02 35 12.6**	**-0.5**
CAVK	**Edirne/Enez-Ca**	**1.19**	**4**	P	**Pb**	**02 35 13.6**	**-0.6**
CAVK				*i* AML	AML	02 35 43.0	
	comp=E,206nm,1.3s						
ERIK	**Erikli-Kesan**	**1.22**	**17**	Pn	**Pb**	**02 35 14.1**	**-0.5**
URLA	**Izmir**	**1.22**	**160**	Pn	**Pb**	**02 35 14.1**	**-0.6**
URLA	**Izmir**	**1.22**	**160**	P	**Pb**	**02 35 13.9**	**-0.8**
URLA				S	**Sb**	**02 35 29.3**	**-1.1**
ENEZ	**Enez**	**1.23**	**3**	Pn	**Pn**	**02 35 14.8**	**+0.1**
STEP	**BALIKESIR_Sava**	**1.29**	**95**	P	**Pn**	**02 35 15.4**	**-0.3**
STEP				S	**Sb**	**02 35 32.8**	**+0.2**
KRBG	**Karabiga-Canak**	**1.30**	**47**	Pn	**Pn**	**02 35 15.6**	**-0.1**
ZEYE	**Izmir, Urla-Ze**	**1.31**	**164**	P	**Pn**	**02 35 15.3**	**-0.5**
ZEYE				S	**Sb**	**02 35 32.3**	**-0.8**
BLCB	**Balcova**	**1.36**	**145**	Pn	**Pn**	**02 35 17.3**	**+0.8**
GONE	**Gonen-Balikesi**	**1.37**	**66**	Pn	**Pn**	**02 35 16.8**	**+0.2**
ALN	**Alexandroupoli**	**1.39**	**360**	P	**Pn**	**02 35 16.6**	**-0.3**
ALN				S	**Sn**	**02 35 36.2**	**+0.9**
	comp=E,175nm,0.4s						
ALN	**Alexandroupoli**	**1.39**	**360**	Pn	**Pn**	**02 35 17.1**	**+0.2**
ALN	**Alexandroupoli**	**1.39**	**360**	P	**Pn**	**02 35 16.9**	**0.0**
KESN	**Edirne-Kesan**	**1.40**	**20**	P	**Pn**	**02 35 16.9**	**-0.5**
KESN				S	**Sb**	**02 35 36.4**	**+0.3**
BALB	**Balikesir**	**1.42**	**84**	Pn	**Pn**	**02 35 17.3**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.46**	**36**	Pn	**Pn**	**02 35 18.7**	**+0.7**
RKY				Sn	**Sg**	**02 35 38.5**	**-0.2**
BKES	**Balkesir-Mer**	**1.47**	**81**	P	**Pn**	**02 35 18.0**	**+0.1**
THAS	**Thassos island**	**1.50**	**317**	P	**Pn**	**02 35 17.8**	**-0.6**
THAS	**Thassos island**	**1.50**	**317**	P	**Pn**	**02 35 17.9**	**-0.6**
DGB	**zmir**	**1.59**	**156**	P	**Pn**	**02 35 20.5**	**+0.9**
EDC	**Edincik**	**1.62**	**58**	Pn	**Pn**	**02 35 20.8**	**+0.6**
UKOP	**Uzunkopru-Edir**	**1.68**	**15**	Pn	**Pn**	**02 35 22.0**	**+1.1**
RDO	**Rodhopi**	**1.69**	**347**	P	**Pn**	**02 35 21.1**	**+0.1**
RDO				S	**Sn**	**02 35 42.1**	**-0.4**
	comp=E,38nm,0.5s						
RDO	**Rodhopi**	**1.69**	**347**	Pn	**Pn**	**02 35 21.4**	**+0.4**
OUR	**Ouranopolis**	**1.80**	**298**	Pn	**Pn**	**02 35 23.1**	**+0.6**
TKR	**Tekirdag**	**1.87**	**37**	Pn	**Pn**	**02 35 24.7**	**+1.2**
KCTX	**Karacabey (Bur**	**1.93**	**66**	Pn	**Pn**	**02 35 24.9**	**+0.6**
CRLT	**Corlu**	**2.07**	**38**	Pn	**Pn**	**02 35 26.9**	**+0.6**
KULA	**Kula-Manisa**	**2.26**	**115**	Pn	**Pn**	**02 35 30.5**	**+1.5**
SIMA	**Simav-Kutahya**	**2.31**	**100**	Pn	**Pn**	**02 35 31.0**	**+1.3**

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*IEPN **02** 02:44:39.0, 86°.53N×69°.74E, h10^{km}*
*BER **02** 02:44:52.3±1.2, 86°.19N×46°.95E, h0^{km}±109^{km}, ML2.3,*
Confirmed Earthquake
ISC 02 02:44:41.9±3.6**, 86°.6N**±0°.2×**50°.8E**±0°.2**, h10**^{km}**, n15,**
σ1^{s}.83/21**, North of Franz Josef Land**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZFI2	**Zemlya Franca-**	**5.83**	**185**	*e*P	**Pn**	**02 46 09.3**	**+1.0**
ZFI2				S	**Sn**	**02 47 13.9**	**-1.2**
ZFI	**Zemlya Franca-**	**5.84**	**185**	*e*P	**Pn**	**02 46 09.4**	**+1.1**
ZFI				S	**Sn**	**02 47 14.9**	**-0.2**
	9.9nm,1.3s						
OMEGA	**Omega**	**5.86**	**185**	*e*P	**Pn**	**02 46 09.4**	**+0.8**
OMEGA				S	**Sn**	**02 47 15.1**	**-0.6**
	12nm,2.7s						
NOR	**Nord**	**7.81**	**271**	*e*S	**Sn**	**02 48 00.5**	**-3.0**
KBS	**Kingsbay**	**8.74**	**233**	*e*P	**Pn**	**02 46 49.3**	**+1.2**
KBS				S	**Sn**	**02 48 28.3**	**+1.8**
KBS	**Kingsbay**	**8.74**	**233**	*e*P	**Pn**	**02 46 50.0**	**+1.9**
KBS				IAML		02 48 38.8	
	comp=Z,2.2nm,0.8s						
SPA0	**Spitsbergen Ar**	**9.28**	**226**	*e*P	**Pn**	**02 46 56.6**	**+1.2**
SPA0				*e*S	**Sn**	**02 48 41.8**	**+2.2**
SPA0	**Spitsbergen Ar**	**9.28**	**226**	*e*P	**Pn**	**02 46 56.9**	**+1.5**
SPA0				IAML		02 48 51.1	
	comp=Z,3.5nm,0.8s						
BRBB	**Barentsburg B**	**9.45**	**229**	*e*P	**Pn**	**02 46 59.8**	**+1.9**
BRBA	**Barentsburg A**	**9.49**	**229**	*e*P	**Pn**	**02 46 59.1**	**+0.8**
HSPB	**Hornsund (broa**	**10.47**	**226**	*e*P	**Pn**	**02 47 14.6**	**+2.9**
HSPB	**Hornsund (broa**	**10.47**	**226**	*e*P	**Pn**	**02 47 11.0**	**-0.7**
HOPEN	**Hopen**	**10.60**	**214**	*e*P	**Pn**	**02 47 14.1**	**+0.7**
HOPEN				*e*S	**Sn**	**02 49 08.4**	**-3.5**
HOPEN	**Hopen**	**10.60**	**214**	*e*P	**Pn**	**02 47 14.3**	**+0.9**
DAG	**Danmarks Havn**	**12.52**	**264**	*e*P	**Pn**	**02 47 41.3**	**+1.6**

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*AEIC **02** 02:56:24.3±6.3, 55°.26N±0°.09×163°.3W±0°.1, h189^{km}±5^{km},*
Error ellipse: s-maj=13.7km s-min=8.8km az=166.0
*NEIC **02** 02:56:24.9±1.8, 55°.60N±0°.09×163°.6W±0°.1, h179^{km}±7^{km},*
mb4.4/91, ML4.3(AEIC), Error ellipse: s-maj=13.1km
s-min=8.9km az=168.0
*ANF **02** 02:56:24.3±0.2, 55°.44N×163°.48W, h168^{km}±2^{km}, ML4.5/14,*
Error ellipse: s-maj=3.5km s-min=2.8km az=133.0
*IDC **02** 02:56:25.2±0.6, 55°.61N×163°.65W, h186^{km}±4^{km}, mb3.6/25,*
mbtmp4.1/28, Error ellipse: s-maj=15.5km s-min=7.9km
az=8.0
ISC 02 02:56:24.3±0.4**, 55°.49N**±0°.06×**163°.50W**±0°.04**,**
h183^{km}±3^{km}**, n433, σ1^{s}.23**/459**, mb4.3**/72**, Unimak Island**
region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FALS	**False Pass**	**0.64**	**176**		**Pn**	**02 56 48.7**	**-1.4**
FALS				Sn	**Sn**	**02 57 10.9**	**+1.1**
FALS	**False Pass**	**0.64**	**176**	P	**Pn**	**02 56 48.6**	**-1.4**
	baz=4.4,SNR=20						
FALS				S	**Sn**	**02 57 07.5**	**-2.3**
	baz=4.4						
S12K	**Black Hills**	**0.84**	**75**	P	**Pn**	**02 56 51.0**	**-0.2**
	baz=242,SNR=60						
S12K				S	**Sn**	**02 57 11.1**	**-0.9**
	baz=242						
SDPT	**Sand Point**	**1.73**	**94**		**Pn**	**02 56 57.1**	**-1.5**
SDPT	**Sand Point**	**1.73**	**94**	P	**Pn**	**02 56 57.2**	**-1.5**
SDPT	**Sand Point**	**1.73**	**94**	P	**Pn**	**02 56 57.2**	**-1.5**
	baz=269,SNR=41						
SDPT				S	**Sn**	**02 57 22.4**	**-2.9**
	baz=269						
AKUT	**Akutan**	**1.89**	**225**		**Pn**	**02 56 59.3**	**-1.1**
UNV	**Unalaska Valle**	**2.40**	**228**		**Pn**	**02 57 04.5**	**-1.5**
UNV	**Unalaska Valle**	**2.40**	**228**	P	**Pn**	**02 57 04.4**	**-1.5**
	baz=50,SNR=25						
UNV				S	**Sn**	**02 57 35.4**	**-3.0**
	baz=50						
CHGN	**Chignik**	**2.98**	**72**		**Pn**	**02 57 12.1**	**-0.6**
CHGN	**Chignik**	**2.98**	**72**	P	**Pn**	**02 57 12.1**	**-0.6**
	baz=252,SNR=64						
R16K	**Pilot Point**	**3.88**	**55**	P	**Pn**	**02 57 24.2**	**+0.3**
	baz=237,SNR=19						
NIKH	**Nikolski High**	**4.03**	**233**	Pn	**Pn**	**02 57 24.6**	**-1.2**
NIKH	**Nikolski High**	**4.03**	**233**	P	**Pn**	**02 57 24.6**	**-1.2**
	baz=52,SNR=9.9						
NIKH				S	**Sn**	**02 58 10.1**	**-3.9**
	baz=52						
SPIA	**Saint Paul Isl**	**4.12**	**297**		**Pn**	**02 57 26.3**	**-0.5**
SPIA	**Saint Paul Isl**	**4.12**	**297**	P	**Pn**	**02 57 26.7**	**-0.1**
	baz=113						
R17K	**Ugashik Creek**	**4.48**	**58**	P	**Pn**	**02 57 31.5**	**0.0**
	baz=242						
CLES	**Cleveland East**	**4.61**	**237**	Pn	**Pn**	**02 57 32.3**	**-0.9**
P16K	**Nushagak River**	**4.64**	**38**	P	**Pn**	**02 57 34.3**	**+0.8**
	baz=220,SNR=70						
Q16K	**King Salmon**	**4.91**	**47**	P	**Pn**	**02 57 37.6**	**+0.6**
	baz=230,SNR=19						
Q17K	**Contact Creek**	**5.01**	**53**	P	**Pn**	**02 57 38.6**	**+0.2**
	baz=237,SNR=25						
O16K	**Kokwok River B**	**5.04**	**33**	P	**Pn**	**02 57 38.8**	**+0.2**
	baz=216,SNR=25						
P17K	**Kvichak River**	**5.33**	**43**	P	**Pn**	**02 57 43.4**	**+1.1**
	baz=227,SNR=54						
O17K	**Koliganek Bris**	**5.50**	**36**	P	**Pn**	**02 57 44.9**	**+0.3**
	baz=220						
N16K	**Nishlik Lake**	**5.59**	**25**	P	**Pn**	**02 57 46.4**	**+0.6**
	baz=207,SNR=29						
Q18K	**Katmai Hardscr**	**5.61**	**52**	P	**Pn**	**02 57 46.6**	**+0.5**
	baz=237,SNR=21						
P18K	**Big Mountain,**	**5.93**	**45**	Pn	**Pn**	**02 57 51.0**	**+0.7**
P18K	**Big Mountain,**	**5.93**	**45**	P	**Pn**	**02 57 51.0**	**+0.7**
	baz=230,SNR=64						
OHAK	**Old Harbor**	**5.94**	**69**		**Pn**	**02 57 48.1**	**-2.2**
OHAK	**Old Harbor**	**5.94**	**69**	P	**Pn**	**02 57 48.0**	**-2.2**
OHAK	**Old Harbor**	**5.94**	**69**	P	**Pn**	**02 57 48.1**	**-2.2**
	baz=255,SNR=10						
O18K	**Koktuh Hills**	**6.23**	**42**	Pn	**Pn**	**02 57 54.9**	**+0.6**
O18K	**Koktuh Hills**	**6.23**	**42**	P	**Pn**	**02 57 55.1**	**+0.9**
	baz=227,SNR=73						
Q19K	**Cape Douglas,**	**6.36**	**53**		**Pn**	**02 57 56.1**	**+0.1**
Q19K	**Cape Douglas,**	**6.36**	**53**	P	**Pn**	**02 57 55.7**	**-0.2**
	baz=240,SNR=14						
KDAK	**Kodiak Island**	**6.44**	**65**	P	**Pn**	**02 57 55.4**	**-1.5**
	108nm,0.3s,baz=256,slow=3.7,SNR=827						
KDAK				S	**Sn**	**02 59 05.8**	**-4.3**
	24nm,0.3s,baz=75,slow=22,SNR=7.3						
KDAK	**Kodiak Island**	**6.44**	**65**	Pn	**Pn**	**02 57 54.9**	**-2.0**
O19K	**Port Alsworth**	**6.79**	**42**	P	**Pn**	**02 58 01.9**	**+0.4**
	baz=228						
Q20K	**Shuyak Island**	**6.81**	**58**	P	**Pn**	**02 58 00.8**	**-1.0**
	baz=246,SNR=22						
P19K	**Oil Pt**	**6.92**	**49**		**Pn**	**02 58 03.8**	**+0.6**
P19K	**Oil Pt**	**6.92**	**49**	P	**Pn**	**02 58 03.2**	**0.0**
	baz=236						
SVW2	**Sparrevohn**	**7.00**	**33**	Pn	**Pn**	**02 58 04.1**	**0.0**
SVW2	**Sparrevohn**	**7.00**	**33**	P	**Pn**	**02 58 05.0**	**+0.8**
ILSW	**Iliamna Southw**	**7.14**	**47**	Pn	**Pn**	**02 58 05.7**	**-0.4**
N19K	**Bonanza Creek**	**7.15**	**38**		**Pn**	**02 58 07.1**	**+0.8**
N19K	**Bonanza Creek**	**7.15**	**38**	P	**Pn**	**02 58 07.2**	**+0.9**
	baz=224						
O20K	**Slope Mountain**	**7.41**	**47**	P	**Pn**	**02 58 10.0**	**+0.4**
	baz=235						
RSO	**Redoubt South**	**7.57**	**44**		**Pn**	**02 58 12.4**	**+0.4**
HOM	**Homer**	**7.62**	**52**	Pn	**Pn**	**02 58 11.8**	**-0.5**
HOM	**Homer**	**7.62**	**52**	P	**Pn**	**02 58 11.7**	**-0.6**
	baz=240						
CNPM	**China Poot**	**7.74**	**54**		**Pn**	**02 58 12.8**	**-1.2**
M19K	**Big River Lodg**	**7.98**	**33**		**Pn**	**02 58 17.6**	**+0.5**
M19K	**Big River Lodg**	**7.98**	**33**	P	**Pn**	**02 58 17.9**	**+0.8**
	baz=219						
BRLK	**Bradley Lake**	**8.01**	**53**		**Pn**	**02 58 15.5**	**-2.0**
BRSE	**Bradley Lake S**	**8.06**	**53**	P	**Pn**	**02 58 16.6**	**-1.6**
	baz=242,SNR=8.2						
L19K	**White Mountain**	**8.06**	**30**	Pn	**Pn**	**02 58 18.6**	**+0.4**
L19K	**White Mountain**	**8.06**	**30**	P	**Pn**	**02 58 19.1**	**+0.9**
	baz=216						
N20K	**Mount Spurr**	**8.24**	**41**	P	**Pn**	**02 58 21.6**	**+1.0**
	baz=230,SNR=12						
SPCR	**Spurr Chakacha**	**8.24**	**41**	P	**Pn**	**02 58 21.3**	**+0.7**
	baz=230,SNR=9.7						
SPU	**Mount Spurr**	**8.29**	**42**		**Pn**	**02 58 21.5**	**+0.3**
M20K	**Styx River**	**8.37**	**36**		**Pn**	**02 58 23.3**	**+1.0**
M20K	**Styx River**	**8.37**	**36**	P	**Pn**	**02 58 23.9**	**+1.6**
	baz=223						
TTA	**Tatalina**	**8.38**	**24**	Pn	**Pn**	**02 58 22.6**	**+0.2**
TTA	**Tatalina**	**8.38**	**24**	P	**Pn**	**02 58 23.1**	**+0.7**
	baz=210,SNR=14						
CAPN	**Captain Cook N**	**8.40**	**46**	P	**Pn**	**02 58 22.6**	**+0.1**
	baz=235						
ADK	**Adak**	**8.62**	**251**	Pn	**Pn**	**02 58 24.1**	**-1.4**
SEW	**Seward**	**8.80**	**53**		**Pn**	**02 58 26.0**	**-1.9**
SEW	**Seward**	**8.80**	**53**	P	**Pn**	**02 58 26.0**	**-1.9**
	baz=243,SNR=22						
O22K	**Cooper Landing**	**8.85**	**50**		**Pn**	**02 58 27.2**	**-1.4**
O22K	**Cooper Landing**	**8.85**	**50**	P	**Pn**	**02 58 27.6**	**-0.9**
	baz=240,SNR=45						
SUA	**Susitna One**	**8.96**	**43**		**Pn**	**02 58 29.4**	**-0.7**
SUA	**Susitna One**	**8.96**	**43**	P	**Pn**	**02 58 30.2**	**+0.1**
	baz=232,SNR=19						
SKT	**Skwentna**	**8.99**	**39**		**Pn**	**02 58 30.9**	**+0.5**
SKT	**Skwentna**	**8.99**	**39**	P	**Pn**	**02 58 31.5**	**+1.2**
	baz=228,SNR=8.1						
ANM	**Nome**	**9.15**	**355**		**Pn**	**02 58 31.8**	**-0.6**
ANM	**Nome**	**9.15**	**355**	P	**Pn**	**02 58 33.6**	**+1.2**
	baz=173						
RC01	**Rabbit Creek A**	**9.15**	**47**		**Pn**	**02 58 31.0**	**-1.5**
RC01	**Rabbit Creek A**	**9.15**	**47**	P	**Pn**	**02 58 31.4**	**-1.0**
	baz=237,SNR=18						
K20K	**Telida**	**9.22**	**27**		**Pn**	**02 58 33.9**	**+0.5**
K20K	**Telida**	**9.22**	**27**	P	**Pn**	**02 58 34.7**	**+1.3**
	baz=214,SNR=20						
PPLA	**Purkeypile**	**9.41**	**33**		**Pn**	**02 58 37.1**	**+1.2**
PPLA	**Purkeypile**	**9.41**	**33**	P	**Pn**	**02 58 37.7**	**+1.8**
	baz=222,SNR=22						
PWL	**Port Wells**	**9.63**	**50**		**Pn**	**02 58 36.6**	**-2.2**
PWL	**Port Wells**	**9.63**	**50**	P	**Pn**	**02 58 36.7**	**-2.2**
	baz=242,SNR=12						
PMR	**Palmer**	**9.67**	**45**		**Pn**	**02 58 38.3**	**-0.9**
PMR	**Palmer**	**9.67**	**45**	P	**Pn**	**02 58 39.2**	**0.0**
PMR	**Palmer**	**9.67**	**45**	P	**Pn**	**02 58 38.6**	**-0.6**
	baz=236						
P23K	**Montague Islan**	**9.71**	**56**	P	**Pn**	**02 58 37.7**	**-2.0**
	baz=248						
CUT	**Chulitna**	**9.72**	**39**		**Pn**	**02 58 39.4**	**-0.4**
CUT	**Chulitna**	**9.72**	**39**	P	**Pn**	**02 58 39.9**	**+0.1**
	baz=229						
CAST	**Castle Rocks**	**9.83**	**31**		**Pn**	**02 58 42.5**	**+1.2**
CAST	**Castle Rocks**	**9.83**	**31**	P	**Pn**	**02 58 42.4**	**+1.1**
	baz=220,SNR=40						
GCSA	**Galena City Sc**	**9.85**	**17**	P	**Pn**	**02 58 40.9**	**-0.5**
	baz=202						
KNK	**Knik Glacier**	**9.85**	**47**		**Pn**	**02 58 39.6**	**-2.0**
KNK	**Knik Glacier**	**9.85**	**47**	P	**Pn**	**02 58 40.1**	**-1.5**
	baz=238,SNR=9.0						
Q23K	**Middleton Isla**	**10.04**	**60**	Pn	**Pn**	**02 58 42.4**	**-1.6**
Q23K	**Middleton Isla**	**10.04**	**60**	P	**Pn**	**02 58 41.7**	**-2.2**
	baz=253						
MID	**Middleton Isla**	**10.04**	**60**	Pn	**Pn**	**02 58 42.4**	**-1.7**
MID	**Middleton Isla**	**10.04**	**60**	P	**Pn**	**02 58 42.2**	**-1.8**

SML	Sawmill	10.11	45		Pn	02 58 42.0	-2.9
SML	Sawmill	10.11	45	P	Pn	02 58 42.9	-2.0
	baz=237						
CHUM	Lake Minchumin	10.12	29	P	Pn	02 58 46.5	+1.5
	baz=218,SNR=50						
KTH	Kantishna Hill	10.28	33		Pn	02 58 47.8	+0.6
TNA	Tin City	10.33	350		Pn	02 58 48.4	+0.6
TNA	Tin City	10.33	350	P	Pn	02 58 48.0	+0.2
	baz=166,SNR=5.6						
M23K	Glacier View	10.35	46	P	Pn	02 58 46.6	-1.5
	baz=238,SNR=44						
SCM	Sheep Creek Mo	10.53	46		Pn	02 58 47.7	-2.8
SCM	Sheep Creek Mo	10.53	46	P	Pn	02 58 48.6	-1.9
	baz=239,SNR=16						
BPAW	Bear Paw Mtn.	10.66	31		Pn	02 58 51.8	-0.4
BPAW	Bear Paw Mtn.	10.66	31	P	Pn	02 58 52.6	+0.4
	baz=221,SNR=36						
EYAK	Cordova Ski Ar	10.67	54		Pn	02 58 49.6	-2.6
EYAK	Cordova Ski Ar	10.67	54	P	Pn	02 58 50.3	-1.9
EYAK	Cordova Ski Ar	10.67	54	P	Pn	02 58 50.1	-2.1
	baz=248						
KLU	Klutina	10.96	50		Pn	02 58 54.2	-1.9
KLU	Klutina	10.96	50	P	Pn	02 58 54.5	-1.6
	baz=244						
MCK	McKinley	11.05	36		Pn	02 58 56.4	-0.7
MCK	McKinley	11.05	36	P	Pn	02 58 56.7	-0.4
	baz=227,SNR=10						
M24K	Tolsona, Glenn	11.14	46		Pn	02 58 57.0	-1.4
M24K	Tolsona, Glenn	11.14	46	P	Pn	02 58 57.4	-1.0
	baz=240						
BWN	Browne	11.18	33	Pn	Pn	02 58 59.1	+0.4
I21K	Tanana	11.24	26		Pn	02 58 59.7	+0.1
I21K	Tanana	11.24	26	P	Pn	02 59 00.8	+1.2
	baz=215						
MLY	Manley	11.44	28		Pn	02 59 02.1	-0.1
MLY	Manley	11.44	28	P	Pn	02 59 03.3	+1.1
	baz=218,SNR=28						
H21K	Melozitna Rive	11.45	23		Pn	02 59 03.9	+1.7
H21K	Melozitna Rive	11.45	23	P	Pn	02 59 03.2	+1.0
	baz=211						
IMAR	Indian Mountai	11.53	20		Pn	02 59 02.9	-0.5
N25K	Chitina, Valde	11.59	50		Pn	02 59 02.6	-1.6
NEA2	Nenana	11.60	32		Pn	02 59 03.3	-0.8
NEA2	Nenana	11.60	32	P	Pn	02 59 03.4	-0.8
	baz=224,SNR=7.5						
WRH	Wood River Hil	11.82	34		Pn	02 59 05.1	-1.9
PAX	Paxson	11.85	44		Pn	02 59 07.0	-0.5
PAX	Paxson	11.85	44	P	Pn	02 59 06.7	-0.8
	baz=238						
I23K	Minto, Yukon-K	11.91	30		Pn	02 59 08.0	-0.2
I23K	Minto, Yukon-K	11.91	30	P	Pn	02 59 08.3	+0.1
	baz=222,SNR=38						
H22K	Ishtalitna Cre	11.97	25	P	Pn	02 59 09.1	+0.2
	baz=214						
CCB	Clear Creek Bu	12.03	34		Pn	02 59 07.7	-1.9
G21K	Allakaket	12.05	19	P	Pn	02 59 10.8	+0.8
	baz=208						
MDM	Murphy Dome	12.11	32		Pn	02 59 08.8	-1.9
TCOL	CIGO, UAF Yank	12.16	33		Pn	02 59 09.7	-1.7
K24K	Donnelly Dome	12.19	40	P	Pn	02 59 11.5	-0.3
	baz=234						
MCARA	McCarthy VSAT	12.21	53	P	Pn	02 59 11.6	-0.4
	baz=249						
H23K	Yukon River	12.38	28	P	Pn	02 59 15.4	+1.3
H23K	Yukon River	12.38	28	P	Pn	02 59 15.1	+1.0
	baz=219,SNR=80						
IL31		12.41	35	Pn	Pn	02 59 11.6	-2.9
ILAR	Eielson Array	12.41	35	P	Pn	02 59 13.0	-1.5
	1.8nm,0.3s,baz=228,slow=11,SNR=50						
ILAR				S	Sn	03 01 28.4	-3.8
	0.3nm,0.3s,baz=222,slow=21,SNR=1.1						
ILAR				ScP	ScP	03 07 54.0	+0.1
	0.6nm,0.6s,baz=251,slow=3.6,SNR=10						
POKR	Poker Plat Res	12.46	33		Pn	02 59 13.5	-1.7
POKR	Poker Plat Res	12.46	33	P	Pn	02 59 13.6	-1.6
	baz=226,SNR=6.0						
RIDG	Independent Ri	12.50	41	P	Pn	02 59 14.8	-1.0
	baz=236						
RDOG	Red Dog Mine	12.61	1	P	Pn	02 59 18.0	+1.0
	baz=181						
F21K	Alatna River	12.69	18	P	Pn	02 59 19.3	+1.3
	baz=206						
H24K	Noodor Dome	12.84	30	P	Pn	02 59 19.1	-1.0
H24K	Noodor Dome	12.84	30	P	Pn	02 59 18.9	-1.1
	baz=223						
G23K	Bananza Creek	12.96	24	P	Pn	02 59 22.7	+1.2
	baz=216						
M27K	Edge Creek, AK	13.07	49	P	Pn	02 59 23.2	+0.2
	baz=247						
PINM	Pinnacle	13.19	60	P	Pn	02 59 24.3	-0.2
	baz=259						
COLD	Coldfoot	13.34	23		Pn	02 59 27.0	+0.7
COLD	Coldfoot	13.34	23	P	Pn	02 59 27.1	+0.8
	baz=214,SNR=47						
O28M	Mount Upton	13.36	57	P	Pn	02 59 26.5	-0.3
	baz=256						
YUK3	Moose Creek	13.50	53	P	Pn	02 59 28.1	-0.4
	baz=252,SNR=10						
BVCY	Beaver Creek	13.53	50	P	Pn	02 59 28.2	-0.5
	baz=249						
PNL	Peninsula	13.55	62	P	P	02 59 31.0	-1.0
PNL	Peninsula	13.55	62	P	Pn	02 59 28.5	-0.6
	baz=262						
G24K	Hadweenzic Riv	13.59	28	P	Pn	02 59 29.1	-0.3
	baz=221,SNR=10						
YUK8	Steele Glacier	13.68	55	P	Pn	02 59 30.5	-0.4
	baz=255,SNR=7.9						
K27K	Chicken	13.70	43	P	Pn	02 59 30.8	0.0
	baz=240						
G25K	Bearman Lake	14.01	29	P	Pn	02 59 34.4	-0.3
	baz=224						
O29M	Mount Kennedy	14.05	60	P	Pn	02 59 34.5	-0.9
	baz=260						
F24K	Squaw Lake	14.11	25	P	Pn	02 59 36.8	+0.9
	baz=218,SNR=23						
E23K	Chandalar	14.16	22	P	P	02 59 37.9	-0.8
	baz=213						
YUK4	Talbot Arm	14.22	56	P	Pn	02 59 37.9	+0.4
	baz=256						
YUK6	Outpost Mounta	14.27	57	P	Pn	02 59 37.5	-0.6
	baz=258						
E24K	Your Creek	14.41	23	P	P	02 59 40.9	-0.6
	baz=216						
EGAK	Eagle	14.42	41	P	Pn	02 59 40.2	+0.6
	baz=240						
M29M	Somme Creek	14.59	51	P	Pn	02 59 41.9	-0.1
	baz=252						
TOLK	Toolik Lake Re	14.66	20	P	Pn	02 59 43.0	+0.3
TOLK	Toolik Lake Re	14.66	20	P	P	02 59 44.6	+0.5
	baz=212,SNR=31						
HYT	Haines Junctio	14.66	58	P	Pn	02 59 42.3	-0.6
	baz=259						
D23K	Nanushuk River	14.72	18	P	P	02 59 45.2	+0.4
	baz=209						
F25K	Christian Rive	14.73	28	P	Pn	02 59 43.8	+0.2
	baz=223						
P30M	Million Dollar	14.83	61	P	Pn	02 59 45.3	+0.4
	baz=263						
BMAR	Burnt Mountain	14.90	29	Pn	Pn	02 59 43.8	-1.9
L29M	L29M	14.95	49	P	Pn	02 59 46.4	+0.2
	baz=250						
N30M	Aishikik Lake	14.98	56	P	Pn	02 59 46.5	-0.2
	baz=258						
PLBC	Pleasant Camp	15.07	64	P	Pn	02 59 47.1	-0.6
	baz=266,SNR=9.6						
E25K	Arctic Village	15.14	26	P	P	02 59 49.7	+0.2
	baz=222,SNR=22						
F26K	Sheenjek River	15.21	29	P	P	02 59 50.3	+0.1
	baz=225						
M30M	Minto, Yukon	15.37	52	P	Pn	02 59 51.8	+0.2
	baz=254						
J29M	Klondike Camp	15.40	44	P	P	02 59 52.6	+0.2
	baz=245						
K29M	Barlow Dome	15.45	47	P	Pn	02 59 52.6	+0.1
	baz=248						
SKAG	Skagway	15.60	64	P	P	02 59 57.6	+3.1
N31M	Braeburn, Yuko	15.60	56	P	Pn	02 59 53.1	-1.2
	baz=259						
SIT	Sitka	15.68	73	P	P	02 59 59.4	+4.0
C24K	Franklin Bluff	15.74	19	P	P	02 59 56.8	+0.8
	baz=212						
D25K	Kavik River	15.88	22	P	P	02 59 58.1	+0.4
	baz=217						
S32K	Killisnoo	16.04	71	P	P	02 59 58.3	-1.2
	baz=274,SNR=7.0						
JIS	Juneau Island	16.09	68	P	Pn	03 00 03.9	+3.7
A21K	Barrow	16.17	8	P	Pn	03 00 01.3	+0.3
	baz=194						
E27K	Coleen River	16.25	30	P	P	03 00 01.2	-0.6
	baz=229						
M31M	Drury Creek, Y	16.38	54	P	Pn	03 00 03.5	-0.2
	baz=258,SNR=5.5						
P32M	Atlin	16.43	63	P	P	03 00 03.5	-0.3
	baz=268,SNR=12						
C26K	Camden Bay	16.67	23	P	Pn	03 00 07.3	+0.3
	baz=219,SNR=26						
C27K	Jago River	16.72	24	P	Pn	03 00 07.6	0.0
	baz=222						
EPYK	Eagle Plains	16.80	39	P	P	03 00 08.2	+0.4
	baz=242,SNR=14						
N32M	Quiet Lake	16.84	58	P	P	03 00 08.1	-0.1
	baz=263						
FARO	Faro, Yukon	16.86	54	P	Pn	03 00 10.1	+0.6
	baz=259,SNR=12						
P33M	Teslin, Yukon	16.90	61		Pn	03 00 11.2	+1.2
P33M	Teslin, Yukon	16.90	61	P	Pn	03 00 10.1	+0.1
	baz=267,SNR=15						
CRAG	Craig	17.15	77	P	Pn	03 00 21.8	+8.9
Q32M	Nakina River	17.17	66	P	Pn	03 00 12.7	-0.6
	baz=271,SNR=12						
G30M	tAoh Zraii Nji	17.27	37	P	P	03 00 11.9	-0.9
	baz=241						
WRAK	Wrangell Islan	17.39	74	P	P	03 00 14.7	+0.4
	baz=279						
S34M	Telegraph Cree	17.84	69	P	P	03 00 18.9	-0.3
	baz=275,SNR=9.4						
MMPY	Sheldon Lake,	17.89	53	P	P	03 00 19.7	0.0
	baz=261,SNR=40						
F31M	Tsiigehtchic	18.34	37	P	P	03 00 22.8	-1.6
	baz=243,SNR=9.6						
DLBC	Dease Lake	18.37	67	P	Pn	03 00 26.4	-0.9
	14nm,0.8s,baz=275,slow=11,SNR=16						
DLBC	Dease Lake	18.37	67		P	03 00 26.1	+1.1
DLBC				IAmb	IAmb	03 00 30.6	
	comp=Z,16nm,0.9s						
DLBC	Dease Lake	18.37	67	P	Pn	03 00 27.2	-0.1
	baz=275						
T35M	Bob Quinn	18.44	72	P	Pn	03 00 27.1	-1.0
	baz=279						
BILL	Bilibino	18.77	324	P	P	03 00 29.3	+0.2
INK	Inuvik	18.81	35	P	P	03 00 28.0	-1.5
	comp=Z,32nm,1.1s,baz=230,slow=12,SNR=84						
INK				S	S	03 03 47.4	-6.0
	comp=Z,1.3nm,0.7s,baz=25,slow=32,SNR=2.2						
INK				ScP	ScP	03 08 05.6	-0.2
	comp=Z,0.7nm,0.5s,baz=226,slow=1.5,SNR=7.3						
INK	Inuvik	18.81	35	P	P	03 00 27.6	-1.9
INK	Inuvik	18.81	35	P	P	03 00 27.6	-1.9
	baz=241,SNR=30						
WTLY	Watson Lake, Y	18.91	62	P	P	03 00 31.7	+0.9
WTLY				IAmb	IAmb	03 00 34.0	
	comp=Z,11nm,0.8s						
WTLY	Watson Lake, Y	18.91	62	P	P	03 00 30.6	-0.2
	baz=271,SNR=6.6						
KOTAN	Kotaneelee Air	21.28	61	P	P	03 00 56.1	0.0
	baz=274						
C36M	Paulatuk	22.37	36	P	P	03 01 04.5	-2.3
C36M				IAmb	IAmb	03 01 08.0	
	comp=Z,12nm,0.8s						
C36M	Paulatuk	22.37	36	P	P	03 01 05.6	-1.2
	baz=251,SNR=7.0						
PEA0B	Petropavlovsk-	22.57	280	P	P	03 01 07.0	-1.9
PETK	Petropavlovsk-	22.57	280	P	P	03 01 08.2	-0.6
	comp=Z,3.4nm,0.6s,baz=80,slow=14,SNR=5.8						
PETK				pP	pP	03 01 43.1	+1.6
	comp=Z,14nm,0.9s,baz=84,slow=15,SNR=3.9						
	comp=Z,3.4nm,0.6s						
A36M	Sachs Harbour	23.00	30	P	P	03 01 12.4	-0.1
A36M	Sachs Harbour	23.00	30	P	P	03 01 12.2	-0.3
	baz=244,SNR=21						
SEY	Seymchan	23.35	307	P	P	03 01 15.2	-0.6
	comp=Z,2.6nm,0.6s,baz=93,slow=8.7,SNR=8.4						
	comp=Z,2.6nm,0.6s						
MA2	Magadan	24.50	298	P	P	03 01 26.6	+0.4
	comp=Z,19nm,0.9s,baz=98,slow=10,SNR=12						
	comp=Z,19nm,0.9s						
MA2	Magadan	24.50	298	P	P	03 01 26.5	+0.2
HILA	High Level	25.09	64	P	P	03 01 30.5	-1.1
YKA	Yellowknife Ar	25.58	54	P	P	03 01 36.5	+0.5
	comp=Z,3.4nm,0.9s,baz=275,slow=10,SNR=35						
YKA				pP	pP	03 02 14.6	+1.6
	comp=Z,4.2nm,0.8s,baz=272,slow=9.3,SNR=7.3						
YKA				PcP	PcP	03 05 01.6	0.0
	comp=Z,0.3nm,0.7s,baz=281,slow=2.9,SNR=3.1						
YKA				ScP	ScP	03 08 24.1	+0.8
	comp=Z,1.6nm,0.8s,baz=285,slow=2.9,SNR=15						
	comp=Z,3.4nm,0.9s						
YKA	Yellowknife Ar	25.58	54	P	P	03 01 36.0	+0.1
LON	Longmire	27.22	91	P	P	03 01 53.0	+2.0
HOOD	Mount Hood Mea	28.14	94	P	P	03 02 01.5	+2.3
HOOD				IAmb	IAmb	03 02 01.9	
	comp=Z,11nm,1.1s						
H04A	Detroit Lake	28.21	95	P	P	03 02 02.0	+2.3
H04A				IAmb	IAmb	03 02 02.9	
	comp=Z,6.8nm,0.6s						
G05A	Wamic	28.37	93	P	P	03 02 02.6	+1.5
DBO	Dodson Butte	28.59	99	P	P	03 02 04.8	+1.6
I04A	Tendick Farm,	28.64	97	P	P	03 02 05.2	+1.7
HAWA	Hanford	28.72	90	P	P	03 02 05.5	+1.3
HAWA				IAmb	IAmb	03 02 07.3	
	comp=Z,8.0nm,0.8s						
NEW	Newport	29.06	85	P	P	03 02 08.7	+1.5
	comp=Z,2.5nm,0.5s,baz=296,slow=7.4,SNR=7.6						
	comp=Z,2.5nm,0.5s						
NEW	Newport	29.06	85	P	P	03 02 08.8	+1.7
NEW				IAmb	IAmb	03 02 10.2	
	comp=Z,6.2nm,1.0s						
NEW	Newport	29.06	85	P	P	03 02 08.0	+0.8
	baz=302,SNR=5.6						
PINE	Pine Mountain	29.47	95	P	P	03 02 12.8	+1.8
J05D	Fort Rock, OR	29.62	96	P	P	03 02 14.3	+2.0
L04D	Klamath Falls	29.70	99	P	P	03 02 15.0	+2.0
I07A	Izee	30.11	94	P	P	03 02 18.3	+1.8
I07A				IAmb	IAmb	03 02 19.7	
	comp=Z,6.6nm,1.0s						
F10A	Beach Ranch, E	30.27	89	P	P	03 02 19.5	+1.6
F10A				IAmb	IAmb	03 02 20.8	
	comp=Z,4.9nm,0.8s						
MOD	Modoc Plateau	31.04	98	P	P	03 02 26.6	+1.8
MOD				IAmb	IAmb	03 02 28.1	
	comp=Z,5.4nm,0.8s						
J08A	Circle Bar Ran	31.14	94	P	P	03 02 27.0	+1.4
WVOR	Wild Horse Val	31.64	95	P	P	03 02 31.3	+1.3
WVOR				IAmb	IAmb	03 02 33.1	
	comp=Z,8.6nm,0.8s						
MSO	Missoula	31.65	85	P	P	03 02 29.3	-0.8
	baz=304						
RES	Resolute Bay	32.02	28	P	P	03 02 32.3	-0.5
	comp=Z,1.6nm,0.8s,baz=252,slow=11,SNR=4.0						
	comp=Z,1.6nm,0.8s						
MFID	Camas Ranch	32.61	91	P	P	03 02 39.3	+0.8
MFID				IAmb	IAmb	03 02 41.2	
	comp=Z,5.6nm,0.9s						
HRY	Holter Researc	32.91	83	P	P	03 02 42.1	+1.1
MPK	Martis Peak	32.95	101	P	P	03 02 43.0	+1.3
MPK				IAmb	IAmb	03 02 44.7	
	comp=Z,16nm,1.3s						
PAHR	Pah Rah Range	33.03	100	P	P	03 02 43.7	+1.5
PAHR				IAmb	IAmb	03 02 45.1	
	comp=Z,5.8nm,0.7s						
HLID	Hailey	33.32	90	P	P	03 02 46.6	+1.9
HLID	Hailey	33.32	90	P	P	03 02 45.3	+0.6
	baz=308,SNR=9.0						
EGMT	Eagleton	33.34	80	P	P	03 02 45.0	+0.3
	baz=303						
MCMT	McKenzie Canyo	33.44	87	P	P	03 02 46.7	+1.0
YERR	Yerington	33.61	101	P	P	03 02 48.0	+0.8
YERR				IAmb	IAmb	03 02 50.4	
	comp=Z,10nm,1.2s						
BOZ	Bozeman (W)	33.67	85	P	P	03 02 48.6	+0.9
	baz=306						
KVN	Kaiserville	34.20	99	P	P	03 02 53.6	+1.3
YHL	Hebgen Lake	34.37	86	P	P	03 02 55.4	+1.6
NVAR	Mina Array Bea	34.52	100	P	P	03 02 57.4	+2.3
	comp=Z,3.5nm,0.7s,baz=300,slow=8.1,SNR=30						
NVAR				PcP	PcP	03 05 26.4	+0.7
	comp=Z,0.5nm,0.4s,baz=302,slow=2.0,SNR=6.7						
	comp=Z,3.5nm,0.7s						
NVAR	Mina Array Bea	34.52	100	P	P	03 02 56.3	+1.2
LHV	Little Huntoon	34.53	101	P	P	03 02 56.1	+1.2
LHV				IAmb	IAmb	03 02 58.5	
	comp=Z,7.3nm,1.0s						
YMR	Madison River	34.60	86	P	P	03 02 56.5	+0.8
ELK	Elko	34.67	95	P	P	03 02 57.5	+1.1
ELK				IAmb	IAmb	03 02 59.4	
	comp=Z,5.7nm,0.8s						
H17A	Grant Village	34.99	86	P	P	03 02 59.2	0.0
	baz=307						
RLMT	Red Lodge	35.29	84	P	P	03 03 02.2	+0.6
RLMT				IAmb	IAmb	03 03 04.8	
	comp=Z,7.2nm,1.1s						
RLMT	Red Lodge	35.29	84	P	P	03 03 03.2	+1.5
	baz=307,SNR=5.4						
TPH	Tonopah	35.37	100	P	P	03 03 03.1	+0.7
HVU	Hansel Valley	35.39	91	P	P	03 03 03.5	+1.1
HVU				IAmb	IAmb	03 03 05.4	
	comp=Z,6.2nm,0.8s						
BGU	Big Grassy Mou	35.80	92	P	P	03 03 07.1	+1.1
VES	Vestal, Richgr	35.94	104	P	P	03 03 08.1	+1.1
	baz=317						
Q12A	Willow Creek R	36.05	96	P	P	03 03 08.6	+0.5
Q12A				IAmb	IAmb	03 03 10.7	
	comp=Z,9.1nm,1.1s						
GRAC	Grapevine Rang	36.06	101	P	P	03 03 08.7	+0.6
	baz=316						
CWC	Cottonwood Cre	36.06	103	P	P	03 03 09.4	+1.2
	baz=316						
LAO	LASA Array	36.08	80	P	P	03 03 09.8	+1.6
	baz=305						
R11A	Troy Canyon, C	36.10	98	P	P	03 03 09.7	+1.2
R11A				IAmb	IAmb	03 03 11.3	
	comp=Z,10nm,1.1s						
R11A	Troy Canyon, C	36.10	98	P	P	03 03 09.8	+1.2
	baz=314,SNR=16						
HWUT	Hardware Ranch	36.19	90	P	P	03 03 10.4	+1.1
DGMT	Dagmar	36.19	76	P	P	03 03 10.8	+1.8
	baz=304						
PKM	Mcpherson Peak	36.24	106	P	P	03 03 10.9	+1.1
	baz=318						
FCC	Fort Churchill	36.29	56	P	P	03 03 10.2	+0.5
FCC				IAmb	IAmb	03 03 11.3	
	comp=Z,7.7nm,1.2s						
ISA	Isabella, Lake	36.41	104	P	P	03 03 12.2	+1.1
	baz=317						
DUG	Dugway, Tooele	36.41	93	P	P	03 03 12.6	+1.4
DUG				IAmb	IAmb	03 03 14.0	
	comp=Z,9.1nm,1.1s						
DUG	Dugway, Tooele	36.41	93	P	P	03 03 12.5	+1.4
	baz=312,SNR=7.8						
BW06	Boulder Array	36.58	87	P	P	03 03 13.5	+0.9
	baz=309						
PD31	Pinedale Array	36.58	87	P	P	03 03 13.4	+0.8
PDAR	Pinedale Array	36.58	87	P	P	03 03 13.8	+1.1
	comp=Z,1.4nm,0.6s,baz=296,slow=3.0,SNR=19						
PDAR				PcP	PcP	03 05 32.3	+0.6
	comp=Z,0.4nm,0.7s,baz=270,slow=7.2,SNR=2.5						
	comp=Z,1.4nm,0.6s						
PDAR	Pinedale Array	36.58	87	P	P	03 03 14.0	+1.4
WCT	Wildcat Mounta	36.62	101	P	P	03 03 13.6	+0.8
MPMC	Manual Prospec	36.66	103	P	P	03 03 14.9	+1.5
	baz=316,SNR=8.7						
TPNV	Topopah Spring	36.72	100	P	P	03 03 14.9	+1.2
TPNV	Topopah Spring	36.72	100	P	P	03 03 15.8	+2.1
	baz=316,SNR=16						
FURC	Furnace Creek,	36.72	101	P	P	03 03 15.7	+2.1
	baz=316,SNR=5.1						
LRMC	Laurel Mtn Rad	36.98	103	P	P	03 03 16.9	+0.9
	baz=317,SNR=5.5						
NLU	North Lily Min	36.99	93	P	P	03 03 17.3	+1.2
NLU				IAmb	IAmb	03 03 18.6	
	comp=Z,4.1nm,0.8s						
GWY	Greenwater Val	37.03	102	P	P	03 03 17.4	+1.0
GWY				IAmb	IAmb	03 03 19.1	
	comp=Z,8.3nm,0.7s						
PRN	Pahroc Range	37.06	99	P	P	03 03 18.1	+1.5
PRN				IAmb	IAmb	03 03 19.6	
	comp=Z,11nm,1.0s						
QSM	Queen of Sheba	37.08	102	P	P	03 03 18.1	+1.4
QSM				IAmb	IAmb	03 03 19.4	
	comp=Z,7.5nm,0.7s						
EDW2	Edwards Air Fo	37.25	104	P	P	03 03 18.9	+0.7
	baz=318						
BSUT	Blindstream Ca	37.35	91	P	P	03 03 20.1	+0.8
BSUT				IAmb	IAmb	03 03 21.7	
	comp=Z,10.0nm,1.3s						
DECC	Green Verdugo	37.53	105	P	P	03 03 21.5	+1.0
	baz=318						
GSC	Goldstone, Bar	37.60	103	P	P	03 03 22.2	+1.1
GSC				IAmb	IAmb	03 03 23.4	
	comp=Z,12nm,1.4s						
GSC	Goldstone, Bar	37.60	103	P	P	03 03 22.5	+1.4
	baz=317,SNR=5.4						
BFSC	Mount Baldy Ra	37.91	105	P	P	03 03 25.5	+1.8
	baz=318						
MSU	Marysvale	37.91	95	P	P	03 03 24.1	+0.2
TUQ	Turquoise Moun	37.99	102	P	P	03 03 25.8	+1.4
	baz=317						
P17A	Butcher Ranch,	38.08	92	P	P	03 03 26.4	+1.2
HEC	Hector,Ludlow	38.20	103	P	P	03 03 27.2	+1.0
	baz=317						
BBRC	Big Bear Solar	38.30	104	P	P	03 03 28.8	+1.6
	baz=318						
V12A	Nelson	38.38	100	P	P	03 03 28.8	+1.2
V12A				IAmb	IAmb	03 03 30.7	
	comp=Z,9.4nm,0.7s						
K22A	Casper	38.38	85	P	P	03 03 28.1	+0.4
	baz=310						
GMRC	Granite Mounta	38.61	102	P	P	03 03 30.9	+1.2
	baz=317,SNR=7.1						
MURC	Murrieta	38.64	105	P	P	03 03 31.5	+1.7
	baz=319						
RSSD	Black Hills	38.86	81	P	P	03 03 31.9	+0.3
RSSD	Black Hills	38.86	81	P	P	03 03 32.5	+0.8
	baz=308						
BELC	Belle Mtn. Jos	39.00	103	P	P	03 03 34.0	+1.1
	baz=318,SNR=6.4						
PFO	Pinyon Flats O	39.04	104	P	P	03 03 34.5	+1.3
	comp=Z,2.9nm,0.6s,baz=326,slow=6.9,SNR=4.5						
	comp=Z,2.9nm,0.6s						
PFO	Pinyon Flats O	39.04	104	P	P	03 03 34.3	+1.1
PFO				IAmb	IAmb	03 03 36.0	
	comp=Z,9.0nm,1.2s						
PFO	Pinyon Flats O	39.04	104	P	P	03 03 34.3	+1.1
	baz=318						
TPFO	Pinon Flats	39.05	104	P	P	03 03 33.9	+0.7
	baz=318						
O20A	White River Ci	39.05	89	P	P	03 03 34.5	+1.2
O20A	White River Ci	39.05	89	P	P	03 03 34.0	+0.7
	baz=312,SNR=12						
PMD	Palm Desert	39.06	104	P	P	03 03 33.6	+0.4
PMD				IAmb	IAmb	03 03 35.4	
	comp=Z,6.9nm,0.9s						
MDND	Maddock	39.07	74	P	P	03 03 33.5	+0.4
	baz=306						
HMU	Henry Mountain	39.13	94	P	P	03 03 34.5	+0.5
109C	Camp Elliot, M	39.23	106	P	P	03 03 35.0	+0.4
	baz=319						
U15A	North Rim	39.31	97	P	P	03 03 37.0	+1.4
U15A				IAmb	IAmb	03 03 38.5	
	comp=Z,9.7nm,1.1s						
IRM	Iron Mountain	39.36	102	P	P	03 03 36.9	+1.2
	baz=318,SNR=8.7						
W13A	Hualapai Mount	39.37	100	P	P	03 03 37.2	+1.1
W13A				IAmb	IAmb	03 03 38.8	
	comp=Z,7.1nm,0.9s						
BC3	Big Chuckawall	39.56	103	P	P	03 03 38.7	+1.3
	baz=318						
MONP2	Monument Peak	39.60	105	P	P	03 03 38.8	+0.8
	baz=319						
PDMCI	Parker Dam,Lak	39.81	101	P	P	03 03 40.3	+0.9
	baz=317						
N23A	Red Feather La	39.85	87	P	P	03 03 40.9	+0.9
	baz=311						
PHWY	Pilot Hill	39.86	86	P	P	03 03 39.8	-0.3
SWSC	Sam W. Stewart	39.90	104	P	P	03 03 41.0	+0.8
	baz=319						
PV11	David Mesa, Pa	39.94	92	P	P	03 03 41.5	+0.8
PV11				IAmb	IAmb	03 03 42.7	
	comp=Z,11nm,1.1s						
IKP	In-Ko-Pah, Jac	39.96	105	P	P	03 03 41.3	+0.6
	baz=319						
BLYC	Blythe	40.01	102	P	P	03 03 41.9	+0.9
BLYC				IAmb	IAmb	03 03 43.8	
	comp=Z,16nm,1.1s						
PV13	Radium Mtn., P	40.07	92	P	P	03 03 42.5	+0.8
GLA	Glamis	40.36	103	P	P	03 03 45.2	+1.2
	baz=319						
WUAZ	Wupatki	40.48	97	P	P	03 03 46.2	+1.1
WUAZ				IAmb	IAmb	03 03 48.0	
	comp=Z,11nm,1.1s						

WUAZ	Wupatki	40.48	97	P	P	03 03 45.2	+0.1
	baz=316,SNR=7.0						
ISCO	Idaho Springs	40.77	88	P	P	03 03 47.5	-0.1
	baz=312						
AGMN	Agassiz Nation	40.83	71	P	P	03 03 48.2	+0.6
	baz=306						
MVCO	Mesa Verde	40.91	93	P	P	03 03 49.6	+0.9
MVCO	Mesa Verde	40.91	93	P	P	03 03 49.4	+0.7
	baz=314						
113A	Mohawk Valley,	41.16	102	P	P	03 03 51.5	+1.0
S22A	4UR Ranch, Cre	41.48	91	P	P	03 03 55.1	+1.7
	baz=314						
SUSD	Miller	41.50	77	P	P	03 03 54.1	+1.0
	baz=309						
Q24A	Divide	41.60	88	P	P	03 03 55.4	+1.0
	baz=313						
W18A	Petrified Fore	41.70	96	P	P	03 03 56.2	+1.2
	baz=316						
X18A	Snowflake	42.00	97	P	P	03 03 58.1	+0.6
X18A				IAmb	IAmb	03 04 00.6	
	comp=Z,13nm,0.9s						
SDCO	Great Sand Dun	42.24	90	P	P	03 04 00.2	+0.6
SDCO	Great Sand Dun	42.24	90	P	P	03 04 00.8	+1.3
	baz=314,SNR=5.5						
214A	Organ Pipe Nat	42.30	102	P	P	03 04 01.2	+1.4
	baz=319,SNR=5.5						
KSCO	Kaye Shedlock'	43.00	86	P	P	03 04 05.8	+0.3
KSCO				IAmb	IAmb	03 04 08.1	
	comp=Z,18nm,1.1s						
KSCO	Kaye Shedlock'	43.00	86	P	P	03 04 07.3	+1.8
	baz=313						
TUC	Tucson	43.17	100	P	P	03 04 07.5	+0.7
TUC	Tucson	43.17	100	P	P	03 04 08.3	+1.5
	baz=318						
MJAR	Matsushiro Arr	43.25	269	P	P	03 04 06.3	-1.0
	comp=Z,0.9nm,0.4s,baz=35,slow=6.9,SNR=4.5						
	comp=Z,0.9nm,0.4s						
T25A	Trinidad	43.28	90	P	P	03 04 08.8	+1.0
T25A				IAmb	IAmb	03 04 10.4	
	comp=Z,8.7nm,0.9s						
T25A	Trinidad	43.28	90	P	P	03 04 08.9	+1.1
	baz=314,SNR=5.7						
ANMO	Albuquerque	43.68	94	P	P	03 04 11.9	+0.9
	comp=Z,0.9nm,0.6s,baz=329,slow=11,SNR=3.6						
	comp=Z,0.9nm,0.6s						
ANMO	Albuquerque	43.68	94	P	P	03 04 12.0	+0.9
ANMO	Albuquerque	43.68	94	P	P	03 04 12.0	+0.9
	baz=316						
BGNE	Belgrade	43.92	80	P	P	03 04 13.2	+0.6
	baz=312						
121A	Cookes Peak, D	44.69	97	P	P	03 04 19.4	+0.4
121A	Cookes Peak, D	44.69	97	P	P	03 04 18.9	-0.1
	baz=318						
CBKS	Cedar Bluff	44.78	84	P	P	03 04 18.8	-0.7
	baz=313						
NRIK	Noril'sk	45.32	332	P	P	03 04 23.1	-0.2
	comp=Z,2.4nm,0.4s,baz=0.0,slow=0.0,SNR=4.6						
NRIK				pP	pP	03 05 03.9	+0.7
	comp=Z,2.4nm,0.4s,baz=45,slow=1.4,SNR=2.2						
	comp=Z,2.4nm,0.4s						
N35A	Tabor	45.69	79	P	P	03 04 27.1	+0.6
DAG	Danmarks Havn	46.13	11	*i* P	P	03 04 29.3	-0.2
DAG				IAmb	IAmb	03 04 30.3	
	comp=Z,2.9nm,0.8s						
AMTX	Amarillo	46.44	90	P	P	03 04 32.8	+0.2
	baz=316						
MSTX	Muleshoe	46.48	91	P	P	03 04 33.7	+0.7
MSTX	Muleshoe	46.48	91	P	P	03 04 33.5	+0.6
	baz=317						
MNTX	Cornudas Mount	46.67	96	P	P	03 04 36.0	+1.6
	baz=318,SNR=9.0						
SUMG	Summit	46.72	20	*i* P	P	03 04 35.3	+0.7
SUMG				IAmb	IAmb	03 04 36.2	
	comp=Z,8.9nm,1.0s						
HTMS	Hat Mesa	47.09	94	P	P	03 04 38.3	+0.6
POST	Post	47.86	91	P	P	03 04 44.5	+0.9
POST				IAmb	IAmb	03 04 45.2	
	comp=Z,9.8nm,0.9s						
DBG	Daneborg	48.16	13	*i* P	P	03 04 44.9	-0.2
DBG				IAmb	IAmb	03 04 46.0	
	comp=Z,7.0nm,1.1s						
WMOK	Wichita Mounta	48.20	87	P	P	03 04 46.4	+0.3
WMOK	Wichita Mounta	48.20	87	P	P	03 04 46.6	+0.6
	baz=316,SNR=5.7						
KSRS	Korea Array	48.45	278	P	P	03 04 47.6	-0.2
	comp=Z,1.0nm,0.6s,baz=25,slow=23,SNR=1.6						
	comp=Z,1.0nm,0.6s						
P40A	Paris	48.60	78	P	P	03 04 48.9	-0.2
ABTX	Abilene, Hawle	49.25	90	P	P	03 04 54.9	+0.8
ABTX				IAmb	IAmb	03 04 56.2	
	comp=Z,12nm,1.0s						
ABTX	Abilene, Hawle	49.25	90	P	P	03 04 54.2	+0.2
	baz=318,SNR=5.2						
R40A	Maddies Statio	49.34	79	P	P	03 04 53.8	-0.9
HDIL	Hopedale	49.41	75	P	P	03 04 55.0	-0.2
	baz=314						
TX32	Lajitas Array	49.42	96	P	P	03 04 56.6	+1.1
TX32				IAmb	IAmb	03 04 57.7	
	comp=Z,6.5nm,0.7s						
TXAR	Lajitas Array	49.42	96	P	P	03 04 56.9	+1.4
	comp=Z,5.1nm,0.6s,baz=303,slow=6.1,SNR=78						
TXAR				PcP	PcP	03 06 15.8	+0.9
	comp=Z,0.7nm,0.4s,baz=238,slow=1.3,SNR=6.9						
	comp=Z,5.1nm,0.6s						
CCM	Cathedral Cave	50.08	79	P	P	03 04 59.7	-0.5
	baz=315						
JCT	Junction City	50.75	92	P	P	03 05 06.1	+0.6
JCT				IAmb	IAmb	03 05 06.7	
	comp=Z,6.9nm,0.6s						
JCT	Junction City	50.75	92	P	P	03 05 05.6	+0.2
	baz=319						
WHTX	Lake Whitney,	50.96	89	P	P	03 05 07.3	+0.4
	baz=318						
FCAR	Ozark Folk Cen	51.13	81	P	P	03 05 06.7	-1.4
FCAR				IAmb	IAmb	03 05 07.9	
	comp=Z,5.8nm,0.7s						
MIAR	Mount Ida	51.29	84	P	P	03 05 09.6	+0.3
	baz=317						
SONM	Songino Array	52.63	302	P	P	03 05 19.3	+0.1
	comp=Z,0.4nm,0.6s,baz=50,slow=6.6,SNR=3.7						
SONM				pP	pP	03 06 00.3	0.0
	comp=Z,1.7nm,0.8s,baz=44,slow=7.0,SNR=8.4						
SONM				PcP	PcP	03 06 26.5	-0.1
	comp=Z,0.2nm,0.5s,baz=18,slow=1.4,SNR=4.2						
SONM				ScP	ScP	03 10 06.7	+0.6
	comp=Z,0.2nm,0.7s,baz=50,slow=4.5,SNR=3.9						
	comp=Z,0.4nm,0.6s						
WVT	Waverly	53.36	78	P	P	03 05 24.2	-0.3
	baz=316						
OXF	Oxford	53.66	80	P	P	03 05 26.7	0.0
OXF	Oxford	53.66	80	P	P	03 05 26.9	+0.2
	baz=317,SNR=7.7						
HHC	Hu-ho-hao-te	54.98	293	*e*P	P	03 05 37.5	+1.2
HHC				pmax	pmax		
	comp=Z,22nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,6.7s						
ARCES	ARCESS Array B	55.11	356	P	P	03 05 36.5	-0.1
	comp=Z,2.9nm,0.8s,baz=18,slow=7.1,SNR=2.1						
	comp=Z,2.9nm,0.8s						
LBNH	Lisbon	55.91	60	P	P	03 05 41.9	-0.8
	baz=316						
LRAL	Lakeview Retre	56.10	80	P	P	03 05 43.1	-1.2
	baz=318						
BLA	Blacksburg	56.64	72	P	P	03 05 47.2	-0.9
	baz=317						
ZALV	Zalesovo Beam	57.39	319	P	P	03 05 53.4	+0.5
	comp=Z,0.4nm,0.3s,baz=36,slow=13,SNR=2.7						
	comp=Z,0.4nm,0.3s						
KMSC	Kings Mountain	57.67	74	P	P	03 05 54.6	-0.7
	baz=318						
LZH	Lanzhou	62.56	294	*e*P	P	03 06 30.0	+1.3
LZH				sP	sP	03 07 34.2	+3.3
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
FIA1	FINESS Array S	63.16	355	P	P	03 06 31.6	-0.4
FINES	FINESS Array B	63.16	355	P	P	03 06 32.1	+0.1
	comp=Z,3.2nm,0.8s,baz=5.9,slow=6.7,SNR=9.0						
FINES				pP	pP	03 07 15.3	+0.8
	comp=Z,3.0nm,0.8s,baz=24,slow=11,SNR=3.8						
	comp=Z,3.2nm,0.8s						
FINES	FINESS Array B	63.16	355	P	P	03 06 31.1	-0.9
NOA	NORSAR Array B	63.73	3	P	P	03 06 36.7	+0.9
	comp=Z,1.2nm,1.0s,baz=358,slow=9.8,SNR=1.7						
	comp=Z,1.2nm,1.0s						
MK31	Makanchi Array	64.08	316	P	P	03 06 37.9	-0.4
MKAR	Makanchi Array	64.08	316	P	P	03 06 37.3	-1.0
	comp=Z,0.7nm,0.8s,baz=39,slow=4.8,SNR=5.7						
MKAR				pP	pP	03 07 20.7	-0.3
	comp=Z,0.6nm,0.8s,baz=43,slow=5.5,SNR=3.4						
	comp=Z,0.7nm,0.8s						
MKAR	Makanchi Array	64.08	316	P	P	03 06 37.2	-1.2
WMQ	Urumqi	64.24	310	*e*P	P	03 06 43.4	+3.9
PZH	PanZhiHua	71.18	289	P	P	03 07 24.2	+1.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,4.5s						
AKASG	Malin Array Be	73.64	352	P	P	03 07 36.6	-0.5
	comp=Z,0.9nm,0.5s,baz=6.7,slow=5.6,SNR=7.3						
AKASG				pP	pP	03 08 20.6	-0.3
	comp=Z,1.1nm,0.6s,baz=6.9,slow=5.6,SNR=3.2						
	comp=Z,0.9nm,0.5s						
CMAR	Chiang Mai Arr	79.18	287	P	P	03 08 09.1	+0.3
	comp=Z,1.1nm,0.3s,baz=26,slow=6.5,SNR=1.6						
CMAR				pP	pP	03 08 53.1	0.0
	comp=Z,1.9nm,0.3s,baz=17,slow=4.7,SNR=2.3						
	comp=Z,1.1nm,0.3s						
ESDC	Sonseca Array	83.61	16	P	P	03 08 31.6	-0.2
	comp=Z,0.9nm,0.8s,baz=352,slow=7.2,SNR=6.7						
ESDC				pP	pP	03 09 18.1	+1.5
	comp=Z,0.8nm,0.8s,baz=347,slow=5.0,SNR=3.8						
	comp=Z,0.9nm,0.8s						
WRA	Warramunga Arr	91.65	236	P	P	03 09 09.7	-0.7
	comp=Z,0.6nm,0.8s,baz=34,slow=6.1,SNR=3.3						
	comp=Z,0.6nm,0.8s						
ASAR	Alice Springs	95.05	235	P	P	03 09 25.0	-1.0
	comp=Z,0.2nm,0.3s,baz=24,slow=4.1,SNR=4.5						
	comp=Z,0.2nm,0.3s						

*NEIC **02** 02:58:11.3±1.7, 61°.538N±0°.009×141°.07W±0°.02, h1^{km}±3^{km}, Error ellipse: s-maj=2.0km s-min=0.9km az=125.0*

*AEIC **02** 02:58:11.5±1.4, 61°.54N±0°.01×140°.99W±0°.03, h2^{km}±3^{km}, Error ellipse: s-maj=1.9km s-min=1.6km az=136.0*

*ANF **02** 02:58:11.1±0.2, 61°.55N×140°.97W, h5^{km}±1^{km}, ML2.7/15, Error ellipse: s-maj=1.4km s-min=1.0km az=49.0*

*PGC **02** 02:58:12.4, 61°.56N×140°.96W, h10^{km}, ML2.5/11, 205km Wnw of Haines Jct., Yt Southern Yukon Territory, Canada*

ISC 02 02:58:11.6±0.9**, 61°.55N**±0°.01×**140°.98W**±0°.01**, h9**^{km}±8^{km}**, n113,** σ**0^{s}.87**/183**, Southern Yukon Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.25	15		Pg	02 58 16.5	-0.2
YUK2					Sg	02 58 20.3	+0.2
YUK2	White River	0.25	15	P	Pg	02 58 16.5	-0.2
YUK2				S	Sg	02 58 20.3	+0.2
YUK3	Moose Creek	0.34	47		Pg	02 58 18.1	-0.3
YUK3					Sg	02 58 23.0	+0.1
YUK3	Moose Creek	0.34	47	P	Pg	02 58 18.1	-0.3
YUK3				S	Sg	02 58 23.0	+0.1
YUK3	Moose Creek	0.34	47	P	Pg	02 58 18.1	-0.3
	baz=228,SNR=1000						
YUK3				S	Sg	02 58 22.8	0.0
	baz=228						
BARN	Barnard Glacie	0.59	214		Pg	02 58 22.6	-0.4
BARN	Barnard Glacie	0.59	214		Sg	02 58 31.1	+0.3
YUK8	Steele Glacier	0.64	114		Pg	02 58 23.7	-0.3
YUK8					Sb	02 58 33.6	-0.7
YUK8	Steele Glacier	0.64	114	P	Pg	02 58 23.7	-0.3
YUK8				S	Sb	02 58 33.6	-0.7
YUK8	Steele Glacier	0.64	114	P	Pg	02 58 23.6	-0.4
	baz=296,SNR=637						
BALM	Baldy	0.84	233		Pg	02 58 26.9	-0.8
BALM					Sg	02 58 38.5	0.0
BALM	Baldy	0.84	233	P	Pg	02 58 26.9	-0.8
BALM				S	Sg	02 58 38.5	0.0
O28M	Mount Upton	0.87	154		Pg	02 58 27.7	-0.6
O28M					Sg	02 58 39.6	+0.1
O28M	Mount Upton	0.87	154	P	Pg	02 58 27.7	-0.6
O28M				S	Sg	02 58 39.6	+0.1
O28M	Mount Upton	0.87	154	P	Pg	02 58 27.7	-0.6
	baz=335						
O28M				S	Sg	02 58 39.7	+0.1
	baz=335						
BVCY	Beaver Creek	0.87	4		Pg	02 58 27.9	-0.5
BVCY					Sg	02 58 39.8	+0.1
BVCY	Beaver Creek	0.87	4	P	Pg	02 58 27.9	-0.5
BVCY				S	Sg	02 58 39.8	+0.1
BVCY	Beaver Creek	0.87	4	P	Pg	02 58 27.9	-0.5
	baz=183,SNR=624						
BVCY				S	Sg	02 58 39.6	-0.1
	baz=183						
KIAG	Kiagna River	0.92	228		Pg	02 58 28.3	-0.9
KIAG					Sg	02 58 41.7	+0.6
KIAG	Kiagna River	0.92	228	P	Pg	02 58 28.3	-0.9
KIAG				S	Sg	02 58 41.7	+0.6
M27K	Edge Creek, AK	0.92	333		Pg	02 58 28.6	-0.6
M27K					Sg	02 58 41.3	0.0
M27K	Edge Creek, AK	0.92	333	IAML		02 58 49.1	
	comp=N,136nm,0.6s						
M27K				IAML		02 58 49.5	
	comp=E,164nm,0.4s						
M27K	Edge Creek, AK	0.92	333	P	Pg	02 58 28.6	-0.6
M27K				S	Sg	02 58 41.3	0.0
M27K	Edge Creek, AK	0.92	333	P	Pg	02 58 28.5	-0.8
	baz=151						
M27K				S	Sg	02 58 41.3	0.0
	baz=151						
MCARA	McCarthy VSAT	1.00	261		Pg	02 58 30.5	-0.2
MCARA					Sb	02 58 45.0	+0.7
MCARA	McCarthy VSAT	1.00	261	P	Pg	02 58 30.4	-0.3
	baz=79,SNR=154						
MCARA				S	Sb	02 58 44.6	+0.4
	baz=79						
YUK4	Talbot Arm	1.14	99		Pg	02 58 33.0	-0.4
YUK4	Talbot Arm	1.14	99	P	Pg	02 58 33.0	-0.4
YUK4	Talbot Arm	1.14	99	P	Pg	02 58 33.1	-0.4
	baz=277,SNR=210						
VRDI	Verde Repeater	1.23	256		Pg	02 58 34.2	-1.0
M26K	Nabesna, AK	1.28	313		Pn	02 58 35.2	-0.6
M26K				IAML		02 58 57.0	
	comp=E,148nm,0.5s						
M26K				IAML		02 59 01.7	
	comp=N,112nm,0.7s						
M26K	Nabesna, AK	1.28	313	P	Pn	02 58 35.1	-0.7
	baz=130						
M26K				S	Sb	02 58 52.7	+0.1
	baz=130						
GLB	Gilahina Butte	1.36	267		Pn	02 58 36.6	-0.3
GLB				IAML		02 58 57.0	
	comp=N,120nm,0.6s						
YUK6	Outpost Mounta	1.40	114		Pn	02 58 37.1	-0.4
YUK6					Sn	02 58 56.6	+0.3
YUK6	Outpost Mounta	1.40	114	P	Pn	02 58 37.1	-0.4
YUK6				S	Sn	02 58 56.6	+0.3
YUK6	Outpost Mounta	1.40	114	P	Pn	02 58 37.1	-0.4
	baz=297,SNR=307						
YUK6				S	Sg	02 58 56.8	+0.1
	baz=297						
SAMH	Samovar Hills	1.43	176		Pb	02 58 38.5	+0.1
SAMH					Sg	02 58 58.9	+1.5
SAMH	Samovar Hills	1.43	176	P	Pb	02 58 38.5	+0.1
SAMH				S	Sg	02 58 58.9	+1.5
M29M	Somme Creek	1.49	52		Pn	02 58 38.8	+0.1
M29M					Sb	02 58 58.8	+0.2
M29M	Somme Creek	1.49	52	P	Pn	02 58 38.8	+0.1
M29M				S	Sb	02 58 58.8	+0.2
M29M	Somme Creek	1.49	52	P	Pn	02 58 38.8	+0.1
	baz=234						
M29M				S	Sb	02 58 58.8	+0.2
	baz=234						
PCA	Pinnacle	1.50	166	Pn	Pb	02 58 39.4	-0.2
PCA				Sn	Sg	02 59 00.2	+0.4
PCA	Pinnacle	1.50	166	Pn	Pb	02 58 39.4	-0.2
PCA				Sn	Sg	02 59 00.2	+0.4
PINM	Pinnacle	1.50	166	P	Pb	02 58 39.3	-0.3
	baz=347,SNR=150						
PINM				S	Sg	02 59 00.1	+0.4
	baz=347						
YUK5	Granite Creek	1.56	104	Pn	Pn	02 58 39.7	0.0
YUK5				Sn	Sn	02 59 00.4	+0.3
YUK5	Granite Creek	1.56	104	Pn	Pn	02 58 39.7	0.0
YUK5				Sn	Sn	02 59 00.4	+0.3
BCAR	Beaver Creek A	1.57	346		Pn	02 58 40.0	+0.3
L27K	Beaver Creek,	1.57	346	Pn	Pn	02 58 40.0	+0.3
L27K				Sn	Sb	02 59 01.4	+0.5
L27K	Beaver Creek,	1.57	346	Pn	Pn	02 58 40.0	+0.3
L27K				Sn	Sb	02 59 01.4	+0.5
L27K	Beaver Creek,	1.57	346	P	Pn	02 58 40.0	+0.3
	baz=165						
L27K				S	Sb	02 59 00.9	0.0
	baz=165						
O29M	Mount Kennedy	1.71	136	Pn	Pb	02 58 42.7	-0.6
O29M				Sg	Sg	02 59 06.5	-0.1
O29M	Mount Kennedy	1.71	136	Pn	Pb	02 58 42.7	-0.6
O29M				Sg	Sg	02 59 06.5	-0.1
O29M	Mount Kennedy	1.71	136	Pb	Pb	02 58 43.2	-0.1
	baz=318						
YUK7	Dusty Glacier	1.72	125	Pn	Pb	02 58 42.9	-0.5
YUK7				Sg	Sg	02 59 06.8	0.0
YUK7	Dusty Glacier	1.72	125	Pn	Pb	02 58 42.9	-0.5
YUK7				Sg	Sg	02 59 06.8	0.0
N25K	Chitina, Valde	1.73	274	Pb	Pb	02 58 43.5	-0.1
	baz=90						
HYT	Haines Junctio	1.83	112		Pn	02 58 44.3	+1.0
HYT				IAML		02 59 13.3	
	comp=N,34nm,0.8s						
HYT				IAML		02 59 48.0	
	comp=E,36nm,2.8s						
HYT	Haines Junctio	1.83	112	Pn	Pn	02 58 44.4	+1.0
HYT				Sg	Sb	02 59 09.2	+0.8
HYT	Haines Junctio	1.83	112	Pn	Pn	02 58 44.4	+1.0
HYT				Sg	Sb	02 59 09.2	+0.8
HYT	Haines Junctio	1.83	112	P	Pn	02 58 44.0	+0.6
	baz=295,SNR=98						
HYT				S	Sn	02 59 07.6	+0.9
	baz=295						
L26K	Log Cabin Wild	1.85	324		Pn	02 58 44.1	+0.5
L26K				IAML		02 59 15.7	
	comp=N,74nm,0.4s						
L26K				IAML		02 59 16.3	
	comp=E,76nm,0.4s						
L26K	Log Cabin Wild	1.85	324	P	Pn	02 58 44.5	+0.9
	baz=142,SNR=21						
L26K				Sb	Sg	02 59 10.2	-0.9
	baz=142						
N30M	Aishikik Lake	1.87	91	Pn	Pn	02 58 43.8	0.0
N30M					Sn	02 59 08.2	+0.7
N30M	Aishikik Lake	1.87	91	Pn	Pn	02 58 43.8	0.0
N30M				Sg	Sn	02 59 08.2	+0.7
N30M	Aishikik Lake	1.87	91	P	Pn	02 58 43.8	0.0
	baz=275						
N30M				S	Sn	02 59 08.0	+0.5
	baz=275						
PNL	Peninsula	2.04	157	Pg	Pb	02 58 49.3	+0.5
PNL				Sg	Sg	02 59 16.2	-0.9
PNL	Peninsula	2.04	157	Pg	Pb	02 58 49.3	+0.5
PNL				Sg	Sg	02 59 16.2	-0.9
L29M	L29M	2.06	39	Pn	Pn	02 58 47.0	+0.6
L29M				Pg	Pb	02 58 49.5	+0.3
L29M				Sg	Sb	02 59 15.2	+0.4
L29M	L29M	2.06	39	Pn	Pn	02 58 47.0	+0.6
L29M				Pg	Pb	02 58 49.5	+0.3
L29M				Sg	Sb	02 59 15.2	+0.4
L29M	L29M	2.06	39	P	Pn	02 58 46.8	+0.4
	baz=222						
L29M				Sb	Sb	02 59 16.0	+1.2
	baz=222						
HARP	HAARP	2.15	295	Pb	Pb	02 58 50.8	0.0
	baz=111						
M30M	Minto, Yukon	2.22	60	Pn	Pn	02 58 49.0	+0.3
M30M				Sg	Sb	02 59 20.8	+1.2
M30M	Minto, Yukon	2.22	60	Pn	Pn	02 58 48.7	0.0
M30M				IAML		02 59 21.9	
	comp=N,40nm,0.7s						
M30M				IAML		02 59 22.3	
	comp=E,29nm,1.1s						
M30M	Minto, Yukon	2.22	60	Pn	Pn	02 58 49.0	+0.3
M30M				Sg	Sb	02 59 20.8	+1.2
M30M	Minto, Yukon	2.22	60	Pb	Pb	02 58 51.9	-0.1
	baz=244						
M30M				Sb	Sb	02 59 21.0	+1.4
	baz=244						
DIV	Divide	2.35	262		Pb	02 58 52.7	-1.4
DIV	Divide	2.35	262	Pg	Pb	02 58 53.0	-1.1
P30M	Million Dollar	2.43	124	Pn	Pn	02 58 52.6	+1.0
P30M				Pg	Pb	02 58 55.9	+0.4
P30M	Million Dollar	2.43	124	Pn	Pn	02 58 52.6	+1.0
P30M				Pg	Pb	02 58 55.9	+0.4
N31M	Braeburn, Yuko	2.49	89	Pn	Pn	02 58 52.6	+0.2
N31M				Sg	Sg	02 59 29.9	-1.7
N31M	Braeburn, Yuko	2.49	89	IAML		02 59 33.0	
	comp=N,41nm,1.0s						
N31M				IAML		02 59 38.9	
	comp=E,43nm,0.7s						
N31M	Braeburn, Yuko	2.49	89	Pn	Pn	02 58 52.6	+0.2
N31M				Pg	Pb	02 58 57.5	+1.0
N31M				Sg	Sg	02 59 29.9	-1.7
N31M	Braeburn, Yuko	2.49	89	Sb	Sg	02 59 29.8	-1.8
	baz=274						
O30N	Mendenhall	2.49	106	P	Pn	02 58 52.6	+0.2
	baz=291,SNR=40						
O30N				S	Sn	02 59 23.6	+0.7
	baz=291						
K27K	Chicken	2.54	349	Pn	Pn	02 58 53.3	+0.3
K27K	Chicken	2.54	349	Pn	Pn	02 58 53.8	+0.7
K27K				Sg	Sg	02 59 31.5	-1.7
K27K	Chicken	2.54	349	P	Pn	02 58 52.9	-0.1
	baz=168						
DOT	Dot Lake	2.55	327	Pn	Pn	02 58 53.7	+0.6
DOT				Sn	Sn	02 59 22.9	-1.4
DOT	Dot Lake	2.55	327	Pn	Pn	02 58 53.7	+0.6
DOT				Pg	Pg	02 58 59.1	-1.3
DOT				Sn	Sn	02 59 22.9	-1.4
DAWY	Dawson	2.63	15	Pn	Pn	02 58 54.8	+0.5
DAWY	Dawson	2.63	15	IAML		02 59 43.2	
	comp=N,19nm,0.5s						
DAWY				IAML		02 59 47.9	
	comp=E,32nm,1.0s						
DAWY	Dawson	2.63	15	Pn	Pn	02 58 54.8	+0.5
DAWY	Dawson	2.63	15	S	Sn	02 59 27.6	+1.3
	baz=197						
K29M	Barlow Dome	2.80	33	Pn	Pn	02 58 58.0	+1.3
K29M	Barlow Dome	2.80	33	Pn	Pn	02 58 58.0	+1.3
SCRK	Sand Creek	2.80	332		Pn	02 58 57.2	+0.5
SCRK	Sand Creek	2.80	332	IAML		02 59 33.4	
	comp=E,15nm,3.5s						
RIDG	Independent Ri	2.83	323	Pn	Pn	02 58 57.8	+0.7
RIDG				IAML		02 59 19.1	
	comp=N,30nm,2.9s						
RIDG				IAML		02 59 32.4	
	comp=E,31nm,2.9s						
PLBC	Pleasant Camp	3.10	131	Sg	Sg	02 59 48.6	-2.4
PLBC	Pleasant Camp	3.10	131	Sg	Sg	02 59 48.6	-2.4
M31M	Drury Creek, Y	3.19	75	Pn	Pn	02 59 02.5	+0.6
M31M				Sg	Sg	02 59 51.7	-2.2
M31M	Drury Creek, Y	3.19	75	Pn	Pn	02 59 02.6	+0.6
M31M				IAML		03 00 06.3	
	comp=E,30nm,1.4s						
M31M				IAML		03 00 11.2	
	comp=N,27nm,1.6s						
M31M	Drury Creek, Y	3.19	75	Pn	Pn	02 59 02.5	+0.6
M31M				Sg	Sg	02 59 51.7	-2.2
J26L	Joseph Creek	3.19	339	Pn	Pn	02 59 02.7	+0.7
J26L				IAML		02 59 52.8	
	comp=N,17nm,0.6s						
EGAK	Eagle	3.25	359	Pn	Pn	02 59 04.4	+1.7
EGAK				IAML		02 59 58.8	
	comp=N,22nm,1.9s						
N32M	Quiet Lake	3.82	92	Pn	Pn	02 59 11.2	+0.5
N32M				Sg	Sg	03 00 10.9	-3.3
N32M	Quiet Lake	3.82	92	Pn	Pn	02 59 11.2	+0.5
N32M				Sg	Sg	03 00 10.9	-3.3
I26K	Coal Creek Min	3.90	346		Pn	02 59 13.3	+1.7
PRP	Porcupine Dome	4.47	335	Pn	Pn	02 59 21.1	+1.5
MMPY	Sheldon Lake,	4.69	72	Pn	Pn	02 59 23.0	+0.4
MMPY	Sheldon Lake,	4.69	72	Pn	Pn	02 59 23.0	+0.4
H27K	Steamboat Moun	4.71	357	Pn	Pn	02 59 25.2	+2.4
H27K	Steamboat Moun	4.71	357	Pn	Pn	02 59 25.2	+2.4

*THE **02** 03:05:09.7, 39°.51N×26°.05E, h7^{km}±1^{km}, ML2.3/7, Error ellipse: s-maj=1.9km s-min=0.5km az=167.0*

*DDA **02** 03:05:09.9±0.0, 39°.53N×26°.12E, h10^{km}, ML2.5*

*ISK **02** 03:05:09.1, 39°.51N×26°.05E, h9^{km}, ML2.5/22*

*ATH **02** 03:05:10.2, 39°.49N×26°.07E, h14^{km}±2^{km}, ML2.4/3, Error ellipse: s-maj=3.3km s-min=1.2km az=223.0*

ISC 02 03:05:09.7±0.8**, 39°.50N**±0°.02×**26°.07E**±0°.02**, h12**^{km}±5^{km}**, n58,** σ**0^{s}.49**/82**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.05	92	P	Pg	03 05 12.1	+0.1
KOCA				S	Sg	03 05 13.5	-0.2
GPNR	Gulpinar-Canak	0.07	134	Pg	Pg	03 05 11.8	-0.3
GPNR				Sg	Sg	03 05 13.6	-0.3
PRK	Paraskevi	0.30	148	P	Pg	03 05 16.1	+0.3
PRK				S	Sg	03 05 20.6	+0.7
	1µm,0.3s						
PRK	Paraskevi	0.30	148	P	Pg	03 05 16.0	+0.2
PRK				S	Sg	03 05 20.7	+0.7
PRK				AML	AML	03 05 21.0	
	comp=E,2612µm,0.3s						
PRK				AML	AML	03 05 21.2	
	comp=N,1952µm,0.2s						
SIGR	SIGRI	0.34	210	P	Pg	03 05 16.4	0.0
SIGR				S	Sg	03 05 21.1	+0.1
	comp=N,790nm,0.2s						
SIGR	SIGRI	0.34	210	Pg	Pg	03 05 16.4	0.0
SIGR				Sg	Sg	03 05 21.2	+0.3
SIGR	SIGRI	0.34	210	P	Pg	03 05 16.5	+0.1
SIGR				S	Sg	03 05 21.0	+0.1
SIGR				AML	AML	03 05 21.8	
	comp=N,1734µm,0.2s						
SIGR				AML	AML	03 05 21.8	
	comp=E,1416µm,0.2s						
BOZC	Bozcaada	0.34	358	Pg	Pg	03 05 16.6	+0.1
BOZC				Sg	Sg	03 05 21.9	+0.8
BOZC	Bozcaada	0.34	358	P	Pg	03 05 16.6	+0.1
BOZC				P	Pg	03 05 16.6	+0.1
BOZC				S	Sg	03 05 21.4	+0.3
BOZC				S	Sg	03 05 21.4	+0.3
BOZC				*i* AML	AML	03 05 22.0	
	comp=E,579nm,0.3s						
BOZC				*i* AML	AML	03 05 22.0	
	comp=E,593nm,0.3s						
BOZC				*i* AML	AML	03 05 22.0	
	comp=E,502nm,0.3s						
BOZC				*i* AML	AML	03 05 22.0	
	comp=E,674nm,0.3s						
EZN	Ezine	0.38	32	P	Pg	03 05 17.2	0.0
EZN				S	Sg	03 05 22.7	+0.4
	comp=E,465nm,0.2s						
EZN	Ezine	0.38	32	Pg	Pg	03 05 17.2	0.0
EZN				Sg	Sg	03 05 22.6	+0.3
BAYC	CANAKKALE_Bayr	0.44	57	P	Pg	03 05 18.1	-0.2
BAYC				S	Sg	03 05 23.2	-1.0
AYVA	Ayvalik	0.52	112	P	Pg	03 05 20.0	+0.1
ECEA	Canakkale, Ece	0.55	9	P	Pg	03 05 19.5	-0.9
COMU	Canakkale	0.67	28	Pg	Pg	03 05 22.6	-0.1
GOKA	anakkale-Gk	0.70	350	P	Pg	03 05 22.8	-0.4
GOKA				*i* AML	AML	03 05 36.0	
	comp=E,201nm,0.2s						
GADA	Gvkgeada	0.70	349	Pg	Pg	03 05 22.9	-0.3
BUHA	Balikesir, Bur	0.78	90	P	Pg	03 05 24.6	-0.2
BUHA				S	Sg	03 05 34.2	-0.8
DKL	Dikili	0.78	123	Pg	Pb	03 05 25.4	+0.2
LIA	Limnos Island	0.79	300	P	Pg	03 05 25.0	+0.1
LIA				S	Sg	03 05 35.5	+0.3
	comp=E,328nm,0.3s						
LIA	Limnos Island	0.79	300	P	Pg	03 05 24.9	0.0
LIA				S	Sb	03 05 37.2	+1.2
LIA				AML	AML	03 05 38.3	
	comp=E,589µm,0.3s						
LIA				AML	AML	03 05 39.2	
	comp=N,748µm,0.3s						
KARB	zmir-Karabur	0.88	162	P	Pg	03 05 26.8	+0.1
KARB				S	Sg	03 05 37.9	-0.3
KARB				*i* AML	AML	03 05 40.0	
	comp=N,125nm,0.2s						
CANM	Can-anakkale	0.91	56	Pg	Pb	03 05 27.7	+0.3
GELI	Tayfur-Gelibol	0.95	19	Pg	Pg	03 05 27.5	-0.4
ZEDA	zmir-Bergama	0.95	124	P	Pg	03 05 27.8	-0.2
LPK	Lapseki	1.02	31	Pg	Pg	03 05 28.9	-0.4
PSRA	Psara	1.04	202	P	Pg	03 05 29.8	+0.2
SMTH	Samothraki Isl	1.05	337	P	Pg	03 05 29.4	-0.5
SMTH				S	Sg	03 05 43.5	-0.1
	comp=N,68nm,0.2s						
SMTH	Samothraki Isl	1.05	337	P	Pg	03 05 29.3	-0.5
CHOS	Chios island	1.12	181	P	Pb	03 05 30.2	-0.8
CHOS				S	Sn	03 05 47.1	+0.6
	comp=N,262nm,0.2s						
CHOS	Chios island	1.12	181	Pn	Pb	03 05 30.4	-0.6
CHOS	Chios island	1.12	181	P	Pb	03 05 30.4	-0.6
ERIK	Erikli-Kesan	1.21	16	Pn	Pn	03 05 32.0	-0.5
URLA	Izmir	1.21	160	Pn	Pn	03 05 31.7	-0.8
URLA	Izmir	1.21	160	P	Pn	03 05 31.8	-0.8
URLA				S	Sb	03 05 47.3	-0.9
URLA				*i* AML	AML	03 05 55.0	
	comp=N,81nm,0.9s						
BALY	Balya	1.22	78	P	Pn	03 05 31.8	-0.8
BALY				S	Sb	03 05 47.6	-0.9
BALY				*i* AML	AML	03 05 50.0	
	comp=N,100nm,0.7s						
ENEZ	Enez	1.23	3	Pn	Pn	03 05 32.4	-0.3
STEP	BALIKESIR_Sava	1.28	95	P	Pn	03 05 33.7	+0.2
STEP				S	Sb	03 05 50.5	+0.2
KRBG	Karabiga-Canak	1.30	46	Pn	Pn	03 05 33.6	0.0
ZEYE	Izmir, Urla-Ze	1.31	165	P	Pn	03 05 33.7	-0.1
ZEYE				*i* AML	AML	03 05 57.0	
	comp=N,61nm,0.3s						
BLCB	Balcova	1.35	145	Pn	Pb	03 05 35.1	+0.2
GONE	Gonen-Balikesi	1.36	66	Pn	Pn	03 05 34.4	-0.1
ALN	Alexandroupoli	1.39	359	P	Pn	03 05 34.7	-0.2
ALN				S	Sb	03 05 52.7	-0.6
	comp=N,55nm,1.1s						
ALN	Alexandroupoli	1.39	359	Pn	Pn	03 05 35.4	+0.5
ALN	Alexandroupoli	1.39	359	P	Pn	03 05 35.0	+0.1
KESN	Edirne-Kesan	1.40	19	P	Pn	03 05 35.2	-0.2
BALB	Balikesir	1.41	84	Pn	Pn	03 05 35.7	+0.6
BKES	Balkesir-Mer	1.46	80	P	Pb	03 05 37.2	+0.5
RKY	Sarkoy-Tekirda	1.46	35	Pn	Pn	03 05 36.5	+0.6
THAS	Thassos island	1.51	317	P	Pn	03 05 36.2	-0.4
EDC	Edincik	1.62	58	Pn	Pn	03 05 38.5	+0.5
RDO	Rodhopi	1.69	346	P	Pn	03 05 39.0	0.0
RDO	Rodhopi	1.69	346	Pn	Pn	03 05 39.0	0.0
RDO	Rodhopi	1.69	346	P	Pn	03 05 38.8	-0.2
TKR	Tekirdag	1.86	37	Pn	Pn	03 05 41.9	+0.5
KCTX	Karacabey (Bur	1.92	66	Pn	Pn	03 05 42.6	+0.4
CRLT	Corlu	2.06	38	Pn	Pn	03 05 45.1	+0.9
KULA	Kula-Manisa	2.25	115	Pn	Pn	03 05 47.9	+1.1

IDC 02 03:10:20.8±1.4**, 34°.35N**×**81°.64E, h0**^{km}**, mb3.4**/4**,**
mbtmp3.6/5**, ML3.5**/1**, MS3.5**/1**, Error ellipse:**
s-maj=35.1km s-min=33.4km az=25.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	12.44	2	Pn	Pn	03 13 18.7	-0.3
	0.3nm,0.3s,baz=181,slow=13,SNR=35 2.4nm,0.6s						
SONM	Songino Array	22.89	47	P	P	03 15 26.4	+0.4
	0.3nm,0.9s,baz=232,slow=11,SNR=2.1 0.3nm,0.9s						
KLR	Kul'dur	39.47	52	LR	LR	03 36 48.4	
	comp=Z,66nm,18.0s,baz=341,slow=40						
FINES	FINESS Array B	44.16	325	P	P	03 18 30.8	-0.1
	3.1nm,1.1s,baz=102,slow=9.1,SNR=2.1 3.1nm,1.1s						
WRA	Warramunga Arr	73.67	129	P	P	03 21 56.4	-0.1
	0.2nm,0.5s,baz=325,slow=5.8,SNR=2.0 0.2nm,0.5s						
TORD	Torodi Ar. Bea	74.47	275	P	P	03 22 01.5	+0.1
	0.4nm,0.7s,baz=46,slow=5.7,SNR=5.7 0.4nm,0.7s						

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*TIR **02** 03:42:05.4, 42°.19N×19°.58E, h21^{km}±1^{km}, Md3.7, Ml3.6*
*PDG **02** 03:42:06.7±0.3, 41°.91N×20°.14E, h12^{km}, MD3.6/11,*
ML3.5/13, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0
*PRU **02** 03:42:06.5±0.0, 41°.64N×20°.15E, h10^{km}*
*THE **02** 03:42:07.0, 42°.06N×20°.18E, h6^{km}±16^{km}, ML3.2/3, Error*
ellipse: s-maj=20.8km s-min=3.1km az=317.0
*BEO **02** 03:42:07.7±0.2, 41°.92N×20°.15E, h0^{km}, ML3.2/21*
*RHSSO **02** 03:42:07.5±0.6, 41°.92N×20°.15E, h4^{km}±2^{km}, ML3.7/15*
*SKO **02** 03:42:07.6, 41°.93N×20°.14E, h14^{km}*
ISC 02 03:42:06.7±1.0**, 41°.89N**±0°.02×**20°.14E**±0°.02**, h7**^{km}±9^{km}**,**
n136, σ1^{s}**23**/207**, 26C-7D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCI	Bajram Curri	0.47	353	P	Pg	03 42 15.7	-0.3
	baz=63						
BCI				S	Sg	03 42 20.4	-1.8
	baz=63						
BCI				AMP			
	comp=N,29nm,0.5s,baz=63						
TIR	Tirane	0.58	201	⇑P	Pb	03 42 19.2	-0.1
TIR	Tirane	0.58	201	*e*Pg	Pb	03 42 18.9	-0.4
TIR				*e*Sg	Sb	03 42 27.1	-0.6
TIR	Tirane	0.58	201	*i* Pg	Pb	03 42 18.9	-0.4
TIR				*i* Sg	Sn	03 42 29.0	-2.3
ULC	Ulcinj	0.67	276	*i* Pg	Pg	03 42 19.2	-0.5
ULC	Ulcinj	0.67	276	⇑*i*Pg	Pg	03 42 19.4	-0.3
ULC				*i* Sg	Sb	03 42 30.1	-0.3
PVY	Plav	0.71	349	⇑*i*Pg	Pg	03 42 20.1	-0.4
PVY				*i* Sg	Sg	03 42 31.1	+1.3
DRME	Dracevica, Mon	0.77	293	⇑*i*Pg	Pg	03 42 20.7	-0.8
DRME				*e*Sg	Sg	03 42 32.2	+0.6
DRME	Dracevica, Mon	0.77	293	⇑*i*Pg	Pg	03 42 20.8	-0.8
DRME				*i* Sg	Sb	03 42 33.4	+0.2
PDG	Podgorica	0.85	309	⇑P	Pg	03 42 22.0	-1.1
PDG	Podgorica	0.85	309	*e*Pg	Pg	03 42 22.0	-1.1
PDG				*e*Sg	Sg	03 42 34.9	+0.8
PDG	Podgorica	0.85	309	*i* Pg	Pg	03 42 21.9	-1.1
PDG				*i* Sg	Sb	03 42 35.8	+0.3
PDG	Podgorica	0.85	309	⇑*i*Pg	Pg	03 42 21.9	-1.1
PDG				*i* Sg	Sb	03 42 35.7	+0.3
SKO	Skopje	0.97	85	*e*Pg	Pg	03 42 25.1	-0.3
SKO				*e*Sg	Sb	03 42 39.0	+0.1
SKO	Skopje	0.97	85	*i* Pg	Pg	03 42 24.9	-0.4
SKO				*i* Sg	Sb	03 42 38.8	-0.1
BEY	Berane	0.99	349	*i* Pg	Pg	03 42 24.6	-1.2
IVA	Berane	0.99	349	⇓*i*Pg	Pg	03 42 25.2	-0.6
IVA				*i* Sg	Sb	03 42 40.9	+1.2
BUM	Brajici-Budva	1.01	294	⇓*i*Pg	Pg	03 42 25.7	-0.5
BUM				*i* Sg	Sn	03 42 41.7	-0.3
KOME	Kolasin	1.06	334	⇑*i*Pg	Pg	03 42 25.9	-1.3
KOME				*i* Sg	Sb	03 42 42.4	+0.7
CEME	Cevo	1.12	306	⇑*i*Pg	Pg	03 42 26.8	-1.4
CEME				*i* Sg	Sn	03 42 44.4	-0.2
NKME	Niksic	1.24	315	⇑*i*Pg	Pn	03 42 29.1	-1.4
NKME				*i* Sg	Sn	03 42 48.7	+1.2
HCY	Herceg Novi	1.34	295	*e*Pg	Pn	03 42 30.9	-1.0
HCY				*e*Sg	Sb	03 42 49.3	-0.4
HCY	Herceg Novi	1.34	295	⇓*i*Pg	Pn	03 42 30.9	-1.0
HCY				*i* Sg	Sg	03 42 51.8	+1.8
SJES	Sjenica	1.37	355	*e*Pg	Pn	03 42 32.0	-0.4
SJES				*e*Sg	Sb	03 42 51.2	+0.6
SJES	Sjenica	1.37	355	⇑*i*Pg	Pn	03 42 31.7	-0.7
SJES				*e*Sg	Sb	03 42 50.7	+0.1
FNA	Florina	1.45	140	P	Pb	03 42 33.2	-0.8
FNA				S	Sg	03 42 55.0	+1.8
	comp=N,2µm,0.5s						
FNA	Florina	1.45	140	*e*Pg	Pg	03 42 33.4	-1.1
FNA				*e*Sg	Sg	03 42 55.0	+1.8
FNA	Florina	1.45	140	*i* Pn	Pb	03 42 33.2	-0.8
SELS	Selova	1.51	28	*e*Pg	Pn	03 42 33.7	-0.5
SELS				*e*Sg	Sn	03 42 54.3	+0.2
PLE	Pljevlja	1.54	339	⇑*i*Pg	Pn	03 42 34.4	-0.3
PLE				*i* Sg	Sg	03 42 58.2	+2.0
STIP	Stip	1.54	97	*i* Pn	Pg	03 42 37.1	+0.8
STIP				*i* Sn	Sg	03 42 59.5	+3.2
BARS	Barje	1.54	53	*e*Pg	Pb	03 42 35.1	-0.6
BARS				*e*Sg	Sb	03 42 55.6	+0.2
BARS	Barje	1.54	53	*i* Pn	Pn	03 42 34.6	-0.1
BRY	Bratogost	1.56	311	*e*Pn	Pn	03 42 34.6	-0.4
BRY				*e*Sn	Sn	03 42 55.4	-0.1
BRY	Bratogost	1.56	311	⇑*i*Pg	Pn	03 42 35.2	+0.2
BRY				*i* Sg	Sg	03 42 58.5	+1.7
PRVS	Prvonek	1.56	66	*e*Pg	Pn	03 42 35.1	+0.2
PRVS				*e*Sg	Sg	03 42 57.1	+0.2
TREB	Trebinje	1.56	302	*e*Pg	Pn	03 42 35.2	+0.3
TREB				*e*Sg	Sg	03 42 57.4	+0.4
TREB	Trebinje	1.56	302	*e*Pn	Pn	03 42 35.0	+0.1
TREB				*e*Sn	Sb	03 42 56.5	+0.5
UPM	Unac-Piva	1.60	325	⇑*i*Pn	Pn	03 42 35.7	+0.1
UPM				*e*Sn	Sn	03 42 57.1	+0.6
UPM	Unac-Piva	1.60	325	⇑*i*Pn	Pn	03 42 35.5	-0.1
UPM				*i* Sn	Sg	03 42 59.0	+0.9
DBRK	Dubrovnik	1.67	298	*e*Pn	Pn	03 42 36.2	-0.2
IVAS	Ivanjica	1.68	0	*e*Pg	Pn	03 42 36.4	-0.2
IVAS				*e*Sg	Sb	03 43 00.2	+0.8
LSK	Leskovik	1.78	169	P	Pg	03 42 40.8	0.0
	baz=158						
LSK				S	Sg	03 43 07.5	+3.7
	baz=158						
LSK				AMP			
	comp=N,5.9nm,0.9s,baz=158						
RUDO	Rudo	1.81	342	⇑*i*Pn	Pn	03 42 38.5	+0.1
RUDO				*e*Sn	Sn	03 43 01.7	0.0
PENT	Pentalofos	1.86	156	P	Pg	03 42 41.6	-0.7
GRG	Griva	1.94	118	P	Pb	03 42 40.7	-1.7
KZN	Kozani	2.01	142	P	Pb	03 42 43.2	-0.4
KZN				S	Sg	03 43 11.6	+0.4
	comp=N,412nm,0.8s						
SRN	Sarande	2.02	183	P	Pb	03 42 43.0	-0.6
	baz=171						
SRN				S	Sg	03 43 10.9	-0.5
	baz=171						
SRN				AMP			
	comp=N,0.9nm,1.0s,baz=171						
GRUS	Gruza	2.04	12	*e*Pn	Pn	03 42 42.2	+0.8
GRUS				*e*Sn	Sb	03 43 09.7	+0.1
BBLS	Lazići	2.04	345	*e*Pn	Pn	03 42 42.4	+0.8
BBLS				*e*Sn	Sn	03 43 09.1	+1.7
BBLS	Lazići	2.04	345	*e*Pn	Pn	03 42 41.4	-0.2
BBLS				*e*Sn	Sn	03 43 08.0	+0.6
STON	Ston	2.06	299	*e*Pn	Pb	03 42 43.4	-1.0
STON	Ston	2.06	299	*e*Pn	Pb	03 42 43.3	-1.0
STON				*e*Sn	Sb	03 43 09.8	-0.3
STON	Ston	2.06	299	*e*Pn	Pn	03 42 43.0	+1.3
STON				*e*Sn	Sn	03 43 09.1	+1.6
BOVS	Bovan	2.09	33	⇑P	Pn	03 42 42.1	0.0
BOVS	Bovan	2.09	33	*e*Pn	Pb	03 42 43.8	-1.1
BOVS				*e*Sn	Sb	03 43 10.5	-0.5
KTI	Kastanea	2.12	135	P	Pb	03 42 43.4	-2.1
KNT	Kendrikon	2.19	109	P	Pn	03 42 43.5	-0.1
KEK	Kerkira	2.19	187	P	Pb	03 42 45.8	-0.9
DIVS	Divibare	2.21	357	*e*Pn	Pn	03 42 44.1	+0.3
DIVS				*e*Sn	Sb	03 43 13.6	-0.9
DIVS	Divibare	2.21	357	*e*Pn	Pn	03 42 43.9	+0.1
DIVS				*e*Sn	Sn	03 43 11.7	+0.3
JAN	Janina	2.30	166	P	Pb	03 42 48.3	-0.2
ZAPS	Zavoj	2.30	52	*e*Sn	Sb	03 43 16.1	-1.1
HAPS	Han Pijesak,BI	2.36	339	*e*Pn	Pn	03 42 46.9	+1.0
HAPS				*e*Sn	Sb	03 43 17.8	-1.2
HAPS	Han Pijesak,BI	2.36	339	⇑*i*Pn	Pn	03 42 47.0	+1.0
HAPS				*e*Sn	Sn	03 43 16.1	+0.9
IGT	Igoumenitsa	2.36	176	P	Pb	03 42 47.6	-2.0
VTS	Vitosha	2.41	71	⇑P	Pb	03 42 48.5	-1.9
VTS	Vitosha	2.41	71	*e*Pn	Pb	03 42 48.6	-1.9
VTS				*e*Sn	Sb	03 43 18.3	-2.1
ZAGS	Zajecar	2.46	38	*e*Pn	Pn	03 42 47.7	+0.5
ZAGS				*e*Sn	Sn	03 43 19.0	+1.5
LIT	Litokhoron	2.52	134	P	Pn	03 42 48.9	+0.8
LSTV	Lastovo	2.56	291	*i* Pn	Pb	03 42 52.2	-0.8
TEKS	Tekeris	2.69	351	*e*Sn	Sn	03 43 24.6	+1.3
TEKS	Tekeris	2.69	351	⇑*i*Pn	Pn	03 42 51.9	+1.4
TEKS				*e*Sn	Sn	03 43 23.8	+0.5
MAKA	Makarska	2.69	302	*e*Pn	Pb	03 42 54.0	-1.2
SRS	Serrai	2.71	106	P	Pn	03 42 51.3	+0.6
SRS	Serrai	2.71	106	*e*Pn	Pn	03 42 51.2	+0.6
RICI	Ricice	2.73	307	*e*Pn	Pb	03 42 56.7	+0.7
KUBS	Kucevo	2.75	23	*e*Pn	Pn	03 42 53.2	+1.9
NVR	Nevrokopi	2.84	100	P	Pn	03 42 53.1	+0.6
NVR				S	Sn	03 43 28.0	+1.0
	comp=N,58nm,0.8s						
BLJ	Bijeljina	2.96	348	*e*Pn	Pn	03 42 54.0	-0.1
MDVR	Moldovita	3.10	21	⇓P	Pn	03 42 56.1	-0.1
LKD2	Lefkada island	3.13	173	P	Pn	03 42 57.6	+1.2
DOB	Doboj	3.21	333	*e*Pn	Pn	03 42 58.5	+1.0
DOB				*e*Sn	Sn	03 43 35.5	-0.4
FRGS	Fruska Gora	3.27	356	⇑P	Pn	03 42 58.7	+0.3
FRGS	Fruska Gora	3.27	356	*e*Pn	Pn	03 42 58.8	+0.3
FRGS				*e*Sn	Sn	03 43 38.2	+0.6
FRGS	Fruska Gora	3.27	356	⇑*i*Pn	Pn	03 42 58.4	0.0
FRGS				*e*Sn	Sn	03 43 37.4	-0.2
MGRS	Mrkonjic Grad	3.37	319	*e*Pn	Pn	03 43 01.1	+1.3
MGRS				*e*Sn	Sn	03 43 39.4	-0.7
PLD	Plovdiv	3.41	85	*e*Pn	Pn	03 43 02.5	+2.3
KAVA	Kavala	3.41	104	P	Pn	03 43 01.2	+1.0
KIJV	Kijevo	3.46	309	*e*Pn	Pn	03 43 02.0	+1.0
SRE	Strehaia	3.56	38	⇓P	Pn	03 43 02.7	+0.3
BLY	Banja Luka	3.58	324	*e*Pn	Pn	03 43 05.2	+2.6
BLY				*e*Sn	Sn	03 43 48.0	+2.9
BLY	Banja Luka	3.58	324	⇑*i*Pn	Pn	03 43 03.7	+1.1
BLY				*e*Sn	Sn	03 43 45.9	+0.8
A050A	Klekovaca	3.70	316	*e*Pn	Pn	03 43 05.7	+1.4
A050A				*e*Sn	Sn	03 43 48.7	+0.6
ZIRJ	Zirje	3.75	299	*e*Pn	Pn	03 43 07.4	+2.4
MORI	Morici	3.81	303	*e*Pn	Pn	03 43 10.0	+4.3
BZS	Buzias	3.87	16	⇑P	Pn	03 43 06.5	-0.1
BZS	Buzias	3.87	16	*e*Pn	Pn	03 43 06.7	+0.1
BZS				*e*Sn	Sn	03 43 52.6	+0.3
A051A	Mrakovica	3.91	324	*e*Pn	Pn	03 43 08.1	+0.9
A051A				*e*Sn	Sn	03 43 52.9	-0.4
SURR	Surduc	4.12	20	⇑P	Pn	03 43 09.5	-0.5
UDBI	Udbina	4.14	311	*e*Pn	Pn	03 43 11.8	+1.4
DUGI	Dugi Otok	4.28	301	*e*Pn	Pn	03 43 15.4	+3.1
VIRC	Vir	4.43	304	*e*Pn	Pn	03 43 14.5	+0.2
PLIT	Plitvice	4.44	314	*e*Pn	Pn	03 43 15.4	+0.8
MORH	Mrgy, Hungar	4.45	346	⇑P	Pn	03 43 14.7	+0.1
MOSL	Moslavina	4.46	328	*e*Pn	Pn	03 43 15.3	+0.6
NVLJ	Novalja	4.69	306	*e*Pn	Pn	03 43 19.8	+2.0
RABC	Rab	4.84	308	*e*Pn	Pn	03 43 19.8	-0.1
VOIR		5.02	43	⇓P	Pn	03 43 24.2	+1.6
BOJS	Bojanci	5.06	317	*e*Pn	Pn	03 43 23.9	+1.0
BOJS				*e*Sn	Sn	03 44 20.3	-1.3
CRES	Cresnjev	5.19	321	*e*Pn	Pn	03 43 25.6	+0.8
DRGR		5.23	20	*e*Pn	Pn	03 43 25.2	-0.2
DRGR				*e*Sn	Sn	03 44 26.1	+0.1
RIY	Rijeka	5.35	312	*e*Pn	Pn	03 43 27.8	+0.9
SMRN	Sveta Marina	5.37	308	*e*Pn	Pn	03 43 26.9	-0.3
MLR	Muntele Rosu	5.53	48	⇓P	Pn	03 43 30.6	+1.0
CEY	Cerknica	5.64	315	*e*Pn	Pn	03 43 31.9	+0.9
CEY				*e*Sn	Sn	03 44 34.7	-1.4
SKDS	Skadanscina	5.75	311	*e*Pn	Pn	03 43 32.0	-0.5
SKDS				*e*Sn	Sn	03 44 36.0	-2.6
SOKA	Soboth	6.03	324	*e*Pn	Pn	03 43 38.2	+1.9
	comp=N,2.3nm,0.5s,SNR=9.6						
OBKA	Obir	6.12	321	*i* Pn	Pn	03 43 40.2	+2.6
	comp=N,1.3nm,0.2s,SNR=5.1						
OBKA	Obir	6.12	321	*e*Pn	Pn	03 43 37.7	+0.1
OBKA				*e*Sn	Sn	03 44 45.2	-2.7
ARSA	Arzberg	6.29	330	*e*Pn	Pn	03 43 41.9	+2.0
	comp=N,2.7nm,0.3s,SNR=4.2						
MYKA	Terra Mystica	6.65	318	*i* Pn	Pn	03 43 46.1	+1.2
	comp=N,1.8nm,0.3s						
VYHS	Vyhne	6.66	352	*e*PN	Pn	03 43 46.0	+1.0
VYHS				*e*SN	Sn	03 45 01.8	+0.6
CONA	Conrad Observa	6.75	335	*e*Pn	Pn	03 43 49.5	+3.2
	comp=N,0.5nm,0.2s						
MODS	Modra-Piesok	6.79	344	*e*PN	Pn	03 43 49.3	+2.6
MODS				*e*SN	Sn	03 45 04.0	-0.2
KBA	Koelnbreinsper	7.10	319	*e*Pn	Pn	03 43 52.7	+1.5
	comp=N,2.2nm,0.3s,SNR=9.3						
ABTA	Abfaltersbach	7.31	314	*e*Pn	Pn	03 43 54.6	+0.6
	comp=N,4.0nm,0.6s,SNR=6.4						
BIOA	Bad Ischl, Aus	7.41	324	*i* Pn	Pn	03 43 57.5	+2.1
	comp=N,2.5nm,0.3s						
CKRC	Cesky Krumlov	8.05	331	*e*PN	Pn	03 44 04.8	+0.8
CKRC				*e*SN	Sn	03 45 35.0	-0.3
WTTA	Wattenberg	8.10	314	*i* Pn	Pn	03 44 06.8	+1.9
	comp=N,2.0nm,0.4s						
WATA	Walderalm	8.18	315	*i* Pn	Pn	03 44 08.6	+2.7
	comp=N,3.5nm,0.5s						
SQTA	Sankt Quirin	8.31	313	*i* Pn	Pn	03 44 09.1	+1.5
	comp=N,1.2nm,0.2s						
MOTA	Moosalm	8.44	313	*e*Pn	Pn	03 44 10.2	+0.7
	comp=N,2.8nm,0.4s						
FETA	Feichten	8.46	310	*i* Pn	Pn	03 44 11.3	+1.6
	comp=N,0.5nm,0.4s						
KHC	Kasperske Hory	8.58	330	*e*PN	Pn	03 44 13.5	+2.2
KHC				*e*SN	Sn	03 45 48.0	-0.2
RETA	Reutte	8.71	313	*i* Pn	Pn	03 44 10.4	-2.7
	comp=N,0.8nm,0.3s						

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*SSNC **02** 03:52:18.8±1.3, 17°.73N×78°.55W, h0^{km}±27^{km}, MD3.4,*
ML2.6
*JSN **02** 03:52:18.0±1.3, 17°.69N×78°.69W, h77^{km}±36^{km}, MD3.7*
ISC 02 03:52:15.1±3.2**, 17°.5N**±0°.2×**78°.7W**±0°.1**, h10**^{km}**, n8, σ0**^{s}**86**/9**,**
1C-1D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCJ	Malvern	1.06	64	⇓*i*P	Pg	03 52 35.7	+0.2
MCJ				*i* S	Sg	03 52 49.9	+0.5
PCJ	Portland Cotta	1.48	79	*i* P	Pn	03 52 43.0	+1.1
BBJ	Bamboo Saint A	1.63	56	*i* P	Pn	03 52 43.4	-0.6
STH	Stony Hill	1.89	71	⇑*i*P	Pn	03 52 46.7	-0.8
HOJ	Hope	1.92	73	*i* P	Pn	03 52 46.8	-1.1
GWJ	Greenwich	1.96	72	*i* P	Pn	03 52 47.9	-0.7
GTBY	Guantanamo Bay	4.18	54	*e*P	Pn	03 53 18.6	-0.4
MGV	Manicaragua	4.78	345	*e*P	Pn	03 53 27.3	0.0

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*IDC **02** 03:54:49.4±1.6, 29°.79S×176°.71W, h0^{km}, mb4.1/3,*
mbtmp4.1/6, ML3.6/3, MS3.6/4, Error ellipse: s-maj=34.4km
s-min=31.7km az=161.0
*NEIC **02** 03:54:52.0±1.3, 29°.8S±0°.1×176°.8W±0°.1, h10^{km}±2^{km},*
mb4.2/9, Error ellipse: s-maj=23.7km s-min=15.3km
az=54.0
ISC 02 03:54:54.1±1.1**, 29°.83S**±0°.08×**176°.9W**±0°.1**, h24**^{km}**, n27,**
σ1^{s}**14**/28**, mb4.5**/5**, MS3.5**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.03	304	Pn	Pb	03 55 13.6	+0.4
	196nm,0.3s,baz=256,slow=23,SNR=5.7						
RAO				LR	LR	03 55 22.6	
	comp=Z,280nm,19.5s,baz=136,slow=28						
RAO				Sn	Sn	03 55 24.5	-2.2
	363nm,0.3s,baz=204,slow=23,SNR=9.2						
URZ	Urewera	9.75	209	Pn	Pn	03 57 13.2	+0.4
	0.3nm,0.3s,baz=179,slow=24,SNR=1.4						
URZ				Sn	Sn	03 59 00.3	-1.2
	1.4nm,0.3s,baz=266,slow=21,SNR=8.8 3.9nm,0.9s						
RTZ	Ruatahuna	10.11	208	Pn	Pn	03 57 17.4	-0.4
BKZ	Black Stump Fm	10.78	208	Pn	Pn	03 57 27.4	+0.5
MRNZ	Matariki Terra	14.26	213	Pn	Pn	03 58 14.6	+0.2
THZ	Tophouse	14.47	212	Pn	Pn	03 58 17.3	-0.1
AMCZ	Amberley	15.72	209	Pn	Pn	03 58 32.6	-1.3
DZM	Mont Dzumac	16.81	293	Pn	Pn	03 58 48.8	+0.7
	0.1nm,0.3s,baz=106,slow=16,SNR=2.0						
DZM				LR	LR	04 04 14.7	
	comp=Z,271nm,18.5s,baz=22,slow=33 5.2nm,0.9s						
RPZ	Rata Peaks	16.85	211	Pn	Pn	03 58 47.9	-0.4
	0.5nm,0.3s,baz=299,slow=14,SNR=1.9 2.8nm,0.5s						
RPZ	Rata Peaks	16.85	211	Pn	Pn	03 58 47.9	-0.4
RPZ				IAmb	IAmb	03 59 10.6	
	comp=Z,8.7nm,0.9s						
FOZ	Fox Glacier	17.29	214	Pn	Pn	03 58 53.3	-0.5
FOZ				IAmb	IAmb	03 59 07.5	
	comp=Z,24nm,1.3s						
PPT	Papeete	27.79	70	LR	LR	04 11 55.3	
	comp=Z,31nm,18.2s,baz=206,slow=37						
STKA	Stephens Creek	35.51	256	P	P	04 01 50.6	+1.5
	comp=Z,2.8nm,0.7s,baz=108,slow=11,SNR=6.7						
STKA				LR	LR	04 15 55.6	
	comp=Z,87nm,18.3s,baz=201,slow=36 comp=Z,2.8nm,0.7s						
STKA	Stephens Creek	35.51	256	P	P	04 01 51.8	+2.7
STKA				IAmb	IAmb	04 02 09.0	
	comp=Z,1.4nm,1.0s						
BBOO	Buckleboo	40.01	253	P	P	04 02 27.4	+0.2
ASAR	Alice Springs	44.06	266	P	P	04 03 00.1	-0.2
	comp=Z,0.8nm,0.6s,baz=102,slow=6.3,SNR=7.2						
ASAR				LR	LR	04 20 58.1	
	comp=Z,133nm,18.9s,baz=155,slow=35 comp=Z,0.8nm,0.6s						
WB2	Warramunga Arr	44.99	271	P	P	04 03 08.5	+0.7
WRA	Warramunga Arr	45.00	271	P	P	04 03 07.8	-0.1
	comp=Z,3.4nm,0.6s,baz=111,slow=7.2,SNR=30 comp=Z,3.4nm,0.6s						
WRA	Warramunga Arr	45.00	271	P	P	04 03 07.8	-0.1
WB0	Warramunga Arr	45.02	271	P	P	04 03 08.7	+0.6
WB0				IAmb	IAmb	04 03 09.3	
	comp=Z,3.9nm,0.6s						
FITZ	Fitzroy Crossi	53.29	269	P	P	04 04 11.7	+0.4
QSPA	South Pole Qui	60.28	180	P	P	04 05 00.7	+0.2

QSPA				IAmb	IAmb	04 05 21.9	
	comp=Z,3.0nm,0.8s						
FINES	FINESS Array B	144.91	341	PKP	PKPdf	04 14 27.8	-0.7
	comp=Z,3.6nm,0.6s,baz=62,slow=3.6,SNR=23						
NB2	NORSAR Subarra	148.31	352	PKP	PKiKP	04 14 38.0	-1.3
	comp=Z,0.8nm,0.7s,baz=11,slow=2.9						
NOA	NORSAR Array B	148.31	352	PKPbc	PKiKP	04 14 37.0	-2.3
	comp=Z,0.5nm,0.7s,baz=22,slow=4.7,SNR=2.4						
AKASG	Malin Array Be	151.39	324	PKPbc	PKPbc	04 14 44.2	-1.2
	comp=Z,2.2nm,0.6s,baz=44,slow=3.1,SNR=13						
CLL	Collm	157.29	344	*i* PKPab	PKPab	04 15 20.6	+1.9

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*THE **02** 04:23:32.6, 38°.23N×25°.54E, h9^{km}±2^{km}, ML2.5/5, Error ellipse: s-maj=2.3km s-min=1.0km az=35.0*

*ISK **02** 04:23:32.1, 38°.28N×25°.51E, h14^{km}, ML2.8/9*

*DDA **02** 04:23:33.5±0.0, 38°.27N×25°.65E, h9^{km}±3^{km}, ML2.7*

*ATH **02** 04:23:33.0, 38°.25N×25°.57E, h21^{km}±2^{km}, ML2.6/5, Error ellipse: s-maj=2.4km s-min=1.0km az=99.0*

ISC 02 04:23:32.2±1.1**, 38°.25N**±0°.02×**25°.53E**±0°.02**, h14**^{km}±9^{km}**, n50, σ0^{s}.70**/72**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSRA	Psara	0.29	5	P	Pb	04 23 39.6	+0.3
PSRA				S	Sb	04 23 43.9	-0.2
PSRA				AML	AML	04 23 44.6	
	comp=N,7864µm,0.2s						
PSRA				AML	AML	04 23 46.0	
	comp=E,4868µm,0.2s						
CHOS	Chios island	0.44	71	P	Pb	04 23 41.6	-0.2
CHOS				S	Sb	04 23 47.5	-0.7
	comp=E,2µm,0.3s						
CHOS	Chios island	0.44	71	Pg	Pb	04 23 41.6	-0.2
CHOS				Sg	Sb	04 23 47.6	-0.7
CHOS	Chios island	0.44	71	P	Pb	04 23 41.5	-0.2
CHOS				S	Sb	04 23 47.4	-0.8
CHOS				AML	AML	04 23 47.8	
	comp=N,2615µm,0.5s						
CHOS				AML	AML	04 23 49.7	
	comp=E,4077µm,0.2s						
TNSA	Tinos	0.76	202	P	Pg	04 23 47.6	+0.6
TNSA				S	Sg	04 23 57.7	+0.6
TNSA				AML	AML	04 23 59.1	
	comp=E,704µm,0.3s						
TNSA				AML	AML	04 24 00.2	
	comp=N,1023µm,0.1s						
ZEYE	Izmir, Urla-Ze	0.77	90	P	Pg	04 23 46.6	-0.5
KARB	zmir-Karabur	0.81	59	P	Pb	04 23 48.2	+0.1
KARB				S	Sg	04 23 57.6	-0.9
KARB				*i* AML	AML	04 24 01.0	
	comp=N,665nm,0.3s						
KARB				*i* AML	AML	04 24 02.0	
	comp=N,329nm,0.3s						
URLA	Izmir	0.85	82	Pg	Pb	04 23 49.1	+0.4
URLA	Izmir	0.85	82	P	Pg	04 23 48.7	+0.1
URLA				S	Sg	04 23 59.3	-0.5
URLA				*i* AML	AML	04 24 03.0	
	comp=N,263nm,0.6s						
SIGR	SIGRI	0.99	15	P	Pb	04 23 51.1	-0.2
SIGR				S	Sg	04 24 05.1	+0.6
	comp=N,215nm,0.5s						
SIGR	SIGRI	0.99	15	Pg	Pb	04 23 51.2	-0.1
SIGR				Sg	Sn	04 24 05.3	-0.3
SIGR	SIGRI	0.99	15	P	Pb	04 23 51.1	-0.2
SIGR				S	Sb	04 24 04.1	-0.1
SIGR				AML	AML	04 24 09.6	
	comp=E,460µm,0.4s						
SIGR				AML	AML	04 24 10.3	
	comp=N,437µm,0.2s						
DGB	zmir	1.08	100	P	Pb	04 23 52.6	-0.1
DGB				S	Sb	04 24 05.9	-0.8
PRK	Paraskevi	1.15	30	P	Pb	04 23 53.9	-0.1
PRK				S	Sn	04 24 10.8	+1.3
	comp=N,200nm,0.5s						
PRK	Paraskevi	1.15	30	P	Pb	04 23 53.0	-0.9
APE	Apeiranthos	1.18	180	P	Pn	04 23 53.2	-1.1
APE				S	Sb	04 24 09.9	+0.4
	comp=N,172nm,0.3s						
APE	Apeiranthos	1.18	180	P	Pn	04 23 53.2	-1.1
APE				S	Sb	04 24 07.8	-1.7
KYMI	Kymi, Euboea I	1.19	289	P	Pn	04 23 55.5	+1.1
KYMI	Kymi, Euboea I	1.19	289	P	Pn	04 23 53.4	-1.0
BLCB	Balcova	1.20	83	P	Pn	04 23 54.6	0.0
BLCB				S	Sg	04 24 11.3	+0.4
BLCB	Balcova	1.20	83	Pn	Pb	04 23 55.2	+0.5
EREA	Eretria	1.27	278	P	Pn	04 23 55.0	-0.6
DION	Dionisos Attik	1.27	263	P	Pn	04 23 55.9	+0.3
DION				S	Sb	04 24 13.2	+1.0
	comp=N,235nm,0.6s						
DION	Dionisos Attik	1.27	263	P	Pn	04 23 55.9	+0.3
DION				S	Sb	04 24 11.5	-0.7
PTL	Penteli	1.33	262	P	Pn	04 23 56.7	+0.3
PTL				S	Sn	04 24 13.5	-0.4
KOCA	Canakkale, Ayv	1.34	21	P	Pb	04 23 57.4	+0.2
DKL	Dikili	1.35	52	Pn	Pn	04 23 57.2	+0.5
AYVA	Ayvalik	1.39	40	P	Pb	04 23 58.5	+0.5
AYVA				S	Sg	04 24 16.7	-0.4
ATHU	Athens Univers	1.41	259	P	Pn	04 23 56.7	-0.8
ZEDA	zmir-Bergama	1.41	59	P	Pg	04 24 00.1	+0.8
ZEDA				S	Sg	04 24 16.7	-1.0
VLY	Voula,Athens	1.43	254	P	Pn	04 23 57.3	-0.4
VLY				AML	AML	04 24 18.8	
	comp=N,163µm,0.4s						
VLY				AML	AML	04 24 22.2	
	comp=E,244µm,0.6s						
ATH	Athens Observa	1.46	260	P	Pn	04 23 57.6	-0.5
BOZC	Bozcaada	1.64	14	Pn	Pn	04 24 01.1	+0.4
LIA	Limnos Island	1.67	351	P	Pn	04 24 00.5	-0.6
LIA	Limnos Island	1.67	351	P	Pn	04 24 00.4	-0.6
BAYC	CANAKKALE_Bayr	1.69	28	P	Pn	04 24 00.4	-0.9
EZN	Ezine	1.69	21	Pn	Pn	04 24 01.2	-0.2
BUHA	Balikesir, Bur	1.74	43	P	Pb	04 24 04.0	+0.1
VIL2	Platees	1.78	270	P	Pn	04 24 01.8	-0.9
MHLO	Agia Marina, M	1.79	210	P	Pn	04 24 03.3	+0.5
AYDN	Tasoluk	1.95	107	P	Pb	04 24 07.2	-0.3
STEP	BALIKESIR_Sava	2.05	56	P	Pb	04 24 10.3	+1.0
STEP				S	Sb	04 24 36.0	+1.5
STEP				*i* AML	AML	04 24 41.0	
	comp=E,60nm,0.5s						
STEP				*i* AML	AML	04 24 44.0	
	comp=E,52nm,0.7s						
DAT	Datca	2.23	132	Pn	Pn	04 24 09.9	+1.1
BALB	Balikesir	2.30	52	Pn	Pn	04 24 10.6	+0.9
BKES	Balkesir-Mer	2.39	51	P	Pg	04 24 17.4	-0.6
MANT	Manisa	2.39	83	P	Pg	04 24 18.2	+0.1
MANT				S	Sb	04 24 45.4	+0.8
AGG	Agios Georgios	2.62	288	Pn	Pn	04 24 14.7	+0.5
DURS	Dursunbey	2.67	59	P	Pb	04 24 18.7	-1.1
ALN	Alexandroupoli	2.68	8	P	Pn	04 24 14.4	-0.5
USAK	Uak-Merkez	2.78	79	P	Pb	04 24 22.9	+1.2

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*IDC **02** 04:24:08.9±1.2, 6°.87S×128°.78E, h0^{km}, mb4.0/4, mbtmp4.0/6, ML4.3/2, Error ellipse: s-maj=217.3km s-min=21.2km az=67.0*

ISC 02 04:24:24.4±0.9**, 7°.03S**±0°.09×**129°.3E**±0°.2**, h150**^{km}**, n13, σ1^{s}.75**/13**, mb3.8**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.17	116	P	Pn	04 25 03.2	+1.6
FAKI	Fak Fak	5.02	36	P	Pn	04 25 37.8	-0.2
MTN	Manton Dam	6.04	163	P	Pn	04 25 51.6	-0.1
KDU	Kakadu	6.42	151	P	Pn	04 25 55.9	-0.8
KNRA	Kununurra	8.61	184	P	Pn	04 26 25.2	-0.7
WRA	Warramunga Arr	13.73	160	Pn	Pn	04 27 29.3	-3.6
	1.2nm,0.3s,baz=336,slow=12,SNR=26						
WRA				Sn	Sn	04 29 52.5	-13
	1.3nm,0.3s,baz=334,slow=22,SNR=8.3						
	0.7nm,0.2s						
QIS	Mount Isa	16.73	144	P	P	04 28 08.9	-1.0
ASAR	Alice Springs	17.12	166	P	P	04 28 14.6	+0.6
	1.2nm,0.3s,baz=347,slow=11,SNR=77						
ASAR				S	S	04 31 12.3	-13
	0.8nm,0.6s,baz=335,slow=19,SNR=3.5						
	5.3nm,0.5s						
AS01	Alice Springs	17.13	165	P	P	04 28 14.5	+0.3
	13nm,0.6s						
STKA	Stephens Creek	27.24	157	P	P	04 29 57.8	+3.3
	1.3nm,0.5s,baz=335,slow=13,SNR=4.4						
	1.3nm,0.5s						
SONM	Songino Array	58.26	342	P	P	04 34 04.0	+0.8
	0.2nm,0.4s,baz=164,slow=6.5,SNR=5.3						
	0.2nm,0.4s						
MKAR	Makanchi Array	67.89	327	P	P	04 35 07.0	+0.3
	1.8nm,0.5s,baz=117,slow=8.1,SNR=25						
	1.8nm,0.5s						
ZALV	Zalesovo Beam	71.31	334	P	P	04 35 26.6	-0.9
	0.7nm,0.5s,baz=117,slow=5.0,SNR=4.0						
	0.7nm,0.5s						

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*MOS **02** 04:31:53.6±0.0, 41°.68N×47°.43E, h10^{km}, MPVA3.7*

*DRS **02** 04:31:55.8±0.0, 41°.59N×47°.34E, h16^{km}*

*TIF **02** 04:31:55.7, 41°.72N×47°.26E, h12^{km}±1^{km}*

ISC 02 04:31:55.1±1.1**, 41°.64N**±0°.03×**47°.34E**±0°.02**, h7**^{km}±10^{km}**, n24, σ0^{s}.99**/47**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKT	Akhty	0.33	118	*i* Pg	Pg	04 32 01.2	-0.5
AKT				*e*Sg	Sg	04 32 06.0	-0.1
KMKR	Kumukh	0.53	340	*e*Pg	Pb	04 32 06.0	-0.8
KMKR				*e*Sg	Sb	04 32 13.9	-0.7
URKR	Urkarakh	0.57	23	*e*Pg	Pg	04 32 05.9	-0.3
URKR				*e*Sg	Sb	04 32 14.8	-1.1
KSMR	Kasumkent	0.59	93	*e*Pg	Pg	04 32 06.5	-0.1
	2.0nm,0.4s						
KSMR				*e*Sg	Sg	04 32 14.8	+0.5
	314nm,0.2s						
GNBR	Gunib	0.80	340	*e*Pg	Pb	04 32 10.9	-0.5
	57nm,0.7s						
GNBR				*e*Sg	Sb	04 32 22.5	0.0
	324nm,0.2s						
DRN	Derbent	0.84	62	*e*Pg	Pb	04 32 11.8	-0.2
	46nm,0.6s						
DRN				*e*Sg	Sb	04 32 23.4	0.0
	75nm,0.1s						
LGD	Lagodekhi	0.84	284	P	Pg	04 32 11.1	-0.2
LGD				S	Sg	04 32 22.2	-0.1
DDFL	Dedoflistskaro	0.94	259	P	Pn	04 32 15.7	+1.0
DDFL				S	Sn	04 32 30.0	+1.6
ARKR	Arakani	1.00	345	*e*Pg	Pb	04 32 14.5	-0.3
	1.0nm,0.7s						
ARKR				*e*Sg	Sn	04 32 28.6	-1.3
	48nm,0.5s						
XNZR	Khunzakh	1.02	333	*e*Pg	Pb	04 32 14.9	-0.3
	27nm,0.4s						
XNZR				*e*Sg	Sn	04 32 29.3	-1.4
	68nm,0.5s						
UNCR	Uncukul	1.15	340	*e*Pg	Pn	04 32 17.5	-0.1
	41nm,0.4s						
UNCR				*e*Sg	Sn	04 32 34.2	+0.5
	200nm,0.5s						
BUJR	Buynaksk	1.20	352	*e*Pg	Pb	04 32 17.6	-0.5
	34nm,0.6s						
BUJR				*e*Sg	Sn	04 32 34.4	-0.5
	43nm,0.4s						
KRNR	Karanay	1.23	345	*e*Pg	Pg	04 32 18.6	-0.1
	14nm,0.3s						
KRNR				*e*Sg	Sn	04 32 36.1	+0.3
	35nm,0.5s						
BTLR	Botlikh	1.32	321	*e*Pg	Pb	04 32 20.1	-0.1
	28nm,0.3s						
BTLR				*e*Sg	Sg	04 32 38.5	+1.0
	28nm,0.5s						
DBC	Dubki	1.43	345	*e*Pg	Pg	04 32 22.4	-0.2
	24nm,0.1s						
DBC				*e*Sg	Sg	04 32 42.5	+1.3
	109nm,0.6s						
DLMR	Dylym	1.52	340	*e*Pg	Pb	04 32 23.5	-0.2
	75nm,0.1s						
DLMR				*e*Sg	Sg	04 32 44.5	+0.4
	109nm,0.6s						
DVE	Vedeno	1.60	326	*e*Pg	Pb	04 32 24.2	-0.7
DVE				*e*Sg	Sg	04 32 47.4	+1.0
SHTL	Shatili	1.92	303	P	Pb	04 32 29.3	-1.2
GROC	Groznyy	1.94	324	*e*Pg	Pb	04 32 30.4	-0.3
GROC				*e*Sg	Sg	04 32 57.9	+0.5
DMNI	Dmanisi	2.38	264	P	Pn	04 32 35.9	+1.2
DMNI				S	Sb	04 33 06.8	-1.2
TRLG	Trialeti	2.43	269	P	Pn	04 32 36.6	+1.2
TRLG				S	Sb	04 33 07.3	-2.1
LACR	Lac	2.55	299	*e*Pn	Pb	04 32 41.0	-0.3
LACR				*e*Sn	Sb	04 33 12.9	0.0
ZEI	Tsey	2.80	295	*e*Pn	Pn	04 32 42.9	+2.4
ZEI				*e*Sn	Sb	04 33 18.2	-1.9
AKH	Akhalkalaki	2.90	267	*e*Pn	Pn	04 32 43.4	+1.6
AKH				*e*Sn	Sb	04 33 21.0	-1.8

IDC 02 04:41:24.1±3.2**, 6°.72S**×**149°.84E, h0**^{km}**, mb3.5**/1**, mbtmp3.9**/3**, ML4.0**/1**, Error ellipse: s-maj=125.8km s-min=36.8km az=123.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.77	225	Pn	Pn	04 42 25.3	+1.8
	22nm,0.4s,baz=55,slow=7.9,SNR=15						
PMG				Sn	Sn	04 43 09.2	+0.6
	21nm,0.3s,baz=79,slow=15,SNR=3.6						
WRA	Warramunga Arr	19.98	227	P	P	04 45 58.0	-0.3
	0.5nm,0.3s,baz=53,slow=11,SNR=27						
	3.4nm,0.5s						
ASAR	Alice Springs	22.77	221	P	P	04 46 27.4	-1.0
	1.2nm,0.7s,baz=54,slow=9.3,SNR=12						
	1.2nm,0.7s						
TORD	Torodi Ar. Bea	148.00	284	PKPbc	PKPbc	05 01 12.3	-0.4
	1.0nm,0.8s,baz=70,slow=3.3,SNR=6.8						

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*BJI **02** 04:50:50.6±0.0, 5°.91S×147°.45E, h75^{km}, mb4.7/31, mB5.1/12*

*IDC **02** 04:50:51.9±1.6, 5°.80S×147°.17E, h62^{km}±14^{km}, mb4.2/17, mbtmp4.5/21, MS3.5/24, Error ellipse: s-maj=18.5km s-min=11.3km az=83.0*

*NEIC **02** 04:50:53.1±1.5, 5°.82S±0°.08×147°.13E±0°.10, h70^{km}±7^{km}, mb4.7/92, Error ellipse: s-maj=14.7km s-min=10.5km az=116.0*

*DJA **02** 04:50:53.9±0.3, 6°S±2°×14°7E±°, h70^{km}±4^{km}, M5.0/43, mB5.5/11, mb4.9/43, MLv5.1/5, Mw(mB)5.0/11*

ISC 02 04:50:53.9±0.3**, 5°.85S**±0°.04×**147°.10E**±0°.06**, h78**^{km}**, n220, σ1^{s}.15**/214**, mb4.7**/92**, 3D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.54	179	P	Pn	04 51 45.6	-0.9
	140nm,0.3s,baz=354,slow=8.0,SNR=64						
PMG				S	Sn	04 52 27.2	-0.1
	309nm,0.3s,baz=306,slow=4.7,SNR=9.8						
PMG				LR	LR	04 53 23.5	
	comp=Z,1µm,21.1s,baz=359,slow=42						
PMG	Port Moresby	3.54	179	P	Pn	04 51 45.8	-0.7
KRVT	Keravat (AS076	5.14	73	P	Pn	04 52 06.7	-1.7
	84nm,0.4s,baz=167,slow=3.9,SNR=9.5						
RABL	Rabaul	5.31	72	Pn	Pn	04 52 08.8	-1.9
RABL	Rabaul	5.31	72	P	Pn	04 52 12.7	+2.0
	737nm,0.6s						
MMPI	Merauke	7.15	248	P	Pn	04 52 35.7	-0.2
	22nm,0.9s,0.1nm						
GENI	Genyem	7.63	295	P	Pn	04 52 41.7	-0.7
	145nm,0.7s,1.0nm						
COEN	Coen	8.94	205	Pn	Pn	04 52 60.0	-0.3
COEN	Coen	8.94	205	P	Pn	04 53 00.5	+0.2
	45nm,0.4s						
SMPI	Sarmi	9.20	294	P	Pn	04 53 13.0	+9.1
BAKI	Biak	11.90	292	P	Pn	04 53 39.7	-1.1
	0.8nm,0.6s						
MTSU	Mount Surprise	12.51	192	P	Pn	04 53 49.3	+0.3
	7.4nm,0.9s						
HNR	Honiara	13.22	106	LR	LR	04 57 39.7	
	comp=Z,875nm,18.5s,baz=334,slow=31						
RKPI	Ransiki, Papua	13.59	288	P	Pn	04 54 03.3	-0.2
	42nm,0.6s,7µm						
CTA	Charters Tower	14.18	183	P	Pn	04 54 11.8	+0.7
	5.0nm,0.5s,baz=359,slow=14,SNR=9.7						
CTA				S	Sn	04 56 48.0	+0.9
	4.6nm,0.6s,baz=104,slow=18,SNR=2.2						
CTA				LR	LR	04 59 54.3	
	comp=Z,155nm,19.1s,baz=30,slow=38						
CTAO	Charters Tower	14.18	183	Pn	Pn	04 54 11.5	+0.4
FAKI	Fak Fak	15.09	280		Pn	04 54 24.6	+1.8
FAKI				IAmb	IAmb	04 54 28.9	
	comp=Z,63nm,1.4s						
FAKI	Fak Fak	15.09	280	P	Pn	04 54 22.6	-0.3
	comp=Z,32nm,1.2s						
SAUI	Saumlaki	15.82	261	P	Pn	04 54 32.5	+0.3
	comp=Z,262nm,1.1s,comp=Z,14µm						
KDU	Kakadu	15.95	244	P	Pn	04 54 33.8	+0.1
	comp=Z,36nm,1.1s						
SWI	Sorong	16.56	287	P	Pn	04 54 40.2	-1.3
	comp=Z,52nm,0.8s						
BNDI	Bandanaira	17.17	274	P	Pn	04 54 49.6	+0.6
	comp=Z,298nm,0.8s						
MTN	Manton Dam	17.21	245		Pn	04 54 48.3	-1.2
MTN	Manton Dam	17.21	245	P	Pn	04 54 50.4	+1.0
	comp=Z,18nm,0.7s						
MSAI	Masohi	18.28	277	P	P	04 54 59.1	-2.6
WB0	Warramunga Arr	18.55	221	P	P	04 55 04.1	-0.5
WB0				IAmb	IAmb	04 55 11.3	
	comp=Z,27nm,0.7s						
WR0	Warramunga Arr	18.59	220	P	P	04 55 05.0	-0.1
WR0				IAmb	IAmb	04 55 12.0	
	comp=Z,30nm,0.8s						
WRAB	Tennant Creek	18.70	220	P	P	04 55 07.4	+1.2
WRAB				IAmb	IAmb	04 55 13.0	
	comp=Z,40nm,0.7s						
WRAB	Tennant Creek	18.70	220	P	P	04 55 07.3	+1.1
	comp=Z,57nm,0.8s						
WB2	Warramunga Arr	18.70	220	P	P	04 55 06.7	+0.4
WB2				IAmb	IAmb	04 55 13.1	
	comp=Z,39nm,0.7s						
WRA	Warramunga Arr	18.71	220	P	P	04 55 06.4	0.0
	comp=Z,15nm,0.9s,baz=48,slow=13,SNR=68						
WRA				S	S	04 58 29.2	-6.0
	comp=Z,3.3nm,0.9s,baz=42,slow=22,SNR=4.9						
WRA				PcP	PcP	04 59 31.9	+0.2
	comp=Z,2.7nm,0.7s,baz=25,slow=2.1,SNR=6.3						
WRA				ScP	ScP	05 03 03.4	+2.8
	comp=Z,2.2nm,1.0s,baz=44,slow=2.4,SNR=6.2						
WRA				LR	LR	05 03 28.1	
	comp=Z,383nm,19.8s,baz=52,slow=40						
WRA	Warramunga Arr	18.71	220	P	P	04 55 05.4	-0.9
AAI	Ambon	18.96	276	P	P	04 55 08.1	-1.0
	comp=Z,147nm,0.8s						
GUMO	Guam	19.44	353	LR	LR	05 02 47.1	
	comp=Z,107nm,19.1s,baz=134,slow=37						
EIDS	Eidsvold	19.78	169	P	P	04 55 17.4	-0.5
EIDS	Eidsvold	19.78	169	P	P	04 55 19.1	+1.1
	comp=Z,22nm,1.1s						
KNRA	Kununurra	20.47	240	P	P	04 55 25.2	-0.3
KNRA				IAmb	IAmb	04 55 30.8	
	comp=Z,30nm,0.6s						
KNRA	Kununurra	20.47	240	P	P	04 55 26.1	+0.6
	comp=Z,42nm,1.0s						
RMQ	Roma	20.58	176	P	Pn	04 55 28.9	-0.7
	comp=Z,24nm,0.6s						
TNTI	Ternate	20.77	288	P	P	04 55 29.9	+1.1
	comp=Z,36nm,1.1s						
QLP	Quilpie	20.80	187	P	P	04 55 31.0	+2.0
	comp=Z,68nm,1.1s						
SANI	Sanana	21.39	279	P	P	04 55 36.7	+1.3
	comp=Z,35nm,1.1s						
SANI	Sanana	21.39	279	P	P	04 55 36.6	+1.2
	comp=Z,34nm,1.0s						
AS01	Alice Springs	21.77	214	P	P	04 55 41.0	+1.6
	comp=Z,27nm,0.8s						
AS31	Alice Springs	21.80	214	P	P	04 55 40.0	+0.3
ASAR	Alice Springs	21.80	214	P	P	04 55 40.0	+0.3
	comp=Z,7.3nm,0.3s,baz=55,slow=8.3,SNR=77						
ASAR				PcP	PcP	04 59 38.0	+0.6
	comp=Z,4.2nm,0.8s,baz=35,slow=2.7,SNR=9.0						
ASAR				ScP	ScP	05 03 09.9	+2.0
	comp=Z,0.9nm,1.0s,baz=29,slow=2.9,SNR=3.2						
ASAR				LR	LR	05 04 26.8	
	comp=Z,198nm,19.6s,baz=17,slow=37						
	comp=Z,7.3nm,0.3s						
ASAR	Alice Springs	21.80	214	P	P	04 55 38.9	-0.8
INKA	Innaminka	22.59	195	P	P	04 55 50.2	+2.0
	comp=Z,66nm,0.9s						
SOEI	Soe	22.95	259	P	P	04 55 52.2	+0.2
SOEI	Soe	22.95	259	P	P	04 55 53.3	+1.2
	comp=Z,70nm,0.9s						
SOEI	Soe	22.95	259	P	P	04 55 52.8	+0.7
	comp=Z,70nm,0.8s						
FITZ	Fitzroy Crossi	24.23	238	P	P	04 56 04.5	+0.9
OOD	Oodnadatta	24.37	205	P	P	04 56 05.9	+1.1
	comp=Z,27nm,1.3s						
DZM	Mont Dzumac	24.70	133	P	P	04 56 06.9	-1.1
	comp=Z,6.4nm,0.6s,baz=328,slow=9.5,SNR=8.8						
	comp=Z,6.4nm,0.6s						
DZM	Mont Dzumac	24.70	133	P	P	04 56 06.6	-1.4
ARMA	Armidale	24.81	171	P	P	04 56 09.2	+0.3
ARMA	Armidale	24.81	171	P	P	04 56 09.5	+0.6
	comp=Z,20nm,1.2s						
GTOI	Gorontalo	24.90	284	P	P	04 56 11.4	+1.6
	comp=Z,8.6nm,0.6s						
CMSA	Cobar Meteorol	25.59	183	P	P	04 56 17.6	+1.7
	comp=Z,19nm,1.2s						
LCRK	Leigh Creek	25.86	198	P	P	04 56 19.2	+0.9
	comp=Z,80nm,0.9s						
WRKA	Warakurna	26.25	221	P	P	04 56 22.0	0.0
	comp=Z,26nm,2.3s						
STKA	Stephens Creek	26.40	191	P	P	04 56 22.9	-0.4
	comp=Z,3.0nm,0.3s,baz=7.8,slow=11,SNR=6.3						
STKA				LR	LR	05 07 13.3	
	comp=Z,139nm,21.2s,baz=30,slow=37						
	comp=Z,3.0nm,0.3s						
STKA	Stephens Creek	26.40	191	P	P	04 56 22.6	-0.6
STKA	Stephens Creek	26.40	191	P	P	04 56 25.6	+2.4
	comp=Z,1.8nm,1.4s						
BSSI	Bau Bau, Buton	26.46	268	P	P	04 56 23.0	-1.0
	comp=Z,56nm,1.2s						
BASI	Baing, Sumba	26.61	259	P	P	04 56 26.4	+1.1
	comp=Z,193nm,1.1s						
BKSI	Bulukumba	26.85	270	P	P	04 56 28.3	+0.8
	comp=Z,19nm,1.0s						
MULG	Mulgathing	27.23	205	P	P	04 56 31.0	+0.3
	comp=Z,16nm,1.2s						
KAPI	Kappang	27.23	270	P	P	04 56 30.8	-0.1
	comp=Z,10nm,0.8s,baz=84,slow=12,SNR=4.2						
KAPI				LR	LR	05 10 43.0	
	comp=Z,39nm,18.5s,baz=90,slow=44						
	comp=Z,10nm,0.8s						
SPSI	Sidrap Palu	27.29	273	P	P	04 56 32.6	+1.2
	comp=Z,15nm,1.1s						
BBOO	Buckleboo	28.73	200	P	P	04 56 44.0	-0.1
BBOO				IAmb	IAmb	04 56 48.5	
	comp=Z,13nm,0.9s						
FORT	Forrest	30.58	213	P	P	04 57 01.2	+0.8
PSA00	Pilbara Seismi	30.66	237	P	P	04 57 02.0	+0.8
PSA00				IAmb	IAmb	04 57 02.8	
	comp=Z,14nm,0.8s						
PSA00	Pilbara Seismi	30.66	237	P	P	04 56 60.0	-1.3
PSA00				IAmb	IAmb	04 57 02.8	
	comp=Z,9.1nm,0.8s						
H11S3	WAKE ISLAND Hy	30.96	38	T	T	05 29 20.4	
	baz=220,slow=74,SNR=9.0						
H11S2	WAKE ISLAND Hy	30.96	38	T	T	05 29 20.8	
	baz=220,slow=74,SNR=7.6						
H11S1	WAKE ISLAND Hy	30.98	38	T	T	05 29 22.6	
	baz=220,slow=74,SNR=8.9						
TOO	Toolangi	31.61	182	P	P	04 57 08.7	-0.7
TOO				IAmb	IAmb	04 57 11.1	
	comp=Z,13nm,1.0s						
TOO	Toolangi	31.61	182	P	P	04 57 11.0	+1.5
BRAT	Ballarat	31.69	185	P	P	04 57 12.5	+2.5
	comp=Z,10nm,0.9s						
H11N1	WAKE ISLAND Hy	32.01	37	T	T	05 31 16.6	
	baz=219,slow=76,SNR=4.3						
H11N3	WAKE ISLAND Hy	32.02	37	T	T	05 31 15.1	
	baz=219,slow=76,SNR=3.2						
H11N2	WAKE ISLAND Hy	32.03	37	T	T	05 31 19.2	
	baz=219,slow=76,SNR=5.8						
MSVF	Nonsavu	32.46	114	LR	LR	05 09 52.3	
	comp=Z,66nm,19.0s,baz=121,slow=35						
JAGI	Jajag, Banyuwa	32.78	263	P	P	04 57 18.3	-1.7
JAGI	Jajag, Banyuwa	32.78	263	P	P	04 57 19.2	-0.8
	comp=Z,21nm,1.4s						
KMBL	Kambalda	34.68	220	P	P	04 57 37.2	+0.9
	comp=Z,64nm,0.9s						
GIRL	Giralia	35.83	239	P	P	04 57 45.5	-0.7
UGM	Wanagama	36.36	265	P	P	04 57 51.0	0.0
MORW	Morawa	37.34	228	P	P	04 57 58.9	-0.2
MORW				IAmb	IAmb	04 58 00.3	
	comp=Z,11nm,0.9s						
MORW	Morawa	37.34	228	P	P	04 57 59.8	+0.7
	comp=Z,15nm,1.3s						
KLBR	Kellerberrin	37.55	223	P	P	04 58 01.0	+0.2
	comp=Z,82nm,0.8s						
KPJI	Karang Pucung	37.94	266	P	P	04 58 03.4	-0.8
	comp=Z,31nm,0.8s						
CMJI	Cimerak	38.41	265	P	P	04 58 07.5	-0.8
	comp=Z,62nm,0.9s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JCJI	**Jatiwangi**	**38.60**	**267**	P	**P**	**04 58 10.8**	**+1.0**
	comp=Z,142nm,0.4s						
MUN	**Mundaring**	**38.84**	**224**	P	**P**	**04 58 12.8**	**+1.2**
	comp=Z,23nm,0.9s						
BBJI	**Bungbulang**	**39.21**	**265**	P	**P**	**04 58 15.0**	**0.0**
	comp=Z,86nm,0.7s						
TPI	**Tanjungpandan**	**39.45**	**273**	P	**P**	**04 58 17.7**	**+0.8**
	comp=Z,16nm,1.0s						
CNJI	**Cibinong**	**39.72**	**266**	P	**P**	**04 58 18.9**	**-0.3**
	comp=Z,59nm,1.0s,comp=Z,697nm						
CGJI	**Cibinong**	**41.16**	**267**	P	**P**	**04 58 29.1**	**-1.9**
	comp=Z,25nm,0.9s						
MRNZ	**Matariki Terra**	**42.16**	**151**	P	**P**	**04 58 38.5**	**-0.3**
URZ	**Urewera**	**42.22**	**144**	LR	LR	05 15 05.4	
	comp=Z,120nm,18.5s,baz=38,slow=34						
JGF	**Kuroka**	**42.23**	**348**	P	**P**	**04 58 38.6**	**-0.9**
JGF				IAmb	IAmb	04 58 47.2	
	comp=Z,14nm,0.9s						
JWT	**Wachi**	**42.37**	**346**	P	**P**	**04 58 40.8**	**+0.3**
RTZ	**Ruatahuna**	**42.38**	**145**	P	**P**	**04 58 41.0**	**+0.2**
RTZ				IAmb	IAmb	04 58 42.7	
	comp=Z,10.0nm,1.0s						
KASI	**Kota Agung**	**42.38**	**268**	P	**P**	**04 58 40.0**	**-1.1**
	comp=Z,28nm,0.8s						
BKZ	**Black Stump Fm**	**42.48**	**146**	P	**P**	**04 58 42.2**	**+0.7**
BKZ				IAmb	IAmb	04 59 13.6	
	comp=Z,17nm,1.3s						
JCZ	**Jackson Bay**	**42.57**	**157**	P	**P**	**04 58 43.7**	**+1.5**
	comp=Z,27nm,0.9s						
MDSI	**Maura Dua**	**42.76**	**270**	P	**P**	**04 58 44.5**	**+0.4**
	comp=Z,21nm,1.1s						
TUWZ	**Tuamarina**	**42.76**	**150**	P	**P**	**04 58 42.9**	**-0.8**
TCW	**Tory Channel**	**42.76**	**149**	P	**P**	**04 58 43.5**	**-0.2**
BSWZ	**Blackbirch Sta**	**42.94**	**150**	P	**P**	**04 58 44.8**	**-0.4**
MJAR	**Matsushiro Arr**	**42.98**	**349**	P	**P**	**04 58 44.4**	**-1.1**
	comp=Z,6.6nm,0.9s,baz=178,slow=7.8,SNR=11						
MJAR				ScP	**ScP**	**05 04 20.9**	**+1.8**
	comp=Z,0.7nm,0.3s,baz=164,slow=4.5,SNR=4.5						
MJAR				LR	LR	05 16 56.2	
	comp=Z,28nm,18.2s,baz=166,slow=36						
	comp=Z,6.6nm,0.9s						
MAJO	**Matsushiro**	**42.98**	**349**	P	**P**	**04 58 45.0**	**-0.5**
MAJO				IAmb	IAmb	04 58 46.8	
	comp=Z,13nm,0.9s						
MJB9	**Matsu-Tunnel**	**42.99**	**349**	P	**P**	**04 58 46.0**	**+0.5**
MJB9				IAmb	IAmb	04 58 47.8	
	comp=Z,13nm,0.9s						
LTZ	**Lake Taylor**	**43.00**	**153**	P	**P**	**04 58 45.7**	**+0.1**
LTZ				IAmb	IAmb	04 59 16.2	
	comp=Z,18nm,1.4s						
MRZ	**Mangatainoka R**	**43.03**	**148**	P	**P**	**04 58 45.7**	**-0.3**
MRZ				IAmb	IAmb	04 58 46.4	
	comp=Z,17nm,1.0s						
RPZ	**Rata Peaks**	**43.20**	**155**	P	**P**	**04 58 47.0**	**-0.3**
	comp=Z,9.5nm,0.8s,baz=1.8,slow=4.6,SNR=3.3						
RPZ				LR	LR	05 17 00.6	
	comp=Z,60nm,20.3s,baz=308,slow=36						
	comp=Z,9.5nm,0.8s						
KHZ	**Kahutara**	**43.31**	**151**	P	**P**	**04 58 46.6**	**-1.5**
KHZ				IAmb	IAmb	04 59 16.2	
	comp=Z,21nm,1.2s						
LBZ	**Lake Benmore**	**43.39**	**156**	P	**P**	**04 58 48.7**	**0.0**
LBZ				IAmb	IAmb	04 58 56.8	
	comp=Z,15nm,1.2s						
BFZ	**Birch Farm**	**43.41**	**147**	P	**P**	**04 58 48.2**	**-0.7**
PLWZ	**Palliser**	**43.52**	**149**	P	**P**	**04 58 49.3**	**-0.6**
MNAI	**Manna**	**43.98**	**270**	P	**P**	**04 58 52.8**	**-1.1**
JSD	**Sado**	**44.43**	**350**	P	**P**	**04 58 57.1**	**+0.1**
JSD				IAmb	IAmb	04 58 59.3	
	comp=Z,13nm,0.8s						
NJ2	**Nanjing**	**46.31**	**326**	*e*P	**P**	**04 59 15.1**	**+3.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSRS	**Korea Array**	**46.65**	**339**	P	**P**	**04 59 14.3**	**-0.3**
	comp=Z,3.8nm,0.8s,baz=154,slow=8.3,SNR=6.3						
KSRS				LR	LR	05 15 41.8	
	comp=Z,43nm,21.7s,baz=160,slow=32						
	comp=Z,3.8nm,0.8s						
JTM	**Tenmabayashi**	**46.74**	**354**	P	**P**	**04 59 15.8**	**+0.6**
ASAJ	**Asahikawa**	**49.90**	**356**	LR	LR	05 17 37.2	
	comp=Z,25nm,21.1s,baz=264,slow=32						
USRK	**Ussuriysk Ar.**	**51.65**	**346**	P	**P**	**04 59 53.3**	**+0.6**
	comp=Z,3.9nm,0.6s,baz=149,slow=7.0,SNR=6.5						
USRK				LR	LR	05 19 44.1	
	comp=Z,29nm,20.6s,baz=170,slow=34						
	comp=Z,3.9nm,0.6s						
HNS	**HongShan**	**52.57**	**328**	⇓P	**P**	**04 59 59.9**	**+0.3**
HNS				pmax	pmax		
	comp=Z,21nm,0.9s						
CMAR	**Chiang Mai Arr**	**53.26**	**298**	P	**P**	**05 00 05.9**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=113,slow=6.9,SNR=1.2						
	comp=Z,0.9nm,0.3s						
XAN	**Xi'an**	**53.63**	**320**	⇓P	**P**	**05 00 07.4**	**-0.2**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
PZH	**PanZhiHua**	**54.44**	**308**	P	**P**	**05 00 15.5**	**+1.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,270nm,5.5s						
HHC	**Hu-ho-hao-te**	**56.76**	**328**	*e*P	**P**	**05 00 31.2**	**+1.2**
HHC				pmax	pmax		
	comp=Z,18nm,0.6s						
HHC				pmax	pmax		
	comp=Z,310nm,5.0s						
LZH	**Lanzhou**	**58.16**	**319**	*e*P	**P**	**05 00 40.8**	**+0.7**
LZH				pP	pP	05 00 59.2	-0.2
LZH				sP	sP	05 01 11.0	+3.0
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
PEA0B	**Petropavlovsk-**	**59.42**	**7**	P	**P**	**05 00 49.1**	**+0.9**
PETK	**Petropavlovsk-**	**59.42**	**7**	P	**P**	**05 00 48.9**	**+0.7**
	comp=Z,6.0nm,0.8s,baz=188,slow=9.0,SNR=5.5						
PETK				LR	LR	05 22 45.2	
	comp=Z,45nm,21.7s,baz=169,slow=32						
	comp=Z,6.0nm,0.8s						
PETK	**Petropavlovsk-**	**59.42**	**7**	P	**P**	**05 00 49.6**	**+1.4**
GTA	**Gaotai**	**62.69**	**320**	*e*P	**P**	**05 01 13.3**	**+2.5**
GTA				pP	pP	05 01 33.8	+3.4
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ULN	**Ulaanbaatar**	**64.02**	**331**	P	**P**	**05 01 19.2**	**-0.3**
ULN				IAmb	IAmb	05 01 21.0	
	comp=Z,5.6nm,0.8s						
SONM	**Songino Array**	**64.32**	**331**	P	**P**	**05 01 22.0**	**+0.6**
	comp=Z,6.2nm,1.0s,baz=151,slow=6.0,SNR=19						
	comp=Z,6.2nm,1.0s						
SONM	**Songino Array**	**64.32**	**331**	P	**P**	**05 01 21.5**	**+0.1**
SONM				IAmb	IAmb	05 01 24.2	
	comp=Z,7.3nm,1.2s						
CASY	**Casey**	**65.43**	**195**	P	**P**	**05 01 28.3**	**+0.2**
VNDA	**Vanda**	**72.06**	**177**	P	**P**	**05 02 09.2**	**0.0**
	comp=Z,6.3nm,0.7s,baz=333,slow=6.5,SNR=19						
	comp=Z,6.3nm,0.7s						
VNDA	**Vanda**	**72.06**	**177**	P	**P**	**05 02 09.7**	**+0.6**
VNDA				IAmb	IAmb	05 02 10.6	
	comp=Z,8.0nm,0.8s						
WMQ	**Urumqi**	**72.74**	**319**	*e*P	**P**	**05 02 15.4**	**+1.5**
BILL	**Bilibino**	**74.95**	**7**	P	**P**	**05 02 26.3**	**+0.1**
MK31	**Makanchi Array**	**77.44**	**320**	P	**P**	**05 02 39.8**	**-1.1**
MKAR	**Makanchi Array**	**77.44**	**320**	P	**P**	**05 02 40.3**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=96,slow=8.1,SNR=18						
	comp=Z,0.6nm,0.4s						
MKAR	**Makanchi Array**	**77.44**	**320**	P	**P**	**05 02 39.6**	**-1.2**
MAKZ	**Makanchi**	**77.65**	**320**	P	**P**	**05 02 40.6**	**-1.4**
TIXI	**Tiksi**	**78.27**	**354**	P	**P**	**05 02 43.8**	**-1.0**
TNA	**Tin City**	**78.42**	**17**	P	**P**	**05 02 44.4**	**-1.3**
ANM	**Nome**	**78.53**	**19**	P	**P**	**05 02 46.8**	**+0.3**
ZAA0	**Zalesovo Array**	**78.94**	**328**	P	**P**	**05 02 46.8**	**-2.1**
ZALV	**Zalesovo Beam**	**78.94**	**328**	P	**P**	**05 02 46.9**	**-2.0**
	comp=Z,2.9nm,0.7s,baz=120,slow=5.9,SNR=11						
ZALV				LR	LR	05 38 21.5	
	comp=Z,32nm,19.9s,baz=90,slow=36						
	comp=Z,2.9nm,0.7s						
KSH	**Kashi**	**79.35**	**312**	P	**P**	**05 02 53.3**	**+1.6**
M19K	**Big River Lodg**	**80.98**	**24**	P	**P**	**05 02 59.4**	**-0.4**
M19K				IAmb	IAmb	05 03 19.0	
	comp=Z,16nm,1.4s						
KURK	**Kurchatov**	**81.15**	**323**	P	**P**	**05 02 60.0**	**-0.9**
CNPM	**China Poot**	**81.17**	**27**	P	**P**	**05 03 01.2**	**+0.3**
AAK	**Ala-Archa**	**81.31**	**315**	LR	LR	05 39 30.9	
	comp=Z,11nm,21.0s,baz=24,slow=36						
M20K	**Styx River**	**81.48**	**24**	P	**P**	**05 03 02.7**	**+0.2**
M20K				IAmb	IAmb	05 03 23.5	
	comp=Z,21nm,1.4s						
RDOG	**Red Dog Mine**	**81.57**	**17**	P	**P**	**05 03 02.1**	**-0.6**
PPLA	**Purkeypile**	**82.36**	**24**	P	**P**	**05 03 06.5**	**-0.7**
PPLA				IAmb	IAmb	05 03 33.3	
	comp=Z,20nm,1.5s						
RC01	**Rabbit Creek A**	**82.54**	**26**	P	**P**	**05 03 07.1**	**-0.9**
CAST	**Castle Rocks**	**82.66**	**23**	P	**P**	**05 03 08.1**	**-0.5**
KTH	**Kantishna Hill**	**83.18**	**23**	P	**P**	**05 03 10.1**	**-1.2**
KTH				IAmb	IAmb	05 03 40.5	
	comp=Z,17nm,1.5s						
IMAR	**Indian Mountai**	**83.31**	**21**	P	**P**	**05 03 11.8**	**-0.1**
SML	**Sawmill**	**83.47**	**26**	P	**P**	**05 03 12.0**	**-0.8**
H21K	**Melozitna Rive**	**83.48**	**21**	P	**P**	**05 03 12.8**	**0.0**
I21K	**Tanana**	**83.55**	**22**	P	**P**	**05 03 12.4**	**-0.6**
I21K				IAmb	IAmb	05 03 38.5	
	comp=Z,11nm,1.4s						
RND	**Reindeer**	**83.94**	**24**	P	**P**	**05 03 14.8**	**-0.4**
RND				IAmb	IAmb	05 03 43.2	
	comp=Z,4.9nm,0.8s						
MLY	**Manley**	**83.94**	**22**	P	**P**	**05 03 14.8**	**-0.3**
MLY				IAmb	IAmb	05 03 36.1	
	comp=Z,7.3nm,1.4s						
MCK	**McKinley**	**84.05**	**24**	P	**P**	**05 03 14.8**	**-1.0**
MCK				IAmb	IAmb	05 03 17.4	
	comp=Z,7.8nm,1.0s						
QSPA	**South Pole Qui**	**84.12**	**180**	LR	LR	05 40 07.9	
	comp=Z,23nm,18.2s,baz=314,slow=35						
QSPA	**South Pole Qui**	**84.12**	**180**	P	**P**	**05 03 16.1**	**-0.1**
KKAR	**Karatay Array**	**84.25**	**314**	P	**P**	**05 03 17.5**	**+0.3**
NEA2	**Nenana**	**84.38**	**23**	P	**P**	**05 03 16.0**	**-1.3**
NEA2				IAmb	IAmb	05 03 19.1	
	comp=Z,11nm,1.4s						
I23K	**Minto, Yukon-K**	**84.52**	**22**	P	**P**	**05 03 17.9**	**-0.1**
M24K	**Tolsona, Glenn**	**84.52**	**26**	P	**P**	**05 03 16.5**	**-1.7**
WRH	**Wood River Hil**	**84.71**	**23**	P	**P**	**05 03 17.2**	**-1.8**
WRH				IAmb	IAmb	05 03 38.8	
	comp=Z,11nm,1.3s						
H23K	**Yukon River**	**84.75**	**22**	P	**P**	**05 03 19.2**	**0.0**
H23K				IAmb	IAmb	05 03 22.1	
	comp=Z,3.1nm,0.6s						
CCB	**Clear Creek Bu**	**84.89**	**23**	P	**P**	**05 03 18.4**	**-1.4**
HDA	**Harding Lake**	**85.13**	**23**	P	**P**	**05 03 20.1**	**-1.0**
HDA				IAmb	IAmb	05 03 54.3	
	comp=Z,13nm,1.4s						
NRIK	**Noril'sk**	**85.16**	**342**	P	**P**	**05 03 20.5**	**-0.7**
	comp=Z,3.0nm,0.5s,baz=112,slow=5.3,SNR=5.7						
	comp=Z,3.0nm,0.5s						
IL31		**85.30**	**23**	P	**P**	**05 03 20.0**	**-1.9**
IL31				IAmb	IAmb	05 03 21.4	
	comp=Z,5.5nm,0.8s						
ILAR	**Eielson Array**	**85.30**	**23**	P	**P**	**05 03 19.9**	**-2.1**
	comp=Z,3.8nm,0.7s,baz=252,slow=5.0,SNR=58						
ILAR				LR	LR	05 37 19.8	
	comp=Z,28nm,20.1s,baz=210,slow=33						
	comp=Z,3.8nm,0.7s						
H24K	**Noodor Dome**	**85.37**	**22**	P	**P**	**05 03 21.9**	**-0.4**
RIDG	**Independent Ri**	**85.71**	**24**	P	**P**	**05 03 22.9**	**-1.3**
RIDG				IAmb	IAmb	05 03 24.9	
	comp=Z,12nm,1.3s						
DOT	**Dot Lake**	**86.00**	**25**	P	**P**	**05 03 24.7**	**-0.8**
DOT				IAmb	IAmb	05 03 27.1	
	comp=Z,14nm,1.4s						
TOLK	**Toolik Lake Re**	**86.02**	**19**	P	**P**	**05 03 25.6**	**+0.1**
TOLK				IAmb	IAmb	05 03 32.0	
	comp=Z,6.0nm,1.2s						
BARN	**Barnard Glacie**	**86.15**	**27**	P	**P**	**05 03 26.4**	**-0.1**
SCRK	**Sand Creek**	**86.16**	**24**	P	**P**	**05 03 25.0**	**-1.4**
SCRK				IAmb	IAmb	05 03 27.6	
	comp=Z,7.8nm,1.4s						
M27K	**Edge Creek, AK**	**86.48**	**26**	P	**P**	**05 03 27.2**	**-0.8**
J26L	**Joseph Creek**	**86.52**	**24**	P	**P**	**05 03 27.6**	**-0.5**
J26L				IAmb	IAmb	05 03 29.8	
	comp=Z,10nm,1.4s						
FYU	**Fort Yukon**	**86.65**	**22**	P	**P**	**05 03 28.4**	**-0.2**
FYU				IAmb	IAmb	05 03 51.2	
	comp=Z,10nm,1.2s						
L27K	**Beaver Creek,**	**86.74**	**26**	P	**P**	**05 03 29.0**	**-0.1**
L27K				IAmb	IAmb	05 03 31.2	
	comp=Z,8.0nm,1.2s						
BCPM	**Bancas Point**	**86.75**	**29**	P	**P**	**05 03 28.8**	**-0.5**
BCAR	**Beaver Creek A**	**86.76**	**26**	P	**P**	**05 03 29.2**	**0.0**
K27K	**Chicken**	**86.96**	**25**	P	**P**	**05 03 30.1**	**0.0**
I26K	**Coal Creek Min**	**86.97**	**23**	P	**P**	**05 03 29.6**	**-0.6**
BMAR	**Burnt Mountain**	**87.22**	**21**	P	**P**	**05 03 31.6**	**+0.2**
EGAK	**Eagle**	**87.59**	**24**	P	**P**	**05 03 33.2**	**+0.1**
EGAK				IAmb	IAmb	05 03 35.5	
	comp=Z,8.3nm,1.1s						
HYT	**Haines Junctio**	**88.01**	**28**	P	**P**	**05 03 34.0**	**-1.4**
DAWY	**Dawson**	**88.09**	**25**	P	**P**	**05 03 36.1**	**+0.4**
DAWY				IAmb	IAmb	05 03 39.0	
	comp=Z,13nm,1.5s						
I29M	**Ogilvie Camp,**	**88.92**	**24**	P	**P**	**05 03 39.2**	**-0.2**
EPYK	**Eagle Plains**	**89.82**	**23**	P	**P**	**05 03 43.5**	**-0.2**
YBH	**Yreka Blue Hor**	**93.99**	**49**	LR	LR	05 37 27.7	
	comp=Z,31nm,21.9s,baz=256,slow=30						
ELIB	**Princess Elisa**	**94.37**	**195**	*d*P	**P**	**05 04 04.8**	**0.0**
	comp=Z,7.1nm,0.9s						
NEW	**Newport**	**98.18**	**42**	LR	LR	05 42 23.0	
	comp=Z,21nm,18.9s,baz=117,slow=32						
PFO	**Pinyon Flats O**	**98.56**	**57**	LR	LR	05 41 57.4	
	comp=Z,25nm,18.6s,baz=152,slow=31						
YKA	**Yellowknife Ar**	**98.99**	**28**	P	**P**	**05 04 25.0**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=276,slow=4.9,SNR=1.9						
	comp=Z,0.2nm,0.7s						
ELK	**Elko**	**99.59**	**50**	LR	LR	05 41 08.5	
	comp=Z,17nm,19.4s,baz=104,slow=30						
MNK	**Minsk**	**111.43**	**327**	*i* P	**Pdif**	**05 05 18.6**	**-2.5**
	comp=E,4.0nm,0.9s						
MNK				*i* P	**Pdif**	**05 05 18.6**	**-2.5**
	comp=N,36nm,0.8s						
MNK				*i* P	**Pdif**	**05 05 18.6**	**-2.5**
	comp=Z,8.0nm,0.7s,baz=69						
MNK				*i* PP	**PP**	**05 09 58.1**	**-2.4**
MNK				*i* PPP	PPP	05 12 19.2	
MNK				*i* SKS	**SKSdf**	**05 16 22.7**	**-1.4**
MNK				*i* SS	**SS**	**05 25 28.2**	**-0.3**
MNK				*i* SSS	SSS	05 29 37.9	
MNK				*i* LQ	LQ	05 49 50.3	
MNK				*i* LR	LR	05 54 21.1	
MNK				*i* LRM	MLR	05 56 36.4	
	comp=E,36nm,18.7s						
MNK				*i* LRM	MLR	05 57 19.0	
	comp=N,248nm,14.8s						
MNK				*i* LRM	MLR	05 57 20.9	
	comp=Z,62nm,17.4s						
GERES	**GERESS Array B**	**121.84**	**326**	PKP	**PKPdf**	**05 09 38.5**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=147,slow=2.0,SNR=6.1						
PLCA	**Paso Flores**	**122.19**	**147**	PKP	**PKPdf**	**05 09 40.1**	**-0.2**
	comp=Z,4.3nm,0.7s,baz=273,slow=1.8,SNR=18						
CPUP	**Villa Florida**	**140.20**	**145**	PKP	**PKPdf**	**05 10 14.4**	**-0.1**
	comp=Z,4.7nm,0.9s,baz=299,slow=1.6,SNR=6.9						
TORD	**Torodi Ar. Bea**	**145.15**	**285**	PKPbc	**PKPbc**	**05 10 22.2**	**-1.0**
	comp=Z,5.0nm,0.6s,baz=78,slow=3.1,SNR=45						
DBIC	**Dimbokro**	**152.11**	**273**	PKPbc	**PKPbc**	**05 10 40.8**	**-0.7**
	comp=Z,3.1nm,0.7s,baz=124,slow=2.2,SNR=6.9						
BDFB	**Brasilia**	**153.93**	**145**	PKPbc	**PKPbc**	**05 10 44.9**	**-0.7**
	comp=Z,15nm,0.7s,baz=207,slow=1.4,SNR=28						

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*JSN **02** 04:59:41.4±0.8, 18.°06N×78.°36W, h26^{km}±15^{km}, MD3.2*
*SSNC **02** 04:59:42.0±0.8, 18.°22N×78.°22W, h24^{km}±13^{km}, MD2.9, ML2.1*
ISC 02 04:59:39.7±2.1**, 18.°49N**±0.°06×**78.°1W**±0.°1**, h10**^{km}**, n7, σ1.**^{s}**37**/10**, 1D, Jamaica region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCJ	**Malvern**	**0.71**	**142**	⇓*i*P	**Pg**	**04 59 53.5**	**+0.1**
MCJ				*i* S	**Sg**	**05 00 02.5**	**-0.2**
PCJ	**Portland Cotta**	**1.20**	**128**	*i* P	**Pb**	**05 00 01.1**	**-1.3**
STH	**Stony Hill**	**1.33**	**108**	*i* P	**Pg**	**05 00 05.1**	**-0.1**
GWJ	**Greenwich**	**1.40**	**107**	*i* P	**Pb**	**05 00 06.0**	**-0.1**
HOJ	**Hope**	**1.41**	**110**	*i* P	**Pg**	**05 00 06.8**	**0.0**
CCCC	**Cccc**	**2.72**	**7**	*e*P	**Pb**	**05 00 27.4**	**-1.1**
RCC	**Rio Carpintero**	**2.75**	**57**	*e*P	**Pn**	**05 00 25.9**	**+2.0**
RCC				*e*S	**Sn**	**05 00 58.2**	**+1.0**
RCC				*e*Sg	**Sb**	**05 01 00.6**	**-2.3**
RCC				IAML		05 01 03.1	
	comp=E,3.3nm,0.3s						
RCC				IAML		05 01 03.3	
	comp=N,3.0nm,0.2s						

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*ISK **02** 05:26:54.9, 39.°51N×26.°02E, h6^{km}, ML2.5/17*
*DDA **02** 05:26:55.5±0.0, 39.°51N×26.°07E, h12^{km}, ML2.3*
*THE **02** 05:26:55.7, 39.°51N×26.°05E, h4^{km}±1^{km}, ML2.3/6, Error ellipse: s-maj=1.5km s-min=0.4km az=173.0*
*ATH **02** 05:26:56.0, 39.°49N×26.°05E, h13^{km}±1^{km}, ML2.5/7, Error ellipse: s-maj=1.9km s-min=0.8km az=247.0*
ISC 02 05:26:55.6±0.8**, 39.°50N**±0.°02×**26.°05E**±0.°02**, h11**^{km}±6^{km}**, n48, σ0.**^{s}**40**/70**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.07**	**92**	P	**Pg**	**05 26 58.0**	**0.0**
KOCA				S	**Sg**	**05 26 59.7**	**-0.1**
GPNR	**Gulpinar-Canak**	**0.08**	**126**	Pg	**Pg**	**05 26 57.7**	**-0.4**
PRK	**Paraskevi**	**0.31**	**146**	P	**Pg**	**05 27 02.0**	**+0.1**
PRK				S	**Sg**	**05 27 06.6**	**+0.5**
	1μm,0.2s						
PRK	**Paraskevi**	**0.31**	**146**	P	**Pg**	**05 27 02.0**	**+0.1**
PRK				S	**Sg**	**05 27 06.4**	**+0.4**
PRK				AML	AML	05 27 07.0	
	comp=E,2762μm,0.3s						
PRK				AML	AML	05 27 07.2	
	comp=N,2981μm,0.2s						
SIGR	**SIGRI**	**0.33**	**207**	P	**Pg**	**05 27 02.2**	**0.0**
SIGR				S	**Sg**	**05 27 07.1**	**+0.5**
	comp=N,718nm,0.4s						
SIGR	**SIGRI**	**0.33**	**207**	Pg	**Pg**	**05 27 01.9**	**-0.3**
SIGR	**SIGRI**	**0.33**	**207**	P	**Pg**	**05 27 02.2**	**0.0**
SIGR				S	**Sg**	**05 27 06.9**	**+0.3**
SIGR				AML	AML	05 27 07.9	
	comp=E,1485μm,0.3s						
SIGR				AML	AML	05 27 08.3	
	comp=N,1283μm,0.3s						
BOZC	**Bozcaada**	**0.34**	**1**	Pg	**Pg**	**05 27 02.4**	**0.0**
BOZC	**Bozcaada**	**0.34**	**1**	P	**Pg**	**05 27 02.2**	**-0.2**
BOZC				P	**Pg**	**05 27 02.4**	**0.0**
BOZC				*i* AML	AML	05 27 07.0	
	comp=N,436nm,0.3s						
BOZC				*i* AML	AML	05 27 07.0	
	comp=N,541nm,0.3s						
BOZC				*i* AML	AML	05 27 07.0	
	comp=N,490nm,0.3s						
BOZC				*i* AML	AML	05 27 07.0	
	comp=N,320nm,0.3s						
BOZC				S	**Sg**	**05 27 07.5**	**+0.6**
BOZC				S	**Sg**	**05 27 07.6**	**+0.6**
EZN	**Ezine**	**0.39**	**34**	P	**Pg**	**05 27 03.1**	**-0.2**
EZN				S	**Sg**	**05 27 08.8**	**+0.4**
	comp=N,432nm,0.3s						
EZN	**Ezine**	**0.39**	**34**	Pg	**Pg**	**05 27 03.2**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**0.45**	**58**	P	**Pg**	**05 27 04.1**	**-0.4**
ECEA	**Canakkale, Ece**	**0.55**	**10**	P	**Pg**	**05 27 06.3**	**0.0**
ECEA				S	**Sb**	**05 27 14.9**	**-0.1**
ECEA				*i* AML	AML	05 27 17.0	
	comp=N,114nm,0.4s						
ECEA				*i* AML	AML	05 27 17.0	
	comp=N,273nm,0.5s						
COMU	**Canakkale**	**0.68**	**29**	Pg	**Pg**	**05 27 08.4**	**-0.4**
GOKA	**anakkale-Gk**	**0.69**	**351**	P	**Pg**	**05 27 08.6**	**-0.5**
GOKA				S	**Sg**	**05 27 18.6**	**+0.4**
GOKA				*i* AML	AML	05 27 22.0	
	comp=N,220nm,0.7s						
GOKA				*i* AML	AML	05 27 22.0	
	comp=N,297nm,0.2s						
GADA	**Gvkgeada**	**0.69**	**351**	Pg	**Pg**	**05 27 08.7**	**-0.4**
LIA	**Limnos Island**	**0.78**	**301**	P	**Pg**	**05 27 10.8**	**+0.2**
LIA				S	**Sb**	**05 27 22.1**	**+0.5**
LIA	**Limnos Island**	**0.78**	**301**	P	**Pg**	**05 27 10.8**	**+0.2**
LIA				S	**Sb**	**05 27 22.0**	**+0.4**
LIA				AML	AML	05 27 24.4	
	comp=E,844μm,0.3s						
LIA				AML	AML	05 27 25.1	
	comp=N,761μm,0.3s						
DKL	**Dikili**	**0.79**	**123**	Pg	**Pb**	**05 27 11.3**	**-0.1**
BUHA	**Balikesir, Bur**	**0.80**	**90**	P	**Pg**	**05 27 10.8**	**-0.2**
BUHA				S	**Sg**	**05 27 21.6**	**+0.2**
BUHA				*i* AML	AML	05 27 26.0	
	comp=N,82nm,0.5s						
BUHA				*i* AML	AML	05 27 28.0	
	comp=N,72nm,0.6s						
CANM	**Can-anakkale**	**0.93**	**56**	Pg	**Pb**	**05 27 13.9**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.95**	**20**	Pg	**Pg**	**05 27 13.4**	**-0.5**
ZEDA	**zmir-Bergama**	**0.96**	**124**	P	**Pn**	**05 27 15.1**	**+0.1**
ZEDA				S	**Sn**	**05 27 28.9**	**+0.3**
ZEDA				*i* AML	AML	05 27 29.0	
	comp=N,66nm,0.2s						
LPK	**Lapseki**	**1.03**	**32**	Pg	**Pb**	**05 27 14.8**	**-0.5**
PSRA	**Psara**	**1.03**	**202**	P	**Pb**	**05 27 15.3**	**-0.2**
PSRA				S	**Sb**	**05 27 29.1**	**+0.1**
PSRA				AML	AML	05 27 34.0	
	comp=N,1273μm,0.2s						
PSRA				AML	AML	05 27 35.3	
	comp=E,986μm,0.2s						
SMTH	**Samothraki Isl**	**1.04**	**338**	P	**Pb**	**05 27 15.3**	**-0.4**
SMTH				S	**Sb**	**05 27 29.9**	**+0.5**
	comp=E,98nm,0.3s						
SMTH	**Samothraki Isl**	**1.04**	**338**	P	**Pb**	**05 27 15.5**	**-0.2**
SMTH				S	**Sb**	**05 27 29.6**	**+0.3**
SMTH				AML	AML	05 27 31.2	
	comp=N,205μm,0.3s						
SMTH				AML	AML	05 27 32.4	
	comp=E,147μm,0.2s						
CHOS	**Chios island**	**1.12**	**180**	P	**Pb**	**05 27 16.1**	**-0.8**
CHOS				S	**Sn**	**05 27 32.8**	**+0.3**
	comp=E,305nm,0.2s						
CHOS	**Chios island**	**1.12**	**180**	Pn	**Pb**	**05 27 16.4**	**-0.5**
CHOS	**Chios island**	**1.12**	**180**	P	**Pb**	**05 27 16.5**	**-0.5**
CHOS				S	**Sb**	**05 27 30.9**	**-0.5**
CHOS				AML	AML	05 27 35.7	
	comp=E,808μm,0.3s						
CHOS				AML	AML	05 27 36.3	
	comp=N,428μm,0.3s						
ERIK	**Erikli-Kesan**	**1.22**	**17**	Pn	**Pn**	**05 27 17.8**	**-0.7**
URLA	**Izmir**	**1.22**	**159**	Pn	**Pn**	**05 27 17.8**	**-0.8**
ENEZ	**Enez**	**1.23**	**4**	Pn	**Pn**	**05 27 18.7**	**0.0**
BALY	**Balya**	**1.24**	**79**	P	**Pn**	**05 27 18.3**	**-0.5**
BALY				S	**Sb**	**05 27 34.6**	**-0.3**
BALY				*i* AML	AML	05 27 36.0	
	comp=N,134nm,0.4s						
BALY				*i* AML	AML	05 27 36.0	
	comp=N,40nm,0.2s						
KRBG	**Karabiga-Canak**	**1.31**	**47**	Pn	**Pn**	**05 27 19.8**	**+0.1**
BLCB	**Balcova**	**1.36**	**145**	Pn	**Pn**	**05 27 20.7**	**+0.2**
GONE	**Gonen-Balikesi**	**1.37**	**66**	Pn	**Pb**	**05 27 21.3**	**0.0**
ALN	**Alexandroupoli**	**1.39**	**360**	P	**Pn**	**05 27 20.7**	**-0.2**
ALN				S	**Sg**	**05 27 39.9**	**-0.5**
	comp=N,92nm,0.4s						
ALN	**Alexandroupoli**	**1.39**	**360**	Pn	**Pn**	**05 27 21.0**	**+0.1**
ALN	**Alexandroupoli**	**1.39**	**360**	P	**Pn**	**05 27 20.9**	**0.0**
ALN				AML	AML	05 27 41.0	
	comp=E,177μm,0.4s						
ALN				AML	AML	05 27 41.1	
	comp=N,185μm,0.4s						
BALB	**Balikesir**	**1.42**	**84**	Pn	**Pn**	**05 27 21.7**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.47**	**36**	Pn	**Pn**	**05 27 22.4**	**+0.4**
THAS	**Thassos island**	**1.50**	**318**	P	**Pn**	**05 27 21.7**	**-0.7**
EDC	**Edincik**	**1.63**	**58**	Pn	**Pn**	**05 27 24.9**	**+0.7**
GOMA	**Golmarmara-Man**	**1.66**	**118**	Pn	**Pb**	**05 27 26.2**	**+0.1**
RDO	**Rodhopi**	**1.69**	**347**	Pn	**Pn**	**05 27 25.3**	**+0.4**
RDO	**Rodhopi**	**1.69**	**347**	P	**Pn**	**05 27 24.0**	**-0.9**
KAVA	**Kavala**	**1.90**	**322**	P	**Pn**	**05 27 27.9**	**0.0**

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*JMA **02** 05:30:08.9±0.4, 32°N±2°×14°2E±°, h31^{km}, MV3.4/7, NEAR TORISHIMA IS*
*IDC **02** 05:30:15.7±5.5, 31.°38N×141.°10E, h42^{km}±76^{km}, mb3.3/3, mbtmp3.5/4, ML2.6/1, Error ellipse: s-maj=266.6km s-min=33.3km az=69.0*
ISC 02 05:30:12.2±1.4**, 31.°6N**±0.°1×**141.°8E**±0.°2**, h35**^{km}**, n9, σ1.**^{s}**18**/10**, mb3.5**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.25**	**313**	*e*P	**Pn**	**05 30 45.5**	**-1.4**
JHJ2				*e*S	**Sn**	**05 31 12.6**	**-0.8**
BSO1	**Boso 1**	**3.12**	**348**	P	**Pn**	**05 30 56.9**	**-1.6**
JOD2	**Odawara 2**	**4.29**	**329**	*e*P	**Pn**	**05 31 14.8**	**-0.3**
CBIJ	**Chichi jima**	**4.50**	**175**	*e*P	**Pn**	**05 31 18.3**	**+0.4**
JRY	**Ryogami san**	**5.02**	**332**	*e*P	**Pn**	**05 31 25.4**	**+0.3**
MJAR	**Matsushiro Arr**	**5.75**	**330**	P	**Pn**	**05 31 37.2**	**+2.0**
	0.2nm,0.3s,baz=149,slow=11,SNR=5.1						
	1.2nm,0.3s						
KURBB	**Kurchatov Arra**	**49.72**	**312**	P	**P**	**05 39 01.2**	**+0.4**
	0.2nm,0.4s,baz=88,slow=6.7,SNR=3.3						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**51.74**	**189**	P	**P**	**05 39 16.5**	**+0.2**
	0.8nm,0.5s,baz=5.5,slow=7.6,SNR=11						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	0.8nm,0.5s						
ASAR	Alice Springs	55.47	189	P	P	05 39 44.0	+0.4
	0.2nm,0.4s,baz=356,slow=5.5,SNR=6.4						
	0.2nm,0.4s						

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*ISK **02** 05:48:40.8, 39°.49N×26°.04E, h7^{km}, ML3.9/32*
*IDC **02** 05:48:40.5±1.3, 39°.50N×26°.05E, h0^{km}, mb3.7/3, mbtmp3.5/5, ML3.4/2, MS2.9/3, Error ellipse: s-maj=30.1km s-min=20.9km az=152.0*
*DDA **02** 05:48:41.7±0.0, 39°.50N×26°.09E, h9^{km}, MW3.9*
*MCSM **02** 05:48:41.3±0.4, 40°N±3°×2°6E±°, h6^{km}±3^{km}, mb4.2*
*THE **02** 05:48:41.7, 39°.49N×26°.04E, h9^{km}±1^{km}, ML3.8/10, Error ellipse: s-maj=1.4km s-min=0.6km az=179.0*
*ATH **02** 05:48:42.1, 39°.48N×26°.06E, h10^{km}±1^{km}, ML3.6/20, Error ellipse: s-maj=1.9km s-min=0.8km az=192.0*
*SOF **02** 05:48:44.5, 39°.67N×26°.00E, h25^{km}, MD3.9*
ISC 02 05:48:41.6±0.8, **39°.50N**±0°.01×**26°.06E**±0°.02, **h9**^{km}±5^{km}, **n129,** σ**0^{s}.77**/165, **mb3.8**/3, **8C-7D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.06	83	P	Pg	05 48 43.7	+0.1
KOCA				S	Sg	05 48 45.1	-0.1
GPNR	Gulpinar-Canak	0.07	124	Pg	Pg	05 48 43.4	-0.3
GPNR				Sg	Sg	05 48 44.7	-0.5
PRK	Paraskevi	0.30	146	P	Pg	05 48 47.7	+0.2
PRK				S	Sg	05 48 51.9	+0.4
	24μm,0.8s						
PRK	Paraskevi	0.30	146	P	Pg	05 48 47.3	-0.3
PRK				S	Sg	05 48 52.2	+0.6
PRK				AML	AML	05 48 53.3	
	comp=E,40450μm,0.3s						
PRK				AML	AML	05 48 53.4	
	comp=N,34789μm,0.2s						
SIGR	SIGRI	0.32	209	P	Pg	05 48 48.1	+0.1
SIGR				S	Sg	05 48 52.9	+0.6
	comp=N,17μm,0.3s						
SIGR	SIGRI	0.32	209	Pg	Pg	05 48 48.2	+0.2
SIGR				Sg	Sg	05 48 52.4	+0.1
SIGR	SIGRI	0.32	209	Pg	Pg	05 48 48.1	+0.1
SIGR				Sg	Sg	05 48 52.6	+0.3
SIGR	SIGRI	0.32	209	P	Pg	05 48 48.3	+0.2
SIGR				S	Sg	05 48 53.0	+0.6
SIGR				AML	AML	05 48 53.4	
	comp=E,25602μm,0.2s						
SIGR				AML	AML	05 48 53.8	
	comp=N,32983μm,0.2s						
BOZC	Bozcaada	0.35	359	Pg	Pg	05 48 47.8	-0.7
BOZC				Sg	Sg	05 48 53.4	+0.3
BOZC	Bozcaada	0.35	359	SPECP		05 48 48.0	
BOZC				P	Pg	05 48 48.6	+0.1
BOZC				S	Sg	05 48 53.8	+0.7
EZN	Ezine	0.39	32	P	Pg	05 48 49.4	+0.2
EZN				S	Sg	05 48 54.9	+0.5
	comp=N,12μm,0.4s						
EZN	Ezine	0.39	32	Pg	Pg	05 48 49.3	+0.1
EZN	Ezine	0.39	32	Pg	Pg	05 48 49.3	+0.1
EZN				Sg	Sg	05 48 54.8	+0.4
BAYC	CANAKKALE_Bayr	0.45	57	SPECP		05 48 49.0	
BAYC				P	Pg	05 48 50.1	-0.3
BAYC				S	Sg	05 48 56.1	-0.2
AYVA	Ayvalik	0.52	111	P	Pg	05 48 51.6	-0.2
AYVA				S	Sg	05 48 59.5	+0.8
ECEA	Canakkale, Ece	0.56	9	SPECP		05 48 52.0	
ECEA				P	Pg	05 48 52.6	+0.2
ECEA				S	Sb	05 49 01.4	-0.1
COMU	Canakkale	0.68	28	Pg	Pg	05 48 54.8	0.0
COMU				Sg	Sb	05 49 04.9	-0.3
GOKA	anakkale-Gk	0.70	351	SPECP		05 48 55.0	
GOKA				P	Pg	05 48 55.2	0.0
GOKA				S	Sb	05 49 05.6	-0.1
GADA	Gvkgeada	0.71	350	Pg	Pg	05 48 55.1	-0.1
DKL	Dikili	0.78	123	Pg	Pg	05 48 56.6	0.0
LIA	Limnos Island	0.79	301	P	Pg	05 48 56.9	+0.2
LIA				S	Sg	05 49 07.1	+0.1
	comp=N,16μm,0.4s						
LIA	Limnos Island	0.79	301	Pg	Pg	05 48 56.9	+0.2
LIA	Limnos Island	0.79	301	P	Pb	05 48 57.2	-0.2
LIA				S	Sb	05 49 07.6	-0.5
LIA				AML	AML	05 49 10.8	
	comp=N,31524μm,0.4s						
LIA				AML	AML	05 49 11.2	
	comp=E,28941μm,0.3s						
BUHA	Balikesir, Bur	0.79	89	P	Pg	05 48 56.4	-0.3
BUHA				S	Sb	05 49 09.3	+1.1
KARB	zmir-Karabur	0.88	162	P	Pg	05 48 58.9	+0.5
KARB				S	Sg	05 49 10.6	+0.8
CANM	Can-anakkale	0.92	56	Pg	Pg	05 48 58.8	-0.6
ZEDA	zmir-Bergama	0.95	123	P	Pg	05 48 59.8	0.0
ZEDA				S	Sb	05 49 13.3	+0.5
GELI	Tayfur-Gelibol	0.96	19	Pg	Pg	05 48 59.6	-0.4
PSRA	Psara	1.03	202	P	Pb	05 49 01.7	+0.3
PSRA				S	Sb	05 49 15.7	+0.6
PSRA				AML	AML	05 49 18.3	
	comp=N,19842μm,0.5s						
PSRA				AML	AML	05 49 20.2	
	comp=E,19207μm,0.2s						
LPK	Lapseki	1.03	31	Pg	Pg	05 49 00.9	-0.5
SMTH	Samothraki Isl	1.06	338	P	Pg	05 49 01.5	-0.4
SMTH				S	Sb	05 49 16.3	+0.4
	comp=E,4μm,0.4s						
SMTH	Samothraki Isl	1.06	338	P	Pg	05 49 01.8	-0.1
SMTH				S	Sb	05 49 16.1	+0.2
SMTH				AML	AML	05 49 17.9	
	comp=N,7357μm,0.4s						
SMTH				AML	AML	05 49 19.2	
	comp=E,5271μm,0.3s						
CHOS	Chios island	1.11	180	P	Pg	05 49 02.4	-0.4
CHOS				S	Sg	05 49 17.0	-0.2
	comp=E,6μm,0.7s						
CHOS	Chios island	1.11	180	Pn	Pg	05 49 02.4	-0.4
CHOS	Chios island	1.11	180	P	Pg	05 49 02.6	-0.3
CHOS				S	Sg	05 49 16.7	-0.5
CHOS				AML	AML	05 49 21.8	
	comp=N,9004μm,0.3s						
CHOS				AML	AML	05 49 24.5	
	comp=E,12943μm,0.6s						
URLA	Izmir	1.21	160	Pn	Pb	05 49 03.8	-0.8
URLA	Izmir	1.21	160	SPECP	Pb	05 49 03.0	-1.6
URLA				P	Pb	05 49 03.0	-1.6
URLA				S	Sb	05 49 19.9	-0.4
ERIK	Erikli-Kesan	1.23	16	Pn	Pn	05 49 04.2	-0.6
BALY	Balya	1.23	78	P	Pn	05 49 04.1	-0.8
BALY				S	Sb	05 49 20.6	-0.4
ENEZ	Enez	1.24	3	P	Pn	05 49 04.8	-0.3
ENEZ				S	Sb	05 49 21.4	+0.2
	comp=E,7μm,0.6s						
ENEZ	Enez	1.24	3	Pn	Pn	05 49 04.7	-0.3
KRBG	Karabiga-Canak	1.31	46	Pn	Pn	05 49 05.7	-0.3
BLCB	Balcova	1.35	145	P	Pn	05 49 06.1	-0.5
BLCB				S	Sb	05 49 24.3	0.0
BLCB	Balcova	1.35	145	Pn	Pn	05 49 06.0	-0.5
GONE	Gonen-Balikesi	1.37	66	Pn	Pn	05 49 07.4	+0.6
ALN	Alexandroupoli	1.40	360	P	Pn	05 49 07.1	-0.1
ALN				S	Sn	05 49 26.1	+0.3
	comp=E,6μm,0.5s						
ALN	Alexandroupoli	1.40	360	Pn	Pn	05 49 06.7	-0.5
ALN				Sn	Sg	05 49 26.5	-0.1
ALN	Alexandroupoli	1.40	360	P	Pn	05 49 07.1	-0.1
ALN				S	Sb	05 49 25.0	-0.8
ALN				AML	AML	05 49 27.7	
	comp=E,13350μm,0.5s						
ALN				AML	AML	05 49 27.8	
	comp=N,11308μm,0.5s						
BALB	Balikesir	1.42	84	Pn	Pn	05 49 07.5	+0.1
BALB				Sn	Sb	05 49 27.0	+0.8
RKY	Sarkoy-Tekirda	1.47	35	Pn	Pn	05 49 08.1	-0.1
RKY				Sn	Sb	05 49 28.4	+0.6
AKS	Akhisar	1.50	114	Pn	Pn	05 49 08.1	-0.5
THAS	Thassos island	1.51	318	P	Pn	05 49 08.3	-0.4
THAS				S	Sn	05 49 27.3	-1.3
	comp=N,2μm,0.4s						
THAS	Thassos island	1.51	318	P	Pn	05 49 08.4	-0.4
THAS				AML	AML	05 49 32.2	
	comp=N,3162μm,0.4s						
THAS				AML	AML	05 49 33.5	
	comp=E,2893μm,0.4s						
EDC	Edincik	1.63	58	Pn	Pn	05 49 10.1	-0.3
GOMA	Golmarmara-Man	1.65	118	Pn	Pn	05 49 10.7	+0.1
UKOP	Uzunkopru-Edir	1.69	15	Pn	Pn	05 49 11.9	+0.7
RDO	Rodhopi	1.70	347	P	Pn	05 49 11.3	0.0
RDO	Rodhopi	1.70	347	Pn	Pn	05 49 11.5	+0.2
RDO	Rodhopi	1.70	347	P	Pn	05 49 11.3	0.0
RDO				AML	AML	05 49 36.4	
	comp=E,1695μm,0.5s						
RDO				AML	AML	05 49 42.6	
	comp=N,1379μm,0.4s						
KYMI	Kymi, Euboea I	1.75	241	P	Pn	05 49 10.9	-1.2
KYMI	Kymi, Euboea I	1.75	241	P	Pn	05 49 11.0	-1.1
KYMI				AML	AML	05 49 41.1	
	comp=N,2044μm,0.5s						
KYMI				AML	AML	05 49 41.6	
	comp=E,1665μm,0.7s						
OUR	Ouranopolis	1.80	298	P	Pn	05 49 12.7	-0.1
OUR	Ouranopolis	1.80	298	Pn	Pn	05 49 12.4	-0.4
OUR	Ouranopolis	1.80	298	P	Pn	05 49 12.9	+0.2
OUR				AML	AML	05 49 43.5	
	comp=E,1907μm,0.3s						
OUR				AML	AML	05 49 43.7	
	comp=N,1717μm,0.6s						
TKR	Tekirdag	1.87	37	Pn	Pn	05 49 14.7	+1.0
KAVA	Kavala	1.91	322	P	Pn	05 49 14.1	-0.2
KAVA				S	Sn	05 49 36.6	-1.8
	comp=N,2μm,0.4s						
KAVA	Kavala	1.91	322	P	Pn	05 49 14.0	-0.3
KVLA	Kavala	1.93	319	P	Pn	05 49 15.1	+0.7
KCTX	Karacabey (Bur	1.93	66	Pn	Pn	05 49 14.9	+0.4
EREA	Eretria	1.98	238	P	Pn	05 49 14.2	-1.0
EREA	Eretria	1.98	238	P	Pn	05 49 14.2	-1.0
EREA				AML	AML	05 49 51.1	
	comp=E,1109μm,0.6s						
EREA				AML	AML	05 49 53.1	
	comp=N,1003μm,0.5s						
DST	Dursunbey	1.98	86	Pn	Pn	05 49 15.8	+0.5
TNSA	Tinos	2.08	200	P	Pn	05 49 15.5	-1.0
CRLT	Corlu	2.08	38	Pn	Pn	05 49 17.3	+0.8
BOTS	Marmara Eregli	2.10	44	Pn	Pn	05 49 17.7	+0.9
DION	Dionisos Attik	2.18	230	P	Pn	05 49 18.5	+0.5
DION				AML	AML	05 49 59.4	
	comp=E,1083μm,0.9s						
DION				AML	AML	05 50 01.2	
	comp=N,1542μm,1.0s						
KDZ	Kurdzhali	2.21	347	*i* P	Pn	05 49 18.3	-0.1
XOR	Xorichti	2.22	268	P	Pn	05 49 18.0	-0.6
XOR				AML	AML	05 50 01.6	
	comp=E,353μm,0.8s						
XOR				AML	AML	05 50 03.3	
	comp=N,624μm,0.7s						
PTL	Penteli	2.24	231	P	Pn	05 49 19.7	+0.9
PTL				AML	AML	05 50 00.8	
	comp=N,592μm,0.5s						
PTL				AML	AML	05 50 04.9	
	comp=E,797μm,0.7s						
KULA	Kula-Manisa	2.25	115	P	Pn	05 49 19.1	+0.1
KULA	Kula-Manisa	2.25	115	Pn	Pn	05 49 19.2	+0.2
ORLT	Orhaneli	2.25	75	Pn	Pn	05 49 19.8	+0.8
SIMA	Simav-Kutahya	2.31	99	Pn	Pn	05 49 20.2	+0.4
EDRB	Edirne	2.41	12	P	Pn	05 49 20.8	-0.3
VLY	Voula,Athens	2.42	228	P	Pn	05 49 20.3	-0.9
VLY				AML	AML	05 50 06.3	
	comp=N,751μm,0.6s						
VLY				AML	AML	05 50 06.4	
	comp=E,843μm,0.7s						
RZN	Rozhen	2.42	335	P	Pn	05 49 21.7	+0.3
SOH	Sokhos	2.46	303	P	Pn	05 49 22.3	+0.4
SOH				AML	AML	05 50 01.0	
	comp=N,1062μm,0.6s						
SOH				AML	AML	05 50 06.3	
	comp=E,1314μm,0.5s						
SRS	Serrai	2.49	311	P	Pn	05 49 22.1	-0.1
SRS				AML	AML	05 50 03.2	
	comp=E,1500μm,0.5s						
SRS				AML	AML	05 50 03.3	
	comp=N,932μm,0.7s						
NVR	Nevrokopi	2.50	319	P	Pn	05 49 23.4	+1.0
NVR	Nevrokopi	2.50	319	P	Pn	05 49 23.4	+1.0
NVR				AML	AML	05 50 05.5	
	comp=E,767μm,0.4s						
NVR				AML	AML	05 50 10.9	
	comp=N,504μm,0.5s						
VIL2	Platees	2.53	240	P	Pn	05 49 21.9	-0.9
VIL2				AML	AML	05 50 06.0	
	comp=N,1046μm,0.7s						
VIL2				AML	AML	05 50 10.2	
	comp=E,1557μm,0.8s						
DIM	Dimitrovgrad	2.58	351	P	Pn	05 49 23.6	+0.1
MMB	Musomiste	2.74	320	*i* P	Pn	05 49 25.2	-0.6
PLD	Plovdiv	2.80	339	P	Pn	05 49 27.4	+0.9
LIT	Litokhoron	2.81	284	P	Pn	05 49 27.4	+0.6
KNT	Kendrikon	2.93	306	P	Pn	05 49 28.6	+0.2
TYRN	Tyrnavos	2.96	275	P	Pn	05 49 29.1	+0.4
THL	Klokotos Trika	3.13	273	P	Pn	05 49 31.2	+0.2
GRG	Griva	3.16	299	P	Pn	05 49 32.5	+1.1
KKB	Krupnik	3.28	317	P	Pn	05 49 34.6	+1.5
STIP	Stip	3.68	308	*i* Pn	Pn	05 49 37.9	-0.7
SZH	Strazhica	3.77	359	P	Pn	05 49 41.4	+1.6
VTS	Vitosha	3.78	327	*i* P	Pn	05 49 41.4	+1.3
PLVB	Pleven	4.04	345	⇓P	Pn	05 49 44.2	+0.7
IDI	Anoyia	4.30	193	LR	LR	05 51 37.1	
	comp=E,111nm,19.2s,baz=226,slow=41						
BRTR	Keskin Array B	5.86	85	Pn	Pn	05 50 09.4	+0.7
	comp=E,0.8nm,0.3s,baz=263,slow=13,SNR=4.7						
BRTR				Sn	Sn	05 51 12.9	-3.1
	comp=E,0.1nm,0.3s,baz=279,slow=12,SNR=1.1						
	comp=E,2.2nm,0.5s						
ARR	Arges	5.96	350	⇓P	Pn	05 50 11.6	+1.5
VOIR		5.99	353	⇑P	Pn	05 50 11.0	+0.7
MLR	Muntele Rosu	5.99	359	⇑P	Pn	05 50 12.8	+2.3
HERR	Herculane	6.02	335	⇓P	Pn	05 50 09.8	-1.0
MDVR	Moldovita	6.19	330	⇑P	Pn	05 50 13.5	+0.4
PLOR	Plostina	6.37	4	⇓P	Pn	05 50 17.8	+2.2
GZR	Gura Zlata	6.37	339	⇑P	Pn	05 50 15.4	-0.2
VRI	Vrincioaia	6.39	4	⇓P	Pn	05 50 17.7	+1.9
DOPR	Dopca	6.49	356	⇑P	Pn	05 50 18.5	+1.3
BZS	Buzias	6.94	333	⇓P	Pn	05 50 23.2	-0.1
TESR	Tescani	7.03	3	⇑P	Pn	05 50 26.1	+1.5
MARR	Marisel-Cluj	7.49	344	⇓P	Pn	05 50 31.8	+0.8
SIRR	Siria	7.50	336	⇑P	Pn	05 50 30.9	-0.1
BURAR	Bucovina Array	8.14	356	⇑P	Pn	05 50 43.0	+3.1
KMPD	K-Podol'skiy	9.07	2	Pn	Pn	05 50 52.7	+0.2
	comp=E,9.5nm,1.0s						
LUBAR	Lubar, Ukraine	10.49	6	Pn	Pn	05 51 11.1	-0.9
	comp=E,3.3nm,0.7s						
LUBAR				pP		05 51 12.6	
	comp=E,3.3nm,0.7s						
LUBAR				sP		05 51 14.0	
	comp=E,3.3nm,0.7s						
AKASG	Malin Array Be	11.43	10	Pn	Pn	05 51 23.5	-1.3
	comp=E,0.3nm,0.3s,baz=195,slow=13,SNR=1.5						
	comp=E,0.1nm,0.3s						
MI28	Mi28,Pidlybu	11.49	5	Pn	Pn	05 51 25.0	-0.7
ESDC	Sonseca Array	23.09	280	P	P	05 53 47.9	+0.3
	comp=E,1.0nm,0.8s,baz=72,slow=10.0,SNR=7.9						
	comp=E,1.0nm,0.8s						
NOA	NORSAR Array B	23.45	342	LR	LR	06 04 03.4	
	comp=E,17nm,18.7s,baz=235,slow=39						
GEYT	Alibeck	25.00	83	P	P	05 54 07.3	+1.6
	comp=E,1.4nm,0.4s,baz=297,slow=9.4,SNR=2.0						
	comp=E,1.4nm,0.4s						
TORD	Torodi Ar. Bea	33.92	226	P	P	05 55 25.1	+0.1
	comp=E,0.8nm,0.6s,baz=34,slow=9.4,SNR=7.5						
	comp=E,0.8nm,0.6s						
KSRS	Korea Array	75.11	54	LR	LR	06 37 54.5	
	comp=E,11nm,18.7s,baz=85,slow=39						

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*ISK **02** 05:59:35.7, 39°.51N×26°.06E, h6^{km}, ML2.9/29*
*ATH **02** 05:59:36.6, 39°.48N×26°.06E, h12^{km}±2^{km}, ML2.7/9, Error ellipse: s-maj=2.3km s-min=0.9km az=217.0*
*DDA **02** 05:59:36.4±0.0, 39°.51N×26°.11E, h9^{km}, ML2.5*
*THE **02** 05:59:36.2, 39°.50N×26°.08E, h7^{km}±1^{km}, ML2.8/8, Error ellipse: s-maj=1.8km s-min=0.6km az=177.0*
ISC 02 05:59:36.1±0.8, **39°.50N**±0°.02×**26°.06E**±0°.02, **h9**^{km}±6^{km}, **n62,** σ**0^{s}.44**/83, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.06	89	P	Pg	05 59 38.1	0.0
KOCA				S	Sg	05 59 39.7	+0.2
GPNR	Gulpinar-Canak	0.07	128	Pg	Pg	05 59 38.2	0.0
GPNR				Sg	Sg	05 59 39.3	-0.4
PRK	Paraskevi	0.30	147	P	Pg	05 59 42.3	+0.2
PRK				S	Sg	05 59 46.2	+0.1
	5μm,0.2s						
PRK	Paraskevi	0.30	147	P	Pg	05 59 42.3	+0.2
PRK				S	Sg	05 59 46.3	+0.1
PRK				AML	AML	05 59 47.3	
	comp=E,10331μm,0.2s						
PRK				AML	AML	05 59 47.4	
	comp=N,9236μm,0.2s						
SIGR	SIGRI	0.33	209	P	Pg	05 59 42.7	+0.1
SIGR				S	Sg	05 59 47.4	+0.5
	comp=N,2μm,0.3s						
SIGR	SIGRI	0.33	209	Pg	Pg	05 59 42.8	+0.1
SIGR	SIGRI	0.33	209	P	Pg	05 59 42.6	+0.1
SIGR				S	Sg	05 59 47.4	+0.5
SIGR				AML	AML	05 59 47.8	
	comp=N,5592μm,0.4s						
SIGR				AML	AML	05 59 48.5	
	comp=E,3301μm,0.2s						
BOZC	Bozcaada	0.34	359	Pg	Pg	05 59 42.9	+0.1
BOZC				Sg	Sg	05 59 47.7	+0.4
BOZC	Bozcaada	0.34	359	P	Pg	05 59 43.0	+0.2
BOZC				S	Sg	05 59 48.2	+0.9
EZN	Ezine	0.38	32	P	Pg	05 59 43.7	+0.1
EZN				S	Sg	05 59 49.0	+0.3
	comp=E,1μm,0.2s						
EZN	Ezine	0.38	32	Pg	Pg	05 59 43.5	-0.1
EZN				Sg	Sg	05 59 49.1	+0.3
BAYC	CANAKKALE_Bayr	0.45	57	P	Pg	05 59 44.4	-0.4
BAYC				S	Sg	05 59 50.7	0.0
BAYC				*i* AML	AML	05 59 51.0	
	comp=E,458nm,0.5s						
AYVA	Ayvalik	0.53	111	P	Pb	05 59 47.3	-0.2
ECEA	Canakkale, Ece	0.55	9	P	Pg	05 59 46.9	+0.2
ECEA				S	Sb	05 59 55.1	-0.7
ECEA				*i* AML	AML	05 59 56.0	
	comp=E,458nm,0.3s						
COMU	Canakkale	0.68	28	Pg	Pg	05 59 48.9	-0.3
GADA	Gvkgeada	0.70	350	Pg	Pg	05 59 49.5	-0.1
LIA	Limnos Island	0.78	301	P	Pg	05 59 51.8	+0.7
LIA				S	Sb	06 00 02.9	+0.4
	comp=E,1μm,0.4s						
LIA	Limnos Island	0.78	301	P	Pg	05 59 51.4	+0.3
LIA				S	Sb	06 00 03.1	+0.6
LIA				AML	AML	06 00 04.1	
	comp=E,1766μm,0.3s						
LIA				AML	AML	06 00 06.2	
	comp=N,2008μm,0.2s						
DKL	Dikili	0.79	123	Pg	Pg	05 59 51.5	+0.3
CANM	Can-anakkale	0.92	56	Pg	Pg	05 59 53.4	-0.4
GELI	Tayfur-Gelibol	0.95	20	Pg	Pg	05 59 54.0	-0.3
LPK	Lapseki	1.02	32	Pg	Pg	05 59 55.4	-0.3
PSRA	Psara	1.03	202	P	Pg	05 59 55.7	-0.2
PSRA				AML	AML	06 00 14.4	
	comp=N,2712μm,0.2s						
PSRA				AML	AML	06 00 15.4	
	comp=E,3312μm,0.2s						
SMTH	Samothraki Isl	1.05	337	P	Pg	05 59 56.3	+0.1
SMTH				S	Sb	06 00 10.7	+0.4
	comp=E,242nm,0.3s						
SMTH	Samothraki Isl	1.05	337	P	Pg	05 59 56.3	+0.1
SMTH				S	Sb	06 00 10.6	+0.4
SMTH				AML	AML	06 00 12.7	
	comp=N,490μm,0.2s						
SMTH				AML	AML	06 00 12.8	
	comp=E,468μm,0.4s						
CHOS	Chios island	1.11	180	P	Pg	05 59 57.5	+0.1
CHOS				S	Sg	06 00 12.0	+0.1
	comp=E,745nm,0.5s						
CHOS	Chios island	1.11	180	Pn	Pg	05 59 57.5	+0.1
CHOS	Chios island	1.11	180	P	Pg	05 59 57.5	+0.1
CHOS				S	Sg	06 00 11.8	-0.1
CHOS				AML	AML	06 00 16.8	
	comp=N,1050μm,0.4s						
CHOS				AML	AML	06 00 18.5	
	comp=E,1433μm,0.2s						
URLA	Izmir	1.21	160	Pn	Pb	05 59 58.5	-0.7
ERIK	Erikli-Kesan	1.22	17	Pn	Pb	05 59 58.5	-0.8
ENEZ	Enez	1.24	3	P	Pn	05 59 59.3	-0.2
ENEZ				S	Sb	06 00 15.6	0.0
	comp=E,442nm,0.5s						
ENEZ	Enez	1.24	3	Pn	Pn	05 59 59.3	-0.2
KRBG	Karabiga-Canak	1.30	47	Pn	Pn	06 00 00.3	-0.1
BLCB	Balcova	1.35	145	Pn	Pn	06 00 01.5	+0.4
GONE	Gonen-Balikesi	1.37	66	Pn	Pn	06 00 01.5	+0.2
ALN	Alexandroupoli	1.39	360	P	Pn	06 00 01.4	-0.3
ALN				S	Sb	06 00 20.1	-0.1
	comp=E,288nm,0.5s						
ALN	Alexandroupoli	1.39	360	Pn	Pn	06 00 01.6	-0.1
ALN	Alexandroupoli	1.39	360	P	Pn	06 00 01.9	+0.2
ALN				AML	AML	06 00 21.9	
	comp=E,682μm,0.5s						
ALN				AML	AML	06 00 22.0	
	comp=N,467μm,0.5s						
BALB	Balikesir	1.42	84	Pn	Pn	06 00 01.7	-0.3
RKY	Sarkoy-Tekirda	1.46	36	Pn	Pn	06 00 02.9	+0.2
RKY				Sn	Sg	06 00 22.9	-0.2
AKS	Akhisar	1.50	114	Pn	Pn	06 00 03.8	+0.7
THAS	Thassos island	1.51	317	P	Pn	06 00 02.8	-0.4
THAS	Thassos island	1.51	317	P	Pn	06 00 02.8	-0.4
THAS				AML	AML	06 00 26.4	
	comp=N,188μm,0.3s						
THAS				AML	AML	06 00 27.2	
	comp=E,148μm,0.2s						
EDC	Edincik	1.62	58	Pn	Pn	06 00 05.3	+0.4
UKOP	Uzunkopru-Edir	1.68	15	Pn	Pn	06 00 06.2	+0.5
RDO	Rodhopi	1.69	347	P	Pn	06 00 05.9	+0.2
RDO	Rodhopi	1.69	347	Pn	Pn	06 00 06.3	+0.6
RDO	Rodhopi	1.69	347	P	Pn	06 00 05.1	-0.7
RDO				AML	AML	06 00 33.6	
	comp=E,98μm,0.4s						
RDO				AML	AML	06 00 34.2	
	comp=N,82μm,0.3s						
KYMI	Kymi, Euboea I	1.75	241	P	Pn	06 00 05.4	-1.2
OUR	Ouranopolis	1.80	298	Pn	Pn	06 00 07.8	+0.6
OUR	Ouranopolis	1.80	298	P	Pn	06 00 07.2	0.0
TKR	Tekirdag	1.87	37	Pn	Pn	06 00 08.6	+0.4
KAVA	Kavala	1.91	322	P	Pn	06 00 08.5	-0.2
KAVA	Kavala	1.91	322	P	Pn	06 00 08.7	0.0
KCTX	Karacabey (Bur	1.93	66	Pn	Pn	06 00 09.2	+0.2
EREA	Eretria	1.98	238	P	Pn	06 00 08.7	-1.0
KDZ	Kurdzhali	2.20	347	Pn	Pn	06 00 13.1	+0.3
KULA	Kula-Manisa	2.25	115	Pn	Pn	06 00 14.6	+1.0
SIMA	Simav-Kutahya	2.31	99	Pn	Pn	06 00 14.9	+0.6
SLVT	Silivri	2.38	43	Pn	Pn	06 00 16.4	+1.1
EDRB	Edirne	2.40	12	Pn	Pn	06 00 16.4	+0.9
NVR	Nevrokopi	2.49	318	P	Pn	06 00 17.4	+0.5

NOU 02 06:08:43.5, 17°.62S×168°.41E, h107^{km}, MLv4.3/13, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	0.17	175	P	Pn	06 08 59.6	+1.1
DVP	Devils Point	0.24	244	P	Pn	06 08 59.7	+1.1
MARNC	Mare, Loyalty	3.86	185	P	Pn	06 09 39.3	-1.6
YATNC	Mamie plateau,	4.64	198	P	Pn	06 09 50.3	-1.2
DZM	Mont Dzumac	4.80	202	P	Pn	06 09 53.5	-0.2
KOUNC	Koumac, New Ca	4.87	233	P	Pn	06 09 55.0	+0.5
NOUC	Port Laguerre	4.88	204	P	Pn	06 09 55.0	+0.3
OUENC	Ouen Island, N	5.00	197	P	Pn	06 09 56.6	+0.4
ONTNC	Ouen Toro	5.01	201	P	Pn	06 09 57.2	+0.7
PINNC	Pines Island,	5.05	190	P	Pn	06 09 57.3	+0.3

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*VIE **02** 06:25:06.5, 51°.52N×15°.96E, h0^{km}, mb2.5/3, ml2.4/3 87 km NW of Wroclaw Suspected Mining induced.*
*PRU **02** 06:25:07.5±0.0, 51°.52N×16°.07E, h0^{km}*
ISC 02 06:25:06.6±1.2, **51°.55N**±0°.05×**16°.13E**±0°.03, **h0**^{km}, **n25,** σ**0^{s}.92**/49, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.71	172	*e*Pg	Pg	06 25 21.1	+0.8
KSP				*e*Sg	Sg	06 25 30.6	+1.2
CHVC	Chvalec	0.96	183	*e*PG	Pg	06 25 25.2	+0.2
CHVC				*e*SG	Sg	06 25 37.5	+0.1
	comp=Z,27nm,0.5s						
OSTC	Ostas	0.99	177	*e*PG	Pg	06 25 25.9	+0.3
OSTC				*e*SG	Sg	06 25 39.3	+0.8
	comp=Z,20nm,0.3s						
UPC	Upice	1.04	184	*e*PG	Pg	06 25 26.9	+0.3
UPC				*e*SG	Sg	06 25 40.8	+0.7
	comp=Z,46nm,0.2s						
DPC	Dobruska-Polom	1.20	174	*e*PG	Pg	06 25 29.7	0.0
DPC				*e*SG	Sg	06 25 45.2	0.0

	comp=Z,17nm,0.6s						
PVCC	Panska Ves	1.42	225	ePG	Pn	06 25 33.6	0.0
PVCC				eSG	Sb	06 25 52.5	0.0
	comp=Z,133nm,0.3s						
KRLC	Kraliky	1.53	164	ePG	Pn	06 25 34.9	-0.3
KRLC				eSG	Sg	06 25 55.2	-0.5
	comp=Z,10nm,0.4s						
BRG	Berggiesshubel	1.53	245	Pg	Pg	06 25 36.1	+0.1
BRG				Sg	Sn	06 25 56.5	+0.6
BRG				Amp		06 25 58.3	
	comp=Z,55nm,0.4s						
GOPC	GO Pecny, Ondr	1.84	208	ePG	Pb	06 25 40.5	-0.7
GOPC				eSG	Sb	06 26 04.8	0.0
	comp=Z,12nm,0.4s						
PRU	Pruhonice	1.86	214	ePG	Pn	06 25 40.0	+0.3
PRU				eSG	Sb	06 26 05.6	+0.4
	comp=Z,20nm,0.6s						
CLL	Collm	1.97	264	ePg	Pb	06 25 43.0	-0.4
CLL				ex	x	06 25 48.0	
CLL				eSg	Sg	06 26 10.0	0.0
	comp=Z,20nm,0.3s						
MORC	Moravsky Berou	1.99	153	ePN	Pn	06 25 41.2	-0.3
MORC				eSG	Sg	06 26 09.9	-0.5
OKC	Ostrava-Krasne	2.14	142	ePG	Pb	06 25 46.5	+0.3
OKC				eSG	Sg	06 26 14.9	-0.3
	comp=Z,20nm,1.1s						
VRAC	Vranov	2.26	172	ePN	Pn	06 25 45.4	+0.2
VRAC				eSG	Sg	06 26 18.3	-0.9
KRUC	Moravsky	2.49	176	ePN	Pn	06 25 49.3	+0.9
KRUC				eSG	Sg	06 26 25.5	-1.2
OJC	Ojcow	2.68	118	ePg	Pg	06 25 57.9	0.0
OJC				eSg	Sg	06 26 33.2	+0.7
NKC	Novy Kostel	2.68	242	ePG	Pb	06 25 55.4	0.0
NKC				eSG	Sg	06 26 32.5	-0.1
	comp=Z,39nm,0.8s						
KHC	Kasperske Hory	2.92	215	ePN	Pn	06 25 54.1	-0.2
KHC				ePG	Pb	06 25 59.4	-0.1
KHC				eSN	Sn	06 26 29.4	-0.7
KHC				eSG	Sg	06 26 38.9	-1.5
	comp=Z,5.6nm,0.2s						
CKRC	Cesky Krumlov	2.97	204	ePG	Pb	06 26 01.1	+0.7
CKRC				eSG	Sg	06 26 40.6	-1.4
MODS	Modra-Piesok	3.26	166	eSG	Sg	06 26 52.5	+1.2
VYHS	Vyhne	3.52	149	ePN	Pb	06 26 06.5	-3.2
CONA	Conrad Observa	3.63	183	i Pn	Pn	06 26 02.7	-1.4
	comp=Z,0.5nm,0.2s						
CONA				eSn	Sn	06 26 47.9	+0.3
	comp=Z,0.9nm,0.2s						
STHS	Stebnicka Huta	3.90	121	ePG	Pg	06 26 22.7	+1.4
ARSA	Arzberg	4.32	186	ePn	Pn	06 26 12.6	-1.0
	comp=Z,0.6nm,0.2s						
ARSA				eSg	Sg	06 27 27.3	+2.1
	comp=Z,2.7nm,0.4s						
KBA	Koelnbreinsper	4.83	203	i Pn	Pn	06 26 19.8	-0.9
	comp=Z,1.6nm,0.5s						
KBA				eSn	Sn	06 27 19.0	+1.7
	comp=Z,1.7nm,0.4s						

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*IDC **02** 06:36:23.7±1.1, 43°.50N×18°.97E, h0km, mb3.4/6, mbtmp3.4/13, ML3.4/7, MS2.9/4, Error ellipse: s-maj=16.0km s-min=10.8km az=27.0*
*RHSSO **02** 06:36:23.8±0.2, 43°.40N×18°.97E, h2km±1km, ML3.7/21*
*PDG **02** 06:36:24.2±0.1, 43°.35N×18°.92E, h10km, MD3.6/12, ML3.5/13, Error ellipse: s-maj=0.3km s-min=0.2km az=90.0*
*BEO **02** 06:36:24.3±0.2, 43°.40N×18°.95E, h3km±2km, ML3.6/9*
*PRU **02** 06:36:26.3±0.0, 43°.52N×18°.81E, h0km*
ISC 02 06:36:23.5±1.0**, 43°.40N**±0°.01×**18°.96E**±0°.01**, h4**km±7km**, n149, σ1s.30**/235**, mb3.5**/6**, 23C-24D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UPM	Unac-Piva	0.20	191	⇓iPg	Pg	06 36 27.7	+0.2
UPM				eSg	Sg	06 36 30.8	+0.6
UPM	Unac-Piva	0.20	191	⇓iPg	Pg	06 36 27.7	+0.2
UPM				i Sg	Sg	06 36 30.0	-0.2
PLE	Pljevlja	0.32	103	⇑iPg	Pg	06 36 30.4	+0.6
PLE				i Sg	Sg	06 36 35.3	+1.3
RUDO	Rudo	0.37	54	ePg	Pg	06 36 30.2	-0.4
RUDO				eSg	Sg	06 36 35.3	-0.2
RUDO	Rudo	0.37	54	⇑iPg	Pg	06 36 30.1	-0.5
RUDO				eSg	Sg	06 36 35.1	-0.4
BBLS	Lazići	0.56	35	ePg	Pg	06 36 34.7	+0.3
BBLS				eSg	Sg	06 36 43.1	+1.4
BBLS	Lazići	0.56	35	⇓iPg	Pg	06 36 34.6	+0.2
BBLS				eSg	Sg	06 36 41.7	0.0
BRY	Bratogost	0.59	212	⇓iPg	Pg	06 36 33.9	-0.8
BRY				eSg	Sg	06 36 42.9	+0.5
BRY	Bratogost	0.59	212	⇓iPg	Pg	06 36 34.0	-0.8
BRY				i Sg	Sg	06 36 41.8	-0.6
NKME	Niksic	0.64	180	⇓iPg	Pg	06 36 35.3	-0.4
NKME				i Sg	Sg	06 36 44.3	+0.4
HAPS	Han Pijesak,BI	0.68	360	ePg	Pg	06 36 36.5	-0.2
HAPS	Han Pijesak,BI	0.68	360	⇓iPg	Pg	06 36 36.4	-0.2
HAPS				eSg	Sg	06 36 45.6	+0.1
KOME	Kolasin	0.69	143	⇓iPg	Pg	06 36 36.9	+0.2
KOME				i Sg	Sg	06 36 46.1	+0.5
SJES	Sjenica	0.76	101	ePg	Pg	06 36 38.2	+0.2
SJES				eSg	Sg	06 36 48.2	+0.4
SJES	Sjenica	0.76	101	ePg	Pg	06 36 37.6	-0.4
SJES				eSg	Sg	06 36 48.0	+0.2
TREB	Trebinje	0.82	213	ePg	Pg	06 36 37.8	-1.4
TREB				eSg	Sb	06 36 51.8	+0.2
TREB	Trebinje	0.82	213	ePg	Pg	06 36 37.7	-1.4
TREB				eSg	Sg	06 36 50.4	+0.6
CEME	Cevo	0.86	182	⇓iPg	Pg	06 36 38.6	-1.3
CEME				i Sg	Sg	06 36 51.2	+0.2
IVA	Berane	0.87	127	⇑iPg	Pg	06 36 40.1	0.0
IVA				i Sg	Sb	06 36 53.7	+0.6
IVAS	Ivanjica	0.89	78	ePg	Pg	06 36 40.2	-0.3
IVAS				eSg	Sb	06 36 54.0	+0.3
DBRK	Dubrovnik	0.94	219	ePg	Pg	06 36 40.1	-1.5
PDG	Podgorica	1.00	167	⇑P	Pg	06 36 41.7	-0.9
PDG				⇑S	Sg	06 36 56.1	+0.6
PDG	Podgorica	1.00	167	ePg	Pg	06 36 41.9	-0.7
PDG				eSg	Sg	06 36 56.1	+0.6
PDG	Podgorica	1.00	167	⇑iPg	Pg	06 36 41.5	-1.1
PDG				i Sg	Sg	06 36 56.2	+0.6
HCY	Herceg Novi	1.01	200	ePg	Pg	06 36 41.7	-1.2
HCY				eSg	Sg	06 36 55.6	-0.5
HCY	Herceg Novi	1.01	200	⇑iPg	Pg	06 36 41.7	-1.2
HCY				i Sg	Sg	06 36 56.9	+0.8
DIVS	Divibare	1.02	47	ePg	Pg	06 36 43.1	0.0
DIVS				eSg	Sb	06 36 58.0	+0.4
DIVS	Divibare	1.02	47	⇓iPg	Pg	06 36 42.5	-0.6
DIVS				eSg	Sg	06 36 55.8	-0.6
STON	Ston	1.06	240	ePg	Pg	06 36 42.7	-1.1
STON				Sg	Sg	06 36 58.0	+0.4
STON	Ston	1.06	240	ePg	Pg	06 36 42.1	-1.8
STON				eSg	Sb	06 36 58.4	-0.2
STON	Ston	1.06	240	ePg	Pg	06 36 42.3	-1.6
STON				eSg	Sg	06 36 57.8	+0.2
PVY	Plav	1.09	137	⇑iPg	Pg	06 36 44.1	-0.3
PVY				i Sg	Sb	06 37 00.7	+1.0
BUM	Brajici-Budva	1.10	182	⇓iPg	Pg	06 36 43.6	-1.0
BUM				i Sg	Sb	06 36 59.9	0.0
TEKS	Tekeris	1.22	20	ePg	Pg	06 36 46.4	-0.4
TEKS				eSg	Sn	06 37 04.1	-0.2
TEKS	Tekeris	1.22	20	ePg	Pg	06 36 45.6	-1.2
TEKS				eSg	Sg	06 37 02.5	-0.1
DRME	Dracevica, Mon	1.23	172	ePg	Pg	06 36 45.7	-1.3
DRME				eSg	Sg	06 37 03.1	+0.2
DRME	Dracevica, Mon	1.23	172	⇑iPg	Pg	06 36 45.9	-1.1
DRME				i Sg	Sn	06 37 04.4	0.0
RICI	Ricice	1.33	275	ePg	Pn	06 36 47.7	-1.2
RICI				Sg	Sb	06 37 06.8	+0.4
GRUS	Gruza	1.36	69	ePg	Pn	06 36 49.7	+0.4
GRUS				eSg	Sn	06 37 08.9	+1.0
BLJ	Bijeljina	1.40	9	ePg	Pn	06 36 48.6	-1.1
BLJ				eSg	Sb	06 37 07.4	-0.9
MAKA	Makarska	1.42	266	ePn	Pn	06 36 48.9	-1.1
MAKA				Sg	Sn	06 37 09.7	+0.5
ULC	Ulcinj	1.46	172	⇓iPg	Pn	06 36 50.5	-0.1
ULC				i Sg	Sg	06 37 12.7	+2.5
SRKY	Kupres RS	1.46	298	⇑iPg	Pn	06 36 49.7	-1.0
SRKY				eSg	Sg	06 37 11.2	+0.8
DOB	Doboj	1.47	335	⇑iPg	Pn	06 36 50.9	+0.2
DOB				eSg	Sg	06 37 10.6	0.0
SELS	Selova	1.59	96	ePg	Pn	06 36 52.7	+0.3
SELS				eSg	Sn	06 37 13.7	+0.3
LSTV	Lastovo	1.64	248	ePn	Pn	06 36 52.8	-0.3
LSTV				Sn	Sg	06 37 16.1	-0.1
MGRS	Mrkonjic Grad	1.69	307	⇑iPn	Pn	06 36 53.6	-0.2
MGRS				eSn	Sb	06 37 17.3	+0.5
BLY	Banja Luka	1.85	317	ePn	Pb	06 36 57.3	-0.7
BLY	Banja Luka	1.85	317	⇑iPn	Pn	06 36 56.6	+0.5
BLY				eSn	Sn	06 37 20.8	+0.8
FRGS	Fruska Gora	1.86	19	⇓P	Pn	06 36 55.7	-0.5
FRGS				⇓S	Sb	06 37 21.7	+0.1
FRGS	Fruska Gora	1.86	19	ePn	Pn	06 36 55.6	-0.5
FRGS				eSn	Sb	06 37 21.5	-0.1
FRGS	Fruska Gora	1.86	19	ePn	Pn	06 36 55.8	-0.3
FRGS				eSn	Sn	06 37 20.5	+0.4
KIJV	Kijevo	1.95	289	ePn	Pb	06 36 58.9	-0.6
A052A	Srbac	1.99	329	ePn	Pn	06 36 57.7	-0.2
A052A				eSn	Sn	06 37 23.4	+0.1
BOVS	Bovan	2.01	82	ePn	Pn	06 36 58.3	+0.1
A050A	Klekovaca	2.06	302	⇑iPn	Pn	06 37 00.0	+1.1
A050A				eSn	Sn	06 37 25.4	+0.3
TIR	Tirane	2.16	162	ePn	Pb	06 37 02.3	-0.9
BARS	Barje	2.17	105	ePn	Pn	06 37 00.9	+0.5
A051A	Mrakovica	2.18	318	⇑iPn	Pn	06 37 01.1	+0.5
A051A				eSn	Sn	06 37 28.6	+0.5
PRIJ	Prijedor	2.25	315	ePn	Pn	06 37 02.3	+0.8
PRIJ				eSn	Sn	06 37 30.4	+0.7
SKO	Skopje	2.32	127	ePn	Pn	06 37 03.4	+0.9
SKO	Skopje	2.32	127	i Pn	Pn	06 37 03.5	+1.0
MORI	Morici	2.41	282	ePn	Pb	06 37 05.7	-1.6
MORI				Sn	Sb	06 37 37.0	-0.3
ZAGS	Zajecar	2.41	79	ePn	Pn	06 37 03.7	0.0
MDVR	Moldovita	2.42	54	⇓P	Pn	06 37 04.5	+0.7
MDVR				⇓S	Sn	06 37 34.7	+0.8
ZIRJ	Zirje	2.42	277	ePn	Pn	06 37 05.7	+1.8
ZIRJ				Sn	Sb	06 37 37.5	-0.3
PRVS	Prvonek	2.46	110	ePn	Pn	06 37 05.0	+0.6
UDBI	Udbina	2.56	297	ePn	Pn	06 37 07.0	+1.2
MOSL	Moslavina	2.71	325	ePn	Pn	06 37 08.3	+0.5
PLIT	Plitvice	2.82	303	ePn	Pn	06 37 10.4	+1.0
MORH	Mrgy, Hungar	2.82	356	⇓P	Pn	06 37 09.1	-0.2
MORH	Mrgy, Hungar	2.82	356	ePn	Pn	06 37 09.2	-0.1
MORH				eSn	Sn	06 37 44.7	+1.0
DUGI	Dugi Otok	2.89	283	ePn	Pn	06 37 12.1	+1.8
HERR	Herculane	2.90	58	⇓P	Pn	06 37 10.9	+0.6
BZS	Buzias	2.92	40	⇑P	Pn	06 37 10.7	+0.1
BZS	Buzias	2.92	40	ePn	Pn	06 37 10.4	-0.3
VIRC	Vir	2.96	289	ePn	Pn	06 37 12.7	+1.5
NVLJ	Novalja	3.17	293	ePn	Pn	06 37 15.5	+1.4
FNA	Florina	3.18	145	ePn	Pn	06 37 16.7	+2.4
MATE	Matera	3.22	212	⇑P	Pn	06 37 15.0	+0.2
VTS	Vitosha	3.23	103	⇓P	Pn	06 37 16.2	+1.1
VTS	Vitosha	3.23	103	ePn	Pn	06 37 15.7	+0.6
VTS	Vitosha	3.23	103	i P	Pn	06 37 15.8	+0.6
KALN	Kalnik	3.26	328	ePn	Pn	06 37 15.9	+0.5
SURR	Surduc	3.26	43	⇑P	Pn	06 37 14.8	-0.6
PTJ	Puntijarka	3.29	321	ePn	Pn	06 37 17.6	+1.7
BOJS	Bojanci	3.38	310	i Pn	Pn	06 37 18.4	+1.4
BOJS	Bojanci	3.38	310	ePn	Pn	06 37 18.0	+0.9
BOJS				eSn	Sn	06 37 58.0	+0.4
GZR	Gura Zlata	3.38	53	⇑P	Pn	06 37 18.1	+0.9
KKB	Krupnik	3.41	115	i P	Pn	06 37 19.0	+1.6
LOBO	Lobor	3.44	324	ePn	Pn	06 37 18.6	+0.8
SIRR	Siria	3.45	33	⇓P	Pn	06 37 17.5	-0.5
CRES	Cresnjev	3.48	315	ePn	Pn	06 37 19.2	+0.8
MPEP	Malo Peshtene	3.49	89	P	Pb	06 37 22.7	-3.1
LEGS	Legarje	3.63	316	i Pn	Pn	06 37 21.5	+1.0
VISS	Visnje	3.79	311	i Pn	Pn	06 37 24.1	+1.3
SMRN	Sveta Marina	3.82	297	ePn	Pn	06 37 23.8	+0.8
CEY	Cerknica	3.99	307	ePn	Pn	06 37 26.1	+0.6
CEY				eSn	Sn	06 38 12.2	-0.5
LOT	Lotru	4.01	58	⇑P	Pn	06 37 26.1	+0.3
SKDS	Skadanscina	4.14	303	ePn	Pn	06 37 27.5	+0.1
SKDS				eSn	Sn	06 38 15.7	-0.5
SOKA	Soboth	4.30	321	i Pn	Pn	06 37 30.3	+0.6
	6.1nm,0.4s,SNR=12						
SOKA				eSn	Sn	06 38 20.9	+0.6
	7.0nm,0.4s						
DRGR		4.31	37	⇓P	Pn	06 37 30.6	+0.8
MARR	Marisel-Cluj	4.41	41	⇑P	Pn	06 37 31.2	0.0
OBKA	Obir	4.41	316	ePn	Pn	06 37 32.3	+1.1
	9.6nm,0.3s,SNR=17						
OBKA				eSn	Sn	06 38 25.0	+1.9
	19nm,0.5s						
OBKA	Obir	4.41	316	ePn	Pn	06 37 31.0	-0.2
OBKA				eSn	Sn	06 38 22.3	-0.7
TIP	Timpagrande	4.53	202	⇑P	Pn	06 37 33.0	0.0
ARSA	Arzberg	4.54	329	i Pn	Pn	06 37 33.7	+0.6
	20nm,0.5s,SNR=16						
ARSA				eSn	Sn	06 38 26.8	+0.5
	18nm,0.5s						
ARSA	Arzberg	4.54	329	ePn	Pn	06 37 33.3	+0.2
ARSA				eSn	Sn	06 38 24.8	-1.5
RONA	Rosalia, Austr	4.69	337	i Pn	Pn	06 37 35.2	+0.2
	4.3nm,0.5s,SNR=4.3						
RONA				eSn	Sn	06 38 29.4	-0.4
	18nm,0.4s						
MYKA	Terra Mystica	4.96	312	i Pn	Pn	06 37 40.0	+1.2
	3.9nm,0.4s						
MYKA				eSn	Sn	06 38 38.3	+1.7
	6.1nm,0.4s						
CONA	Conrad Observa	5.02	335	i Pn	Pn	06 37 41.2	+1.6
	0.8nm,0.2s						
CONA				eSn	Sn	06 38 38.4	+0.3
	18nm,0.5s						
VYHS	Vyhne	5.09	359	ePN	Pn	06 37 41.6	+1.0
VYHS				eSN	Sn	06 38 39.3	-0.5
MODS	Modra-Piesok	5.11	347	ePN	Pn	06 37 42.2	+1.4
MODS				eSN	Sn	06 38 38.2	-2.0
KECS	Kecovo	5.19	11	ePN	Pn	06 37 42.7	+0.8
KECS				eSN	Sn	06 38 39.6	-2.6
DOPR	Dopca	5.25	59	⇓P	Pn	06 37 42.8	+0.1
TRPA	Tarpa	5.35	27	⇓P	Pn	06 37 44.2	+0.1
KBA	Koelnbreinsper	5.40	315	i Pn	Pn	06 37 46.6	+1.6
	2.4nm,0.3s,SNR=12						
KBA				eSn	Sn	06 38 46.0	-1.7
	5.9nm,0.5s						
MLR	Muntele Rosu	5.42	65	Pn	Pn	06 37 47.0	+1.9
	0.4nm,0.3s,baz=210,slow=8.8,SNR=1.6						
MLR				Sn	Sn	06 38 49.0	+1.0
	0.8nm,0.3s,baz=310,slow=20,SNR=4.2						
MLR				LR	LR	06 40 27.3	
	comp=Z,165nm,18.7s,baz=292,slow=45						
	1.1nm,0.3s						
JAVC	Velka Javorina	5.53	351	ePN	Pn	06 37 46.4	-0.2
ABTA	Abfaltersbach	5.66	308	i Pn	Pn	06 37 50.1	+1.7
	2.8nm,0.2s						
ABTA				eSn	Sn	06 38 54.2	+0.4
	2.0nm,0.2s						
BIOA	Bad Ischl, Aus	5.69	321	i Pn	Pn	06 37 49.0	+0.3
	1.9nm,0.2s						
BIOA				eSn	Sn	06 38 56.1	+1.7
	22nm,0.5s						
LANS	Liptovska Anna	5.76	3	ePN	Pn	06 37 53.5	+3.8
VRI	Vrincioaia	6.07	63	⇓P	Pn	06 37 54.0	+0.1
BURAR	Bucovina Array	6.09	44	⇑P	Pn	06 37 55.4	+1.0
VRAC	Vranov	6.13	345	Pn	Pn	06 37 54.9	+0.1
	0.3nm,0.3s,baz=203,slow=21,SNR=1.2						
VRAC				Sn	Sn	06 39 02.9	-2.4
	0.5nm,0.3s,baz=169,slow=17,SNR=2.7						
	1.8nm,0.4s						
STHS	Stebnicka Huta	6.22	14	ePN	Pn	06 37 57.9	+1.9
STHS				eSN	Sn	06 39 06.9	-0.6
WTTA	Wattenberg	6.44	309	ePn	Pn	06 38 01.9	+2.6
	4.0nm,0.4s,SNR=8.1						
WTTA				eSn	Sn	06 39 15.1	+1.8
	8.5nm,0.6s						
WATA	Walderalm	6.52	310	i Pn	Pn	06 38 03.0	+2.8
	17nm,0.5s						
WATA				eSn	Sn	06 39 17.2	+2.2
	5.8nm,0.5s						
GERES	GERESS Array B	6.55	328	Pn	Pn	06 38 01.7	+1.0
	0.7nm,0.3s,baz=151,slow=14,SNR=12						
GERES				Sn	Sn	06 39 13.1	-2.8
	0.5nm,0.3s,baz=142,slow=25,SNR=1.3						
	1.1nm,0.3s						
SQTA	Sankt Quirin	6.66	308	i Pn	Pn	06 38 05.1	+2.9
	7.3nm,0.4s						
SQTA				eSn	Sn	06 39 20.3	+1.7
SQTA				eSn	Sn	06 39 21.0	+2.4
MOTA	Moosalm	6.79	308	i Pn	Pn	06 38 06.6	+2.6
	24nm,0.7s,SNR=14						
MOTA				eSn	Sn	06 39 26.6	+4.8
	7.6nm,0.6s						
KHC	Kasperske Hory	6.83	329	ePN	Pn	06 38 06.7	+2.2
KHC				eSN	Sn	06 39 18.8	-3.9
KRLC	Kraliky	6.84	348	ePN	Pn	06 38 06.5	+1.9
FETA	Feichten	6.84	305	i Pn	Pn	06 38 06.6	+1.9
	6.7nm,0.7s,SNR=8.9						
FETA				eSn	Sn	06 39 27.1	+3.9
	3.4nm,0.7s						
RETA	Reutte	7.06	308	i Pn	Pn	06 38 10.2	+2.6
	1.6nm,0.3s						
RETA				eSn	Sn	06 39 31.0	+2.6
	3.6nm,0.3s						
DPC	Dobruska-Polom	7.18	346	ePN	Pn	06 38 11.2	+2.0
DPC				eSN	Sn	06 39 28.1	-3.1
DAVOX	Davos/Dischmat	7.26	301	Pn	Pn	06 38 11.1	+0.7
	1.2nm,0.3s,baz=126,slow=16,SNR=11						
DAVOX				Sn	Sn	06 39 35.6	+2.2
	0.7nm,0.3s,baz=180,slow=20,SNR=2.4						
DAVOX				LR	LR	06 41 36.4	
	comp=Z,114nm,19.2s,baz=200,slow=43						
	6.1nm,0.6s						
DAVA	Damuels	7.48	304	i Pn	Pn	06 38 06.1	-7.4
	3.0nm,0.5s						
IDI	Anoyia	9.31	148	Pn	Pn	06 38 39.1	+0.6
	0.4nm,0.3s,baz=262,slow=14,SNR=1.3						
IDI				Sn	Sn	06 40 17.3	-6.4
	0.7nm,0.3s,baz=237,slow=22,SNR=2.5						
	6.7nm,0.8s						
AKASG	Malin Array Be	10.11	40	LR	LR	06 43 09.3	
	comp=Z,41nm,20.4s,baz=188,slow=40						
ESDC	Sonseca Array	17.55	266	P	P	06 40 31.9	+1.8
	0.1nm,0.3s,baz=357,slow=21,SNR=2.6						
	0.4nm,0.7s						
FINES	FINESS Array B	18.56	11	P	Pn	06 40 42.0	+0.8
	0.1nm,0.3s,baz=190,slow=9.7,SNR=1.4						
	1.0nm,0.8s						
BELG	Belogornoye	21.10	55	LR	LR	06 49 56.8	
	comp=Z,40nm,20.3s,baz=141,slow=39						
TORD	Torodi Ar. Bea	33.62	211	P	P	06 43 06.8	+1.7
	0.3nm,0.5s,baz=17,slow=10,SNR=2.7						
	0.3nm,0.5s						
BVAR	Borovoye Array	34.90	56	P	P	06 43 16.6	+0.8
	0.4nm,0.6s,baz=298,slow=6.2,SNR=1.5						
	0.4nm,0.6s						
ZALV	Zalesovo Beam	43.24	52	P	P	06 44 24.7	-0.9
	0.4nm,0.4s,baz=279,slow=11,SNR=1.6						
	0.4nm,0.4s						
MKAR	Makanchi Array	43.76	63	P	P	06 44 28.4	-1.5
	0.2nm,0.5s,baz=290,slow=6.0,SNR=2.2						
	0.2nm,0.5s						
SONM	Songino Array	58.13	52	P	P	06 46 18.1	-0.1
	0.4nm,0.6s,baz=300,slow=6.7,SNR=3.6						
	0.4nm,0.6s						
YKA	Yellowknife Ar	68.09	339	P	P	06 47 23.8	0.0
	0.1nm,0.5s,baz=32,slow=5.4,SNR=1.6						
	0.1nm,0.5s						

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*NOU **02** 06:44:27.5, 37°.80S×177°.79E, h59km, MLv3.5/9, Off E. Coast of N. Island, N.Z.*
*WEL **02** 06:44:29.1±0.4, 38°S±4°×17°8E±°, h28km±3km, M3.3/37, ML3.6/38, MLv3.3/37, Error ellipse: s-maj=0.0km s-min=0.0km az=17.8, confirmed*
ISC 02 06:44:29.6±1.4**, 37°.80S**±0°.04×**177°.57E**±0°.04**, h40**km±9km**, n116, σ1s.14**/122**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAZ	Te Kaha	0.17	77	P	Pn	06 44 36.4	-0.3
HAZ				S	Sn	06 44 42.3	+0.7
RUGZ	Raukumara Rang	0.19	154	P	Pn	06 44 36.5	-0.5
RUGZ				S	Sn	06 44 42.4	+0.2
WIZ	White Island	0.40	311	P	Pn	06 44 38.7	-0.4
PKGZ	Pakihiroa	0.41	103	P	Pn	06 44 38.6	-0.6
WSRZ	White Island S	0.42	311	P	Pn	06 44 39.3	0.0
WHRZ	Whale Island	0.48	262	P	Pn	06 44 40.3	+0.3
WHRZ				S	Sn	06 44 49.3	+1.9
TWGZ	Tauwhareparae	0.50	140	P	Pn	06 44 40.9	+0.5
MWZ	Matawai	0.54	184	P	Pn	06 44 40.8	-0.2
MWZ				S	Sn	06 44 49.5	+0.6
URZ	Urewera	0.59	218	P	Pn	06 44 41.6	0.0
URZ	Urewera	0.59	218	P	Pn	06 44 41.5	0.0
URZ				S	Sn	06 44 50.3	+0.3
PUZ	Puketiti	0.61	117	P	Pn	06 44 42.2	+0.3
PUZ				S	Sn	06 44 53.1	+2.6
MXZ	Matakaoa Point	0.63	69	P	Pn	06 44 41.4	-0.7
MXZ	Matakaoa Point	0.63	69	P	Pn	06 44 41.3	-0.7
WMGZ	Waiomatatini S	0.67	92	P	Pn	06 44 43.0	+0.4
TKGZ	Te Karaka	0.68	161	P	Pn	06 44 43.7	+1.0
RAGZ	Rawiri	0.71	190	P	Pn	06 44 43.5	+0.3
EDRZ	Edgecumbe	0.73	244	P	Pn	06 44 43.5	+0.1
MARZ	Manawahe	0.73	255	P	Pn	06 44 43.3	-0.3
OPRZ	Ohinepanea	0.81	266	P	Pn	06 44 44.0	-0.5
CNGZ	Carnagh Statio	0.85	144	P	Pn	06 44 45.6	+0.5
RIGZ	Rimuhau	0.92	171	P	Pn	06 44 46.6	+0.4
MUGZ	Murupara	0.93	223	P	Pn	06 44 46.0	-0.2
MKRZ	Makatiti	0.94	248	P	Pn	06 44 46.9	+0.5
RTZ	Ruatahuna	0.94	209	P	Pn	06 44 46.1	-0.3
TARZ	Mount Tarawera	0.95	242	P	Pn	06 44 46.8	+0.2
RRRZ	Republican Roa	0.99	237	P	Pn	06 44 47.0	-0.1
OMRZ	Omania	1.00	251	P	Pn	06 44 47.1	0.0
TGRZ	Tauranga	1.04	273	P	Pn	06 44 47.1	-0.6
HLRZ	Highlands Stat	1.06	244	P	Pn	06 44 48.2	+0.1
KARZ	Kaharoa	1.07	257	P	Pn	06 44 48.0	-0.2
NGRZ	Ngongotaha	1.14	254	P	Pn	06 44 49.7	+0.6
PRRZ	Plateau Road	1.17	233	P	Pn	06 44 49.3	-0.2
MYRZ	Mayor Island	1.18	296	P	Pn	06 44 48.9	-0.6
HRRZ	Handcock Road	1.18	239	P	Pn	06 44 51.6	+2.0
RAHZ	Arahi	1.18	199	P	Pn	06 44 50.2	+0.5
MTHZ	Maungataniwha	1.20	208	P	Pn	06 44 49.7	-0.2
KNZ	Kokohu	1.23	176	P	Pn	06 44 50.0	-0.3
ALRZ	Allen Road	1.23	231	P	Pn	06 44 50.3	-0.1
GRRZ	Galatos Road	1.28	244	P	Pn	06 44 51.0	+0.1
KMRZ	Kaimai	1.29	267	P	Pn	06 44 50.6	-0.6
WHHZ	Waihua	1.31	192	P	Pn	06 44 52.3	+0.9
WPRZ	Whakapapatarin	1.32	236	P	Pn	06 44 51.5	-0.1
MHGZ	Mahia Peninsul	1.38	169	P	Pn	06 44 52.3	-0.1
NMHZ	Naumai	1.43	205	P	Pn	06 44 53.8	+0.7
ARHZ	Aropaoanui	1.53	197	P	Pn	06 44 55.5	+1.0
KUTZ	Kaahu Road	1.54	243	P	Pn	06 44 54.8	+0.2
BKZ	Black Stump Fm	1.61	211	P	Pn	06 44 55.5	-0.1
BKZ	Black Stump Fm	1.61	211	P	Pn	06 44 55.5	-0.1
TOZ	Tahuroa Road	1.64	272	P	Pn	06 44 55.3	-0.6
TLZ	Tolley Road	1.69	251	P	Pn	06 44 56.4	-0.2
RATZ	Rangitukua	1.77	232	P	Pn	06 44 58.2	+0.4
MCHZ	McNeill Hill	1.78	202	P	Pn	06 45 00.3	+2.4
RITZ	Rihia Road	1.79	228	P	Pn	06 44 58.4	+0.4
KUZ	Kuaotunu	1.81	305	P	Pn	06 44 57.0	-1.2
KUZ	Kuaotunu	1.81	305	P	Pn	06 44 57.0	-1.2
KWHZ	Kaweka Forest	1.86	209	P	Pn	06 44 59.8	+0.8
CKHZ	Cape Kidnapper	1.90	192	P	Pn	06 44 58.9	-0.6
TMVZ	Te Maari	1.97	227	P	Pn	06 45 00.8	+0.2
NTVZ	North Tongarir	1.98	228	P	Pn	06 45 00.9	+0.3
ETVZ	East Tongariro	1.98	227	P	Pn	06 45 01.0	+0.2
KRVZ	Karewarewa	2.00	229	P	Pn	06 45 01.5	+0.6
OTVZ	Oturere	2.03	227	P	Pn	06 45 01.5	+0.1
NNVZ	North Ngauruho	2.03	228	P	Pn	06 45 01.9	+0.4
MKAZ	Moumakai	2.04	289	P	Pn	06 45 00.8	-0.5
WTVZ	West Tongariro	2.04	229	P	Pn	06 45 01.9	+0.4
SNVZ	South Ngauruho	2.06	227	P	Pn	06 45 02.0	+0.2
BHHZ	Black Hill Sta	2.06	214	P	Pn	06 45 02.0	+0.2
KAHZ	Kahuranaki	2.07	195	P	Pn	06 45 01.5	-0.4
NGZ	Ngauruhoe	2.07	228	P	Pn	06 45 02.4	+0.4
TUVZ	Tukino	2.10	225	P	Pn	06 45 04.0	+1.6
TWVZ	Taurewa	2.10	232	P	Pn	06 45 04.6	+2.2
MOVZ	Moawhango	2.15	221	P	Pn	06 45 02.7	-0.3
FWVZ	Far West T-bar	2.15	227	P	Pn	06 45 04.7	+1.5
WNVZ	Wahianoa	2.17	225	P	Pn	06 45 03.4	0.0
TRVZ	Turoa	2.18	226	P	Pn	06 45 04.9	+1.3
WIAZ	Waiheke Island	2.19	296	P	Pn	06 45 02.8	-0.6
HIZ	Hauiti	2.26	251	P	Pn	06 45 04.9	+0.5
HIZ	Hauiti	2.26	251	P	Pn	06 45 05.0	+0.6
ETAZ	East Tamaki Re	2.27	291	P	Pn	06 45 04.4	-0.1
MTVZ	Mangateitei	2.29	225	P	Pn	06 45 06.1	+1.2
GRZ	Great Barrier	2.29	312	P	Pn	06 45 03.8	-1.0
PKVZ	Pokaka	2.29	229	P	Pn	06 45 05.4	+0.4
PXZ	Pawanui	2.30	194	P	Pn	06 45 03.6	-1.4
MBAZ	Motutapu North	2.37	295	P	Pn	06 45 05.6	-0.2
PNHZ	Pukenui	2.37	206	P	Pn	06 45 05.8	-0.2
PRHZ	Porangahau	2.57	196	P	Pn	06 45 07.0	-1.7
VRZ	Vera Road	2.58	238	P	Pn	06 45 09.9	+1.2
RVAZ	Riverhead Bore	2.60	292	P	Pn	06 45 09.2	+0.2
DVHZ	Dannevirke	2.73	203	P	Pn	06 45 09.7	-1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WAZ	Wanganui	2.81	225	P	Pn	06 45 13.2	+1.2
PRWZ	Pori Road	3.02	204	P	Pn	06 45 14.8	-0.1
BFZ	Birch Farm	3.06	199	P	Pn	06 45 14.1	-1.4
BFZ	Birch Farm	3.06	199	P	Pn	06 45 14.0	-1.4
NEZ	North Egmont	3.10	241	P	Pn	06 45 18.8	+2.8
KHEZ	Kahui Hut	3.17	241	P	Pn	06 45 19.7	+2.8
KHEZ	Kahui Hut	3.17	241	P	Pn	06 45 19.2	+2.2
WCZ	Waipu Caves	3.18	305	P	Pn	06 45 16.8	-0.3
MRZ	Mangatainoka R	3.25	208	P	Pn	06 45 16.7	-1.4
HOWZ	Holdsworth Sta	3.48	207	P	Pn	06 45 19.2	-2.1
OGWZ	Otaki Gorge	3.55	211	P	Pn	06 45 20.3	-1.8
TMWZ	Te Maipa	3.55	201	P	Pn	06 45 19.7	-2.5
KIW	Kapiti Island	3.69	213	P	Pn	06 45 22.5	-1.6
MTW	Mount Morrison	3.72	205	P	Pn	06 45 21.9	-2.6
CAW	Cannon Point	3.83	210	P	Pn	06 45 23.5	-2.6
OUZ	Omahuta	4.11	308	P	Pn	06 45 30.0	+0.2
OUZ	Omahuta	4.11	308	P	Pn	06 45 30.0	+0.2
DUWZ	D'Urville Isla	4.13	222	P	Pn	06 45 28.9	-1.2
TCW	Tory Channel	4.26	216	P	Pn	06 45 29.7	-2.1
TUWZ	Tuamarina	4.58	217	P	Pn	06 45 34.1	-2.2
BSWZ	Blackbirch Sta	4.84	215	P	Pn	06 45 38.2	-1.6
QRZ	Quartz Range	4.94	231	P	Pn	06 45 40.3	-1.0
MRNZ	Matariki Terra	5.17	224	P	Pn	06 45 41.8	-2.7
KHZ	Kahutara	5.55	213	P	Pn	06 45 48.7	-0.9
LTZ	Lake Taylor	6.42	217	P	Pn	06 45 59.1	-2.5
CTZ	Chatham Island	7.39	145	P	Pn	06 46 14.2	-0.7
ODZ	Otahua Downs	8.91	213	P	Pn	06 46 32.9	-2.8

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*IDC **02** 06:45:19.5±0.8, 4°.06S×151°.41E, h90^{km}±8^{km}, mb3.4/5, mbtmp3.7/5, MS3.0/1, Error ellipse: s-maj=27.3km s-min=14.8km az=159.0*

ISC 02 06:45:20.5±0.8**, 4°.2S**±0°.2×**151°.5E**±0°.1**, h100**^{km}**, n7, σ0^{s}.94**/11**, mb3.4**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	0.56	101	P	Pn	06 45 36.5	-0.2
	137nm,0.3s,baz=327,slow=1.2,SNR=20						
KRVT				S	Sn	06 45 49.1	+0.3
	301nm,0.4s,baz=197,slow=19,SNR=7.9						
WRA	Warramunga Arr	22.89	225	P	P	06 50 14.6	-1.4
	1.5nm,0.5s,baz=50,slow=10.0,SNR=21						
WRA				pP	pP	06 50 35.9	+0.4
	2.1nm,0.7s,baz=52,slow=9.9,SNR=7.2						
WRA				LR	LR	06 58 54.9	
	comp=Z,34nm,18.6s,baz=50,slow=36						
	1.5nm,0.5s						
ASAR	Alice Springs	25.74	220	P	P	06 50 42.7	+0.8
	0.4nm,0.3s,baz=50,slow=9.0,SNR=11						
ASAR				pP	pP	06 51 03.5	-0.1
	1.1nm,0.8s,baz=56,slow=9.1,SNR=6.9						
	0.4nm,0.3s						
ZALV	Zalesovo Beam	79.92	327	P	P	06 57 19.4	+1.0
	0.2nm,0.3s,baz=108,slow=7.7,SNR=1.6						
	0.2nm,0.3s						
ILAR	Eielson Array	82.10	22	P	P	06 57 28.1	-1.6
	0.2nm,0.7s,baz=254,slow=5.7,SNR=5.3						
	0.2nm,0.7s						
NVAR	Mina Array Bea	92.75	52	P	P	06 58 23.1	+0.9
	0.3nm,0.8s,baz=224,slow=5.0,SNR=2.0						
	0.3nm,0.8s						
TORD	Torodi Ar. Bea	148.87	289	PKPbc	PKPbc	07 04 57.5	-0.1
	0.4nm,0.4s,baz=86,slow=2.2,SNR=6.4						
TORD				pPKPbc	pPKPdf	07 05 20.6	-0.2
	0.6nm,1.1s,baz=82,slow=3.1,SNR=2.1						

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*IDC **02** 06:58:28.3±1.7, 5°.55S×147°.11E, h173^{km}±14^{km}, mb3.9/6, mbtmp4.5/10, MS3.4/1, Error ellipse: s-maj=22.2km s-min=11.4km az=120.0*

*NEIC **02** 06:58:29.4±0.9, 5°.52S±0°.06×147°.10E±0°.07, h169^{km}±8^{km}, mb4.4/21, Error ellipse: s-maj=11.8km s-min=7.4km az=57.0*

*DJA **02** 06:58:31.7±0.8, 6°S±3°×14°7E±°, h31^{km}±10^{km}, M4.9/18, mb4.7/18, mB5.5/4, MLv5.0/4, Mw(mB)5.0/4, MwMwp4.8/1, Mwp5.2/1*

ISC 02 06:58:31.7±0.5**, 5°.72S**±0°.06×**147°.23E**±0°.06**, h200**^{km}**, n67, σ1^{s}.57**/56**, mb4.2**/14**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.66	181	P	Pn	06 59 28.1	-1.4
	356nm,0.3s,baz=34,slow=5.1,SNR=136						
PMG				S	Sn	07 00 11.2	-3.6
	194nm,0.3s,baz=285,slow=20,SNR=5.8						
PMG	Port Moresby	3.66	181	Pn	Pn	06 59 28.2	-1.2
PMG				Sn	Sn	07 00 12.0	-2.8
PMG	Port Moresby	3.66	181	P	Pn	06 59 28.0	-1.4
KRVT	Keravat (AS076	4.97	74	P	Pn	06 59 43.6	-2.3
	169nm,0.5s,baz=333,slow=3.9,SNR=8.2						
RABL	Rabaul	5.14	73		Pn	06 59 46.4	-1.6
RABL	Rabaul	5.14	73	P	Pn	06 59 46.4	-1.6
MMPI	Merauke	7.33	248	P	Pn	07 00 18.6	+2.3
	13nm,0.7s,0.1nm						
GENI	Genyem	7.70	293	P	Pn	07 00 26.3	+5.1
	89nm,0.6s,0.5nm						
COEN	Coen	9.11	206	Pn	Pn	07 00 39.5	0.0
COEN	Coen	9.11	206	P	Pn	07 00 40.3	+0.8
SMPI	Sarmi	9.28	293	P	Pn	07 00 46.9	+5.2
	35nm,1.3s,9µm						
SRPI	Serui, Papua	11.62	289	P	P	07 01 18.7	+1.5
BAKI	Biak	11.98	292	P	P	07 01 22.9	+1.7
	1.3nm,0.7s						
MTSU	Mount Surprise	12.66	193	P	P	07 01 28.0	-0.8
HNR	Honiara	13.13	107	P	Pn	07 01 31.2	+0.2
	866nm,0.4s,baz=258,slow=7.5,SNR=5.9						
HNR	Honiara	13.13	107	Pn	Pn	07 01 31.0	+0.1
TV1H	Townsville Har	13.47	182	P	P	07 01 37.0	-0.7
CTA	Charters Tower	14.32	184	P	P	07 01 47.0	-0.1
	9.1nm,0.6s,baz=358,slow=16,SNR=4.7						
CTAO	Charters Tower	14.32	184	Pn	Pn	07 01 45.2	-0.5
CTAO	Charters Tower	14.32	184	P	P	07 01 48.6	+1.5
FAKI	Fak Fak	15.20	280	Pn	Pn	07 01 52.5	-4.1
SAUI	Saumlaki	15.98	261	P	Pn	07 02 16.4	+10
	326nm,1.1s						
KDU	Kakadu	16.13	244	P	P	07 02 06.0	-1.2
QIS	Mount Isa	16.51	206	P	Pn	07 02 13.1	+0.8
BNDI	Bandanaira	17.30	273	P	Pn	07 02 33.8	+12
	308nm,1.2s						
MTN	Manton Dam	17.39	245	P	P	07 02 19.4	-1.7
MTN				IAmb	IAmb	07 02 37.3	
	comp=Z,12nm,0.6s						
WB0	Warramunga Arr	18.74	221	P	P	07 02 35.3	-0.4
WB0				IAmb	IAmb	07 02 37.0	
	comp=Z,31nm,1.1s						
WR0	Warramunga Arr	18.78	220	P	P	07 02 36.1	-0.1
WRAB	Tennant Creek	18.88	220	P	P	07 02 37.4	+0.1
WB2	Warramunga Arr	18.89	220	P	P	07 02 37.4	+0.1
WRA	Warramunga Arr	18.90	220	P	P	07 02 37.5	+0.1
	comp=Z,23nm,0.5s,baz=41,slow=12,SNR=132						
WRA				S	S	07 05 59.2	-2.4
	comp=Z,9.6nm,0.9s,baz=39,slow=20,SNR=10						
WRA	Warramunga Arr	18.90	220	P	P	07 02 37.7	+0.2
EIDS	Eidsvold	19.88	170	P	P	07 02 49.8	+1.9
EIDS				IAmb	IAmb	07 03 17.3	
	comp=Z,10nm,1.2s						
LBMI	Labuha	20.33	284	P	Pn	07 03 08.0	+10
KNRA	Kununurra	20.65	240	P	P	07 02 55.0	-1.2
KNRA				IAmb	IAmb	07 03 15.7	
	comp=Z,6.6nm,0.7s						
KNRA	Kununurra	20.65	240	P	P	07 02 56.8	+0.6
TNTI	Ternate	20.86	287	P	Pn	07 03 13.7	+9.2
	comp=Z,30nm,0.4s						
SANI	Sanana	21.50	279	P	P	07 03 22.0	+17
	comp=Z,10nm,0.7s						
AS31	Alice Springs	21.98	214	P	P	07 03 10.9	+1.0
AS31				IAmb	IAmb	07 03 15.1	
	comp=Z,9.7nm,0.8s						
ASAR	Alice Springs	21.98	214	P	P	07 03 10.6	+0.7
	comp=Z,20nm,0.6s,baz=50,slow=8.4,SNR=300						
ASAR				S	S	07 07 00.4	+2.3
	comp=Z,15nm,0.9s,baz=30,slow=22,SNR=30						
	comp=Z,20nm,0.6s						
ASAR	Alice Springs	21.98	214	P	P	07 03 10.9	+1.0
SOEI	Soe	23.10	259	P	P	07 03 38.6	+18
	comp=Z,19nm,1.2s						
FITZ	Fitzroy Crossi	24.41	238	P	P	07 03 31.3	-0.7
DZM	Mont Dzumac	24.68	133	P	P	07 03 35.5	+0.9
	comp=Z,7.3nm,0.8s,baz=293,slow=23,SNR=18						
	comp=Z,7.3nm,0.8s						
DZM	Mont Dzumac	24.68	133	P	P	07 03 36.0	+1.4
DZM				IAmb	IAmb	07 03 48.0	
	comp=Z,26nm,1.4s						
ARMA	Armidale	24.92	171	P	P	07 03 39.0	+2.3
ARMA				IAmb	IAmb	07 03 41.2	
	comp=Z,5.1nm,0.9s						
FORT	Forrest	30.76	214	P	P	07 04 29.1	+0.6
H11S3	WAKE ISLAND Hy	30.77	38	T	T	07 38 22.6	
	baz=220						
H11S2	WAKE ISLAND Hy	30.78	38	T	T	07 38 26.4	
	baz=220						
H11S1	WAKE ISLAND Hy	30.79	38	T	T	07 38 24.9	
	baz=220						
H11N1	WAKE ISLAND Hy	31.83	37	T	T	07 39 44.0	
	baz=219						
H11N3	WAKE ISLAND Hy	31.84	37	T	T	07 39 53.0	
	baz=219						
H11N2	WAKE ISLAND Hy	31.84	37	T	T	07 39 35.3	
	baz=219						
MORW	Morawa	37.53	228	P	P	07 05 26.7	-0.1
MORW				IAmb	IAmb	07 05 41.8	
	comp=Z,8.8nm,1.2s						
AFI	Afiamalu	41.15	105	LR	LR	07 20 22.4	
	comp=Z,49nm,21.3s,baz=64,slow=32						
RTZ	Ruatahuna	42.41	145	P	P	07 06 08.6	+1.8
RTZ				IAmb	IAmb	07 06 28.4	
	comp=Z,9.3nm,1.3s						
BKZ	Black Stump Fm	42.51	146	P	P	07 06 09.9	+2.4
BKZ				IAmb	IAmb	07 06 10.9	
	comp=Z,24nm,1.3s						
ULN	Ulaanbaatar	63.98	331	P	P	07 08 42.8	-1.1
SONM	Songino Array	64.27	331	P	P	07 08 43.1	-2.7
	comp=Z,0.2nm,0.5s,baz=159,slow=4.5,SNR=2.1						
SONM	Songino Array	64.27	331	P	P	07 08 45.0	-0.8
VNDA	Vanda	72.18	177	P	P	07 09 35.3	+1.1
	comp=Z,2.3nm,0.9s,baz=336,slow=8.1,SNR=5.3						
	comp=Z,2.3nm,0.9s						
VNDA	Vanda	72.18	177	P	P	07 09 36.2	+2.0
VNDA				IAmb	IAmb	07 09 40.9	
	comp=Z,6.0nm,1.2s						
MLY	Manley	83.77	22	P	P	07 10 37.9	-0.3
QSPA	South Pole Qui	84.25	180	P	P	07 10 40.9	+0.1
	comp=Z,1.3nm,0.5s,baz=78,slow=19,SNR=19						
	comp=Z,1.3nm,0.5s						
ILAR	Eielson Array	85.13	23	P	P	07 10 42.9	-2.0
	comp=Z,1.0nm,0.7s,baz=252,slow=4.9,SNR=15						
	comp=Z,1.0nm,0.7s						
NVAR	Mina Array Bea	97.01	52	P	P	07 11 41.9	+0.6
	comp=Z,0.2nm,0.5s,baz=239,slow=5.1,SNR=2.3						
	comp=Z,0.2nm,0.5s						
TORD	Torodi Ar. Bea	145.25	285	PKPbc	PKPdf	07 17 44.8	-1.8
	comp=Z,0.4nm,0.5s,baz=67,slow=4.0,SNR=6.7						

NNC 02 07:05:16.3±4.0**, 54°.24N**×**86°.63E, h0**^{km}**, mb4.2, mpv3.9, 12C-3D, Error ellipse: s-maj=32.4km s-min=25.4km az=77.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	6.03	237	⇑Pn	Pn	07 06 46.9	+0.2
	8.5nm,0.4s						
KURK				⇓Sn	Sn	07 07 58.4	+2.0
	7.3nm,0.7s						
KURK				⇑Lg	Lg	07 08 30.4	
	25nm,0.8s						
KURBB	Kurchatov Arra	6.13	237	⇑Pn	Pn	07 06 48.2	+0.1
	12nm,0.3s,baz=52,slow=13						
KURBB				⇑Sn	Sn	07 07 58.6	-0.3
	44nm,0.7s,baz=59,slow=24						
KURBB				⇑Lg	Lg	07 08 31.8	
	21nm,0.6s						
MK31	Makanchi Array	7.95	202	⇑Pn	Pn	07 07 15.0	+1.9
	0.9nm,0.3s,baz=26,slow=14,SNR=121						
MK31				⇑Sn	Sn	07 08 45.8	+2.1
	1.9nm,0.5s,baz=25,slow=27,SNR=9.2						
MK31				⇑Lg	Lg	07 09 30.9	
	5.0nm,0.9s						
MAKZ	Makanchi	8.01	204	⇑Pn	Pn	07 07 15.9	+2.0
	1.6nm,0.4s						
MAKZ				⇑Sn	Sn	07 08 46.0	+0.9
	1.5nm,0.6s						
MAKZ				⇑Lg	Lg	07 09 31.0	
	2.7nm,0.7s						
BVA0	Borovoye Array	9.72	269	⇓P	Pn	07 07 35.9	-1.4
	2.7nm,0.5s						
BRVK	Borovoye	9.78	270	⇓P	Pn	07 07 37.0	-1.1
	2.0nm,0.5s						
OTUK	Ortayu	10.77	242	⇑P	Pn	07 07 48.8	-3.0
	1.0nm,0.5s						

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*ISK **02** 07:18:49.8, 39°.51N×26°.07E, h10^{km}, ML3.4/32*

*ATH **02** 07:18:50.6, 39°.50N×26°.10E, h13^{km}±1^{km}, ML3.0/9, Error ellipse: s-maj=1.9km s-min=0.9km az=253.0*

*DDA **02** 07:18:50.2±0.0, 39°.51N×26°.11E, h11^{km}, ML3.1*

*THE **02** 07:18:50.5, 39°.51N×26°.07E, h10^{km}±2^{km}, ML2.8/6, Error ellipse: s-maj=2.0km s-min=0.9km az=148.0*

ISC 02 07:18:50.3±0.8**, 39°.51N**±0°.02×**26°.07E**±0°.02**, h12**^{km}±5^{km}**, n69, σ0^{s}.53**/100**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.05	95	P	Pg	07 18 52.5	0.0
KOCA				S	Sg	07 18 54.0	-0.2
GPNR	Gulpinar-Canak	0.07	137	Pg	Pg	07 18 52.4	-0.3
PRK	Paraskevi	0.30	149	P	Pg	07 18 56.5	+0.1
PRK				S	Sg	07 19 00.9	+0.4
	12µm,0.4s						
PRK	Paraskevi	0.30	149	P	Pg	07 18 56.6	+0.2
PRK				S	Sg	07 19 00.3	-0.2
PRK				AML	AML	07 19 01.4	
	comp=E,25785µm,0.3s						
PRK				AML	AML	07 19 02.9	
	comp=N,20145µm,0.4s						
BOZC	Bozcaada	0.34	357	Pg	Pg	07 18 57.2	+0.2
SIGR	SIGRI	0.34	210	P	Pg	07 18 57.1	0.0
SIGR				S	Sg	07 19 02.0	+0.4
	comp=N,3µm,0.3s						
SIGR	SIGRI	0.34	210	Pg	Pg	07 18 57.1	0.0
SIGR	SIGRI	0.34	210	P	Pg	07 18 57.2	+0.1
SIGR				S	Sg	07 19 02.0	+0.4
SIGR				AML	AML	07 19 02.4	
	comp=N,7840µm,0.3s						
SIGR				AML	AML	07 19 02.8	
	comp=E,5085µm,0.3s						
EZN	Ezine	0.37	31	P	Pg	07 18 57.7	0.0
EZN				S	Sg	07 19 03.2	+0.5
	comp=E,2µm,0.4s						
EZN	Ezine	0.37	31	Pg	Pg	07 18 57.7	0.0
BAYC	CANAKKALE_Bayr	0.43	57	P	Pg	07 18 58.5	-0.3
BAYC				S	Sg	07 19 04.1	-0.5
BAYC				*i* AML	AML	07 19 05.0	
	comp=E,2µm,0.3s						
ECEA	Canakkale, Ece	0.54	8	P	Pg	07 19 01.0	+0.1
ECEA				S	Sb	07 19 09.3	-0.2
ECEA				*i* AML	AML	07 19 14.0	
	comp=E,1µm,0.4s						
COMU	Canakkale	0.67	27	Pg	Pg	07 19 03.0	-0.2
GOKA	anakkale-Gk	0.69	350	P	Pg	07 19 03.6	-0.2
GOKA				S	Sg	07 19 13.2	+0.3
GOKA				*i* AML	AML	07 19 18.0	
	comp=E,823nm,0.5s						
GOKA				*i* AML	AML	07 19 20.0	
	comp=E,789nm,0.5s						
GADA	Gvkgeada	0.70	349	Pg	Pg	07 19 03.3	-0.5
BUHA	Balikesir, Bur	0.78	90	P	Pg	07 19 05.3	0.0
BUHA				S	Sg	07 19 15.5	+0.1
BUHA				*i* AML	AML	07 19 19.0	
	comp=E,771nm,0.4s						
BUHA				*i* AML	AML	07 19 19.0	
	comp=E,937nm,0.3s						
DKL	Dikili	0.78	124	Pg	Pb	07 19 06.1	+0.4
LIA	Limnos Island	0.79	300	P	Pg	07 19 05.9	+0.4
LIA				S	Sb	07 19 17.6	+1.0
	comp=E,2µm,0.4s						
LIA	Limnos Island	0.79	300	P	Pg	07 19 05.9	+0.4
LIA				S	Sb	07 19 17.6	+1.0
LIA				AML	AML	07 19 19.1	
	comp=E,2873µm,0.3s						
LIA				AML	AML	07 19 22.5	
	comp=N,3421µm,0.4s						
KARB	zmir-Karabur	0.88	162	P	Pg	07 19 07.0	-0.3
KARB				S	Sb	07 19 20.1	+0.9
KARB				*i* AML	AML	07 19 21.0	
	comp=N,1µm,0.4s						
KARB				*i* AML	AML	07 19 21.0	
	comp=N,914nm,0.3s						
CANM	Can-anakkale	0.91	56	Pg	Pg	07 19 07.1	-0.7
GELI	Tayfur-Gelibol	0.94	19	Pg	Pg	07 19 08.0	-0.4
ZEDA	zmir-Bergama	0.95	124	P	Pg	07 19 08.5	-0.1
ZEDA				S	Sn	07 19 22.7	-0.2
ZEDA				*i* AML	AML	07 19 23.0	
	comp=N,588nm,0.5s						
ZEDA				*i* AML	AML	07 19 24.0	
	comp=N,714nm,0.3s						
LPK	Lapseki	1.01	31	Pg	Pg	07 19 09.3	-0.5
LPK				Sg	Sb	07 19 23.8	+0.7
PSRA	Psara	1.04	203	P	Pb	07 19 10.5	+0.2
PSRA				S	Sb	07 19 24.9	+1.1
PSRA				AML	AML	07 19 29.3	
	comp=E,4797µm,0.2s						
PSRA				AML	AML	07 19 30.0	
	comp=N,4649µm,0.3s						
SMTH	Samothraki Isl	1.05	337	P	Pb	07 19 10.2	-0.2
SMTH				S	Sg	07 19 24.5	+0.4
	comp=N,372nm,0.5s						
SMTH	Samothraki Isl	1.05	337	P	Pb	07 19 10.2	-0.2
SMTH				S	Sg	07 19 24.5	+0.4
SMTH				AML	AML	07 19 25.5	
	comp=E,744µm,0.5s						
SMTH				AML	AML	07 19 25.5	
	comp=N,731µm,0.5s						
CHOS	Chios island	1.12	181	P	Pb	07 19 11.0	-0.5
CHOS	Chios island	1.12	181	Pn	Pb	07 19 11.1	-0.5
CHOS	Chios island	1.12	181	P	Pb	07 19 10.9	-0.7
CHOS				S	Sb	07 19 25.6	-0.5
CHOS				AML	AML	07 19 29.9	
	comp=E,3990µm,0.3s						
CHOS				AML	AML	07 19 31.1	
	comp=N,2594µm,0.5s						
CAVK	Edirne/Enez-Ca	1.19	3	P	Pb	07 19 12.5	-0.2
CAVK				S	Sn	07 19 29.2	+0.4
CAVK				*i* AML	AML	07 19 34.0	
	comp=N,391nm,0.9s						
CAVK				*i* AML	AML	07 19 36.0	
	comp=N,456nm,0.7s						
ERIK	Erikli-Kesan	1.21	16	Pn	Pn	07 19 12.5	-0.5
URLA	Izmir	1.22	160	Pn	Pn	07 19 12.3	-0.8
ENEZ	Enez	1.23	3	Pn	Pn	07 19 13.2	-0.1
STEP	BALIKESIR_Sava	1.28	95	P	Pn	07 19 14.1	+0.1
STEP				S	Sg	07 19 33.0	+1.5
STEP				*i* AML	AML	07 19 34.0	
	comp=N,344nm,0.5s						
STEP				*i* AML	AML	07 19 35.0	
	comp=N,502nm,0.4s						
KRBG	Karabiga-Canak	1.29	46	Pn	Pn	07 19 14.2	0.0
ZEYE	Izmir, Urla-Ze	1.31	165	P	Pn	07 19 13.8	-0.6
ZEYE				S	Sb	07 19 31.9	+0.3
ZEYE				*i* AML	AML	07 19 35.0	
	comp=N,558nm,0.6s						
ZEYE				*i* AML	AML	07 19 37.0	
	comp=N,513nm,0.5s						
BLCB	Balcova	1.35	146	P	Pb	07 19 15.9	+0.4
BLCB				S	Sb	07 19 32.7	-0.1
BLCB	Balcova	1.35	146	Pn	Pn	07 19 15.2	+0.2
KNL	Balıkesir	1.35	55	P	Pn	07 19 15.1	+0.1
KNL				S	Sg	07 19 33.5	-0.3
KNL				*i* AML	AML	07 19 34.0	
	comp=N,667nm,0.6s						
GONE	Gonen-Balikesi	1.35	66	Pn	Pb	07 19 15.6	0.0
GONE				Sn	Sg	07 19 33.7	-0.2
ALN	Alexandroupoli	1.39	359	P	Pn	07 19 15.5	0.0
ALN	Alexandroupoli	1.39	359	Pn	Pn	07 19 15.7	+0.2
ALN	Alexandroupoli	1.39	359	P	Pn	07 19 15.6	+0.2
ALN				S	Sn	07 19 32.4	-1.4
ALN				AML	AML	07 19 35.4	
	comp=N,388µm,0.5s						
ALN				AML	AML	07 19 41.9	
	comp=E,482µm,0.3s						
BALB	Balikesir	1.40	84	Pn	Pn	07 19 15.7	0.0
BALB				Sn	Sg	07 19 35.1	-0.3
BKES	Balkesir-Mer	1.45	80	P	Pn	07 19 16.7	+0.3
BKES				S	Sg	07 19 36.5	-0.5
BKES				*i* AML	AML	07 19 38.0	
	comp=E,375nm,0.3s						
RKY	Sarkoy-Tekirda	1.45	35	Pn	Pn	07 19 16.4	0.0
AKS	Akhisar	1.49	114	Pn	Pn	07 19 16.6	-0.3
THAS	Thassos island	1.51	317	P	Pn	07 19 16.8	-0.4
THAS				S	Sn	07 19 35.5	-1.3
	comp=E,148nm,0.7s						
THAS	Thassos island	1.51	317	P	Pn	07 19 16.8	-0.4
THAS				AML	AML	07 19 39.0	
	comp=N,292µm,0.5s						
THAS				AML	AML	07 19 41.3	
	comp=E,223µm,0.5s						
DGB	zmir	1.58	156	P	Pb	07 19 19.2	-0.3
DGB				S	Sb	07 19 40.4	+1.0
EDC	Edincik	1.61	58	Pn	Pn	07 19 18.1	-0.5
GOMA	Golmarmara-Man	1.64	118	Pn	Pb	07 19 19.9	-0.6
UKOP	Uzunkopru-Edir	1.68	15	Pn	Pn	07 19 19.9	+0.5
RDO	Rodhopi	1.69	346	Pn	Pn	07 19 20.4	+0.8
RDO	Rodhopi	1.69	346	P	Pn	07 19 19.0	-0.6
KYMI	Kymi, Euboea I	1.77	241	P	Pn	07 19 19.7	-1.0
KYMI				AML	AML	07 19 50.1	
	comp=E,318µm,0.4s						
KYMI				AML	AML	07 19 50.1	
	comp=N,302µm,0.9s						
BAND	Balkesir-Ban	1.77	61	P	Pn	07 19 20.8	0.0
BAND				S	Sn	07 19 43.8	+0.4
BAND				*i* AML	AML	07 19 49.0	
	comp=N,156nm,0.2s						
BAND				*i* AML	AML	07 19 49.0	
	comp=N,183nm,0.3s						
OUR	Ouranopolis	1.81	298	Pn	Pn	07 19 21.2	0.0
OUR	Ouranopolis	1.81	298	P	Pn	07 19 21.3	0.0
TKR	Tekirdag	1.86	37	Pn	Pn	07 19 22.3	+0.4
KAVA	Kavala	1.91	322	P	Pn	07 19 22.7	+0.1
KCTX	Karacabey (Bur	1.91	66	Pn	Pn	07 19 22.2	-0.5
DST	Dursunbey	1.97	86	Pn	Pn	07 19 24.4	+0.8
EREA	Eretria	1.99	238	P	Pn	07 19 23.0	-0.8
ORLT	Orhaneli	2.24	75	Pn	Pn	07 19 28.0	+0.7
KULA	Kula-Manisa	2.25	115	Pn	Pn	07 19 27.5	+0.1
SIMA	Simav-Kutahya	2.30	100	Pn	Pn	07 19 29.4	+1.3
NVR	Nevrokopi	2.50	318	P	Pn	07 19 31.4	+0.6

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*ISK **02** 07:19:35.6, 39°.49N×26°.11E, h13^{km}±1^{km}, ML2.7/3*

*DDA **02** 07:19:36.0±0.0, 39°.50N×25°.93E, h7^{km}±7^{km}, ML2.3*

ISC 02 07:19:36.1±1.1**, 39°.49N**±0°.03×**26°.00E**±0°.06**, h8**^{km}±7^{km}**, n9, σ0^{s}.96**/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.11	86	P	Pg	07 19 38.8	+0.2
KOCA				S	Sg	07 19 40.3	-0.2
GPNR	Gulpinar-Canak	0.11	110	Pg	Pg	07 19 38.5	-0.2
GPNR				Sg	Sg	07 19 40.3	-0.1
SIGR	SIGRI	0.30	202	Pg	Pb	07 19 43.2	-0.6
SIGR				Sg	Sb	07 19 48.2	-0.7
BOZC	Bozcaada	0.35	7	Pg	Pg	07 19 43.3	+0.3
BOZC				Sg	Sg	07 19 48.5	+0.8
BOZC	Bozcaada	0.35	7	P	Pg	07 19 43.2	+0.1
BOZC				S	Sg	07 19 48.2	+0.6
BOZC				*i* AML	AML	07 19 49.0	
	comp=N,396nm,0.2s						
BOZC				*i* AML	AML	07 19 49.0	
	comp=E,474nm,0.2s						
EZN	Ezine	0.41	37	Pg	Pg	07 19 43.5	-0.8
EZN				Sg	Sg	07 19 49.2	-0.5
BAYC	CANAKKALE_Bayr	0.49	59	P	Pn	07 19 49.8	+0.4
BAYC				S	Sb	07 19 54.9	+0.6
BAYC				*i* AML	AML	07 19 55.0	
	comp=N,174nm,0.1s						
AYVA	Ayvalik	0.56	109	P	Pn	07 19 53.0	+2.5
AYVA				S	Sn	07 19 58.5	-1.4
ECEA	Canakkale, Ece	0.57	14	P	Pb	07 19 47.6	-0.7
ECEA				S	Sb	07 19 55.7	-0.7
ECEA				*i* AML	AML	07 19 58.0	
	comp=N,167nm,0.7s						
ECEA				*i* AML	AML	07 19 59.0	
	comp=E,189nm,0.5s						

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*ANF **02** 07:31:18.3±0.2, 34°.05N×117°.00W, h17^{km}±1^{km}, ML3.0/29, Error ellipse: s-maj=1.1km s-min=1.0km az=60.0*

*NEIC **02** 07:31:18.9±0.6, 34°.055N±0°.008×117°.000W±0°.010, h18^{km}±1^{km}, Error ellipse: s-maj=1.3km s-min=1.1km az=137.0*

*PAS **02** 07:31:19.4±0.9, 34°.058N±0°.008×117°.001W±0°.010, h13km±1km, ML3.1/222, ML2.9/52(NEIC), Error ellipse: s-maj=1.2km s-min=1.0km az=214.0*

ISC 02 07:31:18.9±0.8, **34°.05N**±0°.01×**117°.00W**±0°.01, **h18**km±3km, **n128**, σ**0ˢ.55**/192, **Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CFT	Crafton Hills	0.10	260		Pg	07 31 22.4	-0.2
CFT					Sg	07 31 25.1	+0.1
SVD	Seven Oaks Dam	0.10	303		Pg	07 31 22.3	-0.3
SVD					Sg	07 31 24.6	-0.4
BBSC	Beaumont Base	0.13	173		Pg	07 31 23.1	+0.1
BBSC					Sg	07 31 26.1	+0.5
HLNC	Highland	0.20	291		Pg	07 31 23.7	0.0
HLNC					Sb	07 31 27.1	0.0
BTL	Butler Peak	0.20	359		Pg	07 31 23.9	-0.2
PEC	Perris	0.21	220		Pg	07 31 24.0	0.0
PEC					Sg	07 31 27.5	0.0
BBRC	Big Bear Solar	0.22	17		Pg	07 31 24.0	-0.3
BBRC					Sg	07 31 27.6	-0.4
BBRC	Big Bear Solar	0.22	17	P	Pg	07 31 23.7	-0.6
	baz=198,SNR=470						
BBRC				S	Sg	07 31 27.0	-1.0
	baz=198						
CFSC	Central Fire S	0.24	283		Pg	07 31 24.5	+0.1
CLTC	Calectric	0.27	279		Pg	07 31 24.9	+0.1
CLTC					Sb	07 31 29.9	+0.5
RSBC	Riverside Bore	0.28	254		Pg	07 31 25.1	0.0
RSBC					Sg	07 31 29.1	-0.3
RSBC	Riverside Bore	0.28	254		Pg	07 31 25.1	0.0
RSBC					Sg	07 31 29.4	0.0
RVR	Riverside	0.32	259		Pg	07 31 25.6	-0.1
RVR					Sg	07 31 30.2	-0.2
SIL	Silver Peak	0.33	26		Pg	07 31 25.6	-0.4
SIL					Sg	07 31 30.4	-0.5
HMTC	Hemet	0.34	181		Pg	07 31 26.2	0.0
HMTC					Sg	07 31 31.3	+0.2
DEVC	Devers	0.37	108		Pb	07 31 26.8	-0.2
DEVC					Sg	07 31 32.1	+0.2
FON	Fontana	0.37	277		Pg	07 31 26.5	-0.1
FON					Sg	07 31 31.9	0.0
POB	Polly Butte	0.37	170		Pg	07 31 26.8	+0.1
POB					Sg	07 31 32.1	+0.2
CSP	Cedar Springs	0.39	310		Pg	07 31 26.8	-0.2
DGR	Domenigoni Val	0.40	181		Pg	07 31 27.2	0.0
DGR					Sg	07 31 32.7	-0.1
BACC	Bachelor Mtn.	0.44	185		Pg	07 31 27.7	-0.2
BACC					Sg	07 31 33.9	0.0
SS2	San Sevaine	0.44	291		Pg	07 31 28.0	+0.1
GVDA	Garner Valley	0.47	145		Pg	07 31 28.2	-0.2
GVDA					Sg	07 31 34.6	-0.3
MLSC	Mira Loma	0.47	264		Pg	07 31 28.1	-0.3
MLSC					Sg	07 31 34.5	-0.2
MURC	Murrieta	0.48	200		Pg	07 31 28.5	-0.1
MURC					Sg	07 31 35.1	0.0
MURC	Murrieta	0.48	200	P	Pg	07 31 28.5	-0.1
	baz=19,SNR=187						
MURC				S	Sg	07 31 35.0	-0.1
	baz=19						
CRNC	Corona	0.50	250		Pg	07 31 28.7	-0.3
CRNC					Sg	07 31 35.5	-0.2
EW2	E Wide Canyon	0.50	103		Pg	07 31 28.9	-0.1
EW2					Sb	07 31 36.1	-0.2
BLAC	Blackrock camp	0.51	88		Pg	07 31 29.0	-0.2
BLAC					Sg	07 31 36.2	+0.2
CRY	Cary Ranch	0.53	156		Pg	07 31 29.6	0.0
CRY					Sg	07 31 36.9	+0.1
ELS	Elsinore Mount	0.54	222		Pg	07 31 29.5	-0.2
ELS					Sg	07 31 36.7	-0.2
ELS	Elsinore Mount	0.54	222	IAML		07 31 37.2	
	comp=E,1µm,0.2s						
ELS				IAML		07 31 37.2	
	comp=N,950nm,0.2s						
CHNC	Chino	0.57	265		Pg	07 31 29.9	-0.3
CHNC					Sb	07 31 38.0	-0.1
DNR	Dunn Ranch,Anz	0.57	148		Pg	07 31 30.4	+0.1
DNR					Sb	07 31 38.4	0.0
VTV	Victorville	0.58	332		Pg	07 31 29.9	-0.5
VTV					Sg	07 31 37.4	-0.7
BFSC	Mount Baldy Ra	0.58	289		Pg	07 31 30.1	-0.4
BFSC					Sg	07 31 38.2	0.0
BFSC	Mount Baldy Ra	0.58	289	P	Pg	07 31 30.0	-0.4
	baz=108,SNR=30						
BFSC				S	Sg	07 31 37.9	-0.3
	baz=108						
GTM	Goat Mountain	0.58	65		Pg	07 31 29.9	-0.6
GTM					Sg	07 31 37.6	-0.9
SNDA	J Saunders Pla	0.59	147		Pg	07 31 30.7	0.0
SNDA					Sb	07 31 39.0	0.0
SSK	Sunset Peak	0.60	286		Pg	07 31 30.6	-0.2
ADO	Adelanto Recei	0.61	324		Pg	07 31 30.9	-0.1
ADO					Sb	07 31 39.6	+0.1
BZNA	Buzz No.'s Pla	0.62	154		Pg	07 31 31.2	-0.1
BZNA					Sb	07 31 39.8	0.0
PFO	Pinyon Flats O	0.63	134		Pg	07 31 31.1	-0.3
PFO				IAML		07 31 40.6	
	comp=N,599nm,0.1s						
PFO				IAML		07 31 40.9	
	comp=N,611nm,0.1s						
PFO	Pinyon Flats O	0.63	134		Pg	07 31 31.1	-0.3
PFO					Sg	07 31 39.6	-0.1
PFO	Pinyon Flats O	0.63	134	P	Pg	07 31 31.1	-0.3
	baz=315,SNR=73						
PFO				S	Sg	07 31 39.7	-0.1
	baz=315						
XPFO	Pion Flat	0.63	134		Pg	07 31 31.1	-0.4
XPFO					Sg	07 31 39.6	-0.3
FRD	Ford Ranch, An	0.65	149		Pg	07 31 31.6	-0.1
FRD					Sg	07 31 40.4	0.0
FRD	Ford Ranch, An	0.65	149		Pg	07 31 31.6	-0.1
FRD					Sg	07 31 40.1	-0.3
PMD	Palm Desert	0.66	128		Pb	07 31 31.4	-0.4
PMD					Sg	07 31 40.1	-0.5
PMD	Palm Desert	0.66	128	IAML		07 31 40.9	
	comp=E,1µm,0.1s						
PMD				IAML		07 31 41.0	
	comp=N,649nm,0.2s						
PSRC	Puddingstone R	0.67	274		Pb	07 31 31.7	-0.4
PSRC					Sg	07 31 40.8	-0.3
PLM	Palomar	0.71	171		Pb	07 31 32.6	-0.2
PLM					Sg	07 31 42.1	-0.1
PEM	Pine Mountain	0.73	279		Pb	07 31 32.8	-0.3
XTL	Crystal Lake,	0.76	289		Pb	07 31 33.0	-0.6
TPC	Twentynine Pal	0.79	86		Pb	07 31 33.8	-0.3
HOLC	Holcomb Ridge	0.81	300		Pb	07 31 34.1	-0.4
HOLC					Sb	07 31 45.0	-0.2
SANC	Santa Ana	0.81	245		Sn	07 31 46.8	-0.3
RRX	Edison Barstow	0.82	0		Pb	07 31 34.5	-0.1
RRX					Sg	07 31 45.6	-0.2
RRX	Edison Barstow	0.82	0	P	Pb	07 31 34.6	-0.1
	baz=180						
RRX				S	Sg	07 31 45.6	-0.2
	baz=180						
BELC	Belle Mtn. Jos	0.83	93		Pb	07 31 34.7	-0.2
BELC					Sb	07 31 46.0	+0.1
BELC	Belle Mtn. Jos	0.83	93	P	Pb	07 31 34.7	-0.2
	baz=274,SNR=88						
BELC				S	Sb	07 31 45.7	-0.2
	baz=274						
BREC	Barre Substati	0.85	254		Pn	07 31 36.0	0.0
BREC					Sn	07 31 48.5	+0.5
JNH	Juniper Hills	0.88	297		Pb	07 31 35.5	-0.3
JNH					Sb	07 31 47.4	0.0
MWC	Mount Wilson	0.90	281		Pb	07 31 35.6	-0.4
MWC					Sb	07 31 47.4	-0.3
CHFC	Chilao Flat St	0.90	289		Pb	07 31 35.6	-0.4
CHFC					Sb	07 31 47.6	-0.2
MATG	Mataguay Scout	0.90	161		Pb	07 31 36.1	0.0
GORC	Green Oak Ranc	0.92	192		Pb	07 31 35.6	-0.7
BORC	Borrego Spring	0.92	148		Pb	07 31 36.4	0.0
CTCC	Cactus City	0.93	115		Pg	07 31 36.8	-0.1
SBB	Saddle Back Bu	0.93	313		Pb	07 31 36.4	-0.2
HYS	Haystack Butte	0.94	330		Pb	07 31 36.5	-0.2
HEC	Hector,Ludlow	0.95	35		Pb	07 31 36.7	-0.2
HEC	Hector,Ludlow	0.95	35	P	Pb	07 31 36.7	-0.2
	baz=216,SNR=30						
HEC				S	Sb	07 31 49.3	+0.1
	baz=216						
LRRC	Littlerock Res	0.97	299		Pb	07 31 37.1	-0.1
PASC	Pasadena Art C	0.99	277	Pn	Pn	07 31 37.7	-0.2
PASC				IAML		07 31 52.3	
	comp=E,244nm,0.5s						
DPP	Dos Picos Cty	1.05	177		Pb	07 31 37.9	-0.7
DECC	Green Verdugo	1.12	281	P	Pn	07 31 39.7	-0.1
	baz=100,SNR=10.0						
DECC				S	Sb	07 31 54.4	+0.2
	baz=100						
FMP	Fort Macarthur	1.13	253	P	Pn	07 31 39.4	-0.4
	baz=72						
FMP				S	Sb	07 31 54.5	+0.3
	baz=72						
109C	Camp Elliot, M	1.16	184		Pn	07 31 39.8	-0.5
109C	Camp Elliot, M	1.16	184	P	Pn	07 31 39.7	-0.5
	baz=4.2,SNR=32						
109C				S	Sb	07 31 54.7	-0.6
	baz=4.2						
EDW2	Edwards Air Fo	1.17	315	P	Pb	07 31 40.5	-0.1
	baz=135,SNR=55						
EDW2				S	Sb	07 31 55.4	0.0
	baz=135						
MONP2	Monument Peak	1.25	157	P	Pb	07 31 42.1	-0.1
	baz=338,SNR=51						
MONP2				S	Sn	07 31 58.4	+0.1
	baz=338						
GSC	Goldstone, Bar	1.26	7		Pn	07 31 41.8	+0.2
GSC				IAML		07 32 00.0	
	comp=N,287nm,0.5s						
GSC	Goldstone, Bar	1.26	7	P	Pn	07 31 41.9	+0.2
	baz=187,SNR=181						
GSC				S	Sn	07 31 58.8	+0.6
	baz=187						
GMRC	Granite Mounta	1.33	56	P	Pn	07 31 42.4	-0.3
	baz=237,SNR=48						
GMRC				S	Sb	07 32 00.7	+0.6
	baz=237						
BC3	Big Chuckawall	1.35	107	P	Pn	07 31 42.5	-0.4
	baz=288,SNR=8.4						
BC3				S	Sb	07 32 00.6	-0.1
	baz=288						
CIS	Catalina Islan	1.35	242	P	Pn	07 31 42.8	0.0
	baz=60,SNR=6.1						
CIS				S	Sb	07 32 01.0	+0.5
	baz=60						
CCAC	Calif City Air	1.38	323		Pb	07 31 43.8	-0.4
CCAC				IAML		07 32 05.5	
	comp=N,271nm,0.9s						
CCAC				IAML		07 32 06.0	
	comp=E,201nm,0.8s						
BAR	Barrett	1.40	169		Pn	07 31 43.6	+0.1
SWSC	Sam W. Stewart	1.49	137	P	Pn	07 31 44.1	-0.7
	baz=318,SNR=23						
SWSC				S	Sn	07 32 03.5	-0.3
	baz=318						
LRMC	Laurel Mtn Rad	1.53	339	P	Pn	07 31 45.7	+0.2
	baz=158,SNR=91						
TJX	Tijuana	1.54	182		Pn	07 31 46.0	+0.5
TJX				IAML		07 32 23.1	
	comp=E,248nm,0.6s						
IRM	Iron Mountain	1.54	86	P	Pn	07 31 45.0	-0.6
	baz=267,SNR=28						
IKP	In-Ko-Pah, Jac	1.58	152	P	Pn	07 31 46.2	0.0
	baz=332						
IKP				Sb	Sb	07 32 08.5	+1.1
	baz=332						
TUQ	Turquoise Moun	1.64	32	P	Pn	07 31 46.9	-0.1
	baz=213,SNR=21						
TUQ				Sb	Sb	07 32 10.4	+1.3
	baz=213						
YUH	Yuha Desert	1.67	147		Pn	07 31 46.9	-0.3
CBX	Cerro Bola	1.76	171		Pn	07 31 49.2	+0.6
CBX				IAML		07 32 15.1	
	comp=N,99nm,0.4s						
CBX				IAML		07 32 16.4	
	comp=E,138nm,0.6s						
ARVC	Arvin	1.85	306	Pg	Pg	07 31 53.6	-0.9
	baz=125						
QSM	Queen of Sheba	1.91	3		Pn	07 31 51.0	+0.4
SHOC	Shoshone, Teco	1.94	18	P	Pn	07 31 51.3	+0.3
	baz=198,SNR=85						
ISA	Isabella, Lake	2.01	323	P	Pn	07 31 51.9	-0.1
	baz=143,SNR=10						
MPMC	Manual Prospec	2.04	349	P	Pn	07 31 52.8	+0.2
	baz=169,SNR=26						
GLA	Glamis	2.07	118	Pg	Pg	07 31 57.7	-1.0
	baz=300						
NEE2	Needles Airpor	2.09	69	P	Pn	07 31 52.7	-0.4
	baz=251						
GWY	Greenwater Val	2.15	7	Pn	Pn	07 31 53.9	-0.1
BCW	Bitter Crk WRg	2.18	295		Pb	07 31 56.3	-1.6
BCW				IAML		07 32 34.0	
	comp=N,90nm,0.9s						
BCW				IAML		07 32 34.0	
	comp=E,90nm,0.7s						
CCX	Cicese	2.20	173		Pn	07 31 55.5	+1.0
CCX				IAML		07 32 28.4	
	comp=N,67nm,0.5s						
CCX				IAML		07 32 30.3	
	comp=E,55nm,0.5s						
ESJX	Sierra Juarez	2.22	156		Pn	07 31 55.4	+0.4
ESJX				IAML		07 32 28.5	
	comp=N,80nm,0.1s						
ESJX				IAML		07 32 29.1	
	comp=E,110nm,0.2s						
V12A	Nelson	2.43	46	Pn	Pn	07 31 57.9	0.0
V12A				IAML		07 32 36.8	
	comp=E,55nm,0.3s						
V12A				IAML		07 32 37.8	
	comp=N,50nm,0.3s						
WCT	Wildcat Mounta	2.75	6		Pn	07 32 02.8	+0.6
WCT				IAML		07 32 48.6	
	comp=E,39nm,0.5s						
W13A	Hualapai Mount	2.77	67		Pn	07 32 03.2	+0.5
SHPR	Sheep Range	2.87	31	Pn	Pn	07 32 04.9	+1.0
GRAC	Grapevine Rang	2.95	354		Pn	07 32 06.1	+1.2
GRAC				IAML		07 32 56.3	
	comp=E,48nm,0.8s						
GRAC				IAML		07 32 57.6	
	comp=N,41nm,0.7s						
GRAC	Grapevine Rang	2.95	354	P	Pn	07 32 05.8	+0.8
	baz=174						
TPNV	Topopah Spring	2.95	12		Pn	07 32 06.0	+0.9
TPNV	Topopah Spring	2.95	12	P	Pn	07 32 06.0	+0.9
	baz=192,SNR=6.5						
Y14A	Wickenburg	3.32	91	Pn	Pn	07 32 10.2	+0.1
PRN	Pahroc Range	3.70	25		Pn	07 32 16.6	+1.2
OMMB	Old Mammoth Mi	3.91	336		Pn	07 32 20.7	+2.3
MDPB	Devils Postpil	3.95	335		Pn	07 32 21.3	+2.4
LCMT	Little Creek M	4.25	45		Pn	07 32 24.2	+1.3
LHV	Little Huntoon	4.36	344		Pn	07 32 26.4	+2.1
KNB	Kanab	4.51	48		Pn	07 32 27.5	+1.0
U15A	North Rim	4.52	57		Pn	07 32 27.6	+0.9
CMB	Columbia Colle	4.83	326	Pn	Pn	07 32 32.1	+1.3
KVN	Kaiserville	5.07	350		Pn	07 32 35.6	+1.4
PKCU	Pink Cliffs	5.10	47		Pn	07 32 36.2	+1.5
SPR3	Spring Creek 3	5.38	23	Pn	Pn	07 32 39.0	+0.4

WEL 02 07:41:51.7, 42°S±6°×**17°4E**±1°0, **h13**km±12km, **M2.8**/12, **mB4.9**/1, **ML2.5**/15, **MLv2.8**/12, **Mw(mB)4.2**/1, **Error ellipse: s-maj=0.0km s-min=0.0km az=86.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHZ	Kahutara	0.02	160	P	Pg	07 41 54.3	+0.3
GVZ	Greta Valley S	0.68	213	P	Pn	07 42 06.8	-0.2
BSWZ	Blackbirch Sta	0.73	21	P	Pb	07 42 06.7	+0.4
THZ	Tophouse	0.79	324	P	Pb	07 42 07.4	+0.1
LTZ	Lake Taylor	1.01	247	P	Pn	07 42 11.7	+0.1
TUWZ	Tuamarina	1.02	18	P	Pn	07 42 12.0	+0.3
MRNZ	Matariki Terra	1.16	330	P	Pg	07 42 14.6	+0.7
NNZ	Nelson	1.19	354	P	Pg	07 42 14.6	0.0
TCW	Tory Channel	1.31	25	P	Pb	07 42 16.4	+0.2
DSZ	Denniston Nort	1.44	296	P	Pg	07 42 19.2	-0.2
MQZ	McQueen's Vall	1.46	206	P	Pn	07 42 17.1	-0.6
INZ	Inchbonnie	1.58	257	P	Pb	07 42 20.9	+0.2
DUWZ	D'Urville Isla	1.62	11	P	Pb	07 42 22.0	+0.4
CAW	Cannon Point	1.73	42	P	Pn	07 42 21.7	+0.3
QRZ	Quartz Range	1.74	334	P	Pb	07 42 23.8	+0.2
MTVZ	Mangateitei	3.35	27	P	Pb	07 42 49.2	-1.8
VRZ	Vera Road	3.40	16	P	Pb	07 42 48.5	-3.3
MOVZ	Moawhango	3.43	30	P	Pn	07 42 47.4	+2.4
WNVZ	Wahianoa	3.45	28	P	Pn	07 42 47.1	+1.8
TRVZ	Turoa	3.46	27	P	Pn	07 42 48.6	+3.2
BHHZ	Black Hill Sta	3.48	34	P	Pn	07 42 47.4	+1.8
TUVZ	Tukino	3.52	28	P	Pn	07 42 47.9	+1.7
NGZ	Ngauruhoe	3.58	27	P	Pb	07 42 51.7	-3.3
SNVZ	South Ngauruho	3.59	27	P	Pn	07 42 48.1	+1.0
OTVZ	Oturere	3.62	27	P	Pn	07 42 48.2	+0.6
NNVZ	North Ngauruho	3.63	27	P	Pb	07 42 52.2	-3.6
TMVZ	Te Maari	3.67	27	P	Pn	07 42 47.9	-0.4
NTVZ	North Tongarir	3.68	27	P	Pn	07 42 48.3	-0.1
MSZ	Milford Sound	4.67	239	P	Pb	07 43 09.1	-4.3
PKGZ	Pakihiroa	5.70	39	P	Pn	07 43 20.4	+4.4

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*IDC **02** 08:17:55.0±1.0, 8°.15S×156°.13E, h0km, mb3.9/8, mbtmp4.0/9, ML5.1/1, MS3.2/11, Error ellipse: s-maj=33.2km s-min=23.5km az=131.0*

ISC 02 08:17:57.7±0.8, **8°.2S**±0°.2×**156°.2E**±0°.1, **h18**km, **n17**, σ**1ˢ.11**/10, **mb3.9**/8, **MS3.1**/7, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	3.93	109	Pn	Pn	08 18 57.9	+0.7
	112nm,0.3s,baz=218,slow=9.6,SNR=2.0						
HNR				Sn	Sn	08 19 42.4	-0.6
	82nm,0.3s,baz=306,slow=19,SNR=2.1						
HNR				LR	LR	08 20 20.2	
	comp=Z,3µm,21.2s,baz=294,slow=36						
	290nm,0.4s						
PMG	Port Moresby	9.00	261	LR	LR	08 23 37.0	
	comp=Z,150nm,20.2s,baz=146,slow=38						
CTA	Charters Tower	15.26	218	LR	LR	08 26 51.5	
	comp=Z,70nm,18.1s,baz=80,slow=35						
DZM	Mont Dzumac	17.00	146	LR	LR	08 26 49.9	
	comp=Z,37nm,18.8s,baz=287,slow=31						
WRA	Warramunga Arr	24.17	239	P	P	08 23 12.9	-0.4
	5.9nm,0.8s,baz=62,slow=9.1,SNR=30						
WRA				LR	LR	08 32 04.9	
	comp=Z,57nm,19.0s,baz=88,slow=35						
	5.9nm,0.8s						
GUMO	Guam	24.35	332	LR	LR	08 33 56.4	
	comp=Z,13nm,18.3s,baz=117,slow=40						
ASAR	Alice Springs	26.33	232	P	P	08 23 31.4	-1.4
	0.7nm,0.8s,baz=62,slow=9.7,SNR=5.8						
ASAR				LR	LR	08 33 29.9	
	comp=Z,48nm,19.5s,baz=107,slow=36						
	0.7nm,0.8s						
STKA	Stephens Creek	27.22	208	P	P	08 23 41.6	+0.9
	1.1nm,0.4s,baz=28,slow=12,SNR=2.8						
	1.1nm,0.4s						
AFI	Afiamalu	31.94	103	LR	LR	08 34 47.0	
	comp=Z,54nm,19.3s,baz=44,slow=32						
RPZ	Rata Peaks	37.73	162	LR	LR	08 39 29.9	
	comp=Z,54nm,18.3s,baz=12,slow=34						
JNU	Nakatsue	47.59	331	LR	LR	08 46 02.6	
	comp=Z,14nm,18.1s,baz=46,slow=36						
PETK	Petropavlovsk-	61.04	1	LR	LR	08 51 01.7	
	comp=Z,21nm,21.6s,baz=112,slow=33						
SONM	Songino Array	70.95	327	P	P	08 29 14.4	+0.2
	0.6nm,0.8s,baz=146,slow=7.4,SNR=4.5						
	0.6nm,0.8s						
MKAR	Makanchi Array	85.05	319	P	P	08 30 32.5	0.0
	1.0nm,0.9s,baz=99,slow=7.5,SNR=8.5						
	1.0nm,0.9s						
ZALV	Zalesovo Beam	85.80	326	P	P	08 30 37.6	+1.6
	0.4nm,0.4s,baz=92,slow=7.6,SNR=2.1						
	0.4nm,0.4s						
NVAR	Mina Array Bea	91.52	52	P	P	08 31 04.1	+0.2
	0.8nm,1.0s,baz=239,slow=6.2,SNR=2.8						
	0.8nm,1.0s						
YKA	Yellowknife Ar	96.81	28	P	P	08 31 25.7	-1.5
	0.2nm,0.7s,baz=262,slow=4.7,SNR=2.8						
	0.2nm,0.7s						

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*IDC **02** 08:35:51.6±1.9, 14°.82N×90°.46W, h194km±25km, mb3.3/6, mbtmp3.8/9, MS3.3/1, Error ellipse: s-maj=37.5km s-min=17.1km az=32.0*

*SNET **02** 08:35:53.9±1.3, 14°.71N×90°.27W, h195km±34km, ML3.6*

*GCG **02** 08:35:59.1±0.3, 14°.90N×90°.84W, h141km±44km, MD2.7*

ISC 02 08:35:50.9±0.9, **14°.6N**±0°.2×**90°.7W**±0°.1, **h210**km±8km, **n20**, σ**2ˢ.01**/26, **mb4.0**/5, **1C, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUG	Fuego 3	0.21	226	*e*P	Pn	08 36 19.8	+1.0
PCG	Pacaya	0.22	160	*e*P	Pn	08 36 20.7	+1.8
NBG	Las Nubes	0.33	92	*e*P	Pn	08 36 20.8	+1.8
SULM	Suchitepequez,	0.90	251	*e*P	Pn	08 36 22.3	+1.2
NUBE	Las Nubes	1.12	128⇑	*e*P	Pn	08 36 23.2	+0.5
NUBE				*e*S	S	08 36 46.0	-1.2
CEVE	Cerro Verde	1.28	127	*e*P	Pn	08 36 24.6	+0.5
CEVE				*e*S	S	08 36 49.9	+0.3
JAYA	Jayaque - finc	1.52	128	*e*P	Pn	08 36 26.1	+0.2
JAYA				*e*S	S	08 36 51.4	-1.5
JAYA				IAML		08 36 58.5	
	comp=Z,423nm,0.2s						
UEES	Universidad Ev	1.65	122	*e*P	Pn	08 36 27.5	+0.5
UEES				*e*S	S	08 36 53.0	-1.8
SCLA	Alcaldia de Sa	2.10	115	*e*P	Pn	08 36 31.8	+0.6
SCLA				*e*S	S	08 36 59.6	-2.7
CMIG	Matias Romero	4.74	302	P	Pn	08 37 02.2	-0.1
	comp=Z,5.1nm,0.4s,baz=124,slow=11,SNR=27						
CMIG				S	S	08 37 53.0	-5.4
	comp=Z,8.6nm,0.3s,baz=20,slow=13,SNR=13						
JTS	Las Juntas de	7.05	127	P	Pn	08 37 32.7	+0.8
	comp=Z,4.1nm,0.8s,baz=251,slow=12,SNR=2.1						
JTS				S	S	08 38 47.4	-4.7
	comp=Z,2.6nm,0.5s,baz=280,slow=23,SNR=2.0						
TXAR	Lajitas Array	18.95	323	P	Pn	08 39 59.7	0.0
	comp=Z,0.4nm,0.6s,baz=135,slow=12,SNR=3.8						
SDV	Santo Domingo	20.43	104	P	P	08 40 12.7	+0.2
	comp=Z,1.3nm,0.3s,baz=354,slow=13,SNR=2.2						
	comp=Z,1.3nm,0.3s						
TKL	Tuckaleechee C	21.87	15	P	P	08 40 27.2	+0.2
	comp=Z,3.0nm,0.6s,baz=172,slow=13,SNR=6.2						
	comp=Z,3.0nm,0.6s						
ATAH	Atahualpa	24.80	150	LR	LR	08 50 05.9	
	comp=Z,73nm,19.6s,baz=74,slow=34						
NVAR	Mina Array Bea	34.03	319	P	P	08 42 18.6	+3.2
	comp=Z,0.7nm,0.8s,baz=123,slow=9.8,SNR=6.0						
	comp=Z,0.7nm,0.8s						
ULM	Lac du Bonnet	35.81	354	P	P	08 42 29.5	-0.6
	comp=Z,1.9nm,0.5s,baz=171,slow=8.3,SNR=4.7						
	comp=Z,1.9nm,0.5s						
SCHQ	Schefferville	44.23	20	P	P	08 43 39.1	-0.2
	comp=Z,5.0nm,0.6s,baz=218,slow=7.6,SNR=11						
	comp=Z,5.0nm,0.6s						
YKA	Yellowknife Ar	50.75	346	P	P	08 44 28.7	-0.5
	comp=Z,0.2nm,0.6s,baz=147,slow=7.1,SNR=3.1						
	comp=Z,0.2nm,0.6s						
WRA	Warramunga Arr	136.78	256	PKP	PKPdf	08 54 50.7	+1.5
	comp=Z,0.4nm,0.6s,baz=89,slow=2.5,SNR=5.4						

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*IDC **02** 08:37:04.1±1.4, 16°.72S×174°.80W, h0km, mb4.0/4, mbtmp4.1/5, ML4.4/1, Error ellipse: s-maj=52.9km s-min=24.7km az=135.0*

*NEIC **02** 08:37:12.7±2.3, 16°.76S±0°.09×174°.1W±0°.1, h107km±9km, mb4.2/10, Error ellipse: s-maj=21.6km s-min=12.0km az=69.0*

ISC 02 08:37:11.7±0.8, **16°.82S**±0°.07×**174°.01W**±0°.09, **h100**km, **n18**, σ**1ˢ.52**/20, **mb4.1**/10, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	3.60	37	Pn	Pn	08 38 07.5	+1.8
	23nm,0.3s,baz=225,slow=8.6,SNR=42						
AFI				Sn	Sn	08 38 46.0	-1.4
	56nm,0.3s,baz=248,slow=16,SNR=14						
	56nm,0.3s						
AFI	Afiamalu	3.60	37	Pn	Pn	08 38 07.0	+1.3
AFI				Sn	Sn	08 38 46.0	-1.4
NIUE	Niue	4.49	121	Pn	Pn	08 38 19.4	+1.9
NIUE				Sn	Sn	08 39 05.8	-2.8
URZ	Urewera	22.74	198	P	P	08 42 06.4	+1.0
	2.6nm,0.3s,baz=5.6,slow=3.9,SNR=6.8						
	2.6nm,0.3s						
RTZ	Ruatahuna	23.11	198	P	P	08 42 10.2	+1.0
RTZ				IAmb	IAmb	08 42 46.4	
	comp=Z,15nm,1.4s						
BKZ	Black Stump Fm	23.76	199	P	P	08 42 14.4	-0.7
BKZ				IAmb	IAmb	08 42 43.7	
	comp=Z,12nm,1.3s						
BFZ	Birch Farm	25.23	198	P	P	08 42 28.2	-0.1
LTZ	Lake Taylor	28.41	202	P	P	08 42 57.6	+0.8
LTZ				IAmb	IAmb	08 43 25.8	
	comp=Z,14nm,1.3s						
CTAO	Charters Tower	37.78	259	P	P	08 44 18.7	+0.2

WR0	**Warramunga Arr**	**48.78**	**258**	P	**P**	**08 45 46.1**	**-0.9**
WR0				IAmb	IAmb	08 45 48.7	
	comp=Z,6.9nm,1.4s						
WB0	**Warramunga Arr**	**48.93**	**258**	P	**P**	**08 45 46.3**	**-1.9**
WB0				IAmb	IAmb	08 46 29.7	
	comp=Z,6.4nm,1.4s						
WRA	**Warramunga Arr**	**48.97**	**258**	P	**P**	**08 45 46.7**	**-1.7**
	comp=Z,0.2nm,0.4s,baz=96,slow=7.2,SNR=7.6						
	comp=Z,0.2nm,0.4s						
WRA	**Warramunga Arr**	**48.97**	**258**	P	**P**	**08 45 46.9**	**-1.6**
AS31	**Alice Springs**	**49.13**	**253**	P	**P**	**08 45 48.7**	**-0.9**
AS31				IAmb	IAmb	08 45 49.6	
	comp=Z,1.5nm,0.6s						
ASAR	**Alice Springs**	**49.13**	**253**	P	**P**	**08 45 48.8**	**-0.9**
	comp=Z,4.7nm,0.5s,baz=88,slow=8.5,SNR=132						
	comp=Z,4.7nm,0.5s						
ASAR	**Alice Springs**	**49.13**	**253**	P	**P**	**08 45 47.9**	**-1.8**
QSPA	**South Pole Qui**	**73.23**	**180**	P	**P**	**08 48 32.7**	**+0.8**
YKA	**Yellowknife Ar**	**91.62**	**24**	P	P	08 50 13.5	+6.4
	comp=Z,0.2nm,0.4s,baz=225,slow=5.8,SNR=7.5						
	comp=Z,0.2nm,0.4s						

*VIE **02** 08:41:20.8, 47°.34N×14°.11E, h14km, mb2.3/19, ml3.2/19*
15 km NNW of Pllau am Grein felt 3-4 ems98 Woelzer Tauern / Styria
*ROM **02** 08:41:21.4±0.1, 47°.41N×14°.10E, h11km, ML2.8/16, Error ellipse: s-maj=0.0km s-min=0.0km az=45.0*
*PRU **02** 08:41:21.3±0.0, 47°.38N×14°.18E, h5km*
*LDG **02** 08:41:22.0±0.2, 47°.33N×13°.99E, h3km, Ml3.2/3, Error ellipse: s-maj=5.3km s-min=4.3km az=72.0*
*BGR **02** 08:41:22.9±0.2, 47°.39N×14°.12E, h10km, ML3.2/24, Error ellipse: s-maj=3.3km s-min=3.3km az=87.0*
ISC 02 08:41:21.9±0.9**, 47°.33N**±0°.01×**14°.10E**±0°.01**, h17**km±7km**,**
n111, σ2s.36/199**, 4C-7D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIOA	**Bad Ischl, Aus**	**0.48**	**320**	*i* Pg	**Pg**	**08 41 30.5**	**-1.1**
	11nm,0.0s,SNR=40						
BIOA				*e*Sg	**Sg**	**08 41 37.2**	**-0.9**
	88nm,0.1s						
KBA	**Koelnbreinsper**	**0.57**	**244**	*e*Pg	**Pg**	**08 41 32.5**	**-0.7**
	38nm,0.1s,SNR=155						
KBA				*i* Sg	**Sg**	**08 41 40.4**	**-0.6**
	184nm,0.2s						
KBA	**Koelnbreinsper**	**0.57**	**244**	*e*Pg	**Pg**	**08 41 32.6**	**-0.7**
KBA				*e*Sg	**Sg**	**08 41 40.3**	**-0.6**
MYKA	**Terra Mystica**	**0.76**	**204**	*i* Pg	**Pg**	**08 41 36.4**	**-0.5**
	16nm,0.1s,SNR=36						
MYKA				*e*Sg	**Sg**	**08 41 46.6**	**-0.3**
	106nm,0.3s						
ACOM	**Acomizza, Ital**	**0.88**	**207**	P	**Pg**	**08 41 38.8**	**-0.2**
ACOM				S	**Sb**	**08 41 51.2**	**+0.9**
ACOM				AML	AML		
	comp=E,598µm,0.9s						
ACOM				AML	AML		
	comp=N,842µm,0.5s						
ACOM				AML	AML		
	comp=E,567µm,0.5s						
ACOM				AML	AML		
	comp=E,567µm,1.5s						
ACOM				AML	AML		
	comp=N,852µm,0.5s						
OBKA	**Obir**	**0.88**	**159**	*i* Pg	**Pg**	**08 41 38.4**	**-0.6**
	comp=N,6.2nm,0.2s,SNR=32						
OBKA				*e*Sg	**Sb**	**08 41 50.7**	**+0.5**
	comp=N,43nm,0.2s						
OBKA	**Obir**	**0.88**	**159**	*e*Pg	**Pg**	**08 41 38.0**	**-0.9**
OBKA				*e*Sg	**Sb**	**08 41 50.6**	**+0.5**
SOKA	**Soboth**	**0.91**	**135**	*e*Pg	**Pg**	**08 41 38.5**	**-1.2**
	comp=N,12nm,0.2s,SNR=20						
SOKA				*i* Sg	**Sg**	**08 41 50.6**	**-1.1**
	comp=N,46nm,0.3s						
RJOB	**Jochberg**	**0.97**	**296**	*e*Pg	**Pg**	**08 41 41.1**	**+0.3**
RJOB				*e*Sg	**Sb**	**08 41 54.8**	**+1.9**
ARSA	**Arzberg**	**0.97**	**94**	*e*Pg	**Pg**	**08 41 39.2**	**-1.6**
	comp=N,4.8nm,0.2s,SNR=17						
ARSA				*i* Sg	**Sg**	**08 41 52.6**	**-1.1**
	comp=N,5.0nm,0.1s						
ARSA	**Arzberg**	**0.97**	**94**	*e*Pg	**Pg**	**08 41 39.3**	**-1.6**
ARSA				*e*Sg	**Sg**	**08 41 52.7**	**-1.0**
ARSA	**Arzberg**	**0.97**	**94**	P	**Pg**	**08 41 39.2**	**-1.6**
ARSA				S	**Sb**	**08 41 53.2**	**+0.3**
GORS	**Gorjuse**	**1.01**	**184**	*i* Pg	**Pg**	**08 41 41.2**	**-0.4**
GORS				IAML		08 41 56.5	
	comp=Z,51nm,0.3s						
PTCC	**Patocco-Chiusa**	**1.05**	**209**	⇑P	**Pg**	**08 41 42.0**	**-0.4**
PTCC				S	**Sg**	**08 41 55.8**	**-0.3**
PTCC				AML	AML		
	comp=N,217µm,1.0s						
PTCC				AML	AML		
	comp=E,262µm,0.3s						
PTCC				AML	AML		
	comp=N,217µm,1.0s						
ZOU	**Zoufplan**	**1.09**	**225**	P	**Pg**	**08 41 42.7**	**-0.3**
ZOU				S	**Sg**	**08 41 56.9**	**-0.3**
ZOU				AML	AML		
	comp=E,380µm,0.5s						
ZOU				AML	AML		
	comp=E,398µm,0.5s						
ZOU				AML	AML		
	comp=N,177µm,1.3s						
ZOU				AML	AML		
	comp=N,207µm,1.3s						
ZOU				AML	AML		
	comp=N,207µm,0.7s						
ZOU				AML	AML		
	comp=E,398µm,1.5s						
ZOU				AML	AML		
	comp=E,380µm,1.5s						
ZOU				AML	AML		
	comp=N,177µm,0.7s						
CADS	**Cadrg**	**1.13**	**193**	*i* Sg	**Sn**	**08 41 59.1**	**+1.0**
CADS				IAML		08 42 01.9	
	comp=Z,124nm,0.3s						
ROBS	**Robic**	**1.16**	**201**	*i* Pg	**Pn**	**08 41 44.0**	**+0.7**
ROBS				*e*Sg	**Sn**	**08 41 59.6**	**+0.9**
ROBS				IAML		08 42 01.6	
	comp=Z,57nm,0.3s						
FVI	**Forni Avoltri**	**1.16**	**231**	P	**Pb**	**08 41 43.8**	**+0.3**
FVI				S	**Sg**	**08 41 59.1**	**-0.4**
FVI				AML	AML		
	comp=E,508µm,0.4s						
FVI				AML	AML		
	comp=E,508µm,1.6s						
FVI				AML	AML		
	comp=N,515µm,0.2s						
CLUD	**Cludinico**	**1.20**	**224**	P	**Pb**	**08 41 44.6**	**+0.4**
CLUD				S	**Sb**	**08 42 00.5**	**+1.0**
CLUD				AML	AML		
	comp=E,125µm,0.6s						
CLUD				AML	AML		
	comp=N,144µm,0.5s						
VINO	**Villanova**	**1.21**	**208**	P	**Pb**	**08 41 44.7**	**+0.3**
VINO				S	**Sn**	**08 42 01.1**	**+1.1**
VINO				AML	AML		
	comp=E,127µm,1.0s						
VINO				AML	AML		
	comp=N,160µm,0.4s						
ABTA	**Abfaltersbach**	**1.23**	**242**	*e*Pg	**Pn**	**08 41 45.1**	**+0.7**
	comp=N,4.2nm,0.1s						
ABTA				*e*Sg	**Sb**	**08 42 00.8**	**+0.5**
	comp=N,34nm,0.2s,SNR=7.0						
GEPF	**Gemona**	**1.24**	**212**	P	**Pg**	**08 41 46.0**	**+0.2**
GEPF				S	**Sn**	**08 42 02.9**	**+2.1**
GEPF				AML	AML		
	comp=N,351µm,0.7s						
GEPF				AML	AML		
	comp=E,216µm,0.9s						
MPRI	**Monte Prat**	**1.32**	**215**	P	**Pg**	**08 41 47.3**	**-0.2**
MPRI				S	**Sg**	**08 42 05.2**	**+0.5**
MPRI				AML	AML		
	comp=E,342µm,0.4s						
MPRI				AML	AML		
	comp=N,414µm,0.5s						
MPRI				AML	AML		
	comp=N,316µm,0.4s						
MPRI				AML	AML		
	comp=E,270µm,0.4s						
CONA	**Conrad Observa**	**1.34**	**63**	*e*Pg	**Pn**	**08 41 46.2**	**+0.3**
CONA				*i* Pg	**Pn**	**08 41 46.3**	**+0.3**
	comp=E,2.0nm,0.2s,SNR=22						
CONA				*i* Sg	**Sb**	**08 42 03.6**	**+0.1**
	comp=E,34nm,0.2s						
SABO	**M.te Sabotino**	**1.39**	**194**	P	**Pb**	**08 41 48.1**	**+0.6**
SABO				S	**Sg**	**08 42 09.5**	**+2.7**
SABO				AML	AML		
	comp=N,619µm,0.6s						
SABO				AML	AML		
	comp=N,2205µm,0.6s						
SABO				AML	AML		
	comp=E,466µm,0.9s						
SABO				AML	AML		
	comp=E,2110µm,0.5s						
RISI	**Rein**	**1.43**	**255**	⇑P	**Pn**	**08 41 48.1**	**+0.8**
RISI				AML	AML		
	comp=E,1220µm,0.4s						
RISI				AML	AML		
	comp=N,1425µm,0.4s						
RISI				AML	AML		
	comp=N,1425µm,1.6s						
STAL	**STALIGIAL**	**1.43**	**222**	P	**Pb**	**08 41 48.7**	**+0.6**
STAL				S	**Sg**	**08 42 08.2**	**+0.1**
STAL				AML	AML		
	comp=E,276µm,0.4s						
STAL				AML	AML		
	comp=N,350µm,1.2s						
STAL				AML	AML		
	comp=E,276µm,0.4s						
STAL				AML	AML		
	comp=E,326µm,1.5s						
STAL				AML	AML		
	comp=N,350µm,1.3s						
STAL				AML	AML		
	comp=N,257µm,0.7s						
STAL				AML	AML		
	comp=E,326µm,0.5s						
CKRC	**Cesky Krumlov**	**1.50**	**5**	*e*PG	**Pn**	**08 41 47.9**	**-0.2**
CKRC				*e*SG	**Sn**	**08 42 08.0**	**+0.7**
CIMO	**Cimolais**	**1.52**	**229**	⇓P	**Pb**	**08 41 50.6**	**+0.8**
CIMO				AML	AML		
	comp=E,79µm,0.4s						
CIMO				AML	AML		
	comp=N,74µm,0.4s						
CIMO				AML	AML		
	comp=E,77µm,0.4s						
CIMO				AML	AML		
	comp=N,73µm,0.7s						
CIMO				AML	AML		
	comp=N,74µm,0.4s						
CIMO				AML	AML		
	comp=E,79µm,1.6s						
CIMO				AML	AML		
	comp=E,77µm,1.6s						
RONA	**Rosalia, Austr**	**1.54**	**75**	*e*Pg	**Pb**	**08 41 50.6**	**+0.6**
	comp=E,12nm,0.3s,SNR=23						
RONA				*e*Sg	**Sg**	**08 42 11.1**	**-0.5**
	comp=E,44nm,0.3s						
GEC2	**GERESS Array S**	**1.54**	**350**	*e*Pn	**Pn**	**08 41 49.3**	**+0.5**
GEC2				*e*Pg	**Pb**	**08 41 51.0**	**+0.8**
GEC2				*e*Sg	**Sn**	**08 42 09.9**	**+1.4**
TRI	**Trieste**	**1.63**	**188**	AML	AML		
	comp=N,62µm,0.6s						
TRI				AML	AML		
	comp=E,81µm,1.2s						
TRI				AML	AML		
	comp=E,82µm,1.2s						
TRI				AML	AML		
	comp=E,82µm,0.8s						
WTTA	**Wattenberg**	**1.68**	**269**	*e*Pn	**Pb**	**08 41 52.8**	**+0.4**
	comp=E,1.2nm,0.2s						
WTTA				*e*Pg	**Pg**	**08 41 53.8**	**-0.3**
	comp=E,10nm,0.1s,SNR=42						
WTTA				*i* Sg	**Sg**	**08 42 17.6**	**+1.7**
	comp=E,174nm,0.5s						
WTTA	**Wattenberg**	**1.68**	**269**	*e*Pn	**Pb**	**08 41 52.8**	**+0.4**
WTTA				*e*Sg	**Sg**	**08 42 16.2**	**+0.2**
WTTA	**Wattenberg**	**1.68**	**269**	⇓P	**Pg**	**08 41 53.8**	**-0.3**
WTTA				S	**Sg**	**08 42 17.8**	**+1.9**
WTTA				AML	AML		
	comp=N,328µm,0.6s						
WTTA				AML	AML		
	comp=E,416µm,0.5s						
WATA	**Walderalm**	**1.71**	**271**	*e*Pn	**Pb**	**08 41 53.9**	**+0.8**
	comp=E,2.6nm,0.1s,SNR=17						
WATA				*e*Sg	**Sg**	**08 42 18.3**	**+1.1**
	comp=E,41nm,0.2s,SNR=5.7						
KHC	**Kasperske Hory**	**1.84**	**349**	*e*PG	**Pn**	**08 41 53.2**	**+0.4**
KHC				*e*SG	**Sn**	**08 42 17.8**	**+2.1**
	comp=E,187nm,0.6s						
ROSI	**Rosskopf**	**1.88**	**259**	⇓P	**Pg**	**08 41 58.1**	**+0.1**
ROSI				AML	AML		
	comp=N,414µm,0.6s						
ROSI				AML	AML		
	comp=E,318µm,0.5s						
SQTA	**Sankt Quirin**	**1.97**	**268**	*e*Pg	**Pb**	**08 41 58.4**	**+1.0**
	comp=E,8.5nm,0.2s,SNR=17						
SQTA				*e*Sg	**Sg**	**08 42 26.3**	**+1.0**
	comp=E,55nm,0.3s						
BOJS	**Bojanci**	**1.99**	**156**	⇓P	**Pg**	**08 42 00.1**	**-0.1**
BOJS				AML	AML		
	comp=N,103µm,0.5s						
BOJS				AML	AML		
	comp=E,117µm,1.3s						
BOJS				AML	AML		
	comp=N,103µm,1.5s						
MOTA	**Moosalm**	**2.04**	**272**	*e*Sg	**Sg**	**08 42 27.4**	**0.0**
	comp=N,22nm,0.2s						
FUR	**Furstenfeldbru**	**2.08**	**295**	*e*Sg	**Sg**	**08 42 27.8**	**-1.0**
RETA	**Reutte**	**2.27**	**275**	*e*Pg	**Pg**	**08 42 04.8**	**-0.7**
	comp=N,2.6nm,0.1s						
RETA				*i* Sg	**Sg**	**08 42 34.5**	**-0.4**
	comp=N,38nm,0.3s						
FETA	**Feichten**	**2.32**	**264**	Pn	**Pn**	**08 41 59.1**	**-0.4**
	comp=N,0.4nm,0.3s,SNR=17						
FETA				*e*Sg	**Sg**	**08 42 35.6**	**-0.9**
	comp=N,14nm,0.4s						
KRUC	**Moravsky**	**2.32**	**41**	*e*PN	**Pn**	**08 41 59.4**	**+0.1**
KRUC				*e*SG	**Sn**	**08 42 27.3**	**-0.2**
MODS	**Modra-Piesok**	**2.39**	**63**	*e*PN	**Pn**	**08 42 01.1**	**+0.8**
MODS				*e*PG	**Pb**	**08 42 05.7**	**+1.3**
MODS				*e*SG	**Sn**	**08 42 32.1**	**+3.0**
VRAC	**Vranov**	**2.59**	**39**	*e*PN	**Pn**	**08 42 03.2**	**+0.1**
VRAC				*e*SG	**Sn**	**08 42 36.6**	**+2.4**
GOPC	**GO Pecny, Ondr**	**2.63**	**10**	*e*PN	**Pn**	**08 42 03.4**	**-0.2**
GOPC				*e*SG	**Sb**	**08 42 43.6**	**+3.0**
	comp=N,43nm,0.6s						
PRU	**Pruhonice**	**2.68**	**6**	*e*PN	**Pn**	**08 42 04.1**	**-0.2**
PRU				*e*SG	**Sb**	**08 42 44.6**	**+2.6**
	comp=N,32nm,0.4s						
UBR	**Ueberruh**	**2.73**	**279**	*e*Pn	**Pn**	**08 42 07.0**	**+2.0**
UBR				*e*Sg	**Sg**	**08 42 48.9**	**-0.6**
ROTZ	**Rotzenmuhle**	**2.75**	**334**	*e*Pn	**Pn**	**08 42 06.2**	**+1.0**
ROTZ				*e*Pg	**Pb**	**08 42 12.9**	**+2.3**
ROTZ				*e*Sg	**Sg**	**08 42 48.0**	**-2.1**
DAVA	**Damuels**	**2.87**	**271**	*i* Pn	**Pn**	**08 42 09.3**	**+2.2**
	comp=N,2.1nm,0.1s						
DAVA				*e*Pg	**Pg**	**08 42 15.5**	**-1.4**
	comp=N,9.8nm,0.3s						
DAVA				*i* Sn	**Sn**	**08 42 44.3**	**+3.1**
	comp=N,8.0nm,0.2s						
DAVA				*i* Sg	**Sg**	**08 42 54.6**	**+0.5**
	comp=N,57nm,0.6s						
DAVA	**Damuels**	**2.87**	**271**	*e*Pn	**Pn**	**08 42 09.3**	**+2.2**
DAVA				*e*Sg	**Sg**	**08 42 54.4**	**+0.4**
DAVOX	**Davos/Dischmat**	**2.93**	**261**	⇓P	**Pn**	**08 42 10.4**	**+2.5**
DAVOX				AML	AML		
	comp=E,48µm,1.4s						
DAVOX				AML	AML		
	comp=N,84µm,0.4s						
DAVOX				AML	AML		
	comp=E,48µm,0.6s						
DAVOX				AML	AML		
	comp=N,84µm,1.6s						
MANZ	**Manzenberg**	**2.97**	**334**	*e*Pn	**Pn**	**08 42 09.0**	**+0.7**
MANZ				*e*Pg	**Pg**	**08 42 17.8**	**-1.1**
MANZ				*e*Sg	**Sb**	**08 42 54.6**	**+4.2**
GRF	**Grafenberg Arr**	**3.04**	**322**	*e*Pn	**Pn**	**08 42 10.4**	**+1.1**
GRF				*e*Sg	**Sg**	**08 42 58.7**	**-0.9**
NKC	**Novy Kostel**	**3.11**	**340**	*e*PN	**Pn**	**08 42 10.6**	**+0.4**
NKC				*e*SG	**Sb**	**08 42 58.8**	**+4.5**
	comp=N,64nm,0.4s						
NKC	**Novy Kostel**	**3.11**	**340**	*e*Pn	**Pn**	**08 42 11.8**	**+1.6**
NKC				*e*Pg	**Pg**	**08 42 19.6**	**-1.8**
NKC				*e*Sg	**Sg**	**08 42 59.1**	**-2.6**
ROHR	**Rohrbach**	**3.14**	**339**	*e*Pn	**Pn**	**08 42 12.1**	**+1.5**
ROHR				*e*Pg	**Pg**	**08 42 20.3**	**-1.7**
ROHR				*e*Sg	**Sg**	**08 43 00.4**	**-2.4**
MNTV	**Mantova**	**3.16**	**228**	S	**Sb**	**08 42 56.1**	**+0.2**
WERN	**Wernitzgruen**	**3.17**	**340**	*e*Pn	**Pn**	**08 42 12.4**	**+1.3**
WERN				*e*Pg	**Pg**	**08 42 21.3**	**-1.4**
WERN				*e*Sg	**Sg**	**08 43 01.3**	**-2.5**
PVCC	**Panska Ves**	**3.22**	**5**	*e*SG	**Sb**	**08 43 01.3**	**+3.8**
	comp=N,69nm,0.4s						
PLONS	**Plons/SG**	**3.23**	**267**	*e*Pn	**Pn**	**08 42 14.1**	**+2.2**
PLONS				*e*Sn	**Sn**	**08 42 52.8**	**+2.8**
PLONS				*e*Sg	**Sg**	**08 43 05.3**	**-0.3**
GUNZ	**Gunzen**	**3.25**	**340**	*e*Pn	**Pn**	**08 42 13.5**	**+1.3**
GUNZ				*e*Pg	**Pg**	**08 42 22.7**	**-1.5**
GUNZ				*e*Sg	**Sb**	**08 43 02.9**	**+4.3**
TANN	**Tannenbergstha**	**3.27**	**341**	*e*Pn	**Pn**	**08 42 13.6**	**+1.1**
TANN				*e*Pg	**Pg**	**08 42 23.3**	**-1.3**
TANN				*e*Sg	**Sb**	**08 43 02.9**	**+3.8**
KRLC	**Kraliky**	**3.28**	**32**	*e*PN	**Pn**	**08 42 12.7**	**+0.2**
KRLC				*e*SG	**Sb**	**08 43 03.5**	**+4.3**
	comp=N,39nm,0.6s						
MULD	**Muldenberg**	**3.28**	**341**	*e*Pn	**Pn**	**08 42 14.0**	**+1.4**
MULD				*e*Sg	**Sb**	**08 43 04.0**	**+4.5**
NDIM	**Novi di Modena**	**3.30**	**224**	⇑P	**Pb**	**08 42 22.5**	**+2.5**
WERD	**Werda**	**3.34**	**340**	*e*Pn	**Pn**	**08 42 14.4**	**+1.0**
WERD				*e*Sg	**Sg**	**08 43 07.8**	**-1.4**
MORC	**Moravsky Berou**	**3.35**	**42**	*e*PN	**Pn**	**08 42 14.1**	**+0.5**
MORC				*e*SG	**Sb**	**08 43 05.8**	**+4.3**
DPC	**Dobruska-Polom**	**3.37**	**25**	*e*PN	**Pn**	**08 42 13.3**	**-0.4**
DPC				*e*SG	**Sb**	**08 43 05.4**	**+3.6**
	comp=N,46nm,0.5s						
IMOL	**Imola, Italy**	**3.39**	**210**	P	**Pb**	**08 42 23.4**	**+1.9**
VYHS	**Vyhne**	**3.40**	**68**	*e*SG	**Sg**	**08 43 09.0**	**-2.0**
UPC	**Upice**	**3.43**	**21**	*e*SG	**Sb**	**08 43 08.1**	**+4.6**
	comp=N,70nm,0.5s						
CHVC	**Chvalec**	**3.51**	**21**	*e*PN	**Pn**	**08 42 15.4**	**-0.3**
CHVC				*e*SG	**Sb**	**08 43 10.6**	**+4.7**
	comp=N,104nm,1.1s						
OSTC	**Ostas**	**3.52**	**23**	*e*SG	**Sg**	**08 43 11.3**	**-3.7**
	comp=N,53nm,0.6s						
BRG	**Berggiesshubel**	**3.55**	**358**	*e*Pg	**Pg**	**08 42 28.1**	**-1.8**
BRG				Amp		08 42 33.7	
	comp=Z,2.9nm,0.4s						
BRG	**Berggiesshubel**	**3.55**	**358**	Sg	**Sb**	**08 43 10.1**	**+3.0**
BRG				Amp		08 43 14.4	
	comp=Z,24nm,0.6s						
OKC	**Ostrava-Krasne**	**3.68**	**45**	*e*SG	**Sb**	**08 43 14.7**	**+3.9**
	comp=Z,20nm,0.7s						
MOX	**Moxa**	**3.70**	**335**	*e*Pn	**Pn**	**08 42 19.0**	**+0.7**
MOX				*e*Sg	**Sb**	**08 43 16.3**	**+4.9**
SLE	**Schleitheim**	**3.82**	**279**	*e*Pn	**Pn**	**08 42 21.0**	**+1.0**
SLE				*e*Pg	**Pg**	**08 42 34.4**	**-0.7**
SLE				*e*Sn	**Sn**	**08 43 02.8**	**-1.7**
SLE				*e*Sg	**Sg**	**08 43 21.9**	**-2.6**
CRUX	**Bergwerk Schwa**	**3.94**	**328**	*e*Pn	**Pn**	**08 42 22.2**	**+0.6**
CRUX				*e*Sg	**Sg**	**08 43 25.4**	**-2.8**
BFO	**Black Forest**	**4.01**	**287**	*e*Pn	**Pn**	**08 42 23.8**	**+1.2**
BFO				*e*Sn	**Sn**	**08 43 07.0**	**-2.2**
BFO				*e*Sg	**Sg**	**08 43 28.6**	**-2.1**
EUCT	**Pavia**	**4.04**	**240**	S	**Sn**	**08 43 13.1**	**+3.2**
CLL	**Collm**	**4.05**	**350**	*e*Pn	**Pn**	**08 42 24.3**	**+1.2**
CLL				*e*Sg	**Sg**	**08 43 27.7**	**-4.1**
T1220	**Camerino, Fraz**	**4.28**	**190**	S	**Sn**	**08 43 14.2**	**-1.5**
CSP1	**Cessapalombo**	**4.28**	**189**	S	**Sn**	**08 43 13.5**	**-2.5**
FDMO	**Fiordimonte**	**4.35**	**190**	S	**Sn**	**08 43 13.0**	**-4.6**
T1256	**Bolognola (MC)**	**4.36**	**188**	P	**Pg**	**08 42 43.1**	**-2.4**
T1256				S	**Sn**	**08 43 19.5**	**+1.4**
T1256				AML	AML		
	comp=N,588µm,0.4s						
T1256				AML	AML		
	comp=E,508µm,0.2s						
SARZ	**Sarezzano**	**4.37**	**238**	S	**Sn**	**08 43 20.7**	**+2.8**
OFFI	**Offida**	**4.40**	**184**	S	**Sn**	**08 43 13.9**	**-4.9**
CDF	**Champ du Feu**	**4.72**	**286**	*e*Pg	**Pb**	**08 42 43.9**	**-0.3**
CDF				*e*Sn	**Sn**	**08 43 21.0**	**-5.7**
CDF				*e*Sg	**Sb**	**08 43 44.3**	**+3.6**
	comp=E,6.4nm,0.3s						
TRIF	**Trifonti**	**4.78**	**209**	⇓P	**Pn**	**08 42 33.9**	**+0.8**
MCIV	**Monte Civitell**	**4.86**	**202**	⇓P	**Pg**	**08 42 53.6**	**-1.4**
HINF	**Hinteralfeld**	**4.93**	**278**	*e*Pn	Pn	08 42 30.6	-4.6
HINF	**Hinteralfeld**	**4.93**	**278**	*e*Pg	**Pb**	**08 42 47.5**	**-0.2**
HINF				*e*Sn	**Sn**	**08 43 25.0**	**-6.8**
	comp=E,3.0nm,0.2s						
HINF				*e*Sg	**Sb**	**08 43 53.0**	**+6.3**
HAU	**Haudompre**	**5.28**	**280**	*e*Pn	**Pn**	**08 42 36.9**	**-3.1**
HAU	**Haudompre**	**5.28**	**280**	*e*Pg	**Pb**	**08 42 54.4**	**+0.7**
HAU				*e*Sn	**Sn**	**08 43 34.1**	**-6.3**
HAU				*e*Sg	**Sb**	**08 44 02.6**	**+5.8**
	comp=E,20nm,0.6s						
LPL	**La Plagne**	**5.40**	**253**	*e*Pn	**Pn**	**08 42 40.0**	**-1.9**
CABF	**La Chapelle**	**5.53**	**265**	*e*Pn	**Pn**	**08 42 40.0**	**-3.5**
CABF				*e*Sn	**Sn**	**08 43 40.6**	**-6.1**
MBDF	**Montbardon**	**5.72**	**246**	*e*Pn	**Pn**	**08 42 45.5**	**-0.7**
MBDF				*e*Sn	**Sn**	**08 43 46.4**	**-5.2**
PAGF	**Fort de Pagny**	**5.76**	**285**	*e*Pn	**Pn**	**08 42 43.1**	**-3.5**
PAGF				*e*Sg	**Sb**	**08 44 10.6**	**+0.1**
BSSO	**Busso**	**5.79**	**176**	P	Pb	08 43 07.6	+5.1
GATE	**Gambatesa**	**5.84**	**174**	⇑P	Pn	08 42 55.4	+7.6
SFTF	**Sexfontaines**	**6.17**	**282**	*e*Pn	Pn	08 42 47.9	-4.3
SFTF	**Sexfontaines**	**6.17**	**282**	*e*Pg	**Pb**	**08 43 11.9**	**+3.0**
SFTF				*e*Sn	**Sn**	**08 43 55.7**	**-6.6**
MEZF	**Maizieres J'vi**	**6.19**	**284**	*e*Pn	**Pn**	**08 42 49.3**	**-3.2**
ORIF	**Oris-en-Rattie**	**6.20**	**250**	*e*Pn	**Pn**	**08 42 50.6**	**-2.1**
ORIF				*e*Sn	**Sn**	**08 43 56.3**	**-6.9**
GIVF	**Givet**	**6.73**	**298**	*e*Pn	Pn	08 42 55.5	-4.4
GIVF	**Givet**	**6.73**	**298**	*e*Pg	**Pb**	**08 43 19.6**	**+1.1**
GIVF				*e*Sn	**Sn**	**08 44 09.5**	**-6.7**
SMF	**Signal de Mont**	**7.05**	**268**	*e*Pn	**Pn**	**08 43 01.7**	**-2.6**
SMF				*e*Sn	Sn	08 44 13.7	-10

*IDC **02** 08:42:20.3±0.9, 33°.54S×77°.84E, h0km, mb4.0/8, mbtmp4.0/8, MS3.7/25, Error ellipse: s-maj=32.0km s-min=28.6km az=49.0*
ISC 02 08:42:21.8±0.9**, 33°.6S**±0°.2×**77°.8E**±0°.2**, h10**km**, n35,**
σ**0s.94**/11**, mb4.0**/8**, MS3.7**/25**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**26.26**	**348**	T	T	09 15 04.3	
	baz=170,slow=76,SNR=76						
H08S1	**Diego Carcia H**	**26.26**	**348**	T	T	09 15 01.7	
	baz=170,slow=76,SNR=85						
H08S3	**Diego Garcia H**	**26.28**	**348**	T	T	09 15 05.8	
	baz=170,slow=76,SNR=75						
H01W2	**Cape Leeuwin H**	**29.94**	**103**	T	T	09 20 04.0	
	baz=261,slow=75,SNR=17						
H01W3	**Cape Leeuwin H**	**29.94**	**103**	T	T	09 20 04.4	
	baz=261,slow=75,SNR=16						
H01W1	**Cape Leeuwin H**	**29.95**	**103**	T	T	09 20 06.8	
	baz=261,slow=75,SNR=17						
PALK	**Pallekele**	**40.70**	**4**	LR	LR	09 03 06.4	
	comp=Z,72nm,19.0s,baz=297,slow=31						
BOSA	**Boshof**	**44.91**	**262**	LR	LR	09 05 22.5	
	comp=Z,121nm,20.5s,baz=154,slow=31						
LBTB	**Lobatse**	**45.95**	**266**	LR	LR	09 05 54.3	
	comp=Z,64nm,20.7s,baz=160,slow=31						
SUR	**Sutherland**	**47.33**	**255**	LR	LR	09 06 31.7	
	comp=Z,92nm,19.6s,baz=156,slow=31						
KAPI	**Kappang**	**48.18**	**63**	LR	LR	09 09 21.9	
	comp=Z,34nm,19.9s,baz=222,slow=34						
ASAR	**Alice Springs**	**49.68**	**94**	P	**P**	**08 51 13.8**	**-0.4**
	0.8nm,1.0s,baz=235,slow=5.7,SNR=4.8						
ASAR				LR	LR	09 10 32.0	
	comp=Z,58nm,19.6s,baz=246,slow=34						
	0.8nm,1.0s						
WRA	**Warramunga Arr**	**51.67**	**90**	P	**P**	**08 51 29.5**	**+0.3**
	1.2nm,1.0s,baz=243,slow=8.1,SNR=6.0						
WRA				LR	LR	09 12 11.5	
	comp=Z,49nm,18.4s,baz=246,slow=35						
	1.2nm,1.0s						
STKA	**Stephens Creek**	**52.89**	**107**	LR	LR	09 11 03.0	
	comp=Z,66nm,18.9s,baz=205,slow=33						
MBAR	**Mbarara**	**54.97**	**297**	LR	LR	09 12 03.0	
	comp=Z,52nm,18.2s,baz=110,slow=32						
CMAR	**Chiang Mai Arr**	**55.51**	**24**	P	**P**	**08 51 58.8**	**+1.6**
	1.8nm,0.3s,baz=221,slow=6.0,SNR=4.6						
CMAR				LR	LR	09 14 15.2	
	comp=Z,14nm,18.2s,baz=195,slow=34						
	1.8nm,0.3s						
VNDA	**Vanda**	**56.22**	**165**	LR	LR	09 13 40.6	
	comp=Z,112nm,18.2s,baz=272,slow=33						
QSPA	**South Pole Qui**	**56.59**	**180**	P	**P**	**08 52 04.8**	**+0.2**
	2.6nm,1.1s,baz=210,slow=8.9,SNR=3.5						
QSPA				LR	LR	09 13 21.7	
	comp=Z,67nm,18.1s,baz=266,slow=33						
	2.6nm,1.1s						
BRDH	**Bariadhala**	**57.45**	**15**	LR	LR	09 11 55.0	
	comp=Z,33nm,22.0s,baz=360,slow=31						

CTA	Charters Tower	61.53	96	LR	LR	09 17 19.8	
	comp=Z,77nm,19.8s,baz=262,slow=34						
PMG	Port Moresby	67.64	87	LR	LR	09 21 49.8	
	comp=Z,81nm,18.8s,baz=156,slow=35						
KRVT	Keravat (AS076	74.46	85	LR	LR	09 25 43.7	
	comp=Z,52nm,20.7s,baz=353,slow=35						
EIL	Elat	74.84	322	LR	LR	09 23 10.0	
	comp=Z,34nm,18.1s,baz=254,slow=33						
AAK	Ala-Archa	75.89	357	LR	LR	09 23 45.8	
	comp=Z,30nm,21.3s,baz=184,slow=33						
DZM	Mont Dzumac	77.03	108	LR	LR	09 23 49.0	
	comp=Z,67nm,19.7s,baz=258,slow=32						
MKAR	Makanchi Array	80.09	3	P	P	08 54 30.2	-1.3
	0.6nm,0.7s,baz=165,slow=6.3,SNR=7.4						
MKAR				LR	LR	09 26 58.1	
	comp=Z,37nm,21.8s,baz=254,slow=33						
	0.6nm,0.7s						
KURBB	Kurchatov Arra	83.82	0	LR	LR	09 29 38.6	
	comp=Z,36nm,20.4s,baz=159,slow=34						
SONM	Songino Array	84.98	19	P	P	08 54 56.3	-0.8
	0.5nm,0.9s,baz=204,slow=3.2,SNR=2.8						
	0.5nm,0.9s						
TORD	Torodi Ar. Bea	85.96	289	P	P	08 55 03.1	+0.5
	1.3nm,0.8s,baz=107,slow=4.3,SNR=7.2						
TORD				LR	LR	09 32 26.9	
	comp=Z,68nm,18.4s,baz=186,slow=35						
	1.3nm,0.8s						
BVAR	Borovoye Array	86.47	355	LR	LR	09 31 55.0	
	comp=Z,42nm,19.5s,baz=290,slow=34						
ZALV	Zalesovo Beam	87.36	4	P	P	08 55 08.5	0.0
	1.0nm,0.5s,baz=192,slow=5.1,SNR=5.2						
	1.0nm,0.5s						
DBIC	Dimbokro	87.60	280	LR	LR	09 31 39.5	
	comp=Z,60nm,18.5s,baz=180,slow=34						
MSVF	Nonsavu	88.54	110	LR	LR	09 27 44.6	
	comp=Z,59nm,19.4s,baz=237,slow=31						
SCHQ	Schefferville	147.45	322	PKPbc	PKPbc	09 02 05.8	+0.3
	1.9nm,0.8s,baz=86,slow=1.4,SNR=3.8						
YKA	Yellowknife Ar	149.99	12	PKPbc	PKPbc	09 02 10.4	-1.3
	0.8nm,0.7s,baz=328,slow=3.3,SNR=13						
YKA				PKPab	PKPab	09 02 17.7	+0.2
	0.9nm,0.8s,baz=316,slow=2.8,SNR=8.1						

IDC 02 08:49:24.7±5.6, 13°.97S×166°.55E, h0^{km}, mb3.8/4, mbtmp3.7/4, Error ellipse: s-maj=150.1km s-min=54.2km az=117.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	28.96	228	P	P	08 55 26.0	0.0
	1.0nm,0.5s,baz=50,slow=11,SNR=4.8						
	1.0nm,0.5s						
WRA	Warramunga Arr	31.34	255	P	P	08 55 45.8	-1.4
	0.5nm,0.9s,baz=88,slow=8.2,SNR=2.5						
	0.5nm,0.9s						
ASAR	Alice Springs	32.30	248	P	P	08 55 56.6	+1.0
	0.6nm,0.7s,baz=80,slow=9.1,SNR=7.1						
	0.6nm,0.7s						
MKAR	Makanchi Array	96.18	317	P	P	09 02 54.6	-0.1
	0.2nm,0.7s,baz=92,slow=4.3,SNR=2.6						
	0.2nm,0.7s						

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*KRSC **02** 09:08:44.0±1.5, 49°.61N×156°.84E, h57^{km}±24^{km}, Ml4.2*

*MOS **02** 09:08:43.7±0.7, 49°.68N×156°.01E, h110^{km}, mb3.8/1, Error ellipse: s-maj=22.3km s-min=5.2km az=74.3*

*IDC **02** 09:08:48.7±3.9, 50°.04N×155°.70E, h127^{km}±29^{km}, mb3.4/11, mbtmp3.8/13, Error ellipse: s-maj=40.0km s-min=13.1km az=168.0*

ISC 02 09:08:44.2±0.9, 49°.62N±0°.10×156°.12E±0°.09, h100^{km}, n61, σ1^{s}.38/73, mb3.8/11, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.07	360	PN	Pn	09 09 04.6	-0.7
SKR				S	Sn	09 09 19.6	-1.6
SKR	Severo-Kuril's	1.07	360	*e*P	Pn	09 09 04.6	-0.7
SKR				*e*S	Sn	09 09 19.6	-1.6
PAU	Pauzhetka	1.90	13	PN	Pn	09 09 16.4	+0.9
PAU				S	Sn	09 09 39.9	+0.5
PAU	Pauzhetka	1.90	13	*e*P	Pn	09 09 16.4	+0.9
PAU				*e*S	Sn	09 09 39.9	+0.5
KDTR	Khodutka, Kamc	2.52	29	PN	Pn	09 09 22.7	-0.8
KDTR				S	Sn	09 09 51.2	-2.5
KDTR	Khodutka, Kamc	2.52	29	*e*P	Pn	09 09 22.7	-0.8
KDTR				*e*S	Sn	09 09 51.2	-2.5
MTVR	Mutnovka	3.15	24	PN	Pn	09 09 32.1	0.0
MTVR				S	Sn	09 10 07.8	-1.1
MTVR	Mutnovka	3.15	24	*e*P	Pn	09 09 32.1	0.0
MTVR				*e*S	Sn	09 10 07.8	-1.1
GRL	Gorelyy	3.19	22	PN	Pn	09 09 33.2	+0.7
GRL				S	Sn	09 10 09.6	-0.2
GRL	Gorelyy	3.19	22	*e*P	Pn	09 09 33.2	+0.7
GRL				*e*S	Sn	09 10 09.6	-0.2
RUS	Russkaya	3.20	27	PN	Pn	09 09 31.7	-0.8
RUS				S	Sn	09 10 07.0	-2.8
RUS	Russkaya	3.20	27	*e*P	Pn	09 09 31.7	-0.8
RUS				*e*S	Sn	09 10 07.0	-2.8
APC	Apacha	3.38	11	PN	Pn	09 09 36.3	+1.4
APC	Apacha	3.38	11	*e*P	Pn	09 09 36.3	+1.4
KRMR	Karymshinskiy	3.46	21	PN	Pn	09 09 36.4	+0.4
KRMR	Karymshinskiy	3.46	21	*e*P	Pn	09 09 36.4	+0.4
PETK	Petropavlovsk-	3.63	15	P	Pn	09 09 38.3	-0.1
	6.7nm,0.5s,baz=191,slow=16,SNR=55						
PETK				S	Sn	09 10 19.1	-1.2
	2.1nm,0.3s,baz=118,slow=22,SNR=6.0						
PET	Petropavlovsk	3.76	24	*e*PN	Pn	09 09 39.9	-0.2
PET				*e*S	Sn	09 10 22.4	-1.0
PET				smax	smax		
	comp=N,95nm,0.5s						
PET				smax	smax		
	comp=E,68nm,0.6s						
DALK	Dalny	3.80	25	PN	Pn	09 09 40.5	-0.1
DALK				S	Sn	09 10 23.1	-1.1
DALK	Dalny	3.80	25	*e*P	Pn	09 09 40.5	-0.1
DALK				*e*S	Sn	09 10 23.1	-1.1
UGLR	Uglovaya	3.97	24	PN	Pn	09 09 43.7	+0.6
UGLR	Uglovaya	3.97	24	*e*P	Pn	09 09 43.7	+0.6
KOK	Koryaka	4.00	22	PN	Pn	09 09 44.7	+1.3
KOK	Koryaka	4.00	22	*e*P	Pn	09 09 44.7	+1.3
AVH	Avacha	4.00	23	PN	Pn	09 09 44.5	+1.1
AVH	Avacha	4.00	23	*e*P	Pn	09 09 44.5	+1.1
SMAR	Somma	4.02	24	PN	Pn	09 09 44.1	+0.3
SMAR	Somma	4.02	24	*e*P	Pn	09 09 44.1	+0.3
KRER	Koryakskii	4.04	23	PN	Pn	09 09 45.0	+0.9
KRER	Koryakskii	4.04	23	*e*P	Pn	09 09 45.0	+0.9
SDLR	Sedlovina	4.05	24	PN	Pn	09 09 44.2	+0.1
SDLR	Sedlovina	4.05	24	*e*P	Pn	09 09 44.2	+0.1
KRX	Arik	4.07	22	PN	Pn	09 09 45.2	+0.9
KRX	Arik	4.07	22	*e*P	Pn	09 09 45.2	+0.9
GNL	Ganaly	4.24	15	PN	Pn	09 09 47.5	+0.9
GNL	Ganaly	4.24	15	*e*P	Pn	09 09 47.5	+0.9
SPN	Mys Shipunski	4.26	34	PN	Pn	09 09 46.0	-0.8
SPN				S	Sn	09 10 32.3	-3.0
SPN	Mys Shipunski	4.26	34	*e*P	Pn	09 09 46.0	-0.8
SPN				*e*S	Sn	09 10 32.3	-3.0
TUMD	Tumrok D	6.17	23	*e*P	Pn	09 10 14.6	+1.8
TUMR	Tumrok	6.18	22	PN	Pn	09 10 14.6	+1.6
TUMR	Tumrok	6.18	22	*e*P	Pn	09 10 16.6	+3.6
ASAJ	Asahikawa	10.77	244	P	Pn	09 11 14.2	-1.0
	comp=E,5.6nm,0.9s,baz=150,slow=33,SNR=2.1						
KLR	Kul'dur	15.85	278	P	Pn	09 12 21.9	+0.5
	comp=E,0.4nm,0.4s,baz=299,slow=22,SNR=2.2						
H11N2	WAKE ISLAND Hy	31.04	160	T	T	09 48 08.7	
	baz=342						
H11N1	WAKE ISLAND Hy	31.06	160	T	T	09 47 51.3	
	baz=342						
H11N3	WAKE ISLAND Hy	31.06	160	T	T	09 48 00.8	
	baz=342						
H11S1	WAKE ISLAND Hy	32.18	161	T	T	09 49 28.0	
	baz=347,slow=76,SNR=58						
H11S3	WAKE ISLAND Hy	32.19	161	T	T	09 49 26.5	
	baz=347,slow=76,SNR=69						
H11S2	WAKE ISLAND Hy	32.20	161	T	T	09 49 38.3	
	baz=347,slow=76,SNR=34						
ILAR	Eielson Array	33.05	41	P	P	09 15 09.6	-0.2
	comp=E,0.5nm,0.7s,baz=262,slow=6.2,SNR=14						
	comp=E,0.5nm,0.7s						
INK	Inuvik	38.15	35	P	P	09 15 53.9	+0.7
	comp=E,1.0nm,0.7s,baz=298,slow=6.0,SNR=4.3						
	comp=E,1.0nm,0.7s						
ZALV	Zalesovo Beam	42.62	304	P	P	09 16 27.8	-2.4
	comp=E,1.3nm,0.4s,baz=64,slow=7.3,SNR=6.3						
	comp=E,1.3nm,0.4s						
YKA	Yellowknife Ar	47.42	39	P	P	09 17 08.5	+0.4
	comp=E,0.2nm,0.5s,baz=296,slow=7.0,SNR=4.7						
	comp=E,0.2nm,0.5s						
MKAR	Makanchi Array	47.44	296	P	P	09 17 06.3	-2.2
	comp=E,1.3nm,0.8s,baz=64,slow=8.2,SNR=12						
	comp=E,1.3nm,0.8s						
KURK	Kurchatov	47.48	303	P	P	09 17 07.5	-1.2
KURBB	Kurchatov Arra	47.58	303	P	P	09 17 07.5	-2.0
	comp=E,3.3nm,0.8s,baz=64,slow=8.2,SNR=16						
	comp=E,3.3nm,0.8s						
BVAR	Borovoye Array	50.61	309	P	P	09 17 30.7	-1.8
	comp=E,0.9nm,0.3s,baz=59,slow=7.6,SNR=4.5						
	comp=E,0.9nm,0.3s						
CMAR	Chiang Mai Arr	54.99	257	P	P	09 18 05.7	+0.5
	comp=E,1.1nm,0.3s,baz=29,slow=6.7,SNR=7.3						
	comp=E,1.1nm,0.3s						
NVAR	Mina Array Bea	59.36	66	P	P	09 18 38.2	+2.2
	comp=E,0.6nm,0.8s,baz=295,slow=7.7,SNR=4.1						
	comp=E,0.6nm,0.8s						
PDAR	Pinedale Array	61.46	57	P	P	09 18 52.4	+2.1
	comp=E,0.6nm,0.9s,baz=348,slow=4.0,SNR=5.1						
	comp=E,0.6nm,0.9s						
TXAR	Lajitas Array	74.36	63	P	P	09 20 12.4	+1.3
	comp=E,0.6nm,0.5s,baz=306,slow=4.9,SNR=4.8						
	comp=E,0.6nm,0.5s						

IDC 02 09:17:38.1±3.0, 53°.54N×87°.85E, h0^{km}, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=24.5km s-min=15.1km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.84	284	I	I	09 31 20.0	
	baz=98,slow=324,SNR=1.1						
ZALV	Zalesovo Beam	1.84	284	Pg	Pn	09 18 11.1	+0.2
	1.5nm,0.3s,baz=106,slow=9.9,SNR=19						
ZALV				Lg	Lg	09 18 36.2	
	6.8nm,0.3s,baz=106,slow=26,SNR=43						
KURBB	Kurchatov Arra	6.44	247	Pn	Pn	09 19 15.8	+1.8
	0.1nm,0.3s,baz=61,slow=14,SNR=4.8						
KURBB				Sn	Sn	09 20 26.8	-1.3
	baz=39,slow=50,SNR=1.4						
KURBB				Lg	Lg	09 21 00.3	
	0.1nm,0.3s,baz=61,slow=30,SNR=1.8						
	0.9nm,0.5s						
MKAR	Makanchi Array	7.63	210	Pn	Pn	09 19 30.8	+0.3
	0.1nm,0.3s,baz=30,slow=15,SNR=4.4						
MKAR				Sn	Sn	09 20 58.3	+0.7
	0.1nm,0.3s,baz=32,slow=27,SNR=3.8						
MKAR				Lg	Lg	09 21 39.6	
	0.1nm,0.3s,baz=30,slow=32,SNR=5.6						
	0.2nm,0.4s						

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*NOU **02** 09:27:27.6, 42°.64S×173°.23E, h0^{km}, MLv3.5/9, South Island, New Zealand*

*WEL **02** 09:27:27.8, 43°S±4°×17°3E±°, h27^{km}±12^{km}, M2.7/24, ML2.9/28, MLv2.7/24, Error ellipse: s-maj=0.0km s-min=0.0km az=83.4*

ISC 02 09:27:27.3±1.0, 42°.63S±0°.03×173°.27E±0°.04, h10^{km}, n54, σ1^{s}.48/55, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHZ	Kahutara	0.29	44	P	Pb	09 27 34.8	+0.2
GVZ	Greta Valley S	0.38	207	P	Pn	09 27 38.0	-1.0
AMCZ	Amberley	0.71	219	P	Pn	09 27 43.7	+0.2
LTZ	Lake Taylor	0.75	258	P	Pg	09 27 42.0	+0.1
THZ	Tophouse	0.91	343	P	Pg	09 27 43.4	-1.3
BSWZ	Blackbirch Sta	1.02	27	P	Pb	09 27 47.4	+0.4
CMWZ	Cape Campbell	1.12	39	P	Pn	09 27 50.8	+1.7
OXZ	Oxford	1.14	232	P	Pb	09 27 49.5	+0.3
MQZ	McQueen's Vall	1.17	202	P	Pb	09 27 49.6	0.0
AKCZ	Akaroa Harbour	1.27	192	P	Pg	09 27 51.8	0.0
MRNZ	Matariki Terra	1.28	343	P	Pn	09 27 50.5	-0.9
TUWZ	Tuamarina	1.30	23	P	Pb	09 27 51.9	0.0
INZ	Inchbonnie	1.35	265	P	Pn	09 27 51.9	-0.3
RACZ	Rakaia	1.38	217	P	Pn	09 27 52.8	+0.2
DSZ	Denniston Nort	1.40	309	P	Pn	09 27 52.5	-0.5
MHCZ	Mount Hutt	1.54	233	P	Pn	09 27 54.8	-0.1
TCW	Tory Channel	1.60	28	P	Pn	09 27 56.2	+0.5
TKNZ	Takaka Hill	1.61	352	P	Pn	09 27 55.8	0.0
WACZ	Wakanui South	1.68	218	P	Pn	09 27 56.9	+0.2
SNZO	South Karori	1.70	40	P	Pb	09 27 57.9	-0.7
PLWZ	Palliser	1.82	55	P	Pn	09 27 58.8	0.0
QRZ	Quartz Range	1.88	343	P	Pn	09 28 00.0	+0.4
QRZ	Quartz Range	1.88	343	P	Pn	09 27 59.8	+0.3
DUWZ	D'Urville Isla	1.89	15	P	Pn	09 28 00.6	+0.9
WVZ	Waitaha Valley	1.92	256	P	Pn	09 28 00.6	+0.6
RPZ	Rata Peaks	1.95	235	P	Pn	09 28 00.8	+0.3
RPZ	Rata Peaks	1.95	235	P	Pn	09 28 00.6	+0.1
ARCZ	Arundel	2.02	228	P	Pn	09 28 01.6	+0.1
CAW	Cannon Point	2.03	42	P	Pn	09 28 01.8	+0.2
KIW	Kapiti Island	2.15	35	P	Pn	09 28 03.9	+0.6
GCSZ	Gaunt Creek Bo	2.27	251	P	Pn	09 28 05.9	+1.1
OGWZ	Otaki Gorge	2.30	39	P	Pn	09 28 05.7	+0.4
TMZ	Timaru	2.41	222	P	Pn	09 28 07.2	+0.4
MRZ	Mangatainoka R	2.62	42	P	Pn	09 28 09.5	-0.2
FOZ	Fox Glacier	2.69	249	P	Pn	09 28 12.1	+1.5
BFZ	Birch Farm	2.96	50	P	Pb	09 28 17.2	-3.0
ODZ	Otahua Downs	3.07	217	P	Pn	09 28 16.8	+0.9
ODZ	Otahua Downs	3.07	217	P	Pn	09 28 15.9	0.0
WAZ	Wanganui	3.15	25	P	Pb	09 28 21.2	-2.2
KHEZ	Kahui Hut	3.38	10	P	Pn	09 28 23.3	+3.1
NBEZ	Newall Road No	3.39	8	P	Pn	09 28 23.3	+3.1
PKE	Pukeiti	3.47	9	P	Pn	09 28 23.8	+2.4
JCZ	Jackson Bay	3.58	245	P	Pn	09 28 24.4	+1.5
JCZ	Jackson Bay	3.58	245	P	Pn	09 28 23.8	+0.9
VRZ	Vera Road	3.68	18	P	Pn	09 28 26.4	+2.2
WNVZ	Wahianoa	3.74	29	P	Pn	09 28 26.7	+1.5
TRVZ	Turoa	3.75	28	P	Pb	09 28 32.4	-1.3
OTVZ	Oturere	3.91	28	P	Pn	09 28 28.4	+0.8
OTVZ				P	Pn	09 28 28.5	+0.9
ETVZ	East Tongariro	3.95	29	P	Pn	09 28 31.6	+3.5
HIZ	Hauiti	4.28	17	P	Pn	09 28 34.3	+1.7
TLZ	Tolley Road	4.63	23	P	Pn	09 28 40.4	+3.1
RAGZ	Rawiri	5.20	39	P	Pn	09 28 50.0	+4.8
URZ	Urewera	5.26	35	P	Pn	09 28 45.7	-0.2
URZ	Urewera	5.26	35	P	Pn	09 28 45.3	-0.6

IDC 02 09:30:16.1±2.6, 53°.63N×86°.95E, h0^{km}, mbtmp2.5/2, ML2.3/2, Error ellipse: s-maj=24.0km s-min=13.9km az=72.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.30	285	I	I	09 40 00.0	
	baz=102,slow=336,SNR=1.7						
ZALV	Zalesovo Beam	1.30	285	Pg	Pg	09 30 40.2	-0.9
	0.8nm,0.3s,baz=104,slow=15,SNR=13						
ZALV				Lg	Lg	09 30 58.0	
	1.0nm,0.3s,baz=105,slow=23,SNR=8.5						
ZALV				Rg	Rg	09 31 04.0	
	2.0nm,0.5s,baz=100,slow=31,SNR=5.1						
KURBB	Kurchatov Arra	6.00	243	Pn	Pn	09 31 46.7	+0.7
	baz=61,slow=14,SNR=2.4						
KURBB				Lg	Lg	09 33 26.6	
	baz=62,slow=33						
	0.2nm,0.3s						
MKAR	Makanchi Array	7.46	205	Pn	Pn	09 32 08.1	+1.9
	0.1nm,0.3s,baz=28,slow=14,SNR=7.1						
MKAR				Sn	Sn	09 33 30.2	-1.3
	0.1nm,0.3s,baz=27,slow=26,SNR=3.0						
MKAR				Lg	Lg	09 34 07.2	
	baz=22,slow=28,SNR=2.1						
	0.2nm,0.4s						

IDC 02 09:42:48.2±2.2, 7°.03S×129°.04E, h0^{km}, mb3.4/1, mbtmp3.5/3, ML3.6/2, Error ellipse: s-maj=146.7km s-min=32.3km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.83	159	Pn	Pn	09 46 05.6	-0.1
	0.3nm,0.3s,baz=341,slow=13,SNR=10						
WRA				Sn	Sn	09 48 27.6	-13
	1.3nm,0.3s,baz=333,slow=23,SNR=12						
	0.8nm,0.5s						
ASAR	Alice Springs	17.19	165	P	Pn	09 46 50.0	+0.1
	0.2nm,0.3s,baz=338,slow=9.7,SNR=17						
ASAR				S	Sn	09 49 50.6	-11
	0.6nm,0.5s,baz=357,slow=30,SNR=6.5						
	0.6nm,0.6s						
MKAR	Makanchi Array	67.73	327	P	P	09 53 47.6	0.0
	0.2nm,0.4s,baz=117,slow=5.8,SNR=4.5						
	0.2nm,0.4s						

IDC 02 09:45:23.2±2.5, 53°.70N×87°.00E, h0^{km}, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=21.1km s-min=13.4km az=74.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.32	282	I	I	09 55 20.0	
	baz=103,slow=338,SNR=2.1						
ZALV	Zalesovo Beam	1.32	282	Pg	Pg	09 45 47.0	-1.3
	1.5nm,0.3s,baz=101,slow=18,SNR=16						
ZALV				Lg	Lg	09 46 05.6	
	1.4nm,0.3s,baz=101,slow=30,SNR=12						
KURBB	Kurchatov Arra	6.05	243	Pn	Pn	09 46 54.8	+0.9
	0.1nm,0.3s,baz=59,slow=14,SNR=4.0						
KURBB				Sn	Sn	09 48 03.0	-0.8
	baz=35,slow=40						
KURBB				Lg	Lg	09 48 33.5	
	baz=48,slow=52						
	0.4nm,0.4s						
MKAR	Makanchi Array	7.54	205	Pn	Pn	09 47 15.3	+0.9
	0.2nm,0.3s,baz=25,slow=14,SNR=7.9						
MKAR				Sn	Sn	09 48 42.4	+1.9
	0.1nm,0.3s,baz=25,slow=27,SNR=4.0						
MKAR				Lg	Lg	09 49 21.9	
	baz=26,slow=34,SNR=2.9						
	0.2nm,0.3s						

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*NEIC **02** 10:09:43.9±1.8, 6°.40S±0°.09×155°.16E±0°.04, h41^{km}±9^{km}, mb4.8/26, Error ellipse: s-maj=12.8km s-min=4.7km az=188.0*

*DJA **02** 10:09:45.9±0.5, 6°S±3°×15°5E±°, h77^{km}±6^{km}, M4.7/20, mB4.7/2, mb4.6/20, MLv4.8/2, Mw(mB)3.9/2*

*IDC **02** 10:09:49.8±1.4, 6°.25S×154°.74E, h84^{km}±13^{km}, mb4.1/14, mbtmp4.4/18, MS3.3/17, Error ellipse: s-maj=14.7km s-min=9.7km az=45.0*

ISC 02 10:09:45.1±0.4, 6°.36S±0°.06×155°.02E±0°.06, h50^{km}, n110, σ1^{s}.41/96, mb4.7/36, MS3.3/13, 1D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	3.57	307	Pn	Pn	10 10 39.9	+1.8
RABL	Rabaul	3.57	307	P	Pn	10 10 40.1	+2.1
KRVT	Keravat (AS076	3.61	304	P	Pn	10 10 38.7	+0.1
	142nm,0.4s,baz=271,slow=4.0,SNR=30						
KRVT				S	Sn	10 11 19.1	-0.9
	502nm,0.8s,baz=138,slow=13,SNR=3.8						
KRVT				LR	LR	10 12 21.1	
	comp=Z,735nm,18.6s,baz=318,slow=46						
HNR	Honiara	5.76	122	P	Pn	10 11 16.3	+8.2
	3µm,0.9s,baz=165,slow=3.6,SNR=2.7						
HNR				S	Sn	10 12 25.3	+13
	1µm,0.6s,baz=302,slow=13,SNR=1.5						
HNR	Honiara	5.76	122	Pn	Pn	10 11 05.4	-2.7
PMG	Port Moresby	8.36	248	P	Pn	10 11 44.4	+0.7
	20nm,0.6s,baz=47,slow=9.4,SNR=10						
PMG				S	Sn	10 13 15.3	-1.4
	16nm,0.6s,baz=140,slow=22,SNR=2.5						
PMG				LR	LR	10 14 37.7	
	comp=Z,238nm,21.6s,baz=36,slow=35						
PMG	Port Moresby	8.36	248	Pn	Pn	10 11 44.8	+1.1
PMG	Port Moresby	8.36	248	P	Pn	10 11 37.5	-6.2
PMG	Port Moresby	8.36	248	P	Pn	10 11 37.9	-5.8
PATS	Pohnpei	13.51	14	Pn	Pn	10 12 51.4	-2.9
COEN	Coen	13.88	236	Pn	Pn	10 12 57.9	-1.4
CTA	Charters Tower	16.09	211	P	P	10 13 32.3	+1.6
	3.0nm,0.7s,baz=32,slow=12,SNR=2.6						
CTA				LR	LR	10 19 04.8	
	comp=Z,111nm,19.4s,baz=70,slow=35						
SMPI	Sarmi	16.83	284	P	Pn	10 13 37.3	-0.2
	19nm,1.2s						
DZM	Mont Dzumac	19.13	146	P	Pn	10 14 08.6	+3.1
	4.9nm,0.7s,baz=227,slow=11,SNR=7.0						
DZM				LR	LR	10 20 41.1	
	comp=Z,145nm,20.0s,baz=26,slow=34						
DZM	Mont Dzumac	19.13	146	P	Pn	10 14 10.7	+5.2
ONTNC	Ouen Toro	19.32	146	P	P	10 14 01.8	-4.5
ONTNC				IAmb	IAmb	10 14 08.5	
	comp=Z,137nm,1.9s						
QIS	Mount Isa	20.56	225	P	P	10 14 19.9	+0.1
RKPI	Ransiki, Papua	21.34	282	P	P	10 14 29.9	+1.6
	comp=Z,29nm,0.6s						
GUMO	Guam	22.23	333	P	P	10 14 37.2	-0.6
QLP	Quilpie	22.59	206	P	P	10 14 42.1	+0.6
FAKI	Fak Fak	22.95	278	P	P	10 14 44.3	-1.2
FAKI				IAmb	IAmb	10 14 46.3	
	comp=Z,46nm,1.1s						
FAKI	Fak Fak	22.95	278	P	P	10 14 44.6	-0.8
	comp=Z,40nm,1.0s						
WR0	Warramunga Arr	24.05	234	P	P	10 14 56.2	+0.3
WR0				IAmb	IAmb	10 14 57.3	
	comp=Z,59nm,1.1s						
WB0	Warramunga Arr	24.07	234	P	P	10 14 56.0	0.0
WB0				IAmb	IAmb	10 14 57.3	
	comp=Z,30nm,0.9s						
WRAB	Tennant Creek	24.19	234	P	P	10 14 57.7	+0.5
WRAB				IAmb	IAmb	10 15 28.0	
	comp=Z,35nm,0.7s						
WRAB	Tennant Creek	24.19	234	P	P	10 14 57.1	0.0
WB2	Warramunga Arr	24.19	234	P	P	10 14 57.2	0.0
WB2				IAmb	IAmb	10 14 58.6	
	comp=Z,30nm,0.9s						
WRA	Warramunga Arr	24.20	234	P	P	10 14 57.2	0.0
	comp=Z,19nm,0.8s,baz=57,slow=9.5,SNR=85						
WRA				PcP	PcP	10 18 37.5	+0.5
	comp=Z,0.4nm,0.7s,baz=61,slow=2.0,SNR=5.3						
WRA				LR	LR	10 24 11.9	
	comp=Z,101nm,19.6s,baz=84,slow=36						
	comp=Z,19nm,0.8s						
WRA	Warramunga Arr	24.20	234	P	P	10 14 56.4	-0.9
MTN	Manton Dam	24.41	253	P	P	10 14 59.1	-0.1
MTN				IAmb	IAmb	10 15 00.2	
	comp=Z,17nm,0.8s						
MTN	Manton Dam	24.41	253	P	P	10 14 59.2	+0.1
MSVF	Nonsavu	25.16	119	LR	LR	10 24 24.1	
	comp=Z,108nm,20.1s,baz=143,slow=34						
INKA	Innaminka	25.22	211	P	P	10 15 07.2	+0.9
CMSA	Cobar Meteorol	26.53	198	P	P	10 15 21.6	+3.4
AS01	Alice Springs	26.58	227	P	P	10 15 18.3	-0.5
	comp=Z,8.6nm,0.8s						
AS31	Alice Springs	26.61	228	P	P	10 15 18.8	-0.3
AS31				IAmb	IAmb	10 15 19.6	
	comp=Z,4.5nm,0.4s						
ASAR	Alice Springs	26.61	228	P	P	10 15 19.0	-0.1
	comp=Z,5.2nm,0.4s,baz=57,slow=9.0,SNR=128						
ASAR				PcP	PcP	10 18 42.1	-0.3
	comp=Z,1.7nm,0.7s,baz=63,slow=2.6,SNR=8.8						
ASAR				LR	LR	10 24 52.8	
	comp=Z,98nm,19.8s,baz=80,slow=34						
	comp=Z,5.2nm,0.4s						
ASAR	Alice Springs	26.61	228	P	P	10 15 18.5	-0.6
H11S3	WAKE ISLAND Hy	27.25	25	T	T	10 44 00.3	
	baz=204,slow=75,SNR=17						
H11S2	WAKE ISLAND Hy	27.25	25	T	T	10 43 52.5	
	baz=204,slow=75,SNR=23						
H11S1	WAKE ISLAND Hy	27.26	25	T	T	10 43 49.2	
	baz=204,slow=75,SNR=17						
KNRA	Kununurra	27.36	248	P	P	10 15 25.4	-0.4
KNRA				IAmb	IAmb	10 15 28.6	
	comp=Z,16nm,0.8s						
KNRA	Kununurra	27.36	248	P	P	10 15 26.4	+0.6
LBMI	Labuha	28.04	281	P	P	10 15 32.7	+0.7
	comp=Z,60nm,1.1s						
OOD	Oodnadatta	28.12	218	P	P	10 15 33.2	+0.6
STKA	Stephens Creek	28.32	205	P	P	10 15 34.2	0.0
	comp=Z,3.1nm,0.4s,baz=41,slow=14,SNR=5.9						
STKA				LR	LR	10 27 11.0	
	comp=Z,76nm,18.2s,baz=27,slow=37						
	comp=Z,3.1nm,0.4s						
STKA	Stephens Creek	28.32	205	P	P	10 15 34.0	-0.2
H11N1	WAKE ISLAND Hy	28.42	24	T	T	10 45 42.2	
	baz=205						
H11N3	WAKE ISLAND Hy	28.43	24	T	T	10 45 32.7	
	baz=205						
H11N2	WAKE ISLAND Hy	28.44	24	T	T	10 45 38.9	
	baz=205						
LCRK	Leigh Creek	28.70	211	P	P	10 15 38.2	+0.6
SANI	Sanana	29.26	277	P	P	10 15 42.0	-0.8
	comp=Z,23nm,0.8s						

HTT	Hallett	30.80	207	P	P	10 15 57.2	+0.9
MULG	Mulgathing	30.90	217	P	P	10 15 57.1	0.0
	comp=Z,15nm,2.5s						
FITZ	Fitzroy Crossi	30.93	245	P	P	10 15 56.6	-0.9
FITZ	Fitzroy Crossi	30.93	245	P	P	10 15 56.9	-0.7
WRKA	Warakurna	31.61	231	P	P	10 16 03.1	-0.5
BBOO	Buckleboo	31.69	211	P	P	10 16 04.2	+0.1
DAV	Davao City (W)	32.26	294	LR	LR	10 29 04.5	
	comp=Z,21nm,19.2s,baz=66,slow=36						
MMRI	Maumere	32.58	264	P	P	10 16 10.7	-1.3
ARPS	Mount Arapiles	32.58	200	P	P	10 16 13.1	+1.3
	comp=Z,28nm,0.8s						
AFI	Afiamalu	33.50	106	LR	LR	10 27 29.1	
	comp=Z,47nm,19.9s,baz=50,slow=31						
TOLI2	Tolitoli	34.97	281	P	P	10 16 33.4	+0.5
FORT	Forrest	35.07	223	P	P	10 16 31.2	-2.3
FORT				IAmb	IAmb	10 16 34.4	
	comp=Z,19nm,0.8s						
FORT	Forrest	35.07	223	P	P	10 16 33.3	-0.2
	comp=Z,27nm,0.8s						
MPSI	Mapaga	35.68	279	P	P	10 16 35.6	-3.4
PLAI	Plampang	36.99	264	P	P	10 16 48.5	-1.7
MBWA	Marble Bar	37.18	243	P	P	10 16 51.2	-0.6
MBWA				IAmb	IAmb	10 16 51.5	
	comp=Z,8.6nm,0.6s						
MBWA	Marble Bar	37.18	243	P	P	10 16 50.6	-1.1
PSA00	Pilbara Seismi	37.21	242	P	P	10 16 51.4	-0.6
PSA00				IAmb	IAmb	10 17 43.6	
	comp=Z,26nm,1.6s						
URZ	Urewera	37.55	151	P	P	10 16 59.6	+5.1
	comp=Z,4.3nm,0.5s,baz=102,slow=4.4,SNR=6.4						
	comp=Z,4.3nm,0.5s						
URZ	Urewera	37.55	151	P	P	10 17 01.5	+7.0
BKZ	Black Stump Fm	37.98	152	P	P	10 17 04.1	+5.8
RPZ	Rata Peaks	39.79	162	P	P	10 17 16.1	+2.8
	comp=Z,2.6nm,0.5s,baz=103,slow=10,SNR=1.8						
	comp=Z,2.6nm,0.5s						
JOW	Kunigami	41.95	323	P	P	10 17 30.8	-0.5
MORW	Morawa	43.15	234	P	P	10 17 40.6	-0.5
MORW				IAmb	IAmb	10 17 41.4	
	comp=Z,9.6nm,0.9s						
KSAR	Wonju Array Be	50.40	332	P	P	10 18 37.5	-0.1
NJ2	Nanjing	51.45	320	eP	P	10 18 47.4	+1.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ASAJ	Asahikawa	51.48	349	LR	LR	10 38 08.6	
	comp=Z,29nm,20.9s,baz=166,slow=33						
USA0B	Ussuriysk Arra	54.45	340	P	P	10 19 06.5	-0.9
USRK	Ussuriysk Ar.	54.45	340	P	P	10 19 06.4	-1.0
KLR	Kul'dur	58.97	342	LR	LR	10 44 53.3	
	comp=Z,11nm,20.5s,baz=44,slow=36						
PETK	Petropavlovsk-	59.28	2	LR	LR	10 43 09.5	
	comp=Z,27nm,20.4s,baz=132,slow=34						
PHRA	Phrae	59.40	296	P	P	10 19 43.8	+0.8
CRAI	Chiangrai	59.85	298	P	P	10 19 46.7	+0.6
CRAI				IAmb	IAmb	10 19 47.4	
	comp=Z,11nm,1.2s						
CM31	Chiang Mai Arr	60.54	295	P	P	10 19 51.4	+0.6
CMAR	Chiang Mai Arr	60.54	295	P	P	10 19 51.5	+0.7
	comp=Z,6.3nm,0.8s,baz=119,slow=4.9,SNR=26						
CMAR				LR	LR	10 44 43.4	
	comp=Z,12nm,21.2s,baz=140,slow=35						
	comp=Z,6.3nm,0.8s						
CMAR	Chiang Mai Arr	60.54	295	P	P	10 19 50.5	-0.3
CHTO	Chiang Mai	60.65	296	P	P	10 19 52.1	+0.5
PZH	PanZhiHua	61.07	305	P	P	10 19 57.9	+3.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,120nm,5.2s						
CD2	Chengdu	61.42	310	P	P	10 19 57.1	+0.4
HHC	Hu-ho-hao-te	61.60	324	eP	P	10 20 00.8	+3.1
HHC				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,4.8s						
SONM	Songino Array	68.82	327	P	P	10 20 44.0	-0.4
	comp=Z,0.7nm,0.4s,baz=144,slow=5.7,SNR=12						
	comp=Z,0.7nm,0.4s						
YAK	Yakutsk	70.94	348	LR	LR	10 50 18.8	
	comp=Z,16nm,20.8s,baz=112,slow=34						
CCD	Concordia, Ant	71.04	188	P	P	10 20 59.3	+1.4
BILL	Bilibino	74.65	4	P	P	10 21 20.2	+1.4
KDAK	Kodiak Island	76.59	26	LR	LR	10 58 45.4	
	comp=Z,14nm,18.4s,baz=47,slow=38						
WMQ	Urumqi	78.38	317	eP	P	10 21 41.7	+1.1
ILAR	Eielson Array	82.78	22	P	P	10 22 03.5	0.0
	comp=Z,0.4nm,0.4s,baz=241,slow=5.2,SNR=18						
ILAR				LR	LR	10 53 34.4	
	comp=Z,35nm,22.0s,baz=66,slow=32						
	comp=Z,0.4nm,0.4s						
MK31	Makanchi Array	82.95	319	P	P	10 22 05.0	+0.1
MKAR	Makanchi Array	82.95	319	P	P	10 22 04.1	-0.8
	comp=Z,1.3nm,0.6s,baz=94,slow=7.9,SNR=20						
	comp=Z,1.3nm,0.6s						
MKAR	Makanchi Array	82.95	319	P	P	10 22 04.8	-0.1
ZALV	Zalesovo Beam	83.67	326	P	P	10 22 06.6	-1.8
	comp=Z,1.6nm,0.7s,baz=118,slow=8.6,SNR=7.2						
	comp=Z,1.6nm,0.7s						
MAW	Mawson	84.99	203	P	P	10 22 15.7	+0.9
	comp=Z,12nm,0.5s,baz=255,slow=17,SNR=1.0						
	comp=Z,12nm,0.5s						
NRIK	Noril'sk	88.15	341	P	P	10 22 29.1	-1.1
	comp=Z,1.9nm,0.5s,baz=99,slow=7.1,SNR=1.3						
	comp=Z,1.9nm,0.5s						
NVAR	Mina Array Bea	91.31	52	P	P	10 22 48.1	+2.1
	comp=Z,0.8nm,0.7s,baz=260,slow=7.0,SNR=8.8						
	comp=Z,0.8nm,0.7s						
YKA	Yellowknife Ar	95.77	28	P	P	10 23 06.5	+0.9
	comp=Z,0.5nm,0.7s,baz=264,slow=4.5,SNR=7.4						
YKA				PKKPbc	PKKPbc	10 39 54.6	-3.3
	comp=Z,0.1nm,0.5s,baz=84,slow=2.5,SNR=4.5						
	comp=Z,0.5nm,0.7s						
NACGM	Naroch	116.43	330	ePKP	PKiKP	10 28 25.1	+1.8
	comp=Z,9.0nm,1.1s,baz=62						
BCLA	Clavier	129.32	335	dPKiKP	PKiKP	10 28 48.0	-0.8
TORD	Torodi Ar. Bea	152.88	286	PKP	PKPdf	10 29 30.2	-0.4
	comp=Z,0.4nm,1.0s,baz=62,slow=2.2,SNR=1.9						
TORD				PKPbc	PKPbc	10 29 36.5	-1.3
	comp=Z,1.4nm,0.6s,baz=59,slow=2.4,SNR=10.0						
TORD				PKPab	PKPab	10 29 48.0	-1.0
	comp=Z,0.9nm,0.6s,baz=102,slow=2.4,SNR=6.1						

WEL 02 10:11:34.7,43°S±5°×17°3E±°,h18^{km}±13^{km},M2.6/20, mB5.0/1,ML2.9/27,MLv2.6/20,Mw(mB)4.3/1,Error ellipse: s-maj=0.0km s-min=0.0km az=86.1,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	Greta Valley S	0.07	275	P	Pg	10 11 38.5	+0.5
AMCZ	Amberley	0.40	239	P	Pn	10 11 45.6	0.0
KHZ	Kahutara	0.64	29	P	Pn	10 11 49.1	+0.3
LTZ	Lake Taylor	0.66	287	P	Pn	10 11 49.2	+0.1
MQZ	McQueen's Vall	0.81	205	P	Pn	10 11 51.9	+0.7
OXZ	Oxford	0.87	246	P	Pn	10 11 53.3	+1.2
AKCZ	Akaroa Harbour	0.91	190	P	Pn	10 11 53.8	+1.2
RACZ	Rakaia	1.04	223	P	Pg	10 11 55.6	+0.7
THZ	Tophouse	1.22	352	P	Pg	10 11 58.7	+0.4
INZ	Inchbonnie	1.26	281	P	Pg	10 11 59.5	+0.5
MHCZ	Mount Hutt	1.27	243	P	Pg	10 11 58.6	-0.5
WACZ	Wakanui South	1.35	224	P	Pb	10 11 59.9	+0.5
BSWZ	Blackbirch Sta	1.38	24	P	Pg	10 12 01.4	+0.2
CMWZ	Cape Campbell	1.47	34	P	Pg	10 12 03.0	+0.1
DSZ	Denniston Nort	1.57	321	P	Pb	10 12 03.8	+0.7
MRNZ	Matariki Terra	1.60	350	P	Pg	10 12 04.8	-0.5
TUWZ	Tuamarina	1.66	22	P	Pb	10 12 04.9	+0.2
RPZ	Rata Peaks	1.68	243	P	Pb	10 12 04.7	-0.4
ARCZ	Arundel	1.72	235	P	Pb	10 12 05.2	-0.6
WVZ	Waitaha Valley	1.75	266	P	Pb	10 12 06.8	+0.5
NNZ	Nelson	1.77	6	P	Pb	10 12 07.1	+0.6
TKNZ	Takaka Hill	1.94	356	P	Pb	10 12 10.1	+0.6
GCSZ	Gaunt Creek Bo	2.08	260	P	Pb	10 12 11.4	-0.4
TMZ	Timaru	2.08	227	P	Pn	10 12 10.4	+1.6
PLWZ	Palliser	2.11	49	P	Pn	10 12 09.7	+0.5
QRZ	Quartz Range	2.19	348	P	Pb	10 12 13.2	-0.6
DUWZ	D'Urville Isla	2.25	16	P	Pb	10 12 13.5	-1.3
CAW	Cannon Point	2.36	38	P	Pn	10 12 13.7	+1.2
FOZ	Fox Glacier	2.48	256	P	Pb	10 12 17.5	-1.1
OGWZ	Otaki Gorge	2.64	36	P	Pn	10 12 17.5	+1.1
ODZ	Otahua Downs	2.74	220	P	Pn	10 12 19.1	+1.4
MRZ	Mangatainoka R	2.95	39	P	Pn	10 12 21.3	+0.7
BFZ	Birch Farm	3.27	47	P	Pn	10 12 25.8	+0.8
JCZ	Jackson Bay	3.34	249	P	Pn	10 12 28.3	+2.2
EAZ	Earnscleugh	3.56	229	P	Pn	10 12 30.4	+1.4
PKE	Pukeiti	3.83	10	P	Pn	10 12 36.3	+3.5
VRZ	Vera Road	4.04	18	P	Pn	10 12 39.0	+3.4
OTVZ	Oturere	4.26	28	P	Pn	10 12 42.4	+3.6
WHHZ	Waihua	4.98	40	P	Pb	10 12 55.8	-5.5
MUGZ	Murupara	5.28	33	P	Pn	10 12 55.8	+3.2

KRNET 02 10:13:38.1±0.1,39°.37N×73°.17E,h16^{km},mb3.7
SOME 02 10:13:38.6,39°.55N×73°.30E,h0^{km}
NNC 02 10:13:42.6±1.4,39°.56N×73°.36E,h0^{km},mb3.9,mpv3.5, Error ellipse: s-maj=11.9km s-min=6.3km az=169.0
ISC 02 10:13:41.2±1.1,39°.39N±0°.06×73°.12E±0°.03,h10^{km},n67, σ1^{s}.22/92,29C-17D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.03	276	⇑iP	Pg	10 13 58.5	-2.5
	baz=77						
DRK				⇑iS	Sg	10 14 13.3	-1.1
	baz=77						
OHH	Osh	1.16	347	⇓iP	Pb	10 14 00.9	-2.5
	baz=46						
OHH				⇓iS	Sb	10 14 17.4	-1.2
	baz=46						
BTK	Batken	1.90	291	⇓eP	Pn	10 14 14.2	+0.5
	baz=91						
BTK				⇓iS	Sb	10 14 40.5	+0.7
	baz=91						
GAR	Garm	2.21	261	⇓iP	Pn	10 14 18.7	+0.6
	baz=61						
GAR				⇓iS	Sb	10 14 48.2	-0.7
	baz=61						
ARK	Arkit	2.56	340	⇑eP	Pn	10 14 23.3	+0.4
	baz=40						
ARK				⇑iS	Sn	10 14 56.4	+2.2
	baz=40						
TRKS	Terek-Say	2.62	325	⇑iP	Pn	10 14 23.3	-0.4
	baz=25						
TRKS				⇑iS	Sn	10 14 56.4	+0.7
	baz=25						
ARLS	Aral	2.63	20	⇑iP	Pn	10 14 23.8	-0.1
	baz=19						
ARLS				⇑iS	Sn	10 14 57.4	+1.4
	baz=19						
AML	Almayashu	2.77	9	P	Pn	10 14 27.0	+0.9
	SNR=34						
AML	Almayashu	2.77	9	⇑Pn	Pn	10 14 26.3	+0.2
	1.9nm,0.5s						
AML				⇓Sn	Sb	10 15 02.7	-2.6
	20nm,0.6s						
AML	Almayashu	2.77	9	⇓eP	Pn	10 14 26.3	+0.2
	baz=8.0						
AML				⇓iS	Sn	10 15 01.6	+1.8
	baz=8.0						
UCH	Uchtor	3.03	20	P	Pn	10 14 30.0	+0.5
	SNR=28						
UCH	Uchtor	3.03	20	⇑iP	Pn	10 14 29.6	0.0
	baz=19						
UCH				⇑iS	Sn	10 15 07.4	+1.3
	baz=19						
CHGR	Chuyangaron	3.17	258	⇑eP	Pn	10 14 31.8	+0.6
	baz=58						
CHGR				⇑iS	Sn	10 15 11.0	+1.8
	baz=58						
EKS2	Erkin-Say	3.31	8	P	Pn	10 14 34.3	+1.2
	SNR=14						
EKS2	Erkin-Say	3.31	8	⇑iP	Pn	10 14 33.5	+0.4
	baz=8.0						
EKS2				⇑iS	Sn	10 15 13.8	+1.2
	baz=8.0						
MRKS	Merke	3.35	1	Pg	Pb	10 14 38.4	-2.4
	16nm,0.7s						
MRKS				Lg	Lg	10 15 21.2	
	82nm,0.3s						
MRKS	Merke	3.35	1	ePg	Pb	10 14 38.4	-2.4
	16nm,0.7s						
MRKS				eLg	Lg	10 15 21.2	
	82nm,0.3s						
AAK	Ala-Archa	3.41	17	P	Pn	10 14 35.6	+1.1
	SNR=34						
AAK	Ala-Archa	3.41	17	⇓iP	Pn	10 14 34.8	+0.3
	baz=17						
AAK				⇓iS	Sn	10 15 16.3	+1.2
	baz=17						
TAS	Tashkent	3.51	305	⇑iP	Pn	10 14 36.6	+0.9
	baz=5.0						
TAS				⇑iS	Sn	10 15 19.2	+1.9
	baz=5.0						
KBK	Karagaybulak	3.54	22	P	Pn	10 14 38.6	+2.1
	SNR=19						
KBK	Karagaybulak	3.54	22	⇑iP	Pn	10 14 36.8	+0.4
	baz=22						
KBK				⇑iS	Sn	10 15 19.6	+1.1
	baz=22						
IUG	Iuzhnay	3.62	321	Pg	Pb	10 14 46.2	+0.9
	35nm,0.7s						
IUG	Iuzhnay	3.62	321	ePg	Pb	10 14 46.2	+0.9
	35nm,0.7s						
IUG				eLg	Lg	10 15 34.4	
	104nm,1.1s						
ULHL	Ulahol	3.71	39	⇓iP	Pn	10 14 39.0	+0.3
	baz=38						
ULHL				⇓iS	Sn	10 15 23.2	+0.6
	baz=38						
CHMS	Chumysh	3.81	18	P	Pn	10 14 40.8	+0.9
	SNR=11						
CHMS	Chumysh	3.81	18	⇑iP	Pn	10 14 40.3	+0.4
	baz=18						
CHMS				⇑iS	Sn	10 15 25.8	+1.0
	baz=18						
TKM2	Tokmak 2	3.99	27	P	Pn	10 14 43.0	+0.3
	SNR=18						
TKM2	Tokmak 2	3.99	27	⇑Pn	Pn	10 14 42.8	+0.3
	6.2nm,0.6s						
TKM2				⇑Sn	Sb	10 15 40.2	0.0
	31nm,0.6s						
TKM2	Tokmak 2	3.99	27	⇑eP	Pn	10 14 42.9	+0.3
	baz=27						
TKM2				⇑eS	Sn	10 15 30.3	+0.7
	baz=27						
USP	Ospenovka	4.01	15	P	Pn	10 14 43.5	+0.8
	SNR=5.7						
USP	Ospenovka	4.01	15	⇓eP	Pn	10 14 43.1	+0.4
	baz=14						
USP				⇓iS	Sn	10 15 30.7	+0.9
	baz=14						
KDJ	Kajisay	4.12	47	⇑eP	Pn	10 14 44.6	+0.2
	baz=47						
KDJ				⇑eS	Sn	10 15 33.3	+0.6
	baz=47						
KK31	Karatay Array	4.20	333	⇓Pn	Pn	10 14 47.4	+2.1
	0.8nm,0.3s,baz=145,slow=11,SNR=31						
KK31				⇑Pg	Pb	10 14 55.9	+0.8
	3.9nm,0.5s,baz=148,slow=14,SNR=16						
KK31				⇑Sn	Sn	10 15 38.6	+4.1
	11nm,0.5s,baz=180,slow=35,SNR=4.7						
SGDS	Sogindy	4.22	15	Pg	Pb	10 14 54.0	-1.4
	3.8nm,0.6s						
SGDS				Lg	Lg	10 15 48.6	
	17nm,1.0s						
DGS	Degeres	4.34	27	Pg	Pb	10 14 57.5	0.0
	16nm,1.0s						
DGS				Lg	Lg	10 15 54.0	
	43nm,0.8s						
DGS	Degeres	4.34	27	ePg	Pb	10 14 57.5	0.0
	16nm,0.2s						
DGS				eLg	Lg	10 15 54.0	
	43nm,0.8s						
MTBS	Maitube	4.49	33	Pg	Pb	10 15 00.1	-0.1
	11nm,0.7s						
MTBS				Lg	Lg	10 15 58.1	
	22nm,0.9s						
MTBS	Maitube	4.49	33	ePg	Pb	10 15 00.1	-0.1
	7.1nm,0.3s						
MTBS				eLg	Lg	10 15 58.1	
	39nm,0.3s						
IZV	Izvestkoviy	4.50	35	Pg	Pb	10 14 59.6	-0.7
	4.6nm,0.8s						
IZV				Lg	Lg	10 15 58.1	
	82nm,1.6s						
IZV	Izvestkoviy	4.50	35	ePg	Pb	10 14 59.6	-0.7
	4.6nm,0.2s						
IZV				eLg	Lg	10 15 58.1	
	89nm,0.4s						
TNSS	Tian-Shan	4.65	37	Pg	Pb	10 15 02.9	-0.1
	9.4nm,0.6s						
TNSS				Lg	Lg	10 16 03.3	
	18nm,0.9s						
TNSS	Tian-Shan	4.65	37	ePg	Pb	10 15 03.0	0.0
	9.4nm,0.2s						
TNSS				eLg	Lg	10 16 03.3	
	18nm,0.9s						
KRBS	Karabastau	4.71	23	Pg	Pb	10 15 02.9	-1.0
	8.0nm,1.1s						
KRBS				Lg	Lg	10 16 03.6	
	41nm,0.8s						
KRBS	Karabastau	4.71	23	ePg	Pb	10 15 02.9	-1.0
	3.5nm,0.2s						
KRBS				eLg	Lg	10 16 03.6	
	41nm,0.3s						
MDOK	Medeo	4.79	37	⇓Pn	Pn	10 14 54.3	+0.7
	4.3nm,0.6s						
MDOK				Pg	Pb	10 15 02.3	-3.0
	14nm,0.9s						
MDOK				Pg	Pg	10 15 05.0	-7.9
	4.1nm,0.6s						
MDOK				Sn	Sb	10 16 05.8	+2.7
	54nm,0.6s						
MDOK				Lg	Lg	10 16 07.1	
	27nm,1.1s						
KOTS	Kotyrbulak	4.88	37	Pg	Pb	10 15 06.5	-0.2
	6.2nm,1.1s						
KOTS				Lg	Lg	10 16 10.2	
	136nm,0.5s						
KOTS	Kotyrbulak	4.88	37	ePg	Pb	10 15 06.5	-0.2
	6.2nm,1.1s						
KOTS				eLg	Lg	10 16 10.2	
	136nm,0.4s						
KTBS	Karatobe	5.08	31	Pg	Pb	10 15 09.9	-0.2
	3.5nm,0.6s						
KTBS				Lg	Lg	10 16 15.8	
	44nm,1.2s						
KTBS	Karatobe	5.08	31	ePg	Pb	10 15 09.9	-0.2
	2.8nm,0.3s						
KTBS				eLg	Lg	10 16 15.8	
	44nm,0.1s						
KUU	Kurty	5.11	27	Pg	Pb	10 15 10.0	-0.5
	3.2nm,0.6s						
KUU				Lg	Lg	10 16 15.8	
	19nm,0.9s						
KUU	Kurty	5.11	27	ePg	Pb	10 15 10.1	-0.5
	3.3nm,0.1s						
KUU				eLg	Lg	10 16 15.8	
	39nm,0.2s						
SATY	Saty	5.42	46	Pg	Pb	10 15 15.6	-0.3
	10nm,0.8s						
SATY				Lg	Lg	10 16 25.5	
	22nm,1.6s						
SATY	Saty	5.42	46	ePg	Pb	10 15 14.6	-1.3
	13nm,0.4s						
SATY				eLg	Lg	10 16 23.3	
	17nm,0.5s						
ZHN	Zhinishke	5.50	45	ePg	Pb	10 15 17.6	+0.2
	4.5nm,0.1s						
ZHN				eLg	Lg	10 16 28.6	
	13nm,0.2s						
KURS	Kuram	5.58	41	Pg	Pb	10 15 19.2	+0.5
	5.3nm,0.9s						
KURS				Lg	Lg	10 16 31.3	
	13nm,3.0s						
KURS	Kuram	5.58	41	ePg	Pb	10 15 19.2	+0.5
	5.2nm,0.3s						
KURS				eLg	Lg	10 16 31.3	
	12nm,0.6s						
BTLS	Baital	5.69	7	Pg	Pb	10 15 21.7	+1.2
	1.5nm,0.6s						
BTLS				Lg	Lg	10 16 35.2	
	9.4nm,0.8s						
BTLS	Baital	5.69	7	ePg	Pb	10 15 21.0	+0.5
	2.2nm,0.3s						
BTLS				eLg	Lg	10 16 34.5	
	6.7nm,0.4s						
UZB	Uzynbulak	5.82	48	Pg	Pb	10 15 23.2	+0.4
	4.9nm,0.5s						
UZB				Lg	Lg	10 16 38.3	
	12nm,1.2s						
UZB	Uzynbulak	5.82	48	ePg	Pb	10 15 21.2	-1.6
	4.7nm,0.2s						
UZB				eLg	Lg	10 16 35.0	
	12nm,0.4s						
KPKS	Kokpek	5.84	44	Pg	Pb	10 15 23.1	0.0
	9.5nm,0.8s						
KPKS				Lg	Lg	10 16 38.5	
	11nm,0.6s						
KPKS	Kokpek	5.84	44	ePg	Pb	10 15 23.1	0.0
	9.5nm,0.2s						
KPKS				eLg	Lg	10 16 38.5	
	12nm,0.3s						
ARXS	Arharly	5.97	35	Pg	Pb	10 15 27.0	+1.8
	11nm,0.7s						
ARXS				Lg	Lg	10 16 44.3	
	34nm,2.2s						
ARXS	Arharly	5.97	35	ePg	Pb	10 15 26.7	+1.5
	8.3nm,0.3s						
ARXS				eLg	Lg	10 16 44.3	
	19nm,0.4s						
BLB	Baldybastay	6.18	39	Pg	Pb	10 15 29.5	+0.6
	15nm,1.2s						
BLB				Lg	Lg	10 16 48.6	
	19nm,0.7s						
PDGK	Podgornoye	6.20	49	Pg	Pb	10 15 30.4	+1.1
	2.3nm,1.1s						
PDGK				Lg	Lg	10 16 50.9	
	4.0nm,1.3s						

SOME 02 10:45:12.9,39°.95N×81°.13E,h0^{km}
NNC 02 10:45:16.5±2.0,40°.01N×81°.11E,h0^{km},mb3.8,mpv3.4, 1C-1D,Error ellipse: s-maj=15.9km s-min=11.3km az=48.0,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	3.38	339	Pg	Pb	10 46 16.0	-1.3
	9.6nm,0.3s						
SHLS				Lg	Lg	10 47 01.1	
	104nm,0.7s						
SHLS	Shalkode	3.38	339	ePg	Pb	10 46 16.0	-1.3
	9.8nm,0.1s						
SHLS				eLg	Lg	10 47 01.1	
	104nm,0.5s						
UZB	Uzynbulak	3.50	334	Pg	Pb	10 46 19.9	+0.5
	5.1nm,0.3s						
UZB				Lg	Lg	10 47 08.3	
	21nm,0.3s						
UZB	Uzynbulak	3.50	334	ePg	Pb	10 46 19.9	+0.5
	5.5nm,0.1s						
UZB				eLg	Lg	10 47 08.3	
	24nm,0.2s						
PDGK	Podgornoye	3.53	340	Pg	Pb	10 46 19.3	-0.5
	2.9nm,0.5s						
PDGK				Lg	Lg	10 47 07.1	
	15nm,0.6s						
PDGK	Podgornoye	3.53	340	⇑Pn	Pb	10 46 20.0	+0.2
	10nm,0.7s						
PDGK				⇓Sn	Sn	10 46 54.1	-1.0
	25nm,0.7s						
SATY	Saty	3.66	327	Pg	Pb	10 46 23.7	+1.6
	5.8nm,0.5s						
SATY				Lg	Lg	10 47 15.0	
	38nm,0.3s						
SATY	Saty	3.66	327	ePg	Pb	10 46 23.6	+1.5
	5.4nm,0.1s						
SATY				eLg	Lg	10 47 15.0	
	38nm,0.3s						
KPKS	Kokpek	3.90	333	Pg	Pb	10 46 27.2	+1.1
	12nm,0.4s						
KPKS				Lg	Lg	10 47 20.9	
	29nm,0.4s						
KPKS	Kokpek	3.90	333	ePg	Pb	10 46 27.2	+1.1
	12nm,0.1s						
KPKS				eLg	Lg	10 47 20.9	
	38nm,0.2s						
TNSS	Tian-Shan	4.35	315	Pg	Pb	10 46 35.4	+1.5
	3.1nm,0.7s						
TNSS				Lg	Lg	10 47 34.8	
	5.9nm,0.5s						
TNSS	Tian-Shan	4.35	315	ePg	Pb	10 46 35.4	+1.4
	6.2nm,0.2s						
TNSS				eLg	Lg	10 47 34.8	
	6.2nm,0.2s						
MDOK	Medeo	4.38	317	Pg	Pb	10 46 36.3	+1.9
	1.3nm,0.4s						
MDOK				Lg	Lg	10 47 36.2	
	10nm,0.5s						

MDOK	**Medeo**	**4.38**	**317**	*e*Pg	Pb	10 46 36.3	+1.9
	3.5nm,0.2s						
MDOK				*e*Lg	Lg	10 47 36.2	
	12nm,0.2s						
KOTS	**Kotyrbulak**	**4.40**	**318**	Pg	Pb	10 46 37.1	+2.5
	4.8nm,0.4s						
KOTS				Lg	Lg	10 47 37.6	
	14nm,0.4s						
KOTS	**Kotyrbulak**	**4.40**	**318**	*e*Pg	Pb	10 46 37.1	+2.5
	4.8nm,0.2s						
KOTS				*e*Lg	Lg	10 47 37.6	
	17nm,0.2s						
BLB	**Baldybastay**	**4.53**	**335**	Pg	Pb	10 46 38.2	+1.4
	8.5nm,0.4s						
BLB				Lg	Lg	10 47 39.9	
	15nm,0.4s						
IZV	**Izvestkoviy**	**4.53**	**313**	Pg	Pb	10 46 39.2	+2.3
	3.0nm,0.5s						
IZV				Lg	Lg	10 47 41.1	
	10nm,0.5s						
IZV	**Izvestkoviy**	**4.53**	**313**	*e*Pg	Pb	10 46 39.2	+2.3
	3.0nm,0.2s						
IZV				*e*Lg	Lg	10 47 41.1	
	11nm,0.2s						
MTBS	**Maitube**	**4.69**	**313**	Pg	Pb	10 46 42.2	+2.5
	2.0nm,0.5s						
MTBS				Lg	Lg	10 47 46.2	
	5.1nm,0.2s						
MTBS	**Maitube**	**4.69**	**313**	*e*Pg	Pb	10 46 42.2	+2.5
	1.8nm,0.1s						
MTBS				*e*Lg	Lg	10 47 46.2	
	9.2nm,0.2s						
CHKK	**Chushkaly**	**4.92**	**323**	Pg	Pb	10 46 45.9	+2.5
	3.5nm,0.3s						
CHKK				Lg	Lg	10 47 52.8	
	11nm,0.3s						
CHKK	**Chushkaly**	**4.92**	**323**	*e*Pg	Pb	10 46 45.9	+2.5
	4.5nm,0.1s						
CHKK				*e*Lg	Lg	10 47 52.8	
	11nm,0.1s						
KTBS	**Karatobe**	**4.96**	**320**	Pg	Pb	10 46 46.6	+2.4
	2.5nm,1.3s						
KTBS				Lg	Lg	10 47 53.7	
	9.4nm,0.5s						
KTBS	**Karatobe**	**4.96**	**320**	*e*Pg	Pb	10 46 46.6	+2.4
	2.6nm,0.1s						
KTBS				*e*Lg	Lg	10 47 53.7	
	14nm,0.3s						
DGS	**Degeres**	**5.14**	**311**	Pg	Pb	10 46 48.8	+1.5
	2.8nm,0.7s						
DGS				Lg	Lg	10 47 58.2	
	4.8nm,0.9s						
DGS	**Degeres**	**5.14**	**311**	*e*Pg	Pb	10 46 48.8	+1.5
	2.8nm,0.2s						
DGS				*e*Lg	Lg	10 47 58.2	
	6.1nm,0.2s						
KRBS	**Karabastau**	**5.48**	**314**	Pg	Pb	10 46 55.6	+2.6
	1.9nm,0.6s						
KRBS				Lg	Lg	10 48 10.0	
	2.9nm,0.6s						
KRBS	**Karabastau**	**5.48**	**314**	*e*Pg	Pb	10 46 55.6	+2.6
	1.9nm,0.3s						
KRBS				*e*Lg	Lg	10 48 10.0	
	2.9nm,0.2s						

ROM 02 10:52:12.1±0.2**,44°.328N**±0°.008×**11°.09E**±0°.01**,h20**^{km}±1^{km}**,**
ML2.0/18**,2D,Error ellipse: s-maj=0.8km s-min=0.4km az=222.0,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZCCA	**Zocca**	**0.08**	**287**	⇓P	Pb	10 52 15.5	-0.5
ZCCA				S	Sb	10 52 19.2	+0.5
ZCCA				AML	AML		
	comp=N,1031µm,0.4s						
ZCCA				AML	AML		
	comp=N,1056µm,0.4s						
ZCCA				AML	AML		
	comp=E,785µm,0.4s						
ZCCA				AML	AML		
	comp=N,1030µm,0.4s						
ZCCA				AML	AML		
	comp=E,755µm,0.3s						
FNVD	**Fontana Vidola**	**0.16**	**170**	P	Pb	10 52 16.3	-1.1
FNVD				S	Sb	10 52 20.0	-1.1
MTRZ	**Monterenzio**	**0.28**	**80**	P	Pb	10 52 18.7	+0.2
MTRZ				AML	AML		
	comp=N,582µm,1.6s						
MTRZ				AML	AML		
	comp=N,582µm,1.6s						
MTRZ				AML	AML		
	comp=N,594µm,1.6s						
MTRZ				AML	AML		
	comp=E,759µm,0.4s						
MTRZ				AML	AML		
	comp=E,725µm,0.4s						
MTRZ				AML	AML		
	comp=N,582µm,0.4s						
MTRZ				AML	AML		
	comp=N,594µm,0.4s						
MTCR	**Monte La Croce**	**0.31**	**192**	P	Pb	10 52 18.6	-0.4
MTCR				S	Sb	10 52 24.4	+0.7
SEI	**Scarperia**	**0.34**	**144**	P	Pb	10 52 19.3	-0.1
SEI				S	Sb	10 52 25.4	+1.1
SEI				AML	AML		
	comp=E,371µm,1.3s						
SEI				AML	AML		
	comp=N,576µm,0.2s						
SEI				AML	AML		
	comp=E,371µm,0.7s						
GSCL	**Gusciola**	**0.36**	**274**	P	Pb	10 52 19.5	-0.2
GSCL				S	Sb	10 52 25.6	+0.7
MPPT	**Montemurlo**	**0.37**	**179**	P	Pb	10 52 19.6	-0.3
MPPT				S	Sb	10 52 26.5	+1.2
A306A	**Viano (RE)**	**0.41**	**301**	P	Pb	10 52 21.4	+0.8
BDI	**Bagni Di Lucca**	**0.44**	**233**	P	Pb	10 52 21.1	0.0
BDI				S	Sb	10 52 28.2	+0.9
BDI				AML	AML		
	comp=E,354µm,0.4s						
BDI				AML	AML		
	comp=N,310µm,1.0s						
BDI				AML	AML		
	comp=E,156µm,0.4s						
BDI				AML	AML		
	comp=N,128µm,1.1s						
BDI				AML	AML		
	comp=E,354µm,1.6s						
BDI				AML	AML		
	comp=N,128µm,0.9s						
BDI				AML	AML		
	comp=E,156µm,1.6s						
BDI				AML	AML		
	comp=N,310µm,1.0s						
SARO	**Sassorosso**	**0.51**	**254**	P	Pb	10 52 22.4	-0.1
SARO				S	Sb	10 52 30.0	+0.4
CARD	**Cardoso**	**0.53**	**235**	P	Pb	10 52 22.6	-0.1
CARD				S	Sb	10 52 30.8	+0.8
CARD				AML	AML		
	comp=N,236µm,1.2s						
CARD				AML	AML		
	comp=E,202µm,0.2s						
CARD				AML	AML		
	comp=N,236µm,0.8s						
VLC	**Villacollemand**	**0.53**	**252**	P	Pb	10 52 22.7	-0.1
VLC				S	Sb	10 52 30.7	+0.7
APEC	**Apecchio**	**1.23**	**128**	S	Sn	10 52 52.7	+2.4
FDMO	**Fiordimonte**	**1.94**	**131**	P	Pb	10 52 46.1	-0.7
CSP1	**Cessapalombo**	**1.97**	**128**	S	Sb	10 53 14.6	+3.0
T1215	**Vallo di Nera,**	**2.00**	**139**	⇓P	Pb	10 52 47.2	-0.7
MC2	**Monte Cornacci**	**2.08**	**132**	P	Pn	10 52 47.5	+1.4
T1217	**Poggiodomo (PG**	**2.10**	**140**	P	Pn	10 52 46.5	+0.3

IDC ***02*** *10:53:40.6±0.9,51°.40N×16°.27E,h0*^{km}*,mbtmp3.3/6, ML2.7/6,Error ellipse: s-maj=18.7km s-min=8.4km az=107.0*
PRU ***02*** *10:53:41.6±0.0,51°.41N×16°.05E,h0*^{km}
VIE ***02*** *10:53:41.4,51°.34N×15°.84E,h0*^{km}*,mb2.6/4,ml2.7/5 80 km NE of Liberec Suspected Mining induced.*
ISC 02 10:53:39.3±0.8**,51°.48N**±0°.04×**16°.08E**±0°.02**,h0**^{km}**,n36,**
σ**1**^{s}**26**/70**,Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.65**	**168**	*i* Pg	**Pb**	**10 53 53.0**	**-0.5**
KSP				*e*Sg	**Sg**	**10 54 01.4**	**+1.3**
CHVC	**Chvalec**	**0.89**	**181**	*e*PG	**Pb**	**10 53 57.5**	**-0.1**
CHVC				*e*SG	**Sg**	**10 54 07.8**	**0.0**
	comp=Z,66nm,1.0s						
OSTC	**Ostas**	**0.93**	**175**	*e*PG	**Pb**	**10 53 58.0**	**-0.2**
OSTC				*e*SG	**Sg**	**10 54 09.5**	**+0.5**
	comp=Z,41nm,0.6s						
UPC	**Upice**	**0.97**	**182**	*e*PG	**Pb**	**10 53 58.8**	**-0.2**
UPC				*e*SG	**Sg**	**10 54 11.2**	**+0.7**
	comp=Z,159nm,0.4s						
DPC	**Dobruska-Polom**	**1.14**	**172**	*e*PG	**Pg**	**10 54 01.3**	**+0.2**
DPC				*e*SG	**Sg**	**10 54 16.3**	**+0.5**
	comp=Z,28nm,0.3s						
PVCC	**Panska Ves**	**1.35**	**226**	*e*PG	**Pb**	**10 54 05.6**	**+0.3**
PVCC				*e*SG	**Sb**	**10 54 23.7**	**+0.6**
	comp=Z,187nm,0.3s						
BRG	**Berggiesshubel**	**1.47**	**247**	Amp		10 54 29.9	
	comp=Z,56nm,0.4s						
BRG	**Berggiesshubel**	**1.47**	**247**	Pg	**Pb**	**10 54 08.8**	**+1.3**
BRG	**Berggiesshubel**	**1.47**	**247**	Sg	**Sn**	**10 54 28.7**	**+1.7**
KRLC	**Kraliky**	**1.47**	**162**	*e*PG	**Pn**	**10 54 07.3**	**+0.2**
KRLC				*e*SG	**Sg**	**10 54 25.9**	**-0.7**
	comp=Z,59nm,0.8s						
GOPC	**GO Pecny, Ondr**	**1.77**	**208**	*e*PG	**Pn**	**10 54 11.5**	**+0.4**
GOPC				*e*SG	**Sg**	**10 54 36.3**	**+0.3**
	comp=Z,17nm,0.2s						
PRU	**Pruhonice**	**1.78**	**214**	*e*PG	**Pn**	**10 54 12.0**	**+0.7**
PRU				*e*SG	**Sg**	**10 54 37.7**	**+1.2**
	comp=Z,28nm,0.8s						
CLL	**Collm**	**1.93**	**266**	*e*Pn	**Pn**	**10 54 14.0**	**+0.6**
CLL				*e*Pg	**Pg**	**10 54 16.0**	**-0.3**
CLL				*e*x	x	10 54 18.0	
CLL				*e*Sg	**Sg**	**10 54 42.0**	**+0.7**
	comp=Z,20nm,0.7s						
MORC	**Moravsky Berou**	**1.94**	**151**	*e*PN	**Pn**	**10 54 13.7**	**+0.2**
MORC				*e*SG	**Sb**	**10 54 40.1**	**-0.2**
OKC	**Ostrava-Krasne**	**2.11**	**140**	*e*PG	**Pb**	**10 54 18.8**	**+0.5**
OKC				*e*SG	**Sg**	**10 54 46.2**	**-0.6**
	comp=Z,35nm,0.5s						
VRAC	**Vranov**	**2.20**	**171**	Pn	**Pn**	**10 54 16.2**	**-0.8**
	comp=Z,1.7nm,0.3s,baz=350,slow=18,SNR=10						
VRAC				Lg	Lg	10 54 49.5	
	comp=Z,3.6nm,0.3s,baz=267,slow=20,SNR=8.0						
	comp=Z,3.0nm,0.3s						
VRAC	**Vranov**	**2.20**	**171**	*e*PN	**Pn**	**10 54 18.0**	**+1.0**
VRAC				*e*SG	**Sb**	**10 54 48.1**	**+0.5**
KRUC	**Moravsky**	**2.43**	**175**	*e*SG	**Sg**	**10 54 56.0**	**-1.2**
NKC	**Novy Kostel**	**2.62**	**243**	*e*PN	**Pn**	**10 54 24.1**	**+1.3**
NKC				*e*PG	**Pg**	**10 54 29.0**	**-0.4**
NKC				*e*SG	**Sg**	**10 55 03.9**	**+0.6**
	comp=Z,29nm,0.3s						
OJC	**Ojcow**	**2.67**	**117**	*e*Pg	**Pg**	**10 54 31.2**	**+0.7**
OJC				*e*Sg	**Sg**	**10 55 06.9**	**+1.8**
KHC	**Kasperske Hory**	**2.84**	**215**	*e*PN	**Pn**	**10 54 27.2**	**+1.3**
KHC				*e*PG	**Pb**	**10 54 31.7**	**+0.8**
KHC				*e*SN	**Sn**	**10 55 01.6**	**+0.7**
KHC				*e*SG	**Sg**	**10 55 10.9**	**+0.3**
	comp=Z,7.2nm,0.3s						
CKRC	**Cesky Krumlov**	**2.89**	**204**	*e*PN	**Pn**	**10 54 28.3**	**+1.7**
CKRC				*e*PG	**Pg**	**10 54 33.4**	**-1.3**
CKRC				*e*SG	**Sg**	**10 55 12.4**	**+0.2**
GERES	**GERESS Array B**	**3.05**	**211**	Pn	**Pn**	**10 54 30.2**	**+1.4**
	comp=Z,0.7nm,0.3s,baz=32,slow=13,SNR=10.0						
GERES				Pg	**Pg**	**10 54 36.4**	**-1.2**
	comp=Z,3.0nm,0.3s,baz=30,slow=16,SNR=28						
GERES				Lg	Lg	10 55 17.8	
	comp=Z,3.7nm,0.3s,baz=36,slow=27,SNR=8.4						
	comp=Z,1.4nm,0.4s						
LANS	**Liptovska Anna**	**3.19**	**136**	*e*PN	**Pb**	**10 54 34.0**	**-2.7**
LANS				*e*PG	**Pg**	**10 54 41.0**	**+0.7**
LANS				*e*SG	**Sg**	**10 55 21.2**	**-0.3**
MODS	**Modra-Piesok**	**3.20**	**166**	*e*PG	**Pg**	**10 54 41.2**	**+0.6**
MODS				*e*SG	**Sg**	**10 55 22.5**	**+0.4**
NIE	**Niedzica**	**3.40**	**126**	*e*P	**Pg**	**10 54 44.6**	**+0.3**
NIE				*e*Sg	**Sg**	**10 55 29.5**	**+1.2**
CONA	**Conrad Observa**	**3.56**	**182**	*e*Pn	**Pn**	**10 54 35.5**	**-0.2**
	comp=Z,1.6nm,0.4s						
CONA				*e*Sg	**Sg**	**10 55 33.7**	**+0.2**
	comp=Z,7.6nm,0.3s						
RONA	**Rosalia, Austr**	**3.79**	**178**	*e*Pn	**Pn**	**10 54 39.8**	**+0.9**
	comp=Z,0.4nm,0.2s						
RONA				*e*Sg	**Sg**	**10 55 40.3**	**-0.5**
	comp=Z,7.2nm,0.5s						
STHS	**Stebnicka Huta**	**3.89**	**120**	*e*PN	**Pn**	**10 54 42.0**	**+1.7**
STHS				*e*PG	**Pg**	**10 54 55.6**	**+1.8**
STHS				*e*SG	**Sg**	**10 55 48.7**	**+4.4**
BIOA	**Bad Ischl, Aus**	**4.11**	**204**	*e*Pn	**Pn**	**10 54 42.8**	**-0.5**
	comp=Z,1.1nm,0.2s						
BIOA				*e*Sg	**Sg**	**10 55 52.2**	**+1.0**
	comp=Z,6.5nm,0.4s						
ARSA	**Arzberg**	**4.25**	**185**	*e*Pg	**Pg**	**10 54 59.0**	**-1.6**
	comp=Z,1.3nm,0.2s						
ARSA				*e*Sg	**Sg**	**10 55 58.2**	**+2.6**
	comp=Z,6.8nm,0.6s						
KBA	**Koelnbreinsper**	**4.75**	**203**	*e*Pn	**Pn**	**10 54 52.3**	**0.0**
	comp=Z,1.5nm,0.5s						
KBA				*e*Sg	**Sg**	**10 56 12.1**	**+0.2**
	comp=Z,3.7nm,0.5s						
DAVOX	**Davos/Dischmat**	**6.22**	**223**	Pn	**Pn**	**10 55 14.2**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=110,slow=17,SNR=1.5						
DAVOX				Sn	**Sn**	**10 56 26.5**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=346,slow=17,SNR=1.3						
DAVOX				Lg	Lg	10 56 59.9	
	comp=Z,0.2nm,0.3s,baz=198,slow=7.9,SNR=3.1						
	comp=Z,0.7nm,0.4s						
HFS	**Hagfors**	**8.78**	**352**	Pn	**Pn**	**10 55 46.3**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=165,slow=19,SNR=2.3						
	comp=Z,2.3nm,0.8s						
FINES	**FINESS Array B**	**11.40**	**25**	Pn	**Pn**	**10 56 21.5**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=212,slow=9.8,SNR=5.5						
	comp=Z,0.9nm,0.5s						
ARCES	**ARCESS Array B**	**18.66**	**10**	Pn	**P**	**10 57 54.8**	**-3.6**
	comp=Z,0.1nm,0.3s,baz=197,slow=11,SNR=1.8						
	comp=Z,3.0nm,1.0s						

IDC 02 10:57:16.2±8.7**,61°.60N**×**26°.58W,h0**^{km}**,mb3.3**/3**,**
mbtmp3.4/4**,ML3.4**/1**,Error ellipse: s-maj=174.5km s-min=32.6km az=147.0,Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**3.96**	**35**	Pn	Pn	10 58 18.6	+0.5
	2.8nm,0.3s,baz=268,slow=7.1,SNR=21						
BORG				Sn	Sn	10 59 05.5	+0.3
	0.4nm,0.3s,baz=27,slow=11,SNR=1.0						
	12nm,0.5s						
YKA	**Yellowknife Ar**	**38.23**	**311**	P	P	11 04 36.3	-1.0
	0.4nm,1.0s,baz=51,slow=8.8,SNR=3.6						
	0.4nm,1.0s						
ILAR	**Eielson Array**	**46.36**	**329**	P	P	11 05 44.6	+1.1
	0.4nm,1.0s,baz=21,slow=7.7,SNR=3.6						
	0.4nm,1.0s						
PDAR	**Pinedale Array**	**50.41**	**288**	P	P	11 06 14.7	-0.6
	0.5nm,0.8s,baz=56,slow=6.7,SNR=3.7						
	0.5nm,0.8s						

PRE 02 11:03:00.4±1.0**,33°.55S**×**19°.75E,h5**^{km}**,ML1.5,South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CER	**Ceres**	**0.42**	**297**	*e*P	Pg	11 03 08.2	-0.4
CER				*e*S	Sg	11 03 14.4	+0.2
CER				IAML		11 03 24.1	
	comp=Z,70nm,0.6s						
CER	**Ceres**	**0.42**	**297**	*e*P	Pg	11 03 08.6	0.0
CER	**Ceres**	**0.42**	**297**	*e*S	Sb	11 03 16.2	-0.9
CER	**Ceres**	**0.42**	**297**	IAML		11 03 18.0	
	comp=Z,5.9nm,0.6s						
MATJ	**Matjiesfontein**	**0.76**	**68**	*e*S	Sg	11 03 25.0	+0.3
MATJ	**Matjiesfontein**	**0.76**	**68**	*e*P	Pg	11 03 14.2	-0.7
MATJ				*e*S	Sg	11 03 25.0	+0.3
MATJ				IAML		11 03 34.2	
	comp=Z,11nm,0.3s						
MATJ	**Matjiesfontein**	**0.76**	**68**	*e*P	Pg	11 03 13.5	-1.4
ELIM	**Elim**	**1.04**	**180**	IAML		11 03 28.5	
	comp=Z,64nm,0.5s						
ELIM	**Elim**	**1.04**	**180**	*e*P	Pg	11 03 13.6	-6.8
ELIM	**Elim**	**1.04**	**180**	*e*S	Sg	11 03 27.4	-6.5
SUR	**Sutherland**	**1.47**	**38**	IAML		11 03 51.0	
	comp=Z,8.3nm,0.8s						
SUR	**Sutherland**	**1.47**	**38**	*e*P	Pg	11 03 29.0	+0.3
SUR				*e*S	Sg	11 03 48.3	+0.5
SUR				IAML		11 03 51.5	
	comp=Z,2.5nm,0.4s						
SUR	**Sutherland**	**1.47**	**38**	*e*P	Pn	11 03 27.4	-0.4
SUR	**Sutherland**	**1.47**	**38**	*e*S	Sg	11 03 50.0	+2.3
MERW	**Merweville**	**1.73**	**60**	*e*P	Pb	11 03 32.0	-0.7
MERW				*e*S	Sb	11 03 55.2	+0.4
MERW				IAML		11 03 56.5	
	comp=Z,12nm,0.6s						
CVNA	**Calvinia**	**2.06**	**0**	IAML		11 04 08.2	
	comp=Z,3.8nm,0.4s						
CVNA	**Calvinia**	**2.06**	**0**	*e*P	Pb	11 03 37.2	-1.2
CVNA				IAML		11 04 08.4	
	comp=Z,3.9nm,0.3s						
CVNA	**Calvinia**	**2.06**	**0**	*e*P	Pb	11 03 37.9	-0.6
CVNA	**Calvinia**	**2.06**	**0**	*e*S	Sb	11 04 05.0	+0.5
FRAZ	**Fraserburg**	**2.14**	**41**	*e*P	Pn	11 03 37.9	+1.0
FRAZ				*e*S	Sn	11 04 05.1	+1.2
FRAZ				IAML		11 04 10.8	
	comp=Z,6.1nm,0.4s						
FRAZ	**Fraserburg**	**2.14**	**41**	*e*P	Pn	11 03 37.3	+0.4
FRAZ	**Fraserburg**	**2.14**	**41**	*e*S	Sb	11 04 06.4	-0.3
FRAZ	**Fraserburg**	**2.14**	**41**	IAML		11 04 09.5	
	comp=Z,5.7nm,0.3s						
GRAN	**Grantham**	**2.39**	**59**	*e*P	Pn	11 03 41.2	+0.9
GRAN				*e*S	Sn	11 04 10.8	+0.7
GRAN				IAML		11 04 14.9	
	comp=Z,7.4nm,0.3s						
GRAN	**Grantham**	**2.39**	**59**	*e*P	Pn	11 03 39.3	-1.0
GRAN	**Grantham**	**2.39**	**59**	*e*S	Sn	11 04 10.8	+0.8
GRAN	**Grantham**	**2.39**	**59**	IAML		11 04 14.7	
	comp=Z,7.3nm,0.3s						
BRAK	**Brakfontein**	**3.19**	**57**	*e*P	Pn	11 03 51.8	+0.5
BRAK	**Brakfontein**	**3.19**	**57**	*e*S	Sn	11 04 30.3	+0.6
BRAK	**Brakfontein**	**3.19**	**57**	IAML		11 04 44.9	
	comp=Z,3.4nm,0.4s						
ROOI	**Rooidraai Farm**	**3.37**	**73**	*e*P	Pn	11 03 54.5	+0.7
ROOI				*e*S	Sn	11 04 34.1	0.0
ROOI				IAML		11 04 52.3	
	comp=Z,4.7nm,0.4s						
ROOI	**Rooidraai Farm**	**3.37**	**73**	*e*P	Pn	11 03 53.9	+0.2
ROOI	**Rooidraai Farm**	**3.37**	**73**	*e*S	Sn	11 04 33.0	-1.2
ROOI	**Rooidraai Farm**	**3.37**	**73**	IAML		11 04 50.7	
	comp=Z,4.5nm,0.4s						
BFON	**Badsfontein, M**	**3.76**	**63**	IAML		11 04 58.3	
	comp=Z,4.8nm,0.4s						
BFON	**Badsfontein, M**	**3.76**	**63**	*e*P	Pn	11 03 58.6	-0.5
BFON	**Badsfontein, M**	**3.76**	**63**	*e*S	Sn	11 04 43.1	-0.7
GRAF	**Camdeboo Natio**	**4.19**	**74**	*e*P	Pn	11 04 04.0	-1.0
GRAF	**Camdeboo Natio**	**4.19**	**74**	*e*S	Sn	11 04 53.3	-1.1
GRAF	**Camdeboo Natio**	**4.19**	**74**	IAML		11 05 09.3	
	comp=Z,3.7nm,0.4s						

ISK ***02*** *11:07:24.4,37°.49N×38°.50E,h15*^{km}*,ML5.7/45*
MOS ***02*** *11:07:25.1±0.9,37°.63N×38°.40E,h12*^{km}*,mb5.4/70, MS5.1/47,Error ellipse: s-maj=4.0km s-min=2.9km az=105.0*
IDC ***02*** *11:07:25.1±0.3,37°.66N×38°.40E,h0*^{km}*,mb4.9/39, mbtmp4.9/55,ML4.3/15,MS5.1/83,Error ellipse: s-maj=6.8km s-min=5.9km az=123.0*
MCSM ***02*** *11:07:25.5±0.7,38°N±5°×3°8E±°,h15*^{km}*±1*^{km}*,mb5.5*
PDG ***02*** *11:07:25.4,37°.60N×38°.49E,h11*^{km}*,Mw5.5/4*
MED_RC ***02*** *11:07:25.0±0.2,37°.59N×38°.54E,h12*^{km}*±1*^{km}*,MW5.6/35, Moment Tensor Solution. Body waves: s10,c13;Mantle waves: s35,c80; Duration: 1*^{s}*5 Moment tensor: Scale 10*^{17}*Nm;* M_{rr}*0.02±.05;* $M_{\theta\theta}$*-2.27±.05;* $M_{\phi\phi}$*2.25±.06;* $M_{r\theta}$*1.24±.19;* $M_{\theta\phi}$*0.12±.04;* $M_{\phi r}$*1.05±.16; Best double couple:* M_0*2.78000×10*^{17} *NP1:*ϕ_s*227.00000°,δ90.00000°, λ-36.00000°. NP2:*ϕ_s*317.00000°,δ54.00000°, λ-179.00000°. Principal axes: T 2.7400, Plg24.0000°, Azm278.0000°; N 0.1000, Plg54.0000°, Azm46.0000°; P -2.8300, Plg25.0000°, Azm176.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=40s.*
DDA ***02*** *11:07:25.0±0.0,37°.60N×38°.49E,h10*^{km}*,MW5.5*
GII ***02*** *11:07:26.9±0.0,37°.58N×38°.44E,h10*^{km}
BGR ***02*** *11:07:26.3,37°.53N×38°.68E,h21*^{km}*±1*^{km}*,mb5.0,Ms4.9*
GCMT ***02*** *11:07:26.9±0.1,37°.53N±0°.01×38°.45E±0°.01,h17*^{km}*, MW5.6/151,Moment Tensor Solution. s105,c158; s151,c327; Duration: 1*^{s}*5 Moment tensor: Scale 10*^{17} *Nm;* M_{rr}*0.20±.03;* $M_{\theta\theta}$*-2.60±.04;* $M_{\phi\phi}$*2.40±.03;* $M_{r\theta}$*1.51±.11;* $M_{\theta\phi}$*0.12±.03;* $M_{\phi r}$*0.15±.08; Best double couple:* M_0*2.84100×10*^{17} *NP1:*ϕ_s*225.00000°,δ78.00000°, λ-21.00000°. NP2:*ϕ_s*319.00000°,δ69.00000°, λ-167.00000°. Principal axes: T 2.4220, Plg6.0000°, Azm273.0000°; N 0.8360, Plg66.0000°, Azm16.0000°; P -3.2600, Plg24.0000°, Azm181.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***02*** *11:07:26.9±1.2,37°.62N±0°.05×38°.43E±0°.05,h10*^{km}*±1*^{km}*, mb5.3/280,Ms_20 5.2/246,Mwr5.7/30,Mww5.6/31 Error ellipse: s-maj=9.7km s-min=6.0km az=338.0,Moment Tensor Solution. Moment tensor: Scale 10*^{17}*Nm;* M_{rr}*0.72;* $M_{\theta\theta}$*-3.29;* $M_{\phi\phi}$*2.57;* $M_{r\theta}$*2.34;* $M_{\theta\phi}$*-0.75;* $M_{\phi r}$*1.69; Fault plane solution:* M_0*4.22000×10*^{17} *NP1:* ϕ_s*309.02000°,δ44.96000°,λ173.42000°. NP2:* ϕ_s*43.69000°,δ85.36000°,λ45.23000°. Principal axes: T 3.6244, Plg34.0000°, Azm277.0000°; N 1.0157, Plg45.0000°, Azm48.0000°; P -4.6401, Plg26.0000°, Azm167.0000°;*
NEIC ***02*** *11:07:26.8,37°.59N×38°.46E,h14*^{km}
NEIC ***02*** *11:07:26.8,37°.39N×38°.58E,h14*^{km}*,Moment Tensor Solution. Duration: 3*^{s}*3 Moment tensor: Scale 10*^{17}*Nm;* M_{rr}*-0.16;* $M_{\theta\theta}$*-2.07;* $M_{\phi\phi}$*2.23;* $M_{r\theta}$*1.85;* $M_{\theta\phi}$*0.17;* $M_{\phi r}$*0.73; Fault plane solution:* M_0*2.88000×10*^{17} *NP1:* ϕ_s*227.20000°,δ83.63000°,λ-39.52000°. NP2:* ϕ_s*322.43000°,δ50.77000°,λ-171.77000°. Principal axes: T 2.5549, Plg22.0000°, Azm281.0000°; N 0.6480, Plg50.0000°, Azm40.0000°; P -3.2029, Plg32.0000°, Azm177.0000°;*
NEIC ***02*** *11:07:26.8,37°.58N×38°.46E,h10*^{km}
DSN ***02*** *11:07:27.5±0.5,37°.45N×38°.45E,h15*^{km}*,mb5.6/19,Error ellipse: s-maj=11.3km s-min=6.7km az=51.0*
CFUSG ***02*** *11:07:29.2,37°.60N×38°.50E,h10*^{km}*,mb4.0/4,Eastern Turkey Magtype MSH 4.8 from 4 stations*
ISC 02 11:07:27.2±0.3**,37°.62N**±0°.02×**38°.43E**±0°.01**,h12**^{km}±1^{km}**,**
h12^{km}**:pP-P,n1495,**σ**1**^{s}**66**/1496**,mb5.3**/312**,MS5.2**/249**,**
49C-43D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	**Bozova**	**0.18**	**216**	P	**Pg**	**11 07 29.7**	**-1.7**
ATAB				S	**Sg**	**11 07 33.0**	**-1.2**
URFA	**Urfa**	**0.36**	**120**	Pg	**Pg**	**11 07 34.3**	**-0.1**
AKCA	**Adyaman/G¶l**	**0.62**	**287**	SPECP		11 07 38.0	
AKCA				P	**Pg**	**11 07 38.1**	**-1.1**
AKCA				S	**Sg**	**11 07 47.9**	**+0.5**
AKCA				*i* AML	AML	11 07 55.0	
	comp=N,15µm,0.6s						
AKCA				*i* AML	AML	11 07 57.0	
	comp=E,9µm,0.5s						
SANL	**SANLIURFA_Merk**	**0.63**	**135**	SPECP		11 07 36.0	
SANL				P	**Pg**	**11 07 36.9**	**-2.5**
SANL				S	**Sg**	**11 07 44.7**	**-3.0**
SANL				*i* AML	AML	11 07 50.0	
	comp=N,30µm,1.7s						
SANL				*i* AML	AML	11 07 50.0	
	comp=E,27µm,1.7s						
MAYA	**Malatya/Merkez**	**0.71**	**360**	P	**Pg**	**11 07 38.9**	**-2.0**
MAYA				S	**Sg**	**11 07 49.3**	**-0.9**
MAYA				*i* AML	AML	11 07 55.0	
	comp=N,5µm,1.0s						
MAYA				*i* AML	AML	11 07 58.0	
	comp=E,4µm,0.7s						
GZT	**Gaziantep**	**0.74**	**249**	SPECP		11 07 40.0	
GZT				P	**Pg**	**11 07 40.3**	**-1.3**
GZT				S	**Sn**	**11 07 54.0**	**-0.9**
GZT				*i* AML	AML	11 07 54.0	
	comp=E,13µm,0.7s						
GZT				*i* AML	AML	11 07 55.0	
	comp=N,10µm,0.4s						
SURC	**SANLIURFA_SURC**	**0.75**	**169**	SPECP		11 07 39.0	
SURC				P	**Pg**	**11 07 39.6**	**-2.2**
SURC				S	**Sb**	**11 07 53.1**	**+0.7**
SURC				*i* AML	AML	11 08 04.0	
	comp=N,26µm,0.7s						

SURC				*i* AML	AML	11 08 08.0	
	comp=E,37µm,1.0s						
NZIP	**Nizip/Gaziante**	**0.83**	**227**	P	**Pg**	**11 07 41.9**	**-1.4**
NZIP				S	**Sg**	**11 07 53.7**	**-0.6**
NZIP				*i* AML	AML	11 07 57.0	
	comp=N,30µm,1.0s						
NZIP				*i* AML	AML	11 08 01.0	
	comp=E,24µm,0.8s						
ELZG	**Elazig**	**0.98**	**26**	P	**Pg**	**11 07 43.5**	**-2.6**
ELZG				S	**Sb**	**11 07 59.3**	**+0.1**
GAZ	**Gaziantep**	**1.07**	**246**	Pg	**Pb**	**11 07 46.3**	**-1.5**
GAZ				Sg	**Sb**	**11 08 01.1**	**-0.6**
GAZ	**Gaziantep**	**1.07**	**246**		**Pb**	**11 07 46.4**	**-1.3**
GAZ				Sg	**Sb**	**11 08 01.4**	**-0.2**
GAZ	**Gaziantep**	**1.07**	**246**	Pg	**Pb**	**11 07 46.2**	**-1.5**
GAZ				Sg	**Sb**	**11 08 01.2**	**-0.5**
KAHM	**Kahramanmaras,**	**1.15**	**265**	P	**Pb**	**11 07 47.3**	**-1.8**
KAHM				S	**Sb**	**11 08 03.8**	**-0.2**
DARE	**Darende-Malaty**	**1.21**	**322**	Pn	**Pn**	**11 07 49.3**	**-0.8**
ELBS	**KAHRAMANMARAS**	**1.25**	**305**	SPECP		11 07 49.0	
ELBS				P	**Pn**	**11 07 49.2**	**-1.4**
ELBS				S	**Sg**	**11 08 08.6**	**+1.2**
ELBS				*i* AML	AML	11 08 13.0	
	comp=N,8µm,1.0s						
ELBS				*i* AML	AML	11 08 15.0	
	comp=E,6µm,0.6s						
HEKM	**Malatya_Hekimh**	**1.31**	**344**	P	**Pn**	**11 07 50.1**	**-1.5**
HEKM				S	**Sg**	**11 08 10.7**	**+1.1**
KUZU	**Kuzuini**	**1.37**	**233**	P	**Pn**	**11 07 50.8**	**-1.5**
KUZU				S	**Sg**	**11 08 11.2**	**-0.2**
DYBB	**Diyarbakir**	**1.39**	**76**	Pn	**Pn**	**11 07 49.5**	**-3.0**
DYBB				Sn	**Sn**	**11 08 08.5**	**-2.4**
CUGUR	**Gurin_SVAS**	**1.43**	**321**	P	**Pn**	**11 07 53.1**	**-0.1**
CUGUR				S	**Sg**	**11 08 15.2**	**+1.8**
CUGUR				*i* AML	AML	11 08 20.0	
	comp=N,12µm,0.9s						
KAMA	**Osmaniye**	**1.47**	**253**	P	**Pn**	**11 07 51.8**	**-1.8**
KAMA				S	**Sg**	**11 08 14.3**	**-0.3**
KAMA				*i* AML	AML	11 08 18.0	
	comp=N,2µm,1.9s						
KAMA				*i* AML	AML	11 08 19.0	
	comp=E,3µm,0.9s						
ARPR	**Arapgir-MALATY**	**1.47**	**357**	Pn	**Pn**	**11 07 52.6**	**-1.1**
ARPR				Sn	**Sg**	**11 08 14.2**	**-0.5**
KOVA	**Elazig, Kovanc**	**1.54**	**45**	SPECP		11 07 53.0	
KOVA				P	**Pn**	**11 07 53.4**	**-1.2**
KOVA				S	**Sn**	**11 08 13.4**	**-1.1**
KOVA				*i* AML	AML	11 08 19.0	
	comp=N,6µm,1.2s						
KOVA				*i* AML	AML	11 08 21.0	
	comp=E,8µm,1.4s						
KEMA	**Kemaliye**	**1.65**	**2**	P	**Pn**	**11 07 55.2**	**-0.9**
KEMA				S	**Sb**	**11 08 18.9**	**+0.5**
ANDN	**Andirin**	**1.66**	**269**	P	**Pn**	**11 07 54.6**	**-1.6**
ANDN				S	**Sg**	**11 08 21.1**	**+0.5**
TNCL	**Tunceli-Merkez**	**1.73**	**30**	P	**Pn**	**11 07 56.1**	**-1.2**
TNCL				S	**Sb**	**11 08 21.2**	**+0.4**
HANI	**Diyarbakir_Han**	**1.75**	**62**	P	**Pn**	**11 07 55.6**	**-1.8**
HANI				S	**Sn**	**11 08 19.5**	**-0.1**
HANI				*i* AML	AML	11 08 22.0	
	comp=E,6µm,1.0s						
HANI				*i* AML	AML	11 08 25.0	
	comp=N,11µm,1.2s						
SARI	**SarD1z-Kayseri**	**1.77**	**297**	Pn	**Pn**	**11 07 57.5**	**-0.4**
CUKAN	**kangal_SIVAS**	**1.86**	**336**	P	**Pn**	**11 07 58.6**	**-0.4**
CUKAN				S	**Sg**	**11 08 26.8**	**-0.1**
SAIM	**ADANA**	**1.90**	**282**	P	**Pn**	**11 07 58.5**	**-0.9**
SAIM				S	**Sg**	**11 08 28.8**	**+0.6**
SAIM				*i* AML	AML	11 08 35.0	
	comp=E,2µm,0.7s						
SAIM				*i* AML	AML	11 08 36.0	
	comp=N,3µm,0.7s						
RHAN	**Hatay/Reyhanl**	**2.00**	**228**	P	**Pn**	**11 08 00.1**	**-0.7**
RHAN				S	**Sb**	**11 08 29.6**	**+1.3**
BINT	**Bingol**	**2.05**	**52**	P	**Pn**	**11 07 59.8**	**-1.8**
KOZT	**Kozan**	**2.08**	**267**	Pn	**Pn**	**11 08 00.2**	**-1.7**
CUAYA	**Sivas-Altinyay**	**2.11**	**322**	P	**Pn**	**11 08 02.8**	**+0.3**
CUAYA				S	**Sg**	**11 08 34.7**	**-0.4**
ERZN	**Erzincan**	**2.21**	**27**	Pn	**Pn**	**11 08 03.2**	**-0.6**
CEYT	**Ceyhan**	**2.23**	**255**	Pn	**Pn**	**11 08 02.3**	**-1.6**
BNGB	**Bingl**	**2.24**	**52**	Pn	**Pn**	**11 08 02.9**	**-1.3**
SVAN	**Silvan-Diyarba**	**2.25**	**76**	Pn	**Pn**	**11 08 01.9**	**-2.4**
SVAN	**Silvan-Diyarba**	**2.25**	**76**	SPECP		11 08 01.0	
SVAN				P	**Pn**	**11 08 02.1**	**-2.2**
SVAN				S	**Sg**	**11 08 38.1**	**-1.5**
SVAN				*i* AML	AML	11 08 41.0	
	comp=E,3µm,1.1s						
SVAN				*i* AML	AML	11 08 43.0	
	comp=N,4µm,1.1s						
BTMN	**Batman**	**2.27**	**82**	P	**Pn**	**11 08 02.4**	**-2.2**
BTMN				S	**Sb**	**11 08 36.9**	**+0.8**
EUZM	**Uzumlu**	**2.31**	**25**	P	**Pn**	**11 08 04.9**	**-0.3**
EUZM				S	**Sg**	**11 08 40.8**	**-0.6**
EUZM				*i* AML	AML	11 08 46.0	
	comp=E,2µm,1.3s						
EUZM				*i* AML	AML	11 08 49.0	
	comp=N,7µm,2.4s						
CUZAR	**Zara_SIVAS**	**2.33**	**347**	P	**Pn**	**11 08 05.5**	**0.0**
CUZAR				S	**Sg**	**11 08 41.1**	**-0.8**
MIDY	**Mardin/Midyat-**	**2.37**	**94**	P	**Pn**	**11 08 03.9**	**-2.1**
MIDY				S	**Sb**	**11 08 37.9**	**-1.2**
YURE	**YUREGIR**	**2.37**	**251**	P	**Pn**	**11 08 05.1**	**-0.8**
YURE				S	**Sg**	**11 08 46.8**	**+3.4**
AKO	**Adana**	**2.38**	**267**	P	**Pn**	**11 08 04.4**	**-1.7**
AKO				S	**Sg**	**11 08 44.3**	**+0.7**
BNN	**Bunyan**	**2.38**	**302**	Pn	**Pn**	**11 08 06.5**	**+0.3**
BNN	**Bunyan**	**2.38**	**302**	Pn	**Pn**	**11 08 06.5**	**+0.3**
SLHN	**Bingol, Solhan**	**2.44**	**56**	P	**Pn**	**11 08 06.0**	**-0.9**
SLHN				S	**Sb**	**11 08 39.3**	**-1.9**
YEDI	**Yedisu-Bingol**	**2.46**	**42**	Pn	**Pn**	**11 08 06.4**	**-0.9**
SCER	**sogukcermik**	**2.46**	**336**	P	**Pn**	**11 08 07.5**	**+0.2**
SCER				S	**Sg**	**11 08 45.5**	**-0.8**
CUSAR	**Sarkisla-SIVAS**	**2.48**	**317**	P	**Pn**	**11 08 07.6**	**0.0**
CUSAR				S	**Sg**	**11 08 50.1**	**+3.0**
SVSK	**Karacayir**	**2.55**	**334**	Pn	**Pn**	**11 08 08.6**	**+0.2**
GUNE	**Kayseri**	**2.56**	**301**	P	**Pn**	**11 08 08.8**	**+0.3**
GUNE				S	**Sg**	**11 08 56.0**	**+6.7**
SUSE	**Susehri**	**2.59**	**356**	P	**Pn**	**11 08 09.3**	**+0.1**
SUSE				S	**Sg**	**11 08 50.1**	**-0.4**
KELT	**Kelkit**	**2.61**	**14**	P	**Pn**	**11 08 09.1**	**-0.3**
KELT				S	**Sg**	**11 08 49.4**	**-1.6**
KARA	**Karaisali**	**2.71**	**263**	Pn	**Pn**	**11 08 08.8**	**-1.8**
ALUC	**Giresun/Alucra**	**2.73**	**5**	P	**Pn**	**11 08 11.3**	**+0.2**
ALUC				S	**Sg**	**11 08 55.2**	**+0.1**
ECAT	**Cat-ERZURUM**	**2.81**	**44**	P	**Pn**	**11 08 11.1**	**-1.1**
ECAT				S	**Sg**	**11 08 58.8**	**+1.2**
VRTB	**Varto-Mus**	**2.83**	**56**	Pn	**Pn**	**11 08 10.9**	**-1.5**
KOPT	**Kop Dagi**	**2.89**	**33**	Pn	**Pn**	**11 08 13.1**	**-0.2**
RSDY	**Resadiye-TOKAT**	**2.91**	**343**	Pn	**Pn**	**11 08 13.5**	**+0.2**
GURO	**Guroymak-BITLI**	**2.99**	**71**	Pn	**Pn**	**11 08 12.4**	**-2.2**
GURO	**Guroymak-BITLI**	**2.99**	**71**	Pn	**Pn**	**11 08 12.3**	**-2.3**
GURO	**Guroymak-BITLI**	**2.99**	**71**	Pn	**Pn**	**11 08 12.2**	**-2.3**
TOKT	**Tokat**	**3.07**	**332**	Pn	**Pn**	**11 08 15.6**	**0.0**
BAYT	**Aydıntepe-Bayb**	**3.07**	**25**	Pn	**Pn**	**11 08 15.6**	**-0.2**
YOZ	**Yozgat**	**3.16**	**311**	Pn	**Pn**	**11 08 16.9**	**-0.1**
KOZK	**Kozakli-Nevseh**	**3.22**	**301**	Pn	**Pn**	**11 08 17.7**	**0.0**
GULA	**Gulagac**	**3.39**	**284**	Pn	**Pn**	**11 08 19.5**	**-0.6**
KTUT	**Trabzon**	**3.52**	**17**	⇓P	**Pn**	**11 08 22.3**	**+0.7**
KTUT	**Trabzon**	**3.52**	**17**	Pn	**Pn**	**11 08 22.1**	**+0.4**
BEIL	**Beino**	**3.57**	**211**	*e*P	**Pn**	**11 08 21.9**	**-0.6**
KOPR	**Koprukoy-ERZUR**	**3.57**	**47**	Pn	**Pn**	**11 08 22.1**	**-0.5**
MLAZ	**Malazgirt-MUS**	**3.58**	**64**	Pn	**Pn**	**11 08 21.4**	**-1.2**
KIZK	**Mersin**	**3.61**	**253**	Pn	**Pn**	**11 08 21.8**	**-1.2**
AKDM	**Akdamar-Van**	**3.66**	**77**	Pn	**Pn**	**11 08 21.9**	**-1.9**
GEVA	**Gevas**	**3.72**	**78**	Pn	**Pn**	**11 08 22.8**	**-1.8**
YESY	**Yesilyurt**	**3.72**	**274**	Pn	**Pn**	**11 08 24.3**	**-0.3**
KIZO	**Buyukkizoglu-L**	**3.81**	**330**	Pn	**Pn**	**11 08 26.7**	**+0.9**
SILI	**Silifke-Mersin**	**3.82**	**252**	Pn	**Pn**	**11 08 24.7**	**-1.1**
YAYX	**Yaylak**	**3.87**	**291**	Pn	**Pn**	**11 08 26.0**	**-0.6**
HWQ	**Hawqa**	**3.90**	**212**	*e*P	**Pn**	**11 08 26.3**	**-0.7**
CHOM	**Cayeli-Rize**	**3.92**	**27**	Pn	**Pn**	**11 08 27.2**	**0.0**
CORM	**Corum**	**3.92**	**312**	Pn	**Pn**	**11 08 27.7**	**+0.4**
KVT	**Kavak**	**3.92**	**333**	Pn	**Pn**	**11 08 27.7**	**+0.4**
SULT	**Sultanhani-AKS**	**3.93**	**280**	Pn	**Pn**	**11 08 27.3**	**-0.2**
EREN	**Erenkoy**	**4.01**	**240**	Pn	**Pn**	**11 08 27.0**	**-1.5**
VANB	**Van**	**4.03**	**74**	Pn	**Pn**	**11 08 27.4**	**-1.4**
KARG	**Kargicak-Mersi**	**4.04**	**251**	Pn	**Pn**	**11 08 28.3**	**-0.6**
IKL	**Isikli**	**4.04**	**252**	Pn	**Pn**	**11 08 27.6**	**-1.3**
SERE	**Sereflikochisa**	**4.05**	**291**	Pn	**Pn**	**11 08 29.0**	**-0.2**
AGRB	**Hanur-Agry**	**4.07**	**60**	Pn	**Pn**	**11 08 28.7**	**-0.8**
TISA	**Tisan-Mersin**	**4.08**	**251**	Pn	**Pn**	**11 08 28.8**	**-0.6**
YESI	**Yesilovacik-Me**	**4.09**	**251**	Pn	**Pn**	**11 08 28.9**	**-0.7**
KAMT	**Kaman**	**4.09**	**297**	Pn	**Pn**	**11 08 29.7**	**0.0**
CUKT	**Cukurca**	**4.14**	**94**	Pn	**Pn**	**11 08 27.9**	**-2.4**
KRMN	**Karaman**	**4.14**	**265**	Pn	**Pn**	**11 08 30.0**	**-0.3**
TEPK	**Tepekoy-MERSIN**	**4.16**	**252**	Pn	**Pn**	**11 08 29.5**	**-1.0**
TEVE	**Tevekalti-Mers**	**4.16**	**255**	Pn	**Pn**	**11 08 29.9**	**-0.7**
AKKU	**Akkuyu-Mersin**	**4.17**	**251**	Pn	**Pn**	**11 08 29.3**	**-1.4**
AKK2	**Akkuyu-Mersin**	**4.18**	**251**	Pn	**Pn**	**11 08 29.9**	**-0.9**
OREN	**Orenkoy-Mersin**	**4.23**	**252**	Pn	**Pn**	**11 08 30.9**	**-0.5**
SENK	**Senkaya-Erzuru**	**4.23**	**45**	Pn	**Pn**	**11 08 31.1**	**-0.6**
ZAHL	**Zahle**	**4.29**	**210**	*e*P	**Pn**	**11 08 32.7**	**+0.3**
BR131	**Keskin Array S**	**4.30**	**301**	Pn	**Pn**	**11 08 32.7**	**+0.1**
BR131	**Keskin Array S**	**4.30**	**301**	P	**Pn**	**11 08 32.7**	**+0.1**
BR131	**Keskin Array S**	**4.30**	**301**	P	**Pn**	**11 08 32.7**	**+0.1**
	SNR=207						
BRTR	**Keskin Array B**	**4.30**	**301**	Pn	**Pn**	**11 08 33.5**	**+0.9**
	19nm,0.3s,baz=129,slow=15,SNR=351						
BRTR				Pg	**Pb**	**11 08 43.5**	**+0.7**
	26nm,0.3s,baz=130,slow=15,SNR=17						
BRTR				Lg	Lg	11 09 42.5	
	baz=118,slow=28						
BRTR				LR	LR	11 10 33.7	
	comp=Z,63µm,19.0s,baz=124,slow=44						
	304nm,0.9s						
BRTR	**Keskin Array B**	**4.30**	**301**	Pn	**Pn**	**11 08 32.8**	**+0.1**
BHL	**Bhannes**	**4.34**	**212**	*e*P	**Pn**	**11 08 32.6**	**-0.5**
DQRL	**Deir Qamar**	**4.55**	**212**	*e*P	**Pn**	**11 08 36.8**	**+0.9**
RCY	**Rachaya**	**4.62**	**208**	*e*P	**Pn**	**11 08 37.1**	**+0.1**
QRWL	**Qaraoun**	**4.64**	**210**	*e*P	**Pn**	**11 08 38.4**	**+1.2**
KARS	**Kars**	**4.70**	**49**		**Pn**	**11 08 37.6**	**-0.5**
KARS	**Kars**	**4.70**	**49**	P	**Pn**	**11 08 37.6**	**-0.5**
DIKM	**Dikmen**	**4.71**	**330**	⇑P	**Pn**	**11 08 39.4**	**+1.3**
NATI	**Neve Ativ**	**4.87**	**208**	Pn	**Pn**	**11 08 40.3**	**0.0**
CSS	**Mathiatis**	**4.90**	**239**	Pn	**Pn**	**11 08 39.2**	**-1.5**
CSS	**Mathiatis**	**4.90**	**239**	Pn	**Pn**	**11 08 40.1**	**-0.7**
CSS	**Mathiatis**	**4.90**	**239**	P	**Pn**	**11 08 40.0**	**-0.7**
GEM	**Giv'at Ha'Em**	**4.95**	**208**	Pn	**Pn**	**11 08 41.0**	**-0.3**
GEM	**Giv'at Ha'Em**	**4.95**	**208**	P	**Pn**	**11 08 42.9**	**+1.6**
ANTO	**Ankara**	**4.95**	**299**	⇑P	**Pn**	**11 08 42.4**	**+1.0**
ANTO	**Ankara**	**4.95**	**299**	Pn	**Pn**	**11 08 42.2**	**+0.8**
ANTO	**Ankara**	**4.95**	**299**	P	**Pn**	**11 08 42.4**	**+1.0**
ANTO	**Ankara**	**4.95**	**299**	P	**Pn**	**11 08 42.4**	**+1.0**
ANTO				S	**Sn**	**11 09 38.4**	**-0.2**
BR231	**Keskin MP Arra**	**4.95**	**298**		**Pn**	**11 08 42.0**	**+0.6**
ILGA	**Ilgaz**	**5.01**	**315**		**Pn**	**11 08 43.0**	**+0.6**
MMA0B	**Mount Meron ar**	**5.22**	**209**	Pn	**Pn**	**11 08 45.6**	**+0.5**
MMAI	**Mount Meron Ar**	**5.22**	**209**	Pn	**Pn**	**11 08 46.0**	**+0.8**
	35nm,0.3s,baz=64,slow=13,SNR=49						
MMAI				Pg	**Pb**	**11 09 02.5**	**+4.1**
	114nm,0.3s,baz=40,slow=14,SNR=13						
MMAI				Sn	**Sn**	**11 09 45.5**	**+0.2**
	127nm,0.3s,baz=49,slow=11,SNR=4.6						
MMAI				Lg	Lg	11 10 12.7	
	384nm,0.3s,baz=27,slow=26,SNR=7.8						
MMAI				LR	LR	11 11 04.8	
	comp=Z,19µm,19.7s,baz=356,slow=42						
	76nm,0.5s						
HNTI	**Hanita**	**5.25**	**211**	Pn	**Pn**	**11 08 45.9**	**+0.4**
HNTI	**Hanita**	**5.25**	**211**	P	**Pn**	**11 08 45.4**	**-0.1**
SHMJ	**Saham**	**5.35**	**205**	P	**Pn**	**11 08 47.9**	**+1.0**
BZK	**Bozkurt**	**5.52**	**323**		**Pn**	**11 08 46.8**	**-2.4**
GNI	**Garni**	**5.53**	**61**	Pn	**Pn**	**11 08 49.9**	**+0.4**
	14nm,0.3s,baz=302,slow=2.9,SNR=22						
GNI				Pg	**Pb**	**11 09 07.6**	**+3.8**
	16nm,0.3s,baz=156,slow=22,SNR=8.5						
GNI				Lg	Lg	11 10 18.9	
	9.7nm,0.3s,baz=99,slow=18,SNR=1.0						
GNI				LR	LR	11 10 33.1	
	comp=Z,4µm,21.3s,baz=244,slow=34						
	56nm,0.5s						
GNI	**Garni**	**5.53**	**61**	Pn	**Pn**	**11 08 49.4**	**-0.2**
GNI	**Garni**	**5.53**	**61**	P	**Pn**	**11 08 50.3**	**+0.8**
GNI				S	**Sn**	**11 09 59.3**	**+6.1**
BLGI	**Bet Lehem HaGe**	**5.55**	**210**	Pn	**Pn**	**11 08 49.9**	**+0.3**
BLGI	**Bet Lehem HaGe**	**5.55**	**210**	P	**Pn**	**11 08 51.6**	**+2.0**
ASF	**Jabal al Asfar**	**5.58**	**194**	Pn	**Pn**	**11 08 49.2**	**-0.9**
	8.4nm,0.3s,baz=26,slow=6.4,SNR=84						
ASF				Pg	**Pb**	**11 09 06.8**	**+2.2**
	44nm,0.3s,baz=17,slow=6.6,SNR=8.2						
ASF				Lg	Lg	11 10 20.2	
	238nm,0.3s,baz=208,slow=21,SNR=6.9						
ASF				LR	LR	11 11 17.4	
	comp=Z,27µm,21.5s,baz=34,slow=41						
	233nm,0.9s						
ASF	**Jabal al Asfar**	**5.58**	**194**	P	**Pn**	**11 08 49.2**	**-0.9**
MMLI	**Mount Malkishu**	**5.73**	**206**	Pn	**Pn**	**11 08 52.3**	**+0.2**
OFRI	**`Ofer**	**5.73**	**211**	P	**Pn**	**11 08 53.1**	**+1.0**
NAX	**Nakhchivan**	**5.76**	**72**	P	**Pn**	**11 08 55.0**	**+2.4**
QRNJ	**Al-Qirein**	**5.77**	**205**	P	**Pn**	**11 08 53.6**	**+1.0**
HSUJ	**Al Zarqa**	**5.80**	**199**	P	**Pn**	**11 08 54.5**	**+1.4**
HMDT	**Nahal Hemdat**	**5.86**	**205**	P	**Pn**	**11 08 54.5**	**+0.6**
SOC	**Sochi**	**6.04**	**9**	*e*P	**Pn**	**11 08 54.5**	**-1.8**
SOC				*e*		11 10 04.2	
SOC				pmax	pmax		
	comp=Z,30nm,0.8s						
SOC				MLR	MLR		
	comp=Z,7µm,18.0s						
SLTI	**Sal'it**	**6.04**	**208**	Pn	**Pn**	**11 08 56.2**	**-0.2**
SLTI	**Sal'it**	**6.04**	**208**	P	**Pn**	**11 08 58.7**	**+2.3**
SALP	**Salfit**	**6.14**	**207**	Pn	**Pn**	**11 08 58.0**	**+0.2**
UJAP	**Al Uja**	**6.16**	**204**	Pn	**Pn**	**11 08 57.8**	**-0.1**
UJAP	**Al Uja**	**6.16**	**204**	P	**Pn**	**11 08 58.7**	**+0.8**
ISP	**Isparta**	**6.27**	**274**	Pn	**Pn**	**11 08 59.8**	**+0.1**
ISP	**Isparta**	**6.27**	**274**	Pn	**Pn**	**11 09 00.6**	**+0.9**
ISP	**Isparta**	**6.27**	**274**	P	**Pn**	**11 08 59.8**	**+0.1**
ONI	**Oni**	**6.28**	**36**	Pn	**Pn**	**11 08 59.3**	**-0.4**
ONI	**Oni**	**6.28**	**36**	P	**Pn**	**11 08 59.3**	**-0.4**
MDUB	**Mudurnu**	**6.31**	**299**	Pn	**Pn**	**11 09 00.5**	**+0.4**
WALJ	**Wala**	**6.42**	**200**	P	**Pn**	**11 09 02.1**	**+0.6**
DSI	**Dead Sea**	**6.54**	**204**	P	**Pn**	**11 09 02.4**	**-0.8**
KDZE	**Karadeniz Ereo**	**6.54**	**306**	⇓P	**Pn**	**11 09 03.9**	**+0.6**
ZEI	**Tsey**	**6.65**	**37**	*e*P	**Pn**	**11 09 04.8**	**0.0**
ZEI				pmax	pmax		
	comp=Z,65nm,1.2s						
SWQJ	**Swaqa**	**6.66**	**198**	P	**Pn**	**11 09 01.6**	**-3.3**
MDBI	**Mazsada**	**6.78**	**203**	Pn	**Pn**	**11 09 06.2**	**-0.3**
MSBI	**Mazada**	**6.78**	**203**	Pn	**Pn**	**11 09 05.9**	**-0.6**
LISJ	**El Lisan**	**6.81**	**202**	P	**Pn**	**11 09 07.5**	**+0.6**
YTIR	**Yattir**	**6.81**	**205**	Pn	**Pn**	**11 09 07.3**	**+0.2**
YTIR	**Yattir**	**6.81**	**205**	P	**Pn**	**11 09 06.6**	**-0.5**
ELL	**Elmali**	**6.86**	**265**		**Pn**	**11 09 08.0**	**+0.3**
ELL	**Elmali**	**6.86**	**265**	P	**Pn**	**11 09 08.0**	**+0.3**
KARJ	**KARJ**	**6.88**	**200**	P	Pn	11 08 57.9	-10
SHA1	**Shidzhatmaz**	**6.90**	**26**	*i* P	**Pn**	**11 09 09.4**	**+1.0**
KBZ	**Khabaz**	**6.98**	**28**	Pn	**Pn**	**11 09 10.9**	**+1.7**
	comp=Z,1.0nm,0.3s,baz=50,slow=2.8,SNR=14						
KBZ				Lg	Lg	11 11 04.1	
	baz=182,slow=19						
KBZ				LR	LR	11 12 14.8	
	comp=Z,28µm,18.7s,baz=208,slow=42						
	comp=Z,2.9nm,0.3s						
KBZ	**Khabaz**	**6.98**	**28**	P	**Pn**	**11 09 11.0**	**+1.7**
KIV	**Kislovodsk**	**7.10**	**26**		**Pn**	**11 09 11.7**	**+0.7**
KIV	**Kislovodsk**	**7.10**	**26**	*e*P	**Pn**	**11 09 11.0**	**0.0**
KIV				*e*S	**Sn**	**11 10 32.1**	**+0.4**
KIV				pmax	pmax		
	comp=Z,44nm,1.0s						
KIV				MLR	MLR		
	comp=Z,6µm,10.0s						
KIV	**Kislovodsk**	**7.10**	**26**	*i* P	**Pn**	**11 09 12.2**	**+1.1**
	SNR=22						
KVAR	**Kislovodsk Arr**	**7.11**	**26**	Pn	**Pn**	**11 09 13.0**	**+1.9**
	baz=109,slow=23						
KVAR				Lg	Lg	11 11 08.9	
	baz=271,slow=23						
KVAR				LR	LR	11 12 15.0	
	comp=Z,27µm,18.1s,baz=90,slow=41						
	comp=Z,11nm,0.4s						
AKAS	**Kas**	**7.21**	**262**		**Pn**	**11 09 11.9**	**-0.5**
ANN	**Anapa**	**7.21**	**354**	*e*P	**Pn**	**11 09 12.1**	**-0.3**
ANN				*e*S	**Sn**	**11 10 36.0**	**+1.8**
ANN				pmax	pmax		
	comp=Z,126nm,1.7s						
ANN				MLR	MLR		
	comp=Z,16µm,12.0s						
MNGR	**Mingechevir, A**	**7.42**	**62**	P	**Pn**	**11 09 17.7**	**+2.4**
ZFRI	**Zfri**	**7.54**	**202**	Pn	**Pn**	**11 09 16.7**	**-0.3**
ZFRI	**Zfri**	**7.54**	**202**	P	**Pn**	**11 09 18.7**	**+1.7**
YAL	**Yalta**	**7.58**	**336**	*e*P	Pn	11 09 24.8	+7.3
YAL				Pm		11 09 40.5	
	comp=Z,53nm,0.8s						
YAL				*e*S	Sn	11 10 52.6	+9.3
YAL				Sm		11 11 27.8	
	comp=N,157nm,1.4s						
YAL				Sm		11 11 27.8	
	comp=E,276nm,1.8s						
YAL				x	x	11 14 38.1	
	comp=Z,7µm,10.7s						
YAL	**Yalta**	**7.58**	**336**	*e*P	Pn	11 09 24.8	+7.3
YAL				*e*S	Sn	11 10 52.6	+9.3
HSNJ	**Maan**	**7.69**	**198**	P	**Pn**	**11 09 19.3**	**+0.2**
SUDU	**Sudak**	**7.71**	**342**	*e*P	**Pn**	**11 09 21.0**	**+1.8**
SUDU				Pm		11 09 42.5	
	comp=Z,142nm,0.9s						
SUDU				*e*S	**Sn**	**11 10 50.1**	**+3.7**
SUDU				Sm		11 11 31.3	
	comp=N,573nm,1.4s,comp=E,322nm,1.4s						
SUDU	**Sudak**	**7.71**	**342**	*e*P	**Pn**	**11 09 21.0**	**+1.8**
SUDU				*e*S	**Sn**	**11 10 50.1**	**+3.7**
PRNI	**Paran**	**7.79**	**202**	Pn	**Pn**	**11 09 20.2**	**-0.2**
PRNI	**Paran**	**7.79**	**202**	P	**Pn**	**11 09 20.6**	**+0.2**
SEV	**Sevastopol'**	**7.80**	**334**	*e*P	**Pn**	**11 09 20.1**	**-0.3**
SEV				Pm		11 09 39.0	
	comp=Z,181nm,1.2s						
SEV				*e*S	**Sn**	**11 10 46.4**	**-2.2**
SEV				Sm		11 11 32.0	
	comp=N,100nm,1.6s						
SEV				Sm		11 11 32.0	
	comp=E,160nm,1.8s						
SEV	**Sevastopol'**	**7.80**	**334**	*e*P	**Pn**	**11 09 20.1**	**-0.3**
SEV				*e*S	**Sn**	**11 10 46.4**	**-2.2**
MANT	**Manisa**	**7.84**	**279**	Pn	**Pn**	**11 09 21.1**	**-0.2**
GROC	**Groznyy**	**7.91**	**43**	*e*P	Pn	11 09 30.6	+8.6
SIM	**Simferopol'**	**8.01**	**337**	*e*P	Pn	11 09 28.9	+5.5
SIM				Pm		11 09 58.5	
	comp=Z,850nm,2.6s						
SIM				*e*S	**Sn**	**11 11 00.2**	**+6.3**
SIM				Sm		11 11 32.0	
	comp=E,2µm,3.1s						
SIM				Sm		11 11 44.9	
	comp=N,3µm,3.8s						
SIM				x	x	11 14 49.6	
	comp=Z,4µm,10.8s						
SIM	**Simferopol'**	**8.01**	**337**	*e*P	**Pn**	**11 09 25.6**	**+2.2**
SIM				S	**Sn**	**11 11 00.0**	**+6.1**
SIM				MLR	MLR		
	comp=Z,8µm,15.0s						
HRFI	**Mount Harif**	**8.07**	**201**	Pn	**Pn**	**11 09 23.9**	**-0.4**
KRMI	**Paran Flat**	**8.09**	**203**	Pn	**Pn**	**11 09 24.2**	**-0.4**
AKT	**Akhty**	**8.15**	**59**	*e*P	**Pn**	**11 09 29.8**	**+4.4**
AKT				*e*S	**Sn**	**11 11 04.1**	**+6.6**
AKT				pmax	pmax		
	comp=Z,71nm,0.7s						
AKT				smax	smax		
	comp=E,49nm,1.1s						
AKT				smax	smax		
	comp=N,56nm,0.8s						
LKRN	**Lenkeran, Azer**	**8.22**	**79**	P	**Pn**	**11 09 28.4**	**+2.1**
MBRI	**Mt Berech**	**8.34**	**202**	Pn	**Pn**	**11 09 28.1**	**+0.1**
MBRI	**Mt Berech**	**8.34**	**202**	P	**Pn**	**11 09 28.4**	**+0.4**
AQBJ	**Aqaba**	**8.36**	**201**	P	**Pn**	**11 09 29.4**	**+1.2**
ARG	**Arkhangelos**	**8.37**	**263**	P	**Pn**	**11 09 25.9**	**-2.5**
EIL	**Elat**	**8.44**	**201**	Pn	**Pn**	**11 09 30.2**	**+0.9**
	comp=N,2.7nm,0.3s,baz=346,slow=8.6,SNR=19						
EIL				Pg	Pb	11 09 58.2	+5.0
	comp=N,9.5nm,0.3s,baz=360,slow=15,SNR=12						
EIL				Lg	Lg	11 11 54.5	
	comp=N,11nm,0.3s,baz=144,slow=9.3,SNR=3.6						
EIL				LR	LR	11 12 49.2	
	comp=N,22µm,20.0s,baz=7.5,slow=38						
	comp=N,32nm,0.8s						
EIL	**Elat**	**8.44**	**201**	Pn	**Pn**	**11 09 28.7**	**-0.6**
MAK	**Makhachkala**	**8.75**	**50**	*e*P	**Pn**	**11 09 28.7**	**-4.7**
MAK				*e*S	**Sn**	**11 11 06.9**	**-5.0**
MAK				MLR	MLR		
	comp=Z,29µm,8.0s						
KARP	**Karpathos**	**9.30**	**261**		**Pn**	**11 09 39.9**	**-1.2**
PSN	**Preselentsi**	**9.86**	**311**	P	**Pn**	**11 09 49.6**	**+0.9**
JURR	**Jurilovca**	**10.13**	**318**	⇑P	**Pn**	**11 09 53.2**	**+0.7**
ALN	**Alexandroupoli**	**10.15**	**293**	Pn	**Pn**	**11 09 51.6**	**-1.1**
ALN	**Alexandroupoli**	**10.15**	**293**	P	**Pn**	**11 09 51.6**	**-1.1**
TIRR	**Tirgusor**	**10.19**	**315**	⇓P	**Pn**	**11 09 53.3**	**+0.1**
TIRR	**Tirgusor**	**10.19**	**315**		**Pn**	**11 09 52.8**	**-0.4**
TIRR	**Tirgusor**	**10.19**	**315**	P	**Pn**	**11 09 53.3**	**+0.1**
TPGR	**Topolog**	**10.44**	**317**	⇓P	**Pn**	**11 09 56.4**	**-0.3**
RDO	**Rodhopi**	**10.58**	**293**	P	**Pn**	**11 10 00.9**	**+2.3**
RDO	**Rodhopi**	**10.58**	**293**		**Pn**	**11 09 58.6**	**0.0**
HARR	**Harsova**	**10.61**	**315**	⇑P	**Pn**	**11 09 58.7**	**-0.2**
HARR	**Harsova**	**10.61**	**315**	P	**Pn**	**11 09 58.7**	**-0.2**
CFR	**Carcaliu**	**10.80**	**318**	⇓P	**Pn**	**11 10 01.2**	**-0.4**
CFR	**Carcaliu**	**10.80**	**318**	P	**Pn**	**11 10 01.2**	**-0.4**
KDZ	**Kurdzhali**	**10.81**	**296**	*i* P	**Pn**	**11 10 03.4**	**+1.6**
SZH	**Strazhica**	**11.06**	**305**	P	**Pn**	**11 10 05.6**	**+0.4**
IDI	**Anoyia**	**11.15**	**262**	Pn	**Pn**	**11 10 04.3**	**-2.2**
	comp=Z,3.6nm,0.3s,baz=53,slow=12,SNR=21						
IDI				Sn	Sn	11 12 01.9	-9.3
	baz=188,slow=23						
	comp=Z,84nm,0.7s						
IDI	**Anoyia**	**11.15**	**262**	P	**Pn**	**11 10 05.8**	**-0.7**
IDI	**Anoyia**	**11.15**	**262**		**Pn**	**11 10 04.8**	**-1.7**
DION	**Dionisos Attik**	**11.48**	**277**	P	**Pn**	**11 10 14.5**	**+3.6**
PTL	**Penteli**	**11.53**	**277**	P	**Pn**	**11 10 15.5**	**+3.8**
OUR	**Ouranopolis**	**11.57**	**288**	P	**Pn**	**11 10 14.9**	**+2.8**
ISR	**Istrita**	**11.65**	**314**	⇓P	**Pn**	**11 10 14.5**	**+1.2**
ISR	**Istrita**	**11.65**	**314**	P	**Pn**	**11 10 14.5**	**+1.2**
KIS	**Kishinev**	**11.76**	**326**	*e*P	**Pn**	**11 10 13.0**	**-1.7**
KIS				*e*Lq	LQ	11 13 50.0	
	comp=Z,2µm,10.0s						
KIS				LRM	MLR	11 17 00.0	
	comp=Z,4µm,13.0s						
KIS	**Kishinev**	**11.76**	**326**	*e*P	**Pn**	**11 10 13.0**	**-1.7**
KIS				*e*		11 12 35.0	
KIS				MLR	MLR		
	comp=Z,4µm,13.0s						
ODBI	**Odobesti**	**11.76**	**317**	⇑P	**Pn**	**11 10 16.4**	**+1.7**
IMMV	**Iera Moni Meta**	**11.82**	**264**	P	**Pn**	**11 10 15.8**	**+0.2**
PLVB	**Pleven**	**11.98**	**303**	⇓P	**Pn**	**11 10 19.6**	**+1.9**
VRI	**Vrincioaia**	**12.00**	**317**	⇑P	**Pn**	**11 10 19.1**	**+1.1**
VRI	**Vrincioaia**	**12.00**	**317**	P	**Pn**	**11 10 19.1**	**+1.1**
MMB	**Musomiste**	**12.01**	**294**	*i* P	**Pn**	**11 10 19.8**	**+1.5**
PLOR	**Plostina**	**12.04**	**317**	⇑P	**Pn**	**11 10 19.8**	**+1.2**
PLOR	**Plostina**	**12.04**	**317**	P	**Pn**	**11 10 19.7**	**+1.2**
SOH	**Sokhos**	**12.12**	**290**	P	**Pn**	**11 10 22.7**	**+2.9**
MLR	**Muntele Rosu**	**12.21**	**314**	⇑P	**Pn**	**11 10 22.3**	**+1.2**
MLR	**Muntele Rosu**	**12.21**	**314**	Pn	**Pn**	**11 10 21.9**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=31,slow=5.8,SNR=6.1						
MLR				Sn	**Sn**	**11 12 29.0**	**-8.1**
	comp=Z,0.2nm,0.3s,baz=347,slow=20,SNR=1.4						
MLR				LR	LR	11 15 59.2	
	comp=Z,13µm,18.8s,baz=133,slow=42						
	comp=Z,5.1nm,0.7s						
MLR	**Muntele Rosu**	**12.21**	**314**		**Pn**	**11 10 20.6**	**-0.4**
MLR	**Muntele Rosu**	**12.21**	**314**	P	**Pn**	**11 10 22.2**	**+1.2**
COVR	**Voineasa-Covas**	**12.28**	**316**	⇓P	**Pn**	**11 10 23.3**	**+1.4**
TESR	**Tescani**	**12.46**	**319**	⇓P	**Pn**	**11 10 23.7**	**-0.6**
KNT	**Kendrikon**	**12.53**	**291**	P	**Pn**	**11 10 27.2**	**+2.0**
MPEP	**Malo Peshtene**	**12.56**	**302**	P	**Pn**	**11 10 25.4**	**-0.3**
VTS	**Vitosha**	**12.65**	**298**		**Pn**	**11 10 27.5**	**+0.4**
VTS	**Vitosha**	**12.65**	**298**	P	**Pn**	**11 10 27.5**	**+0.4**
VTS	**Vitosha**	**12.65**	**298**	*i* P	**Pn**	**11 10 29.3**	**+2.2**
OZUR		**12.66**	**316**	⇑P	**Pn**	**11 10 27.3**	**+0.3**
VOIR		**12.70**	**312**	⇑P	**Pn**	**11 10 28.0**	**+0.3**
VOIR		**12.70**	**312**	P	**Pn**	**11 10 27.9**	**+0.3**
AGG	**Agios Georgios**	**12.73**	**281**	P	**Pn**	**11 10 30.3**	**+2.3**
DOPR	**Dopca**	**12.80**	**315**	⇑P	**Pn**	**11 10 28.9**	**-0.1**
SORM	**Soroca**	**12.84**	**328**	⇓P	**Pn**	**11 10 29.5**	**0.0**
SORM	**Soroca**	**12.84**	**328**	P	**Pn**	**11 10 29.4**	**0.0**
ARR	**Arges**	**12.91**	**311**	⇑P	**Pn**	**11 10 32.2**	**+1.7**
THL	**Klokotos Trika**	**12.99**	**284**	P	**Pn**	**11 10 33.8**	**+2.2**
EVR	**Evrytania**	**13.13**	**281**	P	**Pn**	**11 10 37.4**	**+3.8**
STIP	**Stip**	**13.16**	**293**	*i* P	**P**	**11 10 41.7**	**-2.3**
DRO	**Drossia**	**13.23**	**277**	P	**P**	**11 10 40.5**	**-4.4**
KZN	**Kozani**	**13.24**	**287**	P	**Pn**	**11 10 38.4**	**+3.3**
PVO	**Paravola**	**13.35**	**279**	P	**P**	**11 10 46.6**	**+0.5**
VORD	**Divnogorie**	**13.36**	**2**	*e*P	**Pn**	**11 10 36.4**	**-0.1**
VORD				pmax	pmax		
	comp=Z,20nm,0.9s						
RLS	**Riolos of Patr**	**13.42**	**277**	P	**Pn**	**11 10 39.9**	**+2.5**
FNA	**Florina**	**13.60**	**289**	P	**P**	**11 10 50.2**	**+1.3**
VSR	**Storozhevoye**	**13.61**	**2**	*e*P	**Pn**	**11 10 40.3**	**+0.4**
VSR				pmax	pmax		
	comp=Z,50nm,1.0s						
PENT	**Pentalofos**	**13.71**	**286**	P	**Pn**	**11 10 43.6**	**+2.1**
SKO	**Skopje**	**13.77**	**294**	*i* P	**Pn**	**11 10 45.4**	**+3.3**
VRH	**Novokhopyorsk**	**13.78**	**9**	*e*P	**Pn**	**11 10 40.9**	**-1.4**
JAN	**Janina**	**13.90**	**284**	P	**Pn**	**11 10 47.5**	**+3.6**
BURAR	**Bucovina Array**	**13.93**	**320**	⇑P	**Pn**	**11 10 45.3**	**+0.9**

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BURAR  Bucovina Array    13.93 320        Pn      11 10 43.9  -0.5
BURAR  Bucovina Array    13.93 320   P    Pn      11 10 45.2  +0.9
BUR08  Bucovina Ar. S    13.95 320        Pn      11 10 43.7  -1.1
KMPD   K-Podol'skiy      13.99 325   Pn   Pn      11 10 43.4  -1.7
       comp=Z,192nm,1.1s
NYDR   Nydri-Lefkada     14.00 280   P    P       11 10 49.3  -4.0
KBN    Korca             14.02 288   P    P       11 10 54.5  +0.8
LKD2   Lefkada island    14.03 280   P    P       11 10 50.5  -3.2
TSLK   Tsoukalades, L    14.03 280   P    P       11 10 51.2  -2.5
EVGI   Lefkada island    14.04 280   P    Pn      11 10 49.6  +3.8
GZR    Gura Zlata        14.05 308  ⇑P    Pn      11 10 47.4  +1.2
VORR   Voronezh          14.06   2  eP    Pn      11 10 38.3  -7.8
VORR                                 pmax pmax
       comp=Z,40nm,0.4s
IGT    Igoumenitsa       14.29 283   P    P       11 10 55.0  -1.6
MDVR   Moldovita         14.46 305  ⇓P    Pn      11 10 52.2  +0.5
LUBAR  Lubar, Ukraine    14.49 331   Pn   Pn      11 10 50.3  -1.8
       comp=Z,90nm,1.3s
LUBAR                                pP   P       11 10 54.2  -4.5
       comp=Z,90nm,1.3s
MARR   Marisel-Cluj      14.50 313  ⇓P    Pn      11 10 54.1  +1.8
AK07   Malin Array Si    14.51 336   Pn   Pn      11 10 50.6  -1.7
AK07                                 pP   P       11 10 54.6  -4.3
AK10   Malin Array Si    14.54 336   Pn   Pn      11 10 50.9  -1.8
AK10                                 pP   P       11 10 54.9  -4.3
AK09   Malin Array Si    14.54 336   Pn   Pn      11 10 51.2  -1.5
AK06   Malin Array Si    14.54 336   Pn   Pn      11 10 50.9  -1.8
AK08   Malin Array Si    14.57 336   Pn   Pn      11 10 51.7  -1.3
AK05   Malin Array Si    14.57 336   Pn   Pn      11 10 51.8  -1.3
AK02   Malin Array Si    14.60 336   Pn   Pn      11 10 52.1  -1.4
AK13   Malin Array Si    14.61 336   Pn   Pn      11 10 52.1  -1.6
AK14   Malin Array Si    14.61 336   Pn   Pn      11 10 52.5  -1.2
AK01   Malin Array Si    14.63 336   Pn   Pn      11 10 52.3  -1.6
AK11   Malin Array Si    14.63 336   Pn   Pn      11 10 52.6  -1.4
AK11                                 pP   P       11 10 56.4  -3.9
AKASG  Malin Array Be    14.64 336   Pn   Pn      11 10 51.5  -2.5
       comp=Z,0.6nm,0.3s,baz=148,slow=13,SNR=36
AKASG                                Sn   Sn      11 13 22.8   -13
       baz=148,slow=47
AKASG                                PcP  PcP     11 16 04.7  -2.0
       comp=Z,1.5nm,0.5s,baz=84,slow=2.0,SNR=4.9
       comp=Z,13nm,0.8s
AKASG  Malin Array Be    14.64 336        Pn      11 10 53.9  -0.1
AKASG  Malin Array Be    14.64 336   P    Pn      11 10 53.9  -0.1
AKBB   Malin Array Si    14.64 336        Pn      11 10 52.0  -2.0
AKBB   Malin Array Si    14.64 336   Pn   Pn      11 10 52.3  -1.7
AKBB   Malin Array Si    14.64 336  i P   Pn      11 10 52.4  -1.6
AK16   Malin Array Si    14.65 336   Pn   Pn      11 10 52.7  -1.4
AK16                                 pP   P       11 10 56.4  -4.0
AK03   Malin Array Si    14.66 336   Pn   Pn      11 10 52.9  -1.4
AK15   Malin Array Si    14.66 336   Pn   Pn      11 10 52.9  -1.4
AK04   Malin Array Si    14.67 336   Pn   Pn      11 10 53.0  -1.5
AK17   Malin Array Si    14.68 336   Pn   Pn      11 10 53.2  -1.3
AK18   Malin Array Si    14.71 336   Pn   Pn      11 10 53.3  -1.6
AK18                                 pP   P       11 10 57.4  -3.7
AK18                                 sP           11 10 59.4
KEK    Kerkira           14.71 284   P    P       11 11 02.4  +1.2
AK23   Malin Array Si    14.72 336   Pn   Pn      11 10 53.5  -1.6
AK19   Malin Array Si    14.72 336   Pn   Pn      11 10 53.4  -1.8
AK19                                 pP   P       11 10 57.5  -3.8
AK22   Malin Array Si    14.74 336   Pn   Pn      11 10 54.0  -1.3
AK22                                 pP   P       11 10 57.6  -3.8
AK22                                 sP           11 10 59.7
AK20   Malin Array Si    14.74 336   Pn   Pn      11 10 53.8  -1.6
AK20                                 pP   P       11 10 57.7  -3.8
AK21   Malin Array Si    14.76 336   Pn   Pn      11 10 54.2  -1.5
AK21                                 pP   P       11 10 57.9  -3.8
DRGR                     14.80 313  ⇓P    Pn      11 10 57.1  +0.7
DRGR                     14.80 313   P    Pn      11 10 57.0  +0.7
BZS    Buzias            14.88 308   P    Pn      11 10 58.6  +1.2
BZS    Buzias            14.88 308   P    Pn      11 10 58.5  +1.2
PVY    Plav              14.98 295⇑iP     Pn      11 11 00.7  +1.9
LPSR   Galich'ya Gora    14.99   1  eP    Pn      11 10 56.3  -2.4
LPSR                                 pmax pmax
       comp=Z,50nm,1.0s
IVA    Berane            15.09 296⇑iP     Pn      11 11 02.0  +1.7
SJES   Sjenica           15.13 298  ePn   Pn      11 11 02.5  +1.7
RAYN   Ar Rayn           15.30 155        Pn      11 11 01.2  -1.9
RAYN   Ar Rayn           15.30 155   P    Pn      11 11 01.2  -1.9
RAYN                                 pmax pmax
       comp=Z,20nm,0.9s
RAYN   Ar Rayn           15.30 155  i P   Pn      11 11 00.3  -2.8
       SNR=6.1
KOME   Kolasin           15.36 296⇑iP     Pn      11 11 05.7  +1.9
DIVS   Divibare          15.37 301   IAmb IAmb    11 11 10.9
       comp=Z,181nm,1.0s
DIVS   Divibare          15.37 301  ePn   Pn      11 11 04.7  +0.8
ULC    Ulcinj            15.37 292⇑iP     Pn      11 11 05.4  +1.5
PDG    Podgorica         15.45 294        Pn      11 11 05.8  +0.9
PDG    Podgorica         15.45 294⇑iP     Pn      11 11 06.9  +2.0
DRME   Dracevica, Mon    15.46 293  ePn   Pn      11 11 07.0  +2.1
DRME   Dracevica, Mon    15.46 293⇑iP     Pn      11 11 07.1  +2.1
SAKB   Bahrain           15.49 135   P    P       11 11 09.6  -0.4
SAKB                                 S    S       11 14 08.0  -4.9
PLE    Pljevlja          15.56 297⇑iP     P       11 11 08.9  -1.9
GEYT   Alibeck           15.57  83   Pn   Pn      11 11 06.8  +0.2
       comp=Z,1.9nm,0.3s,baz=287,slow=12,SNR=33
GEYT                                 Sn   Sn      11 13 55.3  -3.8
       comp=Z,0.3nm,0.3s,baz=98,slow=22,SNR=1.0
GEYT                                 LR   LR      11 18 41.4
       comp=Z,6μm,19.5s,baz=314,slow=43
       comp=Z,112nm,1.0s
RUDO   Rudo              15.65 298  ePn   P       11 11 11.4  -0.3
BUM    Brajici-Budva     15.69 293⇑iP     Pn      11 11 09.5  +1.4
BBLS   Lazi&#263;i       15.70 299  ePn   Pn      11 11 09.5  +1.3
CEME   Cevo              15.72 294⇑iP     Pn      11 11 09.9  +1.4
NKME   Niksic            15.74 295⇑iP     Pn      11 11 10.4  +1.7
TEKS   Tekeris           15.83 302  ePn   P       11 11 13.5  -0.1
FRGS   Fruska Gora       15.86 304  ePn   Pn      11 11 11.8  +1.6
UPM    Unac-Piva         15.87 297  ePn   P       11 11 12.7  -1.6
UPM    Unac-Piva         15.87 297⇑iP     Pn      11 11 11.6  +1.0
LVV    L'vov             16.00 324  eP    Pn      11 11 13.0  +1.0
LVV                                 eS    Sn      11 14 09.3  +0.1
LVV                                  pmax pmax
       comp=Z,350nm,1.7s
LVV                                  MLR  MLR
       comp=E,6μm,12.0s
LVV                                  MLR  MLR
       comp=Z,6μm,12.0s
LVV                                  MLR  MLR
       comp=N,4μm,11.0s
HCY    Herceg Novi       16.01 294  ePn   Pn      11 11 11.8  -0.3
HCY    Herceg Novi       16.01 294⇑iP     Pn      11 11 13.0  +0.9
HAPS   Han Pijesak,BI    16.08 300  ePn   Pn      11 11 13.3  +0.2
UZH    Uzhgorod          16.09 318   P    P       11 11 16.3  -0.1
BELG   Belogornoye       16.12  21   Pn   Pn      11 11 11.6  -1.9
       comp=N,0.7nm,0.3s,baz=32,slow=7.2,SNR=19
BELG                                 Sn   Sn      11 14 10.4  -1.6
       comp=N,0.4nm,0.3s,baz=272,slow=22,SNR=0.7
       comp=N,35nm,0.8s
TREB   Trebinje          16.16 295  ePn   Pn      11 11 14.3  +0.2
SMRA   Abu-Samra         16.62 137   P    Pn      11 11 21.1  +1.0
SMRA                                 S    Sn      11 14 27.9  +3.3
STON   Ston              16.66 295  ePn   Pn      11 11 18.5  -2.0
MORH   Mrgy, Hungar      17.02 307  ⇑P    Pn      11 11 25.4  +0.5
TIP    Timpagrande       17.06 282  ⇑P    Pn      11 11 25.9  +0.3
TIP    Timpagrande       17.06 282   P    Pn      11 11 24.9  -0.7
TIP                                  IAmb IAmb    11 11 29.4
       comp=Z,373nm,1.1s
STHS   Stebnicka Huta    17.11 319  eP    P       11 11 28.6  +0.7
STHS   Stebnicka Huta    17.11 319  eP    P       11 11 28.5  +0.7
BLY    Banja Luka        17.48 301  ePn   Pn      11 11 31.3  +0.6
OBN    Obninsk           17.55 356   P    Pn      11 11 29.1  -2.3
       comp=Z,1.8nm,0.3s,baz=259,slow=3.3,SNR=23
OBN                                  S    Sn      11 14 37.1  -9.4
       comp=Z,3.9nm,0.4s,baz=122,slow=21,SNR=1.2
OBN                                  LR   LR      11 19 10.2
       comp=Z,736nm,21.1s,baz=190,slow=40
       comp=Z,7.0nm,0.4s
OBN    Obninsk           17.55 356   P    Pn      11 11 28.9  -2.5
OBN    Obninsk           17.55 356d iP    Pn      11 11 27.9  -3.5
OBN                                 i S   S       11 14 51.5  -2.9
OBN                                  pmax pmax
       comp=Z,180nm,1.2s
OBN                                  MLR  MLR
       comp=Z,7μm,17.0s
NIE    Niedzica          17.61 318  eP    P       11 11 33.0  -0.3
NIE                                 eS    S       11 15 03.1  +7.2
JRN    Qarnain Island    17.62 132   P    Pn      11 11 31.4  -1.1
JRN                                  S    Sn      11 14 49.2  +0.4
SLWR   Sila              17.64 136   P    Pn      11 11 31.5  -1.2
SLWR                                 S    Sn      11 14 51.7  +2.6
A051A  Mrakovica         17.75 301  ePn   Pn      11 11 33.5  -0.6
CUC    Castrocucco       17.78 285   P    Pn      11 11 34.7  +0.1
CEL    Celeste           17.79 279   P    Pn      11 11 31.9  -2.7
CEL                                  IAmb IAmb    11 11 37.4
       comp=Z,218nm,1.0s
A050A  Klekovaca         17.86 299  ePn   Pn      11 11 35.3  -0.2
LANS   Liptovska Anna    17.91 316  eP    P       11 11 38.6  +1.9
LANS   Liptovska Anna    17.91 316  eP    P       11 11 38.6  +1.9
VYHS   Vyhne             17.93 314  eP    P       11 11 37.6  +0.8
VYHS   Vyhne             17.93 314  eP    P       11 11 37.6  +0.8
SGRT   San Giovanni R    17.93 290   IAmb IAmb    11 11 40.0
       comp=Z,183nm,0.9s
MOS    Moscow            18.14 359  eP    Pn      11 11 33.8  -4.9
MOS                                 eS    Sn      11 14 57.7  -3.1
MOS                                  pmax pmax
       comp=Z,617nm,2.0s
MOS                                  pmax pmax
       comp=Z,2μm,2.5s
MOS                                  smax smax
       comp=N,3μm,6.3s
MOS                                  smax smax
       comp=N,2μm,5.3s
MOS                                  MLR  MLR
       comp=Z,7μm,17.0s
OJC    Ojcow             18.34 319  eP    Pn      11 11 38.8  -2.5
OJC                                 eS    S       11 15 13.7  +2.9
OJC                                 eL    L       11 20 41.7
       comp=Z,8μm,20.1s
MNK    Minsk             18.37 340  i P   Pn      11 11 39.9  -1.7
       comp=E,16nm,0.9s
MNK                                 i P   Pn      11 11 39.9  -1.7
       comp=N,121nm,1.0s
MNK                                 i P   Pn      11 11 39.9  -1.7
       comp=Z,120nm,0.9s,baz=151
MNK                                 i PP  PnPn    11 11 51.6  -1.4
MNK                                 i S   Sn      11 15 06.4  -0.1
MNK                                 i SS  SnSn    11 15 21.6  +1.3
MNK                                 i LQ  LQ      11 17 09.1
MNK                                 i LR  LR      11 18 33.0
MNK                                 i LRM MLR     11 19 54.0
       comp=Z,4μm,20.6s
MNK                                 i LRM MLR     11 19 58.5
       comp=E,1μm,18.1s
MNK                                 i LRM MLR     11 20 13.3
       comp=N,4μm,18.7s
MNK    Minsk             18.37 340  i P   Pn      11 11 39.9  -1.7
MNK                                 i S   Sn      11 15 06.4  -0.1
MNK                                  pmax pmax
       comp=Z,120nm,0.9s
MNK                                  pmax pmax
       comp=E,16nm,0.9s
MNK                                  pmax pmax
       comp=N,121nm,1.0s
MNK                                  MLR  MLR
       comp=Z,4μm,21.0s
MNK                                  MLR  MLR
       comp=E,1μm,18.0s
MNK                                  MLR  MLR
       comp=N,4μm,19.0s
GHWR   Ruwais            18.39 134   P    P       11 11 40.9  -1.1
GHWR                                 S    S       11 15 12.2  +0.4
KOGS   Kog               18.64 305  eP    Pn      11 11 45.0   0.0
SMOL   Smolenice         18.75 312  eP    Pn      11 11 46.8  +0.5
JAVC   Velka Javorina    18.78 313  eP    Pn      11 11 47.6  +0.9
MODS   Modra-Piesok      18.78 312  eP    Pn      11 11 46.6  -0.1
MODS   Modra-Piesok      18.78 312  eP    Pn      11 11 46.6  -0.1
BEL    Belsk             18.88 324  eP    P       11 11 47.4  +0.2
SHME   Shamm             18.92 122  i P   P       11 11 45.5  -2.4
       SNR=9.5
SHME   Shamm             18.92 122   P    P       11 11 46.3  -1.6
       SNR=8.9
SHME                                 S    Sn      11 15 17.4  -2.9
UMQ    Umm Al-Quwin      18.96 125   P    Pn      11 11 49.3  +0.3
CRES   Cresnjev          18.96 303  eP    P       11 11 48.3  +0.1
CRES                                eS    Sn      11 15 21.4  +0.4
CRES   Cresnjev          18.96 303  ePn   Pn      11 11 49.0  +0.1
AKTO   Aktyubinsk        18.96  41   P    P       11 11 47.4  -0.8
       comp=N,0.8nm,0.3s,baz=234,slow=12,SNR=39
AKTO                                 S    Sn      11 15 13.2  -7.8
       comp=N,7.3nm,0.9s,baz=351,slow=13,SNR=0.9
AKTO                                 LR   LR      11 20 55.5
       comp=N,10μm,18.1s,baz=228,slow=43
       comp=N,92nm,1.1s
BOJS   Bojanci           19.01 302  ePn   P       11 11 48.3  -0.4
OKC    Ostrava-Krasne    19.01 316  eP    Pn      11 11 49.1  -0.3
OKC                                 eS    Sn      11 15 22.7  +0.7
OKC                                  AMS  AMS     11 20 40.0
       comp=N,7μm,15.3s
OKC    Ostrava-Krasne    19.01 316  eP    Pn      11 11 49.1  -0.3
OKC                                 eS    Sn      11 15 22.7  +0.7
OKC                                  MLR  MLR
       comp=Z,7μm,15.3s
NACGM  Naroch            19.03 339⇑iP     P       11 11 48.3  -0.5
       comp=Z,131nm,0.9s,baz=149
VAE    Valguarnera       19.04 277   P    P       11 11 48.4  -0.8
       comp=Z,5.2nm,0.4s,baz=50,slow=10,SNR=1.7
VAE                                  S    S       11 15 25.9  +0.7
       comp=Z,12nm,0.8s,baz=225,slow=23,SNR=1.3
VAE                                  LR   LR      11 20 00.5
       comp=Z,3μm,18.9s,baz=79,slow=40
RONA   Rosalia, Austr    19.08 309  ePn   Pn      11 11 50.2  -0.2
       comp=Z,68nm,1.1s,SNR=31
BANOM  Banah             19.11 122  i P   P       11 11 48.1  -2.0
       SNR=11
BANOM  Banah             19.11 122   P    P       11 11 50.0   0.0
       SNR=27
BANOM                                S    Sn      11 15 25.4  +0.4
RAFF   Raffo Rosso       19.11 276   P    P       11 11 49.6  -0.4
RAFF                                 IAmb IAmb    11 11 53.2
       comp=Z,360nm,1.3s
MZWR   Madinat Zayed     19.13 132   P    P       11 11 50.2  +0.1
MZWR                                 S    Sn      11 15 25.9  +0.7
GROS   Grobnik           19.13 305  eP    Pn      11 11 50.7  -0.3
GROS                                eS    Sn      11 15 20.7  -4.6
AJN    Ajban             19.21 128  i P   P       11 11 48.9  -2.1
       SNR=19
AJN    Ajban             19.21 128   P    Pn      11 11 51.5  -0.4
       SNR=14
AJN                                  S    S       11 15 27.9  -0.5
MORC   Moravsky Berou    19.31 316  ⇑P    Pn      11 11 52.7  -0.4
MORC   Moravsky Berou    19.31 316  eP    P       11 11 52.3  +0.3
MORC   Moravsky Berou    19.31 316   P    Pn      11 11 52.7  -0.4
INTR   Introdacqua       19.32 291   IAmb IAmb    11 11 55.2
       comp=Z,224nm,0.9s
NAZ    Nazwa, Dubai      19.33 126  i P   P       11 11 51.1  -1.3
       SNR=23
NAZ    Nazwa, Dubai      19.33 126   P    Pn      11 11 53.0  -0.5
       SNR=34
ASUD   Al Ashush, Dub    19.38 127  i P   P       11 11 51.9  -1.0
       SNR=17
ASUD   Al Ashush, Dub    19.38 127   P    P       11 11 52.6  -0.3
       SNR=17
ASUD                                 S    Sn      11 15 31.0  -0.3
MASF   Masafi            19.39 124   P    P       11 11 52.0  -1.1
       SNR=39
MASF                                 S    S       11 15 32.7  +0.4
ARSA   Arzberg           19.39 307  i Pn  Pn      11 11 54.0  -0.1
       comp=Z,35nm,1.4s
IDID   Didziasalis       19.40 340  eP    P       11 11 48.8  -4.1
ABKAR  Akbulak array     19.40  46   P    P       11 11 52.3  -0.6
ABKAR  Akbulak array     19.40  46   P    P       11 11 52.4  -0.6
MSFE   Esma-Masafi       19.40 124  i P   P       11 11 52.6  -0.5
       SNR=36
CONA   Conrad Observa    19.44 309  i Pn  Pn      11 11 54.3  -0.4
       comp=Z,58nm,1.0s,SNR=31
FAQ    Al Faqa, Dubai    19.46 126  i P   P       11 11 52.9  -0.9
       SNR=19
FAQ    Al Faqa, Dubai    19.46 126   P    P       11 11 53.6  -0.1
       SNR=32
FAQ                                  S    Sn      11 15 32.8  -0.4
MZR    Muzera            19.48 134  i P   P       11 11 52.0  -2.0
       SNR=24
MZR    Muzera            19.48 134   P    P       11 11 53.7  -0.3
       SNR=42
MZR                                  S    Sn      11 15 33.2  -0.5
SOKA   Soboth            19.51 305  eP    P       11 11 54.8  +0.5
       comp=Z,30nm,1.0s,SNR=14
MDH    Madha             19.53 124  i P   P       11 11 54.0  -0.6
       SNR=27
MDH    Madha             19.53 124   P    P       11 11 54.6   0.0
       SNR=61
MDH                                  S    S       11 15 35.7  +0.6
VNDS   Vrh nad Dolski    19.55 303  eP    Pn      11 11 55.8  -0.1
VNDS                                eS    Sn      11 15 38.6  +3.4
IIGN   Ignalina          19.57 339  eP    P       11 11 52.1  -2.7
KRUC   Moravsky          19.61 313  eP    P       11 11 55.6  +0.3
VRAC   Vranov            19.61 314   P    P       11 11 54.7  -0.6
       comp=Z,0.4nm,0.3s,baz=117,slow=9.8,SNR=19
VRAC                                 S    Sn      11 15 37.0  +0.4
       comp=Z,1.2nm,0.3s,baz=36,slow=8.6,SNR=0.9
VRAC                                 LR   LR      11 20 56.2
       comp=Z,10μm,18.8s,baz=122,slow=42
       comp=Z,22nm,1.0s
VRAC   Vranov            19.61 314  eP    P       11 11 55.4  +0.1
CEY    Cerknica          19.63 302  ePn   P       11 11 55.7  +0.2
LJU    Ljubljana         19.65 303  eP    Pn      11 11 56.8  -0.3
LJU                                 eS    Sn      11 15 38.3  +0.8
UOSS   Minazif           19.71 125   P    P       11 11 54.8  -1.8
UOSS                                 IAmb IAmb    11 12 10.2
       comp=Z,172nm,1.0s
UOSS   Minazif           19.71 125  i P   P       11 11 54.6  -2.0
       SNR=32
UOSS   Minazif           19.71 125   P    P       11 11 55.1  -1.5
UOSS                                 S    S       11 15 38.6  -0.1
HATD   Hatta, Dubai      19.75 125  i P   P       11 11 55.8  -1.2
       SNR=45
HATD   Hatta, Dubai      19.75 125   P    P       11 11 55.6  -1.4
       SNR=114
HATD                                 S    Sn      11 15 47.3  +7.0
OBKA   Obir              19.77 304  ePn   Pn      11 11 58.7   0.0
       comp=Z,99nm,1.1s,SNR=29
OBKA   Obir              19.77 304  ePn   P       11 11 57.6  +0.4
ISAL   Salakas           19.79 339  eP    P       11 11 54.8  -2.4
ASHO   Ashiyiah          19.80 126  i P   P       11 11 57.0  -0.6
       SNR=137
ASHO   Ashiyiah          19.80 126   P    P       11 11 57.3  -0.3
       SNR=127
ASHO                                 S    Sn      11 15 41.8  +0.2
GUMA   Gualdo di Mace    19.86 294   IAmb IAmb    11 11 59.9
       comp=Z,369nm,0.8s
SKDS   Skadanscina       19.86 301  ePn   P       11 11 56.1  -1.9
KRLC   Kraliky           19.89 316  eP    P       11 11 58.7  +0.4
KRLC                                eS    Sn      11 15 43.7  +0.4
KRLC                                 AMS  AMS     11 21 20.0
       comp=Z,9μm,16.1s
KRLC   Kraliky           19.89 316  eP    P       11 11 58.7  +0.4
KRLC                                eS    Sn      11 15 43.7  +0.4
KRLC                                 MLR  MLR
       comp=Z,9μm,16.1s
ALNE   Al Ain            20.05 127  i P   P       11 11 59.1  -1.2
       SNR=40
ALNE   Al Ain            20.05 127   P    Pn      11 12 01.6  -0.4
       SNR=58
ALNE                                 S    Sn      11 15 51.2  +3.6
JASK   Jask - Hormozg    20.21 120   P    Pn      11 12 03.8  -0.2
       SNR=22
JASK                                 S    Sn      11 15 50.8  -0.7
SABO   M.te Sabotino     20.25 302   IAmb IAmb    11 12 06.4
       comp=Z,176nm,1.2s
TREC   Trest             20.25 312  eP    Pn      11 12 03.3  -0.9
TREC                                 AMS  AMS     11 21 10.0
       comp=Z,10μm,14.7s
TREC   Trest             20.25 312  eP    Pn      11 12 03.3  -0.9
TREC                                 MLR  MLR
       comp=Z,10μm,14.7s
DPC    Dobruska-Polom    20.28 316  eP    P       11 12 02.4  -0.2
DPC                                 eS    S       11 15 46.5  -3.2
DPC                                  AMS  AMS     11 21 30.0
       comp=Z,8μm,16.9s
DPC    Dobruska-Polom    20.28 316  eP    P       11 12 02.4  -0.2
DPC                                 eS    S       11 15 46.5  -3.2
DPC                                  MLR  MLR
       comp=Z,8μm,16.9s
CESX   Cesi              20.36 292   IAmb IAmb    11 12 08.1
       comp=Z,262nm,1.1s
PABE   Paberze           20.39 336   P    P       11 12 03.0  -0.7
PABE   Paberze           20.39 336  eP    P       11 12 02.7  -1.0
PRED   Cave del Predi    20.40 303   IAmb IAmb    11 12 07.0
       comp=Z,182nm,1.0s
MYKA   Terra Mystica     20.41 304  i Pn  P       11 12 05.1  +1.0
       comp=Z,120nm,0.8s,SNR=53
OSTC   Ostas             20.44 316  eP    P       11 12 04.2  -0.2
OSTC                                eS    Sn      11 15 55.0  -1.6
OSTC                                 AMS  AMS     11 21 10.0
       comp=Z,8μm,14.7s
OSTC   Ostas             20.44 316  eP    P       11 12 04.2  -0.2
OSTC                                eS    Sn      11 15 55.0  -1.6
OSTC                                 MLR  MLR
       comp=Z,8μm,14.7s
SOHO   SOHO              20.50 126  i P   P       11 12 03.9  -1.2
       SNR=6.6
UPC    Upice             20.53 316  eP    P       11 12 05.1  -0.2
UPC                                 eS    S       11 15 55.0  +0.4
UPC                                  AMS  AMS     11 21 00.0
       comp=Z,9μm,16.2s
UPC    Upice             20.53 316  eP    P       11 12 05.1  -0.2
UPC                                 eS    S       11 15 55.0  +0.4
UPC                                  MLR  MLR
       comp=Z,9μm,16.2s
CHVC   Chvalec           20.55 316  eP    P       11 12 05.2  -0.3
CHVC                                 AMS  AMS     11 21 10.0
       comp=Z,8μm,16.4s
CHVC   Chvalec           20.55 316  eP    P       11 12 05.2  -0.3
CHVC                                 MLR  MLR
       comp=Z,8μm,16.4s
KSP    Ksiaz             20.55 317  i P   P       11 12 05.7  +0.2
KSP                                 eS    S       11 15 54.5  -0.5
KSP                                 eL    L       11 21 39.1
       comp=Z,9μm,17.5s
UMZA   Um Al Zommool     20.68 131   P    P       11 12 07.1   0.0
UMZA                                 S    S       11 15 58.7  +0.7
KBA    Koelnbreinsper    20.74 305  i Pn  P       11 12 08.7  +1.0
       comp=Z,304nm,1.1s,SNR=123
BIOA   Bad Ischl, Aus    20.75 307  i P   P       11 12 08.4  +0.7
       comp=Z,98nm,1.2s,SNR=34
CKRC   Cesky Krumlov     20.75 310  eP    P       11 12 07.9  +0.2
CKRC                                eS    S       11 15 55.7  -3.4
CKRC   Cesky Krumlov     20.75 310  eP    P       11 12 07.9  +0.2
CKRC                                eS    S       11 15 55.7  -3.4
VSVD   Vaisvydziai       20.80 337  eP    P       11 12 06.1  -2.0
CLUD   Cludinico         20.86 303   IAmb IAmb    11 12 10.8
       comp=Z,186nm,0.9s
STAL   STALIGIAL         20.92 303   IAmb IAmb    11 12 10.9
       comp=Z,126nm,1.0s
GOPC   GO Pecny, Ondr    20.94 313  eP    P       11 12 09.6  -0.1
GOPC                                 AMS  AMS     11 21 00.0
       comp=Z,8μm,17.7s
GOPC   GO Pecny, Ondr    20.94 313  eP    P       11 12 09.6  -0.1
GOPC                                 MLR  MLR
       comp=Z,8μm,17.7s
ARQ    Araqi             21.06 127   P    P       11 12 11.1  -0.1
       SNR=38
ARQ                                  S    S       11 16 08.5  +3.0
KLNR   Kaliningrad       21.06 330  i P   P       11 12 11.0  +0.1
KLNR                                 pmax pmax
       comp=Z,214nm,0.8s
PRU    Pruhonice         21.11 313  eP    P       11 12 11.4  -0.2
PRU                                 eS    S       11 16 02.1  -4.0
PRU                                  AMS  AMS     11 21 30.0
       comp=Z,7μm,16.1s
PRU    Pruhonice         21.11 313  eP    P       11 12 11.4  -0.2
PRU                                 eS    S       11 16 02.1  -4.0
PRU                                  MLR  MLR
       comp=Z,7μm,16.1s
CIMO   Cimolais          21.11 303   IAmb IAmb    11 12 17.3
       comp=Z,67nm,0.9s
GEC2   GERESS Array S    21.13 310  eP    P       11 12 12.4  +0.5
       comp=Z,81nm,1.1s,baz=113,slow=9.7
GERES  GERESS Array B    21.13 310   P    P       11 12 11.4  -0.5
       comp=Z,30nm,0.9s,baz=113,slow=10,SNR=48
GERES                                S    S       11 16 09.0  +2.3
       comp=Z,0.5nm,0.4s,baz=106,slow=13,SNR=0.9
GERES                                LR   LR      11 22 46.7
       comp=Z,5μm,18.2s,baz=122,slow=44
       comp=Z,30nm,0.9s
ABTA   Abfaltersbach     21.18 304  i P   P       11 12 12.8  +0.3
       comp=Z,66nm,1.0s,SNR=20
RJOB   Jochberg          21.30 306  eP    P       11 12 14.6  +0.9
       comp=Z,83nm,1.2s,baz=113,slow=9.7
KHC    Kasperske Hory    21.32 311  eP    P       11 12 13.0  -0.8
KHC                                 epP   sP      11 12 19.0  -0.1
KHC                                 eS    S       11 16 07.6  -2.7
KHC                                  AMS  AMS     11 23 30.0
       comp=Z,5μm,11.6s
KHC    Kasperske Hory    21.32 311  eP    P       11 12 13.0  -0.8
KHC                                 e             11 12 19.0
KHC                                 eS    S       11 16 07.6  -2.7
KHC                                  MLR  MLR
       comp=Z,5μm,11.6s
PVCC   Panska Ves        21.34 315  eP    P       11 12 14.7  +0.6
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PVCC				AMS	AMS	11 22 00.0	
	comp=Z,10µm,16.0s						
PVCC	**Panska Ves**	**21.34**	**315**	*e*P	**P**	**11 12 14.7**	**+0.6**
PVCC				MLR	MLR		
	comp=Z,10µm,16.0s						
HOQ	**Hoqain**	**21.39**	**126**	P	**P**	**11 12 14.1**	**-0.6**
	SNR=64						
GKP	**Gorka Klasztor**	**21.46**	**324**	*e*P	**P**	**11 12 14.9**	**-0.4**
GKP				*e*L	L	11 22 16.6	
	comp=Z,6µm,19.0s						
GKP	**Gorka Klasztor**	**21.46**	**324**	*e*P	**P**	**11 12 16.3**	**+1.0**
PBUR	**Paburge**	**21.50**	**334**	*e*P	**P**	**11 12 15.8**	**+0.2**
CTI	**Castel Tesino**	**21.58**	**301**	IAmb	IAmb	11 12 18.6	
	comp=Z,178nm,1.3s						
CASP	**Castiglione de**	**21.63**	**292**	P	**P**	**11 12 15.3**	**-1.9**
CASP				IAmb	IAmb	11 12 18.5	
	comp=Z,145nm,0.9s						
ZCCA	**Zocca**	**21.73**	**297**	IAmb	IAmb	11 12 38.8	
	comp=Z,192nm,1.1s						
BRG	**Berggiesshubel**	**21.86**	**315**	*i* P	**P**	**11 12 19.8**	**+0.2**
BRG				Amp		11 12 22.6	
	comp=Z,64nm,1.4s						
BRG	**Berggiesshubel**	**21.86**	**315**	S	**S**	**11 16 25.0**	**+4.2**
BRG				Amp		11 22 46.0	
	comp=E,4.1nm,11.5s						
BRG				Amp		11 22 50.0	
	comp=Z,9.4nm,13.2s						
BRG				Amp		11 23 02.0	
	comp=N,7.9nm,18.6s						
BRG	**Berggiesshubel**	**21.86**	**315**	*i* P	**P**	**11 12 19.7**	**+0.2**
BRG						11 12 48.8	
BRG				S	**S**	**11 16 25.0**	**+4.2**
BRG				pmax	pmax		
	comp=Z,64nm,1.4s						
BRG				pmax	pmax		
	comp=Z,72nm,1.4s						
BRG				smax	smax		
	comp=E,4µm,11.5s						
BRG				MLR	MLR		
	comp=Z,9µm,13.2s						
BRG				MLR	MLR		
	comp=N,8µm,18.6s						
BRG	**Berggiesshubel**	**21.86**	**315**	*e*P	**P**	**11 12 19.7**	**+0.2**
	comp=N,154nm,2.2s,baz=113,slow=9.7						
WTTA	**Wattenberg**	**21.91**	**305**	*i* P	**P**	**11 12 20.5**	**+0.1**
	comp=N,196nm,1.1s,SNR=49						
BSY	**Bisya**	**21.91**	**127**	P	**P**	**11 12 20.0**	**-0.5**
	SNR=89						
BSY				S	**S**	**11 16 22.7**	**+0.3**
BIDO	**Bidbid**	**21.96**	**124**	P	**P**	**11 12 22.2**	**+1.3**
	SNR=26						
BIDO				S	**S**	**11 16 23.4**	**+0.3**
WATA	**Walderalm**	**21.96**	**305**	*i* P	**P**	**11 12 20.9**	**0.0**
	comp=N,164nm,1.1s,SNR=29						
KIRV	**Kirov**	**22.17**	**15**	P	**P**	**11 12 21.0**	**-1.8**
	comp=N,86nm,0.8s,baz=212,slow=7.7,SNR=32						
KIRV				S	**S**	**11 16 19.4**	**-7.1**
	comp=N,9.2nm,0.4s,baz=83,slow=22,SNR=1.5						
KIRV				LR	LR	11 21 26.2	
	comp=N,3µm,20.8s,baz=208,slow=38						
	comp=N,86nm,0.8s						
KIRV	**Kirov**	**22.17**	**15**	*de*P	**P**	**11 12 20.8**	**-2.0**
SQTA	**Sankt Quirin**	**22.17**	**304**	*i* P	**P**	**11 12 22.8**	**-0.3**
	comp=N,100nm,1.0s,SNR=32						
KSLA	**Kassala**	**22.20**	**185**	*i* P	**P**	**11 12 22.8**	**-0.7**
VSU	**Vasula**	**22.21**	**344**	*i* P	**P**	**11 12 23.1**	**-0.1**
VSU				pmax	pmax		
	comp=Z,346nm,1.1s						
VSU	**Vasula**	**22.21**	**344**	*e*P	**P**	**11 12 23.9**	**+0.7**
SMDO	**Samad**	**22.23**	**125**	P	**P**	**11 12 23.0**	**-0.9**
	SNR=117						
SALO	**Salr**	**22.26**	**300**	IAmb	IAmb	11 12 27.3	
	comp=Z,93nm,1.0s						
MOTA	**Moosalm**	**22.27**	**305**	*i* P	**P**	**11 12 23.8**	**-0.5**
	comp=Z,182nm,0.9s,SNR=73						
ROTZ	**Rotzenmuhle**	**22.39**	**311**	*e*P	**P**	**11 12 25.1**	**-0.2**
	comp=Z,20nm,1.0s,baz=113,slow=9.7						
FUR	**Furstenfeldbru**	**22.40**	**307**	*e*P	**P**	**11 12 25.6**	**+0.1**
	comp=Z,123nm,1.2s,baz=113,slow=9.7						
NKC	**Novy Kostel**	**22.43**	**312**	*e*P	**P**	**11 12 25.7**	**-0.1**
NKC				*e*S	**S**	**11 16 31.3**	**-0.5**
NKC				AMS	AMS	11 23 10.0	
	comp=Z,8µm,13.9s						
NKC	**Novy Kostel**	**22.43**	**312**	*e*P	**P**	**11 12 25.7**	**-0.1**
NKC				*e*S	**S**	**11 16 31.3**	**-0.5**
NKC				MLR	MLR		
	comp=Z,8µm,13.9s						
FETA	**Feichten**	**22.44**	**304**	*i* P	**P**	**11 12 26.2**	**+0.2**
	comp=Z,72nm,1.1s,SNR=23						
WSAR	**Wadi Sarin**	**22.49**	**124**	P	**P**	**11 12 26.3**	**-0.2**
	comp=Z,61nm,0.8s,baz=301,slow=7.7,SNR=32						
WSAR				S	**S**	**11 16 27.4**	**-5.8**
	comp=Z,11nm,0.7s,baz=233,slow=17,SNR=1.3						
WSAR				LR	LR	11 22 30.6	
	comp=Z,6µm,20.1s,baz=318,slow=40						
	comp=Z,61nm,0.8s						
WSAR	**Wadi Sarin**	**22.49**	**124**	P	**P**	**11 12 25.8**	**-0.8**
	SNR=26						
WSAR				S	**S**	**11 16 35.3**	**+2.1**
WERN	**Wernitzgruen**	**22.50**	**313**	*e*P	**P**	**11 12 26.6**	**+0.1**
	comp=Z,99nm,1.1s,baz=113,slow=9.7						
TANN	**Tannenbergstha**	**22.50**	**313**	*e*P	**P**	**11 12 26.6**	**+0.1**
	comp=Z,46nm,1.5s,baz=113,slow=9.7						
MANZ	**Manzenberg**	**22.53**	**312**	*e*P	**P**	**11 12 26.6**	**-0.3**
	comp=Z,14nm,1.4s,baz=113,slow=9.7						
RETA	**Reutte**	**22.54**	**305**	*i* P	**P**	**11 12 26.4**	**-0.6**
	comp=Z,119nm,1.0s,SNR=29						
GUNZ	**Gunzen**	**22.55**	**313**	*e*P	**P**	**11 12 27.4**	**+0.3**
	comp=Z,56nm,1.0s,baz=113,slow=9.7						
CLL	**Collm**	**22.59**	**315**	IAMs_20	IAMs_20	11 22 38.4	
	comp=Z,8µm,18.0s						
CLL	**Collm**	**22.59**	**315**	⇑*i*P	**P**	**11 12 26.6**	**-0.7**
	comp=Z,32nm,1.2s						
CLL				*e*Pmax		11 12 30.0	
CLL				*i* sP	**sP**	**11 12 32.3**	**-0.3**
CLL				*e*PPP	PPP	11 12 56.0	
CLL				*e*x	x	11 13 11.0	
CLL				*e*S	**S**	**11 16 35.0**	**+0.5**
	comp=N,2µm,30.0s						
CLL				*e*S	**S**	**11 16 35.0**	**+0.5**
	comp=E,800nm,23.6s						
CLL				*e*SSSS		11 17 30.0	
CLL				AMS	AMS	11 23 00.0	
	comp=N,7µm,20.1s						
CLL				AMS	AMS	11 23 00.0	
	comp=E,8µm,18.0s						
CLL				AMS	AMS	11 23 00.0	
	comp=Z,9µm,18.1s						
CLL				AMS	AMS	11 23 00.0	
CLL	**Collm**	**22.59**	**315**	⇑*i*P	**P**	**11 12 26.6**	**-0.7**
CLL				*i*		11 12 32.3	
CLL				*e*S	**S**	**11 16 35.0**	**+0.5**
CLL				pmax	pmax		
	comp=Z,32nm,1.2s						
CLL				MLR	MLR		
	comp=Z,9µm,18.1s						
CLL	**Collm**	**22.59**	**315**	*e*P	**P**	**11 12 27.0**	**-0.3**
	comp=Z,32nm,1.2s,baz=113,slow=9.7						
CLL				*e*pP	**sP**	**11 12 32.5**	**-0.1**
WERD	**Werda**	**22.60**	**313**	*e*P	**P**	**11 12 27.5**	**-0.1**
	comp=Z,30nm,1.2s,baz=113,slow=9.7						
WERD				*e*pP	**sP**	**11 12 32.4**	**-0.4**
PLN	**Plauen**	**22.71**	**313**	*e*P	**P**	**11 12 28.4**	**-0.3**
	comp=Z,58nm,1.4s,baz=113,slow=9.7						
JMDO	**Jabal Madar**	**22.76**	**126**	P	**P**	**11 12 29.0**	**-0.5**
	SNR=73						
JMDO				S	**S**	**11 16 39.9**	**+1.8**
PUL	**Pulkovo**	**22.77**	**349**	*de*P	**P**	**11 12 30.2**	**+1.0**
PUL				pmax	pmax		
	comp=Z,240nm,0.9s						
NGCH	**Negor - Chabah**	**22.83**	**116**	P	**P**	**11 12 33.1**	**+2.9**
	SNR=22						
NGCH				S	**S**	**11 16 42.9**	**+3.7**
JAWL	**J.Aulia**	**22.91**	**195**	*i* P	**P**	**11 12 30.9**	**-0.1**
DAVOX	**Davos/Dischmat**	**22.94**	**303**	P	**P**	**11 12 31.0**	**-0.4**
	comp=Z,25nm,0.8s,baz=115,slow=7.0,SNR=20						
DAVOX				S	**S**	**11 16 37.7**	**-3.7**
	comp=Z,2.6nm,0.7s,baz=80,slow=10,SNR=1.4						
	comp=Z,25nm,0.8s						
DAVOX	**Davos/Dischmat**	**22.94**	**303**	P	**P**	**11 12 31.0**	**-0.4**
GRA1	**Grafenberg Arr**	**22.95**	**310**	IAmb	IAmb	11 12 36.1	
	comp=Z,119nm,1.2s						
GRF	**Grafenberg Arr**	**22.95**	**310**	*e*P	**P**	**11 12 31.8**	**+0.6**
	comp=Z,93nm,1.1s,baz=113,slow=9.7						
GRF				*e*L	L	11 26 26.6	
	comp=Z,3µm,18.1s						
GRFO	**Grafenberg**	**22.95**	**310**	P	**P**	**11 12 30.5**	**-0.8**
GRFO				IAmb	IAmb	11 12 36.1	
	comp=Z,104nm,1.2s						
GRFO	**Grafenberg**	**22.95**	**310**	P	**P**	**11 12 30.5**	**-0.8**
GRFO				pmax	pmax		
	comp=Z,104nm,1.2s						
GRFO				MLR	MLR		
	comp=Z,5µm,20.0s						
DAVA	**Damuels**	**23.06**	**304**	*i* P	**P**	**11 12 31.7**	**-0.9**
	comp=Z,171nm,0.9s,SNR=44						
MOX	**Moxa**	**23.09**	**313**	P	**P**	**11 12 32.3**	**-0.3**
MOX				pmax	pmax		
	comp=Z,31nm,2.6s						
MOX	**Moxa**	**23.09**	**313**	*e*P	**P**	**11 12 32.5**	**-0.2**
	comp=Z,62nm,1.6s,baz=113,slow=9.7						
MOX				*e*L	L	11 22 50.9	
	comp=Z,6µm,19.8s						
ARU	**Arti**	**23.13**	**29**	P	**P**	**11 12 32.5**	**-0.5**
	comp=Z,27nm,0.8s,baz=223,slow=8.0,SNR=21						
ARU				S	**S**	**11 16 42.1**	**-2.0**
	comp=Z,3.8nm,0.4s,baz=193,slow=22,SNR=1.1						
ARU				LR	LR	11 23 44.6	
	comp=Z,6µm,18.2s,baz=228,slow=42						
	comp=Z,27nm,0.8s						
ARU	**Arti**	**23.13**	**29**	P	**P**	**11 12 31.5**	**-1.5**
ARU				IAmb	IAmb	11 12 55.0	
	comp=Z,106nm,1.1s						
ARU	**Arti**	**23.13**	**29**	*d i*P	**P**	**11 12 31.8**	**-1.2**
ARU						11 13 01.4	
ARU				S	**S**	**11 16 45.1**	**+1.1**
ARU				SS	**SnSn**	**11 17 18.4**	**+1.4**
ARU				pmax	pmax		
	comp=Z,49nm,1.1s						
ARU				MLR	MLR		
	comp=Z,9µm,16.0s						
MTSE	**Matsula**	**23.15**	**340**	*e*P	**P**	**11 12 33.5**	**+0.4**
WBK	**Wadi Bani Khal**	**23.15**	**124**	P	**P**	**11 12 34.2**	**+0.7**
	SNR=50						
TUE	**Stuetta**	**23.23**	**302**	P	**P**	**11 12 32.1**	**-2.3**
TUE				IAMs_20	IAMs_20	11 23 09.2	
	comp=Z,6µm,18.0s						
KLMR	**Klimovskoe**	**23.27**	**1**	⇓*i*P	**P**	**11 12 34.9**	**+0.6**
KLMR				⇓*i*P	**P**	**11 12 34.9**	**+0.6**
KLMR				⇓*i*P	**P**	**11 12 34.9**	**+0.6**
KLMR				AMP		11 12 41.4	
	comp=Z,1µm,2.0s						
KLMR				AMP		11 12 41.8	
	comp=Z,474nm,1.8s						
KLMR				*e*PP	**PnPn**	**11 13 06.2**	**+6.2**
KLMR				S	**S**	**11 16 45.9**	**-0.2**
KLMR				S	**S**	**11 16 45.9**	**-0.2**
KLMR				LQ	LQ	11 20 30.5	
KLMR				LQ	LQ	11 20 30.5	
KLMR				LR	LR	11 20 53.4	
KLMR				AMP		11 23 03.0	
	comp=Z,5µm,11.3s						
KLMR	**Klimovskoe**	**23.27**	**1**	*d i*P	**P**	**11 12 34.9**	**+0.6**
KLMR				*e*		11 13 06.2	
KLMR				S	**S**	**11 16 45.9**	**-0.2**
KLMR				pmax	pmax		
	comp=Z,1µm,2.0s						
KLMR				pmax	pmax		
	comp=Z,474nm,1.8s						
KLMR				MLR	MLR		
	comp=Z,5µm,11.0s						
KEST	**Kesra**	**23.37**	**274**	P	**P**	**11 12 36.1**	**+0.4**
	comp=Z,88nm,0.9s,baz=22,slow=5.3,SNR=53						
KEST				S	**S**	**11 16 46.9**	**-1.6**
	comp=Z,2.0nm,0.5s,baz=355,slow=22,SNR=1.0						
KEST				LR	LR	11 23 12.6	
	comp=Z,3µm,19.3s,baz=30,slow=41						
	comp=Z,88nm,0.9s						
KEST	**Kesra**	**23.37**	**274**	P	**P**	**11 12 36.4**	**+0.8**
KEST	**Kesra**	**23.37**	**274**	P	**P**	**11 12 36.9**	**+1.2**
	SNR=46						
DOK	**Doka**	**23.39**	**140**	P	**P**	**11 12 34.6**	**-1.3**
	SNR=20						
DOK				S	**S**	**11 16 49.2**	**+0.4**
BSD	**Bornholm Skovb**	**23.68**	**325**	*e*P	**P**	**11 12 37.6**	**-0.9**
BSD	**Bornholm Skovb**	**23.68**	**325**	*e*P	**P**	**11 12 36.7**	**-1.7**
BSD				IAmb	IAmb	11 12 47.0	
	comp=Z,236nm,1.5s						
MHTO	**MHTO**	**23.69**	**129**	P	**P**	**11 12 40.0**	**+1.1**
	SNR=31						
JLN	**Jalan Bani Buh**	**23.76**	**125**	P	**P**	**11 12 39.7**	**+0.2**
	SNR=32						
WHFO	**Wadi Hawf**	**23.80**	**141**	P	**P**	**11 12 38.7**	**-1.2**
	SNR=19						
STU	**Stuttgart**	**23.91**	**307**	*e*P	**P**	**11 12 39.8**	**-0.9**
	comp=Z,299nm,1.5s,baz=113,slow=9.7						
FLTG	**Flechtingen**	**24.03**	**316**	*e*P	**P**	**11 12 40.8**	**-1.0**
	comp=Z,54nm,1.5s,baz=113,slow=9.7						
TAS	**Tashkent**	**24.05**	**71**	P	**P**	**11 12 41.8**	**-0.3**
TAS	**Tashkent**	**24.05**	**71**	P	**P**	**11 12 41.8**	**-0.3**
TAS				pmax	pmax		
	comp=Z,148nm,0.9s						
BLEU	**Blekinge**	**24.05**	**328**	*e*P	**P**	**11 12 42.0**	**+0.1**
ABTO	**Aybut**	**24.05**	**143**	P	**P**	**11 12 43.1**	**+0.7**
	SNR=18						
UBBA	**Unterbreizbach**	**24.10**	**312**	*e*P	**P**	**11 12 41.6**	**-0.8**
	comp=Z,308nm,2.5s,baz=113,slow=9.7						
SVE	**Sverdlovsk**	**24.23**	**30**	*ce*P	**P**	**11 12 43.0**	**-0.7**
SVE				*e*S	**S**	**11 17 04.3**	**+2.6**
SVE				pmax	pmax		
	comp=Z,178nm,1.1s						
SVE				MLR	MLR		
	comp=Z,7µm,15.0s						
DQM	**DQM**	**24.23**	**131**	P	**P**	**11 12 45.0**	**+1.0**
	SNR=16						
CHM	**Chimkent**	**24.27**	**69**	*e*P	**P**	**11 12 44.1**	**-0.2**
	comp=Z,30nm,0.8s,baz=69						
CHM	**Chimkent**	**24.27**	**69**	*e*P	**P**	**11 12 44.0**	**-0.2**
CHM				pmax	pmax		
	comp=Z,30nm,0.8s						
CLZ	**Clausthal**	**24.29**	**315**	*e*P	**P**	**11 12 44.2**	**-0.2**
	comp=Z,71nm,1.0s,baz=113,slow=9.7						
MEF	**Metsahovi**	**24.32**	**343**	*e*P	**P**	**11 12 43.3**	**-1.1**
BFO	**Black Forest**	**24.34**	**306**	P	**P**	**11 12 44.0**	**-0.8**
BFO				IAmb	IAmb	11 12 49.2	
	comp=Z,111nm,1.4s						
BFO	**Black Forest**	**24.34**	**306**	P	**P**	**11 12 44.0**	**-0.8**
BFO				pmax	pmax		
	comp=Z,111nm,1.4s						
BFO				MLR	MLR		
	comp=Z,3µm,21.0s						
RBK	**Rabkut**	**24.37**	**141**	P	**P**	**11 12 45.4**	**+0.2**
	SNR=32						
GTTG	**Gottingen**	**24.40**	**314**	*e*P	**P**	**11 12 45.4**	**+0.1**
	comp=Z,59nm,1.1s,baz=113,slow=9.7						
DMTO	**DMTO**	**24.57**	**139**	P	**P**	**11 12 46.3**	**-0.8**
	SNR=12						
IUG	**Iuzhnay**	**24.59**	**69**	*e*P	**P**	**11 12 46.2**	**-1.1**
	baz=70						
IUG	**Iuzhnay**	**24.59**	**69**	*e*P	**P**	**11 12 46.1**	**-1.1**
LUNU	**Lund**	**24.66**	**325**	*e*P	**P**	**11 12 47.3**	**-0.2**
NRDL	**Niedersach Rie**	**24.72**	**316**	*e*P	**P**	**11 12 48.5**	**+0.4**
	comp=Z,16nm,0.9s,baz=113,slow=9.7						
TNS	**Taunus Mts**	**24.82**	**310**	*e*P	**P**	**11 12 48.8**	**-0.3**
	comp=Z,126nm,1.3s,baz=113,slow=9.7						
BNI	**Bardonecchia**	**24.86**	**297**	P	**P**	**11 12 49.6**	**-0.1**
BNI	**Bardonecchia**	**24.86**	**297**	P	**P**	**11 12 49.6**	**-0.1**
BNI				pmax	pmax		
	comp=Z,185nm,1.1s						
BNI				MLR	MLR		
	comp=Z,4µm,21.0s						
LPL	**La Plagne**	**24.87**	**299**	*e*P	**P**	**11 12 48.2**	**-1.7**
LPL				pmax	pmax		
	comp=Z,32nm,0.8s						
KBL	**Kabul**	**24.88**	**88**	P	**P**	**11 12 50.3**	**+0.3**
KBL				IAmb	IAmb	11 12 55.6	
	comp=Z,100nm,1.1s						
KBL	**Kabul**	**24.88**	**88**	P	**P**	**11 12 50.3**	**+0.3**
KBL				pmax	pmax		
	comp=Z,100nm,1.1s						
KBL	**Kabul**	**24.88**	**88**	P	**P**	**11 12 52.3**	**+2.3**
	SNR=49						
KK31	**Karatay Array**	**24.96**	**67**	P	**P**	**11 12 50.2**	**-0.2**
KK31	**Karatay Array**	**24.96**	**67**	P	**P**	**11 12 50.2**	**-0.2**
KK31				pmax	pmax		
	comp=Z,303nm,1.3s						
KKAR	**Karatay Array**	**24.96**	**67**	P	**P**	**11 12 50.5**	**+0.1**
KKAR	**Karatay Array**	**24.96**	**67**	P	**P**	**11 12 50.5**	**+0.1**
DEL	**Delary**	**24.98**	**327**	*e*P	**P**	**11 12 50.7**	**+0.2**
DEL	**Delary**	**24.98**	**327**	*e*P	**P**	**11 12 50.1**	**-0.4**
LLD	**Lille Linde**	**25.06**	**323**	*e*P	**P**	**11 12 53.3**	**+2.2**
LLD				IAmb	IAmb	11 12 59.3	
	comp=Z,138nm,1.0s						
ECH	**Echery**	**25.07**	**305**	P	**P**	**11 12 50.7**	**-0.7**
ECH				IAmb	IAmb	11 12 56.8	
	comp=Z,73nm,1.2s						
ECH	**Echery**	**25.07**	**305**	P	**P**	**11 12 50.7**	**-0.7**
ECH				pmax	pmax		
	comp=Z,73nm,1.2s						
ECH				MLR	MLR		
	comp=Z,4µm,19.0s						
FIA1	**FINESS Array S**	**25.07**	**346**	IAmb	IAmb	11 13 14.4	
	comp=Z,94nm,1.2s						
FINES	**FINESS Array B**	**25.07**	**346**	P	**P**	**11 12 51.1**	**-0.1**
	comp=Z,12nm,0.6s,baz=142,slow=9.6,SNR=23						
FINES				S	**S**	**11 17 15.7**	**+0.5**
	comp=Z,3.4nm,0.8s,baz=155,slow=11,SNR=1.6						
FINES				LR	LR	11 24 04.4	
	comp=Z,2µm,18.2s,baz=160,slow=40						
	comp=Z,12nm,0.6s						
FINES	**FINESS Array B**	**25.07**	**346**	P	**P**	**11 12 50.9**	**-0.3**
BJUU	**Bjuv**	**25.11**	**325**	*e*P	**P**	**11 12 51.9**	**+0.3**
KASTN	**Kahler Asten**	**25.17**	**312**	*e*P	**P**	**11 12 52.6**	**+0.3**
	comp=Z,109nm,1.1s,baz=113,slow=9.7						
VIKU	**Vikbolandet**	**25.23**	**333**	*e*P	**P**	**11 12 52.7**	**0.0**
RETH	**Rethem/Aller,**	**25.24**	**316**	*e*P	**P**	**11 12 53.4**	**+0.6**
	comp=Z,57nm,1.2s,baz=113,slow=9.7						
AAL	**Aland**	**25.45**	**338**	*e*P	**P**	**11 12 54.3**	**-0.3**
DZA	**Taraz**	**25.55**	**68**	*e*P	**P**	**11 12 56.0**	**+0.2**
	baz=68						
DZA	**Taraz**	**25.55**	**68**	*e*P	**P**	**11 12 56.0**	**+0.2**
RAF	**Rauma**	**25.67**	**341**	*e*P	**P**	**11 12 56.3**	**-0.3**
AHRW	**Bad Neuenahr-A**	**25.75**	**310**	*e*P	**P**	**11 12 57.5**	**0.0**
	comp=Z,21nm,1.0s,baz=113,slow=9.7						
FABU	**Falkenberg**	**25.81**	**327**	*e*P	**P**	**11 12 57.9**	**-0.1**
UPP	**Uppsala**	**25.93**	**336**	*e*P	**P**	**11 12 58.5**	**-0.5**
BUG	**Bochum--Univer**	**25.93**	**312**	*e*P	**P**	**11 12 59.3**	**+0.2**
	comp=Z,42nm,1.2s,baz=113,slow=9.7						
WLF	**Walferdange**	**26.07**	**308**	*d*P	**P**	**11 12 59.4**	**-1.0**
WLF	**Walferdange**	**26.07**	**308**	*e*P	**P**	**11 12 59.6**	**-0.8**
	comp=Z,30nm,0.9s,baz=113,slow=9.7						
BORU	**Boraas**	**26.18**	**328**	*e*P	**P**	**11 13 01.3**	**0.0**
ATD	**Arta Tunnel**	**26.28**	**170**	P	**P**	**11 13 01.9**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=282,slow=21,SNR=1.3						
ATD				S	**S**	**11 17 39.5**	**+4.4**
	comp=Z,0.1nm,0.3s,baz=270,slow=23,SNR=1.1						
ATD				Lg	Lg	11 21 15.4	
	baz=81,slow=23,SNR=0.9						
ATD				LR	LR	11 23 21.2	
	comp=Z,343nm,18.6s,baz=350,slow=36						
ATD	**Arta Tunnel**	**26.28**	**170**	IAMs_20	IAMs_20	11 22 37.8	
	comp=Z,6µm,20.0s						
ATD	**Arta Tunnel**	**26.28**	**170**	*e*P	**P**	**11 13 03.6**	**+1.0**
ADZR	**Andozero**	**26.34**	**360**	*e*P	**P**	**11 13 00.0**	**-2.7**
ADZR				pmax	pmax		
	comp=Z,42nm,0.8s						
BHOU	**Houvegnez**	**26.35**	**309**	*d*P	**P**	**11 13 02.9**	**-0.1**
SSB	**Saint Sauveur**	**26.38**	**298**	P	**P**	**11 13 01.3**	**-2.1**
SSB	**Saint Sauveur**	**26.38**	**298**	P	**P**	**11 13 01.3**	**-2.1**
SSB				pmax	pmax		
	comp=Z,43nm,0.9s						
ONAU	**Onsala**	**26.40**	**327**	*e*P	**P**	**11 13 03.9**	**+0.6**
DESE	**Dese**	**26.41**	**177**	*e*P	P	11 12 54.4	-10
MEM	**Membach**	**26.42**	**310**	*d*P	**P**	**11 13 03.8**	**+0.2**
MEM				*d*x	x	11 13 25.4	
MAHO	**Mahon**	**26.65**	**286**	P	**P**	**11 13 03.0**	**-2.7**
RCHB	**Rochefort**	**26.78**	**309**	*d*P	**P**	**11 13 06.1**	**-0.6**
BCLA	**Clavier**	**26.80**	**309**	*d*P	**P**	**11 13 07.3**	**+0.3**
BCLA				*d*x	x	11 13 27.5	
BCLA				*d*x	x	11 13 59.0	
BRVK	**Borovoye**	**26.91**	**45**	P	**P**	**11 13 07.7**	**-0.2**
BRVK	**Borovoye**	**26.91**	**45**	IAMs_20	IAMs_20	11 25 14.2	
	comp=Z,9µm,18.0s						
BRVK	**Borovoye**	**26.91**	**45**	P	**P**	**11 13 07.7**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,34nm,1.0s						
BRVK				MLR	MLR		
	comp=Z,9µm,18.0s						
TJOU	**Tjoern**	**26.91**	**328**	*e*P	**P**	**11 13 07.3**	**-0.6**
BGES	**Gesves**	**26.92**	**309**	*d*P	**P**	**11 13 08.8**	**+0.7**
BGES				*d*x	x	11 13 32.5	
BGES				*d*PP	**PnPn**	**11 13 48.8**	**-1.3**
BVAR	**Borovoye Array**	**26.95**	**45**	P	**P**	**11 13 08.1**	**-0.2**
	comp=Z,19nm,0.9s,baz=227,slow=5.7,SNR=27						
BVAR				LR	LR	11 25 28.4	
	comp=Z,9µm,18.2s,baz=251,slow=40						
	comp=Z,19nm,0.9s						
BMRD	**Maredsous**	**27.10**	**309**	*d*P	**P**	**11 13 09.4**	**-0.3**
BMRD				*d*x	x	11 13 29.0	
MUD	**Monsted U'grnd**	**27.11**	**323**	*i* P	**P**	**11 13 11.0**	**+1.3**
MUD				IAmb	IAmb	11 13 11.3	
	comp=Z,71nm,1.0s						
DOU	**Dourbes**	**27.16**	**308**	*d*P	**P**	**11 13 08.7**	**-1.5**
BRZS	**Berezniki**	**27.38**	**52**	*e*P	**P**	**11 13 12.0**	**-0.3**
	baz=52						
BRZS				*e*S	**S**	**11 17 52.4**	**+0.4**
	baz=52						
BRZS	**Berezniki**	**27.38**	**52**	*e*P	**P**	**11 13 12.0**	**-0.3**
BRZS				*e*S	**S**	**11 17 52.4**	**+0.4**
HFS	**Hagfors**	**27.48**	**333**	P	**P**	**11 13 12.7**	**-0.3**
	comp=Z,10nm,0.7s,baz=134,slow=11,SNR=17						
HFS				LR	LR	11 26 08.1	
	comp=Z,5µm,18.3s,baz=139,slow=41						
	comp=Z,10nm,0.7s						
BTLS	**Baital**	**27.58**	**63**	*e*P	**P**	**11 13 14.2**	**+0.1**
	comp=Z,27nm,0.9s,baz=63						
BTLS	**Baital**	**27.58**	**63**	*e*P	**P**	**11 13 14.2**	**+0.1**
BTLS				pmax	pmax		
	comp=Z,27nm,0.9s						
STRU	**Stroemstad**	**27.71**	**329**	*e*P	**P**	**11 13 14.2**	**-0.9**
ETOS	**Mallorca**	**27.77**	**286**	P	**P**	**11 13 14.5**	**-1.4**
ETOS				S	**S**	**11 17 58.7**	**+0.4**
AAK	**Ala-Archa**	**27.88**	**68**	LR	LR	11 26 32.2	
	comp=Z,6µm,19.2s,baz=278,slow=41						
AAK	**Ala-Archa**	**27.88**	**68**	IAMs_20	IAMs_20	11 26 10.8	
	comp=Z,6µm,19.0s						
AAK	**Ala-Archa**	**27.88**	**68**	*i* P	**P**	**11 13 16.7**	**-0.3**
AAK				pmax	pmax		
	comp=Z,20nm,0.8s						
ANKE	**Ethiopia-Afar**	**27.93**	**177**	*e*P	**P**	**11 13 13.0**	**-4.8**
AAE	**Adis Abeba**	**28.46**	**179**	*e*P	P	11 13 16.8	-5.7
FURI	**Furi**	**28.60**	**179**	*e*P	**P**	**11 13 20.0**	**-3.7**
KONO	**Kongsberg**	**28.73**	**329**	*i* P	**P**	**11 13 23.8**	**-0.4**
KONO				pmax	pmax		
	comp=Z,12nm,0.9s						
NC405	**NORSAR Array S**	**28.86**	**333**	P	**P**	**11 13 23.8**	**-1.6**
NB2	**NORSAR Subarra**	**29.00**	**333**	P	**P**	**11 13 25.4**	**-1.1**
	comp=Z,178nm,2.5s,baz=130,slow=9.3						
NB2	**NORSAR Subarra**	**29.00**	**333**	P	**P**	**11 13 25.4**	**-1.1**
	baz=130,slow=9.3						
NOA	**NORSAR Array B**	**29.00**	**333**	P	**P**	**11 13 25.5**	**-1.1**
	comp=Z,6.1nm,0.9s,baz=129,slow=9.1,SNR=7.7						
NOA				LR	LR	11 26 55.3	
	comp=Z,3µm,19.5s,baz=140,slow=40						
	comp=Z,6.1nm,0.9s						
EIBI	**Ibiza**	**29.00**	**284**	P	**P**	**11 13 23.4**	**-3.4**
EIBI				S	**S**	**11 18 17.7**	**0.0**
LFF	**La Frestale**	**29.05**	**297**	*e*P	**P**	**11 13 26.4**	**-0.8**
LFF				pmax	pmax		
	comp=Z,40nm,1.2s						
NBO00	**NORSAR Array S**	**29.15**	**332**	IAmb	IAmb	11 14 24.1	
	comp=Z,68nm,1.3s						
KUU	**Kurty**	**29.20**	**66**	*e*P	**P**	**11 13 28.6**	**-0.1**
	baz=66						
KUU	**Kurty**	**29.20**	**66**	*e*P	**P**	**11 13 28.5**	**-0.1**
KSH	**Kashi**	**29.28**	**75**	P	**P**	**11 13 30.4**	**+1.0**
KSH				pP	pP	11 13 33.0	-0.3
KSH				sP	sP	11 13 38.4	+3.5
KSH				PP	**PnPn**	**11 14 19.9**	**-2.5**
KSH				PcP	**PcP**	**11 16 40.2**	**+4.2**
KSH				S	**S**	**11 18 23.5**	**+1.3**
KSH				PcS	**PcS**	**11 20 20.4**	**+1.4**
KSH				pmax	pmax		
	comp=Z,50nm,0.9s						
KSH				LR	LR		
	comp=Z,4µm,18.3s						
KSH				LR	LR		
	comp=Z,4µm,15.1s						
KSH				LR	LR		
	comp=Z,3µm,12.5s						
AAA	**Alma-Ata**	**29.64**	**67**	*e*P	**P**	**11 13 32.2**	**-0.3**
	baz=67						
AAA	**Alma-Ata**	**29.64**	**67**	*e*P	**P**	**11 13 32.2**	**-0.3**
CHKK	**Chushkaly**	**29.67**	**66**	*e*P	**P**	**11 13 33.2**	**+0.4**
	baz=66						
CHKK	**Chushkaly**	**29.67**	**66**	*e*P	**P**	**11 13 33.1**	**+0.4**
MDOK	**Medeo**	**29.74**	**67**	*e*P	**P**	**11 13 33.3**	**-0.3**

	baz=67						
MDOK				*e*S	**S**	**11 18 31.0**	**+1.5**
	baz=67						
MDOK	**Medeo**	**29.74**	**67**	*e*P	**P**	**11 13 33.2**	**-0.3**
MDOK				*e*S	**S**	**11 18 31.0**	**+1.5**
APA	**Apatity**	**30.13**	**356**	⇓*i*P	**P**	**11 13 35.5**	**-1.0**
APA				*i*		11 14 39.5	
APA				*i*		11 16 34.2	
APA				*i* S	**S**	**11 18 32.0**	**-2.8**
APA				pmax	pmax		
	comp=Z,12nm,0.9s						
APA				MLR	MLR		
	comp=Z,5µm,13.0s						
LVZ	**Lovozero**	**30.41**	**357**	IAMs_20	IAMs_20	11 27 28.9	
	comp=Z,4µm,19.0s						
LVZ	**Lovozero**	**30.41**	**357**	*i* P	**P**	**11 13 37.9**	**-1.1**
LVZ				pmax	pmax		
	comp=Z,15nm,1.2s						
ECHE	**Chera**	**30.69**	**286**	P	**P**	**11 13 41.0**	**-0.8**
SATY	**Saty**	**30.74**	**67**	*e*P	**P**	**11 13 42.7**	**+0.4**
	baz=67						
SATY	**Saty**	**30.74**	**67**	*e*P	**P**	**11 13 42.7**	**+0.4**
ZHN	**Zhinishke**	**30.75**	**67**	*e*P	**P**	**11 13 42.6**	**+0.2**
	comp=Z,29nm,1.0s,baz=67						
ZHN	**Zhinishke**	**30.75**	**67**	*e*P	**P**	**11 13 42.6**	**+0.2**
ZHN				pmax	pmax		
	comp=Z,29nm,1.0s						
KPKS	**Kokpek**	**30.92**	**66**	*e*P	**P**	**11 13 43.6**	**-0.3**
	comp=Z,17nm,0.8s,baz=66						
KPKS	**Kokpek**	**30.92**	**66**	*e*P	**P**	**11 13 43.5**	**-0.3**
KPKS				pmax	pmax		
	comp=Z,17nm,0.8s						
DILA	**Dilla**	**31.04**	**180**	*e*P	**P**	**11 13 43.2**	**-2.0**
UZB	**Uzynbulak**	**31.18**	**67**	*e*P	**P**	**11 13 46.6**	**+0.3**
	comp=Z,19nm,0.9s,baz=67						
UZB	**Uzynbulak**	**31.18**	**67**	*e*P	**P**	**11 13 46.5**	**+0.3**
UZB				pmax	pmax		
	comp=Z,19nm,0.9s						
KURBB	**Kurchatov Arra**	**31.19**	**52**	P	**P**	**11 13 46.9**	**+0.9**
	comp=Z,34nm,0.9s,baz=267,slow=9.2,SNR=41						
KURBB				PcP	**PcP**	**11 16 40.3**	**-0.3**
	comp=Z,4.1nm,0.7s,baz=272,slow=3.1,SNR=5.6						
KURBB				LR	LR	11 28 45.9	
	comp=Z,10µm,18.1s,baz=259,slow=41						
	comp=Z,34nm,0.9s						
EMUR	**La Murta**	**31.22**	**283**	P	**P**	**11 13 44.4**	**-2.1**
KURK	**Kurchatov**	**31.26**	**52**	P	**P**	**11 13 47.2**	**+0.7**
KURK				IAmb	IAmb	11 13 52.3	
	comp=Z,60nm,0.9s						
KURK	**Kurchatov**	**31.26**	**52**	P	**P**	**11 13 47.3**	**+0.7**
KURK				pmax	pmax		
	comp=Z,60nm,1.0s						
KURK				MLR	MLR		
	comp=Z,12µm,18.0s						
KURK	**Kurchatov**	**31.26**	**52**	P	**P**	**11 13 49.8**	**+3.2**
ETOB	**Tobarra**	**31.30**	**284**	P	**P**	**11 13 46.6**	**-0.6**
SHLS	**Shalkode**	**31.50**	**67**	*e*P	**P**	**11 13 51.8**	**+2.7**
	comp=Z,33nm,0.7s,baz=67						
SHLS	**Shalkode**	**31.50**	**67**	*e*P	**P**	**11 13 51.7**	**+2.7**
SHLS				pmax	pmax		
	comp=Z,33nm,0.7s						
TAM	**Tamanrasset**	**31.86**	**252**	P	**P**	**11 13 52.5**	**+0.1**
TAM				IAmb	IAmb	11 13 55.0	
	comp=Z,76nm,1.2s						
TAM	**Tamanrasset**	**31.86**	**252**	P	**P**	**11 13 52.5**	**+0.1**
TAM				pmax	pmax		
	comp=Z,76nm,1.2s						
TAM				MLR	MLR		
	comp=Z,800nm,20.0s						
ENIJ	**Nijar**	**32.16**	**282**	P	**P**	**11 13 53.6**	**-1.2**
UCM	**Universidad Co**	**32.30**	**288**	P	**P**	**11 13 54.7**	**-1.3**
UCM				S	**S**	**11 19 08.6**	**-0.8**
ARCES	**ARCESS Array B**	**32.73**	**352**	P	**P**	**11 13 58.8**	**-0.6**
	comp=Z,16nm,0.9s,baz=163,slow=8.9,SNR=20						
ARCES				LR	LR	11 29 32.3	
	comp=Z,4µm,18.4s,baz=158,slow=41						
	comp=Z,16nm,0.9s						
ARCES	**ARCESS Array B**	**32.73**	**352**	P	**P**	**11 13 59.6**	**+0.2**
ARCES	**ARCESS Array B**	**32.73**	**352**	P	**P**	**11 13 59.6**	**+0.2**
ARCES				pmax	pmax		
	comp=Z,31nm,1.2s						
KEV	**Kevo**	**32.78**	**353**	P	**P**	**11 13 59.3**	**-0.4**
KEV				IAmb	IAmb	11 14 47.4	
	comp=Z,78nm,1.6s						
KEV				IAMs_20	IAMs_20	11 28 59.9	
	comp=Z,4µm,18.0s						
KEV	**Kevo**	**32.78**	**353**	P	**P**	**11 13 59.3**	**-0.4**
KEV				pmax	pmax		
	comp=Z,78nm,1.6s						
KEV				MLR	MLR		
	comp=Z,4µm,18.0s						
TAF	**Taforalt**	**32.89**	**278**	P	**P**	**11 14 03.0**	**+1.7**
ESDC	**Sonseca Array**	**32.95**	**287**	P	**P**	**11 14 00.9**	**-0.8**
	comp=Z,14nm,0.8s,baz=65,slow=8.8,SNR=92						
ESDC				LR	LR	11 28 12.7	
	comp=Z,2µm,19.9s,baz=74,slow=38						
	comp=Z,14nm,0.8s						
EKA	**Eskdalemuir Ar**	**33.05**	**316**	P	**P**	**11 14 00.5**	**-1.8**
	comp=Z,8.0nm,0.8s,baz=107,slow=9.5,SNR=12						
EKA				PcP	**PcP**	**11 16 44.5**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=75,slow=3.0,SNR=5.1						
EKA				LR	LR	11 30 47.5	
	comp=Z,5µm,18.9s,baz=112,slow=42						
	comp=Z,8.0nm,0.8s						
JBK	**JBK**	**33.16**	**277**	P	**P**	**11 14 06.0**	**+2.3**
MAKZ	**Makanchi**	**33.16**	**60**	P	**P**	**11 14 04.0**	**+0.5**
MAKZ	**Makanchi**	**33.16**	**60**	P	**P**	**11 14 04.0**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,24nm,0.9s						
PAB	**San Pablo**	**33.27**	**287**	P	**P**	**11 14 03.7**	**-0.8**
PAB	**San Pablo**	**33.27**	**287**	P	**P**	**11 14 03.8**	**-0.8**
PAB	**San Pablo**	**33.27**	**287**	P	**P**	**11 14 03.7**	**-0.8**
PAB				pmax	pmax		
	comp=Z,158nm,2.0s						
PAB				MLR	MLR		
	comp=Z,3µm,20.0s						
MK31	**Makanchi Array**	**33.38**	**60**	P	**P**	**11 14 05.6**	**+0.3**
MK31	**Makanchi Array**	**33.38**	**60**	P	**P**	**11 14 05.6**	**+0.3**
MK31				pmax	pmax		
	comp=Z,20nm,0.8s						
MKAR	**Makanchi Array**	**33.38**	**60**	P	**P**	**11 14 06.0**	**+0.6**
	comp=Z,19nm,0.7s,baz=269,slow=6.1,SNR=48						
MKAR				LR	LR	11 29 43.4	
	comp=Z,7µm,18.2s,baz=285,slow=40						
	comp=Z,19nm,0.7s						
MKAR	**Makanchi Array**	**33.38**	**60**	P	**P**	**11 14 06.5**	**+1.1**
MKAR	**Makanchi Array**	**33.38**	**60**	P	**P**	**11 14 06.5**	**+1.1**
EMAL	**Malaga-Limoner**	**33.94**	**282**	P	**P**	**11 14 09.0**	**-1.3**
AKLM	**AKL**	**34.12**	**278**	P	**P**	**11 14 13.0**	**+1.0**
LODK	**Lodwar**	**34.15**	**185**	P	**P**	**11 14 12.0**	**-0.3**
LODK				IAmb	IAmb	11 14 16.0	
	comp=Z,70nm,1.8s						
LODK				IAMs_20	IAMs_20	11 28 17.6	
	comp=Z,5µm,19.0s						
LODK	**Lodwar**	**34.15**	**185**	*e*P	P	11 14 06.9	-5.4
MVO	**Moncorvo**	**35.01**	**290**	*e*P	**P**	**11 14 18.5**	**-1.1**
MVO				A	A	11 14 23.9	
	comp=Z,48nm,2.2s						
MVO				*e*S	**S**	**11 19 57.9**	**+6.5**
MVO				*e*LR	LR	11 28 00.0	
MVO				A	A	11 29 18.6	
	comp=Z,1µm,20.0s						
MDT	**Midelt**	**35.26**	**275**	P	**P**	**11 14 21.6**	**-0.2**
	comp=Z,6.4nm,1.0s,baz=93,slow=12,SNR=6.8						
MDT				LR	LR	11 31 21.9	
	comp=Z,1µm,18.0s,baz=77,slow=41						
	comp=Z,6.4nm,1.0s						
MDT	**Midelt**	**35.26**	**275**	P	**P**	**11 14 23.7**	**+1.9**
SFS	**San Fernando**	**35.40**	**282**	IAMs_20	IAMs_20	11 29 19.4	
	comp=Z,3µm,19.0s						
ARF	**Arif**	**35.45**	**273**	P	**P**	**11 14 25.0**	**+1.5**
PVRL	**Vila Real**	**35.50**	**291**	*e*P	**P**	**11 14 23.2**	**-0.6**
ZAA0	**Zalesovo Array**	**35.51**	**47**	P	**P**	**11 14 23.6**	**+0.1**
ZALV	**Zalesovo Beam**	**35.51**	**47**	P	**P**	**11 14 23.4**	**-0.2**
	comp=Z,12nm,0.6s,baz=263,slow=7.8,SNR=36						
ZALV				LR	LR	11 29 57.3	
	comp=Z,3µm,19.1s,baz=260,slow=38						
	comp=Z,12nm,0.6s						
ZALV	**Zalesovo Beam**	**35.51**	**47**	P	**P**	**11 14 23.2**	**-0.4**
ZALV	**Zalesovo Beam**	**35.51**	**47**	*i* P	**P**	**11 14 23.8**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,12nm,0.6s						
MTE	**Manteigas**	**35.53**	**289**	IAmb	IAmb	11 14 23.8	
	comp=Z,43nm,1.1s						
MTE	**Manteigas**	**35.53**	**289**	*e*P	**P**	**11 14 23.6**	**-0.4**
MTE				A	A	11 14 25.6	
	comp=Z,85nm,1.7s						
MTE				*e*S	**S**	**11 20 07.7**	**+8.3**
MTE				*e*LR	LR	11 29 44.0	
MTE				A	A	11 32 14.5	
	comp=Z,1µm,16.0s						
PCBR	**Castelo Branco**	**35.58**	**288**	*e*P	**P**	**11 14 23.4**	**-1.0**
PCBR				A	A	11 14 29.1	
	comp=Z,80nm,2.1s						
PMRV	**Marv??o**	**35.60**	**287**	*e*P	**P**	**11 14 23.9**	**-0.7**
PMRV				A	A	11 14 24.9	
	comp=Z,55nm,2.1s						
PMRV				*e*S	**S**	**11 20 06.5**	**+6.1**
PMRV				*e*LR	LR	11 28 02.6	
PMRV				A	A	11 30 17.1	
	comp=Z,2µm,20.0s						
PBAR	**Barrancos**	**35.61**	**285**	*e*P	**P**	**11 14 23.4**	**-1.3**
PBAR				A	A	11 14 29.2	
	comp=Z,68nm,2.1s						
PCAB	**Cabril**	**35.66**	**291**	*e*P	**P**	**11 14 24.8**	**-0.3**
PCAB				A	A	11 14 55.4	
	comp=Z,77nm,1.9s						
PVIS	**Viseu**	**35.73**	**290**	*e*P	**P**	**11 14 25.0**	**-0.8**
PVIS				A	A	11 14 31.5	
	comp=Z,78nm,1.9s						
PGAV	**Gavieira, Arco**	**35.80**	**292**	*e*P	**P**	**11 14 25.8**	**-0.6**
PGAV				*e*S	S	11 20 17.9	+14
PGAV				*e*LR	LR	11 28 19.1	
PGAV				A	A	11 32 54.3	
	comp=Z,3µm,18.0s						
PESTR	**Estremoz**	**35.87**	**287**	P	**P**	**11 14 25.7**	**-1.3**
PESTR	**Estremoz**	**35.87**	**287**	P	**P**	**11 14 26.0**	**-0.9**
PESTR	**Estremoz**	**35.87**	**287**	*e*P	**P**	**11 14 25.9**	**-1.1**
PESTR				A	A	11 14 26.6	
	comp=Z,55nm,0.9s						
GOLM	**Goulmima**	**35.93**	**274**	P	**P**	**11 14 29.0**	**+1.3**
PBEJ	**Beja**	**36.28**	**285**	*e*P	**P**	**11 14 29.4**	**-1.0**
PBEJ				A	A	11 14 35.2	
	comp=Z,69nm,2.0s						
PCAS	**Casmilo, Conde**	**36.31**	**289**	*e*P	**P**	**11 14 31.0**	**+0.3**
PCAS				A	A	11 14 36.0	
	comp=Z,65nm,1.7s						
PMTG	**Montargil**	**36.31**	**287**	*e*P	**P**	**11 14 29.3**	**-1.4**
PMTG				A	A	11 14 36.0	
	comp=Z,44nm,1.6s						
PVAQ	**Vaqueiros**	**36.32**	**284**	P	**P**	**11 14 29.9**	**-0.9**
PVAQ	**Vaqueiros**	**36.32**	**284**	*e*P	**P**	**11 14 29.6**	**-1.2**
PVAQ				A	A	11 14 33.0	
	comp=Z,56nm,2.0s						
PVAQ				*e*S	**S**	**11 20 17.1**	**+5.7**
PVAQ	**Vaqueiros**	**36.32**	**284**	*e*LR	LR	11 30 55.6	
PVAQ				A	A	11 37 52.9	
	comp=Z,830nm,16.0s						
PCVE	**Castro Verde**	**36.51**	**285**	*e*P	**P**	**11 14 31.2**	**-1.2**
PCVE				A	A	11 14 43.3	
	comp=Z,53nm,1.4s						
PBDV	**Barranco-do-Ve**	**36.53**	**284**	*e*P	**P**	**11 14 30.7**	**-1.9**
PBDV				A	A	11 14 32.1	
	comp=Z,79nm,1.2s						
MESJ	**Messejana**	**36.60**	**285**	IAmb	IAmb	11 14 36.5	
	comp=Z,37nm,1.2s						
MESJ	**Messejana**	**36.60**	**285**	*e*P	**P**	**11 14 32.2**	**-0.9**
MESJ				A	A	11 14 44.3	
	comp=Z,48nm,1.7s						
MESJ	**Messejana**	**36.60**	**285**	*e*P	**P**	**11 14 31.4**	**-1.7**
MESJ				IAmb	IAmb	11 14 36.7	
	comp=Z,26nm,1.0s						
MESJ				*e*S	**S**	**11 20 15.3**	**-0.3**
TZRR	**Tazzarine**	**36.76**	**273**	P	**P**	**11 14 36.0**	**+1.2**
PNCL	**Nicolau / Gran**	**36.77**	**286**	*e*P	**P**	**11 14 33.9**	**-0.7**
PNCL				A	A	11 14 38.7	
	comp=Z,37nm,2.4s						
DGZ	**Jazzator, Alta**	**36.82**	**55**	*i* P	**P**	**11 14 33.5**	**-1.6**
DGZ				pmax	pmax		
	comp=Z,49nm,1.2s						
MORF	**Marmelete**	**37.07**	**284**	*e*P	**P**	**11 14 35.5**	**-1.7**
MORF				*e*S	**S**	**11 20 22.6**	**-0.3**
MORF	**Marmelete**	**37.07**	**284**	*e*P	**P**	**11 14 36.2**	**-1.0**
MORF	**Marmelete**	**37.07**	**284**	*e*P	**P**	**11 14 35.5**	**-1.7**
MORF				IAmb	IAmb	11 14 37.2	
	comp=Z,76nm,1.9s						
MORF				*e*S	**S**	**11 20 22.6**	**-0.3**
PFVI	**Vila Bisbo**	**37.24**	**284**	IAmb	IAmb	11 14 39.4	
	comp=Z,35nm,0.8s						
PFVI	**Vila Bisbo**	**37.24**	**284**	P	**P**	**11 14 38.0**	**-0.6**
PFVI	**Vila Bisbo**	**37.24**	**284**	*e*P	**P**	**11 14 37.7**	**-1.0**
PFVI				A	A	11 14 50.5	
	comp=Z,78nm,1.5s						
WMQ	**Urumqi**	**37.39**	**65**	*e*P	**P**	**11 14 41.4**	**+1.5**
WMQ				pP	sP	11 14 46.1	+0.7
WMQ				S	**S**	**11 20 27.7**	**-0.1**
WMQ				pmax	pmax		
	comp=Z,130nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,610nm,4.3s						
WMQ				LR	LR		
	comp=Z,7µm,17.7s						
WMQ				LR	LR		
	comp=Z,5µm,16.1s						
WMQ				LR	LR		
	comp=Z,3µm,18.5s						
JBP	**Jabalpur**	**38.31**	**100**	*e*P	**P**	**11 14 47.1**	**-0.6**
JBP				*e*x	x	11 14 47.1	
	baz=308,slow=22						
JBP				IAmb	IAmb	11 14 49.8	
	comp=Z,112nm,0.8s						
JBP				⇓*e*S	**S**	**11 20 38.6**	**-3.2**
PYUN	**Piuthan**	**38.31**	**91**	*e*P	**P**	**11 14 47.7**	**-0.3**
	comp=Z,223nm,0.8s						
KMBO	**Kilima Mbogo**	**38.57**	**182**	P	**P**	**11 14 49.3**	**-0.9**
	baz=2.3,slow=24,SNR=7.7						
KMBO				LR	LR	11 29 56.3	
	comp=Z,13nm,18.9s,baz=318,slow=35						
KMBO	**Kilima Mbogo**	**38.57**	**182**	P	**P**	**11 14 49.8**	**-0.4**
KMBO				IAmb	IAmb	11 14 55.7	
	comp=Z,107nm,1.9s						
KMBO	**Kilima Mbogo**	**38.57**	**182**	P	**P**	**11 14 49.8**	**-0.4**
KMBO				pmax	pmax		
	comp=Z,107nm,2.0s						
KMBO				MLR	MLR		
	comp=Z,2µm,20.0s						
KMBO	**Kilima Mbogo**	**38.57**	**182**	*i* P	**P**	**11 14 51.0**	**+0.8**
	SNR=17						
KMBO	**Kilima Mbogo**	**38.57**	**182**	*e*P	**P**	**11 14 46.0**	**-4.2**
KMBO	**Kilima Mbogo**	**38.57**	**182**	⇓*i*P	**P**	**11 14 51.4**	**+1.2**
KMBO				IAmb	IAmb	11 14 55.2	
	comp=Z,295nm,1.9s						
MBAR	**Mbarara**	**38.69**	**192**	LR	LR	11 29 55.1	
	comp=Z,1µm,18.2s,baz=354,slow=35						
MBAR	**Mbarara**	**38.69**	**192**	P	**P**	**11 14 50.5**	**-0.7**
MBAR				IAmb	IAmb	11 14 55.0	
	comp=Z,96nm,1.9s						
MBAR	**Mbarara**	**38.69**	**192**	*i* P	**P**	**11 14 50.5**	**-0.7**
MBAR				pmax	pmax		
	comp=Z,49nm,1.9s						
MBAR	**Mbarara**	**38.69**	**192**	*e*P	**P**	**11 14 49.1**	**-2.1**
MBAR	**Mbarara**	**38.69**	**192**	*e*P	**P**	**11 14 52.7**	**+1.5**
MBAR				IAmb	IAmb	11 14 54.7	
	comp=Z,100nm,1.9s						
DANN	**Dangsing**	**38.81**	**90**	*e*P	**P**	**11 14 52.2**	**-0.1**
	comp=Z,497nm,0.8s						
KOLN	**Koldanda**	**38.94**	**91**	*e*P	**P**	**11 14 52.8**	**-0.5**
GKN	**Gorkha**	**39.66**	**90**	*e*P	**P**	**11 14 58.7**	**-0.6**
	comp=Z,607nm,0.9s						
KIBK	**Kibwezi**	**39.76**	**181**	P	**P**	**11 14 59.0**	**-1.0**
KIBK				IAMs_20	IAMs_20	11 30 53.8	
	comp=Z,4µm,18.0s						
DMN	**Daman**	**40.21**	**90**	*e*P	**P**	**11 15 03.6**	**-0.3**
	comp=Z,382nm,0.8s						
KKN	**Kakani**	**40.27**	**90**	*e*P	**P**	**11 15 03.9**	**-0.5**
PKIN	**Phulchoki**	**40.45**	**90**	*e*P	**P**	**11 15 05.6**	**-0.4**
	comp=Z,339nm,1.0s						
PKI	**Pulchoki**	**40.47**	**90**	*e*P	**P**	**11 15 05.4**	**-0.8**
	comp=Z,272nm,0.9s						
HYB	**Hyderabad**	**40.49**	**109**	*e*P	**P**	**11 15 07.7**	**+1.7**
HYB				IVmB_BB		11 15 08.3	
	comp=Z,337nm,3.8s						
GUN	**Gumba**	**40.69**	**89**	*e*P	**P**	**11 15 07.3**	**-0.7**
	comp=Z,458nm,1.1s						
TORD	**Torodi Ar. Bea**	**40.78**	**243**	P	**P**	**11 15 07.3**	**-1.1**
	comp=Z,18nm,0.9s,baz=47,slow=8.0,SNR=69						
TORD				LR	LR	11 35 50.9	
	comp=Z,1µm,18.3s,baz=44,slow=42						
	comp=Z,18nm,0.9s						
JIRN	**Jiri**	**41.05**	**90**	*e*P	**P**	**11 15 10.7**	**-0.3**
	comp=Z,320nm,1.0s						
NRIK	**Noril'sk**	**41.18**	**24**	P	**P**	**11 15 10.4**	**-0.7**
	comp=Z,25nm,1.0s,baz=245,slow=7.2,SNR=29						
NRIK				LR	LR	11 35 37.6	
	comp=Z,2µm,18.9s,baz=242,slow=41						
	comp=Z,25nm,1.0s						
NRIK	**Noril'sk**	**41.18**	**24**	P	**P**	**11 15 11.5**	**+0.4**
NRIK				IAmb	IAmb	11 15 18.0	
	comp=Z,102nm,1.2s						
NRIK	**Noril'sk**	**41.18**	**24**	*ce*P	**P**	**11 15 11.2**	**+0.1**
NRIK				pmax	pmax		
	comp=Z,59nm,1.1s						
NRIK				MLR	MLR		
	comp=Z,2µm,17.0s						
JMIC	**Jan Mayen**	**41.24**	**339**	LR	LR	11 33 15.7	
	comp=Z,1µm,20.1s,baz=122,slow=38						
RAMN	**Ramite**	**41.69**	**90**	*e*P	**P**	**11 15 15.6**	**-0.6**
	comp=Z,557nm,0.7s						
SPB2	**Spitsbergen Ar**	**41.71**	**353**	P	**P**	**11 15 15.6**	**+0.2**
SPB2				IAmb	IAmb	11 15 21.9	
	comp=Z,50nm,0.9s						
SPITS	**Spitsbergen Ar**	**41.71**	**353**	P	**P**	**11 15 15.0**	**-0.4**
	comp=Z,26nm,0.9s,baz=131,slow=25,SNR=8.8						
SPITS				LR	LR	11 35 31.4	
	comp=Z,2µm,19.5s,baz=134,slow=40						
	comp=Z,26nm,0.9s						
SPITS	**Spitsbergen Ar**	**41.71**	**353**	P	**P**	**11 15 15.6**	**+0.2**
SPITS				pmax	pmax		
	comp=Z,77nm,1.1s						
ODAN	**Odare**	**42.36**	**90**	*e*P	**P**	**11 15 21.1**	**-0.5**
TAPN	**Taplejung**	**42.39**	**89**	*e*P	**P**	**11 15 21.8**	**-0.1**
	comp=Z,214nm,0.8s						
KBS	**Kingsbay**	**42.80**	**353**	IAMs_20	IAMs_20	11 35 17.2	
	comp=Z,4µm,19.0s						
PCHI	**Peechi**	**43.41**	**118**	⇑*e*P	**P**	**11 15 32.4**	**+2.5**
PCHI				*e*S	**S**	**11 22 01.8**	**+3.8**
BORG	**Borgarnes**	**43.90**	**328**	LR	LR	11 37 10.5	
	comp=Z,1µm,18.1s,baz=114,slow=41						
LSA	**Lhasa**	**44.10**	**84**	P	**P**	**11 15 35.6**	**-0.3**
LSA				pmax	pmax		
	comp=Z,14nm,1.1s						
GOMU	**GeErMu**	**44.52**	**74**	P	**P**	**11 15 40.6**	**+1.5**
GOMU				sP	sP	11 15 46.3	+1.7
GOMU				S	**S**	**11 22 17.1**	**+2.5**
GOMU				pmax	pmax		
	comp=Z,37nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,380nm,4.7s						
GOMU				LR	LR		
	comp=Z,1µm,13.7s						
GOMU				LR	LR		
	comp=Z,2µm,16.0s						
GOMU				LR	LR		
	comp=Z,2µm,17.1s						
MSEY	**Mahe Island**	**44.97**	**156**	IAMs_20	IAMs_20	11 34 44.3	
	comp=Z,3µm,19.0s						
SCO	**Scoresbysund**	**45.22**	**336**	P	**P**	**11 15 43.9**	**+0.2**
SCO				IAmb	IAmb	11 15 53.1	
	comp=Z,50nm,1.4s						
SCO	**Scoresbysund**	**45.22**	**336**	P	**P**	**11 15 43.9**	**+0.2**
SCO				pmax	pmax		
	comp=Z,50nm,1.4s						
SCO	**Scoresbysund**	**45.22**	**336**	*i* P	**P**	**11 15 42.4**	**-1.3**
MOY	**Mondy**	**45.30**	**51**	*e*P	**P**	**11 15 46.3**	**+1.5**
MOY				pmax	pmax		
	comp=Z,47nm,1.5s						
DBG	**Daneborg**	**45.79**	**341**	*i* P	**P**	**11 15 47.4**	**-0.8**
SHL	**Shillong**	**46.53**	**89**	P	**P**	**11 15 53.4**	**-1.5**
SHL				pmax	pmax		
	comp=Z,73nm,1.5s						
ZAK	**Zakamensk**	**46.92**	**53**	*e*P	**P**	**11 15 58.1**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,17nm,1.2s						
IRK	**Irkutsk**	**47.22**	**50**	*e*P	**P**	**11 16 00.9**	**+1.1**
IRK				pmax	pmax		
	comp=Z,761nm,2.8s						
GTA	**Gaotai**	**47.23**	**68**	*e*P	**P**	**11 16 00.1**	**-0.1**
GTA				pP	pP	11 16 03.7	-0.5
GTA				PP	**PP**	**11 17 53.7**	**+2.7**
GTA				S	**S**	**11 22 55.6**	**+2.5**
GTA				pmax	pmax		
	comp=Z,32nm,2.5s						
GTA				pmax	pmax		
	comp=Z,320nm,3.6s						
GTA				LR	LR		
	comp=Z,2µm,14.3s						
GTA				LR	LR		
	comp=Z,2µm,18.7s						
GTA				LR	LR		
	comp=Z,2µm,15.5s						
BRDH	**Bariadhala**	**47.76**	**92**	P	**P**	**11 16 04.8**	**+0.5**
	comp=Z,109nm,0.3s,baz=90,slow=3.7,SNR=12						
BRDH				LR	LR	11 39 44.2	
	comp=Z,3µm,19.3s,baz=233,slow=41						
NOR	**Nord**	**48.09**	**351**	*i* P	**P**	**11 16 04.4**	**-1.7**
PALK	**Pallekele**	**48.75**	**117**	P	**P**	**11 16 12.4**	**+0.4**
	comp=Z,13nm,0.8s,baz=67,slow=9.4,SNR=3.1						
PALK				LR	LR	11 39 06.7	
	comp=Z,3µm,18.1s,baz=53,slow=39						
	comp=Z,13nm,0.8s						
PALK	**Pallekele**	**48.75**	**117**	IAMs_20	IAMs_20	11 38 47.5	
	comp=Z,2µm,19.0s						
KAAM	**Kaadhehdhoo**	**48.77**	**131**	IAMs_20	IAMs_20	11 34 24.1	
	comp=Z,2µm,20.0s						
SONM	**Songino Array**	**49.47**	**55**	P	**P**	**11 16 16.7**	**-0.6**
	comp=Z,3.8nm,0.8s,baz=292,slow=8.7,SNR=27						
SONM				PP	**PP**	**11 18 11.5**	**+0.2**
	comp=Z,3.1nm,0.9s,baz=280,slow=4.6,SNR=3.6						
SONM				LR	LR	11 39 37.9	
	comp=Z,11µm,18.6s,baz=292,slow=39						
	comp=Z,3.8nm,0.8s						
SONM	**Songino Array**	**49.47**	**55**	P	**P**	**11 16 17.7**	**+0.4**
SONM	**Songino Array**	**49.47**	**55**	P	**P**	**11 16 17.7**	**+0.4**
SONM				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ULN	**Ulaanbaatar**	**49.89**	**55**	P	**P**	**11 16 20.3**	**-0.3**
ULN				IAmb	IAmb	11 16 33.5	
	comp=Z,25nm,0.9s						
ULN	**Ulaanbaatar**	**49.89**	**55**	P	**P**	**11 16 20.3**	**-0.3**
ULN				pmax	pmax		
	comp=Z,25nm,1.0s						
ULN				MLR	MLR		
	comp=Z,10µm,19.0s						
DBIC	**Dimbokro**	**49.89**	**243**	P	**P**	**11 16 19.2**	**-1.5**
	comp=Z,18nm,0.9s,baz=56,slow=8.3,SNR=18						
DBIC				LR	LR	11 40 07.5	
	comp=Z,1µm,18.4s,baz=49,slow=39						
	comp=Z,18nm,0.9s						
DBIC	**Dimbokro**	**49.89**	**243**	P	**P**	**11 16 19.1**	**-1.5**
DBIC	**Dimbokro**	**49.89**	**243**	*e*P	**P**	**11 16 18.8**	**-1.9**
DBIC				IAmb	IAmb	11 16 19.6	
	comp=Z,24nm,0.9s						
SUMG	**Summit**	**50.66**	**338**	*i* P	**P**	**11 16 23.0**	**-3.4**
ICESG	**Greenland Ices**	**51.23**	**333**	*i* P	**P**	**11 16 28.3**	**-2.3**
LZH	**Lanzhou**	**51.38**	**71**	*e*P	**P**	**11 16 34.3**	**+2.3**
LZH				sP	sP	11 16 39.8	+2.2
LZH				S	**S**	**11 23 48.5**	**-3.0**
LZH				sS	pS	11 23 56.2	-0.1
LZH				SS	**SS**	**11 27 24.7**	**-2.3**
LZH				pmax	pmax		
	comp=Z,110nm,1.4s						
LZH				pmax	pmax		
	comp=Z,340nm,5.2s						
LZH				LR	LR		
	comp=Z,4µm,15.1s						
LZH				LR	LR		
	comp=Z,3µm,15.8s						
LZH				LR	LR		
	comp=Z,5µm,16.8s						
BOD	**Bodaibo**	**51.73**	**41**	*e*P	**P**	**11 16 32.9**	**-1.2**
BOD				pmax	pmax		
	comp=Z,45nm,1.2s						
TNCH	**TengChong**	**52.05**	**86**	⇑P	**P**	**11 16 39.1**	**+2.0**
TNCH				pP	sP	11 16 42.4	-0.3
TNCH				PP	**PP**	**11 18 38.4**	**+3.2**
TNCH				S	**S**	**11 24 00.5**	**-0.4**
TNCH				sS	pS	11 24 06.1	+0.4
TNCH				SS	**SS**	**11 27 35.2**	**-2.7**
TNCH				pmax	pmax		
	comp=Z,110nm,0.8s						
TNCH				pmax	pmax		
	comp=Z,650nm,3.2s						
TNCH				LR	LR		
	comp=Z,1µm,17.9s						
TNCH				LR	LR		
	comp=Z,850nm,14.7s						
TNCH				LR	LR		

	comp=Z,1µm,23.7s						
CD2	**Chengdu**	**53.44**	**76**	P	**P**	**11 16 47.6**	**+0.4**
CD2				pP	pP	11 16 50.2	-1.1
CD2				S	**S**	**11 24 20.6**	**+1.0**
CD2				sS	sS	11 24 27.5	+1.3
CD2				SS	**SS**	**11 28 01.7**	**+2.3**
CD2				pmax	pmax		
	comp=Z,50nm,1.2s						
CD2				pmax	pmax		
	comp=Z,260nm,3.8s						
CD2				LR	LR		
	comp=Z,1µm,12.3s						
CD2				LR	LR		
	comp=Z,840nm,15.0s						
CD2				LR	LR		
	comp=Z,2µm,16.4s						
LSZ	**Lusaka**	**53.49**	**192**	P	**P**	**11 16 47.8**	**+0.2**
	comp=Z,3.6nm,0.7s,baz=17,slow=8.5,SNR=10						
LSZ				LR	LR	11 40 01.8	
	comp=Z,3µm,19.7s,baz=12,slow=37						
	comp=Z,3.6nm,0.7s						
LSZ	**Lusaka**	**53.49**	**192**	P	**P**	**11 16 49.9**	**+2.3**
LSZ				IAmb	IAmb	11 16 55.1	
	comp=Z,53nm,1.5s						
LSZ	**Lusaka**	**53.49**	**192**	IAMs_20	IAMs_20	11 39 49.2	
	comp=Z,3µm,20.0s						
LSZ	**Lusaka**	**53.49**	**192**	P	**P**	**11 16 49.9**	**+2.3**
LSZ				pmax	pmax		
	comp=Z,53nm,1.5s						
LSZ				MLR	MLR		
	comp=Z,3µm,20.0s						
LSZ	**Lusaka**	**53.49**	**192**	*e*P	**P**	**11 16 49.6**	**+2.0**
LSZ				IAmb	IAmb	11 16 52.1	
	comp=Z,1µm,2.2s						
NEEM	**North Greenlan**	**53.51**	**344**	*i* P	**P**	**11 16 46.2**	**-1.2**
BBTS	**Babate**	**53.55**	**260**	LR	LR	11 43 35.4	
	comp=Z,2µm,18.9s,baz=55,slow=40						
PZH	**PanZhiHua**	**53.89**	**82**	P	**P**	**11 16 51.7**	**+1.1**
PZH				pP	**pP**	**11 16 54.0**	**-0.7**
PZH				ScP	**ScP**	**11 21 50.9**	**-3.0**
PZH				S	**S**	**11 24 22.3**	**-3.5**
PZH				pmax	pmax		
	comp=Z,60nm,0.8s						
PZH				pmax	pmax		
	comp=Z,440nm,3.5s						
PZH				LR	LR		
	comp=Z,3µm,20.8s						
PZH				LR	LR		
	comp=Z,5µm,21.5s						
PZH				LR	LR		
	comp=Z,4µm,21.7s						
MBO	**M'Bour**	**54.04**	**260**	IAMs_20	IAMs_20	11 43 30.2	
	comp=Z,3µm,20.0s						
DY2G	**Dye2**	**54.11**	**330**	*i* P	**P**	**11 16 48.2**	**-3.6**
BTO	**Baotou**	**54.20**	**63**	*e*P	**P**	**11 16 51.7**	**-1.0**
BTO				S	**S**	**11 24 29.9**	**+0.3**
BTO				LR	LR		
	comp=Z,9µm,20.8s						
BTO				LR	LR		
	comp=Z,10µm,20.6s						
TIXI	**Tiksi**	**54.93**	**23**	LR	LR	11 45 13.8	
	comp=Z,2µm,18.4s,baz=270,slow=41						
TIXI	**Tiksi**	**54.93**	**23**	P	**P**	**11 16 57.5**	**+0.2**
TIXI				IAmb	IAmb	11 17 02.8	
	comp=Z,32nm,1.1s						
TIXI	**Tiksi**	**54.93**	**23**	*ce*P	**P**	**11 16 58.3**	**+1.0**
TIXI				pmax	pmax		
	comp=Z,40nm,1.3s						
TIXI				MLR	MLR		
	comp=Z,2µm,22.0s						
HHC	**Hu-ho-hao-te**	**55.19**	**62**	*e*P	**P**	**11 17 02.4**	**+2.5**
HHC				S	**S**	**11 24 46.8**	**+3.8**
HHC				sS	sS	11 24 52.7	+3.0
HHC				pmax	pmax		
	comp=Z,93nm,0.8s						
HHC				pmax	pmax		
	comp=Z,280nm,5.0s						
HHC				LR	LR		
	comp=Z,5µm,13.2s						
HHC				LR	LR		
	comp=Z,3µm,15.1s						
HHC				LR	LR		
	comp=Z,5µm,18.0s						
KMI	**Kunming**	**55.34**	**83**	⇓P	**P**	**11 16 59.1**	**-2.2**
KMI				S	**S**	**11 24 40.8**	**-4.8**
KMI				SS	**SS**	**11 28 26.7**	**-3.2**
KMI				pmax	pmax		
	comp=Z,57nm,0.9s						
KMI				pmax	pmax		
	comp=Z,480nm,4.1s						
KMI				LR	LR		
	comp=Z,910nm,13.9s						
KMI				LR	LR		
	comp=Z,2µm,16.5s						
CHTO	**Chiang Mai**	**55.59**	**92**	P	**P**	**11 17 02.5**	**-0.4**
CHTO	**Chiang Mai**	**55.59**	**92**	P	**P**	**11 17 02.5**	**-0.4**
SFJD	**Kangerlussuaq**	**55.66**	**332**	LR	LR	11 43 25.0	
	comp=Z,949nm,18.3s,baz=80,slow=39						
CM31	**Chiang Mai Arr**	**55.78**	**92**	IAmb	IAmb	11 17 07.1	
	comp=Z,30nm,0.8s						
CMAR	**Chiang Mai Arr**	**55.78**	**92**	P	**P**	**11 17 03.9**	**-0.4**
	comp=Z,29nm,1.0s,baz=298,slow=8.0,SNR=58						
CMAR				PP	**PP**	**11 19 09.7**	**+0.9**
	comp=Z,2.0nm,0.8s,baz=291,slow=9.1,SNR=2.5						
CMAR				LR	LR	11 46 04.0	
	comp=Z,1µm,20.4s,baz=305,slow=42						
	comp=Z,29nm,1.0s						
CMAR	**Chiang Mai Arr**	**55.78**	**92**	P	**P**	**11 17 03.3**	**-1.0**
CMAR	**Chiang Mai Arr**	**55.78**	**92**	*i* P	**P**	**11 17 05.0**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,30nm,1.0s						
CRAI	**Chiangrai**	**55.97**	**90**	P	**P**	**11 17 04.5**	**-1.1**
CRAI				IAmb	IAmb	11 17 07.7	
	comp=Z,37nm,1.5s						
XAN	**Xi'an**	**56.02**	**71**	⇑P	**P**	**11 17 07.2**	**+1.3**
XAN				pP	sP	11 17 13.7	+2.2
XAN				S	**S**	**11 24 56.1**	**+2.0**
XAN				pmax	pmax		
	comp=Z,48nm,1.0s						
XAN				LR	LR		
	comp=Z,2µm,15.6s						
XAN				LR	LR		
	comp=Z,2µm,16.8s						
XAN				LR	LR		
	comp=Z,3µm,17.1s						
OPO	**Ambohidratompo**	**56.49**	**170**	P	**P**	**11 17 09.9**	**+0.6**
	comp=Z,12nm,0.8s,baz=342,slow=6.5,SNR=12						
OPO				LR	LR	11 39 57.0	
	comp=Z,1µm,21.8s,baz=174,slow=34						
	comp=Z,12nm,0.8s						
PHRA	**Phrae**	**56.78**	**92**	P	**P**	**11 17 11.1**	**-0.4**
ABPO	**Ambohimpanom**	**56.94**	**170**	P	**P**	**11 17 12.0**	**-0.5**
ABPO	**Ambohimpanom**	**56.94**	**170**	IAMs_20	IAMs_20	11 43 17.7	
	comp=Z,2µm,18.0s						
ABPO	**Ambohimpanom**	**56.94**	**170**	P	**P**	**11 17 12.0**	**-0.5**
ABPO				pmax	pmax		
	comp=Z,15nm,1.0s						
ABPO				MLR	MLR		
	comp=Z,2µm,18.0s						
ABPO	**Ambohimpanom**	**56.94**	**170**	⇓*i*P	**P**	**11 17 12.7**	**+0.2**
ABPO				IAmb	IAmb	11 17 15.8	
	comp=Z,15nm,0.9s						
XLT	**XiLinHaoTe**	**57.13**	**57**	*e*P	**P**	**11 17 15.6**	**+1.9**
XLT				sP	sP	11 17 22.6	+3.3
XLT				pmax	pmax		
	comp=Z,18nm,1.8s						
XLT				pmax	pmax		
	comp=Z,280nm,3.7s						
XLT				LR	LR		
	comp=Z,480nm,23.1s						
XLT				LR	LR		
	comp=Z,3µm,22.6s						
XLT				LR	LR		
	comp=Z,3µm,22.0s						
HIA	**Hailar**	**57.46**	**50**	IAMs_20	IAMs_20	11 44 53.2	
	comp=Z,2µm,19.0s						
HIA	**Hailar**	**57.46**	**50**	IAmb	IAmb	11 17 19.7	
	comp=Z,20nm,0.9s						
HIA	**Hailar**	**57.46**	**50**	P	**P**	**11 17 18.2**	**+2.3**
TULEG	**Thule**	**57.61**	**345**	IAmb	IAmb	11 17 24.5	
	comp=Z,40nm,1.4s						
GYA	**Guiyang**	**57.77**	**80**	⇑P	**P**	**11 17 19.3**	**+0.8**
GYA				pP	pP	11 17 22.4	-0.1
GYA				PcP	**PcP**	**11 18 09.0**	**-2.2**
GYA				S	**S**	**11 25 22.2**	**+4.7**
GYA				SS	**SS**	**11 29 10.3**	**+2.5**
GYA				pmax	pmax		
	comp=Z,83nm,1.0s						
GYA				pmax	pmax		
	comp=Z,510nm,3.5s						
GYA				LR	LR		
	comp=Z,1µm,15.6s						
GYA				LR	LR		
	comp=Z,2µm,19.5s						
GYA				LR	LR		
	comp=Z,2µm,21.0s						
ENH	**Enshi**	**58.14**	**74**	P	**P**	**11 17 21.1**	**+0.2**
ENH				IAmb	IAmb	11 17 24.1	
	comp=Z,34nm,0.9s						
ENH				IAMs_20	IAMs_20	11 46 13.7	
	comp=Z,2µm,20.0s						
ENH	**Enshi**	**58.14**	**74**	P	**P**	**11 17 22.1**	**+1.2**
YAK	**Yakutsk**	**58.14**	**34**	LR	LR	11 46 03.1	
	comp=Z,2µm,19.0s,baz=292,slow=40						
YAK	**Yakutsk**	**58.14**	**34**	IAMs_20	IAMs_20	11 46 32.9	
	comp=Z,2µm,19.0s						
YAK	**Yakutsk**	**58.14**	**34**	*e*P	**P**	**11 17 22.0**	**+1.7**
YAK				*e**PP	**sP**	**11 17 26.1**	**+0.2**
YAK				*e*		11 18 12.3	
YAK				*e*		11 19 33.1	
YAK				*e*PPP	PPP	11 20 47.9	
YAK				*e*S	**S**	**11 25 24.2**	**+3.1**
YAK				*e**SS	**sS**	**11 25 31.6**	**+3.8**
YAK				*e*SS	**SS**	**11 29 19.0**	**+7.1**
YAK				pmax	pmax		
	comp=Z,25nm,1.0s						
YAK				pmax	pmax		
	comp=E,12nm,1.4s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,115nm,3.2s						
YAK				pmax	pmax		
	comp=N,40nm,3.1s						
YAK				smax	smax		
	comp=N,276nm,3.8s						
YAK				smax	smax		
	comp=E,140nm,3.3s						
YAK				MLR	MLR		
	comp=Z,2µm,16.0s						
YAK				MLR	MLR		
	comp=N,473nm,15.0s						
YAK				MLR	MLR		
	comp=E,1µm,16.0s						
LYN	**LuoYang**	**58.44**	**69**	⇑P	**P**	**11 17 24.9**	**+2.0**
LYN				pP	sP	11 17 29.0	+0.5
LYN				PP	**PP**	**11 19 38.6**	**+6.6**
LYN				S	**S**	**11 25 32.2**	**+6.4**
LYN				pmax	pmax		
	comp=E,27nm,0.7s						
LYN				pmax	pmax		
	comp=E,160nm,5.9s						
LYN				LR	LR		
	comp=E,2µm,14.5s						
LYN				LR	LR		
	comp=E,3µm,16.3s						
LYN				LR	LR		
	comp=E,3µm,17.5s						
EUNU	**Eureka**	**58.69**	**350**	IAmb	IAmb	11 17 31.2	
	comp=Z,34nm,1.1s						
BJI	**Beijing**	**58.74**	**61**	P	**P**	**11 17 27.0**	**+2.1**
BJI				pP	**sP**	**11 17 30.1**	**-0.4**
BJI				S	**S**	**11 25 33.9**	**+4.3**
BJI				pmax	pmax		
	comp=Z,13nm,0.8s						
BJI				pmax	pmax		
	comp=Z,120nm,3.5s						
BJI				LR	LR		
	comp=Z,2µm,19.9s						
BJI				LR	LR		
	comp=Z,1µm,19.2s						
BJI				LR	LR		
	comp=Z,2µm,15.6s						
BJT	**Baijiatuau**	**58.74**	**61**	IAmb	IAmb	11 17 28.4	
	comp=Z,18nm,0.8s						
BJT	**Baijiatuau**	**58.74**	**61**	P	**P**	**11 17 27.5**	**+2.6**
HNS	**HongShan**	**58.83**	**65**	⇑P	**P**	**11 17 27.4**	**+1.9**
HNS				S	**S**	**11 25 32.5**	**+1.7**
HNS				SS	**SS**	**11 29 25.3**	**+1.6**
HNS				pmax	pmax		
	comp=Z,30nm,0.9s						
HNS				LR	LR		
	comp=Z,2µm,15.5s						
HNS				LR	LR		
	comp=Z,2µm,14.9s						
HNS				LR	LR		
	comp=Z,2µm,17.7s						
NONG	**Nongkai**	**59.34**	**90**	P	**P**	**11 17 29.8**	**+0.5**
VOI	**Vohitsoka**	**59.73**	**171**	P	**P**	**11 17 31.2**	**-0.7**
VOI				IAMs_20	IAMs_20	11 42 47.4	
	comp=Z,2µm,20.0s						
VOI	**Vohitsoka**	**59.73**	**171**	P	**P**	**11 17 34.7**	**+2.8**
VOI	**Vohitsoka**	**59.73**	**171**	*e*P	**P**	**11 17 33.0**	**+1.1**
NAYO	**Nakonayok**	**59.99**	**95**	P	**P**	**11 17 35.7**	**+1.8**
ZEA	**Zeya**	**60.09**	**43**	*e*P	**P**	**11 17 38.2**	**+4.2**
ZEA				*e*S	S	11 25 57.0	+10
ZEA				pmax	pmax		
	comp=Z,40nm,0.9s						
ZEA				smax	smax		
	comp=E,100nm,1.7s						
ZEA				smax	smax		
	comp=N,200nm,14.9s						
ZEA				MLR	MLR		
	comp=E,2µm,16.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,16.0s						
MUSN	**Musina, Limpop**	**60.13**	**189**	*e*P	**P**	**11 17 36.5**	**+1.9**
MUSN				IAmb	IAmb	11 17 42.2	
	comp=Z,26nm,1.1s						
MOPA	**Mopani**	**61.17**	**187**	⇓*i*P	**P**	**11 17 42.7**	**+1.1**
MOPA				IAmb	IAmb	11 17 45.1	
	comp=Z,33nm,1.2s						
HEH	**HeiHe**	**61.63**	**47**	*e*P	**P**	**11 17 45.2**	**+0.6**
HEH				pP	**pP**	**11 17 49.2**	**+0.6**
HEH				sP	**sP**	**11 17 51.5**	**+1.3**
HEH				S	**S**	**11 26 10.9**	**+4.5**
HEH				ScS	**SKKSac**	**11 27 33.0**	**-2.8**
HEH				pmax	pmax		
	comp=Z,42nm,0.9s						
HEH				pmax	pmax		
	comp=Z,280nm,5.4s						
HEH				LR	LR		
	comp=Z,8µm,22.6s						
HEH				LR	LR		
	comp=Z,4µm,22.0s						
HEH				LR	LR		
	comp=Z,4µm,17.3s						
WHN	**Wuhan**	**61.70**	**72**	⇓P	**P**	**11 17 47.5**	**+2.2**
WHN				pP	**sP**	**11 17 51.0**	**0.0**
WHN				S	**S**	**11 26 15.3**	**+7.4**
WHN				pmax	pmax		
	comp=Z,110nm,0.8s						
WHN				LR	LR		
	comp=Z,5µm,14.1s						
WHN				LR	LR		
	comp=Z,5µm,14.3s						
WHN				LR	LR		
	comp=Z,6µm,17.5s						
MLSI	**Meulaboh, Aceh**	**62.30**	**107**	P	**P**	**11 17 48.3**	**-1.2**
	comp=Z,39nm,0.9s						
SNY	**Shenyang**	**62.99**	**57**	⇑P	P	11 17 40.3	-14
SNY				S	**S**	**11 26 22.8**	**-1.0**
SNY				pmax	pmax		
	comp=Z,22nm,0.6s						
SNY				pmax	pmax		
	comp=Z,270nm,4.9s						
SNY				LR	LR		
	comp=N,9µm,18.6s						
SNY				LR	LR		
	comp=E,7µm,18.8s						
SNY				LR	LR		
	comp=Z,8µm,18.5s						
DL2	**Dalian**	**63.02**	**60**	P	**P**	**11 17 56.1**	**+2.0**
DL2				S	**S**	**11 26 27.4**	**+3.1**
DL2				pmax	pmax		
	comp=Z,79nm,1.0s						
DL2				LR	LR		
	comp=Z,950nm,14.3s						
DL2				LR	LR		
	comp=Z,2µm,16.9s						
DL2				LR	LR		
	comp=Z,2µm,17.0s						
WIN	**Windhoek**	**63.14**	**202**	P	**P**	**11 17 55.2**	**+0.2**
WIN				IAmb	IAmb	11 18 01.6	
	comp=Z,27nm,0.9s						
WIN	**Windhoek**	**63.14**	**202**	P	**P**	**11 17 55.2**	**+0.2**
WIN				pmax	pmax		
	comp=Z,27nm,0.9s						
WIN	**Windhoek**	**63.14**	**202**	*e*P	**P**	**11 17 55.3**	**+0.2**
WIN				IAmb	IAmb	11 18 00.9	
	comp=Z,10nm,0.9s						
CN2	**Changchun**	**63.31**	**54**	*e*P	**P**	**11 17 56.6**	**+0.7**
CN2				*e*PP	**PP**	**11 20 16.8**	**+2.0**
CN2				*e*S	**S**	**11 26 24.4**	**-3.3**
CN2				*e*sS	sS	11 26 34.6	+0.1
CN2				*e*SS	**SS**	**11 30 31.9**	**-1.8**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
CN2				pmax	pmax		
	comp=Z,220nm,3.0s						
CN2				LR	LR		
	comp=Z,8µm,19.0s						
CN2				LR	LR		
	comp=Z,4µm,19.0s						
CN2				LR	LR		
	comp=Z,4µm,20.0s						
LBTB	**Lobatse**	**63.46**	**193**	P	**P**	**11 17 56.9**	**-0.1**
	comp=Z,13nm,0.6s,baz=351,slow=3.4,SNR=17						
LBTB				LR	LR	11 46 27.3	
	comp=Z,3µm,18.2s,baz=11,slow=37						
	comp=Z,13nm,0.6s						
LBTB	**Lobatse**	**63.46**	**193**	P	**P**	**11 17 56.6**	**-0.4**
LBTB	**Lobatse**	**63.46**	**193**	P	**P**	**11 17 56.7**	**-0.4**
LBTB				pmax	pmax		
	comp=Z,90nm,1.8s						
LBTB	**Lobatse**	**63.46**	**193**	*e*P	**P**	**11 17 57.4**	**+0.4**
LBTB				IAmb	IAmb	11 18 02.6	
	comp=Z,18nm,0.8s						
BNX	**BinXian**	**63.65**	**51**	⇑P	**P**	**11 17 59.4**	**+1.3**
BNX				pP	**sP**	**11 18 03.6**	**-0.1**
BNX				sP	**pP**	**11 18 04.6**	**+2.4**
BNX				S	**S**	**11 26 34.7**	**+2.8**
BNX				sS	**sS**	**11 26 39.2**	**+0.5**
BNX				pmax	pmax		
	comp=Z,33nm,0.8s						
BNX				pmax	pmax		
	comp=Z,190nm,4.5s						
BNX				LR	LR		
	comp=Z,2µm,15.2s						
BNX				LR	LR		
	comp=Z,1µm,17.4s						
BNX				LR	LR		
	comp=Z,2µm,17.0s						
FRB	**Frobisher Bay**	**63.81**	**332**	LR	LR	11 48 03.9	
	comp=Z,930nm,18.1s,baz=64,slow=38						
KCSI	**Kotacane, Aceh**	**63.81**	**107**	P	**P**	**11 17 58.0**	**-1.6**
	comp=Z,40nm,1.0s						
RES	**Resolute Bay**	**63.82**	**348**	LR	LR	11 47 38.1	
	comp=Z,1µm,19.0s,baz=24,slow=38						
RES	**Resolute Bay**	**63.82**	**348**	P	**P**	**11 17 59.3**	**+0.5**
RES	**Resolute Bay**	**63.82**	**348**	P	**P**	**11 17 59.3**	**+0.5**
RES				pmax	pmax		
	comp=Z,12nm,1.0s						
HRAO	**HartRAO**	**63.98**	**191**	*e*P	**P**	**11 18 00.8**	**+0.3**
HRAO				IAmb	IAmb	11 18 05.4	
	comp=Z,11nm,0.9s						
QIZ	**Qiongzhong**	**64.12**	**85**	P	**P**	**11 18 00.8**	**-0.8**
QIZ				S	**S**	**11 26 39.2**	**+0.7**
QIZ				SS	**SS**	**11 30 48.2**	**+0.8**
QIZ				LR	LR		
	comp=Z,950nm,15.7s						
QIZ				LR	LR		
	comp=Z,2µm,18.6s						
QIZ				LR	LR		
	comp=Z,1µm,19.0s						
QIZ	**Qiongzhong**	**64.12**	**85**	P	**P**	**11 18 03.9**	**+2.3**
NJ2	**Nanjing**	**64.33**	**68**	⇑P	**P**	**11 18 05.0**	**+2.2**
NJ2				pP	**sP**	**11 18 07.7**	**-0.7**
NJ2				sP	**pP**	**11 18 10.5**	**+3.6**
NJ2				S	**S**	**11 26 39.8**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,37nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,340nm,3.8s						
NJ2				LR	LR		
	comp=Z,2µm,17.5s						
NJ2				LR	LR		
	comp=Z,2µm,15.6s						
NJ2				LR	LR		
	comp=Z,1µm,18.0s						
KLR	**Kul'dur**	**64.60**	**46**	LR	LR	11 49 12.9	
	comp=Z,2µm,18.4s,baz=298,slow=39						
KLR	**Kul'dur**	**64.60**	**46**	*ce*P	**P**	**11 18 05.2**	**+0.9**
KLR				pmax	pmax		
	comp=Z,33nm,1.1s						
KLR				MLR	MLR		
	comp=Z,2µm,20.0s						
PRYS	**Parys**	**65.04**	**191**	*e*P	**P**	**11 18 06.8**	**-0.6**
PRYS				IAmb	IAmb	11 18 13.9	
	comp=Z,26nm,1.6s						
GSI	**Gunungsitoli**	**65.11**	**109**	IAMs_20	IAMs_20	11 47 01.0	
	comp=Z,1µm,20.0s						
GSI	**Gunungsitoli**	**65.11**	**109**	P	**P**	**11 18 09.5**	**+1.4**
GSI	**Gunungsitoli**	**65.11**	**109**	P	**P**	**11 18 08.2**	**+0.1**
	comp=Z,59nm,0.8s,comp=Z,2µm						
PSI	**Prapat**	**65.16**	**107**	P	**P**	**11 18 08.3**	**-0.2**
RPSI	**Rantau Prapat**	**65.22**	**107**	IAMs_20	IAMs_20	11 50 05.1	
	comp=Z,2µm,20.0s						
MDJ	**Mudanjiang**	**65.55**	**52**	P	**P**	**11 18 09.4**	**-1.1**
MDJ				PcP	**PcP**	**11 18 38.6**	**-3.6**
MDJ				PP	**PP**	**11 20 34.0**	**-0.4**
MDJ				S	**S**	**11 26 55.4**	**+0.1**
MDJ				ScS	**SKSac**	**11 28 02.8**	**-2.9**
MDJ				SS	**SS**	**11 31 09.2**	**+0.8**
MDJ				pmax	pmax		
	comp=Z,170nm,5.6s						
MDJ				LR	LR		
	comp=Z,5µm,16.2s						
MDJ				LR	LR		
	comp=Z,3µm,17.7s						
MDJ	**Mudanjiang**	**65.55**	**52**	IAMs_20	IAMs_20	11 49 11.1	
	comp=Z,2µm,18.0s						
SWZ	**Schweizer**	**65.62**	**193**	*e*P	**P**	**11 18 10.6**	**-0.6**
SWZ				IAmb	IAmb	11 18 15.6	
	comp=Z,10nm,0.9s						
IPM	**Ipoh**	**65.70**	**104**	P	**P**	**11 18 11.1**	**-0.8**
IPM	**Ipoh**	**65.70**	**104**	P	**P**	**11 18 12.1**	**+0.2**
SNKL	**Senekal, Frees**	**66.31**	**190**	*e*P	**P**	**11 18 14.5**	**-1.1**
SNKL				IAmb	IAmb	11 18 25.2	
	comp=Z,9.4nm,0.8s						
GRNR	**Gornyy**	**66.45**	**43**	⇑*i*P	**P**	**11 18 16.0**	**-0.3**
GRNR				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GRNR				MLR	MLR		
	comp=N,4µm,18.0s						
GRNR				MLR	MLR		
	comp=Z,2µm,17.0s						
PBSI	**Pulau Batu**	**66.53**	**109**	P	**P**	**11 18 17.8**	**+0.6**
	comp=Z,140nm,1.1s,comp=Z,2µm						
SSE	**Sheshan**	**66.53**	**68**	P	**P**	**11 18 13.7**	**-3.3**
SSE				S	**S**	**11 27 02.6**	**-5.1**
SSE				pmax	pmax		
	comp=Z,20nm,0.8s						
SSE				pmax	pmax		
	comp=Z,75nm,5.2s						
SSE				LR	LR		
	comp=Z,950nm,19.5s						
SSE				LR	LR		
	comp=Z,700nm,19.6s						
SEY	**Seymchan**	**66.86**	**27**	LR	LR	11 52 43.4	
	comp=Z,2µm,18.1s,baz=304,slow=41						
SEY	**Seymchan**	**66.86**	**27**	*ce*P	**P**	**11 18 19.6**	**+1.0**
SEY				pmax	pmax		
	comp=Z,75nm,1.3s						
SEY				MLR	MLR		
	comp=Z,2µm,17.0s						
BOSA	**Boshof**	**67.03**	**193**	P	**P**	**11 18 19.9**	**-0.2**
	comp=Z,14nm,0.8s,baz=4.2,slow=5.0,SNR=12						
BOSA				LR	LR	11 48 34.5	
	comp=Z,3µm,19.3s,baz=14,slow=37						
	comp=Z,14nm,0.8s						
BOSA	**Boshof**	**67.03**	**193**	P	**P**	**11 18 19.3**	**-0.9**
BOSA				IAmb	IAmb	11 18 24.4	
	comp=Z,53nm,1.6s						
BOSA	**Boshof**	**67.03**	**193**	P	**P**	**11 18 19.3**	**-0.9**
BOSA				pmax	pmax		
	comp=Z,53nm,1.6s						
BOSA	**Boshof**	**67.03**	**193**	⇓*i*P	**P**	**11 18 20.1**	**-0.1**

BOSA				IAmb	IAmb	11 18 21.9	
	comp=Z,19nm,1.2s						
INCN	Inchon	67.16	60	P	P	11 18 20.3	-0.7
INCN	Inchon	67.16	60	P	P	11 18 23.0	+2.0
INCN	Inchon	67.16	60	P	P	11 18 20.3	-0.7
INCN				pmax	pmax		
	comp=Z,78nm,1.0s						
INCN				MLR	MLR		
	comp=Z,4µm,19.0s						
USA0B	Ussuriysk Arra	67.24	51	IAmb	IAmb	11 18 26.4	
	comp=Z,26nm,1.1s						
USA0B	Ussuriysk Arra	67.24	51	*i* P	P	11 18 21.6	+0.2
USRK	Ussuriysk Ar.	67.24	51	P	P	11 18 21.5	+0.1
	comp=Z,12nm,0.8s,baz=301,slow=5.0,SNR=14						
USRK				LR	LR	11 50 25.2	
	comp=Z,3µm,18.5s,baz=302,slow=38						
	comp=Z,12nm,0.8s						
USRK	Ussuriysk Ar.	67.24	51	P	P	11 18 21.0	-0.4
AUSN	Aus	67.25	201	*e*P	P	11 18 21.2	-0.5
AUSN				IAmb	IAmb	11 18 29.9	
	comp=Z,38nm,1.2s						
UPI	Upington	67.58	196	*e*P	P	11 18 24.3	+0.7
UPI				IAmb	IAmb	11 18 27.2	
	comp=Z,282nm,2.7s						
ARMS	Ukamas	67.63	198	*e*P	P	11 18 23.6	-0.3
ARMS				IAmb	IAmb	11 18 28.5	
	comp=Z,15nm,0.8s						
BILL	Bilibino	67.67	19	P	P	11 18 23.8	+0.1
BILL	Bilibino	67.67	19*c*	*i*P	P	11 18 23.7	+0.1
BILL				*i* *PP	pP	11 18 27.2	-0.6
BILL				*i* *SP	sP	11 18 28.1	-1.2
BILL				*i*		11 18 54.7	
BILL				*i* S	S	11 27 19.1	-1.2
BILL				*i* SS	SS	11 31 38.1	-2.2
BILL				pmax	pmax		
	comp=Z,69nm,1.2s						
BILL				MLR	MLR		
	comp=Z,978nm,19.0s						
KNMB	Chin-men Tao	67.88	76	IAMs_20	IAMs_20	11 51 52.8	
	comp=Z,2µm,20.0s						
KEIM	Keimoes	67.98	197	*e*P	P	11 18 25.0	-1.1
KEIM				IAmb	IAmb	11 18 29.6	
	comp=Z,155nm,2.8s						
SCHQ	Schefferville	67.99	323	P	P	11 18 25.1	-0.8
	comp=Z,5.0nm,0.8s,baz=360,slow=2.8,SNR=6.2						
SCHQ				LR	LR	11 49 07.2	
	comp=Z,1µm,19.7s,baz=62,slow=37						
	comp=Z,5.0nm,0.8s						
KS19	Wonju Array Si	67.99	59	P	P	11 18 26.0	-0.2
KSAR	Wonju Array Be	68.04	59	P	P	11 18 26.1	-0.4
KSAR	Wonju Array Be	68.04	59	P	P	11 18 26.1	-0.4
KSRS	Korea Array	68.06	59	P	P	11 18 26.0	-0.6
	comp=Z,40nm,0.9s,baz=293,slow=5.6,SNR=54						
KSRS				LR	LR	11 52 06.8	
	comp=Z,2µm,18.9s,baz=295,slow=39						
	comp=Z,40nm,0.9s						
MA2	Magadan	68.31	30	LR	LR	11 53 25.8	
	comp=Z,3µm,18.2s,baz=302,slow=40						
MA2	Magadan	68.31	30	P	P	11 18 28.1	+0.3
MA2				IAmb	IAmb	11 18 33.8	
	comp=Z,32nm,1.1s						
MA2	Magadan	68.31	30	P	P	11 18 31.1	+3.3
MA2	Magadan	68.31	30*c*	*e*P	P	11 18 27.9	+0.1
MA2				pmax	pmax		
	comp=Z,45nm,1.3s						
BKNI	Bangkinang	68.36	107	P	P	11 18 29.8	+1.0
BKNI	Bangkinang	68.36	107	P	P	11 18 29.5	+0.7
	comp=Z,202nm,0.9s,comp=Z,4µm						
PDSI	Padang	68.73	109	P	P	11 18 30.3	-0.8
	comp=Z,81nm,1.0s						
SDSI	Sungai Dareh	69.47	108	P	P	11 18 33.4	-2.3
MYKOM	Kota Tinggi	69.57	104	IAmb	IAmb	11 18 38.1	
	comp=Z,30nm,0.8s						
PPSI	Pulau Pagai	69.61	110	P	P	11 18 36.7	+0.1
	comp=Z,122nm,1.1s						
TYV	Tymovskoe	69.72	41	*e*P	P	11 18 40.3	+3.5
TYV				*e*S	S	11 27 53.6	+8.4
TYV				pmax	pmax		
	comp=Z,200nm,3.0s						
TYV				pmax	pmax		
	comp=Z,19nm,1.3s						
TYV				smax	smax		
	comp=N,700nm,9.4s						
TYV				smax	smax		
	comp=E,800nm,9.4s						
YHNB	Yeheng	70.06	74	IAMs_20	IAMs_20	11 52 18.4	
	comp=Z,2µm,21.0s						
A36M	Sachs Harbour	70.09	355	IAMs_20	IAMs_20	11 52 52.3	
	comp=Z,1µm,20.0s						
A36M	Sachs Harbour	70.09	355	P	P	11 18 38.5	-0.2
	baz=14						
SSLB	Suanglung	70.22	75	IAMs_20	IAMs_20	11 55 18.6	
	comp=Z,1µm,18.0s						
NACB	Ninganchiao	70.50	74	IAMs_20	IAMs_20	11 53 56.0	
	comp=Z,2µm,18.0s						
BRAK	Brakfontein	70.55	194	*e*P	P	11 18 37.2	-4.8
BRAK				IAmb	IAmb	11 18 59.1	
	comp=Z,303nm,2.9s						
YULB	Yu-li	70.70	75	IAMs_20	IAMs_20	11 55 43.3	
	comp=Z,2µm,20.0s						
GRAF	Camdeboo Natio	70.75	192	*e*P	P	11 18 44.3	+1.1
GRAF				IAmb	IAmb	11 18 48.8	
	comp=Z,23nm,1.1s						
A21K	Barrow	70.83	5	P	P	11 18 41.8	-1.3
	baz=347,SNR=7.1						
FRAZ	Fraserburg	70.99	195	*e*P	P	11 18 44.0	-0.7
FRAZ				IAmb	IAmb	11 18 58.2	
	comp=Z,420nm,3.2s						
ROOI	Rooidraai Farm	71.12	193	*e*P	P	11 18 46.5	+1.0
ROOI				IAmb	IAmb	11 18 54.2	
	comp=Z,122nm,1.7s						
GRAN	Grantham	71.20	195	*e*P	P	11 18 45.1	-0.8
GRAN				IAmb	IAmb	11 18 50.5	
	comp=Z,6.0nm,0.7s						
MASI	Maura Aman, Be	71.53	109	P	P	11 18 48.5	+0.2
	comp=Z,83nm,0.9s,comp=Z,686nm						
SUR	Sutherland	71.55	196	P	P	11 18 48.6	+0.4
	comp=Z,9.3nm,0.7s,baz=359,slow=4.2,SNR=12						
SUR				LR	LR	11 50 28.2	
	comp=Z,4µm,19.0s,baz=354,slow=36						
	comp=Z,9.3nm,0.7s						
DSRI	Dabo	71.57	105	P	P	11 18 48.6	0.0
	comp=Z,66nm,0.8s						
YSS	Yuzh-Sakhalins	72.05	44	P	P	11 18 50.4	-0.5
YSS	Yuzh-Sakhalins	72.05	44	P	P	11 18 54.4	+3.5
YSS	Yuzh-Sakhalins	72.05	44	*e*P	P	11 18 54.2	+3.3
YSS				*e*		11 19 12.6	
YSS				*e*S	S	11 28 12.4	+0.1
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS				pmax	pmax		
	comp=Z,300nm,4.2s						
YSS				MLR	MLR		
	comp=E,3µm,16.0s						
YSS				MLR	MLR		
	comp=Z,3µm,16.0s						
KSI	Kapahiang	72.12	109	P	P	11 18 52.5	+0.6
	comp=Z,191nm,0.9s						
JNU	Nakatsue	72.42	62	LR	LR	11 54 48.5	
	comp=Z,3µm,18.3s,baz=315,slow=39						
C36M	Paulatuk	72.57	354	P	P	11 18 53.5	-0.2
C36M				IAmb	IAmb	11 18 59.3	
	comp=Z,53nm,1.2s						
C36M	Paulatuk	72.57	354	P	P	11 18 52.8	-0.8
	baz=14,SNR=12						
C26K	Camden Bay	72.75	1	P	P	11 18 53.9	-0.8
	baz=357						
CER	Ceres	72.83	197	*e*P	P	11 18 57.0	+1.4
CER				IAmb	IAmb	11 19 04.5	
	comp=Z,16nm,1.4s						
CER				IAmb	IAmb	11 19 04.5	
	comp=Z,16nm,1.4s						
C24K	Franklin Bluff	72.84	3	P	P	11 18 54.7	-0.6
	baz=354,SNR=7.0						
C27K	Jago River	73.06	1	P	P	11 18 56.2	-0.4
	baz=358						
PMBI	Palembang	73.30	107	IAMs_20	IAMs_20	11 55 10.1	
	comp=Z,1µm,21.0s						
D25K	Kavik River	73.31	2	P	P	11 18 57.6	-0.6
	baz=356						
PQI	Presque Isle	73.39	316	IAMs_20	IAMs_20	11 52 24.9	
	comp=Z,2µm,20.0s						
RDOG	Red Dog Mine	73.43	8	IAMs_20	IAMs_20	11 56 41.5	
	comp=Z,1µm,21.0s						
RDOG	Red Dog Mine	73.43	8	P	P	11 18 58.4	-0.4
	baz=342						
D23K	Nanushuk River	73.52	3	P	P	11 18 59.0	-0.3
	baz=352						
ASAJ	Asahikawa	73.64	47	LR	LR	11 53 25.6	
	comp=Z,1µm,19.4s,baz=303,slow=38						
JKA	Kamikawa-asahi	73.64	47	IAmb	IAmb	11 19 13.2	
	comp=Z,27nm,1.1s						
PPBI	Pangkal Pinang	73.84	106	P	P	11 19 02.3	+0.2
MDSI	Maura Dua	73.86	109	P	P	11 19 00.4	-1.7
	comp=Z,45nm,0.9s						
TOLK	Toolik Lake Re	73.89	3	IAMs_20	IAMs_20	11 53 37.8	
	comp=Z,1µm,20.0s						
TOLK	Toolik Lake Re	73.89	3	P	P	11 19 02.0	+0.4
	baz=353,SNR=18						
LWLI	Liwa	74.12	109	P	P	11 19 03.2	-0.6
	comp=Z,283nm,0.8s						
INK	Inuvik	74.22	357	LR	LR	11 56 36.4	
	comp=Z,562nm,18.7s,baz=2.0,slow=40						
INK	Inuvik	74.22	357	P	P	11 19 02.0	-1.4
INK	Inuvik	74.22	357	P	P	11 19 02.0	-1.4
INK				pmax	pmax		
	comp=Z,16nm,1.1s						
INK	Inuvik	74.22	357	P	P	11 19 03.3	-0.1
	baz=6.6						
E22K	Anaktuvuk Pass	74.28	4	P	P	11 19 04.2	+0.3
	baz=352						
E23K	Chandalar	74.47	3	P	P	11 19 05.3	+0.3
	baz=353						
E24K	Your Creek	74.50	3	P	P	11 19 04.3	-0.8
	baz=354						
E27K	Coleen River	74.51	0	P	P	11 19 05.0	-0.2
	baz=360,SNR=31						
E25K	Arctic Village	74.54	2	P	P	11 19 04.6	-0.7
	baz=357,SNR=28						
KASI	Kota Agung	74.78	109	P	P	11 19 06.3	-1.2
	comp=Z,107nm,1.0s,comp=Z,1µm						
KSM	Kuching	74.78	100	IAmb	IAmb	11 19 10.3	
	comp=Z,40nm,0.8s						
KSM				IAMs_20	IAMs_20	11 55 53.3	
	comp=Z,868nm,20.0s						
KSM	Kuching	74.78	100	P	P	11 19 08.9	+1.3
PKME	Peaks-Kenny Pk	74.95	316	IAMs_20	IAMs_20	11 51 21.3	
	comp=Z,1µm,22.0s						
PKME	Peaks-Kenny Pk	74.95	316	P	P	11 19 08.3	+0.2
	baz=52						
F26K	Sheenjek River	74.99	1	P	P	11 19 08.1	+0.1
	baz=358						
F25K	Christian Rive	75.06	2	P	P	11 19 08.0	-0.4
	baz=357						
F24K	Squaw Lake	75.08	3	P	P	11 19 08.7	+0.2
	baz=355						
F21K	Alatna River	75.09	5	P	P	11 19 08.3	-0.2
	baz=350						
F31M	Tsiigehtchic	75.09	357	P	P	11 19 08.2	-0.3
	baz=6.4,SNR=17						
TNA	Tin City	75.12	11	P	P	11 19 08.3	-0.4
	baz=339,SNR=27						
ERM	Erimo	75.23	48	P	P	11 19 14.4	+4.7
ERM	Erimo	75.23	48	*i* P	P	11 19 09.6	-0.1
ERM				pmax	pmax		
	comp=Z,75nm,1.2s						
JEM	Erimo	75.23	48	P	P	11 19 14.6	+4.9
BMAR	Burnt Mountain	75.25	1	P	P	11 19 10.0	+0.5
COLD	Coldfoot	75.27	3	IAmb	IAmb	11 19 16.5	
	comp=Z,37nm,1.1s						
COLD	Coldfoot	75.27	3	P	P	11 19 09.1	-0.4
	baz=353,SNR=30						
INU	Inuyama	75.33	57	IAmb	IAmb	11 19 13.6	
	comp=Z,34nm,1.3s						
INU	Inuyama	75.33	57	P	P	11 19 13.2	+2.7
MJB9	Matsu-Tunnel	75.41	55	P	P	11 19 08.7	-2.2
MAJO	Matsushiro	75.42	55	P	P	11 19 10.5	-0.5
MAJO	Matsushiro	75.42	55	P	P	11 19 12.3	+1.3
MAJO	Matsushiro	75.42	55	P	P	11 19 10.5	-0.5
MAJO				pmax	pmax		
	comp=Z,86nm,1.7s						
MAJO				MLR	MLR		
	comp=Z,2µm,22.0s						
MJAR	Matsushiro Arr	75.42	55	P	P	11 19 11.4	+0.4
	comp=Z,15nm,0.9s,baz=313,slow=6.4,SNR=20						
MJAR				LR	LR	11 54 19.9	
	comp=Z,2µm,21.7s,baz=316,slow=37						
	comp=Z,15nm,0.9s						
PEA0B	Petropavlovsk-	75.47	33	P	P	11 19 10.6	-0.4
PEA0B	Petropavlovsk-	75.47	33	P	P	11 19 10.6	-0.4
PEA0B				pmax	pmax		
	comp=Z,67nm,1.4s						
PETK	Petropavlovsk-	75.47	33	P	P	11 19 11.4	+0.4
	comp=Z,7.4nm,1.0s,baz=306,slow=5.2,SNR=3.8						
PETK				LR	LR	11 58 33.6	
	comp=Z,1µm,18.2s,baz=304,slow=41						
	comp=Z,7.4nm,1.0s						
WVL	Waterville	75.59	315	IAMs_20	IAMs_20	11 49 26.3	
	comp=Z,984nm,22.0s						
G30M	tAoh Zraii Nji	75.64	358	P	P	11 19 11.4	-0.4
	baz=4.4						
SBUM	Sibu	75.68	98	P	P	11 19 12.5	-0.2
G26K	Porcupine Rive	75.74	1	P	P	11 19 12.2	-0.1
	baz=358						
G21K	Allakaket	75.79	5	P	P	11 19 12.2	-0.3
	baz=350						
G23K	Bananza Creek	75.79	3	P	P	11 19 12.6	-0.1
	baz=353						
G25K	Bearman Lake	75.88	2	P	P	11 19 13.4	+0.4
	baz=356						
G27K	Doyon Strip	75.90	0	P	P	11 19 13.4	+0.2
	baz=360						
G24K	Hadweenzic Riv	75.91	2	P	P	11 19 13.1	-0.1
	baz=355						
PET	Petropavlovsk	75.94	33	IAMs_20	IAMs_20	11 58 03.4	
	comp=Z,1µm,19.0s						
FYU	Fort Yukon	76.10	2	IAmb	IAmb	11 19 22.0	
	comp=Z,44nm,1.2s						
EPYK	Eagle Plains	76.27	358	IAmb	IAmb	11 19 21.6	
	comp=Z,43nm,1.2s						
EPYK	Eagle Plains	76.27	358	P	P	11 19 15.2	-0.2
	baz=4.0,SNR=15						
JMM	Marumori	76.29	53	P	P	11 19 17.2	+1.3
IMAR	Indian Mountai	76.30	5	P	P	11 19 15.7	+0.2
CGJI	Cibinong	76.39	109	P	P	11 19 16.1	-0.6
	comp=Z,177nm,0.7s,comp=Z,2µm						
ANM	Nome	76.44	10	IAmb	IAmb	11 19 23.0	
	comp=Z,43nm,1.0s						
ANM				IAMs_20	IAMs_20	11 59 25.1	
	comp=Z,1µm,19.0s						
ANM	Nome	76.44	10	P	P	11 19 16.4	+0.1
	baz=341,SNR=42						
H27K	Steamboat Moun	76.48	360	P	P	11 19 16.4	-0.2
	baz=0.0,SNR=17						
JSG	Sagara	76.50	57	P	P	11 19 20.1	+2.9
H22K	Ishtalitna Cre	76.54	4	P	P	11 19 16.8	0.0
	baz=352						
H21K	Melozitna Rive	76.68	5	IAmb	IAmb	11 19 25.0	
	comp=Z,44nm,1.1s						
H21K				IAMs_20	IAMs_20	11 55 38.6	
	comp=Z,824nm,19.0s						
H21K	Melozitna Rive	76.68	5	P	P	11 19 18.1	+0.4
	baz=351						
H23K	Yukon River	76.70	3	P	P	11 19 17.9	+0.2
	baz=354						
H24K	Noodor Dome	76.76	3	P	P	11 19 18.5	+0.4
	baz=355						
LBNH	Lisbon	77.05	316	IAMs_20	IAMs_20	11 50 43.9	
	comp=Z,1µm,22.0s						
I27K	Kandik River	77.11	0	P	P	11 19 20.5	+0.4
	baz=360						
PRP	Porcupine Dome	77.15	2	IAmb	IAmb	11 19 26.7	
	comp=Z,42nm,1.7s						
PRP				IAMs_20	IAMs_20	11 55 18.9	
	comp=Z,979nm,22.0s						
PRP	Porcupine Dome	77.15	2	P	P	11 19 19.8	-0.7
	baz=357,SNR=5.5						
I21K	Tanana	77.21	4	IAMs_20	IAMs_20	11 55 32.6	
	comp=Z,926nm,21.0s						
I21K	Tanana	77.21	4	P	P	11 19 20.8	+0.2
	baz=352						
GCSA	Galena City Sc	77.26	7	P	P	11 19 21.0	+0.1
	baz=348,SNR=6.3						
SKJI	Sukabumi	77.29	109	P	P	11 19 21.8	0.0
	comp=Z,140nm,0.7s,comp=Z,1µm						
I29M	Ogilvie Camp,	77.32	359	IAMs_20	IAMs_20	11 57 26.4	
	comp=Z,842nm,20.0s						
I29M	Ogilvie Camp,	77.32	359	P	P	11 19 21.6	+0.3
	baz=2.6,SNR=16						
I23K	Minto, Yukon-K	77.39	3	IAmb	IAmb	11 19 30.4	
	comp=Z,28nm,1.2s						
I23K	Minto, Yukon-K	77.39	3	P	P	11 19 21.4	-0.1
	baz=354,SNR=7.4						
I26K	Coal Creek Min	77.40	1	P	P	11 19 21.2	-0.4
I26K				IAmb	IAmb	11 19 28.6	
	comp=Z,20nm,1.0s						
I26K	Coal Creek Min	77.40	1	P	P	11 19 22.1	+0.4
	baz=359						
MLY	Manley	77.43	4	P	P	11 19 21.8	-0.1
MLY				IAmb	IAmb	11 19 28.3	
	comp=Z,56nm,1.4s						
MLY	Manley	77.43	4	P	P	11 19 22.3	+0.4
	baz=352,SNR=23						
VT1	Waterbury	77.45	317	IAMs_20	IAMs_20	11 53 42.4	
	comp=Z,1µm,21.0s						
POKR	Poker Plat Res	77.49	3	IAmb	IAmb	11 19 29.4	
	comp=Z,40nm,1.1s						
POKR				IAMs_20	IAMs_20	11 56 09.0	
	comp=Z,792nm,19.0s						
POKR	Poker Plat Res	77.49	3	P	P	11 19 22.5	+0.3
	baz=355,SNR=14						
HNH	Hanover	77.60	316	IAMs_20	IAMs_20	11 55 39.3	
	comp=Z,1µm,18.0s						
COLA	College	77.72	3	P	P	11 19 23.5	+0.1
COLA				IAmb	IAmb	11 19 30.2	
	comp=Z,34nm,0.9s						
COLA	College	77.72	3	P	P	11 19 23.5	+0.1
COLA				pmax	pmax		
	comp=Z,34nm,0.9s						
COLA				MLR	MLR		
	comp=Z,700nm,20.0s						
COLA	College	77.72	3	P	P	11 19 23.6	+0.1
	baz=355						
TCOL	CIGO, UAF Yank	77.72	3	IAmb	IAmb	11 19 30.2	
	comp=Z,34nm,0.9s						
TCOL	CIGO, UAF Yank	77.72	3	P	P	11 19 22.2	-1.2
	baz=355,SNR=5.7						
IL31		77.86	2	P	P	11 19 24.1	-0.1
IL31				IAmb	IAmb	11 19 54.8	
	comp=Z,53nm,1.8s						
ILAR	Eielson Array	77.86	2	P	P	11 19 24.3	+0.1
	comp=Z,1.7nm,0.9s,baz=320,slow=4.2,SNR=20						
ILAR				PKKPbc	PKKPbc	11 38 25.6	+0.2
	comp=Z,0.5nm,0.9s,baz=193,slow=3.7,SNR=3.2						
ILAR				LR	LR	11 57 22.5	
	comp=Z,328nm,20.4s,baz=343,slow=38						
	comp=Z,1.7nm,0.9s						
ILAR	Eielson Array	77.86	2	P	P	11 19 23.4	-0.8
YKA	Yellowknife Ar	77.89	348	P	P	11 19 24.6	+0.1
	comp=Z,11nm,0.8s,baz=24,slow=5.6,SNR=114						
YKA				LR	LR	11 55 52.1	
	comp=Z,922nm,20.4s,baz=45,slow=37						
	comp=Z,11nm,0.8s						
WES	Weston	77.91	315	IAMs_20	IAMs_20	11 54 37.7	
	comp=Z,1µm,20.0s						
EGAK	Eagle	77.94	360	P	P	11 19 23.0	-1.7
EGAK				IAmb	IAmb	11 19 30.8	
	comp=Z,41nm,1.4s						
EGAK	Eagle	77.94	360	P	P	11 19 24.0	-0.7
	baz=0.3,SNR=6.2						
CCB	Clear Creek Bu	77.95	3	IAmb	IAmb	11 19 31.0	
	comp=Z,27nm,1.0s						
CCB				IAMs_20	IAMs_20	11 56 15.1	
	comp=Z,814nm,20.0s						
NEA2	Nenana	77.95	3	P	P	11 19 24.6	-0.2
NEA2				IAmb	IAmb	11 19 31.1	
	comp=Z,23nm,1.1s						
NEA2	Nenana	77.95	3	P	P	11 19 24.8	+0.1
	baz=354,SNR=15						
WRH	Wood River Hil	78.12	3	IAmb	IAmb	11 19 31.3	
	comp=Z,62nm,1.6s						
J26L	Joseph Creek	78.20	1	IAmb	IAmb	11 19 32.1	
	comp=Z,40nm,1.6s						
J26L				IAMs_20	IAMs_20	11 55 29.8	
	comp=Z,861nm,21.0s						
J26L	Joseph Creek	78.20	1	P	P	11 19 26.4	+0.1
	baz=358						
HDA	Harding Lake	78.22	2	IAmb	IAmb	11 19 32.2	
	comp=Z,22nm,0.9s						
HDA	Harding Lake	78.22	2	P	P	11 19 26.0	-0.3
	baz=356,SNR=17						
J29M	Klondike Camp	78.23	359	IAmb	IAmb	11 19 33.1	
	comp=Z,70nm,1.6s						
J29M	Klondike Camp	78.23	359	P	P	11 19 26.0	-0.4
	baz=2.7						
LONY	Lake Ozonia	78.24	318	P	P	11 19 26.5	-0.3
	baz=48						
BPAW	Bear Paw Mtn.	78.34	4	IAmb	IAmb	11 19 33.3	
	comp=Z,43nm,1.2s						
BPAW	Bear Paw Mtn.	78.34	4	P	P	11 19 27.6	+0.6
	baz=352,SNR=23						
BBJI	Bungbulang	78.41	109	P	P	11 19 26.6	-1.5
WRGLY	Wrigley	78.45	352	P	P	11 19 28.0	+0.5
	baz=15						
CHUM	Lake Minchumin	78.48	5	P	P	11 19 27.3	-0.4
	baz=351						
JHJ	Hachijo jima 2	78.50	57	LR	LR	11 57 37.4	
	comp=Z,3µm,18.3s,baz=302,slow=38						
L61B	Northampton	78.64	315	IAMs_20	IAMs_20	11 52 17.8	
	comp=Z,1µm,20.0s						
L61B	Northampton	78.64	315	P	P	11 19 27.7	-1.3
	baz=49						
DAWY	Dawson	78.64	359	IAmb	IAmb	11 19 34.8	
	comp=Z,67nm,1.6s						
DAWY	Dawson	78.64	359	P	P	11 19 28.4	-0.2
	baz=1.8,SNR=5.9						
K27K	Chicken	78.69	0	IAmb	IAmb	11 19 36.0	
	comp=Z,34nm,1.1s						
K27K	Chicken	78.69	0	P	P	11 19 28.5	-0.4
	baz=360						
SCRK	Sand Creek	78.72	1	IAmb	IAmb	11 19 36.3	
	comp=Z,47nm,1.2s						
SCRK				IAMs_20	IAMs_20	11 55 57.5	
	comp=Z,871nm,21.0s						
SCRK	Sand Creek	78.72	1	P	P	11 19 28.8	-0.4
	baz=358,SNR=19						
MCK	McKinley	78.82	3	IAmb	IAmb	11 19 35.6	
	comp=Z,48nm,1.3s						
MCK	McKinley	78.82	3	P	P	11 19 29.3	-0.3
	baz=354,SNR=6.9						
K29M	Barlow Dome	78.83	358	P	P	11 19 29.0	-0.8
	baz=3.3						
K24K	Donnelly Dome	78.86	2	P	P	11 19 29.9	0.0
	baz=357,SNR=16						
K20K	Telida	78.87	6	IAmb	IAmb	11 19 36.2	
	comp=Z,28nm,1.1s						
K20K	Telida	78.87	6	P	P	11 19 29.3	-0.5
	baz=350,SNR=5.2						
KTH	Kantishna Hill	78.89	4	IAmb	IAmb	11 19 36.8	
	comp=Z,38nm,1.1s						
KTH				IAMs_20	IAMs_20	11 57 29.9	
	comp=Z,837nm,20.0s						
RIDG	Independent Ri	78.95	1	P	P	11 19 29.3	-1.1
RIDG				IAMs_20	IAMs_20	12 00 18.4	
	comp=Z,831nm,21.0s						
RIDG	Independent Ri	78.95	1	P	P	11 19 30.4	+0.1
	baz=357,SNR=6.1						
CAST	Castle Rocks	78.95	5	IAMs_20	IAMs_20	11 56 58.6	
	comp=Z,855nm,20.0s						
CAST	Castle Rocks	78.95	5	P	P	11 19 29.9	-0.4
	baz=352						
MAYO	Mayo, Yukon	79.02	357	P	P	11 19 30.3	-0.4
MAYO	Mayo, Yukon	79.02	357	P	P	11 19 30.1	-0.6
	baz=4.6						
TRF	Thorofare Moun	79.03	4	IAMs_20	IAMs_20	12 00 17.9	
	comp=Z,963nm,20.0s						
TRF	Thorofare Moun	79.03	4	P	P	11 19 30.2	-0.7
	baz=353						
DOT	Dot Lake	79.05	1	IAmb	IAmb	11 19 37.3	
	comp=Z,54nm,1.4s						
TTA	Tatalina	79.12	7	P	P	11 19 35.3	+3.9
TTA	Tatalina	79.12	7	P	P	11 19 30.5	-0.8
	baz=348						
RND	Reindeer	79.15	3	IAmb	IAmb	11 19 37.6	
	comp=Z,29nm,1.2s						
CMJI	Cimerak	79.22	109	P	P	11 19 31.6	-0.8
	comp=Z,56nm,0.9s						
KPJI	Karang Pucung	79.29	108	P	P	11 19 31.9	-0.9
	comp=Z,21nm,1.0s						
PPLA	Purkeypile	79.47	5	P	P	11 19 33.0	-0.2
	baz=351						
L29M	L29M	79.58	358	P	P	11 19 33.7	-0.1
	baz=2.8						
BCAR	Beaver Creek A	79.66	0	P	P	11 19 32.4	-1.8
L27K	Beaver Creek,	79.66	0	IAmb	IAmb	11 19 41.0	
	comp=Z,37nm,1.4s						
L27K	Beaver Creek,	79.66	0	P	P	11 19 33.5	-0.7
	baz=360,SNR=5.7						
L26K	Log Cabin Wild	79.69	1	IAmb	IAmb	11 19 41.0	
	comp=Z,50nm,1.5s						
L26K	Log Cabin Wild	79.69	1	P	P	11 19 34.3	-0.1

	baz=359,SNR=5.2						
PAX	**Paxson**	**79.70**	**2**	P	**P**	**11 19 33.6**	**-1.0**
	baz=357						
L20K	**Farewell, AK**	**79.75**	**6**	P	**P**	**11 19 34.0**	**-0.7**
	baz=350						
MENT	**Mentasta**	**79.77**	**1**	IAmb	IAmb	11 19 41.3	
	comp=Z,49nm,1.4s						
MENT	**Mentasta**	**79.77**	**1**	P	P	11 19 40.7	+5.9
	comp=Z,25nm,1.4s						
L19K	**White Mountain**	**79.97**	**6**	IAmb	IAmb	11 19 42.3	
	comp=Z,57nm,1.6s						
L19K	**White Mountain**	**79.97**	**6**	P	**P**	**11 19 35.9**	**0.0**
	baz=349						
M30M	**Minto, Yukon**	**80.07**	**358**	P	**P**	**11 19 36.2**	**-0.2**
	baz=3.8						
M29M	**Somme Creek**	**80.25**	**359**	P	**P**	**11 19 37.1**	**-0.4**
	baz=2.5						
FARO	**Faro, Yukon**	**80.28**	**356**	P	**P**	**11 19 37.6**	**0.0**
	baz=6.6						
M19K	**Big River Lodg**	**80.28**	**6**	IAmb	IAmb	11 19 44.0	
	comp=Z,80nm,1.6s						
M19K	**Big River Lodg**	**80.28**	**6**	P	**P**	**11 19 37.0**	**-0.6**
	baz=350						
PAL	**Palisades**	**80.28**	**315**	IAMs_20	IAMs_20	11 55 49.3	
	comp=Z,1μm,21.0s						
HARP	**HAARP**	**80.28**	**2**	P	**P**	**11 19 36.7**	**-0.9**
	baz=357						
BVCY	**Beaver Creek**	**80.31**	**360**	P	**P**	**11 19 37.5**	**-0.2**
	baz=0.6,SNR=5.9						
M26K	**Nabesna, AK**	**80.32**	**1**	P	**P**	**11 19 38.0**	**+0.2**
	baz=359,SNR=7.0						
M31M	**Drury Creek, Y**	**80.35**	**357**	P	**P**	**11 19 37.7**	**-0.2**
M31M				IAmb	IAmb	11 19 44.5	
	comp=Z,40nm,1.3s						
M31M	**Drury Creek, Y**	**80.35**	**357**	P	**P**	**11 19 37.4**	**-0.6**
	baz=5.8						
M27K	**Edge Creek, AK**	**80.37**	**0**	IAmb	IAmb	11 19 45.6	
	comp=Z,54nm,1.3s						
M27K	**Edge Creek, AK**	**80.37**	**0**	P	**P**	**11 19 37.6**	**-0.6**
	baz=360						
M20K	**Styx River**	**80.40**	**6**	IAMs_20	IAMs_20	11 58 26.0	
	comp=Z,923nm,20.0s						
M20K	**Styx River**	**80.40**	**6**	P	**P**	**11 19 37.4**	**-0.9**
	baz=351						
SKT	**Skwentna**	**80.42**	**5**	IAmb	IAmb	11 19 48.2	
	comp=Z,44nm,1.4s						
SKT	**Skwentna**	**80.42**	**5**	P	**P**	**11 19 37.8**	**-0.6**
	baz=352						
SADO	**Sadowa**	**80.52**	**320**	LR	LR	11 57 18.7	
	comp=Z,1μm,18.7s,baz=68,slow=37						
M24K	**Tolsona, Glenn**	**80.55**	**2**	P	**P**	**11 19 39.3**	**+0.2**
	baz=356						
BINY	**Binghamton**	**80.63**	**317**	IAMs_20	IAMs_20	11 53 47.4	
	comp=Z,2μm,22.0s						
BINY	**Binghamton**	**80.63**	**317**	P	**P**	**11 19 39.0**	**-0.8**
	baz=47						
M22K	**Willow**	**80.73**	**4**	P	**P**	**11 19 40.0**	**+0.1**
	baz=353						
SML	**Sawmill**	**80.77**	**3**	P	**P**	**11 19 39.0**	**-1.2**
SML				IAmb	IAmb	11 19 50.7	
	comp=Z,29nm,0.8s						
SML	**Sawmill**	**80.77**	**3**	P	**P**	**11 19 39.2**	**-1.1**
	baz=355						
SCM	**Sheep Creek Mo**	**80.78**	**3**	P	**P**	**11 19 39.7**	**-0.6**
	baz=355						
M23K	**Glacier View**	**80.81**	**3**	P	**P**	**11 19 39.6**	**-0.8**
	baz=355						
UGM	**Wanagama**	**80.86**	**107**	IAMs_20	IAMs_20	11 55 17.6	
	comp=Z,1μm,19.0s						
PMR	**Palmer**	**80.94**	**4**	P	P	11 19 45.9	+4.8
PMR	**Palmer**	**80.94**	**4**	P	**P**	**11 19 39.8**	**-1.3**
	baz=354						
YUK3	**Moose Creek**	**80.95**	**359**	P	**P**	**11 19 40.9**	**-0.5**
	baz=0.9,SNR=6.8						
SUA	**Susitna One**	**80.98**	**4**	P	**P**	**11 19 40.5**	**-0.9**
	baz=353						
N25K	**Chitina, Valde**	**81.09**	**1**	P	**P**	**11 19 40.9**	**-1.1**
	baz=358						
N31M	**Braeburn, Yuko**	**81.13**	**357**	P	**P**	**11 19 41.2**	**-0.9**
	baz=4.6						
SPCR	**Spurr Chakacha**	**81.15**	**5**	P	**P**	**11 19 41.2**	**-1.1**
	baz=352						
N20K	**Mount Spurr**	**81.15**	**5**	P	**P**	**11 19 41.2**	**-1.1**
	baz=352						
KNK	**Knik Glacier**	**81.16**	**3**	P	**P**	**11 19 42.0**	**-0.2**
	baz=354						
KLU	**Klutina**	**81.17**	**2**	P	**P**	**11 19 41.7**	**-0.8**
	baz=356						
N30M	**Aishikik Lake**	**81.20**	**358**	P	**P**	**11 19 42.2**	**-0.4**
	baz=3.6						
N16K	**Nishlik Lake**	**81.24**	**9**	P	**P**	**11 19 42.6**	**-0.1**
	baz=346						
N32M	**Quiet Lake**	**81.33**	**356**	P	**P**	**11 19 43.7**	**+0.4**
	baz=6.8						
MCARA	**McCarthy VSAT**	**81.34**	**1**	IAMs_20	IAMs_20	11 57 52.6	
	comp=Z,858nm,20.0s						
MCARA	**McCarthy VSAT**	**81.34**	**1**	P	**P**	**11 19 43.2**	**0.0**
	baz=359						
N19K	**Bonanza Creek**	**81.35**	**6**	P	**P**	**11 19 43.3**	**-0.1**
	baz=350						
YUK4	**Talbot Arm**	**81.36**	**359**	P	**P**	**11 19 42.7**	**-0.9**
	baz=2.4,SNR=7.8						
BBKI	**Banjar Baru**	**81.39**	**101**	P	**P**	**11 19 47.1**	**+2.9**
RC01	**Rabbit Creek A**	**81.41**	**4**	P	**P**	**11 19 43.6**	**0.0**
	baz=353						
YUK8	**Steele Glacier**	**81.43**	**359**	P	**P**	**11 19 43.7**	**-0.3**
	baz=1.4						
VRDI	**Verde Repeater**	**81.49**	**1**	IAMs_20	IAMs_20	11 57 56.6	
	comp=Z,876nm,20.0s						
KOTAN	**Kotaneelee Air**	**81.54**	**351**	P	**P**	**11 19 44.8**	**+0.5**
	baz=14						
BKB	**Balikpapan**	**81.64**	**98**	IAMs_20	IAMs_20	11 59 26.6	
	comp=Z,817nm,18.0s						
CAPN	**Captain Cook N**	**81.65**	**5**	P	**P**	**11 19 44.8**	**0.0**
	baz=352						
PWL	**Port Wells**	**81.72**	**3**	P	**P**	**11 19 45.2**	**0.0**
	baz=355						
YUK6	**Outpost Mounta**	**81.75**	**358**	P	**P**	**11 19 44.5**	**-1.2**
	baz=2.6						
HYT	**Haines Junctio**	**81.85**	**358**	IAmb	IAmb	11 19 52.6	
	comp=Z,50nm,1.2s						
HYT	**Haines Junctio**	**81.85**	**358**	P	**P**	**11 19 46.3**	**+0.2**
	baz=3.2,SNR=5.3						
O30N	**Mendenhall**	**81.86**	**357**	P	**P**	**11 19 45.9**	**-0.2**
	baz=4.4						
PWJI	**Pagerwojo**	**81.91**	**107**	P	**P**	**11 19 45.4**	**-1.5**
	comp=Z,26nm,1.1s						
FFC	**Flin Flon**	**81.94**	**338**	P	**P**	**11 19 45.9**	**-0.6**
FFC	**Flin Flon**	**81.94**	**338**	IAMs_20	IAMs_20	11 58 43.2	
	comp=Z,1μm,19.0s						
FFC	**Flin Flon**	**81.94**	**338**	P	**P**	**11 19 45.9**	**-0.6**
FFC				pmax	pmax		
	comp=Z,19nm,1.1s						
FFC				MLR	MLR		
	comp=Z,1μm,19.0s						
O28M	**Mount Upton**	**81.95**	**359**	P	**P**	**11 19 46.7**	**-0.1**
	baz=1.1						
O19K	**Port Alsworth**	**81.97**	**6**	P	**P**	**11 19 46.7**	**+0.2**
	baz=350						
O17K	**Koliganek Bris**	**82.11**	**8**	P	**P**	**11 19 47.5**	**+0.2**
	baz=348						
SHEM	**Shemya Is, Ala**	**82.12**	**25**	LR	LR	12 01 25.7	
	comp=Z,1μm,18.3s,baz=308,slow=40						
EYAK	**Cordova Ski Ar**	**82.12**	**2**	P	**P**	**11 19 47.3**	**0.0**
	baz=357						
O16K	**Kokwok River B**	**82.18**	**8**	P	**P**	**11 19 46.9**	**-0.7**
	baz=347						
O18K	**Koktuh Hills**	**82.23**	**7**	P	**P**	**11 19 49.1**	**+1.2**
	baz=349						
P33M	**Teslin, Yukon**	**82.25**	**356**	P	**P**	**11 19 47.6**	**-0.6**
	baz=7.0						
O29M	**Mount Kennedy**	**82.40**	**358**	P	**P**	**11 19 47.2**	**-1.8**
	baz=2.4						
SEW	**Seward**	**82.41**	**4**	P	**P**	**11 19 47.7**	**-1.1**
	baz=354						
LIRD	**Liard River Hi**	**82.48**	**352**	P	**P**	**11 19 49.4**	**+0.1**
	baz=12						
P30M	**Million Dollar**	**82.54**	**358**	P	**P**	**11 19 49.2**	**-0.4**
	baz=3.7						
P16K	**Nushagak River**	**82.74**	**8**	P	**P**	**11 19 48.8**	**-1.8**
	baz=347						
SSPA	**Standing Stone**	**82.74**	**317**	IAMs_20	IAMs_20	11 57 21.4	
	comp=Z,1μm,19.0s						
P17K	**Kvichak River**	**82.75**	**8**	P	**P**	**11 19 48.4**	**-2.2**
	baz=348						
ERPA	**Erie**	**82.82**	**319**	P	**P**	**11 19 50.4**	**-0.9**
	baz=45						
P32M	**Atlin**	**82.93**	**356**	P	**P**	**11 19 50.8**	**-0.8**
	baz=6.3						
MPSI	**Mapaga**	**83.03**	**95**	P	**P**	**11 19 54.0**	**+1.2**
	comp=Z,62nm,1.0s,comp=Z,884nm						
SKAG	**Skagway**	**83.14**	**357**	P	**P**	**11 19 51.5**	**-1.1**
	baz=5.0						
GLMI	**Grayling**	**83.17**	**323**	IAMs_20	IAMs_20	11 57 22.5	
	comp=Z,847nm,20.0s						
TOLI2	**Tolitoli**	**83.26**	**94**	P	**P**	**11 19 55.2**	**+1.2**
GMJI	**Gumukmas**	**83.32**	**106**	P	**P**	**11 19 53.8**	**-0.4**
	comp=Z,40nm,1.0s						
DAV	**Davao City (W)**	**83.48**	**86**	LR	LR	12 02 53.4	
	comp=Z,927nm,18.5s,baz=332,slow=40						
ABJI	**Asem Bagus**	**83.62**	**105**	P	**P**	**11 19 56.6**	**+0.8**
	comp=Z,104nm,0.9s						
ULM	**Lac du Bonnet**	**83.69**	**332**	P	**P**	**11 19 55.4**	**-0.3**
	comp=Z,14nm,0.8s,baz=40,slow=4.1,SNR=26						
ULM				LR	LR	12 00 46.9	
	comp=Z,841nm,18.5s,baz=34,slow=38						
	comp=Z,14nm,0.8s						
ULM	**Lac du Bonnet**	**83.69**	**332**	IAmb	IAmb	11 20 00.7	
	comp=Z,23nm,1.1s						
Q20K	**Shuyak Island**	**83.70**	**6**	P	**P**	**11 19 55.0**	**-0.5**
	baz=351						
Q17K	**Contact Creek**	**83.72**	**8**	P	**P**	**11 19 55.2**	**-0.7**
	baz=349						
DLBC	**Dease Lake**	**83.82**	**354**	LR	LR	12 01 46.8	
	comp=Z,541nm,18.8s,baz=9.5,slow=39						
DLBC	**Dease Lake**	**83.82**	**354**	P	**P**	**11 19 56.7**	**+0.4**
	baz=9.2						
EYMN	**Ely**	**83.84**	**329**	IAMs_20	IAMs_20	11 57 12.7	
	comp=Z,1μm,22.0s						
EYMN	**Ely**	**83.84**	**329**	P	**P**	**11 19 55.1**	**-1.4**
	baz=38						
JCJ	**Chichijima**	**83.85**	**61**	LR	LR	12 01 07.8	
	comp=Z,2μm,18.8s,baz=352,slow=38						
JAGI	**Jajag, Banyuwa**	**83.98**	**105**	P	**P**	**11 19 57.6**	**-0.1**
JAGI	**Jajag, Banyuwa**	**83.98**	**105**	P	**P**	**11 19 57.7**	**0.0**
	comp=Z,80nm,0.9s						
CBN	**Corbin Frederi**	**84.14**	**315**	IAMs_20	IAMs_20	11 59 24.7	
	comp=Z,827nm,19.0s						
COWI	**Conover**	**84.28**	**326**	IAMs_20	IAMs_20	12 00 14.5	
	comp=Z,1μm,18.0s						
B35A	**Bob, Littlefor**	**84.41**	**330**	IAmb	IAmb	11 20 04.7	
	comp=Z,27nm,1.1s						
MCWV	**Mont Chateau**	**84.49**	**317**	P	**P**	**11 19 58.8**	**-1.2**
	baz=44						
KDAK	**Kodiak Island**	**84.51**	**6**	LR	LR	12 02 27.1	
	comp=Z,799nm,19.1s,baz=0.4,slow=39						
SRBI	**Singaraja**	**84.56**	**104**	P	**P**	**11 20 01.5**	**+0.9**
	comp=Z,38nm,1.0s						
MRSI	**Marisa**	**84.56**	**94**	P	**P**	**11 20 02.1**	**+1.4**
	comp=Z,45nm,1.0s,comp=Z,672nm						
S31K	**Pelican**	**84.67**	**357**	P	**P**	**11 19 58.7**	**-1.8**
	baz=4.2						
O53A	**New Philadelph**	**84.80**	**318**	P	**P**	**11 19 59.7**	**-1.8**
	baz=44						
AGMN	**Agassiz Nation**	**85.29**	**331**	IAMs_20	IAMs_20	11 59 26.0	
	comp=Z,1μm,21.0s						
AGMN	**Agassiz Nation**	**85.29**	**331**	P	**P**	**11 20 03.4**	**-0.4**
	baz=35						
WAPA	**Wapiti River**	**85.61**	**347**	IAmb	IAmb	11 20 12.1	
	comp=Z,40nm,1.2s						
P52A	**Corning**	**85.74**	**318**	IAMs_20	IAMs_20	12 00 02.6	
	comp=Z,1μm,19.0s						
P52A	**Corning**	**85.74**	**318**	P	**P**	**11 20 05.5**	**-0.7**
	baz=43						
ROSB	**Rosrio**	**85.86**	**263**	*e*P	**P**	**11 20 07.4**	**+0.2**
FALS	**False Pass**	**86.00**	**12**	P	**P**	**11 20 05.3**	**-1.8**
	baz=343						
KAPI	**Kappang**	**86.18**	**99**	LR	LR	12 04 52.2	
	comp=Z,368nm,18.7s,baz=308,slow=40						
KAPI	**Kappang**	**86.18**	**99**	P	**P**	**11 20 07.6**	**-1.1**
KAPI	**Kappang**	**86.18**	**99**	P	**P**	**11 20 11.4**	**+2.7**
KAPI	**Kappang**	**86.18**	**99**	P	**P**	**11 20 07.6**	**-1.1**
KAPI				pmax	pmax		
	comp=Z,112nm,1.2s						
TWSI	**Taliwang, Sumb**	**86.25**	**104**	P	**P**	**11 20 07.3**	**-1.7**
BRLDA	**Berland Lookou**	**86.31**	**346**	IAmb	IAmb	11 20 15.5	
	comp=Z,37nm,1.2s						
CNNC	**Cliffs of the**	**86.51**	**313**	IAMs_20	IAMs_20	11 59 43.4	
	comp=Z,1μm,20.0s						
SPMN	**Marine on St.**	**86.55**	**328**	P	**P**	**11 20 08.7**	**-1.4**
	baz=37						
BLA	**Blacksburg**	**86.55**	**316**	IAMs_20	IAMs_20	11 59 04.4	
	comp=Z,1μm,22.0s						
D32A	**Dogwood Acres,**	**86.69**	**331**	IAmb	IAmb	11 20 10.9	
	comp=Z,16nm,0.8s						
L44A	**Lake County Fo**	**86.74**	**323**	IAMs_20	IAMs_20	12 00 29.9	
	comp=Z,888nm,19.0s						
O48B	**Farmland**	**86.84**	**320**	P	**P**	**11 20 10.3**	**-1.4**
	baz=41						
PLAI	**Plampang**	**86.99**	**103**	P	**P**	**11 20 11.6**	**-1.1**
PLAI	**Plampang**	**86.99**	**103**	P	**P**	**11 20 10.7**	**-2.0**
MDND	**Maddock**	**87.05**	**333**	IAmb	IAmb	11 20 18.3	
	comp=Z,31nm,1.1s						
MDND	**Maddock**	**87.05**	**333**	P	**P**	**11 20 10.8**	**-1.7**
	baz=32						
JFWS	**Jewell Farm**	**87.26**	**325**	IAMs_20	IAMs_20	12 02 35.6	
	comp=Z,1μm,19.0s						
JFWS	**Jewell Farm**	**87.26**	**325**	P	**P**	**11 20 12.2**	**-1.4**
	baz=38						
F33A	**5 Mile Ranch,**	**87.48**	**330**	IAmb	IAmb	11 20 15.1	
	comp=Z,13nm,0.9s						
MDP	**Montagnes des**	**87.77**	**275**	LR	LR	11 55 24.9	
	comp=Z,264nm,21.7s,baz=68,slow=33						
DGMT	**Dagmar**	**88.07**	**336**	P	**P**	**11 20 17.6**	**+0.1**
DGMT	**Dagmar**	**88.07**	**336**	IAMs_20	IAMs_20	12 04 40.3	
	comp=Z,935nm,22.0s						
DGMT	**Dagmar**	**88.07**	**336**	P	**P**	**11 20 16.8**	**-0.6**
	baz=29						
HDIL	**Hopedale**	**88.66**	**323**	IAMs_20	IAMs_20	12 05 29.6	
	comp=Z,936nm,18.0s						
HDIL	**Hopedale**	**88.66**	**323**	P	**P**	**11 20 18.9**	**-1.4**
	baz=39						
TMAB	**Tom-Au,PA,Br**	**88.68**	**266**	*e*P	**P**	**11 20 20.9**	**+0.1**
SANI	**Sanana**	**89.30**	**93**	P	**P**	**11 20 25.4**	**+1.7**
ECSD	**EROS Data Cent**	**89.35**	**329**	IAMs_20	IAMs_20	12 00 22.5	
	comp=Z,957nm,20.0s						
ECSD	**EROS Data Cent**	**89.35**	**329**	IAmb	IAmb	11 21 35.8	
	comp=Z,35nm,1.9s						
ECSD	**EROS Data Cent**	**89.35**	**329**	P	**P**	**11 20 22.1**	**-1.5**
	baz=34						
SCIA	**State Center**	**89.39**	**326**	IAMs_20	IAMs_20	12 02 02.0	
	comp=Z,943nm,21.0s						
TKL	**Tuckaleechee C**	**89.53**	**316**	LR	LR	12 01 08.2	
	comp=Z,902nm,21.2s,baz=50,slow=36						
SUSD	**Miller**	**89.68**	**331**	P	**P**	**11 20 24.3**	**-0.9**
	baz=32,SNR=7.3						
BBB	**Bella Bella**	**89.80**	**352**	LR	LR	12 04 43.3	
	comp=Z,425nm,20.2s,baz=37,slow=38						
SJG	**San Juan**	**90.13**	**293**	LR	LR	11 56 28.1	
	comp=Z,206nm,21.7s,baz=79,slow=33						
EGMT	**Eagleton**	**90.14**	**339**	P	**P**	**11 20 26.8**	**-0.5**
EGMT				IAmb	IAmb	11 20 32.8	
	comp=Z,59nm,1.9s						
EGMT				IAMs_20	IAMs_20	12 02 51.0	
	comp=Z,1μm,20.0s						
EGMT	**Eagleton**	**90.14**	**339**	P	**P**	**11 20 26.3**	**-1.0**
	baz=25						
LAO	**LASA Array**	**90.29**	**337**	IAMs_20	IAMs_20	12 05 37.9	
	comp=Z,1μm,20.0s						
LAO	**LASA Array**	**90.29**	**337**	P	**P**	**11 20 28.1**	**+0.1**
	baz=27,SNR=16						
LLLB	**Lillooet**	**90.45**	**348**	IAmb	IAmb	11 20 35.5	
	comp=Z,21nm,1.2s						
MCPB	**Macapa, AP**	**90.61**	**270**	*e*P	**P**	**11 20 30.1**	**+0.2**
P40A	**Paris**	**90.77**	**324**	IAmb	IAmb	11 20 35.6	
	comp=Z,31nm,1.4s						
N35A	**Tabor**	**91.31**	**327**	IAmb	IAmb	11 20 34.6	
	comp=Z,23nm,1.2s						
WVT	**Waverly**	**91.34**	**319**	P	**P**	**11 20 32.2**	**-0.8**
	baz=40						
CCM	**Cathedral Cave**	**91.55**	**323**	P	**P**	**11 20 31.9**	**-2.0**
CCM				IAmb	IAmb	11 20 33.9	
	comp=Z,19nm,1.4s						
CCM	**Cathedral Cave**	**91.55**	**323**	P	**P**	**11 20 31.9**	**-2.0**
CCM				pmax	pmax		
	comp=Z,19nm,1.4s						
CCM				MLR	MLR		
	comp=Z,1μm,18.0s						
CCM	**Cathedral Cave**	**91.55**	**323**	P	**P**	**11 20 33.1**	**-0.8**
	baz=38						
NEW	**Newport**	**91.77**	**344**	IAMs_20	IAMs_20	12 08 48.7	
	comp=Z,1μm,19.0s						
NEW	**Newport**	**91.77**	**344**	P	**P**	**11 20 35.5**	**+0.7**
	baz=19,SNR=27						
RSSD	**Black Hills**	**91.82**	**334**	P	**P**	**11 20 35.0**	**-0.3**
RSSD				IAmb	IAmb	11 20 36.2	
	comp=Z,9.5nm,0.9s						
RSSD	**Black Hills**	**91.82**	**334**	P	**P**	**11 20 35.0**	**-0.3**
RSSD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
RSSD	**Black Hills**	**91.82**	**334**	P	**P**	**11 20 34.6**	**-0.7**
	baz=29						
R40A	**Maddies Statio**	**91.86**	**323**	IAmb	IAmb	11 20 40.8	
	comp=Z,15nm,0.9s						
BGNE	**Belgrade**	**91.91**	**329**	P	**P**	**11 20 35.1**	**-0.5**
	baz=33						
B08A	**Colville Reser**	**92.14**	**345**	P	**P**	**11 20 35.7**	**-0.8**
B08A				IAmb	IAmb	11 20 42.2	
	comp=Z,17nm,1.4s						
GCMT	**Greycliff**	**92.14**	**338**	P	**P**	**11 20 37.2**	**+0.5**
PRPB	**Parauapebas**	**92.34**	**264**	*e*P	**P**	**11 20 38.3**	**+0.4**
MSO	**Missoula**	**92.36**	**341**	P	**P**	**11 20 37.9**	**+0.3**
	baz=22,SNR=6.6						
C09A	**Chrisman Ranch**	**92.45**	**345**	IAmb	IAmb	11 20 39.6	
	comp=Z,7.4nm,0.8s						
SOEI	**Soe**	**92.61**	**100**	P	**P**	**11 20 40.5**	**+1.3**
	comp=Z,27nm,1.2s						
RLMT	**Red Lodge**	**92.63**	**338**	IAmb	IAmb	11 20 40.6	
	comp=Z,13nm,1.0s						
RLMT				IAMs_20	IAMs_20	12 03 30.0	
	comp=Z,875nm,20.0s						
RLMT	**Red Lodge**	**92.63**	**338**	P	**P**	**11 20 39.6**	**+0.6**
	baz=25,SNR=16						
BOZ	**Bozeman (W)**	**92.88**	**339**	IAMs_20	IAMs_20	12 04 18.5	
	comp=Z,1μm,21.0s						
BOZ	**Bozeman (W)**	**92.88**	**339**	P	**P**	**11 20 40.1**	**-0.1**
	baz=23,SNR=5.2						
KSU1	**Kansas State U**	**93.18**	**327**	IAmb	IAmb	11 20 42.6	
	comp=Z,15nm,0.9s						
KSU1	**Kansas State U**	**93.18**	**327**	P	**P**	**11 20 40.9**	**-0.5**
	baz=34						
LRAL	**Lakeview Retre**	**93.26**	**317**	P	**P**	**11 20 40.0**	**-1.9**
	baz=40						
SDDR	**Presa de Saban**	**93.27**	**297**	IAMs_20	IAMs_20	12 00 42.6	
	comp=Z,1μm,22.0s						
JANB	**Januaria**	**93.44**	**254**	*e*P	**P**	**11 20 43.5**	**+0.6**
LTY	**Liberty**	**93.46**	**346**	IAmb	IAmb	11 20 47.9	
	comp=Z,32nm,1.8s						
LKWY	**Lake**	**93.47**	**338**	IAmb	IAmb	11 20 47.1	
	comp=Z,11nm,1.1s						
YMR	**Madison River**	**93.55**	**339**	IAmb	IAmb	11 20 53.7	
	comp=Z,22nm,1.5s						
H17A	**Grant Village**	**93.68**	**338**	IAmb	IAmb	11 20 55.8	
	comp=Z,17nm,1.4s						
H17A	**Grant Village**	**93.68**	**338**	P	**P**	**11 20 45.7**	**+1.7**
	baz=24						
YFT	**Old Faithful**	**93.71**	**338**	IAmb	IAmb	11 20 47.5	
	comp=Z,11nm,0.9s						
OGNE	**Ogallala**	**93.85**	**331**	IAMs_20	IAMs_20	12 09 20.5	
	comp=Z,704nm,19.0s						
OGNE	**Ogallala**	**93.85**	**331**	P	**P**	**11 20 43.5**	**-1.0**
	baz=30						
F10A	**Beach Ranch, E**	**93.95**	**343**	P	**P**	**11 20 44.3**	**-0.6**
K22A	**Casper**	**93.97**	**335**	IAmb	IAmb	11 20 45.1	
	comp=Z,13nm,0.8s						
K22A	**Casper**	**93.97**	**335**	P	**P**	**11 20 43.4**	**-1.8**
	baz=27						
FLWY	**Flagg Ranch**	**94.00**	**338**	IAmb	IAmb	11 20 52.3	
	comp=Z,25nm,1.3s						
FLWY				IAMs_20	IAMs_20	12 07 51.2	
	comp=Z,1μm,19.0s						
HAWA	**Hanford**	**94.06**	**345**	IAMs_20	IAMs_20	12 10 17.4	
	comp=Z,918nm,20.0s						
MOOW	**Moose Ponds**	**94.32**	**338**	IAmb	IAmb	11 20 57.1	
	comp=Z,15nm,1.4s						
MOOW				IAMs_20	IAMs_20	12 08 08.6	
	comp=Z,1μm,20.0s						
U38A	**Gravette**	**94.34**	**324**	IAmb	IAmb	11 20 47.8	
	comp=Z,12nm,1.1s						
GUMO	**Guam**	**94.39**	**69**	LR	LR	12 07 21.6	
	comp=Z,370nm,18.9s,baz=326,slow=38						
R32A	**Long Quarter,**	**94.65**	**328**	IAmb	IAmb	11 20 49.4	
	comp=Z,17nm,1.2s						
PHWY	**Pilot Hill**	**94.80**	**334**	P	**P**	**11 20 47.8**	**-1.4**
PHWY				IAmb	IAmb	11 22 04.2	
	comp=Z,13nm,0.9s						
PHWY				IAMs_20	IAMs_20	12 07 34.6	
	comp=Z,869nm,18.0s						
BW06	**Boulder Array**	**94.85**	**337**	IAMs_20	IAMs_20	12 10 22.8	
	comp=Z,949nm,18.0s						
BW06	**Boulder Array**	**94.85**	**337**	P	**P**	**11 20 45.7**	**-3.7**
	baz=25						
PDAR	**Pinedale Array**	**94.85**	**337**	P	**P**	**11 20 48.5**	**-0.9**
	comp=Z,1.7nm,0.9s,baz=66,slow=2.8,SNR=12						
PDAR				LR	LR	12 05 33.1	
	comp=Z,580nm,19.5s,baz=32,slow=37						
	comp=Z,1.7nm,0.9s						
PDAR	**Pinedale Array**	**94.85**	**337**	P	**P**	**11 20 47.5**	**-1.8**
BRIGG	**Briggsdale**	**95.02**	**332**	IAMs_20	IAMs_20	12 09 36.5	
	comp=Z,1μm,21.0s						
KAN09	**Caldwell North**	**95.25**	**326**	IAmb	IAmb	11 20 51.2	
	comp=Z,13nm,0.9s						
KAN01	**Argonia South**	**95.30**	**326**	IAmb	IAmb	11 20 50.9	
	comp=Z,8.6nm,0.7s						
AHID	**Auburn Hatcher**	**95.32**	**338**	IAMs_20	IAMs_20	12 08 57.2	
	comp=Z,967nm,20.0s						
N23A	**Red Feather La**	**95.33**	**334**	IAmb	IAmb	11 20 52.7	
	comp=Z,11nm,1.0s						
N23A	**Red Feather La**	**95.33**	**334**	P	**P**	**11 20 50.3**	**-1.3**
	baz=28						
TUL1	**Leonard**	**95.43**	**324**	IAmb	IAmb	11 20 51.4	
	comp=Z,13nm,1.1s						
TUL1	**Leonard**	**95.43**	**324**	P	**P**	**11 20 50.4**	**-1.4**
	baz=35						
MIAR	**Mount Ida**	**95.48**	**322**	P	**P**	**11 20 50.9**	**-1.1**
	baz=36						
HLID	**Hailey**	**95.52**	**341**	IAMs_20	IAMs_20	12 06 19.3	
	comp=Z,1μm,21.0s						
HLID	**Hailey**	**95.52**	**341**	P	**P**	**11 20 48.9**	**-3.4**
	baz=21						
OK046	**Pawnee Station**	**95.54**	**325**	IAmb	IAmb	11 20 57.8	
	comp=Z,23nm,1.4s						
OK046				IAMs_20	IAMs_20	12 05 18.8	
	comp=Z,858nm,20.0s						
OK050	**Pawnee Station**	**95.58**	**325**	IAMs_20	IAMs_20	12 05 21.7	
	comp=Z,1μm,21.0s						
KSCO	**Kaye Shedlock’**	**95.75**	**331**	P	**P**	**11 20 52.6**	**-0.7**
	baz=30						
OK032	**Salt Plains WL**	**95.79**	**326**	IAMs_20	IAMs_20	12 07 05.1	
	comp=Z,1μm,18.0s						
OK053	**SW of W Deep R**	**95.81**	**325**	IAMs_20	IAMs_20	12 09 55.7	
	comp=Z,948nm,18.0s						
OK052	**Battle Ridge R**	**95.83**	**325**	IAMs_20	IAMs_20	12 09 50.4	
	comp=Z,1μm,18.0s						
OK033	**Mehan**	**95.85**	**325**	IAMs_20	IAMs_20	12 09 50.9	
	comp=Z,902nm,19.0s						
OK030	**Cody Creek RV**	**95.88**	**325**	IAMs_20	IAMs_20	12 09 57.6	
	comp=Z,951nm,18.0s						
OK031	**S. Brethren Rd**	**95.88**	**325**	IAMs_20	IAMs_20	12 09 58.7	
	comp=Z,959nm,19.0s						
MBWA	**Marble Bar**	**96.08**	**112**	IAMs_20	IAMs_20	12 01 56.8	
	comp=Z,905nm,21.0s						
ISCO	**Idaho Springs**	**96.18**	**333**	IAMs_20	IAMs_20	12 07 46.2	
	comp=Z,983nm,19.0s						
ISCO	**Idaho Springs**	**96.18**	**333**	P	**P**	**11 20 54.6**	**-1.0**
	baz=28						
OK029	**Liberty Lake**	**96.29**	**325**	IAMs_20	IAMs_20	12 10 24.5	
	comp=Z,1μm,18.0s						
OK038	**West end E0370**	**96.29**	**327**	IAMs_20	IAMs_20	12 06 45.5	
	comp=Z,1μm,20.0s						
OK025	**Westminster Rd**	**96.41**	**325**	IAMs_20	IAMs_20	12 06 58.8	
	comp=Z,975nm,21.0s						
HWUT	**Hardware Ranch**	**96.52**	**338**	IAMs_20	IAMs_20	12 11 18.9	
	comp=Z,961nm,18.0s						
BDFB	**Brasilia**	**96.63**	**255**	P	**P**	**11 20 56.5**	**-1.1**
	comp=Z,1.8nm,0.6s,baz=8.1,slow=7.1,SNR=2.0						
BDFB				LR	LR	12 06 36.8	
	comp=Z,566nm,18.8s,baz=73,slow=37						
	comp=Z,1.8nm,0.6s						
J08A	**Circle Bar Ran**	**96.72**	**343**	IAmb	IAmb	11 21 30.6	
	comp=Z,10.0nm,1.5s						
HVU	**Hansel Valley**	**96.72**	**339**	IAmb	IAmb	11 21 02.5	
	comp=Z,10.0nm,1.4s						
O20A	**White River Ci**	**96.80**	**335**	IAmb	IAmb	11 21 03.7	
	comp=Z,8.7nm,1.1s						
O20A	**White River Ci**	**96.80**	**335**	P	**P**	**11 20 56.7**	**-1.5**
	baz=26						
RDMU	**Red Mountain**	**96.84**	**336**	IAmb	IAmb	11 20 58.8	
	comp=Z,7.9nm,1.0s						
SMCO	**Snowmass**	**97.22**	**334**	IAMs_20	IAMs_20	12 08 24.5	
	comp=Z,901nm,18.0s						
WMOK	**Wichita Mounta**	**97.77**	**326**	IAMs_20	IAMs_20	12 11 19.6	
	comp=Z,1μm,18.0s						
WMOK	**Wichita Mounta**	**97.77**	**326**	P	**P**	**11 21 01.2**	**-1.3**

	baz=33						
SDCO	**Great Sand Dun**	**97.95**	**332**	IAMs_20	IAMs_20	12 09 08.0	
	comp=Z,1µm,19.0s						
SDCO	**Great Sand Dun**	**97.95**	**332**	P	**P**	**11 21 01.4**	**-2.1**
	baz=28						
DUG	**Dugway, Tooele**	**98.19**	**338**	P	**P**	**11 21 03.7**	**-0.7**
	baz=23						
ELK	**Elko**	**98.37**	**340**	LR	LR	12 08 47.8	
	comp=Z,832nm,19.1s,baz=23,slow=38						
ELK	**Elko**	**98.37**	**340**	P	**P**	**11 21 05.2**	**-0.1**
ELK				IAmb	IAmb	11 21 11.8	
	comp=Z,8.7nm,1.4s						
ELK	**Elko**	**98.37**	**340**	P	**P**	**11 21 05.2**	**-0.1**
ELK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
HUMO	**Hull Mountain**	**98.37**	**346**	IAMs_20	IAMs_20	12 05 54.5	
	comp=Z,948nm,21.0s						
S22A	**4UR Ranch, Cre**	**98.44**	**333**	P	**P**	**11 21 04.5**	**-1.3**
	baz=27						
PV15	**Paradox Valley**	**98.49**	**334**	IAmb	IAmb	11 21 08.3	
	comp=Z,8.3nm,1.0s						
MOD	**Modoc Plateau**	**98.51**	**344**	IAMs_20	IAMs_20	12 11 07.2	
	comp=Z,1µm,20.0s						
PV23	**Carpenter Ridg**	**98.57**	**335**	IAmb	IAmb	11 21 08.4	
	comp=Z,8.8nm,0.9s						
PV11	**David Mesa, Pa**	**98.66**	**335**	IAmb	IAmb	11 21 08.8	
	comp=Z,13nm,1.1s						
FITZ	**Fitzroy Crossi**	**98.68**	**106**	P	Pdif	11 21 07.8	+1.2
PV13	**Radium Mtn., P**	**98.77**	**334**	IAmb	IAmb	11 22 50.1	
	comp=Z,9.7nm,1.6s						
YBH	**Yreka Blue Hor**	**99.17**	**346**	LR	LR	12 10 13.4	
	comp=Z,390nm,18.5s,baz=10,slow=38						
YBH	**Yreka Blue Hor**	**99.17**	**346**	IAMs_20	IAMs_20	12 13 49.6	
	comp=Z,762nm,18.0s						
ABTX	**Abilene, Hawle**	**99.93**	**325**	P	**Pdif**	**11 21 11.2**	**-1.0**
	baz=32						
ANMO	**Albuquerque**	**100.78**	**331**	IAMs_20	IAMs_20	12 13 53.0	
	comp=Z,1µm,19.0s						
ANMO	**Albuquerque**	**100.78**	**331**	*i* P	**Pdif**	**11 21 15.2**	**-0.9**
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SPB	**Sao Paulo**	**100.92**	**249**	IAMs_20	IAMs_20	12 14 33.6	
	comp=Z,791nm,20.0s						
ORV	**Oroville**	**101.02**	**344**	IAMs_20	IAMs_20	12 11 56.6	
	comp=Z,864nm,20.0s						
NVAR	**Mina Array Bea**	**101.34**	**342**	P	**Pdif**	**11 21 18.0**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=50,slow=4.3,SNR=4.1						
NVAR				PP	**PP**	**11 25 26.5**	**-0.2**
	comp=Z,0.4nm,0.9s,baz=30,slow=6.2,SNR=2.3						
Y22D	**IRIS PASSCAL I**	**101.73**	**331**	IAMs_20	IAMs_20	12 11 24.1	
	comp=Z,887nm,19.0s						
WUAZ	**Wupatki**	**102.03**	**335**	IAMs_20	IAMs_20	12 09 54.8	
	comp=Z,1µm,22.0s						
CMB	**Columbia Colle**	**102.22**	**343**	IAMs_20	IAMs_20	12 11 15.6	
	comp=Z,904nm,20.0s						
MCCM	**Marconi Confer**	**102.66**	**345**	IAMs_20	IAMs_20	12 13 51.1	
	comp=Z,893nm,20.0s						
WRA	**Warramunga Arr**	**106.44**	**103**	Pdiff	**Pdif**	**11 21 41.3**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=323,slow=3.9,SNR=3.4						
WRA				PKiKP	**PKiKP**	**11 25 51.8**	**-0.5**
	comp=Z,0.7nm,0.9s,baz=315,slow=2.0,SNR=2.5						
WRA				PP	**PP**	**11 26 07.9**	**+1.7**
	comp=Z,2.0nm,1.0s,baz=299,slow=9.0,SNR=5.1						
TGUH	**Tegucigalpa,Un**	**107.64**	**304**	IAMs_20	IAMs_20	12 05 11.8	
	comp=Z,589nm,22.0s						
ASAR	**Alice Springs**	**108.18**	**106**	Pdiff	**Pdif**	**11 21 49.1**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=316,slow=5.3,SNR=4.7						
ASAR				PKiKP	**PKiKP**	**11 25 55.0**	**-0.4**
	comp=Z,1.5nm,1.0s,baz=322,slow=2.1,SNR=5.8						
ASAR				PP	**PP**	**11 26 20.6**	**+1.5**
	comp=Z,1.0nm,0.9s,baz=304,slow=7.2,SNR=6.1						
STKA	**Stephens Creek**	**118.25**	**110**	PKP	**PKiKP**	**11 26 15.3**	**+0.9**
	comp=Z,3.6nm,1.0s,baz=175,slow=1.9,SNR=3.7						
AC02	**Maricunga**	**119.14**	**257**		**PKPdf**	**11 26 15.8**	**-1.0**
PLCA	**Paso Flores**	**126.26**	**243**	PKP	**PKPdf**	**11 26 29.5**	**-0.1**
	comp=Z,6.7nm,1.1s,baz=71,slow=4.1,SNR=6.9						
QSPA	**South Pole Qui**	**127.45**	**180**	PKP	**PKPdf**	**11 26 30.0**	**-0.9**
	comp=Z,7.1nm,0.9s,baz=46,slow=0.9,SNR=14						
QSPA	**South Pole Qui**	**127.45**	**180**		**PKPdf**	**11 26 29.8**	**-1.2**
DZM	**Mont Dzumac**	**132.90**	**86**	*e*LR	LR	12 09 01.1	
	comp=Z,951nm,21.0s						
DZM	**Mont Dzumac**	**132.90**	**86**	PKP	**PKPdf**	**11 26 40.6**	**-2.1**
	comp=Z,5.2nm,0.8s,baz=252,slow=18,SNR=1.7						
WVZ	**Waitaha Valley**	**143.63**	**114**	P	**PKPdf**	**11 27 00.9**	**-0.7**
ODZ	**Otahua Downs**	**143.80**	**117**		**PKPdf**	**11 27 02.0**	**+0.1**
HHSZ	**Highcliff Hill**	**143.83**	**119**	P	**PKiKP**	**11 27 10.9**	**+5.5**
RPZ	**Rata Peaks**	**143.95**	**115**	PKPdf	PKPbc	11 27 00.8	+0.7
RPZ	**Rata Peaks**	**143.95**	**115**	P	PKPbc	11 27 01.1	+1.0
DSZ	**Denniston Nort**	**144.22**	**112**		**PKPab**	**11 27 00.1**	**-0.5**
DSZ	**Denniston Nort**	**144.22**	**112**	P	**PKPdf**	**11 27 02.2**	**-0.6**
QRZ	**Quartz Range**	**144.60**	**110**	P	**PKPab**	**11 27 01.3**	**-0.7**
OXZ	**Oxford**	**144.61**	**114**	P	**PKPdf**	**11 27 03.6**	**+0.2**
LTZ	**Lake Taylor**	**144.71**	**113**	P	**PKPab**	**11 27 01.8**	**-0.7**
MRNZ	**Matariki Terra**	**144.87**	**111**	P	**PKPdf**	**11 27 04.1**	**+0.2**
WCZ	**Waipu Caves**	**144.89**	**101**	P	**PKPab**	**11 27 02.1**	**-1.1**
TKNZ	**Takaka Hill**	**144.96**	**110**		**PKPab**	**11 27 02.3**	**-1.1**
THZ	**Tophouse**	**145.04**	**111**	P	**PKPbc**	**11 27 03.1**	**-0.5**
MQZ	**McQueen's Vall**	**145.10**	**115**	P	**PKPdf**	**11 27 05.2**	**+1.1**
NNZ	**Nelson**	**145.30**	**110**	P	**PKPbc**	**11 27 04.2**	**-0.2**
KHZ	**Kahutara**	**145.59**	**112**	P	**PKPdf**	**11 27 04.9**	**-0.1**
WIAZ	**Waiheke Island**	**145.73**	**102**	P	**PKiKP**	**11 27 08.2**	**-1.4**
BSWZ	**Blackbirch Sta**	**145.75**	**111**	P	**PKPdf**	**11 27 01.3**	**-4.0**
TUWZ	**Tuamarina**	**145.76**	**111**	P	**PKPdf**	**11 27 03.6**	**-1.7**
MKAZ	**Moumakai**	**145.83**	**103**	P	**PKPab**	**11 27 07.2**	**+0.6**
HIZ	**Hauiti**	**145.92**	**105**	P	**PKPab**	**11 27 07.6**	**+0.7**
TCW	**Tory Channel**	**145.97**	**110**	P	**PKPbc**	**11 27 06.6**	**+0.1**
CMWZ	**Cape Campbell**	**146.00**	**111**	P	**PKPdf**	**11 26 59.3**	**-6.5**
KUZ	**Kuaotunu**	**146.17**	**102**	P	**PKPab**	**11 27 09.0**	**+1.1**
TOZ	**Tahuroa Road**	**146.24**	**104**	P	**PKPab**	**11 27 09.1**	**+0.9**
PKVZ	**Pokaka**	**146.45**	**106**	P	**PKPab**	**11 27 09.4**	**+0.3**
CAW	**Cannon Point**	**146.55**	**110**	P	**PKPab**	**11 27 09.4**	**+0.1**
OGWZ	**Otaki Gorge**	**146.58**	**109**	P	**PKPab**	**11 27 10.0**	**+0.6**
FWVZ	**Far West T-bar**	**146.60**	**106**	P	**PKPab**	**11 27 10.3**	**+0.4**
TRVZ	**Turoa**	**146.60**	**106**	P	**PKPab**	**11 27 09.5**	**-0.3**
WNVZ	**Wahianoa**	**146.65**	**106**	P	**PKPbc**	**11 27 08.3**	**-0.5**
SNVZ	**South Ngauruho**	**146.65**	**106**	P	**PKPbc**	**11 27 08.5**	**-0.4**
OTVZ	**Oturere**	**146.67**	**106**	P	**PKPab**	**11 27 09.9**	**-0.2**
PLWZ	**Palliser**	**146.75**	**111**	P	**PKiKP**	**11 27 11.0**	**-0.6**
MOVZ	**Moawhango**	**146.78**	**107**	P	**PKPdf**	**11 27 08.0**	**+0.7**
WHTZ	**Whakaora**	**146.79**	**105**	P	**PKiKP**	**11 27 13.2**	**+1.4**
MRZ	**Mangatainoka R**	**146.86**	**109**		**PKPdf**	**11 27 07.5**	**+0.2**
MRZ	**Mangatainoka R**	**146.86**	**109**	P	**PKPab**	**11 27 10.2**	**-0.3**
BHHZ	**Black Hill Sta**	**147.03**	**107**	P	**PKPbc**	**11 27 10.4**	**+0.6**
TMWZ	**Te Maipa**	**147.16**	**110**	P	**PKPab**	**11 27 11.7**	**0.0**
PNHZ	**Pukenui**	**147.21**	**107**	P	**PKPab**	**11 27 12.1**	**+0.1**
KWHZ	**Kaweka Forest**	**147.29**	**106**	P	**PKPab**	**11 27 12.2**	**-0.1**
BKZ	**Black Stump Fm**	**147.30**	**106**		**PKPbc**	**11 27 11.3**	**+0.8**
BKZ	**Black Stump Fm**	**147.30**	**106**	P	**PKPbc**	**11 27 11.1**	**+0.6**
BFZ	**Birch Farm**	**147.37**	**109**	P	**PKPbc**	**11 27 10.8**	**+0.2**
MTHZ	**Maungataniwha**	**147.51**	**105**	P	**PKPbc**	**11 27 12.1**	**+1.0**
RTZ	**Ruatahuna**	**147.57**	**105**	P	**PKPbc**	**11 27 11.6**	**+0.3**
URZ	**Urewera**	**147.60**	**104**	P	**PKPdf**	**11 27 08.6**	**+0.1**
RAGZ	**Rawiri**	**147.88**	**104**	P	**PKiKP**	**11 27 13.5**	**-0.6**
MWZ	**Matawai**	**147.93**	**104**	P	**PKPbc**	**11 27 12.7**	**+0.5**
RUGZ	**Raukumara Rang**	**147.97**	**103**	P	**PKPbc**	**11 27 11.2**	**-1.3**
HAZ	**Te Kaha**	**148.01**	**103**	P	**PKPbc**	**11 27 11.0**	**-1.3**
TWGZ	**Tauwhareparae**	**148.25**	**104**	P	**PKiKP**	**11 27 14.6**	**-0.2**
PKGZ	**Pakihiroa**	**148.26**	**103**	P	**PKPbc**	**11 27 12.6**	**-0.5**
PUZ	**Puketiti**	**148.44**	**103**	P	**PKPbc**	**11 27 14.3**	**+0.7**
TAOE	**Nuku Hiva Isla**	**151.34**	**357**	*e*LR	LR	12 17 34.8	
	comp=Z,716nm,23.5s						
PPT2	**Papeete2**	**158.84**	**22**	*e*LR	LR	12 21 02.9	
	comp=Z,702nm,22.5s						
PPT2				*e*LR	LR	12 21 03.7	
	comp=Z,716nm,26.5s						
TBI	**Tubuai**	**164.25**	**28**	*e*LR	LR	12 23 32.7	
	comp=Z,10µm,24.5s						
TBI				*e*LR	LR	12 23 34.0	
	comp=Z,4µm,33.5s						

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*NNC **02** 11:08:56.4±1.1, 49°.98N×78°.63E, h0^{km}, mb3.3, mpv3.1,*
Error ellipse: s-maj=8.5km s-min=5.8km az=95.0,
Suspected Mining explosion.
*IDC **02** 11:08:58.1±1.0, 50°.07N×78°.75E, h0^{km}, mbtmp2.9/2,*
ML2.5/2, Error ellipse: s-maj=13.8km s-min=6.0km
az=66.0
ISC 02 11:08:56.8±0.9**, 50°.05N**±0°.04×**78°.55E**±0°.06**, h0^{km}, n17,**
σ**0^{s}.77**/29**, 16C-4D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.54**	**358**	⇓P	**Pb**	**11 09 08.3**	**-0.8**
KUR07				⇑S	**Sb**	**11 09 17.5**	**+0.1**
KUR06	**Kurchatov Arra**	**0.56**	**359**	⇓P	**Pb**	**11 09 08.9**	**-0.6**
KUR06				⇑S	**Sb**	**11 09 18.1**	**+0.2**
KUR14	**Kurchatov Arra**	**0.57**	**3**	⇑P	**Pb**	**11 09 09.0**	**-0.7**
KUR14				⇑S	**Sb**	**11 09 17.6**	**-0.7**
KUR15	**Kurchatov Arra**	**0.57**	**1**	⇓P	**Pb**	**11 09 08.9**	**-0.8**
KUR15				⇑S	**Sb**	**11 09 18.1**	**-0.3**
KURBB	**Kurchatov Arra**	**0.58**	**359**	Pg	**Pb**	**11 09 09.0**	**-0.7**
	2.4nm,0.3s,baz=167,slow=16,SNR=146						
KURBB				Lg	Lg	11 09 17.9	
	4.3nm,0.3s,baz=165,slow=35,SNR=13						
KURBB	**Kurchatov Arra**	**0.58**	**359**	⇓P	**Pb**	**11 09 09.2**	**-0.6**
	31nm,0.6s						
KURBB				⇑S	**Sb**	**11 09 18.5**	**-0.1**
	181nm,0.7s						
KUR16	**Kurchatov Arra**	**0.58**	**357**	⇑P	**Pb**	**11 09 09.2**	**-0.6**
KUR16				⇑S	**Sb**	**11 09 18.4**	**-0.3**
KUR17	**Kurchatov Arra**	**0.59**	**355**	⇑P	**Pb**	**11 09 09.5**	**-0.5**
KUR17				⇑S	**Sb**	**11 09 19.1**	**+0.3**
KUR05	**Kurchatov Arra**	**0.60**	**359**	⇑P	**Pb**	**11 09 09.5**	**-0.6**
KUR05				⇑S	**Sb**	**11 09 18.4**	**-0.7**
KUR04	**Kurchatov Arra**	**0.62**	**360**	⇑P	**Pb**	**11 09 09.8**	**-0.7**
KUR04				⇑S	**Sb**	**11 09 19.4**	**-0.3**
KURK	**Kurchatov**	**0.67**	**4**	⇑P	**Pb**	**11 09 10.5**	**-0.9**
	9.5nm,0.4s						
KURK				⇑S	**Sb**	**11 09 20.6**	**-0.6**
	54nm,0.9s						
SEM	**Semipalatinsk**	**1.15**	**71**	P	Pg	11 09 13.5	-5.3
	20nm,0.5s						
SEM				S	**Sn**	**11 09 37.2**	**+0.2**
	33nm,0.2s						
BRZS	**Berezniki**	**3.79**	**271**	Pg	**Pg**	**11 10 08.4**	**-0.9**
	3.2nm,0.5s						
BRZS				Lg	Lg	11 10 57.5	
	3.8nm,0.5s						
MKAR	**Makanchi Array**	**4.10**	**141**	Pn	**Pn**	**11 10 01.2**	**+0.6**
	0.3nm,0.3s,baz=322,slow=11,SNR=22						
MKAR				Pg	**Pb**	**11 10 08.6**	**-1.2**
	1.0nm,0.3s,baz=324,slow=18,SNR=27						
MKAR				Sn	**Sn**	**11 10 50.7**	**+1.4**
	0.8nm,0.3s,baz=329,slow=21,SNR=8.1						
MKAR				Lg	Lg	11 11 04.3	
	3.4nm,0.3s,baz=329,slow=26,SNR=15						
	0.3nm,0.3s						
I46RU	**ZALESOVO INFRA**	**5.50**	**42**	I	I	11 41 30.0	
	baz=220,slow=327,SNR=1.5						
ZALV	**Zalesovo Beam**	**5.50**	**42**	Pn	**Pn**	**11 10 21.5**	**+1.6**
	0.8nm,0.3s,baz=232,slow=14,SNR=10						
ZALV				Sn	**Sn**	**11 11 23.5**	**-0.3**
	0.1nm,0.3s,baz=230,slow=22,SNR=1.6						
ZALV				Lg	Lg	11 11 47.6	
	0.2nm,0.3s,baz=230,slow=22,SNR=2.5						
	2.2nm,0.4s						
BVAR	**Borovoye Array**	**5.90**	**304**	Sn	**Sn**	**11 11 34.9**	**+1.2**
	0.1nm,0.3s,baz=112,slow=22,SNR=15						
BVAR				Lg	Lg	11 12 05.1	
	0.1nm,0.3s,baz=121,slow=26,SNR=3.8						

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*KRNET **02** 11:11:20.6±0.1, 39°.17N×74°.36E, mb3.9*
*IDC **02** 11:11:20.3±1.1, 39°.02N×74°.25E, h0^{km}, mb4.0/7,*
mbtmp3.8/9, ML2.9/2, Error ellipse: s-maj=27.9km
s-min=22.2km az=98.0
*SOME **02** 11:11:24.6, 39°.47N×74°.03E, h5^{km}*
*NNC **02** 11:11:25.9±1.6, 39°.52N×73°.95E, h0^{km}, mb4.2, mpv3.8,*
Error ellipse: s-maj=10.5km s-min=7.0km az=165.0
ISC 02 11:11:22.6±0.8**, 39°.11N**±0°.05×**74°.38E**±0°.04**, h10^{km}, n78,**
σ**2^{s}.02**/98**, mb4.1**/7**, 31C-23D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.87**	**319**	⇑*e*P	**Pn**	**11 11 54.5**	**-0.2**
	baz=19						
OHH				⇑*e*S	**Sn**	**11 12 19.4**	**+0.9**
	baz=19						
DRK	**Karamyk**	**2.04**	**281**	⇑*e*P	**Pn**	**11 11 58.2**	**+1.0**
	baz=80						
DRK				⇑*e*S	**Sb**	**11 12 25.5**	**+0.1**
	baz=80						
ARLS	**Aral**	**2.74**	**359**	⇓*e*P	**Pn**	**11 12 07.4**	**+0.5**
	baz=59						
ARLS				⇓*e*S	**Sn**	**11 12 41.4**	**+1.2**
	baz=59						
BTK	**Batken**	**2.91**	**290**	⇓*e*P	**Pn**	**11 12 09.9**	**+0.8**
	baz=89						
BTK				⇓*e*S	**Sn**	**11 12 45.9**	**+1.8**
	baz=89						
AML	**Almayashu**	**3.06**	**350**	P	**Pn**	**11 12 13.9**	**+2.5**
	SNR=34						
AML	**Almayashu**	**3.06**	**350**	⇓Pn	**Pn**	**11 12 13.6**	**+2.2**
	14nm,1.0s						
AML				⇓Lg	Lg	11 12 46.9	
	18nm,0.8s						
AML	**Almayashu**	**3.06**	**350**	⇑*e*P	**Pn**	**11 12 11.9**	**+0.5**
	baz=50						
AML				⇑*e*S	**Sn**	**11 12 49.4**	**+1.2**
	baz=50						
UCH	**Uchtor**	**3.11**	**2**	P	**Pn**	**11 12 15.0**	**+2.9**
	SNR=130						
UCH	**Uchtor**	**3.11**	**2**	⇓*e*P	**Pn**	**11 12 12.8**	**+0.6**
	baz=2.0						
UCH				⇓*e*S	**Sn**	**11 12 50.7**	**+1.1**
	baz=2.0						
GAR	**Garm**	**3.17**	**269**	⇑*e*P	**Pn**	**11 12 13.9**	**+1.3**
	baz=68						
GAR				⇑*e*S	**Sn**	**11 12 52.4**	**+1.9**
	baz=68						
ARK	**Arkit**	**3.25**	**326**	⇑*e*P	**Pn**	**11 12 14.5**	**+0.7**
	baz=26						
ARK				⇑*e*S	**Sn**	**11 12 53.8**	**+1.1**
	baz=26						
ULHL	**Ulahol**	**3.43**	**24**	⇑*e*P	**Pn**	**11 12 17.2**	**+0.8**
	baz=24						
ULHL				⇑*e*S	**Sn**	**11 12 58.4**	**+1.2**
	baz=24						
TRKS	**Terek-Say**	**3.46**	**315**	⇓*e*P	**Pn**	**11 12 16.7**	**0.0**
	baz=14						
TRKS				⇓*e*S	**Sn**	**11 12 57.3**	**-0.5**
	baz=14						
AAK	**Ala-Archa**	**3.52**	**1**	P	**Pn**	**11 12 20.6**	**+3.0**
	SNR=25						
AAK	**Ala-Archa**	**3.52**	**1**	Pn	**Pn**	**11 12 21.0**	**+3.5**
	3.5nm,0.3s,baz=181,slow=8.9,SNR=46						
AAK				Sn	**Sb**	**11 13 05.5**	**-2.4**
	baz=34,slow=18						
	36nm,0.4s						
AAK	**Ala-Archa**	**3.52**	**1**	⇑*e*P	**Pn**	**11 12 18.2**	**+0.7**
	baz=2.0						
AAK				⇑*e*S	**Sn**	**11 13 00.3**	**+1.0**
	baz=2.0						
KBK	**Karagaybulak**	**3.56**	**7**	P	**Pn**	**11 12 21.9**	**+3.8**
	SNR=38						
KBK	**Karagaybulak**	**3.56**	**7**	⇑*e*P	**Pn**	**11 12 18.7**	**+0.6**
	baz=7.0						
KBK				⇑*e*S	**Sn**	**11 13 01.4**	**+1.0**
	baz=7.0						
EKS2	**Erkin-Say**	**3.57**	**353**	P	**Pn**	**11 12 21.3**	**+3.1**
	SNR=25						
EKS2	**Erkin-Say**	**3.57**	**353**	⇓*e*P	**Pn**	**11 12 18.7**	**+0.5**
	baz=53						
EKS2				⇓*e*S	**Sn**	**11 13 01.4**	**+0.8**
	baz=53						
KDJ	**Kajisay**	**3.69**	**34**	⇑*e*P	**Pn**	**11 12 20.9**	**+1.0**
	baz=35						
KDJ				⇑*e*S	**Sn**	**11 13 04.8**	**+1.3**
	baz=35						
TARG	**Taragay, Kyrgy**	**3.69**	**44**	⇓*e*P	**Pn**	**11 12 21.0**	**+0.9**
	baz=45						
TARG				⇓*e*S	**Sn**	**11 13 05.0**	**+1.1**
	baz=45						
FRU1	**Bishkek**	**3.70**	**3**	⇓*e*P	**Pn**	**11 12 20.7**	**+0.8**
	baz=3.0						
FRU1				⇓*e*S	**Sn**	**11 13 04.3**	**+0.8**
	baz=3.0						
MRKS	**Merke**	**3.73**	**347**	Pg	Pn	11 12 25.3	+5.0
	14nm,0.4s						
MRKS				Lg	Lg	11 13 09.0	
	27nm,0.4s						
MRKS	**Merke**	**3.73**	**347**	*e*Pg	Pn	11 12 25.3	+5.0
	14nm,0.4s						
MRKS				*e*Lg	Lg	11 13 09.0	
	34nm,0.3s						
CHMS	**Chumysh**	**3.89**	**4**	P	**Pn**	**11 12 25.7**	**+3.2**
	SNR=6.4						
CHMS	**Chumysh**	**3.89**	**4**	⇓*e*P	**Pn**	**11 12 23.2**	**+0.7**
	baz=4.0						
CHMS				⇓*e*S	**Sn**	**11 13 09.0**	**+0.7**
	baz=4.0						
TKM2	**Tokmak 2**	**3.91**	**13**	P	**Pn**	**11 12 26.2**	**+3.2**
	SNR=16						
TKM2	**Tokmak 2**	**3.91**	**13**	⇑Pn	**Pn**	**11 12 25.9**	**+2.9**
	11nm,0.7s						
TKM2				⇑Lg	Lg	11 13 16.9	
	19nm,0.7s						
TKM2	**Tokmak 2**	**3.91**	**13**	⇓*i*P	**Pn**	**11 12 23.7**	**+0.7**
	baz=14						
TKM2				⇓*e*S	**Sn**	**11 13 09.8**	**+0.8**
	baz=14						
CHGR	**Chuyangaron**	**4.10**	**265**	⇑*e*P	**Pn**	**11 12 26.8**	**+1.4**
	baz=65						
CHGR				⇑*e*S	**Sn**	**11 13 15.0**	**+1.5**
	baz=65						
KST	**Kastek**	**4.10**	**16**	Pg	**Pb**	**11 12 37.3**	**+2.3**
	12nm,1.3s						
KST				Lg	Lg	11 13 29.6	
	45nm,1.2s						
KST	**Kastek**	**4.10**	**16**	*e*Pg	**Pb**	**11 12 37.5**	**+2.5**
	12nm,0.2s						
KST				*e*Lg	Lg	11 13 29.6	
	45nm,0.5s						
USP	**Ospenovka**	**4.15**	**1**	P	**Pn**	**11 12 30.1**	**+4.0**
	SNR=5.6						
USP	**Ospenovka**	**4.15**	**1**	⇑*e*P	**Pn**	**11 12 26.9**	**+0.8**
	baz=1.0						
USP				⇑*e*S	**Sn**	**11 13 15.3**	**+0.6**
	baz=1.0						
DGS	**Degeres**	**4.26**	**14**	Pg	**Pb**	**11 12 39.6**	**+2.1**
	53nm,1.0s						
DGS				Lg	Lg	11 13 33.8	
	30nm,0.6s						
DGS	**Degeres**	**4.26**	**14**	*e*Pg	**Pb**	**11 12 39.9**	**+2.3**
	16nm,0.2s						
DGS				*e*Lg	Lg	11 13 33.8	
	32nm,0.3s						
IZV	**Izvestkoviy**	**4.27**	**23**	Pg	**Pb**	**11 12 39.9**	**+2.1**
	13nm,0.6s						
IZV				Lg	Lg	11 13 33.7	
	70nm,0.7s						
IZV	**Izvestkoviy**	**4.27**	**23**	*e*Pg	**Pb**	**11 12 39.9**	**+2.1**
	13nm,0.3s						
IZV				*e*Lg	Lg	11 13 33.7	
	70nm,0.4s						
MTBS	**Maitube**	**4.30**	**20**	Pg	**Pb**	**11 12 38.7**	**+0.4**
	17nm,0.8s						
MTBS	**Maitube**	**4.30**	**20**	*e*Pg	**Pb**	**11 12 38.6**	**+0.2**
	17nm,0.3s						
MTBS				*e*Lg	Lg	11 13 31.8	
	38nm,0.3s						
SGDS	**Sogindy**	**4.34**	**2**	Pg	**Pb**	**11 12 39.5**	**+0.5**
	15nm,1.6s						
SGDS				Lg	Lg	11 13 33.2	
	22nm,0.9s						
TNSS	**Tian-Shan**	**4.37**	**25**	Pg	**Pb**	**11 12 42.3**	**+2.6**
	20nm,0.8s						
TNSS				Lg	Lg	11 13 38.4	
	21nm,0.8s						
TNSS	**Tian-Shan**	**4.37**	**25**	*e*Pg	**Pb**	**11 12 42.4**	**+2.6**
	19nm,0.2s						
TNSS				*e*Lg	Lg	11 13 38.4	
	31nm,0.5s						
ANVS	**Anan'yevo**	**4.43**	**33**	⇑*e*P	**Pn**	**11 12 31.1**	**+1.1**
	baz=34						
ANVS				⇑*e*S	**Sn**	**11 13 22.5**	**+0.7**
	baz=34						
TAS	**Tashkent**	**4.48**	**301**	⇑*e*P	**Pn**	**11 12 31.6**	**+1.1**
	baz=1.0						
TAS				⇑*e*S	**Sn**	**11 13 23.4**	**+0.7**
	baz=1.0						
IUG	**Iuzhnay**	**4.49**	**314**	Pg	Pb	11 12 37.5	-4.0
	96nm,1.1s						
IUG				Lg	Lg	11 13 29.8	
	108nm,1.9s						
IUG	**Iuzhnay**	**4.49**	**314**	*e*Pg	Pb	11 12 37.5	-4.0
	26nm,0.1s						
IUG				*e*Lg	Lg	11 13 29.8	
	108nm,0.6s						
MDOK	**Medeo**	**4.52**	**26**	Pg	**Pb**	**11 12 44.9**	**+2.8**
	11nm,0.8s						
MDOK				Lg	Lg	11 13 42.5	
	31nm,1.2s						
MDOK	**Medeo**	**4.52**	**26**	⇑Pn	**Pb**	**11 12 38.9**	**-3.2**
	12nm,0.7s						
MDOK				⇓Lg	Lg	11 13 41.4	
	120nm,0.8s						
MDOK	**Medeo**	**4.52**	**26**	*e*Pg	**Pb**	**11 12 44.9**	**+2.8**
	11nm,0.2s						
MDOK				*e*Lg	Lg	11 13 42.5	
	86nm,0.4s						
PRZ	**Przheval'sk**	**4.54**	**41**	⇓*e*P	**Pn**	**11 12 32.7**	**+1.1**
	baz=41						
PRZ				⇓*e*S	**Sn**	**11 13 25.6**	**+1.1**
	baz=41						
KOTS	**Kotyrbulak**	**4.60**	**26**	Pg	**Pb**	**11 12 46.8**	**+3.3**
	9.9nm,0.6s						
KOTS				Lg	Lg	11 13 46.3	
	110nm,1.2s						
KOTS	**Kotyrbulak**	**4.60**	**26**	*e*Pg	**Pb**	**11 12 46.8**	**+3.3**
	10nm,0.3s						
KOTS				*e*Lg	Lg	11 13 45.9	
	112nm,0.4s						
KRBS	**Karabastau**	**4.68**	**12**	Pg	**Pb**	**11 12 46.3**	**+1.5**
	6.8nm,0.6s						
KRBS				Lg	Lg	11 13 44.8	
	22nm,0.8s						
KRBS	**Karabastau**	**4.68**	**12**	Pg	**Pn**	**11 12 33.0**	**-0.4**
KRBS				Lg	Lg	11 13 26.0	
KRBS	**Karabastau**	**4.68**	**12**	*e*Pg	**Pb**	**11 12 46.3**	**+1.5**
	6.0nm,0.3s						
KRBS				*e*Lg	Lg	11 13 44.8	
	23nm,0.4s						
KTBS	**Karatobe**	**4.91**	**20**	Pg	**Pb**	**11 12 51.1**	**+2.4**
	19nm,1.1s						
KTBS				Lg	Lg	11 13 53.8	
	43nm,0.5s						
KTBS	**Karatobe**	**4.91**	**20**	Pg	**Pn**	**11 12 37.4**	**+0.9**
KTBS				Lg	Lg	11 13 33.5	
KTBS	**Karatobe**	**4.91**	**20**	*e*Pg	**Pb**	**11 12 51.1**	**+2.4**
	7.0nm,0.2s						
KTBS				*e*Lg	Lg	11 13 53.2	
	52nm,0.3s						
KK31	**Karatay Array**	**4.94**	**325**	⇑Pn	**Pn**	**11 12 38.1**	**+1.2**
	1.2nm,0.3s,baz=129,slow=13,SNR=80						
KK31				⇑Lg	Lg	11 13 46.3	
	6.3nm,0.3s,baz=128,slow=20						
KUU	**Kurty**	**5.00**	**16**	Pg	**Pb**	**11 12 52.7**	**+2.6**
	8.9nm,0.9s						
KUU				Lg	Lg	11 13 56.4	
	17nm,0.9s						
KUU	**Kurty**	**5.00**	**16**	*e*Pg	**Pb**	**11 12 53.0**	**+2.9**
	3.6nm,0.1s						
KUU				*e*Lg	Lg	11 13 56.4	
	48nm,0.4s						
CHKK	**Chushkaly**	**5.12**	**22**	Pg	**Pb**	**11 12 56.5**	**+4.2**
	9.7nm,0.8s						
CHKK				Lg	Lg	11 14 02.3	
	14nm,0.9s						
CHKK	**Chushkaly**	**5.12**	**22**	*e*Pg	**Pb**	**11 12 56.5**	**+4.2**
	11nm,0.3s						
CHKK				*e*Lg	Lg	11 14 02.3	
	20nm,0.3s						
UZB	**Uzynbulak**	**5.34**	**40**	Pg	**Pg**	**11 13 03.2**	**-1.6**
	11nm,0.9s						
UZB	**Uzynbulak**	**5.34**	**40**	*e*Pg	**Pg**	**11 13 03.2**	**-1.6**
	11nm,0.2s						
UZB				*e*Lg	Lg	11 14 13.8	
	18nm,0.6s						
KPKS	**Kokpek**	**5.42**	**35**	Pg	**Pb**	**11 13 01.3**	**+3.9**
	8.1nm,0.4s						
KPKS				Lg	Lg	11 14 10.6	
	43nm,1.0s						
KPKS	**Kokpek**	**5.42**	**35**	*e*Pg	**Pb**	**11 13 01.3**	**+3.9**
	9.2nm,0.3s						
KPKS				*e*Lg	Lg	11 14 10.6	
	47nm,0.3s						
PDGK	**Podgornoye**	**5.71**	**41**	Pg	**Pg**	**11 13 08.3**	**-3.6**
	4.8nm,0.8s						
PDGK				Lg	Lg	11 14 22.8	
	14nm,1.7s						
MKAR	**Makanchi Array**	**9.61**	**34**	Pn	**Pn**	**11 13 45.0**	**+4.0**
	baz=216,slow=14,SNR=2.3						
	0.5nm,0.6s						
FINES	**FINESS Array B**	**36.90**	**323**	P	**P**	**11 18 30.5**	**-0.6**
	3.1nm,0.9s,baz=98,slow=10.0,SNR=2.0						
	3.1nm,0.9s						
ARCES	**ARCESS Array B**	**39.81**	**336**	P	**P**	**11 18 55.0**	**-0.5**
	5.5nm,1.0s,baz=96,slow=8.3,SNR=1.9						

	5.5nm,1.0s						
TORD	**Torodi Ar. Bea**	**68.44**	**270**	P	**P**	**11 22 24.4**	**-0.6**
	1.1nm,0.5s,baz=47,slow=5.6,SNR=11						
	1.1nm,0.5s						
YKA	**Yellowknife Ar**	**78.48**	**4**	P	**P**	**11 23 22.0**	**-1.4**
	0.6nm,0.7s,baz=346,slow=5.3,SNR=1.7						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**81.18**	**124**	P	**P**	**11 23 37.9**	**-0.7**
	0.2nm,0.6s,baz=311,slow=4.2,SNR=1.0						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**83.63**	**127**	P	**P**	**11 23 50.5**	**-0.9**
	0.3nm,0.8s,baz=323,slow=5.3,SNR=1.6						
	0.3nm,0.8s						
PDAR	**Pinedale Array**	**98.42**	**3**	P	**P**	**11 25 00.7**	**-0.5**
	0.9nm,1.1s,baz=33,slow=5.5,SNR=1.4						
	0.9nm,1.1s						

*IDC **02** 11:16:20.7±2.1, 24°.48N×46°.17W, h0^{km}, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=90.6km s-min=29.0km az=19.0*

ISC 02 11:16:22.3±1.8**, 24°.5N**±0°.6×**46°.2W**±0°.2**, h10**^{km}**, n11, σ1^{s}26**/6**, mb3.8**/6**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**44.58**	**132**	T	T	12 11 50.6	
	baz=317,slow=75,SNR=13						
H10N3	**ASCENSION HYDR**	**44.58**	**132**	T	T	12 11 50.7	
	baz=317,slow=75,SNR=13						
H10N1	**ASCENSION HYDR**	**44.60**	**132**	T	T	12 11 52.0	
	baz=317,slow=75,SNR=15						
H10S3	**ASCENSION HYDR**	**45.29**	**133**	T	T	12 12 43.1	
	baz=315,slow=74,SNR=36						
H10S2	**ASCENSION HYDR**	**45.30**	**133**	T	T	12 12 44.4	
	baz=265,slow=74,SNR=29						
TORD	**Torodi Ar. Bea**	**46.47**	**95**	P	**P**	**11 24 49.7**	**-0.2**
	2.1nm,1.1s,baz=300,slow=8.9,SNR=4.5						
	2.1nm,1.1s						
TXAR	**Lajitas Array**	**51.07**	**289**	P	**P**	**11 25 25.0**	**-0.2**
	0.3nm,0.6s,baz=64,slow=8.1,SNR=2.6						
	0.3nm,0.6s						
PDAR	**Pinedale Array**	**54.58**	**306**	P	**P**	**11 25 49.6**	**-1.6**
	0.7nm,0.9s,baz=110,slow=7.2,SNR=2.7						
	0.7nm,0.9s						
YKA	**Yellowknife Ar**	**58.61**	**330**	P	**P**	**11 26 19.2**	**+0.1**
	0.9nm,0.9s,baz=96,slow=7.8,SNR=6.3						
	0.9nm,0.9s						
NVAR	**Mina Array Bea**	**61.65**	**302**	P	**P**	**11 26 42.1**	**+1.4**
	0.5nm,0.8s,baz=76,slow=4.1,SNR=1.9						
	0.5nm,0.8s						
ILAR	**Eielson Array**	**72.53**	**334**	P	**P**	**11 27 49.6**	**+0.5**
	0.7nm,0.8s,baz=72,slow=5.6,SNR=7.2						
	0.7nm,0.8s						

*DDA **02** 11:16:54.8±0.0, 37°.58N×38°.49E, h8^{km}±1^{km}, MW4.2*

*ISK **02** 11:16:55.9, 37°.54N×38°.44E, h18^{km}, ML3.7/16*

ISC 02 11:16:55.5±0.9**, 37°.58N**±0°.02×**38°.47E**±0°.02**, h12**^{km}±7^{km}**, n31, σ0^{s}80**/49**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	**Bozova**	**0.18**	**231**	P	**Pg**	**11 16 59.3**	**-0.2**
ATAB				S	**Sg**	**11 17 02.6**	**+0.4**
URFA	**Urfa**	**0.32**	**116**	Pg	**Pb**	**11 17 03.8**	**+0.6**
URFA				Sg	**Sb**	**11 17 08.3**	**0.0**
SANL	**SANLIURFA_Merk**	**0.58**	**134**	SPECP		11 17 06.0	
SANL				P	**Pg**	**11 17 06.4**	**-0.5**
SANL				S	**Sg**	**11 17 14.3**	**-0.3**
AKCA	**Adyaman/G¶l**	**0.65**	**289**	SPECP		11 17 08.0	
AKCA				P	**Pg**	**11 17 08.1**	**-0.1**
AKCA				S	**Sg**	**11 17 17.1**	**+0.3**
SURC	**SANLIURFA_SURC**	**0.71**	**170**	SPECP		11 17 08.0	
SURC				P	**Pg**	**11 17 09.1**	**-0.2**
SURC				S	**Sb**	**11 17 19.1**	**-0.5**
MAYA	**Malatya/Merkez**	**0.74**	**358**	SPECP		11 17 08.0	
MAYA				P	**Pg**	**11 17 09.0**	**-1.0**
MAYA				S	**Sg**	**11 17 19.5**	**-0.2**
GZT	**Gaziantep**	**0.75**	**253**	SPECP		11 17 10.0	
GZT				P	**Pb**	**11 17 10.1**	**-0.5**
GZT				S	**Sn**	**11 17 23.1**	**-0.4**
NZIP	**Nizip/Gaziante**	**0.83**	**230**	SPECP		11 17 11.0	
NZIP				P	**Pb**	**11 17 11.6**	**-0.3**
NZIP				S	**Sb**	**11 17 23.4**	**+0.3**
ELZG	**Elazig**	**1.00**	**24**	P	**Pb**	**11 17 13.6**	**-1.4**
ELZG				S	**Sg**	**11 17 28.2**	**+0.3**
GAZ	**Gaziantep**	**1.08**	**248**	Pg	**Pn**	**11 17 16.1**	**-0.5**
GAZ				Sg	**Sn**	**11 17 31.2**	**-0.3**
KAHM	**Kahramanmaras,**	**1.18**	**267**	P	**Pb**	**11 17 17.3**	**-0.5**
KAHM				S	**Sn**	**11 17 33.6**	**-0.3**
DARE	**Darende-Malaty**	**1.26**	**322**	Pn	**Pg**	**11 17 19.6**	**-0.1**
DARE				Sn	**Sg**	**11 17 37.0**	**+1.0**
HCB	**Kahramanmara**	**1.26**	**260**	P	**Pn**	**11 17 18.7**	**-0.3**
HCB				S	**Sn**	**11 17 35.4**	**-0.6**
ELBS	**KAHRAMANMARAS**	**1.29**	**306**	P	**Pn**	**11 17 19.4**	**-0.1**
ELBS				S	**Sg**	**11 17 37.6**	**+0.5**
KUZU	**Kuzuini**	**1.37**	**234**	P	**Pg**	**11 17 21.8**	**-0.1**
KUZU				S	**Sg**	**11 17 40.6**	**+0.9**
DYBB	**Diyarbakir**	**1.38**	**74**	Pn	**Pn**	**11 17 20.5**	**-0.2**
DYBB				Sn	**Sg**	**11 17 40.1**	**+0.2**
KAMA	**Osmaniye**	**1.49**	**255**	P	**Pn**	**11 17 21.8**	**-0.3**
KAMA				S	**Sg**	**11 17 43.9**	**+0.6**
ARPR	**Arapgir-MALATY**	**1.51**	**356**	Pn	**Pb**	**11 17 23.2**	**-0.4**
SARI	**SarD1z-Kayseri**	**1.82**	**298**	Pn	**Pn**	**11 17 27.0**	**+0.2**
SAIM	**ADANA**	**1.93**	**283**	P	**Pn**	**11 17 28.6**	**+0.3**
SAIM				S	**Sg**	**11 17 58.5**	**+0.9**
KOZT	**Kozan**	**2.10**	**268**	Pn	**Pn**	**11 17 30.6**	**0.0**
ERZN	**Erzincan**	**2.23**	**26**	Pn	**Pn**	**11 17 33.8**	**+1.3**
SVAN	**Silvan-Diyarba**	**2.24**	**74**	Pn	**Pb**	**11 17 34.4**	**-1.5**
BNGB	**Bingl**	**2.24**	**50**	Pn	**Pn**	**11 17 32.9**	**+0.3**
CEYT	**Ceyhan**	**2.24**	**256**	Pn	**Pn**	**11 17 33.2**	**+0.8**
BNN	**Bunyan**	**2.42**	**302**	Pn	**Pn**	**11 17 35.7**	**+0.6**
YEDI	**Yedisu-Bingol**	**2.47**	**41**	Pn	**Pn**	**11 17 37.4**	**+1.6**
SVSK	**Karacayir**	**2.60**	**334**	Pn	**Pn**	**11 17 38.9**	**+1.5**
KARA	**Karaisali**	**2.73**	**264**	Pn	**Pn**	**11 17 40.3**	**+1.0**
GURO	**Guroymak-BITLI**	**2.98**	**70**	Pn	**Pn**	**11 17 44.7**	**+2.0**
BAYT	**Aydıntepe-Bayb**	**3.10**	**24**	Pn	**Pn**	**11 17 46.3**	**+1.9**

*DDA **02** 11:18:16.7±0.0, 37°.58N×38°.49E, h7^{km}±2^{km}, MW4.4*

*IDC **02** 11:18:17.7±0.8, 37°.54N×38°.26E, h0^{km}, mb3.6/7, mbtmp3.7/13, ML3.5/6, Error ellipse: s-maj=12.9km s-min=11.3km az=136.0*

*ISK **02** 11:18:18.1, 37°.57N×38°.44E, h8^{km}, ML4.0/16*

*GII **02** 11:18:23.2±0.0, 37°.60N×38°.50E, h1^{km}*

ISC 02 11:18:17.5±1.1**, 37°.57N**±0°.02×**38°.46E**±0°.02**, h3**^{km}±8^{km}**, n51, σ1^{s}54**/69**, mb3.7**/8**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	**Bozova**	**0.17**	**232**	P	**Pg**	**11 18 21.3**	**+0.5**
ATAB				SPECP		11 18 24.0	
ATAB				S	**Sg**	**11 18 24.5**	**+1.5**
URFA	**Urfa**	**0.32**	**114**	Pg	**Pb**	**11 18 25.4**	**-0.4**
URFA				Sg	**Sb**	**11 18 30.1**	**-1.3**
SANL	**SANLIURFA_Merk**	**0.58**	**133**	P	**Pg**	**11 18 28.0**	**-0.6**
SANL				S	**Sg**	**11 18 35.5**	**-0.7**
AKCA	**Adyaman/G¶l**	**0.65**	**290**	P	**Pg**	**11 18 30.1**	**+0.1**
AKCA				S	**Sg**	**11 18 39.3**	**+0.8**
SURC	**SANLIURFA_SURC**	**0.70**	**170**	P	**Pg**	**11 18 30.8**	**-0.2**
SURC				S	**Sb**	**11 18 40.9**	**-1.6**
GZT	**Gaziantep**	**0.75**	**253**	P	**Pg**	**11 18 32.1**	**+0.3**
GZT				S	**Sb**	**11 18 43.0**	**-0.9**
MAYA	**Malatya/Merkez**	**0.75**	**358**	P	**Pg**	**11 18 30.8**	**-1.2**
MAYA				S	**Sg**	**11 18 41.5**	**-0.3**
NZIP	**Nizip/Gaziante**	**0.82**	**230**	P	**Pg**	**11 18 33.6**	**+0.3**
NZIP				S	**Sb**	**11 18 45.2**	**-0.7**
ELZG	**Elazig**	**1.01**	**24**	P	**Pg**	**11 18 35.3**	**-1.6**
ELZG				S	**Sg**	**11 18 50.3**	**+0.2**
GAZ	**Gaziantep**	**1.07**	**249**	Pg	**Pn**	**11 18 38.7**	**-0.8**
GAZ				Sg	**Sn**	**11 18 53.8**	**-1.1**
KAHM	**Kahramanmaras,**	**1.17**	**268**	SPECP		11 18 39.0	
KAHM				P	**Pb**	**11 18 39.2**	**-1.2**
KAHM				S	**Sn**	**11 18 56.0**	**-1.4**
HCB	**Kahramanmara**	**1.26**	**260**	P	**Pn**	**11 18 39.9**	**-2.1**
HCB				S	**Sb**	**11 18 57.5**	**-0.9**
DARE	**Darende-Malaty**	**1.26**	**323**	Pn	**Pg**	**11 18 42.4**	**+0.7**
DARE				Sn	**Sn**	**11 19 00.1**	**+0.5**
ELBS	**KAHRAMANMARAS**	**1.29**	**306**	P	**Pn**	**11 18 40.8**	**-1.7**
ELBS				SPECP		11 18 41.0	
ELBS				S	**Sn**	**11 18 59.6**	**-0.8**
KUZU	**Kuzuini**	**1.36**	**235**	P	**Pb**	**11 18 43.4**	**-0.3**
KUZU				S	**Sg**	**11 19 02.2**	**+0.9**
KAMA	**Osmaniye**	**1.48**	**255**	SPECP		11 18 43.0	
KAMA				P	**Pn**	**11 18 43.5**	**-1.6**
KAMA				S	**Sg**	**11 19 05.5**	**+0.4**
ARPR	**Arapgir-MALATY**	**1.52**	**356**	Pn	**Pb**	**11 18 46.2**	**-0.2**
ARPR				Sn	**Sg**	**11 19 06.9**	**+0.5**
SARI	**SarD1z-Kayseri**	**1.82**	**298**	Pn	**Pb**	**11 18 50.2**	**-1.3**
SARI				Sn	**Sb**	**11 19 13.8**	**-0.9**
ERZN	**Erzincan**	**2.24**	**26**	Pn	**Pb**	**11 18 56.6**	**-2.1**
SVAN	**Silvan-Diyarba**	**2.24**	**74**	Pn	**Pb**	**11 18 56.8**	**-1.9**
BNGB	**Bingl**	**2.25**	**50**	Pn	**Pb**	**11 18 57.1**	**-1.7**
BNGB				Sn	**Sb**	**11 19 25.0**	**-2.0**
YEDI	**Yedisu-Bingol**	**2.48**	**41**	Pn	**Pn**	**11 19 00.1**	**+1.2**
SVSK	**Karacayir**	**2.61**	**334**	Pn	**Pn**	**11 19 01.7**	**+1.2**
VRTB	**Varto-Mus**	**2.84**	**55**	Pn	**Pn**	**11 19 05.1**	**+1.3**
RSDY	**Resadiye-TOKAT**	**2.96**	**343**	Pn	**Pn**	**11 19 06.9**	**+1.6**
GURO	**Guroymak-BITLI**	**2.98**	**70**	Pn	**Pn**	**11 19 07.3**	**+1.5**
BAYT	**Aydıntepe-Bayb**	**3.11**	**24**	Pn	**Pn**	**11 19 09.1**	**+1.6**
TOKT	**Tokat**	**3.12**	**332**	Pn	**Pn**	**11 19 08.9**	**+1.2**
KOPR	**Koprukoy-ERZUR**	**3.59**	**47**	Pn	**Pn**	**11 19 16.0**	**+1.9**
VANB	**Van**	**4.02**	**74**	Pn	**Pn**	**11 19 22.2**	**+2.2**
AGRB	**Hanur-Agry**	**4.08**	**59**	Pn	**Pn**	**11 19 23.2**	**+2.3**
BRTR	**Keskin Array B**	**4.34**	**301**	Pn	**Pn**	**11 19 25.1**	**+0.6**
	1.6nm,0.3s,baz=135,slow=29,SNR=8.3						
BRTR				Pg	**Pb**	**11 19 37.3**	**+2.7**
	4.2nm,0.3s,baz=121,slow=16,SNR=10						
BRTR				Lg	Lg	11 20 30.4	
	baz=124,slow=29						
	5.9nm,0.5s						
GEM	**Giv'at Ha'Em**	**4.92**	**209**	Pn	Pb	11 19 39.4	-4.8
MMA0B	**Mount Meron ar**	**5.19**	**210**	Pn	Pb	11 19 42.3	-6.6
MMA0B				Sn	**Sb**	**11 20 45.1**	**-6.5**
MMAI	**Mount Meron Ar**	**5.19**	**210**	Pn	**Pn**	**11 19 35.0**	**-1.1**
	6.3nm,0.3s,baz=29,slow=27,SNR=2.4						
MMAI				Pg	**Pb**	**11 19 48.9**	**0.0**
	11nm,0.3s,baz=31,slow=14,SNR=5.6						
MMAI				Lg	Lg	11 20 59.9	
	18nm,0.3s,baz=32,slow=29,SNR=1.8						
	5.2nm,0.5s						
BLGI	**Bet Lehem HaGe**	**5.52**	**210**	Pn	Pb	11 19 48.2	-6.3
GNI	**Garni**	**5.54**	**60**	Pn	Pn	11 19 46.8	+5.9
	0.5nm,0.3s,baz=183,slow=19,SNR=1.6						
GNI				Pg	**Pg**	**11 20 02.9**	**-0.6**
	0.9nm,0.3s,baz=21,slow=22,SNR=2.5						
GNI				Lg	Lg	11 21 14.5	
	0.8nm,0.3s,baz=32,slow=19,SNR=1.4						
	7.3nm,0.7s						
ASF	**Jabal al Asfar**	**5.54**	**194**	Pn	**Pn**	**11 19 41.5**	**+0.6**
	1.7nm,0.3s,baz=67,slow=21,SNR=1.4						
ASF				Pg	**Pb**	**11 19 57.4**	**+2.5**
	4.9nm,0.3s,baz=312,slow=6.9,SNR=7.0						
ASF				Sn	**Sn**	**11 20 46.0**	**+0.9**
	4.3nm,0.3s,baz=346,slow=19,SNR=1.8						
ASF				Lg	Lg	11 21 10.0	
	13nm,0.3s,baz=210,slow=23,SNR=3.4						
	4.9nm,0.3s						
HMDT	**Nahal Hemdat**	**5.83**	**205**	Pn	Pn	11 19 50.8	+6.0
HMDT				Sn	Sn	11 20 59.9	+7.8
UJAP	**Al Uja**	**6.12**	**205**	Pn	Pb	11 19 56.6	-8.2
EIL	**Elat**	**8.41**	**201**	Lg	Lg	11 22 39.6	
	0.5nm,0.3s,baz=210,slow=24,SNR=1.4						
IDI	**Anoyia**	**11.17**	**262**	Pn	**Pn**	**11 20 56.4**	**-1.7**
	0.5nm,0.3s,baz=74,slow=12,SNR=1.9						
	9.2nm,0.9s						
AKTO	**Aktyubinsk**	**18.98**	**41**	P	**Pn**	**11 22 40.1**	**-0.5**
	0.2nm,0.3s,baz=276,slow=10,SNR=2.7						
	1.4nm,0.5s						
GERES	**GERESS Array B**	**21.18**	**310**	P	**P**	**11 23 03.7**	**-0.2**
	0.4nm,0.4s,baz=107,slow=12,SNR=2.0						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**25.12**	**346**	P	**P**	**11 23 44.0**	**+0.7**
	3.4nm,1.1s,baz=162,slow=10,SNR=1.9						
	3.4nm,1.1s						
KSH	**Kashi**	**29.27**	**74**	P	**P**	**11 24 23.3**	**+2.3**
KSH				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KURBB	**Kurchatov Arra**	**31.20**	**52**	P	**P**	**11 24 38.8**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=265,slow=8.4,SNR=2.5						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**33.38**	**60**	P	**P**	**11 24 58.8**	**+1.8**
	comp=Z,0.5nm,0.9s,baz=282,slow=7.2,SNR=3.1						
	comp=Z,0.5nm,0.9s						
MDT	**Midelt**	**35.29**	**275**	P	**P**	**11 25 12.1**	**-1.6**
	comp=Z,2.5nm,0.7s,baz=263,slow=6.7,SNR=5.7						
	comp=Z,2.5nm,0.7s						
BOSA	**Boshof**	**66.99**	**193**	P	**P**	**11 29 13.0**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=14,slow=6.2,SNR=4.3						
	comp=Z,0.8nm,0.6s						
YKA	**Yellowknife Ar**	**77.94**	**348**	P	**P**	**11 30 16.3**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=27,slow=5.6,SNR=2.4						
	comp=Z,0.2nm,0.6s						

*DDA **02** 11:20:51.5±0.0, 37°.61N×38°.48E, h7^{km}±2^{km}, ML3.1*

*ISK **02** 11:20:53.3, 37°.53N×38°.49E, h26^{km}, ML3.3/10*

ISC 02 11:20:51.9±1.0**, 37°.61N**±0°.03×**38°.49E**±0°.03**, h8**^{km}±9^{km}**, n23, σ0^{s}71**/40**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	**Bozova**	**0.20**	**229**	P	**Pg**	**11 20 56.4**	**+0.3**
ATAB				S	**Sg**	**11 20 59.7**	**+0.8**
ATAB				*i* AML	AML	11 21 00.0	
	comp=E,1µm,0.1s						
URFA	**Urfa**	**0.31**	**122**	Pg	**Pb**	**11 21 00.9**	**+1.1**
URFA				Sg	**Sb**	**11 21 05.7**	**+0.7**
SANL	**SANLIURFA_Merk**	**0.59**	**137**	P	**Pb**	**11 21 03.6**	**-0.8**
SANL				S	**Sb**	**11 21 11.5**	**-1.5**
SANL				*i* AML	AML	11 21 17.0	
	comp=N,1µm,0.3s						
AKCA	**Adyaman/G¶l**	**0.66**	**287**	P	**Pg**	**11 21 04.6**	**-0.1**
AKCA				S	**Sg**	**11 21 13.8**	**+0.4**
AKCA				*i* AML	AML	11 21 19.0	
	comp=N,1µm,0.7s						
MAYA	**Malatya/Merkez**	**0.72**	**356**	P	**Pg**	**11 21 05.6**	**-0.3**
MAYA				S	**Sg**	**11 21 15.4**	**+0.1**
SURC	**SANLIURFA_SURC**	**0.73**	**172**	SPECP		11 21 06.0	
SURC				P	**Pb**	**11 21 06.4**	**-0.5**
SURC				S	**Sb**	**11 21 16.5**	**-0.6**
SURC				*i* AML	AML	11 21 20.0	
	comp=N,470nm,0.3s						
GZT	**Gaziantep**	**0.78**	**252**	SPECP		11 21 06.0	
GZT				P	**Pg**	**11 21 06.9**	**+0.1**
GZT				S	**Sg**	**11 21 17.6**	**+0.6**
GZT				*i* AML	AML	11 21 21.0	
	comp=N,2µm,0.5s						
NZIP	**Nizip/Gaziante**	**0.86**	**229**	P	**Pb**	**11 21 08.9**	**-0.2**
NZIP				SPECP		11 21 10.0	
NZIP				S	**Sb**	**11 21 20.2**	**-0.6**
NZIP				*i* AML	AML	11 21 24.0	
	comp=E,743nm,0.4s						
ELZG	**Elazig**	**0.97**	**24**	P	**Pg**	**11 21 09.9**	**-0.7**
ELZG				S	**Sb**	**11 21 24.3**	**+0.1**
ELZG				*i* AML	AML	11 21 27.0	
	comp=E,369nm,0.6s						
GAZ	**Gaziantep**	**1.10**	**247**	Pg	**Pb**	**11 21 13.2**	**-0.1**
GAZ				Sg	**Sb**	**11 21 27.7**	**-0.2**
KAHM	**Kahramanmaras,**	**1.20**	**266**	SPECP		11 21 14.0	
KAHM				P	**Pg**	**11 21 14.1**	**-0.8**
KAHM				S	**Sg**	**11 21 29.3**	**-1.1**
KAHM				*i* AML	AML	11 21 36.0	
	comp=N,317nm,0.4s						
DARE	**Darende-Malaty**	**1.25**	**321**	Pn	**Pn**	**11 21 16.5**	**+0.7**
DARE				Sn	**Sn**	**11 21 33.5**	**+0.7**
HCB	**Kahramanmara**	**1.28**	**259**	P	**Pn**	**11 21 15.3**	**-0.9**
HCB				S	**Sg**	**11 21 32.0**	**-1.2**
HCB				*i* AML	AML	11 21 34.0	
	comp=N,482nm,0.3s						
ELBS	**KAHRAMANMARAS**	**1.29**	**304**	SPECP		11 21 16.0	
ELBS				P	**Pn**	**11 21 16.2**	**-0.1**
ELBS				S	**Sg**	**11 21 33.2**	**-0.2**
DYBB	**Diyarbakir**	**1.35**	**75**	Pn	**Pn**	**11 21 17.2**	**0.0**
KUZU	**Kuzuini**	**1.40**	**234**	P	**Pb**	**11 21 18.2**	**-0.2**
KUZU				S	**Sn**	**11 21 37.5**	**+1.1**
ARPR	**Arapgir-MALATY**	**1.49**	**355**	Pn	**Pb**	**11 21 20.2**	**+0.2**
KAMA	**Osmaniye**	**1.51**	**254**	SPECP		11 21 20.0	
KAMA				P	**Pg**	**11 21 20.6**	**-0.3**
KAMA				S	**Sn**	**11 21 39.5**	**+0.3**
ANDN	**Andirin**	**1.70**	**270**	SPECP		11 21 22.0	
ANDN				P	**Pn**	**11 21 22.9**	**+0.9**
ANDN				S	**Sb**	**11 21 45.0**	**-0.1**
SARI	**SarD1z-Kayseri**	**1.82**	**297**	Pn	**Pn**	**11 21 24.1**	**+0.4**
KOZT	**Kozan**	**2.12**	**267**	Pn	**Pn**	**11 21 28.4**	**+0.8**
BNGB	**Bingl**	**2.21**	**51**	Pn	**Pb**	**11 21 31.1**	**-1.1**
SVAN	**Silvan-Diyarba**	**2.21**	**75**	Pn	**Pn**	**11 21 30.1**	**+1.1**

*IDC **02** 11:24:18.4±0.9, 37°.70N×38°.54E, h0^{km}, mb3.7/7, mbtmp3.7/16, ML3.5/8, Error ellipse: s-maj=13.9km s-min=10.3km az=156.0*

*ISK **02** 11:24:20.1, 37°.59N×38°.49E, h10^{km}, ML4.2/26*

*GII **02** 11:24:38.0±0.0, 37°.60N×38°.50E, h1^{km}±5^{km}*

ISC 02 11:24:20.5±1.2**, 37°.62N**±0°.03×**38°.51E**±0°.03**, h10**^{km}±9^{km}**, n50, σ1^{s}91**/61**, mb3.4**/7**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URFA	**Urfa**	**0.30**	**126**	Pg	**Pb**	**11 24 27.6**	**-0.5**
URFA				Sg	**Sg**	**11 24 31.6**	**+0.9**
GAZ	**Gaziantep**	**1.13**	**247**	Pn	**Pg**	**11 24 41.3**	**-0.9**
GAZ				Sn	**Sb**	**11 24 56.7**	**-0.2**
DARE	**Darende-Malaty**	**1.25**	**320**	Pn	**Pg**	**11 24 44.4**	**-0.2**
DARE				Sn	**Sb**	**11 25 01.9**	**+1.4**
DYBB	**Diyarbakir**	**1.33**	**75**	Pn	**Pg**	**11 24 45.3**	**-0.8**
DYBB				Sn	**Sb**	**11 25 04.1**	**+1.3**
ARPR	**Arapgir-MALATY**	**1.48**	**355**	Pn	**Pn**	**11 24 48.3**	**+0.9**
ARPR				Sn	**Sn**	**11 25 08.5**	**+1.6**
SARI	**SarD1z-Kayseri**	**1.83**	**296**	Pn	**Pn**	**11 24 52.9**	**+0.7**
KOZT	**Kozan**	**2.14**	**267**	Pn	**Pn**	**11 24 56.6**	**+0.3**
ERZN	**Erzincan**	**2.18**	**25**	Pn	**Pn**	**11 24 57.6**	**+0.6**
BNGB	**Bingl**	**2.19**	**50**	Pn	**Pn**	**11 24 57.6**	**+0.6**
SVAN	**Silvan-Diyarba**	**2.19**	**75**	Pn	**Pn**	**11 24 58.3**	**+1.3**
CEYT	**Ceyhan**	**2.29**	**255**	Pn	**Pn**	**11 24 58.7**	**+0.4**
YEDI	**Yedisu-Bingol**	**2.42**	**41**	Pn	**Pn**	**11 25 01.6**	**+1.4**
BNN	**Bunyan**	**2.44**	**301**	Pn	**Pn**	**11 25 01.7**	**+1.2**
SVSK	**Karacayir**	**2.58**	**333**	Pn	**Pn**	**11 25 03.1**	**+0.7**
KARA	**Karaisali**	**2.78**	**264**	Pn	**Pn**	**11 25 05.7**	**+0.7**
VRTB	**Varto-Mus**	**2.78**	**55**	Pn	**Pn**	**11 25 06.4**	**+1.2**
RSDY	**Resadiye-TOKAT**	**2.92**	**342**	Pn	**Pn**	**11 25 08.7**	**+1.6**
GURO	**Guroymak-BITLI**	**2.93**	**70**	Pn	**Pn**	**11 25 08.8**	**+1.5**
BAYT	**Aydıntepe-Bayb**	**3.05**	**24**	Pn	**Pn**	**11 25 10.6**	**+1.7**
TOKT	**Tokat**	**3.10**	**331**	Pn	**Pn**	**11 25 10.6**	**+1.0**
YOZ	**Yozgat**	**3.21**	**310**	Pn	**Pn**	**11 25 12.2**	**+1.0**
KOZK	**Kozakli-Nevseh**	**3.27**	**300**	Pn	**Pn**	**11 25 13.5**	**+1.5**
MLAZ	**Malazgirt-MUS**	**3.52**	**63**	Pn	**Pn**	**11 25 17.1**	**+1.7**
KOPR	**Koprukoy-ERZUR**	**3.52**	**47**	Pn	**Pn**	**11 25 16.4**	**+0.9**
AKDM	**Akdamar-Van**	**3.60**	**77**	Pn	**Pn**	**11 25 18.3**	**+1.8**
BEIL	**Beino**	**3.60**	**212**	*e*P	**Pb**	**11 25 25.2**	**+0.9**
HWQ	**Hawqa**	**3.93**	**213**	*e*P	**Pb**	**11 25 28.2**	**-1.8**
BRTR	**Keskin Array B**	**4.36**	**300**	Pn	**Pn**	**11 25 27.8**	**+0.9**
	2.3nm,0.3s,baz=200,slow=14,SNR=28						
BRTR				Pg	**Pb**	**11 25 38.8**	**+1.6**
	2.6nm,0.3s,baz=128,slow=19,SNR=13						
BRTR				Lg	Lg	11 26 36.5	
	0.9nm,0.3s,baz=278,slow=34,SNR=1.2						
	2.7nm,0.3s						
BHL	**Bhannes**	**4.37**	**213**	*e*P	**Pg**	**11 25 41.3**	**-3.0**
DQRL	**Deir Qamar**	**4.58**	**212**	*e*P	**Pb**	**11 25 43.9**	**+2.8**
NATI	**Neve Ativ**	**4.90**	**208**	Pn	**Pg**	**11 25 51.6**	**-2.8**
NATI				Sn	**Sb**	**11 26 50.6**	**+5.2**
GEM	**Giv'at Ha'Em**	**4.97**	**209**	Pn	**Pg**	**11 25 53.8**	**-2.0**
GEM				Sn	**Sb**	**11 26 53.1**	**+5.5**
MMA0B	**Mount Meron ar**	**5.25**	**210**	Pn	**Pg**	**11 25 56.8**	**-4.2**
MMAI	**Mount Meron Ar**	**5.25**	**210**	Pn	**Pn**	**11 25 39.5**	**+0.4**
	2.2nm,0.3s,baz=47,slow=16,SNR=3.4						
MMAI				Pg	**Pb**	**11 25 56.2**	**+3.8**
	10nm,0.3s,baz=31,slow=15,SNR=7.5						
MMAI				Lg	Lg	11 27 07.2	
	23nm,0.3s,baz=60,slow=22,SNR=6.2						
	1.1nm,0.3s						
GNI	**Garni**	**5.48**	**61**	Pn	**Pn**	**11 25 41.9**	**-0.4**
	1.3nm,0.3s,baz=354,slow=19,SNR=1.9						
GNI				Pg	**Pb**	**11 25 58.5**	**+2.2**
	0.5nm,0.3s,baz=144,slow=18,SNR=1.7						
	3.5nm,0.3s						
ASF	**Jabal al Asfar**	**5.59**	**194**	Pn	**Pn**	**11 25 44.6**	**+0.7**
	0.9nm,0.3s,baz=144,slow=15,SNR=2.0						
ASF				Pg	**Pb**	**11 25 58.2**	**-0.1**
	3.2nm,0.3s,baz=182,slow=13,SNR=6.5						
ASF				Sn	**Sn**	**11 26 51.8**	**+3.6**
	4.5nm,0.3s,baz=344,slow=19,SNR=4.4						
ASF				Lg	Lg	11 27 14.1	
	11nm,0.3s,baz=38,slow=22,SNR=4.9						
	2.4nm,0.4s						
MMLI	**Mount Malkishu**	**5.76**	**207**	Pn	**Pb**	**11 26 04.4**	**+3.4**
MMLI				Sn	**Sb**	**11 27 11.4**	**+1.3**
KBZ	**Khabaz**	**6.95**	**27**	Pn	**Pn**	**11 26 03.0**	**+0.7**
	1.6nm,0.9s,baz=297,slow=14,SNR=1.9						
KBZ				Lg	Lg	11 27 57.8	
	0.1nm,0.3s,baz=227,slow=21,SNR=1.5						
EIL	**Elat**	**8.46**	**202**	Lg	Lg	11 28 48.9	
	0.7nm,0.3s,baz=51,slow=7.2,SNR=3.3						
IDI	**Anoyia**	**11.22**	**262**	Pn	**Pn**	**11 27 00.5**	**-0.4**
	0.5nm,0.3s,baz=47,slow=13,SNR=1.7						
	20nm,1.1s						
AKASG	**Malin Array Be**	**14.66**	**336**	Pn	Pn	11 27 43.8	-4.0
	0.2nm,0.3s,baz=140,slow=13,SNR=1.5						
	0.3nm,0.3s						
GEYT	**Alibeck**	**15.51**	**83**	Pn	**Pn**	**11 27 58.2**	**-1.1**
	0.2nm,0.3s,baz=259,slow=22,SNR=1.8						
	1.8nm,0.6s						
AKTO	**Aktyubinsk**	**18.92**	**41**	P	**P**	**11 28 40.7**	**-0.6**
	0.1nm,0.3s,baz=258,slow=6.9,SNR=3.3						
	2.9nm,0.8s						
GERES	**GERESS Array B**	**21.18**	**310**	P	**P**	**11 29 04.2**	**-1.8**
	0.8nm,0.5s,baz=114,slow=13,SNR=2.5						
	0.8nm,0.5s						
FINES	**FINESS Array B**	**25.09**	**346**	P	**P**	**11 29 44.3**	**-0.7**
	2.3nm,0.9s,baz=171,slow=9.8,SNR=2.1						
	2.3nm,0.9s						
ARCES	**ARCESS Array B**	**32.74**	**352**	P	**P**	**11 30 51.2**	**-1.9**
	2.2nm,0.9s,baz=179,slow=8.0,SNR=1.1						
	2.2nm,0.9s						
MKAR	**Makanchi Array**	**33.33**	**60**	P	**P**	**11 30 58.1**	**-0.3**
	0.4nm,0.7s,baz=270,slow=5.7,SNR=4.3						
	0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**40.83**	**243**	P	**P**	**11 32 01.8**	**-0.7**
	0.3nm,0.6s,baz=65,slow=8.1,SNR=2.2						
	0.3nm,0.6s						
YKA	**Yellowknife Ar**	**77.91**	**348**	P	**P**	**11 36 17.0**	**-1.2**
	0.2nm,0.7s,baz=22,slow=5.0,SNR=3.1						
	0.2nm,0.7s						
PDAR	**Pinedale Array**	**94.88**	**337**	P	**P**	**11 37 41.8**	**-1.2**
	1.6nm,1.1s,baz=46,slow=6.4,SNR=6.2						
	1.6nm,1.1s						

IDC 02 11:28:25.5±2.1**, 13°.32N**×**145°.01E, h56**^{km}±21^{km}**, mb3.0**/4**, mbtmp3.3**/4**, Error ellipse: s-maj=60.3km s-min=24.7km az=115.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.30**	**332**	LR	LR	11 28 16.2	
	comp=Z,32nm,20.7s,baz=152,slow=31						
GUMO				P	Pn	11 28 37.1	+1.8
	baz=150,slow=16						
GUMO				S	Sn	11 28 44.8	+2.5
	3µm,0.4s,baz=39,slow=22,SNR=24						
H11S3	**WAKE ISLAND Hy**	**21.46**	**73**	T	T	11 55 47.8	
	baz=259,slow=75,SNR=5.7						
H11S1	**WAKE ISLAND Hy**	**21.48**	**73**	T	T	11 55 49.0	
	baz=259,slow=75,SNR=7.2						
H11S2	**WAKE ISLAND Hy**	**21.48**	**73**	T	T	11 55 49.1	
	baz=259,slow=75,SNR=4.6						
H11N1	**WAKE ISLAND Hy**	**21.90**	**70**	T	T	11 56 21.5	
	baz=257,slow=75,SNR=13						
H11N2	**WAKE ISLAND Hy**	**21.91**	**70**	T	T	11 56 21.5	
	baz=257,slow=75,SNR=6.0						
H11N3	**WAKE ISLAND Hy**	**21.92**	**70**	T	T	11 56 22.1	
	baz=257,slow=75,SNR=13						
ASAR	**Alice Springs**	**38.33**	**197**	P	P	11 35 40.5	-0.6
	0.2nm,0.6s,baz=26,slow=13,SNR=4.2						
	0.2nm,0.6s						
ILAR	**Eielson Array**	**68.75**	**25**	P	P	11 39 22.9	-0.2
	0.2nm,0.5s,baz=254,slow=5.9,SNR=5.4						
	0.2nm,0.5s						
YKA	**Yellowknife Ar**	**83.03**	**27**	P	P	11 40 44.6	0.0
	0.1nm,0.6s,baz=283,slow=5.6,SNR=2.0						
	0.1nm,0.6s						
PDAR	**Pinedale Array**	**92.05**	**45**	P	P	11 41 29.2	+0.3
	0.2nm,0.6s,baz=262,slow=1.8,SNR=1.7						
	0.2nm,0.6s						

*DDA **02** 11:28:29.4±0.0, 37°.58N×38°.51E, h7^{km}±2^{km}, MW3.7*

*ISK **02** 11:28:31.2, 37°.53N×38°.48E, h16^{km}, ML2.8/8*

ISC 02 11:28:30.4±1.0**, 37°.58N**±0°.03×**38°.53E**±0°.03**, h10**^{km}±10^{km}**, n17, σ1^{s}02**/31**, Turkey**

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

URFA	**Urfa**	**0.27**	**120**	Pg	**Pb**	**11 28 38.1**	**+0.7**
URFA				Sg	**Sb**	**11 28 42.5**	**+0.4**
SANL	**SANLIURFA_Merk**	**0.55**	**138**	P	**Pg**	**11 28 40.7**	**-0.4**
SANL				S	**Sg**	**11 28 48.3**	**0.0**
AKCA	**Adyaman/G¶l**	**0.70**	**288**	P	**Pg**	**11 28 43.0**	**-0.9**
AKCA				S	**Sg**	**11 28 52.4**	**-0.6**
SURC	**SANLIURFA_SURC**	**0.70**	**174**	SPECP		11 28 43.0	
SURC				P	**Pg**	**11 28 43.6**	**-0.4**
SURC				S	**Sg**	**11 28 53.6**	**+0.5**
MAYA	**Malatya/Merkez**	**0.75**	**354**	SPECP		11 28 44.0	
MAYA				P	**Pg**	**11 28 44.0**	**-0.8**
MAYA				S	**Sn**	**11 28 57.6**	**-1.0**
ELZG	**Elazig**	**0.99**	**21**	SPECP		11 28 48.0	
ELZG				P	**Pg**	**11 28 48.2**	**-1.2**
ELZG				S	**Sg**	**11 29 01.8**	**-0.5**
GAZ	**Gaziantep**	**1.12**	**249**	Pg	**Pb**	**11 28 51.7**	**-0.2**
GAZ				Sg	**Sn**	**11 29 07.4**	**-0.3**
DARE	**Darende-Malaty**	**1.29**	**321**	Pn	**Pg**	**11 28 55.1**	**0.0**
DARE				Sn	**Sg**	**11 29 13.1**	**+1.2**
ELBS	**KAHRAMANMARAS_**	**1.33**	**305**	SPECP		11 28 54.0	
ELBS				P	**Pn**	**11 28 54.0**	**-1.1**
ELBS				S	**Sb**	**11 29 10.8**	**-1.8**
DYBB	**Diyarbakir**	**1.33**	**73**	Pn	**Pg**	**11 28 56.2**	**+0.2**
DYBB				Sn	**Sg**	**11 29 14.9**	**+1.6**
HEKM	**Malatya_Hekimh**	**1.37**	**341**	SPECP		11 28 55.0	
HEKM				P	**Pn**	**11 28 55.7**	**-0.1**
HEKM				S	**Sg**	**11 29 16.2**	**+1.6**
CUGUR	**Gurin_SVAS**	**1.51**	**320**	P	**Pg**	**11 29 02.3**	**+3.0**
CUGUR				S	**Sb**	**11 29 18.0**	**+0.1**
ARPR	**Arapgir-MALATY**	**1.52**	**354**	Pn	**Pb**	**11 28 59.0**	**+0.2**
KEMA	**Kemaliye**	**1.69**	**359**	P	**Pn**	**11 29 00.7**	**+0.7**
KEMA				S	**Sg**	**11 29 24.8**	**+0.1**
SARI	**SarD1z-Kayseri**	**1.86**	**297**	Pn	**Pn**	**11 29 03.0**	**+0.6**
SARI				Sn	**Sn**	**11 29 26.4**	**+0.3**
KOZT	**Kozan**	**2.15**	**268**	Pn	**Pn**	**11 29 06.9**	**+0.7**
SVAN	**Silvan-Diyarba**	**2.19**	**74**	Pn	**Pb**	**11 29 09.2**	**-0.9**

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*DDA **02** 11:30:21.4±0.0, 37°.59N×38°.49E, h7^{km}±2^{km}, ML2.0*
*ISK **02** 11:30:23.5, 37°.57N×38°.47E, h20^{km}, ML2.6/4*
ISC 02 11:30:22.3±1.1, **37°.59N**±0°.04×**38°.49E**±0°.03, **h9**^{km}±9^{km}, **n9,**
σ0^{s}.61/16, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	**Bozova**	**0.20**	**231**	P	**Pg**	**11 30 26.1**	**-0.2**
ATAB				*i* AML	AML	11 30 29.0	
	comp=N,423nm,0.1s						
ATAB				*i* AML	AML	11 30 29.0	
	comp=E,728nm,0.2s						
ATAB				S	**Sg**	**11 30 29.3**	**+0.1**
URFA	**Urfa**	**0.31**	**120**	Pg	**Pb**	**11 30 30.9**	**+0.9**
URFA				Sg	**Sb**	**11 30 35.5**	**+0.4**
SANL	**SANLIURFA_Merk**	**0.58**	**136**	P	**Pg**	**11 30 32.7**	**-0.8**
SANL				*i* AML	AML	11 30 41.0	
	comp=N,93nm,0.2s						
SANL				S	**Sg**	**11 30 41.4**	**+0.2**
SANL				*i* AML	AML	11 30 48.0	
	comp=E,118nm,0.5s						
AKCA	**Adyaman/G¶l**	**0.67**	**288**	P	**Pg**	**11 30 34.8**	**-0.4**
AKCA				S	**Sg**	**11 30 43.6**	**-0.3**
AKCA				*i* AML	AML	11 30 49.0	
	comp=N,87nm,0.5s						
SURC	**SANLIURFA_SURC**	**0.72**	**172**	P	**Pb**	**11 30 37.1**	**+0.1**
SURC				*i* AML	AML	11 30 48.0	
	comp=E,43nm,0.5s						
SURC				S	**Sn**	**11 30 48.4**	**-1.4**
SURC				*i* AML	AML	11 30 50.0	
	comp=N,48nm,0.4s						
NZIP	**Nizip/Gaziante**	**0.85**	**230**	S	**Sn**	**11 30 53.2**	**+0.2**
GAZ	**Gaziantep**	**1.10**	**248**	Pn	**Pg**	**11 30 43.8**	**+0.4**
GAZ				Sn	**Sn**	**11 30 59.1**	**-0.2**
DYBB	**Diyarbakir**	**1.36**	**74**	Pn	**Pb**	**11 30 48.2**	**+0.3**
DYBB				Sn	**Sg**	**11 31 06.3**	**+0.4**
ARPR	**Arapgir-MALATY**	**1.50**	**355**	Pn	**Pb**	**11 30 50.4**	**0.0**

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*DDA **02** 11:32:46.5±0.0, 37°.59N×38°.49E, h7^{km}±3^{km}, MW3.1*
*ISK **02** 11:32:48.7, 37°.55N×38°.51E, h25^{km}, ML2.4/8*
ISC 02 11:32:46.3±1.1, **37°.57N**±0°.03×**38°.51E**±0°.03, **h19**^{km}±4^{km},
n17, σ0^{s}.90/30, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	**Bozova**	**0.20**	**240**	SPECP		11 32 51.0	
ATAB				P	**Pg**	**11 32 51.4**	**-0.1**
ATAB				S	**Sg**	**11 32 54.7**	**-0.3**
ATAB				*i* AML	AML	11 32 55.0	
	comp=N,411nm,0.6s						
URFA	**Urfa**	**0.28**	**118**	Pg	**Pn**	**11 32 55.9**	**+0.4**
URFA				Sg	**Sn**	**11 33 00.6**	**-0.6**
SANL	**SANLIURFA_Merk**	**0.55**	**136**	SPECP		11 32 57.0	
SANL				P	**Pb**	**11 32 57.2**	**-0.1**
SANL				*i* AML	AML	11 33 06.0	
	comp=N,59nm,0.2s						
SANL				S	**Sn**	**11 33 06.6**	**-1.3**
AKCA	**Adyaman/G¶l**	**0.69**	**289**	SPECP		11 32 57.0	
AKCA				P	**Pb**	**11 32 57.3**	**-2.5**
AKCA				S	**Sg**	**11 33 09.1**	**-0.2**
SURC	**SANLIURFA_SURC**	**0.70**	**173**	SPECP		11 32 59.0	
SURC				P	**Pg**	**11 32 59.8**	**-0.3**
SURC				S	**Sn**	**11 33 11.6**	**+0.2**
SURC				*i* AML	AML	11 33 21.0	
	comp=N,29nm,0.3s						
MAYA	**Malatya/Merkez**	**0.76**	**355**	SPECP		11 33 00.0	
MAYA				P	**Pb**	**11 33 00.3**	**-0.7**
MAYA				S	**Sg**	**11 33 11.3**	**-0.1**
GZT	**Gaziantep**	**0.79**	**254**	SPECP		11 33 01.0	
GZT				P	**Pg**	**11 33 01.5**	**-0.3**
GZT				S	**Sn**	**11 33 13.0**	**-0.8**
NZIP	**Nizip/Gaziante**	**0.85**	**232**	SPECP		11 33 05.0	
NZIP				P	**Pn**	**11 33 05.1**	**+1.8**
NZIP				S	**Sn**	**11 33 15.8**	**+0.5**
NZIP				*i* AML	AML	11 33 21.0	
	comp=N,47nm,0.4s						
ELZG	**Elazig**	**1.00**	**22**	SPECP		11 33 05.0	
ELZG				P	**Pg**	**11 33 05.7**	**-0.2**
ELZG				*i* AML	AML	11 33 20.0	
	comp=N,40nm,0.7s						
ELZG				S	**Sn**	**11 33 20.4**	**+1.3**
GAZ	**Gaziantep**	**1.11**	**249**	Pn	**Pg**	**11 33 09.5**	**+1.6**
GAZ				Sn	**Sg**	**11 33 23.3**	**+0.8**
DARE	**Darende-Malaty**	**1.29**	**321**	Pn	**Pg**	**11 33 11.6**	**+0.3**
DARE				Sn	**Sg**	**11 33 28.0**	**-0.2**
DYBB	**Diyarbakir**	**1.34**	**73**	Pn	**Pg**	**11 33 12.6**	**+0.3**
KAMA	**Osmaniye**	**1.52**	**256**	P	**Pg**	**11 33 14.6**	**-1.1**
KAMA				S	**Sg**	**11 33 34.9**	**-0.6**
KAMA				*i* AML	AML	11 33 35.0	
	comp=N,24nm,1.2s						
ARPR	**Arapgir-MALATY**	**1.52**	**355**	Pn	**Pg**	**11 33 15.8**	**0.0**
ARPR				Sn	**Sg**	**11 33 35.1**	**-0.6**
SARI	**SarD1z-Kayseri**	**1.85**	**297**	Pn	**Pb**	**11 33 20.1**	**+0.4**
KOZT	**Kozan**	**2.14**	**268**	Pn	**Pb**	**11 33 23.8**	**-0.6**
SVAN	**Silvan-Diyarba**	**2.20**	**74**	Pn	**Pb**	**11 33 24.9**	**-0.7**

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*TEH **02** 11:35:50.1, 37°.64N×53°.39E, h11^{km}±30^{km}, ML3.4*
*AZER **02** 11:35:53.2±0.9, 37°.62N×53°.20E, h8^{km}, Error ellipse:*
s-maj=12.6km s-min=6.0km az=7.0
ISC 02 11:35:51.3±1.1, **37°.64N**±0°.05×**53°.38E**±0°.05, **h10**^{km}, **n29,**
σ0^{s}.86/37, **Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGLO	**Ghaloghah**	**1.20**	**162**	Pg	**Pb**	**11 36 12.8**	**-1.4**
IPRN	**Peran**	**1.63**	**211**	Pg	**Pn**	**11 36 20.6**	**+0.5**
ISHM	**Shahmirzad**	**1.83**	**182**	Pn	**Pn**	**11 36 23.7**	**+0.6**
MZPU	**Pul - Mazandar**	**1.88**	**231**	Pn	**Pn**	**11 36 23.1**	**-0.5**
IFIR	**Firoozkooh**	**2.06**	**194**	Pn	**Pn**	**11 36 26.8**	**+0.7**
MRVT	**Maraveh tapeh**	**2.15**	**89**	Pn	**Pn**	**11 36 27.3**	**0.0**
KLST	**Kelardasht - M**	**2.17**	**239**	Pn	**Pn**	**11 36 27.0**	**-0.7**
IANJ	**Anjilo**	**2.21**	**169**	Pn	**Pn**	**11 36 29.2**	**+1.0**
ILAS	**Lasjerd**	**2.28**	**189**	Pn	**Pn**	**11 36 29.9**	**+0.7**
IDMV	**Damavand**	**2.33**	**208**	Pn	**Pn**	**11 36 30.2**	**+0.3**
QALM	**Alamut, Qazvin**	**2.50**	**242**	Pn	**Pn**	**11 36 33.6**	**+1.4**
ISFB	**Sefidab**	**3.41**	**196**	Pn	**Pn**	**11 36 45.1**	**+0.5**
ASTR	**Astara**	**3.73**	**286**	P	**Pn**	**11 36 49.6**	**+0.7**
ASTR				S	**Sn**	**11 37 33.6**	**+0.7**
ISFR	**Sfrayin**	**3.73**	**98**	Pn	**Pn**	**11 36 50.2**	**+1.0**
LKRN	**Lenkeran, Azer**	**3.78**	**288**	P	**Pn**	**11 36 49.2**	**-0.3**
LKRN				S	**Sn**	**11 37 33.4**	**-0.6**
LRK	**Lerik**	**4.09**	**286**	P	**Pn**	**11 36 54.4**	**+0.3**
LRK				S	**Sn**	**11 37 42.1**	**0.0**
GLBA	**Clilabad**	**4.22**	**294**	P	**Pn**	**11 36 56.8**	**+1.1**
GLBA				S	**Sn**	**11 37 45.7**	**+0.6**
YRD	**Yardimli**	**4.24**	**289**	P	**Pn**	**11 36 56.3**	**+0.3**
YRD				S	**Sn**	**11 37 45.3**	**-0.3**
ANAR	**Anarak**	**4.45**	**176**	Pn	**Pn**	**11 37 00.3**	**+1.4**
TNSJ	**Nastanj**	**4.51**	**143**	Pn	**Pn**	**11 37 00.7**	**+0.9**
PQL	**Pirkuli**	**4.87**	**312**	S	**Sn**	**11 38 02.0**	**+1.0**
SIZA	**Siyzn**	**4.88**	**316**	S	**Sn**	**11 38 00.8**	**-0.5**
TKDS	**Koohdasht(Taba**	**5.05**	**142**	Pn	**Pn**	**11 37 08.0**	**+0.9**
IHRS	**Heris**	**5.05**	**280**	Pn	**Pn**	**11 37 08.6**	**+1.4**
TPRV	**Parvadeh(Tabas**	**5.34**	**149**	Pn	**Pn**	**11 37 12.3**	**+1.2**
XNQ	**Khinaliq**	**5.37**	**313**	P	**Pn**	**11 37 13.3**	**+1.6**
XNQ				S	**Sn**	**11 38 14.1**	**+0.4**
QSAR	**Qusar**	**5.53**	**316**	P	**Pn**	**11 37 13.5**	**-0.1**
QSAR				S	**Sn**	**11 38 17.0**	**-0.2**
SEKA	**Sheki**	**5.96**	**309**	S	**Sn**	**11 38 29.3**	**+1.3**
GDB	**GEDABAY**	**6.67**	**300**	P	**Pn**	**11 37 29.8**	**+0.4**
GDB				S	**Sn**	**11 38 44.8**	**-0.8**

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*ISK **02** 11:46:00.9, 37°.63N×38°.48E, h6^{km}, ML2.7/7*
DDA 02 11:46:00.6±0.0, **37°.59N×38°.51E, h7**^{km}±2^{km}**, ML2.7,**
Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	**Bozova**	**0.21**	**235**	P	Pg	11 46 10.8	+6.1
ATAB				*i* AML	AML	11 46 14.0	
	comp=N,1μm,0.5s						
ATAB				*i* AML	AML	11 46 14.0	
	comp=E,3μm,0.2s						
ATAB				S	Sg	11 46 14.1	+6.5
SANL	**SANLIURFA_Merk**	**0.57**	**137**	P	Pg	11 46 11.8	+0.2
SANL				*i* AML	AML	11 46 31.0	
	comp=E,504nm,0.5s						
SANL				*i* AML	AML	11 46 32.0	
	comp=N,554nm,0.5s						
AKCA	**Adyaman/G¶l**	**0.68**	**288**	P	Pg	11 46 13.9	+0.2
AKCA				*i* AML	AML	11 46 28.0	
	comp=N,302nm,0.5s						
AKCA	**Adyaman/G¶l**	**0.68**	**288**	P	Pn	11 46 19.6	+2.8
AKCA				*i* AML	AML	11 46 35.0	
	comp=E,183nm,0.3s						
AKCA				*i* AML	AML	11 46 36.0	
	comp=N,339nm,0.5s						
AKCA	**Adyaman/G¶l**	**0.68**	**288**	S	Pg	11 46 19.7	+6.0
SURC	**SANLIURFA_SURC**	**0.71**	**173**	P	Pg	11 46 14.6	+0.3
MAYA	**Malatya/Merkez**	**0.74**	**355**	P	Pg	11 46 14.6	-0.2
GZT	**Gaziantep**	**0.79**	**253**	P	Pg	11 46 16.0	+0.2
GZT	**Gaziantep**	**0.79**	**253**	P	Sg	11 46 29.8	+3.9
GZT				S	Sn	11 46 35.6	+5.2
NZIP	**Nizip/Gaziante**	**0.86**	**231**	P	Pb	11 46 18.0	+0.1
NZIP				*i* AML	AML	11 46 39.0	
	comp=E,308nm,0.4s						
NZIP				*i* AML	AML	11 46 40.0	
	comp=N,267nm,0.8s						
GAZ	**Gaziantep**	**1.11**	**248**	Pn	Pn	11 46 22.5	-0.2
GAZ				Sn	Sn	11 46 38.3	0.0
KAHM	**Kahramanmaras,**	**1.21**	**267**	P	Pn	11 46 24.4	+0.4
DARE	**Darende-Malaty**	**1.27**	**321**	Pn	Pn	11 46 24.4	-0.5
DARE				Sn	Sn	11 46 42.2	-0.1
DYBB	**Diyarbakir**	**1.34**	**74**	Pn	Pg	11 46 26.8	+0.4
DYBB				Sn	Sn	11 46 45.8	+1.8
ARPR	**Arapgir-MALATY**	**1.51**	**355**	Pn	Pn	11 46 28.5	+0.3
SARI	**SarD1z-Kayseri**	**1.84**	**297**	Pn	Pn	11 46 33.4	+0.6
KOZT	**Kozan**	**2.13**	**268**	Pn	Pn	11 46 37.7	+1.0
SVAN	**Silvan-Diyarba**	**2.20**	**74**	Pn	Pb	11 46 39.3	-1.5
BNGB	**Bingl**	**2.21**	**50**	Pn	Pn	11 46 39.1	+1.3

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*DDA **02** 11:47:47.1±0.0, 37°.59N×38°.48E, h7^{km}±2^{km}, MW3.3*
*ISK **02** 11:47:48.4, 37°.58N×38°.43E, h14^{km}, ML2.8/9*
ISC 02 11:47:47.8±0.9, **37°.59N**±0°.02×**38°.46E**±0°.02, **h10**^{km}±8^{km},
n21, σ0^{s}.76/37, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	**Bozova**	**0.18**	**227**	P	**Pg**	**11 47 51.8**	**+0.1**
ATAB				S	**Sg**	**11 47 54.7**	**+0.4**
URFA	**Urfa**	**0.32**	**118**	Pg	**Pb**	**11 47 56.2**	**+0.5**
URFA				Sg	**Sb**	**11 48 00.7**	**-0.3**
SANL	**SANLIURFA_Merk**	**0.59**	**135**	SPECP		11 47 58.0	
SANL				P	**Pg**	**11 47 58.9**	**-0.4**
SANL				S	**Sg**	**11 48 05.9**	**-1.2**
AKCA	**Adyaman/G¶l**	**0.65**	**288**	P	**Pg**	**11 48 00.3**	**0.0**
AKCA				S	**Sg**	**11 48 09.2**	**+0.3**
SURC	**SANLIURFA_SURC**	**0.72**	**170**	SPECP		11 48 01.0	
SURC				P	**Pg**	**11 48 01.6**	**-0.1**
SURC				S	**Sg**	**11 48 11.4**	**+0.3**
MAYA	**Malatya/Merkez**	**0.73**	**358**	P	**Pg**	**11 48 01.3**	**-0.6**
MAYA				S	**Sg**	**11 48 11.1**	**-0.4**
GZT	**Gaziantep**	**0.75**	**252**	SPECP		11 48 02.0	
GZT				P	**Pg**	**11 48 02.5**	**+0.1**
GZT				S	**Sn**	**11 48 14.9**	**-1.3**
NZIP	**Nizip/Gaziante**	**0.83**	**229**	SPECP		11 48 05.0	
NZIP				P	**Pn**	**11 48 05.5**	**-0.1**
NZIP				S	**Sb**	**11 48 16.1**	**+0.4**
ELZG	**Elazig**	**0.99**	**24**	SPECP		11 48 07.0	
ELZG				P	**Pb**	**11 48 07.4**	**+0.3**
ELZG				S	**Sb**	**11 48 20.5**	**+0.1**
GAZ	**Gaziantep**	**1.08**	**248**	Pg	**Pn**	**11 48 09.3**	**+0.2**
GAZ				Sg	**Sn**	**11 48 23.9**	**-0.2**
KAHM	**Kahramanmaras,**	**1.18**	**267**	P	**Pb**	**11 48 09.8**	**-0.4**
KAHM				S	**Sn**	**11 48 26.2**	**-0.2**
DARE	**Darende-Malaty**	**1.25**	**322**	Pn	**Pg**	**11 48 11.8**	**+0.1**
DARE				Sn	**Sn**	**11 48 28.9**	**+0.6**
ELBS	**KAHRAMANMARAS_**	**1.28**	**305**	SPECP		11 48 09.0	
ELBS				P	**Pn**	**11 48 09.7**	**-2.2**
ELBS				S	**Sn**	**11 48 30.4**	**+1.2**
DYBB	**Diyarbakir**	**1.38**	**74**	Pn	**Pg**	**11 48 14.3**	**+0.1**
DYBB				Sn	**Sg**	**11 48 33.2**	**+1.1**
KUZU	**Kuzuini**	**1.38**	**234**	SPECP		11 48 14.0	
KUZU				P	**Pg**	**11 48 14.5**	**+0.3**
KUZU				S	**Sg**	**11 48 33.1**	**+1.0**
KAMA	**Osmaniye**	**1.49**	**255**	P	**Pb**	**11 48 15.0**	**-0.6**
KAMA				S	**Sb**	**11 48 34.7**	**+0.2**
ARPR	**Arapgir-MALATY**	**1.50**	**356**	Pn	**Pb**	**11 48 15.5**	**-0.3**
SARI	**SarD1z-Kayseri**	**1.81**	**297**	Pn	**Pn**	**11 48 19.8**	**+0.7**
KOZT	**Kozan**	**2.10**	**268**	Pn	**Pn**	**11 48 23.2**	**+0.2**
BNGB	**Bingl**	**2.23**	**51**	Pn	**Pn**	**11 48 26.3**	**+1.4**
SVAN	**Silvan-Diyarba**	**2.23**	**75**	Pn	**Pb**	**11 48 26.8**	**-1.5**

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*DDA **02** 11:51:34.0±0.0, 37°.57N×38°.51E, h7^{km}±2^{km}, MW3.1*
*ISK **02** 11:51:35.4, 37°.55N×38°.49E, h18^{km}, ML2.6/7*
ISC 02 11:51:34.9±1.0, **37°.57N**±0°.03×**38°.50E**±0°.03, **h10**^{km}±8^{km},
n16, σ0^{s}.36/26, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	**Bozova**	**0.19**	**238**	SPECP		11 51 38.0	
ATAB				P	**Pg**	**11 51 38.8**	**-0.2**
ATAB				S	**Sg**	**11 51 42.1**	**+0.2**
ATAB				*i* AML	AML	11 51 43.0	
	comp=N,757nm,0.3s						
ATAB				*i* AML	AML	11 51 43.0	
	comp=E,765nm,0.4s						
URFA	**Urfa**	**0.29**	**117**	Pg	**Pb**	**11 51 42.6**	**+0.4**
URFA				Sg	**Sb**	**11 51 46.8**	**-0.3**
SANL	**SANLIURFA_Merk**	**0.56**	**136**	S	**Sg**	**11 51 53.0**	**-0.1**
AKCA	**Adyaman/G¶l**	**0.68**	**289**	SPECP		11 51 47.0	
AKCA				P	**Pg**	**11 51 47.7**	**-0.4**
AKCA				S	**Sg**	**11 51 57.0**	**0.0**
AKCA				*i* AML	AML	11 52 01.0	
	comp=E,284nm,0.2s						
AKCA				*i* AML	AML	11 52 02.0	
	comp=N,411nm,0.3s						
SURC	**SANLIURFA_SURC**	**0.70**	**173**	SPECP		11 51 47.0	
SURC				P	**Pg**	**11 51 48.0**	**-0.4**
SURC				S	**Sg**	**11 51 57.7**	**+0.2**
SURC				*i* AML	AML	11 52 03.0	
	comp=E,184nm,0.4s						
SURC				*i* AML	AML	11 52 10.0	
	comp=N,114nm,0.5s						
GZT	**Gaziantep**	**0.78**	**254**	SPECP		11 51 49.0	
GZT				P	**Pg**	**11 51 49.8**	**-0.1**
GZT				*i* AML	AML	11 52 04.0	
	comp=N,421nm,0.3s						
GZT				*i* AML	AML	11 52 04.0	
	comp=E,347nm,0.3s						
NZIP	**Nizip/Gaziante**	**0.84**	**232**	SPECP		11 51 51.0	
NZIP				P	**Pg**	**11 51 51.1**	**-0.1**
NZIP				S	**Sb**	**11 52 02.6**	**-0.5**
NZIP				*i* AML	AML	11 52 05.0	
	comp=E,148nm,0.5s						
NZIP				*i* AML	AML	11 52 07.0	
	comp=N,144nm,0.3s						
ELZG	**Elazig**	**1.00**	**22**	SPECP		11 51 53.0	
ELZG				P	**Pg**	**11 51 54.0**	**-0.2**
ELZG				S	**Sg**	**11 52 07.0**	**-0.2**
ELZG				*i* AML	AML	11 52 10.0	
	comp=E,127nm,0.6s						
ELZG				*i* AML	AML	11 52 12.0	
	comp=N,76nm,0.3s						
GAZ	**Gaziantep**	**1.10**	**249**	Pn	**Pn**	**11 51 56.3**	**-0.2**
GAZ				Sn	**Sn**	**11 52 11.3**	**-0.5**
DARE	**Darende-Malaty**	**1.28**	**321**	Pn	**Pn**	**11 51 58.9**	**0.0**
DARE				Sn	**Sg**	**11 52 16.6**	**+0.4**
DYBB	**Diyarbakir**	**1.35**	**73**	Pn	**Pb**	**11 52 00.3**	**-0.1**
DYBB				Sn	**Sg**	**11 52 18.4**	**-0.1**
KUZU	**Kuzuini**	**1.39**	**235**	P	**Sg**	**11 52 20.1**	**+0.4**
KUZU				*i* AML	AML	11 53 04.0	
	comp=N,48nm,0.3s						
KUZU				*i* AML	AML	11 53 05.0	
	comp=E,47nm,0.3s						
ARPR	**Arapgir-MALATY**	**1.52**	**355**	Pn	**Pn**	**11 52 02.7**	**+0.4**
SARI	**SarD1z-Kayseri**	**1.84**	**297**	Pn	**Pn**	**11 52 07.1**	**+0.3**
SARI				Sn	**Sn**	**11 52 30.2**	**0.0**
KOZT	**Kozan**	**2.13**	**268**	Pn	**Pn**	**11 52 11.2**	**+0.7**
SVAN	**Silvan-Diyarba**	**2.21**	**74**	Pn	**Pn**	**11 52 12.3**	**+0.6**

DDA 02 12:04:10.0±0.0, **37°.58N×38°.50E, h7**^{km}±1^{km}**, ML1.4,**
Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	**Bozova**	**0.20**	**235**	P	Pg	12 04 14.5	+0.5
ATAB				S	Sg	12 04 17.9	+1.2
ATAB				*i* AML	AML	12 04 18.0	
	comp=N,98nm,0.1s						
ATAB				*i* AML	AML	12 04 18.0	
	comp=E,141nm,0.1s						
AKCA	**Adyaman/G¶l**	**0.68**	**288**	P	Pg	12 04 23.4	+0.3
AKCA				*i* AML	AML	12 04 37.0	
	comp=E,9.7nm,0.2s						
AKCA				*i* AML	AML	12 04 52.0	
	comp=N,17nm,0.4s						
GZT	**Gaziantep**	**0.78**	**253**	P	Pb	12 04 25.9	-0.1
GZT				*i* AML	AML	12 04 39.0	
	comp=N,40nm,0.3s						
GZT				*i* AML	AML	12 04 39.0	
	comp=E,27nm,0.3s						

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*ISK **02** 12:04:48.4, 37°.58N×38°.46E, h23^{km}, ML2.6/8*
ISC 02 12:04:47.6±1.5, **37°.66N**±0°.07×**38°.44E**±0°.04, **h6**^{km}±15^{km},
n10, σ0^{s}.66/14, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	**Bozova**	**0.22**	**212**	S	**Sg**	**12 04 54.7**	**-0.1**
ATAB	**Bozova**	**0.22**	**212**	P	**Pg**	**12 04 51.5**	**-0.5**
URFA	**Urfa**	**0.37**	**125**	Pg	**Pb**	**12 04 56.4**	**-0.2**
URFA				Sg	**Sg**	**12 05 01.0**	**+1.4**
GAZ	**Gaziantep**	**1.09**	**244**	Pg	**Pg**	**12 05 08.8**	**+0.3**
GAZ				Sg	**Sb**	**12 05 23.3**	**-0.2**
DARE	**Darende-Malaty**	**1.19**	**321**	Pn	**Pb**	**12 05 10.2**	**-0.4**
DARE				Sn	**Sn**	**12 05 28.0**	**+0.6**
DYBB	**Diyarbakir**	**1.38**	**77**	Pn	**Pn**	**12 05 13.1**	**-0.4**
DYBB				Sn	**Sb**	**12 05 30.8**	**-0.9**
ARPR	**Arapgir-MALATY**	**1.44**	**357**	Pn	**Pn**	**12 05 14.2**	**-0.2**
SARI	**SarD1z-Kayseri**	**1.77**	**296**	Pn	**Pn**	**12 05 19.3**	**+0.4**
KOZT	**Kozan**	**2.09**	**266**	Pn	**Pn**	**12 05 23.3**	**+0.1**
BNGB	**Bingl**	**2.21**	**52**	Pn	**Pn**	**12 05 25.6**	**+0.7**

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*DDA **02** 12:06:05.0±0.0, 37°.58N×38°.51E, h7^{km}±3^{km}, MW3.1*
*ISK **02** 12:06:06.3, 37°.55N×38°.47E, h17^{km}, ML2.9/10*
ISC 02 12:06:05.7±1.1, **37°.59N**±0°.03×**38°.50E**±0°.02, **h7**^{km}±9^{km},
n22, σ0^{s}.54/37, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	**Bozova**	**0.20**	**235**	SPECP		12 06 09.0	
ATAB				P	**Pg**	**12 06 09.7**	**0.0**
ATAB				S	**Sg**	**12 06 12.8**	**+0.3**
ATAB				*i* AML	AML	12 06 13.0	
	comp=N,2μm,0.2s						
ATAB				*i* AML	AML	12 06 13.0	
	comp=E,2μm,0.1s						
URFA	**Urfa**	**0.29**	**120**	Pg	**Pb**	**12 06 13.5**	**+0.1**
URFA				Sg	**Sb**	**12 06 17.9**	**-0.6**
SANL	**SANLIURFA_Merk**	**0.57**	**137**	SPECP		12 06 16.0	
SANL				P	**Pg**	**12 06 16.4**	**-0.3**
SANL				*i* AML	AML	12 06 29.0	
	comp=N,368nm,0.5s						
SANL				*i* AML	AML	12 06 29.0	
	comp=E,395nm,0.6s						
SANL	**SANLIURFA_Merk**	**0.57**	**137**	SPECP		12 06 16.0	
SANL				P	**Pg**	**12 06 16.2**	**-0.4**
SANL				S	**Sg**	**12 06 23.9**	**-0.2**
AKCA	**Adyaman/G¶l**	**0.68**	**288**	SPECP		12 06 18.0	
AKCA				P	**Pg**	**12 06 18.3**	**-0.4**
AKCA				S	**Sg**	**12 06 28.2**	**+0.6**
AKCA				*i* AML	AML	12 06 32.0	
	comp=N,255nm,0.5s						
AKCA				*i* AML	AML	12 06 32.0	
	comp=E,212nm,0.2s						
AKCA	**Adyaman/G¶l**	**0.68**	**288**	SPECP		12 06 18.0	
AKCA				P	**Pg**	**12 06 18.5**	**-0.2**
AKCA				S	**Sg**	**12 06 28.4**	**+0.8**
SURC	**SANLIURFA_SURC**	**0.71**	**173**	SPECP		12 06 18.0	
SURC				P	**Pg**	**12 06 18.7**	**-0.7**
SURC				*i* AML	AML	12 06 34.0	
	comp=N,116nm,0.5s						
SURC				*i* AML	AML	12 06 38.0	
	comp=E,243nm,0.7s						
SURC	**SANLIURFA_SURC**	**0.71**	**173**	SPECP		12 06 19.0	
SURC				P	**Pg**	**12 06 19.0**	**-0.4**
SURC				S	**Sg**	**12 06 28.7**	**+0.1**
MAYA	**Malatya/Merkez**	**0.74**	**355**	SPECP		12 06 19.0	
MAYA				P	**Pg**	**12 06 19.2**	**-0.7**
MAYA				*i* AML	AML	12 06 34.0	
	comp=N,69nm,0.2s						
MAYA				*i* AML	AML	12 06 34.0	
	comp=E,79nm,0.2s						
MAYA	**Malatya/Merkez**	**0.74**	**355**	P	**Pg**	**12 06 19.1**	**-0.9**
MAYA				S	**Sg**	**12 06 30.3**	**+0.7**
GZT	**Gaziantep**	**0.78**	**253**	SPECP		12 06 20.0	
GZT				P	**Pg**	**12 06 20.4**	**-0.3**
GZT				S	**Sg**	**12 06 31.5**	**+0.6**
GZT				*i* AML	AML	12 06 34.0	
	comp=N,560nm,0.3s						
GZT				*i* AML	AML	12 06 34.0	
	comp=E,373nm,0.4s						
GZT	**Gaziantep**	**0.78**	**253**	P	**Pg**	**12 06 20.7**	**0.0**
GZT				S	**Sg**	**12 06 31.1**	**+0.2**
NZIP	**Nizip/Gaziante**	**0.85**	**231**	SPECP		12 06 33.0	
NZIP				P	**Sg**	**12 06 33.4**	**+0.2**
NZIP				*i* AML	AML	12 06 56.0	
	comp=N,81nm,0.5s						
NZIP				*i* AML	AML	12 06 56.0	
	comp=E,106nm,0.6s						
NZIP	**Nizip/Gaziante**	**0.85**	**231**	SPECP		12 06 22.0	
NZIP				P	**Pb**	**12 06 22.6**	**-0.3**
NZIP				S	**Sb**	**12 06 34.9**	**+0.3**
GAZ	**Gaziantep**	**1.11**	**248**	Pg	**Pb**	**12 06 27.2**	**-0.1**
GAZ				Sg	**Sb**	**12 06 41.8**	**-0.2**
DARE	**Darende-Malaty**	**1.27**	**321**	Pn	**Pg**	**12 06 29.5**	**-0.6**
DARE				Sn	**Sn**	**12 06 47.7**	**+0.3**
DYBB	**Diyarbakir**	**1.35**	**74**	Pn	**Pn**	**12 06 30.9**	**-0.2**
DYBB				Sn	**Sn**	**12 06 49.8**	**+0.5**
ARPR	**Arapgir-MALATY**	**1.51**	**355**	Pn	**Pb**	**12 06 33.8**	**-0.4**
SARI	**SarD1z-Kayseri**	**1.84**	**297**	Pn	**Pn**	**12 06 37.9**	**0.0**
SARI				Sn	**Sn**	**12 07 01.1**	**-0.5**
KOZT	**Kozan**	**2.13**	**268**	Pn	**Pn**	**12 06 41.8**	**0.0**
KOZT				Sn	**Sn**	**12 07 07.9**	**-0.6**
BNGB	**Bingl**	**2.21**	**50**	Pn	**Pn**	**12 06 44.1**	**+1.1**
GURO	**Guroymak-BITLI**	**2.95**	**70**	Pn	**Pn**	**12 06 54.5**	**+1.3**

WEL 02 12:08:57.9, 43°S±8°×**17°3E**±2°3, **h13**^{km}±28^{km}, **M2.9**/16,

mB4.9/1, ML2.8/17, MLv2.9/16, Mw(mB)4.2/1, Error ellipse: s-maj=0.0km s-min=0.0km az=88.3, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.36	7	P	Sn	12 09 16.7	+1.1
GVZ	Greta Valley S	0.38	239	P	Pb	12 09 06.2	-0.4
AMCZ	Amberley	0.73	236	P	Pn	12 09 13.4	-0.4
LTZ	Lake Taylor	0.89	269	P	Pn	12 09 17.1	+1.0
BSWZ	Blackbirch Sta	1.09	16	P	Pg	12 09 20.8	+1.9
MQZ	McQueen's Vall	1.11	213	P	Pg	12 09 19.7	+0.3
CMWZ	Cape Campbell	1.16	28	P	Pg	12 09 20.5	+0.3
AKCZ	Akaroa Harbour	1.18	201	P	Pg	12 09 22.0	+1.4
OXZ	Oxford	1.20	242	P	Pg	12 09 21.1	+0.2
RACZ	Rakaia	1.37	225	P	Pg	12 09 24.1	-0.2
TUWZ	Tuamarina	1.38	14	P	Pn	12 09 23.1	+0.3
MRNZ	Matariki Terra	1.47	338	P	Pg	12 09 32.9	+6.7
TCW	Tory Channel	1.67	21	P	Pn	12 09 26.2	-0.5
WACZ	Wakanui South	1.68	225	P	Pb	12 09 28.2	-0.4
RPZ	Rata Peaks	2.01	241	P	Pn	12 09 32.6	+1.1
CAW	Cannon Point	2.04	36	P	Pb	12 09 34.0	-0.7
WVZ	Waitaha Valley	2.04	261	P	Pb	12 09 34.9	+0.2
ARCZ	Arundel	2.05	234	P	Pn	12 09 33.0	+1.0
OGWZ	Otaki Gorge	2.33	33	P	Pb	12 09 38.0	-1.6
TMZ	Timaru	2.42	227	P	Pn	12 09 38.5	+1.5
MRZ	Mangatainoka R	2.63	37	P	Pn	12 09 41.7	+1.8
FOZ	Fox Glacier	2.79	253	P	Pb	12 09 45.4	-2.1
ODZ	Otahua Downs	3.06	221	P	Pn	12 09 46.9	+1.0
WHHZ	Waihua	4.66	39	P	Pn	12 10 09.6	+1.8
MARZ	Manawahe	5.37	28	P	Pn	12 10 19.8	+2.2

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*NOU **02** 12:10:20.0, 43°.19S×173°.34E, h0^{km}, MLv3.4/9, Off E. Coast of S. Island, N.Z.*
*WEL **02** 12:10:21.8, 43°S±5°×17°3E±°, h19^{km}±13^{km}, M2.8/23, mB5.0/1, ML3.0/27, MLv2.8/23, Mw(mB)4.3/1, Error ellipse: s-maj=0.0km s-min=0.0km az=86.8*
ISC 02 12:10:20.5±2.0**, 43°.07S**±0°.05×**173°.26E**±0°.05**, h3**^{km}±19^{km}**, n51, σ0^{s}.75**/51**, Off east coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	Greta Valley S	0.19	302	P	Pg	12 10 24.4	+0.1
AMCZ	Amberley	0.46	256	P	Pb	12 10 31.7	+0.5
KHZ	Kahutara	0.69	18	P	Pb	12 10 34.9	-0.2
KHZ	Kahutara	0.69	18	P	Pb	12 10 34.9	-0.2
MQZ	McQueen's Vall	0.77	214	P	Pn	12 10 37.9	-0.4
LTZ	Lake Taylor	0.78	291	P	Pg	12 10 35.3	-0.1
AKCZ	Akaroa Harbour	0.84	197	P	Pn	12 10 39.9	+0.6
OXZ	Oxford	0.93	254	P	Pb	12 10 39.3	+0.1
RACZ	Rakaia	1.05	231	P	Pn	12 10 42.2	+0.1
MHCZ	Mount Hutt	1.32	249	P	Pn	12 10 45.0	-0.9
THZ	Tophouse	1.33	349	P	Pn	12 10 44.7	-1.4
WACZ	Wakanui South	1.35	229	P	Pb	12 10 46.1	-0.4
INZ	Inchbonnie	1.38	284	P	Pn	12 10 45.6	-1.0
BSWZ	Blackbirch Sta	1.43	19	P	Pn	12 10 47.4	0.0
CMWZ	Cape Campbell	1.50	29	P	Pb	12 10 48.8	-0.1
DSZ	Denniston Nort	1.71	320	P	Pn	12 10 50.0	-1.2
MRNZ	Matariki Terra	1.71	347	P	Pn	12 10 50.9	-0.3
TUWZ	Tuamarina	1.72	17	P	Pn	12 10 50.9	-0.4
RPZ	Rata Peaks	1.73	247	P	Pn	12 10 51.0	-0.5
RPZ	Rata Peaks	1.73	247	P	Pn	12 10 50.8	-0.7
ARCZ	Arundel	1.75	239	P	Pn	12 10 51.3	-0.5
WVZ	Waitaha Valley	1.85	269	P	Pn	12 10 52.9	-0.2
NNZ	Nelson	1.85	3	P	Pn	12 10 52.8	-0.3
TCW	Tory Channel	2.01	23	P	Pn	12 10 54.5	-0.7
TKNZ	Takaka Hill	2.05	354	P	Pn	12 10 56.0	+0.1
SNZO	South Karori	2.06	32	P	Pn	12 10 55.5	-0.5
TMZ	Timaru	2.10	230	P	Pn	12 10 56.7	+0.2
PLWZ	Palliser	2.11	45	P	Pn	12 10 56.1	-0.6
WEL	Wellington	2.11	33	P	Pn	12 10 56.2	-0.5
GCSZ	Gaunt Creek Bo	2.16	262	P	Pn	12 10 57.6	+0.2
QRZ	Quartz Range	2.31	346	P	Pn	12 11 00.5	+1.1
QRZ	Quartz Range	2.31	346	P	Pn	12 10 59.2	-0.2
DUWZ	D'Urville Isla	2.32	13	P	Pn	12 10 59.4	-0.2
CAW	Cannon Point	2.38	35	P	Pn	12 10 59.7	-0.7
FOZ	Fox Glacier	2.56	258	P	Pn	12 11 03.3	+0.5
OGWZ	Otaki Gorge	2.67	33	P	Pn	12 11 03.5	-0.8
ODZ	Otahua Downs	2.73	223	P	Pn	12 11 04.2	-1.0
ODZ	Otahua Downs	2.73	223	P	Pn	12 11 05.3	+0.1
MRZ	Mangatainoka R	2.97	37	P	Pn	12 11 07.3	-1.2
BFZ	Birch Farm	3.27	44	P	Pn	12 11 13.5	+0.9
BFZ	Birch Farm	3.27	44	P	Pn	12 11 11.2	-1.4
JCZ	Jackson Bay	3.40	251	P	Pn	12 11 14.5	0.0
JCZ	Jackson Bay	3.40	251	P	Pn	12 11 14.4	-0.2
KHEZ	Kahui Hut	3.81	9	P	Pn	12 11 22.3	+2.1
PKE	Pukeiti	3.91	8	P	Pn	12 11 22.3	+0.8
VRZ	Vera Road	4.10	17	P	Pn	12 11 24.8	+0.8
WNVZ	Wahianoa	4.13	26	P	Pn	12 11 25.0	+0.4
TRVZ	Turoa	4.14	25	P	Pn	12 11 25.2	+0.3
OTVZ	Oturere	4.30	26	P	Pn	12 11 26.8	-0.2
HIZ	Hauiti	4.71	15	P	Pn	12 11 33.7	+1.2
NGRZ	Ngongotaha	5.44	25	P	Pn	12 11 44.1	+1.6

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*DDA **02** 12:10:24.4±0.0, 37°.58N×38°.51E, h7^{km}±2^{km}, ML2.5*
*ISK **02** 12:10:24.7, 37°.64N×38°.52E, h8^{km}, ML2.8/9*
ISC 02 12:10:24.7±1.0**, 37°.57N**±0°.03×**38°.54E**±0°.03**, h10**^{km}±8^{km}**, n17, σ0^{s}.52**/30**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	Bozova	0.22	242	P	Pg	12 10 29.4	+0.1
ATAB				S	Sg	12 10 32.5	+0.1
ATAB				i AML	AML	12 10 33.0	
	comp=E,1µm,0.5s						
ATAB				i AML	AML	12 10 34.0	
	comp=N,942nm,0.6s						
URFA	Urfa	0.26	121	Pg	Pb	12 10 31.2	-0.3
URFA				Sg	Sb	12 10 36.4	+0.3
SANL	SANLIURFA_Merk	0.54	138	P	Pg	12 10 35.0	-0.1
SANL				S	Sb	12 10 43.5	-0.6
SANL				i AML	AML	12 10 49.0	
	comp=N,293nm,0.3s						
SURC	SANLIURFA_SURC	0.69	175	P	Pb	12 10 38.6	-0.4
SURC				S	Sb	12 10 48.8	+0.2
AKCA	Adyaman/G¶l	0.71	288	P	Pg	12 10 38.3	-0.2
AKCA				S	Sg	12 10 47.6	-0.2
AKCA				i AML	AML	12 10 51.0	
	comp=E,224nm,0.2s						
MAYA	Malatya/Merkez	0.76	353	P	Pg	12 10 39.0	-0.3
MAYA				S	Sg	12 10 49.2	0.0
GZT	Gaziantep	0.81	255	P	Pn	12 10 41.8	-0.5
GZT				S	Sn	12 10 53.2	-1.2
GZT				i AML	AML	12 10 55.0	
	comp=N,269nm,0.2s						
GZT				i AML	AML	12 10 57.0	
	comp=E,369nm,0.3s						
NZIP	Nizip/Gaziante	0.87	233	P	Pn	12 10 43.1	0.0
NZIP				S	Sb	12 10 54.2	+0.5
NZIP				i AML	AML	12 10 57.0	
	comp=N,188nm,0.3s						
ELZG	Elazig	0.99	21	P	Pg	12 10 42.8	-0.9
ELZG				S	Sb	12 10 57.6	+0.4
ELZG				i AML	AML	12 11 00.0	
	comp=E,200nm,0.5s						
ELZG				i AML	AML	12 11 03.0	
	comp=N,117nm,0.3s						
GAZ	Gaziantep	1.13	250	Pn	Pn	12 10 46.6	-0.1
GAZ				Sn	Sn	12 11 03.1	+0.7
DARE	Darende-Malaty	1.30	320	Pn	Pn	12 10 48.9	-0.1
DARE				Sn	Sn	12 11 06.6	+0.1
DYBB	Diyarbakir	1.32	73	Pn	Pb	12 10 49.9	+0.2
DYBB				Sn	Sg	12 11 07.9	+0.6
ELBS	KAHRAMANMARAS_	1.34	304	P	Pg	12 10 50.2	-0.2
ELBS				S	Sn	12 11 07.6	0.0
ELBS				i AML	AML	12 11 13.0	
	comp=N,76nm,0.5s						
ELBS				i AML	AML	12 11 16.0	
	comp=E,76nm,0.4s						
ARPR	Arapgir-MALATY	1.53	354	Pn	Pn	12 10 52.1	-0.1
SARI	SarD1z-Kayseri	1.87	297	Pn	Pn	12 10 57.5	+0.5
KOZT	Kozan	2.16	268	Pn	Pn	12 11 02.0	+1.2
BNGB	Bingl	2.20	49	Pn	Pn	12 11 02.0	+0.6

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*DDA **02** 12:11:55.0±0.0, 37°.57N×38°.50E, h7^{km}±2^{km}, ML2.5*
*ISK **02** 12:11:56.6, 37°.52N×38°.50E, h23^{km}, ML2.8/9*
ISC 02 12:11:55.8±1.0**, 37°.57N**±0°.03×**38°.50E**±0°.03**, h10**^{km}±9^{km}**, n16, σ0^{s}.56**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	Bozova	0.19	239	P	Pg	12 11 59.8	+0.1
ATAB				i AML	AML	12 12 03.0	
	comp=E,1µm,0.1s						
ATAB				S	Sg	12 12 03.0	+0.5
ATAB				i AML	AML	12 12 04.0	
	comp=N,1µm,0.2s						
URFA	Urfa	0.29	116	Pg	Pb	12 12 03.7	+0.6
URFA				Sg	Sb	12 12 08.2	+0.2
SANL	SANLIURFA_Merk	0.56	135	P	Pg	12 12 06.4	-0.2
SANL				S	Sg	12 12 14.0	0.0
SANL				i AML	AML	12 12 19.0	
	comp=N,296nm,0.4s						
SANL				i AML	AML	12 12 23.0	
	comp=E,330nm,0.5s						
AKCA	Adyaman/G¶l	0.68	290	P	Pg	12 12 08.6	-0.3
AKCA				S	Sg	12 12 18.1	+0.3
AKCA				i AML	AML	12 12 23.0	
	comp=N,243nm,0.5s						
SURC	SANLIURFA_SURC	0.69	172	P	Pb	12 12 09.3	-0.7
SURC				S	Sb	12 12 18.5	-1.0
MAYA	Malatya/Merkez	0.76	356	P	Pg	12 12 09.5	-1.0
MAYA				S	Sg	12 12 19.9	-0.5
GZT	Gaziantep	0.77	254	P	Pn	12 12 12.1	-0.7
GZT				S	Sb	12 12 21.4	-0.5
GZT				i AML	AML	12 12 25.0	
	comp=N,386nm,0.2s						
GZT				i AML	AML	12 12 25.0	
	comp=E,306nm,0.1s						
NZIP	Nizip/Gaziante	0.84	232	P	Pb	12 12 12.7	+0.2
NZIP				S	Sb	12 12 23.9	+0.2
NZIP				i AML	AML	12 12 27.0	
	comp=E,201nm,0.5s						
NZIP				i AML	AML	12 12 28.0	
	comp=N,181nm,0.2s						
ELZG	Elazig	1.01	22	P	Pg	12 12 14.2	-1.0
ELZG				S	Sb	12 12 29.1	+0.3
GAZ	Gaziantep	1.10	249	Pn	Pn	12 12 17.3	+0.1
GAZ				Sn	Sb	12 12 31.2	0.0
DARE	Darende-Malaty	1.28	322	Pn	Pn	12 12 19.9	+0.1
DARE				Sn	Sn	12 12 37.7	+0.6
DYBB	Diyarbakir	1.36	73	Pn	Pn	12 12 20.7	-0.2
DYBB				Sn	Sb	12 12 39.1	+0.3
ARPR	Arapgir-MALATY	1.53	355	Pn	Pn	12 12 23.9	+0.6
SARI	SarD1z-Kayseri	1.84	298	Pn	Pn	12 12 28.3	+0.7
KOZT	Kozan	2.12	269	Pn	Pn	12 12 31.7	+0.4
BNGB	Bingl	2.23	50	Pn	Pn	12 12 33.6	+0.7

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*MAN **02** 12:16:30.1, 4°.97N×125°.80E, h110^{km}, mb5.0, ML3.9, MS4.0*
*DJA **02** 12:16:32.6±0.4, 5°N±2°×12°6E±°, h125^{km}±7^{km}, M4.3/13, mb4.3/10, mB4.8/7, MLv4.6/13, Mw(mB)4.1/7*
*IDC **02** 12:16:32.4±1.3, 5°.21N×125°.91E, h130^{km}±11^{km}, mb3.6/13, mbtmp4.0/13, Error ellipse: s-maj=28.3km s-min=11.3km az=70.0*
ISC 02 12:16:31.0±0.8**, 5°.06N**±0°.04×**125°.81E**±0°.06**, h122**^{km}±8^{km}**, n42, σ2^{s}.09**/62**, mb3.8**/13**, 8C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	1.33	320	⇓iP	Pn	12 16 55.5	-1.3
GSPH				i S	Sn	12 17 13.9	-2.4
SGSI	Sangihe	1.40	191	P	Pn	12 16 59.0	+1.6
SGSI				S	Sn	12 17 20.4	+2.9
SKMP	Bagumbayan, Su	1.92	319	⇓eP	Pn	12 17 04.0	+0.5
SKMP				eS	Sn	12 17 28.0	-0.4
MATI	Mati	1.92	14	⇑eP	Pn	12 17 03.5	-0.2
MATI				eS	Sn	12 17 24.2	-4.4
DAV	Davao City (W)	2.01	354	P	Pn	12 17 04.3	-0.4
	126nm,0.4s,baz=200,slow=6.4,SNR=1.6						
DAV				S	Sn	12 17 30.3	-0.1
	298nm,0.3s,baz=288,slow=23,SNR=3.4						
CTBH	Cotabato--PC H	2.65	324	⇑iP	Pn	12 17 12.8	+0.1
CTBH				i S	Sn	12 17 43.1	-1.7
CDOP	Cateel, Davao	2.77	13	eP	Pn	12 17 15.4	+1.0
CDOP				i S	Sn	12 17 51.5	+3.6
BUKP	Musuan	2.89	345	⇑eP	Pn	12 17 16.5	+0.4
BUKP				eS	Sn	12 17 51.7	+1.0
TASP	Talacogon, Agu	3.37	0	eP	Pn	12 17 22.6	+0.4
TASP				eS	Sn	12 18 07.2	+5.4
CGP	Cagayan de Oro	3.54	342	⇓eP	Pn	12 17 26.0	+1.4
CGP				eS	Sn	12 18 07.4	+1.4
PAGZ	Pagadian	3.67	319	⇑eP	Pn	12 17 26.9	+0.7
PAGZ				eS	Sn	12 18 07.9	-1.0
BUTP	Butuan	3.88	357	⇑eP	Pn	12 17 30.4	+1.3
BUTP				eS	Sn	12 18 17.3	+3.2
TNTI	Ternate	4.54	160	P	Pn	12 17 38.5	+0.7
TNTI				S	Sn	12 18 30.2	+0.4
GLSP	General Luna,	4.70	4	⇑eP	Pn	12 17 41.1	+1.1
GLSP				eS	Sn	12 18 36.5	+2.9
GHBP	Garcia Hernand	4.77	342	⇓iP	Pn	12 17 41.7	+0.8
GHBP				eS	Sn	12 18 35.7	+0.4
MSLP	Maasin	5.12	350	⇑eP	Pn	12 17 47.2	+1.5
MSLP				eS	Sn	12 18 40.7	-3.1
TABP	Talibon, Bohol	5.20	344	eP	Pn	12 17 46.4	-0.3
TABP				eS	Sn	12 18 45.5	-0.3
GTOI	Gorontalo	5.21	212	P	Pn	12 17 49.1	+2.3
	25nm,0.5s,544nm0.3nm						
GTOI				S	Sn	12 18 46.5	+0.6
	25nm,0.5s,544nm0.3nm						
CNOP	Candoni, Negro	5.68	327	⇑eP	Pn	12 17 54.9	+1.7
LBMI	Labuha	5.91	163	P	Pn	12 17 56.7	+0.4
	39nm,0.4s,2µm0.6nm						
LBMI				S	Sn	12 19 01.2	-1.7
	39nm,0.4s,2µm0.6nm						
MRSI	Marisa	5.97	220	P	Pn	12 17 54.7	-2.4
	70nm,0.6s,942nm0.5nm						
MRSI				S	Sn	12 19 05.7	+1.4
	70nm,0.6s,942nm0.5nm						
LUWI	Luwuk	6.78	207	P	Pn	12 18 11.9	+3.9
	53nm,1.1s,2µm0.5nm						
LUWI				S	Sn	12 19 34.2	+10
	53nm,1.1s,2µm0.5nm						
SANI	Sanana	7.07	179	P	Pn	12 18 10.9	-1.0
	24nm,0.6s,1µm0.3nm						
SANI				S	Sn	12 19 24.1	-6.8
	24nm,0.6s,1µm0.3nm						
MPSI	Mapaga	7.54	232	P	Pn	12 18 20.1	+1.8
	12nm,0.9s,0.1nm						
NLAI	Namlea	8.35	171	P	Pn	12 18 29.2	0.0
NLAI				S	Sn	12 19 55.8	-6.1
WRA	Warramunga Arr	26.23	162	P	P	12 21 55.7	+0.9
	0.5nm,0.3s,baz=339,slow=10,SNR=23						
	0.5nm,0.3s						
CMAR	Chiang Mai Arr	29.41	299	P	P	12 22 25.2	+2.0
	0.5nm,0.4s,baz=122,slow=7.0,SNR=7.6						
	0.5nm,0.4s						
ASAR	Alice Springs	29.63	165	P	P	12 22 27.1	+2.1
	1.0nm,0.5s,baz=344,slow=7.3,SNR=29						
	1.0nm,0.5s						
KSRS	Korea Array	32.30	3	P	P	12 22 48.5	+0.2
	2.0nm,0.8s,baz=190,slow=11,SNR=4.5						
	2.0nm,0.8s						
MJAR	Matsushiro Arr	33.33	18	P	P	12 22 56.6	-0.7
	2.7nm,0.9s,baz=200,slow=9.4,SNR=4.4						
	2.7nm,0.9s						
STKA	Stephens Creek	39.70	159	P	P	12 23 53.1	+1.7
	2.8nm,0.8s,baz=57,slow=6.7,SNR=6.3						
	2.8nm,0.8s						
H11N1	WAKE ISLAND Hy	42.55	66	T	T	13 10 31.1	
	baz=253						
H11N2	WAKE ISLAND Hy	42.55	66	T	T	13 10 26.3	
	baz=253						
H11N3	WAKE ISLAND Hy	42.56	66	T	T	13 10 31.8	
	baz=253						
SONM	Songino Array	45.75	342	P	P	12 24 38.9	-1.4
	0.4nm,0.5s,baz=144,slow=5.4,SNR=2.8						
SONM				PcP	PcP	12 26 16.5	+0.5
	0.3nm,0.7s,baz=116,slow=3.4,SNR=2.0						
	0.4nm,0.5s						
DZM	Mont Dzumac	48.05	126	P	P	12 24 58.6	+0.1
	4.6nm,0.7s,baz=150,slow=15,SNR=1.5						
	4.6nm,0.7s						
MKAR	Makanchi Array	55.94	325	P	P	12 25 56.4	-0.1
	0.7nm,0.5s,baz=120,slow=7.2,SNR=12						
MKAR				PcP	PcP	12 26 53.7	+0.1
	0.7nm,0.8s,baz=120,slow=4.6,SNR=3.7						
	0.7nm,0.5s						
ZALV	Zalesovo Beam	58.99	333	P	P	12 26 16.0	-1.6
	0.3nm,0.3s,baz=116,slow=6.7,SNR=1.8						
	0.3nm,0.3s						
ILAR	Eielson Array	84.30	25	P	P	12 28 49.3	+0.3
	0.4nm,0.8s,baz=252,slow=5.1,SNR=10						
	0.4nm,0.8s						
ARCES	ARCESS Array B	88.89	340	P	P	12 29 11.0	-0.2
	3.8nm,1.1s,baz=88,slow=4.6,SNR=1.6						
	3.8nm,1.1s						
YKA	Yellowknife Ar	98.67	24	P	P	12 29 55.1	-1.0
	0.1nm,0.5s,baz=297,slow=5.5,SNR=2.9						
	0.1nm,0.5s						
TORD	Torodi Ar. Bea	121.62	289	PKP	PKiKP	12 35 11.2	-0.3
	0.3nm,0.7s,baz=116,slow=3.0,SNR=2.4						

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*DDA **02** 12:20:52.0±0.0, 37°.58N×38°.51E, h7^{km}±2^{km}, ML2.4*
*ISK **02** 12:20:53.4, 37°.53N×38°.46E, h15^{km}, ML2.7/7*
ISC 02 12:20:52.8±1.0**, 37°.58N**±0°.03×**38°.47E**±0°.03**, h9**^{km}±8^{km}**, n17, σ0^{s}.80**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	Bozova	0.18	231	P	Pg	12 20 56.8	+0.2
ATAB				i AML	AML	12 21 00.0	
	comp=N,1µm,0.2s						
ATAB				S	Sg	12 21 00.0	+0.8
URFA	Urfa	0.31	117	Pg	Pb	12 21 00.6	0.0
URFA				Sg	Sb	12 21 05.0	-0.8
SANL	SANLIURFA_Merk	0.58	135	P	Pg	12 21 03.8	-0.3
SANL				S	Sg	12 21 10.9	-0.8
SANL				i AML	AML	12 21 16.0	
	comp=N,245nm,0.5s						
AKCA	Adyaman/G¶l	0.66	289	P	Pg	12 21 05.6	+0.1
AKCA				S	Sb	12 21 15.5	-0.2
SURC	SANLIURFA_SURC	0.71	171	P	Pg	12 21 06.2	-0.4
SURC				S	Sg	12 21 16.2	+0.4
MAYA	Malatya/Merkez	0.74	357	P	Pg	12 21 04.7	-2.5
MAYA				S	Sg	12 21 16.4	-0.4
MAYA				i AML	AML	12 21 21.0	
	comp=E,73nm,0.3s						
GZT	Gaziantep	0.76	253	P	Pn	12 21 09.1	-0.7
GZT				S	Sn	12 21 20.9	-0.5
GZT				i AML	AML	12 21 22.0	
	comp=N,387nm,0.4s						
NZIP	Nizip/Gaziante	0.83	230	P	Pb	12 21 09.2	-0.2
NZIP				S	Sb	12 21 21.0	+0.2
NZIP				i AML	AML	12 21 26.0	
	comp=N,178nm,0.2s						
GAZ	Gaziantep	1.08	248	Pg	Pn	12 21 14.2	0.0
GAZ				Sg	Sn	12 21 29.2	-0.2
DARE	Darende-Malaty	1.26	322	Pn	Pg	12 21 17.3	+0.3
DARE				Sn	Sn	12 21 35.3	+1.6
HCB	Kahramanmara	1.27	260	P	Pn	12 21 16.0	-0.7
HCB				S	Sn	12 21 33.7	-0.1
HCB				i AML	AML	12 21 43.0	
	comp=N,74nm,0.7s						
DYBB	Diyarbakir	1.37	74	Pn	Pb	12 21 18.8	+0.1
DYBB				Sn	Sg	12 21 37.7	+0.7
KAMA	Osmaniye	1.49	255	P	Pn	12 21 20.1	+0.3
KAMA				S	Sg	12 21 40.3	-0.4
KAMA				i AML	AML	12 21 44.0	
	comp=N,35nm,0.4s						
ARPR	Arapgir-MALATY	1.51	356	Pn	Pn	12 21 20.7	+0.5
ARPR				Sn	Sg	12 21 41.6	+0.2
SARI	SarD1z-Kayseri	1.82	298	Pn	Pn	12 21 25.3	+0.9
KOZT	Kozan	2.10	268	Pn	Pn	12 21 28.9	+0.7
BNGB	Bingl	2.23	50	Pn	Pn	12 21 31.6	+1.5

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*NOU **02** 12:23:05.5, 39°.51S×177°.54E, h6^{km}, MLv3.4/7, Off E. Coast of N. Island, N.Z.*
*WEL **02** 12:23:08.8±0.5, 39°S±3°×17°7E±°, h23^{km}±6^{km}, M3.6/14, ML3.9/14, MLv3.6/14, Error ellipse: s-maj=0.0km s-min=0.0km az=122.7, confirmed*
ISC 02 12:23:06.9±1.2**, 39°.46S**±0°.03×**177°.42E**±0°.03**, h13**^{km}±9^{km}**, n108, σ0^{s}.85**/127**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CKHZ	Cape Kidnapper	0.33	233	P	Pn	12 23 18.0	+0.7
ARHZ	Aropaoanui	0.38	301	P	Pb	12 23 15.9	+0.5
WHHZ	Waihua	0.41	340	P	Pb	12 23 16.4	+0.5
WHHZ				S	Sb	12 23 23.1	+1.1
KNZ	Kokohu	0.48	25	P	Pn	12 23 19.0	-0.4
MHGZ	Mahia Peninsul	0.49	51	P	Pn	12 23 20.4	+0.8
MHGZ				S	Sn	12 23 30.6	+2.7
KAHZ	Kahuranaki	0.53	231	P	Pn	12 23 21.0	+0.8
KAHZ				S	Sn	12 23 31.6	+2.5
MCHZ	McNeill Hill	0.56	271	P	Pn	12 23 19.8	-0.6
MCHZ				S	Sn	12 23 28.4	-1.1
NMHZ	Naumai	0.59	307	P	Pb	12 23 19.4	+0.3
NMHZ				S	Sb	12 23 27.8	+0.4
RAHZ	Arahi	0.60	335	P	Pb	12 23 19.4	+0.2
RAHZ				S	Sb	12 23 27.9	+0.4
SNGZ	Shannon Statio	0.68	355	P	Pb	12 23 21.3	+0.7
SNGZ				S	Sn	12 23 31.6	-1.0
PXZ	Pawanui	0.71	217	P	Pn	12 23 23.1	+0.5
MTHZ	Maungataniwha	0.75	324	P	Pg	12 23 21.5	0.0
MTHZ				S	Sg	12 23 31.5	+0.1
KWHZ	Kaweka Forest	0.77	272	P	Pb	12 23 22.8	+0.7
KWHZ				S	Sb	12 23 33.8	+1.3
BKZ	Black Stump Fm	0.77	292	P	Pb	12 23 22.6	+0.4
BKZ	Black Stump Fm	0.77	292	P	Pg	12 23 22.2	+0.3
BKZ				S	Sg	12 23 32.2	+0.1
RIGZ	Rimuhau	0.80	20	P	Pn	12 23 24.0	+0.2
RIGZ				S	Sn	12 23 36.2	+0.6
RTZ	Ruatahuna	0.91	338	P	Pb	12 23 24.1	-0.4
RTZ				S	Sg	12 23 36.2	-0.1
RAGZ	Rawiri	0.96	0	P	Pn	12 23 25.8	-0.3
WPHZ	Waipukurau	0.96	231	P	Pn	12 23 26.4	+0.4
PRHZ	Porangahau	1.00	216	P	Pg	12 23 26.9	+0.7
PNHZ	Pukenui	1.04	244	P	Pb	12 23 27.0	+0.2
BHHZ	Black Hill Sta	1.05	268	P	Pb	12 23 26.8	0.0
BHHZ				S	Sb	12 23 40.3	-0.2
TKGZ	Te Karaka	1.07	18	P	Pn	12 23 27.4	-0.1
TKGZ				S	Sn	12 23 42.0	-0.2
MUGZ	Murupara	1.10	333	P	Pb	12 23 27.2	-0.6
MUGZ				S	Sb	12 23 40.9	-1.1
MWZ	Matawai	1.13	5	P	Pb	12 23 27.5	-0.7
CNGZ	Carnagh Statio	1.15	33	P	Pg	12 23 29.3	+0.2
HATZ	Hinemaiaia	1.18	299	P	Pn	12 23 28.9	-0.1
HATZ				S	Sb	12 23 43.3	-0.9
URZ	Urewera	1.22	349	P	Pn	12 23 28.9	-0.7
URZ	Urewera	1.22	349	P	Pn	12 23 28.8	-0.7
ALRZ	Allen Road	1.23	317	P	Pb	12 23 29.9	0.0
ALRZ				S	Sb	12 23 45.1	-0.5
PRRZ	Plateau Road	1.25	320	P	Pn	12 23 30.0	+0.1
DVHZ	Dannevirke	1.27	228	P	Pn	12 23 30.3	0.0
MOVZ	Moawhango	1.29	272	P	Pn	12 23 30.7	+0.1
MOVZ				S	Sb	12 23 47.0	-0.5
RITZ	Rihia Road	1.30	291	P	Pg	12 23 31.8	-0.1
RRRZ	Republican Roa	1.32	328	P	Pb	12 23 31.3	-0.2
WPRZ	Whakapapatarin	1.35	314	P	Pn	12 23 31.2	-0.3
TWGZ	Tauwhareparae	1.36	19	P	Pb	12 23 31.7	-0.4
TWGZ				S	Sg	12 23 49.7	-0.8
ETVZ	East Tongariro	1.36	283	P	Pb	12 23 32.4	+0.2
TMVZ	Te Maari	1.37	284	P	Pb	12 23 32.4	0.0
TUVZ	Tukino	1.38	277	P	Pb	12 23 32.8	+0.3
WHTZ	Whakaora	1.38	304	P	Pg	12 23 33.5	0.0
HRRZ	Handcock Road	1.39	320	P	Pn	12 23 32.3	+0.4
OTVZ	Oturere	1.39	282	P	Pb	12 23 32.7	-0.1
NTVZ	North Tongarir	1.40	284	P	Pb	12 23 32.8	-0.1
SNVZ	South Ngauruho	1.40	281	P	Pb	12 23 33.0	0.0
TARZ	Mount Tarawera	1.41	330	P	Pn	12 23 32.0	-0.3
WNVZ	Wahianoa	1.41	275	P	Pb	12 23 33.1	-0.1
KRVZ	Karewarewa	1.42	284	P	Pb	12 23 33.6	+0.3
WHVZ	Whangaehu Hut	1.43	277	P	Pb	12 23 33.5	+0.1
NNVZ	North Ngauruho	1.43	283	P	Pb	12 23 33.6	+0.1
NGZ	Ngauruhoe	1.44	281	P	Pn	12 23 33.3	+0.6
DRZ	Dome Shelter	1.45	277	P	Pg	12 23 34.9	+0.3
EDRZ	Edgecumbe	1.45	338	P	Pb	12 23 34.1	+0.4
TRVZ	Turoa	1.46	276	P	Pn	12 23 33.5	+0.5
WTVZ	West Tongariro	1.46	283	P	Pb	12 23 34.4	+0.5
FWVZ	Far West T-bar	1.46	277	P	Pn	12 23 33.5	+0.5
HLRZ	Highlands Stat	1.46	325	P	Pb	12 23 34.2	+0.3
HSRZ	Hossack Road	1.47	321	P	Pb	12 23 33.6	-0.4
GRRZ	Galatos Road	1.50	317	P	Pb	12 23 35.2	+0.5
RUGZ	Raukumara Rang	1.51	8	P	Pn	12 23 33.0	-0.6
MTVZ	Mangateitei	1.51	272	P	Pb	12 23 34.8	+0.1
MKRZ	Makatiti	1.51	330	P	Pg	12 23 35.8	-0.1
BFZ	Birch Farm	1.51	216	P	Pn	12 23 33.4	-0.2
BFZ	Birch Farm	1.51	216	P	Pn	12 23 33.3	-0.3
PUZ	Puketiti	1.54	26	P	Pn	12 23 34.4	+0.4
PRWZ	Pori Road	1.56	225	P	Pn	12 23 34.3	+0.1

POWZ	Post Office Ro	1.57	233	P	Pn	12 23 34.8	+0.4
KUTZ	Kaahu Road	1.57	308	P	Pn	12 23 34.0	-0.5
OMRZ	Omania	1.58	329	P	Pb	12 23 36.1	+0.2
MARZ	Manawahe	1.58	338	P	Pn	12 23 32.3	-2.3
TWVZ	Taurewa	1.58	284	P	Pb	12 23 36.2	+0.2
PKVZ	Pokaka	1.61	275	P	Pb	12 23 36.7	+0.2
WHRZ	Whale Island	1.64	348	P	Pn	12 23 35.9	+0.5
NGRZ	Ngongotaha	1.66	324	P	Pg	12 23 40.9	+2.2
HAZ	Te Kaha	1.73	10	P	Pn	12 23 36.0	-0.5
OPRZ	Ohinepanea	1.75	337	P	Pn	12 23 36.2	-0.6
TIWZ	Tintock	1.76	221	P	Pn	12 23 36.7	-0.4
WMGZ	Waiomatatini S	1.82	26	P	Pn	12 23 37.1	-0.6
MRZ	Mangatainoka R	1.85	229	P	Pn	12 23 37.6	-0.6
WAZ	Wanganui	1.90	260	P	Pn	12 23 40.1	+1.1
TGRZ	Tauranga	1.95	332	P	Pg	12 23 44.4	+0.1
TMWZ	Te Maipa	2.02	215	P	Pn	12 23 39.8	-0.7
MXZ	Matakaoa Point	2.02	21	P	Pn	12 23 40.6	0.0
HOWZ	Holdsworth Sta	2.04	225	P	Pn	12 23 40.0	-1.0
VRZ	Vera Road	2.09	278	P	Pb	12 23 43.6	-0.9
OGWZ	Otaki Gorge	2.19	231	P	Pn	12 23 42.1	-0.8
HIZ	Hauiti	2.21	295	P	Pn	12 23 43.4	+0.3
HIZ	Hauiti	2.21	295	P	Pn	12 23 43.1	0.0
MTW	Mount Morrison	2.24	220	P	Pn	12 23 42.1	-1.5
TOZ	Tahuroa Road	2.29	318	P	Pb	12 23 48.5	+0.6
LREZ	Lake Rotokare	2.33	269	P	Pg	12 23 51.0	-0.5
KIW	Kapiti Island	2.38	233	P	Pn	12 23 44.7	-0.8
CAW	Cannon Point	2.44	227	P	Pn	12 23 45.1	-1.2
NEZ	North Egmont	2.58	273	P	Pn	12 23 49.8	+1.5
KHEZ	Kahui Hut	2.64	273	P	Pn	12 23 51.2	+2.0
PKE	Pukeiti	2.67	275	P	Pn	12 23 50.6	+1.0
PLWZ	Palliser	2.67	217	P	Pn	12 23 48.0	-1.6
SNZO	South Karori	2.77	227	P	Pn	12 23 50.0	-0.9
TCW	Tory Channel	2.97	233	P	Pn	12 23 52.2	-1.4
DUWZ	D'Urville Isla	2.99	242	P	Pn	12 23 52.7	-1.3
BSWZ	Blackbirch Sta	3.51	229	P	Pn	12 23 59.5	-1.6
NNZ	Nelson	3.55	239	P	Pn	12 24 00.9	-0.7
TKNZ	Takaka Hill	3.75	244	P	Pn	12 24 03.0	-1.4
QRZ	Quartz Range	3.98	248	P	Pn	12 24 05.5	-2.0
MRNZ	Matariki Terra	4.05	240	P	Pn	12 24 07.2	-1.3
KHZ	Kahutara	4.16	224	P	Pn	12 24 08.7	-1.3
DSZ	Denniston Nort	4.84	240	P	Pn	12 24 17.4	-2.0
AKCZ	Akaroa Harbour	5.55	216	P	Pn	12 24 27.2	-1.8

WEL 02 12:24:26.4±0.4,**39°S**±3°×**17°7E**±°,**h25**km±4km,**M3.7**/16, **ML4.1**/16,**MLv3.7**/16,**Error ellipse: s-maj=0.0km s-min=0.0km az=118.3,confirmed,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARHZ	Aropaoanui	0.22	288	P	Pb	12 24 33.0	+0.6
ARHZ				S	Sb	12 24 38.7	+2.3
WHHZ	Waihua	0.26	354	P	Pb	12 24 33.6	+0.7
WHHZ				S	Sn	12 24 39.8	+0.1
CKHZ	Cape Kidnapper	0.36	205	P	Pb	12 24 35.2	+0.8
CKHZ				S	Sn	12 24 42.6	+0.3
NMHZ	Naumai	0.43	303	P	Pn	12 24 36.6	-0.5
NMHZ				S	Sn	12 24 44.8	+0.6
RAHZ	Arahi	0.44	341	P	Pn	12 24 36.6	-0.6
RAHZ				S	Sn	12 24 44.6	+0.3
KNZ	Kokohu	0.44	45	P	Pb	12 24 36.1	+0.4
MCHZ	McNeill Hill	0.46	256	P	Pn	12 24 37.1	-0.3
MCHZ				S	Sn	12 24 46.0	+1.2
MHGZ	Mahia Peninsul	0.53	70	P	Pb	12 24 37.6	+0.5
MHGZ				S	Sn	12 24 48.1	+1.6
KAHZ	Kahuranaki	0.55	213	P	Pn	12 24 38.4	-0.4
KAHZ				S	Sn	12 24 48.7	+1.5
SNGZ	Shannon Statio	0.55	6	P	Pn	12 24 38.4	-0.4
SNGZ				S	Sn	12 24 48.0	+0.9
MTHZ	Maungataniwha	0.58	325	P	Pn	12 24 38.7	-0.5
MTHZ				S	Sn	12 24 48.7	+0.8
BKZ	Black Stump Fm	0.63	285	P	Pn	12 24 39.4	-0.4
KWHZ	Kaweka Forest	0.66	262	P	Pn	12 24 40.0	-0.3
RIGZ	Rimuhau	0.73	32	P	Pn	12 24 41.1	-0.1
RTZ	Ruatahuna	0.75	342	P	Pn	12 24 41.3	-0.2
PXZ	Pawanui	0.77	204	P	Pb	12 24 40.4	-0.7
RAGZ	Rawiri	0.84	8	P	Pn	12 24 42.8	+0.1
MUGZ	Murupara	0.94	335	P	Pb	12 24 44.4	+0.3
BHHZ	Black Hill Sta	0.95	260	P	Pn	12 24 44.0	-0.2
TKGZ	Te Karaka	1.00	27	P	Pn	12 24 44.4	-0.4
PNHZ	Pukenui	1.01	235	P	Pn	12 24 44.2	-0.8
HATZ	Hinemaiaia	1.02	295	P	Pb	12 24 45.9	+0.5
MWZ	Matawai	1.02	12	P	Pn	12 24 44.7	-0.4
PRHZ	Porangahau	1.05	207	P	Pn	12 24 44.2	-1.4
ALRZ	Allen Road	1.06	317	P	Pb	12 24 46.3	+0.3
PRRZ	Plateau Road	1.08	320	P	Pb	12 24 47.1	+0.7
URZ	Urewera	1.08	353	P	Pn	12 24 45.9	0.0
CNGZ	Carnagh Statio	1.12	41	P	Pn	12 24 46.1	-0.3
RITZ	Rihia Road	1.15	287	P	Pb	12 24 48.3	+0.6
RRRZ	Republican Roa	1.15	329	P	Pn	12 24 47.3	+0.3
MOVZ	Moawhango	1.18	266	P	Pb	12 24 47.8	-0.3
WPRZ	Whakapapatarin	1.19	313	P	Pb	12 24 48.2	0.0
HRRZ	Handcock Road	1.22	320	P	Pb	12 24 49.0	+0.2
WHTZ	Whakaora	1.22	303	P	Pb	12 24 50.3	+1.4
ETVZ	East Tongariro	1.23	279	P	Pb	12 24 49.7	+0.7
TMVZ	Te Maari	1.23	280	P	Pb	12 24 49.4	+0.3
TARZ	Mount Tarawera	1.25	331	P	Pb	12 24 48.9	-0.5
RATZ	Rangitukua	1.25	291	P	Pb	12 24 49.1	-0.4
TUVZ	Tukino	1.25	272	P	Pb	12 24 49.9	+0.4
OTVZ	Oturere	1.26	277	P	Pb	12 24 49.8	+0.2
NTVZ	North Tongarir	1.26	280	P	Pb	12 24 49.7	+0.1
SNVZ	South Ngauruho	1.27	276	P	Pb	12 24 49.6	-0.2
KATZ	Kakaramea	1.28	286	P	Pb	12 24 49.9	0.0
TWGZ	Tauwhareparae	1.28	26	P	Pb	12 24 49.5	-0.4
KRVZ	Karewarewa	1.29	280	P	Pb	12 24 50.1	0.0
EDRZ	Edgecumbe	1.29	341	P	Pb	12 24 50.5	+0.4
HLRZ	Highlands Stat	1.30	326	P	Pb	12 24 51.2	+1.0
HSRZ	Hossack Road	1.30	322	P	Pb	12 24 49.6	-0.5
WNVZ	Wahianoa	1.30	270	P	Pb	12 24 50.3	0.0
NNVZ	North Ngauruho	1.30	278	P	Pb	12 24 50.9	+0.6
NGZ	Ngauruhoe	1.30	276	P	Pb	12 24 49.8	-0.6
WHVZ	Whangaehu Hut	1.30	272	P	Pb	12 24 50.6	+0.2
WTVZ	West Tongariro	1.32	279	P	Pb	12 24 51.4	+0.7
DRZ	Dome Shelter	1.32	272	P	Pb	12 24 51.2	+0.4
FWVZ	Far West T-bar	1.33	273	P	Pb	12 24 51.0	+0.1
GRRZ	Galatos Road	1.34	317	P	Pb	12 24 50.2	-0.6
TRVZ	Turoa	1.34	271	P	Pb	12 24 51.0	0.0
MKRZ	Makatiti	1.35	332	P	Pb	12 24 52.8	+1.7
WATZ	Wairara	1.35	297	P	Pb	12 24 50.4	-0.6
RUGZ	Raukumara Rang	1.40	13	P	Pn	12 24 50.2	-0.3
KUTZ	Kaahu Road	1.41	306	P	Pn	12 24 50.9	+0.4
OMRZ	Omania	1.41	330	P	Pb	12 24 53.3	+1.2
MARZ	Manawahe	1.42	341	P	Pb	12 24 51.7	-0.6
UTU	Utuhina	1.43	324	P	Pb	12 24 55.4	+3.0
TWVZ	Taurewa	1.45	280	P	Pb	12 24 52.2	-0.5
PUZ	Puketiti	1.48	32	P	Pn	12 24 50.8	-0.7
PKVZ	Pokaka	1.49	271	P	Pb	12 24 53.8	+0.3
WHRZ	Whale Island	1.49	351	P	Pb	12 24 52.8	-0.6
KARZ	Kaharoa	1.54	328	P	Pb	12 24 54.9	+0.7
BFZ	Birch Farm	1.56	210	P	Pn	12 24 50.5	-2.0
PKGZ	Pakihiroa	1.57	24	P	Pn	12 24 52.3	-0.6
OPRZ	Ohinepanea	1.59	339	P	Pn	12 24 53.0	+0.1
HAZ	Te Kaha	1.62	14	P	Pn	12 24 53.2	-0.2
TLZ	Tolley Road	1.68	306	P	Pn	12 24 54.3	0.0
WMGZ	Waiomatatini S	1.76	31	P	Pn	12 24 54.3	-0.9
TGRZ	Tauranga	1.79	333	P	Pb	12 25 02.0	+3.5
KMRZ	Kaimai	1.81	325	P	Pb	12 25 03.5	+4.6
MXZ	Matakaoa Point	1.95	25	P	Pn	12 24 57.7	-0.2
HIZ	Hauiti	2.05	293	P	Pb	12 25 05.9	+2.9
TOZ	Tahuroa Road	2.12	319	P	Pb	12 25 05.5	+1.4
PKE	Pukeiti	2.55	272	P	Pn	12 25 08.9	+2.6
ETAZ	East Tamaki Re	3.01	321	P	Pn	12 25 13.6	+1.1
OUZ	Omahuta	5.04	323	P	Pn	12 25 43.0	+2.6
LTZ	Lake Taylor	5.11	226	P	Pn	12 25 39.1	-2.3

IDC 02 12:25:35.9±1.4,**0°.84N**×**125°.74E**,**h0**km,**mb3.4**/4, **mbtmp3.4**/4,**Error ellipse: s-maj=157.2km s-min=22.9km az=68.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.31	158	P	P	12 30 34.0	-1.2
	0.7nm,0.4s,baz=335,slow=11,SNR=10						
	0.7nm,0.4s						
ASAR	Alice Springs	25.62	162	P	P	12 31 08.2	+1.0
	0.5nm,0.6s,baz=350,slow=10,SNR=7.0						
	0.5nm,0.6s						
SONM	Songino Array	49.73	343	P	P	12 34 29.3	-0.8
	0.3nm,0.6s,baz=152,slow=9.4,SNR=1.8						
	0.3nm,0.6s						
MKAR	Makanchi Array	59.38	327	P	P	12 35 40.7	+0.5
	0.2nm,0.4s,baz=115,slow=8.8,SNR=2.8						
	0.2nm,0.4s						

DDA ***02*** *12:28:24.7±0.0,37°.59N×38°.49E,h7km±2km,ML2.5*
ISK ***02*** *12:28:26.2,37°.59N×38°.45E,h17km,ML2.4/7*
ISC 02 12:28:25.4±1.1,**37°.60N**±0°.04×**38°.47E**±0°.03,**h10**km±12km, **n12,σ0ˢ61**/21,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URFA	Urfa	0.32	119	Pg	Pb	12 28 33.9	+0.6
URFA				Sg	Sb	12 28 38.9	+0.2
SANL	SANLIURFA_Merk	0.60	136	P	Pg	12 28 36.4	-0.6
SANL				S	Sg	12 28 44.6	-0.2
AKCA	Adyaman/G¶l	0.65	288	P	Pg	12 28 37.9	-0.1
AKCA				S	Sb	12 28 47.3	-0.8
MAYA	Malatya/Merkez	0.72	357	P	Pg	12 28 38.6	-0.8
MAYA				S	Sg	12 28 49.2	+0.2
GZT	Gaziantep	0.76	251	P	Pn	12 28 41.8	-0.6
GZT				S	Sb	12 28 51.5	+0.2
GZT				*i* AML	AML	12 28 54.0	
	comp=N,198nm,0.3s						
NZIP	Nizip/Gaziante	0.84	229	P	Pg	12 28 41.5	-0.2
NZIP				S	Sb	12 28 53.6	-0.1
GAZ	Gaziantep	1.09	247	Pg	Pn	12 28 46.7	-0.1
GAZ				Sg	Sn	12 29 01.4	-0.6
DARE	Darende-Malaty	1.24	322	Pn	Pg	12 28 49.3	0.0
DARE				Sn	Sg	12 29 06.4	+1.0
DYBB	Diyarbakir	1.37	75	Pn	Pb	12 28 51.4	+0.2
DYBB				Sn	Sg	12 29 10.1	+0.6
ARPR	Arapgir-MALATY	1.49	356	Pn	Pb	12 28 52.9	-0.5
SARI	SarD1z-Kayseri	1.81	297	Pn	Pn	12 28 57.4	+0.6
KOZT	Kozan	2.10	268	Pn	Pn	12 29 01.9	+1.2

NOU ***02*** *12:32:26.7,39°.52S×177°.45E,h13km,MLv3.5/9,Off E. Coast of N. Island, N.Z.*
WEL ***02*** *12:32:29.3±0.5,39°S±3°×17°7E±°,h28km±6km,M3.5/14, ML3.9/14,MLv3.5/14,Error ellipse: s-maj=0.0km s-min=0.0km az=117.6,confirmed*
ISC 02 12:32:28.2±1.3,**39°.45S**±0°.03×**177°.38E**±0°.03,**h23**km±12km, **n128,σ0ˢ99**/139,**Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CKHZ	Cape Kidnapper	0.31	228	P	Pn	12 32 38.3	+0.9
CKHZ				S	Sn	12 32 45.5	+2.3
ARHZ	Aropaoanui	0.35	302	P	Pb	12 32 36.2	+0.2
WHHZ	Waihua	0.39	343	P	Pb	12 32 36.7	+0.2
KNZ	Kokohu	0.49	28	P	Pn	12 32 39.3	-0.4
KNZ				S	Sn	12 32 48.9	+1.5
MHGZ	Mahia Peninsul	0.51	54	P	Pn	12 32 40.8	+0.7
KAHZ	Kahuranaki	0.52	229	P	Pn	12 32 41.4	+1.2
KAHZ				S	Sn	12 32 50.9	+2.5
MCHZ	McNeill Hill	0.53	271	P	Pn	12 32 40.1	-0.2
MCHZ				S	Sn	12 32 48.9	+0.4
NMHZ	Naumai	0.57	308	P	Pb	12 32 39.7	+0.1
NMHZ				S	Sn	12 32 48.0	-1.6
RAHZ	Arahi	0.58	337	P	Pb	12 32 39.7	-0.1
RAHZ				S	Sb	12 32 48.2	+0.6
SNGZ	Shannon Statio	0.67	357	P	Pn	12 32 41.5	-0.9
SNGZ				S	Sn	12 32 51.7	-0.4
PXZ	Pawanui	0.70	214	P	Pn	12 32 43.4	+0.6
PXZ				S	Sn	12 32 55.5	+2.7
MTHZ	Maungataniwha	0.73	325	P	Pb	12 32 41.8	-0.5
MTHZ				S	Sb	12 32 51.7	-0.2
KWHZ	Kaweka Forest	0.74	272	P	Pn	12 32 43.1	-0.2
KWHZ				S	Sn	12 32 54.0	+0.1
BKZ	Black Stump Fm	0.74	292	P	Pn	12 32 42.7	-0.7
BKZ	Black Stump Fm	0.74	292	P	Pb	12 32 42.5	-0.1
BKZ				S	Sn	12 32 53.0	-1.0
RIGZ	Rimuhau	0.80	22	P	Pn	12 32 44.0	-0.1
RTZ	Ruatahuna	0.89	339	P	Pb	12 32 44.4	-0.6
WPHZ	Waipukurau	0.95	230	P	Pn	12 32 46.8	+0.6
RAGZ	Rawiri	0.96	2	P	Pn	12 32 45.9	-0.4
PRHZ	Porangahau	0.99	215	P	Pn	12 32 47.3	+0.5
BHHZ	Black Hill Sta	1.02	268	P	Pn	12 32 47.2	0.0
PNHZ	Pukenui	1.02	243	P	Pn	12 32 47.2	+0.1
TKGZ	Te Karaka	1.08	20	P	Pb	12 32 47.7	-0.5
MUGZ	Murupara	1.08	334	P	Pb	12 32 47.5	-0.8
MWZ	Matawai	1.12	6	P	Pn	12 32 47.7	-0.8
HATZ	Hinemaiaia	1.15	299	P	Pb	12 32 49.1	-0.3
CNGZ	Carnagh Statio	1.16	34	P	Pb	12 32 49.1	-0.6
ALRZ	Allen Road	1.20	317	P	Pb	12 32 50.0	-0.3
URZ	Urewera	1.21	350	P	Pn	12 32 49.3	-0.4
URZ	Urewera	1.21	350	P	Pn	12 32 49.1	-0.6
ANWZ	Angora Road	1.22	214	P	Pn	12 32 50.3	+0.4
PRRZ	Plateau Road	1.22	321	P	Pn	12 32 49.9	0.0
TSZ	Takapari Road	1.25	241	P	Pn	12 32 50.2	-0.1
DVHZ	Dannevirke	1.26	227	P	Pn	12 32 50.6	+0.2
MOVZ	Moawhango	1.26	272	P	Pb	12 32 51.0	-0.3
RITZ	Rihia Road	1.27	291	P	Pb	12 32 51.4	-0.1
RRRZ	Republican Roa	1.30	328	P	Pb	12 32 51.7	-0.3
WPRZ	Whakapapatarin	1.33	314	P	Pn	12 32 51.4	0.0
ETVZ	East Tongariro	1.33	283	P	Pn	12 32 51.7	+0.2
TMVZ	Te Maari	1.34	284	P	Pn	12 32 51.8	+0.2
TUVZ	Tukino	1.35	277	P	Pb	12 32 52.6	-0.4
WHTZ	Whakaora	1.36	305	P	Pb	12 32 53.6	+0.7
TWGZ	Tauwhareparae	1.36	20	P	Pn	12 32 51.6	-0.2
OTVZ	Oturere	1.36	282	P	Pn	12 32 52.1	+0.2
HRRZ	Handcock Road	1.36	321	P	Pb	12 32 52.3	-0.8
NTVZ	North Tongarir	1.37	284	P	Pb	12 32 52.5	-0.8
SNVZ	South Ngauruho	1.38	281	P	Pn	12 32 52.4	+0.3
RATZ	Rangitukua	1.38	295	P	Pn	12 32 52.2	+0.1
WNVZ	Wahianoa	1.39	275	P	Pb	12 32 52.8	-0.7
KATZ	Kakaramea	1.39	289	P	Pb	12 32 53.0	-0.7
TARZ	Mount Tarawera	1.39	330	P	Pn	12 32 52.0	-0.3
KRVZ	Karewarewa	1.40	284	P	Pb	12 32 53.2	-0.5
WHVZ	Whangaehu Hut	1.40	276	P	Pb	12 32 53.7	0.0
NNVZ	North Ngauruho	1.41	283	P	Pb	12 32 53.3	-0.5
NGZ	Ngauruhoe	1.41	281	P	Pn	12 32 52.8	+0.2
DRZ	Dome Shelter	1.42	277	P	Pb	12 32 54.3	+0.2
TRVZ	Turoa	1.43	276	P	Pn	12 32 53.2	+0.3
FWVZ	Far West T-bar	1.43	277	P	Pb	12 32 53.9	-0.5
WTVZ	West Tongariro	1.43	283	P	Pb	12 32 54.1	-0.2
EDRZ	Edgecumbe	1.43	339	P	Pb	12 32 54.5	+0.2
HLRZ	Highlands Stat	1.44	326	P	Pb	12 32 55.1	+0.7
HSRZ	Hossack Road	1.44	322	P	Pn	12 32 53.2	+0.3
MTVZ	Mangateitei	1.48	272	P	Pn	12 32 54.0	+0.6
GRRZ	Galatos Road	1.48	318	P	Pb	12 32 54.2	-0.8
WATZ	Wairara	1.48	300	P	Pn	12 32 53.6	+0.1
MKRZ	Makatiti	1.49	331	P	Pb	12 32 56.1	+0.8
RUGZ	Raukumara Rang	1.50	9	P	Pn	12 32 53.2	-0.7
BFZ	Birch Farm	1.50	215	P	Pn	12 32 53.9	+0.1
BFZ	Birch Farm	1.50	215	P	Pn	12 32 53.6	-0.2
PUZ	Puketiti	1.54	27	P	Pn	12 32 53.3	-0.9
PRWZ	Pori Road	1.54	224	P	Pn	12 32 54.7	+0.4
KUTZ	Kaahu Road	1.55	308	P	Pn	12 32 54.0	-0.4
POWZ	Post Office Ro	1.55	232	P	Pn	12 32 54.7	+0.2
TWVZ	Taurewa	1.56	284	P	Pb	12 32 55.9	-0.4
OMRZ	Omania	1.56	329	P	Pb	12 32 57.4	+1.0
MARZ	Manawahe	1.56	339	P	Pn	12 32 55.0	+0.4
UTU	Utuhina	1.57	324	P	Pb	12 32 58.8	+2.1
PKVZ	Pokaka	1.58	275	P	Pb	12 32 56.9	0.0
WHRZ	Whale Island	1.62	349	P	Pb	12 33 00.1	+2.6
PKGZ	Pakihiroa	1.66	19	P	Pn	12 32 55.5	-0.4
KARZ	Kaharoa	1.68	328	P	Pb	12 32 60.0	+1.5
HAZ	Te Kaha	1.72	11	P	Pn	12 32 56.2	-0.6
OPRZ	Ohinepanea	1.73	338	P	Pn	12 32 56.5	-0.4
TIWZ	Tintock	1.75	220	P	Pn	12 32 57.0	-0.2
OHWZ	Ohakea	1.76	244	P	Pb	12 32 58.6	-1.2
WMGZ	Waiomatatini S	1.82	27	P	Pn	12 32 57.3	-0.8
TLZ	Tolley Road	1.82	307	P	Pn	12 32 57.4	-0.7
MRZ	Mangatainoka R	1.83	228	P	Pn	12 32 58.0	-0.3
WAZ	Wanganui	1.87	260	P	Pn	12 33 00.1	+1.2
KMRZ	Kaimai	1.96	324	P	Pb	12 33 04.4	+1.2
TMWZ	Te Maipa	2.01	214	P	Pn	12 33 00.1	-0.6
MXZ	Matakaoa Point	2.02	21	P	Pn	12 33 01.0	+0.1
MXZ	Matakaoa Point	2.02	21	P	Pn	12 33 00.9	+0.1
HOWZ	Holdsworth Sta	2.03	224	P	Pn	12 33 00.3	-0.7
VRZ	Vera Road	2.06	278	P	Pn	12 33 02.6	+1.2
OGWZ	Otaki Gorge	2.17	230	P	Pn	12 33 02.4	-0.6
HIZ	Hauiti	2.18	295	P	Pn	12 33 03.3	+0.3
HIZ	Hauiti	2.18	295	P	Pn	12 33 03.4	+0.4
MTW	Mount Morrison	2.23	220	P	Pn	12 33 02.4	-1.3
TOZ	Tahuroa Road	2.26	319	P	Pb	12 33 09.4	+1.0
TRWZ	Traveller	2.33	213	P	Pn	12 33 03.9	-1.2
KIW	Kapiti Island	2.36	233	P	Pn	12 33 05.0	-0.5
CAW	Cannon Point	2.42	226	P	Pn	12 33 05.4	-1.0
DREZ	Durham Road	2.48	275	P	Pb	12 33 09.5	-2.6
NEZ	North Egmont	2.55	273	P	Pn	12 33 09.6	+1.4
KHEZ	Kahui Hut	2.61	272	P	Pn	12 33 10.4	+1.3
KHEZ	Kahui Hut	2.61	272	P	Pn	12 33 10.7	+1.7
PKE	Pukeiti	2.64	275	P	Pn	12 33 10.7	+1.3
PLWZ	Palliser	2.66	217	P	Pn	12 33 08.1	-1.6
NBEZ	Newall Road No	2.73	273	P	Pb	12 33 16.8	+0.5
SNZO	South Karori	2.76	227	P	Pn	12 33 10.0	-1.0
TCW	Tory Channel	2.95	232	P	Pn	12 33 12.3	-1.3
DUWZ	D'Urville Isla	2.97	242	P	Pn	12 33 12.9	-1.1
TUWZ	Tuamarina	3.28	232	P	Pn	12 33 16.3	-1.9
BSWZ	Blackbirch Sta	3.50	229	P	Pn	12 33 19.4	-1.8
NNZ	Nelson	3.53	239	P	Pn	12 33 20.2	-1.3
TKNZ	Takaka Hill	3.73	244	P	Pn	12 33 23.3	-1.1
QRZ	Quartz Range	3.96	248	P	Pn	12 33 25.8	-1.7
QRZ	Quartz Range	3.96	248	P	Pn	12 33 25.7	-1.9
MRNZ	Matariki Terra	4.03	240	P	Pn	12 33 27.2	-1.3
THZ	Tophouse	4.11	234	P	Pn	12 33 27.8	-1.9
KHZ	Kahutara	4.15	223	P	Pn	12 33 28.7	-1.4
GVZ	Greta Valley S	4.80	222	P	Pn	12 33 38.0	-1.1
DSZ	Denniston Nort	4.82	240	P	Pn	12 33 37.5	-1.9
OUZ	Omahuta	5.19	323	P	Pn	12 33 46.3	+1.9
AKCZ	Akaroa Harbour	5.54	216	P	Pn	12 33 47.5	-1.8
CTZ	Chatham Island	6.21	135	P	Pn	12 33 59.9	+1.5
ARCZ	Arundel	6.46	224	P	Pn	12 34 00.4	-1.4

DDA ***02*** *12:32:56.2±0.0,37°.58N×38°.49E,h7km±2km,ML3.0*
ISK ***02*** *12:32:57.3,37°.54N×38°.48E,h20km,ML2.9/8*
ISC 02 12:32:56.9±1.0,**37°.57N**±0°.04×**38°.48E**±0°.03,**h12**km±7km, **n18,σ0ˢ71**/30,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	Bozova	0.17	237	P	Pg	12 33 00.7	-0.2
ATAB				S	Sg	12 33 03.7	+0.1
ATAB				*i* AML	AML	12 33 04.0	
	comp=N,3μm,0.2s						
ATAB				*i* AML	AML	12 33 04.0	
	comp=E,4μm,0.2s						
URFA	Urfa	0.30	114	Pg	Pb	12 33 04.8	+0.6
URFA				Sg	Sb	12 33 08.9	-0.3
AKCA	Adyaman/G¶l	0.67	290	P	Pg	12 33 09.7	-0.2
AKCA				S	Sg	12 33 19.2	+0.5
GZT	Gaziantep	0.76	254	P	Pn	12 33 13.1	-0.5
GZT				S	Sn	12 33 24.6	-0.4
GZT				*i* AML	AML	12 33 25.0	
	comp=E,683nm,0.2s						
GZT				*i* AML	AML	12 33 26.0	
	comp=N,685nm,0.4s						
MAYA	Malatya/Merkez	0.76	357	P	Pg	12 33 10.4	-1.3
NZIP	Nizip/Gaziante	0.83	231	P	Pb	12 33 13.3	+0.1
NZIP				S	Sb	12 33 24.8	+0.4
NZIP				*i* AML	AML	12 33 27.0	
	comp=N,492nm,0.4s						
NZIP				*i* AML	AML	12 33 27.0	
	comp=E,480nm,0.7s						
GAZ	Gaziantep	1.08	249	Pg	Pb	12 33 17.5	-0.1
GAZ				Sg	Sn	12 33 32.9	0.0
KAHM	Kahramanmaras,	1.19	268	P	Pn	12 33 18.6	-0.7
KAHM				S	Sn	12 33 35.0	-0.5
DARE	Darende-Malaty	1.28	322	Pn	Pb	12 33 20.9	0.0
DARE				Sn	Sg	12 33 38.4	+0.4
DYBB	Diyarbakir	1.37	73	Pn	Pn	12 33 21.6	-0.3
DYBB				Sn	Sg	12 33 40.4	-0.7
KAMA	Osmaniye	1.49	256	P	Pn	12 33 23.6	0.0
KAMA				S	Sn	12 33 42.8	-0.3
CUGUR	Gurin_SVAS	1.50	321	P	Pg	12 33 25.2	-0.5
CUGUR				S	Sg	12 33 47.5	+2.4
CUGUR				*i* AML	AML	12 33 50.0	
	comp=N,211nm,0.5s						
CUGUR				*i* AML	AML	12 33 50.0	
	comp=E,234nm,0.6s						
ARPR	Arapgir-MALATY	1.53	356	Pn	Pn	12 33 23.9	-0.3
ANDN	Andirin	1.69	271	P	Pb	12 33 28.3	+0.2
ANDN				S	Sg	12 33 51.2	-0.2
SARI	SarD1z-Kayseri	1.83	298	Pn	Pn	12 33 28.8	+0.4
KOZT	Kozan	2.11	269	Pn	Pn	12 33 32.5	+0.5
BNGB	Bingl	2.24	50	Pn	Pn	12 33 34.5	+0.6
AKDM	Akdamar-Van	3.64	77	Pn	Pn	12 33 54.5	+1.3

IDC ***02*** *12:39:52.8±4.3,29°.15S×175°.85W,h59km±32km,mb3.4/4, mbtmp3.9/6,ML3.6/2,Error ellipse: s-maj=33.6km s-min=29.4km az=21.0*
ISC 02 12:39:50.2±1.3,**29°.0S**±0°.1×**175°.7W**±0°.1,**h35**km,**n8, σ0ˢ96**/10,**mb3.8**/4,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.94	263	P	Pn	12 40 21.4	+0.8
	462nm,0.3s,baz=106,slow=20,SNR=3.3						
RAO				S	Sn	12 40 43.9	+0.2
	691nm,0.3s,baz=81,slow=23,SNR=5.2						
URZ	Urewera	10.96	211	P	Pn	12 42 24.6	+0.1
	0.2nm,0.3s,baz=43,slow=19,SNR=1.9						
URZ				S	Sn	12 44 26.1	+0.3
	13nm,1.1s,baz=207,slow=18,SNR=1.4						
	8.6nm,1.0s						
DZM	Mont Dzumac	17.52	289	P	P	12 43 53.4	+0.7
	0.5nm,0.3s,baz=141,slow=22,SNR=5.8						
	6.7nm,0.8s						
STKA	Stephens Creek	36.73	255	P	P	12 46 53.3	-1.0
	0.9nm,0.5s,baz=85,slow=10,SNR=4.3						
	0.9nm,0.5s						
ASAR	Alice Springs	45.19	265	P	P	12 48 03.0	-1.0
	0.5nm,0.5s,baz=95,slow=7.0,SNR=14						
	0.5nm,0.5s						
WRA	Warramunga Arr	46.06	270	P	P	12 48 09.4	-1.5
	0.8nm,0.4s,baz=110,slow=6.4,SNR=18						
	0.8nm,0.4s						
NVAR	Mina Array Bea	85.90	42	P	P	12 52 27.1	+0.4
	0.2nm,0.6s,baz=243,slow=5.6,SNR=1.6						
	0.2nm,0.6s						
FINES	FINESS Array B	144.51	342	PKP	PKPdf	12 59 23.0	+0.8
	1.2nm,0.8s,baz=50,slow=2.2,SNR=4.0						

DDA ***02*** *12:41:37.6±0.0,37°.62N×38°.47E,h6km±1km,ML2.7*
ISK ***02*** *12:41:38.5,37°.63N×38°.47E,h23km,ML2.7/8*
ISC 02 12:41:38.0±1.0,**37°.62N**±0°.03×**38°.46E**±0°.03,**h12**km±8km, **n19,σ0ˢ35**/33,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	Bozova	0.20	221	P	Pg	12 41 42.2	-0.2
ATAB				*i* AML	AML	12 41 45.0	
	comp=N,2μm,0.2s						
ATAB				S	Sg	12 41 45.3	-0.1
ATAB				*i* AML	AML	12 41 46.0	
	comp=E,2μm,0.3s						
URFA	Urfa	0.34	122	Pg	Pb	12 41 46.7	+0.7
URFA				Sg	Sb	12 41 51.4	0.0
AKCA	Adyaman/G¶l	0.64	286	P	Pg	12 41 50.4	0.0
AKCA				S	Sg	12 41 59.6	+0.7
AKCA				*i* AML	AML	12 42 04.0	
	comp=N,723nm,0.3s						
AKCA				*i* AML	AML	12 42 04.0	
	comp=E,442nm,0.3s						
MAYA	Malatya/Merkez	0.70	358	P	Pg	12 41 51.4	-0.3
MAYA				S	Sg	12 42 01.1	+0.1
GZT	Gaziantep	0.76	250	P	Pg	12 41 52.8	0.0
GZT				S	Sn	12 42 06.0	-0.2
GZT				*i* AML	AML	12 42 06.0	
	comp=N,420nm,0.2s						
GZT				*i* AML	AML	12 42 06.0	
	comp=E,406nm,0.4s						
NZIP	Nizip/Gaziante	0.85	228	P	Pg	12 41 54.5	0.0
NZIP				S	Sb	12 42 06.0	-0.1
NZIP				*i* AML	AML	12 42 08.0	
	comp=E,208nm,0.5s						
NZIP				*i* AML	AML	12 42 09.0	
	comp=N,207nm,0.6s						
GAZ	Gaziantep	1.09	246	Pn	Pb	12 41 58.9	+0.1
GAZ				Sn	Sn	12 42 14.1	-0.1
KAHM	Kahramanmaras,	1.18	265	P	Pn	12 42 00.1	-0.2
KAHM				S	Sb	12 42 15.7	+0.3
DARE	Darende-Malaty	1.22	321	Pn	Pn	12 42 00.9	-0.1
DARE				Sn	Sb	12 42 16.9	0.0
ELBS	KAHRAMANMARAS	1.26	304	P	Pg	12 42 02.7	+0.4
ELBS				S	Sg	12 42 19.0	+0.3

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ELBS                                i AML    AML      12 42 23.0
           comp=E,114nm,0.3s
ELBS                                i AML    AML      12 42 24.0
           comp=N,104nm,0.5s
HEKM   Malatya_Hekimh     1.32 343   P       Pb       12 42 02.8  0.0
HEKM                                 S       Sn       12 42 20.0 +0.1
DYBB   Diyarbakir         1.37  76   Pn      Pn       12 42 02.7 -0.3
DYBB                                 Sn      Sn       12 42 20.5 -0.6
ARPR   Arapgir-MALATY     1.47 356   Pn      Pn       12 42 04.4 -0.1
KAMA   Osmaniye           1.49 254   P       Pb       12 42 05.5 -0.2
KAMA                                 S       Sn       12 42 23.7 -0.4
ANDN   Andirin            1.68 269   P       Pb       12 42 08.4 -0.5
ANDN                                 S       Sg       12 42 31.4 -0.7
ANDN                                i AML    AML      12 42 37.0
           comp=N,70nm,0.3s
SARI   SarD1z-Kayseri     1.79 297   Pn      Pn       12 42 09.2 +0.3
KOZT   Kozan              2.10 267   Pn      Pn       12 42 13.7 +0.8
BNGB   Bingl              2.22  51   Pn      Pn       12 42 14.7  0.0
SVAN   Silvan-Diyarba     2.23  75   Pn      Pn       12 42 14.7 -0.1
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BJI ***02*** *12:44:17.9±0.0, 5°.19S×151°.51E, h157^{km}, mb4.5/36, mB5.0/15*

DJA ***02*** *12:44:18.7±0.4, 5°S±6°×15°1E±°, h152^{km}±6^{km}, M5.0/14, mB5.2/3, mb4.5/14, MLv5.3/3, Mw(mB)4.5/3*

NEIC ***02*** *12:44:19.9±1.2, 5°.04S±0°.09×151°.17E±0°.06, h145^{km}±6^{km}, mb4.6/66, Error ellipse: s-maj=13.8km s-min=6.9km az=157.0*

IDC ***02*** *12:44:19.4±0.6, 5°.10S×151°.28E, h148^{km}±5^{km}, mb4.1/21, mbtmp4.5/23, MS3.6/6, Error ellipse: s-maj=14.0km s-min=9.0km az=94.0*

ISC 02 12:44:19.9±0.3**, 5°.12S**±0°.05×**151°.21E**±0°.06**, h150^{km}, n150, σ1^{s}09**/150**, mb4.6**/64**, 1D, New Britain region**

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Code   Station Name       Δ°   AZ°   Phase ID             Time      Res
                                     Op      ISC        h  m  s     ISC
KRVT   Keravat (AS076     1.15  45   P       Pn       12 44 44.6 -1.4
           2µm,0.5s,baz=283,slow=0.2,SNR=393
KRVT                                 LR      LR       12 45 01.6
           comp=Z,284nm,18.7s,baz=350,slow=39
KRVT                                 S       Sn       12 45 04.4 -1.5
           3µm,0.7s,baz=358,slow=23,SNR=7.8
RABL   Rabaul             1.32  46           Pn       12 44 47.4 -0.4
RABL                                 Sn      Sn       12 45 08.1 -0.9
RABL   Rabaul             1.32  46   P       Pn       12 44 47.6 -0.1
PMG    Port Moresby       5.86 223   P       Pn       12 45 45.2 +0.5
           155nm,0.4s,baz=39,slow=5.9,SNR=104
PMG                                  S       Sn       12 46 48.8 -2.3
           243nm,1.0s,baz=34,slow=18,SNR=4.1
PMG                                  LR      LR       12 48 13.8
           comp=Z,212nm,19.9s,baz=279,slow=40
PMG    Port Moresby       5.86 223   Pn      Pn       12 45 45.0 +0.3
PMG    Port Moresby       5.86 223   P       Pn       12 45 45.7 +1.0
PMG    Port Moresby       5.86 223   P       Pn       12 45 45.4 +0.7
HNR    Honiara            9.67 117   P       Pn       12 46 34.7 -0.9
           780nm,0.4s,baz=192,slow=1.6,SNR=3.8
HNR    Honiara            9.67 117   Pn      Pn       12 46 36.2 +0.6
COEN   Coen              11.82 221           Pn       12 47 03.3 -0.7
MTSU   Mount Surprise    14.59 207   P       P        12 47 41.8 +0.2
TV1H   Townsville Har    14.70 197   P       Pn       12 47 40.2 -0.5
CTA    Charters Tower    15.64 198   P       Pn       12 47 52.7 +0.3
           5.4nm,0.5s,baz=23,slow=11,SNR=18
CTA                                  LR      LR       12 53 12.5
           comp=Z,158nm,19.6s,baz=52,slow=34
CTA    Charters Tower    15.64 198   P       P        12 47 53.8 +0.5
CTAO   Charters Tower    15.64 198   P       P        12 47 53.5 +0.2
CTAO   Charters Tower    15.64 198   P       P        12 47 54.2 +0.9
GD1S   Gladstone Soft    18.62 180   P       Pn       12 48 28.7 +0.7
           84nm,0.9s
QIS    Mount Isa         19.05 215   P       P        12 48 31.3 +0.6
KDU    Kakadu            19.97 247   P       P        12 48 42.0 +1.3
SAUI   Saumlaki          19.98 261   P       P        12 48 39.7 -1.1
           112nm,1.0s
EIDS   Eidsvold          20.14 180   P       P        12 48 42.7 +0.3
EIDS                                 IAmb    IAmb     12 48 44.0
           comp=Z,28nm,1.1s
EIDS   Eidsvold          20.14 180   P       P        12 48 43.2 +0.8
MTN    Manton Dam        21.25 247   P       P        12 48 54.1 -0.3
MTN                                  IAmb    IAmb     12 48 58.0
           comp=Z,16nm,0.5s
RMQ    Roma              21.38 186   P       P        12 48 56.5 +0.8
WB0    Warramunga Arr    21.91 227   P       P        12 49 01.2 -0.1
WB0                                  IAmb    IAmb     12 49 26.8
           comp=Z,22nm,1.1s
WR0    Warramunga Arr    21.93 226   P       P        12 49 01.1 -0.4
WR0                                  IAmb    IAmb     12 49 03.4
           comp=Z,24nm,1.2s
WRAB   Tennant Creek     22.05 227   P       P        12 49 02.2 -0.6
WRAB   Tennant Creek     22.05 227   P       P        12 49 03.2 +0.4
WB2    Warramunga Arr    22.05 227   P       P        12 49 02.6 -0.2
WB2                                  IAmb    IAmb     12 49 04.5
           comp=Z,26nm,1.3s
WRA    Warramunga Arr    22.06 227   P       P        12 49 02.4 -0.6
           comp=Z,7.1nm,0.8s,baz=52,slow=10.0,SNR=43
WRA                                  S       S        12 52 52.8 -3.0
           comp=Z,1.9nm,0.8s,baz=54,slow=18,SNR=5.3
WRA                                  ScP     ScP      12 56 18.8 +0.1
           comp=Z,1.4nm,0.7s,baz=50,slow=2.7,SNR=14
           comp=Z,7.1nm,0.8s
WRA    Warramunga Arr    22.06 227   P       P        12 49 02.0 -0.9
AUWSH  Wavell State H    22.23 176   P       P        12 49 05.1 +0.7
QLP    Quilpie           22.36 197   P       P        12 49 07.7 +2.0
DZM    Mont Dzumac       22.40 140   P       P        12 49 06.0 -0.2
           comp=Z,9.4nm,0.5s,baz=254,slow=10.0,SNR=22
           comp=Z,9.4nm,0.5s
DZM    Mont Dzumac       22.40 140   P       P        12 49 06.4 +0.1
DZM                                  IAmb    IAmb     12 49 33.5
           comp=Z,38nm,1.4s
OUENC  Ouen Island, N    22.90 140   P       P        12 49 11.4 +0.6
OUENC                                IAmb    IAmb     12 49 11.8
           comp=Z,30nm,1.0s
AULRC  Lightning Ridg    24.37 187   P       P        12 49 25.5 +1.3
KNRA   Kununurra         24.41 243   P       P        12 49 25.5 +0.8
KNRA   Kununurra         24.41 243   P       P        12 49 25.9 +1.2
INKA   Innaminka         24.60 203   P       P        12 49 28.7 +2.4
AS01   Alice Springs     24.83 220   P       P        12 49 31.0 +2.5
           comp=Z,13nm,1.1s
AS31   Alice Springs     24.86 220   P       P        12 49 29.2 +0.4
AS31                                 IAmb    IAmb     12 49 31.9
           comp=Z,7.2nm,0.2s
ASAR   Alice Springs     24.86 220   P       P        12 49 28.9 +0.1
           comp=Z,6.8nm,0.4s,baz=55,slow=8.8,SNR=162
ASAR                                 S       S        12 53 39.3 -1.6
           comp=Z,2.1nm,1.1s,baz=32,slow=20,SNR=4.5
ASAR                                 ScP     ScP      12 56 26.5 +0.4
           comp=Z,1.6nm,0.7s,baz=39,slow=2.7,SNR=16
           comp=Z,6.8nm,0.4s
ASAR   Alice Springs     24.86 220   P       P        12 49 29.2 +0.4
ARMA   Armidale          25.17 179   P       P        12 49 32.1 +0.6
ARMA                                 IAmb    IAmb     12 49 34.9
           comp=Z,29nm,1.1s
ARMA   Armidale          25.17 179   P       P        12 49 33.0 +1.4
AUDCS  Dubbo College     27.08 185   P       P        12 49 49.8 +1.2
LHI    Lord Howe Isla    27.28 165   P       P        12 49 51.1 +0.7
LCRK   Leigh Creek       28.01 204   P       P        12 49 57.0 +0.1
STKA   Stephens Creek    28.10 198   P       P        12 49 57.7  0.0
           comp=Z,2.8nm,0.5s,baz=17,slow=8.7,SNR=10
STKA                                 LR      LR       13 01 44.9
           comp=Z,118nm,18.9s,baz=45,slow=37
           comp=Z,2.8nm,0.5s
STKA   Stephens Creek    28.10 198   P       P        12 49 57.8 +0.1
STKA   Stephens Creek    28.10 198   P       P        12 49 58.4 +0.7
DAV    Davao City (W)    28.30 295   LR      LR       13 00 41.5
           comp=Z,39nm,21.0s,baz=41,slow=35
CAN    Canberra          30.12 184   P       P        12 50 15.9 +0.3
CAN                                  IAmb    IAmb     12 50 43.6
           comp=Z,24nm,1.5s
HTT    Hallett           30.41 201   P       P        12 50 18.9 +0.8
           comp=Z,32nm,1.3s
BBOO   Buckleboo         30.97 205   P       P        12 50 22.8 -0.3
BBOO                                 IAmb    IAmb     12 50 51.1
           comp=Z,16nm,1.1s
TOO    Toolangi          32.72 188   P       P        12 50 39.1 +0.8
TOO                                  IAmb    IAmb     12 50 40.0
           comp=Z,17nm,1.2s
PLAI   Plampang          33.38 262   P       P        12 50 42.9 -1.4
MBWA   Marble Bar        34.44 240   P       P        12 50 53.0 -0.4
MBWA                                 IAmb    IAmb     12 50 56.1
           comp=Z,7.0nm,0.8s
TAU    Tasmania Unive    37.79 185   P       P        12 51 22.5 +1.0
GIRL   Giralia           39.73 240   P       P        12 51 39.5 +1.5
HAZ    Te Kaha           40.53 147   P       P        12 51 45.3 +1.0
URZ    Urewera           40.54 148   P       P        12 51 44.4 -0.1
           comp=Z,15nm,1.0s,baz=213,slow=9.8,SNR=3.0
           comp=Z,15nm,1.0s
URZ    Urewera           40.54 148   P       P        12 51 44.9 +0.5
RTZ    Ruatahuna         40.73 149   P       P        12 51 46.8 +0.6
RTZ                                  IAmb    IAmb     12 51 48.5
           comp=Z,19nm,1.2s
RTZ    Ruatahuna         40.73 149   P       P        12 51 47.6 +1.5
MTHZ   Maungataniwha     40.84 149   P       P        12 51 47.6 +0.7
RAGZ   Rawiri            40.87 148   P       P        12 51 49.0 +1.7
WMGZ   Waiomatatini S    40.92 146   P       P        12 51 48.5 +1.0
TWGZ   Tauwhareparae     40.94 147   P       P        12 51 48.6 +0.7
NMHZ   Naumai            41.01 149   P       P        12 51 50.1 +1.7
PUZ    Puketiti          41.01 147   P       P        12 51 49.2 +0.8
RIGZ   Rimuhau           41.21 148   P       P        12 51 50.6 +0.6
THZ    Tophouse          41.31 155   P       P        12 51 50.4 -0.4
THZ                                  IAmb    IAmb     12 51 51.6
           comp=Z,10nm,0.7s
TCW    Tory Channel      41.45 153   P       P        12 51 51.5 -0.4
INZ    Inchbonnie        41.53 157   P       P        12 51 52.4 -0.2
INZ                                  IAmb    IAmb     12 51 57.3
           comp=Z,29nm,1.3s
SNZO   South Karori      41.72 153   P       P        12 51 54.8 +0.8
SNZO                                 IAmb    IAmb     12 52 04.4
           comp=Z,21nm,1.1s
RPZ    Rata Peaks        42.24 159   P       P        12 51 57.4 -0.8
           comp=Z,25nm,0.8s,baz=317,slow=2.0,SNR=18
           comp=Z,25nm,0.8s
OXZ    Oxford            42.27 157   IAmb    IAmb     12 51 58.8
           comp=Z,20nm,1.1s
JNU    Nakatsue          42.64 335   P       P        12 52 03.3 +1.6
           comp=Z,9.3nm,0.8s,baz=261,slow=23,SNR=2.5
           comp=Z,9.3nm,0.8s
MJAR   Matsushiro Arr    43.19 345   PcP     PcP      12 53 51.9 -0.9
           comp=Z,1.4nm,0.5s,baz=186,slow=2.1,SNR=2.8
NJ2    Nanjing           48.11 322  eP       P        12 52 46.9 +2.2
NJ2                                  pmax    pmax
           comp=Z,15nm,1.0s
ASAJ   Asahikawa         49.62 352   P       P        12 52 55.8 -0.2
           comp=Z,3.0nm,0.7s,baz=9.5,slow=13,SNR=6.6
           comp=Z,3.0nm,0.7s
HNS    HongShan          54.26 324  ⇓P       P        12 53 32.0 +1.5
HNS                                  pmax    pmax
           comp=Z,10.0nm,1.4s
XAN    Xi'an             55.77 317   P       P        12 53 43.1 +1.6
XAN                                  pmax    pmax
           comp=Z,8.0nm,0.7s
CMAR   Chiang Mai Arr    56.58 296   P       P        12 53 47.9 +0.4
           comp=Z,3.4nm,1.0s,baz=112,slow=5.1,SNR=17
           comp=Z,3.4nm,1.0s
CMAR   Chiang Mai Arr    56.58 296   P       P        12 53 47.2 -0.3
CHTO   Chiang Mai        56.70 296   P       P        12 53 46.5 -1.7
KLR    Kul'dur           56.72 345   P       P        12 53 47.4 -0.4
           comp=Z,1.4nm,0.6s,baz=218,slow=21,SNR=6.5
           comp=Z,1.4nm,0.6s
PZH    PanZhiHua         57.26 306   P       P        12 53 54.6 +2.3
PZH                                  pmax    pmax
           comp=Z,10.0nm,0.5s
PZH                                  pmax    pmax
           comp=Z,150nm,4.5s
XLT    XiLinHaoTe        58.15 331  eP       P        12 53 59.0 +0.9
XLT                                  pP      pwP      12 54 34.1 -1.2
XLT                                  pmax    pmax
           comp=Z,12nm,1.0s
XLT                                  pmax    pmax
           comp=Z,180nm,6.4s
PETK   Petropavlovsk-    58.27   5   P       P        12 53 57.8 -0.8
           comp=Z,1.7nm,0.5s,baz=176,slow=8.2,SNR=24
           comp=Z,1.7nm,0.5s
HHC    Hu-ho-hao-te      58.39 325  eP       P        12 54 03.5 +3.7
HHC                                  pmax    pmax
           comp=Z,32nm,0.9s
HHC                                  pmax    pmax
           comp=Z,320nm,5.2s
LZH    Lanzhou           60.36 317  eP       P        12 54 15.1 +1.6
LZH                                  pmax    pmax
           comp=Z,10.0nm,1.4s
MA2    Magadan           64.49 360   P       P        12 54 39.4 -0.8
           comp=Z,3.3nm,0.5s,baz=127,slow=21,SNR=2.0
           comp=Z,3.3nm,0.5s
GTA    Gaotai            64.82 318  eP       P        12 54 44.3 +1.3
GTA                                  pmax    pmax
           comp=Z,3.0nm,0.9s
ULN    Ulaanbaatar       65.44 329   P       P        12 54 46.9  0.0
ULN                                  IAmb    IAmb     12 54 49.4
           comp=Z,5.4nm,1.0s
SONM   Songino Array     65.76 329   P       P        12 54 50.2 +1.4
           comp=Z,3.9nm,0.7s,baz=145,slow=6.1,SNR=21
SONM                                 PcP     PcP      12 55 18.9  0.0
           comp=Z,0.5nm,0.5s,baz=154,slow=5.1,SNR=1.7
           comp=Z,3.9nm,0.7s
SONM   Songino Array     65.76 329   P       P        12 54 47.9 -1.0
SONM                                 IAmb    IAmb     12 54 51.8
           comp=Z,13nm,1.4s
SEY    Seymchan          67.87   1   P       P        12 55 00.4 -1.3
           comp=Z,1.4nm,0.6s,baz=208,slow=6.8,SNR=6.5
           comp=Z,1.4nm,0.6s
YAK    Yakutsk           68.98 349   P       P        12 55 08.8 +0.2
YAK                                  IAmb    IAmb     12 55 15.8
           comp=Z,10nm,0.7s
BILL   Bilibino          73.76   6   P       P        12 55 37.2  0.0
WMQ    Urumqi            74.91 318  eP       P        12 55 46.2 +1.7
WMQ                                  pmax    pmax
           comp=Z,14nm,0.9s
ANM    Nome              76.55  18   P       P        12 55 53.7 +0.4
MK31   Makanchi Array    79.53 319   P       P        12 56 10.6 +0.5
MKAR   Makanchi Array    79.53 319   P       P        12 56 10.2 +0.1
           comp=Z,1.4nm,0.5s,baz=99,slow=7.5,SNR=38
           comp=Z,1.4nm,0.5s
MKAR   Makanchi Array    79.53 319   P       P        12 56 10.8 +0.6
MAKZ   Makanchi          79.73 319   P       P        12 56 11.6 +0.4
ZAA0   Zalesovo Array    80.54 327   P       P        12 56 15.1 -0.2
ZAA0                                 IAmb    IAmb     12 56 15.6
           comp=Z,12nm,1.5s
ZALV   Zalesovo Beam     80.54 327   P       P        12 56 14.8 -0.6
           comp=Z,2.3nm,0.4s,baz=111,slow=5.8,SNR=19
           comp=Z,2.3nm,0.4s
PWL    Port Wells        80.61  26   P       P        12 56 15.4 -0.2
MLY    Manley            81.75  21   P       P        12 56 21.4 -0.1
MLY                                  IAmb    IAmb     12 56 22.2
           comp=Z,7.2nm,0.5s
KSH    Kashi             81.94 311   P       P        12 56 25.2 +1.9
KSH                                  pmax    pmax
           comp=Z,3.0nm,1.0s
NEA2   Nenana            82.14  22   P       P        12 56 22.4 -1.2
NEA2                                 IAmb    IAmb     12 56 23.4
           comp=Z,4.4nm,0.5s
CCB    Clear Creek Bu    82.64  22   P       P        12 56 24.5 -1.7
TKM2   Tokmak 2          83.01 314   P       P        12 56 29.6 +0.8
           SNR=5.8
KURK   Kurchatov         83.05 322   P       P        12 56 28.5 -0.1
KURK                                 IAmb    IAmb     12 56 29.4
           comp=Z,11nm,1.1s
IL31                     83.05  22   P       P        12 56 26.5 -1.7
ILAR   Eielson Array     83.05  22   P       P        12 56 26.4 -1.8
           comp=Z,2.5nm,0.5s,baz=255,slow=5.1,SNR=98
           comp=Z,2.5nm,0.5s
ILAR   Eielson Array     83.05  22   P       P        12 56 26.7 -1.6
KURBB  Kurchatov Arra    83.07 322   P       P        12 56 27.4 -1.3
           comp=Z,3.0nm,0.9s,baz=103,slow=4.1,SNR=11
           comp=Z,3.0nm,0.9s
COLD   Coldfoot          83.08  20   P       P        12 56 28.2 -0.2
UCH    Uchtor            83.63 313   P       P        12 56 33.5 +1.2
           SNR=7.0
DOT    Dot Lake          83.66  24   IAmb    IAmb     12 56 31.4
           comp=Z,10nm,1.5s
AAK    Ala-Archa         83.73 314   P       P        12 56 33.1 +0.6
USP    Ospenovka         83.87 314   P       P        12 56 33.6 +0.6
           SNR=9.2
AML    Almayashu         84.20 313   P       P        12 56 36.3 +1.1
           SNR=14
EKS2   Erkin-Say         84.26 314   P       P        12 56 36.0 +1.0
           SNR=9.5
QSPA   South Pole Qui    84.84 180   P       P        12 56 37.2 -0.4
KKAR   Karatay Array     86.70 314   P       P        12 56 46.6 -0.5
BRVK   Borovoye          88.61 323   P       P        12 56 52.1 -3.7
BRVK                                 IAmb    IAmb     12 56 56.5
           comp=Z,6.0nm,1.2s
INK    Inuvik            89.32  21   P       P        12 56 58.5 -0.3
           comp=Z,0.9nm,0.5s,baz=334,slow=1.2,SNR=4.1
           comp=Z,0.9nm,0.5s
HUMO   Hull Mountain     90.36  47   IAmb    IAmb     12 57 06.2
           comp=Z,11nm,1.4s
YBH    Yreka Blue Hor    90.45  48   P       P        12 57 05.8 +0.9
YBH                                  IAmb    IAmb     12 57 06.7
           comp=Z,8.8nm,1.3s
MOD    Modoc Plateau     92.25  48   IAmb    IAmb     12 57 14.6
           comp=Z,7.0nm,1.2s
YERR   Yerington         92.83  51   IAmb    IAmb     12 57 17.4
           comp=Z,2.8nm,0.9s
MDPB   Devils Postpil    92.86  53   P       P        12 57 16.6 +0.3
OMMB   Old Mammoth Mi    92.92  53   P       P        12 57 17.0 +0.3
OMMB                                 IAmb    IAmb     12 57 18.3
           comp=Z,7.1nm,1.3s
NVAR   Mina Array Bea    93.53  52   P       P        12 57 19.9 +0.6
           comp=Z,5.4nm,1.1s,baz=256,slow=5.8,SNR=18
NVAR                                 LR      LR       13 34 55.6
           comp=Z,68nm,18.7s,baz=192,slow=32
           comp=Z,5.4nm,1.1s
NVAR   Mina Array Bea    93.53  52   P       P        12 57 18.8 -0.5
NV11   Mina Array Sit    93.64  52   P       P        12 57 20.3 +0.5
KVN    Kaiserville       93.72  51   IAmb    IAmb     12 57 21.0
           comp=Z,6.7nm,1.4s
QSM    Queen of Sheba    94.53  54   P       P        12 57 23.7  0.0
PRN    Pahroc Range      96.05  53   P       P        12 57 31.5 +0.7
RPN    Rapa Nui          96.07 118   LR      LR       13 32 23.1
           comp=Z,162nm,21.6s,baz=273,slow=30
YKA    Yellowknife Ar    96.44  28   P       P        12 57 31.4 -0.4
           comp=Z,0.3nm,0.6s,baz=269,slow=4.8,SNR=6.2
           comp=Z,0.3nm,0.6s
SPR3   Spring Creek 3    96.66  51   IAmb    IAmb     12 57 35.2
           comp=Z,2.3nm,0.9s
PDAR   Pinedale Array   100.23  48   P       Pdif     12 57 49.0 -0.6
           comp=Z,0.6nm,0.5s,baz=212,slow=2.9,SNR=11
TORD   Torodi Ar. Bea   148.89 287   PKPbc   PKPbc    13 03 50.5 -0.5
           comp=Z,6.2nm,0.7s,baz=98,slow=2.9,SNR=42
TORD                                 pPKPbc  pPKPbc   13 04 28.7 -1.6
           comp=Z,1.0nm,0.6s,baz=64,slow=3.0,SNR=4.0
BDFB   Brasilia         151.93 138   PKPbc   PKPbc    13 03 58.2 -0.1
           comp=Z,1.2nm,0.4s,baz=73,slow=4.8,SNR=4.7
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IDC ***02*** *12:57:49.2±0.7, 30°.41S×177°.87W, h0^{km}, mb4.5/7, mbtmp4.5/9, ML3.8/2, MS3.7/7, Error ellipse: s-maj=26.3km s-min=17.0km az=108.0*

NEIC ***02*** *12:57:58.5±1.3, 29°.9S±0°.1×177°.7W±0°.2, h82^{km}±12^{km}, mb4.6/19, Error ellipse: s-maj=25.8km s-min=12.2km az=223.0*

ISC 02 12:57:53.8±0.7**, 30°.41S**±0°.05×**177°.8W**±0°.1**, h35^{km}, n71, σ1^{s}89**/74**, mb4.6**/16**, MS3.7**/6**, Kermadec Islands**

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Code   Station Name       Δ°   AZ°   Phase ID             Time      Res
                                     Op      ISC        h  m  s     ISC
GLKZ   Green Lake         1.15 355   P       Pn       12 58 13.2 -0.1
GLKZ                                 S       Sn       12 58 25.4 -2.4
RAO    Raoul Island       1.16 355   Pn      Pn       12 58 13.7 +0.2
           449nm,0.3s,baz=112,slow=13,SNR=16
RAO                                  Sn      Sn       12 58 26.6 -1.5
           2µm,0.3s,baz=74,slow=21,SNR=12
RAO                                  LR      LR       12 58 34.0
           comp=Z,408nm,21.5s,baz=144,slow=39
RAO    Raoul Island       1.16 355           Pn       12 58 13.5 -0.1
RIZ    Raoul Island       1.17 355   P       Pn       12 58 13.8 +0.1
RIZ                                  S       Sn       12 58 27.1 -1.2
PKGZ   Pakihiroa          8.20 203   P       Pn       12 59 48.5 -1.9
PKGZ                                 S       Sn       13 01 19.9 -2.0
PUZ    Puketiti           8.31 202   P       Pn       12 59 49.9 -1.9
PUZ                                  S       Sn       13 01 22.1 -2.3
RUGZ   Raukumara Rang     8.41 205   P       Pn       12 59 51.9 -1.4
RUGZ                                 S       Sn       13 01 28.1 +1.0
TWGZ   Tauwhareparae      8.50 203   P       Pn       12 59 53.1 -1.3
TWGZ                                 S       Sn       13 01 27.9 -1.2
TKGZ   Te Karaka          8.78 203   P       Pn       12 59 55.5 -2.6
TKGZ                                 S       Sn       13 01 34.4 -1.4
MWZ    Matawai            8.79 205   P       Pn       12 59 55.9 -2.6
MWZ                                  S       Sn       13 01 36.2 -0.2
URZ    Urewera            8.89 207   Pn      Pn       12 59 57.1 -2.6
           0.6nm,0.3s,baz=349,slow=3.5,SNR=16
URZ                                  Sn      Sn       13 01 36.9 -1.6
           8.7nm,0.3s,baz=287,slow=21,SNR=21
           3.1nm,0.3s
RIGZ   Rimuhau            9.05 203   P       Pn       12 59 60.0 -2.0
RIGZ                                 S       Sn       13 01 39.6 -2.9
MUGZ   Murupara           9.21 208   P       Pn       13 00 01.2 -2.9
MUGZ                                 S       Sn       13 01 45.8 -0.7
RTZ    Ruatahuna          9.25 206   P       Pn       13 00 01.4 -3.3
RTZ                                  S       Sn       13 01 45.0 -2.5
KNZ    Kokohu             9.36 202   P       Pn       13 00 02.8 -3.3
KNZ                                  S       Sn       13 01 46.8 -3.4
CMWZ   Cape Campbell     13.02 207   Pn      P        13 01 02.5 -3.6
QRZ    Quartz Range      13.02 214   Pn      P        13 01 03.8 -2.4
DSZ    Denniston Nort    14.08 214   Pn      P        13 01 19.7 +1.7
INZ    Inchbonnie        15.01 212   Pn      P        13 01 29.4 +1.2
RPZ    Rata Peaks        15.96 211   Pn      Pn       13 01 34.7 -0.9
           0.6nm,0.3s,baz=117,slow=12,SNR=2.2
RPZ                                  Sn      Sn       13 04 16.2  -15
           1.3nm,0.3s,baz=124,slow=23,SNR=8.0
           2.7nm,0.5s
DZM    Mont Dzumac       16.38 297   Pn      P        13 01 47.0 +3.3
           0.1nm,0.3s,baz=89,slow=19,SNR=2.2
AFI    Afiamalu          17.34  20   LR      LR       13 07 35.5
           comp=Z,203nm,20.1s,baz=156,slow=34
WHZ    Wether Hill Ro    19.05 212   P       Pn       13 02 18.7 +4.9
WHZ                                  IAmb    IAmb     13 02 50.1
           comp=Z,28nm,1.4s
FUNA   Funafuti          21.95 352   P       P        13 02 38.2 -6.3
ARMA   Armidale          26.33 262   P       P        13 03 26.1 -0.4
ARMA                                 IAmb    IAmb     13 04 05.1
           comp=Z,17nm,1.3s
CAN    Canberra          28.23 251   P       P        13 03 45.6 +2.1
CAN                                  IAmb    IAmb     13 03 48.1
           comp=Z,9.4nm,1.0s
TOO    Toolangi          31.12 247   P       P        13 04 11.2 +2.1
TOO                                  IAmb    IAmb     13 04 13.9
           comp=Z,7.7nm,1.0s
CTA    Charters Tower    33.97 279   LR      LR       13 15 56.0
           comp=Z,136nm,19.7s,baz=89,slow=32
CTAO   Charters Tower    33.97 279   P       P        13 04 34.5 +0.4
CTAO                                 IAmb    IAmb     13 04 37.6
           comp=Z,12nm,1.0s
STKA   Stephens Creek    34.64 257   P       P        13 04 41.6 +1.7
           comp=Z,20nm,0.9s,baz=96,slow=10,SNR=22
STKA                                 LR      LR       13 17 35.1
           comp=Z,132nm,19.7s,baz=55,slow=34
           comp=Z,20nm,0.9s
STKA   Stephens Creek    34.64 257   P       P        13 04 41.6 +1.7
STKA                                 IAmb    IAmb     13 04 43.6
           comp=Z,3.7nm,0.8s
PMG    Port Moresby      38.77 295   LR      LR       13 18 11.6
           comp=Z,78nm,21.2s,baz=108,slow=32
BBOO   Buckleboo         39.13 254   P       P        13 05 17.7 -0.4
AS31   Alice Springs     43.28 267   P       P        13 05 52.6 +0.3
ASAR   Alice Springs     43.28 267   P       P        13 05 51.9 -0.4
           comp=Z,3.6nm,0.8s,baz=104,slow=7.4,SNR=47
ASAR                                 PcP     PcP      13 07 41.5 +0.5
           comp=Z,1.0nm,0.8s,baz=117,slow=3.7,SNR=4.5
ASAR                                 LR      LR       13 24 10.3
           comp=Z,105nm,18.8s,baz=117,slow=37
           comp=Z,3.6nm,0.8s
ASAR   Alice Springs     43.28 267   P       P        13 05 51.7 -0.6
WR0    Warramunga Arr    44.09 272   P       P        13 05 58.6 -0.2
WR0                                  IAmb    IAmb     13 06 01.5
           comp=Z,8.8nm,1.0s
WB2    Warramunga Arr    44.26 272   P       P        13 05 60.0 -0.2
WB2                                  IAmb    IAmb     13 06 02.5
           comp=Z,11nm,1.1s
WRAB   Tennant Creek     44.26 272   P       P        13 05 59.3 -0.9
WRAB                                 IAmb    IAmb     13 06 02.4
           comp=Z,12nm,1.0s
WRA    Warramunga Arr    44.27 272   P       P        13 06 00.0 -0.3
           comp=Z,4.9nm,0.5s,baz=111,slow=7.8,SNR=24
           comp=Z,4.9nm,0.5s
WRA    Warramunga Arr    44.27 272   P       P        13 05 60.0 -0.3
WB0    Warramunga Arr    44.29 272   P       P        13 05 59.9 -0.5
WB0                                  IAmb    IAmb     13 06 02.7
           comp=Z,22nm,1.2s
KNRA   Kununurra         50.88 274   P       P        13 06 52.1 +0.5
FITZ   Fitzroy Crossi    52.53 270   P       P        13 07 04.3 +0.4
GUMO   Guam              56.61 315   LR      LR       13 29 26.6
           comp=Z,43nm,21.2s,baz=114,slow=34
MORW   Morawa            56.69 253   P       P        13 07 33.6 -0.4
MORW                                 IAmb    IAmb     13 07 36.7
           comp=Z,14nm,1.4s
QSPA   South Pole Qui    59.70 180   P       P        13 07 56.2 +1.6
           comp=Z,7.8nm,1.0s,baz=25,slow=1.3,SNR=24
           comp=Z,7.8nm,1.0s
QSPA   South Pole Qui    59.70 180   P       P        13 07 58.3 +3.7
H03S2  Juan Fernandez    80.32 123   T       T        14 39 14.2
           baz=238,slow=74,SNR=28
H03S1  Juan Fernandez    80.33 123   T       T        14 39 15.5
           baz=238,slow=74,SNR=24
H03S3  Juan Fernandez    80.33 123   T       T        14 39 17.4
           baz=238,slow=74,SNR=29
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H03N3	Juan Fernandez	80.51	123	T	T	14 39 26.9	
	baz=241,slow=72,SNR=21						
H03N2	Juan Fernandez	80.51	123	T	T	14 39 25.4	
	baz=241,slow=72,SNR=18						
H03N1	Juan Fernandez	80.52	123	T	T	14 39 23.7	
	baz=241,slow=72,SNR=36						
PETK	Petropavlovsk-	85.86	345	P	P	13 10 32.0	+2.6
	comp=Z,3.9nm,0.7s,baz=120,slow=6.5,SNR=11						
	comp=Z,3.9nm,0.7s						
NVAR	Mina Array Bea	88.13	43	P	P	13 10 43.2	+2.1
	comp=Z,0.7nm,0.7s,baz=223,slow=9.5,SNR=7.5						
	comp=Z,0.7nm,0.7s						
KLR	Kul'dur	91.13	330	LR	LR	13 46 51.4	
	comp=Z,45nm,20.8s,baz=99,slow=32						
SEY	Seymchan	96.03	347	P	P	13 11 16.6	-0.1
	comp=Z,1.6nm,1.0s,baz=0.0,slow=24,SNR=9.4						
	comp=Z,1.6nm,1.0s						
MKAR	Makanchi Array	117.91	310	PKP	PKiKP	13 16 36.4	-0.1
	comp=Z,0.4nm,0.6s,baz=154,slow=1.2,SNR=6.3						
KURBB	Kurchatov Arra	121.22	314	PKP	PKPdf	13 16 42.1	-0.5
	comp=Z,1.6nm,0.7s,baz=109,slow=1.8,SNR=12						
AAK	Ala-Archa	122.26	304	PKP	PKiKP	13 16 45.4	+0.2
	comp=Z,0.3nm,0.3s,baz=201,slow=7.3,SNR=3.8						
BVAR	Borovoye Array	126.53	316	PKP	PKiKP	13 16 53.3	+0.1
	comp=Z,2.3nm,0.7s,baz=93,slow=2.9,SNR=9.5						
AKTO	Aktyubinsk	134.23	312	PKP	PKiKP	13 17 08.8	0.0
	comp=Z,0.9nm,0.5s,baz=275,slow=5.7,SNR=1.8						
ARCES	ARCESS Array B	138.63	348	PKP	PKiKP	13 17 15.7	-1.5
	comp=Z,2.2nm,0.9s,baz=28,slow=4.1,SNR=1.3						
FINES	FINESS Array B	145.21	340	PKPbc	PKPbc	13 17 26.2	-0.4
	comp=Z,9.7nm,0.7s,baz=51,slow=3.6,SNR=22						
KBZ	Khabaz	145.26	304	PKPbc	PKPab	13 17 27.9	+0.5
	comp=Z,2.7nm,0.8s,baz=350,slow=8.7,SNR=4.1						
NOA	NORSAR Array B	148.79	352	PKPbc	PKPbc	13 17 36.2	-0.7
	comp=Z,3.4nm,0.7s,baz=16,slow=4.3,SNR=6.5						
AKASG	Malin Array Be	151.41	323	PKPbc	PKiKP	13 17 43.3	-0.6
	comp=Z,3.4nm,0.6s,baz=50,slow=2.7,SNR=12						
MMAI	Mount Meron Ar	151.70	284	PKPbc	PKiKP	13 17 45.8	+0.5
	comp=Z,9.5nm,0.8s,baz=64,slow=5.7,SNR=7.2						
BRTR	Keskin Array B	152.75	299	PKPbc	PKiKP	13 17 47.8	+0.5
	comp=Z,2.4nm,1.0s,baz=57,slow=12,SNR=4.3						
TORD	Torodi Ar. Bea	162.81	178	PKPab	PKPab	13 18 42.8	+1.2
	comp=Z,2.4nm,0.9s,baz=180,slow=3.0,SNR=12						

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*ISK **02** 13:03:39.6, 37°.68N×38°.48E, h8^{km}, ML2.6/9*
*DDA **02** 13:03:39.1±0.0, 37°.58N×38°.50E, h7^{km}±2^{km}, ML2.4*
ISC 02 13:03:39.2±1.1**, 37°.63N**±0°.03×**38°.49E**±0°.03**, h5**^{km}±10^{km}**,**
n17, σ0ˢ.61/29**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	Bozova	0.22	225	P	Pg	13 03 43.6	+0.1
ATAB				S	Sg	13 03 46.8	+0.4
ATAB				*i* AML	AML	13 03 49.0	
	comp=N,626nm,0.5s						
ATAB				*i* AML	AML	13 03 55.0	
	comp=E,926nm,0.2s						
URFA	Urfa	0.32	125	Pg	Pb	13 03 47.5	+0.1
URFA				Sg	Sb	13 03 52.4	-0.5
SANL	SANLIURFA_Merk	0.60	139	P	Pg	13 03 50.5	-0.2
SANL				S	Sg	13 03 57.8	-0.7
SANL				*i* AML	AML	13 04 15.0	
	comp=E,253nm,0.5s						
AKCA	Adyaman/G¶l	0.66	285	P	Pg	13 03 52.3	+0.5
AKCA				S	Sb	13 04 01.6	-1.1
AKCA				*i* AML	AML	13 04 07.0	
	comp=E,167nm,0.2s						
AKCA				*i* AML	AML	13 04 15.0	
	comp=N,210nm,0.6s						
MAYA	Malatya/Merkez	0.70	356	P	Pb	13 03 53.7	-0.2
MAYA				S	Sg	13 04 01.5	-0.3
SURC	SANLIURFA_SURC	0.75	173	P	Pg	13 03 53.3	-0.3
SURC				S	Sg	13 04 03.4	0.0
SURC				*i* AML	AML	13 04 23.0	
	comp=E,134nm,0.4s						
GZT	Gaziantep	0.79	250	P	Pg	13 03 54.4	+0.2
GZT				S	Sb	13 04 07.1	+0.7
GZT				*i* AML	AML	13 04 09.0	
	comp=N,249nm,0.5s						
GZT				*i* AML	AML	13 04 17.0	
	comp=E,137nm,0.2s						
NZIP	Nizip/Gaziante	0.87	229	P	Pg	13 03 56.1	+0.2
NZIP				S	Sn	13 04 10.2	-1.0
NZIP				*i* AML	AML	13 04 11.0	
	comp=N,138nm,0.6s						
NZIP				*i* AML	AML	13 04 21.0	
	comp=E,128nm,0.4s						
GAZ	Gaziantep	1.12	246	Pn	Pn	13 04 01.4	-0.1
GAZ				Sn	Sn	13 04 17.5	+0.2
KAHM	Kahramanmaras,	1.20	265	P	Pn	13 04 02.8	+0.2
KAHM				S	Sn	13 04 18.8	-0.6
DARE	Darende-Malaty	1.23	320	Pn	Pb	13 04 02.4	-0.6
DARE				Sn	Sn	13 04 20.0	-0.2
DYBB	Diyarbakir	1.34	75	Pn	Pn	13 04 04.7	+0.1
DYBB				Sn	Sn	13 04 23.8	+0.9
ARPR	Arapgir-MALATY	1.47	355	Pn	Pn	13 04 06.3	-0.1
SARI	SarD1z-Kayseri	1.81	296	Pn	Pn	13 04 11.7	+0.5
KOZT	Kozan	2.12	267	Pn	Pn	13 04 16.6	+1.3
BNGB	Bingl	2.19	51	Pn	Pn	13 04 16.9	+0.6
SVAN	Silvan-Diyarba	2.20	75	Pn	Pn	13 04 17.4	+1.0

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*DDA **02** 13:11:49.2±0.0, 37°.61N×38°.46E, h7^{km}±2^{km}, ML3.1*
*ISK **02** 13:11:50.4, 37°.57N×38°.47E, h22^{km}, ML3.1/14*
ISC 02 13:11:49.7±1.1**, 37°.61N**±0°.03×**38°.48E**±0°.02**, h6**^{km}±10^{km}**,**
n25, σ0ˢ.50/40**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	Bozova	0.20	226	P	Pg	13 11 53.9	+0.1
ATAB				S	Sg	13 11 56.8	+0.3
ATAB				*i* AML	AML	13 11 57.0	
	comp=N,3µm,0.2s						
ATAB				*i* AML	AML	13 11 58.0	
	comp=E,4µm,0.4s						
URFA	Urfa	0.32	122	Pg	Pb	13 11 58.1	+0.2
URFA				Sg	Sb	13 12 02.9	-0.4
SANL	SANLIURFA_Merk	0.60	137	P	Pg	13 12 00.8	-0.4
SANL				S	Sg	13 12 08.7	-0.3
SANL				*i* AML	AML	13 12 17.0	
	comp=N,770nm,0.5s						
SANL				*i* AML	AML	13 12 18.0	
	comp=E,623nm,0.4s						
AKCA	Adyaman/G¶l	0.65	287	P	Pg	13 12 01.9	-0.4
AKCA				*i* AML	AML	13 12 16.0	
	comp=N,648nm,0.4s						
MAYA	Malatya/Merkez	0.71	357	P	Pg	13 12 02.8	-0.6
MAYA				S	Sg	13 12 13.0	+0.2
SURC	SANLIURFA_SURC	0.74	172	P	Pg	13 12 03.6	-0.2
SURC				S	Sb	13 12 15.3	0.0
GZT	Gaziantep	0.77	251	P	Pg	13 12 04.2	-0.4
GZT				S	Sb	13 12 16.9	+0.5
GZT				*i* AML	AML	13 12 18.0	
	comp=N,1µm,0.3s						
GZT				*i* AML	AML	13 12 18.0	
	comp=E,652nm,0.4s						
NZIP	Nizip/Gaziante	0.85	229	P	Pb	13 12 07.2	+0.2
NZIP				S	Sb	13 12 18.6	-0.1
NZIP				*i* AML	AML	13 12 21.0	
	comp=N,626nm,0.7s						
NZIP				*i* AML	AML	13 12 23.0	
	comp=E,696nm,0.5s						
ELZG	Elazig	0.97	24	P	Pg	13 12 07.9	-0.4
ELZG				S	Sg	13 12 21.9	+0.9
GAZ	Gaziantep	1.10	247	Pg	Pg	13 12 10.5	-0.3
GAZ				Sg	Sg	13 12 25.3	+0.2
KAHM	Kahramanmaras,	1.19	266	P	Pg	13 12 11.6	-0.9
KAHM				S	Sg	13 12 27.7	-0.2
DARE	Darende-Malaty	1.24	321	Pn	Pg	13 12 12.8	-0.7
DARE				Sn	Sg	13 12 30.4	+0.8
ELBS	KAHRAMANMARAS_	1.28	304	P	Pg	13 12 13.5	-0.8
ELBS				S	Sg	13 12 31.0	+0.1
DYBB	Diyarbakir	1.36	75	Pn	Pn	13 12 14.8	-0.4
DYBB				Sn	Sg	13 12 32.8	-0.6
KUZU	Kuzuini	1.40	234	P	Pn	13 12 16.0	+0.2
KUZU				S	Sn	13 12 34.8	+0.3
KUZU				*i* AML	AML	13 12 37.0	
	comp=E,963nm,0.3s						
KUZU				*i* AML	AML	13 12 38.0	
	comp=N,930nm,0.3s						
ARPR	Arapgir-MALATY	1.48	356	Pn	Pn	13 12 16.8	-0.3
KAMA	Osmaniye	1.50	254	P	Pn	13 12 17.0	-0.2
KAMA				S	Sn	13 12 36.5	-0.7
SARI	SarD1z-Kayseri	1.81	297	Pn	Pn	13 12 21.7	+0.1
KOZT	Kozan	2.11	267	Pn	Pn	13 12 25.4	-0.1
ERZN	Erzincan	2.20	26	Pn	Pn	13 12 27.2	+0.3
BNGB	Bingl	2.21	51	Pn	Pn	13 12 27.5	+0.5
SVAN	Silvan-Diyarba	2.22	75	Pn	Pn	13 12 27.2	+0.2
BNN	Bunyan	2.42	302	Pn	Pn	13 12 30.1	+0.3
SVSK	Karacayir	2.58	334	Pn	Pn	13 12 32.8	+0.9
AKDM	Akdamar-Van	3.63	77	Pn	Pn	13 12 47.6	+1.1

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*IDC **02** 13:13:23.5±2.9, 2°.28S×139°.73E, h0^{km}, mb3.7/4, mbtmp3.7/5, ML3.8/1, MS3.5/1, Error ellipse: s-maj=95.2km s-min=24.5km az=86.0*
*DJA **02** 13:13:29.9±0.9, 2°S±13°×13°9E±°, h23^{km}±7^{km}, M4.1/5, mb4.3/1, MLv4.1/5*
ISC 02 13:13:31.1±0.9**, 2°.3S**±0°.1×**139°.16E**±0°.07**, h35**^{km}**, n11,**
σ1ˢ.02/11**, mb3.7**/4**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.55	306	P	Pn	13 13 42.3	-0.2
SMPI				S	Sn	13 13 50.4	0.0
GENI	Genyem	1.05	105	P	Pn	13 13 49.6	+0.3
GENI				S	Sn	13 14 03.9	+1.2
WAMI	Wamena	1.62	196	P	Pn	13 14 04.0	+6.7
SRPI	Serui, Papua	2.95	279	P	Pn	13 14 16.3	+0.8
FAKI	Fak Fak	6.93	265	P	Pn	13 15 11.8	+1.6
WRA	Warramunga Arr	18.14	195	P	Pn	13 17 38.9	-1.6
	0.3nm,0.3s,baz=19,slow=12,SNR=12						
WRA				S	Sn	13 20 48.8	-13
	0.3nm,0.6s,baz=13,slow=22,SNR=1.6						
	0.5nm,0.4s						
ASAR	Alice Springs	21.83	193	P	P	13 18 19.9	-0.8
	1.0nm,0.6s,baz=27,slow=11,SNR=16						
	1.0nm,0.6s						
CMAR	Chiang Mai Arr	44.63	299	P	P	13 21 41.0	+0.3
	0.4nm,0.4s,baz=138,slow=6.2,SNR=4.4						
	0.4nm,0.4s						
RPZ	Rata Peaks	50.01	150	LR	LR	13 44 50.6	
	comp=Z,42nm,18.0s,baz=142,slow=38						
MKAR	Makanchi Array	69.75	322	P	P	13 24 38.1	+0.4
	0.8nm,0.7s,baz=107,slow=7.4,SNR=11						
	0.8nm,0.7s						
ZALV	Zalesovo Beam	71.82	330	P	P	13 24 49.5	-0.7
	0.5nm,0.4s,baz=104,slow=7.7,SNR=2.7						
	0.5nm,0.4s						

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*DDA **02** 13:26:57.4±0.0, 37°.59N×38°.47E, h11^{km}±2^{km}, ML2.6*
*ISK **02** 13:26:58.6, 37°.60N×38°.43E, h13^{km}, ML3.0/9*
ISC 02 13:26:57.9±1.1**, 37°.59N**±0°.03×**38°.45E**±0°.02**, h6**^{km}±10^{km}**,**
n20, σ0ˢ.56/33**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URFA	Urfa	0.34	117	Pg	Pb	13 27 06.7	+0.4
URFA				Sg	Sb	13 27 11.4	-0.6
HANM	anlurfa/Hi	0.35	92	P	Pg	13 27 04.1	-0.5
HANM				S	Sg	13 27 08.8	-0.4
HANM				*i* AML	AML	13 27 11.0	
	comp=E,679nm,0.3s						
SANL	SANLIURFA_Merk	0.60	134	P	Pg	13 27 09.3	-0.2
SANL				S	Sg	13 27 17.3	-0.1
SANL				*i* AML	AML	13 27 22.0	
	comp=E,651nm,0.5s						
AKCA	Adyaman/G¶l	0.63	289	P	Pg	13 27 10.6	+0.6
AKCA				S	Sb	13 27 19.8	-0.8
AKCA				*i* AML	AML	13 27 25.0	
	comp=N,398nm,0.4s						
AKCA				*i* AML	AML	13 27 29.0	
	comp=E,196nm,0.5s						
SURC	SANLIURFA_SURC	0.72	169	P	Pg	13 27 12.0	+0.2
SURC				*i* AML	AML	13 27 26.0	
	comp=N,172nm,0.3s						
SURC				*i* AML	AML	13 27 33.0	
	comp=E,282nm,0.6s						
MAYA	Malatya/Merkez	0.73	359	P	Pg	13 27 11.5	-0.5
MAYA				*i* AML	AML	13 27 22.0	
	comp=E,92nm,0.5s						
GZT	Gaziantep	0.74	252	P	Pb	13 27 12.9	-0.4
GZT				S	Sb	13 27 23.3	-0.4
NZIP	Nizip/Gaziante	0.82	228	P	Pb	13 27 14.9	+0.3
NZIP				S	Sb	13 27 25.6	-0.4
NZIP				*i* AML	AML	13 27 29.0	
	comp=E,387nm,0.4s						
NZIP				*i* AML	AML	13 27 32.0	
	comp=N,314nm,0.3s						
GAZ	Gaziantep	1.07	247	Pg	Pn	13 27 19.4	-0.1
GAZ				Sg	Sn	13 27 34.1	-0.6
KAHM	Kahramanmaras,	1.16	267	P	Pg	13 27 20.0	-0.1
KAHM				*i* AML	AML	13 27 36.0	
	comp=E,34nm,0.7s						
KAHM				S	Sn	13 27 36.9	-0.1
KAHM				*i* AML	AML	13 27 40.0	
	comp=N,83nm,0.4s						
DARE	Darende-Malaty	1.24	322	Pn	Pn	13 27 21.9	0.0
DARE				Sn	Sn	13 27 39.1	+0.2
ELBS	KAHRAMANMARAS_	1.27	306	P	Pg	13 27 23.2	+1.0
ELBS				*i* AML	AML	13 27 42.0	
	comp=E,107nm,0.5s						
ELBS				*i* AML	AML	13 27 44.0	
	comp=N,113nm,0.6s						
DYBB	Diyarbakir	1.39	75	Pn	Pg	13 27 24.5	0.0
DYBB				Sn	Sg	13 27 43.1	+0.6
KAMA	Osmaniye	1.47	255	P	Pg	13 27 26.1	0.0
KAMA				S	Sg	13 27 44.9	-0.3
KAMA				*i* AML	AML	13 28 01.0	
	comp=N,42nm,1.0s						
KAMA				*i* AML	AML	13 28 02.0	
	comp=E,40nm,0.8s						
ARPR	Arapgir-MALATY	1.50	357	Pn	Pn	13 27 25.3	-0.2
SARI	SarD1z-Kayseri	1.80	298	Pn	Pn	13 27 30.2	+0.6
SARI				Sn	Sn	13 27 52.8	0.0
SAIM	ADANA	1.91	282	P	Pb	13 27 32.4	-0.8
SAIM				S	Sg	13 28 00.1	+0.8
SAIM				*i* AML	AML	13 28 02.0	
	comp=N,64nm,0.4s						
SAIM				*i* AML	AML	13 28 06.0	
	comp=E,78nm,0.3s						
KOZT	Kozan	2.08	268	Pn	Pn	13 27 34.5	+1.1
BNGB	Bingl	2.24	51	Pn	Pn	13 27 36.5	+0.8
SVAN	Silvan-Diyarba	2.25	75	Pn	Pn	13 27 36.7	+1.0

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*NEIC **02** 13:30:17.0±1.4, 30°.8S±0°.1×179°.8W±0°.1, h348^{km}±15^{km}, mb4.0/10, Error ellipse: s-maj=20.4km s-min=15.7km az=145.0*
*IDC **02** 13:30:17.6±1.2, 30°.66S×179°.87W, h357^{km}±14^{km}, mb3.7/4, mbtmp4.7/9, Error ellipse: s-maj=19.6km s-min=14.3km az=106.0*
ISC 02 13:30:16.4±0.6**, 30°.68S**±0°.06×**179°.8W**±0°.1**, h350**^{km}**, n103,**
σ1ˢ.70/105**, mb4.0**/10**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.17	50	P	Pn	13 31 11.8	+2.8
GLKZ				S	S	13 31 54.3	+3.1
RAO	Raoul Island	2.18	50	P	Pn	13 31 12.6	+3.5
	327nm,0.3s,baz=171,slow=19,SNR=3.3						
RAO				S	S	13 31 51.6	+0.3
	787nm,0.3s,baz=40,slow=23,SNR=8.5						
RAO	Raoul Island	2.18	50	Pn	Pn	13 31 09.8	+0.8
MXZ	Matakaoa Point	7.04	192		Pn	13 32 00.7	+1.5
MXZ	Matakaoa Point	7.04	192	P	Pn	13 32 00.7	+1.5
MXZ				S	S	13 33 21.2	-1.5
OUZ	Omahuta	7.15	229	P	Pn	13 32 07.4	+7.0
WCZ	Waipu Caves	7.17	221	P	Pn	13 32 08.2	+7.6
WSRZ	White Island S	7.26	199	P	Pn	13 32 06.7	+4.9
WSRZ				S	S	13 33 31.3	+3.8
WIZ	White Island	7.27	199	P	Pn	13 32 06.9	+5.1
WMGZ	Waiomatatini S	7.27	191	P	Pn	13 32 03.1	+1.3
HAZ	Te Kaha	7.33	195	P	Pn	13 32 02.8	+0.3
HAZ				S	S	13 33 29.9	+0.9
PKGZ	Pakihiroa	7.40	193	P	Pn	13 32 03.9	+0.5
PKGZ				S	S	13 33 31.5	+1.0
PUZ	Puketiti	7.55	192	P	Pn	13 32 05.4	+0.3
PUZ				S	S	13 33 32.8	-0.9
RUGZ	Raukumara Rang	7.56	195	P	Pn	13 32 06.0	+0.6
RUGZ				S	S	13 33 31.9	-2.1
ETAZ	East Tamaki Re	7.63	213	P	Pn	13 32 13.2	+7.1
WHRZ	Whale Island	7.64	199	P	Pn	13 32 12.0	+5.8
MKAZ	Moumakai	7.65	212	P	Pn	13 32 13.6	+7.3
TWGZ	Tauwhareparae	7.70	193	P	Pn	13 32 07.5	+0.6
TWGZ				S	S	13 33 37.3	+0.3
OPRZ	Ohinepanea	7.75	202	P	Pn	13 32 10.0	+2.5
MARZ	Manawahe	7.84	201	P	Pn	13 32 11.4	+2.8
MARZ				S	S	13 33 45.4	+5.3
EDRZ	Edgecumbe	7.94	200	P	Pn	13 32 14.7	+4.9
MWZ	Matawai	7.95	195	P	Pn	13 32 10.1	+0.2
MWZ				S	S	13 33 43.3	+1.0
LIRZ	Lichensteins R	7.95	202	P	Pn	13 32 16.7	+6.8
CNGZ	Carnagh Statio	7.96	191	P	Pn	13 32 10.4	+0.4
URZ	Urewera	7.98	198	P	Pn	13 32 09.9	-0.2
	122nm,0.3s,baz=347,slow=3.8,SNR=51						
URZ				S	S	13 33 42.9	+0.1
	166nm,0.4s,baz=338,slow=20,SNR=22						
URZ	Urewera	7.98	198	P	Pn	13 32 09.9	-0.2
URZ				S	S	13 33 41.7	-1.2
TKGZ	Te Karaka	7.98	193	P	Pn	13 32 10.0	-0.1
KARZ	Kaharoa	8.01	203	P	Pn	13 32 15.3	+4.7
MKRZ	Makatiti	8.05	201	P	Pn	13 32 17.3	+6.2
OMRZ	Omania	8.05	202	P	Pn	13 32 16.7	+5.6
NGRZ	Ngongotaha	8.11	203	P	Pn	13 32 18.1	+6.3
RAGZ	Rawiri	8.13	196	P	Pn	13 32 12.4	+0.4
TARZ	Mount Tarawera	8.13	201	P	P	13 32 15.3	+0.3
UTU	Utuhina	8.17	203	P	P	13 32 19.1	+3.7
HLRZ	Highlands Stat	8.19	202	P	P	13 32 16.6	+1.0
RRRZ	Republican Roa	8.22	201	P	P	13 32 16.0	+0.1
RIGZ	Rimuhau	8.25	193	P	Pn	13 32 12.9	-0.5
MUGZ	Murupara	8.27	199	P	Pn	13 32 14.0	+0.3
HSRZ	Hossack Road	8.28	202	P	P	13 32 17.9	+1.3
HRRZ	Handcock Road	8.34	202	P	P	13 32 17.9	+0.6
RTZ	Ruatahuna	8.35	198	Pn	Pn	13 32 14.0	-0.6
RTZ	Ruatahuna	8.35	198	P	Pn	13 32 14.1	-0.6
GRRZ	Galatos Road	8.36	203	P	P	13 32 17.1	-0.4
PRRZ	Plateau Road	8.40	201	P	P	13 32 17.1	-0.9
SNGZ	Shannon Statio	8.42	195	P	Pn	13 32 15.1	-0.3
ALRZ	Allen Road	8.48	201	P	P	13 32 17.9	-0.9
WPRZ	Whakapapatarin	8.49	202	P	P	13 32 19.7	+0.6
KNZ	Kokohu	8.58	193	P	Pn	13 32 16.3	-0.9
RAHZ	Arahi	8.60	196	P	Pn	13 32 17.2	-0.4
MTHZ	Maungataniwha	8.61	198	P	Pn	13 32 17.6	-0.1
MHGZ	Mahia Peninsul	8.66	192	P	P	13 32 18.8	-2.0
WHHZ	Waihua	8.72	195	P	Pn	13 32 18.6	-0.4
WATZ	Wairara	8.81	203	P	P	13 32 23.8	+1.3
NMHZ	Naumai	8.85	197	P	Pn	13 32 20.4	-0.1
ARHZ	Aropaoanui	8.96	196	P	Pn	13 32 21.0	-0.7
HIZ	Hauiti	8.96	208		P	13 32 25.8	+1.6
BKZ	Black Stump Fm	8.99	199	Pn	Pn	13 32 21.3	-1.0
BKZ	Black Stump Fm	8.99	199	P	Pn	13 32 21.2	-1.0
KATZ	Kakaramea	9.06	203	P	P	13 32 26.0	+0.5
MCHZ	McNeill Hill	9.20	197	P	Pn	13 32 24.2	-0.5
BFZ	Birch Farm	10.48	197	Pn	Pn	13 32 37.5	-2.5
MRZ	Mangatainoka R	10.64	199	Pn	Pn	13 32 38.9	-3.0
SNZO	South Karori	11.50	201	P	Pn	13 32 49.1	-2.9
BHW	Baring Head	11.54	200	P	Pn	13 32 51.6	-0.9
TCW	Tory Channel	11.54	203	P	Pn	13 32 48.7	-3.9
PLWZ	Palliser	11.57	199	P	Pn	13 32 49.7	-3.3
TUWZ	Tuamarina	11.85	203	P	Pn	13 32 52.5	-3.8
NNZ	Nelson	11.87	206	P	Pn	13 32 53.1	-3.3
TKNZ	Takaka Hill	11.87	208	P	Pn	13 32 53.8	-2.7
QRZ	Quartz Range	11.87	209	P	P	13 32 57.4	+0.9
CMWZ	Cape Campbell	12.05	202	P	Pn	13 32 59.2	+0.6
BSWZ	Blackbirch Sta	12.13	203	P	P	13 32 57.4	-1.9
MRNZ	Matariki Terra	12.26	207	P	P	13 32 59.7	-1.1
THZ	Tophouse	12.52	206	P	Pn	13 33 03.4	-0.8
KHZ	Kahutara	12.87	203	P	P	13 33 05.5	-2.0
DSZ	Denniston Nort	12.94	209	P	P	13 33 06.7	-1.7
MSVF	Nonsavu	13.03	351	P	P	13 33 10.5	+0.8
	12nm,0.5s,baz=144,slow=16,SNR=9.4						
GVZ	Greta Valley S	13.53	203	P	P	13 33 14.1	-0.7
LTZ	Lake Taylor	13.63	205	P	P	13 33 14.8	-1.1
AMCZ	Amberley	13.84	204	P	Pn	13 33 18.4	-1.2
INZ	Inchbonnie	13.90	208	P	P	13 33 18.8	-0.1
OXZ	Oxford	14.19	205	P	P	13 33 21.9	-0.1
MQZ	McQueen's Vall	14.31	203	P	P	13 33 22.9	-0.4
RPZ	Rata Peaks	14.89	207	P	P	13 33 29.7	-0.1
	10.0nm,0.6s,baz=42,slow=2.0,SNR=15						
RPZ				S	S	13 36 05.9	-4.1
	13nm,0.4s,baz=124,slow=20,SNR=13						
AFI	Afiamalu	18.26	26	P	P	13 34 06.3	0.0
	19nm,0.4s,baz=252,slow=3.2,SNR=8.2						
AFI				S	S	13 37 12.4	-4.6
	23nm,0.9s,baz=278,slow=10,SNR=2.4						
STKA	Stephens Creek	32.88	258	P	P	13 36 20.8	+1.8
	2.5nm,0.7s,baz=119,slow=8.1,SNR=4.1						
	2.5nm,0.7s						
BBOO	Buckleboo	37.38	255	P	P	13 36 58.0	+1.0
BBOO				IAmb	IAmb	13 36 59.5	
	comp=Z,11nm,1.1s						
ASAR	Alice Springs	41.52	268	P	P	13 37 31.0	-0.1
	comp=Z,0.8nm,0.4s,baz=106,slow=7.4,SNR=19						
	comp=Z,0.8nm,0.4s						
WR0	Warramunga Arr	42.36	274	P	P	13 37 37.8	+0.1
WR0				IAmb	IAmb	13 37 39.3	
	comp=Z,3.7nm,0.5s						
WB2	Warramunga Arr	42.53	273	P	P	13 37 39.2	+0.1
WRAB	Tennant Creek	42.53	273	P	P	13 37 39.1	0.0
WRAB				IAmb	IAmb	13 37 40.6	
	comp=Z,4.1nm,0.5s						
WRA	Warramunga Arr	42.54	273	P	P	13 37 39.1	0.0
	comp=Z,3.8nm,0.4s,baz=112,slow=7.5,SNR=67						
	comp=Z,3.8nm,0.4s						
WRA	Warramunga Arr	42.54	273	P	P	13 37 37.9	-1.3
WB0	Warramunga Arr	42.56	274	P	P	13 37 39.3	-0.1
WB0				IAmb	IAmb	13 37 41.1	
	comp=Z,8.4nm,1.0s						
KNRA	Kununurra	49.16	276	P	P	13 38 29.0	-1.4
KNRA				IAmb	IAmb	13 38 46.6	
	comp=Z,9.3nm,1.1s						
MORW	Morawa	54.94	254	P	P	13 39 11.3	-1.1
QSPA	South Pole Qui	59.43	180	P	P	13 39 44.6	+1.5
	comp=Z,6.8nm,0.6s,baz=30,slow=0.9,SNR=52						
	comp=Z,6.8nm,0.6s						
QSPA	South Pole Qui	59.43	180	P	P	13 39 43.4	+0.3
SNAA	Sanae	77.92	179	P	P	13 41 36.1	+0.1
SNAA				IAmb	IAmb	13 41 45.0	
	comp=Z,4.2nm,1.1s						
FINES	FINESS Array B	144.84	339	PKP	PKPdf	13 49 10.1	-1.2
	comp=Z,4.1nm,0.7s,baz=63,slow=4.1,SNR=17						
NOA	NORSAR Array B	148.76	350	PKPbc	PKPbc	13 49 21.1	-1.2
	comp=Z,0.5nm,0.6s,baz=16,slow=4.2,SNR=2.1						
CLL	Collm	157.29	339	*e*PKPab	PKPab	13 50 05.0	+1.4
TORD	Torodi Ar. Bea	162.50	185	PKPab	PKPab	13 50 26.5	-0.7
	comp=Z,0.3nm,0.6s,baz=169,slow=4.3,SNR=4.9						

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*DDA **02** 13:44:11.8±0.0, 37°.58N×38°.50E, h7^{km}±2^{km}, MW3.8*
*ISK **02** 13:44:13.0, 37°.54N×38°.48E, h21^{km}, ML3.9/15*
ISC 02 13:44:12.4±0.9**, 37°.57N**±0°.02×**38°.50E**±0°.02**, h11**^{km}±7^{km}**,**
n44, σ0ˢ.66/72**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	Bozova	0.19	239	SPECP		13 44 16.0	
ATAB				P	Pg	13 44 16.5	0.0
ATAB				*i* AML	AML	13 44 19.0	
	comp=E,3µm,0.2s						
ATAB				S	Sg	13 44 19.6	+0.3
ATAB				*i* AML	AML	13 44 20.0	
	comp=N,1µm,0.2s						
URFA	Urfa	0.29	115	Pg	Pb	13 44 20.5	+0.9
URFA				Sg	Sb	13 44 24.9	+0.5
HANM	anlurfa/Hi	0.30	87	SPECP		13 44 18.0	
HANM				P	Pg	13 44 18.0	-0.5
HANM				*i* AML	AML	13 44 22.0	
	comp=N,2µm,0.2s						
HANM				*i* AML	AML	13 44 22.0	
	comp=E,6µm,0.3s						
HANM				S	Sg	13 44 22.0	-0.7
SANL	SANLIURFA_Merk	0.56	135	SPECP		13 44 23.0	
SANL				P	Pg	13 44 23.1	-0.1
SANL				S	Sg	13 44 30.2	-0.3
SANL				*i* AML	AML	13 44 34.0	
	comp=N,7µm,0.4s						
SANL				*i* AML	AML	13 44 36.0	
	comp=E,9µm,0.7s						
AKCA	Adyaman/G¶l	0.68	290	SPECP		13 44 25.0	
AKCA				P	Pg	13 44 25.2	-0.4
AKCA				S	Sg	13 44 34.9	+0.3
AKCA				*i* AML	AML	13 44 39.0	
	comp=N,8µm,0.5s						
AKCA				*i* AML	AML	13 44 40.0	
	comp=E,5µm,0.3s						
SURC	SANLIURFA_SURC	0.69	172	SPECP	Pb	13 44 26.0	-0.4
SURC				P	Pb	13 44 26.0	-0.4
SURC				S	Sb	13 44 35.6	-0.4

SURC				*i* AML	AML	13 44 39.0	
	comp=E,2µm,0.3s						
SURC				*i* AML	AML	13 44 39.0	
	comp=N,2µm,0.2s						
MAYA	**Malatya/Merkez**	0.76	356	SPECP		13 44 26.0	
MAYA				P	Pg	13 44 26.2	-0.9
MAYA				S	Sb	13 44 39.2	+1.0
MAYA				*i* AML	AML	13 44 42.0	
	comp=E,1µm,0.3s						
GZT	**Gaziantep**	0.77	255	SPECP		13 44 27.0	
GZT				P	Pg	13 44 27.4	+0.1
GZT				S	Sn	13 44 40.3	-0.7
GZT				*i* AML	AML	13 44 41.0	
	comp=N,8µm,0.3s						
GZT				*i* AML	AML	13 44 41.0	
	comp=E,4µm,0.4s						
NZIP	**Nizip/Gaziante**	0.84	232	SPECP		13 44 28.0	
NZIP				P	Pb	13 44 28.6	-0.4
NZIP				S	Sn	13 44 41.6	-1.0
NZIP				*i* AML	AML	13 44 43.0	
	comp=N,7µm,0.4s						
NZIP				*i* AML	AML	13 44 43.0	
	comp=E,7µm,0.7s						
ELZG	**Elazig**	1.01	22	SPECP		13 44 30.0	
ELZG				P	Pb	13 44 30.9	-1.0
ELZG				S	Sb	13 44 44.7	-0.6
ELZG				*i* AML	AML	13 44 49.0	
	comp=E,2µm,0.8s						
ELZG				*i* AML	AML	13 44 50.0	
	comp=N,2µm,0.5s						
GAZ	**Gaziantep**	1.10	249	Pg	Pg	13 44 33.4	-0.1
GAZ				Sg	Sn	13 44 48.2	-0.7
KAHM	**Kahramanmaras,**	1.20	268	SPECP		13 44 34.0	
KAHM				P	Pn	13 44 34.5	-0.7
KAHM				S	Sn	13 44 50.6	-0.9
KAHM				*i* AML	AML	13 44 53.0	
	comp=N,867nm,0.3s						
KAHM				*i* AML	AML	13 44 56.0	
	comp=E,700nm,0.4s						
DARE	**Darende-Malaty**	1.28	322	Pn	Pb	13 44 36.7	+0.1
DARE				Sn	Sg	13 44 53.8	0.0
ELBS	**KAHRAMANMARAS**	1.32	306	SPECP		13 44 36.0	
ELBS				P	Pb	13 44 37.0	-0.3
ELBS				S	Sg	13 44 55.4	+0.5
ELBS				*i* AML	AML	13 44 58.0	
	comp=E,2µm,0.4s						
ELBS				*i* AML	AML	13 44 59.0	
	comp=N,1µm,0.6s						
DYBB	**Diyarbakir**	1.36	73	Pn	Pn	13 44 37.2	-0.1
DYBB				Sn	Sg	13 44 56.0	-0.1
HEKM	**Malatya_Hekimh**	1.38	342	SPECP		13 44 37.0	
HEKM				P	Pn	13 44 37.6	-0.1
HEKM				S	Sb	13 44 56.4	+0.4
HEKM				*i* AML	AML	13 45 00.0	
	comp=N,1µm,0.3s						
HEKM				*i* AML	AML	13 45 02.0	
	comp=E,2µm,0.6s						
KUZU	**Kuzuini**	1.38	236	SPECP		13 44 38.0	
KUZU				P	Pg	13 44 39.0	0.0
KUZU				S	Sg	13 44 57.8	+0.9
KUZU				*i* AML	AML	13 44 58.0	
	comp=N,6µm,0.3s						
KUZU				*i* AML	AML	13 44 58.0	
	comp=E,5µm,0.3s						
KAMA	**Osmaniye**	1.50	256	SPECP		13 44 38.0	
KAMA				P	Pn	13 44 38.7	-0.7
KAMA				S	Sb	13 44 59.0	-0.5
KAMA				*i* AML	AML	13 45 02.0	
	comp=N,626nm,0.4s						
KAMA				*i* AML	AML	13 45 04.0	
	comp=E,558nm,0.8s						
CUGUR	**Gurin_SVAS**	1.51	321	P	Pg	13 44 41.2	-0.1
CUGUR				S	Sg	13 45 01.9	+1.0
CUGUR				*i* AML	AML	13 45 05.0	
	comp=E,3µm,0.6s						
CUGUR				*i* AML	AML	13 45 06.0	
	comp=N,3µm,0.5s						
ARPR	**Arapgir-MALATY**	1.53	355	Pn	Pn	13 44 39.7	-0.1
ARPR				Sn	Sb	13 45 00.2	-0.1
KOVA	**Elazig, Kovanc**	1.54	42	P	Pb	13 44 40.4	-0.6
KOVA				S	Sn	13 45 00.0	+0.1
KOVA				*i* AML	AML	13 45 02.0	
	comp=N,322nm,0.4s						
KOVA				*i* AML	AML	13 45 03.0	
	comp=E,687nm,0.8s						
KEMA	**Kemaliye**	1.70	360	SPECP		13 44 42.0	
KEMA				P	Pn	13 44 42.6	+0.5
KEMA				S	Sg	13 45 06.5	-0.6
KEMA				*i* AML	AML	13 45 08.0	
	comp=E,746nm,0.5s						
KEMA				*i* AML	AML	13 45 10.0	
	comp=N,590nm,0.4s						
ANDN	**Andirin**	1.71	271	SPECP		13 44 41.0	
ANDN				P	Pn	13 44 41.7	-0.5
ANDN				S	Sb	13 45 04.7	-0.7
ANDN				*i* AML	AML	13 45 14.0	
	comp=N,1µm,0.5s						
ANDN				*i* AML	AML	13 45 16.0	
	comp=E,798nm,0.3s						
HANI	**Diyarbakir_Han**	1.73	60	SPECP		13 44 42.0	
HANI				P	Pn	13 44 42.8	+0.4
HANI				S	Sb	13 45 05.9	0.0
HANI				*i* AML	AML	13 45 11.0	
	comp=N,888nm,0.4s						
HANI				*i* AML	AML	13 45 12.0	
	comp=E,1µm,0.6s						
TNCL	**Tunceli-Merkez**	1.75	28	SPECP		13 44 44.0	
TNCL				P	Pb	13 44 45.0	+0.3
TNCL				*i* AML	AML	13 45 12.0	
	comp=N,327nm,0.6s						
TNCL				*i* AML	AML	13 45 12.0	
	comp=E,586nm,0.7s						
SARI	**SarD1z-Kayseri**	1.84	298	Pn	Pn	13 44 44.7	+0.6
SARI				Sn	Sn	13 45 07.3	-0.3
CUKAN	**kangal_SIVAS**	1.93	335	P	Pb	13 44 47.1	-0.5
CUKAN				*i* AML	AML	13 45 17.0	
	comp=N,260nm,0.6s						
CUKAN				*i* AML	AML	13 45 21.0	
	comp=E,241nm,0.4s						
SAIM	**ADANA**	1.96	283	SPECP		13 44 45.0	
SAIM				P	Pn	13 44 45.7	+0.1
SAIM				S	Sb	13 45 13.7	+1.1
SAIM				*i* AML	AML	13 45 18.0	
	comp=E,827nm,0.3s						
SAIM				*i* AML	AML	13 45 21.0	
	comp=N,1µm,0.5s						
RHAN	**Hatay/Reyhanl**	2.00	230	SPECP		13 44 49.0	
RHAN				P	Pb	13 44 49.2	+0.4
RHAN				S	Sb	13 45 14.6	+0.9
RHAN				*i* AML	AML	13 45 19.0	
	comp=N,1µm,0.4s						
RHAN				*i* AML	AML	13 45 21.0	
	comp=E,737nm,0.4s						
KOZT	**Kozan**	2.12	269	Pn	Pn	13 44 47.3	-0.5
CUAYA	**Sivas-Altinyay**	2.19	322	P	Pn	13 44 50.1	+1.4
CUAYA				*i* AML	AML	13 45 26.0	
	comp=E,375nm,0.7s						
CUAYA				*i* AML	AML	13 45 29.0	
	comp=N,306nm,0.9s						
BNGB	**Bingl**	2.23	50	Pn	Pn	13 44 49.7	+0.3
ERZN	**Erzincan**	2.24	25	Pn	Pn	13 44 50.4	+0.9
CEYT	**Ceyhan**	2.26	257	Pn	Pn	13 44 50.1	+0.4
MIDY	**Mardin/Midyat-**	2.31	93	SPECP		13 44 50.0	
MIDY				P	Pn	13 44 50.9	+0.4
MIDY				S	Sb	13 45 22.8	0.0
MIDY				*i* AML	AML	13 45 27.0	
	comp=N,1µm,0.6s						
MIDY				*i* AML	AML	13 45 31.0	
	comp=E,1µm,0.3s						
YURE	**YUREGIR**	2.40	253	SPECP		13 44 52.0	
YURE				P	Pn	13 44 52.3	+0.6
AKO	**Adana**	2.43	268	SPECP		13 44 51.0	
AKO				P	Pn	13 44 51.3	-0.7
BNN	**Bunyan**	2.45	302	Pn	Pn	13 44 53.1	+0.7
YEDI	**Yedisu-Bingol**	2.46	40	Pn	Pn	13 44 53.7	+1.0
SVSK	**Karacayir**	2.62	334	Pn	Pn	13 44 55.8	+1.1
KARA	**Karaisali**	2.76	265	Pn	Pn	13 44 57.1	+0.6
VRTB	**Varto-Mus**	2.82	55	Pn	Pn	13 44 58.9	+1.4
GURO	**Guroymak-BITLI**	2.96	69	Pn	Pn	13 45 00.6	+1.2
BAYT	**Aydıntepe-Bayb**	3.10	24	Pn	Pn	13 45 02.8	+1.4

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*DDA **02** 13:47:13.7±0.0, 37°.58N×38°.50E, h12^{km}±2^{km}, MW3.6*

*ISK **02** 13:47:15.3, 37°.50N×38°.50E, h24^{km}, ML3.6/17*

ISC 02 13:47:12.4±0.8**, 37°.60N**±0°.03×**38°.55E**±0°.02**, h9**^{km}**, n33, σ1§28**/50**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HANM	**anlurfa/Hi**	0.26	93	SPECP		13 47 20.0	
HANM				P	Pb	13 47 20.1	+0.7
HANM				S	Sb	13 47 24.5	+0.4
URFA	**Urfa**	0.27	125	Pg	Pn	13 47 22.5	-0.1
URFA				Sg	Sb	13 47 26.7	+2.6
SANL	**SANLIURFA_Merk**	0.55	140	SPECP		13 47 25.0	
SANL				P	Pn	13 47 25.3	-1.2
SANL				S	Sb	13 47 32.8	+0.5
AKCA	**Adyaman/G¶l**	0.71	286	SPECP		13 47 27.0	
AKCA				P	Pb	13 47 27.4	+0.3
AKCA				S	Sb	13 47 37.2	+0.2
SURC	**SANLIURFA_SURC**	0.72	176	SPECP		13 47 28.0	
SURC				P	Pn	13 47 28.1	-0.7
SURC				S	Sb	13 47 37.9	+0.9
MAYA	**Malatya/Merkez**	0.73	352	SPECP		13 47 28.0	
MAYA				P	Pn	13 47 28.2	-0.9
MAYA				S	Sn	13 47 38.6	-1.9
GZT	**Gaziantep**	0.82	253	SPECP		13 47 29.0	
GZT				P	Pn	13 47 29.4	-0.9
GZT				S	Sb	13 47 40.1	-0.1
NZIP	**Nizip/Gaziante**	0.89	232	SPECP		13 47 30.0	
NZIP				P	Pn	13 47 31.0	-0.2
NZIP				S	Sb	13 47 42.3	+0.3
GAZ	**Gaziantep**	1.15	249	Pn	Pn	13 47 35.5	+0.8
GAZ				Sn	Sn	13 47 50.2	-0.4
KAHM	**Kahramanmaras,**	1.24	267	SPECP		13 47 36.0	
KAHM				P	Pg	13 47 36.6	+0.3
KAHM				S	Sn	13 47 53.0	0.0
DARE	**Darende-Malaty**	1.29	320	Pn	Pg	13 47 39.2	+2.1
DARE				Sn	Sn	13 47 56.6	+2.5
DYBB	**Diyarbakir**	1.31	74	Pn	Pg	13 47 39.2	+1.6
HCB	**Kahramanmara**	1.33	260	SPECP		13 47 37.0	
HCB				P	Pg	13 47 37.4	-0.6
HCB				S	Sb	13 47 54.1	-0.6
ELBS	**KAHRAMANMARAS**	1.33	303	SPECP		13 47 38.0	
ELBS				P	Pg	13 47 38.5	+0.4
ELBS				S	Sg	13 47 56.7	+1.3
KOVA	**Elazig, Kovanc**	1.49	42	P	Pg	13 47 43.4	+2.3
ARPR	**Arapgir-MALATY**	1.50	354	Pn	Pg	13 47 42.8	+1.5
KAMA	**Osmaniye**	1.55	255	SPECP		13 47 40.0	
KAMA				P	Pb	13 47 40.8	-0.6
KAMA				S	Sb	13 48 01.4	+0.2
HANI	**Diyarbakir_Han**	1.68	60	SPECP		13 47 44.0	
HANI				P	Pg	13 47 44.5	-0.1
HANI				S	Sg	13 48 08.1	+1.8
SARI	**SarD1z-Kayseri**	1.87	296	Pn	Pb	13 47 45.9	-0.9
SAIM	**ADANA**	1.99	282	SPECP		13 47 48.0	
SAIM				P	Pb	13 47 48.1	-0.8
KOZT	**Kozan**	2.17	268	Pn	Pn	13 47 49.3	+0.6
SVAN	**Silvan-Diyarba**	2.17	74	Pn	Pb	13 47 50.8	-1.1
BNGB	**Bingl**	2.18	50	Pn	Pg	13 47 52.7	-1.5
ERZN	**Erzincan**	2.19	24	Pn	Pg	13 47 52.8	-1.6
MIDY	**Mardin/Midyat-**	2.27	94	SPECP		13 47 53.0	
MIDY				P	Pb	13 47 53.1	-0.6
MIDY				S	Sg	13 48 23.9	-1.7
CEYT	**Ceyhan**	2.31	256	Pn	Pb	13 47 52.1	-2.1
SLHN	**Bingol, Solhan**	2.38	54	SPECP		13 47 54.0	
SLHN				P	Pb	13 47 55.0	-0.5
SLHN				S	Sb	13 48 25.5	+0.6
YEDI	**Yedisu-Bingol**	2.42	40	Pn	Pb	13 47 55.8	-0.4
BNN	**Bunyan**	2.47	301	Pn	Pb	13 47 55.4	-1.7
SVSK	**Karacayir**	2.62	333	Pn	Pb	13 47 57.6	-1.9
KARA	**Karaisali**	2.80	264	Pn	Pn	13 47 59.4	+2.0
GURO	**Guroymak-BITLI**	2.91	70	Pn	Pb	13 48 02.6	-2.0
BAYT	**Aydıntepe-Bayb**	3.06	23	Pn	Pb	13 48 05.1	-2.0

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*MEX **02** 13:50:09.9±0.7, 14°.44N×92°.69W, h16^{km}±24^{km}, MD3.9*

*GCG **02** 13:50:13.9±0.3, 14°.92N×92°.32W, h41^{km}±15^{km}, MD4.0*

ISC 02 13:50:09.0±1.5**, 14°.60N**±0°.06×**92°.67W**±0°.04**, h25**^{km}±15^{km}**, n18, σ1§36**/29**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.50	52	*e*P	Pn	13 50 21.1	+0.6
THIG				*e*S	Sn	13 50 29.4	+1.0
PATR	**El Naranjo**	0.67	39	*e*P	Pb	13 50 22.8	+0.6
PATR				*e*S	Sn	13 50 32.9	+0.1
CHUJ	**Union Juarez**	0.74	48	*i* P	Pb	13 50 23.8	+0.4
CHUJ				*e*S	Sn	13 50 34.3	-0.3
PAVE	**Pavencul**	0.76	39	*i* P	Pb	13 50 24.2	+0.4
PAVE				*e*S	Sn	13 50 35.3	+0.1
STG3	**Santiaguito 3,**	1.07	84	*e*P	Pn	13 50 28.7	+0.1
STG3				*e*S	Sb	13 50 40.2	-2.5
SULM	**Suchitepequez,**	1.11	105	*e*P	Pb	13 50 30.7	+1.1
PCIG		1.22	335	*i* P	Pn	13 50 30.9	+0.5
PCIG				*e*S	Sn	13 50 46.2	+0.1
CCIG	**Comitan**	1.75	17	*e*P	Pn	13 50 39.4	+1.4
CCIG				*e*S	Sb	13 51 01.6	-0.7
FUG	**Fuego 3**	1.78	95	*e*P	Pn	13 50 39.0	+0.7
FUG				*e*S	Sn	13 50 58.6	-1.6
TGIG		2.21	349	*e*P	Pn	13 50 44.2	0.0
TGIG				*e*S	Sn	13 51 09.9	-0.8
NILT	**Santiago Nilte**	2.71	317	*i* P	Pn	13 50 51.4	+0.5
NILT				*e*S	Sn	13 51 23.9	+1.0
CMIG	**Matias Romero**	3.27	320	*e*P	Pn	13 50 58.5	-0.1
CMIG				*e*S	Sn	13 51 34.6	-2.1
HUIG	**Huatulco**	3.52	290	*e*P	Pn	13 51 00.3	-1.7
HUIG				*e*S	Sn	13 51 37.8	-5.0
PEIG	**Puerto Escondi**	4.54	288	*e*P	Pn	13 51 16.3	+0.2
PEIG				*e*S	Sn	13 52 03.7	-4.3
YOIG	**Yosondua**	5.20	296	*e*P	Pn	13 51 28.3	+2.8
YOIG				*e*S	Sn	13 52 21.6	-3.3
PNIG	**Pinotepa**	5.55	289	*e*P	Pn	13 51 31.4	+1.3
PNIG				*e*S	Sn	13 52 26.1	-7.1
TXIG	**Tlaxiaco**	5.57	299	*e*P	Pn	13 51 30.4	-0.1
TXIG				*e*S	Sn	13 52 28.7	-5.2
CRIG	**Cruz Grande**	6.57	290	*e*P	Pn	13 51 45.8	+1.7

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*IDC **02** 14:00:59.5±0.8, 39°.18N×73°.43E, h0^{km}, mb3.8/14, mbtmp3.7/21, ML2.7/3, MS2.6/1, Error ellipse: s-maj=15.5km s-min=14.3km az=126.0*

*MOS **02** 14:01:00.2±1.2, 39°.17N×73°.33E, h10^{km}, mb4.1/4, Error ellipse: s-maj=8.8km s-min=4.5km az=88.6*

*SOME **02** 14:01:02.5, 39°.48N×73°.38E, h5^{km}*

*KRNET **02** 14:01:03.2±0.1, 39°.40N×73°.18E, mb4.0*

*NNC **02** 14:01:05.7±2.3, 39°.48N×73°.60E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=15.4km s-min=5.1km az=1.0*

ISC 02 14:01:01.2±1.3**, 39°.26N**±0°.04×**73°.25E**±0°.03**, h4**^{km}±8^{km}**, n144, σ1§84**/190**, mb3.9**/18**, 30C-25D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	1.15	281	⇑*e*P	Pg	14 01 23.4	+0.3
	baz=75						
DRK				⇑*e*S	Sg	14 01 38.2	+0.2
	baz=75						
OHH	**Osh**	1.31	344	⇓*e*P	Pg	14 01 24.8	-1.5
	baz=45						
OHH				⇓*e*S	Sg	14 01 40.6	-2.7
	baz=45						
OHH	**Osh**	1.31	344	*e*PG	Pg	14 01 24.8	-1.5
KSH	**Kashi**	2.12	82	Pg	Pn	14 01 31.7	-6.0
KSH				Sg	Sn	14 01 57.5	-7.1
KSH				pmax	pmax		
	comp=Z,36nm,0.8s						
KSH				smax	smax		
	comp=N,580nm,0.8s						
KSH				smax	smax		
	comp=E,430nm,0.8s						
GAR	**Garm**	2.30	264	⇑*e*P	Pn	14 01 42.8	+2.8
	baz=61						
GAR				⇑*e*S	Sb	14 02 11.7	-0.4
	baz=61						
GAR	**Garm**	2.30	264	*e*PN	Pn	14 01 42.8	+2.8
GAR				*e*S	Sb	14 02 11.7	-0.4
ARK	**Arkit**	2.71	339	⇑*e*P	Pn	14 01 47.2	+1.4
	baz=39						
ARK				⇑*e*S	Sn	14 02 19.3	+0.1
	baz=39						
ARK	**Arkit**	2.71	339	*e*PN	Pn	14 01 47.2	+1.4
ARK				*e*S	Sn	14 02 19.3	+0.1
TRKS	**Terek-Say**	2.78	325	⇑*e*P	Pn	14 01 47.2	+0.5
	baz=24						
TRKS				⇑*e*S	Sn	14 02 19.3	-1.5
	baz=24						
TRKS	**Terek-Say**	2.78	325	*e*PN	Pn	14 01 47.2	+0.5
TRKS				*e*S	Sn	14 02 19.3	-1.5
AML	**Almayashu**	2.88	7	P	Pn	14 01 50.4	+2.0
	SNR=33						
AML	**Almayashu**	2.88	7	⇓Pn	Pn	14 01 50.0	+1.6
	comp=E,6.9nm,0.6s						
AML				⇑Sn	Sn	14 02 27.1	+3.4
	comp=E,47nm,0.7s						
AML	**Almayashu**	2.88	7	⇓*e*P	Pn	14 01 50.0	+1.6
	baz=8.0						
AML				⇓*e*S	Sn	14 02 24.1	+0.4
	baz=8.0						
AML	**Almayashu**	2.88	7	PN	Pn	14 01 49.9	+1.6
AML				SN	Sb	14 02 27.7	-1.6
UCH	**Uchtor**	3.11	18	P	Pn	14 01 53.0	+1.5
	SNR=83						
UCH	**Uchtor**	3.11	18	⇓*e*P	Pn	14 01 53.2	+1.7
	baz=19						
UCH				⇓*e*S	Sn	14 02 30.0	+0.6
	baz=19						
UCH	**Uchtor**	3.11	18	*e*PN	Pn	14 01 53.2	+1.7
UCH				*e*S	Sn	14 02 30.0	+0.6
CHGR	**Chuyangaron**	3.25	261	⇑*e*P	Pn	14 01 56.2	+3.1
	baz=58						
CHGR				⇑*e*S	Sn	14 02 34.8	+2.6
	baz=58						
CHGR	**Chuyangaron**	3.25	261	*e*PN	Pn	14 01 56.2	+3.1
CHGR				*e*S	Sn	14 02 34.8	+2.6
EKS2	**Erkin-Say**	3.42	7	P	Pn	14 01 58.3	+2.9
	SNR=12						
EKS2	**Erkin-Say**	3.42	7	⇓*e*P	Pn	14 01 57.2	+1.8
	baz=8.0						
EKS2				⇓*e*S	Sn	14 02 36.6	+0.1
	baz=8.0						
EKS2	**Erkin-Say**	3.42	7	*e*PN	Pn	14 01 57.2	+1.8
EKS2				*e*S	Sn	14 02 36.6	+0.1
MRKS	**Merke**	3.48	360	Pg	Pb	14 02 02.8	-0.6
	comp=E,45nm,0.5s						
MRKS				Lg	Lg	14 02 46.6	
	comp=E,82nm,0.6s						
MRKS	**Merke**	3.48	360	*e*Pg	Pb	14 02 02.8	-0.6
	comp=E,30nm,0.2s						
MRKS				*e*Lg	Lg	14 02 46.6	
	comp=E,82nm,0.2s						
AAK	**Ala-Archa**	3.50	15	P	Pn	14 01 59.0	+2.4
	SNR=51						
AAK	**Ala-Archa**	3.50	15	Pn	Pn	14 01 58.6	+2.0
	comp=E,24nm,0.4s,baz=179,slow=8.9,SNR=128						
AAK				Sn	Sn	14 02 42.8	+4.3
	comp=E,4.5nm,0.3s,baz=342,slow=19,SNR=15						
AAK	**Ala-Archa**	3.50	15	⇑*e*P	Pn	14 01 58.4	+1.8
	baz=17						
AAK				⇑*e*S	Sn	14 02 38.8	+0.2
	baz=17						
KBK	**Karagaybulak**	3.62	20	P	Pn	14 02 00.6	+2.3
	SNR=12						
KBK	**Karagaybulak**	3.62	20	⇓*e*P	Pn	14 02 00.3	+2.0
	baz=22						
KBK				⇓*e*S	Sn	14 02 42.0	+0.3
	baz=22						
KBK	**Karagaybulak**	3.62	20	*e*PN	Pn	14 02 00.3	+2.0
KBK				*e*S	Sn	14 02 42.0	+0.3
TAS	**Tashkent**	3.66	306	⇓*e*P	Pn	14 02 00.5	+1.9
	baz=4.0						
TAS				⇓*e*S	Sn	14 02 42.4	+0.1
	baz=4.0						
TAS	**Tashkent**	3.66	306	*e*PN	Pn	14 02 00.5	+1.9
TAS				*e*S	Sn	14 02 42.4	+0.1
FRU1	**Bishkek**	3.69	16	⇓*e*P	Pn	14 02 01.2	+2.0
	baz=17						
FRU1				⇓*e*S	Sn	14 02 43.6	+0.4
	baz=17						
FRU1	**Bishkek**	3.69	16	*e*PN	Pn	14 02 01.2	+2.0
FRU1				*e*S	Sn	14 02 43.6	+0.4
ULHL	**Ulahol**	3.75	36	⇓*e*P	Pn	14 02 02.4	+2.4
	baz=38						
ULHL				⇓*e*S	Sn	14 02 45.8	+1.1
	baz=38						
ULHL	**Ulahol**	3.75	36	*e*PN	Pn	14 02 02.4	+2.4
ULHL				*e*S	Sn	14 02 45.8	+1.1
IUG	**Iuzhnay**	3.78	321	*e*Pg	Pg	14 02 12.3	-1.3
	comp=E,168nm,0.3s						
IUG				*e*Lg	Lg	14 03 02.6	
	comp=E,153nm,0.5s						
BOOM	**Boomskoye usch**	3.81	31	⇓*i*P	Pn	14 02 03.4	+2.5
	baz=33						
BOOM				⇓*i*S	Sn	14 02 47.1	+0.8
	baz=33						
CHMS	**Chumysh**	3.90	16	P	Pn	14 02 04.0	+2.1
	SNR=15						
CHMS	**Chumysh**	3.90	16	⇑*e*P	Pn	14 02 03.8	+1.8
	baz=18						
CHMS				⇑*e*S	Sn	14 02 48.2	-0.1
	baz=18						
CHMS	**Chumysh**	3.90	16	*e*PN	Pn	14 02 03.8	+1.8
CHMS				*e*S	Sn	14 02 48.2	-0.1
TKM2	**Tokmak 2**	4.06	25	P	Pn	14 02 06.4	+2.0
	SNR=27						
TKM2	**Tokmak 2**	4.06	25	⇓P	Pn	14 02 06.1	+1.7
	comp=E,38nm,1.0s						
TKM2				⇓S	Sb	14 03 06.6	+3.6
	comp=E,76nm,0.8s						
TKM2	**Tokmak 2**	4.06	25	⇑*e*P	Pn	14 02 06.3	+2.0
	baz=27						
TKM2				⇑*e*S	Sn	14 02 52.7	+0.2
	baz=27						
TKM2	**Tokmak 2**	4.06	25	PN	Pn	14 02 06.7	+2.3
TKM2				S	Sb	14 03 06.6	+3.6
USP	**Ospenovka**	4.11	13	P	Pn	14 02 07.7	+2.8
	SNR=14						
USP	**Ospenovka**	4.11	13	⇑*e*P	Pn	14 02 06.7	+1.8
	baz=14						
USP				⇑*e*S	Sn	14 02 53.3	-0.1
	baz=14						
USP	**Ospenovka**	4.11	13	*e*PN	Pn	14 02 06.7	+1.8
USP				*e*S	Sn	14 02 53.3	-0.1
KDJ	**Kajisay**	4.14	45	⇑*e*P	Pn	14 02 08.2	+2.8
	baz=47						
KDJ				⇑*e*S	Sn	14 02 55.8	+1.5
	baz=47						
KDJ	**Kajisay**	4.14	45	*e*PN	Pn	14 02 08.2	+2.8
KDJ				*e*S	Sn	14 02 55.8	+1.5
KST	**Kastek**	4.29	28	Pg	Pb	14 02 18.5	+1.1
	comp=E,23nm,0.9s						
KST				Lg	Lg	14 03 12.7	
	comp=E,62nm,0.9s						
KST	**Kastek**	4.29	28	*e*Pg	Pb	14 02 18.5	+1.1
	comp=E,8.1nm,0.3s						
KST				*e*Lg	Lg	14 03 12.7	
	comp=E,115nm,0.4s						
SGDS	**Sogindy**	4.31	13	Pg	Pb	14 02 17.1	-0.5
	comp=E,9.4nm,1.0s						
SGDS				Lg	Lg	14 03 10.8	
	comp=E,32nm,1.4s						
KK31	**Karatay Array**	4.36	333	Pn	Pn	14 02 10.4	+2.2
	comp=E,2.4nm,0.3s,baz=141,slow=12,SNR=51						
KK31				Pg	Pb	14 02 20.9	+2.5
	comp=E,41nm,0.9s,baz=152,slow=16,SNR=24						
KK31				⇓Sn	Sn	14 03 04.3	+4.8
	comp=E,18nm,0.5s,baz=164,slow=30,SNR=6.9						
KK31				⇑Lg	Lg	14 03 18.8	
	comp=E,41nm,0.6s						
KK31	**Karatay Array**	4.36	333	PN	Pn	14 02 10.5	+2.2
KK31				PG	Pb	14 02 20.9	+2.5
KK31				SN	Sn	14 03 04.3	+4.8
KK31				LG	Lg	14 03 18.8	
KKAR	**Karatay Array**	4.36	333	⇓*e*P	Pn	14 02 09.9	+1.7
	baz=32						
KKAR				⇓*e*S	Sn	14 02 58.5	-1.0
	baz=32						
KKAR	**Karatay Array**	4.36	333	*e*PN	Pn	14 02 09.9	+1.7
DGS	**Degeres**	4.41	25	Pg	Pb	14 02 21.0	+1.8
	comp=E,17nm,0.8s						
DGS				Lg	Lg	14 03 17.5	
	comp=E,43nm,0.7s						
DGS	**Degeres**	4.41	25	*e*Pg	Pb	14 02 21.0	+1.8
	comp=E,17nm,0.5s						
DGS				*e*Lg	Lg	14 03 17.5	
	comp=E,69nm,0.4s						
IZV	**Izvestkoviy**	4.54	33	Pg	Pb	14 02 22.8	+1.2
	comp=E,4.3nm,0.5s						
IZV				Lg	Lg	14 03 20.4	
	comp=E,46nm,0.7s						
IZV	**Izvestkoviy**	4.54	33	*e*Pg	Pb	14 02 23.1	+1.4

	comp=E,3.0nm,0.2s						
IZV				*e*Lg	Lg	14 03 20.4	
	comp=E,46nm,0.4s						
MTBS	**Maitube**	**4.55**	**31**	Pg	**Pb**	**14 02 23.0**	**+1.4**
	comp=E,12nm,0.7s						
MTBS				Lg	Lg	14 03 20.6	
	comp=E,24nm,0.6s						
MTBS	**Maitube**	**4.55**	**31**	*e*Pg	**Pb**	**14 02 23.0**	**+1.4**
	comp=E,12nm,0.3s						
MTBS				*e*Lg	Lg	14 03 20.6	
	comp=E,39nm,0.4s						
TNSS	**Tian-Shan**	**4.69**	**35**	Pg	**Pb**	**14 02 26.2**	**+2.0**
	comp=E,5.0nm,1.0s						
TNSS				Lg	Lg	14 03 26.3	
	comp=E,44nm,0.8s						
TNSS	**Tian-Shan**	**4.69**	**35**	*e*Pg	**Pb**	**14 02 26.2**	**+2.0**
	comp=E,8.2nm,0.2s						
TNSS				*e*Lg	Lg	14 03 26.3	
	comp=E,45nm,0.3s						
KRBS	**Karabastau**	**4.79**	**22**	Pg	**Pb**	**14 02 27.0**	**+1.3**
	comp=E,23nm,0.5s						
KRBS				Lg	Lg	14 03 28.0	
	comp=E,56nm,0.9s						
KRBS	**Karabastau**	**4.79**	**22**	*e*Pg	**Pb**	**14 02 27.0**	**+1.3**
	comp=E,23nm,0.2s						
KRBS				*e*Lg	Lg	14 03 28.0	
	comp=E,67nm,0.5s						
MDOK	**Medeo**	**4.83**	**35**	Pg	Pn	14 02 22.0	+7.1
	comp=E,36nm,1.2s						
MDOK				Pg	**Pb**	**14 02 27.7**	**+1.1**
	comp=E,10.0nm,0.9s						
MDOK				⇑Lg	Lg	14 03 28.5	
	comp=E,90nm,1.4s						
MDOK				Lg	Lg	14 03 29.0	
	comp=E,27nm,2.4s						
MDOK	**Medeo**	**4.83**	**35**	*e*Pg	**Pb**	**14 02 27.7**	**+1.1**
	comp=E,7.2nm,0.2s						
MDOK				*e*Lg	Lg	14 03 29.0	
	comp=E,38nm,0.4s						
MDOK	**Medeo**	**4.83**	**35**	PN	Pn	14 02 22.2	+7.3
MDOK				LG	Lg	14 03 28.5	
ANVS	**Anan'yevo**	**4.85**	**42**	⇑*i*P	**Pn**	**14 02 18.3**	**+3.1**
	baz=44						
ANVS				⇑*i*S	**Sn**	**14 03 12.6**	**+0.7**
	baz=44						
KOTS	**Kotyrbulak**	**4.92**	**35**	Pg	**Pb**	**14 02 30.2**	**+2.2**
	comp=E,12nm,0.8s						
KOTS				Lg	Lg	14 03 33.1	
	comp=E,106nm,0.9s						
KOTS	**Kotyrbulak**	**4.92**	**35**	*e*Pg	**Pb**	**14 02 30.2**	**+2.2**
	comp=E,12nm,0.8s						
KOTS				*e*Lg	Lg	14 03 33.1	
	comp=E,106nm,0.9s						
KTBS	**Karatobe**	**5.14**	**29**	Pg	**Pb**	**14 02 33.0**	**+1.4**
	comp=E,5.9nm,0.9s						
KTBS				Lg	Lg	14 03 38.6	
	comp=E,92nm,0.8s						
KTBS	**Karatobe**	**5.14**	**29**	*e*Pg	**Pb**	**14 02 33.0**	**+1.4**
	comp=E,6.1nm,0.2s						
KTBS				*e*Lg	Lg	14 03 38.6	
	comp=E,39nm,0.4s						
KUU	**Kurty**	**5.17**	**26**	Pg	**Pb**	**14 02 33.8**	**+1.6**
	comp=E,10nm,0.6s						
KUU				Lg	Lg	14 03 39.7	
	comp=E,20nm,0.8s						
KUU	**Kurty**	**5.17**	**26**	*e*Pg	**Pb**	**14 02 33.8**	**+1.6**
	comp=E,10nm,0.3s						
KUU				*e*Lg	Lg	14 03 39.7	
	comp=E,36nm,0.3s						
CHKK	**Chushkaly**	**5.38**	**30**	Pg	**Pb**	**14 02 37.5**	**+1.8**
	comp=E,6.7nm,0.9s						
CHKK				Lg	Lg	14 03 45.8	
	comp=E,35nm,0.6s						
CHKK	**Chushkaly**	**5.38**	**30**	*e*Pg	**Pb**	**14 02 37.5**	**+1.8**
	comp=E,6.6nm,0.4s						
CHKK				*e*Lg	Lg	14 03 45.8	
	comp=E,46nm,0.3s						
SATY	**Saty**	**5.43**	**44**	Pg	**Pb**	**14 02 38.2**	**+1.5**
	comp=E,15nm,1.1s						
SATY				Lg	Lg	14 03 46.9	
	comp=E,29nm,2.1s						
SATY	**Saty**	**5.43**	**44**	*e*Pg	**Pb**	**14 02 38.2**	**+1.5**
	comp=E,15nm,0.4s						
SATY				*e*Lg	Lg	14 03 46.9	
	comp=E,40nm,0.4s						
ZHN	**Zhinishke**	**5.52**	**43**	Pg	**Pb**	**14 02 39.4**	**+1.1**
	comp=E,9.6nm,0.5s						
ZHN				Lg	Lg	14 03 48.5	
	comp=E,14nm,1.4s						
ZHN	**Zhinishke**	**5.52**	**43**	*e*Pg	**Pb**	**14 02 39.4**	**+1.1**
	comp=E,9.6nm,0.1s						
ZHN				*e*Lg	Lg	14 03 48.5	
	comp=E,12nm,0.4s						
KURS	**Kuram**	**5.61**	**40**	Pg	**Pb**	**14 02 42.9**	**+3.1**
	comp=E,8.1nm,1.1s						
KURS				Lg	Lg	14 03 55.4	
	comp=E,22nm,2.2s						
KURS	**Kuram**	**5.61**	**40**	*e*Pg	**Pb**	**14 02 42.9**	**+3.1**
	comp=E,8.6nm,0.4s						
KURS				*e*Lg	Lg	14 03 55.4	
	comp=E,24nm,0.8s						
BTLS	**Baital**	**5.80**	**6**	Pg	**Pb**	**14 02 45.9**	**+3.0**
	comp=E,4.7nm,0.8s						
BTLS				Lg	Lg	14 04 00.3	
	comp=E,14nm,0.8s						
BTLS	**Baital**	**5.80**	**6**	*e*Pg	**Pb**	**14 02 45.9**	**+3.0**
	comp=E,3.5nm,0.3s						
BTLS				*e*Lg	Lg	14 04 00.3	
	comp=E,14nm,0.8s						
UZB	**Uzynbulak**	**5.83**	**46**	Pg	**Pb**	**14 02 46.1**	**+2.5**
	comp=E,4.7nm,0.6s						
UZB				Lg	Lg	14 03 60.0	
	comp=E,20nm,1.0s						
UZB	**Uzynbulak**	**5.83**	**46**	*e*Pg	**Pb**	**14 02 46.1**	**+2.5**
	comp=E,4.6nm,0.2s						
UZB				*e*Lg	Lg	14 03 60.0	
	comp=E,13nm,0.4s						
KPKS	**Kokpek**	**5.86**	**42**	Pg	**Pb**	**14 02 46.2**	**+2.2**
	comp=E,12nm,1.6s						
KPKS				Lg	Lg	14 04 00.8	
	comp=E,20nm,0.9s						
KPKS	**Kokpek**	**5.86**	**42**	*e*Pg	**Pb**	**14 02 46.2**	**+2.2**
	comp=E,8.7nm,0.3s						
KPKS				*e*Lg	Lg	14 04 00.8	
	comp=E,18nm,0.3s						
ARXS	**Arharly**	**6.01**	**33**	Pg	**Pb**	**14 02 48.8**	**+2.2**
	comp=E,8.7nm,0.9s						
ARXS				Lg	Lg	14 04 05.8	
	comp=E,33nm,0.9s						
ARXS	**Arharly**	**6.01**	**33**	*e*Pg	**Pb**	**14 02 48.8**	**+2.2**
	comp=E,8.7nm,0.9s						
ARXS				*e*Lg	Lg	14 04 05.8	
	comp=E,4.0nm,0.1s						
SHLS	**Shalkode**	**6.09**	**48**	Pg	**Pg**	**14 02 57.2**	**-0.6**
	comp=E,6.3nm,0.7s						
SHLS				Lg	Lg	14 04 19.6	
	comp=E,25nm,0.8s						
SHLS	**Shalkode**	**6.09**	**48**	*e*Pg	**Pg**	**14 02 57.2**	**-0.6**
	comp=E,6.3nm,0.7s						
SHLS				*e*Lg	Lg	14 04 19.6	
	comp=E,25nm,0.8s						
PDGK	**Podgornoye**	**6.21**	**47**	Pg	**Pb**	**14 02 52.7**	**+2.7**
	comp=E,1.7nm,1.3s						
PDGK				Lg	Lg	14 04 11.9	
	comp=E,9.7nm,1.2s						
BLB	**Baldybastay**	**6.21**	**37**	Pg	**Pb**	**14 02 51.7**	**+1.6**
	comp=E,9.0nm,0.7s						
BLB				Lg	Lg	14 04 10.1	
	comp=E,27nm,1.2s						
DJR	**Jarkent**	**7.04**	**42**	Pg	Pb	14 03 09.4	+5.4
	comp=E,4.5nm,1.2s						
DJR				Lg	Lg	14 04 40.1	
	comp=E,12nm,1.1s						
DJR	**Jarkent**	**7.04**	**42**	*e*Pg	Pb	14 03 09.4	+5.4
	comp=E,2.8nm,0.5s						
DJR				*e*Lg	Lg	14 04 40.1	
	comp=E,12nm,0.4s						
OTUK	**Ortayu**	**9.00**	**356**	⇑P	**Pn**	**14 03 12.3**	**+0.3**
	comp=E,3.5nm,0.7s						
OTUK				⇑S		14 05 39.0	
	comp=E,48nm,1.4s						
OTUK	**Ortayu**	**9.00**	**356**	P	**Pn**	**14 03 12.3**	**+0.3**
MK31	**Makanchi Array**	**10.02**	**38**	*i* P	**Pn**	**14 03 26.9**	**+1.0**
MKAR	**Makanchi Array**	**10.02**	**38**	Pn	**Pn**	**14 03 26.4**	**+0.5**
	baz=216,slow=12,SNR=6.0						
MKAR				Lg	Lg	14 06 11.3	
	comp=E,0.1nm,0.3s,baz=232,slow=27,SNR=6.0						
MKAR				LR	LR	14 07 40.4	
	comp=E,32nm,19.5s,baz=332,slow=40						
	comp=E,0.5nm,0.9s						
MKAR	**Makanchi Array**	**10.02**	**38**	*i* P	**Pn**	**14 03 26.7**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WMQ	**Urumqi**	**11.74**	**63**	*e*P	**Pn**	**14 03 49.8**	**+0.3**
GEYT	**Alibeck**	**11.92**	**268**	Pn	**Pn**	**14 03 55.0**	**+3.0**
	comp=Z,0.3nm,0.3s,baz=88,slow=13,SNR=2.0						
GEYT				Sn	**Sn**	**14 06 06.2**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=135,slow=18,SNR=2.8						
KURBB	**Kurchatov Arra**	**11.95**	**16**	Pn	**Pn**	**14 03 51.2**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=204,slow=12,SNR=4.3						
KURBB				Lg	Lg	14 07 13.6	
	baz=202,slow=27,SNR=6.3						
KURBB	**Kurchatov Arra**	**11.95**	**16**	⇑Lg	Lg	14 07 07.7	
	comp=Z,20nm,0.8s						
KURK	**Kurchatov**	**12.06**	**17**	⇓Lg	Lg	14 07 15.0	
	comp=Z,20nm,1.3s						
KURK	**Kurchatov**	**12.06**	**17**	P	**Pn**	**14 03 51.2**	**-2.6**
AB31	**Akbulak array**	**13.79**	**321**	P	**Pn**	**14 04 16.0**	**-1.4**
	comp=Z,0.7nm,0.5s,baz=132,slow=14,SNR=18						
AB31				⇑S	S	14 07 04.1	-10
	comp=Z,1.4nm,0.5s						
BVA0	**Borovoye Array**	**13.90**	**353**	P	**Pn**	**14 04 19.9**	**+0.9**
BVAR	**Borovoye Array**	**13.90**	**353**	Pn	**Pn**	**14 04 17.4**	**-1.5**
	baz=166,slow=14,SNR=7.6						
BVAR				Lg	Lg	14 08 22.1	
	baz=158,slow=33,SNR=3.6						
	comp=Z,1.6nm,0.8s						
BRVK	**Borovoye**	**13.95**	**353**	P	**Pn**	**14 04 20.4**	**+0.8**
DGZ	**Jazzator, Alta**	**14.51**	**39**	*i* P	**Pn**	**14 04 25.7**	**-1.7**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKTO	**Aktyubinsk**	**15.50**	**321**	Pn	**Pn**	**14 04 39.6**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=124,slow=12,SNR=7.1						
ZALV	**Zalesovo Beam**	**16.67**	**24**	Pn	**Pn**	**14 04 55.0**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=212,slow=11,SNR=9.6						
	comp=Z,2.7nm,0.8s						
ZALV	**Zalesovo Beam**	**16.67**	**24**	*i* P	**Pn**	**14 04 55.4**	**-0.1**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARU	**Arti**	**19.73**	**335**	P	**P**	**14 05 32.5**	**+0.9**
	comp=Z,0.9nm,0.2s,baz=110,slow=9.9,SNR=3.2						
ARU	**Arti**	**19.73**	**335***c*	*i*P	**Pn**	**14 05 34.0**	**+0.9**
ARU				S	**Sn**	**14 09 19.2**	**+4.3**
ARU				pmax	pmax		
	comp=Z,10.0nm,2.3s						
GTA	**Gaotai**	**20.53**	**81**	*e*P	**P**	**14 05 40.7**	**0.0**
GTA				sP	sP	14 05 49.8	+5.9
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BELG	**Belogornoye**	**22.02**	**315**	*i* P	**P**	**14 05 57.2**	**+0.8**
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KBZ	**Khabaz**	**23.10**	**291**	P	**P**	**14 06 10.3**	**+2.4**
	comp=Z,2.3nm,1.0s,baz=90,slow=7.1,SNR=2.6						
	comp=Z,2.3nm,1.0s						
KBZ	**Khabaz**	**23.10**	**291**	*i* P	**P**	**14 06 09.1**	**+1.1**
KBZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
LZH	**Lanzhou**	**24.36**	**88**	*e*P	**P**	**14 06 19.2**	**-1.4**
LZH				pP	sP	14 06 28.3	+4.4
LZH				pmax	pmax		
	comp=Z,16nm,1.5s						
SONM	**Songino Array**	**25.35**	**59**	P	**P**	**14 06 28.3**	**-1.0**
	comp=Z,1.4nm,1.0s,baz=270,slow=9.7,SNR=7.8						
	comp=Z,1.4nm,1.0s						
NRIK	**Noril'sk**	**31.10**	**10**	*i* P	**P**	**14 07 20.2**	**-0.1**
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AKASG	**Malin Array Be**	**32.71**	**305**	P	**P**	**14 07 34.8**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=78,slow=7.0,SNR=2.9						
	comp=Z,0.2nm,0.3s						
MNK	**Minsk**	**33.89**	**312**	*i* P	**P**	**14 07 42.7**	**-2.1**
	comp=E,1.0nm,0.7s						
MNK				*i* P	**P**	**14 07 42.7**	**-2.1**
	comp=N,47nm,0.9s						
MNK				*i* P	**P**	**14 07 42.7**	**-2.1**
	comp=Z,8.0nm,0.8s,baz=278						
MNK				*i* PP	**PnPn**	**14 08 55.9**	**-1.4**
MNK				*i* PPP	PPP	14 09 07.2	
MNK				*i* S	**S**	**14 13 08.8**	**-1.0**
MNK				*i* SS	**SnSn**	**14 15 16.5**	**+1.9**
MNK				*i* SSS	SSS	14 15 32.2	
MNK				*i* LQ	LQ	14 18 58.9	
MNK				*i* LR	LR	14 20 59.8	
MNK				*i* LRM	MLR	14 22 45.0	
	comp=Z,37nm,18.6s						
MNK				*i* LRM	MLR	14 23 00.2	
	comp=E,48nm,19.5s						
MNK				*i* LRM	MLR	14 23 07.0	
	comp=N,261nm,18.6s						
MNK	**Minsk**	**33.89**	**312**	*i* P	**P**	**14 07 42.7**	**-2.1**
MNK				*i*		14 08 55.8	
MNK				*i*		14 10 20.4	
MNK				*i* S	**S**	**14 13 08.7**	**-1.0**
MNK				*i* SS	**SnSn**	**14 15 16.4**	**+1.9**
MNK				*i*		14 18 07.3	
MNK				pmax	pmax		
	comp=E,1.0nm,0.7s						
MNK				MLR	MLR		
	comp=Z,37nm,19.0s						
MNK				MLR	MLR		
	comp=E,48nm,20.0s						
MNK				MLR	MLR		
	comp=N,261nm,19.0s						
FINES	**FINESS Array B**	**36.26**	**323**	P	**P**	**14 08 05.0**	**-0.2**
	comp=N,1.6nm,0.8s,baz=98,slow=10.0,SNR=6.5						
	comp=N,1.6nm,0.8s						
ARCES	**ARCESS Array B**	**39.32**	**336**	P	**P**	**14 08 30.7**	**-0.3**
	comp=N,6.2nm,1.1s,baz=96,slow=9.2,SNR=2.0						
	comp=N,6.2nm,1.1s						
KLR	**Kul'dur**	**42.10**	**56**	P	**P**	**14 08 53.0**	**-1.3**
	comp=N,0.8nm,0.5s,baz=282,slow=9.3,SNR=2.2						
	comp=N,0.8nm,0.5s						
KLR	**Kul'dur**	**42.10**	**56**	*i* P	**P**	**14 08 54.7**	**+0.4**
KLR				pmax	pmax		
	comp=Z,6.0nm,1.9s						
TIXI	**Tiksi**	**42.55**	**23**	P	**P**	**14 08 55.7**	**-1.8**
	comp=Z,1.3nm,0.3s,baz=270,slow=19,SNR=3.5						
	comp=Z,1.3nm,0.3s						
NB2	**NORSAR Subarra**	**43.30**	**321**	P	**P**	**14 09 03.0**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=91,slow=8.6						
NOA	**NORSAR Array B**	**43.30**	**321**	P	**P**	**14 09 03.3**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=92,slow=7.9,SNR=5.0						
	comp=Z,1.0nm,0.6s						
ESDC	**Sonseca Array**	**57.76**	**297**	P	**P**	**14 10 53.1**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=56,slow=6.8,SNR=2.5						
	comp=Z,0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**67.56**	**269**	P	**P**	**14 11 58.5**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=43,slow=5.4,SNR=4.5						
	comp=Z,0.3nm,0.4s						
ILAR	**Eielson Array**	**71.63**	**17**	P	**P**	**14 12 21.4**	**-2.2**
	comp=Z,0.3nm,0.8s,baz=325,slow=4.5,SNR=5.0						
	comp=Z,0.3nm,0.8s						
YKA	**Yellowknife Ar**	**78.39**	**4**	P	**P**	**14 13 01.3**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=351,slow=6.0,SNR=5.4						
	comp=Z,0.3nm,0.7s						
YKA	**Yellowknife Ar**	**78.39**	**4**	*i* P	**P**	**14 13 03.0**	**+0.4**
WRA	**Warramunga Arr**	**81.99**	**124**	P	**P**	**14 13 20.7**	**-1.9**
	comp=Z,0.7nm,0.6s,baz=322,slow=5.2,SNR=8.7						
	comp=Z,0.7nm,0.6s						
ASAR	**Alice Springs**	**84.42**	**127**	P	**P**	**14 13 33.0**	**-2.1**
	comp=Z,0.9nm,1.0s,baz=321,slow=4.7,SNR=7.2						
	comp=Z,0.9nm,1.0s						

ISK ***02*** *14:07:17.9, 34°.81N×33°.94E, h30^{km}, ML2.5/4*
NIC ***02*** *14:07:20.6±0.0, 34°.76N×33°.84E, h28^{km}, Ml2.0/7*
ISC 02 14:07:19.4±1.6**, 34°.85N**±0°.06×**33°.95E**±0°.05**, h46**^{km}±10^{km}**,**
n15, σ0^{s}.69/26**, 1C-2D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PARAL	**Paralimni**	**0.16**	**29**	⇑*e*P	**Pn**	**14 07 27.5**	**+0.4**
PARAL				S	**Sn**	**14 07 33.4**	**+1.0**
PARAL				AML	AML	14 07 34.5	
	0.6nm,0.4s						
PARAL				AML	AML	14 07 34.5	
	0.6nm,0.4s						
PARAL				AML	AML	14 07 35.6	
	0.5nm,0.2s						
PARAL				AML	AML	14 07 35.6	
	0.5nm,0.2s						
MVOU	**Mavrovouni**	**0.30**	**302**	⇓*i*P	**Pn**	**14 07 27.9**	**-0.3**
MVOU				S	**Sn**	**14 07 34.3**	**-0.1**
MVOU				AML	AML	14 07 35.1	
	0.9nm,0.2s						
MVOU				AML	AML	14 07 35.1	
	0.9nm,0.2s						
MVOU				AML	AML	14 07 35.3	
	1.0nm,0.3s						
MVOU				AML	AML	14 07 35.3	
	1.0nm,0.3s						
CSS	**Mathiatis**	**0.52**	**282**	Pg	**Pn**	**14 07 29.5**	**-1.2**
CSS				Sg	**Sn**	**14 07 37.8**	**-0.9**
CSS	**Mathiatis**	**0.52**	**282**	P	**Pn**	**14 07 30.0**	**-0.6**
CSS				S	**Sn**	**14 07 37.8**	**-0.9**
CSS				AML	AML	14 07 38.1	
	0.2nm,0.4s						
CSS				AML	AML	14 07 38.1	
	0.2nm,0.4s						
CSS				AML	AML	14 07 38.7	
	0.3nm,0.5s						
CSS				AML	AML	14 07 38.7	
	0.3nm,0.5s						
LFK	**Lefkose**	**0.54**	**322**	Pg	**Pn**	**14 07 30.3**	**-0.7**
LFK				Sg	**Sn**	**14 07 39.2**	**-0.1**
ASGA	**Asgata**	**0.58**	**264**	⇓*i*P	**Pn**	**14 07 31.5**	**0.0**
ASGA				S	**Sn**	**14 07 40.8**	**+0.8**
ASGA				AML	AML	14 07 41.1	
	0.5nm,0.3s						
ASGA				AML	AML	14 07 41.1	
	0.5nm,0.3s						
ASGA				AML	AML	14 07 44.6	
	0.5nm,0.4s						
ASGA				AML	AML	14 07 44.6	
	0.5nm,0.4s						
EREN	**Erenkoy**	**0.70**	**15**	Pg	**Pn**	**14 07 32.5**	**-0.5**
EREN				Sg	**Sn**	**14 07 43.1**	**+0.3**
SZAC	**Souni**	**0.88**	**264**	P	**Pn**	**14 07 35.4**	**0.0**
SZAC				S	**Sn**	**14 07 46.2**	**-1.0**
SZAC				AML	AML	14 07 47.8	
	0.6nm,0.4s						
SZAC				AML	AML	14 07 47.8	
	0.6nm,0.4s						
TROD	**Troodos**	**0.89**	**276**	P	**Pn**	**14 07 35.7**	**-0.1**
TROD				S	**Sn**	**14 07 47.8**	**+0.1**
TROD				AML	AML	14 07 51.4	
	0.3nm,0.5s						
TROD				AML	AML	14 07 51.4	
	0.3nm,0.5s						
TROD				AML	AML	14 07 51.7	
	0.2nm,0.5s						
TROD				AML	AML	14 07 51.7	
	0.2nm,0.5s						
LEF	**Lefka**	**0.91**	**287**	Pg	**Pn**	**14 07 35.7**	**-0.1**
LEF				Sg	**Sn**	**14 07 48.2**	**+0.5**
NATA	**Nata**	**1.13**	**267**	P	**Pn**	**14 07 39.3**	**+0.5**
ALFC	**Alefka**	**1.15**	**286**	P	**Pn**	**14 07 39.8**	**+0.7**
ALFC				AML	AML	14 07 55.5	
	0.3nm,0.2s						
ALFC				AML	AML	14 07 57.0	
	0.2nm,0.2s						
AKMS	**Akamas**	**1.33**	**278**	P	**Pn**	**14 07 42.5**	**+0.9**
AKMS				S	**Sn**	**14 07 59.4**	**+1.2**
AKKU	**Akkuyu-Mersin**	**1.34**	**346**	Pn	**Pn**	**14 07 41.7**	**0.0**
MMLI	**Mount Malkishu**	**2.71**	**153**	Pn	**Pn**	**14 07 59.9**	**-0.6**

IDC 02 14:08:26.5±10.0**, 24°.66N×140°.70E, h188**^{km}±191^{km}**,**
mb2.9/3**, mbtmp3.5**/4**, ML4.3**/1**, Error ellipse:**
s-maj=332.3km s-min=26.8km az=71.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.77**	**29**	P	Pn	14 09 12.8	0.0
	44nm,0.3s,baz=283,slow=18,SNR=13						
JCJ				S	Sn	14 09 44.7	-4.3
	169nm,0.2s,baz=276,slow=22,SNR=38						
	132nm,0.4s						
WRA	**Warramunga Arr**	**44.76**	**189**	P	P	14 16 21.6	+0.1
	1.7nm,0.6s,baz=9.9,slow=8.8,SNR=16						
	1.7nm,0.6s						
ASAR	**Alice Springs**	**48.49**	**188**	P	P	14 16 49.9	-0.5
	0.1nm,0.5s,baz=4.1,slow=5.6,SNR=6.9						
	0.1nm,0.5s						
MKAR	**Makanchi Array**	**51.03**	**311**	P	P	14 17 09.2	-0.1
	0.1nm,0.4s,baz=87,slow=7.4,SNR=1.8						
	0.1nm,0.4s						

JMA ***02*** *14:11:23.4±0.1, 27°.5N±1°.0×14°1E±°, h138^{km}, MV3.8/24,*
NEAR CHICHIJIMA ISLAND
IDC ***02*** *14:11:24.0±4.0, 27°.53N×141°.44E, h151^{km}±82^{km}, mb3.2/3,*
mbtmp3.6/3, Error ellipse: s-maj=366.1km s-min=28.5km az=86.0
ISC 02 14:11:22.9±0.9**, 27°.64N**±0°.09×**141°.8E**±0°.3**, h150**^{km}**, n14,**
σ1^{s}.84/16**, mb3.5**/3**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**0.65**	**147**	P	**Pn**	**14 11 45.3**	**+0.2**
CBIJ				*e*S	**Sn**	**14 12 02.1**	**+0.2**
JCJ	**Chichijima**	**0.65**	**147**	P	**Pn**	**14 11 47.5**	**+2.4**
	83nm,0.3s,baz=288,slow=20,SNR=17						
JCJ				S	**Sn**	**14 12 03.2**	**+1.2**
	828nm,0.4s,baz=158,slow=19,SNR=9.0						
JHH2	**Haha-jima-NKT2**	**1.06**	**161**	P	**Pn**	**14 11 47.9**	**-0.4**
JHH2				S	**Sn**	**14 12 06.2**	**-1.4**
BSO1	**Boso 1**	**7.03**	**355**	P	**Pn**	**14 13 04.8**	**+2.1**
BSO1				*e*S	**Sn**	**14 14 22.9**	**+1.9**
JOD2	**Odawara 2**	**7.94**	**344**	P	**Pn**	**14 13 16.6**	**+1.2**
JRY	**Ryogami san**	**8.70**	**344**	P	**Pn**	**14 13 25.9**	**+0.2**
JAG	**Ashikaga**	**8.98**	**348**	*e*P	**Pn**	**14 13 28.2**	**-1.0**
JHO	**Hitachi**	**9.00**	**354**	P	**Pn**	**14 13 30.0**	**+0.5**
JHO				*e*S	**Sn**	**14 15 04.6**	**-4.9**
H11N2	**WAKE ISLAND Hy**	**24.28**	**103**	T	T	14 41 51.8	
	baz=293						
H11N1	**WAKE ISLAND Hy**	**24.28**	**104**	T	T	14 41 54.9	
	baz=293						
H11N3	**WAKE ISLAND Hy**	**24.29**	**104**	T	T	14 41 54.0	
	baz=293						
WRA	**Warramunga Arr**	**47.85**	**189**	P	**P**	**14 19 45.1**	**-0.5**
	1.3nm,0.8s,baz=9.8,slow=8.6,SNR=11						
	1.3nm,0.8s						
ASAR	**Alice Springs**	**51.57**	**189**	P	**P**	**14 20 13.8**	**0.0**
	0.1nm,0.3s,baz=12,slow=7.2,SNR=4.5						
	0.1nm,0.3s						
FINES	**FINESS Array B**	**77.30**	**334**	P	**P**	**14 23 01.2**	**+0.8**
	0.8nm,0.8s,baz=76,slow=5.9,SNR=3.7						
	0.8nm,0.8s						

RSNC ***02*** *14:26:19.1±1.1, 8°.51N×73°.24W, h142^{km}±6^{km}, ML3.9, Mw4.4*
IDC ***02*** *14:26:20.7±1.1, 8°.46N×73°.00W, h154^{km}±11^{km}, mb3.4/8,*
mbtmp3.9/10, Error ellipse: s-maj=17.3km s-min=9.5km az=129.0
ISC 02 14:26:18.6±0.7**, 8°.57N**±0°.03×**73°.25W**±0°.04**, h134**^{km}±6^{km}**,**
n53, σ2^{s}.08/95**, mb3.6**/8**, 3C-4D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LL1C	**La Loma 1 Cana**	**1.01**	**342**	⇑*i*P	**Pn**	**14 26 44.2**	**+2.2**
LL1C				*e*S	**Sn**	**14 27 02.7**	**+2.9**
LL1C				*i*		14 27 06.5	
	comp=Z,3μm,0.3s						
LL5C	**La Loma 5 El P**	**1.26**	**338**	*e*P	**Pn**	**14 26 45.9**	**+1.5**
LL5C				*e*S	**Sn**	**14 27 06.1**	**+2.0**
LL5C				*i*		14 27 07.9	
	comp=Z,1μm,0.3s						
PAMC	**Pamplona, Colo**	**1.34**	**156**	⇓*i*P	**Pn**	**14 26 46.3**	**+0.6**
PAMC				*e*S	**Sn**	**14 27 05.9**	**-0.5**
PAMC				*i*		14 27 08.5	
	comp=Z,864nm,0.3s						
BRRC	**Barranca, Sant**	**1.53**	**198**	⇓*i*P	**Pn**	**14 26 47.6**	**+0.3**
BRRC				*e*S	**Sn**	**14 27 08.9**	**-0.3**
BRRC				*i*		14 27 15.1	
	comp=Z,886nm,0.2s						
ARGC	**Ariguani, Magd**	**1.61**	**322**	⇑*i*P	**Pn**	**14 26 50.5**	**+2.3**
ARGC				*e*S	**Sn**	**14 27 13.4**	**+2.4**
ARGC				*i*		14 27 16.1	
	comp=Z,712nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.92**	**236**	*e*P	**Pn**	**14 26 52.0**	**+0.1**
ZARC				*e*S	**Sn**	**14 27 17.2**	**-0.1**
ZARC				*i*		14 27 21.4	
	comp=Z,1μm,0.5s						
BARC	**Barichara**	**1.97**	**178**	⇓*i*P	**Pn**	**14 26 53.0**	**+0.4**
BARC				*e*S	**Sn**	**14 27 18.0**	**-0.7**
SJCC	**San Jacinto, C**	**2.32**	**305**	⇑*i*P	**Pn**	**14 26 57.7**	**+1.0**

SJCC				eS	Sn	14 27 25.7	-0.3
SJCC				i		14 27 29.9	
	comp=Z,607nm,0.4s						
PTBC	PUERTO BERRIO,	2.35	211	⇓iP	Pn	14 26 57.0	-0.1
PTBC				eS	Sn	14 27 25.7	-1.0
PTBC				i		14 27 32.6	
	comp=Z,844nm,0.3s						
UREC	San Jos de Ur	2.41	250	eP	Pn	14 26 57.4	-0.4
UREC				eS	Sn	14 27 26.1	-1.8
UREC				i		14 27 36.2	
	comp=Z,2μm,0.4s						
CRJC	Cerrejon, Guaj	2.46	8	eP	Pn	14 26 58.9	+0.3
CRJC				eS	Sn	14 27 28.8	-0.5
TAMC	Tame, Arauca	2.57	146	i P	Pn	14 27 00.4	+0.5
TAMC				eS	Sn	14 27 30.5	-1.1
TAMC				i		14 27 30.9	
	comp=Z,387nm,0.4s						
SDV	Santo Domingo	2.60	83	P	Pn	14 27 01.4	+1.0
	comp=Z,56nm,0.4s,baz=304,slow=11,SNR=73						
SDV				S	Sn	14 27 31.8	-0.8
	comp=Z,240nm,0.4s,baz=21,slow=15,SNR=27						
RUSC	La Rusia	2.67	177	eP	Pn	14 27 01.0	-0.6
RUSC				eS	Sn	14 27 34.6	0.0
RUSC				i		14 27 37.5	
	comp=Z,217nm,0.5s						
SMRC	Santa Marta, M	2.75	340	eP	Pn	14 27 02.8	+0.6
SMRC				eS	Sn	14 27 32.4	-3.3
SMRC				i		14 27 41.1	
	comp=Z,386nm,0.4s						
LCBC	Los crdobas,	3.10	275	eP	Pn	14 27 06.6	-0.1
LCBC				eS	Sn	14 27 45.4	+1.6
LCBC				i		14 27 49.6	
	comp=Z,179nm,0.4s						
HELC	Santa Helena	3.27	224	eP	Pn	14 27 10.0	+0.7
HELC				eS	Sn	14 27 48.8	+0.4
HELC				i		14 27 58.6	
	comp=Z,248nm,0.5s						
DBBC	Dabeiba	3.32	242	eP	Pn	14 27 09.7	+0.1
DBBC				eS	Sn	14 27 44.6	-4.4
DBBC				i		14 28 03.8	
	comp=Z,335nm,0.6s						
URIC	Uribia, Colomb	3.34	22	eP	Pn	14 27 09.8	0.0
URIC				eS	Sn	14 27 46.2	-3.3
URIC				i		14 27 50.9	
	comp=Z,181nm,0.6s						
APAC	Apartado, Choc	3.37	259	eP	Pn	14 27 10.5	+0.4
APAC				eS	Sn	14 27 49.5	-0.5
APAC				i		14 27 55.8	
	comp=Z,228nm,0.6s						
NORC	Norcasia	3.40	208	eP	Pn	14 27 10.6	0.0
NORC				eS	Sn	14 27 49.3	-1.5
NORC				i		14 27 59.0	
	comp=Z,377nm,0.4s						
CBOC	Ciudad Bolivar	3.84	226	eP	Pn	14 27 17.4	+0.8
CBOC				eS	Sn	14 27 59.6	-1.9
CBOC				i		14 28 20.5	
	comp=Z,161nm,0.5s						
ROSC	El Rosal	3.86	196	P	Pn	14 27 19.0	+2.0
	comp=Z,208nm,0.4s,baz=77,slow=14,SNR=42						
ROSC				S	Sn	14 28 04.9	+2.7
	comp=Z,156nm,0.5s,baz=162,slow=16,SNR=5.0						
ROSC	El Rosal	3.86	196	eP	Pn	14 27 19.2	+2.2
ROSC				eS	Sn	14 28 05.4	+3.2
ROSC				i		14 28 15.3	
	comp=Z,276nm,0.5s						
CHIC	Chingaza	3.95	187	eP	Pn	14 27 19.0	+0.9
CHIC				eS	Sn	14 28 07.6	+3.3
CHIC				i		14 28 13.5	
	comp=Z,150nm,0.5s						
NIZA	Niza - Manizal	4.13	212	eP	Pn	14 27 22.6	+2.1
NIZA				eS	Sn	14 28 07.5	-1.0
RECRC	Villamaria, Ca	4.15	210	eP	Pn	14 27 22.4	+1.4
RECRC				eS	Sn	14 28 12.6	+3.2
VILC	Villavicencio,	4.46	186	eP	Pn	14 27 26.3	+1.7
VILC				eS	Sn	14 28 14.8	-1.1
VILC				i		14 28 32.4	
	comp=Z,231nm,0.5s						
ANIL	Santa Ana	4.59	208	eP	Pn	14 27 27.7	+1.2
ANIL				eS	Sn	14 28 25.9	+6.5
ORTC	Ortega, Tolima	5.04	203	eP	Pn	14 27 33.9	+1.5
ORTC				eS	Sn	14 28 33.3	+3.5
ORTC				i		14 28 40.1	
	comp=Z,152nm,0.5s						
PRAC	Prado	5.10	199	eP	Pn	14 27 30.6	-2.5
PRAC				eS	Sn	14 28 31.3	+0.1
PRAC				i		14 28 43.3	
	comp=Z,121nm,0.4s						
YOTC	Yotoco, Valle	5.50	214	eP	Pn	14 27 39.4	+0.8
YOTC				eS	Sn	14 28 39.4	-1.6
YOTC				i		14 28 52.9	
	comp=Z,43nm,0.6s						
MALC	Bahia Malaga	6.09	222	eP	Pn	14 27 47.9	+1.5
MALC				eS	Sn	14 29 00.1	+5.2
BETC	Betania	6.25	201	eP	Pn	14 27 50.6	+2.1
BETC				eS	Sn	14 29 00.8	+1.9
BETC				i		14 29 04.8	
	comp=Z,50nm,0.5s						
JAMC	Jamundi, Valle	6.32	213	eP	Pn	14 27 49.1	-0.6
JAMC				eS	Sn	14 28 57.8	-3.0
JAMC				i		14 29 13.3	
	comp=Z,21nm,0.5s						
MACC	Macarena, Meta	6.41	185	eP	Pn	14 27 47.4	-3.4
MACC				eS	Sn	14 28 55.0	-7.8
MACC				i		14 29 28.8	
	comp=Z,68nm,0.6s						
BCIP	Isla Barro Col	6.54	276	eP	Pn	14 27 52.6	+0.2
BCIP				eS	Sn	14 29 03.0	-2.8
BCIP				i		14 29 08.4	
	comp=Z,20nm,0.4s						
GARC	Garzon, Huila	6.73	200	eP	Pn	14 27 55.0	-0.2
GARC				eS	Sn	14 29 05.5	-5.2
GARC				i		14 29 22.9	
	comp=Z,64nm,0.2s						
POPC	Popayan, Colom	6.90	210	eP	Pn	14 27 57.2	-0.2
POPC				eS	Sn	14 29 09.0	-5.7
FLOC	Florencia	7.35	199	eP	Pn	14 28 03.7	+0.4
FLOC				eS	Sn	14 29 27.0	+1.6
FLOC				i		14 29 33.0	
	comp=Z,18nm,0.5s						
BBAC	Balboa, Cauca	7.63	212	eP	Pn	14 28 08.7	+1.3
BBAC				eS	Sn	14 29 28.3	-4.2
BBAC				i		14 29 31.5	
	comp=Z,7.0nm,0.4s						
GCUF	Volcan Galeras	8.36	209	eP	Pn	14 28 19.5	+2.1
GCUF				eS	Sn	14 29 50.3	-0.3
GCUF				i		14 29 59.3	
	comp=Z,10nm,0.6s						
SDDR	Presa de Saban	10.52	10	eP	Pn	14 28 50.1	+4.2
SDDR				eS	Sn	14 30 40.7	-1.4
LPAZ	La Paz	25.21	168	P	P	14 31 32.0	-0.7
	comp=Z,0.8nm,0.4s,baz=325,slow=12,SNR=4.6						
	comp=Z,0.8nm,0.4s						
SIV	San Ignacio	27.22	154	P	P	14 31 49.2	-0.9
	comp=Z,0.5nm,0.4s,baz=321,slow=12,SNR=2.3						
	comp=Z,0.5nm,0.4s						
SCHQ	Schefferville	46.42	5	P	P	14 34 33.2	+1.6
	comp=Z,3.4nm,0.5s,baz=215,slow=8.6,SNR=9.7						
	comp=Z,3.4nm,0.5s						
PDAR	Pinedale Array	46.60	323	P	P	14 34 35.1	+1.6
	comp=Z,0.2nm,0.5s,baz=115,slow=8.1,SNR=1.9						
	comp=Z,0.2nm,0.5s						
YKA	Yellowknife Ar	61.59	340	P	P	14 36 22.4	+0.9
	comp=Z,1.2nm,0.6s,baz=129,slow=7.4,SNR=24						
YKA				pP	pP	14 36 55.1	+1.3
	comp=Z,0.6nm,0.7s,baz=130,slow=7.4,SNR=3.8						
	comp=Z,1.2nm,0.6s						
DBIC	Dimbokro	67.73	86	P	P	14 37 00.2	-2.1
	comp=Z,1.3nm,0.4s,baz=264,slow=6.1,SNR=1.9						
	comp=Z,1.3nm,0.4s						
TORD	Torodi Ar. Bea	73.51	79	P	P	14 37 35.5	-1.8
	comp=Z,0.5nm,0.5s,baz=289,slow=6.6,SNR=7.6						
	comp=Z,0.5nm,0.5s						
ILAR	Eielson Array	75.33	335	P	P	14 37 48.0	+1.0
	comp=Z,0.2nm,0.6s,baz=93,slow=4.2,SNR=5.2						
	comp=Z,0.2nm,0.6s						
ASAR	Alice Springs	149.99	237	PKPbc	PKPbc	14 45 53.9	-0.3
	comp=Z,0.8nm,0.7s,baz=121,slow=3.0,SNR=8.3						
WRA	Warramunga Arr	151.03	244	PKPbc	PKPbc	14 45 56.6	0.0
	comp=Z,1.4nm,0.7s,baz=105,slow=3.0,SNR=9.6						

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*ISK **02** 14:31:30.6, 38°.51N×44°.17E, h5^{km}, ML2.6/7*

*DDA **02** 14:31:30.4±0.0, 38°.42N×44°.23E, h7^{km}±2^{km}, ML2.4*

*TEH **02** 14:31:33.8, 38°.53N×44°.23E, h10^{km}±170^{km}, ML2.7*

ISC 02 14:31:32.4±1.2**, 38°.52N**±0°.04×**44°.16E**±0°.03**, h12**^{km}±10^{km}**,**
n18, σ1^{s}18/24**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.19	317	P	Pg	14 31 36.9	+0.2
OZAP				i AML	AML	14 31 42.0	
	comp=N,558nm,0.3s						
OZAP				i AML	AML	14 31 45.0	
	comp=E,729nm,0.7s						
VANB	Van	0.61	277	Pg	Pg	14 31 43.6	-0.7
VMUR	Van-Muradiye	0.65	316	P	Pb	14 31 45.9	0.0
VMUR				S	Sb	14 31 56.2	+1.1
VMUR				i AML	AML	14 31 59.0	
	comp=N,155nm,0.6s						
VMUR				i AML	AML	14 32 02.0	
	comp=E,176nm,0.7s						
GEVA	Gevas	0.89	257	P	Pg	14 31 48.1	-1.5
GEVA				S	Sb	14 32 02.0	+0.2
GEVA				i AML	AML	14 32 06.0	
	comp=E,123nm,0.5s						
GEVA				i AML	AML	14 32 08.0	
	comp=N,139nm,0.6s						
MAKU	Maku	0.93	26	Pg	Pn	14 31 50.5	-1.0
MAKU				Sg	Sn	14 32 03.8	-1.0
AKDM	Akdamar-Van	0.95	259	Pg	Pg	14 31 49.7	-1.0
AKDM				Sg	Sb	14 32 04.2	+0.8
DYDN	Diyadin	1.08	340	P	Pn	14 31 54.9	+1.2
ADCV	BITLIS_Adilcev	1.16	285	P	Pb	14 31 54.1	-0.4
ADCV				i AML	AML	14 32 14.0	
	comp=E,47nm,0.8s						
ADCV				i AML	AML	14 32 14.0	
	comp=N,51nm,0.4s						
ISHB	Shabestar	1.17	101	Pg	Pn	14 31 54.3	-0.5
IMRD	Marand	1.23	81	Pg	Pn	14 31 55.9	+0.4
CUKT	Cukurca	1.34	199	Pn	Pg	14 31 57.4	-0.9
CUKT				Sn	Sn	14 32 16.9	+1.9
AGRB	Hanur-Agry	1.39	320	Pn	Pb	14 31 57.6	-0.8
AGRB				Sn	Sg	14 32 18.7	+1.5
PERV	Siirt/Pervari-	1.40	246	P	Pg	14 32 00.8	+1.6
TASB	TASBURUN-IGDIR	1.46	2	Pn	Pg	14 31 59.4	-1.1
ITBZ	Tabriz	1.59	100	Pg	Pg	14 32 03.7	+0.8
IAZR	Azarshahr	1.67	120	Pg	Pg	14 32 04.4	0.0
GURO	Guroymak-BITLI	1.67	272	Pn	Pb	14 32 02.0	-1.1
SVAN	Silvan-Diyarba	2.36	262	Pn	Pb	14 32 12.5	-2.3

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*IDC **02** 14:40:36.9±1.6, 59°.60N×152°.98W, h62^{km}±18^{km}, mb3.5/10, mbtmp3.9/14, Error ellipse: s-maj=13.7km s-min=12.8km az=88.0*

*NEIC **02** 14:40:37.8±0.8, 59°.55N±0°.05×152°.66W±0°.08, h89^{km}±7^{km}, Error ellipse: s-maj=7.9km s-min=6.0km az=174.0*

*AEIC **02** 14:40:39.3±0.9, 59°.58N±0°.05×152°.62W±0°.07, h81^{km}±6^{km}, ML3.6, mb3.8/2(NEIC), ML3.8/92(NEIC), Error ellipse: s-maj=7.7km s-min=5.3km az=194.0*

ISC 02 14:40:38.5±0.7**, 59°.59N**±0°.04×**152°.62W**±0°.03**, h86**^{km}±6^{km}**,**
n199, σ0^{s}77/200**, mb3.7**/11**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPT	Oil Point	0.32	282	P	Pn	14 40 51.2	-0.3
	baz=103						
P19K	Oil Pt	0.32	282		Pn	14 40 51.2	-0.3
P19K	Oil Pt	0.32	282	P	Pn	14 40 51.3	-0.3
	baz=103						
P19K				S	Sn	14 41 00.7	-0.5
	baz=103						
ILSW	Iliamna Southw	0.47	326		Pn	14 40 52.2	-0.6
ILSW				IAML		14 41 02.6	
	comp=N,4μm,0.7s						
ILSW				IAML		14 41 02.7	
	comp=E,4μm,0.8s						
O20K	Slope Mountain	0.49	360	P	Pn	14 40 52.9	0.0
	baz=181						
O20K				S	Sn	14 41 03.6	+0.2
	baz=181						
HOM	Homer	0.50	82		Pn	14 40 52.9	+0.1
HOM	Homer	0.50	82		Sn	14 41 03.9	+0.5
HOM	Homer	0.50	82	IAML		14 41 04.2	
	comp=N,6μm,0.5s						
HOM				IAML		14 41 04.9	
	comp=E,7μm,1.0s						
HOM	Homer	0.50	82	P	Pn	14 40 52.8	+0.1
	baz=262						
HOM				S	Sn	14 41 03.9	+0.5
	baz=262						
CNPM	China Poot	0.71	95		Pn	14 40 54.5	-0.2
CNPM					Sn	14 41 06.3	-0.5
CNPM	China Poot	0.71	95	IAML		14 41 07.6	
	comp=N,3μm,0.4s						
Q19K	Cape Douglas,	0.85	219		Pn	14 40 55.6	-0.6
Q19K				IAML		14 41 10.4	
	comp=E,2μm,0.5s						
Q19K				IAML		14 41 14.2	
	comp=N,2μm,0.5s						
Q19K	Cape Douglas,	0.85	219	P	Pn	14 40 55.6	-0.6
	baz=38						
RSO	Redoubt South	0.88	356		Pn	14 40 56.6	-0.1
BRLK	Bradley Lake	0.90	78		Pn	14 40 56.3	-0.4
BRLK				IAML		14 41 09.8	
	comp=N,2μm,0.4s						
BRLK				IAML		14 41 10.4	
	comp=E,2μm,0.5s						
BRSE	Bradley Lake S	0.97	80		Pn	14 40 57.1	-0.4
BRSE	Bradley Lake S	0.97	80	P	Pn	14 40 57.1	-0.4
	baz=262						
Q20K	Shuyak Island	0.99	173	P	Pn	14 40 57.8	0.0
	baz=353						
RDJH	Redoubt Jeurge	1.01	355		Pn	14 40 58.0	-0.1
O19K	Port Alsworth	1.05	306		Pn	14 40 57.8	-0.6
O19K				IAML		14 41 14.9	
	comp=N,3μm,0.5s						
O19K	Port Alsworth	1.05	306	P	Pn	14 40 57.9	-0.5
	baz=125						
O18K	Koktuh Hills	1.34	283		Pn	14 41 01.4	-0.6
O18K				IAML		14 41 19.2	
	comp=E,824nm,0.6s						
O18K				IAML		14 41 19.5	
	comp=N,814nm,1.0s						
O18K	Koktuh Hills	1.34	283	P	Pn	14 41 01.4	-0.6
	baz=101						
O18K				S	Sn	14 41 18.9	-0.8
	baz=101						
P18K	Big Mountain,	1.35	263		Pn	14 41 01.3	-0.8
P18K				IAML		14 41 19.4	
	comp=N,651nm,1.0s						
P18K	Big Mountain,	1.35	263	P	Pn	14 41 01.1	-1.0
	baz=81						
CAPN	Captain Cook N	1.39	31		Pn	14 41 04.3	+1.7
CAPN	Captain Cook N	1.39	31	IAML		14 42 05.2	
	comp=E,2μm,1.0s						
CAPN	Captain Cook N	1.39	31	P	Pn	14 41 04.3	+1.7
	baz=213						
N19K	Bonanza Creek	1.54	324		Pn	14 41 04.6	0.0
N19K	Bonanza Creek	1.54	324	P	Pn	14 41 04.5	-0.2
	baz=143						
N19K				S	Sn	14 41 23.8	-0.6
	baz=143						
Q18K	Katmai Hardscr	1.55	234	P	Pn	14 41 04.3	-0.5
	baz=51						
SPU	Mount Spurr	1.62	10		Pn	14 41 05.8	+0.2
N20K	Mount Spurr	1.63	7	P	Pn	14 41 05.8	+0.1
	baz=188						
SPCR	Spurr Chakacha	1.63	7	P	Pn	14 41 05.9	+0.1
	baz=188						
SEW	Seward	1.68	71		Pn	14 41 06.2	-0.1
SEW	Seward	1.68	71	P	Pn	14 41 06.5	+0.2
	baz=253						
O22K	Cooper Landing	1.71	57		Pn	14 41 06.7	0.0
O22K	Cooper Landing	1.71	57	P	Pn	14 41 06.6	0.0
	baz=240						
O22K				S	Sn	14 41 28.0	-0.1
	baz=240						
KDAK	Kodiak Island	1.81	179	P	Pn	14 41 07.3	-0.7
	comp=E,149nm,0.4s,baz=55,slow=9.2,SNR=390						
KDAK				S	Sn	14 41 28.4	-2.1
	comp=E,122nm,0.3s,baz=263,slow=23,SNR=33						
KDAK	Kodiak Island	1.81	179	Pn	Pn	14 41 07.5	-0.6
KDAK				IAML		14 41 29.9	
	comp=E,390nm,0.2s						
KDAK				IAML		14 41 30.4	
	comp=E,418nm,0.2s						
P17K	Kvichak River	1.99	260	P	Pn	14 41 10.3	-0.1
	baz=77						
RC01	Rabbit Creek A	2.08	42		Pn	14 41 11.7	+0.1
RC01	Rabbit Creek A	2.08	42	IAML		14 41 38.3	
	comp=N,1μm,0.4s						
RC01				IAML		14 41 39.8	
	comp=E,678nm,0.2s						
RC01	Rabbit Creek A	2.08	42	P	Pn	14 41 11.7	+0.1
	baz=225						
SUA	Susitna One	2.10	25		Pn	14 41 12.5	+0.7
SUA				IAML		14 41 41.6	
	comp=E,457nm,0.8s						
SUA				IAML		14 41 41.7	
	comp=N,621nm,1.0s						
SUA	Susitna One	2.10	25	P	Pn	14 41 12.6	+0.7
	baz=207						
SVW2	Sparrevohn	2.11	317		Pn	14 41 11.6	-0.4
Q17K	Contact Creek	2.15	233	P	Pn	14 41 12.5	-0.2
	baz=50						
Q16K	King Salmon	2.27	248	P	Pn	14 41 14.3	+0.2
	baz=64						
O17K	Koliganek Bris	2.28	277	P	Pn	14 41 14.0	-0.1
	baz=93						
O17K				S	Sn	14 41 40.5	-1.0
	baz=93						
M20K	Styx River	2.31	354		Pn	14 41 15.2	+0.5
OHAK	Old Harbor	2.40	189		Pn	14 41 14.7	-1.1
OHAK	Old Harbor	2.40	189	P	Pn	14 41 14.7	-1.1
	baz=7.8						
SKT	Skwentna	2.46	12		Pn	14 41 16.7	0.0
SKT	Skwentna	2.46	12	P	Pn	14 41 16.6	0.0
	baz=193						
M19K	Big River Lodg	2.48	340		Pn	14 41 17.1	+0.2
PWL	Port Wells	2.49	57	Pn	Pn	14 41 16.6	-0.5
PWL	Port Wells	2.49	57	P	Pn	14 41 16.5	-0.5
	baz=241						
M22K	Willow	2.50	28		Pn	14 41 17.6	+0.6
M22K				IAML		14 41 54.8	
	comp=E,637nm,0.6s						
M22K	Willow	2.50	28	P	Pn	14 41 17.8	+0.7
	baz=211						
PMR	Palmer	2.65	39	Pn	Pn	14 41 18.6	-0.5
PMR				IAML		14 41 51.1	
	comp=N,167nm,0.1s						
PMR				IAML		14 41 52.7	
	comp=E,224nm,0.4s						
PMR	Palmer	2.65	39	P	Pn	14 41 18.5	-0.5
	baz=222						
P23K	Montague Islan	2.67	79	P	Pn	14 41 19.3	-0.1
	baz=263						
P23K				S	Sn	14 41 49.0	-1.8
	baz=263						
KNK	Knik Glacier	2.75	47		Pn	14 41 20.1	-0.5
KNK				IAML		14 41 54.1	
	comp=E,522nm,0.4s						
KNK	Knik Glacier	2.75	47	P	Pn	14 41 20.0	-0.5
	baz=230						
O16K	Kokwok River B	2.78	272	P	Pn	14 41 21.0	+0.1
	baz=88						
P16K	Nushagak River	2.81	261	P	Pn	14 41 21.8	+0.5
	baz=76						
L19K	White Mountain	2.82	338		Pn	14 41 21.8	+0.3
CUT	Chulitna	3.05	21		Pn	14 41 24.9	+0.5
CUT				IAML		14 42 06.2	
	comp=E,334nm,0.4s						
CUT				IAML		14 42 07.6	
	comp=N,261nm,0.6s						
CUT	Chulitna	3.05	21	P	Pn	14 41 24.8	+0.3
	baz=203						
SML	Sawmill	3.06	42		Pn	14 41 24.6	-0.2
SML				IAML		14 42 13.0	
	comp=E,162nm,0.5s						
SML				IAML		14 42 28.2	
	comp=N,155nm,1.0s						
SML	Sawmill	3.06	42	P	Pn	14 41 24.4	-0.4
	baz=225						
Q23K	Middleton Isla	3.20	90	Pn	Pn	14 41 26.6	0.0
MID	Middleton Isla	3.21	90	Pn	Pn	14 41 26.6	-0.1
M23K	Glacier View	3.27	45	P	Pn	14 41 27.4	-0.1
	baz=230						
PPLA	Purkeypile	3.33	3		Pn	14 41 29.5	+1.1
SCM	Sheep Creek Mo	3.44	47		Pn	14 41 29.9	0.0
SCM				IAML		14 42 11.0	
	comp=E,351nm,0.7s						
SCM				IAML		14 42 11.4	
	comp=N,247nm,0.5s						
SCM	Sheep Creek Mo	3.44	47	P	Pn	14 41 29.6	-0.2
	baz=232						
EYAK	Cordova Ski Ar	3.58	71		Pn	14 41 30.3	-1.3
EYAK	Cordova Ski Ar	3.58	71	P	Pn	14 41 31.5	-0.1
	baz=257						
TTA	Tatalina	3.73	335	Pn	Pn	14 41 33.6	-0.2
TTA	Tatalina	3.73	335	P	Pn	14 41 33.6	-0.2
	baz=153						
DIV	Divide	3.74	63		Pn	14 41 33.2	-0.6
KLU	Klutina	3.82	57		Pn	14 41 34.4	-0.7
KLU	Klutina	3.82	57	P	Pn	14 41 34.5	-0.5
	baz=243						
K20K	Telida	3.84	350	Pn	Pn	14 41 35.7	+0.4
K20K	Telida	3.84	350	P	Pn	14 41 35.7	+0.4
	baz=169						
CAST	Castle Rocks	3.85	4		Pn	14 41 35.5	+0.1
CAST	Castle Rocks	3.85	4	P	Pn	14 41 35.6	+0.2
	baz=184						
TRF	Thorofare Moun	4.03	15		Pn	14 41 37.1	-0.9
TRF	Thorofare Moun	4.03	15	IAML		14 42 28.8	
	comp=N,148nm,0.6s						
TRF				IAML		14 42 29.6	
	comp=E,91nm,0.5s						
M24K	Tolsona, Glenn	4.04	49		Pn	14 41 37.9	-0.1
M24K	Tolsona, Glenn	4.04	49	P	Pn	14 41 38.4	+0.4
	baz=234						
KTH	Kantishna Hill	4.06	11		Pn	14 41 38.3	+0.1
KTH	Kantishna Hill	4.06	11	IAML		14 42 32.3	
	comp=E,68nm,0.6s						
KTH				IAML		14 43 11.1	
	comp=N,67nm,1.0s						
RND	Reindeer	4.23	24		Pn	14 41 41.1	+0.5
RND	Reindeer	4.23	24	IAML		14 42 30.3	
	comp=N,65nm,0.6s						
RND				IAML		14 42 30.4	
	comp=E,82nm,0.5s						
N25K	Chitina, Valde	4.44	59		Pn	14 41 42.7	-0.7
N25K				IAML		14 42 33.6	
	comp=E,86nm,0.5s						
N25K				IAML		14 42 40.6	
	comp=N,132nm,0.7s						
N25K	Chitina, Valde	4.44	59	P	Pn	14 41 43.0	-0.5
	baz=246						
MCK	McKinley	4.51	21	Pn	Pn	14 41 44.4	0.0
MCK	McKinley	4.51	21	P	Pn	14 41 44.8	+0.4
	baz=205						
BPAW	Bear Paw Mtn.	4.59	9		Pn	14 41 44.8	-0.6
BPAW	Bear Paw Mtn.	4.59	9	P	Pn	14 41 45.5	+0.1
	baz=191						
HARP	HAARP	4.60	49	P	Pn	14 41 45.8	+0.3
	baz=236						
GLB	Gilahina Butte	4.73	63		Pn	14 41 46.7	-0.7
GLB				IAML		14 42 39.4	
	comp=E,78nm,0.3s						
GLB				IAML		14 42 41.3	
	comp=N,91nm,0.4s						
VRDI	Verde Repeater	4.83	66		Pn	14 41 47.8	-1.1
VRDI	Verde Repeater	4.83	66	IAML		14 42 42.5	
	comp=E,46nm,0.6s						
VRDI				IAML		14 42 43.5	
	comp=N,85nm,0.6s						
BWN	Browne	4.83	17		Pn	14 41 49.3	+0.6
BWN	Browne	4.83	17	IAML		14 42 50.2	
	comp=E,68nm,1.4s						
BWN				IAML		14 43 11.7	
	comp=N,94nm,0.9s						
PAX	Paxson	4.84	42		Pn	14 41 48.8	-0.1
PAX	Paxson	4.84	42	P	Pn	14 41 48.7	-0.1
	baz=229						
MCARA	McCarthy VSAT	5.08	65		Pn	14 41 51.3	-0.7
MCARA	McCarthy VSAT	5.08	65	P	Pn	14 41 51.7	-0.3
	baz=253						
KIAG	Kiagna River	5.28	71		Pn	14 41 54.3	-0.7
NEA2	Nenana	5.29	17		Pn	14 41 54.3	-0.6
NEA2	Nenana	5.29	17	IAML		14 42 55.2	
	comp=E,46nm,0.7s						
NEA2				IAML		14 42 56.8	
	comp=N,23nm,0.5s						
NEA2	Nenana	5.29	17	P	Pn	14 41 54.7	-0.2
	baz=200						
BALM	Baldy	5.31	70		Pn	14 41 54.4	-0.9
WRH	Wood River Hil	5.34	22		Pn	14 41 54.6	-1.0
WRH	Wood River Hil	5.34	22	IAML		14 42 56.6	

	comp=N,39nm,0.5s						
WRH				IAML		14 42 56.8	
	comp=E,53nm,0.5s						
MENT	Mentasta	5.45	48		Pn	14 41 57.3	+0.1
M26K	Nabesna, AK	5.47	55	Pn	Pn	14 41 57.3	-0.1
M26K	Nabesna, AK	5.47	55	P	Pn	14 41 57.5	+0.1
	baz=243						
HDA	Harding Lake	5.52	26		Pn	14 41 58.1	0.0
HDA	Harding Lake	5.52	26	P	Pn	14 41 58.2	+0.1
	baz=212						
MLY	Manley	5.53	8		Pn	14 41 57.7	-0.6
CCB	Clear Creek Bu	5.55	22		Pn	14 41 58.1	-0.4
RIDG	Independent Ri	5.57	38		Pn	14 41 58.6	-0.1
RIDG	Independent Ri	5.57	38	P	Pn	14 41 59.2	+0.4
	baz=225						
L26K	Log Cabin Wild	5.64	48		Pn	14 42 00.3	+0.6
BARN	Barnard Glacie	5.64	70		Pn	14 41 58.5	-1.4
TCOL	CIGO, UAF Yank	5.75	21		Pn	14 42 01.1	0.0
TCOL	CIGO, UAF Yank	5.75	21	P	Pn	14 42 01.3	+0.1
	baz=205						
COLA	College	5.75	21		Pn	14 42 01.1	-0.1
DOT	Dot Lake	5.76	41		Pn	14 42 01.1	-0.2
MDM	Murphy Dome	5.76	19		Pn	14 42 01.2	-0.2
I23K	Minto, Yukon-K	5.78	14		Pn	14 42 01.6	0.0
I23K	Minto, Yukon-K	5.78	14	P	Pn	14 42 01.4	-0.1
	baz=197						
IL31		5.85	25		Pn	14 42 02.2	-0.3
ILAR	Eielson Array	5.85	25	P	Pn	14 42 01.9	-0.6
	comp=E,16nm,0.5s,baz=209,slow=14,SNR=326						
ILAR				S	Sn	14 43 05.0	-3.1
	comp=E,17nm,0.7s,baz=204,slow=25,SNR=17						
ILAR	Eielson Array	5.85	25		Pn	14 42 02.4	-0.2
M27K	Edge Creek, AK	5.92	57		Pn	14 42 03.6	-0.1
SAMH	Samovar Hills	5.99	80		Pn	14 42 04.9	+0.4
SCRK	Sand Creek	6.01	39		Pn	14 42 03.9	-0.9
SCRK	Sand Creek	6.01	39	P	Pn	14 42 04.4	-0.4
	baz=227						
POKR	Poker Plat Res	6.05	21		Pn	14 42 04.0	-1.3
POKR	Poker Plat Res	6.05	21	P	Pn	14 42 05.2	-0.1
	baz=206						
H21K	Melozitna Rive	6.09	359		Pn	14 42 05.6	-0.2
L27K	Beaver Creek,	6.25	52		Pn	14 42 08.0	0.0
PCA	Pinnacle	6.25	80		Pn	14 42 08.0	-0.1
PINM	Pinnacle	6.26	80	P	Pn	14 42 08.0	-0.2
	baz=271						
BCAR	Beaver Creek A	6.27	52	Pn	Pn	14 42 08.1	-0.2
YUK3	Moose Creek	6.36	65	P	Pn	14 42 10.0	+0.3
	baz=255						
H23K	Yukon River	6.42	11		Pn	14 42 10.3	+0.1
H23K	Yukon River	6.42	11	P	Pn	14 42 10.3	+0.1
	baz=194						
IMAR	Indian Mountai	6.44	356	Pn	Pn	14 42 10.4	-0.2
J26L	Joseph Creek	6.51	37		Pn	14 42 11.2	-0.3
J26L	Joseph Creek	6.51	37	P	Pn	14 42 11.0	-0.6
	baz=225						
H24K	Noodor Dome	6.64	17		Pn	14 42 13.0	-0.3
PRP	Porcupine Dome	6.79	26		Pn	14 42 15.0	-0.4
PRP	Porcupine Dome	6.79	26	P	Pn	14 42 15.2	-0.2
	baz=212						
YUK4	Talbot Arm	7.13	70	P	Pn	14 42 20.8	+0.7
	baz=261						
I26K	Coal Creek Min	7.22	33		Pn	14 42 20.5	-0.7
EGAK	Eagle	7.46	41		Pn	14 42 23.9	-0.6
HYT	Haines Junctio	7.63	74	Pn	Pn	14 42 27.3	+0.4
DAWY	Dawson	7.70	49		Pn	14 42 27.8	+0.1
COLD	Coldfoot	7.74	7		Pn	14 42 26.5	-1.8
FYU	Fort Yukon	7.76	22		Pn	14 42 27.7	-0.8
ANM	Nome	7.78	315		Pn	14 42 29.6	+0.7
M30M	Minto, Yukon	8.23	62	Pn	Pn	14 42 34.9	-0.1
N31M	Braeburn, Yuko	8.51	70		Pn	14 42 39.2	+0.3
BMAR	Burnt Mountain	8.64	21	Pn	Pn	14 42 39.3	-1.3
SKAG	Skagway	8.79	83	Pn	Pn	14 42 42.1	-0.5
MAYO	Mayo, Yukon	8.92	56		Pn	14 42 43.8	-0.5
TOLK	Toolik Lake Re	9.18	7		Pn	14 42 48.9	+0.9
TNA	Tin City	9.24	317		Pn	14 42 50.4	+1.8
M31M	Drury Creek, Y	9.26	66	Pn	Pn	14 42 49.1	+0.2
JIS	Juneau Island	9.52	90	Pn	Pn	14 42 53.8	+1.3
FARO	Faro, Yukon	9.74	66	Pn	Pn	14 42 55.0	-0.6
EPYK	Eagle Plains	9.90	40	Pn	Pn	14 42 58.3	+0.6
P33M	Teslin, Yukon	9.96	78	Pn	Pn	14 42 58.5	-0.2
DLBC	Dease Lake	11.69	86	P	Pn	14 43 23.4	+1.3
	comp=E,2.6nm,0.3s,baz=292,slow=9.0,SNR=20						
DLBC				S	Sn	14 45 27.6	-2.9
	comp=E,4.3nm,0.5s,baz=145,slow=22,SNR=7.5						
DLBC	Dease Lake	11.69	86	Pn	Pn	14 43 23.5	+1.4
INK	Inuvik	12.05	36	P	Pn	14 43 26.7	-0.1
	comp=E,1.7nm,0.6s,baz=230,slow=15,SNR=13						
INK	Inuvik	12.05	36	Pn	Pn	14 43 26.1	-0.7
A36M	Sachs Harbour	16.51	30	Pn	Pn	14 44 22.8	-1.6
A36M				IAmb	IAmb	14 44 28.6	
	comp=Z,7.4nm,0.8s						
YKA	Yellowknife Ar	18.45	65	P	Pn	14 44 48.0	-0.1
	comp=Z,2.3nm,0.5s,baz=277,slow=9.6,SNR=46						
YKA	Yellowknife Ar	18.45	65	P	P	14 44 46.5	-0.4
NEW	Newport	23.47	103	P	P	14 45 42.4	+2.2
	comp=Z,3.5nm,0.7s,baz=307,slow=10,SNR=5.5						
	comp=Z,3.5nm,0.7s						
WALA	Waterton Lakes	24.55	98	P	P	14 45 48.3	-1.8
WALA				IAmb	IAmb	14 46 08.2	
	comp=Z,3.6nm,1.1s						
SEY	Seymchan	25.96	301	P	P	14 46 01.6	-1.0
	comp=Z,0.5nm,0.5s,baz=84,slow=11,SNR=6.1						
	comp=Z,0.5nm,0.5s						
PETK	Petropavlovsk-	27.71	279	P	P	14 46 17.4	-0.9
	comp=Z,1.5nm,0.8s,baz=74,slow=12,SNR=16						
	comp=Z,1.5nm,0.8s						
NVAR	Mina Array Bea	30.36	119	P	P	14 46 45.0	+2.8
	comp=Z,0.3nm,0.4s,baz=307,slow=8.9,SNR=4.4						
	comp=Z,0.3nm,0.4s						
PDAR	Pinedale Array	31.11	103	P	P	14 46 51.0	+2.1
	comp=Z,0.5nm,0.7s,baz=312,slow=4.2,SNR=6.5						
	comp=Z,0.5nm,0.7s						
TXAR	Lajitas Array	44.66	110	P	P	14 48 44.7	+2.2
	comp=Z,0.6nm,0.8s,baz=331,slow=5.4,SNR=4.3						
	comp=Z,0.6nm,0.8s						
KSRS	Korea Array	53.46	283	P	P	14 49 49.1	-0.3
	comp=Z,0.9nm,0.5s,baz=37,slow=6.9,SNR=5.3						
	comp=Z,0.9nm,0.5s						
SONM	Songino Array	55.19	306	P	P	14 50 02.6	+0.5
	comp=Z,0.3nm,0.4s,baz=42,slow=5.8,SNR=4.8						
	comp=Z,0.3nm,0.4s						
ZALV	Zalesovo Beam	57.82	324	P	P	14 50 20.4	0.0
	comp=Z,1.6nm,0.6s,baz=21,slow=7.9,SNR=7.9						
	comp=Z,1.6nm,0.6s						
MKAR	Makanchi Array	64.87	322	P	P	14 51 07.6	-0.5
	comp=Z,0.6nm,0.5s,baz=35,slow=6.7,SNR=10						
	comp=Z,0.6nm,0.5s						

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*DDA **02** 14:46:36.3±0.0,37°.61N×38°.46E,h7^{km}±1^{km},ML2.6*

*ISK **02** 14:46:37.9,37°.60N×38°.43E,h16^{km},ML2.6/8*

ISC 02 14:46:36.9±1.2,37°.60N±0°.03×38°.44E±0°.03,h4^{km}±11^{km}, n16,$\sigma 0^{s}.64$/23,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URFA	Urfa	0.34	117	Pg	Pb	14 46 46.2	+0.7
URFA				Sg	Sb	14 46 50.9	-0.3
HANM	anlurfa/Hi	0.35	93	P	Pg	14 46 43.3	-0.3
HANM				*i* AML	AML	14 46 48.0	
	comp=N,670nm,0.2s						
HANM				S	Sg	14 46 48.1	0.0
SANL	SANLIURFA_Merk	0.61	134	P	Pg	14 46 48.2	-0.3
SANL				S	Sg	14 46 56.6	+0.2
AKCA	Adyaman/G¶l	0.63	288	P	Pg	14 46 49.1	+0.1
AKCA				S	Sg	14 46 58.3	+1.1
AKCA				*i* AML	AML	14 47 03.0	
	comp=N,383nm,0.3s						
MAYA	Malatya/Merkez	0.73	359	P	Pg	14 46 49.9	-1.0
SURC	SANLIURFA_SURC	0.73	169	P	Pg	14 46 50.9	0.0
GZT	Gaziantep	0.74	251	P	Pb	14 46 51.8	-0.6
NZIP	Nizip/Gaziante	0.83	228	P	Pg	14 46 51.7	-1.0
GAZ	Gaziantep	1.07	247	Pg	Pn	14 46 58.5	-0.1
GAZ				Sg	Sn	14 47 13.9	-0.1
DARE	Darende-Malaty	1.23	322	Pn	Pg	14 47 00.9	+0.4
DARE				Sn	Sn	14 47 18.2	+0.2
DYBB	Diyarbakir	1.39	75	Pn	Pn	14 47 02.5	-0.5
DYBB				Sn	Sg	14 47 22.4	+0.9
ARPR	Arapgir-MALATY	1.50	357	Pn	Pb	14 47 04.5	-0.8
MAZI	Mazidag	1.60	94	Pn	Pn	14 47 05.6	-0.4
SARI	SarD1z-Kayseri	1.79	297	Pn	Pn	14 47 09.0	+0.3
KOZT	Kozan	2.08	268	Pn	Pn	14 47 13.2	+0.7
SVAN	Silvan-Diyarba	2.25	75	Pn	Pn	14 47 15.7	+0.9

UPP 02 14:52:01.0±0.1,67°.17N×20°.64E,h0^{km},ML2.2, Confirmed Induced event,Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	Dundret	0.06	209	P	Pg	14 52 02.4	+0.3
DUNU				S	Sg	14 52 03.4	+0.6
MASU	Masugnsbyn	0.60	61	P	Pg	14 52 12.5	+0.1
RATU	Laukkuluspa	0.77	329	P	Pg	14 52 15.5	-0.3
SALU	Saltoluokta	0.85	285	P	Pg	14 52 17.4	+0.1
ERTU	Ertsjaerv	0.87	135	P	Pg	14 52 17.1	-0.5
NIKU	Nikkaluokta	0.93	319	P	Pg	14 52 18.1	-0.7
PAJU	Pajala	0.98	98	P	Pg	14 52 19.2	-0.6
HEF	Hetta	1.69	41	*e*P	Pn	14 52 31.9	+0.1
KIF	Kilpisjarvi	1.84	2	*e*P	Pb	14 52 35.7	+0.2

BER 02 14:52:48.2±0.9,60°.85N×5°.06E,h0^{km},ML0.8,Suspected explosion,Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUE	Sulen	0.25	325	*e*P	Pg	14 52 52.5	-0.6
SUE				*e*S	Sg	14 52 56.2	-0.1
SUE				IAML		14 52 58.0	
	comp=Z,4.6nm,0.1s						
ASK	Askoy	0.38	170	*e*P	Pg	14 52 54.8	-0.5
ASK				*e*S	Sg	14 52 59.5	-0.6
ASK				IAML		14 53 02.9	
	comp=Z,6.7nm,0.1s						
HYA	Hoyanger	0.63	60	*e*P	Pg	14 52 58.9	-1.4
HYA				*e*S	Sg	14 53 08.2	-0.3
HYA				IAML		14 53 09.5	
	comp=Z,2.7nm,0.1s						
FOO	Floro	0.75	359	*e*S	Sg	14 53 11.4	-0.9
ODD1	Odda	1.22	140	*e*P	Pg	14 53 09.8	-1.8
ODD1				*e*S	Sg	14 53 26.2	-1.2
ODD1				IAML		14 53 30.4	
	comp=Z,3.0nm,0.3s						
BLS5	Blasjo	1.59	153	*e*P	Pn	14 53 16.4	-1.3
BLS5				*e*S	Sn	14 53 35.8	-3.1
BLS5				IAML		14 53 39.8	
	comp=Z,2.2nm,0.3s						
SKAR	Skarslia	1.60	95	*e*P	Pn	14 53 16.6	-1.2
SKAR				*e*Sg	Sn	14 53 38.0	-1.2
SKAR				IAML		14 53 40.1	
	comp=Z,4.0nm,0.1s						
AKN	Aaknes	1.62	34	*e*P	Pn	14 53 16.2	-1.9
AKN				*e*Sg	Sn	14 53 38.4	-1.3
AKN				IAML		14 53 40.5	
	comp=Z,4.0nm,0.2s						

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*BJI **02** 14:53:38.4±0.0,32°.37N×132°.37E,h46^{km},mb4.8/80, mB5.1/70,Ms5.1/88,Ms7 5.0/82*

*MOS **02** 14:53:40.8±1.0,32°.60N×131°.98E,h47^{km},mb5.2/50, MS4.9/13,Error ellipse: s-maj=6.3km s-min=4.2km az=107.6*

*JMA **02** 14:53:42.7±0.1,32°.7N±0°.2×132°.1E±0°.2,h37^{km},MD5.3/39, MW5.2/39,HYUGANADA REGION*

JMA Felt IV J1 at HYUGANADA REGION .

*NEIC **02** 14:53:42.9,32°.62N×132°.11E,h30^{km},Moment Tensor Solution. Duration: $2^{s}.0$ Moment tensor: Scale 10^{16}Nm; M_{rr}-4.80; $M_{\theta\theta}$-0.25; $M_{\phi\phi}$5.05; $M_{r\theta}$2.96; $M_{\theta\phi}$0.98; $M_{\phi r}$7.48; Fault plane solution: $M_0$9.48000×10^{16} NP1: ϕ_s199.97000°,δ74.26000°,λ-84.11000°. NP2: ϕ_s359.15000°,δ16.78000°,λ-110.00000°. Principal axes: T 9.6175, Plg29.0000°, Azm285.0000°; N -0.2689, Plg6.0000°, Azm18.0000°; P -9.3486, Plg60.0000°, Azm118.0000°;*

*IDC **02** 14:53:42.1±1.3,32°.65N×131°.96E,h35^{km}±9^{km},mb4.4/34, mbtmp4.7/39,ML4.1/5,MS4.6/87 Error ellipse: s-maj=11.4km s-min=9.9km az=33.0*

*NEIC **02** 14:53:42.9,32°.64N×132°.10E,h48^{km}*

*NEIC **02** 14:53:42.6±2.4,32°.63N±0°.05×132°.10E±0°.02,h44^{km}±4^{km}, mb5.3/111,Mwr5.1/15,Mww5.3/22,Error ellipse: s-maj=7.6km s-min=0.9km az=197.0,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-4.57; $M_{\theta\theta}$-0.52; $M_{\phi\phi}$5.09; $M_{r\theta}$1.31; $M_{\theta\phi}$0.74; $M_{\phi r}$3.55; Fault plane solution: $M_0$6.20000×10^{16} NP1:ϕ_s195.79000°, δ64.08000°,λ-81.79000°. NP2:ϕ_s357.53000°,δ27.10000°, λ-106.37000°. Principal axes: T 6.4342, Plg19.0000°, Azm280.0000°; N -0.5066, Plg7.0000°, Azm12.0000°; P -5.9277, Plg70.0000°, Azm123.0000°;*

*NIED **02** 14:53:42.7,32°.65N×132°.13E,h37^{km},MW5.3,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.73; $M_{\theta\theta}$0.14; $M_{\phi\phi}$3.59; $M_{r\theta}$2.64; $M_{\theta\phi}$1.37; $M_{\phi r}$7.92; Fault plane solution: $M_0$9.22000×10^{16} NP1: ϕ_s199.00000°,δ77.00000°,λ-90.00000°. NP2:ϕ_s20.00000°, δ13.00000°,λ-88.00000°.*

*NEIC **02** 14:53:42.9,32°.62N×132°.11E,h30^{km}*

*GCMT **02** 14:53:43.6±0.2,32°.69N±0°.01×131°.82E±0°.01,h49^{km}±1^{km}, MW5.2/125,Moment Tensor Solution. s88,c137; s125,c219; Duration: $1^{s}.0$ Moment tensor: Scale 10^{17} Nm; M_{rr}-0.48±.02; $M_{\theta\theta}$-0.10±.01; $M_{\phi\phi}$0.58±.01; $M_{r\theta}$0.24±.01; $M_{\theta\phi}$-0.06±.01; $M_{\phi r}$0.60±.02; Best double couple: $M_0$0.84300×10^{17} NP1:ϕ_s196.00000°,δ71.00000°, λ-74.00000°. NP2:ϕ_s334.00000°,δ25.00000°, λ-129.00000°. Principal axes: T 0.8570, Plg25.0000°, Azm273.0000°; N -0.0270, Plg15.0000°, Azm10.0000°; P -0.8290, Plg61.0000°, Azm129.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 14:53:43.1±0.2,32°.61N±0°.02×132°.08E±0°.02,h47^{km}±1^{km}, h47^{km}:pP-P,n915,$\sigma 1^{s}.78$/903,mb5.1/179,MS4.7/107, 34C-18D,Shikoku

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSKE	Saikikamae	0.24	322	⇓P	Pn	14 53 49.8	-1.6
JSKE				⇓S	Sn	14 53 55.2	-2.1
JSKE	Saikikamae	0.24	322	A	A	14 53 49.8	
	comp=E,301nm,0.6s,comp=E,301nm,1.6s						
JHHC	Hyugahichiya	0.41	246	⇓*i*P	Pn	14 53 52.5	-0.5
JHHC				⇓S	Sn	14 54 00.0	-0.1
JHHC	Hyugahichiya	0.41	246	A	A	14 53 52.5	
	comp=E,699nm,1.2s,comp=E,345nm,0.3s						
JKIT	Kitakata	0.53	272	*i* P	Pn	14 53 54.2	-0.3
JKIT				S	Sn	14 54 02.9	+0.3
JKIT	Kitakata	0.53	272	A	A	14 53 54.2	
	comp=E,465nm,0.8s,comp=E,338nm,0.4s						
JUS	Usuki	0.53	329	P	Pn	14 53 53.5	-1.1
JUS				S	Sn	14 54 01.8	-1.0
JUS	Usuki	0.53	329	A	A	14 53 53.5	
	comp=E,434nm,0.8s,comp=E,324nm,0.5s						
JTSN	Tsuno	0.60	233	⇓*i*P	Pn	14 53 55.4	-0.1
JTSN				⇓S	Sn	14 54 05.3	+0.9
JTSN	Tsuno	0.60	233	A	A	14 53 55.4	
	comp=E,192nm,0.8s,comp=E,386nm,2.2s						
JTO	Tosashimizu	0.66	68	*i* P	Pn	14 53 54.6	-1.6
JTO				S	Sn	14 54 03.6	-2.1
JTO	Tosashimizu	0.66	68	A	A	14 53 54.6	
	comp=E,167nm,1.4s,comp=E,168nm,1.4s						
UWA2	Uwa jima 2	0.76	37	⇓P	Pn	14 53 55.9	-1.7
UWA2				⇓S	Sn	14 54 06.0	-2.0
UWA2	Uwa jima 2	0.76	37	A	A	14 53 55.9	
	comp=E,81nm,1.1s,comp=E,146nm,5.3s						
JBEP	Beppuamama	0.92	322	A	A	14 53 59.4	
	comp=E,371nm,0.9s,comp=E,454nm,0.9s						
JNA	Nagahama	1.00	20	P	Pn	14 53 59.7	-1.2
JNA	Nagahama	1.00	20	A	A	14 53 59.7	
	comp=E,42nm,3.4s,comp=E,34nm,5.2s						
JIU3	Izumi3	1.07	267	*i* P	Pn	14 54 02.7	+1.0
JIU3	Izumi3	1.07	267	A	A	14 54 02.7	
	comp=E,141nm,1.1s,comp=E,106nm,1.1s						
JKU	Kubokawa	1.08	50	P	Pn	14 54 00.5	-1.5
JKU	Kubokawa	1.08	50	A	A	14 54 00.5	
	comp=E,44nm,3.6s,comp=E,82nm,2.9s						
JTZ	Takazaki	1.09	230	⇓*i*P	Pn	14 54 02.8	+0.7
JTZ	Takazaki	1.09	230	A	A	14 54 02.8	
	comp=E,99nm,3.1s,comp=E,111nm,1.6s						
JKI	Kunimi	1.11	338	A	A	14 54 02.0	
	comp=E,155nm,1.2s,comp=E,269nm,2.2s						
JNKG	Nichinankitago	1.11	212	A	A	14 54 03.2	
	comp=E,94nm,2.7s,comp=E,70nm,2.3s						
JNU	Nakatsue	1.13	297	Pg	Pn	14 54 03.4	+0.8
	13µm,0.3s,baz=67,slow=4.6						
JNU				Lg	Lg	14 54 19.0	
	11µm,0.3s,baz=308,slow=15,SNR=22						
JNU	Nakatsue	1.13	297	P	Pn	14 54 04.0	+1.4
JNU	Nakatsue	1.13	297	A	A	14 54 03.0	
	comp=E,120nm,3.2s,comp=E,78nm,0.8s						
JNAR	Kushima--Naru	1.28	213	A	A	14 54 05.5	
	comp=E,104nm,2.7s,comp=E,88nm,1.5s						
JZO	Okuchi	1.33	250	A	A	14 54 06.4	
	comp=E,180nm,1.5s,comp=E,216nm,3.0s						
JTA	Tamana	1.35	286	A	A	14 54 06.3	
	comp=E,147nm,1.7s,comp=E,57nm,3.2s						
JET	Tanbara	1.42	35	A	A	14 54 06.1	
	comp=E,29nm,1.3s,comp=E,30nm,3.2s						
JKD	Kudamatsu	1.45	353	A	A	14 54 06.9	
	comp=E,53nm,4.9s,comp=E,24nm,2.0s						
JKHR	Kochiharuno	1.50	53	A	A	14 54 07.0	
	comp=E,52nm,1.5s,comp=E,87nm,3.4s						
JFA	Akaike	1.54	316	A	A	14 54 08.7	
	comp=E,52nm,2.9s,comp=E,66nm,3.1s						
JHM	Kurahashi	1.57	14	A	A	14 54 08.4	
	comp=E,61nm,4.1s,comp=E,28nm,3.5s						
JFI	Itaya	1.64	300	A	A	14 54 10.3	
	comp=E,37nm,3.7s,comp=E,64nm,3.4s						
JHD	Hondo	1.64	266	A	A	14 54 10.8	
	comp=E,105nm,1.6s,comp=E,96nm,3.8s						
JTSR	Tashiro 2	1.74	215	A	A	14 54 12.3	
	comp=E,50nm,2.4s,comp=E,40nm,3.0s						
JSU	Suzuyama	1.76	232	Pn	Pn	14 54 11.9	+0.7
JSU	Suzuyama	1.76	232	P	Pn	14 54 13.4	+2.2
JSU	Suzuyama	1.76	232	A	A	14 54 12.6	
	comp=E,34nm,5.5s,comp=E,29nm,1.9s						
JTY	Toyota	1.85	333	A	A	14 54 13.0	
	comp=E,52nm,3.0s,comp=E,58nm,3.6s						
JUR	Ureshino	1.85	286	A	A	14 54 13.7	
	comp=E,185nm,1.9s,comp=E,55nm,1.9s						
JMN	Monobe	1.88	53	Pn	Pn	14 54 11.6	-1.3
JMN	Monobe	1.88	53	P	Pn	14 54 14.8	+2.0
JMN	Monobe	1.88	53	A	A	14 54 12.6	
	comp=E,94nm,3.7s,comp=E,95nm,2.1s						
MRT2	Murotomisaki 2	1.90	65	A	A	14 54 13.0	
	comp=E,52nm,4.2s,comp=E,55nm,3.2s						
JHIK	Hikimi	1.92	356	A	A	14 54 13.6	
	comp=E,28nm,1.4s,comp=E,19nm,3.0s						
NGSJ	Nagasakinomoza	1.92	271	A	A	14 54 14.8	
	comp=E,57nm,3.9s,comp=E,106nm,2.0s						
JHT	Toyohira	2.07	8	A	A	14 54 15.6	
	comp=E,36nm,2.0s,comp=E,20nm,2.1s						
JTN	Tanegashima 3	2.16	206	A	A	14 54 18.3	
	comp=E,32nm,1.7s,comp=E,25nm,1.8s						
JSJ	Shimokoshiki	2.21	246	A	A	14 54 19.0	
	comp=E,30nm,2.2s,comp=E,60nm,3.9s						
JJG	Jouge	2.22	24	A	A	14 54 17.6	
	comp=E,39nm,4.4s,comp=E,43nm,4.1s						
JMAF	Mimaanabuki	2.25	50	A	A	14 54 18.0	
	comp=E,41nm,4.8s,comp=E,69nm,3.4s						
JII	Iki	2.29	302	A	A	14 54 19.8	
	comp=E,108nm,2.7s,comp=E,59nm,2.0s						
JHGM	Hagimishima	2.30	340	A	A	14 54 19.3	
	comp=E,47nm,3.7s,comp=E,44nm,4.6s						
JAI	Aioi	2.31	59	A	A	14 54 18.9	
	comp=E,24nm,4.4s,comp=E,38nm,2.8s						
JJS	Sakaide	2.35	41	A	A	14 54 19.3	
	comp=E,66nm,4.2s,comp=E,42nm,4.5s						
JMTN	Minamitane	2.42	205	A	A	14 54 22.0	
	comp=E,33nm,2.0s,comp=E,23nm,1.8s						
JGT2	ShimaneMisato	2.48	8	A	A	14 54 21.4	
	comp=E,27nm,3.9s,comp=E,11nm,2.3s						
JHS	Saijyo	2.54	20	Pn	Pn	14 54 21.4	-0.4
JHS	Saijyo	2.54	20	P	Pn	14 54 26.1	+4.3
JHS	Saijyo	2.54	20	A	A	14 54 22.2	
	comp=E,54nm,2.4s,comp=E,19nm,1.4s						
JKC	Kuchinoerabu	2.67	217	A	A	14 54 25.7	
	comp=E,16nm,3.9s,comp=E,26nm,5.0s						
JYAK	Yakushimahirau	2.72	210	A	A	14 54 26.3	
	comp=E,17nm,5.7s,comp=E,17nm,4.7s						
JFU	Fukue jima 2	2.81	272	A	A	14 54 27.4	
	comp=E,27nm,2.8s,comp=E,32nm,6.1s						
JTSM	Tsushimamitsus	2.83	308	A	A	14 54 27.3	
	comp=E,20nm,4.0s,comp=E,26nm,3.3s						
JTU	Tsushima	2.94	311	Pn	Pn	14 54 27.4	+0.1
JTU	Tsushima	2.94	311	P	Pn	14 54 27.9	+0.6
JTU	Tsushima	2.94	311	A	A	14 54 28.9	
	comp=E,29nm,4.8s,comp=E,25nm,2.3s						
JISK	Izumosakaura	2.96	12	A	A	14 54 28.2	
	comp=E,31nm,3.6s,comp=E,32nm,4.2s						
JNM	Ikuma	2.99	15	A	A	14 54 28.7	
	comp=E,38nm,4.0s,comp=E,39nm,1.4s						
JAWN	Awajishima-nag	3.01	51	A	A	14 54 28.8	
	comp=E,44nm,3.9s,comp=E,65nm,2.8s						
JWM	Minabe	3.01	65	A	A	14 54 28.8	
	comp=E,16nm,3.4s,comp=E,17nm,6.6s						
JKR	Kurayoshi	3.12	27	A	A	14 54 30.4	
	comp=E,25nm,3.0s,comp=E,21nm,3.2s						
JTNC	Tanabenakahech	3.20	67	A	A	14 54 31.5	
	comp=E,14nm,3.4s,comp=E,13nm,3.4s						
JKS	Kasai	3.31	43	A	A	14 54 33.0	
	comp=E,26nm,3.0s,comp=E,14nm,3.0s						
JMIK	Miki	3.31	48	A	A	14 54 33.1	
	comp=E,51nm,4.5s,comp=E,62nm,3.5s						
JHE	Heguri	3.64	55	A	A	14 54 37.6	
	comp=E,39nm,5.4s,comp=E,21nm,4.4s						
JKSM	Kasumi	3.67	35	A	A	14 54 38.1	
	comp=E,21nm,3.3s,comp=E,20nm,3.8s						
JOI	OKI	3.80	14	A	A	14 54 40.1	
	comp=E,28nm,4.0s,comp=E,21nm,1.8s						
JWT	Wachi	3.84	45	A	A	14 54 40.5	
	comp=E,23nm,3.8s,comp=E,15nm,4.9s						
JKY	Yasaka	3.92	39	A	A	14 54 41.7	
	comp=E,33nm,4.0s,comp=E,23nm,3.5s						
JFM	Mihama	4.36	47	A	A	14 54 47.8	
	comp=E,13nm,4.2s,comp=E,15nm,2.1s						
JEG	Eigenji	4.39	54	A	A	14 54 48.2	
	comp=E,11nm,4.3s,comp=E,18nm,3.5s						
JICN	Ichinomiyachia	4.79	55	A	A	14 54 53.8	
	comp=E,23nm,3.3s,comp=E,23nm,4.8s						
JYTA	Yamagatataniai	4.88	51	A	A	14 54 55.1	
	comp=E,13nm,5.3s,comp=E,22nm,4.9s						
INU	Inuyama	4.93	55	Pn	Pn	14 54 55.5	+0.8
INU	Inuyama	4.93	55	P	Pn	14 54 56.1	+1.5
JKG	Kaga	5.08	43	A	A	14 54 57.9	
	comp=E,16nm,4.2s,comp=E,12nm,3.1s						
JGF	Kuroka	5.30	54	Pn	Pn	14 54 58.2	-1.6
JGF	Kuroka	5.30	54	P	Pn	14 55 00.7	+0.9
JGF	Kuroka	5.30	54	A	A	14 55 01.0	
	comp=E,10.0nm,5.7s,comp=E,14nm,3.9s						
TJN	Taejon	5.41	315	Pn	Pn	14 55 01.9	+0.8
TJN	Taejon	5.41	315	P	Pn	14 55 02.2	+1.0
TJN	Taejon	5.41	315	P	Pn	14 55 02.0	+0.8
JSG	Sagara	5.50	66	Pn	Pn	14 55 02.3	-0.1
JSG	Sagara	5.50	66	P	Pn	14 55 03.9	+1.5
JGN	Niukaw	5.63	49	A	A	14 55 05.7	
	comp=E,12nm,4.9s,comp=E,10.0nm,4.5s						
JJH	Hakui	5.79	41	A	A	14 55 07.9	
	comp=E,15nm,4.9s,comp=E,14nm,4.9s						
JTT	Ttatey	5.89	46	A	A	14 55 09.3	
	comp=E,27nm,4.0s,comp=E,23nm,4.1s						
KSRS	Korea Array	5.91	326	Pn	Pn	14 55 09.0	+0.9
	20nm,0.3s,baz=145,slow=14,SNR=206						
KSRS				Sn	Sn	14 56 14.6	+0.1
	17nm,0.3s,baz=146,slow=25,SNR=6.2						
KSRS				Lg	Lg	14 56 46.5	
	8.7nm,0.3s,baz=150,slow=30,SNR=4.2						
KSAR	Wonju Array Be	5.92	326	Pn	Pn	14 55 06.6	-1.6
KSAR	Wonju Array Be	5.92	326	P	Pn	14 55 06.6	-1.6
KS19	Wonju Array Si	5.98	326	Pn	Pn	14 55 07.2	-1.8
MJB9	Matsu-Tunnel	6.40	50	Pn	Pn	14 55 13.6	-1.2
MAJO	Matsushiro	6.40	50	Pn	Pn	14 55 12.3	-2.5
MAJO	Matsushiro	6.40	50	P	Pn	14 55 15.2	+0.4
MAJO	Matsushiro	6.40	50	*i* P	Pn	14 55 13.9	-0.9
MJAR	Matsushiro Arr	6.40	51	Pn	Pn	14 55 15.5	+0.6
	3.1nm,0.3s,baz=241,slow=13,SNR=78						
MJAR				Sn	Sn	14 56 24.5	-2.1
	baz=234,slow=24						
	31nm,0.4s						
JHJ	Hachijo jima 2	6.50	83	Pn	Pn	14 55 15.9	-0.3
	98nm,0.3s,baz=339,slow=23,SNR=21						
JHJ				Sn	Sn	14 56 26.8	-2.3
	baz=62,slow=23						
JHJ				LR	LR	14 57 47.5	
	comp=Z,7µm,19.5s,baz=284,slow=37						
	192nm,0.3s						
JHJ2	Mitsune	6.53	84	Pn	Pn	14 55 14.1	-2.5
INCN	Inchon	6.60	319		Pn	14 55 18.6	+1.0
INCN	Inchon	6.60	319	P	Pn	14 55 19.2	+1.6
INCN	Inchon	6.60	319	P	Pn	14 55 18.6	+1.0
JOW	Kunigami	6.64	211	Pn	Pn	14 55 18.7	+0.6
	4.3nm,0.3s,baz=100,slow=21,SNR=6.2						

JOW				Sn	**Sn**	**14 56 29.4**	**-3.0**
	18nm,0.3s,baz=183,slow=24,SNR=9.6						
JOW				LR	LR	14 58 21.2	
	comp=Z,3µm,19.6s,baz=72,slow=42						
	14nm,0.3s						
JOW	**Kunigami**	**6.64**	**211**	Pn	**Pn**	**14 55 20.0**	**+1.9**
JSD	**Sado**	**7.41**	**41**	Pn	**Pn**	**14 55 27.6**	**-1.0**
JSD	**Sado**	**7.41**	**41**	P	**Pn**	**14 55 31.7**	**+3.1**
JMM	**Marumori**	**8.85**	**51**	Pn	**Pn**	**14 55 49.4**	**+1.0**
JMM	**Marumori**	**8.85**	**51**	P	**Pn**	**14 55 49.5**	**+1.1**
SSE	**Sheshan**	**9.38**	**264**	P	**Pn**	**14 55 54.5**	**-1.2**
SSE				S	**Sn**	**14 57 40.3**	**+0.5**
SSE				pmax	pmax		
	comp=Z,15nm,0.7s						
SSE				pmax	pmax		
	comp=Z,110nm,3.7s						
SSE				LR	LR		
	comp=N,1µm,13.6s						
SSE				LR	LR		
	comp=E,4µm,13.5s						
JCJ	**Chichijima**	**10.35**	**119**	Sn	**Sn**	**14 58 01.6**	**-2.0**
	10nm,0.3s,baz=289,slow=20,SNR=2.4						
JCJ				LR	LR	14 59 39.2	
	comp=Z,6µm,20.7s,baz=314,slow=34						
DL2	**Dalian**	**10.56**	**309**	P	**Pn**	**14 56 12.9**	**+1.2**
DL2				S	**Sn**	**14 58 13.8**	**+5.3**
DL2				pmax	pmax		
	comp=Z,79nm,1.2s						
DL2				pmax	pmax		
	comp=Z,460nm,5.2s						
DL2				LR	LR		
	comp=N,9µm,4.3s						
DL2				LR	LR		
	comp=E,4µm,5.4s						
DL2				LR	LR		
	comp=Z,5µm,5.0s						
JTM	**Tenmabayashi**	**10.89**	**39**	P	**Pn**	**14 56 18.3**	**+2.0**
NJ2	**Nanjing**	**11.20**	**271**	⇑*i*P	**Pn**	**14 56 23.5**	**+3.0**
NJ2				PP	**PnPn**	**14 56 35.2**	**+6.9**
NJ2				sP		14 56 38.8	
NJ2				S	**Sn**	**14 58 28.9**	**+4.6**
NJ2				SS	**SnSn**	**14 58 45.7**	**+9.4**
NJ2				pmax	pmax		
	comp=Z,70nm,1.1s						
NJ2				LR	LR		
	comp=N,2µm,8.8s						
NJ2				LR	LR		
	comp=E,8µm,10.9s						
NJ2				LR	LR		
	comp=Z,7µm,17.1s						
USA0B	**Ussuriysk Arra**	**11.57**	**360**	*i* P	**Pn**	**14 56 26.4**	**+0.8**
USRK	**Ussuriysk Ar.**	**11.57**	**360**	Pn	Pn	14 56 31.3	+5.8
	1.2nm,0.3s,baz=188,slow=14,SNR=14						
USRK				LR	LR	15 00 44.0	
	comp=Z,3µm,18.5s,baz=166,slow=37						
MDJ	**Mudanjiang**	**12.14**	**352**	P	**Pn**	**14 56 34.2**	**+0.8**
MDJ				PP	**PnPn**	**14 56 42.1**	**+0.7**
MDJ				S	**Sn**	**14 58 52.8**	**+5.5**
MDJ				SS	**SnSn**	**14 59 06.8**	**+6.9**
MDJ				PcS	**PcS**	**15 05 42.9**	**-5.6**
MDJ				ScS	**ScS**	**15 09 15.2**	**-4.2**
MDJ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,280nm,4.5s						
MDJ				LR	LR		
	comp=N,3µm,17.6s						
MDJ				LR	LR		
	comp=E,2µm,16.3s						
MDJ				LR	LR		
	comp=Z,4µm,21.1s						
MDJ	**Mudanjiang**	**12.14**	**352**	P	**Pn**	**14 56 36.7**	**+3.3**
CN2	**Changchun**	**12.32**	**337**	*e*P	**Pn**	**14 56 38.8**	**+3.0**
CN2				*e*pP	P	14 56 48.0	+1.2
CN2				*e*sP		14 56 57.2	
CN2				*e*S	**Sn**	**14 58 53.9**	**+2.2**
CN2				*e*SS	**SnSn**	**14 59 09.9**	**+5.6**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				LR	LR		
	comp=N,3µm,11.0s						
CN2				LR	LR		
	comp=E,4µm,11.0s						
CN2				LR	LR		
	comp=Z,4µm,12.0s						
ERM	**Erimo**	**12.87**	**40**	Pn	**Pn**	**14 56 40.9**	**-2.3**
ERM	**Erimo**	**12.87**	**40**	*i* P	**Pn**	**14 56 42.5**	**-0.8**
SSLB	**Suanglung**	**13.16**	**231**	Pn	**Pn**	**14 56 46.9**	**-0.5**
BNX	**BinXian**	**13.60**	**346**	⇑P	**P**	**14 56 58.2**	**-2.8**
BNX				S	**Sn**	**14 59 28.7**	**+5.9**
BNX				PcP	**PcP**	**15 02 17.7**	**+1.4**
BNX				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BNX				pmax	pmax		
	comp=Z,190nm,6.5s						
BNX				LR	LR		
	comp=N,3µm,15.2s						
BNX				LR	LR		
	comp=E,1µm,10.4s						
BNX				LR	LR		
	comp=Z,3µm,17.3s						
TPUB	**Ta-pu**	**13.71**	**230**	Pn	**Pn**	**14 56 53.9**	**-1.0**
ASAJ	**Asahikawa**	**14.13**	**33**	Pn	**Pn**	**14 56 59.5**	**-0.9**
	1.0nm,0.3s,baz=245,slow=7.5,SNR=21						
ASAJ				LR	LR	15 02 14.0	
	comp=Z,2µm,20.1s,baz=236,slow=36						
	16nm,0.9s						
JKA	**Kamikawa-asahi**	**14.13**	**33**	Pn	**Pn**	**14 56 59.4**	**-1.1**
BJT	**Baijiatuau**	**14.79**	**304**		**P**	**14 57 12.7**	**-1.6**
BJT	**Baijiatuau**	**14.79**	**304**	P	**Pn**	**14 57 10.8**	**+1.5**
BJT	**Baijiatuau**	**14.79**	**304**	P	**P**	**14 57 12.7**	**-1.6**
BJI	**Beijing**	**14.80**	**305**	P	**Pn**	**14 57 10.6**	**+1.3**
BJI				S	**S**	**15 00 06.0**	**-2.4**
BJI				pmax	pmax		
	comp=Z,18nm,0.9s						
HNS	**HongShan**	**15.01**	**293**	⇑P	**Pn**	**14 57 13.2**	**+1.1**
HNS				sP	**pP**	**14 57 29.8**	**+2.1**
HNS				pmax	pmax		
	comp=Z,190nm,1.0s						
HNS				pmax	pmax		
	comp=Z,1µm,5.9s						
HNS				LR	LR		
	comp=N,5µm,16.7s						
HNS				LR	LR		
	comp=E,9µm,15.9s						
HNS				LR	LR		
	comp=Z,9µm,15.9s						
WHN	**Wuhan**	**15.25**	**267**	⇑P	**P**	**14 57 20.7**	**+1.3**
WHN				sP	**pP**	**14 57 31.7**	**+1.3**
WHN				S	**S**	**15 00 12.2**	**-5.7**
WHN				pmax	pmax		
	comp=Z,130nm,0.9s						
WHN				pmax	pmax		
	comp=Z,2µm,2.5s						
WHN				LR	LR		
	comp=N,10µm,5.3s						
WHN				LR	LR		
	comp=E,3µm,7.2s						
WHN				LR	LR		
	comp=Z,25µm,12.2s						
YUK	**Yuzh-Kuril'sk**	**15.70**	**39**	*i* P	**Pn**	**14 57 20.7**	**-0.3**
LYN	**LuoYang**	**16.46**	**282**	⇑*i*P	**P**	**14 57 31.9**	**-0.9**
LYN				pP	pP	14 57 44.1	+0.3
LYN				S	**S**	**15 00 42.7**	**+0.2**
LYN				pmax	pmax		
	comp=Z,1µm,8.0s						
LYN				LR	LR		
	comp=Z,2µm,15.5s						
LYN				LR	LR		
	comp=Z,4µm,18.0s						
LYN				LR	LR		
	comp=Z,5µm,17.8s						
YSS	**Yuzh-Sakhalins**	**16.49**	**27**	P	**P**	**14 57 33.2**	**+0.2**
YSS	**Yuzh-Sakhalins**	**16.49**	**27**	⇑*e*P	**Pn**	**14 57 31.3**	**+0.3**
YSS				*e*S	**Sn**	**15 00 29.7**	**-3.2**
YSS				pmax	pmax		
	comp=Z,600nm,5.2s						
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
YSS				MLR	MLR		
	comp=Z,1µm,13.0s						
YSS				MLR	MLR		
	comp=N,1µm,16.0s						
KLR	**Kul'dur**	**16.61**	**359**	Pn	**P**	**14 57 33.6**	**-0.7**
	comp=N,1.9nm,0.3s,baz=170,slow=9.4,SNR=56						
KLR				LR	LR	15 03 42.6	
	comp=N,1µm,19.0s,baz=166,slow=36						
	comp=N,104nm,1.2s						
KLR	**Kul'dur**	**16.61**	**359**	*ce*P	**P**	**14 57 34.8**	**+0.4**
KLR				pmax	pmax		
	comp=Z,121nm,1.3s						
TIY	**Taiyuan**	**16.84**	**293**	⇑P	**P**	**14 57 36.6**	**-0.6**
TIY				pP	**pP**	**14 57 50.6**	**+2.5**
TIY				S	**S**	**15 00 51.6**	**+1.1**
TIY				pmax	pmax		
	comp=Z,32nm,0.6s						
TIY				pmax	pmax		
	comp=Z,1µm,5.0s						
TIY				LR	LR		
	comp=Z,2µm,13.5s						
TIY				LR	LR		
	comp=Z,6µm,15.1s						
TIY				LR	LR		
	comp=Z,7µm,16.1s						
XLT	**XiLinHaoTe**	**16.85**	**317**	*e*P	**P**	**14 57 41.1**	**+3.9**
XLT				pP	pP	14 57 50.1	+2.0
XLT				sP	sP	14 57 56.8	+2.7
XLT				S	**S**	**15 00 51.1**	**+0.6**
XLT				sS	sS	15 01 04.3	-3.5
XLT				pmax	pmax		
	comp=Z,36nm,0.9s						
XLT				pmax	pmax		
	comp=Z,760nm,7.8s						
XLT				LR	LR		
	comp=Z,6µm,13.1s						
XLT				LR	LR		
	comp=Z,8µm,13.5s						
SGCP	**Gonzaga**	**16.92**	**215**	⇑*e*P	**P**	**14 57 41.4**	**+3.4**
CNSH	**ChangSha**	**17.09**	**260**	⇑P	**P**	**14 57 40.5**	**+0.6**
CNSH				S	**Sn**	**15 00 47.6**	**-0.2**
CNSH				LR	LR		
	comp=Z,3µm,7.9s						
CNSH				LR	LR		
	comp=Z,4µm,15.8s						
CNSH				LR	LR		
	comp=Z,4µm,15.2s						
HEH	**HeiHe**	**17.97**	**350**	*e*P	**Pn**	**14 57 49.2**	**-0.1**
HEH				pP	**pP**	**14 58 01.2**	**+0.9**
HEH				S	**Sn**	**15 01 10.4**	**+1.8**
HEH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HEH				pmax	pmax		
	comp=Z,320nm,5.5s						
HEH				LR	LR		
	comp=Z,2µm,17.5s						
HEH				LR	LR		
	comp=Z,2µm,13.9s						
HEH				LR	LR		
	comp=Z,2µm,20.4s						
HHC	**Hu-ho-hao-te**	**18.36**	**302**	*e*P	**Pn**	**14 57 55.7**	**+1.5**
HHC				S	**S**	**15 01 24.0**	**+2.8**
HHC				sS	sS	15 01 30.5	-8.1
HHC				pmax	pmax		
	comp=Z,69nm,0.8s						
HHC				pmax	pmax		
	comp=Z,2µm,4.4s						
HHC				LR	LR		
	comp=Z,5µm,15.5s						
HHC				LR	LR		
	comp=Z,10µm,14.9s						
HHC				LR	LR		
	comp=Z,14µm,14.4s						
GRNR	**Gornyy**	**18.43**	**9**	⇑*i*P	**Pn**	**14 57 55.0**	**+0.1**
GRNR				*e*S	**S**	**15 01 21.6**	**-0.7**
GRNR				pmax	pmax		
	comp=E,1.0nm,0.6s						
GRNR				pmax	pmax		
	comp=N,3.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GRNR				smax	smax		
	comp=N,2.0nm,0.6s						
GRNR				MLR	MLR		
	comp=E,1µm,16.0s						
GRNR				MLR	MLR		
	comp=N,740nm,15.0s						
SAMP	**Sagada Mountai**	**18.47**	**216**	⇓*e*P	**P**	**14 57 55.2**	**+0.1**
HKPS	**Hong Kong Po S**	**18.93**	**242**	P	**P**	**14 57 56.6**	**-3.5**
HIA	**Hailar**	**19.03**	**335**		**P**	**14 57 56.6**	**-4.5**
HIA	**Hailar**	**19.03**	**335**	P	**Pn**	**14 58 03.2**	**+1.0**
HIA	**Hailar**	**19.03**	**335**	P	**P**	**14 57 56.6**	**-4.5**
HIA				pmax	pmax		
	comp=Z,25nm,0.8s						
BTO	**Baotou**	**19.39**	**301**	*e*P	**Pn**	**14 58 07.3**	**+0.7**
BTO				S	**S**	**15 01 41.4**	**-0.6**
BTO				LR	LR		
	comp=Z,9µm,18.0s						
BTO				LR	LR		
	comp=Z,13µm,18.8s						
XAN	**Xi'an**	**19.40**	**281**	⇑P	**P**	**14 58 05.4**	**+0.1**
XAN				S	**S**	**15 01 42.6**	**+0.4**
XAN				pmax	pmax		
	comp=Z,18nm,1.3s						
XAN				pmax	pmax		
	comp=Z,710nm,7.5s						
XAN				LR	LR		
	comp=Z,3µm,11.4s						
XAN				LR	LR		
	comp=Z,3µm,14.3s						
XAN				LR	LR		
	comp=Z,3µm,18.1s						
ENH	**Enshi**	**19.41**	**269**		**P**	**14 58 03.7**	**-1.7**
ENH	**Enshi**	**19.41**	**269**	P	**P**	**14 58 05.5**	**+0.1**
TYV	**Tymovskoe**	**19.84**	**20**	*e*P	**Pn**	**14 58 12.3**	**+0.6**
TYV				*e*S	**Sn**	**15 01 55.3**	**+1.6**
TYV				pmax	pmax		
	comp=Z,14nm,0.9s						
TYV				pmax	pmax		
	comp=Z,200nm,3.4s						
TYV				smax	smax		
	comp=N,400nm,6.1s						
TYV				smax	smax		
	comp=E,500nm,6.1s						
JCNP	**Jose Panganiba**	**20.14**	**207**	⇑*e*P	Pn	14 58 16.9	+1.3
PVCP	**Virac**	**20.26**	**203**	⇑*e*P	Pn	14 58 18.6	+1.5
LQP	**Lukban**	**20.77**	**210**	⇑*e*P	Pn	14 58 33.4	+10
BOAC	**Boac**	**21.23**	**208**	⇑*e*P	**P**	**14 58 28.9**	**+3.7**
ZEA	**Zeya**	**21.40**	**352**	*e*P	**P**	**14 58 26.1**	**-0.6**
ZEA				*e*S	**S**	**15 02 11.7**	**-10**
ZEA				*e*		15 03 11.0	
ZEA				pmax	pmax		
	comp=Z,200nm,3.8s						
ZEA				pmax	pmax		
	comp=N,40nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,70nm,0.9s						
ZEA				smax	smax		
	comp=E,500nm,11.9s						
ZEA				MLR	MLR		
	comp=N,800nm,18.0s						
ZEA				MLR	MLR		
	comp=E,600nm,18.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,17.0s						
OTRP	**Odiongan**	**22.16**	**207**	⇓*e*P	**P**	**14 58 37.1**	**+1.9**
GUMO	**Guam**	**22.25**	**145**	LR	LR	15 06 29.9	
	comp=Z,966nm,19.9s,baz=18,slow=34						
GYA	**Guiyang**	**22.91**	**261**	⇑P	**P**	**14 58 42.3**	**-0.9**
GYA				pP	pP	14 58 53.6	-0.9
GYA				pmax	pmax		
	comp=Z,22nm,1.0s						
GYA				pmax	pmax		
	comp=Z,340nm,6.2s						
GYA				LR	LR		
	comp=Z,2µm,16.8s						
GYA				LR	LR		
	comp=Z,2µm,19.5s						
GYA				LR	LR		
	comp=Z,3µm,23.4s						
BUSP	**Coron**	**23.23**	**211**	⇓*e*P	**P**	**14 58 47.8**	**+1.5**
LZH	**Lanzhou**	**23.53**	**286**	⇑P	**P**	**14 58 48.2**	**-1.1**
LZH				pP	pP	14 58 58.6	-2.5
LZH				sP	sP	14 59 04.6	-2.2
LZH				S	**S**	**15 02 58.8**	**-1.2**
LZH				pmax	pmax		
	comp=Z,51nm,1.4s						
LZH				pmax	pmax		
	comp=Z,930nm,4.8s						
LZH				LR	LR		
	comp=Z,2µm,13.1s						
LZH				LR	LR		
	comp=Z,3µm,13.1s						
LZH				LR	LR		
	comp=Z,4µm,14.4s						
CIT	**Chita**	**23.62**	**331**	*e*P	**P**	**14 58 48.9**	**-0.9**
CIT				*e*		14 59 00.4	
CIT				*e*		14 59 19.6	
CIT				*e*		14 59 32.9	
CIT				pmax	pmax		
	comp=Z,69nm,1.3s						
QIZ	**Qiongzhong**	**24.09**	**241**	P	**P**	**14 58 53.9**	**-0.4**
QIZ				sP	**sP**	**14 59 13.6**	**+1.5**
QIZ				S	**S**	**15 03 09.7**	**+0.9**
QIZ				LR	LR		
	comp=Z,1µm,16.9s						
QIZ				LR	LR		
	comp=Z,1µm,13.9s						
QIZ				LR	LR		
	comp=Z,2µm,13.9s						
CD2	**Chengdu**	**24.11**	**274**	P	**P**	**14 58 53.3**	**-1.2**
CD2				pP	pP	14 59 05.2	-1.5
CD2				sP	sP	14 59 11.6	-0.7
CD2				S	**S**	**15 03 09.4**	**+0.2**
CD2				sS	sS	15 03 28.5	-0.9
CD2				pmax	pmax		
	comp=Z,30nm,0.7s						
CD2				pmax	pmax		
	comp=Z,380nm,4.6s						
CD2				LR	LR		
	comp=Z,3µm,11.1s						
CD2				LR	LR		
	comp=Z,5µm,11.7s						
CD2				LR	LR		
	comp=Z,9µm,12.3s						
ENPP	**El Nido**	**24.27**	**212**	⇓*e*P	**P**	**14 58 52.0**	**-4.0**
ULN	**Ulaanbaatar**	**24.29**	**316**	P	**P**	**14 58 54.7**	**-1.4**
ULN				IAmb	IAmb	14 59 10.2	
	comp=Z,62nm,1.1s						
ULN	**Ulaanbaatar**	**24.29**	**316**	P	**P**	**14 58 54.7**	**-1.4**
ULN				pmax	pmax		
	comp=Z,62nm,1.1s						
CNOP	**Candoni, Negro**	**24.29**	**203**	⇑*e*P	**P**	**14 58 57.7**	**+1.5**
SONM	**Songino Array**	**24.66**	**316**	P	**P**	**14 58 58.7**	**-0.8**
	comp=Z,7.0nm,0.7s,baz=130,slow=7.0,SNR=48						
SONM				LR	LR	15 09 58.4	
	comp=Z,4µm,18.4s,baz=120,slow=40						
	comp=Z,7.0nm,0.7s						
SONM	**Songino Array**	**24.66**	**316**	P	**P**	**14 58 57.2**	**-2.3**
SONM				IAmb	IAmb	14 59 13.0	
	comp=Z,95nm,1.0s						
SONM	**Songino Array**	**24.66**	**316**	P	**P**	**14 58 57.2**	**-2.3**
SONM				pmax	pmax		
	comp=Z,95nm,1.0s						
SKR	**Severo-Kuril's**	**25.29**	**37**	*ce*P	**P**	**14 59 05.2**	**+0.2**
PAGZ	**Pagadian**	**25.93**	**200**	⇓*e*P	**P**	**14 59 12.4**	**+1.4**
DAV	**Davao City (W)**	**26.12**	**195**	LR	LR	15 09 19.5	
	comp=Z,260nm,20.5s,baz=28,slow=36						
KMI	**Kunming**	**26.69**	**261**	⇑P	**P**	**14 59 16.8**	**-1.4**
KMI				pP	pP	14 59 29.7	-0.7
KMI				sP	sP	14 59 36.1	+0.1
KMI				S	**S**	**15 03 46.1**	**-4.5**
KMI				sS	sS	15 04 09.4	-1.7
KMI				pmax	pmax		
	comp=Z,13nm,0.6s						
KMI				pmax	pmax		
	comp=Z,170nm,8.1s						
KMI				LR	LR		
	comp=Z,1µm,15.0s						
KMI				LR	LR		
	comp=Z,4µm,14.8s						
KMI				LR	LR		
	comp=Z,4µm,14.4s						
GTA	**Gaotai**	**26.87**	**294**	*e*P	**P**	**14 59 19.2**	**-0.4**
GTA				pP	pP	14 59 31.3	-0.5
GTA				sP	sP	14 59 36.4	-1.0
GTA				S	**S**	**15 03 54.3**	**+1.3**
GTA				sS	sS	15 04 11.6	-1.9
GTA				pmax	pmax		
	comp=Z,12nm,1.8s						
GTA				pmax	pmax		
	comp=Z,210nm,6.8s						
GTA				LR	LR		
	comp=Z,2µm,14.7s						
GTA				LR	LR		
	comp=Z,4µm,16.7s						
GTA				LR	LR		
	comp=Z,5µm,17.5s						
PZH	**PanZhiHua**	**27.02**	**265**	P	**P**	**14 59 18.5**	**-2.5**
PZH				pP	**sP**	**14 59 36.5**	**-2.4**
PZH				PP	**PnPn**	**15 00 13.1**	**+7.9**
PZH				S	**S**	**15 04 00.6**	**+5.0**
PZH				sS	**sS**	**15 04 17.9**	**+1.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,170nm,8.0s						
PZH				LR	LR		
	comp=Z,2µm,14.7s						
PZH				LR	LR		
	comp=Z,5µm,13.9s						
PZH				LR	LR		
	comp=Z,6µm,20.6s						
PEA0B	**Petropavlovsk-**	**27.54**	**34**	P	**P**	**14 59 25.2**	**-0.1**
PEA0B	**Petropavlovsk-**	**27.54**	**34**	P	**P**	**14 59 25.2**	**-0.1**
PEA0B				pmax	pmax		
	comp=Z,39nm,1.1s						
PETK	**Petropavlovsk-**	**27.54**	**34**	P	**P**	**14 59 26.0**	**+0.8**
	comp=Z,13nm,0.8s,baz=218,slow=11,SNR=16						
PETK				PcP	**PcP**	**15 02 43.5**	**+1.4**
	comp=Z,3.9nm,0.9s,baz=259,slow=3.8,SNR=4.2						
PETK				LR	LR	15 11 56.7	
	comp=Z,518nm,19.9s,baz=223,slow=40						
	comp=Z,13nm,0.8s						
PETK	**Petropavlovsk-**	**27.54**	**34**	P	**P**	**14 59 25.6**	**+0.3**
ZAK	**Zakamensk**	**27.68**	**318**	*e*P	**P**	**14 59 25.4**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,23nm,1.0s						
PET	**Petropavlovsk**	**27.95**	**35**	P	**P**	**14 59 32.0**	**+3.1**
	comp=Z,186nm,1.4s						
PET	**Petropavlovsk**	**27.95**	**35**	*e*P	**P**	**14 59 29.3**	**+0.4**
PET				*e*S	**S**	**15 04 09.0**	**-0.4**
PET				pmax	pmax		
	comp=Z,59nm,1.1s						
PET				MLR	MLR		
	comp=Z,1µm,20.0s						
BOD	**Bodaibo**	**28.06**	**339**	*e*P	**P**	**14 59 34.0**	**+4.2**
BOD				pmax	pmax		
	comp=Z,18nm,1.9s						
IRK	**Irkutsk**	**28.11**	**323**	*e*P	P	14 59 41.8	+11
IRK				pmax	pmax		
	comp=Z,48nm,2.2s						
YAK	**Yakutsk**	**29.48**	**358**	P	**P**	**14 59 42.5**	**+0.2**
	comp=Z,4.8nm,0.4s,baz=254,slow=0.3,SNR=2.0						
YAK				LR	LR	15 11 26.3	
	comp=Z,1µm,19.1s,baz=160,slow=36						
	comp=Z,4.8nm,0.4s						
YAK	**Yakutsk**	**29.48**	**358**	*e*P	**P**	**14 59 41.8**	**-0.5**
YAK				e*PP	**pP**	**14 59 55.6**	**+1.0**
YAK				*e*		15 00 34.8	
YAK				*e*		15 02 44.5	
YAK				*e*S	**S**	**15 04 33.2**	**0.0**
YAK				e*SS	**sS**	**15 04 55.5**	**+1.7**
YAK				*e*SS	ScP	15 06 02.7	-22
YAK				*e*		15 10 18.3	
YAK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,95nm,4.2s						
YAK				smax	smax		
	comp=N,58nm,2.7s						
YAK				smax	smax		
	comp=E,29nm,2.7s						
YAK				MLR	MLR		
	comp=Z,912nm,16.0s						
YAK				MLR	MLR		
	comp=N,677nm,18.0s						
YAK				MLR	MLR		
	comp=E,513nm,19.0s						
MOY	**Mondy**	**29.57**	**319**	*e*P	P	14 59 48.8	+5.4
MOY				pmax	pmax		
	comp=Z,19nm,2.2s						
MA2	**Magadan**	**29.71**	**19**	P	**P**	**14 59 45.6**	**+1.2**
	comp=Z,9.4nm,0.8s,baz=191,slow=8.0,SNR=10						

MA2				LR	LR	15 12 58.5	
	comp=Z,511nm,18.7s,baz=196,slow=39						
	comp=Z,9.4nm,0.8s						
MA2	Magadan	29.71	19	P	P	14 59 47.6	+3.2
MA2	Magadan	29.71	19	ceP	P	14 59 45.4	+1.0
MA2				pmax	pmax		
	comp=Z,32nm,1.7s						
NONG	Nongkai	29.77	248	P	P	14 59 46.6	+1.2
	comp=Z,24nm,0.7s						
TNCH	TengChong	30.26	264	eP	P	14 59 50.3	+0.3
TNCH				pP	pP	15 00 03.8	+1.6
TNCH				PP	PnPn	15 00 50.4	+1.3
TNCH				S	S	15 04 44.5	-2.2
TNCH				sS	sS	15 05 07.4	+0.1
TNCH				pmax	pmax		
	comp=Z,27nm,0.5s						
TNCH				pmax	pmax		
	comp=Z,220nm,4.4s						
TNCH				LR	LR		
	comp=Z,580nm,13.0s						
TNCH				LR	LR		
	comp=Z,470nm,14.6s						
TNCH				LR	LR		
	comp=Z,2µm,16.8s						
GOMU	GeErMu	30.83	287	P	P	14 59 54.4	-0.7
GOMU				PcP	PcP	15 02 51.9	+0.6
GOMU				S	S	15 04 48.0	-7.8
GOMU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,210nm,4.0s						
GOMU				LR	LR		
	comp=Z,520nm,18.4s						
GOMU				LR	LR		
	comp=Z,1µm,20.8s						
GOMU				LR	LR		
	comp=Z,1µm,20.2s						
PHRA	Phrae	31.84	252	P	P	15 00 02.1	-1.6
TNTI	Ternate	31.98	189	P	P	15 00 07.1	+2.3
	comp=Z,35nm,1.6s						
CHTO	Chiang Mai	32.71	253	P	P	15 00 10.8	-0.6
CHTO	Chiang Mai	32.71	253	P	P	15 00 10.8	-0.6
CM31	Chiang Mai Arr	32.90	253	P	P	15 00 11.8	-1.2
CMAR	Chiang Mai Arr	32.90	253	P	P	15 00 12.4	-0.5
	comp=Z,4.0nm,0.6s,baz=47,slow=8.5,SNR=36						
CMAR				PcP	PcP	15 02 57.0	+0.3
	comp=Z,1.7nm,0.9s,baz=33,slow=2.2,SNR=2.0						
CMAR				LR	LR	15 14 46.0	
	comp=Z,1µm,18.3s,baz=60,slow=38						
	comp=Z,4.0nm,0.6s						
CMAR	Chiang Mai Arr	32.90	253	P	P	15 00 12.7	-0.3
CMAR	Chiang Mai Arr	32.90	253	ceP	P	15 00 12.6	-0.3
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SEY	Seymchan	32.96	17	LR	LR	15 13 27.0	
	comp=Z,702nm,21.2s,baz=182,slow=36						
SEY	Seymchan	32.96	17	ceP	P	15 00 12.2	-0.8
SEY				pmax	pmax		
	comp=Z,19nm,1.7s						
H11N2	WAKE ISLAND Hy	33.62	104	T	T	15 36 20.5	
	baz=296,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	33.63	104	T	T	15 36 23.3	
	baz=296,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	33.64	104	T	T	15 36 27.0	
	baz=296,slow=75,SNR=12						
H11S3	WAKE ISLAND Hy	34.07	106	T	T	15 36 40.0	
	baz=301,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	34.08	106	T	T	15 36 55.5	
	baz=301,slow=75,SNR=8.2						
H11S2	WAKE ISLAND Hy	34.09	106	T	T	15 36 55.1	
	baz=301,slow=75,SNR=7.4						
MPSI	Mapaga	34.09	202	P	P	15 00 23.9	+0.6
	comp=Z,10nm,1.9s						
FAKI	Fak Fak	35.33	180	P	P	15 00 32.1	-1.9
FAKI	Fak Fak	35.33	180	P	P	15 00 35.7	+1.7
FAKI	Fak Fak	35.33	180	P	P	15 00 35.4	+1.4
	comp=Z,133nm,0.9s						
SHEM	Shemya Is, Ala	36.19	44	LR	LR	15 15 04.5	
	comp=Z,343nm,21.7s,baz=197,slow=35						
WMQ	Urumqi	36.23	301	eP	P	15 00 41.0	-0.6
WMQ				pP	pP	15 00 51.6	-2.5
WMQ				PP	PP	15 02 06.9	+2.4
WMQ				pmax	pmax		
	comp=Z,49nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,100nm,5.5s						
WMQ				LR	LR		
	comp=Z,1µm,16.5s						
WMQ				LR	LR		
	comp=Z,2µm,24.1s						
WMQ				LR	LR		
	comp=Z,2µm,25.5s						
BRDH	Bariadhala	36.97	265	LR	LR	15 18 46.6	
	comp=Z,3µm,18.2s,baz=92,slow=41						
DGZ	Jazzator, Alta	37.08	311	i P	P	15 00 48.4	-0.5
DGZ				pmax	pmax		
	comp=Z,11nm,1.9s						
ZSN	Zaisan	38.46	307	i P	P	15 01 00.1	-0.4
	baz=307						
ZSN	Zaisan	38.46	307	i P	P	15 01 00.0	-0.4
TAPN	Taplejung	38.58	274	eP	P	15 01 01.5	-0.4
TIXI	Tiksi	39.14	358	LR	LR	15 17 41.9	
	comp=Z,1µm,19.8s,baz=90,slow=37						
TIXI	Tiksi	39.14	358	P	P	15 01 04.7	-1.0
TIXI	Tiksi	39.14	358	ceP	P	15 01 04.9	-0.8
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KAPI	Kappang	39.20	200	LR	LR	15 18 01.8	
	comp=Z,178nm,21.3s,baz=9.5,slow=37						
BBKI	Banjar Baru	39.42	208	P	P	15 01 09.8	+1.1
	comp=Z,107nm,1.0s,comp=Z,6µm						
ZALV	Zalesovo Beam	39.54	317	P	P	15 01 07.5	-1.8
	comp=Z,0.6nm,0.3s,baz=104,slow=6.3,SNR=4.0						
ZALV				PcP	PcP	15 03 15.5	-0.4
	comp=Z,2.8nm,0.8s,baz=108,slow=4.7,SNR=3.3						
ZALV				ScP	ScP	15 07 00.5	-0.3
	comp=Z,2.0nm,0.6s,baz=121,slow=4.2,SNR=6.9						
ZALV				LR	LR	15 18 42.7	
	comp=Z,3µm,19.8s,baz=102,slow=38						
	comp=Z,0.6nm,0.3s						
RAMN	Ramite	39.64	274	eP	P	15 01 10.0	-0.8
	comp=Z,15nm,0.6s						
JIRN	Jiri	39.76	275	eP	P	15 01 11.4	-0.5
GUN	Gumba	39.94	276	eP	P	15 01 12.5	-0.8
	comp=Z,120nm,0.8s						
MK31	Makanchi Array	40.17	306	P	P	15 01 12.4	-2.3
MK31	Makanchi Array	40.17	306	P	P	15 01 12.4	-2.3
MK31				pmax	pmax		
	comp=Z,20nm,0.9s						
MKAR	Makanchi Array	40.17	306	P	P	15 01 13.3	-1.4
	comp=Z,2.5nm,0.5s,baz=91,slow=10,SNR=40						
MKAR				ScP	ScP	15 07 03.5	+0.1
	comp=Z,2.3nm,0.6s,baz=94,slow=4.0,SNR=8.3						
MKAR				LR	LR	15 19 07.5	
	comp=Z,2µm,19.4s,baz=122,slow=38						
	comp=Z,2.5nm,0.5s						
MKAR	Makanchi Array	40.17	306	P	P	15 01 13.1	-1.6
IPM	Ipoh	40.31	233	P	P	15 01 14.8	-1.4
IPM				IAmb	IAmb	15 01 17.8	
	comp=Z,71nm,1.4s						
IPM	Ipoh	40.31	233	P	P	15 01 17.1	+1.0
	comp=Z,35nm,1.4s						
MAKZ	Makanchi	40.39	306	P	P	15 01 13.6	-2.9
MAKZ	Makanchi	40.39	306	P	P	15 01 13.6	-2.9
MAKZ				pmax	pmax		
	comp=Z,23nm,0.9s						
MAKZ	Makanchi	40.39	306	P	P	15 01 15.4	-1.1
MAKZ				pP	pP	15 01 26.6	-2.4
MAKZ				sP	sP	15 01 31.2	-3.3
PKI	Pulchoki	40.44	275	eP	P	15 01 16.9	-0.6
PKIN	Phulchoki	40.45	275	eP	P	15 01 16.8	-0.7
KKN	Kakani	40.48	276	eP	P	15 01 17.3	-0.4
BILL	Bilibino	40.58	19	P	P	15 01 18.0	+0.4
BILL				IAmb	IAmb	15 01 21.0	
	comp=Z,39nm,1.0s						
BILL	Bilibino	40.58	19	c iP	P	15 01 18.7	+1.0
BILL				e*PP	pP	15 01 30.3	0.0
BILL				e*SP	sP	15 01 36.1	+0.3
BILL				i		15 02 55.5	
BILL				e		15 03 18.7	
BILL				i S	S	15 07 28.4	+4.9
BILL				e*SS	sS	15 07 47.9	+3.4
BILL				SS	SS	15 10 26.0	+1.6
BILL				eSSS	SSS	15 10 53.2	
BILL				pmax	pmax		
	comp=Z,54nm,1.3s						
BILL				MLR	MLR		
	comp=Z,567nm,16.0s						
BILL	Bilibino	40.58	19	P	P	15 01 18.9	+1.2
BILL				pP	pP	15 01 30.2	0.0
BILL				sP	sP	15 01 34.5	-1.3
GKN	Gorkha	40.95	276	eP	P	15 01 20.2	-1.3
RABL	Rabaul	41.27	149	P	P	15 01 27.8	+3.8
KRVT	Keravat (AS076	41.31	149	LR	LR	15 16 04.0	
	comp=Z,374nm,21.8s,baz=105,slow=32						
DANN	Dangsing	41.58	277	eP	P	15 01 25.8	-1.0
KOLN	Koldanda	41.90	277	eP	P	15 01 27.3	-2.0
	comp=Z,102nm,1.3s						
SHLS	Shalkode	42.22	300	eP	P	15 01 28.0	-3.7
	baz=300						
SHLS	Shalkode	42.22	300	eP	P	15 01 28.0	-3.7
PYUN	Piuthan	42.30	277	eP	P	15 01 31.5	-1.1
PPBI	Pangkal Pinang	42.41	220	P	P	15 01 34.5	+1.2
	comp=Z,28nm,1.5s,comp=Z,5µm						
UZB	Uzynbulak	42.54	300	eP	P	15 01 33.6	-0.7
	baz=300						
UZB	Uzynbulak	42.54	300	eP	P	15 01 33.6	-0.7
KPKS	Kokpek	42.77	301	eP	P	15 01 35.3	-0.8
	baz=301						
KPKS	Kokpek	42.77	301	eP	P	15 01 35.3	-0.8
SOEI	Soe	42.78	191	P	P	15 01 37.1	+0.7
SOEI	Soe	42.78	191	P	P	15 01 36.2	-0.2
	comp=Z,54nm,1.3s						
KURK	Kurchatov	42.82	311	P	P	15 01 34.8	-1.5
KURK	Kurchatov	42.82	311	ceP	P	15 01 35.5	-0.7
KURK				pmax	pmax		
	comp=Z,14nm,1.7s						
KURK	Kurchatov	42.82	311	P	P	15 01 34.8	-1.5
KURK				pP	pP	15 01 46.1	-2.9
KURK				sP	sP	15 01 51.0	-3.5
KURBB	Kurchatov Arra	42.87	311	LR	LR	15 20 39.3	
	comp=Z,2µm,18.4s,baz=76,slow=38						
PSI	Prapat	42.96	233	P	P	15 01 39.3	+1.4
	comp=Z,9.4nm,1.0s						
ZHN	Zhinishke	42.97	300	eP	P	15 01 37.1	-0.7
	baz=300						
ZHN	Zhinishke	42.97	300	eP	P	15 01 37.0	-0.7
SATY	Saty	43.00	300	eP	P	15 01 37.5	-0.6
	baz=300						
SATY	Saty	43.00	300	eP	P	15 01 37.4	-0.6
ARXS	Arharly	43.34	302	eP	P	15 01 39.4	-1.3
PLAI	Plampang	43.40	201	P	P	15 01 44.8	+3.5
	comp=Z,33nm,0.8s						
GRJI	Gresik	43.51	209	P	P	15 01 43.6	+1.5
	comp=Z,67nm,1.2s						
TWSI	Taliwang, Sumb	43.59	202	P	P	15 01 43.2	+0.4
	comp=Z,41nm,0.8s,comp=Z,578nm						
MLSI	Meulaboh, Aceh	43.66	237	P	P	15 01 42.2	-1.2
	comp=Z,25nm,0.6s						
CHKK	Chushkaly	43.97	301	eP	P	15 01 44.4	-1.3
	baz=301						
CHKK	Chushkaly	43.97	301	eP	P	15 01 44.3	-1.3
MDOK	Medeo	43.98	300	eP	P	15 01 45.3	-0.7
	baz=300						
MDOK				epP	pP	15 01 56.4	-2.3
	baz=300						
MDOK	Medeo	43.98	300	eP	P	15 01 45.2	-0.7
MDOK				e*PP	pP	15 01 56.3	-2.3
AAA	Alma-Ata	44.08	300	eP	P	15 01 45.8	-0.8
	baz=300						
AAA	Alma-Ata	44.08	300	eP	P	15 01 45.8	-0.8
SDSI	Sungai Dareh	44.16	227	P	P	15 01 48.0	+0.6
	comp=Z,17nm,1.6s						
PMG	Port Moresby	44.19	158	LR	LR	15 18 18.1	
	comp=Z,811nm,21.9s,baz=310,slow=33						
NRIK	Noril'sk	44.36	339	P	P	15 01 47.7	-0.7
	comp=Z,10nm,0.7s,baz=115,slow=10,SNR=15						
NRIK				LR	LR	15 21 32.4	
	comp=Z,1µm,20.4s,baz=128,slow=38						
	comp=Z,10nm,0.7s						
NRIK	Noril'sk	44.36	339	deP	P	15 01 48.1	-0.3
NRIK				pmax	pmax		
	comp=Z,14nm,0.9s						
KUU	Kurty	44.43	301	eP	P	15 01 47.3	-2.1
	baz=301						
KUU	Kurty	44.43	301	eP	P	15 01 47.2	-2.1
PWJI	Pagerwojo	44.79	209	P	P	15 01 53.0	+0.7
	comp=Z,40nm,0.8s						
GSI	Gunungsitoli	44.97	233	P	P	15 01 52.9	-0.9
GSI				IAmb	IAmb	15 02 13.7	
	comp=Z,38nm,0.6s						
GSI	Gunungsitoli	44.97	233	P	P	15 01 55.8	+1.9
GSI	Gunungsitoli	44.97	233	P	P	15 01 53.3	-0.6
	comp=Z,55nm,1.3s						
TKM2	Tokmak 2	45.07	300	P	P	15 01 54.6	-0.1
	SNR=30						
MTN	Manton Dam	45.20	181	P	P	15 01 54.7	-0.9
MTN				IAmb	IAmb	15 01 56.8	
	comp=Z,44nm,0.7s						
MTN	Manton Dam	45.20	181	P	P	15 01 57.0	+1.4
UGM	Wanagama	45.23	211	P	P	15 01 55.0	-0.9
UGM	Wanagama	45.23	211	P	P	15 01 57.3	+1.4
	comp=Z,59nm,1.1s						
KSH	Kashi	45.25	295	P	P	15 02 00.5	+4.4
KSH				pP	pP	15 02 11.0	+2.1
KSH				ScS	ScS	15 11 50.2	+1.3
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KSH				LR	LR		
	comp=Z,990nm,17.5s						
KSH				LR	LR		
	comp=Z,1µm,16.1s						
KSH				LR	LR		
	comp=Z,2µm,21.3s						
MDSI	Maura Dua	45.41	221	P	P	15 01 56.7	-0.7
	comp=Z,20nm,1.3s,comp=Z,481nm						
MASI	Maura Aman, Be	45.42	224	P	P	15 01 58.8	+1.3
	comp=Z,26nm,0.9s						
KPJI	Karang Pucung	45.43	213	P	P	15 01 58.7	+1.3
	comp=Z,68nm,0.8s						
KBK	Karagaybulak	45.57	300	P	P	15 01 55.9	-2.7
	SNR=8.5						
CHMS	Chumysh	45.67	300	P	P	15 01 58.7	-0.5
	SNR=5.1						
SGDS	Sogindy	45.71	301	eP	P	15 01 59.5	-0.1
	baz=301						
SGDS	Sogindy	45.71	301	eP	P	15 01 59.5	-0.1
USP	Ospenovka	45.83	301	P	P	15 01 59.9	-0.6
	SNR=6.9						
AAK	Ala-Archa	45.91	300	P	P	15 01 58.0	-3.2
	SNR=9.0						
AAK	Ala-Archa	45.91	300	P	P	15 02 00.4	-0.8
	comp=Z,5.6nm,0.5s,baz=118,slow=5.6,SNR=25						
AAK				LR	LR	15 23 36.9	
	comp=Z,2µm,18.3s,baz=84,slow=39						
	comp=Z,5.6nm,0.5s						
AAK	Ala-Archa	45.91	300	P	P	15 02 00.7	-0.6
AAK				IAmb	IAmb	15 02 14.4	
	comp=Z,22nm,0.8s						
AAK	Ala-Archa	45.91	300	P	P	15 02 00.7	-0.6
AAK				pmax	pmax		
	comp=Z,22nm,0.8s						
AAK	Ala-Archa	45.91	300	P	P	15 02 00.6	-0.6
AAK				pP	pP	15 02 12.1	-1.9
AAK				sP	sP	15 02 16.4	-3.0
UCH	Uchtor	45.94	299	P	P	15 02 02.1	+0.2
	SNR=14						
BTLS	Baital	45.97	303	eP	P	15 02 00.3	-1.2
	baz=303						
BTLS	Baital	45.97	303	eP	P	15 02 00.3	-1.2
BBJI	Bungbulang	46.14	215	P	P	15 02 03.3	+0.1
NIKH	Nikolski High	46.41	46	P	P	15 02 04.8	0.0
	baz=268						
EKS2	Erkin-Say	46.43	300	P	P	15 02 04.9	-0.4
	SNR=8.9						
AML	Almayashu	46.56	299	P	P	15 02 06.1	-0.6
	SNR=16						
BRZS	Berezniki	46.61	310	eP	P	15 02 05.0	-1.5
	baz=310						
BRZS	Berezniki	46.61	310	eP	P	15 02 04.9	-1.5
COEN	Coen	47.50	165	P	P	15 02 15.9	+2.2
UNV	Unalaska Valle	47.83	45	P	P	15 02 15.4	-0.5
	baz=269						
BVAR	Borovoye Array	47.99	314	P	P	15 02 15.6	-1.6
	comp=Z,9.2nm,0.6s,baz=98,slow=9.4,SNR=32						
BVAR				ScP	ScP	15 07 35.4	+0.2
	comp=Z,1.5nm,0.6s,baz=88,slow=4.8,SNR=3.7						
BVAR				LR	LR	15 24 35.3	
	comp=Z,557nm,20.1s,baz=88,slow=39						
	comp=Z,9.2nm,0.6s						
BRVK	Borovoye	48.06	314	P	P	15 02 16.8	-0.8
BRVK				IAmb	IAmb	15 02 40.4	
	comp=Z,16nm,0.8s						
BRVK	Borovoye	48.06	314	P	P	15 02 16.8	-0.8
BRVK				pmax	pmax		
	comp=Z,16nm,0.9s						
BRVK	Borovoye	48.06	314	P	P	15 02 16.5	-1.2
BRVK				pP	pP	15 02 28.1	-2.5
BRVK				sP	sP	15 02 32.4	-3.6
KNRA	Kununurra	48.12	184	P	P	15 02 18.1	-0.3
KNRA	Kununurra	48.12	184	P	P	15 02 19.7	+1.3
TNA	Tin City	48.45	29	P	P	15 02 20.4	-0.1
TNA	Tin City	48.45	29	P	P	15 02 22.2	+1.7
	baz=258,SNR=59						
NIL	Nilore	48.68	288	P	P	15 02 20.6	-2.2
NIL				IAmb	IAmb	15 02 36.1	
	comp=Z,66nm,1.7s						
NIL	Nilore	48.68	288	P	P	15 02 20.6	-2.2
NIL				pmax	pmax		
	comp=Z,66nm,1.7s						
NIL	Nilore	48.68	288	P	P	15 02 22.8	0.0
NIL				pP	pP	15 02 34.7	-1.0
NIL				sP	sP	15 02 38.8	-2.5
KK31	Karatay Array	48.74	301	P	P	15 02 22.7	-0.4
KK31	Karatay Array	48.74	301	P	P	15 02 22.7	-0.4
KK31				pmax	pmax		
	comp=Z,46nm,0.9s						
KKAR	Karatay Array	48.74	301	P	P	15 02 22.7	-0.4
KKAR				IAmb	IAmb	15 02 36.3	
	comp=Z,46nm,0.9s						
KKAR	Karatay Array	48.74	301	P	P	15 02 22.7	-0.4
KKAR				pmax	pmax		
	comp=Z,46nm,0.9s						
IUG	Iuzhnay	49.25	300	eP	P	15 02 26.4	-0.8
	baz=300						
IUG	Iuzhnay	49.25	300	eP	P	15 02 26.3	-0.8
ANM	Nome	49.33	30	P	P	15 02 26.8	-0.4
ANM				IAmb	IAmb	15 02 31.4	
	comp=Z,34nm,0.8s						
ANM				PcP	PcP	15 03 50.2	+1.0
ANM	Nome	49.33	30	P	P	15 02 26.8	-0.4
ANM						15 03 50.2	
ANM				pmax	pmax		
	comp=Z,34nm,0.8s						
ANM	Nome	49.33	30	P	P	15 02 28.8	+1.5
	baz=261,SNR=40						
CHM	Chimkent	49.53	300	eP	P	15 02 28.5	-0.7
	baz=300						
CHM	Chimkent	49.53	300	eP	P	15 02 28.4	-0.7
FALS	False Pass	49.64	43	P	P	15 02 29.4	-0.3
	baz=271						
GAR	Garm	49.66	296	P	P	15 02 29.9	-0.4
HYB	Hyderabad	50.31	266	eP	P	15 02 33.0	-2.4
S12K	Black Hills	50.40	42	P	P	15 02 35.4	-0.1
	baz=271						
CHGR	Chuyangaron	50.62	296	P	P	15 02 37.1	-0.5
CHGR				PcP	PcP	15 03 53.8	-0.8
CHGR	Chuyangaron	50.62	296	P	P	15 02 37.1	-0.5
CHGR						15 03 53.8	
CHGR				pmax	pmax		
	comp=Z,75nm,1.0s						
FITZ	Fitzroy Crossi	50.79	188	P	P	15 02 39.3	+0.5
FITZ	Fitzroy Crossi	50.79	188	P	P	15 02 40.2	+1.4
RDOG	Red Dog Mine	50.88	26	P	P	15 02 39.8	+0.9
	baz=260,SNR=6.2						
MTSU	Mount Surprise	51.80	165	P	P	15 02 48.3	+1.9
N16K	Nishlik Lake	52.07	36	P	P	15 02 47.4	-0.6
	baz=270						
WB0	Warramunga Arr	52.13	177	P	P	15 02 48.8	+0.1
WB0				IAmb	IAmb	15 02 50.0	
	comp=Z,20nm,0.7s						
WRAB	Tennant Creek	52.29	177	P	P	15 02 48.6	-1.4
WRAB				IAmb	IAmb	15 02 51.2	
	comp=Z,22nm,0.8s						
WRAB	Tennant Creek	52.29	177	P	P	15 02 51.8	+1.8
WRAB	Tennant Creek	52.29	177	P	P	15 02 48.6	-1.4
WRAB				pmax	pmax		
	comp=Z,22nm,0.8s						
WRAB	Tennant Creek	52.29	177	P	P	15 02 50.7	+0.7
WRAB				pP	pP	15 03 02.3	-0.2
WRA	Warramunga Arr	52.30	177	P	P	15 02 50.7	+0.7
	comp=Z,15nm,0.6s,baz=353,slow=8.1,SNR=67						
WRA				LR	LR	15 24 53.4	
	comp=Z,262nm,21.1s,baz=6.0,slow=36						
	comp=Z,15nm,0.6s						
WRA	Warramunga Arr	52.30	177	P	P	15 02 48.2	-1.8
WRA	Warramunga Arr	52.30	177	P	P	15 02 48.2	-1.8
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WB2	Warramunga Arr	52.30	177	P	P	15 02 50.2	+0.2
WB2				IAmb	IAmb	15 02 52.4	
	comp=Z,25nm,0.8s						
WR0	Warramunga Arr	52.32	177	P	P	15 02 49.8	-0.4
WR0				IAmb	IAmb	15 02 52.0	
	comp=Z,33nm,0.7s						
O16K	Kokwok River B	52.43	37	P	P	15 02 50.5	-0.1
	baz=272						
P16K	Nushagak River	52.50	38	P	P	15 02 52.5	+1.4
	baz=272						
O17K	Koliganek Bris	52.93	37	P	P	15 02 55.2	+0.9
	baz=272						
GCSA	Galena City Sc	52.98	31	P	P	15 02 55.6	+1.0
	baz=269						
Q16K	King Salmon	53.21	38	P	P	15 02 57.6	+1.3
	baz=274						
P17K	Kvichak River	53.29	38	P	P	15 02 58.1	+1.1
	baz=273						
QIS	Mount Isa	53.35	171	P	P	15 02 58.4	+0.6
TTA	Tatalina	53.36	33	P	P	15 03 01.1	+3.6
TTA	Tatalina	53.36	33	P	P	15 02 58.6	+1.1
	baz=271						
TV1H	Townsville Har	53.47	163	P	P	15 03 00.8	+2.2
	comp=Z,33nm,0.7s						
A21K	Barrow	53.50	22	P	P	15 02 59.3	+1.1
	baz=264,SNR=5.3						
Q17K	Contact Creek	53.64	39	P	P	15 03 00.9	+1.2
	baz=274						
PALK	Pallekele	53.83	254	LR	LR	15 26 31.9	
	comp=Z,600nm,21.7s,baz=144,slow=37						
PALK	Pallekele	53.83	254	P	P	15 02 59.1	-2.5
PALK				IAmb	IAmb	15 03 42.4	
	comp=Z,50nm,1.4s						
PALK	Pallekele	53.83	254	P	P	15 02 59.1	-2.5
PALK				pmax	pmax		
	comp=Z,50nm,1.5s						
O18K	Koktuh Hills	53.87	37	P	P	15 03 02.6	+1.3
	baz=274						
P18K	Big Mountain,	53.90	37	P	P	15 03 02.4	+0.9
	baz=274						
L19K	White Mountain	53.92	34	P	P	15 03 01.6	0.0
L19K	White Mountain	53.92	34	P	P	15 03 02.5	+1.0
	baz=272						
Q18K	Katmai Hardscr	54.07	38	P	P	15 03 04.1	+1.3
	baz=275						
CTA	Charters Tower	54.13	163	LR	LR	15 25 37.8	
	comp=Z,281nm,19.5s,baz=349,slow=35						
CTA	Charters Tower	54.13	163	P	P	15 03 03.4	-0.1
CTAO	Charters Tower	54.13	163	P	P	15 03 03.9	+0.4
CTAO	Charters Tower	54.13	163	P	P	15 03 03.3	-0.2
CTAO	Charters Tower	54.13	163	P	P	15 03 03.9	+0.4
CTAO				pmax	pmax		
	comp=Z,168nm,2.0s						
CTAO	Charters Tower	54.13	163	P	P	15 03 04.6	+1.2
CTAO				pP	pP	15 03 16.7	+0.6
CTAO				sP	sP	15 03 20.7	-0.7
N19K	Bonanza Creek	54.17	35	P	P	15 03 02.8	-0.8
N19K	Bonanza Creek	54.17	35	P	P	15 03 04.7	+1.2
	baz=274						
K20K	Telida	54.23	32	P	P	15 03 05.3	+1.5
	baz=272						
O19K	Port Alsworth	54.29	36	P	P	15 03 05.9	+1.6
	baz=274						
IMAR	Indian Mountai	54.30	29	P	P	15 03 04.8	+0.5
IMAR				PcP	PcP	15 04 10.0	+2.2
L20K	Farewell, AK	54.36	33	P	P	15 03 06.1	+1.3
	baz=273						
G21K	Allakaket	54.39	28	P	P	15 03 06.5	+1.6
	baz=270						
F21K	Alatna River	54.40	27	P	P	15 03 05.8	+0.8
	baz=270						
ARU	Arti	54.62	319	P	P	15 03 05.3	-1.5
	comp=Z,3.7nm,0.4s,baz=98,slow=2.1,SNR=7.3						
ARU				LR	LR	15 27 46.4	
	comp=Z,277nm,21.4s,baz=90,slow=38						
	comp=Z,3.7nm,0.4s						
ARU	Arti	54.62	319	c iP	P	15 03 05.8	-0.9
ARU				*PP	sP	15 03 23.4	-1.8

ARU						15 04 06.5	
ARU				S	S	15 10 43.0	+0.1
ARU				SS	SS	15 14 22.0	-3.6
ARU				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ARU				MLR	MLR		
	comp=Z,876nm,16.0s						
ARU	Arti	54.62	319	P	P	15 03 05.2	-1.5
ARU				pP	pP	15 03 16.8	-3.0
H21K	Melozitna Rive	54.70	29	P	P	15 03 08.7	+1.5
	baz=272						
M20K	Styx River	54.75	34	P	P	15 03 09.0	+1.4
	baz=274						
Q19K	Cape Douglas,	54.75	38	P	P	15 03 05.4	-2.3
Q19K	Cape Douglas,	54.75	38	P	P	15 03 08.8	+1.1
	baz=276						
MBWA	Marble Bar	54.75	194	P	P	15 03 06.2	-1.8
MBWA	Marble Bar	54.75	194	P	P	15 03 08.0	+0.1
MBWA				pP	pP	15 03 20.3	-0.4
ABKAR	Akbulak array	54.91	310	P	P	15 03 07.8	-1.2
ABKAR				PcP	PcP	15 04 08.0	-2.5
CHUM	Lake Minchumin	54.99	32	P	P	15 03 10.9	+1.6
	baz=273,SNR=9.8						
E22K	Anaktuvuk Pass	55.03	26	P	P	15 03 10.8	+1.2
	baz=271,SNR=27						
I21K	Tanana	55.06	30	P	P	15 03 10.2	+0.4
I21K				IAmb	IAmb	15 03 14.0	
	comp=Z,35nm,0.9s						
I21K	Tanana	55.06	30	P	P	15 03 10.7	+1.0
	baz=273						
PPLA	Purkeypile	55.11	33	P	P	15 03 10.6	+0.2
PPLA	Purkeypile	55.11	33	P	P	15 03 11.5	+1.2
	baz=274						
CAST	Castle Rocks	55.12	32	P	P	15 03 10.4	+0.1
CAST				IAmb	IAmb	15 03 14.3	
	comp=Z,53nm,1.4s						
CAST	Castle Rocks	55.12	32	P	P	15 03 11.6	+1.3
	baz=274,SNR=11						
PSA00	Pilbara Seismi	55.13	194	P	P	15 03 09.8	-0.9
PSA00				IAmb	IAmb	15 03 26.8	
	comp=Z,54nm,1.6s						
PSA00	Pilbara Seismi	55.13	194	P	P	15 03 11.3	+0.6
N20K	Mount Spurr	55.24	35	P	P	15 03 11.9	+0.7
	baz=275						
SPCR	Spurr Chakacha	55.24	35	P	P	15 03 12.8	+1.6
	baz=275						
H22K	Ishtalitna Cre	55.27	29	P	P	15 03 12.9	+1.5
	baz=273						
D23K	Nanushuk River	55.43	25	P	P	15 03 14.5	+2.1
	baz=271						
Q20K	Shuyak Island	55.43	38	P	P	15 03 13.0	+0.4
	baz=277						
KDAK	Kodiak Island	55.44	39	LR	LR	15 27 38.2	
	comp=Z,471nm,22.0s,baz=257,slow=37						
KDAK	Kodiak Island	55.44	39	P	P	15 03 11.4	-1.1
KDAK	Kodiak Island	55.44	39	P	P	15 03 11.5	-1.1
KDAK				pmax	pmax		
	comp=Z,279nm,1.9s						
SKT	Skwentna	55.49	34	P	P	15 03 14.3	+1.3
	baz=275						
BPAW	Bear Paw Mtn.	55.55	31	P	P	15 03 11.6	-1.8
BPAW	Bear Paw Mtn.	55.55	31	P	P	15 03 15.1	+1.7
	baz=274,SNR=7.5						
MLY	Manley	55.59	30	P	P	15 03 11.7	-1.9
MLY				IAmb	IAmb	15 03 17.7	
	comp=Z,31nm,1.1s						
MLY	Manley	55.59	30	P	P	15 03 15.3	+1.7
	baz=274,SNR=21						
PCHI	Peechi	55.62	260	eP	P	15 03 14.5	0.0
KTH	Kantishna Hill	55.63	32	P	P	15 03 14.5	+0.5
KTH				IAmb	IAmb	15 03 32.1	
	comp=Z,41nm,1.2s						
COLD	Coldfoot	55.67	27	P	P	15 03 15.1	+0.9
COLD	Coldfoot	55.67	27	P	P	15 03 15.7	+1.5
	baz=273,SNR=9.0						
G23K	Bananza Creek	55.77	28	P	P	15 03 16.1	+1.1
	baz=274						
TOLK	Toolik Lake Re	55.84	26	P	P	15 03 17.2	+1.8
	baz=273						
E23K	Chandalar	55.85	26	P	P	15 03 16.8	+1.2
	baz=273						
AKTO	Aktyubinsk	55.91	312	P	P	15 03 15.1	-1.0
	comp=Z,5.2nm,0.8s,baz=79,slow=11,SNR=14						
AKTO				LR	LR	15 30 36.5	
	comp=Z,735nm,18.9s,baz=67,slow=40						
	comp=Z,5.2nm,0.8s						
SUA	Susitna One	55.92	34	P	P	15 03 17.5	+1.4
	baz=276						
TRF	Thorofare Moun	55.92	32	P	P	15 03 17.6	+1.4
	baz=276						
AS31	Alice Springs	55.98	178	P	P	15 03 16.2	-0.6
AS01	Alice Springs	55.99	178	P	P	15 03 18.0	+1.1
	comp=Z,25nm,0.6s						
ASAR	Alice Springs	55.99	178	P	P	15 03 17.8	+0.9
	comp=Z,12nm,0.7s,baz=11,slow=12,SNR=165						
ASAR				LR	LR	15 27 35.2	
	comp=Z,206nm,20.2s,baz=20,slow=36						
ASAR				PKP2bc	P'P'bc	15 33 28.8	+5.0
	comp=Z,1.1nm,1.0s,baz=170,slow=3.1,SNR=5.5						
	comp=Z,12nm,0.7s						
ASAR	Alice Springs	55.99	178	P	P	15 03 17.0	+0.1
H23K	Yukon River	56.03	29	P	P	15 03 18.7	+1.9
	baz=275						
CUT	Chulitna	56.04	33	P	P	15 03 18.1	+1.3
	baz=276						
BRLK	Bradley Lake	56.06	36	P	P	15 03 16.6	-0.4
C24K	Franklin Bluff	56.10	24	P	P	15 03 18.3	+1.2
	baz=273						
BRSE	Bradley Lake S	56.13	36	P	P	15 03 18.8	+1.3
	baz=278						
I23K	Minto, Yukon-K	56.16	30	P	P	15 03 18.3	+0.6
I23K	Minto, Yukon-K	56.16	30	P	P	15 03 18.0	+0.3
	baz=275						
M22K	Willow	56.18	34	P	P	15 03 18.7	+0.9
	baz=277						
E24K	Your Creek	56.28	26	P	P	15 03 20.1	+1.6
	baz=274						
NEA2	Nenana	56.34	31	P	P	15 03 19.0	0.0
NEA2				IAmb	IAmb	15 03 22.8	
	comp=Z,34nm,0.8s						
NEA2	Nenana	56.34	31	P	P	15 03 19.1	+0.1
	baz=276,SNR=27						
RC01	Rabbit Creek A	56.45	35	P	P	15 03 20.7	+1.0
	baz=278						
MCK	McKinley	56.49	32	P	P	15 03 20.2	+0.2
MCK				IAmb	IAmb	15 03 34.6	
	comp=Z,46nm,1.4s						
MCK	McKinley	56.49	32	P	P	15 03 20.3	+0.2
MCK				pmax	pmax		
	comp=Z,46nm,1.4s						
MCK	McKinley	56.49	32	P	P	15 03 21.1	+1.0
	baz=276						
F24K	Squaw Lake	56.55	27	P	P	15 03 21.7	+1.3
	baz=275						
MDM	Murphy Dome	56.66	30	P	P	15 03 21.5	+0.3
PMR	Palmer	56.67	34	P	P	15 03 22.7	+1.4
PMR	Palmer	56.67	34	P	P	15 03 22.3	+1.0
	baz=278						
H24K	Noodor Dome	56.71	29	P	P	15 03 22.9	+1.2
	baz=276						
SEW	Seward	56.72	36	P	P	15 03 22.3	+0.6
	baz=278						
WRH	Wood River Hil	56.78	31	P	P	15 03 19.7	-2.3
G24K	Hadweenzic Riv	56.79	28	P	P	15 03 23.2	+1.1
	baz=276						
TCOL	CIGO, UAF Yank	56.83	30	P	P	15 03 23.5	+1.1
	baz=277						
COLA	College	56.83	30	P	P	15 03 26.2	+3.8
COLA	College	56.83	30	iP	P	15 03 22.4	0.0
COLA				pmax	pmax		
	comp=Z,28nm,1.5s						
COLA	College	56.83	30	P	P	15 03 23.7	+1.3
	baz=277						
COLA	College	56.83	30	P	P	15 03 24.6	+2.2
COLA				pP	pP	15 03 36.0	+0.5
CCB	Clear Creek Bu	56.88	30	P	P	15 03 20.9	-1.8
D25K	Kavik River	56.95	25	P	P	15 03 25.3	+2.0
	baz=275						
POKR	Poker Plat Res	56.98	30	P	P	15 03 22.5	-1.0
POKR				IAmb	IAmb	15 03 27.5	
	comp=Z,37nm,0.9s						
POKR	Poker Plat Res	56.98	30	P	P	15 03 24.6	+1.1
	baz=277						
KNK	Knik Glacier	57.01	34	P	P	15 03 23.8	0.0
KNK				IAmb	IAmb	15 03 50.1	
	comp=Z,23nm,0.8s						
KNK	Knik Glacier	57.01	34	P	P	15 03 25.2	+1.4
	baz=278						
SML	Sawmill	57.02	34	P	P	15 03 22.8	-1.0
SML				IAmb	IAmb	15 03 53.9	
	comp=Z,21nm,0.9s						
SML	Sawmill	57.02	34	P	P	15 03 24.1	+0.2
SML				pmax	pmax		
	comp=Z,21nm,0.9s						
SML	Sawmill	57.02	34	P	P	15 03 24.7	+0.8
	baz=278						
PWL	Port Wells	57.16	35	P	P	15 03 25.6	+0.7
	baz=279						
IL31		57.25	30	P	P	15 03 25.6	+0.2
ILAR	Eielson Array	57.25	30	P	P	15 03 26.1	+0.7
	comp=Z,6.4nm,0.6s,baz=259,slow=5.8,SNR=77						
ILAR				LR	LR	15 27 53.7	
	comp=Z,290nm,21.7s,baz=276,slow=36						
	comp=Z,6.4nm,0.6s						
ILAR	Eielson Array	57.25	30	P	P	15 03 25.1	-0.4
IL03	Eielson Array	57.27	30	P	P	15 03 25.7	+0.1
HDA	Harding Lake	57.28	31	P	P	15 03 25.8	+0.2
HDA				IAmb	IAmb	15 03 28.1	
	comp=Z,24nm,0.8s						
HDA	Harding Lake	57.28	31	P	P	15 03 26.2	+0.6
	baz=278,SNR=12						
M23K	Glacier View	57.30	34	P	P	15 03 26.8	+0.9
	baz=279						
G25K	Bearman Lake	57.32	28	P	P	15 03 27.2	+1.3
	baz=277						
E25K	Arctic Village	57.36	26	P	P	15 03 27.4	+1.2
	baz=277						
F25K	Christian Rive	57.40	27	P	P	15 03 27.7	+1.2
	baz=277						
C26K	Camden Bay	57.40	24	P	P	15 03 28.5	+2.1
	baz=276						
WRKA	Warakurna	57.44	184	P	P	15 03 29.1	+1.9
SCM	Sheep Creek Mo	57.48	34	P	P	15 03 28.1	+0.9
	baz=279						
FYU	Fort Yukon	57.69	28	P	P	15 03 28.9	+0.5
PRP	Porcupine Dome	57.72	29	P	P	15 03 27.7	-1.2
PRP				IAmb	IAmb	15 03 32.5	
	comp=Z,16nm,0.8s						
PRP	Porcupine Dome	57.72	29	P	P	15 03 29.9	+1.0
	baz=278,SNR=14						
P23K	Montague Islan	57.76	36	P	P	15 03 30.3	+1.3
	baz=280						
BMAR	Burnt Mountain	57.82	27	P	P	15 03 28.3	-1.1
C27K	Jago River	57.85	24	P	P	15 03 30.9	+1.3
	baz=277						
K24K	Donnelly Dome	57.87	31	P	P	15 03 31.0	+1.2
	baz=279						
F26K	Sheenjek River	57.95	27	P	P	15 03 32.8	+2.5
	baz=278						
M24K	Tolsona, Glenn	57.98	33	P	P	15 03 32.5	+1.8
	baz=280						
PAX	Paxson	58.15	32	P	P	15 03 33.0	+1.1
	baz=280						
G26K	Porcupine Rive	58.20	27	P	P	15 03 33.8	+1.8
	baz=279						
KLU	Klutina	58.20	34	P	P	15 03 33.3	+1.1
	baz=280						
RIDG	Independent Ri	58.29	31	P	P	15 03 32.8	0.0
RIDG				IAmb	IAmb	15 04 15.9	
	comp=Z,24nm,1.2s						
RIDG	Independent Ri	58.29	31	P	P	15 03 34.3	+1.5
	baz=280						
HARP	HAARP	58.39	33	P	P	15 03 34.7	+1.2
	baz=281						
SCRK	Sand Creek	58.62	31	P	P	15 03 33.5	-1.7
SCRK				IAmb	IAmb	15 03 38.2	
	comp=Z,38nm,1.2s						
SCRK	Sand Creek	58.62	31	P	P	15 03 35.8	+0.6
	baz=281,SNR=18						
DOT	Dot Lake	58.65	31	P	P	15 03 35.5	+0.2
DOT				IAmb	IAmb	15 03 38.0	
	comp=Z,47nm,1.5s						
J26L	Joseph Creek	58.71	30	P	P	15 03 37.1	+1.3
	baz=281						
I26K	Coal Creek Min	58.73	29	P	P	15 03 37.0	+1.3
	baz=280						
N25K	Chitina, Valde	58.80	34	P	P	15 03 38.5	+2.0
	baz=282						
E27K	Coleen River	58.83	26	P	P	15 03 37.8	+1.4
	baz=280						
MENT	Mentasta	58.94	32	P	P	15 03 40.8	+3.5
G27K	Doyon Strip	59.05	27	P	P	15 03 39.5	+1.5
	baz=281						
L26K	Log Cabin Wild	59.09	32	P	P	15 03 39.5	+1.2
	baz=282						
KIRV	Kirov	59.11	323	LR	LR	15 32 10.6	
	comp=Z,1µm,18.0s,baz=84,slow=39						
GEYT	Alibeck	59.16	298	P	P	15 03 39.2	0.0
	comp=Z,4.2nm,0.7s,baz=41,slow=2.7,SNR=8.5						
GEYT				LR	LR	15 31 37.5	
	comp=Z,1µm,21.3s,baz=86,slow=38						
	comp=Z,4.2nm,0.7s						
H27K	Steamboat Moun	59.22	28	P	P	15 03 40.3	+1.1
	baz=281						
I27K	Kandik River	59.31	29	P	P	15 03 40.9	+1.1
	baz=282						
M26K	Nabesna, AK	59.38	33	P	P	15 03 41.4	+1.0
	baz=282						
K27K	Chicken	59.44	31	P	P	15 03 41.9	+1.2
	baz=282						
MCARA	McCarthy VSAT	59.59	34	P	P	15 03 39.4	-2.3
MCARA				IAmb	IAmb	15 04 08.9	
	comp=Z,30nm,1.0s						
MCARA	McCarthy VSAT	59.59	34	P	P	15 03 42.7	+0.9
	baz=283						
EGAK	Eagle	59.67	30	P	P	15 03 40.2	-2.0
EGAK				IAmb	IAmb	15 04 23.9	
	comp=Z,58nm,1.9s						
EGAK	Eagle	59.67	30	P	P	15 03 43.6	+1.4
	baz=282						
L27K	Beaver Creek,	59.76	32	P	P	15 03 44.6	+1.6
	baz=283						
BCAR	Beaver Creek A	59.78	32	P	P	15 03 42.6	-0.5
M27K	Edge Creek, AK	59.90	33	P	P	15 03 45.3	+1.2
	baz=283						
QLP	Quilpie	59.99	167	P	P	15 03 45.9	+1.1
OOD	Oodnadatta	60.17	176	P	P	15 03 47.1	+1.1
MEEK	Meekatharra	60.30	194	P	P	15 03 47.0	0.0
BVCY	Beaver Creek	60.34	32	P	P	15 03 48.2	+1.2
	baz=284						
EIDS	Eidsvold	60.44	160	P	P	15 03 46.5	-1.4
EIDS	Eidsvold	60.44	160	P	P	15 03 49.8	+1.9
INKA	Innaminka	60.58	171	P	P	15 03 50.2	+1.4
	comp=Z,57nm,0.8s						
DAWY	Dawson	60.58	30	P	P	15 03 48.5	-0.1
DAWY	Dawson	60.58	30	P	P	15 03 50.2	+1.6
	baz=284,SNR=6.0						
YUK3	Moose Creek	60.69	33	P	P	15 03 50.5	+1.0
	baz=285						
I29M	Ogilvie Camp,	60.71	29	P	P	15 03 50.6	+1.2
	baz=285,SNR=10						
RMQ	Roma	60.88	163	P	P	15 03 53.2	+2.3
	comp=Z,24nm,1.0s						
J29M	Klondike Camp	60.98	30	P	P	15 03 52.8	+1.5
	baz=285						
EPYK	Eagle Plains	61.08	27	P	P	15 03 52.6	+0.7
	baz=285						
G30M	tAoh Zraii Nji	61.10	27	P	P	15 03 53.7	+1.7
	baz=286						
YUK8	Steele Glacier	61.14	33	P	P	15 03 53.6	+0.9
	baz=286						
PINM	Pinnacle	61.23	35	P	P	15 03 54.9	+1.8
	baz=286						
L29M	L29M	61.38	31	P	P	15 03 55.9	+1.9
	baz=286						
M29M	Somme Creek	61.41	32	P	P	15 03 56.3	+1.9
	baz=286						
K29M	Barlow Dome	61.44	30	P	P	15 03 56.7	+2.2
	baz=286						
YUK4	Talbot Arm	61.64	33	P	P	15 03 58.1	+2.2
	baz=286						
BELG	Belogornoye	61.72	316	LR	LR	15 32 59.7	
	comp=Z,2µm,19.5s,baz=94,slow=38						
INK	Inuvik	61.72	25	LR	LR	15 32 34.5	
	comp=Z,301nm,19.5s,baz=278,slow=38						
INK	Inuvik	61.72	25	P	P	15 03 55.5	-0.6
INK				IAmb	IAmb	15 03 59.4	
	comp=Z,37nm,1.1s						
INK	Inuvik	61.72	25	P	P	15 03 55.5	-0.6
INK				pmax	pmax		
	comp=Z,37nm,1.2s						
INK	Inuvik	61.72	25	P	P	15 03 57.6	+1.6
	baz=287,SNR=28						
YUK6	Outpost Mounta	61.89	34	P	P	15 03 58.9	+1.2
	baz=287						
F31M	Tsiigehtchic	61.90	26	P	P	15 03 58.0	+0.7
	baz=287						
O29M	Mount Kennedy	61.97	34	P	P	15 03 59.8	+1.7
	baz=287						
M30M	Minto, Yukon	62.12	32	P	P	15 03 59.3	+0.3
M30M				IAmb	IAmb	15 04 03.1	
	comp=Z,11nm,0.7s						
M30M	Minto, Yukon	62.12	32	P	P	15 04 00.2	+1.2
	baz=287						
MAYO	Mayo, Yukon	62.20	30	P	P	15 04 01.9	+2.4
	baz=288,SNR=5.7						
N30M	Aishikik Lake	62.32	33	P	P	15 04 02.1	+1.8
	baz=288						
HYT	Haines Junctio	62.32	34	P	P	15 04 00.6	+0.1
HYT				IAmb	IAmb	15 04 04.8	
	comp=Z,18nm,0.9s						
HYT	Haines Junctio	62.32	34	P	P	15 04 02.8	+2.3
	baz=288,SNR=5.8						
AUBSH	Beerwah State	62.39	159	P	P	15 04 03.7	+2.7
	comp=Z,58nm,0.8s						
HOPEN	Hopen	62.41	345	eP	P	15 04 01.6	+1.0
P30M	Million Dollar	62.80	34	P	P	15 04 05.6	+2.1
	baz=288						
N31M	Braeburn, Yuko	62.91	33	P	P	15 04 04.0	-0.3
N31M				IAmb	IAmb	15 04 08.6	
	comp=Z,32nm,0.8s						
N31M	Braeburn, Yuko	62.91	33	P	P	15 04 06.7	+2.5
	baz=289,SNR=5.7						
AUWSH	Wavell State H	62.92	159	P	P	15 04 07.3	+2.7
LCRK	Leigh Creek	62.98	174	P	P	15 04 06.6	+1.7
O30N	Mendenhall	63.00	33	P	P	15 04 06.7	+1.8
	baz=289						
A36M	Sachs Harbour	63.12	20	P	P	15 04 07.5	+2.1
	baz=293						
FORT	Forrest	63.16	184	P	P	15 04 05.1	-1.0
MORW	Morawa	63.20	196	P	P	15 04 05.4	-1.0
MORW				IAmb	IAmb	15 04 26.5	
	comp=Z,24nm,1.3s						
PLBC	Pleasant Camp	63.30	35	P	P	15 04 09.5	+2.7
	baz=289						
M31M	Drury Creek, Y	63.30	32	P	P	15 04 06.0	-0.8
M31M				IAmb	IAmb	15 04 10.6	
	comp=Z,12nm,0.8s						
M31M	Drury Creek, Y	63.30	32	P	P	15 04 09.0	+2.1
	baz=290,SNR=6.6						
SPA0	Spitsbergen Ar	63.30	348	eP	P	15 04 06.8	+0.2
SPA0				IAmb	IAmb	15 04 14.2	
	comp=Z,36nm,1.1s						
SPITS	Spitsbergen Ar	63.30	348	LR	LR	15 33 14.0	
	comp=Z,505nm,20.2s,baz=12,slow=38						
SPITS	Spitsbergen Ar	63.30	348	P	P	15 04 05.2	-1.4
SPITS				pmax	pmax		
	comp=Z,40nm,1.2s						
KLMR	Klimovskoe	63.31	327	eP	P	15 04 07.7	+0.9
KLMR				AMP		15 04 18.6	
	comp=Z,18nm,1.4s						
KLMR				LQ	LQ	15 24 46.1	
KLMR				LQ	LQ	15 24 46.1	
KLMR				LR	LR	15 28 08.7	
KLMR				LRM	MLR	15 34 43.0	
KLMR				AMP		15 34 43.8	
	comp=Z,2µm,17.4s						
KLMR	Klimovskoe	63.31	327	eP	P	15 04 07.6	+0.8
KLMR				pmax	pmax		
	comp=Z,18nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,2µm,17.0s						
NOUC	Port Laguerre	63.48	144	P	P	15 04 10.3	+1.9
NOUC				pP	pP	15 04 22.1	+0.8
APA	Apatity	63.48	335⇓	iP	P	15 04 17.0	+9.1
APA				pmax	pmax		
	comp=Z,12nm,1.0s						
APA				MLR	MLR		
	comp=Z,1µm,17.0s						
AULRC	Lightning Ridg	63.52	165	P	P	15 04 10.7	+2.2
	comp=Z,28nm,1.9s						
DZM	Mont Dzumac	63.52	144	eP	P	15 04 09.2	+0.4
	comp=Z,109nm,1.1s						
DZM	Mont Dzumac	63.52	144	eLR	LR	15 23 07.9	
	comp=Z,2µm,22.3s						
DZM	Mont Dzumac	63.52	144	LR	LR	15 28 40.3	
	comp=Z,807nm,21.9s,baz=346,slow=33						
DZM	Mont Dzumac	63.52	144	P	P	15 04 06.4	-2.4
DZM				PcP	PcP	15 04 38.3	-6.8
DZM	Mont Dzumac	63.52	144	P	P	15 04 11.1	+2.3
DZM	Mont Dzumac	63.52	144	P	P	15 04 11.1	+2.3
KBS	Kingsbay	63.62	349	eP	P	15 04 09.4	+0.7
FARO	Faro, Yukon	63.75	31	P	P	15 04 09.5	-0.3
FARO	Faro, Yukon	63.75	31	P	P	15 04 12.3	+2.6
	baz=290,SNR=21						
VADS	Vadso	63.87	338	eP	P	15 04 10.6	+0.2
VADS				IAmb	IAmb	15 04 11.0	
	comp=Z,30nm,1.1s						
N32M	Quiet Lake	64.25	32	P	P	15 04 15.0	+1.9
	baz=291						
WSAR	Wadi Sarin	64.43	282	P	P	15 04 15.7	+0.8
	comp=Z,1.7nm,0.7s,baz=22,slow=9.6,SNR=1.6						
WSAR				LR	LR	15 35 51.8	
	comp=Z,385nm,21.2s,baz=81,slow=39						
	comp=Z,1.7nm,0.7s						
P32M	Atlin	64.52	34	P	P	15 04 15.2	+0.3
	baz=291						
C36M	Paulatuk	64.55	22	P	P	15 04 13.5	-1.3
C36M	Paulatuk	64.55	22	P	P	15 04 16.4	+1.5
	baz=295						
P33M	Teslin, Yukon	64.71	33	P	P	15 04 18.2	+2.0
	baz=292,SNR=6.0						
STKA	Stephens Creek	64.77	171	P	P	15 04 18.2	+1.6
	comp=Z,28nm,0.7s,baz=342,slow=6.9,SNR=84						
STKA				LR	LR	15 32 43.2	
	comp=Z,224nm,18.9s,baz=0.7,slow=36						
	comp=Z,28nm,0.7s						
STKA	Stephens Creek	64.77	171	P	P	15 04 16.8	+0.2
STKA	Stephens Creek	64.77	171	P	P	15 04 18.3	+1.6
STKA	Stephens Creek	64.77	171	P	P	15 04 16.8	+0.2
STKA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ALE	Alert	64.89	2	P	P	15 04 18.3	+1.4
MAK	Makhachkala	64.99	306	eP	P	15 04 15.5	-2.6
MAK				e*PP	pP	15 04 30.2	-1.3
MAK				e*SP	sP	15 04 35.9	-0.9
MAK				e		15 06 39.3	
MAK				ePPP	PPP	15 08 17.6	
MAK				eS	S	15 12 52.6	-4.0
MAK				e*SS	sS	15 13 18.3	-0.8
MAK				eSS	SS	15 17 04.9	-3.7
MAK				pmax	pmax		
	comp=Z,206nm,1.1s						
MAK				MLR	MLR		
	comp=Z,473nm,13.0s						
CMSA	Cobar Meteorol	65.09	167	P	P	15 04 21.1	+2.4
BBOO	Buckleboo	65.18	176	P	P	15 04 17.7	-1.6
ARA0	ARCESS Array S	65.33	338	eP	P	15 04 19.8	-0.2
ARCES	ARCESS Array B	65.33	338	P	P	15 04 19.6	-0.3
	comp=Z,1.1nm,0.4s,baz=58,slow=6.9,SNR=9.6						
ARCES				LR	LR	15 37 35.4	
	comp=Z,656nm,19.5s,baz=68,slow=40						
	comp=Z,1.1nm,0.4s						
ARMA	Armidale	65.36	161	P	P	15 04 19.6	-1.1
ARMA				IAmb	IAmb	15 04 24.7	
	comp=Z,50nm,1.3s						
ARMA	Armidale	65.36	161	P	P	15 04 22.8	+2.1
AKT	Akhty	65.39	305	eP	P	15 04 20.3	-0.7
AKT				e*PP	pP	15 04 35.9	+1.5
AKT				e*SP	sP	15 04 41.6	+1.9
AKT				e		15 04 53.0	
AKT				pmax	pmax		
	comp=Z,27nm,0.8s						
Q32M	Nakina River	65.44	35	P	P	15 04 22.4	+1.3
	baz=293						
EUNU	Eureka	65.59	7	P	P	15 04 20.1	-1.5
EUNU				IAmb	IAmb	15 04 22.6	
	comp=Z,44nm,1.5s						
SEKA	Sheki	65.87	305	P	P	15 04 22.9	-1.1
MOS	Moscow	66.09	322	eP	P	15 04 29.8	+4.8
MOS				MLR	MLR		
	comp=Z,1µm,16.0s						
KTK1	Kautokeino	66.29	338	eP	P	15 04 26.2	+0.1
KTK1				IAmb	IAmb	15 04 32.5	
	comp=Z,10nm,0.9s						
AUDCS	Dubbo College	66.36	165	P	P	15 04 29.5	+2.6
S34M	Telegraph Cree	66.41	35	P	P	15 04 28.6	+1.6
	baz=294						

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MSVF  Nonsavu          66.63 132  LR      LR     15 27 59.8
      comp=Z,292nm,21.0s,baz=343,slow=31
MSVF  Nonsavu          66.63 132  P       P      15 04 31.5 +2.5
GANJ  Ganja            66.70 304  P       P      15 04 27.1 -2.2
DLBC  Dease Lake       66.72  35  P       P      15 04 28.4 -0.8
DLBC                              IAmb    IAmb   15 04 33.6
      comp=Z,26nm,1.2s
DLBC  Dease Lake       66.72  35  P       P      15 04 31.4 +2.2
      baz=294
JETT  Jettan, Norway   66.88 339 eP       P      15 04 30.4 +0.5
OBN   Obninsk          66.89 322  LR      LR     15 36 44.8
      comp=Z,419nm,18.5s,baz=61,slow=39
OBN   Obninsk          66.89 322⇑eP       P      15 04 29.5 -0.7
OBN                               *PP     pP     15 04 44.0 +0.5
OBN                               *SP     sP     15 04 51.0 +2.2
OBN                                              15 04 59.0
OBN                              i S      S      15 13 25.0 +5.6
OBN                              i *SS    sS     15 13 56.7  +15
OBN                               pmax    pmax
      comp=Z,4.0nm,0.8s
OBN                               MLR     MLR
      comp=Z,1µm,17.0s
T35M  Bob Quinn        67.23  36  P       P      15 04 34.0 +1.7
      baz=295
ZEI   Tsey             67.49 307 eP       P      15 04 30.6 -3.9
ZEI                               pmax    pmax
      comp=Z,9.0nm,0.8s
KBZ   Khabaz           67.78 308  P       P      15 04 35.2 -0.7
      comp=Z,9.5nm,0.8s,baz=67,slow=3.7,SNR=20
KBZ                               LR      LR     15 38 30.7
      comp=Z,1µm,18.5s,baz=66,slow=40
      comp=Z,9.5nm,0.8s
KBZ   Khabaz           67.78 308ceP       P      15 04 35.2 -0.7
KBZ                               pmax    pmax
      comp=Z,2.0nm,0.4s
KVAR  Kislovodsk Arr   67.82 309  LR      LR     15 37 27.3
      comp=Z,780nm,20.9s,baz=266,slow=39
KIV   Kislovodsk       67.82 309 eP       P      15 04 35.2 -1.2
KIV                               pmax    pmax
      comp=Z,12nm,1.1s
KIV                               MLR     MLR
      comp=Z,1µm,17.0s
SHA1  Shidzhatmaz      67.93 309 i P      P      15 04 36.2 -1.1
GNI   Garni            68.00 304  P       P      15 04 37.5 -0.2
      comp=Z,2.8nm,0.4s,baz=13,slow=17,SNR=2.0
GNI                               LR      LR     15 37 09.4
      comp=Z,301nm,21.9s,baz=78,slow=38
      comp=Z,2.8nm,0.4s
GNI   Garni            68.00 304ceP       P      15 04 35.8 -1.9
GNI                               pmax    pmax
      comp=Z,14nm,1.3s
LIRD  Liard River Hi   68.14  33  P       P      15 04 40.3 +2.3
      baz=297,SNR=11
YNG   Young            68.30 166  P       P      15 04 41.5 +2.3
AKH   Akhalkalaki      68.34 306  P       P      15 04 42.7 +2.9
RES   Resolute Bay     68.65  12  P       P      15 04 41.9 +0.9
RES                               IAmb    IAmb   15 04 43.6
      comp=Z,26nm,0.8s
RES   Resolute Bay     68.65  12  P       P      15 04 41.9 +0.9
RES                               pmax    pmax
      comp=Z,26nm,0.8s
KOTAN Kotaneelee Air   68.72  31  P       P      15 04 42.7 +1.1
      baz=298
FIA1  FINESS Array S   68.99 330  P       P      15 04 41.3 -1.9
FIA1                              IAmb    IAmb   15 04 56.2
      comp=Z,32nm,1.4s
FINES FINESS Array B   68.99 330  P       P      15 04 41.5 -1.7
      comp=Z,1.9nm,0.6s,baz=73,slow=5.8,SNR=20
FINES                             LR      LR     15 37 29.1
      comp=Z,384nm,18.4s,baz=66,slow=38
      comp=Z,1.9nm,0.6s
FINES FINESS Array B   68.99 330  P       P      15 04 41.2 -2.0
STEI  Steigen          69.36 339 eP       P      15 04 46.2 +0.9
STEI                              IAmb    IAmb   15 04 51.5
      comp=Z,37nm,1.0s
DAG   Danmarks Havn    69.37 353 i P      P      15 04 45.0 -0.4
DAG                               IAmb    IAmb   15 04 46.6
      comp=Z,32nm,1.2s
CAN   Canberra         69.41 165  P       P      15 04 47.8 +1.6
ARPS  Mount Arapiles   69.62 172  P       P      15 04 49.4 +2.1
FAUS  Fauske           69.67 338 eP       P      15 04 47.4 +0.1
SOC   Sochi            69.93 309 eP       P      15 04 46.7 -2.7
SOC                              e               15 07 25.4
SOC                              ePPP     PPP    15 09 10.1
SOC                              eS       S      15 13 52.6 -3.3
SOC                              eSS      SS     15 18 26.3 +1.3
SOC                              eSSS     SSS    15 21 30.1
SOC                               pmax    pmax
      comp=Z,8.0nm,0.6s
SOC                               MLR     MLR
      comp=Z,1µm,19.0s
NEEM  North Greenlan   70.19   1 eP       P      15 04 51.5 +0.7
NEEM                              IAmb    IAmb   15 04 54.2
      comp=Z,12nm,0.8s
TULEG Thule            70.33   5 eP       P      15 04 51.1 -0.1
TULEG                             IAmb    IAmb   15 04 52.6
      comp=Z,15nm,1.0s
BRAT  Ballarat         70.67 170  P       P      15 04 57.7 +4.0
      comp=Z,12nm,0.6s
AFI   Afiamalu         70.83 121  LR      LR     15 29 08.5
      comp=Z,291nm,21.9s,baz=318,slow=30
ANN   Anapa            70.85 311 eP       P      15 04 52.9 -2.1
ANN                              e*PP     pP     15 05 06.6 -1.8
ANN                              eS       S      15 14 04.5 -2.1
ANN                               pmax    pmax
      comp=Z,93nm,1.8s
ANN                               MLR     MLR
      comp=Z,1µm,20.0s
TOO   Toolangi         70.93 169  P       P      15 04 55.8 +0.4
TOO                               IAmb    IAmb   15 04 59.1
      comp=Z,25nm,1.1s
TOO   Toolangi         70.93 169  P       P      15 04 58.1 +2.7
      comp=Z,32nm,0.9s
TOO   Toolangi         70.93 169  P       P      15 04 55.8 +0.4
TOO                               pmax    pmax
      comp=Z,25nm,1.1s
YKA   Yellowknife Ar   71.34  27  P       P      15 04 59.0 +1.4
      comp=Z,17nm,0.8s,baz=303,slow=5.8,SNR=168
YKA                               LR      LR     15 39 10.3
      comp=Z,117nm,18.1s,baz=296,slow=38
      comp=Z,17nm,0.8s
YKA   Yellowknife Ar   71.34  27  P       P      15 04 55.9 -1.7
YKA   Yellowknife Ar   71.34  27  P       P      15 04 59.0 +1.4
MNK   Minsk            71.64 323 i P      P      15 04 57.1 -2.4
      comp=E,3.0nm,0.9s
MNK                              i P      P      15 04 57.1 -2.4
      comp=N,23nm,0.8s
MNK                              i P      P      15 04 57.1 -2.4
      comp=Z,7.0nm,0.8s,baz=240
MNK                              i pP     pP     15 05 11.4 -1.7
MNK                              i PP     PP     15 07 36.3 -2.2
MNK                              i PPP    PPP    15 09 20.0
MNK                              i S      S      15 14 13.3 -2.2
MNK                              i sS     sS     15 14 37.7 -0.4
MNK                              i ScS    SKSac  15 14 57.8 -1.3
MNK                              i SS     SS     15 18 50.3 -0.5
MNK                              i SSS    SSS    15 22 09.9
MNK                              i LQ     LQ     15 31 36.1
MNK                              i LR     LR     15 36 45.9
MNK                              i LRM    MLR    15 40 20.3
      comp=N,303nm,17.7s
MNK                              i LRM    MLR    15 40 22.9
      comp=Z,770nm,15.7s
MNK                              i LRM    MLR    15 40 25.6
      comp=E,86nm,14.4s
MNK   Minsk            71.64 323 i P      P      15 04 57.1 -2.4
MNK                              i *PP    pP     15 05 11.3 -1.7
MNK                              i               15 07 36.3
MNK                              i PPP    PPP    15 09 19.9
MNK                              i S      S      15 14 13.2 -2.2
MNK                              i *SS    sS     15 14 37.7 -0.4
MNK                              i               15 14 57.8
MNK                              i SS     SS     15 18 50.2 -0.5
MNK                               pmax    pmax
      comp=E,3.0nm,0.9s
MNK                               pmax    pmax
      comp=N,23nm,0.8s
MNK                               pmax    pmax
      comp=Z,7.0nm,0.8s
MNK                               MLR     MLR
      comp=N,303nm,18.0s
MNK                               MLR     MLR
      comp=Z,770nm,16.0s
MNK                               MLR     MLR
      comp=E,86nm,14.0s
DBG   Daneborg         71.78 352 eP       P      15 04 59.3 -0.8
DBG                               IAmb    IAmb   15 05 00.7
      comp=Z,18nm,1.5s
NACGM Naroch           71.98 324 eP       P      15 05 12.2  +11
      comp=Z,9.0nm,0.8s,baz=59
NSS   Namsos           72.51 337 eP       P      15 05 03.4 -1.2
AKASG Malin Array Be   72.87 320  P       P      15 05 05.1 -1.9
      comp=Z,1.1nm,0.4s,baz=56,slow=6.5,SNR=8.7
AKASG                             LR      LR     15 39 38.6
      comp=Z,842nm,18.1s,baz=76,slow=38
      comp=Z,1.1nm,0.4s
AKASG Malin Array Be   72.87 320ceP       P      15 05 08.1 +1.1
AKASG                             pmax    pmax
      comp=Z,2.0nm,0.4s
AKBB  Malin Array Si   72.87 320 i P      P      15 05 05.6 -1.4
AKBB                              pmax    pmax
      comp=Z,32nm,3.0s
JMIC  Jan Mayen        72.96 347  LR      LR     15 37 48.2
      comp=Z,188nm,21.6s,baz=36,slow=36
WAPA  Wapiti River     73.48  35  P       P      15 05 08.7 -1.9
HFS   Hagfors          74.72 333  P       P      15 05 16.0 -1.6
      comp=Z,2.0nm,0.5s,baz=103,slow=4.7,SNR=13
HFS                               LR      LR     15 42 53.6
      comp=Z,378nm,19.2s,baz=54,slow=40
      comp=Z,2.0nm,0.5s
UPNV  Upernavik        74.74   3 eP       P      15 05 17.3 -0.2
UPNV                              IAmb    IAmb   15 05 21.2
      comp=Z,8.1nm,0.9s
NC405 NORSAR Array S   74.83 334  P       P      15 05 17.2 -1.1
NC405                             IAmb    IAmb   15 05 29.7
      comp=Z,29nm,1.0s
SUMG  Summit           74.89 357 eP       P      15 05 19.7 +0.7
SUMG                              IAmb    IAmb   15 05 21.2
      comp=Z,35nm,1.2s
RAYN  Ar Rayn          74.98 288  P       P      15 05 18.6 -1.2
RAYN  Ar Rayn          74.98 288  P       P      15 05 18.6 -1.2
RAYN                              pmax    pmax
      comp=Z,8.0nm,0.9s
NB2   NORSAR Subarra   75.06 334  P       P      15 05 17.8 -1.9
      comp=Z,12nm,1.1s,baz=48,slow=5.9
NB2   NORSAR Subarra   75.06 334  P       P      15 05 17.8 -1.9
      slow=5.9
NOA   NORSAR Array B   75.06 334  P       P      15 05 17.9 -1.8
      comp=Z,1.4nm,0.8s,baz=50,slow=5.7,SNR=4.9
NOA                               LR      LR     15 41 32.2
      comp=Z,478nm,20.0s,baz=70,slow=38
      comp=Z,1.4nm,0.8s
NC602 NORSAR Array S   75.14 334 eP       P      15 05 19.4 -0.6
AKN   Aaknes           75.76 337 eP       P      15 05 23.9 +0.3
BRTR  Keskin Array B   75.77 308  P       P      15 05 23.4 -0.8
      comp=Z,6.3nm,0.7s,baz=99,slow=7.6,SNR=13
BRTR                              LR      LR     15 43 29.2
      comp=Z,432nm,21.0s,baz=69,slow=40
      comp=Z,6.3nm,0.7s
BRTR  Keskin Array B   75.77 308  P       P      15 05 21.8 -2.5
BRTR  Keskin Array B   75.77 308ceP       P      15 05 23.6 -0.6
BRTR                              pmax    pmax
      comp=Z,7.0nm,0.8s
BURAR Bucovina Array   76.74 318  P       P      15 05 29.0 -0.6
MLR   Muntele Rosu     77.51 316  LR      LR     15 43 05.6
      comp=Z,1µm,18.1s,baz=61,slow=38
RAO   Raoul Island     77.68 137  LR      LR     15 33 50.9
      comp=Z,229nm,21.4s,baz=116,slow=31
DBO   Dodson Butte     77.96  46  P       P      15 05 35.2 -1.3
DBO                               IAmb    IAmb   15 05 40.4
      comp=Z,24nm,1.0s
MMAI  Mount Meron Ar   77.97 301  LR      LR     15 44 42.5
      comp=Z,458nm,20.0s,baz=81,slow=39
ICESG Greenland Ices   78.42 357 eP       P      15 05 39.4 +0.5
NEW   Newport          78.54  40  LR      LR     15 39 09.2
      comp=Z,81nm,21.6s,baz=322,slow=35
NEW   Newport          78.54  40  P       P      15 05 38.8 -0.7
NEW                               IAmb    IAmb   15 05 42.8
      comp=Z,19nm,0.8s
NEW   Newport          78.54  40  P       P      15 05 38.8 -0.7
NEW                               pmax    pmax
      comp=Z,19nm,0.8s
NEW   Newport          78.54  40  P       P      15 05 41.5 +1.9
      baz=306,SNR=17
JCC   Jacoby Creek,    78.73  49  P       P      15 05 40.5 -0.1
JCC                               IAmb    IAmb   15 07 37.8
      comp=Z,54nm,1.2s
YBH   Yreka Blue Hor   79.05  47  LR      LR     15 36 02.0
      comp=Z,92nm,21.2s,baz=301,slow=32
VYHS  Vyhne            79.69 322 eP       P      15 05 46.2 +0.4
VYHS  Vyhne            79.69 322 eP       P      15 05 46.2 +0.4
ELL   Elmali           79.83 307  P       P      15 05 45.6 -1.3
ELL   Elmali           79.83 307  P       P      15 05 45.6 -1.3
ELL                               pmax    pmax
      comp=Z,81nm,0.8s
EIL   Elat             80.04 299  LR      LR     15 46 43.4
      comp=Z,149nm,18.6s,baz=59,slow=40
VRAC  Vranov           80.34 323  LR      LR     15 45 18.1
      comp=Z,1µm,18.9s,baz=57,slow=39
MOD   Modoc Plateau    80.44  46  P       P      15 05 48.4 -1.7
MODS  Modra-Piesok     80.58 322 eP       P      15 05 51.2 +0.6
MODS  Modra-Piesok     80.58 322 eP       P      15 05 51.2 +0.6
BRG   Berggiesshubel   80.63 326 eP       P      15 06 03.3  +13
BRG                               Amp            15 06 06.9
      comp=Z,7.9nm,1.2s
BRG                               Amp            15 46 19.0
      comp=Z,2.1nm,15.1s
BRG                               Amp            15 46 22.0
      comp=N,0.6nm,15.5s
BRG                               Amp            15 46 23.0
      comp=E,1.1nm,15.2s
SFJD  Kangerlussuaq    80.69   1  LR      LR     15 44 01.6
      comp=E,270nm,18.4s,baz=346,slow=37
CLL   Collm            80.79 326 i P      P      15 05 51.1 -0.5
      comp=Z,6.0nm,0.8s
CLL                              i PcP    PcP    15 05 57.8 -0.3
CLL                              i x      x      15 06 01.5
CLL                              i x      x      15 06 06.8
CLL                              eS       S      15 16 00.0 +4.0
CLL                              ex       x      15 22 54.0
CLL                              ex       x      15 26 00.0
CLL   Collm            80.79 326 i P      P      15 05 51.1 -0.5
CLL                              i               15 06 01.5
CLL                               pmax    pmax
      comp=Z,6.0nm,0.8s
MSO   Missoula         81.12  39  P       P      15 05 55.1 +1.5
      baz=309
FCC   Fort Churchill   81.19  22  P       P      15 05 52.9 -0.6
FCC                               IAmb    IAmb   15 05 56.3
      comp=Z,22nm,0.8s
FCC   Fort Churchill   81.19  22  P       P      15 05 52.9 -0.6
FCC                               pmax    pmax
      comp=Z,22nm,0.8s
DY2G  Dye2             81.22 359 eP       P      15 05 54.2 +0.3
DY2G                              IAmb    IAmb   15 05 56.0
      comp=Z,28nm,1.2s
RONA  Rosalia, Austr   81.52 322 ePcP     PcP    15 06 00.1 -1.4
      comp=Z,6.0nm,1.0s
CONA  Conrad Observa   81.59 322 ePcP     PcP    15 06 00.6 -1.3
      comp=Z,2.4nm,0.6s
URZ   Urewera          82.02 146  LR      LR     15 37 17.8
      comp=Z,231nm,21.9s,baz=58,slow=32
GERES GERESS Array B   82.09 324  P       P      15 05 56.8 -1.9
      comp=Z,0.4nm,0.4s,baz=54,slow=6.7,SNR=2.2
GERES                             LR      LR     15 46 42.0
      comp=Z,2µm,18.3s,baz=63,slow=39
      comp=Z,0.4nm,0.4s
ARSA  Arzberg          82.21 322 eP       P      15 05 57.5 -1.7
      comp=Z,6.3nm,1.0s
RTZ   Ruatahuna        82.24 146  P       P      15 05 57.9 -1.5
BKZ   Black Stump Fm   82.45 147  P       P      15 05 59.0 -1.4
EGMT  Eagleton         82.53  37  P       P      15 06 01.4 +0.5
      baz=312,SNR=9.2
FRB   Frobisher Bay    82.58   9  LR      LR     15 43 21.0
      comp=Z,320nm,21.9s,baz=359,slow=36
NNZ   Nelson           82.75 150  P       P      15 06 01.9 +0.1
SOKA  Soboth           82.83 322 i P      P      15 06 01.9 -0.7
      comp=Z,4.2nm,0.5s
HLID  Hailey           82.90  42  P       P      15 06 04.1 +1.0
      baz=309,SNR=21
BOZ   Bozeman (W)      83.14  39  P       P      15 06 06.1 +1.8
      baz=310,SNR=9.6
TUWZ  Tuamarina        83.16 150  P       P      15 06 02.4 -1.5
ATD   Arta Tunnel      83.24 279  LR      LR     15 46 00.9
      comp=Z,7.2nm,19.4s,baz=64,slow=38
BSWZ  Blackbirch Sta   83.37 150  P       P      15 06 04.7 -0.3
KBA   Koelnbreinsper   83.44 323 eP       P      15 06 04.6 -1.2
      comp=Z,7.0nm,1.3s
MYKA  Terra Mystica    83.59 322 eP       P      15 06 05.4 -1.0
      comp=Z,12nm,2.0s
NVAR  Mina Array Bea   83.72  48  P       P      15 06 09.3 +1.9
      comp=Z,24nm,0.8s,baz=293,slow=5.2,SNR=108
NVAR                              LR      LR     15 36 28.1
      comp=Z,179nm,21.9s,baz=314,slow=31
NV11  Mina Array Sit   83.81  48  P       P      15 06 07.9  0.0
NV11                              IAmb    IAmb   15 06 11.3
      comp=Z,14nm,0.8s
RPZ   Rata Peaks       83.89 153  P       P      15 06 08.1 +0.5
      comp=Z,5.2nm,0.7s,baz=259,slow=5.2,SNR=2.9
RPZ                               LR      LR     15 39 07.8
      comp=Z,260nm,21.4s,baz=339,slow=32
      comp=Z,5.2nm,0.7s
IDI   Anoyia           84.01 308  P       P      15 06 10.0 +1.2
      comp=Z,14nm,0.9s,baz=60,slow=14,SNR=2.1
IDI                               LR      LR     15 48 15.2
      comp=Z,310nm,21.5s,baz=64,slow=39
      comp=Z,14nm,0.9s
ABTA  Abfaltersbach    84.09 323 eP       P      15 06 07.6 -1.4
      comp=Z,7.2nm,0.9s
WTTA  Wattenberg       84.18 324 ePcP     P      15 06 10.5 +1.0
      comp=Z,5.2nm,0.8s
ELK   Elko             84.18  45  LR      LR     15 40 04.6
      comp=Z,109nm,22.0s,baz=331,slow=33
RAR   Rarotonga        84.25 119  LR      LR     15 36 36.0
      comp=Z,294nm,21.9s,baz=298,slow=30
MOTA  Moosalm          84.39 324 eP       P      15 06 08.6 -2.0
      comp=Z,2.6nm,0.5s
EKA   Eskdalemuir Ar   84.39 336  LR      LR     15 49 18.5
      comp=Z,409nm,18.8s,baz=20,slow=40
SQTA  Sankt Quirin     84.42 324 eP       P      15 06 08.7 -2.0
      comp=Z,6.1nm,0.9s
RETA  Reutte           84.45 324 eP       P      15 06 07.0 -3.9
      comp=Z,2.4nm,0.7s
SMMC  Simmler          84.48  51  P       P      15 06 13.2 +2.0
      baz=306
H17A  Grant Village    84.49  40  P       P      15 06 14.5 +3.2
      baz=311
TIN   Tinemaha, Big    84.59  49  P       P      15 06 13.8 +2.0
      baz=307,SNR=7.1
TPH   Tonopah          84.61  48  P       P      15 06 10.2 -1.8
TPH   Tonopah          84.61  48  P       P      15 06 10.2 -1.8
RLMT  Red Lodge        84.71  39  P       P      15 06 13.9 +1.5
      baz=312
VES   Vestal, Richgr   84.77  51  P       P      15 06 14.2 +1.7
      baz=307
FETA  Feichten         84.79 324 eP       P      15 06 10.2 -2.5
      comp=Z,3.9nm,0.7s
PKM   Mcpherson Peak   84.85  52  P       P      15 06 13.9 +0.7
      baz=306,SNR=6.5
DGMT  Dagmar           84.93  34  P       P      15 06 14.7 +1.5
      baz=315,SNR=5.3
DGMT  Dagmar           84.93  34  P       P      15 06 13.7 +0.6
      baz=315
DAVA  Damuels          85.03 325 eP       P      15 06 13.2 -0.6
      comp=Z,6.3nm,1.0s
CWC   Cottonwood Cre   85.06  50  P       P      15 06 15.7 +1.5
      baz=307
GRAC  Grapevine Rang   85.18  49  P       P      15 06 16.3 +1.6
      baz=308,SNR=9.8
LAO   LASA Array       85.20  36  P       P      15 06 15.8 +1.3
      baz=314,SNR=5.8
LAO   LASA Array       85.20  36  P       P      15 06 15.0 +0.4
      baz=314
ISA   Isabella, Lake   85.27  50  P       P      15 06 16.4 +1.3
      baz=307
ARVC  Arvin            85.36  51  P       P      15 06 16.7 +1.1
      baz=307
DAVOX Davos/Dischmat   85.38 324  P       P      15 06 14.9 -0.7
      comp=Z,1.8nm,0.6s,baz=40,slow=7.9,SNR=2.0
DAVOX                             LR      LR     15 48 57.3
      comp=Z,2µm,18.3s,baz=54,slow=39
      comp=Z,1.8nm,0.6s
R11A  Troy Canyon, C   85.46  47  P       P      15 06 16.1 -0.1
R11A                              IAmb    IAmb   15 06 19.7
      comp=Z,17nm,0.8s
R11A  Troy Canyon, C   85.46  47  P       P      15 06 18.1 +1.8
      baz=309
SCZ2  Santa Cruz Isl   85.50  52  P       P      15 06 17.7 +1.4
      baz=307
MPMC  Manual Prospec   85.67  50  P       P      15 06 18.3 +1.0
      baz=308,SNR=22
OSI   Osito Audit: C   85.74  51  P       P      15 06 18.5 +1.1
      baz=307
WCT   Wildcat Mounta   85.77  49  P       P      15 06 15.3 -2.4
WCT                               IAmb    IAmb   15 06 21.0
      comp=Z,21nm,1.3s
FURC  Furnace Creek,   85.82  49  P       P      15 06 18.8 +1.1
      baz=308,SNR=5.1
LRMC  Laurel Mtn Rad   85.90  50  P       P      15 06 19.5 +1.2
      baz=308
TPNV  Topopah Spring   85.91  48  P       P      15 06 19.7 +1.2
      baz=308,SNR=28
DUG   Dugway, Tooele   85.96  44  P       P      15 06 18.2 -0.4
DUG                               IAmb    IAmb   15 06 22.4
      comp=Z,17nm,0.8s
DUG   Dugway, Tooele   85.96  44  P       P      15 06 18.2 -0.4
DUG                               pmax    pmax
      comp=Z,17nm,0.9s
DUG   Dugway, Tooele   85.96  44  P       P      15 06 20.2 +1.6
      baz=310,SNR=9.5
SNCC  San Nicolas Is   86.02  53  P       P      15 06 20.1 +1.2
      baz=307
EDW2  Edwards Air Fo   86.06  51  P       P      15 06 20.7 +1.6
      baz=307,SNR=14
BW06  Boulder Array    86.13  41  P       P      15 06 20.8 +1.4
      baz=312
PDAR  Pinedale Array   86.13  41  P       P      15 06 20.4 +0.9
      comp=Z,2.6nm,0.7s,baz=329,slow=1.1,SNR=23
PDAR                              LR      LR     15 48 48.7
      comp=Z,66nm,18.5s,baz=338,slow=38
      comp=Z,2.6nm,0.7s
PDAR  Pinedale Array   86.13  41  P       P      15 06 17.4 -2.0
DECC  Green Verdugo    86.21  51  P       P      15 06 21.1 +1.3
      baz=307
GSC   Goldstone, Bar   86.57  50  P       P      15 06 22.6 +1.0
      baz=308,SNR=13
BFSC  Mount Baldy Ra   86.66  51  P       P      15 06 22.8 +0.6
      baz=308
CIS   Catalina Islan   86.67  52  P       P      15 06 23.0 +1.0
      baz=307
HEC   Hector,Ludlow    87.17  50  P       P      15 06 25.6 +1.1
      baz=308,SNR=6.7
ULM   Lac du Bonnet    87.23  29  P       P      15 06 25.2 +0.8
      comp=Z,17nm,0.9s,baz=324,slow=5.4,SNR=20
ULM                               LR      LR     15 49 05.5
      comp=Z,165nm,20.1s,baz=341,slow=38
      comp=Z,17nm,0.9s
ULM   Lac du Bonnet    87.23  29  P       P      15 06 24.0 -0.4
ULM                               IAmb    IAmb   15 06 26.9
      comp=Z,19nm,0.8s
ULM   Lac du Bonnet    87.23  29  P       P      15 06 24.0 -0.4
ULM                               pmax    pmax
      comp=Z,19nm,0.9s
MURC  Murrieta         87.36  51  P       P      15 06 27.0 +1.5
      baz=308
MDND  Maddock          87.48  32  P       P      15 06 26.8 +1.1
      baz=319
MDND  Maddock          87.48  32  P       P      15 06 26.5 +0.8
      baz=319
GMRC  Granite Mounta   87.63  50  P       P      15 06 27.4 +0.6
      baz=309,SNR=8.3
PFO   Pinyon Flats O   87.84  51  LR      LR     15 40 30.4
      comp=Z,405nm,20.1s,baz=284,slow=32
PFO   Pinyon Flats O   87.84  51  P       P      15 06 29.0 +1.2
      baz=308,SNR=5.6
TPFO  Pinon Flats      87.84  51  P       P      15 06 28.7 +0.8
      baz=308
K22A  Casper           87.84  39  P       P      15 06 28.8 +1.1
      baz=314
K22A  Casper           87.84  39  P       P      15 06 28.7 +0.9
      baz=314
BELC  Belle Mtn. Jos   87.90  50  P       P      15 06 29.5 +1.4
      baz=309
RSSD  Black Hills      88.10  37          P      15 06 29.1 +0.1
RSSD                              IAmb    IAmb   15 06 32.9
      comp=Z,16nm,0.9s
RSSD  Black Hills      88.10  37  P       P      15 06 29.1 +0.1
RSSD                              pmax    pmax
      comp=Z,16nm,0.9s
RSSD  Black Hills      88.10  37  P       P      15 06 30.8 +1.8
      baz=316
RSSD  Black Hills      88.10  37  P       P      15 06 29.9 +0.9
      baz=316
MONP2 Monument Peak    88.30  52  P       P      15 06 31.4 +1.2
      baz=308
IRM   Iron Mountain    88.35  50  P       P      15 06 31.7 +1.5
      baz=309,SNR=5.7
BC3   Big Chuckawall   88.47  50  P       P      15 06 32.4 +1.6
      baz=309
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O20A	White River Ci	88.63	42	P	P	15 06 32.7	+1.2
	baz=313						
IKP	In-Ko-Pah, Jac	88.66	52	P	P	15 06 33.1	+1.5
	baz=308						
AGMN	Agassiz Nation	88.76	30	P	P	15 06 33.4	+1.7
	baz=321						
AGMN	Agassiz Nation	88.76	30	P	P	15 06 32.1	+0.4
	baz=321						
PDMCI	Parker Dam,Lak	88.91	49	P	P	15 06 35.0	+2.4
	baz=310						
VAE	Valguarnera	89.24	315	LR	LR	15 50 55.0	
	comp=Z,260nm,19.5s,baz=32,slow=38						
GLA	Glamis	89.25	51	P	P	15 06 36.4	+2.0
	baz=309						
N23A	Red Feather La	89.38	40	P	P	15 06 36.5	+1.3
	baz=314						
B35A	Bob, Littlefor	89.59	29	P	P	15 06 35.3	-0.3
	baz=323						
PMOR	Pomariorio Ree	89.81	108	*e*T	T	16 45 15.2	
	comp=Z,9.9nm,0.2s						
WUAZ	Wupatki	89.86	47	P	P	15 06 38.5	+1.1
	baz=311,SNR=16						
PPT	Papeete	89.90	111	LR	LR	15 39 44.2	
	comp=Z,257nm,21.7s,baz=284,slow=31						
PPT2	Papeete2	89.91	111	*e*P	P	15 06 37.5	-0.1
	comp=Z,58nm,26.8s						
PPT2	Papeete2	89.91	111	*e*S	S	15 17 23.5	-3.4
	comp=Z,183nm,26.2s						
PPT2	Papeete2	89.91	111	*e*LR	LR	15 35 21.3	
	comp=Z,521nm,23.0s						
PPT2				*e*LR	LR	15 35 21.4	
	comp=Z,658nm,22.8s						
ISCO	Idaho Springs	90.32	41	P	P	15 06 41.1	+1.4
	baz=315,SNR=5.6						
ISCO	Idaho Springs	90.32	41	P	P	15 06 40.2	+0.6
	baz=315						
SUSD	Miller	90.34	34	P	P	15 06 41.0	+1.8
	baz=319						
SUSD	Miller	90.34	34	P	P	15 06 39.6	+0.4
	baz=319						
MVCO	Mesa Verde	90.46	44	P	P	15 06 41.7	+1.5
	baz=313,SNR=12						
F33A	5 Mile Ranch,	90.49	32	P	P	15 06 40.7	+0.9
	baz=321						
EYMN	Ely	90.81	28	P	P	15 06 42.7	+1.4
	baz=324						
EYMN	Ely	90.81	28	P	P	15 06 42.2	+0.9
	baz=324						
S22A	4UR Ranch, Cre	91.07	43	P	P	15 06 45.5	+2.4
	baz=314						
W18A	Petrified Fore	91.13	46	P	P	15 06 45.1	+1.8
	baz=312						
Q24A	Divide	91.16	41	P	P	15 06 44.7	+1.1
	baz=315						
SCHQ	Schefferville	91.41	11	LR	LR	15 49 11.6	
	comp=Z,292nm,21.2s,baz=358,slow=36						
OGNE	Ogallala	91.42	38	P	P	15 06 46.0	+1.6
	baz=317						
F36A	Milaca	91.66	30	P	P	15 06 44.7	-0.6
	baz=323						
ECSD	EROS Data Cent	91.97	33	P	P	15 06 48.2	+1.3
	baz=321						
ECSD	EROS Data Cent	91.97	33	P	P	15 06 47.0	+0.2
	baz=321						
TUC	Tucson	92.33	49	P	P	15 06 50.9	+2.1
	baz=311						
TAOE	Nuku Hiva Isla	92.85	99	*e*S	S	15 17 49.9	-3.9
	comp=Z,132nm,26.1s						
TAOE	Nuku Hiva Isla	92.85	99	*e*LR	LR	15 36 42.4	
	comp=Z,1µm,27.1s						
T25A	Trinidad	92.86	42	P	P	15 06 52.5	+1.2
	baz=315						
BGNE	Belgrade	93.03	35	P	P	15 06 52.8	+1.1
	baz=320						
I37B	Waseca	93.19	31	P	P	15 06 53.7	+1.2
	baz=323						
ANMO	Albuquerque	93.22	45	LR	LR	15 47 23.5	
	comp=Z,97nm,20.7s,baz=59,slow=34						
ANMO	Albuquerque	93.22	45	*i* P	P	15 06 53.9	+1.0
ANMO				pmax	pmax		
	comp=Z,11nm,1.0s						
ANMO	Albuquerque	93.22	45	P	P	15 06 54.0	+1.0
	baz=314						
ANMO	Albuquerque	93.22	45	P	P	15 06 54.3	+1.3
	baz=314						
TBI	Tubuai	93.22	116	*e*P	P	15 06 52.3	-0.4
	comp=Z,287nm,34.8s						
TBI	Tubuai	93.22	116	*e*S	S	15 17 52.6	-3.8
	comp=Z,752nm,28.8s						
TBI	Tubuai	93.22	116	*e*LR	LR	15 36 53.0	
	comp=Z,16µm,25.0s						
TBI				*e*LR	LR	15 36 53.3	
	comp=Z,5µm,26.5s						
KEST	Kesra	93.41	317	LR	LR	15 54 42.1	
	comp=Z,443nm,19.0s,baz=354,slow=39						
G40A	Rib Lake	93.51	28	P	P	15 06 54.4	+0.5
	baz=325						
Y22A	Socorro	93.61	46	P	P	15 06 55.8	+1.0
	baz=314						
121A	Cookes Peak, D	94.07	47	P	P	15 06 58.2	+1.3
	baz=313						
121A	Cookes Peak, D	94.07	47	P	P	15 06 58.5	+1.6
	baz=313						
N35A	Tabor	94.66	34	P	P	15 07 00.2	+1.0
	baz=321						
MNTX	Cornudas Mount	96.12	46	P	P	15 07 06.5	+0.5
	baz=314						
MNTX	Cornudas Mount	96.12	46	P	P	15 07 07.4	+1.3
	baz=314						
ESDC	Sonseca Array	97.34	327	LR	LR	15 57 22.1	
	comp=Z,476nm,18.6s,baz=34,slow=39						
WMOK	Wichita Mounta	97.73	40	P	Pdif	15 07 14.0	+0.6
	baz=319						
SADO	Sadowa	97.92	22	LR	LR	15 54 54.1	
	comp=Z,102nm,19.7s,baz=312,slow=38						
LPIG	La Paz	98.03	55	LR	LR	15 43 56.5	
	comp=Z,121nm,21.8s,baz=328,slow=31						
TXAR	Lajitas Array	98.83	47	P	Pdif	15 07 18.9	+0.4
	comp=Z,2.3nm,0.5s,baz=289,slow=2.8,SNR=22						
TXAR				LR	LR	15 48 31.8	
	comp=Z,81nm,21.1s,baz=312,slow=33						
	comp=Z,2.3nm,0.5s						
CCM	Cathedral Cave	98.95	33	P	Pdif	15 07 18.9	+0.2
	baz=324						
LONY	Lake Ozonia	99.39	19	P	Pdif	15 07 20.7	+0.1
	baz=338						
MBAR	Mbarara	99.88	276	LR	LR	15 53 14.6	
	comp=Z,26nm,18.8s,baz=9.5,slow=36						
TORD	Torodi Ar. Bea	114.30	305	PKP	PKPdf	15 12 17.2	-1.0
	comp=Z,0.3nm,0.4s,baz=35,slow=2.1,SNR=4.0						
TORD				PKKPbc	PKKPbc	15 22 59.2	+2.3
	comp=Z,1.6nm,0.8s,baz=239,slow=2.4,SNR=10						
QSPA	South Pole Qui	122.36	180	PKP	PKiKP	15 12 32.5	+0.2
	comp=Z,2.0nm,0.6s,baz=311,slow=0.8,SNR=16						
DBIC	Dimbokro	123.41	306	PKP	PKPdf	15 12 35.5	-0.3
	comp=Z,3.2nm,0.9s,baz=95,slow=9.8,SNR=3.2						
ELIB	Princess Elisa	126.45	202	*d*PKP	PKiKP	15 12 41.0	+0.6
ELIB				*d*pPKP	pPKPdf	15 12 52.7	-1.5
TBTG	Tabatinga, AM	145.03	41	*e*P	PKPdf	15 13 17.3	+1.3
CZSB	Cruzeiro do Su	146.21	48	*e*P	PKPbc	15 13 18.9	-0.1
NNA	Nana	146.47	59*c*	*i*PKP2	PKPdf	15 13 18.6	+0.2
NNA				pmax	pmax		
	comp=Z,147nm,1.7s						
TEFE	Tefe	147.09	32	*e*P	PKPbc	15 13 21.0	-0.6
MCPB	Macapa, AP	147.69	8	*e*P	PKPbc	15 13 22.8	-0.4
ITTB	Itaituba	150.97	16	*e*P	PKPdf	15 13 27.2	+1.5
ETMB	Extrema	151.72	41	*e*P	PKPdf	15 13 27.6	+0.9
SAML	Samuel	152.54	34	*e*P	PKPdf	15 13 29.5	+1.5
PRPB	Parauapebas	153.64	4	*e*P	PKPdf	15 13 30.4	+0.8
NPGB	Novo Progresso	153.64	17	*e*P	PKPdf	15 13 31.5	+1.9
H03N2	Juan Fernandez	154.03	100	T	T	18 06 43.8	
	baz=281,slow=75,SNR=4.8						
H03N3	Juan Fernandez	154.04	100	T	T	18 06 44.4	
	baz=281,slow=75,SNR=5.8						
H03N1	Juan Fernandez	154.05	100	T	T	18 06 52.1	
	baz=281,slow=75,SNR=6.2						
LPAZ	La Paz	155.53	53	PKPbc	PKPbc	15 13 43.0	
	comp=Z,3.2nm,0.6s,baz=24,slow=2.7,SNR=14						
LPAZ				PKPab	PKPab	15 13 59.4	+0.6
	comp=Z,13nm,0.8s,baz=353,slow=5.8,SNR=6.9						
LPAZ	La Paz	155.53	53	*e*P	PKPdf	15 13 34.3	+1.4
PTLB	Pontes e Lacer	160.11	33	*e*P	PKPdf	15 13 39.7	+1.9
PLCA	Paso Flores	160.16	121	PKPab	PKPab	15 14 19.6	+2.0
	comp=Z,5.6nm,0.8s,baz=225,slow=5.0,SNR=10						
BBSD	Serra de San D	160.84	40	*e*P	PKPdf	15 13 39.7	+1.1
BDFB	Brasilia	163.11	0	PKP	PKPdf	15 13 41.6	+0.6
	comp=Z,1.2nm,0.4s,baz=40,slow=16,SNR=3.9						
BDFB				PKPab	PKPab	15 14 29.7	-1.2
	comp=Z,2.2nm,0.5s,baz=321,slow=6.5,SNR=2.4						
CPUP	Villa Florida	169.69	55	PKPab	PKPab	15 14 59.9	+0.1
	comp=Z,1.9nm,0.8s,baz=329,slow=7.4,SNR=5.7						

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*DDA **02** 14:55:20.0±0.0, 37°.58N×38°.52E, h7^{km}±1^{km}, ML3.6*
*ISK **02** 14:55:20.7, 37°.62N×38°.49E, h11^{km}, ML3.5/18*
ISC 02 14:55:20.5±1.1**, 37°.60N**±0°.03×**38°.52E**±0°.02**, h7**^{km}±10^{km}**,**
n27, σ0^{s}51/34**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URFA	Urfa	0.29	123	Pg	Pb	14 55 28.5	+0.4
URFA				Sg	Sb	14 55 32.9	-0.2
HANM	anlurfa/Hi	0.29	93	SPECP		14 55 26.0	
HANM				P	Pg	14 55 26.1	-0.1
HANM				*i* AML	AML	14 55 30.0	
	comp=N,1µm,0.3s						
HANM				S	Sg	14 55 30.1	+0.1
SANL	SANLIURFA_Merk	0.57	138	P	Pg	14 55 30.9	-0.6
SANL				S	Sg	14 55 38.8	-0.1
AKCA	Adyaman/G¶l	0.69	287	SPECP		14 55 33.0	
AKCA				P	Pg	14 55 33.6	-0.2
AKCA				S	Sg	14 55 42.8	+0.1
AKCA				*i* AML	AML	14 55 45.0	
	comp=N,2µm,0.4s						
SURC	SANLIURFA_SURC	0.72	174	SPECP		14 55 34.0	
SURC				P	Pg	14 55 34.1	-0.3
MAYA	Malatya/Merkez	0.73	354	SPECP		14 55 34.0	
MAYA				P	Pg	14 55 34.3	-0.3
GZT	Gaziantep	0.80	253	SPECP		14 55 35.0	
GZT				P	Pg	14 55 36.0	+0.1
NZIP	Nizip/Gaziante	0.87	231	SPECP		14 55 36.0	
NZIP				P	Pg	14 55 36.9	-0.3
GAZ	Gaziantep	1.12	248	Pn	Pb	14 55 42.0	-0.3
GAZ				Sn	Sn	14 55 58.3	-0.2
DARE	Darende-Malaty	1.27	320	Pn	Pg	14 55 44.6	-0.3
DARE				Sn	Sn	14 56 01.9	-0.3
ELBS	KAHRAMANMARAS	1.31	304	SPECP		14 55 44.0	
ELBS				P	Pb	14 55 45.0	-0.6
DYBB	Diyarbakir	1.33	74	Pn	Pn	14 55 45.2	-0.4
DYBB				Sn	Sg	14 56 04.6	+1.2
ARPR	Arapgir-MALATY	1.50	355	Pn	Pn	14 55 47.9	-0.1
MAZI	Mazidag	1.54	95	Pn	Pn	14 55 48.5	0.0
HANI	Diyarbakir_Han	1.69	61	P	Pn	14 55 49.7	-0.9
SARI	SarD1z-Kayseri	1.84	297	Pn	Pn	14 55 52.8	0.0
KOZT	Kozan	2.14	268	Pn	Pn	14 55 57.2	+0.5
SVAN	Silvan-Diyarba	2.19	75	Pn	Pn	14 55 57.9	+0.5
BNGB	Bingl	2.20	50	Pn	Pn	14 55 57.7	+0.1
ERZN	Erzincan	2.20	25	Pn	Pn	14 55 57.9	+0.3
CEYT	Ceyhan	2.29	256	Pn	Pn	14 55 59.2	+0.5
YEDI	Yedisu-Bingol	2.43	40	Pn	Pn	14 56 01.3	+0.5
BNN	Bunyan	2.45	302	Pn	Pn	14 56 01.6	+0.5
SVSK	Karacayir	2.60	333	Pn	Pn	14 56 03.6	+0.6
KARA	Karaisali	2.78	264	Pn	Pn	14 56 06.4	+0.9
VRTB	Varto-Mus	2.79	55	Pn	Pn	14 56 06.1	+0.4
BAYT	Aydıntepe-Bayb	3.06	24	Pn	Pn	14 56 10.4	+0.8

PGC 02 15:02:33.4±2.2**, 48°.78N**×**129°.03W, h10**^{km}**, MLSn3.0**/23**,**
Mw3.6/23**, 230km west of Tofino, Bc Vancouver Island,**
Canada Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NCHR	NEPTUNE Canada	0.81	183	P	Pg	15 02 46.2	-2.7
KEMF	NEPTUNE Canada	0.83	183	P	Pg	15 02 46.6	-2.8
NC89	ODP889	1.45	94	Pn	Pn	15 02 57.5	-2.0
EDB	Eliza Dome	1.66	48	Pn	Pn	15 03 00.4	-2.1
EDB				Sn	Sn	15 03 19.3	-4.6
ETB	Estevan Point	1.74	69	Pn	Pn	15 03 02.1	-1.5
PACB	Port Alice, BC	1.93	30	Pn	Pn	15 03 04.1	-2.1
PACB				Sn	Sn	15 03 25.4	-5.2
HOLB	Holberg	1.95	17	Pn	Pn	15 03 04.7	-1.9
HOLB				Sn	Sn	15 03 26.6	-4.5
MAYB	Maynard	2.02	36	Pn	Pn	15 03 06.1	-1.6
MAYB				Sn	Sn	15 03 28.6	-4.5
WOSB	Woss	2.12	48	Pn	Pn	15 03 07.6	-1.3
WOSB				Sn	Sn	15 03 31.9	-3.3
GDR	Gold River	2.20	62	Pn	Pn	15 03 08.3	-1.6
B012	Ucluelet	2.31	85	Pn	Pn	15 03 09.2	-2.2
B012				Sn	Sn	15 03 35.8	-3.9
OZB	Mount Ozzard	2.34	84	Pn	Pn	15 03 09.9	-2.1
OZB				Sn	Sn	15 03 36.9	-3.8
BTB	Buttle Lake	2.40	72	Pn	Pn	15 03 11.7	-1.3
BTB				Sn	Sn	15 03 40.1	-2.4
SPLB	Strathcona Par	2.47	62	Pn	Pn	15 03 12.4	-1.3
SPLB				Sn	Sn	15 03 41.3	-2.6
NCRB	Newcastle Ridg	2.52	49	Pn	Pn	15 03 13.7	-0.9
NCRB				Sn	Sn	15 03 42.1	-3.3
BFSB	Bamfield	2.57	87	Pn	Pn	15 03 13.1	-2.0
BFSB				Sn	Sn	15 03 42.8	-3.5
B928	Bamfield	2.57	87	Pn	Pn	15 03 13.2	-1.8
B928				Sn	Sn	15 03 42.9	-3.4
CBB	Campbell River	2.70	61	Pn	Pn	15 03 15.8	-1.0
CBB				Sn	Sn	15 03 47.3	-2.2
B927	Port Alberni	2.81	79	Pn	Pn	15 03 17.2	-1.1
MGB	Mount Grey	2.87	84	Pn	Pn	15 03 17.4	-1.9
MGB				Sn	Sn	15 03 50.7	-3.2
OCP	Olym-Cheeka Pk	2.96	98	Pn	Pn	15 03 19.4	-1.1
PFB	Port Renfrew	3.05	92	Pn	Pn	15 03 20.2	-1.4
PFB				Sn	Sn	15 03 54.3	-3.9
CLRS	Cowichan Lake	3.24	87	Pn	Pn	15 03 22.9	-1.2
CLRS				Sn	Sn	15 04 00.0	-2.8
OBC	Olympics--Boni	3.38	101	Pn	Pn	15 03 25.7	-0.6
BBB	Bella Bella	3.46	9	Pn	Pn	15 03 26.6	-0.6
BBB				Sn	Sn	15 04 04.5	-3.7
SYMB	Survey Mountai	3.47	92	Pn	Pn	15 03 26.1	-1.4
SYMB				Sn	Sn	15 04 05.7	-3.0
STW	Striped Peak	3.62	98	Pn	Pn	15 03 28.6	-0.8
B009	North Saanich	3.69	90	Pn	Pn	15 03 28.6	-1.9
B010	North Saanich	3.69	90	Pn	Pn	15 03 28.9	-1.6
PGC	Sidney	3.69	90	Pn	Pn	15 03 28.9	-1.6
B011	North Saanich	3.70	90	Pn	Pn	15 03 29.1	-1.4
BIB	Bowen Island	3.81	78	Pn	Pn	15 03 31.4	-0.6
WPB	Watts Point	3.91	75	Pn	Pn	15 03 33.5	0.0
HDW	Hoodsport	4.15	104	Pn	Pn	15 03 37.6	+0.7
HNBB	Haney	4.28	81	Pn	Pn	15 03 38.3	-0.2
HNBB				Sn	Sn	15 04 24.4	-4.1
CPW	Capitol Peak	4.36	112	Pn	Pn	15 03 39.8	+0.1
VDB	Vedder Mountai	4.57	84	Pn	Pn	15 03 42.0	-0.6
LLLB	Lillooet	4.99	66	Pn	Pn	15 03 48.8	+0.5
LLLB				Sn	Sn	15 04 43.2	-2.8
RPW	Rockport	5.00	91	Pn	Pn	15 03 48.3	-0.1
LON	Longmire	5.27	110	Pn	Pn	15 03 54.2	+2.0
FMW	Mount Fremont	5.29	108	Pn	Pn	15 03 53.5	+1.0
LTY	Liberty	5.81	102	Pn	Pn	15 03 60.0	+0.3
FSB	Fort Saint Jam	6.41	25	Pn	Pn	15 04 08.4	+0.6
SLEB	Sale Mountain	7.42	67	Pn	Pn	15 04 21.7	-0.2
MNB	Mounoet Dainar	7.60	59	Pn	Pn	15 04 25.0	+0.7
T35M	Bob Quinn	8.25	355	Pn	Pn	15 04 35.2	+2.3
NBC5	NorthernBC 5	9.55	21	Pn	Pn	15 04 52.8	+1.9

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*JMA **02** 15:08:18.5±0.0, 32°.6N±0°.1×132°.1E±0°.1, h37^{km}, MD3.9/38,*
MV4.2/38, HYUGANADA REGION
JMA Felt III J1 at HYUGANADA REGION .
*IDC **02** 15:08:18.3±2.0, 32°.56N×131°.96E, h35^{km}±17^{km}, mb3.3/8,*
mbtmp3.6/11, ML3.5/3, Error ellipse: s-maj=19.0km
s-min=17.0km az=57.0
*NEIC **02** 15:08:19.6±2.0, 32°.61N±0°.06×132°.10E±0°.06, h46^{km}±8^{km},*
mb4.1/18, Error ellipse: s-maj=9.2km s-min=7.6km
az=162.0
ISC 02 15:08:18.3±0.6**, 32°.58N**±0°.04×**132°.12E**±0°.03**, h35**^{km}±2^{km}**,**
n89, σ1^{s}27/78**, mb4.0**/19**, 4D, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSKE	Saikikamae	0.28	320	*i* P	Pn	15 08 26.0	-0.2
JSKE				S	Sn	15 08 31.2	-0.9
JSKE	Saikikamae	0.28	320	A	A	15 08 26.0	
	comp=E,108nm,0.3s,comp=E,33nm,0.2s						
JHHC	Hyugahichiya	0.43	251	*i* P	Pn	15 08 28.0	+0.2
JHHC				S	Sn	15 08 34.9	+0.4
JHHC	Hyugahichiya	0.43	251	A	A	15 08 28.0	
	comp=E,15nm,0.6s,comp=E,24nm,1.1s						
JKIT	Kitakata	0.56	275	*i* P	Pn	15 08 29.9	0.0
JKIT				S	Sn	15 08 38.2	+0.3
JKIT	Kitakata	0.56	275	A	A	15 08 29.9	
	comp=E,21nm,0.2s,comp=E,23nm,0.4s						
JUS	Usuki	0.57	328	*i* P	Pn	15 08 29.8	-0.2
JUS				S	Sn	15 08 37.9	-0.3
JUS	Usuki	0.57	328	A	A	15 08 29.8	
	comp=E,13nm,0.3s,comp=E,9.0nm,0.8s						
JTSN	Tsuno	0.62	237	⇓*i*P	Pn	15 08 30.8	+0.2
JTSN				⇓S	Sn	15 08 39.9	+0.6
JTSN	Tsuno	0.62	237	A	A	15 08 30.8	
	comp=E,8.0nm,1.0s,comp=E,8.0nm,0.7s						
JTO	Tosashimizu	0.64	64	*i* P	Pn	15 08 30.9	0.0
JTO				S	Sn	15 08 39.6	-0.2
JTO	Tosashimizu	0.64	64	A	A	15 08 30.9	
	comp=E,8.0nm,1.4s,comp=E,7.0nm,2.4s						
UWA2	Uwa jima 2	0.76	34	*i* P	Pn	15 08 32.2	-0.3
UWA2				S	Sn	15 08 42.4	-0.5
UWA2	Uwa jima 2	0.76	34	A	A	15 08 32.2	
	comp=E,3.0nm,1.1s,comp=E,4.0nm,1.8s						
JBEP	Beppuamama	0.96	322	A	A	15 08 35.5	
	comp=E,12nm,1.1s,comp=E,9.0nm,0.8s						
JNA	Nagahama	1.02	17	P	Pn	15 08 36.0	-0.1
JNA				S	Sn	15 08 48.8	-0.3
JKU	Kubokawa	1.08	47	*i* P	Pn	15 08 36.8	0.0
JIU3	Izumi3	1.10	269	⇓*i*P	Pn	15 08 38.2	+1.0
JIU3	Izumi3	1.10	269	A	A	15 08 38.2	
	comp=E,6.0nm,1.4s,comp=E,7.0nm,1.6s						
JTZ	Takazaki	1.10	232	⇓*i*P	Pn	15 08 38.2	+1.0
JKI	Kunimi	1.15	336	A	A	15 08 38.2	
	comp=E,4.0nm,4.3s,comp=E,9.0nm,0.7s						
JNU	Nakatsue	1.17	298	Pg	Pn	15 08 39.2	+1.0
	211nm,0.3s,baz=166,slow=8.0,SNR=492						
JNU				Lg	Lg	15 08 54.1	
	376nm,0.3s,baz=345,slow=19,SNR=11						
JNU	Nakatsue	1.17	298	P	Pn	15 08 39.5	+1.3
JNU	Nakatsue	1.17	298	A	A	15 08 38.8	
	comp=N,5.0nm,1.2s						
JZO	Okuchi	1.36	252	A	A	15 08 41.8	
	comp=E,5.0nm,0.8s,comp=E,4.0nm,0.6s						
JHM	Kurahashi	1.59	12	A	A	15 08 44.8	
	comp=E,3.0nm,2.2s,comp=E,2.0nm,0.6s						
JHD	Hondo	1.68	267	A	A	15 08 46.4	
	comp=E,3.0nm,4.8s,comp=E,2.0nm,3.8s						
JSU	Suzuyama	1.77	233	Pn	Pn	15 08 47.4	+1.0
JSU	Suzuyama	1.77	233	P	Pn	15 08 47.5	+1.0
JMN	Monobe	1.87	52	Pn	Pn	15 08 48.4	+0.6
JMN	Monobe	1.87	52	P	Pn	15 08 49.1	+1.3
JMN	Monobe	1.87	52	A	A	15 08 48.9	
	comp=E,2.0nm,4.1s,comp=E,3.0nm,3.0s						
JTY	Toyota	1.89	333	A	A	15 08 49.2	
	comp=E,2.0nm,3.5s,comp=E,3.0nm,0.9s						
JHS	Saijyo	2.55	19		Pn	15 08 58.4	+1.3
JHS	Saijyo	2.55	19	P	Pn	15 08 59.4	+2.3
JTU	Tsushima	2.98	311		Pn	15 09 03.7	+0.6
JTU	Tsushima	2.98	311	P	Pn	15 09 03.7	+0.6
INU	Inuyama	4.92	55		Pn	15 09 31.2	+1.5
INU	Inuyama	4.92	55	P	Pn	15 09 31.5	+1.9
JGF	Kuroka	5.29	54	Pn	Pn	15 09 35.2	+0.4
JGF	Kuroka	5.29	54	P	Pn	15 09 35.9	+1.1
	29nm,0.5s						
TJN	Taejon	5.45	315	Pn	Pn	15 09 37.7	+0.7
KSRS	Korea Array	5.96	326	Pn	Pn	15 09 45.3	+1.4
	0.6nm,0.3s,baz=146,slow=15,SNR=8.3						
KSRS				Sn	Sn	15 10 51.9	+1.1
	0.9nm,0.3s,baz=148,slow=24,SNR=6.5						
KSRS				Lg	Lg	15 11 25.8	
	0.4nm,0.3s,baz=159,slow=31,SNR=4.7						
	1.1nm,0.3s						
KSAR	Wonju Array Be	5.96	326	Pn	Pn	15 09 45.6	+1.6
KS19	Wonju Array Si	6.02	326	Pn	Pn	15 09 45.5	+0.7
MAJO	Matsushiro	6.39	50	Pn	Pn	15 09 51.2	+1.4
MAJO	Matsushiro	6.39	50	P	Pn	15 09 51.3	+1.4
MJB9	Matsu-Tunnel	6.39	50	Pn	Pn	15 09 52.1	+2.2
MJAR	Matsushiro Arr	6.39	50	Pn	Pn	15 09 51.4	+1.5
	0.2nm,0.3s,baz=242,slow=14,SNR=14						
	2.8nm,0.5s						
JHJ	Hachijo jima 2	6.47	83	Pn	Pn	15 09 51.9	+0.9
	28nm,0.3s,baz=252,slow=20,SNR=8.2						
	110nm,0.5s						
JHJ2	Mitsune	6.50	83	Pn	Pn	15 09 52.5	+1.1
JHJ2	Mitsune	6.50	83	P	Pn	15 09 52.5	+1.1
HHC	Hu-ho-hao-te	18.40	302	*e*P	Pn	15 12 34.6	+4.0
HHC				pmax	pmax		
	comp=Z,26nm,0.8s						
HHC				pmax	pmax		
	comp=Z,360nm,4.9s						
SONM	Songino Array	24.70	316	P	P	15 13 34.4	-1.7
	comp=Z,0.4nm,0.6s,baz=133,slow=9.1,SNR=4.7						
	comp=Z,0.4nm,0.6s						
SONM	Songino Array	24.70	316	P	P	15 13 34.3	-1.8
PZH	PanZhiHua	27.05	265	P	P	15 13 59.0	+1.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,80nm,5.0s						
CMAR	Chiang Mai Arr	32.92	253	P	P	15 14 48.2	-1.3
	comp=Z,0.5nm,0.5s,baz=54,slow=7.0,SNR=4.1						
	comp=Z,0.5nm,0.5s						
H11N2	WAKE ISLAND Hy	33.58	104	T	T	15 50 54.9	
	baz=300						
H11N1	WAKE ISLAND Hy	33.59	104	T	T	15 50 51.2	
	baz=300						
H11N3	WAKE ISLAND Hy	33.60	104	T	T	15 50 55.9	
	baz=300						
FAKI	Fak Fak	35.31	180	P	P	15 15 10.9	+0.9
WMQ	Urumqi	36.27	301	*e*P	P	15 15 20.5	+2.3
MKAR	Makanchi Array	40.22	306	P	P	15 15 49.0	-2.3
	comp=Z,0.1nm,0.4s,baz=103,slow=9.5,SNR=3.6						
	comp=Z,0.1nm,0.4s						
KURK	Kurchatov	42.87	311	P	P	15 16 11.4	-1.5
KURK				IAmb	IAmb	15 16 18.7	
	comp=Z,1.1nm,0.9s						
MTN	Manton Dam	45.18	181	P	P	15 16 30.6	-1.1
KSH	Kashi	45.29	295	P	P	15 16 37.6	+4.9
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
COEN	Coen	47.47	165	P	P	15 16 48.4	-1.4
KNRA	Kununurra	48.09	184	P	P	15 16 52.8	-1.7
BRVK	Borovoye	48.10	314	P	P	15 16 52.7	-1.7
BRVK				IAmb	IAmb	15 16 55.4	
	comp=Z,1.4nm,0.6s						
KKAR	Karatay Array	48.78	301	P	P	15 16 57.3	-2.5
FITZ	Fitzroy Crossi	50.77	188	P	P	15 17 15.3	+0.4
WB0	Warramunga Arr	52.10	177	P	P	15 17 24.9	0.0
WB0				IAmb	IAmb	15 17 25.8	
	comp=Z,5.5nm,1.3s						
WRAB	Tennant Creek	52.26	177	P	P	15 17 25.7	-0.4
WRAB				IAmb	IAmb	15 17 27.1	
	comp=Z,4.6nm,1.1s						
WRA	Warramunga Arr	52.27	177	P	P	15 17 26.2	0.0
	comp=Z,1.8nm,0.8s,baz=353,slow=8.1,SNR=15						
	comp=Z,1.8nm,0.8s						
WRA	Warramunga Arr	52.27	177	P	P	15 17 26.3	+0.2
WB2	Warramunga Arr	52.27	177	P	P	15 17 25.9	-0.2
WB2				IAmb	IAmb	15 17 27.1	
	comp=Z,2.6nm,0.8s						
WR0	Warramunga Arr	52.29	177	P	P	15 17 26.2	-0.2
WR0				IAmb	IAmb	15 17 27.4	
	comp=Z,4.1nm,0.9s						
ABKAR	Akbulak array	54.96	310	P	P	15 17 43.2	-2.4
ABKAR	Akbulak array	54.96	310	P	P	15 17 43.6	-2.0
ABKAR				IAmb	IAmb	15 17 44.0	
	comp=Z,1.6nm,0.9s						
TOLK	Toolik Lake Re	55.85	26	P	P	15 17 52.5	+0.6
TOLK				IAmb	IAmb	15 17 55.0	
	comp=Z,0.8nm,0.8s						
AS31	Alice Springs	55.96	178	P	P	15 17 53.0	-0.1
AS31				IAmb	IAmb	15 18 08.8	
	comp=Z,0.7nm,1.0s						
ASAR	Alice Springs	55.96	178	P	P	15 17 53.3	+0.3
	comp=Z,1.4nm,0.8s,baz=11,slow=12,SNR=16						
	comp=Z,1.4nm,0.8s						
ASAR	Alice Springs	55.96	178	P	P	15 17 52.8	-0.2
ILAR	Eielson Array	57.26	30	P	P	15 18 03.1	+1.2
	comp=Z,0.2nm,0.8s,baz=267,slow=6.9,SNR=1.7						
	comp=Z,0.2nm,0.8s						
BMAR	Burnt Mountain	57.83	27	P	P	15 18 06.8	+0.9
N31M	Braeburn, Yuko	62.91	33	P	P	15 18 42.0	+1.3
STKA	Stephens Creek	64.73	171	P	P	15 18 53.1	+0.3
	comp=Z,1.4nm,0.7s,baz=11,slow=11,SNR=3.7						
	comp=Z,1.4nm,0.7s						
STKA	Stephens Creek	64.73	171	P	P	15 18 53.4	+0.5
YKA	Yellowknife Ar	71.35	27	P	P	15 19 35.5	+1.4
	comp=Z,0.1nm,0.4s,baz=307,slow=6.1,SNR=1.8						
	comp=Z,0.1nm,0.4s						

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*DDA **02** 15:11:22.4±0.0, 37°.56N×38°.48E, h7^{km}±2^{km}, ML2.3*

ISK ***02*** *15:11:24.3, 37°.52N×38°.47E, h17^{km}, ML2.5/9*

ISC 02 15:11:22.8±1.1**, 37°.54N**±0°.03×**38°.48E**±0°.02**, h5**^{km}±11^{km}**,**
n17, σ0^{s}.82/27**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	**Bozova**	**0.16**	**243**	P	**Pg**	**15 11 26.4**	**+0.3**
URFA	**Urfa**	**0.29**	**110**	Pg	**Pb**	**15 11 31.5**	**+0.9**
URFA				Sg	**Sb**	**15 11 35.6**	**-0.2**
HANM	**anlurfa/Hi**	**0.32**	**83**	P	**Pg**	**15 11 28.3**	**-0.8**
HANM				S	**Sg**	**15 11 31.9**	**-1.5**
HANM				*i* AML	AML	15 11 33.0	
	comp=N,1µm,0.2s						
SANL	**SANLIURFA_Merk**	**0.55**	**132**	P	**Pg**	**15 11 33.2**	**-0.2**
SURC	**SANLIURFA_SURC**	**0.67**	**171**	P	**Pg**	**15 11 36.5**	**+0.8**
SURC				S	**Sb**	**15 11 46.2**	**-0.5**
AKCA	**Adyaman/G¶l**	**0.67**	**292**	P	**Pg**	**15 11 35.6**	**-0.2**
AKCA				S	**Sg**	**15 11 44.4**	**-0.2**
AKCA				*i* AML	AML	15 11 50.0	
	comp=N,188nm,0.5s						
AKCA				*i* AML	AML	15 11 50.0	
	comp=E,97nm,0.3s						
GZT	**Gaziantep**	**0.75**	**256**	P	**Pn**	**15 11 39.4**	**-0.8**
MAYA	**Malatya/Merkez**	**0.78**	**357**	P	**Pg**	**15 11 37.2**	**-0.7**
NZIP	**Nizip/Gaziante**	**0.81**	**232**	P	**Pn**	**15 11 40.4**	**-0.6**
NZIP				S	**Sn**	**15 11 52.2**	**-1.2**
GAZ	**Gaziantep**	**1.07**	**250**	Pg	**Pn**	**15 11 44.8**	**+0.2**
GAZ				Sg	**Sn**	**15 12 00.0**	**+0.1**
DARE	**Darende-Malaty**	**1.29**	**323**	Pn	**Pg**	**15 11 48.1**	**+0.5**
DARE				Sn	**Sg**	**15 12 06.2**	**+1.8**
DYBB	**Diyarbakir**	**1.38**	**72**	Pn	**Pb**	**15 11 49.2**	**0.0**
DYBB				Sn	**Sg**	**15 12 07.8**	**+0.6**
ARPR	**Arapgir-MALATY**	**1.55**	**356**	Pn	**Pb**	**15 11 52.1**	**0.0**
ARPR				Sn	**Sg**	**15 12 12.8**	**+0.1**
MAZI	**Mazidag**	**1.57**	**92**	Pn	**Pb**	**15 11 52.1**	**-0.3**
MAZI				Sn	**Sb**	**15 12 12.6**	**0.0**
SARI	**SarD1z-Kayseri**	**1.84**	**299**	Pn	**Pb**	**15 11 56.4**	**-0.7**
KOZT	**Kozan**	**2.11**	**269**	Pn	**Pn**	**15 11 59.9**	**+1.1**
SVAN	**Silvan-Diyarba**	**2.24**	**73**	Pn	**Pn**	**15 12 02.0**	**+1.4**

NEIC ***02*** *15:13:35.3±1.6, 18°.6S±0°.2×177°.6W±0°.2, h611^{km}±13^{km}, mb4.5/26, Error ellipse: s-maj=28.9km s-min=22.0km az=79.0*

IDC ***02*** *15:13:36.4±1.2, 18°.53S×177°.81W, h618^{km}±15^{km}, mb3.0/12, mbtmp4.0/15, Error ellipse: s-maj=21.1km s-min=11.8km az=140.0*

ISC 02 15:13:35.7±0.8**, 18°.5S**±0°.1×**177°.78W**±0°.10**, h609**^{km}±9^{km}**,**
n52, σ1^{s}.19/58**, mb4.1**/22**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.03**	**280**	P	**P**	**15 15 04.2**	**+2.0**
	23nm,0.7s,baz=124,slow=7.7,SNR=12						
MSVF	**Nonsavu**	**4.03**	**280**	P	**P**	**15 15 04.0**	**+1.9**
AFI	**Afiamalu**	**7.34**	**53**	P	**P**	**15 15 29.4**	**+0.1**
	7.2nm,0.4s,baz=315,slow=9.2,SNR=4.2						
AFI				S	**S**	**15 16 59.3**	**-3.0**
	21nm,1.1s,baz=202,slow=24,SNR=1.8						
LIFNC	**LIFOU**	**14.30**	**258**	P	**P**	**15 16 36.6**	**-0.5**
PINNC	**Pines Island,**	**14.44**	**251**	P	**P**	**15 16 36.6**	**-1.8**
DZM	**Mont Dzumac**	**15.23**	**254**	P	**P**	**15 16 46.2**	**+0.5**
	3.9nm,0.7s,baz=95,slow=14,SNR=1.3						
KOUNC	**Koumac, New Ca**	**17.03**	**260**	P	**P**	**15 17 04.5**	**+2.4**
KOUNC				IAmb	IAmb	15 17 44.8	
	comp=Z,26nm,1.4s						
URZ	**Urewera**	**20.21**	**192**	P	**P**	**15 17 29.1**	**-1.5**
	comp=Z,3.5nm,0.3s,baz=336,slow=2.7,SNR=15						
	comp=Z,3.5nm,0.3s						
RTZ	**Ruatahuna**	**20.58**	**192**	P	**P**	**15 17 33.0**	**-1.1**
RTZ				IAmb	IAmb	15 17 42.8	
	comp=Z,18nm,1.4s						
BKZ	**Black Stump Fm**	**21.21**	**192**	P	**P**	**15 17 37.5**	**-2.2**
BKZ				IAmb	IAmb	15 17 49.9	
	comp=Z,13nm,1.3s						
MRZ	**Mangatainoka R**	**22.84**	**193**	P	**P**	**15 17 52.6**	**-1.5**
MRZ				IAmb	IAmb	15 18 30.6	
	comp=Z,24nm,1.4s						
QRZ	**Quartz Range**	**23.78**	**198**	P	**P**	**15 18 01.0**	**-1.4**
QRZ				IAmb	IAmb	15 18 14.8	
	comp=Z,18nm,1.2s						
NNZ	**Nelson**	**23.90**	**197**	P	**P**	**15 18 02.2**	**-1.3**
NNZ				IAmb	IAmb	15 18 21.1	
	comp=Z,14nm,1.1s						
THZ	**Tophouse**	**24.54**	**197**	P	**P**	**15 18 07.5**	**-1.7**
THZ				IAmb	IAmb	15 18 50.2	
	comp=Z,7.8nm,1.2s						
DSZ	**Denniston Nort**	**24.84**	**199**	P	**P**	**15 18 10.1**	**-1.8**
DSZ				IAmb	IAmb	15 18 17.5	
	comp=Z,22nm,1.2s						
INZ	**Inchbonnie**	**25.84**	**198**	P	**P**	**15 18 19.7**	**-0.9**
RPZ	**Rata Peaks**	**26.86**	**198**	P	**P**	**15 18 31.2**	**+1.6**
	comp=Z,4.6nm,1.0s,baz=25,slow=9.7,SNR=1.7						
	comp=Z,4.6nm,1.0s						
RPZ	**Rata Peaks**	**26.86**	**198**	P	**P**	**15 18 28.6**	**-1.0**
RPZ				IAmb	IAmb	15 19 08.8	
	comp=Z,16nm,1.2s						
FOZ	**Fox Glacier**	**27.08**	**200**	P	**P**	**15 18 30.9**	**-0.5**
WKZ	**Wanaka**	**28.50**	**200**	P	**P**	**15 18 42.5**	**-1.3**
MLZ	**Mavora Lakes**	**29.27**	**201**	P	**P**	**15 18 50.2**	**-0.3**
WHZ	**Wether Hill Ro**	**29.79**	**200**	P	**P**	**15 18 55.4**	**+0.5**
WHZ				IAmb	IAmb	15 19 28.1	
	comp=Z,22nm,1.3s						
CAN	**Canberra**	**33.84**	**234**	P	**P**	**15 19 27.7**	**-1.7**
CAN				IAmb	IAmb	15 19 57.9	
	comp=Z,11nm,1.3s						
TOO	**Toolangi**	**37.28**	**232**	P	**P**	**15 19 58.6**	**+0.9**
TOO				IAmb	IAmb	15 20 16.4	
	comp=Z,16nm,1.4s						
STKA	**Stephens Creek**	**38.89**	**242**	P	**P**	**15 20 11.0**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=90,slow=12,SNR=2.5						
	comp=Z,1.8nm,0.7s						
STKA	**Stephens Creek**	**38.89**	**242**	P	**P**	**15 20 10.5**	**-0.2**
WR0	**Warramunga Arr**	**44.93**	**260**	P	**P**	**15 20 58.1**	**-0.1**
WB0	**Warramunga Arr**	**45.09**	**260**	P	**P**	**15 20 59.2**	**-0.2**
WB0				PcP	**PcP**	**15 22 26.6**	**-0.1**
WB2	**Warramunga Arr**	**45.11**	**260**	P	**P**	**15 20 59.2**	**-0.3**
WB2				IAmb	IAmb	15 21 24.8	
	comp=Z,8.5nm,1.5s						
WRA	**Warramunga Arr**	**45.12**	**260**	P	**P**	**15 20 59.6**	**0.0**
	comp=Z,0.7nm,0.4s,baz=97,slow=7.0,SNR=16						
WRA				PcP	**PcP**	**15 22 27.1**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=92,slow=3.5,SNR=4.7						
	comp=Z,0.7nm,0.4s						
WRA	**Warramunga Arr**	**45.12**	**260**	P	**P**	**15 20 58.9**	**-0.8**
WRA				PcP	**PcP**	**15 22 26.3**	**-0.5**
ASAR	**Alice Springs**	**45.22**	**255**	P	**P**	**15 21 00.8**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=92,slow=7.1,SNR=11						
ASAR				PcP	**PcP**	**15 22 27.1**	**0.0**
	comp=Z,0.5nm,0.5s,baz=106,slow=3.7,SNR=13						
ASAR				S	**S**	**15 26 55.6**	**-1.8**
	comp=Z,1.1nm,1.0s,baz=93,slow=15,SNR=5.8						
	comp=Z,0.5nm,0.6s						
ASAR	**Alice Springs**	**45.22**	**255**	P	**P**	**15 21 00.2**	**-0.1**
ASAR				PcP	**PcP**	**15 22 25.3**	**-1.9**
MTN	**Manton Dam**	**49.38**	**269**	P	**P**	**15 21 31.0**	**-0.5**
MTN				IAmb	IAmb	15 21 43.4	
	comp=Z,28nm,1.5s						
FITZ	**Fitzroy Crossi**	**53.53**	**261**	P	**P**	**15 22 00.8**	**-0.3**
SBA	**Scott Base**	**59.90**	**184**	P	**P**	**15 22 45.0**	**+1.4**
QSPA	**South Pole Qui**	**71.58**	**180**	P	**P**	**15 23 57.8**	**+1.3**
PEA0B	**Petropavlovsk-**	**74.38**	**345**	P	**P**	**15 24 12.5**	**+0.2**
PETK	**Petropavlovsk-**	**74.38**	**345**	P	**P**	**15 24 12.2**	**0.0**
	comp=Z,2.1nm,0.6s,baz=119,slow=6.6,SNR=9.3						
	comp=Z,2.1nm,0.6s						
PETK	**Petropavlovsk-**	**74.38**	**345**	P	**P**	**15 24 11.7**	**-0.6**
NVAR	**Mina Array Bea**	**79.42**	**43**	P	**P**	**15 24 41.2**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=240,slow=7.2,SNR=4.2						
	comp=Z,0.5nm,0.7s						
TXAR	**Lajitas Array**	**85.79**	**57**	P	**P**	**15 25 14.1**	**+1.8**
	comp=Z,0.7nm,0.8s,baz=216,slow=5.6,SNR=5.2						
	comp=Z,0.7nm,0.8s						
ILAR	**Eielson Array**	**86.30**	**13**	P	**P**	**15 25 13.1**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=219,slow=4.8,SNR=24						
	comp=Z,0.5nm,0.4s						
PDAR	**Pinedale Array**	**87.35**	**43**	P	**P**	**15 25 19.9**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=222,slow=1.2,SNR=4.1						
	comp=Z,0.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**89.64**	**289**	P	**P**	**15 25 30.5**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=116,slow=4.1,SNR=2.5						
	comp=Z,0.2nm,0.5s						
YKA	**Yellowknife Ar**	**94.59**	**25**	P	**P**	**15 25 51.8**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=246,slow=4.0,SNR=3.1						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**109.96**	**314**	PKiKP	**PKiKP**	**15 30 57.8**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=33,slow=1.6,SNR=1.5						
ARCES	**ARCESS Array B**	**126.97**	**350**	PKP	**PKPdf**	**15 31 30.8**	**0.0**
	comp=Z,5.0nm,1.0s,baz=15,slow=3.7,SNR=5.5						
FINES	**FINESS Array B**	**133.89**	**344**	PKP	**PKPdf**	**15 31 43.9**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=132,slow=2.1,SNR=4.9						
AKASG	**Malin Array Be**	**141.34**	**332**	PKhKP	PKPpre	15 31 52.6	
	comp=Z,0.5nm,0.5s,baz=41,slow=4.0,SNR=4.6						
CLL	**Collm**	**146.14**	**348**	*i* PKPbc	**PKPbc**	**15 32 09.0**	**+0.4**
	comp=Z,9.0nm,1.1s						
GERES	**GERESS Array B**	**148.31**	**346**	PKPbc	**PKPbc**	**15 32 13.7**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=3.5,slow=3.2,SNR=2.9						

IDC 02 15:19:03.1±2.6**, 1°.95S**×**133°.52E, h0**^{km}**, mb3.7**/2**, mbtmp3.7**/3**, ML3.4**/1**, Error ellipse: s-maj=125.8km s-min=27.0km az=76.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.91**	**177**	P	Pn	15 23 13.8	0.0
	0.1nm,0.3s,baz=356,slow=12,SNR=7.4						
WRA				S	Sn	15 26 25.3	-9.0
	0.4nm,0.8s,baz=5.1,slow=24,SNR=1.9						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**21.60**	**179**	P	P	15 23 54.8	0.0
	2.9nm,0.9s,baz=9.2,slow=12,SNR=19						
	2.9nm,0.9s						
MKAR	**Makanchi Array**	**66.07**	**324**	P	P	15 29 52.0	0.0
	0.5nm,0.6s,baz=107,slow=8.3,SNR=8.0						
	0.5nm,0.6s						

IDC 02 15:29:44.7±2.6**, 1°.99S**×**133°.48E, h0**^{km}**, mb3.7**/2**, mbtmp3.7**/3**, ML3.7**/1**, MS3.4**/1**, Error ellipse: s-maj=126.5km s-min=27.3km az=76.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.86**	**177**	P	Pn	15 33 54.9	0.0
	0.2nm,0.3s,baz=356,slow=12,SNR=13						
WRA				S	Sn	15 37 06.5	-8.2
	0.6nm,1.0s,baz=2.6,slow=23,SNR=2.7						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**21.55**	**179**	P	P	15 34 35.8	-0.1
	2.3nm,0.8s,baz=6.1,slow=11,SNR=14						
ASAR				LR	LR	15 43 42.0	
	comp=Z,104nm,19.8s,baz=4.0,slow=39						
	2.3nm,0.8s						
MKAR	**Makanchi Array**	**66.09**	**324**	P	P	15 40 33.8	0.0
	0.6nm,0.6s,baz=110,slow=8.0,SNR=6.8						
	0.6nm,0.6s						

IDC 02 15:48:37.4±3.2**, 6°.43S**×**147°.42E, h0**^{km}**, mb3.0**/1**, mbtmp3.3**/3**, ML3.4**/1**, Error ellipse: s-maj=79.6km s-min=34.3km az=91.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.96**	**185**	Pn	Pn	15 49 26.3	+0.6
	19nm,0.5s,baz=7.1,slow=8.1,SNR=11						
PMG				Sn	Sn	15 50 02.8	+0.8
	3.8nm,0.3s,baz=68,slow=19,SNR=3.7						
WRA	**Warramunga Arr**	**18.48**	**222**	P	P	15 52 54.2	-0.9
	0.1nm,0.3s,baz=45,slow=11,SNR=5.0						
	1.0nm,1.0s						
ASAR	**Alice Springs**	**21.50**	**216**	P	P	15 53 27.1	-0.9
	0.6nm,0.8s,baz=52,slow=8.3,SNR=12						
	0.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**145.60**	**284**	PKPbc	PKPdf	16 08 18.8	0.0
	0.6nm,0.6s,baz=86,slow=3.6,SNR=4.7						

JMA ***02*** *16:00:14.8±0.1, 29°.6N±1°.0×14°0E±°, h392^{km}, MV3.6/22, NEAR TORISHIMA IS*

IDC ***02*** *16:00:16.5±0.8, 29°.60N×139°.61E, h362^{km}±10^{km}, mb3.0/8, mbtmp3.8/12, Error ellipse: s-maj=29.9km s-min=9.6km az=75.0*

ISC 02 16:00:15.8±0.8**, 29°.61N**±0°.07×**139°.6E**±0°.1**, h350**^{km}**, n23,**
σ1^{s}.43/29**, mb3.3**/7**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**3.38**	**137**	*e*P	**Pn**	**16 01 19.7**	**+0.9**
CBIJ				*e*S	**S**	**16 02 09.3**	**-0.2**
JCJ	**Chichijima**	**3.39**	**137**	P	**Pn**	**16 01 21.4**	**+2.6**
	62nm,0.4s,baz=285,slow=23,SNR=12						
JCJ				S	**S**	**16 02 11.8**	**+2.3**
	114nm,0.3s,baz=279,slow=22,SNR=9.4						
JHJ2	**Mitsune**	**3.50**	**3**	P	**Pn**	**16 01 22.2**	**+2.5**
JHJ	**Hachijo jima 2**	**3.51**	**3**	P	**Pn**	**16 01 20.9**	**+1.2**
	52nm,0.3s,baz=130,slow=22,SNR=13						
JHJ				S	**S**	**16 02 13.3**	**+1.9**
	109nm,0.8s,baz=78,slow=23,SNR=2.2						
JHH2	**Haha-jima-NKT2**	**3.74**	**142**	S	**S**	**16 02 15.7**	**0.0**
BSO1	**Boso 1**	**5.17**	**13**	P	**Pn**	**16 01 38.2**	**+1.7**
BSO1				*e*S	**S**	**16 02 43.5**	**+1.4**
JOD2	**Odawara 2**	**5.66**	**356**	*e*P	**Pn**	**16 01 43.5**	**+0.9**
JHU	**Hanno**	**6.23**	**358**	P	**Pn**	**16 01 49.5**	**+0.3**
JRY	**Ryogami san**	**6.42**	**355**	P	**Pn**	**16 01 52.5**	**+1.1**
JAG	**Ashikaga**	**6.80**	**359**	P	**Pn**	**16 01 55.5**	**-0.2**
MJAR	**Matsushiro Arr**	**7.01**	**351**	P	**Pn**	**16 01 58.7**	**+0.4**
	1.1nm,0.4s,baz=168,slow=10,SNR=8.2						
JHO	**Hitachi**	**7.03**	**6**	P	**Pn**	**16 01 58.5**	**0.0**
JHO				S	**S**	**16 03 19.4**	**-2.5**
JFK	**Kawauchi**	**7.81**	**8**	P	**Pn**	**16 02 08.0**	**+0.4**
JMK	**Ichinoseki**	**9.42**	**8**	P	**Pn**	**16 02 28.2**	**+1.6**
JMK				*e*S	**S**	**16 04 11.0**	**-2.8**
KSRS	**Korea Array**	**12.48**	**312**	P	**Pn**	**16 03 04.3**	**+1.1**
	1.3nm,0.5s,baz=125,slow=9.4,SNR=7.3						
KLR	**Kul'dur**	**20.49**	**345**	P	**P**	**16 04 29.0**	**+0.9**
	2.1nm,0.7s,baz=154,slow=7.2,SNR=8.4						
	2.1nm,0.7s						
SONM	**Songino Array**	**31.33**	**315**	P	**P**	**16 06 04.6**	**-0.3**
	0.5nm,0.4s,baz=126,slow=8.8,SNR=9.8						
	0.5nm,0.4s						
WRA	**Warramunga Arr**	**49.52**	**187**	P	**P**	**16 08 31.6**	**-0.6**
	0.5nm,0.3s,baz=3.2,slow=7.7,SNR=9.6						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**53.25**	**187**	P	**P**	**16 08 58.7**	**-0.9**
	0.4nm,0.7s,baz=0.1,slow=6.6,SNR=3.3						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**56.63**	**29**	P	**P**	**16 09 22.5**	**-0.6**
	0.2nm,0.5s,baz=274,slow=4.9,SNR=5.2						
	0.2nm,0.5s						
ARCES	**ARCESS Array B**	**70.42**	**340**	P	**P**	**16 10 52.2**	**-0.2**
	1.9nm,0.7s,baz=75,slow=7.7,SNR=8.2						
	1.9nm,0.7s						
FINES	**FINESS Array B**	**74.69**	**333**	P	**P**	**16 11 16.8**	**-0.6**
	0.6nm,0.4s,baz=76,slow=4.6,SNR=9.3						
	0.6nm,0.4s						
NOA	**NORSAR Array B**	**80.43**	**337**	P	**P**	**16 11 48.0**	**-1.0**
	0.5nm,0.6s,baz=44,slow=5.6,SNR=3.2						
	0.5nm,0.6s						

DNK ***02*** *16:26:48.6±2.8, 56°.13N×12°.31E, h28^{km}±5^{km}, ML2.7, MW2.5, Fault plane solution: NP1:ϕ_s21.00000°, δ52.00000°, λ31.00000°., Probable volcanic*

BER ***02*** *16:26:48.8±2.9, 56°.11N×12°.26E, h11^{km}±11^{km}, ML2.0, ML2.4(UPP), Confirmed Earthquake*

UPP ***02*** *16:26:49.2±0.2, 56°.14N×12°.41E, h25^{km}±1^{km}, ML2.4, Confirmed Earthquake*

NAO ***02*** *16:26:51.5±3.2, 56°.43N×12°.02E, h7^{km}±14^{km}, ML2.4*

IDC ***02*** *16:26:53.3±2.5, 56°.53N×12°.28E, h0^{km}, mbtmp3.4/3, ML2.0/4, Error ellipse: s-maj=20.5km s-min=17.4km az=46.0*

ISC 02 16:26:48.2±0.9**, 56°.16N**±0°.02×**12°.38E**±0°.02**, h29**^{km}±8^{km}**,**
n88, σ1^{s}.25/196**, 23C-15D, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJUU	**Bjuv**	**0.37**	**104**	⇓P	**Pb**	**16 26 56.7**	**+0.2**
BJUU				S	**Sb**	**16 27 02.0**	**-0.1**
BJUU	**Bjuv**	**0.37**	**104**	*i* P	**Pb**	**16 26 56.7**	**+0.2**
BJUU				⇓P	**Pb**	**16 26 56.7**	**+0.2**
BJUU				⇓P	**Pb**	**16 26 56.7**	**+0.2**
BJUU				⇓P	**Pb**	**16 26 56.7**	**+0.2**
BJUU				*i* S	**Sb**	**16 27 02.0**	**-0.1**
BJUU				S	**Sb**	**16 27 02.0**	**-0.1**
BJUU				S	**Sb**	**16 27 02.0**	**-0.1**
BJUU				S	**Sb**	**16 27 02.0**	**-0.1**
BJUU	**Bjuv**	**0.37**	**104**	⇓P	**Pb**	**16 26 56.7**	**+0.2**
BJUU				S	**Sb**	**16 27 02.0**	**-0.1**
LUNU	**Lund**	**0.80**	**131**	⇓P	**Pb**	**16 27 03.6**	**+0.1**
LUNU				S	**Sb**	**16 27 14.2**	**+0.2**
LUNU	**Lund**	**0.80**	**131**	*i* P	**Pb**	**16 27 03.6**	**+0.1**
LUNU				⇓P	**Pb**	**16 27 03.6**	**+0.1**
LUNU				⇓P	**Pb**	**16 27 03.6**	**+0.1**
LUNU				⇓P	**Pb**	**16 27 03.6**	**+0.1**
LUNU				*i* S	**Sb**	**16 27 14.0**	**0.0**
LUNU				S	**Sb**	**16 27 14.2**	**+0.2**
LUNU				S	**Sb**	**16 27 14.2**	**+0.2**
LUNU				S	**Sb**	**16 27 14.2**	**+0.2**
LUNU	**Lund**	**0.80**	**131**	⇓P	**Pb**	**16 27 03.6**	**+0.1**
LUNU				S	**Sb**	**16 27 14.2**	**+0.2**
LLD	**Lille Linde**	**0.84**	**187**	*i* P	**Pb**	**16 27 04.8**	**+0.6**
LLD				*i* S	**Sn**	**16 27 15.7**	**+0.4**
LLD				IAML		16 27 16.2	
	comp=Z,124nm,0.1s						
FABU	**Falkenberg**	**0.86**	**12**	⇑P	**Pb**	**16 27 05.3**	**+0.8**
FABU				S	**Sn**	**16 27 16.8**	**+0.9**
FABU	**Falkenberg**	**0.86**	**12**	*i* P	**Pb**	**16 27 05.3**	**+0.8**
FABU				⇑P	**Pb**	**16 27 05.3**	**+0.8**
FABU				⇑P	**Pb**	**16 27 05.3**	**+0.8**
FABU				⇑P	**Pb**	**16 27 05.3**	**+0.8**
FABU				*i* S	**Sn**	**16 27 16.4**	**+0.5**
FABU				S	**Sn**	**16 27 16.8**	**+0.9**
FABU				S	**Sn**	**16 27 16.8**	**+0.9**
FABU	**Falkenberg**	**0.86**	**12**	⇑P	**Pb**	**16 27 05.3**	**+0.8**
DEL	**Delary**	**0.88**	**69**	⇑P	**Pb**	**16 27 05.3**	**+0.4**
DEL				S	**Sn**	**16 27 16.8**	**+0.3**
DEL	**Delary**	**0.88**	**69**	*e*P	**Pn**	**16 27 04.7**	**0.0**
DEL	**Delary**	**0.88**	**69**	⇑P	**Pb**	**16 27 05.3**	**+0.4**
DEL				*i* P	**Pb**	**16 27 05.3**	**+0.4**
DEL				*i* S	**Sn**	**16 27 16.7**	**+0.3**
DEL				S	**Sn**	**16 27 16.8**	**+0.3**
DEL				IAML		16 27 20.2	
	comp=Z,28nm,0.2s						
DEL	**Delary**	**0.88**	**69**	⇑P	**Pb**	**16 27 05.3**	**+0.4**
ONAU	**Onsala**	**1.26**	**348**	P	**Pb**	**16 27 11.8**	**+0.5**
ONAU				S	**Sb**	**16 27 28.9**	**+1.8**
ONAU	**Onsala**	**1.26**	**348**	*i* P	**Pb**	**16 27 11.8**	**+0.5**
ONAU				P	**Pb**	**16 27 11.8**	**+0.5**
ONAU				P	**Pb**	**16 27 11.8**	**+0.5**
ONAU				P	**Pb**	**16 27 11.8**	**+0.5**
ONAU				*i* S	**Sb**	**16 27 27.9**	**+0.7**
ONAU				S	**Sb**	**16 27 28.9**	**+1.8**
ONAU				S	**Sb**	**16 27 28.9**	**+1.8**
ONAU				S	**Sb**	**16 27 28.9**	**+1.8**
ONAU	**Onsala**	**1.26**	**348**	P	**Pb**	**16 27 11.8**	**+0.5**
ONAU				S	**Sb**	**16 27 28.9**	**+1.8**
GNOU	**Gnosjoe**	**1.36**	**33**	⇑P	**Pb**	**16 27 13.6**	**+0.7**
GNOU				S	**Sb**	**16 27 31.1**	**+1.1**
GNOU	**Gnosjoe**	**1.36**	**33**	⇑P	**Pb**	**16 27 13.6**	**+0.7**
GNOU				⇑P	**Pb**	**16 27 13.6**	**+0.7**
GNOU				⇑P	**Pb**	**16 27 13.6**	**+0.7**
GNOU				S	**Sb**	**16 27 31.1**	**+1.1**
GNOU				S	**Sb**	**16 27 31.1**	**+1.1**
GNOU				S	**Sb**	**16 27 31.1**	**+1.1**
GNOU	**Gnosjoe**	**1.36**	**33**	⇑P	**Pb**	**16 27 13.6**	**+0.7**
GNOU				S	**Sb**	**16 27 31.1**	**+1.1**
BORU	**Boraas**	**1.49**	**8**	⇑P	**Pb**	**16 27 15.7**	**+0.5**
BORU				S	**Sb**	**16 27 34.9**	**+1.3**
BORU	**Boraas**	**1.49**	**8**	*i* P	**Pb**	**16 27 15.7**	**+0.5**
BORU				⇑P	**Pb**	**16 27 15.7**	**+0.5**
BORU				⇑P	**Pb**	**16 27 15.7**	**+0.5**
BORU				⇑P	**Pb**	**16 27 15.7**	**+0.5**
BORU				S	**Sb**	**16 27 34.9**	**+1.3**
BORU				S	**Sb**	**16 27 34.9**	**+1.3**
BORU				S	**Sb**	**16 27 34.9**	**+1.3**
BORU				*i* S	**Sb**	**16 27 35.0**	**+1.3**
BORU	**Boraas**	**1.49**	**8**	⇑P	**Pb**	**16 27 15.7**	**+0.5**
BORU				S	**Sb**	**16 27 34.9**	**+1.3**
VXJU	**Vaexsjoe**	**1.61**	**61**	P	**Pb**	**16 27 16.7**	**-0.5**
VXJU	**Vaexsjoe**	**1.61**	**61**	P	**Pb**	**16 27 16.7**	**-0.5**
VXJU				P	**Pb**	**16 27 16.7**	**-0.5**
VXJU				P	**Pb**	**16 27 16.7**	**-0.5**
VXJU	**Vaexsjoe**	**1.61**	**61**	P	**Pb**	**16 27 16.7**	**-0.5**
OVD	**Ostervraa, Den**	**1.67**	**315**	*i* P	**Pn**	**16 27 15.5**	**+0.1**
OVD				*i* S	**Sb**	**16 27 42.3**	**+3.6**
OVD				IAML		16 27 51.4	
	comp=Z,39nm,0.1s						
RGN	**Rugen**	**1.71**	**161**	*e*P	**Pb**	**16 27 21.3**	**+2.5**
RGN				*i* S	**Sb**	**16 27 42.6**	**+2.8**
BSD	**Bornholm Skovb**	**1.78**	**125**	*e*P	**Pb**	**16 27 22.4**	**+2.3**
BSD	**Bornholm Skovb**	**1.78**	**125**	*i* P	**Pn**	**16 27 17.5**	**+0.5**
BSD				*i*		16 27 19.7	
BSD				*i* S	**Sn**	**16 27 38.4**	**-0.2**
BSD				IAML		16 27 44.0	
	comp=Z,54nm,0.1s						
MUD	**Monsted U'grnd**	**1.81**	**281**	*i* P	**Pb**	**16 27 22.0**	**+1.4**
MUD				*e*S	**Sn**	**16 27 38.9**	**-0.5**
MUD				*i* S	**Sb**	**16 27 41.4**	**-1.4**
MUD				IAML		16 27 51.6	
	comp=Z,17nm,0.5s						
TJOU	**Tjoern**	**1.92**	**348**	⇑P	**Pb**	**16 27 20.8**	**-1.6**
TJOU	**Tjoern**	**1.92**	**348**	*i*	**Pb**	**16 27 20.8**	**-1.6**
TJOU				⇑P	**Pb**	**16 27 20.8**	**-1.6**
TJOU				⇑P	**Pb**	**16 27 20.8**	**-1.6**
TJOU				⇑P	**Pb**	**16 27 20.8**	**-1.6**
TJOU				*i* P	**Pb**	**16 27 22.9**	**+0.5**
TJOU				*i* S	**Sb**	**16 27 47.4**	**+1.5**
TJOU	**Tjoern**	**1.92**	**348**	⇑P	**Pb**	**16 27 20.8**	**-1.6**
BLEU	**Blekinge**	**1.92**	**84**	⇓P	**Pn**	**16 27 20.1**	**+1.3**
BLEU	**Blekinge**	**1.92**	**84**	⇓P	**Pn**	**16 27 20.1**	**+1.3**
BLEU				⇓P	**Pn**	**16 27 20.1**	**+1.3**
BLEU				⇓P	**Pn**	**16 27 20.1**	**+1.3**
BLEU				*i* P	**Pb**	**16 27 20.3**	**-2.1**
BLEU				*i*		16 27 22.7	
BLEU				*i* S	**Sb**	**16 27 46.6**	**+0.6**
BLEU	**Blekinge**	**1.92**	**84**	⇓P	**Pn**	**16 27 20.1**	**+1.3**
STRU	**Stroemstad**	**2.95**	**348**	*e*P	**Pn**	**16 27 34.7**	**+1.7**
STRU				*e*S	**Sn**	**16 28 08.2**	**+0.7**
STRU	**Stroemstad**	**2.95**	**348**	*e*P	**Pn**	**16 27 34.7**	**+1.7**
STRU				*e*S	**Sn**	**16 28 08.2**	**+0.7**
HOMB	**Homborsund**	**2.98**	**317**	Pn	**Pn**	**16 27 33.7**	**+0.2**
HOMB				Pg	**Pb**	**16 27 40.4**	**-0.2**
HOMB				Sn	**Sn**	**16 28 06.5**	**-1.7**
HOMB	**Homborsund**	**2.98**	**317**	*e*P	**Pn**	**16 27 33.9**	**+0.4**
HOMB				*i* P	**Pn**	**16 27 34.0**	**+0.5**
HOMB				*i* S	**Sn**	**16 28 06.7**	**-1.6**
HOMB				*e*S	**Sn**	**16 28 08.2**	**0.0**
HOMB				IAML		16 28 24.6	
	comp=Z,6.2nm,0.1s						
HOMB	**Homborsund**	**2.98**	**317**	*e*P	**Pn**	**16 27 33.9**	**+0.4**
HOMB				*e*S	**Sn**	**16 28 08.2**	**0.0**
HOMB				IAML		16 28 24.6	
	comp=Z,6.2nm,0.1s						
VIKU	**Vikbolandet**	**3.31**	**43**	*e*P	**Pb**	**16 27 48.2**	**+2.0**
SNART	**Snartemo**	**3.56**	**310**	*e*P	**Pn**	**16 27 42.0**	**+0.6**
SNART				*e*S	**Sn**	**16 28 21.3**	**-1.1**
SNART				IAML		16 28 58.1	
	comp=Z,7.2nm,0.3s						
SNART	**Snartemo**	**3.56**	**310**	*e*P	**Pn**	**16 27 42.0**	**+0.6**
SNART				*e*S	**Sn**	**16 28 21.3**	**-1.1**
SNART				IAML		16 28 58.1	
	comp=Z,7.2nm,0.3s						
KON	**Kongsberg**	**3.80**	**338**	Sn	**Sn**	**16 28 27.2**	**-1.2**
KON				Lg	Lg	16 28 45.1	
KONO	**Kongsberg**	**3.80**	**338**	*e*P	**Pn**	**16 27 46.0**	**+1.3**
KONO				*e*S	**Sn**	**16 28 27.1**	**-1.2**
KONO				IAML		16 28 53.1	
	comp=Z,5.3nm,0.3s						
KONO	**Kongsberg**	**3.80**	**338**	*e*P	**Pn**	**16 27 46.0**	**+1.3**
KONO				*e*S	**Sn**	**16 28 27.1**	**-1.2**
KONO				IAML		16 28 53.1	
	comp=Z,5.3nm,0.3s						
HFS	**Hagfors**	**4.04**	**9**	Pn	**Pn**	**16 27 49.9**	**+1.8**
	baz=205,slow=14						
HFS				Sn	**Sn**	**16 28 33.4**	**-0.9**
	baz=198,slow=22						
HFS				Lg	Lg	16 28 52.0	
	baz=199,slow=37						
HFS	**Hagfors**	**4.04**	**9**	Pn	**Pn**	**16 27 49.9**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=192,slow=12,SNR=1.4						
HFS				Sn	**Sn**	**16 28 34.1**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=189,slow=17,SNR=7.5						
HFS				Lg	Lg	16 28 50.2	
	comp=Z,1.8nm,0.3s,baz=190,slow=24,SNR=11						
HFS	**Hagfors**	**4.04**	**9**	Pn	**Pn**	**16 27 49.9**	**+1.8**
	baz=205,slow=14						
HFS				Sn	**Sn**	**16 28 33.4**	**-0.9**
	baz=198,slow=22						
HFS	**Hagfors**	**4.04**	**9**	Pn	**Pn**	**16 27 49.9**	**+1.8**

	baz=205,slow=14						
HFS				Sn	Sn	16 28 33.4	-0.9
	baz=198,slow=22						
BLS5	Blasjo	4.55	318	*e*P	Pn	16 27 55.9	+0.8
BLS5				*e*S	Sn	16 28 45.5	-1.5
BLS5				IAML		16 29 20.7	
	comp=Z,3.3nm,0.5s						
BLS5	Blasjo	4.55	318	*e*P	Pn	16 27 55.9	+0.8
BLS5				*e*S	Sn	16 28 45.5	-1.5
BLS5				IAML		16 29 20.7	
	comp=Z,3.3nm,0.5s						
NC602	NORSAR Array S	4.61	355	IAML		16 29 17.1	
	comp=Z,9.6nm,0.3s						
NC602	NORSAR Array S	4.61	355	IAML		16 29 17.1	
	comp=Z,9.6nm,0.3s						
NRA0	NORESS Array S	4.61	355	Pn	Pn	16 27 57.1	+1.3
	baz=188,slow=12						
NRA0				Sn	Sn	16 28 46.9	-1.3
	baz=174,slow=28						
NRA0				Lg	Lg	16 29 07.7	
	baz=162,slow=28						
NRA0	NORESS Array S	4.61	355	Pn	Pn	16 27 57.1	+1.3
	baz=188,slow=12						
NRA0				Sn	Sn	16 28 46.9	-1.3
	baz=174,slow=28						
NRA0	NORESS Array S	4.61	355	Pn	Pn	16 27 57.1	+1.3
	baz=188,slow=12						
NRA0				Sn	Sn	16 28 46.9	-1.3
	baz=174,slow=28						
NAO01	NORSAR Array S	4.76	351	*e*P	Pn	16 27 59.3	+1.4
NAO01				*e*S	Sn	16 28 50.4	-1.7
NAO01				IAML		16 29 21.3	
	comp=Z,7.8nm,0.4s						
NAO01	NORSAR Array S	4.76	351	*e*P	Pn	16 27 59.3	+1.4
NAO01				*e*S	Sn	16 28 50.4	-1.7
NAO01				IAML		16 29 21.3	
	comp=Z,7.8nm,0.4s						
ODD1	Odda	4.84	323	*e*P	Pn	16 28 00.0	+0.9
ODD1				*e*S	Sn	16 28 52.0	-2.2
ODD1				IAML		16 29 25.4	
	comp=Z,3.2nm,0.4s						
ODD1	Odda	4.84	323	*e*P	Pn	16 28 00.0	+0.9
ODD1				*e*S	Sn	16 28 52.0	-2.2
ODD1				IAML		16 29 25.4	
	comp=Z,3.2nm,0.4s						
NB2	NORSAR Subarra	4.93	353	Pn	Pn	16 28 01.9	+1.6
	baz=174,slow=14						
NB2				Sn	Sn	16 28 57.0	+0.7
NB2				Lg	Lg	16 29 18.9	
	baz=168,slow=37						
NB2	NORSAR Subarra	4.93	353	Pn	Pn	16 28 01.9	+1.6
	baz=174,slow=14						
NB2				Sn	Sn	16 28 57.0	+0.7
NB2	NORSAR Subarra	4.93	353	Pn	Pn	16 28 01.9	+1.6
	baz=174,slow=14						
NB2				Sn	Sn	16 28 57.0	+0.7
NOA	NORSAR Array B	4.93	353	Pn	Pn	16 28 01.4	+1.1
	baz=178,slow=12,SNR=13						
NOA				Sn	Sn	16 28 53.0	-3.3
	baz=192,slow=14,SNR=1.3						
NOA				Lg	Lg	16 29 14.2	
	comp=Z,0.2nm,0.3s,baz=57,slow=23,SNR=3.5						
	comp=Z,0.4nm,0.3s						
NB201	NORSAR Array S	4.93	354	IAML		16 29 24.9	
	comp=Z,5.0nm,0.4s						
NB201	NORSAR Array S	4.93	354	IAML		16 29 24.9	
	comp=Z,5.0nm,0.4s						
NBO00	NORSAR Array S	4.95	351	*e*P	Pn	16 28 01.8	+1.2
NBO00				*e*S	Sn	16 28 55.0	-1.8
NBO00				IAML		16 29 27.0	
	comp=Z,5.7nm,0.3s						
NBO00	NORSAR Array S	4.95	351	*e*P	Pn	16 28 01.8	+1.2
NBO00				*e*S	Sn	16 28 55.0	-1.8
NBO00				IAML		16 29 27.0	
	comp=Z,5.7nm,0.3s						
SKAR	Skarslia	5.01	336	*e*P	Pn	16 28 02.3	+0.9
SKAR				*e*S	Sn	16 28 55.4	-2.9
SKAR				IAML		16 29 28.9	
	comp=Z,6.8nm,0.4s						
SKAR	Skarslia	5.01	336	*e*P	Pn	16 28 02.3	+0.9
SKAR				*e*S	Sn	16 28 55.4	-2.9
SKAR				IAML		16 29 28.9	
	comp=Z,6.8nm,0.4s						
NC303	NORSAR Array S	5.11	354	*e*S	Sn	16 28 59.5	-1.0
NC303				IAML		16 29 31.5	
	comp=Z,18nm,0.5s						
NC303	NORSAR Array S	5.11	354	*e*S	Sn	16 28 59.5	-1.0
NC303				IAML		16 29 31.5	
	comp=Z,18nm,0.5s						
NC204	NORSAR Array S	5.20	351	*e*P	Pn	16 28 05.2	+1.2
NC204				*e*S	Sn	16 29 01.4	-1.5
NC204				IAML		16 29 42.9	
	comp=Z,3.8nm,0.6s						
NC204	NORSAR Array S	5.20	351	*e*P	Pn	16 28 05.2	+1.2
NC204				*e*S	Sn	16 29 01.4	-1.5
NC204				IAML		16 29 42.9	
	comp=Z,3.8nm,0.6s						
AAL	Aland	5.69	42	*e*P	Pb	16 28 19.1	-7.5
DOMB	Dombas	6.14	345	*e*S	Sn	16 29 23.5	-2.5
DOMB	Dombas	6.14	345	*e*S	Sn	16 29 23.5	-2.5
AKN	Aaknes	6.64	338	Pn	Pn	16 28 24.1	+0.4
AKN				Sn	Sn	16 29 38.0	-0.2
AKN	Aaknes	6.64	338	Pn	Pn	16 28 24.1	+0.4
AKN				Sn	Sn	16 29 38.0	-0.2
AKN	Aaknes	6.64	338	Pn	Pn	16 28 24.1	+0.4
AKN				Sn	Sn	16 29 38.0	-0.2
FIA0	FINESS Array S	8.85	48	Pn	Pn	16 28 56.1	+2.1
	baz=216,slow=14						
FIA0				Sn	Sn	16 30 31.4	-1.2
	baz=245,slow=22						
FIA0				Lg	Lg	16 31 21.0	
	baz=243,slow=28						
FIA0	FINESS Array S	8.85	48	Pn	Pn	16 28 56.1	+2.1
	baz=216,slow=14						
FIA0				Sn	Sn	16 30 31.4	-1.2
	baz=245,slow=22						
FIA0	FINESS Array S	8.85	48	Pn	Pn	16 28 56.1	+2.1
	baz=216,slow=14						
FIA0				Sn	Sn	16 30 31.4	-1.2
	baz=245,slow=22						
FINES	FINESS Array B	8.85	48	Pn	Pn	16 28 55.8	+1.8
	comp=Z,0.1nm,0.3s,baz=240,slow=11,SNR=2.8						
FINES				Sn	Sn	16 30 31.1	-1.5
	comp=Z,0.1nm,0.3s,baz=245,slow=23,SNR=1.3						
FINES				Lg	Lg	16 31 21.1	
	comp=Z,0.5nm,0.3s,baz=249,slow=26,SNR=7.5						
	comp=Z,2.9nm,0.9s						
ARCES	ARCESS Array B	14.64	18	Pn	Pn	16 30 10.2	-2.7
	baz=208,slow=13,SNR=2.0						
	comp=Z,2.9nm,0.9s						

KRNET ***02*** *16:29:23.0±0.1, 39°.16N×73°.64E, mb3.9*
IDC ***02*** *16:29:23.8±1.0, 38°.95N×73°.44E, h0km, mb3.7/10, mbtmp3.7/17, ML3.0/7, MS2.4/3, Error ellipse: s-maj=16.4km s-min=15.0km az=130.0*
SOME ***02*** *16:29:26.6, 39°.27N×73°.47E, h10km*
NNC ***02*** *16:29:28.5±2.4, 39°.22N×73°.38E, h0km, mb3.9, mpv3.4, Error ellipse: s-maj=19.7km s-min=17.0km az=175.0*
ISC 02 16:29:24.4±1.6**, 39°.22N**±0°.05×**73°.60E**±0°.03**, h1**km±9km**, n76, σ1.78/99, mb3.7/10, 31C-22D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	1.45	335	⇑*i*P	Pn	16 29 51.4	-0.5
	baz=34						
OHH				⇑*e*S	Sg	16 30 12.1	+1.1
	baz=34						
BTK	Batken	2.31	292	⇑*e*P	Pn	16 30 04.9	+1.2
	baz=93						
BTK				⇑*e*S	Sb	16 30 35.6	-0.3
	baz=93						
ARLS	Aral	2.70	12	⇓*e*P	Pn	16 30 10.4	+1.3
	baz=11						
ARLS				⇓*e*S	Sb	16 30 44.8	-2.5
	baz=11						
ARK	Arkit	2.87	335	⇓*e*P	Pn	16 30 12.9	+1.5
	baz=35						
ARK				⇓*e*S	Sb	16 30 49.4	-2.6
	baz=35						
NRN	Naryn	2.88	39	⇑*e*P	Pn	16 30 12.1	+0.4
	baz=38						
NRN				⇑*e*S	Sn	16 30 48.1	+1.0
	baz=38						
AML	Almayashu	2.91	1	P	Pb	16 30 16.9	-0.5
	SNR=44						
AML	Almayashu	2.91	1	⇓Pn	Pb	16 30 17.0	-0.5
	0.6nm,0.5s						
AML				⇑Sn	Sb	16 30 53.6	-0.1
	39nm,1.1s						
AML	Almayashu	2.91	1	⇑*e*P	Pn	16 30 13.6	+1.3
	baz=1.0						
AML				⇑*e*S	Sn	16 30 50.6	+2.5
	baz=1.0						
TRKS	Terek-Say	2.98	322	⇑*e*P	Pn	16 30 13.6	+0.6
	baz=21						
TRKS				⇑*e*S	Sn	16 30 50.6	+1.2
	baz=21						
UCH	Uchtor	3.09	13	P	Pb	16 30 20.6	+0.2
	SNR=18						
UCH	Uchtor	3.09	13	⇑*e*P	Pn	16 30 15.9	+1.2
	baz=12						
UCH				⇑*e*S	Sn	16 30 54.5	+2.0
	baz=12						
EKS2	Erkin-Say	3.44	2	P	Pb	16 30 24.8	-1.6
	SNR=14						
EKS2	Erkin-Say	3.44	2	⇑*e*P	Pn	16 30 20.9	+1.6
	baz=2.0						
EKS2				⇑*e*S	Sn	16 31 03.0	+2.1
	baz=2.0						
AAK	Ala-Archa	3.48	11	P	Pb	16 30 25.8	-1.2
	SNR=43						
AAK	Ala-Archa	3.48	11	Pn	Pb	16 30 26.0	-1.0
	5.2nm,0.3s,baz=169,slow=5.7,SNR=84						
AAK				Sn	Sb	16 31 13.0	+3.1
	3.2nm,0.3s,baz=356,slow=13,SNR=6.2						
AAK				LR	LR	16 31 16.3	
	comp=Z,9.0nm,19.6s,baz=273,slow=30						
	24nm,0.5s						
AAK	Ala-Archa	3.48	11	⇑*e*P	Pn	16 30 21.2	+1.3
	baz=10.0						
AAK				⇑*e*S	Sn	16 31 03.7	+1.8
	baz=10.0						
MRKS	Merke	3.54	356	*e*Pg	Pg	16 30 31.0	-1.2
	28nm,0.2s						
MRKS				*e*Lg	Lg	16 31 17.0	
	47nm,0.3s						
KBK	Karagaybulak	3.58	16	P	Pb	16 30 28.1	-0.6
	SNR=16						
KBK	Karagaybulak	3.58	16	⇑*e*P	Pn	16 30 22.5	+1.2
	baz=15						
KBK				⇑*e*S	Sn	16 31 06.1	+1.7
	baz=15						
ULHL	Ulahol	3.63	33	⇓*e*P	Pn	16 30 23.0	+1.0
	baz=32						
ULHL				⇓*e*S	Sn	16 31 06.8	+1.2
	baz=32						
FRU1	Bishkek	3.67	12	⇑*e*P	Pn	16 30 24.1	+1.7
	baz=11						
FRU1				⇑*e*S	Sn	16 31 08.8	+2.4
	baz=11						
BOOM	Boomskoye usch	3.72	28	⇑*i*P	Pn	16 30 24.4	+1.2
	baz=27						
BOOM				⇑*i*S	Sn	16 31 09.3	+1.6
	baz=27						
CHMS	Chumysh	3.88	13	P	Pb	16 30 31.0	-2.6
	SNR=21						
CHMS	Chumysh	3.88	13	⇓*e*P	Pn	16 30 26.6	+1.4
	baz=12						
CHMS				⇓*e*S	Sn	16 31 12.9	+1.5
	baz=12						
TAS	Tashkent	3.91	304	⇓*e*P	Pn	16 30 27.4	+1.8
	baz=4.0						
TAS				⇓*e*S	Sn	16 31 14.1	+2.0
	baz=4.0						
KDJ	Kajisay	3.98	42	⇑*i*P	Pn	16 30 28.1	+1.3
	baz=41						
KDJ				⇑*i*S	Sn	16 31 15.2	+0.9
	baz=41						
IUG	Iuzhnay	3.99	318	*e*Pg	Pb	16 30 39.2	+3.5
	23nm,0.2s						
IUG				*e*Lg	Lg	16 31 31.1	
	103nm,0.3s						
TKM2	Tokmak 2	4.00	22	P	Pb	16 30 33.2	-2.6
	SNR=7.3						
TKM2	Tokmak 2	4.00	22	⇓*e*P	Pn	16 30 28.4	+1.4
	baz=21						
TKM2				⇓*e*S	Sn	16 31 15.9	+1.3
	baz=21						
USP	Ospenovka	4.10	9	P	Pb	16 30 35.4	-2.1
	SNR=10						
USP	Ospenovka	4.10	9	⇓*e*P	Pn	16 30 29.8	+1.5
	baz=9.0						
USP				⇓*e*S	Sn	16 31 18.6	+1.6
	baz=9.0						
KST	Kastek	4.22	24	*e*Pg	Pg	16 30 45.1	-0.2
	5.1nm,0.1s						
KST				*e*Lg	Lg	16 31 41.6	
	36nm,0.5s						
DGS	Degeres	4.34	21	*e*Pg	Pg	16 30 48.0	+0.4
	14nm,0.3s						
DGS				*e*Lg	Lg	16 31 46.3	
	25nm,0.4s						
IZV	Izvestkoviy	4.44	30	*e*Pg	Pg	16 30 49.2	-0.4
	2.5nm,0.2s						
IZV				*e*Lg	Lg	16 31 48.9	
	28nm,0.3s						
MTBS	Maitube	4.45	28	*e*Pg	Pg	16 30 48.8	-1.0
	7.3nm,0.4s						
MTBS				*e*Lg	Lg	16 31 47.8	
	22nm,0.4s						
KK31	Karatay Array	4.53	330	Pn	Pn	16 30 37.9	+3.8
	2.2nm,0.3s,baz=143,slow=12,SNR=73						
KK31				⇓Sn	Sn	16 31 32.9	+5.5
	14nm,0.5s,baz=146,slow=18,SNR=4.7						
KK31				⇓Lg	Lg	16 31 47.5	
	16nm,0.5s,baz=146,slow=23,SNR=3.7						
KKAR	Karatay Array	4.53	330	⇓*e*P	Pn	16 30 35.8	+1.7
	baz=30						
KKAR				⇓*e*S	Sn	16 31 29.2	+1.8
	baz=30						
TNSS	Tian-Shan	4.58	32	*e*Pg	Pg	16 30 52.3	+0.1
	18nm,0.3s						
TNSS				*e*Lg	Lg	16 31 53.4	
	8.7nm,0.3s						
ANVS	Anan'yevo	4.71	40	⇓*i*P	Pn	16 30 37.8	+1.0
	baz=39						
ANVS				⇓*i*S	Sn	16 31 32.6	+0.5
	baz=39						
MDOK	Medeo	4.72	32	Pn	Pb	16 30 42.9	-5.2
	16nm,1.4s						
MDOK				⇑Pg	Pg	16 30 56.2	+1.2
	11nm,0.6s						
MDOK				⇑Sn	Sg	16 31 57.6	+1.5
	52nm,1.0s						
MDOK	Medeo	4.72	32	*e*Pg	Pg	16 30 54.6	-0.3
	11nm,0.3s						
MDOK				*e*Lg	Lg	16 31 57.9	
	24nm,0.4s						
KRBS	Karabastau	4.74	19	*e*Pg	Pg	16 30 53.2	-2.1
	5.3nm,0.3s						
KRBS				*e*Lg	Lg	16 31 55.1	
	20nm,0.6s						
KOTS	Kotyrbulak	4.81	32	*e*Pg	Pg	16 30 55.7	-0.9
	5.3nm,0.3s						
KOTS				*e*Lg	Lg	16 31 59.4	
	68nm,0.4s						
KTBS	Karatobe	5.05	26	*e*Pg	Pg	16 30 59.7	-1.5
	4.0nm,0.3s						
KTBS				*e*Lg	Lg	16 32 06.5	
	43nm,0.5s						
KUU	Kurty	5.10	23	*e*Pg	Pg	16 31 01.1	-1.1
	3.8nm,0.2s						
KUU				*e*Lg	Lg	16 32 09.0	
	31nm,0.3s						
SATY	Saty	5.28	42	*e*Pg	Pg	16 31 05.6	0.0
	7.7nm,0.5s						
SATY				*e*Lg	Lg	16 32 16.8	
	30nm,0.6s						
CHKK	Chushkaly	5.29	28	*e*Pg	Pg	16 31 04.1	-1.6
	4.0nm,0.3s						
CHKK				*e*Lg	Lg	16 32 13.8	
	12nm,0.3s						
KURS	Kuram	5.48	37	*e*Pg	Pg	16 31 08.1	-1.3
	4.3nm,0.5s						
KURS				*e*Lg	Lg	16 32 20.9	
	11nm,0.5s						
UZB	Uzynbulak	5.67	44	*e*Pg	Pg	16 31 12.8	-0.2
	4.1nm,0.1s						
UZB				*e*Lg	Lg	16 32 28.7	
	13nm,0.6s						
KPKS	Kokpek	5.71	40	*e*Pg	Pg	16 31 13.0	-1.0
	1.6nm,0.1s						
KPKS				*e*Lg	Lg	16 32 29.2	
	14nm,0.3s						
BTLS	Baital	5.83	3	*e*Pg	Pg	16 31 13.3	-2.8
	2.4nm,0.3s						
BTLS				*e*Lg	Lg	16 32 29.8	
	10nm,0.5s						
ARXS	Arharly	5.91	31	*e*Pg	Pg	16 31 16.5	-1.2
	11nm,0.3s						
ARXS				*e*Lg	Lg	16 32 35.7	
	3.8nm,0.1s						
PDGK	Podgornoye	6.05	45	⇑Pg	Pg	16 31 22.5	+2.2
	5.0nm,0.7s						
PDGK				⇑Lg	Lg	16 32 40.0	
	18nm,0.8s						
MK31	Makanchi Array	9.89	37	⇑Lg	Lg	16 34 28.7	
	1.6nm,0.8s						
MKAR	Makanchi Array	9.89	37	Pn	Pn	16 31 54.3	+6.7
	baz=207,slow=9.3,SNR=5.7						
	0.5nm,0.8s						
KURBB	Kurchatov Arra	11.92	15	Pn	Pn	16 32 17.6	+2.1
	baz=204,slow=13,SNR=1.6						
KURBB				Lg	Lg	16 35 43.1	
	baz=287,slow=23,SNR=1.7						
	0.4nm,0.3s						
KURBB	Kurchatov Arra	11.92	15	⇓Lg	Lg	16 35 36.9	
	6.9nm,1.1s						
GEYT	Alibeck	12.19	269	Pn	Pn	16 32 16.9	-2.4
	0.5nm,0.3s,baz=91,slow=8.6,SNR=3.7						
	1.5nm,0.5s						
BVA0	Borovoye Array	13.99	352	P	Pn	16 32 46.0	+2.4
	9.1nm,2.4s,baz=163,slow=12,SNR=6.3						
BVAR	Borovoye Array	13.99	352	Pn	Pn	16 32 45.5	+1.8
	baz=159,slow=10,SNR=8.0						
BVAR				Lg	Lg	16 36 46.5	
	baz=298,slow=42,SNR=1.6						
	1.3nm,0.7s						
AB31	Akbulak array	14.00	320	P	Pn	16 32 42.6	-1.2
	0.5nm,0.5s,baz=133,slow=13,SNR=20						
AB31				S	Sn	16 35 14.9	-4.9
	1.5nm,0.8s,baz=132,slow=24,SNR=4.6						
BRVK	Borovoye	14.03	352	⇑P	Pn	16 32 45.2	+0.9
	6.0nm,1.5s						
AKTO	Aktyubinsk	15.71	321	Pn	Pn	16 33 06.3	-0.5
	0.1nm,0.3s,baz=121,slow=2.1,SNR=2.0						
AKTO				Sn	Sn	16 35 57.3	-4.2
	0.2nm,0.3s,baz=63,slow=6.3,SNR=2.8						
	0.8nm,0.4s						
ZALV	Zalesovo Beam	16.60	24	Pn	P	16 33 21.9	+1.1
	0.2nm,0.3s,baz=212,slow=14,SNR=4.4						
ZALV				LR	LR	16 40 16.8	
	comp=Z,23nm,18.3s,baz=24,slow=39						
	0.8nm,0.6s						
GNI	Garni	22.19	282	P	P	16 34 22.1	-0.1
	2.0nm,0.5s,baz=236,slow=8.9,SNR=1.7						
	2.0nm,0.5s						
SONM	Songino Array	25.14	59	P	P	16 34 54.4	+3.3
	0.6nm,0.7s,baz=268,slow=9.4,SNR=6.2						
	0.6nm,0.7s						
BRTR	Keskin Array B	30.68	284	LR	LR	16 50 46.7	
	comp=Z,19nm,18.7s,baz=234,slow=42						
FINES	FINESS Array B	36.46	323	P	P	16 36 30.6	+0.1
	0.9nm,0.4s,baz=117,slow=11,SNR=7.5						
	0.9nm,0.4s						
ARCES	ARCESS Array B	39.47	336	P	P	16 36 56.1	+0.2
	3.3nm,1.0s,baz=102,slow=11,SNR=4.0						
	3.3nm,1.0s						
GERES	GERESS Array B	43.10	303	P	P	16 37 26.8	+0.7
	0.8nm,0.8s,baz=95,slow=11,SNR=1.9						
	0.8nm,0.8s						
NB2	NORSAR Subarra	43.50	321	P	P	16 37 28.7	-0.4
	comp=Z,0.8nm,0.6s,baz=92,slow=7.9						
NOA	NORSAR Array B	43.50	321	P	P	16 37 28.8	-0.4
	comp=Z,1.3nm,0.8s,baz=90,slow=7.7,SNR=4.4						
	comp=Z,1.3nm,0.8s						
TORD	Torodi Ar. Bea	67.83	269	P	P	16 40 24.0	-0.4
	comp=Z,0.3nm,0.6s,baz=52,slow=5.5,SNR=2.0						
	comp=Z,0.3nm,0.6s						
YKA	Yellowknife Ar	78.42	4	P	P	16 41 25.9	-0.5
	comp=Z,0.3nm,0.6s,baz=352,slow=5.5,SNR=5.0						
	comp=Z,0.3nm,0.6s						
WRA	Warramunga Arr	81.74	124	P	P	16 41 44.1	-0.8
	comp=Z,0.5nm,0.9s,baz=325,slow=5.2,SNR=4.2						
	comp=Z,0.5nm,0.9s						
ASAR	Alice Springs	84.17	127	P	P	16 41 56.1	-1.4
	comp=Z,0.3nm,0.8s,baz=321,slow=5.5,SNR=2.1						
	comp=Z,0.3nm,0.8s						

NOU 02 16:32:26.8, 15°.76S×166°.78E, h17km, MLv4.0/11**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOUNC	Koumac, New Ca	5.32	206	P	Pn	16 33 45.4	-0.1
MARNC	Mare, Loyalty	5.81	168	P	Pn	16 33 52.7	+0.4
YATNC	Mamie plateau,	6.27	179	P	Pn	16 33 58.0	-0.5
DZM	Mont Dzumac	6.29	183	P	Pn	16 33 58.4	-0.5
NOUC	Port Laguerre	6.32	184	P	Pn	16 33 59.4	+0.1
	22nm,1.5s						
OUENC	Ouen Island, N	6.62	180	P	Pn	16 34 04.2	+0.8

DDA ***02*** *16:33:50.4±0.0, 39°.50N×26°.09E, h7km±3km, ML2.1*
ISK ***02*** *16:33:50.3, 39°.50N×26°.10E, h6km, ML2.5/19*
ATH ***02*** *16:33:51.4, 39°.49N×26°.07E, h13km±1km, ML2.1/6, Error ellipse: s-maj=2.2km s-min=0.8km az=238.0*
THE ***02*** *16:33:51.0, 39°.50N×26°.10E, h13km±1km, ML2.2/6, Error ellipse: s-maj=1.4km s-min=0.6km az=102.0*
ISC 02 16:33:50.9±0.8**, 39°.50N**±0°.02×**26°.09E**±0°.02**, h14**km±6km**, n49, σ0.41**/75**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GPNR	Gulpinar-Canak	0.06	143	Pg	Pg	16 33 53.1	-0.4
PRK	Paraskevi	0.29	151	P	Pg	16 33 57.1	+0.2
PRK				S	Sg	16 34 01.8	+0.7
	1µm,0.4s						
PRK	Paraskevi	0.29	151	P	Pg	16 33 57.2	+0.2
PRK				S	Sg	16 34 01.6	+0.5
PRK				AML	AML	16 34 02.1	
	comp=E,2359µm,0.3s						
PRK				AML	AML	16 34 03.3	
	comp=N,1878µm,0.5s						
BOZC	Bozcaada	0.34	355	Pg	Pg	16 33 57.8	-0.1
BOZC				Sg	Sg	16 34 03.0	+0.4
BOZC	Bozcaada	0.34	355	P	Pg	16 33 57.7	-0.2
BOZC				S	Sg	16 34 02.7	+0.1
BOZC				*i* AML	AML	16 34 03.0	
	comp=N,169nm,0.4s						
BOZC				*i* AML	AML	16 34 03.0	
	comp=N,168nm,0.4s						
SIGR	SIGRI	0.34	212	P	Pg	16 33 57.8	0.0
SIGR				S	Sg	16 34 02.6	+0.1
	comp=N,340nm,0.5s						
SIGR	SIGRI	0.34	212	Pg	Pg	16 33 57.8	0.0
SIGR				Sg	Sg	16 34 02.9	+0.3
SIGR	SIGRI	0.34	212	P	Pg	16 33 57.8	0.0
SIGR				S	Sg	16 34 02.8	+0.3
SIGR				AML	AML	16 34 07.6	
	comp=E,685µm,0.3s						
SIGR				AML	AML	16 34 07.6	
	comp=N,732µm,0.4s						
EZN	Ezine	0.37	29	P	Pg	16 33 58.2	-0.2
EZN				S	Sg	16 34 03.6	+0.1
	comp=N,105nm,0.2s						
EZN	Ezine	0.37	29	Pg	Pg	16 33 58.3	-0.2
EZN				Sg	Sg	16 34 03.6	+0.1
BAYC	CANAKKALE_Bayr	0.43	56	P	Pg	16 33 59.0	-0.4
BAYC				S	Sg	16 34 04.8	-0.4
BAYC				*i* AML	AML	16 34 05.0	
	comp=N,114nm,0.3s						
BAYC				*i* AML	AML	16 34 06.0	
	comp=N,97nm,0.2s						
AYVA	Ayvalik	0.51	112	P	Pb	16 34 01.8	+0.3
AYVA				S	Sn	16 34 12.4	+0.2
AYVA				*i* AML	AML	16 34 15.0	
	comp=N,81nm,0.2s						
COMU	Canakkale	0.67	26	Pg	Pg	16 34 03.8	-0.1
COMU				Sg	Sb	16 34 13.5	0.0
GOKA	anakkale-Gk	0.70	349	P	Pg	16 34 04.1	-0.5
GOKA				S	Sg	16 34 13.5	-0.3
GOKA				*i* AML	AML	16 34 18.0	
	comp=N,182nm,0.3s						
GOKA				*i* AML	AML	16 34 18.0	
	comp=N,135nm,0.6s						
GADA	Gvkgeada	0.70	348	Pg	Pg	16 34 04.1	-0.5
BUHA	Balikesir, Bur	0.77	90	P	Pg	16 34 05.4	-0.3

BUHA				S	Sg	16 34 15.7	-0.1
BUHA				*i* AML	AML	16 34 19.0	
	comp=N,61nm,0.4s						
BUHA				*i* AML	AML	16 34 20.0	
	comp=N,94nm,0.4s						
DKL	**Dikili**	0.77	124	Pg	Pg	16 34 05.5	-0.3
LIA	**Limnos Island**	0.80	300	P	Pg	16 34 06.4	-0.1
LIA				S	Sb	16 34 18.5	+1.2
	comp=N,315nm,0.4s						
LIA	**Limnos Island**	0.80	300	P	Pg	16 34 06.5	0.0
LIA				S	Sg	16 34 17.2	+0.2
KARB	**zmir-Karabur**	0.87	163	P	Pg	16 34 07.7	-0.1
KARB				S	Sb	16 34 19.8	+0.4
KARB				*i* AML	AML	16 34 21.0	
	comp=N,103nm,0.3s						
KARB				*i* AML	AML	16 34 22.0	
	comp=N,84nm,0.3s						
CANM	**Can-anakkale**	0.90	55	Pg	Pg	16 34 08.0	-0.3
ZEDA	**zmir-Bergama**	0.94	125	P	Pg	16 34 08.7	-0.3
ZEDA				S	Sn	16 34 22.1	-0.7
ZEDA				*i* AML	AML	16 34 24.0	
	comp=N,68nm,0.4s						
ZEDA				*i* AML	AML	16 34 24.0	
	comp=N,58nm,0.3s						
GELI	**Tayfur-Gelibol**	0.94	18	Pg	Pb	16 34 08.6	-0.4
LPK	**Lapseki**	1.01	30	Pg	Pb	16 34 10.0	-0.2
PSRA	**Psara**	1.04	203	P	Pb	16 34 10.5	-0.1
SMTH	**Samothraki Isl**	1.06	336	P	Pb	16 34 10.8	-0.2
SMTH				S	Sb	16 34 25.1	+0.4
	comp=N,78nm,0.2s						
SMTH	**Samothraki Isl**	1.06	336	P	Pb	16 34 10.7	-0.2
SMTH				S	Sb	16 34 25.1	+0.4
SMTH				AML	AML	16 34 25.9	
	comp=E,144µm,0.3s						
SMTH				AML	AML	16 34 26.3	
	comp=N,161µm,0.1s						
CHOS	**Chios island**	1.11	181	P	Pb	16 34 11.4	-0.5
CHOS				S	Sb	16 34 26.3	-0.1
	comp=N,182nm,0.4s						
CHOS	**Chios island**	1.11	181	Pn	Pb	16 34 12.0	0.0
CHOS	**Chios island**	1.11	181	P	Pb	16 34 11.5	-0.5
CHOS				S	Sb	16 34 26.6	+0.3
CHOS				AML	AML	16 34 30.5	
	comp=E,483µm,0.3s						
CHOS				AML	AML	16 34 31.8	
	comp=N,297µm,0.4s						
BALY	**Balya**	1.21	78	P	Pb	16 34 13.9	+0.3
BALY				S	Sb	16 34 29.0	0.0
BALY				*i* AML	AML	16 34 32.0	
	comp=N,50nm,0.4s						
BALY				*i* AML	AML	16 34 33.0	
	comp=N,36nm,0.3s						
URLA	**Izmir**	1.21	161	Pn	Pn	16 34 12.9	-0.5
URLA	**Izmir**	1.21	161	P	Pn	16 34 12.1	-1.3
URLA				S	Sg	16 34 30.0	+0.1
URLA				*i* AML	AML	16 34 31.0	
	comp=N,45nm,0.3s						
URLA				*i* AML	AML	16 34 38.0	
	comp=N,54nm,0.9s						
ERIK	**Erikli-Kesan**	1.21	15	Pn	Pn	16 34 13.2	-0.2
ENEZ	**Enez**	1.23	2	Pn	Pn	16 34 14.0	+0.3
STEP	**BALIKESIR_Sava**	1.27	95	P	Pg	16 34 15.6	+0.3
STEP				S	Sg	16 34 32.8	+0.9
STEP				*i* AML	AML	16 34 36.0	
	comp=N,52nm,0.4s						
STEP				*i* AML	AML	16 34 38.0	
	comp=N,40nm,0.4s						
KRBG	**Karabiga-Canak**	1.29	46	Pn	Pn	16 34 14.8	+0.3
GONE	**Gonen-Balikesi**	1.35	66	Pn	Pb	16 34 16.0	+0.1
BALB	**Balikesir**	1.39	84	Pn	Pb	16 34 16.7	0.0
ALN	**Alexandroupoli**	1.39	359	P	Pn	16 34 15.3	-0.6
ALN	**Alexandroupoli**	1.39	359	Pn	Pb	16 34 16.7	0.0
ALN	**Alexandroupoli**	1.39	359	P	Pn	16 34 16.0	+0.1
ALN				S	Sn	16 34 34.1	-0.1
ALN				AML	AML	16 34 36.1	
	comp=N,73µm,0.4s						
ALN				AML	AML	16 34 36.3	
	comp=E,94µm,0.4s						
RKY	**Sarkoy-Tekirda**	1.45	35	Pn	Pn	16 34 17.3	+0.5
THAS	**Thassos island**	1.52	317	P	Pn	16 34 17.3	-0.4
THAS				AML	AML	16 34 41.7	
	comp=N,87µm,0.3s						
THAS				AML	AML	16 34 41.8	
	comp=E,61µm,0.4s						
UKOP	**Uzunkopru-Edir**	1.68	14	Pn	Pb	16 34 21.1	-0.4
RDO	**Rodhopi**	1.70	346	P	Pn	16 34 19.9	-0.2
RDO	**Rodhopi**	1.70	346	Pn	Pn	16 34 20.9	+0.8
RDO	**Rodhopi**	1.70	346	P	Pn	16 34 20.8	+0.8
KAVA	**Kavala**	1.92	322	P	Pn	16 34 23.4	+0.3

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*TUL **02** 16:43:39.8±1.1, 36°.54N±0°.01×98°.96W±0°.01, h6^{km}±2^{km}, ML3.3, mb_Lg3.1/71(NEIC), ML3.5/28(NEIC), Error ellipse: s-maj=2.1km s-min=1.2km az=147.0*

*NEIC **02** 16:43:39.5±0.8, 36°.55N±0°.02×99°.00W±0°.03, h11^{km}±5^{km}, Error ellipse: s-maj=3.8km s-min=2.2km az=113.0*

*ANF **02** 16:43:40.1±1.1, 36°.52N×98°.95W, h7^{km}±9^{km}, ML3.8/8, Error ellipse: s-maj=14.4km s-min=7.6km az=101.0*

ISC 02 16:43:39.9±0.9**, 36°.53N**±0°.02×**98°.95W**±0°.03**, h9**^{km}±6^{km}**,**
n122, σ**0^s.92**/126**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NOKA	**Waynoka**	0.10	9		Pg	16 43 42.6	+0.1
NOKA				Sg	Sg	16 43 44.6	+0.3
NOKA				IAML		16 43 44.8	
	comp=E,22µm,0.3s						
NOKA				IAML		16 43 44.8	
	comp=N,22µm,0.3s						
U32A	**Winter Ranch,**	0.16	195	Pg	Pg	16 43 43.1	-0.2
U32A				Sg	Sg	16 43 46.0	+0.3
U32A	**Winter Ranch,**	0.16	195	P	Pg	16 43 43.3	-0.1
	baz=11						
OK038	**West end E0370**	0.18	108		Pg	16 43 43.0	-0.7
OK038				Sg	Sg	16 43 46.1	-0.1
OK038				IAML		16 43 46.4	
	comp=N,18µm,0.3s						
OK038				IAML		16 43 48.7	
	comp=N,18µm,0.4s						
OK035	**E0210 Rd and N**	0.26	48		Pg	16 43 45.5	+0.3
OK035				Sg	Sg	16 43 49.8	+1.1
ELIS	**Ellis County**	0.60	219	Pg	Pg	16 43 51.4	-0.1
ELIS				Sg	Sg	16 44 00.1	+0.7
OK032	**Salt Plains WL**	0.65	65		Pg	16 43 52.6	0.0
OK032				Sg	Sg	16 44 01.7	+0.6
OK032				IAML		16 44 02.1	
	comp=N,2µm,0.2s						
OK032				IAML		16 44 04.6	
	comp=N,2µm,0.2s						
CROK	**Carrier**	0.78	92		Pg	16 43 54.9	-0.1
CROK				Sg	Sg	16 44 05.7	+0.6
KAN14	**Manchester OK**	0.90	62		Pg	16 43 57.1	-0.2
KAN14				Sg	Sg	16 44 08.7	-0.2
KAN14				IAML		16 44 11.9	
	comp=N,2µm,0.4s						
KAN14				IAML		16 44 13.3	
	comp=E,1µm,0.1s						
CSTR	**Hydro, Custer**	0.91	166	Pg	Pg	16 43 57.1	-0.3
GC02	**Grant County #**	0.93	70	Pg	Pg	16 43 57.5	-0.3
GC02				Sg	Sg	16 44 09.9	-0.2
KAN05	**Bluff City Nor**	1.04	56		Pg	16 43 59.6	-0.3
KAN05				Sg	Sg	16 44 13.7	+0.3
KAN08	**Anthony NE Sta**	1.05	48	Pg	Pg	16 43 59.7	-0.4
KAN08				Sg	Sb	16 44 14.1	-0.1
KAN12	**Harper NE Stat**	1.08	45		Pg	16 44 00.1	-0.6
KAN12				Sg	Sg	16 44 14.7	0.0
KAN12				IAML		16 44 23.6	
	comp=E,2µm,0.3s						
KAN17	**Caldwell West**	1.08	61		Pg	16 44 00.3	-0.4
KAN17				Sg	Sg	16 44 14.7	0.0
KAN17				IAML		16 44 19.2	
	comp=E,1µm,0.3s						
KAN17				IAML		16 44 21.9	
	comp=N,1µm,0.3s						
KAN06	**Argonia West S**	1.13	50		Pg	16 44 01.2	-0.4
KAN06				Sg	Sg	16 44 16.4	0.0
KAN06				IAML		16 44 18.5	
	comp=N,966nm,0.1s						
KAN06				IAML		16 44 19.5	
	comp=E,844nm,0.1s						
KAN01	**Argonia South**	1.14	57	Pg	Pg	16 44 01.4	-0.4
KAN01				Sg	Sg	16 44 16.8	+0.2
KAN09	**Caldwell North**	1.23	60		Pb	16 44 02.9	-0.5
KAN09				Sg	Sb	16 44 19.8	+0.5
KAN13	**South Haven SW**	1.28	68		Pn	16 44 03.8	-0.2
KAN13				Sg	Sb	16 44 20.8	+0.1
KS21	**Milan North St**	1.28	54	IAML		16 44 23.0	
	comp=E,925nm,0.1s						
KS21	**Milan North St**	1.28	54		Pn	16 44 03.9	-0.1
KS21				Sg	Sb	16 44 20.7	0.0
KS20	**Mayfield South**	1.32	58		Pn	16 44 04.4	-0.1
KS20					Sb	16 44 21.9	-0.1
BLOK	**Blackwell**	1.41	80		Pn	16 44 05.9	0.0
OK029	**Liberty Lake**	1.42	121	Pg	Pn	16 44 06.0	+0.1
ADOK	**Arcadia Dam**	1.55	124		Pn	16 44 08.4	+0.6
OK050	**Pawnee Station**	1.59	94		Pn	16 44 09.1	+0.7
OK025	**Westminster Rd**	1.62	126		Pn	16 44 09.3	+0.7
OK045	**Pawnee Station**	1.64	92		Pn	16 44 09.8	+0.8
OK046	**Pawnee Station**	1.65	94		Pn	16 44 10.0	+0.8
OK033	**Mehan**	1.70	106		Pn	16 44 10.6	+0.9
OK044	**Pawnee Station**	1.74	95		Pn	16 44 11.3	+0.8
FNO	**Franklin**	1.79	135		Pn	16 44 11.9	+0.9
WMOK	**Wichita Mounta**	1.80	176	Pn	Pn	16 44 11.2	0.0
WMOK	**Wichita Mounta**	1.80	176	P	Pn	16 44 11.4	+0.2
	baz=355						
WMOK				S	Sb	16 44 35.7	0.0
	baz=355						
OK031	**S. Brethren Rd**	1.80	108		Pn	16 44 12.1	+0.9
OK052	**Battle Ridge R**	1.82	107		Pn	16 44 12.3	+0.8
OK053	**SW of W Deep R**	1.82	106		Pn	16 44 12.5	+1.0
QUOK	**Quay**	1.85	101		Pn	16 44 12.8	+1.0
OK030	**Cody Creek RV**	1.85	108		Pn	16 44 12.8	+0.9
OK034	**N. Norfolk Rd.**	1.88	105		Pn	16 44 13.2	+0.9
R32A	**Long Quarter,**	1.90	6	Pn	Pn	16 44 13.3	+0.7
R32A	**Long Quarter,**	1.90	6	P	Pn	16 44 13.3	+0.7
	baz=186						
R32A				S	Sb	16 44 38.2	-0.4
	baz=186						
T35A	**Sooner Cattle**	2.00	78		Pn	16 44 14.3	+0.4
T35A				IAmb_Lg		16 44 43.6	
	comp=Z,75nm,0.7s						
T35B	**Sooner Cattle**	2.00	78	P	Pn	16 44 14.5	+0.6
	baz=260						
T35B				S	Sn	16 44 40.4	+1.4
	baz=260						
DEOK	**Depew**	2.10	108		Pn	16 44 15.7	+0.4
X34A	**Smith Ranch, M**	2.13	154		Pn	16 44 15.8	0.0
X34A				IAmb_Lg		16 44 51.6	
	comp=Z,94nm,0.7s						
W35A	**Tecumseh**	2.18	129	Pn	Pn	16 44 17.1	+0.7
CBKS	**Cedar Bluff**	2.36	345		Pn	16 44 19.4	+0.5
CBKS				IAmb_Lg		16 44 56.1	
	comp=Z,74nm,0.8s						
CBKS	**Cedar Bluff**	2.36	345	P	Pn	16 44 19.7	+0.8
	baz=165						
TUL1	**Leonard**	2.63	103		Pn	16 44 22.5	-0.1
TUL1				IAmb_Lg		16 45 07.9	
	comp=Z,66nm,1.0s						
TUL1	**Leonard**	2.63	103	P	Pn	16 44 22.6	+0.1
	baz=285						
AMTX	**Amarillo**	2.77	234		Pn	16 44 25.5	+0.9
AMTX				IAmb_Lg		16 45 08.8	
	comp=Z,64nm,0.8s						
AMTX	**Amarillo**	2.77	234	P	Pn	16 44 24.9	+0.3
	baz=52						
WTFS	**Witchita Falls**	2.79	172		Pn	16 44 23.3	-1.5
LOOK	**Love County**	2.92	150		Pn	16 44 25.4	-1.2
KSU1	**Kansas State U**	3.16	35	Pn	Pn	16 44 29.3	-0.7
KSU1				IAmb_Lg		16 45 22.5	
	comp=Z,69nm,0.7s						
KSU1	**Kansas State U**	3.16	35	P	Pn	16 44 30.5	+0.5
	baz=217						
KSU1				S	Sn	16 45 09.3	+1.5
	baz=217						
RLO	**Rose Lookout**	3.19	95	Pn	Pn	16 44 30.3	0.0
Z35A	**Perchaven, San**	3.49	156	Pn	Pn	16 44 35.0	+0.6
X37A	**Clayton**	3.50	123	Pn	Pn	16 44 35.2	+0.6
FW03	**Perrin-Whitt E**	3.56	168	Pn	Pn	16 44 36.3	+0.9
FW03				IAmb_Lg		16 45 39.9	
	comp=Z,21nm,0.7s						
U38A	**Gravette**	3.68	90	Pn	Pn	16 44 36.2	-0.9
FW06	**Azle**	3.73	162	Pn	Pn	16 44 38.9	+1.1
FW06				IAmb_Lg		16 45 48.2	
	comp=Z,29nm,0.8s						
KSCO	**Kaye Shedlock’**	3.82	311	Pn	Pn	16 44 38.6	-0.5
KSCO				IAmb_Lg		16 45 50.5	
	comp=Z,40nm,0.8s						
FW07	**Weatherford**	3.94	166	IAmb_Lg		16 45 55.7	
	comp=Z,24nm,0.8s						
ABTX	**Abilene, Hawle**	3.94	189	Pn	Pn	16 44 41.2	+0.6
ABTX				IAmb_Lg		16 45 52.9	
	comp=Z,26nm,1.0s						
MSTX	**Muleshoe**	4.04	232	Pn	Pn	16 44 41.6	-0.5
MSTX				IAmb_Lg		16 45 58.9	
	comp=Z,25nm,0.8s						
POST	**Post**	4.04	212	Pn	Pn	16 44 42.0	-0.1
POST				IAmb_Lg		16 45 51.7	
	comp=Z,53nm,1.1s						
HHAR	**Hobbs**	4.05	92	Pn	Pn	16 44 42.9	+0.7
FW13	**Cleburne**	4.36	163	IAmb_Lg		16 46 04.9	
	comp=Z,15nm,0.9s						
FW14	**Alvarado**	4.37	160	IAmb_Lg		16 46 10.0	
	comp=Z,22nm,0.8s						
T25A	**Trinidad**	4.42	279	Pn	Pn	16 44 48.0	+0.6
T25A				IAmb_Lg		16 46 02.0	
	comp=Z,32nm,0.8s						
Z38A	**Mt. Pleasant**	4.61	134	IAmb_Lg		16 46 10.0	
	comp=Z,39nm,0.8s						
S39A	**Bolivar**	4.64	74	Pn	Pn	16 44 49.8	-0.5
S39A				IAmb_Lg		16 46 06.2	
	comp=Z,54nm,0.8s						
WHTX	**Lake Whitney,**	4.70	164	Pn	Pn	16 44 52.5	+1.5
MIAR	**Mount Ida**	4.81	113	Pn	Pn	16 44 53.2	+0.6
BGNE	**Belgrade**	4.91	7	IAmb_Lg		16 46 20.2	
	comp=Z,49nm,0.8s						
OGNE	**Ogallala**	5.02	332	Pn	Pn	16 44 55.6	0.0
OGNE				IAmb_Lg		16 46 22.0	
	comp=Z,55nm,0.7s						
N35A	**Tabor**	5.04	30	Pn	Pn	16 44 57.4	+1.7
P38A	**Dawn**	5.27	53	Pn	Pn	16 44 58.6	-0.3
P38A				IAmb_Lg		16 46 34.5	
	comp=Z,40nm,0.7s						
SDCO	**Great Sand Dun**	5.37	285	Pn	Pn	16 44 58.7	-1.9
SDCO				IAmb_Lg		16 46 36.6	
	comp=Z,26nm,1.1s						
Q24A	**Divide**	5.48	298	Pn	Pn	16 45 01.0	-1.1
Q24A				IAmb_Lg		16 46 33.6	
	comp=Z,28nm,0.8s						
WHAR	**Wooly Hollow**	5.55	101	Pn	Pn	16 45 02.2	-0.5
WHAR				IAmb_Lg		16 46 42.0	
	comp=Z,50nm,1.1s						
FCAR	**Ozark Folk Cen**	5.56	95	Pn	Pn	16 45 00.9	-1.9
WLAR	**White Oak Lake**	5.56	119	Pn	Pn	16 45 03.2	+0.3
HTMS	**Hat Mesa**	5.60	225	Pn	Pn	16 45 01.5	-2.0
R40A	**Maddies Statio**	5.60	70	Pn	Pn	16 45 01.6	-1.8
UALR	**University of**	5.66	106	IAmb_Lg		16 46 45.0	
	comp=Z,26nm,0.9s						
L34A	**Svendsen Farm,**	5.78	19	Pn	Pn	16 45 05.2	-0.7
BRIGG	**Briggsdale**	5.83	315	IAmb_Lg		16 46 52.4	
	comp=Z,42nm,0.8s						
435B	**Jarrell**	5.85	168	IAmb_Lg		16 47 01.0	
	comp=Z,30nm,0.9s						
CLNB	**Carlsbad**	5.89	225	Pn	Pn	16 45 08.9	+1.3
Z41A	**Richland Creek**	6.02	121	Pn	Pn	16 45 07.6	-1.5
JCT	**Junction City**	6.08	187	Pn	Pn	16 45 08.6	-1.5
JCT				IAmb_Lg		16 46 58.9	
	comp=Z,23nm,0.8s						
K31A	**O'Neill**	6.08	1	Pn	Pn	16 45 08.2	-1.9
K31A				IAmb_Lg		16 46 56.8	
	comp=Z,28nm,0.7s						
N38A	**Joes South For**	6.17	45	Pn	Pn	16 45 10.2	-1.0
ISCO	**Idaho Springs**	6.18	304	Pn	Pn	16 45 09.2	-2.5
P40A	**Paris**	6.21	59	Pn	Pn	16 45 10.3	-1.6
GDL2	**Guadalupe Moun**	6.22	228	Pn	Pn	16 45 10.4	-1.7
ANMO	**Albuquerque**	6.31	258	Pn	Pn	16 45 11.1	-2.3
LCAR	**Lake Charles**	6.31	92	Pn	Pn	16 45 12.3	-0.9
LCAR				IAmb_Lg		16 46 57.8	
	comp=Z,18nm,0.8s						
CCM	**Cathedral Cave**	6.33	74	IAmb_Lg		16 47 09.7	
	comp=Z,27nm,0.8s						
S22A	**4UR Ranch, Cre**	6.41	283	Pn	Pn	16 45 13.3	-1.5
BNM	**Barren Site**	6.71	251	Pn	Pn	16 45 17.9	-1.0
PHWY	**Pilot Hill**	6.96	315	IAmb_Lg		16 47 21.1	
	comp=Z,19nm,0.8s						
SCIA	**State Center**	6.97	38	IAmb_Lg		16 47 30.6	
	comp=Z,30nm,0.7s						
N23A	**Red Feather La**	6.99	311	IAmb_Lg		16 47 26.7	
	comp=Z,37nm,1.1s						
MNTX	**Cornudas Mount**	7.19	230	Pn	Pn	16 45 25.2	-0.1
ECSD	**EROS Data Cent**	7.41	13	Pn	Pn	16 45 27.9	-0.4
CGM3	**Cape Girardeau**	7.48	81	IAmb_Lg		16 47 44.8	
	comp=Z,20nm,0.8s						
SUSD	**Miller**	7.90	360	IAmb_Lg		16 47 56.9	
	comp=Z,16nm,0.7s						
W45A	**Hickory Valley**	8.05	97	IAmb_Lg		16 48 13.8	
	comp=Z,26nm,1.0s						
L40A	**Anamosa**	8.15	45	Pn	Pn	16 45 38.8	+0.4
PV17	**East Wray Mesa**	8.15	285	Pn	Pn	16 45 38.4	-0.3
TX31	**Lajitas Ar. Si**	8.20	210	Pn	Pn	16 45 38.5	-0.7
TX32	**Lajitas Array**	8.20	210	Pn	Pn	16 45 38.5	-0.7
TXAR	**Lajitas Array**	8.20	210	Pn	Pn	16 45 38.5	-0.7
K22A	**Casper**	8.45	319	IAmb_Lg		16 48 28.9	
	comp=Z,20nm,0.8s						
RSSD	**Black Hills**	8.51	334	IAmb_Lg		16 48 17.6	
	comp=Z,12nm,0.9s						
HDIL	**Hopedale**	8.56	59	Pn	Pn	16 45 42.4	-1.7
L42A	**Oliver, Polo**	9.04	50	Pn	Pn	16 45 47.2	-3.3
L42A				IAmb_Lg		16 48 45.1	
	comp=Z,27nm,0.9s						
JFWS	**Jewell Farm**	9.25	44	IAmb_Lg		16 48 40.9	
	comp=Z,22nm,0.7s						

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*DDA **02** 16:44:10.0±0.0, 37°.57N×38°.51E, h7^{km}±2^{km}, ML3.3*

*ISK **02** 16:44:11.1, 37°.55N×38°.46E, h19^{km}, ML3.5/9*

ISC 02 16:44:10.5±0.9**, 37°.57N**±0°.03×**38°.49E**±0°.02**, h11**^{km}±8^{km}**,**
n31, σ**0^s.72**/43**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	**Bozova**	0.19	237	P	Pg	16 44 14.8	+0.1
ATAB				S	Sg	16 44 17.7	+0.3
ATAB				*i* AML	AML	16 44 18.0	
	comp=N,8µm,0.2s						
ATAB				*i* AML	AML	16 44 18.0	
	comp=E,1µm,0.1s						
URFA	**Urfa**	0.29	116	Pg	Pb	16 44 18.6	+0.8
URFA				Sg	Sb	16 44 22.9	+0.2
HANM	**anlurfa/Hi**	0.31	88	P	Pg	16 44 16.2	-0.6
HANM				*i* AML	AML	16 44 20.0	
	comp=N,7µm,0.2s						
HANM				*i* AML	AML	16 44 20.0	
	comp=E,2µm,0.1s						
HANM				S	Sg	16 44 20.3	-0.7
SANL	**SANLIURFA_Merk**	0.56	135	P	Pg	16 44 21.3	-0.2
SANL				S	Sg	16 44 28.8	-0.1
SANL				*i* AML	AML	16 44 34.0	
	comp=E,2µm,0.7s						
SANL				*i* AML	AML	16 44 35.0	
	comp=N,2µm,0.6s						
AKCA	**Adyaman/G¶l**	0.68	289	P	Pg	16 44 23.5	-0.1
AKCA				S	Sg	16 44 32.2	-0.3
AKCA				*i* AML	AML	16 44 38.0	
	comp=E,1µm,0.3s						
AKCA				*i* AML	AML	16 44 38.0	
	comp=N,1µm,0.3s						
SURC	**SANLIURFA_SURC**	0.70	172	P	Pg	16 44 24.2	+0.2
MAYA	**Malatya/Merkez**	0.76	356	P	Pg	16 44 24.5	-0.7
GZT	**Gaziantep**	0.77	254	P	Pg	16 44 25.5	+0.1
GZT				*i* AML	AML	16 44 39.0	
	comp=N,2µm,0.3s						
GZT				*i* AML	AML	16 44 40.0	
	comp=E,1µm,0.2s						
NZIP	**Nizip/Gaziante**	0.84	231	P	Pb	16 44 26.9	-0.2
NZIP				S	Sb	16 44 37.8	-0.5
NZIP				*i* AML	AML	16 44 41.0	
	comp=E,1µm,0.3s						
NZIP				*i* AML	AML	16 44 41.0	
	comp=N,2µm,0.4s						
ELZG	**Elazig**	1.00	23	P	Pb	16 44 28.7	-1.3
ELZG				S	Sb	16 44 43.4	+0.1
GAZ	**Gaziantep**	1.09	249	Pg	Pg	16 44 31.5	-0.1
GAZ				Sg	Sn	16 44 46.5	-0.4
KAHM	**Kahramanmaras,**	1.20	268	P	Pn	16 44 32.5	-0.6
DARE	**Darende-Malaty**	1.28	322	Pn	Pb	16 44 34.7	+0.1
ELBS	**KAHRAMANMARAS_**	1.31	305	P	Pn	16 44 34.6	-0.2
ELBS				S	Sg	16 44 56.0	+3.2
DYBB	**Diyarbakir**	1.36	73	Pn	Pn	16 44 35.4	-0.1
DYBB				Sn	Sg	16 44 54.8	+0.5
HEKM	**Malatya_Hekimh**	1.37	342	P	Pn	16 44 35.7	-0.1
HEKM				S	Sg	16 44 55.2	+0.5
HEKM				*i* AML	AML	16 44 58.0	
	comp=E,475nm,0.5s						
KUZU	**Kuzuini**	1.38	235	P	Pg	16 44 37.2	+0.1
KUZU				S	Sg	16 44 55.3	+0.3
KUZU				*i* AML	AML	16 44 58.0	
	comp=E,1µm,0.2s						
KUZU				*i* AML	AML	16 44 58.0	
	comp=N,2µm,0.3s						
CUGUR	**Gurin_SVAS**	1.50	320	P	Pg	16 44 39.2	-0.2
KAMA	**Osmaniye**	1.50	256	P	Pn	16 44 37.1	-0.3
ARPR	**Arapgir-MALATY**	1.52	355	Pn	Pn	16 44 38.0	+0.2
KOVA	**Elazig, Kovanc**	1.54	42	P	Pb	16 44 39.2	+0.2
MAZI	**Mazidag**	1.56	94	Pn	Pn	16 44 38.4	+0.2
KEMA	**Kemaliye**	1.69	0	P	Pn	16 44 40.8	+0.7
ANDN	**Andirin**	1.71	271	P	Pn	16 44 39.9	-0.3
HANI	**Diyarbakir_Han**	1.73	60	P	Pn	16 44 40.7	+0.2
TNCL	**Tunceli-Merkez**	1.75	28	P	Pb	16 44 43.4	+0.7
SARI	**SarD1z-Kayseri**	1.84	298	Pn	Pn	16 44 42.9	+0.8
CUKAN	**kangal_SIVAS**	1.92	336	P	Pb	16 44 44.5	-1.1
SAIM	**ADANA**	1.95	283	P	Pn	16 44 43.9	+0.3
BNGB	**Bingl**	2.23	50	Pn	Pn	16 44 47.9	+0.4
AKO	**Adana**	2.42	268	P	Pn	16 44 49.1	-1.0

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*DDA **02** 16:45:16.1±0.0, 37°.56N×38°.50E, h7^{km}±2^{km}, ML3.8*

*ISK **02** 16:45:17.8, 37°.54N×38°.48E, h19^{km}, ML3.9/13*

ISC 02 16:45:15.9±0.9**, 37°.57N**±0°.03×**38°.53E**±0°.02**, h17**^{km}±7^{km}**,**
n31, σ**1^s.20**/43**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	**Bozova**	0.22	241	SPECP		16 45 20.0	
ATAB				P	Pg	16 45 20.6	-0.4
ATAB				*i* AML	AML	16 45 24.0	
	comp=N,3µm,0.2s						
ATAB				S	Sg	16 45 24.1	-0.5
URFA	**Urfa**	0.27	120	Pg	Pn	16 45 25.0	-0.1
URFA				Sg	Sn	16 45 29.5	-1.3
HANM	**anlurfa/Hi**	0.28	89	SPECP		16 45 22.0	
HANM				P	Pg	16 45 22.3	+0.2
HANM				S	Sg	16 45 26.7	+0.5
HANM				*i* AML	AML	16 45 27.0	
	comp=N,1µm,0.2s						
SANL	**SANLIURFA_Merk**	0.54	138	SPECP		16 45 27.0	
SANL				P	Pb	16 45 27.7	+0.7
SANL				S	Sb	16 45 35.0	+0.6
SANL				*i* AML	AML	16 45 40.0	
	comp=E,9µm,0.6s						
SANL				*i* AML	AML	16 45 40.0	
	comp=N,7µm,0.5s						
SURC	**SANLIURFA_SURC**	0.70	175	SPECP		16 45 29.0	
SURC				P	Pg	16 45 29.5	-0.1
SURC				S	Sb	16 45 40.1	+1.2
AKCA	**Adyaman/G¶l**	0.70	288	SPECP		16 45 29.0	
AKCA				P	Pb	16 45 29.9	+0.1
MAYA	**Malatya/Merkez**	0.76	354	SPECP		16 45 30.0	
MAYA				P	Pg	16 45 30.2	-0.6
GZT	**Gaziantep**	0.80	254	P	Pn	16 45 33.3	+0.7
GZT				S	Sb	16 45 42.2	+0.2
GZT				*i* AML	AML	16 45 45.0	
	comp=N,6µm,0.4s						
GZT				*i* AML	AML	16 45 46.0	
	comp=E,5µm,0.4s						
NZIP	**Nizip/Gaziante**	0.86	232	SPECP		16 45 33.0	
NZIP				P	Pn	16 45 33.6	+0.3
NZIP				S	Sg	16 45 44.6	+0.4
NZIP				*i* AML	AML	16 45 48.0	
	comp=N,5µm,1.1s						
AKCD	**Akcadag**	0.87	326	SPECP		16 45 33.0	
AKCD				P	Pn	16 45 33.6	+0.2
ELZG	**Elazig**	0.99	21	SPECP		16 45 35.0	
ELZG				P	Pn	16 45 35.3	+0.1
GAZ	**Gaziantep**	1.13	250	Pg	Pg	16 45 37.9	+0.2
GAZ				Sg	Sg	16 45 53.5	+1.0
KAHM	**Kahramanmaras,**	1.23	268	SPECP		16 45 38.0	
KAHM				P	Pn	16 45 38.7	+0.3
DARE	**Darende-Malaty**	1.29	321	Pn	Pg	16 45 41.8	+0.9
DARE				Sn	Sg	16 45 59.2	+1.3
DYBB	**Diyarbakir**	1.33	73	Pn	Pg	16 45 42.5	+0.9

DYBB				Sn	Sg	16 46 00.9	+2.0
HEKM	Malatya_Hekimh	1.38	341	SPECP		16 45 42.0	
HEKM				P	Pg	16 45 42.4	-0.1
ARPR	Arapgir-MALATY	1.52	354	Pn	Pg	16 45 45.8	+0.5
MAZI	Mazidag	1.53	94	Pn	Pg	16 45 45.1	-0.2
MAZI				Sn	Sg	16 46 06.2	+1.0
KAMA	Osmaniye	1.54	256	P	Pg	16 45 45.5	0.0
KAMA				S	Sn	16 46 02.4	+0.3
KAMA				*i* AML	AML	16 46 08.0	
	comp=E,774nm,0.7s						
ANDN	Andirin	1.74	271	P	Pb	16 45 47.1	-0.3
SARI	SarD1z-Kayseri	1.87	297	Pn	Pn	16 45 48.3	+1.1
KOZT	Kozan	2.15	268	Pn	Pb	16 45 53.5	-0.9
SVAN	Silvan-Diyarba	2.19	74	Pn	Pb	16 45 54.6	-0.4
BNGB	Bingl	2.20	49	Pn	Pb	16 45 55.5	+0.2
CEYT	Ceyhan	2.29	257	Pn	Pb	16 45 55.4	-1.3
YEDI	Yedisu-Bingol	2.44	40	Pn	Pb	16 45 59.1	-0.3
SVSK	Karacayir	2.63	333	Pn	Pb	16 46 00.6	-1.9
VRTB	Varto-Mus	2.79	55	Pn	Pb	16 46 03.8	-1.6
GURO	Guroymak-BITLI	2.93	69	Pn	Pb	16 46 05.4	-2.3
HWQ	Hawqa	3.90	213	*e*P	Pn	16 46 10.8	-4.4
DQRL	Deir Qamar	4.55	213	*e*P	Pb	16 46 37.6	+2.3

IDC 02 16:52:48.9±330.0**, 54°.25N×42°.81E, h0^{km}, Error ellipse: s-maj=140.0km s-min=77.9km az=135.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	4.03	310	I	I	17 18 10.0	
	0.1nm,0.7s,baz=127,slow=336,SNR=1.8						
I31KZ	AKTYUBINSK INF	10.08	106	I	I	17 54 40.0	
	baz=301,slow=323,SNR=2.1						
I37NO	I37NO	18.57	332	I	I	18 53 50.0	
	baz=131,slow=336,SNR=2.1						
I46RU	ZALESOVO INFRA	24.38	73	I	I	19 21 30.0	
	baz=291,slow=330,SNR=2.4						

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*NEIC **02** 16:53:31.6±2.0, 47°.63N±0°.02×91°.96W±0°.05, h0^{km}±2^{km}, ML3.2/50, mb_Lg3.0(OTT), Error ellipse: s-maj=5.9km s-min=3.0km az=114.0*

*OTT **02** 16:53:32.4±0.1, 47°.61N×91°.93W, h0^{km}, MN3.0/8, Blast, Minnesota, U.S. 128km south from Atikokan, On Mining explosion.*

ISC 02 16:53:31.1±0.9**, 47°.61N**±0°.03×**91°.92W**±0°.03**, h0^{km}, n55, σ1^s.25**/76**, Minnesota**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EYMN	Ely	0.44	40		Pg	16 53 40.1	+0.7
EYMN				Sg	Sg	16 53 46.1	+0.9
EYMN	Ely	0.44	40	PG	Pg	16 53 40.2	+0.7
EYMN				SG	Sg	16 53 46.4	+1.2
E38A	The Farm, Brul	1.04	166		Pg	16 53 51.6	+0.7
ATKO	Atikokan Iron	1.23	10	Pg	Pg	16 53 54.6	-0.1
ATKO				Sg	Sg	16 54 10.5	-0.1
ATKO	Atikokan Iron	1.23	10	PG	Pg	16 53 54.6	-0.1
ATKO				SG	Sg	16 54 10.5	-0.1
ATKO				Trac		16 54 24.7	
	comp=Z,13nm,0.1s						
B35A	Bob, Littlefor	1.43	302		Pn	16 53 57.4	-0.9
B35A				Sn	Sg	16 54 16.2	-0.6
TBO	Thunder Bay	1.98	57	Pn	Pn	16 54 06.9	+1.1
TBO				Sn	Sn	16 54 32.3	+1.0
TBO	Thunder Bay	1.98	57	PN	Pn	16 54 06.9	+1.1
TBO				SN	Sn	16 54 32.3	+1.0
TBO				Trac		16 54 42.6	
	comp=Z,34nm,0.1s						
F36A	Milaca	2.07	213		Pn	16 54 07.8	+0.8
F36A				IAML		16 54 45.7	
	comp=N,164nm,0.2s						
F36A				IAML		16 54 47.3	
	comp=E,153nm,0.2s						
D41A	Chassel	2.35	102	Pn	Pn	16 54 11.8	+0.9
D41A				IAML		16 54 50.9	
	comp=N,87nm,0.2s						
D41A				IAML		16 54 53.9	
	comp=E,92nm,0.1s						
EPLO	Experimental L	2.38	331	Sn	Sn	16 54 42.1	+0.7
EPLO	Experimental L	2.38	331	SN	Sn	16 54 42.1	+0.7
SOLO	Sioux Lookout	2.41	358	Pn	Pn	16 54 12.7	+0.8
SOLO				Sn	Sn	16 54 43.8	+1.7
SOLO	Sioux Lookout	2.41	358	PN	Pn	16 54 12.7	+0.8
SOLO				SN	Sn	16 54 43.8	+1.7
SOLO				Trac		16 54 54.8	
	comp=E,8.5nm,0.1s						
COWI	Conover	2.44	127	Pn	Pn	16 54 12.6	+0.5
COWI				IAML		16 54 54.1	
	comp=E,93nm,0.3s						
SPMN	Marine on St.	2.47	195		Pn	16 54 13.3	+0.8
SPMN				IAML		16 54 59.0	
	comp=E,145nm,0.3s						
G40A	Rib Lake	2.63	152		Pn	16 54 16.1	+1.4
G40A				IAML		16 55 00.0	
	comp=N,107nm,0.2s						
G40A				IAML		16 55 01.6	
	comp=E,148nm,0.3s						
AGMN	Agassiz Nation	2.74	286	Pn	Pn	16 54 17.0	+0.8
AGMN				IAML		16 55 01.3	
	comp=E,90nm,0.2s						
AGMN				IAML		16 55 01.7	
	comp=E,82nm,0.2s						
F42A	Maple Grove Fa	3.20	124	Pn	Pn	16 54 24.9	+2.3
F42A				IAML		16 55 13.0	
	comp=E,78nm,0.2s						
F42A				IAML		16 55 16.7	
	comp=N,92nm,0.3s						
F33A	5 Mile Ranch,	3.49	241	Pn	Pn	16 54 27.5	+0.9
F33A				IAML		16 55 33.7	
	comp=E,96nm,0.4s						
D32A	Dogwood Acres,	3.50	264	Pn	Pn	16 54 27.8	+1.1
D32A				IAML		16 55 35.2	
	comp=N,89nm,0.5s						
D32A				IAML		16 55 40.2	
	comp=E,72nm,0.5s						
E43A	Lone Tree Farm	3.59	108	Pn	Pn	16 54 29.2	+1.2
ULM	Lac du Bonnet	3.71	317	Pn	Pn	16 54 28.9	-0.7
ULM	Lac du Bonnet	3.71	317	PN	Pn	16 54 29.8	+0.1
ULM				SN	Sn	16 55 12.9	-1.1
ULM				Trac		16 55 29.4	
	comp=E,5.6nm,0.2s						
I37A	Lemond, Waseca	3.74	197	Pn	Pn	16 54 29.7	-0.4
I37A				IAML		16 55 38.2	
	comp=E,38nm,0.8s						
I37A				IAML		16 55 40.0	
	comp=N,46nm,0.5s						
I40A	Norwalk	3.83	166	Pn	Pn	16 54 30.8	-0.5
I40A				IAML		16 55 44.0	
	comp=N,55nm,0.2s						
I40A				IAML		16 55 47.0	
	comp=E,46nm,0.2s						
PNPO	Pukaskwa Natio	3.90	73	Pn	Pn	16 54 33.0	+0.7
PNPO				Sn	Sn	16 55 18.1	-0.7
PNPO	Pukaskwa Natio	3.90	73	PN	Pn	16 54 33.0	+0.7
PNPO				SN	Sn	16 55 18.1	-0.7
PNPO				Trac		16 55 37.6	
	comp=E,9.8nm,0.2s						
GTO	Geraldton	3.92	55	Pn	Pn	16 54 33.2	+0.7
GTO				Sn	Sn	16 55 18.3	-0.8
GTO	Geraldton	3.92	55	PN	Pn	16 54 33.2	+0.7
GTO				SN	Sn	16 55 18.3	-0.8
GTO				Trac		16 55 41.4	
	comp=E,27nm,0.2s						
PKLO	Pickle Lake	4.02	14	Pn	Pn	16 54 34.4	+0.5
PKLO				Sn	Sn	16 55 20.2	-1.5
PKLO	Pickle Lake	4.02	14	PN	Pn	16 54 34.4	+0.5
PKLO				SN	Sn	16 55 20.2	-1.5
PKLO				LG	Lg	16 55 37.3	
PKLO				Trac		16 55 39.6	
	comp=E,8.1nm,0.2s						
H43A	Windswept, Lux	4.27	136	Pn	Pn	16 54 37.1	-0.1
H43A				IAML		16 55 48.6	
	comp=N,20nm,1.6s						
I42A	Draeger Farm,	4.28	149	Pn	Pn	16 54 37.4	0.0
I42A				IAML		16 56 03.4	
	comp=N,21nm,2.2s						
I42A				IAML		16 56 16.7	
	comp=E,21nm,3.9s						
JFWS	Jewell Farm	4.84	165	Pn	Pn	16 54 45.2	0.0
JFWS				IAML		16 57 49.1	
	comp=E,16nm,2.8s						
JFWS				IAML		16 57 59.6	
	comp=E,18nm,3.2s						
JFWS	Jewell Farm	4.84	165	PN	Pn	16 54 47.7	+2.5
JFWS				SN	Sn	16 55 40.2	-1.8
K38A	Parkersburg	5.00	187	Pn	Pn	16 54 47.3	-0.1
G45A	Suttons Bay	5.04	118	Pn	Pn	16 54 47.7	-0.2
ECSD	EROS Data Cent	5.09	222	IAML		16 56 15.4	
	comp=E,12nm,3.5s						
ECSD				IAML		16 57 08.2	
	comp=E,12nm,4.0s						
ECSD	EROS Data Cent	5.09	222	Pn	Pn	16 54 47.9	-0.6
MDND	Maddock	5.19	275	Pn	Pn	16 54 49.0	-1.0
I45A	Fountain	5.34	130	Pn	Pn	16 54 53.0	+0.9
E46A	Sault Ste Mari	5.36	101	Pn	Pn	16 54 52.5	+0.2
E46A	Sault Ste Mari	5.36	101	PN	Pn	16 54 53.1	+0.8
E46A				SN	Sn	16 55 52.1	-2.5
K43A	Burlington	5.52	151	Pn	Pn	16 54 56.4	+1.8
L40A	Anamosa	5.57	175	Pn	Pn	16 54 57.5	+2.4
KAPO	Kapuskasing	6.52	70	Pn	Pn	16 55 08.6	+0.5
KAPO				Sn	Sn	16 56 20.4	-2.7
KAPO	Kapuskasing	6.52	70	PN	Pn	16 55 08.6	+0.5
KAPO				SN	Sn	16 56 20.4	-2.7
KAPO				LG	Lg	16 56 57.0	
KAPO				Trac		16 57 16.9	
	comp=E,17nm,0.5s						
VIMO	Victor Mine	7.39	42	Pn	Pn	16 55 20.4	+0.3
VIMO				Sn	Sn	16 56 41.1	-3.4
VIMO	Victor Mine	7.39	42	PN	Pn	16 55 20.4	+0.3
VIMO				SN	Sn	16 56 41.1	-3.4
VIMO				Trac		16 57 40.9	
	comp=E,78nm,1.4s						
L48A	N Adams	7.78	134	Pn	Pn	16 55 25.6	+0.2
N47A	Urbana	8.08	144	Pn	Pn	16 55 30.8	+1.2
P40A	Paris	8.08	181	Pn	Pn	16 55 30.7	+1.1
O49A	Covington	9.22	141	Pn	Pn	16 55 43.9	-1.3
R40A	Maddies Statio	9.32	182	Pn	Pn	16 55 45.6	-1.0

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*WEL **02** 16:53:00, 39°.38S×177°.32E, h24^{km}, ML4.5, Mw4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15} Nm; M_{rr}-3.63; $M_{\theta\theta}$-0.59; $M_{\phi\phi}$4.22; $M_{r\theta}$2.21; $M_{\theta\phi}$4.03; $M_{\phi r}$-4.42; Fault plane solution: $M_0$7.50000×10^{15} NP1: ϕ_s243.00000°, δ43.00000°, λ-29.00000°. NP2: ϕ_s355.00000°, δ71.00000°, λ-129.00000°. Principal axes: T -767.2600, Plg17.0000°, Azm113.0000°; N 35.4400, Plg37.0000°, Azm9.0000°; P 731.8200, Plg48.0000°, Azm223.0000°;*

*NEIC **02** 16:53:46.4, 39°.52S×177°.50E, h13^{km}*

*NEIC **02** 16:53:47.8±1.6, 39°.48S±0°.04×177°.44E±0°.08, h18^{km}±4^{km}, mb4.7/29, Mwr4.5/23, Error ellipse: s-maj=9.0km s-min=5.3km az=110.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-3.71; $M_{\theta\theta}$0.45; $M_{\phi\phi}$3.26; $M_{r\theta}$0.85; $M_{\theta\phi}$4.88; $M_{\phi r}$-3.30; Fault plane solution: $M_0$6.91000×10^{15} NP1:ϕ_s4.65000°, δ66.92000°, λ-132.79000°. NP2:ϕ_s251.70000°, δ47.54000°, λ-32.10000°. Principal axes: T 7.3686, Plg12.0000°, Azm124.0000°; N -1.0375, Plg39.0000°, Azm25.0000°; P -6.3312, Plg49.0000°, Azm228.0000°;*

*NOU **02** 16:53:49.4, 39°.51S×177°.33E, h22^{km}, mb4.8/35, Off E. Coast of N. Island, N.Z.*

*IDC **02** 16:53:51.1±2.6, 39°.28S×177°.30E, h33^{km}±18^{km}, mb4.4/6, mbtmp4.5/7, ML4.3/1, MS3.8/13, Error ellipse: s-maj=26.1km s-min=21.4km az=72.0*

*WEL **02** 16:53:51.1, 39°S±3°×17°7E±°, h30^{km}±5^{km}, M4.5/149, ML5.1/33, MLv4.5/149, Error ellipse: s-maj=0.0km s-min=0.0km az=88.8, confirmed*

ISC 02 16:53:48.7±0.5**, 39°.43S**±0°.02×**177°.30E**±0°.03**, h20^{km}**±3^{km}**, n301, σ1^s.29**/303**, mb4.7**/23**, MS3.8**/14**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CKHZ	Cape Kidnapper	0.29	217	P	Pn	16 53 59.8	+2.1
CKHZ				S	Sn	16 54 07.5	+4.0
ARHZ	Aropaoanui	0.29	305	P	Pn	16 53 57.8	0.0
ARHZ				S	Sn	16 54 03.6	+0.1
WHHZ	Waihua	0.36	351	P	Pn	16 53 58.4	-0.3
WHHZ				S	Sn	16 54 04.9	-0.2
MCHZ	McNeill Hill	0.47	268	P	Pn	16 54 01.7	+1.5
MCHZ				S	Sn	16 54 10.5	+2.5
KAHZ	Kahuranaki	0.49	222	P	Pn	16 54 03.0	+2.4
KNZ	Kokohu	0.50	35	P	Pn	16 54 00.9	+0.3
NMHZ	Naumai	0.51	311	P	Pn	16 54 01.3	+0.5
NMHZ				S	Sn	16 54 09.8	+0.8
RAHZ	Arahi	0.54	342	P	Pn	16 54 01.4	+0.1
RAHZ				S	Sn	16 54 09.9	+0.2
MHGZ	Mahia Peninsul	0.54	60	P	Pn	16 54 02.3	+1.0
MHGZ				S	Sn	16 54 12.7	+2.9
SNGZ	Shannon Statio	0.65	3	P	Pn	16 54 03.1	+0.4
MTHZ	Maungataniwha	0.68	328	P	Pn	16 54 03.5	+0.3
BKZ	Black Stump Fm	0.68	293		Pn	16 54 04.0	+0.8
BKZ				Sg	Sn	16 54 14.3	+1.0
BKZ	Black Stump Fm	0.68	293	P	Pn	16 54 04.3	+1.1
BKZ	Black Stump Fm	0.68	293	P	Pn	16 54 04.1	+0.9
BKZ				S	Sn	16 54 14.3	+1.0
KWHZ	Kaweka Forest	0.68	270	P	Pn	16 54 04.7	+1.5
PXZ	Pawanui	0.69	209	P	Pn	16 54 04.9	+1.6
RIGZ	Rimuhau	0.81	26	P	Pn	16 54 05.6	+0.6
RTZ	Ruatahuna	0.85	343		Pn	16 54 06.1	+0.5
RTZ				Sg	Sn	16 54 18.1	+0.6
RTZ	Ruatahuna	0.85	343	P	Pn	16 54 06.1	+0.5
WPHZ	Waipukurau	0.92	226	P	Pn	16 54 08.3	+1.9
RAGZ	Rawiri	0.94	5	P	Pn	16 54 07.2	+0.5
BHHZ	Black Hill Sta	0.96	266	P	Pn	16 54 08.7	+1.7
PNHZ	Pukenui	0.98	240	P	Pn	16 54 08.7	+1.4
PRHZ	Porangahau	0.98	211	P	Pn	16 54 08.7	+1.4
MUGZ	Murupara	1.04	336	P	Pn	16 54 09.1	+1.0
TKGZ	Te Karaka	1.08	23	P	Pb	16 54 09.2	+0.6
HATZ	Hinemaiaia	1.08	299	P	Pb	16 54 10.6	+1.8
MWZ	Matawai	1.11	9	P	Pb	16 54 09.3	+0.1
ALRZ	Allen Road	1.15	319	P	Pb	16 54 11.0	+1.2
PRRZ	Plateau Road	1.17	322	P	Pb	16 54 11.7	+1.5
CNGZ	Carnagh Statio	1.18	37	P	Pb	16 54 10.6	+0.3
URZ	Urewera	1.18	353	Pg	Pb	16 54 10.6	+0.3
	442nm,0.3s,baz=292,slow=6.8,SNR=1368						
URZ				Lg	Lg	16 54 25.8	
	1μm,0.3s,baz=40,slow=21,SNR=16						
URZ	Urewera	1.18	353	P	Pb	16 54 10.9	+0.6
URZ	Urewera	1.18	353	P	Pb	16 54 10.7	+0.3
MOVZ	Moawhango	1.20	271	P	Pb	16 54 12.6	+1.8
ANWZ	Angora Road	1.21	212	P	Pb	16 54 11.7	+0.9
RITZ	Rihia Road	1.21	291	P	Pb	16 54 12.5	+1.6
TSZ	Takapari Road	1.21	238	P	Pb	16 54 11.7	+0.8
DVHZ	Dannevirke	1.23	225	P	Pb	16 54 12.1	+0.9
RRRZ	Republican Roa	1.25	330	P	Pb	16 54 12.2	+0.6
ETVZ	East Tongariro	1.27	283	P	Pb	16 54 13.2	+1.3
WPRZ	Whakapapatarin	1.27	315	P	Pb	16 54 12.6	+0.6
TMVZ	Te Maari	1.28	284	P	Pb	16 54 13.3	+1.2
TUVZ	Tukino	1.29	277	P	Pb	16 54 14.1	+1.8
WHTZ	Whakaora	1.30	306	P	Pb	16 54 13.5	+1.1
OTVZ	Oturere	1.30	281	P	Pb	16 54 13.7	+1.2
NTVZ	North Tongarir	1.31	284	P	Pb	16 54 13.6	+1.0
HRRZ	Handcock Road	1.31	322	P	Pb	16 54 13.1	+0.6
SNVZ	South Ngauruho	1.31	280	P	Pb	16 54 13.9	+1.2
RATZ	Rangitukua	1.32	295	P	Pb	16 54 13.6	+0.8
WNVZ	Wahianoa	1.33	274	P	Pb	16 54 14.2	+1.3
KATZ	Kakaramea	1.33	289	P	Pb	16 54 14.0	+1.0
KRVZ	Karewarewa	1.33	284	P	Pb	16 54 14.0	+1.0
WHVZ	Whangaehu Hut	1.34	276	P	Pb	16 54 14.5	+1.3
NNVZ	North Ngauruho	1.34	282	P	Pb	16 54 14.4	+1.1
NGZ	Ngauruhoe	1.34	280	P	Pb	16 54 14.3	+1.1
TARZ	Mount Tarawera	1.35	332	P	Pb	16 54 13.5	+0.3
DRZ	Dome Shelter	1.36	276	P	Pb	16 54 15.6	+2.0
TWGZ	Tauwhareparae	1.36	23	P	Pn	16 54 13.1	+0.6
TRVZ	Turoa	1.37	275	P	Pb	16 54 14.7	+1.0
WTVZ	West Tongariro	1.37	283	P	Pb	16 54 14.7	+1.1
FWVZ	Far West T-bar	1.37	277	P	Pb	16 54 14.6	+0.9
HSRZ	Hossack Road	1.39	323	P	Pb	16 54 14.5	+0.5
HLRZ	Highlands Stat	1.39	327	P	Pb	16 54 14.7	+0.7
EDRZ	Edgecumbe	1.39	341	P	Pb	16 54 14.1	+0.1
WATZ	Wairara	1.42	300	P	Pb	16 54 14.5	+0.1
MTVZ	Mangateitei	1.42	271	P	Pb	16 54 15.7	+1.2
GRRZ	Galatos Road	1.43	319	P	Pb	16 54 15.2	+0.7
MKRZ	Makatiti	1.45	333	P	Pb	16 54 16.7	+1.7
KUTZ	Kaahu Road	1.49	309	P	Pb	16 54 15.6	0.0
BFZ	Birch Farm	1.49	213		Pb	16 54 15.1	-0.6
BFZ				Sn	Sb	16 54 34.7	+0.6
BFZ	Birch Farm	1.49	213	P	Pb	16 54 15.3	-0.3
BFZ	Birch Farm	1.49	213	P	Pb	16 54 15.1	-0.6
RUGZ	Raukumara Rang	1.49	11	P	Pn	16 54 14.8	+0.4
TWVZ	Taurewa	1.49	283	P	Pb	16 54 16.1	+0.4
OMRZ	Omania	1.51	331	P	Pb	16 54 15.7	-0.3
PRWZ	Pori Road	1.52	222	P	Pb	16 54 16.2	0.0
POWZ	Post Office Ro	1.52	230	P	Pb	16 54 16.2	0.0
UTU	Utuhina	1.52	325	P	Pb	16 54 16.2	0.0
PKVZ	Pokaka	1.52	275	P	Pb	16 54 17.1	+0.9
MARZ	Manawahe	1.52	341	P	Pb	16 54 15.9	-0.3
PUZ	Puketiti	1.55	29	P	Pn	16 54 15.0	-0.1
NGRZ	Ngongotaha	1.59	326	P	Pb	16 54 17.5	+0.2
WHRZ	Whale Island	1.59	351	P	Pb	16 54 16.7	-0.7
LIRZ	Lichensteins R	1.60	333	P	Pb	16 54 18.3	+0.8
KARZ	Kaharoa	1.63	329	P	Pn	16 54 17.0	+0.8
PKGZ	Pakihiroa	1.66	22	P	Pn	16 54 16.9	+0.3
OPRZ	Ohinepanea	1.69	339	P	Pn	16 54 17.5	+0.6
CPWZ	Castlepoint	1.70	209	P	Pb	16 54 18.4	-0.8
HAZ	Te Kaha	1.71	13	P	Pn	16 54 17.9	+0.6
OHWZ	Ohakea	1.72	243	P	Pb	16 54 20.0	+0.5
TIWZ	Tintock	1.73	219	P	Pn	16 54 18.5	+0.9
TLZ	Tolley Road	1.76	308	P	Pn	16 54 18.9	+0.9
MRZ	Mangatainoka R	1.81	227	Pn	Pn	16 54 19.5	+0.9
MRZ				Sn	Sb	16 54 42.3	-0.9
MRZ	Mangatainoka R	1.81	227	P	Pn	16 54 19.5	+0.9
WAZ	Wanganui	1.82	259	P	Pb	16 54 21.8	+0.5
WMGZ	Waiomatatini S	1.83	29	P	Pn	16 54 19.0	+0.1
TGRZ	Tauranga	1.89	334	P	Pn	16 54 20.6	+0.9
WIZ	White Island	1.90	357	P	Pn	16 54 20.2	+0.3
KMRZ	Kaimai	1.91	326	P	Pb	16 54 23.0	+0.2
WSRZ	White Island S	1.91	357	P	Pb	16 54 21.7	-1.1
TMWZ	Te Maipa	1.99	212	P	Pn	16 54 21.5	+0.3
VRZ	Vera Road	2.00	278	P	Pb	16 54 23.1	-1.2
HOWZ	Holdsworth Sta	2.01	223	P	Pn	16 54 21.8	+0.4
MXZ	Matakaoa Point	2.02	23	Pn	Pn	16 54 21.7	+0.1
MXZ	Matakaoa Point	2.02	23	P	Pn	16 54 22.3	+0.7
MXZ	Matakaoa Point	2.02	23	P	Pn	16 54 21.8	+0.2
HIZ	Hauiti	2.12	295	Pn	Pn	16 54 24.2	+1.3
HIZ	Hauiti	2.12	295	P	Pb	16 54 24.7	-1.6
HIZ	Hauiti	2.12	295	P	Pn	16 54 24.2	+1.3
OGWZ	Otaki Gorge	2.14	229	P	Pn	16 54 23.8	+0.6
TOZ	Tahuroa Road	2.21	320	P	Pn	16 54 25.2	+1.1
MTW	Mount Morrison	2.21	218	P	Pn	16 54 23.9	-0.2
LREZ	Lake Rotokare	2.25	268	P	Pb	16 54 27.1	-1.5
MYRZ	Mayor Island	2.30	338	P	Pn	16 54 26.2	+0.8
TRWZ	Traveller	2.32	212	P	Pn	16 54 25.2	-0.5
KIW	Kapiti Island	2.33	231	P	Pn	16 54 26.6	+0.9
MHEZ	Mangahewa	2.34	278	P	Pb	16 54 29.6	-0.5
CAW	Cannon Point	2.40	225	P	Pn	16 54 27.0	+0.3
NEZ	North Egmont	2.49	273	P	Pb	16 54 31.2	-1.6
MSWZ	Moikau Station	2.53	218	Pn	Pn	16 54 27.3	-1.3
KHEZ	Kahui Hut	2.55	272	P	Pb	16 54 31.5	-2.3
KHEZ	Kahui Hut	2.55	272	P	Pb	16 54 32.2	-1.6
PKE	Pukeiti	2.58	274	P	Pb	16 54 32.1	-2.2
PLWZ	Palliser	2.65	216	Pn	Pn	16 54 29.2	-1.0
PLWZ	Palliser	2.65	216	P	Pn	16 54 29.3	-0.9
NMEZ	Namu Road	2.65	269	P	Pb	16 54 33.5	-2.0
NBEZ	Newall Road No	2.67	272	P	Pb	16 54 34.1	-1.6
WEL	Wellington	2.68	225	P	Pn	16 54 30.7	0.0
BHW	Baring Head	2.71	222	Pn	Pn	16 54 30.2	-0.8
SNZO	South Karori	2.73	226	Pn	Pn	16 54 31.0	-0.4
SNZO	South Karori	2.73	226	P	Pn	16 54 31.4	+0.1
MKAZ	Moumakai	2.87	323	P	Pn	16 54 35.0	+1.8
TCW	Tory Channel	2.92	231		Pn	16 54 33.3	-0.6
TCW	Tory Channel	2.92	231	P	Pn	16 54 33.9	0.0
DUWZ	D'Urville Isla	2.93	241	P	Pn	16 54 34.6	+0.4
KUZ	Kuaotunu	2.96	335	P	Pn	16 54 34.9	+0.5
KUZ	Kuaotunu	2.96	335	P	Pn	16 54 35.2	+0.8
ETAZ	East Tamaki Re	3.10	322	P	Pn	16 54 38.4	+2.0
WIAZ	Waiheke Island	3.14	326	P	Pn	16 54 38.9	+1.9
AWAZ	Awhitu Peninsu	3.16	318	P	Pn	16 54 39.1	+2.0
TUWZ	Tuamarina	3.25	231		Pn	16 54 37.6	-0.8
TUWZ	Tuamarina	3.25	231	P	Pn	16 54 37.8	-0.7
MBAZ	Motutapu North	3.27	324	P	Pn	16 54 40.5	+1.9
WTAZ	Waiatarua	3.29	318	P	Pn	16 54 41.4	+2.3
CMWZ	Cape Campbell	3.30	224		Pn	16 54 39.0	-0.2
BSWZ	Blackbirch Sta	3.47	228		Pn	16 54 40.8	-0.6
BSWZ	Blackbirch Sta	3.47	228	P	Pn	16 54 40.9	-0.6
NNZ	Nelson	3.49	238		Pn	16 54 41.8	0.0
NNZ	Nelson	3.49	238	P	Pn	16 54 42.0	+0.3
GRZ	Great Barrier	3.50	335	P	Pn	16 54 43.6	+1.8
TKNZ	Takaka Hill	3.69	243		Pn	16 54 44.7	+0.2
TKNZ	Takaka Hill	3.69	243	P	Pn	16 54 44.8	+0.2
QRZ	Quartz Range	3.92	248		Pn	16 54 47.2	-0.4
QRZ	Quartz Range	3.92	248	P	Pn	16 54 47.3	-0.4
QRZ	Quartz Range	3.92	248	P	Pn	16 54 47.2	-0.4
MRNZ	Matariki Terra	3.99	239		Pn	16 54 48.3	-0.3
MRNZ	Matariki Terra	3.99	239	P	Pn	16 54 48.6	0.0
THZ	Tophouse	4.08	234		Pn	16 54 48.5	-1.5
THZ	Tophouse	4.08	234	P	Pn	16 54 49.3	-0.6
KHZ	Kahutara	4.13	223		Pn	16 54 48.4	-2.1
KHZ	Kahutara	4.13	223	P	Pn	16 54 49.4	-1.1
KHZ	Kahutara	4.13	223	P	Pn	16 54 49.1	-1.3
WCZ	Waipu Caves	4.20	325	P	Pn	16 54 53.6	+2.0
GVZ	Greta Valley S	4.78	221	Pn	Pn	16 54 57.7	-1.8
DSZ	Denniston Nort	4.78	239	Pn	Pn	16 54 58.2	-1.4
DSZ	Denniston Nort	4.78	239	P	Pn	16 54 59.0	-0.6
LTZ	Lake Taylor	5.07	227		Pn	16 55 01.5	-1.9
AMCZ	Amberley	5.13	222	Pn	Pn	16 55 03.3	-1.0
AMCZ	Amberley	5.13	222	P	Pn	16 55 03.5	-0.7
OUZ	Omahuta	5.14	324	P	Pn	16 55 06.6	+2.2
OUZ	Omahuta	5.14	324	P	Pn	16 55 06.9	+2.6
MQZ	McQueen's Vall	5.51	218	Pn	Pn	16 55 07.5	-2.1
INZ	Inchbonnie	5.52	231		Pn	16 55 07.9	-1.7
AKCZ	Akaroa Harbour	5.52	215	P	Pn	16 55 08.3	-1.4
OXZ	Oxford	5.55	224		Pn	16 55 07.9	-2.2
RACZ	Rakaia	5.78	220	P	Pn	16 55 11.8	-1.5
WACZ	Wakanui South	6.09	220	P	Pn	16 55 16.6	-0.8
WVZ	Waitaha Valley	6.14	232	P	Pn	16 55 17.3	-0.8
CTZ	Chatham Island	6.27	135	P	Pn	16 55 21.1	+1.2
CTZ	Chatham Island	6.27	135	P	Pn	16 55 21.3	+1.4
RPZ	Rata Peaks	6.35	226	Pn	Pn	16 55 20.3	-0.7
	5.8nm,0.3s,baz=50,slow=1.5,SNR=49						
RPZ				Pg	Pb	16 55 44.9	+6.5
	4.3nm,0.3s,baz=301,slow=3.5,SNR=6.0						
RPZ				Sn	Sn	16 56 27.0	-5.9
	32nm,0.3s,baz=310,slow=22,SNR=30						
RPZ				LR	LR	16 58 44.2	
	comp=Z,952nm,18.4s,baz=14,slow=46						
RPZ	Rata Peaks	6.35	226	Pn	Pn	16 55 18.6	-2.4
RPZ	Rata Peaks	6.35	226	P	Pn	16 55 20.2	-0.8
RPZ	Rata Peaks	6.35	226	P	Pn	16 55 20.0	-1.0
ARCZ	Arundel	6.43	223	P	Pn	16 55 20.9	-1.3
GCSZ	Gaunt Creek Bo	6.53	231	P	Pn	16 55 22.3	-1.2
FOZ	Fox Glacier	6.96	232		Pn	16 55 27.1	-2.2
LBZ	Lake Benmore	7.26	225	Pn	Pn	16 55 31.9	-1.6
LBZ	Lake Benmore	7.26	225	P	Pn	16 55 32.3	-1.2
ODZ	Otahua Downs	7.47	219	Pn	Pn	16 55 33.9	-2.6
ODZ	Otahua Downs	7.47	219	P	Pn	16 55 35.3	-1.2
JCZ	Jackson Bay	7.88	231	P	Pn	16 55 40.5	-1.6
HHSZ	Highcliff Hill	8.12	215	P	Pn	16 55 44.2	-1.2
WKZ	Wanaka	8.18	226	Pn	Pn	16 55 42.6	-3.6
MSZ	Milford Sound	8.72	230	P	Pn	16 55 53.7	+0.2
MLZ	Mavora Lakes	9.02	226	Pn	Pn	16 55 54.8	-2.8
SYZ	Scrubby Hill	9.28	217	P	Pn	16 56 00.8	-0.4
SYZ	Scrubby Hill	9.28	217	P	Pn	16 56 00.9	-0.4
WHZ	Wether Hill Ro	9.44	224	Pn	Pn	16 56 00.6	-2.8
DCZ	Deep Cove	9.62	228	Pn	Pn	16 56 03.6	-2.2
PYZ	Puysegur Point	10.30	226	Pn	Pn	16 56 12.6	-2.6
PYZ	Puysegur Point	10.30	226	P	Pn	16 56 15.5	+0.3
DZM	Mont Dzumac	19.63	329	*e*LR	LR	17 02 56.4	
	comp=Z,183nm,23.8s						
DZM	Mont Dzumac	19.63	329	P	Pn	16 58 17.1	-0.4
	1.0nm,0.3s,baz=164,slow=12,SNR=12						
DZM				LR	LR	17 04 19.2	
	comp=Z,182nm,19.8s,baz=332,slow=32						
	8.0nm,0.6s						
DZM	Mont Dzumac	19.63	329	Pn	Pn	16 58 17.5	0.0
DZM	Mont Dzumac	19.63	329	P	Pn	16 58 18.2	+0.7
MSVF	Nonsavu	21.63	2	P	P	16 58 35.4	-2.3
MSVF				IAmb	IAmb	16 59 10.7	
	comp=Z,24nm,1.2s						
KOUNC	Koumac, New Ca	21.89	326	P	P	16 58 39.9	-0.5
KOUNC				IAmb	IAmb	16 58 44.5	
	comp=Z,19nm,0.9s						
CAN	Canberra	22.82	271	P	P	16 58 48.5	-1.8
ARMA	Armidale	22.83	285	P	P	16 58 49.7	-0.8
TOO	Toolangi	24.90	264	P	P	16 59 09.1	-1.1
TOO				IAmb	IAmb	16 59 13.3	
	comp=Z,24nm,0.8s						

TOO	**Toolangi**	**24.90**	**264**	P	**P**	**16 59 12.6**	**+2.4**
EIDS	**Eidsvold**	**26.09**	**295**	P	**P**	**16 59 21.3**	**+0.3**
EIDS				IAmb	IAmb	16 59 37.9	
	comp=Z,21nm,1.4s						
RAR	**Rarotonga**	**26.73**	**54**	LR	LR	17 07 38.3	
	comp=Z,93nm,20.5s,baz=205,slow=31						
CMSA	**Cobar Meteorol**	**26.82**	**277**	P	**P**	**16 59 29.5**	**+2.0**
STKA	**Stephens Creek**	**29.83**	**273**	P	**P**	**16 59 56.1**	**+1.7**
	comp=Z,5.7nm,0.8s,baz=108,slow=9.5,SNR=7.8						
STKA				LR	LR	17 11 25.4	
	comp=Z,182nm,20.1s,baz=75,slow=35						
	comp=Z,5.7nm,0.8s						
STKA	**Stephens Creek**	**29.83**	**273**	P	**P**	**16 59 53.3**	**-1.1**
QLP	**Quilpie**	**30.37**	**285**	P	**P**	**17 00 01.2**	**+2.0**
TBI	**Tubuai**	**32.36**	**70**	*e*LR	LR	17 08 44.9	
	comp=Z,2µm,23.2s						
TBI				*e*LR	LR	17 08 45.0	
	comp=Z,404nm,24.2s						
TBI	**Tubuai**	**32.36**	**70**	*e*T	T	17 33 40.0	
	comp=Z,6.7nm,0.3s						
INKA	**Innaminka**	**32.40**	**280**	P	**P**	**17 00 19.0**	**+1.9**
CTAO	**Charters Tower**	**32.90**	**297**	P	**P**	**17 00 20.7**	**-0.8**
CTAO				IAmb	IAmb	17 00 24.2	
	comp=Z,11nm,0.9s						
LCRK	**Leigh Creek**	**33.06**	**274**	P	**P**	**17 00 24.1**	**+1.3**
HNR	**Honiara**	**33.66**	**328**	LR	LR	17 13 05.3	
	comp=Z,1µm,18.5s,baz=184,slow=34						
BBOO	**Buckleboo**	**33.74**	**268**	P	**P**	**17 00 28.6**	**-0.2**
BBOO	**Buckleboo**	**33.74**	**268**	P	**P**	**17 00 30.1**	**+1.3**
MTSU	**Mount Surprise**	**35.56**	**297**	P	**P**	**17 00 45.8**	**+1.1**
PPT2	**Papeete2**	**36.03**	**62**	*e*LR	LR	17 10 27.5	
	comp=Z,127nm,23.2s						
PPT2				*e*LR	LR	17 10 27.5	
	comp=Z,137nm,25.8s						
MULG	**Mulgathing**	**36.35**	**271**	P	**P**	**17 00 51.8**	**+0.5**
COEN	**Coen**	**39.28**	**301**	P	**P**	**17 01 15.2**	**-0.9**
COEN				IAmb	IAmb	17 01 18.2	
	comp=Z,9.4nm,0.8s						
AS01	**Alice Springs**	**39.75**	**280**	P	**P**	**17 01 20.4**	**+0.3**
AS31	**Alice Springs**	**39.78**	**280**	P	**P**	**17 01 20.4**	**0.0**
ASAR	**Alice Springs**	**39.78**	**280**	P	**P**	**17 01 20.6**	**+0.2**
	comp=Z,13nm,0.8s,baz=131,slow=9.1,SNR=104						
ASAR				PcP	**PcP**	**17 03 25.4**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=138,slow=4.5,SNR=3.4						
ASAR				S	**S**	**17 07 18.9**	**-4.7**
	comp=Z,0.6nm,0.9s,baz=125,slow=15,SNR=4.7						
ASAR				LR	LR	17 18 40.5	
	comp=Z,189nm,18.2s,baz=120,slow=38						
	comp=Z,13nm,0.8s						
ASAR	**Alice Springs**	**39.78**	**280**	P	**P**	**17 01 19.7**	**-0.7**
PMG	**Port Moresby**	**40.22**	**310**	LR	LR	17 17 52.3	
	comp=Z,98nm,18.1s,baz=102,slow=36						
PMG	**Port Moresby**	**40.22**	**310**	P	**P**	**17 01 24.8**	**+0.9**
PMG				IAmb	IAmb	17 01 26.3	
	comp=Z,16nm,0.8s						
FORT	**Forrest**	**40.78**	**267**	P	**P**	**17 01 28.1**	**-0.3**
FORT	**Forrest**	**40.78**	**267**	P	**P**	**17 01 28.9**	**+0.5**
WR0	**Warramunga Arr**	**41.45**	**285**	P	**P**	**17 01 34.0**	**-0.1**
WR0				IAmb	IAmb	17 01 35.3	
	comp=Z,13nm,0.8s						
WB2	**Warramunga Arr**	**41.60**	**285**	P	**P**	**17 01 35.3**	**-0.1**
WB2				IAmb	IAmb	17 01 36.4	
	comp=Z,17nm,0.8s						
WRAB	**Tennant Creek**	**41.61**	**285**	P	**P**	**17 01 35.2**	**-0.2**
WRAB				IAmb	IAmb	17 01 36.4	
	comp=Z,15nm,0.7s						
WRAB	**Tennant Creek**	**41.61**	**285**	P	**P**	**17 01 35.7**	**+0.3**
WRA	**Warramunga Arr**	**41.61**	**285**	P	**P**	**17 01 35.4**	**0.0**
	comp=Z,10.0nm,0.7s,baz=129,slow=7.1,SNR=77						
WRA				LR	LR	17 19 41.9	
	comp=Z,280nm,18.1s,baz=114,slow=37						
	comp=Z,10.0nm,0.7s						
WRA	**Warramunga Arr**	**41.61**	**285**	P	**P**	**17 01 35.5**	**0.0**
WB0	**Warramunga Arr**	**41.68**	**285**	P	**P**	**17 01 36.0**	**+0.1**
WB0				IAmb	IAmb	17 01 37.0	
	comp=Z,14nm,0.8s						
RABL	**Rabaul**	**41.82**	**321**	P	**P**	**17 01 37.4**	**+0.2**
WRKA	**Warakurna**	**43.36**	**274**	P	**P**	**17 01 49.1**	**-0.5**
CASY	**Casey**	**45.40**	**211**	P	**P**	**17 02 04.7**	**-0.7**
KLBR	**Kellerberrin**	**48.34**	**260**	P	**P**	**17 02 28.6**	**-0.3**
KNRA	**Kununurra**	**48.41**	**285**	P	**P**	**17 02 29.6**	**+0.1**
KNRA	**Kununurra**	**48.41**	**285**	P	**P**	**17 02 29.8**	**+0.3**
MTN	**Manton Dam**	**48.48**	**290**	P	**P**	**17 02 29.9**	**-0.2**
TAOE	**Nuku Hiva Isla**	**48.66**	**63**	*e*LR	LR	17 16 18.4	
	comp=Z,116nm,23.6s						
FITZ	**Fitzroy Crossi**	**49.29**	**280**	P	**P**	**17 02 36.3**	**+0.1**
MEEK	**Meekatharra**	**50.03**	**266**	P	**P**	**17 02 41.5**	**-0.4**
QSPA	**South Pole Qui**	**50.70**	**180**	P	**P**	**17 02 49.7**	**+3.2**
	comp=Z,3.6nm,0.9s,baz=349,slow=1.1,SNR=16						
	comp=Z,3.6nm,0.9s						
QSPA	**South Pole Qui**	**50.70**	**180**	P	**P**	**17 02 50.4**	**+3.9**
QSPA				IAmb	IAmb	17 03 20.9	
	comp=Z,14nm,1.5s						
MORW	**Morawa**	**50.82**	**262**	P	**P**	**17 02 46.5**	**-1.3**
MORW				IAmb	IAmb	17 03 04.6	
	comp=Z,22nm,1.4s						
PSA00	**Pilbara Seismi**	**51.76**	**272**	P	**P**	**17 02 54.1**	**-0.8**
PSA00				IAmb	IAmb	17 03 26.9	
	comp=Z,11nm,1.2s						
MBWA	**Marble Bar**	**52.07**	**273**	P	**P**	**17 02 56.6**	**-0.7**
MBWA				IAmb	IAmb	17 03 27.7	
	comp=Z,16nm,1.4s						
FAKI	**Fak Fak**	**54.66**	**300**	P	**P**	**17 03 14.8**	**-1.5**
FAKI	**Fak Fak**	**54.66**	**300**	P	**P**	**17 03 15.3**	**-1.0**
SANI	**Sanana**	**59.59**	**295**	P	**P**	**17 03 51.1**	**-0.1**
GUMO	**Guam**	**60.80**	**323**	LR	LR	17 26 43.9	
	comp=Z,22nm,21.9s,baz=99,slow=32						
KAPI	**Kappang**	**62.04**	**288**	LR	LR	17 33 14.9	
	comp=Z,149nm,18.3s,baz=108,slow=38						
H03S2	**Juan Fernandez**	**78.63**	**124**	T	T	18 32 16.2	
	baz=230						
H03S1	**Juan Fernandez**	**78.64**	**124**	T	T	18 32 19.8	
	baz=230						
H03S3	**Juan Fernandez**	**78.65**	**124**	T	T	18 32 13.3	
	baz=230						
H03N3	**Juan Fernandez**	**78.87**	**124**	T	T	18 32 25.5	
	baz=233,slow=72,SNR=4.7						
H03N2	**Juan Fernandez**	**78.88**	**124**	T	T	18 32 22.6	
	baz=233,slow=72,SNR=2.5						
H03N1	**Juan Fernandez**	**78.89**	**124**	T	T	18 32 19.5	
	baz=233,slow=72,SNR=4.3						
KSRS	**Korea Array**	**88.96**	**323**	P	**P**	**17 06 43.2**	**+1.7**
	comp=Z,4.8nm,0.9s,baz=142,slow=5.3,SNR=12						
	comp=Z,4.8nm,0.9s						
NJ2	**Nanjing**	**89.42**	**314**	*e*P	**P**	**17 06 46.0**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**92.91**	**291**	P	**P**	**17 07 01.1**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=145,slow=2.9,SNR=6.5						
CMAR				LR	LR	17 51 09.8	
	comp=Z,14nm,21.8s,baz=220,slow=37						
	comp=Z,0.8nm,0.6s						
CMAR	**Chiang Mai Arr**	**92.91**	**291**	P	**P**	**17 07 00.2**	**-0.2**
PFO	**Pinyon Flats O**	**95.06**	**50**	LR	LR	17 44 31.1	
	comp=Z,23nm,18.1s,baz=54,slow=32						
PZH	**PanZhiHua**	**96.18**	**299**	P	**P**	**17 07 16.2**	**+0.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
CPUP	**Villa Florida**	**97.08**	**132**	LR	LR	17 45 00.9	
	comp=Z,70nm,19.5s,baz=40,slow=32						
HHC	**Hu-ho-hao-te**	**99.83**	**315**	*e*P	**Pdif**	**17 07 32.6**	**+1.2**
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,210nm,5.2s						
LZH	**Lanzhou**	**101.09**	**308**	*e*P	**Pdif**	**17 07 40.3**	**+3.1**
LZH				pP	pPdif	17 07 44.2	+0.2
LZH				pmax	pmax		
	comp=Z,14nm,1.3s						
YKA	**Yellowknife Ar**	**115.22**	**28**	PKP	**PKiKP**	**17 12 28.3**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=258,slow=2.2,SNR=3.2						
WMQ	**Urumqi**	**115.64**	**307**	*e*P	**PKPdf**	**17 12 29.0**	**0.0**
WMQ				smax	smax		
	comp=N,1µm,0.7s						
WMQ				smax	smax		
	comp=E,740nm,0.7s						
MKAR	**Makanchi Array**	**120.41**	**307**	PKP	**PKPdf**	**17 12 37.3**	**-0.7**
	comp=E,0.7nm,0.5s,baz=128,slow=1.3,SNR=17						
ZALV	**Zalesovo Beam**	**122.01**	**316**	PKP	**PKPdf**	**17 12 38.9**	**-1.9**
	comp=E,0.4nm,0.4s,baz=111,slow=3.2,SNR=2.0						
AAK	**Ala-Archa**	**123.62**	**300**	PKP	**PKPdf**	**17 12 44.5**	**0.0**
	comp=E,0.7nm,0.6s,baz=180,slow=4.0,SNR=2.2						
KURBB	**Kurchatov Arra**	**124.26**	**310**	PKP	**PKPdf**	**17 12 44.8**	**-0.5**
	comp=E,1.9nm,0.6s,baz=117,slow=1.8,SNR=21						
NRIK	**Noril'sk**	**126.17**	**334**	PKP	**PKiKP**	**17 12 48.6**	**-0.1**
	comp=E,2.2nm,0.6s,baz=97,slow=4.5,SNR=6.8						
BVAR	**Borovoye Array**	**129.81**	**311**	PKP	**PKPdf**	**17 12 56.0**	**+0.2**
	comp=E,1.2nm,0.6s,baz=46,slow=2.2,SNR=8.7						
GEYT	**Alibeck**	**133.31**	**288**	PKP	**PKPdf**	**17 13 03.5**	**+0.5**
	comp=E,1.3nm,0.6s,baz=259,slow=2.3,SNR=3.8						
AKTO	**Aktyubinsk**	**136.77**	**305**	PKP	**PKiKP**	**17 13 10.1**	**-0.7**
	comp=E,2.6nm,0.7s,baz=134,slow=4.5,SNR=6.7						
ARU	**Arti**	**137.13**	**314**	PKP	**PKPdf**	**17 13 09.9**	**+0.5**
	comp=E,0.8nm,0.3s,baz=89,slow=5.4,SNR=3.5						
KBZ	**Khabaz**	**145.96**	**292**	PKPbc	**PKPdf**	**17 13 26.0**	**+0.4**
	comp=E,3.4nm,0.9s,baz=74,slow=3.5,SNR=6.1						
ARCES	**ARCESS Array B**	**146.33**	**343**	PKPbc	**PKPbc**	**17 13 26.3**	**-0.4**
	comp=E,6.5nm,0.7s,baz=40,slow=3.5,SNR=30						
KLMR	**Klimovskoe**	**146.35**	**324**	*e*	**PKPdf**	**17 13 25.2**	**-0.5**
KLMR				AMP		17 13 27.6	
	comp=Z,13nm,0.7s						
DBIC	**Dimbokro**	**147.33**	**176**	PKPbc	**PKPab**	**17 13 32.5**	**-0.4**
	comp=Z,2.6nm,0.9s,baz=160,slow=4.8,SNR=2.0						
FINES	**FINESS Array B**	**151.76**	**331**	PKPbc	**PKPbc**	**17 13 40.0**	**-0.8**
	comp=Z,8.0nm,0.8s,baz=114,slow=4.8,SNR=21						
FINES				PKPab	**pPKPbc**	**17 13 48.6**	**+0.9**
	comp=Z,4.5nm,0.7s,baz=66,slow=4.6,SNR=9.5						
BRTR	**Keskin Array B**	**152.11**	**282**	PKPbc	**PKPbc**	**17 13 42.5**	**0.0**
	comp=Z,5.1nm,0.8s,baz=144,slow=5.8,SNR=16						
BRTR				PKPab	**sPKPbc**	**17 13 51.5**	**-0.3**
	comp=Z,2.8nm,0.8s,baz=114,slow=6.1,SNR=4.7						
TORD	**Torodi Ar. Bea**	**153.53**	**190**	PKP	**PKPdf**	**17 13 39.0**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=205,slow=3.0,SNR=2.2						
TORD				PKPbc	**sPKPdf**	**17 13 47.2**	**-0.5**
	comp=Z,1.0nm,1.0s,baz=140,slow=1.0,SNR=3.9						
TORD				PKPab	**PKPab**	**17 13 58.2**	**-0.2**
	comp=Z,2.5nm,0.9s,baz=171,slow=3.5,SNR=9.8						
AKASG	**Malin Array Be**	**154.99**	**307**	PKPbc	**PKPbc**	**17 13 47.6**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=68,slow=2.3,SNR=7.1						
AKASG				PKPab	**PKPab**	**17 14 01.9**	**-1.9**
	comp=Z,0.9nm,0.6s,baz=66,slow=3.5,SNR=4.7						
KEST	**Kesra**	**169.75**	**253**	PKPab	**PKPab**	**17 15 09.6**	**+0.6**
	comp=Z,5.6nm,1.1s,baz=308,slow=3.0,SNR=4.1						

IDC ***02*** *16:55:56.9±0.8, 18°.78N×120°.88E, h0^{km}, mb3.8/12, mbtmp3.8/13, ML3.7/1, MS3.3/11, Error ellipse: s-maj=32.0km s-min=16.3km az=66.0*

NEIC ***02*** *16:55:58.7±1.8, 18°.79N±0°.10×120°.6E±0°.1, h8^{km}±6^{km}, mb4.4/16, Error ellipse: s-maj=16.1km s-min=12.2km az=128.0*

MAN ***02*** *16:56:00.2, 18°.93N×120°.76E, h1^{km}, mb4.9, ML3.8, MS3.8*

ISC 02 16:55:59.2±1.4**, 18°.91N**±0°.03×**120°.64E**±0°.05**, h11**^{km}±9^{km}**, n69,** σ1^{s}.**83**/73**, mb4.2**/18**, MS3.3**/10**, 12C-5D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PACPP	**Pamplona Cagay**	**0.81**	**124**	⇓*e*P	**Pg**	**16 56 14.9**	**+0.1**
PACPP				*i* S	**Sb**	**16 56 26.8**	**+0.6**
CICP	**Calayan Island**	**0.87**	**66**	⇑*e*P	**Pg**	**16 56 15.4**	**-0.5**
CICP				*e*S	**Sg**	**16 56 27.0**	**-0.2**
SIPP	**Brgy, Tapao**	**1.00**	**190**	⇓*e*P	**Pn**	**16 56 20.1**	**+0.9**
SIPP				*i* S	**Sn**	**16 56 39.8**	**+6.5**
SGCP	**Gonzaga**	**1.49**	**116**	*e*P	**Pn**	**16 56 26.1**	**+0.2**
SGCP				*i* S	**Sb**	**16 56 46.3**	**+0.5**
SGCP	**Gonzaga**	**1.49**	**116**	⇓*e*P	**Pn**	**16 56 26.3**	**+0.4**
SGCP				*e*S	**Sb**	**16 56 46.3**	**+0.5**
CVP	**Callao Caves**	**1.64**	**137**	⇓*i*P	**Pn**	**16 56 28.7**	**+0.6**
CVP				*i* S	**Sb**	**16 56 51.0**	**+0.8**
SAMP	**Sagada Mountai**	**1.84**	**172**	⇑*e*P	**Pn**	**16 56 31.6**	**+0.8**
SAMP				*e*S	**Sb**	**16 56 55.9**	**+0.1**
BBP	**Basco**	**1.97**	**39**	*e*P	**Pn**	**16 56 33.9**	**+1.4**
BBP	**Basco**	**1.97**	**39**	⇑*e*P	**Pn**	**16 56 34.0**	**+1.5**
BBP				*e*S	**Sn**	**16 56 58.6**	**+1.4**
CAUP	**Cauayan**	**2.25**	**150**	⇑*e*P	**Pb**	**16 56 40.0**	**+0.1**
CAUP				*e*S	**Sg**	**16 57 14.9**	**+3.2**
BALP	**Baler**	**3.27**	**164**	⇑*e*P	**Pb**	**16 56 54.0**	**-3.4**
BALP				*e*S	**Sb**	**16 57 34.1**	**-3.2**
PCPH	**Palayan**	**3.36**	**173**	⇓*e*P	**Pn**	**16 56 54.9**	**+3.3**
PCPH				*e*S	**Sb**	**16 57 38.7**	**-1.0**
TWG	**Pinlang**	**3.91**	**6**		**Pn**	**16 56 58.9**	**-0.3**
QVP	**Quezon City--P**	**4.28**	**175**	⇑*e*P	**Pn**	**16 57 08.0**	**+3.7**
QVP				*e*S	**Sb**	**16 58 07.8**	**+1.7**
TPUB	**Ta-pu**	**4.37**	**360**	Pn	**Pn**	**16 57 05.2**	**-0.3**
YULB	**Yu-li**	**4.50**	**8**	Pn	**Pn**	**16 57 06.4**	**-1.0**
MACP	**Maragondon, Ca**	**4.62**	**179**	⇑*e*P	**Pn**	**16 57 12.9**	**+3.8**
TGY	**Tagaytay City**	**4.79**	**177**	⇑*e*P	Pb	16 57 17.1	-6.1
TGY				*e*S	**Sg**	**16 58 35.1**	**+2.0**
LQP	**Lukban**	**4.85**	**170**	⇑*e*P	Pn	16 57 18.0	+5.6
LQP				*e*S	**Sg**	**16 58 34.1**	**-0.9**
SSLB	**Suanglung**	**4.86**	**3**		**Pn**	**16 57 11.9**	**-0.5**
JCNP	**Jose Panganiba**	**5.00**	**157**	⇑*e*P	**Pn**	**16 57 16.8**	**+2.6**
JCNP				*e*S	**Sn**	**16 58 06.5**	**-5.6**
LUBP	**Lubang**	**5.16**	**184**	⇑*e*P	Pn	16 57 22.5	+6.0
LUBP				*e*S	**Sn**	**16 58 17.2**	**+1.1**
NACB	**Ninganchiao**	**5.31**	**9**	Pn	**Pn**	**16 57 18.8**	**+0.2**
YHNB	**Yeheng**	**5.77**	**7**		**Pn**	**16 57 25.6**	**+0.7**
KNMB	**Chin-men Tao**	**5.91**	**340**	Pn	**Pn**	**16 57 26.5**	**-0.3**
TATO	**Taipei**	**6.09**	**7**	Pn	**Pn**	**16 57 30.4**	**+1.3**
PVCP	**Virac**	**6.27**	**147**	⇑*e*P	**Pn**	**16 57 35.1**	**+3.4**
PVCP				*e*S	**Sn**	**16 58 43.8**	**+0.5**
HKPS	**Hong Kong Po S**	**6.95**	**300**	Pn	**Pn**	**16 57 39.5**	**-1.5**
QIZ	**Qiongzhong**	**10.22**	**272**	Pn	**Pn**	**16 58 24.3**	**-1.7**
JNU	**Nakatsue**	**16.86**	**31**	LR	LR	17 07 08.6	
	comp=Z,43nm,18.2s,baz=220,slow=40						
KSRS	**Korea Array**	**19.54**	**18**	P	**P**	**17 00 27.7**	**+0.9**
	0.2nm,0.3s,baz=198,slow=11,SNR=7.2						
	1.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**20.56**	**272**	P	Pn	17 00 41.3	+0.9
	0.7nm,0.7s,baz=92,slow=5.4,SNR=2.5						
	0.7nm,0.7s						
JGF	**Kuroka**	**22.24**	**38**		**P**	**17 00 56.8**	**+0.7**
JGF				IAmb	IAmb	17 01 17.4	
	comp=Z,36nm,1.4s						
KAPI	**Kappang**	**23.79**	**182**	LR	LR	17 10 42.7	
	comp=Z,50nm,20.7s,baz=26,slow=37						
USRK	**Ussuriysk Ar.**	**26.95**	**18**	LR	LR	17 13 39.8	
	comp=Z,30nm,18.9s,baz=256,slow=39						
SONM	**Songino Array**	**31.10**	**341**	P	**P**	**17 02 18.8**	**+1.1**
	comp=Z,1.2nm,0.8s,baz=149,slow=10,SNR=11						
SONM				LR	LR	17 14 57.6	
	comp=Z,65nm,20.3s,baz=179,slow=36						
	comp=Z,1.2nm,0.8s						
SONM	**Songino Array**	**31.10**	**341**	P	**P**	**17 02 18.4**	**+0.7**
ASAJ	**Asahikawa**	**31.14**	**31**	LR	LR	17 16 09.0	
	comp=Z,54nm,19.5s,baz=202,slow=39						
KLR	**Kul'dur**	**31.54**	**14**	LR	LR	17 16 50.4	
	comp=Z,58nm,19.4s,baz=194,slow=40						
WRA	**Warramunga Arr**	**40.88**	**160**	P	**P**	**17 03 39.0**	**-2.5**
	comp=Z,0.5nm,0.5s,baz=341,slow=9.3,SNR=2.1						
	comp=Z,0.5nm,0.5s						
WR0	**Warramunga Arr**	**40.96**	**160**	P	**P**	**17 03 40.5**	**-1.8**
MK31	**Makanchi Array**	**41.91**	**320**	P	**P**	**17 03 49.5**	**-0.3**
MKAR	**Makanchi Array**	**41.91**	**320**	P	**P**	**17 03 51.0**	**+1.2**
	comp=Z,1.9nm,1.0s,baz=113,slow=9.3,SNR=9.1						
	comp=Z,1.9nm,1.0s						
MKAR	**Makanchi Array**	**41.91**	**320**	P	**P**	**17 03 49.1**	**-0.7**
YAK	**Yakutsk**	**43.54**	**6**	LR	LR	17 24 03.0	
	comp=Z,45nm,18.2s,baz=271,slow=39						
ASAR	**Alice Springs**	**44.25**	**162**	P	**P**	**17 04 07.3**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=339,slow=6.7,SNR=6.7						
	comp=Z,0.5nm,0.6s						
ZAA0	**Zalesovo Array**	**44.48**	**330**	P	**P**	**17 04 10.6**	**+0.3**
ZALV	**Zalesovo Beam**	**44.48**	**330**	P	**P**	**17 04 10.7**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=129,slow=6.3,SNR=6.8						
ZALV				LR	LR	17 24 00.9	
	comp=Z,36nm,21.4s,baz=26,slow=38						
	comp=Z,1.1nm,0.7s						
ZALV	**Zalesovo Beam**	**44.48**	**330**	P	**P**	**17 04 10.4**	**+0.1**
AAK	**Ala-Archa**	**45.46**	**312**	LR	LR	17 25 43.6	
	comp=Z,57nm,18.3s,baz=124,slow=39						
KURK	**Kurchatov**	**45.91**	**324**	P	**P**	**17 04 21.6**	**-0.3**
KURK				IAmb	IAmb	17 04 24.1	
	comp=Z,3.7nm,1.1s						
KURBB	**Kurchatov Arra**	**45.92**	**324**	P	**P**	**17 04 22.9**	**+1.0**
	comp=Z,1.8nm,0.6s,baz=121,slow=7.9,SNR=18						
	comp=Z,1.8nm,0.6s						
MA2	**Magadan**	**46.05**	**21**	LR	LR	17 25 30.5	
	comp=Z,45nm,18.4s,baz=247,slow=38						
GAR	**Garm**	**47.71**	**306**	P	**P**	**17 04 36.4**	**+0.1**
KBL	**Kabul**	**48.15**	**300**	P	**P**	**17 04 40.8**	**+0.9**
KK31	**Karatay Array**	**48.41**	**311**	P	**P**	**17 04 42.8**	**+1.3**
KK31				IAmb	IAmb	17 04 44.1	
	comp=Z,6.7nm,1.2s						
KKAR	**Karatay Array**	**48.41**	**311**	P	**P**	**17 04 42.8**	**+1.3**
KKAR	**Karatay Array**	**48.41**	**311**	P	**P**	**17 04 42.5**	**+1.0**
KKAR				IAmb	IAmb	17 04 44.1	
	comp=Z,6.7nm,1.2s						
BVAR	**Borovoye Array**	**51.51**	**324**	P	**P**	**17 05 05.9**	**+1.0**
	comp=Z,1.1nm,0.8s,baz=108,slow=9.5,SNR=5.9						
	comp=Z,1.1nm,0.8s						
BRVK	**Borovoye**	**51.58**	**324**	P	**P**	**17 05 06.1**	**+0.7**
BRVK				IAmb	IAmb	17 05 07.9	
	comp=Z,3.7nm,1.1s						
BBOO	**Buckleboo**	**53.50**	**164**	P	**P**	**17 05 18.8**	**-1.0**
STKA	**Stephens Creek**	**54.35**	**158**	P	**P**	**17 05 22.9**	**-3.1**
	comp=Z,2.9nm,1.0s,baz=325,slow=9.0,SNR=2.8						
	comp=Z,2.9nm,1.0s						
BILL	**Bilibino**	**56.80**	**19**	P	**P**	**17 05 44.0**	**+0.8**
BILL				IAmb	IAmb	17 06 09.4	
	comp=Z,5.9nm,1.5s						
ABKAR	**Akbulak array**	**56.84**	**317**	P	**P**	**17 05 44.0**	**+0.1**
ABKAR	**Akbulak array**	**56.84**	**317**	P	**P**	**17 05 43.4**	**-0.5**
ABKAR				IAmb	IAmb	17 05 46.0	
	comp=Z,4.7nm,1.1s						
AKTO	**Aktyubinsk**	**58.26**	**318**	P	**P**	**17 05 55.1**	**+1.3**
	comp=Z,1.6nm,0.8s,baz=151,slow=3.6,SNR=3.7						
	comp=Z,1.6nm,0.8s						
ILAR	**Eielson Array**	**74.12**	**26**	P	**P**	**17 07 35.7**	**+0.3**
	comp=Z,0.5nm,0.9s,baz=260,slow=5.3,SNR=4.3						
	comp=Z,0.5nm,0.9s						
NOA	**NORSAR Array B**	**82.64**	**332**	LR	LR	17 50 27.3	
	comp=Z,34nm,19.1s,baz=245,slow=40						
YKA	**Yellowknife Ar**	**88.01**	**22**	P	**P**	**17 08 48.4**	**-0.8**
	comp=Z,0.8nm,1.0s,baz=309,slow=4.6,SNR=6.4						
	comp=Z,0.8nm,1.0s						

DDA ***02*** *17:03:02.0±0.0, 37°.58N×38°.50E, h8^{km}±2^{km}, MW4.0*

IDC ***02*** *17:03:03.6±0.9, 37°.52N×38°.27E, h0^{km}, mb3.3/4, mbtmp3.4/11, ML3.2/6, MS2.8/2, Error ellipse: s-maj=12.8km s-min=10.5km az=136.0*

ISK ***02*** *17:03:03.1, 37°.55N×38°.48E, h20^{km}, ML4.1/14*

GII ***02*** *17:03:20.6±0.0, 37°.59N×38°.49E, h10^{km}*

ISC 02 17:03:03.4±1.1**, 37°.60N**±0°.02×**38°.49E**±0°.02**, h1**^{km}±9^{km}**, n67,** σ1^{s}.**62**/98**, mb3.3**/4**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAB	**Bozova**	**0.20**	**229**	SPECP		17 03 06.0	
ATAB				P	**Pg**	**17 03 06.7**	**-0.6**
ATAB				S	**Sg**	**17 03 09.9**	**+0.1**
ATAB				*i* AML	AML	17 03 10.0	
	comp=N,3µm,0.3s						
ATAB				*i* AML	AML	17 03 10.0	
	comp=E,5µm,0.2s						
URFA	**Urfa**	**0.31**	**121**	Pg	**Pg**	**17 03 10.7**	**+1.4**
URFA				Sg	**Sg**	**17 03 14.9**	**+1.6**
HANM	**anlurfa/Hi**	**0.31**	**94**	SPECP		17 03 08.0	
HANM				P	**Pg**	**17 03 08.2**	**-1.2**
HANM				*i* AML	AML	17 03 12.0	
	comp=N,1µm,0.2s						
HANM				S	**Sg**	**17 03 12.5**	**-1.0**
SANL	**SANLIURFA_Merk**	**0.59**	**137**	P	**Pg**	**17 03 13.3**	**-1.3**
SANL				S	**Sg**	**17 03 21.0**	**-1.2**
SANL				*i* AML	AML	17 03 26.0	
	comp=N,1µm,0.6s						
AKCA	**Adyaman/G¶l**	**0.66**	**287**	SPECP		17 03 15.0	
AKCA				P	**Pg**	**17 03 15.6**	**-0.5**
AKCA				S	**Sg**	**17 03 27.9**	**+3.3**
MAYA	**Malatya/Merkez**	**0.72**	**356**	P	**Pg**	**17 03 16.4**	**-0.9**
MAYA				S	**Sg**	**17 03 26.9**	**+0.2**
SURC	**SANLIURFA_SURC**	**0.73**	**172**	P	**Pg**	**17 03 16.1**	**-1.2**
SURC				S	**Sg**	**17 03 27.0**	**+0.2**
GZT	**Gaziantep**	**0.78**	**252**	P	**Pg**	**17 03 17.5**	**-0.7**
GZT				S	**Sg**	**17 03 28.0**	**-0.2**
GZT				*i* AML	AML	17 03 31.0	
	comp=E,7µm,0.4s						
AKCD	**Akcadag**	**0.82**	**327**	P	**Pg**	**17 03 18.5**	**-0.7**
AKCD				S	**Sg**	**17 03 30.4**	**+0.5**
NZIP	**Nizip/Gaziante**	**0.85**	**229**	P	**Pg**	**17 03 18.9**	**-0.8**
NZIP				S	**Sg**	**17 03 30.4**	**-0.4**
NZIP				*i* AML	AML	17 03 33.0	
	comp=E,7µm,0.8s						
ELZG	**Elazig**	**0.98**	**24**	P	**Pb**	**17 03 20.8**	**-2.4**
ELZG				S	**Sb**	**17 03 36.4**	**-0.3**
GAZ	**Gaziantep**	**1.10**	**247**	Pg	**Pb**	**17 03 23.5**	**-1.8**
GAZ				Sg	**Sb**	**17 03 38.9**	**-1.3**
KAHM	**Kahramanmaras,**	**1.20**	**266**	P	**Pn**	**17 03 24.6**	**-2.6**
KAHM				S	**Sb**	**17 03 42.0**	**-0.8**
DARE	**Darende-Malaty**	**1.25**	**321**	Pn	**Pn**	**17 03 26.3**	**-1.8**
DARE				Sn	**Sb**	**17 03 44.0**	**-0.5**
HCB	**Kahramanmara**	**1.28**	**259**	SPECP		17 03 25.0	
HCB				P	**Pn**	**17 03 25.8**	**-2.6**
HCB				S	**Sb**	**17 03 43.5**	**-1.8**
HCB				*i* AML	AML	17 03 45.0	
	comp=E,2µm,0.3s						
HCB				*i* AML	AML	17 03 48.0	
	comp=N,1µm,0.3s						
ELBS	**KAHRAMANMARAS**	**1.29**	**304**	P	**Pn**	**17 03 26.5**	**-2.1**
ELBS				SPECP		17 03 27.0	
ELBS				S	**Sb**	**17 03 44.6**	**-1.0**
HEKM	**Malatya_Hekimh**	**1.34**	**342**	P	**Pn**	**17 03 27.5**	**-1.9**
HEKM				S	**Sn**	**17 03 47.6**	**-0.4**
DYBB	**Diyarbakir**	**1.35**	**75**	Pn	**Pn**	**17 03 27.4**	**-2.1**
DYBB				Sn	**Sn**	**17 03 46.1**	**-2.1**
KUZU	**Kuzuini**	**1.40**	**234**	SPECP		17 03 28.0	
KUZU				P	**Pn**	**17 03 28.9**	**-1.2**
KUZU				S	**Sn**	**17 03 47.8**	**-1.4**
KUZU				*i* AML	AML	17 03 52.0	
	comp=N,8µm,0.4s						
KUZU				*i* AML	AML	17 03 54.0	
	comp=E,6µm,0.5s						
CUGUR	**Gurin_SVAS**	**1.47**	**320**	P	**Pn**	**17 03 30.5**	**-0.7**
CUGUR				S	**Sb**	**17 03 52.2**	**+1.3**
CUGUR				*i* AML	AML	17 03 57.0	
	comp=E,4µm,0.6s						
ARPR	**Arapgir-MALATY**	**1.49**	**355**	Pn	**Pn**	**17 03 30.3**	**-1.2**
KAMA	**Osmaniye**	**1.51**	**255**	P	**Pn**	**17 03 29.0**	**-2.6**
KAMA				S	**Sn**	**17 03 49.3**	**-2.7**
KAMA				*i* AML	AML	17 03 54.0	
	comp=E,1µm,0.5s						
KOVA	**Elazig, Kovanc**	**1.52**	**43**	P	**Pn**	**17 03 31.5**	**-0.3**
KOVA				S	**Sn**	**17 03 52.2**	**-0.1**
KOVA				*i* AML	AML	17 03 56.0	
	comp=N,707nm,1.0s						
KEMA	**Kemaliye**	**1.66**	**0**	P	**Pn**	**17 03 32.6**	**-1.2**
KEMA				SPECP		17 03 33.0	
KEMA				S	**Sn**	**17 03 55.4**	**-0.5**
ANDN	**Andirin**	**1.70**	**270**	P	**Pn**	**17 03 31.8**	**-2.5**
ANDN				S	**Sn**	**17 03 53.5**	**-3.3**
HANI	**Diyarbakir_Han**	**1.71**	**61**	P	**Pn**	**17 03 32.3**	**-2.1**
SARI	**SarD1z-Kayseri**	**1.82**	**297**	Pn	**Pn**	**17 03 34.5**	**-1.5**
SAIM	**ADANA**	**1.94**	**282**	P	**Pn**	**17 03 36.1**	**-1.5**
SAIM				S	**Sb**	**17 04 06.0**	**+1.7**
RHAN	**Hatay/Reyhanl**	**2.02**	**229**	SPECP		17 03 39.0	
RHAN				P	**Pn**	**17 03 39.3**	**+0.7**
RHAN				S	**Sn**	**17 04 04.6**	**+0.1**
RHAN				*i* AML	AML	17 04 09.0	
	comp=N,1µm,0.4s						
KOZT	**Kozan**	**2.12**	**268**	Pn	**Pn**	**17 03 37.5**	**-2.4**
CUAYA	**Sivas-Altinyay**	**2.15**	**321**	P	**Pn**	**17 03 41.0**	**+0.5**
BNGB	**Bingl**	**2.21**	**51**	Pn	**Pn**	**17 03 39.9**	**-1.4**
SVAN	**Silvan-Diyarba**	**2.21**	**75**	Pn	**Pn**	**17 03 38.8**	**-2.5**
SVAN	**Silvan-Diyarba**	**2.21**	**75**	P	**Pn**	**17 03 39.6**	**-1.7**
CEYT	**Ceyhan**	**2.26**	**256**	Pn	**Pn**	**17 03 40.1**	**-1.8**
SLHN	**Bingol, Solhan**	**2.41**	**55**	SPECP		17 03 44.0	
SLHN				P	**Pn**	**17 03 44.7**	**+0.6**
BNN	**Bunyan**	**2.42**	**302**	Pn	**Pn**	**17 03 43.3**	**-1.0**
YEDI	**Yedisu-Bingol**	**2.44**	**41**	Pn	**Pn**	**17 03 44.0**	**-0.5**
SVSK	**Karacayir**	**2.59**	**334**	Pn	**Pn**	**17 03 46.1**	**-0.3**
VRTB	**Varto-Mus**	**2.80**	**55**	Pn	**Pn**	**17 03 48.9**	**-0.6**
RSDY	**Resadiye-TOKAT**	**2.93**	**342**	Pn	**Pn**	**17 03 50.8**	**-0.4**
GURO	**Guroymak-BITLI**	**2.95**	**70**	Pn	**Pn**	**17 03 49.0**	**-2.5**
BEIL	**Beino**	**3.58**	**212**	*e*P	**Pn**	**17 04 00.1**	**0.0**
AKDM	**Akdamar-Van**	**3.62**	**77**	Pn	**Pn**	**17 04 00.0**	**-0.8**
HWQ	**Hawqa**	**3.91**	**213**	*e*P	**Pn**	**17 04 03.1**	**-1.5**
BRTR	**Keskin Array B**	**4.35**	**301**	Pn	**Pn**	**17 04 10.8**	**+0.1**
	0.9nm,0.3s,baz=128,slow=16,SNR=17						
BRTR				Pg	**Pb**	**17 04 21.8**	**+1.2**
	1.5nm,0.3s,baz=126,slow=20,SNR=20						
BRTR				Lg	Lg	17 05 18.9	
	0.7nm,0.3s,baz=139,slow=26,SNR=1.0						
BRTR				LR	LR	17 06 10.3	
	comp=Z,182nm,18.6s,baz=130,slow=44						
	2.4nm,0.6s						
BHL	**Bhannes**	**4.35**	**213**	*e*P	**Pn**	**17 04 09.6**	**-1.2**
DQRL	**Deir Qamar**	**4.56**	**212**	*e*P	**Pn**	**17 04 15.9**	**+2.4**
RCY	**Rachaya**	**4.63**	**209**	*e*P	**Pn**	**17 04 14.3**	**-0.3**
GEM	**Giv'at Ha'Em**	**4.95**	**209**	Pn	**Pb**	**17 04 35.1**	**+4.2**
GEM				Sn	**Sb**	**17 05 31.7**	**+0.8**

MMA0B	Mount Meron ar	5.22	210	Pn	Pb	17 04 40.0	+4.4
MMAI	Mount Meron Ar	5.22	210	Pn	Pn	17 04 22.4	-0.3
	1.4nm,0.3s,baz=65,slow=15,SNR=2.2						
MMAI				Pg	Pb	17 04 36.3	+0.7
	5.6nm,0.3s,baz=35,slow=15,SNR=9.9						
MMAI				Lg	Lg	17 05 43.9	
	14nm,0.3s,baz=24,slow=32,SNR=2.9						
	1.6nm,0.5s						
HNTI	Hanita	5.26	212	Pn	Pb	17 04 38.6	+2.5
HNTI				Sn	Sb	17 05 39.4	-0.4
GNI	Garni	5.50	61	Pn	Pn	17 04 32.5	+5.9
	0.9nm,0.3s,baz=344,slow=10,SNR=3.5						
GNI				Pg	Pg	17 04 48.6	-0.2
	0.6nm,0.3s,baz=254,slow=2.4,SNR=6.1						
GNI				Lg	Lg	17 06 04.6	
	0.1nm,0.3s,baz=279,slow=1.5,SNR=0.9						
	3.1nm,0.4s						
ASF	Jabal al Asfar	5.57	194	Pn	Pn	17 04 27.2	-0.3
	0.4nm,0.3s,baz=45,slow=5.5,SNR=2.1						
ASF				Pg	Pb	17 04 41.4	-0.1
	1.0nm,0.3s,baz=4.2,slow=22,SNR=8.4						
ASF				Lg	Lg	17 05 56.5	
	8.2nm,0.3s,baz=212,slow=23,SNR=6.5						
	1.1nm,0.3s						
OFRI	`Ofer	5.74	211	Pn	Pb	17 04 46.0	+1.7
HMDT	Nahal Hemdat	5.87	205	Pn	Pb	17 04 48.1	+1.7
HMDT				Sn	Sb	17 05 54.2	-3.0
KBZ	Khabaz	6.98	27	LR	LR	17 07 59.4	
	comp=Z,34nm,18.0s,baz=156,slow=42						
EIL	Elat	8.44	201	Pg	Pb	17 05 33.2	+2.9
	0.3nm,0.3s,baz=4.0,slow=19,SNR=2.6						
EIL				Lg	Lg	17 07 28.8	
	0.6nm,0.3s,baz=284,slow=3.0,SNR=3.7						
IDI	Anoyia	11.19	262	Pn	Pn	17 05 43.5	-1.1
	0.3nm,0.3s,baz=72,slow=19,SNR=1.3						
	6.5nm,0.7s						
AKASG	Malin Array Be	14.67	336	Pn	Pn	17 06 32.2	+0.3
	0.1nm,0.3s,baz=143,slow=14,SNR=1.7						
AKTO	Aktyubinsk	18.95	41	P	P	17 07 26.2	+0.4
	0.1nm,0.3s,baz=264,slow=8.2,SNR=2.4						
	0.9nm,0.5s						
CLL	Collm	22.63	315	*e*P	P	17 08 04.0	-1.5
FINES	FINESS Array B	25.10	346	P	P	17 08 31.0	+1.7
	0.7nm,0.8s,baz=143,slow=12,SNR=1.2						
	0.7nm,0.8s						
BVAR	Borovoye Array	26.93	45	P	P	17 08 47.2	+1.1
	0.2nm,0.5s,baz=255,slow=4.3,SNR=2.0						
	0.2nm,0.5s						
MKAR	Makanchi Array	33.35	60	P	P	17 09 43.9	+1.0
	0.1nm,0.5s,baz=270,slow=8.5,SNR=2.0						
	0.1nm,0.5s						
YKA	Yellowknife Ar	77.92	348	P	P	17 15 03.7	+1.1
	0.3nm,0.6s,baz=27,slow=5.6,SNR=2.8						
	0.3nm,0.6s						

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*IDC **02** 17:12:21.9±1.0, 43°.29N×88°.77E, h0^{km}, mb3.5/8, mbtmp3.6/13, ML3.3/5, MS3.0/2, Error ellipse: s-maj=33.2km s-min=12.4km az=48.0*

*NNC **02** 17:12:26.7±5.4, 43°.35N×88°.11E, h0^{km}, mb4.3, mpv3.9, Error ellipse: s-maj=42.1km s-min=34.7km az=95.0*

ISC 02 17:12:23.5±0.9, **43°.37N**±0°.08×**88°.63E**±0°.08, **h10^{km}, n22,** σ**1^{s}.88**/30, **mb3.5**/8, **9C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	0.82	304	Pg	Pb	17 12 39.7	-0.1
WMQ	Urumqi	0.82	304	Sg	Sb	17 12 51.3	+0.3
MK31	Makanchi Array	5.65	310	Pn	Pn	17 13 49.1	+1.7
	10.0nm,0.6s,baz=122,slow=12,SNR=150						
MK31				Sn	Sn	17 14 53.7	+1.4
	21nm,0.7s,baz=124,slow=28,SNR=5.4						
MK31				⇓Lg	Lg	17 15 13.2	
	5.7nm,0.4s						
MKAR	Makanchi Array	5.65	310	Pn	Pn	17 13 49.4	+1.9
	3.3nm,0.3s,baz=126,slow=14,SNR=188						
MKAR				Pg	Pg	17 14 12.3	+0.7
	2.5nm,0.3s,baz=123,slow=15,SNR=5.5						
MKAR				Sn	Sn	17 14 53.5	+1.2
	3.7nm,0.3s,baz=129,slow=24,SNR=8.3						
MKAR				Lg	Lg	17 15 27.3	
	2.6nm,0.3s,baz=127,slow=29,SNR=5.1						
MKAR				LR	LR	17 16 27.4	
	comp=Z,41nm,20.1s,baz=210,slow=42						
	11nm,0.5s						
MAKZ	Makanchi	5.83	308	⇑Pn	Pn	17 13 51.9	+1.9
	17nm,0.7s						
MAKZ				⇑Sn	Sn	17 14 57.7	+0.8
	14nm,0.7s						
MAKZ				⇑Lg	Lg	17 15 30.5	
	15nm,0.7s						
PDGK	Podgornoye	6.67	273	⇑Pn	Pn	17 14 00.7	-0.8
	7.1nm,1.1s						
PDGK				⇑Sn	Sn	17 15 13.1	-4.5
	12nm,0.5s						
PDGK				⇑Lg	Lg	17 15 39.9	
	10nm,0.5s						
KURBB	Kurchatov Arra	10.01	320	Pn	Pn	17 14 47.4	+0.2
	0.7nm,0.3s,baz=132,slow=13,SNR=57						
KURBB				Sn	Sn	17 16 35.2	-4.3
	0.1nm,0.3s,baz=351,slow=24,SNR=2.0						
KURBB				Lg	Lg	17 17 41.6	
	baz=48,slow=7.8						
	4.6nm,0.5s						
KURBB	Kurchatov Arra	10.01	320	⇑Pn	Pn	17 14 47.4	+0.2
	5.7nm,0.6s						
KURBB				⇑Sn	Sn	17 16 35.7	-3.8
	3.6nm,0.5s						
KURK	Kurchatov	10.03	321	⇑Pn	Pn	17 14 47.4	0.0
	1.6nm,0.3s						
KURK				⇓Sn	Sn	17 16 36.3	-3.6
	1.5nm,0.3s						
AAK	Ala-Archa	10.38	271	Pn	Pn	17 14 53.2	+0.6
	0.1nm,0.3s,baz=69,slow=14,SNR=1.7						
AAK				Sn	Sn	17 16 50.2	+1.1
	0.1nm,0.3s,baz=294,slow=16,SNR=1.7						
AAK				Lg	Lg	17 17 44.6	
	0.1nm,0.3s,baz=259,slow=20,SNR=2.0						
	0.3nm,0.3s						
ZALV	Zalesovo Beam	10.88	348	Pn	Pn	17 15 00.6	+1.4
	0.5nm,0.3s,baz=170,slow=14,SNR=7.7						
ZALV				Sn	Sn	17 16 59.4	-1.5
	0.4nm,0.3s,baz=165,slow=26,SNR=5.9						
ZALV				Lg	Lg	17 18 11.1	
	baz=73,slow=25						
	1.0nm,0.3s						
SONM	Songino Array	13.21	64	Lg	Lg	17 19 24.4	
	baz=258,slow=41,SNR=1.6						
BVAR	Borovoye Array	15.49	315	Pn	Pn	17 16 00.1	-1.7
	0.1nm,0.3s,baz=105,slow=13,SNR=8.9						
BVAR				Lg	Lg	17 20 31.6	
	baz=115,slow=20						
	0.9nm,0.5s						
AKTO	Aktyubinsk	21.97	299	P	P	17 17 17.1	-0.2
	0.5nm,0.4s,baz=79,slow=3.8,SNR=1.5						
	0.5nm,0.4s						
ARU	Arti	23.14	315	P	P	17 17 30.0	+0.4
	1.1nm,0.3s,baz=258,slow=7.5,SNR=3.1						
	1.1nm,0.3s						
CMAR	Chiang Mai Arr	26.32	157	P	P	17 17 58.8	-0.6
	0.7nm,0.7s,baz=332,slow=9.2,SNR=6.9						
	0.7nm,0.7s						
AKASG	Malin Array Be	40.17	302	P	P	17 19 59.9	+0.3
	0.1nm,0.3s,baz=78,slow=8.3,SNR=2.2						
	0.1nm,0.3s						
NOA	NORSAR Array B	47.54	320	P	P	17 20 59.1	+0.4
	0.3nm,0.5s,baz=74,slow=7.8,SNR=2.0						
	0.3nm,0.5s						
PMG	Port Moresby	74.66	119	LR	LR	17 57 35.3	
	comp=Z,29nm,20.3s,baz=354,slow=36						
WRA	Warramunga Arr	75.69	136	P	P	17 24 08.3	-0.8
	0.9nm,1.1s,baz=349,slow=7.7,SNR=2.2						
	0.9nm,1.1s						
ASAR	Alice Springs	78.61	138	P	P	17 24 24.6	-0.8
	0.3nm,0.6s,baz=327,slow=5.0,SNR=4.7						
	0.3nm,0.6s						
TORD	Torodi Ar. Bea	78.89	278	P	P	17 24 28.9	+1.7
	0.3nm,0.6s,baz=46,slow=4.2,SNR=2.1						
	0.3nm,0.6s						

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*NNC **02** 17:29:59.1±3.8, 36°.95N×70°.97E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=33.0km s-min=26.4km az=137.0*

ISC 02 17:29:56.4±1.5, **36°.45N**±0°.09×**71°.3E**±0°.2, **h200^{km}, n18,** σ**1^{s}.84**/21, **4C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.97	17	P	Pn	17 31 25.0	+1.4
	SNR=11						
AML	Almayashu	5.97	17	⇑P	Pn	17 31 24.5	+0.9
	0.8nm,0.5s						
AML				⇑S	Sn	17 32 30.0	-2.6
	2.3nm,0.5s						
UCH	Uchtor	6.29	22	P	Pn	17 31 29.1	+1.4
	SNR=10						
EKS2	Erkin-Say	6.49	16	P	Pn	17 31 32.5	+2.4
	SNR=16						
AAK	Ala-Archa	6.66	21	P	Pn	17 31 34.2	+2.0
	SNR=8.1						
KK31	Karatay Array	6.67	355	⇑P	Pn	17 31 32.6	+0.3
	4.1nm,0.3s,baz=175,slow=12,SNR=53						
KK31				⇓S	Sn	17 32 43.9	-4.5
	1.8nm,0.3s,baz=187,slow=23,SNR=9.8						
TKM2	Tokmak 2	7.26	26	P	Pn	17 31 42.3	+2.1
	SNR=5.9						
TKM2	Tokmak 2	7.26	26	⇑P	Pn	17 31 41.8	+1.6
	3.4nm,0.5s						
TKM2				⇓S	Sn	17 33 02.4	-0.2
	4.7nm,1.2s						
PYUN	Piuthan	12.93	127	*e*P	Pn	17 32 52.4	-0.8
	9.7nm,0.3s						
DANN	Dangsing	13.27	124	*e*P	Pn	17 32 56.3	-1.3
	2.7nm,0.2s						
GKN	Gorkha	14.08	123	*e*P	Pn	17 33 07.1	-0.4
	8.0nm,0.4s						
PKIN	Phulchoki	14.87	123	*e*P	P	17 33 17.4	-0.8
PKI	Pulchoki	14.88	123	*e*P	P	17 33 17.5	-0.9
	2.7nm,0.2s						
GUN	Gumba	14.99	120	*e*P	P	17 33 18.8	-0.8
AB31	Akbulak array	15.24	331	P	P	17 33 24.4	+2.7
	0.7nm,0.5s,baz=144,slow=13,SNR=35						
JIRN	Jiri	15.36	121	*e*P	P	17 33 23.0	-0.7
RAMN	Ramite	16.09	122	*e*P	Pn	17 33 32.7	+0.6
TAPN	Taplejung	16.62	118	*e*P	Pn	17 33 39.0	+0.5
	2.8nm,0.4s						

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*DDA **02** 17:38:41.4±0.0, 37°.58N×38°.51E, h7^{km}±1^{km}, ML2.8*

*ISK **02** 17:38:43.3, 37°.55N×38°.52E, h20^{km}, ML3.0/12*

ISC 02 17:38:42.0±1.0, **37°.59N**±0°.05×**38°.50E**±0°.03, **h8^{km}**±9^{km}, **n14,** σ**0^{s}.82**/20, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	Bozova	0.20	235	P	Pg	17 38 46.1	0.0
ATAB				*i* AML	AML	17 38 49.0	
	comp=E,3µm,0.2s						
ATAB				*i* AML	AML	17 38 49.0	
	comp=N,3µm,0.2s						
ATAB				S	Sg	17 38 49.4	+0.5
URFA	Urfa	0.29	120	Pg	Pb	17 38 50.1	+0.6
URFA				Sg	Sb	17 38 53.9	-0.7
HANM	anlurfa/Hi	0.30	91	P	Pg	17 38 47.5	-0.4
HANM				S	Sg	17 38 51.9	-0.1
HANM				*i* AML	AML	17 38 52.0	
	comp=N,1µm,0.2s						
HANM				*i* AML	AML	17 38 52.0	
	comp=E,316nm,0.2s						
AKCA	Adyaman/G¶l	0.68	288	P	Pg	17 38 54.6	-0.5
AKCA				S	Sn	17 39 07.4	-1.5
AKCA				*i* AML	AML	17 39 09.0	
	comp=E,445nm,0.4s						
AKCA				*i* AML	AML	17 39 09.0	
	comp=N,529nm,0.6s						
GAZ	Gaziantep	1.11	249	Pn	Pg	17 39 03.9	+0.6
GAZ				Sn	Sn	17 39 19.7	+0.3
DARE	Darende-Malaty	1.27	321	Pn	Pg	17 39 07.2	+0.7
DYBB	Diyarbakir	1.35	74	Pn	Pb	17 39 07.2	-0.4
DYBB				Sn	Sg	17 39 25.2	-0.2
ARPR	Arapgir-MALATY	1.51	355	Pn	Pb	17 39 10.4	0.0
MAZI	Mazidag	1.55	94	Pn	Pb	17 39 10.5	-0.5
SARI	SarD1z-Kayseri	1.84	297	Pn	Pn	17 39 15.0	+0.9
KOZT	Kozan	2.13	268	Pn	Pb	17 39 19.3	-1.6
SVAN	Silvan-Diyarba	2.21	74	Pn	Pn	17 39 19.7	+0.7
BNGB	Bingl	2.21	50	Pn	Pn	17 39 19.8	+0.6
BNN	Bunyan	2.45	302	Pn	Pn	17 39 23.6	+1.2

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*IDC **02** 18:17:34.9±2.0, 0°.87S×130°.86E, h0^{km}, mb3.7/4, mbtmp3.6/5, ML3.3/1, Error ellipse: s-maj=103.4km s-min=22.1km az=69.0*

*DJA **02** 18:17:38.9±0.5, 0°S±5°×13°1E±$^{\circ}$, h47^{km}±8^{km}, M3.8/8, MLv3.8/8*

ISC 02 18:17:40.5±1.0, **0°.62S**±0°.09×**130°.74E**±0°.08, **h35^{km}, n14,** σ**2^{s}.58**/11, **mb3.7**/4, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	3.26	214	P	Pn	18 18 29.7	+0.5
RKPI	Ransiki, Papua	3.55	105	P	Pn	18 18 33.2	0.0
TNTI	Ternate	3.64	292	P	Pn	18 18 32.0	-2.4
BNDI	Bandanaira	3.97	192	P	Pn	18 18 39.6	+0.7
AAI	Ambon	3.97	220	P	Pn	18 18 39.3	+0.3
NLAI	Namlea	4.47	234	P	Pn	18 18 45.9	0.0
WRA	Warramunga Arr	19.53	170	P	P	18 22 00.1	-5.0
	0.1nm,0.3s,baz=348,slow=13,SNR=1.5						
WRA				S	S	18 25 21.5	-22
	2.8nm,1.0s,baz=356,slow=23,SNR=11						
	0.4nm,0.5s						
ASAR	Alice Springs	23.12	173	P	P	18 22 40.9	-2.8
	1.3nm,0.6s,baz=352,slow=11,SNR=19						
	1.3nm,0.6s						
CMAR	Chiang Mai Arr	36.55	303	P	P	18 24 46.6	+3.4
	0.3nm,0.6s,baz=136,slow=8.3,SNR=4.2						
	0.3nm,0.6s						
H11N1	WAKE ISLAND Hy	40.79	58	T	T	19 08 05.8	
	baz=245						
H11N2	WAKE ISLAND Hy	40.80	58	T	T	19 08 07.7	
	baz=245						
H11N3	WAKE ISLAND Hy	40.81	58	T	T	19 08 05.2	
	baz=245						
MKAR	Makanchi Array	63.39	325	P	P	18 28 08.0	+1.4
	0.5nm,0.6s,baz=117,slow=7.5,SNR=7.1						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	67.54	327	P	P	18 28 33.4	+0.2
	0.5nm,0.2s,baz=126,slow=5.6,SNR=5.6						
	0.5nm,0.2s						

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*IDC **02** 18:37:27.7±1.3, 22°.73S×112°.15W, h0^{km}, mb3.8/4, mbtmp3.8/4, MS3.3/3, Error ellipse: s-maj=52.0km s-min=40.1km az=34.0*

ISC 02 18:37:28.6±1.5, **22°.8S**±0°.4×**112°.1W**±0°.3, **h10^{km}, n23,** σ**0^{s}.70**/12, **mb3.8**/4, **Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	4.99	150	LR	LR	18 40 19.5	
	comp=Z,163nm,19.6s,baz=322,slow=34						
H03N2	Juan Fernandez	31.02	117	T	T	19 16 30.2	
	baz=285,slow=75,SNR=74						
H03N3	Juan Fernandez	31.03	117	T	T	19 16 31.3	
	baz=285,slow=75,SNR=69						
H03N1	Juan Fernandez	31.04	117	T	T	19 16 31.6	
	baz=285,slow=75,SNR=82						
NNA	Nana	35.28	78	LR	LR	18 54 46.9	
	comp=Z,53nm,19.9s,baz=8.5,slow=30						
LPAZ	La Paz	41.86	89	P	P	18 45 20.2	+0.3
	2.0nm,1.0s,baz=233,slow=11,SNR=2.6						
LPAZ				LR	LR	18 59 05.9	
	comp=Z,66nm,19.2s,baz=73,slow=31						
	2.0nm,1.0s						
NVAR	Mina Array Bea	61.20	354	P	P	18 47 45.0	+1.2
	1.1nm,0.8s,baz=180,slow=9.4,SNR=6.2						
	1.1nm,0.8s						
PDAR	Pinedale Array	65.30	2	P	P	18 48 09.8	-1.1
	0.3nm,0.6s,baz=163,slow=6.6,SNR=2.5						
	0.3nm,0.6s						
YKA	Yellowknife Ar	85.04	359	P	P	18 50 04.0	+0.1
	0.5nm,0.9s,baz=175,slow=5.2,SNR=5.2						
	0.5nm,0.9s						
H11S2	WAKE ISLAND Hy	89.25	290	T	T	20 29 05.1	
	baz=114,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	89.26	290	T	T	20 29 07.5	
	baz=114,slow=75,SNR=9.9						
H11S3	WAKE ISLAND Hy	89.27	290	T	T	20 29 07.5	
	baz=114,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	89.58	292	T	T	20 29 35.1	
	baz=113						
H11N1	WAKE ISLAND Hy	89.59	291	T	T	20 29 29.9	
	baz=113						
H11N2	WAKE ISLAND Hy	89.59	292	T	T	20 29 28.0	
	baz=113						
AKASG	Malin Array Be	139.11	37	PKP	PKPdf	18 56 55.2	-0.3
	0.1nm,0.3s,baz=281,slow=2.5,SNR=1.9						
ZALV	Zalesovo Beam	146.38	342	PKPbc	PKPbc	18 57 08.7	-0.7
	0.6nm,0.5s,baz=347,slow=4.4,SNR=3.3						
BRTR	Keskin Array B	146.50	52	PKPbc	PKPab	18 57 10.9	-0.5
	0.8nm,0.8s,baz=222,slow=5.0,SNR=5.3						
BVAR	Borovoye Array	149.78	357	PKPbc	PKPbc	18 57 18.9	+0.3
	0.6nm,0.5s,baz=22,slow=4.3,SNR=2.1						
CMAR	Chiang Mai Arr	150.62	267	PKPbc	PKiKP	18 57 22.4	+0.1
	1.0nm,0.8s,baz=97,slow=1.2,SNR=9.4						
KBZ	Khabaz	150.69	39	PKPbc	PKiKP	18 57 22.2	+0.5
	3.5nm,0.8s,baz=306,slow=2.1,SNR=8.8						
KURBB	Kurchatov Arra	151.02	346	PKPbc	PKPbc	18 57 21.0	-0.6
	0.3nm,0.6s,baz=357,slow=0.8,SNR=3.8						
MKAR	Makanchi Array	153.40	338	PKPbc	PKPbc	18 57 27.1	-0.1
	0.4nm,0.7s,baz=29,slow=3.3,SNR=3.0						

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*DDA **02** 18:46:35.4±0.0, 37°.91N×27°.21E, h7^{km}±5^{km}, ML1.5*

ISK 02 18:46:35.6, 37°.95N×27°.27E, h11^{km}, ML2.2/6, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGB	zmir	0.32	289	P	Pg	18 46 42.0	-0.1
DGB				S	Sg	18 46 46.1	-0.3
DGB	zmir	0.32	289	P	Pg	18 46 41.7	-0.4
BLCB	Balcova	0.47	338	Pg	Pb	18 46 45.5	-0.5
AYDN	Tasoluk	0.56	120	P	Pb	18 46 47.8	+0.3
AYDN				S	Sg	18 46 54.7	+0.7
AYDN				*i* AML	AML	18 46 56.0	
	comp=E,21nm,0.2s						
ZEYE	Izmir, Urla-Ze	0.67	296	P	Pg	18 46 48.5	-0.1
ZEYE				S	Sg	18 46 57.2	-0.2
ZEYE				*i* AML	AML	18 46 59.0	
	comp=E,38nm,0.2s						
ZEYE	Izmir, Urla-Ze	0.67	296	P	Pg	18 46 48.0	-0.6
ZEYE				*i* AML	AML	18 46 51.0	
	comp=N,34nm,1.1s						
ZEYE				S	Sg	18 46 56.8	-0.6
ZEYE				*i* AML	AML	18 46 59.0	
	comp=E,38nm,0.2s						
URLA	Izmir	0.67	308	Pg	Pg	18 46 48.7	+0.1
URLA				Sg	Sb	18 46 58.9	+0.1
URLA	Izmir	0.67	308	P	Pb	18 46 49.2	-0.2
MLSB	Milas	0.77	148	Pg	Pb	18 46 50.9	-0.1
ZEDA	zmir-Bergama	1.03	352	P	Pn	18 46 56.8	+0.8
ZEDA				S	Sn	18 47 12.3	+1.8
ZEDA				*i* AML	AML	18 47 14.0	
	comp=N,22nm,0.6s						
CHOS	Chios island	1.05	295	Pg	Pn	18 46 56.5	+0.1
CHOS				Sg	Sn	18 47 11.3	+0.1
DAT	Datca	1.24	168	Pn	Pg	18 46 59.4	0.0
DAT				Sn	Sn	18 47 17.2	+1.4
TURN	Turunc	1.40	146	Pn	Pn	18 47 01.4	+0.2
TURN				Sn	Sg	18 47 20.5	-0.3
DALY	Dalyan (Mula)	1.58	135	Pn	Pb	18 47 04.4	-0.4

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*IDC **02** 18:48:32.4±0.6, 37°.96N×120°.68E, h0^{km}, mb4.0/19, mbtmp4.0/24, ML3.5/5, MS3.1/15, Error ellipse: s-maj=15.8km s-min=13.0km az=34.0*

*MOS **02** 18:48:33.3±1.3, 37°.90N×120°.71E, h20^{km}, mb4.4/15, Error ellipse: s-maj=9.0km s-min=6.3km az=124.6*

*BJI **02** 18:48:34.7±0.0, 38°.06N×120°.77E, h10^{km}, mb4.1/21, mB4.6/6, ML4.5/14, Ms4.0/18, Ms7 3.7/17*

*NEIC **02** 18:48:35.5±1.6, 38°.20N±0°.08×120°.80E±0°.09, h13^{km}±5^{km}, mb4.4/20, Error ellipse: s-maj=12.9km s-min=8.9km az=219.0*

*KEA **02** 18:48:35.4, 38°.26N×121°.03E, h15^{km}, ML4.4/4*

ISC 02 18:48:35.1±0.4, **38°.25N**±0°.04×**120°.76E**±0°.03, **h10^{km}, n115,** σ**2^{s}.01**/130, **mb4.2**/38, **MS3.1**/13, **7C-2D, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DL2	Dalian	0.94	46	Pg	Pg	18 48 53.1	-0.2
DL2				Sg	Sg	18 49 06.3	+0.7
DL2				smax	smax		
	comp=N,7µm,0.4s						
DL2				smax	smax		
	comp=E,16µm,0.6s						
SUJ	Sinuiju	3.44	56	Pg	Pb	18 49 37.1	+1.0
SUJ				Sg	Sb	18 50 20.1	+2.1
SUJ				AML	AML		
	comp=N,1µm,0.6s						
SUJ				AML	AML		
	comp=E,1µm,0.6s						
SUJ				AML	AML		
	comp=Z,732nm,0.8s						
HJU	Haeju	3.92	92	Pg	Pb	18 49 45.1	+0.8
HJU				Sg	Sb	18 50 34.8	+3.0
HJU				AML	AML		
	comp=N,1µm,0.6s						
HJU				AML	AML		
	comp=E,652nm,0.7s						
HJU				AML	AML		
	comp=Z,686nm,0.6s						
BJT	Baijiatuau	3.98	298	Pn	Pn	18 49 35.5	-0.6
BJT	Baijiatuau	3.98	298	P	Pn	18 49 35.5	-0.6
PYAG	Pyongyang	4.00	77	Pg	Pb	18 49 46.3	+0.8
PYAG				Sg	Sb	18 50 36.6	+2.7
PYAG				AML	AML		
	comp=N,945nm,0.8s						
PYAG				AML	AML		
	comp=E,751nm,0.5s						
PYAG				AML	AML		
	comp=Z,590nm,0.1s						
PYS	Pyongsong	4.11	74	Pg	Pb	18 49 48.8	+1.3
PYS				Sg	Sb	18 50 40.3	+3.1
PYS				AML	AML		
	comp=N,3µm,0.8s						
PYS				AML	AML		
	comp=E,2µm,0.7s						
PYS				AML	AML		
	comp=Z,598nm,0.2s						
INCN	Inchon	4.71	98		Pb	18 49 58.8	+1.0
KGE	Kanggye	5.26	57	Sg	Sg	18 51 18.1	-5.9
WOSN	Wonsan	5.29	78	Sg	Sb	18 51 17.4	+6.2
TJN	Taejon	5.59	108		Pn	18 49 56.8	-1.5
TJN	Taejon	5.59	108	P	Pn	18 49 56.8	-1.5
KS19	Wonju Array Si	5.67	95	Pn	Pn	18 49 57.9	-1.5
KSAR	Wonju Array Be	5.70	96	Pn	Pn	18 49 57.6	-2.2
KSAR	Wonju Array Be	5.70	96	P	Pn	18 49 57.6	-2.2
KSRS	Korea Array	5.73	96	Pn	Pn	18 49 58.2	-1.9
	comp=Z,3.1nm,0.3s,baz=276,slow=14,SNR=35						
KSRS				Pg	Pb	18 50 17.9	+2.8
	comp=Z,6.7nm,0.3s,baz=275,slow=17,SNR=14						
KSRS				Sn	Sn	18 50 58.7	-7.2
	comp=Z,6.7nm,0.3s,baz=275,slow=24,SNR=1.2						
KSRS				Lg	Lg	18 51 27.8	
	comp=Z,8.5nm,0.3s,baz=180,slow=28,SNR=4.1						
	comp=Z,16nm,0.6s						
NJ2	Nanjing	6.38	195	*e*Pg	Pb	18 50 25.9	-0.3
NJ2				Sg	Sb	18 51 46.6	+4.1
NJ2				smax	smax		
	comp=Z,260nm,0.8s						
NJ2				smax	smax		
	comp=Z,260nm,0.7s						
NJ2				LR	LR		
	comp=Z,810nm,8.1s						
NJ2				LR	LR		
	comp=Z,430nm,5.2s						
NJ2				LR	LR		
	comp=Z,620nm,8.1s						
CN2	Changchun	6.58	31	*e*Pg	Pb	18 50 35.8	+6.2
CN2				*e*Sg	Sg	18 52 03.3	-2.9
CN2				smax	smax		
	comp=Z,370nm,1.0s						
CN2				smax	smax		
	comp=Z,460nm,1.0s						
LYN	LuoYang	7.63	244	Pn	Pn	18 50 28.6	+2.2
LYN				Sn	Sn	18 51 52.1	-0.8
LYN				smax	smax		
	comp=Z,120nm,0.7s						
LYN				smax	smax		
	comp=Z,40nm,0.9s						
LYN				LR	LR		
	comp=Z,850nm,16.1s						
LYN				LR	LR		
	comp=Z,380nm,12.2s						
LYN				LR	LR		
	comp=Z,290nm,12.7s						
BTO	Baotou	8.63	289	*e*P	Pn	18 50 43.7	+3.6
BTO				LR	LR		

	comp=Z,2µm,13.3s						
BTO				LR	LR		
	comp=Z,1µm,10.0s						
BNX	BinXian	8.97	31	⇑P	Pn	18 50 46.6	+2.0
BNX				S	Sn	18 52 23.7	-1.9
BNX				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BNX				pmax	pmax		
	comp=Z,140nm,4.2s						
BNX				LR	LR		
	comp=Z,390nm,4.6s						
BNX				LR	LR		
	comp=Z,310nm,4.5s						
BNX				LR	LR		
	comp=Z,160nm,5.4s						
MDJ	Mudanjiang	9.19	43	Pn	Pn	18 50 46.0	-1.6
JNU	Nakatsue	9.69	119	Pn	Pn	18 50 52.4	-2.2
	comp=Z,0.5nm,0.3s,baz=286,slow=8.5,SNR=6.4						
JNU				Sn	Sn	18 52 31.2	-12
	comp=Z,0.4nm,0.3s,baz=46,slow=10,SNR=1.6						
JNU				Lg	Lg	18 53 32.9	
	comp=Z,0.7nm,0.3s,baz=199,slow=12,SNR=4.3						
JNU				LR	LR	18 54 43.2	
	comp=Z,111nm,20.4s,baz=292,slow=39						
	comp=Z,1.5nm,0.3s						
USRK	Ussuriysk Ar.	10.33	51	Pn	Pn	18 51 05.9	+2.6
	comp=Z,0.4nm,0.3s,baz=258,slow=14,SNR=4.4						
USRK				Lg	Lg	18 53 59.3	
	comp=Z,0.7nm,0.3s,baz=247,slow=20,SNR=4.4						
USRK				LR	LR	18 54 50.2	
	comp=Z,84nm,21.6s,baz=232,slow=36						
	comp=Z,1.4nm,0.4s						
HEH	HeiHe	12.90	19	eP	Pn	18 51 44.1	+5.7
HEH				S	Sn	18 54 01.1	-0.9
JOW	Kunigami	13.03	149	LR	LR	18 56 35.3	
	comp=Z,90nm,18.7s,baz=144,slow=38						
KLR	Kul'dur	13.53	32	Pn	Pn	18 51 45.9	-1.1
	baz=245,slow=14,SNR=1.5						
KLR				Lg	Lg	18 55 41.0	
	comp=Z,0.4nm,0.3s,baz=117,slow=23,SNR=7.3						
KLR				LR	LR	18 56 48.6	
	comp=Z,86nm,19.5s,baz=220,slow=36						
KLR	Kul'dur	13.53	32	ceP	Pn	18 51 51.3	+4.3
KLR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LZH	Lanzhou	13.66	266	eP	P	18 51 59.6	+1.7
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
LZH				LR	LR		
	comp=N,440nm,13.5s						
LZH				LR	LR		
	comp=E,290nm,13.1s						
LZH				LR	LR		
	comp=Z,230nm,12.3s						
ULN	Ulaanbaatar	13.86	318	Pn	Pn	18 51 50.5	-1.1
ULN	Ulaanbaatar	13.86	318	P	Pn	18 51 50.5	-1.1
MJAR	Matsushiro Arr	13.98	92	LR	LR	18 57 05.8	
	comp=Z,71nm,21.0s,baz=270,slow=37						
SONM	Songino Array	14.19	317	Pn	Pn	18 51 55.1	-1.1
	comp=Z,0.2nm,0.3s,baz=130,slow=14,SNR=24						
SONM				Sn	Sn	18 54 23.6	-10
	comp=Z,0.1nm,0.3s,baz=157,slow=19,SNR=3.4						
SONM				Lg	Lg	18 56 02.2	
	comp=Z,0.1nm,0.3s,baz=125,slow=24,SNR=1.4						
SONM				LR	LR	18 57 17.0	
	comp=Z,33nm,18.6s,baz=287,slow=36						
	comp=Z,3.5nm,0.8s						
SONM	Songino Array	14.19	317	Pn	Pn	18 51 56.0	-0.2
SONM	Songino Array	14.19	317	P	Pn	18 51 56.0	-0.2
ZEA	Zeya	16.12	14	eP	P	18 52 26.8	+1.9
ZEA				pmax	pmax		
	comp=N,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				MLR	MLR		
	comp=E,100nm,8.0s						
ZEA				MLR	MLR		
	comp=N,200nm,9.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,8.0s						
GTA	Gaotai	16.36	281	eP	Pn	18 52 25.0	+0.1
GTA				pP	P	18 52 29.4	+1.6
GTA				pmax	pmax		
	comp=Z,4.0nm,2.2s						
GTA				LR	LR		
	comp=Z,200nm,10.4s						
GTA				LR	LR		
	comp=Z,200nm,14.3s						
GTA				LR	LR		
	comp=Z,150nm,12.7s						
ZAK	Zakamensk	17.36	320	eP	Pn	18 52 38.1	+0.6
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ASAJ	Asahikawa	17.43	63	P	Pn	18 52 38.6	+0.3
	comp=Z,0.1nm,0.3s,baz=253,slow=19,SNR=2.3						
	comp=Z,6.5nm,1.0s						
IRK	Irkutsk	18.11	326	eP	P	18 52 49.3	+2.3
IRK				pmax	pmax		
	comp=Z,21nm,2.3s						
MOY	Mondy	19.29	320	eP	Pn	18 53 03.4	+2.3
MOY				pmax	pmax		
	comp=Z,24nm,2.4s						
BOD	Bodaibo	20.07	349	eP	P	18 53 10.1	+1.7
BOD				pmax	pmax		
	comp=Z,9.0nm,2.0s						
GOMU	GeErMu	20.74	272	P	P	18 53 17.3	+1.1
GOMU				pmax	pmax		
	comp=Z,9.0nm,1.2s						
YAK	Yakutsk	24.43	10	P	P	18 53 54.8	+1.1
	comp=Z,1.4nm,0.4s,baz=6.5,slow=8.4,SNR=8.4						
YAK				LR	LR	19 04 16.5	
	comp=Z,69nm,20.5s,baz=218,slow=38						
	comp=Z,1.4nm,0.4s						
YAK	Yakutsk	24.43	10	P	P	18 53 53.9	+0.2
YAK	Yakutsk	24.43	10	ceP	P	18 53 55.9	+2.3
YAK				pmax	pmax		
	comp=Z,15nm,1.0s						
WMQ	Urumqi	25.44	293	eP	P	18 54 04.9	+1.9
WMQ				pP	sP	18 54 07.9	+0.6
WMQ				sP	pP	18 54 12.9	+6.8
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				LR	LR		
	comp=Z,42nm,16.7s						
DGZ	Jazzator, Alta	26.36	307	i P	P	18 54 12.3	+0.9
DGZ				pmax	pmax		
	comp=Z,7.0nm,2.2s						
CMAR	Chiang Mai Arr	27.40	230	P	P	18 54 18.8	-2.1
	comp=Z,0.6nm,0.8s,baz=29,slow=8.6,SNR=5.9						
CMAR				LR	LR	19 05 45.7	
	comp=Z,38nm,21.4s,baz=40,slow=38						
	comp=Z,0.6nm,0.8s						
MA2	Magadan	28.63	32	LR	LR	19 06 18.6	
	comp=Z,33nm,18.3s,baz=56,slow=37						
ZALV	Zalesovo Beam	29.06	314	P	P	18 54 35.4	+0.1
	comp=Z,0.6nm,0.5s,baz=117,slow=8.7,SNR=3.6						
ZALV				LR	LR	19 05 47.3	
	comp=Z,61nm,18.3s,baz=68,slow=35						
	comp=Z,0.6nm,0.5s						
ZALV	Zalesovo Beam	29.06	314	P	P	18 54 35.9	+0.6
ZALV	Zalesovo Beam	29.06	314	i P	P	18 54 36.2	+0.9
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MK31	Makanchi Array	29.36	299	P	P	18 54 38.1	-0.1
MK31	Makanchi Array	29.36	299	P	P	18 54 38.1	-0.1
MK31				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MKAR	Makanchi Array	29.36	299	P	P	18 54 38.5	+0.3
	comp=Z,1.7nm,0.8s,baz=95,slow=10,SNR=15						
MKAR				LR	LR	19 05 47.8	
	comp=Z,61nm,19.2s,baz=110,slow=35						
	comp=Z,1.7nm,0.8s						
MKAR	Makanchi Array	29.36	299	P	P	18 54 38.6	+0.5
MKAR	Makanchi Array	29.36	299	P	P	18 54 38.6	+0.5
PETK	Petropavlovsk-	29.39	48	LR	LR	19 06 29.4	
	comp=Z,88nm,18.1s,baz=250,slow=36						
MAKZ	Makanchi	29.58	299	P	P	18 54 39.7	-0.4
MAKZ	Makanchi	29.58	299	P	P	18 54 39.7	-0.4
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SEY	Seymchan	31.25	28	i P	P	18 55 01.9	+7.4
SEY				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KURK	Kurchatov	32.10	307	P	P	18 55 02.5	+0.3
KURK				IAmb	IAmb	18 55 03.9	
	comp=Z,2.7nm,0.9s						
KURK	Kurchatov	32.10	307	P	P	18 55 02.5	+0.3
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURBB	Kurchatov Arra	32.15	306	P	P	18 55 02.9	+0.3
	comp=Z,2.4nm,0.8s,baz=98,slow=9.1,SNR=18						
	comp=Z,2.4nm,0.8s						
GUMO	Guam	32.57	132	LR	LR	19 06 12.0	
	comp=Z,18nm,21.5s,baz=90,slow=33						
TIXI	Tiksi	33.73	5	P	P	18 55 18.4	+2.3
	comp=Z,4.6nm,0.8s,baz=270,slow=23,SNR=18						
TIXI				LR	LR	19 09 35.9	
	comp=Z,38nm,19.5s,baz=85,slow=37						
	comp=Z,4.6nm,0.8s						
TIXI	Tiksi	33.73	5	P	P	18 55 18.1	+2.0
TIXI				IAmb	IAmb	18 55 21.5	
	comp=Z,6.3nm,1.0s						
TIXI	Tiksi	33.73	5	ceP	P	18 55 19.7	+3.6
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AAK	Ala-Archa	35.14	292	P	P	18 55 29.4	+0.5
	comp=Z,1.6nm,0.7s,baz=120,slow=9.4,SNR=5.5						
AAK				LR	LR	19 09 55.4	
	comp=Z,33nm,21.1s,baz=80,slow=36						
	comp=Z,1.6nm,0.7s						
AAK	Ala-Archa	35.14	292	i P	P	18 55 29.6	+0.6
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BVAR	Borovoye Array	37.37	310	P	P	18 55 47.9	+0.2
	comp=Z,1.5nm,0.6s,baz=93,slow=10,SNR=12						
	comp=Z,1.5nm,0.6s						
BRVK	Borovoye	37.44	310	P	P	18 55 48.6	+0.3
BRVK	Borovoye	37.44	310	ceP	P	18 55 49.1	+0.8
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KK31	Karatay Array	37.95	294	P	P	18 55 52.6	-0.2
KK31				IAmb	IAmb	18 55 54.1	
	comp=Z,5.5nm,0.9s						
KK31	Karatay Array	37.95	294	P	P	18 55 52.6	-0.2
KK31				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KKAR	Karatay Array	37.95	294	P	P	18 55 52.7	0.0
KKAR				IAmb	IAmb	18 55 54.1	
	comp=Z,5.5nm,0.9s						
KKAR	Karatay Array	37.95	294	P	P	18 55 52.6	-0.2
KKAR	Karatay Array	37.95	294	P	P	18 55 52.6	-0.2
KKAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NIL	Nilore	38.40	278	P	P	18 55 57.0	+0.3
NIL	Nilore	38.40	278	P	P	18 55 57.0	+0.3
NIL				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BILL	Bilibino	38.85	25	P	P	18 56 01.7	+1.7
BILL	Bilibino	38.85	25	⇓eP	P	18 56 03.5	+3.5
BILL				e		18 56 08.4	
BILL				pmax	pmax		
	comp=Z,9.0nm,2.0s						
BILL				MLR	MLR		
	comp=Z,44nm,16.0s						
CHGR	Chuyangaron	39.96	287	P	P	18 56 09.5	-0.3
CHGR	Chuyangaron	39.96	287	P	P	18 56 09.5	-0.3
CHGR				pmax	pmax		
	comp=Z,14nm,0.8s						
KBL	Kabul	41.35	281	P	P	18 56 20.8	-0.6
KBL				IAmb	IAmb	18 56 52.5	
	comp=Z,2.7nm,0.5s						
KBL	Kabul	41.35	281	P	P	18 56 20.8	-0.6
KBL				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ABKAR	Akbulak array	44.16	305	P	P	18 56 43.7	-0.1
ABKAR				IAmb	IAmb	18 56 45.4	
	comp=Z,4.8nm,1.4s						
ARU	Arti	44.22	315	P	P	18 56 44.4	+0.3
ARU				IAmb	IAmb	18 56 45.7	
	comp=Z,5.0nm,1.0s						
ARU	Arti	44.22	315	d iP	P	18 56 43.4	-0.7
ARU				S	S	19 03 13.2	-4.1
ARU				SS	SS	19 06 24.8	-10
ARU				pmax	pmax		
	comp=Z,11nm,1.5s						
GEYT	Alibeck	48.43	290	P	P	18 57 16.1	-1.5
	comp=Z,0.9nm,0.5s,baz=46,slow=10,SNR=2.7						
	comp=Z,0.9nm,0.5s						
ANM	Nome	49.42	33	P	P	18 57 27.3	+2.6
ANM				IAmb	IAmb	18 57 29.9	
	comp=Z,3.3nm,0.7s						
ANM	Nome	49.42	33	P	P	18 57 27.3	+2.6
OBN	Obninsk	56.60	317	⇑eP	P	18 58 19.0	+1.2
OBN				*PP	sP	18 58 23.0	+0.8
OBN						19 00 23.0	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,76nm,16.0s						
BMAR	Burnt Mountain	57.04	27	P	P	18 58 20.5	-0.3
ILAR	Eielson Array	57.10	31	P	P	18 58 22.2	+1.0
	comp=Z,6.7nm,1.4s,baz=289,slow=7.6,SNR=9.4						
	comp=Z,6.7nm,1.4s						
ILAR	Eielson Array	57.10	31	P	P	18 58 23.4	+2.2
ILAR	Eielson Array	57.10	31	P	P	18 58 23.4	+2.2
PRP	Porcupine Dome	57.37	30	P	P	18 58 22.4	-0.9
PRP				IAmb	IAmb	18 58 28.4	
	comp=Z,4.1nm,0.8s						
WRA	Warramunga Arr	59.28	165	P	P	18 58 33.5	-3.4
	comp=Z,2.2nm,0.9s,baz=351,slow=7.4,SNR=11						
	comp=Z,2.2nm,0.9s						
FINES	FINESS Array B	59.34	326	P	P	18 58 37.1	+0.2
	comp=Z,1.8nm,0.9s,baz=55,slow=7.3,SNR=4.7						
	comp=Z,1.8nm,0.9s						
FINES	FINESS Array B	59.34	326	P	P	18 58 36.7	-0.2
FINES	FINESS Array B	59.34	326	ceP	P	18 58 39.7	+2.8
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
A36M	Sachs Harbour	60.90	19	P	P	18 58 47.2	-0.2
MNK	Minsk	61.46	318	i P	P	18 58 51.1	-0.4
	comp=E,2.0nm,0.8s						
MNK				i P	P	18 58 51.1	-0.4
	comp=N,32nm,0.8s						
MNK				i P	P	18 58 51.1	-0.4
	comp=Z,5.0nm,0.8s,baz=244						
MNK				i PcP	PcP	18 59 34.8	+1.4
MNK				i PP	PP	19 01 05.0	-1.3
MNK				i PPP	PPP	19 02 28.6	
MNK				i S	S	19 07 09.1	-3.4
MNK				i ScS	SKKSac	19 08 42.2	-0.6
MNK				i SS	SS	19 11 09.2	-3.4
MNK				i SSS	SSS	19 13 54.9	
MNK				i LR	LR	19 24 31.8	
MNK				i LRM	MLR	19 29 18.0	
	comp=N,758nm,18.1s						
MNK				i LRM	MLR	19 29 29.6	
	comp=E,112nm,20.6s						
MNK				i LRM	MLR	19 29 46.4	
	comp=Z,388nm,19.3s						
MNK	Minsk	61.46	318	i P	P	18 58 51.1	-0.4
MNK				i		18 59 34.8	
MNK				i		19 01 05.0	
MNK				i S	S	19 07 09.0	-3.4
MNK				i		19 08 42.1	
MNK				i SS	SS	19 11 09.1	-3.4
MNK				i SSS	SSS	19 13 54.8	
MNK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,32nm,0.9s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				MLR	MLR		
	comp=N,758nm,18.0s						
MNK				MLR	MLR		
	comp=E,112nm,21.0s						
MNK				MLR	MLR		
	comp=Z,388nm,19.0s						
AKASG	Malin Array Be	62.45	314	P	P	18 58 56.7	-1.5
	comp=Z,0.3nm,0.4s,baz=61,slow=6.2,SNR=3.5						
	comp=Z,0.3nm,0.4s						
ASAR	Alice Springs	62.82	166	P	P	18 58 58.0	-2.9
	comp=Z,0.7nm,0.8s,baz=344,slow=6.6,SNR=6.5						
	comp=Z,0.7nm,0.8s						
ASAR	Alice Springs	62.82	166	P	P	18 58 58.0	-2.9
BRTR	Keskin Array B	64.97	302	P	P	18 59 14.7	-0.6
	comp=Z,0.5nm,0.6s,baz=95,slow=3.0,SNR=2.9						
	comp=Z,0.5nm,0.6s						
NOA	NORSAR Array B	65.77	330	P	P	18 59 19.5	-0.4
	comp=Z,1.8nm,1.1s,baz=55,slow=6.6,SNR=3.2						
	comp=Z,1.8nm,1.1s						
YKA	Yellowknife Ar	70.23	24	P	P	18 59 48.4	+0.6
	comp=Z,1.9nm,0.8s,baz=320,slow=5.6,SNR=25						
	comp=Z,1.9nm,0.8s						
YKA	Yellowknife Ar	70.23	24	i P	P	18 59 50.9	+3.1
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
STKA	Stephens Creek	72.42	161	P	P	18 59 58.5	-2.9
	comp=Z,2.2nm,0.8s,baz=301,slow=6.1,SNR=3.2						
	comp=Z,2.2nm,0.8s						
NVAR	Mina Array Bea	86.35	42	P	P	19 01 19.0	+1.2
	comp=Z,0.7nm,0.7s,baz=308,slow=4.4,SNR=4.3						
	comp=Z,0.7nm,0.7s						

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*DDA **02** 18:50:08.0±0.0, 37°.58N×38°.50E, h7^{km}±1^{km}, ML2.3*
*ISK **02** 18:50:09.6, 37°.52N×38°.47E, h18^{km}, ML2.5/8*
ISC 02 18:50:08.5±1.1**, 37°.57N**±0°.03×**38°.48E**±0°.03**, h8**^{km}±11^{km},
n17, σ0^{s}.76/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URFA	Urfa	0.30	115	Pg	Pb	18 50 16.7	+0.4
URFA				Sg	Sb	18 50 21.2	-0.3
HANM	anlurfa/Hi	0.32	88	P	Pg	18 50 14.2	-0.6
HANM				S	Sg	18 50 18.6	-0.5
HANM				i AML	AML	18 50 19.0	
	comp=N,394nm,0.1s						
SANL	SANLIURFA_Merk	0.57	134	P	Pg	18 50 19.4	-0.1
SANL				S	Sg	18 50 26.9	-0.1
SANL				i AML	AML	18 50 32.0	
	comp=E,122nm,0.3s						
AKCA	Adyaman/G¶l	0.66	290	P	Pg	18 50 21.5	+0.1
SURC	SANLIURFA_SURC	0.70	171	P	Pg	18 50 22.1	+0.1
MAYA	Malatya/Merkez	0.75	357	P	Pg	18 50 22.3	-0.8
GZT	Gaziantep	0.76	254	P	Pn	18 50 24.8	-0.9
GZT				S	Sb	18 50 34.5	-0.1
GZT				i AML	AML	18 50 37.0	
	comp=N,247nm,0.3s						
NZIP	Nizip/Gaziante	0.83	231	P	Pn	18 50 26.5	-0.1
NZIP				S	Sb	18 50 36.0	-0.5
NZIP				i AML	AML	18 50 40.0	
	comp=N,86nm,0.3s						
AKCD	Akcadag	0.85	329	P	Pg	18 50 24.4	-0.4
GAZ	Gaziantep	1.08	249	Pg	Pn	18 50 30.3	+0.2
GAZ				Sg	Sn	18 50 45.1	-0.2
DARE	Darende-Malaty	1.27	322	Pn	Pb	18 50 32.9	+0.1
DARE				Sn	Sg	18 50 51.6	+2.2
ELBS	KAHRAMANMARAS	1.30	306	P	Pn	18 50 31.9	-1.3
DYBB	Diyarbakir	1.37	73	Pn	Pb	18 50 34.3	-0.2
DYBB				Sn	Sg	18 50 53.4	+0.8
ARPR	Arapgir-MALATY	1.52	356	Pn	Pb	18 50 36.9	-0.2
MAZI	Mazidag	1.57	93	Pn	Pn	18 50 36.9	+0.1
SARI	SarD1z-Kayseri	1.83	298	Pn	Pn	18 50 41.1	+0.7
SVAN	Silvan-Diyarba	2.23	74	Pn	Pn	18 50 47.1	+1.3

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*DDA **02** 18:54:26.6±0.0, 37°.57N×38°.50E, h7^{km}±2^{km}, ML2.4*
*ISK **02** 18:54:28.5, 37°.50N×38°.47E, h20^{km}, ML2.6/9*
ISC 02 18:54:27.1±1.1**, 37°.57N**±0°.03×**38°.54E**±0°.02**, h20**^{km}±3^{km},
n17, σ0^{s}.75/26**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URFA	Urfa	0.26	120	Pg	Pn	18 54 35.9	-0.1
URFA				Sg	Sn	18 54 40.1	-1.4
HANM	anlurfa/Hi	0.28	88	P	Pg	18 54 33.1	-0.3
HANM				S	Sg	18 54 37.1	-0.6
HANM				i AML	AML	18 54 38.0	
	comp=N,468nm,0.1s						
SANL	SANLIURFA_Merk	0.54	138	P	Pg	18 54 37.9	-0.1
SANL				S	Sb	18 54 45.7	+0.4
SANL				i AML	AML	18 54 53.0	
	comp=N,217nm,0.6s						
SURC	SANLIURFA_SURC	0.69	175	P	Pg	18 54 40.4	-0.4
AKCA	Adyaman/G¶l	0.71	288	P	Pg	18 54 39.8	-1.3
MAYA	Malatya/Merkez	0.76	353	P	Pg	18 54 41.2	-0.9
GZT	Gaziantep	0.80	255	P	Pb	18 54 42.5	0.0
GZT				S	Sb	18 54 52.7	-0.3
GZT				i AML	AML	18 54 56.0	
	comp=N,309nm,0.4s						
NZIP	Nizip/Gaziante	0.87	233	P	Pn	18 54 45.6	+1.3
NZIP				S	Sg	18 54 55.4	-0.2
NZIP				i AML	AML	18 54 58.0	
	comp=E,170nm,0.3s						
NZIP				i AML	AML	18 55 01.0	
	comp=N,145nm,0.2s						
AKCD	Akcadag	0.87	326	P	Pg	18 54 44.2	0.0
AKCD				S	Sb	18 54 54.5	-0.5
GAZ	Gaziantep	1.13	250	Pg	Pg	18 54 48.7	-0.3
GAZ				Sg	Sn	18 55 03.3	+0.4
DARE	Darende-Malaty	1.30	321	Pn	Pg	18 54 52.2	0.0
DARE				Sn	Sg	18 55 10.2	+1.0
DYBB	Diyarbakir	1.33	73	Pn	Pg	18 54 52.7	-0.1
DYBB				Sn	Sg	18 55 11.9	+1.7
MAZI	Mazidag	1.52	94	Pn	Pg	18 54 56.1	-0.4
ARPR	Arapgir-MALATY	1.53	354	Pn	Pg	18 54 56.3	-0.3
SARI	SarD1z-Kayseri	1.87	297	Pn	Pb	18 55 00.1	-0.6
SVAN	Silvan-Diyarba	2.19	74	Pn	Pb	18 55 05.9	-0.1
BNGB	Bingl	2.20	49	Pn	Pb	18 55 06.3	-0.1

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*ISK **02** 19:01:40.7, 39°.96N×41°.41E, h10^{km}, ML2.9/7*
*TIF **02** 19:01:40.0, 39°.96N×41°.38E, h5^{km}±2^{km}*
*DDA **02** 19:01:41.6±0.0, 39°.94N×41°.42E, h7^{km}±4^{km}, ML2.5*
ISC 02 19:01:41.4±1.0**, 39°.98N**±0°.02×**41°.41E**±0°.02**, h6**^{km}±9^{km},
n25, σ1^{s}.65/43**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EJDE	Erzurum, Palan	0.17	209	P	Pg	19 01 44.9	-0.1
EJDE				S	Sg	19 01 47.8	+0.4
EJDE				i AML	AML	19 01 50.0	
	comp=N,1µm,0.7s						
EJDE				i AML	AML	19 01 51.0	
	comp=E,2µm,0.6s						
EMRE	Erzurum,Aziziy	0.34	278	P	Pg	19 01 48.3	+0.3
EMRE				S	Sb	19 01 54.3	-1.4
EMRE				i AML	AML	19 01 58.0	
	comp=N,3µm,0.4s						
EMRE				i AML	AML	19 01 58.0	
	comp=E,2µm,0.3s						
KOPR	Koprukoy-ERZUR	0.34	88	Pg	Pg	19 01 47.5	-0.7
KOPR				Sg	Sb	19 01 53.6	-2.2
KRIK	Erzurum-spir	0.51	314	P	Pb	19 01 51.8	-1.1
KRIK				S	Sb	19 02 01.0	+0.3
KRIK				i AML	AML	19 02 02.0	
	comp=E,183nm,0.4s						
KRIK				i AML	AML	19 02 07.0	
	comp=N,189nm,0.4s						
KOPT	Kop Dagi	0.70	273	P	Pb	19 01 55.0	-1.2
KOPT				S	Sn	19 02 08.5	-0.9
KOPT				i AML	AML	19 02 12.0	
	comp=E,330nm,0.6s						
VRTB	Varto-Mus	0.82	177	P	Pb	19 01 57.2	-1.0
VRTB				S	Sn	19 02 16.6	+4.4
VRTB				i AML	AML	19 02 23.0	
	comp=N,260nm,0.7s						
VRTB				i AML	AML	19 02 24.0	
	comp=E,361nm,1.0s						
YEDI	Yedisu-Bingol	0.86	231	Pg	Pg	19 01 56.9	-1.1
YEDI				Sg	Sb	19 02 09.9	-0.8
SENK	Senkaya-Erzuru	0.92	51	Pg	Pg	19 01 58.4	-0.8
SENK				Sg	Sb	19 02 13.0	+0.4
BAYT	Aydıntepe-Bayb	1.05	293	Pg	Pb	19 02 01.7	-0.5
BAYT				Sg	Sn	19 02 16.8	-1.2
SLHN	Bingol, Solhan	1.07	196	P	Pb	19 02 01.0	-1.3
SLHN				S	Sn	19 02 20.1	+1.9
SLHN				i AML	AML	19 02 22.0	
	comp=N,237nm,0.3s						
SLHN				i AML	AML	19 02 23.0	
	comp=E,391nm,0.4s						
CHOM	Cayeli-Rize	1.22	336	Pn	Pg	19 02 04.6	-0.2
CHOM				Sn	Sn	19 02 22.2	+0.4
MUSM	Mu-Merkez	1.26	176	P	Pg	19 02 03.6	-2.0
MUSM				S	Sn	19 02 22.7	-0.3
MUSM				i AML	AML	19 02 28.0	
	comp=N,94nm,0.8s						
MUSM				i AML	AML	19 02 28.0	
	comp=E,80nm,0.6s						
BOZK	Kars-Merkez-Bo	1.34	63	P	Pn	19 02 05.9	-1.0
ERZN	Erzincan	1.36	254	Pn	Pn	19 02 05.7	-1.3
HOPA	Hopa-Artvin	1.40	1	Pn	Pb	19 02 07.6	-0.4
KTUT	Trabzon	1.60	309	Pn	Pn	19 02 10.3	0.0
BLIS	Bitlis-Merkez	1.66	160	P	Pb	19 02 11.5	-1.0
BLIS				S	Sg	19 02 36.6	+1.8

BLIS				*i* AML	AML	19 02 38.0	
	comp=N,57nm,0.5s						
BLIS				*i* AML	AML	19 02 39.0	
	comp=E,102nm,0.5s						
HANI	Diyarbakir_Han	1.75	207	P	Pg	19 02 13.6	-1.4
HANI				S	Sg	19 02 41.6	+3.9
HANI				*i* AML	AML	19 02 47.0	
	comp=E,31nm,0.7s						
HANI				*i* AML	AML	19 02 52.0	
	comp=N,31nm,0.9s						
KOVA	Elazig, Kovanc	1.78	225	P	Pg	19 02 14.6	-0.9
KOVA				S	Sg	19 02 40.7	+2.1
KOVA				*i* AML	AML	19 02 49.0	
	comp=E,44nm,1.0s						
KOVA				*i* AML	AML	19 02 50.0	
	comp=N,27nm,1.6s						
ABS	Abastumani	2.07	31	P	Pb	19 02 19.3	-0.1
ABS				S	Sg	19 02 47.8	0.0
AKH	Akhalkalaki	2.13	47	P	Pg	19 02 21.2	-1.1
TRLG	Trialeti	2.57	52	P	Pb	19 02 25.6	-2.4
TKB	Tkibuli	2.65	26	P	Pb	19 02 26.9	-2.5
TKB				S	Sg	19 03 07.6	+1.0
ONI	Oni	3.03	30	P	Pn	19 02 32.1	+2.2
ONI				S	Sb	19 03 13.6	+0.7
SHTL	Shatili	3.88	45	P	Pn	19 02 45.4	+3.6

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*IDC **02** 19:04:08.0±0.7,61°.30N×27°.65W,h0^{km},mb3.9/19, mbtmp3.9/23,ML3.5/4,MS3.8/3,Error ellipse: s-maj=21.8km s-min=12.0km az=16.0*
*REY **02** 19:04:08.7,61°.03N×26°.00W,h10^{km}*
*NEIC **02** 19:04:10.8±2.1,61°.47N±0°.10×27°.43W±0°.10,h14^{km}±4^{km}, mb4.4/60,Error ellipse: s-maj=14.3km s-min=6.5km az=185.0*
ISC 02 19:04:10.0±0.5,**61°.43N**±0°.07×**27°.28W**±0°.05,**h10**^{km}**,n133,** σ**1^{s}63**/143,**mb4.3**/47,**Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRNE	Reykjanes	3.19	39	P	Pn	19 04 59.1	-1.0
	baz=27						
IGRV	Grindav??k	3.30	40	P	Pn	19 05 00.4	-1.2
	baz=29						
IGRV				S	Sn	19 05 41.2	+0.4
	baz=29						
INYL	Nylenda	3.30	37	P	Pn	19 05 01.4	-0.2
	baz=26						
INYL				S	Sn	19 05 42.2	+1.4
	baz=26						
IKRI	Krysuvik	3.43	42	P	Pn	19 05 01.8	-1.7
	baz=31						
IKRI				S	Sn	19 05 44.0	-0.1
	baz=31						
IVOS	Vogsosar	3.54	44	P	Pn	19 05 03.0	-1.9
	baz=33						
IVOS				S	Sn	19 05 45.1	-1.6
	baz=33						
IKAS	Kald??rsel	3.60	41	P	Pn	19 05 04.5	-1.3
	baz=31						
IKAS				S	Sn	19 05 48.9	+0.5
	baz=31						
ISAN	Sandskeio	3.72	42	P	Pn	19 05 05.9	-1.4
	baz=32						
ISAN				S	Sn	19 05 50.6	-0.6
	baz=32						
IBJA	Bjarnastaoir	3.73	45	P	Pn	19 05 05.5	-2.1
	baz=35						
IBJA				S	Sn	19 05 49.9	-1.7
	baz=35						
IEDA	Engidalur	3.79	43	P	Pn	19 05 06.8	-1.6
	baz=33						
IEDA				S	Sn	19 05 52.2	-0.9
	baz=33						
ISOL	Solvholt	3.85	47	P	Pn	19 05 06.6	-2.5
	baz=37						
ISOL				S	Sn	19 05 52.3	-2.0
	baz=37						
IKRO	Krokur	3.89	44	P	Pn	19 05 07.9	-1.8
	baz=34						
IKRO				S	Sn	19 05 55.0	-0.5
	baz=34						
IASM	Asmuli	3.91	49	P	Pn	19 05 07.2	-2.7
	baz=39						
IASM				S	Sn	19 05 52.8	-3.0
	baz=39						
IHEI	Heioarbar	3.92	42	P	Pn	19 05 08.7	-1.5
	baz=33						
ISAU	Saurbar	4.07	48	P	Pn	19 05 09.7	-2.5
	baz=39						
ISAU				S	Sn	19 05 58.2	-1.6
	baz=39						
IESK	Eystri-Skogar	4.20	57	P	Pn	19 05 10.4	-3.5
	baz=48						
IHAU	Haukadalur	4.22	50	P	Pn	19 05 11.5	-2.8
	baz=41						
IHAU				S	Sn	19 06 00.1	-3.4
	baz=41						
BORG	Borgarnes	4.29	36	Pn	Pn	19 05 15.6	+0.4
	22nm,0.3s,baz=254,slow=5.8,SNR=163						
BORG				Sn	Sn	19 06 04.7	-0.5
	baz=254,slow=5.4						
BORG				LR	LR	19 06 34.1	
	comp=Z,617nm,18.2s,baz=236,slow=32						
	193nm,0.6s						
BORG	Borgarnes	4.29	36		Pn	19 05 15.4	+0.2
IALF	Alftagrof	4.29	58	P	Pn	19 05 11.6	-3.5
	baz=49						
IASB	`sbjarnarst	4.29	36	P	Pn	19 05 15.7	+0.6
	baz=28						
IGOD	Go??abunga	4.31	55	P	Pn	19 05 12.2	-3.4
	baz=47						
IGYG	Gygjarholskot	4.32	45	P	Pn	19 05 14.1	-1.5
	baz=37						
IGFL	Graenufjoll	4.33	57	P	Pn	19 05 12.3	-3.6
	baz=49						
IHES	Hestalda	4.41	50	P	Pn	19 05 14.9	-2.0
	baz=42						
ISLY	Slysaalda	4.47	54	P	Pn	19 05 14.6	-3.0
	baz=46						
ANGG	Ammassalik, Gr	6.25	317	Pn	Pn	19 05 39.9	-2.1
ICESG	Greenland Ices	9.25	331	*e*P	Pn	19 06 25.0	+1.5
ICESG				IAmb	IAmb	19 06 27.7	
	comp=Z,65nm,0.9s						
SCO	Scoresbysund	9.34	11	Pn	Pn	19 06 22.8	-1.6
SCO	Scoresbysund	9.34	11	*e*P	Pn	19 06 34.3	+10
DY2G	Dye2	9.74	309	*e*P	Pn	19 06 33.7	+3.6
SFJD	Kangerlussuaq	11.54	309	Pn	Pn	19 06 53.0	-1.5
	comp=Z,0.4nm,0.3s,baz=141,slow=16,SNR=2.1						
SFJD				LR	LR	19 10 43.6	
	comp=Z,766nm,18.9s,baz=116,slow=34						
	comp=Z,5.0nm,0.7s						
SFJD	Kangerlussuaq	11.54	309		Pn	19 06 52.7	-1.8
SUMG	Summit	11.98	344	*i* P	Pn	19 07 01.5	+0.7
ILULI	Ilulissat	12.56	318	Pn	Pn	19 07 05.3	-3.1
ILULI	Ilulissat	12.56	318	*e*P	Pn	19 07 07.0	-1.4
DSB	Dublin	13.89	117	Pn	Pn	19 07 25.5	-1.2
ESK	Eskdalemuir	13.98	105	Pn	Pn	19 07 28.7	+0.9
EKA	Eskdalemuir Ar	13.99	105	Pn	Pn	19 07 28.4	+0.4
	baz=308,slow=11						
EKA				LR	LR	19 11 51.8	
	comp=Z,390nm,20.2s,baz=344,slow=33						
	comp=Z,3.1nm,0.8s						
NUUG	Nuugaatsiaq	14.32	326	*e*P	Pn	19 07 30.4	-2.0
NEEM	North Greenlan	17.85	343	*e*P	P	19 08 20.1	+1.1
NOA	NORSAR Array B	18.35	74	P	P	19 08 24.6	+0.3
	baz=286,slow=11,SNR=5.8						
	comp=Z,1.4nm,0.8s						
NOR	Nord	20.47	4	*e*P	Pn	19 08 51.4	+2.0
NOR				IAmb	IAmb	19 08 57.9	
	comp=Z,16nm,1.8s						
TULEG	Thule	20.48	334	Pn	Pn	19 08 49.9	+0.3
TULEG	Thule	20.48	334	*e*P	Pn	19 08 48.8	-0.8
TULEG				IAmb	IAmb	19 08 57.5	
	comp=Z,9.3nm,1.1s						
CLF	Chambon-Foret	21.46	115	P	P	19 08 58.6	+0.5
ECH	Echery	23.50	108	P	P	19 09 20.6	+1.0
ECH				IAmb	IAmb	19 09 30.1	
	comp=Z,19nm,1.2s						
CLL	Collm	24.10	96	*e*P	P	19 09 27.0	+1.6
	comp=Z,18nm,1.5s						
CLL				*e*x	x	19 09 44.0	
SSB	Saint Sauveur	24.58	117	P	P	19 09 33.5	+3.6
FINES	FINESS Array B	24.92	66	P	P	19 09 35.2	+2.5
	comp=Z,2.3nm,0.8s,baz=323,slow=7.9,SNR=4.9						
	comp=Z,2.3nm,0.8s						
SENIN	Lac Senin/Sane	24.95	111	P	P	19 09 35.6	+2.2
PRU	Pruhonice	25.71	97	*e*P	P	19 09 39.8	-0.2
DAVOX	Davos/Dischmat	25.80	108	P	P	19 09 41.9	+0.8
	comp=Z,2.3nm,0.7s,baz=318,slow=20,SNR=4.3						
	comp=Z,2.3nm,0.7s						
KHC	Kasperske Hory	25.84	100	P	P	19 09 44.5	+3.3
KHC				IAmb	IAmb	19 09 47.7	
	comp=Z,10nm,1.4s						
KHC	Kasperske Hory	25.84	100	*e*P	P	19 09 45.1	+3.8
ESDC	Sonseca Array	26.06	136	P	P	19 09 43.3	-0.1
	comp=Z,2.3nm,1.0s,baz=141,slow=50,SNR=5.3						
	comp=Z,2.3nm,1.0s						
ESDC	Sonseca Array	26.06	136	P	P	19 09 42.5	-0.9
GEC2	GERESS Array S	26.10	100	P	P	19 09 44.3	+0.7
GERES	GERESS Array B	26.10	100	P	P	19 09 44.6	+0.9
	comp=Z,0.5nm,0.6s,baz=330,slow=16,SNR=4.5						
	comp=Z,0.5nm,0.6s						
GERES	GERESS Array B	26.10	100	P	P	19 09 45.0	+1.4
DPC	Dobruska-Polom	26.32	95	*e*P	P	19 09 46.4	+0.8
CKRC	Cesky Krumlov	26.40	99	*e*P	P	19 09 49.3	+3.0
CIMO	Cimolais	27.33	105	P	P	19 09 56.7	+1.9
CIMO				IAmb	IAmb	19 10 00.2	
	comp=Z,3.8nm,0.8s						
CLUD	Cludinico	27.43	105	P	P	19 09 53.8	-1.8
STAL	STALIGIAL	27.50	105	P	P	19 09 55.8	-0.4
STAL				IAmb	IAmb	19 10 05.8	
	comp=Z,12nm,1.1s						
AKASG	Malin Array Be	32.28	83	P	P	19 10 39.1	+0.7
	comp=Z,2.8nm,0.7s,baz=313,slow=8.6,SNR=14						
	comp=Z,2.8nm,0.7s						
AKBB	Malin Array Si	32.28	83	P	P	19 10 38.9	+0.5
AKBB				IAmb	IAmb	19 11 21.3	
	comp=Z,11nm,1.4s						
BUR08	Bucovina Ar. S	32.44	91	P	P	19 10 39.8	-0.1
BUR08				IAmb	IAmb	19 10 45.6	
	comp=Z,4.6nm,1.1s						
BURAR	Bucovina Array	32.46	91	P	P	19 10 39.9	-0.4
PDG	Podgorica	33.46	103	P	P	19 10 49.1	+0.3
KBN	Korca	35.59	103	P	P	19 11 06.8	-0.5
RDO	Rodhopi	37.42	98	P	P	19 11 25.5	+2.6
RDO				IAmb	IAmb	19 11 27.3	
	comp=Z,7.5nm,1.1s						
AGG	Agios Georgios	37.58	103	P	P	19 11 25.0	+0.7
YKA	Yellowknife Ar	38.09	311	P	P	19 11 27.6	-0.7
	comp=Z,1.3nm,0.7s,baz=51,slow=8.9,SNR=20						
	comp=Z,1.3nm,0.7s						
ULM	Lac du Bonnet	38.28	285	P	P	19 11 28.5	-1.6
	comp=Z,3.3nm,0.8s,baz=63,slow=7.7,SNR=5.3						
	comp=Z,3.3nm,0.8s						
ULM	Lac du Bonnet	38.28	285	P	P	19 11 30.0	-0.1
ULM				IAmb	IAmb	19 11 31.7	
	comp=Z,9.4nm,1.1s						
AGMN	Agassiz Nation	39.65	283	P	P	19 11 40.8	-0.8
AGMN				IAmb	IAmb	19 11 43.2	
	comp=Z,5.2nm,0.8s						
D32A	Dogwood Acres,	41.03	283	P	P	19 11 52.5	-0.5
P48A	Milroy	41.28	265	P	P	19 11 53.0	-2.1
P48A				IAmb	IAmb	19 11 58.1	
	comp=Z,6.5nm,0.8s						
BR131	Keskin Array S	42.40	92	P	P	19 12 04.2	-0.3
BRTR	Keskin Array B	42.40	92	P	P	19 12 06.9	+2.4
	comp=Z,1.9nm,0.8s,baz=336,slow=5.6,SNR=8.7						
	comp=Z,1.9nm,0.8s						
BRTR	Keskin Array B	42.40	92	P	P	19 12 05.2	+0.8
KBZ	Khabaz	43.76	80	P	P	19 12 18.0	+2.8
	comp=Z,6.6nm,1.2s,baz=311,slow=8.2,SNR=3.8						
	comp=Z,6.6nm,1.2s						
TAM	Tamanrasset	44.71	135	P	P	19 12 23.7	+0.4
TAM				IAmb	IAmb	19 12 28.1	
	comp=Z,4.6nm,1.2s						
CCM	Cathedral Cave	45.19	269	P	P	19 12 26.4	-0.3
CCM				IAmb	IAmb	19 12 27.7	
	comp=Z,4.4nm,0.7s						
AKH	Akhalkalaki	45.82	82	P	P	19 12 35.0	+3.1
TIXI	Tiksi	46.17	10	P	P	19 12 34.2	+0.2
ILAR	Eielson Array	46.33	329	P	P	19 12 35.4	0.0
	comp=Z,0.4nm,0.7s,baz=24,slow=4.5,SNR=4.7						
ILAR				PcP	PcP	19 14 10.3	0.0
	comp=Z,0.4nm,0.7s,baz=354,slow=2.6,SNR=3.4						
	comp=Z,0.4nm,0.7s						
S39A	Bolivar	46.47	271		P	19 12 36.9	0.0
S39A				IAmb	IAmb	19 12 38.6	
	comp=Z,6.3nm,0.9s						
ABKAR	Akbulak array	47.33	63	P	P	19 12 43.1	-0.3
HRY	Holter Researc	48.11	293	P	P	19 12 48.8	-0.8
BVAR	Borovoye Array	48.69	53	P	P	19 12 54.9	+1.0
	comp=Z,0.6nm,0.6s,baz=343,slow=4.5,SNR=2.2						
	comp=Z,0.6nm,0.6s						
BOZ	Bozeman (W)	48.88	292	P	P	19 12 55.5	-0.2
BOZ				IAmb	IAmb	19 12 59.9	
	comp=Z,8.6nm,1.5s						
MOOW	Moose Ponds	49.92	290	P	P	19 13 03.7	0.0
N23A	Red Feather La	49.95	284	P	P	19 13 03.4	-0.6
C09A	Chrisman Ranch	50.06	298	P	P	19 13 04.5	0.0
C09A				IAmb	IAmb	19 13 06.1	
	comp=Z,2.9nm,0.8s						
B08A	Colville Reser	50.07	300	P	P	19 13 03.8	-0.7
B08A				IAmb	IAmb	19 13 14.7	
	comp=Z,4.0nm,1.1s						
PD31	Pinedale Array	50.15	288	P	P	19 13 04.3	-1.1
PD31				IAmb	IAmb	19 13 06.3	
	comp=Z,2.9nm,0.8s						
PDAR	Pinedale Array	50.15	288	P	P	19 13 04.2	-1.3
	comp=Z,2.2nm,0.7s,baz=60,slow=6.8,SNR=22						
	comp=Z,2.2nm,0.7s						
PDAR	Pinedale Array	50.15	288	P	P	19 13 04.0	-1.4
BW06	Boulder Array	50.15	288	P	P	19 13 04.2	-1.3
BW06				IAmb	IAmb	19 13 06.3	
	comp=Z,3.3nm,0.8s						
REDW	Red Top Meadow	50.27	290	P	P	19 13 05.5	-0.8
REDW				IAmb	IAmb	19 13 42.5	
	comp=Z,6.2nm,1.5s						
PLID	Pearl Lake	51.21	295	P	P	19 13 13.3	-0.1
PLID				IAmb	IAmb	19 13 15.2	
	comp=Z,2.7nm,0.8s						
HLID	Hailey	51.71	292	P	P	19 13 17.2	+0.1
RDMU	Red Mountain	51.89	286	P	P	19 13 17.5	-1.1
BMO	Blue Mountains	51.96	295	P	P	19 13 17.7	-1.2
BMO				IAmb	IAmb	19 13 19.2	
	comp=Z,2.6nm,0.8s						
T25A	Trinidad	52.22	280	P	P	19 13 19.7	-1.3
TORD	Torodi Ar. Bea	52.57	144	P	P	19 13 22.4	-1.0
	comp=Z,2.4nm,0.8s,baz=339,slow=7.8,SNR=12						
	comp=Z,2.4nm,0.8s						
TORD	Torodi Ar. Bea	52.57	144	P	P	19 13 22.6	-0.9
TORD				IAmb	IAmb	19 13 25.7	
	comp=Z,6.0nm,1.4s						
ZALV	Zalesovo Beam	53.10	43	P	P	19 13 28.4	+1.4
	comp=Z,0.3nm,0.4s,baz=334,slow=8.6,SNR=2.0						
	comp=Z,0.3nm,0.4s						
PV13	Radium Mtn., P	53.47	284	P	P	19 13 30.5	+0.2
PV13				IAmb	IAmb	19 13 38.6	
	comp=Z,5.0nm,1.1s						
SRU	San Rafael Swe	53.49	286	P	P	19 13 30.2	-0.2
SRU				IAmb	IAmb	19 14 08.1	
	comp=Z,6.3nm,1.5s						
KURK	Kurchatov	53.62	49	P	P	19 13 31.6	+0.8
KURK				IAmb	IAmb	19 14 00.1	
	comp=Z,4.2nm,1.2s						
KURBB	Kurchatov Arra	53.66	50	P	P	19 13 32.3	+1.1
	comp=Z,1.0nm,0.7s,baz=323,slow=6.9,SNR=2.6						
	comp=Z,1.0nm,0.7s						
PV05	Paradox Valley	53.66	284	P	P	19 13 29.4	-2.3
PV05				IAmb	IAmb	19 13 32.1	
	comp=Z,4.3nm,0.9s						
ELK	Elko	54.33	291	P	P	19 13 36.8	+0.2
MVU	Marysvale	54.76	287	P	P	19 13 37.1	-2.6
SPR3	Spring Creek 3	55.33	289	P	P	19 13 44.2	+0.3
SPR3				IAmb	IAmb	19 13 57.4	
	comp=Z,5.9nm,1.4s						
MOD	Modoc Plateau	55.63	295	P	P	19 13 44.3	-1.5
MOD				IAmb	IAmb	19 13 56.4	
	comp=Z,2.7nm,0.8s						
R11A	Troy Canyon, C	56.43	289	P	P	19 13 49.8	-1.8
KVN	Kaiserville	56.99	292	P	P	19 13 54.7	-0.9
NVAR	Mina Array Bea	57.59	292	P	P	19 13 58.0	-1.8
	comp=Z,0.6nm,0.5s,baz=42,slow=6.2,SNR=4.6						
	comp=Z,0.6nm,0.5s						
NVAR	Mina Array Bea	57.59	292	P	P	19 13 59.2	-0.7
TPNV	Topopah Spring	57.88	289	P	P	19 14 01.2	-0.6
TPNV				IAmb	IAmb	19 14 03.6	
	comp=Z,2.5nm,0.8s						
MK31	Makanchi Array	58.23	50	P	P	19 14 05.1	+1.1
MKAR	Makanchi Array	58.23	50	P	P	19 14 05.3	+1.3
	comp=Z,0.9nm,0.6s,baz=335,slow=6.1,SNR=14						
	comp=Z,0.9nm,0.6s						
MKAR	Makanchi Array	58.23	50	P	P	19 14 03.7	-0.3
GWY	Greenwater Val	58.70	289	P	P	19 14 08.0	+0.4
GSC	Goldstone, Bar	59.49	288	P	P	19 14 13.9	+0.9
GSC				IAmb	IAmb	19 14 21.0	
	comp=Z,3.3nm,0.8s						
GAR	Garm	59.99	63	P	P	19 14 17.9	+1.4
KSH	Kashi	61.93	59	P	P	19 14 35.2	+5.6
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SONM	Songino Array	64.89	33	P	P	19 14 50.0	+0.9
	comp=Z,0.6nm,0.6s,baz=326,slow=6.8,SNR=8.5						
	comp=Z,0.6nm,0.6s						
SONM	Songino Array	64.89	33	P	P	19 14 50.3	+1.2
CMAR	Chiang Mai Arr	89.64	50	P	P	19 17 06.7	-1.2
	comp=Z,0.3nm,0.6s,baz=95,slow=9.3,SNR=4.6						
	comp=Z,0.3nm,0.6s						

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*IDC **02** 19:10:55.1±3.4,43°.35S×75°.14W,h0^{km},mb4.1/3, mbtmp4.0/4,ML4.0/1,MS3.2/1,Error ellipse: s-maj=106.8km s-min=36.5km az=121.0*
*GUC **02** 19:11:02.9±0.7,43°.37S×74°.42W,h27^{km}±4^{km},ML4.4*
*NEIC **02** 19:11:06.5±2.1,43°.23S±0°.03×74°.1W±0°.1,h28^{km}±8^{km}, mb4.1/3,Mwr4.5(GUC),Error ellipse: s-maj=12.7km s-min=3.9km az=94.0*
ISC 02 19:11:05.1±1.6,**43°.26S**±0°.04×**74°.19W**±0°.07,**h32**^{km}±10^{km}, **n39,**σ**1^{s}34**/47,**mb4.0**/5,**Southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO07	Milladeo Hill,	0.41	69		Pb	19 11 13.8	-0.5
GO07	Milladeo Hill,	0.41	69	*e*P	Pb	19 11 13.8	-0.5
GO07				*i* S	Sn	19 11 22.1	+0.6
GO07				IAML		19 11 26.1	
	comp=N,30µm,0.2s						
LL07	Hotel Espejo d	0.68	51		Pb	19 11 18.4	-0.1
LL07	Hotel Espejo d	0.68	51	*e*P	Pb	19 11 18.4	-0.1
LL07				*i* S	Sn	19 11 29.7	+1.8
LL07				IAML		19 11 30.7	
	comp=N,36µm,0.3s						
LL06	Loncomilla	1.13	22		Pn	19 11 24.5	-0.2
LL06				Sn	Sb	19 11 40.0	-0.4
LL06	Loncomilla	1.13	22	*e*P	Pn	19 11 24.4	-0.2
LL06				*i* S	Sn	19 11 41.4	+2.3
LL06				IAML		19 11 43.4	
	comp=N,9µm,0.5s						
LL01	San Ignacio de	1.58	57		Pn	19 11 31.2	+0.3
LL01	San Ignacio de	1.58	57	*e*P	Pn	19 11 31.3	+0.3
LL01				*i* S	Sb	19 11 53.3	0.0
AY01	Puyuhuapi	1.61	137		Pn	19 11 30.4	-0.9
AY01	Puyuhuapi	1.61	137	*e*P	Pn	19 11 30.5	-0.9
AY01				*i* S	Sn	19 11 51.3	+0.3
AY01				IAML		19 11 58.9	
	comp=N,4µm,0.4s						
LL02	Futaleuf	1.71	88		Pn	19 11 33.6	+0.8
LL02	Futaleuf	1.71	88	*e*P	Pn	19 11 33.6	+0.8
LL02				*i* S	Sb	19 11 57.7	+0.5
LL05	Los Muermos	1.93	16		Pb	19 11 37.5	-2.1
LL05	Los Muermos	1.93	16	*e*P	Pn	19 11 36.9	+1.2
LL05				*i* S	Sb	19 12 02.7	-0.7
LL03	Petrohue	2.50	33		Pn	19 11 44.6	+1.0
LL03	Petrohue	2.50	33	*e*P	Pn	19 11 44.6	+1.0
LL03				*i* S	Sn	19 12 16.7	+3.7
LL03				IAML		19 12 22.2	
	comp=N,2µm,0.3s						
LL04	Puerto Octay	2.70	30		Pn	19 11 46.6	+0.3
LL04	Puerto Octay	2.70	30	*e*P	Pn	19 11 46.6	+0.3
LL04				*i* S	Sn	19 12 19.0	+1.1
LL04				IAML		19 12 22.8	
	comp=N,1µm,0.3s						
COYC	Coyhaique	2.76	148		Pn	19 11 46.8	-0.4
AY02	Valle Explorad	3.30	168		Pn	19 11 56.6	+2.1
LR04	Corral	3.43	10		Pn	19 11 58.4	+2.1
PLCA	Paso Flores	3.71	48	Pn	Pn	19 12 02.0	+1.8
	comp=N,1.9nm,0.3s,baz=232,slow=12,SNR=22						
PLCA				Sn	Sb	19 12 55.5	+1.1
	comp=N,4.1nm,0.3s,baz=135,slow=22,SNR=1.4						
PLCA				LR	LR	19 13 43.2	
	comp=N,299nm,19.9s,baz=276,slow=39						
	comp=N,7.3nm,0.6s						
PLCA	Paso Flores	3.71	48		Pn	19 12 01.6	+1.3
LR03	Panguipulli	3.88	22		Pn	19 12 03.9	+1.2
GO06	Curarrehue	4.21	30		Pn	19 12 08.3	+1.2
GO08	Villa O’Higgin	5.33	168	Pn	Pn	19 12 23.0	+0.5
GO05	Huala	8.43	13	Pn	Pn	19 13 04.6	-0.4
BO02	Sierra Bellavi	8.86	19	Pn	Pn	19 13 12.0	+0.9
BO01	Tunca	9.18	16	Pn	Pn	19 13 13.6	-1.7
H03S1	Juan Fernandez	10.10	337	T	T	19 23 28.8	
	baz=159,slow=74,SNR=16						
H03S2	Juan Fernandez	10.11	337	T	T	19 23 26.2	
	baz=159,slow=74,SNR=11						
H03S3	Juan Fernandez	10.12	337	T	T	19 23 27.8	
	baz=159,slow=74,SNR=15						
CPUP	Villa Florida	21.77	45	P	P	19 15 53.2	-0.9
	comp=N,2.2nm,0.3s,baz=235,slow=8.8,SNR=7.0						
	comp=N,2.2nm,0.3s						
CPUP	Villa Florida	21.77	45	P	P	19 15 53.5	-0.7
CPUP				IAmb	IAmb	19 16 02.5	
	comp=Z,4.3nm,0.7s						
MNMC	Minye Minye	24.37	11	P	P	19 16 22.1	+1.5
MNMC				IAmb	IAmb	19 17 04.7	
	comp=Z,4.4nm,0.9s						
QSPA	South Pole Qui	46.99	180	P	P	19 19 35.2	+2.2
QSPA				IAmb	IAmb	19 20 06.9	
	comp=Z,7.9nm,1.4s						
BOSA	Boshof	77.30	117	P	P	19 22 54.5	-2.2
	comp=Z,2.0nm,0.7s,baz=239,slow=5.9,SNR=5.6						
	comp=Z,2.0nm,0.7s						
TORD	Torodi Ar. Bea	88.90	71	P	P	19 23 54.3	-2.1
	comp=Z,0.7nm,0.8s,baz=227,slow=5.7,SNR=1.5						
	comp=Z,0.7nm,0.8s						
MKAR	Makanchi Array	163.02	70	PKPab	PKPab	19 31 52.5	-1.0
	comp=Z,0.7nm,0.8s,baz=270,slow=4.2,SNR=6.7						

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*DDA **02** 19:11:16.3±0.0,37°.72N×38°.39E,h7^{km}±3^{km},ML2.4*
*ISK **02** 19:11:16.8,37°.50N×38°.50E,h22^{km},ML2.7/9*
ISC 02 19:11:16.3±0.9,**37°.56N**±0°.05×**38°.45E**±0°.04,**h14**^{km}±8^{km}, **n10,**σ**0^{s}59**/16,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	Bozova	0.15	235	P	Pg	19 11 19.7	-0.5
ATAB				S	Sg	19 11 22.9	+0.1
URFA	Urfa	0.32	112	Pg	Pb	19 11 23.9	+0.1
URFA				Sg	Sg	19 11 28.1	+0.8
GAZ	Gaziantep	1.06	249	Pg	Pg	19 11 37.0	+0.2
GAZ				Sg	Sn	19 11 51.7	+0.3
DARE	Darende-Malaty	1.27	323	Pn	Pg	19 11 40.6	-0.1
DARE				Sn	Sg	19 11 58.3	+1.1
DYBB	Diyarbakir	1.40	73	Pn	Pn	19 11 41.4	0.0
DYBB				Sn	Sn	19 11 59.2	-0.4
ARPR	Arapgir-MALATY	1.54	357	Pn	Pb	19 11 44.3	-0.3
MAZI	Mazidag	1.59	93	Pn	Pn	19 11 44.0	-0.1
MAZI				Sn	Sn	19 12 03.5	-1.0
SARI	SarD1z-Kayseri	1.82	298	Pn	Pb	19 11 48.8	-0.6
SVAN	Silvan-Diyarba	2.25	74	Pn	Pn	19 11 53.7	+0.5
BNGB	Bingl	2.26	50	Pn	Pn	19 11 53.6	+0.2

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*IDC **02** 19:13:13.7±0.4,61°.30N×27°.53W,h0^{km},mb4.5/33, mbtmp4.5/39,ML3.4/5,MS4.2/83,Error ellipse: s-maj=13.0km s-min=8.6km az=17.0*
*BJI **02** 19:13:13.0±0.0,61°.40N×27°.40W,h10^{km},mb4.8/51, mB5.2/20,Ms4.8/15,Ms7 4.5/16*
*MOS **02** 19:13:13.6±1.0,61°.31N×27°.48W,h10^{km},mb4.9/66, MS4.2/19,Error ellipse: s-maj=5.9km s-min=5.5km az=108.0*
*GCMT **02** 19:13:14.7±0.2,61°.25N±0°.01×27°.50W±0°.02,h17^{km}, MW5.0/115,Moment Tensor Solution. s29,c33; s115,c192; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.37±.17; $M_{\theta\theta}$-0.46±.12; $M_{\phi\phi}$2.82±.13; $M_{r\theta}$-0.72±.29; $M_{\theta\phi}$3.36±.08; $M_{\phi r}$-0.23±.27; Best double couple: $M_0$3.97000×10^{16} NP1:ϕ_s68.00000°,δ66.00000°, λ-34.00000°. NP2:ϕ_s174.00000°,δ59.00000°, λ-152.00000°. Principal axes: T 4.9650, Plg5.0000°, Azm122.0000°; N -1.9980, Plg49.0000°, Azm217.0000°; P -2.9740, Plg41.0000°, Azm28.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*REY **02** 19:13:15.1,60°.99N×25°.77W,h10^{km}*

NEIC ***02*** *19:13:15.7±1.6, 61°.35N±0°.08×27°.4W±0°.1, h10km±1km, mb5.0/431, Error ellipse: s-maj=13.7km s-min=10.6km az=177.0*

BGR ***02*** *19:13:20.2, 61°.71N×27°.04W, h33km, mb4.9, Ms4.2*

DNK ***02*** *19:13:25.5±5.9, 62°.21N×28°.63W, h0km±228km, ML3.8, Ms4.7*

ISC 02 19:13:15.9±0.5**, 61°.30N**±0°.04×**27°.41W**±0°.03**, h14**km±3km**, h13**km**:pP-P, n1161, σ1s.33**/1141**, mb4.9**/354**, MS4.3**/105**, 46C-20D, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRNE	**Reykjanes**	**3.33**	**39**	P	**Pn**	**19 14 05.4**	**-2.2**
	baz=25						
IGRV	**Grindav??k**	**3.44**	**40**	P	**Pn**	**19 14 06.3**	**-2.7**
	baz=27						
IGRV				S	**Sn**	**19 14 46.5**	**-3.0**
	baz=27						
INYL	**Nylenda**	**3.44**	**37**	P	**Pn**	**19 14 07.1**	**-1.9**
	baz=24						
INYL				S	**Sn**	**19 14 47.7**	**-1.9**
	baz=24						
IKRI	**Krysuvik**	**3.57**	**41**	P	**Pn**	**19 14 08.5**	**-2.4**
	baz=29						
IKRI				S	**Sn**	**19 14 49.6**	**-3.3**
	baz=29						
IVOS	**Vogsosar**	**3.68**	**43**	P	**Pn**	**19 14 09.1**	**-3.3**
	baz=32						
IVOS				S	**Sn**	**19 14 50.9**	**-4.5**
	baz=32						
IKAS	**Kald??rsel**	**3.74**	**41**	P	**Pn**	**19 14 10.0**	**-3.2**
	baz=29						
ISAN	**Sandskeio**	**3.86**	**42**	P	**Pn**	**19 14 11.9**	**-2.9**
	baz=30						
IBJA	**Bjarnastaoir**	**3.87**	**44**	P	**Pn**	**19 14 11.4**	**-3.5**
	baz=33						
IBJA				S	**Sn**	**19 14 56.1**	**-4.1**
	baz=33						
IEDA	**Engidalur**	**3.93**	**42**	P	**Pn**	**19 14 13.5**	**-2.4**
	baz=31						
IEDA				S	**Sn**	**19 14 58.1**	**-3.6**
	baz=31						
ISOL	**Solvholt**	**3.98**	**46**	P	**Pn**	**19 14 12.7**	**-3.8**
	baz=35						
ISOL				S	**Sn**	**19 14 58.3**	**-4.6**
	baz=35						
IKRO	**Krokur**	**4.03**	**43**	P	**Pn**	**19 14 14.8**	**-2.5**
	baz=33						
IKRO				S	**Sn**	**19 15 00.4**	**-3.7**
	baz=33						
IASM	**Asmuli**	**4.04**	**48**	P	**Pn**	**19 14 12.8**	**-4.5**
	baz=38						
IASM				S	**Sn**	**19 14 58.5**	**-5.9**
	baz=38						
IHEI	**Heioarbar**	**4.06**	**42**	P	**Pn**	**19 14 15.4**	**-2.3**
	baz=31						
ISAU	**Saurbar**	**4.21**	**47**	P	**Pn**	**19 14 15.2**	**-4.3**
	baz=37						
ISAU				S	**Sn**	**19 15 03.1**	**-5.4**
	baz=37						
IESK	**Eystri-Skogar**	**4.32**	**55**	P	Pn	19 14 15.8	-5.4
	baz=46						
IESK				S	**Sn**	**19 15 03.9**	**-7.4**
	baz=46						
IHAU	**Haukadalur**	**4.35**	**49**	P	**Pn**	**19 14 17.0**	**-4.6**
	baz=40						
IHAU				S	**Sn**	**19 15 06.2**	**-5.9**
	baz=40						
IALF	**Alftagrof**	**4.41**	**57**	P	Pn	19 14 17.1	-5.3
	baz=48						
IALF				S	**Sn**	**19 15 05.5**	**-8.0**
	baz=48						
BORG	**Borgarnes**	**4.43**	**36**	Pn	**Pn**	**19 14 21.4**	**-1.3**
	680nm,0.7s,baz=268,slow=5.9,SNR=144						
BORG				Sn	**Sn**	**19 15 09.9**	**-4.0**
	15nm,0.3s,baz=359,slow=21,SNR=12						
BORG	**Borgarnes**	**4.43**	**36**		**Pn**	**19 14 21.1**	**-1.6**
IASB	**`sbjarnarst**	**4.43**	**36**	P	**Pn**	**19 14 21.3**	**-1.3**
	baz=26						
IASB				S	**Sn**	**19 15 12.8**	**-1.2**
	baz=26						
IGOD	**Go??abunga**	**4.43**	**54**	P	Pn	19 14 17.6	-5.3
	baz=46						
IMJO	**Mjoaskard**	**4.44**	**50**	P	**Pn**	**19 14 19.0**	**-3.9**
	baz=41						
IGYG	**Gygjarholskot**	**4.45**	**45**	P	**Pn**	**19 14 19.6**	**-3.4**
	baz=35						
IGFL	**Graenufjoll**	**4.46**	**56**	P	Pn	19 14 17.8	-5.3
	baz=48						
IFED	**Fedgar**	**4.49**	**49**	P	**Pn**	**19 14 19.3**	**-4.2**
	baz=40						
IENT	**Enta**	**4.51**	**54**	P	Pn	19 14 18.7	-5.2
	baz=46						
IAUS	**Austmannsbunga**	**4.54**	**55**	P	Pn	19 14 18.8	-5.4
	baz=46						
IHES	**Hestalda**	**4.55**	**49**	P	**Pn**	**19 14 20.6**	**-3.7**
	baz=40						
IIEY	**Innrieyrar**	**5.11**	**53**	P	**Pn**	**19 14 28.0**	**-4.1**
	baz=45						
ANGG	**Ammassalik, Gr**	**6.30**	**318**		**Pn**	**19 14 47.0**	**-1.2**
ANGG	**Ammassalik, Gr**	**6.30**	**318**	*i* P	**Pn**	**19 14 48.7**	**+0.4**
ISOG	**Isortoq, Green**	**6.71**	**314**	*i* P	**Pn**	**19 14 51.5**	**-2.4**
NRS	**Narsarsuaq**	**8.69**	**277**		**Pn**	**19 15 19.8**	**-1.2**
NRS	**Narsarsuaq**	**8.69**	**277**	P	**Pn**	**19 15 19.8**	**-1.2**
ICESG	**Greenland Ices**	**9.33**	**332**	*i* P	**Pn**	**19 15 27.5**	**-2.7**
ICESG				IAML		19 15 43.8	
	comp=Z,51nm,0.7s						
SCO	**Scoresbysund**	**9.48**	**11**		**Pn**	**19 15 29.1**	**-2.8**
SCO	**Scoresbysund**	**9.48**	**11**	P	**Pn**	**19 15 36.0**	**+4.1**
SCO	**Scoresbysund**	**9.48**	**11**	*i* P	**Pn**	**19 15 33.5**	**+1.7**
SCO				IAML		19 15 49.4	
	comp=Z,13nm,0.7s						
DY2G	**Dye2**	**9.77**	**310**	*i* P	**Pn**	**19 15 37.5**	**+1.5**
IVI	**Ivigtut**	**9.99**	**279**	Pn	**Pn**	**19 15 39.0**	**+0.1**
IVI	**Ivigtut**	**9.99**	**279**	*i* P	**Pn**	**19 15 39.5**	**+0.6**
IVI				IVMs_BB	IVMs_BB	19 21 09.8	
	comp=Z,4µm,6.0s						
SFJD	**Kangerlussuaq**	**11.57**	**309**	Pn	**Pn**	**19 15 59.6**	**-0.9**
	comp=Z,1.4nm,0.3s,baz=117,slow=8.5,SNR=10						
SFJD				Sn	Sn	19 17 58.3	-11
	comp=Z,0.3nm,0.3s,baz=203,slow=21,SNR=1.4						
SFJD				LR	LR	19 19 49.0	
	comp=Z,5µm,18.5s,baz=106,slow=34						
	comp=Z,14nm,0.6s						
SFJD	**Kangerlussuaq**	**11.57**	**309**	Pn	**Pn**	**19 15 58.5**	**-2.0**
SFJD	**Kangerlussuaq**	**11.57**	**309**	*i* P	**Pn**	**19 15 58.4**	**-2.0**
SUMG	**Summit**	**12.09**	**344**	*i* P	**Pn**	**19 16 06.0**	**-1.8**
SUMG				IAML		19 16 26.9	
	comp=Z,21nm,0.9s						
JMIC	**Jan Mayen**	**12.29**	**30**	LR	LR	19 19 51.2	
	comp=Z,1µm,18.6s,baz=216,slow=32						
ILULI	**Ilulissat**	**12.61**	**319**		**Pn**	**19 16 11.2**	**-3.4**
ILULI	**Ilulissat**	**12.61**	**319**	P	**Pn**	**19 16 11.2**	**-3.4**
ILULI	**Ilulissat**	**12.61**	**319**	*i* P	Pn	19 16 09.4	-5.2
DBG	**Daneborg**	**13.32**	**9**	*i* P	**Pn**	**19 16 25.4**	**+1.0**
DSB	**Dublin**	**13.89**	**116**	Pn	**Pn**	**19 16 31.8**	**-0.4**
ESK	**Eskdalemuir**	**14.01**	**104**	*e*P	**Pn**	**19 16 32.8**	**-1.0**
ESK	**Eskdalemuir**	**14.01**	**104**	Pn	**Pn**	**19 16 34.0**	**+0.2**
ESK	**Eskdalemuir**	**14.01**	**104**	P	**Pn**	**19 16 34.0**	**+0.2**
EKA	**Eskdalemuir Ar**	**14.02**	**104**	Pn	**Pn**	**19 16 33.5**	**-0.5**
	baz=307,slow=11						
EKA				LR	LR	19 21 07.1	
	comp=Z,2µm,18.9s,baz=317,slow=34						
	comp=Z,17nm,0.9s						
NUUG	**Nuugaatsiaq**	**14.39**	**326**	*i* P	Pn	19 16 31.3	-7.6
YLL	**Llanberis**	**14.94**	**113**	*e*P	**Pn**	**19 16 46.9**	**+0.5**
LLW	**Llanuwychllyn**	**15.36**	**113**	*e*P	**Pn**	**19 16 53.9**	**+1.9**
FOEL	**Foel Wylfa**	**15.54**	**112**	*e*P	**Pn**	**19 16 55.1**	**+0.7**
HPK	**Haverah Park**	**15.56**	**107**	*e*P	**P**	**19 16 58.2**	**-0.8**
DAG	**Danmarks Havn**	**15.82**	**7**	P	**Pn**	**19 16 59.4**	**+1.5**
DAG	**Danmarks Havn**	**15.82**	**7**	*i* P	**Pn**	**19 16 58.0**	**+0.1**
UPNV	**Upernavik**	**15.82**	**328**	*i* P	**Pn**	**19 16 53.5**	**-4.5**
LBWR	**Ladybower, Pea**	**15.87**	**108**	*e*P	**Pn**	**19 16 59.8**	**+1.1**
HLM1	**Long Mynd**	**15.93**	**112**	*e*P	**Pn**	**19 17 01.2**	**+1.6**
SBD	**Saint Breward**	**16.56**	**120**	*e*P	**P**	**19 17 10.7**	**+0.6**
STRD	**Stroud**	**16.77**	**113**	*e*P	**P**	**19 17 13.6**	**+1.3**
WOL	**Wolverton**	**17.51**	**113**	*e*P	**P**	**19 17 20.5**	**0.0**
NEEM	**North Greenlan**	**17.95**	**343**	*i* P	**Pn**	**19 17 21.2**	**-3.9**
ELMS	**Elmsett, Ipswi**	**17.97**	**108**	*e*P	**P**	**19 17 25.7**	**+0.1**
KONO	**Kongsberg**	**18.16**	**79**	*ce*P	**Pn**	**19 17 27.4**	**0.0**
KONO				pmax	pmax		
	comp=Z,36nm,1.7s						
NC204	**NORSAR Array S**	**18.17**	**73**	Pn	**Pn**	**19 17 25.5**	**-2.1**
NBO00	**NORSAR Array S**	**18.25**	**74**		**Pn**	**19 17 28.6**	**+0.1**
NBO00				IAmb	IAmb	19 17 33.0	
	comp=Z,159nm,1.8s						
NAO01	**NORSAR Array S**	**18.36**	**74**		**P**	**19 17 28.9**	**-1.0**
NOA	**NORSAR Array B**	**18.45**	**74**	P	**P**	**19 17 30.6**	**-0.3**
	baz=287,slow=12,SNR=9.7						
NOA				LR	LR	19 24 07.7	
	comp=Z,267nm,18.4s,baz=290,slow=35						
	comp=Z,5.8nm,1.0s						
NC303	**NORSAR Array S**	**18.46**	**73**	P	**P**	**19 17 30.1**	**-0.9**
NB201	**NORSAR Array S**	**18.48**	**74**	P	**P**	**19 17 30.8**	**-0.5**
NC405	**NORSAR Array S**	**18.66**	**73**		**P**	**19 17 32.8**	**-0.3**
FRB	**Frobisher Bay**	**18.90**	**295**	P	**P**	**19 17 34.6**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=90,slow=12,SNR=11						
FRB				LR	LR	19 24 06.1	
	comp=Z,2µm,18.1s,baz=85,slow=35						
	comp=Z,8.3nm,1.0s						
HFS	**Hagfors**	**19.91**	**75**	P	**P**	**19 17 46.6**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=285,slow=7.5,SNR=6.4						
HFS				LR	LR	19 25 03.1	
	comp=Z,328nm,19.1s,baz=290,slow=36						
	comp=Z,5.9nm,0.9s						
SNF	**Seneffe**	**20.57**	**107**	*d*P	**P**	**19 17 53.7**	**-0.3**
	comp=Z,65nm,1.0s						
TULEG	**Thule**	**20.57**	**334**	P	**P**	**19 17 53.0**	**-0.8**
TULEG	**Thule**	**20.57**	**334**	*i* P	Pn	19 17 55.0	-1.0
NOR	**Nord**	**20.61**	**4**	*e*P	Pn	19 17 57.0	+0.6
NOR				IAmb	IAmb	19 17 59.4	
	comp=Z,28nm,1.2s						
NOR				IAMs_20	IAMs_20	19 25 15.4	
	comp=Z,248nm,5.3s						
NOR				IVMs_BB	IVMs_BB	19 25 30.8	
	comp=Z,1µm,10.7s						
DRLN	**Deer Lake**	**20.73**	**248**	P	**P**	**19 17 55.6**	**-0.2**
DRLN				IAmb	IAmb	19 18 12.0	
	comp=Z,104nm,1.4s						
BMRD	**Maredsous**	**20.93**	**107**	*d*P	**P**	**19 17 57.1**	**-0.9**
DOU	**Dourbes**	**21.00**	**108**	*d*P	**P**	**19 17 58.4**	**-0.3**
	comp=Z,54nm,0.9s						
IBBN	**Ibbenburen**	**21.01**	**99**	*e*P	**P**	**19 18 02.0**	**+3.3**
	comp=Z,113nm,1.6s,baz=314,slow=9.9						
BGES	**Gesves**	**21.02**	**107**	*d*P	**P**	**19 17 58.6**	**-0.4**
	comp=Z,31nm,1.0s						
HSPB	**Hornsund (broa**	**21.08**	**25**	*e*P	**P**	**19 18 03.0**	**+3.6**
BCLA	**Clavier**	**21.10**	**106**	*d*P	**P**	**19 17 57.5**	**-2.2**
	comp=Z,22nm,1.0s						
RCHB	**Rochefort**	**21.25**	**107**	*d*P	**P**	**19 18 01.5**	**+0.1**
	comp=Z,26nm,1.0s						
MEM	**Membach**	**21.30**	**105**	*d*P	**P**	**19 18 00.7**	**-1.2**
	comp=Z,30nm,1.0s						
KBS	**Kingsbay**	**21.34**	**20**	*ce*P	**P**	**19 18 00.6**	**-1.5**
KBS				pmax	pmax		
	comp=Z,47nm,1.3s						
CLF	**Chambon-Foret**	**21.46**	**115**	P	**P**	**19 18 03.8**	**+0.1**
BHOU	**Houvegnez**	**21.47**	**105**	*d*P	**P**	**19 18 04.5**	**+0.7**
	comp=Z,42nm,1.0s						
RETH	**Rethem/Aller,**	**21.50**	**97**	*e*P	**P**	**19 18 05.2**	**+1.1**
	comp=Z,172nm,1.4s,baz=314,slow=9.9						
MFF	**Saint Martin d**	**21.54**	**121**	*e*P	**P**	**19 18 04.2**	**-0.3**
MFF				pmax	pmax		
	comp=Z,148nm,1.1s						
SCHQ	**Schefferville**	**21.56**	**270**	P	**P**	**19 18 04.9**	**+0.2**
	comp=Z,33nm,1.1s,baz=56,slow=8.5,SNR=11						
	comp=Z,33nm,1.1s						
DEL	**Delary**	**21.59**	**84**	*e*P	**P**	**19 18 05.5**	**+0.5**
SPITS	**Spitsbergen Ar**	**21.75**	**23**	LR	LR	19 24 55.2	
	comp=Z,300nm,18.6s,baz=226,slow=32						
SPITS	**Spitsbergen Ar**	**21.75**	**23**	P	**P**	**19 18 04.9**	**-1.6**
SPITS				pmax	pmax		
	comp=Z,98nm,1.5s						
SPB2	**Spitsbergen Ar**	**21.75**	**23**	P	**P**	**19 18 05.3**	**-1.2**
SPB2				IAmb	IAmb	19 18 12.3	
	comp=Z,104nm,1.6s						
UPP	**Uppsala**	**21.84**	**74**	*e*P	**P**	**19 18 07.3**	**-0.3**
AHRW	**Bad Neuenahr-A**	**21.84**	**104**	*e*P	**P**	**19 18 09.1**	**+1.4**
	comp=Z,225nm,1.8s,baz=314,slow=9.9						
VIKU	**Vikbolandet**	**21.98**	**78**	*e*P	**P**	**19 18 09.3**	**+0.2**
NRDL	**Niedersach Rie**	**22.01**	**97**	*e*P	**P**	**19 18 10.6**	**+1.2**
	comp=Z,80nm,1.2s,baz=314,slow=9.9						
WLF	**Walferdange**	**22.02**	**107**	P	**P**	**19 18 09.2**	**-0.4**
WLF				IAmb	IAmb	19 18 14.9	
	comp=Z,106nm,1.3s						
WLF	**Walferdange**	**22.02**	**107**	P	**P**	**19 18 09.3**	**-0.4**
WLF				pmax	pmax		
	comp=Z,106nm,1.3s						
WLF	**Walferdange**	**22.02**	**107**	*d*P	**P**	**19 18 10.4**	**+0.7**
	comp=Z,30nm,1.3s						
ASSE	**Asse, Remlinge**	**22.51**	**97**	*e*P	**P**	**19 18 16.0**	**+1.2**
	comp=Z,91nm,1.7s,baz=314,slow=9.9						
GTTG	**Gottingen**	**22.55**	**99**	*e*P	**P**	**19 18 16.8**	**+1.5**
	comp=Z,102nm,1.1s,baz=314,slow=9.9						
CLZ	**Clausthal**	**22.55**	**98**	*e*P	**P**	**19 18 16.8**	**+1.4**
	comp=Z,60nm,1.3s,baz=314,slow=9.9						
PGAV	**Gavieira, Arco**	**22.55**	**140**	*e*P	**P**	**19 18 18.9**	**+3.3**
PGAV				A	A	19 18 26.0	
	comp=Z,64nm,1.3s						
PGAV				*e*LR	LR	19 23 56.4	
PGAV				A	A	19 25 02.1	
	comp=Z,448nm,20.0s						
FLTG	**Flechtingen**	**22.66**	**96**	*e*P	**P**	**19 18 16.9**	**+0.5**
	comp=Z,83nm,1.4s,baz=314,slow=9.9						
TNS	**Taunus Mts**	**22.70**	**103**	*e*P	**P**	**19 18 18.4**	**+1.3**
	comp=Z,40nm,1.4s,baz=314,slow=9.9						
SSF	**Saint Saulge**	**22.74**	**115**	*e*P	**P**	**19 18 17.2**	**-0.2**
SSF				pmax	pmax		
	comp=Z,86nm,1.2s						
ARCES	**ARCESS Array B**	**22.75**	**47**	P	**P**	**19 18 17.7**	**+0.4**
	comp=Z,12nm,1.0s,baz=285,slow=9.7,SNR=10						
ARCES				LR	LR	19 25 24.5	
	comp=Z,785nm,19.7s,baz=274,slow=32						
	comp=Z,12nm,1.0s						
ARCES	**ARCESS Array B**	**22.75**	**47**	P	**P**	**19 18 15.1**	**-2.2**
ARCES				IAmb	IAmb	19 18 24.2	
	comp=Z,43nm,1.2s						
ARCES	**ARCESS Array B**	**22.75**	**47**	P	**P**	**19 18 15.1**	**-2.2**
ARCES				pmax	pmax		
	comp=Z,43nm,1.2s						
PBRG	**Braganca**	**23.18**	**138**	*e*P	**P**	**19 18 27.1**	**+5.1**
PBRG				*e*LQ	LQ	19 23 35.4	
PBRG				*e*LR	LR	19 24 17.3	
PBRG				A	A	19 25 56.5	
	comp=Z,708nm,20.0s						
POLO	**Lamas de Olo**	**23.24**	**140**	*e*P	**P**	**19 18 26.3**	**+3.6**
POLO				A	A	19 18 28.3	
	comp=Z,32nm,1.5s						
KEV	**Kevo**	**23.25**	**46**	P	**P**	**19 18 21.6**	**-0.8**
KEV				IAmb	IAmb	19 18 27.9	
	comp=Z,55nm,1.3s						
KEV	**Kevo**	**23.25**	**46**	P	**P**	**19 18 21.6**	**-0.8**
KEV				pmax	pmax		
	comp=Z,55nm,1.2s						
LFF	**La Frestale**	**23.25**	**122**	*e*P	**P**	**19 18 24.8**	**+2.2**
LFF				pmax	pmax		
	comp=Z,33nm,1.1s						
RAF	**Rauma**	**23.28**	**69**	*e*P	**P**	**19 18 22.9**	**+0.2**
PVRL	**Vila Real**	**23.35**	**140**	*e*P	**P**	**19 18 27.5**	**+3.7**
PVRL				A	A	19 18 52.3	
	comp=Z,69nm,1.6s						
ECH	**Echery**	**23.52**	**108**	P	**P**	**19 18 25.9**	**+0.6**
ECH				IAmb	IAmb	19 18 29.3	
	comp=Z,53nm,1.1s						
ECH	**Echery**	**23.52**	**108**	P	**P**	**19 18 25.9**	**+0.6**
ECH				pmax	pmax		
	comp=Z,53nm,1.1s						
NEUB	**Neuenburg**	**23.63**	**97**	*e*P	**P**	**19 18 27.8**	**+1.4**
	comp=Z,63nm,1.3s,baz=314,slow=9.9						
MVO	**Moncorvo**	**23.67**	**139**	*e*P	**P**	**19 18 28.7**	**+1.8**
MVO				A	A	19 18 32.2	
	comp=Z,57nm,1.6s						
MVO				*e*LQ	LQ	19 23 27.7	
MVO				*e*LR	LR	19 24 24.6	
MVO				A	A	19 25 48.4	
	comp=Z,539nm,22.0s						
CAF	**Calviac**	**23.81**	**120**	*e*P	**P**	**19 18 28.6**	**+0.4**
CAF				pmax	pmax		
	comp=Z,56nm,1.0s						
PVIS	**Viseu**	**23.81**	**141**	*e*P	**P**	**19 18 29.8**	**+1.6**
PVIS				A	A	19 18 47.2	
	comp=Z,56nm,1.3s						
MOX	**Moxa**	**23.92**	**99**	P	**P**	**19 18 29.7**	**+0.5**
MOX				pmax	pmax		
	comp=Z,29nm,1.5s						
MOX	**Moxa**	**23.92**	**99**	*e*P	**P**	**19 18 30.6**	**+1.4**
	comp=Z,167nm,2.0s,baz=314,slow=9.9						
MOX				*e*L	L	19 26 59.5	
	comp=Z,528nm,21.9s						
BFO	**Black Forest**	**23.98**	**106**	P	**P**	**19 18 29.2**	**-0.5**
BFO				IAmb	IAmb	19 18 50.4	
	comp=Z,31nm,1.1s						
BFO	**Black Forest**	**23.98**	**106**	P	**P**	**19 18 29.3**	**-0.5**
BFO				pmax	pmax		
	comp=Z,31nm,1.1s						
BFO	**Black Forest**	**23.98**	**106**	*e*P	**P**	**19 18 31.6**	**+1.8**
	comp=Z,41nm,1.3s,baz=314,slow=9.9						
STU	**Stuttgart**	**24.07**	**105**	P	**P**	**19 18 30.2**	**-0.3**
STU	**Stuttgart**	**24.07**	**105**	P	**P**	**19 18 30.2**	**-0.3**
STU				pmax	pmax		
	comp=Z,79nm,1.3s						
STU	**Stuttgart**	**24.07**	**105**	*e*P	**P**	**19 18 32.2**	**+1.7**
	comp=Z,208nm,1.4s,baz=314,slow=9.9						
COI	**Coimbra**	**24.12**	**142**	*e*LR	LR	19 24 27.8	
COI				A	A	19 25 43.6	
	comp=Z,446nm,20.0s						
CLL	**Collm**	**24.15**	**96**	P	**P**	**19 18 30.8**	**-0.5**
CLL	**Collm**	**24.15**	**96**	*i* P	**P**	**19 18 30.9**	**-0.4**
	comp=Z,29nm,1.3s						
CLL				*i* pP	**pP**	**19 18 32.7**	**-2.4**
CLL				*i* sP	**sP**	**19 18 35.5**	**-1.2**
CLL				*i* x	x	19 18 50.0	
CLL				*e*(PP)		19 19 06.0	
CLL				*e*PPP	PPP	19 19 10.0	
CLL				*e*S	**S**	**19 22 51.0**	**+2.4**
CLL	**Collm**	**24.15**	**96**	*i* P	**P**	**19 18 30.9**	**-0.4**
CLL				*i*		19 18 35.5	
CLL				*e*S	**S**	**19 22 51.0**	**+2.4**
CLL				pmax	pmax		
	comp=Z,29nm,1.3s						
CLL	**Collm**	**24.15**	**96**	*e*P	**P**	**19 18 32.3**	**+1.0**
	comp=Z,33nm,1.3s,baz=314,slow=9.9						
MTE	**Manteigas**	**24.21**	**141**	P	**P**	**19 18 33.7**	**+1.7**
MTE	**Manteigas**	**24.21**	**141**	*e*P	**P**	**19 18 34.4**	**+2.4**
MTE				A	A	19 18 43.3	
	comp=Z,45nm,2.4s						
MTE				*e*LR	LR	19 24 43.8	
MTE				A	A	19 27 21.9	
	comp=Z,423nm,18.0s						
PCAS	**Casmilo, Conde**	**24.24**	**143**	*e*P	**P**	**19 18 33.1**	**+0.9**
PCAS				A	A	19 18 38.5	
	comp=Z,65nm,1.7s						
PCAS				*e*LR	LR	19 24 24.7	
PCAS				A	A	19 25 46.3	
	comp=Z,422nm,20.0s						
PLN	**Plauen**	**24.29**	**98**	*e*P	**P**	**19 18 33.9**	**+1.4**
	comp=Z,61nm,1.2s,baz=314,slow=9.9						
GRA1	**Grafenberg Arr**	**24.38**	**101**	P	**P**	**19 18 31.0**	**-2.4**
GRA1				IAmb	IAmb	19 18 39.8	
	comp=Z,31nm,1.1s						
GRF	**Grafenberg Arr**	**24.38**	**101**	P	**P**	**19 18 31.0**	**-2.4**
GRF				pmax	pmax		
	comp=Z,31nm,1.1s						
GRF	**Grafenberg Arr**	**24.38**	**101**	*e*P	**P**	**19 18 35.2**	**+1.8**
	comp=Z,214nm,2.5s,baz=314,slow=9.9						
GRF				*e*L	L	19 28 21.8	
	comp=Z,1µm,18.6s						
GRFO	**Grafenberg**	**24.38**	**101**	P	**P**	**19 18 31.2**	**-2.2**
GRFO				IAmb	IAmb	19 18 39.7	
	comp=Z,28nm,1.1s						
GRFO	**Grafenberg**	**24.38**	**101**	P	**P**	**19 18 31.2**	**-2.2**
GRFO				pmax	pmax		
	comp=Z,28nm,1.1s						
WERD	**Werda**	**24.38**	**98**	*e*P	**P**	**19 18 34.9**	**+1.4**
	comp=Z,49nm,1.6s,baz=314,slow=9.9						
GUNZ	**Gunzen**	**24.45**	**98**	*e*P	**P**	**19 18 35.6**	**+1.5**
	comp=Z,40nm,1.4s,baz=314,slow=9.9						
TANN	**Tannenbergstha**	**24.48**	**98**	*e*P	**P**	**19 18 35.4**	**+1.0**
	comp=Z,34nm,1.2s,baz=314,slow=9.9						
WERN	**Wernitzgruen**	**24.52**	**99**	*e*P	**P**	**19 18 36.3**	**+1.5**
	comp=Z,45nm,1.3s,baz=314,slow=9.9						
FBE	**Freiberg**	**24.57**	**96**	*e*P	**P**	**19 18 36.4**	**+1.3**
	comp=Z,217nm,2.5s,baz=314,slow=9.9						
SSB	**Saint Sauveur**	**24.58**	**116**	P	**P**	**19 18 35.3**	**-0.1**
SSB				IAmb	IAmb	19 18 48.5	
	comp=Z,35nm,1.0s						
SSB	**Saint Sauveur**	**24.58**	**116**	P	**P**	**19 18 35.3**	**-0.1**
SSB				pmax	pmax		
	comp=Z,35nm,1.0s						
NKC	**Novy Kostel**	**24.59**	**99**	*e*P	**P**	**19 18 36.7**	**+1.3**
NKC				AMS	AMS	19 29 10.0	
	comp=Z,1µm,14.7s						
NKC	**Novy Kostel**	**24.59**	**99**	*e*P	**P**	**19 18 36.7**	**+1.3**
NKC				MLR	MLR		
	comp=Z,1µm,14.7s						
MANZ	**Manzenberg**	**24.60**	**99**	*e*P	**P**	**19 18 36.7**	**+1.3**
	comp=Z,12nm,1.1s,baz=314,slow=9.9						
PSBE	**So Bento**	**24.65**	**144**	*e*LR	LR	19 24 55.4	
PSBE				A	A	19 27 08.6	
	comp=Z,801nm,18.0s						
PCBR	**Castelo Branco**	**24.74**	**141**	*e*P	**P**	**19 18 37.5**	**+0.8**
PCBR				A	A	19 18 41.8	
	comp=Z,64nm,1.3s						
ROTZ	**Rotzenmuhle**	**24.80**	**100**	*e*P	**P**	**19 18 39.3**	**+2.1**
	comp=Z,7.4nm,1.3s,baz=314,slow=9.9						
BRG	**Berggiesshubel**	**24.89**	**96**	*i* P	**P**	**19 18 38.5**	**+0.5**
BRG				Amp		19 18 40.8	
	comp=Z,18nm,1.1s						
BRG	**Berggiesshubel**	**24.89**	**96**	*i* P	**P**	**19 18 38.5**	**+0.5**
BRG				pmax	pmax		
	comp=Z,18nm,1.1s						
BRG				MLR	MLR		
	comp=Z,1µm,15.9s						
BRG				MLR	MLR		
	comp=E,769nm,14.8s						
BRG				MLR	MLR		
	comp=N,608nm,14.4s						
BRG	**Berggiesshubel**	**24.89**	**96**	*e*P	**P**	**19 18 39.1**	**+1.1**
	comp=N,18nm,1.1s,baz=314,slow=9.9						
SENIN	**Lac Senin/Sane**	**24.96**	**111**	P	**P**	**19 18 38.0**	**-1.0**
FIA1	**FINESS Array S**	**25.03**	**66**	P	**P**	**19 18 39.6**	**+0.4**
FINES	**FINESS Array B**	**25.03**	**66**	P	**P**	**19 18 39.9**	**+0.7**
	comp=N,8.4nm,0.9s,baz=320,slow=8.7,SNR=13						
FINES				LR	LR	19 28 03.1	
	comp=N,215nm,18.5s,baz=278,slow=36						
	comp=N,8.4nm,0.9s						
FINES	**FINESS Array B**	**25.03**	**66**	P	**P**	**19 18 39.3**	**+0.1**
PMAFR	**Mafra**	**25.04**	**145**	*e*LR	LR	19 25 04.4	
PMAFR				A	A	19 26 59.1	
	comp=N,915nm,18.0s						
EUNU	**Eureka**	**25.08**	**339**	P	**P**	**19 18 38.3**	**-1.3**
EUNU				IAmb	IAmb	19 18 56.7	
	comp=Z,40nm,1.4s						
PMRV	**Marv??o**	**25.14**	**141**	*e*P	**P**	**19 18 42.5**	**+2.1**
PMRV				A	A	19 18 46.2	
	comp=Z,83nm,1.4s						
PMRV				*e*LR	LR	19 25 10.1	
PMRV				A	A	19 26 15.5	
	comp=Z,456nm,20.0s						
PMTG	**Montargil**	**25.23**	**143**	*e*P	**P**	**19 18 42.0**	**+0.8**
PMTG				A	A	19 18 46.0	
	comp=Z,51nm,1.5s						
PMTG				*e*LR	LR	19 25 14.6	
PMTG				A	A	19 27 36.4	
	comp=Z,667nm,18.0s						
UBR	**Ueberruh**	**25.27**	**105**	*e*P	**P**	**19 18 43.3**	**+1.7**
	comp=Z,72nm,1.3s,baz=314,slow=9.9						
LPL	**La Plagne**	**25.36**	**113**	*e*P	**P**	**19 18 45.6**	**+3.0**
LPL				pmax	pmax		
	comp=Z,24nm,1.0s						
PVCC	**Panska Ves**	**25.41**	**96**	*e*P	**P**	**19 18 42.6**	**-0.2**
PVCC				AMS	AMS	19 30 10.0	
	comp=Z,900nm,14.6s						
PVCC	**Panska Ves**	**25.41**	**96**	*e*P	**P**	**19 18 42.6**	**-0.2**
PVCC				MLR	MLR		
	comp=Z,900nm,14.6s						
DAVA	**Damuels**	**25.45**	**106**	*i* P	**P**	**19 18 44.8**	**+1.4**
	comp=Z,10.0nm,1.1s						
FUR	**Furstenfeldbru**	**25.47**	**103**	*e*P	**P**	**19 18 45.1**	**+1.7**
	comp=Z,64nm,1.2s,baz=314,slow=9.9						
PESTR	**Estremoz**	**25.60**	**142**	P	**P**	**19 18 45.0**	**+0.4**
PESTR				IAmb	IAmb	19 18 50.1	
	comp=Z,40nm,1.2s						
PESTR	**Estremoz**	**25.60**	**142**	*e*P	**P**	**19 18 45.5**	**+0.9**
PESTR				A	A	19 18 50.3	
	comp=Z,81nm,1.4s						
PESTR				*e*LR	LR	19 25 21.4	
PESTR				A	A	19 28 14.0	
	comp=Z,406nm,18.0s						
KLNR	**Kaliningrad**	**25.63**	**83**	*i* P	**P**	**19 18 45.5**	**+0.9**
KLNR				pmax	pmax		
	comp=Z,153nm,0.9s						
PBUR	**Paburge**	**25.67**	**79**	*e*P	**P**	**19 18 45.4**	**+0.4**
BNI	**Bardonecchia**	**25.70**	**114**	P	**P**	**19 18 47.0**	**+1.5**
BNI				IAmb	IAmb	19 18 51.1	
	comp=Z,57nm,1.4s						
BNI	**Bardonecchia**	**25.70**	**114**	P	**P**	**19 18 47.1**	**+1.5**

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BNI                                   pmax   pmax
       comp=Z,57nm,1.4s
RETA   Reutte             25.72 105 i P      P      19 18 47.1 +1.4
       comp=Z,18nm,1.1s,SNR=7.1
PRU    Pruhonice          25.76  97 eP       P      19 18 46.0 +0.1
PRU                                   AMS    AMS    19 29 10.0
       comp=Z,800nm,16.6s
PRU    Pruhonice          25.76  97 eP       P      19 18 46.0 +0.1
PRU                                   MLR    MLR
       comp=Z,800nm,16.6s
EVO    Evora              25.79 143 eP       P      19 18 47.5 +1.2
EVO                                   A      A      19 18 51.1
       comp=Z,28nm,1.5s
TUE    Stuetta            25.81 108   P      P      19 18 46.4  -0.3
TUE                                   IAmb   IAmb   19 18 53.7
       comp=Z,34nm,0.9s
DAVOX  Davos/Dischmat     25.83 107   P      P      19 18 47.8 +1.0
       comp=Z,5.9nm,0.8s,baz=303,slow=14,SNR=8.1
DAVOX                                 LR     LR     19 28 25.3
       comp=Z,419nm,19.2s,baz=296,slow=35
       comp=Z,5.9nm,0.8s
KHC    Kasperske Hory     25.88  99   P      P      19 18 47.4 +0.2
KHC                                   IAmb   IAmb   19 18 52.5
       comp=Z,30nm,1.4s
KHC    Kasperske Hory     25.88  99 eP       P      19 18 47.3 +0.2
KHC                                 ex       x      19 19 02.5
KHC                                   AMS    AMS    19 29 30.0
       comp=Z,1μm,16.1s
KHC    Kasperske Hory     25.88  99 i P      P      19 18 47.8 +0.7
KHC                                   pmax   pmax
       comp=Z,64nm,1.6s
GOPC   GO Pecny, Ondr     25.93  97 eP       P      19 18 47.3  -0.2
GOPC                                  AMS    AMS    19 29 20.0
       comp=Z,800nm,17.9s
GOPC   GO Pecny, Ondr     25.93  97 eP       P      19 18 47.3  -0.2
GOPC                                  MLR    MLR
       comp=Z,800nm,17.9s
APA    Apatity            25.96  50⇓iP       P      19 18 46.2  -1.4
APA                                   pmax   pmax
       comp=Z,1.0nm,0.9s
MOTA   Moosalm            25.98 105 i P      P      19 18 48.7 +0.6
       comp=Z,13nm,1.4s
PAB    San Pablo          26.00 136   P      P      19 18 48.2  -0.1
PAB                                   IAmb   IAmb   19 18 54.6
       comp=Z,25nm,1.0s
PAB    San Pablo          26.00 136   P      P      19 18 48.2  -0.1
PAB                                   pmax   pmax
       comp=Z,25nm,1.0s
ESBB   Sonseca Array      26.02 136   P      P      19 18 49.4 +1.0
ESDC   Sonseca Array      26.02 136   P      P      19 18 49.2 +0.8
       comp=Z,12nm,1.0s,baz=335,slow=8.7,SNR=16
ESDC                                  LR     LR     19 27 13.9
       comp=Z,561nm,20.8s,baz=326,slow=32
       comp=Z,12nm,1.0s
ESDC   Sonseca Array      26.02 136   P      P      19 18 49.7 +1.3
PNCL   Nicolau / Gran     26.03 144 eP       P      19 18 49.4 +0.9
PNCL                                eLR      LR     19 25 36.4
PNCL                                  A      A      19 27 32.7
       comp=Z,961nm,18.0s
KSP    Ksiaz              26.04  94 eP       P      19 18 49.1 +0.7
FETA   Feichten           26.04 106 i P      P      19 18 49.8 +1.1
       comp=Z,17nm,1.1s
CHVC   Chvalec            26.09  94 eP       P      19 18 49.4 +0.5
CHVC                                  AMS    AMS    19 29 00.0
       comp=Z,800nm,19.1s
CHVC   Chvalec            26.09  94 eP       P      19 18 49.4 +0.5
CHVC                                  MLR    MLR
       comp=Z,800nm,19.1s
SQTA   Sankt Quirin       26.12 105 eP       P      19 18 50.4 +1.0
       comp=Z,27nm,1.5s,SNR=5.2
UPC    Upice              26.12  95 eP       P      19 18 49.2  0.0
UPC                                   AMS    AMS    19 31 40.0
       comp=Z,800nm,14.3s
UPC    Upice              26.12  95 eP       P      19 18 49.2  0.0
UPC                                   MLR    MLR
       comp=Z,800nm,14.3s
FUORN  Ofenpass-Fuorn     26.12 107   P      P      19 18 49.6 +0.1
GEC2   GERESS Array S     26.14 100   P      P      19 18 49.3  -0.2
GEC2   GERESS Array S     26.14 100 eP       P      19 18 52.9 +3.4
       comp=Z,22nm,1.4s,baz=314,slow=9.9
GERES  GERESS Array B     26.14 100   P      P      19 18 49.5  0.0
       comp=Z,2.2nm,0.8s,baz=330,slow=7.7,SNR=11
GERES                                 LR     LR     19 29 27.1
       comp=Z,796nm,18.4s,baz=307,slow=37
       comp=Z,2.2nm,0.8s
GERES  GERESS Array B     26.14 100   P      P      19 18 50.0 +0.5
OSTC   Ostas              26.19  94 eP       P      19 18 50.1 +0.3
OSTC                                  AMS    AMS    19 29 10.0
       comp=Z,800nm,22.0s
OSTC   Ostas              26.19  94 eP       P      19 18 50.1 +0.3
OSTC                                  MLR    MLR
       comp=Z,800nm,22.0s
WATA   Walderalm          26.21 104 epP      P      19 18 51.4 +1.2
       comp=Z,30nm,1.0s,SNR=9.5
WTTA   Wattenberg         26.29 104 i pP     P      19 18 52.2 +1.2
       comp=Z,29nm,1.3s,SNR=6.7
DPC    Dobruska-Polom     26.38  94 eP       P      19 18 52.0 +0.5
DPC                                   AMS    AMS    19 29 10.0
       comp=Z,700nm,16.2s
DPC    Dobruska-Polom     26.38  94 eP       P      19 18 52.0 +0.5
DPC                                   MLR    MLR
       comp=Z,700nm,16.2s
MESJ   Messejana          26.38 144   P      P      19 18 52.4 +0.8
MESJ   Messejana          26.38 144   P      P      19 18 52.4 +0.8
MESJ                                  pmax   pmax
       comp=Z,17nm,1.0s
MESJ   Messejana          26.38 144 eP       P      19 18 54.7 +3.1
MESJ                                  A      A      19 19 21.7
       comp=Z,34nm,1.6s
MESJ   Messejana          26.38 144 eP       P      19 18 53.5 +1.9
MESJ                                  IAmb   IAmb   19 18 57.5
       comp=Z,13nm,0.9s
PBAR   Barrancos          26.41 142 eP       P      19 18 53.2 +1.4
PBAR                                  A      A      19 18 59.0
       comp=Z,28nm,1.7s
PBAR                                eLR      LR     19 25 47.3
PBAR                                  A      A      19 27 37.5
       comp=Z,447nm,20.0s
CKRC   Cesky Krumlov      26.45  99 eP       P      19 18 52.3 +0.1
CKRC   Cesky Krumlov      26.45  99 eP       P      19 18 52.3 +0.1
PTEO   Sao Teotonio       26.51 145 eP       P      19 18 56.3 +3.6
PTEO                                  A      A      19 18 59.1
       comp=Z,67nm,1.6s
LMN    Caledonia Moun     26.57 252   P      P      19 18 53.0  -0.3
PCVE   Castro Verde       26.62 144 eP       P      19 18 57.2 +3.4
PCVE                                  A      A      19 18 59.5
       comp=Z,32nm,1.1s
PCVE                                eLR      LR     19 25 55.7
PCVE                                  A      A      19 27 58.9
       comp=Z,974nm,18.0s
VSU    Vasula             26.66  72 i P      P      19 18 54.6 +0.7
VSU                                   pmax   pmax
       comp=Z,64nm,1.1s
VSU    Vasula             26.66  72 eP       P      19 18 54.9 +1.0
TREC   Trest              26.68  97 eP       P      19 18 55.5 +1.2
TREC                                  AMS    AMS    19 30 20.0
       comp=Z,700nm,15.6s
TREC   Trest              26.68  97 eP       P      19 18 55.5 +1.2
TREC                                  MLR    MLR
       comp=Z,700nm,15.6s
RES    Resolute Bay       26.69 327   P      P      19 18 53.5  -0.5
       comp=Z,4.1nm,0.7s,baz=132,slow=10,SNR=11
RES                                   LR     LR     19 28 58.3
       comp=Z,1μm,19.2s,baz=64,slow=35
       comp=Z,4.1nm,0.7s
RES    Resolute Bay       26.69 327   P      P      19 18 53.4  -0.7
RES                                   IAmb   IAmb   19 18 58.7
       comp=Z,46nm,1.9s
RES    Resolute Bay       26.69 327   P      P      19 18 53.4  -0.7
RES                                   pmax   pmax
       comp=Z,46nm,1.9s
MORF   Marmelete          26.75 145 eLR      LR     19 26 04.7
MORF                                  A      A      19 27 51.9
       comp=Z,941nm,18.0s
KRLC   Kraliky            26.78  95   AMS    AMS    19 29 10.0
       comp=Z,700nm,18.4s
KRLC   Kraliky            26.78  95   P      P      19 18 56.6 +1.4
KRLC                                  pmax   pmax
       comp=Z,22nm,1.2s
PFVI   Vila Bisbo         26.87 146 eLR      LR     19 25 43.1
PFVI                                  A      A      19 27 22.9
       comp=Z,799nm,20.0s
PABE   Paberze            26.92  79   P      P      19 18 56.2  0.0
PABE                                  IAmb   IAmb   19 19 07.5
       comp=Z,33nm,1.1s
PABE   Paberze            26.92  79 eP       P      19 18 56.3  0.0
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BIOA   Bad Ischl, Aus     26.92 102 i P      P      19 18 57.4 +0.9
       comp=Z,19nm,1.0s
PVAQ   Vaqueiros          26.92 144   P      P      19 18 56.4  -0.2
PVAQ   Vaqueiros          26.92 144 eP       P      19 19 01.1 +4.6
PVAQ                                  A      A      19 19 03.0
       comp=Z,27nm,1.5s
PVAQ                                eLR      LR     19 26 02.2
PVAQ                                  A      A      19 27 58.8
       comp=Z,837nm,20.0s
SALO   Salr               27.00 108   P      P      19 18 56.6  -0.5
SALO                                  IAmb   IAmb   19 18 60.0
       comp=Z,19nm,0.8s
PBDV   Barranco-do-Ve     27.01 144 eLR      LR     19 25 53.5
PBDV                                  A      A      19 28 02.0
       comp=Z,1μm,20.0s
ABTA   Abfaltersbach      27.08 104 i P      P      19 19 02.8 +4.9
       comp=Z,14nm,1.5s
CTI    Castel Tesino      27.19 106   P      P      19 18 59.6 +0.6
CTI                                   IAmb   IAmb   19 19 03.3
       comp=Z,23nm,1.1s
CTI    Castel Tesino      27.19 106   P      P      19 18 59.6 +0.6
CTI                                   pmax   pmax
       comp=Z,23nm,1.1s
VRAC   Vranov             27.20  96 ⇓P       P      19 18 59.6 +0.6
VRAC   Vranov             27.20  96   P      P      19 18 58.7  -0.3
       comp=Z,1.7nm,0.5s,baz=302,slow=11,SNR=6.1
VRAC                                  LR     LR     19 30 12.2
       comp=Z,656nm,18.4s,baz=312,slow=37
       comp=Z,1.7nm,0.5s
VRAC   Vranov             27.20  96 eP       P      19 18 59.1 +0.1
VRAC   Vranov             27.20  96   P      P      19 18 59.6 +0.6
KBA    Koelnbreinsper     27.23 103 i pP     P      19 19 01.7 +2.3
       comp=Z,24nm,1.2s,SNR=9.2
KRUC   Moravsky           27.28  97 eP       P      19 18 59.5  -0.1
MORC   Moravsky Berou     27.34  94 ⇑P       P      19 19 01.5 +1.2
MORC   Moravsky Berou     27.34  94   P      P      19 19 00.5 +0.2
MORC   Moravsky Berou     27.34  94 eP       P      19 19 00.6 +0.3
MORC   Moravsky Berou     27.34  94   P      P      19 19 00.5 +0.2
MORC                                  pmax   pmax
       comp=Z,20nm,1.4s
CIMO   Cimolais           27.36 105   P      P      19 19 01.3 +0.9
CIMO                                  IAmb   IAmb   19 19 05.7
       comp=Z,29nm,1.3s
CLUD   Cludinico          27.46 104   P      P      19 19 02.2 +0.9
CLUD                                  IAmb   IAmb   19 19 06.7
       comp=Z,30nm,1.0s
STAL   STALIGIAL          27.53 105   P      P      19 19 01.5  -0.4
STAL                                  IAmb   IAmb   19 19 07.0
       comp=Z,46nm,1.3s
PRMA   PARMA              27.55 110   P      P      19 19 03.0 +1.0
OKC    Ostrava-Krasne     27.59  94 eP       P      19 19 03.5 +1.1
OKC                                   AMS    AMS    19 32 00.0
       comp=Z,700nm,13.7s
OKC    Ostrava-Krasne     27.59  94 eP       P      19 19 03.5 +1.1
OKC                                   MLR    MLR
       comp=Z,700nm,13.7s
MYKA   Terra Mystica      27.69 103 i pP     P      19 19 05.6 +2.2
       comp=Z,10.0nm,1.1s
TEOL   Teolo              27.72 107   P      P      19 19 03.0  -0.6
TEOL                                  IAmb   IAmb   19 19 06.6
       comp=Z,32nm,1.0s
CONA   Conrad Observa     27.81  99 eP       P      19 19 03.4  -1.1
       comp=Z,8.9nm,1.4s
ISAL   Salakas            27.90  77 eP       P      19 19 05.0  -0.2
JAVC   Velka Javorina     28.03  96 eP       P      19 19 07.2 +0.8
IIGN   Ignalina           28.07  78 eP       P      19 19 04.9  -1.7
ARSA   Arzberg            28.13 100 i pP     P      19 19 08.7 +1.4
       comp=Z,12nm,1.1s
OJC    Ojcow              28.14  91 eP       P      19 19 09.0 +1.7
OJC    Ojcow              28.14  91   P      P      19 19 07.1  -0.2
OJC    Ojcow              28.14  91   P      P      19 19 07.1  -0.2
OJC                                   pmax   pmax
       comp=Z,18nm,1.3s
SMOL   Smolenice          28.15  96 eP       P      19 19 08.0 +0.6
MODS   Modra-Piesok       28.18  97 eP       P      19 19 09.1 +1.4
MODS   Modra-Piesok       28.18  97 eP       P      19 19 09.1 +1.4
RONA   Rosalia, Austr     28.18  99 i pP     P      19 19 09.1 +1.4
       comp=Z,17nm,1.3s,SNR=6.6
OBKA   Obir               28.21 102 i pP     P      19 19 09.4 +1.4
       comp=Z,5.5nm,0.9s
SOKA   Soboth             28.31 102 i P      P      19 19 09.5 +0.5
       comp=Z,14nm,1.4s,SNR=9.4
G65A   Princeton          28.33 254   P      P      19 19 09.6 +0.6
IDID   Didziasalis        28.34  77 eP       P      19 19 04.6  -4.4
TRI    Trieste            28.43 104   P      P      19 19 10.4 +0.5
TRI                                   IAmb   IAmb   19 19 11.7
       comp=Z,17nm,1.0s
TRI    Trieste            28.43 104   P      P      19 19 10.4 +0.5
TRI                                   pmax   pmax
       comp=Z,17nm,1.0s
NACGM  Naroch             28.59  78 eP       P      19 19 11.0  -0.2
       comp=Z,31nm,0.9s,baz=305
LANS   Liptovska Anna     28.69  93 eP       P      19 19 13.4 +1.1
LANS                                  pmax   pmax
       comp=Z,6.0nm,1.5s
LANS   Liptovska Anna     28.69  93 eP       P      19 19 13.4 +1.1
VYHS   Vyhne              28.84  95 eP       P      19 19 14.4 +0.8
VYHS                                  pmax   pmax
       comp=Z,12nm,1.4s
VYHS   Vyhne              28.84  95 eP       P      19 19 14.4 +0.8
ADZR   Andozero           29.14  56 eP       P      19 19 16.3 +0.3
ADZR                                  pmax   pmax
       comp=Z,11nm,0.8s
PMOZ   Porto Moniz, M     29.26 162 eLR      LR     19 27 43.7
PMOZ                                  A      A      19 28 11.3
       comp=Z,428nm,20.0s
MNK    Minsk              29.34  78 i P      P      19 19 17.1  -0.9
       comp=E,2.0nm,0.8s
MNK                                 i P      P      19 19 17.1  -0.9
       comp=N,38nm,0.9s
MNK                                 i P      P      19 19 17.1  -0.9
       comp=Z,12nm,0.8s,baz=306
MNK                                 i PP     PnPn   19 20 10.6  -0.7
MNK                                 i PPP    PPP    19 20 18.9
MNK                                 i PcP    PcP    19 22 22.9  -0.9
MNK                                 i S      S      19 24 11.6 +1.0
MNK                                 i SS     SnSn   19 25 39.2 +2.7
MNK                                 i SSS    SSS    19 25 53.8
MNK                                 i LR     LR     19 31 01.0
MNK                                 i LRM    MLR    19 32 03.0
       comp=E,35nm,14.4s
MNK                                 i LRM    MLR    19 32 10.7
       comp=Z,253nm,11.9s
MNK                                 i LRM    MLR    19 32 36.1
       comp=N,310nm,12.7s
MNK    Minsk              29.34  78 i P      P      19 19 17.0  -0.9
MNK                                 i               19 20 10.5
MNK                                 i               19 22 22.8
MNK                                 i S      S      19 24 11.6 +1.0
MNK                                 i SS     SnSn   19 25 39.1 +2.7
MNK                                   pmax   pmax
       comp=N,38nm,0.9s
MNK                                   pmax   pmax
       comp=Z,12nm,0.8s
MNK                                   pmax   pmax
       comp=E,2.0nm,0.8s
MNK                                   MLR    MLR
       comp=E,35nm,14.0s
MNK                                   MLR    MLR
       comp=Z,253nm,12.0s
MNK                                   MLR    MLR
       comp=N,310nm,13.0s
FDMO   Fiordimonte        30.16 109   P      P      19 19 26.5 +1.2
FDMO                                  IAmb   IAmb   19 19 28.4
       comp=Z,48nm,1.7s
NRCA   Norcia             30.33 109   P      P      19 19 26.9 +0.1
MORH   Mrgy, Hungar       30.36  98 ⇑P       P      19 19 27.0  0.0
LVV    L'vov              30.45  88 eP       P      19 19 27.5  -0.2
LVV                                 eS       S      19 24 24.9  -3.1
LVV                                   pmax   pmax
       comp=Z,60nm,1.6s
LVV                                   MLR    MLR
       comp=E,400nm,16.0s
LVV                                   MLR    MLR
       comp=N,500nm,15.0s
LVV                                   MLR    MLR
       comp=Z,600nm,18.0s
TRPA   Tarpa              30.88  92 ⇑P       P      19 19 31.6  0.0
KLMR   Klimovskoe         31.10  61 eP       P      19 19 31.7  -1.7
KLMR                                  AMP           19 19 34.1
       comp=Z,23nm,1.6s
KLMR                                  LR     LR     19 29 21.3
KLMR                                  AMP           19 32 16.6
       comp=Z,394nm,14.2s
KLMR   Klimovskoe         31.10  61 eP       P      19 19 31.7  -1.7
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KLMR                                  pmax   pmax
       comp=Z,23nm,1.6s
KLMR                                  MLR    MLR
       comp=Z,394nm,14.0s
INTR   Introdacqua        31.34 109   P      P      19 19 36.5 +0.8
INTR                                  IAmb   IAmb   19 19 38.4
       comp=Z,14nm,0.9s
FRGS   Fruska Gora        31.70  99 ⇑P       P      19 19 39.5 +0.6
LONY   Lake Ozonia        32.07 261   P      P      19 19 42.2 +0.1
       baz=42
FCC    Fort Churchill     32.11 296   P      P      19 19 40.6  -1.6
FCC                                   IAmb   IAmb   19 19 44.7
       comp=Z,22nm,1.1s
FCC    Fort Churchill     32.11 296   P      P      19 19 40.6  -1.6
FCC                                   pmax   pmax
       comp=Z,22nm,1.1s
MDT    Midelt             32.11 142   P      P      19 19 42.8 +0.1
       comp=Z,6.3nm,1.0s,baz=349,slow=10,SNR=11
MDT                                   LR     LR     19 30 47.8
       comp=Z,276nm,21.5s,baz=353,slow=33
       comp=Z,6.3nm,1.0s
BANR   Banloc             32.16  97 ⇑P       P      19 19 44.8 +1.9
MARR   Marisel-Cluj       32.18  94 ⇓P       P      19 19 43.7 +0.6
BZS    Buzias             32.22  96 ⇓P       P      19 19 44.4 +1.0
BZS    Buzias             32.22  96   P      P      19 19 44.4 +1.0
AKASG  Malin Array Be     32.36  83   P      P      19 19 43.9  -0.7
       comp=Z,11nm,0.9s,baz=312,slow=8.7,SNR=38
AKASG                                 LR     LR     19 33 04.8
       comp=Z,310nm,18.5s,baz=310,slow=37
       comp=Z,11nm,0.9s
AKASG  Malin Array Be     32.36  83   P      P      19 19 43.4  -1.2
AKASG  Malin Array Be     32.36  83 i P      P      19 19 44.2  -0.3
AKASG                                 pmax   pmax
       comp=Z,8.0nm,0.8s
AKBB   Malin Array Si     32.36  83   P      P      19 19 43.9  -0.6
AKBB                                  IAmb   IAmb   19 19 45.4
       comp=Z,17nm,1.0s
AKBB   Malin Array Si     32.36  83 i P      P      19 19 44.9 +0.4
AKBB                                  pmax   pmax
       comp=Z,20nm,1.1s
SURR   Surduc             32.37  96 ⇑P       P      19 19 44.3  -0.4
BUR08  Bucovina Ar. S     32.50  90   P      P      19 19 46.7 +0.7
BUR08                                 IAmb   IAmb   19 19 48.4
       comp=Z,18nm,1.4s
BURAR  Bucovina Array     32.53  90 ⇑P       P      19 19 47.2 +1.0
BURAR  Bucovina Array     32.53  90   P      P      19 19 47.2 +1.0
BURAR  Bucovina Array     32.53  90   P      P      19 19 47.2 +1.0
DIVS   Divibare           32.57 100   P      P      19 19 46.5  -0.1
MDVR   Moldovita          32.88  97 ⇑P       P      19 19 49.5 +0.2
GZR    Gura Zlata         32.94  96 ⇓P       P      19 19 51.3 +1.4
OBN    Obninsk            33.02  71   LR     LR     19 32 31.2
       comp=Z,50nm,21.7s,baz=320,slow=35
OBN    Obninsk            33.02  71   P      P      19 19 49.1  -1.2
OBN    Obninsk            33.02  71deP       P      19 19 49.8  -0.5
OBN                                 i *PP    pP     19 19 53.8  -0.3
OBN                                                 19 20 57.0
OBN                                   S      S      19 25 08.0  0.0
OBN                                 eSS      SnSn   19 27 04.6  -1.1
OBN                                   pmax   pmax
       comp=Z,18nm,1.4s
OBN                                   MLR    MLR
       comp=Z,232nm,14.0s
HERR   Herculane          33.15  97 ⇑P       P      19 19 52.5 +1.0
J58A   Remsen             33.35 260   P      P      19 19 53.7 +0.3
DJES   Djerdap            33.36  97 ⇓P       P      19 19 54.0 +0.7
DJES   Djerdap            33.36  97   P      P      19 19 54.2 +0.8
LOT    Lotru              33.38  95 ⇓P       P      19 19 54.2 +0.5
PDG    Podgorica          33.49 103 ⇑P       P      19 19 54.5  0.0
PDG    Podgorica          33.49 103   P      P      19 19 54.2  -0.3
PDG                                   IAmb   IAmb   19 19 57.0
       comp=Z,12nm,0.9s
SORM   Soroca             33.68  87 ⇑P       P      19 19 55.4  -0.7
SORM   Soroca             33.68  87   P      P      19 19 55.3  -0.7
SRE    Strehaia           33.69  96 ⇑P       P      19 19 57.6 +1.3
SRE    Strehaia           33.69  96   P      P      19 19 57.5 +1.3
BOVS   Bovan              33.74  99 ⇓P       P      19 19 56.5  -0.2
DOPR   Dopca              33.78  92 ⇑P       P      19 19 56.1  -1.0
CUC    Castrocucco        33.81 109   P      P      19 19 57.0  -0.4
CUC                                   IAmb   IAmb   19 20 00.6
       comp=Z,22nm,1.3s
ARR    Arges              33.86  94 ⇑P       P      19 19 58.8 +1.0
VOIR                      34.01  93 ⇑P       P      19 19 59.8 +0.7
VOIR                      34.01  93   P      P      19 19 59.7 +0.7
SADO   Sadowa             34.14 265   LR     LR     19 32 07.3
       comp=Z,709nm,19.9s,baz=80,slow=33
SADO   Sadowa             34.14 265   P      P      19 20 00.2  0.0
SADO                                  IAmb   IAmb   19 20 03.0
       comp=Z,29nm,1.1s
COVR   Voineasa-Covas     34.27  92 ⇑P       P      19 20 01.1  -0.2
STFAR  Stefanesti-Arg     34.38  94 ⇑P       P      19 20 03.1 +0.8
MLR    Muntele Rosu       34.40  92 ⇑P       P      19 20 03.6 +1.0
MLR    Muntele Rosu       34.40  92   LR     LR     19 35 23.1
       comp=Z,449nm,18.7s,baz=307,slow=39
MLR    Muntele Rosu       34.40  92   P      P      19 20 02.5  -0.1
MLR    Muntele Rosu       34.40  92   P      P      19 20 02.5  -0.1
MLR                                   pmax   pmax
       comp=Z,14nm,1.1s
PLOR   Plostina           34.48  91 ⇓P       P      19 20 03.8 +0.7
PLOR   Plostina           34.48  91   P      P      19 20 03.8 +0.7
VRI    Vrincioaia         34.50  91 ⇑P       P      19 20 04.2 +0.8
VRI    Vrincioaia         34.50  91   P      P      19 20 04.1 +0.8
KEST   Kesra              34.53 121   P      P      19 20 03.3  -0.4
       comp=Z,11nm,1.2s,baz=218,slow=6.4,SNR=9.7
KEST                                  LR     LR     19 33 48.8
       comp=Z,788nm,18.1s,baz=278,slow=36
       comp=Z,11nm,1.2s
KEST   Kesra              34.53 121   P      P      19 20 02.8  -1.0
NEHR   Nehoiu             34.61  92 ⇑P       P      19 20 06.3 +2.0
ODBI   Odobesti           34.73  91 ⇑P       P      19 20 05.9 +0.6
SULR                      35.14  93 ⇑P       P      19 20 09.8 +1.0
VAE    Valguarnera        35.24 113   LR     LR     19 35 14.5
       comp=Z,842nm,18.5s,baz=12,slow=37
VTS    Vitosha            35.24  98 ⇑P       P      19 20 10.8 +1.0
VTS    Vitosha            35.24  98   P      P      19 20 10.1 +0.3
VTS    Vitosha            35.24  98   P      P      19 20 10.1 +0.3
VTS                                   pmax   pmax
       comp=Z,7.0nm,0.9s
PLVB   Pleven             35.32  96 ⇑P       P      19 20 11.6 +1.3
KBN    Korca              35.62 103   P      P      19 20 13.5 +0.4
KBN    Korca              35.62 103   P      P      19 20 13.5 +0.4
KBN                                   pmax   pmax
       comp=Z,70nm,1.2s
CFR    Carcaliu           35.68  91 ⇓P       P      19 20 12.5  -1.0
CFR    Carcaliu           35.68  91   P      P      19 20 12.4  -1.0
A36M   Sachs Harbour      35.72 328   P      P      19 20 13.3  -0.2
A36M                                  IAmb   IAmb   19 20 16.7
       comp=Z,13nm,0.8s
A36M   Sachs Harbour      35.72 328   P      P      19 20 13.9 +0.5
       baz=55
FNA    Florina            35.77 102   P      P      19 20 14.4 +0.1
FNA    Florina            35.77 102   P      P      19 20 14.4 +0.1
FNA                                   pmax   pmax
       comp=Z,5.0nm,0.9s
HARR   Harsova            35.94  92 ⇑P       P      19 20 14.7  -0.9
HARR   Harsova            35.94  92   P      P      19 20 14.7  -0.9
TPGR   Topolog            36.05  91 ⇑P       P      19 20 15.4  -1.3
RAZG   Razgrad            36.09  94 ⇑P       P      19 20 16.8  -0.2
ICOR   Ion Corvin         36.30  92 ⇑P       P      19 20 18.7  0.0
TIRR   Tirgusor           36.34  91 ⇑P       P      19 20 18.7  -0.5
TIRR   Tirgusor           36.34  91   P      P      19 20 18.6  -0.5
VORR   Voronezh           36.43  74 eP       P      19 20 19.6  -0.2
VORR                                  pmax   pmax
       comp=Z,30nm,0.4s
KIRV   Kirov              36.52  59   LR     LR     19 34 19.1
       comp=Z,342nm,18.4s,baz=313,slow=35
KIRV   Kirov              36.52  59 i P      P      19 20 22.1 +1.7
SSPA   Standing Stone     36.69 259   P      P      19 20 22.8 +0.7
SSPA   Standing Stone     36.69 259   P      P      19 20 22.2 +0.1
       baz=38
SSPA   Standing Stone     36.69 259   P      P      19 20 22.4 +0.3
       baz=38
VSR    Storozhevoye       36.72  75 eP       P      19 20 20.3  -1.9
VSR                                   pmax   pmax
       comp=Z,10.0nm,0.9s
M53A   WI Miller and      37.39 263   P      P      19 20 28.8 +0.7
       baz=39
RDO    Rodhopi            37.47  98   P      P      19 20 28.7 +0.1
RDO                                   IAmb   IAmb   19 20 32.8
       comp=Z,25nm,1.2s
AGG    Agios Georgios     37.61 103   P      P      19 20 30.4 +0.4
AGG    Agios Georgios     37.61 103   P      P      19 20 30.4 +0.4
AGG                                   pmax   pmax
       comp=Z,9.0nm,1.1s
P57A   Homestead Farm     37.65 258   P      P      19 20 30.8 +0.5
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P57A                             IAmb      IAmb      19 20 33.3
      comp=Z,28nm,1.1s
F42A  Maple Grove Fa   37.76 274 P         P         19 20 31.6 +0.4
EYMN  Ely              37.80 279 P         P         19 20 32.0 +0.5
EYMN                             IAmb      IAmb      19 20 34.0
      comp=Z,29nm,1.0s
EYMN  Ely              37.80 279 P         P         19 20 31.4 -0.1
      baz=45
EYMN  Ely              37.80 279 P         P         19 20 30.7 -0.8
      baz=45
ALN   Alexandroupoli   37.90  98 P         P         19 20 32.5 +0.1
ALN                              IAmb      IAmb      19 20 36.8
      comp=Z,29nm,1.2s
ALN   Alexandroupoli   37.90  98 P         P         19 20 32.5 +0.1
ALN                              pmax      pmax
      comp=Z,29nm,1.2s
VRH   Novokhopyorsk    37.91  73 eP        P         19 20 32.2 -0.1
VRH                              pmax      pmax
      comp=Z,10.0nm,1.0s
N53A  Lisbon           37.96 262 P         P         19 20 35.3 +2.4
COWI  Conover          37.99 275 P         P         19 20 33.5 +0.4
COWI  Conover          37.99 275 P         P         19 20 31.9 -1.3
      baz=44
FFC   Flin Flon        38.01 295 P         P         19 20 32.2 -0.9
FFC                              IAmb      IAmb      19 20 36.0
      comp=Z,26nm,1.2s
FFC   Flin Flon        38.01 295 P         P         19 20 32.2 -0.9
FFC                              pmax      pmax
      comp=Z,26nm,1.3s
YKA   Yellowknife Ar   38.13 311 P         P         19 20 33.3 -0.7
      comp=Z,8.4nm,0.9s,baz=51,slow=8.9,SNR=52
YKA                              PcP       PcP       19 22 47.2 -1.2
      comp=Z,3.7nm,1.0s,baz=45,slow=3.2,SNR=6.1
YKA                              LR        LR        19 35 23.4
      comp=Z,1µm,20.6s,baz=36,slow=35
      comp=Z,8.4nm,0.9s
YKA   Yellowknife Ar   38.13 311 i P       P         19 20 33.2 -0.8
YKA                              pmax      pmax
      comp=Z,9.0nm,0.9s
ULM   Lac du Bonnet    38.26 285 P         P         19 20 34.7 -0.6
      comp=Z,22nm,1.0s,baz=51,slow=8.2,SNR=19
ULM                              LR        LR        19 35 25.9
      comp=Z,1µm,18.0s,baz=58,slow=35
      comp=Z,22nm,1.0s
ULM   Lac du Bonnet    38.26 285 P         P         19 20 35.2 -0.1
ULM                              IAmb      IAmb      19 20 37.9
      comp=Z,43nm,1.1s
ULM   Lac du Bonnet    38.26 285 P         P         19 20 35.2 -0.1
ULM                              pmax      pmax
      comp=Z,43nm,1.2s
B35A  Bob, Littlefor   38.57 282 P         P         19 20 37.8 -0.1
B35A  Bob, Littlefor   38.57 282 P         P         19 20 37.1 -0.8
      baz=45,SNR=9.0
O53A  New Philadelph   38.57 262 P         P         19 20 38.0 -0.1
O53A                             IAmb      IAmb      19 20 44.3
      comp=Z,30nm,1.1s
O53A  New Philadelph   38.57 262 P         P         19 20 38.0 -0.1
      baz=38
R58B  Mineral          38.80 257 P         P         19 20 39.7 -0.3
O52A  Adamsville       38.97 263 P         P         19 20 41.9 +0.5
O52A                             IAmb      IAmb      19 20 44.8
      comp=Z,49nm,1.1s
G40A  Rib Lake         39.11 275 P         P         19 20 42.6 +0.1
P53A  Whipple          39.25 262 P         P         19 20 44.5 +0.8
P53A                             IAmb      IAmb      19 20 47.6
      comp=Z,30nm,1.0s
P53A  Whipple          39.25 262 P         P         19 20 43.7 -0.1
      baz=38
P53A                             P         P         19 20 43.7 -0.1
      baz=38
ACSO  Alum Creek Sta   39.43 264 P         P         19 20 45.7 +0.4
ACSO                             IAmb      IAmb      19 20 49.0
      comp=Z,42nm,1.1s
ACSO  Alum Creek Sta   39.43 264 P         P         19 20 45.4 +0.1
      baz=39
N49A  Columbus Grove   39.48 266 P         P         19 20 46.0 +0.4
N49A                             IAmb      IAmb      19 20 49.4
      comp=Z,47nm,1.1s
N49A  Columbus Grove   39.48 266 P         P         19 20 46.0 +0.4
      baz=39
N49A                             P         P         19 20 46.0 +0.4
      baz=39
P52A  Corning          39.49 262 P         P         19 20 45.8  0.0
AGMN  Agassiz Nation   39.62 283 P         P         19 20 45.8 -0.9
AGMN                             IAmb      IAmb      19 20 49.3
      comp=Z,27nm,0.9s
AGMN  Agassiz Nation   39.62 283 P         P         19 20 46.5 -0.2
      baz=45,SNR=13
AGMN  Agassiz Nation   39.62 283 P         P         19 20 46.3 -0.4
      baz=45,SNR=13
BELG  Belogornoye      39.78  68 LR        LR        19 37 06.9
      comp=Z,357nm,19.1s,baz=316,slow=36
BELG  Belogornoye      39.78  68 i P       P         19 20 50.6 +2.6
BELG                             pmax      pmax
      comp=Z,4.0nm,0.9s
P51A  Williamsport     40.06 263 P         P         19 20 50.9 +0.5
P51A                             IAmb      IAmb      19 20 53.4
      comp=Z,26nm,0.9s
K43A  Burlington       40.12 271 P         P         19 20 50.1 -0.8
K43A                             IAmb      IAmb      19 20 54.4
      comp=Z,43nm,1.1s
O49A  Covington        40.12 265 P         P         19 20 51.1 +0.2
O49A                             IAmb      IAmb      19 20 56.8
      comp=Z,32nm,1.1s
INK   Inuvik           40.25 326 P         P         19 20 50.8 -0.9
      comp=Z,1.7nm,0.8s,baz=36,slow=12,SNR=7.8
INK                              LR        LR        19 37 33.3
      comp=Z,551nm,18.9s,baz=30,slow=36
      comp=Z,1.7nm,0.8s
INK   Inuvik           40.25 326 P         P         19 20 50.5 -1.2
INK   Inuvik           40.25 326 P         P         19 20 50.5 -1.2
INK                              pmax      pmax
      comp=Z,7.0nm,1.1s
INK   Inuvik           40.25 326 P         P         19 20 51.2 -0.5
      baz=46
F36A  Milaca           40.27 279 P         P         19 20 51.7 -0.4
F36A  Milaca           40.27 279 P         P         19 20 51.8 -0.3
      baz=43,SNR=7.3
L44A  Lake County Fo   40.31 270 P         P         19 20 52.6 +0.1
L44A  Lake County Fo   40.31 270 P         P         19 20 53.0 +0.5
      baz=40
I40A  Norwalk          40.33 274           P         19 20 53.1 +0.4
I40A                             IAmb      IAmb      19 20 58.1
      comp=Z,59nm,1.8s
SPMN  Marine on St.    40.39 277 P         P         19 20 53.4 +0.3
SPMN                             IAmb      IAmb      19 20 56.1
      comp=Z,32nm,0.8s
SPMN  Marine on St.    40.39 277 P         P         19 20 53.1  0.0
      baz=42,SNR=6.2
SPMN  Marine on St.    40.39 277 P         P         19 20 53.5 +0.4
      baz=42,SNR=6.2
O48B  Farmland         40.46 266 P         P         19 20 53.9 +0.2
      baz=39
Q51A  Peebles          40.55 263 P         P         19 20 54.3 -0.3
Q51A                             IAmb      IAmb      19 20 57.7
      comp=Z,37nm,1.2s
Q51A  Peebles          40.55 263 P         P         19 20 54.9 +0.4
      baz=38
Q51A                             P         P         19 20 54.9 +0.4
      baz=38
S54A  Dingess, Beckl   40.55 260 P         P         19 20 54.6  0.0
S54A                             IAmb      IAmb      19 20 57.4
      comp=Z,45nm,1.3s
MDUB  Mudurnu          40.71  93 P         P         19 20 56.5 +0.5
BORA  Eskisehir        40.81  94 P         P         19 20 58.2 +1.4
P49A  Miami Univ. Ec   40.81 265 P         P         19 20 58.0 +1.3
P49A                             IAmb      IAmb      19 20 59.5
      comp=Z,27nm,1.1s
P49A  Miami Univ. Ec   40.81 265 P         P         19 20 57.8 +1.1
      baz=38
JFWS  Jewell Farm      40.88 273 P         P         19 20 57.5 +0.3
      baz=41
F31M  Tsiigehtchic     40.92 326 P         P         19 20 56.6 -0.6
      baz=45
D32A  Dogwood Acres,   40.99 283 P         P         19 20 59.4 +1.3
D32A                             IAmb      IAmb      19 21 00.6
      comp=Z,18nm,0.8s
P48A  Milroy           41.21 265 P         P         19 20 59.8 -0.1
P48A  Milroy           41.21 265 P         P         19 21 00.2 +0.2
      baz=38
P48A                             P         P         19 21 00.2 +0.2
      baz=38
U56A  King             41.28 258 P         P         19 20 59.0 -1.6
L42A  Oliver, Polo     41.29 272 P         P         19 20 59.0 -1.6
L42A                             IAmb      IAmb      19 21 03.6
      comp=Z,34nm,0.9s
L42A  Oliver, Polo     41.29 272 P         P         19 21 00.2 -0.4
      baz=40
SFIN  Lafayette        41.30 268 P         P         19 21 00.8 +0.1
SFIN                             IAmb      IAmb      19 21 03.7
      comp=Z,20nm,0.9s
SFIN  Lafayette        41.30 268 P         P         19 21 01.7 +1.1
      baz=39
ILGA  Ilgaz            41.48  90 P         P         19 20 60.0 -2.4
ILGA                             IAmb      IAmb      19 21 06.5
      comp=Z,24nm,1.1s
I37A  Lemond, Waseca   41.57 277 P         P         19 21 02.4 -0.5
I37A                             IAmb      IAmb      19 21 06.6
      comp=Z,23nm,0.9s
I37B  Waseca           41.57 277 P         P         19 21 03.8 +0.9
      baz=42,SNR=5.1
F33A  5 Mile Ranch,    41.60 281 P         P         19 21 02.7 -0.4
F33A                             IAmb      IAmb      19 21 08.2
      comp=Z,67nm,1.6s
F33A  5 Mile Ranch,    41.60 281 P         P         19 21 03.6 +0.6
      baz=42,SNR=5.9
R50A  Paris            41.61 263 P         P         19 21 03.2 -0.1
R50A                             IAmb      IAmb      19 21 08.5
      comp=Z,55nm,1.6s
R50A  Paris            41.61 263 P         P         19 21 03.4 +0.2
      baz=37
R50A                             P         P         19 21 03.4 +0.2
      baz=37
HILA  High Level       41.62 308 P         P         19 21 03.0 -0.1
ARU   Arti             41.66  56 LR        LR        19 37 16.7
      comp=Z,658nm,18.7s,baz=308,slow=35
ARU   Arti             41.66  56 P         P         19 21 03.3 -0.2
ARU   Arti             41.66  56c iP       P         19 21 04.3 +0.8
ARU                                                  19 22 39.5
ARU                              S         S         19 27 22.3 +3.0
ARU                              SS        SS        19 30 22.3 -1.8
ARU                              pmax      pmax
      comp=Z,9.0nm,1.2s
ARU                              MLR       MLR
      comp=Z,643nm,17.0s
MDND  Maddock          41.69 285 P         P         19 21 04.7 +0.8
MDND  Maddock          41.69 285 P         P         19 21 04.5 +0.6
      baz=44
NRIK  Noril'sk         41.71  29 P         P         19 21 04.8 +1.0
      comp=Z,14nm,1.1s,baz=305,slow=4.7,SNR=13
NRIK                             LR        LR        19 38 35.5
      comp=Z,217nm,20.7s,baz=331,slow=36
      comp=Z,14nm,1.1s
NRIK  Noril'sk         41.71  29 P         P         19 21 05.0 +1.3
NRIK  Noril'sk         41.71  29ceP        P         19 21 05.7 +2.0
NRIK                             pmax      pmax
      comp=Z,18nm,1.1s
S51A  Beattyville      41.77 262 P         P         19 21 03.8 -0.7
S51A                             IAmb      IAmb      19 21 07.6
      comp=Z,25nm,1.1s
S51A  Beattyville      41.77 262 P         P         19 21 04.4 -0.2
      baz=37
S51A                             P         P         19 21 04.4 -0.2
      baz=37
C27K  Jago River       41.80 332 P         P         19 21 04.0 -0.5
      baz=40
IDI   Anoyia           41.83 104 LR        LR        19 41 58.9
      comp=Z,217nm,19.3s,baz=312,slow=41
C26K  Camden Bay       41.85 333 P         P         19 21 04.6 -0.2
      baz=40
G30M  tAoh Zraii Nji   41.92 326 P         P         19 21 05.3 -0.3
      baz=43
L40A  Anamosa          42.00 273 P         P         19 21 06.2 -0.1
L40A                             IAmb      IAmb      19 21 12.1
      comp=Z,26nm,0.9s
L40A  Anamosa          42.00 273 P         P         19 21 06.6 +0.2
      baz=40
HDIL  Hopedale         42.22 270 P         P         19 21 07.7 -0.5
HDIL  Hopedale         42.22 270 P         P         19 21 07.8 -0.4
      baz=39
K38A  Parkersburg      42.30 275 P         P         19 21 08.7 -0.2
E27K  Coleen River     42.40 330 P         P         19 21 08.8 -0.6
      baz=41
SOC   Sochi            42.44  83 eP        P         19 21 10.2 +0.2
SOC                              e                   19 22 48.9
SOC                              ePPP      PPP       19 23 30.1
SOC                              eS        S         19 27 34.7 +3.7
SOC                              eSS       SS        19 30 41.3 +1.5
SOC                              eSSS      SSS       19 31 23.2
SOC                              MLR       MLR
      comp=Z,241nm,16.0s
BR131 Keskin Array S   42.47  92 P         P         19 21 11.3 +0.9
BR131                            IAmb      IAmb      19 21 14.5
      comp=Z,21nm,1.0s
BR131 Keskin Array S   42.47  92 P         P         19 21 11.3 +0.9
BR131                            pmax      pmax
      comp=Z,21nm,1.0s
BRTR  Keskin Array B   42.47  92 P         P         19 21 11.5 +1.1
      comp=Z,7.9nm,0.9s,baz=319,slow=4.2,SNR=30
      comp=Z,7.9nm,0.9s
BRTR  Keskin Array B   42.47  92 i P       P         19 21 12.1 +1.7
BRTR                             pmax      pmax
      comp=Z,8.0nm,0.9s
EPYK  Eagle Plains     42.51 326 P         P         19 21 09.8 -0.5
      baz=42
WCI   Wyandotte Cave   42.59 265 P         P         19 21 10.9 -0.3
WCI                              IAmb      IAmb      19 21 14.4
      comp=Z,20nm,0.8s
WCI   Wyandotte Cave   42.59 265 P         P         19 21 11.0 -0.3
WCI                              pmax      pmax
      comp=Z,20nm,0.9s
WCI   Wyandotte Cave   42.59 265 P         P         19 21 11.7 +0.5
      baz=37
TZTN  Tazewell         42.62 261 P         P         19 21 12.6 +1.1
TZTN                             IAmb      IAmb      19 21 18.1
      comp=Z,37nm,1.2s
TZTN  Tazewell         42.62 261 P         P         19 21 12.2 +0.7
      baz=36
D25K  Kavik River      42.63 333 P         P         19 21 10.6 -0.8
      baz=38
C24K  Franklin Bluff   42.82 334 P         P         19 21 12.2 -0.6
      baz=37
N41A  Harden Midland   42.86 271 P         P         19 21 13.4  0.0
N41A                             IAmb      IAmb      19 21 16.6
      comp=Z,24nm,0.9s
P43A  Skaggs, Pawnee   43.04 269 P         P         19 21 15.3 +0.5
P43A                             IAmb      IAmb      19 21 18.2
      comp=Z,33nm,1.1s
SCIA  State Center     43.08 274 P         P         19 21 15.5 +0.4
SCIA                             IAmb      IAmb      19 21 18.2
      comp=Z,25nm,0.8s
SCIA  State Center     43.08 274 P         P         19 21 15.8 +0.6
      baz=40
KOTAN Kotaneelee Air   43.09 313 P         P         19 21 14.9 -0.2
      baz=44
ECSD  EROS Data Cent   43.32 279 P         P         19 21 17.2 +0.1
ECSD                             IAmb      IAmb      19 21 22.5
      comp=Z,64nm,1.9s
ECSD  EROS Data Cent   43.32 279 P         P         19 21 17.9 +0.8
      baz=41,SNR=8.6
ECSD  EROS Data Cent   43.32 279 P         P         19 21 17.3 +0.2
      baz=41,SNR=8.6
DGMT  Dagmar           43.35 289 P         P         19 21 17.6 +0.2
DGMT                             IAmb      IAmb      19 21 20.9
      comp=Z,32nm,1.0s
DGMT  Dagmar           43.35 289 P         P         19 21 18.3 +1.0
      baz=43,SNR=6.0
DGMT  Dagmar           43.35 289 P         P         19 21 18.5 +1.2
      baz=43,SNR=6.0
Q44A  Meyer Farm, Va   43.38 268 P         P         19 21 17.2 -0.4
Q44A                             IAmb      IAmb      19 21 20.7
      comp=Z,29nm,0.9s
F26K  Sheenjek River   43.40 330 P         P         19 21 17.0 -0.5
      baz=39
E25K  Arctic Village   43.40 331 P         P         19 21 17.1 -0.4
      baz=38
TKL   Tuckaleechee C   43.45 260 LR        LR        19 37 39.5
      comp=Z,244nm,21.0s,baz=34,slow=34
G27K  Doyon Strip      43.47 328 P         P         19 21 17.7 -0.4
      baz=40
KIV   Kislovodsk       43.58  80 ⇑P        P         19 21 21.4 +2.1
KIV   Kislovodsk       43.58  80 P         P         19 21 19.5 +0.2
KIV   Kislovodsk       43.58  80 eP        P         19 21 20.7 +1.4
KIV                              pmax      pmax
      comp=Z,10.0nm,1.0s
KIV                              MLR       MLR
      comp=Z,176nm,16.0s
BG3   Lake Jocassee    43.59 259 P         P         19 21 19.1 -0.3
BG3                              IAmb      IAmb      19 21 23.0
      comp=Z,20nm,1.1s
V51A  Loudon           43.60 261 P         P         19 21 19.3 -0.2
MMPY  Sheldon Lake,    43.68 319 P         P         19 21 19.9  0.0
      baz=43
I29M  Ogilvie Camp,    43.70 325 P         P         19 21 19.6 -0.3
I29M  Ogilvie Camp,    43.70 325 P         P         19 21 20.1 +0.2
      baz=41
SHA1  Shidzhatmaz      43.73  80 i P       P         19 21 21.7 +1.0
F25K  Christian Rive   43.83 331 P         P         19 21 20.6 -0.5
      baz=38
KBZ   Khabaz           43.85  80 P         P         19 21 22.4 +1.1
      comp=Z,12nm,0.9s,baz=315,slow=8.1,SNR=19
KBZ                              LR        LR        19 40 16.0
      comp=Z,250nm,20.9s,baz=320,slow=37
      comp=Z,12nm,0.9s
KBZ   Khabaz           43.85  80ceP        P         19 21 22.7 +1.4
KBZ                              pmax      pmax
      comp=Z,14nm,0.9s
D23K  Nanushuk River   43.85 334 P         P         19 21 20.3 -0.7
      baz=36
TOLK  Toolik Lake Re   43.88 333 P         P         19 21 19.9 -1.4
TOLK                             IAmb      IAmb      19 21 31.7
      comp=Z,22nm,1.4s
TOLK  Toolik Lake Re   43.88 333 P         P         19 21 20.6 -0.8
      baz=36
H27K  Steamboat Moun   43.89 328 P         P         19 21 21.0 -0.4
      baz=39
G26K  Porcupine Rive   43.89 329 P         P         19 21 21.2 -0.2
      baz=38
SUSD  Miller           43.90 281 P         P         19 21 21.7 -0.1
SUSD                             IAmb      IAmb      19 21 31.2
      comp=Z,18nm,0.7s
SUSD  Miller           43.90 281 P         P         19 21 22.3 +0.5
      baz=41
N38A  Joes South For   43.94 273 P         P         19 21 22.0 -0.2
N38A                             IAmb      IAmb      19 21 24.7
      comp=Z,23nm,0.8s
CPCT  Cooper Cave      43.97 261 P         P         19 21 23.5 +1.1
CPCT                             IAmb      IAmb      19 21 26.1
      comp=Z,22nm,1.1s
E24K  Your Creek       44.10 332 P         P         19 21 23.0 -0.1
      baz=36
BNN   Bunyan           44.21  91 P         P         19 21 25.6 +1.1
BNN                              IAmb      IAmb      19 21 32.0
      comp=Z,31nm,1.1s
CLTN  Cedars of Leba   44.32 263 P         P         19 21 26.7 +1.5
CLTN                             IAmb      IAmb      19 21 30.6
      comp=Z,22nm,1.3s
P40A  Paris            44.35 271 P         P         19 21 25.0 -0.4
P40A  Paris            44.35 271 P         P         19 21 25.4  0.0
      baz=38,SNR=9.4
I27K  Kandik River     44.40 327 P         P         19 21 24.7 -0.9
      baz=39
F24K  Squaw Lake       44.41 332 P         P         19 21 24.4 -1.2
      baz=36
S44A  Carbondale       44.45 267 P         P         19 21 27.9 +1.7
S44A                             IAmb      IAmb      19 21 29.9
      comp=Z,24nm,1.2s
W50A  Signal Mountai   44.55 261 P         P         19 21 27.4 +0.3
W50A                             IAmb      IAmb      19 21 36.9
      comp=Z,28nm,1.4s
G25K  Bearman Lake     44.60 330 P         P         19 21 26.3 -0.8
      baz=37
FARO  Faro, Yukon      44.62 320 P         P         19 21 27.3 -0.1
      baz=41
K29M  Barlow Dome      44.64 324 P         P         19 21 27.1 -0.5
      baz=40
TAM   Tamanrasset      44.67 134 P         P         19 21 28.9 +0.6
TAM   Tamanrasset      44.67 134 P         P         19 21 28.9 +0.6
TAM                              pmax      pmax
      comp=Z,13nm,1.1s
E22K  Anaktuvuk Pass   44.77 334 P         P         19 21 27.9 -0.6
      baz=34
FVM   French Village   44.78 269 P         P         19 21 29.1 +0.2
FVM   French Village   44.78 269 P         P         19 21 29.1 +0.2
FVM                              pmax      pmax
      comp=Z,66nm,1.9s
SWET  Sewanee          44.83 262 P         P         19 21 30.1 +0.7
V48A  Smith Brothers   44.84 263 P         P         19 21 29.6 +0.2
V48A                             IAmb      IAmb      19 21 33.5
      comp=Z,32nm,1.4s
WAPA  Wapiti River     44.88 306 P         P         19 21 30.5 +1.0
WAPA                             IAmb      IAmb      19 21 33.2
      comp=Z,19nm,1.1s
CGM3  Cape Girardeau   44.95 267 P         P         19 21 30.7 +0.5
CGM3                             IAmb      IAmb      19 21 33.9
      comp=Z,26nm,1.4s
M31M  Drury Creek, Y   44.97 321 P         P         19 21 28.7 -1.4
      baz=41
G24K  Hadweenzic Riv   44.98 331 P         P         19 21 29.2 -1.0
      baz=36
P38A  Dawn             44.99 273 P         P         19 21 29.7 -0.8
DAWY  Dawson           44.99 325 P         P         19 21 30.4 +0.1
DAWY  Dawson           44.99 325 P         P         19 21 30.5 +0.1
      baz=39
WVT   Waverly          45.01 265 P         P         19 21 29.4 -1.3
WVT                              IAmb      IAmb      19 21 33.3
      comp=Z,12nm,0.9s
WVT   Waverly          45.01 265 P         P         19 21 29.4 -1.3
WVT                              pmax      pmax
      comp=Z,13nm,0.9s
WVT   Waverly          45.01 265 P         P         19 21 30.7  0.0
      baz=36
I26K  Coal Creek Min   45.03 328 P         P         19 21 30.1 -0.5
      baz=38
CCM   Cathedral Cave   45.12 269 P         P         19 21 31.0 -0.5
CCM                              IAmb      IAmb      19 21 36.5
      comp=Z,16nm,0.8s
CCM   Cathedral Cave   45.12 269 P         P         19 21 31.0 -0.5
CCM                              pmax      pmax
      comp=Z,16nm,0.8s
CCM   Cathedral Cave   45.12 269 P         P         19 21 31.9 +0.3
      baz=38
CCM   Cathedral Cave   45.12 269 P         P         19 21 31.4 -0.2
      baz=38,SNR=9.0
COLD  Coldfoot         45.17 333 P         P         19 21 31.9 +0.3
COLD  Coldfoot         45.17 333 P         P         19 21 31.6 -0.1
      baz=35
K31A  O'Neill          45.18 280 P         P         19 21 31.5 -0.5
M30M  Minto, Yukon     45.40 322 P         P         19 21 32.6 -1.0
      baz=40
R40A  Maddies Statio   45.43 270 P         P         19 21 33.6 -0.4
R40A                             IAmb      IAmb      19 21 43.0
      comp=Z,18nm,1.2s
R40A  Maddies Statio   45.43 270 P         P         19 21 33.9 -0.1
      baz=38
PRP   Porcupine Dome   45.46 329 P         P         19 21 33.9 -0.2
      baz=37
KOPT  Kop Dagi         45.55  85 P         P         19 21 36.5 +1.3
KOPT                             IAmb      IAmb      19 21 50.7
      comp=Z,19nm,1.3s
G23K  Bananza Creek    45.56 332 P         P         19 21 34.5 -0.2
      baz=35
LAO   LASA Array       45.59 289 P         P         19 21 36.0 +0.6
LAO   LASA Array       45.59 289 P         P         19 21 36.9 +1.6
      baz=41,SNR=7.8
AKTO  Aktyubinsk       45.74  63 LR        LR        19 40 25.7
      comp=Z,293nm,18.3s,baz=58,slow=36
PBMO  Poplar Bluff     45.74 267 P         P         19 21 35.0 -1.4
H24K  Noodor Dome      45.78 330 P         P         19 21 36.3 -0.2
H24K  Noodor Dome      45.78 330 P         P         19 21 36.6 +0.1
      baz=35
J26L  Joseph Creek     45.78 327 P         P         19 21 36.4 -0.2
J26L  Joseph Creek     45.78 327 P         P         19 21 36.5 -0.1
      baz=37
BGNE  Belgrade         45.83 278 P         P         19 21 34.8 -2.4
LNXT  Lenox            45.83 266 P         P         19 21 37.1 -0.1
F21K  Alatna River     45.89 334 P         P         19 21 37.3  0.0
      baz=33
AKH   Akhalkalaki      45.90  82 P         P         19 21 37.8 -0.2
AKH   Akhalkalaki      45.90  82 P         P         19 21 37.8 -0.2
AKH                              pmax      pmax
      comp=Z,82nm,1.5s
N31M  Braeburn, Yuko   45.94 321 P         P         19 21 37.7 -0.2
      baz=40
X48A  Hartselle        45.99 262 P         P         19 21 37.9 -0.6
X48A                             IAmb      IAmb      19 21 41.1
      comp=Z,16nm,0.9s
X48A  Hartselle        45.99 262 P         P         19 21 38.0 -0.4
      baz=35
P33M  Teslin, Yukon    45.99 318 P         P         19 21 39.0 +0.7
      baz=40
M29M  Somme Creek      46.00 323 P         P         19 21 39.1 +0.8
      baz=39
N33A  J Bar K, Exete   46.01 277 P         P         19 21 39.1 +0.5
PLAL  Pickwick Lake    46.05 264 P         P         19 21 40.4 +1.5
PLAL                             IAmb      IAmb      19 21 43.8
      comp=Z,18nm,1.0s
CSS   Mathiatis        46.10  96 P         P         19 21 39.6 +0.1
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CSS				IAmb	IAmb	19 21 47.0	
	comp=Z,18nm,0.9s						
Y49A	Blount Mountai	46.17	261	P	P	19 21 40.1	+0.2
Y49A				IAmb	IAmb	19 21 42.8	
	comp=Z,22nm,1.1s						
H23K	Yukon River	46.18	331	P	P	19 21 40.1	+0.5
H23K				IAmb	IAmb	19 21 51.2	
	comp=Z,17nm,1.4s						
H23K	Yukon River	46.18	331	P	P	19 21 39.9	+0.2
	baz=34						
EGMT	Eagleton	46.19	293	P	P	19 21 40.1	+0.1
EGMT	Eagleton	46.19	293	P	P	19 21 40.5	+0.5
	baz=41,SNR=14						
GNAR	Gosnell	46.19	266	P	P	19 21 39.3	-0.8
GAZ	Gaziantep	46.20	91	P	P	19 21 40.0	-0.3
GAZ				IAmb	IAmb	19 21 45.6	
	comp=Z,17nm,1.2s						
KARS	Kars	46.31	83	P	P	19 21 41.3	+0.1
KARS	Kars	46.31	83	P	P	19 21 41.3	+0.1
KARS				pmax	pmax		
	comp=Z,104nm,1.5s						
SCRK	Sand Creek	46.31	327	P	P	19 21 41.2	+0.4
	baz=37						
TIXI	Tiksi	46.31	10	P	P	19 21 41.3	+0.8
TIXI				IAmb	IAmb	19 21 44.2	
	comp=Z,9.2nm,0.9s						
TIXI	Tiksi	46.31	10*ce*	P	P	19 21 42.3	+1.8
TIXI				pmax	pmax		
	comp=Z,14nm,1.3s						
IL31		46.41	329	P	P	19 21 41.1	-0.2
IL31				IAmb	IAmb	19 23 18.6	
	comp=Z,38nm,2.0s						
ILAR	Eielson Array	46.41	329	P	P	19 21 41.5	+0.1
	comp=Z,1.5nm,0.9s,baz=34,slow=6.9,SNR=11						
ILAR				PcP	PcP	19 23 15.2	-0.7
	comp=Z,2.2nm,0.8s,baz=352,slow=2.2,SNR=11						
ILAR				LR	LR	19 41 16.2	
	comp=Z,517nm,22.0s,baz=26,slow=36						
	comp=Z,1.5nm,0.9s						
ILAR	Eielson Array	46.41	329	P	P	19 21 41.1	-0.3
S39A	Bolivar	46.41	271	P	P	19 21 41.2	-0.6
S39A	Bolivar	46.41	271	P	P	19 21 41.4	-0.4
	baz=37,SNR=16						
DLBC	Dease Lake	46.41	315	LR	LR	19 40 49.7	
	comp=Z,695nm,18.1s,baz=96,slow=36						
DLBC	Dease Lake	46.41	315	P	P	19 21 41.9	+0.3
	baz=40						
BCAR	Beaver Creek A	46.45	325	P	P	19 21 41.5	-0.3
L27K	Beaver Creek,	46.46	325	P	P	19 21 42.0	0.0
L27K	Beaver Creek,	46.46	325	P	P	19 21 41.2	-0.8
	baz=37						
G21K	Allakaket	46.49	333	P	P	19 21 41.7	-0.3
	baz=32						
RSSD	Black Hills	46.53	285	P	P	19 21 43.5	+0.6
RSSD				IAmb	IAmb	19 21 48.2	
	comp=Z,40nm,1.9s						
RSSD	Black Hills	46.53	285	P	P	19 21 43.5	+0.6
RSSD				pmax	pmax		
	comp=Z,40nm,2.0s						
RSSD	Black Hills	46.53	285	P	P	19 21 44.1	+1.2
	baz=40						
H22K	Ishtalitna Cre	46.55	332	P	P	19 21 42.5	0.0
	baz=33						
COLA	College	46.56	330	P	P	19 21 42.8	+0.2
	baz=35						
TCOL	CIGO, UAF Yank	46.56	330	P	P	19 21 42.5	-0.2
	baz=35						
MDM	Murphy Dome	46.58	330	P	P	19 21 42.9	+0.1
MDM				IAmb	IAmb	19 21 53.9	
	comp=Z,16nm,1.4s						
O30N	Mendenhall	46.59	320	P	P	19 21 42.8	-0.2
	baz=39						
DOT	Dot Lake	46.59	327	P	P	19 21 44.5	+1.5
DOT				IAmb	IAmb	19 22 53.0	
	comp=Z,24nm,1.7s						
LCAR	Lake Charles	46.66	268	P	P	19 21 43.5	-0.2
LCAR				IAmb	IAmb	19 21 46.4	
	comp=Z,16nm,1.1s						
I23K	Minto, Yukon-K	46.70	330	P	P	19 21 43.9	+0.3
	baz=34						
HDA	Harding Lake	46.72	329	P	P	19 21 44.4	+0.5
	baz=35						
RIDG	Independent Ri	46.73	327	P	P	19 21 45.2	+1.2
RIDG	Independent Ri	46.73	327	P	P	19 21 44.9	+0.9
	baz=36						
P32M	Atlin	46.76	318	P	P	19 21 43.6	-0.7
	baz=39						
KSU1	Kansas State U	46.88	275	P	P	19 21 45.1	-0.3
KSU1	Kansas State U	46.88	275	P	P	19 21 45.7	+0.3
	baz=38						
L26K	Log Cabin Wild	46.91	326	P	P	19 21 45.5	+0.1
	baz=36						
K24K	Donnelly Dome	46.92	328	P	P	19 21 45.9	+0.4
	baz=36						
HYT	Haines Junctio	46.98	321	P	P	19 21 46.0	-0.2
	baz=38						
RDOG	Red Dog Mine	46.98	339	P	P	19 21 44.4	-1.5
RDOG				IAmb	IAmb	19 21 58.4	
	comp=Z,12nm,1.2s						
RDOG	Red Dog Mine	46.98	339	P	P	19 21 46.1	+0.2
	baz=28						
IMAR	Indian Mountai	47.00	333	P	P	19 21 46.2	+0.1
H21K	Melozitna Rive	47.07	333	P	P	19 21 46.9	+0.3
H21K	Melozitna Rive	47.07	333	P	P	19 21 47.0	+0.4
	baz=32						
OXF	Oxford	47.07	265	P	P	19 21 48.4	+1.4
	baz=35						
NEA2	Nenana	47.09	330	P	P	19 21 46.3	-0.5
	baz=34						
LRAL	Lakeview Retre	47.12	261	P	P	19 21 47.0	-0.3
LRAL				IAmb	IAmb	19 21 50.3	
	comp=Z,18nm,1.1s						
LRAL	Lakeview Retre	47.12	261	P	P	19 21 48.0	+0.6
	baz=34						
LRAL	Lakeview Retre	47.12	261	P	P	19 21 47.7	+0.3
	baz=34						
MLY	Manley	47.12	331	P	P	19 21 46.6	-0.5
MLY				IAmb	IAmb	19 23 16.2	
	comp=Z,21nm,1.9s						
MLY	Manley	47.12	331	P	P	19 21 46.8	-0.3
	baz=33						
ZKTA	Zakatala	47.22	79	P	P	19 21 47.9	-0.2
WALA	Waterton Lakes	47.23	297	P	P	19 21 47.7	-0.5
BBTS	Babate	47.23	166	LR	LR	19 38 47.4	
	comp=Z,198nm,20.1s,baz=359,slow=32						
U40A	Yellville	47.25	269	P	P	19 21 48.4	0.0
	baz=36,SNR=14						
U40A				P	P	19 21 48.4	0.0
	baz=36,SNR=14						
FCAR	Ozark Folk Cen	47.27	268	P	P	19 21 48.2	-0.3
I21K	Tanana	47.28	332	P	P	19 21 48.1	-0.1
I21K	Tanana	47.28	332	P	P	19 21 48.7	+0.5
	baz=33						
ABKAR	Akbulak array	47.45	63	P	P	19 21 50.2	+0.4
ABKAR	Akbulak array	47.45	63	P	P	19 21 50.5	+0.7
ABKAR				IAmb	IAmb	19 21 55.3	
	comp=Z,18nm,1.7s						
GNI	Garni	47.48	82	LR	LR	19 40 43.1	
	comp=Z,132nm,20.9s,baz=328,slow=35						
GNI	Garni	47.48	82	P	P	19 21 51.8	+1.5
GNI	Garni	47.48	82*ce*	P	P	19 21 51.2	+0.9
GNI				pmax	pmax		
	comp=Z,37nm,1.7s						
PAX	Paxson	47.52	327	P	P	19 21 51.1	+0.9
	baz=35						
PLBC	Pleasant Camp	47.71	319	P	P	19 21 52.7	+1.1
	baz=38						
O29M	Mount Kennedy	47.72	321	P	P	19 21 51.1	-0.7
	baz=37						
MCK	McKinley	47.77	329	P	P	19 21 51.8	-0.3
	baz=34						
SEKA	Sheki	47.82	79	P	P	19 21 52.9	+0.1
O28M	Mount Upton	47.83	322	P	P	19 21 53.3	+0.4
	baz=37						
WHAR	Wooly Hollow	47.83	268	P	P	19 21 52.2	-0.6
HHAR	Hobbs	47.83	270	P	P	19 21 52.9	0.0
GANJ	Ganja	47.84	80	P	P	19 21 52.8	-0.2
U38A	Gravette	47.92	271	P	P	19 21 52.8	-0.8
U38A				IAmb	IAmb	19 21 57.9	
	comp=Z,11nm,0.8s						
U38A	Gravette	47.92	271	P	P	19 21 53.2	-0.4
	baz=37						
BPAW	Bear Paw Mtn.	47.96	330	P	P	19 21 53.3	-0.3
	baz=33						
OGNE	Ogallala	48.03	281	P	P	19 21 55.1	+0.6
OGNE	Ogallala	48.03	281	P	P	19 21 56.1	+1.6
	baz=39						
HRY	Holter Researc	48.10	293	P	P	19 21 53.8	-1.2
MNGR	Mingechevir, A	48.11	79	P	P	19 21 54.8	-0.1
GEVA	Gevas	48.12	85	P	P	19 21 55.9	+0.6
RLMT	Red Lodge	48.17	290	P	P	19 21 55.0	-0.6
RLMT	Red Lodge	48.17	290	P	P	19 21 56.7	+1.1
	baz=40,SNR=9.5						
UALR	University of	48.27	268		P	19 21 56.4	+0.1
N25K	Chitina, Valde	48.41	325	P	P	19 21 57.7	+0.6
	baz=35						
R32A	Long Quarter,	48.43	276	P	P	19 21 57.0	-0.4
R32A				IAmb	IAmb	19 22 06.0	
	comp=Z,22nm,1.1s						
RLO	Rose Lookout	48.45	271	P	P	19 21 56.0	-1.6
RLO				IAmb	IAmb	19 22 12.9	
	comp=Z,17nm,0.7s						
CHUM	Lake Minchumin	48.46	331	P	P	19 21 57.2	-0.2
	baz=32						
T35A	Sooner Cattle	48.56	273		P	19 21 58.4	-0.1
T35A				IAmb	IAmb	19 22 07.7	
	comp=Z,20nm,1.2s						
NAX	Nakhchivan	48.60	82	P	P	19 21 58.9	0.0
MMAI	Mount Meron Ar	48.68	96	LR	LR	19 43 32.7	
	comp=Z,106nm,20.7s,baz=203,slow=37						
BRVK	Borovoye	48.76	53	P	P	19 22 00.6	+0.8
BRVK	Borovoye	48.76	53	P	P	19 22 00.6	+0.8
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
K22A	Casper	48.82	286	P	P	19 22 00.2	-0.4
K22A				IAmb	IAmb	19 22 02.8	
	comp=Z,14nm,0.9s						
K22A	Casper	48.82	286	P	P	19 22 01.1	+0.5
	baz=39						
BVAR	Borovoye Array	48.82	53	LR	LR	19 41 45.0	
	comp=Z,198nm,18.3s,baz=321,slow=35						
YMP	Mirror Lake Pl	48.87	290	P	P	19 22 00.1	-1.1
YMP				IAmb	IAmb	19 22 04.5	
	comp=Z,16nm,0.8s						
BOZ	Bozeman (W)	48.87	292	P	P	19 22 01.1	+0.1
BOZ				IAmb	IAmb	19 22 04.3	
	comp=Z,14nm,1.0s						
BOZ	Bozeman (W)	48.87	292	P	P	19 22 01.1	+0.1
BOZ				pmax	pmax		
	comp=Z,14nm,1.0s						
BOZ	Bozeman (W)	48.87	292	P	P	19 22 01.9	+1.0
	baz=40,SNR=10.0						
MSO	Missoula	48.94	295	P	P	19 22 00.5	-0.9
MSO				IAmb	IAmb	19 22 06.2	
	comp=Z,12nm,1.2s						
MSO	Missoula	48.94	295	P	P	19 22 01.3	-0.2
	baz=40						
KAN13	South Haven SW	48.95	274	P	P	19 22 00.4	-1.1
KAN12	Harper NE Stat	48.98	274	P	P	19 22 00.3	-1.4
KAN08	Anthony NE Sta	49.02	274	P	P	19 22 00.9	-1.2
TUL1	Leonard	49.02	272	P	P	19 22 00.8	-1.2
TUL1				IAmb	IAmb	19 22 04.6	
	comp=Z,21nm,1.1s						
BLOK	Blackwell	49.03	273		P	19 22 01.7	-0.4
YUF	Upper Falls	49.05	290	P	P	19 22 02.4	0.0
YUF				IAmb	IAmb	19 22 13.4	
	comp=Z,29nm,1.4s						
MIAR	Mount Ida	49.05	269	P	P	19 22 01.9	-0.3
MIAR	Mount Ida	49.05	269	P	P	19 22 02.0	-0.3
MIAR				pmax	pmax		
	comp=Z,36nm,1.4s						
MIAR	Mount Ida	49.05	269	P	P	19 22 02.4	+0.1
	baz=36,SNR=5.6						
MIAR	Mount Ida	49.05	269	P	P	19 22 01.6	-0.7
	baz=36,SNR=5.6						
LRM	Limekiln Ridge	49.06	293	P	P	19 22 01.9	-0.7
KAN17	Caldwell West	49.06	274	P	P	19 22 01.2	-1.2
KAN05	Bluff City Nor	49.07	274	P	P	19 22 04.0	+1.6
LKWY	Lake	49.11	290	P	P	19 22 03.9	+0.9
LKWY	Lake	49.11	290	P	P	19 22 03.9	+0.9
LKWY				pmax	pmax		
	comp=Z,6.0nm,0.8s						
YNR	Norris Junctio	49.12	291	P	P	19 22 03.3	+0.2
OK044	Pawnee Station	49.13	273		P	19 22 02.1	-0.8
OK045	Pawnee Station	49.14	273	P	P	19 22 02.5	-0.4
OK046	Pawnee Station	49.17	273		P	19 22 02.4	-0.8
OK050	Pawnee Station	49.21	273	P	P	19 22 03.0	-0.5
NEW	Newport	49.22	298	LR	LR	19 42 16.6	
	comp=Z,920nm,18.8s,baz=30,slow=35						
NEW	Newport	49.22	298	P	P	19 22 03.5	0.0
NEW	Newport	49.22	298	P	P	19 22 03.5	0.0
NEW				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NEW	Newport	49.22	298	P	P	19 22 03.1	-0.4
	baz=40						
KAN14	Manchester OK	49.23	274	P	P	19 22 02.7	-1.0
QUOK	Quay	49.25	273	P	P	19 22 03.6	-0.2
QUOK				IAmb	IAmb	19 22 08.3	
	comp=Z,14nm,0.8s						
YMR	Madison River	49.29	291	P	P	19 22 05.0	+0.8
K20K	Telida	49.32	332	P	P	19 22 03.4	-0.6
K20K				IAmb	IAmb	19 22 17.1	
	comp=Z,24nm,1.2s						
K20K	Telida	49.32	332	P	P	19 22 04.4	+0.4
	baz=31						
H17A	Grant Village	49.32	290	P	P	19 22 05.7	+1.1
H17A				IAmb	IAmb	19 22 09.2	
	comp=Z,10nm,1.0s						
H17A	Grant Village	49.32	290	P	P	19 22 06.4	+1.8
	baz=39,SNR=7.6						
PHWY	Pilot Hill	49.37	284	P	P	19 22 03.6	-1.4
PHWY				IAmb	IAmb	19 22 07.7	
	comp=Z,9.2nm,0.8s						
QLMT	Earthquake Lak	49.37	291	P	P	19 22 04.8	-0.1
BRIGG	Briggsdale	49.40	282	P	P	19 22 04.6	-0.5
DEOK	Depew	49.42	272	P	P	19 22 04.4	-0.7
DEOK				IAmb	IAmb	19 22 06.8	
	comp=Z,15nm,1.0s						
OK053	SW of W Deep R	49.42	272	P	P	19 22 04.0	-1.1
OK052	Battle Ridge R	49.44	272	P	P	19 22 04.3	-0.9
OK033	Mehan	49.47	273	P	P	19 22 04.7	-0.7
OK032	Salt Plains WL	49.47	274	P	P	19 22 04.5	-1.0
OK032				IAmb	IAmb	19 22 13.5	
	comp=Z,13nm,0.8s						
VBMS	Vicksburg	49.48	264	P	P	19 22 05.1	-0.5
DLMT	Dillon	49.48	292	P	P	19 22 05.6	-0.1
DLMT				IAmb	IAmb	19 22 11.5	
	comp=Z,32nm,1.6s						
OK030	Cody Creek RV	49.49	272	P	P	19 22 05.3	-0.3
143A	Socs Landing,	49.51	265	P	P	19 22 05.3	-0.5
WLAR	White Oak Lake	49.52	267	P	P	19 22 07.5	+1.6
CROK	Carrier	49.60	274	P	P	19 22 05.3	-1.2
FLWY	Flagg Ranch	49.62	290	P	P	19 22 08.1	+1.3
FLWY				IAmb	IAmb	19 22 37.0	
	comp=Z,22nm,1.4s						
KOWA	Kowa	49.69	150	P	P	19 22 07.0	-0.3
KOWA				IAmb	IAmb	19 22 10.4	
	comp=Z,16nm,0.7s						
Z41A	Richland Creek	49.73	267	P	P	19 22 06.2	-1.2
OK035	E0210 Rd and N	49.79	275	P	P	19 22 07.0	-0.9
KSCO	Kaye Shedlock’	49.83	280	P	P	19 22 08.0	-0.4
KSCO	Kaye Shedlock’	49.83	280	P	P	19 22 10.1	+1.7
	baz=38						
IMW	Indian Meadow	49.87	290	P	P	19 22 11.4	+2.6
IMW				IAmb	IAmb	19 22 15.3	
	comp=Z,26nm,1.6s						
X37A	Clayton	49.88	270		P	19 22 08.2	-0.4
X37A				IAmb	IAmb	19 22 11.5	
	comp=Z,17nm,0.8s						
X37A	Clayton	49.88	270	P	P	19 22 08.5	-0.1
	baz=36,SNR=5.6						
RWWY	Rawlins	49.88	285	P	P	19 22 09.0	+0.1
RWWY				IAmb	IAmb	19 22 11.7	
	comp=Z,16nm,0.9s						
SKT	Skwentna	49.90	329	P	P	19 22 08.1	-0.3
	baz=31						
MOOW	Moose Ponds	49.90	290	P	P	19 22 08.7	-0.3
OK029	Liberty Lake	49.91	273	P	P	19 22 08.1	-0.7
N23A	Red Feather La	49.92	284	P	P	19 22 09.3	+0.1
N23A				IAmb	IAmb	19 22 12.6	
	comp=Z,21nm,0.9s						
N23A	Red Feather La	49.92	284	P	P	19 22 10.6	+1.4
	baz=38,SNR=6.4						
NOKA	Waynoka	49.95	275	P	P	19 22 08.1	-1.1
OK038	West end E0370	49.99	274	P	P	19 22 08.3	-1.2
OK038				IAmb	IAmb	19 22 10.1	
	comp=Z,16nm,0.8s						
MCMT	McKenzie Canyo	50.01	292	P	P	19 22 10.0	+0.2
OK025	Westminster Rd	50.03	273	P	P	19 22 08.3	-1.4
C09A	Chrisman Ranch	50.06	298	P	P	19 22 10.0	+0.1
C09A				IAmb	IAmb	19 22 18.1	
	comp=Z,17nm,1.1s						
B08A	Colville Reser	50.08	300	P	P	19 22 09.9	-0.1
B08A				IAmb	IAmb	19 22 20.9	
	comp=Z,16nm,1.2s						
TNA	Tin City	50.10	340	P	P	19 22 09.8	-0.1
TNA	Tin City	50.10	340	P	P	19 22 10.6	+0.7
	baz=24						
FXWY	Fox Creek	50.12	290	P	P	19 22 10.3	-0.3
BW06	Boulder Array	50.13	288	P	P	19 22 08.9	-1.8
BW06				IAmb	IAmb	19 22 12.7	
	comp=Z,12nm,0.8s						
BW06	Boulder Array	50.13	288	P	P	19 22 10.0	-0.7
	baz=38,SNR=16						
PD31	Pinedale Array	50.13	288	P	P	19 22 09.6	-1.1
PD31				IAmb	IAmb	19 22 12.7	
	comp=Z,10nm,0.8s						
PDAR	Pinedale Array	50.13	288	P	P	19 22 09.8	-0.9
	comp=Z,8.7nm,0.8s,baz=60,slow=7.0,SNR=48						
PDAR				LR	LR	19 42 31.4	
	comp=Z,595nm,19.6s,baz=34,slow=35						
	comp=Z,8.7nm,0.8s						
PDAR	Pinedale Array	50.13	288	P	P	19 22 09.3	-1.4
SNOW	Snow King Moun	50.13	290	P	P	19 22 10.8	0.0
SNOW				IAmb	IAmb	19 22 20.0	
	comp=Z,20nm,1.2s						
TTA	Tatalina	50.13	332	P	P	19 22 09.8	-0.4
	baz=29						
SUA	Susitna One	50.14	328	P	P	19 22 09.9	-0.5
W35A	Tecumseh	50.15	272		P	19 22 09.9	-0.8
U32A	Winter Ranch,	50.19	275	P	P	19 22 09.5	-1.5
RC01	Rabbit Creek A	50.20	328	P	P	19 22 09.5	-1.2
	baz=32						
REDW	Red Top Meadow	50.25	290	P	P	19 22 10.9	-0.7
L19K	White Mountain	50.52	331	P	P	19 22 12.6	-0.6
	baz=30						
LKRN	Lenkeran, Azer	50.53	80	P	P	19 22 13.4	-0.1
ANM	Nome	50.57	338	P	P	19 22 13.1	-0.4
ANM	Nome	50.57	338	P	P	19 22 13.1	-0.4
ANM				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ANM	Nome	50.57	338	P	P	19 22 13.9	+0.4
	baz=25						
BILL	Bilibino	50.57	353	P	P	19 22 12.6	-0.8
BILL	Bilibino	50.57	353*c*	*i*P	P	19 22 14.0	+0.6
BILL				*i* *PP	pP	19 22 17.2	-0.2
BILL						19 24 05.0	
BILL				*e*S	S	19 29 36.3	+9.5
BILL				*e*SSS	SSS	19 34 34.3	
BILL				pmax	pmax		
	comp=Z,15nm,1.7s						
BILL				MLR	MLR		
	comp=Z,275nm,17.0s						
ISCO	Idaho Springs	50.62	283	P	P	19 22 13.0	-1.6
ISCO	Idaho Springs	50.62	283	P	P	19 22 13.0	-1.6
ISCO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ISCO	Idaho Springs	50.62	283	P	P	19 22 16.3	+1.7
	baz=38						
CSTR	Hydro, Custer	50.63	274	P	P	19 22 14.4	+0.1
M19K	Big River Lodg	50.65	331	P	P	19 22 13.9	-0.3
M19K				IAmb	IAmb	19 23 14.0	
	comp=Z,42nm,1.9s						
N20K	Mount Spurr	50.74	329	P	P	19 22 15.0	+0.2
	baz=31						
AHID	Auburn Hatcher	50.83	289	P	P	19 22 16.2	+0.2
F10A	Beach Ranch, E	51.04	296	P	P	19 22 16.4	-1.0
SJG	San Juan	51.05	230	LR	LR	19 39 56.1	
	comp=Z,100nm,21.8s,baz=92,slow=31						
X34A	Smith Ranch, M	51.06	272		P	19 22 17.6	+0.1
X34A				IAmb	IAmb	19 22 20.7	
	comp=Z,26nm,1.0s						
Q24A	Divide	51.07	282	P	P	19 22 19.8	+1.9
Q24A				IAmb	IAmb	19 22 23.4	
	comp=Z,16nm,1.2s						
Q24A	Divide	51.07	282	P	P	19 22 20.1	+2.2
	baz=37						
PLID	Pearl Lake	51.20	295	P	P	19 22 18.0	-0.7
PLID				IAmb	IAmb	19 22 29.3	
	comp=Z,16nm,1.1s						
EIL	Elat	51.23	99	LR	LR	19 47 37.1	
	comp=Z,83nm,19.5s,baz=343,slow=40						
LOOK	Love County	51.24	271		P	19 22 19.1	+0.3
WMOK	Wichita Mounta	51.41	273		P	19 22 20.1	-0.1
WMOK				IAmb	IAmb	19 22 29.7	
	comp=Z,22nm,1.1s						
WMOK	Wichita Mounta	51.41	273	P	P	19 22 20.1	-0.1
WMOK				pmax	pmax		
	comp=Z,22nm,1.2s						
WMOK	Wichita Mounta	51.41	273	P	P	19 22 20.3	+0.1
	baz=36,SNR=8.6						
WMOK	Wichita Mounta	51.41	273	P	P	19 22 20.0	-0.2
	baz=36,SNR=8.6						
O20A	White River Ci	51.59	285	P	P	19 22 22.6	+0.9
O20A				IAmb	IAmb	19 22 25.5	
	comp=Z,15nm,0.9s						
O20A	White River Ci	51.59	285	P	P	19 22 23.9	+2.2
	baz=37,SNR=6.8						
BRSE	Bradley Lake S	51.62	327	P	P	19 22 20.0	-1.5
	baz=31						
HLID	Hailey	51.70	292	P	P	19 22 23.3	+0.9
HLID	Hailey	51.70	292	P	P	19 22 23.0	+0.5
	baz=38,SNR=11						
SMCO	Snowmass	51.76	283	P	P	19 22 23.4	+0.2
O20K	Slope Mountain	51.81	329	P	P	19 22 22.5	-0.4
	baz=30						
Z35A	Perchaven, San	51.81	271	P	P	19 22 22.9	-0.3
Z35A				IAmb	IAmb	19 22 26.4	
	comp=Z,20nm,0.9s						
RDMU	Red Mountain	51.86	286	P	P	19 22 23.8	0.0
RDMU				IAmb	IAmb	19 22 26.9	
	comp=Z,23nm,1.1s						
HOM	Homer	51.92	328	P	P	19 22 22.8	-0.8
	baz=30						
BMO	Blue Mountains	51.96	295	P	P	19 22 23.0	-1.3
BMO	Blue Mountains	51.96	295	P	P	19 22 23.0	-1.3
BMO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HWUT	Hardware Ranch	51.96	289	P	P	19 22 24.9	+0.5
WTFS	Witchita Falls	52.04	272		P	19 22 25.1	+0.2
WTFS				IAmb	IAmb	19 22 30.3	
	comp=Z,103nm,1.8s						
T25A	Trinidad	52.17	280	P	P	19 22 26.7	+0.6
T25A				IAmb	IAmb	19 22 32.5	
	comp=Z,20nm,0.9s						
T25A	Trinidad	52.17	280	P	P	19 22 26.9	+0.8
	baz=36,SNR=10						
SDCO	Great Sand Dun	52.20	281	P	P	19 22 26.8	+0.4
SDCO	Great Sand Dun	52.20	281	P	P	19 22 27.4	+1.0
	baz=36,SNR=7.1						
SDCO	Great Sand Dun	52.20	281	P	P	19 22 27.1	+0.7
	baz=36,SNR=7.1						
FW06	Azle	52.25	271	P	P	19 22 26.6	+0.1
FW06				IAmb	IAmb	19 22 29.1	
	comp=Z,20nm,0.7s						
F07A	Phinny Hill Vi	52.26	298	P	P	19 22 27.1	+0.7
F07A				IAmb	IAmb	19 22 37.6	
	comp=Z,15nm,1.1s						
TCUT	Toone Canyon	52.27	288	P	P	19 22 27.0	+0.1
HVU	Hansel Valley	52.37	290	P	P	19 22 27.8	+0.3
HVU	Hansel Valley	52.37	290	P	P	19 22 27.8	+0.3
HVU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BSUT	Blindstream Ca	52.44	287	P	P	19 22 27.9	-0.3
FW03	Perrin-Whitt E	52.44	271	P	P	19 22 28.6	+0.7
FW03				IAmb	IAmb	19 22 30.6	
	comp=Z,17nm,1.0s						
MFID	Camas Ranch	52.45	293	P	P	19 22 27.2	-0.7
TORD	Torodi Ar. Bea	52.50	143	P	P	19 22 27.9	-0.5
	comp=Z,12nm,0.9s,baz=342,slow=6.5,SNR=47						
TORD				LR	LR	19 43 59.1	
	comp=Z,218nm,18.1s,baz=341,slow=35						
	comp=Z,12nm,0.9s						
TORD	Torodi Ar. Bea	52.50	143	P	P	19 22 27.2	-1.2
SPUT	South Promonto	52.60	289	P	P	19 22 28.6	-0.5
SPUT				IAmb	IAmb	19 22 36.5	
	comp=Z,14nm,0.9s						
AMTX	Amarillo	52.69	276	P	P	19 22 28.5	-1.3
AMTX				IAmb	IAmb	19 22 40.4	
	comp=Z,16nm,1.1s						
AMTX	Amarillo	52.69	276	P	P	19 22 30.9	+1.1
	baz=36						
S22A	4UR Ranch, Cre	52.83	282	P	P	19 22 31.8	+0.7
S22A				IAmb	IAmb	19 22 34.8	
	comp=Z,13nm,1.1s						

S22A	4UR Ranch, Cre	52.83	282	P	P	19 22 32.7	+1.6
	baz=36,SNR=13						
P18A	Preston Nutter	52.92	286	P	P	19 22 31.3	-0.5
P18A				IAmb	IAmb	19 22 36.8	
	comp=Z,13nm,1.0s						
WHTX	Lake Whitney,	53.01	270	P	P	19 22 30.9	-1.1
WHTX				IAmb	IAmb	19 22 36.9	
	comp=Z,15nm,0.9s						
O17K	Koliganek Bris	53.16	331	P	P	19 22 33.9	+1.1
	baz=28						
BGU	Big Grassy Mou	53.17	289	P	P	19 22 34.9	+1.6
PV21	Cone Mtn., Par	53.19	284	P	P	19 22 33.9	+0.3
ZAA0	Zalesovo Array	53.24	43	P	P	19 22 35.4	+1.9
ZALV	Zalesovo Beam	53.24	43	P	P	19 22 33.9	+0.4
	comp=Z,2.6nm,0.6s,baz=323,slow=6.7,SNR=12						
ZALV				PcP	PcP	19 23 41.4	+0.3
	comp=Z,1.8nm,0.9s,baz=5.7,slow=2.9,SNR=4.0						
ZALV				LR	LR	19 47 13.3	
	comp=Z,162nm,18.8s,baz=328,slow=38						
	comp=Z,2.6nm,0.6s						
ZALV	Zalesovo Beam	53.24	43	P	P	19 22 33.7	+0.3
ZALV	Zalesovo Beam	53.24	43	i P	P	19 22 35.7	+2.2
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MPU	Maple Canyon	53.26	288	P	P	19 22 36.0	+2.0
P17A	Butcher Ranch,	53.28	286	P	P	19 22 35.0	+0.9
P17A				IAmb	IAmb	19 22 39.1	
	comp=Z,38nm,1.7s						
PV23	Carpenter Ridg	53.29	284	P	P	19 22 37.0	+2.6
PV12	Saucer Basin,	53.30	284	P	P	19 22 35.7	+1.3
PV12				IAmb	IAmb	19 22 39.6	
	comp=Z,30nm,1.6s						
PV01	Paradox Valley	53.34	284	P	P	19 22 35.5	+0.8
PV11	David Mesa, Pa	53.35	284	P	P	19 22 37.2	+2.5
PV11				IAmb	IAmb	19 22 39.9	
	comp=Z,19nm,1.3s						
PV14	Lion Creek, Pa	53.36	284	P	P	19 22 36.1	+1.3
PV14				IAmb	IAmb	19 22 37.7	
	comp=Z,32nm,1.8s						
PV16	Nyswonger Mesa	53.36	284	P	P	19 22 35.5	+0.6
PV16				IAmb	IAmb	19 22 37.9	
	comp=Z,41nm,1.9s						
PV10	Paradox Valley	53.37	284	P	P	19 22 33.5	-1.4
PV10				IAmb	IAmb	19 22 39.0	
	comp=Z,38nm,1.7s						
PV03	Paradox Valley	53.37	284	P	P	19 22 36.0	+1.1
PV17	East Wray Mesa	53.41	284	P	P	19 22 33.0	-2.2
PV18	Skein Mesa, Pa	53.41	284	P	P	19 22 36.0	+0.8
PV18				IAmb	IAmb	19 22 44.7	
	comp=Z,18nm,1.2s						
PV13	Radium Mtn., P	53.44	284	P	P	19 22 35.8	+0.3
PV13				IAmb	IAmb	19 22 45.0	
	comp=Z,18nm,1.2s						
SRU	San Rafael Swe	53.47	286	P	P	19 22 35.3	-0.3
SRU				IAmb	IAmb	19 22 42.3	
	comp=Z,11nm,0.8s						
SRU	San Rafael Swe	53.47	286	P	P	19 22 35.3	-0.3
SRU				pmax	pmax		
	comp=Z,11nm,0.8s						
NLU	North Lily Min	53.51	288	P	P	19 22 36.3	+0.3
NLU				IAmb	IAmb	19 22 41.4	
	comp=Z,21nm,1.5s						
I07A	Izee	53.52	296	P	P	19 22 34.7	-1.2
ABTX	Abilene, Hawle	53.54	272	P	P	19 22 35.8	-0.3
ABTX				IAmb	IAmb	19 22 38.8	
	comp=Z,15nm,0.9s						
ABTX	Abilene, Hawle	53.54	272	P	P	19 22 37.3	+1.2
	baz=35						
O16K	Kokwok River B	53.56	331	P	P	19 22 35.7	0.0
	baz=27						
PV05	Paradox Valley	53.63	284	P	P	19 22 36.8	-0.1
PV05				IAmb	IAmb	19 22 45.1	
	comp=Z,12nm,0.9s						
TMUT	Trail Mountain	53.64	287	P	P	19 22 36.5	-0.5
TMUT				IAmb	IAmb	19 22 39.9	
	comp=Z,9.1nm,0.8s						
DUG	Dugway, Tooele	53.65	289	P	P	19 22 37.1	+0.2
DUG				IAmb	IAmb	19 22 43.3	
	comp=Z,31nm,1.9s						
DUG	Dugway, Tooele	53.65	289	P	P	19 22 37.1	+0.2
DUG				pmax	pmax		
	comp=Z,31nm,1.9s						
DUG	Dugway, Tooele	53.65	289	P	P	19 22 37.5	+0.6
	baz=36						
J08A	Circle Bar Ran	53.66	295	P	P	19 22 36.6	-0.3
J08A				IAmb	IAmb	19 22 39.4	
	comp=Z,11nm,0.8s						
KURK	Kurchatov	53.75	49	P	P	19 22 36.8	-0.4
KURK				IAmb	IAmb	19 22 41.2	
	comp=Z,11nm,1.0s						
KURK	Kurchatov	53.75	49	ceP	P	19 22 38.7	+1.5
KURK				pmax	pmax		
	comp=Z,11nm,1.0s						
KURBB	Kurchatov Arra	53.79	49	LR	LR	19 45 23.1	
	comp=Z,249nm,18.1s,baz=188,slow=36						
KDAK	Kodiak Island	53.80	327	LR	LR	19 47 08.1	
	comp=Z,354nm,19.5s,baz=49,slow=38						
Q16A	Castle Valley	53.92	286	P	P	19 22 39.8	+0.8
Q16A				IAmb	IAmb	19 22 43.1	
	comp=Z,33nm,1.8s						
MSTX	Muleshoe	53.95	276	P	P	19 22 39.2	+0.1
MSTX				IAmb	IAmb	19 22 42.2	
	comp=Z,13nm,1.1s						
MSTX	Muleshoe	53.95	276	P	P	19 22 39.6	+0.5
	baz=35						
P16K	Nushagak River	54.04	331	P	P	19 22 39.6	+0.4
	baz=27						
MVCO	Mesa Verde	54.05	283	P	P	19 22 41.0	+1.1
MVCO				IAmb	IAmb	19 22 53.8	
	comp=Z,16nm,1.2s						
MVCO	Mesa Verde	54.05	283	P	P	19 22 40.6	+0.7
	baz=36						
POST	Post	54.08	274	P	P	19 22 40.6	+0.6
POST				IAmb	IAmb	19 22 42.2	
	comp=Z,10nm,1.1s						
ELK	Elko	54.31	291	LR	LR	19 45 02.1	
	comp=Z,361nm,18.7s,baz=39,slow=35						
ELK	Elko	54.31	291	P	P	19 22 42.6	+0.8
ELK				IAmb	IAmb	19 22 46.0	
	comp=Z,14nm,0.9s						
ELK	Elko	54.31	291	P	P	19 22 42.6	+0.8
ELK				pmax	pmax		
	comp=Z,14nm,0.9s						
PINE	Pine Mountain	54.38	297	P	P	19 22 42.8	+0.6
WVOR	Wild Horse Val	54.47	295	P	P	19 22 43.2	+0.4
WVOR	Wild Horse Val	54.47	295	P	P	19 22 43.2	+0.4
WVOR				pmax	pmax		
	comp=Z,11nm,1.2s						
MSU	Marysvale	54.71	287	P	P	19 22 45.1	+0.3
MSU	Marysvale	54.71	287	P	P	19 22 45.1	+0.3
MVU	Marysvale	54.74	287	P	P	19 22 44.1	-0.9
J05D	Fort Rock, OR	54.91	297	P	P	19 22 46.9	+0.8
ANMO	Albuquerque	54.92	280	P	P	19 22 45.7	-0.5
ANMO	Albuquerque	54.92	280	ceP	P	19 22 46.9	+0.7
ANMO				pmax	pmax		
	comp=Z,12nm,1.7s						
ANMO	Albuquerque	54.92	280	P	P	19 22 47.4	+1.1
	baz=35						
ANMO	Albuquerque	54.92	280	P	P	19 22 47.2	+0.9
	baz=35,SNR=5.5						
MTPU	Mount Pierson	55.10	287	P	P	19 22 49.5	+1.8
K05A	Summer Lake	55.22	296	P	P	19 22 49.8	+1.5
SPR3	Spring Creek 3	55.31	289	P	P	19 22 50.5	+1.4
SPR3				IAmb	IAmb	19 22 56.1	
	comp=Z,12nm,1.0s						
JCT	Junction City	55.38	271	P	P	19 22 49.2	-0.3
JCT				IAmb	IAmb	19 22 52.2	
	comp=Z,20nm,1.1s						
JCT	Junction City	55.38	271	P	P	19 22 49.2	-0.3
JCT				pmax	pmax		
	comp=Z,20nm,1.1s						
JCT	Junction City	55.38	271	P	P	19 22 49.8	+0.4
	baz=34						
JCT	Junction City	55.38	271	P	P	19 22 49.4	0.0
	baz=34						
Q12A	Willow Creek R	55.51	289	P	P	19 22 52.2	+1.8
GEYT	Alibeck	55.54	73	P	P	19 22 51.6	+1.1
	comp=Z,1.6nm,0.7s,baz=306,slow=9.8,SNR=2.2						
GEYT				LR	LR	19 48 00.4	
	comp=Z,312nm,18.8s,baz=346,slow=38						
	comp=Z,1.6nm,0.7s						
HTMS	Hat Mesa	55.59	276	P	P	19 22 51.0	+0.1
MOD	Modoc Plateau	55.63	295	P	P	19 22 50.6	-0.6
MOD				IAmb	IAmb	19 22 58.9	
	comp=Z,13nm,0.9s						
PKCU	Pink Cliffs	55.64	286	P	P	19 22 51.1	-0.5
PKCU				IAmb	IAmb	19 23 01.1	
	comp=Z,26nm,1.4s						
BNM	Barren Site	55.65	279	P	P	19 22 50.3	-1.3
YAK	Yakutsk	55.75	13	P	P	19 22 51.2	-0.4
YAK				IAmb	IAmb	19 22 56.2	
	comp=Z,18nm,1.0s						
YAK	Yakutsk	55.75	13	eP	P	19 22 51.6	0.0
YAK				e*PP	pP	19 22 55.0	-0.6
YAK				eS	S	19 30 38.9	+1.6
YAK				e*SS	sS	19 30 51.0	+7.0
YAK				e		19 32 41.2	
YAK				eSS	SS	19 34 26.0	+4.2
YAK				pmax	pmax		
	comp=Z,16nm,1.0s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.3s						
YAK				smax	smax		
	comp=E,123nm,5.7s						
YAK				smax	smax		
	comp=N,75nm,6.6s						
SEY	Seymchan	56.08	0	ceP	P	19 22 54.6	+0.7
SEY				pmax	pmax		
	comp=Z,13nm,1.7s						
GDL2	Guadalupe Moun	56.16	276	P	P	19 22 54.7	-0.4
KNB	Kanab	56.23	286	P	P	19 22 56.7	+1.1
KNB				IAmb	IAmb	19 22 58.3	
	comp=Z,12nm,1.1s						
KNB	Kanab	56.23	286	P	P	19 22 56.7	+1.1
KNB				pmax	pmax		
	comp=Z,12nm,1.1s						
L04D	Klamath Falls	56.24	297	P	P	19 22 55.0	-0.6
R11A	Troy Canyon, C	56.41	289	P	P	19 22 58.4	+1.5
R11A	Troy Canyon, C	56.41	289	P	P	19 22 57.8	+0.9
	baz=35,SNR=12						
LCMT	Little Creek M	56.42	287	P	P	19 22 58.8	+1.8
U15A	North Rim	56.46	285	P	P	19 22 56.7	-0.7
WUAZ	Wupatki	56.77	284	P	P	19 22 59.4	-0.1
WUAZ				IAmb	IAmb	19 23 02.2	
	comp=Z,12nm,0.8s						
WUAZ	Wupatki	56.77	284	P	P	19 22 59.9	+0.4
	baz=35,SNR=6.7						
KK31	Karatay Array	56.80	60	P	P	19 22 59.9	+0.5
KK31	Karatay Array	56.80	60	P	P	19 22 59.9	+0.5
KK31				pmax	pmax		
	comp=Z,8.0nm,1.4s						
KKAR	Karatay Array	56.80	60	P	P	19 22 59.4	0.0
KKAR	Karatay Array	56.80	60	P	P	19 22 59.2	-0.2
KKAR	Karatay Array	56.80	60	P	P	19 22 59.2	-0.2
KKAR						19 22 59.4	
YBH	Yreka Blue Hor	56.81	297	LR	LR	19 47 01.5	
	comp=Z,883nm,18.4s,baz=36,slow=36						
L02F	Cave Junction	56.86	298	P	P	19 22 59.8	0.0
L02F				IAmb	IAmb	19 23 10.5	
	comp=Z,16nm,1.2s						
PRN	Pahroc Range	56.93	288	P	P	19 23 01.1	+0.6
PRN				IAmb	IAmb	19 23 04.5	
	comp=Z,12nm,0.9s						
KVN	Kaiserville	56.97	292	P	P	19 23 00.0	-0.9
KVN				IAmb	IAmb	19 23 03.8	
	comp=Z,16nm,0.9s						
KVN	Kaiserville	56.97	292	P	P	19 23 00.0	-0.9
KVN				pmax	pmax		
	comp=Z,16nm,0.9s						
PAHR	Pah Rah Range	57.01	293	P	P	19 23 00.5	-0.7
PAHR				IAmb	IAmb	19 23 10.3	
	comp=Z,13nm,1.1s						
DBIC	Dimbokro	57.06	153	P	P	19 23 01.2	-0.2
	comp=Z,6.7nm,0.8s,baz=7.6,slow=7.3,SNR=10						
DBIC				LR	LR	19 45 33.8	
	comp=Z,283nm,18.2s,baz=350,slow=34						
	comp=Z,6.7nm,0.8s						
MNTX	Cornudas Mount	57.06	277	P	P	19 23 01.7	+0.3
MNTX	Cornudas Mount	57.06	277	P	P	19 23 02.4	+0.9
	baz=34,SNR=8.0						
MNTX	Cornudas Mount	57.06	277	P	P	19 23 01.7	+0.3
	baz=34,SNR=8.0						
TPH	Tonopah	57.38	290	P	P	19 23 04.2	+0.5
TPH	Tonopah	57.38	290	P	P	19 23 04.2	+0.5
TPH				pmax	pmax		
	comp=Z,59nm,1.0s						
NV11	Mina Array Sit	57.51	291	P	P	19 23 04.2	-0.4
121A	Cookes Peak, D	57.53	279	P	P	19 23 05.9	+1.0
121A				IAmb	IAmb	19 23 08.5	
	comp=Z,12nm,1.2s						
121A	Cookes Peak, D	57.53	279	P	P	19 23 05.4	+0.6
	baz=34						
YERR	Yerington	57.54	293	P	P	19 23 04.7	-0.2
YERR				IAmb	IAmb	19 23 08.6	
	comp=Z,15nm,1.1s						
NVAR	Mina Array Bea	57.57	292	P	P	19 23 04.2	-0.9
	comp=Z,3.8nm,0.9s,baz=49,slow=5.0,SNR=15						
NVAR				LR	LR	19 47 04.3	
	comp=Z,525nm,19.6s,baz=20,slow=35						
	comp=Z,3.8nm,0.9s						
NVAR	Mina Array Bea	57.57	292	P	P	19 23 04.5	-0.7
MPK	Martis Peak	57.63	293	P	P	19 23 05.6	-0.1
DGZ	Jazzator, Alta	57.70	44	eP	P	19 23 07.4	+1.6
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SHPR	Sheep Range	57.72	288	P	P	19 23 06.9	+0.7
LHV	Little Huntoon	57.81	292	P	P	19 23 08.0	+1.5
LHV				IAmb	IAmb	19 23 16.8	
	comp=Z,16nm,1.3s						
TPNV	Topopah Spring	57.86	289	P	P	19 23 07.9	+0.8
TPNV				IAmb	IAmb	19 23 16.5	
	comp=Z,9.9nm,0.9s						
TPNV	Topopah Spring	57.86	289	P	P	19 23 07.9	+0.8
TPNV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TPNV	Topopah Spring	57.86	289	P	P	19 23 07.2	0.0
	baz=35,SNR=6.7						
DUN6	Lazy B Ranch	58.13	280	P	P	19 23 10.1	+1.1
WCT	Wildcat Mounta	58.16	289	P	P	19 23 10.0	+0.8
TX31	Lajitas Ar. Si	58.20	274	P	P	19 23 10.2	+0.7
TX32	Lajitas Array	58.20	274	P	P	19 23 08.8	-0.7
TX32				IAmb	IAmb	19 23 28.8	
	comp=Z,21nm,1.7s						
TXAR	Lajitas Array	58.20	274	P	P	19 23 09.7	+0.2
	comp=Z,1.6nm,0.8s,baz=52,slow=2.1,SNR=13						
TXAR				LR	LR	19 47 52.2	
	comp=Z,529nm,18.7s,baz=22,slow=36						
	comp=Z,1.6nm,0.8s						
TXAR	Lajitas Array	58.20	274	P	P	19 23 10.2	+0.7
TXAR	Lajitas Array	58.20	274	P	P	19 23 10.2	+0.7
MAKZ	Makanchi	58.23	50	P	P	19 23 10.4	+1.0
MAKZ	Makanchi	58.23	50	P	P	19 23 10.4	+1.0
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LCH	Last Change Ra	58.26	290	P	P	19 23 10.4	+0.5
DSP	Deep Springs	58.29	291	P	P	19 23 10.2	+0.3
GRAC	Grapevine Rang	58.33	290	P	P	19 23 10.5	+0.2
GRAC				IAmb	IAmb	19 23 14.0	
	comp=Z,15nm,0.8s						
GRAC	Grapevine Rang	58.33	290	P	P	19 23 11.5	+1.2
	baz=34,SNR=6.4						
SPIA	Saint Paul Isl	58.33	337	P	P	19 23 08.6	-1.2
	baz=20						
MK31	Makanchi Array	58.36	49	P	P	19 23 10.1	-0.2
MK31				IAmb	IAmb	19 23 13.7	
	comp=Z,13nm,1.4s						
MK31	Makanchi Array	58.36	49	P	P	19 23 10.1	-0.2
MK31				pmax	pmax		
	comp=Z,13nm,1.4s						
MKAR	Makanchi Array	58.36	49	P	P	19 23 10.6	+0.3
	comp=Z,6.7nm,0.8s,baz=335,slow=5.4,SNR=61						
MKAR				LR	LR	19 48 31.1	
	comp=Z,140nm,18.6s,baz=323,slow=36						
	comp=Z,6.7nm,0.8s						
MKAR	Makanchi Array	58.36	49	P	P	19 23 10.1	-0.2
FURC	Furnace Creek,	58.53	289	P	P	19 23 13.0	+1.5
	baz=34						
MDPB	Devils Postpil	58.58	292	P	P	19 23 13.8	+1.6
GWY	Greenwater Val	58.67	289	P	P	19 23 13.4	+0.5
AAK	Ala-Archa	58.83	58	LR	LR	19 47 51.6	
	comp=Z,300nm,20.0s,baz=338,slow=35						
AAK	Ala-Archa	58.83	58	i P	P	19 23 14.9	+1.1
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CMB	Columbia Colle	58.83	293	P	P	19 23 14.4	+0.6
CMB	Columbia Colle	58.83	293	P	P	19 23 14.4	+0.6
CMB				pmax	pmax		
	comp=Z,9.0nm,1.2s						
QSM	Queen of Sheba	58.95	289	P	P	19 23 15.7	+1.2
QSM				IAmb	IAmb	19 23 20.0	
	comp=Z,8.3nm,1.0s						
PDMCI	Parker Dam,Lak	59.06	286	P	P	19 23 16.0	+0.7
	baz=34						
CWC	Cottonwood Cre	59.11	290	P	P	19 23 16.4	+0.6
	baz=34						
TUC	Tucson	59.13	282	P	P	19 23 18.5	+2.5
TUC				IAmb	IAmb	19 23 19.9	
	comp=Z,9.3nm,1.1s						
TUC	Tucson	59.13	282	P	P	19 23 18.5	+2.5
TUC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TUC	Tucson	59.13	282	P	P	19 23 17.6	+1.7
	baz=34						
MPMC	Manual Prospec	59.16	289	P	P	19 23 17.6	+1.4
	baz=34,SNR=15						
MDP	Montagnes des	59.19	210	LR	LR	19 42 04.6	
	comp=Z,257nm,20.9s,baz=63,slow=29						
319A	Douglas	59.19	280	P	P	19 23 14.9	-1.5
319A				IAmb	IAmb	19 23 20.3	
	comp=Z,18nm,1.1s						
GMRC	Granite Mounta	59.37	287	P	P	19 23 18.3	+0.7
	baz=34,SNR=8.1						
MA2	Magadan	59.44	1	LR	LR	19 50 13.1	
	comp=Z,162nm,18.5s,baz=8.5,slow=37						
MA2	Magadan	59.44	1	P	P	19 23 16.1	-1.5
MA2				IAmb	IAmb	19 23 20.3	
	comp=Z,15nm,1.0s						
MA2	Magadan	59.44	1	ceP	P	19 23 17.8	+0.2
MA2				pmax	pmax		
	comp=Z,27nm,1.7s						
GSC	Goldstone, Bar	59.47	288	P	P	19 23 18.9	+0.6
GSC				IAmb	IAmb	19 23 21.5	
	comp=Z,10.0nm,0.9s						
GSC	Goldstone, Bar	59.47	288	P	P	19 23 18.9	+0.6
GSC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GSC	Goldstone, Bar	59.47	288	P	P	19 23 19.8	+1.6
	baz=34,SNR=7.5						
HEC	Hector,Ludlow	59.64	288	P	P	19 23 20.7	+1.2
	baz=34						
IRM	Iron Mountain	59.65	286	P	P	19 23 21.0	+1.6
	baz=34						
LRMC	Laurel Mtn Rad	59.72	289	P	P	19 23 21.3	+1.3
	baz=34						
CHGR	Chuyangaron	59.89	64	P	P	19 23 22.1	+0.9
CHGR	Chuyangaron	59.89	64	P	P	19 23 22.1	+0.9
CHGR				pmax	pmax		
	comp=Z,17nm,0.9s						
ISA	Isabella, Lake	59.93	290	P	P	19 23 23.2	+1.8
ISA				IAmb	IAmb	19 23 25.5	
	comp=Z,18nm,1.2s						
ISA	Isabella, Lake	59.93	290	P	P	19 23 23.2	+1.8
ISA				pmax	pmax		
	comp=Z,18nm,1.2s						
ISA	Isabella, Lake	59.93	290	P	P	19 23 23.1	+1.7
	baz=34						
MOY	Mondy	60.10	34	eP	P	19 23 24.7	+2.3
MOY				pmax	pmax		
	comp=Z,23nm,2.5s						
GAR	Garm	60.11	63	P	P	19 23 23.5	+0.9
CCAC	Calif City Air	60.15	289	P	P	19 23 24.7	+1.8
113A	Mohawk Valley,	60.16	284	P	P	19 23 24.4	+1.5
113A				IAmb	IAmb	19 23 25.7	
	comp=Z,7.9nm,1.0s						
BELC	Belle Mtn. Jos	60.17	287	P	P	19 23 24.6	+1.5
	baz=34,SNR=7.3						
BC3	Big Chuckawall	60.21	286	P	P	19 23 24.9	+1.5
	baz=34						
EDW2	Edwards Air Fo	60.36	289	P	P	19 23 26.1	+1.7
	baz=34,SNR=14						
214A	Organ Pipe Nat	60.38	283	P	P	19 23 26.5	+1.9
	baz=33						
GLA	Glamis	60.42	285	P	P	19 23 24.9	+0.2
GLA				IAmb	IAmb	19 23 30.7	
	comp=Z,16nm,1.0s						
GLA	Glamis	60.42	285	P	P	19 23 24.9	+0.2
GLA				pmax	pmax		
	comp=Z,17nm,1.0s						
GLA	Glamis	60.42	285	P	P	19 23 26.4	+1.6
	baz=34						
IRK	Irkutsk	60.44	32	eP	P	19 23 25.2	+0.6
IRK				pmax	pmax		
	comp=Z,27nm,1.1s						
PMPB	Monarch Peak	60.52	292	P	P	19 23 26.3	+0.8
PMD	Palm Desert	60.64	287	P	P	19 23 26.9	+0.7
PMD				IAmb	IAmb	19 23 36.0	
	comp=Z,9.7nm,0.9s						
PFO	Pinyon Flats O	60.71	287	LR	LR	19 49 32.2	
	comp=Z,592nm,18.4s,baz=40,slow=36						
PFO	Pinyon Flats O	60.71	287	P	P	19 23 27.4	+0.6
PFO				IAmb	IAmb	19 23 30.6	
	comp=Z,15nm,1.0s						
PFO	Pinyon Flats O	60.71	287	P	P	19 23 27.4	+0.6
PFO				pmax	pmax		
	comp=Z,15nm,1.0s						
PFO	Pinyon Flats O	60.71	287	P	P	19 23 28.1	+1.3
	baz=33,SNR=6.9						
TPFO	Pinon Flats	60.71	287	P	P	19 23 27.6	+0.8
	baz=33,SNR=6.8						
BFSC	Mount Baldy Ra	60.74	288	P	P	19 23 29.0	+2.0
	baz=33						
SWSC	Sam W. Stewart	60.96	286	P	P	19 23 30.4	+2.0
	baz=33						
MURC	Murrieta	61.06	287	P	P	19 23 30.2	+1.1
	baz=33						
PKM	Mcpherson Peak	61.18	290	P	P	19 23 31.4	+1.3
	baz=33						
SDV	Santo Domingo	61.19	231	P	P	19 23 29.7	-0.6
	comp=Z,4.5nm,0.5s,baz=337,slow=21,SNR=1.0						
SDV				LR	LR	19 45 36.2	
	comp=Z,110nm,21.9s,baz=46,slow=32						
	comp=Z,4.5nm,0.5s						
MONP2	Monument Peak	61.29	286	P	P	19 23 32.0	+1.1
	baz=33						
IKP	In-Ko-Pah, Jac	61.35	286	P	P	19 23 32.2	+1.1
	baz=33						
RAYN	Ar Rayn	61.46	93	P	P	19 23 32.4	+0.4
RAYN	Ar Rayn	61.46	93	P	P	19 23 32.4	+0.4
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BAR	Barrett	61.58	287	P	P	19 23 34.5	+1.8
BAR				IAmb	IAmb	19 23 36.4	
	comp=Z,13nm,1.0s						
ZAK	Zakamensk	61.88	33	eP	P	19 23 34.9	+0.4
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KSH	Kashi	62.05	58	P	P	19 23 38.7	+2.8
KSH				pP	pP	19 23 41.3	+1.4
KSH				sP	sP	19 23 46.8	+5.3
KSH				sS	sS	19 32 13.0	+6.2
KSH				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KSH				LR	LR		
	comp=Z,410nm,16.8s						
KSH				LR	LR		
	comp=Z,490nm,18.6s						
KSH				LR	LR		
	comp=Z,540nm,17.9s						
WMQ	Urumqi	62.87	47	eP	P	19 23 42.6	+1.4
WMQ				sP	sP	19 23 50.6	+3.9
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				LR	LR		
	comp=Z,410nm,17.7s						
WMQ				LR	LR		
	comp=Z,530nm,18.9s						
WMQ				LR	LR		
	comp=Z,120nm,22.7s						
KBL	Kabul	63.29	67	P	P	19 23 43.6	-0.6
KBL	Kabul	63.29	67	P	P	19 23 43.6	-0.6
KBL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ZEA	Zeya	63.55	16	eP	P	19 23 48.1	+2.7
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ESPN	Las Esperanzas	63.79	246	P	P	19 23 46.0	-1.5
MATN	Matagalpa	63.86	248	P	P	19 23 46.4	-1.7
MCPB	Macapa, AP	64.33	208	eP	P	19 23 50.0	-1.0
CMIG	Matias Romero	64.36	258	LR	LR	19 52 17.1	
	comp=Z,80nm,19.2s,baz=16,slow=36						
SHEM	Shemya Is, Ala	65.03	346	LR	LR	19 51 20.5	
	comp=Z,81nm,21.9s,baz=327,slow=35						
SONM	Songino Array	65.03	32	P	P	19 23 54.8	-0.6
	comp=Z,7.2nm,1.0s,baz=323,slow=6.7,SNR=43						

SONM				LR	LR	19 54 33.5	
	comp=Z,98nm,18.6s,baz=352,slow=38						
	comp=Z,7.2nm,1.0s						
SONM	**Songino Array**	**65.03**	**32**	P	**P**	**19 23 55.5**	**+0.1**
SONM				IAmb	IAmb	19 23 58.9	
	comp=Z,15nm,1.3s						
SONM	**Songino Array**	**65.03**	**32**	P	**P**	**19 23 55.5**	**+0.1**
SONM				pmax	pmax		
	comp=Z,15nm,1.3s						
ULN	**Ulaanbaatar**	**65.17**	**32**	P	**P**	**19 23 57.6**	**+1.2**
ULN				IAmb	IAmb	19 24 00.3	
	comp=Z,13nm,1.1s						
ULN	**Ulaanbaatar**	**65.17**	**32**	P	**P**	**19 23 57.6**	**+1.2**
ULN				pmax	pmax		
	comp=Z,13nm,1.1s						
ROSB	**Rosrio**	**65.31**	**198**	*e*P	**P**	**19 23 57.1**	**-0.3**
UOSS	**Minazif**	**65.41**	**83**	P	**P**	**19 23 57.7**	**-0.3**
UOSS				IAmb	IAmb	19 24 03.2	
	comp=Z,12nm,1.1s						
LPIG	**La Paz**	**65.78**	**276**	LR	LR	19 51 57.9	
	comp=Z,510nm,19.7s,baz=28,slow=35						
PETK	**Petropavlovsk-**	**65.86**	**357**	LR	LR	19 51 20.8	
	comp=Z,84nm,21.9s,baz=15,slow=35						
NIL	**Nilore**	**65.89**	**64**		**P**	**19 24 00.8**	**-0.2**
NIL				IAmb	IAmb	19 24 12.4	
	comp=Z,9.8nm,1.2s						
NIL	**Nilore**	**65.89**	**64**	P	**P**	**19 24 00.8**	**-0.2**
NIL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ROSC	**El Rosal**	**66.30**	**233**	LR	LR	19 52 18.4	
	comp=Z,114nm,18.5s,baz=64,slow=35						
ROSC	**El Rosal**	**66.30**	**233**	P	**P**	**19 24 02.3**	**-1.9**
ROSC	**El Rosal**	**66.30**	**233**	P	**P**	**19 24 02.3**	**-1.9**
ROSC				pmax	pmax		
	comp=Z,71nm,1.8s						
HEH	**HeiHe**	**66.97**	**17**	*e*P	**P**	**19 24 08.1**	**+0.4**
HEH				pmax	pmax		
	comp=Z,18nm,1.2s						
WSAR	**Wadi Sarin**	**68.02**	**82**	LR	LR	19 58 21.0	
	comp=Z,52nm,18.1s,baz=347,slow=40						
KLR	**Kul'dur**	**68.55**	**15**	*ce*P	**P**	**19 24 18.3**	**+0.7**
KLR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ITTB	**Itaituba**	**69.06**	**210**	*e*P	**P**	**19 24 21.3**	**+0.2**
GTA	**Gaotai**	**70.88**	**41**	*e*P	**P**	**19 24 34.0**	**+1.7**
GTA				sP	sP	19 24 42.3	+4.4
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GTA				LR	LR		
	comp=Z,150nm,18.7s						
GTA				LR	LR		
	comp=Z,160nm,16.3s						
GTA				LR	LR		
	comp=Z,240nm,14.7s						
XLT	**XiLinHaoTe**	**71.05**	**27**	*e*P	**P**	**19 24 36.4**	**+3.2**
XLT				pmax	pmax		
	comp=Z,11nm,1.1s						
XLT				pmax	pmax		
	comp=Z,150nm,3.7s						
BNX	**BinXian**	**71.38**	**18**	⇑P	**P**	**19 24 36.1**	**+1.1**
BNX				pmax	pmax		
	comp=Z,11nm,0.9s						
BNX				pmax	pmax		
	comp=Z,80nm,5.1s						
NPGB	**Novo Progresso**	**71.55**	**209**	*e*P	**P**	**19 24 35.9**	**-0.5**
SMTB	**Santa Maria do**	**71.72**	**201**	*e*P	**P**	**19 24 37.7**	**+0.3**
YSS	**Yuzh-Sakhalins**	**71.80**	**7**	*e*P	**P**	**19 24 35.6**	**-2.0**
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS				MLR	MLR		
	comp=Z,500nm,17.0s						
OTAV	**Otavalo**	**72.12**	**235**	P	**P**	**19 24 40.7**	**+0.3**
OTAV	**Otavalo**	**72.12**	**235**	P	**P**	**19 24 40.7**	**+0.3**
OTAV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GOMU	**GeErMu**	**72.13**	**46**	P	**P**	**19 24 43.1**	**+2.9**
GOMU				sP	sP	19 24 48.2	+2.4
GOMU				PcP	**PcP**	**19 25 03.2**	**+4.7**
GOMU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GOMU				pmax	pmax		
	comp=Z,140nm,5.1s						
PULU	**Pululahua**	**72.33**	**235**	P	**P**	**19 24 40.4**	**-1.2**
MDJ	**Mudanjiang**	**72.80**	**17**	P	**P**	**19 24 45.1**	**+1.5**
MDJ				PcP	**PcP**	**19 25 00.6**	**-0.1**
MDJ				PP	**PP**	**19 27 28.5**	**+3.7**
MDJ				S	**SKiKP**	**19 34 15.0**	**-1.2**
MDJ				pmax	pmax		
	comp=Z,16nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,100nm,3.7s						
MDJ	**Mudanjiang**	**72.80**	**17**	P	**P**	**19 24 43.8**	**+0.2**
MDJ				IAmb	IAmb	19 24 46.4	
	comp=Z,21nm,1.2s						
HHC	**Hu-ho-hao-te**	**72.88**	**31**	*e*P	**P**	**19 24 46.8**	**+2.6**
HHC				pmax	pmax		
	comp=Z,32nm,0.8s						
HHC				pmax	pmax		
	comp=Z,220nm,4.6s						
CN2	**Changchun**	**72.96**	**20**	*e*P	P	19 24 39.0	-5.5
CN2				*e*sP	pP	19 24 46.1	-2.6
USRK	**Ussuriysk Ar.**	**73.53**	**15**	P	**P**	**19 24 47.3**	**-0.6**
	comp=Z,5.2nm,1.0s,baz=35,slow=7.0,SNR=5.1						
	comp=Z,5.2nm,1.0s						
USRK	**Ussuriysk Ar.**	**73.53**	**15**	P	**P**	**19 24 47.6**	**-0.3**
USRK	**Ussuriysk Ar.**	**73.53**	**15**	P	**P**	**19 24 47.6**	**-0.3**
PORT	**Chimborazo Vol**	**73.80**	**234**	P	**P**	**19 24 50.4**	**0.0**
PORT				IAmb	IAmb	19 25 38.5	
	comp=Z,18nm,1.4s						
CHSH	**Refugio Sur-Vo**	**73.86**	**234**	P	**P**	**19 24 48.5**	**-2.4**
CHSH				IAmb	IAmb	19 25 06.8	
	comp=Z,11nm,0.9s						
LODK	**Lodwar**	**74.19**	**113**	P	**P**	**19 24 53.2**	**+1.0**
ASAJ	**Asahikawa**	**74.62**	**7**	LR	LR	19 58 18.6	
	comp=Z,108nm,18.8s,baz=41,slow=36						
PYUN	**Piuthan**	**74.83**	**59**	*e*P	**P**	**19 24 56.1**	**+0.1**
	comp=Z,17nm,0.9s						
DANN	**Dangsing**	**74.92**	**58**	*e*P	**P**	**19 24 57.1**	**+0.5**
	comp=Z,27nm,1.0s						
LZH	**Lanzhou**	**75.18**	**39**	*e*P	**P**	**19 25 00.0**	**+2.2**
LZH				pP	sP	19 25 06.5	+3.0
LZH				sP	PcP	19 25 10.8	-0.5
LZH				pmax	pmax		
	comp=Z,20nm,1.5s						
LZH				LR	LR		
	comp=Z,200nm,13.9s						
LZH				LR	LR		
	comp=Z,170nm,16.3s						
LZH				LR	LR		
	comp=Z,190nm,14.7s						
GKN	**Gorkha**	**75.59**	**58**	*e*P	**P**	**19 25 00.6**	**+0.3**
	comp=Z,16nm,0.8s						
MBAR	**Mbarara**	**75.79**	**119**	LR	LR	20 00 40.2	
	comp=Z,226nm,18.1s,baz=328,slow=38						
DMN	**Daman**	**76.13**	**58**	*e*P	**P**	**19 25 04.4**	**+0.9**
	comp=Z,27nm,0.9s						
GUN	**Gumba**	**76.18**	**57**	*e*P	**P**	**19 25 04.9**	**+1.0**
	comp=Z,31nm,0.9s						
PKIN	**Phulchoki**	**76.28**	**57**	*e*P	**P**	**19 25 04.6**	**+0.2**
PDRB	**Porto dos Gac**	**76.28**	**210**	*e*P	**P**	**19 25 04.7**	**+0.7**
MCRA	**Macar, Loja**	**76.91**	**234**	P	**P**	**19 25 05.8**	**-2.0**
HNS	**HongShan**	**76.92**	**30**	⇑P	**P**	**19 25 11.0**	**+3.5**
HNS				pmax	pmax		
	comp=Z,12nm,1.2s						
JANB	**Januaria**	**77.29**	**197**	*e*P	**P**	**19 25 08.9**	**-0.8**
RAMN	**Ramite**	**77.32**	**57**	*e*P	**P**	**19 25 10.5**	**+0.3**
	comp=Z,31nm,0.8s						
BDFB	**Brasilia**	**78.43**	**200**	P	**P**	**19 25 15.6**	**-0.5**
	comp=Z,4.1nm,0.9s,baz=339,slow=8.6,SNR=2.4						
	comp=Z,4.1nm,0.9s						
XAN	**Xi'an**	**78.58**	**36**	⇑P	**P**	**19 25 18.8**	**+1.9**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ATAH	**Atahualpa**	**78.84**	**232**	LR	LR	19 57 06.2	
	comp=Z,68nm,21.5s,baz=33,slow=33						
ARAG	**Araguaiana, MT**	**79.18**	**204**	*e*P	**P**	**19 25 20.7**	**+0.6**
KSRS	**Korea Array**	**79.56**	**20**	P	**P**	**19 25 22.1**	**+0.1**
	comp=Z,2.5nm,0.8s,baz=352,slow=5.8,SNR=6.2						
KSRS				LR	LR	19 59 52.8	
	comp=Z,50nm,21.4s,baz=345,slow=35						
	comp=Z,2.5nm,0.8s						
KSAR	**Wonju Array Be**	**79.56**	**20**	P	**P**	**19 25 21.8**	**-0.3**
KSAR	**Wonju Array Be**	**79.56**	**20**	P	**P**	**19 25 21.8**	**-0.3**
CD2	**Chengdu**	**79.94**	**41**	*e*P	**P**	**19 25 22.6**	**-1.8**
SALV	**Santo Antonio**	**80.18**	**208**	*e*P	**P**	**19 25 25.7**	**+0.2**
SHL	**Shillong**	**80.64**	**53**	P	**P**	**19 25 28.3**	**-0.1**
SHL	**Shillong**	**80.64**	**53**	P	**P**	**19 25 28.3**	**-0.1**
SHL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SIV	**San Ignacio**	**81.57**	**213**	LR	LR	19 56 43.8	
	comp=Z,261nm,19.7s,baz=94,slow=32						
MJAR	**Matsushiro Arr**	**81.80**	**12**	P	**P**	**19 25 34.0**	**-0.2**
	comp=Z,3.1nm,0.9s,baz=336,slow=7.1,SNR=4.5						
	comp=Z,3.1nm,0.9s						
MJAR	**Matsushiro Arr**	**81.80**	**12**	P	**P**	**19 25 34.0**	**-0.2**
ENH	**Enshi**	**82.28**	**37**	P	**P**	**19 25 38.5**	**+1.7**
ENH				IAmb	IAmb	19 25 39.3	
	comp=Z,12nm,1.2s						
NNA	**Nana**	**82.74**	**229**	LR	LR	20 00 48.0	
	comp=Z,48nm,20.7s,baz=24,slow=34						
NJ2	**Nanjing**	**83.01**	**28**	*e*P	**P**	**19 25 39.7**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BRDH	**Bariadhala**	**83.15**	**54**	LR	LR	20 04 53.7	
	comp=Z,160nm,18.7s,baz=324,slow=37						
PZH	**PanZhiHua**	**83.36**	**44**	P	**P**	**19 25 44.1**	**+1.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=Z,100nm,5.9s						
TNCH	**TengChong**	**83.59**	**48**	*e*P	**P**	**19 25 45.3**	**+1.4**
TNCH				pP	PcP	19 25 48.5	+0.4
TNCH				pmax	pmax		
	comp=Z,12nm,1.0s						
LPAZ	**La Paz**	**83.85**	**219**	LR	LR	20 01 59.1	
	comp=Z,44nm,18.6s,baz=67,slow=35						
AQDB	**Aquidauana**	**84.61**	**207**	P	**P**	**19 25 48.5**	**-0.1**
AQDB				IAmb	IAmb	19 25 50.1	
	comp=Z,11nm,1.0s						
PB16	**IPOC Station P**	**86.20**	**220**	P	**P**	**19 25 55.6**	**-1.6**
LSZ	**Lusaka**	**88.06**	**127**	LR	LR	20 08 27.3	
	comp=Z,455nm,18.4s,baz=347,slow=38						
CHTO	**Chiang Mai**	**89.44**	**50**	P	**P**	**19 26 13.4**	**+1.0**
CHTO	**Chiang Mai**	**89.44**	**50**	P	**P**	**19 26 13.4**	**+1.0**
CM31	**Chiang Mai Arr**	**89.77**	**50**	P	**P**	**19 26 13.3**	**-0.6**
CMAR	**Chiang Mai Arr**	**89.77**	**50**	P	**P**	**19 26 14.2**	**+0.3**
	comp=Z,4.6nm,0.9s,baz=321,slow=5.8,SNR=24						
CMAR				LR	LR	20 09 40.6	
	comp=Z,29nm,19.4s,baz=320,slow=38						
	comp=Z,4.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**89.77**	**50**	P	**P**	**19 26 14.4**	**+0.6**
JOW	**Kunigami**	**89.99**	**22**	LR	LR	20 11 34.3	
	comp=Z,62nm,18.1s,baz=293,slow=39						
LVC	**Limon Verde**	**90.04**	**218**	LR	LR	20 01 41.9	
	comp=Z,90nm,22.0s,baz=2.0,slow=32						
CPUP	**Villa Florida**	**90.63**	**207**	LR	LR	20 03 57.3	
	comp=Z,37nm,21.5s,baz=34,slow=34						
PALK	**Pallekele**	**92.22**	**71**	LR	LR	20 11 05.3	
	comp=Z,40nm,21.1s,baz=88,slow=38						
LBTB	**Lobatse**	**96.02**	**133**	LR	LR	20 10 20.1	
	comp=Z,151nm,21.8s,baz=2.5,slow=36						
CFA	**Coronel Fontan**	**98.34**	**214**	LR	LR	20 07 48.9	
	comp=Z,140nm,19.8s,baz=129,slow=33						
OPO	**Ambohidratompo**	**98.95**	**112**	LR	LR	20 13 03.8	
	comp=Z,60nm,20.0s,baz=185,slow=36						
BOSA	**Boshof**	**99.20**	**135**	LR	LR	20 13 24.8	
	comp=Z,134nm,19.4s,baz=348,slow=36						
TAOE	**Nuku Hiva Isla**	**108.56**	**286**	*e*LR	LR	20 03 31.7	
	comp=Z,230nm,29.8s						
PPT2	**Papeete2**	**120.54**	**290**	*e*LR	LR	20 09 04.2	
	comp=Z,282nm,22.2s						
PPT2				*e*LR	LR	20 09 05.3	
	comp=Z,258nm,28.8s						
TBI	**Tubuai**	**125.49**	**287**	*e*LR	LR	20 11 22.6	
	comp=Z,2µm,34.8s						
TBI				*e*LR	LR	20 11 23.3	
	comp=Z,3µm,23.8s						
WRA	**Warramunga Arr**	**136.73**	**25**	PKP	**PKPdf**	**19 32 37.6**	**0.0**
	comp=Z,1.1nm,1.0s,baz=356,slow=2.6,SNR=3.9						
DZM	**Mont Dzumac**	**139.63**	**340**	*e*LR	LR	20 17 55.6	
	comp=Z,164nm,23.9s						
ASAR	**Alice Springs**	**140.25**	**27**	PKhKP	PKPpre	19 32 35.2	
	comp=Z,0.2nm,0.6s,baz=335,slow=3.6,SNR=2.4						
STKA	**Stephens Creek**	**149.70**	**19**	PKPbc	**PKPbc**	**19 33 04.9**	**+0.3**
	comp=Z,6.2nm,1.0s,baz=90,slow=4.8,SNR=5.6						

RHSSO ***02*** *19:17:28.7±0.2, 43°.46N×19°.09E, h3^{km}±2^{km}, ML1.5/9*
BEO ***02*** *19:17:29.6±0.3, 43°.42N×19°.10E, h0^{km}, ML1.3/6*

ISC 02 19:17:28.3±1.0**, 43°.44N**±0°.02×**19°.10E**±0°.02**, h8**^{km}±8^{km}**,**
n22, σ**0^{s}64**/43**, 1C-3D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RUDO	**Rudo**	**0.27**	**47**	*e*Pg	**Pg**	**19 17 33.3**	**-0.2**
RUDO				*e*Sg	**Sg**	**19 17 37.2**	**+0.1**
RUDO	**Rudo**	**0.27**	**47**	⇑*i*Pg	**Pg**	**19 17 33.3**	**-0.2**
RUDO				*e*Sg	**Sg**	**19 17 37.1**	**0.0**
UPM	**Unac-Piva**	**0.28**	**212**	⇓*i*Pg	**Pg**	**19 17 33.7**	**-0.1**
UPM				*e*Sg	**Sg**	**19 17 38.5**	**+1.0**
BBLS	**Lazići**	**0.48**	**27**	*e*Pg	**Pg**	**19 17 38.1**	**+0.5**
BBLS				*e*Sg	**Sb**	**19 17 46.3**	**0.0**
BBLS	**Lazići**	**0.48**	**27**	⇓*i*Pg	**Pg**	**19 17 37.5**	**-0.1**
BBLS				*e*Sg	**Sg**	**19 17 44.0**	**+0.1**
HAPS	**Han Pijesak,Bl**	**0.66**	**350**	*e*Pg	**Pb**	**19 17 42.5**	**+0.5**
HAPS				*e*Sg	**Sg**	**19 17 50.0**	**+0.4**
HAPS	**Han Pijesak,Bl**	**0.66**	**350**	*e*Pg	**Pg**	**19 17 40.5**	**-0.5**
HAPS				*e*Sg	**Sg**	**19 17 49.7**	**+0.1**
SJES	**Sjenica**	**0.66**	**105**	*e*Pg	**Pg**	**19 17 41.5**	**+0.5**
SJES				*e*Sg	**Sg**	**19 17 50.2**	**+0.6**
SJES	**Sjenica**	**0.66**	**105**	*e*Pg	**Pg**	**19 17 41.0**	**0.0**
SJES				*e*Sg	**Sg**	**19 17 49.8**	**+0.2**
BRY	**Bratogost**	**0.68**	**218**	*e*Pg	**Pg**	**19 17 40.4**	**-0.9**
BRY				*e*Sg	**Sg**	**19 17 49.9**	**-0.3**
IVAS	**Ivanjica**	**0.78**	**79**	*e*Pg	**Pg**	**19 17 43.0**	**-0.2**
IVAS				*e*Sn	**Sn**	**19 17 57.0**	**-0.4**
TREB	**Trebinje**	**0.91**	**218**	*e*Pg	**Pg**	**19 17 45.0**	**-0.7**
TREB				*e*Sg	**Sg**	**19 17 58.3**	**+0.8**
DIVS	**Divibare**	**0.92**	**44**	*e*Pg	**Pn**	**19 17 47.9**	**+0.3**
DIVS				*e*Sg	**Sn**	**19 18 00.1**	**-1.0**
DIVS	**Divibare**	**0.92**	**44**	*e*Pg	**Pg**	**19 17 45.4**	**-0.6**
DIVS				*e*Sg	**Sg**	**19 17 57.6**	**-0.4**
STON	**Ston**	**1.17**	**242**	*e*Pg	**Pb**	**19 17 49.5**	**-1.2**
STON				Sg	**Sn**	**19 18 07.6**	**+0.5**
STON	**Ston**	**1.17**	**242**	*e*Pg	**Pb**	**19 17 50.0**	**-0.7**
STON				*e*Sg	**Sn**	**19 18 07.0**	**0.0**
STON	**Ston**	**1.17**	**242**	⇓*i*Pg	**Pb**	**19 17 50.1**	**-0.7**
STON				*e*Sg	**Sb**	**19 18 06.2**	**+0.2**
DRME	**Dracevica, Mon**	**1.25**	**177**	*e*Pg	**Pn**	**19 17 52.2**	**+0.2**
DRME				*e*Sg	**Sn**	**19 18 09.6**	**+0.6**
RICI	**Ricice**	**1.44**	**273**	Sn	**Sg**	**19 18 16.7**	**+2.4**
SRKY	**Kupres RS**	**1.54**	**295**	*e*Pn	**Pn**	**19 17 56.2**	**+0.1**
SRKY				*e*Sn	**Sg**	**19 18 17.3**	**-0.4**
LSTV	**Lastovo**	**1.75**	**248**	*e*Pn	**Pn**	**19 17 59.5**	**+0.7**
LSTV				Sn	**Sg**	**19 18 24.1**	**-0.4**
A050A	**Klekovaca**	**2.13**	**300**	*e*Pn	**Pn**	**19 18 04.3**	**+0.1**
A050A				*e*Sn	**Sn**	**19 18 31.3**	**+0.5**

IDC 02 19:18:45.0±1.8**, 12°.96S×70°.05W, h0**^{km}**, mb3.4**/2**,**
mbtmp3.6/3**, ML4.0**/1**, Error ellipse: s-maj=77.4km**
s-min=27.5km az=57.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.80**	**151**	Pn	Pn	19 19 44.8	-0.6
	7.7nm,0.3s,baz=318,slow=10,SNR=49						
LPAZ				Sn	Sn	19 20 33.9	+2.8
	51nm,0.3s,baz=177,slow=19,SNR=14						
	37nm,0.4s						
TXAR	**Lajitas Array**	**53.11**	**323**	P	P	19 28 04.8	0.0
	0.3nm,0.8s,baz=129,slow=7.1,SNR=1.7						
	0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**75.69**	**73**	P	P	19 30 33.0	+0.1
	0.5nm,0.9s,baz=265,slow=5.3,SNR=2.5						
	0.5nm,0.9s						
WRA	**Warramunga Arr**	**139.44**	**217**	PKhKP	PKPpre	19 38 11.6	
	0.1nm,0.6s,baz=124,slow=1.7,SNR=0.8						
SONM	**Songino Array**	**145.10**	**4**	PKPbc	PKPbc	19 38 23.3	-0.9
	0.2nm,0.8s,baz=350,slow=2.4,SNR=3.5						

WEL 02 19:18:49.2±0.3**, 43°S**±3°×**17°3E**±°**, h17**^{km}±4^{km}**, M3.2**/12**,**
ML3.4/12**, MLv3.2**/12**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=118.2, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.23**	**60**	P	Pb	19 18 55.0	+0.1
KHZ				S	Sb	19 18 59.1	+0.4
GVZ	**Greta Valley S**	**0.47**	**202**	P	Pb	19 19 00.1	+1.1
GVZ				S	Sn	19 19 08.2	-1.0
LTZ	**Lake Taylor**	**0.78**	**251**	P	Pb	19 19 03.7	-0.6
LTZ				S	Sn	19 19 16.4	-0.5
AMCZ	**Amberley**	**0.79**	**215**	P	Pn	19 19 05.2	-0.4
AMCZ				S	Sn	19 19 17.3	+0.3
THZ	**Tophouse**	**0.81**	**340**	P	Pb	19 19 04.2	-0.7
THZ				S	Sb	19 19 13.6	-2.1
BSWZ	**Blackbirch Sta**	**0.93**	**29**	P	Pg	19 19 07.1	-0.1
CMWZ	**Cape Campbell**	**1.05**	**42**	P	Pg	19 19 10.0	+0.5
MRNZ	**Matariki Terra**	**1.19**	**341**	P	Pn	19 19 10.6	-0.6
MRNZ				S	Sg	19 19 27.6	-0.2
OXZ	**Oxford**	**1.21**	**228**	P	Pn	19 19 10.4	-0.9
OXZ				S	Sn	19 19 27.4	+0.1
TUWZ	**Tuamarina**	**1.21**	**25**	P	Pb	19 19 11.5	-0.1
MQZ	**McQueen's Vall**	**1.26**	**201**	P	Pn	19 19 10.4	-1.6
MQZ				S	Sb	19 19 27.4	-1.0
NNZ	**Nelson**	**1.31**	**4**	P	Pn	19 19 13.0	+0.3
NNZ				S	Sg	19 19 31.6	0.0
DSZ	**Denniston Nort**	**1.34**	**305**	P	Pn	19 19 12.7	-0.5
INZ	**Inchbonnie**	**1.36**	**261**	P	Pn	19 19 13.2	-0.2
AKCZ	**Akaroa Harbour**	**1.37**	**191**	P	Pn	19 19 12.7	-0.8
RACZ	**Rakaia**	**1.46**	**214**	P	Pn	19 19 13.6	-1.1
TKNZ	**Takaka Hill**	**1.51**	**351**	P	Pn	19 19 15.8	+0.3
TCW	**Tory Channel**	**1.52**	**30**	P	Pn	19 19 15.7	+0.1
MHCZ	**Mount Hutt**	**1.60**	**231**	P	Pn	19 19 15.7	-1.1
WACZ	**Wakanui South**	**1.76**	**216**	P	Pn	19 19 17.8	-1.1
PLWZ	**Palliser**	**1.76**	**58**	P	Pn	19 19 17.9	-1.1
QRZ	**Quartz Range**	**1.79**	**342**	P	Pn	19 19 18.9	-0.4
DUWZ	**D'Urville Isla**	**1.79**	**16**	P	Pn	19 19 20.1	+0.7
WVZ	**Waitaha Valley**	**1.94**	**253**	P	Pn	19 19 21.4	0.0
CAW	**Cannon Point**	**1.95**	**44**	P	Pn	19 19 21.0	-0.6
RPZ	**Rata Peaks**	**2.01**	**233**	P	Pn	19 19 21.5	-0.9
KIW	**Kapiti Island**	**2.07**	**37**	P	Pn	19 19 23.1	-0.1
ARCZ	**Arundel**	**2.09**	**226**	P	Pn	19 19 22.4	-1.0
OGWZ	**Otaki Gorge**	**2.23**	**40**	P	Pn	19 19 24.7	-0.6
GCSZ	**Gaunt Creek Bo**	**2.30**	**249**	P	Pn	19 19 26.4	+0.1
TMZ	**Timaru**	**2.48**	**221**	P	Pn	19 19 28.0	-0.9
MRZ	**Mangatainoka R**	**2.55**	**44**	P	Pn	19 19 28.6	-1.2
FOZ	**Fox Glacier**	**2.73**	**247**	P	Pn	19 19 32.1	0.0
BFZ	**Birch Farm**	**2.90**	**51**	P	Pn	19 19 34.2	-0.3
LBZ	**Lake Benmore**	**2.92**	**229**	P	Pn	19 19 34.0	-0.8
ODZ	**Otahua Downs**	**3.15**	**216**	P	Pn	19 19 36.6	-1.4
KHEZ	**Kahui Hut**	**3.28**	**10**	P	Pn	19 19 43.1	+3.2
NBEZ	**Newall Road No**	**3.29**	**8**	P	Pn	19 19 42.8	+2.9
PKE	**Pukeiti**	**3.38**	**9**	P	Pn	19 19 44.1	+2.9
VRZ	**Vera Road**	**3.58**	**19**	P	Pn	19 19 47.2	+3.3
JCZ	**Jackson Bay**	**3.62**	**243**	P	Pn	19 19 44.2	-0.4
WNVZ	**Wahianoa**	**3.65**	**30**	P	Pn	19 19 48.1	+3.0
TRVZ	**Turoa**	**3.66**	**29**	P	Pb	19 19 50.9	-2.6
NGZ	**Ngauruhoe**	**3.79**	**29**	P	Pb	19 19 53.3	-2.4
OTVZ	**Oturere**	**3.82**	**29**	P	Pn	19 19 49.1	+1.7
ETVZ	**East Tongariro**	**3.86**	**29**	P	Pb	19 19 54.4	-2.5
HHSZ	**Highcliff Hill**	**3.87**	**209**	P	Pn	19 19 46.7	-1.2
EAZ	**Earnscleugh**	**3.94**	**225**	P	Pn	19 19 47.8	-1.0
HIZ	**Hauiti**	**4.19**	**17**	P	Pn	19 19 55.0	+2.7
TLZ	**Tolley Road**	**4.54**	**23**	P	Pn	19 20 00.9	+3.8
WIAZ	**Waiheke Island**	**5.91**	**15**	P	Pn	19 20 18.2	+2.3

IDC ***02*** *19:28:24.9±1.4, 6°.73N×72°.98W, h170^{km}±13^{km}, mb3.4/6,*
mbtmp3.9/8, MS3.2/1, Error ellipse: s-maj=27.4km
s-min=17.2km az=93.0
NEIC ***02*** *19:28:24.2±1.2, 6°.81N±0°.08×73°.00W±0°.08, h155^{km}±8^{km},*
mb4.2/16, Error ellipse: s-maj=12.5km s-min=10.2km
az=131.0
RSNC ***02*** *19:28:26.1±1.0, 6°.79N×73°.15W, h146^{km}±3^{km}, ML3.7,*
Mw3.9, Fault plane solution: NP1:φ$_s$84.00000°,
δ55.00000°, λ-162.00000°.

ISC 02 19:28:23.6±0.6**, 6°.82N**±0°.03×**73°.10W**±0°.04**, h154**^{km}±5^{km}**,**
n85, σ**1^{s}47**/125**, mb4.0**/13**, 2C-8D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**200**	⇓*i*P	**Pn**	**19 28 45.7**	**+1.0**
BARC				*e*S	**Sn**	**19 29 00.7**	**-0.2**
BARC				*i*		19 29 01.9	
	comp=Z,1µm,0.2s						
PAMC	**Pamplona, Colo**	**0.66**	**38**	⇓*i*P	**Pn**	**19 28 48.6**	**+1.8**
PAMC				*e*S	**Sn**	**19 29 05.5**	**+1.0**
PAMC				*i*		19 29 07.8	
	comp=Z,2µm,0.5s						
BRRC	**Barranca, Sant**	**0.67**	**295**	*e*P	**Pn**	**19 28 47.6**	**+1.2**
BRRC				*e*S	**Sn**	**19 29 04.7**	**+1.0**
BRRC				*i*		19 29 07.7	
	comp=Z,916nm,0.4s						
RUSC	**La Rusia**	**0.92**	**179**		**Pn**	**19 28 49.0**	**+0.4**
RUSC				Sn	**Sn**	**19 29 07.9**	**+0.1**
RUSC	**La Rusia**	**0.92**	**179**	⇓*i*P	**Pn**	**19 28 49.7**	**+1.0**
RUSC				*e*S	**Sn**	**19 29 08.5**	**+0.7**
RUSC				*i*		19 29 09.5	
	comp=Z,746nm,0.3s						
TAMC	**Tame, Arauca**	**1.35**	**106**	⇓*i*P	**Pn**	**19 28 54.1**	**+2.0**
TAMC				*e*S	**Sn**	**19 29 15.8**	**+2.0**
PTBC	**PUERTO BERRIO,**	**1.37**	**259**	*e*P	**Pn**	**19 28 52.2**	**0.0**
PTBC				*e*S	**Sn**	**19 29 13.5**	**-0.6**
PTBC				*i*		19 29 18.5	
	comp=Z,374nm,0.2s						
SPBC	**San Pablo de B**	**1.51**	**220**	*e*P	**Pn**	**19 28 54.6**	**+0.9**
SPBC				*e*S	**Sn**	**19 29 16.6**	**-0.1**
SPBC				*i*		19 29 21.4	
	comp=Z,857nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.87**	**291**	*e*P	**Pn**	**19 28 58.2**	**+0.7**
ZARC				*e*S	**Sn**	**19 29 23.0**	**-0.5**
ZARC				*i*		19 29 30.4	
	comp=Z,510nm,0.4s						
NORC	**Norcasia**	**2.15**	**235**	*e*P	**Pn**	**19 29 01.6**	**+0.7**
NORC				*e*S	**Sn**	**19 29 29.3**	**-0.2**
NORC				*i*		19 29 37.3	
	comp=Z,401nm,0.5s						
CHIC	**Chingaza**	**2.26**	**196**	⇑*i*P	**Pn**	**19 29 03.6**	**+1.1**
CHIC				*e*S	**Sn**	**19 29 33.1**	**+0.6**
CHIC				*i*		19 29 36.6	
	comp=Z,394nm,0.5s						
ROSC	**El Rosal**	**2.31**	**212**	P	**Pn**	**19 29 05.4**	**+2.4**
	comp=Z,264nm,0.3s,baz=184,slow=22,SNR=198						
ROSC				S	**Sn**	**19 29 31.6**	**-1.8**
	comp=Z,188nm,0.4s,baz=102,slow=14,SNR=5.5						
ROSC	**El Rosal**	**2.31**	**212**	⇑*i*P	**Pn**	**19 29 05.5**	**+2.4**
ROSC				*e*S	**Sn**	**19 29 33.7**	**+0.4**
ROSC				*i*		19 29 39.4	
	comp=Z,682nm,0.4s						
HELC	**Santa Helena**	**2.49**	**256**		**Pn**	**19 29 07.3**	**+2.1**
HELC					**Sn**	**19 29 37.3**	**+0.1**
HELC	**Santa Helena**	**2.49**	**256**	*e*P	**Pn**	**19 29 06.8**	**+1.6**
HELC				*e*S	**Sn**	**19 29 37.2**	**+0.1**
HELC				*i*		19 29 44.6	
	comp=Z,218nm,0.3s						
UREC	**San Jos de Ur**	**2.58**	**291**	*e*P	**Pn**	**19 29 05.5**	**-0.5**
UREC				*e*S	**Sn**	**19 29 37.0**	**-1.7**
UREC				*i*		19 29 47.4	
	comp=Z,304nm,0.2s						
LL1C	**La Loma 1 Cana**	**2.74**	**351**	*e*P	**Pn**	**19 29 10.6**	**+2.6**
LL1C				*e*S	**Sn**	**19 29 46.3**	**+4.0**
VILC	**Villavicencio,**	**2.75**	**192**	*e*P	**Pn**	**19 29 09.1**	**+0.9**
VILC				*e*S	**Sn**	**19 29 43.2**	**+0.5**
VILC				*i*		19 29 46.3	
	comp=Z,627nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.77**	**160**	⇓*i*P	**Pn**	**19 29 08.9**	**+0.5**
PTGC				*e*S	**Sn**	**19 29 42.2**	**-0.7**
PTGC				*i*		19 29 47.0	
	comp=Z,478nm,0.3s						
LL5C	**La Loma 5 El P**	**2.98**	**348**	*e*S	**Sn**	**19 29 48.9**	**+1.4**
CBOC	**Ciudad Bolivar**	**3.04**	**252**	*e*P	**Pn**	**19 29 13.7**	**+1.8**
CBOC				*e*S	**Sn**	**19 29 50.5**	**+1.3**
CBOC				*i*		19 29 53.8	
	comp=Z,75nm,0.2s						
DBBC	**Dabeiba**	**3.09**	**274**	*e*P	**Pn**	**19 29 13.2**	**+0.8**
DBBC				*e*S	**Sn**	**19 29 47.9**	**-2.2**
DBBC				*i*		19 29 50.5	
	comp=Z,94nm,0.4s						
SDV	**Santo Domingo**	**3.19**	**50**	P	**Pn**	**19 29 15.3**	**+1.5**
	comp=Z,31nm,0.2s,baz=210,slow=3.4,SNR=42						
SDV				S	**Sn**	**19 29 52.1**	**-0.5**
	comp=Z,216nm,0.5s,baz=44,slow=20,SNR=41						
SDV	**Santo Domingo**	**3.19**	**50**		**Pn**	**19 29 14.9**	**+1.1**
ARGC	**Ariguani, Magd**	**3.23**	**340**	*e*P	**Pn**	**19 29 16.4**	**+2.3**
ARGC				*e*S	**Sn**	**19 29 54.3**	**+1.1**
ARGC				*i*		19 30 05.6	
	comp=Z,91nm,0.2s						
ANIL	**Santa Ana**	**3.25**	**225**	*e*P	**Pn**	**19 29 16.9**	**+2.3**
ANIL				*e*S	**Sn**	**19 29 56.5**	**+2.3**

PRAC	Prado	3.56	210		Pn	19 29 18.7	+0.3
PRAC	Prado	3.56	210	eP	Pn	19 29 19.2	+0.8
PRAC				eS	Sn	19 30 01.3	+0.4
PRAC				i		19 30 06.6	
	comp=Z,241nm,0.4s						
ORTC	Ortega, Tolima	3.59	217	eP	Pn	19 29 19.9	+1.2
ORTC				⇓iP	Pn	19 29 20.2	+1.4
ORTC				eS	Sn	19 30 03.5	+1.9
ORTC				i		19 30 06.9	
	comp=Z,200nm,0.5s						
APAC	Apartado, Choc	3.61	288	⇓iP	Pn	19 29 19.6	+0.6
APAC				eS	Sn	19 30 02.5	+0.6
APAC				i		19 30 06.4	
	comp=Z,120nm,0.4s						
SJCC	San Jacinto, C	3.69	326	eP	Pn	19 29 19.9	-0.1
SJCC				eS	Sn	19 30 01.1	-2.7
SJCC				i		19 30 05.4	
	comp=Z,120nm,0.6s						
LCBC	Los crdobas,	3.82	302	eS	Sn	19 30 08.2	+1.4
CRJC	Cerrejon, Guaj	4.18	3	eP	Pn	19 29 26.0	-0.5
CRJC				eS	Sn	19 30 13.6	-1.8
CRJC				i		19 30 20.7	
	comp=Z,162nm,0.4s						
YOTC	Yotoco, Valle	4.28	229	eP	Pn	19 29 28.2	+0.3
YOTC				eS	Sn	19 30 22.4	+4.6
SMRC	Santa Marta, M	4.46	346	eP	Pn	19 29 31.2	+1.2
SMRC				eS	Sn	19 30 19.0	-2.8
SMRC				i		19 30 22.1	
	comp=Z,93nm,0.2s						
MACC	Macarena, Meta	4.70	189	eP	Pn	19 29 32.8	-0.5
MACC				eS	Sn	19 30 23.9	-3.6
MACC				i		19 30 28.4	
	comp=Z,52nm,0.3s						
BETC	Betania	4.72	210	eP	Pn	19 29 33.8	+0.2
BETC				i		19 30 32.3	
	comp=Z,53nm,0.3s						
URIC	Uribia, Colomb	4.98	13		Pn	19 29 35.8	-1.0
URIC	Uribia, Colomb	4.98	13	eP	Pn	19 29 36.4	-0.4
URIC				eS	Sn	19 30 33.0	-1.0
URIC				i		19 30 35.6	
	comp=Z,22nm,0.1s						
JAMC	Jamundi, Valle	5.05	225	eP	Pn	19 29 39.0	+1.1
JAMC				eS	Sn	19 30 38.8	+2.8
JAMC				i		19 30 45.2	
	comp=Z,17nm,0.3s						
MALC	Bahia Malaga	5.05	237	eP	Pn	19 29 40.3	+2.5
MALC				eS	Sn	19 30 38.7	+2.9
MALC				i		19 30 55.3	
	comp=Z,18nm,0.6s						
GARC	Garzon, Huila	5.18	208	⇓iP	Pn	19 29 39.7	-0.1
GARC				eS	Sn	19 30 37.2	-2.0
GARC				i		19 30 42.0	
	comp=Z,102nm,0.3s						
BAUV	El Baul	5.44	67		Pn	19 29 41.7	-1.3
POPC	Popayan, Colom	5.54	220	eP	Pn	19 29 45.3	+0.7
POPC				eS	Sn	19 30 47.6	-0.2
FLOC	Florencia	5.79	206	eP	Pn	19 29 48.8	+1.1
FLOC				eS	Sn	19 30 54.8	+1.4
FLOC				i		19 31 25.4	
	comp=Z,14nm,0.4s						
BBAC	Balboa, Cauca	6.31	221	eP	Pn	19 29 56.9	+2.2
BBAC				eS	Sn	19 31 05.6	-0.4
BBAC				i		19 31 12.5	
	comp=Z,11nm,0.3s						
GR1C	Gorgona, Isla	6.31	233	eP	Pn	19 29 55.1	+0.5
GR1C				eS	Sn	19 31 03.6	-2.2
GR1C				i		19 31 10.7	
	comp=Z,91nm,0.5s						
BCIP	Isla Barro Col	7.07	290	Pn	Pn	19 30 03.7	-0.9
BIRV	Birongo	7.67	61	Pn	Pn	19 30 08.7	-4.0
OTAV	Otavalo	8.44	219	Pn	Pn	19 30 23.1	-0.3
MTDJ	Mount Denham	12.14	340	Pn	P	19 31 15.2	-2.7
JTS	Las Juntas de	12.22	287	LR	LR	19 37 23.7	
	comp=Z,106nm,19.0s,baz=94,slow=44						
SDDR	Presa de Saban	12.22	8	Pn	Pn	19 31 12.8	+0.1
DR12	Loma Pena Alta	12.44	17	Pn	Pn	19 31 15.3	-0.3
CRPR	Cabo Rojo, PR	12.56	27	Pn	Pn	19 31 17.6	+0.5
GTBY	Guantanamo Bay	13.18	352	P	P	19 31 29.6	+0.2
BOAV	Boa Vista	13.28	109	Pn	Pn	19 31 25.6	-0.8
HUMP	Col San Antoni	13.29	31	Pn	Pn	19 31 26.0	-0.5
CBYP	Canovanas	13.40	31	Pn	Pn	19 31 26.9	-0.9
ETMB	Extrema	17.89	157	P	P	19 32 22.1	+0.5
SAML	Samuel	18.52	148	P	P	19 32 28.6	+0.1
TEIG	Tepich	19.86	314	P	P	19 32 44.3	+1.4
TEIG				IAmb	IAmb	19 33 03.8	
	comp=Z,19nm,1.3s						
LVC	Limon Verde	29.53	172	P	P	19 34 11.9	-2.3
	comp=Z,3.4nm,0.8s,baz=3.8,slow=15,SNR=2.4						
	comp=Z,3.4nm,0.8s						
CCM	Cathedral Cave	35.18	335	P	P	19 35 03.4	+0.4
CCM				IAmb	IAmb	19 35 04.8	
	comp=Z,3.4nm,0.6s						
TXAR	Lajitas Array	36.48	312	P	P	19 35 15.6	+1.3
	comp=Z,0.4nm,0.4s,baz=132,slow=8.8,SNR=7.5						
	comp=Z,0.4nm,0.4s						
TX31	Lajitas Ar. Si	36.48	312	P	P	19 35 14.9	+0.7
TX31				IAmb	IAmb	19 35 57.5	
	comp=Z,8.8nm,1.3s						
TX32	Lajitas Array	36.48	312	P	P	19 35 14.9	+0.7
EYMN	Ely	43.88	342	P	P	19 36 15.4	+0.7
EYMN				IAmb	IAmb	19 36 44.4	
	comp=Z,14nm,1.2s						
PHWY	Pilot Hill	44.80	325	P	P	19 36 22.9	+0.4
ULM	Lac du Bonnet	47.30	340	P	P	19 36 41.7	+0.2
	comp=Z,1.7nm,0.4s,baz=139,slow=7.0,SNR=2.4						
	comp=Z,1.7nm,0.4s						
PDAR	Pinedale Array	48.09	324	P	P	19 36 47.9	-0.2
	comp=Z,0.3nm,0.6s,baz=123,slow=6.8,SNR=3.4						
	comp=Z,0.3nm,0.6s						
NVAR	Mina Array Bea	51.50	315	P	P	19 37 13.6	-0.3
	comp=Z,0.7nm,0.7s,baz=107,slow=7.8,SNR=2.3						
	comp=Z,0.7nm,0.7s						
YKA	Yellowknife Ar	63.27	340	P	P	19 38 36.1	+0.5
	comp=Z,0.9nm,0.6s,baz=132,slow=6.8,SNR=18						
	comp=Z,0.9nm,0.6s						
M30M	Minto, Yukon	72.04	334	P	P	19 39 31.6	+0.9
M30M				IAmb	IAmb	19 40 09.5	
	comp=Z,3.6nm,1.4s						
A36M	Sachs Harbour	72.44	345	P	P	19 39 33.5	+0.7
A36M				IAmb	IAmb	19 39 34.4	
	comp=Z,2.6nm,0.8s						
PCA	Pinnacle	72.83	331	P	P	19 39 35.8	+0.3
INK	Inuvik	73.04	340	P	P	19 39 36.2	-0.2
M27K	Edge Creek, AK	74.22	333	P	P	19 39 43.0	-0.7
M27K				IAmb	IAmb	19 40 20.4	
	comp=Z,9.9nm,1.4s						
BCAR	Beaver Creek A	74.37	334	P	P	19 39 43.0	-1.4
L27K	Beaver Creek,	74.39	334	P	P	19 39 42.5	-2.0
L27K				IAmb	IAmb	19 40 25.6	
	comp=Z,4.4nm,1.4s						
PPLA	Purkeypile	78.99	333	P	P	19 40 10.8	+0.3
L19K	White Mountain	80.16	332	P	P	19 40 17.0	+0.5
MKAR	Makanchi Array	122.32	20	PKP	PKPdf	19 47 00.4	-0.3
	comp=Z,0.2nm,0.6s,baz=47,slow=2.1,SNR=1.7						
ASAR	Alice Springs	149.12	234	PKPbc	PKPbc	19 47 53.9	-0.8
	comp=Z,0.6nm,0.5s,baz=119,slow=3.5,SNR=8.3						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPbc	19 47 57.4	-0.4
	comp=Z,0.5nm,0.3s,baz=108,slow=2.8,SNR=11						

DJA 02 19:36:30.1±0.3,**3°S**±3°×**12°9E**±°,**h10^{km},M3.7**/13,**mb4.0**/5,**mB5.2**/1,**MLv3.6**/13,**Mw(mB)4.6**/1,**Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.78	211	P	Pg	19 36 44.8	-0.4
AAI	Ambon	1.52	228	P	Pn	19 36 57.8	+0.4
BNDI	Bandanaira	1.93	163	P	Pn	19 37 03.0	0.0
NLAI	Namlea	2.30	256	P	Pn	19 37 08.9	+0.8
LBMI	Labuha	2.72	318	P	Pn	19 37 14.5	+0.6
FAKI	Fak Fak	2.93	95	P	Pn	19 37 16.1	-0.6
SANI	Sanana	3.40	280	P	Pn	19 37 20.7	-2.5
RKPI	Ransiki, Papua	4.98	77	P	Pn	19 37 45.1	+0.1
LUWI	Luwuk	6.75	284	P	Pn	19 38 08.8	-0.5
	39nm,1.2s,2µm0.2nm						
MRSI	Marisa	8.02	293	P	Pn	19 38 26.6	-0.2

KRSC ***02*** *19:57:17.3±1.5,54°.69N×165°.74E,h26^{km}±16^{km},Ml4.1*

IDC ***02*** *19:57:20.7±4.0,54°.85N×165°.94E,h59^{km}±37^{km},mb3.1/5,mbtmp3.4/6,ML2.7/1,MS3.1/2,Error ellipse: s-maj=40.2km s-min=23.1km az=155.0*

ISC 02 19:57:17.5±1.2,**54°.75N**±0°.07×**166°.23E**±0°.09,**h35^{km},n34,**σ**1^{s}59**/44,**mb3.5**/5,**Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.48	342	eP	Pn	19 57 27.1	-0.7
BKI				eS	Sn	19 57 33.9	-1.0
KBTR	Krutoberegovo	2.43	308	eP	Pn	19 57 55.8	+1.2
KBG	Krutoberegovo	2.51	308	eP	Pn	19 57 55.8	+0.2
TUMD	Tumrok D	3.39	280	eP	Pn	19 58 08.7	+0.8
TUMD				eS	Sn	19 58 46.5	-0.3
TUMR	Tumrok	3.54	281	eP	Pn	19 58 11.4	+1.4
KMNR	Kamenistaya	3.57	289	eP	Pn	19 58 12.2	+1.8
SRDR	Sredinnyy	4.02	296	eP	Pn	19 58 19.2	+2.7
SPN	Mys Shipunski	4.03	248	eP	Pn	19 58 16.9	+0.4
SPN				eS	Sn	19 59 00.1	-2.3
NLC	Nalytchevo	4.36	252	eP	Pn	19 58 23.0	+1.9
NLC				eS	Sn	19 59 09.1	-1.6
ESO	Esso	4.46	288	eP	Pn	19 58 25.4	+2.9
SDLR	Sedlovina	4.58	254	eP	Pn	19 58 25.5	+1.3
SDLR				eS	Sn	19 59 15.2	-0.9
SMAR	Somma	4.63	254	eP	Pn	19 58 26.3	+1.2
UGLR	Uglovaya	4.64	254	eP	Pn	19 58 26.4	+1.4
KRER	Koryakskii	4.64	255	eP	Pn	19 58 26.7	+1.5
KRER				eS	Sn	19 59 16.8	-1.1
AVH	Avacha	4.66	254	eP	Pn	19 58 27.1	+1.7
AVH				eS	Sn	19 59 16.9	-1.3
KRX	Arik	4.68	256	eP	Pn	19 58 27.1	+1.4
KRX				eS	Sn	19 59 17.3	-1.5
KOK	Koryaka	4.71	255	eP	Pn	19 58 27.4	+1.4
KOK				eS	Sn	19 59 17.9	-1.5
DALK	Dalny	4.75	252	eP	Pn	19 58 27.5	+1.0
DALK				eS	Sn	19 59 18.2	-2.0
GNL	Ganaly	4.98	261	eP	Pn	19 58 31.9	+2.1
KRMR	Karymshinskiy	5.17	251	eP	Pn	19 58 34.1	+1.8
KRMR				eS	Sn	19 59 30.2	-0.5
MTVR	Mutnovka	5.30	248	eP	Pn	19 58 35.4	+1.2
MTVR				eS	Sn	19 59 32.1	-2.0
PETK	Petropavlovsk-	5.30	255	P	Pn	19 58 35.2	+1.1
	1.2nm,0.3s,baz=75,slow=17,SNR=51						
PETK				S	Sn	19 59 34.3	+0.3
	2.9nm,0.4s,baz=71,slow=23,SNR=8.9						
	1.7nm,0.4s						
GRL	Gorelyy	5.33	249	eP	Pn	19 58 36.5	+1.9
GRL				eS	Sn	19 59 34.8	+0.1
KDTR	Khodutka, Kamc	5.71	242	eP	Pn	19 58 40.8	+1.2
KDTR				eS	Sn	19 59 40.0	-3.8
ILAR	Eielson Array	25.04	48	P	P	20 02 39.5	+1.6
	0.6nm,0.6s,baz=262,slow=9.5,SNR=7.0						
	0.6nm,0.6s						
H11N2	WAKE ISLAND Hy	34.97	179	T	T	20 41 35.5	
	baz=360,slow=76,SNR=38						
H11N3	WAKE ISLAND Hy	34.98	179	T	T	20 41 37.3	
	baz=360,slow=76,SNR=52						
H11N1	WAKE ISLAND Hy	34.98	179	T	T	20 41 35.4	
	baz=360,slow=76,SNR=52						
ZALV	Zalesovo Beam	44.89	304	LR	LR	20 25 23.8	
	comp=Z,28nm,18.4s,baz=15,slow=38						
KURBB	Kurchatov Arra	49.99	304	P	P	20 06 06.5	-1.2
	0.2nm,0.4s,baz=58,slow=7.7,SNR=2.2						
	0.2nm,0.4s						
MKAR	Makanchi Array	50.65	298	P	P	20 06 12.3	-0.6
	0.1nm,0.5s,baz=59,slow=8.7,SNR=1.3						
	0.1nm,0.5s						
BVAR	Borovoye Array	52.14	310	P	P	20 06 23.2	-0.7
	0.5nm,0.7s,baz=36,slow=7.5,SNR=3.3						
	0.5nm,0.7s						
CMAR	Chiang Mai Arr	62.04	262	LR	LR	20 36 15.4	
	comp=Z,12nm,18.2s,baz=290,slow=38						
ASAR	Alice Springs	82.88	210	P	P	20 09 38.7	+0.6
	0.4nm,0.9s,baz=21,slow=5.4,SNR=4.4						
	0.4nm,0.9s						

WEL 02 20:00:39.1±0.5,**39°S**±3°×**17°7E**±°,**h26^{km}**±5^{km},**M3.6**/15,**ML4.0**/15,**MLv3.6**/15,**Error ellipse: s-maj=0.0km s-min=0.0km az=115.7,confirmed,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARHZ	Aropaoanui	0.25	290	P	Pb	20 00 46.2	+0.8
ARHZ				S	Sb	20 00 52.1	+2.3
WHHZ	Waihua	0.28	350	P	Pn	20 00 46.8	-0.7
WHHZ				S	Sn	20 00 53.4	+0.5
CKHZ	Cape Kidnapper	0.35	209	P	Pn	20 00 48.0	-0.5
CKHZ				S	Sn	20 00 55.9	+1.1
KNZ	Kokohu	0.44	42	P	Pn	20 00 49.2	-0.5
NMHZ	Naumai	0.46	303	P	Pn	20 00 49.7	-0.4
NMHZ				S	Sn	20 00 58.0	+0.6
RAHZ	Arahi	0.46	339	P	Pn	20 00 49.7	-0.4
RAHZ				S	Sn	20 00 58.1	+0.6
MCHZ	McNeill Hill	0.47	258	P	Pn	20 00 50.0	-0.2
MCHZ				S	Sn	20 00 58.8	+1.0
MHGZ	Mahia Peninsul	0.51	67	P	Pn	20 00 50.6	-0.1
KAHZ	Kahuranaki	0.55	216	P	Pn	20 00 51.2	-0.1
SNGZ	Shannon Statio	0.57	3	P	Pn	20 00 51.5	-0.1
MTHZ	Maungataniwha	0.61	324	P	Pn	20 00 51.8	-0.3
BKZ	Black Stump Fm	0.65	286	P	Pn	20 00 52.4	-0.3
KWHZ	Kaweka Forest	0.68	264	P	Pn	20 00 52.9	-0.2
RIGZ	Rimuhau	0.74	29	P	Pn	20 00 54.1	+0.2
PXZ	Pawanui	0.76	206	P	Pb	20 00 53.2	-0.4
RTZ	Ruatahuna	0.78	341	P	Pn	20 00 54.5	+0.1
RAGZ	Rawiri	0.86	6	P	Pn	20 00 55.7	+0.1
MUGZ	Murupara	0.96	335	P	Pb	20 00 57.3	+0.2
BHHZ	Black Hill Sta	0.97	261	P	Pn	20 00 57.0	-0.1
WPHZ	Waipukurau	0.97	223	P	Pn	20 00 56.6	-0.5
TKGZ	Te Karaka	1.01	25	P	Pn	20 00 57.5	0.0
PNHZ	Pukenui	1.02	236	P	Pn	20 00 57.1	-0.7
MWZ	Matawai	1.03	10	P	Pn	20 00 57.6	-0.3
HATZ	Hinemaiaia	1.04	296	P	Pb	20 00 59.0	+0.5
PRHZ	Porangahau	1.05	209	P	Pn	20 00 57.2	-0.9
ALRZ	Allen Road	1.08	316	P	Pb	20 00 59.7	+0.6
URZ	Urewera	1.10	352	P	Pn	20 00 59.0	+0.1
PRRZ	Plateau Road	1.10	320	P	Pb	20 01 00.5	+1.0
CNGZ	Carnagh Statio	1.12	40	P	Pn	20 00 58.9	-0.1
RITZ	Rihia Road	1.18	288	P	Pb	20 01 01.3	+0.5
RRRZ	Republican Roa	1.18	329	P	Pb	20 01 01.8	+1.0
MOVZ	Moawhango	1.20	267	P	Pb	20 01 00.8	-0.3
WPRZ	Whakapapatarin	1.21	313	P	Pb	20 01 01.3	-0.1
HRRZ	Handcock Road	1.24	320	P	Pb	20 01 03.1	+1.2
WHTZ	Whakaora	1.25	303	P	Pb	20 01 02.8	+0.8
ETVZ	East Tongariro	1.25	279	P	Pn	20 01 01.5	+0.5
TMVZ	Te Maari	1.26	280	P	Pb	20 01 01.7	-0.5
TARZ	Mount Tarawera	1.27	331	P	Pn	20 01 01.8	+0.5
ANWZ	Angora Road	1.27	209	P	Pn	20 01 00.3	-0.9
TUVZ	Tukino	1.28	273	P	Pb	20 01 02.9	+0.4
OTVZ	Oturere	1.28	278	P	Pn	20 01 02.0	+0.6
RATZ	Rangitukua	1.28	292	P	Pn	20 01 01.9	+0.5
NTVZ	North Tongarir	1.28	281	P	Pn	20 01 02.0	+0.5
NTVZ				P	Pb	20 01 02.7	0.0
DVHZ	Dannevirke	1.29	222	P	Pn	20 01 00.4	-1.0
TWGZ	Tauwhareparae	1.29	25	P	Pn	20 01 01.5	0.0
SNVZ	South Ngauruho	1.30	277	P	Pn	20 01 02.3	+0.6
KATZ	Kakaramea	1.30	286	P	Pb	20 01 02.8	-0.1
KRVZ	Karewarewa	1.31	281	P	Pb	20 01 03.0	-0.1
WNVZ	Wahianoa	1.32	271	P	Pb	20 01 03.1	-0.2
HLRZ	Highlands Stat	1.32	326	P	Pb	20 01 04.4	+1.2
HSRZ	Hossack Road	1.32	321	P	Pb	20 01 02.7	-0.6
NNVZ	North Ngauruho	1.32	279	P	Pb	20 01 03.2	-0.1
WHVZ	Whangaehu Hut	1.33	272	P	Pb	20 01 03.2	-0.2
NGZ	Ngauruhoe	1.33	277	P	Pn	20 01 02.6	+0.5
DRZ	Dome Shelter	1.35	273	P	Pb	20 01 04.0	+0.2
WTVZ	West Tongariro	1.35	280	P	Pb	20 01 03.1	-0.6
FWVZ	Far West T-bar	1.36	274	P	Pn	20 01 03.0	+0.5
TRVZ	Turoa	1.36	272	P	Pn	20 01 03.1	+0.5
MKRZ	Makatiti	1.37	332	P	Pb	20 01 07.1	+2.9
WATZ	Wairara	1.38	297	P	Pn	20 01 03.4	+0.7
RUGZ	Raukumara Rang	1.42	12	P	Pn	20 01 03.0	-0.3
MTVZ	Mangateitei	1.42	268	P	Pb	20 01 04.2	-0.6
KUTZ	Kaahu Road	1.44	306	P	Pn	20 01 04.3	+0.8
OMRZ	Omania	1.44	329	P	Pb	20 01 06.8	+1.6
TWVZ	Taurewa	1.47	280	P	Pb	20 01 05.4	-0.4
PUZ	Puketiti	1.48	31	P	Pn	20 01 03.5	-0.6
WHRZ	Whale Island	1.51	350	P	Pn	20 01 05.1	+0.5
PKVZ	Pokaka	1.52	272	P	Pb	20 01 06.8	+0.3
BFZ	Birch Farm	1.56	211	P	Pn	20 01 03.5	-1.6
POWZ	Post Office Ro	1.57	228	P	Pn	20 01 04.6	-0.7
PRWZ	Pori Road	1.58	220	P	Pn	20 01 04.4	-1.0
PKGZ	Pakihiroa	1.58	23	P	Pn	20 01 05.2	-0.3
OPRZ	Ohinepanea	1.61	339	P	Pn	20 01 06.1	+0.2
HAZ	Te Kaha	1.64	14	P	Pn	20 01 06.0	-0.2
WMGZ	Waiomatatini S	1.76	30	P	Pn	20 01 07.3	-0.7
TIWZ	Tintock	1.79	217	P	Pn	20 01 06.9	-1.5
WAZ	Wanganui	1.83	257	P	Pn	20 01 10.0	+1.0
KMRZ	Kaimai	1.84	324	P	Pb	20 01 16.3	+4.2
MRZ	Mangatainoka R	1.86	225	P	Pn	20 01 08.0	-1.3
MXZ	Matakaoa Point	1.95	24	P	Pn	20 01 10.6	0.0
VRZ	Vera Road	1.98	276	P	Pb	20 01 16.8	+2.3
TMWZ	Te Maipa	2.06	211	P	Pn	20 01 09.8	-2.2
HOWZ	Holdsworth Sta	2.06	221	P	Pn	20 01 10.1	-2.0
HIZ	Hauiti	2.08	293	P	Pn	20 01 13.2	+0.9
TOZ	Tahuroa Road	2.14	318	P	Pb	20 01 19.5	+2.3
OGWZ	Otaki Gorge	2.19	227	P	Pn	20 01 12.1	-1.7
KIW	Kapiti Island	2.37	230	P	Pn	20 01 14.8	-1.5
TRWZ	Traveller	2.39	211	P	Pn	20 01 14.1	-2.5
CAW	Cannon Point	2.45	224	P	Pn	20 01 15.3	-2.1
NEZ	North Egmont	2.48	271	P	Pn	20 01 19.9	+1.9
PKE	Pukeiti	2.57	272	P	Pn	20 01 20.4	+1.3
PLWZ	Palliser	2.71	214	P	Pn	20 01 17.7	-3.3
DUWZ	D’Urville Isla	2.97	240	P	Pn	20 01 22.8	-1.8
TUWZ	Tuamarina	3.30	230	P	Pn	20 01 26.0	-3.0
BSWZ	Blackbirch Sta	3.52	227	P	Pn	20 01 29.6	-2.5
TKNZ	Takaka Hill	3.72	242	P	Pn	20 01 33.1	-1.8
QRZ	Quartz Range	3.94	247	P	Pn	20 01 35.7	-2.2
MRNZ	Matariki Terra	4.03	238	P	Pn	20 01 37.1	-1.9
AKCZ	Akaroa Harbour	5.59	215	P	Pn	20 01 57.2	-3.3
CTZ	Chatham Island	6.33	136	P	Pn	20 02 09.4	-1.2

HEL 02 20:05:37.3±0.2,**67°.61N**×**33°.32E,h0^{km},ML1.6,Explosion,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVZ	Lovozero	0.58	60	PG	Pg	20 05 48.1	-0.3
LVZ				SG	Sg	20 05 55.2	-0.9
VRF	Varrio	1.42	277	PG	Pn	20 06 02.8	-1.5
	baz=90						
VRF				MSG		20 06 20.1	
	comp=Z,5.3nm,0.2s						
VRF				SG	Sg	20 06 22.8	-0.1
OLKF	Oulanka, Finla	2.01	232	PG	Pn	20 06 13.5	+1.0
OLKF				MSG		20 06 37.2	
	comp=Z,2.4nm,0.2s						
KEV	Kevo	3.16	316	PN	Pn	20 06 26.6	-1.5
KEV				SN	Sn	20 07 05.0	-1.4
ARA0	ARCESS Array S	3.46	308	PN	Pn	20 06 30.2	-2.1
	baz=121						
ARA0				SN	Sn	20 07 12.8	-1.1
KLF	Kolari	3.63	268	SB	Sb	20 07 24.4	-2.3
TOF	Tornio	3.87	251	PB	Pb	20 06 43.1	-3.2
PAJU	Pajala	4.00	266	SN	Sn	20 07 26.9	-0.3

BJI ***02*** *20:14:26.0±0.0,6°.10S×154°.90E,h156^{km},mb4.2/17,mB5.0/7*

NEIC ***02*** *20:14:27.7±1.9,6°.09S±0°.08×154°.97E±0°.08,h161^{km}±8^{km},mb4.8/87,Error ellipse: s-maj=13.0km s-min=10.3km az=216.0*

IDC ***02*** *20:14:28.9±1.0,6°.09S×154°.91E,h176^{km}±9^{km},mb4.0/19,mbtmp4.6/24,MS3.3/9,Error ellipse: s-maj=10.1km s-min=7.9km az=75.0*

DJA ***02*** *20:14:29.0±0.4,6°S±4°×15°5E±°,h178^{km}±3^{km},M4.7/31,mb4.8/31,mB5.2/10,MLv4.9/2,Mw(mB)4.5/10,MwMwp6.9/1,Mwp6.8/1*

ISC 02 20:14:26.4±0.3,**6°.10S**±0°.05×**154°.99E**±0°.05,**h150^{km},n228,**σ**1^{s}26**/222,**mb4.8**/105,**Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.40	304		Pn	20 15 21.3	+2.4
RABL				Sn	Sn	20 15 59.4	-0.1
KRVT	Keravat (AS076	3.45	301	P	Pn	20 15 21.6	+2.1
	307nm,0.4s,baz=294,slow=0.6,SNR=48						
KRVT				S	Sn	20 16 02.7	+2.0
	2µm,0.3s,baz=173,slow=22,SNR=9.6						
HNR	Honiara	5.92	124	P	Pn	20 15 54.9	+2.8
	680nm,0.3s,baz=207,slow=5.4,SNR=1.9						
HNR				S	Sn	20 16 59.7	+0.6
	4µm,0.8s,baz=118,slow=19,SNR=1.8						
HNR	Honiara	5.92	124	Pn	Pn	20 15 54.5	+2.4
PMG	Port Moresby	8.43	247	P	Pn	20 16 28.7	+3.1
	149nm,0.8s,baz=27,slow=20,SNR=43						
PMG				S	Sn	20 18 03.5	+4.0
	18nm,0.6s,baz=286,slow=7.8,SNR=0.6						
PMG				LR	LR	20 19 26.2	
	comp=Z,138nm,21.9s,baz=66,slow=36						
PMG	Port Moresby	8.43	247	Pn	Pn	20 16 27.6	+1.9
PMG	Port Moresby	8.43	247	P	Pn	20 16 32.8	+7.2
	344nm,0.8s						
PATS	Pohnpei	13.27	15	Pn	Pn	20 17 28.5	-0.6
COEN	Coen	14.01	235		Pn	20 17 37.3	-1.3
COEN	Coen	14.01	235	P	P	20 17 42.9	+1.2
	32nm,0.8s						
GENI	Genyem	15.19	283	P	P	20 17 56.3	+1.5
	53nm,0.6s						
TV1H	Townsville Har	15.33	211	P	P	20 17 59.4	+3.1
	54nm,0.6s						
CTA	Charters Tower	16.30	211	P	P	20 18 08.8	+1.8
	49nm,0.8s,baz=34,slow=12,SNR=40						
CTA				S	Sn	20 21 10.4	+1.6
	3.1nm,0.8s,baz=231,slow=21,SNR=1.5						
CTA				LR	LR	20 23 10.7	
	comp=Z,69nm,20.0s,baz=7.5,slow=32						
CTA	Charters Tower	16.30	211	P	P	20 18 09.9	+2.9
	99nm,0.8s						
CTAO	Charters Tower	16.30	211	P	P	20 18 08.3	+1.3
CTAO	Charters Tower	16.30	211	P	P	20 18 09.9	+2.9
	85nm,0.9s						
KOUNC	Koumac, New Ca	16.96	149		P	20 18 14.5	+0.2
NOUC	Port Laguerre	19.30	147	P	P	20 18 40.9	+1.0
	120nm,0.7s						
DZM	Mont Dzumac	19.36	146	P	P	20 18 41.8	+1.1
	50nm,0.4s,baz=260,slow=8.9,SNR=130						
DZM				S	S	20 22 11.3	-0.4
	11nm,1.1s,baz=118,slow=21,SNR=2.3						
DZM	Mont Dzumac	19.36	146	P	P	20 18 40.8	+0.2
DZM	Mont Dzumac	19.36	146	P	P	20 18 42.1	+1.5
	114nm,0.8s						
TARA	Tarawa	19.37	68	P	P	20 18 39.1	-1.6
EIDS	Eidsvold	19.53	191	P	P	20 18 42.0	-0.3
EIDS	Eidsvold	19.53	191	P	P	20 18 43.9	+1.6
	101nm,1.0s						
ONTNC	Ouen Toro	19.55	147	P	P	20 18 41.0	-1.6
ONTNC	Ouen Toro	19.55	147	P	P	20 18 43.6	+1.0
	101nm,0.8s						
OUENC	Ouen Island, N	19.85	146	P	P	20 18 46.6	+0.7
	65nm,1.0s						
QIS	Mount Isa	20.73	225	P	P	20 18 56.0	+0.7
	39nm,0.9s						
RMQ	Roma	21.13	196	P	P	20 19 01.0	+1.5
	195nm,0.7s						
QLP	Quilpie	22.81	206	P	P	20 19 17.2	+0.7
	429nm,0.8s						
FAKI	Fak Fak	22.89	277	P	P	20 19 17.4	0.0
	44nm,1.2s						
KDU	Kakadu	23.15	252	P	P	20 19 19.8	+0.1
	50nm,0.7s						
WR0	Warramunga Arr	24.18	233	P	P	20 19 29.1	-0.1
WB0	Warramunga Arr	24.20	234	P	P	20 19 29.1	-0.2
WB0				IAmb	IAmb	20 19 31.6	
	comp=Z,28nm,0.6s						
WRAB	Tennant Creek	24.32	234	P	P	20 19 30.2	-0.2
WRAB				IAmb	IAmb	20 19 31.4	
	comp=Z,25nm,0.6s						
WRAB	Tennant Creek	24.32	234	P	P	20 19 30.5	+0.1
	comp=Z,39nm,0.7s						
WB2	Warramunga Arr	24.32	234	P	P	20 19 30.1	-0.3
WRA	Warramunga Arr	24.34	234	P	P	20 19 30.6	+0.1
	comp=Z,19nm,0.6s,baz=57,slow=9.9,SNR=182						
WRA				S	S	20 23 35.2	-3.9
	comp=Z,1.2nm,0.8s,baz=55,slow=16,SNR=1.6						
	comp=Z,19nm,0.6s						
WRA	Warramunga Arr	24.34	234	P	P	20 19 29.2	-1.3
ARMA	Armidale	24.40	187	P	P	20 19 30.1	-1.0
ARMA	Armidale	24.40	187	P	P	20 19 32.2	+1.1
	comp=Z,63nm,1.1s						
MTN	Manton Dam	24.46	252	P	P	20 19 29.7	-2.0
MTN				IAmb	IAmb	20 20 12.4	
	comp=Z,32nm,1.1s						
INKA	Innaminka	25.43	211	P	P	20 19 40.2	-0.1
	comp=Z,149nm,0.6s						
AS01	Alice Springs	26.74	227	P	P	20 19 51.7	-0.5
	comp=Z,9.5nm,0.9s						
CMSA	Cobar Meteorol	26.77	198	P	P	20 19 52.6	+0.3

	comp=Z,28nm,0.7s						
AS31	Alice Springs	26.77	227	P	P	20 19 50.9	-1.6
ASAR	Alice Springs	26.77	227	P	P	20 19 51.9	-0.7
	comp=Z,5.4nm,0.5s,baz=59,slow=8.8,SNR=124						
ASAR				PcP	PcP	20 23 11.2	-0.7
	comp=Z,1.1nm,0.6s,baz=66,slow=3.8,SNR=2.3						
ASAR				S	S	20 24 15.2	-2.3
	comp=Z,1.2nm,0.8s,baz=58,slow=14,SNR=2.3						
ASAR				ScP	ScP	20 26 35.2	-3.0
	comp=Z,0.6nm,0.8s,baz=60,slow=2.4,SNR=4.2						
ASAR				LR	LR	20 29 38.9	
	comp=Z,66nm,20.0s,baz=44,slow=34						
	comp=Z,5.4nm,0.5s						
ASAR	Alice Springs	26.77	227	P	P	20 19 50.9	-1.7
H11S3	WAKE ISLAND Hy	27.02	25	T	T	20 49 04.8	
	baz=202,slow=76,SNR=10						
H11S2	WAKE ISLAND Hy	27.02	25	T	T	20 49 04.6	
	baz=202,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	27.04	25	T	T	20 48 55.7	
	baz=202,slow=76,SNR=12						
KNRA	Kununurra	27.43	248	P	P	20 19 56.6	-1.8
KNRA				IAmb	IAmb	20 20 44.7	
	comp=Z,23nm,0.9s						
KNRA	Kununurra	27.43	248	P	P	20 19 58.2	-0.2
	comp=Z,7.9nm,1.1s						
LBMI	Labuha	27.97	280	P	P	20 20 03.8	+0.6
	comp=Z,67nm,0.7s						
H11N1	WAKE ISLAND Hy	28.20	24	T	T	20 51 03.3	
	baz=203						
H11N3	WAKE ISLAND Hy	28.21	24	T	T	20 50 49.1	
	baz=203						
H11N2	WAKE ISLAND Hy	28.21	24	T	T	20 50 53.2	
	baz=203						
OOD	Oodnadatta	28.31	218	P	P	20 20 05.5	-0.6
	comp=Z,38nm,0.9s						
STKA	Stephens Creek	28.55	204	P	P	20 20 07.5	-0.6
	comp=Z,6.9nm,0.7s,baz=22,slow=8.8,SNR=9.6						
STKA				LR	LR	20 32 02.7	
	comp=Z,74nm,18.0s,baz=22,slow=37						
	comp=Z,6.9nm,0.7s						
STKA	Stephens Creek	28.55	204	P	P	20 20 06.7	-1.5
STKA	Stephens Creek	28.55	204	P	P	20 20 07.7	-0.4
	comp=Z,2.1nm,0.8s						
LCRK	Leigh Creek	28.91	211	P	P	20 20 10.8	-0.5
	comp=Z,29nm,0.8s						
SANI	Sanana	29.20	277	P	P	20 20 13.4	-0.8
	comp=Z,16nm,1.0s						
CAN	Canberra	29.60	190	P	P	20 20 17.1	-0.4
CAN				IAmb	IAmb	20 20 19.0	
	comp=Z,11nm,0.8s						
FITZ	Fitzroy Crossi	31.02	245	P	P	20 20 28.9	-1.3
FITZ	Fitzroy Crossi	31.02	245	P	P	20 20 29.1	-1.1
	comp=Z,1.8nm,0.8s						
HTT	Hallett	31.03	207	P	P	20 20 30.3	+0.2
	comp=Z,16nm,2.0s						
MULG	Mulgathing	31.09	217	P	P	20 20 29.7	-0.9
	comp=Z,20nm,0.7s						
WRKA	Warakurna	31.76	231	P	P	20 20 35.5	-1.1
	comp=Z,22nm,0.8s						
BBOO	Buckleboo	31.90	211	P	P	20 20 36.5	-1.1
BBOO				IAmb	IAmb	20 20 37.8	
	comp=Z,20nm,0.9s						
BBOO	Buckleboo	31.90	211	P	P	20 20 37.1	-0.6
	comp=Z,29nm,2.0s						
TOO	Toolangi	32.51	194	P	P	20 20 42.4	-0.5
TOO				IAmb	IAmb	20 20 44.1	
	comp=Z,13nm,0.8s						
MMRI	Maumere	32.58	264	P	P	20 20 41.6	-2.3
MMRI	Maumere	32.58	264	P	P	20 20 42.5	-1.4
ARPS	Mount Arapiles	32.82	200	P	P	20 20 45.8	+0.2
	comp=Z,48nm,0.8s						
TOLI2	Tolitoli	34.90	281	P	P	20 21 02.9	-1.0
	comp=Z,8.4nm,0.6s						
KAPI	Kappang	35.09	270	LR	LR	20 36 55.3	
	comp=Z,31nm,21.6s,baz=30,slow=38						
FORT	Forrest	35.24	223	P	P	20 21 05.6	-1.1
FORT	Forrest	35.24	223	P	P	20 21 05.9	-0.7
	comp=Z,36nm,1.0s						
MPSI	Mapaga	35.61	279	P	P	20 21 09.3	-0.7
	comp=Z,24nm,0.8s						
MOO	Moorlands	36.85	190	P	P	20 21 19.7	-0.5
	comp=Z,42nm,1.0s						
HIZ	Hauiti	36.95	154	P	P	20 21 20.7	-0.4
	comp=Z,56nm,1.2s						
PLAI	Plampang	36.99	263	P	P	20 21 19.8	-2.0
	comp=Z,11nm,0.7s						
MBWA	Marble Bar	37.27	243	P	P	20 21 22.8	-1.3
MBWA				IAmb	IAmb	20 21 23.7	
	comp=Z,9.4nm,0.7s						
MBWA	Marble Bar	37.27	243	P	P	20 21 23.2	-0.9
	comp=Z,11nm,1.3s						
MBWA	Marble Bar	37.27	243	P	P	20 21 22.8	-1.3
TAU	Tasmania Unive	37.28	189	P	P	20 21 24.0	+0.2
TAU	Tasmania Unive	37.28	189	P	P	20 21 25.1	+1.3
PSA00	Pilbara Seismi	37.31	242	P	P	20 21 22.9	-1.4
PSA00	Pilbara Seismi	37.31	242	P	P	20 21 22.4	-1.9
PSA00				IAmb	IAmb	20 21 24.1	
	comp=Z,4.2nm,0.9s						
PSA00	Pilbara Seismi	37.31	242	P	P	20 21 23.6	-0.7
	comp=Z,9.3nm,0.9s						
URZ	Urewera	37.79	151	P	P	20 21 28.6	+0.6
	comp=Z,20nm,0.6s,baz=212,slow=1.1,SNR=18						
	comp=Z,20nm,0.6s						
URZ	Urewera	37.79	151	P	P	20 21 29.0	+0.9
	comp=Z,33nm,1.1s						
MXZ	Matakaoa Point	37.84	149	P	P	20 21 29.4	+0.9
MXZ	Matakaoa Point	37.84	149	P	P	20 21 29.9	+1.4
	comp=Z,28nm,1.1s						
QRZ	Quartz Range	37.98	158	P	P	20 21 29.9	+0.3
QRZ				IAmb	IAmb	20 21 38.7	
	comp=Z,30nm,1.3s						
RTZ	Ruatahuna	38.01	152	P	P	20 21 30.5	+0.4
BKZ	Black Stump Fm	38.22	153	P	P	20 21 31.9	0.0
BKZ	Black Stump Fm	38.22	153	P	P	20 21 32.3	+0.5
	comp=Z,36nm,0.5s						
MRNZ	Matariki Terra	38.56	158	P	P	20 21 35.2	+0.6
NNZ	Nelson	38.63	158	P	P	20 21 35.2	0.0
NNZ				IAmb	IAmb	20 21 38.6	
	comp=Z,14nm,0.6s						
THZ	Tophouse	38.93	159	P	P	20 21 37.9	+0.2
THZ				IAmb	IAmb	20 21 43.5	
	comp=Z,50nm,1.4s						
TCW	Tory Channel	38.97	157	P	P	20 21 38.8	+0.8
TUWZ	Tuamarina	39.03	157	P	P	20 21 38.9	+0.5
MRZ	Mangatainoka R	39.04	155	P	P	20 21 38.3	-0.3
SNZO	South Karori	39.23	156	P	P	20 21 40.0	-0.1
SNZO	South Karori	39.23	156	P	P	20 21 41.1	+1.0
	comp=Z,42nm,1.3s						
BSWZ	Blackbirch Sta	39.25	157	P	P	20 21 39.3	-1.0
INZ	Inchbonnie	39.28	161	P	P	20 21 39.3	-1.2
BFZ	Birch Farm	39.35	154	P	P	20 21 41.0	0.0
BFZ				IAmb	IAmb	20 21 41.9	
	comp=Z,18nm,0.5s						
BFZ	Birch Farm	39.35	154	P	P	20 21 41.1	0.0
	comp=Z,26nm,0.6s						
BHW	Baring Head	39.38	156	P	P	20 21 40.8	-0.5
BHW				IAmb	IAmb	20 21 46.2	
	comp=Z,36nm,1.1s						
FOZ	Fox Glacier	39.50	163	P	P	20 21 41.1	-1.2
LTZ	Lake Taylor	39.60	160	P	P	20 21 43.7	+0.5
LTZ				IAmb	IAmb	20 21 45.4	
	comp=Z,16nm,0.8s						
PLWZ	Palliser	39.67	156	P	P	20 21 42.8	-1.0
JCZ	Jackson Bay	39.72	164	P	P	20 21 44.8	+0.6
	comp=Z,14nm,0.9s						
KHZ	Kahutara	39.73	158	P	P	20 21 44.0	-0.2
KHZ				IAmb	IAmb	20 21 44.8	
	comp=Z,18nm,0.7s						
KMBL	Kambalda	39.90	227	P	P	20 21 45.4	-0.5
	comp=Z,50nm,0.7s						
OXZ	Oxford	40.01	161	P	P	20 21 45.2	-1.4
RPZ	Rata Peaks	40.04	162	P	P	20 21 47.5	+0.7
	comp=Z,23nm,0.6s,baz=313,slow=1.8,SNR=18						
	comp=Z,23nm,0.6s						
RPZ	Rata Peaks	40.04	162	P	P	20 21 46.5	-0.3
RPZ	Rata Peaks	40.04	162	P	P	20 21 47.5	+0.7
	comp=Z,41nm,0.7s						
MEEK	Meekatharra	40.21	235	P	P	20 21 47.9	-0.6
	comp=Z,23nm,0.8s						
LBZ	Lake Benmore	40.39	163	P	P	20 21 49.7	0.0
KKM	Kota Kinabalu	40.54	287	P	P	20 21 49.9	-1.6
KKM				IAmb	IAmb	20 22 22.9	
	comp=Z,53nm,1.5s						
KKM	Kota Kinabalu	40.54	287	P	P	20 21 51.1	-0.4
	comp=Z,13nm,1.1s						
MQZ	McQueen’s Vall	40.55	160	P	P	20 21 50.8	-0.2
MLZ	Mavora Lakes	40.75	166	P	P	20 21 52.2	-0.5
MLZ				IAmb	IAmb	20 21 58.8	
	comp=Z,45nm,1.4s						
KLBR	Kellerberrin	43.06	229	P	P	20 22 10.4	-1.2
	comp=Z,64nm,0.9s						
MORW	Morawa	43.28	233	P	P	20 22 12.5	-0.9
MORW				IAmb	IAmb	20 22 13.1	
	comp=Z,11nm,0.7s						
MORW	Morawa	43.28	233	P	P	20 22 12.5	-0.9
	comp=Z,18nm,1.7s						
BLDU	Ballidu	43.42	231	P	P	20 22 13.3	-1.2
	comp=Z,10nm,2.1s						
UGM	Wanagama	44.16	265	P	P	20 22 19.6	-1.1
	comp=Z,57nm,1.6s						
TPUB	Ta-pu	44.50	312	P	P	20 22 22.8	-0.4
	comp=Z,62nm,2.5s						
SSLB	Suanglung	44.56	313	P	P	20 22 23.6	-0.1
	comp=Z,22nm,1.2s						
MJAR	Matsushiro Arr	45.24	341	P	P	20 22 27.6	-1.2
	comp=Z,0.9nm,0.6s,baz=176,slow=7.7,SNR=1.9						
	comp=Z,0.9nm,0.6s						
CMJI	Cimerak	46.22	265	P	P	20 22 35.4	-1.5
	comp=Z,37nm,0.9s						
CNJI	Cibinong	47.54	266	P	P	20 22 45.9	-1.2
CGJI	Cibinong	48.98	267	P	P	20 22 56.1	-2.1
	comp=Z,29nm,0.8s,comp=Z,653nm						
KSRS	Korea Array	50.15	332	P	P	20 23 05.7	-0.9
	comp=Z,1.4nm,0.8s,baz=149,slow=7.2,SNR=2.7						
	comp=Z,1.4nm,0.8s						
ASAJ	Asahikawa	51.22	349	P	P	20 23 14.1	-0.4
	comp=Z,5.0nm,0.8s,baz=256,slow=1.3,SNR=5.0						
	comp=Z,5.0nm,0.8s						
NJ2	Nanjing	51.23	320	*e*P	P	20 23 16.7	+1.9
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
KLR	Kul'dur	58.72	342	LR	LR	20 45 50.1	
	comp=Z,12nm,21.9s,baz=290,slow=32						
PETK	Petropavlovsk-	59.02	2	P	P	20 24 11.1	+0.8
	comp=Z,5.0nm,0.8s,baz=160,slow=8.3,SNR=10						
	comp=Z,5.0nm,0.8s						
PETK	Petropavlovsk-	59.02	2	P	P	20 24 10.8	+0.5
CMAR	Chiang Mai Arr	60.40	295	P	P	20 24 20.6	+0.2
	comp=Z,0.4nm,0.4s,baz=120,slow=5.3,SNR=1.9						
	comp=Z,0.4nm,0.4s						
PZH	PanZhiHua	60.90	305	P	P	20 24 25.4	+1.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,80nm,5.7s						
DRV	Dumont d’Urvil	61.35	187	P	P	20 24 25.9	0.0
HHC	Hu-ho-hao-te	61.37	324	*e*P	P	20 24 30.2	+3.5
HHC				pmax	pmax		
	comp=Z,19nm,0.8s						
HHC				pmax	pmax		
	comp=Z,250nm,4.9s						
LZH	Lanzhou	63.68	315	*e*P	P	20 24 45.1	+2.9
LZH				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GTA	Gaotai	68.09	317	*e*P	P	20 25 14.6	+4.3
GTA				pP	pP	20 25 49.6	+3.3
GTA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ULN	Ulaanbaatar	68.25	327	P	P	20 25 11.1	-0.1
ULN	Ulaanbaatar	68.25	327	P	P	20 25 11.5	+0.4
ULN				pP	pP	20 25 50.4	+3.1
SONM	Songino Array	68.58	327	P	P	20 25 13.6	+0.5
	comp=Z,0.8nm,0.5s,baz=147,slow=5.5,SNR=22						
	comp=Z,0.8nm,0.5s						
SONM	Songino Array	68.58	327	P	P	20 25 12.7	-0.4
CCD	Concordia, Ant	71.29	188	P	P	20 25 29.6	0.0
CCD				pP	pwP	20 26 09.2	+1.2
TAPN	Taplejung	72.94	301	*e*P	pP	20 26 18.1	+1.4
	comp=Z,13nm,1.0s						
BILL	Bilibino	74.39	4	P	P	20 25 47.5	+0.2
GUN	Gumba	74.66	301	*e*P	pP	20 26 27.9	+1.0
	comp=Z,12nm,0.7s						
PKI	Pulchoki	74.97	301	*e*P	pP	20 26 29.6	+0.9
PKIN	Phulchoki	74.98	301	*e*P	pP	20 26 29.6	+0.9
DMN	Daman	75.24	300	*e*P	pP	20 26 31.3	+1.1
	comp=Z,29nm,1.0s						
GKN	Gorkha	75.74	301	*e*P	pP	20 26 33.8	+0.8
	comp=Z,20nm,1.1s						
ANM	Nome	76.38	16	P	P	20 25 59.3	+0.6
TNA	Tin City	76.46	15	P	P	20 25 59.9	+0.7
KOLN	Koldanda	76.57	300	*e*P	pP	20 26 38.0	+0.2
PYUN	Piuthan	77.17	300	*e*P	pP	20 26 41.7	+0.5
	comp=Z,19nm,1.0s						
L19K	White Mountain	78.13	22	P	P	20 26 09.5	+0.9
L19K				IAmb	IAmb	20 26 30.9	
	comp=Z,42nm,1.9s						
WMQ	Urumqi	78.17	317	*e*P	P	20 26 09.9	+0.6
CAST	Castle Rocks	79.89	21	P	P	20 26 18.1	-0.1
CAST				IAmb	IAmb	20 26 29.0	
	comp=Z,35nm,2.0s						
IMAR	Indian Mountai	80.88	19	P	P	20 26 23.3	-0.2
MCK	McKinley	81.23	22	P	P	20 26 24.1	-1.2
MCK				IAmb	IAmb	20 27 10.8	
	comp=Z,23nm,1.2s						
MLY	Manley	81.32	20	P	P	20 26 24.5	-1.3
I23K	Minto, Yukon-K	81.86	21	P	P	20 26 26.1	-2.5
I23K				IAmb	IAmb	20 27 09.1	
	comp=Z,35nm,2.0s						
H23K	Yukon River	82.18	20	P	P	20 26 29.9	-0.3
H23K				IAmb	IAmb	20 27 53.9	
	comp=Z,28nm,2.0s						
HDA	Harding Lake	82.33	22	P	P	20 26 30.3	-0.8
HDA				IAmb	IAmb	20 26 36.7	
	comp=Z,35nm,2.0s						
IL31		82.54	22	P	P	20 26 30.8	-1.2
IL31				IAmb	IAmb	20 27 16.7	
	comp=Z,25nm,1.7s						
ILAR	Eielson Array	82.54	22	P	P	20 26 30.7	-1.4
	comp=Z,0.7nm,0.4s,baz=237,slow=5.8,SNR=22						
ILAR				LR	LR	21 00 41.0	
	comp=Z,22nm,18.9s,baz=280,slow=34						
	comp=Z,0.7nm,0.4s						
MK31	Makanchi Array	82.73	319	P	P	20 26 32.6	-1.0
MKAR	Makanchi Array	82.73	319	P	P	20 26 32.6	-1.0
	comp=Z,1.2nm,0.7s,baz=99,slow=5.7,SNR=14						
	comp=Z,1.2nm,0.7s						
H24K	Noodor Dome	82.76	20	P	P	20 26 31.8	-1.5
RIDG	Independent Ri	82.78	23	P	P	20 26 33.2	-0.3
RIDG				IAmb	IAmb	20 27 20.5	
	comp=Z,35nm,1.6s						
BARN	Barnard Glacie	82.83	26	P	P	20 26 33.2	-0.8
MAKZ	Makanchi	82.94	319	P	P	20 26 34.0	-0.7
DOT	Dot Lake	83.04	23	P	P	20 26 34.7	-0.1
DOT				IAmb	IAmb	20 27 21.1	
	comp=Z,11nm,0.9s						
SCRK	Sand Creek	83.23	23	P	P	20 26 35.6	-0.3
M27K	Edge Creek, AK	83.32	25	P	P	20 26 37.2	+0.8
M27K				IAmb	IAmb	20 27 23.6	
	comp=Z,18nm,0.9s						
ZALV	Zalesovo Beam	83.44	326	P	P	20 26 35.4	-1.6
	comp=Z,0.5nm,0.4s,baz=143,slow=6.5,SNR=3.8						
	comp=Z,0.5nm,0.4s						
J26L	Joseph Creek	83.65	22	P	P	20 26 37.6	-0.3
L27K	Beaver Creek,	83.66	24	P	P	20 26 38.3	+0.3
BCAR	Beaver Creek A	83.68	24	P	P	20 26 38.2	+0.1
QSPA	South Pole Qui	83.87	180	P	P	20 26 38.4	-0.8
	comp=Z,3.1nm,0.5s,baz=304,slow=18,SNR=6.2						
	comp=Z,3.1nm,0.5s						
HYT	Haines Junctio	84.58	27	P	P	20 26 43.3	+0.6
HYT				IAmb	IAmb	20 27 30.0	
	comp=Z,17nm,1.0s						
EGAK	Eagle	84.69	23	P	P	20 26 43.7	+0.6
BMAR	Burnt Mountain	84.71	20	P	P	20 26 42.3	-0.9
DAWY	Dawson	85.08	24	P	P	20 26 45.5	+0.4
M30M	Minto, Yukon	85.56	26	P	P	20 26 48.2	+0.7
M30M				IAmb	IAmb	20 27 31.7	
	comp=Z,42nm,2.0s						
I29M	Ogilvie Camp,	86.04	23	P	P	20 26 49.1	-0.7
M31M	Drury Creek, Y	86.47	26	P	P	20 26 51.6	-0.4
M31M				IAmb	IAmb	20 30 10.8	
	comp=Z,42nm,2.0s						
FARO	Faro, Yukon	86.94	26	P	P	20 26 53.4	-0.9
FARO				IAmb	IAmb	20 27 36.3	
	comp=Z,37nm,1.8s						
EPYK	Eagle Plains	87.03	22	P	P	20 26 53.9	-0.8
EPYK				IAmb	IAmb	20 27 41.3	
	comp=Z,15nm,0.9s						
YBH	Yreka Blue Hor	88.29	48	LR	LR	20 59 02.7	
	comp=Z,25nm,21.1s,baz=202,slow=30						
NVAR	Mina Array Bea	91.17	52	P	P	20 27 15.2	+0.3
	comp=Z,7.5nm,0.9s,baz=245,slow=7.4,SNR=7.3						
	comp=Z,7.5nm,0.9s						
NVAR	Mina Array Bea	91.17	52	P	P	20 27 15.7	+0.8
BVAR	Borovoye Array	91.58	323	P	P	20 27 14.0	-2.2
	comp=Z,0.5nm,0.6s,baz=99,slow=7.4,SNR=3.6						
	comp=Z,0.5nm,0.6s						
PFO	Pinyon Flats O	92.12	57	P	P	20 27 19.5	+0.1
PFO				IAmb	IAmb	20 27 21.3	
	comp=Z,9.9nm,0.9s						
PMD	Palm Desert	92.20	57	P	P	20 27 20.1	+0.6
PMD				IAmb	IAmb	20 27 21.4	
	comp=Z,9.3nm,0.9s						
WCT	Wildcat Mounta	92.31	53	P	P	20 27 19.8	-0.3
WCT				IAmb	IAmb	20 27 21.9	
	comp=Z,6.4nm,0.9s						
TPNV	Topopah Spring	92.63	53	P	P	20 27 22.3	+0.7
TPNV				IAmb	IAmb	20 28 07.3	
	comp=Z,16nm,1.4s						
NEW	Newport	93.09	42	LR	LR	21 01 19.8	
	comp=Z,23nm,19.8s,baz=182,slow=30						
R11A	Troy Canyon, C	93.28	52	P	P	20 27 25.3	+0.7
R11A				IAmb	IAmb	20 27 26.5	
	comp=Z,7.5nm,1.1s						
SHPR	Sheep Range	93.46	54	P	P	20 27 26.0	+0.6
SHPR				IAmb	IAmb	20 27 27.7	
	comp=Z,4.3nm,0.9s						
PRN	Pahroc Range	93.62	53	P	P	20 27 26.3	+0.1
PRN				IAmb	IAmb	20 27 28.3	
	comp=Z,6.8nm,1.1s						
Q12A	Willow Creek R	93.93	51	P	P	20 27 28.0	+0.5
Q12A				IAmb	IAmb	20 27 29.6	
	comp=Z,9.8nm,1.0s						
HILA	High Level	94.10	32	P	P	20 27 27.3	-0.3
SPR3	Spring Creek 3	94.31	51	P	P	20 27 30.2	+0.6
SPR3				IAmb	IAmb	20 27 31.4	
	comp=Z,9.4nm,1.0s						
KNB	Kanab	95.37	53	P	P	20 27 35.0	+0.7
YKA	Yellowknife Ar	95.55	28	P	P	20 27 34.1	-0.1
	comp=Z,2.2nm,0.7s,baz=265,slow=4.5,SNR=28						
	comp=Z,2.2nm,0.7s						
YKA	Yellowknife Ar	95.55	28	P	P	20 27 33.9	-0.3
HVU	Hansel Valley	95.68	49	P	P	20 27 36.1	+0.6
U15A	North Rim	95.76	54	P	P	20 27 37.0	+0.8
U15A				IAmb	IAmb	20 31 14.6	
	comp=Z,6.1nm,1.3s						
RDMU	Red Mountain	98.06	50	P	P	20 27 46.5	+0.1
RDMU				IAmb	IAmb	20 27 47.9	
	comp=Z,4.5nm,0.9s						
PD31	Pinedale Array	98.10	48	P	P	20 27 45.0	-1.6
PD31				IAmb	IAmb	20 31 26.8	
	comp=Z,10nm,1.8s						
PDAR	Pinedale Array	98.10	48	P	P	20 27 45.8	-0.8
	comp=Z,0.7nm,0.7s,baz=241,slow=2.9,SNR=6.4						
	comp=Z,0.7nm,0.7s						
PDAR	Pinedale Array	98.10	48	P	P	20 27 45.2	-1.3
TXAR	Lajitas Array	102.83	61	P	Pdif	20 28 07.9	+0.2
	comp=Z,0.1nm,0.4s,baz=244,slow=7.9,SNR=1.7						
LPAZ	La Paz	131.88	118	PKP	PKPdf	20 33 21.9	-1.9
	comp=Z,1.1nm,0.5s,baz=238,slow=5.4,SNR=5.1						
TORD	Torodi Ar. Bea	152.78	287	PKP	PKPdf	20 33 57.4	-2.0
	comp=Z,0.1nm,0.4s,baz=54,slow=0.1,SNR=3.0						
TORD				PKPbc	PKPbc	20 34 05.0	-1.7
	comp=Z,1.0nm,0.3s,baz=82,slow=2.2,SNR=27						

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*NCEDC **02** 20:23:45.0±2.5, 40°.29N±0°.02×124°.40W±0°.05, h8^{km}±6^{km}, Mwr3.9/3, ML3.3/66(NEIC), Error ellipse: s-maj=5.8km s-min=2.8km az=91.0*

*NEIC **02** 20:23:45, 40°.29N×124°.40W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.09; $M_{\theta\theta}$-2.50; $M_{\phi\phi}$2.41; $M_{r\theta}$1.97; $M_{\theta\phi}$-6.48; $M_{\phi r}$1.98; Fault plane solution: $M_0$7.47000×10^{14} NP1:ϕ_s282.03000°, δ73.34000°, λ-169.64000°. NP2:ϕ_s189.03000°, δ80.08000°, λ-16.92000°. Principal axes: T 6.9237, Plg5.0000°, Azm236.0000°; N 0.9924, Plg70.0000°, Azm340.0000°; P -7.9162, Plg19.0000°, Azm145.0000°;*

*NEIC **02** 20:23:45, 40°.29N×124°.40W, h8^{km}*

NEIC 02 20:23:44.1±1.5**, 40°.26N**±0°.03×**124°.48W**±0°.05**, h16**^{km}±6^{km}**, Error ellipse: s-maj=6.0km s-min=4.3km az=97.0, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.24	27		Pb	20 23 49.8	-0.3
KCTM					Sb	20 23 53.8	-0.3
KSMM	Slide Mountain	0.25	108		Pg	20 23 50.0	+0.3
KMPM	Mount Pierce	0.32	61	Pg	Pg	20 23 50.6	-0.2
KCRM	Chalk Rock	0.53	72		Pb	20 23 55.3	+0.2
KMRM	Mail Ridge	0.59	94		Pb	20 23 56.1	-0.1
JCC	Jacoby Creek,	0.65	32		Pg	20 23 56.8	-0.1
JCC				IAML		20 24 08.0	
	comp=E,3µm,0.7s						
KBSM	Bell Springs	0.76	117		Pb	20 23 59.6	+0.5
KHMM	Horse Mountain	0.83	43	Pg	Pb	20 24 00.3	0.0
KPPM	Pickett Peak	0.86	84		Pb	20 23 60.0	-0.8
KIPM	Iron Peak	0.89	120		Pg	20 24 01.4	0.0
KCPM	Cahto Peak	0.90	130		Pb	20 24 01.3	-0.1
KFPM	Farley Peak	1.02	127		Pb	20 24 03.1	-0.4
KHBM	Hayfork Bally	1.04	67		Pb	20 24 03.5	-0.4
KBNM	Bluenose Ridge	1.05	110		Pb	20 24 04.0	-0.1
GTC	Three Chop Rid	1.12	140		Pb	20 24 04.4	-0.7
KRKM	Rackout Spring	1.22	125		Pn	20 24 05.5	-1.1
LBPM	Beegum Peak	1.22	87		Pn	20 24 06.1	-0.6
KOMM	Orleans Mounta	1.28	37		Pn	20 24 06.5	-1.0
GWRM	Wonder Ranch	1.39	139		Pn	20 24 08.3	-0.7
LGPM	Granite Peak	1.41	62		Pn	20 24 08.8	-0.6
GHMM	Hull Mountain	1.42	122		Pn	20 24 08.6	-0.8
GROM	Round Mountain	1.43	103		Pn	20 24 09.0	-0.5
GVV	Valley View	1.47	109		Pn	20 24 09.6	-0.5
GGUM	Gualala	1.60	151		Pn	20 24 10.9	-0.9
LBKM	Bonanza King	1.60	59		Pn	20 24 11.8	-0.2
GHLM	Highland Sprin	1.66	137		Pn	20 24 11.9	-0.8
HOPS	Hopland Field	1.67	139		Pn	20 24 12.0	-0.8
HOPS				IAML		20 24 54.8	
	comp=E,387nm,1.3s						
HOPS				IAML		20 25 00.7	
	comp=N,368nm,1.1s						
GHGM	Hogback Ridge	1.71	131		Pn	20 24 12.8	-0.5
GCK	Clark Valley	1.73	114		Pn	20 24 13.8	+0.3
GTSM	Trough Springs	1.73	123		Pn	20 24 13.2	-0.4
KTRM	Thompson Ridge	1.84	27		Pn	20 24 14.7	-0.5
GACM	Adobe Creek	1.87	137		Pn	20 24 15.0	-0.6
GBMM	Baldy Mountain	1.90	126		Pn	20 24 15.9	0.0
GRTM	Round Top Moun	1.93	133		Pg	20 24 21.6	+0.5
GFC	Funks Creek	1.93	118		Pn	20 24 16.3	0.0
GHCM	House Creek	1.93	149		Pn	20 24 15.9	-0.4
LSHM	Sage Hen Hill	1.93	73		Pn	20 24 16.5	+0.1
GDXM	Geysers	1.95	138		Pn	20 24 16.7	0.0
GDXM	Geysers	1.95	138		Pg	20 24 24.6	+3.0
L02F	Cave Junction	1.98	20		Pn	20 24 16.6	-0.3
L02F				IAML		20 24 58.6	
	comp=E,164nm,0.9s						
YBH	Yreka Blue Hor	1.99	42		Pn	20 24 16.6	-0.5
LDBM	Digger Butte	2.07	84		Pn	20 24 18.0	-0.3
LMPM	Military Pass	2.14	54		Pn	20 24 20.5	+1.1
NHSM	Mount Saint He	2.16	137		Pn	20 24 19.2	-0.4
B040	Montague	2.21	44		Pn	20 24 20.1	0.0
OSUM	Sutter Buttes	2.25	115		Pn	20 24 19.8	-0.9
OGOM	Van Goodin Ran	2.29	105		Pn	20 24 20.2	-1.0
NTYM	Taylor	2.34	142		Pn	20 24 21.8	-0.2
HATC	Hat Creek Radi	2.37	76		Pn	20 24 23.4	+1.0
ORV	Oroville	2.40	106		Pn	20 24 23.1	+0.4
LGMM	Garner Mountai	2.41	55		Pn	20 24 24.0	+1.0
PAM	Palermo	2.42	109		Pb	20 24 25.6	-1.6
LTIM	Timbered Crate	2.45	67		Pn	20 24 23.7	+0.2
LBCM	Butte Creek Ri	2.45	75		Pn	20 24 24.6	+0.9
MCCM	Marconi Confer	2.45	149		Pn	20 24 23.0	-0.5
MCCM				IAML		20 24 52.5	
	comp=E,135nm,0.7s						
MCCM				IAML		20 24 55.9	
	comp=N,95nm,1.2s						
CVS	Carmenet Viney	2.48	140		Pn	20 24 24.0	+0.2
K02D	Willamette Mer	2.51	14		Pn	20 24 24.2	-0.1
M04C	Macdoel	2.51	52		Pn	20 24 24.8	+0.4
L04D	Klamath Falls	2.55	39		Pn	20 24 26.0	+1.0
HUMO	Hull Mountain	2.61	26	Pn	Pn	20 24 25.6	-0.1
DBO	Dodson Butte	3.00	18		Pn	20 24 31.3	+0.2
K04D	Chiloquin, OR	3.12	40		Pn	20 24 32.1	-0.7
K04D				IAML		20 25 18.1	
	comp=E,143nm,0.9s						
JFP	Foothills Park	3.41	148		Pn	20 24 36.2	-0.4
MOD	Modoc Plateau	3.56	61		Pn	20 24 38.1	-0.7
MOD				IAML		20 25 56.0	
	comp=E,44nm,1.2s						

MPK	Martis Peak	3.56	104		Pn	20 24 40.9	+1.9
K05A	Summer Lake	3.65	46		Pn	20 24 40.8	+0.7
K05A				IAML		20 25 57.9	
	comp=E,47nm,1.7s						
K05A				IAML		20 26 13.0	
	comp=N,51nm,1.6s						
ARN	Arnold Ranch	3.71	141		Pn	20 24 41.2	+0.4
I04A	Tendick Farm,	3.85	23		Pn	20 24 43.7	+0.9
I02E	Swisshome, OR	3.87	7	Pn	Pn	20 24 43.5	+0.5
I02E				IAML		20 26 36.0	
	comp=E,50nm,1.9s						
I02E				IAML		20 26 42.1	
	comp=N,50nm,2.4s						
J05D	Fort Rock, OR	3.87	38	Pn	Pn	20 24 43.8	+0.7
CMB	Columbia Colle	3.88	124		Pn	20 24 43.6	+0.4
GHS	Gilroy Hot Spr	3.95	142		Pn	20 24 44.1	0.0
PAHR	Pah Rah Range	3.95	96		Pn	20 24 43.0	-1.2
PAHR				IAML		20 26 04.7	
	comp=E,30nm,1.6s						
PAHR				IAML		20 26 06.5	
	comp=N,29nm,2.7s						
SAO	San Andreas Ge	4.23	145		Pn	20 24 47.1	-0.8
YERR	Yerington	4.24	106		Pn	20 24 49.0	+0.7
YERR				IAML		20 25 52.2	
	comp=E,41nm,1.0s						
YERR				IAML		20 26 31.5	
	comp=N,33nm,2.3s						
PINE	Pine Mountain	4.40	36		Pn	20 24 51.5	+1.1
PINE				IAML		20 25 21.7	
	comp=N,34nm,1.1s						
PINE				IAML		20 25 27.3	
	comp=E,39nm,1.1s						
BJCM	Johnson Can.	4.43	146		Pn	20 24 49.6	-1.1
HAST	Hastings Reser	4.50	148		Pn	20 24 50.8	-0.9
BSMM	Soledad Missio	4.56	147		Pn	20 24 53.7	+1.2
BBGB	Big Mountain B	4.56	143	Pn	Pn	20 24 52.3	-0.3
BPIM	Pinnacles	4.58	144		Pn	20 24 57.9	+5.2
BBNM	San Benito	4.60	143		Pb	20 25 02.0	-2.5
H04A	Detroit Lake	4.73	20		Pn	20 24 55.5	+0.7
H04A				IAML		20 25 39.1	
	comp=N,25nm,4.7s						
H04A				IAML		20 26 56.8	
	comp=E,18nm,5.0s						
WVOR	Wild Horse Val	4.90	62		Pn	20 24 54.1	-3.1
WVOR				IAML		20 26 44.6	
	comp=E,18nm,2.2s						
WVOR				IAML		20 26 46.6	
	comp=E,15nm,1.9s						
MDPB	Devils Postpil	4.96	120		Pn	20 24 56.5	-1.7
MDPB				IAML		20 26 38.2	
	comp=E,24nm,2.0s						
MDPB				IAML		20 26 42.3	
	comp=N,18nm,1.5s						
PMPB	Monarch Peak	4.97	143	Pn	Pn	20 24 58.3	+0.1
PMPB				IAML		20 26 19.2	
	comp=E,31nm,2.8s						
PAPM	Alder Peak	4.99	150		Pn	20 24 59.2	+0.7
LHV	Little Huntoon	5.05	112		Pn	20 24 59.6	+0.4
LHV				IAML		20 26 39.0	
	comp=N,34nm,1.9s						
KVN	Kaiserville	5.07	102		Pn	20 25 00.3	+0.6
KVN				IAML		20 26 42.6	
	comp=N,17nm,2.1s						
KVN				IAML		20 26 45.3	
	comp=E,12nm,1.7s						
NVAR	Mina Array Bea	5.13	109		Pn	20 25 00.6	+0.1
NV11	Mina Array Sit	5.23	108		Pn	20 25 01.1	-0.8
NV11				IAML		20 26 41.0	
	comp=N,19nm,2.1s						
NV11				IAML		20 27 23.1	
	comp=E,17nm,3.4s						
I07A	Izee	5.31	42		Pn	20 25 02.6	-0.3
I07A				IAML		20 26 10.9	
	comp=N,13nm,4.5s						
I07A				IAML		20 26 55.4	
	comp=E,12nm,5.0s						
G05A	Wamic	5.49	24	Pn	Pn	20 24 59.9	-5.3
PSNM	Stone Corral	5.56	142		Pn	20 25 05.2	-0.9
DSP	Deep Springs	5.85	118	Pn	Pn	20 25 08.9	-1.2
TPH	Tonopah	6.05	109	Pn	Pn	20 25 11.8	-1.2
G08A	Pilot Rock	6.46	37	Pn	Pn	20 25 17.8	-0.8
F07A	Phinny Hill Vi	6.54	29	Pn	Pn	20 25 14.4	-5.2
ISA	Isabella, Lake	6.60	132	Pn	Pn	20 25 21.9	+1.3
BMO	Blue Mountains	7.00	47	Pn	Pn	20 25 26.9	+0.8
ELK	Elko	7.06	83	Pn	Pn	20 25 26.9	-0.1
HAWA	Hanford	7.11	29	Pn	Pn	20 25 26.9	-0.6
MFID	Camas Ranch	7.19	61	Pn	Pn	20 25 29.2	+0.5
TPNV	Topopah Spring	7.24	115	Pn	Pn	20 25 28.7	-0.8
Q12A	Willow Creek R	7.54	96	Pn	Pn	20 25 33.8	+0.2
GSC	Goldstone, Bar	7.84	127	Pn	Pn	20 25 40.5	+3.0
PLID	Pearl Lake	7.89	50	Pn	Pn	20 25 40.0	+1.6

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*NEIC **02** 20:27:29.8±0.3, 36°.51N±0°.02×98°.96W±0°.04, h6^{km}±4^{km}, Error ellipse: s-maj=4.8km s-min=2.7km az=117.0*

*TUL **02** 20:27:29±0.4, 36°.53N±0°.03×98°.98W±0°.05, h6^{km}±4^{km}, ML3.5, mb_Lg3.3/90(NEIC), ML3.5/26(NEIC), Error ellipse: s-maj=6.2km s-min=2.7km az=119.0*

*ANF **02** 20:27:30.9±1.3, 36°.48N×98°.93W, h16^{km}±9^{km}, ML4.3/14, Error ellipse: s-maj=2.3km s-min=1.9km az=61.0*

ISC 02 20:27:29.5±1.2**, 36°.51N**±0°.02×**98°.92W**±0°.02**, h1**^{km}±10^{km}**, n136,** σ**1^{s}28**/130**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOKA	Waynoka	0.12	354		Pg	20 27 31.9	0.0
NOKA				Sg	Sg	20 27 33.9	+0.3
NOKA				IAML		20 27 34.3	
	comp=E,26µm,0.2s						
NOKA				IAML		20 27 34.3	
	comp=N,21µm,0.3s						
OK038	West end E0370	0.14	103		Pg	20 27 32.4	+0.1
OK038				IAML		20 27 36.1	
	comp=N,15µm,0.4s						
OK038				IAML		20 27 39.3	
	comp=N,9µm,0.3s						
U32A	Winter Ranch,	0.15	208	Pg	Pg	20 27 32.4	0.0
U32A					Sg	20 27 34.9	+0.6
U32A				IAML		20 27 35.5	
	comp=N,10µm,0.1s						
U32A	Winter Ranch,	0.15	208	P	Pg	20 27 32.6	+0.2
	baz=8.0						
OK035	E0210 Rd and N	0.26	40	Pg	Pg	20 27 34.9	+0.4
ELIS	Ellis County	0.60	223		Pg	20 27 40.3	-0.7
ELIS				IAML		20 27 53.9	
	comp=N,3µm,0.2s						
ELIS				IAML		20 27 56.9	
	comp=E,4µm,0.5s						
OK032	Salt Plains WL	0.64	63		Pg	20 27 41.8	0.0
OK032				IAML		20 27 52.9	
	comp=E,2µm,0.2s						
OK032				IAML		20 27 58.0	
	comp=E,2µm,0.2s						
CROK	Carrier	0.75	90	Pg	Pg	20 27 44.2	+0.3
CSTR	Hydro, Custer	0.88	168	Pg	Pg	20 27 46.3	-0.1
KAN14	Manchester OK	0.89	60		Pg	20 27 46.4	-0.1
KAN14				Sg	Sg	20 27 58.7	+0.7
GC02	Grant County #	0.91	68	Pg	Pg	20 27 47.0	-0.1
KAN05	Bluff City Nor	1.03	54	Pg	Pg	20 27 48.8	-0.4
KAN08	Anthony NE Sta	1.04	46		Pg	20 27 49.0	-0.5
KAN17	Caldwell West	1.07	60		Pg	20 27 49.6	-0.4
KAN12	Harper NE Stat	1.07	43		Pg	20 27 49.5	-0.6
KAN06	Argonia West S	1.12	49		Pb	20 27 50.5	-1.3
KAN06				IAML		20 28 11.8	
	comp=E,1µm,0.7s						
KAN06				IAML		20 28 18.5	
	comp=N,736nm,0.2s						
KAN01	Argonia South	1.13	55		Pb	20 27 50.7	-1.2
KAN01				IAML		20 28 11.2	
	comp=N,1µm,0.5s						
KAN01				IAML		20 28 11.8	
	comp=E,995nm,0.3s						
KAN09	Caldwell North	1.21	59	Pg	Pn	20 27 52.2	-1.5
KAN13	South Haven SW	1.26	66	Pg	Pn	20 27 53.0	-1.3
KS21	Milan North St	1.27	52	Pg	Pn	20 27 53.1	-1.3
KS20	Mayfield South	1.31	56		Pn	20 27 53.7	-1.3
OK029	Liberty Lake	1.38	121		Pn	20 27 55.0	-0.9
BLOK	Blackwell	1.39	79		Pn	20 27 55.3	-0.8
OK050	Pawnee Station	1.56	94		Pn	20 27 58.2	-0.3
OK025	Westminster Rd	1.58	126		Pn	20 27 58.3	-0.4
OK045	Pawnee Station	1.60	92		Pn	20 27 58.8	-0.2
OK046	Pawnee Station	1.62	93		Pn	20 27 59.1	-0.2
OK033	Mehan	1.66	106		Pn	20 27 59.6	-0.3
OK044	Pawnee Station	1.71	94		Pn	20 28 00.2	-0.3
FNO	Franklin	1.75	135		Pn	20 28 01.0	-0.1
OK031	S. Brethren Rd	1.77	108		Pn	20 28 00.8	-0.6
WMOK	Wichita Mounta	1.77	176	Pn	Pn	20 28 00.4	-1.0
WMOK	Wichita Mounta	1.77	176	P	Pn	20 28 00.5	-0.9
	baz=355						
WMOK				Sb	Sb	20 28 25.0	-0.6
	baz=355						
WMOK	Wichita Mounta	1.77	176	P	Pn	20 28 00.4	-1.0
	baz=355						
WMOK				S	Sn	20 28 24.0	-0.6
	baz=355						
OK052	Battle Ridge R	1.78	106		Pn	20 28 01.2	-0.3
OK053	SW of W Deep R	1.79	105		Pn	20 28 01.4	-0.2
QUOK	Quay	1.81	100		Pn	20 28 01.7	-0.3
OK030	Cody Creek RV	1.82	108		Pn	20 28 01.9	-0.1
OK034	N. Norfolk Rd.	1.85	105		Pn	20 28 01.9	-0.5
R32A	Long Quarter,	1.92	5		Pn	20 28 02.6	-0.8
R32A	Long Quarter,	1.92	5	P	Pn	20 28 02.8	-0.5
	baz=186						
R32A				S	Sn	20 28 27.4	-0.7
	baz=186						
T35A	Sooner Cattle	1.97	77		Pn	20 28 03.7	-0.4
T35A				IAmb_Lg		20 28 35.2	
	comp=Z,143nm,0.9s						
T35B	Sooner Cattle	1.97	77	P	Pn	20 28 03.8	-0.3
	baz=260						
T35B				S	Sn	20 28 29.6	0.0
	baz=260						
DEOK	Depew	2.07	108		Pn	20 28 04.5	-0.9
X34A	Smith Ranch, M	2.10	155		Pn	20 28 06.0	+0.1
X34A				IAmb_Lg		20 28 37.7	
	comp=Z,189nm,1.0s						
W35A	Tecumseh	2.14	129	Pn	Pn	20 28 06.3	-0.2
CBKS	Cedar Bluff	2.39	344		Pn	20 28 09.6	-0.3
CBKS				IAmb_Lg		20 28 46.7	
	comp=Z,141nm,0.7s						
CBKS	Cedar Bluff	2.39	344	P	Pn	20 28 10.2	+0.3
	baz=165						
CBKS				S	Sb	20 28 41.0	-2.4
	baz=165						
CBKS	Cedar Bluff	2.39	344	P	Pn	20 28 08.6	-1.3
	baz=165						
CBKS				S	Sn	20 28 38.1	-1.8
	baz=165						
TUL1	Leonard	2.60	102		Pn	20 28 11.9	-0.8
TUL1	Leonard	2.60	102	P	Pn	20 28 12.2	-0.4
	baz=284,SNR=8.8						
TUL1				Sb	Sb	20 28 50.5	+1.2
	baz=284						
TUL1	Leonard	2.60	102	P	Pn	20 28 11.9	-0.8
	baz=284						
TUL1				S	Sn	20 28 45.4	+0.5
	baz=284						
WTFS	Witchita Falls	2.76	172	Pn	Pn	20 28 14.8	-0.2
AMTX	Amarillo	2.77	235	Pn	Pn	20 28 14.7	-0.5
AMTX				IAmb_Lg		20 29 03.6	
	comp=Z,129nm,1.0s						
AMTX	Amarillo	2.77	235	P	Pn	20 28 14.8	-0.5
	baz=52						
AMTX				Sb	Sb	20 28 54.1	-0.5
	baz=52						
AMTX	Amarillo	2.77	235	P	Pn	20 28 14.3	-0.9
	baz=52						
LOOK	Love County	2.89	150		Pn	20 28 16.8	+0.1
RLO	Rose Lookout	3.16	95		Pn	20 28 20.2	-0.2
KSU1	Kansas State U	3.17	35	Pn	Pn	20 28 19.8	-0.7
KSU1				IAmb_Lg		20 29 18.5	
	comp=Z,74nm,0.7s						
KSU1	Kansas State U	3.17	35	P	Pn	20 28 20.2	-0.3
	baz=217						
KSU1				Sb	Sb	20 29 07.8	+2.1
	baz=217						
KSU1	Kansas State U	3.17	35	P	Pn	20 28 19.8	-0.7
	baz=217						
KSU1				S	Sn	20 28 59.2	+0.3
	baz=217						
Z35A	Perchaven, San	3.45	156		Pn	20 28 23.8	-0.7
Z35A	Perchaven, San	3.45	156	P	Pn	20 28 24.0	-0.5
	baz=337						
X37A	Clayton	3.47	123	Pn	Pn	20 28 24.3	-0.3
X37A	Clayton	3.47	123	P	Pn	20 28 24.4	-0.3
	baz=304						
FW03	Perrin-Whitt E	3.53	168	IAmb_Lg		20 29 27.7	
	comp=Z,36nm,0.8s						
U38A	Gravette	3.65	90	Pn	Pn	20 28 27.0	-0.2
U38A				IAmb_Lg		20 29 30.0	
	comp=Z,74nm,0.9s						
FW06	Azle	3.70	162		Pn	20 28 26.6	-1.3
FW06				IAmb_Lg		20 29 37.8	
	comp=Z,54nm,0.8s						
KSCO	Kaye Shedlock'	3.86	311		Pn	20 28 28.0	-2.2
KSCO				IAmb_Lg		20 29 40.2	
	comp=Z,74nm,0.8s						
KSCO	Kaye Shedlock'	3.86	311	Sb	Sb	20 29 27.5	+1.8
	baz=130						
FW07	Weatherford	3.91	166	Pn	Pn	20 28 30.0	-0.8
FW07				IAmb_Lg		20 29 35.5	
	comp=Z,42nm,0.7s						
ABTX	Abilene, Hawle	3.92	189		Pn	20 28 30.0	-0.9
ABTX	Abilene, Hawle	3.92	189	P	Pn	20 28 30.0	-0.9
	baz=7.8,SNR=11						
ABTX				Sb	Sb	20 29 30.0	+2.4
	baz=7.8						
HHAR	Hobbs	4.02	92		Pn	20 28 31.7	-0.6
HHAR				IAmb_Lg		20 29 41.1	
	comp=Z,50nm,1.1s						
POST	Post	4.04	213	Pn	Pn	20 28 31.8	-0.9
POST				IAmb_Lg		20 29 45.7	
	comp=Z,51nm,0.7s						
MSTX	Muleshoe	4.05	232		Pn	20 28 32.1	-0.6
MSTX				IAmb_Lg		20 29 45.8	
	comp=Z,64nm,0.8s						
MSTX	Muleshoe	4.05	232	P	Pn	20 28 31.8	-1.0
	baz=49,SNR=15						
FW13	Cleburne	4.33	163	IAmb_Lg		20 29 55.5	
	comp=Z,28nm,0.8s						
FW14	Alvarado	4.34	160	IAmb_Lg		20 29 52.1	
	comp=Z,55nm,0.9s						
FW16	Waxahatchie	4.35	157	Pn	Pn	20 28 35.8	-1.0
FW16				IAmb_Lg		20 29 59.3	
	comp=Z,102nm,0.9s						
N33A	J Bar K, Exete	4.37	15		Pn	20 28 35.5	-1.6
T25A	Trinidad	4.45	280		Pn	20 28 36.8	-1.6
T25A				IAmb_Lg		20 29 53.4	
	comp=Z,79nm,0.8s						
T25A	Trinidad	4.45	280	P	Pn	20 28 37.0	-1.4
	baz=96,SNR=12						
T25A				Sb	Sb	20 29 45.0	+2.0
	baz=96						
Z38A	Mt. Pleasant	4.58	134		Pn	20 28 39.4	-0.6
Z38A				IAmb_Lg		20 30 06.6	
	comp=Z,58nm,0.8s						
S39A	Bolivar	4.62	74		Pn	20 28 39.7	-0.9
S39A				IAmb_Lg		20 29 57.9	
	comp=Z,78nm,0.9s						
WHTX	Lake Whitney,	4.67	165		Pn	20 28 39.8	-1.3
WHTX				IAmb_Lg		20 30 11.4	
	comp=Z,40nm,1.1s						
WHTX	Lake Whitney,	4.67	165	P	Pn	20 28 40.5	-0.6
	baz=345,SNR=8.5						
WHTX				Sb	Sb	20 29 52.1	+3.1
	baz=345						
MIAR	Mount Ida	4.78	113	Pn	Pn	20 28 42.3	-0.3
MIAR	Mount Ida	4.78	113	P	Pn	20 28 42.4	-0.3
	baz=296						
MIAR				S	Sn	20 29 37.6	-1.0
	baz=296						
BGNE	Belgrade	4.93	7		Pn	20 28 43.1	-1.7
BGNE				IAmb_Lg		20 30 13.4	
	comp=Z,85nm,0.9s						
BGNE	Belgrade	4.93	7	P	Pn	20 28 43.6	-1.1
	baz=188						
BGNE				Sb	Sb	20 30 01.7	+5.3
	baz=188						
N35A	Tabor	5.04	30		Pn	20 28 45.8	-0.5
OGNE	Ogallala	5.05	332		Pn	20 28 45.6	-1.0
OGNE	Ogallala	5.05	332	P	Pn	20 28 46.1	-0.5
	baz=151,SNR=7.3						
OGNE				Sb	Sb	20 30 04.5	+4.4
	baz=151						
237A	Washetta, Mont	5.18	149	IAmb_Lg		20 30 28.6	
	comp=Z,64nm,0.9s						
P38A	Dawn	5.26	52		Pn	20 28 48.9	-0.4
P38A				IAmb_Lg		20 30 13.4	
	comp=Z,49nm,0.9s						
CPRX	Cap Rock	5.35	231	Pn	Pn	20 28 50.0	-0.7
SDCO	Great Sand Dun	5.41	285		Pn	20 28 50.2	-1.4
SDCO				IAmb_Lg		20 30 23.1	
	comp=Z,47nm,1.1s						
SDCO	Great Sand Dun	5.41	285	P	Pn	20 28 50.5	-1.0
	baz=101,SNR=6.3						
SDCO				Sb	Sb	20 30 13.8	+3.4
	baz=101						
Q24A	Divide	5.51	298	IAmb_Lg		20 30 23.7	
	comp=Z,48nm,0.9s						
Q24A	Divide	5.51	298	Sb	Sb	20 30 16.6	+3.0
	baz=115						
WHAR	Wooly Hollow	5.51	101	Pn	Pn	20 28 52.1	-0.7
WHAR				IAmb_Lg		20 30 30.2	
	comp=Z,65nm,1.0s						
FCAR	Ozark Folk Cen	5.53	94		Pn	20 28 52.4	-0.6
FCAR				IAmb_Lg		20 30 31.2	
	comp=Z,38nm,0.8s						
R40A	Maddies Statio	5.58	69		Pn	20 28 53.4	-0.3
UALR	University of	5.62	106	IAmb_Lg		20 30 45.5	
	comp=Z,40nm,0.8s						
435B	Jarrell	5.82	169	IAmb_Lg		20 30 48.8	
	comp=Z,55nm,0.8s						
JCT	Junction City	6.06	187	IAmb_Lg		20 30 54.8	
	comp=Z,64nm,0.9s						
JCT	Junction City	6.06	187	P	Pn	20 28 59.8	-0.6
	baz=6.3						
N38A	Joes South For	6.17	44	Pn	Pn	20 29 00.4	-1.3
P40A	Paris	6.20	59	Pn	Pn	20 29 01.4	-0.8
ISCO	Idaho Springs	6.21	304	Pn	Pn	20 29 01.4	-1.3
ISCO	Idaho Springs	6.21	304	P	Pn	20 29 01.6	-1.1
	baz=120,SNR=9.4						
LCAR	Lake Charles	6.28	92	IAmb_Lg		20 30 52.7	
	comp=Z,28nm,0.8s						
CCM	Cathedral Cave	6.31	74	IAmb_Lg		20 30 56.2	
	comp=Z,51nm,0.8s						
ANMO	Albuquerque	6.33	258	Sb	Sb	20 30 41.9	+5.0
	baz=73						
PBMO	Poplar Bluff	6.83	85	IAmb_Lg		20 31 19.6	
	comp=Z,56nm,0.8s						
SCIA	State Center	6.97	38	IAmb_Lg		20 31 11.6	
	comp=Z,42nm,0.7s						
Y22D	IRIS PASSCAL I	6.98	252	IAmb_Lg		20 31 22.5	
	comp=Z,47nm,0.8s						
PHWY	Pilot Hill	6.99	315	IAmb_Lg		20 31 14.9	
	comp=Z,42nm,0.8s						
N23A	Red Feather La	7.03	311	IAmb_Lg		20 31 20.8	
	comp=Z,55nm,0.8s						
MNTX	Cornudas Mount	7.20	230	P	Pn	20 29 14.6	-1.3
	baz=46						
CGM3	Cape Girardeau	7.46	81	IAmb_Lg		20 31 26.1	
	comp=Z,24nm,0.8s						
K38A	Parkersburg	7.75	36	IAmb_Lg		20 31 44.7	
	comp=Z,50nm,0.7s						
SUSD	Miller	7.92	360	IAmb_Lg		20 31 48.7	
	comp=Z,28nm,0.8s						
OXF	Oxford	8.00	102	IAmb_Lg		20 31 59.9	
	comp=Z,28nm,1.0s						
OXF	Oxford	8.00	102	P	Pn	20 29 26.5	-0.5
	baz=287						
PV11	David Mesa, Pa	8.12	286	IAmb_Lg		20 31 54.7	
	comp=Z,23nm,1.1s						
833A	Chaparral WMA,	8.17	183	IAmb_Lg		20 31 57.4	
	comp=Z,26nm,0.9s						
TX32	Lajitas Array	8.20	210	Pn	Pn	20 29 28.0	-1.7
TXAR	Lajitas Array	8.20	210	Pn	Pn	20 29 27.9	-1.8
RWWY	Rawlins	8.26	311	IAmb_Lg		20 31 59.6	
	comp=Z,35nm,1.0s						
RSSD	Black Hills	8.55	334	IAmb_Lg		20 32 03.4	
	comp=Z,28nm,0.8s						
I37A	Lemond, Waseca	8.60	28	IAmb_Lg		20 32 24.7	
	comp=Z,20nm,0.9s						
L42A	Oliver, Polo	9.03	50	IAmb_Lg		20 32 19.3	
	comp=Z,39nm,0.7s						
JFWS	Jewell Farm	9.24	44	IAmb_Lg		20 32 31.2	
	comp=Z,38nm,0.8s						
I40A	Norwalk	9.72	38	IAmb_Lg		20 33 00.2	
	comp=Z,18nm,1.0s						

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*IDC **02** 20:55:12.0±0.7, 27°.14N×140°.27E, h452^{km}±10^{km}, mb3.1/12, mbtmp3.9/13, Error ellipse: s-maj=23.4km s-min=13.4km az=80.0*

*JMA **02** 20:55:13.7±0.4, 27°N±2°×14°0E±°, h421^{km}, MV3.9/17, W OFF OGASAWARA*

ISC 02 20:55:11.9±0.8**, 27°.21N**±0°.09×**140°.3E**±0°.2**, h450**^{km}**, n21,** σ**1^{s}36**/27**, mb3.4**/12**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.73	93	P	P	20 56 11.4	+0.4
CBIJ				*e*S	S	20 56 56.1	-2.8
JCJ	Chichijima	1.73	93	P	P	20 56 13.1	+2.1
	81nm,0.3s,baz=24,slow=22,SNR=8.9						
JCJ				S	S	20 56 58.6	-0.3
	62nm,0.3s,baz=304,slow=23,SNR=2.0						
JHH2	Haha-jima-NKT2	1.82	108	P	P	20 56 12.4	+1.0
JHH2				*e*S	S	20 56 58.8	-0.8
BSO1	Boso 1	7.45	5	*e*P	P	20 57 03.1	+2.5
BSO1				*e*S	S	20 58 29.4	-0.6
BSO3	Boso 3	7.57	2	*e*P	P	20 57 03.7	+1.4
BSO3				*e*S	S	20 58 31.5	-1.4
JAG	Ashikaga	9.21	356	*e*P	P	20 57 20.2	-0.1
JAG				S	S	20 59 02.1	-3.8
JHO	Hitachi	9.38	2	P	P	20 57 23.2	+1.1
MJAR	Matsushiro Arr	9.47	350	P	P	20 57 23.2	+0.2
	1.1nm,0.5s,baz=92,slow=18,SNR=3.5						
WRA	Warramunga Arr	47.22	188	P	P	21 03 02.0	-0.8
	0.3nm,0.3s,baz=3.7,slow=7.4,SNR=13						
	0.3nm,0.3s						
ZALV	Zalesovo Beam	48.27	319	P	P	21 03 10.4	+0.1
	0.4nm,0.3s,baz=107,slow=7.9,SNR=3.6						
	0.4nm,0.3s						
MKAR	Makanchi Array	49.07	310	P	P	21 03 16.9	+0.4
	0.4nm,0.5s,baz=90,slow=10,SNR=10						
	0.4nm,0.5s						
ASAR	Alice Springs	50.95	187	P	P	21 03 29.8	-0.8
	0.1nm,0.3s,baz=1.9,slow=5.1,SNR=5.3						
	0.1nm,0.3s						
KURBB	Kurchatov Arra	51.73	314	P	P	21 03 36.3	+0.4
	1.6nm,0.5s,baz=92,slow=8.0,SNR=18						
	1.6nm,0.5s						
BVAR	Borovoye Array	56.79	317	P	P	21 04 12.2	+0.5
	1.9nm,0.6s,baz=89,slow=7.3,SNR=16						
	1.9nm,0.6s						
ILAR	Eielson Array	58.44	29	P	P	21 04 23.1	+0.3
	0.2nm,0.4s,baz=250,slow=5.4,SNR=4.8						
	0.2nm,0.4s						
YKA	Yellowknife Ar	72.86	28	P	P	21 05 54.2	+0.7
	0.4nm,0.6s,baz=294,slow=5.6,SNR=5.2						
	0.4nm,0.6s						
ARCES	ARCESS Array B	72.86	340	P	P	21 05 54.4	+0.9
	2.8nm,0.9s,baz=39,slow=9.8,SNR=6.1						
	2.8nm,0.9s						
FINES	FINESS Array B	77.08	333	P	P	21 06 17.3	0.0
	1.8nm,0.4s,baz=64,slow=5.0,SNR=32						
	1.8nm,0.4s						
HFS	Hagfors	82.63	336	P	P	21 06 46.2	-0.5
	0.9nm,0.4s,baz=132,slow=2.1,SNR=7.8						
	0.9nm,0.4s						
NB2	NORSAR Subarra	82.86	338	P	P	21 06 47.2	-0.6
	comp=Z,0.3nm,0.4s,baz=45,slow=5.1						
NOA	NORSAR Array B	82.86	338	P	P	21 06 47.4	-0.4
	comp=Z,0.7nm,0.5s,baz=46,slow=4.7,SNR=3.6						
	comp=Z,0.7nm,0.5s						

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*IDC **02** 21:08:31.1±1.2, 0°.15N×125°.01E, h0^{km}, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=171.9km s-min=23.4km az=68.0*

*DJA **02** 21:08:36.7±0.3, 0°S±5°×12°5E±°, h10^{km}, M4.0/11, mb4.0/1, mB4.7/1, MLv3.9/11, Mw(mB)3.9/1*

ISC 02 21:08:37.2±1.0**, 0°.07S**±0°.09×**124°.66E**±0°.05**, h35**^{km}**, n12,** σ**2^{s}30**/13**, mb3.3**/4**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	2.12	243	P	Pn	21 09 13.2	+3.0
SANI	Sanana	2.37	146	P	Pn	21 09 13.8	+0.1
MRSI	Marisa	2.77	281	P	Pn	21 09 18.9	-0.2
TNTI	Ternate	2.83	73	P	Pn	21 09 23.2	+3.2
LBMI	Labuha	2.90	101	P	Pn	21 09 23.5	+2.6
NLAI	Namlea	3.98	142	P	Pn	21 09 37.3	+1.5
MPSI	Mapaga	4.78	275	P	Pn	21 09 49.9	+3.2
SPSI	Sidrap Palu	6.23	232	P	Pn	21 10 09.5	+2.8
WRA	Warramunga Arr	21.91	155	P	P	21 13 25.9	-1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.5nm,0.6s,baz=335,slow=11,SNR=4.8						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**25.12**	**160**	P	**P**	**21 13 59.0**	**0.0**
	0.7nm,0.7s,baz=332,slow=7.6,SNR=7.8						
ASAR				PcP	**PcP**	**21 17 32.6**	**-0.3**
	0.2nm,0.3s,baz=354,slow=2.1,SNR=4.1						
	0.7nm,0.7s						
SONM	**Songino Array**	**50.29**	**344**	P	**P**	**21 17 29.2**	**-1.2**
	0.2nm,0.6s,baz=144,slow=9.2,SNR=2.5						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**63.86**	**329**	P	**P**	**21 19 04.6**	**-1.6**
	0.2nm,0.2s,baz=135,slow=6.0,SNR=1.1						
	0.2nm,0.2s						

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*IDC **02** 21:11:21.9±0.9, 55°.76S×122°.49W, h0^{km}, mb3.8/5, mbtmp3.8/5, MS4.2/39, Error ellipse: s-maj=41.8km s-min=28.4km az=131.0*

*NEIC **02** 21:11:22.6±1.7, 55°.60S±0°.09×121°.8W±0°.2, h10^{km}±1^{km}, mb4.8/18, Error ellipse: s-maj=24.1km s-min=10.3km az=298.0*

*GCMT **02** 21:11:28.6±0.2, 56°.22S±0°.01×122°.18W±0°.03, h13^{km}±1^{km}, MW5.1/88, Moment Tensor Solution. s33,c44; s88,c124; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.52±.20; M$_{\theta\theta}$3.05±.15; M$_{\phi\phi}$0.47±.13; M$_{r\theta}$-0.65±.28; M$_{\theta\phi}$2.60±.09; M$_{\phi r}$-2.31±.38; Best double couple: M$_0$4.83100×10^{16} NP1:φ$_s$36.00000°,δ61.00000°,λ-117.00000°. NP2: φ$_s$262.00000°,δ39.00000°,λ-51.00000°. Principal axes: T 5.0500, Plg12.0000°, Azm145.0000°; N -0.4310, Plg23.0000°, Azm50.0000°; P -4.6130, Plg63.0000°, Azm260.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 21:11:21.5±0.6**, 55°.4S**±0°.1×**122°.1W**±0°.1**, h10^{km}, n93, σ1^{s}.81**/40**, mb4.5**/14**, MS4.3**/42**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**29.34**	**132**	LR	LR	21 25 36.4	
	comp=Z,1μm,21.7s,baz=274,slow=29						
PMSA	**Palmer Station**	**29.34**	**132**	P	**P**	**21 17 23.7**	**-0.3**
RPN	**Rapa Nui**	**29.73**	**23**	LR	LR	21 26 41.8	
	comp=Z,444nm,19.7s,baz=192,slow=30						
MG02	**Cerro Sombrero**	**30.48**	**107**	P	**P**	**21 17 33.2**	**-0.9**
ESPZ	**Base Esperanza**	**32.67**	**131**	P	**P**	**21 17 52.4**	**-0.9**
ESPZ				IAmb	IAmb	21 18 18.6	
	comp=Z,21nm,1.0s						
VNDA	**Vanda**	**33.74**	**202**	LR	LR	21 28 40.0	
	comp=Z,459nm,19.6s,baz=92,slow=31						
QSPA	**South Pole Qui**	**34.78**	**180**	P	**P**	**21 18 11.2**	**-0.7**
	comp=Z,3.4nm,0.8s,baz=116,slow=3.4,SNR=17						
QSPA				LR	LR	21 30 20.7	
	comp=Z,527nm,20.0s,baz=96,slow=33						
	comp=Z,3.4nm,0.8s						
QSPA	**South Pole Qui**	**34.78**	**180**	P	**P**	**21 18 12.0**	**+0.2**
QSPA				IAmb	IAmb	21 18 30.1	
	comp=Z,14nm,1.3s						
BELA	**Belgrano 2**	**36.07**	**159**	P	**P**	**21 18 21.1**	**-1.6**
BELA				IAmb	IAmb	21 18 22.2	
	comp=Z,9.9nm,1.3s						
PLCA	**Paso Flores**	**36.51**	**88**	LR	LR	21 29 48.2	
	comp=Z,488nm,19.2s,baz=230,slow=30						
H03S2	**Juan Fernandez**	**36.70**	**72**	T	T	21 57 41.4	
	baz=218,slow=74,SNR=16						
H03S1	**Juan Fernandez**	**36.71**	**72**	T	T	21 57 42.8	
	baz=218,slow=74,SNR=18						
H03S3	**Juan Fernandez**	**36.72**	**72**	T	T	21 57 38.6	
	baz=218,slow=74,SNR=20						
H03N3	**Juan Fernandez**	**36.99**	**72**	T	T	21 58 09.7	
	baz=221,slow=72,SNR=130						
H03N2	**Juan Fernandez**	**37.00**	**72**	T	T	21 57 55.8	
	baz=221,slow=72,SNR=176						
H03N1	**Juan Fernandez**	**37.01**	**72**	T	T	21 58 05.4	
	baz=221,slow=72,SNR=116						
EFI	**East Falkland**	**37.01**	**112**	P	**P**	**21 18 29.2**	**-1.7**
TBI	**Tubuai**	**37.91**	**316**	*e*LR	LR	21 28 55.1	
	comp=Z,19μm,25.8s						
TBI				*e*LR	LR	21 28 55.7	
	comp=Z,6μm,26.5s						
TBI	**Tubuai**	**37.91**	**316**	*e*T	T	21 59 01.9	
	comp=Z,19nm,0.3s						
MT03	**Universidad Ad**	**41.62**	**80**	P	**P**	**21 19 09.2**	**-0.4**
MT03				IAmb	IAmb	21 19 19.0	
	comp=Z,33nm,1.2s						
VA06	**Catapilco**	**41.87**	**78**	P	**P**	**21 19 12.4**	**+0.8**
VA06				IAmb	IAmb	21 19 19.3	
	comp=Z,60nm,1.4s						
PPT2	**Papeete2**	**43.19**	**320**	*e*S	**S**	**21 25 46.2**	**-2.9**
	comp=Z,194nm,25.8s						
PPT2				*e*SS	**SS**	**21 29 01.5**	**-0.4**
	comp=Z,133nm,26.5s						
PPT2				*e*LR	LR	21 31 22.5	
	comp=Z,1μm,29.0s						
PPT2				*e*LR	LR	21 31 22.5	
	comp=Z,2μm,26.2s						
PPT	**Papeete**	**43.21**	**320**	LR	LR	21 33 17.3	
	comp=Z,452nm,18.1s,baz=178,slow=30						
RPZ	**Rata Peaks**	**43.29**	**257**	LR	LR	21 33 52.6	
	comp=Z,190nm,18.7s,baz=120,slow=31						
URZ	**Urewera**	**43.51**	**267**	LR	LR	21 33 17.5	
	comp=Z,228nm,21.4s,baz=204,slow=30						
RAR	**Rarotonga**	**44.24**	**305**	LR	LR	21 33 04.6	
	comp=Z,262nm,21.8s,baz=131,slow=29						
CFA	**Coronel Fontan**	**44.30**	**80**	LR	LR	21 33 40.2	
	comp=Z,249nm,18.9s,baz=172,slow=30						
VAH	**Vaihoa**	**44.67**	**324**	*e*T	T	22 07 36.2	
	comp=Z,41nm,0.2s						
SNAA	**Sanae**	**46.28**	**158**	LR	LR	21 39 32.8	
	comp=Z,478nm,18.0s,baz=192,slow=37						
PB14	**IPOC Station P**	**48.51**	**72**	P	**P**	**21 20 04.9**	**+0.1**
PB14				IAmb	IAmb	21 20 13.7	
	comp=Z,24nm,1.3s						
TAOE	**Nuku Hiva Isla**	**48.60**	**336**	*e*S	**S**	**21 27 04.3**	**-2.7**
	comp=Z,234nm,23.7s						
TAOE				*e*LR	LR	21 33 54.6	
	comp=Z,1μm,26.9s						
LVC	**Limon Verde**	**50.94**	**72**	LR	LR	21 37 22.1	
	comp=Z,133nm,18.9s,baz=221,slow=30						
CPUP	**Villa Florida**	**54.48**	**86**	LR	LR	21 41 06.2	
	comp=Z,434nm,19.0s,baz=226,slow=33						
AFI	**Afiamalu**	**56.34**	**297**	LR	LR	21 39 07.6	
	comp=Z,141nm,19.0s,baz=100,slow=30						
LPAZ	**La Paz**	**56.53**	**69**	P	**P**	**21 21 08.9**	**+4.3**
	comp=Z,0.7nm,0.5s,baz=166,slow=1.9,SNR=4.4						
LPAZ				LR	LR	21 39 35.7	
	comp=Z,118nm,21.8s,baz=82,slow=30						
	comp=Z,0.7nm,0.5s						
LPAZ	**La Paz**	**56.53**	**69**	P	**P**	**21 21 05.0**	**+0.3**
MAW	**Mawson**	**57.25**	**182**	LR	LR	21 44 31.4	
	comp=Z,646nm,18.9s,baz=168,slow=35						
MSVF	**Nonsavu**	**58.58**	**285**	LR	LR	21 40 38.5	
	comp=Z,75nm,18.8s,baz=91,slow=30						
ATAH	**Atahualpa**	**59.28**	**53**	LR	LR	21 42 53.8	
	comp=Z,101nm,18.7s,baz=68,slow=32						
DZM	**Mont Dzumac**	**61.66**	**272**	*e*LR	LR	21 39 48.2	
	comp=Z,154nm,25.7s						
DZM	**Mont Dzumac**	**61.66**	**272**	LR	LR	21 44 43.9	
	comp=Z,85nm,18.7s,baz=135,slow=33						
ETMB	**Extrema**	**62.95**	**66**	P	**P**	**21 21 49.4**	**+1.3**
ETMB				IAmb	IAmb	21 22 03.2	
	comp=Z,5.6nm,1.3s						
STKA	**Stephens Creek**	**67.79**	**246**	LR	LR	21 46 52.6	
	comp=Z,98nm,18.9s,baz=200,slow=32						
BDFB	**Brasilia**	**68.21**	**86**	LR	LR	21 49 32.5	
	comp=Z,478nm,20.1s,baz=171,slow=33						
BDFB	**Brasilia**	**68.21**	**86**	P	**P**	**21 22 21.2**	**-1.1**
JTS	**Las Juntas de**	**72.43**	**39**	LR	LR	21 47 29.9	
	comp=Z,192nm,20.6s,baz=95,slow=30						
CTA	**Charters Tower**	**74.66**	**257**	LR	LR	21 49 37.8	
	comp=Z,39nm,21.9s,baz=83,slow=31						
CCIG	**Comitan**	**75.76**	**30**	P	**P**	**21 23 08.1**	**+0.6**
CCIG				IAmb	IAmb	21 23 08.5	
	comp=Z,11nm,1.0s						
CMIG	**Matias Romero**	**75.80**	**27**	LR	LR	21 51 04.2	
	comp=Z,94nm,18.1s,baz=188,slow=31						
TARA	**Tarawa**	**77.21**	**292**	P	**P**	**21 23 17.1**	**+1.6**
H01W1	**Cape Leeuwin H**	**78.06**	**224**	T	T	22 49 22.2	
	baz=151,slow=76,SNR=5.8						
H01W2	**Cape Leeuwin H**	**78.06**	**224**	T	T	22 49 18.9	
	baz=151,slow=76,SNR=5.5						
H01W3	**Cape Leeuwin H**	**78.07**	**224**	T	T	22 49 27.7	
	baz=151,slow=76,SNR=5.3						
ASAR	**Alice Springs**	**78.41**	**245**	P	**P**	**21 23 21.9**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=199,slow=24,SNR=1.8						
ASAR				LR	LR	21 52 59.0	
	comp=Z,74nm,19.9s,baz=148,slow=32						
	comp=Z,0.2nm,0.6s						
ASAR	**Alice Springs**	**78.41**	**245**	P	**P**	**21 23 22.9**	**+0.5**
LPIG	**La Paz**	**79.82**	**11**	LR	LR	21 51 08.2	
	comp=Z,193nm,19.8s,baz=236,slow=30						
WB2	**Warramunga Arr**	**81.24**	**248**	P	**P**	**21 23 39.3**	**+1.6**
WB2				IAmb	IAmb	21 24 02.9	
	comp=Z,6.3nm,1.2s						
WRA	**Warramunga Arr**	**81.24**	**248**	P	**P**	**21 23 37.9**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=143,slow=4.4,SNR=4.6						
WRA				LR	LR	21 56 38.9	
	comp=Z,71nm,18.1s,baz=132,slow=34						
	comp=Z,0.7nm,0.8s						
WRA	**Warramunga Arr**	**81.24**	**248**	P	**P**	**21 23 38.7**	**+1.0**
WRAB	**Tennant Creek**	**81.25**	**248**	P	**P**	**21 23 39.4**	**+1.7**
WRAB				IAmb	IAmb	21 23 59.0	
	comp=Z,5.1nm,1.1s						
WB0	**Warramunga Arr**	**81.36**	**248**	P	**P**	**21 23 39.5**	**+1.2**
PMG	**Port Moresby**	**82.79**	**264**	LR	LR	21 55 57.5	
	comp=Z,69nm,18.5s,baz=118,slow=32						
TXAR	**Lajitas Array**	**85.86**	**16**	P	P	21 24 07.0	+6.0
	comp=Z,0.2nm,0.6s,baz=149,slow=2.9,SNR=2.9						
TXAR				LR	LR	21 56 30.3	
	comp=Z,64nm,19.1s,baz=164,slow=31						
	comp=Z,0.2nm,0.6s						
SUR	**Sutherland**	**86.96**	**149**	LR	LR	22 00 09.6	
	comp=Z,195nm,18.2s,baz=190,slow=34						
PFO	**Pinyon Flats O**	**88.79**	**5**	LR	LR	21 55 54.9	
	comp=Z,190nm,18.6s,baz=229,slow=30						
ANMO	**Albuquerque**	**90.98**	**13**	LR	LR	21 58 17.3	
	comp=Z,91nm,18.5s,baz=282,slow=31						
BOSA	**Boshof**	**91.76**	**152**	LR	LR	22 02 14.2	
	comp=Z,317nm,18.9s,baz=192,slow=33						
NVAR	**Mina Array Bea**	**93.52**	**3**	LR	LR	21 58 40.9	
	comp=Z,212nm,18.6s,baz=176,slow=30						
H11S2	**WAKE ISLAND Hy**	**94.87**	**296**	T	T	23 10 38.7	
	baz=148,slow=76,SNR=15						
H11S3	**WAKE ISLAND Hy**	**94.88**	**296**	T	T	23 10 39.8	
	baz=148,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	**94.89**	**296**	T	T	23 10 46.2	
	baz=148,slow=76,SNR=7.9						
LBTB	**Lobatse**	**95.26**	**151**	LR	LR	22 01 24.1	
	comp=Z,171nm,20.0s,baz=205,slow=32						
H11N3	**WAKE ISLAND Hy**	**95.79**	**296**	T	T	23 11 49.5	
	baz=135						
H11N1	**WAKE ISLAND Hy**	**95.80**	**296**	T	T	23 11 52.1	
	baz=135						
H11N2	**WAKE ISLAND Hy**	**95.81**	**296**	T	T	23 11 51.6	
	baz=135						
ELK	**Elko**	**95.96**	**5**	LR	LR	22 00 59.1	
	comp=Z,133nm,18.2s,baz=192,slow=31						
TKL	**Tuckaleechee C**	**96.44**	**31**	LR	LR	22 03 51.0	
	comp=Z,31nm,18.4s,baz=172,slow=32						
YBH	**Yreka Blue Hor**	**96.77**	**360**	LR	LR	21 59 27.2	
	comp=Z,199nm,20.0s,baz=177,slow=30						
PDAR	**Pinedale Array**	**98.38**	**9**	LR	LR	22 01 50.7	
	comp=Z,143nm,19.4s,baz=200,slow=31						
ILAR	**Eielson Array**	**121.35**	**348**	PKP	**PKiKP**	**21 30 14.2**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=119,slow=1.1,SNR=3.4						
DAVA	**Damuels**	**149.44**	**85**	*e*PKP	**PKPab**	**21 31 19.4**	**+4.5**
	comp=Z,7.7nm,1.1s						
SONM	**Songino Array**	**149.53**	**276**	PKPbc	**PKiKP**	**21 31 11.7**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=63,slow=2.3,SNR=4.1						
FETA	**Feichten**	**149.78**	**86**	*e*PKP	**PKiKP**	**21 31 11.7**	**-0.1**
	comp=Z,12nm,2.1s						
RETA	**Reutte**	**150.05**	**85**	*e*PKP	**PKiKP**	**21 31 12.5**	**+0.2**
	comp=Z,5.4nm,1.2s						
MOTA	**Moosalm**	**150.17**	**86**	*e*PKP	**PKPab**	**21 31 16.5**	**-1.5**
	comp=Z,4.6nm,1.6s						
WTTA	**Wattenberg**	**150.43**	**86**	*e*PKP	**PKPab**	**21 31 16.6**	**-2.5**
	comp=Z,4.0nm,0.9s						
WATA	**Walderalm**	**150.43**	**86**	*e*PKP	**PKiKP**	**21 31 14.1**	**+0.9**
	comp=Z,5.3nm,1.1s						
ABTA	**Abfaltersbach**	**150.64**	**88**	*e*PKP	**PKiKP**	**21 31 15.1**	**+1.5**
	comp=Z,8.6nm,2.1s						
KBA	**Koelnbreinsper**	**151.30**	**88**	*e*PKP	**PKPab**	**21 31 20.3**	**-2.4**
	comp=Z,3.9nm,1.2s						
OBKA	**Obir**	**151.67**	**90**	*i* PKP	**PKiKP**	**21 31 18.7**	**+3.0**
	comp=Z,4.0nm,0.8s						
BIOA	**Bad Ischl, Aus**	**151.80**	**87**	*e*PKP	**PKiKP**	**21 31 18.4**	**+2.6**
	comp=Z,5.4nm,1.2s						
SOKA	**Soboth**	**152.04**	**90**	*i* PKP	**PKiKP**	**21 31 19.4**	**+3.0**
	comp=Z,3.8nm,1.2s						
GERES	**GERESS Array B**	**152.44**	**85**	PKPbc	**PKiKP**	**21 31 18.6**	**+1.5**
	comp=Z,0.5nm,0.6s,baz=163,slow=1.0,SNR=5.1						

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*NEIC **02** 21:17:48.1±1.7, 57°.55N±0°.05×155°.6W±0°.1, h96^{km}±16^{km}, Error ellipse: s-maj=9.5km s-min=6.7km az=125.0*

*AEIC **02** 21:17:48.2±1.5, 57°.57N±0°.04×155°.65W±0°.08, h100^{km}±9^{km}, ML2.9, ML3.3/42(NEIC), Error ellipse: s-maj=7.1km s-min=4.4km az=52.0*

*IDC **02** 21:17:50.7±4.3, 58°.05N×155°.38W, h86^{km}±35^{km}, mb3.1/2, mbtmp3.6/3, Error ellipse: s-maj=47.4km s-min=28.1km az=72.0*

ISC 02 21:17:47.7±0.9**, 57°.57N**±0°.05×**155°.59W**±0°.05**, h97^{km}**±13^{km}**, n76, σ1^{s}.12**/85**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.30**	**105**		**Pn**	**21 18 11.6**	**+0.3**
OHAK				Sn	**Sn**	**21 18 28.9**	**-0.2**
OHAK				IAML		21 18 29.8	
	comp=E,156nm,0.2s						
KDAK	**Kodiak Island**	**1.63**	**81**	P	**Pn**	**21 18 16.1**	**+0.7**
	comp=E,60nm,0.3s,baz=282,slow=5.2,SNR=555						
KDAK				S	**Sn**	**21 18 35.6**	**-0.8**
	comp=E,24nm,0.3s,baz=221,slow=20,SNR=2.6						
KDAK	**Kodiak Island**	**1.63**	**81**	Pn	**Pn**	**21 18 16.1**	**+0.7**
KDAK				Sn	**Sn**	**21 18 36.0**	**-0.5**
Q19K	**Cape Douglas,**	**1.71**	**36**		**Pn**	**21 18 17.4**	**+1.0**
Q19K					**Sn**	**21 18 37.9**	**-0.4**
Q19K				IAML		21 18 43.0	
	comp=N,286nm,0.9s						
Q19K				IAML		21 18 49.7	
	comp=E,294nm,1.6s						
P18K	**Big Mountain,**	**1.84**	**6**		**Pn**	**21 18 18.5**	**+0.4**
P18K					**Sn**	**21 18 40.3**	**-1.0**
CHGN	**Chignik**	**2.00**	**232**	Pn	**Pn**	**21 18 20.6**	**+0.5**
CHGN					**Sn**	**21 18 44.4**	**-0.4**
CHGN				IAML		21 18 46.8	
	comp=E,247nm,0.1s						
O18K	**Koktuh Hills**	**2.30**	**5**		**Pn**	**21 18 24.6**	**+0.6**
O19K	**Port Alsworth**	**2.72**	**14**		**Pn**	**21 18 30.3**	**+0.8**
O19K				IAML		21 19 15.2	
	comp=N,48nm,0.5s						
O19K				IAML		21 19 19.0	
	comp=E,112nm,0.5s						
ILSW	**Iliamna Southw**	**2.74**	**27**		**Pn**	**21 18 31.1**	**+1.2**
ILSW				IAML		21 19 54.6	
	comp=N,42nm,3.3s						
HOM	**Homer**	**2.94**	**43**	Sn	**Sn**	**21 19 08.1**	**+1.0**
CNPM	**China Poot**	**3.01**	**47**	Pn	**Pn**	**21 18 34.4**	**+0.9**
CNPM				Sn	**Sn**	**21 19 07.8**	**-1.0**
CNPM				IAML		21 19 08.9	
	comp=E,81nm,0.4s						
CNPM				IAML		21 19 47.5	
	comp=N,99nm,3.4s						
RSO	**Redoubt South**	**3.25**	**26**		**Pn**	**21 18 38.5**	**+1.6**
BRLK	**Bradley Lake**	**3.30**	**46**		**Sn**	**21 19 13.2**	**-2.5**
N19K	**Bonanza Creek**	**3.31**	**9**		**Pn**	**21 18 38.7**	**+1.2**
SDPT	**Sand Point**	**3.50**	**233**	Pn	**Pn**	**21 18 39.1**	**-1.0**
SDPT				Sn	**Sn**	**21 19 19.9**	**-0.7**
SPU	**Mount Spurr**	**4.05**	**25**	Pn	**Pn**	**21 18 48.7**	**+1.2**
SEW	**Seward**	**4.08**	**49**	Pn	**Pn**	**21 18 50.1**	**+2.3**
O22K	**Cooper Landing**	**4.21**	**44**	Pn	**Pn**	**21 18 49.7**	**+0.1**
M19K	**Big River Lodg**	**4.39**	**7**		**Pn**	**21 18 53.1**	**+1.0**
M19K				IAML		21 20 24.7	
	comp=E,22nm,3.9s						
M19K				IAML		21 20 41.8	
	comp=N,19nm,3.6s						
M20K	**Styx River**	**4.50**	**15**		**Pn**	**21 18 55.4**	**+1.8**
M20K				IAML		21 19 57.8	
	comp=N,19nm,3.6s						
M20K				IAML		21 20 45.6	
	comp=E,20nm,3.7s						
SUA	**Susitna One**	**4.62**	**30**	Pn	**Pn**	**21 18 55.9**	**+0.6**
SUA					**Sn**	**21 19 47.3**	**-0.5**
RC01	**Rabbit Creek A**	**4.63**	**38**	Pn	**Pn**	**21 18 55.7**	**+0.4**
RC01				IAML		21 21 40.2	
	comp=E,41nm,3.5s						
RC01				IAML		21 21 53.4	
	comp=N,33nm,3.1s						
L19K	**White Mountain**	**4.64**	**4**		**Pn**	**21 18 56.9**	**+1.4**
L19K				IAML		21 19 36.9	
	comp=E,19nm,4.0s						
L19K				IAML		21 21 57.8	
	comp=N,22nm,4.1s						
SKT	**Skwentna**	**4.88**	**23**	Pn	**Pn**	**21 18 55.0**	**-3.7**
SKT				IAML		21 19 59.1	
	comp=E,28nm,3.4s						
SKT				IAML		21 22 00.5	
	comp=N,21nm,3.6s						
PWL	**Port Wells**	**4.98**	**45**	Pn	**Pn**	**21 19 00.2**	**+0.2**
KNK	**Knik Glacier**	**5.30**	**40**	Pn	**Pn**	**21 19 04.8**	**+0.4**
KNK				IAML		21 20 56.9	
	comp=N,27nm,2.7s						
TTA	**Tatalina**	**5.38**	**358**	Pn	**Pn**	**21 19 06.9**	**+1.3**
TTA				IAML		21 20 02.5	
	comp=N,17nm,3.7s						
TTA				IAML		21 20 52.7	
	comp=E,12nm,4.6s						
SML	**Sawmill**	**5.62**	**38**	Pn	**Pn**	**21 19 06.6**	**-2.1**
K20K	**Telida**	**5.86**	**7**		**Pn**	**21 19 13.6**	**+1.7**
SCM	**Sheep Creek Mo**	**5.98**	**41**	Pn	**Pn**	**21 19 14.6**	**+0.9**
CAST	**Castle Rocks**	**6.12**	**15**	Pn	**Pn**	**21 19 17.1**	**+1.6**
KLU	**Klutina**	**6.30**	**47**	Pn	**Pn**	**21 19 18.5**	**+0.6**
KTH	**Kantishna Hill**	**6.43**	**19**	Pn	**Pn**	**21 19 20.2**	**+0.4**
TRF	**Thorofare Moun**	**6.46**	**22**	Pn	**Pn**	**21 19 20.7**	**+0.6**
M24K	**Tolsona, Glenn**	**6.57**	**42**	Pn	**Pn**	**21 19 23.1**	**+1.4**
RND	**Reindeer**	**6.73**	**27**	Pn	**Pn**	**21 19 23.8**	**0.0**
N25K	**Chitina, Valde**	**6.89**	**49**	Pn	**Pn**	**21 19 26.6**	**+0.6**
BPAW	**Bear Paw Mtn.**	**6.93**	**17**		**Pn**	**21 19 26.6**	**+0.1**
MCK	**McKinley**	**6.99**	**25**	Pn	**Pn**	**21 19 27.6**	**+0.3**
GLB	**Gilahina Butte**	**7.14**	**52**	Pn	**Pn**	**21 19 30.1**	**+0.7**
VRDI	**Verde Repeater**	**7.20**	**54**	Pn	**Pn**	**21 19 30.7**	**+0.4**
UNV	**Unalaska Valle**	**7.20**	**243**	Pn	**Pn**	**21 19 30.2**	**0.0**
BWN	**Browne**	**7.27**	**22**	Pn	**Pn**	**21 19 30.8**	**-0.3**
PAX	**Paxson**	**7.39**	**39**	Pn	**Pn**	**21 19 33.9**	**+1.1**
MCARA	**McCarthy VSAT**	**7.45**	**54**	Pn	**Pn**	**21 19 34.6**	**+1.0**
MLY	**Manley**	**7.84**	**15**	Pn	**Pn**	**21 19 38.8**	**-0.1**
BARN	**Barnard Glacie**	**7.94**	**58**	Pn	**Pn**	**21 19 41.2**	**+0.9**
M26K	**Nabesna, AK**	**7.95**	**47**	Pn	**Pn**	**21 19 41.3**	**+0.8**
CCB	**Clear Creek Bu**	**8.04**	**25**	Pn	**Pn**	**21 19 39.7**	**-1.8**
HDA	**Harding Lake**	**8.04**	**28**	Pn	**Pn**	**21 19 40.7**	**-0.8**
RIDG	**Independent Ri**	**8.13**	**36**	Pn	**Pn**	**21 19 43.1**	**+0.3**
I23K	**Minto, Yukon-K**	**8.17**	**19**	Pn	**Pn**	**21 19 42.7**	**-0.6**
MDM	**Murphy Dome**	**8.21**	**22**	Pn	**Pn**	**21 19 42.7**	**-1.3**
DOT	**Dot Lake**	**8.32**	**38**	Pn	**Pn**	**21 19 46.1**	**+0.8**
PCA	**Pinnacle**	**8.35**	**66**	Pn	**Pn**	**21 19 46.8**	**+1.0**
IL31		**8.35**	**27**	Pn	**Pn**	**21 19 44.4**	**-1.4**
ILAR	**Eielson Array**	**8.35**	**27**	P	**Pn**	**21 19 44.1**	**-1.7**
	comp=E,2.5nm,0.4s,baz=216,slow=13,SNR=41						
ILAR				S	Sn	21 21 08.9	-9.4
	comp=E,0.2nm,0.4s,baz=221,slow=22,SNR=5.2						
ILAR	**Eielson Array**	**8.35**	**27**	Pn	**Pn**	**21 19 44.0**	**-1.9**
M27K	**Edge Creek, AK**	**8.38**	**49**	Pn	**Pn**	**21 19 47.4**	**+1.0**
ANM	**Nome**	**8.46**	**330**	Pn	**Pn**	**21 19 48.6**	**+1.3**
IMAR	**Indian Mountai**	**8.49**	**5**	Pn	**Pn**	**21 19 49.0**	**+1.4**
POKR	**Poker Plat Res**	**8.52**	**24**	Pn	**Pn**	**21 19 46.2**	**-1.9**
SCRK	**Sand Creek**	**8.57**	**37**	Pn	**Pn**	**21 19 49.1**	**+0.3**
L27K	**Beaver Creek,**	**8.76**	**45**	Pn	**Pn**	**21 19 52.3**	**+0.9**
H23K	**Yukon River**	**8.77**	**17**	Pn	**Pn**	**21 19 51.4**	**0.0**
BCAR	**Beaver Creek A**	**8.78**	**45**	Pn	**Pn**	**21 19 52.5**	**+0.8**
H24K	**Noodor Dome**	**9.06**	**21**	Pn	**Pn**	**21 19 54.6**	**-0.9**
J26L	**Joseph Creek**	**9.06**	**35**	Pn	**Pn**	**21 19 56.0**	**+0.4**
K27K	**Chicken**	**9.24**	**40**	Pn	**Pn**	**21 19 58.3**	**+0.5**
PRP	**Porcupine Dome**	**9.30**	**27**	Pn	**Pn**	**21 19 58.0**	**-0.8**
I26K	**Coal Creek Min**	**9.77**	**32**	Pn	**Pn**	**21 20 04.9**	**-0.1**
EGAK	**Eagle**	**10.02**	**38**	Pn	**Pn**	**21 20 08.9**	**+0.5**
M30M	**Minto, Yukon**	**10.63**	**54**	Pn	**Pn**	**21 20 17.6**	**+0.8**
BMAR	**Burnt Mountain**	**11.10**	**23**	Pn	**Pn**	**21 20 21.0**	**-2.2**
YKA	**Yellowknife Ar**	**20.78**	**59**	P	**P**	**21 22 21.0**	**+0.4**
	comp=E,0.3nm,0.7s,baz=274,slow=9.6,SNR=5.7						
	comp=E,0.3nm,0.7s						
FINES	**FINESS Array B**	**61.32**	**359**	P	**P**	**21 27 52.9**	**+0.5**
	comp=E,1.5nm,0.9s,baz=346,slow=7.0,SNR=1.7						
	comp=E,1.5nm,0.9s						

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*IDC **02** 21:19:55.9±1.9, 43°.15N×105°.12W, h0^{km}, mb2.5/1, mbtmp3.1/4, ML3.4/3, MS2.6/1, Error ellipse: s-maj=36.7km s-min=8.7km az=151.0*

*NEIC **02** 21:20:01.3±0.9, 43°.65N±0°.06×105°.31W±0°.08, h0^{km}±2^{km}, ML3.3/75, Error ellipse: s-maj=11.1km s-min=8.8km az=37.0*

ISC 02 21:19:58.9±0.9**, 43°.66N**±0°.05×**105°.31W**±0°.04**, h0^{km}, n34, σ1^{s}.92**/25**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.03**	**63**		**Pg**	**21 20 19.5**	**+0.8**
K22A	**Casper**	**1.34**	**222**	Pg	**Pg**	**21 20 24.7**	**+0.1**
K22A				IAML		21 20 47.6	
	comp=E,497nm,0.3s						
K22A				IAML		21 20 53.5	
	comp=N,507nm,0.3s						
PHWY	**Pilot Hill**	**2.36**	**183**	Pn	**Pb**	**21 20 41.3**	**-1.2**
RWWY	**Rawlins**	**2.42**	**216**		**Pb**	**21 20 42.3**	**-1.1**
N23A	**Red Feather La**	**2.80**	**190**	Pn	**Pn**	**21 20 47.5**	**+2.2**
N23A				IAML		21 21 27.7	
	comp=E,99nm,0.8s						
N23A				IAML		21 21 32.7	
	comp=N,106nm,0.6s						
LAO	**LASA Array**	**3.10**	**348**	Pn	**Pn**	**21 20 51.4**	**+2.2**
LAO				IAML		21 21 47.7	
	comp=N,102nm,1.4s						
LAO				IAML		21 21 49.6	
	comp=N,109nm,0.8s						
BRIGG	**Briggsdale**	**3.16**	**166**	Pn	**Pn**	**21 20 51.3**	**+1.2**
RLMT	**Red Lodge**	**3.19**	**299**	Pn	**Pn**	**21 20 52.3**	**+1.8**
BW06	**Boulder Array**	**3.23**	**255**		**Pn**	**21 20 53.3**	**+2.2**
BW06				IAML		21 21 41.8	
	comp=N,66nm,0.7s						
PD31	**Pinedale Array**	**3.23**	**255**		**Pn**	**21 20 52.7**	**+1.7**
PDAR	**Pinedale Array**	**3.23**	**255**	Pn	**Pn**	**21 20 52.6**	**+1.5**
	comp=N,3.4nm,0.3s,baz=87,slow=13,SNR=69						
PDAR				Lg	Lg	21 21 37.5	
	comp=N,12nm,0.3s,baz=88,slow=33,SNR=1.9						
	comp=N,4.4nm,0.3s						
OGNE	**Ogallala**	**3.64**	**137**	Pn	**Pn**	**21 20 59.0**	**+2.3**
YMP	**Mirror Lake Pl**	**3.65**	**289**		**Pn**	**21 20 59.1**	**+2.2**
YMP				IAML		21 22 08.6	
	comp=E,73nm,0.8s						
YMP				IAML		21 22 08.7	
	comp=N,66nm,1.4s						
GCMT	**Greycliff**	**3.77**	**306**	Pn	**Pn**	**21 21 00.5**	**+2.1**
LKWY	**Lake**	**3.77**	**286**	Pn	**Pn**	**21 21 00.8**	**+2.2**
LKWY				IAML		21 22 09.5	
	comp=N,50nm,1.5s						
LKWY				IAML		21 22 14.9	
	comp=N,54nm,2.1s						
ISCO	**Idaho Springs**	**3.86**	**183**		**Pn**	**21 21 02.4**	**+2.5**
ISCO				IAML		21 22 07.4	
	comp=N,35nm,1.4s						
H17A	**Grant Village**	**3.87**	**283**		**Pn**	**21 21 01.9**	**+2.0**
H17A				IAML		21 22 05.4	
	comp=E,34nm,2.2s						
H17A				IAML		21 22 11.2	
	comp=N,31nm,1.6s						
FLWY	**Flagg Ranch**	**3.92**	**278**	Pg	**Pg**	**21 21 14.1**	**+0.1**
FLWY				IAML		21 22 34.9	
	comp=N,58nm,2.1s						
MOOW	**Moose Ponds**	**3.94**	**273**		**Pn**	**21 21 03.3**	**+2.5**
SNOW	**Snow King Moun**	**3.96**	**269**		**Pn**	**21 21 03.0**	**+1.8**
SNOW				IAML		21 22 16.1	
	comp=N,58nm,1.6s						
REDW	**Red Top Meadow**	**4.04**	**268**		**Pg**	**21 21 16.1**	**-0.2**
REDW				IAML		21 22 18.1	
	comp=N,55nm,1.4s						
IMW	**Indian Meadow**	**4.08**	**275**	IAML		21 22 14.5	
	comp=N,33nm,0.8s						
IMW				IAML		21 22 18.2	
	comp=N,38nm,0.7s						
AHID	**Auburn Hatcher**	**4.32**	**260**	IAML		21 22 28.7	
	comp=N,33nm,1.4s						
RDMU	**Red Mountain**	**4.42**	**227**	IAML		21 22 27.0	
	comp=E,30nm,1.7s						
RDMU				IAML		21 22 41.9	
	comp=N,37nm,1.0s						
SMCO	**Snowmass**	**4.65**	**196**	IAML		21 22 38.0	
	comp=N,25nm,1.1s						
SMCO				IAML		21 23 16.3	
	comp=N,28nm,1.9s						
Q24A	**Divide**	**4.69**	**178**	IAML		21 22 29.9	
	comp=E,30nm,0.3s						
Q24A				IAML		21 22 32.6	
	comp=N,19nm,0.4s						

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BOZ   Bozeman (W)        4.91 295  IAML               21 22 33.5
            comp=N,15nm,2.9s
BOZ                                IAML               21 23 10.2
            comp=N,14nm,2.2s
HWUT  Hardware Ranch     5.05 248  IAML               21 22 45.5
            comp=N,22nm,1.3s
BSUT  Blindstream Ca     5.12 234  IAML               21 23 02.3
            comp=N,17nm,1.9s
BSUT                               IAML               21 23 02.7
            comp=E,18nm,2.0s
ANMO  Albuquerque        8.75 186  LR       LR        21 25 03.9
            comp=E,41nm,22.0s,baz=197,slow=37
I10CA LAC DU BONNET      9.12  41  I        I         22 18 00.0
            comp=E,0.1nm,1.1s,baz=223,slow=338,SNR=6.8
ULM   Lac du Bonnet      9.22  41  Pn       Pn        21 22 11.7  -1.4
            comp=E,1.2nm,0.3s,baz=230,slow=11,SNR=8.0
ULM                                Sn       Sn        21 23 54.6  -2.9
            comp=E,0.2nm,0.3s,baz=225,slow=1.4,SNR=2.4
ULM                                Lg       Lg        21 24 50.7
            comp=E,0.5nm,0.3s,baz=225,slow=14,SNR=4.2
            comp=E,2.3nm,0.3s
NVAR  Mina Array Bea    11.11 246  Pn       Pn        21 22 37.4  -1.8
            comp=E,0.1nm,0.3s,baz=66,slow=14,SNR=1.8
            comp=E,0.2nm,0.6s
YKA   Yellowknife Ar    19.64 347  P        Pn        21 24 30.6  +0.5
            comp=E,0.1nm,0.4s,baz=160,slow=9.2,SNR=2.5
            comp=E,0.1nm,0.4s
```

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*IDC **02** 21:27:55.7±6.3, 21.°66N×143.°11E, h276km±61km, mb3.1/11, mbtmp3.8/11, Error ellipse: s-maj=33.3km s-min=17.2km az=86.0*

*NEIC **02** 21:27:57.4±2.0, 21.°6N±0.°1×142.°9E±0.°1, h293km±11km, mb4.0/14, Error ellipse: s-maj=21.5km s-min=10.2km az=209.0*

ISC 02 21:27:57.8±0.9**, 21.°6N**±0.°1×**143.°0E**±0.°1**, h300**km**, n27,** σ**1.s00**/27**, mb3.7**/18**, Mariana Islands region**

```
Code  Station Name        Δ°  AZ°   Phase ID             Time      Res
                                   Op       ISC        h  m  s    ISC
JOW   Kunigami          14.40 294  P        P         21 31 06.9  -1.3
KSRS  Korea Array       20.49 324  P        P         21 32 12.0  -1.6
            0.5nm,0.4s,baz=144,slow=8.6,SNR=2.4
            0.5nm,0.4s
KLR   Kul'dur           29.00 345  P        P         21 33 30.5  +0.4
            1.1nm,0.5s,baz=183,slow=6.6,SNR=11
            1.1nm,0.5s
PETK  Petropavlovsk-    33.43  16  P        P         21 34 08.7   0.0
SONM  Songino Array     39.30 321  P        P         21 34 59.3  +0.9
            0.2nm,0.5s,baz=132,slow=8.4,SNR=4.1
            0.2nm,0.5s
CMAR  Chiang Mai Arr    41.40 274  P        P         21 35 17.3  +1.6
            0.4nm,0.6s,baz=98,slow=6.7,SNR=4.7
            0.4nm,0.6s
WB0   Warramunga Arr    41.95 192  P        P         21 35 20.5  +0.5
WB0                                IAmb     IAmb      21 35 24.7
            comp=Z,7.9nm,1.5s
WR0   Warramunga Arr    42.11 192  P        P         21 35 18.7  -2.6
WR0                                IAmb     IAmb      21 35 22.8
            comp=Z,5.5nm,1.3s
WRAB  Tennant Creek     42.12 192  P        P         21 35 22.0  +0.6
WRAB                               IAmb     IAmb      21 35 38.1
            comp=Z,6.2nm,1.2s
WB2   Warramunga Arr    42.13 192  P        P         21 35 21.6  +0.1
WB2                                IAmb     IAmb      21 35 28.6
            comp=Z,15nm,1.5s
WRA   Warramunga Arr    42.13 192  P        P         21 35 22.1  +0.6
            comp=Z,0.5nm,0.8s,baz=13,slow=9.4,SNR=8.6
            comp=Z,0.5nm,0.8s
WRA   Warramunga Arr    42.13 192  P        P         21 35 21.3  -0.2
ANM   Nome              54.59  25  P        P         21 36 56.4  +1.0
MKAR  Makanchi Array    54.63 313  P        P         21 36 56.3  +0.3
            comp=Z,0.1nm,0.3s,baz=68,slow=11,SNR=5.4
            comp=Z,0.1nm,0.3s
MAKZ  Makanchi          54.85 313  P        P         21 36 56.8  -0.8
CHGN  Chignik           54.97  36  P        P         21 36 56.3  -1.9
O18K  Koktuh Hills      57.47  32  P        P         21 37 15.9  +0.1
O18K                               IAmb     IAmb      21 37 20.0
            comp=Z,43nm,0.9s
KURBB Kurchatov Arra    57.48 317  P        P         21 37 16.0  +0.1
            comp=Z,0.7nm,0.5s,baz=94,slow=7.5,SNR=10
            comp=Z,0.7nm,0.5s
CUT   Chulitna          60.34  29  P        P         21 37 36.5  +1.2
BPAW  Bear Paw Mtn.     60.35  28  P        P         21 37 35.7  +0.3
BPAW                               IAmb     IAmb      21 38 18.2
            comp=Z,7.1nm,1.4s
PWL   Port Wells        61.01  31  P        P         21 37 39.3  -0.5
SML   Sawmill           61.15  30  P        P         21 37 41.1  +0.4
SML                                IAmb     IAmb      21 38 07.6
            comp=Z,28nm,1.3s
BVAR  Borovoye Array    62.63 320  P        P         21 37 51.4  +0.7
            comp=Z,1.6nm,0.3s,baz=95,slow=8.0,SNR=23
            comp=Z,1.6nm,0.3s
BRVK  Borovoye          62.70 320  P        P         21 37 50.4  -0.7
BRVK                               IAmb     IAmb      21 38 07.5
            comp=Z,2.7nm,1.4s
YKA   Yellowknife Ar    76.64  28  P        P         21 39 15.6  +0.1
            comp=Z,0.3nm,0.6s,baz=290,slow=5.6,SNR=4.2
            comp=Z,0.3nm,0.6s
ARCES ARCESS Array B    78.97 341  P        P         21 39 28.6  +0.5
            comp=Z,4.3nm,1.1s,baz=70,slow=7.5,SNR=8.5
            comp=Z,4.3nm,1.1s
FINES FINESS Array B    83.20 334  P        P         21 39 49.9  -0.6
            comp=Z,1.0nm,0.5s,baz=58,slow=3.1,SNR=13
            comp=Z,1.0nm,0.5s
```

IDC 02 21:39:08.9±3.8**, 1.°31S**×**135.°72E, h0**km**, mb3.4**/2**, mbtmp3.4**/3**, ML3.2**/1**, Error ellipse: s-maj=171.1km s-min=29.7km az=79.0, Irian Jaya region**

```
Code  Station Name        Δ°  AZ°   Phase ID             Time      Res
                                   Op       ISC        h  m  s    ISC
WRA   Warramunga Arr    18.56 184  P        P         21 43 27.1  -0.5
            0.1nm,0.3s,baz=5.5,slow=12,SNR=2.2
            0.4nm,0.7s
ASAR  Alice Springs     22.29 184  P        P         21 44 08.2  +0.2
            0.7nm,0.7s,baz=8.2,slow=11,SNR=6.9
            0.7nm,0.7s
MKAR  Makanchi Array    66.87 323  P        P         21 50 03.0   0.0
            0.9nm,1.1s,baz=112,slow=6.5,SNR=4.0
            0.9nm,1.1s
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*IDC **02** 21:58:21.9±0.7, 49.°89N×178.°51W, h0km, mb4.2/24, mbtmp4.2/27, ML4.0/3, MS3.6/6, Error ellipse: s-maj=20.6km s-min=13.0km az=174.0*

*MOS **02** 21:58:26.0±0.9, 49.°92N×178.°61W, h33km, mb4.6/24, Error ellipse: s-maj=11.2km s-min=6.5km az=100.3*

*AEIC **02** 21:58:27.2±2.0, 50.°0N±0.°1×178.°44W±0.°09, h29km±7km, Error ellipse: s-maj=15.4km s-min=8.7km az=174.0*

*NEIC **02** 21:58:29.4±2.0, 50.°1N±0.°1×178.°55W±0.°04, h34km±10km, mb4.2/53, ML3.8(AEIC), Error ellipse: s-maj=17.3km s-min=3.0km az=187.0*

ISC 02 21:58:27.7±0.6**, 49.°91N**±0.°08×**178.°54W**±0.°05**, h35**km**, n206,** σ**1.s45**/198**, mb4.3**/66**, MS3.7**/6**, 32C-10D, South of Aleutian Islands**

```
Code  Station Name        Δ°  AZ°   Phase ID             Time      Res
                                   Op       ISC        h  m  s    ISC
AMKA  Amchitka           2.01 318  Pn       Pn        21 58 56.8  -2.3
AMKA                               Sn       Sn        21 59 19.7  -3.3
KIWB  Kanaga Island      2.14  24           Pn        21 58 59.0  -1.9
ADK   Adak               2.31  30           Pn        21 59 00.9  -2.2
ADK                                Sn       Sn        21 59 26.7  -3.5
ADK   Adak               2.31  30  P        Pn        21 59 00.9  -2.2
ADK                                                   21 59 26.7
GSTR  Great Sitkin T     2.70  35  Pn       Pn        21 59 07.9  -0.6
SHEM  Shemya Is, Ala     5.41 304  Pn       Pn        21 59 43.3  -2.5
            6.5nm,0.3s,baz=95,slow=21,SNR=1.7
SHEM                               Sn       Sn        22 00 41.3  -5.4
            0.7nm,0.3s,baz=249,slow=23,SNR=2.2
            34nm,0.3s
SMY   Shemya             5.41 304  Pn       Pn        21 59 45.5  -0.2
SMY   Shemya             5.41 304  P        Pn        21 59 45.6  -0.2
CLES  Cleveland East     6.15  58  Pn       Pn        21 59 55.8  -0.2
NIKH  Nikolski High      6.79  59           Pn        22 00 02.6  -2.1
UNV   Unalaska Valle     8.43  57           Pn        22 00 25.8  -1.3
SPIA  Saint Paul Isl     8.79  31  Pn       Pn        22 00 32.0  -0.2
PET   Petropavlovsk     14.54 291 i P       Pn        22 01 50.2  -0.4
PET                                pmax     pmax
            comp=Z,7.0nm,0.3s
PEA0B Petropavlovsk-    15.12 291 i P       Pn        22 01 58.1  -0.3
PETK  Petropavlovsk-    15.12 291  Pn       Pn        22 01 57.1  -1.3
            comp=Z,0.7nm,0.3s,baz=92,slow=18,SNR=6.0
            comp=Z,3.9nm,0.9s
KDAK  Kodiak Island     17.14  53  P        Pn        22 02 21.2  -3.0
            comp=Z,1.2nm,0.3s,baz=270,slow=8.9,SNR=2.0
            comp=Z,13nm,0.5s
TTA   Tatalina          17.91  35           Pn        22 02 33.4  -0.3
TTA   Tatalina          17.91  35  P        Pn        22 02 33.4  -0.3
TTA                                pmax     pmax
            comp=Z,11nm,1.4s
L19K  White Mountain    17.93  38  P        P         22 02 34.3  +0.1
M19K  Big River Lodg    17.96  39           P         22 02 35.0  +0.4
RSO   Redoubt South     18.00  44  Pn       Pn        22 02 28.7  -6.2
CNPM  China Poot        18.35  48  P        Pn        22 02 39.1   0.0
M20K  Styx River        18.47  40  P        Pn        22 02 41.1  +0.5
BRLK  Bradley Lake      18.60  47  P        P         22 02 41.5  -0.2
BRLK                               IAmb     IAmb      22 03 11.3
            comp=Z,40nm,1.4s
K20K  Telida            18.87  35  P        P         22 02 44.8  +0.1
SKT   Skwentna          19.19  41  P        P         22 02 48.1  +0.1
SKT                                IAmb     IAmb      22 02 51.0
            comp=Z,17nm,1.3s
SUA   Susitna One       19.30  43  P        Pn        22 02 52.5  +1.9
SUA                                IAmb     IAmb      22 02 56.7
            comp=Z,11nm,0.8s
PPLA  Purkeypile        19.35  38  P        Pn        22 02 51.6  +0.3
PPLA                               IAmb     IAmb      22 03 33.6
            comp=Z,31nm,1.5s
CAST  Castle Rocks      19.66  37  P        P         22 02 53.4  +0.1
CAST                               IAmb     IAmb      22 02 60.0
            comp=Z,9.7nm,0.8s
BILL  Bilibino          19.69 343  P        P         22 02 53.6  +0.1
BILL  Bilibino          19.69 343d iP       P         22 02 53.9  +0.4
BILL                               S        Sn        22 06 34.0  -0.9
BILL                               pmax     pmax
            comp=Z,20nm,1.8s
MA2   Magadan           20.01 311 i P       P         22 02 57.3  +0.3
MA2                                pmax     pmax
            comp=Z,7.0nm,1.0s
KTH   Kantishna Hill    20.18  37  P        P         22 02 58.8  -0.2
KTH                                IAmb     IAmb      22 03 04.1
            comp=Z,9.2nm,0.9s
BPAW  Bear Paw Mtn.     20.43  36  P        P         22 03 01.8  +0.1
BPAW                               IAmb     IAmb      22 03 06.6
            comp=Z,6.1nm,0.8s
SEY   Seymchan          20.47 321  P        P         22 03 01.6  -0.4
            comp=Z,6.0nm,0.6s,baz=121,slow=11,SNR=26
            comp=Z,6.0nm,0.6s
SEY   Seymchan          20.47 321ceP        Pn        22 03 03.1  -1.2
SEY                                pmax     pmax
            comp=Z,15nm,1.3s
SML   Sawmill           20.50  43  P        Pn        22 03 05.2  +0.5
SML                                IAmb     IAmb      22 03 08.4
            comp=Z,16nm,0.9s
SML   Sawmill           20.50  43  P        Pn        22 03 05.2  +0.5
SML                                pmax     pmax
            comp=Z,16nm,0.9s
IMAR  Indian Mountai    20.57  29  P        P         22 03 02.1  -0.9
H21K  Melozitna Rive    20.67  31  P        P         22 03 03.8  -0.3
SCM   Sheep Creek Mo    20.95  43  Pn       Pn        22 03 09.8  -0.2
SCM                                IAmb     IAmb      22 03 17.4
            comp=Z,20nm,1.2s
SCM   Sheep Creek Mo    20.95  43  P        Pn        22 03 09.8  -0.2
SCM                                pmax     pmax
            comp=Z,19nm,1.2s
MLY   Manley            21.02  34           P         22 03 11.3  +3.3
MLY                                IAmb     IAmb      22 03 13.8
            comp=Z,15nm,1.5s
MCK   McKinley          21.05  38  P        P         22 03 07.9  -0.3
MCK                                IAmb     IAmb      22 03 13.3
            comp=Z,8.1nm,1.0s
MCK   McKinley          21.05  38  P        P         22 03 07.9  -0.3
MCK                                pmax     pmax
            comp=Z,8.0nm,1.0s
NEA2  Nenana            21.40  36  P        P         22 03 14.4  +2.4
KLU   Klutina           21.47  45  P        P         22 03 14.9  +2.0
KLU                                IAmb     IAmb      22 03 47.8
            comp=Z,23nm,1.4s
M24K  Tolsona, Glenn    21.56  43  P        P         22 03 16.0  +2.3
I23K  Minto, Yukon-K    21.57  34  P        P         22 03 14.8  +1.0
I23K                               IAmb     IAmb      22 03 17.3
            comp=Z,8.4nm,0.7s
MDM   Murphy Dome       21.89  35  P        P         22 03 17.9  +0.5
MDM                                IAmb     IAmb      22 03 19.2
            comp=Z,5.0nm,0.7s
N25K  Chitina, Valde    22.11  45  P        P         22 03 21.6  +1.9
PAX   Paxson            22.16  41  P        P         22 03 20.4  +0.1
PAX                                IAmb     IAmb      22 04 03.9
            comp=Z,9.9nm,1.4s
PAX   Paxson            22.16  41  P        P         22 03 20.4  +0.1
PAX                                pmax     pmax
            comp=Z,10.0nm,1.4s
IL31                    22.32  36  P        P         22 03 21.4  -0.4
ILAR  Eielson Array     22.32  36  P        P         22 03 18.7  -3.1
            comp=Z,0.7nm,0.7s,baz=239,slow=8.5,SNR=14
ILAR                               LR       LR        22 13 11.0
            comp=Z,203nm,19.1s,baz=140,slow=40
            comp=Z,0.7nm,0.7s
ILAR  Eielson Array     22.32  36  P        P         22 03 21.2  -0.6
ILAR  Eielson Array     22.32  36  P        P         22 03 21.2  -0.6
GLB   Gilahina Butte    22.43  46  P        P         22 03 24.4  +1.3
GLB                                IAmb     IAmb      22 03 25.0
            comp=Z,9.5nm,0.7s
COLD  Coldfoot          22.45  29  P        P         22 03 22.2  -1.0
H24K  Noodor Dome       22.46  33  P        P         22 03 23.6  +0.2
RIDG  Independent Ri    22.70  40  P        P         22 03 25.5  -0.5
RIDG                               IAmb     IAmb      22 03 56.8
            comp=Z,14nm,1.3s
MCARA McCarthy VSAT     22.78  46  P        P         22 03 27.5  +0.7
DOT   Dot Lake          23.00  40  P        P         22 03 28.5  -0.6
DOT                                IAmb     IAmb      22 03 32.0
            comp=Z,6.2nm,0.7s
M26K  Nabesna, AK       23.06  44  P        P         22 03 30.7  +0.9
M26K                               IAmb     IAmb      22 03 31.2
            comp=Z,7.0nm,0.6s
L26K  Log Cabin Wild    23.09  42  P        P         22 03 31.8  +1.7
SCRK  Sand Creek        23.15  40  P        P         22 03 28.5  -2.2
SCRK                               IAmb     IAmb      22 03 31.4
            comp=Z,8.1nm,0.9s
PRP   Porcupine Dome    23.16  35  P        P         22 03 29.9  -0.9
BARN  Barnard Glacie    23.35  47  P        P         22 03 33.2  +0.4
TOLK  Toolik Lake Re    23.50  26  P        P         22 03 32.8  -1.2
TOLK                               IAmb     IAmb      22 03 37.1
            comp=Z,5.0nm,0.9s
J26L  Joseph Creek      23.51  38  P        P         22 03 32.4  -1.8
M27K  Edge Creek, AK    23.55  44  P        P         22 03 35.6  +0.9
FYU   Fort Yukon        23.75  33  P        P         22 03 37.9  +1.6
FYU                                IAmb     IAmb      22 03 39.7
            comp=Z,5.8nm,0.8s
L27K  Beaver Creek,     23.77  43  IAmb     IAmb      22 03 42.2
            comp=Z,5.8nm,1.1s
BCAR  Beaver Creek A    23.79  43  P        P         22 03 36.4  -0.4
PCA   Pinnacle          23.87  50  P        P         22 03 35.9  -1.7
BMAR  Burnt Mountain    24.39  31  P        P         22 03 42.1  -0.3
DAWY  Dawson            25.09  41  P        P         22 03 48.3  -0.4
DAWY                               IAmb     IAmb      22 03 49.7
            comp=Z,5.9nm,0.9s
HYT   Haines Junctio    25.32  49  P        P         22 03 51.1  +0.3
YSS   Yuzh-Sakhalins    25.66 278 eP        P         22 03 55.1  +1.2
M30M  Minto, Yukon      25.91  45  P        P         22 03 55.7  -0.4
M30M                               IAmb     IAmb      22 04 15.1
            comp=Z,7.7nm,1.2s
P33M  Teslin, Yukon     27.59  51  P        P         22 04 12.4  +1.2
P33M                               IAmb     IAmb      22 04 13.5
            comp=Z,11nm,1.2s
INK   Inuvik            28.59  33  P        P         22 04 18.7  -1.3
            comp=Z,1.2nm,0.4s,baz=242,slow=10,SNR=5.8
            comp=Z,1.2nm,0.4s
INK   Inuvik            28.59  33  P        P         22 04 19.6  -0.4
INK                                IAmb     IAmb      22 04 58.8
            comp=Z,2.7nm,0.8s
INK   Inuvik            28.59  33  P        P         22 04 19.6  -0.4
INK                                pmax     pmax
            comp=Z,3.0nm,0.8s
YAK   Yakutsk           30.53 313 i P       P         22 04 36.8  -0.4
YAK                                pmax     pmax
            comp=Z,4.0nm,0.8s
KLR   Kul'dur           31.77 288  P        P         22 04 48.0  -0.3
            comp=Z,4.7nm,0.7s,baz=70,slow=8.0,SNR=15
KLR                                LR       LR        22 17 41.0
            comp=Z,17nm,21.0s,baz=106,slow=36
            comp=Z,4.7nm,0.7s
KLR   Kul'dur           31.77 288ceP        P         22 04 48.7  +0.4
KLR                                pmax     pmax
            comp=Z,6.0nm,1.3s
H11N2 WAKE ISLAND Hy    32.27 206  T        T         22 38 43.8
            baz=17,slow=73,SNR=10
H11N3 WAKE ISLAND Hy    32.28 206  T        T         22 38 45.2
            baz=17,slow=73,SNR=8.4
H11N1 WAKE ISLAND Hy    32.29 206  T        T         22 38 44.4
            baz=17,slow=73,SNR=6.9
ZEA   Zeya              33.04 298 eP        P         22 04 59.2  -0.2
ZEA                                pmax     pmax
            comp=Z,10.0nm,1.1s
YKA   Yellowknife Ar    36.15  45  P        P         22 05 25.7  -0.4
            comp=Z,5.5nm,1.0s,baz=278,slow=7.7,SNR=34
YKA                                PcP      PcP       22 07 51.0   0.0
            comp=Z,0.6nm,0.7s,baz=288,slow=2.9,SNR=5.5
            comp=Z,5.5nm,1.0s
YKA   Yellowknife Ar    36.15  45ceP        P         22 05 27.2  +1.1
YKA                                pmax     pmax
            comp=Z,4.0nm,0.9s
NVAR  Mina Array Bea    43.59  81  P        P         22 06 28.4  -0.1
            comp=Z,0.3nm,0.3s,baz=284,slow=7.3,SNR=4.9
            comp=Z,0.3nm,0.3s
NRIK  Noril'sk          45.77 330 i P       P         22 06 44.2  -0.9
NRIK                               pmax     pmax
            comp=Z,4.0nm,1.2s
PRN   Pahroc Range      46.27  80  P        P         22 06 49.6  -0.1
PDAR  Pinedale Array    46.62  71  P        P         22 06 51.8  -0.7
            comp=Z,0.9nm,0.7s,baz=284,slow=4.5,SNR=4.6
            comp=Z,0.9nm,0.7s
FCC   Fort Churchill    46.87  45  P        P         22 06 54.2  +0.3
FCC   Fort Churchill    46.87  45  P        P         22 06 54.2  +0.3
FCC                                pmax     pmax
            comp=Z,6.0nm,1.1s
SONM  Songino Array     47.47 298  P        P         22 06 58.9   0.0
            comp=Z,1.6nm,0.8s,baz=62,slow=7.9,SNR=13
SONM                               PcP      PcP       22 08 28.0  -0.8
            comp=Z,0.7nm,0.5s,baz=87,slow=1.5,SNR=8.9
            comp=Z,1.6nm,0.8s
ZAK   Zakamensk         47.87 302 eP        P         22 07 02.5  +0.6
ZAK                                pmax     pmax
            comp=Z,5.0nm,1.1s
KBS   Kingsbay          51.28 357 eP        P         22 07 27.6  +0.2
SPA0  Spitsbergen Ar    51.86 356 eP        P         22 07 32.0  +0.2
SPITS Spitsbergen Ar    51.86 356  P        P         22 07 31.5  -0.2
            comp=Z,5.7nm,0.6s,baz=30,slow=8.6,SNR=20
            comp=Z,5.7nm,0.6s
ZALV  Zalesovo Beam     55.17 314  P        P         22 07 55.2  -1.2
            comp=Z,1.0nm,0.6s,baz=46,slow=6.4,SNR=5.0
ZALV                               PcP      PcP       22 08 57.4  +0.4
            comp=Z,0.3nm,0.3s,baz=80,slow=7.9,SNR=2.2
            comp=Z,1.0nm,0.6s
ZALV  Zalesovo Beam     55.17 314 i P       P         22 07 57.2  +0.9
ZALV                               pmax     pmax
            comp=Z,1.0nm,0.6s
LZH   Lanzhou           55.96 287 eP        P         22 08 01.0  -1.5
LZH                                pP       pP        22 08 09.3  -2.0
LZH                                pmax     pmax
            comp=Z,5.0nm,1.4s
GTA   Gaotai            56.28 293 eP        P         22 08 05.1  +0.4
GTA                                pP       pP        22 08 14.2  +0.7
GTA                                pmax     pmax
            comp=Z,3.0nm,0.7s
DGZ   Jazzator, Alta    56.59 309 i P       P         22 08 05.9  -0.8
DGZ                                pmax     pmax
            comp=Z,5.0nm,1.4s
VADS  Vadso             58.58 349 eP        P         22 08 20.6  +0.4
HAMF  Hammerfest        58.69 352 eP        P         22 08 20.7  -0.3
TXAR  Lajitas Array     58.73  80  P        P         22 08 21.4  -0.7
            comp=Z,0.8nm,0.7s,baz=302,slow=6.0,SNR=7.8
TXAR                               PcP      PcP       22 09 11.2  -0.4
            comp=Z,0.3nm,0.6s,baz=306,slow=2.1,SNR=2.5
            comp=Z,0.8nm,0.7s
JMIC  Jan Mayen         59.20   4  LR       LR        22 35 25.2
            comp=Z,58nm,19.0s,baz=330,slow=38
ARA0  ARCESS Array S    59.57 350 eP        P         22 08 27.3  +0.1
ARCES ARCESS Array B    59.57 350  P        P         22 08 27.0  -0.1
            comp=Z,7.7nm,0.7s,baz=342,slow=7.6,SNR=35
            comp=Z,7.7nm,0.7s
JETT  Jettan, Norway    60.04 352 eP        P         22 08 31.1  +0.7
TRO   Tromso            60.09 353 eP        P         22 08 30.8  +0.2
KURK  Kurchatov         60.16 314ceP        P         22 08 31.9  +0.5
KURK                               pmax     pmax
            comp=Z,7.0nm,1.3s
WMQ   Urumqi            60.29 304 eP        P         22 08 36.0  +3.5
KTK1  Kautokeino        60.31 351 eP        P         22 08 32.1  -0.1
SCHQ  Schefferville     61.06  38  P        P         22 08 37.2  -0.4
            comp=Z,6.2nm,1.1s,baz=240,slow=18,SNR=3.7
            comp=Z,6.2nm,1.1s
MK31  Makanchi Array    61.09 309 i P       P         22 08 37.7  -0.1
MKAR  Makanchi Array    61.09 309  P        P         22 08 37.5  -0.3
            comp=Z,1.8nm,0.8s,baz=49,slow=5.8,SNR=16
            comp=Z,1.8nm,0.8s
HNR   Honiara           62.01 204  LR       LR        22 29 01.9
            comp=Z,327nm,21.9s,baz=154,slow=30
STEI  Steigen           62.03 354 eP        P         22 08 43.9  +0.1
FAUS  Fauske            62.57 354 eP        P         22 08 49.1  +1.7
PZH   PanZhiHua         63.77 281  P        P         22 08 59.0  +2.8
PZH                                pmax     pmax
            comp=Z,10.0nm,0.8s
PZH                                pmax     pmax
            comp=Z,90nm,5.0s
MOR8  Moi Rana          63.83 354 eP        P         22 08 55.1  -0.8
ARU   Arti              63.95 329d iP       P         22 08 56.6  -0.1
ARU                                                   22 09 28.0
ARU                                                   22 11 15.7
ARU                                S        S         22 17 31.0  +1.3
ARU                                SS       SS        22 21 40.0  +2.4
ARU                                pmax     pmax
            comp=Z,4.0nm,0.7s
KIRV  Kirov             64.97 335ceP        P         22 09 04.8  +1.4
NSS   Namsos            65.61 355 eP        P         22 09 07.8  +0.3
FINES FINESS Array B    67.26 347  P        P         22 09 16.2  -1.8
            comp=Z,3.1nm,0.8s,baz=32,slow=7.5,SNR=9.7
FINES                              LR       LR        22 40 19.0
            comp=Z,52nm,21.1s,baz=260,slow=37
            comp=Z,3.1nm,0.8s
FINES FINESS Array B    67.26 347ceP        P         22 09 18.0   0.0
FINES                              pmax     pmax
            comp=Z,3.0nm,0.8s
AAK   Ala-Archa         67.94 310  P        P         22 09 23.0  +0.2
            comp=Z,5.1nm,0.7s,baz=122,slow=3.7,SNR=18
            comp=Z,5.1nm,0.7s
AAK   Ala-Archa         67.94 310ceP        P         22 09 23.5  +0.7
AAK                                pmax     pmax
            comp=Z,4.0nm,1.0s
NB2   NORSAR Subarra    69.13 355  P        P         22 09 30.3  +0.5
            comp=Z,0.9nm,0.5s,baz=7.0,slow=6.9
NB2   NORSAR Subarra    69.13 355  P        P         22 09 30.3  +0.5
            slow=6.9
NOA   NORSAR Array B    69.13 355  P        P         22 09 29.9  +0.1
            comp=Z,1.2nm,0.5s,baz=2.2,slow=13,SNR=12
            comp=Z,1.2nm,0.5s
KSH   Kashi             69.52 307  P        P         22 09 37.2  +4.5
KSH                                sP       sP        22 09 46.4  +1.2
KSH                                pmax     pmax
            comp=Z,7.0nm,0.7s
SKAR  Skarslia          69.63 356 eP        P         22 09 33.4  +0.5
OBN   Obninsk           71.31 340ceP        P         22 09 43.8  +0.7
OBN                                                   22 10 00.0
OBN                                S        S         22 19 04.0  +6.1
OBN                                SS       SS        22 23 36.0  +4.8
OBN                                pmax     pmax
            comp=Z,6.0nm,0.6s
CMAR  Chiang Mai Arr    71.33 277  P        P         22 09 44.0  +0.1
            comp=Z,0.7nm,0.3s,baz=27,slow=6.4,SNR=4.7
            comp=Z,0.7nm,0.3s
CMAR  Chiang Mai Arr    71.33 277ceP        P         22 09 43.7  -0.2
CMAR                               pmax     pmax
            comp=Z,1.0nm,0.3s
RAR   Rarotonga         72.73 162  LR       LR        22 33 33.5
            comp=Z,42nm,21.9s,baz=278,slow=29
AKASG Malin Array Be    77.00 342  P        P         22 10 16.4   0.0
            comp=Z,3.6nm,0.6s,baz=19,slow=5.7,SNR=12
            comp=Z,3.6nm,0.6s
AKASG Malin Array Be    77.00 342ceP        P         22 10 16.7  +0.3
AKASG                              pmax     pmax
            comp=Z,4.0nm,0.6s
AKBB  Malin Array Si    77.00 342ceP        P         22 10 16.4   0.0
AKBB                               pmax     pmax
            comp=Z,6.0nm,1.0s
DPC   Dobruska-Polom    79.32 350 eP        P         22 10 29.7  +0.4
DPC   Dobruska-Polom    79.32 350 eP        P         22 10 29.7  +0.4
STHS  Stebnicka Huta    79.61 347 eP        P         22 10 32.3  +1.4
STHS                               pmax     pmax
            comp=Z,6.0nm,1.1s
STHS  Stebnicka Huta    79.61 347 eP        P         22 10 32.3  +1.4
SORM  Soroca            79.62 342 ⇑P        P         22 10 31.6  +0.6
KBZ   Khabaz            79.97 331  P        P         22 10 33.2  +0.2
            comp=Z,2.1nm,0.8s,baz=297,slow=11,SNR=3.5
            comp=Z,2.1nm,0.8s
```

VRAC	**Vranov**	**80.31**	**350**	⇑P	**P**	**22 10 36.0**	**+1.3**
VRAC	**Vranov**	**80.31**	**350**	⇑P	**P**	**22 10 36.0**	**+1.3**
ZEI	**Tsey**	**80.50**	**330**	*e*P	**P**	**22 10 35.8**	**-0.3**
ZEI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TRPA	**Tarpa**	**80.67**	**346**	⇑P	**P**	**22 10 38.2**	**+1.6**
BURAR	**Bucovina Array**	**80.72**	**344**	⇑P	**P**	**22 10 38.2**	**+1.2**
KHC	**Kasperske Hory**	**80.80**	**352**	*e*P	**P**	**22 10 38.1**	**+0.8**
KHC	**Kasperske Hory**	**80.80**	**352**	*e*P	**P**	**22 10 38.1**	**+0.8**
VYHS	**Vyhne**	**80.84**	**348**	*e*P	**P**	**22 10 38.7**	**+1.1**
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.2s						
VYHS	**Vyhne**	**80.84**	**348**	*e*P	**P**	**22 10 38.7**	**+1.1**
SMOL	**Smolenice**	**81.00**	**349**	*e*P	**P**	**22 10 37.9**	**-0.5**
WRA	**Warramunga Arr**	**81.07**	**224**	P	**P**	**22 10 38.0**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=30,slow=5.8,SNR=5.1						
	comp=Z,0.7nm,0.7s						
GERES	**GERESS Array B**	**81.07**	**352**	P	**P**	**22 10 38.9**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=20,slow=4.3,SNR=5.6						
	comp=Z,0.6nm,0.5s						
MODS	**Modra-Piesok**	**81.16**	**349**	*e*P	**P**	**22 10 40.8**	**+1.5**
MODS	**Modra-Piesok**	**81.16**	**349**	*e*P	**P**	**22 10 40.8**	**+1.5**
ARCR	**ARCALIA**	**81.38**	**344**	⇑P	**P**	**22 10 42.6**	**+2.2**
CONA	**Conrad Observa**	**81.76**	**350**	*i* P	**P**	**22 10 42.2**	**-0.3**
	comp=Z,2.7nm,0.8s						
DRGR		**81.94**	**345**	⇓P	**P**	**22 10 44.4**	**+0.9**
DRGR		**81.94**	**345**	⇓P	**P**	**22 10 44.4**	**+0.9**
MARR	**Marisel-Cluj**	**81.98**	**345**	⇓P	**P**	**22 10 44.7**	**+0.9**
VRI	**Vrincioaia**	**82.12**	**342**	⇑P	P	22 10 51.1	+6.7
VRI	**Vrincioaia**	**82.12**	**342**	⇑P	P	22 10 51.1	+6.7
PLOR	**Plostina**	**82.15**	**343**	⇑P	P	22 10 36.1	-8.4
PLOR	**Plostina**	**82.15**	**343**	⇑P	P	22 10 36.1	-8.4
COVR	**Voineasa-Covas**	**82.24**	**343**	⇓P	**P**	**22 10 47.0**	**+2.0**
BISRR	**Bisoca**	**82.42**	**342**	⇑P	P	22 10 51.4	+5.4
MLR	**Muntele Rosu**	**82.63**	**343**	⇓P	**P**	**22 10 49.4**	**+2.2**
MLR	**Muntele Rosu**	**82.63**	**343**	P	**P**	**22 10 46.6**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=212,slow=18,SNR=4.2						
	comp=Z,2.1nm,0.7s						
MLR	**Muntele Rosu**	**82.63**	**343**	⇓P	**P**	**22 10 49.4**	**+2.2**
WATA	**Walderalm**	**82.75**	**353**	*i* P	**P**	**22 10 47.7**	**-0.1**
	comp=Z,4.9nm,0.9s						
MOTA	**Moosalm**	**82.77**	**353**	*e*P	**P**	**22 10 48.0**	**+0.1**
	comp=Z,3.9nm,1.0s						
WTTA	**Wattenberg**	**82.81**	**353**	*i* P	**P**	**22 10 47.2**	**-0.9**
	comp=Z,3.5nm,1.1s						
VOIR		**82.85**	**344**	⇑P	**P**	**22 10 50.0**	**+1.7**
VOIR		**82.85**	**344**	⇑P	**P**	**22 10 50.0**	**+1.7**
KBA	**Koelnbreinsper**	**82.85**	**352**	*i* P	**P**	**22 10 47.9**	**-0.4**
	comp=Z,7.3nm,0.6s						
SQTA	**Sankt Quirin**	**82.89**	**353**	*e*P	**P**	**22 10 48.7**	**+0.2**
	comp=Z,6.0nm,1.7s						
ARR	**Arges**	**82.99**	**344**	⇑P	**P**	**22 10 50.5**	**+1.6**
HARR	**Harsova**	**83.00**	**341**	⇑P	**P**	**22 10 51.1**	**+2.1**
SURR	**Surduc**	**83.04**	**346**	⇑P	**P**	**22 10 50.5**	**+1.4**
SOKA	**Soboth**	**83.08**	**351**	*i* P	**P**	**22 10 50.2**	**+0.7**
	comp=Z,2.7nm,0.6s						
FETA	**Feichten**	**83.12**	**354**	*i* P	**P**	**22 10 50.2**	**+0.4**
	comp=Z,3.6nm,0.9s						
TIRR	**Tirgusor**	**83.12**	**341**	⇑P	**P**	**22 10 49.2**	**-0.3**
TIRR	**Tirgusor**	**83.12**	**341**	⇑P	**P**	**22 10 49.2**	**-0.3**
ABTA	**Abfaltersbach**	**83.25**	**352**	*i* P	**P**	**22 10 50.8**	**+0.5**
	comp=Z,3.4nm,1.0s						
BZS	**Buzias**	**83.26**	**346**	⇑P	**P**	**22 10 50.8**	**+0.5**
BZS	**Buzias**	**83.26**	**346**	⇑P	**P**	**22 10 50.8**	**+0.5**
GZR	**Gura Zlata**	**83.29**	**345**	⇓P	**P**	**22 10 51.8**	**+1.3**
GZR	**Gura Zlata**	**83.29**	**345**	⇓P	**P**	**22 10 51.8**	**+1.3**
FRGS	**Fruska Gora**	**83.98**	**347**	⇑P	**P**	**22 10 55.1**	**+1.1**
ASAR	**Alice Springs**	**84.51**	**223**	P	**P**	**22 10 55.5**	**-1.3**
	comp=Z,1.1nm,0.8s,baz=35,slow=4.7,SNR=6.9						
	comp=Z,1.1nm,0.8s						
H03N2	**Juan Fernandez**	**120.58**	**107**	T	T	00 29 22.2	
	baz=314,slow=77,SNR=11						
H03N1	**Juan Fernandez**	**120.59**	**107**	T	T	00 29 23.5	
	baz=314,slow=77,SNR=12						
H03N3	**Juan Fernandez**	**120.59**	**107**	T	T	00 29 22.8	
	baz=314,slow=77,SNR=9.1						
BOSA	**Boshof**	**152.08**	**311**	PKPbc	**PKiKP**	**22 18 19.7**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=14,slow=4.1,SNR=6.2						

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*NEIC **02** 22:09:08.1±1.6, 36°.37N±0°.03×110°.36W±0°.03, h0^{km}±2^{km}, ML2.9/118, Error ellipse: s-maj=5.7km s-min=4.3km az=343.0*

*IDC **02** 22:09:09.7±1.1, 36°.90N×109°.70W, h0^{km}, mbtmp2.6/4, ML2.8/4, Error ellipse: s-maj=18.9km s-min=9.9km az=59.0*

ISC 02 22:09:05.3±0.9**, 36°.49N**±0°.03×**110°.33W**±0°.03**, h0**^{km}**, n51, σ1^{s}.11**/39**, Eastern Arizona**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WUAZ	**Wupatki**	**1.29**	**222**		**Pg**	**22 09 29.8**	**-0.2**
WUAZ				Sg	**Sg**	**22 09 46.4**	**-0.3**
WUAZ				IAML		22 09 54.6	
	265nm,0.5s						
WUAZ				IAML		22 09 56.6	
	274nm,0.4s						
W18A	**Petrified Fore**	**1.45**	**160**	Pn	**Pn**	**22 09 32.8**	**-0.1**
W18A				Sg	**Sg**	**22 09 51.3**	**-0.5**
W18A				IAML		22 09 57.0	
	comp=E,160nm,0.6s						
W18A				IAML		22 09 59.1	
	comp=N,130nm,0.4s						
HMU	**Henry Mountain**	**1.49**	**347**		**Pb**	**22 09 35.4**	**+1.3**
HMU				IAML		22 10 05.4	
	comp=N,193nm,0.6s						
U15A	**North Rim**	**1.59**	**269**	Pn	**Pg**	**22 09 36.7**	**+1.0**
MVCO	**Mesa Verde**	**1.64**	**63**		**Pg**	**22 09 36.7**	**0.0**
MVCO				IAML		22 10 10.1	
	comp=N,169nm,0.6s						
PKCU	**Pink Cliffs**	**1.85**	**302**	Pn	**Pg**	**22 09 42.2**	**+1.3**
X18A	**Snowflake**	**1.98**	**171**	Pn	**Pb**	**22 09 41.8**	**-0.5**
X18A				IAML		22 10 16.2	
	comp=N,106nm,0.5s						
PV13	**Radium Mtn., P**	**2.06**	**35**		**Pg**	**22 09 44.3**	**-0.5**
KNB	**Kanab**	**2.07**	**286**		**Pg**	**22 09 44.9**	**-0.2**
KNB				IAML		22 10 15.2	
	comp=E,71nm,0.5s						
KNB				IAML		22 10 17.4	
	comp=N,65nm,0.6s						
MTPU	**Mount Pierson**	**2.15**	**317**		**Pg**	**22 09 46.8**	**+0.3**
MTPU				IAML		22 10 17.8	
	comp=E,91nm,0.7s						
MTPU				IAML		22 10 22.7	
	comp=N,60nm,0.5s						
PV10	**Paradox Valley**	**2.15**	**28**		**Pb**	**22 09 45.2**	**-0.1**
PV10				IAML		22 10 21.8	
	comp=E,127nm,0.6s						
PV10				IAML		22 10 22.2	
	comp=N,129nm,0.7s						
PV11	**David Mesa, Pa**	**2.15**	**32**		**Pg**	**22 09 46.1**	**-0.4**
PV23	**Carpenter Ridg**	**2.22**	**28**		**Pg**	**22 09 47.2**	**-0.8**
PV07	**Paradox Valley**	**2.36**	**34**		**Pb**	**22 09 48.8**	**-0.1**
PV07				IAML		22 10 29.1	
	comp=N,71nm,0.9s						
PV07				IAML		22 10 32.7	
	comp=E,68nm,0.8s						
PV15	**Paradox Valley**	**2.37**	**38**		**Pb**	**22 09 48.5**	**-0.4**
LCMT	**Little Creek M**	**2.40**	**284**		**Pb**	**22 09 48.9**	**-0.6**
LCMT				IAML		22 10 24.3	
	comp=N,56nm,0.5s						
LCMT				IAML		22 10 25.2	
	comp=E,75nm,0.5s						
MSU	**Marysvale**	**2.50**	**325**		**Pb**	**22 09 51.2**	**-0.1**
MVU	**Marysvale**	**2.51**	**324**		**Pb**	**22 09 51.7**	**+0.2**
Q16A	**Castle Valley**	**2.52**	**345**		**Pb**	**22 09 52.0**	**+0.5**
Q16A				IAML		22 10 37.2	
	comp=N,60nm,0.8s						
Q16A				IAML		22 10 41.2	
	comp=E,57nm,0.9s						
SRU	**San Rafael Swe**	**2.63**	**357**		**Pb**	**22 09 53.2**	**-0.1**
SRU				IAML		22 10 45.9	
	comp=N,51nm,0.7s						
TCRU	**Three Creeks R**	**2.71**	**322**	Pn	**Pb**	**22 09 55.3**	**+0.4**
TCRU				IAML		22 10 38.9	
	comp=E,35nm,1.3s						
TCRU				IAML		22 10 49.8	
	comp=N,34nm,1.1s						
TMUT	**Trail Mountain**	**2.89**	**346**		**Pb**	**22 09 57.4**	**-0.6**
TMUT				IAML		22 10 44.4	
	comp=N,70nm,0.6s						
P17A	**Butcher Ranch,**	**3.00**	**354**		**Pb**	**22 09 58.5**	**-1.3**
P17A				IAML		22 10 51.0	
	comp=N,33nm,1.1s						
P17A				IAML		22 10 55.9	
	comp=E,48nm,1.0s						
S22A	**4UR Ranch, Cre**	**3.06**	**65**		**Pb**	**22 09 59.1**	**-1.8**
P18A	**Preston Nutter**	**3.14**	**1**		**Pb**	**22 10 00.3**	**-1.8**
P18A				IAML		22 10 47.7	
	comp=N,36nm,0.7s						
P18A				IAML		22 10 58.2	
	comp=E,36nm,0.9s						
Y14A	**Wickenburg**	**3.36**	**222**		**Pg**	**22 10 08.5**	**-1.2**
Y14A				IAML		22 11 01.8	
	comp=N,26nm,0.7s						
Y14A				IAML		22 11 03.9	
	comp=E,25nm,0.9s						
ANMO	**Albuquerque**	**3.50**	**115**	Pn	**Pn**	**22 10 03.0**	**+1.8**
	comp=E,0.5nm,0.3s,baz=271,slow=6.6,SNR=5.8						
ANMO				Pg	**Pb**	**22 10 09.8**	**+1.5**
	comp=E,1.0nm,0.3s,baz=284,slow=4.2,SNR=11						
ANMO				Lg	Lg	22 10 52.9	
	comp=E,0.9nm,0.3s,baz=300,slow=20,SNR=1.8						
	comp=E,2.1nm,0.5s						
ANMO	**Albuquerque**	**3.50**	**115**		**Pn**	**22 10 02.8**	**+1.6**
LENM	**Lemitar**	**3.59**	**129**		**Pg**	**22 10 13.8**	**-0.3**
MPU	**Maple Canyon**	**3.67**	**344**	Pg	**Pg**	**22 10 16.3**	**+0.6**
NLU	**North Lily Min**	**3.73**	**339**		**Pg**	**22 10 15.4**	**-1.4**
NLU				IAML		22 11 11.1	
	comp=E,14nm,0.6s						
SMCO	**Snowmass**	**3.78**	**44**		**Pg**	**22 10 18.3**	**+0.6**
SMCO				IAML		22 11 15.9	
	comp=E,19nm,1.0s						
PRN	**Pahroc Range**	**3.90**	**285**	IAML		22 11 22.7	
	comp=E,29nm,0.8s						
PRN				IAML		22 11 31.4	
	comp=N,25nm,0.8s						
O20A	**White River Ci**	**4.00**	**24**	IAML		22 11 25.6	
	comp=N,26nm,1.0s						
BSUT	**Blindstream Ca**	**4.06**	**355**	IAML		22 11 17.3	
	comp=N,11nm,3.9s						
BSUT				IAML		22 11 29.9	
	comp=E,14nm,1.6s						
RDMU	**Red Mountain**	**4.12**	**8**	IAML		22 10 45.9	
	comp=E,14nm,4.5s						
RDMU				IAML		22 11 55.7	
	comp=N,10nm,3.8s						
TUC	**Tucson**	**4.18**	**185**	IAML		22 11 24.9	
	comp=N,11nm,0.9s						
CTU	**Camp Tracy**	**4.35**	**346**	IAML		22 11 36.2	
	comp=E,11nm,1.4s						
Q12A	**Willow Creek R**	**4.39**	**307**	IAML		22 11 31.3	
	comp=N,14nm,0.7s						
Q12A				IAML		22 12 20.9	
	comp=E,11nm,4.1s						
BLYC	**Blythe**	**4.39**	**233**	IAML		22 11 30.0	
	comp=N,13nm,0.7s						
BLYC				IAML		22 11 37.5	
	comp=E,11nm,0.8s						
121A	**Cookes Peak, D**	**4.47**	**151**	IAML		22 11 33.5	
	comp=N,20nm,0.7s						
TPNV	**Topopah Spring**	**4.78**	**277**	IAML		22 11 44.3	
	comp=N,11nm,0.8s						
T25A	**Trinidad**	**4.79**	**80**	IAML		22 11 06.5	
	comp=E,10nm,4.2s						
T25A				IAML		22 11 39.4	
	comp=N,14nm,3.8s						
Q24A	**Divide**	**4.79**	**57**	IAML		22 11 08.5	
	comp=E,9.1nm,4.7s						
Q24A				IAML		22 11 44.4	
	comp=N,11nm,0.2s						
BGU	**Big Grassy Mou**	**4.91**	**335**	IAML		22 11 12.6	
	comp=N,6.2nm,4.8s						
BGU				IAML		22 12 18.9	
	comp=E,5.4nm,4.9s						
GWY	**Greenwater Val**	**5.13**	**269**	IAML		22 12 17.9	
	comp=N,6.9nm,4.3s						
GWY				IAML		22 12 18.4	
	comp=E,8.0nm,1.2s						
HWUT	**Hardware Ranch**	**5.20**	**350**	IAML		22 11 13.9	
	comp=E,8.6nm,4.7s						
HWUT				IAML		22 12 00.2	
	comp=E,9.6nm,3.4s						
ELK	**Elko**	**5.73**	**319**	Pg	**Pg**	**22 10 54.1**	**-1.1**
	comp=E,0.2nm,0.3s,baz=138,slow=12,SNR=2.8						
PDAR	**Pinedale Array**	**6.30**	**5**	Pn	**Pn**	**22 10 41.4**	**+1.7**
	comp=E,0.1nm,0.3s,baz=172,slow=13,SNR=6.3						
PDAR				Pg	**Pb**	**22 10 53.0**	**-3.1**
	comp=E,0.3nm,0.3s,baz=167,slow=15,SNR=8.7						
PDAR				Lg	Lg	22 12 15.4	
	baz=167,slow=14,SNR=2.0						
	comp=E,0.6nm,0.6s						
NVAR	**Mina Array Bea**	**6.64**	**289**	Pn	Pb	22 10 56.1	-5.7
	comp=E,0.1nm,0.3s,baz=99,slow=23,SNR=1.9						
NVAR				Pg	**Pg**	**22 11 10.7**	**-1.8**
	comp=E,0.1nm,0.3s,baz=106,slow=19,SNR=2.2						
NVAR				Lg	Lg	22 12 39.1	
	comp=E,0.1nm,0.3s,baz=95,slow=17,SNR=1.4						
	comp=E,0.1nm,0.3s						
TXAR	**Lajitas Array**	**9.06**	**140**	Pn	Pn	22 11 24.9	+7.3
	baz=325,slow=15,SNR=1.4						
TXAR				Lg	Lg	22 13 54.5	
	baz=320,slow=31,SNR=1.9						
	comp=E,0.3nm,0.7s						

IDC 02 22:16:09.4±2.6**, 7°.03S**×**128°.89E, h0**^{km}**, mb3.3**/1**, mbtmp3.3**/3**, ML3.3**/2**, Error ellipse: s-maj=207.1km s-min=33.7km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.88**	**158**	Pn	Pn	22 19 27.9	+0.3
	0.1nm,0.3s,baz=337,slow=9.9,SNR=6.7						
WRA				Sn	Sn	22 21 46.3	-16
	0.3nm,0.3s,baz=337,slow=21,SNR=2.1						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**17.23**	**164**	P	Pn	22 20 11.3	-0.3
	0.1nm,0.3s,baz=347,slow=11,SNR=5.3						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**67.66**	**327**	P	P	22 27 08.4	0.0
	0.3nm,0.9s,baz=120,slow=7.8,SNR=2.0						
	0.3nm,0.9s						

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*IDC **02** 22:25:12.6±1.4, 71°.34N×3°.44W, h0^{km}, mb3.5/6, mbtmp3.6/11, ML2.7/4, MS3.4/9, Error ellipse: s-maj=27.6km s-min=21.0km az=61.0*

*BER **02** 22:25:14.3±2.2, 71°.36N×4°.02W, h10^{km}, ML2.2, ML3.4(NAO), Confirmed Earthquake*

*NAO **02** 22:25:15.3±4.0, 71°.44N×2°.54W, ML3.4*

*DNK **02** 22:25:18.2±2.3, 71°.80N×4°.80W, h0^{km}±61^{km}, ML1.7*

ISC 02 22:25:13.5±0.6**, 71°.48N**±0°.08×**3°.85W**±0°.06**, h10**^{km}**, n70, σ1^{s}.91**/62**, mb4.0**/12**, MS3.5**/8**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMIC	**Jan Mayen**	**1.58**	**254**	Pn	**Pn**	**22 25 40.5**	**-1.0**
	8.6nm,0.3s,baz=220,slow=6.3,SNR=1.9						
JMIC				Sn	**Sn**	**22 26 00.8**	**-1.3**
	6.4nm,0.3s,baz=161,slow=23,SNR=1.6						
JMIC	**Jan Mayen**	**1.58**	**254**	*e*	**Sn**	**22 26 00.6**	**-1.5**
DBG	**Daneborg**	**5.59**	**308**	*e*	**Pn**	**22 26 34.8**	**-1.6**
	baz=104,slow=16						
DBG				*i* P	**Pn**	**22 26 35.1**	**-1.4**
DBG				*i* S	Sn	22 27 33.0	-7.6
SCO	**Scoresbysund**	**5.99**	**269**	*i* P	**Pn**	**22 26 43.2**	**+1.1**
DAG	**Danmarks Havn**	**6.66**	**330**	*i* P	**Pn**	**22 26 49.5**	**-1.7**
DAG				*i* S	Sn	22 27 56.2	-11
DAG				IAML		22 28 05.0	
	comp=Z,2.4nm,0.3s						
DAG	**Danmarks Havn**	**6.66**	**330**	*e*P	**Pn**	**22 26 49.7**	**-1.5**
DAG				*e*		22 27 55.2	
LOF	**Lofoten**	**6.88**	**111**	*e*P	**Pn**	**22 26 52.6**	**-1.6**
LOF				*e*S	Sn	22 28 03.1	-9.3
LOF				IAML		22 28 09.2	
	comp=Z,3.4nm,0.7s						
STEI	**Steigen**	**7.51**	**109**	*e*P	**Pn**	**22 27 01.2**	**-1.7**
STEI				*e*S	Sn	22 28 17.6	-10
STEI				IAML		22 28 26.0	
	comp=Z,2.7nm,0.4s						
HSPB	**Hornsund (broa**	**7.60**	**35**	Pn	**Pn**	**22 27 03.3**	**-0.8**
HSPB	**Hornsund (broa**	**7.60**	**35**	*e*P	**Pn**	**22 27 03.5**	**-0.6**
TRO	**Tromso**	**7.80**	**93**	*e*P	**Pn**	**22 27 03.5**	**-3.3**
TRO				*e*S	Sn	22 28 23.6	-11
TRO				IAML		22 28 30.8	
	comp=Z,1.3nm,0.3s						
KONS	**Konsvik**	**7.86**	**121**	*e*P	**Pn**	**22 27 05.5**	**-2.1**
KONS				*e*S	Sn	22 28 24.5	-12
KONS				IAML		22 28 29.6	
	comp=Z,4.1nm,0.7s						
FAUS	**Fauske**	**7.87**	**112**	*e*P	**Pn**	**22 27 06.0**	**-1.7**
FAUS				*e*S	Sn	22 28 25.3	-11
FAUS				IAML		22 28 39.0	
	comp=Z,2.1nm,0.5s						
STOK	**Stokkvaagen**	**7.96**	**122**	*e*P	**Pn**	**22 27 07.0**	**-2.0**
STOK				*e*S	Sn	22 28 26.6	-12
BRBB	**Barentsburg B**	**8.11**	**27**	Pn	**Pn**	**22 27 12.4**	**+1.4**
BRBB	**Barentsburg B**	**8.11**	**27**	*e*P	**Pn**	**22 27 10.3**	**-0.7**
JETT	**Jettan, Norway**	**8.31**	**92**	Pn	**Pn**	**22 27 11.4**	**-2.4**
JETT				Sn	Sn	22 28 36.9	-11
JETT	**Jettan, Norway**	**8.31**	**92**	Pn	**Pn**	**22 27 11.4**	**-2.4**
KBS	**Kingsbay**	**8.45**	**21**	Pn	**Pn**	**22 27 16.3**	**+0.6**
KBS	**Kingsbay**	**8.45**	**21**	*i* P	**Pn**	**22 27 16.3**	**+0.6**
KBS	**Kingsbay**	**8.45**	**21**	*e*P	**Pn**	**22 27 16.1**	**+0.4**
KBS				IAML		22 28 48.3	
	comp=Z,1.6nm,0.8s						
SPA0	**Spitsbergen Ar**	**8.49**	**29**	Pn	**Pn**	**22 27 16.8**	**+0.5**
	baz=224,slow=14						
SPA0	**Spitsbergen Ar**	**8.49**	**29**	Pn	**Pn**	**22 27 16.8**	**+0.5**
	baz=224,slow=14						
SPITS	**Spitsbergen Ar**	**8.49**	**29**	Pn	**Pn**	**22 27 16.3**	**0.0**
	comp=Z,2.3nm,0.3s,baz=211,slow=14,SNR=109						
KIF	**Kilpisjarvi**	**8.68**	**95**	Pn	**Pn**	**22 27 17.1**	**-1.8**
KIF	**Kilpisjarvi**	**8.68**	**95**	*e*P	**Pn**	**22 27 16.4**	**-2.5**
KIF				*e*S	Sn	22 28 45.2	-11
HAMF	**Hammerfest**	**8.95**	**82**	Pn	Pn	22 27 19.2	-3.3
NSS	**Namsos**	**9.13**	**132**	*e*P	**Pn**	**22 27 23.4**	**-1.6**
NSS				*e*S	Sn	22 28 50.9	-17
NSS				IAML		22 29 05.6	
	comp=Z,3.0nm,0.6s						
HOPEN	**Hopen**	**9.32**	**44**	Pn	**Pn**	**22 27 26.9**	**-0.7**
HOPEN	**Hopen**	**9.32**	**44**	*e*P	**Pn**	**22 27 27.7**	**+0.1**
KTK1	**Kautokeino**	**9.45**	**92**	*e*P	**Pn**	**22 27 27.7**	**-1.7**
HEF	**Hetta**	**9.88**	**95**	*e*P	**Pn**	**22 27 33.1**	**-2.2**
HEF				*e*S	Sn	22 29 14.4	-12
ARA0	**ARCESS Array S**	**9.94**	**87**	Pn	**Pn**	**22 27 34.1**	**-2.1**
	baz=288,slow=12						
ARA0	**ARCESS Array S**	**9.94**	**87**	Pn	**Pn**	**22 27 34.1**	**-2.1**
	baz=288,slow=12						
ARCES	**ARCESS Array B**	**9.94**	**87**	Pn	**Pn**	**22 27 33.9**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=287,slow=12,SNR=38						
	comp=Z,0.7nm,0.3s						
AKN	**Aaknes**	**10.25**	**150**	*e*P	**Pn**	**22 27 39.6**	**-0.8**
AKN				*e*		22 29 24.6	
AKN				IAML		22 29 32.2	
	comp=Z,2.9nm,0.2s						
KEV	**Kevo**	**10.33**	**85**	Pn	**Pn**	**22 27 39.2**	**-2.2**
KEV	**Kevo**	**10.33**	**85**	*e*P	Pn	22 27 38.2	-3.3
NOR	**Nord**	**10.55**	**350**	*i* P	**Pn**	**22 27 43.7**	**-0.7**
NOR	**Nord**	**10.55**	**350**	*e*P	Pn	22 27 41.5	-2.9
NB2	**NORSAR Subarra**	**12.06**	**143**	Pn	**Pn**	**22 28 04.2**	**-1.0**
NB2	**NORSAR Subarra**	**12.06**	**143**	Pn	**Pn**	**22 28 04.2**	**-1.0**
NOA	**NORSAR Array B**	**12.06**	**143**	Pn	**Pn**	**22 28 02.7**	**-2.5**
	baz=336,slow=13,SNR=4.3						
NOA				LR	LR	22 32 30.0	
	comp=Z,150nm,21.6s,baz=335,slow=37						
	comp=Z,0.4nm,0.6s						
NRA0	**NORESS Array S**	**12.40**	**143**	Pn	**Pn**	**22 28 08.9**	**-0.9**
	slow=14						
NRA0	**NORESS Array S**	**12.40**	**143**	Pn	**Pn**	**22 28 08.9**	**-0.9**
	slow=14						
HFS	**Hagfors**	**13.39**	**139**	Pn	**Pn**	**22 28 22.6**	**-0.6**
	baz=335,slow=10						
HFS	**Hagfors**	**13.39**	**139**	Pn	**Pn**	**22 28 21.7**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=345,slow=11,SNR=9.7						
	comp=Z,5.8nm,0.7s						
HFS	**Hagfors**	**13.39**	**139**	Pn	**Pn**	**22 28 22.6**	**-0.6**
	baz=335,slow=10						
FIA0	**FINESS Array S**	**15.40**	**116**	P	**Pn**	**22 28 49.1**	**-1.4**
	baz=328,slow=12						
FINES	**FINESS Array B**	**15.40**	**116**	Pn	**Pn**	**22 28 48.3**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=330,slow=11,SNR=5.0						
	comp=Z,2.2nm,0.8s						
KLMR	**Klimovskoe**	**19.95**	**100**	*e*	**P**	**22 29 45.7**	**+0.5**
KLMR				AMP		22 29 49.5	
	comp=Z,27nm,1.6s						
BRG	**Berggiesshubel**	**22.20**	**149**	*e*P	P	22 30 17.3	+7.7
BRG				Amp		22 30 17.6	
	comp=Z,4.7nm,0.8s						
GERES	**GERESS Array B**	**24.13**	**151**	P	**P**	**22 30 28.2**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=260,slow=41,SNR=2.8						
GERES				LR	LR	22 39 25.8	
	comp=Z,96nm,21.7s,baz=248,slow=36						
	comp=Z,0.6nm,0.7s						
VRAC	**Vranov**	**24.16**	**146**	LR	LR	22 39 37.7	
	comp=Z,92nm,18.9s,baz=284,slow=36						
MOTA	**Moosalm**	**25.22**	**156**	*e*P	**P**	**22 30 42.5**	**+3.3**
	comp=Z,4.2nm,1.0s						
WATA	**Walderalm**	**25.30**	**155**	*e*P	**P**	**22 30 44.1**	**+4.2**
	comp=Z,5.6nm,1.1s						
SQTA	**Sankt Quirin**	**25.36**	**156**	*e*P	**P**	**22 30 44.6**	**+4.2**
	comp=Z,12nm,1.5s						
CONA	**Conrad Observa**	**25.37**	**148**	*e*P	**P**	**22 30 43.8**	**+3.3**
	comp=Z,3.0nm,0.7s						
WTTA	**Wattenberg**	**25.37**	**155**	*e*P	**P**	**22 30 44.9**	**+4.3**
	comp=Z,10nm,1.1s						
AKASG	**Malin Array Be**	**25.64**	**127**	P	**P**	**22 30 42.1**	**-0.7**
	comp=Z,2.6nm,0.8s,baz=336,slow=9.5,SNR=7.9						
	comp=Z,2.6nm,0.8s						
KBA	**Koelnbreinsper**	**25.80**	**152**	*e*P	**P**	**22 30 48.2**	**+3.7**
	comp=Z,5.9nm,1.6s						
YKA	**Yellowknife Ar**	**38.12**	**315**	P	**P**	**22 32 33.8**	**+1.8**
	comp=Z,0.1nm,0.2s,baz=30,slow=8.8,SNR=2.8						
YKA				LR	LR	22 48 00.7	
	comp=Z,78nm,18.2s,baz=337,slow=36						
	comp=Z,0.1nm,0.2s						
ILAR	**Eielson Array**	**41.69**	**337**	LR	LR	22 51 50.7	
	comp=Z,31nm,20.1s,baz=45,slow=38						
MKAR	**Makanchi Array**	**45.31**	**75**	P	**P**	**22 33 31.7**	**+0.7**
	comp=Z,0.3nm,0.8s,baz=318,slow=7.8,SNR=2.2						
	comp=Z,0.3nm,0.8s						
GEYT	**Alibeck**	**45.67**	**103**	P	**P**	**22 33 33.1**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=310,slow=11,SNR=1.7						
	comp=Z,0.5nm,0.4s						
NEW	**Newport**	**51.63**	**308**	LR	LR	22 55 50.8	
	comp=Z,36nm,18.3s,baz=130,slow=36						
PDAR	**Pinedale Array**	**54.73**	**300**	LR	LR	22 58 08.2	
	comp=Z,38nm,18.4s,baz=52,slow=36						
ELK	**Elko**	**58.16**	**304**	LR	LR	22 59 23.2	
	comp=Z,38nm,20.5s,baz=80,slow=35						
TORD	**Torodi Ar. Bea**	**58.40**	**174**	P	**P**	**22 35 08.1**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=356,slow=7.4,SNR=2.1						
	comp=Z,0.2nm,0.6s						
YBH	**Yreka Blue Hor**	**59.14**	**310**	LR	LR	23 00 53.5	
	comp=Z,36nm,18.4s,baz=76,slow=36						

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*NSSP **02** 22:25:11.1, 38°.33N×44°.23E, h7^{km}, Ms2.9*

*DDA **02** 22:25:14.8±0.0, 38°.50N×44°.15E, h7^{km}±1^{km}, ML2.7*

*TEH **02** 22:25:15.4, 38°.50N×44°.12E, h5^{km}, ML2.8*

*ISK **02** 22:25:15.6, 38°.46N×44°.16E, h6^{km}, ML3.0/15*

ISC 02 22:25:16.4±1.4**, 38°.49N**±0°.03×**44°.13E**±0°.03**, h1**^{km}±14^{km}**, n43, σ1^{s}.10**/53**, 4C-6D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.20**	**329**	P	**Pg**	**22 25 19.2**	**-1.1**
OZAP				*i* AML	AML	22 25 25.0	
	comp=N,1µm,0.3s						
OZAP				*i* AML	AML	22 25 28.0	
	comp=E,2µm,0.7s						
VANB	**Van**	**0.59**	**281**	Pg	**Pg**	**22 25 27.1**	**-0.5**
VANB				Sg	**Sb**	**22 25 36.7**	**-1.7**
ERCV	**ERCIS-VAN**	**0.81**	**311**	Pg	**Pb**	**22 25 32.7**	**-0.7**
AKDM	**Akdamar-Van**	**0.92**	**260**	Pg	**Pg**	**22 25 33.2**	**-0.7**
AKDM				Sg	**Sb**	**22 25 47.7**	**-0.2**
MAKU	**Maku**	**0.97**	**27**	Pg	**Pg**	**22 25 33.7**	**-1.2**
MAKU				Sg	**Sg**	**22 25 47.1**	**-0.4**
ADCV	**BITLIS_Adilcev**	**1.14**	**287**	P	**Pg**	**22 25 36.9**	**-1.4**
ADCV				*i* AML	AML	22 25 57.0	
	comp=E,98nm,0.8s						
ADCV				*i* AML	AML	22 25 58.0	
	comp=N,130nm,0.4s						
ISHB	**Shabestar**	**1.19**	**100**	Pg	**Pg**	**22 25 37.7**	**-1.4**
IMRD	**Marand**	**1.25**	**79**	Pg	**Pn**	**22 25 39.3**	**-2.0**
CUKT	**Cukurca**	**1.31**	**198**	Pn	**Pn**	**22 25 41.0**	**-0.9**
CUKT	**Cukurca**	**1.31**	**198**	P	**Pn**	**22 25 40.3**	**-1.5**
CUKT				*i* AML	AML	22 26 06.0	
	comp=E,255nm,0.5s						
CUKT				*i* AML	AML	22 26 07.0	
	comp=N,220nm,1.0s						
PERV	**Siirt/Pervari-**	**1.36**	**247**	P	**Pg**	**22 25 44.2**	**+1.8**
IGDI	**IGDIR**	**1.38**	**358**	P	**Pn**	**22 25 40.6**	**-2.2**
IGDI				*i* AML	AML	22 26 08.0	
	comp=E,73nm,0.6s						

MLAZ	**Malazgirt-MUS**	1.39	298	Pn	Pn	22 25 42.3	-0.8
AGRB	**Hanur-Agry**	1.40	321	Pn	Pn	22 25 42.1	-1.1
TASB	**TASBURUN-IGDIR**	1.50	3	Pn	Pn	22 25 44.1	-0.3
NRKZ	**NAREK**	1.56	15	⇓*i*P	Pn	22 25 44.6	-0.8
NRKZ				⇓*i*S	Sg	22 26 08.1	+1.4
BLIS	**Bitlis-Merkez**	1.58	268	P	Pn	22 25 45.4	-0.3
BLIS				*i* AML	AML	22 26 21.0	
	comp=E,64nm,0.6s						
ITBZ	**Tabriz**	1.61	99	Pg	Pn	22 25 45.0	-1.1
VNNZ	**Vanand**	1.63	352	⇓*i*P	Pb	22 25 46.9	-0.4
VNNZ				⇓*i*S	Sg	22 26 11.9	+3.2
GURO	**Guroymak-BITLI**	1.64	273	Pn	Pn	22 25 46.3	-0.2
METS	**Metsamor**	1.66	359	⇑*i*P	Pn	22 25 46.6	0.0
METS				⇑*i*S	Sg	22 26 11.7	+2.0
METS	**Metsamor**	1.66	359	P	Pn	22 25 46.8	+0.1
IAZR	**Azarshahr**	1.67	118	Pg	Pn	22 25 46.9	-0.1
GNI	**Garni**	1.73	16	⇑*i*P	Pn	22 25 47.8	+0.2
GNI				⇑*i*S	Sg	22 26 13.6	+1.8
GNI	**Garni**	1.73	16	Pn	Pn	22 25 47.6	-0.1
KAPZ	**Kaputan**	1.88	13	⇓*i*P	Pn	22 25 50.1	+0.3
KAPZ				⇓*i*S	Sg	22 26 17.6	+0.7
TVRZ	**Varzaqan**	1.99	89	Pn	Pn	22 25 52.6	+1.3
MAHB	**Mahabad**	2.13	143	Pn	Pn	22 25 53.4	+0.3
VRTB	**Varto-Mus**	2.19	289	Pn	Pn	22 25 54.1	0.0
EAK	**Akyaka**	2.23	350	P	Pb	22 25 57.0	-0.6
KARS	**Kars**	2.28	340	Pn	Pn	22 25 55.2	-0.1
IHRS	**Heris**	2.30	93	Pn	Pn	22 25 56.6	+1.1
KOPR	**Koprukoy-ERZUR**	2.32	311	Pn	Pn	22 25 56.1	+0.3
SVAN	**Silvan-Diyarba**	2.33	263	Pn	Pn	22 25 55.8	0.0
SENK	**Senkaya-Erzuru**	2.48	327	Pn	Pn	22 25 58.7	+0.6
DMNI	**Dmanisi**	2.84	1	P	Pb	22 26 08.0	+0.1
ISRB	**Sarab**	2.87	102	Pn	Pn	22 26 05.0	+1.6
YEDI	**Yedisu-Bingol**	2.95	290	Pn	Pn	22 26 05.2	+0.7
TRLG	**Trialeti**	3.05	360	P	Pb	22 26 10.9	-0.6
TRLG				S	Sg	22 26 54.2	0.0
MAZI	**Mazidag**	3.08	252	Pn	Pn	22 26 06.4	+0.1
DGRG	**David-gareji**	3.11	18	P	Pb	22 26 12.7	+0.2
DGRG				S	Sb	22 26 52.5	+1.6
BRNG	**Burnasheti**	3.14	356	P	Pb	22 26 13.1	0.0
DDFL	**Dedoflistskaro**	3.33	27	P	Pb	22 26 16.0	-0.1

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*JMA **02** 22:30:24.4±0.1, 24°N±2°×122°.5E±0°.3, h50^{km}±1^{km}, MV2.1/11, NW OFF ISHIGAKIJIMA IS*
*TAP **02** 22:30:24.1, 24°.09N×122°.53E, h46^{km}, ML2.8, C*
ISC 02 22:30:24.9±1.2, **24°.11N**±0°.03×**122°.52E**±0°.02, **h42**^{km}±9^{km}, **n63**, σ**0^s.72**/124, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	**EOS4**	0.18	274	*i* P	Pn	22 30 31.9	+0.1
	baz=277						
EOS4				*i* S	Sn	22 30 37.5	+0.9
	baz=277						
EOS2	**EOS2**	0.40	320	P	Pn	22 30 34.5	+0.1
	baz=319						
EOS2				S	Sn	22 30 41.9	+0.9
	baz=319						
JYNG	**Yonagunijimaku**	0.52	49	P	Pn	22 30 35.2	-0.8
JYNG				*e*S	Sn	22 30 43.0	-0.8
YOJ	**Yonaguni jima**	0.57	52	P	Pn	22 30 35.9	-0.7
YOJ				S	Sn	22 30 44.2	-0.8
YOJ	**Yonaguni jima**	0.57	52	*i* P	Pn	22 30 36.1	-0.6
	baz=49						
YOJ				*i* S	Sn	22 30 44.8	-0.3
	baz=49						
EWUT	**Wuta**	0.75	297	P	Pn	22 30 38.4	-0.7
	baz=296						
EWUT				S	Sn	22 30 49.1	-0.3
	baz=296						
ENA	**Nanau**	0.78	294	P	Pn	22 30 38.7	-0.7
	baz=294						
ENA				*e*S	Sn	22 30 49.0	-0.9
	baz=294						
TWC	**Suao**	0.79	309	P	Pn	22 30 38.8	-0.8
	baz=309						
TWC				*e*S	Sn	22 30 49.2	-1.0
	baz=309						
ETL	**Fush Village**	0.82	274	P	Pn	22 30 40.0	0.0
	baz=274						
ETL				S	Sn	22 30 50.7	-0.3
	baz=274						
TWD	**Chiawan**	0.84	268	*i* P	Pn	22 30 39.8	-0.5
	baz=269						
TWD				*e*S	Sn	22 30 50.6	-0.9
	baz=269						
NACB	**Ninganchiao**	0.84	275	P	Pn	22 30 39.8	-0.5
	baz=275						
NACB				S	Sn	22 30 51.1	-0.5
	baz=275						
NDS	**Dongshan**	0.90	306	P	Pn	22 30 41.2	+0.1
	baz=305						
NDS				S	Sn	22 30 53.3	+0.3
	baz=305						
ETM	**Tongmen**	0.95	262	P	Pn	22 30 41.5	-0.2
	baz=262						
ETM				*i* S	Sn	22 30 54.1	0.0
	baz=262						
ETLH	**Xiulin Townshi**	0.95	276	P	Pn	22 30 41.3	-0.6
	baz=276						
ETLH				*e*S	Sn	22 30 53.4	-0.9
	baz=276						
TWE	**Neicheng**	0.99	308	P	Pn	22 30 42.1	-0.1
	baz=308						
TWE				S	Sn	22 30 54.7	-0.3
	baz=308						
LATG	**Datong**	1.00	295	P	Pn	22 30 42.4	-0.2
	baz=295						
LATG				S	Sn	22 30 55.9	+0.4
	baz=295						
ENTT	**Nioudou**	1.02	302	P	Pn	22 30 42.7	-0.1
	baz=301						
ENTT				*i* S	Sn	22 30 55.9	+0.1
	baz=301						
TWB1	**Santiao Chiao**	1.02	332	P	Pn	22 30 42.2	-0.5
	baz=331						
TWB1				*e*S	Sn	22 30 55.1	-0.7
	baz=331						
TIPB	**Shuangxi**	1.07	324	P	Pn	22 30 42.9	-0.5
	baz=323						
TIPB				*e*S	Sn	22 30 56.1	-1.0
	baz=323						
FUSB	**Fushanzhiwuyua**	1.07	308	P	Pn	22 30 43.6	+0.2
	baz=307						
FUSB				S	Sn	22 30 57.0	-0.1
	baz=307						
NNSB	**Datong**	1.08	287	*i* P	Pn	22 30 43.3	-0.4
	baz=287						
NNSB				S	Sn	22 30 57.2	-0.4
	baz=287						
NNSH	**Datong**	1.08	287	P	Pn	22 30 43.5	-0.3
	baz=287						
NNSH				S	Sn	22 30 57.3	-0.3
	baz=287						
EGFH	**Guangfu**	1.09	247	P	Pn	22 30 43.6	-0.1
	baz=247						
EGFH				*i* S	Sn	22 30 57.7	+0.1
	baz=247						
NNS	**Nan Shan**	1.09	288	*i* P	Pn	22 30 43.5	-0.4
	baz=288						
NNS				S	Sn	22 30 57.9	-0.1
	baz=288						
IRIF	**Iriomote-Funau**	1.13	78	P	Pn	22 30 44.5	+0.2
IRIF				S	Sn	22 30 58.9	+0.4
NWLT	**Wulai**	1.14	306	P	Pn	22 30 44.5	+0.1
	baz=305						
NWLT				*i* S	Sn	22 30 59.0	+0.2
	baz=305						
SXI1	**Grass Mountain**	1.14	329	P	Pn	22 30 43.7	-0.8
	baz=329						
SXI1				*e*S	Sn	22 30 57.8	-1.3
	baz=329						
WHF	**Hehuan Shan**	1.14	272	P	Pn	22 30 44.2	-0.6
	baz=272						
WHF				S	Sn	22 30 59.2	-0.3
	baz=272						
WFSB	**Wu-fen Shan**	1.17	325	*i* P	Pn	22 30 44.7	-0.1
	baz=324						
WFSB				*i* S	Sn	22 30 59.9	+0.3
	baz=324						
HGSD	**Ruisui**	1.17	239	P	Pn	22 30 44.1	-0.8
	baz=239						
HGSD				S	Sn	22 30 58.9	-0.8
	baz=239						
HATJ	**Hateruma jima**	1.18	92	P	Pn	22 30 45.6	+0.7
HATJ				S	Sn	22 31 00.6	+0.9
YHNB	**Yeheng**	1.18	298	P	Pn	22 30 45.1	+0.1
	baz=298						
YHNB				*i* S	Sn	22 31 00.0	0.0
	baz=298						
NSK	**Sanguang**	1.20	298	P	Pn	22 30 45.2	0.0
	baz=298						
NSK				*i* S	Sn	22 31 00.3	-0.1
	baz=298						
CHGB	**Renai**	1.23	268	P	Pn	22 30 45.7	-0.1
	baz=268						
CHGB				*i* S	Sn	22 31 01.2	-0.1
	baz=268						
OWD	**Renai**	1.24	263	P	Pn	22 30 45.8	-0.1
	baz=263						
OWD				*e*S	Sn	22 31 00.5	-1.0
	baz=263						
EHY	**Hungye**	1.25	242	P	Pn	22 30 45.4	-0.4
	baz=241						
EHY				S	Sn	22 31 01.2	-0.3
	baz=241						
ECBN	**Changbin**	1.25	231	P	Pn	22 30 46.0	0.0
	baz=231						
ECBN				S	Sn	22 31 01.1	-0.6
	baz=231						
WUSB	**Renai**	1.28	265	P	Pn	22 30 46.6	+0.1
	baz=265						
WUSB				*i* S	Sn	22 31 02.4	-0.2
	baz=265						
VWDT	**VWDT**	1.31	255	*e*P	Pn	22 30 47.2	+0.6
	baz=255						
VWDT				S	Sn	22 31 03.4	+0.5
	baz=255						
YULB	**Yu-li**	1.32	238	P	Pn	22 30 46.4	-0.6
	baz=238						
YULB				S	Sn	22 31 03.1	-0.4
	baz=238						
EYUL	**Yuli**	1.33	236	P	Pn	22 30 47.1	0.0
	baz=236						
EYUL				S	Sn	22 31 03.8	+0.2
	baz=236						
TWF1	**Yuli**	1.35	236	P	Pn	22 30 47.2	0.0
	baz=236						
TWF1				S	Sn	22 31 04.2	+0.3
	baz=236						
JKRS	**Kuro-shima**	1.37	84	P	Pn	22 30 48.5	+1.0
JKRS				S	Sn	22 31 05.4	+0.9
NFF	**Wufeng Townshi**	1.38	293	*e*P	Pn	22 30 48.6	+0.9
	baz=292						
NFF				S	Sn	22 31 04.9	+0.1
	baz=292						
FULB	**Fuli**	1.44	231	P	Pn	22 30 48.2	-0.4
	baz=231						
FULB				S	Sn	22 31 06.0	-0.3
	baz=231						
SSLB	**Suanglung**	1.47	258	P	Pn	22 30 49.2	+0.3
	baz=258						
SSLB				S	Sn	22 31 06.6	-0.3
	baz=258						
WCS	**Beigang Elemen**	1.47	268	*e*P	Pn	22 30 51.6	+2.7
	baz=268						
WCS				*e*S	Sn	22 31 08.6	+1.7
	baz=268						
LIOB	**Emei**	1.47	292	P	Pn	22 30 49.9	+0.9
	baz=291						
LIOB				*e*S	Sn	22 31 08.5	+1.5
	baz=291						
NSTT	**Nanjuang**	1.48	291	P	Pn	22 30 49.8	+0.8
	baz=291						
NSTT				*e*S	Sn	22 31 07.8	+0.7
	baz=291						
SMLT	**Sun Moon Lake**	1.50	262	*e*P	Pn	22 30 51.2	+1.8
	baz=261						
SMLT				*e*S	Sn	22 31 09.3	+1.5
	baz=261						
JIJ	**Ishigaki jima**	1.51	80	P	Pn	22 30 49.2	-0.2
JIJ				S	Sn	22 31 07.2	-0.6
TYC	**Yuchr**	1.53	263	*e*P	Pn	22 30 52.2	+2.4
	baz=262						
EHD	**Haiduan**	1.54	232	P	Pn	22 30 49.5	-0.3
	baz=232						
EHD				S	Sn	22 31 08.3	-0.3
	baz=232						
EDH	**Donghe**	1.59	225	P	Pn	22 30 50.0	-0.6
	baz=225						
EDH				*e*S	Sn	22 31 08.3	-1.5
	baz=225						
ELDTW	**Lidau**	1.65	237	P	Pn	22 30 51.4	-0.1
	baz=236						
ELDTW				S	Sn	22 31 11.3	-0.3
	baz=236						
ALS	**Alishan**	1.68	250	*e*P	Pn	22 30 53.0	+1.0
	baz=249						
ALS				*e*S	Sn	22 31 13.4	+1.0
	baz=249						
JISG	**Ishigakijimahi**	1.70	73	*e*P	Pn	22 30 52.1	0.0
JISG				S	Sn	22 31 12.7	0.0
LDUT	**Ludao**	1.72	214	P	Pn	22 30 51.3	-1.1
	baz=214						
LDUT				*e*S	Sn	22 31 11.5	-1.7
	baz=214						
LONT	**Longtian**	1.75	227	*i* P	Pn	22 30 52.5	-0.2
	baz=227						
LONT				S	Sn	22 31 13.3	-0.5
	baz=227						
TWGBT	**Beinan**	1.84	226	P	Pn	22 30 54.3	+0.2
	baz=226						
TWGBT				S	Sn	22 31 15.9	-0.2
	baz=226						
STYH	**Taoyuan**	1.85	240	*e*P	Pn	22 30 54.7	+0.6
	baz=240						
STYH				*e*S	Sn	22 31 17.2	+0.9
	baz=240						
JTJ	**Tarama**	2.06	75	P	Pn	22 30 57.6	+0.6
JTJ				S	Sn	22 31 21.9	+0.4
LYUB	**Lan-yu**	2.27	202	P	Pn	22 30 59.3	-0.6
	baz=202						

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*NEIC **02** 22:32:16.2±2.7, 6°.61S±0°.06×130°.7E±0°.1, h98^{km}±9^{km}, mb4.1/8, Error ellipse: s-maj=17.4km s-min=8.2km az=88.0*
*IDC **02** 22:32:20.6±7.6, 7°.02S×130°.74E, h149^{km}±74^{km}, mb3.6/4, mbtmp3.9/6, MS3.3/2, Error ellipse: s-maj=95.1km s-min=24.8km az=61.0*
ISC 02 22:32:16.3±0.6, **6°.62S**±0°.06×**130°.68E**±0°.10, **h100**^{km}, **n33**, σ**1^s.69**/33, **mb4.0**/6, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	1.48	155	Pn	Pn	22 32 43.4	+1.0
SAUI				Sn	Sn	22 33 03.3	+1.2
FAKI	**Fak Fak**	4.00	23	Pn	Pn	22 33 15.3	-0.3
FAKI				Sn	Sn	22 33 58.8	-2.7
MTN	**Manton Dam**	6.20	176	Pn	Pn	22 33 45.2	-0.2
SOEI	**Soe**	7.07	243	Pn	Pn	22 33 57.2	-0.1
KNRA	**Kununurra**	9.19	192		Pn	22 34 24.5	-1.6
FITZ	**Fitzroy Crossi**	12.42	203		Pn	22 35 06.7	-2.9
WB0	**Warramunga Arr**	13.55	165		Pn	22 35 21.8	-2.8
WRAB	**Tennant Creek**	13.70	165		Pn	22 35 25.4	-1.1
WRA	**Warramunga Arr**	13.71	165	P	Pn	22 35 22.9	-3.6
	3.0nm,0.5s,baz=340,slow=14,SNR=27						
WRA				S	Sn	22 37 47.6	-10
	11nm,0.6s,baz=340,slow=20,SNR=13						
WRA	**Warramunga Arr**	13.71	165	Pn	Pn	22 35 23.7	-2.9
WB2	**Warramunga Arr**	13.71	165		Pn	22 35 24.5	-2.1
WR0	**Warramunga Arr**	13.78	165		Pn	22 35 26.4	-1.1
COEN	**Coen**	14.29	122		Pn	22 35 33.8	-0.3
AS31	**Alice Springs**	17.23	170	P	P	22 36 10.2	-0.6
AS31				IAmb	IAmb	22 36 26.6	
	comp=Z,3.5nm,0.3s						
ASAR	**Alice Springs**	17.23	170	P	P	22 36 08.8	-2.1
	comp=Z,0.7nm,0.5s,baz=356,slow=14,SNR=16						
ASAR				S	Sn	22 39 09.7	-13
	comp=Z,4.3nm,0.7s,baz=349,slow=26,SNR=7.5						
ASAR	**Alice Springs**	17.23	170	P	P	22 36 10.5	-0.3
MBWA	**Marble Bar**	17.92	215	P	P	22 36 17.2	-1.2
MBWA				IAmb	IAmb	22 36 20.9	
	comp=Z,8.1nm,0.8s						
PSA00	**Pilbara Seismi**	18.18	214	P	P	22 36 19.8	-1.5
KRVT	**Keravat (AS076**	21.37	85	LR	LR	22 47 15.1	
	comp=Z,46nm,19.9s,baz=312,slow=42						
MORW	**Morawa**	26.26	210	P	P	22 37 41.3	-1.0
MORW				IAmb	IAmb	22 37 42.2	
	comp=Z,18nm,1.4s						
BBOO	**Buckleboo**	26.53	170	P	P	22 37 44.3	-0.4
SONM	**Songino Array**	58.30	341	P	P	22 42 02.8	+2.0
	comp=Z,0.6nm,0.5s,baz=168,slow=8.4,SNR=5.3						
	comp=Z,0.6nm,0.5s						
MK31	**Makanchi Array**	68.28	326	P	P	22 43 07.6	+1.0
MKAR	**Makanchi Array**	68.28	326	P	P	22 43 07.6	+1.0
	comp=Z,0.8nm,0.3s,baz=119,slow=7.3,SNR=34						
	comp=Z,0.8nm,0.3s						
MKAR	**Makanchi Array**	68.28	326	P	P	22 43 07.4	+0.8
MAKZ	**Makanchi**	68.47	326	P	P	22 43 07.5	-0.3
MAKZ				IAmb	IAmb	22 43 10.3	
	comp=Z,2.3nm,0.8s						
SEY	**Seymchan**	71.32	10	LR	LR	23 14 50.8	
	comp=Z,43nm,20.4s,baz=27,slow=36						
ZALV	**Zalesovo Beam**	71.55	333	P	P	22 43 27.5	+1.1
	comp=Z,0.8nm,0.5s,baz=98,slow=4.5,SNR=5.2						
	comp=Z,0.8nm,0.5s						
ZALV	**Zalesovo Beam**	71.55	333	P	P	22 43 26.6	+0.2
ABKAR	**Akbulak array**	82.64	321	P	P	22 44 29.3	+0.7
QSPA	**South Pole Qui**	83.35	180	P	P	22 44 34.1	+1.9
ILAR	**Eielson Array**	92.72	25	P	P	22 45 17.1	+0.1
	comp=Z,0.7nm,1.1s,baz=279,slow=4.8,SNR=4.6						
	comp=Z,0.7nm,1.1s						
LPAZ	**La Paz**	150.59	141	PKPab	PKiKP	22 52 01.7	+2.6
	comp=Z,1.7nm,0.4s,baz=317,slow=2.5,SNR=11						

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*DDA **02** 23:10:53.0±0.0, 37°.61N×38°.48E, h10^{km}±1^{km}, MW3.7*
*ISK **02** 23:10:54.6, 37°.55N×38°.48E, h24^{km}, ML3.7/18*
*GII **02** 23:11:10.3±0.0, 37°.61N×38°.48E, h12^{km}*
ISC 02 23:10:52.9±1.0, **37°.59N**±0°.02×**38°.50E**±0°.02, **h9**^{km}±8^{km}, **n55**, σ**1^s.24**/94, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	**Bozova**	0.20	233	P	Pg	23 10 57.8	+0.7
ATAB				S	Sg	23 11 01.0	+1.1
ATAB				*i* AML	AML	23 11 01.0	
	comp=N,3µm,0.2s						
ATAB				*i* AML	AML	23 11 02.0	
	comp=E,3µm,0.3s						
URFA	**Urfa**	0.30	120	Pg	Pn	23 11 02.4	-1.2
URFA				Sg	Sb	23 11 07.3	+1.7
HANM	**anlurfa/Hi**	0.30	92	SPECP		23 10 59.0	
HANM				P	Pb	23 10 59.8	-0.8
HANM				*i* AML	AML	23 11 04.0	
	comp=N,1µm,0.1s						
HANM				S	Sb	23 11 04.2	-1.6
SANL	**SANLIURFA_Merk**	0.57	137	SPECP		23 11 04.0	
SANL				P	Pb	23 11 05.0	-0.2
SANL				S	Sb	23 11 12.9	-0.6
SANL				*i* AML	AML	23 11 18.0	
	comp=E,5µm,0.3s						
SANL				*i* AML	AML	23 11 18.0	
	comp=N,5µm,0.4s						
AKCA	**Adyaman/G¶l**	0.67	288	SPECP		23 11 06.0	
AKCA				P	Pb	23 11 06.1	-0.8
AKCA				S	Sb	23 11 15.2	-1.1
AKCA				*i* AML	AML	23 11 20.0	
	comp=N,6µm,0.4s						
AKCA				*i* AML	AML	23 11 20.0	
	comp=E,3µm,0.3s						
SURC	**SANLIURFA_SURC**	0.72	173	SPECP		23 11 07.0	
SURC				P	Pb	23 11 07.8	+0.2
SURC				S	Sb	23 11 18.8	+1.2
SURC				*i* AML	AML	23 11 22.0	
	comp=E,2µm,0.5s						
SURC				*i* AML	AML	23 11 24.0	
	comp=N,2µm,0.2s						
MAYA	**Malatya/Merkez**	0.73	356	SPECP		23 11 06.0	
MAYA				P	Pg	23 11 06.9	-0.1
MAYA				S	Sb	23 11 17.0	-1.1
GZT	**Gaziantep**	0.78	253	SPECP		23 11 08.0	
GZT				P	Pb	23 11 08.3	-0.4
GZT				S	Sb	23 11 18.7	-0.8
GZT				*i* AML	AML	23 11 22.0	
	comp=N,7µm,0.2s						
GZT				*i* AML	AML	23 11 23.0	
	comp=E,4µm,0.2s						
AKCD	**Akcadag**	0.84	327	P	Pb	23 11 09.1	-0.7
AKCD				S	Sg	23 11 19.4	-0.5
AKCD				*i* AML	AML	23 11 20.0	
	comp=E,2µm,0.3s						
AKCD				*i* AML	AML	23 11 25.0	
	comp=N,3µm,0.6s						
NZIP	**Nizip/Gaziante**	0.85	230	SPECP		23 11 09.0	
NZIP				P	Pb	23 11 09.7	-0.3
NZIP				S	Sb	23 11 21.2	-0.4
NZIP				*i* AML	AML	23 11 28.0	
	comp=N,3µm,0.3s						
ELZG	**Elazig**	0.98	23	P	Pb	23 11 11.6	-0.6
ELZG				S	Sg	23 11 24.1	-0.5
ELZG				*i* AML	AML	23 11 28.0	
	comp=E,2µm,0.2s						
ELZG				*i* AML	AML	23 11 29.0	
	comp=N,1µm,0.2s						
GAZ	**Gaziantep**	1.11	248	Pg	Pb	23 11 14.5	+0.2
GAZ				Sg	Sb	23 11 28.9	+0.1
KAHM	**Kahramanmaras,**	1.20	267	P	Pg	23 11 15.5	-0.5
KAHM				S	Sg	23 11 30.7	-0.8
KAHM				*i* AML	AML	23 11 37.0	
	comp=N,1µm,0.4s						
KAHM				*i* AML	AML	23 11 39.0	
	comp=E,490nm,0.4s						
DARE	**Darende-Malaty**	1.26	321	Pn	Pg	23 11 16.5	-0.6
DARE				Sn	Sn	23 11 34.7	+0.6
ELBS	**KAHRAMANMARAS**	1.30	305	SPECP		23 11 17.0	
ELBS				P	Pg	23 11 17.2	-0.7
ELBS				S	Sg	23 11 34.1	-0.7
ELBS				*i* AML	AML	23 11 39.0	
	comp=E,1µm,0.3s						
ELBS				*i* AML	AML	23 11 40.0	
	comp=N,1µm,0.5s						
DYBB	**Diyarbakir**	1.35	74	Pn	Pb	23 11 18.6	+0.2
DYBB				Sn	Sn	23 11 36.6	+0.4
HEKM	**Malatya_Hekimh**	1.35	342	P	Pg	23 11 17.9	-1.0
HEKM				S	Sb	23 11 36.3	+0.3
HEKM				*i* AML	AML	23 11 40.0	
	comp=E,2µm,0.6s						
HEKM				*i* AML	AML	23 11 43.0	
	comp=N,1µm,0.5s						
KUZU	**Kuzuini**	1.40	235	P	Pb	23 11 19.8	+0.5
KUZU				S	Sn	23 11 38.8	+1.5
KUZU				*i* AML	AML	23 11 40.0	
	comp=E,7µm,0.2s						
KUZU				*i* AML	AML	23 11 41.0	
	comp=N,7µm,0.4s						
CUGUR	**Gurin_SVAS**	1.49	320	P	Pb	23 11 20.4	-0.4
CUGUR				S	Sn	23 11 42.2	+2.6
ARPR	**Arapgir-MALATY**	1.50	355	Pn	Pb	23 11 20.9	-0.2
ARPR				Sn	Sn	23 11 41.2	+1.1
KAMA	**Osmaniye**	1.51	255	P	Pn	23 11 20.1	-0.2
KAMA				S	Sb	23 11 38.9	-1.6
KAMA				*i* AML	AML	23 11 43.0	
	comp=N,705nm,0.2s						
KAMA				*i* AML	AML	23 11 43.0	
	comp=E,620nm,0.2s						
KOVA	**Elazig, Kovanc**	1.52	43	SPECP		23 11 20.0	
KOVA				P	Pn	23 11 20.8	+0.4
KOVA				S	Sg	23 11 42.6	+0.8
KOVA				*i* AML	AML	23 11 44.0	
	comp=E,612nm,0.3s						
MAZI	**Mazidag**	1.56	94	Pn	Pn	23 11 21.1	+0.2
MAZI				Sn	Sn	23 11 41.6	+0.3
KEMA	**Kemaliye**	1.67	360	P	Pn	23 11 22.5	0.0
KEMA				S	Sg	23 11 46.7	0.0
KEMA				*i* AML	AML	23 11 48.0	
	comp=E,483nm,0.5s						
KEMA				*i* AML	AML	23 11 49.0	
	comp=N,346nm,1.1s						
ANDN	**Andirin**	1.71	270	P	Pn	23 11 21.9	-1.1
ANDN				S	Sg	23 11 48.1	+0.3
ANDN				*i* AML	AML	23 11 51.0	
	comp=N,879nm,0.4s						
ANDN				*i* AML	AML	23 11 52.0	
	comp=E,696nm,0.3s						
HANI	**Diyarbakir_Han**	1.71	61	SPECP		23 11 23.0	
HANI				P	Pn	23 11 23.4	+0.4
HANI				S	Sg	23 11 47.1	-0.8
HANI				*i* AML	AML	23 11 52.0	
	comp=N,710nm,0.3s						
HANI				*i* AML	AML	23 11 55.0	
	comp=E,779nm,0.4s						
TNCL	**Tunceli-Merkez**	1.73	28	P	Pb	23 11 24.8	-0.2
TNCL				S	Sg	23 11 49.0	+0.5

TNCL				*i* AML	AML	23 11 52.0	
	comp=N,270nm,0.6s						
TNCL				*i* AML	AML	23 11 55.0	
	comp=E,441nm,0.6s						
SARI	SarD1z-Kayseri	1.83	297	Pn	Pb	23 11 25.8	-0.9
SARI				Sn	Sn	23 11 48.3	+0.1
CUKAN	kangal_SIVAS	1.90	335	P	Pb	23 11 27.3	-0.6
CUKAN				S	Sb	23 11 51.3	-0.6
CUKAN				*i* AML	AML	23 11 57.0	
	comp=N,171nm,0.5s						
CUKAN				*i* AML	AML	23 11 58.0	
	comp=E,128nm,0.3s						
SAIM	ADANA	1.95	282	P	Pn	23 11 26.1	-0.2
SAIM				S	Sg	23 11 56.1	+0.5
SAIM				*i* AML	AML	23 12 00.0	
	comp=E,811nm,0.2s						
SAIM				*i* AML	AML	23 12 01.0	
	comp=N,774nm,0.4s						
RHAN	Hatay/Reyhanl	2.02	229	P	Pb	23 11 28.7	-1.1
RHAN				S	Sg	23 11 57.6	-0.1
RHAN				*i* AML	AML	23 12 05.0	
	comp=N,1µm,0.7s						
RHAN				*i* AML	AML	23 12 07.0	
	comp=E,863nm,0.6s						
KOZT	Kozan	2.12	268	Pn	Pn	23 11 29.9	+1.3
KOZT				Sn	Sn	23 11 54.9	-0.3
CUAYA	Sivas-Altinyay	2.16	321	P	Pb	23 11 30.9	-1.5
CUAYA				S	Sg	23 12 03.1	+0.6
CUAYA				*i* AML	AML	23 12 09.0	
	comp=E,148nm,0.5s						
CUAYA				*i* AML	AML	23 12 10.0	
	comp=N,206nm,0.6s						
SVAN	Silvan-Diyarba	2.21	75	Pn	Pn	23 11 30.6	+0.8
SVAN				Sn	Sn	23 11 57.5	+0.2
SVAN	Silvan-Diyarba	2.21	75	SPECP		23 11 29.0	
SVAN				P	Pn	23 11 29.8	-0.1
SVAN				S	Sb	23 12 01.8	+1.2
SVAN				*i* AML	AML	23 12 10.0	
	comp=E,356nm,0.8s						
ERZN	Erzincan	2.21	25	Pn	Pb	23 11 31.7	-1.4
BNGB	Bingl	2.21	50	Pn	Pn	23 11 30.9	+0.9
BTMN	Batman	2.22	81	P	Pb	23 11 32.5	-0.7
BTMN				S	Sg	23 12 05.4	+1.2
CEYT	Ceyhan	2.27	256	Pn	Pn	23 11 30.9	+0.3
EUZM	Uzumlu	2.31	24	SPECP		23 11 32.0	
EUZM				P	Pn	23 11 32.5	+1.2
EUZM				S	Sg	23 12 08.1	+0.9
MIDY	Mardin/Midyat-	2.31	94	P	Pn	23 11 31.5	+0.2
MIDY				S	Sg	23 12 05.6	-1.7
MIDY				*i* AML	AML	23 12 12.0	
	comp=E,814nm,0.5s						
MIDY				*i* AML	AML	23 12 14.0	
	comp=N,679nm,0.4s						
CUZAR	Zara_SIVAS	2.36	346	P	Pn	23 11 33.5	+1.5
CUZAR				S	Sg	23 12 09.6	+0.9
BNN	Bunyan	2.44	302	Pn	Pn	23 11 33.8	+0.8
YEDI	Yedisu-Bingol	2.44	40	Pn	Pn	23 11 35.1	+1.9
SVSK	Karacayir	2.60	334	Pn	Pn	23 11 36.9	+1.8
KARA	Karaisali	2.76	264	Pn	Pn	23 11 37.9	+0.5
VRTB	Varto-Mus	2.80	55	Pn	Pn	23 11 40.0	+1.9
BAYT	Aydıntepe-Bayb	3.08	24	Pn	Pn	23 11 43.8	+1.9
GEM	Giv'at Ha'Em	4.95	209	Pn	Pg	23 12 24.0	-3.6
MMA0B	Mount Meron ar	5.22	210	Pn	Pg	23 12 28.7	-4.2
HNTI	Hanita	5.25	212	Pn	Pb	23 12 28.5	+3.5
MMLI	Mount Malkishu	5.73	207	Pn	Pb	23 12 36.3	+3.3
HMDT	Nahal Hemdat	5.86	205	Pn	Pb	23 12 37.5	+2.3
SLTI	Sal'it	6.05	209	Pn	Pb	23 12 40.4	+2.0
DSI	Dead Sea	6.53	204	Pn	Pb	23 12 46.9	+0.2

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*GUC **02** 23:18:34.8±0.5, 23°.15S×67°.16W, h249^{km}±13^{km}, ML2.9*
*IDC **02** 23:18:38.9±10.0, 22°.77S×66°.59W, h228^{km}±76^{km}, mb2.8/1, mbtmp3.4/2, Error ellipse: s-maj=133.8km s-min=84.6km az=54.0*
ISC 02 23:18:34.7±1.4**, 23°.14S**±0°.09×**66°.87W**±0°.10**, h208**^{km}**, n11, σ0^{s}.76**/20**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	IPOC Station P	2.40	268	*e*P	Pn	23 19 18.6	+0.4
PB15				*i* S	S	23 19 51.7	+0.1
PB06	IPOC Station P	2.53	279	*e*P	Pn	23 19 19.9	+0.3
PB06				*i* S	S	23 19 54.0	-0.1
PB09	IPOC Station P	2.57	301	*e*P	Pn	23 19 21.0	+0.9
PB09				*i* S	S	23 19 56.3	+1.3
PB09				IAML		23 20 00.7	
	comp=N,21nm,0.2s						
PB03	IPOC Station P	2.88	292	*e*P	Pn	23 19 23.5	0.0
PB03				*i* S	S	23 20 00.6	-0.6
PB07	IPOC Station P	3.12	296	*e*P	Pn	23 19 26.5	+0.1
PB07				*i* S	S	23 20 05.3	-1.1
PB04	IPOC Station P	3.13	284	*e*P	Pn	23 19 26.4	-0.1
PB04				*i* S	S	23 20 05.6	-0.9
PB01	IPOC Station P	3.20	310	*e*P	Pn	23 19 27.3	+0.1
PB01				*i* S	S	23 20 07.9	0.0
PB08	IPOC Station P	3.66	324	*e*P	Pn	23 19 34.2	+1.1
PB08				*i* S	S	23 20 19.1	+0.7
LPAZ	La Paz	6.92	350	P	Pn	23 20 15.1	+0.4
	comp=N,1.6nm,0.4s,baz=172,slow=7.9,SNR=11						
LPAZ				S	S	23 21 32.1	-1.7
	comp=N,0.8nm,0.6s,baz=192,slow=19,SNR=1.7						
TORD	Torodi Ar. Bea	76.15	69	P	P	23 30 00.2	0.0
	comp=N,0.3nm,0.8s,baz=248,slow=5.5,SNR=1.5						
	comp=N,0.3nm,0.8s						
MKAR	Makanchi Array	145.79	39	PKPbc	PKPbc	23 37 49.0	-0.3
	comp=N,0.4nm,0.8s,baz=300,slow=4.3,SNR=4.3						

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*DDA **02** 23:43:39.9±0.0, 37°.58N×38°.49E, h7^{km}±2^{km}, ML2.1*
*ISK **02** 23:43:40.9, 37°.64N×38°.48E, h8^{km}, ML2.5/11*
ISC 02 23:43:40.3±1.1**, 37°.60N**±0°.03×**38°.47E**±0°.02**, h4**^{km}±10^{km}**, n18, σ0^{s}.75**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	Bozova	0.19	227	P	Pg	23 43 44.2	+0.3
ATAB				*i* AML	AML	23 43 47.0	
	comp=E,1µm,0.1s						
ATAB				S	Sg	23 43 47.4	+1.0
ATAB				*i* AML	AML	23 43 48.0	
	comp=N,610nm,0.1s						
URFA	Urfa	0.32	119	Pg	Pb	23 43 48.7	0.0
URFA				Sg	Sb	23 43 53.3	-1.0
HANM	anlurfa/Hi	0.33	93	P	Pg	23 43 46.2	-0.4
HANM				S	Sg	23 43 50.8	-0.2
HANM				*i* AML	AML	23 43 53.0	
	comp=N,265nm,0.7s						
SANL	SANLIURFA_Merk	0.59	136	P	Pg	23 43 51.4	-0.3
SANL				S	Sg	23 43 59.0	-0.4
SURC	SANLIURFA_SURC	0.73	171	P	Pg	23 43 53.7	-0.6
SURC				S	Sg	23 44 04.9	+1.3
MAYA	Malatya/Merkez	0.73	357	P	Pg	23 43 54.1	-0.1
GZT	Gaziantep	0.76	252	P	Pg	23 43 55.1	+0.3
GZT				*i* AML	AML	23 44 09.0	
	comp=N,100nm,0.3s						
GZT				S	Sn	23 44 09.1	-0.8
GZT				*i* AML	AML	23 44 13.0	
	comp=E,57nm,0.3s						
AKCD	Akcadag	0.82	328	P	Pg	23 43 56.2	+0.1
AKCD				S	Sb	23 44 07.8	-0.9
AKCD				*i* AML	AML	23 44 11.0	
	comp=N,76nm,0.4s						
AKCD				*i* AML	AML	23 44 16.0	
	comp=E,59nm,0.5s						
GAZ	Gaziantep	1.09	247	Pn	Pn	23 44 02.2	-0.2
GAZ				Sn	Sn	23 44 18.6	+0.7
DARE	Darende-Malaty	1.24	322	Pn	Pb	23 44 03.8	-0.6
DARE				Sn	Sn	23 44 22.3	+0.4
DYBB	Diyarbakir	1.37	74	Pn	Pg	23 44 06.5	-0.1
DYBB				Sn	Sn	23 44 25.5	+0.5
ARPR	Arapgir-MALATY	1.50	356	Pn	Pb	23 44 08.1	-0.7
SARI	SarD1z-Kayseri	1.81	297	Pn	Pb	23 44 13.4	-0.7
KOZT	Kozan	2.10	268	Pn	Pb	23 44 17.9	-1.1
BNGB	Bingl	2.23	51	Pn	Pn	23 44 18.9	+0.8
SVAN	Silvan-Diyarba	2.23	75	Pn	Pn	23 44 18.9	+0.8
BNN	Bunyan	2.42	302	Pn	Pn	23 44 21.7	+1.0
GURO	Guroymak-BITLI	2.97	70	Pn	Pn	23 44 29.7	+1.4

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*ISK **02** 23:59:42.4, 39°.50N×26°.05E, h9^{km}, ML2.7/22*
*ATH **02** 23:59:43.5, 39°.48N×26°.04E, h12^{km}±2^{km}, ML2.7/7, Error ellipse: s-maj=2.1km s-min=1.0km az=203.0*
*DDA **02** 23:59:43.2±0.0, 39°.52N×26°.10E, h6^{km}, ML2.5*
*THE **02** 23:59:43.1, 39°.50N×26°.03E, h4^{km}±1^{km}, ML2.6/8, Error ellipse: s-maj=1.3km s-min=0.4km az=190.0*
ISC 02 23:59:42.9±0.8**, 39°.49N**±0°.01×**26°.06E**±0°.02**, h11**^{km}±6^{km}**, n76, σ0^{s}.50**/102**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.07	81	P	Pg	23 59 44.6	-0.6
GPNR	Gulpinar-Canak	0.07	121	Pg	Pg	23 59 44.9	-0.3
PRK	Paraskevi	0.30	146	P	Pg	23 59 49.3	+0.4
PRK				S	Sg	23 59 54.0	+1.1
	2µm,0.4s						
PRK	Paraskevi	0.30	146	P	Pg	23 59 49.3	+0.4
PRK				S	Sg	23 59 53.4	+0.5
PRK				AML	AML	23 59 54.2	
	comp=E,3211µm,0.5s						
PRK				AML	AML	23 59 54.5	
	comp=N,3072µm,0.4s						
SIGR	SIGRI	0.32	209	P	Pg	23 59 49.4	+0.1
SIGR				S	Sg	23 59 54.2	+0.6
	comp=N,2µm,0.3s						
SIGR	SIGRI	0.32	209	Pg	Pg	23 59 49.5	+0.1
SIGR				Sg	Sg	23 59 54.3	+0.6
SIGR	SIGRI	0.32	209	P	Pg	23 59 49.4	+0.1
SIGR				S	Sg	23 59 54.1	+0.4
SIGR				AML	AML	23 59 54.7	
	comp=N,5630µm,0.3s						
SIGR				AML	AML	23 59 54.8	
	comp=E,3824µm,0.3s						
BOZC	Bozcaada	0.35	360	Pg	Pg	23 59 49.9	0.0
BOZC				Sg	Sg	23 59 55.1	+0.5
BOZC	Bozcaada	0.35	360	P	Pg	23 59 49.8	-0.2
BOZC				P	Pg	23 59 49.9	0.0
BOZC				S	Sg	23 59 54.7	+0.1
BOZC				*i* AML	AML	23 59 55.0	
	comp=E,1µm,0.3s						
BOZC				*i* AML	AML	23 59 55.0	
	comp=E,690nm,0.2s						
EZN	Ezine	0.39	32	P	Pg	23 59 50.7	0.0
EZN				S	Sg	23 59 56.5	+0.5
	comp=E,928nm,0.3s						
EZN	Ezine	0.39	32	Pg	Pg	23 59 50.6	-0.1
EZN				Sg	Sg	23 59 56.4	+0.5
BAYC	CANAKKALE_Bayr	0.45	57	P	Pg	23 59 51.0	-0.8
BAYC				S	Sg	23 59 57.2	-0.7
BAYC				*i* AML	AML	23 59 58.0	
	comp=E,407nm,0.6s						
BAYC				*i* AML	AML	23 59 58.0	
	comp=E,374nm,0.5s						
AYVA	Ayvalik	0.53	110	P	Pg	23 59 53.4	+0.2
ECEA	Canakkale, Ece	0.56	9	P	Pg	23 59 53.5	-0.3
ECEA				S	Sb	00 00 01.8	-1.0
ECEA				*i* AML	AML	00 00 02.0	
	comp=E,450nm,0.6s						
COMU	Canakkale	0.69	28	Pg	Pg	23 59 56.1	-0.1
COMU				Sg	Sb	00 00 05.9	-0.6
GOKA	anakkale-Gk	0.71	351	P	Pg	23 59 56.0	-0.7
GOKA				S	Sb	00 00 06.6	-0.4
GOKA				*i* AML	AML	00 00 12.0	
	comp=E,287nm,0.3s						
GADA	Gvkgeada	0.71	350	Pg	Pg	23 59 56.2	-0.5
DKL	Dikili	0.78	122	Pg	Pb	23 59 58.8	+0.3
LIA	Limnos Island	0.79	301	P	Pg	23 59 58.2	+0.1
LIA				S	Sb	00 00 09.1	-0.2
	comp=E,862nm,0.3s						
LIA	Limnos Island	0.79	301	P	Pg	23 59 58.2	+0.1
LIA				S	Sb	00 00 09.6	+0.3
LIA				AML	AML	00 00 11.6	
	comp=E,2161µm,0.4s						
LIA				AML	AML	00 00 12.8	
	comp=N,1268µm,0.3s						
BUHA	Balikesir, Bur	0.79	89	P	Pg	23 59 57.9	-0.3
BUHA				S	Sb	00 00 09.0	-0.5
BUHA				*i* AML	AML	00 00 12.0	
	comp=N,170nm,0.4s						
KARB	zmir-Karabur	0.87	161	P	Pb	00 00 00.4	+0.3
KARB				S	Sg	00 00 11.6	+0.4
KARB				*i* AML	AML	00 00 14.0	
	comp=N,316nm,0.3s						
CANM	Can-anakkale	0.93	56	Pg	Pb	00 00 00.9	-0.1
ZEDA	zmir-Bergama	0.95	123	P	Pb	00 00 01.8	+0.3
GELI	Tayfur-Gelibol	0.96	19	Pg	Pg	00 00 00.9	-0.5
PSRA	Psara	1.02	202	P	Pn	00 00 03.2	0.0
PSRA				AML	AML	00 00 20.9	
	comp=N,2061µm,0.3s						
PSRA				AML	AML	00 00 21.7	
	comp=E,1780µm,0.2s						
LPK	Lapseki	1.03	31	Pg	Pg	00 00 02.4	-0.4
SMTH	Samothraki Isl	1.06	338	P	Pg	00 00 02.8	-0.5
SMTH				S	Sb	00 00 17.1	-0.1
	comp=E,72nm,0.3s						
SMTH	Samothraki Isl	1.06	338	P	Pg	00 00 02.9	-0.4
SMTH				AML	AML	00 00 19.5	
	comp=N,173µm,0.3s						
SMTH				AML	AML	00 00 19.6	
	comp=E,185µm,0.3s						
CHOS	Chios island	1.10	180	P	Pg	00 00 03.6	-0.6
CHOS				S	Sn	00 00 20.1	+0.4
	comp=E,560nm,0.3s						
CHOS	Chios island	1.10	180	Pn	Pg	00 00 03.8	-0.4
CHOS	Chios island	1.10	180	P	Pg	00 00 03.7	-0.4
CHOS				S	Sg	00 00 18.6	0.0
CHOS				AML	AML	00 00 23.6	
	comp=N,959µm,0.3s						
CHOS				AML	AML	00 00 23.6	
	comp=E,1294µm,0.3s						
CAVK	Edirne/Enez-Ca	1.20	4	P	Pb	00 00 05.2	-0.5
URLA	Izmir	1.21	159	Pn	Pb	00 00 04.9	-0.9
URLA	Izmir	1.21	159	P	Pb	00 00 04.7	-1.1
URLA				S	Sg	00 00 21.9	+0.1
URLA				*i* AML	AML	00 00 24.0	
	comp=E,121nm,0.4s						
URLA				*i* AML	AML	00 00 27.0	
	comp=E,126nm,0.8s						
ERIK	Erikli-Kesan	1.23	16	Pn	Pn	00 00 05.4	-0.7
BALY	Balya	1.23	78	P	Pb	00 00 06.1	-0.2
BALY				S	Sb	00 00 21.7	-0.5
BALY				*i* AML	AML	00 00 24.0	
	comp=E,244nm,0.6s						
BALY				*i* AML	AML	00 00 24.0	
	comp=E,106nm,0.4s						
ENEZ	Enez	1.25	3	P	Pn	00 00 06.1	-0.2
ENEZ				S	Sn	00 00 23.8	+0.7
	comp=E,220nm,0.3s						
ENEZ	Enez	1.25	3	Pn	Pb	00 00 06.3	-0.2
STEP	BALIKESIR_Sava	1.29	95	P	Pn	00 00 06.7	-0.3
ZEYE	Izmir, Urla-Ze	1.30	164	P	Pn	00 00 06.6	-0.4
ZEYE				S	Sb	00 00 23.0	-1.0
ZEYE				*i* AML	AML	00 00 27.0	
	comp=E,116nm,0.5s						
ZEYE				*i* AML	AML	00 00 27.0	
	comp=E,110nm,0.5s						
KRBG	Karabiga-Canak	1.31	46	Pn	Pn	00 00 07.0	-0.2
BLCB	Balcova	1.35	145	P	Pb	00 00 08.3	+0.1
BLCB	Balcova	1.35	145	Pn	Pb	00 00 08.3	+0.1
GONE	Gonen-Balikesi	1.37	66	Pn	Pn	00 00 08.2	+0.2
KNL	Balıkesir	1.37	55	P	Pn	00 00 07.2	-0.8
ALN	Alexandroupoli	1.40	360	P	Pn	00 00 08.4	-0.1
ALN				S	Sn	00 00 27.0	0.0
	comp=E,100nm,0.5s						
ALN	Alexandroupoli	1.40	360	Pn	Pn	00 00 08.4	-0.1
ALN	Alexandroupoli	1.40	360	P	Pn	00 00 08.5	+0.1
ALN				AML	AML	00 00 28.3	
	comp=E,254µm,0.4s						
ALN				AML	AML	00 00 29.0	
	comp=N,154µm,0.6s						
KESN	Edirne-Kesan	1.42	20	P	Pn	00 00 08.9	-0.1
BALB	Balikesir	1.42	83	Pn	Pn	00 00 08.7	0.0
RKY	Sarkoy-Tekirda	1.47	35	Pn	Pn	00 00 09.5	0.0
THAS	Thassos island	1.51	318	P	Pn	00 00 09.7	-0.3
THAS	Thassos island	1.51	318	P	Pn	00 00 09.5	-0.5
EDC	Edincik	1.63	58	Pn	Pn	00 00 11.6	0.0
UKOP	Uzunkopru-Edir	1.69	15	Pn	Pn	00 00 12.9	+0.5
RDO	Rodhopi	1.70	347	P	Pn	00 00 12.4	-0.1
RDO	Rodhopi	1.70	347	Pn	Pn	00 00 12.6	0.0
RDO	Rodhopi	1.70	347	P	Pn	00 00 12.5	0.0
KYMI	Kymi, Euboea I	1.75	241	P	Pn	00 00 12.2	-1.0
KYMI	Kymi, Euboea I	1.75	241	P	Pn	00 00 12.2	-1.0
OUR	Ouranopolis	1.80	298	Pn	Pn	00 00 14.2	+0.2
OUR	Ouranopolis	1.80	298	P	Pn	00 00 14.1	+0.2
TKR	Tekirdag	1.88	37	Pn	Pn	00 00 15.4	+0.4
KAVA	Kavala	1.91	322	P	Pn	00 00 15.5	+0.1
KCTX	Karacabey (Bur	1.93	66	Pn	Pn	00 00 15.9	+0.1
EREA	Eretria	1.97	238	P	Pn	00 00 15.4	-0.9
CRLT	Corlu	2.08	38	Pn	Pn	00 00 18.7	+0.9
DION	Dionisos Attik	2.18	230	P	Pn	00 00 18.7	-0.5
KDZ	Kurdzhali	2.21	347	*i* P	Pn	00 00 19.7	+0.1
KULA	Kula-Manisa	2.25	115	Pn	Pn	00 00 21.2	+1.0
SIMA	Simav-Kutahya	2.31	99	Pn	Pn	00 00 21.5	+0.5
DIM	Dimitrovgrad	2.59	351	*i* P	Pn	00 00 24.9	+0.2
MMB	Musomiste	2.75	320	*i* P	Pn	00 00 27.1	+0.1
JMB	Yambol	3.00	7	*i* P	Pb	00 00 37.4	+1.1
VTS	Vitosha	3.78	327	*i* P	Pn	00 00 42.7	+1.4

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*DDA **03** 00:01:26.9±0.0, 37°.61N×38°.47E, h7^{km}±1^{km}, ML1.6*
*ISK **03** 00:01:28.3, 37°.64N×38°.41E, h8^{km}, ML1.7/4*
ISC 03 00:01:27.8±1.0**, 37°.60N**±0°.04×**38°.47E**±0°.03**, h9**^{km}±8^{km}**, n13, σ0^{s}.52**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	Bozova	0.19	227	P	Pg	00 01 31.6	-0.2
ATAB				S	Sg	00 01 34.7	+0.1
ATAB				*i* AML	AML	00 01 35.0	
	comp=N,84nm,0.3s						
ATAB	Bozova	0.19	227	P	Pg	00 01 31.7	-0.1
ATAB				S	Sg	00 01 34.9	+0.4
ATAB				*i* AML	AML	00 01 35.0	
	comp=N,84nm,0.3s						
ATAB				*i* AML	AML	00 01 35.0	
	comp=E,58nm,0.4s						
URFA	Urfa	0.32	120	Pg	Pb	00 01 36.7	+0.9
URFA				Sg	Sb	00 01 41.7	+0.6
HANM	anlurfa/Hi	0.33	94	P	Pg	00 01 33.3	-1.0
HANM				S	Sg	00 01 38.8	+0.1
HANM	anlurfa/Hi	0.33	94	P	Pg	00 01 34.0	-0.3
HANM				S	Sg	00 01 38.9	+0.3
HANM				*i* AML	AML	00 01 39.0	
	comp=N,38nm,0.2s						
HANM				*i* AML	AML	00 01 41.0	
	comp=E,12nm,0.5s						
SANL	SANLIURFA_Merk	0.60	136	P	Pg	00 01 38.6	-0.8
SANL				S	Sg	00 01 46.8	-0.3
SURC	SANLIURFA_SURC	0.73	171	P	Pg	00 01 41.5	-0.4
GZT	Gaziantep	0.76	251	P	Pb	00 01 43.9	+0.6
GZT	Gaziantep	0.76	251	P	Pb	00 01 43.3	+0.1
GZT				S	Sb	00 01 53.0	-0.8
GZT				*i* AML	AML	00 01 56.0	
	comp=N,17nm,0.3s						
GZT				*i* AML	AML	00 01 59.0	
	comp=E,7.6nm,0.4s						
AKCD	Akcadag	0.82	328	P	Pn	00 01 45.3	-0.3
GAZ	Gaziantep	1.09	247	Pg	Pn	00 01 49.2	-0.1
GAZ				Sg	Sn	00 02 04.3	-0.2
DARE	Darende-Malaty	1.24	322	Pn	Pg	00 01 51.5	-0.2
DARE				Sn	Sg	00 02 07.9	+0.1
SARI	SarD1z-Kayseri	1.81	297	Pn	Pn	00 01 59.6	+0.3

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*HEL **03** 00:31:17.6±0.7, 67°.73N×20°.91E, h0^{km}, ML1.5, Explosion*
UPP 03 00:31:14.0±0.0**, 67°.83N×20°.20E, h0^{km}, ML1.9, Suspected explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.14	22	P	Pg	00 31 16.8	+0.2
KUA				S	Sg	00 31 18.7	+0.3
RATU	Laukkuluspa	0.23	270	P	Pg	00 31 18.6	+0.2
KOVU	Salmi	0.40	358	P	Pg	00 31 21.6	0.0
NIKU	Nikkaluokta	0.45	276	P	Pg	00 31 22.5	0.0
LANU	Lannavaara	0.71	71	P	Pg	00 31 27.4	-0.3
LANU	Lannavaara	0.71	71	PG	Pg	00 31 27.4	-0.3
LANU				SG	Sg	00 31 33.0	-3.8
DUNU	Dundret	0.72	169	P	Pg	00 31 27.5	-0.3
MASU	Masugnsbyn	0.78	118	P	Pg	00 31 28.9	-0.1
SALU	Saltoluokta	0.79	236	P	Pg	00 31 28.8	-0.3
KIF	Kilpisjarvi	1.20	10	*e*P	Pg	00 31 37.1	+0.1
KIF	Kilpisjarvi	1.20	10	PG	Pn	00 31 43.2	+5.2
KIF				MSG		00 31 57.5	
	comp=Z,7.6nm,0.2s						
KIF				SG	Sn	00 31 57.6	+2.6
PAJU	Pajala	1.38	124	P	Pg	00 31 39.3	-1.1
PAJU	Pajala	1.38	124	PN	Pg	00 31 39.2	-1.2
HEF	Hetta	1.42	64	*e*P	Pn	00 31 40.1	-1.0
HEF	Hetta	1.42	64	PG	Pn	00 31 40.1	-1.0
HEF				MSG		00 31 54.9	
	comp=Z,3.0nm,0.2s						
ERTU	Ertsjaerv	1.50	148	P	Pn	00 31 41.3	-0.8
ERTU	Ertsjaerv	1.50	148	PG	Pn	00 31 41.5	-0.5
KLF	Kolari	1.56	111	PN	Pn	00 31 42.5	-0.5
KLF				MSG		00 31 56.2	
	comp=Z,2.2nm,0.2s						
KTK1	Kautokeino	1.64	42	PG	Pn	00 31 43.8	-0.2
KTK1				SN	Sg	00 32 08.2	+1.7
HARU	Harads	1.70	169	P	Pn	00 31 44.9	+0.1
TRO	Tromso	1.87	346	SN	Sg	00 32 19.5	+5.4
KALU	Kalix	2.34	146	PG	Pn	00 31 54.9	+1.3
RNF	Rovaniemi	2.57	116	PG	Pn	00 31 58.8	+1.9
ARA0	ARCESS Array S	2.59	46	PN	Pn	00 31 58.3	+1.2
	baz=226						
ARA0				SG	Sb	00 32 33.6	+0.1
KEV	Kevo	3.14	49	MSG		00 32 46.2	
	comp=Z,1.1nm,0.2s						
KEV				SG	Sb	00 32 50.4	+1.0
OBF8	Ulkokalla	3.75	158	PB	Pb	00 32 17.9	-3.1

UPP 03 00:31:19.8±0.1**, 67°.84N×20°.21E, h0^{km}, ML1.7, Suspected explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.13	23	P	Pg	00 31 22.4	+0.2
KUA				S	Sg	00 31 24.4	+0.5
RATU	Laukkuluspa	0.23	267	P	Pg	00 31 24.2	-0.1
KOVU	Salmi	0.39	358	P	Pg	00 31 27.4	+0.1
KOVU				S	Sg	00 31 32.6	+0.4
NIKU	Nikkaluokta	0.45	275	P	Pg	00 31 28.5	+0.2
NIKU				S	Sg	00 31 34.2	+0.1
LANU	Lannavaara	0.71	72	S	Sg	00 31 42.6	+0.1
MASU	Masugnsbyn	0.79	118	P	Pg	00 31 34.5	-0.3
SALU	Saltoluokta	0.80	236	P	Pg	00 31 34.9	-0.1

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*JMA **03** 00:36:29.4±0.1, 40°.2N±0°.3×142°.4E±0°.8, h35^{km}±1^{km}, MV3.9/38, NE OFF IWATE PREF*
JMA Felt I J1 at NE OFF IWATE PREF .
*IDC **03** 00:36:31.7±2.7, 40°.17N×142°.46E, h64^{km}±23^{km}, mb3.4/7, mbtmp3.7/9, MS2.7/4, Error ellipse: s-maj=38.7km s-min=16.9km az=102.0*
ISC 03 00:36:30.3±1.3**, 40°.15N**±0°.04×**142°.31E**±0°.09**, h41**^{km}±11^{km}**, n29, σ1^{s}.33**/30**, mb3.6**/7**, 10D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.40	238	⇓*i*P	Pn	00 36 39.6	-0.2
JTH				⇓S	Sn	00 36 46.8	+0.3
JKEN	Kujiedanarisaw	0.46	277	⇓*i*P	Pn	00 36 40.2	-0.4
JKEN				⇓S	Sn	00 36 47.6	-0.1
JANG	Nango	0.65	290	⇓*i*P	Pn	00 36 42.8	-0.2
JANG				⇓S	Sn	00 36 52.0	-0.1
MIYJ	Miyakonagasawa	0.69	213	*i* P	Pn	00 36 43.0	-0.6
MIYJ				S	Sn	00 36 53.4	+0.4
JKZ	Kuzumaki	0.77	258	⇓*i*P	Pn	00 36 45.1	+0.4
JOM	Ohasama	1.03	229	⇓*i*P	Pn	00 36 49.0	+0.7
JARK	Aomorirokkasho	1.11	320	⇓*i*P	Pn	00 36 49.6	+0.2
JARK				⇓*e*S	Sn	00 37 04.5	+0.9
JTM	Tenmabayashi	1.14	304	*i* P	Pn	00 36 50.3	+0.5
JTM				*e*S	Sn	00 37 05.4	+1.2
OFUJ	Ofunato	1.18	205	*i* P	Pn	00 36 50.4	+0.1
OFUJ				S	Sn	00 37 06.3	+1.2
JAH	Hinai	1.28	272	*i* P	Pn	00 36 52.7	+1.0
JAH				S	Sn	00 37 10.3	+2.7
JMK	Ichinoseki	1.46	215	*i* P	Pn	00 36 55.0	+0.8
JMK				S	Sn	00 37 15.0	+2.9
ASAJ	Asahikawa	3.97	3	P	Pn	00 37 31.4	+2.8
	15nm,0.4s,baz=219,slow=14,SNR=11						
ASAJ				S	Sn	00 38 14.3	+0.4
	6.2nm,0.3s,baz=144,slow=29,SNR=1.2						
MJAR	Matsushiro Arr	4.83	223	P	Pn	00 37 43.7	+3.1
	6.5nm,0.6s,baz=31,slow=13,SNR=16						
USRK	Ussuriysk Ar.	8.66	301	LR	LR	00 42 00.9	
	comp=Z,34nm,21.0s,baz=123,slow=38						

KSRS	Korea Array	11.54	261	LR	LR	00 43 07.2	
	comp=Z,36nm,20.9s,baz=65,slow=34						
KLR	Kul'dur	11.77	324	LR	LR	00 43 29.6	
	comp=Z,28nm,19.4s,baz=44,slow=35						
SEY	Seymchan	23.60	12	P	P	00 41 36.2	-0.9
	0.9nm,0.4s,baz=107,slow=3.6,SNR=3.6						
	0.9nm,0.4s						
SONM	Songino Array	26.76	299	P	P	00 42 05.8	-0.4
	0.7nm,0.7s,baz=109,slow=8.1,SNR=6.4						
SONM				LR	LR	00 53 33.3	
	comp=Z,28nm,18.2s,baz=360,slow=38						
	0.7nm,0.7s						
H11N2	WAKE ISLAND Hy	29.30	127	T	T	01 13 26.5	
	baz=319,slow=75,SNR=99						
H11N1	WAKE ISLAND Hy	29.31	127	T	T	01 13 13.7	
	baz=319,slow=75,SNR=74						
H11N3	WAKE ISLAND Hy	29.32	127	T	T	01 13 14.3	
	baz=319,slow=75,SNR=63						
H11S1	WAKE ISLAND Hy	30.11	129	T	T	01 14 25.6	
	baz=321,slow=76,SNR=27						
H11S3	WAKE ISLAND Hy	30.11	129	T	T	01 14 23.4	
	baz=321,slow=76,SNR=21						
H11S2	WAKE ISLAND Hy	30.13	129	T	T	01 14 30.1	
	baz=321,slow=76,SNR=20						
ZALV	Zalesovo Beam	40.40	310	P	P	00 44 03.7	-0.3
	0.6nm,0.5s,baz=91,slow=8.9,SNR=4.4						
	0.6nm,0.5s						
MKAR	Makanchi Array	43.13	299	P	P	00 44 25.9	-0.6
	0.8nm,0.7s,baz=86,slow=9.8,SNR=11						
	0.8nm,0.7s						
WRA	Warramunga Arr	60.24	189	P	P	00 46 32.4	-1.9
	0.4nm,0.8s,baz=5.5,slow=7.1,SNR=1.8						
	0.4nm,0.8s						
FINES	FINESS Array B	66.39	332	P	P	00 47 14.7	+0.1
	1.0nm,0.7s,baz=21,slow=5.9,SNR=4.4						
	1.0nm,0.7s						
KBZ	Khabaz	69.42	310	P	P	00 47 33.7	-0.1
	1.2nm,0.8s,baz=25,slow=14,SNR=1.5						
	1.2nm,0.8s						

MAN 03 00:37:24.4, 10°.14N×124°.79E, h1^{km}, mb4.0, ML2.8, MS2.4, 11C-4D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	0.06	97	⇑eP	Pg	00 37 25.0	-0.6
MSLP				eS	Sg	00 37 29.8	+3.3
TABP	Talibon, Bohol	0.46	264	⇓eP	Pb	00 37 34.4	-0.8
TABP				eS	Sg	00 37 40.6	+1.5
GHBP	Garcia Hernand	0.69	223	⇑eP	Pb	00 37 38.6	-0.6
GHBP				eS	Sb	00 37 49.6	+0.3
SCPH	Surigao	0.77	118	⇑iP	Pg	00 37 39.8	+0.6
SCPH				eS	Sg	00 37 50.3	+1.1
LLP	Lapu-Lapu	0.83	282	⇓iP	Pg	00 37 40.5	+0.2
LLP				iS	Sg	00 37 51.9	+0.7
OCLP	Ormoc	0.92	349	⇓eP	Pb	00 37 43.4	+0.3
OCLP				eS	Sn	00 37 57.8	-0.5
TBP	Tagbilaran	1.02	244	eP	Pg	00 37 40.4	-3.5
TBP				iS	Sn	00 38 00.2	-0.7
GLSP	General Luna,	1.36	105	⇑eP	Pg	00 37 50.1	-0.4
GLSP				eS	Sn	00 38 09.7	+0.5
BUTP	Butuan	1.42	145	⇑eP	Pn	00 37 50.8	-0.5
LSIP	Lazi, Siquijor	1.52	229	⇑eP	Pn	00 37 52.0	-0.7
LSIP				eS	Sn	00 38 12.7	-0.6
CGP	Cagayan de Oro	1.68	183	⇑eP	Pn	00 37 52.3	-2.6
CGP				eS	Sn	00 38 11.9	-5.1
CNOP	Candoni, Negro	2.15	262	⇓eP	Pn	00 38 01.0	-0.3
CNOP				eS	Sn	00 38 26.6	-2.0
GUIM	Jordan	2.22	283	⇑eP	Pn	00 38 02.8	+0.4
GUIM				eS	Sn	00 38 31.6	+1.1
BUKP	Musuan	2.26	173	⇑eP	Pn	00 38 03.7	+0.7
BUKP				eS	Sn	00 38 32.1	+0.5
RCP	Roxas	2.46	305	⇑eP	Pb	00 38 07.8	-1.6
RCP				eS	Sn	00 38 37.0	+0.7
PAGZ	Pagadian	2.67	212	⇑eP	Pn	00 38 09.7	+1.2
PAGZ				eS	Sn	00 38 39.9	-1.7

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*ANF **03** 00:41:29.7±0.2, 61°.22N×146°.19W, h23^{km}±1^{km}, ML4.5/84, Error ellipse: s-maj=1.0km s-min=0.9km az=158.0*

*NEIC **03** 00:41:29.8, 61°.24N×146°.16W, h23^{km}*

*IDC **03** 00:41:30.7±2.2, 61°.32N×146°.29W, h40^{km}±21^{km}, mb3.6/15, mbtmp3.8/19, ML3.7/5, MS3.1/18, Error ellipse: s-maj=20.5km s-min=12.3km az=43.0*

*NEIC **03** 00:41:30.7±1.8, 61°.26N±0°.02×146°.09W±0°.05, h34^{km}±4^{km}, ML4.2/154, Mwr4.0/98, ML4.2(AEIC), Error ellipse: s-maj=3.7km s-min=3.5km az=73.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.56; $M_{\theta\theta}$-0.44; $M_{\phi\phi}$1.00; $M_{r\theta}$0.66; $M_{\theta\phi}$0.30; $M_{\phi r}$0.40; Fault plane solution: $M_0$1.20000×10^{15} NP1:ϕ_s336.52000°, δ41.79000°, λ-151.82000°. NP2:ϕ_s224.75000°, δ71.66000°, λ-51.77000°. Principal axes: T 1.2316, Plg18.0000°, Azm287.0000°; N -0.0614, Plg36.0000°, Azm31.0000°; P -1.1702, Plg49.0000°, Azm176.0000°;*

*AEIC **03** 00:41:31.3±1.6, 61°.27N±0°.03×146°.11W±0°.04, h23^{km}±7^{km} Error ellipse: s-maj=4.5km s-min=2.7km az=200.0*

ISC 03 00:41:29.2±1.1**, 61°.21N**±0°.02×**146°.14W**±0°.02**, h25**^{km}±8^{km}**, n300, σ0^s.94**/312**, mb3.8**/16**, MS3.1**/15**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DIV	Divide	0.20	115		Pn	00 41 36.6	+0.1
KLU	Klutina	0.30	20		Pn	00 41 37.5	-0.5
KLU					Sn	00 41 43.0	-0.7
KLU	Klutina	0.30	20	P	Pn	00 41 37.5	-0.5
	baz=203,SNR=1000						
KLU				S	Sn	00 41 43.1	-0.7
	baz=203						
EYAK	Cordova Ski Ar	0.69	164		Pn	00 41 43.5	+0.3
EYAK	Cordova Ski Ar	0.69	164	P	Pn	00 41 43.7	+0.4
EYAK	Cordova Ski Ar	0.69	164	P	Pn	00 41 43.6	+0.4
	baz=346,SNR=117						
EYAK				S	Sn	00 41 54.0	+0.9
	baz=346						
N25K	Chitina, Valde	0.84	61		Pb	00 41 44.8	-0.4
N25K					Sb	00 41 55.9	-0.1
N25K				IAML		00 41 56.4	
	comp=N,14µm,0.4s						
N25K				IAML		00 41 58.0	
	comp=E,7µm,0.5s						
N25K	Chitina, Valde	0.84	61	P	Pb	00 41 44.7	-0.4
	baz=245,SNR=490						
N25K				S	Sb	00 41 55.9	-0.1
	baz=245						
SCM	Sheep Creek Mo	0.84	318		Pb	00 41 44.9	-0.3
SCM					Sb	00 41 56.3	+0.1
SCM				IAML		00 41 56.9	
	comp=N,12µm,0.4s						
SCM				IAML		00 41 57.2	
	comp=E,16µm,0.6s						
SCM	Sheep Creek Mo	0.84	318	P	Pb	00 41 45.0	-0.3
	baz=134,SNR=462						
M24K	Tolsona, Glenn	0.90	359		Pn	00 41 46.1	-0.1
M24K				Sn	Sn	00 41 58.6	+0.2
M24K				IAML		00 42 06.8	
	comp=E,7µm,1.1s						
M24K	Tolsona, Glenn	0.90	359	P	Pn	00 41 46.1	-0.1
	baz=178,SNR=596						
M24K				S	Sn	00 41 58.7	+0.2
	baz=178						
M23K	Glacier View	0.96	308	P	Pn	00 41 46.5	-0.5
	baz=124,SNR=631						
M23K				S	Sb	00 41 59.2	-0.2
	baz=124						
PWL	Port Wells	1.13	253	Pn	Pn	00 41 49.7	+0.4
PWL				IAML		00 42 06.4	
	comp=E,6µm,0.7s						
PWL				IAML		00 42 08.5	
	comp=N,5µm,0.5s						
PWL	Port Wells	1.13	253	P	Pn	00 41 49.7	+0.4
	baz=68,SNR=74						
PWL				S	Sb	00 42 04.7	+0.5
	baz=68						
KNK	Knik Glacier	1.14	281		Pb	00 41 50.1	-0.1
KNK					Sb	00 42 05.6	+1.1
KNK	Knik Glacier	1.14	281	P	Pb	00 41 50.1	-0.1
	baz=97,SNR=926						
KNK				S	Sb	00 42 05.3	+0.8
	baz=97						
GLB	Gilahina Butte	1.15	77	Pn	Pn	00 41 49.5	-0.1
GLB				IAML		00 42 05.5	
	comp=E,9µm,0.8s						
SML	Sawmill	1.21	301		Pn	00 41 50.5	0.0
SML				IAML		00 42 07.5	
	comp=N,6µm,0.6s						
SML	Sawmill	1.21	301	P	Pn	00 41 50.4	0.0
	baz=117,SNR=443						
SML				S	Sb	00 42 06.9	+0.3
	baz=117						
HARP	HAARP	1.28	21	P	Pn	00 41 51.8	+0.4
	baz=202,SNR=175						
HARP				S	Sb	00 42 09.5	+0.9
	baz=202						
VRDI	Verde Repeater	1.30	88		Pn	00 41 51.6	-0.2
VRDI				IAML		00 42 10.1	
	comp=N,4µm,0.7s						
VRDI				IAML		00 42 14.2	
	comp=E,4µm,0.7s						
P23K	Montague Islan	1.37	208	P	Pn	00 41 53.4	+0.8
	baz=26,SNR=56						
P23K				Sb	Sb	00 42 13.2	+2.1
	baz=26						
GHO	Glory Hole Cre	1.45	294		Pn	00 41 54.5	+0.7
GHO				IAML		00 42 15.8	
	comp=E,4µm,0.4s						
GHO				IAML		00 42 19.1	
	comp=N,3µm,0.6s						
PMR	Palmer	1.49	286	Pn	Pn	00 41 55.0	+0.8
PMR				IAML		00 42 16.1	
	comp=E,3µm,0.6s						
PMR				IAML		00 42 16.2	
	comp=N,3µm,0.4s						
PMR	Palmer	1.49	286	P	Pn	00 41 55.2	+0.9
PMR	Palmer	1.49	286	P	Pn	00 41 55.1	+0.9
	baz=102,SNR=559						
PMR				S	Sb	00 42 14.3	-0.2
	baz=102						
MCARA	McCarthy VSAT	1.51	82		Pn	00 41 54.8	+0.2
MCARA	McCarthy VSAT	1.51	82	P	Pn	00 41 54.8	+0.2
	baz=267,SNR=442						
RC01	Rabbit Creek A	1.75	268		Pn	00 41 59.3	+1.4
RC01	Rabbit Creek A	1.75	268	P	Pn	00 41 59.0	+1.2
	baz=83,SNR=477						
Q23K	Middleton Isla	1.79	183		Pn	00 41 59.3	+0.9
Q23K	Middleton Isla	1.79	183	P	Pn	00 41 59.2	+0.9
	baz=3.2						
Q23K				S	Sb	00 42 22.9	-0.3
	baz=3.2						
MID	Middleton Isla	1.79	183		Pn	00 41 59.3	+0.9
MID				IAML		00 42 36.9	
	comp=E,2µm,0.5s						
MID	Middleton Isla	1.79	183	P	Pn	00 41 59.5	+1.1
PAX	Paxson	1.79	10		Pn	00 41 59.3	+0.7
PAX	Paxson	1.79	10	P	Pn	00 41 59.2	+0.7
	baz=190,SNR=204						
PAX				S	Sb	00 42 21.9	-1.5
	baz=190						
BALM	Baldy	1.85	94		Pn	00 41 59.5	+0.2
O22K	Cooper Landing	1.90	249		Pn	00 42 00.8	+0.9
O22K	Cooper Landing	1.90	249	P	Pn	00 42 00.7	+0.8
	baz=64,SNR=50						
M26K	Nabesna, AK	1.91	50	Pn	Pn	00 42 01.2	+1.1
M26K	Nabesna, AK	1.91	50	P	Pn	00 42 01.3	+1.2
	baz=234						
M26K				S	Sb	00 42 25.8	-1.0
	baz=234						
SEW	Seward	1.97	237	Pn	Pn	00 42 01.4	+0.5
SEW	Seward	1.97	237	P	Pn	00 42 01.4	+0.5
	baz=53,SNR=29						
FIS	Fire Island	1.98	270	Pn	Pn	00 42 02.2	+1.3
M22K	Willow	1.99	288		Pn	00 42 02.2	+1.2
M22K	Willow	1.99	288	P	Pn	00 42 02.4	+1.3
	baz=103,SNR=115						
MENT	Mentasta	2.07	32	Pn	Pn	00 42 03.3	+1.0
MENT				IAML		00 42 42.0	
	comp=E,3µm,0.4s						
MENT				IAML		00 42 42.0	
	comp=N,3µm,0.7s						
MENT	Mentasta	2.07	32	P	Pn	00 42 03.9	+1.6
CYK	Cape Yakataga	2.13	121		Pb	00 42 06.6	-0.3
BARN	Barnard Glacie	2.18	92		Pn	00 42 05.3	+1.4
BARN				IAML		00 42 38.4	
	comp=N,1µm,0.6s						
BARN				IAML		00 42 39.0	
	comp=E,2µm,0.5s						
SUA	Susitna One	2.24	279		Pn	00 42 05.3	+0.7
SUA				IAML		00 42 46.9	
	comp=N,1µm,0.8s						
SUA				IAML		00 42 49.0	
	comp=E,1µm,0.7s						
SUA	Susitna One	2.24	279	P	Pn	00 42 05.3	+0.7
	baz=93,SNR=214						
L26K	Log Cabin Wild	2.24	35	Pn	Pn	00 42 06.1	+1.5
L26K				IAML		00 42 37.7	
	comp=E,2µm,0.4s						
L26K				IAML		00 42 37.9	
	comp=N,2µm,0.3s						
L26K	Log Cabin Wild	2.24	35	P	Pn	00 42 06.3	+1.6
	baz=218,SNR=85						
CUT	Chulitna	2.30	303		Pn	00 42 06.3	+1.0
CUT	Chulitna	2.30	303	P	Pn	00 42 06.6	+1.2
	baz=119,SNR=101						
M27K	Edge Creek, AK	2.33	59	Pn	Pn	00 42 06.6	+0.7
M27K	Edge Creek, AK	2.33	59	P	Pn	00 42 07.3	+1.4
	baz=243						
CAPN	Captain Cook N	2.48	262		Pn	00 42 09.4	+1.5
CAPN	Captain Cook N	2.48	262	P	Pn	00 42 09.5	+1.6
	baz=76,SNR=16						
RND	Reindeer	2.54	331	Pn	Pn	00 42 09.8	+1.0
RND				IAML		00 42 51.7	
	comp=E,1µm,1.2s						
RND				IAML		00 42 52.4	
	comp=N,895nm,0.6s						
K24K	Donnelly Dome	2.61	4	P	Pn	00 42 11.3	+1.7
	baz=184,SNR=347						
RIDG	Independent Ri	2.61	13		Pn	00 42 11.4	+1.7
RIDG	Independent Ri	2.61	13	P	Pn	00 42 11.4	+1.7
	baz=194,SNR=167						
DOT	Dot Lake	2.63	21	Pn	Pn	00 42 11.3	+1.4
SKT	Skwentna	2.69	289		Pn	00 42 11.3	+0.5
SKT				IAML		00 42 52.4	
	comp=N,1µm,0.5s						
SKT				IAML		00 42 53.2	
	comp=E,872nm,0.6s						
SKT	Skwentna	2.69	289	P	Pn	00 42 11.2	+0.5
	baz=103,SNR=178						
BRSE	Bradley Lake S	2.71	239		Pn	00 42 11.8	+0.7
BRSE	Bradley Lake S	2.71	239	P	Pn	00 42 11.8	+0.7
	baz=54,SNR=25						
L27K	Beaver Creek,	2.75	46	Pn	Pn	00 42 12.4	+0.8
L27K	Beaver Creek,	2.75	46	P	Pn	00 42 12.8	+1.2
	baz=230						
BRLK	Bradley Lake	2.76	240	Pn	Pn	00 42 12.5	+0.7
BRLK				IAML		00 42 55.0	
	comp=E,1µm,0.6s						
BRLK				IAML		00 42 55.4	
	comp=N,817nm,0.7s						
BCAR	Beaver Creek A	2.76	46	Pn	Pn	00 42 12.7	+0.9
BVCY	Beaver Creek	2.78	62	P	Pn	00 42 13.5	+1.4
	baz=247,SNR=52						
YUK3	Moose Creek	2.78	76	P	Pn	00 42 13.1	+0.9
	baz=262,SNR=83						
MCK	McKinley	2.84	334		Pn	00 42 13.6	+0.7
MCK	McKinley	2.84	334	P	Pn	00 42 13.9	+1.1
	baz=151,SNR=241						
SPU	Mount Spurr	2.86	272		Pn	00 42 13.7	+0.5
O28M	Mount Upton	2.93	96	P	Pn	00 42 15.3	+0.9
	baz=282						
N20K	Mount Spurr	2.94	272	P	Pn	00 42 14.6	+0.4
	baz=86,SNR=94						
SPCR	Spurr Chakacha	2.94	272	P	Pn	00 42 14.7	+0.5
	baz=86,SNR=33						
SPCR				S	Sn	00 42 49.6	+1.0
	baz=86						
SCRK	Sand Creek	2.95	19	Pn	Pn	00 42 15.2	+0.9
SCRK	Sand Creek	2.95	19	P	Pn	00 42 15.3	+0.9
	baz=201,SNR=45						
TRF	Thorofare Moun	2.97	321	Pn	Pn	00 42 15.0	+0.3
TRF				IAML		00 43 02.0	
	comp=N,1µm,0.7s						
TRF				IAML		00 43 03.2	
	comp=E,870nm,0.9s						
CNPM	China Poot	3.04	238		Pn	00 42 16.3	+0.6
CNPM				IAML		00 43 02.2	
	comp=E,1µm,1.0s						
CNPM				IAML		00 43 03.2	
	comp=N,1µm,0.6s						
YUK8	Steele Glacier	3.08	86	P	Pn	00 42 17.7	+1.4
	baz=272,SNR=44						
PCA	Pinnacle	3.10	109		Pn	00 42 18.0	+1.5
PINM	Pinnacle	3.11	109	P	Pn	00 42 16.8	+0.3
	baz=295,SNR=33						
HOM	Homer	3.14	243	Pn	Pn	00 42 17.3	+0.4
HOM	Homer	3.14	243	P	Pn	00 42 17.8	+0.9
	baz=57						
HDA	Harding Lake	3.23	354		Pn	00 42 18.5	+0.4
HDA	Harding Lake	3.23	354	P	Pn	00 42 18.8	+0.6
	baz=173,SNR=328						
KTH	Kantishna Hill	3.24	319	Pn	Pn	00 42 19.4	+1.0
KTH				IAML		00 43 06.8	
	comp=E,1µm,0.7s						
KTH				IAML		00 43 13.6	
	comp=N,862nm,0.8s						
PPLA	Purkeypile	3.31	303	Pn	Pn	00 42 20.6	+1.2
PPLA	Purkeypile	3.31	303	P	Pn	00 42 19.8	+0.4
	baz=117,SNR=115						
RSO	Redoubt South	3.33	260	Pn	Pn	00 42 20.3	+0.6
BWN	Browne	3.34	334		Pn	00 42 19.1	-0.7
O20K	Slope Mountain	3.39	253	P	Pn	00 42 21.4	+1.0
	baz=67						
WRH	Wood River Hil	3.39	346	Pn	Pn	00 42 20.7	+0.3
WRH				IAML		00 43 08.8	
	comp=E,443nm,0.9s						
WRH				IAML		00 43 16.3	
	comp=N,439nm,1.0s						
K27K	Chicken	3.39	32	Pn	Pn	00 42 21.5	+1.1
K27K	Chicken	3.39	32	P	Pn	00 42 21.6	+1.2
	baz=216						
M20K	Styx River	3.42	284	Pn	Pn	00 42 21.4	+0.5
M20K	Styx River	3.42	284	P	Pn	00 42 21.3	+0.5
	baz=98						
BCPM	Bancas Point	3.45	109	Pn	Pn	00 42 22.1	+0.9
BCPM				IAML		00 43 15.4	
	comp=N,624nm,0.9s						
BCPM				IAML		00 43 22.6	
	comp=E,635nm,0.7s						
J26L	Joseph Creek	3.51	19	Pn	Pn	00 42 23.3	+1.2
J26L				IAML		00 43 22.8	
	comp=E,404nm,0.8s						
J26L	Joseph Creek	3.51	19	P	Pn	00 42 23.2	+1.2
	baz=201						
CCB	Clear Creek Bu	3.53	348	Pn	Pn	00 42 21.9	-0.4
CCB				IAML		00 43 10.1	
	comp=E,583nm,0.4s						
CCB				IAML		00 43 10.1	
	comp=N,627nm,0.5s						
CAST	Castle Rocks	3.55	311	Pn	Pn	00 42 22.9	+0.3
CAST				IAML		00 43 19.3	
	comp=E,392nm,0.9s						
CAST				IAML		00 43 24.3	
	comp=N,384nm,0.8s						
CAST	Castle Rocks	3.55	311	P	Pn	00 42 23.1	+0.6
	baz=125,SNR=58						
ILAR	Eielson Array	3.59	355	P	Pn	00 42 22.9	-0.1
	comp=N,8.7nm,0.3s,baz=180,slow=13,SNR=295						
ILAR				S	Sn	00 43 07.8	+3.2
	comp=N,79nm,0.6s,baz=180,slow=19,SNR=16						
ILAR	Eielson Array	3.59	355	Pn	Pn	00 42 22.7	-0.4
YUK4	Talbot Arm	3.62	85	P	Pn	00 42 25.3	+1.6
	baz=271						
NEA2	Nenana	3.65	340	Pn	Pn	00 42 23.5	-0.4
NEA2				IAML		00 43 22.8	
	comp=N,439nm,1.0s						
NEA2	Nenana	3.65	340	P	Pn	00 42 23.8	-0.1
	baz=157,SNR=49						
BPAW	Bear Paw Mtn.	3.66	324	Pn	Pn	00 42 24.5	+0.4
BPAW				IAML		00 43 24.8	
	comp=N,549nm,0.8s						
BPAW	Bear Paw Mtn.	3.66	324	P	Pn	00 42 24.7	+0.6
	baz=140,SNR=95						
ILSW	Iliamna Southw	3.67	253		Pn	00 42 25.1	+0.9
ILSW				IAML		00 43 27.0	
	comp=N,316nm,0.9s						
ILSW				IAML		00 43 32.1	
	comp=E,418nm,0.9s						
PNL	Peninsula	3.68	112	P	Pn	00 42 26.5	+2.1
PNL	Peninsula	3.68	112	P	Pn	00 42 26.1	+1.7
	baz=299						
COLA	College	3.76	349		Pn	00 42 25.6	+0.2
COLA	College	3.76	349	P	Pn	00 42 25.7	+0.3
COLA	College	3.76	349	P	Pn	00 42 25.6	+0.2
	baz=167						
TCOL	CIGO, UAF Yank	3.76	349	P	Pn	00 42 25.5	+0.1
	baz=167,SNR=60						
YUK6	Outpost Mounta	3.79	91	P	Pn	00 42 27.6	+1.6
	baz=278						
O29M	Mount Kennedy	3.82	100	P	Pn	00 42 26.8	+0.4
	baz=288,SNR=46						
M29M	Somme Creek	3.84	68	P	Pn	00 42 27.6	+0.9
	baz=255,SNR=24						
P19K	Oil Pt	3.85	249	Pn	Pn	00 42 27.1	+0.5
P19K	Oil Pt	3.85	249	P	Pn	00 42 27.2	+0.5
	baz=62						
MDM	Murphy Dome	3.88	347		Pn	00 42 27.2	+0.1
MDM				IAML		00 43 19.4	
	comp=E,387nm,0.9s						
MDM				IAML		00 43 32.5	
	comp=N,372nm,0.8s						
CHUM	Lake Minchumin	3.92	316	P	Pn	00 42 28.2	+0.6
	baz=130						
POKR	Poker Plat Res	3.96	352	Pn	Pn	00 42 28.4	+0.2
POKR				IAML		00 43 22.1	
	comp=N,412nm,0.9s						
POKR				IAML		00 43 23.2	
	comp=E,340nm,0.7s						
POKR	Poker Plat Res	3.96	352	P	Pn	00 42 28.2	0.0
	baz=171,SNR=84						
M19K	Big River Lodg	4.01	284	Pn	Pn	00 42 28.8	-0.1
M19K	Big River Lodg	4.01	284	P	Pn	00 42 28.6	-0.3
	baz=96						
N19K	Bonanza Creek	4.08	268	P	Pn	00 42 29.7	-0.3
	baz=80						
Q20K	Shuyak Island	4.09	233	P	Pn	00 42 30.8	+0.8
	baz=47						
O19K	Port Alsworth	4.15	259	Pn	Pn	00 42 31.4	+0.7
O19K	Port Alsworth	4.15	259	P	Pn	00 42 30.7	0.0
	baz=72						
L29M	L29M	4.21	60	P	Pn	00 42 33.0	+1.3
	baz=247						
I23K	Minto, Yukon-K	4.21	341	Pn	Pn	00 42 31.8	+0.2
I23K				IAML		00 43 42.1	
	comp=E,304nm,0.8s						
I23K				IAML		00 43 44.8	
	comp=N,384nm,1.5s						
I23K	Minto, Yukon-K	4.21	341	P	Pn	00 42 31.9	+0.2
	baz=158,SNR=58						
HYT	Haines Junctio	4.22	91		Pn	00 42 33.8	+2.0
HYT	Haines Junctio	4.22	91	P	Pn	00 42 32.7	+0.9
	baz=280						
DAWY	Dawson	4.23	44	Pn	Pn	00 42 32.9	+1.0
DAWY	Dawson	4.23	44	P	Pn	00 42 32.9	+1.0
	baz=231,SNR=22						
EGAK	Eagle	4.24	30		Pn	00 42 32.5	+0.5
EGAK				IAML		00 43 52.9	
	comp=N,333nm,0.8s						
EGAK				IAML		00 43 58.1	
	comp=N,335nm,0.8s						
EGAK	Eagle	4.24	30	P	Pn	00 42 33.5	+1.6
	baz=215,SNR=21						
L19K	White Mountain	4.26	287	Pn	Pn	00 42 32.4	0.0
L19K	White Mountain	4.26	287	P	Pn	00 42 32.2	-0.1
	baz=99						
K20K	Telida	4.28	304	Pn	Pn	00 42 33.1	+0.4
K20K				IAML		00 43 50.6	
	comp=E,280nm,1.0s						
K20K	Telida	4.28	304	P	Pn	00 42 32.7	+0.1
	baz=116,SNR=42						
I26K	Coal Creek Min	4.33	17	Pn	Pn	00 42 33.7	+0.5
I26K				IAML		00 43 53.7	
	comp=N,248nm,0.7s						
I26K				IAML		00 44 02.6	
	comp=E,282nm,0.9s						
I26K	Coal Creek Min	4.33	17	P	Pn	00 42 34.4	+1.3
	baz=200,SNR=27						
PRP	Porcupine Dome	4.33	3	Pn	Pn	00 42 33.7	+0.3
PRP				IAML		00 43 45.3	
	comp=E,278nm,0.5s						
PRP				IAML		00 43 53.4	
	comp=N,250nm,1.1s						
PRP	Porcupine Dome	4.33	3	P	Pn	00 42 33.9	+0.5
	baz=184,SNR=59						
MLY	Manley	4.37	333	P	Pn	00 42 34.0	+0.2
	baz=149,SNR=85						
N30M	Aishikik Lake	4.37	83	P	Pn	00 42 33.5	-0.3
	baz=271						

Q19K	**Cape Douglas,**	**4.40**	**242**	Pn	**Pn**	**00 42 35.6**	**+1.3**
Q19K	**Cape Douglas,**	**4.40**	**242**	P	**Pn**	**00 42 34.6**	**+0.3**
	baz=55						
SVW2	**Sparrevohn**	**4.58**	**273**	Pn	**Pn**	**00 42 36.1**	**-0.5**
SVW2	**Sparrevohn**	**4.58**	**273**	P	**Pn**	**00 42 36.0**	**-0.7**
M30M	**Minto, Yukon**	**4.63**	**69**		**Pn**	**00 42 39.3**	**+1.9**
M30M	**Minto, Yukon**	**4.63**	**69**	P	**Pn**	**00 42 37.7**	**+0.4**
	baz=258						
P30M	**Million Dollar**	**4.64**	**100**	P	**Pn**	**00 42 38.1**	**+0.4**
	baz=288						
O18K	**Koktuh Hills**	**4.68**	**257**	Pn	**Pn**	**00 42 37.8**	**-0.4**
O18K				IAML		00 44 02.5	
	comp=N,206nm,1.1s						
O18K				IAML		00 44 02.5	
	comp=E,154nm,0.8s						
O18K	**Koktuh Hills**	**4.68**	**257**	P	**Pn**	**00 42 37.3**	**-0.8**
	baz=69						
H24K	**Noodor Dome**	**4.71**	**351**	Pn	**Pn**	**00 42 39.1**	**+0.6**
H24K				IAML		00 43 40.0	
	comp=N,205nm,0.9s						
H24K				IAML		00 43 40.1	
	comp=E,291nm,0.9s						
H24K	**Noodor Dome**	**4.71**	**351**	P	**Pn**	**00 42 38.7**	**+0.2**
	baz=170,SNR=61						
KDAK	**Kodiak Island**	**4.75**	**227**	P	**Pn**	**00 42 39.4**	**+0.3**
	comp=E,14nm,0.3s,baz=53,slow=13,SNR=77						
KDAK				S	**Sn**	**00 43 28.8**	**-4.5**
	comp=E,57nm,0.3s,baz=323,slow=21,SNR=8.6						
KDAK				Lg	Lg	00 43 58.5	
	comp=E,2.2nm,0.3s,baz=318,slow=20,SNR=6.1						
	comp=E,36nm,0.4s						
KDAK	**Kodiak Island**	**4.75**	**227**	Pn	**Pn**	**00 42 39.6**	**+0.6**
KDAK				IAML		00 43 33.7	
	comp=E,154nm,0.5s						
KDAK				IAML		00 44 06.2	
	comp=E,155nm,0.9s						
I21K	**Tanana**	**4.78**	**329**		**Pn**	**00 42 39.7**	**+0.3**
I21K				IAML		00 43 41.4	
	comp=N,199nm,0.6s						
I21K				IAML		00 44 07.2	
	comp=E,164nm,1.0s						
I21K	**Tanana**	**4.78**	**329**	P	**Pn**	**00 42 39.8**	**+0.3**
	baz=143						
K29M	**Barlow Dome**	**4.79**	**53**	P	**Pn**	**00 42 41.0**	**+1.3**
	baz=241,SNR=11						
I27K	**Kandik River**	**4.85**	**23**	P	**Pn**	**00 42 42.1**	**+1.7**
	baz=207						
J29M	**Klondike Camp**	**4.87**	**45**	Pn	**Pn**	**00 42 40.8**	**0.0**
J29M	**Klondike Camp**	**4.87**	**45**	P	**Pn**	**00 42 41.4**	**+0.7**
	baz=232						
H23K	**Yukon River**	**4.88**	**343**	Pn	**Pn**	**00 42 41.0**	**+0.3**
H23K				IAML		00 43 45.9	
	comp=N,173nm,0.8s						
H23K				IAML		00 44 04.5	
	comp=E,154nm,1.3s						
H23K	**Yukon River**	**4.88**	**343**	P	**Pn**	**00 42 40.6**	**-0.1**
	baz=160,SNR=36						
P18K	**Big Mountain,**	**4.88**	**252**		**Pn**	**00 42 41.0**	**+0.2**
P18K	**Big Mountain,**	**4.88**	**252**	P	**Pn**	**00 42 40.4**	**-0.4**
	baz=64						
O30N	**Mendenhall**	**4.91**	**91**	P	**Pn**	**00 42 41.9**	**+0.6**
	baz=280						
TTA	**Tatalina**	**4.95**	**295**	Pn	**Pn**	**00 42 41.4**	**-0.4**
TTA	**Tatalina**	**4.95**	**295**	P	**Pn**	**00 42 41.2**	**-0.6**
TTA	**Tatalina**	**4.95**	**295**	P	**Pn**	**00 42 41.2**	**-0.6**
	baz=106,SNR=16						
N31M	**Braeburn, Yuko**	**5.00**	**82**	Pn	**Pn**	**00 42 43.5**	**+1.0**
N31M				IAML		00 44 10.0	
	comp=E,154nm,0.9s						
N31M				IAML		00 44 14.8	
	comp=N,161nm,1.2s						
N31M	**Braeburn, Yuko**	**5.00**	**82**	P	**Pn**	**00 42 42.9**	**+0.5**
	baz=272						
Q18K	**Katmai Hardscr**	**5.15**	**244**	P	**Pn**	**00 42 44.1**	**-0.5**
	baz=56						
PLBC	**Pleasant Camp**	**5.17**	**106**	P	**Pn**	**00 42 45.9**	**+1.2**
	baz=295						
H22K	**Ishtalitna Cre**	**5.25**	**336**	P	**Pn**	**00 42 45.9**	**0.0**
	baz=151						
MAYO	**Mayo, Yukon**	**5.33**	**59**	Pn	**Pn**	**00 42 47.6**	**+0.6**
MAYO				IAML		00 44 47.7	
	comp=E,219nm,0.9s						
H21K	**Melozitna Rive**	**5.37**	**329**	Pn	**Pn**	**00 42 47.4**	**-0.1**
H21K				IAML		00 44 22.2	
	comp=E,145nm,1.1s						
H21K				IAML		00 44 22.6	
	comp=N,116nm,1.4s						
H21K	**Melozitna Rive**	**5.37**	**329**	P	**Pn**	**00 42 47.6**	**+0.1**
	baz=143						
FYU	**Fort Yukon**	**5.39**	**4**	Pn	**Pn**	**00 42 49.0**	**+1.2**
FYU				IAML		00 44 26.5	
	comp=N,211nm,0.9s						
OHAK	**Old Harbor**	**5.43**	**226**	P	**Pn**	**00 42 48.3**	**0.0**
OHAK	**Old Harbor**	**5.43**	**226**	P	**Pn**	**00 42 48.0**	**-0.3**
	baz=39						
H27K	**Steamboat Moun**	**5.44**	**20**	P	**Pn**	**00 42 49.8**	**+1.3**
	baz=204						
I29M	**Ogilvie Camp,**	**5.46**	**37**	P	**Pn**	**00 42 49.4**	**+0.6**
	baz=224						
G24K	**Hadweenzic Riv**	**5.54**	**354**	P	**Pn**	**00 42 50.1**	**+0.2**
	baz=173						
G25K	**Bearman Lake**	**5.58**	**0**	P	**Pn**	**00 42 50.5**	**+0.2**
	baz=180						
O17K	**Koliganek Bris**	**5.61**	**260**	P	**Pn**	**00 42 50.1**	**-0.6**
	baz=70						
SKAG	**Skagway**	**5.65**	**103**	P	**Pn**	**00 42 53.3**	**+2.0**
SKAG	**Skagway**	**5.65**	**103**	P	**Pn**	**00 42 51.9**	**+0.6**
	baz=293						
M31M	**Drury Creek, Y**	**5.68**	**75**	P	**Pn**	**00 42 52.2**	**+0.4**
	baz=266						
Q17K	**Contact Creek**	**5.75**	**243**	P	**Pn**	**00 42 52.7**	**-0.1**
	baz=54						
G23K	**Bananza Creek**	**5.78**	**344**	P	**Pn**	**00 42 53.9**	**+0.7**
	baz=161						
G26K	**Porcupine Rive**	**5.85**	**9**	P	**Pn**	**00 42 54.8**	**+0.6**
	baz=191						
Q16K	**King Salmon**	**5.86**	**249**	P	**Pn**	**00 42 54.7**	**+0.4**
	baz=59						
G27K	**Doyon Strip**	**5.95**	**17**	P	**Pn**	**00 42 56.9**	**+1.3**
	baz=202						
GCSA	**Galena City Sc**	**6.04**	**311**	P	**Pn**	**00 42 56.9**	**+0.2**
	baz=121						
O16K	**Kokwok River B**	**6.14**	**260**	P	**Pn**	**00 42 57.9**	**-0.2**
	baz=69						
FARO	**Faro, Yukon**	**6.17**	**75**	P	**Pn**	**00 42 59.3**	**+0.8**
	baz=267,SNR=19						
G22K	**Bettles**	**6.20**	**340**	P	**Pn**	**00 42 59.2**	**+0.4**
	baz=155						
N16K	**Nishlik Lake**	**6.22**	**269**	P	**Pn**	**00 42 58.9**	**-0.3**
	baz=77						
G21K	**Allakaket**	**6.24**	**332**	P	**Pn**	**00 42 59.6**	**+0.2**
	baz=145						
BMAR	**Burnt Mountain**	**6.28**	**6**	Pn	**Pn**	**00 42 59.9**	**-0.2**
COLD	**Coldfoot**	**6.29**	**345**	Pn	**Pn**	**00 43 00.5**	**+0.3**
COLD	**Coldfoot**	**6.29**	**345**	P	**Pn**	**00 43 00.7**	**+0.5**
	baz=162,SNR=49						
P16K	**Nushagak River**	**6.31**	**255**	P	**Pn**	**00 43 00.7**	**+0.3**
	baz=64						
N32M	**Quiet Lake**	**6.32**	**85**	P	**Pn**	**00 43 01.7**	**+1.1**
	baz=277						
R17K	**Ugashik Creek**	**6.34**	**240**	P	**Pn**	**00 43 01.5**	**+0.7**
	baz=51						
P32M	**Atlin**	**6.37**	**99**	P	**Pn**	**00 43 01.9**	**+0.6**
	baz=291						
F24K	**Squaw Lake**	**6.38**	**354**	P	**Pn**	**00 43 01.7**	**+0.3**
	baz=172						
F25K	**Christian Rive**	**6.41**	**2**	P	**Pn**	**00 43 02.0**	**+0.1**
	baz=182						
F26K	**Sheenjek River**	**6.57**	**7**	P	**Pn**	**00 43 04.5**	**+0.6**
	baz=188						
R32K	**Eaglecrest**	**6.57**	**112**	P	**Pn**	**00 43 04.8**	**+0.8**
	baz=302						
P33M	**Teslin, Yukon**	**6.61**	**93**	P	**Pn**	**00 43 05.1**	**+0.4**
	baz=285						
JIS	**Juneau Island**	**6.63**	**111**	P	**Pn**	**00 43 06.5**	**+1.7**
EPYK	**Eagle Plains**	**6.64**	**35**	P	**Pn**	**00 43 05.6**	**+0.6**
	baz=223						
F21K	**Alatna River**	**6.83**	**335**	P	**Pn**	**00 43 07.8**	**+0.3**
	baz=148						
F22K	**John River**	**6.84**	**340**	P	**Pn**	**00 43 08.8**	**+1.1**
	baz=154						
E25K	**Arctic Village**	**6.94**	**2**	P	**Pn**	**00 43 09.5**	**+0.4**
	baz=182,SNR=18						
SIT	**Sitka**	**6.95**	**122**	P	**Pn**	**00 43 09.7**	**+0.6**
E24K	**Your Creek**	**6.96**	**353**	P	**Pn**	**00 43 09.7**	**+0.3**
	baz=170						
E23K	**Chandalar**	**7.03**	**349**	P	**Pn**	**00 43 10.9**	**+0.5**
	baz=166						
G30M	**tAoh Zraii Nji**	**7.23**	**33**	P	**Pn**	**00 43 13.2**	**+0.2**
	baz=222						
E27K	**Coleen River**	**7.27**	**14**	P	**Pn**	**00 43 14.2**	**+0.7**
	baz=198						
Q32M	**Nakina River**	**7.29**	**102**	P	**Pn**	**00 43 15.0**	**+0.9**
	baz=294						
TOLK	**Toolik Lake Re**	**7.60**	**350**	Pn	**Pn**	**00 43 19.6**	**+1.4**
TOLK	**Toolik Lake Re**	**7.60**	**350**	P	**Pn**	**00 43 19.1**	**+0.9**
	baz=167,SNR=23						
D23K	**Nanushuk River**	**8.02**	**348**	P	**Pn**	**00 43 24.5**	**+0.7**
	baz=164						
D25K	**Kavik River**	**8.15**	**359**	P	**Pn**	**00 43 25.9**	**+0.2**
	baz=179						
F31M	**Tsiigehtchic**	**8.23**	**35**	P	**Pn**	**00 43 27.4**	**+0.6**
	baz=227						
S34M	**Telegraph Cree**	**8.30**	**107**	P	**Pn**	**00 43 28.7**	**+1.0**
	baz=300						
C27K	**Jago River**	**8.51**	**6**	P	**Pn**	**00 43 31.1**	**+0.5**
	baz=188						
DLBC	**Dease Lake**	**8.57**	**102**	P	**Pn**	**00 43 32.4**	**+0.9**
	comp=N,0.2nm,0.3s,baz=112,slow=14,SNR=2.4						
DLBC				Lg	Lg	00 46 01.4	
	comp=N,0.4nm,0.3s,baz=230,slow=16,SNR=2.3						
DLBC				LR	LR	00 47 09.4	
	comp=N,192nm,19.5s,baz=318,slow=39						
	comp=N,2.2nm,0.6s						
C24K	**Franklin Bluff**	**8.61**	**354**	P	**Pn**	**00 43 33.0**	**+1.1**
	baz=172						
C26K	**Camden Bay**	**8.76**	**3**	P	**Pn**	**00 43 34.5**	**+0.6**
	baz=184						
INK	**Inuvik**	**8.91**	**32**	P	**Pn**	**00 43 36.0**	**0.0**
	comp=N,0.5nm,0.3s,baz=241,slow=21,SNR=20						
INK				S	**Sn**	**00 45 14.3**	**-1.1**
	comp=N,3.1nm,0.5s,baz=168,slow=18,SNR=1.6						
INK				Lg	Lg	00 46 09.9	
	comp=N,0.3nm,0.3s,baz=136,slow=5.4,SNR=4.6						
INK				LR	LR	00 46 38.8	
	comp=N,31nm,18.6s,baz=349,slow=35						
	comp=N,1.2nm,0.3s						
INK	**Inuvik**	**8.91**	**32**	P	**Pn**	**00 43 36.9**	**+0.9**
	baz=223						
ANM	**Nome**	**9.39**	**299**	P	**Pn**	**00 43 42.6**	**+0.1**
	baz=102,SNR=5.4						
TNA	**Tin City**	**10.67**	**303**	P	**Pn**	**00 43 60.0**	**-0.1**
	baz=104						
C36M	**Paulatuk**	**12.24**	**39**	Pn	**Pn**	**00 44 21.8**	**+0.3**
C36M	**Paulatuk**	**12.24**	**39**	P	**Pn**	**00 44 20.4**	**-1.1**
	baz=239						
UNV	**Unalaska Valle**	**13.15**	**245**	Pn	**Pn**	**00 44 32.3**	**-1.7**
BBB	**Bella Bella**	**13.36**	**124**	LR	LR	00 49 34.6	
	comp=N,61nm,20.1s,baz=172,slow=36						
A36M	**Sachs Harbour**	**13.52**	**28**	P	**Pn**	**00 44 39.8**	**+1.0**
	baz=228						
YKA	**Yellowknife Ar**	**14.86**	**71**	P	**Pn**	**00 44 56.9**	**-0.3**
	comp=N,0.4nm,0.3s,baz=274,slow=9.9,SNR=8.1						
	comp=N,0.5nm,0.6s						
NEW	**Newport**	**20.95**	**115**	P	Pn	00 46 11.8	-0.8
	comp=N,3.0nm,0.9s,baz=345,slow=5.5,SNR=5.1						
NEW				LR	LR	00 54 51.3	
	comp=N,111nm,18.6s,baz=314,slow=38						
	comp=N,3.0nm,0.9s						
NEW	**Newport**	**20.95**	**115**	P	**P**	**00 46 10.8**	**+0.9**
	baz=319						
YBH	**Yreka Blue Hor**	**24.11**	**133**	P	**P**	**00 46 43.5**	**+0.8**
	comp=N,2.4nm,0.9s,baz=349,slow=5.2,SNR=4.1						
YBH				LR	LR	00 54 11.0	
	comp=N,64nm,21.5s,baz=335,slow=31						
	comp=N,2.4nm,0.9s						
EGMT	**Eagleton**	**24.47**	**106**	P	**P**	**00 46 45.8**	**-0.1**
	baz=316						
HLID	**Hailey**	**25.82**	**119**	P	**P**	**00 46 59.2**	**+1.0**
	baz=324						
RLMT	**Red Lodge**	**26.86**	**110**	P	**P**	**00 47 09.2**	**+1.6**
	baz=320						
ELK	**Elko**	**27.81**	**123**	P	**P**	**00 47 16.3**	**+0.1**
	comp=N,1.1nm,0.9s,baz=322,slow=6.6,SNR=4.5						
	comp=N,1.1nm,0.9s						
SEY	**Seymchan**	**27.89**	**301**	P	**P**	**00 47 14.8**	**-1.7**
	comp=N,0.6nm,0.3s,baz=72,slow=5.8,SNR=4.2						
	comp=N,0.6nm,0.3s						
PDAR	**Pinedale Array**	**28.57**	**113**	P	**P**	**00 47 23.7**	**+0.8**
	comp=N,1.1nm,0.9s,baz=317,slow=6.3,SNR=6.8						
PDAR				LR	LR	00 59 11.0	
	comp=N,56nm,20.9s,baz=316,slow=37						
	comp=N,1.1nm,0.9s						
NVAR	**Mina Array Bea**	**28.62**	**130**	P	**P**	**00 47 24.8**	**+1.4**
	comp=N,0.6nm,0.7s,baz=312,slow=8.3,SNR=4.5						
NVAR				LR	LR	00 57 33.8	
	comp=N,29nm,20.7s,baz=341,slow=33						
	comp=N,0.6nm,0.7s						
R11A	**Troy Canyon, C**	**29.72**	**126**	P	**P**	**00 47 33.8**	**+0.6**
	baz=330						
RSSD	**Black Hills**	**30.03**	**105**	P	**P**	**00 47 36.2**	**+0.3**
	baz=320						
MA2	**Magadan**	**30.15**	**295**	LR	LR	01 01 50.7	
	comp=N,32nm,18.1s,baz=16,slow=41						
CWC	**Cottonwood Cre**	**30.46**	**132**	P	**P**	**00 47 40.1**	**+0.4**
	baz=334						
PETK	**Petropavlovsk-**	**30.61**	**280**	LR	LR	00 59 37.1	
	comp=N,39nm,21.9s,baz=92,slow=36						
MPMC	**Manual Prospec**	**31.02**	**131**	P	**P**	**00 47 46.6**	**+1.9**
	baz=333						
PKM	**Mcpherson Peak**	**31.25**	**135**	P	**P**	**00 47 48.7**	**+2.0**
	baz=336						
LRMC	**Laurel Mtn Rad**	**31.46**	**132**	P	**P**	**00 47 49.3**	**+0.8**
	baz=334						
BFSC	**Mount Baldy Ra**	**32.59**	**133**	P	**P**	**00 48 00.5**	**+2.1**
	baz=335						
ISCO	**Idaho Springs**	**32.72**	**112**	P	**P**	**00 48 00.4**	**+0.7**
	baz=325						
GMRC	**Granite Mounta**	**32.83**	**130**	P	**P**	**00 48 01.6**	**+1.2**
	baz=333						
WUAZ	**Wupatki**	**33.85**	**123**	P	**P**	**00 48 10.5**	**+1.0**
	baz=330,SNR=5.0						
YAK	**Yakutsk**	**37.36**	**309**	LR	LR	01 04 53.3	
	comp=N,35nm,18.0s,baz=112,slow=38						
WMOK	**Wichita Mounta**	**39.97**	**109**	P	**P**	**00 49 02.1**	**+0.8**
	baz=326						
SCHQ	**Schefferville**	**40.03**	**62**	P	**P**	**00 49 01.3**	**-0.3**
	comp=N,3.0nm,0.6s,baz=322,slow=7.8,SNR=9.8						
	comp=N,3.0nm,0.6s						
TXAR	**Lajitas Array**	**42.42**	**119**	P	**P**	**00 49 22.6**	**+1.1**
	comp=N,0.7nm,0.6s,baz=333,slow=6.8,SNR=8.5						
	comp=N,0.7nm,0.6s						
NRIK	**Noril'sk**	**44.25**	**336**	LR	LR	01 12 35.1	
	comp=N,24nm,18.1s,baz=30,slow=42						
ARCES	**ARCESS Array B**	**49.41**	**4**	P	**P**	**00 50 15.1**	**-0.9**
	comp=N,7.9nm,0.9s,baz=5.2,slow=11,SNR=3.4						
	comp=N,7.9nm,0.9s						
KSRS	**Korea Array**	**56.14**	**287**	LR	LR	01 14 51.5	
	comp=N,24nm,21.4s,baz=15,slow=36						
SONM	**Songino Array**	**56.72**	**310**	P	**P**	**00 51 10.4**	**+0.1**
	comp=N,1.2nm,0.8s,baz=27,slow=6.5,SNR=9.6						
SONM				LR	LR	01 16 54.7	
	comp=N,31nm,18.3s,baz=1.5,slow=38						
	comp=N,1.2nm,0.8s						
NOA	**NORSAR Array B**	**56.84**	**13**	LR	LR	01 16 24.1	
	comp=N,8.7nm,21.0s,baz=220,slow=37						
FINES	**FINESS Array B**	**57.52**	**4**	P	**P**	**00 51 13.4**	**-2.1**
	comp=N,0.4nm,0.4s,baz=14,slow=8.8,SNR=5.6						
	comp=N,0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**58.29**	**327**	P	**P**	**00 51 19.8**	**-1.3**
	comp=N,0.4nm,0.5s,baz=19,slow=6.1,SNR=2.4						
	comp=N,0.4nm,0.5s						
MKAR	**Makanchi Array**	**65.47**	**326**	P	**P**	**00 52 07.0**	**-2.6**
	comp=N,0.3nm,0.7s,baz=26,slow=5.3,SNR=5.9						
	comp=N,0.3nm,0.7s						
WMQ	**Urumqi**	**66.61**	**320**	*e*P	**P**	**00 52 19.7**	**+2.8**
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
AKASG	**Malin Array Be**	**68.38**	**3**	P	**P**	**00 52 26.4**	**-1.5**
	comp=Z,1.0nm,0.5s,baz=356,slow=6.1,SNR=7.2						
AKASG				LR	LR	01 21 49.3	
	comp=Z,14nm,21.8s,baz=248,slow=35						
	comp=Z,1.0nm,0.5s						
VRAC	**Vranov**	**68.96**	**12**	LR	LR	01 24 09.6	
	comp=Z,18nm,20.4s,baz=332,slow=37						
AAK	**Ala-Archa**	**71.37**	**330**	LR	LR	01 26 57.5	
	comp=Z,23nm,18.4s,baz=356,slow=38						
ESDC	**Sonseca Array**	**74.85**	**29**	P	**P**	**00 53 07.0**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=344,slow=5.2,SNR=6.1						
	comp=Z,0.5nm,0.7s						
PZH	**PanZhiHua**	**76.99**	**302**	P	**P**	**00 53 21.7**	**+2.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,5.1s						
CMAR	**Chiang Mai Arr**	**85.31**	**300**	LR	LR	01 33 53.0	
	comp=Z,7.3nm,21.0s,baz=20,slow=37						
BOSA	**Boshof**	**146.90**	**14**	PKPbc	**PKPdf**	**01 01 06.8**	**0.0**
	comp=Z,2.3nm,0.9s,baz=271,slow=3.3,SNR=3.1						

OTT 03 00:45:08.2±0.3**,77°.07N**×**103°.12W,h18**^{km}**,ML3.9**/7**,**
191km south from Isachsen, Nu Sverdrup Seismic
Zone.,Queen Elizabeth Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RES	**Resolute Bay**	**3.13**	**136**	PN	Pn	00 45 56.5	0.0
RES				SN	Sn	00 46 32.5	-0.8
RES				Trac		00 46 53.3	
	comp=Z,63nm,0.4s						
EUNU	**Eureka**	**4.45**	**40**	PN	Pn	00 46 09.4	-5.3
EUNU				SN	Sn	00 47 03.2	-2.8
EUNU				Trac		00 47 06.5	
	comp=Z,7.9nm,0.2s						
A36M	**Sachs Harbour**	**7.75**	**240**	PN	Pn	00 46 59.6	-0.3
A36M				SN	Sn	00 48 20.4	-6.7
A36M				Trac		00 48 53.2	
	comp=Z,64nm,1.6s						
C36M	**Paulatuk**	**9.76**	**228**	PN	Pn	00 47 26.6	-0.7
C36M				SN	Sn	00 49 09.4	-6.7
C36M				Trac		00 49 12.9	
	comp=Z,55nm,1.3s						
ILON	**Igloolik, Nuna**	**9.79**	**131**	PN	Pn	00 47 27.1	-0.7
ILON				SN	Sn	00 49 09.7	-7.5
ILON				Trac		00 49 36.1	
	comp=Z,20nm,0.8s						
KUKN	**Kugluktuk,NWT**	**9.94**	**207**	PN	Pn	00 47 29.3	-0.6
KUKN				SN	Sn	00 49 11.1	-10
KUKN				Trac		00 49 27.7	
	comp=Z,59nm,1.4s						

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*IDC **03** 00:45:17.1±2.3, 32°.63S×178°.21W, h0^{km}, mb4.0/2, mbtmp4.0/3, ML3.5/1, MS3.2/1, Error ellipse: s-maj=62.6km s-min=34.7km az=125.0*
*NEIC **03** 00:45:34.8±1.2, 33°.04S±0°.09×179°.46E±0°.06, h10^{km}±2^{km}, mb4.0/6, Error ellipse: s-maj=15.6km s-min=8.0km az=164.0*
ISC 03 00:45:32.8±1.1**,33°.1S**±0°.1×**179°.6E**±0°.2**,h10**^{km}**,n18,**
σ**2ˢ21**/17**,mb4.0**/6**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.35**	**30**	Pn	**Pn**	**00 46 41.4**	**+2.4**
MXZ	**Matakaoa Point**	**4.62**	**193**	Pn	**Pn**	**00 46 44.1**	**+1.6**
URZ	**Urewera**	**5.57**	**201**	Pn	**Pn**	**00 46 57.9**	**+2.2**
	0.9nm,0.3s,baz=134,slow=23,SNR=2.0						
URZ				Sn	**Sb**	**00 48 14.9**	**-1.9**
	4.2nm,0.3s,baz=328,slow=5.9,SNR=8.7						
	2.3nm,0.3s						
RTZ	**Ruatahuna**	**5.94**	**200**	Pn	**Pn**	**00 47 03.2**	**+2.4**
BKZ	**Black Stump Fm**	**6.59**	**201**	Pn	**Pn**	**00 47 13.0**	**+3.2**
KHZ	**Kahutara**	**10.49**	**205**	Pn	**Pn**	**00 48 05.3**	**+2.0**
DZM	**Mont Dzumac**	**15.97**	**310**	LR	LR	00 55 01.8	
	comp=Z,74nm,18.9s,baz=190,slow=34						
AS31	**Alice Springs**	**41.01**	**271**	P	**P**	**00 53 17.1**	**+0.8**
AS31				IAmb	IAmb	00 53 27.2	
	comp=Z,0.7nm,0.8s						
ASAR	**Alice Springs**	**41.01**	**271**	P	**P**	**00 53 17.5**	**+1.2**
	comp=Z,1.0nm,0.5s,baz=111,slow=7.9,SNR=10						
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**41.01**	**271**	P	**P**	**00 53 17.1**	**+0.8**
WR0	**Warramunga Arr**	**42.07**	**276**	P	**P**	**00 53 25.0**	**0.0**
WR0				IAmb	IAmb	00 53 55.7	
	comp=Z,6.4nm,1.2s						
WB2	**Warramunga Arr**	**42.24**	**276**	P	**P**	**00 53 26.5**	**+0.1**
WB2				IAmb	IAmb	00 53 53.9	
	comp=Z,8.7nm,1.4s						
WRA	**Warramunga Arr**	**42.25**	**276**	P	**P**	**00 53 26.7**	**+0.3**
	comp=Z,1.5nm,0.5s,baz=113,slow=7.9,SNR=32						
	comp=Z,1.5nm,0.5s						
WRA	**Warramunga Arr**	**42.25**	**276**	P	**P**	**00 53 26.5**	**+0.1**
WB0	**Warramunga Arr**	**42.28**	**277**	P	**P**	**00 53 27.1**	**+0.3**
WB0				IAmb	IAmb	00 53 29.0	
	comp=Z,3.0nm,0.8s						
QSPA	**South Pole Qui**	**57.06**	**180**	P	**P**	**00 55 17.7**	**-1.2**
FINES	**FINESS Array B**	**146.86**	**337**	PKPbc	PKPdf	01 05 00.9	-12
	comp=Z,1.3nm,0.5s,baz=46,slow=3.6,SNR=17						
BRTR	**Keskin Array B**	**151.92**	**293**	PKPbc	**PKPdf**	**01 05 16.5**	**-5.2**
	comp=Z,0.2nm,0.5s,baz=122,slow=1.8,SNR=1.9						

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*IDC **03** 00:46:03.5±1.1, 61°.25N×27°.65W, h0^{km}, mb3.4/7, mbtmp3.4/7, MS3.1/8, Error ellipse: s-maj=38.9km s-min=24.5km az=174.0*
ISC 03 00:46:05.0±1.0**,61°.3N**±0°.2×**27°.7W**±0°.2**,h10**^{km}**,n13,**
σ**0ˢ45**/7**,mb3.5**/7**,MS3.1**/6**,Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFJD	**Kangerlussuaq**	**11.52**	**310**	LR	LR	00 52 38.4	
	comp=Z,86nm,18.3s,baz=133,slow=34						
NOA	**NORSAR Array B**	**18.58**	**73**	LR	LR	00 56 22.1	
	comp=Z,28nm,18.6s,baz=285,slow=33						
DAVOX	**Davos/Dischmat**	**25.93**	**107**	LR	LR	01 01 52.5	
	comp=Z,32nm,18.8s,baz=260,slow=37						
GERES	**GERESS Array B**	**26.25**	**99**	LR	LR	01 02 16.8	
	comp=Z,47nm,18.1s,baz=260,slow=37						
VRAC	**Vranov**	**27.32**	**96**	LR	LR	01 01 57.8	
	comp=Z,24nm,20.4s,baz=325,slow=35						
PDAR	**Pinedale Array**	**50.03**	**288**	P	**P**	**00 54 59.6**	**+0.1**
	0.6nm,0.8s,baz=56,slow=7.2,SNR=4.8						
PDAR				LR	LR	01 16 57.1	
	comp=Z,22nm,21.4s,baz=72,slow=37						
	0.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**52.53**	**143**	P	**P**	**00 55 18.3**	**0.0**
	0.8nm,1.0s,baz=333,slow=8.8,SNR=3.5						
	0.8nm,1.0s						
ZALV	**Zalesovo Beam**	**53.36**	**43**	P	**P**	**00 55 24.4**	**+0.5**
	0.2nm,0.4s,baz=335,slow=6.5,SNR=1.4						
	0.2nm,0.4s						
ANMO	**Albuquerque**	**54.81**	**280**	LR	LR	01 17 19.4	
	comp=Z,37nm,18.9s,baz=170,slow=34						
NVAR	**Mina Array Bea**	**57.48**	**291**	P	**P**	**00 55 54.6**	**+0.4**
	0.1nm,0.3s,baz=72,slow=5.9,SNR=2.2						
NVAR				LR	LR	01 18 17.1	
	comp=Z,28nm,18.4s,baz=324,slow=34						
	0.1nm,0.3s						
TXAR	**Lajitas Array**	**58.08**	**273**	P	**P**	**00 55 58.1**	**-0.2**
	0.2nm,0.7s,baz=64,slow=4.1,SNR=1.7						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**58.49**	**49**	P	**P**	**00 56 01.0**	**+0.2**
	0.3nm,0.7s,baz=341,slow=5.7,SNR=4.7						
	0.3nm,0.7s						
SONM	**Songino Array**	**65.14**	**32**	P	**P**	**00 56 45.2**	**-0.6**
	0.1nm,0.4s,baz=323,slow=9.1,SNR=1.7						
	0.1nm,0.4s						

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*DDA **03** 01:30:46.0±0.0, 37°.58N×38°.50E, h7^{km}±2^{km}, ML2.3*
*ISK **03** 01:30:47.9, 37°.51N×38°.48E, h19^{km}, ML2.6/12*
ISC 03 01:30:46.2±1.2**,37°.60N**±0°.03×**38°.51E**±0°.02**,h2**^{km}±11^{km}**,**
n22,σ**1ˢ01**/33**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URFA	**Urfa**	**0.29**	**122**	Pg	**Pb**	**01 30 54.9**	**+0.7**
URFA				Sg	**Sb**	**01 30 59.3**	**-0.3**
HANM	**anlurfa/Hi**	**0.29**	**93**	P	**Pg**	**01 30 52.4**	**+0.5**
HANM				*i* AML	AML	01 30 56.0	
	comp=N,692nm,0.2s						
HANM				*i* AML	AML	01 30 56.0	
	comp=E,193nm,0.2s						
HANM				S	**Sg**	**01 30 56.6**	**+0.9**
SANL	**SANLIURFA_Merk**	**0.57**	**138**	P	**Pg**	**01 30 57.5**	**+0.3**
SANL				S	**Sg**	**01 31 05.0**	**+0.5**
SANL				*i* AML	AML	01 31 10.0	
	comp=E,245nm,0.5s						
SANL				*i* AML	AML	01 31 11.0	
	comp=N,196nm,0.8s						
AKCA	**Adyaman/G¶l**	**0.68**	**287**	P	**Pg**	**01 30 59.7**	**+0.3**
AKCA				S	**Sg**	**01 31 08.9**	**+0.7**
AKCA				*i* AML	AML	01 31 13.0	
	comp=E,138nm,0.2s						
AKCA				*i* AML	AML	01 31 14.0	
	comp=N,175nm,0.3s						
MAYA	**Malatya/Merkez**	**0.73**	**355**	P	**Pg**	**01 31 00.4**	**+0.2**
GZT	**Gaziantep**	**0.79**	**253**	P	**Pg**	**01 31 01.7**	**+0.3**
GZT				*i* AML	AML	01 31 15.0	
	comp=N,193nm,0.3s						
GZT				S	**Sb**	**01 31 15.2**	**+1.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GZT				*i* AML	AML	01 31 16.0	
	comp=E,147nm,0.2s						
NZIP	**Nizip/Gaziante**	**0.87**	**231**	P	**Pg**	**01 31 03.0**	**+0.2**
NZIP				S	**Sg**	**01 31 14.9**	**+0.8**
NZIP				*i* AML	AML	01 31 18.0	
	comp=E,109nm,0.3s						
NZIP				*i* AML	AML	01 31 21.0	
	comp=N,129nm,0.4s						
GAZ	**Gaziantep**	**1.12**	**248**	Pg	**Pb**	**01 31 08.3**	**-0.1**
GAZ				Sg	**Sb**	**01 31 23.2**	**-0.2**
KAHM	**Kahramanmaras,**	**1.22**	**267**	P	**Pg**	**01 31 08.6**	**-0.9**
KAHM				S	**Sg**	**01 31 25.0**	**-0.3**
KAHM				*i* AML	AML	01 31 30.0	
	comp=E,28nm,0.3s						
DARE	**Darende-Malaty**	**1.27**	**320**	Pn	**Pn**	**01 31 11.8**	**+0.7**
DARE				Sn	**Sn**	**01 31 29.7**	**+1.0**
HCB	**Kahramanmara**	**1.30**	**259**	P	**Pn**	**01 31 09.7**	**-1.8**
HCB				S	**Sg**	**01 31 27.2**	**-0.8**
HCB				*i* AML	AML	01 31 29.0	
	comp=E,42nm,0.2s						
HCB				*i* AML	AML	01 31 29.0	
	comp=N,25nm,0.4s						
DYBB	**Diyarbakir**	**1.34**	**74**	Pn	**Pg**	**01 31 12.4**	**+0.5**
DYBB				Sn	**Sn**	**01 31 31.5**	**+1.1**
ARPR	**Arapgir-MALATY**	**1.50**	**355**	Pn	**Pg**	**01 31 15.3**	**+0.3**
MAZI	**Mazidag**	**1.54**	**95**	Pn	**Pn**	**01 31 14.9**	**0.0**
SARI	**SarD1z-Kayseri**	**1.84**	**297**	Pn	**Pn**	**01 31 19.8**	**+0.8**
SAIM	**ADANA**	**1.96**	**282**	P	**Pn**	**01 31 18.6**	**-2.0**
KOZT	**Kozan**	**2.14**	**268**	Pn	**Pn**	**01 31 23.3**	**+0.4**
SVAN	**Silvan-Diyarba**	**2.20**	**75**	Pn	**Pb**	**01 31 25.3**	**-1.4**
SVAN	**Silvan-Diyarba**	**2.20**	**75**	P	**Pn**	**01 31 22.4**	**-1.4**
BNGB	**Bingl**	**2.20**	**50**	Pn	**Pb**	**01 31 26.2**	**-0.6**
BNN	**Bunyan**	**2.44**	**302**	Pn	**Pn**	**01 31 28.4**	**+1.1**
GURO	**Guroymak-BITLI**	**2.94**	**70**	Pn	**Pb**	**01 31 36.7**	**-2.7**

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*TEH **03** 01:42:31.6, 24°.96N×63°.34E, h10^{km}, ML3.7*
*DSN **03** 01:42:44.3±1.6, 25°.10N×62°.51E, h15^{km}, ML3.3/12, Error ellipse: s-maj=25.0km s-min=15.2km az=177.0*
*OMAN **03** 01:42:45.2±0.3, 24°.83N×62°.65E, h42^{km}±23^{km}, mb4.9/15, ml3.5/7, Error ellipse: s-maj=5.4km s-min=4.7km az=263.0*
ISC 03 01:42:33.6±2.1**, 24°.98N**±0°.07×**63°.1E**±0°.1**, h10^{km}, n59, σ2^s.91**/76**, Off coast of Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NGCH	**Negor - Chabah**	**1.85**	**282**	P	**Pb**	**01 43 08.2**	**+0.7**
	SNR=52						
NGCH				S	**Sn**	**01 43 29.4**	**+0.6**
NGCH	**Negor - Chabah**	**1.85**	**282**	Pn	**Pb**	**01 43 08.1**	**+0.6**
CHBR	**Chabahar**	**2.48**	**285**	Pn	**Pn**	**01 43 16.1**	**+2.1**
SRVN	**Saravan**	**2.51**	**345**	Pn	**Pb**	**01 43 16.1**	**-2.7**
JLN	**Jalan Bani Buh**	**4.42**	**231**	P	**Pn**	**01 43 43.7**	**+2.9**
	SNR=15						
JLN				S	**Sn**	**01 44 30.3**	**-2.1**
WSAR	**Wadi Sarin**	**4.46**	**248**	P	**Pn**	**01 43 43.5**	**+2.1**
WSAR				S	**Sn**	**01 44 28.6**	**-4.7**
WBK	**Wadi Bani Khal**	**4.48**	**239**	P	**Pn**	**01 43 44.1**	**+2.5**
	SNR=69						
WBK				S	**Sn**	**01 44 30.4**	**-3.4**
BIDO	**Bidbid**	**4.79**	**253**	P	**Pn**	**01 43 50.4**	**+4.5**
	SNR=7.1						
BIDO				S	**Sn**	**01 44 37.5**	**-3.9**
BIDO	**Bidbid**	**4.79**	**253**	Pn	**Pn**	**01 43 49.3**	**+3.4**
ZHDN	**Zahedan**	**4.87**	**335**	Pn	**Pn**	**01 43 48.2**	**+1.1**
SMDO	**Samad**	**5.02**	**249**	P	**Pn**	**01 43 52.0**	**+2.9**
	SNR=13						
SMDO				S	**Sn**	**01 44 43.5**	**-3.8**
JMDO	**Jabal Madar**	**5.29**	**242**	P	**Pn**	**01 43 56.4**	**+3.7**
	SNR=35						
JMDO				S	**Sn**	**01 44 51.0**	**-2.8**
HOQ	**Hoqain**	**5.49**	**257**	P	**Pn**	**01 43 57.9**	**+2.4**
	SNR=24						
HOQ				S	**Sn**	**01 44 54.2**	**-4.5**
BSY	**Bisya**	**5.87**	**249**	P	**Pn**	**01 44 04.5**	**+3.9**
	SNR=9.1						
BSY				S	**Sn**	**01 45 05.2**	**-2.8**
SOHO	**SOHO**	**6.07**	**263**	*i* P	**Pn**	**01 44 04.9**	**+1.5**
	SNR=12						
SOHO	**SOHO**	**6.07**	**263**	P	**Pn**	**01 44 04.9**	**+1.5**
SOHO	**SOHO**	**6.07**	**263**	Pn	**Pn**	**01 44 05.4**	**+2.1**
MHTO	**MHTO**	**6.20**	**231**	P	**Pn**	**01 44 09.1**	**+3.9**
MHTO				S	**Sn**	**01 45 13.0**	**-3.1**
MDH	**Madha**	**6.20**	**274**	P	**Pn**	**01 44 06.6**	**+1.4**
	SNR=7.3						
MDH	**Madha**	**6.20**	**274**	Pn	**Pn**	**01 44 06.6**	**+1.4**
BANOM	**Banah**	**6.25**	**280**	P	**Pn**	**01 44 07.8**	**+1.9**
BANOM	**Banah**	**6.25**	**280**	P	**Pn**	**01 44 07.9**	**+2.0**
	SNR=37						
BANOM	**Banah**	**6.25**	**280**	Pn	**Pn**	**01 44 07.8**	**+1.9**
ARQ	**Araqi**	**6.25**	**256**	P	Pn	01 44 11.0	+5.0
	SNR=70						
ARQ				S	**Sn**	**01 45 15.6**	**-2.0**
UOSS	**Minazif**	**6.29**	**271**	*i* P	**Pn**	**01 44 07.2**	**+0.7**
	SNR=12						
UOSS	**Minazif**	**6.29**	**271**	Pn	**Pn**	**01 44 07.6**	**+1.1**
MSFE	**Esma-Masafi**	**6.33**	**275**	*i* P	**Pn**	**01 44 07.7**	**+0.7**
	SNR=7.1						
MSFE	**Esma-Masafi**	**6.33**	**275**	Pn	**Pn**	**01 44 08.3**	**+1.2**
HATD	**Hatta, Dubai**	**6.36**	**270**	*i* P	**Pn**	**01 44 08.7**	**+1.3**
	SNR=26						
HATD	**Hatta, Dubai**	**6.36**	**270**	P	**Pn**	**01 44 08.7**	**+1.3**
	SNR=26						
HATD	**Hatta, Dubai**	**6.36**	**270**	Pn	**Pn**	**01 44 09.4**	**+2.0**
SHME	**Shamm**	**6.41**	**281**	P	**Pn**	**01 44 10.5**	**+2.5**
SHME	**Shamm**	**6.41**	**281**	P	**Pn**	**01 44 10.7**	**+2.7**
	SNR=29						
SHME	**Shamm**	**6.41**	**281**	Pn	**Pn**	**01 44 12.2**	**+4.1**
IBND	**Bandar-abas**	**6.41**	**294**	Pn	**Pn**	**01 44 11.4**	**+3.3**
ASHO	**Ashiyiah**	**6.43**	**269**	*i* P	**Pn**	**01 44 11.0**	**+2.5**
	SNR=105						
ASHO				S	**Sn**	**01 45 18.8**	**-3.2**
ASHO	**Ashiyiah**	**6.43**	**269**	P	**Pn**	**01 44 10.5**	**+2.1**
	SNR=104						
ASHO	**Ashiyiah**	**6.43**	**269**	Pn	**Pn**	**01 44 10.8**	**+2.3**
GENO	**Geno**	**6.70**	**293**	Pn	**Pn**	**01 44 15.1**	**+2.8**
NAZ	**Nazwa, Dubai**	**6.78**	**272**	*i* P	**Pn**	**01 44 16.9**	**+3.7**
	SNR=12						
NAZ	**Nazwa, Dubai**	**6.78**	**272**	P	**Pn**	**01 44 15.6**	**+2.5**
	SNR=12						
NAZ				S	**Sn**	**01 45 28.2**	**-2.2**
NAZ	**Nazwa, Dubai**	**6.78**	**272**	Pn	**Pn**	**01 44 16.6**	**+3.4**
ALNE	**Al Ain**	**6.79**	**264**	*i* P	**Pn**	**01 44 16.6**	**+3.3**
	SNR=9.4						
ALNE	**Al Ain**	**6.79**	**264**	P	**Pn**	**01 44 17.6**	**+4.4**
	SNR=16						
ALNE				S	**Sn**	**01 45 28.0**	**-2.6**
ALNE	**Al Ain**	**6.79**	**264**	Pn	**Pn**	**01 44 17.0**	**+3.7**
FAQ	**Al Faqa, Dubai**	**6.85**	**270**	*i* P	**Pn**	**01 44 18.0**	**+3.8**
	SNR=23						
FAQ	**Al Faqa, Dubai**	**6.85**	**270**	P	**Pn**	**01 44 18.6**	**+4.4**
	SNR=23						
FAQ				S	**Sn**	**01 45 30.3**	**-1.9**
NHDN	**Nehbandan**	**6.95**	**338**	Pn	**Pn**	**01 44 16.1**	**+0.5**
ASUD	**Al Ashush, Dub**	**7.10**	**269**	*i* P	**Pn**	**01 44 21.2**	**+3.6**
	SNR=12						
ASUD	**Al Ashush, Dub**	**7.10**	**269**	P	**Pn**	**01 44 22.1**	**+4.6**
	SNR=12						
ASUD				S	**Sn**	**01 45 36.8**	**-1.5**
NGRK	**Negar Kerman**	**7.35**	**311**	Pn	**Pn**	**01 44 24.7**	**+3.3**
AJN	**Ajban**	**7.42**	**269**	P	**Pn**	**01 44 25.6**	**+3.7**
AJN				S	**Sn**	**01 45 43.0**	**-3.1**
UMZA	**Um Al Zommool**	**7.64**	**254**	P	**Pn**	**01 44 28.7**	**+3.8**
UMZA				S	**Sn**	**01 45 48.2**	**-3.3**
UMZA	**Um Al Zommool**	**7.64**	**254**	Pn	**Pn**	**01 44 28.7**	**+3.8**
ESRB	**Sir Abu**	**8.07**	**274**	Pn	**Pn**	**01 44 33.8**	**+2.9**
MZR	**Muzera**	**9.04**	**259**	P	**Pn**	**01 44 46.4**	**+2.2**
MZR	**Muzera**	**9.04**	**259**	P	**Pn**	**01 44 46.8**	**+2.5**
MZR	**Muzera**	**9.04**	**259**	Pn	**Pn**	**01 44 46.6**	**+2.4**
TPRV	**Parvadeh(Tabas**	**9.81**	**326**	Pn	**Pn**	**01 44 57.1**	**+2.3**

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*IDC **03** 01:48:12.7±1.5, 9°.78S×154°.48E, h0^{km}, mb3.6/6, mbtmp3.6/6, MS3.3/11, Error ellipse: s-maj=57.0km s-min=24.8km az=124.0*
ISC 03 01:48:15.6±1.2**, 9°.8S**±0°.3×**154°.4E**±0°.3**, h18^{km}, n14, σ1^s.34**/6**, mb3.6**/6**, MS3.2**/8**, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.44**	**87**	LR	LR	01 51 22.3	
	comp=Z,1µm,21.4s,baz=289,slow=35						
KRVT	**Keravat (AS076**	**5.92**	**336**	LR	LR	01 52 08.6	
	comp=Z,115nm,19.0s,baz=281,slow=40						
CTA	**Charters Tower**	**12.96**	**217**	LR	LR	01 56 04.4	
	comp=Z,74nm,18.2s,baz=80,slow=36						
WRA	**Warramunga Arr**	**21.88**	**240**	P	**P**	**01 53 07.4**	**-0.4**
	1.2nm,0.8s,baz=65,slow=9.8,SNR=4.6						
	1.2nm,0.8s						
ASAR	**Alice Springs**	**24.00**	**232**	P	**P**	**01 53 28.9**	**-0.6**
	1.0nm,0.8s,baz=58,slow=9.3,SNR=6.7						
ASAR				LR	LR	02 02 18.8	
	comp=Z,69nm,18.8s,baz=84,slow=35						
	1.0nm,0.8s						
STKA	**Stephens Creek**	**25.03**	**207**	P	**P**	**01 53 39.2**	**+0.5**
	1.3nm,0.6s,baz=32,slow=15,SNR=1.7						
STKA				LR	LR	02 02 39.3	
	comp=Z,72nm,20.1s,baz=29,slow=35						
	1.3nm,0.6s						
GUMO	**Guam**	**25.06**	**338**	LR	LR	02 04 47.5	
	comp=Z,11nm,18.4s,baz=108,slow=40						
KAPI	**Kappang**	**34.70**	**275**	LR	LR	02 11 17.6	
	comp=Z,32nm,18.6s,baz=223,slow=40						
URZ	**Urewera**	**34.93**	**148**	LR	LR	02 07 08.7	
	comp=Z,81nm,18.3s,baz=321,slow=33						
RPZ	**Rata Peaks**	**36.79**	**160**	LR	LR	02 09 32.8	
	comp=Z,84nm,18.8s,baz=237,slow=35						
MJAR	**Matsushiro Arr**	**48.52**	**343**	LR	LR	02 15 03.3	
	comp=Z,20nm,21.5s,baz=181,slow=33						
SONM	**Songino Array**	**71.36**	**328**	P	**P**	**01 59 35.5**	**+1.0**
	1.7nm,0.9s,baz=148,slow=6.1,SNR=8.3						
	1.7nm,0.9s						
ILAR	**Eielson Array**	**86.13**	**22**	P	**P**	**02 00 53.5**	**-1.7**
	0.3nm,0.8s,baz=248,slow=4.8,SNR=2.6						
ILAR				LR	LR	02 34 23.1	
	comp=Z,22nm,20.1s,baz=96,slow=32						
	0.3nm,0.8s						
NVAR	**Mina Array Bea**	**93.85**	**52**	P	**P**	**02 01 33.4**	**+0.9**
	0.1nm,0.4s,baz=252,slow=5.6,SNR=1.5						
	0.1nm,0.4s						

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*BJI **03** 02:14:30.7±0.0, 5°.76S×149°.66E, h99^{km}, mb4.7/28, mB5.1/11*
*IDC **03** 02:14:32.4±0.4, 5°.77S×149°.45E, h92^{km}±3^{km}, mb4.2/17, mbtmp4.5/20, MS3.2/21, Error ellipse: s-maj=11.4km s-min=7.4km az=116.0*
*NEIC **03** 02:14:33.5±1.3, 5°.73S±0°.08×149°.36E±0°.09, h100^{km}±6^{km}, mb4.7/39, Error ellipse: s-maj=14.0km s-min=9.5km az=128.0*
*DJA **03** 02:14:33.4±0.4, 6°S±3°×14°9E±°, h99^{km}±5^{km}, M4.8/24, mb4.7/24, mB5.1/9, MLv5.2/3, Mw(mB)4.5/9, MwMwp5.3/1, Mwp5.5/1*
ISC 03 02:14:32.9±0.4**, 5°.76S**±0°.04×**149°.37E**±0°.05**, h96^{km}**±3^{km}**, h96^{km}:pP-P, n148, σ1^s.20**/160**, mb4.7**/44**, 2C, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.01**	**61**	P	**Pn**	**02 15 19.2**	**+0.5**
	668nm,0.4s,baz=334,slow=0.8,SNR=45						
KRVT				S	**Sn**	**02 15 52.3**	**-1.8**
	332nm,0.7s,baz=176,slow=13,SNR=4.8						
RABL	**Rabaul**	**3.19**	**61**		**Pn**	**02 15 23.4**	**+2.3**
RABL	**Rabaul**	**3.19**	**61**	P	**Pn**	**02 15 24.2**	**+3.0**
PMG	**Port Moresby**	**4.23**	**211**	P	**Pn**	**02 15 35.4**	**+0.1**
	141nm,0.2s,baz=305,slow=14,SNR=54						
PMG				S	**Sn**	**02 16 25.0**	**+1.4**
	581nm,0.3s,baz=233,slow=21,SNR=9.2						
PMG	**Port Moresby**	**4.23**	**211**	Pn	**Pn**	**02 15 37.3**	**+2.1**
PMG	**Port Moresby**	**4.23**	**211**	P	**Pn**	**02 15 35.4**	**+0.1**
PMG	**Port Moresby**	**4.23**	**211**	P	**Pn**	**02 15 35.3**	**+0.1**
COEN	**Coen**	**10.18**	**216**	Pn	**Pn**	**02 16 56.6**	**+0.4**
COEN	**Coen**	**10.18**	**216**	P	**Pn**	**02 16 56.5**	**+0.4**
MTSU	**Mount Surprise**	**13.25**	**201**	P	**Pn**	**02 17 38.7**	**+1.3**
CTA	**Charters Tower**	**14.56**	**192**	P	**Pn**	**02 17 55.1**	**+0.8**
	4.0nm,0.9s,baz=19,slow=14,SNR=1.9						
CTA				LR	LR	02 23 02.8	
	comp=Z,54nm,18.5s,baz=82,slow=35						
CTA	**Charters Tower**	**14.56**	**192**	P	**Pn**	**02 17 54.5**	**+0.2**
CTAO	**Charters Tower**	**14.56**	**192**	Pn	**Pn**	**02 17 53.0**	**-1.4**
CTAO	**Charters Tower**	**14.56**	**192**	P	**Pn**	**02 17 54.6**	**+0.2**
FAKI	**Fak Fak**	**17.30**	**279**		**P**	**02 18 28.4**	**-0.2**
FAKI				IAmb	IAmb	02 18 33.4	
	comp=Z,79nm,1.2s						
QIS	**Mount Isa**	**17.50**	**212**	P	**Pn**	**02 18 32.1**	**+1.1**
KDU	**Kakadu**	**18.04**	**246**	P	**P**	**02 18 36.4**	**-0.3**
MTN	**Manton Dam**	**19.32**	**247**		**P**	**02 18 50.0**	**-0.7**
MTN				IAmb	IAmb	02 18 52.4	
	comp=Z,27nm,0.9s						
MTN	**Manton Dam**	**19.32**	**247**	P	**P**	**02 18 50.9**	**+0.2**
EIDS	**Eidsvold**	**19.57**	**175**	P	**Pn**	**02 18 54.8**	**-0.7**
EIDS	**Eidsvold**	**19.57**	**175**	P	**Pn**	**02 18 55.5**	**0.0**
GUMO	**Guam**	**19.74**	**347**	LR	LR	02 25 08.5	
	comp=Z,50nm,20.4s,baz=120,slow=32						
WB0	**Warramunga Arr**	**20.15**	**225**	P	**P**	**02 18 60.0**	**+0.2**
WB0				IAmb	IAmb	02 19 01.7	
	comp=Z,54nm,0.8s						
WR0	**Warramunga Arr**	**20.18**	**224**	P	**P**	**02 19 00.2**	**+0.2**
WR0				IAmb	IAmb	02 19 02.0	
	comp=Z,65nm,0.9s						
WRAB	**Tennant Creek**	**20.29**	**225**	P	**P**	**02 19 01.7**	**+0.5**
WB2	**Warramunga Arr**	**20.30**	**225**	P	**P**	**02 19 00.9**	**-0.4**
WB2				IAmb	IAmb	02 19 03.3	
	comp=Z,62nm,0.9s						
WRA	**Warramunga Arr**	**20.31**	**225**	P	**P**	**02 19 02.0**	**+0.6**
	comp=Z,40nm,0.7s,baz=50,slow=11,SNR=103						
WRA				S	**S**	**02 22 42.9**	**-1.0**
	comp=Z,8.0nm,1.2s,baz=52,slow=22,SNR=12						
WRA				ScP	**ScP**	**02 26 36.5**	**-2.8**
	comp=Z,2.7nm,1.0s,baz=33,slow=2.1,SNR=5.0						
	comp=Z,40nm,0.7s						
WRA	**Warramunga Arr**	**20.31**	**225**	P	**P**	**02 19 00.8**	**-0.6**
RMQ	**Roma**	**20.62**	**182**	P	Pn	02 19 06.4	-1.4
KOUNC	**Koumac, New Ca**	**20.64**	**137**	P	**P**	**02 19 05.2**	**+0.3**
KOUNC				IAmb	IAmb	02 19 07.3	
	comp=Z,22nm,1.1s						
KNRA	**Kununurra**	**22.50**	**242**	P	**P**	**02 19 23.5**	**-1.3**
KNRA				IAmb	IAmb	02 19 27.9	
	comp=Z,26nm,0.8s						
KNRA	**Kununurra**	**22.50**	**242**	P	**P**	**02 19 23.9**	**-0.8**
DZM	**Mont Dzumac**	**23.14**	**136**	P	**P**	**02 19 31.0**	**-0.2**
	comp=Z,21nm,0.6s,baz=275,slow=7.5,SNR=18						
DZM				LR	LR	02 27 15.7	
	comp=Z,130nm,21.0s,baz=344,slow=33						
	comp=Z,21nm,0.6s						
DZM	**Mont Dzumac**	**23.14**	**136**	P	**P**	**02 19 29.7**	**-1.5**
DZM				IAmb	IAmb	02 19 32.3	
	comp=Z,48nm,1.0s						
DZM	**Mont Dzumac**	**23.14**	**136**	P	**P**	**02 19 31.2**	**0.0**
AS01	**Alice Springs**	**23.18**	**218**	P	**P**	**02 19 31.3**	**-0.2**
	comp=Z,24nm,0.9s						
AS31	**Alice Springs**	**23.21**	**218**	P	**P**	**02 19 31.4**	**-0.4**
AS31				IAmb	IAmb	02 19 33.1	
	comp=Z,8.3nm,0.4s						
ASAR	**Alice Springs**	**23.21**	**218**	P	**P**	**02 19 31.9**	**0.0**
	comp=Z,9.8nm,0.3s,baz=49,slow=8.8,SNR=142						
ASAR				pP	**pP**	**02 19 52.2**	**+2.2**
	comp=Z,9.6nm,0.6s,baz=47,slow=10,SNR=4.4						
ASAR				S	**S**	**02 23 37.7**	**+1.3**
	comp=Z,1.9nm,1.0s,baz=45,slow=14,SNR=2.3						
ASAR				ScP	**ScP**	**02 26 45.9**	**-0.7**
	comp=Z,1.9nm,0.9s,baz=28,slow=4.2,SNR=6.6						
ASAR				LR	LR	02 29 17.2	
	comp=Z,82nm,18.1s,baz=28,slow=38						
	comp=Z,9.8nm,0.3s						
ASAR	**Alice Springs**	**23.21**	**218**	P	**P**	**02 19 31.4**	**-0.4**
ONTNC	**Ouen Toro**	**23.30**	**137**	P	**P**	**02 19 32.3**	**-0.4**
INKA	**Innaminka**	**23.35**	**200**	P	**P**	**02 19 33.3**	**+0.3**
YATNC	**Mamie plateau,**	**23.44**	**135**	P	**P**	**02 19 35.5**	**+1.6**
OUENC	**Ouen Island, N**	**23.65**	**136**	P	**P**	**02 19 36.0**	**+0.2**
OUENC				IAmb	IAmb	02 19 50.1	
	comp=Z,49nm,1.3s						
OUENC	**Ouen Island, N**	**23.65**	**136**	P	**P**	**02 19 36.7**	**+1.0**
ARMA	**Armidale**	**24.62**	**175**	P	**P**	**02 19 45.6**	**+1.0**
ARMA				IAmb	IAmb	02 19 47.3	
	comp=Z,36nm,1.4s						
ARMA	**Armidale**	**24.62**	**175**	P	**P**	**02 19 45.1**	**+0.5**
SOEI	**Soe**	**25.18**	**259**	P	**P**	**02 19 48.8**	**-1.1**
SOEI				IAmb	IAmb	02 20 03.5	
	comp=Z,31nm,1.4s						
CMSA	**Cobar Meteorol**	**25.88**	**187**	P	**P**	**02 19 56.0**	**+0.2**
FITZ	**Fitzroy Crossi**	**26.21**	**240**	P	**P**	**02 19 57.5**	**-1.5**
LCRK	**Leigh Creek**	**26.71**	**202**	P	**P**	**02 20 03.4**	**+0.1**
STKA	**Stephens Creek**	**26.98**	**195**	P	**P**	**02 20 05.8**	**0.0**
	comp=Z,4.9nm,0.3s,baz=28,slow=10,SNR=17						
STKA				LR	LR	02 30 26.1	
	comp=Z,53nm,19.2s,baz=27,slow=35						
	comp=Z,4.9nm,0.3s						
STKA	**Stephens Creek**	**26.98**	**195**	P	**P**	**02 20 05.3**	**-0.5**
STKA	**Stephens Creek**	**26.98**	**195**	P	**P**	**02 20 07.5**	**+1.7**
WRKA	**Warakurna**	**27.85**	**224**	P	**P**	**02 20 13.2**	**-0.5**
MULG	**Mulgathing**	**28.34**	**209**	P	**P**	**02 20 17.5**	**-0.4**
HTT	**Hallett**	**29.20**	**198**	P	**P**	**02 20 25.7**	**+0.1**
TOLI2	**Tolitoli**	**29.35**	**283**	P	**P**	**02 20 25.9**	**-1.2**
TOLI2	**Tolitoli**	**29.35**	**283**	P	**P**	**02 20 27.2**	**+0.1**
	comp=Z,8.3nm,1.0s						
CAN	**Canberra**	**29.42**	**181**	P	**P**	**02 20 27.3**	**-0.2**
CAN				IAmb	IAmb	02 20 38.1	
	comp=Z,47nm,1.5s						
KAPI	**Kappang**	**29.50**	**270**	LR	LR	02 33 44.6	
	comp=Z,44nm,20.1s,baz=91,slow=39						
BBOO	**Buckleboo**	**29.64**	**203**	P	**P**	**02 20 28.7**	**-0.7**
BBOO				IAmb	IAmb	02 20 45.9	
	comp=Z,26nm,1.4s						
BBOO	**Buckleboo**	**29.64**	**203**	P	**P**	**02 20 29.4**	**0.0**
PLAI	**Plampang**	**31.48**	**263**	P	**P**	**02 20 44.7**	**-1.2**
PLAI	**Plampang**	**31.48**	**263**	P	**P**	**02 20 43.9**	**-2.0**
	comp=Z,16nm,1.1s						
ARPS	**Mount Arapiles**	**31.63**	**192**	P	**P**	**02 20 47.4**	**+0.5**
TOO	**Toolangi**	**31.86**	**186**	P	**P**	**02 20 48.6**	**-0.4**
TOO				IAmb	IAmb	02 20 50.6	
	comp=Z,12nm,0.9s						
FORT	**Forrest**	**31.94**	**216**	P	**P**	**02 20 49.6**	**-0.1**
FORT	**Forrest**	**31.94**	**216**	P	**P**	**02 20 49.6**	**-0.1**
TAVE	**Taveuni**	**31.98**	**112**	P	**P**	**02 20 51.7**	**+1.4**
TWSI	**Taliwang, Sumb**	**32.36**	**263**	P	**P**	**02 20 52.0**	**-1.6**
	comp=Z,6.2nm,0.5s,comp=Z,1µm						
MBWA	**Marble Bar**	**32.54**	**239**	P	**P**	**02 20 54.5**	**-0.6**
MBWA				IAmb	IAmb	02 20 55.3	
	comp=Z,9.9nm,0.6s						
MBWA	**Marble Bar**	**32.54**	**239**	P	**P**	**02 20 54.7**	**-0.4**
PSA00	**Pilbara Seismi**	**32.61**	**238**	P	**P**	**02 20 53.5**	**-2.2**
PSA00				IAmb	IAmb	02 20 56.5	
	comp=Z,4.4nm,0.8s						
JCJ	**Chichijima**	**33.39**	**348**	LR	LR	02 32 56.0	
	comp=Z,60nm,21.9s,baz=334,slow=33						
JAGI	**Jajag, Banyuwa**	**35.04**	**263**	P	**P**	**02 21 14.0**	**-2.9**
JAGI	**Jajag, Banyuwa**	**35.04**	**263**	P	**P**	**02 21 16.9**	**0.0**
	comp=Z,14nm,1.3s						
MEEK	**Meekatharra**	**35.92**	**231**	P	**P**	**02 21 24.0**	**-0.3**
KMBL	**Kambalda**	**36.23**	**222**	P	**P**	**02 21 27.5**	**+0.7**
MOO	**Moorlands**	**36.58**	**183**	P	**P**	**02 21 32.0**	**+2.4**
OUZ	**Omahuta**	**36.85**	**146**	P	**P**	**02 21 33.2**	**+1.2**
TAU	**Tasmania Unive**	**37.04**	**183**	P	**P**	**02 21 32.1**	**-1.4**
JOW	**Kunigami**	**38.30**	**329**	LR	LR	02 35 02.6	
	comp=Z,34nm,21.3s,baz=96,slow=32						
AFI	**Afiamalu**	**39.08**	**105**	LR	LR	02 38 00.6	
	comp=Z,25nm,18.3s,baz=346,slow=36						
KLBR	**Kellerberrin**	**39.19**	**225**	P	**P**	**02 21 51.4**	**-0.4**
YULB	**Yu-li**	**39.89**	**318**	P	**P**	**02 21 57.8**	**+0.1**
NACB	**Ninganchiao**	**40.23**	**319**	P	**P**	**02 21 58.5**	**-1.9**
NACB	**Ninganchiao**	**40.23**	**319**	S	**P**	**02 21 58.9**	**-1.6**
	baz=235						
TPUB	**Ta-pu**	**40.28**	**317**	P	**P**	**02 22 01.2**	**+0.3**
SSLB	**Suanglung**	**40.39**	**318**	P	**P**	**02 22 03.3**	**+1.5**
CMJI	**Cimerak**	**40.68**	**265**	P	**P**	**02 22 03.7**	**-0.6**
	comp=Z,27nm,0.9s						
YHNB	**Yeheng**	**40.72**	**319**	P	**P**	**02 22 05.1**	**+0.5**
YHNB	**Yeheng**	**40.72**	**319**	*e*P	**P**	**02 22 04.4**	**-0.2**
	baz=324						
URZ	**Urewera**	**40.99**	**146**	P	**P**	**02 22 06.6**	**0.0**
	comp=Z,4.8nm,0.4s,baz=342,slow=3.0,SNR=7.7						
	comp=Z,4.8nm,0.4s						
URZ	**Urewera**	**40.99**	**146**	P	**P**	**02 22 07.0**	**+0.4**
BKZ	**Black Stump Fm**	**41.31**	**148**	P	**P**	**02 22 11.1**	**+1.9**
TCW	**Tory Channel**	**41.73**	**151**	P	**P**	**02 22 12.7**	**+0.2**
CNJI	**Cibinong**	**41.98**	**265**	P	**P**	**02 22 14.2**	**-0.8**
LTZ	**Lake Taylor**	**42.07**	**155**	P	**P**	**02 22 15.2**	**-0.2**
RPZ	**Rata Peaks**	**42.35**	**157**	P	**P**	**02 22 17.1**	**-0.4**
	comp=Z,5.8nm,0.5s,baz=9.7,slow=14,SNR=2.7						
	comp=Z,5.8nm,0.5s						
JNU	**Nakatsue**	**42.47**	**337**	P	**P**	**02 22 20.1**	**+1.4**
	comp=Z,8.2nm,0.7s,baz=67,slow=13,SNR=2.2						
	comp=Z,8.2nm,0.7s						
MJAR	**Matsushiro Arr**	**43.36**	**347**	LR	LR	02 38 47.8	
	comp=Z,27nm,18.5s,baz=180,slow=34						
KSRS	**Korea Array**	**47.42**	**337**	P	**P**	**02 22 59.2**	**+1.4**
	comp=Z,4.4nm,0.7s,baz=152,slow=8.2,SNR=14						
KSRS				pP	**pP**	**02 23 19.3**	**-1.1**
	comp=Z,1.8nm,0.8s,baz=154,slow=8.3,SNR=2.2						
KSRS				LR	LR	02 42 53.1	
	comp=Z,13nm,18.8s,baz=140,slow=36						
	comp=Z,4.4nm,0.7s						
NJ2	**Nanjing**	**47.53**	**324**	*e*P	**P**	**02 23 01.2**	**+2.5**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
WHN	**Wuhan**	**49.26**	**319**	P	**P**	**02 23 13.1**	**+1.0**
ASAJ	**Asahikawa**	**50.02**	**354**	LR	LR	02 42 31.3	
	comp=Z,18nm,21.4s,baz=164,slow=34						
USRK	**Ussuriysk Ar.**	**52.14**	**344**	P	**P**	**02 23 34.4**	**+0.9**
	comp=Z,5.9nm,0.7s,baz=108,slow=7.7,SNR=2.4						
USRK				pP	**pP**	**02 23 55.7**	**-0.7**
	comp=Z,2.5nm,0.6s,baz=182,slow=7.2,SNR=2.4						
	comp=Z,5.9nm,0.7s						
MDJ	**Mudanjiang**	**53.21**	**342**	P	**P**	**02 23 41.1**	**-0.2**
MDJ				pP	pP	02 24 06.6	+2.3
MDJ				PcP	**PcP**	**02 24 45.6**	**-2.5**
MDJ				ScP	**ScP**	**02 28 34.3**	**-2.9**
MDJ				PcS	**PcS**	**02 28 43.7**	**-3.2**
MDJ				S	**S**	**02 31 07.6**	**+2.6**
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,75nm,3.8s						
HNS	**HongShan**	**53.74**	**326**	⇑P	**P**	**02 23 46.3**	**+1.0**
HNS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BNX	**BinXian**	**54.90**	**341**	⇑P	**P**	**02 23 54.9**	**+1.3**
BNX				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BNX				pmax	pmax		
	comp=Z,220nm,4.7s						
CMAR	**Chiang Mai Arr**	**55.23**	**297**	LR	LR	02 48 06.6	
	comp=Z,4.2nm,19.2s,baz=100,slow=36						
PZH	**PanZhiHua**	**56.17**	**307**	P	**P**	**02 24 05.6**	**+2.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,5.5s						
KLR	**Kul'dur**	**56.88**	**346**	P	**P**	**02 24 08.4**	**+0.7**
	comp=Z,1.8nm,0.8s,baz=173,slow=3.3,SNR=8.7						
KLR				pP	**pP**	**02 24 30.8**	**-0.2**
	comp=Z,9.2nm,1.2s,baz=171,slow=9.3,SNR=6.7						
	comp=Z,1.8nm,0.8s						
HEH	**HeiHe**	**58.94**	**344**	*e*P	**P**	**02 24 23.4**	**+1.3**
PETK	**Petropavlovsk-**	**59.07**	**6**	P	**P**	**02 24 23.3**	**+0.3**
	comp=Z,8.3nm,0.5s,baz=172,slow=8.0,SNR=22						
PETK				pP	**pP**	**02 24 46.9**	**+0.4**
	comp=Z,3.1nm,0.7s,baz=164,slow=8.2,SNR=2.4						
	comp=Z,8.3nm,0.5s						
PETK	**Petropavlovsk-**	**59.07**	**6**	P	**P**	**02 24 22.3**	**-0.7**
GTA	**Gaotai**	**64.09**	**319**	*e*P	**P**	**02 24 58.4**	**+1.3**
GTA				pP	pP	02 25 23.3	+2.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ULN	**Ulaanbaatar**	**65.06**	**330**	P	**P**	**02 25 04.5**	**+1.2**
ULN				IAmb	IAmb	02 25 06.6	
	comp=Z,3.8nm,1.1s						
SONM	**Songino Array**	**65.37**	**330**	P	**P**	**02 25 06.4**	**+1.1**
	comp=Z,1.0nm,0.4s,baz=150,slow=5.8,SNR=25						
SONM				pP	**pP**	**02 25 30.2**	**+1.0**
	comp=Z,12nm,1.1s,baz=144,slow=5.5,SNR=21						
SONM				LR	LR	02 55 47.3	
	comp=Z,16nm,19.5s,baz=49,slow=38						
	comp=Z,1.0nm,0.4s						
SONM	**Songino Array**	**65.37**	**330**	P	**P**	**02 25 05.5**	**+0.2**
VNDA	**Vanda**	**72.02**	**177**	P	**P**	**02 25 46.0**	**+0.1**
	comp=Z,2.9nm,0.6s,baz=342,slow=6.4,SNR=9.9						
	comp=Z,2.9nm,0.6s						
VNDA	**Vanda**	**72.02**	**177**	P	**P**	**02 25 46.3**	**+0.4**
VNDA				IAmb	IAmb	02 25 51.7	
	comp=Z,22nm,1.4s						
WMQ	**Urumqi**	**74.16**	**319**	*e*P	**P**	**02 26 01.4**	**+2.1**
WMQ				pP	pP	02 26 25.4	+1.6
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
MK31	**Makanchi Array**	**78.83**	**320**	P	**P**	**02 26 24.6**	**-0.9**
MKAR	**Makanchi Array**	**78.83**	**320**	P	**P**	**02 26 23.9**	**-1.5**
	comp=Z,0.6nm,0.5s,baz=98,slow=8.4,SNR=11						
MKAR				pP	**pP**	**02 26 50.0**	**-0.3**
	comp=Z,2.4nm,0.9s,baz=99,slow=7.5,SNR=5.3						
MKAR				LR	LR	03 02 06.8	

	comp=Z,20nm,19.6s,baz=289,slow=36						
	comp=Z,0.6nm,0.5s						
MAKZ	Makanchi	79.03	320	P	P	02 26 26.1	-0.5
MAKZ				pP	pP	02 26 52.9	+1.5
ZALV	Zalesovo Beam	80.08	327	P	P	02 26 31.1	-0.9
	comp=Z,1.0nm,0.4s,baz=144,slow=3.8,SNR=3.2						
ZALV				pP	pP	02 26 56.8	-0.1
	comp=Z,3.5nm,0.7s,baz=114,slow=5.5,SNR=4.9						
ZALV				LR	LR	03 03 56.9	
	comp=Z,16nm,19.4s,baz=76,slow=37						
	comp=Z,1.0nm,0.4s						
ZALV	Zalesovo Beam	80.08	327	P	P	02 26 30.8	-1.2
ZALV				pP	pP	02 26 56.8	-0.1
KSH	Kashi	80.98	311	P	P	02 26 37.8	+0.4
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KURK	Kurchatov	82.44	323	P	P	02 26 44.0	-0.6
IMAR	Indian Mountai	82.44	20	P	P	02 26 44.2	-0.1
KURBB	Kurchatov Arra	82.46	323	pP	pP	02 27 10.5	+0.6
	comp=Z,2.4nm,0.8s,baz=111,slow=4.5,SNR=6.5						
AAK	Ala-Archa	82.86	314	LR	LR	03 05 39.2	
	comp=Z,11nm,19.1s,baz=85,slow=37						
BWN	Browne	83.07	23	P	P	02 26 47.4	-0.2
QSPA	South Pole Qui	84.21	180	P	P	02 26 52.1	-1.5
QSPA				IAmb	IAmb	02 26 53.8	
	comp=Z,20nm,1.2s						
ILAR	Eielson Array	84.34	23	P	P	02 26 52.4	-1.7
	comp=Z,1.4nm,0.6s,baz=248,slow=5.2,SNR=19						
ILAR				pP	pP	02 27 17.1	-2.1
	comp=Z,1.0nm,0.9s,baz=246,slow=5.3,SNR=4.1						
ILAR				LR	LR	02 59 02.1	
	comp=Z,19nm,20.4s,baz=78,slow=32						
	comp=Z,1.4nm,0.6s						
ILAR	Eielson Array	84.34	23	P	P	02 26 54.1	0.0
NRIK	Noril'sk	85.78	342	P	P	02 27 03.5	+2.3
NRIK				IAmb	IAmb	02 27 15.5	
	comp=Z,3.9nm,1.2s						
NRIK				pP	pP	02 27 27.1	+0.7
KK31	Karatay Array	85.82	314	P	P	02 27 01.1	-0.9
KK31				pP	pP	02 27 26.6	-0.7
KKAR	Karatay Array	85.82	314	P	P	02 27 00.7	-1.3
BVAR	Borovoye Array	87.97	324	P	P	02 27 11.0	-1.2
	comp=Z,0.4nm,0.4s,baz=109,slow=5.3,SNR=2.8						
BVAR				pP	pP	02 27 35.1	-2.5
	comp=Z,3.7nm,0.8s,baz=100,slow=5.0,SNR=9.0						
	comp=Z,0.4nm,0.4s						
DLBC	Dease Lake	89.96	31	LR	LR	03 01 28.4	
	comp=Z,38nm,21.3s,baz=348,slow=31						
YBH	Yreka Blue Hor	92.24	48	LR	LR	03 00 43.2	
	comp=Z,16nm,20.8s,baz=328,slow=30						
ARU	Arti	95.20	326	LR	LR	03 10 06.9	
	comp=Z,29nm,21.9s,baz=178,slow=35						
SAML	Samuel	144.41	114	PKPdf	PKPab	02 33 55.6	-1.9
PTLB	Pontes e Lacer	144.76	127	PKPdf	PKPab	02 33 57.6	-1.1
VILB	Vilhena	145.23	122	PKPbc	PKPbc	02 33 59.7	-0.7
TORD	Torodi Ar. Bea	147.31	285	PKPbc	PKPbc	02 34 05.5	-1.0
	comp=Z,1.6nm,0.4s,baz=59,slow=3.2,SNR=69						
TORD				pPKPbc	pPKPdf	02 34 29.8	-0.8
	comp=Z,1.0nm,0.5s,baz=68,slow=3.1,SNR=3.2						
BDFB	Brasilia	152.64	141	PKPbc	PKPbc	02 34 19.0	-0.6
	comp=Z,2.8nm,0.3s,baz=205,slow=2.2,SNR=11						
BDFB				pPKPbc	pPKPbc	02 34 44.2	-1.9
	comp=Z,1.8nm,0.3s,baz=135,slow=1.4,SNR=3.6						

TIF ***03*** *02:21:38.2, 42.°18N×45.°98E, h15km±2km*
MOS ***03*** *02:21:38.3±0.0, 42.°13N×46.°02E, h13km, MPVA3.9*
NORS ***03*** *02:21:38.6±0.0, 42.°11N×45.°97E, h10km, MPVA3.7*
DRS ***03*** *02:21:40.4±0.0, 42.°09N×45.°91E, h16km*
AZER ***03*** *02:21:42.8±0.9, 41.°96N×46.°01E, h2km, Error ellipse: s-maj=6.2km s-min=2.9km az=152.0*
ISK ***03*** *02:21:43.5, 41.°99N×45.°50E, h5km, ML3.1/8*
ISC 03 02:21:39.8±1.0, **42.°10N**±0.°01×**45.°95E**±0.°01, **h5**km±8km, **n146, σ1.°17**/268, **3C-2D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LGD	Lagodekhi	0.34	140	ePG	Pg	02 21 46.4	+0.1
LGD				eS	Sg	02 21 51.4	+0.5
LGD	Lagodekhi	0.34	140	P	Pg	02 21 46.5	+0.1
LGD				S	Sg	02 21 51.4	+0.5
DDFL	Dedoflistskaro	0.66	169	ePG	Pn	02 21 55.1	-0.8
DDFL	Dedoflistskaro	0.66	169	P	Pn	02 21 55.1	-0.8
ZKTA	Zakatala	0.68	132	P	Pg	02 21 53.1	+0.3
ZKTA				S	Sg	02 22 02.5	+0.8
XNZR	Khunzakh	0.71	51	i Pg	Pg	02 21 53.6	0.0
	86nm,0.4s						
XNZR				eSg	Sg	02 22 03.3	+0.5
	67nm,0.4s						
HNZR	Khunzah	0.73	51	i PG	Pg	02 21 53.5	-0.3
HNZR				eS	Sg	02 22 03.9	+0.5
GNBR	Gunib	0.81	69	i Pg	Pg	02 21 55.0	-0.3
	187nm,0.3s						
GNBR				eSg	Sg	02 22 06.2	+0.5
	444nm,0.2s						
GNBR	Gunib	0.81	69	⇑iPG	Pg	02 21 54.9	-0.3
GNBR				i S	Sb	02 22 06.4	-1.2
GNBR				pmax	pmax		
	comp=Z,188nm,0.3s						
GNBR				smax	smax		
	comp=N,494nm,0.4s						
SHTL	Shatili	0.81	314	ePG	Pg	02 21 53.5	-1.8
SHTL	Shatili	0.81	314	P	Pg	02 21 53.6	-1.8
SHTL				S	Sg	02 22 03.4	-2.5
KMKR	Kumukh	0.86	87	i Pg	Pg	02 21 56.0	-0.3
	comp=N,609nm,0.1s						
KMKR				eSg	Sg	02 22 07.6	+0.3
	comp=N,662nm,0.5s						
KMKR	Kumukh	0.86	87	i PG	Pg	02 21 55.9	-0.3
KMKR				eS	Sb	02 22 08.6	-0.5
DVE	Vedeno	0.87	9	i Pg	Pg	02 21 55.9	-0.6
DVE				eSg	Sg	02 22 08.2	+0.5
DVE	Vedeno	0.87	9	i PG	Pg	02 21 55.8	-0.6
DVE				eS	Sg	02 22 08.2	+0.5
UNCR	Uncukul	0.88	45	i Pg	Pg	02 21 56.0	-0.6
	comp=N,93nm,0.3s						
UNCR				eSg	Sg	02 22 07.9	-0.1
	comp=N,268nm,0.4s						
UNCR	Uncukul	0.88	45	⇑iPG	Pg	02 21 56.0	-0.6
UNCR				i S	Sg	02 22 08.3	+0.3
UNCR				pmax	pmax		
	comp=Z,93nm,0.3s						
UNCR				smax	smax		
	comp=E,747nm,0.5s						
SEAG	Tbilisi Sea	0.92	249	ePG	Pg	02 21 57.3	0.0
SEAG				eS	Sb	02 22 11.3	+0.6
SEAG	Tbilisi Sea	0.92	249	P	Pg	02 21 57.4	0.0
SEAG				S	Sb	02 22 11.3	+0.6
ARKR	Arakani	0.92	57	ePg	Pg	02 21 57.1	-0.4
	comp=E,1.0nm,0.1s						
ARKR				eSg	Sg	02 22 09.5	0.0
	comp=E,1.0nm,0.4s						
ARKR	Arakani	0.92	57	ePG	Pg	02 21 57.2	-0.3
ARKR				eS	Sb	02 22 10.3	-0.6
BTNK	Botanikuri	0.95	245	ePG	Pg	02 21 51.9	-6.2
KRNR	Karanay	1.02	44	ePg	Pg	02 21 58.4	-0.9
	comp=E,41nm,0.2s						
KRNR				eSg	Sg	02 22 11.8	-0.6
	comp=E,1µm,0.4s						
KRNR	Karanay	1.02	44	ePG	Pg	02 21 58.4	-0.9
KRNR				i S	Sg	02 22 12.2	-0.3
KRNR				pmax	pmax		
	comp=Z,42nm,0.2s						
KRNR				smax	smax		
	comp=E,241nm,0.4s						
DLMR	Dylym	1.09	27	ePg	Pg	02 22 00.1	-0.7
	comp=E,68nm,0.4s						
DLMR				eSg	Sb	02 22 15.2	-0.6
	comp=E,1µm,0.6s						
DLMR	Dylym	1.09	27	ePG	Pg	02 22 00.1	-0.7
DLMR				i S	Sb	02 22 15.5	-0.3
DLMR				pmax	pmax		
	comp=Z,68nm,0.4s						
DLMR				smax	smax		
	comp=E,956nm,0.3s						
GROC	Groznyy	1.11	354	i Pg	Pb	02 22 01.3	-0.2
GROC				i Sg	Sn	02 22 17.5	-0.2
GROC	Groznyy	1.11	354	i PG	Pb	02 22 01.3	-0.2
GROC				i S	Sn	02 22 17.5	-0.2
BUJR	Buynaksk	1.12	49	ePg	Pg	02 22 01.0	-0.4
	comp=E,289nm,0.3s						
BUJR				eSg	Sg	02 22 16.0	+0.1
	comp=E,280nm,0.5s						
BUJR	Buynaksk	1.12	49	ePG	Pg	02 22 00.9	-0.4
BUJR				i S	Sb	02 22 16.3	-0.4
BUJR				pmax	pmax		
	comp=Z,289nm,0.3s						
BUJR				smax	smax		
	comp=N,998nm,0.6s						
PNSH	Pansheti	1.12	299	ePG	Pg	02 21 59.9	-1.4
PNSH	Pansheti	1.12	299	P	Pg	02 21 60.0	-1.4
PNSH				S	Sg	02 22 12.9	-3.1
QZX	Qazax, Azerbai	1.13	203	P	Pg	02 22 01.1	-0.2
	SNR=247						
QZX				S	Sn	02 22 17.7	-0.4
DBC	Dubki	1.13	35	ePg	Pg	02 22 00.8	-0.7
	comp=N,43nm,0.1s						
DBC				eSg	Sb	02 22 16.2	-0.7
	comp=N,533nm,0.5s						
DBC	Dubki	1.13	35	ePG	Pg	02 22 00.7	-0.7
DBC				i S	Sb	02 22 16.5	-0.3
DBC				pmax	pmax		
	comp=Z,43nm,0.2s						
DBC				smax	smax		
	comp=E,372nm,1.0s						
GUDG	Gudauri	1.15	289	ePG	Pg	02 22 00.5	-1.4
GUDG	Gudauri	1.15	289	P	Pg	02 22 00.5	-1.4
GUDG				S	Sg	02 22 15.4	-1.5
KMGR	Komgaron	1.25	321	ePg	Pg	02 22 03.0	-0.7
KMGR				eSg	Sn	02 22 21.9	+0.7
KMGR	Komgaron	1.25	321	ePG	Pg	02 22 03.0	-0.7
KMGR				eS	Sn	02 22 21.9	+0.7
URKR	Urkarakh	1.25	86	ePg	Pg	02 22 03.6	-0.3
	comp=E,67nm,0.4s						
URKR				eSg	Sb	02 22 20.5	0.0
	comp=E,193nm,0.4s						
URKR	Urkarakh	1.25	86	ePG	Pg	02 22 03.5	-0.3
URKR				eS	Sn	02 22 20.7	-0.7
SEKA	Sheki	1.29	133	P	Pn	02 22 04.1	-0.4
	SNR=70						
SEKA				S	Sn	02 22 22.6	+0.4
VLKR	Vladikavkaz	1.33	316	ePg	Pn	02 22 04.6	-0.6
VLKR				eSg	Sn	02 22 23.8	+0.5
VLKR	Vladikavkaz	1.33	316	ePG	Pn	02 22 04.6	-0.6
VLKR				eS	Sn	02 22 23.8	+0.5
GDB	GEDABAY	1.38	186	P	Pn	02 22 05.0	-0.9
	SNR=73						
GDB				S	Sg	02 22 24.6	+0.4
LACR	Lac	1.42	301	ePg	Pn	02 22 05.4	-1.0
LACR				eSg	Sg	02 22 27.2	+1.6
LACR	Lac	1.42	301	ePG	Pn	02 22 05.5	-0.9
MAK	Makhachkala	1.44	53	ePg	Pg	02 22 08.1	+0.8
MAK				eSg	Sg	02 22 25.7	-0.3
MAK	Makhachkala	1.44	53	ePG	Pg	02 22 08.1	+0.8
MAK				eS	Sg	02 22 25.7	-0.3
AKT	Akhty	1.47	114	ePg	Pn	02 22 06.1	-0.9
	comp=E,78nm,0.3s						
AKT				eSg	Sn	02 22 25.7	-1.0
	comp=E,307nm,0.4s						
AKT	Akhty	1.47	114	ePG	Pn	02 22 06.6	-0.4
AKT				eS	Sg	02 22 27.2	+0.3
GANJ	Ganja	1.48	169	P	Pn	02 22 06.7	-0.3
	SNR=25						
GANJ				S	Sg	02 22 27.3	+0.1
TRLG	Trialeti	1.49	249	ePG	Pn	02 22 06.5	-0.9
TRLG				eS	Sn	02 22 27.3	+0.1
TRLG	Trialeti	1.49	249	P	Pn	02 22 06.5	-0.9
TRLG				S	Sn	02 22 27.4	+0.1
DMNI	Dmanisi	1.52	240	ePG	Pn	02 22 06.6	-1.2
DMNI	Dmanisi	1.52	240	P	Pn	02 22 06.7	-1.2
DMNI				S	Sn	02 22 27.8	-0.3
MNGR	Mingechevir, A	1.57	147	P	Pn	02 22 08.9	+0.5
	SNR=5.8						
MNGR				S	Sg	02 22 31.9	+1.5
ARNR	Ardon	1.64	312	ePg	Pb	02 22 10.2	-0.3
ARNR				eSg	Sg	02 22 33.9	+1.5
ARNR	Ardon	1.64	312	ePN	Pb	02 22 10.2	-0.3
ARNR				eS	Sg	02 22 33.9	+1.5
BTKR	Batakoyurt	1.64	321	ePg	Pb	02 22 10.8	+0.2
BTKR				eSg	Sg	02 22 34.2	+1.6
BTKR	Batakoyurt	1.64	321	ePN	Pb	02 22 10.8	+0.2
BTKR				eS	Sg	02 22 34.2	+1.6
BRNG	Burnasheti	1.66	254	ePN	Pn	02 22 09.5	-0.1
BRNG				eS	Sb	02 22 32.6	+0.6
BRNG	Burnasheti	1.66	254	P	Pn	02 22 09.6	-0.1
BRNG				S	Sb	02 22 32.7	+0.6
ZEI	Tsey	1.67	295	ePg	Pn	02 22 10.2	+0.3
ZEI				eSg	Sg	02 22 34.8	+1.5
ZEI	Tsey	1.67	295	ePN	Pn	02 22 10.4	+0.6
ZEI				eS	Sg	02 22 34.1	+0.8
KSMR	Kasumkent	1.70	106	ePg	Pn	02 22 10.4	+0.2
	comp=E,1.0nm,0.4s						
KSMR				eSg	Sb	02 22 33.0	-0.3
	comp=E,308nm,0.4s						
KSMR	Kasumkent	1.70	106	ePN	Pn	02 22 10.4	+0.2
KSMR				i S	Sb	02 22 33.4	+0.1
KSMR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KSMR				smax	smax		
	comp=E,249nm,0.4s						
KORR	Kora	1.71	306	ePg	Pb	02 22 11.4	-0.2
KORR				eSg	Sg	02 22 35.2	+0.6
KORR	Kora	1.71	306	ePN	Pb	02 22 11.4	-0.2
KORR				eS	Sg	02 22 35.2	+0.6
ALIG	Mtskhetisjvari	1.71	271	PN	Pn	02 22 09.8	-0.5
DRN	Derbent	1.77	91	ePg	Pn	02 22 11.5	+0.4
DRN				eSg	Sg	02 22 36.1	-0.7
DRN	Derbent	1.77	91	ePN	Pn	02 22 11.5	+0.4
DRN				eS	Sg	02 22 36.1	-0.7
QBL	Gabala	1.82	128	P	Pb	02 22 13.0	-0.6
	SNR=11						
QBL				S	Sb	02 22 36.6	-0.2
QSAR	Qusar	1.82	108	P	Pb	02 22 14.0	+0.3
	SNR=17						
QSAR				S	Sg	02 22 38.8	+0.4
TRKR	Terskaya	1.85	332	ePg	Pb	02 22 13.8	-0.3
TRKR				eSg	Sg	02 22 40.0	+0.6
TRKR	Terskaya	1.85	332	ePN	Pb	02 22 13.9	-0.3
TRKR				eS	Sg	02 22 40.0	+0.6
STDR	Stavd-Durt	1.88	313	ePg	Pb	02 22 15.1	+0.5
STDR				eSg	Sg	02 22 39.8	-0.5
STDR	Stavd-Durt	1.88	313	ePN	Pb	02 22 15.1	+0.5
XNQ	Khinaliq	1.88	119	P	Pb	02 22 14.6	-0.2
	SNR=17						
XNQ				S	Sg	02 22 40.2	-0.1
ONI	Oni	1.92	286	Pn	Pb	02 22 14.5	-0.7
ONI				Sn	Sn	02 22 37.3	-0.4
ONI	Oni	1.92	286	ePN	Pn	02 22 14.0	+0.9
ONI	Oni	1.92	286	P	Pn	02 22 14.0	+0.9
ONI				S	Sb	02 22 40.3	+0.8
DIGR	Digorskoe uzhe	1.93	295	ePg	Pb	02 22 14.7	-0.8
DIGR				eSg	Sb	02 22 40.5	+0.6
DIGR	Digorskoe uzhe	1.93	295	ePN	Pb	02 22 14.9	-0.6
LSNR	Lesken	1.96	308	ePg	Pb	02 22 16.3	+0.3
LSNR				eSg	Sb	02 22 41.5	+0.7
LSNR	Lesken	1.96	308	ePN	Pb	02 22 16.3	+0.3
AKH	Akhalkalaki	1.96	250	Pn	Pn	02 22 14.2	+0.3
AKH				Sn	Sn	02 22 36.6	-2.4
AKH	Akhalkalaki	1.96	250	i Pg	Pn	02 22 14.1	+0.2
AKH				eSg	Sg	02 22 42.6	-0.2
AKH	Akhalkalaki	1.96	250	i PN	Pn	02 22 14.1	+0.2
AKH	Akhalkalaki	1.96	250	P	Pn	02 22 13.1	-0.8
AKH				S	Sn	02 22 40.1	+1.2
QUBA	Quba, Azerbaij	2.04	110	P	Pb	02 22 17.3	-0.1
QUBA				S	Sg	02 22 44.9	-0.5
BRDA	Brd	2.05	153	P	Pb	02 22 16.7	-0.8
	SNR=4.5						
BRDA				S	Sb	02 22 43.2	-0.2
PRTR	Priterechnaya	2.06	324	ePg	Pb	02 22 17.1	-0.5
PRTR				eSg	Sb	02 22 44.2	+0.7
PRTR	Priterechnaya	2.06	324	ePN	Pb	02 22 17.1	-0.5
PRTR				eS	Sb	02 22 44.2	+0.7
IML	Ismayilli	2.12	127	P	Pb	02 22 18.5	-0.3
	SNR=4.6						
IML				S	Sb	02 22 45.0	-0.5
GNI	Garni	2.15	206	Pn	Pb	02 22 18.3	-1.0
GNI				Sn	Sn	02 22 44.5	+0.9
GNI	Garni	2.15	206	i PN	Pb	02 22 18.2	-1.0
GNI				pmax	pmax		
	comp=Z,62nm,0.4s						
AGDM	Agdam	2.17	156	P	Pb	02 22 18.9	-0.7
	SNR=5.0						
AGDM				S	Sb	02 22 46.4	-0.4
TKB	Tkibuli	2.21	278	ePN	Pn	02 22 18.4	+1.3
TKB				eS	Sb	02 22 47.7	-0.2
TKB	Tkibuli	2.21	278	P	Pn	02 22 18.4	+1.3
TKB				S	Sb	02 22 47.8	-0.2
NCK	Nalchik	2.23	310	ePn	Pb	02 22 20.6	+0.1
NCK				eSn	Sb	02 22 49.2	+0.9
NCK	Nalchik	2.23	310	ePN	Pb	02 22 20.6	+0.1
NCK				eS	Sb	02 22 49.2	+0.9
ZRD	Zardab	2.24	144	P	Pb	02 22 20.6	0.0
ZRD				S	Sb	02 22 47.5	-1.2
ABS	Abastumani	2.37	263	ePN	Pn	02 22 19.9	+0.5
ABS				eS	Sb	02 22 52.8	+0.3
ABS	Abastumani	2.37	263	P	Pn	02 22 19.9	+0.5
ABS				S	Sb	02 22 52.8	+0.3
PQL	Pirkuli	2.38	122	P	Pg	02 22 25.1	-0.3
PQL				S	Sb	02 22 51.9	-1.0
KDMR	Kurdemir	2.41	135	P	Pb	02 22 22.6	-1.0
KDMR				S	Sb	02 22 52.4	-1.2
SIZA	Siyzn	2.44	114	P	Pb	02 22 24.3	+0.2
	SNR=6.6						
SIZA				S	Sb	02 22 53.5	-1.0
TASB	TASBURUN-IGDIR	2.48	212	Pn	Pn	02 22 22.9	+2.1
HYR	Heyderabad	2.52	200	P	Pb	02 22 23.8	-1.7
	SNR=6.7						
HYR				S	Sb	02 22 56.0	-0.8
ATGJ	Altiaghaj	2.56	118	P	Pb	02 22 26.5	+0.2
ATGJ				S	Sb	02 22 55.9	-2.3
KARS	Kars	2.61	237	Pn	Pn	02 22 23.9	+1.1
NEY	Neytrino	2.64	297	ePn	Pb	02 22 27.7	0.0
NEY				eSn	Sb	02 22 58.5	-2.0
NEY	Neytrino	2.64	297	ePN	Pb	02 22 27.7	0.0
NEY				eS	Sb	02 22 58.5	-2.0
BLQ	Beylaqan	2.67	152	P	Pb	02 22 26.2	-1.8
BLQ				S	Sb	02 22 59.4	-1.7
SBZ	Shahbuz	2.71	187	P	Pb	02 22 26.9	-2.0
	SNR=17						
SBZ				S	Sb	02 23 00.7	-1.9
GBS	Qobustan	2.74	124	P	Pb	02 22 27.8	-1.5
KBZ	Khabaz	2.77	307	ePn	Pb	02 22 28.2	-1.6
KBZ				eSn	Sb	02 23 02.0	-2.0
KBZ	Khabaz	2.77	307	ePN	Pb	02 22 28.2	-1.6
KBZ				eS	Sb	02 23 02.0	-2.0
QRD	Qoradiz	2.83	158	S	Sb	02 23 03.4	-2.4
SHA1	Shidzhatmaz	2.92	305	ePn	Pb	02 22 31.7	-0.8
SHA1				eSn	Sn	02 23 05.1	+2.4
SHA1	Shidzhatmaz	2.92	305	ePN	Pb	02 22 31.7	-0.8
SHA1				eS	Sn	02 23 05.1	+2.4
NAX	Nakhchivan	2.94	187	P	Pb	02 22 30.2	-2.5
	SNR=11						
NAX				S	Sn	02 23 05.8	+2.8
BEYR	Belyy Ugol+	2.99	311	ePn	Pn	02 22 28.2	+0.4
BEYR				eSn	Sn	02 23 05.3	+1.2
BEYR	Belyy Ugol+	2.99	311	ePN	Pn	02 22 28.2	+0.4
BEYR				eS	Sn	02 23 05.3	+1.2
KIV0	Kislovodsk Arr	3.02	309	ePn	Pn	02 22 30.4	+2.0
KIV0				eSn	Sn	02 23 07.3	+2.3
KIV	Kislovodsk	3.03	309	ePN	Pn	02 22 30.4	+1.9
KIV				eS	Sn	02 23 07.3	+2.1
SENK	Senkaya-Erzuru	3.12	242	Pn	Pn	02 22 30.6	+0.9
ORD	Ordubad	3.17	179	P	Pn	02 22 32.4	+2.1
ORD				S	Sn	02 23 11.9	+3.3
AGRB	Hanur-Agry	3.37	223	Pn	Pn	02 22 35.0	+1.7
GLBA	Clilabad	3.40	146	P	Pn	02 22 36.2	+2.7
GLBA				S	Sb	02 23 18.4	-3.9
DOMR	Dombai	3.41	292	ePn	Pn	02 22 35.4	+1.7
DOMR				eSn	Sn	02 23 16.6	+2.1
DOMR	Dombai	3.41	292	ePN	Pn	02 22 35.4	+1.7
DOMR				eS	Sn	02 23 16.6	+2.1
ALER	Alexandrovskoy	3.46	321	ePn	Pn	02 22 31.6	-2.7
ALER				eSn	Sn	02 23 16.7	+1.0
ALER	Alexandrovskoy	3.46	321	ePN	Pn	02 22 31.6	-2.7
ALER				eS	Sn	02 23 16.7	+1.0
YRD	Yardimli	3.63	150	P	Pn	02 22 37.8	+1.0
YRD				S	Sn	02 23 20.4	+0.3
LRK	Lerik	3.90	151	P	Pn	02 22 42.1	+1.5
	SNR=4.4						
LRK				S	Sn	02 23 29.4	+2.6
CHOM	Cayeli-Rize	4.02	257	Pn	Pn	02 22 43.6	+1.6
ASTR	Astara	4.15	147	P	Pn	02 22 45.0	+1.3
ASTR				S	Sn	02 23 34.9	+2.3
VSLR	Vesyoloye	4.56	289	ePn	Pn	02 22 49.6	+0.1
VSLR				ePn	Sn	02 23 43.6	+0.7
VSLR	Vesyoloye	4.56	289	ePN	Pn	02 22 49.6	+0.1
VSLR				S	Sn	02 23 43.6	+0.7
BELG	Belogornoye	10.36	6	i P	Pn	02 24 09.1	+0.2
BELG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKTO	Aktyubinsk	11.79	41	⇑P	Pn	02 24 31.2	+2.7
	comp=Z,1.9nm,1.3s						
AKTO				⇓S	Sn	02 26 37.6	-2.8
	comp=Z,1.7nm,1.1s						
AKTO	Aktyubinsk	11.79	41	P	Pn	02 24 31.2	+2.7
AKTO				S	Sn	02 26 37.6	-2.8
AB31	Akbulak array	12.11	49	P	Pn	02 24 34.6	+1.7
	comp=Z,0.4nm,0.5s,baz=242,slow=14,SNR=12						
AB31				⇓S	Sn	02 26 45.3	-3.0
	comp=Z,2.0nm,0.8s,baz=239,slow=24,SNR=3.6						
AB31	Akbulak array	12.11	49	P	Pn	02 24 34.6	+1.7
AB31				S	Sn	02 26 46.3	-2.0

TAP 03 02:21:53.0, 24.°25N×121.°71E, h7km, ML1.5, 1C, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	Fush Village	0.12	222	P	Pg	02 21 56.2	+0.7
	baz=221						
ETL				eS	Sg	02 21 58.8	+1.5
	baz=221						
NACB	Ninganchiao	0.13	235	⇑iP	Pg	02 21 56.6	+0.8
	baz=235						
ENA	Nanau	0.18	9	P	Pg	02 21 57.5	+0.8
	baz=11						
ENA				eS	Sg	02 22 01.0	+1.8
	baz=11						
TWD	Chiawan	0.20	212	P	Pg	02 21 58.4	+1.4
	baz=210						
TWD				eS	Sg	02 22 01.3	+1.7
	baz=210						
ETLH	Xiulin Townshi	0.21	259	i P	Pg	02 21 58.1	+0.9
	baz=258						
ETLH				eS	Sg	02 22 02.5	+2.3
	baz=258						
LATG	Datong	0.33	330	eP	Pg	02 22 00.3	+0.8
	baz=329						
LATG				eS	Sb	02 22 06.4	-0.6
	baz=329						
NNSB	Datong	0.35	301	eP	Pg	02 22 00.7	+0.9
	baz=301						
NNSB				eS	Sb	02 22 07.0	-0.4
	baz=301						
ENTT	Nioudou	0.41	341	eP	Pb	02 22 02.1	-0.6
	baz=342						
ENTT				eS	Sb	02 22 08.5	-0.7
	baz=342						
WHF	Hehuan Shan	0.42	256	eP	Pb	02 22 02.2	-0.9
	baz=255						
WHF				eS	Sb	02 22 08.9	-0.8
	baz=255						
YHNB	Yeheng	0.52	324	eS	Sb	02 22 12.6	+0.3
	baz=324						
FUSB	Fushanzhiwuyua	0.52	348	eP	Pb	02 22 04.4	-0.2
	baz=347						
FUSB				eS	Sb	02 22 12.8	+0.4
	baz=347						
CHGB	Renai	0.52	249	eP	Pb	02 22 04.4	-0.3
	baz=249						
CHGB				eS	Sb	02 22 12.7	+0.1
	baz=249						
NSK	Sanguang	0.53	323	eP	Pb	02 22 04.5	-0.3
	baz=323						
NSK				eS	Sb	02 22 12.9	+0.2
	baz=323						
NWLT	Wulai	0.56	340	eP	Pb	02 22 05.9	+0.6
	baz=340						
NWLT				eS	Sb	02 22 14.0	+0.5
	baz=340						
OWD	Renai	0.57	239	eP	Pb	02 22 05.3	-0.1
	baz=239						
OWD				eS	Sb	02 22 13.9	+0.1
	baz=239						
WUSB	Renai	0.60	245	eP	Pb	02 22 06.8	+0.9
	baz=244						
WUSB				eS	Sb	02 22 15.2	+0.6
	baz=244						

*IDC **03** 02:30:35.4±1.0, 0°.94N×126°.90E, h0^{km}, mb4.1/8, mbtmp4.1/9, ML3.5/1, MS2.9/1, Error ellipse: s-maj=42.4km s-min=17.6km az=74.0*

*DJA **03** 02:30:39.9±0.6, 1°N±4°×12°7E±°, h24^{km}±6^{km}, M4.2/9, mb4.6/1, MLv3.9/9*

*NEIC **03** 02:30:39.6±2.2, 0°.90N±0°.08×126°.88E±0°.06, h31^{km}±8^{km}, mb4.1/8, Error ellipse: s-maj=13.1km s-min=7.6km az=207.0*

ISC 03 02:30:40.3±0.6, **0°.98N**±0°.07×**127°.00E**±0°.06, **h35**^{km}, **n33**, σ**1^{s}31**/33, **mb4.1**/12, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.43	119		Pn	02 30 50.5	+0.6
TNTI				Sg	Sn	02 30 56.9	+0.4
TNTI	Ternate	0.43	119	P	Pn	02 30 50.4	+0.6
TNTI				S	Sn	02 30 57.8	+1.3
LBMI	Labuha	1.69	163	P	Pn	02 31 09.0	+1.7
SANI	Sanana	3.17	198	P	Pn	02 31 29.5	+1.8
GTOI	Gorontalo	4.00	265	P	Pn	02 31 42.2	+3.1
NLAI	Namlea	4.19	179	P	Pn	02 31 43.6	+1.8
LUWI	Luwuk	4.68	245	Pn	Pn	02 31 44.8	-3.6
LUWI	Luwuk	4.68	245	P	Pn	02 31 51.1	+2.7
MRSI	Marisa	5.08	264	P	Pn	02 31 55.7	+1.8
TOLI2	Tolitoli	6.21	271		Pn	02 32 05.8	-3.8
KAPI	Kappang	9.37	230	Pn	Pn	02 32 50.3	-2.6
	0.5nm,0.3s,baz=134,slow=15,SNR=1.7						
KAPI				Sn	Sn	02 34 36.9	-0.2
	1.0nm,0.3s,baz=39,slow=23,SNR=2.0						
	4.8nm,0.6s						
WB0	Warramunga Arr	21.86	161	P	P	02 35 29.3	-0.8
WB0				IAmb	IAmb	02 35 50.4	
	comp=Z,9.4nm,1.4s						
WRA	Warramunga Arr	22.01	161	P	P	02 35 31.5	-0.1
	comp=Z,1.1nm,0.3s,baz=339,slow=11,SNR=18						
	comp=Z,1.1nm,0.3s						
WB2	Warramunga Arr	22.01	161	P	P	02 35 31.2	-0.5
WR0	Warramunga Arr	22.09	161	P	P	02 35 30.5	-2.0
WR0				IAmb	IAmb	02 36 03.1	
	comp=Z,10nm,1.5s						
AS31	Alice Springs	25.40	165	P	P	02 36 04.1	-0.5
ASAR	Alice Springs	25.40	165	P	P	02 36 05.1	+0.4
	comp=Z,1.1nm,0.5s,baz=344,slow=8.8,SNR=15						
	comp=Z,1.1nm,0.5s						
ASAR	Alice Springs	25.40	165	P	P	02 36 04.4	-0.3
KSAR	Wonju Array Be	36.29	1	P	P	02 37 39.4	-1.1
SONM	Songino Array	49.97	342	P	P	02 39 31.7	+0.6
	comp=Z,0.4nm,0.6s,baz=159,slow=11,SNR=4.1						
	comp=Z,0.4nm,0.6s						
PETK	Petropavlovsk-	57.87	21	LR	LR	03 05 58.7	
	comp=Z,11nm,19.9s,baz=323,slow=37						
MK31	Makanchi Array	59.96	326	P	P	02 40 41.9	-1.3
MK31				IAmb	IAmb	02 40 44.9	
	comp=Z,1.2nm,0.8s						
MKAR	Makanchi Array	59.96	326	P	P	02 40 44.1	+0.9
	comp=Z,1.5nm,0.4s,baz=114,slow=7.8,SNR=51						
	comp=Z,1.5nm,0.4s						
MKAR	Makanchi Array	59.96	326	P	P	02 40 42.7	-0.5
KURBB	Kurchatov Arra	64.19	328	P	P	02 41 12.2	+0.8
	comp=Z,1.4nm,0.4s,baz=127,slow=6.1,SNR=30						
	comp=Z,1.4nm,0.4s						
KURK	Kurchatov	64.19	328	P	P	02 41 11.7	+0.2
KK31	Karatay Array	65.42	318	P	P	02 41 19.2	-0.4
KKAR	Karatay Array	65.42	318	P	P	02 41 19.8	+0.1
KKAR				IAmb	IAmb	02 41 21.2	
	comp=Z,1.8nm,0.8s						
BVAR	Borovoye Array	69.76	327	P	P	02 41 47.3	+0.5
	comp=Z,0.7nm,0.4s,baz=131,slow=6.4,SNR=7.8						
	comp=Z,0.7nm,0.4s						
ABKAR	Akbulak array	74.44	321	P	P	02 42 14.2	-0.7
AKTO	Aktyubinsk	75.97	322	P	P	02 42 24.0	+0.3
	comp=Z,0.9nm,0.5s,baz=93,slow=13,SNR=2.8						
	comp=Z,0.9nm,0.5s						
ARCES	ARCESS Array B	93.10	340	P	P	02 43 49.5	-0.7
	comp=Z,5.9nm,1.1s,baz=82,slow=6.5,SNR=1.8						
	comp=Z,5.9nm,1.1s						
TORD	Torodi Ar. Bea	123.99	287	PKP	PKPdf	02 49 35.2	-0.8
	comp=Z,0.3nm,0.7s,baz=75,slow=1.6,SNR=1.6						

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*NEIC **03** 02:38:27.9±1.1, 36°.67N±0°.01×99°.07W±0°.04, h4^{km}±7^{km}, Error ellipse: s-maj=4.8km s-min=1.0km az=111.0*

*ANF **03** 02:38:27.6±0.5, 36°.68N×99°.05W, h5^{km}, ML3.8/14, Error ellipse: s-maj=6.2km s-min=4.6km az=102.0*

*TUL **03** 02:38:27±1.5, 36°.67N±0°.02×99°.13W±0°.04, h6^{km}±7^{km}, ML3.3, mb_Lg2.9/57(NEIC), ML3.3/18(NEIC), Error ellipse: s-maj=4.6km s-min=2.5km az=104.0*

ISC 03 02:38:28.3±0.9, **36°.65N**±0°.03×**99°.05W**±0°.03, **h14**^{km}±6^{km}, **n101**, σ**1^{s}08**/99, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOKA	Waynoka	0.09	98		Pg	02 38 30.9	-0.5
NOKA				Sg	Sg	02 38 33.6	+0.1
NOKA				IAML		02 38 36.1	
	comp=E,8µm,0.3s						
U32A	Winter Ranch,	0.27	172	Pg	Pg	02 38 33.5	-0.5
U32A				Sg	Sg	02 38 37.3	-0.6
U32A				IAML		02 38 38.2	
	comp=E,4µm,0.5s						
U32A				IAML		02 38 38.7	
	comp=N,4µm,0.1s						
U32A	Winter Ranch,	0.27	172	P	Pg	02 38 33.5	-0.5
	baz=340						
U32A				S	Sg	02 38 38.0	+0.1
	baz=340						
OK035	E0210 Rd and N	0.28	77	Pg	Pg	02 38 34.1	0.0
OK035				Sg	Sg	02 38 38.9	+0.7
OK035				IAML		02 38 41.7	
	comp=N,5µm,0.2s						
OK038	West end E0370	0.30	125		Pg	02 38 33.6	-0.9
OK038				IAML		02 38 43.5	
	comp=N,3µm,0.3s						
OK038				IAML		02 38 44.7	
	comp=N,3µm,0.3s						
ELIS	Ellis County	0.65	207	Pg	Pg	02 38 39.7	-1.4
ELIS				Sg	Sg	02 38 48.8	-0.9
ELIS				IAML		02 38 57.6	
	comp=E,1µm,0.3s						
ELIS				IAML		02 38 59.0	
	comp=N,1µm,0.2s						
OK032	Salt Plains WL	0.69	77		Pg	02 38 41.5	-0.2
OK032				Sg	Sg	02 38 51.0	+0.2
OK032				IAML		02 38 54.7	
	comp=N,1µm,0.2s						
CROK	Carrier	0.87	99	Pg	Pg	02 38 44.9	-0.2
CROK				Sg	Sg	02 38 56.4	-0.1
CROK				IAML		02 39 13.8	
	comp=N,693nm,0.3s						
KAN14	Manchester OK	0.92	70		Pg	02 38 45.7	-0.5
KAN14				Sg	Sg	02 38 57.8	-0.5
GC02	Grant County #	0.97	78	Pg	Pg	02 38 46.7	-0.5
GC02				Sg	Sg	02 38 59.8	-0.1
KAN08	Anthony NE Sta	1.04	56		Pg	02 38 47.6	-0.7
CSTR	Hydro, Custer	1.04	164		Pg	02 38 47.7	-0.7
KAN05	Bluff City Nor	1.05	64		Pg	02 38 47.9	-0.6
KAN05				Sg	Sb	02 39 02.3	+0.5
KAN12	Harper NE Stat	1.06	52		Pg	02 38 48.0	-0.8
KAN12				Sg	Sb	02 39 02.6	+0.4
KAN17	Caldwell West	1.10	69		Pg	02 38 48.9	-0.7
KAN06	Argonia West S	1.12	57		Pg	02 38 49.1	-0.9
KAN01	Argonia South	1.15	64		Pg	02 38 49.7	-0.8
KAN09	Caldwell North	1.25	67		Pg	02 38 51.5	-0.8
KS21	Milan North St	1.28	60	Pn	Pg	02 38 52.0	-0.9
KAN13	South Haven SW	1.31	73		Pn	02 38 52.6	+0.5
KS20	Mayfield South	1.33	64		Pn	02 38 52.8	+0.4
BLOK	Blackwell	1.48	85	Pn	Pb	02 38 55.5	0.0
OK029	Liberty Lake	1.54	123		Pn	02 38 56.1	+0.8
OK050	Pawnee Station	1.68	98		Pn	02 38 58.7	+1.4
OK045	Pawnee Station	1.72	96		Pb	02 38 59.4	-0.3
OK046	Pawnee Station	1.74	98		Pn	02 38 59.5	+1.4
OK025	Westminster Rd	1.75	127		Pn	02 38 59.6	+1.5
R32A	Long Quarter,	1.79	8		Pn	02 38 59.5	+0.7
R32A	Long Quarter,	1.79	8	P	Pn	02 38 59.8	+0.9
	baz=191,SNR=62						
R32A				S	Sb	02 39 23.8	+0.5
	baz=191						
WMOK	Wichita Mounta	1.92	173	Pn	Pn	02 39 01.3	+0.8
WMOK				IAmb_Lg		02 39 28.2	
	comp=Z,40nm,0.7s						
WMOK	Wichita Mounta	1.92	173	P	Pn	02 39 01.3	+0.8
	baz=352						
WMOK				S	Sb	02 39 27.9	+1.1
	baz=352						
OK052	Battle Ridge R	1.93	109		Pn	02 39 02.4	+1.8
T35A	Sooner Cattle	2.05	82	Pn	Pn	02 39 03.8	+1.4
T35B	Sooner Cattle	2.05	82	P	Pn	02 39 03.8	+1.4
	baz=264,SNR=33						
T35B				S	Sg	02 39 33.4	-0.9
	baz=264						
DEOK	Depew	2.21	111		Pn	02 39 05.7	+1.1
CBKS	Cedar Bluff	2.23	346	Pn	Pn	02 39 06.2	+1.3
CBKS				IAmb_Lg		02 39 42.4	
	comp=Z,55nm,0.7s						
CBKS	Cedar Bluff	2.23	346	P	Pn	02 39 05.6	+0.7
	baz=167,SNR=48						
CBKS				S	Sb	02 39 35.5	-0.4
	baz=167						
X34A	Smith Ranch, M	2.27	154		Pn	02 39 07.8	+2.5
W35A	Tecumseh	2.31	130		Pn	02 39 07.1	+1.2
TUL1	Leonard	2.73	105		Pn	02 39 12.7	+1.0
AMTX	Amarillo	2.77	231	Pn	Pn	02 39 13.0	+0.7
AMTX	Amarillo	2.77	231	P	Pn	02 39 13.0	+0.7
	baz=49						
WTFS	Witchita Falls	2.92	170		Pn	02 39 15.5	+1.3
KSU1	Kansas State U	3.12	37	Pn	Pn	02 39 19.6	+2.6
KSU1				IAmb_Lg		02 40 13.3	
	comp=Z,30nm,0.7s						
KSU1	Kansas State U	3.12	37	P	Pn	02 39 17.6	+0.6
	baz=220,SNR=9.3						
RLO	Rose Lookout	3.28	97	Pn	Pn	02 39 20.2	+0.9
Z35A	Perchaven, San	3.62	155	IAmb_Lg		02 40 34.0	
	comp=Z,18nm,0.8s						
X37A	Clayton	3.63	123	Pn	Pn	02 39 25.1	+1.0
X37A				IAmb_Lg		02 40 32.1	
	comp=Z,24nm,0.9s						
X37A	Clayton	3.63	123	P	Pn	02 39 24.9	+0.8
	baz=305						
FW03	Perrin-Whitt E	3.69	167	IAmb_Lg		02 40 33.1	
	comp=Z,19nm,0.8s						
U38A	Gravette	3.76	92	Pn	Pn	02 39 27.4	+1.5
U38A				IAmb_Lg		02 40 33.3	
	comp=Z,27nm,0.8s						
FW06	Azle	3.87	161	IAmb_Lg		02 40 36.6	
	comp=Z,15nm,0.8s						
ABTX	Abilene, Hawle	4.04	187	Pn	Pn	02 39 30.1	+0.3
ABTX				IAmb_Lg		02 40 37.8	
	comp=Z,22nm,0.7s						
ABTX	Abilene, Hawle	4.04	187	P	Pn	02 39 30.5	+0.7
	baz=5.8						
MSTX	Muleshoe	4.05	230	Pn	Pn	02 39 30.1	+0.1
MSTX	Muleshoe	4.05	230	P	Pn	02 39 29.9	0.0
	baz=47						
FW07	Weatherford	4.07	165	IAmb_Lg		02 40 43.1	
	comp=Z,16nm,1.0s						
POST	Post	4.10	210	Pn	Pn	02 39 31.9	+1.2
POST				IAmb_Lg		02 40 45.1	
	comp=Z,22nm,0.9s						
HHAR	Hobbs	4.13	94	Pn	Pn	02 39 32.0	+1.0
N33B	J Bar K, Exete	4.27	17	S	Sn	02 40 22.2	-0.3
	baz=198						
T25A	Trinidad	4.33	278	Pn	Pn	02 39 33.3	-0.6
T25A				IAmb_Lg		02 40 47.5	
	comp=Z,30nm,0.8s						
FW13	Cleburne	4.49	162	IAmb_Lg		02 40 56.4	
	comp=Z,9.6nm,0.7s						
FW14	Alvarado	4.51	160	IAmb_Lg		02 40 54.0	
	comp=Z,16nm,0.8s						
S39A	Bolivar	4.69	75	Pn	Pn	02 39 39.6	+1.0
S39A				IAmb_Lg		02 40 57.1	
	comp=Z,20nm,0.7s						
S39A	Bolivar	4.69	75	P	Pn	02 39 39.3	+0.6
	baz=259,SNR=8.3						
Z38A	Mt. Pleasant	4.75	134	IAmb_Lg		02 41 03.1	
	comp=Z,15nm,0.7s						
OGNE	Ogallala	4.88	332	Pn	Pn	02 39 41.7	+0.4
MIAR	Mount Ida	4.93	114		Pn	02 39 42.6	+0.7
N35A	Tabor	4.98	31	Pn	Pn	02 39 42.5	-0.1
N35A				IAmb_Lg		02 41 19.1	
	comp=Z,33nm,0.9s						
N35A	Tabor	4.98	31	S	Sn	02 40 40.5	+0.6
	baz=214						
U40A	Yellville	5.00	92	P	Pn	02 39 44.5	+1.7
	baz=275,SNR=8.3						
U40A				P	Pn	02 39 44.5	+1.7
	baz=275,SNR=8.3						
P38A	Dawn	5.27	54	IAmb_Lg		02 41 22.6	
	comp=Z,18nm,0.8s						
SDCO	Great Sand Dun	5.27	284	Pn	Pn	02 39 47.8	+0.9
SDCO	Great Sand Dun	5.27	284	Sb	Sb	02 41 07.6	+4.1
	baz=100						
237A	Washetta, Mont	5.35	149	IAmb_Lg		02 41 27.9	
	comp=Z,15nm,0.7s						
Q24A	Divide	5.36	297	Pn	Pn	02 39 47.6	-0.4
Q24A				IAmb_Lg		02 41 15.9	
	comp=Z,14nm,0.9s						
X40A	Basin Creek Fa	5.50	111		Pn	02 39 50.3	+0.5
X40A	Basin Creek Fa	5.50	111	P	Pn	02 39 51.6	+1.8
	baz=295,SNR=5.4						
X40A				P	Pn	02 39 51.6	+1.8
	baz=295,SNR=5.4						
HTMS	Hat Mesa	5.63	224	Pn	Pn	02 39 52.1	+0.5
R40A	Maddies Statio	5.64	71	Pn	Pn	02 39 52.4	+0.8
FCAR	Ozark Folk Cen	5.64	96	Pn	Pn	02 39 52.7	+0.9
FCAR				IAmb_Lg		02 41 40.4	
	comp=Z,14nm,0.7s						
WHAR	Wooly Hollow	5.65	102	Pn	Pn	02 39 52.7	+1.0
WHAR				IAmb_Lg		02 41 38.5	
	comp=Z,12nm,0.9s						
L34A	Svendsen Farm,	5.70	20	Pn	Pn	02 39 51.2	-1.3
UALR	University of	5.77	107	IAmb_Lg		02 41 36.8	
	comp=Z,15nm,0.9s						
CLNB	Carlsbad	5.92	224	Pn	Pn	02 39 55.8	+0.2
435B	Jarrell	5.98	168	IAmb_Lg		02 41 47.6	
	comp=Z,21nm,0.8s						
ISCO	Idaho Springs	6.05	303	Pn	Pn	02 39 57.4	-0.2
N38A	Joes South For	6.15	46	Pn	Pn	02 39 59.2	+0.6
P40A	Paris	6.22	60	Pn	Pn	02 39 59.6	-0.1
CCM	Cathedral Cave	6.37	75	IAmb_Lg		02 41 54.9	
	comp=Z,22nm,0.9s						
T42A	Van Buren	6.39	84	IAmb_Lg		02 42 03.3	
	comp=Z,16nm,0.7s						
BNM	Barren Site	6.67	250	Pn	Pn	02 40 04.9	-1.2
N23A	Red Feather La	6.86	310	IAmb_Lg		02 42 13.3	
	comp=Z,20nm,1.0s						
FVM	French Village	7.00	76	S	Sn	02 41 27.9	-1.8
	baz=262						
CGM3	Cape Girardeau	7.54	82	IAmb_Lg		02 42 30.7	
	comp=Z,18nm,0.8s						
N41A	Harden Midland	7.58	55	IAmb_Lg		02 42 30.8	
	comp=Z,19nm,0.8s						
SUSD	Miller	7.79	0	IAmb_Lg		02 42 42.0	
	comp=Z,19nm,0.7s						
TX31	Lajitas Ar. Si	8.26	209	P	Pn	02 40 27.0	-0.7
	baz=26						
K22A	Casper	8.32	318	IAmb_Lg		02 43 11.9	
	comp=Z,11nm,1.0s						
RSSD	Black Hills	8.38	335	IAmb_Lg		02 43 03.0	
	comp=Z,8.8nm,0.9s						
HDIL	Hopedale	8.57	60	S	Sn	02 42 05.6	-2.8
	baz=246						

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*WEL **03** 02:49:00, 41°.74S×174°.11E, h23^{km}, ML4.3, Mw4.1, Moment Tensor Solution. s6 Moment tensor: Scale 10^{15} Nm; M_{rr}0.82; $M_{\theta\theta}$1.35; $M_{\phi\phi}$-2.17; $M_{r\theta}$-0.64; $M_{\theta\phi}$-0.15; $M_{\phi r}$0.59; Fault plane solution: $M_0$2.06000×10^{15} NP1: ϕ_s223.00000°, δ57.00000°, λ161.00000°. NP2: ϕ_s324.00000°, δ74.00000°, λ34.00000°. Principal axes: T 183.0000, Plg36.0000°, Azm189.0000°; N 45.0700, Plg52.0000°, Azm345.0000°; P -228.0700, Plg11.0000°, Azm90.0000°;*

*IDC **03** 02:49:10.4±1.5, 41°.60S×174°.07E, h0^{km}, mb3.4/2, mbtmp3.5/4, ML3.3/2 Error ellipse: s-maj=44.3km s-min=13.6km az=131.0*

*WEL **03** 02:49:14.0±0.4, 42°S±2°×17°4E±°, h6^{km}±3^{km}, M4.0/13, ML4.4/13, MLv4.0/13, Error ellipse: s-maj=0.0km s-min=0.0km az=137.5, confirmed*

*NOU **03** 02:49:13.5, 41°.87S×174°.31E, h14^{km}, MLv4.4/13, Cook Strait, New Zealand*

ISC 03 02:49:13.2±0.9, **41°.77S**±0°.03×**174°.13E**±0°.02, **h18**^{km}±5^{km}, **n115**, σ**1^{s}22**/127, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.07	73	P	Pg	02 49 16.2	-0.3
CMWZ				S	Sg	02 49 19.0	+0.3
BSWZ	Blackbirch Sta	0.20	285	P	Pg	02 49 17.9	-0.1
BSWZ				S	Sb	02 49 22.0	+0.4
TUWZ	Tuamarina	0.37	337	P	Pb	02 49 20.9	-0.3
TUWZ				S	Sb	02 49 26.7	+0.1
TCW	Tory Channel	0.57	11	P	Pg	02 49 24.2	-0.3
TCW				S	Sg	02 49 32.2	+0.2
SNZO	South Karori	0.63	44	P	Pb	02 49 26.1	+0.5
KHZ	Kahutara	0.78	214	P	Pn	02 49 29.8	+0.5
KHZ	Kahutara	0.78	214	P	Pn	02 49 29.4	0.0
KHZ				S	Sn	02 49 42.8	+2.1
NNZ	Nelson	0.79	314	P	Pg	02 49 28.4	-0.2
PLWZ	Palliser	0.87	77	P	Pb	02 49 30.1	+0.4
PLWZ				S	Sn	02 49 44.3	+1.5
MSWZ	Moikau Station	0.91	68	P	Pg	02 49 31.5	+0.6
THZ	Tophouse	0.92	270	P	Pn	02 49 31.1	-0.2
CAW	Cannon Point	0.96	47	P	Pb	02 49 32.1	+0.7
CAW				S	Sn	02 49 46.2	+1.1
DUWZ	D’Urville Isla	0.98	351	P	Pb	02 49 31.4	-0.2
DUWZ				S	Sn	02 49 45.5	0.0
KIW	Kapiti Island	1.08	33	P	Pb	02 49 33.4	+0.1
KIW				S	Sb	02 49 48.0	+0.9
MRNZ	Matariki Terra	1.09	289	P	Pg	02 49 34.4	+0.1
TKNZ	Takaka Hill	1.15	309	P	Pg	02 49 35.0	-0.3
TKNZ				S	Sg	02 49 50.8	+0.5
MTW	Mount Morrison	1.20	60	P	Pn	02 49 34.7	-0.3
TRWZ	Traveller	1.23	73	P	Pn	02 49 34.8	-0.6
OGWZ	Otaki Gorge	1.23	40	P	Pn	02 49 35.9	+0.4
OGWZ				S	Sg	02 49 53.6	+0.5
HOWZ	Holdsworth Sta	1.36	51	P	Pn	02 49 37.1	-0.2
GVZ	Greta Valley S	1.45	214	P	Pn	02 49 39.0	+0.5
TMWZ	Te Maipa	1.48	64	P	Pn	02 49 38.3	-0.7
QRZ	Quartz Range	1.53	307	P	Pg	02 49 41.7	-0.9
QRZ	Quartz Range	1.53	307	P	Pb	02 49 40.5	-0.5
MRZ	Mangatainoka R	1.56	45	P	Pn	02 49 39.9	0.0
TIWZ	Tintock	1.65	54	P	Pn	02 49 41.6	+0.2
LTZ	Lake Taylor	1.71	233	P	Pn	02 49 42.9	+0.7
DSZ	Denniston Nort	1.74	270	P	Pb	02 49 44.8	+0.2
CPWZ	Castlepoint	1.78	62	P	Pg	02 49 49.7	+2.3
AMCZ	Amberley	1.78	217	P	Pb	02 49 46.4	+1.0
OHWZ	Ohakea	1.80	30	P	Pb	02 49 45.5	-0.1
PRWZ	Pori Road	1.84	50	P	Pn	02 49 43.9	-0.1
POWZ	Post Office Ro	1.85	43	P	Pn	02 49 44.2	+0.2
BFZ	Birch Farm	1.93	56	P	Pn	02 49 44.8	-0.3
BFZ	Birch Farm	1.93	56	P	Pn	02 49 44.3	-0.8
WAZ	Wanganui	2.11	18	P	Pb	02 49 50.7	-0.2
DVHZ	Dannevirke	2.13	47	P	Pn	02 49 47.0	-0.9
OXZ	Oxford	2.19	224	P	Pn	02 49 48.5	-0.2
TSZ	Takapari Road	2.20	40	P	Pn	02 49 49.0	+0.1
ANWZ	Angora Road	2.20	54	P	Pn	02 49 48.3	-0.6
INZ	Inchbonnie	2.21	243	P	Pn	02 49 50.2	+1.2
MQZ	McQueen’s Vall	2.22	209	P	Pn	02 49 47.7	-1.4
AKCZ	Akaroa Harbour	2.29	203	P	Pn	02 49 49.1	-0.9
LREZ	Lake Rotokare	2.31	5	P	Pb	02 49 55.2	+0.8
NMEZ	Namu Road	2.36	355	P	Pg	02 49 57.0	-1.4
PRHZ	Porangahau	2.42	52	P	Pn	02 49 50.8	-1.1
PNHZ	Pukenui	2.43	41	P	Pn	02 49 51.5	-0.6
WPHZ	Waipukurau	2.44	47	P	Pn	02 49 51.8	-0.4
RACZ	Rakaia	2.45	216	P	Pn	02 49 51.6	-0.6
KHEZ	Kahui Hut	2.47	358	P	Pb	02 49 56.2	-0.9
KHEZ	Kahui Hut	2.47	358	P	Pb	02 49 56.8	-0.3
NEZ	North Egmont	2.50	359	P	Pb	02 49 57.4	-0.1
NBEZ	Newall Road No	2.50	355	P	Pb	02 49 58.6	+1.0
PKE	Pukeiti	2.57	358	P	Pb	02 49 59.0	+0.2
MTVZ	Mangateitei	2.59	24	P	Pb	02 49 59.9	+0.8
PKVZ	Pokaka	2.64	21	P	Pb	02 49 59.1	-0.9
MOVZ	Moawhango	2.66	28	P	Pn	02 49 55.9	+0.6
WNVZ	Wahianoa	2.68	25	P	Pn	02 49 57.0	+1.4
VRZ	Vera Road	2.68	11	P	Pb	02 49 58.6	-2.1
TRVZ	Turoa	2.69	24	P	Pn	02 49 57.7	+1.9
BHHZ	Black Hill Sta	2.71	34	P	Pn	02 49 56.3	+0.4
DRZ	Dome Shelter	2.72	24	P	Pb	02 50 01.2	-0.3
WHVZ	Whangaehu Hut	2.72	25	P	Pn	02 49 58.1	+1.9
FWVZ	Far West T-bar	2.73	24	P	Pn	02 49 58.1	+1.7
WACZ	Wakanui South	2.75	217	P	Pn	02 49 56.3	-0.1
TUVZ	Tukino	2.75	25	P	Pn	02 49 57.8	+1.2
NGZ	Ngauruhoe	2.82	24	P	Pn	02 49 59.4	+1.8
SNVZ	South Ngauruho	2.82	25	P	Pn	02 49 59.4	+1.8
WVZ	Waitaha Valley	2.83	241	P	Pn	02 49 58.8	+1.3
OTVZ	Oturere	2.85	25	P	Pn	02 49 59.2	+1.3
NNVZ	North Ngauruho	2.87	24	P	Pn	02 49 59.8	+1.6
KAHZ	Kahuranaki	2.87	48	P	Pn	02 49 57.0	-1.1
TWVZ	Taurewa	2.87	21	P	Pn	02 49 59.9	+1.7
WTVZ	West Tongariro	2.87	23	P	Pn	02 49 59.8	+1.6
ETVZ	East Tongariro	2.89	25	P	Pn	02 49 59.8	+1.4
KRVZ	Karewarewa	2.91	24	P	Pn	02 50 00.8	+2.1
TMVZ	Te Maari	2.91	25	P	Pn	02 49 60.0	+1.3
NTVZ	North Tongarir	2.92	24	P	Pn	02 50 00.6	+1.8
KWHZ	Kaweka Forest	2.92	37	P	Pn	02 49 58.4	-0.4
RPZ	Rata Peaks	2.99	228	Pn	Pn	02 49 59.7	0.0
	5.1nm,0.3s,baz=254,slow=0.3,SNR=13						
RPZ				Pg	Pb	02 50 06.6	+0.8
	8.6nm,0.3s,baz=18,slow=2.2,SNR=13						
RPZ				Sn	Sn	02 50 34.2	-0.8
	7.5nm,0.3s,baz=308,slow=23,SNR=10						
RPZ				Lg	Lg	02 50 47.4	
	baz=215,slow=21						
	23nm,0.5s						
RPZ	Rata Peaks	2.99	228	P	Pn	02 49 59.8	+0.1
RPZ	Rata Peaks	2.99	228	P	Pn	02 49 59.8	+0.1
MCHZ	McNeill Hill	3.03	41	P	Pn	02 49 59.8	-0.5
KATZ	Kakaramea	3.04	24	P	Pb	02 50 07.9	+1.1
ARCZ	Arundel	3.08	224	P	Pn	02 50 01.2	+0.3
RITZ	Rihia Road	3.08	26	P	Pb	02 50 08.0	+0.5
RATZ	Rangitukua	3.16	24	P	Pb	02 50 09.2	+0.4
BKZ	Black Stump Fm	3.16	36	P	Pn	02 50 02.7	+0.6
BKZ	Black Stump Fm	3.16	36	P	Pn	02 50 02.3	+0.1
GCSZ	Gaunt Creek Bo	3.21	240	P	Pn	02 50 04.8	+2.1
HIZ	Hauiti	3.30	10	P	Pn	02 50 06.7	+2.8
HIZ	Hauiti	3.30	10	P	Pn	02 50 06.4	+2.5
TMZ	Timaru	3.47	220	P	Pn	02 50 04.1	-2.3
FOZ	Fox Glacier	3.64	240	P	Pn	02 50 09.6	+1.0
LBZ	Lake Benmore	3.90	227	P	Pn	02 50 13.1	+0.9
ODZ	Otahua Downs	4.14	217	P	Pn	02 50 16.1	+0.5
ODZ	Otahua Downs	4.14	217	P	Pn	02 50 14.9	-0.7
TOZ	Tahuroa Road	4.17	15	P	Pb	02 50 21.4	-4.6
URZ	Urewera	4.18	34	Pn	Pn	02 50 15.1	-1.0
	1.2nm,0.3s,baz=342,slow=3.9,SNR=7.9						
URZ				Pg	Pb	02 50 24.4	-1.9
	4.7nm,0.3s,baz=303,slow=14,SNR=14						
URZ				Sn	Sn	02 51 00.5	-4.0
	10nm,0.3s,baz=147,slow=16,SNR=7.5						
URZ				Lg	Lg	02 51 18.5	
	14nm,0.3s,baz=178,slow=22,SNR=1.9						
	6.0nm,0.5s						
URZ	Urewera	4.18	34	P	Pn	02 50 16.2	+0.1
URZ	Urewera	4.18	34	P	Pn	02 50 15.1	-1.0
JCZ	Jackson Bay	4.55	238	P	Pn	02 50 23.3	+2.1
JCZ	Jackson Bay	4.55	238	P	Pn	02 50 22.1	+0.9
RUGZ	Raukumara Rang	4.68	37	P	Pn	02 50 22.5	-0.5
AWAZ	Awhitu Peninsu	4.71	5	P	Pn	02 50 27.6	+4.2
MKAZ	Moumakai	4.72	10	P	Pn	02 50 27.6	+4.0
HAZ	Te Kaha	4.90	36	P	Pn	02 50 24.7	-1.2
MBAZ	Motutapu North	5.03	7	P	Pb	02 50 34.4	-6.2
MXZ	Matakaoa Point	5.29	39	P	Pn	02 50 31.9	+0.5
WCZ	Waipu Caves	5.82	2	P	Pn	02 50 45.1	+6.5
CTZ	Chatham Island	7.09	109	P	Pn	02 50 55.1	-0.9
CTZ	Chatham Island	7.09	109	P	Pn	02 50 54.5	-1.5
ASAR	Alice Springs	37.95	286	P	P	02 56 28.9	-1.0
	0.6nm,0.9s,baz=123,slow=7.0,SNR=4.2						
	0.6nm,0.9s						
WRA	Warramunga Arr	40.02	291	P	P	02 56 46.4	-0.8
	0.4nm,0.7s,baz=126,slow=8.1,SNR=2.7						
	0.4nm,0.7s						
TORD	Torodi Ar. Bea	150.73	195	PKPbc	PKPbc	03 09 05.0	+0.3
	0.8nm,0.7s,baz=160,slow=3.1,SNR=14						

IDC 03 03:30:39.6±9.4, **12°.19N**×**142°.83E**, **h0**^{km}, **mb3.5**/4, **mbtmp3.5**/4, **Error ellipse: s-maj=254.1km s-min=49.3km az=4.0**, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	46.76	327	P	P	03 39 11.0	+0.2
	0.2nm,0.5s,baz=120,slow=8.5,SNR=1.6						
	0.2nm,0.5s						
MKAR	Makanchi Array	61.13	317	P	P	03 40 55.5	-0.4
	0.2nm,0.5s,baz=84,slow=6.3,SNR=2.8						
	0.2nm,0.5s						
ILAR	Eielson Array	70.67	25	P	P	03 41 56.8	-0.2
	0.7nm,0.5s,baz=247,slow=6.0,SNR=18						

	0.7nm,0.5s						
YKA	**Yellowknife Ar**	**85.00**	**27**	P	P	03 43 17.2	+0.5
	0.2nm,0.5s,baz=286,slow=5.1,SNR=5.0						
	0.2nm,0.5s						

IDC 03 03:31:13.0±2.8,61°.60N×27°.89W,h0^{km},mb3.5/5, mbtmp3.5/5,MS3.1/14,Error ellipse: s-maj=95.3km s-min=25.5km az=2.0,Iceland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFJD	**Kangerlussuaq**	**11.20**	**309**	LR	LR	03 37 45.9	
	comp=Z,124nm,18.2s,baz=129,slow=35						
JMIC	**Jan Mayen**	**12.15**	**31**	LR	LR	03 37 06.5	
	comp=Z,46nm,18.6s,baz=14,slow=29						
EKA	**Eskdalemuir Ar**	**14.32**	**105**	LR	LR	03 39 14.5	
	comp=Z,64nm,18.8s,baz=286,slow=34						
FRB	**Frobisher Bay**	**18.56**	**294**	LR	LR	03 41 44.8	
	comp=Z,100nm,18.4s,baz=164,slow=34						
NOA	**NORSAR Array B**	**18.59**	**74**	LR	LR	03 40 56.0	
	comp=Z,32nm,21.4s,baz=285,slow=31						
HFS	**Hagfors**	**20.06**	**76**	LR	LR	03 42 06.7	
	comp=Z,50nm,18.1s,baz=270,slow=33						
ARCES	**ARCESS Array B**	**22.71**	**47**	LR	LR	03 43 51.8	
	comp=Z,32nm,19.2s,baz=310,slow=33						
FINES	**FINESS Array B**	**25.12**	**66**	LR	LR	03 44 35.3	
	comp=Z,38nm,21.0s,baz=170,slow=32						
ESDC	**Sonseca Array**	**26.39**	**135**	LR	LR	03 46 57.3	
	comp=Z,37nm,19.2s,baz=241,slow=36						
GERES	**GERESS Array B**	**26.42**	**100**	LR	LR	03 47 34.9	
	comp=Z,42nm,19.0s,baz=288,slow=37						
VRAC	**Vranov**	**27.46**	**96**	LR	LR	03 47 17.7	
	comp=Z,43nm,20.6s,baz=344,slow=35						
AKASG	**Malin Array Be**	**32.55**	**83**	P	P	03 37 45.6	+0.3
	0.7nm,0.7s,baz=306,slow=9.0,SNR=1.4						
AKASG				LR	LR	03 50 47.7	
	comp=Z,29nm,19.1s,baz=273,slow=36						
	0.7nm,0.7s						
SADO	**Sadowa**	**33.94**	**264**	LR	LR	03 50 15.3	
	comp=Z,44nm,18.3s,baz=172,slow=34						
YKA	**Yellowknife Ar**	**37.76**	**311**	P	P	03 38 30.2	+0.2
	0.5nm,0.8s,baz=52,slow=8.7,SNR=6.2						
	0.5nm,0.8s						
PDAR	**Pinedale Array**	**49.81**	**287**	P	P	03 40 07.2	-0.3
	0.7nm,0.7s,baz=65,slow=5.9,SNR=6.0						
PDAR				LR	LR	04 00 15.4	
	comp=Z,28nm,20.9s,baz=74,slow=35						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**58.34**	**49**	P	P	03 41 09.3	-0.1
	0.5nm,0.7s,baz=334,slow=5.9,SNR=6.0						
	0.5nm,0.7s						
SONM	**Songino Array**	**64.90**	**32**	P	P	03 41 53.5	-0.3
	0.3nm,0.8s,baz=324,slow=7.1,SNR=2.2						
	0.3nm,0.8s						

IDC 03 03:35:53.2±5.0,2°.64S×139°.30E,h0^{km},mb3.3/2, mbtmp3.4/3,ML3.6/1,Error ellipse: s-maj=198.4km s-min=29.9km az=87.0,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.86**	**195**	P	Pn	03 40 03.2	-0.1
	0.2nm,0.3s,baz=15,slow=12,SNR=12						
WRA				S	Sn	03 43 14.2	-9.1
	0.1nm,0.5s,baz=35,slow=27,SNR=0.4						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**21.54**	**194**	P	P	03 40 44.1	-0.2
	0.3nm,0.4s,baz=22,slow=10,SNR=7.1						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**70.09**	**322**	P	P	03 47 07.5	+0.2
	0.4nm,0.6s,baz=107,slow=8.3,SNR=5.3						
	0.4nm,0.6s						

MAN 03 03:38:56.9,9°.75N×125°.37E,h3^{km},mb4.5,ML3.3,MS3.1, 11C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.12**	**73**	⇑*i*P	Pg	03 39 00.8	+1.4
SCPH				*i* S	Sg	03 39 03.1	+2.1
MSLP	**Maasin**	**0.64**	**308**	⇑*e*P	Pg	03 39 09.6	+0.5
MSLP				*e*S	Sg	03 39 18.5	+1.1
GLSP	**General Luna,**	**0.75**	**87**	⇑*e*P	Pg	03 39 10.7	-0.6
GLSP				*e*S	Sg	03 39 20.7	-0.3
GLSP	**General Luna,**	**0.75**	**87**	⇑*e*P	Pn	03 39 26.0	+12
GLSP				*e*S	Sn	03 39 35.5	+9.2
BUTP	**Butuan**	**0.81**	**162**	⇑*e*P	Pn	03 39 15.1	-0.2
BUTP				*e*S	Sn	03 39 30.2	+2.4
TABP	**Talibon, Bohol**	**1.08**	**289**	⇑*e*P	Pg	03 39 17.1	-0.6
CGP	**Cagayan de Oro**	**1.45**	**208**	⇑*e*P	Pn	03 39 23.3	-0.7
CGP				*e*S	Sn	03 39 43.6	+0.1
TBP	**Tagbilaran**	**1.49**	**268**	*e*P	Pn	03 39 24.1	-0.5
TBP				*i* S	Sg	03 39 47.5	+2.7
LLP	**Lapu-Lapu**	**1.50**	**292**	*e*P	Pn	03 39 23.9	-0.8
LLP				*e*S	Sg	03 39 45.5	+0.5
OCLP	**Ormoc**	**1.50**	**330**	⇑*e*P	Pn	03 39 23.7	-1.0
OCLP				*e*S	Sg	03 39 47.8	+2.6
BIPH	**Bislig**	**1.83**	**148**	⇑*e*P	Pn	03 39 29.9	+0.5
BIPH				*i* S	Sn	03 39 53.5	+0.3
BUKP	**Musuan**	**1.88**	**189**	⇑*e*P	Pg	03 39 34.6	+1.6
BUKP				*e*S	Sg	03 39 57.6	+0.2
RCP	**Roxas**	**3.15**	**305**	⇑*e*P	Pn	03 39 46.7	-0.8

IDC 03 03:43:02.0±1.0,2°.68S×100°.95E,h0^{km},mb4.2/11, mbtmp4.2/11,MS3.0/2,Error ellipse: s-maj=45.7km s-min=16.1km az=52.0

NEIC 03 03:43:07.2±1.1,2°.91S±0°.09×101°.0E±0°.1,h49^{km}±8^{km}, mb4.4/13,Error ellipse: s-maj=17.3km s-min=9.0km az=54.0

DJA 03 03:43:10.2±0.5,3°S±3°×10°1E±°,h32^{km}±7^{km},M4.2/13, mb4.0/4,MLv4.3/13

ISC 03 03:43:08.4±0.5,2°.77S±0°.06×100°.98E±0°.05,h50^{km},n56, σ1^{s}.64/55,mb4.3/16,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPSI	**Pulau Pagai**	**0.97**	**270**	P	**Pn**	**03 43 28.8**	**+3.1**
MASI	**Maura Aman, Be**	**1.31**	**107**	P	**Pn**	**03 43 32.2**	**+1.8**
MASI				S	**Sn**	**03 43 48.8**	**+1.9**
KSI	**Kapahiang**	**1.84**	**119**	P	**Pn**	**03 43 40.5**	**+2.9**
SDSI	**Sungai Dareh**	**1.88**	**14**	P	**Pn**	**03 43 39.6**	**+1.5**
SDSI				S	**Sn**	**03 44 01.4**	**+0.8**
PDSI	**Padang**	**1.91**	**344**	P	**Pn**	**03 43 39.4**	**+0.8**
MNAI	**Manna**	**2.53**	**129**		**Pn**	**03 43 45.2**	**-1.9**
MNAI	**Manna**	**2.53**	**129**	P	**Pn**	**03 43 49.2**	**+2.1**
BKNI	**Bangkinang**	**3.07**	**1**		**Pn**	**03 43 54.5**	**0.0**
MDSI	**Maura Dua**	**3.62**	**118**	P	**Pn**	**03 44 04.4**	**+2.4**
LWLI	**Liwa**	**3.80**	**126**	P	**Pn**	**03 44 07.5**	**+2.9**
PBSI	**Pulau Batu**	**3.81**	**315**	P	**Pn**	**03 44 06.2**	**+1.6**
DSRI	**Dabo**	**4.25**	**58**	P	**Pn**	**03 44 11.9**	**+1.2**
KASI	**Kota Agung**	**4.45**	**128**	P	**Pn**	**03 44 16.9**	**+3.5**
GSI	**Gunungsitoli**	**5.28**	**320**		**Pn**	**03 44 24.6**	**-0.3**
RPSI	**Rantau Prapat**	**5.80**	**339**	Pn	**Pn**	**03 44 32.1**	**+0.2**
IPM	**Ipoh**	**7.20**	**0**	Pn	**Pn**	**03 44 52.1**	**+1.0**
CNJI	**Cibinong**	**7.61**	**127**	P	**Pn**	**03 44 58.6**	**+1.8**
	5.4nm,0.7s,0.0nm						
JAGI	**Jajag, Banyuwa**	**14.28**	**114**	P	**Pn**	**03 46 29.6**	**+1.7**
CMAR	**Chiang Mai Arr**	**21.18**	**355**	LR	LR	03 56 09.8	
	comp=Z,25nm,18.6s,baz=120,slow=37						
FITZ	**Fitzroy Crossi**	**28.58**	**124**	P	**P**	**03 48 59.2**	**-0.7**
H08S2	**Diego Garcia H**	**28.77**	**259**	T	T	04 18 21.9	
	baz=82,slow=76,SNR=10						
H08S3	**Diego Garcia H**	**28.77**	**259**	T	T	04 18 16.8	
	baz=82,slow=76,SNR=10						
H08S1	**Diego Carcia H**	**28.79**	**259**	T	T	04 18 26.5	
	baz=82,slow=76,SNR=11						
TAPN	**Taplejung**	**32.56**	**338**	*e*P	**P**	**03 49 36.7**	**+1.3**
	14nm,0.4s						
JIRN	**Jiri**	**33.44**	**336**	*e*P	**P**	**03 49 44.4**	**+1.3**
GUN	**Gumba**	**33.78**	**336**	*e*P	**P**	**03 49 47.3**	**+1.2**
	31nm,0.4s						
GKN	**Gorkha**	**34.40**	**334**	*e*P	**P**	**03 49 52.3**	**+1.1**
DANN	**Dangsing**	**35.09**	**333**	*e*P	**P**	**03 49 58.2**	**+0.9**
	8.5nm,0.4s						
PYUN	**Piuthan**	**35.23**	**332**	*e*P	**P**	**03 50 00.1**	**+1.6**
	3.3nm,0.2s						
WB0	**Warramunga Arr**	**36.74**	**120**	P	**P**	**03 50 08.2**	**-3.1**
WB0				IAmb	IAmb	03 50 45.2	
	comp=Z,6.3nm,1.1s						
WRA	**Warramunga Arr**	**36.77**	**120**	P	**P**	**03 50 11.8**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=288,slow=9.8,SNR=30						
	comp=Z,0.6nm,0.3s						
WR0	**Warramunga Arr**	**36.95**	**120**	P	**P**	**03 50 10.7**	**-2.4**
WR0				IAmb	IAmb	03 50 38.2	
	comp=Z,4.2nm,1.0s						
ASAR	**Alice Springs**	**38.02**	**126**	P	**P**	**03 50 23.0**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=300,slow=8.2,SNR=21						
ASAR				PcP	**PcP**	**03 52 38.2**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=316,slow=2.6,SNR=2.5						
	comp=Z,1.9nm,0.6s						
ASAR	**Alice Springs**	**38.02**	**126**	P	**P**	**03 50 19.7**	**-2.4**
AS31	**Alice Springs**	**38.02**	**126**	P	**P**	**03 50 19.4**	**-2.7**
ROCAM	**Rodrigues Isla**	**40.41**	**242**	P	**P**	**03 50 38.5**	**-3.5**
NIL	**Nilore**	**44.68**	**326**	P	**P**	**03 51 15.4**	**-1.1**
NIL				IAmb	IAmb	03 51 18.6	
	comp=Z,6.7nm,0.6s						
STKA	**Stephens Creek**	**47.91**	**132**	P	**P**	**03 51 43.2**	**+1.2**
	comp=Z,1.4nm,0.4s,baz=305,slow=9.0,SNR=4.4						
	comp=Z,1.4nm,0.4s						
STKA	**Stephens Creek**	**47.91**	**132**	P	**P**	**03 51 39.9**	**-2.1**
SONM	**Songino Array**	**50.61**	**5**	P	**P**	**03 52 02.4**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=188,slow=9.7,SNR=10						
SONM				PcP	**PcP**	**03 53 19.5**	**0.0**
	comp=Z,0.4nm,0.3s,baz=196,slow=4.1,SNR=4.5						
	comp=Z,1.6nm,0.6s						
SONM	**Songino Array**	**50.61**	**5**	P	**P**	**03 52 01.9**	**-0.6**
SONM				IAmb	IAmb	03 52 03.8	
	comp=Z,1.6nm,0.8s						
AAK	**Ala-Archa**	**51.14**	**335**	LR	LR	04 16 13.1	
	comp=Z,29nm,21.7s,baz=206,slow=39						
MK31	**Makanchi Array**	**52.03**	**344**	P	**P**	**03 52 12.7**	**-0.2**
MK31				IAmb	IAmb	03 52 13.9	
	comp=Z,2.5nm,0.9s						
MKAR	**Makanchi Array**	**52.03**	**344**	P	**P**	**03 52 13.0**	**+0.1**
	comp=Z,3.5nm,0.6s,baz=149,slow=8.2,SNR=38						
	comp=Z,3.5nm,0.6s						
MKAR	**Makanchi Array**	**52.03**	**344**	P	**P**	**03 52 12.9**	**-0.1**
HIA	**Hailar**	**54.32**	**15**	P	**P**	**03 52 29.3**	**-0.4**
HIA				IAmb	IAmb	03 53 01.6	
	comp=Z,4.4nm,0.7s						
USRK	**Ussuriysk Ar.**	**54.38**	**27**	P	**P**	**03 52 30.3**	**+0.1**
	comp=Z,2.2nm,0.5s,baz=218,slow=4.1,SNR=9.4						
	comp=Z,2.2nm,0.5s						
USRK	**Ussuriysk Ar.**	**54.38**	**27**	P	**P**	**03 52 29.4**	**-0.8**
ZAA0	**Zalesovo Array**	**58.10**	**349**	P	**P**	**03 52 55.6**	**-1.0**
ZALV	**Zalesovo Beam**	**58.10**	**349**	P	**P**	**03 52 56.1**	**-0.5**
	comp=Z,3.1nm,0.3s,baz=169,slow=5.1,SNR=25						
	comp=Z,3.1nm,0.3s						
ABKAR	**Akbulak array**	**62.78**	**331**	P	**P**	**03 53 27.6**	**-0.9**
KBZ	**Khabaz**	**69.52**	**319**	P	**P**	**03 54 12.8**	**+0.8**
	comp=Z,3.1nm,1.1s,baz=153,slow=6.8,SNR=2.7						
	comp=Z,3.1nm,1.1s						
BRTR	**Keskin Array B**	**74.56**	**312**	P	**P**	**03 54 42.6**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=146,slow=6.6,SNR=4.9						
	comp=Z,0.6nm,0.6s						
FINES	**FINESS Array B**	**85.24**	**332**	P	**P**	**03 55 40.3**	**+0.8**
	comp=Z,1.2nm,0.9s,baz=117,slow=6.6,SNR=3.7						
	comp=Z,1.2nm,0.9s						
ARCES	**ARCESS Array B**	**87.52**	**340**	P	**P**	**03 55 51.1**	**+0.6**
	comp=Z,4.2nm,1.1s,baz=76,slow=5.1,SNR=6.8						
	comp=Z,4.2nm,1.1s						
TXAR	**Lajitas Array**	**144.69**	**39**	PKP	**PKPab**	**04 02 40.2**	**+0.9**
	comp=Z,1.4nm,0.5s,baz=239,slow=0.8,SNR=29						

IDC 03 04:00:12.1±4.4,13°.81S×168°.13E,h0^{km},mb3.6/3, mbtmp3.6/3,Error ellipse: s-maj=244.0km s-min=31.6km az=143.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.87**	**255**	P	P	04 06 47.9	-0.2
	0.4nm,0.6s,baz=85,slow=8.7,SNR=2.7						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**33.78**	**248**	P	P	04 06 56.2	+0.2
	0.7nm,0.6s,baz=76,slow=9.5,SNR=8.7						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**85.40**	**18**	P	P	04 12 51.4	+0.3
	0.4nm,0.6s,baz=232,slow=5.6,SNR=12						
	0.4nm,0.6s						
ARCES	**ARCESS Array B**	**119.58**	**346**	PKP	PKPdf	04 19 02.5	-0.9
	3.0nm,1.0s,baz=57,slow=3.3,SNR=6.7						

MAN 03 04:01:39.7,5°.47N×127°.19E,h99^{km},mb5.4,ML4.4,MS4.6

BJI 03 04:01:41.0±0.0,5°.60N×127°.20E,h100^{km},mb4.7/44, mB4.9/14

IDC 03 04:01:42.3±2.0,5°.57N×127°.20E,h104^{km}±14^{km},mb4.2/20, mbtmp4.5/21,MS2.9/11,Error ellipse: s-maj=44.9km s-min=10.9km az=63.0

DJA 03 04:01:42.7±0.4,6°N±3°×12°7E±°,h99^{km}±5^{km},M4.6/19, mB5.1/6,mb4.6/19,MLv4.8/10,Mw(mB)4.4/6

NEIC 03 04:01:43.8±1.2,5°.52N±0°.08×127°.01E±0°.06,h111^{km}±8^{km}, mb4.7/35,Error ellipse: s-maj=13.3km s-min=4.7km az=213.0

ISC 03 04:01:41.5±0.9,5°.54N±0°.04×127°.16E±0°.07,h97^{km}±7^{km}, n124,σ1^{s}.62/136,mb4.7/46,14C-5D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.66**	**327**	⇑*e*P	**Pn**	**04 02 09.8**	**+0.2**
MATI				*e*S	**Sn**	**04 02 29.7**	**-1.3**
DAV	**Davao City (W)**	**2.18**	**314**	P	**Pn**	**04 02 18.0**	**+1.6**
	853nm,0.5s,baz=190,slow=0.8,SNR=21						
DAV				S	**Sn**	**04 02 45.1**	**+2.0**
	943nm,0.4s,baz=269,slow=20,SNR=24						
DAV				LR	LR	04 03 01.5	
	comp=Z,725nm,21.9s,baz=169,slow=36						
DAV	**Davao City (W)**	**2.18**	**314**		**Pn**	**04 02 18.2**	**+1.8**
DAV					**Sn**	**04 02 44.1**	**+1.0**
GSPH	**General Santos**	**2.26**	**284**	⇓*e*P	**Pn**	**04 02 15.2**	**-2.3**
GSPH				*i* S	**Sn**	**04 02 41.7**	**-3.4**
CDOP	**Cateel, Davao**	**2.34**	**342**	⇑*e*P	**Pn**	**04 02 18.0**	**-0.5**
CDOP				*e*S	**Sn**	**04 02 43.3**	**-3.4**
SGSI	**Sangihe**	**2.46**	**221**	P	**Pn**	**04 02 20.8**	**+0.8**
SGSI				S	**Sn**	**04 02 50.1**	**+0.6**
KCP	**Kidapawan**	**2.52**	**305**	⇑*i*P	**Pn**	**04 02 21.0**	**+0.1**
KCP				*i* S	**Sn**	**04 02 50.2**	**-0.9**
BIPH	**Bislig**	**2.74**	**343**	⇑*i*P	**Pn**	**04 02 23.2**	**-0.6**
BIPH				*i* S	**Sn**	**04 02 51.3**	**-4.9**
SKMP	**Bagumbayan, Su**	**2.77**	**291**	⇑*e*P	**Pn**	**04 02 24.0**	**-0.2**
SKMP				*e*S	**Sn**	**04 02 58.3**	**+1.2**
BUKP	**Musuan**	**3.12**	**318**	⇑*e*P	**Pn**	**04 02 29.7**	**+0.8**
BUKP				*e*S	**Sn**	**04 03 06.1**	**+0.8**
TASP	**Talacogon, Agu**	**3.19**	**335**	⇑*e*P	**Pn**	**04 02 32.3**	**+2.5**
TASP				*e*S	**Sn**	**04 03 08.7**	**+1.7**
CTBH	**Cotabato--PC H**	**3.34**	**300**	⇓*e*P	**Pn**	**04 02 32.4**	**+0.6**
CTBH				*i* S	**Sn**	**04 03 06.7**	**-3.9**
BUTP	**Butuan**	**3.73**	**336**	⇑*e*P	**Pn**	**04 02 38.3**	**+1.2**
BUTP				*e*S	**Sn**	**04 03 22.0**	**+2.0**
CGP	**Cagayan de Oro**	**3.79**	**320**	⇑*e*P	**Pn**	**04 02 40.5**	**+2.7**
CGP				*i* S	**Sn**	**04 03 21.5**	**+0.1**
GLSP	**General Luna,**	**4.34**	**346**	⇓*e*P	**Pn**	**04 02 45.4**	**+0.2**
GLSP				*e*S	**Sn**	**04 03 28.1**	**-6.6**
PAGZ	**Pagadian**	**4.39**	**302**	⇑*e*P	**Pn**	**04 02 46.7**	**+0.7**
PAGZ				*e*S	**Sn**	**04 03 38.0**	**+1.9**
TNTI	**Ternate**	**4.74**	**177**	Pn	**Pn**	**04 02 51.7**	**+1.0**
TNTI	**Ternate**	**4.74**	**177**	P	**Pn**	**04 02 51.8**	**+1.0**
DCPH	**Dipolog City**	**4.84**	**309**	⇓*e*P	**Pn**	**04 02 51.2**	**-0.8**
MSLP	**Maasin**	**5.10**	**334**	⇑*e*P	**Pn**	**04 02 57.0**	**+1.4**
MSLP				*e*S	**Sn**	**04 03 52.2**	**-1.0**
TBP	**Tagbilaran**	**5.26**	**322**	*e*P	**Pn**	**04 02 54.6**	**-3.1**
TBP				*i* S	**Sn**	**04 03 59.9**	**+2.7**
LLP	**Lapu-Lapu**	**5.70**	**327**	*e*P	Pn	04 03 12.1	+8.3
LLP				*e*S	**Sn**	**04 04 11.3**	**+3.4**
LBMI	**Labuha**	**6.15**	**177**	P	**Pn**	**04 03 11.0**	**+1.1**
	142nm,0.6s,2µm0.4nm						
GTOI	**Gorontalo**	**6.39**	**220**	P	**Pn**	**04 03 12.9**	**-0.3**
	23nm,0.6s,340nm0.1nm						
MRSI	**Marisa**	**7.24**	**226**	P	**Pn**	**04 03 25.8**	**+1.1**
	107nm,0.6s,2µm0.4nm						
RCP	**Roxas**	**7.40**	**324**	⇑*e*P	**Pn**	**04 03 30.2**	**+3.3**
SANI	**Sanana**	**7.63**	**189**	P	**Pn**	**04 03 28.2**	**-1.8**
	32nm,0.6s,1µm0.3nm						
TOLI2	**Tolitoli**	**7.74**	**236**	Pn	**Pn**	**04 03 30.6**	**-0.9**
LUWI	**Luwuk**	**7.87**	**214**	Pn	**Pn**	**04 03 34.9**	**+1.6**
LUWI	**Luwuk**	**7.87**	**214**	P	**Pn**	**04 03 35.7**	**+2.4**
	81nm,0.9s,4µm0.5nm						
MYLDM	**Lahad Datu**	**8.63**	**268**	Pn	**Pn**	**04 03 43.4**	**-0.2**
NLAI	**Namlea**	**8.72**	**180**	P	**Pn**	**04 03 44.3**	**-0.6**
	29nm,0.6s						
MPSI	**Mapaga**	**8.90**	**235**	P	**Pn**	**04 03 48.6**	**+1.3**
	8.4nm,0.7s						
AAI	**Ambon**	**9.22**	**174**	P	**Pn**	**04 03 52.8**	**+1.0**
	61nm,0.6s,2µm						
FAKI	**Fak Fak**	**9.82**	**149**	P	**Pn**	**04 04 00.4**	**+0.5**
	55nm,1.6s						
SPSI	**Sidrap Palu**	**11.98**	**218**	P	**Pn**	**04 04 29.0**	**-0.1**
	13nm,0.7s						
KAPI	**Kappang**	**12.83**	**215**	LR	LR	04 10 18.4	
	comp=Z,25nm,21.1s,baz=338,slow=40						
SBUM	**Sibu**	**15.21**	**259**	Pn	**Pn**	**04 05 11.1**	**-0.1**
SBUM				IAmb	IAmb	04 05 16.2	
	comp=Z,50nm,0.7s						
SOEI	**Soe**	**15.47**	**191**	Pn	**Pn**	**04 05 15.3**	**+0.8**
SOEI				IAmb	IAmb	04 05 30.4	
	comp=Z,32nm,0.8s						
PLAI	**Plampang**	**17.06**	**213**	P	**P**	**04 05 36.3**	**+1.8**
	comp=Z,28nm,1.0s						
MTN	**Manton Dam**	**18.69**	**168**	P	**P**	**04 05 52.5**	**+0.2**
MTN				IAmb	IAmb	04 05 55.2	
	comp=Z,42nm,1.5s						
KNRA	**Kununurra**	**21.14**	**176**	P	**P**	**04 06 19.0**	**+0.2**
KNRA				IAmb	IAmb	04 06 20.7	
	comp=Z,29nm,0.6s						
WB0	**Warramunga Arr**	**26.14**	**164**	P	**P**	**04 07 07.0**	**+0.2**
WB0				IAmb	IAmb	04 07 10.7	
	comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**26.29**	**165**	P	**P**	**04 07 08.0**	**-0.2**
	comp=Z,3.9nm,0.7s,baz=339,slow=10,SNR=31						
WRA				ScP	**ScP**	**04 14 03.1**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=350,slow=3.4,SNR=6.3						
WRA				LR	LR	04 20 43.5	
	comp=Z,72nm,19.5s,baz=75,slow=43						
	comp=Z,3.9nm,0.7s						
WRA	**Warramunga Arr**	**26.29**	**165**	P	**P**	**04 07 08.9**	**+0.7**
NJ2	**Nanjing**	**27.50**	**345**	*e*P	**P**	**04 07 20.8**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
JNU	**Nakatsue**	**27.66**	**7**	LR	LR	04 21 40.4	
	comp=Z,6.9nm,18.6s,baz=229,slow=43						
RPSI	**Rantau Prapat**	**28.30**	**265**	P	**P**	**04 07 23.6**	**-2.6**
RPSI				IAmb	IAmb	04 07 25.4	
	comp=Z,15nm,1.2s						
ENH	**Enshi**	**29.70**	**328**	P	**P**	**04 07 37.2**	**-1.3**
ENH				IAmb	IAmb	04 07 40.0	
	comp=Z,24nm,1.0s						
AS31	**Alice Springs**	**29.77**	**167**	P	**P**	**04 07 39.5**	**+0.4**
ASAR	**Alice Springs**	**29.77**	**167**	P	**P**	**04 07 39.3**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=353,slow=7.8,SNR=18						
ASAR				ScP	**ScP**	**04 14 13.8**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=331,slow=3.2,SNR=4.4						
	comp=Z,1.0nm,0.3s						
CRAI	**Chiangrai**	**29.84**	**302**	P	**P**	**04 07 37.6**	**-2.3**
CMAR	**Chiang Mai Arr**	**30.37**	**297**	LR	LR	04 20 14.1	
	comp=Z,16nm,18.8s,baz=100,slow=37						
KSRS	**Korea Array**	**31.77**	**1**	LR	LR	04 20 17.4	
	comp=Z,6.0nm,20.7s,baz=180,slow=35						
PZH	**PanZhiHua**	**31.98**	**313**	P	**P**	**04 08 00.2**	**+1.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,130nm,5.4s						
XAN	**Xi'an**	**33.02**	**332**	⇑P	**P**	**04 08 08.1**	**+0.5**
XAN				pmax	pmax		
	comp=Z,22nm,1.0s						
CD2	**Chengdu**	**33.47**	**322**	P	**P**	**04 08 11.4**	**-0.2**
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
HNS	**HongShan**	**33.69**	**342**	⇓P	**P**	**04 08 14.1**	**+0.8**
HNS				pmax	pmax		
	comp=Z,14nm,1.0s						
BJT	**Baijiatuau**	**35.72**	**345**	P	**P**	**04 08 31.4**	**+0.5**
BJT				IAmb	IAmb	04 08 34.9	
	comp=Z,22nm,1.3s						
HNR	**Honiara**	**35.90**	**114**	LR	LR	04 22 33.5	
	comp=Z,366nm,20.0s,baz=289,slow=35						
LZH	**Lanzhou**	**37.19**	**328**	⇑P	**P**	**04 08 44.2**	**+0.7**
LZH				pmax	pmax		
	comp=Z,41nm,1.5s						
HHC	**Hu-ho-hao-te**	**37.83**	**341**	*e*P	**P**	**04 08 51.8**	**+2.9**
HHC				pmax	pmax		
	comp=Z,17nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,6.5s						
MDJ	**Mudanjiang**	**38.98**	**3**	P	**P**	**04 09 00.2**	**+1.9**
MDJ				pP	pwP	04 09 23.6	-4.7
MDJ				sP	sP	04 09 36.7	+8.2
MDJ				PP	**PP**	**04 10 31.7**	**+2.2**
MDJ				PcP	**PcP**	**04 11 07.6**	**+0.8**
MDJ				ScP	**ScP**	**04 14 43.5**	**-3.1**
MDJ				S	**S**	**04 14 55.3**	**+5.4**
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,79nm,4.1s						
MDJ	**Mudanjiang**	**38.98**	**3**	P	**P**	**04 08 58.5**	**+0.2**
SHL	**Shillong**	**39.18**	**304**	P	**P**	**04 08 59.6**	**-0.9**
SHL				IAmb	IAmb	04 09 00.1	
	comp=Z,14nm,0.8s						
STKA	**Stephens Creek**	**39.67**	**161**	P	**P**	**04 09 05.0**	**+0.7**
	comp=Z,3.3nm,0.6s,baz=328,slow=7.8,SNR=9.3						
	comp=Z,3.3nm,0.6s						
STKA	**Stephens Creek**	**39.67**	**161**	P	**P**	**04 09 05.1**	**+0.9**
GTA	**Gaotai**	**41.79**	**328**	*e*P	**P**	**04 09 22.0**	**+0.3**
GTA				pP	pwP	04 09 48.8	+0.8
GTA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GOMU	**GeErMu**	**42.55**	**320**	P	**P**	**04 09 29.1**	**+0.8**
GOMU				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TAPN	**Taplejung**	**43.32**	**305**	*e*P	**P**	**04 09 33.4**	**-1.1**
	comp=Z,11nm,0.5s						
ODAN	**Odare**	**43.40**	**304**	*e*P	**P**	**04 09 33.8**	**-1.3**
KLR	**Kul'dur**	**43.71**	**4**	LR	LR	04 28 12.2	
	comp=Z,14nm,21.0s,baz=276,slow=36						
RAMN	**Ramite**	**44.09**	**303**	*e*P	**P**	**04 09 39.5**	**-1.1**
	comp=Z,51nm,1.1s						
JIRN	**Jiri**	**44.69**	**304**	*e*P	**P**	**04 09 44.4**	**-1.1**
GUN	**Gumba**	**45.03**	**304**	*e*P	**P**	**04 09 47.0**	**-1.3**
	comp=Z,18nm,0.6s						
PKI	**Pulchoki**	**45.30**	**304**	*e*P	**P**	**04 09 48.5**	**-1.8**
PKIN	**Phulchoki**	**45.31**	**304**	*e*P	**P**	**04 09 48.6**	**-1.8**
ULN	**Ulaanbaatar**	**45.55**	**341**	P	**P**	**04 09 51.9**	**+0.1**
DMN	**Daman**	**45.56**	**304**	*e*P	**P**	**04 09 50.8**	**-1.5**
SONM	**Songino Array**	**45.74**	**341**	P	**P**	**04 09 53.5**	**+0.3**
	comp=Z,2.0nm,0.9s,baz=157,slow=7.1,SNR=13						
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**45.74**	**341**	P	**P**	**04 09 53.9**	**+0.7**
PALK	**Pallekele**	**46.18**	**275**	LR	LR	04 29 55.6	
	comp=Z,27nm,19.0s,baz=221,slow=37						
KOLN	**Koldanda**	**46.87**	**303**	*e*P	**P**	**04 10 01.2**	**-1.3**
DANN	**Dangsing**	**46.94**	**304**	*e*P	**P**	**04 10 01.6**	**-1.5**
	comp=Z,33nm,0.7s						
PYUN	**Piuthan**	**47.49**	**303**	*e*P	**P**	**04 10 06.3**	**-1.0**
WMQ	**Urumqi**	**51.51**	**324**	*e*P	**P**	**04 10 37.6**	**+0.2**
WMQ				sP	sP	04 11 14.3	+4.2
WMQ				pmax	pmax		
	comp=Z,17nm,1.3s						
MK31	**Makanchi Array**	**56.33**	**324**	P	**P**	**04 11 12.5**	**+0.1**
MKAR	**Makanchi Array**	**56.33**	**324**	P	**P**	**04 11 12.4**	**0.0**
	comp=Z,8.5nm,0.5s,baz=117,slow=7.6,SNR=125						
	comp=Z,8.5nm,0.5s						
MAKZ	**Makanchi**	**56.52**	**324**	P	**P**	**04 11 13.4**	**-0.3**
MA2	**Magadan**	**56.86**	**14**	LR	LR	04 38 18.5	
	comp=Z,9.4nm,19.4s,baz=82,slow=39						
KSH	**Kashi**	**57.08**	**314**	P	**P**	**04 11 19.9**	**+1.9**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ZAA0	**Zalesovo Array**	**59.18**	**332**	P	**P**	**04 11 31.7**	**-0.6**
ZAA0				IAmb	IAmb	04 11 34.4	
	comp=Z,4.4nm,1.1s						
ZALV	**Zalesovo Beam**	**59.18**	**332**	P	**P**	**04 11 31.9**	**-0.4**
	comp=Z,1.2nm,0.3s,baz=114,slow=7.2,SNR=6.6						
	comp=Z,1.2nm,0.3s						
KURK	**Kurchatov**	**60.46**	**327**	P	**P**	**04 11 40.8**	**-0.2**
KURBB	**Kurchatov Arra**	**60.46**	**327**	P	**P**	**04 11 40.9**	**-0.2**
	comp=Z,12nm,0.8s,baz=126,slow=6.2,SNR=103						
KURBB				PP	**PP**	**04 13 55.6**	**+0.2**
	comp=Z,1.1nm,1.1s,baz=121,slow=9.1,SNR=4.6						
	comp=Z,12nm,0.8s						
KK31	**Karatay Array**	**62.22**	**316**	P	**P**	**04 11 52.7**	**-0.4**
KK31				IAmb	IAmb	04 11 53.7	
	comp=Z,9.9nm,1.0s						
KKAR	**Karatay Array**	**62.22**	**316**	P	**P**	**04 11 52.7**	**-0.4**
KKAR				IAmb	IAmb	04 11 53.7	
	comp=Z,9.9nm,1.0s						
BSWZ	**Blackbirch Sta**	**63.43**	**142**	P	**P**	**04 12 00.2**	**-0.9**
TIXI	**Tiksi**	**66.04**	**1**	P	**P**	**04 12 17.9**	**+0.4**
BVAR	**Borovoye Array**	**66.05**	**326**	P	**P**	**04 12 18.1**	**+0.2**

	comp=Z,7.4nm,0.6s,baz=124,slow=7.4,SNR=40						
	comp=Z,7.4nm,0.6s						
BRVK	Borovoye	66.12	326	P	P	04 12 18.3	-0.1
GEYT	Alibeck	70.11	308	P	P	04 12 44.3	+0.6
	comp=Z,2.8nm,0.5s,baz=28,slow=3.5,SNR=6.5						
	comp=Z,2.8nm,0.5s						
ABKAR	Akbulak array	71.03	320	P	P	04 12 48.5	-0.5
AKTO	Aktyubinsk	72.52	321	P	P	04 12 58.2	+0.3
	comp=Z,9.9nm,0.7s,baz=98,slow=6.3,SNR=25						
AKTO				LR	LR	04 46 52.2	
	comp=Z,22nm,20.9s,baz=189,slow=37						
	comp=Z,9.9nm,0.7s						
RAYN	Ar Rayn	80.17	293	P	P	04 13 40.3	-1.5
RAYN				IAmb	IAmb	04 13 42.5	
	comp=Z,16nm,1.2s						
GNI	Garni	80.66	310	P	P	04 13 45.0	+0.8
	comp=Z,2.8nm,0.5s,baz=110,slow=7.3,SNR=3.9						
	comp=Z,2.8nm,0.5s						
ONI	Oni	81.65	312	P	P	04 13 49.8	+0.5
ONI				IAmb	IAmb	04 13 55.8	
	comp=Z,7.6nm,1.0s						
GEVA	Gevas	81.97	308	IAmb	IAmb	04 13 52.7	
	comp=Z,11nm,0.9s						
KBZ	Khabaz	82.05	313	P	P	04 13 50.0	-1.3
	comp=Z,4.5nm,1.0s,baz=52,slow=2.7,SNR=5.3						
	comp=Z,4.5nm,1.0s						
GURO	Guroymak-BITLI	82.77	308	P	P	04 13 55.6	+0.3
GURO				IAmb	IAmb	04 13 57.2	
	comp=Z,15nm,1.0s						
KOPT	Kop Dagi	83.92	310	IAmb	IAmb	04 14 07.2	
	comp=Z,12nm,0.7s						
KLMR	Klimovskoe	84.05	331	*e*P	P	04 13 59.2	-2.0
KLMR				AMP		04 14 03.7	
	comp=Z,17nm,1.0s						
ASF	Jabal al Asfar	87.31	302	P	P	04 14 18.7	+0.6
	comp=Z,15nm,0.9s,baz=150,slow=1.0,SNR=10						
	comp=Z,15nm,0.9s						
ARCES	ARCESS Array B	88.91	340	P	P	04 14 24.3	-0.5
	comp=Z,2.0nm,0.8s,baz=82,slow=8.7,SNR=4.1						
	comp=Z,2.0nm,0.8s						
BR131	Keskin Array S	89.20	310	P	P	04 14 25.7	-1.3
BR131				IAmb	IAmb	04 14 28.0	
	comp=Z,6.8nm,1.1s						
BRTR	Keskin Array B	89.20	310	P	P	04 14 26.4	-0.5
	comp=Z,3.5nm,1.0s,baz=130,slow=4.6,SNR=12						
	comp=Z,3.5nm,1.0s						
EIL	Elat	89.20	300	P	P	04 14 27.3	+0.3
	comp=Z,6.8nm,1.0s,baz=17,slow=7.2,SNR=4.5						
	comp=Z,6.8nm,1.0s						
FINES	FINESS Array B	90.45	332	P	P	04 14 31.5	-0.6
	comp=Z,1.2nm,0.7s,baz=35,slow=7.0,SNR=9.3						
	comp=Z,1.2nm,0.7s						
AKASG	Malin Array Be	90.76	321	P	P	04 14 32.9	-0.9
	comp=Z,1.4nm,0.8s,baz=76,slow=3.1,SNR=6.6						
	comp=Z,1.4nm,0.8s						
NACGM	Naroch	91.44	325	*e*P	P	04 14 43.0	+6.2
	comp=Z,14nm,0.9s,baz=78						
MLR	Muntele Rosu	93.90	316	P	P	04 14 48.3	-0.3
	comp=Z,1.3nm,0.4s,baz=175,slow=4.6,SNR=3.9						
	comp=Z,1.3nm,0.4s						
NOA	NORSAR Array B	97.36	334	LR	LR	05 02 16.5	
	comp=Z,8.3nm,20.2s,baz=230,slow=37						
YKA	Yellowknife Ar	97.68	24	P	Pdif	04 15 05.4	+0.1
	comp=Z,0.3nm,0.8s,baz=292,slow=4.9,SNR=3.5						
	comp=Z,0.3nm,0.8s						
TORD	Torodi Ar. Bea	122.74	289	PKP	PKPdf	04 20 26.6	-0.6
	comp=Z,0.9nm,0.7s,baz=37,slow=1.4,SNR=7.3						

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*IDC **03** 04:04:52.5±3.6, 19°.78S×177°.78W, h555^{km}±27^{km}, mb3.2/6, mbtmp4.2/8, Error ellipse: s-maj=84.9km s-min=20.8km az=145.0*

ISC 03 04:04:51.6±1.3**, 19°.8S**±0°.3×**177°.7W**±0°.2**, h550**^{km}**, n13, σ0^{s}.66**/12**, mb4.0**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.57	297	P	P	04 06 18.2	+0.1
	16nm,0.4s,baz=140,slow=4.9,SNR=17						
AFI	Afiamalu	8.16	45	S	S	04 08 20.7	-8.3
	15nm,0.4s,baz=173,slow=22,SNR=2.6						
DZM	Mont Dzumac	15.01	259	P	P	04 08 02.5	+1.2
	3.8nm,0.5s,baz=284,slow=21,SNR=6.0						
CTA	Charters Tower	33.88	263	P	P	04 10 49.3	+0.1
	3.2nm,0.5s,baz=99,slow=11,SNR=5.2						
	3.2nm,0.5s						
STKA	Stephens Creek	38.36	243	P	P	04 11 25.7	-0.4
	1.5nm,0.3s,baz=66,slow=12,SNR=3.5						
	1.5nm,0.3s						
ASAR	Alice Springs	44.98	256	P	P	04 12 18.2	-0.3
	8.0nm,0.8s,baz=90,slow=8.3,SNR=56						
ASAR				PcP	PcP	04 13 47.7	-0.2
	0.4nm,0.6s,baz=100,slow=3.9,SNR=2.9						
	8.0nm,0.8s						
WRA	Warramunga Arr	45.01	261	P	P	04 12 17.8	-0.9
	3.2nm,0.6s,baz=97,slow=8.0,SNR=37						
	3.2nm,0.6s						
TXAR	Lajitas Array	86.44	57	P	P	04 16 37.4	+0.8
	0.2nm,0.6s,baz=223,slow=4.9,SNR=1.9						
	0.2nm,0.6s						
ILAR	Eielson Array	87.61	13	P	P	04 16 40.7	-0.4
	0.2nm,0.4s,baz=224,slow=5.9,SNR=6.0						
	0.2nm,0.4s						
MKAR	Makanchi Array	110.98	314	PKiKP	PKiKP	04 22 21.9	-0.7
	0.3nm,0.6s,baz=186,slow=1.0,SNR=3.1						
AKASG	Malin Array Be	142.59	332	PKhKP	PKPpre	04 23 18.7	
	1.0nm,0.5s,baz=42,slow=4.1,SNR=9.4						
BRTR	Keskin Array B	146.63	313	PKPbc	PKPbc	04 23 32.1	-0.1
	0.7nm,0.5s,baz=149,slow=4.5,SNR=6.4						
GERES	GERESS Array B	149.65	345	PKPbc	PKPbc	04 23 39.7	+0.2
	0.2nm,0.5s,baz=318,slow=1.8,SNR=5.5						

MAN 03 04:10:48.5, 9°.77N×125°.34E, h4^{km}, mb4.6, ML3.5, MS3.3, 12C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.14	85	⇑*i*P	Pg	04 10 51.6	+0.2
SCPH				*e*S	Sg	04 10 54.0	+0.7
MSLP	Maasin	0.60	307	⇑*e*P	Pg	04 11 00.6	+0.6
MSLP				*e*S	Sb	04 11 10.2	-0.2
GLSP	General Luna,	0.77	89	⇑*e*P	Pg	04 11 01.4	-1.9
GLSP				*e*S	Sg	04 11 11.4	-2.0
BUTP	Butuan	0.84	161	⇑*e*P	Pb	04 11 06.4	+0.7
BUTP				*e*S	Sn	04 11 19.5	-0.4
TABP	Talibon, Bohol	1.05	288	⇑*e*P	Pg	04 11 08.3	-0.3
CGP	Cagayan de Oro	1.46	206	⇑*e*P	Pn	04 11 14.6	-1.0
CGP				*e*S	Sg	04 11 35.4	+0.1
LLP	Lapu-Lapu	1.46	292	⇓*e*P	Pn	04 11 14.2	-1.5
LLP				*e*S	Sg	04 11 36.4	+0.8
TBP	Tagbilaran	1.46	267	⇓*i*P	Pn	04 11 14.8	-0.9
TBP				*i* S	Sb	04 11 34.8	-0.5
OCLP	Ormoc	1.46	331	⇓*e*P	Pb	04 11 16.4	0.0
OCLP				*e*S	Sg	04 11 39.0	+3.4
BIPH	Bislig	1.87	147	⇓*i*P	Pn	04 11 21.9	+0.6
BIPH				*i* S	Sn	04 11 46.0	+0.6
BUKP	Musuan	1.90	188	⇑*e*P	Pg	04 11 26.1	+1.2
BUKP				*e*S	Sb	04 11 47.5	-0.4
CDOP	Cateel, Davao	2.25	151	⇑*e*P	Pn	04 11 26.7	+0.1
CDOP				*e*S	Sg	04 11 59.6	-1.3
DCPH	Dipolog City	2.29	239	⇓*e*P	Pn	04 11 26.5	-0.6
PAGZ	Pagadian	2.72	226	⇑*e*P	Pn	04 11 33.4	+0.4
PAGZ				*e*S	Sn	04 12 05.7	-0.7
KCP	Kidapawan	2.75	185	⇑*e*P	Pb	04 11 36.5	-1.9
KCP				*i* S	Sg	04 12 22.7	+5.6
CNP	Catarman	2.81	346	⇑*e*P	Pb	04 11 38.1	-1.1
RCP	Roxas	3.11	305	⇑*e*P	Pn	04 11 39.9	+1.4

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*IDC **03** 04:32:21.5±1.0, 0°.81S×121°.48E, h0^{km}, mb3.7/6, mbtmp3.8/7, ML3.9/1, MS3.1/9, Error ellipse: s-maj=40.1km s-min=18.5km az=78.0*

*DJA **03** 04:32:22.9±0.3, 1°S±3°×12°1E±°, h10^{km}, M4.3/13, mb4.5/5, mB5.6/2, MLv4.2/13, Mw(mB)5.2/2*

ISC 03 04:32:23.1±0.8**, 0°.79S**±0°.06×**121°.49E**±0°.06**, h10**^{km}**, n23, σ0^{s}.75**/18**, mb3.6**/6**, MS3.0**/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	1.31	101	P	Pn	04 32 46.8	-0.6
LUWI				S	Sg	04 33 06.3	+1.0
MRSI	Marisa	1.34	20	P	Pn	04 32 46.7	-1.1
GTOI	Gorontalo	2.08	47	P	Pn	04 32 58.3	+0.3
SPSI	Sidrap Palu	3.59	208	P	Pn	04 33 18.9	+0.1
KAPI	Kappang	4.54	202	Pn	Pn	04 33 31.7	-0.2
	5.2nm,0.3s,baz=30,slow=2.8,SNR=22						
KAPI				Sn	Sn	04 34 23.8	-1.0
	1.4nm,0.3s,baz=36,slow=19,SNR=1.8						
KAPI				LR	LR	04 35 31.3	
	comp=Z,259nm,21.6s,baz=28,slow=42						
	30nm,0.5s						
SANI	Sanana	4.67	106	P	Pn	04 33 32.0	-1.7
BKSI	Bulukumba	4.71	197	P	Pn	04 33 33.9	-0.3
BSSI	Bau Bau, Buton	5.41	191	P	Pn	04 33 44.1	+0.2
	33nm,1.3s,0.2nm						
LBMI	Labuha	6.02	89	P	Pn	04 33 52.3	+0.1
	54nm,0.9s,0.4nm						
NLAI	Namlea	6.12	114	P	Pn	04 33 53.9	+0.3
	15nm,0.5s,7µm0.1nm						
DAV	Davao City (W)	8.81	28	LR	LR	04 38 28.0	
	comp=Z,72nm,21.6s,baz=100,slow=42						
WRA	Warramunga Arr	22.82	147	P	P	04 37 25.6	-0.8
	1.4nm,0.8s,baz=326,slow=10,SNR=6.1						
	1.4nm,0.8s						
ASAR	Alice Springs	25.74	153	P	P	04 37 54.1	+0.1
	0.7nm,0.7s,baz=342,slow=15,SNR=2.4						
ASAR				LR	LR	04 49 18.8	
	comp=Z,52nm,18.7s,baz=324,slow=40						
	0.7nm,0.7s						
JOW	Kunigami	28.23	13	LR	LR	04 50 31.5	
	comp=Z,34nm,19.6s,baz=350,slow=39						
JNU	Nakatsue	34.87	14	LR	LR	04 55 16.4	
	comp=Z,18nm,19.9s,baz=212,slow=39						
KSRS	Korea Array	38.52	8	LR	LR	04 54 06.3	
	comp=Z,17nm,21.4s,baz=210,slow=34						
MJAR	Matsushiro Arr	40.26	21	LR	LR	04 56 11.7	
	comp=Z,16nm,19.2s,baz=155,slow=36						
PALK	Pallekele	41.46	282	LR	LR	04 57 43.9	
	comp=Z,49nm,18.7s,baz=233,slow=37						
SONM	Songino Array	50.18	347	P	P	04 41 20.0	+0.9
	0.4nm,0.6s,baz=169,slow=8.8,SNR=3.9						
	0.4nm,0.6s						
MKAR	Makanchi Array	58.50	329	P	P	04 42 19.6	+0.1
	0.7nm,0.7s,baz=133,slow=8.3,SNR=8.5						
	0.7nm,0.7s						
PETK	Petropavlovsk-	61.61	24	P	P	04 42 40.8	+0.1
	4.6nm,0.6s,baz=238,slow=10.0,SNR=4.0						
	4.6nm,0.6s						
ZALV	Zalesovo Beam	62.41	337	LR	LR	05 11 56.6	
	comp=Z,23nm,19.0s,baz=324,slow=38						
KURBB	Kurchatov Arra	62.90	331	P	P	04 42 49.2	-0.2
	0.2nm,0.4s,baz=129,slow=5.5,SNR=5.1						
	0.2nm,0.4s						

KRSC 03 04:40:36.0±1.1**, 55°.86N×163°.23E, h3**^{km}±10^{km}**, Ml4.1, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.42	327	*e*P	Pb	04 40 45.7	-0.4
KBTR				*e*S	Sb	04 40 51.6	-1.4
KBG	Krutoberegovo	0.50	324	*e*P	Pb	04 40 46.8	-0.7
KBG				*e*S	Sb	04 40 53.9	-1.2
SMKR	Semkarok	1.23	307	*e*P	Pg	04 40 59.3	-0.2
SMKR				*e*S	Sb	04 41 16.5	+0.3
SRKR	Sorokina	1.40	306	*e*P	Pn	04 41 02.4	-0.1
SRKR				*e*S	Sn	04 41 22.7	+1.0
BZGR	Bezymyannyi-Gr	1.43	274	*e*P	Pn	04 41 02.7	-0.3
BZP	Bezymyannyi-Pe	1.52	273	*e*P	Pn	04 41 03.8	-0.5
BZMR	Bezymyannaya	1.55	274	*e*P	Pn	04 41 04.5	-0.1
MKZ	Mys Kozlova	1.56	214	*e*P	Pb	04 41 05.3	-0.3
KIRR	Kirishev	1.63	275	*e*P	Pn	04 41 05.8	0.0
BKI	Bering	1.69	112	*e*P	Pg	04 41 08.2	-0.2
BKI				*e*S	Sg	04 41 30.9	+0.6
KMNR	Kamenistaya	1.69	268	*e*P	Pb	04 41 07.3	-0.6
KMNR				*e*S	Sb	04 41 30.0	+0.3
KPT	Kopyto	1.70	275	*e*P	Pn	04 41 07.1	+0.5
TUMD	Tumrok D	1.74	249	*e*P	Pn	04 41 07.7	+0.5
TUMR	Tumrok	1.84	253	*e*P	Pb	04 41 10.0	-0.5
SRDR	Sredinnyy	2.02	285	*e*P	Pn	04 41 12.1	+1.0
SPN	Mys Shipunski	3.34	215	*e*P	Pn	04 41 31.3	+2.2
NLC	Nalytchevo	3.52	222	*e*S	Sn	04 42 17.0	+3.4
SDLR	Sedlovina	3.62	226	*e*P	Pn	04 41 35.5	+2.5
KRER	Koryakskii	3.65	227	*e*P	Pn	04 41 36.4	+2.8
KRX	Arik	3.66	229	*e*P	Pn	04 41 36.1	+2.5
SMAR	Somma	3.66	227	*e*P	Pn	04 41 36.1	+2.4
AVH	Avacha	3.69	227	*e*P	Pn	04 41 36.8	+2.9
UGLR	Uglovaya	3.69	226	*e*P	Pn	04 41 36.5	+2.4
KOK	Koryaka	3.71	228	*e*P	Pn	04 41 37.4	+3.1
GNL	Ganaly	3.75	237	*e*P	Pn	04 41 37.7	+2.8
DALK	Dalny	3.85	225	*e*P	Pn	04 41 40.4	+4.2
KRMR	Karymshinskiy	4.25	227	*e*P	Pn	04 41 45.8	+4.2
GRL	Gorelyy	4.49	225	*e*P	Pn	04 41 49.2	+4.2
MTVR	Mutnovka	4.50	223	*e*P	Pn	04 41 49.1	+4.0

IDC 03 04:44:48.0±7.2**, 4°.66S×153°.64E, h96**^{km}±51^{km}**, mb3.3**/2**, mbtmp3.5**/2**, Error ellipse: s-maj=74.1km s-min=47.4km az=104.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.65	282	P	Pn	04 45 16.0	0.0
	29nm,0.4s,baz=130,slow=7.9,SNR=1.0						
KRVT				S	Sn	04 45 37.3	+0.1
	74nm,0.4s,baz=147,slow=23,SNR=2.7						
WRA	Warramunga Arr	24.17	229	P	P	04 49 55.5	-0.1
	1.2nm,0.6s,baz=55,slow=10,SNR=15						
	1.2nm,0.6s						
ASAR	Alice Springs	26.82	223	P	P	04 50 19.4	-0.3
	0.3nm,0.7s,baz=54,slow=9.3,SNR=2.7						
	0.3nm,0.7s						
TORD	Torodi Ar. Bea	151.06	289	PKPbc	PKPbc	05 04 31.0	0.0
	0.1nm,0.3s,baz=87,slow=2.4,SNR=4.1						

IDC 03 04:56:28.7±2.1**, 9°.10S×118°.54E, h0**^{km}**, mb3.3**/2**, mbtmp3.6**/4**, ML3.7**/2**, Error ellipse: s-maj=57.1km s-min=24.4km az=67.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	4.23	17	Pn	Pn	04 57 34.2	-0.2
	3.3nm,0.3s,baz=194,slow=12,SNR=16						
KAPI				Sn	Sn	04 58 26.1	+1.4
	0.2nm,0.3s,baz=220,slow=22,SNR=1.2						
	24nm,0.6s						
WRA	Warramunga Arr	18.69	127	P	P	05 00 48.4	-0.3
	0.3nm,0.3s,baz=302,slow=13,SNR=14						
WRA				S	Sn	05 04 15.7	-3.1
	0.5nm,0.6s,baz=313,slow=23,SNR=1.6						
	1.3nm,0.7s						
ASAR	Alice Springs	20.63	136	P	P	05 01 10.2	+0.3
	1.1nm,0.5s,baz=309,slow=9.0,SNR=28						
	1.1nm,0.5s						
MKAR	Makanchi Array	64.34	333	P	P	05 07 06.3	0.0
	0.1nm,0.5s,baz=145,slow=6.3,SNR=1.6						
	0.1nm,0.5s						

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*DDA **03** 05:04:56.5±0.0, 37°.59N×38°.49E, h9^{km}±1^{km}, MW3.6*

*ISK **03** 05:04:57.7, 37°.56N×38°.47E, h18^{km}, ML3.8/23*

*GII **03** 05:05:13.0±0.0, 37°.75N×38°.04E, h1^{km}, Mm3.9/3*

ISC 03 05:04:57.0±1.2**, 37°.59N**±0°.02×**38°.49E**±0°.02**, h2**^{km}±10^{km}**, n43, σ1^{s}.14**/64**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URFA	Urfa	0.30	119	Pg	Pb	05 05 04.9	-0.3
URFA				Sg	Sb	05 05 09.6	-1.0
HANM	anlurfa/Hi	0.31	91	SPECP		05 05 02.0	
HANM				P	Pg	05 05 02.5	-0.4
HANM				S	Sg	05 05 07.5	+0.5
HANM				*i* AML	AML	05 05 11.0	
	comp=N,2µm,0.4s						
HANM				*i* AML	AML	05 05 16.0	
	comp=E,2µm,0.9s						
SANL	SANLIURFA_Merk	0.57	136	SPECP		05 05 07.0	
SANL				P	Pg	05 05 07.9	-0.1
SANL				S	Sg	05 05 15.6	+0.1
SANL				*i* AML	AML	05 05 22.0	
	comp=N,3µm,0.5s						
SANL				*i* AML	AML	05 05 25.0	
	comp=E,3µm,1.0s						
AKCA	Adyaman/G¶l	0.67	288	SPECP		05 05 09.0	
AKCA				P	Pg	05 05 09.7	-0.2
AKCA				S	Sg	05 05 19.4	+0.8
AKCA				*i* AML	AML	05 05 25.0	
	comp=E,3µm,0.9s						
AKCA				*i* AML	AML	05 05 27.0	
	comp=N,5µm,0.7s						
SURC	SANLIURFA_SURC	0.71	172	SPECP		05 05 10.0	
SURC				P	Pg	05 05 10.7	0.0
SURC				S	Sg	05 05 21.2	+1.3
SURC				*i* AML	AML	05 05 26.0	
	comp=N,1µm,0.5s						
SURC				*i* AML	AML	05 05 30.0	
	comp=E,2µm,0.7s						
MAYA	Malatya/Merkez	0.74	356	SPECP		05 05 10.0	
MAYA				P	Pg	05 05 10.6	-0.6
MAYA				S	Sg	05 05 21.1	+0.3
MAYA				*i* AML	AML	05 05 28.0	
	comp=E,546nm,0.3s						
MAYA				*i* AML	AML	05 05 29.0	
	comp=N,415nm,0.3s						
GZT	Gaziantep	0.78	253	SPECP		05 05 11.0	
GZT				P	Pg	05 05 11.8	-0.1
GZT				S	Sb	05 05 24.3	0.0
GZT				*i* AML	AML	05 05 26.0	
	comp=N,4µm,0.4s						
GZT				*i* AML	AML	05 05 29.0	
	comp=E,3µm,0.5s						
GAZ	Gaziantep	1.10	248	Pg	Pg	05 05 18.5	+0.3
GAZ				Sg	Sb	05 05 33.6	-0.1
KAHM	Kahramanmaras,	1.20	267	SPECP		05 05 19.0	
KAHM				P	Pb	05 05 19.1	-1.4
KAHM				S	Sb	05 05 36.1	-0.3
KAHM				*i* AML	AML	05 05 39.0	
	comp=N,877nm,0.5s						
KAHM				*i* AML	AML	05 05 40.0	
	comp=E,641nm,0.2s						
DARE	Darende-Malaty	1.27	321	Pn	Pn	05 05 21.1	-0.7
DARE				Sn	Sn	05 05 38.4	-1.0
ELBS	KAHRAMANMARAS_	1.30	305	SPECP		05 05 21.0	
ELBS				P	Pn	05 05 21.5	-0.8
ELBS				S	Sn	05 05 40.1	-0.3
ELBS				*i* AML	AML	05 05 45.0	
	comp=N,1µm,1.2s						
ELBS				*i* AML	AML	05 05 47.0	
	comp=E,842nm,0.9s						
DYBB	Diyarbakir	1.35	74	Pn	Pn	05 05 22.1	-0.9
DYBB				Sn	Sb	05 05 41.1	+0.1
ARPR	Arapgir-MALATY	1.51	355	Pn	Pn	05 05 24.7	-0.5
KOVA	Elazig, Kovanc	1.53	43	P	Pn	05 05 24.3	-1.1
KOVA				S	Sg	05 05 47.0	+1.0
KOVA				*i* AML	AML	05 05 57.0	
	comp=N,339nm,1.5s						
KOVA				*i* AML	AML	05 05 58.0	
	comp=E,329nm,0.8s						
MAZI	Mazidag	1.56	94	Pn	Pn	05 05 24.9	-1.0
HANI	Diyarbakir_Han	1.72	61	SPECP		05 05 25.0	
HANI				P	Pn	05 05 26.0	-2.0
HANI				S	Sn	05 05 50.5	-0.1
HANI				*i* AML	AML	05 05 56.0	
	comp=N,611nm,0.9s						
HANI				*i* AML	AML	05 05 57.0	
	comp=E,476nm,0.6s						
SARI	SarD1z-Kayseri	1.83	297	Pn	Pn	05 05 29.5	-0.2
KOZT	Kozan	2.12	268	Pn	Pn	05 05 31.9	-1.6
SVAN	Silvan-Diyarba	2.21	74	Pn	Pn	05 05 33.4	-1.4
SVAN	Silvan-Diyarba	2.21	74	SPECP		05 05 33.0	
SVAN				P	Pn	05 05 33.3	-1.5
SVAN				S	Sb	05 06 07.1	+1.4
SVAN				*i* AML	AML	05 06 15.0	
	comp=N,222nm,0.9s						
SVAN				*i* AML	AML	05 06 22.0	
	comp=E,223nm,1.7s						
ERZN	Erzincan	2.22	25	Pn	Pn	05 05 35.2	+0.3
BNGB	Bingl	2.22	50	Pn	Pn	05 05 34.9	0.0
CEYT	Ceyhan	2.26	256	Pn	Pn	05 05 34.9	-0.5
SLHN	Bingol, Solhan	2.42	55	SPECP		05 05 36.0	
SLHN				P	Pn	05 05 36.3	-1.4
SLHN				S	Sn	05 06 09.3	+1.4
SLHN				*i* AML	AML	05 06 25.0	
	comp=E,225nm,0.6s						
SLHN				*i* AML	AML	05 06 26.0	
	comp=N,250nm,0.8s						
BNN	Bunyan	2.44	302	Pn	Pn	05 05 37.7	-0.3
YEDI	Yedisu-Bingol	2.45	40	Pn	Pn	05 05 38.5	+0.3
SVSK	Karacayir	2.60	334	Pn	Pn	05 05 40.6	+0.5
MUSM	Mu-Merkez	2.64	64	SPECP		05 05 39.0	
MUSM				P	Pn	05 05 39.8	-0.9
MUSM				S	Sb	05 06 16.9	-1.0
MUSM				*i* AML	AML	05 06 25.0	
	comp=N,113nm,0.8s						
MUSM				*i* AML	AML	05 06 30.0	
	comp=E,94nm,1.1s						
KARA	Karaisali	2.76	264	Pn	Pn	05 05 41.9	-0.3
VRTB	Varto-Mus	2.81	55	Pn	Pn	05 05 43.5	+0.4
RSDY	Resadiye-TOKAT	2.95	342	Pn	Pn	05 05 45.5	+0.6
GURO	Guroymak-BITLI	2.95	70	Pn	Pn	05 05 45.5	+0.4
BAYT	Aydıntepe-Bayb	3.08	24	Pn	Pn	05 05 47.5	+0.6
TOKT	Tokat	3.12	332	Pn	Pn	05 05 47.9	+0.6
YOZ	Yozgat	3.22	310	Pn	Pn	05 05 49.2	+0.4
KOZK	Kozakli-Nevseh	3.28	301	Pn	Pn	05 05 49.8	+0.3
AKDM	Akdamar-Van	3.62	77	Pn	Pn	05 05 55.4	+1.1
NATI	Neve Ativ	4.87	208	Pn	Pg	05 06 27.5	-2.8
NATI				Sn	Sb	05 07 24.5	+2.5
GEM	Giv'at Ha'Em	4.94	209	Pn	Pg	05 06 28.9	-2.8
GEM				Sn	Sb	05 07 26.2	+2.1
MMA0	Mount Meron ar	5.21	210	Sn	Sb	05 07 34.3	+2.2
MMLI	Mount Malkishu	5.72	207	Pn	Pb	05 06 39.6	+2.0
MMLI				Sn	Sb	05 07 46.9	+0.3
HMDT	Nahal Hemdat	5.85	205	Pn	Pb	05 06 41.6	+1.8
HMDT				Sn	Sb	05 07 49.8	-0.5
SALP	Salfit	6.14	207	Sn	Sb	05 07 56.8	-1.8

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*KRNET **03** 05:11:30.6±0.1, 39°.33N×75°.54E, mb3.3*

*NNC **03** 05:11:33.5±1.7, 39°.69N×75°.17E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=12.5km s-min=7.6km az=170.0*

*SOME **03** 05:11:36.4, 39°.78N×75°.15E, h5^{km}*

ISC 03 05:11:33.4±1.8**, 39°.71N**±0°.06×**75°.17E**±0°.03**, h1**^{km}±12^{km}**, n53, σ1^{s}.81**/70**, 24C-14D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	1.84	20	⇑*i*P	Pn	05 12 07.0	+0.5
	baz=9.0						
NRN				⇑*i*S	Sg	05 12 33.8	+1.3
	baz=9.0						
OHH	Osh	2.00	295	⇑*i*P	Pg	05 12 11.5	-0.3
	baz=0.0						
OHH				⇑*i*S	Sg	05 12 41.2	+3.5
	baz=0.0						
ARLS	Aral	2.25	344	⇑*e*P	Pb	05 12 15.0	+0.1
	baz=40						
ARLS				⇑*i*S	Sg	05 12 47.5	+1.9
	baz=40						
UCH	Uchtor	2.57	349	P	Pb	05 12 19.2	-1.3
	SNR=10.0						
UCH	Uchtor	2.57	349	⇓*e*P	Pb	05 12 19.5	-1.1
	baz=45						
UCH				⇓*i*S	Sg	05 12 55.5	-0.5
	baz=45						
DRK	Karamyk	2.61	266	⇓*i*P	Pn	05 12 18.2	+1.1
	baz=74						
DRK				⇓*i*S	Sb	05 12 52.9	-1.0
	baz=74						
ULHL	Ulahol	2.67	17	⇓*e*P	Pn	05 12 18.7	+1.0
	baz=10.0						
ULHL				⇓*i*S	Sb	05 12 54.1	-1.3
	baz=10.0						
AML	Almayashu	2.67	336	P	Pg	05 12 24.5	-0.1
	SNR=6.5						
AML	Almayashu	2.67	336	⇓Pg	Pg	05 12 24.0	-0.6
	0.6nm,0.6s						
AML				⇓Lg	Lg	05 12 58.9	
	0.7nm,0.5s						
AML	Almayashu	2.67	336	⇑*e*P	Pb	05 12 21.4	-0.9
	baz=34						
AML				⇑*i*S	Sg	05 12 58.7	-0.5
	baz=34						
BOOM	Boomskoye usch	2.84	12	⇓*e*P	Pn	05 12 21.7	+1.6
	baz=5.0						
BOOM				⇓*i*S	Sb	05 12 59.2	-1.3
	baz=5.0						
TARG	Taragay, Kyrgy	2.85	44	⇑*i*P	Pn	05 12 18.4	-2.0
	baz=35						
TARG				⇑*i*S	Sn	05 12 53.7	-1.9
	baz=35						
KDJ	Kajisay	2.86	32	⇑*e*P	Pn	05 12 19.9	-0.5
	baz=24						

KDJ				⇑*e*S	Sn	05 12 56.4	+0.8
	baz=24						
KBK	Karagaybulak	2.95	357	P	Pb	05 12 24.8	-2.2
	SNR=7.5						
KBK	Karagaybulak	2.95	357	⇓*e*P	Pn	05 12 24.2	+2.5
	baz=53						
KBK				⇓*i*S	Sb	05 13 03.9	+0.2
	baz=53						
AAK	Ala-Archa	2.97	350	P	Pb	05 12 25.7	-1.6
	SNR=5.2						
ARK	Arkit	3.21	312	⇑*i*P	Pb	05 12 28.4	-2.9
	baz=13						
ARK				⇑*i*S	Sb	05 13 11.3	+0.3
	baz=13						
TKM2	Tokmak 2	3.23	6	P	Pn	05 12 28.6	+3.1
	SNR=12						
TKM2	Tokmak 2	3.23	6	⇑Pn	Pn	05 12 28.4	+2.9
	12nm,0.4s						
TKM2				Sn	Sb	05 13 08.7	-2.9
TKM2				⇑Lg	Lg	05 13 17.3	
	25nm,0.6s						
BTK	Batken	3.37	277	⇑*i*P	Pn	05 12 29.5	+2.3
	baz=83						
BTK				⇑*i*S	Sb	05 13 12.7	-2.7
	baz=83						
MRKS	Merke	3.37	335	Pg	Pb	05 12 31.9	-2.2
	4.4nm,0.4s						
MRKS				Lg	Lg	05 13 16.2	
	7.6nm,0.6s						
MRKS	Merke	3.37	335	*e*Pg	Pg	05 12 36.5	-1.6
	4.4nm,0.2s						
MRKS				*e*Lg	Lg	05 13 19.6	
	4.8nm,0.1s						
KST	Kastek	3.39	10	*e*Pg	Pb	05 12 34.2	-0.2
	2.6nm,0.0s						
KST				*e*Lg	Lg	05 13 15.7	
	39nm,0.6s						
IZV	Izvestkoviy	3.50	18	Pg	Pb	05 12 37.4	+1.1
	2.6nm,0.3s						
IZV				Lg	Lg	05 13 26.4	
	23nm,0.6s						
IZV	Izvestkoviy	3.50	18	*e*Pg	Pg	05 12 40.5	0.0
	3.6nm,0.2s						
IZV				*e*Lg	Lg	05 13 26.5	
	22nm,0.2s						
MTBS	Maitube	3.55	15	Pg	Pb	05 12 38.8	+1.7
	5.2nm,0.3s						
MTBS				Lg	Lg	05 13 27.9	
	11nm,0.4s						
MTBS	Maitube	3.55	15	*e*Pg	Pg	05 12 41.4	0.0
	5.4nm,0.2s						
MTBS				*e*Lg	Lg	05 13 28.2	
	11nm,0.1s						
DGS	Degeres	3.56	7	*e*Pg	Pb	05 12 36.2	-1.1
	5.4nm,0.2s						
DGS				*e*Lg	Lg	05 13 19.3	
	13nm,0.2s						
TRKS	Terek-Say	3.57	302	⇑*i*P	Pn	05 12 32.9	+2.8
	baz=4.0						
TRKS				⇑*i*S	Sb	05 13 18.2	-3.1
	baz=4.0						
TNSS	Tian-Shan	3.59	21	Pg	Pb	05 12 37.6	-0.3
	3.6nm,0.3s						
TNSS				Lg	Lg	05 13 26.7	
	13nm,0.6s						
TNSS	Tian-Shan	3.59	21	*e*Pg	Pg	05 12 41.8	-0.4
	1.7nm,0.3s						
TNSS				*e*Lg	Lg	05 13 28.7	
	9.1nm,0.3s						
USP	Ospenovka	3.59	352	P	Pn	05 12 33.0	+2.7
	SNR=9.6						
MDOK	Medeo	3.73	22	Pg	Pb	05 12 40.8	+0.5
	4.2nm,0.5s						
MDOK				⇑Pg	Pg	05 12 41.1	-3.8
	11nm,1.0s						
MDOK				Lg	Lg	05 13 31.3	
	29nm,0.8s						
MDOK				⇓Lg	Lg	05 13 33.0	
	43nm,1.3s						
MDOK	Medeo	3.73	22	*e*Pg	Pg	05 12 43.6	-1.4
	3.0nm,0.3s						
MDOK				*e*Lg	Lg	05 13 32.0	
	29nm,0.8s						
SGDS	Sogindy	3.77	354	Pg	Pb	05 12 42.3	+1.6
	4.2nm,0.6s						
SGDS				Lg	Lg	05 13 34.7	
	8.1nm,0.6s						
KOTS	Kotyrbulak	3.82	22	Pg	Pb	05 12 42.8	+1.2
	4.9nm,0.4s						
KOTS				Lg	Lg	05 13 35.1	
	96nm,0.8s						
KOTS	Kotyrbulak	3.82	22	*e*Pg	Pg	05 12 45.4	-1.1
	4.7nm,0.3s						
KOTS				*e*Lg	Lg	05 13 35.1	
	96nm,0.4s						
SATY	Saty	4.14	35	Pg	Pb	05 12 49.2	+2.0
	5.7nm,0.6s						
SATY				Lg	Lg	05 13 46.3	
	14nm,0.9s						
KTBS	Karatobe	4.16	15	Pg	Pb	05 12 49.9	+2.4
	1.3nm,0.3s						
KTBS				Lg	Lg	05 13 47.2	
	19nm,0.6s						
KTBS	Karatobe	4.16	15	*e*Pg	Pb	05 12 50.6	+3.1
	3.5nm,0.1s						
KTBS				*e*Lg	Lg	05 13 43.6	
	19nm,0.6s						
KUU	Kurty	4.28	11	Pg	Pb	05 12 51.0	+1.6
	3.4nm,0.5s						
KUU				Lg	Lg	05 13 49.1	
	17nm,1.1s						
KUU	Kurty	4.28	11	*e*Pg	Pg	05 12 53.7	-1.6
	1.8nm,0.1s						
KUU				*e*Lg	Lg	05 13 48.7	
	17nm,1.1s						
CHKK	Chushkaly	4.36	18	Pg	Pb	05 12 52.7	+1.8
	4.5nm,0.6s						
CHKK				Lg	Lg	05 13 52.8	
	21nm,0.9s						
KURS	Kuram	4.40	30	Pg	Pb	05 12 53.8	+2.3
	8.0nm,1.6s						
KURS				Lg	Lg	05 13 53.9	
	7.2nm,0.9s						
KURS	Kuram	4.40	30	*e*Pg	Pg	05 12 56.2	-1.5
	5.3nm,0.3s						
KURS				*e*Lg	Lg	05 13 53.4	
	7.4nm,0.3s						
UZB	Uzynbulak	4.50	39	Pg	Pb	05 12 54.8	+1.6
	4.3nm,0.5s						
UZB				Lg	Lg	05 13 55.4	
	6.3nm,0.7s						
KPKS	Kokpek	4.59	34	Pg	Pb	05 12 55.9	+1.1
	4.0nm,0.6s						
KPKS				Lg	Lg	05 13 57.5	
	12nm,0.7s						
KPKS	Kokpek	4.59	34	*e*Pg	Pg	05 12 58.8	-2.6
	3.0nm,0.2s						
KPKS				*e*Lg	Lg	05 13 57.5	
	12nm,0.2s						
IUG	Iuzhnay	4.59	304	*e*Pg	Pg	05 13 00.6	-0.8
	2.5nm,0.1s						
IUG				*e*Lg	Lg	05 14 00.8	
	18nm,0.1s						
PDGK	Podgornoye	4.86	40	Pg	Pb	05 13 00.7	+1.2
	1.7nm,0.5s						
PDGK				Lg	Lg	05 14 05.5	
	2.8nm,0.8s						
PDGK	Podgornoye	4.86	40	⇓Pg	Pb	05 13 01.0	+1.6
	4.6nm,0.8s						
PDGK				⇑Lg	Lg	05 14 08.9	
	12nm,1.1s						
KK31	Karatay Array	4.88	316	Pn	Pn	05 12 48.6	+0.7
	0.5nm,0.5s,baz=131,slow=13,SNR=8.0						
KK31				⇑Sn	Sn	05 13 45.8	+0.7
	0.5nm,0.3s						
KK31				⇑Lg	Lg	05 14 09.6	
	1.9nm,0.6s,baz=133,slow=28,SNR=4.6						
BLB	Baldybastay	5.04	28	Pg	Pb	05 13 04.4	+2.0
	5.7nm,0.4s						
BLB				Lg	Lg	05 14 12.1	
	7.1nm,0.5s						

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*ISK **03** 05:31:08.8, 39°.50N×26°.04E, h5^{km}, ML3.0/26*
*THE **03** 05:31:09.6, 39°.49N×26°.05E, h4^{km}±1^{km}, ML3.0/8, Error ellipse: s-maj=1.3km s-min=0.4km az=172.0*
*DDA **03** 05:31:09.0±0.0, 39°.49N×26°.07E, h7^{km}±3^{km}, ML2.9*
*ATH **03** 05:31:09.8, 39°.49N×26°.06E, h11^{km}±1^{km}, ML3.0/6, Error ellipse: s-maj=2.2km s-min=0.8km az=228.0*
ISC 03 05:31:09.5±0.8**, 39°.49N**±0°.01×**26°.05E**±0°.02**, h10**^{km}±6^{km}**, n74, σ0^s.59**/104**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GPNR	Gulpinar-Canak	0.07	118	Pg	Pg	05 31 11.3	-0.5
GPNR				Sg	Sg	05 31 13.2	-0.2
PRK	Paraskevi	0.30	145	P	Pg	05 31 15.5	0.0
PRK				S	Sg	05 31 20.2	+0.7
	4µm,0.6s						
PRK	Paraskevi	0.30	145	P	Pg	05 31 15.5	0.0
PRK				S	Sg	05 31 19.5	-0.1
PRK				AML	AML	05 31 20.7	
	comp=N,6469µm,0.4s						
PRK				AML	AML	05 31 21.9	
	comp=E,9620µm,0.6s						
SIGR	SIGRI	0.32	208	P	Pg	05 31 15.8	0.0
SIGR				S	Sg	05 31 20.4	+0.3
	comp=E,3µm,0.2s						
SIGR	SIGRI	0.32	208	Pg	Pg	05 31 15.9	0.0
SIGR				Sg	Sg	05 31 20.8	+0.7
SIGR	SIGRI	0.32	208	P	Pg	05 31 15.9	0.0
SIGR				S	Sg	05 31 20.6	+0.5
SIGR				AML	AML	05 31 21.5	
	comp=E,5366µm,0.2s						
SIGR				AML	AML	05 31 23.4	
	comp=N,8192µm,0.3s						
BOZC	Bozcaada	0.35	1	Pg	Pg	05 31 16.3	-0.2
BOZC				Sg	Sg	05 31 21.6	+0.4
EZN	Ezine	0.40	33	P	Pg	05 31 17.1	-0.2
EZN				S	Sg	05 31 23.0	+0.5
	comp=N,2µm,0.3s						
EZN	Ezine	0.40	33	Pg	Pg	05 31 17.1	-0.2
EZN				Sg	Sg	05 31 23.1	+0.5
BAYC	CANAKKALE_Bayr	0.46	57	P	Pg	05 31 17.8	-0.7
BAYC				*i* AML	AML	05 31 24.0	
	comp=N,760nm,0.5s						
BAYC				*i* AML	AML	05 31 24.0	
	comp=N,739nm,0.3s						
BAYC				S	Sg	05 31 24.1	-0.5
ECEA	Canakkale, Ece	0.56	10	P	Pg	05 31 20.2	-0.2
ECEA				S	Sb	05 31 28.9	-0.5
ECEA				*i* AML	AML	05 31 29.0	
	comp=N,666nm,0.4s						
COMU	Canakkale	0.69	28	Pg	Pg	05 31 22.6	-0.2
GOKA	anakkale-Gk	0.71	351	P	Pg	05 31 22.8	-0.4
GOKA				S	Sg	05 31 32.6	+0.2
GOKA				*i* AML	AML	05 31 37.0	
	comp=N,807nm,0.4s						
GOKA				*i* AML	AML	05 31 37.0	
	comp=N,703nm,0.5s						
GADA	Gvkgeada	0.71	351	Pg	Pg	05 31 22.7	-0.5
LIA	Limnos Island	0.78	302	P	Pg	05 31 24.8	+0.2
LIA				S	Sb	05 31 36.0	+0.2
	comp=N,2µm,0.3s						
LIA	Limnos Island	0.78	302	P	Pg	05 31 24.7	+0.2
LIA				S	Sb	05 31 35.8	0.0
LIA				AML	AML	05 31 38.7	
	comp=N,2765µm,0.3s						
LIA				AML	AML	05 31 38.9	
	comp=E,3611µm,0.2s						
DKL	Dikili	0.79	122	Pg	Pb	05 31 25.2	0.0
BUHA	Balikesir, Bur	0.80	89	P	Pg	05 31 24.3	-0.5
BUHA				S	Sg	05 31 35.0	-0.2
BUHA				*i* AML	AML	05 31 38.0	
	comp=E,399nm,0.4s						
KARB	zmir-Karabur	0.87	161	P	Pg	05 31 26.5	+0.2
KARB				S	Sg	05 31 37.8	+0.1
KARB				*i* AML	AML	05 31 41.0	
	comp=E,753nm,0.3s						
KARB				*i* AML	AML	05 31 41.0	
	comp=E,573nm,0.7s						
CANM	Can-anakkale	0.93	56	Pg	Pg	05 31 27.3	-0.1
ZEDA	zmir-Bergama	0.95	123	P	Pg	05 31 27.6	-0.3
ZEDA				S	Sb	05 31 40.9	+0.1
GELI	Tayfur-Gelibol	0.96	20	Pg	Pg	05 31 27.5	-0.5
PSRA	Psara	1.02	202	P	Pb	05 31 29.8	+0.6
LPK	Lapseki	1.04	32	Pg	Pg	05 31 28.6	-0.8
SMTH	Samothraki Isl	1.06	338	P	Pg	05 31 29.3	-0.5
SMTH				S	Sb	05 31 44.2	+0.5
	comp=E,340nm,0.5s						
SMTH	Samothraki Isl	1.06	338	P	Pg	05 31 29.3	-0.5
SMTH				S	Sg	05 31 43.7	+0.1
SMTH				AML	AML	05 31 45.8	
	comp=E,657µm,0.4s						
SMTH				AML	AML	05 31 47.5	
	comp=N,580µm,0.3s						
CHOS	Chios island	1.10	180	P	Pg	05 31 30.2	-0.5
CHOS				S	Sb	05 31 45.9	+0.8
	comp=N,1µm,0.4s						
CHOS	Chios island	1.10	180	Pn	Pg	05 31 30.4	-0.3
CHOS	Chios island	1.10	180	P	Pg	05 31 29.9	-0.8
CHOS				S	Sg	05 31 44.8	-0.3
CHOS				AML	AML	05 31 50.0	
	comp=N,1920µm,0.5s						
CHOS				AML	AML	05 31 52.2	
	comp=E,3080µm,0.3s						
CAVK	Edirne/Enez-Ca	1.20	4	P	Pg	05 31 31.5	-1.1
CAVK				S	Sg	05 31 47.5	-0.7
CAVK				*i* AML	AML	05 31 51.0	
	comp=E,195nm,0.4s						
CAVK				*i* AML	AML	05 31 52.0	
	comp=E,186nm,0.4s						
URLA	Izmir	1.21	159	Pn	Pg	05 31 31.7	-1.0
ERIK	Erikli-Kesan	1.23	17	Pn	Pb	05 31 31.7	-1.1
ENEZ	Enez	1.25	4	P	Pb	05 31 32.6	-0.5
ENEZ				S	Sn	05 31 50.2	+0.4
	comp=E,695nm,0.4s						
ENEZ	Enez	1.25	4	Pn	Pb	05 31 32.8	-0.3
STEP	BALIKESIR_Sava	1.30	95	P	Pn	05 31 33.3	-0.4
STEP				S	Sn	05 31 51.4	+0.3
STEP				*i* AML	AML	05 31 54.0	
	comp=E,139nm,0.4s						
STEP				*i* AML	AML	05 31 57.0	
	comp=E,165nm,0.8s						
ZEYE	Izmir, Urla-Ze	1.30	164	P	Pn	05 31 33.3	-0.4
ZEYE				S	Sb	05 31 49.4	-1.2
ZEYE				*i* AML	AML	05 31 53.0	
	comp=E,256nm,0.5s						
ZEYE				*i* AML	AML	05 31 54.0	
	comp=E,312nm,0.6s						
KRBG	Karabiga-Canak	1.32	46	Pn	Pn	05 31 33.6	-0.3
BLCB	Balcova	1.35	145	Pn	Pb	05 31 35.1	+0.3
KNL	Balıkesir	1.38	55	P	Pn	05 31 34.6	-0.1
KNL				S	Sb	05 31 52.7	-0.2
KNL				*i* AML	AML	05 31 54.0	
	comp=E,210nm,0.5s						
KNL				*i* AML	AML	05 31 55.0	
	comp=E,479nm,0.6s						
GONE	Gonen-Balikesi	1.38	66	Pn	Pn	05 31 35.3	+0.6
ALN	Alexandroupoli	1.40	360	P	Pn	05 31 35.1	0.0
ALN				S	Sg	05 31 54.6	-0.1
	comp=E,530nm,0.4s						
ALN	Alexandroupoli	1.40	360	Pn	Pn	05 31 35.6	+0.5
ALN	Alexandroupoli	1.40	360	P	Pn	05 31 35.0	-0.1
ALN				AML	AML	05 31 55.5	
	comp=E,1025µm,0.4s						
ALN				AML	AML	05 31 55.6	
	comp=N,1092µm,0.4s						
BALB	Balikesir	1.42	83	Pn	Pn	05 31 35.8	+0.4
BKES	Balkesir-Mer	1.47	80	P	Pn	05 31 36.2	+0.2
BKES				S	Sn	05 31 55.6	+0.3
BKES				*i* AML	AML	05 32 01.0	
	comp=N,116nm,0.5s						
RKY	Sarkoy-Tekirda	1.48	36	Pn	Pn	05 31 36.2	+0.1
THAS	Thassos island	1.51	318	P	Pn	05 31 36.0	-0.5
THAS	Thassos island	1.51	318	P	Pn	05 31 36.1	-0.5
DGB	zmir	1.58	155	P	Pn	05 31 37.0	-0.5
DGB				S	Sn	05 31 58.0	+0.1
EDC	Edincik	1.64	58	Pn	Pn	05 31 38.3	0.0
UKOP	Uzunkopru-Edir	1.70	15	Pn	Pn	05 31 39.7	+0.6
RDO	Rodhopi	1.70	347	P	Pn	05 31 39.3	+0.2
RDO	Rodhopi	1.70	347	Pn	Pn	05 31 39.6	+0.5
RDO	Rodhopi	1.70	347	P	Pn	05 31 39.1	0.0
KYMI	Kymi, Euboea I	1.74	241	P	Pn	05 31 38.8	-0.9
KYMI	Kymi, Euboea I	1.74	241	P	Pn	05 31 38.9	-0.9
BAND	Balkesir-Ban	1.80	61	P	Pn	05 31 39.7	-0.8
BAND				S	Sn	05 32 03.0	-0.4
OUR	Ouranopolis	1.80	299	P	Pn	05 31 40.8	+0.3
OUR	Ouranopolis	1.80	299	Pn	Pn	05 31 40.9	+0.4
OUR	Ouranopolis	1.80	299	P	Pn	05 31 40.4	-0.1
TKR	Tekirdag	1.88	37	Pn	Pn	05 31 42.5	+0.8
KAVA	Kavala	1.91	322	P	Pn	05 31 41.8	-0.2
KCTX	Karacabey (Bur	1.94	66	Pn	Pn	05 31 43.2	+0.7
EREA	Eretria	1.97	238	P	Pn	05 31 40.6	-2.3
KDZ	Kurdzhali	2.21	348	*i* P	Pn	05 31 46.5	+0.3
KULA	Kula-Manisa	2.26	115	Pn	Pn	05 31 47.7	+0.8
ORLT	Orhaneli	2.26	75	Pn	Pn	05 31 48.0	+1.0
SIMA	Simav-Kutahya	2.31	99	Pn	Pn	05 31 48.6	+0.9
RZN	Rozhen	2.42	336	*i* P	Pn	05 31 48.7	-0.5
NVR	Nevrokopi	2.50	319	P	Pn	05 31 51.1	+0.9
DIM	Dimitrovgrad	2.59	351	*i* P	Pn	05 31 52.7	+1.4
MMB	Musomiste	2.74	321	*i* P	Pn	05 31 53.4	-0.1
JMB	Yambol	3.00	8	*i* P	Pb	05 32 04.7	+1.7
STIP	Stip	3.67	308	*i* Pn	Pn	05 32 05.9	-0.4

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*HVO **03** 05:47:36.1±1.0, 19°.547N±0°.007×155°.614W±0°.009, h11^{km}±2^{km}, ML2.9/35, ML3.0/50(NEIC), Error ellipse: s-maj=1.3km s-min=0.9km az=54.0*
NEIC 03 05:47:36.3±1.2**, 19°.551N**±0°.007×**155°.605W**±0°.009**, h10**^{km}±1^{km}**, Error ellipse: s-maj=2.6km s-min=1.4km az=244.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLOA	Mauna Loa Obse	0.03	118	Pg	Pg	05 47 38.7	0.0
MWH	Moku‘aweowe	0.07	174		Pg	05 47 38.9	-0.1
MWH					Sg	05 47 41.0	+0.1
MWH	Moku‘aweowe	0.07	174	IAML		05 47 41.3	
	comp=N,11µm,0.3s						
MWH				IAML		05 47 41.7	
	comp=E,4µm,0.2s						
HMH	Humu‘ula Sheep	0.13	66		Pg	05 47 39.8	+0.4
HMH	Humu‘ula Sheep	0.13	66	IAML		05 47 44.0	
	comp=N,4µm,0.2s						
HMH				IAML		05 47 44.0	
	comp=E,5µm,0.2s						
MLH	Mauna Loa	0.21	105		Pg	05 47 41.0	+0.2
MLH					Sg	05 47 45.4	+1.5
MLH	Mauna Loa	0.21	105	IAML		05 47 45.8	
	comp=E,3µm,0.3s						
MLH				IAML		05 47 45.8	
	comp=N,2µm,0.2s						
POHA	Pohakuloa	0.22	18		Pg	05 47 40.9	0.0
POHA					Sg	05 47 44.4	+0.4
POHA	Pohakuloa	0.22	18	IAML		05 47 46.5	
	comp=N,4µm,0.2s						
POHA				IAML		05 47 49.3	
	comp=N,3µm,0.2s						
AIN	Ainahou	0.23	142		Pg	05 47 41.1	+0.1
AIN					Sg	05 47 45.0	+0.8
AIN	Ainahou	0.23	142	IAML		05 47 45.2	
	comp=N,1µm,0.4s						
AIN				IAML		05 47 50.0	
	comp=E,1µm,0.3s						
KHLU	Kahalu`u	0.28	279		Pg	05 47 42.0	+0.1
KHLU					Sg	05 47 46.6	+1.0
KHLU	Kahalu`u	0.28	279	IAML		05 47 47.2	
	comp=N,4µm,0.2s						
KHLU				IAML		05 47 47.5	
	comp=E,4µm,0.2s						
CPH	Captain Cook	0.30	258		Pg	05 47 42.2	-0.2
CPH					Sg	05 47 47.2	+0.8
KHU	Kahuku	0.30	182		Pg	05 47 42.0	-0.5
KHU					Sg	05 47 46.6	+0.1
KHU	Kahuku	0.30	182	IAML		05 47 46.8	
	comp=N,817nm,0.2s						
KHU				IAML		05 47 46.8	
	comp=E,1µm,1.8s						
RSD	Rainshed	0.32	106		Pg	05 47 42.6	-0.1
RSD					Sb	05 47 48.3	-1.2
RSD	Rainshed	0.32	106	IAML		05 47 48.9	
	comp=N,3µm,0.6s						
RSD				IAML		05 47 49.0	
	comp=E,5µm,0.3s						
UWE	Uwekahuna	0.32	114		Pg	05 47 42.8	+0.1
UWE					Sb	05 47 48.5	-1.0
UWE	Uwekahuna	0.32	114	IAML		05 47 48.8	
	comp=N,8µm,0.4s						
UWE				IAML		05 47 49.1	
	comp=E,8µm,0.4s						
WRMHI	West Rim	0.32	116		Pg	05 47 42.7	0.0
WRMHI					Sb	05 47 48.3	-1.2
OBL	Observatory Le	0.33	114		Pg	05 47 42.8	-0.1
OBL					Sg	05 47 48.5	+1.2
OBL	Observatory Le	0.33	114	IAML		05 47 51.0	
	comp=E,5µm,0.5s						
OBL				IAML		05 47 52.5	
	comp=N,8µm,0.5s						
UWB	Uwekahuna B	0.33	112		Pg	05 47 42.8	-0.2
UWB					Sg	05 47 48.2	+0.8
UWB	Uwekahuna B	0.33	112	IAML		05 47 48.8	
	comp=E,1µm,0.5s						
UWB				IAML		05 47 54.1	
	comp=N,818nm,0.4s						
SDHHI	Sand Hill	0.33	119		Pg	05 47 42.8	-0.1
SDHHI					Sb	05 47 48.9	-0.9
SDHHI	Sand Hill	0.33	119	IAML		05 47 49.1	
	comp=E,3µm,0.7s						
SDHHI				IAML		05 47 49.1	
	comp=N,4µm,0.5s						
NPH	North Pit	0.34	114		Pg	05 47 42.8	-0.2
NPH					Sg	05 47 48.4	+0.9
NPH	North Pit	0.34	114	IAML		05 47 48.7	
	comp=N,2µm,0.8s						
NPH				IAML		05 47 49.1	
	comp=E,704nm,0.4s						
SBLHI	Steaming Bluff	0.34	111		Pg	05 47 42.9	-0.2
SBLHI					Sg	05 47 48.6	+0.9
SBLHI	Steaming Bluff	0.34	111	IAML		05 47 48.9	
	comp=N,2µm,0.3s						
SBLHI				IAML		05 47 48.9	
	comp=E,1µm,0.6s						
HATHI	Halema‘uma‘u T	0.35	111		Pg	05 47 43.0	-0.3
HATHI					Sg	05 47 48.7	+0.8
HATHI	Halema‘uma‘u T	0.35	111	IAML		05 47 49.6	
	comp=E,2µm,0.6s						
HATHI				IAML		05 47 55.8	
	comp=N,2µm,0.7s						
RIM	Rim	0.35	116		Pg	05 47 43.1	-0.1
RIM					Sg	05 47 48.9	+1.0
RIM	Rim	0.35	116	IAML		05 47 49.2	
	comp=N,2µm,0.5s						
RIM				IAML		05 47 49.3	
	comp=E,1µm,0.3s						
BYL	Byron's Ledge	0.35	113		Pg	05 47 43.1	-0.2
BYL					Sg	05 47 48.9	+0.9
BYL	Byron's Ledge	0.35	113	IAML		05 47 52.5	
	comp=E,1µm,0.4s						
BYL				IAML		05 47 53.0	
	comp=N,1µm,0.5s						
KKO	Keanakako`i	0.35	115		Pg	05 47 43.2	-0.1
KKO					Sg	05 47 48.8	+0.8
KKO	Keanakako`i	0.35	115	IAML		05 47 50.0	
	comp=E,2µm,0.5s						
KKO				IAML		05 47 50.6	
	comp=N,2µm,0.8s						
HTC	Hot Caves	0.37	148		Pg	05 47 43.1	-0.4
HLP	Hilina Pali	0.38	132		Pg	05 47 43.6	-0.2
HLP					Sg	05 47 49.7	+0.9
HLP	Hilina Pali	0.38	132	IAML		05 47 50.2	
	comp=N,1µm,0.4s						
HLP				IAML		05 47 50.2	
	comp=E,2µm,0.4s						
PUH	Pauahi	0.41	116		Pg	05 47 43.8	-0.6
PUH					Sg	05 47 50.1	+0.4
KNHH	Kane Nui o Ham	0.45	112		Pg	05 47 44.3	-0.7
STCH	Steam Cracks	0.48	110		Pg	05 47 44.8	-0.9
STCH	Steam Cracks	0.48	110	IAML		05 47 53.8	
	comp=E,796nm,0.1s						
STCH				IAML		05 47 57.4	
	comp=N,722nm,0.5s						
HPAH	Hawaii Prepara	0.48	350		Pg	05 47 44.8	-1.0
HPAH					Sg	05 47 51.3	-0.9
HPAH	Hawaii Prepara	0.48	350	IAML		05 47 51.7	
	comp=E,786nm,0.3s						
HPAH				IAML		05 47 51.8	
	comp=N,487nm,0.1s						
NPOC	North of Pu‘u	0.49	108		Pg	05 47 44.4	-1.5
NPOC					Sg	05 47 52.5	+0.1
NPOC	North of Pu‘u	0.49	108	IAML		05 47 53.0	
	comp=N,998nm,0.3s						
NPOC				IAML		05 47 53.2	
	comp=E,798nm,0.3s						
JCUZ	Jacuzzi	0.50	109		Sg	05 47 52.8	0.0

JCUZ	Jacuzzi	0.50	109		Pg	05 47 45.2	-0.9
JCUZ				IAML		05 47 57.3	
	comp=E,586nm,0.5s						
JCUZ	Jacuzzi	0.50	109	IAML		05 47 48.4	
	comp=N,528nm,0.8s						
JOKA	Jonika Flow	0.58	102		Pg	05 47 46.1	-1.4

IDC 03 06:05:00.2±2.4, 6°.02S×154°.94E, h174km±22km, mb3.2/3, mbtmp3.8/5, MS4.0/2, Error ellipse: s-maj=35.9km s-min=22.3km az=46.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	3.36	300	P	Pn	06 05 52.6	-0.4
	45nm,0.5s,baz=104,slow=12,SNR=6.7						
KRVT				S	Sn	06 06 34.9	+0.6
	33nm,0.5s,baz=53,slow=1.2,SNR=1.2						
DZM	Mont Dzumac	19.45	146	P	P	06 09 13.6	-0.1
	4.2nm,0.5s,baz=273,slow=8.5,SNR=9.5						
WRA	Warramunga Arr	24.33	233	P	P	06 10 02.4	+0.3
	1.0nm,0.4s,baz=58,slow=10.0,SNR=16 1.0nm,0.4s						
ASAR	Alice Springs	26.78	227	P	P	06 10 23.8	-0.4
	0.3nm,0.4s,baz=58,slow=8.7,SNR=5.2 0.3nm,0.4s						
JNU	Nakatsue	45.13	331	LR	LR	06 28 43.9	
	comp=Z,257nm,21.6s,baz=53,slow=32						
KSRS	Korea Array	50.05	332	LR	LR	06 31 20.9	
	comp=Z,110nm,21.5s,baz=150,slow=32						
MKAR	Makanchi Array	82.64	319	P	P	06 17 04.3	+0.2
	0.3nm,0.7s,baz=93,slow=6.1,SNR=3.6 0.3nm,0.7s						

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*JMA **03** 06:27:14.9±0.0, 32°.7N±0°.2×132°.1E±0°.2, h36km, MV3.9/39, HYUGANADA REGION*

JMA Felt II J1 at HYUGANADA REGION .

*NIED **03** 06:27:14.9, 32°.65N×132°.13E, h36km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.63; $M_{\theta\theta}$0.09; $M_{\phi\phi}$0.54; $M_{r\theta}$0.83; $M_{\theta\phi}$0.12; $M_{\phi r}$1.02; Fault plane solution: $M_0$1.45000×10^{15} NP1: ϕ_s217.00000°, δ78.00000°, λ-83.00000°. NP2:ϕ_s4.00000°, δ14.00000°, λ-122.00000°.*

*IDC **03** 06:27:18.6±1.9, 32°.62N×131°.91E, h70km±19km, mb3.4/9, mbtmp3.7/11, MS3.1/15 Error ellipse: s-maj=30.9km s-min=14.9km az=85.0*

ISC 03 06:27:14.9±0.9, 32°.63N±0°.04×132°.13E±0°.03, h33km±3km, n43, σ1ˢ.03/40, mb3.8/9, MS3.2/11, 8D, Shikoku

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSKE	Saikikamae	0.25	311	⇓iP	Pn	06 27 21.9	0.0
JSKE				⇓S	Sb	06 27 27.0	0.0
JHHC	Hyugahichiya	0.46	246	P	Pb	06 27 24.7	-0.2
JHHC				S	Sb	06 27 32.2	+0.5
JUS	Usuki	0.54	324	i P	Pb	06 27 25.6	-0.4
JUS				S	Sn	06 27 33.4	-0.6
JKIT	Kitakata	0.57	269	i P	Pb	06 27 26.4	-0.3
JTO	Tosashimizu	0.61	68	P	Pn	06 27 26.7	-0.5
JTO				S	Sb	06 27 35.5	-0.4
JTSN	Tsuno	0.65	234	⇓P	Pn	06 27 27.6	-0.2
UWA2	Uwa jima 2	0.71	36	⇓P	Pn	06 27 28.0	-0.7
UWA2				⇓S	Sb	06 27 37.8	-0.9
JNA	Nagahama	0.97	18	⇓iP	Pn	06 27 31.7	-0.4
JKU	Kubokawa	1.04	49	⇓iP	Pn	06 27 32.6	-0.5
JKU				⇓S	Sn	06 27 45.3	-1.2
JIU3	Izumi3	1.11	266	i P	Pn	06 27 35.0	+0.8
JTZ	Takazaki	1.14	231	i P	Pn	06 27 35.0	+0.4
JNU	Nakatsue	1.16	295	P	Pn	06 27 35.8	+0.9
	2μm,0.4s,baz=47,slow=4.5,SNR=1965						
JNU				S	Sb	06 27 51.5	+0.3
	4μm,0.6s,baz=281,slow=17,SNR=31						
JNU	Nakatsue	1.16	295	P	Pn	06 27 35.6	+0.8
JSU	Suzuyama	1.81	232	P	Pn	06 27 44.4	+0.6
JMN	Monobe	1.83	53	P	Pn	06 27 45.5	+1.4
JHS	Saijyo	2.50	19	P	Pn	06 27 55.5	+2.2
JTU	Tsushima	2.96	310	P	Pn	06 27 59.8	+0.3
INU	Inuyama	4.88	55	P	Pn	06 28 28.1	+2.1
JGF	Kuroka	5.25	54	P	Pn	06 28 32.6	+1.5
TJN	Taejon	5.42	315	P	Pn	06 28 34.2	+0.8
KSRS	Korea Array	5.92	326	P	Pn	06 28 41.4	+1.2
	3.2nm,0.5s,baz=144,slow=14,SNR=11						
KSRS				S	Sn	06 29 47.8	+1.0
	4.0nm,0.6s,baz=150,slow=26,SNR=4.3						
MJAR	Matsushiro Arr	6.35	50	P	Pn	06 28 49.0	+2.8
	2.9nm,0.4s,baz=245,slow=14,SNR=7.2						
MJAR				LR	LR	06 31 58.0	
	comp=Z,32nm,18.3s,baz=274,slow=43						
JCJ	Chichijima	10.33	120	LR	LR	06 33 10.8	
	comp=Z,135nm,20.3s,baz=34,slow=34						
USRK	Ussuriysk Ar.	11.55	360	LR	LR	06 34 23.3	
	comp=Z,76nm,18.7s,baz=159,slow=37						
KLR	Kul'dur	16.58	359	P	P	06 31 06.5	-0.4
	4.4nm,0.8s,baz=172,slow=10,SNR=8.0						
KLR				LR	LR	06 36 51.3	
	comp=Z,41nm,20.6s,baz=236,slow=34						
SONM	Songino Array	24.67	316	P	P	06 32 31.8	-0.9
	0.8nm,1.0s,baz=126,slow=11,SNR=2.7						
SONM				LR	LR	06 42 11.7	
	comp=Z,45nm,20.1s,baz=53,slow=36 0.8nm,1.0s						
YAK	Yakutsk	29.45	358	LR	LR	06 44 57.0	
	comp=Z,39nm,19.0s,baz=242,slow=36						
CMAR	Chiang Mai Arr	32.95	253	LR	LR	06 48 37.9	
	comp=Z,20nm,18.2s,baz=60,slow=39						
TIXI	Tiksi	39.11	358	LR	LR	06 51 31.0	
	comp=Z,37nm,18.1s,baz=350,slow=37						
ZALV	Zalesovo Beam	39.55	317	LR	LR	06 52 21.8	
	comp=Z,44nm,18.9s,baz=74,slow=38						
MKAR	Makanchi Array	40.19	306	P	P	06 34 46.4	-1.7
	0.4nm,0.6s,baz=93,slow=10,SNR=4.5						
MKAR				LR	LR	06 52 38.3	
	comp=Z,45nm,18.4s,baz=50,slow=38 0.4nm,0.6s						
PMG	Port Moresby	44.20	158	LR	LR	06 54 50.2	
	comp=Z,32nm,18.1s,baz=22,slow=37						
BVAR	Borovoye Array	48.01	314	LR	LR	06 58 41.0	
	comp=Z,23nm,19.4s,baz=45,slow=39						
WRA	Warramunga Arr	52.32	177	P	P	06 36 23.0	-0.5
	1.7nm,0.8s,baz=355,slow=8.0,SNR=16 1.7nm,0.8s						
ASAR	Alice Springs	56.01	178	P	P	06 36 50.0	-0.3
	0.8nm,0.7s,baz=11,slow=13,SNR=15 0.8nm,0.7s						
ILAR	Eielson Array	57.21	30	P	P	06 36 59.2	+0.7
	0.3nm,0.7s,baz=281,slow=6.5,SNR=5.0 0.3nm,0.7s						
DZM	Mont Dzumac	63.52	144	LR	LR	07 01 38.5	
	comp=Z,22nm,21.5s,baz=18,slow=32						
STKA	Stephens Creek	64.78	171	P	P	06 37 50.0	-0.2
	1.6nm,0.6s,baz=331,slow=13,SNR=3.7 1.6nm,0.6s						
ARCES	ARCESS Array B	65.32	338	LR	LR	07 12 00.7	
	comp=Z,16nm,18.7s,baz=60,slow=41						
GNI	Garni	68.03	304	LR	LR	07 10 41.0	
	comp=Z,20nm,19.1s,baz=260,slow=38						
YKA	Yellowknife Ar	71.30	27	P	P	06 38 31.0	+0.3
	0.4nm,0.8s,baz=304,slow=6.1,SNR=6.4 0.4nm,0.8s						
NVAR	Mina Array Bea	83.67	48	P	P	06 39 41.2	+0.5
	0.5nm,0.6s,baz=299,slow=5.1,SNR=5.4 0.5nm,0.6s						
TXAR	Lajitas Array	98.78	47	P	P	06 40 52.3	+0.6
	0.2nm,0.6s,baz=348,slow=3.1,SNR=2.4 0.2nm,0.6s						

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*DDA **03** 06:39:11.7±0.0, 37°.60N×38°.46E, h7km±3km, ML2.6*

*ISK **03** 06:39:13.4, 37°.57N×38°.44E, h19km, ML2.9/10*

ISC 03 06:39:12.4±1.0, 37°.60N±0°.03×38°.45E±0°.02, h9km±8km, n19, σ0ˢ.62/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	Bozova	0.18	225	P	Pg	06 39 16.0	-0.1
ATAB				S	Sg	06 39 18.8	+0.1
ATAB				i AML	AML	06 39 19.0	
	comp=N,1μm,0.2s						
ATAB				i AML	AML	06 39 21.0	
	comp=E,2μm,0.5s						
URFA	Urfa	0.33	118	Pg	Pb	06 39 20.9	+0.3
URFA				Sg	Sb	06 39 26.3	+0.3
HANM	anlurfa/Hi	0.34	93	P	Pg	06 39 18.6	-0.5
HANM				S	Sg	06 39 23.3	-0.3
HANM				i AML	AML	06 39 28.0	
	comp=N,666nm,0.4s						
AKCA	Adyaman/G¶l	0.64	288	P	Pg	06 39 24.7	-0.1
AKCA				S	Sg	06 39 33.8	+0.6
AKCA				i AML	AML	06 39 39.0	
	comp=N,343nm,0.3s						
MAYA	Malatya/Merkez	0.73	358	P	Pg	06 39 26.0	-0.5
MAYA				S	Sg	06 39 35.8	-0.2
GZT	Gaziantep	0.75	251	P	Pg	06 39 26.7	-0.1
GZT				S	Sn	06 39 40.4	-0.5
GZT				i AML	AML	06 39 41.0	
	comp=N,256nm,0.3s						
AKCD	Akcadag	0.81	329	P	Pg	06 39 27.9	-0.2
AKCD				S	Sg	06 39 38.5	-0.2
ELZG	Elazig	0.99	25	P	Pb	06 39 31.1	-0.8
ELZG				S	Sn	06 39 46.0	-1.0
ELZG				i AML	AML	06 39 50.0	
	comp=E,211nm,0.3s						
ELZG				i AML	AML	06 39 51.0	
	comp=N,191nm,0.4s						
GAZ	Gaziantep	1.08	247	Pg	Pn	06 39 33.8	0.0
GAZ				Sg	Sn	06 39 48.6	-0.3
KAHM	Kahramanmaras,	1.17	267	P	Pb	06 39 34.0	-0.8
KAHM				S	Sn	06 39 50.7	-0.4
DARE	Darende-Malaty	1.24	322	Pn	Pg	06 39 36.5	+0.3
DARE				Sn	Sg	06 39 53.4	+1.1
ELBS	KAHRAMANMARAS_	1.27	305	P	Pb	06 39 36.8	+0.1
ELBS				S	Sn	06 39 53.3	-0.5
ELBS				i AML	AML	06 39 56.0	
	comp=E,133nm,0.7s						
ELBS				i AML	AML	06 40 00.0	
	comp=N,132nm,0.5s						
HEKM	Malatya_Hekimh	1.34	343	P	Pn	06 39 37.0	-0.5
HEKM				S	Sg	06 39 57.0	+1.5
HEKM				i AML	AML	06 40 04.0	
	comp=E,118nm,0.4s						
DYBB	Diyarbakir	1.38	75	Pn	Pb	06 39 38.6	+0.1
DYBB				Sn	Sg	06 39 57.1	+0.2
ARPR	Arapgir-MALATY	1.50	356	Pn	Pb	06 39 40.3	-0.2
MAZI	Mazidag	1.59	94	Pn	Pn	06 39 40.7	-0.2
SARI	SarD1z-Kayseri	1.80	297	Pn	Pn	06 39 44.4	+0.6
BNGB	Bingl	2.24	51	Pn	Pn	06 39 50.9	+1.1
SVAN	Silvan-Diyarba	2.24	75	Pn	Pn	06 39 50.9	+1.1

IDC 03 06:55:25.4±3.9, 53°.81N×88°.19E, h0km, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=37.6km s-min=20.2km az=46.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	2.00	275	I	I	07 09 30.0	
	baz=92,slow=343,SNR=2.0						
ZALV	Zalesovo Beam	2.00	275	Pg	Pn	06 56 01.1	+0.7
	1.5nm,0.3s,baz=97,slow=16,SNR=10						
ZALV				Lg	Lg	06 56 28.9	
	3.6nm,0.3s,baz=95,slow=25,SNR=16						
KURBB	Kurchatov Arra	6.74	246	Pn	Pn	06 57 06.2	+0.8
	0.1nm,0.3s,baz=61,slow=14,SNR=5.9 0.4nm,0.3s						
MKAR	Makanchi Array	7.97	211	Pn	Pn	06 57 23.4	+1.0
	0.1nm,0.3s,baz=32,slow=11,SNR=2.3 0.1nm,0.5s						

IDC 03 06:56:48.3±4.2, 53°.85N×88°.27E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=40.8km s-min=21.2km az=44.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	2.05	274	I	I	07 11 40.0	
	baz=92,slow=300,SNR=5.5						
ZALV	Zalesovo Beam	2.05	274	Pg	Pn	06 57 25.0	+1.0
	0.8nm,0.3s,baz=89,slow=14,SNR=4.5						
ZALV				Lg	Lg	06 57 53.4	
	2.4nm,0.3s,baz=93,slow=24,SNR=7.5						
KURBB	Kurchatov Arra	6.80	246	Pn	Pn	06 58 29.6	+0.5
	0.1nm,0.3s,baz=60,slow=14,SNR=5.6 0.7nm,0.4s						
MKAR	Makanchi Array	8.03	211	Pn	Pn	06 58 47.4	+1.2
	0.1nm,0.3s,baz=30,slow=12,SNR=2.2 0.2nm,0.5s						

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*TRN **03** 07:06:21.6, 10°.96N×61°.28W, h124km, MD3.1*

*FUNV **03** 07:06:21.3, 10°.90N×62°.22W, h90km, MW3.2*

ISC 03 07:06:19.6±1.3, 10°.90N±0°.07×62°.30W±0°.05, h100km, n12, σ1ˢ.26/18, 1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	Trinidad (W)	0.91	106	eP	Pn	07 06 39.6	+0.6
TRN				eS	Sn	07 06 52.2	-1.5
CRUV	Carupano	0.95	256	⇓eP	Pn	07 06 40.6	+1.1
CRUV				eS	Sn	07 06 54.8	+0.4
GRGR	Grenville	1.38	27	eP	Pn	07 06 45.1	+0.8
GRGR				eS	Sn	07 07 03.9	+0.8
GRSS	Sisters	1.54	26	eP	Pn	07 06 47.3	+1.0
TOSP	Speyside	1.77	77	eS	Pn	07 06 57.0	+7.8
GCMP	Grenada, Carri	1.79	28	eP	Pn	07 06 50.2	+0.8
GCMP				eS	Sn	07 07 11.1	-1.2
SVB	Belmont	2.57	23	eP	Pn	07 06 59.4	-0.2
PRGV	PARIAGUAN	3.15	228	eP	Pn	07 07 08.8	+1.5
PRGV				eS	Sn	07 07 44.0	-0.2
MERV	Las Mercedes	4.27	248	eP	Pn	07 07 23.3	+0.8
MERV				eS	Sn	07 08 10.3	-0.9
BENV	Beln	5.30	260	eP	Pn	07 07 37.9	+1.4
BENV				eS	Sn	07 08 34.2	-2.2
CACV	CAICARA DEL OR	5.34	232	eP	Pn	07 07 32.2	-4.8
CACV				eS	Sn	07 08 25.8	-11
BAUV	El Baul	5.99	252	eP	Pn	07 07 45.5	-0.3
BAUV				eS	Sn	07 08 50.7	-2.2

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*NNC **03** 07:07:42.9±0.4, 50°.03N×78°.81E, h0km, mb2.9, mpv2.4, Error ellipse: s-maj=7.8km s-min=2.2km az=75.0, Suspected Mining explosion.*

*IDC **03** 07:07:43.8±1.0, 50°.06N×78°.80E, h0km, mbtmp2.5/2, ML2.0/1, Error ellipse: s-maj=14.0km s-min=6.5km az=64.0*

ISC 03 07:07:43.4±1.0, 50°.13N±0°.04×78°.81E±0°.07, h0km, n17, σ0ˢ.70/29, 19C-9D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	Kurchatov Arra	0.49	338	⇑P	Pb	07 07 54.3	-0.7
KUR07				⇑S	Sb	07 08 03.2	+0.4
KUR14	Kurchatov Arra	0.51	344	⇓P	Pb	07 07 54.5	-0.7
KUR14				⇑S	Sb	07 08 03.5	+0.3
KUR06	Kurchatov Arra	0.51	339	⇓P	Pb	07 07 54.7	-0.6
KUR06				⇑S	Sb	07 08 03.8	+0.6
KUR15	Kurchatov Arra	0.52	342	⇑P	Pb	07 07 54.8	-0.6
KUR15				⇑S	Sb	07 08 04.0	+0.5
KURBB	Kurchatov Arra	0.53	340	Pg	Pb	07 07 55.0	-0.5
	0.6nm,0.3s,baz=164,slow=17,SNR=42						
KURBB				Lg	Lg	07 08 04.0	
	0.7nm,0.3s,baz=162,slow=31,SNR=12						
KURBB	Kurchatov Arra	0.53	340	⇑P	Pb	07 07 54.9	-0.6
	4.7nm,0.3s						
KURBB				⇑S	Sb	07 08 03.6	-0.2
	7.3nm,0.5s						
KUR16	Kurchatov Arra	0.54	338	⇑P	Pb	07 07 55.2	-0.6
KUR16				⇑S	Sb	07 08 04.5	+0.5
KUR05	Kurchatov Arra	0.55	341	⇑P	Pb	07 07 55.0	-0.8
KUR05				⇓S	Sb	07 08 04.3	0.0
KUR17	Kurchatov Arra	0.55	337	⇓P	Pb	07 07 55.3	-0.7
KUR17				⇓S	Sb	07 08 04.6	+0.2
KUR04	Kurchatov Arra	0.56	342	⇑P	Pb	07 07 55.6	-0.6
KUR04				⇓S	Sb	07 08 05.1	+0.3
KURK	Kurchatov	0.60	348	⇑P	Pb	07 07 56.3	-0.5
	1.7nm,0.3s						
KURK				⇓S	Sb	07 08 06.2	+0.4
	8.3nm,0.6s						
MAKZ	Makanchi	3.93	146	⇑Pg	Pb	07 08 52.9	-0.7
	2.1nm,1.2s						
MAKZ				⇓Lg	Lg	07 09 42.8	
	1.3nm,0.6s						
MK31	Makanchi Array	4.06	144	⇑Pn	Pn	07 08 47.0	+0.3
	baz=316,slow=10,SNR=14						
MK31				⇑Pg	Pb	07 08 56.5	+0.8
	0.1nm,0.3s,baz=332,slow=14,SNR=11						
MK31				⇑Lg	Lg	07 09 50.5	
	1.4nm,0.6s,baz=334,slow=27,SNR=8.2						
MKAR	Makanchi Array	4.06	144	Pn	Pn	07 08 47.0	+0.3
	0.1nm,0.3s,baz=324,slow=10,SNR=14						
MKAR				Pg	Pb	07 08 53.9	-1.8
	0.3nm,0.3s,baz=323,slow=15,SNR=13						
MKAR				Lg	Lg	07 09 50.2	
	0.5nm,0.3s,baz=330,slow=26,SNR=9.3 0.1nm,0.3s						
OTUK	Ortayu	4.65	249	⇓Pn	Pn	07 08 53.9	-0.9
	2.6nm,1.4s						
OTUK				⇑Pg	Pb	07 09 06.1	+0.4
OTUK				⇑Lg	Lg	07 10 08.0	
	3.1nm,1.1s						
ZALV	Zalesovo Beam	5.33	42	Pn	Pn	07 09 05.2	+1.1
	0.6nm,0.2s,baz=224,slow=13,SNR=1.6						
I46RU	ZALESOVO INFRA	5.33	42	I	I	07 41 20.0	
	baz=224,slow=323,SNR=2.0						

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*ISK **03** 07:21:56.5, 39°.50N×26°.04E, h6km, ML2.5/24*

*ATH **03** 07:21:57.3, 39°.48N×26°.04E, h10km±4km, ML2.4/5, Error ellipse: s-maj=4.3km s-min=1.1km az=205.0*

*DDA **03** 07:21:57.3±0.0, 39°.50N×26°.09E, h8km, ML2.4*

*THE **03** 07:21:57.2, 39°.50N×26°.07E, h2km±2km, ML2.4/7, Error ellipse: s-maj=2.4km s-min=0.6km az=181.0*

ISC 03 07:21:57.1±0.8, 39°.50N±0°.02×26°.05E±0°.02, h8km±5km, n53, σ0ˢ.40/78, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	Canakkale, Ayv	0.07	86	P	Pg	07 21 59.0	0.0
KOCA				S	Sg	07 22 00.5	+0.1
GPNR	Gulpinar-Canak	0.08	124	Pg	Pg	07 21 58.8	-0.3
GPNR				Sg	Sg	07 22 00.7	+0.2
PRK	Paraskevi	0.30	146	P	Pg	07 22 03.2	+0.1
PRK				S	Sg	07 22 07.5	+0.4
	795nm,0.5s						
PRK	Paraskevi	0.30	146	P	Pg	07 22 03.1	0.0
PRK				S	Sg	07 22 07.1	0.0
PRK				AML	AML	07 22 08.2	
	comp=N,1290μm,0.3s						
PRK				AML	AML	07 22 09.5	
	comp=E,1872μm,0.7s						
SIGR	SIGRI	0.32	208	P	Pg	07 22 03.5	+0.1
SIGR				S	Sg	07 22 08.1	+0.4
	comp=E,1μm,0.3s						
SIGR	SIGRI	0.32	208	Pg	Pg	07 22 03.3	-0.1
SIGR				Sg	Sg	07 22 08.4	+0.7
SIGR	SIGRI	0.32	208	P	Pg	07 22 03.4	-0.1
SIGR				S	Sg	07 22 07.8	+0.1
SIGR				AML	AML	07 22 08.8	
	comp=N,2710μm,0.4s						
SIGR				AML	AML	07 22 08.8	
	comp=E,1699μm,0.2s						
BOZC	Bozcaada	0.34	0	Pg	Pg	07 22 03.8	0.0
BOZC				Sg	Sg	07 22 09.1	+0.7
BOZC	Bozcaada	0.34	0	P	Pg	07 22 04.0	+0.2
BOZC				i AML	AML	07 22 09.0	
	comp=E,568nm,0.3s						
BOZC				i AML	AML	07 22 09.0	
	comp=E,359nm,0.2s						
BOZC				S	Sg	07 22 09.3	+0.9
EZN	Ezine	0.39	33	P	Pg	07 22 04.8	+0.1
EZN				S	Sg	07 22 10.4	+0.6
	comp=E,732nm,0.1s						
EZN	Ezine	0.39	33	Pg	Pg	07 22 04.7	+0.1
BAYC	CANAKKALE_Bayr	0.45	57	P	Pg	07 22 05.7	-0.2
BAYC				S	Sg	07 22 11.8	0.0
BAYC				i AML	AML	07 22 12.0	
	comp=E,302nm,0.3s						
BAYC				i AML	AML	07 22 12.0	
	comp=E,295nm,0.3s						
AYVA	Ayvalik	0.53	111	P	Pg	07 22 07.6	+0.3
ECEA	Canakkale, Ece	0.55	10	P	Pg	07 22 08.1	+0.4
ECEA				S	Sb	07 22 16.7	-0.4
ECEA				i AML	AML	07 22 17.0	
	comp=E,307nm,0.3s						
ECEA				i AML	AML	07 22 17.0	
	comp=E,352nm,0.7s						
COMU	Canakkale	0.68	28	Pg	Pg	07 22 10.3	+0.1
GADA	Gvkgeada	0.70	350	Pg	Pg	07 22 10.3	-0.3
LIA	Limnos Island	0.78	301	P	Pg	07 22 12.3	+0.2
LIA				S	Sb	07 22 24.8	+1.2
	comp=E,538nm,0.2s						
LIA	Limnos Island	0.78	301	P	Pg	07 22 12.3	+0.2
LIA				S	Sg	07 22 22.3	+0.1
LIA				AML	AML	07 22 26.4	
	comp=E,1079μm,0.2s						
LIA				AML	AML	07 22 26.9	
	comp=N,1053μm,0.3s						
DKL	Dikili	0.79	122	Pg	Pg	07 22 12.4	+0.2
BUHA	Balikesir, Bur	0.79	89	P	Pg	07 22 12.1	-0.2
BUHA				S	Sg	07 22 22.9	+0.3
BUHA				i AML	AML	07 22 26.0	
	comp=N,100nm,0.4s						
BUHA				i AML	AML	07 22 27.0	
	comp=N,94nm,0.3s						
KARB	zmir-Karabur	0.88	161	P	Pg	07 22 14.3	+0.3
KARB				S	Sb	07 22 26.3	-0.1
KARB				i AML	AML	07 22 28.0	
	comp=N,116nm,0.2s						
KARB				i AML	AML	07 22 28.0	
	comp=N,182nm,0.2s						
CANM	Can-anakkale	0.93	56	Pg	Pg	07 22 14.9	0.0
GELI	Tayfur-Gelibol	0.96	20	Pg	Pg	07 22 15.2	-0.2
ZEDA	zmir-Bergama	0.96	123	P	Pg	07 22 15.3	-0.1
ZEDA				S	Sb	07 22 29.1	+0.4
LPK	Lapseki	1.03	32	Pg	Pg	07 22 16.5	-0.3
SMTH	Samothraki Isl	1.05	338	P	Pg	07 22 16.9	-0.4
SMTH				S	Sb	07 22 31.6	+0.2
	comp=N,80nm,0.2s						
SMTH	Samothraki Isl	1.05	338	P	Pg	07 22 16.9	-0.4
CHOS	Chios island	1.11	180	P	Pg	07 22 17.8	-0.6
CHOS				S	Sn	07 22 34.8	+0.3
	comp=N,260nm,0.2s						
CHOS	Chios island	1.11	180	Pn	Pg	07 22 17.9	-0.5
CHOS	Chios island	1.11	180	P	Pg	07 22 17.7	-0.6
CHOS				AML	AML	07 22 37.6	
	comp=N,372μm,0.3s						
CHOS				AML	AML	07 22 39.8	
	comp=E,677μm,0.3s						
CAVK	Edirne/Enez-Ca	1.20	4	P	Pb	07 22 19.5	-0.5
CAVK				S	Sg	07 22 35.8	+0.3
URLA	Izmir	1.21	159	Pn	Pb	07 22 19.3	-1.0
ERIK	Erikli-Kesan	1.22	17	Pn	Pb	07 22 19.5	-0.9
BALY	Balya	1.23	78	P	Pb	07 22 20.2	-0.4
BALY				S	Sb	07 22 36.3	-0.5
BALY				i AML	AML	07 22 38.0	
	comp=E,167nm,0.4s						
BALY				i AML	AML	07 22 38.0	
	comp=E,83nm,0.5s						
ENEZ	Enez	1.24	4	Pn	Pn	07 22 20.3	-0.4
STEP	BALIKESIR_Sava	1.30	95	P	Pg	07 22 21.9	0.0
STEP				S	Sn	07 22 39.5	+0.5
STEP				i AML	AML	07 22 44.0	
	comp=E,49nm,0.5s						
STEP				i AML	AML	07 22 44.0	
	comp=E,53nm,0.5s						
KRBG	Karabiga-Canak	1.31	47	Pn	Pn	07 22 21.1	-0.5
BLCB	Balcova	1.35	145	Pn	Pb	07 22 22.9	+0.3
KNL	Balıkesir	1.37	55	P	Pn	07 22 21.8	-0.7
KNL				S	Sn	07 22 40.7	-0.1
KNL				i AML	AML	07 22 43.0	
	comp=E,60nm,0.8s						
KNL				i AML	AML	07 22 43.0	
	comp=E,82nm,0.5s						
GONE	Gonen-Balikesi	1.37	66	Pn	Pb	07 22 22.8	-0.2
ALN	Alexandroupoli	1.40	360	P	Pn	07 22 22.6	-0.2
ALN				S	Sg	07 22 42.0	0.0
	comp=E,85nm,0.4s						
ALN	Alexandroupoli	1.40	360	Pn	Pn	07 22 22.9	+0.1
ALN	Alexandroupoli	1.40	360	P	Pn	07 22 22.6	-0.2
ALN				AML	AML	07 22 42.4	
	comp=E,205μm,0.4s						
ALN				AML	AML	07 22 43.1	
	comp=N,138μm,0.5s						
KESN	Edirne-Kesan	1.41	20	P	Pn	07 22 23.3	0.0
KESN				S	Sg	07 22 42.8	+0.4
KESN				i AML	AML	07 22 45.0	
	comp=N,69nm,0.3s						
KESN				i AML	AML	07 22 46.0	
	comp=N,57nm,0.3s						
BALB	Balikesir	1.42	84	Pn	Pb	07 22 23.5	-0.3
RKY	Sarkoy-Tekirda	1.47	36	Pn	Pn	07 22 23.9	0.0

THAS	**Thassos island**	**1.51**	**318**	P	**Pn**	**07 22 23.9**	**-0.4**
EDC	**Edincik**	**1.63**	**58**	Pn	**Pn**	**07 22 26.6**	**+0.5**
UKOP	**Uzunkopru-Edir**	**1.69**	**15**	Pn	**Pn**	**07 22 27.2**	**+0.4**
RDO	**Rodhopi**	**1.69**	**347**	Pn	**Pn**	**07 22 26.8**	**-0.1**
OUR	**Ouranopolis**	**1.80**	**298**	Pn	**Pn**	**07 22 28.4**	**+0.1**
TKR	**Tekirdag**	**1.87**	**37**	Pn	**Pn**	**07 22 29.9**	**+0.5**
KCTX	**Karacabey (Bur**	**1.93**	**66**	Pn	**Pn**	**07 22 30.7**	**+0.5**

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*NNC **03** 07:26:49.1±0.6, 43°.42N×69°.89E, h0^{km}, mb3.1, mpv2.7,*
Error ellipse: s-maj=9.4km s-min=2.9km az=37.0,
Suspected Mining explosion.
*SOME **03** 07:26:49.1, 43°.45N×69°.95E, h5^{km}*
*KRNET **03** 07:26:50.2±0.1, 43°.40N×69°.95E, mb2.9*
ISC 03 07:26:52.1±2.2, **43°.33N**±0°.08×**69°.92E**±0°.08, **h0**^{km}**, n27,**
σ**1.^{s}00**/45, **20C-16D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK08	**Karatay Array**	**0.47**	**118**	⇓P	**Pg**	**07 26 59.8**	**-1.4**
KK08				⇑S	**Sg**	**07 27 07.4**	**+0.1**
KK09	**Karatay Array**	**0.47**	**116**	⇓P	**Pg**	**07 26 59.6**	**-1.5**
KK09				⇑S	**Sg**	**07 27 07.1**	**-0.1**
KK03	**Karatay Array**	**0.48**	**118**	⇑P	**Pg**	**07 26 59.9**	**-1.4**
KK03				⇓S	**Sg**	**07 27 07.7**	**+0.1**
KK04	**Karatay Array**	**0.48**	**117**	⇓P	**Pg**	**07 26 59.8**	**-1.5**
KK04				⇓S	**Sg**	**07 27 07.5**	**-0.1**
KK01	**Karatay Array**	**0.48**	**118**	⇑P	**Pg**	**07 26 60.0**	**-1.4**
KK01				⇑S	**Sg**	**07 27 07.7**	**+0.1**
KK02	**Karatay Array**	**0.49**	**118**	⇓P	**Pg**	**07 27 00.1**	**-1.3**
KK02				⇑S	**Sg**	**07 27 07.8**	**0.0**
KK31	**Karatay Array**	**0.49**	**118**	⇑P	**Pg**	**07 26 59.8**	**-1.6**
	4.8nm,0.5s,baz=316,slow=16,SNR=280						
KK31				⇓S	**Sg**	**07 27 07.6**	**-0.1**
	67nm,0.7s,baz=301,slow=31,SNR=108						
KKAR	**Karatay Array**	**0.49**	**118**	⇑*i*P	**Pg**	**07 27 00.2**	**-1.2**
	baz=26						
KKAR				⇑*i*S	**Sg**	**07 27 07.6**	**-0.2**
	baz=26						
KK07	**Karatay Array**	**0.49**	**119**	⇑P	**Pg**	**07 26 59.9**	**-1.5**
KK07				⇓S	**Sg**	**07 27 07.6**	**-0.2**
KK05	**Karatay Array**	**0.49**	**116**	⇓P	**Pg**	**07 27 00.2**	**-1.3**
KK05				⇑S	**Sg**	**07 27 07.8**	**0.0**
KK06	**Karatay Array**	**0.50**	**118**	⇑P	**Pg**	**07 27 00.3**	**-1.4**
KK06				⇑S	**Sg**	**07 27 07.9**	**-0.2**
IUG	**Iuzhnay**	**1.19**	**176**	*e*P	**Pg**	**07 27 14.2**	**-0.6**
	7.3nm,0.3s						
IUG				*e*S	**Sb**	**07 27 31.2**	**-0.2**
	32nm,0.4s						
TRKS	**Terek-Say**	**2.01**	**153**	⇓*i*P	**Pb**	**07 27 29.4**	**-0.3**
	baz=55						
TRKS				⇓*i*S	**Sg**	**07 27 58.0**	**+1.2**
	baz=55						
ARK	**Arkit**	**2.15**	**135**	⇑*i*P	**Pn**	**07 27 30.1**	**+0.8**
	baz=36						
ARK				⇑*i*S	**Sb**	**07 27 59.3**	**+0.1**
	baz=36						
MRKS	**Merke**	**2.49**	**102**	Pg	**Pb**	**07 27 36.7**	**-1.1**
	1.5nm,0.2s						
MRKS				Lg	Lg	07 28 10.0	
	12nm,0.5s						
MRKS	**Merke**	**2.49**	**102**	*e*Pg	**Pb**	**07 27 36.7**	**-1.1**
	1.5nm,0.2s						
MRKS				*e*Lg	Lg	07 28 10.0	
	12nm,0.5s						
EKS2	**Erkin-Say**	**2.91**	**102**	⇑*e*P	**Pn**	**07 27 39.6**	**-0.2**
	baz=3.0						
EKS2				⇑*i*S	**Sn**	**07 28 16.3**	**+0.8**
	baz=3.0						
AML	**Almayashu**	**3.03**	**112**	⇑Pg	**Pn**	**07 27 42.6**	**+1.0**
	0.8nm,1.1s						
AML				Lg	Lg	07 28 26.7	
	0.8nm,0.6s						
AML	**Almayashu**	**3.03**	**112**	⇑*e*P	**Pn**	**07 27 41.9**	**+0.3**
	baz=13						
AML				⇑*i*S	**Sn**	**07 28 19.6**	**+0.8**
	baz=13						
SGDS	**Sogindy**	**3.43**	**86**	Pg	**Pb**	**07 27 53.8**	**0.0**
	1.3nm,0.4s						
SGDS				Lg	Lg	07 28 39.9	
	5.1nm,0.5s						
UCH	**Uchtor**	**3.56**	**106**	⇓*i*P	**Pn**	**07 27 49.0**	**0.0**
	baz=8.0						
UCH				⇓*i*S	**Sn**	**07 28 32.0**	**+0.1**
	baz=8.0						
ARLS	**Aral**	**3.57**	**113**	⇓*i*P	**Pn**	**07 27 49.4**	**+0.6**
	baz=14						
ARLS				⇓*i*S	**Sn**	**07 28 32.7**	**+0.9**
	baz=14						
TKM2	**Tokmak 2**	**4.17**	**94**	⇓Lg	Lg	07 29 02.2	
	3.8nm,0.8s						
DGS	**Degeres**	**4.27**	**89**	Pg	**Pb**	**07 28 08.0**	**-0.2**
	3.7nm,0.6s						
DGS				Lg	Lg	07 29 04.1	
	5.5nm,0.6s						
DGS	**Degeres**	**4.27**	**89**	*e*Pg	**Pb**	**07 28 08.0**	**-0.2**
	3.7nm,0.6s						
DGS				*e*Lg	Lg	07 29 04.1	
	5.5nm,0.6s						
KST	**Kastek**	**4.43**	**92**	Pg	**Pb**	**07 28 10.4**	**-0.4**
KST				Lg	Lg	07 29 08.0	
KST	**Kastek**	**4.43**	**92**	*e*P	**Pb**	**07 28 10.4**	**-0.4**
KST				*e*S	**Sb**	**07 29 08.0**	**+3.2**

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*DDA **03** 07:50:18.5±0.0, 37°.59N×38°.51E, h10^{km}±1^{km}, ML3.2*
*ISK **03** 07:50:19.2, 37°.55N×38°.50E, h14^{km}, ML3.3/12*
ISC 03 07:50:18.9±1.0, **37°.57N**±0°.03×**38°.51E**±0°.02, **h10**^{km}±9^{km},
n25, σ**0.^{s}86**/44, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URFA	**Urfa**	**0.28**	**117**	Pg	**Pb**	**07 50 25.6**	**-0.5**
URFA				Sg	**Sb**	**07 50 29.9**	**-0.9**
HANM	**anlurfa/Hi**	**0.29**	**88**	P	**Pg**	**07 50 24.5**	**-0.4**
HANM				*i* AML	AML	07 50 29.0	
	comp=N,4μm,0.3s						
HANM				S	**Sg**	**07 50 29.1**	**+0.2**
SANL	**SANLIURFA_Merk**	**0.55**	**136**	P	**Pg**	**07 50 29.7**	**0.0**
SANL				S	**Sg**	**07 50 37.3**	**+0.4**
SANL				*i* AML	AML	07 50 45.0	
	comp=E,1μm,0.4s						
AKCA	**Adyaman/G¶l**	**0.69**	**289**	P	**Pg**	**07 50 32.0**	**-0.3**
AKCA				S	**Sg**	**07 50 41.6**	**+0.2**
AKCA				*i* AML	AML	07 50 46.0	
	comp=N,1μm,0.4s						
SURC	**SANLIURFA_SURC**	**0.69**	**173**	P	**Pg**	**07 50 32.5**	**+0.2**
SURC				S	**Sb**	**07 50 43.2**	**+0.6**
MAYA	**Malatya/Merkez**	**0.76**	**355**	P	**Pg**	**07 50 32.8**	**-0.8**
MAYA				S	**Sg**	**07 50 42.9**	**-0.7**
GZT	**Gaziantep**	**0.78**	**255**	P	**Pg**	**07 50 34.0**	**0.0**
GZT				S	**Sn**	**07 50 47.8**	**-0.1**
GZT				*i* AML	AML	07 50 48.0	
	comp=N,2μm,0.3s						
GZT				*i* AML	AML	07 50 48.0	
	comp=E,1μm,0.3s						
NZIP	**Nizip/Gaziante**	**0.85**	**232**	P	**Pg**	**07 50 35.3**	**0.0**
NZIP				S	**Sn**	**07 50 48.5**	**-1.0**
GAZ	**Gaziantep**	**1.11**	**249**	Pn	**Pn**	**07 50 40.5**	**0.0**
GAZ				Sn	**Sn**	**07 50 56.3**	**+0.4**
KAHM	**Kahramanmaras,**	**1.21**	**268**	P	**Pn**	**07 50 40.8**	**-1.1**
KAHM				S	**Sn**	**07 50 58.8**	**+0.5**
DARE	**Darende-Malaty**	**1.29**	**321**	Pn	**Pg**	**07 50 43.4**	**-0.3**
DARE				Sn	**Sg**	**07 51 01.1**	**+0.7**
HCB	**Kahramanmara**	**1.29**	**261**	P	**Pn**	**07 50 42.0**	**-1.1**
HCB				S	**Sg**	**07 51 01.2**	**+0.6**
HCB				*i* AML	AML	07 51 02.0	
	comp=E,295nm,0.3s						
ELBS	**KAHRAMANMARAS_**	**1.32**	**305**	P	**Pn**	**07 50 43.2**	**-0.4**
ELBS				S	**Sg**	**07 51 03.4**	**+1.8**
DYBB	**Diyarbakir**	**1.35**	**73**	Pn	**Pb**	**07 50 44.2**	**-0.1**
DYBB				Sn	**Sg**	**07 51 02.5**	**+0.2**
CUGUR	**Gurin_SVAS**	**1.51**	**320**	P	**Pg**	**07 50 49.2**	**+1.3**
CUGUR				S	**Sg**	**07 51 09.8**	**+2.2**
CUGUR				*i* AML	AML	07 51 17.0	
	comp=E,383nm,0.4s						
CUGUR				*i* AML	AML	07 51 19.0	
	comp=N,349nm,0.6s						
KAMA	**Osmaniye**	**1.52**	**256**	P	**Pn**	**07 50 45.4**	**-0.7**
KAMA				S	**Sg**	**07 51 07.9**	**+0.2**
ARPR	**Arapgir-MALATY**	**1.53**	**355**	Pn	**Pb**	**07 50 47.3**	**-0.1**
MAZI	**Mazidag**	**1.54**	**93**	Pn	**Pn**	**07 50 46.8**	**+0.2**
MAZI				Sn	**Sb**	**07 51 07.8**	**+0.5**
SARI	**SarD1z-Kayseri**	**1.85**	**298**	Pn	**Pb**	**07 50 51.7**	**-1.3**
CUKAN	**kangal_SIVAS**	**1.93**	**335**	P	**Pb**	**07 50 53.1**	**-1.1**
CUKAN				S	**Sg**	**07 51 20.5**	**-0.4**
KOZT	**Kozan**	**2.13**	**268**	Pn	**Pn**	**07 50 55.3**	**+0.7**
SVAN	**Silvan-Diyarba**	**2.21**	**74**	Pn	**Pn**	**07 50 55.6**	**0.0**
BNGB	**Bingl**	**2.22**	**50**	Pn	**Pn**	**07 50 56.7**	**+0.8**
ERZN	**Erzincan**	**2.23**	**25**	Pn	**Pn**	**07 50 56.9**	**+0.9**
AKO	**Adana**	**2.44**	**268**	P	**Pg**	**07 51 05.4**	**-0.3**
AKO				S	**Sg**	**07 51 39.7**	**+2.4**

IDC 03 07:55:35.1±3.2, **53°.49N**×**87°.56E, h0**^{km}**, mbtmp2.6**/2,
ML2.3/2, **Error ellipse: s-maj=31.8km s-min=15.6km**
az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.69**	**287**	I	I	08 07 20.0	
	baz=105,slow=340,SNR=3.7						
ZALV	**Zalesovo Beam**	**1.69**	**287**	Pg	Pn	07 56 05.6	-0.2
	0.4nm,0.3s,baz=108,slow=12,SNR=8.2						
ZALV				Lg	Lg	07 56 28.6	
	0.6nm,0.3s,baz=105,slow=26,SNR=7.5						
KURBB	**Kurchatov Arra**	**6.26**	**246**	Pn	Pn	07 57 09.0	+0.4
	0.1nm,0.3s,baz=61,slow=14,SNR=1.6						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.51**	**209**	Pn	Pn	07 57 27.1	+1.3
	baz=29,slow=13,SNR=10						
	0.1nm,0.3s						

IDC 03 08:05:13.5±3.2, **54°.62N**×**86°.67E, h0**^{km}**, mbtmp2.9**/2,
ML2.5/2, **Error ellipse: s-maj=25.7km s-min=16.2km**
az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.28**	**239**	I	I	08 11 40.0	
	baz=57,slow=348,SNR=3.7						
ZALV	**Zalesovo Beam**	**1.28**	**239**	Pg	Pg	08 05 36.8	-1.1
	0.7nm,0.3s,baz=54,slow=16,SNR=13						
ZALV				Lg	Lg	08 05 54.0	
	1.8nm,0.3s,baz=55,slow=28,SNR=12						
KURBB	**Kurchatov Arra**	**6.37**	**234**	Pn	Pn	08 06 50.6	+2.1
	0.1nm,0.3s,baz=52,slow=14,SNR=6.0						
KURBB				Lg	Lg	08 08 37.5	
	baz=55,slow=31,SNR=9.7						
	0.9nm,0.2s						
MKAR	**Makanchi Array**	**8.31**	**201**	Pn	Pn	08 07 14.9	-0.3
	0.1nm,0.3s,baz=25,slow=14,SNR=4.3						
MKAR				Sn	Sn	08 08 49.3	-0.5
	0.1nm,0.3s,baz=23,slow=32,SNR=6.4						
MKAR				Lg	Lg	08 09 37.3	
	baz=13,slow=29,SNR=6.3						
	0.1nm,0.3s						

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*NORS **03** 08:06:54.6±0.0, 43°.15N×45°.19E, h16^{km}, MPVA3.5*
*TIF **03** 08:06:56.1, 43°.28N×45°.05E, h15^{km}±1^{km}*
*MOS **03** 08:06:57.2±0.0, 43°.13N×45°.03E, h19^{km}, MPVA3.4*
*DRS **03** 08:06:58.9±0.0, 43°.19N×45°.00E, h17^{km}*
ISC 03 08:06:57.7±1.1, **43°.19N**±0°.03×**45°.06E**±0°.02, **h10**^{km}±8^{km},
n25, σ**0.^{s}94**/50, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMGR	**Komgaron**	**0.20**	**228**	*e*Pg	**Pg**	**08 07 01.9**	**0.0**
KMGR				*e*Sg	**Sg**	**08 07 06.4**	**+1.6**
VLKR	**Vladikavkaz**	**0.32**	**243**	*e*Pg	**Pb**	**08 07 04.7**	**-0.8**
VLKR				*e*Sg	**Sb**	**08 07 10.5**	**-0.2**
BTKR	**Batakoyurt**	**0.42**	**296**	*e*Pg	**Pb**	**08 07 06.9**	**-0.4**
BTKR				*e*Sg	**Sb**	**08 07 14.8**	**+1.0**
GROC	**Groznyy**	**0.54**	**88**	*e*Pg	**Pn**	**08 07 11.1**	**-0.3**
GROC				*i* Sg	**Sn**	**08 07 18.7**	**-1.7**
SHTL	**Shatili**	**0.54**	**173**	P	**Pb**	**08 07 09.0**	**-0.3**
SHTL				S	**Sb**	**08 07 18.2**	**+1.0**
PNSH	**Pansheti**	**0.65**	**211**	P	**Pb**	**08 07 10.4**	**-0.8**
PNSH				S	**Sb**	**08 07 21.1**	**+0.8**
LACR	**Lac**	**0.67**	**237**	*e*Pg	**Pb**	**08 07 10.8**	**-0.8**
LACR				*e*Sg	**Sb**	**08 07 21.4**	**+0.4**
KORR	**Kora**	**0.74**	**262**	*e*Pg	**Pb**	**08 07 11.9**	**-0.8**
KORR				*e*Sg	**Sb**	**08 07 23.7**	**+0.9**
STDR	**Stavd-Durt**	**0.75**	**284**	*e*Pg	**Pb**	**08 07 12.5**	**-0.4**
STDR				*e*Sg	**Sb**	**08 07 23.9**	**+0.7**
PRTR	**Priterechnaya**	**0.80**	**315**	*e*Pg	**Pn**	**08 07 14.7**	**-0.3**
PRTR				*e*Sg	**Sn**	**08 07 27.2**	**+0.2**
DVE	**Vedeno**	**0.81**	**106**	*e*Pg	**Pn**	**08 07 14.7**	**-0.6**
DVE				*e*Sg	**Sn**	**08 07 28.1**	**+0.7**
LSNR	**Lesken**	**0.91**	**276**	*e*Pg	**Pb**	**08 07 15.2**	**-0.4**
LSNR				*e*Sg	**Sb**	**08 07 28.1**	**+0.4**
ZEI	**Tsey**	**0.94**	**245**	*e*Pg	**Pg**	**08 07 15.1**	**-0.8**
ZEI				*e*Sg	**Sb**	**08 07 29.5**	**+0.6**
DIGR	**Digorskoe uzhe**	**1.13**	**256**	*e*Pg	**Pb**	**08 07 19.0**	**-0.4**
DIGR				*e*Sg	**Sn**	**08 07 35.0**	**-0.4**
DBC	**Dubki**	**1.30**	**97**	*e*Pg	**Pb**	**08 07 22.2**	**-0.1**
DBC				*e*Sg	**Sn**	**08 07 41.9**	**+2.3**
ONI	**Oni**	**1.33**	**244**	P	**Pn**	**08 07 21.8**	**-0.5**
ONI				S	**Sn**	**08 07 41.2**	**+1.1**
UNCR	**Uncukul**	**1.36**	**110**	*e*Pg	**Pg**	**08 07 23.9**	**+0.2**
UNCR				*e*Sg	**Sn**	**08 07 43.1**	**+2.3**
XNZR	**Khunzakh**	**1.37**	**118**	*e*Pg	**Pb**	**08 07 23.3**	**-0.2**
XNZR				*e*Sg	**Sn**	**08 07 42.0**	**+0.7**
KRNR	**Karanay**	**1.40**	**104**	*e*Pg	**Pg**	**08 07 24.0**	**-0.6**
KRNR				*e*Sg	**Sn**	**08 07 44.2**	**+2.2**
GNBR	**Gunib**	**1.61**	**119**	*e*Pg	**Pg**	**08 07 27.6**	**-1.1**
GNBR				*e*Sg	**Sg**	**08 07 48.3**	**-1.2**
TRLG	**Trialeti**	**1.80**	**204**	P	**Pb**	**08 07 29.6**	**-1.2**
TRLG				S	**Sg**	**08 07 56.0**	**+0.5**
KMKR	**Kumukh**	**1.84**	**124**	*e*Pg	**Pb**	**08 07 31.1**	**-0.4**
KMKR				*i* Sg	**Sb**	**08 07 54.4**	**-0.2**
SHA1	**Shidzhatmaz**	**1.84**	**288**	*e*Pg	**Pn**	**08 07 29.8**	**+0.3**
SHA1				*e*Sg	**Sb**	**08 07 54.3**	**-0.3**
KIV0	**Kislovodsk Arr**	**1.89**	**295**	*e*Pg	**Pn**	**08 07 29.3**	**-0.8**
KIV0				*i* Sg	**Sb**	**08 07 55.7**	**-0.2**
ALER	**Alexandrovskoy**	**2.21**	**316**	*e*Pg	**Pn**	**08 07 34.6**	**+0.2**
ALER				*e*Sg	**Sn**	**08 08 03.1**	**+1.3**

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*IDC **03** 08:09:56.4±5.7, 7°.38S×128°.77E, h66^{km}±56^{km}, mb4.0/7,*
mbtmp4.2/9, ML4.0/2, Error ellipse: s-maj=57.8km
s-min=22.8km az=62.0
*NEIC **03** 08:10:00.4±1.6, 7°.58S±0°.08×128°.85E±0°.08, h103^{km}±9^{km},*
mb4.1/9, Error ellipse: s-maj=11.5km s-min=11.0km
az=197.0
ISC 03 08:09:59.9±0.5, **7°.60S**±0°.06×**128°.77E**±0°.07, **h100**^{km}**, n48,**
σ**1.^{s}87**/50, **mb4.2**/10, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.53**	**99**	Pn	**Pn**	**08 10 38.2**	**-1.2**
SOEI	**Soe**	**4.94**	**244**	Pn	**Pn**	**08 11 13.5**	**+1.5**
MTN	**Manton Dam**	**5.71**	**156**		**Pn**	**08 11 20.9**	**-1.4**
FAKI	**Fak Fak**	**5.79**	**37**	Pn	**Pn**	**08 11 24.4**	**+0.9**
KDU	**Kakadu**	**6.23**	**145**	P	**Pn**	**08 11 31.3**	**+1.9**
KNRA	**Kununurra**	**8.03**	**180**		**Pn**	**08 11 55.0**	**+1.2**
KNRA	**Kununurra**	**8.03**	**180**	P	**Pn**	**08 11 55.0**	**+1.2**
LUWI	**Luwuk**	**8.84**	**317**	Pn	**Pn**	**08 12 05.6**	**+0.7**
FITZ	**Fitzroy Crossi**	**10.87**	**196**		**Pn**	**08 12 33.3**	**+0.7**
PLAI	**Plampang**	**10.95**	**263**	P	**Pn**	**08 12 31.9**	**-1.7**
WB0	**Warramunga Arr**	**13.27**	**156**	Pn	**Pn**	**08 13 04.4**	**0.0**
BKB	**Balikpapan**	**13.40**	**297**		**P**	**08 13 13.8**	**+1.8**
WRA	**Warramunga Arr**	**13.41**	**157**	P	**Pn**	**08 13 05.0**	**-1.1**
	0.8nm,0.3s,baz=342,slow=13,SNR=22						
WRA				S	Sn	08 15 22.9	-11
	6.3nm,0.4s,baz=329,slow=22,SNR=11						
	1.5nm,0.5s						
WB2	**Warramunga Arr**	**13.41**	**157**	Pn	**Pn**	**08 13 05.8**	**-0.4**
COEN	**Coen**	**15.49**	**115**	P	**Pn**	**08 13 33.5**	**+0.6**
COEN				IAmb	IAmb	08 14 00.1	
	comp=Z,26nm,1.5s						
COEN	**Coen**	**15.49**	**115**	P	**P**	**08 13 34.7**	**-0.5**
MBWA	**Marble Bar**	**16.07**	**212**	P	**Pn**	**08 13 41.5**	**+1.4**
MBWA				IAmb	IAmb	08 13 48.3	
	comp=Z,14nm,1.4s						
MBWA	**Marble Bar**	**16.07**	**212**	P	**Pn**	**08 13 39.6**	**-0.4**
MYLDM	**Lahad Datu**	**16.31**	**321**		**P**	**08 13 43.9**	**-0.4**
PSA00	**Pilbara Seismi**	**16.35**	**211**	P	**Pn**	**08 13 43.7**	**+0.2**
PSA00				IAmb	IAmb	08 14 06.1	
	comp=Z,16nm,1.4s						
PSA00	**Pilbara Seismi**	**16.35**	**211**	P	**Pn**	**08 13 42.0**	**-1.6**
QIS	**Mount Isa**	**16.61**	**142**	P	**P**	**08 13 49.1**	**+1.5**
AS31	**Alice Springs**	**16.72**	**163**	P	**Pn**	**08 13 49.1**	**+1.0**
ASAR	**Alice Springs**	**16.72**	**163**	P	**Pn**	**08 13 49.5**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=342,slow=11,SNR=40						
ASAR				S	**Sn**	**08 16 46.1**	**-7.7**
	comp=Z,1.7nm,0.8s,baz=347,slow=26,SNR=7.2						
	comp=Z,2.5nm,0.5s						
ASAR	**Alice Springs**	**16.72**	**163**		**P**	**08 13 49.9**	**+1.1**
AS01	**Alice Springs**	**16.73**	**163**	P	**P**	**08 13 50.7**	**+1.8**
WRKA	**Warakurna**	**17.35**	**181**	P	**Pn**	**08 13 57.9**	**+2.1**
MTSU	**Mount Surprise**	**18.40**	**126**	P	**Pn**	**08 14 12.0**	**+3.4**
OOD	**Oodnadatta**	**21.13**	**163**	P	**P**	**08 14 40.4**	**+3.7**
INKA	**Innaminka**	**23.02**	**152**	P	**P**	**08 14 59.4**	**+3.0**
	comp=Z,30nm,0.9s						
FORT	**Forrest**	**23.07**	**182**	P	**P**	**08 14 59.3**	**+2.4**
MULG	**Mulgathing**	**23.11**	**168**	P	**P**	**08 14 59.4**	**+2.2**
BBOO	**Buckleboo**	**25.98**	**166**	P	**P**	**08 15 23.1**	**-0.2**
BBOO	**Buckleboo**	**25.98**	**166**	P	**P**	**08 15 25.5**	**+2.1**
STKA	**Stephens Creek**	**26.95**	**155**	P	**P**	**08 15 34.2**	**+2.1**
	comp=Z,1.0nm,0.4s,baz=327,slow=9.7,SNR=2.4						
	comp=Z,1.0nm,0.4s						
STKA	**Stephens Creek**	**26.95**	**155**	P	**P**	**08 15 33.4**	**+1.3**
CMAR	**Chiang Mai Arr**	**39.20**	**312**	P	**P**	**08 17 18.1**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=139,slow=8.4,SNR=5.6						
	comp=Z,0.7nm,0.3s						
SONM	**Songino Array**	**58.63**	**343**	P	**P**	**08 19 46.1**	**-0.6**
	comp=Z,2.9nm,0.9s,baz=163,slow=7.6						
	comp=Z,2.9nm,0.9s						
PETK	**Petropavlovsk-**	**65.27**	**19**	P	**P**	**08 20 30.5**	**-0.4**
	comp=Z,5.1nm,1.0s,baz=205,slow=3.0,SNR=2.0						
	comp=Z,5.1nm,1.0s						
MK31	**Makanchi Array**	**68.06**	**328**	P	**P**	**08 20 48.2**	**-0.6**
MK31				IAmb	IAmb	08 20 49.0	
	comp=Z,1.9nm,0.7s						
MKAR	**Makanchi Array**	**68.06**	**328**	P	**P**	**08 20 48.5**	**-0.3**
	comp=Z,1.9nm,0.5s,baz=119,slow=7.9,SNR=45						
MKAR				PcP	**pP**	**08 21 13.2**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=125,slow=6.5,SNR=4.4						
	comp=Z,1.9nm,0.5s						
MKAR	**Makanchi Array**	**68.06**	**328**	P	**P**	**08 20 48.1**	**-0.7**
ZALV	**Zalesovo Beam**	**71.58**	**334**	P	**P**	**08 21 08.0**	**-2.2**
	comp=Z,3.1nm,0.6s,baz=130,slow=5.0,SNR=14						
	comp=Z,3.1nm,0.6s						
ZALV	**Zalesovo Beam**	**71.58**	**334**	P	**P**	**08 21 08.9**	**-1.2**
KURBB	**Kurchatov Arra**	**72.39**	**329**	P	**P**	**08 21 14.0**	**-1.0**
	comp=Z,1.9nm,0.5s,baz=129,slow=4.9,SNR=5.4						
	comp=Z,1.9nm,0.5s						
QSPA	**South Pole Qui**	**82.38**	**180**	P	**P**	**08 22 11.1**	**+0.3**
QSPA				IAmb	IAmb	08 22 46.5	
	comp=Z,5.3nm,1.5s						
BMAR	**Burnt Mountain**	**95.67**	**23**	P	**P**	**08 23 13.6**	**-0.5**
CPUP	**Villa Florida**	**145.76**	**170**	PKPbc	**PKPab**	**08 29 28.9**	**+0.4**
	comp=Z,2.0nm,0.9s,baz=232,slow=2.5,SNR=3.8						

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*NNC **03** 08:24:37.2±1.9, 54°.12N×86°.59E, h0^{km}, mb2.9, mpv2.8,*
Error ellipse: s-maj=21.3km s-min=8.7km az=6.0,
Suspected Mining explosion.
*IDC **03** 08:24:40.0±2.4, 54°.11N×86°.44E, h0^{km}, mbtmp3.1/2,*
ML2.9/2, Error ellipse: s-maj=19.8km s-min=11.7km
az=61.0
ISC 03 08:24:40.7±4.6, **54°.0N**±0°.2×**86°.4E**±0°.2, **h0**^{km}**, n8,** σ**1.^{s}28**/10,
5C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.91**	**265**	I	I	08 30 20.0	
	baz=81,slow=346,SNR=2.9						
ZAA0	**Zalesovo Array**	**0.91**	**265**	⇑P	**Pg**	**08 24 57.1**	**-1.0**
	0.1nm,0.2s						
ZAA0				⇓S	**Sb**	**08 25 12.2**	**+0.2**
	4.3nm,0.8s						
ZALV	**Zalesovo Beam**	**0.91**	**265**	Pg	**Pg**	**08 24 57.4**	**-0.8**
	1.5nm,0.3s,baz=78,slow=16,SNR=18						
ZALV				Lg	Lg	08 25 12.6	
	3.4nm,0.3s,baz=75,slow=29,SNR=6.0						
KURK	**Kurchatov**	**5.79**	**238**	⇑Pn	**Pn**	**08 26 07.7**	**0.0**
	3.1nm,1.2s						
KURK				⇑Lg	Lg	08 27 47.4	
	5.4nm,1.3s						
KURBB	**Kurchatov Arra**	**5.89**	**238**	Pn	**Pn**	**08 26 10.6**	**+1.5**
	0.2nm,0.3s,baz=54,slow=13,SNR=12						
KURBB				Lg	Lg	08 27 49.3	
	baz=56,slow=31,SNR=4.4						
	1.1nm,0.4s						
KURBB	**Kurchatov Arra**	**5.89**	**238**	⇓Pn	**Pn**	**08 26 10.6**	**+1.5**
	3.1nm,0.9s						
KURBB				⇓Lg	Lg	08 27 50.7	
	5.7nm,1.0s						
MK31	**Makanchi Array**	**7.70**	**201**	⇑Pn	**Pn**	**08 26 32.6**	**-1.4**
	0.9nm,0.8s,baz=26,slow=14,SNR=16						
MK31				⇓Sn	**Sn**	**08 28 01.1**	**-0.7**
	1.0nm,0.9s						
MK31				⇑Lg	Lg	08 28 44.3	
	3.5nm,1.2s,baz=29,slow=31,SNR=5.2						
MKAR	**Makanchi Array**	**7.70**	**201**	Pn	**Pn**	**08 26 35.7**	**+1.7**
	0.3nm,0.3s,baz=23,slow=9.4,SNR=17						
MKAR				Sn	**Sn**	**08 28 02.4**	**+0.6**
	baz=24,slow=27,SNR=6.0						
MKAR				Lg	Lg	08 28 46.5	
	baz=23,slow=27,SNR=7.4						
	0.4nm,0.3s						

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*BGR **03** 08:27:31.4, 42°.79N×145°.89E, h33^{km}, mb5.4, Ms4.0*
*BJI **03** 08:27:33.9±0.0, 43°.29N×145°.43E, h81^{km}, mb5.0/68,*
mB5.0/37, Ms4.3/19, Ms7 3.9/21
*NEIC **03** 08:27:34.5±2.7, 43°.11N±0°.06×145°.7E±0°.1, h66^{km}±5^{km},*
mb5.3/115, Mww5.1/7, Error ellipse: s-maj=11.7km
s-min=8.4km az=110.0
*MOS **03** 08:27:35.8±0.8, 43°.08N×145°.44E, h100^{km}, mb5.4/63,*
Error ellipse: s-maj=6.3km s-min=3.8km az=115.6
MOS Felt (II-III) at Yuzhno-Kuril'sk.
*NEIC **03** 08:27:36.6, 43°.14N×145°.88E, h50^{km}, Moment Tensor*
Solution. Duration: 1.^{s}7 Moment tensor: Scale 10^{16}Nm;
M_{rr}-3.05; $M_{\theta\theta}$2.67; $M_{\phi\phi}$0.37; $M_{r\theta}$2.68; $M_{\theta\phi}$2.83; $M_{\phi r}$0.88;
Fault plane solution: $M_0$4.79000×10^{16} NP1:
ϕ_s249.97000°, δ64.34000°, λ-73.90000°. NP2:ϕ_s36.29000°,
δ29.99000°, λ-119.99000°. Principal axes: T 5.4527,
Plg18.0000°, Azm328.0000°; N -1.3337, Plg14.0000°,
Azm63.0000°; P -4.1190, Plg67.0000°, Azm190.0000°;
*IDC **03** 08:27:36.4±0.4, 43°.14N×145°.39E, h89^{km}±3^{km}, mb4.8/48,*
mbtmp5.1/53, MS3.6/52 Error ellipse: s-maj=8.4km
s-min=6.9km az=83.0
*NEIC **03** 08:27:36.6, 43°.14N×145°.47E, h50^{km}*
*SKHL **03** 08:27:37.4±0.1, 43°.10N×145°.50E, h98^{km}±4^{km}, mb5.4/3,*
msh6.8/9
SKHL Felt (II-III) at Yushno-Kuril'sk.
*NIED **03** 08:27:37.1, 43°.08N×145°.48E, h93^{km}, MW4.8, Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm;
M_{rr}-0.73; $M_{\theta\theta}$0.62; $M_{\phi\phi}$0.10; $M_{r\theta}$1.84; $M_{\theta\phi}$0.27; $M_{\phi r}$0.51;
Fault plane solution: $M_0$2.05000×10^{16} NP1:
ϕ_s254.00000°, δ80.00000°, λ-87.00000°. NP2:ϕ_s60.00000°,
δ11.00000°, λ-104.00000°.
*JMA **03** 08:27:37.1±0.2, 43°.1N±0°.5×145°.5E±0°.8, h93^{km}±1^{km},*
MD4.9/40, MW4.9/40, OFF NEMURO PENINSULA
JMA Felt III J1 at OFF NEMURO PENINSULA .
*GCMT **03** 08:27:38.5±0.3, 43°.22N±0°.02×145°.38E±0°.03, h86^{km}±4^{km},*
MW4.9/103, Moment Tensor Solution. s26,c26;
s103,c137; Duration: 0 Moment tensor: Scale 10^{16}Nm;
M_{rr}-1.39±.14; $M_{\theta\theta}$1.23±.17; $M_{\phi\phi}$0.16±.15; $M_{r\theta}$2.35±.07;
$M_{\theta\phi}$0.70±.11; $M_{\phi r}$0.65±.07; Best double couple:
$M_0$2.85600×10^{16} NP1:ϕ_s253.00000°, δ75.00000°,
λ-84.00000°. NP2:ϕ_s52.00000°, δ17.00000°,
λ-110.00000°. Principal axes: T 2.9260, Plg29.0000°,
Azm338.0000°; N -0.1310, Plg6.0000°, Azm72.0000°; P
-2.7860, Plg60.0000°, Azm172.0000°; nsta1 refers to
body waves, cutoff=40s. nsta2 refers to surface waves,
cutoff=50s. Triangular moment-rate function
ISC 03 08:27:36.2±0.3, **43°.15N**±0°.03×**145°.48E**±0°.03, **h91**^{km}±1^{km},
h91^{km}**:pP-P, n1121,** σ**1.^{s}37**/1205, **mb5.3**/237, **86C-57D,**
Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKHN	**Kushirohamanak**	**0.25**	**253**	⇓*i*P	**Pn**	**08 27 50.8**	**+1.4**
JKHN				⇓*e*S	**Sn**	**08 28 00.9**	**+1.7**
JKHN	**Kushirohamanak**	**0.25**	**253**	A	A	08 27 50.8	
	comp=E,116nm,1.7s,comp=E,381nm,2.2s						
NMR	**Nemuro--Hokkai**	**0.28**	**39**	*d i*PN	**Pn**	**08 27 50.9**	**+1.4**
NMR				*i* S	**Sn**	**08 28 01.0**	**+1.5**
NMR	**Nemuro--Hokkai**	**0.28**	**39**	*i* P	**Pn**	**08 27 51.0**	**+1.4**
NMR				AMB	AMB	08 27 51.4	

	30µm,0.3s						
NMR				*i* S	Sn	08 28 01.1	+1.5
NMR				A	A	08 28 01.4	
	145µm,0.4s						
NMR				A	A	08 28 01.4	
	75µm,0.4s						
NEM2	Nemuro 2	0.28	42	⇓*i*P	Pn	08 27 50.9	+1.3
NEM2				⇓*e*S	Sn	08 28 01.0	+1.4
NEM2	Nemuro 2	0.28	42	A	A	08 27 50.9	
	comp=E,113nm,0.5s,comp=E,186nm,1.0s						
AKK	Akkeshi	0.49	254	*i* P	Pn	08 27 51.8	+0.9
AKK				AMB	AMB	08 27 52.3	
	15µm,0.5s						
AKK				*i* S	Sn	08 28 02.6	+0.7
AKK				A	A	08 28 03.8	
	142µm,0.4s						
AKK				A	A	08 28 03.8	
	84µm,0.4s						
JAK	Akkeshi	0.60	255	⇓*i*P	Pn	08 27 52.6	+0.8
JAK				⇓*e*S	Sn	08 28 04.4	+0.9
JAK	Akkeshi	0.60	255	A	A	08 27 52.6	
	comp=E,232nm,0.7s,comp=E,277nm,0.7s						
JNK	Nakash	0.70	308	⇓*i*P	Pn	08 27 53.9	+1.1
JNK				⇓*e*S	Sn	08 28 06.5	+1.3
JNK	Nakash	0.70	308	A	A	08 27 53.9	
	comp=E,139nm,0.6s,comp=E,42nm,0.6s						
JNSB	Nemuroshibetsu	0.71	331	⇓P	Pn	08 27 54.6	+1.7
JNSB				⇓*e*S	Sn	08 28 07.6	+2.3
JNSB	Nemuroshibetsu	0.71	331	A	A	08 27 54.6	
	comp=E,80nm,0.8s,comp=E,78nm,0.9s						
JRA	Rausu	0.83	342	⇓P	Pn	08 27 56.0	+2.0
JRA				⇓*e*S	Sn	08 28 10.3	+3.0
JRA	Rausu	0.83	342	A	A	08 27 56.0	
	comp=E,84nm,0.6s,comp=E,203nm,1.7s						
YUK	Yuzh-Kuril'sk	0.92	17	*d i*PN	Pn	08 27 56.8	+1.7
YUK				*i* S	Sn	08 28 11.4	+2.2
YUK				pmax	pmax		
	comp=E,5µm,0.3s						
YUK				pmax	pmax		
	comp=Z,77µm,0.3s						
YUK				pmax	pmax		
	comp=N,3µm,0.2s						
YUK				smax	smax		
	comp=N,61µm,0.5s						
YUK				smax	smax		
	comp=E,155µm,0.7s						
YUK				smax	smax		
	comp=E,57µm,0.7s						
YUK				smax	smax		
	comp=N,128µm,1.0s						
YUK	Yuzh-Kuril'sk	0.92	17	*i* P	Pn	08 27 56.8	+1.7
YUK				AMB	AMB	08 27 57.4	
	comp=N,77µm,0.4s						
YUK				*i* S	Sn	08 28 11.4	+2.2
YUK				A	A	08 28 12.7	
	comp=N,61µm,0.7s						
YUK				A	A	08 28 12.7	
	comp=N,78µm,0.7s						
YUK				A	A	08 28 15.5	
	comp=N,128µm,1.0s						
YUK				A	A	08 28 15.5	
	comp=N,57µm,1.0s						
RUSJ	Misakicho	0.97	350	⇓*i*PN	Pn	08 27 57.6	+2.1
RUSJ				*i* S	Sn	08 28 13.2	+3.2
SHO	Shikotan	1.21	53	*i* P	Pn	08 27 59.6	+1.2
SHO				AMB	AMB	08 28 00.3	
	comp=N,9µm,0.3s						
SHO				*i* S	Sn	08 28 15.7	+0.6
SHO				A	A	08 28 16.7	
	comp=N,35µm,0.4s						
SHO				A	A	08 28 16.7	
	comp=N,51µm,0.4s						
JOB	Onbets	1.23	259	⇓*i*P	Pn	08 27 59.7	+1.0
JOB				⇓*e*S	Sn	08 28 16.4	+0.8
JOB	Onbets	1.23	259	A	A	08 27 59.7	
	comp=N,47nm,0.4s,comp=N,81nm,1.3s						
JAR	Ashorobuto	1.26	277	⇓*i*P	Pn	08 28 00.3	+1.3
JAR				⇓*e*S	Sn	08 28 17.4	+1.2
JAR	Ashorobuto	1.26	277	A	A	08 28 00.3	
	comp=N,87nm,0.4s,comp=N,57nm,0.6s						
JTKR	Abashiri--Toko	1.41	306	⇓*i*P	Pn	08 28 02.7	+1.9
JTKR				⇓*e*S	Sn	08 28 21.5	+2.2
JTKR	Abashiri--Toko	1.41	306	A	A	08 28 02.7	
	comp=N,17nm,1.7s,comp=N,13nm,2.2s						
JCH	Churui	1.65	252	⇓P	Pn	08 28 04.5	+0.6
JCH				⇓*e*S	Sn	08 28 24.6	-0.3
JCH	Churui	1.65	252	A	A	08 28 04.5	
	comp=N,35nm,0.8s,comp=N,27nm,1.0s						
JMP	Maruseppu	1.76	300	*i* P	Pn	08 28 07.2	+1.8
JMP				*e*S	Sn	08 28 29.8	+2.3
JMP	Maruseppu	1.76	300	A	A	08 28 07.2	
	comp=N,55nm,1.3s,comp=N,35nm,0.7s						
JTHR	Tokachihiroo	1.83	243	A	A	08 28 07.1	
	comp=N,17nm,0.6s,comp=N,20nm,1.6s						
JEM	Erimo	2.06	237	P	Pn	08 28 10.5	+1.3
JEM	Erimo	2.06	237	A	A	08 28 10.1	
	comp=N,14nm,0.8s,comp=N,17nm,1.3s						
ERM	Erimo	2.06	237		Pn	08 28 10.6	+1.4
ERM				Sn	Sn	08 28 35.1	+0.7
ERM	Erimo	2.06	237	P	Pn	08 28 10.4	+1.2
ERM	Erimo	2.06	237	PN	Pn	08 28 10.6	+1.4
ERM						08 28 35.1	
JFR	Furan	2.12	271	A	A	08 28 11.3	
	comp=N,12nm,0.9s,comp=N,10.0nm,0.7s						
JKK2	Kamakawa 2	2.12	291	A	A	08 28 11.8	
	comp=N,15nm,2.1s,comp=N,12nm,1.9s						
JNBK	Urakawa-nobuka	2.19	247	A	A	08 28 12.1	
	comp=N,21nm,0.6s,comp=N,12nm,0.5s						
JKA	Kamikawa-asahi	2.30	296		Pn	08 28 14.7	+2.3
JKA				Sn	Sn	08 28 42.2	+2.0
ASAJ	Asahikawa	2.31	296	P	Pn	08 28 15.0	+2.6
	comp=N,4µm,0.3s,baz=122,slow=7.9,SNR=3902						
ASAJ				S	Sn	08 28 42.6	+2.4
	comp=N,9µm,0.8s,baz=268,slow=27,SNR=42						
ASAJ				LR	LR	08 29 00.0	
	comp=N,2µm,19.7s,baz=326,slow=37						
ASAJ	Asahikawa	2.31	296	A	A	08 28 14.5	
	comp=N,27nm,1.2s,comp=N,13nm,1.7s						
ASAJ	Asahikawa	2.31	296	PN	Pn	08 28 14.7	+2.3
ASAJ						08 28 42.2	
JSHD	Hidakashinhida	2.34	253	A	A	08 28 14.1	
	comp=N,16nm,1.2s,comp=N,12nm,2.9s						
JAB	Ashibetsu	2.41	279	A	A	08 28 15.5	
	comp=N,17nm,3.3s,comp=N,18nm,2.7s						
JIAM	Iburiatsuma	2.67	260	A	A	08 28 18.8	
	comp=N,17nm,1.6s,comp=N,18nm,1.2s						
KUR	Kuril'sk	2.69	39	*d i*PN	Pn	08 28 20.3	+2.7
KUR				*i* S	Sn	08 28 52.2	+2.8
KUR				pmax	pmax		
	comp=Z,4µm,0.5s						
KUR				pmax	pmax		
	comp=E,686nm,0.3s						
KUR				pmax	pmax		
	comp=N,1µm,0.4s						
KUR				smax	smax		
	comp=E,4µm,0.4s						
KUR				smax	smax		
	comp=N,2µm,0.2s						
KUR	Kuril'sk	2.69	39	*i* P	Pn	08 28 20.1	+2.5
KUR				AMB	AMB	08 28 30.6	
	comp=N,1µm,0.4s						
KUR				AMB	AMB	08 28 30.6	
	comp=N,690nm,0.4s						
KUR				AMB	AMB	08 28 30.6	
	comp=N,4µm,0.4s						
KUR				*e*S	Sn	08 28 52.0	+2.6
KUR				A	A	08 28 53.0	
	comp=N,13µm,1.5s						
KUR				A	A	08 28 53.0	
	comp=N,12µm,1.5s						
KUR				A	A	08 28 54.3	
	comp=N,6µm,0.4s						
KUR				A	A	08 28 54.3	
	comp=N,5µm,0.4s						
JSE	Soyaes	2.76	312	A	A	08 28 20.9	
	comp=N,7.0nm,1.3s,comp=N,7.0nm,4.0s						
JEW	Eniwo	2.98	265	A	A	08 28 23.1	
	comp=N,8.0nm,1.8s,comp=N,9.0nm,1.4s						
JKB	Kayabe	3.52	250	A	A	08 28 30.4	
	comp=N,7.0nm,0.4s,comp=N,8.0nm,0.4s						
JAHD	Aomorihigashid	3.61	240	A	A	08 28 31.4	
	comp=N,20nm,1.9s,comp=N,29nm,1.6s						
JARK	Aomorirokkasho	3.74	236	A	A	08 28 33.1	
	comp=N,11nm,1.4s,comp=N,19nm,1.2s						
JTM	Tenmabayashi	4.05	236	Pn	Pn	08 28 35.6	-0.4
JTM	Tenmabayashi	4.05	236	P	Pn	08 28 35.6	-0.4
JANG	Nango	4.07	228	A	A	08 28 37.4	
	comp=N,9.0nm,1.4s,comp=N,9.0nm,2.4s						
JKEN	Kujiedanarisaw	4.08	225	A	A	08 28 37.6	
	comp=N,7.0nm,1.1s,comp=N,8.0nm,1.2s						
YSS	Yuzh-Sakhalins	4.26	334	Pn	Pn	08 28 40.6	+1.8
YSS	Yuzh-Sakhalins	4.26	334	P	Pn	08 28 40.8	+2.0
YSS	Yuzh-Sakhalins	4.26	334	α *i*PN	Pn	08 28 40.7	+2.0
YSS				*e*S	Sn	08 29 28.9	+1.6
YSS				pmax	pmax		
	comp=Z,600nm,3.8s						
YSS				pmax	pmax		
	comp=Z,550nm,1.0s						
YSS				smax	smax		
	comp=N,1µm,1.2s						
YSS				smax	smax		
	comp=N,2µm,3.5s						
YSS				MLR	MLR		
	comp=Z,2µm,17.0s						
YSS	Yuzh-Sakhalins	4.26	334	*i* P	Pn	08 28 40.7	+2.0
YSS				*i* P	Pn	08 28 40.7	+2.0
YSS				AMB	AMB	08 28 42.2	
	comp=Z,600nm,3.8s						
YSS				AMB	AMB	08 28 46.7	
	comp=Z,550nm,1.0s						
YSS				*e*S	Sn	08 29 28.2	+0.9
YSS				A	A	08 29 31.0	
	comp=Z,530nm,1.2s						
YSS				A	A	08 29 31.0	
	comp=Z,1µm,1.2s						
YSS				A	A	08 29 35.3	
	comp=Z,2µm,2.5s						
YSS				A	A	08 29 35.3	
	comp=Z,1µm,2.5s						
YSS				AMS	AMS	08 30 41.0	
	comp=Z,2µm,17.0s						
JSI2	Shiura 2	4.32	243	A	A	08 28 41.0	
	comp=Z,4.0nm,0.8s,comp=Z,4.0nm,1.0s						
JOM	Ohasama	4.85	222	A	A	08 28 48.1	
	comp=Z,7.0nm,0.3s,comp=Z,6.0nm,1.4s						
JRG	Rokugo	5.24	226	A	A	08 28 53.6	
	comp=Z,7.0nm,1.0s,comp=Z,7.0nm,2.4s						
JYA	Atsumi	6.31	226	A	A	08 29 08.4	
	comp=Z,6.0nm,1.9s,comp=Z,7.0nm,1.9s						
JMM	Marumori	6.38	216		Pn	08 29 05.8	-1.7
JMM	Marumori	6.38	216	P	Pn	08 29 05.5	-2.0
UGL	Uglegorsk	6.38	339	⇑*i*PN	Pn	08 29 10.1	+2.6
UGL				*e*S	Sn	08 30 21.7	+2.8
UGL				pmax	pmax		
	comp=Z,989nm,0.8s						
UGL				pmax	pmax		
	comp=E,752nm,0.8s						
UGL				pmax	pmax		
	comp=N,361nm,0.7s						
UGL				smax	smax		
	comp=N,186nm,0.9s						
UGL				smax	smax		
	comp=E,192nm,0.9s						
UGL	Uglegorsk	6.38	339	*i* P	Pn	08 29 10.1	+2.6
UGL				AMB	AMB	08 29 11.7	
	comp=E,360nm,0.7s						
UGL				AMB	AMB	08 29 11.7	
	comp=E,750nm,0.7s						
UGL				AMB	AMB	08 29 11.7	
	comp=E,990nm,0.7s						
UGL				*e*S	Sn	08 30 19.0	+0.1
UGL				A	A	08 30 24.9	
	comp=E,190nm,0.9s						
UGL				A	A	08 30 24.9	
	comp=E,190nm,0.9s						
UGL				A	A	08 30 28.0	
	comp=E,2µm,3.0s						
UGL				A	A	08 30 28.0	
	comp=E,1µm,3.0s						
TEY	Ternei	6.67	289	⇑*e*PN	Pn	08 29 12.1	+0.7
TEY				pmax	pmax		
	comp=E,70nm,0.7s						
TEY				pmax	pmax		
	comp=Z,70nm,0.7s						
TEY				pmax	pmax		
	comp=N,30nm,0.7s						
TEY	Ternei	6.67	289	*e*P	Pn	08 29 13.1	+1.7
TEY				AMB	AMB	08 29 13.9	
	comp=N,100nm,0.7s						
JSD	Sado	7.50	229	Pn	Pn	08 29 22.1	-0.8
JSD	Sado	7.50	229	P	Pn	08 29 22.5	-0.4
TYV	Tymovskoe	7.95	347	*e*PN	Pn	08 29 30.3	+1.4
TYV				*e*S	Sn	08 31 01.5	+4.4
TYV				pmax	pmax		
	comp=Z,50nm,1.2s						
TYV				pmax	pmax		
	comp=Z,300nm,1.9s						
TYV				smax	smax		
	comp=N,600nm,3.4s						
TYV				smax	smax		
	comp=E,200nm,3.4s						
TYV				smax	smax		
	comp=N,54nm,1.4s						
TYV				smax	smax		
	comp=E,43nm,1.4s						
TYV	Tymovskoe	7.95	347	*e*P	Pn	08 29 30.9	+2.0
TYV				AMB	AMB	08 29 33.4	
	comp=E,70nm,0.6s						
TYV				AMB	AMB	08 29 36.1	
	comp=E,500nm,2.0s						
TYV				*e*S	Sn	08 30 56.6	-0.5
TYV				A	A	08 31 02.0	
	comp=E,600nm,3.0s						
TYV				A	A	08 31 02.0	
	comp=E,300nm,3.0s						
TYV				A	A	08 31 04.0	
	comp=E,60nm,0.9s						
TYV				A	A	08 31 04.0	
	comp=E,50nm,0.9s						
MJB9	Matsu-Tunnel	8.65	223	Pn	Pn	08 29 38.5	-0.1
MAJO	Matsushiro	8.65	223	Pn	Pn	08 29 37.6	-1.0
MAJO	Matsushiro	8.65	223	P	Pn	08 29 38.4	-0.2
MAJO	Matsushiro	8.65	223	PN	Pn	08 29 37.6	-1.0
MJAR	Matsushiro Arr	8.65	223	P	Pn	08 29 37.8	-0.8
	comp=E,15nm,0.7s,baz=28,slow=14,SNR=29						
MJAR				S	Sn	08 31 10.5	-3.9
	comp=E,14nm,0.9s,baz=24,slow=21,SNR=1.5						
KHBR	Khabarovsk	9.02	310	*e*P	Pn	08 29 45.7	+2.3
KHBR				AMB	AMB	08 29 47.5	
	comp=E,90nm,0.6s						
GRTR	Gornotajezhnoj	9.71	278	*e*P	Pn	08 29 54.3	+1.3
GRNR	Gornyy	9.81	324	⇑*i*PN	Pn	08 29 56.0	+1.8
GRNR				*e*S	Sn	08 31 48.1	+5.6
GRNR				pmax	pmax		
	comp=E,20nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,30nm,0.8s						
GRNR				pmax	pmax		
	comp=N,20nm,0.7s						
GRNR				smax	smax		
	comp=N,5.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,290nm,15.0s						
GRNR				MLR	MLR		
	comp=N,220nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,300nm,16.0s						
GRNR	Gornyy	9.81	324	*i* P	Pn	08 29 56.0	+1.8
GRNR				AMB	AMB	08 29 56.5	
	comp=Z,20nm,0.8s						
GRNR				AMB	AMB	08 29 56.5	
	comp=Z,20nm,0.8s						
GRNR				AMB	AMB	08 29 56.5	
	comp=Z,30nm,0.8s						
GRNR				*e*S	Sn	08 31 40.1	-2.4
GRNR				AMS	AMS	08 33 51.7	
	comp=Z,200nm,15.0s						
GRNR				AMS	AMS	08 33 51.7	
	comp=Z,300nm,15.0s						
GRNR				AMS	AMS	08 33 51.7	
	comp=Z,300nm,15.0s						
JGF	Kuroka	9.82	223	Pn	Pn	08 29 53.4	-1.0
JGF	Kuroka	9.82	223	P	Pn	08 29 53.6	-0.8
USA0B	Ussuriysk Arra	9.84	281	Pn	Pn	08 29 55.0	+0.4
USA0B	Ussuriysk Arra	9.84	281	PN	Pn	08 29 55.0	+0.4
USRK	Ussuriysk Ar.	9.84	281	P	Pn	08 29 54.5	-0.1
	comp=Z,12nm,0.6s,baz=85,slow=13,SNR=18						
USRK				LR	LR	08 33 39.7	
	comp=Z,219nm,18.5s,baz=84,slow=37						
USRK	Ussuriysk Ar.	9.84	281	Pn	Pn	08 29 54.7	+0.1
USRK	Ussuriysk Ar.	9.84	281	PN	Pn	08 29 54.7	+0.1
VLA	Vladivostok	9.94	274	*i* PN	Pn	08 29 57.6	+1.5
VLA	Vladivostok	9.94	274	*i* P	Pn	08 29 57.6	+1.5
INU	Inuyama	10.19	223	Pn	Pn	08 29 57.7	-1.7
INU	Inuyama	10.19	223	P	Pn	08 29 59.4	0.0
	comp=Z,63nm,0.9s						
SKR	Severo-Kuril's	10.46	40	*e*PN	Pn	08 30 05.7	+2.7
SKR				pmax	pmax		
	comp=Z,400nm,3.1s						
SKR				pmax	pmax		
	comp=Z,261nm,0.9s						
SKR				MLR	MLR		
	comp=Z,1µm,20.0s						
SKR	Severo-Kuril's	10.46	40	*e*P	Pn	08 30 03.8	+0.8
SKR				AMB	AMB	08 30 08.3	
	comp=Z,260nm,0.6s						
SKR				AMB	AMB	08 30 08.3	
	comp=Z,400nm,3.0s						
SKR				*e*S	Sn	08 31 54.6	-3.6
SKR				A	A	08 32 00.6	
	comp=Z,640nm,0.8s						
SKR				A	A	08 32 00.6	
	comp=Z,260nm,0.8s						
SKR				A	A	08 32 00.6	
	comp=Z,1µm,3.0s						
SKR				A	A	08 32 00.6	
	comp=Z,850nm,3.0s						
SKR				AMS	AMS	08 34 46.0	
	comp=Z,1µm,21.0s						
NKL	Nikolayevsk	10.50	344	*e*PN	Pn	08 30 01.0	-2.6
NKL				pmax	pmax		
	comp=N,355nm,1.1s						
NKL				pmax	pmax		
	comp=E,129nm,1.1s						
NKL				pmax	pmax		
	comp=Z,556nm,1.1s						
NKL				MLR	MLR		
	comp=E,9µm,20.0s						
NKL				MLR	MLR		
	comp=N,2µm,16.0s						
NKL				MLR	MLR		
	comp=Z,2µm,15.0s						
NKL	Nikolayevsk	10.50	344	*e*P	Pn	08 30 04.5	+0.9
NKL				AMB	AMB	08 30 05.9	
	comp=Z,560nm,1.1s						
NKL				*e*S	Sn	08 31 56.4	-2.8
NKL				A	A	08 32 05.5	
	comp=Z,200nm,1.4s						
NKL				A	A	08 32 05.5	
	comp=Z,100nm,1.4s						
NKL				AMS	AMS	08 34 19.8	
	comp=Z,2µm,16.0s						
NKL				AMS	AMS	08 34 19.8	
	comp=Z,2µm,16.0s						
OKH	Okha	10.54	352	*e*P	Pn	08 30 06.3	+2.2
OKH				AMB	AMB	08 30 07.0	
	comp=Z,100nm,0.5s						
OKH				*e*S	Sn	08 31 58.1	-2.0
OKH				A	A	08 32 12.5	
OKH				AMS	AMS	08 35 32.0	
	comp=Z,500nm,17.0s						
OKH				AMS	AMS	08 35 32.0	
	comp=Z,500nm,17.0s						
OKH				AMS	AMS	08 35 32.0	
	comp=Z,300nm,17.0s						
JHJ	Hachijo jima 2	10.97	206	P	Pn	08 30 08.7	-1.5
	comp=Z,44nm,0.3s,baz=44,slow=22,SNR=1.1						
JHJ				S	Sn	08 31 59.0	-12
	comp=Z,224nm,0.4s,baz=65,slow=23,SNR=12						
KLR	Kul'dur	11.29	307	P	Pn	08 30 14.1	-0.2
	comp=Z,25nm,0.8s,baz=117,slow=13,SNR=25						
KLR				LR	LR	08 35 07.3	
	comp=Z,294nm,19.7s,baz=116,slow=40						
KLR	Kul'dur	11.29	307	*ce*PN	Pn	08 30 15.3	+1.0
KLR				pmax	pmax		
	comp=Z,30nm,1.0s						
KLR	Kul'dur	11.29	307	*e*P	Pn	08 30 15.3	+1.0
KLR				AMB	AMB	08 30 16.7	
	comp=Z,30nm,1.0s						
PAU	Pauzhetka	11.31	39	*e*P	Pn	08 30 16.3	+1.7
PAU				AMB	AMB	08 30 19.4	
	comp=Z,80nm,0.6s						
MDJ	Mudanjiang	11.56	283	P	Pn	08 30 17.9	-0.2
MDJ				sP		08 30 42.3	
MDJ				S	Sn	08 32 26.4	+1.2
MDJ				PcP	PcP	08 35 58.0	-3.3
MDJ				PcS	PcS	08 39 30.9	-4.3
MDJ				ScS	ScS	08 42 56.7	-4.5
MDJ				pmax	pmax		
	comp=Z,77nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,130nm,3.7s						
MDJ				LR	LR		
	comp=Z,150nm,5.4s						
MDJ				LR	LR		
	comp=Z,270nm,5.3s						
MDJ				LR	LR		
	comp=Z,340nm,6.8s						
MDJ	Mudanjiang	11.56	283	Pn	Pn	08 30 17.6	-0.4
PEA0B	Petropavlovsk-	12.86	35	Pn	Pn	08 30 33.1	-2.1
PEA0B	Petropavlovsk-	12.86	35	PN	Pn	08 30 33.2	-2.1
PETK	Petropavlovsk-	12.86	35	P	Pn	08 30 33.8	-1.5
	comp=Z,20nm,1.0s,baz=181,slow=12,SNR=14						
PETK	Petropavlovsk-	12.86	35		Pn	08 30 33.0	-2.3
PETK	Petropavlovsk-	12.86	35	PN	Pn	08 30 33.0	-2.3
BNX	BinXian	13.18	288	⇓P	Pn	08 30 38.7	-0.9
BNX				pmax	pmax		
	comp=Z,100nm,0.7s						
BNX				pmax	pmax		
	comp=Z,150nm,4.7s						
PET	Petropavlovsk	13.21	37	*e*PN	Pn	08 30 39.7	-0.2
PET				pmax	pmax		
	comp=Z,51nm,1.0s						
PET				MLR	MLR		
	comp=Z,400nm,11.0s						
PET	Petropavlovsk	13.21	37	*e*P	Pn	08 30 39.7	-0.2
PET				AMB	AMB	08 30 45.4	
	comp=Z,10.0nm,0.4s						
PET				*e*S	Sn	08 32 59.4	-5.5
PET				AMS	AMS	08 35 33.0	
	comp=Z,400nm,11.0s						
HEH	HeiHe	14.27	306	*e*P	Pn	08 30 52.9	-0.8
HEH				sP	P	08 31 15.7	+17
HEH				S	Sn	08 33 26.2	-4.4
HEH				pmax	pmax		
	comp=Z,30nm,0.8s						
HEH				pmax	pmax		
	comp=Z,340nm,5.5s						
KSRS	Korea Array	14.55	253	P	Pn	08 30 58.6	+1.1
	comp=Z,0.5nm,0.3s,baz=9.5,slow=35,SNR=3.2						
KSRS				LR	LR	08 36 01.9	
	comp=Z,141nm,20.0s,baz=70,slow=35						
CN2	Changchun	14.56	279	⇓*i*P	Pn	08 30 55.6	-2.0
CN2				pmax	pmax		
	comp=Z,80nm,0.8s						
JNU	Nakatsue	15.22	234	P	Pn	08 31 06.2	+0.1
	comp=Z,9.7nm,0.9s,baz=32,slow=13,SNR=4.8						
JNU				LR	LR	08 36 59.0	
	comp=Z,86nm,19.7s,baz=42,slow=37						
BMKR	Bomnak	15.87	323	*e*P	Pn	08 31 12.3	-1.7
BMKR				AMB	AMB	08 31 13.0	
	comp=Z,30nm,0.9s						
BMKR				AMB	AMB	08 31 13.0	
	comp=Z,100nm,0.9s						
ZEA	Zeya	16.03	318	*e*P	Pn	08 31 15.3	-0.7
ZEA				pmax	pmax		
	comp=E,100nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,200nm,1.1s						
ZEA				pmax	pmax		
	comp=N,130nm,0.7s						
ZEA				pmax	pmax		
	comp=E,130nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,280nm,0.7s						
ZEA				MLR	MLR		
	comp=Z,200nm,13.0s						
ZEA	Zeya	16.03	318	*e*P	Pn	08 31 16.3	+0.3
ZEA				AMB	AMB	08 31 18.4	
	comp=Z,100nm,1.0s						
ZEA				AMB	AMB	08 31 18.4	
	comp=Z,200nm,1.0s						
ZEA				AMB	AMB	08 31 19.2	
	comp=Z,130nm,0.7s						
ZEA				AMB	AMB	08 31 19.2	
	comp=Z,130nm,0.7s						
ZEA				AMB	AMB	08 31 19.2	
	comp=Z,280nm,0.7s						

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ZEA                                 AMS    AMS    08 38 15.0
      comp=Z,200nm,13.0s
SNY   Shenyang         16.21 273 ⇓P      Pn     08 31 14.1  -4.3
SNY                                 sP     pP     08 31 41.6  +4.5
SNY                                 S      Sn     08 34 12.2  -5.5
SNY                                 pmax   pmax
      comp=Z,10.0nm,0.6s
SNY                                 pmax   pmax
      comp=Z,280nm,4.2s
SNY                                 LR     LR
      comp=Z,180nm,5.8s
SNY                                 LR     LR
      comp=Z,290nm,4.8s
SNY                                 LR     LR
      comp=Z,200nm,5.7s
JCJ   Chichijima       16.25 191    LR     LR     08 38 39.4
      comp=Z,62nm,19.4s,baz=62,slow=41
KROS  Kirovskiy        16.56 319  eP     Pn     08 31 21.6  -1.0
KROS                                AMB    AMB    08 31 25.7
      comp=Z,90nm,0.6s
MA2   Magadan          16.76   9    P      Pn     08 31 23.6  -1.4
      comp=Z,40nm,0.7s,baz=192,slow=11,SNR=25
MA2                                 LR     LR     08 37 57.2
      comp=Z,208nm,18.4s,baz=180,slow=37
MA2   Magadan          16.76   9    P      Pn     08 31 24.8  -0.2
MA2   Magadan          16.76   9c iP     Pn     08 31 23.2  -1.9
MA2                                 pmax   pmax
      comp=Z,69nm,0.9s
MA2   Magadan          16.76   9  i P     Pn     08 31 23.2  -1.9
DL2   Dalian           18.47 265    P      Pn     08 31 45.4  -0.6
DL2                                 S      Sn     08 35 12.7  +0.5
DL2                                 pmax   pmax
      comp=Z,21nm,0.6s
DL2                                 pmax   pmax
      comp=Z,260nm,4.4s
SEY   Seymchan         20.22   9    P      P      08 32 01.4  -2.2
      comp=Z,46nm,0.7s,baz=185,slow=8.6,SNR=120
SEY   Seymchan         20.22   9ceP     P      08 32 01.8  -1.8
SEY                                 pmax   pmax
      comp=Z,52nm,0.8s
YAK   Yakutsk          21.09 339    P      P      08 32 09.5  -3.5
      comp=Z,153nm,0.7s,baz=146,slow=1.4,SNR=23
YAK   Yakutsk          21.09 339  eP     P      08 32 08.4  -4.5
YAK                               e*PP   sP     08 32 38.1  -4.2
YAK                               eS     S      08 35 59.6  -2.7
YAK                                 pmax   pmax
      comp=Z,115nm,0.7s
YAK                                 pmax   pmax
      comp=E,9.0nm,0.7s
YAK                                 pmax   pmax
      comp=N,18nm,0.8s
YAK                                 smax   smax
      comp=E,60nm,0.9s
YAK                                 smax   smax
      comp=N,74nm,1.0s
XLT   XiLinHaoTe       21.29 282⇑iP     P      08 32 14.2  -1.1
XLT                                 S      S      08 36 05.4  -1.3
XLT                                 pmax   pmax
      comp=N,120nm,0.8s
XLT                                 pmax   pmax
      comp=N,260nm,3.7s
SHEM  Shemya Is, Ala   21.30  53    P      P      08 32 12.3  -2.9
      comp=N,132nm,1.1s,baz=267,slow=17,SNR=2.7
JOW   Kunigami         21.47 226    P      P      08 32 17.8  +0.5
      comp=N,127nm,0.9s,baz=33,slow=9.2,SNR=15
JOW                                 LR     LR     08 41 34.8
      comp=N,78nm,20.6s,baz=91,slow=39
      comp=N,127nm,0.9s
JOW   Kunigami         21.47 226    P      P      08 32 17.9  +0.6
JOW                                 IAmb   IAmb   08 32 21.6
      comp=Z,183nm,1.0s
BJI   Beijing          22.09 272    P      P      08 32 22.2  -1.5
BJI                                 S      S      08 36 24.9  +3.3
BJI                                 pmax   pmax
      comp=Z,11nm,0.6s
BJI                                 pmax   pmax
      comp=Z,82nm,3.5s
BJT   Baijiatuau       22.10 272    P      P      08 32 22.9  -1.0
BJT   Baijiatuau       22.10 272    P      P      08 32 22.9  -1.0
BJT                                 pmax   pmax
      comp=Z,21nm,0.7s
CIT   Chita            23.13 304  eP     P      08 32 33.4  -1.0
CIT                                 pmax   pmax
      comp=Z,178nm,1.7s
CIT   Chita            23.13 304  eP     P      08 32 33.4  -1.0
NJ2   Nanjing          23.73 251 ⇑P      P      08 32 42.5  +2.5
NJ2                                 pP     pP     08 32 57.7  -1.7
NJ2                                 sP     sP     08 33 08.1  -2.5
NJ2                                 pmax   pmax
      comp=Z,28nm,0.7s
NJ2                                 pmax   pmax
      comp=Z,380nm,4.2s
HNS   HongShan         24.09 267 ⇓P      P      08 32 43.8  +0.7
HNS                                 sP     sP     08 33 16.4  +2.3
HNS                                 S      S      08 37 00.3  +6.2
HNS                                 pmax   pmax
      comp=Z,18nm,0.8s
BOD   Bodaibo          24.54 318  eP     P      08 32 44.2  -2.8
BOD                                 pmax   pmax
      comp=Z,68nm,1.7s
BTO   Baotou           26.41 277  eP     P      08 33 05.2  +0.9
BTO                                 S      S      08 37 34.1  +3.0
BTO                                 LR     LR
      comp=Z,490nm,7.1s
BTO                                 LR     LR
      comp=Z,480nm,8.6s
LYN   LuoYang          26.97 263 ⇑P      P      08 33 12.9  +3.7
LYN                                 pP     pP     08 33 34.2  +4.5
LYN                                 S      S      08 37 46.2  +6.4
LYN                                 pmax   pmax
      comp=Z,16nm,1.1s
ULN   Ulaanbaatar      27.14 293    P      P      08 33 11.1  +0.2
ULN                                 IAmb   IAmb   08 33 13.9
      comp=Z,84nm,1.1s
ULN   Ulaanbaatar      27.14 293    P      P      08 33 11.1  +0.2
ULN                                 pmax   pmax
      comp=Z,84nm,1.2s
ULN   Ulaanbaatar      27.14 293    P      P      08 33 13.1  +2.3
BILL  Bilibino         27.28  17    P      P      08 33 10.1  -1.5
BILL  Bilibino         27.28  17⇓eP     P      08 33 08.6  -3.0
BILL                              e             08 34 02.5
BILL                              eS     S      08 37 50.1  +6.1
BILL                                pmax   pmax
      comp=Z,21nm,1.0s
SONM  Songino Array    27.59 293    P      P      08 33 15.2  +0.4
      comp=Z,77nm,0.7s,baz=86,slow=8.3,SNR=379
SONM                                ScP    ScP    08 39 59.9  -2.5
      comp=Z,0.9nm,0.9s,baz=101,slow=4.6,SNR=3.7
      comp=Z,77nm,0.7s
SONM  Songino Array    27.59 293    P      P      08 33 15.0  +0.2
SONM                                IAmb   IAmb   08 33 16.6
      comp=Z,84nm,0.7s
SONM  Songino Array    27.59 293    P      P      08 33 15.0  +0.2
SONM                                pmax   pmax
      comp=Z,84nm,0.7s
WHN   Wuhan            27.75 253 ⇑P      P      08 33 17.1  +0.9
WHN                                 sP     sP     08 33 48.1  +0.9
IRK   Irkutsk          28.84 303  eP     P      08 33 25.8  +0.1
IRK                                 pmax   pmax
      comp=Z,116nm,1.9s
GUMO  Guam             29.46 181    LR     LR     08 45 44.0
      comp=Z,21nm,19.1s,baz=20,slow=37
ZAK   Zakamensk        29.47 299  eP     P      08 33 31.9  +0.4
ZAK                                 pmax   pmax
      comp=Z,92nm,1.3s
H11N2 WAKE ISLAND Hy   29.48 136    T      T      09 04 41.3
      baz=328,slow=75,SNR=585
H11N1 WAKE ISLAND Hy   29.50 136    T      T      09 04 40.3
      baz=328,slow=75,SNR=647
H11N3 WAKE ISLAND Hy   29.50 136    T      T      09 04 46.7
      baz=328,slow=75,SNR=533
TIXI  Tiksi            29.71 349    P      P      08 33 29.7  -3.5
      comp=Z,29nm,0.8s,baz=90,slow=23,SNR=92
TIXI                                ScP    ScP    08 40 05.3  -3.1
      comp=Z,1.8nm,0.7s,baz=90,slow=23,SNR=3.6
TIXI                                LR     LR     08 46 26.1
      comp=Z,81nm,20.7s,baz=111,slow=38
TIXI  Tiksi            29.71 349ceP     P      08 33 29.5  -3.7
TIXI                                pmax   pmax
      comp=Z,39nm,1.0s
XAN   Xi'an            29.79 265 ⇑P      P      08 33 34.3  -0.1
XAN                                 pmax   pmax
      comp=Z,8.0nm,0.8s
H11S1 WAKE ISLAND Hy   30.41 137    T      T      09 05 58.1
      baz=328,slow=76,SNR=1757
H11S3 WAKE ISLAND Hy   30.42 137    T      T      09 05 58.2
      baz=328,slow=76,SNR=5243
H11S2 WAKE ISLAND Hy   30.43 137    T      T      09 05 56.7
      baz=328,slow=76,SNR=2334
MOY   Mondy            30.87 302  eP     P      08 33 44.7  +0.9
MOY                                 pmax   pmax
      comp=Z,127nm,1.6s
SPIA  Saint Paul Isl   31.02  48    P      P      08 33 45.4  +0.5
      baz=262
LZH   Lanzhou          32.58 272 ⇑P      P      08 33 59.7  +0.7
LZH                                 pP     pP     08 34 15.3  -4.5
LZH                                 pmax   pmax
      comp=Z,29nm,1.4s
UNV   Unalaska Valle   32.96  54    P      P      08 34 02.5  +0.6
      baz=271
TNA   Tin City         34.01  33    P      P      08 34 11.9  +1.0
TNA                                 IAmb   IAmb   08 34 13.1
      comp=Z,38nm,1.4s
TNA   Tin City         34.01  33    P      P      08 34 11.1  +0.3
      baz=252,SNR=20
GTA   Gaotai           34.20 280  eP     P      08 34 13.8  +0.8
GTA                                 pP     pP     08 34 31.1  -2.8
GTA                                 sP     sP     08 34 40.4  -4.0
GTA                                 pmax   pmax
      comp=Z,7.0nm,0.9s
ANM   Nome             34.77  35    P      P      08 34 18.6  +1.1
ANM                                 IAmb   IAmb   08 34 20.5
      comp=Z,106nm,1.6s
ANM   Nome             34.77  35    P      P      08 34 18.6  +1.1
ANM                                 pmax   pmax
      comp=Z,106nm,1.6s
ANM   Nome             34.77  35    P      P      08 34 17.8  +0.3
      baz=256,SNR=31
CD2   Chengdu          35.14 264    P      P      08 34 22.0  +0.9
CD2                                 pP     pP     08 34 42.2  +0.2
CD2                                 pmax   pmax
      comp=Z,20nm,0.6s
RDOG  Red Dog Mine     36.64  30    P      P      08 34 33.6  +0.2
RDOG                                IAmb   IAmb   08 34 35.3
      comp=Z,24nm,1.0s
RDOG  Red Dog Mine     36.64  30    P      P      08 34 33.6  +0.2
      baz=254,SNR=7.9
N16K  Nishlik Lake     37.24  43    P      P      08 34 39.1  +0.5
      baz=268,SNR=12
O16K  Kokwok River B   37.57  44    P      P      08 34 42.6  +1.3
      baz=270
P16K  Nushagak River   37.62  45    P      P      08 34 43.0  +1.2
      baz=270,SNR=6.1
O17K  Koliganek Bris   38.07  44    P      P      08 34 46.7  +1.1
      baz=270,SNR=7.7
Q16K  King Salmon      38.33  46    P      P      08 34 48.4  +0.7
      baz=272,SNR=6.6
GCSA  Galena City Sc   38.40  36    P      P      08 34 49.1  +0.9
      baz=264,SNR=15
TTA   Tatalina         38.66  39    P      P      08 34 51.5  +0.9
TTA                                 IAmb   IAmb   08 34 55.5
      comp=Z,36nm,1.2s
TTA   Tatalina         38.66  39    P      P      08 34 51.5  +0.9
TTA                                 pmax   pmax
      comp=Z,36nm,1.2s
TTA   Tatalina         38.66  39    P      P      08 34 51.7  +1.1
      baz=267,SNR=13
Q17K  Contact Creek    38.75  46    P      P      08 34 52.8  +1.4
      baz=273
O18K  Koktuh Hills     39.03  44    P      P      08 34 55.2  +1.6
      baz=272
P18K  Big Mountain,    39.03  44    P      P      08 34 54.5  +0.8
P18K  Big Mountain,    39.03  44    P      P      08 34 54.5  +0.8
      baz=272
PZH   PanZhiHua        39.08 259    P      P      08 34 55.1  +0.5
PZH                                 pP     pP     08 35 16.6  +0.8
PZH                                 S      S      08 40 45.0  -2.4
PZH                                 pmax   pmax
      comp=Z,10.0nm,0.6s
PZH                                 pmax   pmax
      comp=Z,140nm,6.0s
GOMU  GeErMu           39.11 277    P      P      08 34 55.8  +0.7
GOMU                                PcP    PcP    08 37 05.1  +2.1
GOMU                                pmax   pmax
      comp=Z,21nm,0.9s
GOMU                                pmax   pmax
      comp=Z,130nm,5.0s
L19K  White Mountain   39.17  40    P      P      08 34 55.8  +1.0
L19K                                IAmb   IAmb   08 34 57.5
      comp=Z,33nm,1.4s
L19K  White Mountain   39.17  40    P      P      08 34 55.9  +1.1
      baz=269,SNR=5.1
Q18K  Katmai Hardscr   39.19  45    P      P      08 34 55.9  +0.8
      baz=273
NRIK  Noril'sk         39.19 332    P      P      08 34 53.2  -1.6
      comp=Z,15nm,0.5s,baz=103,slow=6.1,SNR=22
NRIK                                LR     LR     08 53 12.1
      comp=Z,62nm,18.6s,baz=133,slow=39
      comp=Z,15nm,0.5s
NRIK  Noril'sk         39.19 332ceP     P      08 34 52.6  -2.2
NRIK                                pmax   pmax
      comp=Z,40nm,1.3s
KMI   Kunming          39.20 257 ⇑P      P      08 34 56.5  +0.8
KMI                                 pP     pP     08 35 18.8  +1.9
KMI                                 pmax   pmax
      comp=Z,26nm,0.8s
N19K  Bonanza Creek    39.36  42    P      P      08 34 57.6  +1.1
      baz=271
M19K  Big River Lodg   39.39  40    P      P      08 34 57.8  +1.2
M19K  Big River Lodg   39.39  40    P      P      08 34 58.2  +1.6
      baz=270
K20K  Telida           39.55  38    P      P      08 34 59.1  +1.2
K20K                                IAmb   IAmb   08 35 02.6
      comp=Z,22nm,0.8s
K20K  Telida           39.55  38    P      P      08 34 59.5  +1.5
      baz=268
A21K  Barrow           39.60  25    P      P      08 34 57.8  -0.4
A21K  Barrow           39.60  25    P      P      08 34 58.8  +0.6
      baz=256,SNR=11
L20K  Farewell, AK     39.63  39    P      P      08 34 59.6  +1.0
      baz=270
DGZ   Jazzator, Alta   39.67 300c iP     P      08 35 00.6  +1.3
DGZ                                 pmax   pmax
      comp=Z,47nm,0.9s
IMAR  Indian Mountai   39.82  34    P      P      08 35 00.7  +0.6
Q19K  Cape Douglas,    39.88  45    P      P      08 35 01.5  +0.8
      baz=274
G21K  Allakaket        39.96  33    P      P      08 35 02.6  +1.4
      baz=265
DAV   Davao City (W)   39.98 212    LR     LR     08 50 45.5
      comp=Z,84nm,18.8s,baz=356,slow=35
M20K  Styx River       39.98  40    P      P      08 35 02.5  +0.9
M20K                                IAmb   IAmb   08 35 36.1
      comp=Z,67nm,1.8s
M20K  Styx River       39.98  40    P      P      08 35 03.3  +1.7
      baz=271,SNR=5.7
F21K  Alatna River     40.03  32    P      P      08 35 02.9  +1.0
      baz=264
P19K  Oil Pt           40.03  44    P      P      08 35 03.2  +1.2
      baz=274
H21K  Melozitna Rive   40.19  34    P      P      08 35 04.0  +0.8
H21K                                IAmb   IAmb   08 35 05.6
      comp=Z,37nm,0.8s
H21K  Melozitna Rive   40.19  34    P      P      08 35 04.5  +1.4
      baz=267
OHAK  Old Harbor       40.23  48    P      P      08 35 03.9  +0.4
      baz=276
O20K  Slope Mountain   40.31  43    P      P      08 35 05.0  +0.7
      baz=274
CHUM  Lake Minchumin   40.34  37    P      P      08 35 06.0  +1.6
      baz=269,SNR=15
ZALV  Zalesovo Beam    40.39 307    P      P      08 35 05.3  +0.3
      comp=Z,33nm,0.4s,baz=84,slow=9.1,SNR=58
ZALV                                PcP    PcP    08 37 06.5  +0.3
      comp=Z,7.5nm,0.6s,baz=106,slow=2.9,SNR=4.9
      comp=Z,33nm,0.4s
ZALV  Zalesovo Beam    40.39 307  i P     P      08 35 06.0  +1.0
ZALV                                pmax   pmax
      comp=Z,28nm,0.4s
PPLA  Purkeypile       40.40  39    P      P      08 35 06.4  +1.3
PPLA                                IAmb   IAmb   08 35 10.6
      comp=Z,109nm,1.4s
PPLA  Purkeypile       40.40  39    P      P      08 35 06.9  +1.8
      baz=271,SNR=9.9
CAST  Castle Rocks     40.45  38    P      P      08 35 07.1  +1.7
      baz=270,SNR=26
I21K  Tanana           40.51  35    P      P      08 35 06.8  +1.0
I21K                                IAmb   IAmb   08 35 08.6
      comp=Z,23nm,0.7s
I21K  Tanana           40.51  35    P      P      08 35 07.3  +1.5
      baz=268
KDAK  Kodiak Island    40.54  47    LR     LR     08 50 34.4
      comp=Z,37nm,21.8s,baz=205,slow=34
KDAK  Kodiak Island    40.54  47    P      P      08 35 05.9  -0.2
KDAK                                pP     pP     08 35 28.2  +0.7
KDAK                                sP     sP     08 35 36.7  -1.1
Q20K  Shuyak Island    40.55  45    P      P      08 35 06.5  +0.3
      baz=276
F22K  John River       40.56  32    P      P      08 35 07.2  +1.0
      baz=265
SKT   Skwentna         40.74  40    P      P      08 35 09.0  +1.2
SKT   Skwentna         40.74  40    P      P      08 35 08.5  +0.8
      baz=272
E22K  Anaktuvuk Pass   40.75  31    P      P      08 35 08.1  +0.3
      baz=265
H22K  Ishtalitna Cre   40.78  34    P      P      08 35 09.5  +1.4
      baz=268
BPAW  Bear Paw Mtn.    40.93  37    P      P      08 35 10.2  +0.9
      baz=270,SNR=10
KTH   Kantishna Hill   40.97  38    P      P      08 35 11.1  +1.4
MLY   Manley           41.03  35    P      P      08 35 10.9  +0.8
MLY   Manley           41.03  35    P      P      08 35 11.4  +1.2
      baz=270,SNR=22
WMQ   Urumqi           41.19 292  eP     P      08 35 12.7  +1.0
WMQ                                 pP     pP     08 35 34.0  +0.9
WMQ                                 sP     sP     08 35 44.5  +1.0
WMQ                                 pmax   pmax
      comp=Z,50nm,1.1s
WMQ                                 pmax   pmax
      comp=Z,150nm,4.1s
WMQ                                 LR     LR
      comp=Z,100nm,24.9s
D23K  Nanushuk River   41.23  29    P      P      08 35 12.4  +0.7
      baz=265,SNR=24
BRSE  Bradley Lake S   41.29  44    P      P      08 35 13.6  +1.4
      baz=276
COLD  Coldfoot         41.30  32    P      P      08 35 12.7  +0.4
COLD                                IAmb   IAmb   08 35 14.5
      comp=Z,41nm,1.4s
COLD  Coldfoot         41.30  32    P      P      08 35 13.5  +1.2
      baz=267,SNR=15
CUT   Chulitna         41.31  39    P      P      08 35 12.3   0.0
CUT                                 IAmb   IAmb   08 35 14.5
      comp=Z,31nm,0.7s
CUT   Chulitna         41.31  39    P      P      08 35 13.3  +1.0
      baz=273,SNR=5.6
G23K  Bananza Creek    41.35  33    P      P      08 35 13.6  +0.9
      baz=268,SNR=38
H23K  Yukon River      41.54  34    P      P      08 35 16.1  +1.8
H23K  Yukon River      41.54  34    P      P      08 35 16.3  +2.1
      baz=270
E23K  Chandalar        41.56  31    P      P      08 35 15.0  +0.5
      baz=267
TOLK  Toolik Lake Re   41.61  30    P      P      08 35 15.2  +0.4
TOLK                                IAmb   IAmb   08 35 17.1
      comp=Z,28nm,0.7s
TOLK  Toolik Lake Re   41.61  30    P      P      08 35 15.7  +0.8
      baz=266,SNR=33
I23K  Minto, Yukon-K   41.62  35    P      P      08 35 16.0  +1.2
I23K                                IAmb   IAmb   08 35 17.6
      comp=Z,24nm,0.7s
I23K  Minto, Yukon-K   41.62  35    P      P      08 35 16.1  +1.2
      baz=271,SNR=20
RC01  Rabbit Creek A   41.66  41    P      P      08 35 16.3  +1.1
      baz=275
O22K  Cooper Landing   41.72  42    P      P      08 35 15.9  +0.1
O22K                                IAmb   IAmb   08 35 22.0
      comp=Z,53nm,0.6s
O22K  Cooper Landing   41.72  42    P      P      08 35 17.0  +1.2
      baz=276
NEA2  Nenana           41.75  36    P      P      08 35 17.1  +1.1
NEA2                                IAmb   IAmb   08 35 20.4
      comp=Z,58nm,0.8s
NEA2  Nenana           41.75  36    P      P      08 35 17.4  +1.4
      baz=272,SNR=54
MCK   McKinley         41.85  37    P      P      08 35 17.7  +0.9
MCK                                 IAmb   IAmb   08 35 21.2
      comp=Z,46nm,0.9s
MCK   McKinley         41.85  37    P      P      08 35 17.7  +0.9
MCK                                 pmax   pmax
      comp=Z,46nm,0.9s
MCK   McKinley         41.85  37    P      P      08 35 18.0  +1.2
      baz=273,SNR=22
SEW   Seward           41.89  43    P      P      08 35 18.0  +0.9
      baz=276
PMR   Palmer           41.90  41    P      P      08 35 18.3  +1.1
      baz=275
E24K  Your Creek       41.99  31    P      P      08 35 19.2  +1.3
      baz=268
C24K  Franklin Bluff   41.99  28    P      P      08 35 18.0  +0.2
      baz=266
MDM   Murphy Dome      42.10  36    P      P      08 35 19.8  +1.0
MDM                                 IAmb   IAmb   08 35 21.4
      comp=Z,32nm,0.7s
F24K  Squaw Lake       42.21  32    P      P      08 35 20.4  +0.7
      baz=269
H24K  Noodor Dome      42.22  34    P      P      08 35 21.8  +1.9
      baz=271
KNK   Knik Glacier     42.24  41    P      P      08 35 21.2  +1.2
      baz=276
SML   Sawmill          42.26  40    P      P      08 35 20.7  +0.5
SML                                 IAmb   IAmb   08 35 22.8
      comp=Z,44nm,0.7s
SML   Sawmill          42.26  40    P      P      08 35 20.7  +0.5
SML                                 pmax   pmax
      comp=Z,44nm,0.7s
SML   Sawmill          42.26  40    P      P      08 35 21.3  +1.0
      baz=275,SNR=14
TCOL  CIGO, UAF Yank   42.26  36    P      P      08 35 21.1  +1.0
      baz=272,SNR=20
COLA  College          42.27  36    P      P      08 35 21.3  +1.1
COLA                                IAmb   IAmb   08 35 24.2
      comp=Z,99nm,0.9s
COLA  College          42.27  36  i P     P      08 35 20.6  +0.5
COLA                                pmax   pmax
      comp=Z,94nm,1.0s
COLA  College          42.27  36    P      P      08 35 21.2  +1.1
      baz=272
COLA  College          42.27  36    P      P      08 35 21.6  +1.5
COLA                                pP     pP     08 35 43.6  +2.1
TNCH  TengChong        42.28 260  eP     P      08 35 21.7  +0.7
TNCH                                pP     pP     08 35 41.6  -0.9
TNCH                                pmax   pmax
      comp=Z,150nm,0.6s
PWL   Port Wells       42.36  42    P      P      08 35 22.5  +1.5
      baz=276
G24K  Hadweenzic Riv   42.37  33    P      P      08 35 22.6  +1.7
      baz=271
POKR  Poker Plat Res   42.43  35    P      P      08 35 23.4  +1.9
      baz=272,SNR=40
M23K  Glacier View     42.55  40    P      P      08 35 23.6  +1.1
      baz=276,SNR=6.0
HDA   Harding Lake     42.68  36    P      P      08 35 24.4  +0.8
HDA                                 IAmb   IAmb   08 35 26.3
      comp=Z,103nm,1.4s
HDA   Harding Lake     42.68  36    P      P      08 35 24.3  +0.8
      baz=274,SNR=23
IL31                   42.68  36    P      P      08 35 23.8  +0.4
IL31                                IAmb   IAmb   08 35 27.1
      comp=Z,81nm,1.0s
ILAR  Eielson Array    42.68  36    P      P      08 35 24.1  +0.6
      comp=Z,53nm,0.9s,baz=258,slow=5.8,SNR=170
ILAR                                ScP    ScP    08 40 53.6  -2.5
      comp=Z,0.4nm,0.7s,baz=263,slow=3.3,SNR=4.5
ILAR                                LR     LR     08 53 43.3
      comp=Z,29nm,19.4s,baz=228,slow=37
      comp=Z,53nm,0.9s
ILAR  Eielson Array    42.68  36    P      P      08 35 24.2  +0.7
SCM   Sheep Creek Mo   42.73  40    P      P      08 35 25.2  +1.1
      baz=276
D25K  Kavik River      42.79  29    P      P      08 35 24.9  +0.5
      baz=269,SNR=53
G25K  Bearman Lake     42.91  33    P      P      08 35 26.8  +1.5
      baz=272,SNR=14
P23K  Montague Islan   42.93  43    P      P      08 35 26.6  +1.1
      baz=278
F25K  Christian Rive   43.07  32    P      P      08 35 28.2  +1.5
      baz=271,SNR=23
E25K  Arctic Village   43.08  31    P      P      08 35 28.0  +1.2
      baz=271,SNR=28
PRP   Porcupine Dome   43.21  35    P      P      08 35 28.7  +0.7
PRP                                 IAmb   IAmb   08 35 31.0
      comp=Z,60nm,0.8s
PRP   Porcupine Dome   43.21  35    P      P      08 35 29.7  +1.7
      baz=274,SNR=58
K24K  Donnelly Dome    43.24  37    P      P      08 35 28.7  +0.6
      baz=275,SNR=21
M24K  Tolsona, Glenn   43.24  40    P      P      08 35 30.0  +1.8
      baz=277,SNR=5.3
C26K  Camden Bay       43.31  28    P      P      08 35 29.6  +1.1
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              baz=270
KLU    Klutina            43.44  41    P       P       08 35 30.7 +1.0
              baz=278,SNR=9.3
PAX    Paxson             43.47  38    P       P       08 35 30.4 +0.4
PAX    Paxson             43.47  38    P       P       08 35 30.4 +0.4
PAX                                    pmax    pmax
              comp=Z,10.0nm,0.8s
PAX    Paxson             43.47  38    P       P       08 35 32.2 +2.2
              baz=276,SNR=6.0
F26K   Sheenjek River     43.63  31    P       P       08 35 32.9 +1.7
              baz=272
RIDG   Independent Ri     43.66  37    P       P       08 35 32.0 +0.5
              baz=276,SNR=16
EYAK   Cordova Ski Ar     43.66  42    P       P       08 35 32.9 +1.5
              baz=279
HARP   HAARP              43.68  39    P       P       08 35 32.5 +0.9
              baz=277
C27K   Jago River         43.73  29    P       P       08 35 32.8 +0.9
              baz=271
MK31   Makanchi Array     43.79 298    P       P       08 35 32.5  -0.2
MK31                                   IAmb    IAmb    08 35 36.1
              comp=Z,51nm,0.7s
MK31   Makanchi Array     43.79 298    P       P       08 35 32.5  -0.2
MK31                                   pmax    pmax
              comp=Z,51nm,0.7s
MKAR   Makanchi Array     43.79 298    P       P       08 35 33.2 +0.5
              comp=Z,52nm,0.7s,baz=78,slow=8.8,SNR=230
MKAR                                   S       S       08 41 56.5 +0.1
              comp=Z,3.1nm,1.0s,baz=74,slow=17,SNR=5.4
MKAR                                   LR      LR      08 55 12.6
              comp=Z,74nm,18.3s,baz=144,slow=38
              comp=Z,52nm,0.7s
MKAR   Makanchi Array     43.79 298    P       P       08 35 32.9 +0.2
G26K   Porcupine Rive     43.82  32    P       P       08 35 34.5 +1.9
              baz=274
MAKZ   Makanchi           43.98 298    P       P       08 35 34.5 +0.2
MAKZ                                   IAmb    IAmb    08 35 37.7
              comp=Z,60nm,0.8s
MAKZ   Makanchi           43.98 298    P       P       08 35 34.5 +0.2
MAKZ                                   pmax    pmax
              comp=Z,60nm,0.8s
MAKZ   Makanchi           43.98 298 ⇑P       P       08 35 34.7 +0.4
CRAI   Chiangrai          44.01 253    P       P       08 35 35.1 +0.4
SCRK   Sand Creek         44.01  37    P       P       08 35 34.9 +0.5
SCRK                                   IAmb    IAmb    08 35 37.8
              comp=Z,59nm,0.9s
SCRK   Sand Creek         44.01  37    P       P       08 35 34.6 +0.3
              baz=277,SNR=52
N25K   Chitina, Valde     44.05  40    P       P       08 35 35.0 +0.4
N25K   Chitina, Valde     44.05  40    P       P       08 35 36.1 +1.4
              baz=278
J26L   Joseph Creek       44.13  36    P       P       08 35 35.6 +0.3
J26L   Joseph Creek       44.13  36    P       P       08 35 36.2 +0.9
              baz=276
I26K   Coal Creek Min     44.22  35    P       P       08 35 36.8 +0.9
              baz=276
L26K   Log Cabin Wild     44.42  38    P       P       08 35 38.9 +1.4
              baz=278,SNR=24
GLB    Gilahina Butte     44.45  40    P       P       08 35 38.2 +0.4
GLB                                    IAmb    IAmb    08 35 49.2
              comp=Z,73nm,1.6s
G27K   Doyon Strip        44.67  33    P       P       08 35 40.9 +1.5
              baz=276
M26K   Nabesna, AK        44.67  39    P       P       08 35 41.0 +1.4
M26K                                   IAmb    IAmb    08 35 46.0
              comp=Z,50nm,0.9s
M26K   Nabesna, AK        44.67  39    P       P       08 35 41.4 +1.8
              baz=279
H27K   Steamboat Moun     44.78  33    P       P       08 35 42.3 +1.9
              baz=276,SNR=30
I27K   Kandik River       44.82  34    P       P       08 35 42.6 +1.9
              baz=277
MCARA  McCarthy VSAT      44.83  40    P       P       08 35 42.5 +1.7
              baz=280
KURK   Kurchatov          44.86 304    P       P       08 35 41.1  0.0
KURK   Kurchatov          44.86 304ceP     P       08 35 41.4 +0.3
KURK                                   pmax    pmax
              comp=Z,164nm,0.8s
KURK   Kurchatov          44.86 304    P       P       08 35 42.2 +1.1
KURK   Kurchatov          44.86 304    P       P       08 35 41.4 +0.3
KURK                                   pP      pP      08 36 04.0 +1.2
KURK                                   sP      sP      08 36 12.3  -0.8
KURBB  Kurchatov Arra     44.94 304    LR      LR      08 55 27.6
              comp=Z,71nm,18.9s,baz=182,slow=37
L27K   Beaver Creek,      45.10  38    P       P       08 35 44.2 +1.3
L27K                                   IAmb    IAmb    08 35 48.5
              comp=Z,64nm,0.9s
L27K   Beaver Creek,      45.10  38    P       P       08 35 44.7 +1.8
              baz=279,SNR=39
BCAR   Beaver Creek A     45.12  38    P       P       08 35 44.4 +1.4
EGAK   Eagle              45.12  35    P       P       08 35 43.4 +0.3
EGAK                                   IAmb    IAmb    08 35 46.2
              comp=Z,62nm,0.8s
EGAK   Eagle              45.12  35    P       P       08 35 44.0 +0.9
              baz=278,SNR=40
M27K   Edge Creek, AK     45.20  39    P       P       08 35 45.3 +1.5
M27K                                   IAmb    IAmb    08 35 50.5
              comp=Z,50nm,0.8s
M27K   Edge Creek, AK     45.20  39    P       P       08 35 45.2 +1.3
              baz=280,SNR=26
BARN   Barnard Glacie     45.54  41    P       P       08 35 47.0 +0.4
SIJI   Sorong             45.65 200    P       P       08 35 47.9 +0.2
              comp=Z,30nm,0.7s
              comp=Z,30nm,0.7s
BVCY   Beaver Creek       45.65  39    P       P       08 35 48.7 +1.5
              baz=281,SNR=9.5
YUK3   Moose Creek        45.96  39    P       P       08 35 51.2 +1.2
              baz=282,SNR=7.5
DAWY   Dawson             46.00  36    P       P       08 35 51.5 +1.5
              baz=280,SNR=8.3
CMAR   Chiang Mai Arr     46.19 253    P       P       08 35 52.5 +0.4
              comp=Z,1.2nm,0.4s,baz=41,slow=8.4,SNR=5.8
CMAR                                   LR      LR      08 55 39.6
              comp=Z,26nm,20.0s,baz=75,slow=36
              comp=Z,1.2nm,0.4s
CMAR   Chiang Mai Arr     46.19 253  i P       P       08 35 52.7 +0.7
I29M   Ogilvie Camp,      46.22  34    P       P       08 35 52.8 +1.0
I29M   Ogilvie Camp,      46.22  34    P       P       08 35 53.4 +1.7
              baz=280,SNR=50
O28M   Mount Upton        46.30  41    P       P       08 35 53.9 +1.1
              baz=283
YUK8   Steele Glacier     46.39  40    P       P       08 35 54.5 +1.1
              baz=283
EPYK   Eagle Plains       46.68  33    P       P       08 35 56.5 +1.1
EPYK                                   IAmb    IAmb    08 35 58.1
              comp=Z,62nm,0.8s
EPYK   Eagle Plains       46.68  33    P       P       08 35 57.2 +1.9
              baz=280,SNR=35
M29M   Somme Creek        46.74  38    P       P       08 35 57.4 +1.5
              baz=283
L29M   L29M               46.74  37    P       P       08 35 58.2 +2.3
              baz=282,SNR=58
G30M   tAoh Zraii Nji     46.77  32    P       P       08 35 57.4 +1.4
              baz=280
K29M   Barlow Dome        46.85  36    P       P       08 35 58.5 +1.7
              baz=282
YUK4   Talbot Arm         46.90  40    P       P       08 35 58.7 +1.4
              baz=284
SHLS   Shalkode           46.99 294   eP       P       08 35 56.1  -2.0
              baz=294
SHLS   Shalkode           46.99 294   eP       P       08 35 55.7  -2.5
YUK6   Outpost Mounta     47.13  40    P       P       08 36 00.3 +1.2
              baz=284
UZB    Uzynbulak          47.29 294   eP       P       08 36 00.6 +0.1
              baz=294
UZB    Uzynbulak          47.29 294   eP       P       08 36 00.5  0.0
UZB                                    pmax    pmax
              comp=Z,6.0nm,0.6s
KPKS   Kokpek             47.38 295   eP       P       08 36 01.8 +0.6
              comp=Z,18nm,0.7s,baz=295
KPKS   Kokpek             47.38 295   eP       P       08 36 01.7 +0.6
KPKS                                   pmax    pmax
              comp=Z,18nm,0.7s
M30M   Minto, Yukon       47.46  38    P       P       08 36 03.2 +1.8
M30M                                   IAmb    IAmb    08 36 07.3
              comp=Z,35nm,0.8s
M30M   Minto, Yukon       47.46  38    P       P       08 36 03.1 +1.6
              baz=284,SNR=16
INK    Inuvik             47.52  30    P       P       08 36 02.9 +1.1
              comp=Z,48nm,0.5s,baz=312,slow=4.6,SNR=241
INK                                    LR      LR      08 57 29.2
              comp=Z,60nm,18.2s,baz=274,slow=38
              comp=Z,48nm,0.5s
INK    Inuvik             47.52  30    P       P       08 36 02.5 +0.7
INK    Inuvik             47.52  30    P       P       08 36 02.5 +0.7
INK                                    pmax    pmax
              comp=Z,55nm,0.6s
INK    Inuvik             47.52  30    P       P       08 36 02.9 +1.1
              baz=281,SNR=78
HYT    Haines Junctio     47.57  40    P       P       08 36 04.8 +2.4
              baz=285,SNR=24
N30M   Aishikik Lake      47.60  39    P       P       08 36 03.7 +1.1
              baz=285
KRVT   Keravat (AS076     47.61 171    P       P       08 36 04.0 +1.1
              comp=Z,48nm,0.7s,baz=170,slow=6.6,SNR=5.4
              comp=Z,48nm,0.7s
MAYO   Mayo, Yukon        47.61  36    P       P       08 36 05.1 +2.5
              baz=284,SNR=8.5
F31M   Tsiigehtchic       47.62  31    P       P       08 36 03.9 +1.3
              baz=282,SNR=41
ARXS   Arharly            47.65 296  i P       P       08 36 03.2  0.0
ZHN    Zhinishke          47.67 294   eP       P       08 36 03.9 +0.4
              baz=294
ZHN    Zhinishke          47.67 294   eP       P       08 36 03.8 +0.4
SATY   Saty               47.74 294   eP       P       08 36 04.5 +0.5
              baz=294
SATY   Saty               47.74 294   eP       P       08 36 04.4 +0.5
WUS    Wushi              47.98 292    P       P       08 36 06.5 +0.6
WUS                                    pP      pP      08 36 30.2 +2.5
WUS                                    sP      sP      08 36 39.3 +1.3
P30M   Million Dollar     48.02  41    P       P       08 36 07.0 +1.2
              baz=286
N31M   Braeburn, Yuko     48.20  39    P       P       08 36 09.1 +2.0
              baz=286,SNR=8.1
O30N   Mendenhall         48.25  40    P       P       08 36 09.5 +1.9
              baz=286
CHKK   Chushkaly          48.35 296   eP       P       08 36 08.8 +0.2
              baz=296
CHKK   Chushkaly          48.35 296   eP       P       08 36 08.7 +0.2
PLBC   Pleasant Camp      48.50  42    P       P       08 36 11.3 +1.9
              baz=287
MDOK   Medeo              48.60 295   eP       P       08 36 11.2 +0.6
              baz=295
MDOK   Medeo              48.60 295   eP       P       08 36 11.2 +0.6
M31M   Drury Creek, Y     48.64  38    P       P       08 36 12.5 +2.0
              baz=286,SNR=11
BRZS   Berezniki          48.69 305⇑iP       P       08 36 11.7 +0.7
              baz=305
BRZS   Berezniki          48.69 305   eP       P       08 36 11.1 +0.1
BRZS                                   pmax    pmax
              comp=Z,39nm,0.6s
TNSS   Tian-Shan          48.72 295   eP       P       08 36 12.8 +0.9
              baz=295
TNSS   Tian-Shan          48.72 295   eP       P       08 36 12.7 +0.9
KUU    Kurty              48.76 296   eP       P       08 36 11.2  -0.5
              comp=Z,30nm,0.9s,baz=296
KUU    Kurty              48.76 296   eP       P       08 36 11.2  -0.5
KUU                                    pmax    pmax
              comp=Z,30nm,0.9s
BRVK   Borovoye           48.99 309    P       P       08 36 13.6 +0.3
BRVK   Borovoye           48.99 309    P       P       08 36 13.6 +0.3
BRVK                                   pmax    pmax
              comp=Z,81nm,0.8s
BRVK   Borovoye           48.99 309    P       P       08 36 14.9 +1.6
BRVK   Borovoye           48.99 309   eP       P       08 36 13.8 +0.5
BRVK   Borovoye           48.99 309    P       P       08 36 14.0 +0.7
FARO   Faro, Yukon        49.10  38    P       P       08 36 15.8 +1.8
              baz=287,SNR=11
A36M   Sachs Harbour      49.41  24    P       P       08 36 16.7 +0.5
A36M                                   IAmb    IAmb    08 36 19.0
              comp=Z,30nm,0.8s
A36M   Sachs Harbour      49.41  24    P       P       08 36 16.8 +0.5
              baz=285,SNR=30
N32M   Quiet Lake         49.54  39    P       P       08 36 19.0 +1.6
              baz=288
TKM2   Tokmak 2           49.66 295    P       P       08 36 19.9 +1.1
              SNR=15
P32M   Atlin              49.74  41    P       P       08 36 20.7 +1.8
              baz=289
JIRN   Jiri               49.75 272   eP       P       08 36 20.4 +0.6
              comp=Z,24nm,0.7s
BTLS   Baital             49.78 298⇑iP       P       08 36 19.4  0.0
              baz=298
BTLS   Baital             49.78 298   eP       P       08 36 18.9  -0.5
BTLS                                   pmax    pmax
              comp=Z,14nm,1.5s
R32K   Eaglecrest         49.78  43    P       P       08 36 20.3 +1.2
              baz=289
GUN    Gumba              49.83 273   eP       P       08 36 20.7 +0.3
RAMN   Ramite             49.85 271   eP       P       08 36 20.2  -0.3
              comp=Z,41nm,0.6s
P33M   Teslin, Yukon      49.97  40    P       P       08 36 22.2 +1.5
              baz=289,SNR=8.5
SGDS   Sogindy            50.07 296   eP       P       08 36 22.3 +0.5
              baz=296
SGDS   Sogindy            50.07 296   eP       P       08 36 22.2 +0.5
KBK    Karagaybulak       50.21 295    P       P       08 36 23.5 +0.6
              SNR=15
USP    Ospenovka          50.24 296    P       P       08 36 23.7 +0.7
              SNR=16
PKI    Pulchoki           50.37 273   eP       P       08 36 24.3  -0.2
              comp=Z,16nm,0.5s
AAK    Ala-Archa          50.52 295    P       P       08 36 25.7 +0.5
              SNR=8.1
AAK    Ala-Archa          50.52 295    P       P       08 36 25.7 +0.5
              comp=Z,6.9nm,0.4s,baz=91,slow=11,SNR=14
AAK                                    LR      LR      09 00 39.1
              comp=Z,50nm,18.1s,baz=58,slow=39
              comp=Z,6.9nm,0.4s
AAK    Ala-Archa          50.52 295    P       P       08 36 25.1  0.0
AAK                                    IAmb    IAmb    08 36 30.8
              comp=Z,19nm,1.1s
AAK    Ala-Archa          50.52 295ceP     P       08 36 25.3 +0.1
AAK                                    pmax    pmax
              comp=Z,31nm,1.7s
AAK    Ala-Archa          50.52 295  i P       P       08 36 25.2  0.0
              SNR=8.7
AAK    Ala-Archa          50.52 295    P       P       08 36 26.4 +1.2
AAK    Ala-Archa          50.52 295   eP       P       08 36 25.3 +0.1
AAK    Ala-Archa          50.52 295    P       P       08 36 25.4 +0.2
AAK                                    pP      pP      08 36 47.7 +0.4
C36M   Paulatuk           50.57  27    P       P       08 36 25.4 +0.5
              baz=288,SNR=58
DMN    Daman              50.57 273   eP       P       08 36 25.7  -0.2
              comp=Z,24nm,0.6s
Q32M   Nakina River       50.65  42    P       P       08 36 27.5 +1.5
              baz=290
GKN    Gorkha             50.69 274   eP       P       08 36 26.6  -0.1
KSH    Kashi              50.95 291    P       P       08 36 32.6 +4.2
KSH                                    pP      pP      08 36 56.5 +6.0
KSH                                    sP      sP      08 37 05.3 +4.6
KSH                                    PP      PP      08 38 35.1  +10
KSH                                    S       S       08 43 45.0 +6.7
KSH                                    pmax    pmax
              comp=Z,16nm,0.9s
KSH                                    LR      LR
              comp=Z,490nm,21.3s
KSH                                    LR      LR
              comp=Z,310nm,20.6s
EKS2   Erkin-Say          50.98 296    P       P       08 36 29.3 +0.7
              SNR=12
DANN   Dangsing           51.13 275   eP       P       08 36 30.9 +0.7
AML    Almayashu          51.27 295    P       P       08 36 31.2 +0.1
              SNR=7.8
KOLN   Koldanda           51.58 274   eP       P       08 36 33.9 +0.5
S34M   Telegraph Cree     51.59  43    P       P       08 36 34.4 +1.6
              baz=292
PYUN   Piuthan            51.84 275   eP       P       08 36 35.7 +0.4
WTLY   Watson Lake, Y     51.88  39    P       P       08 36 36.9 +1.9
              baz=292
DLBC   Dease Lake         51.93  42    P       P       08 36 37.6 +2.2
              baz=292
KSM    Kuching            52.02 227    P       P       08 36 37.2 +0.7
PMG    Port Moresby       52.33 178    P       P       08 36 38.4  -0.2
              comp=Z,12nm,0.7s,baz=11,slow=10,SNR=5.6
              comp=Z,12nm,0.7s
PMG    Port Moresby       52.33 178    P       P       08 36 39.0 +0.3
PMG                                    IAmb    IAmb    08 36 40.2
              comp=Z,26nm,1.1s
PMG    Port Moresby       52.33 178    P       P       08 36 39.0 +0.3
PMG                                    pmax    pmax
              comp=Z,26nm,1.1s
T35M   Bob Quinn          52.39  43    P       P       08 36 40.6 +1.9
              baz=293
DZA    Taraz              52.48 297   eP       P       08 36 40.2 +0.5
              comp=Z,16nm,0.7s,baz=297
DZA    Taraz              52.48 297   eP       P       08 36 40.1 +0.5
DZA                                    pmax    pmax
              comp=Z,17nm,0.7s
SVE    Sverdlovsk         52.74 317deP     P       08 36 41.9 +0.6
SVE                                    pmax    pmax
              comp=Z,141nm,0.9s
KK31   Karatay Array      52.92 298    P       P       08 36 43.0 +0.2
KK31                                   IAmb    IAmb    08 36 47.4
              comp=Z,30nm,0.8s
KK31   Karatay Array      52.92 298    P       P       08 36 43.0 +0.2
KK31                                   pmax    pmax
              comp=Z,30nm,0.9s
KKAR   Karatay Array      52.92 298    P       P       08 36 43.0 +0.1
KKAR   Karatay Array      52.92 298    P       P       08 36 43.0 +0.1
WRGLY  Wrigley            53.02  35    P       P       08 36 45.8 +2.5
              baz=294
KAPI   Kappang            53.30 213    P       P       08 36 45.5  -0.4
              comp=Z,15nm,0.7s,baz=332,slow=2.9,SNR=7.3
              comp=Z,15nm,0.7s
LIRD   Liard River Hi     53.42  40    P       P       08 36 48.2 +1.9
              baz=294,SNR=9.4
IUG    Iuzhnay            53.68 297   eP       P       08 36 49.2 +0.6
              baz=297
IUG                                   eS       S       08 44 16.9 +1.3
              baz=297
IUG    Iuzhnay            53.68 297   eP       P       08 36 49.2 +0.6
IUG                                   eS       S       08 44 16.8 +1.3
ALE    Alert              53.80   4 ⇑P       P       08 36 48.9 +0.1
CHM    Chimkent           53.88 297   eP       P       08 36 50.4 +0.5
              comp=Z,25nm,0.7s,baz=297
CHM    Chimkent           53.88 297   eP       P       08 36 50.4 +0.5
CHM                                    pmax    pmax
              comp=Z,25nm,0.7s
ARU    Arti               53.95 317    P       P       08 36 50.3 +0.1
              comp=Z,40nm,0.5s,baz=51,slow=3.1,SNR=68
              comp=Z,40nm,0.5s
ARU    Arti               53.95 317    P       P       08 36 50.2 +0.1
ARU    Arti               53.95 317c iP      P       08 36 50.1  -0.1
ARU                                                    08 37 58.2
ARU                                    S       S       08 44 19.5 +1.0
ARU                                    SS      SKiKP   08 47 54.2 +1.0
ARU                                    pmax    pmax
              comp=Z,183nm,1.2s
ARU    Arti               53.95 317    P       P       08 36 50.1  -0.1
HNR    Honiara            53.97 162    LR      LR      08 58 57.6
              comp=Z,347nm,19.1s,baz=2.0,slow=35
KOTAN  Kotaneelee Air     54.05  38    P       P       08 36 52.8 +2.0
              baz=295
HOPEN  Hopen              54.88 346   eP       P       08 36 56.1  -0.4
HOPEN                                  IAmb    IAmb    08 36 57.4
              comp=Z,61nm,0.7s
GAR    Garm               55.03 293    P       P       08 36 58.2  -0.2
NOR    Nord               55.13 357  i P       P       08 36 56.1  -2.3
NOR                                    IAmb    IAmb    08 36 58.4
              comp=Z,21nm,0.6s
SPA0   Spitsbergen Ar     55.13 349   eP       P       08 36 57.8  -0.7
SPA0                                   IAmb    IAmb    08 37 04.4
              comp=Z,36nm,1.1s
SPITS  Spitsbergen Ar     55.13 349    P       P       08 36 57.3  -1.2
              comp=Z,13nm,0.5s,baz=64,slow=10,SNR=69
SPITS                                  LR      LR      09 02 12.1
              comp=Z,32nm,18.7s,baz=20,slow=38
              comp=Z,13nm,0.5s
KBS    Kingsbay           55.17 350    P       P       08 36 58.8 +0.1
KBS    Kingsbay           55.17 350    P       P       08 36 58.8 +0.1
KBS                                    pmax    pmax
              comp=Z,58nm,0.8s
KBS    Kingsbay           55.17 350  i P       P       08 36 58.6  -0.1
KBS    Kingsbay           55.17 350   eP       P       08 36 58.6  -0.1
KBS                                    IAmb    IAmb    08 36 59.5
              comp=Z,55nm,0.8s
KBS    Kingsbay           55.17 350    P       P       08 36 58.5  -0.1
PBA    Port Blair         55.19 252    P       P       08 37 00.4 +0.8
NIL    Nilore             55.80 286    P       P       08 37 04.5 +0.6
NIL                                    IAmb    IAmb    08 37 05.6
              comp=Z,87nm,1.6s
NIL    Nilore             55.80 286    P       P       08 37 04.5 +0.6
NIL                                    pmax    pmax
              comp=Z,87nm,1.6s
RES    Resolute Bay       55.88  16    LR      LR      09 02 02.6
              comp=Z,40nm,20.9s,baz=122,slow=37
RES    Resolute Bay       55.88  16    P       P       08 37 04.2 +0.4
RES    Resolute Bay       55.88  16    P       P       08 37 04.2 +0.4
RES                                    pmax    pmax
              comp=Z,73nm,0.7s
CHGR   Chuyangaron        55.98 293    P       P       08 37 05.0  -0.2
CHGR   Chuyangaron        55.98 293    P       P       08 37 05.0  -0.2
CHGR                                   pmax    pmax
              comp=Z,58nm,0.7s
HSPB   Hornsund (broa     56.12 348   eP       P       08 37 00.7  -4.8
COEN   Coen               56.87 183    P       P       08 37 11.4  -0.1
COEN                                   IAmb    IAmb    08 37 13.1
              comp=Z,48nm,0.9s
YKA    Yellowknife Ar     56.97  33    P       P       08 37 12.4 +0.7
              comp=Z,33nm,0.8s,baz=301,slow=7.0,SNR=81
YKA                                    pP      pP      08 37 33.5  -0.6
              comp=Z,6.5nm,0.9s,baz=295,slow=6.3,SNR=2.8
YKA                                    LR      LR      09 04 43.6
              comp=Z,33nm,18.9s,baz=294,slow=39
              comp=Z,33nm,0.8s
AKTO   Aktyubinsk         57.00 310    P       P       08 37 12.5 +0.3
              comp=Z,51nm,0.6s,baz=70,slow=6.5,SNR=64
              comp=Z,51nm,0.6s
MTN    Manton Dam         57.25 197    P       P       08 37 13.6  -0.6
KIRV   Kirov              57.31 322    P       P       08 37 14.3 +0.2
              comp=Z,119nm,0.7s,baz=41,slow=1.2,SNR=39
KIRV                                   LR      LR      09 03 24.0
              comp=Z,61nm,18.5s,baz=52,slow=38
              comp=Z,119nm,0.7s
KIRV   Kirov              57.31 322ceP     P       08 37 14.2  0.0
BJO1   Bjornoya           57.36 345   eP       P       08 37 14.1  -0.1
LVZ    Lovozero           57.84 335ceP     P       08 37 17.1  -0.7
LVZ                                    pmax    pmax
              comp=Z,107nm,1.7s
LVZ    Lovozero           57.84 335    P       P       08 37 17.7  -0.1
HILA   High Level         57.97  38    P       P       08 37 19.3 +0.5
VADS   Vadso              57.98 339   eP       P       08 37 18.7  0.0
VADS                                   IAmb    IAmb    08 37 19.8
              comp=Z,79nm,0.9s
KBL    Kabul              58.25 289    P       P       08 37 20.8  -0.5
APA    Apatity            58.41 335⇓iP       P       08 37 19.0  -2.7
APA                                  i                 08 39 37.3
APA                                  i S       S       08 45 12.0  -5.3
APA                                  i PS      PnS     08 45 35.0  -7.2
APA                                    MLR     MLR
              comp=Z,600nm,17.0s
TULEG  Thule              58.61   9  i P       P       08 37 21.4  -1.6
TULEG                                  IAmb    IAmb    08 37 23.0
              comp=Z,28nm,0.8s
KEV    Kevo               58.84 339    P       P       08 37 24.8 +0.1
ADZR   Andozero           58.95 330   eP       P       08 37 25.2  -0.3
ADZR                                  e                08 38 13.6
ADZR                                   pmax    pmax
              comp=Z,140nm,0.6s
HAMF   Hammerfest         59.08 341   eP       P       08 37 26.1  -0.2
HAMF                                   IAmb    IAmb    08 37 27.5
              comp=Z,110nm,1.4s
NEEM   North Greenlan     59.23   4  i P       P       08 37 26.3  -1.4
NEEM                                   IAmb    IAmb    08 37 28.2
              comp=Z,61nm,0.8s
ARA0   ARCESS Array S     59.38 339   eP       P       08 37 29.0 +0.6
ARA0                                   IAmb    IAmb    08 37 30.1
              comp=Z,28nm,1.0s
ARCES  ARCESS Array B     59.38 339    P       P       08 37 28.6 +0.3
              comp=Z,9.8nm,0.6s,baz=39,slow=7.2,SNR=42
ARCES                                  LR      LR      09 06 24.2
              comp=Z,40nm,19.8s,baz=62,slow=39
              comp=Z,9.8nm,0.6s
ARCES  ARCESS Array B     59.38 339    P       P       08 37 28.7 +0.3
ARCES                                  IAmb    IAmb    08 37 29.9
              comp=Z,38nm,1.1s
DAG    Danmarks Havn      59.93 356  i P       P       08 37 29.8  -2.2
DAG                                    IAmb    IAmb    08 37 32.1
              comp=Z,32nm,0.8s
KLMR   Klimovskoe         60.28 327⇑iP       P       08 37 34.6  -0.1
KLMR                                  eP       P       08 37 34.6  -0.1
KLMR                                  eP       P       08 37 34.6  -0.1
KLMR                                   AMP             08 37 36.2
              comp=Z,92nm,0.9s
KLMR   Klimovskoe         60.28 327c iP      P       08 37 34.6  -0.1
KLMR                                   pmax    pmax
              comp=Z,92nm,0.9s
KTK1   Kautokeino         60.33 339   eP       P       08 37 35.3 +0.4
KTK1                                   IAmb    IAmb    08 37 36.5
              comp=Z,42nm,0.8s
JETT   Jettan, Norway     60.64 341   eP       P       08 37 37.4 +0.4
JETT                                   IAmb    IAmb    08 37 38.8
              comp=Z,83nm,0.7s
TRO    Tromso             60.94 341   eP       P       08 37 39.3 +0.3
TRO                                    IAmb    IAmb    08 37 40.5
              comp=Z,80nm,0.6s
BELG   Belogornoye        61.50 316    P       P       08 37 43.5 +0.5
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	comp=Z,225nm,0.7s,baz=16,slow=1.1,SNR=125						
BELG	Belogornoye	61.50	316	c *i*P	P	08 37 43.4	+0.4
BELG				pmax	pmax		
	comp=Z,41nm,0.7s						
HYB	Hyderabad	61.54	268	*e*P	P	08 37 43.5	-0.4
KULLO	Kullorsuaq	61.57	7	*i* P	P	08 37 41.9	-1.3
KULLO				IAmb	IAmb	08 37 43.0	
	comp=Z,13nm,0.8s						
DBG	Daneborg	62.43	356	*i* P	P	08 37 47.4	-1.6
DBG				IAmb	IAmb	08 37 49.4	
	comp=Z,8.8nm,0.8s						
CTA	Charters Tower	62.93	179	P	P	08 37 52.1	-0.8
	comp=Z,5.7nm,0.7s,baz=347,slow=10.0,SNR=9.9						
CTA				pP	pP	08 38 14.2	-0.9
	comp=Z,5.3nm,0.7s,baz=7.8,slow=10.0,SNR=3.6						
	comp=Z,5.7nm,0.7s						
CTAO	Charters Tower	62.93	179	P	P	08 37 52.5	-0.4
CTAO				pP	pP	08 38 14.5	-0.6
STEI	Steigen	63.11	341	*e*P	P	08 37 53.5	-0.1
STEI				IAmb	IAmb	08 37 54.9	
	comp=Z,32nm,0.8s						
I04A	Tendick Farm,	63.22	54	P	P	08 37 55.3	+0.5
LOF	Lofoten	63.34	342	*e*P	P	08 37 54.9	-0.2
LOF				IAmb	IAmb	08 37 56.5	
	comp=Z,51nm,0.8s						
D08A	Wollman Farm,	63.35	50	P	P	08 37 56.2	+0.7
UPNV	Upernavik	63.39	7	*i* P	P	08 37 54.4	-0.9
UPNV				IAmb	IAmb	08 37 58.0	
	comp=Z,16nm,0.9s						
FAUS	Fauske	63.53	341	*e*P	P	08 37 56.5	+0.2
FAUS				IAmb	IAmb	08 37 58.1	
	comp=Z,96nm,0.7s						
WRAB	Tennant Creek	63.60	192	P	P	08 37 56.5	-0.8
WRAB				pP	pP	08 38 19.8	-0.3
WB2	Warramunga Arr	63.61	192	P	P	08 37 56.9	-0.6
WB2				IAmb	IAmb	08 37 57.8	
	comp=Z,30nm,1.1s						
WRA	Warramunga Arr	63.62	192	P	P	08 37 56.5	-0.9
	comp=Z,12nm,0.7s,baz=11,slow=7.1,SNR=53						
WRA				pP	pP	08 38 19.3	-0.8
	comp=Z,6.2nm,0.8s,baz=8.5,slow=6.9,SNR=4.1						
	comp=Z,12nm,0.7s						
WRA	Warramunga Arr	63.62	192	P	P	08 37 56.2	-1.3
WRA	Warramunga Arr	63.62	192	P	P	08 37 56.2	-1.3
NEW	Newport	63.63	48	P	P	08 37 58.8	+1.3
	baz=306						
GEYT	Alibeck	63.66	298	P	P	08 37 56.5	-1.2
	comp=Z,12nm,0.6s,baz=54,slow=3.7,SNR=19						
GEYT				pP	pP	08 38 20.0	-0.6
	comp=Z,19nm,0.9s,baz=69,slow=8.1,SNR=6.4						
GEYT				LR	LR	09 07 54.8	
	comp=Z,96nm,19.0s,baz=81,slow=38						
	comp=Z,12nm,0.6s						
MOS	Moscow	64.21	323	*e*P	P	08 37 58.9	-2.1
MOS				*e**PP	pP	08 38 23.1	-0.8
MOS				*e*S	S	08 46 28.6	-2.3
MOS				pmax	pmax		
	comp=Z,45nm,0.9s						
MOS				pmax	pmax		
	comp=Z,100nm,1.2s						
PUL	Pulkovo	64.51	330	c *e*P	P	08 38 02.9	+0.1
PUL				pmax	pmax		
	comp=Z,183nm,0.7s						
PUL	Pulkovo	64.51	330	*e*P	P	08 38 02.9	+0.1
SUMG	Summit	64.54	1	*i* P	P	08 38 03.0	-0.3
SUMG				IAmb	IAmb	08 38 06.2	
	comp=Z,40nm,0.6s						
MOR8	Moi Rana	64.69	340	*e*P	P	08 38 02.8	-1.2
MOR8				IAmb	IAmb	08 38 04.2	
	comp=Z,125nm,0.7s						
KONS	Konsvik	64.75	341	*e*P	P	08 38 04.6	+0.3
KONS				IAmb	IAmb	08 38 06.3	
	comp=Z,20nm,0.7s						
FIA1	FINESS Array S	64.85	332	P	P	08 38 05.0	0.0
FINES	FINESS Array B	64.85	332	P	P	08 38 05.0	0.0
	comp=Z,143nm,0.7s,baz=46,slow=6.8,SNR=198						
FINES				pP	pP	08 38 28.3	+0.3
	comp=Z,20nm,0.6s,baz=46,slow=8.0,SNR=3.0						
FINES				LR	LR	09 07 52.3	
	comp=Z,52nm,19.0s,baz=46,slow=37						
	comp=Z,143nm,0.7s						
FINES	FINESS Array B	64.85	332	P	P	08 38 04.6	-0.4
STOK	Stokkvaagen	64.91	341	*e*P	P	08 38 06.5	+1.2
OBN	Obninsk	65.07	323	⇑P	P	08 38 06.5	0.0
OBN	Obninsk	65.07	323	P	P	08 38 06.8	+0.2
	comp=Z,16nm,0.7s,baz=229,slow=22,SNR=13						
	comp=Z,16nm,0.7s						
OBN	Obninsk	65.07	323	P	P	08 38 06.6	0.0
OBN	Obninsk	65.07	323	⇑*e*P	P	08 38 06.2	-0.4
OBN				pmax	pmax		
	comp=Z,116nm,1.3s						
OBN				MLR	MLR		
	comp=Z,72nm,16.0s						
VRH	Novokhopyorsk	65.15	318	c *i*P	P	08 38 07.0	-0.2
VRH				*e*		08 38 31.4	
VRH				pmax	pmax		
	comp=Z,124nm,0.7s						
LPSR	Galich'ya Gora	65.61	320	*e*P	P	08 38 09.8	-0.3
LPSR				*e**PP	pP	08 38 32.9	-0.2
LPSR				pmax	pmax		
	comp=Z,120nm,0.7s						
VORR	Voronezh	66.08	319	*e*P	P	08 38 13.6	+0.5
VORR				*e**PP	pP	08 38 39.0	+2.9
VORR				pmax	pmax		
	comp=Z,70nm,0.9s						
MSO	Missoula	66.22	48	P	P	08 38 15.5	+1.2
	baz=308						
MEF	Metsahovi	66.31	332	*e*P	P	08 38 15.0	+0.6
SCO	Scoresbysund	66.31	355	*i* P	P	08 38 14.0	-0.3
SCO				IAmb	IAmb	08 38 15.5	
	comp=Z,7.4nm,0.6s						
VSR	Storozhevoye	66.39	319	*e*P	P	08 38 15.2	+0.1
VSR				*e**PP	pP	08 38 38.3	+0.1
VSR				pmax	pmax		
	comp=Z,130nm,0.6s						
VORD	Divnogorie	66.49	319	*e*P	P	08 38 15.9	+0.1
VORD				*e**PP	pP	08 38 39.4	+0.6
VORD				pmax	pmax		
	comp=Z,90nm,0.8s						
RAF	Rauma	66.58	334	*e*P	P	08 38 16.6	+0.4
NSS	Namsos	66.63	340	*e*P	P	08 38 16.6	+0.1
NSS				IAmb	IAmb	08 38 17.9	
	comp=Z,34nm,0.7s						
PALK	Pallekele	66.73	258	LR	LR	09 09 30.7	
	comp=Z,16nm,19.1s,baz=170,slow=38						
VSU	Vasula	66.75	330	*e*P	P	08 38 18.0	+0.7
FFC	Flin Flon	66.89	36	P	P	08 38 19.0	+0.7
FFC				pP	pP	08 38 42.0	+0.6
MAK	Makhachkala	67.16	308	d *i*P	P	08 38 17.6	-2.5
MAK				*e**PP	pP	08 38 42.6	-0.6
MAK				*e**SP	sP	08 38 54.1	+0.9
MAK				*e*		08 40 48.8	
MAK				*e*S	S	08 47 04.9	-2.3
MAK				*e**SS	sS	08 47 45.6	-1.1
MAK				*e*SS	SS	08 51 26.2	-1.0
MAK				pmax	pmax		
	comp=Z,350nm,1.3s						
ILULI	Ilulissat	67.28	6	*i* P	P	08 38 19.1	-1.4
ILULI				IAmb	IAmb	08 38 21.4	
	comp=Z,27nm,0.8s						
AS31	Alice Springs	67.34	192	P	P	08 38 21.0	-0.4
ASAR	Alice Springs	67.34	192	P	P	08 38 21.5	+0.1
	comp=Z,16nm,0.6s,baz=7.7,slow=5.2,SNR=225						
	comp=Z,16nm,0.6s						
ASAR	Alice Springs	67.34	192	P	P	08 38 21.2	-0.2
PAHR	Pah Rah Range	67.47	56	P	P	08 38 22.5	+0.1
MSVF	Nonsavu	67.57	146	P	P	08 38 24.8	+1.8
	comp=Z,11nm,0.7s,baz=315,slow=7.3,SNR=8.5						
MSVF				LR	LR	09 07 54.9	
	comp=Z,82nm,18.1s,baz=0.4,slow=36						
	comp=Z,11nm,0.7s						
MSVF	Nonsavu	67.57	146	*i* P	P	08 38 23.5	+0.5
MSVF				pmax	pmax		
	comp=Z,22nm,0.9s						
MSVF	Nonsavu	67.57	146	P	P	08 38 25.6	+2.5
MTSE	Matsula	67.61	331	*e*P	P	08 38 23.3	+0.6
EGMT	Eagleton	67.67	45	P	P	08 38 24.8	+1.3
	baz=310						
DZM	Mont Dzumac	67.71	159	*e*LR	LR	08 58 55.7	
	comp=Z,181nm,31.9s						
DZM	Mont Dzumac	67.71	159	P	P	08 38 25.8	+2.0
	comp=Z,13nm,0.7s,baz=16,slow=14,SNR=8.1						
	comp=Z,13nm,0.7s						
AAL	Aland	67.80	334	*e*P	P	08 38 23.8	0.0
AKT	Akhty	67.94	307	*e*P	P	08 38 26.2	+0.9
AKT				*e**PP	pP	08 38 49.0	+0.6
AKT				*e*		08 38 51.2	
AKT				*e**SP	sP	08 38 59.3	+0.9
AKT				pmax	pmax		
	comp=Z,35nm,0.6s						
GROC	Groznyy	67.99	309	*e*P	P	08 38 29.1	+3.7
GROC				*e**PP	PcP	08 38 52.3	+1.2
GROC				*e*		08 38 55.2	
GROC				*e*		08 40 55.1	
GROC				pmax	pmax		
	comp=Z,129nm,1.2s						
HLID	Hailey	68.00	51	P	P	08 38 27.0	+1.3
	baz=309						
YERR	Yerington	68.00	57	P	P	08 38 26.2	+0.4
ICESG	Greenland Ices	68.01	2	*i* P	P	08 38 25.2	-0.4
ICESG				IAmb	IAmb	08 38 27.7	
	comp=Z,46nm,1.1s						
BOZ	Bozeman (W)	68.24	47	P	P	08 38 28.4	+1.2
	baz=310						
MBWA	Marble Bar	68.24	206	P	P	08 38 26.8	-0.2
MBWA	Marble Bar	68.24	206	P	P	08 38 26.9	-0.2
MBWA				pP	pP	08 38 49.7	-0.2
MBWA				sP	sP	08 39 00.1	+0.4
ZKTA	Zakatala	68.49	307	P	P	08 38 30.0	+1.4
KVN	Kaiserville	68.66	56	P	P	08 38 31.1	+1.2
KVN	Kaiserville	68.66	56	P	P	08 38 31.1	+1.2
KVN				pmax	pmax		
	comp=Z,15nm,1.2s						
UPP	Uppsala	68.80	335	*e*P	P	08 38 30.7	+0.6
NVAR	Mina Array Bea	68.92	57	P	P	08 38 33.1	+1.5
	comp=Z,3.9nm,0.7s,baz=292,slow=6.6,SNR=37						
NVAR				pP	PcP	08 38 56.0	+0.6
	comp=Z,3.8nm,0.6s,baz=299,slow=7.3,SNR=6.2						
	comp=Z,3.9nm,0.7s						
NVAR	Mina Array Bea	68.92	57	P	P	08 38 32.2	+0.6
SLIT	Slitere, Latvi	68.96	331	*e*P	P	08 38 32.4	+1.3
NV11	Mina Array Sit	69.01	57	P	P	08 38 32.9	+0.8
IDID	Didziasalis	69.02	328	*e*P	P	08 38 27.8	-3.8
ISAL	Salakas	69.08	328	*e*P	P	08 38 33.0	+1.1
MNK	Minsk	69.16	326	*i* P	P	08 38 33.9	+1.4
	comp=E,7.0nm,0.9s						
MNK				*i* P	P	08 38 33.9	+1.4
	comp=N,50nm,0.9s						
MNK				*i* P	P	08 38 33.9	+1.4
	comp=Z,167nm,0.9s,baz=44						
MNK				*i* pP	PcP	08 38 58.5	+2.8
MNK				*i* PP	PP	08 41 08.0	+2.3
MNK				*i* PPP	PPP	08 42 49.5	
MNK				*i* S	S	08 47 33.0	+2.3
MNK				*i* sS	SKiKP	08 48 16.0	+2.7
MNK				*i* SS	SS	08 52 02.4	+5.0
MNK				*i* SSS	SSS	08 55 20.1	
MNK				*i* LR	LR	09 06 47.7	
MNK				*i* LRM	MLR	09 11 39.9	
	comp=E,10.0nm,12.0s						
MNK				*i* LRM	MLR	09 11 39.9	
	comp=N,363nm,12.0s						
MNK				*i* LRM	MLR	09 12 11.2	
	comp=Z,72nm,12.0s						
MNK	Minsk	69.16	326	*i* P	P	08 38 33.8	+1.4
MNK				*i* *PP	PcP	08 38 58.5	+2.8
MNK				*i*		08 41 08.0	
MNK				*i* PPP	PPP	08 42 49.4	
MNK				*i* S	S	08 47 32.9	+2.3
MNK				*i* *SS	SKiKP	08 48 16.0	+2.7
MNK				*i* SS	SS	08 52 02.4	+5.0
MNK				pmax	pmax		
	comp=E,7.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,50nm,0.9s						
MNK				pmax	pmax		
	comp=Z,167nm,0.9s						
MNK				MLR	MLR		
	comp=E,10.0nm,12.0s						
MNK				MLR	MLR		
	comp=N,363nm,12.0s						
MNK				MLR	MLR		
	comp=Z,72nm,12.0s						
GCMT	Greycliff	69.16	46	P	P	08 38 34.0	+1.1
IIGN	Ignalina	69.20	328	*e*P	P	08 38 30.0	-2.7
KVAR	Kislovodsk Arr	69.24	311	P	P	08 38 34.7	+1.3
	comp=Z,27nm,0.7s,baz=34,slow=3.6,SNR=2.6						
	comp=Z,27nm,0.7s						
KIV	Kislovodsk	69.25	311	P	P	08 38 33.9	+0.6
KIV	Kislovodsk	69.25	311	*e*P	P	08 38 34.5	+1.1
KIV				pmax	pmax		
	comp=Z,182nm,1.0s						
KIV				MLR	MLR		
	comp=Z,33nm,17.0s						
KIV	Kislovodsk	69.25	311	*i* P	P	08 38 35.5	+2.2
	SNR=8.0						
KIV	Kislovodsk	69.25	311	P	P	08 38 34.8	+1.4
KIV	Kislovodsk	69.25	311	*e*P	P	08 38 34.5	+1.1
KBZ	Khabaz	69.28	311	P	P	08 38 34.4	+1.1
	comp=Z,36nm,0.8s,baz=64,slow=3.9,SNR=43						
	comp=Z,36nm,0.8s						
GANJ	Ganja	69.30	307	P	P	08 38 34.8	+1.2
NACGM	Naroch	69.31	327	⇑*i*P	P	08 38 33.8	+0.4
	comp=Z,222nm,0.8s,baz=43						
ZEI	Tsey	69.32	310	*e*P	P	08 38 33.4	-0.6
ZEI				pmax	pmax		
	comp=Z,29nm,0.6s						
MOL	Molde	69.36	341	*e*P	P	08 38 34.5	+0.9
SHA1	Shidzhatmaz	69.41	311	c *i*P	P	08 38 34.7	+0.2
DOMB	Dombas	69.44	340	*e*P	P	08 38 34.3	+0.2
DOMB				IAmb	IAmb	08 38 36.2	
	comp=Z,45nm,0.7s						
SFJD	Kangerlussuaq	69.49	7	P	P	08 38 34.1	-0.2
	comp=Z,25nm,0.9s,baz=342,slow=9.5,SNR=8.6						
SFJD				LR	LR	09 10 05.6	
	comp=Z,24nm,18.1s,baz=1.0,slow=37						
	comp=Z,25nm,0.9s						
SFJD	Kangerlussuaq	69.49	7	*i* P	P	08 38 34.3	0.0
SFJD				IAmb	IAmb	08 38 36.4	
	comp=Z,12nm,0.7s						
SFJD	Kangerlussuaq	69.49	7	P	P	08 38 34.1	-0.2
SFJD				pP	pP	08 38 57.7	+0.2
NC405	NORSAR Array S	69.52	338	P	P	08 38 34.7	+0.1
H17A	Grant Village	69.59	48	P	P	08 38 37.4	+1.8
	baz=311						
VSVD	Vaisvydziai	69.61	329	*e*P	P	08 38 36.4	+1.2
NEY	Neytrino	69.69	311	*i* P	P	08 38 36.3	+0.1
NEY				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ONI	Oni	69.70	310	P	P	08 38 36.4	+0.3
ONI				IAmb	IAmb	08 38 42.5	
	comp=Z,41nm,0.9s						
ONI	Oni	69.70	310	P	P	08 38 36.4	+0.3
ONI				pmax	pmax		
	comp=Z,41nm,0.9s						
NB2	NORSAR Subarra	69.71	338	P	P	08 38 35.8	0.0
	comp=Z,38nm,0.7s,baz=34,slow=6.2						
NB2	NORSAR Subarra	69.71	338	P	P	08 38 35.8	0.0
	slow=6.2						
NOA	NORSAR Array B	69.71	338	P	P	08 38 36.0	+0.2
	comp=Z,28nm,0.6s,baz=35,slow=4.5,SNR=114						
NOA				pP	pP	08 38 59.3	+0.3
	comp=Z,24nm,0.8s,baz=34,slow=6.1,SNR=6.4						
NOA				LR	LR	09 13 15.2	
	comp=Z,26nm,18.9s,baz=35,slow=39						
	comp=Z,28nm,0.6s						
IMW	Indian Meadow	69.72	49	P	P	08 38 37.5	+1.0
HFS	Hagfors	69.76	337	P	P	08 38 36.3	+0.2
	comp=Z,42nm,0.4s,baz=48,slow=6.6,SNR=170						
HFS				pP	pP	08 38 59.0	-0.3
	comp=Z,36nm,0.8s,baz=54,slow=7.3,SNR=5.7						
HFS				LR	LR	09 13 24.2	
	comp=Z,26nm,18.5s,baz=42,slow=39						
	comp=Z,42nm,0.4s						
AKN	Aaknes	69.83	341	*e*P	P	08 38 37.4	+0.9
AKN				IAmb	IAmb	08 38 39.6	
	comp=Z,47nm,1.1s						
FXWY	Fox Creek	69.83	49	P	P	08 38 38.7	+1.5
NC602	NORSAR Array S	69.88	338	*e*P	P	08 38 37.0	+0.3
PABE	Paberze	69.95	329	P	P	08 38 37.2	-0.1
PABE	Paberze	69.95	329	*e*P	P	08 38 38.2	+0.9
VES	Vestal, Richgr	70.06	59	P	P	08 38 39.6	+1.3
	baz=309						
HVU	Hansel Valley	70.06	51	P	P	08 38 38.9	+0.4
HVU	Hansel Valley	70.06	51	P	P	08 38 38.9	+0.4
HVU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
FRB	Frobisher Bay	70.08	15	LR	LR	09 11 58.8	
	comp=Z,38nm,20.2s,baz=20,slow=38						
DGMT	Dagmar	70.15	42	P	P	08 38 39.9	+1.2
	baz=313						
DGMT	Dagmar	70.15	42	P	P	08 38 39.2	+0.5
	baz=313						
VIKU	Vikbolandet	70.16	334	*e*P	P	08 38 39.1	+0.6
PKM	Mcpherson Peak	70.20	61	P	P	08 38 40.3	+0.8
	baz=309						
CWC	Cottonwood Cre	70.31	58	P	P	08 38 40.8	+0.7
	baz=309						
PBUR	Paburge	70.31	330	*e*P	P	08 38 41.0	+1.5
DY2G	Dye2	70.33	5	*i* P	P	08 38 39.0	-0.8
DY2G				IAmb	IAmb	08 38 41.9	
	comp=Z,18nm,0.9s						
LAO	LASA Array	70.36	44	P	P	08 38 40.6	+0.5
LAO	LASA Array	70.36	44	P	P	08 38 41.2	+1.1
	baz=312						
LAO	LASA Array	70.36	44	P	P	08 38 40.9	+0.9
	baz=312						
GRAC	Grapevine Rang	70.40	57	P	P	08 38 42.1	+1.6
	baz=310						
GNI	Garni	70.54	307	LR	LR	09 11 44.6	
	comp=Z,38nm,21.2s,baz=78,slow=38						
GNI	Garni	70.54	307	P	P	08 38 42.1	+0.7
GNI	Garni	70.54	307	c *e*P	P	08 38 41.9	+0.5
GNI				pmax	pmax		
	comp=Z,26nm,1.3s						
R11A	Troy Canyon, C	70.62	55	P	P	08 38 43.1	+1.1
	baz=310						
SKAR	Skarslia	70.79	339	*e*P	P	08 38 43.2	+0.8
FOO	Floro	70.80	341	*e*P	P	08 38 43.4	+1.1
HYA	Hoyanger	70.91	340	*e*P	P	08 38 43.7	+0.8
HYA				IAmb	IAmb	08 38 45.9	
	comp=Z,61nm,0.7s						
MPMC	Manual Prospec	70.92	58	P	P	08 38 44.9	+1.0
	baz=310						
FURC	Furnace Creek,	71.05	58	P	P	08 38 45.6	+1.3
	baz=310						
DUG	Dugway, Tooele	71.07	52	P	P	08 38 46.0	+1.4
	baz=311						
SOC	Sochi	71.11	312	*e*P	P	08 38 43.1	-1.5
SOC				*e*		08 41 21.0	
SOC				*e*PPP	PPP	08 43 04.4	
SOC				*e*S	S	08 47 53.3	-0.6
SOC				*e*SS	SS	08 52 28.7	+0.6
SOC				pmax	pmax		
	comp=Z,37nm,0.6s						
SOC				MLR	MLR		
	comp=Z,143nm,22.0s						
TPNV	Topopah Spring	71.12	57	P	P	08 38 45.9	+0.9
	baz=310						
LRMC	Laurel Mtn Rad	71.17	59	P	P	08 38 46.6	+1.3
	baz=310						
BW06	Boulder Array	71.22	49	P	P	08 38 46.5	+0.9
	baz=312						
PDAR	Pinedale Array	71.22	49	P	P	08 38 46.3	+0.7
	comp=Z,4.9nm,0.5s,baz=322,slow=0.1,SNR=93						
PDAR				pP	pP	08 39 10.1	+1.2
	comp=Z,4.3nm,0.6s,baz=270,slow=0.9,SNR=5.8						
	comp=Z,4.9nm,0.5s						
PDAR	Pinedale Array	71.22	49	P	P	08 38 45.8	+0.2
AKASG	Malin Array Be	71.33	323	P	P	08 38 45.8	0.0
	comp=Z,32nm,0.5s,baz=40,slow=6.3,SNR=81						
AKASG				pP	pP	08 39 09.2	+0.1
	comp=Z,3.1nm,0.4s,baz=40,slow=5.9,SNR=2.2						
AKASG				LR	LR	09 12 03.9	
	comp=Z,29nm,18.1s,baz=38,slow=37						
	comp=Z,32nm,0.5s						
AKASG	Malin Array Be	71.33	323	P	P	08 38 45.6	-0.2
AKASG	Malin Array Be	71.33	323	*i* P	P	08 38 45.7	0.0
AKASG				pmax	pmax		
	comp=Z,33nm,0.5s						
AKBB	Malin Array Si	71.33	323	P	P	08 38 45.9	+0.1
AKBB	Malin Array Si	71.33	323	c *e*P	P	08 38 45.9	+0.1
AKBB				pmax	pmax		
	comp=Z,64nm,0.8s						
SUE	Sulen	71.34	341	*e*P	P	08 38 46.6	+1.0
EDW2	Edwards Air Fo	71.36	60	P	P	08 38 47.9	+1.5
	baz=310						
STRU	Stroemstad	71.39	337	*i* P	P	08 38 45.9	0.0
ANN	Anapa	71.51	314	*e*P	P	08 38 47.1	+0.2
ANN				*e**PP	pP	08 39 09.4	-0.9
ANN				*e*		08 48 43.0	
ANN				pmax	pmax		
	comp=Z,56nm,0.6s						
ANGG	Ammassalik, Gr	71.54	1	*i* P	P	08 38 46.5	-0.2
ISOG	Isortoq, Green	71.58	2	*i* P	P	08 38 47.2	+0.2
ISOG				IAmb	IAmb	08 38 48.7	
	comp=Z,28nm,0.8s						
ASK	Askoy	71.74	341	*e*P	P	08 38 49.0	+1.0
ASK				IAmb	IAmb	08 38 51.0	
	comp=Z,312nm,1.3s						
SHOC	Shoshone, Teco	71.78	58	P	P	08 38 49.4	+0.7
	baz=310						
BER	Bergen	71.79	340	*e*P	P	08 38 49.3	+1.0
GSC	Goldstone, Bar	71.83	59	P	P	08 38 50.4	+1.1
	baz=310						
ODD1	Odda	71.88	340	*e*P	P	08 38 49.8	+0.8
BORG	Borgarnes	71.94	354	P	P	08 38 50.8	+1.6
	comp=Z,17nm,0.7s,baz=354,slow=0.2,SNR=10						
BORG				LR	LR	09 10 14.7	
	comp=Z,26nm,19.1s,baz=352,slow=36						
	comp=Z,17nm,0.7s						
BORU	Boraas	72.09	335	*i* P	P	08 38 49.0	-1.2
TJOU	Tjoern	72.10	336	*i* P	P	08 38 49.6	-0.6
BANOM	Banah	72.20	289	*i* P	P	08 38 51.6	+0.1
	SNR=10.0						
BANOM	Banah	72.20	289	P	P	08 38 52.0	+0.5
	SNR=5.4						
BLEU	Blekinge	72.21	333	*i* P	P	08 38 49.0	-1.9
SHME	Shamm	72.23	289	*i* P	P	08 38 51.5	0.0
	SNR=8.2						
SHME	Shamm	72.23	289	P	P	08 38 51.9	+0.3
	SNR=8.2						
WSAR	Wadi Sarin	72.28	285	P	P	08 38 52.4	+0.5
TUQ	Turquoise Moun	72.30	58	P	P	08 38 52.7	+0.6
	baz=311						
BLS5	Blasjo	72.35	339	*e*P	P	08 38 52.7	+1.0
BLS5				IAmb	IAmb	08 38 53.9	
	comp=Z,237nm,1.9s						
JLN	Jalan Bani Buh	72.43	284	P	P	08 38 53.6	+0.8
BBRC	Big Bear Solar	72.43	59	P	P	08 38 53.6	+0.6
	baz=310						
HEC	Hector,Ludlow	72.43	59	P	P	08 38 53.5	+0.7
	baz=311						
WBK	Wadi Bani Khal	72.44	285	P	P	08 38 53.2	+0.3
HMDM	Hanimaadhoo	72.50	263	P	P	08 38 53.4	+0.1
ONAU	Onsala	72.55	336	*i* P	P	08 38 53.3	+0.4
MDH	Madha	72.60	288	P	P	08 38 54.0	+0.2
FABU	Falkenberg	72.63	335	*i* P	P	08 38 52.4	-1.0
MASF	Masafi	72.65	289	P	P	08 38 54.7	+0.5
	SNR=8.1						
MSFE	Esma-Masafi	72.66	289	*i* P	P	08 38 54.2	0.0
	SNR=8.1						
RDMU	Red Mountain	72.68	50	P	P	08 38 55.0	+0.6
RDMU				IAmb	IAmb	08 39 05.0	
	comp=Z,20nm,1.0s						
MURC	Murrieta	72.69	60	P	P	08 38 55.1	+0.8
	baz=310						
ULM	Lac du Bonnet	72.70	36	P	P	08 38 53.7	-0.3
	comp=Z,6.1nm,0.8s,baz=302,slow=8.5,SNR=8.8						
	comp=Z,6.1nm,0.8s						
DEL	Delary	72.71	334	*e*P	P	08 38 55.7	+1.8
DEL	Delary	72.71	334	*i* P	P	08 38 53.5	-0.3
GEVA	Gevas	72.73	306	P	P	08 38 55.5	+0.9
GMRC	Granite Mounta	72.88	58	P	P	08 38 56.5	+1.0
	baz=311						
UOSS	Minazif	72.89	288	P	P	08 38 55.2	-0.3
UOSS	Minazif	72.89	288	*i* P	P	08 38 55.2	-0.3
	SNR=14						
UOSS	Minazif	72.89	288	P	P	08 38 55.6	0.0
P18A	Preston Nutter	72.92	52	P	P	08 38 55.7	-0.2
K22A	Casper	72.94	47	P	P	08 38 56.6	+0.8
	baz=313						
K22A	Casper	72.94	47	P	P	08 38 56.6	+0.8
	baz=313						
HOQ	Hoqain	72.99	286	P	P	08 38 56.5	+0.3
HATD	Hatta, Dubai	73.02	288	*i* P	P	08 38 56.6	+0.3
	SNR=8.0						
HATD	Hatta, Dubai	73.02	288	P	P	08 38 56.9	+0.6
	SNR=8.0						
SIM	Simferopol'	73.11	316	*e*P	P	08 38 59.6	+3.1
SIM				pmax	pmax		
	comp=Z,66nm,0.8s						
PFO	Pinyon Flats O	73.15	60	P	P	08 38 57.8	+0.7
	baz=311						
TPFO	Pinon Flats	73.15	60	P	P	08 38 58.3	+1.1
	baz=311						

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ASHO  Ashiyiah          73.16 288 i P     P        08 38 57.3 +0.1
      SNR=6.5
ASHO  Ashiyiah          73.16 288   P     P        08 38 57.6 +0.4
E28A  Huff              73.17  41   P     P        08 38 57.4 +0.6
      baz=316
SOHO  SOHO              73.18 287   P     P        08 38 57.2  0.0
SOHO  SOHO              73.18 287   P     P        08 38 57.3 +0.1
BELC  Belle Mtn. Jos    73.18  59   P     P        08 38 57.9 +0.5
      baz=311
JMDO  Jabal Madar       73.21 285   P     P        08 38 57.6 +0.1
RSSD  Black Hills       73.24  45   P     P        08 38 58.3 +0.7
      baz=314
RSSD  Black Hills       73.24  45   P     P        08 38 58.4 +0.7
      baz=314
NAZ   Nazwa, Dubai      73.24 289   P     P        08 38 57.8 +0.2
BJUU  Bjuv              73.30 334 i P     P        08 38 57.8 +0.4
FAQ   Al Faqa, Dubai    73.44 288 i P     P        08 38 59.0 +0.2
      SNR=8.0
FAQ   Al Faqa, Dubai    73.44 288   P     P        08 38 59.0 +0.2
BSD   Bornholm Skovb    73.48 333 eP      P        08 39 01.0 +2.6
BSD   Bornholm Skovb    73.48 333 i P     P        08 38 58.3 -0.1
BSD                                 IAmb  IAmb     08 39 01.5
      comp=Z,103nm,0.7s
LUNU  Lund              73.53 334 i P     P        08 39 00.0 +1.3
NEE2  Needles Airpor    73.54  58   P     P        08 39 00.3 +1.1
      baz=311
SORM  Soroca            73.59 322 ⇓P      P        08 39 00.3 +1.1
SORM  Soroca            73.59 322   P     P        08 39 02.0 +2.8
BSY   Bisya             73.61 286   P     P        08 39 00.6 +0.8
IRM   Iron Mountain     73.62  59   P     P        08 39 00.5 +0.8
      baz=311
GOET  G??ttrup          73.64 337 i P     P        08 39 01.4 +2.1
GOET                                IAmb  IAmb     08 39 03.1
      comp=Z,80nm,0.8s
ARQ   Araqi             73.70 287   P     P        08 39 00.8 +0.4
ASUD  Al Ashush, Dub    73.70 289 i P     P        08 39 01.0 +0.7
      SNR=11
ASUD  Al Ashush, Dub    73.70 289   P     P        08 39 01.0 +0.7
O20A  White River Ci    73.72  50   P     P        08 39 00.7 +0.3
      baz=313
BC3   Big Chuckawall    73.75  59   P     P        08 39 01.7 +1.0
      baz=311
ALNE  Al Ain            73.78 288 i P     P        08 39 01.8 +1.0
      SNR=7.3
ALNE  Al Ain            73.78 288   P     P        08 39 01.0 +0.2
BEL   Belsk             73.98 328 eP      P        08 39 02.7 +1.3
AJN   Ajban             73.98 289   P     P        08 39 02.2 +0.3
IKP   In-Ko-Pah, Jac    74.00  60   P     P        08 39 03.1 +1.1
      baz=311
SWSC  Sam W. Stewart    74.00  60   P     P        08 39 02.9 +1.0
      baz=311
PDMCI Parker Dam,Lak    74.14  58   P     P        08 39 04.0 +1.3
      baz=312
GKP   Gorka Klasztor    74.17 331 eP      P        08 39 05.2 +2.7
GKP   Gorka Klasztor    74.17 331 eP      P        08 39 05.2 +2.7
MHTO  MHTO              74.20 284   P     P        08 39 04.1 +0.9
LVV   L'vov             74.22 325 eP      P        08 39 03.2 +0.3
LVV                               e                08 39 31.0
LVV                               eS      SKiKP    08 48 23.3 +2.2
LVV                               e                08 49 06.0
LVV                                 pmax  pmax
      comp=Z,120nm,1.3s
N23A  Red Feather La    74.47  48   P     P        08 39 05.8 +0.9
      baz=314
D32B  Dogwood Acres,    74.50  39   P     P        08 39 04.9 +0.3
      baz=318
STKA  Stephens Creek    74.75 183   P     P        08 39 06.6 +0.6
      comp=Z,5.2nm,0.8s,baz=347,slow=5.4,SNR=7.2
      comp=Z,5.2nm,0.8s
STKA  Stephens Creek    74.75 183   P     P        08 39 06.1 +0.1
STKA  Stephens Creek    74.75 183   P     P        08 39 06.1 +0.1
MORS  Morshin           74.81 325   P     P        08 39 07.2 +0.9
KSV   Kosov             74.92 323   P     P        08 39 07.6 +0.6
VASR  Vaslui            74.95 321 ⇓P      P        08 39 08.0 +0.8
WUAZ  Wupatki           75.02  55   P     P        08 39 09.1 +1.1
      baz=312
B35A  Bob, Littlefor    75.05  36   P     P        08 39 07.4 -0.4
      baz=319
JRN   Qarnain Island    75.21 290   P     P        08 39 08.3 -0.7
BUR08 Bucovina Ar. S    75.37 323   P     P        08 39 10.2 +0.5
BUR08                               IAmb  IAmb     08 39 14.3
      comp=Z,30nm,0.7s
BURAR Bucovina Array    75.39 323 ⇑P      P        08 39 10.3 +0.4
BURAR Bucovina Array    75.39 323   P     P        08 39 10.6 +0.8
BURAR                               IAmb  IAmb     08 39 14.7
      comp=Z,34nm,0.7s
BURAR Bucovina Array    75.39 323   P     P        08 39 10.2 +0.4
IVI   Ivigtut           75.40   7 i P     P        08 39 09.5  0.0
IVI                                 IAmb  IAmb     08 39 14.0
      comp=Z,19nm,0.6s
VLDR  Vladesti          75.41 320 ⇓P      P        08 39 10.8 +1.0
ISCO  Idaho Springs     75.41  49   P     P        08 39 11.4 +1.1
      baz=314
ISCO  Idaho Springs     75.41  49   P     P        08 39 11.1 +0.7
      baz=314
SUSD  Miller            75.56  42   P     P        08 39 11.4 +0.7
      baz=317
GHRR                    75.56 321 ⇑P      P        08 39 11.9 +1.2
MVCO  Mesa Verde        75.57  52   P     P        08 39 11.9 +0.7
      baz=313
TESR  Tescani           75.58 321 ⇓P      P        08 39 11.2 +0.4
OJC   Ojcow             75.64 327 eP      P        08 39 12.0 +0.9
OJC   Ojcow             75.64 327   P     P        08 39 11.7 +0.6
OJC                                 IAmb  IAmb     08 39 15.7
      comp=Z,68nm,0.9s
OJC   Ojcow             75.64 327   P     P        08 39 11.7 +0.6
OJC                                 pmax  pmax
      comp=Z,68nm,0.9s
STHS  Stebnicka Huta    75.69 326 eP      P        08 39 12.2 +0.8
STHS                                pmax  pmax
      comp=Z,22nm,0.6s
STHS  Stebnicka Huta    75.69 326 eP      P        08 39 12.2 +0.8
IZVR  Izvoarele         75.78 320 ⇑P      P        08 39 12.8 +0.9
F33A  5 Mile Ranch,     75.80  39   P     P        08 39 12.1 +0.1
      baz=318
PANC  Panciu            75.82 321 ⇑P      P        08 39 12.8 +0.6
JURR  Jurilovca         75.83 319 ⇑P      P        08 39 13.3 +1.1
UZH   Uzhgorod          75.87 325   P     P        08 39 13.6 +1.2
CFR   Carcaliu          75.88 320 ⇑P      P        08 39 13.1 +0.6
CFR   Carcaliu          75.88 320   P     P        08 39 13.1 +0.6
SHMA  Al-Shehemyia      75.90 292   P     P        08 39 13.1 +0.1
ODBI  Odobesti          75.95 321 ⇓P      P        08 39 14.8 +1.9
TPGR  Topolog           75.98 319 ⇓P      P        08 39 14.4 +1.2
TRSU  Trosnyk           76.00 324   P     P        08 39 14.9 +1.8
VRI   Vrincioaia        76.02 321 ⇓P      P        08 39 14.7 +1.3
VRI   Vrincioaia        76.02 321   P     P        08 39 14.7 +1.3
RUE   Ruedersdorf       76.03 332 eP      P        08 39 17.4 +4.2
MZR   Muzera            76.04 288 i P     P        08 39 13.8  0.0
      SNR=15
MZR   Muzera            76.04 288   P     P        08 39 13.4 -0.5
NIE   Niedzica          76.07 327 eP      P        08 39 15.1 +1.5
PLOR  Plostina          76.07 321 ⇑P      P        08 39 15.0 +1.4
PLOR  Plostina          76.07 321   P     P        08 39 15.0 +1.4
TRPA  Tarpa             76.15 325 ⇑P      P        08 39 15.5 +1.5
S22A  4UR Ranch, Cre    76.16  51   P     P        08 39 15.8 +1.1
      baz=314
ARCR  ARCALIA           76.17 323 ⇑P      P        08 39 15.2 +1.0
Q24A  Divide            76.25  49   P     P        08 39 15.9 +0.7
      baz=315
MCD   Coleburn Disti    76.28 343 eP      P        08 39 15.4 +0.9
TIRR  Tirgusor          76.28 319 ⇓P      P        08 39 15.6 +0.8
TIRR  Tirgusor          76.28 319   P     P        08 39 15.6 +0.8
OZUR                    76.28 322 ⇓P      P        08 39 16.7 +1.8
EYMN  Ely               76.33  35   P     P        08 39 15.0 -0.1
EYMN                                IAmb  IAmb     08 39 25.9
      comp=Z,16nm,0.8s
EYMN  Ely               76.33  35   P     P        08 39 15.4 +0.3
      baz=321
EYMN  Ely               76.33  35   P     P        08 39 15.2 +0.2
      baz=321
HARR  Harsova           76.34 319 ⇑P      P        08 39 15.9 +0.8
HARR  Harsova           76.34 319   P     P        08 39 15.9 +0.8
KSP   Ksiaz             76.48 330 eP      P        08 39 16.8 +1.0
MFTR  Murfatlar         76.48 319 ⇓P      P        08 39 16.9 +1.0
OGNE  Ogallala          76.53  46   P     P        08 39 17.0 +0.6
      baz=316
OGNE  Ogallala          76.53  46   P     P        08 39 17.2 +0.8
      baz=316
DOPR  Dopca             76.56 322 ⇑P      P        08 39 17.8 +1.4
LANS  Liptovska Anna    76.61 327 eP      P        08 39 18.4 +1.7
LANS                                pmax  pmax
      comp=Z,25nm,0.9s
LANS  Liptovska Anna    76.61 327 eP      P        08 39 18.4 +1.7
MLR   Muntele Rosu      76.67 321 ⇑P      P        08 39 18.4 +1.3
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MLR   Muntele Rosu      76.67 321   P     P        08 39 18.1 +0.9
      comp=Z,12nm,0.8s,baz=45,slow=3.8,SNR=8.9
MLR                                 LR    LR       09 15 03.5
      comp=Z,51nm,20.2s,baz=42,slow=37
      comp=Z,12nm,0.8s
MLR   Muntele Rosu      76.67 321   P     P        08 39 18.1 +0.9
MLR                                 IAmb  IAmb     08 39 23.6
      comp=Z,30nm,1.2s
MLR   Muntele Rosu      76.67 321   P     P        08 39 18.4 +1.3
ISR   Istrita           76.67 320 ⇑P      P        08 39 18.4 +1.3
ISR   Istrita           76.67 320   P     P        08 39 18.3 +1.3
OSTC  Ostas             76.74 330 eP      P        08 39 18.1 +0.8
OSTC  Ostas             76.74 330 eP      P        08 39 18.1 +0.8
CHVC  Chvalec           76.77 330 eP      P        08 39 18.5 +1.0
CHVC  Chvalec           76.77 330 eP      P        08 39 18.5 +1.0
ICOR  Ion Corvin        76.83 319 ⇑P      P        08 39 19.3 +1.5
UPC   Upice             76.85 330 eP      P        08 39 19.0 +1.1
UPC   Upice             76.85 330 eP      P        08 39 19.0 +1.1
DPC   Dobruska-Polom    76.87 329 eP      P        08 39 19.3 +1.2
DPC                               esP     pP       08 39 44.3 +2.6
DPC   Dobruska-Polom    76.87 329 eP      P        08 39 19.3 +1.2
DPC                               e                08 39 44.3
MORC  Moravsky Berou    76.87 328 ⇓P      P        08 39 19.3 +1.2
MORC  Moravsky Berou    76.87 328 eP      P        08 39 18.3 +0.2
MORC  Moravsky Berou    76.87 328   P     P        08 39 19.3 +1.2
SDCO  Great Sand Dun    76.91  50   P     P        08 39 19.8 +0.9
      baz=315
SDCO  Great Sand Dun    76.91  50   P     P        08 39 19.8 +0.9
      baz=315
KRLC  Kraliky           76.92 329 eP      P        08 39 19.4 +1.0
KRLC  Kraliky           76.92 329 eP      P        08 39 19.4 +1.0
K31A  O'Neill           76.99  43   P     P        08 39 19.9 +1.0
      baz=317
KALB  Balgarevo         77.06 318 ⇑P      P        08 39 20.2 +1.1
BR131 Keskin Array S    77.07 313c iP     P        08 39 19.4 -0.1
BR131 Keskin Array S    77.07 313   P     P        08 39 20.4 +0.9
      SNR=7.7
BRTR  Keskin Array B    77.07 313   P     P        08 39 20.1 +0.5
      comp=Z,8.8nm,0.7s,baz=61,slow=2.2,SNR=32
BRTR                                PP    PP       08 42 13.6  0.0
      comp=Z,3.1nm,0.9s,baz=46,slow=6.0,SNR=4.0
BRTR                                LR    LR       09 17 03.4
      comp=Z,40nm,18.9s,baz=70,slow=38
      comp=Z,8.8nm,0.7s
BRTR  Keskin Array B    77.07 313   P     P        08 39 20.0 +0.5
DRGR                    77.12 324 ⇑P      P        08 39 20.2 +0.6
DRGR                    77.12 324   P     P        08 39 20.2 +0.6
VOIR                    77.12 321 ⇓P      P        08 39 20.9 +1.3
VOIR                    77.12 321   P     P        08 39 20.9 +1.3
ECSD  EROS Data Cent    77.22  41   P     P        08 39 20.2 +0.1
      baz=318
ECSD  EROS Data Cent    77.22  41   P     P        08 39 20.4 +0.3
      baz=318
CLL   Collm             77.27 332   P     P        08 39 20.4 +0.1
CLL   Collm             77.27 332 i P     P        08 39 20.7 +0.4
      comp=Z,20nm,0.8s
CLL                               i Pmax           08 39 23.9
      comp=Z,66nm,0.8s
CLL                               ex      x        08 39 30.0
CLL                               e(SS)            08 54 00.0
CLL                               eSSSS            08 59 36.0
CLL   Collm             77.27 332 i P     P        08 39 20.7 +0.4
CLL                               e*PP    pP       08 39 45.0 +1.2
CLL                                 pmax  pmax
      comp=Z,66nm,0.8s
CLL   Collm             77.27 332 eL      L        09 10 24.2
      comp=Z,74nm,21.7s
BRG   Berggiesshubel    77.30 331 eP      P        08 39 21.1 +0.6
BRG                                 Amp            08 39 25.4
      comp=Z,22nm,1.1s
BRG   Berggiesshubel    77.30 331 eP      P        08 39 21.0 +0.6
BRG                                 pmax  pmax
      comp=Z,22nm,1.1s
ARR   Arges             77.36 322 ⇑P      P        08 39 22.8 +1.8
VYHS  Vyhne             77.39 327 eP      P        08 39 22.0 +1.0
VYHS                                pmax  pmax
      comp=Z,27nm,1.0s
VYHS  Vyhne             77.39 327 eP      P        08 39 22.0 +1.0
ANTO  Ankara            77.42 313 ⇑P      P        08 39 20.7 -0.7
ANTO  Ankara            77.42 313   P     P        08 39 20.7 -0.7
ANTO  Ankara            77.42 313   P     P        08 39 20.5 -0.9
INVG  Invergeldie, C    77.51 343 eP      P        08 39 21.7 +0.2
INVG                                IAmb  IAmb     08 39 25.7
      comp=Z,26nm,0.8s
JAVC  Velka Javorina    77.56 328 eP      P        08 39 23.7 +1.7
TUC   Tucson            77.56  57   P     P        08 39 23.4 +1.1
      baz=313
VRAC  Vranov            77.61 329 ⇓P      P        08 39 23.8 +1.5
VRAC  Vranov            77.61 329   P     P        08 39 22.7 +0.5
      comp=Z,21nm,0.7s,baz=59,slow=12,SNR=17
VRAC                                LR    LR       09 16 52.0
      comp=Z,58nm,20.3s,baz=14,slow=38
      comp=Z,21nm,0.7s
VRAC  Vranov            77.61 329 eP      P        08 39 23.2 +1.0
VRAC  Vranov            77.61 329   P     P        08 39 23.7 +1.5
ESY   Stoneypath        77.67 342 eP      P        08 39 23.1 +0.7
GOPC  GO Pecny, Ondr    77.79 330 eP      P        08 39 24.2 +1.0
GOPC  GO Pecny, Ondr    77.79 330 eP      P        08 39 24.2 +1.0
MDUB  Mudurnu           77.82 315   P     P        08 39 24.1 +0.5
PRU   Pruhonice         77.82 330 eP      P        08 39 24.3 +1.0
PRU                               esP     pP       08 39 48.7 +1.7
PRU   Pruhonice         77.82 330 eP      P        08 39 24.3 +1.0
PRU                               e                08 39 48.7
RAZG  Razgrad           77.86 319 ⇓P      P        08 39 24.4 +0.7
KRUC  Moravsky          77.89 329 eP      P        08 39 24.4 +0.7
SMOL  Smolenice         77.93 328 eP      P        08 39 25.5 +1.5
SMOL                                pmax  pmax
      comp=Z,17nm,0.8s
LAWE  Loch Awe, Argy    77.95 344 eP      P        08 39 24.3 +0.4
T25A  Trinidad          77.95  50   P     P        08 39 25.2 +0.5
      baz=315
SIRR  Siria             77.98 324 ⇑P      P        08 39 24.8 +0.5
TREC  Trest             78.04 329 eP      P        08 39 25.4 +0.8
TREC  Trest             78.04 329 eP      P        08 39 25.4 +0.8
MODS  Modra-Piesok      78.11 328 eP      P        08 39 26.6 +1.6
MODS                                pmax  pmax
      comp=Z,55nm,1.0s
MODS  Modra-Piesok      78.11 328 eP      P        08 39 26.6 +1.6
GZR   Gura Zlata        78.17 323 ⇑P      P        08 39 26.0 +0.5
GZR   Gura Zlata        78.17 323   P     P        08 39 29.5 +4.0
PGBU  Glenifferbraes    78.18 343 eP      P        08 39 26.1 +0.9
PGBU                                IAmb  IAmb     08 39 31.1
      comp=Z,96nm,0.9s
SURR  Surduc            78.18 323 ⇓P      P        08 39 26.4 +1.0
D41A  Chassel           78.25  34   P     P        08 39 26.5 +0.7
      baz=323
MOX   Moxa              78.31 332   P     P        08 39 26.4 +0.3
MOX                                 pmax  pmax
      comp=Z,15nm,1.2s
MOX   Moxa              78.31 332 eP      P        08 39 26.4 +0.3
      comp=Z,54nm,2.0s,baz=31,slow=4.9
MOX                               eL      L        09 11 16.3
      comp=Z,83nm,18.1s
ANMO  Albuquerque       78.33  53 i P     P        08 39 27.2 +0.5
ANMO                                pmax  pmax
      comp=Z,11nm,2.6s
ANMO  Albuquerque       78.33  53   P     P        08 39 27.5 +0.8
      baz=315
ANMO  Albuquerque       78.33  53   P     P        08 39 27.4 +0.8
      baz=315
EKA   Eskdalemuir Ar    78.33 342   P     P        08 39 26.8 +0.7
      comp=Z,18nm,0.7s,baz=28,slow=4.9,SNR=32
      comp=Z,18nm,0.7s
ESK   Eskdalemuir       78.36 342 eP      P        08 39 26.8 +0.6
ESK                                 IAmb  IAmb     08 39 30.8
      comp=Z,26nm,0.8s
DOK   Doka              78.47 285   P     P        08 39 27.5 +0.1
      SNR=6.8
BZS   Buzias            78.51 324 ⇑P      P        08 39 27.6 +0.4
BZS   Buzias            78.51 324   P     P        08 39 27.6 +0.4
I37B  Waseca            78.52  39   P     P        08 39 27.9 +0.5
      baz=320
SCHQ  Schefferville     78.58  18   P     P        08 39 27.7 +0.2
      comp=Z,7.6nm,0.6s,baz=321,slow=8.8,SNR=26
SCHQ                                LR    LR       09 15 33.1
      comp=Z,57nm,22.0s,baz=42,slow=37
      comp=Z,7.6nm,0.6s
Y22A  Socorro           78.74  54   P     P        08 39 30.3 +1.4
      baz=315
CKRC  Cesky Krumlov     78.87 330 eP      P        08 39 29.9 +0.7
CKRC  Cesky Krumlov     78.87 330 eP      P        08 39 29.9 +0.7
KHC   Kasperske Hory    78.88 330   P     P        08 39 30.0 +0.7
KHC                                 IAmb  IAmb     08 39 34.6
      comp=Z,38nm,0.7s
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KHC   Kasperske Hory    78.88 330 eP      P        08 39 30.1 +0.8
KHC                               epP     pP       08 39 52.1 -0.8
KHC   Kasperske Hory    78.88 330   P     P        08 39 30.0 +0.7
KHC                                 pmax  pmax
      comp=Z,38nm,0.7s
PLVB  Pleven            78.88 320 ⇑P      P        08 39 29.8 +0.5
KESW  Keswick, Cumbr    79.01 342 eP      P        08 39 30.2 +0.4
KESW                                IAmb  IAmb     08 39 35.5
      comp=Z,134nm,1.1s
CONA  Conrad Observa    79.02 328 eP      P        08 39 31.4 +1.3
      comp=Z,17nm,0.6s,SNR=5.4
RONA  Rosalia, Austr    79.04 328 eP      P        08 39 31.7 +1.5
      comp=Z,12nm,0.8s,SNR=11
GEC2  GERESS Array S    79.08 330 eL      L        09 15 49.4
      comp=Z,84nm,21.5s
GERES GERESS Array B    79.08 330   P     P        08 39 30.8 +0.4
      comp=Z,9.4nm,0.7s,baz=39,slow=6.3,SNR=23
GERES                               LR    LR       09 18 30.3
      comp=Z,45nm,18.4s,baz=54,slow=39
      comp=Z,9.4nm,0.7s
GERES GERESS Array B    79.08 330   P     P        08 39 30.6 +0.2
GAL1  Galloway          79.10 343 eP      P        08 39 30.5 +0.3
MDVR  Moldovita         79.12 323 ⇑P      P        08 39 30.9 +0.3
319A  Douglas           79.13  57   P     P        08 39 32.2 +1.1
319A                                IAmb  IAmb     08 39 44.4
      comp=Z,18nm,0.8s
WHFO  Wadi Hawf         79.19 284   P     P        08 39 30.8 -0.7
121A  Cookes Peak, D    79.23  55   P     P        08 39 33.5 +1.9
      baz=314
HPK   Haverah Park      79.24 341 eP      P        08 39 32.0 +0.9
HPK                                 IAmb  IAmb     08 39 35.8
      comp=Z,57nm,0.9s
GRF   Grafenberg Arr    79.25 332 eP      P        08 39 34.5 +3.3
      comp=Z,46nm,0.7s,baz=31,slow=4.9
GRF                               eL      L        09 14 25.9
      comp=Z,62nm,18.7s
CBKS  Cedar Bluff       79.29  46   P     P        08 39 31.1 -0.6
      baz=317
CBKS  Cedar Bluff       79.29  46   P     P        08 39 31.2 -0.5
      baz=317
MORH  Mrgy, Hungar      79.30 326 ⇑P      P        08 39 31.7 +0.2
RAO   Raoul Island      79.51 148   P     P        08 39 34.2 +1.5
      comp=Z,147nm,0.5s,baz=277,slow=24,SNR=1.4
FRGS  Fruska Gora       79.65 324 ⇑P      P        08 39 34.0 +0.5
FRGS  Fruska Gora       79.65 324⇑iP      P        08 39 33.8 +0.3
ARSA  Arzberg           79.71 328 eP      P        08 39 34.8 +1.0
      comp=Z,12nm,1.3s
TNS   Taunus Mts        79.73 334 eL      L        09 11 00.5
      comp=Z,78nm,21.9s
LBWR  Ladybower, Pea    79.78 341 eP      P        08 39 34.5 +0.5
LBWR                                IAmb  IAmb     08 39 39.4
      comp=Z,113nm,0.9s
N35A  Tabor             79.86  42   P     P        08 39 34.9 +0.3
      baz=319
I40A  Norwalk           79.88  38   P     P        08 39 34.5 -0.3
      baz=322
ABTO  Aybut             79.90 284   P     P        08 39 34.9 -0.4
BOVS  Bovan             80.03 322 ⇑P      P        08 39 35.3 -0.2
BIOA  Bad Ischl, Aus    80.06 329 eP      P        08 39 36.5 +0.8
      comp=Z,10nm,0.9s
ALN   Alexandroupoli    80.11 318   P     P        08 39 36.5 +0.5
ALN   Alexandroupoli    80.11 318   P     P        08 39 36.5 +0.5
ALN                                 pmax  pmax
      comp=Z,10.0nm,0.7s
VTS   Vitosha           80.12 321 ⇓P      P        08 39 37.4 +1.1
VTS   Vitosha           80.12 321   P     P        08 39 37.3 +1.1
MEM   Membach           80.16 335 dP      P        08 39 36.7 +0.6
      comp=Z,14nm,0.8s
RDO   Rodhopi           80.17 318   P     P        08 39 37.1 +0.8
RDO                                 IAmb  IAmb     08 39 47.4
      comp=Z,22nm,0.8s
SCIA  State Center      80.23  40   P     P        08 39 37.0 +0.3
      baz=321
BSTI  Sart Tilman       80.32 335 dP      P        08 39 37.7 +0.7
SOKA  Soboth            80.37 328 i P     P        08 39 37.9 +0.5
      comp=Z,13nm,0.7s,SNR=16
PERS  Pernice           80.37 328 i P     P        08 39 37.9 +0.5
PERS                              epP     pP       08 40 03.1 +2.0
BHOU  Houvegnez         80.39 335 dP      P        08 39 40.0 +2.6
BHOU                              dPcP    PcP      08 39 46.4 +2.2
DIVS  Divibare          80.42 323   P     P        08 39 37.7  0.0
DIVS  Divibare          80.42 323⇑iP      P        08 39 37.7  0.0
FUR   Furstenfeldbru    80.52 331 eL      L        09 12 48.8
      comp=Z,81nm,19.7s
BCLA  Clavier           80.55 335 dP      P        08 39 38.5 +0.3
FOEL  Foel Wylfa        80.60 341 eP      P        08 39 38.8 +0.3
FOEL                                IAmb  IAmb     08 39 43.5
      comp=Z,68nm,0.8s
BGES  Gesves            80.64 336 dx      x        08 39 42.3
KBA   Koelnbreinsper    80.68 329 i P     P        08 39 40.5 +1.3
      comp=Z,53nm,0.8s,SNR=26
OBKA  Obir              80.69 328 eP      P        08 39 39.3 +0.1
      comp=Z,5.3nm,0.6s
OBKA  Obir              80.69 328⇑iP      P        08 39 38.7 -0.5
KSU1  Kansas State U    80.70  44   P     P        08 39 38.9 -0.3
      baz=319
BMRD  Maredsous         80.81 336 dP      P        08 39 40.0 +0.4
      comp=Z,25nm,0.8s
JFWS  Jewell Farm       80.81  38   P     P        08 39 38.4 -1.4
      baz=322
BBLS  Lazi&#263;i       80.86 324⇑iP      P        08 39 40.6 +0.5
HAPS  Han Pijesak,Bl    80.88 324⇑iP      P        08 39 39.3 -0.9
MMAI  Mount Meron Ar    80.88 307   LR    LR       09 19 37.3
      comp=Z,36nm,19.4s,baz=106,slow=39
PDKS  Podkum            80.89 328 eP      P        08 39 40.2  0.0
PDKS                              i PcP   PcP      08 39 44.3 -2.2
PDKS                              i pP    pP       08 40 04.2 +0.3
CRES  Cresnjev          80.90 327⇑iP      P        08 39 40.1 -0.1
MYKA  Terra Mystica     80.94 329 eP      P        08 39 40.4 -0.1
      comp=Z,4.6nm,0.5s
A051A Mrakovica         80.98 326⇑iP      P        08 39 40.6 -0.1
L40A  Anamosa           81.04  39   P     P        08 39 41.1 +0.1
      baz=322
DOU   Dourbes           81.05 336 dP      P        08 39 42.7 +1.9
N38A  Joes South For    81.08  41   P     P        08 39 41.5 +0.3
      baz=321
BLY   Banja Luka        81.08 326⇑iP      P        08 39 39.6 -1.6
SJES  Sjenica           81.09 323⇑iP      P        08 39 42.0 +0.6
AMTX  Amarillo          81.11  50   P     P        08 39 41.5 -0.1
      baz=317
AMTX  Amarillo          81.11  50   P     P        08 39 42.7 +1.1
      baz=317
WATA  Walderalm         81.12 330 eP      P        08 39 42.2 +0.7
      comp=Z,30nm,0.6s,SNR=7.4
RAYN  Ar Rayn           81.14 294   P     P        08 39 42.0 +0.2
RAYN  Ar Rayn           81.14 294 i P     P        08 39 42.3 +0.5
      SNR=7.1
RAYN  Ar Rayn           81.14 294   P     P        08 39 42.0 +0.2
MSTX  Muleshoe          81.16  51   P     P        08 39 42.0 +0.1
      baz=317
MSTX  Muleshoe          81.16  51   P     P        08 39 42.9 +1.0
      baz=317
WTTA  Wattenberg        81.16 330 eP      P        08 39 42.3 +0.6
      comp=Z,31nm,0.6s,SNR=8.0
BOJS  Bojanci           81.25 327 i P     P        08 39 42.1 +0.1
BOJS  Bojanci           81.25 327⇑iP      P        08 39 41.7 -0.3
MNTX  Cornudas Mount    81.26  55   P     P        08 39 43.3 +0.9
      baz=316
MNTX  Cornudas Mount    81.26  55   P     P        08 39 43.2 +0.9
      baz=316
ABTA  Abfaltersbach     81.27 329 ePcP    PcP      08 39 46.6 -1.6
      comp=Z,8.9nm,0.6s
MOTA  Moosalm           81.28 331 eP      P        08 39 43.0 +0.6
      comp=Z,15nm,0.9s,SNR=15
RETA  Reutte            81.28 331 eP      P        08 39 42.9 +0.6
      comp=Z,10nm,1.1s
SQTA  Sankt Quirin      81.35 330 i P     P        08 39 43.4 +0.8
      comp=Z,11nm,0.7s
MCH1  Michaelchurch     81.38 341 eP      P        08 39 43.2 +0.6
MCH1                                IAmb  IAmb     08 39 45.2
      comp=Z,87nm,1.1s
CEY   Cerknica          81.38 328⇑iP      P        08 39 42.3 -0.5
MGRS  Mrkonjic Grad     81.40 325⇑iP      P        08 39 43.8 +0.9
BFO   Black Forest      81.40 333 eL      L        09 11 00.4
      comp=Z,64nm,21.3s
A050A Klekovaca         81.57 326⇑iP      P        08 39 42.4 -1.4
UPM   Unac-Piva         81.61 324⇑iP      P        08 39 43.4 -0.8
SRKY  Kupres RS         81.65 325⇑iP      P        08 39 44.4 +0.1
GLMI  Grayling          81.68  33   P     P        08 39 45.0 +0.7
      baz=325
FETA  Feichten          81.69 331 eP      P        08 39 45.1 +0.5
      comp=Z,14nm,0.8s
SKDS  Skadanscina       81.70 328⇑iP      P        08 39 43.5 -0.9
DAVA  Damuels           81.77 331 i P     P        08 39 44.9  0.0
      comp=Z,33nm,0.8s,SNR=5.8
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P38A	**Dawn**	**81.84**	**42**	P	**P**	**08 39 45.5**	**+0.2**
	baz=321						
BRY	**Bratogost**	**82.01**	**324**	⇑*i*P	**P**	**08 39 45.7**	**-0.5**
PDG	**Podgorica**	**82.07**	**323**	⇑P	**P**	**08 39 46.9**	**+0.5**
PDG	**Podgorica**	**82.07**	**323**	P	**P**	**08 39 46.4**	**0.0**
PDG				IAmb	IAmb	08 39 47.5	
	comp=Z,27nm,0.6s						
DAVOX	**Davos/Dischmat**	**82.20**	**331**	P	**P**	**08 39 47.6**	**+0.4**
	comp=Z,13nm,0.6s,baz=285,slow=5.5,SNR=15						
DAVOX				LR	LR	09 20 50.7	
	comp=Z,37nm,21.1s,baz=80,slow=39						
	comp=Z,13nm,0.6s						
DRME	**Dracevica, Mon**	**82.30**	**323**	⇑*i*P	**P**	**08 39 47.8**	**+0.2**
HCY	**Herceg Novi**	**82.39**	**323**	⇑*i*P	**P**	**08 39 47.3**	**-0.8**
STON	**Ston**	**82.39**	**324**	⇑*i*P	**P**	**08 39 46.1**	**-1.9**
T35B	**Sooner Cattle**	**82.40**	**46**	P	**P**	**08 39 48.9**	**+0.6**
	baz=319						
L44A	**Lake County Fo**	**82.44**	**37**	P	**P**	**08 39 49.2**	**+0.9**
	baz=324						
P40A	**Paris**	**82.63**	**41**	P	**P**	**08 39 50.0**	**+0.6**
	baz=322						
TIR	**Tirane**	**82.67**	**322**	P	**P**	**08 39 50.0**	**+0.5**
TIR				IAmb	IAmb	08 39 53.8	
	comp=Z,31nm,0.6s						
TIR	**Tirane**	**82.67**	**322**	P	**P**	**08 39 50.0**	**+0.5**
WMOK	**Wichita Mounta**	**82.83**	**48**	P	**P**	**08 39 51.3**	**+0.8**
	baz=318						
WMOK	**Wichita Mounta**	**82.83**	**48**	P	**P**	**08 39 50.7**	**+0.2**
	baz=318						
J47A	**Sunmer**	**82.90**	**35**	P	**P**	**08 39 51.2**	**+0.5**
	baz=325						
J47A				P	**P**	**08 39 51.2**	**+0.5**
	baz=325						
HDIL	**Hopedale**	**83.12**	**39**	P	**P**	**08 39 52.5**	**+0.6**
	baz=323						
S39A	**Bolivar**	**83.44**	**43**	P	**P**	**08 39 53.5**	**-0.1**
	baz=321						
R40A	**Maddies Statio**	**83.50**	**42**	P	**P**	**08 39 54.1**	**+0.3**
	baz=322						
TUL1	**Leonard**	**83.54**	**46**	P	**P**	**08 39 54.7**	**+0.6**
	baz=320						
TUL1	**Leonard**	**83.54**	**46**	P	**P**	**08 39 54.7**	**+0.6**
	baz=320						
U38A	**Gravette**	**83.87**	**45**	P	**P**	**08 39 56.3**	**+0.5**
	baz=320						
PMOR	**Pomariorio Ree**	**83.96**	**117**	*e*T	T	10 12 15.4	
	comp=Z,47nm,0.3s						
TX31	**Lajitas Ar. Si**	**83.99**	**55**	P	**P**	**08 39 58.1**	**+1.4**
	baz=317						
TXAR	**Lajitas Array**	**83.99**	**55**	P	**P**	**08 39 57.7**	**+1.1**
	comp=Z,4.0nm,0.9s,baz=294,slow=3.6,SNR=35						
	comp=Z,4.0nm,0.9s						
SSF	**Saint Saulge**	**84.08**	**335**	*e*P	**P**	**08 39 56.3**	**-0.3**
SSF				pmax	pmax		
	comp=Z,11nm,0.7s						
L48A	**N Adams**	**84.13**	**35**	P	**P**	**08 39 57.8**	**+0.8**
	baz=326						
L48A				P	**P**	**08 39 57.8**	**+0.8**
	baz=326						
AAM	**Ann Arbor**	**84.16**	**34**	P	**P**	**08 39 57.4**	**+0.2**
	baz=326						
AAM	**Ann Arbor**	**84.16**	**34**	P	**P**	**08 39 57.8**	**+0.7**
	baz=326						
FDMO	**Fiordimonte**	**84.17**	**327**	P	**P**	**08 39 57.4**	**+0.2**
FDMO				IAmb	IAmb	08 40 03.4	
	comp=Z,23nm,0.7s						
CCM	**Cathedral Cave**	**84.18**	**42**	P	**P**	**08 39 57.9**	**+0.6**
	baz=322						
CCM	**Cathedral Cave**	**84.18**	**42**	P	**P**	**08 39 57.7**	**+0.4**
	baz=322						
Z35A	**Perchaven, San**	**84.72**	**48**	P	**P**	**08 40 00.4**	**+0.3**
	baz=319						
PPT	**Papeete**	**84.77**	**120**	LR	LR	09 14 00.1	
	comp=Z,45nm,19.8s,baz=335,slow=33						
PPT2	**Papeete2**	**84.78**	**120**	*e*LR	LR	09 06 22.7	
	comp=Z,210nm,34.8s						
PPT2				*e*LR	LR	09 06 45.5	
	comp=Z,216nm,31.0s						
PPT2	**Papeete2**	**84.78**	**120**	*e*T	T	10 13 31.8	
	comp=Z,7.9nm,0.3s						
P46A	**Rosedale**	**84.82**	**38**	P	**P**	**08 40 01.2**	**+0.6**
	baz=324						
IDI	**Anoyia**	**85.00**	**315**	LR	LR	09 23 13.5	
	comp=Z,25nm,18.2s,baz=84,slow=39						
N49A	**Columbus Grove**	**85.08**	**35**	P	**P**	**08 40 02.5**	**+0.7**
	baz=326						
N49A				P	**P**	**08 40 02.5**	**+0.7**
	baz=326						
D62A	**Allapoint, All**	**85.09**	**23**	P	**P**	**08 40 02.0**	**+0.3**
	baz=335						
D62A				P	**P**	**08 40 02.0**	**+0.3**
	baz=335						
E62A	**Clayton Lake**	**85.38**	**23**	P	**P**	**08 40 03.5**	**+0.3**
	baz=335						
E62A				P	**P**	**08 40 03.5**	**+0.3**
	baz=335						
BMNY	**Brushton-Moira**	**85.41**	**27**	P	**P**	**08 40 03.3**	**-0.1**
	baz=332						
S44A	**Carbondale**	**85.42**	**41**	P	**P**	**08 40 03.9**	**+0.3**
	baz=323						
MFF	**Saint Martin d**	**85.58**	**337**	*e*P	**P**	**08 40 04.4**	**+0.2**
MFF				pmax	pmax		
	comp=Z,27nm,1.2s						
LONY	**Lake Ozonia**	**85.58**	**27**	P	**P**	**08 40 04.7**	**+0.4**
	baz=332						
WHTX	**Lake Whitney,**	**85.62**	**49**	P	**P**	**08 40 04.9**	**+0.3**
	baz=319						
P48A	**Milroy**	**85.75**	**37**	P	**P**	**08 40 05.6**	**+0.4**
	baz=325						
P48A				P	**P**	**08 40 05.6**	**+0.4**
	baz=325						
MIAR	**Mount Ida**	**85.75**	**45**	P	**P**	**08 40 05.6**	**+0.4**
	baz=321						
MIAR	**Mount Ida**	**85.75**	**45**	P	**P**	**08 40 06.1**	**+0.8**
	baz=321						
ERPA	**Erie**	**85.78**	**32**	P	**P**	**08 40 05.3**	**0.0**
	baz=328						
LCAR	**Lake Charles**	**85.79**	**43**	P	**P**	**08 40 05.7**	**+0.3**
	baz=322						
URZ	**Urewera**	**85.97**	**156**	LR	LR	09 13 39.4	
	comp=Z,38nm,18.7s,baz=30,slow=32						
P49A	**Miami Univ. Ec**	**86.00**	**37**	P	**P**	**08 40 05.8**	**-0.6**
	baz=326						
P49A	**Miami Univ. Ec**	**86.00**	**37**	P	**P**	**08 40 06.5**	**+0.1**
	baz=326						
M53A	**WI Miller and**	**86.09**	**33**	P	**P**	**08 40 06.2**	**-0.6**
	baz=328						
ACSO	**Alum Creek Sta**	**86.16**	**35**	P	**P**	**08 40 07.0**	**-0.2**
	baz=327						
WCI	**Wyandotte Cave**	**86.37**	**38**	P	**P**	**08 40 07.8**	**-0.4**
	baz=325						
CAF	**Calviac**	**86.44**	**335**	*e*P	**P**	**08 40 09.3**	**+0.8**
CAF				pmax	pmax		
	comp=Z,13nm,0.8s						
435B	**Jarrell**	**86.46**	**50**	P	**P**	**08 40 08.2**	**-0.6**
	baz=319						
PKME	**Peaks-Kenny Pk**	**86.67**	**24**	P	**P**	**08 40 10.2**	**+0.6**
	baz=335						
M55A	**Ridgway**	**86.81**	**32**	P	**P**	**08 40 10.9**	**+0.5**
	baz=329						
M55A				P	**P**	**08 40 10.9**	**+0.5**
	baz=329						
O53A	**New Philadelph**	**86.88**	**34**	P	**P**	**08 40 11.0**	**+0.3**
	baz=328						
T47A	**Sharon Grove**	**87.00**	**40**	P	**P**	**08 40 11.9**	**+0.6**
	baz=324						
Q51A	**Peebles**	**87.01**	**36**	P	**P**	**08 40 11.9**	**+0.5**
	baz=326						
Q51A				P	**P**	**08 40 11.9**	**+0.5**
	baz=326						
P52A	**Corning**	**87.02**	**35**	P	**P**	**08 40 11.2**	**-0.2**
	baz=327						
UPAO	**U. Pittsburgh**	**87.16**	**33**	P	**P**	**08 40 12.6**	**+0.5**
	baz=328						
BINY	**Binghamton**	**87.21**	**30**	P	**P**	**08 40 13.1**	**+0.8**
	baz=331						
O54A	**Avella**	**87.27**	**33**	P	**P**	**08 40 13.5**	**+0.9**
	baz=328						
O54A				P	**P**	**08 40 13.5**	**+0.9**
	baz=328						
WVT	**Waverly**	**87.36**	**41**	P	**P**	**08 40 13.0**	**-0.1**
	baz=324						
WVT	**Waverly**	**87.36**	**41**	P	**P**	**08 40 13.4**	**+0.4**
	baz=324						
I63A	**Otisfield**	**87.38**	**25**	P	**P**	**08 40 14.3**	**+1.3**
	baz=334						
I63A				P	**P**	**08 40 14.3**	**+1.3**
	baz=334						
M57A	**Sunshine Farm,**	**87.54**	**31**	P	**P**	**08 40 14.7**	**+0.9**
	baz=330						
M57A				P	**P**	**08 40 14.7**	**+0.9**
	baz=330						
SSPA	**Standing Stone**	**87.86**	**32**	P	**P**	**08 40 15.2**	**-0.2**
	baz=330						
OXF	**Oxford**	**87.89**	**43**	P	**P**	**08 40 15.7**	**+0.1**
	baz=323						
PABK	**Blue Knob Stat**	**87.91**	**32**	P	**P**	**08 40 16.5**	**+0.8**
	baz=329						
MCWV	**Mont Chateau**	**87.93**	**33**	P	**P**	**08 40 16.1**	**+0.3**
	baz=329						
MCWV	**Mont Chateau**	**87.93**	**33**	P	**P**	**08 40 17.0**	**+1.3**
	baz=329						
U49A	**Red Boiling Sp**	**88.00**	**39**	P	**P**	**08 40 16.8**	**+0.6**
	baz=325						
T50A	**Nancy**	**88.02**	**38**	P	**P**	**08 40 16.8**	**+0.6**
	baz=326						
T50A				P	**P**	**08 40 16.8**	**+0.6**
	baz=326						
Q54A	**Coxs Mills**	**88.11**	**34**	P	**P**	**08 40 17.5**	**+0.9**
	baz=328						
Q54A				P	**P**	**08 40 17.5**	**+0.9**
	baz=328						
L61B	**Northampton**	**88.14**	**27**	P	**P**	**08 40 16.4**	**-0.3**
	baz=333						
V48A	**Smith Brothers**	**88.15**	**40**	P	**P**	**08 40 17.3**	**+0.4**
	baz=325						
VAE	**Valguarnera**	**88.26**	**323**	LR	LR	09 22 53.9	
	comp=Z,69nm,18.1s,baz=142,slow=38						
TZTN	**Tazewell**	**88.99**	**37**	P	**P**	**08 40 20.5**	**-0.4**
	baz=326						
TBI	**Tubuai**	**89.14**	**124**	*e*T	T	10 18 57.6	
	comp=Z,9.8nm,0.3s						
RPZ	**Rata Peaks**	**89.46**	**162**	LR	LR	09 18 14.4	
	comp=Z,36nm,21.3s,baz=298,slow=34						
TKL	**Tuckaleechee C**	**89.62**	**38**	LR	LR	09 22 55.5	
	comp=Z,23nm,18.8s,baz=356,slow=37						
LRAL	**Lakeview Retre**	**90.26**	**42**	P	**P**	**08 40 26.0**	**-0.8**
	baz=324						
KEST	**Kesra**	**91.89**	**326**	P	**P**	**08 40 34.0**	**-0.4**
	comp=Z,3.8nm,0.8s,baz=351,slow=2.3,SNR=4.3						
KEST				LR	LR	09 26 19.3	
	comp=Z,48nm,18.2s,baz=262,slow=38						
	comp=Z,3.8nm,0.8s						
KEST	**Kesra**	**91.89**	**326**	P	**P**	**08 40 34.2**	**-0.3**
ESDC	**Sonseca Array**	**93.04**	**337**	P	**P**	**08 40 39.1**	**-0.5**
	comp=Z,3.0nm,0.7s,baz=12,slow=4.0,SNR=17						
ESDC				LR	LR	09 29 11.6	
	comp=Z,22nm,19.7s,baz=315,slow=40						
	comp=Z,3.0nm,0.7s						
DWPF	**Disney Wildern**	**97.02**	**41**	P	**P**	**08 40 56.9**	**-1.0**
	baz=327						
MDT	**Midelt**	**99.59**	**335**	LR	LR	09 33 24.5	
	comp=Z,22nm,18.7s,baz=336,slow=40						
TORD	**Torodi Ar. Bea**	**114.91**	**321**	PKP	**PKiKP**	**08 46 05.9**	**-0.9**
	comp=Z,0.7nm,0.9s,baz=42,slow=1.4,SNR=5.1						
TORD				PP	**PP**	**08 47 00.7**	**-5.0**
	comp=Z,3.2nm,1.0s,baz=34,slow=7.1,SNR=7.8						
TORD				PKKPbc	**PKKPbc**	**08 56 42.9**	**+1.2**
	comp=Z,1.2nm,0.7s,baz=202,slow=2.3,SNR=7.0						
DBIC	**Dimbokro**	**123.58**	**324**	PP	**PP**	**08 48 02.3**	**-3.0**
	comp=Z,5.2nm,0.6s,baz=32,slow=7.5,SNR=6.6						
ELIB	**Princess Elisa**	**140.26**	**204**	*d*PKP	**PKPdf**	**08 46 47.0**	**-6.2**
H03N2	**Juan Fernandez**	**144.18**	**89**	T	T	11 28 21.1	
	baz=302,slow=77,SNR=5.4						
H03N3	**Juan Fernandez**	**144.19**	**89**	T	T	11 28 21.3	
	baz=302,slow=77,SNR=11						
H03N1	**Juan Fernandez**	**144.20**	**89**	T	T	11 28 24.6	
	baz=302,slow=77,SNR=9.3						
BELA	**Belgrano 2**	**145.17**	**180**	PKPbc	**PKPbc**	**08 47 01.4**	**0.0**
PTLB	**Pontes e Lacer**	**145.28**	**45**		**PKPbc**	**08 47 03.5**	**0.0**
TROLL	**Troll, Antarti**	**146.03**	**200**	PKPdf	**PKPab**	**08 47 05.0**	**-0.2**
SNAA	**Sanae**	**147.52**	**198**	PKPdf	**PKPbc**	**08 47 08.6**	**+0.1**
SNAA	**Sanae**	**147.52**	**198**	PKPdf	**PKPbc**	**08 47 08.3**	**-0.2**
SNAA	**Sanae**	**147.52**	**198**	PKP2	**PKPbc**	**08 47 08.3**	**-0.2**
VNA2	**Neumayer--Watz**	**149.07**	**197**	PKPdf	**PKPbc**	**08 47 13.0**	**+0.5**
	baz=145,slow=3.0						
VNA3	**Neumayer Olymp**	**149.28**	**195**	PKPdf	**PKPbc**	**08 47 13.3**	**+0.3**
BDFB	**Brasilia**	**150.25**	**27**	PKPbc	**PKPbc**	**08 47 17.0**	**-0.1**
	comp=Z,2.2nm,0.5s,baz=318,slow=4.1,SNR=4.4						
BDFB				pPKPbc	**pPKPbc**	**08 47 41.0**	**-1.2**
	comp=Z,7.6nm,0.7s,baz=268,slow=2.0,SNR=4.8						
BDFB	**Brasilia**	**150.25**	**27**	PKIKP	**PKPbc**	**08 47 17.0**	**-0.1**
BDFB						08 47 41.0	
PLCA	**Paso Flores**	**153.21**	**97**	PKPbc	**PKiKP**	**08 47 23.4**	**+0.2**
	comp=Z,4.6nm,0.8s,baz=251,slow=4.1,SNR=13						
PLCA				PKPab	**PKPab**	**08 47 35.2**	**-0.1**
	comp=Z,3.6nm,1.1s,baz=273,slow=7.8,SNR=4.1						
PLCA				pPKPbc	**pPKPbc**	**08 47 49.1**	**+0.9**
	comp=Z,3.1nm,1.0s,baz=223,slow=2.1,SNR=3.2						

IDC 03 08:36:35.6±10.0,16°.56S×171°.40W,h0km,mb3.8/2, mbtmp3.8/2,Error ellipse: s-maj=505.4km s-min=61.7km az=143.0,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**51.46**	**257**	P	P	08 45 43.0	-0.3
	0.5nm,0.5s,baz=96,slow=7.6,SNR=0.6						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**51.59**	**253**	P	P	08 45 44.2	0.0
	1.1nm,0.7s,baz=89,slow=8.2,SNR=15						
	1.1nm,0.7s						
BRTR	**Keskin Array B**	**148.26**	**322**	PKPbc	PKPbc	08 56 23.5	-0.7
	0.5nm,0.6s,baz=93,slow=2.9,SNR=6.2						

ROM 03 08:37:38.5±0.1,42°.049N±0°.004×13°.874E±0°.006, h21km,ML1.6/4,4C-3D,Error ellipse: s-maj=0.5km s-min=0.3km az=106.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INTR	**Introdacqua**	**0.04**	**149**	⇓P	Pb	08 37 42.4	+0.1
INTR				S	Sb	08 37 44.9	0.0
INTR				AML	AML		
	comp=E,286nm,0.3s						
INTR				AML	AML		
	comp=N,595nm,0.2s						
INTR				AML	AML		
	comp=N,898µm,0.2s						
INTR				AML	AML		
	comp=E,294µm,0.3s						
T0110	**Collepietro**	**0.19**	**338**	⇓P	Pb	08 37 43.9	-0.6
T0110				S	Sb	08 37 47.8	-0.9
T0110				AML	AML		
	comp=E,372µm,0.3s						
T0110				AML	AML		
	comp=N,340µm,0.6s						
LPEL	**Lama dei Pelig**	**0.23**	**90**	P	Pb	08 37 44.3	-0.2
LPEL				S	Sb	08 37 48.5	-0.3
LPEL				AML	AML		
	comp=E,178µm,0.4s						
LPEL				AML	AML		
	comp=N,148µm,0.7s						
VVLD	**Villa Vallelon**	**0.26**	**227**	⇑P	Pb	08 37 44.6	-0.2
VVLD				S	Sb	08 37 49.2	0.0
POFI	**Posta Fibreno**	**0.35**	**200**	⇑P	Pb	08 37 46.0	0.0
POFI				S	Sb	08 37 51.8	+0.7
POFI				AML	AML		
	comp=E,36µm,1.6s						
POFI				AML	AML		
	comp=N,33µm,1.1s						
POFI				AML	AML		
	comp=E,36µm,0.4s						
RNI2	**Rionero Sannit**	**0.40**	**149**	P	Pb	08 37 47.2	+0.4
LRP	**Arpino**	**0.46**	**208**	⇑P	Pb	08 37 48.0	+0.3
LRP				S	Sb	08 37 55.1	+1.1
GIGS	**Gran Sasso**	**0.46**	**331**	P	Pb	08 37 47.7	-0.2
GIGS				S	Sb	08 37 54.6	+0.3
CERA	**Filignano**	**0.46**	**167**	⇑P	Pb	08 37 48.0	+0.1
CERA				S	Sb	08 37 54.6	+0.2
MIDA	**Miranda**	**0.50**	**145**	P	Pb	08 37 48.8	+0.2
MIDA				S	Sb	08 37 56.2	+0.9
T1212	**Cascia, Frazio**	**0.93**	**319**	S	Sn	08 38 11.1	+1.9
ARVD	**Arcevia**	**1.60**	**335**	⇓P	Pn	08 38 06.2	+0.6

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*NEIC **03** 08:40:46.9±1.4,10°.53S±0°.08×161°.1E±0°.1,h10km±1km, mb4.3/15,Error ellipse: s-maj=24.1km s-min=12.4km az=72.0*

*IDC **03** 08:40:51.4±4.4,10°.43S×161°.14E,h61km±32km,mb3.8/11, mbtmp4.1/12,ML4.4/1,MS3.6/7,Error ellipse: s-maj=36.9km s-min=17.4km az=101.0*

ISC 03 08:40:52.4±0.7,10°.41S±0°.08×161°.0E±0°.1,h62km,n34, σ1s.26/31,mb4.1/17,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.41**	**314**	P	**Pn**	**08 41 14.8**	**-1.2**
	8µm,0.4s,baz=180,slow=11,SNR=48						
HNR				S	**Sn**	**08 41 35.8**	**+2.2**
	123µm,0.3s,baz=344,slow=17,SNR=35						
PMG	**Port Moresby**	**13.65**	**273**	LR	LR	08 48 54.2	
	comp=Z,187nm,20.7s,baz=144,slow=35						
CTA	**Charters Tower**	**17.14**	**234**	P	**P**	**08 44 48.9**	**+0.1**
	0.9nm,0.3s,baz=58,slow=13,SNR=15						
CTA				LR	LR	08 50 41.0	
	comp=Z,174nm,20.3s,baz=79,slow=34						
	15nm,0.8s						
CTAO	**Charters Tower**	**17.14**	**234**	P	**Pn**	**08 44 48.1**	**+0.1**
CTAO				IAmb	IAmb	08 44 53.7	
	comp=Z,17nm,0.8s						
EIDS	**Eidsvold**	**17.59**	**211**	P	**Pn**	**08 44 53.6**	**+0.1**
EIDS				IAmb	IAmb	08 44 57.6	
	comp=Z,19nm,0.9s						
WB0	**Warramunga Arr**	**27.27**	**247**	P	**P**	**08 46 31.1**	**-0.1**
WB0				IAmb	IAmb	08 46 46.9	
	comp=Z,4.0nm,0.7s						
WRA	**Warramunga Arr**	**27.36**	**247**	P	**P**	**08 46 32.0**	**-0.1**
	comp=Z,4.0nm,1.0s,baz=76,slow=9.7,SNR=5.3						
	comp=Z,4.0nm,1.0s						
WRA	**Warramunga Arr**	**27.36**	**247**	P	**P**	**08 46 32.1**	**0.0**
STKA	**Stephens Creek**	**27.89**	**217**	P	**P**	**08 46 37.7**	**+1.1**
	comp=Z,2.3nm,0.6s,baz=52,slow=14,SNR=4.1						
	comp=Z,2.3nm,0.6s						
STKA	**Stephens Creek**	**27.89**	**217**	P	**P**	**08 46 37.7**	**+1.1**
ASAR	**Alice Springs**	**28.98**	**239**	P	**P**	**08 46 45.9**	**-0.6**
	comp=Z,2.0nm,1.0s,baz=65,slow=9.9,SNR=9.4						
ASAR				LR	LR	08 58 29.9	
	comp=Z,247nm,18.1s,baz=60,slow=36						
	comp=Z,2.0nm,1.0s						
ASAR	**Alice Springs**	**28.98**	**239**	P	**P**	**08 46 44.7**	**-1.8**
TOO	**Toolangi**	**30.43**	**205**	P	**P**	**08 46 59.9**	**+0.8**
KNRA	**Kununurra**	**31.80**	**257**	P	**P**	**08 47 11.6**	**+0.2**
BBOO	**Buckleboo**	**31.99**	**222**	P	**P**	**08 47 13.3**	**+0.4**
FITZ	**Fitzroy Crossi**	**35.04**	**253**	P	**P**	**08 47 39.1**	**-0.5**
PSA00	**Pilbara Seismi**	**40.95**	**249**	P	**P**	**08 48 28.5**	**-0.8**
PSA00				IAmb	IAmb	08 48 33.4	
	comp=Z,5.3nm,1.2s						
MBWA	**Marble Bar**	**40.99**	**250**	P	**P**	**08 48 29.6**	**-0.1**
MBWA				IAmb	IAmb	08 48 30.9	
	comp=Z,6.4nm,0.7s						
MJAR	**Matsushiro Arr**	**51.39**	**336**	P	**P**	**08 49 48.7**	**-2.4**
	comp=Z,1.0nm,0.5s,baz=150,slow=9.2,SNR=2.0						
	comp=Z,1.0nm,0.5s						
ASAJ	**Asahikawa**	**56.78**	**344**	LR	LR	09 15 04.9	
	comp=Z,58nm,19.3s,baz=142,slow=36						
KSRS	**Korea Array**	**56.81**	**329**	P	**P**	**08 50 29.8**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=147,slow=5.2,SNR=2.1						
KSRS				LR	LR	09 13 28.4	
	comp=Z,24nm,19.8s,baz=110,slow=34						
	comp=Z,0.8nm,0.6s						
USRK	**Ussuriysk Ar.**	**60.38**	**336**	P	**P**	**08 50 55.3**	**+0.1**
	comp=Z,2.1nm,0.6s,baz=142,slow=7.3,SNR=2.6						
	comp=Z,2.1nm,0.6s						
KLR	**Kul'dur**	**64.71**	**339**	P	**P**	**08 51 23.7**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=144,slow=7.6,SNR=3.6						
	comp=Z,1.1nm,0.6s						
ULN	**Ulaanbaatar**	**75.09**	**326**	P	**P**	**08 52 31.1**	**+3.1**
ULN				IAmb	IAmb	08 52 31.2	
	comp=Z,2.5nm,0.8s						
SONM	**Songino Array**	**75.44**	**325**	P	**P**	**08 52 29.9**	**0.0**
	comp=Z,2.3nm,0.5s,baz=135,slow=7.7,SNR=14						
	comp=Z,2.3nm,0.5s						
SONM	**Songino Array**	**75.44**	**325**	P	**P**	**08 52 31.6**	**+1.7**
SONM				IAmb	IAmb	08 52 33.0	
	comp=Z,2.6nm,0.8s						
QSPA	**South Pole Qui**	**79.59**	**180**	P	**P**	**08 52 53.3**	**+0.6**
QSPA				IAmb	IAmb	08 52 59.9	
	comp=Z,10nm,1.4s						
M19K	**Big River Lodg**	**80.02**	**20**	P	**P**	**08 52 57.0**	**+2.0**
M19K				IAmb	IAmb	08 52 57.5	
	comp=Z,5.9nm,1.0s						
IMAR	**Indian Mountai**	**83.13**	**17**	P	**P**	**08 53 12.5**	**+1.3**
NVAR	**Mina Array Bea**	**89.23**	**51**	P	**P**	**08 53 42.6**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=255,slow=3.5,SNR=3.1						
	comp=Z,0.5nm,0.8s						
PFO	**Pinyon Flats O**	**89.58**	**56**	LR	LR	09 26 56.7	
	comp=Z,26nm,18.3s,baz=250,slow=31						
MKAR	**Makanchi Array**	**89.88**	**318**	P	**P**	**08 53 44.1**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=91,slow=4.0,SNR=4.2						
	comp=Z,0.2nm,0.5s						
NRIK	**Noril'sk**	**93.91**	**340**	LR	LR	09 34 11.1	
	comp=Z,47nm,21.5s,baz=126,slow=34						
YKA	**Yellowknife Ar**	**96.58**	**28**	P	**P**	**08 54 12.9**	**-2.2**
	comp=Z,0.2nm,0.5s,baz=260,slow=4.8,SNR=2.8						
	comp=Z,0.2nm,0.5s						

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*DNK **03** 08:48:50.3±2.7,80°.89N×1°.90W,h36km±25km,ML1.2*

BER 03 08:48:50.8±2.1,80°.70N×2°.53W,h10km,ML1.5, Confirmed Earthquake,North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOR	**Nord**	**2.36**	**299**	*i* P	Pn	08 49 26.0	-3.5
NOR				*i* S	Sn	08 49 51.2	-7.2
NOR				IAML		08 49 60.0	
	comp=Z,2.0nm,0.5s						
NOR	**Nord**	**2.36**	**299**	*e*S	Sn	08 49 55.0	-3.5
KBS	**Kingsbay**	**3.12**	**118**	*i* P	Pn	08 49 37.6	-2.4
KBS				*i* S	Sn	08 50 08.4	-8.8
KBS	**Kingsbay**	**3.12**	**118**	*e*P	Pn	08 49 38.0	-2.0
KBS				*e*		08 50 09.7	
BRBB	**Barentsburg B**	**4.04**	**122**	*e*P	Pn	08 49 51.5	-1.0
BRBB				*e*S	Sn	08 50 34.2	-5.5
BRBA	**Barentsburg A**	**4.06**	**122**	*e*P	Pn	08 49 50.1	-2.8
BRBA				*e*S	Sn	08 50 37.5	-2.9
SPA0	**Spitsbergen Ar**	**4.28**	**117**	*e*P	Pn	08 49 54.0	-1.9
SPA0				*e*S	Sn	08 50 39.7	-6.1
SPA0				IAML		08 50 44.1	
	comp=Z,2.2nm,0.7s						
DAG	**Danmarks Havn**	**5.03**	**227**	*i* P	Pn	08 50 04.0	-2.2
DAG				*i* S	Sn	08 50 58.5	-5.8
DAG				IAML		08 50 59.6	
	comp=Z,1.7nm,0.5s						
DAG	**Danmarks Havn**	**5.03**	**227**	*e*P	Pn	08 50 04.8	-1.3
DAG				*e*S	Sn	08 50 57.9	-6.4
HSPB	**Hornsund (broa**	**5.08**	**128**	*e*P	Pn	08 50 05.8	-0.9
DBG	**Daneborg**	**7.43**	**220**	*i* P	Pn	08 50 35.6	-3.4
DBG				IAML		08 51 05.6	
	comp=Z,0.4nm,0.7s						
DBG				*i* S	Sn	08 51 56.3	-6.8

DDA 03 08:57:46.5±0.0,37°.16N×37°.14E,h7km±6km,ML1.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAMA	**Osmaniye**	**0.38**	**275**	P	Pg	08 57 54.3	+0.4
KAMA				S	Sb	08 58 00.7	-1.1
GZT	**Gaziantep**	**0.39**	**59**	P	Pn	08 57 57.6	-1.1
GZT				*i* AML	AML	08 58 12.0	
	comp=E,96nm,0.6s						
GZT				*i* AML	AML	08 58 14.0	
	comp=N,113nm,0.6s						
AKCA	**Adyaman/G¶l**	**0.77**	**34**	P	Pg	08 58 01.4	0.0
AKCA				S	Sb	08 58 13.7	+0.7
AKCA				*i* AML	AML	08 58 15.0	
	comp=E,28nm,0.3s						
AKCA				*i* AML	AML	08 58 17.0	
	comp=N,30nm,0.4s						
SURC	**SANLIURFA_SURC**	**1.21**	**103**	P	Pg	08 58 08.2	-1.5
SURC				S	Sg	08 58 22.7	-2.7
SURC				*i* AML	AML	08 58 25.0	
	comp=E,15nm,0.3s						
SURC				*i* AML	AML	08 58 28.0	
	comp=N,18nm,0.3s						

ISK 03 08:58:40.8,38°.70N×35°.78E,h0km,ML1.7/6,Suspected Mining explosion.,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNN	**Bunyan**	**0.16**	**20**	Pg	Pg	08 58 44.9	+1.0
BNN				Sg	Sg	08 58 47.9	+1.8

SARI	**SarD1z-Kayseri**	**0.58**	**120**	Pg	Pg	08 58 52.7	+0.8
SARI				Sg	Sb	08 59 01.6	-1.2
YOZ	**Yozgat**	**1.00**	**340**	Pg	Pb	08 59 00.7	-0.5
YOZ				Sg	Sb	08 59 15.3	+0.3
KOZT	**Kozan**	**1.22**	**178**	Pn	Pb	08 59 04.6	-0.1
SVSK	**Karacayir**	**1.54**	**38**	Pn	Pb	08 59 09.9	-0.3
CORM	**Corum**	**1.72**	**329**	Pn	Pn	08 59 12.7	+0.5
ARPR	**Arapgir-MALATY**	**2.04**	**78**	Pn	Pn	08 59 17.3	+0.8

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*NNC **03** 09:13:55.3±0.8, 51.°73N×75.°45E, h0^{km}, mb3.4, mpv3.1, Error ellipse: s-maj=15.2km s-min=5.2km az=25.0, Suspected Mining explosion.*

*IDC **03** 09:13:57.7±0.9, 51.°66N×75.°41E, h0^{km}, mbtmp2.8/4, ML2.3/4, Error ellipse: s-maj=21.6km s-min=7.5km az=29.0*

ISC 03 09:13:56.6±0.9**, 51.°59N**±0.°07×**75.°38E**±0.°05**, h0^{km}, n12, σ1^{s}35**/16**, 12C-3D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.21**	**115**	Pn	**Pn**	**09 14 35.8**	**+1.2**
	0.8nm,0.3s,baz=303,slow=18,SNR=40						
KURBB				Lg	Lg	09 15 06.7	
	1.3nm,0.3s,baz=298,slow=34,SNR=9.3						
	3.0nm,0.4s						
KURBB	**Kurchatov Arra**	**2.21**	**115**	⇑Pg	**Pb**	**09 14 37.0**	**-0.4**
	7.7nm,0.5s						
KURBB				⇑Lg	Lg	09 15 06.7	
	57nm,0.6s						
KURK	**Kurchatov**	**2.22**	**112**	⇑Pg	**Pn**	**09 14 35.6**	**+0.9**
	3.4nm,0.4s						
KURK				⇓Lg	Lg	09 15 05.9	
	17nm,0.6s						
BVA0	**Borovoye Array**	**3.38**	**297**	⇑Pg	**Pb**	**09 14 56.8**	**-0.6**
	2.5nm,0.6s,baz=119,slow=17,SNR=9.6						
BVA0				⇓Lg	Lg	09 15 42.3	
	12nm,0.6s,baz=116,slow=27,SNR=12						
BVAR	**Borovoye Array**	**3.38**	**297**	Pn	**Pn**	**09 14 51.2**	**+0.6**
	0.1nm,0.3s,baz=109,slow=12,SNR=6.7						
BVAR				Sn	**Sn**	**09 15 31.7**	**+0.3**
	0.3nm,0.3s,baz=113,slow=24,SNR=8.4						
BVAR				Lg	Lg	09 15 43.6	
	0.7nm,0.3s,baz=108,slow=26,SNR=17						
	0.9nm,0.4s						
BRVK	**Borovoye**	**3.45**	**297**	⇑Pg	**Pb**	**09 14 58.0**	**-0.6**
	2.9nm,0.5s						
BRVK				⇑Lg	Lg	09 15 42.8	
	18nm,0.8s						
OTUK	**Ortayu**	**3.88**	**212**	⇑Pg	**Pg**	**09 15 10.1**	**-0.9**
	3.2nm,0.8s						
OTUK				⇓Lg	Lg	09 16 02.7	
	8.7nm,0.7s						
I46RU	**ZALESOVO INFRA**	**6.20**	**64**	I	I	09 52 01.9	
	baz=251,slow=318,SNR=7.5						
ZALV	**Zalesovo Beam**	**6.20**	**64**	Pn	**Pn**	**09 15 30.1**	**+0.8**
	0.6nm,0.3s,baz=255,slow=14,SNR=10						
ZALV				Sn	**Sn**	**09 16 40.2**	**-0.5**
	0.3nm,0.3s,baz=251,slow=28,SNR=3.7						
ZALV				Lg	Lg	09 17 13.2	
	0.4nm,0.3s,baz=247,slow=29,SNR=5.1						
	2.0nm,0.4s						
MAKZ	**Makanchi**	**6.45**	**135**	⇑Pn	**Pn**	**09 15 29.3**	**-3.5**
	1.9nm,1.1s						
MAKZ				⇑Sn	**Sn**	**09 16 48.9**	**+1.8**
	1.9nm,0.6s						
MAKZ				⇑Lg	Lg	09 17 20.3	
	8.0nm,0.7s						
MK31	**Makanchi Array**	**6.60**	**134**	⇑Pn	**Pn**	**09 15 35.9**	**+1.1**
	1.5nm,0.9s,baz=316,slow=12,SNR=6.7						
MK31				⇑Sn	**Sn**	**09 16 51.1**	**+0.3**
	0.8nm,0.5s,baz=318,slow=21,SNR=3.3						
MK31				Lg	Lg	09 17 25.4	
	5.2nm,0.7s,baz=317,slow=26,SNR=10						
MKAR	**Makanchi Array**	**6.60**	**134**	Pn	**Pn**	**09 15 36.2**	**+1.3**
	0.1nm,0.3s,baz=315,slow=13,SNR=6.5						
MKAR				Sn	**Sn**	**09 16 50.8**	**0.0**
	0.4nm,0.3s,baz=318,slow=20,SNR=8.8						
MKAR				Lg	Lg	09 17 26.4	
	0.6nm,0.3s,baz=321,slow=27,SNR=11						
	0.4nm,0.6s						

IDC 03 09:14:52.7±349.0**, 68.°18N**×**39.°23E, h0^{km}, Error ellipse: s-maj=169.3km s-min=157.5km az=143.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I37NO	**I37NO**	**7.58**	**286**	I	I	10 03 10.0	
	baz=87,slow=330,SNR=1.1						
I31KZ	**AKTYUBINSK INF**	**20.08**	**143**	I	I	11 19 50.0	
	baz=339,slow=337,SNR=1.4						
I46RU	**ZALESOVO INFRA**	**25.48**	**101**	I	I	11 51 33.8	
	baz=322,slow=328,SNR=1.0						

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*IDC **03** 09:21:34.5±1.6, 36.°50S×52.°29E, h0^{km}, mb4.0/4, mbtmp3.9/5, ML3.8/1, MS3.5/1, Error ellipse: s-maj=83.7km s-min=26.8km az=37.0*

*NEIC **03** 09:21:35.6±2.1, 36.°62S±0.°07×52.°3E±0.°1, h10^{km}±1^{km}, mb4.3/16, Error ellipse: s-maj=18.7km s-min=10.2km az=297.0*

ISC 03 09:21:34.9±0.6**, 36.°60S**±0.°09×**52.°3E**±0.°1**, h10^{km}, n27, σ1^{s}05**/27**, mb4.4**/10**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRZF	**Crozet Islands**	**9.82**	**182**	Pn	**Pn**	**09 23 54.8**	**-1.4**
VOI	**Vohitsoka**	**15.41**	**340**	Pn	**Pn**	**09 25 13.1**	**+0.5**
VOI				IAmb	IAmb	09 25 39.0	
	comp=Z,12nm,1.2s						
OPO	**Ambohidratompo**	**18.52**	**344**	P	**Pn**	**09 25 53.2**	**+1.3**
	baz=162,slow=19,SNR=1.4						
	comp=Z,1.0nm,0.5s						
MSEY	**Mahe Island**	**31.91**	**6**	P	**P**	**09 28 00.0**	**-0.7**
WIN	**Windhoek**	**33.47**	**285**	P	**P**	**09 28 13.9**	**-0.7**
WIN				IAmb	IAmb	09 28 24.5	
	comp=Z,4.5nm,0.6s						
SNAA	**Sanae**	**44.88**	**202**	P	**P**	**09 29 49.7**	**+0.6**
MNCI	**Minicoy**	**48.71**	**28**	P	**P**	**09 30 19.7**	**0.0**
QSPA	**South Pole Qui**	**53.59**	**180**	LR	LR	09 51 12.7	
	comp=Z,47nm,21.7s,baz=354,slow=33						
QSPA	**South Pole Qui**	**53.59**	**180**	P	**P**	**09 30 56.8**	**+0.9**
QSPA				IAmb	IAmb	09 31 21.2	
	comp=Z,3.5nm,1.4s						
UOSS	**Minazif**	**61.33**	**4**	P	**P**	**09 31 50.0**	**-0.7**
UOSS				IAmb	IAmb	09 32 16.0	
	comp=Z,2.0nm,1.0s						
FITZ	**Fitzroy Crossi**	**66.23**	**95**	P	**P**	**09 32 22.7**	**-0.7**
SBUM	**Sibu**	**67.79**	**69**	P	**P**	**09 32 32.5**	**-0.8**
TORD	**Torodi Ar. Bea**	**68.71**	**306**	P	**P**	**09 32 40.3**	**+1.3**
	comp=Z,0.7nm,0.8s,baz=147,slow=5.1,SNR=3.7						
	comp=Z,0.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**68.71**	**306**	P	**P**	**09 32 40.0**	**+1.0**
TORD				IAmb	IAmb	09 32 47.4	
	comp=Z,2.3nm,1.4s						
ASAR	**Alice Springs**	**69.82**	**105**	P	**P**	**09 32 48.1**	**+2.1**
	comp=Z,0.5nm,0.5s,baz=229,slow=6.2,SNR=12						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	**69.82**	**105**	P	**P**	**09 32 47.9**	**+2.0**
AS31	**Alice Springs**	**69.82**	**105**	P	**P**	**09 32 46.6**	**+0.6**
STKA	**Stephens Creek**	**71.29**	**116**	P	**P**	**09 32 56.1**	**+1.3**
WRA	**Warramunga Arr**	**72.15**	**102**	P	**P**	**09 33 01.7**	**+1.5**
	comp=Z,0.9nm,1.0s,baz=236,slow=4.3,SNR=4.9						
	comp=Z,0.9nm,1.0s						
WRA	**Warramunga Arr**	**72.15**	**102**	P	**P**	**09 33 00.3**	**+0.2**
WB2	**Warramunga Arr**	**72.16**	**102**	P	**P**	**09 32 59.7**	**-0.5**
WB2				IAmb	IAmb	09 33 05.5	
	comp=Z,7.3nm,1.4s						
WB0	**Warramunga Arr**	**72.29**	**102**	P	**P**	**09 33 01.1**	**+0.2**
WB0				IAmb	IAmb	09 33 40.2	
	comp=Z,5.4nm,1.2s						
WR0	**Warramunga Arr**	**72.30**	**102**	P	**P**	**09 33 00.7**	**-0.4**
WR0				IAmb	IAmb	09 33 13.3	
	comp=Z,5.5nm,1.2s						
ZALV	**Zalesovo Beam**	**94.45**	**19**	P	**P**	**09 34 54.6**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=198,slow=9.1,SNR=5.5						
	comp=Z,0.8nm,0.3s						
INK	**Inuvik**	**148.07**	**4**	PKPbc	**PKiKP**	**09 41 20.7**	**-0.8**
	comp=Z,2.6nm,1.2s,baz=312,slow=3.4,SNR=3.1						
ILAR	**Eielson Array**	**149.55**	**16**	PKPbc	**PKiKP**	**09 41 24.1**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=323,slow=3.7,SNR=8.9						
YKA	**Yellowknife Ar**	**152.84**	**347**	PKPbc	**PKiKP**	**09 41 31.6**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=4.3,slow=2.4,SNR=4.0						
YKA				PKPab	**PKPab**	**09 41 41.2**	**-1.2**
	comp=Z,0.2nm,0.7s,baz=23,slow=3.4,SNR=4.8						

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*NNC **03** 09:29:10.8±3.2, 54.°77N×83.°77E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=28.8km s-min=10.5km az=23.0, Suspected Mining explosion.*

*IDC **03** 09:29:12.5±1.5, 54.°65N×83.°76E, h0^{km}, mbtmp3.1/3, ML2.6/3, Error ellipse: s-maj=14.2km s-min=9.3km az=9.0*

ISC 03 09:29:08.9±2.1**, 54.°8N**±0.°1×**83.°69E**±0.°06**, h0^{km}, n8, σ2^{s}49**/13**, 6C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.10**	**143**	I	I	09 34 47.5	
	0.1nm,0.7s,baz=318,slow=331,SNR=4.6						
ZAA0	**Zalesovo Array**	**1.10**	**143**	⇑P	**Pb**	**09 29 29.9**	**-0.9**
	0.5nm,0.2s						
ZAA0				⇑S	**Sb**	**09 29 44.8**	**-0.9**
	3.3nm,0.3s						
ZALV	**Zalesovo Beam**	**1.10**	**143**	Pg	**Pg**	**09 29 29.4**	**-0.6**
	5.6nm,0.3s,baz=318,slow=20,SNR=27						
ZALV				Lg	Lg	09 29 44.6	
	15nm,0.3s,baz=320,slow=30,SNR=22						
KURK	**Kurchatov**	**5.14**	**219**	⇑Pn	**Pn**	**09 30 30.5**	**+3.5**
	2.9nm,1.4s						
KURK				⇑Pg	**Pg**	**09 30 46.2**	**-1.1**
	1.3nm,0.5s						
KURK				⇑Lg	Lg	09 31 54.5	
	5.9nm,1.1s						
KURBB	**Kurchatov Arra**	**5.25**	**219**	Pn	**Pn**	**09 30 31.2**	**+2.6**
	0.1nm,0.3s,baz=41,slow=14,SNR=4.8						
KURBB				Sn	**Sn**	**09 31 29.4**	**-0.4**
	0.1nm,0.3s,baz=41,slow=23,SNR=1.9						
KURBB				Lg	Lg	09 31 53.7	
	0.1nm,0.3s,baz=40,slow=31,SNR=5.5						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**5.25**	**219**	⇑Pn	**Pn**	**09 30 31.9**	**+3.3**
	2.2nm,1.0s,baz=40,slow=13						
KURBB				⇓Pg	**Pg**	**09 30 48.7**	**-0.7**
	2.3nm,0.8s						
KURBB				⇓Sn	**Sn**	**09 31 29.3**	**-0.4**
	3.8nm,0.7s						
KURBB				⇓Lg	Lg	09 31 56.1	
	5.7nm,0.6s,baz=40,slow=28						
BVAR	**Borovoye Array**	**8.06**	**262**	Pn	**Pn**	**09 31 09.8**	**+2.7**
	0.1nm,0.3s,baz=67,slow=14,SNR=7.6						
BVAR				Sn	**Sn**	**09 32 34.5**	**-4.3**
	baz=72,slow=23,SNR=3.1						
	1.2nm,0.4s						
MKAR	**Makanchi Array**	**8.10**	**187**	Pn	**Pn**	**09 31 09.2**	**+1.5**
	0.2nm,0.3s,baz=13,slow=13,SNR=5.8						
MKAR				Lg	Lg	09 33 21.8	
	0.1nm,0.3s,baz=6.6,slow=29,SNR=2.0						
	0.3nm,0.4s						

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*IDC **03** 09:32:28.2±0.7, 85.°02N×96.°63E, h0^{km}, mb3.6/13, mbtmp3.7/15, ML3.3/2, MS3.2/23, Error ellipse: s-maj=22.5km s-min=14.5km az=131.0*

*IEPN **03** 09:32:33.0, 84.°88N×96.°83E, h10^{km}*

ISC 03 09:32:29.4±0.6**, 84.°96N**±0.°08×**95.°17E**±0.°07**, h10^{km}, n40, σ1^{s}85**/24**, mb3.6**/13**, MS3.2**/23**, North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVZ	**Severnaya Zeml**	**5.78**	**168**	*e*P	**Pn**	**09 33 52.2**	**-2.7**
SVZ				*e*S	Sn	09 34 51.8	-9.2
	24nm,0.3s						
ZFI2	**Zemlya Franca-**	**6.91**	**260**	*e*P	**Pn**	**09 34 11.4**	**+0.9**
ZFI2				*e*S	**Sn**	**09 35 25.4**	**-3.6**
ZFI	**Zemlya Franca-**	**6.92**	**260**	*e*P	**Pn**	**09 34 11.4**	**+0.9**
ZFI				*e*S	**Sn**	**09 35 25.4**	**-3.6**
	17nm,2.8s						
OMEGA	**Omega**	**6.93**	**260**	*e*P	**Pn**	**09 34 11.5**	**+0.8**
OMEGA				*e*S	**Sn**	**09 35 25.8**	**-3.6**
	18nm,2.3s						
KBS	**Kingsbay**	**11.68**	**288**	P	**Pn**	**09 35 16.5**	**+0.8**
KBS				S	Sn	09 37 16.2	-10
SPA0	**Spitsbergen Ar**	**11.98**	**283**	P	**Pn**	**09 35 19.8**	**0.0**
SPITS	**Spitsbergen Ar**	**11.98**	**283**	Pn	**Pn**	**09 35 19.6**	**-0.2**
	baz=40,slow=23						
	8.4nm,1.0s						
NRIK	**Noril'sk**	**15.77**	**190**	Pn	**Pn**	**09 36 10.9**	**-0.1**
	0.1nm,0.3s,baz=16,slow=14,SNR=2.6						
	2.1nm,0.5s						
SEY	**Seymchan**	**24.82**	**114**	P	**P**	**09 37 50.6**	**-0.4**
	0.3nm,0.3s,baz=353,slow=15,SNR=1.8						
	0.3nm,0.3s						
INK	**Inuvik**	**25.45**	**41**	P	**P**	**09 37 55.5**	**-1.3**
	4.6nm,1.0s,baz=350,slow=11,SNR=9.6						
INK				LR	LR	09 48 21.9	
	comp=Z,41nm,18.8s,baz=328,slow=38						
	4.6nm,1.0s						
FINES	**FINESS Array B**	**27.29**	**258**	P	**P**	**09 38 15.2**	**+1.8**
	2.9nm,1.1s,baz=0.9,slow=18,SNR=2.0						
	2.9nm,1.1s						
ILAR	**Eielson Array**	**28.09**	**54**	P	**P**	**09 38 20.6**	**0.0**
	0.9nm,1.1s,baz=341,slow=5.5,SNR=6.1						
	0.9nm,1.1s						
NOA	**NORSAR Array B**	**28.99**	**273**	LR	LR	09 52 38.0	
	comp=Z,13nm,18.5s,baz=260,slow=42						
HFS	**Hagfors**	**29.67**	**270**	LR	LR	09 50 06.6	
	comp=Z,28nm,19.7s,baz=340,slow=36						
ARU	**Arti**	**29.81**	**222**	LR	LR	09 51 36.7	
	comp=Z,67nm,21.6s,baz=150,slow=38						
ZALV	**Zalesovo Beam**	**31.25**	**192**	P	**P**	**09 38 48.2**	**-0.4**
	0.4nm,0.5s,baz=340,slow=7.8,SNR=1.6						
ZALV				LR	LR	09 52 25.2	
	comp=Z,46nm,18.9s,baz=6.5,slow=38						
	0.4nm,0.5s						
YKA	**Yellowknife Ar**	**32.16**	**26**	P	**P**	**09 38 54.8**	**-1.7**
	0.1nm,0.7s,baz=355,slow=9.5,SNR=3.9						
YKA				LR	LR	09 51 59.2	
	comp=Z,52nm,18.9s,baz=345,slow=36						
	0.1nm,0.7s						
BVAR	**Borovoye Array**	**32.61**	**208**	LR	LR	09 54 03.8	
	comp=Z,30nm,20.0s,baz=335,slow=40						
BELG	**Belogornoye**	**34.54**	**233**	LR	LR	09 54 07.4	
	comp=Z,35nm,19.8s,baz=332,slow=38						
KDAK	**Kodiak Island**	**34.60**	**61**	LR	LR	09 52 32.7	
	comp=Z,46nm,21.2s,baz=28,slow=35						
AKTO	**Aktyubinsk**	**35.82**	**221**	LR	LR	09 55 48.4	
	comp=Z,56nm,19.5s,baz=250,slow=39						
KLR	**Kul'dur**	**36.98**	**140**	LR	LR	09 54 43.2	
	comp=Z,32nm,18.6s,baz=32,slow=36						
SONM	**Songino Array**	**37.38**	**168**	P	**P**	**09 39 43.0**	**+1.1**
	1.0nm,0.9s,baz=344,slow=9.6,SNR=5.4						
	1.0nm,0.9s						
AKASG	**Malin Array Be**	**37.66**	**252**	P	**P**	**09 39 46.1**	**+2.1**
	0.2nm,0.3s,baz=3.9,slow=6.9,SNR=1.5						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**38.46**	**194**	P	**P**	**09 39 51.6**	**+0.8**
	0.6nm,0.7s,baz=1.5,slow=7.2,SNR=6.1						
	0.6nm,0.7s						
AAK	**Ala-Archa**	**42.83**	**203**	LR	LR	10 01 28.1	
	comp=Z,92nm,18.5s,baz=358,slow=40						
KBZ	**Khabaz**	**43.50**	**236**	LR	LR	10 00 53.9	
	comp=Z,34nm,21.7s,baz=50,slow=39						
NEW	**Newport**	**46.28**	**30**	LR	LR	10 00 54.9	
	comp=Z,33nm,19.2s,baz=25,slow=37						
GNI	**Garni**	**46.92**	**234**	LR	LR	10 01 36.2	
	comp=Z,28nm,21.7s,baz=316,slow=37						
BRTR	**Keskin Array B**	**48.19**	**245**	P	**P**	**09 41 12.1**	**+2.6**
	0.6nm,0.7s,baz=13,slow=15,SNR=2.5						
	0.6nm,0.7s						
GEYT	**Alibeck**	**48.27**	**220**	LR	LR	10 03 55.1	
	comp=Z,35nm,19.1s,baz=32,slow=39						
KSRS	**Korea Array**	**48.52**	**145**	LR	LR	10 01 15.9	
	comp=Z,14nm,18.8s,baz=125,slow=36						
PDAR	**Pinedale Array**	**52.07**	**23**	LR	LR	10 04 12.7	
	comp=Z,26nm,19.7s,baz=5.0,slow=37						
IDI	**Anoyia**	**53.32**	**254**	LR	LR	10 05 50.7	
	comp=Z,28nm,21.5s,baz=76,slow=38						
ELK	**Elko**	**53.87**	**28**	LR	LR	10 05 06.3	
	comp=Z,32nm,19.3s,baz=5.0,slow=36						
NVAR	**Mina Array Bea**	**56.04**	**31**	P	**P**	**09 42 07.9**	**-0.1**
	0.3nm,0.7s,baz=357,slow=4.5,SNR=2.8						
	0.3nm,0.7s						
EIL	**Elat**	**58.07**	**243**	LR	LR	10 14 47.1	
	comp=Z,16nm,18.1s,baz=244,slow=44						
ANMO	**Albuquerque**	**59.98**	**20**	LR	LR	10 08 27.0	
	comp=Z,36nm,21.4s,baz=102,slow=36						
TXAR	**Lajitas Array**	**65.65**	**18**	P	**P**	**09 43 13.0**	**-0.4**
	0.8nm,0.8s,baz=1.6,slow=3.8,SNR=8.8						
TXAR				LR	LR	10 11 58.7	
	comp=Z,34nm,21.1s,baz=354,slow=36						
	0.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**77.30**	**275**	P	**P**	**09 44 24.6**	**+1.0**
	0.6nm,0.7s,baz=1.6,slow=5.6,SNR=3.7						
	0.6nm,0.7s						

IDC 03 09:46:01.9±2.6**, 53.°53N**×**87.°59E, h0^{km}, mbtmp2.9**/3**, ML2.4**/2**, Error ellipse: s-maj=22.0km s-min=13.1km az=63.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.70**	**285**	I	I	09 58 20.0	
	baz=101,slow=340,SNR=3.6						
ZALV	**Zalesovo Beam**	**1.70**	**285**	Pg	Pn	09 46 32.5	-0.3
	1.0nm,0.3s,baz=103,slow=15,SNR=14						
ZALV				Lg	Lg	09 46 55.9	
	1.6nm,0.3s,baz=104,slow=24,SNR=11						
KURBB	**Kurchatov Arra**	**6.30**	**246**	Pn	Pn	09 47 36.9	+0.9
	baz=61,slow=14,SNR=4.1						
KURBB				Sn	Sn	09 48 47.9	-0.7
	baz=64,slow=13,SNR=1.5						
KURBB				Lg	Lg	09 49 20.1	
	baz=61,slow=30,SNR=5.0						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**7.56**	**209**	Pn	Pn	09 47 54.2	+1.0
	0.1nm,0.3s,baz=24,slow=9.7,SNR=6.8						
MKAR				Sn	Sn	09 49 19.9	+0.3
	baz=26,slow=34,SNR=2.6						
MKAR				Lg	Lg	09 50 01.3	
	0.1nm,0.3s,baz=24,slow=29,SNR=8.7						
	0.5nm,0.6s						
BVAR	**Borovoye Array**	**10.32**	**274**	Pn	Pn	09 48 30.0	-1.0
	0.2nm,0.3s,baz=74,slow=15,SNR=1.6						
BVAR				Sn	Sn	09 50 22.2	-5.1
	baz=78,slow=22,SNR=1.5						

IDC 03 09:49:18.4±2.7**, 53.°63N**×**87.°87E, h0^{km}, mbtmp3.1**/3**, ML2.8**/3**, Error ellipse: s-maj=25.5km s-min=15.2km az=70.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.84**	**281**	I	I	10 02 40.0	
	baz=98,slow=345,SNR=8.0						
ZALV	**Zalesovo Beam**	**1.84**	**281**	Pn	Pn	09 49 52.0	+0.8
	3.5nm,0.3s,baz=100,slow=16,SNR=25						
ZALV				Lg	Lg	09 50 16.9	
	1.0nm,0.3s,baz=101,slow=25,SNR=3.8						
KURBB	**Kurchatov Arra**	**6.49**	**246**	Pn	Pn	09 50 55.7	+0.7
	0.2nm,0.3s,baz=60,slow=14,SNR=4.3						
KURBB				Lg	Lg	09 52 44.7	
	baz=54,slow=29						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**7.72**	**210**	Pn	Pn	09 51 13.3	+1.4
	0.2nm,0.3s,baz=27,slow=13,SNR=7.1						
MKAR				Sn	Sn	09 52 40.0	-0.1
	0.1nm,0.3s,baz=27,slow=36,SNR=2.5						
MKAR				Lg	Lg	09 53 21.7	
	0.1nm,0.3s,baz=24,slow=30,SNR=6.4						
	0.2nm,0.3s						
BVAR	**Borovoye Array**	**10.48**	**274**	Pn	Pn	09 51 47.2	-2.5
	0.1nm,0.3s,baz=86,slow=12,SNR=1.8						
	0.4nm,0.4s						

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*DDA **03** 09:53:11.4±0.0, 38.°85N×26.°41E, h7^{km}±2^{km}, ML2.8*

*ATH **03** 09:53:12.8, 38.°85N×26.°40E, h13^{km}±1^{km}, ML2.9/5, Error ellipse: s-maj=2.5km s-min=0.9km az=273.0*

*THE **03** 09:53:12.1, 38.°83N×26.°42E, h10^{km}±2^{km}, ML2.9/6, Error ellipse: s-maj=2.2km s-min=0.8km az=202.0*

ISC 03 09:53:11.7±0.9**, 38.°85N**±0.°02×**26.°43E**±0.°03**, h15^{km}**±8^{km}**, n37, σ0^{s}41**/54**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARB	**zmir-Karabur**	**0.18**	**185**	P	**Pb**	**09 53 16.3**	**-0.5**
KARB				*i* AML	AML	09 53 19.0	
	comp=E,3μm,0.3s						
KARB				*i* AML	AML	09 53 19.0	
	comp=N,4μm,0.2s						
KARB				S	**Sg**	**09 53 19.1**	**+0.2**
PRK	**Paraskevi**	**0.42**	**343**	P	**Pb**	**09 53 20.6**	**-0.2**
PRK				S	**Sb**	**09 53 27.1**	**+0.1**
	3μm,0.5s						
PRK	**Paraskevi**	**0.42**	**343**	P	**Pb**	**09 53 20.6**	**-0.2**
PRK				S	**Sb**	**09 53 26.5**	**-0.4**
PRK				AML	AML	09 53 27.0	
	comp=E,4747μm,0.4s						
PRK				AML	AML	09 53 27.5	
	comp=N,5674μm,0.7s						
URLA	**Izmir**	**0.50**	**165**	P	**Pg**	**09 53 21.5**	**-0.2**
URLA				S	**Sb**	**09 53 29.2**	**-0.1**
URLA				*i* AML	AML	09 53 30.0	
	comp=N,767nm,0.6s						
URLA				*i* AML	AML	09 53 31.0	
	comp=N,677nm,0.3s						
AYVA	**Ayvalik**	**0.50**	**23**	P	**Pg**	**09 53 21.5**	**-0.2**
AYVA				*i* AML	AML	09 53 31.0	
	comp=N,348nm,0.5s						
AYVA				*i* AML	AML	09 53 31.0	
	comp=N,596nm,0.2s						
ZEDA	**zmir-Bergama**	**0.52**	**76**	P	**Pg**	**09 53 21.9**	**0.0**
ZEDA				*i* AML	AML	09 53 30.0	
	comp=N,228nm,0.2s						
ZEDA				*i* AML	AML	09 53 30.0	
	comp=N,268nm,0.2s						
CHOS	**Chios island**	**0.55**	**213**	P	**Pb**	**09 53 22.9**	**-0.1**
CHOS				S	**Sb**	**09 53 30.1**	**-0.6**
	comp=N,1μm,0.2s						
CHOS	**Chios island**	**0.55**	**213**	P	**Pb**	**09 53 22.9**	**-0.1**
CHOS				S	**Sb**	**09 53 31.0**	**+0.3**
CHOS				AML	AML	09 53 34.6	
	comp=E,3467μm,0.2s						
CHOS				AML	AML	09 53 34.8	
	comp=N,1739μm,0.2s						
SIGR	**SIGRI**	**0.58**	**309**	P	**Pb**	**09 53 23.6**	**0.0**
SIGR				S	**Sb**	**09 53 31.2**	**-0.4**
	comp=N,795nm,0.5s						
SIGR	**SIGRI**	**0.58**	**309**	P	**Pb**	**09 53 23.5**	**0.0**
SIGR				S	**Sb**	**09 53 31.0**	**-0.5**
SIGR				AML	AML	09 53 31.8	
	comp=E,1240μm,0.5s						
SIGR				AML	AML	09 53 32.4	
	comp=N,1411μm,0.4s						
ZEYE	**Izmir, Urla-Ze**	**0.61**	**175**	P	**Pg**	**09 53 23.3**	**-0.4**
BLCB	**Balcova**	**0.66**	**134**	P	**Pb**	**09 53 25.1**	**+0.2**
BLCB				S	**Sg**	**09 53 33.7**	**+0.3**
PSRA	**Psara**	**0.74**	**246**	P	**Pb**	**09 53 26.7**	**+0.4**
PSRA				S	**Sb**	**09 53 36.3**	**0.0**
PSRA				AML	AML	09 53 39.9	
	comp=E,1666μm,0.2s						
PSRA				AML	AML	09 53 40.9	
	comp=N,2462μm,0.3s						
BUHA	**Balikesir, Bur**	**0.82**	**37**	P	**Pb**	**09 53 27.3**	**-0.4**
BUHA				S	**Sg**	**09 53 38.6**	**0.0**
BUHA				*i* AML	AML	09 53 42.0	
	comp=N,731nm,0.5s						
BUHA				*i* AML	AML	09 53 45.0	
	comp=N,420nm,0.7s						
DGB	**zmir**	**0.87**	**156**	P	**Pb**	**09 53 27.9**	**-0.5**
DGB				S	**Sb**	**09 53 39.5**	**-0.3**
DGB				*i* AML	AML	09 53 43.0	
	comp=N,245nm,0.2s						
DGB				*i* AML	AML	09 53 44.0	
	comp=N,202nm,0.5s						
BAYC	**CANAKKALE_Bayr**	**0.90**	**6**	P	**Pb**	**09 53 28.6**	**-0.4**
BAYC				S	**Sb**	**09 53 40.6**	**-0.2**
BAYC				*i* AML	AML	09 53 43.0	
	comp=N,415nm,0.2s						
BAYC				*i* AML	AML	09 53 46.0	
	comp=N,300nm,0.3s						
EZN	**Ezine**	**0.98**	**355**	P	**Pg**	**09 53 30.6**	**-0.1**
EZN				S	**Sn**	**09 53 44.4**	**-0.2**
	comp=N,508nm,0.3s						
BOZC	**Bozcaada**	**1.04**	**344**	P	**Pb**	**09 53 31.2**	**-0.2**
BOZC				S	**Sn**	**09 53 45.7**	**-0.3**
BOZC				*i* AML	AML	09 53 47.0	
	comp=N,279nm,0.3s						
BOZC				*i* AML	AML	09 53 49.0	
	comp=N,262nm,0.5s						
AKHS	**Akhisar**	**1.08**	**88**	P	**Pg**	**09 53 32.6**	**+0.1**
AKHS				*i* AML	AML	09 53 51.0	
	comp=N,163nm,0.4s						
STEP	**BALIKESIR_Sava**	**1.13**	**62**	P	**Pn**	**09 53 33.3**	**+0.3**
STEP				S	**Sb**	**09 53 47.4**	**-0.1**

STEP				*i* AML	AML	09 53 51.0	
	comp=N,408nm,0.3s						
BALY	**Balya**	**1.28**	**46**	P	**Pn**	**09 53 35.3**	**+0.2**
BALY				*i* AML	AML	09 53 56.0	
	comp=N,484nm,0.4s						
BALY				*i* AML	AML	09 53 56.0	
	comp=N,228nm,0.3s						
BALY	**Balya**	**1.28**	**46**	*i* AML	AML	09 53 56.0	
	comp=N,228nm,0.3s						
BALY	**Balya**	**1.28**	**46**	P	**Pn**	**09 53 35.4**	**+0.2**
BALY	**Balya**	**1.28**	**46**	S	**Sn**	**09 53 52.6**	**+0.5**
BALY	**Balya**	**1.28**	**46**	*i* AML	AML	09 53 56.0	
	comp=N,484nm,0.4s						
LIA	**Limnos Island**	**1.43**	**318**	P	**Pb**	**09 53 37.6**	**-0.4**
LIA				S	**Sn**	**09 53 55.2**	**-0.4**
	comp=N,720nm,0.5s						
LIA	**Limnos Island**	**1.43**	**318**	P	**Pb**	**09 53 37.5**	**-0.5**
LIA				S	**Sn**	**09 53 55.2**	**-0.4**
LIA				AML	AML	09 53 58.6	
	comp=N,1136μm,0.5s						
LIA				AML	AML	09 53 59.2	
	comp=E,1742μm,0.4s						
SMTH	**Samothraki Isl**	**1.77**	**337**	P	**Pn**	**09 53 42.1**	**+0.3**
SMTH	**Samothraki Isl**	**1.77**	**337**	P	**Pn**	**09 53 42.1**	**+0.3**
ENEZ	**Enez**	**1.90**	**354**	P	**Pn**	**09 53 44.6**	**+1.1**
ENEZ				S	**Sb**	**09 54 09.2**	**-0.4**
	comp=E,212nm,0.3s						
ALN	**Alexandroupoli**	**2.07**	**352**	P	**Pn**	**09 53 46.4**	**+0.5**
ALN	**Alexandroupoli**	**2.07**	**352**	P	**Pn**	**09 53 46.5**	**+0.6**
THAS	**Thassos island**	**2.20**	**324**	P	**Pn**	**09 53 47.9**	**+0.2**
THAS	**Thassos island**	**2.20**	**324**	P	**Pn**	**09 53 47.8**	**+0.2**
RDO	**Rodhopi**	**2.40**	**344**	P	**Pn**	**09 53 51.4**	**+1.0**
RDO	**Rodhopi**	**2.40**	**344**	P	**Pn**	**09 53 51.5**	**+1.1**
KAVA	**Kavala**	**2.61**	**326**	P	**Pn**	**09 53 53.8**	**+0.5**

DDA 03 09:53:12.5±0.0**,39°.21N**×**29°.38E,h10**^{km}±1^{km}**,ML2.3, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.14**	**148**	P	Pg	09 53 16.4	+0.6
GDZ				S	Sg	09 53 18.6	+0.3
GDZ				*i* AML	AML	09 53 19.0	
	comp=E,1μm,0.2s						
GDZ				*i* AML	AML	09 53 19.0	
	comp=N,1μm,0.2s						
ANDZ	**Kutahya, Merke**	**0.50**	**53**	P	Pg	09 53 22.2	0.0
ANDZ				S	Sg	09 53 28.9	+0.1
ANDZ				*i* AML	AML	09 53 30.0	
	comp=E,136nm,0.7s						
ANDZ				*i* AML	AML	09 53 30.0	
	comp=N,219nm,0.2s						
DEMI	**Demirci**	**0.55**	**252**	P	Pb	09 53 23.9	-0.2
DEMI				*i* AML	AML	09 53 31.0	
	comp=E,399nm,0.5s						
DEMI				S	Sb	09 53 31.4	-0.7
DEMI				*i* AML	AML	09 53 33.0	
	comp=N,298nm,0.4s						
USAK	**Uak-Merkez**	**0.57**	**210**	P	Pb	09 53 24.4	-0.3
USAK				S	Sb	09 53 32.3	-0.5
USAK				*i* AML	AML	09 53 33.0	
	comp=N,141nm,0.3s						
USAK				*i* AML	AML	09 53 38.0	
	comp=E,208nm,0.3s						
AUBOZ	**BOZOYUK**	**0.86**	**35**	P	Pg	09 53 28.8	-0.3
AUBOZ				S	Sb	09 53 41.0	-0.1
AUBOZ				*i* AML	AML	09 53 45.0	
	comp=E,100nm,0.5s						
AUBOZ				*i* AML	AML	09 53 45.0	
	comp=N,111nm,0.3s						
PASA	**Karahalli, USA**	**0.87**	**175**	P	Pb	09 53 29.6	0.0
ULDT	**Uludag**	**0.95**	**348**	P	Pg	09 53 31.0	+0.1
ULDT				*i* AML	AML	09 53 47.0	
	comp=E,120nm,0.4s						
ULDT				*i* AML	AML	09 53 48.0	
	comp=N,129nm,0.2s						
MANT	**Manisa**	**0.97**	**222**	P	Pb	09 53 31.4	0.0
MANT				S	Sb	09 53 44.2	-0.1
MANT				*i* AML	AML	09 53 46.0	
	comp=E,59nm,0.3s						
MANT				*i* AML	AML	09 53 48.0	
	comp=N,55nm,0.3s						
BILE	**Bilecik/Merkez**	**1.02**	**22**	P	Pg	09 53 31.9	-0.2
BILE				*i* AML	AML	09 53 49.0	
	comp=E,91nm,0.4s						
BILE				*i* AML	AML	09 53 50.0	
	comp=N,98nm,0.4s						
BORA	**Eskisehir**	**1.06**	**51**	P	Pg	09 53 32.5	-0.5
BORA				S	Sg	09 53 46.7	-0.1
BORA				*i* AML	AML	09 53 48.0	
	comp=E,152nm,0.4s						
BORA				*i* AML	AML	09 53 48.0	
	comp=N,122nm,0.4s						
KZIL	**AFYON_Kizioren**	**1.12**	**148**	P	Pn	09 53 34.6	+0.3
KZIL				S	Sn	09 53 49.6	-0.2
KZIL				*i* AML	AML	09 53 54.0	
	comp=N,39nm,0.4s						
KZIL				*i* AML	AML	09 53 56.0	
	comp=E,32nm,0.4s						
SGAZ	**Eskisehir, Sey**	**1.17**	**74**	P	Pn	09 53 35.0	0.0
SGAZ				S	Sb	09 53 49.4	-0.7
SGAZ				*i* AML	AML	09 53 53.0	
	comp=N,35nm,0.5s						
SGAZ				*i* AML	AML	09 53 58.0	
	comp=E,51nm,0.3s						
BKES	**Balkesir-Mer**	**1.24**	**295**	P	Pg	09 53 36.9	+0.5
BKES	**Balkesir-Mer**	**1.24**	**295**	P	Pg	09 53 36.5	+0.2
BKES				S	Sg	09 53 52.5	0.0
BKES				*i* AML	AML	09 54 01.0	
	comp=E,188nm,0.5s						
GEYV	**SAKARYA_Geyve**	**1.45**	**29**	P	Pb	09 53 39.6	0.0
GEYV				S	Sb	09 53 58.6	+0.5
GEYV				*i* AML	AML	09 54 04.0	
	comp=E,29nm,0.3s						
GEYV				*i* AML	AML	09 54 04.0	
	comp=N,31nm,0.6s						
AUMIH	**MIHALICIK**	**1.75**	**67**	P	Pg	09 53 45.8	-0.3
AUMIH				S	Sg	09 54 08.5	-0.3
AUMIH				*i* AML	AML	09 54 14.0	
	comp=E,22nm,0.3s						
AUMIH				*i* AML	AML	09 54 14.0	
	comp=N,18nm,0.3s						
KAYN	**Sakarya, Kayna**	**1.90**	**22**	P	Pg	09 53 48.7	-0.3

IDC ***03*** *10:00:29.0±3.6,64°.64N×31°.76E,h0*^{km}*,mbtmp2.8/3, ML2.2/3,Error ellipse: s-maj=55.9km s-min=13.2km az=98.0*

HEL ***03*** *10:00:30.7±0.3,64°.67N×30°.59E,h0*^{km}*,ML2.1,Explosion*

BER ***03*** *10:00:31.1±1.1,64°.68N×31°.38E,h0*^{km}*,ML2.0,Suspected explosion*

KOLA ***03*** *10:00:31.8,64°.64N×31°.02E,h0*^{km}*,ML2.4,Error ellipse: s-maj=30.0km s-min=24.4km az=120.0,Kostomuksha, Karelia*

ISC 03 10:00:31.9±1.2**,64°.78N**±0°.03×**30°.57E**±0°.05**,h0**^{km}**,n43,** σ**1**^{s}**.53**/64**,Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.63**	**206**	PG	Pg	10 00 41.1	-2.9
RMF				SG	Sg	10 00 45.4	-6.6
RMF				MSG		10 00 47.8	
	comp=Z,38nm,0.2s						
KU6	**Riekki**	**1.28**	**348**	PG	**Pg**	**10 00 55.7**	**-0.7**
	baz=167						
KU6				MSG		10 01 12.7	
	comp=Z,24nm,0.2s						
KU6				SN	**Sn**	**10 01 14.8**	**-0.2**
MSF	**Maaselka**	**1.30**	**331**	PG	**Pg**	**10 00 56.2**	**-0.7**
	baz=151						
MSF				SN	**Sn**	**10 01 15.5**	**0.0**
OLKF	**Oulanka, Finla**	**1.62**	**343**	PG	**Pn**	**10 01 01.7**	**0.0**
OLKF				MSG		10 01 22.5	
	comp=Z,24nm,0.2s						
OLKF				SN	**Sg**	**10 01 26.3**	**+2.4**
JOF	**Joensuu**	**1.90**	**170**	PG	Pn	10 01 02.6	-2.9
	baz=350						
OUL	**Oulu**	**2.01**	**281**	PG	**Pn**	**10 01 07.8**	**+0.7**
OUL				SG	**Sb**	**10 01 34.5**	**-0.4**
OBF4	**Vikkela, Lumij**	**2.34**	**273**	PG	**Pn**	**10 01 12.3**	**+0.8**
OBF4				MSG		10 01 40.4	
	comp=Z,11nm,0.2s						
OBF4				SG	**Sg**	**10 01 46.6**	**-0.4**
OUF	**Merijarvi**	**2.55**	**263**	PB	**Pn**	**10 01 15.1**	**+0.6**
	baz=83						
OUF				MSG		10 01 46.1	
	comp=Z,13nm,0.2s						
OUF				SG	**Sb**	**10 01 49.8**	**-0.6**
RNF	**Rovaniemi**	**2.63**	**316**	PB	**Pn**	**10 01 17.6**	**+2.1**
	baz=132						
RNF				SG	**Sg**	**10 01 54.5**	**-1.8**
OBF0	**Syolatti, Pyha**	**2.74**	**267**	PB	**Pn**	**10 01 18.4**	**+1.3**
OBF0				MSG		10 01 51.5	
	comp=Z,8.6nm,0.2s						
OBF0				SG	**Sb**	**10 01 56.7**	**+1.0**
TOF	**Tornio**	**2.92**	**299**	PB	**Pn**	**10 01 20.4**	**+0.9**
TOF				MSG		10 01 58.3	
	comp=Z,4.1nm,0.2s						
TOF				SG	**Sb**	**10 02 02.2**	**+1.3**
APA0	**Apatity Array**	**3.00**	**18**	P	**Pn**	**10 01 22.2**	**+1.6**
APA0				S	**Sn**	**10 01 58.0**	**+0.6**
VRF	**Varrio**	**3.01**	**353**	PB	**Pn**	**10 01 22.1**	**+1.3**
	baz=168						
VRF				MSG		10 02 02.4	
	comp=Z,5.5nm,0.2s						
VRF				SG	**Sg**	**10 02 08.3**	**-0.1**
OBF8	**Ulkokalla**	**3.11**	**265**	PB	**Pn**	**10 01 22.7**	**+0.6**
OBF8				MSG		10 02 02.2	
	comp=Z,4.4nm,0.2s						
SGF	**Sodankyl**	**3.14**	**330**	PB	**Pn**	**10 01 25.1**	**+2.5**
SGF				SG	**Sb**	**10 02 08.3**	**+1.1**
KALU	**Kalix**	**3.21**	**293**	PB	**Pn**	**10 01 25.8**	**+2.2**
KALU				SB	**Sb**	**10 02 09.4**	**0.0**
KAF	**Kangasniemi**	**3.29**	**217**	PB	**Pn**	**10 01 26.3**	**+1.7**
RUF	**Ruokolahti**	**3.45**	**193**	PB	**Pn**	**10 01 25.9**	**-0.9**
KLF	**Kolari**	**3.65**	**315**	PN	**Pn**	**10 01 31.1**	**+1.5**
	baz=127						
KLF				SG	**Sg**	**10 02 28.1**	**-1.0**
KEF	**Keuruu**	**3.66**	**227**	PB	**Pn**	**10 01 31.7**	**+1.9**
KEF				SG	**Sb**	**10 02 23.8**	**+1.5**
PAJU	**Pajala**	**3.80**	**310**	PB	**Pn**	**10 01 35.6**	**+4.0**
ERTU	**Ertsjaerv**	**3.90**	**301**	PB	**Pn**	**10 01 36.2**	**+3.2**
VAF	**Ylistaro**	**3.90**	**247**	PB	**Pn**	**10 01 35.2**	**+2.2**
	baz=57						
FINES	**FINESS Array B**	**3.92**	**213**	Pn	**Pn**	**10 01 32.1**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=32,slow=13,SNR=7.1						
FINES				Lg	Lg	10 02 30.5	
	comp=Z,1.1nm,0.3s,baz=35,slow=23,SNR=8.5						
	comp=Z,0.5nm,0.3s						
BURU	**Burvik**	**3.95**	**271**	PN	**Pn**	**10 01 34.3**	**+0.6**
UMAU	**Umeaa**	**4.40**	**263**	PN	**Pn**	**10 01 40.1**	**+0.4**
	baz=80						
HEF	**Hetta**	**4.56**	**326**	*e*S	**Sn**	**10 02 36.3**	**+0.5**
HEF	**Hetta**	**4.56**	**326**	SG	**Sg**	**10 02 55.4**	**-3.0**
PVF	**Pernaja**	**4.77**	**209**	SG	**Sb**	**10 02 56.6**	**+2.4**
KTK1	**Kautokeino**	**5.13**	**329**	*e*P	**Pn**	**10 01 50.8**	**+0.8**
KTK1				*e*S	**Sn**	**10 02 50.2**	**+0.4**
KTK1				IAML		10 03 17.0	
	comp=Z,3.6nm,0.5s						
ARA0	**ARCESS Array S**	**5.17**	**340**	*e*P	**Pn**	**10 01 50.4**	**0.0**
ARA0				*e*S	**Sn**	**10 02 49.1**	**-1.5**
ARA0				IAML		10 03 17.8	
	comp=Z,2.8nm,0.3s						
ARCES	**ARCESS Array B**	**5.17**	**340**	Pn	**Pn**	**10 01 49.9**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=151,slow=13,SNR=20						
ARCES				Sn	**Sn**	**10 02 49.2**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=150,slow=22,SNR=2.2						
ARCES				Lg	Lg	10 03 14.5	
	comp=Z,0.7nm,0.3s,baz=152,slow=29,SNR=7.7						
	comp=Z,0.7nm,0.4s						
ARCES	**ARCESS Array B**	**5.17**	**340**	P	**Pn**	**10 01 50.6**	**+0.3**
ARCES				S	**Sn**	**10 02 50.8**	**+0.2**
KEV	**Kevo**	**5.18**	**346**	*e*P	**Pn**	**10 01 50.1**	**-0.5**
KEV				*e*S	**Sn**	**10 02 47.7**	**-3.3**
VADS	**Vadso**	**5.38**	**356**	S	**Sn**	**10 02 55.9**	**0.0**
VADS	**Vadso**	**5.38**	**356**	*e*S	**Sn**	**10 02 52.5**	**-3.5**
SALU	**Saltoluokta**	**5.55**	**303**	*e*P	**Pn**	**10 01 57.4**	**+1.7**
KIF	**Kilpisjarvi**	**5.72**	**322**	*e*P	**Pn**	**10 01 58.6**	**+0.7**
KIF				*e*S	**Sn**	**10 03 03.9**	**-0.3**
JETT	**Jettan, Norway**	**6.21**	**325**	*e*P	**Pn**	**10 02 04.6**	**-0.1**
JETT				*e*S	**Sn**	**10 03 14.4**	**-1.9**
JETT				IAML		10 03 51.8	
	comp=Z,6.5nm,0.5s						
FAUS	**Fauske**	**6.73**	**300**	P	**Pn**	**10 02 13.6**	**+1.7**
FAUS				S	**Sn**	**10 03 29.6**	**+0.5**
FAUS	**Fauske**	**6.73**	**300**	*e*P	**Pn**	**10 02 13.4**	**+1.5**
FAUS				IAML		10 04 05.3	
	comp=Z,2.2nm,0.8s						
STEI	**Steigen**	**6.92**	**304**	*e*P	**Pn**	**10 02 15.0**	**+0.7**
STEI				IAML		10 03 37.5	
	comp=Z,2.0nm,0.6s						
NOA	**NORSAR Array B**	**9.57**	**256**	Pn	**Pn**	**10 02 50.4**	**-0.5**
	baz=67,slow=13,SNR=1.6						
	comp=Z,0.1nm,0.3s						

IDC ***03*** *10:13:51.9±1.0,51°.40N×75°.71E,h0*^{km}*,mbtmp2.8/3, ML2.2/3,Error ellipse: s-maj=24.3km s-min=8.0km az=31.0*

NNC ***03*** *10:13:51.0±0.4,51°.37N×75°.54E,h0*^{km}*,mb3.2,mpv2.8, Error ellipse: s-maj=7.0km s-min=2.8km az=19.0, Suspected Mining explosion.*

ISC 03 10:13:51.6±0.9**,51°.41N**±0°.06×**75°.63E**±0°.05**,h0**^{km}**,n12,** σ**0**^{s}**.96**/19**,9C-7D,Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**1.99**	**112**	Pn	**Pn**	**10 14 26.1**	**-0.5**
	1.1nm,0.3s,baz=297,slow=18,SNR=59						
KURBB				Lg	Lg	10 14 53.1	
	1.2nm,0.3s,baz=294,slow=18,SNR=11						
KURBB	**Kurchatov Arra**	**1.99**	**112**	⇑Pn	**Pn**	**10 14 26.4**	**-0.1**
	10.0nm,0.4s						
KURBB				⇑Sn	**Sb**	**10 14 54.2**	**+0.2**
	31nm,0.3s						
KURK	**Kurchatov**	**2.01**	**109**	⇑Pn	**Pn**	**10 14 26.6**	**-0.1**
	4.5nm,0.4s						
KURK				⇓Sn	**Sn**	**10 14 53.3**	**+0.8**
	11nm,0.6s						
BVA0	**Borovoye Array**	**3.61**	**299**	⇑Pg	**Pb**	**10 14 57.0**	**+0.7**
	1.4nm,0.7s,baz=113,slow=16,SNR=7.4						
BVA0				⇓Sn	**Sn**	**10 15 32.1**	**+0.1**
	2.0nm,0.3s,baz=108,slow=23,SNR=9.1						
BVA0				⇓Lg	Lg	10 15 44.5	
	3.9nm,0.5s,baz=110,slow=27,SNR=6.0						
BVAR	**Borovoye Array**	**3.61**	**299**	Pn	**Pn**	**10 14 49.4**	**+0.6**
	0.1nm,0.3s,baz=113,slow=15,SNR=5.8						
BVAR				Sn	**Sn**	**10 15 32.2**	**+0.1**
	0.4nm,0.3s,baz=115,slow=25,SNR=15						
	0.5nm,0.3s						
BRVK	**Borovoye**	**3.68**	**299**	⇓Pg	**Pb**	**10 14 57.0**	**-0.5**
	0.9nm,0.5s						
BRVK				⇑Sn	**Sn**	**10 15 33.4**	**-0.5**
	1.1nm,0.3s						
BRVK				⇓Lg	Lg	10 15 44.9	
	4.2nm,0.7s						
OTUK	**Ortayu**	**3.82**	**215**	⇓Pg	**Pb**	**10 15 01.1**	**+1.2**
	1.1nm,0.7s						
OTUK				⇓Sn	**Sn**	**10 15 35.2**	**-2.0**
	2.4nm,0.6s						
OTUK				⇑Lg	Lg	10 15 52.8	
	14nm,0.7s						
I46RU	**ZALESOVO INFRA**	**6.14**	**62**	I	I	10 51 45.3	
	baz=249,slow=315,SNR=1.5						
ZALV	**Zalesovo Beam**	**6.14**	**62**	Pn	**Pn**	**10 15 23.6**	**+0.1**
	0.6nm,0.3s,baz=256,slow=14,SNR=8.4						
ZALV				Sn	**Sn**	**10 16 33.2**	**-1.1**
	0.4nm,0.3s,baz=253,slow=28,SNR=3.0						
	1.8nm,0.4s						
MAKZ	**Makanchi**	**6.21**	**135**	⇑Lg	Lg	10 17 09.7	
	2.8nm,0.6s						
MK31	**Makanchi Array**	**6.36**	**134**	Pn	**Pn**	**10 15 27.4**	**+0.9**
	0.2nm,0.5s,baz=101,slow=4.0,SNR=7.3						
MK31				⇑Sn	**Sn**	**10 16 40.3**	**+0.5**
	0.8nm,0.6s,baz=260,slow=56,SNR=4.1						
MK31				⇑Lg	Lg	10 17 13.1	
	1.0nm,0.4s,baz=324,slow=27,SNR=4.8						
MKAR	**Makanchi Array**	**6.36**	**134**	Pn	**Pn**	**10 15 25.6**	**-1.0**
	0.1nm,0.3s,baz=317,slow=9.4,SNR=7.5						
MKAR				Sn	**Sn**	**10 16 37.8**	**-2.0**
	0.2nm,0.3s,baz=315,slow=22,SNR=5.2						
MKAR				Lg	Lg	10 17 10.8	
	0.5nm,0.3s,baz=317,slow=28,SNR=7.0						
	0.1nm,0.3s						

IDC ***03*** *10:32:08.4±1.0,28°.70N×143°.28E,h0*^{km}*,mb3.5/7, mbtmp3.5/10,ML3.2/3,MS2.9/2,Error ellipse: s-maj=30.3km s-min=16.4km az=93.0*

JMA ***03*** *10:32:12.1±0.1,28°.9N±0°.3×14°3E±°,h45*^{km}*,MV4.1/21, NEAR CHICHIJIMA ISLAND*

ISC 03 10:32:14.0±0.9**,28°.82N**±0°.05×**143°.0E**±0°.2**,h41**^{km}**,n22,** σ**2**^{s}**.14**/24**,mb3.5**/8**,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.85**	**202**	*e*P	**Pn**	**10 32 41.9**	**-1.4**
CBIJ				S	**Sn**	**10 33 03.6**	**-1.9**
JCJ	**Chichijima**	**1.85**	**202**	Pn	**Pn**	**10 32 43.2**	**-0.1**
	25nm,0.3s,baz=268,slow=22,SNR=2.4						
JCJ				Sn	**Sn**	**10 33 05.2**	**-0.3**
	67nm,0.3s,baz=270,slow=23,SNR=11						
JHH2	**Haha-jima-NKT2**	**2.29**	**198**	*e*S	**Sn**	**10 33 15.0**	**-1.3**
BSO1	**Boso 1**	**6.05**	**344**	*e*S	**Sn**	**10 34 46.3**	**-1.9**
BSO3	**Boso 3**	**6.31**	**341**	P	**Pn**	**10 33 43.9**	**-0.4**
BSO4	**Boso 4**	**6.54**	**341**	*e*S	**Sn**	**10 34 59.5**	**-1.2**
JHU	**Hanno**	**7.67**	**337**	*e*P	**Pn**	**10 34 02.2**	**-1.0**
JRY	**Ryogami san**	**7.95**	**335**	*e*P	**Pn**	**10 34 06.9**	**-0.1**
JHO	**Hitachi**	**8.02**	**346**	P	**Pn**	**10 34 05.1**	**-2.9**
JHO				*e*S	**Sn**	**10 35 31.0**	**-6.4**
JAG	**Ashikaga**	**8.14**	**340**	*e*P	**Pn**	**10 34 09.2**	**-0.4**
MJAR	**Matsushiro Arr**	**8.67**	**334**	Pn	**Pn**	**10 34 16.0**	**-0.9**
	0.1nm,0.3s,baz=129,slow=17,SNR=4.9						
	0.6nm,0.3s						
JOW	**Kunigami**	**13.15**	**265**	LR	LR	10 40 00.1	
	comp=Z,14nm,18.8s,baz=78,slow=35						
KSRS	**Korea Array**	**15.24**	**308**	Pn	**P**	**10 35 49.5**	**-1.1**
	0.2nm,0.3s,baz=115,slow=11,SNR=3.1						
	1.2nm,0.8s						
USRK	**Ussuriysk Ar.**	**17.67**	**333**	P	**P**	**10 36 20.1**	**+2.6**
	0.2nm,0.3s,baz=127,slow=28,SNR=1.8						
	1.2nm,0.7s						
SONM	**Songino Array**	**33.98**	**314**	P	**P**	**10 38 55.2**	**+1.5**
	0.5nm,0.8s,baz=193,slow=6.1,SNR=2.8						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**49.19**	**191**	P	**P**	**10 40 57.8**	**-0.4**
	3.6nm,0.6s,baz=13,slow=8.5,SNR=30						
MKAR	**Makanchi Array**	**49.92**	**308**	P	**P**	**10 41 06.4**	**+2.7**
	0.4nm,0.7s,baz=83,slow=10,SNR=3.6						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**52.34**	**313**	P	**P**	**10 41 24.1**	**+2.4**
	0.6nm,0.6s,baz=92,slow=7.0,SNR=2.6						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**52.91**	**190**	P	**P**	**10 41 25.3**	**-0.9**
	0.3nm,0.6s,baz=1.9,slow=6.6,SNR=4.2						
ASAR				LR	LR	11 01 08.8	
	comp=Z,47nm,21.0s,baz=52,slow=33						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**55.87**	**29**	P	**P**	**10 41 46.7**	**-0.4**
	0.2nm,0.7s,baz=267,slow=6.6,SNR=3.8						
	0.2nm,0.7s						
BVAR	**Borovoye Array**	**57.25**	**317**	P	**P**	**10 41 59.8**	**+2.6**
	0.5nm,0.4s,baz=75,slow=7.9,SNR=3.5						
	0.5nm,0.4s						
YKA	**Yellowknife Ar**	**70.30**	**29**	P	**P**	**10 43 23.7**	**+0.8**
	0.2nm,0.7s,baz=292,slow=6.6,SNR=3.4						
	0.2nm,0.7s						

IDC ***03*** *10:34:30.5±1.0,61°.22N×27°.70W,h0*^{km}*,mb3.5/8, mbtmp3.6/9,ML3.6/1,MS3.4/32,Error ellipse: s-maj=31.5km s-min=21.7km az=5.0*

ISC 03 10:34:32.2±0.9**,61°.4N**±0°.1×**27°.6W**±0°.1**,h10**^{km}**,n39,** σ**1**^{s}**.38**/10**,mb3.6**/8**,MS3.3**/28**,Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**4.45**	**37**	Pn	**Pn**	**10 35 38.7**	**-0.9**
	3.1nm,0.3s,baz=257,slow=5.2,SNR=20						
BORG				Sn	**Sn**	**10 36 30.3**	**-1.0**
	baz=303,slow=19						
	8.8nm,0.3s						
SFJD	**Kangerlussuaq**	**11.47**	**309**	LR	LR	10 41 05.9	
	comp=Z,295nm,18.0s,baz=124,slow=34						
EKA	**Eskdalemuir Ar**	**14.12**	**104**	LR	LR	10 42 23.7	
	comp=Z,181nm,18.7s,baz=355,slow=34						
NOA	**NORSAR Array B**	**18.52**	**74**	LR	LR	10 45 12.3	
	comp=Z,63nm,19.6s,baz=285,slow=34						
HFS	**Hagfors**	**19.98**	**75**	LR	LR	10 45 57.6	
	comp=Z,77nm,18.1s,baz=265,slow=34						
SCHQ	**Schefferville**	**21.46**	**270**	LR	LR	10 45 46.1	
	comp=Z,83nm,20.8s,baz=139,slow=32						
ARCES	**ARCESS Array B**	**22.78**	**47**	LR	LR	10 46 40.4	
	comp=Z,31nm,19.7s,baz=357,slow=32						
FINES	**FINESS Array B**	**25.10**	**66**	LR	LR	10 49 29.3	
	comp=Z,47nm,18.3s,baz=272,slow=36						
DAVOX	**Davos/Dischmat**	**25.93**	**107**	LR	LR	10 49 10.5	
	comp=Z,52nm,19.1s,baz=262,slow=34						
ESDC	**Sonseca Array**	**26.11**	**135**	LR	LR	10 49 01.2	
	comp=Z,40nm,18.1s,baz=300,slow=33						
GERES	**GERESS Array B**	**26.24**	**100**	LR	LR	10 50 44.0	
	comp=Z,62nm,18.6s,baz=292,slow=37						
RES	**Resolute Bay**	**26.61**	**327**	LR	LR	10 50 05.8	
	comp=Z,66nm,19.4s,baz=74,slow=35						
VRAC	**Vranov**	**27.30**	**96**	LR	LR	10 51 47.0	
	comp=Z,65nm,18.0s,baz=317,slow=38						
AKASG	**Malin Array Be**	**32.44**	**83**	LR	LR	10 54 04.3	
	comp=Z,43nm,18.8s,baz=262,slow=36						
OBN	**Obninsk**	**33.09**	**71**	LR	LR	10 54 45.0	
	comp=Z,6.5nm,21.1s,baz=163,slow=37						
SADO	**Sadowa**	**34.06**	**265**	LR	LR	10 53 34.6	
	comp=Z,93nm,19.0s,baz=294,slow=34						
MLR	**Muntele Rosu**	**34.49**	**92**	LR	LR	10 56 48.4	
	comp=Z,35nm,18.6s,baz=289,slow=39						
VAE	**Valguarnera**	**35.34**	**113**	LR	LR	10 56 30.5	
	comp=Z,95nm,18.0s,baz=326,slow=37						
YKA	**Yellowknife Ar**	**38.03**	**311**	P	**P**	**10 41 49.3**	**-0.7**
	0.2nm,0.7s,baz=54,slow=9.0,SNR=4.2						
YKA				LR	LR	10 56 49.8	
	comp=Z,78nm,18.4s,baz=80,slow=35						
	0.2nm,0.7s						
ULM	**Lac du Bonnet**	**38.16**	**285**	LR	LR	10 56 33.6	
	comp=Z,120nm,18.1s,baz=20,slow=35						
IDI	**Anoyia**	**41.93**	**104**	LR	LR	10 59 50.0	
	comp=Z,42nm,21.4s,baz=236,slow=36						
BRTR	**Keskin Array B**	**42.56**	**92**	P	**P**	**10 42 27.7**	**-0.3**
	0.8nm,0.9s,baz=350,slow=11,SNR=3.1						
	0.8nm,0.9s						
TKL	**Tuckaleechee C**	**43.37**	**260**	LR	LR	10 59 06.6	
	comp=Z,59nm,18.6s,baz=66,slow=34						
DLBC	**Dease Lake**	**46.32**	**315**	LR	LR	11 01 36.5	
	comp=Z,66nm,19.5s,baz=99,slow=35						
GNI	**Garni**	**47.56**	**82**	LR	LR	11 03 06.9	
	comp=Z,18nm,19.3s,baz=330,slow=36						
NEW	**Newport**	**49.11**	**298**	LR	LR	11 01 13.4	
	comp=Z,21nm,21.9s,baz=49,slow=33						
PDAR	**Pinedale Array**	**50.03**	**288**	P	**P**	**10 43 25.8**	**-1.0**
	0.4nm,0.6s,baz=64,slow=6.8,SNR=4.6						
PDAR				LR	LR	11 03 35.9	
	comp=Z,50nm,18.1s,baz=62,slow=35						
	0.4nm,0.6s						
BBB	**Bella Bella**	**50.48**	**308**	LR	LR	11 04 44.3	
	comp=Z,61nm,20.1s,baz=40,slow=36						
TORD	**Torodi Ar. Bea**	**52.59**	**143**	P	**P**	**10 43 44.4**	**-1.6**
	0.9nm,0.8s,baz=339,slow=8.3,SNR=5.4						
	0.9nm,0.8s						
ELK	**Elko**	**54.21**	**291**	LR	LR	11 05 09.0	
	comp=Z,48nm,20.8s,baz=61,slow=34						
ANMO	**Albuquerque**	**54.82**	**280**	LR	LR	11 06 20.2	
	comp=Z,57nm,18.8s,baz=126,slow=35						
YBH	**Yreka Blue Hor**	**56.71**	**297**	LR	LR	11 08 10.1	
	comp=Z,53nm,21.5s,baz=29,slow=36						
NVAR	**Mina Array Bea**	**57.47**	**291**	LR	LR	11 08 28.8	
	comp=Z,27nm,20.2s,baz=332,slow=36						
TXAR	**Lajitas Array**	**58.10**	**273**	P	**P**	**10 44 26.4**	**+0.7**
	0.2nm,0.7s,baz=12,slow=4.8,SNR=2.1						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**58.40**	**49**	P	**P**	**10 44 28.9**	**+1.4**
	0.6nm,0.8s,baz=333,slow=5.7,SNR=4.4						
	0.6nm,0.8s						
PFO	**Pinyon Flats O**	**60.61**	**287**	LR	LR	11 10 49.0	
	comp=Z,57nm,18.4s,baz=60,slow=36						
SONM	**Songino Array**	**65.04**	**32**	P	**P**	**10 45 13.1**	**+0.8**
	0.6nm,0.8s,baz=339,slow=3.6,SNR=3.8						
	0.6nm,0.8s						
LPIG	**La Paz**	**65.69**	**276**	LR	LR	11 12 20.6	
	comp=Z,44nm,19.8s,baz=28,slow=35						
CMAR	**Chiang Mai Arr**	**89.81**	**50**	P	**P**	**10 47 33.0**	**+2.1**
	0.3nm,0.3s,baz=318,slow=1.2,SNR=1.6						
	0.3nm,0.3s						

BJI ***03*** *10:46:50.7±0.0,5°.68S×147°.61E,h116*^{km}*,mb4.6/22, mB5.2/9*

DJA ***03*** *10:46:53.8±0.4,6°S±4°×14°7E±°,h110*^{km}*±5*^{km}*,M5.1/25, mB5.4/13,mb5.2/25,MLv5.6/2,Mw(mB)4.9/13*

*IDC **03** 10:46:54.2±1.2, 5.°63S×147.°29E, h131^{km}±10^{km}, mb4.1/22, mbtmp4.5/25, MS3.3/10, Error ellipse: s-maj=11.2km s-min=8.8km az=91.0*

*NEIC **03** 10:46:54.2±1.4, 5.°61S±0.°08×147.°26E±0.°06, h122^{km}±5^{km}, mb4.8/106, Error ellipse: s-maj=11.4km s-min=7.5km az=159.0*

ISC 03 10:46:53.5±0.3, **5.°68S**±0.°04×**147.°25E**±0.°04, **h122^{km}, n359, σ1.^{s}25**/364, **mb4.7**/82, **1D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.70	181	P	Pn	10 47 49.1	0.0
	320nm,0.3s,baz=0.7,slow=12,SNR=375						
PMG				S	Sn	10 48 29.7	-2.6
	2µm,0.4s,baz=18,slow=20,SNR=19						
PMG				LR	LR	10 49 39.1	
	comp=Z,356nm,20.1s,baz=334,slow=44						
PMG	Port Moresby	3.70	181		Pn	10 47 49.2	+0.1
KRVT	Keravat (AS076	4.95	74	P	Pn	10 48 05.6	-0.2
	358nm,0.5s,baz=147,slow=1.4,SNR=43						
KRVT				S	Sn	10 49 01.6	-0.4
	154nm,0.8s,baz=204,slow=20,SNR=0.9						
RABL	Rabaul	5.11	73		Pn	10 48 09.8	+1.7
GENI	Genyem	7.70	293	P	Pn	10 48 41.9	-1.1
	179nm,0.8s,5µm1.4nm						
COEN	Coen	9.15	206	P	Pn	10 49 03.5	+0.9
	baz=9.2,SNR=483						
COEN	Coen	9.15	206	Pn	Pn	10 49 03.8	+1.2
COEN	Coen	9.15	206	P	Pn	10 49 03.8	+1.2
SRPI	Serui, Papua	11.62	289	P	Pn	10 49 35.5	-0.2
	123nm,0.6s						
MTSU	Mount Surprise	12.71	193	P	Pn	10 49 51.3	+1.4
	baz=13,SNR=59						
MTSU	Mount Surprise	12.71	193	P	Pn	10 49 51.9	+2.0
HNR	Honiara	13.12	107	P	Pn	10 49 55.5	+0.2
	588nm,0.7s,baz=236,slow=3.6,SNR=15						
HNR	Honiara	13.12	107	Pn	Pn	10 49 57.7	+2.4
HNR	Honiara	13.12	107	P	P	10 50 01.7	+0.8
TV1H	Townsville Har	13.51	182	P	P	10 50 04.2	-0.9
CTA	Charters Tower	14.35	184	P	P	10 50 14.7	+0.1
	8.7nm,0.4s,baz=353,slow=14,SNR=16						
CTA				S	Sn	10 52 46.9	-2.9
	3.0nm,0.5s,baz=66,slow=22,SNR=2.3						
CTA				LR	LR	10 55 10.0	
	comp=Z,62nm,18.4s,baz=30,slow=34						
CTA	Charters Tower	14.35	184	P	P	10 50 16.4	+1.8
CTAO	Charters Tower	14.35	184	Pn	Pn	10 50 10.5	-0.6
CTAO	Charters Tower	14.35	184	P	P	10 50 16.2	+1.6
FAKI	Fak Fak	15.21	280	Pn	Pn	10 50 21.2	-0.8
FAKI				IAmb	IAmb	10 50 37.0	
	comp=Z,93nm,1.1s						
FAKI	Fak Fak	15.21	280	P	Pn	10 50 23.1	+1.1
KDU	Kakadu	16.16	243	P	Pn	10 50 34.2	+0.5
	baz=16,SNR=106						
KDU	Kakadu	16.16	243	P	Pn	10 50 34.2	+0.5
QIS	Mount Isa	16.55	206	P	P	10 50 40.9	+2.0
	baz=17,SNR=61						
QIS	Mount Isa	16.55	206	P	P	10 50 41.2	+2.3
MTN	Manton Dam	17.42	245	P	Pn	10 50 50.0	+0.9
	baz=17,SNR=77						
MTN	Manton Dam	17.42	245	P	Pn	10 50 50.4	+1.3
MTN				IAmb	IAmb	10 50 52.8	
	comp=Z,51nm,0.8s						
MTN	Manton Dam	17.42	245	P	Pn	10 50 50.1	+1.0
WB0	Warramunga Arr	18.78	221	P	P	10 51 05.2	+1.8
WB0				IAmb	IAmb	10 51 06.7	
	comp=Z,80nm,1.0s						
WR0	Warramunga Arr	18.82	220	P	P	10 51 05.0	+1.1
WRAB	Tennant Creek	18.92	220	P	P	10 51 06.0	+1.0
WRAB	Tennant Creek	18.92	220	P	P	10 51 06.4	+1.4
WB2	Warramunga Arr	18.93	220	P	P	10 51 06.1	+1.1
WRA	Warramunga Arr	18.94	220	P	P	10 51 06.6	+1.5
	comp=Z,108nm,0.6s,baz=42,slow=12,SNR=224						
WRA				S	S	10 54 29.6	-4.4
	comp=Z,3.0nm,0.8s,baz=43,slow=23,SNR=4.9						
WRA				ScP	ScP	10 58 49.6	-1.2
	comp=Z,4.7nm,0.9s,baz=34,slow=2.6,SNR=7.2						
WRA	Warramunga Arr	18.94	220	P	P	10 51 06.0	+0.9
EIDS	Eidsvold	19.92	170	P	P	10 51 16.8	+1.1
	baz=20,SNR=3.7						
EIDS	Eidsvold	19.92	170		P	10 51 16.0	+0.3
EIDS	Eidsvold	19.92	170	P	P	10 51 18.0	+2.3
KNRA	Kununurra	20.69	240	P	P	10 51 24.8	+0.7
	baz=21,SNR=102						
KNRA	Kununurra	20.69	240	P	P	10 51 24.7	+0.6
KNRA	Kununurra	20.69	240	P	P	10 51 24.8	+0.7
RMQ	Roma	20.74	176	P	P	10 51 27.5	+2.9
	baz=21,SNR=11						
RMQ	Roma	20.74	176	P	Pn	10 51 27.8	-0.3
QLP	Quilpie	20.98	188	P	P	10 51 32.1	+5.0
	baz=21,SNR=7.1						
QLP	Quilpie	20.98	188	P	P	10 51 30.1	+3.0
SANI	Sanana	21.52	279	P	P	10 51 35.4	+2.4
SANI	Sanana	21.52	279	P	P	10 51 42.6	+10
AS01	Alice Springs	21.99	214	P	P	10 51 39.5	+1.5
AS31	Alice Springs	22.02	214	P	P	10 51 39.8	+1.5
ASAR	Alice Springs	22.02	214	P	P	10 51 39.8	+1.5
	comp=Z,14nm,0.6s,baz=50,slow=8.3,SNR=365						
ASAR				S	S	10 55 33.0	-0.4
	comp=Z,26nm,1.0s,baz=32,slow=23,SNR=19						
ASAR				ScP	ScP	10 58 57.5	-0.8
	comp=Z,3.6nm,1.0s,baz=23,slow=3.9,SNR=7.2						
	comp=Z,14nm,0.6s						
KOUNC	Koumac, New Ca	22.18	133	P	P	10 51 39.2	-0.7
INKA	Innaminka	22.79	195	P	P	10 51 47.8	+1.9
SOEI	Soe	23.13	259	P	P	10 51 50.4	+1.1
SOEI	Soe	23.13	259	P	P	10 51 51.1	+1.7
SOEI	Soe	23.13	259	P	P	10 51 49.6	+0.2
	comp=Z,192nm,0.8s,comp=Z,2µm						
FITZ	Fitzroy Crossi	24.45	238	P	P	10 52 02.6	+1.5
OOD	Oodnadatta	24.59	205	P	P	10 52 03.6	+1.3
DZM	Mont Dzumac	24.70	133	P	P	10 52 03.3	-0.2
	comp=Z,10nm,0.5s,baz=311,slow=20,SNR=13						
DZM				LR	LR	11 00 40.9	
	comp=Z,87nm,18.5s,baz=214,slow=34						
	comp=Z,10nm,0.5s						
DZM	Mont Dzumac	24.70	133	P	P	10 52 03.5	0.0
DZM				IAmb	IAmb	10 52 31.1	
	comp=Z,27nm,1.1s						
DZM	Mont Dzumac	24.70	133	P	P	10 52 03.6	+0.1
ARMA	Armidale	24.95	171	P	P	10 52 07.1	+1.4
	baz=25,SNR=4.1						
ARMA	Armidale	24.95	171	P	P	10 52 05.3	-0.4
ARMA	Armidale	24.95	171	P	P	10 52 07.1	+1.4
MMRI	Maumere	24.99	262	P	P	10 52 06.4	+0.3
GTOI	Gorontalo	25.01	284	P	P	10 52 06.6	+0.3
	comp=Z,17nm,0.6s						
CMSA	Cobar Meteorol	25.76	183	P	P	10 52 15.3	+2.4
LCRK	Leigh Creek	26.06	198	P	P	10 52 16.8	+1.2
WRKA	Warakurna	26.47	221	P	P	10 52 20.6	+1.1
	baz=26,SNR=88						
WRKA	Warakurna	26.47	221	P	P	10 52 20.3	+0.8
STKA	Stephens Creek	26.59	191	P	P	10 52 21.4	+1.0
	comp=Z,2.1nm,0.7s,baz=3.2,slow=12,SNR=2.9						
STKA				ScP	ScP	10 59 11.4	+0.7
	comp=Z,4.4nm,1.1s,baz=356,slow=15,SNR=3.4						
STKA				LR	LR	11 03 43.1	
	comp=Z,115nm,20.9s,baz=26,slow=38						
	comp=Z,2.1nm,0.7s						
STKA	Stephens Creek	26.59	191	P	P	10 52 21.9	+1.4
	baz=27,SNR=4.6						
STKA	Stephens Creek	26.59	191	P	P	10 52 21.0	+0.6
KAPI	Kappang	27.39	270	P	P	10 52 29.4	+1.7
	comp=Z,4.4nm,0.3s,baz=97,slow=12,SNR=4.7						
	comp=Z,4.4nm,0.3s						
MULG	Mulgathing	27.45	205	P	P	10 52 28.9	+0.9
HTT	Hallett	28.68	195	P	P	10 52 41.3	+2.3
	baz=29,SNR=6.2						
HTT	Hallett	28.68	195	P	P	10 52 40.0	+1.0
BBOO	Buckleboo	28.94	200	P	P	10 52 41.0	-0.4
PLAI	Plampang	29.40	262	P	P	10 52 44.1	-1.5
PLAI	Plampang	29.40	262	P	P	10 52 43.3	-2.3
	comp=Z,38nm,0.7s						
CAN	Canberra	29.54	177	P	P	10 52 45.9	-0.8
CAN				IAmb	IAmb	10 52 56.9	
	comp=Z,51nm,1.5s						
H11S3	WAKE ISLAND Hy	30.73	38	T	T	11 26 06.6	
	baz=220						
H11S2	WAKE ISLAND Hy	30.74	38	T	T	11 26 04.8	
	baz=220						
H11S1	WAKE ISLAND Hy	30.75	38	T	T	11 26 03.9	
	baz=220						
MBWA	Marble Bar	30.79	237	P	P	10 52 58.7	+0.9
MBWA	Marble Bar	30.79	237	P	P	10 52 58.7	+0.9
MBWA	Marble Bar	30.79	237	P	P	10 52 58.7	+0.9
FORT	Forrest	30.80	214	P	P	10 52 59.0	+1.3
	baz=31,SNR=22						
FORT	Forrest	30.80	214	P	P	10 52 58.2	+0.4
FORT	Forrest	30.80	214	P	P	10 52 58.9	+1.1
PSA00	Pilbara Seismi	30.88	237	P	P	10 52 59.5	+0.9
PSA00	Pilbara Seismi	30.88	237	P	P	10 52 59.8	+1.2
FUNA	Funafuti	31.82	97	P	P	10 53 06.5	-0.4
FUNA	Funafuti	31.82	97	P	P	10 53 06.0	-0.9
MSVF	Nonsavu	32.38	114	P	P	10 53 11.7	-0.2
MSVF				IAmb	IAmb	10 53 22.2	
	comp=Z,30nm,1.4s						
JAGI	Jajag, Banyuwa	32.96	263	P	P	10 53 14.9	-2.0
JAGI	Jajag, Banyuwa	32.96	263	P	P	10 53 13.7	-3.2
	comp=Z,44nm,0.9s						
GMJI	Gumukmas	33.65	264	P	P	10 53 24.0	+1.1
	comp=Z,20nm,1.0s						
KMBL	Kambalda	34.91	220	P	P	10 53 34.5	+0.9
	baz=35,SNR=5.4						
KMBL	Kambalda	34.91	220	P	P	10 53 34.6	+1.1
PBKI	Pangkalan Bun	35.60	273	P	P	10 53 41.1	+1.4
	comp=Z,80nm,0.7s						
GIRL	Giralia	36.05	239	P	P	10 53 45.8	+2.4
	baz=36,SNR=6.2						
GIRL	Giralia	36.05	239	P	P	10 53 45.8	+2.4
UGM	Wanagama	36.53	264	P	P	10 53 47.9	+0.2
UGM	Wanagama	36.53	264	P	P	10 53 48.0	+0.3
MORW	Morawa	37.57	228	P	P	10 53 57.5	+1.3
	baz=38,SNR=5.3						
MORW	Morawa	37.57	228	P	P	10 53 56.7	+0.5
MORW				IAmb	IAmb	10 53 57.9	
	comp=Z,21nm,0.7s						
MORW	Morawa	37.57	228	P	P	10 53 57.6	+1.3
KLBR	Kellerberrin	37.77	223	P	P	10 53 58.7	+0.7
	baz=38,SNR=32						
KLBR	Kellerberrin	37.77	223	P	P	10 53 58.5	+0.6
BLDU	Ballidu	37.93	225	P	P	10 54 00.3	+1.0
	baz=38,SNR=27						
BLDU	Ballidu	37.93	225	P	P	10 54 00.2	+1.0
KPJI	Karang Pucung	38.10	265	P	P	10 54 01.7	+0.8
	comp=Z,23nm,0.5s						
OUZ	Omahuta	38.13	144	P	P	10 54 02.2	+1.4
TWG	Pinlang	38.18	319	P	P	10 53 59.1	-2.3
YULB	Yu-li	38.44	320	P	P	10 54 01.6	-1.9
YULB				IAmb	IAmb	10 54 07.0	
	comp=Z,21nm,1.3s						
YULB	Yu-li	38.44	320	P	P	10 54 04.5	+0.9
TPUB	Ta-pu	38.81	319	P	P	10 54 05.8	-0.8
NACB	Ninganchiao	38.81	321	P	P	10 54 04.4	-2.2
NACB				IAmb	IAmb	10 54 09.2	
	comp=Z,43nm,1.3s						
SSLB	Suanglung	38.94	320	P	P	10 54 06.3	-1.4
SSLB				IAmb	IAmb	10 54 29.4	
	comp=Z,15nm,1.0s						
MUN	Mundaring	39.07	224	P	P	10 54 09.9	+1.2
	baz=39,SNR=7.1						
MUN	Mundaring	39.07	224	P	P	10 54 09.8	+1.1
YHNB	Yeheng	39.30	321	P	P	10 54 12.9	+2.0
BBJI	Bungbulang	39.37	265	P	P	10 54 10.9	-0.7
KNMB	Chin-men Tao	41.09	318	P	P	10 54 26.5	+1.0
AFI	Afiamalu	41.14	105	P	P	10 54 25.4	-0.8
	comp=Z,16nm,0.5s,baz=261,slow=17,SNR=4.9						
	comp=Z,16nm,0.5s						
AFI	Afiamalu	41.14	105	P	P	10 54 24.7	-1.5
AFI	Afiamalu	41.14	105	P	P	10 54 25.2	-0.9
AFI				pP	pP	10 54 52.9	-0.7
JMN	Monobe	41.19	343	P	P	10 54 25.6	-0.6
JMN				IAmb	IAmb	10 54 47.8	
	comp=Z,23nm,1.2s						
QRZ	Quartz Range	41.67	151	P	P	10 54 32.0	+1.9
TKNZ	Takaka Hill	42.04	151	P	P	10 54 35.2	+2.1
DSZ	Denniston Nort	42.05	152	P	P	10 54 34.1	+0.9
JGF	Kuroka	42.10	348	P	P	10 54 33.8	+0.2
JGF				IAmb	IAmb	10 54 58.9	
	comp=Z,16nm,1.2s						
MRNZ	Matariki Terra	42.23	151	P	P	10 54 35.5	+0.9
URZ	Urewera	42.26	144	P	P	10 54 34.7	-0.2
	comp=Z,5.6nm,0.5s,baz=350,slow=3.8,SNR=10						
URZ				LR	LR	11 10 11.2	
	comp=Z,57nm,19.0s,baz=356,slow=33						
	comp=Z,5.6nm,0.5s						
URZ	Urewera	42.26	144	P	P	10 54 35.0	+0.1
NNZ	Nelson	42.39	150	P	P	10 54 36.3	+0.5
RTZ	Ruatahuna	42.43	145	P	P	10 54 35.9	-0.5
RTZ				IAmb	IAmb	10 54 38.3	
	comp=Z,16nm,0.6s						
BKZ	Black Stump Fm	42.53	146	P	P	10 54 37.7	+0.6
BKZ				IAmb	IAmb	10 54 38.9	
	comp=Z,19nm,1.0s						
BKZ	Black Stump Fm	42.53	146	P	P	10 54 37.7	+0.6
JHS	Saijyo	42.60	343	P	P	10 54 36.9	-0.8
JHS				IAmb	IAmb	10 54 42.1	
	comp=Z,35nm,1.4s						
JCZ	Jackson Bay	42.66	157	P	P	10 54 40.0	+1.9
MJAR	Matsushiro Arr	42.85	349	P	P	10 54 38.6	-1.0
	comp=Z,1.3nm,0.8s,baz=168,slow=11,SNR=1.9						
MJAR				PcP	PcP	10 56 28.6	0.0
	comp=Z,2.3nm,0.8s,baz=136,slow=3.3,SNR=4.7						
MJAR				ScP	ScP	11 00 06.2	-2.3
	comp=Z,1.7nm,0.9s,baz=152,slow=4.1,SNR=4.3						
	comp=Z,1.3nm,0.8s						
MAJO	Matsushiro	42.85	349	P	P	10 54 38.5	-1.1
MAJO				IAmb	IAmb	10 55 04.3	
	comp=Z,12nm,1.2s						
RPZ	Rata Peaks	43.29	155	P	P	10 54 43.5	+0.4
	comp=Z,8.6nm,0.5s,baz=334,slow=4.8,SNR=13						
RPZ				LR	LR	11 12 45.8	
	comp=Z,89nm,19.0s,baz=248,slow=36						
	comp=Z,8.6nm,0.5s						
RPZ	Rata Peaks	43.29	155	P	P	10 54 44.7	+1.6
LBZ	Lake Benmore	43.48	156	P	P	10 54 44.7	+0.1
MLZ	Mavora Lakes	43.51	159	P	P	10 54 46.3	+1.4
MLZ				IAmb	IAmb	10 55 15.3	
	comp=Z,48nm,1.4s						
WHZ	Wether Hill Ro	43.90	159	P	P	10 54 49.9	+2.0
NJ2	Nanjing	46.26	326	*e*P	P	10 55 08.9	+2.2
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
KSRS	Korea Array	46.55	339	P	P	10 55 09.1	+0.2
	comp=Z,1.9nm,0.8s,baz=156,slow=8.5,SNR=5.6						
	comp=Z,1.9nm,0.8s						
JTM	Tenmabayashi	46.59	354	P	P	10 55 10.0	+0.8
IPM	Ipoh	47.25	281	P	P	10 55 12.9	-1.9
IPM				IAmb	IAmb	10 55 29.6	
	comp=Z,15nm,0.6s						
LHMI	Lhok Sumawe	51.38	281	P	P	10 55 45.2	-1.1
	comp=Z,109nm,1.0s						
HNS	HongShan	52.51	327	⇓P	P	10 55 54.5	+0.3
HNS				pmax	pmax		
	comp=Z,20nm,0.8s						
CMAR	Chiang Mai Arr	53.32	298	P	P	10 55 58.7	-1.8
	comp=Z,0.5nm,0.3s,baz=116,slow=6.7,SNR=4.6						
	comp=Z,0.5nm,0.3s						
PZH	PanZhiHua	54.46	308	P	P	10 56 11.7	+2.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,5.4s						
PETK	Petropavlovsk-	59.23	7	P	P	10 56 41.3	-0.5
	comp=Z,4.5nm,0.8s,baz=172,slow=7.3,SNR=9.3						
	comp=Z,4.5nm,0.8s						
GTA	Gaotai	62.66	320	*e*P	P	10 57 11.2	+5.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ULN	Ulaanbaatar	63.95	331	P	P	10 57 14.0	+0.2
ULN				IAmb	IAmb	10 57 15.7	
	comp=Z,5.3nm,0.8s						
ULN	Ulaanbaatar	63.95	331	P	P	10 57 14.8	+0.9
SONM	Songino Array	64.25	331	P	P	10 57 16.1	+0.3
	comp=Z,2.5nm,0.8s,baz=128,slow=4.6,SNR=16						
	comp=Z,2.5nm,0.8s						
SONM	Songino Array	64.25	331	P	P	10 57 16.3	+0.6
MA2	Magadan	65.11	2	LR	LR	11 23 15.0	
	comp=Z,7.7nm,21.6s,baz=100,slow=34						
CCD	Concordia, Ant	70.72	186	P	P	10 57 56.9	+0.6
CCD				pP	pP	10 58 26.9	-0.3
VNDA	Vanda	72.21	177	P	P	10 58 05.0	+0.3
	comp=Z,2.9nm,0.6s,baz=350,slow=6.0,SNR=8.2						
	comp=Z,2.9nm,0.6s						
VNDA	Vanda	72.21	177	P	P	10 58 05.2	+0.4
VNDA				IAmb	IAmb	10 58 33.5	
	comp=Z,18nm,1.3s						
WMQ	Urumqi	72.72	319	*e*P	P	10 58 08.7	+0.3
WMQ				PcP	PcP	10 58 25.1	0.0
WMQ				pP	pP	10 58 43.9	+5.1
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KAAM	Kaadhehdhoo	74.39	272	P	P	10 58 17.6	-1.1
BILL	Bilibino	74.77	7	P	P	10 58 20.8	+1.0
MK31	Makanchi Array	77.41	320	P	P	10 58 32.9	-2.4
MKAR	Makanchi Array	77.41	320	P	P	10 58 34.8	-0.4
	comp=Z,2.0nm,0.8s,baz=95,slow=7.6,SNR=17						
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	77.41	320	P	P	10 58 35.0	-0.3
MAKZ	Makanchi	77.62	320	P	P	10 58 36.8	+0.4
O16K	Kokwok River B	77.98	25	P	P	10 58 38.8	+0.7
	baz=236						
TIXI	Tiksi	78.12	354	P	P	10 58 38.5	-0.1
TNA	Tin City	78.22	17	P	P	10 58 39.9	+0.6
TNA	Tin City	78.22	17	P	P	10 58 40.0	+0.8
	baz=226						
ANM	Nome	78.33	19	P	P	10 58 39.9	0.0
ANM	Nome	78.33	19	P	P	10 58 41.0	+1.1
	baz=228						
O17K	Koliganek Bris	78.51	25	P	P	10 58 42.2	+1.3
	baz=237						
Q18K	Katmai Hardscr	78.82	27	P	P	10 58 43.5	+0.6
	baz=239						
ZAA0	Zalesovo Array	78.88	328	P	P	10 58 42.9	-0.2
ZALV	Zalesovo Beam	78.88	328	P	P	10 58 41.6	-1.5
	comp=Z,2.5nm,0.7s,baz=102,slow=6.1,SNR=10						
ZALV				LR	LR	11 31 48.8	
	comp=Z,11nm,20.9s,baz=89,slow=34						
	comp=Z,2.5nm,0.7s						
ZALV	Zalesovo Beam	78.88	328	P	P	10 58 41.2	-1.9
P19K	Oil Pt	80.12	26	P	P	10 58 50.7	+0.9
	baz=240						
TTA	Tatalina	80.66	23	P	P	10 58 51.0	-1.7
TTA	Tatalina	80.66	23	P	P	10 58 53.7	+1.0
	baz=238						
L19K	White Mountain	80.72	24	P	P	10 58 54.5	+1.5
L19K				IAmb	IAmb	10 58 55.5	
	comp=Z,9.8nm,0.9s						
L19K	White Mountain	80.72	24	P	P	10 58 54.0	+1.0
	baz=239						
M19K	Big River Lodg	80.76	24	P	P	10 58 53.7	+0.5
M19K	Big River Lodg	80.76	24	P	P	10 58 54.0	+0.8
	baz=239						
KURBB	Kurchatov Arra	81.13	323	P	P	10 58 54.1	-1.2
	comp=Z,0.7nm,0.7s,baz=109,slow=4.4,SNR=4.3						
	comp=Z,0.7nm,0.7s						
L20K	Farewell, AK	81.26	24	P	P	10 58 57.1	+1.2
	baz=240						
M20K	Styx River	81.27	24	P	P	10 58 55.0	-0.9
M20K				IAmb	IAmb	10 58 58.4	
	comp=Z,8.2nm,0.8s						
M20K	Styx River	81.27	24	P	P	10 58 56.7	+0.8
	baz=240						
GCSA	Galena City Sc	81.33	21	P	P	10 58 57.2	+1.2
	baz=236,SNR=6.4						
RDOG	Red Dog Mine	81.37	17	P	P	10 58 54.3	-2.0
RDOG				IAmb	IAmb	10 58 57.9	
	comp=Z,10.0nm,0.9s						
RDOG	Red Dog Mine	81.37	17	P	P	10 58 57.3	+1.1
	baz=230						
K20K	Telida	81.64	23	P	P	10 58 59.7	+1.9
K20K	Telida	81.64	23	P	P	10 58 58.9	+1.2
	baz=239						
SKT	Skwentna	81.97	25	P	P	10 58 59.6	+0.1
	baz=242						
RC01	Rabbit Creek A	82.33	26	P	P	10 59 01.6	+0.3
RC01				IAmb	IAmb	10 59 02.6	
	comp=Z,18nm,1.0s						
RC01	Rabbit Creek A	82.33	26	P	P	10 59 02.2	+0.8
	baz=244						
CAST	Castle Rocks	82.44	23	P	P	10 59 02.4	+0.4
CAST				IAmb	IAmb	10 59 04.4	
	comp=Z,7.9nm,1.0s						
CAST	Castle Rocks	82.44	23	P	P	10 59 03.0	+1.0
	baz=241						
M22K	Willow	82.46	25	P	P	10 59 02.8	+0.8
	baz=243						
CHUM	Lake Minchumin	82.58	23	P	P	10 59 03.9	+1.3
	baz=241,SNR=6.5						
CUT	Chulitna	82.70	25	P	P	10 59 04.5	+1.3
CUT				IAmb	IAmb	10 59 20.8	
	comp=Z,16nm,1.0s						
CUT	Chulitna	82.70	25	P	P	10 59 04.0	+0.7
	baz=243						
PMR	Palmer	82.81	26	P	P	10 59 04.4	+0.6
PMR				IAmb	IAmb	10 59 23.0	
	comp=Z,13nm,1.3s						
PMR	Palmer	82.81	26	P	P	10 59 04.5	+0.7
	baz=244						
PWL	Port Wells	82.84	26	P	P	10 59 04.8	+0.7
PWL	Port Wells	82.84	26	P	P	10 59 05.0	+0.9
	baz=245						
KNK	Knik Glacier	83.03	26	P	P	10 59 05.5	+0.5
	baz=245						
IMAR	Indian Mountai	83.11	21	P	P	10 59 06.1	+0.7
BPAW	Bear Paw Mtn.	83.20	23	P	P	10 59 06.1	+0.3
BPAW	Bear Paw Mtn.	83.20	23	P	P	10 59 06.6	+0.8
	baz=242						
SML	Sawmill	83.25	26	P	P	10 59 07.5	+1.3
SML				IAmb	IAmb	10 59 07.7	
	comp=Z,16nm,0.8s						
SML	Sawmill	83.25	26	P	P	10 59 06.9	+0.7
	baz=245						
H21K	Melozitna Rive	83.28	21	P	P	10 59 07.3	+1.1
H21K	Melozitna Rive	83.28	21	P	P	10 59 07.8	+1.6
	baz=240						
I21K	Tanana	83.34	22	P	P	10 59 08.2	+1.7
	baz=241						
G21K	Allakaket	83.46	20	P	P	10 59 08.4	+1.3
	baz=239						
M23K	Glacier View	83.50	26	P	P	10 59 09.1	+1.6
	baz=245						
SCM	Sheep Creek Mo	83.69	26	P	P	10 59 09.6	+1.1
	baz=246						
RND	Reindeer	83.73	24	P	P	10 59 08.6	-0.1
RND				IAmb	IAmb	10 59 09.9	
	comp=Z,8.8nm,0.7s						
MLY	Manley	83.73	22	P	P	10 59 09.0	+0.4
MLY				IAmb	IAmb	10 59 10.7	
	comp=Z,12nm,0.8s						
MLY	Manley	83.73	22	P	P	10 59 09.7	+1.1
	baz=242,SNR=11						
F21K	Alatna River	83.83	20	P	P	10 59 09.6	+0.6
	baz=239						
MCK	McKinley	83.84	24	P	P	10 59 09.1	0.0
MCK				IAmb	IAmb	10 59 10.0	
	comp=Z,11nm,0.8s						
MCK	McKinley	83.84	24	P	P	10 59 09.6	+0.5
	baz=244,SNR=5.2						
H22K	Ishtalitna Cre	83.91	21	P	P	10 59 10.5	+1.1
	baz=241						
DIV	Divide	84.09	27	P	P	10 59 11.5	+1.0
DIV				IAmb	IAmb	10 59 12.3	
	comp=Z,30nm,1.1s						
NEA2	Nenana	84.17	23	P	P	10 59 11.3	+0.6
NEA2				IAmb	IAmb	10 59 12.0	
	comp=Z,8.0nm,0.9s						
NEA2	Nenana	84.17	23	P	P	10 59 11.3	+0.6
	baz=244						
KLU	Klutina	84.17	26	P	P	10 59 12.1	+1.1
	baz=247						
KK31	Karatay Array	84.25	314	P	P	10 59 11.9	+0.3
KKAR	Karatay Array	84.25	314	P	P	10 59 11.9	+0.3
QSPA	South Pole Qui	84.28	180	P	P	10 59 11.1	-0.4
	comp=Z,2.9nm,0.5s,baz=358,slow=3.2,SNR=46						
	comp=Z,2.9nm,0.5s						
QSPA	South Pole Qui	84.28	180	P	P	10 59 11.8	+0.3
QSPA				IAmb	IAmb	10 59 12.2	
	comp=Z,12nm,1.5s						
M24K	Tolsona, Glenn	84.30	26	P	P	10 59 12.8	+1.2
	baz=247						
I23K	Minto, Yukon-K	84.30	22	P	P	10 59 11.2	-0.2
I23K	Minto, Yukon-K	84.30	22	P	P	10 59 12.0	+0.6
	baz=243,SNR=5.3						
G22K	Bettles	84.35	20	P	P	10 59 12.0	+0.3
	baz=241						
F22K	John River	84.41	20	P	P	10 59 12.9	+0.9
	baz=241						
WRH	Wood River Hil	84.49	23	P	P	10 59 12.5	+0.1
WRH				IAmb	IAmb	10 59 13.1	
	comp=Z,6.8nm,0.8s						
H23K	Yukon River	84.54	22	P	P	10 59 13.1	+0.4
H23K				IAmb	IAmb	10 59 14.7	
	comp=Z,7.2nm,0.7s						
H23K	Yukon River	84.54	22	P	P	10 59 13.5	+0.8
	baz=243						
CCB	Clear Creek Bu	84.68	23	P	P	10 59 13.0	-0.3
CCB				IAmb	IAmb	10 59 13.8	

	comp=Z,8.5nm,0.6s						
TCOL	CIGO, UAF Yank	84.76	23	P	P	10 59 13.6	0.0
TCOL				IAmb	IAmb	10 59 14.7	
	comp=Z,12nm,0.8s						
TCOL	CIGO, UAF Yank	84.76	23	P	P	10 59 13.9	+0.2
	baz=245						
COLA	College	84.76	23	P	P	10 59 13.9	+0.2
COLA				IAmb	IAmb	10 59 14.7	
	comp=Z,12nm,0.7s						
COLA	College	84.76	23	P	P	10 59 14.1	+0.4
	baz=245						
G23K	Bananza Creek	84.77	21	P	P	10 59 15.0	+1.2
	baz=243						
N25K	Chitina, Valde	84.80	26	P	P	10 59 15.1	+1.0
	baz=248						
E22K	Anaktuvuk Pass	84.84	19	P	P	10 59 15.1	+1.0
	baz=241						
HDA	Harding Lake	84.92	23	P	P	10 59 14.9	+0.3
HDA				IAmb	IAmb	10 59 16.9	
	comp=Z,5.8nm,0.7s						
HDA	Harding Lake	84.92	23	P	P	10 59 14.7	+0.2
	baz=246,SNR=5.8						
PAX	Paxson	84.94	25	P	P	10 59 15.3	+0.4
	baz=247						
COLD	Coldfoot	84.95	20	P	P	10 59 16.0	+1.3
	baz=242						
POKR	Poker Plat Res	85.02	23	P	P	10 59 15.9	+0.8
	baz=245						
A21K	Barrow	85.09	16	P	P	10 59 16.8	+1.6
	baz=236						
IL31		85.09	23	P	P	10 59 14.1	-1.2
IL31				IAmb	IAmb	10 59 16.0	
	comp=Z,10nm,0.7s						
ILAR	Eielson Array	85.09	23	P	P	10 59 13.9	-1.5
	comp=Z,9.8nm,0.7s,baz=253,slow=4.6,SNR=121						
	comp=Z,9.8nm,0.7s						
ILAR	Eielson Array	85.09	23	P	P	10 59 15.2	-0.2
K24K	Donnelly Dome	85.14	24	P	P	10 59 16.8	+1.1
	baz=247						
H24K	Noodor Dome	85.16	22	P	P	10 59 15.9	+0.1
H24K	Noodor Dome	85.16	22	P	P	10 59 17.0	+1.2
	baz=245						
MCARA	McCarthy VSAT	85.42	27	P	P	10 59 18.1	+0.9
	baz=250						
RIDG	Independent Ri	85.50	24	P	P	10 59 18.2	+0.7
RIDG				IAmb	IAmb	10 59 18.9	
	comp=Z,9.0nm,0.8s						
RIDG	Independent Ri	85.50	24	P	P	10 59 18.5	+0.9
	baz=248						
E23K	Chandalar	85.53	20	P	P	10 59 18.9	+1.2
	baz=243						
D23K	Nanushuk River	85.61	19	P	P	10 59 19.7	+1.8
	baz=242						
MENT	Mentasta	85.67	25	P	P	10 59 19.2	+0.8
MENT				IAmb	IAmb	10 59 20.5	
	comp=Z,7.4nm,0.7s						
G24K	Hadweenzic Riv	85.68	21	P	P	10 59 19.3	+1.0
	baz=245						
TOLK	Toolik Lake Re	85.81	19	P	P	10 59 19.8	+0.9
TOLK				IAmb	IAmb	10 59 21.8	
	comp=Z,6.1nm,0.8s						
TOLK	Toolik Lake Re	85.81	19	P	P	10 59 20.2	+1.3
	baz=243						
L26K	Log Cabin Wild	85.86	25	P	P	10 59 20.0	+0.7
L26K				IAmb	IAmb	10 59 21.4	
	comp=Z,7.3nm,0.7s						
L26K	Log Cabin Wild	85.86	25	P	P	10 59 20.5	+1.2
	baz=249,SNR=5.3						
F24K	Squaw Lake	85.88	20	P	P	10 59 20.8	+1.5
	baz=245						
E24K	Your Creek	85.92	20	P	P	10 59 20.8	+1.2
	baz=244						
BARN	Barnard Glacie	85.93	27	P	P	10 59 21.1	+1.2
BARN				IAmb	IAmb	10 59 22.7	
	comp=Z,15nm,0.7s						
SCRK	Sand Creek	85.94	24	P	P	10 59 20.1	+0.3
SCRK	Sand Creek	85.94	24	P	P	10 59 20.6	+0.8
	baz=248						
M27K	Edge Creek, AK	86.27	26	P	P	10 59 21.6	+0.1
M27K	Edge Creek, AK	86.27	26	P	P	10 59 22.8	+1.3
	baz=250						
J26L	Joseph Creek	86.31	24	P	P	10 59 21.9	+0.3
J26L				IAmb	IAmb	10 59 23.2	
	comp=Z,6.8nm,0.8s						
J26L	Joseph Creek	86.31	24	P	P	10 59 22.5	+1.0
	baz=249						
O28M	Mount Upton	86.52	28	P	P	10 59 24.0	+1.1
	baz=252						
L27K	Beaver Creek,	86.53	26	P	P	10 59 24.2	+1.6
	baz=250						
BCAR	Beaver Creek A	86.55	26	P	P	10 59 23.2	+0.5
PNL	Peninsula	86.56	29	P	P	10 59 23.3	+0.5
	baz=253						
C24K	Franklin Bluff	86.58	18	P	P	10 59 23.6	+1.0
	baz=244						
BVAR	Borovoye Array	86.66	324	P	P	10 59 22.0	-1.4
	comp=Z,1.5nm,0.5s,baz=111,slow=7.9,SNR=5.7						
	comp=Z,1.5nm,0.5s						
F25K	Christian Rive	86.70	21	P	P	10 59 24.7	+1.3
	baz=247						
YUK3	Moose Creek	86.71	27	P	P	10 59 25.0	+1.3
	baz=252,SNR=5.1						
BVCY	Beaver Creek	86.73	26	P	P	10 59 25.1	+1.5
	baz=251,SNR=5.0						
I26K	Coal Creek Min	86.76	23	P	P	10 59 24.8	+1.2
I26K				IAmb	IAmb	10 59 39.5	
	comp=Z,10nm,1.4s						
I26K	Coal Creek Min	86.76	23	P	P	10 59 24.8	+1.2
	baz=249						
YUK8	Steele Glacier	86.87	28	P	P	10 59 25.9	+1.4
	baz=252						
E25K	Arctic Village	86.93	20	P	P	10 59 26.0	+1.6
	baz=247						
BMAR	Burnt Mountain	87.01	21	P	P	10 59 25.0	+0.2
G26K	Porcupine Rive	87.12	22	P	P	10 59 26.9	+1.6
	baz=248						
O29M	Mount Kennedy	87.14	29	P	P	10 59 26.6	+0.9
	baz=254						
F26K	Sheenjek River	87.27	21	P	P	10 59 27.6	+1.5
	baz=248						
EGAK	Eagle	87.37	24	P	P	10 59 27.8	+1.2
EGAK				IAmb	IAmb	10 59 28.8	
	comp=Z,7.2nm,0.8s						
EGAK	Eagle	87.37	24	P	P	10 59 27.9	+1.2
	baz=251,SNR=5.2						
YUK4	Talbot Arm	87.41	28	P	P	10 59 28.7	+1.6
	baz=253,SNR=6.6						
YUK6	Outpost Mounta	87.42	28	P	P	10 59 28.3	+1.1
	baz=254						
I27K	Kandik River	87.47	23	P	P	10 59 28.5	+1.5
	baz=250						
H27K	Steamboat Moun	87.71	23	P	P	10 59 29.9	+1.7
	baz=251						
HYT	Haines Junctio	87.80	28	P	P	10 59 29.6	+0.7
HYT				IAmb	IAmb	10 59 31.1	
	comp=Z,15nm,0.9s						
HYT	Haines Junctio	87.80	28	P	P	10 59 30.2	+1.4
	baz=254						
M29M	Somme Creek	87.81	27	P	P	10 59 30.2	+1.4
	baz=254						
G27K	Doyon Strip	87.86	22	P	P	10 59 30.7	+1.8
	baz=250						
C26K	Camden Bay	87.86	19	P	P	10 59 30.7	+2.0
	baz=247						
P30M	Million Dollar	87.87	29	P	P	10 59 31.1	+2.0
	baz=255						
DAWY	Dawson	87.88	25	P	P	10 59 29.7	+0.7
DAWY				IAmb	IAmb	10 59 31.1	
	comp=Z,10nm,0.9s						
DAWY	Dawson	87.88	25	P	P	10 59 30.5	+1.4
	baz=253,SNR=7.2						
PLBC	Pleasant Camp	87.99	30	P	P	10 59 31.0	+1.4
	baz=255						
C27K	Jago River	88.13	19	P	P	10 59 32.0	+1.9
	baz=248						
L29M	L29M	88.14	26	P	P	10 59 32.0	+1.7
	baz=254						
N30M	Aishikik Lake	88.16	28	P	P	10 59 31.3	+0.8
	baz=255						
E27K	Coleen River	88.34	21	P	P	10 59 32.9	+1.7
	baz=250						
O30N	Mendenhall	88.45	29	P	P	10 59 32.8	+1.0
	baz=256						
SKAG	Skagway	88.50	30	P	P	10 59 32.8	+0.8
	baz=256						
K29M	Barlow Dome	88.61	25	P	P	10 59 34.0	+1.4
	baz=254						
I29M	Ogilvie Camp,	88.70	24	P	P	10 59 34.0	+1.1
I29M				IAmb	IAmb	10 59 34.3	
	comp=Z,5.9nm,0.8s						
I29M	Ogilvie Camp,	88.70	24	P	P	10 59 33.9	+1.0
	baz=254						
N31M	Braeburn, Yuko	88.77	28	P	P	10 59 34.2	+0.9
	baz=256						
EPYK	Eagle Plains	89.61	23	P	P	10 59 37.4	+0.3
EPYK	Eagle Plains	89.61	23	P	P	10 59 38.0	+0.8
	baz=255						
G30M	tAoh Zraii Nji	89.96	22	P	P	10 59 39.5	+0.7
	baz=255						
FARO	Faro, Yukon	90.07	27	P	P	10 59 40.2	+0.8
	baz=258						
F31M	Tsiigehtchic	91.00	22	P	P	10 59 44.1	+0.6
	baz=258						
INK	Inuvik	91.27	21	P	P	10 59 44.6	-0.1
	comp=Z,1.8nm,0.8s,baz=272,slow=5.4,SNR=7.1						
	comp=Z,1.8nm,0.8s						
INK	Inuvik	91.27	21	P	P	10 59 45.0	+0.3
INK	Inuvik	91.27	21	P	P	10 59 45.3	+0.6
	baz=258						
WTLY	Watson Lake, Y	91.87	30	P	P	10 59 48.5	+0.7
	baz=262						
ABKAR	Akbulak array	92.50	319	P	P	10 59 49.7	-1.2
LIRD	Liard River Hi	93.14	31	P	P	10 59 54.5	+0.9
	baz=264						
YBH	Yreka Blue Hor	93.77	49	LR	LR	11 37 09.8	
	comp=Z,15nm,18.4s,baz=289,slow=32						
KOTAN	Kotaneelee Air	94.23	30	P	P	10 59 59.4	+0.8
	baz=266						
A36M	Sachs Harbour	94.59	18	P	P	11 00 00.5	+0.6
A36M				IAmb	IAmb	11 00 01.0	
	comp=Z,6.5nm,0.8s						
A36M	Sachs Harbour	94.59	18	P	P	11 00 00.3	+0.4
	baz=266						
NVAR	Mina Array Bea	96.97	52	P	P	11 00 12.0	+0.1
	comp=Z,0.7nm,0.9s,baz=283,slow=5.5,SNR=3.0						
	comp=Z,0.7nm,0.9s						
NEW	Newport	97.95	42	P	P	11 00 15.7	-0.2
	baz=270						
YKA	Yellowknife Ar	98.77	28	P	P	11 00 19.3	+0.2
	comp=Z,0.8nm,0.7s,baz=271,slow=4.8,SNR=13						
	comp=Z,0.8nm,0.7s						
ELK	Elko	99.37	50	LR	LR	11 43 31.0	
	comp=Z,13nm,18.1s,baz=100,slow=34						
RWWY	Rawlins	105.36	48	Pdif	Pdif	11 00 46.0	-3.2
KEV	Kevo	105.47	342	Pdif	Pdif	11 00 48.9	+0.2
S22A	4UR Ranch, Cre	106.04	52	P	PKiKP	11 05 03.9	-0.2
	baz=275						
GERES	GERESS Array B	121.79	326	PKP	PKPdf	11 05 32.2	-1.2
	comp=Z,0.9nm,0.6s,baz=53,slow=0.7,SNR=7.5						
PLCA	Paso Flores	122.25	147	PKP	PKPdf	11 05 34.1	-0.4
	comp=Z,1.0nm,0.5s,baz=257,slow=2.5,SNR=8.1						
SDV	Santo Domingo	142.30	83	PKhKP	PKPpre	11 06 07.3	
	comp=Z,3.9nm,0.5s,baz=290,slow=10,SNR=3.9						
SIV	San Ignacio	144.65	128	PKP	PKPab	11 06 14.7	-1.1
	comp=Z,11nm,0.7s,baz=225,slow=3.5,SNR=48						
SJG	San Juan	145.14	66	PKPbc	PKPbc	11 06 16.3	-1.0
	comp=Z,19nm,0.2s,baz=332,slow=13,SNR=3.6						
TORD	Torodi Ar. Bea	145.25	285	PKPbc	PKPbc	11 06 17.1	-0.8
	comp=Z,3.4nm,0.6s,baz=69,slow=4.0,SNR=26						
TORD				SKPbc	SKPbc	11 09 42.7	-3.8
	comp=Z,1.3nm,0.8s,baz=84,slow=2.3,SNR=3.7						
BDFB	Brasilia	153.97	145	PKPbc	PKPbc	11 06 39.5	-0.4
	comp=Z,2.6nm,0.4s,baz=196,slow=0.6,SNR=6.7						
BDFB				PKPab	PKPab	11 06 52.6	-0.9
	comp=Z,2.6nm,0.4s,baz=226,slow=5.2,SNR=6.6						

*SNET **03** 11:01:18.8±1.6, 13°.68N×91°.04W, h27^{km}±419^{km}, ML4.0*
*NEIC **03** 11:01:20.5±2.6, 14°.09N±0°.10×90°.84W±0°.09, h115^{km}±9^{km}, mb4.6/12, Error ellipse: s-maj=17.9km s-min=6.3km az=219.0*
*GCG **03** 11:01:20.3±0.6, 13°.79N×90°.75W, h77^{km}±20^{km}, MD3.9*
*IDC **03** 11:01:21.5±2.2, 14°.37N×90°.56W, h93^{km}±27^{km}, mb3.6/3, mbtmp3.9/6, Error ellipse: s-maj=48.6km s-min=15.8km az=35.0*
*INET **03** 11:01:24.5±0.6, 14°.20N×90°.51W, h15^{km}±4^{km}, MW3.6*
ISC 03 11:01:20.7±0.8**, 14°.19N**±0°.08×**90°.75W**±0°.06**, h109**^{km}±6^{km}**, n83, σ1^{s}.41**/95**, mb4.7**/6**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PCG	Pacaya	0.24	34	*e*P	Pn	11 01 35.9	-0.7
PCG				*e*S	Sn	11 01 47.9	-0.5
FUG	Fuego 3	0.28	341	*i* P	Pn	11 01 35.2	-1.3
NBG	Las Nubes	0.56	44	*e*P	Pn	11 01 38.8	+0.6
NBG				*e*S	Sn	11 01 53.3	+1.9
SULM	Suchitepequez,	0.80	278	*e*P	Pn	11 01 38.6	-1.3
SULM				*e*S	Sn	11 01 58.9	+4.6
SLOZ	Alcaldia de Sa	0.95	100	*e*P	Pn	11 01 40.8	-0.6
SLOZ				*e*S	Sn	11 01 57.7	+0.8
NUBE	Las Nubes	0.98	107	*e*P	Pn	11 01 41.0	-0.9
NUBE				*e*S	Sn	11 01 56.9	-0.8
NUBE				IAML		11 02 00.4	
	comp=Z,2μm,0.3s						
CEVE	Cerro Verde	1.15	108	*e*P	Pn	11 01 43.3	-0.4
CEVE				*e*S	Sn	11 02 03.0	+1.9
HUEH	Huehuetenango	1.34	327	Pn	Pn	11 01 45.3	-0.6
CEDA	San Andres	1.37	106	*e*P	Pn	11 01 45.3	-0.6
CEDA				*e*S	Sn	11 02 05.8	+0.7
CEDA				IAML		11 02 14.2	
	comp=Z,2μm,0.3s						
JAYA	Jayaque - finc	1.37	113	*e*P	Pn	11 01 45.5	-0.6
JAYA				*e*S	Sn	11 02 04.8	-0.5
ESQI	Esquipulas	1.41	75	Pn	Pn	11 01 47.3	+0.7
UEES	Universidad Ev	1.54	108	*e*P	Pn	11 01 47.8	-0.2
UEES				*e*S	Sn	11 02 09.3	+0.5
SNET	Serv Nac Est T	1.55	108	Pn	Pn	11 01 47.8	-0.4
PAVA	Las Pavas	1.82	105	*e*P	Pn	11 01 51.8	+0.2
TECO	Alcaldia de Te	2.02	108	*e*P	Pn	11 01 54.0	+0.1
PQSS	Presa 15 de Se	2.20	104	*e*P	Pn	11 01 56.1	-0.1
COEB	Comit de Eme	2.26	107	*e*P	Pn	11 01 57.7	+0.5
COEB				*e*S	Sn	11 02 28.5	+3.5
ALJI	Alcalda de J	2.28	112	*e*S	Sn	11 02 26.5	+1.2
CCIG	Comitan	2.48	327	Pn	Pn	11 02 00.4	+0.4
FAGO	Alcalda de S	2.61	100	*e*P	Pn	11 02 02.0	+0.4
FAGO				*e*P	Pn	11 02 02.0	+0.4
PETF	Flores	2.84	17	Pn	Pn	11 02 06.8	+2.1
TGUH	Tegucigalpa,Un	3.37	92	Pn	Pn	11 02 12.7	+0.9
CRIN	San Cristobal	3.89	112	Pn	Pn	11 02 19.8	+1.1
CRIN	San Cristobal	3.89	112	*e*P	Pn	11 02 20.2	+1.5
CNGN	Cerro Negro	4.28	113	Pn	Pn	11 02 24.2	+0.3
MOMN	Momotombo	4.46	113	*e*P	Pn	11 02 27.3	+0.9
COPN	Copaltepe	4.51	116	*e*P	Pn	11 02 27.3	+0.4
MATN	Matagalpa	4.85	104	Pn	Pn	11 02 32.8	+1.1
MATN	Matagalpa	4.85	104	*e*P	Pn	11 02 32.7	+1.1
CMIG	Matias Romero	4.92	306	P	Pn	11 02 31.9	-0.6
	comp=Z,15nm,0.4s,baz=127,slow=11,SNR=50						
CMIG				S	Sn	11 03 27.7	-0.6
	comp=Z,17nm,0.5s,baz=67,slow=19,SNR=5.7						
BOAB	BOACO BROADBAN	6.24	109	Pn	Pn	11 02 37.6	+0.9
BOAB	BOACO BROADBAN	6.24	109	*e*P	Pn	11 02 37.4	+0.6
ACON	Acoyapa	5.86	111	Pn	Pn	11 02 46.6	+1.4
HZTE	Horizontes, Gu	6.10	124	Pn	Pn	11 02 49.5	+1.0
HZTE	Horizontes, Gu	6.10	124	*e*P	Pn	11 02 50.3	+1.8
ALIBA	Liberia Airpor	6.21	125	*e*P	Pn	11 02 52.0	+2.0
HATIL	Hatillo	6.27	128	*e*P	Pn	11 02 51.9	+1.2
SAJU	San Juanillo,	6.41	129	*e*P	Pn	11 02 53.7	+1.1
ORTG	Ortega, Santa	6.42	126	Pn	Pn	11 02 54.2	+1.5
ORTG	Ortega, Santa	6.42	126	*e*P	Pn	11 02 54.3	+1.5
VMAR	Armenia, Volca	6.44	121	*e*P	Pn	11 02 54.0	+0.8
TEIG	Tepich	6.45	21	Pn	Pn	11 02 55.4	+2.2
DUNO	Dulce Nombre,	6.56	128	Pn	Pn	11 02 55.9	+1.1
DUNO	Dulce Nombre,	6.56	128	*e*P	Pn	11 02 55.8	+1.1
ESPN	Las Esperanzas	6.58	107	Pn	Pn	11 02 54.4	-0.6
JTS	Las Juntas de	6.86	124	P	Pn	11 02 59.2	+0.4
	comp=Z,6.4nm,0.3s,baz=117,slow=23,SNR=15						
JTS				S	Sn	11 04 16.6	+1.1
	comp=Z,5.6nm,0.4s,baz=117,slow=23,SNR=1.9						
JTS	Las Juntas de	6.86	124	Pn	Pn	11 02 59.9	+1.1
JTS	Las Juntas de	6.86	124	*e*P	Pn	11 03 00.2	+1.4
LAFE	Finca La Fe, P	7.18	127	*e*P	Pn	11 03 04.2	+1.0
JACO	JACO, Garabito	7.46	126	Pn	Pn	11 03 06.1	-0.8
JACO	JACO, Garabito	7.46	126	*e*P	Pn	11 03 08.7	+1.8
ABE2	San Pablo	7.92	123	*e*P	Pn	11 03 15.5	+2.1
LCR2	La Lucha 2	7.94	123	*e*P	Pn	11 03 13.8	+0.2
RIMA	Rio Macho	8.04	122	Pn	Pn	11 03 14.2	-0.8
RIMA	Rio Macho	8.04	122	*e*P	Pn	11 03 16.6	+1.6
CDM	Cerro de Muert	8.24	123	*e*P	Pn	11 03 19.9	+1.9
BUS1	Rivas	8.25	123	*e*P	Pn	11 03 20.0	+1.9
MRVA	Moravia de Chi	8.36	120	*e*P	Pn	11 03 20.2	+0.9
PEZE	Perez Zeledon,	8.41	124	Pn	Pn	11 03 19.6	-0.2
PEZE	Perez Zeledon,	8.41	124	*e*P	Pn	11 03 21.9	+2.1
SRBA	San Rafael, Bu	8.75	123	Pn	Pn	11 03 23.5	-1.0
SRBA	San Rafael, Bu	8.75	123	*e*P	Pn	11 03 26.2	+1.7
BRU2	Volcan	9.54	123	Pn	Pn	11 03 33.5	-1.8
SOR	Soroa	11.27	39	Pn	Pn	11 03 58.6	+0.1
TXAR	Lajitas Array	19.24	324	P	Pn	11 05 39.8	+1.2
	comp=Z,0.2nm,0.4s,baz=146,slow=11,SNR=8.6						
SDV	Santo Domingo	20.39	103	P	P	11 05 50.0	+0.7
	comp=Z,2.4nm,0.4s,baz=290,slow=18,SNR=1.9						
	comp=Z,2.4nm,0.4s						
MIAR	Mount Ida	20.43	353	P	P	11 05 50.0	+0.8
Y52A	Lilburn	20.51	16	P	P	11 05 50.6	+0.5
Y52A				IAmb	IAmb	11 05 53.8	
	comp=Z,13nm,1.0s						
LCAR	Lake Charles	21.79	359	P	P	11 06 01.2	-2.7
BAUV	El Baul	22.84	101	P	P	11 06 14.3	-0.5
BAUV				IAmb	IAmb	11 06 16.9	
	comp=Z,21nm,0.6s						
CRPR	Cabo Rojo, PR	23.02	77	P	P	11 06 13.3	-3.2
MLPR	Magueyes Islan	23.08	77	P	P	11 06 13.9	-3.2
SADO	Sadowa	32.04	16	P	P	11 07 37.7	+0.8
SADO				IAmb	IAmb	11 08 02.5	
	comp=Z,22nm,1.2s						
DELO	Deloro Mine	32.23	18	P	P	11 07 38.9	+0.4
DELO				IAmb	IAmb	11 08 06.9	
	comp=Z,22nm,1.3s						
NVAR	Mina Array Bea	34.30	320	P	P	11 07 59.9	+3.0
	comp=Z,0.6nm,0.6s,baz=125,slow=7.9,SNR=7.1						
	comp=Z,0.6nm,0.6s						
MACA	Manacapuru-AM	34.43	118	P	P	11 07 52.9	-5.1
SCHQ	Schefferville	44.63	20	P	P	11 09 22.0	-0.1
	comp=Z,3.6nm,0.7s,baz=223,slow=6.1,SNR=8.8						
	comp=Z,3.6nm,0.7s						
SCHQ	Schefferville	44.63	20	P	P	11 09 22.2	+0.1
SCHQ				IAmb	IAmb	11 09 35.3	
	comp=Z,11nm,1.4s						
DLBC	Dease Lake	52.98	335	P	P	11 10 22.6	-3.4
DLBC				IAmb	IAmb	11 10 47.5	
	comp=Z,13nm,1.4s						
BMAR	Burnt Mountain	63.54	340	P	P	11 11 39.6	+0.4
TOLK	Toolik Lake Re	65.76	340	P	P	11 11 52.9	-0.8
WRA	Warramunga Arr	136.62	256	PKP	PKiKP	11 20 32.4	-0.3
	comp=Z,0.3nm,0.7s,baz=82,slow=2.4,SNR=2.1						
ASAR	Alice Springs	136.87	250	PKP	PKiKP	11 20 33.2	+0.1
	comp=Z,0.2nm,0.6s,baz=105,slow=2.3,SNR=2.4						

*AEIC **03** 11:16:40.5±1.8, 51°.7N±0°.1×176°.0W±0°.1, h49^{km}±6^{km}, Error ellipse: s-maj=19.1km s-min=8.7km az=187.0*
NEIC 03 11:16:40.6±1.2**, 51°.6N**±0°.1×**176°.12W**±0°.10**, h51**^{km}±2^{km}**, mb3.7**/15**, ML3.3**(AEIC)**, Error ellipse: s-maj=18.5km s-min=6.7km az=200.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ADK	Adak	0.46	311	Pn	Pn	11 16 50.9	-0.6
ADK				Sn	Sn	11 16 59.3	+0.1
GSTR	Great Sitkin T	0.51	4	Pn	Pn	11 16 51.6	-0.5
KIWB	Kanaga Island	0.69	293	Pn	Pn	11 16 54.4	+0.1
NIKH	Nikolski High	4.67	70	Pn	Pn	11 17 47.3	-1.3
UNV	Unalaska Valle	6.27	65	Pn	Pn	11 18 10.8	+0.5
KDAK	Kodiak Island	14.91	56	Pn	Pn	11 20 08.2	+0.2
SCM	Sheep Creek Mo	18.68	46	P	Pn	11 20 54.7	-0.4
MLY	Manley	18.76	34	P	P	11 20 55.4	+0.3
M24K	Tolsona, Glenn	19.28	45	P	P	11 20 59.3	-1.5
I23K	Minto, Yukon-K	19.32	35	P	P	11 21 01.3	+0.2
I23K				IAmb	IAmb	11 21 12.0	
	comp=Z,6.6nm,1.5s						
WRH	Wood River Hil	19.45	38	P	P	11 21 02.3	-0.3
WRH				IAmb	IAmb	11 21 15.1	
	comp=Z,4.4nm,1.3s						
H23K	Yukon River	19.62	33	P	P	11 21 04.6	+0.1
H23K				IAmb	IAmb	11 21 23.7	
	comp=Z,4.4nm,1.4s						
MDM	Murphy Dome	19.63	36	P	P	11 21 04.3	-0.3
HDA	Harding Lake	19.86	39	P	P	11 21 07.9	+0.8
H24K	Noodor Dome	20.21	34	P	P	11 21 11.2	+0.4
RIDG	Independent Ri	20.43	41	P	P	11 21 12.5	-0.8
RIDG				IAmb	IAmb	11 21 44.7	
	comp=Z,6.6nm,1.2s						
SCRK	Sand Creek	20.87	41	P	P	11 21 17.5	-0.6
SCRK				IAmb	IAmb	11 21 60.0	
	comp=Z,2.8nm,1.2s						
J26L	Joseph Creek	21.23	40	P	P	11 21 21.8	-0.2
J26L				IAmb	IAmb	11 21 22.4	
	comp=Z,2.6nm,0.9s						
M27K	Edge Creek, AK	21.28	46	P	P	11 21 22.1	-0.4
M27K				IAmb	IAmb	11 21 41.8	
	comp=Z,12nm,1.4s						
EGAK	Eagle	22.30	40	P	P	11 21 32.7	-0.6
EGAK				IAmb	IAmb	11 21 35.5	
	comp=Z,8.5nm,1.4s						
INK	Inuvik	26.33	35	P	P	11 22 10.9	-0.3
INK				IAmb	IAmb	11 22 40.0	
	comp=Z,3.6nm,1.4s						
JMM	Marumori	33.04	263	P	P	11 23 11.0	+0.1
TXAR	Lajitas Array	56.97	83	P	P	11 26 20.4	-0.4
MKAR	Makanchi Array	61.20	310	P	P	11 26 48.6	-1.2
ABKAR	Akbulak array	68.77	324	P	P	11 27 38.8	0.0
KKAR	Karatay Array	69.46	314	P	P	11 27 43.4	+0.1

*DDA **03** 11:17:49.3±0.0, 37°.61N×38°.48E, h7^{km}±2^{km}, ML2.6*
*ISK **03** 11:17:50.1, 37°.54N×38°.46E, h15^{km}, ML2.7/8*
ISC 03 11:17:49.8±0.9**, 37°.59N**±0°.03×**38°.48E**±0°.02**, h12**^{km}±7^{km}**, n17, σ0^{s}.60**/29**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ATAB	Bozova	0.19	230	P	Pg	11 17 54.0	0.0
ATAB				*i* AML	AML	11 17 57.0	
	comp=N,2μm,0.2s						
ATAB				S	Sg	11 17 57.3	+0.4
URFA	Urfa	0.31	119	Pg	Pb	11 17 57.0	-0.3
URFA				Sg	Sb	11 18 01.6	-0.8
HANM	anlurfa/Hi	0.32	92	P	Pg	11 17 56.0	-0.4
HANM				S	Sg	11 18 00.6	-0.2
SANL	SANLIURFA_Merk	0.59	136	P	Pg	11 18 01.2	0.0
SANL				S	Sb	11 18 09.4	-0.8
AKCA	Adyaman/G¶l	0.66	288	P	Pg	11 18 02.3	-0.3
AKCA				S	Sg	11 18 11.3	0.0
SURC	SANLIURFA_SURC	0.72	171	P	Pb	11 18 04.0	-0.2
SURC				S	Sb	11 18 13.2	-0.8
MAYA	Malatya/Merkez	0.73	357	P	Pg	11 18 03.3	-0.8
MAYA				S	Sg	11 18 12.9	-0.8
GZT	Gaziantep	0.76	252	P	Pg	11 18 04.5	-0.1
GZT				S	Sb	11 18 15.0	-0.4
GZT				*i* AML	AML	11 18 18.0	
	comp=E,242nm,0.2s						
NZIP	Nizip/Gaziante	0.84	230	P	Pb	11 18 06.5	+0.1
NZIP				S	Sn	11 18 19.5	-0.3
GAZ	Gaziantep	1.09	248	Pg	Pn	11 18 11.1	+0.2
GAZ				Sg	Sn	11 18 26.1	+0.2
DYBB	Diyarbakir	1.37	74	Pn	Pb	11 18 15.7	+0.4
DYBB				Sn	Sg	11 18 34.4	+0.6
KAMA	Osmaniye	1.50	255	P	Pn	11 18 16.2	-0.3
KAMA				S	Sg	11 18 38.2	+0.3
ARPR	Arapgir-MALATY	1.50	356	Pn	Pb	11 18 17.8	+0.1
MAZI	Mazidag	1.57	94	Pn	Pn	11 18 18.1	+0.5
SARI	SarD1z-Kayseri	1.82	297	Pn	Pn	11 18 21.9	+0.9
KOZT	Kozan	2.11	268	Pn	Pn	11 18 25.8	+1.0
SVAN	Silvan-Diyarba	2.23	75	Pn	Pn	11 18 28.0	+1.5

*ISK **03** 11:21:32.6, 37°.53N×38°.45E, h11^{km}, ML2.5/8*
*DDA **03** 11:21:32.3±0.0, 37°.58N×38°.50E, h7^{km}±1^{km}, ML2.2*
ISC 03 11:21:32.8±0.9**, 37°.56N**±0°.03×**38°.49E**±0°.02**, h12**^{km}±7^{km}**, n18, σ0^{s}.67**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ATAB	Bozova	0.18	240	P	Pg	11 21 36.8	0.0
ATAB				*i* AML	AML	11 21 40.0	
	comp=E,991nm,0.1s						
ATAB				S	Sg	11 21 40.2	+0.5
URFA	Urfa	0.29	114	Pg	Pb	11 21 39.3	-0.6
URFA				Sg	Sb	11 21 44.0	-0.7
HANM	anlurfa/Hi	0.31	86	P	Pg	11 21 38.5	-0.7
HANM				S	Sg	11 21 43.1	-0.3
SANL	SANLIURFA_Merk	0.55	134	P	Pg	11 21 43.1	-0.5
SANL				S	Sb	11 21 51.6	-0.7
AKCA	Adyaman/G¶l	0.68	290	P	Pg	11 21 45.7	-0.3

AKCA				S	Sb	11 21 55.7	-0.3
AKCA				*i* AML	AML	11 22 00.0	
	comp=E,85nm,0.2s						
SURC	**SANLIURFA_SURC**	0.69	172	P	Pb	11 21 46.4	-0.3
SURC				S	Sb	11 21 57.0	+0.9
GZT	**Gaziantep**	0.77	255	P	Pb	11 21 47.6	-0.5
GZT				S	Sn	11 22 00.5	-0.5
GZT				*i* AML	AML	11 22 02.0	
	comp=E,92nm,0.2s						
MAYA	**Malatya/Merkez**	0.77	356	P	Pg	11 21 46.6	-1.0
MAYA				S	Sg	11 21 57.8	0.0
NZIP	**Nizip/Gaziante**	0.83	232	P	Pn	11 21 50.0	-0.3
NZIP				S	Sb	11 22 01.0	+0.7
GAZ	**Gaziantep**	1.09	250	Pg	Pb	11 21 53.3	-0.3
GAZ				Sg	Sn	11 22 08.2	-0.7
KAHM	**Kahramanmaras,**	1.20	268	P	Pn	11 21 55.5	+0.2
KAHM				S	Sn	11 22 12.3	+0.8
DYBB	**Diyarbakir**	1.36	73	Pn	Pb	11 21 58.6	+0.3
DYBB				Sn	Sg	11 22 17.9	+1.2
KAMA	**Osmaniye**	1.50	256	P	Pg	11 22 01.0	-0.6
KAMA				S	Sg	11 22 21.5	+0.4
ARPR	**Arapgir-MALATY**	1.54	355	Pn	Pb	11 22 01.1	-0.2
MAZI	**Mazidag**	1.56	93	Pn	Pb	11 22 01.2	-0.4
SARI	**SarD1z-Kayseri**	1.84	298	Pn	Pn	11 22 04.9	+0.5
KOZT	**Kozan**	2.12	269	Pn	Pn	11 22 08.7	+0.7
SVAN	**Silvan-Diyarba**	2.22	74	Pn	Pn	11 22 11.0	+1.5

*ISK **03** 11:23:19.9, 39°.49N×26°.06E, h9^{km}, ML2.6/18*
*THE **03** 11:23:20.6, 39°.49N×26°.05E, h7^{km}±1^{km}, ML2.4/8, Error ellipse: s-maj=1.7km s-min=0.6km az=164.0*
*DDA **03** 11:23:20.6±0.0, 39°.50N×26°.08E, h9^{km}, ML2.5*
*ATH **03** 11:23:20.9, 39°.50N×26°.05E, h7^{km}±2^{km}, ML2.3/6, Error ellipse: s-maj=2.8km s-min=0.7km az=228.0*
ISC 03 11:23:20.5±0.8**, 39°.49N**±0°.02×**26°.06E**±0°.02**, h10**^{km}±5^{km}**, n52, σ0^{s}.42**/85**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	0.06	82	P	Pg	11 23 22.6	0.0
KOCA				S	Sg	11 23 24.0	-0.1
GPNR	**Gulpinar-Canak**	0.07	122	Pg	Pg	11 23 22.3	-0.4
GPNR				Sg	Sg	11 23 23.9	-0.3
PRK	**Paraskevi**	0.30	146	P	Pg	11 23 26.7	+0.2
PRK				S	Sg	11 23 30.7	+0.2
	880nm,0.4s						
PRK	**Paraskevi**	0.30	146	P	Pg	11 23 26.7	+0.2
PRK				S	Sg	11 23 30.9	+0.5
PRK				AML	AML	11 23 32.1	
	comp=N,1497μm,0.2s						
PRK				AML	AML	11 23 33.0	
	comp=E,2009μm,0.7s						
SIGR	**SIGRI**	0.32	209	P	Pg	11 23 27.0	+0.1
SIGR				S	Sg	11 23 31.6	+0.4
	comp=E,1μm,0.3s						
SIGR	**SIGRI**	0.32	209	Pg	Pg	11 23 26.8	-0.1
SIGR				Sg	Sg	11 23 31.8	+0.6
SIGR	**SIGRI**	0.32	209	P	Pg	11 23 27.0	+0.1
SIGR				S	Sg	11 23 31.7	+0.4
SIGR				AML	AML	11 23 32.3	
	comp=N,2708μm,0.4s						
SIGR				AML	AML	11 23 32.3	
	comp=E,1906μm,0.2s						
BOZC	**Bozcaada**	0.35	360	Pg	Pg	11 23 27.5	+0.1
BOZC				Sg	Sg	11 23 32.9	+0.8
BOZC	**Bozcaada**	0.35	360	P	Pg	11 23 27.5	+0.1
BOZC				S	Sg	11 23 32.8	+0.7
EZN	**Ezine**	0.39	32	P	Pg	11 23 28.3	0.0
EZN				S	Sg	11 23 34.2	+0.8
	comp=E,655nm,0.1s						
EZN	**Ezine**	0.39	32	Pg	Pg	11 23 28.2	0.0
EZN				Sg	Sg	11 23 34.2	+0.8
BAYC	**CANAKKALE_Bayr**	0.45	57	P	Pg	11 23 29.1	-0.3
BAYC				S	Sg	11 23 35.4	+0.1
AYVA	**Ayvalik**	0.53	110	P	Pg	11 23 30.4	-0.3
AYVA				S	Sg	11 23 38.4	+0.8
ECEA	**Canakkale, Ece**	0.56	9	P	Pg	11 23 31.6	+0.2
ECEA				*i* AML	AML	11 23 40.0	
	comp=E,290nm,0.7s						
ECEA				S	S	11 23 40.0	+1.3
COMU	**Canakkale**	0.69	28	Pg	Pg	11 23 33.7	-0.1
COMU				Sg	Sb	11 23 43.8	-0.4
GADA	**Gvkgeada**	0.71	350	Pg	Pg	11 23 34.2	0.0
DKL	**Dikili**	0.78	122	Pg	Pg	11 23 35.5	-0.1
LIA	**Limnos Island**	0.79	301	P	Pg	11 23 35.9	+0.2
LIA				S	Sb	11 23 47.1	+0.1
	comp=E,458nm,0.3s						
LIA	**Limnos Island**	0.79	301	P	Pg	11 23 35.8	+0.1
LIA				S	Sg	11 23 46.2	+0.3
LIA				AML	AML	11 23 50.0	
	comp=E,896μm,0.2s						
LIA				AML	AML	11 23 50.5	
	comp=N,926μm,0.3s						
BUHA	**Balikesir, Bur**	0.79	89	P	Pg	11 23 35.5	-0.3
BUHA				S	Sg	11 23 46.3	+0.3
KARB	**zmir-Karabur**	0.87	161	P	Pg	11 23 37.7	+0.3
KARB				S	Sb	11 23 50.2	+0.6
KARB				*i* AML	AML	11 23 52.0	
	comp=N,165nm,0.2s						
CANM	**Can-anakkale**	0.93	56	Pg	Pg	11 23 38.4	0.0
GELI	**Tayfur-Gelibol**	0.96	19	Pg	Pg	11 23 38.5	-0.5
PSRA	**Psara**	1.02	202	P	Pg	11 23 40.2	-0.1
PSRA				S	Sb	11 23 54.4	+0.5
LPK	**Lapseki**	1.03	31	Pg	Pg	11 23 39.9	-0.5
SMTH	**Samothraki Isl**	1.06	338	P	Pg	11 23 40.5	-0.3
SMTH				S	Sb	11 23 55.1	+0.2
	comp=N,75nm,0.1s						
SMTH	**Samothraki Isl**	1.06	338	P	Pg	11 23 40.6	-0.2
SMTH				S	Sb	11 23 55.1	+0.2
SMTH				AML	AML	11 23 56.1	
	comp=N,176μm,0.2s						
SMTH				AML	AML	11 23 56.9	
	comp=E,120μm,0.2s						
CHOS	**Chios island**	1.10	180	Pn	Pg	11 23 41.6	-0.2
CAVK	**Edirne/Enez-Ca**	1.20	4	P	Pb	11 23 42.8	-0.6
CAVK				S	Sn	11 24 00.2	+0.4
URLA	**Izmir**	1.21	159	Pn	Pb	11 23 42.7	-0.8
URLA	**Izmir**	1.21	159	P	Pb	11 23 42.7	-0.8
URLA				S	Sb	11 23 59.3	0.0
ERIK	**Erikli-Kesan**	1.23	16	Pn	Pn	11 23 43.1	-0.7
BALY	**Balya**	1.23	78	P	Pn	11 23 43.4	-0.5
BALY				S	Sb	11 23 59.8	-0.2
ENEZ	**Enez**	1.24	3	P	Pn	11 23 43.8	-0.2
ENEZ				S	Sg	11 24 00.5	-0.1
	comp=E,180nm,0.3s						
ENEZ	**Enez**	1.24	3	Pn	Pn	11 23 43.9	-0.1
STEP	**BALIKESIR_Sava**	1.29	95	P	Pg	11 23 45.5	+0.2
STEP				S	Sn	11 24 02.7	+0.6
ZEYE	**Izmir, Urla-Ze**	1.30	164	P	Pn	11 23 44.2	-0.6
ZEYE				S	Sb	11 24 01.4	-0.5
KRBG	**Karabiga-Canak**	1.31	46	Pn	Pn	11 23 44.9	0.0
BLCB	**Balcova**	1.35	145	Pn	Pn	11 23 45.4	0.0
GONE	**Gonen-Balikesi**	1.37	66	Pn	Pn	11 23 45.9	+0.1
ALN	**Alexandroupoli**	1.40	360	P	Pn	11 23 45.8	-0.4
ALN				S	Sg	11 24 05.5	-0.1
	comp=E,118nm,0.5s						
ALN	**Alexandroupoli**	1.40	360	Pn	Pn	11 23 46.1	-0.1
ALN	**Alexandroupoli**	1.40	360	P	Pn	11 23 46.5	+0.3
ALN				S	Sb	11 24 03.9	-0.9
ALN				AML	AML	11 24 06.0	
	comp=E,233μm,0.5s						
ALN				AML	AML	11 24 06.6	
	comp=N,238μm,0.5s						
KESN	**Edirne-Kesan**	1.41	20	P	Pn	11 23 46.4	-0.3
KESN				S	Sg	11 24 06.3	+0.2
KESN				*i* AML	AML	11 24 09.0	
	comp=N,79nm,0.3s						
BALB	**Balikesir**	1.42	84	Pn	Pn	11 23 46.1	-0.3
BKES	**Balkesir-Mer**	1.47	80	P	Pb	11 23 48.0	0.0
BKES				S	Sb	11 24 07.0	+0.3
RKY	**Sarkoy-Tekirda**	1.47	35	Pn	Pn	11 23 47.1	-0.1
THAS	**Thassos island**	1.51	318	P	Pn	11 23 47.2	-0.5
THAS				S	Sn	11 24 06.6	-0.9
	comp=N,38nm,0.4s						
THAS	**Thassos island**	1.51	318	P	Pn	11 23 47.5	-0.2
THAS				AML	AML	11 24 11.0	
	comp=N,74μm,0.3s						
THAS				AML	AML	11 24 13.2	
	comp=E,78μm,0.3s						
EDC	**Edincik**	1.63	58	Pn	Pn	11 23 49.5	+0.2
RDO	**Rodhopi**	1.70	347	P	Pn	11 23 50.4	+0.1
KAVA	**Kavala**	1.91	322	P	Pn	11 23 53.2	0.0

BUC 03 11:24:07.1±0.1**, 45°.96N**×**22°.72E, h2**^{km}±1^{km}**, ml1.5**/13**, 15C-9D, Error ellipse: s-maj=1.0km s-min=0.9km az=121.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEV	**Deva**	0.15	120	⇑P	Pg	11 24 10.2	+0.2
DEV				⇓S	Sg	11 24 12.0	+0.1
SURR	**Surduc**	0.46	244	⇑P	Pg	11 24 16.4	+0.4
SURR				⇑S	Sg	11 24 22.3	+0.4
GZR	**Gura Zlata**	0.57	176	⇑P	Pg	11 24 18.4	+0.5
GZR				⇑S	Sg	11 24 26.1	+0.9
MARR	**Marisel-Cluj**	0.77	21	⇑P	Pg	11 24 21.4	-0.5
MARR				⇑S	Sg	11 24 32.7	+0.8
SIRR	**Siria**	0.80	293	⇓P	Pg	11 24 22.1	-0.3
SIRR				⇓S	Sg	11 24 33.2	+0.5
DRGR		0.83	360	⇓P	Pg	11 24 23.7	+0.6
DRGR				⇓S	Sg	11 24 34.6	+0.7
BZS	**Buzias**	0.84	247	⇑P	Pg	11 24 22.9	-0.3
BZS				⇓S	Sg	11 24 34.4	+0.2
LOT	**Lotru**	0.90	124	⇑P	Pg	11 24 24.2	-0.1
LOT				⇑S	Sg	11 24 36.6	+0.8
CJR	**Cluj-Napoca**	0.97	39	⇑S	Sb	11 24 39.8	-0.2
HERR	**Herculane**	1.10	191	⇑S	Sb	11 24 43.1	-0.4
MDVR	**Moldovita**	1.37	211	⇑P	Pb	11 24 33.7	+0.2
MDVR				⇓S	Sn	11 24 52.5	+0.5
ARR	**Arges**	1.47	113	⇑P	Pn	11 24 34.8	+0.1
ARR				⇓S	Sn	11 24 54.8	+0.4
VOIR		1.71	107	⇑P	Pn	11 24 38.4	+0.4
VOIR				⇓S	Sb	11 25 01.5	+0.1

ROM 03 11:24:32.1±0.1**, 39°.140N**±0°.008×**15°.897E**±0°.009**, h52**^{km}±1^{km}**, ML1.4**/10**, Error ellipse: s-maj=0.7km s-min=0.6km az=32.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAR1	**CAROLEI**	0.27	65	P	Pn	11 24 41.5	+0.2
CAR1				S	Sn	11 24 47.9	0.0
CAR1				AML	AML		
	comp=N,53μm,0.8s						
CAR1				AML	AML		
	comp=N,53μm,1.2s						
CAR1				AML	AML		
	comp=E,88μm,0.5s						
CET2	**Cetraro**	0.39	7	P	Pn	11 24 43.0	+0.6
CET2				S	Sn	11 24 50.3	+0.5
CET2				AML	AML		
	comp=N,102μm,0.3s						
CET2				AML	AML		
	comp=E,88μm,0.6s						
CET2				AML	AML		
	comp=N,102μm,0.3s						
CET2				AML	AML		
	comp=E,88μm,1.4s						
GRI	**Girifalco**	0.52	128	P	Pn	11 24 44.1	+0.4
CELI	**Celico**	0.54	61	P	Pn	11 24 44.4	+0.2
CELI				S	Sn	11 24 53.5	+0.7
SERS	**Sersale**	0.62	99	P	Pn	11 24 45.0	-0.2
SERS				S	Sn	11 24 55.4	+0.8
SERS				AML	AML		
	comp=N,13μm,0.5s						
SERS				AML	AML		
	comp=N,13μm,0.5s						
SERS				AML	AML		
	comp=N,13μm,1.5s						
SERS				AML	AML		
	comp=E,18μm,0.2s						
TIP	**Timpagrande**	0.67	86	P	Pn	11 24 45.6	-0.1
TIP				S	Sn	11 24 56.0	+0.5
TIP				AML	AML		
	comp=N,12μm,1.6s						
TIP				AML	AML		
	comp=E,14μm,1.6s						
TIP				AML	AML		
	comp=N,12μm,1.6s						
TIP				AML	AML		
	comp=E,14μm,0.4s						
TIP				AML	AML		
	comp=N,12μm,0.4s						
PLAC	**Placanica**	0.81	148	P	Pn	11 24 47.7	+0.3
PLAC				S	Sn	11 24 59.6	+1.0
PLAC				AML	AML		
	comp=N,23μm,1.5s						
PLAC				AML	AML		
	comp=E,30μm,0.8s						
PLAC				AML	AML		
	comp=E,30μm,1.2s						
MSRU	**Castanea**	0.93	199	P	Pn	11 24 49.1	+0.1
MGR	**Morigerati**	1.03	345	P	Pn	11 24 50.7	+0.3
MGR				S	Sn	11 25 04.4	+0.6
NOV	**Novara**	1.26	208	P	Pn	11 24 54.0	+0.5

*ISK **03** 11:27:23.5, 39°.49N×26°.05E, h12^{km}, ML2.7/17*
*DDA **03** 11:27:24.2±0.0, 39°.50N×26°.08E, h9^{km}, ML2.7*
*THE **03** 11:27:24.4, 39°.50N×26°.05E, h5^{km}±1^{km}, ML2.5/6, Error ellipse: s-maj=1.1km s-min=0.4km az=175.0*
*ATH **03** 11:27:24.5, 39°.50N×26°.06E, h11^{km}±2^{km}, ML2.3/7, Error ellipse: s-maj=2.1km s-min=0.8km az=163.0*
ISC 03 11:27:24.0±0.8**, 39°.49N**±0°.02×**26°.06E**±0°.02**, h10**^{km}±5^{km}**, n52, σ0^{s}.52**/82**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	0.07	82	P	Pg	11 27 26.3	+0.1
KOCA				S	Sg	11 27 27.7	0.0
GPNR	**Gulpinar-Canak**	0.07	122	Pg	Pg	11 27 25.9	-0.3
GPNR				Sg	Sg	11 27 27.7	0.0
PRK	**Paraskevi**	0.30	146	P	Pg	11 27 30.3	+0.4
PRK				S	Sg	11 27 34.7	+0.8
	1μm,0.3s						
PRK	**Paraskevi**	0.30	146	P	Pg	11 27 30.4	+0.4
PRK				S	Sg	11 27 34.8	+0.8
PRK				AML	AML	11 27 35.1	
	comp=E,2310μm,0.2s						
PRK				AML	AML	11 27 35.1	
	comp=N,2762μm,0.4s						
SIGR	**SIGRI**	0.32	209	P	Pg	11 27 30.6	+0.2
SIGR				S	Sg	11 27 35.6	+1.0
	comp=N,850nm,0.2s						
SIGR	**SIGRI**	0.32	209	Pg	Pg	11 27 30.4	0.0
SIGR				Sg	Sg	11 27 35.4	+0.7
SIGR	**SIGRI**	0.32	209	P	Pg	11 27 30.7	+0.2
SIGR				S	Sg	11 27 35.7	+1.0
SIGR				AML	AML	11 27 36.2	
	comp=E,1062μm,0.2s						
SIGR				AML	AML	11 27 38.1	
	comp=N,2322μm,0.3s						
BOZC	**Bozcaada**	0.35	360	Pg	Pg	11 27 31.2	+0.3
BOZC				Sg	Sg	11 27 36.6	+1.0
BOZC	**Bozcaada**	0.35	360	P	Pg	11 27 31.2	+0.3
BOZC				S	Sg	11 27 36.2	+0.6
EZN	**Ezine**	0.39	32	P	Pg	11 27 31.9	+0.2
EZN				S	Sg	11 27 37.8	+0.9
	comp=N,418nm,0.2s						
EZN	**Ezine**	0.39	32	Pg	Pg	11 27 31.9	+0.2
EZN				Sg	Sg	11 27 38.1	+1.2
BAYC	**CANAKKALE_Bayr**	0.45	57	P	Pg	11 27 32.8	-0.1
BAYC				S	Sg	11 27 39.0	+0.2
AYVA	**Ayvalik**	0.53	110	P	Pg	11 27 34.4	+0.2
AYVA				S	Sg	11 27 42.1	+0.9
ECEA	**Canakkale, Ece**	0.56	9	P	Pg	11 27 35.2	+0.3
ECEA				S	Sb	11 27 43.4	-0.5
ECEA				*i* AML	AML	11 27 44.0	
	comp=N,367nm,0.6s						
COMU	**Canakkale**	0.69	28	Pg	Pg	11 27 37.5	+0.2
GADA	**Gvkgeada**	0.71	350	Pg	Pg	11 27 37.6	-0.1
DKL	**Dikili**	0.78	122	Pg	Pg	11 27 39.5	+0.4
LIA	**Limnos Island**	0.79	301	P	Pg	11 27 39.5	+0.3
LIA				S	Sb	11 27 50.6	+0.1
	comp=N,358nm,0.3s						
LIA	**Limnos Island**	0.79	301	P	Pg	11 27 39.5	+0.3
LIA				S	Sb	11 27 50.3	-0.2
LIA				AML	AML	11 27 54.3	
	comp=N,729μm,0.3s						
LIA				AML	AML	11 27 54.9	
	comp=E,722μm,0.4s						
BUHA	**Balikesir, Bur**	0.79	89	P	Pg	11 27 39.1	-0.1
BUHA				S	Sg	11 27 50.0	+0.4
KARB	**zmir-Karabur**	0.87	161	P	Pg	11 27 41.3	+0.5
KARB				S	Sb	11 27 53.6	+0.6
CANM	**Can-anakkale**	0.93	56	Pg	Pg	11 27 42.1	+0.3
GELI	**Tayfur-Gelibol**	0.96	19	Pg	Pg	11 27 42.3	-0.2
PSRA	**Psara**	1.02	202	P	Pg	11 27 43.9	+0.2
PSRA				S	Sb	11 27 58.1	+0.7
LPK	**Lapseki**	1.03	31	Pg	Pg	11 27 43.8	-0.1
SMTH	**Samothraki Isl**	1.06	338	P	Pb	11 27 44.1	-0.3
SMTH	**Samothraki Isl**	1.06	338	P	Pb	11 27 44.2	-0.3
SMTH				S	Sg	11 27 58.1	+0.1
SMTH				AML	AML	11 28 00.7	
	comp=N,253μm,0.1s						
SMTH				AML	AML	11 28 01.1	
	comp=E,206μm,0.2s						
CAVK	**Edirne/Enez-Ca**	1.20	4	P	Pn	11 27 46.5	-0.4
CAVK				S	Sn	11 28 03.5	+0.2
URLA	**Izmir**	1.21	159	Pn	Pn	11 27 46.4	-0.7
URLA	**Izmir**	1.21	159	P	Pn	11 27 46.3	-0.7
URLA				S	Sb	11 28 01.9	-0.8
ERIK	**Erikli-Kesan**	1.23	16	Pn	Pn	11 27 46.9	-0.4
BALY	**Balya**	1.23	78	P	Pn	11 27 47.0	-0.4
BALY				S	Sb	11 28 03.5	+0.1
ENEZ	**Enez**	1.24	3	P	Pn	11 27 47.7	+0.2
ENEZ				S	Sn	11 28 04.9	+0.6
	comp=E,282nm,0.4s						
ENEZ	**Enez**	1.24	3	Pn	Pn	11 27 47.1	-0.4
STEP	**BALIKESIR_Sava**	1.29	95	P	Pn	11 27 47.2	-1.0
STEP				S	Sg	11 28 06.8	+1.2
ZEYE	**Izmir, Urla-Ze**	1.30	164	P	Pn	11 27 47.6	-0.7
ZEYE				S	Sb	11 28 04.4	-0.9
KRBG	**Karabiga-Canak**	1.31	46	Pn	Pn	11 27 48.3	-0.1
BLCB	**Balcova**	1.35	145	Pn	Pn	11 27 48.5	-0.4
KNL	**Balıkesir**	1.37	55	P	Pn	11 27 49.5	+0.2
KNL				S	Sg	11 28 08.9	+0.8
KNL				*i* AML	AML	11 28 10.0	
	comp=E,185nm,0.6s						
GONE	**Gonen-Balikesi**	1.37	66	Pn	Pn	11 27 49.0	-0.3
ALN	**Alexandroupoli**	1.40	360	P	Pn	11 27 49.5	-0.2
ALN				S	Sb	11 28 08.6	+0.3
	comp=E,288nm,0.5s						
ALN	**Alexandroupoli**	1.40	360	Pn	Pn	11 27 49.5	-0.2
ALN	**Alexandroupoli**	1.40	360	P	Pn	11 27 49.3	-0.4
ALN				AML	AML	11 28 10.2	
	comp=E,598μm,0.5s						
ALN				AML	AML	11 28 10.2	
	comp=N,553μm,0.4s						
KESN	**Edirne-Kesan**	1.41	20	P	Pn	11 27 49.6	-0.6
KESN				S	Sg	11 28 09.5	-0.1
KESN				*i* AML	AML	11 28 12.0	
	comp=N,111nm,0.2s						
BALB	**Balikesir**	1.42	84	Pn	Pn	11 27 49.5	-0.4
RKY	**Sarkoy-Tekirda**	1.47	35	Pn	Pn	11 27 50.5	-0.2
THAS	**Thassos island**	1.51	318	P	Pn	11 27 50.8	-0.4
THAS	**Thassos island**	1.51	318	P	Pn	11 27 50.8	-0.4
THAS				S	Sn	11 28 09.8	-1.1
THAS				AML	AML	11 28 15.2	
	comp=N,80μm,0.4s						
THAS				AML	AML	11 28 15.5	
	comp=E,95μm,0.3s						
EDC	**Edincik**	1.63	58	Pn	Pn	11 27 52.7	-0.1
RDO	**Rodhopi**	1.70	347	P	Pn	11 27 54.1	+0.4
RDO	**Rodhopi**	1.70	347	P	Pn	11 27 53.3	-0.4
RDO				AML	AML	11 28 19.0	
	comp=E,60μm,0.2s						
RDO				AML	AML	11 28 21.7	
	comp=N,51μm,0.3s						
KYMI	**Kymi, Euboea I**	1.75	241	P	Pn	11 27 53.7	-0.8

IDC 03 11:50:49.1±14.0**, 21°.02S**×**179°.26E, h514**^{km}±156^{km}**, mb3.2**/3**, mbtmp4.1**/3**, Error ellipse: s-maj=255.0km s-min=48.4km az=157.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	41.90	258	P	P	11 57 53.5	-1.0
	2.4nm,0.7s,baz=100,slow=7.2,SNR=32						
ASAR				PcP	PcP	11 59 38.0	-0.3
	0.4nm,0.9s,baz=86,slow=5.8,SNR=2.0						
	2.4nm,0.7s						
WRA	**Warramunga Arr**	41.99	263	P	P	11 57 55.9	+0.7
	3.4nm,0.7s,baz=93,slow=8.3,SNR=25						
	3.4nm,0.7s						
TXAR	**Lajitas Array**	89.50	58	P	P	12 02 51.6	-0.1
	0.4nm,0.8s,baz=235,slow=6.4,SNR=4.1						
	0.4nm,0.8s						

*IDC **03** 11:53:01.7±19.0, 21°.28S×68°.27W, h0^{km}, mb3.7/2, mbtmp3.7/2, MS3.0/1, Error ellipse: s-maj=821.5km s-min=66.4km az=19.0*
*SJA **03** 11:53:14.4±1.2, 21°.81S×68°.55W, h100^{km}, ML3.8, MW3.5, Hypocentre not reviewed by the ISC*
*GUC **03** 11:53:14.9±0.6, 21°.85S×68°.57W, h116^{km}±4^{km}, ML3.7*
ISC 03 11:53:14.6±1.1**, 21°.84S**±0°.05×**68°.6W**±0°.1**, h120**^{km}±10^{km}**, n18, σ0^{s}.51**/28**, 4C-5D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	0.56	274	⇑*i*P	Pn	11 53 33.4	+0.2
PB09				*i* S	Sn	11 53 47.4	+0.2
PB09				IAML		11 53 49.9	
	comp=N,1μm,0.1s						
PB09	**IPOC Station P**	0.56	274	*e*P		11 53 33.4	
PB09				*e*S		11 53 48.1	
LVC	**Limon Verde**	0.81	198	*i* P	Pn	11 53 34.5	-0.8
LVC	**Limon Verde**	0.81	198	*e*P		11 53 35.0	
LVC				*e*S		11 53 50.2	
PB03	**IPOC Station P**	1.06	258	⇑*i*P	Pn	11 53 37.3	-0.1
PB03				*i* S	Sn	11 53 54.5	-0.1
PB03				IAML		11 53 55.2	
	comp=E,2μm,0.1s						
PB03	**IPOC Station P**	1.06	258	*e*P		11 53 37.9	
PB03				*e*S		11 53 54.9	
PB03				IAML		11 53 56.1	
	comp=Z,2μm,0.2s						
PB01	**IPOC Station P**	1.12	315	⇓*i*P	Pn	11 53 38.0	-0.1
PB01				*i* S	Sn	11 53 55.9	+0.2
PB01				IAML		11 53 57.2	
	comp=E,2μm,0.2s						
PB01	**IPOC Station P**	1.12	315	*e*P		11 53 38.1	
PB01				*e*S		11 53 56.4	
PB01				IAML		11 53 58.4	
	comp=Z,1μm,0.1s						
PB07	**IPOC Station P**	1.17	275	*i* P	Pn	11 53 38.6	+0.1
PB07				*i* S	Sn	11 53 56.6	-0.1
PB07				IAML		11 53 58.1	
	comp=N,3μm,0.3s						
PB07	**IPOC Station P**	1.17	275	*e*P		11 53 38.8	
PB07				*e*S		11 53 57.5	
PB07				IAML		11 54 01.3	
	comp=Z,846nm,0.1s						
PB06	**IPOC Station P**	1.22	225	⇑*i*P	Pn	11 53 39.2	+0.1
PB06				*i* S	Sn	11 53 57.7	0.0
PB06				IAML		11 53 58.9	
	comp=E,1μm,0.5s						
PB06	**IPOC Station P**	1.22	225	*e*P		11 53 39.3	
PB06				*e*S		11 53 58.0	
PB02	**IPOC Station P**	1.28	294	⇓*i*P	Pn	11 53 39.8	+0.1
PB02				*i* S	Sn	11 53 58.6	-0.1
PB02				IAML		11 53 59.5	
	comp=E,2μm,0.4s						
PB02	**IPOC Station P**	1.28	294	*e*P		11 53 39.9	
PB02				*e*S		11 53 59.0	
PB02				*e*S		11 53 59.1	
PB02				IAML		11 54 00.2	
	comp=Z,2μm,0.1s						
PB04	**IPOC Station P**	1.49	250	⇑*i*P	Pn	11 53 42.1	0.0
PB04				*i* S	Sn	11 54 03.0	0.0
PB04				IAML		11 54 05.0	
	comp=E,704nm,0.1s						
PB04	**IPOC Station P**	1.49	250	*e*P		11 53 42.0	
PB04				*e*S		11 54 03.2	
PB04				IAML		11 54 04.5	
	comp=Z,581nm,0.2s						
PB15	**IPOC Station P**	1.56	209	⇓*i*P	Pn	11 53 43.1	0.0
PB15				*i* S	Sn	11 54 05.5	+0.8
PB15	**IPOC Station P**	1.56	209	*e*P		11 53 43.2	
PB15				*e*S		11 54 05.6	
PB15				IAML		11 54 09.8	
	comp=Z,2μm,0.2s						
TA01	**Diego Aracena**	1.92	311	*i* P	Pn	11 53 46.7	-0.4
TA01				*e*S	Sn	11 54 11.6	-0.3
TA01				IAML		11 54 13.2	

	comp=E,638nm,0.3s						
TA01	Diego Aracena	1.92	311	*e*P		11 53 46.9	
TA01				*e*S		11 54 12.3	
PB11	IPOC Station P	2.28	335	*i* P	Pn	11 53 51.5	-0.3
PB11				*i* S	Sn	11 54 19.9	-0.3
PB11				IAML		11 54 22.1	
	comp=E,452nm,0.3s						
PB11	IPOC Station P	2.28	335	*e*P		11 53 51.5	
PB11				*e*S		11 54 20.7	
PSGC	Pisagua	2.63	328	⇓*i*P	Pn	11 53 54.9	-1.4
PSGC				IAML		11 54 35.2	
	comp=E,129nm,0.2s						
PSGCX	Pisagua	2.63	328	*e*P		11 53 54.9	
PSGCX				*e*S		11 54 26.7	
MNMC	Minye Minye	2.84	341	⇓*i*P	Pn	11 53 59.1	0.0
MNMC				*i* S	Sn	11 54 34.5	+1.2
MNMC				IAML		11 54 37.0	
	comp=N,336nm,0.2s						
MNMCX	Minye Minye	2.84	341	*e*P		11 53 59.2	
MNMCX				*e*S		11 54 30.7	
YJA	Yavi	2.92	97	*e*P		11 54 01.0	
PB14	IPOC Station P	3.21	210	*e*P		11 54 03.5	
PB14				*e*S		11 54 34.5	
HJA	Humahuaca	3.28	115	*e*P		11 54 06.0	
PB12	IPOC Station P	3.58	333	*e*P		11 54 07.1	
PB16	IPOC Station P	3.58	347	*e*P		11 54 09.8	
PB16	IPOC Station P	3.58	347	*i* P	Pn	11 54 09.8	+0.6
SLA	San Lorenzo	4.07	135	*e*P		11 54 16.0	
ASTB	Santa Barbara	4.39	119	*e*P		11 54 19.2	
CFA	Coronel Fontan	9.73	178	LR	LR	12 00 21.8	
	comp=N,90nm,21.6s,baz=140,slow=43						
TORD	Torodi Ar. Bea	77.23	70	P	P	12 04 55.4	-0.6
	comp=N,0.4nm,0.5s,baz=255,slow=6.3,SNR=5.2						
	comp=N,0.4nm,0.5s						
YKA	Yellowknife Ar	91.59	340	P	P	12 06 08.1	+0.7
	comp=N,0.2nm,0.6s,baz=136,slow=4.8,SNR=5.2						
	comp=N,0.2nm,0.6s						
MKAR	Makanchi Array	145.76	36	PKPbc	PKPbc	12 12 39.5	-0.1
	comp=N,0.3nm,0.6s,baz=311,slow=4.0,SNR=4.3						

IDC 03 12:22:58.2±2.1**, 2°.23S×128°.11E, h0^{km}, mb3.7**/2**, mbtmp3.6**/3**, ML3.2**/1**, Error ellipse: s-maj=176.7km s-min=24.7km az=68.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.63	161	P	Pn	12 27 18.0	+0.3
	0.1nm,0.3s,baz=340,slow=11,SNR=3.2						
	0.5nm,0.7s						
ASAR	Alice Springs	22.04	166	P	P	12 27 54.0	-0.6
	0.6nm,0.5s,baz=345,slow=12,SNR=15						
	0.6nm,0.5s						
MKAR	Makanchi Array	63.23	327	P	P	12 33 28.6	+0.1
	1.5nm,0.7s,baz=130,slow=8.1,SNR=17						
	1.5nm,0.7s						

HEL 03 12:29:04.9±0.4**, 60°.93N×29°.19E, h0^{km}, ML1.5, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUF	Ruokolahti	0.51	347	PG	Pg	12 29 14.4	-0.3
RUF				SG	Sg	12 29 20.4	-0.9
RUF				MSG		12 29 21.5	
	comp=Z,5.9nm,0.2s						
VJF	Virojoki	0.89	245	PG	Pg	12 29 21.3	-0.6
	baz=60						
VJF				MSG		12 29 32.4	
	comp=Z,5.1nm,0.2s						
VJF				SB	Sg	12 29 33.7	+0.2
FIA0	FINESS Array S	1.59	290	PG	Pn	12 29 33.1	-1.2
	baz=111						
FIA0				MSG		12 29 52.6	
	comp=Z,2.4nm,0.2s						
FIA0				SN	Sn	12 29 54.7	-0.8
PVF	Pernaja	1.68	258	PG	Pn	12 29 34.7	-0.8
PVF				MSG		12 29 55.2	
	comp=Z,2.6nm,0.2s						
KAF	Kangasniemi	1.82	312	PG	Pb	12 29 38.4	-0.7
KAF				MSG		12 29 59.1	
	comp=Z,2.8nm,0.2s						
KAF				SN	Sb	12 30 02.1	-0.3
JOF	Joensuu	2.23	26	PG	Pb	12 29 44.9	-1.2
	baz=204						
JOF				SG	Sb	12 30 13.1	-1.1
NUR	Nurmijrvi	2.27	261	PG	Pb	12 29 45.6	-1.1
NUR				MSG		12 30 12.0	
	comp=Z,1.2nm,0.2s						
MEF	Metsahovi	2.47	255	PB	Pn	12 29 47.7	+1.3
MEF				MSG		12 30 17.7	
	comp=Z,1.8nm,0.2s						

MAN ***03*** *12:59:18.8, 15°.77N×120°.34E, h126^{km}, mb4.4, ML3.3, MS3.1*

IDC ***03*** *12:59:19.4±5.3, 15°.60N×120°.60E, h138^{km}±51^{km}, mb3.6/12, mbtmp4.0/12, MS3.3/3, Error ellipse: s-maj=25.1km s-min=13.0km az=70.0*

ISC 03 12:59:19.4±0.7**, 15°.71N**±0°.03×**120°.35E**±0°.06**, h132^{km}**±6^{km}**, n36, σ1^{s}.80**/52**, mb3.9**/11**, 11C-10D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPP	San Manuel, Pa	0.54	36	⇑*i*P	Pn	12 59 38.3	-0.6
SMPP				*e*S	Sn	12 59 52.4	-1.3
PCPH	Palayan	0.73	102	⇓*e*P	Pn	12 59 39.4	-0.8
PCPH				*e*S	Sn	12 59 54.2	-1.7
BOLP	Bolinao	0.79	328	⇑*e*P	Pn	12 59 41.0	+0.3
BOLP				*e*S	Sn	12 59 56.9	+0.1
BALP	Baler	1.18	88	⇑*e*P	Pn	12 59 44.5	+0.3
BALP				*e*S	Sn	13 00 03.8	+0.8
QVP	Quezon City--P	1.25	150	⇑*i*P	Pn	12 59 45.5	+0.6
QVP				*e*S	Sn	13 00 05.5	+1.1
SAMP	Sagada Mountai	1.46	21	⇑*e*P	Pn	12 59 46.6	-0.6
SAMP				*e*S	Sn	13 00 07.2	-1.2
MACP	Maragondon, Ca	1.48	166	⇑*e*P	Pn	12 59 48.1	+0.6
MACP				*e*S	Sn	13 00 09.9	+1.0
TGY	Tagaytay City	1.70	160	⇓*e*P	Pn	12 59 52.3	+2.3
TGY				*e*S	Sn	13 00 18.7	+5.4
CAUP	Cauayan	1.87	49	⇑*e*P	Pn	12 59 52.3	+0.4
CAUP				*e*S	Sn	13 00 19.0	+2.2
LQP	Lukban	1.96	144	⇓*e*P	Pn	12 59 53.7	+0.5
LQP				*e*S	Sn	13 00 18.2	-0.9
LUBP	Lubang	1.97	183	⇑*e*P	Pn	12 59 53.4	+0.3
LUBP				*e*S	Sn	13 00 20.3	+1.4
LUBP	Lubang	1.97	183	⇓*e*P	Pn	12 59 54.7	+1.6
LUBP				*e*S	Sn	13 00 20.0	+1.1
SIPP	Brgy, Tapao	2.20	3	⇓*i*P	Pn	12 59 57.0	+1.1
SIPP				*i* S	Sn	13 00 30.5	+6.5
CVP	Callao Caves	2.43	35	⇓*e*P	Pn	12 59 58.3	-0.5
BOAC	Boac	2.67	147	⇓*e*P	Pn	13 00 03.5	+1.6
BOAC				*e*S	Sn	13 00 37.9	+3.5
JCNP	Jose Panganiba	2.67	122	⇓*e*P	Pn	13 00 02.0	+0.1
JCNP				*e*S	Sn	13 00 35.1	+0.5
SGCP	Gonzaga	2.99	33	⇑*e*P	Pn	13 00 06.5	+0.5
SGCP				*e*S	Sn	13 00 41.0	-1.0
BUSP	Coron	3.69	182	⇓*e*P	Pn	13 00 15.4	+0.3
BUSP				*e*S	Sn	13 00 55.4	-2.9
OTRP	Odiongan	3.70	154	⇑*e*P	Pn	13 00 17.4	+2.0
PVCP	Virac	4.24	119	⇑*e*P	Pn	13 00 23.2	+0.8
ENPP	El Nido	4.57	191	⇓*e*P	Pn	13 00 27.2	+0.4
ENPP				*e*S	Sn	13 01 16.3	-2.9
CMAR	Chiang Mai Arr	20.64	281	P	Pn	13 03 51.9	-0.5
	2.4nm,0.6s,baz=91,slow=8.0,SNR=21						
	2.4nm,0.6s						
ASAJ	Asahikawa	34.03	29	P	P	13 05 50.4	-0.3
	5.1nm,0.6s,baz=240,slow=8.4,SNR=7.3						
	5.1nm,0.6s						
SONM	Songino Array	34.04	343	P	P	13 05 51.9	+0.9
	0.2nm,0.4s,baz=168,slow=10.0,SNR=1.9						
	0.2nm,0.4s						
KLR	Kul'dur	34.70	13	P	P	13 05 56.3	-0.1
	1.8nm,0.8s,baz=194,slow=6.4,SNR=5.9						
	1.8nm,0.8s						
WRA	Warramunga Arr	38.01	158	P	P	13 06 22.0	-2.9
	1.0nm,0.4s,baz=344,slow=8.9,SNR=16						
	1.0nm,0.4s						
ASAR	Alice Springs	41.32	161	P	P	13 06 50.1	-2.2
	1.1nm,0.5s,baz=337,slow=7.3,SNR=32						
ASAR				PcP	PcP	13 08 47.9	-0.5
	0.4nm,1.0s,baz=340,slow=3.4,SNR=2.0						
	1.1nm,0.5s						
MKAR	Makanchi Array	44.23	323	P	P	13 07 16.6	+1.1
	0.5nm,0.6s,baz=99,slow=9.3,SNR=9.1						
MKAR				PcP	PcP	13 08 58.4	+0.5
	0.3nm,0.7s,baz=108,slow=4.7,SNR=3.1						
	0.5nm,0.6s						
ZALV	Zalesovo Beam	47.13	332	P	P	13 07 38.5	+0.4
	0.5nm,0.3s,baz=94,slow=5.9,SNR=3.8						
	0.5nm,0.3s						
AAK	Ala-Archa	47.42	314	LR	LR	13 29 23.9	
	comp=Z,14nm,19.8s,baz=302,slow=38						
ARCES	ARCESS Array B	77.10	339	P	P	13 10 57.9	0.0
	5.4nm,1.0s,baz=91,slow=7.2,SNR=8.3						
	5.4nm,1.0s						
ILAR	Eielson Array	77.10	26	LR	LR	13 49 13.6	
	comp=Z,18nm,18.1s,baz=42,slow=39						
BRTR	Keskin Array B	77.65	308	LR	LR	13 50 44.1	
	comp=Z,30nm,18.0s,baz=166,slow=40						
FINES	FINESS Array B	78.37	331	P	P	13 11 05.1	+0.1
	0.4nm,0.3s,baz=76,slow=8.0,SNR=4.9						
	0.4nm,0.3s						
NOA	NORSAR Array B	85.33	333	P	P	13 11 41.2	-0.3
	0.5nm,0.7s,baz=69,slow=7.2,SNR=1.8						
	0.5nm,0.7s						
YKA	Yellowknife Ar	91.06	22	P	P	13 12 08.6	0.0
	0.7nm,0.7s,baz=308,slow=4.2,SNR=14						
	0.7nm,0.7s						

TEH ***03*** *13:02:40.7, 40°.07N×48°.42E, h10^{km}±990^{km}, ML2.9*

DRS ***03*** *13:02:41.1±0.0, 39°.93N×48°.41E, h21^{km}*

ISC 03 13:02:41.8±1.3**, 40°.13N**±0°.05×**48°.2E**±0°.2**, h10^{km}, n6, σ0^{s}.65**/9**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKT	Akhty	1.39	346	*e*Pg	Pn	13 03 06.8	-0.6
	26nm,0.2s						
AKT				*e*Sg	Sg	13 03 26.6	+0.1
	367nm,0.4s						
KSMR	Kasumkent	1.47	358	*e*Pg	Pn	13 03 07.7	-0.7
	4.0nm,0.0s						
KSMR				*e*Sg	Sb	13 03 28.4	+0.5
	48nm,0.3s						
GAS1	Astara - Iran	1.82	164	Pg	Pn	13 03 13.4	+0.3
IHRS	Heris	2.02	207	Pn	Pg	13 03 19.9	-0.7
KMKR	Kumukh	2.16	338	*e*Pn	Pn	13 03 18.9	+0.9
	14nm,0.4s						
KMKR				*e*Sn	Sb	13 03 48.3	+0.3
	40nm,0.5s						
ISRB	Sarab	2.34	190	Pn	Pb	13 03 24.5	+0.3

NNC 03 13:11:12.3±3.2**, 37°.24N×71°.10E, h0^{km}, mb3.6, mpv3.2, 7C-1D, Error ellipse: s-maj=25.5km s-min=20.7km az=160.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.28	21	⇓P	Pn	13 12 33.0	+0.2
	0.3nm,0.4s						
AML				⇑S	Sn	13 13 34.7	+0.2
	4.1nm,0.6s						
KK31	Karatay Array	5.87	356	⇑P	Pn	13 12 41.7	+1.1
	1.1nm,0.2s,baz=178,slow=12,SNR=44						
KK31				⇑S	Sn	13 13 50.7	+2.0
	8.5nm,0.6s,baz=186,slow=27,SNR=11						
TKM2	Tokmak 2	6.64	30	⇑P	Pn	13 12 51.1	-0.2
	3.3nm,0.6s						
TKM2				⇑S	Sn	13 14 09.4	+1.7
	3.3nm,0.6s						
AB31	Akbulak array	14.48	330	⇑P	Pn	13 14 36.1	-2.3
	0.4nm,0.5s,baz=143,slow=11,SNR=23						
AB31				⇑S	Sn	13 17 19.5	-0.2
	0.9nm,0.5s,baz=150,slow=24,SNR=7.8						

ISK ***03*** *13:20:53.2, 38°.69N×42°.63E, h16^{km}, ML2.5/7*

DDA ***03*** *13:20:54.0±0.0, 38°.74N×42°.55E, h7^{km}±1^{km}, ML2.3*

ISC 03 13:20:53.8±0.9**, 38°.69N**±0°.03×**42°.63E**±0°.03**, h14^{km}**±7^{km}**, n15, σ0^{s}.86**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADCV	BITLIS_Adilcev	0.14	32	P	Pg	13 20 57.4	-0.2
ADCV				*i* AML	AML	13 21 00.0	
	comp=N,3μm,0.4s						
ADCV				S	Sg	13 21 00.1	-0.1
AKDM	Akdamar-Van	0.45	143	Pg	Pg	13 21 02.8	0.0
AKDM				Sg	Sg	13 21 09.5	+0.5
MLAZ	Malazgirt-MUS	0.46	352	Pg	Pb	13 21 02.9	-0.8
MLAZ				Sg	Sb	13 21 10.0	-0.4
BLIS	Bitlis-Merkez	0.49	236	P	Pb	13 21 03.6	-0.7
BLIS				S	Sb	13 21 10.9	-0.4
BLIS				*i* AML	AML	13 21 11.0	
	comp=N,255nm,0.6s						
GURO	Guroymak-BITLI	0.49	254	Pg	Pb	13 21 03.5	-0.8
GURO				Sg	Sb	13 21 10.8	-0.6
VANB	Van	0.60	99	Pg	Pg	13 21 06.2	+0.6
VANB				Sg	Sb	13 21 15.6	+1.0
PERV	Siirt/Pervari-	0.75	185	P	Pg	13 21 08.2	-0.1
PERV				S	Sn	13 21 21.4	+0.1
PERV				*i* AML	AML	13 21 22.0	
	comp=E,115nm,0.4s						
MUSM	Mu-Merkez	0.88	273	P	Pb	13 21 10.0	-0.8
MUSM				S	Sb	13 21 21.9	-0.7
AGRB	Hanur-Agry	0.93	17	Pg	Pb	13 21 11.4	-0.4
SVAN	Silvan-Diyarba	1.25	245	Pn	Pn	13 21 16.6	-0.3
SVAN	Silvan-Diyarba	1.25	245	P	Pg	13 21 18.4	+0.6
SVAN				S	Sg	13 21 36.0	+2.0
KOPR	Koprukoy-ERZUR	1.43	335	Pn	Pn	13 21 19.3	-0.3
EJDE	Erzurum, Palan	1.54	318	P	Pg	13 21 23.7	+0.3
EJDE				S	Sg	13 21 45.8	+2.3
BNGB	Bingl	1.55	282	Pn	Pn	13 21 20.8	-0.3
CUKT	Cukurca	1.63	152	Pn	Pn	13 21 22.0	-0.3

IDC 03 13:24:30.5±745.0**, 53°.51N×34°.32E, h0^{km}, Error ellipse: s-maj=280.4km s-min=82.1km az=27.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	3.62	26	I	I	13 47 30.0	
	0.1nm,0.7s,baz=210,slow=306,SNR=1.3						
I31KZ	AKTYUBINSK INF	14.93	92	I	I	14 52 20.0	
	baz=292,slow=323,SNR=1.3						
I37NO	I37NO	17.24	341	I	I	15 18 50.6	
	baz=146,slow=326,SNR=0.8						

KRNET ***03*** *13:25:21.0±0.1, 41°.14N×76°.17E, h14^{km}, mb3.0*

SOME ***03*** *13:25:22.5, 41°.27N×76°.13E, h5^{km}*

NNC ***03*** *13:25:22.6±1.4, 41°.15N×76°.17E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=10.5km s-min=6.5km az=161.0*

KNET ***03*** *13:25:23.4±0.6, 41°.29N×75°.99E, h0^{km}, ml2.6, Error ellipse: s-maj=4.7km s-min=2.7km az=140.0*

ISC 03 13:25:20.8±1.4**, 41°.13N**±0°.05×**76°.06E**±0°.03**, h16^{km}**±11^{km}**, n67, σ1^{s}.10**/93**, 42C-13D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	0.30	352	⇑*i*P	Pb	13 25 27.3	-0.8
	baz=31						
NRN				⇑*i*S	Sb	13 25 32.1	-0.9
	baz=31						
ULHL	Ulahol	1.12	7	⇑P	Pn	13 25 42.0	0.0
	8.9nm,0.1s,SNR=22						
ULHL				⇑S	Sg	13 25 55.9	-1.4
	32nm,0.2s						
ULHL	Ulahol	1.12	7	⇑*i*P	Pn	13 25 42.1	0.0
	baz=3.0						
ULHL				⇑*i*S	Sn	13 25 57.5	+0.2
	baz=3.0						
KDJ	Kajisay	1.31	40	⇑*e*P	Pn	13 25 44.6	0.0
	baz=38						
KDJ				⇑*i*S	Sb	13 26 01.9	+0.2
	baz=38						
BOOM	Boomskoye usch	1.36	356	⇑*i*P	Pg	13 25 46.7	-0.4
	baz=53						
BOOM				⇑*i*S	Sg	13 26 05.4	+0.5
	baz=53						
TARG	Taragay, Kyrgy	1.44	65	⇑*i*P	Pn	13 25 46.6	-0.1
	baz=64						
TARG				⇑*i*S	Sn	13 26 05.4	-0.1
	baz=64						
ARLS	Aral	1.49	300	⇑*i*P	Pg	13 25 50.0	+0.4
	baz=98						
ARLS				⇑*i*S	Sg	13 26 11.4	+2.4
	baz=98						
UCH	Uchtor	1.59	314	⇑P	Pg	13 25 51.3	-0.3
	15nm,0.2s,SNR=28						
UCH				⇓S	Sg	13 26 13.3	+0.9
	78nm,0.2s						
UCH	Uchtor	1.59	314	⇑*i*P	Pg	13 25 51.9	+0.4
	baz=12						
UCH				⇑*i*S	Sg	13 26 14.4	+2.1
	baz=12						
KBK	Karagaybulak	1.73	332	⇓P	Pg	13 25 54.2	0.0
	21nm,0.1s,SNR=14						
KBK				⇑S	Sg	13 26 16.7	-0.1
	213nm,0.5s						
KBK	Karagaybulak	1.73	332	⇑*e*P	Pg	13 25 53.9	-0.3
	baz=29						
KBK				⇑*i*S	Sg	13 26 17.9	+1.1
	baz=29						
TKM2	Tokmak 2	1.82	349	⇓P	Pg	13 25 55.2	-0.6
	53nm,0.3s,SNR=20						
TKM2				⇓S	Sg	13 26 20.3	+0.8
	23nm,0.1s						
TKM2	Tokmak 2	1.82	349	⇑Pn	Pg	13 25 55.0	-0.8
	20nm,0.3s						
TKM2				⇑Lg	Lg	13 26 22.7	
	10nm,0.3s						
TKM2	Tokmak 2	1.82	349	⇑*e*P	Pg	13 25 55.0	-0.8
	baz=47						
TKM2				⇑*i*S	Sg	13 26 19.9	+0.4
	baz=47						
AAK	Ala-Archa	1.91	323	⇓P	Pg	13 25 57.1	-0.3
	27nm,0.3s,SNR=33						
AAK				⇓S	Sg	13 26 22.2	+0.1
	38nm,0.3s						
AAK	Ala-Archa	1.91	323	⇑*i*P	Pg	13 25 57.2	-0.2
	baz=21						
AAK				⇑*i*S	Sg	13 26 23.5	+1.3
	baz=21						
KST	Kastek	1.91	358	*e*P	Pg	13 25 57.6	+0.1
	7.0nm,0.2s						
KST				*e*S	Sg	13 26 22.8	+0.4
	18nm,0.1s						
IZV	Izvestkoviy	1.95	12	Pg	Pg	13 25 58.4	+0.1
	4.7nm,0.2s						
IZV				Lg	Lg	13 26 24.0	
	50nm,0.6s						
IZV	Izvestkoviy	1.95	12	*e*P	Pg	13 25 57.9	-0.4
	2.7nm,0.2s						
IZV				*e*S	Sg	13 26 22.8	-0.8
	12nm,0.1s						
FRU1	Bishkek	1.99	328	⇓*i*P	Pg	13 25 58.4	-0.6
	baz=26						
FRU1				⇓*i*S	Sg	13 26 25.5	+0.7
	baz=26						
MTBS	Maitube	2.02	8	Pg	Pg	13 25 58.9	-0.6
	7.8nm,0.2s						
MTBS				Lg	Lg	13 26 25.1	
	28nm,0.6s						
MTBS	Maitube	2.02	8	*e*P	Pg	13 25 58.9	-0.6
	7.1nm,0.1s						
MTBS				*e*S	Sg	13 26 25.1	-0.6
	27nm,0.1s						
TNSS	Tian-Shan	2.02	19	Pg	Pg	13 25 58.8	-0.8
	9.9nm,0.5s						
TNSS				Lg	Lg	13 26 24.5	
	19nm,0.9s						
TNSS	Tian-Shan	2.02	19	*e*P	Pg	13 25 58.8	-0.8
	6.8nm,0.1s						
TNSS				*e*S	Sg	13 26 24.5	-1.3
	14nm,0.1s						
AML	Almayashu	2.03	300	⇑P	Pg	13 25 59.4	-0.5
	17nm,0.2s,SNR=23						
AML				⇓S	Sg	13 26 27.4	+1.1
	67nm,0.4s						
AML	Almayashu	2.03	300	⇑Pn	Pg	13 25 59.9	0.0
	2.9nm,0.8s						
AML				⇑Lg	Lg	13 26 29.3	
	14nm,0.9s						
ANVS	Anan'yevo	2.04	36	⇑*i*P	Pb	13 25 57.8	+0.2
	baz=34						
ANVS				⇑*i*S	Sb	13 26 24.5	+1.7
	baz=34						
CHMS	Chumysh	2.10	333	⇓P	Pg	13 26 00.0	-1.2
	6.0nm,0.1s,SNR=7.2						
CHMS				⇑S	Sg	13 26 28.6	0.0
	29nm,0.3s						
DGS	Degeres	2.12	354	Pg	Pg	13 26 01.9	+0.3
	19nm,0.5s						
DGS				Lg	Lg	13 26 29.6	
	25nm,0.4s						
DGS	Degeres	2.12	354	*e*Pg	Pg	13 26 01.1	-0.4
	9.5nm,0.3s						
DGS				*e*Lg	Lg	13 26 28.5	
	9.5nm,0.2s						
MDOK	Medeo	2.16	20	⇑Pg	Pb	13 26 00.5	+0.8
	9.7nm,0.5s						
MDOK				Pg	Pg	13 26 00.7	-1.6
	14nm,0.6s						
MDOK				Lg	Lg	13 26 28.4	
	35nm,0.6s						
MDOK				⇓Lg	Lg	13 26 29.7	
	26nm,0.5s						
MDOK	Medeo	2.16	20	*e*Pg	Pg	13 26 00.7	-1.6
	5.0nm,0.2s						
MDOK				*e*Lg	Lg	13 26 28.4	
	25nm,0.2s						
KNDC	Almaty	2.19	18	⇓Pg	Pg	13 26 01.9	-1.0
	21nm,0.5s						
KNDC				⇑Lg	Lg	13 26 31.0	
	60nm,0.4s						
KOTS	Kotyrbulak	2.24	20	Pg	Pg	13 26 03.3	-0.6
	15nm,0.4s						
KOTS				Lg	Lg	13 26 32.4	
	112nm,0.5s						
KOTS	Kotyrbulak	2.24	20	*e*Pg	Pg	13 26 03.3	-0.6
	15nm,0.4s						
KOTS				*e*Lg	Lg	13 26 32.4	
	112nm,0.5s						
USP	Ospenovka	2.43	332	⇑P	Pb	13 26 04.8	+0.7
	9.4nm,0.3s,SNR=8.0						
SGDS	Sogindy	2.55	336	Pg	Pg	13 26 09.6	-0.2
	8.2nm,0.3s						
SGDS				Lg	Lg	13 26 42.9	
	20nm,0.4s						
OHH	Osh	2.56	257	⇑*i*P	Pb	13 26 07.1	+0.8
	baz=58						
OHH				⇑*i*S	Sg	13 26 40.3	-2.7
	baz=58						
SATY	Saty	2.60	41	Pg	Pg	13 26 09.0	-1.7
	15nm,0.5s						
SATY				Lg	Lg	13 26 42.2	
	86nm,0.4s						
SATY	Saty	2.60	41	*e*Pg	Pg	13 26 09.0	-1.7
	15nm,0.3s						
SATY				*e*Lg	Lg	13 26 42.2	
	61nm,0.1s						
KTBS	Karatobe	2.62	10	Pg	Pg	13 26 10.2	-0.9
	13nm,0.4s						
KTBS				Lg	Lg	13 26 44.4	
	49nm,0.6s						
KTBS	Karatobe	2.62	10	*e*Pg	Pg	13 26 10.2	-0.9
	8.3nm,0.1s						
KTBS				*e*Lg	Lg	13 26 44.4	
	57nm,0.2s						
MRKS	Merke	2.66	308	Pg	Pg	13 26 10.9	-0.9
	7.7nm,0.3s						
MRKS				Lg	Lg	13 26 45.5	
	24nm,0.6s						
MRKS	Merke	2.66	308	*e*Pg	Pg	13 26 10.9	-0.9
	7.7nm,0.3s						
MRKS				*e*Lg	Lg	13 26 45.5	
	24nm,0.6s						
ZHN	Zhinishke	2.70	40	Pg	Pg	13 26 10.8	-1.8
	8.8nm,0.3s						
ZHN				Lg	Lg	13 26 45.2	
	108nm,0.3s						
ZHN	Zhinishke	2.70	40	*e*Pg	Pg	13 26 10.8	-1.8
	8.8nm,0.3s						
ZHN				*e*Lg	Lg	13 26 45.1	
	108nm,0.3s						
KUU	Kurty	2.77	4	Pg	Pg	13 26 12.5	-1.4
	8.0nm,0.3s						
KUU				Lg	Lg	13 26 48.5	
	16nm,0.3s						
KUU	Kurty	2.77	4	*e*Pg	Pg	13 26 12.5	-1.4
	8.0nm,0.3s						

KUU				*e*Lg	Lg	13 26 48.5	
	22nm,0.1s						
CHKK	**Chushkaly**	**2.81**	**14**	Pg	**Pg**	**13 26 13.6**	**-1.1**
	7.4nm,0.3s						
CHKK				Lg	Lg	13 26 49.7	
	29nm,0.3s						
CHKK	**Chushkaly**	**2.81**	**14**	*e*Pg	**Pg**	**13 26 13.6**	**-1.1**
	7.4nm,0.2s						
CHKK				*e*Lg	Lg	13 26 49.6	
	29nm,0.3s						
KURS	**Kuram**	**2.83**	**33**	Pg	**Pb**	**13 26 11.7**	**+0.7**
	5.1nm,0.6s						
KURS				Lg	Lg	13 26 46.7	
	26nm,0.7s						
KURS	**Kuram**	**2.83**	**33**	*e*Pg	**Pb**	**13 26 11.7**	**+0.7**
	5.0nm,0.3s						
KURS				*e*Lg	Lg	13 26 46.7	
	26nm,0.7s						
UZB	**Uzynbulak**	**2.99**	**47**	Pg	**Pb**	**13 26 14.1**	**+0.4**
	8.5nm,0.3s						
UZB				Lg	Lg	13 26 51.3	
	30nm,0.7s						
UZB	**Uzynbulak**	**2.99**	**47**	*e*Pg	**Pb**	**13 26 15.6**	**+1.9**
	7.7nm,0.0s						
UZB				*e*Lg	Lg	13 26 53.2	
	25nm,0.2s						
KPKS	**Kokpek**	**3.04**	**39**	Pg	**Pb**	**13 26 16.1**	**+1.6**
	8.5nm,0.2s						
KPKS				Lg	Lg	13 26 54.7	
	113nm,0.5s						
KPKS	**Kokpek**	**3.04**	**39**	*e*Pg	**Pb**	**13 26 16.1**	**+1.6**
	8.5nm,0.2s						
KPKS				*e*Lg	Lg	13 26 54.7	
	113nm,0.5s						
ARK	**Arkit**	**3.15**	**284**	⇑*i*P	**Pb**	**13 26 15.2**	**-1.2**
	baz=83						
ARK				⇑*i*S	**Sb**	**13 26 54.5**	**-0.1**
	baz=83						
SHLS	**Shalkode**	**3.24**	**50**	Pg	**Pg**	**13 26 24.8**	**+1.9**
	9.2nm,0.3s						
SHLS				Lg	Lg	13 27 09.3	
	23nm,0.6s						
SHLS	**Shalkode**	**3.24**	**50**	*e*Pg	**Pg**	**13 26 24.8**	**+1.9**
	9.2nm,0.3s						
SHLS				*e*Lg	Lg	13 27 09.3	
	23nm,0.6s						
PDGK	**Podgornoye**	**3.37**	**48**	Pg	**Pb**	**13 26 20.2**	**+0.1**
	1.5nm,0.3s						
PDGK				Lg	Lg	13 27 01.3	
	7.4nm,0.8s						
PDGK	**Podgornoye**	**3.37**	**48**	⇑Pn	**Pb**	**13 26 18.3**	**-1.8**
	3.8nm,0.6s						
PDGK				⇑Lg	Lg	13 27 06.1	
	16nm,0.8s						
BLB	**Baldybastay**	**3.46**	**30**	Pg	**Pb**	**13 26 23.9**	**+2.1**
	6.7nm,0.2s						
BLB				Lg	Lg	13 27 07.9	
	29nm,0.5s						
BTLS	**Baital**	**4.18**	**340**	Pg	**Pg**	**13 26 38.6**	**-2.2**
	1.1nm,0.2s						
BTLS				Lg	Lg	13 27 33.0	
	8.0nm,0.7s						
BTLS	**Baital**	**4.18**	**340**	*e*Pg	**Pg**	**13 26 38.6**	**-2.2**
	1.1nm,0.2s						
BTLS				*e*Lg	Lg	13 27 33.0	
	3.6nm,0.1s						
KK31	**Karatay Array**	**4.57**	**297**	⇓Pg	**Pg**	**13 26 47.9**	**-0.5**
	0.6nm,0.3s,baz=129,slow=16,SNR=12						
KK31				⇑Lg	Lg	13 27 50.1	
	2.0nm,0.5s,baz=124,slow=29,SNR=6.0						
IUG	**Iuzhnay**	**4.63**	**285**	Pg	**Pg**	**13 26 48.7**	**-0.8**
	6.2nm,0.6s						
IUG				Lg	Lg	13 27 50.3	
	20nm,0.9s						
IUG	**Iuzhnay**	**4.63**	**285**	*e*Pg	**Pg**	**13 26 48.7**	**-0.8**
	6.1nm,0.2s						
IUG				*e*Lg	Lg	13 27 50.3	
	12nm,0.3s						

NNC ***03*** *13:58:00.5±2.1, 46°.87N×89°.69E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=18.1km s-min=13.0km az=71.0*

ASRS ***03*** *13:58:07.1±0.7, 47°N±3°×8°9E±°, h10^{km}, MLh3.4/5, Error ellipse: s-maj=8.8km s-min=4.5km az=118.8, confirmed*

ISC 03 13:58:02.5±2.6**, 46°.84N**±0°.08×**89°.6E**±0°.1**, h10^{km}, n13,** σ**2^{s}.00**/28**, 7C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGZ	**Jazzator, Alta**	**3.21**	**334**	Pn	**Pn**	**13 58 55.9**	**+2.7**
DGZ				Pg	**Pg**	**13 59 04.4**	**+0.3**
DGZ				Sg	**Sg**	**13 59 43.9**	**-1.8**
CUR	**Chagan-Uzun**	**3.37**	**346**	Pg	**Pg**	**13 59 04.8**	**-2.3**
CUR				Sg	**Sg**	**13 59 50.9**	**+0.1**
CHBI	**Chibit, Altay**	**3.75**	**339**	Pn	**Pb**	**13 59 06.5**	**-2.4**
CHBI				Pg	**Pg**	**13 59 14.0**	**-0.3**
CHBI				Sg	**Sg**	**14 00 04.4**	**+1.5**
ULGR	**Ulagan, Altay**	**3.94**	**344**	Pg	**Pg**	**13 59 16.5**	**-1.5**
ULGR				Sg	**Sg**	**14 00 08.8**	**-0.3**
MK31	**Makanchi Array**	**5.03**	**272**	⇓Pn	**Pn**	**13 59 17.7**	**-0.3**
	0.3nm,0.3s,baz=84,slow=14,SNR=15						
MK31				⇑Pg	**Pb**	**13 59 33.2**	**+2.5**
	1.4nm,0.5s,baz=100,slow=16,SNR=5.8						
MK31				⇓Lg	Lg	14 00 41.4	
	1.7nm,0.3s,baz=88,slow=30,SNR=8.9						
MKAR	**Makanchi Array**	**5.03**	**272**	Pn	**Pn**	**13 59 18.2**	**+0.1**
MKAR				Pg	**Pg**	**13 59 36.0**	**-2.8**
MKAR				Sg	**Sg**	**14 00 43.0**	**-1.0**
ARTR	**Artybash**	**5.19**	**344**	Sg	**Sg**	**14 00 46.5**	**-2.6**
UKR	**Ust'-Kan**	**5.20**	**324**	Pn	**Pn**	**13 59 24.1**	**+3.7**
UKR				Sg	**Sg**	**14 00 49.6**	**+0.3**
MAKZ	**Makanchi**	**5.25**	**272**	⇑Pn	**Pn**	**13 59 20.7**	**-0.3**
	1.7nm,1.1s						
MAKZ				⇑Pg	**Pg**	**13 59 39.0**	**-3.9**
	1.8nm,0.7s						
MAKZ				⇑Lg	Lg	14 00 48.7	
	8.2nm,0.9s						
MAKZ	**Makanchi**	**5.25**	**272**	Pn	**Pn**	**13 59 23.1**	**+2.1**
MAKZ				Pg	**Pb**	**13 59 37.5**	**+3.2**
MAKZ				Sg	**Sg**	**14 00 51.3**	**+0.4**
TASR	**Tashtagol**	**6.03**	**350**	Sg	**Sg**	**14 01 14.7**	**-1.3**
KURK	**Kurchatov**	**8.23**	**302**	⇑Pn	**Pn**	**14 00 01.0**	**-1.0**
	2.2nm,0.6s						
KURK				⇓Sn	**Sn**	**14 01 34.9**	**0.0**
	3.2nm,0.6s						
KURK				⇓Lg	Lg	14 02 22.7	
	5.0nm,0.6s						
KURBB	**Kurchatov Arra**	**8.25**	**301**	⇑Pn	**Pn**	**14 00 01.8**	**-0.4**
	2.2nm,0.6s						
KURBB				⇓Sn	**Sn**	**14 01 37.5**	**+2.2**
	6.4nm,0.6s						
KURBB				⇑Lg	Lg	14 02 23.2	
	14nm,0.7s						

IDC ***03*** *13:58:33.0±0.7, 6°.75N×72°.91W, h166^{km}±9^{km}, mb3.1/4, mbtmp3.7/6, Error ellipse: s-maj=30.1km s-min=7.5km az=131.0*

RSNC ***03*** *13:58:33.7±1.2, 6°.82N×73°.16W, h150^{km}±4^{km}, ML3.7, Mw3.9*

ISC 03 13:58:32.5±0.8**, 6°.83N**±0°.03×**73°.11W**±0°.04**, h153^{km}**±6^{km}**, n46,** σ**1^{s}.74**/85**, mb3.3**/4**, 1C-5D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**197**	⇓*i*P	**Pn**	**13 58 54.0**	**+0.5**
BARC				*e*S	**Sn**	**13 59 09.0**	**-0.5**
BARC				*i*		13 59 11.3	
	comp=Z,2µm,0.3s						
PAMC	**Pamplona, Colo**	**0.65**	**39**	⇓*i*P	**Pn**	**13 58 56.9**	**+1.3**
PAMC				*e*S	**Sn**	**13 59 13.8**	**+0.7**
PAMC				*i*		13 59 16.5	
	comp=Z,2µm,0.7s						
BRRC	**Barranca, Sant**	**0.66**	**295**	⇓*i*P	**Pn**	**13 58 55.8**	**+0.9**
BRRC				*e*S	**Sn**	**13 59 11.9**	**-0.2**
BRRC				*i*		13 59 16.2	
	comp=Z,764nm,0.3s						
RUSC	**La Rusia**	**0.93**	**178**	*e*P	**Pn**	**13 58 57.9**	**+0.4**
RUSC				*e*S	**Sn**	**13 59 16.8**	**+0.1**
RUSC				*i*		13 59 17.9	
	comp=Z,1µm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.37**	**258**	*e*P	**Pn**	**13 59 00.5**	**-0.4**
PTBC				*e*S	**Sn**	**13 59 21.7**	**-0.9**
PTBC				*i*		13 59 24.1	
	comp=Z,392nm,0.2s						
TAMC	**Tame, Arauca**	**1.37**	**106**	⇓*i*P	**Pn**	**13 59 02.4**	**+1.5**
TAMC				*e*S	**Sn**	**13 59 24.1**	**+1.4**
SPBC	**San Pablo de B**	**1.51**	**219**	*e*P	**Pn**	**13 59 02.7**	**+0.3**
SPBC				*e*S	**Sn**	**13 59 24.4**	**-1.0**
SPBC				*i*		13 59 27.5	
	comp=Z,1µm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.85**	**291**	*e*P	**Pn**	**13 59 06.3**	**+0.2**
ZARC				*e*S	**Sn**	**13 59 31.9**	**0.0**
ZARC				*i*		13 59 38.1	
	comp=Z,648nm,0.3s						
CHIC	**Chingaza**	**2.27**	**196**	⇑*i*P	**Pn**	**13 59 11.8**	**+0.5**
CHIC				*e*S	**Sn**	**13 59 41.5**	**+0.2**
CHIC				*i*		13 59 45.1	
	comp=Z,463nm,0.4s						
ROSC	**El Rosal**	**2.31**	**211**	P	**Pn**	**13 59 13.7**	**+1.9**
	comp=Z,344nm,0.3s,baz=308,slow=19,SNR=188						
ROSC				S	**Sn**	**13 59 45.4**	**+3.2**
	comp=Z,750nm,0.3s,baz=212,slow=24,SNR=14						
ROSC	**El Rosal**	**2.31**	**211**	*e*P	**Pn**	**13 59 13.6**	**+1.7**
ROSC				*e*S	**Sn**	**13 59 40.1**	**-2.0**
ROSC				*i*		13 59 48.1	
	comp=Z,769nm,0.4s						
HELC	**Santa Helena**	**2.48**	**255**	*e*P	**Pn**	**13 59 14.6**	**+0.8**
HELC				*e*S	**Sn**	**13 59 45.9**	**+0.1**
HELC				*i*		13 59 52.3	
	comp=Z,338nm,0.4s						
UREC	**San Jos de Ur**	**2.57**	**291**	*e*P	**Pn**	**13 59 13.8**	**-0.8**
UREC				*e*S	**Sn**	**13 59 44.8**	**-2.3**
UREC				*i*		13 59 55.9	
	comp=Z,446nm,0.3s						
LL1C	**La Loma 1 Cana**	**2.73**	**351**	*e*P	**Pn**	**13 59 18.7**	**+2.1**
LL1C				*e*S	**Sn**	**13 59 54.8**	**+4.0**
VILC	**Villavicencio,**	**2.76**	**192**	*e*P	**Pn**	**13 59 17.2**	**+0.1**
VILC				*e*S	**Sn**	**13 59 51.3**	**-0.3**
VILC				*i*		13 59 54.7	
	comp=Z,573nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.79**	**160**	*e*P	**Pn**	**13 59 17.2**	**0.0**
PTGC				*e*S	**Sn**	**13 59 49.5**	**-2.5**
PTGC				*i*		13 59 53.3	
	comp=Z,604nm,0.2s						
RECRC	**Villamaria, Ca**	**2.90**	**230**	*e*P	**Pn**	**13 59 21.9**	**+2.7**
RECRC				*e*S	**Sn**	**13 59 57.8**	**+2.5**
NIZA	**Niza - Manizal**	**2.93**	**233**	*e*P	**Pn**	**13 59 22.5**	**+3.1**
NIZA				*e*S	**Sn**	**13 59 58.8**	**+3.2**
CBOC	**Ciudad Bolivar**	**3.04**	**252**	*e*P	**Pn**	**13 59 21.6**	**+1.0**
CBOC				*e*S	**Sn**	**13 59 56.6**	**-1.2**
CBOC				*i*		14 00 02.3	
	comp=Z,94nm,0.2s						
DBBC	**Dabeiba**	**3.08**	**274**	*e*P	**Pn**	**13 59 21.6**	**+0.6**
DBBC				*e*S	**Sn**	**13 59 56.8**	**-1.9**
DBBC				*i*		13 59 59.1	
	comp=Z,153nm,0.3s						
SDV	**Santo Domingo**	**3.19**	**50**	P	**Pn**	**13 59 23.6**	**+1.0**
	comp=Z,22nm,0.3s,baz=300,slow=2.4,SNR=36						
SDV				S	**Sn**	**14 00 01.0**	**-0.4**
	comp=Z,243nm,0.5s,baz=49,slow=21,SNR=48						
ARGC	**Ariguani, Magd**	**3.21**	**340**	*e*P	**Pn**	**13 59 24.7**	**+2.1**
ARGC				*e*S	**Sn**	**14 00 02.6**	**+1.0**
ARGC				*i*		14 00 09.3	
	comp=Z,117nm,0.3s						
ANIL	**Santa Ana**	**3.25**	**225**	*e*P	**Pn**	**13 59 24.3**	**+0.8**
ANIL				*e*S	**Sn**	**14 00 04.7**	**+1.8**
ORTC	**Ortega, Tolima**	**3.59**	**216**	*e*P	**Pn**	**13 59 28.2**	**+0.6**
ORTC				*e*S	**Sn**	**14 00 11.5**	**+1.0**
ORTC				*i*		14 00 15.3	
	comp=Z,213nm,0.5s						
APAC	**Apartado, Choc**	**3.60**	**287**	⇓*i*P	**Pn**	**13 59 27.8**	**+0.2**
APAC				*e*S	**Sn**	**14 00 10.5**	**0.0**
APAC				*i*		14 00 14.8	
	comp=Z,162nm,0.4s						
SJCC	**San Jacinto, C**	**3.67**	**326**	*e*P	**Pn**	**13 59 27.8**	**-0.8**
SJCC				*e*S	**Sn**	**14 00 09.2**	**-3.0**
SJCC				*i*		14 00 13.8	
	comp=Z,135nm,0.6s						
LCBC	**Los crdobas,**	**3.81**	**302**	*e*P	**Pn**	**13 59 30.1**	**-0.1**
LCBC				*e*S	**Sn**	**14 00 15.1**	**-0.1**
LCBC				*i*		14 00 18.8	
	comp=Z,135nm,0.2s						
CRJC	**Cerrejon, Guaj**	**4.17**	**3**	*e*P	**Pn**	**13 59 34.5**	**-0.7**
CRJC				*e*S	**Sn**	**14 00 21.9**	**-2.0**
CRJC				*i*		14 00 25.6	
	comp=Z,151nm,0.4s						
YOTC	**Yotoco, Valle**	**4.28**	**229**	*e*P	**Pn**	**13 59 36.5**	**-0.2**
YOTC				*e*S	**Sn**	**14 00 29.3**	**+2.7**
SMRC	**Santa Marta, M**	**4.45**	**346**	*e*P	**Pn**	**13 59 38.8**	**+0.2**
SMRC				*e*S	**Sn**	**14 00 26.9**	**-3.3**
SMRC				*i*		14 00 30.5	
	comp=Z,119nm,0.3s						
PIZC	**Pizarro, Choco**	**4.61**	**247**	*e*P	**Pn**	**13 59 43.0**	**+2.2**
PIZC				*e*S	**Sn**	**14 00 34.8**	**+0.7**
PIZC				*i*		14 00 48.2	
	comp=Z,42nm,0.5s						
MACC	**Macarena, Meta**	**4.71**	**189**	*e*P	**Pn**	**13 59 41.0**	**-1.1**
BETC	**Betania**	**4.73**	**210**	*e*P	**Pn**	**13 59 42.3**	**-0.1**
BETC				*e*S	**Sn**	**14 00 33.9**	**-3.1**
BETC				*i*		14 00 40.8	
	comp=Z,62nm,0.2s						
URIC	**Uribia, Colomb**	**4.97**	**13**	*e*P	**Pn**	**13 59 44.4**	**-1.1**
URIC				*e*S	**Sn**	**14 00 38.2**	**-4.4**
URIC				*i*		14 00 44.0	
	comp=Z,25nm,0.4s						
JAMC	**Jamundi, Valle**	**5.05**	**225**	*e*P	**Pn**	**13 59 47.0**	**+0.2**
JAMC				*e*S	**Sn**	**14 00 44.9**	**+0.1**
JAMC				*i*		14 00 53.6	
	comp=Z,20nm,0.3s						
MALC	**Bahia Malaga**	**5.05**	**237**	*e*P	**Pn**	**13 59 48.9**	**+2.3**
MALC				*e*S	**Sn**	**14 00 47.8**	**+3.3**
MALC				*i*		14 00 53.8	
GARC	**Garzon, Huila**	**5.19**	**207**	*e*P	**Pn**	**13 59 48.1**	**-0.6**
GARC				*e*S	**Sn**	**14 00 45.0**	**-3.2**
GARC				*i*		14 00 50.4	
	comp=Z,90nm,0.3s						
POPC	**Popayan, Colom**	**5.55**	**220**	*e*P	**Pn**	**13 59 54.1**	**+0.7**
POPC				*e*S	**Sn**	**14 00 55.5**	**-1.2**
FLOC	**Florencia**	**5.79**	**206**	*e*P	**Pn**	**13 59 56.5**	**0.0**
FLOC				*e*S	**Sn**	**14 00 58.7**	**-3.6**
FLOC				*i*		14 01 09.1	
	comp=Z,12nm,0.4s						
BBAC	**Balboa, Cauca**	**6.31**	**221**	*e*P	**Pn**	**14 00 04.7**	**+1.2**
BBAC				*e*S	**Sn**	**14 01 12.6**	**-2.3**
BBAC				*i*		14 01 19.5	
	comp=Z,11nm,0.4s						
TXAR	**Lajitas Array**	**36.47**	**312**	P	**P**	**14 05 23.8**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=126,slow=9.0,SNR=8.6						
	comp=Z,0.6nm,0.6s						
PDAR	**Pinedale Array**	**48.08**	**324**	P	**P**	**14 06 57.4**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=117,slow=9.7,SNR=5.1						
	comp=Z,0.2nm,0.5s						
NVAR	**Mina Array Bea**	**51.48**	**315**	P	**P**	**14 07 23.5**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=130,slow=7.2,SNR=4.3						
	comp=Z,0.3nm,0.7s						
YKA	**Yellowknife Ar**	**63.26**	**340**	P	**P**	**14 08 44.4**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=132,slow=6.8,SNR=17						
	comp=Z,0.9nm,0.6s						
ASAR	**Alice Springs**	**149.12**	**234**	PKPbc	**PKiKP**	**14 18 02.4**	**-2.5**
	comp=Z,0.5nm,0.5s,baz=116,slow=3.9,SNR=10.0						
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc	**PKiKP**	**14 18 05.5**	**-1.9**
	comp=Z,0.5nm,0.4s,baz=106,slow=2.8,SNR=9.5						

IDC ***03*** *14:06:31.7±1.6, 21°.16S×179°.21W, h633^{km}±14^{km}, mb3.2/4, mbtmp4.2/7, Error ellipse: s-maj=27.8km s-min=23.3km az=142.0*

NEIC ***03*** *14:06:32.2±0.4, 21°.1S±0°.5×179°.2W±0°.3, h634^{km}±27^{km}, mb4.0/14, Error ellipse: s-maj=77.1km s-min=27.0km az=202.0*

ISC 03 14:06:30.9±1.1**, 21°.2S**±0°.1×**179°.2W**±0°.2**, h619^{km}, n25,** σ**1^{s}.16**/28**, mb3.9**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.35**	**322**	P	**P**	**14 08 01.6**	**+1.2**
	3.6nm,0.3s,baz=267,slow=22,SNR=7.1						
MSVF				S	**S**	**14 09 14.3**	**+1.1**
	1.5nm,0.3s,baz=201,slow=21,SNR=1.8						
MSVF	**Nonsavu**	**4.35**	**322**	P	**P**	**14 08 01.4**	**+1.0**
DZM	**Mont Dzumac**	**13.40**	**264**	P	**P**	**14 09 23.8**	**+0.3**
	8.5nm,1.0s,baz=19,slow=16,SNR=2.0						
URZ	**Urewera**	**17.28**	**190**	P	**P**	**14 09 59.0**	**+0.2**
	1.5nm,0.3s,baz=350,slow=5.0,SNR=6.7						
CTAO	**Charters Tower**	**32.34**	**266**	P	**P**	**14 12 11.4**	**-0.2**
STKA	**Stephens Creek**	**36.49**	**245**	P	**P**	**14 12 46.9**	**+1.0**
	0.9nm,0.4s,baz=85,slow=11,SNR=4.6						
	0.9nm,0.4s						
BBOO	**Buckleboo**	**41.25**	**244**	P	**P**	**14 13 24.3**	**+0.3**
WR0	**Warramunga Arr**	**43.23**	**263**	P	**P**	**14 13 39.1**	**-0.6**
WR0				IAmb	IAmb	14 13 40.1	
	comp=Z,2.9nm,1.0s						
AS31	**Alice Springs**	**43.29**	**258**	P	**P**	**14 13 40.5**	**+0.3**
ASAR	**Alice Springs**	**43.29**	**258**	P	**P**	**14 13 40.5**	**+0.4**
	comp=Z,3.3nm,0.5s,baz=93,slow=7.5,SNR=68						
ASAR				PcP	**PcP**	**14 15 14.0**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=104,slow=3.2,SNR=5.7						
ASAR				S	**S**	**14 19 22.0**	**-2.4**
	comp=Z,0.5nm,0.8s,baz=101,slow=14,SNR=5.7						
	comp=Z,3.3nm,0.5s						
WB0	**Warramunga Arr**	**43.40**	**263**	P	**P**	**14 13 40.6**	**-0.4**
WB2	**Warramunga Arr**	**43.41**	**263**	P	**P**	**14 13 40.7**	**-0.4**
WB2				IAmb	IAmb	14 13 41.6	
	comp=Z,4.9nm,0.9s						
WRAB	**Tennant Creek**	**43.41**	**263**	P	**P**	**14 13 40.6**	**-0.4**
WRAB				IAmb	IAmb	14 13 41.6	
	comp=Z,5.2nm,1.0s						
WRA	**Warramunga Arr**	**43.42**	**263**	P	**P**	**14 13 41.0**	**-0.2**
	comp=Z,1.3nm,0.3s,baz=97,slow=7.6,SNR=52						
	comp=Z,1.3nm,0.3s						
WRA	**Warramunga Arr**	**43.42**	**263**	P	**P**	**14 13 40.6**	**-0.6**
KNRA	**Kununurra**	**49.52**	**267**	P	**P**	**14 14 26.3**	**-0.7**
KNRA				IAmb	IAmb	14 15 01.9	
	comp=Z,13nm,1.3s						
FITZ	**Fitzroy Crossi**	**51.85**	**263**	P	**P**	**14 14 43.1**	**-0.7**
SOEI	**Soe**	**55.44**	**273**	P	**P**	**14 15 10.0**	**+0.8**
SOEI				IAmb	IAmb	14 15 20.6	
	comp=Z,10nm,0.7s						
PSA00	**Pilbara Seismi**	**56.44**	**258**	P	**P**	**14 15 15.0**	**-0.9**
PSA00				IAmb	IAmb	14 15 19.3	
	comp=Z,6.7nm,1.0s						
MORW	**Morawa**	**58.54**	**248**	P	**P**	**14 15 29.9**	**-0.1**
MORW				IAmb	IAmb	14 15 30.6	
	comp=Z,24nm,1.4s						
QSPA	**South Pole Qui**	**68.84**	**180**	P	**P**	**14 16 36.3**	**+1.5**
QSPA				IAmb	IAmb	14 16 55.8	
	comp=Z,5.8nm,1.3s						
CMAR	**Chiang Mai Arr**	**89.33**	**290**	P	**P**	**14 18 24.2**	**+1.0**
	comp=Z,0.4nm,0.2s,baz=130,slow=2.7,SNR=4.3						
	comp=Z,0.4nm,0.2s						
ARCES	**ARCESS Array B**	**129.43**	**349**	PKP	**PKPdf**	**14 24 28.1**	**-1.6**
	comp=Z,5.9nm,1.1s,baz=29,slow=2.1,SNR=1.6						
AKASG	**Malin Array Be**	**143.10**	**330**	PKP	**PKPdf**	**14 24 52.0**	**-3.4**
	comp=Z,1.1nm,0.4s,baz=42,slow=4.4,SNR=10						
BRTR	**Keskin Array B**	**146.50**	**311**	PKPbc	**PKPbc**	**14 25 03.3**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=121,slow=1.8,SNR=2.4						

IDC 03 14:11:27.6±3.0**, 0°.11S**×**98°.79E, h0^{km}, mb3.5**/5**, mbtmp3.5**/5**, Error ellipse: s-maj=101.3km s-min=25.0km az=62.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**27.26**	**253**	T	T	14 45 01.2	
	baz=75,slow=76,SNR=7.4						
H08S3	**Diego Garcia H**	**27.27**	**253**	T	T	14 45 05.7	
	baz=75,slow=76,SNR=4.8						
H08S1	**Diego Carcia H**	**27.28**	**253**	T	T	14 45 02.0	
	baz=75,slow=76,SNR=8.2						
WRA	**Warramunga Arr**	**40.00**	**122**	P	P	14 19 04.2	-0.4
	0.6nm,0.9s,baz=303,slow=8.8,SNR=3.7						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**41.34**	**127**	P	P	14 19 15.7	0.0
	0.4nm,0.6s,baz=300,slow=7.8,SNR=8.2						
	0.4nm,0.6s						
KSRS	**Korea Array**	**46.06**	**33**	P	P	14 19 52.5	-0.8
	0.6nm,0.5s,baz=230,slow=9.3,SNR=2.0						
	0.6nm,0.5s						
SONM	**Songino Array**	**48.21**	**7**	P	P	14 20 11.6	+1.4
	0.6nm,0.6s,baz=189,slow=8.3,SNR=2.1						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**48.90**	**345**	P	P	14 20 14.4	-1.0
	0.3nm,0.5s,baz=146,slow=9.2,SNR=4.7						
	0.3nm,0.5s						

ROM 03 14:35:08.8±0.3**, 44°.262N**±0°.010×**11°.456E**±0°.009**, h27^{km}**±1^{km}**, ML1.5**/5**, 2C-3D, Error ellipse: s-maj=0.9km s-min=0.7km az=154.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTRZ	**Monterenzio**	**0.11**	**4**	⇑P	Pb	14 35 13.5	-0.4
MTRZ				S	Sb	14 35 17.4	0.0
MTRZ				AML	AML		
	comp=E,448µm,0.3s						
MTRZ				AML	AML		
	comp=N,524µm,0.7s						
MTRZ				AML	AML		
	comp=E,474µm,0.3s						
MTRZ				AML	AML		
	comp=N,547µm,0.7s						
BRIS	**BRISIGHELLA**	**0.12**	**161**	P	Pn	14 35 15.2	+0.3
BRIS				S	Sb	14 35 20.0	+2.7
BRIS				AML	AML		
	comp=E,172µm,0.4s						
BRIS				AML	AML		
	comp=N,108µm,0.3s						
BRIS				AML	AML		
	comp=E,169µm,0.6s						
SEI	**Scarperia**	**0.22**	**199**	P	Pb	14 35 14.8	-0.2
SEI				S	Sb	14 35 19.2	+0.1
SEI				AML	AML		
	comp=N,463µm,0.2s						
SEI				AML	AML		
	comp=E,182µm,0.3s						
SEI				AML	AML		
	comp=N,149µm,0.3s						
FNVD	**Fontana Vidola**	**0.26**	**249**	P	Pb	14 35 15.3	-0.2
FNVD				S	Sb	14 35 20.2	+0.2
LMD	**Lutirano**	**0.26**	**135**	P	Pb	14 35 15.4	0.0
LMD				S	Sb	14 35 20.4	+0.4
LMD				AML	AML		
	comp=E,43µm,0.3s						
LMD				AML	AML		
	comp=N,49µm,0.5s						
LMD				AML	AML		
	comp=N,36µm,0.1s						
MPPT	**Montemurlo**	**0.40**	**221**	P	Pb	14 35 17.9	+0.3
MPPT				S	Sb	14 35 24.5	+1.0
MTCR	**Monte La Croce**	**0.41**	**235**	P	Pb	14 35 17.7	+0.1
MTCR				S	Sb	14 35 24.3	+0.7
VENL	**Venezia Lido**	**1.33**	**29**	S	Sb	14 36 03.8	+14
ZONE	**Zone**	**1.78**	**328**	S	Sb	14 36 05.6	+3.0
T1212	**Cascia, Frazio**	**1.90**	**142**	S	Sb	14 36 06.5	+0.3
EUCT	**Pavia**	**1.90**	**300**	⇓P	Pn	14 35 40.8	+1.4
EUCT				S	Sn	14 35 59.8	-2.6
VIVA	**Pratoni del Vi**	**2.69**	**159**	⇑P	Pn	14 35 50.2	-0.1
VIVA				AML	AML		
	comp=E,2140µm,0.1s						
VIVA				AML	AML		
	comp=N,1795µm,0.1s						
TDS	**Terranova Siba**	**5.86**	**140**	P	Pb	14 36 48.8	-1.5
CAR1	**CAROLEI**	**6.14**	**143**	P	Pn	14 36 39.0	+1.2
IST3	**Stromboli F**	**6.15**	**151**	⇓P	Pn	14 36 36.7	-1.1
SPS2	**Spezzano della**	**6.16**	**142**	⇓P	Pb	14 36 47.7	-7.7

KRSC 03 14:39:25.9±0.6**, 55°.56N**×**161°.54E, h97^{km}**±10^{km}**, Ml3.5, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BZGR	**Bezymyannyi-Gr**	**0.61**	**309**	*e*P	Pn	14 39 42.9	+0.6
BZGR				*e*S	Sn	14 39 55.3	+0.8
BZP	**Bezymyannyi-Pe**	**0.66**	**302**	*e*P	Pn	14 39 43.1	+0.2
BZP				*e*S	Sn	14 39 55.6	+0.1
BZMR	**Bezymyannaya**	**0.70**	**303**	*e*P	Pn	14 39 44.1	+1.0
BZMR				*e*S	Sn	14 39 57.9	+1.9
LGNR	**Loginova**	**0.71**	**318**	*e*P	Pn	14 39 45.2	+1.8
LGNR				*e*S	Sn	14 39 58.2	+1.8
CIRR	**Tsirk**	**0.71**	**322**	*e*P	Pn	14 39 44.4	+1.2
CIRR				*e*S	Sn	14 39 58.1	+1.9
BZWR	**Bezymyannyi-We**	**0.71**	**305**	*e*P	Pn	14 39 44.2	+0.9
BZWR				*e*S	Sn	14 39 58.0	+1.8
TUMD	**Tumrok D**	**0.74**	**241**	*e*P	Pn	14 39 43.9	+0.5
TUMD				*e*S	Sn	14 39 56.9	+0.5
KMNR	**Kamenistaya**	**0.76**	**285**	*e*P	Pn	14 39 44.8	+1.1
KMNR				*e*S	Sn	14 39 58.3	+1.3
KIRR	**Kirishev**	**0.78**	**301**	*e*P	Pn	14 39 44.4	+0.5
KIRR				*e*S	Sn	14 39 58.6	+1.2
TUMR	**Tumrok**	**0.84**	**251**	*e*P	Pn	14 39 45.6	+1.1
KPT	**Kopyto**	**0.84**	**299**	*e*P	Pn	14 39 45.0	+0.6

KPT				eS	Sn	14 39 59.2	+0.8
KLY	Klyuchi	0.90	327	eP	Pn	14 39 45.4	+0.5
KLY				eS	Sn	14 39 59.7	+0.5
KBG	Krutoberegovo	0.96	43	eP	Pn	14 39 46.4	+0.9
KBG				eS	Sn	14 40 02.1	+1.8
KBTR	Krutoberegovo	0.97	48	eP	Pn	14 39 46.7	+1.1
KBTR				eS	Sn	14 40 02.1	+1.6
SMKR	Semkarok	1.02	358	eP	Pn	14 39 47.5	+1.1
KOZ	Kozyrevsk	1.06	299	eP	Pn	14 39 47.7	+1.0
KOZ				eS	Sn	14 40 04.3	+1.9
SRKR	Sorokina	1.11	350	eP	Pn	14 39 48.6	+1.3
SRKR				eS	Sn	14 40 05.3	+1.8
SRDR	Sredinnyy	1.27	307	eP	Pn	14 39 50.2	+1.0
SRDR				eS	Sn	14 40 07.7	+0.9
ESO	Esso	1.64	284	eP	Pn	14 39 56.0	+2.3
ESO				eS	Sn	14 40 17.3	+2.4
BKI	Bering	2.56	96	eP	Pn	14 40 06.1	+0.6
SPN	Mys Shipunski	2.62	200	eP	Pn	14 40 06.9	+0.5
SPN				eS	Sn	14 40 39.0	+1.3
TIGL	Tigil	2.71	326	eP	Pn	14 40 09.1	+1.5
NLC	Nalytchevo	2.72	209	eP	Pn	14 40 09.6	+1.9
SDLR	Sedlovina	2.76	215	eP	Pn	14 40 10.7	+2.2
KRX	Arik	2.78	219	eP	Pn	14 40 10.2	+1.5
KRER	Koryakskii	2.79	217	eP	Pn	14 40 11.4	+2.5
GNL	Ganaly	2.80	230	eP	Pn	14 40 11.0	+2.0
SMAR	Somma	2.80	216	eP	Pn	14 40 11.5	+2.5
AVH	Avacha	2.82	217	eP	Pn	14 40 11.5	+2.3
KOK	Koryaka	2.84	218	eP	Pn	14 40 11.8	+2.5
UGLR	Uglovaya	2.84	215	eP	Pn	14 40 12.0	+2.5
DALK	Dalny	3.02	214	eP	Pn	14 40 13.3	+1.7
DALK				eS	Sn	14 40 48.9	+2.0
PET	Petropavlovsk	3.05	215	eP	Pn	14 40 14.1	+1.9
KRMR	Karymshinskiy	3.39	218	eP	Pn	14 40 19.5	+2.8
PALN	Palana	3.64	347	eP	Pn	14 40 25.8	+5.8
GRL	Gorelyy	3.64	215	eP	Pn	14 40 23.7	+3.5
OSSR	Ossora	3.79	12	eP	Pn	14 40 23.1	+1.1
OSSR				eS	Sn	14 41 04.5	-1.0
TILK	Tilichiki	5.47	25	eS	Sn	14 41 49.4	+3.1

IDC 03 14:52:17.2±533.0**,57°.37N×33°.08E,h0^{km},Error ellipse: s-maj=201.2km s-min=52.2km az=104.0,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	2.35	104	I	I	15 08 10.0	
	0.2nm,0.7s,baz=287,slow=317,SNR=3.1						
I37NO	I37NO	13.38	337	I	I	16 13 50.0	
	baz=142,slow=329,SNR=0.7						
I31KZ	AKTYUBINSK INF	16.21	105	I	I	16 30 20.0	
	baz=308,slow=329,SNR=0.7						

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*IDC **03** 15:10:51.0±1.0,3°.96S×151°.25E,h0^{km},mb3.4/4, mbtmp3.4/4,MS3.3/2,Error ellipse: s-maj=27.1km s-min=17.1km az=16.0*

ISC 03 15:10:52.5±1.0**,4°.0S**±0°.2×**151°.2E**±0°.1**,h10^{km},n8,σ0^{s}36**/7**, mb3.3**/4**,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	0.86	113	Pn	Pn	15 11 10.6	0.0
	50nm,0.3s,baz=318,slow=6.2,SNR=15						
KRVT				Sn	Sn	15 11 23.4	+0.1
	50nm,0.3s,baz=66,slow=20,SNR=7.6						
PMG	Port Moresby	6.75	217	LR	LR	15 14 46.4	
	comp=Z,29nm,21.0s,baz=47,slow=35						
HNR	Honiara	10.21	123	LR	LR	15 17 10.3	
	comp=Z,1µm,20.5s,baz=178,slow=37						
WRA	Warramunga Arr	22.88	225	P	P	15 15 56.0	-0.4
	0.9nm,1.0s,baz=51,slow=9.6,SNR=5.0						
	0.9nm,1.0s						
ASAR	Alice Springs	25.76	219	P	P	15 16 23.9	+0.2
	0.6nm,0.8s,baz=51,slow=8.7,SNR=5.6						
	0.6nm,0.8s						
MKAR	Makanchi Array	78.68	319	P	P	15 22 55.3	+0.2
	0.1nm,0.5s,baz=114,slow=7.1,SNR=1.5						
	0.1nm,0.5s						
ILAR	Eielson Array	81.99	22	P	P	15 23 12.1	-0.4
	0.5nm,0.6s,baz=246,slow=5.6,SNR=13						
	0.5nm,0.6s						
TORD	Torodi Ar. Bea	148.56	289	PKPbc	PKPbc	15 30 41.2	+0.4
	0.4nm,0.7s,baz=80,slow=4.0,SNR=2.4						

BUL 03 15:27:13.1±1.8**,26°.07S×29°.36E,h10^{km},MD3.1,South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	Mopani	3.14	37	i P	Pn	15 28 00.5	-2.2
MOPA				i S	Sn	15 28 34.0	-6.3
MOPA	Mopani	3.14	37	i P	Pn	15 28 00.2	-2.5
MOPA				i S	Sn	15 28 35.6	-4.7
LBTB	Lobatse	3.56	286	i P	Pn	15 28 04.0	-4.6
LBTB				i S	Sn	15 28 50.7	0.0
LBTB	Lobatse	3.56	286	i P	Pn	15 28 06.2	-2.3
LBTB				i S	Sn	15 28 48.3	-2.4
MUSN	Musina, Limpop	3.79	7	i P	Pn	15 28 09.8	-1.8
MUSN				i S	Sn	15 28 59.5	+3.1
MUSN	Musina, Limpop	3.79	7	i P	Pn	15 28 11.4	-0.2
MUSN				i S	Sn	15 28 54.8	-1.5
BOSA	Boshof	4.45	234	i P	Pn	15 28 22.4	+1.7
BOSA				i S	Sn	15 29 12.1	-0.5
BOSA	Boshof	4.45	234	i P	Pn	15 28 20.3	-0.5
BOSA				i S	Sn	15 29 10.4	-2.3

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*NOU **03** 15:34:55.4,18°.67S×169°.62E,h266^{km},MLv4.2/11, Vanuatu Islands*

*IDC **03** 15:34:57.0±8.4,18°.58S×169°.42E,h236^{km}±47^{km},mb3.7/3, mbtmp4.3/4,Error ellipse: s-maj=113.9km s-min=75.9km az=109.0*

ISC 03 15:34:57.7±2.5**,18°.75S**±0°.10×**169°.5E**±0°.3**,h250^{km},n13, σ0^{s}65**/14**,mb3.8**/3**,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	1.42	312	P	Pn	15 35 35.5	+0.1
DVP	Devils Point	1.64	308	P	Pn	15 35 36.2	-0.9
YATNC	Mamie plateau,	4.13	217	P	Pn	15 36 02.1	-0.9
PINNC	Pines Island,	4.32	207	P	Pn	15 36 04.8	-0.4
DZM	Mont Dzumac	4.40	221	P	Pn	15 36 05.6	-0.7
	9.7nm,0.3s,baz=22,slow=17,SNR=41						
DZM				S	S	15 37 00.8	-0.1
	15nm,0.7s,baz=99,slow=19,SNR=1.9						
DZM	Mont Dzumac	4.40	221	P	Pn	15 36 05.9	-0.4
OUENC	Ouen Island, N	4.44	214	P	Pn	15 36 06.4	-0.3
NOUC	Port Laguerre	4.51	222	P	Pn	15 36 07.1	-0.4
ONTNC	Ouen Toro	4.57	219	P	Pn	15 36 08.1	-0.2
KOUNC	Koumac, New Ca	5.27	249	P	Pn	15 36 16.6	-0.1
STKA	Stephens Creek	28.35	237	P	P	15 40 30.0	+1.2
	1.1nm,0.4s,baz=90,slow=8.1,SNR=4.9						
	1.1nm,0.4s						
WRA	Warramunga Arr	33.20	262	P	P	15 41 10.7	-0.7
	1.1nm,0.4s,baz=98,slow=8.3,SNR=17						
	1.1nm,0.4s						
ASAR	Alice Springs	33.52	255	P	P	15 41 14.2	0.0
	9.6nm,0.5s,baz=82,slow=8.7,SNR=330						
	9.6nm,0.5s						

IDC 03 15:43:19.1±2.2**,6°.10N×125°.99E,h0^{km},mb3.8**/4**, mbtmp3.8**/4**,Error ellipse: s-maj=205.5km s-min=23.3km az=65.0,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.15	163	P	P	15 49 04.2	-0.2
	0.3nm,0.3s,baz=344,slow=9.3,SNR=7.6						
	0.3nm,0.3s						
ASAR	Alice Springs	30.58	166	P	P	15 49 34.5	-0.4
	0.2nm,0.3s,baz=341,slow=7.3,SNR=21						
	0.2nm,0.3s						
STKA	Stephens Creek	40.59	159	P	P	15 51 01.3	+0.6
	0.9nm,0.4s,baz=351,slow=13,SNR=3.5						
	0.9nm,0.4s						
MKAR	Makanchi Array	55.20	325	P	P	15 52 53.8	-0.1
	0.5nm,0.3s,baz=118,slow=8.0,SNR=12						
	0.5nm,0.3s						

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*DJA **03** 15:57:59.9±0.4,4°S±2°×13°0E±°,h14^{km}±3^{km},M4.3/10, mb4.5/9,mB5.0/3,MLv4.3/10,Mw(mB)4.3/3,MwMwp5.1/1, Mwp5.4/1*

*NEIC **03** 15:58:02.5±2.5,4°.27S±0°.07×129°.93E±0°.07,h56^{km}±9^{km}, mb4.4/18,Error ellipse: s-maj=10.8km s-min=10.2km az=63.0*

*IDC **03** 15:58:03.0±3.1,4°.24S×130°.02E,h34^{km}±25^{km},mb3.9/12, mbtmp4.2/15,ML4.4/2,MS3.3/14,Error ellipse: s-maj=24.0km s-min=14.2km az=57.0*

ISC 03 15:58:01.2±1.0**,4°.36S**±0°.05×**129°.87E**±0°.05**,h32^{km}**±7^{km}**, n78,σ1^{s}94**/78**,mb4.2**/20**,MS3.2**/11**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.17	167	P	Pb	15 58 07.4	0.0
BNDI	Bandanaira	0.17	167	P	Pb	15 58 07.2	-0.2
BNDI				S	Sn	15 58 13.0	+1.6
MSAI	Masohi	1.37	317	P	Pn	15 58 21.7	-2.5
MSAI				S	Sn	15 58 38.2	-3.1
AAI	Ambon	1.80	292	P	Pn	15 58 28.7	-1.3
AAI				S	Sn	15 58 49.2	-2.5
FAKI	Fak Fak	2.77	59	Pn	Pn	15 58 43.2	-0.2
FAKI				Sn	Sn	15 59 13.3	-2.5
FAKI	Fak Fak	2.77	59	P	Pn	15 58 43.3	-0.2
FAKI	Fak Fak	2.77	59	P	Pn	15 58 43.2	-0.2
FAKI				S	Sn	15 59 17.3	+1.5
NLAI	Namlea	2.98	292	P	Pn	15 58 47.6	+1.4
LBMI	Labuha	4.39	327	P	Pn	15 59 04.8	-0.8
SANI	Sanana	4.50	301	P	Pn	15 59 07.1	-0.1
SANI	Sanana	4.50	301	P	Pn	15 59 06.4	-0.8
RKPI	Ransiki, Papua	5.15	57	P	Pn	15 59 15.7	-0.4
	313nm,0.6s,4µm3.3nm						
SOEI	Soe	7.72	226		Pn	15 59 52.9	+1.3
LUWI	Luwuk	7.81	295	Pn	Pn	15 59 53.3	+0.5
LUWI	Luwuk	7.81	295	P	Pn	15 59 56.2	+3.4
LUWI	Luwuk	7.81	295	P	Pn	15 59 52.8	0.0
	47nm,0.8s,1µm0.2nm						
MTN	Manton Dam	8.52	172	Pn	Pn	16 00 05.1	+2.6
MTN	Manton Dam	8.52	172	P	Pn	16 00 04.9	+2.4
KDU	Kakadu	8.67	163	P	Pn	16 00 05.5	+1.1
MRSI	Marisa	9.26	301	P	Pn	16 00 12.1	-0.5
	13nm,0.4s						
BKSI	Bulukumba	9.76	264	P	Pn	16 00 24.2	+4.8
KAPI	Kappang	10.10	266	Pn	Pn	16 00 29.1	+5.0
	2.4nm,0.3s,baz=153,slow=11,SNR=4.6						
KAPI				LR	LR	16 04 07.2	
	comp=Z,181nm,20.2s,baz=90,slow=36						
	7.5nm,0.4s						
KNRA	Kununurra	11.30	185	Pn	Pn	16 00 43.1	+2.6
KNRA	Kununurra	11.30	185	P	Pn	16 00 42.5	+2.0
PLAI	Plampang	12.80	249	P	Pn	16 01 04.1	+3.0
PLAI	Plampang	12.80	249	P	P	16 01 08.8	-2.9
TWSI	Taliwang, Sumb	13.61	251	P	Pn	16 01 13.1	+0.9
	17nm,0.7s						
FITZ	Fitzroy Crossi	14.27	197	Pn	Pn	16 01 23.0	+1.9
WB0	Warramunga Arr	15.94	164	Pn	Pn	16 01 42.2	-1.1
WRAB	Tennant Creek	16.09	165	Pn	Pn	16 01 44.3	-0.9
WRAB				IAmb	IAmb	16 02 08.0	
	comp=Z,22nm,1.4s						
WRA	Warramunga Arr	16.09	165	Pn	Pn	16 01 42.4	-2.8
	comp=Z,0.6nm,0.3s,baz=348,slow=13,SNR=15						
WRA				Sn	Sn	16 04 37.9	-4.9
	comp=Z,0.3nm,0.3s,baz=327,slow=23,SNR=5.2						
WRA	Warramunga Arr	16.09	165	P	Pn	16 01 44.4	-0.8
WB2	Warramunga Arr	16.09	165	Pn	Pn	16 01 43.9	-1.4
WB2				IAmb	IAmb	16 02 05.7	
	comp=Z,17nm,1.1s						
WR0	Warramunga Arr	16.16	164		Pn	16 01 45.0	-1.2
COEN	Coen	16.22	127		Pn	16 01 45.8	-1.1
COEN				IAmb	IAmb	16 01 56.0	
	comp=Z,23nm,1.1s						
COEN	Coen	16.22	127	P	Pn	16 01 46.5	-0.4
PMG	Port Moresby	17.88	107	P	Pn	16 02 06.7	-0.9
	comp=Z,22nm,1.1s,baz=303,slow=13,SNR=5.1						
PMG				LR	LR	16 10 58.6	
	comp=Z,84nm,20.5s,baz=307,slow=44						
PMG	Port Moresby	17.88	107	P	Pn	16 02 06.8	-0.9
PMG				IAmb	IAmb	16 02 10.9	
	comp=Z,31nm,1.1s						
AS31	Alice Springs	19.59	169		P	16 02 26.4	-0.4
ASAR	Alice Springs	19.59	169	P	Pn	16 02 28.9	+0.5
	comp=Z,1.5nm,0.3s,baz=351,slow=9.8,SNR=94						
ASAR				S	S	16 06 01.9	-4.5
	comp=Z,0.9nm,0.8s,baz=355,slow=26,SNR=3.5						
ASAR				PcP	PcP	16 06 47.7	+1.5
	comp=Z,0.6nm,0.7s,baz=0.6,slow=1.5,SNR=2.4						
ASAR				ScP	ScP	16 10 21.8	+1.7
	comp=Z,0.8nm,1.0s,baz=354,slow=1.9,SNR=4.6						
ASAR				LR	LR	16 11 26.0	
	comp=Z,109nm,19.0s,baz=337,slow=41						
	comp=Z,5.3nm,0.5s						
ASAR	Alice Springs	19.59	169	Pn	Pn	16 02 28.4	+0.1
KSM	Kuching	20.39	286	P	P	16 02 35.8	+0.3
KSM				IAmb	IAmb	16 02 38.3	
	comp=Z,17nm,0.6s						
KRVT	Keravat (AS076	22.09	91	P	P	16 02 54.5	+0.6
	comp=Z,10nm,0.5s,baz=275,slow=12,SNR=4.2						
	comp=Z,10nm,0.5s						
CTA	Charters Tower	22.34	136	P	P	16 02 59.0	+2.4
	comp=Z,5.4nm,0.7s,baz=325,slow=12,SNR=7.5						
CTA				LR	LR	16 12 35.8	
	comp=Z,127nm,19.2s,baz=322,slow=39						
	comp=Z,5.4nm,0.7s						
CTAO	Charters Tower	22.34	136	P	P	16 02 55.9	-0.7
CTAO				IAmb	IAmb	16 03 06.8	
	comp=Z,14nm,1.1s						
GUMO	Guam	23.23	40	LR	LR	16 11 44.5	
	comp=Z,40nm,20.4s,baz=116,slow=36						
STKA	Stephens Creek	29.51	159	P	P	16 04 04.0	+1.4
	comp=Z,2.1nm,0.7s,baz=338,slow=16,SNR=3.2						
STKA				LR	LR	16 18 51.3	
	comp=Z,89nm,18.4s,baz=9.2,slow=42						
	comp=Z,2.1nm,0.7s						
JCJ	Chichijima	33.46	20	LR	LR	16 15 52.4	
	comp=Z,60nm,21.8s,baz=52,slow=32						
JNU	Nakatsue	37.29	1	LR	LR	16 19 36.6	
	comp=Z,51nm,19.6s,baz=207,slow=35						
CMAR	Chiang Mai Arr	37.98	308	P	P	16 05 18.4	+1.9
	comp=Z,1.8nm,0.8s,baz=138,slow=7.8,SNR=16						
CMAR				LR	LR	16 21 50.8	
	comp=Z,12nm,20.7s,baz=105,slow=38						
	comp=Z,1.8nm,0.8s						
JHS	Saijyo	39.27	4	P	P	16 05 23.1	-3.9
JGF	Kuroka	40.37	9	P	P	16 05 33.4	-2.7
PZH	PanZhiHua	41.02	320	P	P	16 05 43.6	+1.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,120nm,4.6s						
MJAR	Matsushiro Arr	41.43	10	P	P	16 05 44.4	-0.5
	comp=Z,4.6nm,0.8s,baz=190,slow=9.6,SNR=9.2						
MJAR				LR	LR	16 21 19.4	
	comp=Z,33nm,20.1s,baz=221,slow=34						
	comp=Z,4.6nm,0.8s						
MAJO	Matsushiro	41.43	10	P	P	16 05 42.1	-2.7
MAJO				IAmb	IAmb	16 05 46.2	
	comp=Z,11nm,0.8s						
KSRS	Korea Array	41.64	358	P	P	16 05 47.4	+0.9
	comp=Z,1.3nm,0.7s,baz=173,slow=7.4,SNR=5.6						
KSRS				LR	LR	16 23 19.8	
	comp=Z,24nm,20.1s,baz=180,slow=36						
	comp=Z,1.3nm,0.7s						
JMM	Marumori	43.22	13	P	P	16 05 55.0	-4.4
HHC	Hu-ho-hao-te	48.01	341	eP	P	16 06 36.8	-0.6
HHC				pmax	pmax		
	comp=Z,19nm,0.5s						
HHC				pmax	pmax		
	comp=Z,160nm,6.5s						
USRK	Ussuriysk Ar.	48.37	2	P	P	16 06 41.4	+1.4
	comp=Z,1.7nm,0.6s,baz=192,slow=8.2,SNR=3.0						
	comp=Z,1.7nm,0.6s						
GTA	Gaotai	51.62	330	eP	P	16 07 07.6	+2.7
GTA				pP	sP	16 07 21.6	+3.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
SONM	Songino Array	55.91	341	P	P	16 07 37.4	+1.2
	comp=Z,1.5nm,0.7s,baz=160,slow=8.9,SNR=5.1						
	comp=Z,1.5nm,0.7s						
WMQ	Urumqi	61.13	326	eP	P	16 08 12.8	+0.2
PETK	Petropavlovsk-	61.88	19	LR	LR	16 38 00.5	
	comp=Z,9.6nm,18.1s,baz=222,slow=39						
MK31	Makanchi Array	65.96	326	P	P	16 08 43.1	-1.2
MK31				IAmb	IAmb	16 08 46.7	
	comp=Z,2.3nm,0.7s						
MKAR	Makanchi Array	65.96	326	P	P	16 08 45.4	+1.0
	comp=Z,2.5nm,0.6s,baz=113,slow=7.6,SNR=42						
	comp=Z,2.5nm,0.6s						
MKAR	Makanchi Array	65.96	326	P	P	16 08 43.8	-0.6
KSH	Kashi	66.00	317	P	P	16 08 48.9	+4.0
KSH				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MAKZ	Makanchi	66.14	326	P	P	16 08 43.1	-2.4
MAKZ				IAmb	IAmb	16 08 47.8	
	comp=Z,3.4nm,0.8s						
YAK	Yakutsk	66.20	360	LR	LR	16 37 43.0	
	comp=Z,13nm,20.7s,baz=269,slow=36						
ZALV	Zalesovo Beam	69.17	333	P	P	16 09 05.5	+1.0
	comp=Z,1.3nm,0.6s,baz=128,slow=6.9,SNR=7.1						
	comp=Z,1.3nm,0.6s						
KURK	Kurchatov	70.21	328	P	P	16 09 09.8	-1.1
KURK				IAmb	IAmb	16 09 13.3	
	comp=Z,8.2nm,0.8s						
VNDA	Vanda	75.07	173		P	16 09 38.1	-1.3
GEYT	Alibeck	78.42	310	P	P	16 10 00.6	+1.5
	comp=Z,1.4nm,0.7s,baz=90,slow=14,SNR=3.6						
	comp=Z,1.4nm,0.7s						
ABKAR	Akbulak array	80.37	321	P	P	16 10 07.3	-2.1
ILAR	Eielson Array	91.03	25	P	P	16 11 01.8	-0.3
	comp=Z,0.2nm,0.6s,baz=260,slow=4.5,SNR=1.7						
	comp=Z,0.2nm,0.6s						
DLBC	Dease Lake	98.99	32	LR	LR	17 00 16.9	
	comp=Z,44nm,18.8s,baz=238,slow=38						
TORD	Torodi Ar. Bea	128.12	283	PKP	PKiKP	16 17 07.0	+1.1
	comp=Z,0.5nm,0.8s,baz=69,slow=2.4,SNR=2.4						
CPUP	Villa Florida	148.71	168	PKPbc	PKPbc	16 17 46.3	+0.3
	comp=Z,0.8nm,0.4s,baz=249,slow=20,SNR=2.0						

ROM 03 16:17:03.6±0.1**,42°.665N**±0°.004×**13°.193E**±0°.002**, h12^{km},ML0.8**/3**,1C,Error ellipse: s-maj=0.3km s-min=0.2km az=204.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1218	Civita (PG)	0.06	275	P	Pg	16 17 06.3	+0.2
T1218				S	Sg	16 17 07.9	0.0
T1218				AML	AML		
	comp=E,103µm,0.6s						
T1218				AML	AML		
	comp=N,106µm,0.2s						
T1214	Arquata del Tr	0.10	7	P	Pg	16 17 07.0	+0.4
T1214				S	Sg	16 17 08.9	+0.2
LNSS	Leonessa	0.13	241	⇑P	Pg	16 17 07.4	+0.5
LNSS				S	Sg	16 17 09.9	+0.6
LNSS				AML	AML		
	comp=E,39µm,0.4s						
LNSS				AML	AML		
	comp=N,36µm,0.3s						
LNSS				AML	AML		
	comp=N,36µm,0.3s						
T1212	Cascia, Frazio	0.14	308	P	Pg	16 17 07.4	+0.4
T1212				S	Sg	16 17 10.1	+0.6
RM33	Pellescritta (	0.16	174	P	Pb	16 17 07.9	-0.6
RM33				S	Sg	16 17 10.6	+0.6
RM33				AML	AML		
	comp=E,21µm,1.4s						
RM33				AML	AML		
	comp=N,16µm,1.1s						
RM33				AML	AML		
	comp=E,21µm,1.4s						
RM33				AML	AML		
	comp=N,16µm,1.1s						
T1217	Poggiodomo (PG	0.20	284	P	Pg	16 17 08.4	+0.5
T1217				S	Sg	16 17 11.7	+0.7
T1246	Crognaleto (TE	0.24	110	P	Pg	16 17 09.0	+0.4
T1246				S	Sg	16 17 12.9	+0.9
T1215	Vallo di Nera,	0.28	300	P	Pg	16 17 09.7	+0.4
T1215				S	Sg	16 17 14.0	+0.9
TERO	Teramo	0.31	98	P	Pg	16 17 10.1	+0.3
TERO				S	Sg	16 17 14.8	+0.8
CSP1	Cessapalombo	0.43	1	S	Sb	16 17 19.5	-0.1

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*IDC **03** 16:24:39.0±3.8,36°.24N×70°.42E,h182^{km}±35^{km},mb3.2/4, mbtmp3.6/8,MS2.7/1,Error ellipse: s-maj=36.3km s-min=23.1km az=160.0*

*NNC **03** 16:24:47.0±5.9,37°.15N×70°.41E,h0^{km},mb3.8,mpv3.4, Error ellipse: s-maj=47.6km s-min=43.4km az=130.0*

ISC 03 16:24:41.4±0.7**,36°.59N**±0°.06×**70°.42E**±0°.08**,h204^{km},n24, σ1^{s}60**/28**,mb3.3**/3**,2C-3D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	3.02	156	P	Pn	16 25 33.8	+2.1
CEP				S	S	16 26 11.0	+0.7
CHCP	Chirah Chowk	3.74	141	P	Pn	16 25 41.5	+1.3
THW	Thamme Wali	3.94	164	P	Pn	16 25 43.1	+0.4
AML	Almayashu	6.09	24	⇓Pn	Pn	16 26 12.1	+2.0
	0.8nm,0.5s						
AML				⇑Sn	S	16 27 19.3	-0.8
	5.6nm,0.6s						
KK31	Karatay Array	6.50	1	Pn	Pn	16 26 17.0	+1.9
	2.1nm,0.3s,baz=186,slow=12,SNR=33						
KK31				⇓Sn	S	16 27 26.1	-3.2
	6.4nm,0.7s,baz=188,slow=23,SNR=6.3						
AAK	Ala-Archa	6.81	26	P	Pn	16 26 21.5	+2.3
	1.0nm,0.3s,baz=200,slow=9.0,SNR=8.7						
AAK				S	S	16 27 37.2	+0.5
	5.5nm,0.6s,baz=344,slow=20,SNR=4.8						
TKM2	Tokmak 2	7.47	31	⇓Pn	Pn	16 26 30.0	+2.2
	6.8nm,1.3s						
TKM2				⇑Sn	S	16 27 50.7	-1.8
	6.1nm,0.8s						
GEYT	Alibeck	9.90	281	P	Pn	16 26 57.4	-1.8
	0.7nm,0.3s,baz=106,slow=8.7,SNR=2.1						
MKAR	Makanchi Array	13.50	37	P	P	16 27 46.5	-0.8
	0.4nm,0.4s,baz=216,slow=11,SNR=11						
PYUN	Piuthan	13.58	125	eP	Pn	16 27 45.0	-1.2
	13nm,0.5s						
DANN	Dangsing	13.93	122	eP	Pn	16 27 49.8	-0.9
	8.8nm,0.4s						
GKN	Gorkha	14.75	121	eP	P	16 28 00.8	-0.6
	18nm,0.4s						
PKIN	Phulchoki	15.54	121	eP	P	16 28 10.1	-0.2
	26nm,0.7s						
PKI	Pulchoki	15.55	121	eP	Pn	16 28 10.5	0.0
	20nm,0.6s						
GUN	Gumba	15.67	119	eP	P	16 28 11.3	-0.5
	11nm,0.5s						
JIRN	Jiri	16.04	119	eP	Pn	16 28 16.4	0.0
	25nm,0.5s						
BVAR	Borovoye Array	16.43	360	P	Pn	16 28 22.8	+2.3
	0.3nm,0.3s,baz=156,slow=11,SNR=3.3						
RAMN	Ramite	16.77	120	eP	P	16 28 23.1	-0.7
TAPN	Taplejung	17.30	117	eP	P	16 28 29.7	0.0
	5.8nm,0.4s						
ZALV	Zalesovo Beam	20.03	25	P	Pn	16 29 00.5	-2.6
	1.8nm,0.5s,baz=218,slow=12,SNR=9.8						
	1.8nm,0.5s						
OBN	Obninsk	29.56	320	LR	LR	16 45 58.1	
	comp=Z,14nm,20.9s,baz=218,slow=43						
ARCES	ARCESS Array B	40.88	338	P	P	16 32 05.2	+2.1
	3.6nm,0.9s,baz=101,slow=9.3,SNR=2.0						
	3.6nm,0.9s						
TORD	Torodi Ar. Bea	65.25	268	P	P	16 35 01.7	+0.2
	0.2nm,0.4s,baz=54,slow=4.8,SNR=1.9						
	0.2nm,0.4s						
ASAR	Alice Springs	84.69	125	P	P	16 36 51.4	-1.1
	0.3nm,0.9s,baz=316,slow=4.8,SNR=4.2						
	0.3nm,0.9s						

IDC 03 16:32:15.1±725.0**,53°.57N×34°.48E,h0^{km},Error ellipse: s-maj=270.8km s-min=78.0km az=26.0,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	3.53	25	I	I	16 54 50.0	
	0.2nm,0.7s,baz=209,slow=314,SNR=1.1						
I31KZ	AKTYUBINSK INF	14.84	93	I	I	17 59 00.0	
	baz=292,slow=326,SNR=1.8						
I37NO	I37NO	17.22	341	I	I	18 26 08.7	
	baz=145,slow=330,SNR=0.5						

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*TAP **03** 16:33:36.8,24°.59N×122°.80E,h121^{km},ML3.0,D*

*JMA **03** 16:33:38.2±0.2,25°N±2°×122°.7E±0°.6,h105^{km}±1^{km}, MV2.2/10,NW OFF ISHIGAKIJIMA IS*

ISC 03 16:33:38.1±1.6**,24°.57N**±0°.05×**122°.71E**±0°.03**,h109^{km}**±9^{km}**, n65,σ0^{s}57**/119**,2C-2D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.24	119	P	Pn	16 33 53.4	-0.1
JYNG				S	Sn	16 34 04.8	-0.3
YOJ	Yonaguni jima	0.29	111	P	Pn	16 33 53.7	-0.1
YOJ				S	Sn	16 34 05.1	-0.3
YOJ	Yonaguni jima	0.29	111	i P	Pn	16 33 53.6	-0.1
	baz=122						
YOJ				S	Sn	16 34 05.5	+0.1
	baz=122						
EOS2	EOS2	0.46	251	i P	Pn	16 33 54.9	+0.5
	baz=252						
EOS2				i S	Sn	16 34 07.8	+1.1
	baz=252						
EOS4	EOS4	0.57	219	i P	Pn	16 33 55.3	+0.3
	baz=223						
EOS4				S	Sn	16 34 08.6	+0.9
	baz=223						
EGS		0.76	291	eP	Pn	16 33 57.5	+0.6
	baz=288						
EGS				eS	Sn	16 34 11.8	+0.8
	baz=288						
TWC	Suao	0.79	273	i P	Pn	16 33 56.8	-0.3
	baz=271						
TWC				S	Sn	16 34 10.2	-1.3
	baz=271						
TWB1	Santiao Chiao	0.79	304	eP	Pn	16 33 57.0	-0.2
	baz=300						
EWUT	Wuta	0.86	262	P	Pn	16 33 57.9	+0.1
	baz=261						
EWUT				eS	Sn	16 34 12.7	-0.1
	baz=261						
ENA	Nanau	0.90	261	P	Pn	16 33 58.5	+0.3
	baz=260						
ENA				eS	Sn	16 34 13.5	+0.2
	baz=260						
ILA	Ilan	0.90	283	eP	Pn	16 33 58.3	+0.1
	baz=280						
ILA				eS	Sn	16 34 13.4	0.0
	baz=280						
TIPB	Shuangxi	0.90	297	⇓eP	Pn	16 33 58.1	-0.1
	baz=293						
TIPB				eS	Sn	16 34 12.2	-1.3
	baz=293						
NDS	Dongshan	0.91	274	eP	Pn	16 33 58.7	+0.4
	baz=273						
NDS				eS	Sn	16 34 13.4	-0.2
	baz=273						
SXI1	Grass Mountain	0.92	305	P	Pn	16 33 58.4	-0.2
	baz=301						
SXI1				eS	Sn	16 34 14.8	+0.9
	baz=301						
IRIF	Iriomote-Funau	0.95	104	P	Pn	16 33 58.9	+0.2
IRIF				S	Sn	16 34 14.1	-0.2
TWE	Neicheng	0.96	279	P	Pn	16 33 58.9	0.0
	baz=277						
TWE				eS	Sn	16 34 13.9	-0.6
	baz=277						
FUSB	Fushanzhiwuyua	1.04	281	P	Pn	16 33 59.8	0.0
	baz=279						
FUSB				eS	Sn	16 34 15.1	-1.0
	baz=279						
ENTT	Nioudou	1.05	274	P	Pn	16 34 00.2	+0.5
	baz=273						
ENTT				eS	Sn	16 34 16.4	+0.3
	baz=273						
ETL	Fush Village	1.07	248	eP	Pn	16 33 59.9	-0.2
	baz=248						
ETL				eS	Sn	16 34 16.3	-0.4
	baz=248						
LATG	Datong	1.08	269	⇑iP	Pn	16 34 00.4	+0.2
	baz=267						
LATG				eS	Sn	16 34 16.9	0.0
	baz=267						
NACB	Ninganchiao	1.09	249	i P	Pn	16 34 00.2	-0.1
	baz=249						
NACB				eS	Sn	16 34 16.1	-0.8
	baz=249						
TWA	Mucha	1.11	292	eP	Pn	16 34 00.4	+0.1
	baz=290						
TWA				eS	Sn	16 34 16.2	-1.0
	baz=290						
HATJ	Hateruma jima	1.12	117	P	Pn	16 34 01.3	+0.9
HATJ				eS	Sn	16 34 18.4	+1.0
NWLT	Wulai	1.12	281	eP	Pn	16 34 00.5	-0.1
	baz=279						
NWLT				eS	Sn	16 34 16.7	-0.8
	baz=279						
TWD	Chiawan	1.13	245	i P	Pn	16 34 00.5	-0.1
	baz=245						
TWD				S	Sn	16 34 17.1	-0.5
	baz=245						
HWA	Hwalien	1.17	240	eP	Pn	16 34 01.9	+0.8
	baz=240						
ETLH	Xiulin Townshi	1.18	252	eP	Pn	16 34 01.2	-0.1
	baz=252						
ETLH				eS	Sn	16 34 18.0	-0.8
	baz=252						
TATO	Taipei	1.19	290	eP	Pn	16 34 01.0	-0.2
	baz=288						
YM01	YM01	1.19	299	P	Pn	16 34 01.2	-0.1
	baz=297						
NNSB	Datong	1.22	264	eP	Pn	16 34 02.0	+0.2
	baz=263						
NNSB				eS	Sn	16 34 19.4	-0.2
	baz=263						
NNSH	Datong	1.22	264	eP	Pn	16 34 01.9	+0.2
	baz=263						
NNSH				eS	Sn	16 34 19.4	-0.3
	baz=263						
YHNB	Yeheng	1.22	275	eP	Pn	16 34 02.1	+0.4
	baz=274						
YHNB				eS	Sn	16 34 19.3	-0.3
	baz=274						
JKRS	Kuro-shima	1.23	105	P	Pn	16 34 02.3	+0.6
JKRS				S	Sn	16 34 19.6	+0.1
NNS	Nan Shan	1.23	264	eP	Pn	16 34 02.0	+0.2
	baz=263						
NNS				eS	Sn	16 34 19.4	-0.4
	baz=263						
TEYL	Yanliau Villag	1.23	236	eP	Pn	16 34 01.7	-0.1
	baz=238						
TEYL				eS	Sn	16 34 19.9	+0.2
	baz=238						
NSK	Sanguang	1.24	275	⇓P	Pn	16 34 02.2	+0.3
	baz=274						
NSK				eS	Sn	16 34 19.3	-0.6
	baz=274						
ETM	Tongmen	1.27	242	eP	Pn	16 34 02.0	-0.2
	baz=242						
ETM				eS	Sn	16 34 19.9	-0.4
	baz=242						
JIJ	Ishigaki jima	1.32	99	P	Pn	16 34 02.9	+0.1
JIJ				S	Sn	16 34 20.5	-0.9
WHF	Hehuan Shan	1.39	253	eP	Pn	16 34 04.0	+0.1
	baz=252						
WHF				eS	Sn	16 34 23.4	-0.1
	baz=252						
ESL	Shilin	1.39	238	eP	Pn	16 34 03.4	-0.2
	baz=238						
ESL				eS	Sn	16 34 22.0	-0.9
	baz=238						
JISG	Ishigakijimahi	1.45	89	P	Pn	16 34 04.3	0.0
JISG				S	Sn	16 34 23.2	-0.9
NFF	Wufeng Townshi	1.45	273	eP	Pn	16 34 04.7	+0.3
	baz=272						
NFF				eS	Sn	16 34 24.1	-0.2
	baz=272						
EGFH	Guangfu	1.48	233	eP	Pn	16 34 04.6	0.0
	baz=234						
EGFH				eS	Sn	16 34 24.5	-0.2
	baz=234						
CHGB	Renai	1.49	251	eP	Pn	16 34 05.6	+0.5
	baz=250						
CHGB				eS	Sn	16 34 25.2	-0.2
	baz=250						
OWD	Renai	1.53	247	eP	Pn	16 34 05.7	+0.3
	baz=247						
OWD				eS	Sn	16 34 25.5	-0.6
	baz=247						
LIOB	Emei	1.55	273	P	Pn	16 34 05.9	+0.4
	baz=272						
LIOB				eS	Sn	16 34 26.2	0.0
	baz=272						
NSTT	Nanjuang	1.56	273	eP	Pn	16 34 06.0	+0.5
	baz=271						
NSTT				eS	Sn	16 34 26.4	-0.1
	baz=271						
WUSB	Renai	1.57	249	eP	Pn	16 34 06.4	+0.6
	baz=249						
WUSB				eS	Sn	16 34 26.7	-0.1
	baz=249						
NHW	Xinwu Township	1.58	286	eS	Sn	16 34 27.2	+0.4
	baz=285						
HGSD	Ruisui	1.59	228	eP	Pn	16 34 06.0	0.0
	baz=229						
HGSD				eS	Sn	16 34 26.8	-0.4
	baz=229						
VWDT	VWDT	1.65	241	⇑eP	Pn	16 34 07.4	+0.7
	baz=241						
VWDT				eS	Sn	16 34 28.6	+0.2
	baz=241						
EHY	Hungye	1.65	231	eP	Pn	16 34 06.5	-0.2
	baz=231						
EHY				eS	Sn	16 34 27.8	-0.7
	baz=231						
YULB	Yu-li	1.75	228	i P	Pn	16 34 07.8	-0.1
	baz=229						
YULB				eS	Sn	16 34 29.6	-1.0
	baz=229						
TWF1	Yuli	1.77	227	eP	Pn	16 34 08.4	+0.1
	baz=228						
SSLB	Suanglung	1.79	245	eP	Pn	16 34 09.7	+1.3
	baz=245						
SSLB				eS	Sn	16 34 32.1	+0.6
	baz=245						
SMLT	Sun Moon Lake	1.79	248	eP	Pn	16 34 10.2	+1.7
	baz=248						
SMLT				eS	Sn	16 34 33.4	+1.7
	baz=248						
TYC	Yuchr	1.82	249	eP	Pn	16 34 10.6	+1.8
	baz=249						
FULB	Fuli	1.88	224	eP	Pn	16 34 09.8	+0.2
	baz=225						
CHKT	Chengkung	1.91	220	eP	Pn	16 34 09.7	-0.3
	baz=221						
CHKT				eS	Sn	16 34 33.4	-0.9
	baz=221						
EHD	Haiduan	1.98	225	eP	Pn	16 34 10.6	-0.2
	baz=225						
EHD				eS	Sn	16 34 35.2	-0.6
	baz=225						
EDH	Donghe	2.05	219	eP	Pn	16 34 11.6	-0.1
	baz=220						
ELDTW	Lidau	2.07	229	eP	Pn	16 34 12.2	+0.1
	baz=229						
ELDTW				eS	Sn	16 34 37.8	-0.3
	baz=229						
LDUT	Ludao	2.21	211	eP	Pn	16 34 13.6	-0.1
	baz=213						
LDUT				eS	Sn	16 34 40.3	-0.7
	baz=213						
TWGBT	Beinan	2.30	221	eP	Pn	16 34 15.0	0.0
	baz=222						
TWG	Pinlang	2.30	221	eP	Pn	16 34 15.0	0.0
	baz=222						

IDC 03 16:44:20.9±756.0**, 53°.20N**×**34°.17E, h0**km**, Error ellipse: s-maj=282.8km s-min=87.7km az=26.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	3.94	25	I	I	17 09 00.0	
	0.5nm,0.7s,baz=209,slow=308,SNR=1.2						
I31KZ	AKTYUBINSK INF	15.01	91	I	I	18 13 30.0	
	baz=291,slow=325,SNR=1.4						
I37NO	I37NO	17.50	341	I	I	18 40 28.0	
	baz=148,slow=308,SNR=0.8						

*NEIC **03** 16:46:26.3±1.5, 23°.61S±0°.05×179°.9W±0°.1, h510km±9km, mb4.6/34, Error ellipse: s-maj=18.7km s-min=7.1km az=83.0*

*IDC **03** 16:46:28.2±1.7, 23°.72S×179°.87W, h527km±14km, mb3.6/11, mbtmp4.5/14, Error ellipse: s-maj=24.0km s-min=16.1km az=125.0*

*NOU **03** 16:46:29.2, 23°.62S×179°.75W, h558km, mb4.3/39, South of Fiji Islands*

ISC 03 16:46:28.2±0.5**, 23°.69S**±0°.06×**179°.94W**±0°.08**, h532**km**, n157,** σ**1ˢ30**/168**, mb4.5**/32**, 22C-2D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	5.53	11	P	P	16 48 03.0	+1.3
GLKZ	Green Lake	5.84	162	P	P	16 48 05.4	+1.1
GLKZ				S	S	16 49 23.0	+0.1
MSVF	Nonsavu	6.22	342	P	P	16 48 08.8	+0.6
	3.3nm,0.4s,baz=188,slow=20,SNR=2.5						
MSVF	Nonsavu	6.22	342	P	P	16 48 05.5	-2.7
TAVE	Taveuni	6.95	0	P	P	16 48 16.8	+1.7
NIUE	Niue	10.39	66	P	P	16 48 47.7	-2.3
PINNC	Pines Island,	11.66	273	P	P	16 49 01.0	-2.2
PINNC	Pines Island,	11.66	273	P	P	16 49 06.1	+3.0
AFI	Afiamalu	12.42	40	P	P	16 49 07.2	-4.1
	18nm,0.5s,baz=258,slow=9.3,SNR=4.7						
AFI				S	S	16 51 14.1	-11
	12nm,0.6s,baz=220,slow=23,SNR=2.6						
DZM	Mont Dzumac	12.66	275	P	P	16 49 15.5	+1.8
	6.0nm,0.6s,baz=94,slow=19,SNR=8.3						
DZM	Mont Dzumac	12.66	275	P	P	16 49 16.2	+2.5
OUZ	Omahuta	12.79	205	P	P	16 49 17.3	+2.5
KUZ	Kuaotunu	13.54	195	P	P	16 49 24.4	+1.9
WMGZ	Waiomatatini S	14.15	185	P	P	16 49 30.9	+2.0
WMGZ				S	S	16 51 59.2	+1.3
HAZ	Te Kaha	14.16	187	P	P	16 49 31.2	+2.3
HAZ				S	S	16 52 00.1	+2.2
RUGZ	Raukumara Rang	14.38	188	P	P	16 49 33.1	+1.7
RUGZ				S	S	16 52 02.3	-0.2
PUZ	Puketiti	14.42	186	P	P	16 49 35.0	+3.3
TOZ	Tahuroa Road	14.53	195	P	P	16 49 35.9	+3.1
TWGZ	Tauwhareparae	14.55	187	P	P	16 49 33.9	+0.8
TWGZ				S	S	16 52 04.7	-1.0
URZ	Urewera	14.74	189	P	P	16 49 32.9	-2.1
	5.7nm,0.3s,baz=58,slow=2.0,SNR=18						
URZ				S	S	16 52 05.0	-4.1
	7.5nm,0.6s,baz=264,slow=20,SNR=10						
URZ	Urewera	14.74	189	P	P	16 49 33.2	-1.8
URZ				S	S	16 52 05.9	-3.3
MWZ	Matawai	14.76	188	P	P	16 49 34.2	-1.1
MWZ				S	S	16 52 06.6	-3.0
TKGZ	Te Karaka	14.82	187	P	P	16 49 33.7	-2.2
CNGZ	Carnagh Statio	14.83	186	P	P	16 49 36.4	+0.5
MUGZ	Murupara	15.01	190	P	P	16 49 38.8	+0.9
MUGZ				S	S	16 52 12.0	-2.2
RTZ	Ruatahuna	15.11	189	P	P	16 49 39.6	+0.7
MTHZ	Maungataniwha	15.36	190	P	P	16 49 43.2	+1.7
HIZ	Hauiti	15.43	196	P	P	16 49 41.4	-0.8
HIZ	Hauiti	15.43	196	P	P	16 49 43.6	+1.4
HIZ	Hauiti	15.43	196	P	P	16 49 41.9	-0.3
TMVZ	Te Maari	15.82	193	P	P	16 49 46.9	+0.5
TRVZ	Turoa	16.03	193	P	P	16 49 49.0	+0.5
VRZ	Vera Road	16.03	195	P	P	16 49 51.1	+2.8
PKVZ	Pokaka	16.06	193	P	P	16 49 49.3	+0.7
MOVZ	Moawhango	16.09	192	P	P	16 49 49.0	0.0
BHHZ	Black Hill Sta	16.11	191	P	P	16 49 48.2	-1.0
TSZ	Takapari Road	16.68	191	P	P	16 49 53.3	-1.3
TCW	Tory Channel	18.13	194	P	P	16 50 07.4	-0.5
SNZO	South Karori	18.14	193	P	P	16 50 08.5	+0.6
QRZ	Quartz Range	18.22	199	P	P	16 50 10.0	+1.3
NNZ	Nelson	18.35	196	P	P	16 50 09.7	-0.3
BSWZ	Blackbirch Sta	18.70	195	P	P	16 50 12.7	-0.4
KHZ	Kahutara	19.45	195	P	P	16 50 19.3	-0.5
KHZ	Kahutara	19.45	195	P	P	16 50 20.8	+0.9
INZ	Inchbonnie	20.29	199	P	P	16 50 27.2	-0.3
OXZ	Oxford	20.68	197	P	P	16 50 31.2	+0.1
RPZ	Rata Peaks	21.31	198	P	P	16 50 37.0	+0.2
	13nm,0.9s,baz=45,slow=11,SNR=2.4						
	13nm,0.9s						
RPZ	Rata Peaks	21.31	198	P	P	16 50 37.7	+0.9
JCZ	Jackson Bay	22.34	202	P	P	16 50 46.7	+0.6
MLZ	Mavora Lakes	23.71	201	P	P	16 50 59.0	+0.8
MLZ				IAmb	IAmb	16 51 39.5	
	comp=Z,73nm,1.5s						
EIDS	Eidsvold	26.40	260	P	P	16 51 22.9	+0.6
EIDS	Eidsvold	26.40	260	P	P	16 51 23.3	+1.0
RMQ	Roma	28.45	258	P	P	16 51 42.2	+1.9
TV1H	Townsville Har	31.23	272	P	P	16 52 05.0	+0.7
	comp=Z,12nm,0.9s						
CMSA	Cobar Meteorol	31.35	248	P	P	16 52 06.4	+1.2
CTA	Charters Tower	31.53	270	P	P	16 52 08.1	+1.2
	comp=Z,27nm,0.3s,baz=95,slow=11,SNR=156						
	comp=Z,27nm,0.3s						
CTAO	Charters Tower	31.53	270	P	P	16 52 07.8	+0.8
CTAO	Charters Tower	31.53	270	P	P	16 52 08.2	+1.2
QLP	Quilpie	32.50	257	P	P	16 52 16.0	+0.9
MTSU	Mount Surprise	33.79	273	P	P	16 52 27.1	+1.0
PMG	Port Moresby	34.48	289	P	P	16 52 30.3	-1.6
PMG				IAmb	IAmb	16 52 33.2	
	comp=Z,21nm,0.8s						
STKA	Stephens Creek	34.85	248	P	P	16 52 35.6	+0.8
	comp=Z,1.3nm,0.4s,baz=76,slow=9.4,SNR=6.8						
	comp=Z,1.3nm,0.4s						
STKA	Stephens Creek	34.85	248	P	P	16 52 34.9	0.0
COEN	Coen	36.14	279	P	P	16 52 44.4	-1.3
COEN				IAmb	IAmb	16 52 44.6	
	comp=Z,12nm,1.2s						
COEN	Coen	36.14	279	P	P	16 52 46.8	+1.0
LCRK	Leigh Creek	37.70	250	P	P	16 52 58.9	+0.5
BBOO	Buckleboo	39.58	247	P	P	16 53 13.7	+0.1
OOD	Oodnadatta	40.02	254	P	P	16 53 18.8	+1.6
MULG	Mulgathing	41.30	251	P	P	16 53 27.8	+0.4
AS01	Alice Springs	42.08	260	P	P	16 53 33.5	-0.2
	comp=Z,11nm,0.8s						
AS31	Alice Springs	42.12	260	P	P	16 53 34.4	+0.4
AS31				IAmb	IAmb	16 53 35.5	
	comp=Z,3.6nm,0.4s						
ASAR	Alice Springs	42.13	260	P	P	16 53 34.5	+0.5
	comp=Z,6.5nm,0.6s,baz=96,slow=7.4,SNR=224						
ASAR				ScP	ScP	16 58 16.9	+0.7
	comp=Z,1.1nm,0.7s,baz=114,slow=4.1,SNR=9.3						
ASAR				S	S	16 59 11.7	-3.7
	comp=Z,0.5nm,0.7s,baz=95,slow=16,SNR=5.6						
	comp=Z,6.5nm,0.6s						
ASAR	Alice Springs	42.13	260	P	P	16 53 33.9	-0.1
WR0	Warramunga Arr	42.29	266	P	P	16 53 35.1	-0.3
WB2	Warramunga Arr	42.47	266	P	P	16 53 35.0	-1.8
WB2				IAmb	IAmb	16 53 37.0	
	comp=Z,14nm,0.5s						
WB0	Warramunga Arr	42.47	266	P	P	16 53 36.4	-0.4
WB0				IAmb	IAmb	16 53 37.2	
	comp=Z,18nm,0.7s						
WRAB	Tennant Creek	42.47	266	P	P	16 53 36.1	-0.6
WRAB				IAmb	IAmb	16 53 37.2	
	comp=Z,13nm,0.9s						
WRAB	Tennant Creek	42.47	266	P	P	16 53 36.4	-0.4
WRA	Warramunga Arr	42.48	266	P	P	16 53 36.7	-0.1
	comp=Z,11nm,0.5s,baz=90,slow=5.9,SNR=210						
WRA				PcP	PcP	16 55 18.3	+0.8
	comp=Z,1.0nm,0.8s,baz=93,slow=4.2,SNR=4.0						
WRA				ScP	ScP	16 58 19.2	+1.5
	comp=Z,0.8nm,0.9s,baz=115,slow=4.6,SNR=3.2						
WRA				S	S	16 59 16.6	-4.0
	comp=Z,0.9nm,0.7s,baz=102,slow=13,SNR=7.5						
	comp=Z,11nm,0.5s						
WRA	Warramunga Arr	42.48	266	P	P	16 53 35.1	-1.7
KDU	Kakadu	46.33	275	P	P	16 54 06.4	-0.1
FORT	Forrest	46.44	249	P	P	16 54 07.2	0.0
FORT				IAmb	IAmb	16 54 23.5	
	comp=Z,19nm,0.8s						
FORT	Forrest	46.44	249	P	P	16 54 07.5	+0.3
WRKA	Warakurna	46.94	257	P	P	16 54 11.2	+0.1
MTN	Manton Dam	47.50	274	P	P	16 54 14.9	-0.4
MTN				IAmb	IAmb	16 54 40.9	
	comp=Z,38nm,1.4s						
MTN	Manton Dam	47.50	274	P	P	16 54 15.0	-0.4
KNRA	Kununurra	48.75	270	P	P	16 54 24.9	+0.3
KNRA				IAmb	IAmb	16 54 26.2	
	comp=Z,13nm,0.6s						
KNRA	Kununurra	48.75	270	P	P	16 54 25.2	+0.5
FITZ	Fitzroy Crossi	50.90	265	P	P	16 54 41.5	+1.0
SOEI	Soe	54.88	275	P	P	16 55 08.3	-0.8
SOEI				IAmb	IAmb	16 55 11.7	
	comp=Z,25nm,1.0s						
PSA00	Pilbara Seismi	55.26	259	P	P	16 55 10.5	-1.0
MBWA	Marble Bar	55.47	260	P	P	16 55 12.0	-0.9
MBWA	Marble Bar	55.47	260	P	P	16 55 13.0	+0.1
BLDU	Ballidu	56.16	248	P	P	16 55 17.7	+0.1
MORW	Morawa	57.00	250	P	P	16 55 22.7	-0.8
MORW				IAmb	IAmb	16 55 37.4	
	comp=Z,26nm,1.4s						
MORW	Morawa	57.00	250	P	P	16 55 23.6	+0.2
PLAI	Plampang	61.17	273	P	P	16 55 51.7	+0.1
TOLI2	Tolitoli	62.58	284	P	P	16 56 00.3	-0.4
TOLI2				IAmb	IAmb	16 56 02.6	
	comp=Z,11nm,0.7s						
TOLI2	Tolitoli	62.58	284	P	P	16 56 00.2	-0.5
QSPA	South Pole Qui	66.39	180	P	P	16 56 24.9	+0.7
UGM	Wanagama	68.16	271	P	P	16 56 35.0	-0.8
UGM	Wanagama	68.16	271	P	P	16 56 35.5	-0.3
	comp=Z,101nm,2.0s						
KKM	Kota Kinabalu	68.90	287	P	P	16 56 40.0	-0.3
KKM				IAmb	IAmb	16 56 53.4	
	comp=Z,48nm,1.5s						
KKM	Kota Kinabalu	68.90	287	P	P	16 56 40.5	+0.2
JOW	Kunigami	70.89	312	P	P	16 56 52.2	+0.4
JOW				IAmb	IAmb	16 57 09.4	
	comp=Z,62nm,1.5s						
MJAR	Matsushiro Arr	71.76	326	P	P	16 56 56.4	-0.3
	comp=Z,2.8nm,0.8s,baz=162,slow=5.5,SNR=6.1						
	comp=Z,2.8nm,0.8s						
JSU	Suzuyama	72.56	317	P	P	16 57 00.8	-0.6
JSU				IAmb	IAmb	16 57 02.7	
	comp=Z,10nm,0.7s						
ADK	Adak	75.30	2	P	P	16 57 15.2	-1.2
MYKOM	Kota Tinggi	78.11	277	P	P	16 57 32.2	-0.6
MYKOM				IAmb	IAmb	16 57 41.2	
	comp=Z,37nm,1.4s						
KSRS	Korea Array	78.12	320	P	P	16 57 33.4	+1.1
	comp=Z,1.8nm,0.7s,baz=143,slow=5.5,SNR=6.6						
	comp=Z,1.8nm,0.7s						
PEA0B	Petropavlovsk-	78.91	346	P	P	16 57 35.3	-0.8
PEA0B				IAmb	IAmb	16 57 52.5	
	comp=Z,69nm,1.4s						
PETK	Petropavlovsk-	78.91	346	P	P	16 57 36.0	-0.1
	comp=Z,3.3nm,0.6s,baz=131,slow=6.1,SNR=8.8						
	comp=Z,3.3nm,0.6s						
PETK	Petropavlovsk-	78.91	346	P	P	16 57 35.8	-0.3
USA0B	Ussuriysk Arra	80.62	327	P	P	16 57 44.5	-0.7
USRK	Ussuriysk Ar.	80.62	327	P	P	16 57 46.2	+1.0
	comp=Z,2.0nm,0.6s,baz=154,slow=4.7,SNR=8.4						
	comp=Z,2.0nm,0.6s						
USRK	Ussuriysk Ar.	80.62	327	P	P	16 57 44.4	-0.8
CMAR	Chiang Mai Arr	89.51	290	P	P	16 58 31.3	+2.2
	comp=Z,1.8nm,0.9s,baz=135,slow=3.4,SNR=14						
	comp=Z,1.8nm,0.9s						
TXAR	Lajitas Array	90.27	58	P	P	16 58 34.0	+1.5
	comp=Z,0.4nm,0.7s,baz=207,slow=5.3,SNR=4.9						
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	112.05	313	PKiKP	PKiKP	17 04 02.3	-0.7
	comp=Z,0.4nm,0.6s,baz=105,slow=0.8,SNR=7.8						
ARCES	ARCESS Array B	131.69	348	PKP	PKPdf	17 04 40.1	+0.3
	comp=Z,5.8nm,1.0s,baz=39,slow=3.5,SNR=5.3						
FINES	FINESS Array B	138.27	342	PKhKP	PKPpre	17 04 42.9	
	comp=Z,3.9nm,1.1s,baz=57,slow=5.1,SNR=4.7						
FINES				PKP	PKPdf	17 04 53.2	+0.9
	comp=Z,0.6nm,0.4s,baz=72,slow=4.5,SNR=7.9						
FINES				SKPbc	SKPbc	17 07 36.0	-0.6
	comp=Z,3.4nm,1.0s,baz=38,slow=3.4,SNR=4.1						
NB2	NORSAR Subarra	141.88	351	PKP	PKPpre	17 04 54.3	
	comp=Z,0.7nm,0.6s,baz=7.2,slow=3.0						
NOA	NORSAR Array B	141.88	351	PKhKP	PKPpre	17 04 54.7	
	comp=Z,1.1nm,0.7s,baz=15,slow=4.5,SNR=6.1						
PABE	Paberze	143.65	337	PKPdf	PKPbc	17 05 01.1	+0.2
AKASG	Malin Array Be	144.83	327	PKP	PKPdf	17 05 04.2	-0.1
	comp=Z,4.2nm,0.5s,baz=43,slow=4.2,SNR=30						
AKASG	Malin Array Be	144.83	327	PKPdf	PKPdf	17 05 04.4	+0.1
AKBB	Malin Array Si	144.83	327	PKPdf	PKPdf	17 05 03.9	-0.4
SORM	Soroca	146.87	324	⇑P	PKPbc	17 05 09.9	-0.7
BRTR	Keskin Array B	147.50	307	PKPbc	PKPbc	17 05 12.8	0.0
	comp=Z,2.9nm,0.6s,baz=144,slow=5.1,SNR=7.6						
CFR	Carcaliu	148.71	320	⇑P	PKPbc	17 05 15.6	+0.2
TPGR	Topolog	148.72	319	⇑P	PKPbc	17 05 15.7	+0.2
BUR08	Bucovina Ar. S	148.82	326	PKPbc	PKPbc	17 05 16.2	+0.4
BURAR	Bucovina Array	148.83	326	⇑P	PKiKP	17 05 16.6	-0.2
TIRR	Tirgusor	148.94	319	⇑P	PKPbc	17 05 15.9	-0.1
MFTR	Murfatlar	149.08	318	⇓P	PKiKP	17 05 16.9	-0.3
HARR	Harsova	149.10	320	⇑P	PKiKP	17 05 16.9	-0.4
VRI	Vrincioaia	149.12	322	⇑P	PKPbc	17 05 16.3	-0.2
MANR	Mangalia	149.17	318	⇑P	PKiKP	17 05 17.4	-0.1
TSMN	Mangalia Port-	149.17	318	⇑P	PKiKP	17 05 17.2	-0.3
TRPA	Tarpa	149.78	329	⇑P	PKPbc	17 05 18.0	+0.1
DOPR	Dopca	149.80	324	⇑P	PKiKP	17 05 18.7	0.0
MARR	Marisel-Cluj	150.52	327	⇑P	PKiKP	17 05 20.1	-0.3
ARR	Arges	150.59	323	⇑P	PKiKP	17 05 21.4	+1.0
DRGR		150.64	327	⇑P	PKPbc	17 05 19.8	-0.3

CLL	Collm	150.67	343	PKPbc	PKiKP	17 05 20.3	0.0
CLL	Collm	150.67	343	⇑iPKPab	PKPab	17 05 29.4	+0.2
	comp=Z,4.0nm,0.5s						
CLL	Collm	150.67	343	⇓iPKPbc	PKiKP	17 05 20.2	-0.1
	comp=Z,10.0nm,0.9s						
BRG	Berggiesshubel	150.81	342	Amp		17 05 21.2	
	comp=Z,13nm,1.2s						
BRG	Berggiesshubel	150.81	342	iP	PKiKP	17 05 20.9	+0.2
VRAC	Vranov	151.31	337	⇑P	PKPab	17 05 32.6	+0.6
SIRR	Siria	151.53	328	⇑P	PKiKP	17 05 22.1	-0.2
GZR	Gura Zlata	151.56	325	⇑P	PKPbc	17 05 22.0	-0.2
BZS	Buzias	152.01	327	⇑P	PKPbc	17 05 22.9	-0.2
HERR	Herculane	152.10	325	⇑P	PKiKP	17 05 23.5	0.0
GERES	GERESS Array B	152.68	340	PKPbc	PKiKP	17 05 24.6	-0.1
	comp=Z,0.9nm,0.8s,baz=95,slow=3.3,SNR=4.1						
MORH	Mrgy, Hungar	152.98	331	⇑P	PKPbc	17 05 24.5	-0.7
VTS	Vitosha	153.08	320	⇑P	PKPab	17 05 42.0	+2.1

ROM 03 17:03:24.5±0.1**, 42°.723N**±0°.003×**13°.172E**±0°.004**, h12^{km}, ML0.9**/5**, 2D, Error ellipse: s-maj=0.2km s-min=0.2km az=197.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	Arquata del Tr	0.04	37	P	Pg	17 03 27.1	+0.2
T1214				S	Sg	17 03 28.9	+0.1
T1214				AML	AML		
	comp=N,68µm,1.1s						
T1218	Civita (PG)	0.07	218	P	Pg	17 03 27.3	+0.2
T1218				S	Sg	17 03 29.3	+0.3
T1218				AML	AML		
	comp=E,120µm,0.2s						
T1218				AML	AML		
	comp=N,148µm,0.1s						
T1218				AML	AML		
	comp=E,126µm,0.8s						
T1212	Cascia, Frazio	0.10	287	P	Pg	17 03 27.7	+0.3
T1212				S	Sg	17 03 29.8	+0.3
T1212				AML	AML		
	comp=E,61µm,1.6s						
T1212				AML	AML		
	comp=N,84µm,1.6s						
T1245	Castelsantange	0.13	5	⇓P	Pg	17 03 28.3	+0.3
T1245				AML	AML		
	comp=E,58µm,0.2s						
T1245				AML	AML		
	comp=N,69µm,0.3s						
T1245				AML	AML		
	comp=E,58µm,0.2s						
LNSS	Leonessa	0.15	219	P	Pg	17 03 28.7	+0.5
LNSS				S	Sg	17 03 31.5	+0.7
LNSS				AML	AML		
	comp=E,88µm,0.3s						
LNSS				AML	AML		
	comp=N,107µm,0.1s						
LNSS				AML	AML		
	comp=E,88µm,0.3s						
LNSS				AML	AML		
	comp=N,106µm,0.1s						
T1217	Poggiodomo (PG	0.18	266	P	Pg	17 03 28.9	+0.4
T1217				S	Sg	17 03 32.2	+0.8
RM33	Pellescritta (	0.22	172	P	Pg	17 03 29.6	+0.4
RM33				S	Sg	17 03 33.2	+0.9
RM33				AML	AML		
	comp=N,39µm,0.1s						
TERO	Teramo	0.33	107	⇓P	Pg	17 03 31.6	+0.3
FOSV	Fossato di Vic	0.65	332	P	Pg	17 03 35.5	-1.6
INTR	Introdacqua	0.90	142	S	Sg	17 03 53.3	-0.2
VVLD	Villa Vallelon	0.92	158	S	Sg	17 03 53.4	-0.7

NNC 03 17:18:16.9±6.0**, 37°.02N**×**70°.52E, h0^{km}, mb3.7, mpv3.3, 3C-2D, Error ellipse: s-maj=54.6km s-min=45.6km az=85.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.66	25	P	Pn	17 19 42.9	+0.3
	SNR=47						
AML	Almayashu	5.66	25	⇓Pn	Pn	17 19 42.6	0.0
	1.1nm,0.5s						
AML				⇑Sn	Sn	17 20 49.9	+1.4
	4.1nm,0.6s						
UCH	Uchtor	6.04	29	P	Pn	17 19 47.7	-0.2
	SNR=7.2						
KK31	Karatay Array	6.07	360	⇑Pn	Pn	17 19 49.5	+1.6
	0.4nm,0.2s,baz=184,slow=14,SNR=9.8						
KK31				⇓Sn	Sn	17 20 58.9	+0.8
	3.0nm,0.4s,baz=182,slow=25,SNR=4.2						
EKS2	Erkin-Say	6.16	23	P	Pn	17 19 49.6	+0.3
	SNR=18						
AAK	Ala-Archa	6.39	27	P	Pn	17 19 52.1	-0.3
	SNR=7.8						
TKM2	Tokmak 2	7.06	32	P	Pn	17 20 00.4	-1.3
	SNR=5.9						
TKM2	Tokmak 2	7.06	32	⇑Pn	Pn	17 20 00.1	-1.6
	3.8nm,0.5s						

*VIE **03** 17:25:14.8, 51°.51N×16°.58E, h0^{km}, mb2.4/2, ml2.6/2 55 km NNW of Wroclaw Suspected Mining induced.*
*PRU **03** 17:25:14.6±0.0, 51°.58N×15°.97E, h0^{km}*
ISC 03 17:25:13.1±1.4**, 51°.61N**±0°.07×**15°.93E**±0°.03**, h0^{km}, n23, σ1^s.21**/42**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.80	163	ePg	Pg	17 25 28.5	+0.1
KSP				eSg	Sg	17 25 38.9	+0.1
CHVC	Chvalec	1.03	176	ePG	Pg	17 25 32.9	+0.2
CHVC				eSG	Sb	17 25 46.9	-0.8
OSTC	Ostas	1.07	170	ePG	Pb	17 25 34.4	0.0
OSTC				eSG	Sb	17 25 48.4	-0.6
UPC	Upice	1.10	177	ePG	Pg	17 25 34.5	+0.3
UPC				eSG	Sg	17 25 48.7	+0.2
	comp=Z,38nm,0.4s						
DPC	Dobruska-Polom	1.28	169	ePG	Pg	17 25 37.3	-0.4
DPC				eSG	Sb	17 25 54.6	-0.6
	comp=Z,17nm,0.4s						
PVCC	Panska Ves	1.38	219	ePG	Pb	17 25 40.5	+0.7
PVCC				eSG	Sn	17 25 58.9	+0.3
	comp=Z,102nm,0.2s						
BRG	Berggiesshubel	1.45	240	Pg	Pg	17 25 41.6	+0.7
BRG				Sg	Sg	17 25 54.3	-5.4
BRG				Amp		17 25 55.0	
	comp=Z,18nm,0.3s						
BRG	Berggiesshubel	1.45	240	Sg	Sn	17 26 01.4	+1.1
BRG				Amp		17 26 02.6	
	comp=Z,71nm,0.4s						
KRLC	Kraliky	1.63	160	ePG	Pn	17 25 42.7	-0.3
KRLC				eSG	Sn	17 26 04.4	-0.3
PRU	Pruhonice	1.85	209	ePG	Pb	17 25 47.8	+0.1
PRU				eSG	Sb	17 26 12.1	+0.8
	comp=Z,29nm,0.4s						
MORC	Moravsky Berou	2.10	150	ePN	Pn	17 25 48.7	-0.8
MORC				eSG	Sg	17 26 19.5	-1.0
VRAC	Vranov	2.34	169	ePN	Pn	17 25 52.9	+0.1
VRAC				eSG	Sg	17 26 27.7	-0.6
KRUC	Moravsky	2.57	173	ePN	Pn	17 25 56.1	+0.2
KRUC				eSG	Sg	17 26 34.5	-1.0
NKC	Novy Kostel	2.60	239	ePN	Pn	17 25 57.4	+1.0
OJC	Ojcow	2.82	118	ePn	Pn	17 25 58.8	-0.5
OJC				ePg	Pg	17 26 07.2	+0.2
OJC				eSg	Sg	17 26 42.9	-0.6
KHC	Kasperske Hory	2.90	212	ePN	Pn	17 26 01.5	+1.0
KHC				ePG	Pb	17 26 06.5	+0.8
KHC				eSG	Sg	17 26 45.7	-0.6
	comp=Z,4.6nm,0.5s						
CKRC	Cesky Krumlov	2.98	201	eSG	Sg	17 26 47.4	-1.4
	comp=Z,7.8nm,0.3s						
LANS	Liptovska Anna	3.34	136	ePN	Pn	17 26 07.9	+1.3
LANS				ePG	Pg	17 26 16.4	-0.7
LANS				eSG	Sg	17 27 03.4	+3.0
MODS	Modra-Piesok	3.35	164	eSG	Sg	17 27 01.0	+0.2
VYHS	Vyhne	3.64	148	ePN	Pn	17 26 10.0	-0.6
CONA	Conrad Observa	3.69	181	iPn	Pn	17 26 12.4	+1.1
	comp=Z,0.3nm,0.1s						
CONA				eSg	Sg	17 27 10.7	-0.8
	comp=Z,6.7nm,0.4s						
MOA	Molln	3.92	197	iPn	Pn	17 26 14.8	+0.4
	comp=Z,0.7nm,0.2s						
STHS	Stebnicka Huta	4.04	121	ePG	Pg	17 26 29.4	-1.0

MAN 03 17:26:36.2, 17°.52N×**120°.21E, h7^{km}, mb4.6, ML3.4, MS3.3, 13C-4D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	0.46	31	⇑eP	Pb	17 26 46.0	-0.7
SIPP				iS	Sb	17 26 53.5	-0.3
SAMP	Sagada Mountai	0.79	124	⇑eP	Pg	17 26 51.4	-0.1
SAMP				eS	Sg	17 27 02.2	+0.3
PACPP	Pamplona Cagay	1.43	49	⇑eP	Pn	17 27 01.3	-1.3
PACPP				eS	Sb	17 27 19.7	-2.0
SMPP	San Manuel, Pa	1.44	162	⇑eP	Pn	17 27 00.3	-2.4
SMPP				eS	Sn	17 27 20.2	-1.7
CVP	Callao Caves	1.55	83	⇓eP	Pn	17 27 03.8	-0.4
CVP				iS	Sb	17 27 25.2	+0.2
CAUP	Cauayan	1.65	110	⇓eP	Pb	17 27 06.8	-0.1
CAUP				eS	Sg	17 27 30.3	+1.1
SGCP	Gonzaga	1.89	67	⇓eP	Pn	17 27 08.8	-0.2
SGCP				eS	Sb	17 27 34.1	-0.8
PCPH	Palayan	2.13	156	⇓eP	Pn	17 27 11.7	-0.5
PCPH				eS	Sn	17 27 39.7	+0.9
BALP	Baler	2.20	143	⇑eP	Pn	17 27 13.9	+0.7
BALP				eS	Sn	17 27 41.7	+0.9
QVP	Quezon City--P	2.98	165	⇑eP	Pn	17 27 24.5	+0.6
QVP				eS	Sn	17 27 59.1	-0.9
MACP	Maragondon, Ca	3.28	171	⇑eP	Pn	17 27 28.9	+0.9
MACP				eS	Sn	17 28 09.7	+2.4
BBP	Basco	3.34	29	⇑eP	Pn	17 27 30.7	+1.7
BBP				eS	Sn	17 28 06.6	-2.3
LUBP	Lubang	3.77	179	⇑eP	Pn	17 27 37.2	+2.5
LUBP				eS	Sn	17 28 20.2	+0.8
JCNP	Jose Panganiba	4.01	143	⇑eP	Pn	17 27 38.9	+0.8
JCNP				eS	Sn	17 28 27.8	+2.5
BOAC	Boac	4.34	158	⇑eP	Pn	17 27 43.6	+1.0
BOAC				eS	Sb	17 28 43.9	-1.5
BUSP	Coron	5.49	180	⇑eP	Pn	17 27 59.4	+0.9
ENPP	El Nido	6.33	187	⇑eP	Pn	17 28 10.3	+0.3

*SOF **03** 17:35:01.3, 39°.56N×26°.10E, h8^{km}, MD3.2*
*DDA **03** 17:35:02.8±0.0, 39°.56N×26°.12E, h7^{km}, ML3.2*
*ISK **03** 17:35:02.4, 39°.56N×26°.08E, h8^{km}, ML3.2/21*
*ATH **03** 17:35:03.3, 39°.55N×26°.08E, h10^{km}±1^{km}, ML2.8/10, Error ellipse: s-maj=2.3km s-min=0.8km az=220.0*
*THE **03** 17:35:03.0, 39°.56N×26°.09E, h9^{km}, ML3.2/6, Error ellipse: s-maj=0.6km s-min=0.3km az=151.0*
ISC 03 17:35:02.8±0.8**, 39°.56N**±0°.01×**26°.08E**±0°.02**, h12^{km}**±5^{km}**, n102, σ0^s.71**/142**, 16C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.07	141	P	Pg	17 35 04.9	-0.4
KOCA				S	Sg	17 35 06.1	-1.0
GPNR	Gulpinar-Canak	0.11	158	Pg	Pg	17 35 05.3	-0.4
BOZC	Bozcaada	0.28	356	Pg	Pg	17 35 08.6	-0.1
BOZC				Sg	Sg	17 35 12.9	+0.3
BOZC	Bozcaada	0.28	356	P	Pg	17 35 08.8	+0.1
BOZC				P	Pg	17 35 08.8	+0.1
BOZC				S	Sg	17 35 13.1	+0.5
EZN	Ezine	0.33	35	P	Pg	17 35 09.3	-0.2
EZN				S	Sg	17 35 14.3	+0.4
	6µm,0.3s						
EZN	Ezine	0.33	35	Pg	Pg	17 35 09.3	-0.2
EZN				Sg	Sg	17 35 14.3	+0.4
PRK	Paraskevi	0.34	154	P	Pg	17 35 09.9	+0.2
PRK				S	Sg	17 35 14.9	+0.6
	7µm,0.5s						
PRK	Paraskevi	0.34	154	P	Pg	17 35 09.9	+0.2
PRK				S	Sg	17 35 14.2	-0.2
PRK				AML	AML	17 35 16.6	
	comp=E,16340µm,0.3s						
PRK				AML	AML	17 35 16.9	
	comp=N,13754µm,0.5s						
SIGR	SIGRI	0.39	207	P	Pg	17 35 10.6	+0.1
SIGR				S	Sg	17 35 16.4	+0.7
	comp=N,3µm,0.3s						
SIGR	SIGRI	0.39	207	Pg	Pg	17 35 10.6	+0.1
SIGR				Sg	Sg	17 35 16.6	+0.9
SIGR	SIGRI	0.39	207	P	Pg	17 35 10.7	+0.1
SIGR				S	Sg	17 35 16.1	+0.4
SIGR				AML	AML	17 35 17.2	
	comp=E,5654µm,0.2s						
SIGR				AML	AML	17 35 17.2	
	comp=N,5818µm,0.4s						
BAYC	CANAKKALE_Bayr	0.40	63	P	Pg	17 35 10.6	-0.3
BAYC				S	Sg	17 35 15.6	-0.6
BAYC				iAML	AML	17 35 16.0	
	comp=N,2µm,0.2s						
ECEA	Canakkale, Ece	0.49	8	P	Pg	17 35 12.4	0.0
ECEA				iAML	AML	17 35 20.0	
	comp=N,1µm,0.3s						
ECEA				iAML	AML	17 35 20.0	
	comp=N,1µm,0.4s						
ECEA				S	Sb	17 35 20.3	-0.3
AYVA	Ayvalik	0.53	118	P	Pg	17 35 13.0	-0.2
AYVA				S	Sg	17 35 19.9	-0.4
COMU	Canakkale	0.62	29	Pg	Pg	17 35 14.8	-0.1
GOKA	anakkale-Gk	0.65	348	P	Pg	17 35 15.3	-0.1
GOKA				S	Sg	17 35 23.9	0.0
GADA	Gvkgeada	0.65	348	Pg	Pg	17 35 15.3	-0.1
LIA	Limnos Island	0.77	296	P	Pb	17 35 18.2	0.0
LIA				S	Sb	17 35 29.2	+0.6
	comp=N,2µm,0.3s						
LIA	Limnos Island	0.77	296	P	Pb	17 35 18.2	0.0
LIA				S	Sb	17 35 28.7	+0.1
LIA				AML	AML	17 35 32.0	
	comp=E,5659µm,0.4s						
LIA				AML	AML	17 35 33.4	
	comp=N,2741µm,0.3s						
BUHA	Balikesir, Bur	0.77	94	P	Pg	17 35 17.4	-0.4
BUHA				S	Sg	17 35 27.8	-0.1
DKL	Dikili	0.80	127	Pg	Pg	17 35 18.4	+0.1
DKL				Sg	Sb	17 35 29.9	+0.4
CANM	Can-anakkale	0.88	59	Pg	Pb	17 35 19.9	-0.1
GELI	Tayfur-Gelibol	0.89	20	Pg	Pg	17 35 19.7	-0.4
KARB	zmir-Karabur	0.93	164	P	Pg	17 35 20.7	0.0
KARB				S	Sb	17 35 33.8	+0.6
KARB				iAML	AML	17 35 35.0	
	comp=N,1µm,0.3s						
KARB				iAML	AML	17 35 36.0	
	comp=N,726nm,0.3s						
LPK	Lapseki	0.97	32	Pg	Pg	17 35 21.2	-0.3
ZEDA	zmir-Bergama	0.97	127	P	Pg	17 35 21.5	-0.1
ZEDA				S	Sb	17 35 35.3	+0.8
SMTH	Samothraki Isl	1.01	335	P	Pg	17 35 21.9	-0.3
SMTH	Samothraki Isl	1.01	335	P	Pg	17 35 21.9	-0.3
SMTH				AML	AML	17 35 38.9	
	comp=N,775µm,0.2s						
SMTH				AML	AML	17 35 43.8	
	comp=E,720µm,0.4s						
PSRA	Psara	1.09	202	P	Pn	17 35 24.2	+0.3
PSRA				AML	AML	17 35 42.2	
	comp=E,2902µm,0.3s						
PSRA				AML	AML	17 35 43.1	
	comp=N,2123µm,0.3s						
CAVK	Edirne/Enez-Ca	1.14	3	P	Pg	17 35 24.1	-0.5
CAVK				S	Sn	17 35 40.6	+0.5
CAVK				iAML	AML	17 35 43.0	
	comp=N,420nm,0.8s						
ERIK	Erikli-Kesan	1.16	16	Pn	Pg	17 35 24.2	-1.0
CHOS	Chios island	1.17	181	P	Pg	17 35 24.5	-0.8
CHOS	Chios island	1.17	181	P	Pg	17 35 24.5	-0.8
ENEZ	Enez	1.18	3	P	Pb	17 35 24.7	-0.5
ENEZ				S	Sn	17 35 41.4	+0.2
	comp=N,992nm,0.5s						
ENEZ	Enez	1.18	3	Pn	Pb	17 35 25.1	-0.1
BALY	Balya	1.20	81	P	Pb	17 35 25.1	-0.5
BALY				S	Sg	17 35 40.8	-0.7
KRBG	Karabiga-Canak	1.25	48	Pn	Pn	17 35 26.2	0.0
URLA	Izmir	1.26	161	Pn	Pn	17 35 26.1	-0.2
URLA	Izmir	1.26	161	P	Pn	17 35 25.8	-0.5
URLA				S	Sb	17 35 43.0	+0.3
URLA				iAML	AML	17 35 45.0	
	comp=N,362nm,0.7s						
URLA				iAML	AML	17 35 46.0	
	comp=N,436nm,0.6s						
STEP	BALIKESIR_Sava	1.28	98	P	Pn	17 35 26.7	+0.1
STEP				S	Sn	17 35 44.7	+0.9
KNL	Balıkesir	1.32	57	P	Pn	17 35 27.4	+0.2
KNL				S	Sn	17 35 45.5	+0.8
KNL				iAML	AML	17 35 46.0	
	comp=N,926nm,0.6s						
KNL				iAML	AML	17 35 47.0	
	comp=N,738nm,0.4s						
GONE	Gonen-Balikesi	1.33	68	Pn	Pn	17 35 27.6	+0.4
ALN	Alexandroupoli	1.34	359	P	Pn	17 35 26.6	-0.8
ALN				S	Sb	17 35 45.0	0.0
	comp=N,520nm,0.4s						
ALN	Alexandroupoli	1.34	359	Pn	Pn	17 35 27.5	+0.2
ALN	Alexandroupoli	1.34	359	P	Pn	17 35 27.6	+0.2
ALN				S	Sb	17 35 45.1	0.0
ALN				AML	AML	17 35 47.0	
	comp=E,1337µm,0.4s						
ALN				AML	AML	17 35 47.2	
	comp=N,736µm,0.4s						
KESN	Edirne-Kesan	1.35	20	P	Pn	17 35 27.5	-0.3
KESN				S	Sb	17 35 45.3	-0.3
KESN				iAML	AML	17 35 47.0	
	comp=N,671nm,0.5s						
KESN				iAML	AML	17 35 47.0	
	comp=N,574nm,0.5s						
ZEYE	Izmir, Urla-Ze	1.36	166	P	Pn	17 35 26.7	-0.9
ZEYE				S	Sb	17 35 44.9	-0.6
ZEYE				iAML	AML	17 35 50.0	
	comp=N,433nm,0.3s						
ZEYE				iAML	AML	17 35 51.0	
	comp=N,320nm,0.5s						
BLCB	Balcova	1.39	147	P	Pn	17 35 27.4	-0.7
BLCB	Balcova	1.39	147	Pn	Pb	17 35 28.7	0.0
BALB	Balikesir	1.39	86	Pn	Pn	17 35 28.3	+0.2
RKY	Sarkoy-Tekirda	1.41	36	Pn	Pn	17 35 28.6	+0.2
BKES	Balkesir-Mer	1.44	82	P	Pn	17 35 29.2	+0.5
BKES				S	Sg	17 35 48.6	-0.5
THAS	Thassos island	1.48	316	P	Pn	17 35 28.9	-0.4
THAS	Thassos island	1.48	316	P	Pn	17 35 28.9	-0.4
THAS				S	Sn	17 35 47.6	-1.0
AKHS	Akhisar	1.51	116	P	Pn	17 35 29.6	-0.1
EDC	Edincik	1.58	60	Pn	Pn	17 35 30.8	+0.1
UKOP	Uzunkopru-Edir	1.62	15	Pn	Pn	17 35 31.8	+0.5
DGB	zmir	1.63	157	P	Pn	17 35 31.1	-0.2
DGB				S	Sg	17 35 54.5	-0.7
RDO	Rodhopi	1.64	346	P	Pn	17 35 31.3	-0.2
RDO	Rodhopi	1.64	346	Pn	Pn	17 35 31.9	+0.4
RDO	Rodhopi	1.64	346	P	Pn	17 35 32.1	+0.6
RDO				AML	AML	17 36 04.4	
	comp=E,145µm,0.5s						
RDO				AML	AML	17 36 04.9	
	comp=N,124µm,0.3s						
BAND	Balkesir-Ban	1.74	62	P	Pn	17 35 32.6	-0.3
BAND				S	Sn	17 35 55.1	0.0
OUR	Ouranopolis	1.79	296	P	Pn	17 35 33.1	-0.5
OUR	Ouranopolis	1.79	296	P	Pn	17 35 32.9	-0.6
KYMI	Kymi, Euboea I	1.80	240	P	Pn	17 35 33.2	-0.5
KYMI	Kymi, Euboea I	1.80	240	P	Pn	17 35 33.0	-0.6
KYMI				AML	AML	17 36 06.0	
	comp=N,159µm,0.5s						
KYMI				AML	AML	17 36 08.7	
	comp=E,99µm,0.4s						
TKR	Tekirdag	1.81	37	Pn	Pn	17 35 34.7	+0.8
DURS	Dursunbey	1.85	88	P	Pn	17 35 34.6	+0.1
DURS				S	Sn	17 35 56.2	-1.6
KAVA	Kavala	1.87	321	P	Pn	17 35 34.4	-0.3
KAVA	Kavala	1.87	321	P	Pn	17 35 34.4	-0.3
KCTX	Karacabey (Bur	1.89	67	Pn	Pn	17 35 35.4	+0.4
KVLA	Kavala	1.89	317	P	Pn	17 35 35.8	+0.8
EREA	Eretria	2.02	237	P	Pn	17 35 36.3	-0.5
EREA	Eretria	2.02	237	P	Pn	17 35 36.1	-0.8
EREA				AML	AML	17 36 01.4	
	comp=N,118µm,0.4s						
EREA				AML	AML	17 36 20.4	
	comp=E,115µm,0.4s						
DEMI	Demirci	2.11	103	P	Pb	17 35 42.0	+1.0
DEMI				S	Sg	17 36 09.1	-1.5
KDZ	Kurdzhali	2.15	347	iP	Pn	17 35 39.1	+0.5
MANT	Manisa	2.20	118	P	Pn	17 35 39.6	+0.2
MANT				S	Sb	17 36 10.5	+0.4
DION	Dionisos Attik	2.23	229	P	Pn	17 35 40.8	+1.1
RZN	Rozhen	2.37	334	iP	Pn	17 35 42.4	+0.7
SOH	Sokhos	2.44	302	P	Pn	17 35 43.3	+0.8
SRS	Serrai	2.46	310	P	Pn	17 35 42.9	+0.1
SRS	Serrai	2.46	310	P	Pn	17 35 43.2	+0.4
NVR	Nevrokopi	2.46	317	P	Pn	17 35 43.9	+1.0
NVR				AML	AML	17 36 24.7	
	comp=E,75µm,0.4s						
NVR				AML	AML	17 36 30.9	
	comp=N,60µm,0.5s						
MMB	Musomiste	2.71	319	iP	Pn	17 35 46.5	+0.3
KNT	Kendrikon	2.91	304	P	Pn	17 35 49.2	+0.2
KNT	Kendrikon	2.91	304	P	Pn	17 35 49.2	+0.2
VAY	Valandovo	3.21	304	iPn	Pb	17 36 00.2	+0.5
STIP	Stip	3.65	307	iPn	Pn	17 35 58.8	-0.3
VTS	Vitosha	3.74	326	⇑P	Pn	17 36 01.2	+0.7
VTS				⇑S	Sg	17 36 59.9	-3.0
PLVB	Pleven	3.98	344	⇑P	Pn	17 36 04.7	+1.1
PLVB				⇑S	Sg	17 37 08.9	-1.7
CFR	Carcaliu	5.82	14	⇑P	Pn	17 36 28.8	-0.1
VOIR		5.92	353	⇑P	Pn	17 36 31.5	+1.0
MLR	Muntele Rosu	5.93	359	⇑P	Pn	17 36 32.8	+2.2
HERR	Herculane	5.97	334	⇑P	Pn	17 36 31.0	-0.1
MDVR	Moldovita	6.15	330	⇑P	Pn	17 36 34.4	+0.9
GZR	Gura Zlata	6.32	338	⇑P	Pn	17 36 37.6	+1.7
VRI	Vrincioaia	6.32	4	⇑P	Pn	17 36 37.8	+1.9
DOPR	Dopca	6.43	356	⇑P	Pn	17 36 39.6	+2.3
BZS	Buzias	6.89	333	⇑P	Pn	17 36 45.5	+1.8
TESR	Tescani	6.96	3	⇑P	Pn	17 36 45.8	+1.1
SIRR	Siria	7.45	336	⇑P	Pn	17 36 51.8	+0.5
DRGR		7.64	342	⇑P	Pn	17 36 54.5	+0.6

*TEH **03** 17:45:43.7, 35°.23N×46°.84E, h10^{km}±115^{km}, ML2.6*
*ISN **03** 17:45:43.5±1.2, 35°.10N×46°.82E, h9^{km}±15^{km}, ML2.5*
ISC 03 17:45:45.2±1.7**, 35°.14N**±0°.09×**46°.85E**±0°.06**, h10^{km}, n10, σ0^s.37**/13**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILIN	Lien	0.24	158	Pg	Pg	17 45 50.3	+0.1
IDHR	Dehrash	0.58	221	Pg	Pg	17 45 56.6	0.0
KER	Kermanshah	0.79	163	Pg	Pg	17 46 00.2	-0.2
IGHG	Ghaleghazi	0.84	196	Pg	Pb	17 46 01.9	-0.2
IGHG				Sg	Sn	17 46 16.0	+0.1
IBZA	Bozab	1.07	129	Pg	Pn	17 46 07.0	+0.5
IKOM	Komasi	1.11	150	Pg	Pg	17 46 06.2	-0.3
ILBA	Ilam Banvizeh	1.60	200	Pg	Pg	17 46 16.0	0.0
IKFM	Kafar-mosalman	1.81	153	Pn	Pg	17 46 19.4	-0.5
IKRK	Kirkuk	2.07	278	ePn	Pn	17 46 20.0	0.0
	baz=98						
IKRK				eSn	Sn	17 46 46.0	+0.1
IKRK				AML	AML	17 46 56.5	
	comp=E,39nm,0.6s						
IKRK				AML	AML	17 46 59.5	
	comp=N,58nm,0.3s						
IBDR	Badra	2.17	201	ePn	Pn	17 46 21.0	-0.3
IBDR				eSn	Sn	17 46 49.0	+0.8

*IDC **03** 17:46:54.3±0.6, 30°.75N×141°.69E, h0^{km}, mb4.0/19, mbtmp4.0/24, ML3.7/5, MS3.4/26, Error ellipse: s-maj=19.3km s-min=13.5km az=79.0*
*MOS **03** 17:46:56.2±1.2, 30°.76N×141°.72E, h28^{km}, mb4.5/24, Error ellipse: s-maj=13.9km s-min=5.9km az=114.1*
*NIED **03** 17:46:57.2, 30°.90N×142°.00E, h48^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.87; M$_{\theta\theta}$-0.35; M$_{\phi\phi}$-1.52; M$_{r\theta}$-2.35; M$_{\theta\phi}$0.88; M$_{\phi r}$4.35; Fault plane solution: M$_0$5.30000×10^{15} NP1: ϕ_s332.00000°, δ79.00000°, λ90.00000°. NP2: ϕ_s152.00000°, δ11.00000°, λ90.00000°.*
*JMA **03** 17:46:57.2±0.3, 31°N±1°×14°2E±°, h48^{km}, MV4.3/36, NEAR TORISHIMA IS*
*NEIC **03** 17:46:58.3±1.4, 30°.78N±0°.05×141°.8E±0°.1, h28^{km}±5^{km}, mb4.5/47, Error ellipse: s-maj=13.2km s-min=7.2km az=74.0*
ISC 03 17:46:59.1±0.4**, 30°.75N**±0°.04×**141°.75E**±0°.07**, h35^{km}, n183, σ1^s.23**/174**, mb4.3**/57**, MS3.6**/20**, 9C, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	2.85	325	eP	Pn	17 47 40.8	-1.3
JHCJ				S	Sn	17 48 12.7	-2.6
JHJ2	Mitsune	2.88	326	Pn	Pn	17 47 41.6	-0.8
JHJ2				Sn	Sn	17 48 14.1	-1.7

JHJ2	Mitsune	2.88	326	P	Pn	17 47 43.1	+0.7
JHJ2	Mitsune	2.88	326	eP	Pn	17 47 42.0	-0.4
JHJ2				eS	Sn	17 48 13.9	-1.9
JHJ	Hachijo jima 2	2.90	325	Pn	Pn	17 47 41.9	-0.8
	26nm,0.3s,baz=222,slow=13,SNR=9.4						
JHJ				Sn	Sn	17 48 15.1	-1.2
	99nm,0.3s,baz=75,slow=23,SNR=8.6						
	74nm,0.3s						
CBIJ	Chichi jima	3.66	174	S	Sn	17 48 32.2	-2.9
JCJ	Chichijima	3.66	174	Pn	Pn	17 47 54.0	+0.9
	9.2nm,0.3s,baz=22,slow=16,SNR=1.6						
JCJ				Sn	Sn	17 48 32.9	-2.2
	62nm,0.3s,baz=263,slow=23,SNR=8.2						
JCJ				LR	LR	17 49 18.7	
	comp=Z,366nm,18.1s,baz=86,slow=40						
	30nm,0.3s						
JCJ	Chichijima	3.66	174	Pn	Pn	17 47 51.6	-1.5
JCJ				Sn	Sn	17 48 33.6	-1.5
BSO1	Boso 1	3.95	351	eP	Pn	17 47 56.0	-0.6
JHH2	Haha-jima-NKT2	4.12	175	P	Pn	17 48 00.5	+1.0
JHH2				S	Sn	17 48 47.0	+0.6
BSO3	Boso 3	4.18	346	eP	Pn	17 47 59.6	-0.4
JSG	Sagara	4.94	323	Pn	Pn	17 48 08.0	-2.7
JOD2	Odawara 2	5.03	334	eP	Pn	17 48 10.8	-1.3
JOD2				eS	Sn	17 49 05.9	-3.0
JHU	Hanno	5.50	339	eP	Pn	17 48 18.3	-0.1
JIE	Ise	5.60	312	eP	Pn	17 48 21.5	+1.7
JYT	Yasato	5.62	347	eP	Pn	17 48 20.1	0.0
JNY	Yasuok	5.64	326	eP	Pn	17 48 21.5	+1.0
JRY	Ryogami san	5.77	336	eP	Pn	17 48 21.7	-0.5
JRY				eS	Sn	17 49 25.8	-1.4
JKN2	Miekihoku	5.79	308	eP	Pn	17 48 24.5	+2.0
JHO	Hitachi	5.93	351	eP	Pn	17 48 22.6	-1.8
JAG	Ashikaga	5.98	342	eP	Pn	17 48 24.6	-0.5
INU	Inuyama	6.07	320	Pn	Pn	17 48 26.1	-0.2
INU	Inuyama	6.07	320	P	Pn	17 48 27.4	+1.1
JGF	Kuroka	6.08	324	Pn	Pn	17 48 26.4	-0.1
JGF	Kuroka	6.08	324	P	Pn	17 48 28.6	+2.1
MJAR	Matsushiro Arr	6.49	334	Pn	Pn	17 48 31.9	-0.2
	1.0nm,0.3s,baz=157,slow=10,SNR=45						
MJAR				Sn	Sn	17 49 46.2	+1.3
	baz=190,slow=18						
	5.5nm,0.5s						
MAJO	Matsushiro	6.49	334	Pn	Pn	17 48 31.8	-0.3
MAJO	Matsushiro	6.49	334	P	Pn	17 48 31.6	-0.5
MAJO	Matsushiro	6.49	334	i P	Pn	17 48 33.4	+1.3
MJB9	Matsu-Tunnel	6.50	334	Pn	Pn	17 48 32.0	-0.2
JMM	Marumori	7.15	354		Pn	17 48 38.7	-2.3
JMM	Marumori	7.15	354	P	Pn	17 48 39.5	-1.5
JMN	Monobe	7.30	296	Pn	Pn	17 48 45.0	+1.7
JSD	Sado	7.82	339	Pn	Pn	17 48 49.9	-0.5
JSD	Sado	7.82	339	P	Pn	17 48 50.2	-0.1
JNU	Nakatsue	9.54	287	LR	LR	17 52 55.2	
	comp=Z,321nm,18.1s,baz=95,slow=38						
JTM	Tenmabayashi	10.03	357	Pn	Pn	17 49 18.8	-1.9
JTM	Tenmabayashi	10.03	357	P	Pn	17 49 19.9	-0.7
JMZ	Minamidaito 2	10.50	245	Pn	Pn	17 49 27.9	+0.8
ERM	Erimo	11.30	5	Pn	Pn	17 49 36.2	-1.8
ERM	Erimo	11.30	5	P	Pn	17 49 36.2	-1.8
JOW	Kunigami	12.45	255	LR	LR	17 54 37.6	
	comp=Z,277nm,18.6s,baz=85,slow=37						
KSRS	Korea Array	13.26	304	LR	LR	17 55 12.2	
	comp=Z,132nm,18.1s,baz=110,slow=38						
KSAR	Wonju Array Be	13.29	304	Pn	Pn	17 50 04.5	-0.6
KSAR	Wonju Array Be	13.29	304	P	Pn	17 50 04.5	-0.6
KS19	Wonju Array Si	13.32	304		Pn	17 50 05.2	-0.4
JKA	Kamikawa-asahi	13.36	3	Pn	Pn	17 50 01.6	-4.6
ASAJ	Asahikawa	13.36	3	Pn	Pn	17 50 02.2	-3.9
	0.8nm,0.3s,baz=225,slow=11,SNR=10						
ASAJ				LR	LR	17 55 47.2	
	comp=Z,99nm,21.1s,baz=154,slow=40						
ASAJ	Asahikawa	13.36	3	P	Pn	17 50 01.6	-4.5
USRK	Ussuriysk Ar.	15.49	333	Pn	Pn	17 50 32.4	-2.3
	0.2nm,0.3s,baz=150,slow=11,SNR=4.5						
USRK				LR	LR	17 56 11.9	
	comp=Z,78nm,20.1s,baz=169,slow=36						
	2.9nm,0.8s						
YSS	Yuzh-Sakhalins	16.20	2	eP	Pn	17 50 41.7	-2.2
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				MLR	MLR		
	comp=Z,600nm,13.0s						
GUMO	Guam	17.32	170	LR	LR	17 56 14.7	
	comp=Z,121nm,20.2s,baz=340,slow=32						
CN2	Changchun	18.35	320	P	P	17 51 09.9	-0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YHNB	Yeheng	19.02	256	P	Pn	17 51 18.8	-0.2
YHNB				IAmb	IAmb	17 51 45.2	
	comp=Z,56nm,1.5s						
YULB	Yu-li	19.62	253	P	P	17 51 23.1	-1.4
YULB				IAmb	IAmb	17 52 02.5	
	comp=Z,28nm,1.3s						
SSLB	Suanglung	19.73	254	P	P	17 51 24.7	-1.1
SSLB				IAmb	IAmb	17 51 40.5	
	comp=Z,15nm,0.8s						
KLR	Kul'dur	19.96	341	P	P	17 51 27.8	-0.2
	comp=Z,0.5nm,0.3s,baz=143,slow=9.1,SNR=21						
KLR				LR	LR	17 58 58.7	
	comp=Z,49nm,18.6s,baz=126,slow=36						
	comp=Z,4.2nm,0.6s						
KLR	Kul'dur	19.96	341	ceP	P	17 51 26.9	-1.1
KLR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TPUB	Ta-pu	20.21	254	P	P	17 51 31.0	0.0
TPUB				IAmb	IAmb	17 51 60.0	
	comp=Z,57nm,1.3s						
GRNR	Gornyy	20.39	350	⇑iP	Pn	17 51 37.0	+2.0
GRNR				pmax	pmax		
	comp=E,2.0nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,160nm,16.0s						
GRNR				MLR	MLR		
	comp=N,160nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,190nm,18.0s						
HEH	HeiHe	22.26	335	eP	P	17 51 51.5	-1.3
HEH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HIA	Hailar	24.88	324	P	P	17 52 17.4	-1.0
HIA				IAmb	IAmb	17 52 37.1	
	comp=Z,8.3nm,0.7s						
HIA	Hailar	24.88	324	P	P	17 52 17.4	-1.0
HIA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
H11N2	WAKE ISLAND Hy	25.19	110	T	T	18 18 35.6	
	baz=300						
H11N1	WAKE ISLAND Hy	25.20	110	T	T	18 18 36.3	
	baz=300						
H11N3	WAKE ISLAND Hy	25.21	110	T	T	18 18 54.8	
	baz=300						
ZEA	Zeya	25.26	340	eP	P	17 52 23.9	+2.1
ZEA				pmax	pmax		
	comp=E,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.7s						
H11S3	WAKE ISLAND Hy	25.67	113	T	T	18 19 37.3	
	baz=303,slow=76,SNR=3.7						
H11S1	WAKE ISLAND Hy	25.68	113	T	T	18 19 21.8	
	baz=303,slow=76,SNR=4.5						
H11S2	WAKE ISLAND Hy	25.69	113	T	T	18 19 05.9	
	baz=303,slow=76,SNR=4.8						
ULN	Ulaanbaatar	31.49	313	P	P	17 53 18.0	+0.4
ULN	Ulaanbaatar	31.49	313	P	P	17 53 18.0	+0.4
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM	Songino Array	31.90	312	P	P	17 53 21.3	+0.1
	comp=Z,0.8nm,0.4s,baz=127,slow=9.5,SNR=5.2						
	comp=Z,0.8nm,0.4s						
YAK	Yakutsk	32.27	349	LR	LR	18 06 18.2	
	comp=Z,28nm,19.3s,baz=92,slow=36						
YAK	Yakutsk	32.27	349	ceP	P	17 53 24.4	+0.4
YAK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SEY	Seymchan	32.92	9	P	P	17 53 29.9	+0.1
	comp=Z,0.5nm,0.4s,baz=138,slow=14,SNR=4.7						
	comp=Z,0.5nm,0.4s						
GTA	Gaotai	35.13	296	eP	P	17 53 49.3	-0.2
GTA				sP	pwP	17 54 17.6	+14
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				LR	LR		
	comp=N,86nm,15.5s						
GTA				LR	LR		
	comp=E,200nm,15.5s						
GTA				LR	LR		
	comp=Z,200nm,13.9s						
GOMU	GeErMu	39.23	291	P	P	17 54 24.4	-0.1
GOMU				pP	pwP	17 54 41.8	+3.3
GOMU				sP	sP	17 54 50.8	+13
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PHRA	Phrae	39.46	262	P	P	17 54 25.8	-0.4
CMAR	Chiang Mai Arr	40.57	263	P	P	17 54 34.6	-0.8
	comp=Z,0.4nm,0.4s,baz=60,slow=6.4,SNR=6.5						
CMAR				LR	LR	18 11 54.6	
	comp=Z,68nm,19.9s,baz=70,slow=37						
	comp=Z,0.4nm,0.4s						
CMAR	Chiang Mai Arr	40.57	263	ceP	P	17 54 35.4	0.0
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KAPI	Kappang	41.32	214	LR	LR	18 11 45.9	
	comp=Z,22nm,19.3s,baz=80,slow=36						
TIXI	Tiksi	41.55	354	P	P	17 54 42.7	-0.1
TIXI	Tiksi	41.55	354	ceP	P	17 54 40.7	-2.1
TIXI				pmax	pmax		
	comp=Z,5.0nm,2.5s						
COEN	Coen	44.47	178	P	P	17 55 07.4	+0.4
COEN				IAmb	IAmb	17 55 21.5	
	comp=Z,6.9nm,0.9s						
DGZ	Jazzator, Alta	44.53	311	i P	P	17 55 07.6	+0.2
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MTN	Manton Dam	44.53	195	P	P	17 55 07.2	-0.3
ZALV	Zalesovo Beam	46.53	317	P	P	17 55 23.4	+0.4
	comp=Z,1.1nm,0.6s,baz=107,slow=8.7,SNR=6.5						
ZALV				PcP	PcP	17 56 57.5	+0.7
	comp=Z,1.1nm,0.6s,baz=119,slow=4.6,SNR=4.3						
	comp=Z,1.1nm,0.6s						
ZALV	Zalesovo Beam	46.53	317	i P	P	17 55 24.0	+1.1
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MK31	Makanchi Array	47.92	307	P	P	17 55 33.5	-0.4
MK31	Makanchi Array	47.92	307	P	P	17 55 33.5	-0.4
MK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	47.92	307	P	P	17 55 34.3	+0.4
	comp=Z,2.4nm,0.7s,baz=91,slow=9.5,SNR=31						
MKAR				LR	LR	18 14 56.4	
	comp=Z,41nm,20.7s,baz=62,slow=35						
	comp=Z,2.4nm,0.7s						
MKAR	Makanchi Array	47.92	307	P	P	17 55 33.4	-0.5
MAKZ	Makanchi	48.13	307	P	P	17 55 35.9	+0.3
MAKZ				IAmb	IAmb	17 55 37.7	
	comp=Z,2.1nm,0.6s						
MAKZ	Makanchi	48.13	307	P	P	17 55 35.9	+0.3
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	Kurchatov	50.21	312	P	P	17 55 51.0	-0.3
KURK				IAmb	IAmb	17 55 52.3	
	comp=Z,6.5nm,0.9s						
KURK	Kurchatov	50.21	312	ceP	P	17 55 51.1	-0.3
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WB0	Warramunga Arr	50.72	189	P	P	17 55 54.9	-0.5
WB0				IAmb	IAmb	17 55 56.0	
	comp=Z,7.5nm,0.7s						
WRAB	Tennant Creek	50.89	189	P	P	17 55 55.0	-1.7
WRAB				IAmb	IAmb	17 56 07.8	
	comp=Z,5.6nm,0.7s						
WRAB	Tennant Creek	50.89	189	P	P	17 55 55.0	-1.7
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WR0	Warramunga Arr	50.89	189	P	P	17 55 56.3	-0.5
WB2	Warramunga Arr	50.90	189	P	P	17 55 56.1	-0.7
WB2				IAmb	IAmb	17 55 57.5	
	comp=Z,5.1nm,0.7s						
WRA	Warramunga Arr	50.90	189	P	P	17 55 56.8	0.0
	comp=Z,5.0nm,0.7s,baz=6.0,slow=7.8,SNR=72						
WRA				PcP	PcP	17 57 14.9	+1.9
	comp=Z,0.5nm,0.7s,baz=3.5,slow=3.5,SNR=1.2						
WRA				LR	LR	18 17 12.4	
	comp=Z,68nm,18.2s,baz=206,slow=36						
	comp=Z,5.0nm,0.7s						
WRA	Warramunga Arr	50.90	189	P	P	17 55 55.8	-1.0
WRA	Warramunga Arr	50.90	189	P	P	17 55 55.8	-1.0
FITZ	Fitzroy Crossi	50.98	200	P	P	17 55 56.6	-0.8
K20K	Telida	51.45	31	P	P	17 55 59.7	-0.9
TARG	Taragay, Kyrgy	51.66	301	P	P	17 56 02.6	-0.3
TARG				IAmb	IAmb	17 56 07.7	
	comp=Z,6.4nm,1.5s						
TARG	Taragay, Kyrgy	51.66	301	P	P	17 56 02.6	-0.3
TARG				pmax	pmax		
	comp=Z,6.0nm,1.5s						
KDAK	Kodiak Island	51.71	38	LR	LR	18 17 21.9	
	comp=Z,22nm,20.7s,baz=269,slow=35						
IMAR	Indian Mountai	51.98	28	P	P	17 56 03.7	-0.7
PPLA	Purkeypile	52.25	32	P	P	17 56 07.2	+0.6
PPLA				IAmb	IAmb	17 56 14.4	
	comp=Z,12nm,1.3s						
H21K	Melozitna Rive	52.32	28	P	P	17 56 07.5	+0.5
H21K				IAmb	IAmb	17 56 39.4	
	comp=Z,7.2nm,1.4s						
SKT	Skwentna	52.47	33	P	P	17 56 08.4	+0.2
KSH	Kashi	53.45	299	P	P	17 56 22.0	+6.2
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
H23K	Yukon River	53.68	28	P	P	17 56 15.5	-1.5
H23K				IAmb	IAmb	17 56 50.3	
	comp=Z,5.2nm,1.2s						
AAK	Ala-Archa	53.92	303	LR	LR	18 21 22.2	
	comp=Z,25nm,19.4s,baz=86,slow=38						
AAK	Ala-Archa	53.92	303	P	P	17 56 19.1	-0.2
AAK	Ala-Archa	53.92	303	P	P	17 56 19.1	-0.2
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TOLK	Toolik Lake Re	53.98	25	P	P	17 56 19.6	+0.4
TOLK				IAmb	IAmb	17 56 58.4	
	comp=Z,3.9nm,1.1s						
MDM	Murphy Dome	54.16	30	P	P	17 56 20.4	-0.1
MDM				IAmb	IAmb	17 56 40.1	
	comp=Z,6.5nm,1.3s						
WRH	Wood River Hil	54.19	30	P	P	17 56 20.7	0.0
AS31	Alice Springs	54.62	189	P	P	17 56 23.4	-0.9
ASAR	Alice Springs	54.62	189	P	P	17 56 24.4	+0.1
	comp=Z,1.4nm,0.7s,baz=0.2,slow=5.4,SNR=56						
	comp=Z,1.4nm,0.7s						
ASAR	Alice Springs	54.62	189	P	P	17 56 23.8	-0.6
IL31		54.72	30	P	P	17 56 24.7	+0.2
IL31				IAmb	IAmb	17 56 42.5	
	comp=Z,4.4nm,1.1s						
ILAR	Eielson Array	54.72	30	P	P	17 56 25.0	+0.4
	comp=Z,0.5nm,0.6s,baz=265,slow=6.3,SNR=11						
	comp=Z,0.5nm,0.6s						
ILAR	Eielson Array	54.72	30	P	P	17 56 24.5	-0.1
IL03	Eielson Array	54.74	30	P	P	17 56 24.3	-0.3
BRVK	Borovoye	55.20	316	P	P	17 56 28.1	-0.1
BRVK	Borovoye	55.20	316	P	P	17 56 28.1	-0.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BMAR	Burnt Mountain	55.75	27	P	P	17 56 33.3	+1.2
N25K	Chitina, Valde	55.76	34	P	P	17 56 33.0	+0.8
N25K				IAmb	IAmb	17 57 06.1	
	comp=Z,7.3nm,1.1s						
SCRK	Sand Creek	55.97	31	P	P	17 56 34.1	+0.3
PSA00	Pilbara Seismi	56.12	205	P	P	17 56 35.2	+0.2
PSA00				IAmb	IAmb	17 56 45.8	
	comp=Z,2.5nm,0.8s						
KK31	Karatay Array	56.69	304	P	P	17 56 39.4	+0.3
KK31				IAmb	IAmb	17 56 47.9	
	comp=Z,2.7nm,0.8s						
KK31	Karatay Array	56.69	304	P	P	17 56 39.4	+0.3
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KKAR	Karatay Array	56.69	304	P	P	17 56 39.4	+0.3
KKAR	Karatay Array	56.69	304	P	P	17 56 39.3	+0.2
KKAR				IAmb	IAmb	17 56 47.9	
	comp=Z,2.7nm,0.8s						
KKAR	Karatay Array	56.69	304	P	P	17 56 39.3	+0.2
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BCAR	Beaver Creek A	57.00	32	P	P	17 56 40.9	-0.1
NIL	Nilore	57.06	292	P	P	17 56 42.2	+0.3
NIL	Nilore	57.06	292	P	P	17 56 42.2	+0.3
NIL				pmax	pmax		
	comp=Z,14nm,0.7s						
GAR	Garm	57.83	299	P	P	17 56 47.3	0.0
MSVF	Nonsavu	59.51	139	LR	LR	18 19 43.6	
	comp=Z,49nm,19.5s,baz=336,slow=33						
ARU	Arti	61.34	321	LR	LR	18 23 49.0	
	comp=Z,28nm,19.0s,baz=168,slow=36						
ARU	Arti	61.34	321	P	P	17 57 11.1	+0.1
ARU	Arti	61.34	321	c iP	P	17 57 10.7	-0.3
ARU				*PP	sP	17 57 23.6	-0.3
ARU						17 57 48.2	
ARU				S	S	18 05 31.4	+2.5
ARU				SS	SS	18 09 32.4	+3.3
ARU				pmax	pmax		
	comp=Z,6.0nm,0.6s						
PALK	Pallekele	61.49	261	LR	LR	18 26 22.9	
	comp=Z,37nm,18.0s,baz=199,slow=39						
ABKAR	Akbulak array	62.31	313	P	P	17 57 17.7	0.0
ABKAR				IAmb	IAmb	17 57 30.4	
	comp=Z,3.2nm,0.9s						
ABKAR	Akbulak array	62.31	313	P	P	17 57 17.1	-0.5
ABKAR				PcP	PcP	17 57 58.1	+0.9
KIRV	Kirov	65.48	325	ceP	P	17 57 37.0	-1.3
RES	Resolute Bay	68.61	14	P	P	17 57 59.4	+1.4
	comp=Z,0.4nm,0.5s,baz=270,slow=6.1,SNR=1.7						
	comp=Z,0.4nm,0.5s						
BELG	Belogornoye	68.65	319	i P	P	17 57 57.8	-0.8
BELG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	Yellowknife Ar	69.13	29	P	P	17 58 02.0	+0.7
	comp=Z,0.3nm,0.8s,baz=297,slow=6.1,SNR=2.4						
	comp=Z,0.3nm,0.8s						
OBN	Obninsk	73.33	325	eP	P	17 58 25.4	-1.5
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
YBH	Yreka Blue Hor	74.03	51	LR	LR	18 25 07.8	
	comp=Z,32nm,19.4s,baz=268,slow=31						
FINES	FINESS Array B	74.52	333	P	P	17 58 34.3	+0.5
	comp=Z,2.6nm,0.6s,baz=62,slow=5.5,SNR=34						
	comp=Z,2.6nm,0.6s						
FINES	FINESS Array B	74.52	333	i P	P	17 58 34.7	+0.9
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KBZ	Khabaz	75.27	312	P	P	17 58 39.4	+1.0
	comp=Z,3.0nm,0.7s,baz=20,slow=1.3,SNR=6.6						
	comp=Z,3.0nm,0.7s						
KIV	Kislovodsk	75.29	312	eP	P	17 58 37.0	-1.7
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NVAR	Mina Array Bea	78.57	52	P	P	17 58 58.5	+1.0
	comp=Z,0.6nm,0.6s,baz=286,slow=6.0,SNR=5.9						
NVAR				LR	LR	18 30 19.8	
	comp=Z,34nm,20.1s,baz=323,slow=33						
	comp=Z,0.6nm,0.6s						
ELK	Elko	79.42	49	LR	LR	18 28 33.1	
	comp=Z,28nm,21.4s,baz=281,slow=31						
AKASG	Malin Array Be	79.47	323	P	P	17 59 01.7	-0.1
	comp=Z,0.4nm,0.3s,baz=50,slow=5.4,SNR=7.1						
	comp=Z,0.4nm,0.3s						
AKASG	Malin Array Be	79.47	323	ceP	P	17 59 02.0	+0.2
AKBB	Malin Array Si	79.47	323	i P	P	17 58 58.9	-2.9
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HFS	Hagfors	79.94	336	LR	LR	18 35 55.0	
	comp=Z,39nm,18.4s,baz=332,slow=37						
NB2	NORSAR Subarra	80.09	338	P	P	17 59 05.4	+0.3
	comp=Z,2.8nm,0.8s,baz=43,slow=5.9						
NOA	NORSAR Array B	80.09	338	P	P	17 59 05.5	+0.5
	comp=Z,1.0nm,0.6s,baz=42,slow=5.3,SNR=8.1						
NOA				LR	LR	18 37 48.5	
	comp=Z,28nm,18.8s,baz=35,slow=38						
	comp=Z,1.0nm,0.6s						
RLMT	Red Lodge	80.73	43	P	P	17 59 08.3	-0.8
PDAR	Pinedale Array	81.89	45	P	P	17 59 15.7	+0.4
	comp=Z,0.1nm,0.4s,baz=277,slow=0.7,SNR=2.8						
	comp=Z,0.1nm,0.4s						
SFJD	Kangerlussuaq	82.11	5	LR	LR	18 37 42.4	
	comp=Z,25nm,19.9s,baz=167,slow=37						
PFO	Pinyon Flats O	82.33	56	LR	LR	18 30 53.5	
	comp=Z,35nm,19.2s,baz=214,slow=32						
FRB	Frobisher Bay	82.82	13	P	P	17 59 20.3	+1.0
	comp=Z,0.4nm,0.3s,baz=291,slow=8.6,SNR=1.6						
	comp=Z,0.4nm,0.3s						
BR131	Keskin Array S	83.26	312	P	P	17 59 22.3	0.0
BR131				IAmb	IAmb	17 59 31.5	
	comp=Z,4.6nm,1.1s						
BR131	Keskin Array S	83.26	312	P	P	17 59 22.3	0.0
BR131				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BRTR	Keskin Array B	83.26	312	P	P	17 59 22.9	+0.7
	comp=Z,1.2nm,0.6s,baz=112,slow=3.9,SNR=8.9						
	comp=Z,1.2nm,0.6s						
BRTR	Keskin Array B	83.26	312	P	P	17 59 23.0	+0.7
RAYN	Ar Rayn	83.35	293	P	P	17 59 22.5	-0.4
RAYN	Ar Rayn	83.35	293	P	P	17 59 22.5	-0.4
RAYN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ANMO	Albuquerque	88.42	50	LR	LR	18 40 30.3	
	comp=Z,33nm,18.5s,baz=38,slow=36						
TXAR	Lajitas Array	93.71	53	P	P	18 00 14.3	+1.7
	comp=Z,0.3nm,0.6s,baz=316,slow=2.5,SNR=3.1						
	comp=Z,0.3nm,0.6s						
TORD	Torodi Ar. Bea	121.87	313	PKP	PKPdf	18 05 49.5	-0.7
	comp=Z,0.4nm,0.8s,baz=15,slow=3.2,SNR=1.9						

JMA 03 17:47:43.0±0.1**,36°.6N**±0°.3×**139°.4E**±0°.2**,h7**^{km}**,MV-0.3**/6**,**
TOCHIGI GUNMA BORDER,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAG	Ashikaga	0.20	172	eS	Sg	17 47 50.0	+0.4

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*ISK **03** 17:49:58.6, 39°.50N×26°.04E, h6^{km}, ML2.7/20*
*DDA **03** 17:49:59.2±0.0, 39°.50N×26°.07E, h15^{km}±1^{km}, ML2.7*
*ATH **03** 17:49:59.5, 39°.51N×26°.05E, h10^{km}±2^{km}, ML2.6/7, Error ellipse: s-maj=2.3km s-min=0.8km az=204.0*
*THE **03** 17:49:59.4, 39°.50N×26°.04E, h5^{km}, ML2.6/7, Error ellipse: s-maj=0.7km s-min=0.2km az=179.0*
ISC 03 17:49:59.1±0.8**,39°.50N**±0°.01×**26°.05E**±0°.02**,h10**^{km}±5^{km}**,**
n68,σ**0^{s}.46**/108**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.07	86	P	Pg	17 50 01.4	+0.1
KOCA				S	Sg	17 50 02.8	-0.2
GPNR	Gulpinar-Canak	0.08	121	Pg	Pg	17 50 01.1	-0.3
GPNR				Sg	Sg	17 50 02.8	-0.2
PRK	Paraskevi	0.31	145	P	Pg	17 50 05.5	+0.3
PRK				S	Sg	17 50 10.2	+0.8
	2µm,0.4s						
PRK	Paraskevi	0.31	145	P	Pg	17 50 05.6	+0.3
PRK				S	Sg	17 50 09.6	+0.2
PRK				AML	AML	17 50 10.5	
	comp=E,4093µm,0.5s						
PRK				AML	AML	17 50 10.7	
	comp=N,3632µm,0.3s						
SIGR	SIGRI	0.32	207	P	Pg	17 50 05.7	+0.2
SIGR				S	Sg	17 50 10.5	+0.6
	comp=N,2µm,0.3s						
SIGR	SIGRI	0.32	207	Pg	Pg	17 50 05.5	0.0
SIGR				Sg	Sg	17 50 10.4	+0.6
SIGR	SIGRI	0.32	207	P	Pg	17 50 05.8	+0.2
SIGR				S	Sg	17 50 10.5	+0.6
SIGR				AML	AML	17 50 11.0	
	comp=N,5573µm,0.4s						
SIGR				AML	AML	17 50 11.1	
	comp=E,4157µm,0.2s						
BOZC	Bozcaada	0.34	1	Pg	Pg	17 50 06.2	+0.2
BOZC				Sg	Sg	17 50 11.4	+0.8
BOZC	Bozcaada	0.34	1	P	Pg	17 50 06.2	+0.2
BOZC				P	Pg	17 50 06.2	+0.2
BOZC				i AML	AML	17 50 11.0	
	comp=E,1µm,0.3s						
BOZC				i AML	AML	17 50 11.0	
	comp=E,651nm,0.2s						
BOZC				i AML	AML	17 50 11.0	
	comp=E,1µm,0.3s						
BOZC				i AML	AML	17 50 11.0	
	comp=E,697nm,0.3s						
BOZC				S	Sg	17 50 11.4	+0.8
BOZC				S	Sg	17 50 11.4	+0.8
EZN	Ezine	0.39	33	P	Pg	17 50 06.9	0.0
EZN				S	Sg	17 50 12.7	+0.6
	comp=E,928nm,0.2s						
EZN	Ezine	0.39	33	Pg	Pg	17 50 06.9	0.0
EZN				Sg	Sg	17 50 12.5	+0.4

BAYC	**CANAKKALE_Bayr**	**0.46**	**58**	P	**Pg**	**17 50 08.0**	**-0.1**
BAYC				*i* AML	AML	17 50 14.0	
	comp=E,563nm,0.4s						
BAYC				*i* AML	AML	17 50 14.0	
	comp=E,480nm,0.2s						
BAYC				S	**Sg**	**17 50 14.1**	**-0.1**
AYVA	**Ayvalik**	**0.54**	**111**	P	**Pg**	**17 50 09.8**	**+0.3**
AYVA				S	**Sg**	**17 50 17.2**	**+0.7**
ECEA	**Canakkale, Ece**	**0.56**	**10**	P	**Pg**	**17 50 10.2**	**+0.3**
ECEA				S	**Sb**	**17 50 18.4**	**-0.6**
ECEA				*i* AML	AML	17 50 19.0	
	comp=E,559nm,0.6s						
ECEA				*i* AML	AML	17 50 19.0	
	comp=E,620nm,0.4s						
COMU	**Canakkale**	**0.69**	**29**	Pg	**Pg**	**17 50 12.3**	**-0.1**
GOKA	**anakkale-Gk**	**0.70**	**351**	P	**Pg**	**17 50 12.6**	**-0.1**
GOKA				S	**Sb**	**17 50 22.9**	**-0.3**
GOKA				*i* AML	AML	17 50 28.0	
	comp=E,297nm,0.3s						
GADA	**Gvkgeada**	**0.70**	**351**	Pg	**Pg**	**17 50 12.7**	**0.0**
LIA	**Limnos Island**	**0.78**	**301**	P	**Pg**	**17 50 14.3**	**+0.2**
LIA				S	**Sb**	**17 50 25.3**	**-0.1**
	comp=E,835nm,0.3s						
LIA	**Limnos Island**	**0.78**	**301**	P	**Pg**	**17 50 14.2**	**+0.2**
LIA				S	**Sg**	**17 50 24.9**	**+0.7**
LIA				AML	AML	17 50 27.9	
	comp=E,2064µm,0.4s						
LIA				AML	AML	17 50 29.1	
	comp=N,1261µm,0.3s						
DKL	**Dikili**	**0.79**	**122**	Pg	**Pg**	**17 50 14.6**	**+0.2**
BUHA	**Balikesir, Bur**	**0.80**	**89**	P	**Pg**	**17 50 14.5**	**0.0**
BUHA				S	**Sb**	**17 50 25.9**	**-0.1**
KARB	**zmir-Karabur**	**0.88**	**161**	P	**Pb**	**17 50 16.8**	**+0.3**
KARB				S	**Sb**	**17 50 28.7**	**+0.3**
KARB				*i* AML	AML	17 50 30.0	
	comp=N,311nm,0.2s						
KARB				*i* AML	AML	17 50 31.0	
	comp=N,357nm,0.3s						
CANM	**Can-anakkale**	**0.93**	**56**	Pg	**Pg**	**17 50 17.2**	**+0.1**
GELI	**Tayfur-Gelibol**	**0.96**	**20**	Pg	**Pg**	**17 50 17.3**	**-0.3**
ZEDA	**zmir-Bergama**	**0.96**	**123**	P	**Pn**	**17 50 18.6**	**-0.1**
ZEDA				S	**Sb**	**17 50 31.4**	**+0.7**
PSRA	**Psara**	**1.03**	**202**	P	**Pb**	**17 50 19.6**	**+0.6**
PSRA				S	**Sn**	**17 50 33.9**	**-0.1**
PSRA				AML	AML	17 50 37.2	
	comp=N,2423µm,0.2s						
PSRA				AML	AML	17 50 39.3	
	comp=E,2479µm,0.3s						
LPK	**Lapseki**	**1.03**	**32**	Pg	**Pg**	**17 50 18.7**	**-0.3**
SMTH	**Samothraki Isl**	**1.05**	**338**	P	**Pg**	**17 50 18.9**	**-0.4**
SMTH				S	**Sb**	**17 50 34.0**	**+0.7**
	comp=E,88nm,0.2s						
SMTH	**Samothraki Isl**	**1.05**	**338**	P	**Pg**	**17 50 19.1**	**-0.2**
SMTH				S	**Sg**	**17 50 32.8**	**-0.2**
SMTH				AML	AML	17 50 37.2	
	comp=N,224µm,0.2s						
SMTH				AML	AML	17 50 37.3	
	comp=E,188µm,0.4s						
CAVK	**Edirne/Enez-Ca**	**1.20**	**4**	P	**Pb**	**17 50 21.5**	**-0.4**
CAVK				S	**Sn**	**17 50 38.5**	**+0.2**
URLA	**Izmir**	**1.21**	**159**	Pn	**Pn**	**17 50 21.7**	**-0.6**
URLA	**Izmir**	**1.21**	**159**	P	**Pn**	**17 50 21.6**	**-0.7**
URLA				S	**Sb**	**17 50 37.4**	**-0.6**
URLA				*i* AML	AML	17 50 40.0	
	comp=E,148nm,0.3s						
URLA				*i* AML	AML	17 50 41.0	
	comp=E,153nm,0.4s						
ERIK	**Erikli-Kesan**	**1.23**	**17**	Pn	**Pn**	**17 50 21.8**	**-0.6**
BALY	**Balya**	**1.24**	**78**	P	**Pn**	**17 50 22.3**	**-0.3**
BALY				S	**Sb**	**17 50 38.3**	**-0.5**
BALY				*i* AML	AML	17 50 40.0	
	comp=E,264nm,0.6s						
BALY				*i* AML	AML	17 50 41.0	
	comp=E,127nm,0.5s						
ENEZ	**Enez**	**1.24**	**4**	P	**Pn**	**17 50 22.3**	**-0.3**
ENEZ				S	**Sn**	**17 50 39.9**	**+0.5**
	comp=E,205nm,0.4s						
ENEZ	**Enez**	**1.24**	**4**	Pn	**Pn**	**17 50 22.5**	**-0.1**
STEP	**BALIKESIR_Sava**	**1.30**	**95**	P	**Pn**	**17 50 23.5**	**+0.1**
STEP				S	**Sn**	**17 50 41.1**	**+0.1**
ZEYE	**Izmir, Urla-Ze**	**1.31**	**164**	P	**Pn**	**17 50 22.4**	**-1.1**
ZEYE				S	**Sb**	**17 50 40.2**	**-0.4**
ZEYE				*i* AML	AML	17 50 43.0	
	comp=E,116nm,0.5s						
ZEYE				*i* AML	AML	17 50 43.0	
	comp=E,123nm,0.6s						
ZEYE				*i* AML	AML	17 50 44.0	
	comp=E,105nm,0.3s						
KRBG	**Karabiga-Canak**	**1.31**	**47**	Pn	**Pn**	**17 50 23.6**	**0.0**
BLCB	**Balcova**	**1.36**	**145**	Pn	**Pn**	**17 50 24.5**	**+0.3**
KNL	**Balıkesir**	**1.38**	**55**	P	**Pn**	**17 50 24.4**	**-0.1**
KNL				S	**Sg**	**17 50 43.4**	**-0.1**
KNL				*i* AML	AML	17 50 47.0	
	comp=E,135nm,0.4s						
KNL				*i* AML	AML	17 50 48.0	
	comp=E,98nm,0.6s						
GONE	**Gonen-Balikesi**	**1.38**	**66**	Pn	**Pn**	**17 50 24.9**	**+0.4**
ALN	**Alexandroupoli**	**1.40**	**0**	P	**Pn**	**17 50 24.2**	**-0.6**
ALN				S	**Sn**	**17 50 43.7**	**+0.4**
	comp=E,98nm,0.4s						
ALN	**Alexandroupoli**	**1.40**	**0**	Pn	**Pn**	**17 50 25.1**	**+0.3**
ALN	**Alexandroupoli**	**1.40**	**0**	P	**Pn**	**17 50 24.4**	**-0.4**
ALN				AML	AML	17 50 44.9	
	comp=E,241µm,0.4s						
ALN				AML	AML	17 50 45.8	
	comp=N,147µm,0.5s						
KESN	**Edirne-Kesan**	**1.41**	**20**	P	**Pn**	**17 50 25.1**	**-0.2**
KESN				S	**Sb**	**17 50 43.9**	**-0.2**
KESN				*i* AML	AML	17 50 50.0	
	comp=N,95nm,0.2s						
KESN				*i* AML	AML	17 50 51.0	
	comp=N,100nm,0.2s						
BALB	**Balikesir**	**1.43**	**84**	Pn	**Pn**	**17 50 25.3**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.47**	**36**	Pn	**Pn**	**17 50 26.3**	**+0.5**
BKES	**Balkesir-Mer**	**1.47**	**80**	P	**Pn**	**17 50 26.1**	**+0.3**
BKES				S	**Sn**	**17 50 45.1**	**-0.1**
BKES				*i* AML	AML	17 50 50.0	
	comp=N,81nm,0.6s						
THAS	**Thassos island**	**1.50**	**318**	P	**Pn**	**17 50 25.8**	**-0.4**
THAS	**Thassos island**	**1.50**	**318**	P	**Pn**	**17 50 25.7**	**-0.5**
THAS				S	**Sn**	**17 50 44.7**	**-1.2**
AKHS	**Akhisar**	**1.51**	**114**	P	**Pn**	**17 50 26.1**	**-0.2**
AKHS				S	**Sn**	**17 50 46.1**	**+0.1**
DGB	**zmir**	**1.58**	**155**	P	**Pn**	**17 50 26.5**	**-0.8**
DGB				S	**Sn**	**17 50 47.3**	**-0.6**
EDC	**Edincik**	**1.64**	**58**	Pn	**Pn**	**17 50 27.8**	**-0.2**
UKOP	**Uzunkopru-Edir**	**1.69**	**15**	Pn	**Pn**	**17 50 29.4**	**+0.6**
RDO	**Rodhopi**	**1.69**	**347**	P	**Pn**	**17 50 28.4**	**-0.4**
RDO	**Rodhopi**	**1.69**	**347**	Pn	**Pn**	**17 50 29.3**	**+0.5**
RDO	**Rodhopi**	**1.69**	**347**	P	**Pn**	**17 50 28.9**	**+0.1**
KYMI	**Kymi, Euboea I**	**1.74**	**241**	P	**Pn**	**17 50 28.5**	**-1.0**
KYMI	**Kymi, Euboea I**	**1.74**	**241**	P	**Pn**	**17 50 28.5**	**-1.0**
KYMI				AML	AML	17 50 58.3	
	comp=E,109µm,0.7s						
KYMI				AML	AML	17 50 59.0	
	comp=N,123µm,0.8s						
BAND	**Balkesir-Ban**	**1.80**	**61**	P	**Pn**	**17 50 29.9**	**-0.3**
BAND				S	**Sn**	**17 50 52.4**	**-0.8**
DURS	**Dursunbey**	**1.88**	**86**	P	**Pn**	**17 50 31.0**	**-0.4**
DURS				S	**Sn**	**17 50 54.7**	**-0.6**
KAVA	**Kavala**	**1.90**	**322**	P	**Pn**	**17 50 31.4**	**-0.3**
KAVA	**Kavala**	**1.90**	**322**	P	**Pn**	**17 50 31.4**	**-0.3**
SRS	**Serrai**	**2.48**	**312**	P	**Pn**	**17 50 39.4**	**-0.2**
NVR	**Nevrokopi**	**2.49**	**319**	P	**Pn**	**17 50 40.6**	**+0.8**
KNT	**Kendrikon**	**2.92**	**306**	P	**Pn**	**17 50 45.7**	**-0.1**
KNT	**Kendrikon**	**2.92**	**306**	P	**Pn**	**17 50 45.9**	**+0.1**

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*IDC **03** 18:15:00.4±1.0, 8°.62S×53°.25W, h0^{km}, mb3.5/3, mbtmp3.8/6, ML3.6/3, Error ellipse: s-maj=32.6km s-min=28.7km az=85.0*

*VAO **03** 18:15:01.2±0.3, 8°.60S×53°.29W, h0^{km}, mbR3.9*

ISC 03 18:15:01.8±0.7, **8°.66S**±0°.07×**53°.28W**±0°.06, **h10**^{km}, **n21**, σ**1^{s}.95**/26, **mb3.6**/3, **Brazil**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NPGB	**Novo Progresso**	**2.61**	**308**	*e*P	**Pn**	**18 15 44.3**	**+0.3**
CLDB	**Colider**	**3.31**	**228**	*e*P	**Pn**	**18 15 56.2**	**+2.4**
CLDB				*e*S	**Sn**	**18 16 35.5**	**+2.3**
SNDB	**Serra Nova Dou**	**3.83**	**149**	*e*P	**Pn**	**18 16 03.1**	**+2.2**
SNDB				*e*S	**Sn**	**18 16 49.4**	**+3.3**
PRPB	**Parauapebas**	**4.23**	**55**	*e*P	**Pn**	**18 16 07.3**	**+0.9**
PDRB	**Porto dos Gac**	**4.49**	**229**	*e*P	**Pn**	**18 16 11.4**	**+1.4**
PDRB				*e*S	**Sn**	**18 17 03.9**	**+1.6**
ITTB	**Itaituba**	**4.91**	**330**	*e*P	**Pn**	**18 16 15.8**	**+0.1**
SMTB	**Santa Maria do**	**5.63**	**93**	*e*P	**Pn**	**18 16 26.2**	**+0.6**
MALB	**Monte Alegre**	**6.83**	**352**	*e*P	**Pn**	**18 16 41.5**	**-0.5**
ARAG	**Araguaiana, MT**	**7.15**	**169**	*e*P	**Pn**	**18 16 46.7**	**+0.2**
TMAB	**Tom-Au,PA,Br**	**8.10**	**40**	*e*P	**Pn**	**18 17 00.0**	**+0.4**
MCPB	**Macapa, AP**	**8.33**	**8**	*e*P	**Pn**	**18 17 01.0**	**-1.7**
BDFB	**Brasilia**	**8.64**	**144**	Pn	**Pn**	**18 17 05.8**	**-1.3**
	0.3nm,0.3s,baz=324,slow=17,SNR=1.5						
BDFB				Sn	**Sn**	**18 18 42.1**	**-2.7**
	1.9nm,0.3s,baz=81,slow=19,SNR=8.2						
BDFB				Lg	Lg	18 19 28.1	
	5.0nm,0.3s,baz=240,slow=20,SNR=6.6						
	1.8nm,0.4s						
BDFB	**Brasilia**	**8.64**	**144**	*e*P	**Pn**	**18 17 08.0**	**+0.9**
SDBA	**SAO DESIDERIO**	**9.04**	**115**	*e*P	**Pn**	**18 17 13.1**	**+0.6**
SIV	**San Ignacio**	**10.54**	**225**	Pn	**Pn**	**18 17 32.8**	**-0.2**
	0.1nm,0.3s,baz=59,slow=13,SNR=19						
SIV				Sn	**Sn**	**18 19 25.5**	**-5.7**
	0.1nm,0.3s,baz=139,slow=16,SNR=4.6						
SIV				Lg	Lg	18 20 30.2	
	0.2nm,0.3s,baz=113,slow=20,SNR=3.2						
	3.9nm,0.5s						
MDP	**Montagnes des**	**13.68**	**3**	Pn	**Pn**	**18 18 14.3**	**-1.7**
	0.3nm,0.3s,baz=176,slow=13,SNR=0.4						
MDP				Sn	Sn	18 20 37.7	-11
	0.5nm,0.3s,baz=90,slow=19,SNR=1.4						
MDP				Lg	Lg	18 21 59.5	
	0.5nm,0.3s,baz=76,slow=19,SNR=1.8						
	12nm,1.0s						
TORD	**Torodi Ar. Bea**	**58.74**	**69**	P	**P**	**18 25 00.6**	**+0.2**
	0.6nm,0.5s,baz=246,slow=7.8,SNR=4.8						
	0.6nm,0.5s						
TXAR	**Lajitas Array**	**61.47**	**310**	P	**P**	**18 25 19.6**	**+0.5**
	0.1nm,0.4s,baz=119,slow=7.4,SNR=3.5						
	0.1nm,0.4s						
YKA	**Yellowknife Ar**	**84.96**	**336**	P	**P**	**18 27 36.6**	**-0.4**
	0.2nm,0.5s,baz=104,slow=5.3,SNR=1.5						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**147.12**	**192**	PKPbc	**PKPdf**	**18 34 46.4**	**+2.5**
	1.3nm,0.5s,baz=154,slow=3.4,SNR=46						
WRA	**Warramunga Arr**	**150.61**	**195**	PKPbc	**PKPbc**	**18 34 55.0**	**-0.1**
	1.3nm,0.7s,baz=168,slow=2.2,SNR=16						

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*DDA **03** 18:36:37.7±0.0, 37°.63N×38°.35E, h7^{km}±3^{km}, ML2.0*

*ISK **03** 18:36:37.1, 37°.51N×38°.57E, h27^{km}, ML2.1/6*

ISC 03 18:36:36.5±1.0, **37°.61N**±0°.04×**38°.46E**±0°.03, **h15**^{km}±8^{km}, **n14**, σ**0^{s}.88**/24, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AZEY	**Adyaman-Merk**	**0.26**	**321**	P	**Pg**	**18 36 42.2**	**-0.1**
AZEY				S	**Sg**	**18 36 45.5**	**-0.7**
URFA	**Urfa**	**0.33**	**120**	Pg	**Pg**	**18 36 43.7**	**+0.3**
URFA				Sg	**Sg**	**18 36 48.2**	**0.0**
AKCA	**Adyaman/G¶l**	**0.64**	**287**	P	**Pg**	**18 36 48.5**	**-0.6**
AKCA				S	**Sg**	**18 36 57.2**	**-0.5**
GZT	**Gaziantep**	**0.76**	**251**	P	**Pg**	**18 36 50.9**	**-0.3**
GZT				S	**Sg**	**18 37 01.6**	**+0.3**
GZT				*i* AML	AML	18 37 05.0	
	comp=N,79nm,0.2s						
AKCD	**Akcadag**	**0.81**	**328**	P	**Pb**	**18 36 52.2**	**-0.1**
AKCD				S	**Sb**	**18 37 02.2**	**-0.9**
NZIP	**Nizip/Gaziante**	**0.84**	**228**	P	**Pn**	**18 36 53.8**	**-0.1**
NZIP				S	**Sg**	**18 37 04.6**	**+0.6**
NZIP				*i* AML	AML	18 37 07.0	
	comp=E,45nm,0.6s						
GAZ	**Gaziantep**	**1.08**	**247**	Pn	**Pb**	**18 36 57.5**	**+0.5**
GAZ				Sn	**Sn**	**18 37 12.6**	**+0.6**
DARE	**Darende-Malaty**	**1.23**	**322**	Pn	**Pb**	**18 37 00.9**	**+1.3**
HCB	**Kahramanmara**	**1.26**	**258**	P	**Pn**	**18 36 59.2**	**-0.4**
HCB				S	**Sb**	**18 37 14.8**	**-1.3**
DYBB	**Diyarbakir**	**1.38**	**75**	Pn	**Pn**	**18 37 00.2**	**-1.0**
KUZU	**Kuzuini**	**1.38**	**233**	P	**Pb**	**18 37 03.0**	**+0.9**
KUZU				S	**Sg**	**18 37 21.4**	**+0.2**
KUZU				*i* AML	AML	18 37 23.0	
	comp=E,85nm,0.2s						
ARPR	**Arapgir-MALATY**	**1.49**	**356**	Pn	**Pn**	**18 37 04.1**	**+1.2**
KAMA	**Osmaniye**	**1.49**	**254**	P	**Pb**	**18 37 04.3**	**+0.4**
KAMA				S	**Sn**	**18 37 20.8**	**-1.2**
SARI	**SarD1z-Kayseri**	**1.80**	**297**	Pn	**Pn**	**18 37 09.1**	**+1.9**

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*ISK **03** 18:36:50.7, 37°.56N×35°.67E, h5^{km}, ML1.9/7*

*DDA **03** 18:36:51.7±0.0, 37°.49N×35°.66E, h7^{km}±3^{km}, ML1.9*

ISC 03 18:36:51.2±0.9, **37°.52N**±0°.04×**35°.71E**±0°.03, **h12**^{km}±6^{km}, **n15**, σ**1^{s}.77**/23, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.10**	**111**	Pg	**Pg**	**18 36 54.5**	**+0.4**
KOZT				Sg	**Sg**	**18 36 56.8**	**+0.6**
AKO	**Adana**	**0.21**	**255**	P	**Pg**	**18 36 56.1**	**+0.3**
AKO				S	**Sg**	**18 36 58.4**	**-0.6**
CEYT	**Ceyhan**	**0.51**	**176**	Pg	**Pg**	**18 37 01.9**	**+0.8**
ANDN	**Andirin**	**0.51**	**83**	P	**Pg**	**18 37 02.1**	**+0.8**
ANDN				S	**Sb**	**18 37 10.7**	**+1.0**
SAIM	**ADANA**	**0.55**	**33**	P	**Pb**	**18 37 03.5**	**+0.6**
SAIM				S	**Sb**	**18 37 11.2**	**+0.5**
SAIM				*i* AML	AML	18 37 13.0	
	comp=E,73nm,0.2s						
KARA	**Karaisali**	**0.58**	**244**	Pg	**Pg**	**18 37 02.2**	**-0.3**
KARA				Sg	**Sb**	**18 37 10.6**	**-0.9**
YURE	**YUREGIR**	**0.69**	**185**	P	**Pg**	**18 37 04.4**	**-0.2**
YURE				S	**Sb**	**18 37 14.7**	**0.0**
KAMA	**Osmaniye**	**0.83**	**113**	S	**Sn**	**18 37 23.5**	**+2.4**
DED	**Mersin**	**0.91**	**233**	P	**Pb**	**18 37 09.5**	**+0.5**
DED				S	**Sn**	**18 37 23.6**	**+0.6**
HCB	**Kahramanmara**	**0.97**	**100**	S	**Sg**	**18 37 15.8**	**-6.9**
SARI	**SarD1z-Kayseri**	**1.05**	**32**	Pg	**Pg**	**18 37 10.9**	**-0.6**
KERG	**Konya-Eregli**	**1.26**	**266**	P	**Pn**	**18 37 15.6**	**+0.7**
KERG				S	**Sn**	**18 37 32.3**	**+0.5**
GULA	**Gulagac**	**1.43**	**306**	Pn	**Pn**	**18 37 16.9**	**-0.2**
YESY	**Yesilyurt**	**1.58**	**280**	Pn	**Pn**	**18 37 19.6**	**+0.4**
KIZK	**Mersin**	**1.62**	**231**	Pn	**Pb**	**18 37 20.8**	**-0.3**

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*IDC **03** 19:04:00.6±1.6, 22°.79N×12°.20W, h0^{km}, mb3.6/5, mbtmp3.7/7, ML3.8/2, MS2.8/1, Error ellipse: s-maj=43.9km s-min=27.0km az=65.0*

ISC 03 19:04:00.5±1.3, **22°.4N**±0°.1×**12°.0W**±0°.2, **h10**^{km}, **n13**, σ**1^{s}.88**/11, **mb3.8**/5, **Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBTS	**Babate**	**8.82**	**210**	Lg	Lg	19 08 41.3	
	4.1nm,0.3s,baz=135,slow=23,SNR=1.5						
MDT	**Midelt**	**12.26**	**31**	LR	LR	19 11 35.2	
	comp=Z,46nm,19.9s,baz=359,slow=38						
TORD	**Torodi Ar. Bea**	**15.96**	**123**	Pn	**P**	**19 07 49.2**	**+0.3**
	0.3nm,0.3s,baz=313,slow=11,SNR=12						
TORD				Sn	**Sn**	**19 10 41.3**	**-1.2**
	0.2nm,0.3s,baz=304,slow=24,SNR=3.4						
TORD				Lg	Lg	19 12 39.2	
	baz=314,slow=27						
	1.0nm,0.6s						
DBIC	**Dimbokro**	**17.10**	**155**	Pn	**P**	**19 08 04.4**	**+2.9**
	0.3nm,0.3s,baz=342,slow=12,SNR=4.6						
DBIC				Sn	**Sn**	**19 11 07.4**	**-2.8**
	0.1nm,0.3s,baz=67,slow=23,SNR=2.2						
DBIC				Lg	Lg	19 13 10.6	
	baz=84,slow=22						
	1.9nm,0.7s						
I17CI	**DIMBOKRO INFRA**	**17.10**	**155**	I	I	20 52 10.0	
	baz=338,slow=317,SNR=1.6						
I48TN	**KESRA INFRASON**	**22.86**	**50**	I	I	21 15 00.0	
	0.1nm,1.0s,baz=239,slow=299,SNR=1.0						
GERES	**GERESS Array B**	**33.35**	**31**	P	**P**	**19 10 37.5**	**-1.3**
	0.8nm,0.7s,baz=209,slow=11,SNR=4.8						
	0.8nm,0.7s						
BRTR	**Keskin Array B**	**42.26**	**55**	P	**P**	**19 11 56.4**	**+2.1**
	0.4nm,0.8s,baz=251,slow=7.5,SNR=3.7						
	0.4nm,0.8s						
FINES	**FINESS Array B**	**46.97**	**24**	P	**P**	**19 12 30.3**	**-1.1**
	1.5nm,0.8s,baz=230,slow=6.6,SNR=7.1						
	1.5nm,0.8s						
YKA	**Yellowknife Ar**	**75.99**	**332**	P	**P**	**19 15 46.3**	**-1.2**
	0.1nm,0.5s,baz=68,slow=6.6,SNR=2.4						
	0.1nm,0.5s						
MKAR	**Makanchi Array**	**76.84**	**45**	P	**P**	**19 15 53.5**	**+0.8**
	0.5nm,0.5s,baz=292,slow=6.8,SNR=10						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**148.56**	**92**	PKPbc	**PKiKP**	**19 23 51.0**	**+1.0**
	0.7nm,0.7s,baz=295,slow=2.3,SNR=3.2						
ASAR	**Alice Springs**	**148.65**	**99**	PKPbc	**PKPab**	**19 23 51.5**	**-0.8**
	0.8nm,0.7s,baz=286,slow=2.1,SNR=12						

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*NOU **03** 19:09:06.4, 40°.32S×176°.24E, h88^{km}, MLv3.6/9, North Island, New Zealand*

*WEL **03** 19:09:08.8±0.5, 40°S±2°×17°6E±°, h34^{km}±5^{km}, M3.5/14, ML3.9/14, MLv3.5/14, Error ellipse: s-maj=0.0km s-min=0.0km az=101.6, confirmed*

ISC 03 19:09:09.6±1.0, **40°.17S**±0°.02×**175°.93E**±0°.02, **h34**^{km}±2^{km}, **n104**, σ**1^{s}.12**/117, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSZ	**Takapari Road**	**0.11**	**13**	P	**Pb**	**19 09 16.0**	**+0.4**
TSZ				S	**Sb**	**19 09 21.1**	**+1.4**
DVHZ	**Dannevirke**	**0.23**	**126**	P	**Pb**	**19 09 16.8**	**+0.2**
DVHZ				S	**Sb**	**19 09 22.7**	**+1.4**
POWZ	**Post Office Ro**	**0.26**	**209**	P	**Pb**	**19 09 17.4**	**+0.4**
POWZ				S	**Sb**	**19 09 23.5**	**+1.6**
PNHZ	**Pukenui**	**0.33**	**40**	P	**Pn**	**19 09 17.9**	**-0.2**
PNHZ				S	**Sb**	**19 09 24.8**	**+1.4**
PRWZ	**Pori Road**	**0.39**	**175**	P	**Pn**	**19 09 19.0**	**0.0**
PRWZ				S	**Sn**	**19 09 26.7**	**+1.6**
WPHZ	**Waipukurau**	**0.41**	**76**	P	**Pn**	**19 09 19.0**	**-0.2**
WPHZ				S	**Sn**	**19 09 26.9**	**+1.4**
OHWZ	**Ohakea**	**0.47**	**265**	P	**Pn**	**19 09 20.8**	**+0.8**
OHWZ				S	**Sn**	**19 09 29.9**	**+2.7**
ANWZ	**Angora Road**	**0.51**	**125**	P	**Pn**	**19 09 20.4**	**-0.1**
ANWZ				S	**Sn**	**19 09 29.9**	**+1.7**
PRHZ	**Porangahau**	**0.55**	**101**	P	**Pb**	**19 09 20.9**	**-0.1**
PRHZ				S	**Sn**	**19 09 30.6**	**+1.5**
MRZ	**Mangatainoka R**	**0.56**	**208**	P	**Pb**	**19 09 21.1**	**-0.1**
BFZ	**Birch Farm**	**0.57**	**155**	P	**Pb**	**19 09 21.2**	**-0.2**
BFZ	**Birch Farm**	**0.57**	**155**	P	**Pb**	**19 09 20.8**	**-0.5**
BFZ				S	**Sn**	**19 09 30.8**	**+1.2**
TIWZ	**Tintock**	**0.61**	**183**	P	**Pb**	**19 09 21.8**	**-0.2**
TIWZ				S	**Sb**	**19 09 31.2**	**+0.7**
BHHZ	**Black Hill Sta**	**0.68**	**9**	P	**Pb**	**19 09 22.9**	**-0.4**
BHHZ				S	**Sb**	**19 09 32.9**	**+0.4**
PXZ	**Pawanui**	**0.73**	**80**	P	**Pb**	**19 09 23.0**	**-1.0**
CPWZ	**Castlepoint**	**0.77**	**164**	P	**Pb**	**19 09 24.0**	**-0.7**
MOVZ	**Moawhango**	**0.77**	**350**	P	**Pb**	**19 09 24.2**	**-0.6**
MOVZ				S	**Sb**	**19 09 34.9**	**0.0**
HOWZ	**Holdsworth Sta**	**0.80**	**203**	P	**Pn**	**19 09 23.9**	**-0.6**
HOWZ				S	**Sb**	**19 09 34.8**	**-0.8**
KAHZ	**Kahuranaki**	**0.82**	**63**	P	**Pb**	**19 09 24.4**	**-1.0**
KWHZ	**Kaweka Forest**	**0.83**	**27**	P	**Pb**	**19 09 25.0**	**-0.8**
WAZ	**Wanganui**	**0.83**	**299**	P	**Pb**	**19 09 26.0**	**+0.2**
MTVZ	**Mangateitei**	**0.86**	**336**	P	**Pb**	**19 09 25.7**	**-0.4**
OGWZ	**Otaki Gorge**	**0.87**	**221**	P	**Pb**	**19 09 25.3**	**-1.1**
WNVZ	**Wahianoa**	**0.88**	**343**	P	**Pb**	**19 09 26.0**	**-0.6**
TRVZ	**Turoa**	**0.92**	**341**	P	**Pb**	**19 09 26.6**	**-0.6**
WHVZ	**Whangaehu Hut**	**0.92**	**343**	P	**Pb**	**19 09 26.7**	**-0.6**
TUVZ	**Tukino**	**0.92**	**347**	P	**Pb**	**19 09 26.8**	**-0.5**
MCHZ	**McNeill Hill**	**0.93**	**40**	P	**Pb**	**19 09 26.4**	**-1.0**
DRZ	**Dome Shelter**	**0.93**	**342**	P	**Pb**	**19 09 27.3**	**-0.3**
TMWZ	**Te Maipa**	**0.94**	**182**	P	**Pn**	**19 09 25.7**	**-0.8**
FWVZ	**Far West T-bar**	**0.96**	**342**	P	**Pb**	**19 09 27.2**	**-0.7**
PKVZ	**Pokaka**	**0.98**	**333**	P	**Pb**	**19 09 27.5**	**-0.7**
SNVZ	**South Ngauruho**	**1.00**	**347**	P	**Pb**	**19 09 28.1**	**-0.6**
CKHZ	**Cape Kidnapper**	**1.02**	**60**	P	**Pn**	**19 09 27.0**	**-0.6**
NGZ	**Ngauruhoe**	**1.02**	**346**	P	**Pb**	**19 09 28.4**	**-0.6**
OTVZ	**Oturere**	**1.02**	**348**	P	**Pb**	**19 09 28.3**	**-0.7**
KIW	**Kapiti Island**	**1.04**	**228**	P	**Pn**	**19 09 27.7**	**-0.2**
MTW	**Mount Morrison**	**1.04**	**198**	P	**Pn**	**19 09 26.9**	**-1.0**
ETVZ	**East Tongariro**	**1.04**	**351**	P	**Pb**	**19 09 28.4**	**-0.9**
NNVZ	**North Ngauruho**	**1.06**	**347**	P	**Pb**	**19 09 28.9**	**-0.8**
TMVZ	**Te Maari**	**1.06**	**351**	P	**Pb**	**19 09 28.7**	**-1.0**
WTVZ	**West Tongariro**	**1.08**	**346**	P	**Pb**	**19 09 29.1**	**-0.9**
NTVZ	**North Tongarir**	**1.08**	**350**	P	**Pb**	**19 09 29.1**	**-0.9**
BKZ	**Black Stump Fm**	**1.09**	**24**	P	**Pn**	**19 09 28.2**	**-0.4**
BKZ	**Black Stump Fm**	**1.09**	**24**	P	**Pn**	**19 09 28.2**	**-0.4**
KRVZ	**Karewarewa**	**1.09**	**348**	P	**Pb**	**19 09 29.4**	**-0.7**
CAW	**Cannon Point**	**1.15**	**215**	P	**Pn**	**19 09 28.5**	**-0.8**
TWVZ	**Taurewa**	**1.16**	**341**	P	**Pb**	**19 09 29.9**	**-1.4**
RITZ	**Rihia Road**	**1.19**	**357**	P	**Pb**	**19 09 30.5**	**-1.2**
KATZ	**Kakaramea**	**1.20**	**351**	P	**Pb**	**19 09 31.7**	**-0.3**
ARHZ	**Aropaoanui**	**1.22**	**43**	P	**Pn**	**19 09 29.6**	**-0.7**
TRWZ	**Traveller**	**1.24**	**188**	P	**Pn**	**19 09 29.5**	**-1.1**
NMHZ	**Naumai**	**1.27**	**33**	P	**Pn**	**19 09 30.6**	**-0.4**
HATZ	**Hinemaiaia**	**1.28**	**6**	P	**Pn**	**19 09 31.3**	**+0.1**
RATZ	**Rangitukua**	**1.30**	**355**	P	**Pn**	**19 09 31.8**	**+0.3**
LREZ	**Lake Rotokare**	**1.37**	**300**	P	**Pb**	**19 09 33.9**	**-0.8**
VRZ	**Vera Road**	**1.38**	**319**	P	**Pb**	**19 09 33.2**	**-1.7**
WEL	**Wellington**	**1.42**	**218**	P	**Pn**	**19 09 30.7**	**-2.4**
WATZ	**Wairara**	**1.47**	**354**	P	**Pn**	**19 09 33.6**	**-0.1**
SNZO	**South Karori**	**1.47**	**219**	P	**Pn**	**19 09 33.2**	**-0.6**
WHHZ	**Waihua**	**1.48**	**43**	P	**Pn**	**19 09 33.5**	**-0.5**
MTHZ	**Maungataniwha**	**1.49**	**29**	P	**Pn**	**19 09 33.2**	**-0.9**
PLWZ	**Palliser**	**1.49**	**200**	P	**Pn**	**19 09 32.4**	**-1.7**
RAHZ	**Arahi**	**1.54**	**36**	P	**Pn**	**19 09 33.7**	**-1.0**
PREZ	**Palmer Road**	**1.59**	**301**	P	**Pb**	**19 09 37.1**	**-1.4**
TCW	**Tory Channel**	**1.63**	**230**	P	**Pn**	**19 09 35.1**	**-0.9**
ALRZ	**Allen Road**	**1.63**	**11**	P	**Pb**	**19 09 39.1**	**-0.1**
WPRZ	**Whakapapatarin**	**1.66**	**6**	P	**Pn**	**19 09 35.9**	**-0.4**
DUWZ	**D'Urville Isla**	**1.66**	**247**	P	**Pn**	**19 09 35.5**	**-0.8**
NEZ	**North Egmont**	**1.67**	**302**	P	**Pb**	**19 09 38.1**	**-1.8**
KUTZ	**Kaahu Road**	**1.68**	**357**	P	**Pn**	**19 09 36.8**	**+0.1**
PRRZ	**Plateau Road**	**1.70**	**12**	P	**Pb**	**19 09 40.1**	**-0.2**
KHEZ	**Kahui Hut**	**1.71**	**300**	P	**Pb**	**19 09 38.7**	**-1.8**
KHEZ	**Kahui Hut**	**1.71**	**300**	P	**Pb**	**19 09 38.8**	**-1.8**
NMEZ	**Namu Road**	**1.75**	**295**	P	**Pb**	**19 09 38.9**	**-2.2**
RTZ	**Ruatahuna**	**1.75**	**28**	P	**Pn**	**19 09 36.8**	**-0.9**
SNGZ	**Shannon Statio**	**1.76**	**39**	P	**Pn**	**19 09 36.3**	**-1.5**
KNZ	**Kokohu**	**1.77**	**50**	P	**Pn**	**19 09 35.9**	**-1.9**
PKE	**Pukeiti**	**1.79**	**302**	P	**Pb**	**19 09 40.1**	**-1.6**
NBEZ	**Newall Road No**	**1.83**	**299**	P	**Pb**	**19 09 40.0**	**-2.4**
MHGZ	**Mahia Peninsul**	**1.83**	**57**	P	**Pn**	**19 09 37.2**	**-1.5**
HIZ	**Hauiti**	**1.85**	**333**	P	**Pn**	**19 09 39.7**	**+0.7**
HIZ	**Hauiti**	**1.85**	**333**	P	**Pn**	**19 09 39.6**	**+0.6**
TLZ	**Tolley Road**	**1.86**	**350**	P	**Pn**	**19 09 39.7**	**+0.5**
RRRZ	**Republican Roa**	**1.88**	**14**	P	**Pb**	**19 09 42.6**	**-0.7**
TUWZ	**Tuamarina**	**1.97**	**229**	P	**Pn**	**19 09 39.2**	**-1.4**
URZ	**Urewera**	**2.12**	**26**	P	**Pn**	**19 09 40.4**	**-2.2**
URZ	**Urewera**	**2.12**	**26**	P	**Pn**	**19 09 40.7**	**-1.9**
BSWZ	**Blackbirch Sta**	**2.19**	**224**	P	**Pn**	**19 09 42.3**	**-1.4**
NNZ	**Nelson**	**2.20**	**241**	P	**Pn**	**19 09 43.3**	**-0.5**
MWZ	**Matawai**	**2.21**	**35**	P	**Pn**	**19 09 42.0**	**-2.0**
TOZ	**Tahuroa Road**	**2.46**	**352**	P	**Pn**	**19 09 47.5**	**+0.2**
TWGZ	**Tauwhareparae**	**2.55**	**39**	P	**Pn**	**19 09 46.6**	**-2.1**
RUGZ	**Raukumara Rang**	**2.59**	**32**	P	**Pn**	**19 09 47.4**	**-1.9**
QRZ	**Quartz Range**	**2.67**	**255**	P	**Pn**	**19 09 49.3**	**-1.0**
QRZ	**Quartz Range**	**2.67**	**255**	P	**Pn**	**19 09 49.3**	**-1.0**
MRNZ	**Matariki Terra**	**2.70**	**242**	P	**Pn**	**19 09 49.6**	**-1.1**
THZ	**Tophouse**	**2.79**	**234**	P	**Pn**	**19 09 51.0**	**-1.0**
HAZ	**Te Kaha**	**2.81**	**32**	P	**Pn**	**19 09 50.7**	**-1.4**
PKGZ	**Pakihiroa**	**2.82**	**37**	P	**Pn**	**19 09 50.5**	**-2.0**
WIAZ	**Waiheke Island**	**3.43**	**349**	P	**Pn**	**19 10 01.3**	**+0.6**
OUZ	**Omahuta**	**5.27**	**339**	P	**Pn**	**19 10 26.3**	**+0.3**
CTZ	**Chatham Island**	**6.60**	**125**	P	Pn	19 10 37.0	-7.2
CTZ	**Chatham Island**	**6.60**	**125**	P	**Pn**	**19 10 43.2**	**-1.1**

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*JMA **03** 19:19:54.9±0.2, 36°.7N±0°.6×14°2E±°, h34^{km}, MV2.9/36, E OFF FUKUSHIMA PREF*

*IDC **03** 19:19:56.9±2.8, 37°.27N×141°.89E, h0^{km}, mb3.2/2, mbtmp3.1/3, ML2.2/1, Error ellipse: s-maj=51.7km s-min=38.7km az=34.0*

ISC 03 19:19:55.5±1.6, **36°.73N**±0°.05×**142°.17E**±0°.08, **h19**^{km}, **n23**, σ**0^{s}.90**/24, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**1.16**	**289**	P	**Pb**	**19 20 15.8**	**-1.1**
ONAJ				*e*S	**Sg**	**19 20 31.7**	**-1.5**
JFK	**Kawauchi**	**1.22**	**302**	P	**Pb**	**19 20 17.2**	**-0.8**
JHO	**Hitachi**	**1.29**	**265**	P	**Pn**	**19 20 18.2**	**-0.3**
JHYU	**Hitachinakayam**	**1.33**	**254**	P	**Pn**	**19 20 19.0**	**-0.1**
JHYU				S	**Sn**	**19 20 36.8**	**+0.5**
JFFD	**Fukushimafurud**	**1.34**	**286**	P	**Pn**	**19 20 18.9**	**-0.3**
JMM	**Marumori**	**1.58**	**316**	P	**Pn**	**19 20 22.3**	**-0.2**
JOTO	**OTAMA OYAMA**	**1.69**	**300**	P	**Pn**	**19 20 24.4**	**+0.5**
JIO	**Ouri**	**1.84**	**339**	P	**Pn**	**19 20 25.8**	**-0.3**
JOU	**Okura**	**2.03**	**324**	P	**Pn**	**19 20 29.5**	**+0.9**
JFY	**Yanaizu**	**2.09**	**290**	P	**Pn**	**19 20 30.9**	**+1.4**
JAG	**Ashikaga**	**2.21**	**263**	P	**Pn**	**19 20 31.6**	**+0.4**
BSO1	**Boso 1**	**2.29**	**205**	*e*P	**Pn**	**19 20 31.6**	**-0.1**

BSO1				*e*S	**Sn**	**19 20 59.6**	**+0.5**
JMK	**Ichinoseki**	**2.34**	**342**	P	**Pn**	**19 20 33.2**	**+0.3**
JYK	**Kaneyama**	**2.62**	**327**	P	**Pn**	**19 20 37.4**	**+0.7**
JRY	**Ryogami san**	**2.73**	**256**	P	**Pn**	**19 20 38.6**	**+0.3**
JRY				*e*S	**Sn**	**19 21 10.9**	**0.0**
JOM	**Ohasama**	**2.83**	**346**	P	**Pn**	**19 20 40.0**	**+0.4**
JOD2	**Odawara 2**	**2.90**	**241**	P	**Pn**	**19 20 41.1**	**+0.5**
MJAR	**Matsushiro Arr**	**3.19**	**268**	Pn	**Pn**	**19 20 46.1**	**+1.4**
	0.3nm,0.3s,baz=75,slow=12,SNR=20						
MJAR				Sn	**Sn**	**19 21 24.6**	**+2.3**
	0.1nm,0.3s,baz=59,slow=24,SNR=1.9						
	1.9nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**27.47**	**121**	T	T	19 54 32.1	
	baz=313						
H11N1	**WAKE ISLAND Hy**	**27.48**	**121**	T	T	19 54 29.4	
	baz=313						
H11N3	**WAKE ISLAND Hy**	**27.49**	**121**	T	T	19 54 41.4	
	baz=313						
MKAR	**Makanchi Array**	**44.80**	**302**	P	**P**	**19 28 08.3**	**+0.4**
	0.2nm,0.8s,baz=85,slow=9.2,SNR=1.7						
	0.2nm,0.8s						
WRA	**Warramunga Arr**	**56.85**	**189**	P	P	19 29 46.8	+8.0
	0.7nm,1.1s,baz=2.5,slow=7.7,SNR=2.6						
	0.7nm,1.1s						

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*TAP **03** 19:21:51.7, 24°.14N×122°.87E, h17km, ML2.7, C*
*JMA **03** 19:21:51.8±0.1, 24°.2N±0°.9×122°.9E±0°.4, h25km±2km, MV2.7/11, NW OFF ISHIGAKIJIMA IS*
ISC 03 19:21:50.5±1.3**, 24°.05N**±0°.05×**122°.88E**±0°.02**, h15**km±10km**, n45, σ0s.67**/64**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.41**	**8**	P	**Pg**	**19 21 58.8**	**+0.1**
JYNG				S	**Sg**	**19 22 03.6**	**-0.7**
YOJ	**Yonaguni jima**	**0.43**	**16**	P	**Pg**	**19 21 59.3**	**+0.2**
YOJ				*e*S	**Sg**	**19 22 04.4**	**-0.5**
YOJ	**Yonaguni jima**	**0.43**	**16**	*i* P	**Pg**	**19 21 59.3**	**+0.2**
	baz=20						
YOJ				*i* S	**Sg**	**19 22 04.5**	**-0.5**
	baz=20						
IRIF	**Iriomote-Funau**	**0.83**	**69**	P	**Pb**	**19 22 06.6**	**+0.1**
IRIF				S	**Sb**	**19 22 18.1**	**+0.5**
HATJ	**Hateruma jima**	**0.84**	**89**	P	**Pb**	**19 22 07.2**	**+0.4**
HATJ				*e*S	**Sb**	**19 22 18.6**	**+0.5**
JKRS	**Kuro-shima**	**1.05**	**79**	P	**Pb**	**19 22 10.6**	**+0.3**
JKRS				S	**Sb**	**19 22 24.4**	**+0.5**
EWUT	**Wuta**	**1.08**	**292**	*i* P	**Pb**	**19 22 10.8**	**-0.1**
	baz=287						
EWUT				*i* S	**Sb**	**19 22 24.8**	**-0.1**
	baz=287						
TWC	**Suao**	**1.10**	**301**	*i* P	**Pb**	**19 22 11.2**	**0.0**
	baz=309						
TWC				*i* S	**Sb**	**19 22 23.9**	**-1.3**
	baz=309						
ENA	**Nanau**	**1.11**	**290**	*e*P	**Pn**	**19 22 11.9**	**+0.4**
	baz=286						
ENA				*i* S	**Sb**	**19 22 25.9**	**+0.3**
	baz=286						
TWD	**Chiawan**	**1.18**	**272**	*e*P	**Pn**	**19 22 12.4**	**0.0**
	baz=267						
TWD				*e*S	**Sn**	**19 22 28.4**	**+0.2**
	baz=267						
NACB	**Ninganchiao**	**1.18**	**276**	*i* P	**Pn**	**19 22 12.8**	**+0.2**
	baz=272						
JIJ	**Ishigaki jima**	**1.20**	**74**	P	**Pn**	**19 22 12.4**	**-0.2**
JIJ				S	**Sb**	**19 22 28.2**	**+0.1**
NDS	**Dongshan**	**1.21**	**299**	P	**Pb**	**19 22 14.0**	**+0.9**
	baz=295						
NDS				*e*S	**Sb**	**19 22 28.7**	**0.0**
	baz=295						
TWB1	**Santiao Chiao**	**1.26**	**320**	*e*S	**Sb**	**19 22 29.3**	**-0.6**
	baz=330						
ETLH	**Xiulin Townshi**	**1.29**	**277**	*e*P	**Pn**	**19 22 14.5**	**+0.5**
	baz=273						
TWE	**Neicheng**	**1.30**	**302**	P	**Pb**	**19 22 15.3**	**+0.8**
	baz=307						
TWE				S	**Sn**	**19 22 30.7**	**-0.4**
	baz=307						
LATG	**Datong**	**1.33**	**292**	P	**Pb**	**19 22 15.6**	**+0.4**
	baz=288						
TIPB	**Shuangxi**	**1.33**	**314**	P	**Pn**	**19 22 14.7**	**+0.1**
	baz=328						
TIPB				*e*S	**Sn**	**19 22 31.6**	**-0.6**
	baz=328						
ENTT	**Nioudou**	**1.34**	**297**	*e*P	**Pb**	**19 22 15.9**	**+0.6**
	baz=293						
ESL	**Shilin**	**1.34**	**260**	*e*P	**Pn**	**19 22 14.5**	**-0.2**
	baz=245						
ESL				*e*S	**Sn**	**19 22 32.2**	**-0.2**
	baz=245						
FUSB	**Fushanzhiwuyua**	**1.38**	**301**	*e*P	**Pb**	**19 22 16.2**	**+0.2**
	baz=314						
SXI1	**Grass Mountain**	**1.39**	**319**	*e*P	**Pn**	**19 22 15.1**	**-0.3**
	baz=331						
JISG	**Ishigakijimahi**	**1.41**	**67**	P	**Pn**	**19 22 15.4**	**-0.3**
NNSB	**Datong**	**1.42**	**286**	*e*P	**Pb**	**19 22 17.1**	**+0.3**
	baz=282						
NNSB				*e*S	**Sb**	**19 22 35.4**	**+0.7**
	baz=282						
NNS	**Nan Shan**	**1.43**	**286**	P	**Pb**	**19 22 17.8**	**+0.8**
	baz=283						
HGSD	**Ruisui**	**1.44**	**248**	*e*P	**Pn**	**19 22 15.7**	**-0.4**
	baz=244						
NWLT	**Wulai**	**1.45**	**300**	*e*P	**Pb**	**19 22 17.9**	**+0.6**
	baz=314						
WHF	**Hehuan Shan**	**1.48**	**274**	P	**Pn**	**19 22 17.6**	**+0.6**
	baz=270						
YHNB	**Yeheng**	**1.51**	**295**	*e*P	**Pb**	**19 22 18.8**	**+0.6**
	baz=292						
YHNB				*e*S	**Sb**	**19 22 37.7**	**+0.5**
	baz=292						
NSK	**Sanguang**	**1.52**	**295**	*e*P	**Pb**	**19 22 18.8**	**+0.2**
	baz=284						
CHGB	**Renai**	**1.56**	**271**	P	**Pn**	**19 22 18.6**	**+0.6**
	baz=253						
YULB	**Yu-li**	**1.59**	**246**	*e*P	**Pn**	**19 22 18.3**	**+0.1**
	baz=243						
EYUL	**Yuli**	**1.59**	**244**	*e*P	**Pn**	**19 22 18.5**	**+0.3**
	baz=228						
WUSB	**Renai**	**1.61**	**268**	*e*P	**Pn**	**19 22 19.3**	**+0.8**
	baz=252						
VWDT	**VWDT**	**1.62**	**260**	*e*P	**Pn**	**19 22 19.0**	**+0.5**
	baz=256						
VWDT				*e*S	**Sn**	**19 22 39.6**	**+0.5**
	baz=256						
CHKT	**Chengkung**	**1.68**	**236**	*e*S	**Sn**	**19 22 38.5**	**-2.1**
	baz=219						
NFF	**Wufeng Townshi**	**1.71**	**290**	*e*P	**Pb**	**19 22 22.1**	**+0.4**
	baz=274						
JTJ	**Tarama**	**1.76**	**70**	*e*P	**Pn**	**19 22 21.4**	**+0.9**
EHD	**Haiduan**	**1.78**	**240**	*e*P	**Pn**	**19 22 20.7**	**0.0**
	baz=224						
EHD				*e*S	**Sn**	**19 22 42.0**	**-1.1**
	baz=224						
SSLB	**Suanglung**	**1.78**	**262**	*e*P	**Pn**	**19 22 22.1**	**+1.3**
	baz=259						
EDH	**Donghe**	**1.80**	**234**	*e*S	**Sn**	**19 22 41.8**	**-1.8**
	baz=219						
WCS	**Beigang Elemen**	**1.80**	**271**	*e*P	**Pn**	**19 22 22.4**	**+1.4**
	baz=268						
LIOB	**Emei**	**1.80**	**290**	*e*P	**Pb**	**19 22 23.6**	**+0.4**
	baz=287						
NSTT	**Nanjuang**	**1.81**	**289**	*e*P	**Pb**	**19 22 23.8**	**+0.4**
	baz=286						
SMLT	**Sun Moon Lake**	**1.82**	**265**	*e*P	**Pn**	**19 22 22.6**	**+1.2**
	baz=262						

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*IDC **03** 19:46:23.5±3.3, 16°.18S×67°.05E, h0km, mb3.6/6, mbtmp3.6/6, MS3.5/2, Error ellipse: s-maj=118.3km s-min=26.5km az=50.0*
ISC 03 19:46:25.0±3.2**, 16°.2S**±0°.6×**67°.0E**±0°.6**, h10**km**, n13, σ0s.35**/6**, mb3.8**/6**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**10.04**	**33**	T	T	19 59 30.1	
	baz=212,slow=76,SNR=87						
H08S2	**Diego Garcia H**	**10.05**	**33**	T	T	19 59 28.7	
	baz=212,slow=76,SNR=51						
H08S3	**Diego Garcia H**	**10.06**	**33**	T	T	19 59 31.7	
	baz=212,slow=76,SNR=83						
LSZ	**Lusaka**	**37.36**	**266**	LR	LR	20 07 20.0	
	comp=Z,40nm,18.2s,baz=197,slow=34						
H01W3	**Cape Leeuwin H**	**45.93**	**123**	T	T	20 44 13.9	
	baz=280,slow=75,SNR=2.6						
H01W2	**Cape Leeuwin H**	**45.93**	**123**	T	T	20 44 10.3	
	baz=280,slow=75,SNR=3.3						
H01W1	**Cape Leeuwin H**	**45.95**	**123**	T	T	20 44 08.4	
	baz=280,slow=75,SNR=3.2						
ASAR	**Alice Springs**	**62.83**	**109**	P	**P**	**19 56 51.1**	**-0.3**
	0.7nm,0.6s,baz=273,slow=5.8,SNR=11						
ASAR				LR	LR	20 20 33.5	
	comp=Z,56nm,19.8s,baz=231,slow=33						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**63.72**	**105**	P	**P**	**19 56 57.8**	**+0.4**
	1.1nm,0.9s,baz=267,slow=5.7,SNR=8.5						
	1.1nm,0.9s						
BRTR	**Keskin Array B**	**63.77**	**332**	P	**P**	**19 56 57.5**	**+0.1**
	0.2nm,0.5s,baz=148,slow=8.5,SNR=2.2						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**64.20**	**12**	P	**P**	**19 57 00.1**	**+0.1**
	0.2nm,0.6s,baz=205,slow=6.4,SNR=2.4						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**67.31**	**8**	P	**P**	**19 57 19.6**	**-0.2**
	0.2nm,0.3s,baz=203,slow=6.4,SNR=1.9						
	0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**71.53**	**11**	P	**P**	**19 57 45.6**	**-0.2**
	0.3nm,0.3s,baz=180,slow=4.3,SNR=2.6						
	0.3nm,0.3s						

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*NEIC **03** 19:57:11.3±2.2, 7°.06S±0°.08×125°.9E±0°.1, h490km±9km, mb4.2/34, Error ellipse: s-maj=14.8km s-min=11.8km az=78.0*
*DJA **03** 19:57:12.0±0.3, 7°S±3°×12°6E±°, h489km±4km, M4.2/14, mB4.5/6, mb4.3/14, MLv4.5/13, Mw(mB)3.6/6*
*IDC **03** 19:57:12.2±1.6, 7°.11S×126°.06E, h504km±19km, mb3.3/7, mbtmp4.2/10, Error ellipse: s-maj=28.6km s-min=9.7km az=63.0*
ISC 03 19:57:11.0±0.4**, 7°.08S**±0°.05×**126°.03E**±0°.06**, h488**km**, n107, σ1s.34**/117**, mb4.0**/22**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**3.18**	**213**	P	**P**	**19 58 23.4**	**+1.0**
SOEI				S	**S**	**19 59 19.3**	**-1.1**
SOEI	**Soe**	**3.18**	**213**	P	**P**	**19 58 24.1**	**+1.7**
SOEI	**Soe**	**3.18**	**213**	P	**P**	**19 58 23.8**	**+1.4**
NLAI	**Namlea**	**3.96**	**16**	P	**P**	**19 58 31.0**	**+2.7**
AAI	**Ambon**	**4.00**	**33**	P	**P**	**19 58 31.2**	**+2.5**
MMRI	**Maumere**	**4.06**	**247**	P	**P**	**19 58 29.3**	**+0.2**
MMRI				S	**S**	**19 59 33.2**	**+0.5**
MMRI	**Maumere**	**4.06**	**247**	P	**P**	**19 58 29.7**	**+0.6**
MMRI	**Maumere**	**4.06**	**247**	P	**P**	**19 58 31.0**	**+1.9**
MMRI				S	**S**	**19 59 33.5**	**+0.8**
MSAI	**Masohi**	**4.70**	**38**	P	**P**	**19 58 36.8**	**+2.1**
SANI	**Sanana**	**5.00**	**360**	P	**P**	**19 58 38.8**	**+1.5**
SANI	**Sanana**	**5.00**	**360**	P	**P**	**19 58 39.1**	**+1.8**
	87nm,0.8s,776nm0.3nm						
SAUI	**Saumlaki**	**5.30**	**100**	P	**P**	**19 58 42.1**	**+1.9**
BSSI	**Bau Bau, Buton**	**5.58**	**279**	P	**P**	**19 58 45.0**	**+2.2**
	70nm,0.6s,0.3nm						
BKSI	**Bulukumba**	**6.12**	**286**	P	**P**	**19 58 49.4**	**+1.3**
	76nm,0.6s,646nm0.3nm						
BASI	**Baing, Sumba**	**6.22**	**240**	P	**P**	**19 58 49.0**	**0.0**
	127nm,0.9s,1.2nm						
KAPI	**Kappang**	**6.57**	**288**	P	**P**	**19 58 54.7**	**+2.2**
	29nm,0.7s,baz=115,slow=5.2,SNR=28						
KAPI				S	**S**	**20 00 19.0**	**+3.6**
	1.8nm,0.4s,baz=204,slow=21,SNR=1.0						
KAPI	**Kappang**	**6.57**	**288**	P	**P**	**19 58 53.0**	**+0.6**
LUWI	**Luwuk**	**6.82**	**331**	P	**P**	**19 58 54.5**	**-0.5**
SPSI	**Sidrap Palu**	**6.95**	**296**	P	P	19 59 07.8	+11
FAKI	**Fak Fak**	**7.45**	**57**	P	**P**	**19 59 02.0**	**+0.5**
FAKI				S	**S**	**20 00 27.4**	**-4.6**
FAKI	**Fak Fak**	**7.45**	**57**	P	**P**	**19 59 04.1**	**+2.7**
FAKI	**Fak Fak**	**7.45**	**57**	P	**P**	**19 59 03.2**	**+1.8**
	53nm,0.6s,0.5nm						
MTN	**Manton Dam**	**7.62**	**139**	P	**P**	**19 59 04.4**	**+1.2**
PLAI	**Plampang**	**8.35**	**257**	P	**P**	**19 59 09.1**	**-1.7**
PLAI	**Plampang**	**8.35**	**257**	P	**P**	**19 59 09.2**	**-1.6**
	43nm,1.0s						
KDU	**Kakadu**	**8.45**	**132**	P	**P**	**19 59 12.9**	**+1.1**
MRSI	**Marisa**	**8.54**	**331**	P	**P**	**19 59 14.5**	**+1.7**
	48nm,0.8s						
KNRA	**Kununurra**	**8.96**	**163**	P	**P**	**19 59 18.4**	**+1.2**
KNRA	**Kununurra**	**8.96**	**163**	P	**P**	**19 59 18.7**	**+1.6**
TWSI	**Taliwang, Sumb**	**9.21**	**259**	P	**P**	**19 59 19.9**	**0.0**
	18nm,0.8s						
MPSI	**Mapaga**	**9.57**	**320**	P	**P**	**19 59 26.7**	**+2.9**
TOLI2	**Tolitoli**	**9.67**	**327**	P	**P**	**19 59 25.4**	**+0.6**
TOLI2	**Tolitoli**	**9.67**	**327**	P	**P**	**19 59 26.4**	**+1.6**
FITZ	**Fitzroy Crossi**	**10.96**	**182**	P	**P**	**19 59 38.6**	**+0.1**
JAGI	**Jajag, Banyuwa**	**11.85**	**263**	P	**P**	**19 59 45.8**	**-2.3**
JAGI	**Jajag, Banyuwa**	**11.85**	**263**	P	**P**	**19 59 47.9**	**-0.1**
JAGI	**Jajag, Banyuwa**	**11.85**	**263**	P	**P**	**19 59 48.3**	**+0.3**
WB0	**Warramunga Arr**	**15.00**	**148**	P	**P**	**20 00 20.7**	**-0.7**
WB0				IAmb	IAmb	20 00 24.5	
	comp=Z,3.7nm,0.7s						
WRAB	**Tennant Creek**	**15.12**	**149**	P	**P**	**20 00 23.0**	**+0.4**
WRA	**Warramunga Arr**	**15.12**	**149**	P	**P**	**20 00 22.2**	**-0.5**
	comp=Z,2.4nm,0.5s,baz=341,slow=9.1,SNR=25						
WRA				S	**S**	**20 02 57.9**	**-3.0**
	comp=Z,2.5nm,0.8s,baz=323,slow=22,SNR=6.2						
WRA	**Warramunga Arr**	**15.12**	**149**	P	**P**	**20 00 21.9**	**-0.8**
WB2	**Warramunga Arr**	**15.12**	**149**	P	**P**	**20 00 21.4**	**-1.3**
WB2				IAmb	IAmb	20 00 25.4	
	comp=Z,6.0nm,0.9s						
WR0	**Warramunga Arr**	**15.24**	**148**	P	**P**	**20 00 23.4**	**-0.5**
WR0				IAmb	IAmb	20 00 44.9	
	comp=Z,12nm,1.4s						
PSA00	**Pilbara Seismi**	**15.60**	**202**	P	**P**	**20 00 24.7**	**-3.0**
KKM	**Kota Kinabalu**	**16.30**	**323**	P	**P**	**20 00 36.0**	**+0.7**
SBUM	**Sibu**	**16.72**	**304**	P	**P**	**20 00 37.8**	**-1.8**
SBUM				IAmb	IAmb	20 00 40.0	
	comp=Z,4.5nm,0.7s						
KSM	**Kuching**	**17.84**	**298**	P	**P**	**20 00 49.6**	**-1.0**
KSM				IAmb	IAmb	20 00 52.3	
	comp=Z,14nm,0.7s						
WRKA	**Warakurna**	**17.99**	**173**	P	**P**	**20 00 52.5**	**+0.6**
AS31	**Alice Springs**	**18.14**	**156**	P	**P**	**20 00 53.2**	**-0.1**
AS31				IAmb	IAmb	20 00 55.8	
	comp=Z,1.6nm,0.3s						
AS31					**S**	**20 03 54.0**	**-0.9**
ASAR	**Alice Springs**	**18.15**	**156**	P	**P**	**20 00 53.7**	**+0.3**
	comp=Z,1.2nm,0.3s,baz=338,slow=9.1,SNR=55						
ASAR				S	**S**	**20 03 53.9**	**-1.0**
	comp=Z,2.0nm,0.9s,baz=332,slow=17,SNR=9.8						
ASAR				PcP	**PcP**	**20 04 59.8**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=355,slow=1.3,SNR=5.0						
ASAR	**Alice Springs**	**18.15**	**156**	P	**P**	**20 00 54.1**	**+0.7**
AS01	**Alice Springs**	**18.16**	**156**	P	**P**	**20 00 53.7**	**+0.2**
	comp=Z,5.1nm,0.6s						
COEN	**Coen**	**18.18**	**113**	P	**P**	**20 00 53.8**	**0.0**
COEN	**Coen**	**18.18**	**113**	P	**P**	**20 00 55.0**	**+1.2**
BBJI	**Bungbulang**	**18.23**	**268**	P	**P**	**20 00 52.6**	**-1.7**
QIS	**Mount Isa**	**18.78**	**137**	P	**P**	**20 00 59.7**	**+0.5**
OOD	**Oodnadatta**	**22.55**	**157**	P	**P**	**20 01 33.8**	**+0.5**
	comp=Z,13nm,2.8s						
FORT	**Forrest**	**23.66**	**176**	P	**P**	**20 01 43.0**	**-0.1**
FORT	**Forrest**	**23.66**	**176**	P	**P**	**20 01 42.8**	**-0.3**
	comp=Z,20nm,0.8s						
MULG	**Mulgathing**	**24.28**	**163**	P	**P**	**20 01 48.8**	**0.0**
	comp=Z,8.1nm,2.9s						
BBOO	**Buckleboo**	**27.25**	**161**	P	**P**	**20 02 15.0**	**0.0**
BBOO				IAmb	IAmb	20 02 58.5	
	comp=Z,14nm,1.1s						
BBOO	**Buckleboo**	**27.25**	**161**	P	**P**	**20 02 15.3**	**+0.3**
STKA	**Stephens Creek**	**28.63**	**152**	P	**P**	**20 02 27.5**	**+0.4**
	comp=Z,3.7nm,0.5s,baz=324,slow=11,SNR=6.9						
	comp=Z,3.7nm,0.5s						
RPSI	**Rantau Prapat**	**28.74**	**289**	P	**P**	**20 02 27.5**	**-0.8**
RPSI				IAmb	IAmb	20 02 29.7	
	comp=Z,5.0nm,0.8s						
HTT	**Hallett**	**28.82**	**157**	P	**P**	**20 02 29.9**	**+1.1**
	comp=Z,8.5nm,2.0s						
TPUB	**Ta-pu**	**30.65**	**350**	P	**P**	**20 02 43.2**	**-1.6**
SSLB	**Suanglung**	**31.07**	**351**	P	**P**	**20 02 46.9**	**-1.5**
SSLB				IAmb	IAmb	20 02 55.8	
	comp=Z,21nm,1.2s						
ARPS	**Mount Arapiles**	**32.89**	**156**	P	**P**	**20 03 04.6**	**+0.9**
	comp=Z,24nm,0.8s						
TOO	**Toolangi**	**35.13**	**153**	P	**P**	**20 03 23.6**	**+0.9**
TOO				IAmb	IAmb	20 03 59.7	
	comp=Z,11nm,1.2s						
CAN	**Canberra**	**35.15**	**146**	P	**P**	**20 03 24.9**	**+2.0**
CMAR	**Chiang Mai Arr**	**36.85**	**314**	P	**P**	**20 03 37.7**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=145,slow=7.0,SNR=10.0						
CMAR				PcP	**PcP**	**20 05 47.3**	**+0.9**
	comp=Z,0.5nm,0.4s,baz=160,slow=2.9,SNR=4.2						
	comp=Z,1.2nm,0.7s						
JHS	**Saijyo**	**42.38**	**9**	P	**P**	**20 04 21.1**	**-0.5**
JHS				IAmb	IAmb	20 04 52.8	
	comp=Z,26nm,1.4s						
JGF	**Kuroka**	**43.77**	**13**	P	**P**	**20 04 31.9**	**-0.7**
JGF				IAmb	IAmb	20 04 59.1	
	comp=Z,20nm,1.3s						
MJAR	**Matsushiro Arr**	**44.87**	**14**	P	**P**	**20 04 40.5**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=194,slow=9.1,SNR=2.4						
	comp=Z,1.4nm,0.7s						
LSA	**Lhasa**	**49.60**	**319**	P	**P**	**20 05 17.6**	**+0.2**
TAPN	**Taplejung**	**50.45**	**314**	*e*P	**P**	**20 05 24.1**	**+0.5**
RAMN	**Ramite**	**51.01**	**313**	*e*P	**P**	**20 05 27.9**	**+0.3**
	comp=Z,17nm,0.5s						
USA0B	**Ussuriysk Arra**	**51.32**	**5**	P	**P**	**20 05 31.0**	**+1.8**
USA0B				IAmb	IAmb	20 05 56.5	
	comp=Z,6.3nm,0.8s						
JIRN	**Jiri**	**51.72**	**314**	*e*P	**P**	**20 05 32.7**	**-0.2**
	comp=Z,5.0nm,0.5s						
GUN	**Gumba**	**52.09**	**314**	*e*P	**P**	**20 05 35.5**	**0.0**
	comp=Z,9.5nm,0.5s						
PKI	**Pulchoki**	**52.24**	**313**	*e*P	**P**	**20 05 36.0**	**-0.6**
	comp=Z,6.5nm,0.5s						
PKIN	**Phulchoki**	**52.25**	**313**	*e*P	**P**	**20 05 36.0**	**-0.6**
	comp=Z,8.0nm,0.5s						
GKN	**Gorkha**	**53.04**	**313**	*e*P	**P**	**20 05 42.0**	**-0.1**
	comp=Z,9.2nm,0.4s						
RPZ	**Rata Peaks**	**53.63**	**140**	P	**P**	**20 05 46.4**	**+0.5**
DANN	**Dangsing**	**53.88**	**313**	*e*P	**P**	**20 05 48.2**	**0.0**
	comp=Z,6.1nm,0.7s						
PYUN	**Piuthan**	**54.30**	**312**	*e*P	**P**	**20 05 50.7**	**-0.5**
	comp=Z,5.2nm,0.6s						
BFZ	**Birch Farm**	**55.77**	**135**	P	**P**	**20 06 04.7**	**+3.7**
SONM	**Songino Array**	**57.36**	**344**	P	**P**	**20 06 12.1**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=165,slow=7.9,SNR=5.3						
SONM				PcP	**PcP**	**20 06 59.5**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=150,slow=3.2,SNR=2.4						
	comp=Z,0.5nm,0.4s						
SONM	**Songino Array**	**57.36**	**344**	P	**P**	**20 06 11.9**	**0.0**
CASY	**Casey**	**60.07**	**187**	P	**P**	**20 06 30.5**	**+0.7**
PEA0B	**Petropavlovsk-**	**65.70**	**20**	P	**P**	**20 07 07.5**	**+1.2**
PETK	**Petropavlovsk-**	**65.70**	**20**	P	**P**	**20 07 06.9**	**+0.6**
	comp=Z,3.4nm,0.8s,baz=215,slow=4.0,SNR=5.7						
	comp=Z,3.4nm,0.8s						
PETK	**Petropavlovsk-**	**65.70**	**20**	P	**P**	**20 07 07.3**	**+1.0**
MK31	**Makanchi Array**	**66.19**	**329**	P	**P**	**20 07 09.1**	**-0.5**
MKAR	**Makanchi Array**	**66.19**	**329**	P	**P**	**20 07 09.7**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=120,slow=7.3,SNR=12						
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**66.19**	**329**	P	**P**	**20 07 09.4**	**-0.1**
ZAA0	**Zalesovo Array**	**69.96**	**336**	P	**P**	**20 07 31.8**	**-0.7**
ZALV	**Zalesovo Beam**	**69.96**	**336**	P	**P**	**20 07 31.6**	**-0.8**
	comp=Z,2.9nm,0.4s,baz=138,slow=5.4,SNR=17						
	comp=Z,2.9nm,0.4s						
ZALV	**Zalesovo Beam**	**69.96**	**336**	P	**P**	**20 07 31.4**	**-1.0**
KURK	**Kurchatov**	**70.58**	**330**	P	**P**	**20 07 35.3**	**-0.8**
KURK				IAmb	IAmb	20 07 36.9	
	comp=Z,5.5nm,1.1s						
BRVK	**Borovoye**	**76.14**	**329**	P	**P**	**20 08 07.7**	**-0.2**
TIXI	**Tiksi**	**78.59**	**1**	P	**P**	**20 08 19.9**	**-1.0**
TIXI				IAmb	IAmb	20 08 21.2	
	comp=Z,3.2nm,0.5s						
ABKAR	**Akbulak array**	**80.15**	**323**	P	**P**	**20 08 28.9**	**-0.8**
ABKAR	**Akbulak array**	**80.15**	**323**	P	**P**	**20 08 29.0**	**-0.6**
ABKAR				IAmb	IAmb	20 08 41.6	
	comp=Z,2.2nm,1.5s						
QSPA	**South Pole Qui**	**82.90**	**180**	P	**P**	**20 08 43.2**	**-0.4**
QSPA				IAmb	IAmb	20 09 21.8	
	comp=Z,6.7nm,1.4s						
TORD	**Torodi Ar. Bea**	**124.95**	**281**	PKP	**PKPdf**	**20 15 15.5**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=110,slow=2.6,SNR=5.4						
CPUP	**Villa Florida**	**146.63**	**175**	PKPbc	**PKPdf**	**20 15 56.3**	**+0.6**
	comp=Z,1.6nm,0.5s,baz=200,slow=2.2,SNR=5.0						

HEL 03 20:02:47.1±0.2**, 65°.85N×24°.80E, h0**km**, ML0.9, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOF	**Tornio**	**0.30**	**321**	PG	Pg	20 02 52.3	-0.7
TOF				SG	Sg	20 02 53.5	-3.3
KALU	**Kalix**	**0.59**	**272**	PG	Pg	20 02 57.5	-0.9
KALU				SG	Sg	20 03 06.0	-0.1
OUL	**Oulu**	**0.89**	**148**	PG	Pg	20 03 02.5	-1.6
	baz=330						
RNF	**Rovaniemi**	**0.91**	**32**	PB	Pb	20 03 06.2	+0.4
OBF4	**Vikkela, Lumij**	**1.04**	**173**	PB	Pg	20 03 06.4	-0.6
	baz=355						
OBF4				MSG		20 03 19.0	
	comp=Z,0.7nm,0.2s						
ERTU	**Ertsjaerv**	**1.27**	**305**	PN	Pg	20 03 11.2	-0.3
ERTU				SN	Sn	20 03 29.7	-0.3
PAJU	**Pajala**	**1.36**	**331**	PN	Pn	20 03 13.4	0.0
	baz=150						
OBF0	**Syolatti, Pyha**	**1.38**	**190**	PG	Pg	20 03 12.1	-1.3
OBF0				MSG		20 03 28.6	
	comp=Z,1.0nm,0.2s						
OBF0				SN	Sn	20 03 34.0	+1.7
KLF	**Kolari**	**1.43**	**347**	PN	Pb	20 03 14.6	0.0
	baz=163						
KLF				MSG		20 03 30.1	
	comp=Z,1.2nm,0.2s						
OUF	**Merijarvi**	**1.48**	**181**	PG	Pn	20 03 13.9	-1.1
OUF				MSG		20 03 31.7	
	comp=Z,1.1nm,0.2s						
OUF				SN	Sg	20 03 33.9	-0.8
OBF8	**Ulkokalla**	**1.62**	**201**	PG	Pn	20 03 15.9	-1.0
OBF8				MSG		20 03 35.8	
	comp=Z,0.7nm,0.2s						
BURU	**Burvik**	**1.92**	**230**	PG	Pn	20 03 21.5	+0.5
BURU				SG	Sb	20 03 47.5	+0.1
LANU	**Lannavaara**	**2.47**	**335**	PG	Pb	20 03 31.6	-0.7
UMAU	**Umeaa**	**2.64**	**224**	PN	Pn	20 03 30.8	0.0
KTK1	**Kautokeino**	**3.24**	**350**	SN	Sn	20 04 18.0	-0.2

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*IDC **03** 20:24:36.8±6.0, 21°.58N×143°.76E, h221km±57km, mb3.1/9, mbtmp3.7/9, Error ellipse: s-maj=32.8km s-min=15.4km az=81.0*
ISC 03 20:24:33.6±0.9**, 21°.5N**±0°.1×**144°.0E**±0°.2**, h200**km**, n10, σ1s.10**/11**, mb3.3**/9**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**21.08**	**322**	P	**P**	**20 29 03.4**	**+0.9**
	0.9nm,0.6s,baz=147,slow=9.5,SNR=4.8						
	0.9nm,0.6s						
SONM	**Songino Array**	**39.93**	**320**	P	**P**	**20 31 48.5**	**+0.1**
	0.3nm,0.3s,baz=134,slow=8.1,SNR=4.8						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**42.27**	**194**	P	**P**	**20 32 08.7**	**+1.1**
	0.3nm,0.5s,baz=11,slow=8.6,SNR=7.4						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**45.97**	**193**	P	**P**	**20 32 37.2**	**+0.2**
	0.2nm,0.3s,baz=17,slow=11,SNR=4.3						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**55.34**	**313**	P	**P**	**20 33 46.9**	**+0.1**
	0.6nm,0.5s,baz=88,slow=7.8,SNR=13						
MKAR				PcP	**PcP**	**20 34 45.0**	**+0.2**
	0.4nm,0.5s,baz=77,slow=3.0,SNR=6.9						
	0.6nm,0.5s						
ILAR	**Eielson Array**	**61.87**	**27**	P	**P**	**20 34 31.4**	**0.0**
	0.5nm,1.0s,baz=253,slow=5.3,SNR=2.3						
	0.5nm,1.0s						
YKA	**Yellowknife Ar**	**76.27**	**28**	P	**P**	**20 36 01.3**	**+1.4**
	0.2nm,0.4s,baz=291,slow=6.0,SNR=4.1						
	0.2nm,0.4s						
KBZ	**Khabaz**	**83.00**	**314**	P	**P**	**20 36 35.7**	**-0.8**
	1.5nm,0.9s,baz=63,slow=4.5,SNR=2.3						
	1.5nm,0.9s						
FINES	**FINESS Array B**	**83.64**	**335**	P	**P**	**20 36 38.4**	**-1.1**
	1.7nm,0.9s,baz=64,slow=6.3,SNR=5.4						
	1.7nm,0.9s						
PLCA	**Paso Flores**	**145.10**	**131**	PKPbc	**PKiKP**	**20 43 49.5**	**-1.9**
	1.6nm,0.8s,baz=223,slow=7.0,SNR=5.7						

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*IDC **03** 20:29:17.0±2.2, 43°.48N×105°.30W, h0km, mb4.4/1, mbtmp4.0/3, ML3.5/2, MS2.9/4, Error ellipse: s-maj=53.0km s-min=8.9km az=153.0*
*NEIC **03** 20:29:21.2±1.6, 43°.58N±0°.05×105°.40W±0°.09, h0km±2km, ML3.3/77, Error ellipse: s-maj=10.8km s-min=9.1km az=77.0*

ISC 03 20:29:18.7±1.0**, 43°64N**±0°05×**105°30W**±0°05**, h0^{km}, n66, σ1^{s}70**/60**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.03	62		Pg	20 29 37.9	-0.5
K22A	Casper	1.34	223		Pg	20 29 44.0	-0.3
PHWY	Pilot Hill	2.34	183		Pn	20 29 59.5	+0.8
PHWY				IAML		20 30 38.8	
	131nm,0.4s						
RWWY	Rawlins	2.41	217		Pn	20 30 01.5	+1.9
RWWY				IAML		20 30 37.3	
	202nm,0.8s						
RWWY				IAML		20 30 38.1	
	170nm,0.8s						
N23A	Red Feather La	2.79	190		Pn	20 30 06.2	+1.4
N23A				IAML		20 30 50.6	
	comp=N,152nm,0.4s						
N23A				IAML		20 31 02.8	
	comp=E,99nm,1.4s						
LAO	LASA Array	3.12	348		Pn	20 30 12.1	+3.0
BRIGG	Briggsdale	3.15	166		Pn	20 30 10.7	+1.1
RLMT	Red Lodge	3.21	299		Pn	20 30 11.8	+1.3
RLMT				IAML		20 31 19.1	
	comp=E,52nm,0.4s						
BW06	Boulder Array	3.24	256		Pn	20 30 12.2	+1.2
PD31	Pinedale Array	3.24	256		Pn	20 30 11.8	+0.8
PDAR	Pinedale Array	3.24	256	Pn	Pn	20 30 12.1	+1.1
	comp=E,3.1nm,0.3s,baz=79,slow=15,SNR=50						
PDAR				Lg	Lg	20 30 56.5	
	comp=E,17nm,0.3s,baz=80,slow=31,SNR=11						
	comp=E,3.5nm,0.3s						
PDAR	Pinedale Array	3.24	256		Pn	20 30 12.6	+1.7
OGNE	Ogallala	3.62	137		Pn	20 30 18.1	+2.0
YMP	Mirror Lake Pl	3.66	289		Pn	20 30 18.2	+1.3
GCMT	Greycliff	3.78	306		Pn	20 30 19.9	+1.6
LKWY	Lake	3.79	286		Pn	20 30 20.6	+2.0
LKWY				IAML		20 31 35.1	
	comp=E,38nm,1.1s						
ISCO	Idaho Springs	3.85	184		Pn	20 30 21.1	+1.7
ISCO				IAML		20 32 14.7	
	comp=E,31nm,4.3s						
H17A	Grant Village	3.88	283		Pn	20 30 21.3	+1.4
H17A				IAML		20 31 28.5	
	comp=N,38nm,1.3s						
FLWY	Flagg Ranch	3.93	278		Pn	20 30 22.0	+1.5
FLWY				IAML		20 31 41.0	
	comp=N,55nm,1.6s						
FLWY				IAML		20 31 41.9	
	comp=N,52nm,2.5s						
MOOW	Moose Ponds	3.95	273		Pn	20 30 23.2	+2.4
SNOW	Snow King Moun	3.97	269		Pn	20 30 22.4	+1.3
SNOW				IAML		20 31 40.6	
	comp=N,51nm,1.8s						
SNOW				IAML		20 31 44.1	
	comp=N,47nm,2.6s						
REDW	Red Top Meadow	4.05	268		Pn	20 30 24.8	+2.6
REDW				IAML		20 31 51.4	
	comp=N,54nm,1.4s						
IMW	Indian Meadow	4.09	275		Pn	20 30 23.6	+0.8
IMW				IAML		20 31 35.1	
	comp=N,33nm,0.6s						
O20A	White River Ci	4.14	213		Pn	20 30 23.9	+0.6
O20A				IAML		20 32 26.7	
	comp=E,50nm,2.6s						
FXWY	Fox Creek	4.16	272		Pn	20 30 24.6	+1.0
YMR	Madison River	4.21	286		Pn	20 30 26.4	+2.2
YMR				IAML		20 31 49.3	
	comp=E,40nm,2.6s						
AHID	Auburn Hatcher	4.33	260		Pn	20 30 28.2	+2.2
AHID				IAML		20 31 46.0	
	comp=E,37nm,1.2s						
AHID				IAML		20 31 58.2	
	comp=E,40nm,1.6s						
RDMU	Red Mountain	4.42	227		Pn	20 30 29.3	+2.1
RDMU				IAML		20 31 49.1	
	comp=N,34nm,1.5s						
RDMU				IAML		20 31 51.6	
	comp=E,29nm,1.2s						
QLMT	Earthquake Lak	4.56	287		Pn	20 30 29.4	+0.2
SMCO	Snowmass	4.64	196		Pn	20 30 31.9	+1.6
SMCO				IAML		20 31 56.2	
	comp=E,27nm,1.6s						
Q24A	Divide	4.68	179		Pn	20 30 33.3	+2.5
Q24A				IAML		20 31 48.8	
	comp=E,30nm,1.5s						
Q24A				IAML		20 33 07.6	
	comp=N,22nm,4.3s						
DGMT	Dagmar	4.89	9		Pn	20 30 34.6	+1.2
BOZ	Bozeman (W)	4.92	296		Pn	20 30 36.3	+2.2
BOZ				IAML		20 31 56.0	
	comp=N,18nm,3.1s						
BOZ				IAML		20 33 32.6	
	comp=N,17nm,4.4s						
KSCO	Kaye Shedlock'	5.04	156		Pn	20 30 37.9	+2.1
HWUT	Hardware Ranch	5.05	248		Pn	20 30 36.2	+0.3
HWUT				IAML		20 32 13.0	
	comp=N,24nm,1.8s						
HWUT				IAML		20 32 31.4	
	comp=N,25nm,2.3s						
BSUT	Blindstream Ca	5.12	234		Pn	20 30 37.8	+0.9
BSUT				IAML		20 32 16.1	
	comp=E,21nm,1.2s						
BSUT				IAML		20 33 27.6	
	comp=N,16nm,4.9s						
TCUT	Toone Canyon	5.18	243		Pn	20 30 37.3	-0.4
EGMT	Eagleton	5.38	326		Pn	20 30 41.3	+1.1
P18A	Preston Nutter	5.46	224		Pn	20 30 43.0	+1.4
DLMT	Dillon	5.50	291		Pn	20 30 44.2	+2.2
LRM	Limekiln Ridge	5.54	296		Pn	20 30 44.2	+1.6
HRY	Holter Researc	5.54	306	Pn	Pn	20 30 44.5	+1.9
MCMT	McKenzie Canyo	5.55	285		Pn	20 30 45.2	+2.4
CTU	Camp Tracy	5.63	241	Pn	Pn	20 30 45.7	+1.9
SPUT	South Promonto	5.78	249		Pn	20 30 46.2	+0.3
PV07	Paradox Valley	5.78	207		Pn	20 30 46.9	+0.9
MDND	Maddock	5.79	41		Pn	20 30 51.8	+6.0
HVU	Hansel Valley	5.82	254		Pn	20 30 46.8	+0.5
PV15	Paradox Valley	5.82	206		Pn	20 30 48.3	+1.8
P17A	Butcher Ranch,	5.83	226		Pn	20 30 47.4	+0.9
SDCO	Great Sand Dun	5.89	182	Pn	Pn	20 30 49.2	+1.7
PV23	Carpenter Ridg	5.90	210	Pn	Pn	20 30 49.9	+2.3
PV11	David Mesa, Pa	5.99	208		Pn	20 30 48.4	-0.3
SRU	San Rafael Swe	6.00	223		Pn	20 30 48.8	0.0
S22A	4UR Ranch, Cre	6.01	192	Pn	Pn	20 30 49.3	+0.3
PV13	Radium Mtn., P	6.09	207		Pn	20 30 52.5	+2.3
TMUT	Trail Mountain	6.21	228		Pn	20 30 53.2	+1.3
ECSD	EROS Data Cent	6.29	86	Pn	Pn	20 30 57.3	+4.6
HMU	Henry Mountain	7.04	218		Pn	20 31 03.2	0.0
I10CA	LAC DU BONNET	9.12	41	I	I	21 23 25.0	
	comp=N,0.7nm,1.1s,baz=222,slow=327,SNR=30						
ULM	Lac du Bonnet	9.22	41	Pn	Pn	20 31 30.9	-1.9
	comp=N,1.8nm,0.3s,baz=221,slow=13,SNR=10						
ULM				Lg	Lg	20 34 04.2	
	comp=N,0.2nm,0.3s,baz=329,slow=20,SNR=1.8						
	comp=N,2.9nm,0.3s						
NVAR	Mina Array Bea	11.12	246	LR	LR	20 36 26.0	
	comp=N,25nm,20.1s,baz=359,slow=39						
PFO	Pinyon Flats O	13.27	225	LR	LR	20 37 51.9	
	comp=N,59nm,21.3s,baz=317,slow=39						
TKL	Tuckaleechee C	18.36	108	LR	LR	20 41 20.0	
	comp=N,41nm,18.9s,baz=338,slow=40						
ARCES	ARCESS Array B	61.51	18	P	P	20 39 35.5	-1.3
	comp=N,5.2nm,1.0s,baz=340,slow=6.7,SNR=1.6						
	comp=N,5.2nm,1.0s						
JHJ	Hachijo jima 2	83.27	310	LR	LR	21 18 41.8	
	comp=N,9.9nm,19.3s,baz=89,slow=36						

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*NEIC **03** 20:49:48.6±2.4, 18°41N±0°09×145°4E±0°2, h108^{km}±8^{km}, mb4.4/17, Error ellipse: s-maj=25.4km s-min=11.6km az=101.0*

*IDC **03** 20:49:50.3±4.5, 18°48N×145°11E, h135^{km}±41^{km}, mb3.5/6, mbtmp4.0/7, Error ellipse: s-maj=73.2km s-min=20.1km az=112.0*

ISC 03 20:49:47.1±0.6**, 18°49N**±0°07×**145°3E**±0°2**, h100^{km}, n36, σ1^{s}34**/31**, mb4.3**/15**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.89	185	P	Pn	20 51 01.8	+3.4
	25nm,0.3s,baz=3.5,slow=19,SNR=1.6						
GUMO				S	Sn	20 51 55.1	+1.1
	34nm,0.4s,baz=24,slow=20,SNR=1.7						
GUMO	Guam	4.89	185	Pn	Pn	20 50 59.2	+0.8
JHJ2	Mitsune	15.38	342	Pn	Pn	20 53 18.1	-0.5
PATS	Pohnpei	17.14	131	P	Pn	20 53 38.7	-1.8
H11S3	WAKE ISLAND Hy	20.25	87	T	T	21 15 11.9	
	baz=274						
H11S1	WAKE ISLAND Hy	20.26	87	T	T	21 15 08.0	
	baz=274						
H11S2	WAKE ISLAND Hy	20.26	87	T	T	21 15 20.3	
	baz=274						
H11N1	WAKE ISLAND Hy	20.40	83	T	T	21 15 17.0	
	baz=267						
H11N2	WAKE ISLAND Hy	20.41	83	T	T	21 15 33.8	
	baz=267						
H11N3	WAKE ISLAND Hy	20.42	83	T	T	21 15 23.1	
	baz=267						
KNRA	Kununurra	37.67	207	P	P	20 56 53.5	+0.6
WB0	Warramunga Arr	39.51	196	P	P	20 57 07.0	-1.2
WB0				IAmb	IAmb	20 57 27.9	
	comp=Z,9.0nm,1.4s						
WR0	Warramunga Arr	39.65	196	P	P	20 57 08.5	-0.9
WR0				IAmb	IAmb	20 57 12.7	
	comp=Z,7.1nm,1.3s						
WRA	Warramunga Arr	39.69	196	P	P	20 57 08.8	-0.9
	comp=Z,1.8nm,0.8s,baz=11,slow=8.5,SNR=9.6						
	comp=Z,1.8nm,0.8s						
WRA	Warramunga Arr	39.69	196	P	P	20 57 08.4	-1.3
FITZ	Fitzroy Crossi	41.20	209	P	P	20 57 22.5	+0.4
ASAR	Alice Springs	43.36	195	P	P	20 57 38.5	-1.1
	comp=Z,0.8nm,0.6s,baz=18,slow=6.5,SNR=12						
	comp=Z,0.8nm,0.6s						
ASAR	Alice Springs	43.36	195	P	P	20 57 39.8	+0.1
UNV	Unalaska Valle	51.02	35	P	P	20 58 39.2	+0.5
BBOO	Buckleboo	51.78	190	P	P	20 58 43.2	-1.4
BBOO				IAmb	IAmb	20 58 59.5	
	comp=Z,12nm,1.1s						
MORW	Morawa	55.10	211	P	P	20 59 07.8	-1.2
TTA	Tatalina	59.59	27	P	P	20 59 41.6	+1.4
TTA				IAmb	IAmb	21 00 25.4	
	comp=Z,2.1nm,1.2s						
K20K	Telida	60.56	27	P	P	20 59 49.3	+2.6
K20K				IAmb	IAmb	20 59 49.4	
	comp=Z,3.7nm,1.0s						
CAST	Castle Rocks	61.43	27	P	P	20 59 54.2	+1.5
MLY	Manley	62.45	25	P	P	21 00 01.1	+1.6
MLY				IAmb	IAmb	21 00 25.2	
	comp=Z,6.6nm,1.5s						
WRH	Wood River Hil	63.41	26	P	P	21 00 05.8	0.0
TOLK	Toolik Lake Re	63.91	22	P	P	21 00 11.1	+2.0
TOLK				IAmb	IAmb	21 00 47.8	
	comp=Z,9.4nm,1.4s						
ILAR	Eielson Array	63.98	26	P	P	21 00 09.3	-0.2
	comp=Z,0.4nm,0.7s,baz=264,slow=4.5,SNR=4.3						
	comp=Z,0.4nm,0.7s						
BMAR	Burnt Mountain	65.44	24	P	P	21 00 21.0	+1.9
ABKAR	Akbulak array	73.26	317	P	P	21 01 08.3	+0.8
YKA	Yellowknife Ar	78.33	28	P	P	21 01 36.0	-0.1
	comp=Z,0.6nm,0.8s,baz=286,slow=5.7,SNR=7.5						
	comp=Z,0.6nm,0.8s						
RES	Resolute Bay	79.70	14	P	P	21 01 43.4	0.0
RES				IAmb	IAmb	21 01 45.5	
	comp=Z,5.6nm,1.5s						
J05D	Fort Rock, OR	79.98	48	P	P	21 01 45.5	-0.3
NVAR	Mina Array Bea	83.53	52	P	P	21 02 04.8	+0.3
	comp=Z,1.1nm,0.7s,baz=257,slow=6.7,SNR=6.6						
	comp=Z,1.1nm,0.7s						
FINES	FINESS Array B	86.93	335	P	P	21 02 19.5	-1.1
	comp=Z,4.1nm,1.1s,baz=55,slow=5.3,SNR=3.5						
	comp=Z,4.1nm,1.1s						
FFC	Flin Flon	87.45	32	P	P	21 02 22.9	-0.5
FFC				IAmb	IAmb	21 02 34.0	
	comp=Z,9.7nm,1.1s						

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*DDA **03** 20:51:53.5±0.0, 37°62N×38°47E, h11^{km}±1^{km}, MW3.7*

*ISK **03** 20:51:53.6, 37°59N×38°44E, h11^{km}, ML3.8/8*

*GII **03** 20:51:55.2±0.0, 37°62N×38°47E, h11^{km}, Mm3.8/1*

ISC 03 20:51:53.9±0.9**, 37°66N**±0°02×**38°50E**±0°02**, h13**^{km}±7^{km}**, n42, σ1^{s}20**/67**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AZEY	Adyaman-Merk	0.25	308	P	Pg	20 51 59.4	+0.2
AZEY				S	Sg	20 52 03.5	+0.7
NARI	Adyaman-Kaht	0.31	43	P	Pb	20 52 00.8	-0.5
NARI				S	Sb	20 52 06.0	-0.3
HANM	anlurfa/Hi	0.32	105	SPECP		20 52 00.0	
HANM				P	Pg	20 52 00.2	-0.2
HANM				S	Sg	20 52 04.9	+0.1
URFA	Urfa	0.34	130	Pg	Pb	20 52 01.2	-0.6
URFA				Sg	Sg	20 52 05.9	+0.4
SANL	SANLIURFA_Merk	0.63	141	SPECP		20 52 05.0	
SANL				P	Pg	20 52 05.5	-0.7
SANL				S	Sg	20 52 13.4	-1.0
AKCA	Adyaman/G¶l	0.65	282	SPECP		20 52 06.0	
AKCA				P	Pg	20 52 06.4	-0.3
AKCA				S	Sg	20 52 15.8	+0.5
MAYA	Malatya/Merkez	0.67	355	SPECP		20 52 07.0	
MAYA				P	Pb	20 52 07.3	-0.1
MAYA				S	Sn	20 52 17.5	-1.9
SURC	SANLIURFA_SURC	0.79	173	SPECP		20 52 08.0	
SURC				P	Pb	20 52 08.1	-1.3
SURC				S	Sg	20 52 19.7	+0.2
GZT	Gaziantep	0.80	248	SPECP		20 52 08.0	
GZT				P	Pb	20 52 08.6	-1.1
GZT				S	Sn	20 52 21.9	-1.0
NZIP	Nizip/Gaziante	0.90	227	SPECP		20 52 10.0	
NZIP				P	Pb	20 52 10.3	-1.1
NZIP				S	Sb	20 52 22.0	-1.2
GAZ	Gaziantep	1.13	245	Pg	Pn	20 52 14.6	-0.9
GAZ				Sg	Sb	20 52 29.7	-0.3
KAHM	Kahramanmaras,	1.21	264	SPECP		20 52 15.0	
KAHM				P	Pn	20 52 15.8	-0.7
KAHM				S	Sn	20 52 32.7	0.0
DARE	Darende-Malaty	1.21	319	Pn	Pg	20 52 17.5	+0.3
DARE				Sn	Sg	20 52 34.8	+1.8
ELBS	KAHRAMANMARAS_	1.26	302	SPECP		20 52 17.0	
ELBS				P	Pg	20 52 17.9	-0.4
ELBS				S	Sg	20 52 34.6	-0.1
DYBB	Diyarbakir	1.33	77	Pn	Pg	20 52 19.4	-0.2
DYBB				Sn	Sg	20 52 38.6	+1.6
ARPR	Arapgir-MALATY	1.44	355	Pn	Pg	20 52 21.2	-0.3
KOVA	Elazig, Kovanc	1.47	44	SPECP		20 52 21.0	
KOVA				P	Pg	20 52 21.9	-0.3
KOVA				S	Sg	20 52 41.4	0.0
KAMA	Osmaniye	1.53	253	SPECP		20 52 20.0	
KAMA				P	Pn	20 52 20.3	-0.6
KAMA				S	Sn	20 52 40.3	-0.4
MAZI	Mazidag	1.56	97	Pn	Pb	20 52 22.5	-0.2
MAZI				Sn	Sg	20 52 43.7	-0.6
HANI	Diyarbakir_Han	1.68	63	SPECP		20 52 24.0	
HANI				P	Pb	20 52 24.6	-0.1
HANI				S	Sg	20 52 47.4	-0.6
SARI	SarD1z-Kayseri	1.80	295	Pn	Pb	20 52 25.5	-1.3
SAIM	ADANA	1.94	280	SPECP		20 52 26.0	
SAIM				P	Pn	20 52 26.3	-0.2
SAIM				S	Sb	20 52 53.5	+0.4
RHAN	Hatay/Reyhanl	2.06	228	SPECP		20 52 32.0	
RHAN				P	Pg	20 52 32.7	-0.7
RHAN				S	Sb	20 52 57.8	+1.1
CUAYA	Sivas-Altinyay	2.11	320	P	Pb	20 52 31.4	-0.7
BNGB	Bingl	2.17	52	Pn	Pb	20 52 31.8	-1.3
SVAN	Silvan-Diyarba	2.19	76	Pn	Pb	20 52 31.9	-1.5
EUZM	Uzumlu	2.25	24	SPECP		20 52 33.0	
EUZM				P	Pb	20 52 33.4	-1.0
EUZM				S	Sg	20 53 08.8	+2.5
AKO	Adana	2.43	266	SPECP		20 52 33.0	
AKO				P	Pn	20 52 33.5	+0.2
YURE	YUREGIR	2.43	251	SPECP		20 52 33.0	
YURE				P	Pn	20 52 33.6	+0.2
YURE				S	Sg	20 53 13.8	+1.7
GUNE	Kayseri	2.58	300	SPECP		20 52 37.0	
GUNE				P	Pb	20 52 37.5	-2.5
GUNE				S	Sg	20 53 17.6	+0.9
BEIL	Beino	3.63	212	*e*P	Pn	20 52 50.9	+1.0
HWQ	Hawqa	3.96	212	*e*P	Pn	20 52 55.7	+1.3
BHL	Bhannes	4.40	212	*e*P	Pn	20 53 01.5	+1.0
QRWL	Qaraoun	4.70	210	*e*P	Pn	20 53 06.8	+2.3
CSS	Mathiatis	4.96	239	Pn	Pn	20 53 09.8	+1.7
GEM	Giv'at Ha'Em	5.01	208	Pn	Pn	20 53 11.0	+2.3
GEM				Sn	Sn	20 54 08.9	+2.5
MMA0	Mount Meron ar	5.28	210	Pn	Pn	20 53 14.5	+2.0
HNTI	Hanita	5.31	212	Pn	Pn	20 53 14.9	+2.0
MMLI	Mount Malkishu	5.79	207	Pn	Pn	20 53 21.2	+1.7
HMDT	Nahal Hemdat	5.92	205	Pn	Pn	20 53 23.1	+1.9
SLTI	Sal'it	6.11	209	Pn	Pn	20 53 25.5	+1.7
UJAP	Al Uja	6.22	205	Pn	Pn	20 53 26.6	+1.3

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*JMA **03** 21:06:52.8±0.2, 29°N±2°×14°0E±°, h435^{km}, MV3.3/19, W OFF OGASAWARA*

*NEIC **03** 21:06:53.2±2.9, 28°30N±0°10×139°7E±0°2, h410^{km}±8^{km}, mb4.5/12, Error ellipse: s-maj=20.0km s-min=13.6km az=73.0*

*IDC **03** 21:06:54.1±1.4, 28°42N×139°72E, h426^{km}±22^{km}, mb3.1/11, mbtmp3.9/12, Error ellipse: s-maj=51.4km s-min=12.9km az=77.0*

ISC 03 21:06:52.5±0.5**, 28°38N**±0°06×**139°63E**±0°09**, h400^{km}, n39, σ1^{s}63**/46**, mb3.8**/18**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.60	119	P	Pn	21 07 53.6	+0.9
CBIJ				S	S	21 08 41.0	-0.3
JCJ	Chichijima	2.60	119	P	Pn	21 07 55.5	+2.9
	130nm,0.4s,baz=346,slow=8.3,SNR=15						
JCJ				S	S	21 08 42.6	+1.3
	107nm,0.4s,baz=311,slow=23,SNR=9.1						
JCJ	Chichijima	2.60	119		Pn	21 07 53.5	+0.8
JCJ					S	21 08 41.2	-0.1
JHH2	Haha-jima-NKT2	2.86	127	P	Pn	21 07 55.3	+0.7
JHH2				S	S	21 08 45.1	+0.3
JHJ2	Mitsune	4.72	2	Pn	Pn	21 08 13.8	+2.3
BSO1	Boso 1	6.36	10	*e*P	Pn	21 08 30.0	+1.6
BSO1				*e*S	S	21 09 47.1	+0.4
BSO3	Boso 3	6.45	7	*e*S	S	21 09 46.6	-2.3
JIE	Ise	6.49	338	*e*P	P	21 08 34.2	+3.8
JAG	Ashikaga	8.02	359	P	Pn	21 08 47.8	+0.1
JAG				*e*S	S	21 10 16.4	-5.5
JMM	Marumori	9.51	6	P	Pn	21 09 06.6	+1.9
JOW	Kunigami	10.19	264	P	Pn	21 09 14.2	+1.4
KLR	Kul'dur	21.68	346	P	P	21 11 12.7	+0.7
	1.9nm,0.6s,baz=149,slow=6.8,SNR=14						
	1.9nm,0.6s						
HEH	HeiHe	23.74	340	*e*P	P	21 11 30.8	+0.2
HEH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SONM	Songino Array	32.22	316	P	P	21 12 45.9	+0.4
	comp=Z,0.4nm,0.6s,baz=125,slow=7.2,SNR=4.4						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	47.91	309	P	P	21 14 51.9	-0.5
	comp=Z,0.4nm,0.8s,baz=90,slow=8.6,SNR=4.6						
MKAR				PcP	pP	21 16 12.5	+1.8
	comp=Z,0.4nm,0.6s,baz=86,slow=4.5,SNR=4.9						
	comp=Z,0.4nm,0.8s						
MKAR	Makanchi Array	47.91	309	P	P	21 14 51.3	-1.1
WB0	Warramunga Arr	48.13	187	P	P	21 14 53.9	-0.4
WRA	Warramunga Arr	48.31	187	P	P	21 14 55.6	0.0
	comp=Z,0.7nm,0.3s,baz=4.4,slow=7.5,SNR=14						
	comp=Z,0.7nm,0.3s						
WRA	Warramunga Arr	48.31	187	P	P	21 14 55.1	-0.5
KURBB	Kurchatov Arra	50.52	314	P	P	21 15 10.8	-1.0
	comp=Z,0.9nm,0.2s,baz=95,slow=7.4,SNR=6.0						
	comp=Z,0.9nm,0.2s						
ASAR	Alice Springs	52.04	187	P	P	21 15 22.9	-0.3
	comp=Z,0.2nm,0.4s,baz=14,slow=7.7,SNR=6.2						
	comp=Z,0.2nm,0.4s						
O18K	Koktuh Hills	53.49	35	P	P	21 15 32.4	-0.8
O18K				IAmb	IAmb	21 15 33.3	
	comp=Z,32nm,0.8s						
KOUNC	Koumac, New Ca	54.17	151	P	P	21 15 36.8	-1.7
KOUNC				IAmb	IAmb	21 15 37.9	
	comp=Z,31nm,1.5s						
BVAR	Borovoye Array	55.56	317	P	P	21 15 47.5	-0.5
	comp=Z,0.7nm,0.5s,baz=97,slow=8.1,SNR=4.9						
	comp=Z,0.7nm,0.5s						
KK31	Karatay Array	56.49	305	P	P	21 15 52.7	-2.0
KKAR	Karatay Array	56.49	305	P	P	21 15 52.7	-2.0
KNK	Knik Glacier	56.90	33	P	P	21 15 59.4	+2.1
KNK				IAmb	IAmb	21 16 15.2	
	comp=Z,28nm,1.5s						
ARU	Arti	62.02	322	P	P	21 16 30.8	-1.0
	comp=Z,1.4nm,0.3s,baz=104,slow=12,SNR=3.9						
	comp=Z,1.4nm,0.3s						
ARU	Arti	62.02	322	P	P	21 16 30.8	-1.0
ABKAR	Akbulak array	62.57	313	P	P	21 16 34.6	-1.0
C03A	Quillayute Air	73.14	44	P	P	21 17 40.4	-0.1
KBZ	Khabaz	75.47	312	P	P	21 17 53.9	-0.1
	comp=Z,1.6nm,0.8s,baz=63,slow=2.3,SNR=2.6						
	comp=Z,1.6nm,0.8s						
FIA1	FINESS Array S	75.78	333	P	P	21 17 54.0	-1.3
FIA1				IAmb	IAmb	21 17 55.5	
	comp=Z,22nm,1.5s						
FINES	FINESS Array B	75.78	333	P	P	21 17 54.4	-1.0
	comp=Z,0.7nm,0.3s,baz=64,slow=4.4,SNR=12						
	comp=Z,0.7nm,0.3s						
NC405	NORSAR Array S	81.34	337	P	P	21 18 23.3	-2.1
NC405				IAmb	IAmb	21 18 38.4	
	comp=Z,18nm,1.4s						
NC303	NORSAR Array S	81.38	337	P	P	21 18 26.5	+0.9
NC303				IAmb	IAmb	21 18 45.1	
	comp=Z,13nm,1.4s						
NOA	NORSAR Array B	81.57	337	P	P	21 18 24.9	-1.7
	comp=Z,0.7nm,0.9s,baz=55,slow=7.7,SNR=1.9						
	comp=Z,0.7nm,0.9s						
NBO00	NORSAR Array S	81.72	337	P	P	21 18 28.1	+0.7
OK046	Pawnee Station	96.47	43	P	P	21 19 37.4	-0.2

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*HVO **03** 21:21:07.9±0.5, 19°391N±0°008×155°421W±0°009, h10^{km}±2^{km}, ML2.7/30, ML2.6/50(NEIC), Error ellipse: s-maj=1.4km s-min=1.0km az=135.0*

NEIC 03 21:21:06.4±1.3**, 19°42N**±0°05×**155°45W**±0°07**, h22**^{km}±14^{km}**, Error ellipse: s-maj=9.9km s-min=6.0km az=113.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AIN	Ainahou	0.04	196	Pg	Pb	21 21 10.1	-0.5
AIN				Sg	Sb	21 21 11.8	-1.6
MLH	Mauna Loa	0.10	35		Pb	21 21 11.0	0.0
MLH					Sb	21 21 13.1	-1.0
WRMHI	West Rim	0.14	93		Pb	21 21 11.1	-0.5
WRMHI					Sb	21 21 13.4	-1.8
UWE	Uwekahuna	0.14	87		Pb	21 21 11.3	-0.4
UWE				IAML		21 21 15.4	
	comp=E,2μm,0.3s						
UWE				IAML		21 21 15.9	
	comp=N,2μm,0.6s						
UWE				Sg	Sb	21 21 16.8	+1.5
SDHHI	Sand Hill	0.14	100		Pb	21 21 11.0	-0.7
SDHHI					Sb	21 21 13.2	-2.0
OBL	Observatory Le	0.15	89		Pb	21 21 11.1	-0.6
OBL				Sg	Sb	21 21 15.6	+0.3
OBL				IAML		21 21 15.7	
	comp=E,2μm,0.3s						
NPH	North Pit	0.15	91		Sb	21 21 14.2	-1.1
NPH	North Pit	0.15	91		Pb	21 21 10.9	-0.8
NPH	North Pit	0.15	91	IAML		21 21 14.6	
	comp=N,820nm,0.3s						
NPH				IAML		21 21 16.3	
	comp=E,338nm,0.3s						
UWB	Uwekahuna B	0.16	86		Pb	21 21 11.2	-0.5
MWH	Moku‘aweowe	0.16	296		Pb	21 21 12.3	+0.1
MWH					Sb	21 21 15.8	-0.3
MWH	Moku‘aweowe	0.16	296	IAML		21 21 16.1	
	comp=E,2μm,0.5s						
MWH				IAML		21 21 19.3	
	comp=N,1μm,0.2s						
RIM	Rim	0.16	97		Pb	21 21 11.4	-0.4
RIM				Sg	Sb	21 21 13.7	-1.8
RIM				IAML		21 21 14.5	
	comp=E,1μm,0.3s						
RIM				IAML		21 21 16.5	
	comp=N,2μm,0.3s						
RSD	Rainshed	0.17	73		Pb	21 21 11.7	-0.1
RSD	Rainshed	0.17	73	IAML		21 21 16.0	
	comp=E,1μm,0.2s						
RSD				IAML		21 21 17.5	
	comp=N,2μm,0.2s						
SBLHI	Steaming Bluff	0.17	86		Pb	21 21 11.3	-0.5
SBLHI				IAML		21 21 14.6	
	comp=N,1μm,0.2s						
KKO	Keanakako`i	0.17	96		Pb	21 21 11.4	-0.5
KKO				IAML		21 21 14.8	
	comp=N,1μm,0.7s						
MLOA	Mauna Loa Obse	0.17	314		Pb	21 21 12.6	+0.4
MLOA					Sb	21 21 15.8	-0.3
MLOA	Mauna Loa Obse	0.17	314	IAML		21 21 15.9	

	comp=E,3µm,0.1s						
MLOA				IAML		21 21 16.0	
	comp=N,4µm,0.3s						
HATHI	Halema‘uma‘u T	0.17	87		Pb	21 21 11.6	-0.2
HATHI				IAML		21 21 17.4	
	comp=N,1µm,0.5s						
BYL	Byron's Ledge	0.17	91		Pb	21 21 11.8	0.0
BYL	Byron's Ledge	0.17	91	IAML		21 21 16.6	
	comp=E,772nm,0.6s						
BYL				IAML		21 21 16.9	
	comp=N,844nm,0.5s						
HLP	Hilina Pali	0.17	132		Pb	21 21 11.7	-0.1
HLP	Hilina Pali	0.17	132		Sb	21 21 14.4	-1.0
HLP				IAML		21 21 14.5	
	comp=N,6µm,0.4s						
HLP				IAML		21 21 14.7	
	comp=E,4µm,0.3s						
HTC	Hot Caves	0.18	166		Pb	21 21 11.8	0.0
HMH	Humu‘ula Sheep	0.19	349		Pb	21 21 12.9	+0.7
HMH					Sb	21 21 16.4	+0.3
HMH	Humu‘ula Sheep	0.19	349	IAML		21 21 16.5	
	comp=N,1µm,0.2s						
HMH				IAML		21 21 20.1	
	comp=E,727nm,0.3s						
PUH	Pauahi	0.22	101		Pb	21 21 12.2	-0.1
PUH					Sb	21 21 15.4	-0.9
PUH	Pauahi	0.22	101	IAML		21 21 15.5	
	comp=E,969nm,0.5s						
PUH				IAML		21 21 17.3	
	comp=N,975nm,0.4s						
ALEP	Alea Permanent	0.23	304		Pb	21 21 13.3	+0.7
ALEP					Sb	21 21 17.1	+0.2
KHU	Kahuku	0.23	224		Pb	21 21 12.9	+0.3
KHU					Sb	21 21 16.6	-0.1
KHU	Kahuku	0.23	224	IAML		21 21 16.8	
	comp=E,2µm,0.3s						
KHU				IAML		21 21 16.9	
	comp=N,912nm,0.1s						
KNHH	Kane Nui o Ham	0.26	98		Pb	21 21 12.9	+0.1
STCH	Steam Cracks	0.30	95		Pb	21 21 13.5	+0.1
STCH					Sb	21 21 19.1	+1.0
STCH	Steam Cracks	0.30	95	IAML		21 21 19.3	
	comp=N,1µm,0.2s						
STCH				IAML		21 21 19.8	
	comp=E,1µm,0.1s						
NPOC	North of Pu‘u	0.32	94		Pb	21 21 13.8	+0.2
NPOC	North of Pu‘u	0.32	94	IAML		21 21 19.6	
	comp=N,501nm,0.3s						
NPOC				IAML		21 21 20.2	
	comp=E,402nm,0.2s						
JCUZ	Jacuzzi	0.33	95		Sb	21 21 19.6	+0.9
JCUZ	Jacuzzi	0.33	95		Pb	21 21 13.9	+0.2
JCUZ	Jacuzzi	0.33	95	IAML		21 21 17.6	
	comp=N,684nm,0.7s						
JCUZ	Jacuzzi	0.33	95	IAML		21 21 22.6	
	comp=E,521nm,0.7s						
POHA	Pohakuloa	0.35	346		Pn	21 21 15.8	-0.6
POHA				IAML		21 21 22.8	
	comp=E,846nm,0.2s						
POHA				IAML		21 21 25.4	
	comp=E,836nm,0.4s						
JOKA	Jonika Flow	0.42	87		Pb	21 21 15.3	+0.1
CPH	Captain Cook	0.45	279		Pn	21 21 17.1	-0.5
HUH	Hualalai	0.46	306		Pn	21 21 17.9	+0.1
KHLU	Kahalu`u	0.46	293		Pn	21 21 17.3	-0.5
KHLU					Sn	21 21 24.4	-0.9
KHLU	Kahalu`u	0.46	293	IAML		21 21 26.7	
	comp=N,655nm,0.1s						
KHLU				IAML		21 21 27.1	
	comp=E,636nm,0.1s						
HPAH	Hawaii Prepara	0.66	339	Pg	Pb	21 21 19.4	+0.1

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*DDA **03** 21:30:39.2±0.0, 37°.60N×38°.48E, h8km±2km, MW3.6*

*ISK **03** 21:30:39.3, 37°.61N×38°.45E, h10km, ML3.6/12*

ISC 03 21:30:40.0±1.0**, 37°.61N**±0°.02×**38°.46E**±0°.02**, h9**km±9km**,**
n39, σ0ˢ88/61**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AZEY	Adyaman-Merk	0.26	320	P	Pg	21 30 45.2	0.0
AZEY				S	Sg	21 30 48.8	0.0
URFA	Urfa	0.33	120	Pg	Pg	21 30 46.9	+0.3
URFA				Sg	Sg	21 30 51.8	+0.8
HANM	anlurfa/Hi	0.34	95	SPECP		21 30 45.0	
HANM				P	Pg	21 30 45.9	-0.7
HANM				S	Sg	21 30 50.8	-0.3
NARI	Adyaman-Kaht	0.36	41	P	Pg	21 30 46.5	-0.6
NARI				S	Sg	21 30 51.8	-0.1
SANL	SANLIURFA_Merk	0.61	136	SPECP		21 30 51.0	
SANL				P	Pg	21 30 51.2	-0.5
SANL				S	Sg	21 30 59.2	-0.5
AKCA	Adyaman/G¶l	0.64	287	SPECP		21 30 52.0	
AKCA				P	Pg	21 30 52.1	-0.2
AKCA				S	Sg	21 31 01.3	+0.6
MAYA	Malatya/Merkez	0.71	358	SPECP		21 30 53.0	
MAYA				P	Pg	21 30 53.0	-0.7
SURC	SANLIURFA_SURC	0.74	170	SPECP		21 30 53.0	
SURC				P	Pg	21 30 53.8	-0.4
SURC				S	Sg	21 31 04.0	+0.1
GZT	Gaziantep	0.76	251	SPECP		21 30 54.0	
GZT				P	Pg	21 30 54.4	-0.2
GZT				S	Sn	21 31 07.9	-0.7
NZIP	Nizip/Gaziante	0.84	228	SPECP		21 30 56.0	
NZIP				P	Pg	21 30 56.2	0.0
NZIP				S	Sg	21 31 07.3	+0.1
GAZ	Gaziantep	1.09	247	Pg	Pg	21 31 00.5	-0.3
GAZ				Sg	Sb	21 31 15.7	+0.4
KAHM	Kahramanmaras,	1.17	266	SPECP		21 31 01.0	
KAHM				P	Pb	21 31 01.7	-0.8
KAHM				S	Sg	21 31 17.6	-0.1
DARE	Darende-Malaty	1.23	321	Pn	Pn	21 31 02.9	-0.6
DARE				Sn	Sg	21 31 20.3	+0.7
ELBS	KAHRAMANMARAS	1.27	305	SPECP	Pn	21 31 03.0	-1.0
ELBS				P	Pn	21 31 03.0	-1.0
DYBB	Diyarbakir	1.37	75	Pn	Pn	21 31 05.2	-0.2
DYBB				Sn	Sg	21 31 24.1	0.0
CUGUR	Gurin_SVAS	1.45	320	P	Pb	21 31 07.7	+0.4
CUGUR				S	Sg	21 31 29.4	+2.7
ARPR	Arapgir-MALATY	1.48	356	Pn	Pn	21 31 06.6	-0.4
KAMA	Osmaniye	1.49	254	SPECP		21 31 06.0	
KAMA				P	Pn	21 31 06.1	-0.9
KAMA				S	Sn	21 31 25.5	-1.1
KOVA	Elazig, Kovanc	1.53	44	SPECP		21 31 07.0	
KOVA				P	Pn	21 31 07.8	+0.2
KOVA				S	Sg	21 31 29.6	+0.5
MAZI	Mazidag	1.59	95	Pn	Pn	21 31 08.2	-0.2
MAZI				Sn	Sb	21 31 29.6	-0.1
HANI	Diyarbakir_Han	1.73	62	SPECP		21 31 10.0	
HANI				P	Pn	21 31 10.0	-0.3
HANI				S	Sn	21 31 32.8	+0.3
SARI	SarD1z-Kayseri	1.80	297	Pn	Pn	21 31 11.7	+0.4
SAIM	ADANA	1.92	282	SPECP		21 31 12.0	
SAIM				P	Pn	21 31 12.8	-0.1
SAIM				S	Sb	21 31 38.8	-0.6
RHAN	Hatay/Reyhanl	2.01	228	SPECP		21 31 14.0	
RHAN				P	Pn	21 31 14.8	+0.8
RHAN				S	Sg	21 31 43.3	-1.2
KOZT	Kozan	2.10	267	Pn	Pn	21 31 14.9	-0.4
CUAYA	Sivas-Altinyay	2.13	321	P	Pn	21 31 17.6	+1.7
ERZN	Erzincan	2.21	26	Pn	Pn	21 31 17.0	+0.1
BNGB	Bingl	2.22	51	Pn	Pn	21 31 17.3	+0.2
SVAN	Silvan-Diyarba	2.23	75	Pn	Pn	21 31 17.4	+0.2
SVAN	Silvan-Diyarba	2.23	75	SPECP		21 31 18.0	
SVAN				P	Pn	21 31 18.0	+0.8
SVAN				S	Sb	21 31 48.3	+0.1
CEYT	Ceyhan	2.24	255	Pn	Pn	21 31 17.6	+0.3
MIDY	Mardin/Midyat-	2.34	94	SPECP	Pn	21 31 18.0	-0.8
MIDY				P	Pn	21 31 18.0	-0.8
MIDY				S	Sb	21 31 52.7	+1.2
YURE	YUREGIR	2.39	252	SPECP		21 31 19.0	
YURE				P	Pn	21 31 19.6	+0.3
AKO	Adana	2.40	267	P	Pn	21 31 18.2	-1.3
YEDI	Yedisu-Bingol	2.45	41	Pn	Pn	21 31 20.6	+0.3
BEIL	Beino	3.57	212	*e*P	Pn	21 31 37.0	+1.4
HWQ	Hawqa	3.90	212	*e*P	Pn	21 31 42.7	+2.5
BHL	Bhannes	4.35	213	*e*P	Pn	21 31 45.9	-0.4
QRWL	Qaraoun	4.64	210	*e*P	Pn	21 31 53.4	+3.0

ROM 03 21:32:00.5±0.1**, 42°.787N**±0°.004×**13°.207E**±0°.005**,**
h9km**, ML0.9**/12**, 1C, Error ellipse: s-maj=0.4km s-min=0.3km az=139.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	Arquata del Tr	0.03	177	⇑P	Pg	21 32 02.1	-0.3
T1214				S	Sg	21 32 03.0	-0.6
T1214				AML	AML		
	comp=E,906µm,0.3s						
T1214				AML	AML		
	comp=N,566µm,0.3s						
T1214				AML	AML		
	comp=E,845µm,0.3s						
T1214				AML	AML		
	comp=N,566µm,0.3s						
T1214				AML	AML		
	comp=N,499µm,0.4s						
T1214				AML	AML		
	comp=N,499µm,1.6s						
T1214				AML	AML		
	comp=E,906µm,0.3s						
T1214				AML	AML		
	comp=E,846µm,0.3s						
T1245	Castelsantange	0.07	349	P	Pg	21 32 02.8	+0.1
T1245				S	Sg	21 32 04.3	-0.1
T1245				AML	AML		
	comp=E,386µm,0.7s						
T1245				AML	AML		
	comp=N,722µm,0.3s						
T1245				AML	AML		
	comp=E,386µm,0.7s						
T1245				AML	AML		
	comp=N,722µm,0.2s						
T1245				AML	AML		
	comp=N,688µm,1.2s						
T1245				AML	AML		
	comp=N,688µm,0.8s						
T1245				AML	AML		
	comp=E,482µm,0.7s						
T1245				AML	AML		
	comp=N,723µm,0.3s						
T1245				AML	AML		
	comp=E,386µm,0.7s						
T1212	Cascia, Frazio	0.12	254	P	Pg	21 32 03.9	+0.6
T1212				S	Sg	21 32 06.2	+0.8
T1212				AML	AML		
	comp=E,123µm,0.6s						
T1212				AML	AML		
	comp=N,112µm,0.6s						
T1212				AML	AML		
	comp=E,123µm,0.6s						
T1212				AML	AML		
	comp=N,113µm,0.7s						
T1212				AML	AML		
	comp=N,113µm,1.3s						
T1212				AML	AML		
	comp=E,123µm,1.4s						
MC2	Monte Cornacci	0.13	355	P	Pg	21 32 04.1	+0.6
MC2				S	Sg	21 32 06.7	+1.0
T1218	Civita (PG)	0.14	210	AML	AML		
	comp=E,83µm,0.5s						
T1218				AML	AML		
	comp=E,83µm,0.5s						
T1218				AML	AML		
	comp=N,132µm,0.6s						
T1218				AML	AML		
	comp=N,132µm,0.6s						
T1218				AML	AML		
	comp=N,133µm,0.6s						
MMO1	Montemonaco	0.14	38	P	Pg	21 32 04.2	+0.5
MMO1				S	Sg	21 32 06.9	+1.0
T1216	Preci, Frazion	0.17	307	P	Pg	21 32 04.7	+0.5
T1216				S	Sg	21 32 07.9	+1.2
T1216				AML	AML		
	comp=N,105µm,0.4s						
T1216				AML	AML		
	comp=E,112µm,0.3s						
T1216				AML	AML		
	comp=N,105µm,0.4s						
T1241	Roccafluvione,	0.18	67	P	Pg	21 32 05.0	+0.8
T1241				S	Sg	21 32 08.3	+1.5
T1217	Poggiodomo (PG	0.22	250	P	Pg	21 32 05.7	+0.8
T1217				S	Sg	21 32 09.4	+1.4
T1217				AML	AML		
	comp=N,43µm,0.7s						
T1256	Bolognola (MC)	0.22	4	P	Pg	21 32 06.0	+0.9
T1256				AML	AML		
	comp=N,35µm,0.4s						
T1256				AML	AML		
	comp=E,40µm,0.4s						
T1256				AML	AML		
	comp=N,35µm,1.6s						
LNSS	Leonessa	0.22	214	P	Pg	21 32 05.8	+0.8
LNSS				S	Sg	21 32 09.9	+1.8
LNSS				AML	AML		
	comp=E,60µm,0.9s						
LNSS				AML	AML		
	comp=N,56µm,0.4s						
LNSS				AML	AML		
	comp=N,56µm,0.4s						
T1215	Vallo di Nera,	0.25	274	P	Pg	21 32 06.3	+0.8
T1215				S	Sg	21 32 10.3	+1.4
T1215				AML	AML		
	comp=N,20µm,0.2s						
FDMO	Fiordimonte	0.27	341	P	Pg	21 32 06.5	+0.7
FDMO				S	Sb	21 32 11.2	-1.0
FDMO				AML	AML		
	comp=E,30µm,1.4s						
FDMO				AML	AML		
	comp=N,28µm,0.8s						
FDMO				AML	AML		
	comp=E,30µm,1.4s						
FDMO				AML	AML		
	comp=N,28µm,0.8s						
FDMO				AML	AML		
	comp=E,30µm,0.6s						
FDMO				AML	AML		
	comp=E,30µm,0.6s						
CSP1	Cessapalombo	0.30	360	P	Pg	21 32 07.2	+0.6
CSP1				S	Sb	21 32 12.4	-1.0
CSP1				AML	AML		
	comp=E,43µm,1.1s						
T1219	Muccia, Frazio	0.31	331	P	Pg	21 32 07.2	+0.5
T1219				S	Sb	21 32 12.3	-1.1
T1219				AML	AML		
	comp=N,44µm,0.2s						
TERO	Teramo	0.34	119	AML	AML		
	comp=E,26µm,0.6s						
TERO				AML	AML		
	comp=N,26µm,1.1s						

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*NEIC **03** 21:38:42.8±1.6, 34°.0S±0°.2×177°.6W±0°.2, h10km±2km, mb4.1/4, Error ellipse: s-maj=37.0km s-min=19.4km az=137.0*

*IDC **03** 21:38:50.8±2.1, 33°.61S×179°.26W, h0km, mb3.6/2, mbtmp3.8/3, ML4.4/1, MS3.6/1, Error ellipse: s-maj=62.4km s-min=38.9km az=138.0*

*WEL **03** 21:38:54.4±0.6, 34°S±5°×17°9W±1°2, h124km±27km, M4.4/24, mB5.0/14, ML4.8/8, MLv4.6/24, Mw(mB)4.3/14, Error ellipse: s-maj=0.0km s-min=0.0km az=112.3, confirmed*

ISC 03 21:38:52.7±1.0**, 34°.01S**±0°.07×**178°.5W**±0°.1**, h37**km**, n70,**
σ1ˢ66/87**, mb3.8**/4**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.39	215	Pn	Pn	21 39 57.6	+0.9
MXZ				Sn	Sn	21 40 50.1	+3.6
MXZ	Matakaoa Point	4.39	215	P	Pn	21 39 58.1	+1.3
MXZ				S	Sn	21 40 46.6	0.0
WMGZ	Waiomatatini S	4.55	212	P	Pn	21 40 01.4	+2.5
WMGZ				S	Sn	21 40 53.4	+3.0
GLKZ	Green Lake	4.76	6	P	Pn	21 40 02.5	+0.7
GLKZ				S	Sn	21 40 56.2	+0.5
PKGZ	Pakihiroa	4.76	214	P	Pn	21 40 03.7	+1.8
HAZ	Te Kaha	4.80	218	P	Pn	21 40 04.5	+2.2
HAZ				S	Sn	21 40 58.4	+1.7
PUZ	Puketiti	4.83	212	P	Pn	21 40 04.7	+2.0
PUZ				S	Sn	21 40 58.7	+1.3
WIZ	White Island	4.95	224	P	Pn	21 40 06.8	+2.4
RUGZ	Raukumara Rang	5.01	217	P	Pn	21 40 06.9	+1.5
RUGZ				S	Sn	21 41 02.7	+0.5
TWGZ	Tauwhareparae	5.04	213	P	Pn	21 40 07.4	+1.8
TWGZ				S	Sn	21 41 03.0	+0.3
CNGZ	Carnagh Statio	5.19	210	P	Pn	21 40 09.9	+2.1
WHRZ	Whale Island	5.30	222	P	Pn	21 40 12.2	+2.9
WHRZ				S	Sn	21 41 10.2	+1.1
MWZ	Matawai	5.37	215	P	Pn	21 40 11.2	+0.9
MWZ				S	Sn	21 41 11.5	+0.6
KUZ	Kuaotunu	5.44	238	P	Pn	21 40 12.5	+1.4
URZ	Urewera	5.52	219	Pn	Pn	21 40 13.3	+0.9
	11nm,0.3s,baz=2.3,slow=15,SNR=7.0						
URZ				Sn	Sn	21 41 12.9	-1.6
	3.2nm,0.3s,baz=232,slow=19,SNR=3.1						
	37nm,0.5s						
URZ	Urewera	5.52	219	P	Pn	21 40 13.0	+0.7
URZ				S	Sn	21 41 13.5	-1.1
MARZ	Manawahe	5.56	223	P	Pn	21 40 15.8	+2.9
RIGZ	Rimuhau	5.57	212	P	Pn	21 40 14.2	+1.2
RIGZ				S	Sn	21 41 17.8	+2.1
SNGZ	Shannon Statio	5.82	214	P	Pn	21 40 18.0	+1.6
SNGZ				S	Sn	21 41 20.5	-1.3
RTZ	Ruatahuna	5.86	217	Pn	Pn	21 40 17.6	+0.5
RTZ	Ruatahuna	5.86	217	P	Pn	21 40 17.4	+0.4
RTZ				S	Sn	21 41 22.9	-0.1
MUGZ	Murupara	5.86	219	P	Pn	21 40 19.0	+2.0
MHGZ	Mahia Peninsul	5.89	208	P	Pn	21 40 18.4	+1.1
RAHZ	Arahi	6.04	215	P	Pn	21 40 20.1	+0.6
RAHZ				S	Sn	21 41 28.5	+1.1
WHHZ	Waihua	6.11	213	P	Pn	21 40 18.8	-1.6
WHHZ				S	Sn	21 41 29.7	+0.8
MTHZ	Maungataniwha	6.11	216	P	Pn	21 40 20.7	+0.2
MTHZ				S	Sn	21 41 28.8	-0.3
ALRZ	Allen Road	6.15	221	P	Pn	21 40 22.9	+1.9
WCZ	Waipu Caves	6.17	250	P	Pn	21 40 22.0	+0.9
BKZ	Black Stump Fm	6.53	216		Pn	21 40 26.1	-0.1
BKZ	Black Stump Fm	6.53	216	P	Pn	21 40 27.0	+0.8
OUZ	Omahuta	6.61	257	P	Pn	21 40 27.0	-0.3
MCHZ	McNeill Hill	6.65	214	P	Pn	21 40 28.9	+1.1
MCHZ				S	Sn	21 41 43.2	+0.9
CKHZ	Cape Kidnapper	6.65	211	P	Pn	21 40 27.3	-0.6
CKHZ				S	Sn	21 41 39.8	-2.6
KAHZ	Kahuranaki	6.85	211	P	Pn	21 40 30.2	-0.4
KAHZ				S	Sn	21 41 45.4	-2.0
NTVZ	North Tongarir	6.90	221	P	Pn	21 40 32.3	+0.9
ETVZ	East Tongariro	6.91	221	P	Pn	21 40 32.2	+0.7
BHHZ	Black Hill Sta	6.99	217	P	Pn	21 40 32.9	+0.4
HIZ	Hauiti	6.99	228	Pn	Pn	21 40 33.5	+1.0
NGZ	Ngauruhoe	7.00	221	P	Pn	21 40 34.1	+1.4
FWVZ	Far West T-bar	7.08	221	P	Pn	21 40 34.3	+0.4
MOVZ	Moawhango	7.08	219	P	Pn	21 40 33.9	0.0
MOVZ				S	Sn	21 41 49.0	-4.1
WNVZ	Wahianoa	7.11	220	P	Pn	21 40 34.8	+0.6
TRVZ	Turoa	7.12	220	P	Pn	21 40 35.4	+1.0
PNHZ	Pukenui	7.25	214	P	Pn	21 40 36.1	-0.1
PNHZ				S	Sn	21 41 52.3	-4.9
WPHZ	Waipukurau	7.27	212	P	Pn	21 40 35.5	-0.8
TSZ	Takapari Road	7.48	215	P	Pn	21 40 39.2	-0.1
ANWZ	Angora Road	7.58	210	P	Pn	21 40 42.3	+1.8
BFZ	Birch Farm	7.86	210	Pn	Pn	21 40 43.2	-1.2
MRZ	Mangatainoka R	8.13	214	Pn	Pn	21 40 47.1	-1.1
BHW	Baring Head	9.05	213	Pn	Pn	21 40 58.9	-1.9
TCW	Tory Channel	9.18	216	Pn	Pn	21 41 02.2	-0.3
TUWZ	Tuamarina	9.51	217	Pn	Pn	21 41 05.9	-1.2
KHZ	Kahutara	10.46	214	Pn	Pn	21 41 18.4	-1.6
RPZ	Rata Peaks	12.64	217	Pn	Pn	21 41 44.4	-5.4
	0.8nm,0.3s,baz=27,slow=4.5,SNR=1.3						
RPZ				Sn	Sn	21 43 55.5	-14
	0.7nm,0.3s,baz=43,slow=23,SNR=1.5						
COEN	Coen	39.98	291	P	P	21 46 24.8	+0.9
COEN				IAmb	IAmb	21 46 30.7	
	comp=Z,4.8nm,1.1s						
KRVT	Keravat (AS076	40.28	311	LR	LR	22 00 36.6	
	comp=Z,82nm,19.3s,baz=355,slow=33						
ASAR	Alice Springs	42.60	271	P	P	21 46 43.5	-1.9
	comp=Z,0.4nm,0.6s,baz=112,slow=7.5,SNR=7.4						
	comp=Z,0.4nm,0.6s						
WB2	Warramunga Arr	43.91	276	P	P	21 46 54.7	-1.3
WB2				IAmb	IAmb	21 47 05.5	
	comp=Z,3.5nm,1.1s						
WRA	Warramunga Arr	43.92	276	P	P	21 46 54.4	-1.7
	comp=Z,0.4nm,0.5s,baz=116,slow=7.9,SNR=9.4						
	comp=Z,0.4nm,0.5s						
WRA	Warramunga Arr	43.92	276	P	P	21 46 54.5	-1.6
WB0	Warramunga Arr	43.96	276	P	P	21 46 55.0	-1.4
VNA3	Neumayer Olymp	74.75	176	P	P	21 50 25.7	-2.6
VNA2	Neumayer--Watz	75.17	177	P	P	21 50 34.5	+3.7
	baz=276,slow=18						
VNA1	Neumayer--Stat	75.41	177	P	P	21 50 31.0	-1.0
H03N3	Juan Fernandez	79.07	123	T	T	23 19 34.0	
	baz=239,slow=72,SNR=6.7						
H03N2	Juan Fernandez	79.07	123	T	T	23 19 38.3	
	baz=239,slow=72,SNR=4.2						
H03N1	Juan Fernandez	79.08	123	T	T	23 19 43.2	
	baz=239,slow=72,SNR=6.6						
ARCES	ARCESS Array B	142.00	347	PKhKP	PKPpre	21 58 19.4	
	comp=Z,6.2nm,0.9s,baz=22,slow=3.3,SNR=1.8						
FINES	FINESS Array B	148.34	338	PKPbc	PKiKP	21 58 35.9	+0.1
	comp=Z,0.6nm,0.4s,baz=31,slow=4.7,SNR=11						
NOA	NORSAR Array B	152.22	350	PKPbc	PKiKP	21 58 46.4	+2.5
	comp=Z,0.3nm,0.5s,baz=13,slow=4.1,SNR=3.7						

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*IDC **03** 21:40:10.6±1.7, 9°.89N×125°.29E, h0km, mb3.4/5, mbtmp3.4/5, MS2.4/1, Error ellipse: s-maj=193.0km s-min=23.5km az=69.0*

*MAN **03** 21:40:12.9, 10°.33N×126°.39E, h1km, mb4.6, ML3.5, MS3.4*

ISC 03 21:40:10.7±2.4**, 10°.42N**±0°.03×**126°.46E**±0°.06**, h12**km±15km**,**
n25, σ2ˢ52/41**, mb3.4**/5**, 9C-8D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.71	207	⇓*i*P	Pb	21 40 25.0	0.0
GLSP				*e*S	Sb	21 40 35.1	+0.4
SCPH	Surigao	1.14	237	⇓*e*P	Pn	21 40 32.4	-0.1
SCPH				*e*S	Sb	21 40 44.7	-2.5
MSLP	Maasin	1.60	260	⇓*e*P	Pb	21 40 40.0	-0.2
MSLP				*e*S	Sg	21 41 02.0	-0.1
BUTP	Butuan	1.66	210	⇑*e*P	Pn	21 40 40.4	+0.7
BUTP				*e*S	Sb	21 41 03.0	+0.9
TABP	Talibon, Bohol	2.12	261	⇓*e*P	Pb	21 40 49.0	-0.1
TABP				*e*S	Sb	21 41 15.5	+0.2
BIPH	Bislig	2.22	182	⇓*i*P	Pn	21 40 46.6	-0.8
BIPH				*e*S	Sn	21 41 10.8	-4.0
LLP	Lapu-Lapu	2.45	268	⇑*e*P	Pb	21 40 54.8	0.0
LLP				*e*S	Sn	21 41 19.3	-1.3
CGP	Cagayan de Oro	2.61	222	⇓*e*P	Pb	21 40 58.7	+1.2
CGP				*e*S	Sb	21 41 26.9	-2.7
TBP	Tagbilaran	2.66	254	*e*P	Pb	21 40 56.5	-1.7
TBP				*i* S	Sb	21 41 31.0	+0.1
CNP	Catarman	2.72	320	⇑*e*P	Pb	21 40 59.0	-0.4
CNP				*e*S	Sb	21 41 30.4	-2.4
BUKP	Musuan	2.87	209	⇑*e*P	Pb	21 41 00.0	-2.0
BUKP				*e*S	Sb	21 41 33.9	-3.3
SNPH	Sibulan	3.35	252	*e*P	Pb	21 41 12.2	+2.1
DCPH	Dipolog City	3.56	239	⇑*e*P	Pn	21 41 08.7	+2.9
DCPH				*e*S	Sn	21 41 42.1	-5.9
KCP	Kidapawan	3.65	202	⇑*i*P	Pn	21 41 11.1	+4.0
KCP				*i* S	Sn	21 41 50.3	+0.1
CNOP	Candoni, Negro	3.80	261	⇓*e*P	Pn	21 41 12.4	+3.2
CNOP				*e*S	Sn	21 41 55.2	+1.3
GUIM	Jordan	3.81	273	⇓*e*P	Pb	21 41 14.1	-3.8
GUIM				*e*S	Sb	21 41 59.4	-4.6
RCP	Roxas	3.82	288	⇑*e*P	Pn	21 41 13.3	+3.9
PVCP	Virac	3.88	325	⇑*e*P	Pb	21 41 15.5	-3.6
PVCP				*e*S	Sb	21 42 04.8	-1.3
PAGZ	Pagadian	3.97	230	⇑*e*P	Pn	21 41 15.3	+3.8
PAGZ				*e*S	Sn	21 41 54.6	-3.3
CMAR	Chiang Mai Arr	27.79	290	LR	LR	21 55 25.6	
	comp=Z,7.7nm,20.2s,baz=220,slow=34						
WRA	Warramunga Arr	31.15	166	P	P	21 46 28.9	-0.8
	0.9nm,1.1s,baz=345,slow=9.1,SNR=1.8						
	0.9nm,1.1s						
ASAR	Alice Springs	34.65	168	P	P	21 47 00.5	+0.2
	0.2nm,0.5s,baz=341,slow=6.9,SNR=1.9						
	0.2nm,0.5s						
SONM	Songino Array	40.95	339	P	P	21 47 56.0	+2.6
	0.2nm,0.5s,baz=147,slow=8.2,SNR=1.9						
	0.2nm,0.5s						
MKAR	Makanchi Array	52.02	323	P	P	21 49 19.7	-0.6
	0.2nm,0.4s,baz=116,slow=8.1,SNR=4.5						
	0.2nm,0.4s						
FINES	FINESS Array B	85.85	332	P	P	21 52 51.6	+1.4
	1.1nm,0.9s,baz=64,slow=6.3,SNR=4.6						
	1.1nm,0.9s						

*IDC **03** 21:46:58.0±1.8, 39°.46S×177°.32E, h0^{km}, mb3.7/2, mbtmp3.8/3, ML3.3/1, Error ellipse: s-maj=45.3km s-min=22.3km az=104.0*

*NOU **03** 21:46:59.6, 39°.50S×177°.56E, h4^{km}, MLv3.8/9, Off E. Coast of N. Island, N.Z.*

*WEL **03** 21:47:03.9, 39°S±3°×17°7E±°, h26^{km}±7^{km}, M3.7/119, ML4.3/13, MLv3.7/119, Error ellipse: s-maj=0.0km s-min=0.0km az=77.3, confirmed*

ISC 03 21:47:01.9±1.4, **39°.46S**±0°.02×**177°.35E**±0°.03, **h31**^{km}±11^{km}, **n133**, σ**1^{s}25**/140, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CKHZ	**Cape Kidnapper**	**0.29**	**226**	P	**Pn**	**21 47 12.4**	**+2.3**
CKHZ				S	**Sn**	**21 47 19.9**	**+4.5**
ARHZ	**Aropaoanui**	**0.33**	**305**	P	**Pn**	**21 47 10.5**	**-0.1**
ARHZ				S	**Sn**	**21 47 16.4**	**0.0**
WHHZ	**Waihua**	**0.39**	**347**	P	**Pn**	**21 47 11.1**	**-0.3**
WHHZ				S	**Sn**	**21 47 17.4**	**-0.4**
KAHZ	**Kahuranaki**	**0.50**	**227**	P	**Pn**	**21 47 15.5**	**+2.5**
KNZ	**Kokohu**	**0.50**	**30**	P	**Pn**	**21 47 13.5**	**+0.6**
MCHZ	**McNeill Hill**	**0.51**	**271**	P	**Pn**	**21 47 14.4**	**+1.4**
MHGZ	**Mahia Peninsul**	**0.53**	**55**	P	**Pn**	**21 47 14.9**	**+1.5**
NMHZ	**Naumai**	**0.55**	**310**	P	**Pn**	**21 47 14.0**	**+0.2**
RAHZ	**Arahi**	**0.57**	**339**	P	**Pn**	**21 47 14.0**	**0.0**
RAHZ				S	**Sn**	**21 47 22.6**	**+0.2**
SNGZ	**Shannon Statio**	**0.67**	**359**	P	**Pn**	**21 47 15.7**	**+0.4**
PXZ	**Pawanui**	**0.69**	**213**	P	**Pn**	**21 47 17.8**	**+2.3**
KWHZ	**Kaweka Forest**	**0.72**	**272**	P	**Pn**	**21 47 17.4**	**+1.4**
MTHZ	**Maungataniwha**	**0.72**	**327**	P	**Pn**	**21 47 16.1**	**+0.1**
MTHZ				S	**Sn**	**21 47 26.2**	**+0.1**
BKZ	**Black Stump Fm**	**0.72**	**293**	P	**Pn**	**21 47 16.7**	**+0.6**
BKZ	**Black Stump Fm**	**0.72**	**293**	P	**Pn**	**21 47 16.7**	**+0.6**
RIGZ	**Rimuhau**	**0.81**	**23**	P	**Pn**	**21 47 18.2**	**+0.9**
RTZ	**Ruatahuna**	**0.89**	**341**	P	**Pn**	**21 47 18.7**	**+0.4**
WPHZ	**Waipukurau**	**0.93**	**229**	P	**Pn**	**21 47 21.0**	**+2.1**
RAGZ	**Rawiri**	**0.96**	**3**	P	**Pn**	**21 47 21.8**	**+2.4**
PRHZ	**Porangahau**	**0.98**	**214**	P	**Pn**	**21 47 21.4**	**+1.9**
BHHZ	**Black Hill Sta**	**1.00**	**268**	P	**Pn**	**21 47 21.3**	**+1.5**
PNHZ	**Pukenui**	**1.00**	**242**	P	**Pn**	**21 47 21.4**	**+1.5**
MUGZ	**Murupara**	**1.07**	**335**	P	**Pb**	**21 47 21.7**	**-0.2**
TKGZ	**Te Karaka**	**1.09**	**21**	P	**Pb**	**21 47 21.9**	**-0.2**
MWZ	**Matawai**	**1.13**	**7**	P	**Pb**	**21 47 21.9**	**-1.0**
CNGZ	**Carnagh Statio**	**1.18**	**35**	P	**Pb**	**21 47 23.4**	**-0.3**
ALRZ	**Allen Road**	**1.19**	**318**	P	**Pb**	**21 47 23.7**	**-0.2**
ANWZ	**Angora Road**	**1.21**	**213**	P	**Pb**	**21 47 24.5**	**+0.3**
URZ	**Urewera**	**1.21**	**351**	Pn	**Pb**	**21 47 23.1**	**-1.1**
	37nm,0.3s,baz=258,slow=14,SNR=362						
URZ				Sn	**Sn**	**21 47 38.1**	**+0.1**
	95nm,0.3s,baz=217,slow=22,SNR=10						
URZ	**Urewera**	**1.21**	**351**	P	**Pb**	**21 47 23.3**	**-0.9**
URZ	**Urewera**	**1.21**	**351**	P	**Pb**	**21 47 23.2**	**-0.9**
PRRZ	**Plateau Road**	**1.21**	**322**	P	**Pb**	**21 47 24.7**	**+0.4**
TSZ	**Takapari Road**	**1.23**	**240**	P	**Pb**	**21 47 24.3**	**-0.2**
MOVZ	**Moawhango**	**1.24**	**272**	P	**Pb**	**21 47 25.1**	**+0.4**
DVHZ	**Dannevirke**	**1.24**	**227**	P	**Pb**	**21 47 24.7**	**0.0**
RITZ	**Rihia Road**	**1.25**	**292**	P	**Pb**	**21 47 25.7**	**+0.8**
RRRZ	**Republican Roa**	**1.29**	**329**	P	**Pb**	**21 47 24.8**	**-0.8**
ETVZ	**East Tongariro**	**1.31**	**284**	P	**Pb**	**21 47 26.8**	**+0.8**
WPRZ	**Whakapapatarin**	**1.31**	**315**	P	**Pb**	**21 47 25.6**	**-0.4**
TMVZ	**Te Maari**	**1.32**	**284**	P	**Pb**	**21 47 25.9**	**-0.2**
TUVZ	**Tukino**	**1.33**	**278**	P	**Pb**	**21 47 26.9**	**+0.7**
OTVZ	**Oturere**	**1.34**	**282**	P	**Pb**	**21 47 27.1**	**+0.6**
WHTZ	**Whakaora**	**1.34**	**306**	P	**Pb**	**21 47 27.6**	**+1.2**
NTVZ	**North Tongarir**	**1.35**	**285**	P	**Pb**	**21 47 26.4**	**-0.2**
HRRZ	**Handcock Road**	**1.35**	**322**	P	**Pb**	**21 47 27.5**	**+0.9**
SNVZ	**South Ngauruho**	**1.35**	**281**	P	**Pb**	**21 47 27.0**	**+0.2**
RATZ	**Rangitukua**	**1.36**	**295**	P	**Pb**	**21 47 27.0**	**+0.3**
WNVZ	**Wahianoa**	**1.36**	**275**	P	**Pb**	**21 47 27.6**	**+0.7**
TWGZ	**Tauwhareparae**	**1.37**	**21**	P	**Pb**	**21 47 25.6**	**-1.3**
KATZ	**Kakaramea**	**1.37**	**290**	P	**Pb**	**21 47 28.1**	**+1.0**
KRVZ	**Karewarewa**	**1.37**	**285**	P	**Pb**	**21 47 28.1**	**+1.1**
WHVZ	**Whangaehu Hut**	**1.38**	**277**	P	**Pb**	**21 47 27.6**	**+0.5**
NNVZ	**North Ngauruho**	**1.38**	**283**	P	**Pb**	**21 47 27.8**	**+0.6**
NGZ	**Ngauruhoe**	**1.38**	**281**	P	**Pb**	**21 47 27.0**	**-0.3**
TARZ	**Mount Tarawera**	**1.38**	**331**	P	**Pb**	**21 47 26.1**	**-1.1**
DRZ	**Dome Shelter**	**1.40**	**277**	P	**Pb**	**21 47 28.5**	**+1.0**
TRVZ	**Turoa**	**1.40**	**276**	P	**Pb**	**21 47 27.4**	**-0.3**
FWVZ	**Far West T-bar**	**1.41**	**278**	P	**Pb**	**21 47 28.1**	**+0.5**
WTVZ	**West Tongariro**	**1.41**	**283**	P	**Pb**	**21 47 28.3**	**+0.7**
EDRZ	**Edgecumbe**	**1.43**	**340**	P	**Pb**	**21 47 28.1**	**+0.2**
HSRZ	**Hossack Road**	**1.43**	**323**	P	**Pb**	**21 47 27.3**	**-0.6**
HLRZ	**Highlands Stat**	**1.43**	**327**	P	**Pb**	**21 47 28.7**	**+0.7**
MTVZ	**Mangateitei**	**1.46**	**272**	P	**Pb**	**21 47 29.2**	**+0.8**
WATZ	**Wairara**	**1.46**	**300**	P	**Pb**	**21 47 27.8**	**-0.7**
GRRZ	**Galatos Road**	**1.47**	**318**	P	**Pb**	**21 47 27.4**	**-1.1**
BFZ	**Birch Farm**	**1.49**	**214**	P	**Pb**	**21 47 27.8**	**-1.1**
BFZ	**Birch Farm**	**1.49**	**214**	P	**Pb**	**21 47 27.8**	**-1.1**
RUGZ	**Raukumara Rang**	**1.51**	**10**	P	**Pn**	**21 47 27.3**	**+0.4**
PRWZ	**Pori Road**	**1.52**	**223**	P	**Pb**	**21 47 28.8**	**-0.8**
KUTZ	**Kaahu Road**	**1.53**	**309**	P	**Pb**	**21 47 28.3**	**-1.4**
TWVZ	**Taurewa**	**1.53**	**284**	P	**Pb**	**21 47 29.8**	**0.0**
POWZ	**Post Office Ro**	**1.53**	**232**	P	**Pb**	**21 47 28.9**	**-0.8**
OMRZ	**Omania**	**1.55**	**330**	P	**Pb**	**21 47 31.1**	**+1.2**
PUZ	**Puketiti**	**1.55**	**28**	P	**Pn**	**21 47 27.8**	**+0.3**
MARZ	**Manawahe**	**1.56**	**340**	P	**Pb**	**21 47 30.1**	**-0.1**
PKVZ	**Pokaka**	**1.56**	**275**	P	**Pb**	**21 47 29.5**	**-0.7**
WHRZ	**Whale Island**	**1.62**	**350**	P	**Pn**	**21 47 29.1**	**+0.7**
PKGZ	**Pakihiroa**	**1.67**	**20**	P	**Pn**	**21 47 29.5**	**+0.5**
CPWZ	**Castlepoint**	**1.70**	**211**	P	**Pn**	**21 47 29.5**	**+0.1**
OPRZ	**Ohinepanea**	**1.72**	**339**	P	**Pn**	**21 47 30.4**	**+0.6**
HAZ	**Te Kaha**	**1.73**	**11**	P	**Pn**	**21 47 30.3**	**+0.5**
TIWZ	**Tintock**	**1.73**	**220**	P	**Pb**	**21 47 30.7**	**-2.4**
MRZ	**Mangatainoka R**	**1.81**	**228**	P	**Pb**	**21 47 32.1**	**-2.4**
WMGZ	**Waiomatatini S**	**1.83**	**27**	P	**Pn**	**21 47 31.5**	**+0.2**
WAZ	**Wanganui**	**1.85**	**260**	P	**Pb**	**21 47 34.2**	**-0.9**
WIZ	**White Island**	**1.93**	**356**	P	**Pn**	**21 47 32.9**	**+0.3**
TMWZ	**Te Maipa**	**1.99**	**214**	P	**Pn**	**21 47 34.1**	**+0.6**
HOWZ	**Holdsworth Sta**	**2.01**	**224**	P	**Pn**	**21 47 34.4**	**+0.6**
MXZ	**Matakaoa Point**	**2.03**	**22**	P	**Pn**	**21 47 34.5**	**+0.5**
MXZ	**Matakaoa Point**	**2.03**	**22**	P	**Pn**	**21 47 34.6**	**+0.6**
VRZ	**Vera Road**	**2.04**	**279**	P	**Pb**	**21 47 36.7**	**-1.5**
OGWZ	**Otaki Gorge**	**2.15**	**230**	P	**Pn**	**21 47 36.6**	**+0.9**
HIZ	**Hauiti**	**2.16**	**295**	P	**Pb**	**21 47 38.4**	**-1.9**
HIZ	**Hauiti**	**2.16**	**295**	P	**Pb**	**21 47 37.8**	**-2.5**
MTW	**Mount Morrison**	**2.21**	**219**	P	**Pn**	**21 47 36.5**	**0.0**
TOZ	**Tahuroa Road**	**2.25**	**319**	P	**Pb**	**21 47 43.4**	**+1.6**
LREZ	**Lake Rotokare**	**2.28**	**269**	P	**Pb**	**21 47 40.6**	**-1.8**
TRWZ	**Traveller**	**2.32**	**213**	P	**Pn**	**21 47 37.8**	**-0.2**
KIW	**Kapiti Island**	**2.34**	**232**	P	**Pn**	**21 47 39.1**	**+0.9**
CAW	**Cannon Point**	**2.40**	**226**	P	**Pn**	**21 47 39.5**	**+0.4**
PAWZ	**Paruwai Farm**	**2.42**	**217**	P	**Pn**	**21 47 39.6**	**+0.2**
PREZ	**Palmer Road**	**2.47**	**272**	P	**Pb**	**21 47 42.7**	**-3.0**
NEZ	**North Egmont**	**2.53**	**273**	P	**Pb**	**21 47 44.1**	**-2.6**
KHEZ	**Kahui Hut**	**2.59**	**272**	P	**Pb**	**21 47 45.1**	**-2.6**
KHEZ	**Kahui Hut**	**2.59**	**272**	P	**Pb**	**21 47 46.0**	**-1.7**
PKE	**Pukeiti**	**2.62**	**275**	P	**Pb**	**21 47 46.2**	**-2.0**
PLWZ	**Palliser**	**2.65**	**216**	P	**Pn**	**21 47 41.8**	**-0.7**
SNZO	**South Karori**	**2.74**	**227**	P	**Pn**	**21 47 45.5**	**+1.8**
TCW	**Tory Channel**	**2.93**	**232**	P	**Pn**	**21 47 46.5**	**+0.2**
DUWZ	**D'Urville Isla**	**2.95**	**242**	P	**Pn**	**21 47 47.2**	**+0.5**
WIAZ	**Waiheke Island**	**3.18**	**326**	P	**Pn**	**21 47 50.1**	**+0.3**
TUWZ	**Tuamarina**	**3.26**	**232**	P	**Pn**	**21 47 50.4**	**-0.6**
BSWZ	**Blackbirch Sta**	**3.48**	**228**	P	**Pn**	**21 47 53.5**	**-0.4**
NNZ	**Nelson**	**3.51**	**239**	P	**Pn**	**21 47 54.6**	**+0.3**
TKNZ	**Takaka Hill**	**3.71**	**243**	P	**Pn**	**21 47 57.5**	**+0.4**
QRZ	**Quartz Range**	**3.94**	**248**	P	**Pn**	**21 47 59.8**	**-0.5**
MRNZ	**Matariki Terra**	**4.01**	**240**	P	**Pn**	**21 48 01.4**	**+0.2**
THZ	**Tophouse**	**4.09**	**234**	P	**Pn**	**21 48 01.9**	**-0.5**
KHZ	**Kahutara**	**4.13**	**223**	P	**Pn**	**21 48 03.8**	**+0.9**
KHZ	**Kahutara**	**4.13**	**223**	P	**Pn**	**21 48 02.9**	**+0.1**
DSZ	**Denniston Nort**	**4.80**	**240**	P	**Pn**	**21 48 11.6**	**-0.5**
LTZ	**Lake Taylor**	**5.07**	**227**	P	**Pn**	**21 48 14.9**	**-0.9**
OUZ	**Omahuta**	**5.18**	**324**	P	**Pn**	**21 48 19.6**	**+2.4**
RPZ	**Rata Peaks**	**6.35**	**226**	Pn	**Pn**	**21 48 32.8**	**-0.6**
	0.7nm,0.3s,baz=113,slow=11,SNR=1.8						
RPZ				Sn	**Sn**	**21 49 38.8**	**-6.1**
	2.9nm,0.3s,baz=319,slow=22,SNR=28						
	21nm,1.2s						
ARCZ	**Arundel**	**6.44**	**224**	P	**Pn**	**21 48 33.9**	**-0.7**
TMZ	**Timaru**	**6.83**	**222**	P	**Pn**	**21 48 38.9**	**-1.0**
ODZ	**Otahua Downs**	**7.48**	**219**	P	**Pn**	**21 48 47.5**	**-1.3**
ASAR	**Alice Springs**	**39.82**	**280**	P	**P**	**21 54 33.1**	**+0.6**
	0.9nm,0.8s,baz=114,slow=7.8,SNR=7.4						
	0.9nm,0.8s						
WRA	**Warramunga Arr**	**41.65**	**285**	P	**P**	**21 54 47.8**	**+0.2**
	0.8nm,0.6s,baz=127,slow=7.1,SNR=12						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**120.45**	**307**	PKP	**PKiKP**	**22 05 50.1**	**+0.2**
	0.1nm,0.4s,baz=92,slow=1.4,SNR=1.6						
ARCES	**ARCESS Array B**	**146.36**	**343**	PKPbc	**PKPbc**	**22 06 38.3**	**-0.2**
	4.0nm,1.0s,baz=50,slow=1.4,SNR=1.6						
FINES	**FINESS Array B**	**151.80**	**331**	PKPbc	**PKiKP**	**22 06 54.3**	**+1.4**
	2.3nm,1.1s,baz=65,slow=6.6,SNR=1.3						
BRTR	**Keskin Array B**	**152.15**	**282**	PKPbc	**PKiKP**	**22 06 54.8**	**+0.3**
	0.5nm,0.7s,baz=46,slow=4.2,SNR=2.7						

IDC 03 22:36:16.1±9.9, **16°.74S**×**172°.89W**, **h0**^{km}, **mb3.5**/3, **mbtmp3.5**/3, **MS2.8**/2, **Error ellipse: s-maj=438.5km s-min=40.0km az=140.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.01**	**21**	LR	LR	22 38 05.6	
	comp=Z,85nm,19.4s,baz=120,slow=36						
H11S2	**WAKE ISLAND Hy**	**40.36**	**329**	T	T	23 25 52.0	
	baz=149						
H11S3	**WAKE ISLAND Hy**	**40.37**	**329**	T	T	23 26 03.1	
	baz=149						
H11S1	**WAKE ISLAND Hy**	**40.38**	**329**	T	T	23 25 50.8	
	baz=149						
H11N3	**WAKE ISLAND Hy**	**41.31**	**330**	T	T	23 26 43.6	
	baz=150						
H11N1	**WAKE ISLAND Hy**	**41.32**	**330**	T	T	23 26 43.5	
	baz=150						
H11N2	**WAKE ISLAND Hy**	**41.33**	**330**	T	T	23 26 44.6	
	baz=150						
WRA	**Warramunga Arr**	**50.03**	**258**	P	P	22 45 13.3	+0.4
	0.1nm,0.3s,baz=95,slow=7.1,SNR=1.9						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**50.18**	**253**	P	P	22 45 13.4	-0.5
	0.8nm,0.7s,baz=87,slow=8.2,SNR=9.2						
	0.8nm,0.7s						
GUMO	**Guam**	**51.47**	**303**	LR	LR	23 04 23.7	
	comp=Z,17nm,20.0s,baz=116,slow=33						
ILAR	**Eielson Array**	**83.66**	**11**	P	P	22 48 46.1	0.0
	0.4nm,0.9s,baz=219,slow=5.6,SNR=4.5						
	0.4nm,0.9s						

IDC 03 22:44:02.2±15.0, **7°.77S**×**156°.94E**, **h0**^{km}, **mb3.8**/4, **mbtmp3.8**/4, **MS3.0**/1, **Error ellipse: s-maj=456.4km s-min=46.0km az=116.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**16.04**	**219**	LR	LR	22 53 08.3	
	comp=Z,45nm,18.4s,baz=86,slow=34						
WRA	**Warramunga Arr**	**25.02**	**239**	P	P	22 49 28.1	-0.1
	0.3nm,0.6s,baz=61,slow=10,SNR=2.8						
	0.3nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**27.81**	**20**	T	T	23 18 27.6	
	baz=200,slow=74						
H11S2	**WAKE ISLAND Hy**	**27.82**	**20**	T	T	23 18 24.6	
	baz=200,slow=74						
H11S1	**WAKE ISLAND Hy**	**27.83**	**20**	T	T	23 18 27.8	
	baz=200						
SONM	**Songino Array**	**71.03**	**327**	P	P	22 55 22.3	+0.1
	0.4nm,0.6s,baz=140,slow=6.4,SNR=3.3						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**85.25**	**318**	P	P	22 56 41.0	0.0
	1.1nm,0.7s,baz=104,slow=5.5,SNR=15						
	1.1nm,0.7s						
ZALV	**Zalesovo Beam**	**85.90**	**326**	P	P	22 56 43.8	-0.1
	0.7nm,0.5s,baz=104,slow=6.1,SNR=3.8						
	0.7nm,0.5s						

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*ISK **03** 22:56:47.8, 35°.56N×25°.96E, h16^{km}, ML2.5/11*

*ATH **03** 22:56:50.2, 35°.46N×25°.93E, h18^{km}±2^{km}, ML1.9/3, Error ellipse: s-maj=2.2km s-min=1.0km az=123.0*

ISC 03 22:56:47.9±1.2, **35°.53N**±0°.04×**25°.93E**±0°.03, **h13**^{km}±10^{km}, **n23**, σ**1^{s}25**/31, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STIA	**Sitia Lasithi**	**0.36**	**158**	P	**Pb**	**22 56 56.2**	**+0.1**
STIA				S	**Sg**	**22 57 00.9**	**+1.0**
STIA				AML	AML	22 57 01.5	
	comp=N,780µm,0.4s						
STIA				AML	AML	22 57 02.7	
	comp=E,892µm,0.3s						
ZKR	**Zakros**	**0.48**	**150**	Pg	**Pb**	**22 56 58.3**	**+0.1**
ZKR				Sg	**Sb**	**22 57 05.3**	**+0.1**
ZKR	**Zakros**	**0.48**	**150**	P	**Pb**	**22 56 58.3**	**+0.1**
ZKR				S	**Sb**	**22 57 04.9**	**-0.2**
ZKR				AML	AML	22 57 05.3	
	comp=E,448µm,0.3s						
ZKR				AML	AML	22 57 05.9	
	comp=N,182µm,0.2s						
FRMA	**Ierapetra Chan**	**0.54**	**197**	P	**Pg**	**22 56 59.0**	**+0.5**
FRMA				S	**Sg**	**22 57 05.5**	**-0.2**
FRMA				AML	AML	22 57 08.4	
	comp=N,347µm,0.2s						
FRMA				AML	AML	22 57 08.7	
	comp=E,472µm,0.2s						
HRKL	**Herakleio**	**0.71**	**252**	Pg	**Pb**	**22 57 02.7**	**+0.6**
HRKL				Sg	**Sn**	**22 57 13.7**	**-0.7**
HRKL	**Herakleio**	**0.71**	**252**	P	**Pn**	**22 57 03.8**	**+0.2**
HRKL				S	**Sb**	**22 57 13.0**	**+1.3**
KSTL	**Kastelli Herak**	**0.74**	**252**	P	**Pb**	**22 57 01.0**	**-1.6**
KSTL				S	**Sg**	**22 57 08.1**	**-3.7**
IDI	**Anoyia**	**0.88**	**254**	Pg	**Pn**	**22 57 05.9**	**-0.1**
IDI	**Anoyia**	**0.88**	**254**	P	**Pg**	**22 57 05.5**	**+0.6**
THR6	**Thira Island,**	**0.93**	**333**	P	**Pn**	**22 57 08.5**	**+1.9**
THR8	**Santorini-Mono**	**0.94**	**337**	P	**Pn**	**22 57 08.5**	**+1.6**
THR3	**Thira Island,**	**0.97**	**334**	P	**Pn**	**22 57 09.4**	**+2.2**
THR5	**Thira Island,**	**1.00**	**332**	P	**Pn**	**22 57 09.6**	**+2.0**
KARP	**Karpathos**	**1.01**	**89**	Pg	**Pn**	**22 57 07.1**	**-0.6**
KARP				Sg	**Sn**	**22 57 21.1**	**-0.7**
KARP	**Karpathos**	**1.01**	**89**	P	**Pn**	**22 57 08.4**	**+0.7**
KOSK	**Kos Island**	**1.48**	**35**	Pn	**Pb**	**22 57 13.9**	**-1.4**
IMMV	**Iera Moni Meta**	**1.59**	**268**	Pn	**Pn**	**22 57 16.4**	**+0.7**
IMMV	**Iera Moni Meta**	**1.59**	**268**	P	**Pn**	**22 57 16.3**	**+0.6**
GVD	**Gavdhos**	**1.66**	**246**	Pn	**Pn**	**22 57 17.6**	**+0.9**
RODP	**Rodopos**	**1.77**	**272**	Pn	**Pn**	**22 57 19.0**	**+0.8**
KNDR	**Palaiochora Ch**	**1.86**	**261**	Pn	**Pb**	**22 57 20.9**	**-0.7**
ARG	**Arkhangelos**	**1.91**	**68**	Pn	**Pn**	**22 57 19.9**	**-0.2**
KTHA	**Kythira Island**	**2.44**	**288**	Pn	**Pn**	**22 57 28.3**	**+0.9**

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*IDC **03** 22:59:01.0±1.4, 7°.39N×76°.62W, h0^{km}, mb3.8/3, mbtmp3.8/5, ML2.6/2, Error ellipse: s-maj=43.2km s-min=27.1km az=52.0*

*NEIC **03** 22:59:02.7±2.5, 7°.49N±0°.06×76°.36W±0°.04, h10^{km}±1^{km}, mb4.5/11, Error ellipse: s-maj=12.5km s-min=3.4km az=30.0*

*RSNC **03** 22:59:04.3±1.1, 7°.33N×76°.35W, h1^{km}±4^{km}, ML3.5, Mw4.1*

ISC 03 22:59:02.4±1.2, **7°.39N**±0°.03×**76°.40W**±0°.04, **h13**^{km}±8^{km}, **n53**, σ**2^{s}04**/77, **mb4.3**/10, **1C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBBC	**Dabeiba**	**0.41**	**153**	⇓*e*P	**Pg**	**22 59 10.3**	**-0.4**
DBBC				*e*S	**Sg**	**22 59 17.0**	**+0.7**
DBBC				*i*		22 59 18.9	
	comp=Z,12µm,0.4s						
APAC	**Apartado, Choc**	**0.54**	**341**	⇓*e*P	**Pn**	**22 59 15.8**	**0.0**
APAC				*e*S	**Sn**	**22 59 24.8**	**0.0**
APAC				*i*		22 59 33.8	
	comp=Z,2µm,0.5s						
UREC	**San Jos de Ur**	**0.93**	**67**	⇑*i*P	**Pn**	**22 59 20.8**	**-0.5**
UREC				*e*S	**Sn**	**22 59 33.9**	**-0.6**
UREC				*i*		22 59 39.4	
	comp=Z,1µm,0.4s						
LCBC	**Los crdobas,**	**1.46**	**1**	*e*S	**Sg**	**22 59 52.0**	**+2.5**
HELC	**Santa Helena**	**1.47**	**144**		**Pn**	**22 59 28.7**	**-0.3**
HELC				Sn	**Sb**	**22 59 49.1**	**+0.5**
HELC	**Santa Helena**	**1.47**	**144**	⇓*i*P	**Pn**	**22 59 28.9**	**0.0**
HELC				*e*S	**Sb**	**22 59 49.3**	**+0.7**
HELC				*i*		22 59 52.5	
	comp=Z,213nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.53**	**86**	*e*P	**Pb**	**22 59 30.2**	**-0.5**
ZARC				*e*S	**Sg**	**22 59 50.8**	**-1.0**
ZARC				*i*		22 59 55.9	
	comp=Z,2µm,0.5s						
CBOC	**Ciudad Bolivar**	**1.56**	**166**	*e*P	**Pn**	**22 59 30.9**	**+0.8**
CBOC				*e*S	**Sn**	**22 59 51.1**	**+0.9**
CBOC				*i*		23 00 02.9	
	comp=Z,696nm,0.4s						
PTBC	**PUERTO BERRIO,**	**2.11**	**113**	*e*P	**Pn**	**22 59 38.4**	**+1.1**
PTBC				*e*S	**Sb**	**23 00 05.0**	**-1.5**
PTBC				*i*		23 00 16.6	
	comp=Z,351nm,0.4s						
NORC	**Norcasia**	**2.37**	**140**	*e*P	**Pn**	**22 59 42.3**	**+1.3**
NORC				*e*S	**Sn**	**23 00 10.8**	**+0.9**
NORC				*i*		23 00 23.0	
	comp=Z,224nm,0.4s						
NIZA	**Niza - Manizal**	**2.49**	**158**	*e*P	**Pb**	**22 59 48.0**	**+0.8**
NIZA				*e*S	**Sn**	**23 00 14.6**	**+1.2**
RECRC	**Villamaria, Ca**	**2.63**	**157**	*e*P	**Pb**	**22 59 48.4**	**-1.3**
RECRC				*e*S	**Sb**	**23 00 23.1**	**+1.0**
BRRC	**Barranca, Sant**	**2.68**	**96**	*e*P	**Pn**	**22 59 47.3**	**+2.0**
BRRC				*e*S	**Sb**	**23 00 21.1**	**-2.1**
BRRC				*i*		23 00 35.0	
	comp=Z,152nm,0.7s						
SPBC	**San Pablo de B**	**2.89**	**127**	*e*S	**Sg**	**23 00 32.0**	**-3.2**
ANIL	**Santa Ana**	**3.04**	**161**	*e*P	**Pb**	**22 59 54.8**	**-1.8**
ANIL				*e*S	**Sb**	**23 00 33.1**	**-0.8**
ANIL				*i*		23 00 40.5	
	comp=Z,180nm,0.4s						
ROSC	**El Rosal**	**3.27**	**141**	Pn	**Pb**	**22 59 58.1**	**-2.5**
	comp=Z,17nm,0.3s,baz=309,slow=13,SNR=23						
ROSC				Lg	Lg	23 00 44.9	
	comp=Z,35nm,0.3s,baz=13,slow=22,SNR=8.2						
	comp=Z,105nm,0.4s						
ROSC	**El Rosal**	**3.27**	**141**		**Pn**	**22 59 55.6**	**+1.9**
ROSC	**El Rosal**	**3.27**	**141**	*e*P	**Pb**	**23 00 00.7**	**+0.1**
ROSC				*e*S	**Sb**	**23 00 43.6**	**+3.2**
BARC	**Barichara**	**3.29**	**104**	*e*P	**Pb**	**22 59 59.0**	**-1.8**
BARC				*e*S	**Sg**	**23 00 47.5**	**-0.7**
BARC				*i*		23 00 53.1	
	comp=Z,343nm,0.5s						
YOTC	**Yotoco, Valle**	**3.38**	**179**	*e*P	**Pn**	**22 59 55.6**	**+0.6**
YOTC				*e*S	**Sn**	**23 00 36.2**	**+1.0**
MALC	**Bahia Malaga**	**3.48**	**196**	*e*S	**Sn**	**23 00 37.0**	**-0.4**
LL1C	**La Loma 1 Cana**	**3.54**	**53**	*e*S	**Sg**	**23 01 02.0**	**+5.9**
RUSC	**La Rusia**	**3.62**	**114**	Pn	**Pn**	**23 00 00.2**	**+1.7**
RUSC	**La Rusia**	**3.62**	**114**	*e*P	**Pn**	**23 00 01.3**	**+2.8**
RUSC				*e*S	**Sb**	**23 00 49.2**	**-1.3**
ORTC	**Ortega, Tolima**	**3.64**	**162**	*e*P	**Pb**	**23 00 04.1**	**-2.6**
ORTC				*e*S	**Sb**	**23 00 54.0**	**+3.1**
ORTC				*i*		23 01 13.2	
	comp=Z,82nm,0.6s						
PAMC	**Pamplona, Colo**	**3.67**	**91**	*e*P	**Pn**	**23 00 01.4**	**+2.1**
PAMC				*e*S	**Sn**	**23 00 46.1**	**+3.4**
PAMC				*i*		23 01 06.6	
	comp=Z,135nm,0.5s						
CHIC	**Chingaza**	**3.81**	**136**	*e*P	**Pn**	**23 00 05.6**	**+4.3**
CHIC				*e*S	**Sb**	**23 00 52.5**	**-3.6**
CHIC				*i*		23 01 13.4	
	comp=Z,80nm,0.6s						
BCIP	**Isla Barro Col**	**3.83**	**298**	Pn	**Pn**	**23 00 01.5**	**+0.4**
PRAC	**Prado**	**3.95**	**157**		**Pn**	**23 00 06.4**	**+3.6**
PRAC	**Prado**	**3.95**	**157**	*e*P	**Pn**	**23 00 07.2**	**+4.5**
PRAC				*e*S	**Sb**	**23 00 57.1**	**-2.6**
PRAC				*i*		23 01 24.8	
	comp=Z,72nm,0.6s						
JAMC	**Jamundi, Valle**	**4.15**	**184**	*e*P	**Pn**	**23 00 07.8**	**+2.0**
JAMC				*e*S	**Sn**	**23 00 55.7**	**+1.4**
JAMC				*i*		23 01 02.1	
	comp=Z,24nm,0.4s						
VILC	**Villavicencio,**	**4.22**	**140**	*e*P	**Pn**	**23 00 11.1**	**+4.5**
VILC				*e*S	**Sb**	**23 01 10.9**	**+3.2**
SDV	**Santo Domingo**	**5.90**	**75**	Pn	**Pn**	**23 00 32.3**	**+2.6**
	comp=Z,0.7nm,0.3s,baz=242,slow=15,SNR=3.0						
SDV				Sn	**Sn**	**23 01 36.9**	**-0.5**
	comp=Z,6.8nm,0.3s,baz=192,slow=21,SNR=8.1						
SDV				Lg	Lg	23 02 08.8	
	comp=Z,3.7nm,0.3s,baz=53,slow=21,SNR=1.6						
	comp=Z,2.7nm,0.3s						
SDV	**Santo Domingo**	**5.90**	**75**		**Pn**	**23 00 30.5**	**+0.8**
OTAV	**Otavalo**	**7.39**	**196**	Pn	**Pn**	**23 00 53.5**	**+3.0**
PRVC	**Isla de Provid**	**7.70**	**321**	Pn	**Pn**	**23 00 54.2**	**-0.1**
BAUV	**El Baul**	**8.42**	**79**		**Pn**	**23 01 04.0**	**-0.1**
SJG	**San Juan**	**14.61**	**42**	Pn	**Pn**	**23 02 29.8**	**+0.9**
SAML	**Samuel**	**20.90**	**141**	P	**P**	**23 03 45.0**	**+0.3**
SIV	**San Ignacio**	**27.75**	**147**	P	**P**	**23 04 51.4**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=333,slow=14,SNR=4.3						
	comp=Z,1.0nm,0.6s						
WHTX	**Lake Whitney,**	**31.37**	**324**	P	**P**	**23 05 21.5**	**-1.5**
WHTX				IAmb	IAmb	23 05 27.4	
	comp=Z,8.9nm,0.9s						
JCT	**Junction City**	**31.76**	**319**	P	**P**	**23 05 25.1**	**-1.4**
JCT				IAmb	IAmb	23 05 33.5	
	comp=Z,3.9nm,1.0s						
FCAR	**Ozark Folk Cen**	**31.81**	**335**	P	**P**	**23 05 26.2**	**-0.7**
FCAR				IAmb	IAmb	23 05 37.1	
	comp=Z,3.9nm,1.1s						
HHAR	**Hobbs**	**32.92**	**333**	P	**P**	**23 05 36.0**	**-0.6**
HHAR				IAmb	IAmb	23 05 53.1	
	comp=Z,4.2nm,1.0s						
OK033	**Mehan**	**34.15**	**330**	P	**P**	**23 05 47.2**	**-0.1**
AC02	**Maricunga**	**34.74**	**169**	P	**P**	**23 05 51.8**	**-1.3**
PKME	**Peaks-Kenny Pk**	**38.23**	**8**	P	**P**	**23 06 20.5**	**-1.6**
GGN	**Saint George**	**38.49**	**11**	P	**P**	**23 06 22.3**	**-2.0**
GGN				IAmb	IAmb	23 06 23.6	
	comp=Z,11nm,0.9s						
GO05	**Huala**	**42.38**	**175**	P	**P**	**23 06 57.4**	**+0.8**
GO05				IAmb	IAmb	23 07 12.2	
	comp=Z,14nm,1.0s						
WUAZ	**Wupatki**	**42.53**	**316**	P	**P**	**23 06 55.0**	**-3.1**
WUAZ				IAmb	IAmb	23 07 01.5	
	comp=Z,11nm,1.1s						
YKA	**Yellowknife Ar**	**61.64**	**341**	P	**P**	**23 09 19.9**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=130,slow=7.4,SNR=4.4						
	comp=Z,0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**76.81**	**78**	P	**P**	**23 10 56.8**	**+2.2**
	comp=Z,1.1nm,1.1s,baz=288,slow=7.6,SNR=3.5						
	comp=Z,1.1nm,1.1s						
ASAR	**Alice Springs**	**146.73**	**237**	PKPbc	**PKPdf**	**23 18 44.7**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=120,slow=3.3,SNR=4.5						

WEL 03 23:05:07.9±0.4, **42°S**±2°×**17°4E**±°, **h11**^{km}±3^{km}, **M2.3**/4, **ML2.6**/11, **MLv2.3**/4, **1C, Error ellipse: s-maj=0.0km s-min=0.0km az=105.5, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.17**	**184**	P	Pb	23 05 12.7	-0.4
KHZ				S	Sg	23 05 16.0	+1.7
BSWZ	**Blackbirch Sta**	**0.58**	**24**	⇑P	Pg	23 05 19.5	+0.3
BSWZ				S	Sb	23 05 27.9	-0.5
THZ	**Tophouse**	**0.68**	**315**	P	Pg	23 05 21.0	-0.2
THZ				S	Sg	23 05 29.7	-0.4
GVZ	**Greta Valley S**	**0.82**	**208**	S	Sn	23 05 37.3	-0.2
TUWZ	**Tuamarina**	**0.86**	**20**	P	Pg	23 05 24.7	+0.1
MRNZ	**Matariki Terra**	**1.03**	**325**	P	Pb	23 05 27.9	+0.1
MRNZ				P	Pg	23 05 28.0	+0.2
MRNZ				S	Sb	23 05 42.0	+0.6
NNZ	**Nelson**	**1.03**	**353**	P	Pg	23 05 27.2	-0.6
NNZ				S	Sb	23 05 41.8	+0.4
LTZ	**Lake Taylor**	**1.09**	**240**	P	Pb	23 05 28.2	-0.6
TCW	**Tory Channel**	**1.17**	**28**	P	Pb	23 05 29.6	-0.4
TCW				S	Sn	23 05 45.8	-0.3
DSZ	**Denniston Nort**	**1.40**	**290**	P	Pb	23 05 34.1	0.0
DUWZ	**D'Urville Isla**	**1.47**	**11**	P	Pb	23 05 34.9	-0.4
MQZ	**McQueen's Vall**	**1.60**	**204**	P	Pn	23 05 34.2	-2.0
MQZ				S	Sn	23 05 54.0	-2.9
QRZ	**Quartz Range**	**1.61**	**331**	P	Pb	23 05 37.2	-0.5
QRZ				S	Sb	23 05 57.7	-0.3
INZ	**Inchbonnie**	**1.63**	**252**	P	Pn	23 05 37.3	+0.7
INZ				S	Sb	23 05 58.7	+0.1

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*IDC **03** 23:08:49.6±2.2, 4°.75N×125°.00E, h0^{km}, mb3.3/3, mbtmp3.3/3, MS2.4/1, Error ellipse: s-maj=203.8km s-min=27.4km az=64.0*

*MAN **03** 23:08:58.3, 4°.96N×126°.12E, h95^{km}, mb4.5, ML3.4, MS3.2*

ISC 03 23:09:00.0±1.2, **5°.01N**±0°.08×**126°.03E**±0°.08, **h100**^{km}, **n17**, σ**1^{s}83**/24, **mb3.0**/3, **7C-5D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.52**	**315**	⇑*e*P	**Pn**	**23 09 24.9**	**-1.7**
GSPH				*i* S	**Sn**	**23 09 42.3**	**-4.5**
MATI	**Mati**	**1.94**	**7**	⇓*e*P	**Pn**	**23 09 31.7**	**-0.1**
MATI				*i* S	Sn	23 10 07.3	+11
SKMP	**Bagumbayan, Su**	**2.10**	**316**	⇓*e*P	**Pn**	**23 09 34.4**	**+0.4**
SKMP				*e*S	**Sn**	**23 10 01.4**	**+1.5**
KCP	**Kidapawan**	**2.19**	**335**	⇓*i*P	**Pn**	**23 09 34.7**	**-0.5**
CDOP	**Cateel, Davao**	**2.79**	**8**	⇓*e*P	**Pn**	**23 09 42.7**	**-0.3**
CDOP				*e*S	**Sn**	**23 10 14.5**	**-1.6**
CTBH	**Cotabato--PC H**	**2.82**	**321**	*e*P	**Pn**	**23 09 42.9**	**-0.6**

CTBH				i S	Sn	23 10 17.1	+0.3
BUKP	Musuan	3.01	341	⇑eP	Pn	23 09 45.6	-0.4
BUKP				eS	Sn	23 10 22.7	+1.3
BIPH	Bislig	3.17	6	⇑iP	Pn	23 09 47.8	-0.3
BIPH				i S	Sn	23 10 21.5	-3.7
TASP	Talacogon, Agu	3.43	356	⇓eP	Pn	23 09 54.8	+3.2
TASP				eS	Sn	23 10 41.1	+10
CGP	Cagayan de Oro	3.67	339	⇑eP	Pn	23 09 55.9	+1.1
CGP				eS	Sn	23 10 38.0	+0.8
PAGZ	Pagadian	3.85	317	⇑eP	Pn	23 09 57.9	+0.6
PAGZ				eS	Sn	23 10 43.9	+2.2
DCPH	Dipolog City	4.43	323	⇑eP	Pn	23 09 57.5	-7.6
GLSP	General Luna,	4.75	1	⇑eP	Pn	23 10 10.4	+1.1
GLSP				eS	Sn	23 11 04.3	+1.1
WRA	Warramunga Arr	26.11	162	P	P	23 14 26.9	+2.2
	0.3nm,0.5s,baz=339,slow=10,SNR=6.0						
	0.3nm,0.5s						
ASAR	Alice Springs	29.52	165	P	P	23 14 55.3	+0.1
	0.2nm,0.5s,baz=345,slow=7.6,SNR=1.7						
	0.2nm,0.5s						
KSRS	Korea Array	32.34	3	LR	LR	23 28 54.4	
	comp=Z,7.0nm,19.4s,baz=75,slow=37						
MKAR	Makanchi Array	56.11	325	P	P	23 18 28.1	-1.0
	0.2nm,0.5s,baz=115,slow=8.2,SNR=5.6						
	0.2nm,0.5s						

IDC 03 23:12:55.8±2.0, 1°.25N×125°.52E, h0^{km}, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=180.6km s-min=25.9km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.77	158	P	P	23 17 59.4	-0.6
	0.8nm,0.5s,baz=336,slow=11,SNR=7.3						
	0.8nm,0.5s						
ASAR	Alice Springs	26.07	162	P	P	23 18 31.7	+0.5
	0.2nm,0.4s,baz=343,slow=11,SNR=6.4						
	0.2nm,0.4s						
MKAR	Makanchi Array	58.92	327	P	P	23 22 56.8	-0.1
	0.2nm,0.4s,baz=121,slow=7.8,SNR=5.5						
	0.2nm,0.4s						

*DDA **03** 23:16:51.8±0.0, 35°.10N×25°.22E, h7^{km}±5^{km}, MW4.4*

*GII **03** 23:16:55.9±0.0, 35°.45N×25°.90E, h17^{km}, mb4.2/3, MD4.0/3, Mm4.1/9*

*MOS **03** 23:16:58.3±1.3, 35°.47N×25°.84E, h18^{km}, mb4.7/25, Error ellipse: s-maj=4.5km s-min=3.1km az=79.8*

*ISK **03** 23:16:58.8, 35°.58N×25°.90E, h8^{km}, ML4.2*

*ATH **03** 23:17:00.7, 35°.50N×25°.92E, h13^{km}±2^{km}, ML4.6/10, Error ellipse: s-maj=3.0km s-min=0.8km az=182.0*

*MED_RC **03** 23:17:00.0±0.4, 35°.43N×25°.88E, h20^{km}±2^{km}, MW4.5/16, Moment Tensor Solution.Mantle waves: s16,c20; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.78±1.01; $M_{\theta\theta}$-4.60±.53; $M_{\phi\phi}$6.38±.69; $M_{r\theta}$-0.68±.80; $M_{\theta\phi}$1.75±.44; $M_{\phi r}$-1.50±.58; Best double couple: $M_0$5.94000×10^{15} NP1:ϕ_s234.00000°, δ89.00000°, λ13.00000°. NP2:ϕ_s143.00000°, δ77.00000°, λ179.00000°. Principal axes: T 6.9400, Plg10.0000°, Azm99.0000°; N -2.0000, Plg76.0000°, Azm239.0000°; P -4.9400, Plg9.0000°, Azm8.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*IDC **03** 23:17:00.2±2.2, 35°.64N×25°.83E, h17^{km}±14^{km}, mb4.3/25, mbtmp4.4/31, ML4.0/6, MS3.4/28 Error ellipse: s-maj=13.7km s-min=7.2km az=154.0*

*THE **03** 23:17:00.8, 35°.45N×25°.90E, h17^{km}±1^{km}, ML4.5/10, Error ellipse: s-maj=1.5km s-min=0.4km az=165.0*

*NEIC **03** 23:17:00.1±1.7, 35°.39N±0°.07×25°.88E±0°.05, h19^{km}±4^{km}, mb4.5/58, Mwr4.4/30, Error ellipse: s-maj=10.5km s-min=5.1km az=169.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.41; $M_{\theta\theta}$-3.44; $M_{\phi\phi}$2.03; $M_{r\theta}$1.55; $M_{\theta\phi}$2.12; $M_{\phi r}$1.73; Fault plane solution: $M_0$4.34000×10^{15} NP1:ϕ_s327.91000°, δ56.82000°, λ158.97000°. NP2:ϕ_s69.79000°, δ72.52000°, λ35.01000°. Principal axes: T 4.3577, Plg37.0000°, Azm293.0000°; N -0.0303, Plg51.0000°, Azm93.0000°; P -4.3274, Plg10.0000°, Azm196.0000°;*

*NEIC **03** 23:17:00.2, 35°.35N×25°.88E, h21^{km}*

*PDG **03** 23:17:01.2±0.4, 35°.46N×25°.91E, h17^{km}±1^{km}, ML4.5/11, Error ellipse: s-maj=0.8km s-min=0.6km az=90.0*

ISC 03 23:17:00.5±0.7, 35°.41N±0°.02×25°.88E±0°.02, h26^{km}±4^{km}, n554, σ1^{s}75/650, mb4.6/63, MS3.4/21, 38C-32D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STIA	Sitia Lasithi	0.27	140	P	Pb	23 17 07.2	+0.1
STIA	Sitia Lasithi	0.27	140	P	Pb	23 17 07.2	+0.1
STIA				S	Sb	23 17 12.2	+0.6
STIA				AML	AML	23 17 12.7	
STIA				AML	AML	23 17 16.8	
ZKR	Zakros	0.40	137	P	Pb	23 17 09.3	+0.2
ZKR				S	Sb	23 17 15.8	+0.8
	65µm,0.5s						
ZKR	Zakros	0.40	137	Pg	Pb	23 17 09.4	+0.2
ZKR	Zakros	0.40	137	P	Pb	23 17 09.3	+0.2
ZKR				S	Sb	23 17 16.0	+1.0
ZKR				AML	AML	23 17 16.6	
ZKR				AML	AML	23 17 21.1	
	comp=N,62287µm,0.4s						
FRMA	Ierapetra Chan	0.41	197	P	Pb	23 17 09.9	+0.7
FRMA				S	Sb	23 17 16.3	+1.1
	comp=N,21µm,0.3s						
FRMA	Ierapetra Chan	0.41	197	P	Pb	23 17 09.9	+0.7
FRMA				S	Sb	23 17 16.6	+1.4
FRMA				AML	AML	23 17 17.2	
FRMA				AML	AML	23 17 21.8	
	comp=N,99732µm,0.3s						
HRKL	Herakleio	0.64	262	P	Pn	23 17 13.6	-0.3
HRKL				S	Sn	23 17 23.3	+0.1
	comp=N,56µm,0.7s						
HRKL	Herakleio	0.64	262	Pg	Pb	23 17 13.4	+0.3
HRKL	Herakleio	0.64	262	P	Pn	23 17 13.9	0.0
HRKL				S	Sn	23 17 24.1	+0.9
HRKL				AML	AML	23 17 28.5	
HRKL				AML	AML	23 17 30.0	
IACM	Heraklion	0.67	262	P	Pn	23 17 14.3	0.0
IACM				S	Sn	23 17 24.0	+0.1
	comp=N,234µm,0.4s						
IACM	Heraklion	0.67	262	P	Pn	23 17 14.3	0.0
IACM				S	Sn	23 17 25.0	+1.1
KSTL	Kastelli Herak	0.67	261	P	Pb	23 17 10.8	-2.8
KSTL				S	Sb	23 17 18.9	-3.6
KSTL	Kastelli Herak	0.67	261	P	Pb	23 17 11.1	-2.5
KSTL				S	Sb	23 17 19.5	-3.0
KSTL				AML	AML	23 17 25.1	
	comp=E,50345µm,0.6s						
KSTL				AML	AML	23 17 25.3	
	comp=N,90152µm,0.8s						
IDI	Anoyia	0.82	262	⇓P	Pn	23 17 17.0	+0.6
IDI				⇑S	Sn	23 17 28.9	+1.2
IDI	Anoyia	0.82	262	Pg	Pb	23 17 15.9	-0.3
	comp=N,1µm,0.3s,baz=80,slow=14,SNR=5980						
IDI				Lg	Lg	23 17 27.7	
	comp=N,5µm,0.3s,baz=330,slow=18,SNR=35						
IDI				LR	LR	23 17 43.5	
	comp=N,2µm,21.0s,baz=100,slow=51						
IDI	Anoyia	0.82	262	P	Pb	23 17 16.0	-0.1
IDI				S	Sn	23 17 27.7	0.0
	comp=N,31µm,0.4s						
IDI	Anoyia	0.82	262	Pg	Pb	23 17 15.9	-0.3
IDI	Anoyia	0.82	262	Pg	Pb	23 17 15.8	-0.3
IDI					Sb	23 17 27.2	+0.4
IDI	Anoyia	0.82	262	P	Pb	23 17 15.9	-0.3
IDI	Anoyia	0.82	262	P	Pn	23 17 17.1	+0.7
IDI				S	Sn	23 17 29.1	+1.4
IDI				AML	AML	23 17 30.6	
	comp=N,67477µm,0.4s						
IDI				AML	AML	23 17 30.9	
	comp=E,56305µm,0.5s						
TMBK	Timbaki Herakl	0.97	250	P	Pb	23 17 19.6	+0.9
TMBK				S	Sn	23 17 33.1	+1.8
TMBK	Timbaki Herakl	0.97	250	P	Pb	23 17 20.0	+1.4
TMBK				S	Sn	23 17 34.0	+2.6
TMBK				AML	AML	23 17 36.8	
	comp=E,82486µm,0.3s						
TMBK				AML	AML	23 17 39.2	
	comp=N,94255µm,0.7s						
THR6	Thira Island,	1.03	338	P	Pn	23 17 18.0	-1.2
THR9	Santorini-Faro	1.04	336	P	Pn	23 17 18.7	-0.7
KARP	Karpathos	1.05	82	P	Pn	23 17 19.1	-0.5
KARP				S	Sb	23 17 33.1	-0.4
	comp=N,40µm,0.7s						
KARP	Karpathos	1.05	82	Pg	Pn	23 17 19.1	-0.5
KARP				Sg	Sn	23 17 33.4	-0.1
KARP	Karpathos	1.05	82		Pn	23 17 19.3	-0.4
KARP				Sn	Sn	23 17 33.6	+0.2
KARP	Karpathos	1.05	82	P	Pn	23 17 19.2	-0.4
KARP	Karpathos	1.05	82	P	Pn	23 17 19.4	-0.2
KARP				S	Sb	23 17 32.8	-0.7
KARP				AML	AML	23 17 35.5	
KARP				AML	AML	23 17 39.2	
	comp=N,54314µm,0.6s						
PRNS	Prines Rethymn	1.13	268	P	Pb	23 17 21.8	+0.5
PRNS				S	Sb	23 17 38.4	+2.8
CHAN	Chania	1.50	275	P	Pn	23 17 26.3	+0.6
IMMV	Iera Moni Meta	1.55	273	P	Pn	23 17 27.1	+0.7
IMMV				S	Sn	23 17 46.2	+0.5
IMMV	Iera Moni Meta	1.55	273	Pn	Pn	23 17 27.1	+0.7
IMMV	Iera Moni Meta	1.55	273	P	Pb	23 17 27.6	-0.9
NISR	Nisiros	1.57	40	P	Pn	23 17 26.5	-0.2
NISR				S	Sn	23 17 45.4	-0.7
	comp=N,16µm,0.6s						
NISR	Nisiros	1.57	40	P	Pn	23 17 26.9	+0.3
GVDS	Gavdos	1.57	250	Pn	Pb	23 17 29.4	+0.5
GVD	Gavdhos	1.57	249	Pn	Pb	23 17 29.2	+0.3
KOSK	Kos Island	1.61	33	P	Pn	23 17 26.1	-1.1
KOSK	Kos Island	1.61	33	Pn	Pn	23 17 25.9	-1.3
KOSK	Kos Island	1.61	33	P	Pn	23 17 26.1	-1.1
APE	Apeiranthos	1.68	350	⇓P	Pn	23 17 28.5	+0.2
APE				⇓S	Sn	23 17 47.5	-1.6
APE	Apeiranthos	1.68	350	Pn	Pn	23 17 26.9	-1.4
APE	Apeiranthos	1.68	350	Pn	Pn	23 17 24.2	-4.1
APE				Sn	Sn	23 17 45.2	-3.8
APE	Apeiranthos	1.68	350	P	Pn	23 17 28.4	+0.2
APE				S	Sn	23 17 47.4	-1.6
RODP	Rodopos	1.74	276	Pn	Pn	23 17 29.9	+0.9
MHLO	Agia Marina, M	1.75	317	P	Pn	23 17 29.1	-0.1
MHLO				S	Sn	23 17 51.0	+0.3
	comp=N,26µm,0.4s						
MHLO	Agia Marina, M	1.75	317	P	Pb	23 17 30.4	-1.6
MHLO				S	Sn	23 17 50.2	-0.5
MHLO				AML	AML	23 17 56.9	
	comp=N,50944µm,0.4s						
MHLO				AML	AML	23 17 58.0	
	comp=E,56176µm,0.3s						
KNDR	Palaiochora Ch	1.80	265	P	Pb	23 17 31.6	-1.2
KNDR				S	Sb	23 17 53.9	-1.1
KNDR	Palaiochora Ch	1.80	265	Pn	Pb	23 17 32.5	-0.3
KNDR	Palaiochora Ch	1.80	265	P	Pb	23 17 33.0	+0.2
DAT	Datca	1.91	46	Pn	Pn	23 17 30.4	-1.0
DAT	Datca	1.91	46	SPECP		23 17 30.0	
DAT				P	Pn	23 17 30.4	-1.0
DAT				S	Sb	23 17 57.5	-0.6
ARG	Arkhangelos	2.00	65	P	Pn	23 17 32.5	0.0
ARG				S	Sn	23 17 56.2	-0.4
	comp=E,4µm,0.5s						
ARG	Arkhangelos	2.00	65	Pn	Pn	23 17 32.7	+0.2
ARG	Arkhangelos	2.00	65	Pn	Pn	23 17 32.7	+0.2
ARG				Sn	Sn	23 17 56.8	+0.2
ARG	Arkhangelos	2.00	65	P	Pn	23 17 32.5	0.0
ARG				S	Sn	23 17 56.2	-0.4
ARG	Arkhangelos	2.00	65	P	Pn	23 17 32.9	+0.4
ARG				S	Sn	23 17 56.5	-0.1
ARG				AML	AML	23 17 59.4	
	comp=N,6510µm,0.6s						
ARG				AML	AML	23 18 05.4	
	comp=E,7337µm,0.6s						
ANKY	Antikythira Is	2.15	283	P	Pn	23 17 35.0	+0.4
ANKY				S	Sn	23 18 00.4	-0.1
	comp=E,5µm,0.7s						
ANKY	Antikythira Is	2.15	283	P	Pn	23 17 35.2	+0.6
DDIM	Aydin, Didim	2.32	28	P	Pb	23 17 40.8	-0.9
DDIM				S	Sb	23 18 13.1	+3.2
TURN	Turunc	2.35	54	Pn	Pn	23 17 37.2	-0.2
MLSB	Milas	2.43	39	Pn	Pn	23 17 38.0	-0.5
KTHA	Kythira Island	2.44	291	Pn	Pn	23 17 38.9	+0.2
KTHA	Kythira Island	2.44	291	P	Pn	23 17 39.2	+0.5
YER	Yerkesik	2.60	48	Pn	Pn	23 17 40.3	-0.5
YER	Yerkesik	2.60	48	P	Pn	23 17 41.3	+0.5
DALY	Dalyan (Mula)	2.65	57	Pn	Pn	23 17 41.6	+0.1
MULA	Mugla, Merkez-	2.70	46	P	Pn	23 17 43.9	+1.6
MULA				S	Sn	23 18 14.7	+0.5
VLI	Veliai	2.72	300	P	Pn	23 17 43.3	+0.9
DGB	zmir	2.76	17	SPECP		23 17 42.0	
DGB				P	Pn	23 17 42.0	-1.0
DGB				S	Sb	23 18 27.3	+4.9
FETY	Fethiye	2.87	64	Pn	Pn	23 17 44.8	+0.2
FETY	Fethiye	2.87	64	P	Pb	23 17 48.3	-2.7
FETY				S	Sn	23 18 20.5	+2.2
ZEYE	Izmir, Urla-Ze	2.87	10	SPECP		23 17 43.0	
ZEYE				P	Pn	23 17 43.9	-0.6
ZEYE				S	Sb	23 18 32.5	+6.9
KRND	KRANIDI	2.96	313	P	Pn	23 17 46.2	+0.5
KRND				S	Sn	23 18 22.3	+2.0
KRND	KRANIDI	2.96	313	P	Pn	23 17 46.7	+1.0
VLY	Voula,Athens	2.96	326	P	Pn	23 17 46.1	+0.3
URLA	Izmir	3.00	11	Pn	Pn	23 17 45.6	-0.8
KSL	Kastellorizon	3.10	75	P	Pn	23 17 48.8	+1.1
KSL	Kastellorizon	3.10	75	P	Pn	23 17 49.1	+1.4
BLCB	Balcova	3.12	17	Pn	Pn	23 17 47.1	-0.8
AKAS	Kas	3.14	74	Pn	Pn	23 17 49.3	+1.0
AKAS	Kas	3.14	74		Pn	23 17 49.1	+0.8
CAME	Cameli-Denizli	3.17	60	Pn	Pn	23 17 49.2	+0.5
TAVA	DENIZLI_Tavas	3.19	49	SPECP		23 17 51.0	
TAVA				P	Pn	23 17 51.5	+2.4
TAVA				S	Sn	23 18 29.1	+2.8
CAEL	Denizli, Camel	3.26	57	SPECP		23 17 52.0	
CAEL				P	Pn	23 17 52.1	+2.0
CAEL				S	Sb	23 18 36.8	-0.4
KARB	zmir-Karabur	3.28	7	SPECP		23 17 49.0	
KARB				P	Pn	23 17 49.4	-0.7
KARB				S	Sb	23 18 42.5	+5.1
DNIZ	Denizli-Tavas-	3.37	48	SPECP		23 17 53.0	
DNIZ				P	Pn	23 17 53.0	+1.5
DNIZ				S	Sn	23 18 32.3	+1.5
APMY	Acipayam-Deniz	3.44	52	Pn	Pn	23 17 52.9	+0.4
KYMI	Kymi, Euboea I	3.52	337	P	Pn	23 17 53.8	+0.3
KYMI				S	Sn	23 18 32.2	-2.1
ELL	Elmali	3.53	67	Pn	Pn	23 17 54.6	+0.9
ELL	Elmali	3.53	67		Pn	23 17 54.5	+0.9
ELL	Elmali	3.53	67	P	Pn	23 17 54.5	+0.9
ITM	Ithomi	3.65	300	Pn	Pn	23 17 56.4	+1.1
ITM	Ithomi	3.65	300	Pn	Pn	23 17 56.0	+0.7
ZEDA	zmir-Bergama	3.68	15	SPECP		23 17 54.0	
ZEDA				P	Pn	23 17 54.4	-1.3
ZEDA				S	Sb	23 18 57.0	+8.0
AKUM	Antalya-Kumluc	3.74	75	SPECP		23 17 57.0	
AKUM				P	Pn	23 17 57.7	+1.3
AKUM				S	Sn	23 18 38.8	-0.8
DKL	Dikili	3.75	12	Pn	Pn	23 17 56.2	-0.4
MANT	Manisa	3.75	34	Pn	Pn	23 17 57.8	+0.9
MANT	Manisa	3.75	34	SPECP		23 17 59.0	
MANT				P	Pn	23 17 59.1	+2.2
MANT				S	Sb	23 19 07.7	+16
SIGR	SIGRI	3.80	360	Pn	Pn	23 17 56.3	-1.0
KULA	Kula-Manisa	3.82	35	Pn	Pn	23 17 57.5	-0.1
BRDR	BURDUR-Merkez	4.07	55	SPECP		23 18 02.0	
BRDR				P	Pn	23 18 02.6	+1.5
BRDR				S	Sb	23 18 55.9	-4.3
KOCA	Canakkale, Ayv	4.09	3	P	Pn	23 18 00.8	-0.5
KOCA				S	Sb	23 19 11.5	+11
USAK	Uak-Merkez	4.15	36	SPECP		23 18 04.0	
USAK				P	Pn	23 18 04.3	+2.2
BUHA	Balikesir, Bur	4.20	13	SPECP		23 18 01.0	
BUHA				P	Pn	23 18 01.9	-0.9
BUHA				S	Sb	23 19 13.5	+10
STEP	BALIKESIR_Sava	4.22	20	SPECP		23 18 02.0	
STEP				P	Pn	23 18 02.9	-0.3
STEP				S	Sb	23 19 14.9	+10
EZN	Ezine	4.43	4	Pn	Pn	23 18 05.6	-0.3
BOZC	Bozcaada	4.43	2	Pn	Pn	23 18 05.2	-0.8
ISP	Isparta	4.44	56	Pn	Pn	23 18 05.0	-1.3
ISP	Isparta	4.44	56	Pn	Pn	23 18 01.7	-4.6
ISP	Isparta	4.44	56	i P	Pn	23 18 06.9	+0.6
KZIL	AFYON_Kizioren	4.45	49	SPECP		23 18 08.0	
KZIL				P	Pn	23 18 08.3	+2.0
KZIL				S	Sb	23 19 32.7	+22
BALB	Balikesir	4.51	20		Pn	23 18 07.5	+0.3
AGG	Agios Georgios	4.59	323	Pn	Pn	23 18 08.8	+0.6
AGG	Agios Georgios	4.59	323		Pn	23 18 09.7	+1.5
AGG	Agios Georgios	4.59	323	P	Pn	23 18 09.7	+1.5
BKES	Balkesir-Mer	4.62	20	SPECP		23 18 07.0	
BKES				P	Pn	23 18 07.4	-1.1
AFYO	Afyonkarahisar	4.88	45	SPECP		23 18 13.0	
AFYO				P	Pn	23 18 13.4	+1.1
AFYO				S	Sb	23 19 47.7	+24
LIT	Litokhoron	5.40	331	Pn	Pn	23 18 20.2	+0.9
LIT	Litokhoron	5.40	331	P	Pn	23 18 20.2	+0.9
ALN	Alexandroupoli	5.48	1		Pn	23 18 20.1	-0.3
ALN	Alexandroupoli	5.48	1	P	Pn	23 18 20.1	-0.3
RDO	Rodhopi	5.74	357	Pn	Pn	23 18 23.6	-0.3
BORA	Eskisehir	5.75	38		Pn	23 18 25.2	+1.0
CSS	Mathiatis	6.12	92	Pn	Pn	23 18 30.2	+1.1
CSS	Mathiatis	6.12	92	Pn	Pn	23 18 26.2	-3.0
CSS				Sn	Sn	23 19 35.3	-3.0
FNA	Florina	6.44	328		Pn	23 18 33.9	+0.3
FNA	Florina	6.44	328	P	Pn	23 18 33.9	+0.3
VAY	Valandovo	6.45	337	i Pn	Pn	23 18 37.3	+3.6
KEK	Kerkira	6.47	313		Pn	23 18 34.5	+0.6
MDUB	Mudurnu	6.57	38		Pn	23 18 36.0	+0.5
STIP	Stip	6.91	336	i Pn	Pn	23 18 44.2	+4.2
OHR	Ohrid	6.96	326	i Pn	Pn	23 18 43.2	+2.5
BR231	Keskin MP Arra	7.04	49		Pn	23 18 43.4	+1.5
ANTO	Ankara	7.06	49	⇑P	Pn	23 18 44.5	+2.3
ANTO	Ankara	7.06	49		Pn	23 18 43.2	+1.0
ANTO	Ankara	7.06	49	P	Pn	23 18 44.5	+2.3
SKO	Skopje	7.42	333	i Pn	Pn	23 18 51.6	+4.6
VTS	Vitosha	7.49	345	⇓P	Pn	23 18 49.1	+1.0
VTS	Vitosha	7.49	345	Pn	Pn	23 18 49.1	+1.0
VTS	Vitosha	7.49	345	P	Pn	23 18 49.1	+1.0
SCTE	Santa Cesarea	7.49	311		Pn	23 18 47.9	-0.1
BR131	Keskin Array S	7.52	53		Pn	23 18 49.5	+1.0
BR131	Keskin Array S	7.52	53	P	Pn	23 18 49.5	+1.0
BRTR	Keskin Array B	7.52	53	Pn	Pn	23 18 49.4	+0.8
	comp=E,1.7nm,0.3s,baz=221,slow=14,SNR=119						
BRTR				Sn	Sn	23 20 12.6	-0.4
	baz=260,slow=23						
BRTR				LR	LR	23 22 33.9	
	comp=E,548nm,19.4s,baz=242,slow=45						
	comp=E,9.8nm,0.5s						
BRTR	Keskin Array B	7.52	53	Pn	Pn	23 18 49.0	+0.5
TIR	Tirane	7.58	323	⇑P	Pn	23 18 49.8	+0.5
TIR	Tirane	7.58	323	Pn	Pn	23 18 50.3	+1.1
TIR	Tirane	7.58	323	P	Pn	23 18 50.3	+1.1
PLVB	Pleven	8.03	353	⇑P	Pn	23 18 55.8	+0.5
HNTI	Hanita	8.04	104	Pn	Pn	23 18 52.0	-3.5
HNTI				Sn	Sn	23 20 22.3	-3.2
OFRI	`Ofer	8.05	108	Pn	Pn	23 18 52.4	-3.4
OFRI				Sn	Sn	23 20 22.8	-3.2
RAZG	Razgrad	8.16	3	⇑P	Pn	23 18 57.3	+0.1
BLGI	Bet Lehem HaGe	8.17	106	Sn	Sn	23 20 26.1	-2.8
TIP	Timpagrande	8.19	300	⇑P	Pn	23 18 58.0	+0.3
MMA0B	Mount Meron ar	8.24	104	Pn	Pn	23 18 54.8	-3.6
MMA0B				Sn	Sn	23 20 28.6	-2.1
MMAI	Mount Meron Ar	8.24	104	Pn	Pn	23 18 57.9	-0.5
	comp=E,4.4nm,0.3s,baz=302,slow=13,SNR=36						
MMAI				Sn	Sn	23 20 27.8	-2.9
	comp=E,18nm,0.3s,baz=299,slow=25,SNR=12						
MMAI				LR	LR	23 24 21.0	
	comp=E,128nm,18.7s,baz=228,slow=53						
SLTI	Sal'it	8.25	110	Pn	Pn	23 18 55.7	-2.7
SLTI				Sn	Sn	23 20 28.1	-2.7
QRWL	Qaraoun	8.30	100	eP	Pn	23 18 58.9	-0.4
ULC	Ulcinj	8.35	324	⇑iPn	Pn	23 18 59.3	-0.5
ULC				i Sn	Sn	23 20 30.2	-3.1
GEM	Giv'at Ha'Em	8.38	102	Pn	Pn	23 18 57.5	-2.8
GEM				Sn	Sn	23 20 31.4	-2.7
ZAHL	Zahle	8.39	98	eP	Pn	23 19 00.6	+0.1
KZIT	Kziot	8.43	120	Pn	Pn	23 18 58.6	-2.4
KZIT				Sn	Sn	23 20 32.2	-3.1
SALP	Salfit	8.44	111	Pn	Pn	23 18 58.2	-2.9
SALP				Sn	Sn	23 20 33.2	-2.3
RCY	Rachaya	8.44	100	eP	Pn	23 19 01.1	-0.1
MMLI	Mount Malkishu	8.46	108	Pn	Pn	23 18 58.6	-2.8
MMLI				Sn	Sn	23 20 32.8	-3.3
AMAZ	Amatzia	8.48	115	Pn	Pn	23 18 58.3	-3.3
AMAZ				Sn	Sn	23 20 33.7	-2.7
BEIL	Beino	8.50	93	eP	Pn	23 19 02.3	+0.4
PVY	Plav	8.53	329	⇑iPn	Pn	23 19 03.3	+1.0
PVY				i Sn	Sn	23 20 34.0	-3.7
DRME	Dracevica, Mon	8.55	324	ePn	Pn	23 19 01.2	-1.3
DRME	Dracevica, Mon	8.55	324	⇓iPn	Pn	23 19 01.8	-0.7
DRME				i Sn	Sn	23 20 34.6	-3.5
HMDT	Nahal Hemdat	8.62	109	Pn	Pn	23 19 01.0	-2.5
HMDT				Sn	Sn	23 20 37.3	-2.5
QRNJ	Al-Qirein	8.62	108	P	Pn	23 19 04.0	+0.5
SHMJ	Saham	8.62	105	P	Pn	23 19 04.9	+1.3
BNN	Bunyan	8.67	64		Pn	23 19 05.5	+1.2
UJAP	Al Uja	8.70	111	Sn	Sn	23 20 38.6	-3.1
PDG	Podgorica	8.71	326	⇓P	Pn	23 19 04.0	-0.7
PDG				⇑S	Sn	23 20 39.9	-2.0
PDG	Podgorica	8.71	326	⇓iPn	Pn	23 19 03.9	-0.7
PDG				i Sn	Sn	23 20 38.2	-3.7
YTIR	Yattir	8.71	115	Pn	Pn	23 19 02.0	-2.9
YTIR	Yattir	8.71	115	P	Pn	23 19 07.0	+2.1
BUM	Brajici-Budva	8.78	324	⇓iPn	Pn	23 19 04.4	-1.3
BUM				i Sn	Sn	23 20 39.5	-4.3
IVA	Berane	8.78	330	⇑iPn	Pn	23 19 07.4	+1.6
IVA				i Sn	Sn	23 20 40.4	-3.6
DSI	Dead Sea	8.81	113	Pn	Pn	23 19 02.8	-3.3
DSI				Sn	Sn	23 20 41.6	-2.9
DSI	Dead Sea	8.81	113	P	Pn	23 19 07.8	+1.7
ICOR	Ion Corvin	8.82	9	⇑P	Pn	23 19 06.8	+0.5
BOVS	Bovan	8.83	340	⇑P	Pn	23 19 07.6	+1.2
MDBI	Mazsada	8.91	115	Pn	Pn	23 19 03.6	-3.9
MDBI				Sn	Sn	23 20 44.0	-3.1
MDBI	Mazsada	8.91	115	P	Pn	23 19 07.7	+0.2
MSBI	Mazada	8.91	115	Pn	Pn	23 19 04.8	-2.7
MSBI				Sn	Sn	23 20 43.4	-3.7
KOME	Kolasin	8.93	328	⇓iPn	Pn	23 19 08.1	+0.3
KOME				i Sn	Sn	23 20 43.6	-3.9
MATE	Matera	8.93	309	⇑P	Pn	23 19 07.0	-0.7
CEME	Cevo	8.95	325	⇑iPn	Pn	23 19 06.4	-1.7
CEME				i Sn	Sn	23 20 43.9	-4.2
DAMI2	DAM2	9.05	115	Sn	Sn	23 20 47.8	-2.5
GHAJ	Ghor Haditha	9.07	114		Pn	23 19 09.6	-0.1
GHAJ	Ghor Haditha	9.07	114	Pn	Pn	23 19 06.2	-3.5
GHAJ				Sn	Sn	23 20 48.5	-2.5
SJES	Sjenica	9.08	332	ePn	Pn	23 19 08.4	-1.5
HCY	Herceg Novi	9.08	323	ePn	Pn	23 19 07.7	-2.1
HCY	Herceg Novi	9.08	323	⇑iPn	Pn	23 19 10.0	+0.2
HCY				i Sn	Sn	23 20 47.9	-3.3
NKME	Niksic	9.11	326	ePn	Pn	23 19 10.2	0.0
NKME				i Sn	Sn	23 20 48.3	-3.6
BZK	Bozkurt	9.12	42	Pn	Pn	23 19 11.1	+0.9
KRMI	Paran Flat	9.12	123	Pn	Pn	23 19 07.6	-2.9
WALJ	Wala	9.14	112	P	Pn	23 19 10.9	+0.3
AMUR	Altamura	9.14	310	⇑P	Pn	23 19 09.7	-0.9
PRNI	Paran	9.18	121	Pn	Pn	23 19 08.1	-3.1
PRNI	Paran	9.18	121	P	Pn	23 19 13.9	+2.7
ZFRI	Zfri	9.19	119	Pn	Pn	23 19 08.3	-3.0
CUC	Castrocucco	9.20	303	⇓P	Pn	23 19 11.7	+0.3
KARJ	KARJ	9.23	115	P	Pn	23 19 08.4	-3.5
TIRR	Tirgusor	9.25	11	⇑P	Pn	23 19 12.1	+0.1
TIRR	Tirgusor	9.25	11	Pn	Pn	23 19 12.2	+0.1
TIRR	Tirgusor	9.25	11	P	Pn	23 19 12.2	+0.1
PTRP	Pietrapertosa	9.28	306	⇑P	Pn	23 19 12.8	+0.1
GAZ	Gaziantep	9.32	76		Pn	23 19 13.2	+0.1
TREB	Trebinje	9.36	324	ePn	Pn	23 19 10.7	-2.9
MTSN	Montesano sull	9.36	304	⇓P	Pn	23 19 14.7	+0.9
HRFI	Mount Harif	9.39	122	Pn	Pn	23 19 10.7	-3.4
HRFI				Sn	Sn	23 20 55.5	-3.3
MBRI	Mt Berech	9.45	124	Sn	Sn	23 20 58.2	-2.2
MBRI	Mt Berech	9.45	124	P	Pn	23 19 16.6	+1.6
VAE	Valguarnera	9.47	286	Pn	Pn	23 19 15.4	+0.2
	comp=E,0.8nm,0.3s,baz=106,slow=15,SNR=2.9						
VAE				Sn	Sn	23 20 55.5	-5.3
	comp=E,1.9nm,0.3s,baz=160,slow=19,SNR=1.4						
VAE				LR	LR	23 23 08.5	
	comp=E,154nm,21.7s,baz=90,slow=39						
	comp=E,6.9nm,0.5s						
RAFF	Raffo Rosso	9.47	284		Pn	23 19 15.1	-0.1
UPM	Unac-Piva	9.47	327	⇓iPn	Pn	23 19 17.3	+1.9
UPM				i Sn	Sn	23 20 57.1	-4.0
ACER	Acerenza	9.49	307	P	Pn	23 19 14.5	-1.0
SLCN	Sala Consilina	9.50	305	⇓P	Pn	23 19 16.4	+0.8
BULG	Bulgheria - Ca	9.53	302	⇓P	Pn	23 19 15.6	-0.5
EIL	Elat	9.55	124	Pn	Pn	23 19 17.1	+0.8

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      comp=E,3.2nm,0.3s,baz=330,slow=9.7,SNR=35
EIL                                  Sn      Sn      23 20 59.3 -3.6
      comp=E,5.6nm,0.3s,baz=6.8,slow=17,SNR=4.6
      comp=E,18nm,0.5s
EIL   Elat                9.55 124   Pn      Pn      23 19 13.8 -2.5
EIL                                  Sn      Sn      23 21 00.3 -2.6
AQBJ  Aqaba               9.58 124   P       Pn      23 19 18.5 +1.7
DJES  Djerdap             9.60 345   Pn      Pn      23 19 18.2 +1.3
RUDO  Rudo                9.62 330  ePn      Pn      23 19 13.8 -3.4
TPGR  Topolog             9.64  11 ⇓P       Pn      23 19 17.5 +0.1
ISR   Istrita             9.71   3 ⇓P       Pn      23 19 19.6 +1.0
ISR   Istrita             9.71   3   P       Pn      23 19 19.5 +1.0
HSNJ  Maan                9.72 119   P       Pn      23 19 22.2 +3.5
ASF   Jabal al Asfar      9.72 106   Pn      Pn      23 19 19.2 +0.6
      comp=E,1.6nm,0.3s,baz=281,slow=5.5,SNR=15
ASF                                  Sn      Sn      23 21 06.1 -1.0
      comp=E,1.3nm,0.3s,baz=59,slow=18,SNR=2.0
      comp=E,11nm,0.7s
DIVS  Divibare            9.79 334           Pn      23 19 21.3 +1.7
DIVS  Divibare            9.79 334  ePn      Pn      23 19 19.2 -0.4
STON  Ston                9.79 322  ePn      Pn      23 19 16.7 -2.8
HERR  Herculane           9.83 345 ⇑P       Pn      23 19 20.6 +0.6
CFR   Carcaliu            9.91   9 ⇑P       Pn      23 19 20.9 -0.2
CFR   Carcaliu            9.91   9   P       Pn      23 19 20.9 -0.2
ARR   Arges               9.99 355 ⇑P       Pn      23 19 23.2 +0.8
VOIR                     10.04 357 ⇑P       Pn      23 19 23.8 +0.7
VOIR                     10.04 357   P       Pn      23 19 23.7 +0.7
MLR   Muntele Rosu       10.07   0 ⇑P       Pn      23 19 24.1 +0.6
MLR   Muntele Rosu       10.07   0   Pn      Pn      23 19 25.5 +2.0
      comp=E,0.4nm,0.3s,baz=190,slow=5.1,SNR=13
MLR                                  LR      LR      23 23 53.3
      comp=E,198nm,20.6s,baz=182,slow=42
MLR   Muntele Rosu       10.07   0           Pn      23 19 24.5 +1.0
MLR   Muntele Rosu       10.07   0   P       Pn      23 19 24.5 +1.0
SGRT  San Giovanni R     10.15 312           Pn      23 19 23.1 -1.5
HAPS  Han Pijesak,Bl     10.17 331  ePn      Pn      23 19 22.8 -2.1
GZR   Gura Zlata         10.25 348 ⇑P       Pn      23 19 26.3 +0.3
GZR   Gura Zlata         10.25 348   P       Pn      23 19 26.2 +0.3
PLOR  Plostina           10.45   3 ⇓P       Pn      23 19 29.2 +0.6
PLOR  Plostina           10.45   3   P       Pn      23 19 29.2 +0.6
VRI   Vrincioaia         10.47   3 ⇑P       Pn      23 19 30.2 +1.4
VRI   Vrincioaia         10.47   3   P       Pn      23 19 30.2 +1.4
PAOL  Paolisi            10.52 306           Pn      23 19 29.2 -0.3
BZS   Buzias             10.70 344 ⇑P       Pn      23 19 32.8 +0.9
BZS   Buzias             10.70 344   P       Pn      23 19 32.8 +0.9
SURR  Surduc             10.72 346 ⇑P       Pn      23 19 33.3 +1.0
TESR  Tescani            11.11   3 ⇑P       Pn      23 19 39.2 +1.6
MGRS  Mrkonjic Grad      11.24 326  ePn      Pn      23 19 37.0 -2.5
SIM   Simferopol'        11.42  31  eP       Pn      23 19 44.8 +3.0
SIM                                  pmax    pmax
      comp=Z,21nm,0.9s
SIM                                  MLR     MLR
      comp=Z,180nm,16.0s
INTR  Introdacqua        11.44 309           Pn      23 19 42.4 +0.2
BLY   Banja Luka         11.46 327  ePn      Pn      23 19 39.7 -2.6
A050A Klekovaca          11.55 324  ePn      Pn      23 19 40.7 -3.0
DRGR                     11.62 349 ⇑P       Pn      23 19 45.1 +0.5
DRGR                     11.62 349   P       Pn      23 19 45.1 +0.5
A051A Mrakovica          11.79 327  ePn      Pn      23 19 43.6 -3.3
AQU   L'Aquila           11.94 309           Pn      23 19 49.1 +0.2
AQU   L'Aquila           11.94 309   P       Pn      23 19 49.2 +0.2
CAMP  Campotosto         12.03 310           Pn      23 19 51.0 +0.8
MORH  Mrgy, Hungar       12.10 335 ⇑P       Pn      23 19 51.5 +0.4
BURAR Bucovina Array     12.21 358 ⇑P       Pn      23 19 53.5 +0.8
BURAR Bucovina Array     12.21 358   Pn      Pn      23 19 53.5 +0.8
BURAR Bucovina Array     12.21 358   P       Pn      23 19 53.4 +0.8
BUR08 Bucovina Ar. S     12.24 358           Pn      23 19 54.4 +1.3
GUMA  Gualdo di Mace     12.36 312           Pn      23 19 55.2 +0.5
CESX  Cesi               12.59 309   Pn      Pn      23 19 57.9  0.0
BOJS  Bojanci            12.92 325  ePn      Pn      23 19 59.3 -3.0
MURB  Monte Urbino       12.97 311           Pn      23 20 04.1 +1.0
CRES  Cresnjev           13.06 326  ePn      Pn      23 20 02.2 -2.1
GURO  Guroymak-BITLI     13.29  72   Pn      Pn      23 20 07.1 -0.4
SOC   Sochi              13.43  48  eP       Pn      23 20 08.3 -1.0
SOC                                 e                23 22 38.7
SOC                                  MLR     MLR
      comp=Z,99nm,14.0s
KEST  Kesra              13.47 276   Pn      Pn      23 20 12.4 +2.4
      comp=Z,0.3nm,0.3s,baz=54,slow=15,SNR=5.5
KEST                                 Sn      Sn      23 22 35.1 -3.6
      comp=Z,0.2nm,0.3s,baz=279,slow=17,SNR=1.3
KEST                                 LR      LR      23 26 43.5
      comp=Z,99nm,19.5s,baz=95,slow=44
KEST  Kesra              13.47 276   Pn      Pn      23 20 10.4 +0.5
CEY   Cerknica           13.49 323  ePn      Pn      23 20 06.8 -3.3
SKDS  Skadanscina        13.55 322  ePn      Pn      23 20 08.8 -2.2
TRI   Trieste            13.79 322           Pn      23 20 14.3 +0.1
TRI   Trieste            13.79 322   P       Pn      23 20 14.3 +0.1
SOKA  Soboth             13.90 327  i Pn     Pn      23 20 15.0 -0.8
      comp=Z,0.3nm,0.2s
OBKA  Obir               13.99 326  ePn      Pn      23 20 15.5 -1.5
      comp=Z,0.6nm,0.3s
OBKA  Obir               13.99 326  ePn      Pn      23 20 13.3 -3.8
GEVA  Gevas              14.06  73   P       P       23 20 23.1 -2.5
SABO  M.te Sabotino      14.06 322   Pn      Pn      23 20 17.2 -0.7
VYHS  Vyhne              14.08 340  eP       P       23 20 25.1 -0.6
VYHS  Vyhne              14.08 340  ePN      P       23 20 25.0 -0.6
STHS  Stebnicka Huta     14.41 348  eP       P       23 20 30.4 +1.1
STHS  Stebnicka Huta     14.41 348  ePN      P       23 20 30.4 +1.1
MODS  Modra-Piesok       14.44 336  eP       P       23 20 33.7 +4.1
MODS  Modra-Piesok       14.44 336  ePN      P       23 20 33.7 +4.1
KARS  Kars               14.52  64   Pn      Pn      23 20 23.9 -0.4
KARS  Kars               14.52  64   P       Pn      23 20 23.9 -0.4
TEOL  Teolo              14.68 317   Pn      Pn      23 20 24.4 -2.0
STAL  STALIGIAL          14.71 321   Pn      Pn      23 20 26.2 -0.5
CLUD  Cludinico          14.76 322   Pn      Pn      23 20 28.0 +0.6
CIMO  Cimolais           14.88 321   Pn      Pn      23 20 28.9 -0.2
KBA   Koelnbreinsper     14.97 325  i Pn     Pn      23 20 31.1 +0.7
      comp=Z,4.1nm,0.8s
AKH   Akhalkalaki        15.04  61   Pn      Pn      23 20 30.6 -0.8
AKH                                  IAmb    IAmb    23 20 47.8
      comp=Z,24nm,0.9s
AKH   Akhalkalaki        15.04  61   P       Pn      23 20 30.6 -0.8
AKH                                  pmax    pmax
      comp=Z,24nm,0.9s
CTI   Castel Tesino      15.12 319   Pn      Pn      23 20 31.8 -0.5
CTI   Castel Tesino      15.12 319   P       Pn      23 20 31.8 -0.5
CTI                                  pmax    pmax
      comp=Z,7.0nm,0.7s
ABTA  Abfaltersbach      15.14 323  ePn      Pn      23 20 30.8 -1.8
      comp=Z,6.8nm,0.8s
ABTA                                eSn      Sn      23 23 13.4 -6.0
      comp=Z,5.5nm,0.8s
MOA   Molln              15.14 329  i Pn     Pn      23 20 34.7 +2.2
      comp=Z,2.0nm,0.5s
NEY   Neytrino           15.19  54  i P      P       23 20 35.7 -2.4
BIOA  Bad Ischl, Aus     15.29 327  i Pn     Pn      23 20 35.6 +1.1
      comp=Z,1.4nm,0.3s
KRUC  Moravsky           15.33 336  ePN      P       23 20 38.1 -1.4
SHA1  Shidzhatmaz        15.36  52  i P      Pn      23 20 36.4 +0.8
ONI   Oni                15.41  57   Pn      Pn      23 20 36.0 -0.2
ONI   Oni                15.41  57   P       Pn      23 20 36.0 -0.2
ONI                                  pmax    pmax
      comp=Z,8.0nm,1.1s
OJC   Ojcow              15.45 345   Pn      Pn      23 20 36.0 -0.6
OJC   Ojcow              15.45 345   P       Pn      23 20 36.0 -0.6
OJC                                  pmax    pmax
      comp=Z,5.0nm,0.8s
VRAC  Vranov             15.48 337   Pn      P       23 20 40.9 -0.3
      comp=Z,1.1nm,0.3s,baz=160,slow=13,SNR=5.6
AKASG Malin Array Be     15.48   8   Pn      Pn      23 20 38.4 +1.6
      comp=Z,2.9nm,0.3s,baz=196,slow=11,SNR=43
AKASG                                LR      LR      23 26 54.7
      comp=Z,117nm,18.6s,baz=181,slow=39
AKASG Malin Array Be     15.48   8   P       P       23 20 40.1 -1.0
AKASG Malin Array Be     15.48   8ceP       Pn      23 20 36.2 -0.7
AKASG                                pmax    pmax
      comp=Z,7.0nm,0.6s
AKBB  Malin Array Si     15.48   8   Pn      Pn      23 20 38.2 +1.3
AKBB                                 IAmb    IAmb    23 20 42.7
      comp=Z,25nm,0.6s
AKBB  Malin Array Si     15.48   8   P       Pn      23 20 38.2 +1.3
AKBB                                 pmax    pmax
      comp=Z,25nm,0.6s
SALO  Salr               15.48 316   Pn      Pn      23 20 37.4 +0.4
SALO                                 IAmb    IAmb    23 20 45.2
      comp=Z,17nm,0.7s
KIV   Kislovodsk         15.48  51   P       P       23 20 40.7 -0.6
KIV                                  IAmb    IAmb    23 20 44.2
      comp=Z,12nm,0.7s
KIV   Kislovodsk         15.48  51  eP       Pn      23 20 38.2 +1.1
KIV                                  pmax    pmax
      comp=Z,16nm,1.0s
KIV                                  MLR     MLR
      comp=Z,66nm,13.0s
KVAR  Kislovodsk Arr     15.49  51   Pn      P       23 20 42.5 +1.1
      baz=260,slow=21
KBZ   Khabaz             15.51  52   Pn      P       23 20 43.0 +1.5
      comp=Z,1.0nm,0.3s,baz=240,slow=7.9,SNR=54
KBZ                                  LR      LR      23 27 58.1
      comp=Z,92nm,18.3s,baz=234,slow=43
KBZ   Khabaz             15.51  52ceP       Pn      23 20 39.0 +1.7
KBZ                                  pmax    pmax
      comp=Z,17nm,0.9s
MORC  Moravsky Berou     15.60 340   Pn      P       23 20 40.7 -1.9
MORC  Moravsky Berou     15.60 340   P       P       23 20 40.7 -1.9
MORC                                 pmax    pmax
      comp=Z,15nm,1.5s
GNI   Garni              15.64  67   Pn      P       23 20 42.0 -1.2
      comp=Z,0.5nm,0.3s,baz=202,slow=5.2,SNR=12
      comp=Z,6.0nm,0.6s
GNI   Garni              15.64  67   Pn      Pn      23 20 39.2 -0.1
GNI                                  IAmb    IAmb    23 21 01.3
      comp=Z,18nm,1.1s
GNI   Garni              15.64  67ceP       Pn      23 20 40.2 +1.0
GNI                                  pmax    pmax
      comp=Z,11nm,0.8s
ZEI   Tsey               15.80  57  eP       P       23 20 44.8 -0.1
ZEI                                  pmax    pmax
      comp=Z,14nm,1.1s
NCK   Nalchik            15.87  54  i P      P       23 20 44.7 -0.8
CKRC  Cesky Krumlov      15.89 331  eP       Pn      23 20 42.9 +0.6
CKRC  Cesky Krumlov      15.89 331  eP       Pn      23 20 42.9 +0.6
WATA  Walderalm          16.01 322  i Pn     Pn      23 20 42.8 -1.1
      comp=Z,1.6nm,0.4s
NAX   Nakhchivan         16.05  71   P       P       23 20 47.6 -0.1
KRLC  Kraliky            16.09 338  eP       P       23 20 48.6 +0.6
KRLC  Kraliky            16.09 338  eP       P       23 20 48.6 +0.6
SQTA  Sankt Quirin       16.12 322  i Pn     Pn      23 20 44.2 -1.1
      comp=Z,3.5nm,0.5s
SQTA                                i Sn     Sn      23 23 36.6 -6.6
      comp=Z,2.6nm,0.5s
GEC2  GERESS Array S     16.16 330   Pn      Pn      23 20 46.2 +0.5
GERES GERESS Array B     16.16 330   Pn      Pn      23 20 46.2 +0.5
      comp=Z,0.6nm,0.3s,baz=149,slow=12,SNR=15
GERES                                LR      LR      23 27 21.7
      comp=Z,104nm,19.3s,baz=162,slow=39
GERES                                ScP     ScP     23 29 13.5 +0.8
      comp=Z,0.7nm,0.8s,baz=167,slow=4.6,SNR=5.4
      comp=Z,1.2nm,0.4s
GERES GERESS Array B     16.16 330           Pn      23 20 45.4 -0.4
FUORN Ofenpass-Fuorn     16.23 318           P       23 20 48.5 -1.2
FETA  Feichten           16.23 320  i Pn     Pn      23 20 47.8 +1.0
      comp=Z,3.4nm,0.5s
MOTA  Moosalm            16.25 322  ePn      Pn      23 20 47.4 +0.3
      comp=Z,4.4nm,0.6s
MOTA                                i Sn     Sn      23 23 40.5 -6.0
      comp=Z,4.8nm,0.9s
KHC   Kasperske Hory     16.43 330   Pn      Pn      23 20 49.6 +0.4
KHC   Kasperske Hory     16.43 330  eP       Pn      23 20 49.5 +0.4
KHC                                  AMS     AMS     23 28 00.0
      comp=Z,500nm,9.7s
KHC   Kasperske Hory     16.43 330  eP       Pn      23 20 49.5 +0.4
KHC                                  MLR     MLR
      comp=Z,500nm,9.7s
DPC   Dobruska-Polom     16.47 338  eP       P       23 20 52.6 +0.4
DPC   Dobruska-Polom     16.47 338  eP       P       23 20 52.6 +0.4
RETA  Reutte             16.52 322  i Pn     Pn      23 20 50.5 +0.2
      comp=Z,2.3nm,0.4s
DAVOX Davos/Dischmat     16.54 318   Pn      P       23 20 52.0 -1.1
      comp=Z,0.4nm,0.3s,baz=103,slow=12,SNR=4.1
DAVOX                                LR      LR      23 28 46.3
      comp=Z,151nm,20.3s,baz=79,slow=43
OSTC  Ostas              16.69 338  eP       P       23 20 56.3 +1.8
OSTC  Ostas              16.69 338  eP       P       23 20 56.3 +1.8
PRU   Pruhonice          16.76 334  eP       Pn      23 20 52.6 -0.6
PRU   Pruhonice          16.76 334  eP       Pn      23 20 52.6 -0.6
GANJ  Ganja              16.92  66   P       P       23 20 58.7 +1.5
ZKTA  Zakatala           17.36  63   P       P       23 21 03.9 +1.8
BNI   Bardonecchia       17.51 309           Pn      23 21 02.8  0.0
BNI   Bardonecchia       17.51 309   P       Pn      23 21 02.8  0.0
BNI                                  pmax    pmax
      comp=Z,17nm,1.3s
MNGR  Mingechevir, A     17.52  66   P       P       23 21 06.0 +2.3
LPL   La Plagne          17.69 311  eP       P       23 21 07.3 +1.4
SEKA  Sheki              17.69  65   P       P       23 21 08.9 +3.2
BRG   Berggiesshubel     17.71 334  eP       P       23 21 12.1 +6.3
BRG                                  Amp             23 21 13.2
      comp=Z,5.9nm,0.9s
BRG                                  Amp             23 28 47.0
      comp=Z,0.3nm,9.4s
BRG                                  Amp             23 28 50.0
      comp=N,0.3nm,7.7s
BRG                                  Amp             23 28 53.0
      comp=E,0.2nm,12.8s
BRG   Berggiesshubel     17.71 334  eP       P       23 21 12.1 +6.3
BRG                                  pmax    pmax
      comp=Z,6.0nm,1.0s
BRG                                  MLR     MLR
      comp=Z,266nm,9.5s
BRG                                  MLR     MLR
      comp=N,287nm,7.7s
BRG                                  MLR     MLR
      comp=E,186nm,12.8s
SENIN Lac Senin/Sane     17.77 314           P       23 21 06.6 -0.1
GRA1  Grafenberg Arr     17.85 328           Pn      23 21 06.8 -0.1
GRA1                                 IAmb    IAmb    23 21 23.5
      comp=Z,23nm,1.1s
GRF   Grafenberg Arr     17.85 328   P       Pn      23 21 06.8 -0.1
GRF                                  pmax    pmax
      comp=Z,23nm,1.1s
GRFO  Grafenberg         17.85 328           Pn      23 21 06.8 -0.1
GRFO                                 IAmb    IAmb    23 21 23.4
      comp=Z,23nm,1.1s
GRFO  Grafenberg         17.85 328   P       Pn      23 21 06.8 -0.1
GRFO                                 pmax    pmax
      comp=Z,23nm,1.1s
AKT   Akhty              18.14  64  eP       P       23 21 10.6 -0.1
AKT                                  pmax    pmax
      comp=Z,3.0nm,0.6s
BFO   Black Forest       18.32 320   P       Pn      23 21 12.8 +0.2
BFO   Black Forest       18.32 320   P       Pn      23 21 12.8 +0.2
BFO                                  pmax    pmax
      comp=Z,7.0nm,0.9s
VORD  Divnogorie         18.32  28  eP       P       23 21 11.2 -1.3
VORD                                 pmax    pmax
      comp=Z,10.0nm,0.6s
CLL   Collm              18.40 334   P       P       23 21 12.6 -0.8
CLL   Collm              18.40 334⇓iP       P       23 21 13.3 -0.1
      comp=Z,8.0nm,0.7s
CLL                                 i sP     pP      23 21 19.5 -0.8
CLL                                 ePP      PnPn    23 21 27.0 +1.7
CLL                                 ePPP     PPP     23 21 34.0
CLL   Collm              18.40 334⇓iP       P       23 21 13.3 -0.1
CLL                                  pmax    pmax
      comp=Z,8.0nm,0.7s
VSR   Storozhevoye       18.48  27  eP       P       23 21 12.6 -1.6
VSR                                  pmax    pmax
      comp=Z,10.0nm,0.5s
LKRN  Lenkeran, Azer     18.56  73   P       Pn      23 21 18.6 +3.0
VORR  Voronezh           18.86  26  eP       Pn      23 21 19.3 +0.2
VORR                                 pmax    pmax
      comp=Z,20nm,0.4s
ECH   Echery             18.87 318   P       P       23 21 18.0 -0.7
ECH   Echery             18.87 318   P       P       23 21 18.0 -0.7
ECH                                  pmax    pmax
      comp=Z,14nm,1.4s
MNK   Minsk              19.15   4  i P      P       23 21 20.7 -0.8
MNK                                 i P      P       23 21 20.7 -0.8
      comp=N,12nm,0.7s
MNK                                 i P      P       23 21 20.7 -0.8
      comp=Z,14nm,0.7s,baz=184
MNK                                 i PP     PnPn    23 21 33.6 -1.8
MNK                                 i S      Sn      23 24 56.0 -0.1
MNK                                 i SS     S       23 25 08.6  +12
MNK                                 i LR     LR      23 27 47.8
MNK                                 i LRM    MLR     23 29 09.8
      comp=E,38nm,11.2s
MNK                                 i LRM    MLR     23 29 20.6
      comp=N,411nm,12.4s
MNK                                 i LRM    MLR     23 29 39.0
      comp=Z,173nm,18.0s
MNK   Minsk              19.15   4  i P      P       23 21 20.7 -0.8
MNK                                 i S      Sn      23 24 56.0 -0.1
MNK                                  pmax    pmax
      comp=N,12nm,0.7s
MNK                                  pmax    pmax
      comp=Z,14nm,0.7s
MNK                                  MLR     MLR
      comp=E,38nm,11.0s
MNK                                  MLR     MLR
      comp=N,411nm,12.0s
MNK                                  MLR     MLR
      comp=Z,173nm,18.0s
VRH   Novokhopyorsk      19.48  31d iP       P       23 21 25.0 -0.2
VRH                                  pmax    pmax
      comp=Z,30nm,0.6s
NACGM Naroch             19.51   2  eP       Pn      23 21 27.1 +0.2
      comp=Z,14nm,0.9s,baz=183
LPSR  Galich'ya Gora     19.53  24  eP       P       23 21 25.1 -0.7
LPSR                                 pmax    pmax
      comp=Z,50nm,1.3s
IDID  Didziasalis        19.92   1  eP       P       23 21 26.0 -4.0
IIGN  Ignalina           19.95   1  eP       P       23 21 25.4 -4.9
PABE  Paberze            20.14 357   P       P       23 21 30.9 -1.5
PABE                                 IAmb    IAmb    23 21 38.4
      comp=Z,31nm,0.6s
PABE  Paberze            20.14 357  eP       P       23 21 32.6 +0.2
ISAL  Salakas            20.17   0  eP       P       23 21 33.0 +0.4
WLF   Walferdange        20.27 321   P       P       23 21 34.4 +0.5
WLF                                  IAmb    IAmb    23 22 17.3
      comp=Z,42nm,1.5s
WLF   Walferdange        20.27 321   P       P       23 21 34.4 +0.5
WLF                                  pmax    pmax
      comp=Z,42nm,1.5s
WLF   Walferdange        20.27 321  dP       Pn      23 21 38.9 +3.0
SSF   Saint Saulge       20.39 312  eP       P       23 21 34.9 -0.3
SSF                                  pmax    pmax
      comp=Z,24nm,0.6s
CAF   Calviac            20.47 305  eP       P       23 21 36.8 +0.6
CAF                                  pmax    pmax
      comp=Z,16nm,1.1s
RAYN  Ar Rayn            20.74 120   P       P       23 21 39.0 -0.3
RAYN                                 IAmb    IAmb    23 21 49.4
      comp=Z,15nm,1.1s
RAYN  Ar Rayn            20.74 120   P       P       23 21 39.0 -0.3
RAYN                                 pmax    pmax
      comp=Z,15nm,1.1s
MEM   Membach            20.93 323  dP       P       23 21 40.9  0.0
RCHB  Rochefort          21.04 321  dP       P       23 21 43.5 +1.3
OBN   Obninsk            21.05  17   P       P       23 21 42.6 +0.4
      comp=Z,2.4nm,0.4s,baz=151,slow=10,SNR=6.1
OBN                                  LR      LR      23 30 14.1
      comp=Z,36nm,19.9s,baz=196,slow=38
      comp=Z,2.4nm,0.4s
OBN   Obninsk            21.05  17   P       P       23 21 41.6 -0.5
OBN                                  IAmb    IAmb    23 21 59.5
      comp=Z,52nm,1.4s
OBN   Obninsk            21.05  17  eP       P       23 21 42.8 +0.6
OBN                                 e                23 21 59.0
OBN                                 eS       S       23 25 35.8 +0.8
OBN                                 eSS      Sn      23 25 56.1  +14
OBN                                  pmax    pmax
      comp=Z,22nm,1.0s
OBN                                  MLR     MLR
      comp=Z,127nm,19.0s
BSD   Bornholm Skovb     21.12 342  eP       P       23 21 41.3 -1.7
BSD   Bornholm Skovb     21.12 342  i P      P       23 21 41.0 -1.9
BSD                                  IAmb    IAmb    23 21 44.9
      comp=Z,4.1nm,0.7s
BSTI  Sart Tilman        21.13 322  dP       P       23 21 46.2 +3.0
BSTI                                dPP      PnPn    23 22 02.9 +0.2
BCLA  Clavier            21.16 321  dP       P       23 21 44.9 +1.4
BGES  Gesves             21.25 321  dP       P       23 21 43.5 -1.0
DOU   Dourbes            21.34 320  dP       P       23 21 44.9 -0.5
DOU                                 dPP      PnPn    23 22 05.2 -0.2
LFF   La Frestale        21.37 304  eP       P       23 21 47.1 +1.3
LFF                                  pmax    pmax
      comp=Z,8.0nm,0.6s
CLF   Chambon-Foret      21.57 313   P       P       23 21 47.9  0.0
TAM   Tamanrasset        21.73 240   P       P       23 21 49.8 -0.2
TAM   Tamanrasset        21.73 240   P       P       23 21 49.8 -0.2
TAM                                  pmax    pmax
      comp=Z,8.0nm,0.9s
MOS   Moscow             21.87  18  eP       P       23 21 46.4 -4.6
MOS                                 eS       S       23 25 45.6 -5.6
MOS                                  pmax    pmax
      comp=Z,20nm,0.8s
LUNU  Lund               21.96 341  i P      P       23 21 51.2 -0.8
BLEU  Blekinge           22.00 345  i P      P       23 21 51.2 -1.2
MFF   Saint Martin d     22.50 308  eP       P       23 21 58.2 +0.3
MFF                                  pmax    pmax
      comp=Z,18nm,0.6s
DEL   Delary             22.60 343  eP       P       23 21 56.1 -2.8
DEL   Delary             22.60 343  i P      P       23 21 56.0 -2.8
BELG  Belogornoye        22.96  36   P       P       23 22 02.6  0.0
      comp=Z,26nm,0.4s,baz=278,slow=1.2,SNR=34
BELG                                 LR      LR      23 32 34.5
      comp=Z,81nm,21.1s,baz=302,slow=41
      comp=Z,26nm,0.4s
BELG  Belogornoye        22.96  36  i P      P       23 22 01.9 -0.7
VSU   Vasula             23.07   1  eP       P       23 22 04.0 +0.3
MTSE  Matsula            23.36 357  eP       P       23 22 06.8 +0.3
VIKU  Vikbolandet        23.89 348  eP       P       23 22 10.6 -1.2
ESDC  Sonseca Array      23.99 289   P       P       23 22 13.3 +0.4
      comp=Z,2.6nm,0.6s,baz=81,slow=9.3,SNR=24
      comp=Z,2.6nm,0.6s
ESDC  Sonseca Array      23.99 289   P       P       23 22 12.3 -0.7
MEF   Metsahovi          24.84 358  eP       P       23 22 20.9 +0.5
AAL   Aland              25.08 353  eP       P       23 22 21.3 -1.2
MDT   Midelt             25.33 273   P       P       23 22 26.9 +1.7
      comp=Z,4.4nm,0.8s,baz=59,slow=4.5,SNR=6.4
MDT                                  LR      LR      23 35 01.4
      comp=Z,65nm,18.2s,baz=84,slow=43
      comp=Z,4.4nm,0.8s
RAF   Rauma              25.77 355  eP       P       23 22 28.0 -0.8
GEYT  Alibeck            25.91  75   P       P       23 22 31.9 +1.4
      comp=Z,29nm,0.9s,baz=296,slow=7.8,SNR=50
GEYT                                 LR      LR      23 33 26.0
      comp=Z,37nm,18.3s,baz=178,slow=38
      comp=Z,29nm,0.9s
HFS   Hagfors            25.98 346   P       P       23 22 28.4 -2.3
      comp=Z,1.4nm,0.5s,baz=131,slow=10,SNR=10
HFS                                  LR      LR      23 33 08.4
      comp=Z,107nm,18.8s,baz=152,slow=38
      comp=Z,1.4nm,0.5s
FINES FINESS Array B     26.06   0   P       P       23 22 29.2 -2.2
      comp=Z,2.7nm,0.9s,baz=165,slow=10,SNR=13
FINES                                PcP     PcP     23 25 59.8 +1.2
      comp=Z,0.7nm,0.5s,baz=155,slow=4.0,SNR=1.4
FINES                                ScP     ScP     23 29 36.4  0.0
      comp=Z,2.4nm,0.9s,baz=211,slow=0.8,SNR=3.7
FINES                                LR      LR      23 33 32.5
      comp=Z,77nm,18.1s,baz=178,slow=38
      comp=Z,2.7nm,0.9s
FINES FINESS Array B     26.06   0  i P      P       23 22 30.8 -0.6
FINES                                pmax    pmax
      comp=Z,1.0nm,0.5s
KLMR  Klimovskoe         26.93  15  eP       P       23 22 37.1 -2.2
KLMR                                 AMP             23 22 41.4
      comp=Z,22nm,2.2s
KLMR                                 LR      LR      23 32 11.6
KLMR                                 AMP             23 34 14.2
      comp=Z,247nm,12.7s
KLMR                                 LRM     MLR     23 34 19.2
KLMR  Klimovskoe         26.93  15  eP       P       23 22 37.0 -2.2
KLMR                                 pmax    pmax
      comp=Z,22nm,2.2s
KLMR                                 MLR     MLR
      comp=Z,247nm,13.0s
NOA   NORSAR Array B     27.32 344   P       P       23 22 40.6 -2.2
      comp=Z,0.3nm,0.6s,baz=147,slow=9.5,SNR=2.0
NOA                                  LR      LR      23 34 13.0
      comp=Z,57nm,18.7s,baz=160,slow=38
AKTO  Aktyubinsk         27.65  47   P       P       23 22 45.5 -0.4
      comp=Z,5.8nm,0.7s,baz=238,slow=8.3,SNR=16
      comp=Z,5.8nm,0.7s
KIRV  Kirov              27.92  27   LR      LR      23 34 46.4
      comp=Z,73nm,19.7s,baz=219,slow=38
EKA   Eskdalemuir Ar     28.18 324   P       P       23 22 49.8 -0.8
      comp=Z,3.3nm,0.5s,baz=122,slow=9.1,SNR=15
      comp=Z,3.3nm,0.5s
ABKAR Akbulak array      28.46  50   P       P       23 22 53.0 -0.2
ABKAR Akbulak array      28.46  50   IAmb    IAmb    23 23 21.4
      comp=Z,3.0nm,0.7s
ARU   Arti               30.51  36   LR      LR      23 35 42.4
      comp=Z,21nm,20.2s,baz=152,slow=37
ARU   Arti               30.51  36   P       P       23 23 10.1 -1.1
ARU                                  IAmb    IAmb    23 23 11.7
      comp=Z,4.4nm,0.7s
ARU   Arti               30.51  36d iP       P       23 23 10.0 -1.1
ARU                                                  23 24 08.4
ARU                                                  23 26 05.7
ARU                                  S       S       23 28 11.5 +0.7
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ARU				pmax	pmax		
	comp=Z,10.0nm,1.4s						
TORD	**Torodi Ar. Bea**	**31.10**	**231**	P	**P**	**23 23 19.1**	**+2.3**
	comp=Z,8.7nm,0.5s,baz=32,slow=8.7,SNR=108						
TORD				PcP	**PcP**	**23 26 13.8**	**+1.9**
	comp=Z,0.2nm,0.4s,baz=22,slow=4.0,SNR=1.4						
	comp=Z,8.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**31.10**	**231**	P	**P**	**23 23 16.6**	**-0.2**
TORD				IAmb	IAmb	23 23 24.5	
	comp=Z,3.6nm,0.7s						
SVE	**Sverdlovsk**	**31.70**	**37**	*e*P	**P**	**23 23 21.3**	**-0.4**
SVE				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ARCES	**ARCESS Array B**	**34.18**	**360**	P	**P**	**23 23 41.0**	**-2.3**
	comp=Z,0.8nm,0.4s,baz=176,slow=7.3,SNR=11						
ARCES				PcP	**PcP**	**23 26 19.6**	**+0.1**
	comp=Z,5.0nm,1.0s,baz=188,slow=2.7,SNR=2.0						
ARCES				LR	LR	23 38 07.9	
	comp=Z,82nm,18.2s,baz=236,slow=37						
	comp=Z,0.8nm,0.4s						
CHGR	**Chuyangaron**	**34.47**	**72**	P	**P**	**23 23 47.2**	**+1.1**
CHGR	**Chuyangaron**	**34.47**	**72**	P	**P**	**23 23 47.3**	**+1.1**
CHGR				pmax	pmax		
	comp=Z,22nm,0.7s						
KK31	**Karatay Array**	**35.07**	**64**	P	**P**	**23 23 51.6**	**+0.4**
KK31				IAmb	IAmb	23 23 53.8	
	comp=Z,7.2nm,0.6s						
KK31	**Karatay Array**	**35.07**	**64**	P	**P**	**23 23 51.6**	**+0.4**
KK31				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KKAR	**Karatay Array**	**35.07**	**64**	P	**P**	**23 23 52.1**	**+0.8**
KKAR	**Karatay Array**	**35.07**	**64**	IAmb	IAmb	23 23 53.8	
	comp=Z,7.2nm,0.6s						
KKAR	**Karatay Array**	**35.07**	**64**	P	**P**	**23 23 52.1**	**+0.8**
GAR	**Garm**	**35.31**	**71**	P	**P**	**23 23 54.9**	**+1.3**
BRVK	**Borovoye**	**35.69**	**46**	P	**P**	**23 23 56.4**	**0.0**
BRVK				IAmb	IAmb	23 23 58.3	
	comp=Z,5.6nm,0.8s						
BRVK	**Borovoye**	**35.69**	**46**	*ce*P	**P**	**23 23 56.5**	**0.0**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BVAR	**Borovoye Array**	**35.75**	**46**	LR	LR	23 39 52.6	
	comp=Z,51nm,21.2s,baz=244,slow=38						
MACI	**Morro de la Ar**	**36.50**	**271**	P	**P**	**23 24 03.6**	**-0.2**
EKS2	**Erkin-Say**	**37.49**	**64**	P	**P**	**23 24 13.9**	**+1.8**
	SNR=6.8						
AAK	**Ala-Archa**	**38.02**	**64**	P	**P**	**23 24 18.2**	**+1.6**
	SNR=11						
AAK	**Ala-Archa**	**38.02**	**64**	P	**P**	**23 24 17.4**	**+0.8**
AAK				IAmb	IAmb	23 24 19.2	
	comp=Z,8.5nm,0.6s						
AAK	**Ala-Archa**	**38.02**	**64**	P	**P**	**23 24 17.4**	**+0.8**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
UCH	**Uchtor**	**38.08**	**65**	P	**P**	**23 24 18.9**	**+1.5**
	SNR=6.6						
CHMS	**Chumysh**	**38.17**	**63**	P	**P**	**23 24 19.2**	**+1.5**
	SNR=9.0						
KBK	**Karagaybulak**	**38.35**	**64**	P	**P**	**23 24 21.2**	**+1.8**
	SNR=5.9						
NIL	**Nilore**	**38.77**	**79**	P	**P**	**23 24 23.8**	**+0.9**
NIL				IAmb	IAmb	23 24 30.2	
	comp=Z,8.6nm,0.9s						
NIL	**Nilore**	**38.77**	**79**	P	**P**	**23 24 23.8**	**+0.9**
NIL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TKM2	**Tokmak 2**	**38.80**	**63**	P	**P**	**23 24 24.6**	**+1.4**
	SNR=5.5						
KIBK	**Kibwezi**	**39.24**	**161**	P	**P**	**23 24 26.8**	**-0.1**
KIBK				IAmb	IAmb	23 24 29.3	
	comp=Z,9.2nm,1.5s						
KSH	**Kashi**	**39.56**	**69**	P	**P**	**23 24 29.4**	**-0.1**
KSH				pP	pP	23 24 34.2	-2.9
KSH				ScP	**ScP**	**23 30 24.5**	**+1.0**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.5s						
DBIC	**Dimbokro**	**40.18**	**232**	P	**P**	**23 24 35.8**	**+1.1**
	comp=Z,3.5nm,0.7s,baz=19,slow=7.8,SNR=4.3						
DBIC				LR	LR	23 44 38.7	
	comp=Z,85nm,18.2s,baz=14,slow=41						
	comp=Z,3.5nm,0.7s						
KURK	**Kurchatov**	**40.57**	**51**	P	**P**	**23 24 37.9**	**+0.4**
KURK				IAmb	IAmb	23 24 38.7	
	comp=Z,17nm,0.8s						
KURK	**Kurchatov**	**40.57**	**51**	P	**P**	**23 24 37.9**	**+0.4**
KURK				pmax	pmax		
	comp=Z,17nm,0.8s						
BORG	**Borgarnes**	**40.62**	**331**	LR	LR	23 44 40.3	
	comp=Z,51nm,18.6s,baz=130,slow=41						
MAKZ	**Makanchi**	**42.93**	**57**	P	**P**	**23 24 57.5**	**+0.5**
MAKZ	**Makanchi**	**42.93**	**57**	P	**P**	**23 24 57.5**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,13nm,0.4s						
MK31	**Makanchi Array**	**43.15**	**57**	*di*P	**P**	**23 24 59.6**	**+0.9**
MKAR	**Makanchi Array**	**43.15**	**57**	P	**P**	**23 24 59.7**	**+1.0**
	comp=Z,21nm,0.4s,baz=268,slow=8.2,SNR=1005						
MKAR				PcP	**PcP**	**23 26 49.0**	**+1.0**
	comp=Z,1.4nm,0.6s,baz=275,slow=4.9,SNR=2.3						
MKAR				ScP	**ScP**	**23 30 38.1**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=266,slow=4.0,SNR=4.1						
ZAA0	**Zalesovo Array**	**44.41**	**46**	P	**P**	**23 25 08.6**	**-0.1**
ZAA0				IAmb	IAmb	23 25 09.2	
	comp=Z,9.2nm,0.6s						
ZALV	**Zalesovo Beam**	**44.41**	**46**	P	**P**	**23 25 08.5**	**-0.2**
	comp=Z,10nm,0.5s,baz=270,slow=8.5,SNR=52						
ZALV				LR	LR	23 45 15.9	
	comp=Z,21nm,19.9s,baz=356,slow=38						
	comp=Z,10nm,0.5s						
DGZ	**Jazzator, Alta**	**46.26**	**52**	*di*P	**P**	**23 25 24.4**	**+0.7**
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WMQ	**Urumqi**	**47.37**	**60**	*e*P	**P**	**23 25 33.6**	**+1.3**
WMQ				pP	pP	23 25 40.5	+0.4
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
PYUN	**Piuthan**	**48.54**	**82**	*e*P	**P**	**23 25 42.9**	**+1.2**
	comp=Z,17nm,0.6s						
SUMG	**Summit**	**48.96**	**339**	*e*P	**P**	**23 25 45.9**	**+1.3**
DANN	**Dangsing**	**49.06**	**81**	*e*P	**P**	**23 25 47.5**	**+1.7**
	comp=Z,51nm,0.6s						
GKN	**Gorkha**	**49.91**	**81**	*e*P	**P**	**23 25 53.1**	**+1.0**
	comp=Z,14nm,0.4s						
DMN	**Daman**	**50.45**	**81**	*e*P	**P**	**23 25 57.8**	**+1.4**
LSZ	**Lusaka**	**50.45**	**177**	LR	LR	23 47 58.6	
	comp=Z,50nm,18.8s,baz=20,slow=37						
PKIN	**Phulchoki**	**50.69**	**81**	*e*P	**P**	**23 25 59.4**	**+1.2**
	comp=Z,9.8nm,0.6s						
PKI	**Pulchoki**	**50.71**	**81**	*e*P	**P**	**23 25 59.2**	**+0.8**
	comp=Z,16nm,0.8s						
GUN	**Gumba**	**50.95**	**81**	*e*P	**P**	**23 26 01.1**	**+0.9**
	comp=Z,11nm,0.6s						
JIRN	**Jiri**	**51.30**	**81**	*e*P	**P**	**23 26 03.9**	**+1.0**
	comp=Z,13nm,0.6s						
RAMN	**Ramite**	**51.93**	**81**	*e*P	**P**	**23 26 07.9**	**+0.4**
TAPN	**Taplejung**	**52.66**	**81**	*e*P	**P**	**23 26 13.8**	**+0.9**
LSA	**Lhasa**	**54.43**	**76**	P	**P**	**23 26 26.6**	**+0.4**
LSA				IAmb	IAmb	23 26 28.6	
	comp=Z,5.1nm,0.5s						
LSA	**Lhasa**	**54.43**	**76**	P	**P**	**23 26 26.6**	**+0.4**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ZAK	**Zakamensk**	**56.14**	**49**	*e*P	**P**	**23 26 38.1**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SHL	**Shillong**	**56.80**	**80**	P	**P**	**23 26 42.1**	**-0.7**
SHL	**Shillong**	**56.80**	**80**	P	**P**	**23 26 42.1**	**-0.7**
SHL				pmax	pmax		
	comp=Z,7.0nm,0.5s						
GTA	**Gaotai**	**57.33**	**62**	*e*P	**P**	**23 26 47.4**	**+1.0**
GTA				sP	sP	23 26 56.9	-0.4
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				LR	LR		
	comp=N,140nm,15.5s						
GTA				LR	LR		
	comp=E,220nm,15.5s						
GTA				LR	LR		
	comp=Z,240nm,15.5s						
PALK	**Pallekele**	**57.35**	**106**	LR	LR	23 53 36.3	
	comp=Z,53nm,19.7s,baz=54,slow=38						
WIN	**Windhoek**	**58.25**	**190**	P	**P**	**23 26 51.4**	**-1.5**
WIN				IAmb	IAmb	23 27 20.5	
	comp=Z,11nm,1.2s						
WIN	**Windhoek**	**58.25**	**190**	P	**P**	**23 26 51.4**	**-1.5**
WIN				pmax	pmax		
	comp=Z,11nm,1.2s						
SONM	**Songino Array**	**58.87**	**51**	P	**P**	**23 26 57.9**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=287,slow=7.2,SNR=30						
	comp=Z,1.9nm,0.6s						
SONM	**Songino Array**	**58.87**	**51**	P	**P**	**23 26 57.3**	**+0.3**
SONM				IAmb	IAmb	23 26 58.7	
	comp=Z,2.1nm,0.8s						
SONM	**Songino Array**	**58.87**	**51**	P	**P**	**23 26 57.3**	**+0.3**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ULN	**Ulaanbaatar**	**59.28**	**51**	P	**P**	**23 26 59.6**	**-0.3**
ULN				IAmb	IAmb	23 27 01.4	
	comp=Z,3.6nm,0.7s						
ULN	**Ulaanbaatar**	**59.28**	**51**	P	**P**	**23 26 59.6**	**-0.3**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TIXI	**Tiksi**	**60.73**	**21**	P	**P**	**23 27 09.0**	**-0.2**
TIXI				IAmb	IAmb	23 27 09.9	
	comp=Z,3.7nm,0.8s						
TIXI	**Tiksi**	**60.73**	**21**	*ce*P	**P**	**23 27 07.8**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LZH	**Lanzhou**	**61.56**	**64**	*e*P	P	23 27 10.7	-5.0
LZH				pP	pP	23 27 17.5	-6.1
LZH				pmax	pmax		
	comp=Z,18nm,1.5s						
SCHQ	**Schefferville**	**63.38**	**320**	P	**P**	**23 27 27.4**	**+0.1**
	comp=Z,5.6nm,0.3s,baz=70,slow=4.8,SNR=56						
	comp=Z,5.6nm,0.3s						
BOSA	**Boshof**	**63.68**	**181**	P	**P**	**23 27 32.8**	**+3.2**
	comp=Z,1.0nm,0.7s,baz=21,slow=8.6,SNR=1.5						
BOSA				LR	LR	23 57 33.7	
	comp=Z,37nm,18.5s,baz=342,slow=38						
	comp=Z,1.0nm,0.7s						
CD2	**Chengdu**	**63.75**	**70**	P	**P**	**23 27 31.6**	**+1.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH	**PanZhiHua**	**64.23**	**75**	P	**P**	**23 27 34.2**	**+0.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,110nm,5.2s						
CHTO	**Chiang Mai**	**65.78**	**84**	P	**P**	**23 27 43.3**	**-0.2**
CHTO	**Chiang Mai**	**65.78**	**84**	P	**P**	**23 27 43.3**	**-0.2**
CM31	**Chiang Mai Arr**	**65.96**	**84**	P	**P**	**23 27 44.1**	**-0.6**
CMAR	**Chiang Mai Arr**	**65.96**	**84**	P	**P**	**23 27 45.7**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=300,slow=8.7,SNR=15						
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**65.96**	**84**	P	**P**	**23 27 44.8**	**+0.1**
CMAR	**Chiang Mai Arr**	**65.96**	**84**	*ce*P	**P**	**23 27 45.9**	**+1.2**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
XAN	**Xi'an**	**66.20**	**64**	P	**P**	**23 27 47.0**	**+0.9**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PHRA	**Phrae**	**66.98**	**83**	P	**P**	**23 27 51.2**	**0.0**
BJT	**Baijiatuau**	**68.51**	**56**	P	**P**	**23 28 00.8**	**+0.2**
BJT				IAmb	IAmb	23 28 07.5	
	comp=Z,5.0nm,0.7s						
BJT	**Baijiatuau**	**68.51**	**56**	P	**P**	**23 28 00.8**	**+0.2**
BJT				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HEH	**HeiHe**	**70.28**	**42**	*e*P	**P**	**23 28 11.5**	**+0.2**
A36M	**Sachs Harbour**	**71.00**	**351**	P	**P**	**23 28 15.6**	**+0.3**
A36M				IAmb	IAmb	23 28 26.4	
	comp=Z,5.4nm,0.9s						
SEY	**Seymchan**	**73.11**	**23**	P	**P**	**23 28 27.9**	**-0.2**
	comp=Z,1.8nm,0.3s,baz=236,slow=18,SNR=2.0						
	comp=Z,1.8nm,0.3s						
KLR	**Kul'dur**	**73.19**	**41**	*ce*P	**P**	**23 28 28.7**	**-0.2**
KLR				pmax	pmax		
	comp=Z,11nm,2.5s						
MA2	**Magadan**	**75.01**	**26**	LR	LR	00 03 31.2	
	comp=Z,48nm,18.5s,baz=112,slow=37						
USRK	**Ussuriysk Ar.**	**76.25**	**45**	P	**P**	**23 28 46.4**	**-0.2**
	comp=Z,5.3nm,0.6s,baz=295,slow=3.9,SNR=11						
	comp=Z,5.3nm,0.6s						
YKA	**Yellowknife Ar**	**77.39**	**342**	P	**P**	**23 28 52.3**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=30,slow=5.1,SNR=15						
	comp=Z,0.8nm,0.6s						
KSRS	**Korea Array**	**77.66**	**53**	P	**P**	**23 28 55.5**	**+0.8**
	comp=Z,6.1nm,0.5s,baz=312,slow=4.6,SNR=24						
KSRS				LR	LR	00 08 19.3	
	comp=Z,28nm,18.7s,baz=50,slow=40						
	comp=Z,6.1nm,0.5s						
ILAR	**Eielson Array**	**79.99**	**357**	P	**P**	**23 29 07.2**	**+0.2**
	comp=Z,0.5nm,0.9s,baz=332,slow=3.3,SNR=3.4						
	comp=Z,0.5nm,0.9s						
MJAR	**Matsushiro Arr**	**84.72**	**48**	P	**P**	**23 29 33.0**	**+0.7**
	comp=Z,3.8nm,0.8s,baz=314,slow=4.1,SNR=7.8						
	comp=Z,3.8nm,0.8s						
BDFB	**Brasilia**	**86.34**	**248**	P	**P**	**23 29 43.7**	**+3.0**
	comp=Z,1.5nm,0.6s,baz=139,slow=6.8,SNR=3.3						
	comp=Z,1.5nm,0.6s						
PDAR	**Pinedale Array**	**92.20**	**329**	P	**P**	**23 30 08.7**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=76,slow=3.8,SNR=2.9						
	comp=Z,0.3nm,0.6s						
LUWI	**Luwuk**	**96.22**	**87**	P	**P**	**23 30 23.4**	**-3.4**
WRA	**Warramunga Arr**	**116.03**	**97**	PKP	**PKiKP**	**23 35 42.4**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=332,slow=1.4,SNR=1.3						
ASAR	**Alice Springs**	**117.51**	**101**	PKP	**PKiKP**	**23 35 45.2**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=306,slow=1.2,SNR=2.1						

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*IDC **03** 23:17:55.7±3.0, 16°.41S×173°.34W, h0^{km}, mb3.7/5, mbtmp3.7/5, MS3.3/4, Error ellipse: s-maj=169.9km s-min=26.1km az=148.0*

ISC 03 23:18:04.5±2.9**, 16°.3S**±0°.8×**173°.5W**±0°.5**, h66**^{km}**, n17, σ0**^{s}**.34**/7**, mb3.6**/5**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**8.22**	**259**	LR	LR	23 23 02.5	
	comp=Z,116nm,20.7s,baz=335,slow=37						
DZM	**Mont Dzumac**	**19.80**	**250**	LR	LR	23 29 12.3	
	comp=Z,45nm,18.2s,baz=200,slow=34						
URZ	**Urewera**	**23.41**	**199**	LR	LR	23 31 31.4	
	comp=Z,128nm,18.8s,baz=314,slow=35						
H11S2	**WAKE ISLAND Hy**	**39.67**	**330**	T	T	00 07 22.1	
	baz=150						
H11S3	**WAKE ISLAND Hy**	**39.68**	**330**	T	T	00 07 18.0	
	baz=150						
H11S1	**WAKE ISLAND Hy**	**39.69**	**330**	T	T	00 07 27.0	
	baz=150						
H11N3	**WAKE ISLAND Hy**	**40.63**	**331**	T	T	00 08 23.8	
	baz=150						
H11N1	**WAKE ISLAND Hy**	**40.63**	**331**	T	T	00 08 24.8	
	baz=150						
H11N2	**WAKE ISLAND Hy**	**40.64**	**331**	T	T	00 08 25.3	
	baz=150						
WRA	**Warramunga Arr**	**49.56**	**257**	P	**P**	**23 26 49.2**	**0.0**
	0.2nm,0.6s,baz=96,slow=8.1,SNR=1.7						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**49.76**	**253**	P	**P**	**23 26 50.8**	**0.0**
	1.6nm,0.7s,baz=87,slow=8.4,SNR=16						
	1.6nm,0.7s						
JCJ	**Chichijima**	**60.90**	**315**	LR	LR	23 47 59.6	
	comp=Z,48nm,21.7s,baz=53,slow=30						
NVAR	**Mina Array Bea**	**75.03**	**42**	P	**P**	**23 29 39.9**	**+0.4**
	0.6nm,0.8s,baz=238,slow=8.4,SNR=3.8						
	0.6nm,0.8s						
PDAR	**Pinedale Array**	**82.97**	**42**	P	**P**	**23 30 22.4**	**-0.3**
	0.6nm,0.8s,baz=207,slow=3.7,SNR=4.6						
	0.6nm,0.8s						
ILAR	**Eielson Array**	**83.32**	**11**	P	**P**	**23 30 23.6**	**-0.1**
	0.5nm,0.8s,baz=205,slow=4.0,SNR=6.6						
	0.5nm,0.8s						
BRTR	**Keskin Array B**	**146.77**	**320**	PKPbc	**PKPab**	**23 37 41.2**	**+0.3**
	1.1nm,0.8s,baz=72,slow=4.7,SNR=9.0						
GERES	**GERESS Array B**	**146.99**	**351**	PKPbc	**PKPab**	**23 37 41.1**	**-0.3**
	0.9nm,0.9s,baz=52,slow=2.2,SNR=4.8						

ROM 03 23:18:22.3±0.1**, 42°.984N**±0°.005×**13°.038E**±0°.007**, h10**^{km}**, ML0.6**/7**, 2C-1D, Error ellipse: s-maj=0.6km s-min=0.5km az=40.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FEMA	**Monte Fema**	**0.02**	**158**	P	Pg	23 18 24.2	0.0
FEMA				S	Sg	23 18 25.1	-0.5
FDMO	**Fiordimonte**	**0.06**	**34**	⇑P	Pg	23 18 24.8	+0.3
FDMO				S	Sg	23 18 26.2	+0.1
FDMO				AML	AML		
	comp=E,95µm,0.3s						
FDMO				AML	AML		
	comp=E,95µm,0.3s						
FDMO				AML	AML		
	comp=N,69µm,0.4s						
FDMO				AML	AML		
	comp=E,88µm,0.1s						
FDMO				AML	AML		
	comp=N,64µm,0.1s						
T1219	**Muccia, Frazio**	**0.08**	**343**	P	Pg	23 18 24.9	+0.3
T1219				S	Sg	23 18 26.5	+0.1
T1219				AML	AML		
	comp=N,63µm,1.6s						
T1219				AML	AML		
	comp=E,91µm,1.9s						
T1219				AML	AML		
	comp=N,26µm,0.2s						
T1219				AML	AML		
	comp=E,17µm,0.1s						
T1216	**Preci, Frazion**	**0.09**	**189**	P	Pg	23 18 25.1	+0.3
T1216				S	Sg	23 18 27.1	+0.4
T1216				AML	AML		
	comp=N,30µm,0.2s						
T1216				AML	AML		
	comp=E,29µm,0.3s						
CESI	**CESI - Serrava**	**0.10**	**282**	P	Pg	23 18 25.4	+0.4
CESI				S	Sg	23 18 27.5	+0.6
MC2	**Monte Cornacci**	**0.13**	**122**	P	Pg	23 18 26.6	+1.1
MC2				S	Sg	23 18 28.1	+0.3
T1220	**Camerino, Fraz**	**0.13**	**16**	⇓P	Pg	23 18 26.1	+0.7
T1220				S	Sg	23 18 28.5	+0.9
T1220				AML	AML		
	comp=N,90µm,3.4s						
T1220				AML	AML		
	comp=N,92µm,3.4s						
T1220				AML	AML		
	comp=E,54µm,0.3s						
T1256	**Bolognola (MC)**	**0.14**	**81**	P	Pg	23 18 26.0	+0.4
T1256				S	Sg	23 18 28.7	+0.8
CSP1	**Cessapalombo**	**0.16**	**48**	⇑P	Pg	23 18 26.6	+0.7
CSP1				S	Sg	23 18 29.8	+1.3
CSP1				AML	AML		
	comp=N,15µm,2.6s						
CSP1				AML	AML		
	comp=E,17µm,0.1s						
T1245	**Castelsantange**	**0.17**	**139**	P	Pg	23 18 27.1	+1.0
T1245				AML	AML		
	comp=E,76µm,0.8s						
T1245				AML	AML		
	comp=N,73µm,0.1s						
T1245				AML	AML		
	comp=E,76µm,0.8s						
T1245				AML	AML		
	comp=N,46µm,0.1s						
T1245				AML	AML		
	comp=E,37µm,0.3s						
T1215	**Vallo di Nera,**	**0.22**	**215**	P	Pg	23 18 27.6	+0.7
T1215				AML	AML		
	comp=E,84µm,0.7s						
MMO1	**Montemonaco**	**0.23**	**112**	P	Pg	23 18 27.6	+0.6
MMO1				S	Sg	23 18 31.3	+1.1
T1241	**Roccafluvione,**	**0.32**	**114**	S	Sb	23 18 37.7	+2.4

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*BJI **03** 23:30:03.8±0.0, 25°.11N×94°.50E, h64^{km}, mb4.0/17, mB4.7/6, Ms3.9/1, Ms7 3.8/1*

*NDI **03** 23:30:03.2±3.2, 24°.83N×94°.54E, h70^{km}, ML4.0, mb4.1(NEIC)*

*NEIC **03** 23:30:03.1±1.1, 24°.85N±0°.06×94°.55E±0°.08, h66^{km}±7^{km}, mb4.1/17, Error ellipse: s-maj=11.8km s-min=8.1km az=60.0*

*IDC **03** 23:30:05.2±2.3, 24°.67N×94°.52E, h100^{km}±24^{km}, mb3.6/13, mbtmp3.9/15, Error ellipse: s-maj=27.7km s-min=11.7km az=54.0*

ISC 03 23:30:02.9±0.7**, 24°.81N**±0°.04×**94°.46E**±0°.04**, h79**^{km}±7^{km}**, n63, σ2**^{s}**.15**/92**, mb3.9**/20**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**0.47**	**272**	*e*P	**Pn**	**23 30 16.6**	**+0.2**
IMP				*e*S	**Sn**	**23 30 25.9**	**-0.4**
IMP				IAML		23 30 26.3	
	comp=N,3µm,0.4s						
KOHI	**KOHIMA**	**0.96**	**341**	*e*P	**Pn**	**23 30 21.7**	**+0.1**
KOHI				*e*S	**Sn**	**23 30 35.5**	**+0.1**
KOHI				IAML		23 30 42.3	
	comp=E,1µm,0.5s						
MOKO	**MOKOCHONG**	**1.50**	**2**	*e*P	**Pn**	**23 30 28.9**	**+0.5**
MOKO				*e*S	**Sn**	**23 30 47.9**	**+0.3**
MOKO				IAML		23 30 48.4	
	comp=E,1µm,0.5s						
MOKO				IAML		23 30 49.0	
	comp=N,1µm,0.3s						
SILR	**SILCHAR**	**1.51**	**269**	*e*P	**Pn**	**23 30 29.7**	**+1.4**
SILR				*e*S	**Sn**	**23 30 49.7**	**+2.3**
SILR				IAML		23 30 51.6	
	comp=N,1µm,0.3s						
JORH	**JORHAT**	**1.93**	**354**	*e*S	**Sn**	**23 30 57.2**	**-0.2**
JORH				IAML		23 31 00.5	
	comp=E,1µm,0.4s						
TEZP	**TEZPUR**	**2.34**	**321**	*e*P	**Pn**	**23 30 38.5**	**-0.8**
TEZP				*e*S	**Sn**	**23 31 04.3**	**-2.9**
TEZP				IAML		23 31 06.3	
	comp=E,3µm,0.1s						
TEZP				IAML		23 31 07.2	
	comp=N,3µm,0.1s						
SHL	**Shillong**	**2.45**	**288**	Pn	**Pn**	**23 30 40.6**	**-0.4**
SHL				Sn	**Sn**	**23 31 08.4**	**-1.8**
SHL	**Shillong**	**2.45**	**288**	*e*P	**Pn**	**23 30 40.7**	**-0.3**
SHL				*e*PN	**Pn**	**23 30 44.0**	**+3.0**
SHL				*e*S	**Sn**	**23 31 08.3**	**-1.9**
SHL				IAML		23 31 10.5	
	comp=N,1µm,0.2s						
SHL				*e*SN	**Sn**	**23 31 11.0**	**+0.8**
SAIH	**SAIHA**	**2.68**	**211**	*e*P	**Pn**	**23 30 44.3**	**+0.3**
SAIH				*e*S	**Sn**	**23 31 14.7**	**-0.9**
SAIH				IAML		23 31 18.3	
	comp=N,6µm,0.3s						
ZIRO	**ZIRO**	**2.76**	**349**	*e*P	**Pn**	**23 30 44.6**	**-0.6**
ZIRO				*e*S	**Sn**	**23 31 13.5**	**-4.1**
AGT	**Agartala**	**3.07**	**253**	*e*S	**Sn**	**23 31 25.9**	**+1.0**
AGT				IAML		23 31 28.9	
	comp=E,448nm,0.4s						
BRDH	**Bariadhala**	**3.34**	**231**	P	**Pn**	**23 30 55.0**	**+2.0**
	comp=E,82nm,0.4s,baz=92,slow=13,SNR=1.5						
BRDH				S	**Sn**	**23 31 30.2**	**-1.3**
	comp=E,110nm,0.3s,baz=0.0,slow=20,SNR=18						
TNCH	**TengChong**	**3.69**	**86**	*e*P	**Pn**	**23 30 58.0**	**+0.2**
TNCH				S	**Sn**	**23 31 39.5**	**-0.8**
LSA	**Lhasa**	**5.69**	**330**	Pn	**Pn**	**23 31 26.2**	**+0.8**
LSA				Sn	**Sn**	**23 32 28.8**	**-0.7**
GTK	**Tadong**	**5.83**	**297**	*e*P	**Pn**	**23 31 27.6**	**+0.6**
GTK				*e*S	**Sn**	**23 32 31.8**	**-0.7**
TAPN	**Taplejung**	**6.57**	**294**	*e*Pg	**Pn**	**23 31 37.8**	**+0.5**
TAPN				*e*Sg	**Sn**	**23 32 49.4**	**-1.5**
	comp=E,35nm,0.3s						
ODAN	**Odare**	**6.69**	**289**	*e*Pg	**Pn**	**23 31 38.6**	**-0.2**
ODAN				*e*Sg	**Sn**	**23 32 49.9**	**-3.7**
	comp=E,216nm,0.4s						
PZH	**PanZhiHua**	**6.78**	**74**	P	**Pn**	**23 31 41.3**	**+1.4**
PZH				pmax	pmax		
	comp=E,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=E,100nm,5.3s						
CRAI	**Chiangrai**	**7.12**	**129**	Pn	**Pn**	**23 31 43.2**	**-1.2**
CHTO	**Chiang Mai**	**7.28**	**144**		**Pn**	**23 31 45.6**	**-1.0**
RAMN	**Ramite**	**7.39**	**288**	*e*Pg	**Pn**	**23 31 48.1**	**-0.3**
RAMN				*e*Sg	**Sn**	**23 33 06.4**	**-4.5**
	comp=E,85nm,0.4s						
CMAR	**Chiang Mai Arr**	**7.57**	**146**	P	**Pn**	**23 31 50.6**	**0.0**
	comp=E,0.5nm,0.3s,baz=320,slow=12,SNR=5.2						
CMAR				S	**Sn**	**23 33 13.9**	**-1.1**
	comp=E,0.7nm,0.4s,baz=322,slow=23,SNR=1.6						
JIRN	**Jiri**	**7.95**	**293**	*e*Pg	**Pn**	**23 31 55.9**	**-0.2**
JIRN				*e*Sg	**Sn**	**23 33 20.5**	**-4.1**
	comp=E,64nm,0.3s						
GUN	**Gumba**	**8.29**	**294**	*e*Pg	**Pn**	**23 32 00.2**	**-0.5**
GUN				*e*Sg	**Sn**	**23 33 29.4**	**-3.6**
	comp=E,74nm,0.4s						
PKI	**Pulchoki**	**8.58**	**291**	*e*Pg	**Pn**	**23 32 04.1**	**-0.6**
PKI				*e*Sg	**Sn**	**23 33 35.7**	**-4.4**
	comp=E,24nm,0.3s						
PKIN	**Phulchoki**	**8.59**	**291**	*e*Pg	**Pn**	**23 32 04.0**	**-0.8**
PKIN				*e*Sg	**Sn**	**23 33 35.8**	**-4.5**
	comp=E,27nm,0.4s						
KKN	**Kakani**	**8.76**	**292**	*e*Pg	**Pn**	**23 32 06.3**	**-0.7**
KKN				*e*Sg	**Sn**	**23 33 39.7**	**-4.4**
	comp=E,88nm,0.5s						

DMN	Daman	8.85	290	ePg	Pn	23 32 07.2	-1.1
DMN				eSg	Sn	23 33 42.2	-4.3
	comp=E,43nm,0.5s						
GKN	Gorkha	9.36	292	ePg	Pn	23 32 14.0	-1.2
GKN				eSg	Sn	23 33 53.5	-5.4
	comp=E,59nm,0.3s						
KOLN	Koldanda	10.18	289	eSg	Sn	23 34 13.0	-5.9
	comp=E,147nm,0.4s						
DANN	Dangsing	10.20	293	ePg	Pn	23 32 24.8	-2.0
DANN				eSg	Sn	23 34 13.5	-6.1
	comp=E,37nm,0.5s						
PYUN	Piuthan	10.79	290	ePg	Pn	23 32 32.3	-2.4
PYUN				eSg	Sn	23 34 28.0	-5.7
	comp=E,25nm,0.4s						
WMQ	Urumqi	19.75	345	eP	P	23 34 26.2	-0.3
WMQ				pmax	pmax		
	comp=E,8.0nm,0.7s						
NIL	Nilore	20.47	300	P	P	23 34 35.3	+1.0
NIL				IAmb	IAmb	23 34 39.5	
	comp=Z,4.6nm,0.6s						
MK31	Makanchi Array	24.00	339	P	P	23 35 11.5	+1.3
MK31				IAmb	IAmb	23 35 12.6	
	comp=Z,2.9nm,0.5s						
MKAR	Makanchi Array	24.00	339	P	P	23 35 11.9	+1.7
	comp=Z,2.0nm,0.4s,baz=152,slow=9.1,SNR=74						
	comp=Z,2.0nm,0.4s						
MKAR	Makanchi Array	24.00	339	P	P	23 35 11.4	+1.2
KBL	Kabul	24.06	300	P	P	23 35 12.7	+1.6
MAKZ	Makanchi	24.11	339	P	P	23 35 12.4	+1.2
AAK	Ala-Archa	24.23	322	P	P	23 35 15.1	+2.7
	comp=Z,1.1nm,0.6s,baz=154,slow=6.8,SNR=7.6						
	comp=Z,1.1nm,0.6s						
GAR	Garm	24.81	311	P	P	23 35 18.9	+1.1
GAR				IAmb	IAmb	23 35 19.9	
	comp=Z,8.6nm,0.6s						
SONM	Songino Array	24.85	19	P	P	23 35 19.6	+1.6
	comp=Z,1.7nm,0.7s,baz=196,slow=12,SNR=19						
	comp=Z,1.7nm,0.7s						
SONM	Songino Array	24.85	19	P	P	23 35 19.1	+1.1
ULN	Ulaanbaatar	25.08	20	P	P	23 35 21.6	+1.5
ULN				IAmb	IAmb	23 35 22.6	
	comp=Z,3.2nm,0.7s						
SBUM	Sibu	28.07	140	P	P	23 35 46.3	-0.8
KURBB	Kurchatov Arra	28.56	339	P	P	23 35 52.1	+1.0
	comp=Z,1.1nm,0.7s,baz=145,slow=8.6,SNR=6.0						
	comp=Z,1.1nm,0.7s						
KURK	Kurchatov	28.61	339	P	P	23 35 52.1	+0.6
KURK				IAmb	IAmb	23 36 10.7	
	comp=Z,5.1nm,1.4s						
ZAA0	Zalesovo Array	29.98	349	P	P	23 36 04.3	+0.6
ZAA0				IAmb	IAmb	23 36 07.0	
	comp=Z,2.0nm,0.7s						
ZALV	Zalesovo Beam	29.98	349	P	P	23 36 05.2	+1.5
	comp=Z,1.2nm,0.5s,baz=147,slow=5.9,SNR=7.9						
	comp=Z,1.2nm,0.5s						
ZALV	Zalesovo Beam	29.98	349	P	P	23 36 04.3	+0.6
KAAM	Kaadhehdhoo	31.87	224	P	P	23 36 21.9	+1.2
BRVK	Borovoye	33.58	333	P	P	23 36 35.4	+0.1
BRVK				IAmb	IAmb	23 36 39.5	
	comp=Z,2.2nm,0.8s						
ABKAR	Akbulak array	36.31	321	P	P	23 37 00.4	+1.6
ABKAR				IAmb	IAmb	23 37 01.2	
	comp=Z,2.1nm,1.1s						
INU	Inuyama	38.04	64	P	P	23 37 14.1	+0.4
BRTR	Keskin Array B	52.60	302	P	P	23 39 09.9	+0.9
	comp=Z,0.4nm,0.6s,baz=107,slow=6.9,SNR=2.0						
	comp=Z,0.4nm,0.6s						
FINES	FINESS Array B	58.21	328	P	P	23 39 49.5	+0.9
	comp=Z,2.1nm,0.7s,baz=92,slow=5.4,SNR=16						
	comp=Z,2.1nm,0.7s						
WRA	Warramunga Arr	59.03	135	P	P	23 39 53.8	-1.1
	comp=Z,0.5nm,0.4s,baz=322,slow=7.3,SNR=20						
	comp=Z,0.5nm,0.4s						
ARCES	ARCESS Array B	59.64	338	P	P	23 39 59.6	+1.2
	comp=Z,1.7nm,0.7s,baz=98,slow=6.5,SNR=5.8						
	comp=Z,1.7nm,0.7s						
ASAR	Alice Springs	61.52	138	P	P	23 40 11.1	-0.8
	comp=Z,0.8nm,0.5s,baz=317,slow=6.6,SNR=14						
ASAR				pP	pP	23 40 34.5	+2.4
	comp=Z,0.5nm,0.8s,baz=320,slow=6.7,SNR=2.2						
	comp=Z,0.8nm,0.5s						
NB2	NORSAR Subarra	65.38	328	P	P	23 40 37.1	+0.3
	comp=Z,0.3nm,0.5s,baz=83,slow=6.5						
NOA	NORSAR Array B	65.38	328	P	P	23 40 37.2	+0.3
	comp=Z,0.6nm,0.6s,baz=84,slow=6.4,SNR=4.1						
	comp=Z,0.6nm,0.6s						
GERES	GERESS Array B	65.81	314	P	P	23 40 40.5	+0.5
	comp=Z,0.4nm,0.4s,baz=79,slow=7.1,SNR=3.8						
	comp=Z,0.4nm,0.4s						
INK	Inuvik	80.72	16	P	P	23 42 07.7	+0.6
	comp=Z,0.7nm,0.5s,baz=309,slow=3.7,SNR=4.8						
	comp=Z,0.7nm,0.5s						

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*IDC **03** 23:31:01.9±0.4, 54°.84N×167°.96E, h0^{km}, mb4.6/34, mbtmp4.6/36, ML4.3/2, MS3.6/40, Error ellipse: s-maj=12.9km s-min=9.5km az=155.0*

*KRSC **03** 23:31:02.7±1.9, 54°.68N×168°.07E, h70^{km}±39^{km}, Mc4.7, Ml4.9*

*BJI **03** 23:31:04.8±0.0, 54°.92N×168°.03E, h39^{km}, mb4.7/52, mB5.1/24, Ms4.6/24, Ms7 4.3/22*

*MOS **03** 23:31:05.2±0.9, 54°.73N×167°.97E, h36^{km}, mb4.9/65, Error ellipse: s-maj=4.8km s-min=4.3km az=113.6*

*NEIC **03** 23:31:07.4±1.0, 54°.76N±0°.09×168°.0E±0°.1, h34^{km}±4^{km}, mb4.9/338, Error ellipse: s-maj=13.3km s-min=9.0km az=176.0*

ISC 03 23:31:06.0±0.4, **54°.70N**±0°.04×**168°.06E**±0°.03, **h28**^{km}±2^{km}, **n927**, σ1^{s}.**08**/913, **mb4.9**/259, **MS3.7**/48, **26C-23D**,
Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	1.31	294	PN	Pn	23 31 25.2	-3.2
BKI				S	Sn	23 31 41.2	-3.7
BKI	Bering	1.31	294	eP	Pn	23 31 25.2	-3.2
BKI				eS	Sn	23 31 41.2	-3.7
KBTR	Krutoberegovo	3.35	299	PN	Pn	23 31 54.4	-2.0
KBTR				S	Sn	23 32 32.5	-2.7
KBTR	Krutoberegovo	3.35	299	eP	Pn	23 31 54.4	-2.0
KBTR				eS	Sn	23 32 32.5	-2.7
KBG	Krutoberegovo	3.43	299	PN	Pn	23 31 55.4	-2.1
KBG	Krutoberegovo	3.43	299	eP	Pn	23 31 55.4	-2.1
KBG				eS	Sn	23 32 33.0	-4.1
SHEM	Shemya Is, Ala	4.09	116	Pn	Pn	23 32 05.9	-0.7
	75nm,0.3s,baz=286,slow=20,SNR=29						
SHEM				Sn	Sn	23 32 50.5	-3.0
	71nm,0.3s,baz=331,slow=23,SNR=11						
	310nm,0.4s						
SMY	Shemya	4.09	116	Pn	Pn	23 32 06.4	-0.2
SMY	Shemya	4.09	116	PN	Pn	23 32 05.7	-0.9
SMKR	Semkarok	4.19	299	PN	Pn	23 32 07.8	-0.2
SMKR				S	Sn	23 32 55.5	-0.5
SMKR	Semkarok	4.19	299	eP	Pn	23 32 07.8	-0.2
SMKR				eS	Sn	23 32 55.5	-0.5
SRKR	Sorokina	4.37	299	PN	Pn	23 32 10.2	-0.3
SRKR	Sorokina	4.37	299	eP	Pn	23 32 10.2	-0.3
BZGR	Bezymyannyi-Gr	4.39	289	PN	Pn	23 32 11.0	+0.2
BZGR				S	Sn	23 33 01.6	+0.6
BZGR	Bezymyannyi-Gr	4.39	289	eP	Pn	23 32 11.0	+0.2
BZGR				eS	Sn	23 33 01.6	+0.6
CIRR	Tsirk	4.41	292	PN	Pn	23 32 11.2	+0.1
CIRR				S	Sn	23 33 02.0	+0.5
CIRR	Tsirk	4.41	292	eP	Pn	23 32 11.2	+0.1
CIRR				eS	Sn	23 33 02.0	+0.5
TUMD	Tumrok D	4.45	280	eP	Pn	23 32 11.5	0.0
TUMD				eS	Sn	23 33 02.1	-0.2
BZP	Bezymyannyi-Pe	4.47	289	eP	Pn	23 32 11.9	-0.1
BZMR	Bezymyannaya	4.50	289	PN	Pn	23 32 12.2	-0.2
BZMR	Bezymyannaya	4.50	289	eP	Pn	23 32 12.2	-0.2
BZWR	Bezymyannyi-We	4.50	289	PN	Pn	23 32 12.6	+0.2
BZWR				S	Sn	23 33 04.3	+0.4
BZWR	Bezymyannyi-We	4.50	289	eP	Pn	23 32 12.6	+0.2
BZWR				eS	Sn	23 33 04.3	+0.4
KLY	Klyuchi	4.51	294	PN	Pn	23 32 11.0	-1.4
KLY				S	Sn	23 33 01.9	-2.0
KLY	Klyuchi	4.51	294	eP	Pn	23 32 11.0	-1.4
KLY				eS	Sn	23 33 01.9	-2.0
KIRR	Kirishev	4.59	289	PN	Pn	23 32 13.7	+0.1
KIRR				S	Sn	23 33 07.5	+1.6
KIRR	Kirishev	4.59	289	eP	Pn	23 32 13.7	+0.1
KIRR				eS	Sn	23 33 07.5	+1.6
TUMR	Tumrok	4.60	281	PN	Pn	23 32 13.9	+0.2
TUMR				S	Sn	23 33 07.3	+1.1
TUMR	Tumrok	4.60	281	eP	Pn	23 32 13.9	+0.2
TUMR				eS	Sn	23 33 07.3	+1.1
KMNR	Kamenistaya	4.61	286	PN	Pn	23 32 14.4	+0.6
KMNR				S	Sn	23 33 07.4	+1.1
KMNR	Kamenistaya	4.61	286	eP	Pn	23 32 14.4	+0.6
KMNR				eS	Sn	23 33 07.4	+1.1
KPT	Kopyto	4.66	289	PN	Pn	23 32 15.0	+0.6
KPT				S	Sn	23 33 08.8	+1.3
KPT	Kopyto	4.66	289	eP	Pn	23 32 15.0	+0.6
KPT				eS	Sn	23 33 08.8	+1.3
KOZ	Kozyrevsk	4.87	290	PN	Pn	23 32 18.2	+0.9
KOZ				S	Sn	23 33 14.0	+1.4
KOZ	Kozyrevsk	4.87	290	eP	Pn	23 32 18.2	+0.9
KOZ				eS	Sn	23 33 14.0	+1.4
SRDR	Sredinnyy	5.01	292	PN	Pn	23 32 20.0	+0.7
SRDR	Sredinnyy	5.01	292	eP	Pn	23 32 20.0	+0.7
SPN	Mys Shipunski	5.02	255	PN	Pn	23 32 17.5	-1.8
SPN	Mys Shipunski	5.02	255	eP	Pn	23 32 17.5	-1.8
SPN				eS	Sn	23 33 11.7	-4.7
OSSR	Ossora	5.32	331	PN	Pn	23 32 21.7	-1.8
OSSR	Ossora	5.32	331	eP	Pn	23 32 21.7	-1.8
NLC	Nalytchevo	5.37	257	PN	Pn	23 32 24.4	+0.2
NLC	Nalytchevo	5.37	257	eP	Pn	23 32 24.4	+0.2
NLC				eS	Sn	23 33 21.9	-3.1
ESO	Esso	5.49	287	PN	Pn	23 32 27.7	+1.9
ESO				S	Sn	23 33 28.9	+0.9
ESO	Esso	5.49	287	eP	Pn	23 32 27.7	+1.9
ESO				eS	Sn	23 33 28.9	+0.9
SMAR	Somma	5.65	259	PN	Pn	23 32 27.8	-0.5
SMAR	Somma	5.65	259	eP	Pn	23 32 27.8	-0.5
SMAR				eS	Sn	23 33 30.0	-2.3
UGLR	Uglovaya	5.66	258	PN	Pn	23 32 28.0	-0.2
UGLR	Uglovaya	5.66	258	eP	Pn	23 32 28.0	-0.2
UGLR				eS	Sn	23 33 31.0	-1.3
KRER	Koryakskii	5.67	260	PN	Pn	23 32 28.0	-0.5
KRER	Koryakskii	5.67	260	eP	Pn	23 32 28.0	-0.5
KRER				eS	Sn	23 33 30.7	-2.0
AVH	Avacha	5.69	259	PN	Pn	23 32 28.2	-0.4
AVH	Avacha	5.69	259	eP	Pn	23 32 28.2	-0.4
AVH				eS	Sn	23 33 31.9	-1.1
KRX	Arik	5.71	260	PN	Pn	23 32 28.7	-0.3
KRX	Arik	5.71	260	eP	Pn	23 32 28.7	-0.3
KRX				eS	Sn	23 33 30.9	-2.7
KOK	Koryaka	5.74	260	PN	Pn	23 32 29.2	-0.1
KOK	Koryaka	5.74	260	eP	Pn	23 32 29.2	-0.1
KOK				eS	Sn	23 33 31.4	-2.8
DALK	Dalny	5.76	257	PN	Pn	23 32 28.6	-0.9
DALK	Dalny	5.76	257	eP	Pn	23 32 28.6	-0.9
DALK				eS	Sn	23 33 30.8	-3.7
PET	Petropavlovsk	5.82	257		Pn	23 32 29.9	-0.4
PET	Petropavlovsk	5.82	257	ePN	Pn	23 32 30.1	-0.2
PET				pmax	pmax		
	comp=Z,115nm,0.8s						
PET				MLR	MLR		
	comp=Z,1μm,9.0s						
PET	Petropavlovsk	5.82	257	eP	Pn	23 32 29.5	-0.8
PET				eS	Sn	23 33 32.1	-3.9
INSR	Institute	5.83	258	eS	Sn	23 33 33.1	-3.2
TILK	Tilichiki	5.86	351	PN	Pn	23 32 30.0	-0.8
TILK	Tilichiki	5.86	351	eP	Pn	23 32 30.0	-0.8
GNL	Ganaly	6.03	265	PN	Pn	23 32 33.9	+0.6
GNL	Ganaly	6.03	265	eP	Pn	23 32 33.9	+0.6
GNL				eS	Sn	23 33 40.4	-0.9
RUS	Russkaya	6.13	252	PN	Pn	23 32 33.7	-0.8
RUS	Russkaya	6.13	252	eP	Pn	23 32 33.7	-0.8
RUS				eS	Sn	23 33 39.7	-3.9
KRMR	Karymshinskiy	6.18	256	PN	Pn	23 32 35.1	-0.2
KRMR	Karymshinskiy	6.18	256	eP	Pn	23 32 35.1	-0.2
KRMR				eS	Sn	23 33 42.0	-3.0
PALN	Palana	6.25	318	PN	Pn	23 32 38.7	+2.5
PALN	Palana	6.25	318	eP	Pn	23 32 38.7	+2.5
MTVR	Mutnovka	6.29	253	PN	Pn	23 32 36.5	-0.4
MTVR	Mutnovka	6.29	253	eP	Pn	23 32 36.5	-0.4
GRL	Gorelyy	6.32	254	PN	Pn	23 32 37.3	-0.1
GRL	Gorelyy	6.32	254	eP	Pn	23 32 37.3	-0.1
GRL				eS	Sn	23 33 45.0	-3.6
PEA0B	Petropavlovsk-	6.33	260	Pn	Pn	23 32 37.6	+0.2
PEA0B	Petropavlovsk-	6.33	260	PN	Pn	23 32 37.6	+0.2
PETK	Petropavlovsk-	6.33	260	Pn	Pn	23 32 37.3	-0.1
	comp=Z,7.9nm,0.3s,baz=85,slow=16,SNR=98						
PETK				Sn	Sn	23 33 47.1	-1.5
	comp=Z,7.1nm,0.3s,baz=100,slow=25,SNR=6.4						
PETK				LR	LR	23 35 38.1	
	comp=Z,375nm,18.5s,baz=76,slow=44						
	comp=Z,11nm,0.3s						
KDTR	Khodutka, Kamc	6.65	248	PN	Pn	23 32 40.6	-1.2
KDTR	Khodutka, Kamc	6.65	248	eP	Pn	23 32 40.6	-1.2
APC	Apacha	6.70	259	PN	Pn	23 32 43.1	+0.7
APC	Apacha	6.70	259	eP	Pn	23 32 43.1	+0.7
APC				eS	Sn	23 33 56.5	-1.2
AMKA	Amchitka	7.55	112	Pn	Pn	23 32 54.0	0.0
KMSK	Kamenskaya	7.85	354	PN	Pn	23 32 56.4	-1.8
KMSK	Kamenskaya	7.85	354	eP	Pn	23 32 56.4	-1.8
KMSK				eS	Sn	23 34 20.0	-5.9
SKR	Severo-Kuril's	8.29	246	ePN	Pn	23 33 04.1	-0.2
SKR				pmax	pmax		
	comp=Z,235nm,1.0s						
ADK	Adak	9.56	101	Pn	Pn	23 33 22.1	+0.5
ADK	Adak	9.56	101	PN	Pn	23 33 22.1	+0.5
MA2	Magadan	10.58	305	LR	LR	23 37 40.2	
	comp=Z,249nm,18.7s,baz=108,slow=38						
SEY	Seymchan	11.55	322	Pn	Pn	23 33 49.9	+1.1
	comp=Z,0.3nm,0.3s,baz=132,slow=12,SNR=10						
SEY				LR	LR	23 38 10.5	
	comp=Z,358nm,20.7s,baz=212,slow=38						
SEY	Seymchan	11.55	322	cePN	Pn	23 33 48.1	-0.7
SEY				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BILL	Bilibino	13.41	357	Pn	Pn	23 34 14.6	+0.3
BILL	Bilibino	13.41	357	cePN	Pn	23 34 13.0	-1.2
BILL				eSS	SnSn	23 36 54.2	0.0
BILL				pmax	pmax		
	comp=Z,17nm,1.7s						
BILL				MLR	MLR		
	comp=Z,196nm,13.0s						
NIKH	Nikolski High	13.73	88	P	Pn	23 34 19.5	+0.9
	baz=287						
OKH	Okha	14.76	276	deP	Pn	23 34 18.8	-14
OKH				MLR	MLR		
	comp=Z,400nm,15.0s						
OKH				MLR	MLR		
	comp=N,900nm,14.0s						
UNV	Unalaska Valle	14.86	83		P	23 34 39.7	+0.3
UNV	Unalaska Valle	14.86	83	P	Pn	23 34 34.0	+0.1
	baz=284,SNR=5.7						
AKUT	Akutan	15.21	81	P	P	23 34 44.1	+0.8
AKUT				IAmb	IAmb	23 34 45.8	
	comp=Z,72nm,0.8s						
TYV	Tymovskoe	15.81	266	eP	Pn	23 34 46.7	+0.3
TYV				eS	Sn	23 37 42.8	+2.2
TYV				pmax	pmax		
	comp=Z,400nm,4.5s						
TYV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TYV				smax	smax		
	comp=N,200nm,5.5s						
TNA	Tin City	16.04	38	Pn	Pn	23 34 49.2	0.0
TNA	Tin City	16.04	38	P	Pn	23 34 49.2	0.0
	baz=239,SNR=18						
ANM	Nome	16.53	43	Pn	Pn	23 34 56.1	+0.5
ANM	Nome	16.53	43	P	Pn	23 34 56.1	+0.5
ANM				pmax	pmax		
	comp=Z,54nm,1.5s						
ANM	Nome	16.53	43	P	Pn	23 34 55.9	+0.3
	baz=246,SNR=15						
S12K	Black Hills	17.02	74	P	P	23 35 03.8	+0.4
	baz=279						
YSS	Yuzh-Sakhalins	17.70	254	P	P	23 35 11.3	+0.4
YSS	Yuzh-Sakhalins	17.70	254	⇓eP	P	23 35 12.8	+1.9
YSS				eS	S	23 38 30.6	-2.4
YSS				MLR	MLR		
	comp=Z,800nm,17.0s						
N16K	Nishlik Lake	18.55	58	P	P	23 35 20.3	+0.1
	baz=267						
O16K	Kokwok River B	18.86	61	P	P	23 35 23.2	-0.4
	baz=270						
P16K	Nushagak River	18.92	63	P	Pn	23 35 25.1	+0.1
	baz=272,SNR=5.6						
CHGN	Chignik	18.95	71	P	Pn	23 35 25.4	0.0
	baz=279						
RDOG	Red Dog Mine	19.03	34		P	23 35 25.8	+0.4
RDOG	Red Dog Mine	19.03	34	P	P	23 35 25.9	+0.5
	baz=240						
R16K	Pilot Point	19.24	67	P	P	23 35 28.3	+0.6
	baz=276,SNR=6.4						
O17K	Koliganek Bris	19.37	61	P	Pn	23 35 30.4	0.0
	baz=270						
GRNR	Gornyy	19.46	271	⇓iP	Pn	23 35 31.6	0.0
GRNR				pmax	pmax		
	comp=E,20nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,40nm,0.8s						
GRNR				pmax	pmax		
	comp=N,10.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,460nm,17.0s						
GRNR				MLR	MLR		
	comp=N,230nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,270nm,15.0s						
ASAJ	Asahikawa	19.55	248	P	Pn	23 35 35.8	+3.1
	comp=Z,26nm,0.9s,baz=37,slow=4.6,SNR=6.5						
ASAJ				LR	LR	23 42 25.9	
	comp=Z,119nm,21.8s,baz=46,slow=35						
Q16K	King Salmon	19.63	64	P	Pn	23 35 33.4	-0.1
	baz=274,SNR=19						
P17K	Kvichak River	19.71	62	P	Pn	23 35 33.9	-0.6
	baz=273,SNR=6.8						
R17K	Ugashik Creek	19.87	67	P	Pn	23 35 35.7	-0.7
	baz=277						
Q17K	Contact Creek	20.07	65	P	P	23 35 37.8	+0.9
	baz=276,SNR=23						
TTA	Tatalina	20.10	51	P	P	23 35 37.5	+0.4
TTA				IAmb	IAmb	23 35 39.7	
	comp=Z,50nm,1.0s						
TTA	Tatalina	20.10	51	P	P	23 35 37.5	+0.4
TTA				pmax	pmax		
	comp=Z,50nm,1.0s						
TTA	Tatalina	20.10	51	P	Pn	23 35 38.7	-0.4
	baz=263,SNR=28						
SVW2	Sparrevohn	20.14	57	P	P	23 35 37.7	+0.1
O18K	Koktuh Hills	20.32	60	P	P	23 35 40.2	+0.7
O18K				IAmb	IAmb	23 35 41.8	
	comp=Z,50nm,0.9s						
O18K	Koktuh Hills	20.32	60	P	P	23 35 40.4	+0.8
	baz=272						
P18K	Big Mountain,	20.33	62	P	P	23 35 40.3	+0.7
P18K				IAmb	IAmb	23 35 41.8	
	comp=Z,69nm,0.8s						
P18K	Big Mountain,	20.33	62	P	P	23 35 40.6	+0.9
	baz=273,SNR=13						
Q18K	Katmai Hardscr	20.49	64	P	P	23 35 42.4	+0.9
	baz=275,SNR=27						
L19K	White Mountain	20.55	54	P	P	23 35 42.5	+0.5
L19K				IAmb	IAmb	23 35 44.5	
	comp=Z,59nm,0.9s						
L19K	White Mountain	20.55	54	P	P	23 35 43.0	+1.0
	baz=266						
N19K	Bonanza Creek	20.67	58	P	P	23 35 43.7	+0.3
N19K				IAmb	IAmb	23 35 45.6	
	comp=Z,36nm,0.8s						
N19K	Bonanza Creek	20.67	58	P	P	23 35 44.6	+1.2
	baz=270,SNR=9.0						
ERM	Erimo	20.72	243	P	Pn	23 35 45.1	-1.3
ERM				IAmb	IAmb	23 35 48.1	
	comp=Z,86nm,1.2s						
ERM	Erimo	20.72	243	ceP	P	23 35 42.0	-1.9
ERM				pmax	pmax		
	comp=Z,61nm,1.3s						
M19K	Big River Lodg	20.75	55	P	P	23 35 44.8	+0.6
M19K	Big River Lodg	20.75	55	P	P	23 35 45.2	+1.0
	baz=267						
O19K	Port Alsworth	20.76	59	P	P	23 35 44.8	+0.6
O19K				IAmb	IAmb	23 35 46.9	
	comp=Z,34nm,0.9s						
O19K	Port Alsworth	20.76	59	P	P	23 35 45.2	+1.0
	baz=272						
K20K	Telida	21.02	50	P	P	23 35 47.7	+0.6
K20K				IAmb	IAmb	23 35 49.1	
	comp=Z,34nm,0.9s						
K20K	Telida	21.02	50	P	P	23 35 48.0	+0.8
	baz=263,SNR=19						
L20K	Farewell, AK	21.03	53	P	P	23 35 47.8	+0.6
	baz=266						
YAK	Yakutsk	21.15	306	LR	LR	23 44 22.9	
	comp=Z,112nm,19.8s,baz=84,slow=38						
YAK	Yakutsk	21.15	306	eP	P	23 35 50.1	+1.6
YAK				e		23 36 10.0	
YAK				eS	S	23 39 45.0	+3.0
YAK				e*SS	SnSn	23 40 09.1	+5.0
YAK				pmax	pmax		
	comp=Z,46nm,1.5s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,31nm,1.5s						
YAK				pmax	pmax		
	comp=Z,215nm,5.1s						
YAK				pmax	pmax		
	comp=N,126nm,4.8s						
YAK				pmax	pmax		
	comp=E,247nm,5.2s						
YAK				smax	smax		
	comp=N,253nm,6.3s						
YAK				smax	smax		
	comp=E,220nm,5.2s						
YAK				MLR	MLR		
	comp=Z,226nm,26.0s						
YAK				MLR	MLR		
	comp=N,165nm,24.0s						
Q19K	Cape Douglas,	21.17	63	P	P	23 35 49.5	+0.7
Q19K	Cape Douglas,	21.17	63	P	P	23 35 49.7	+0.9
	baz=275						
P19K	Oil Pt	21.33	61	P	P	23 35 51.3	+0.8
P19K	Oil Pt	21.33	61	P	P	23 35 51.7	+1.2
	baz=274						
M20K	Styx River	21.34	55	P	P	23 35 51.4	+0.7
M20K	Styx River	21.34	55	P	P	23 35 51.6	+0.9
	baz=268						
ILSW	Iliamna Southw	21.36	60	P	P	23 35 51.5	+0.7
ILSW				IAmb	IAmb	23 35 54.7	
	comp=Z,39nm,1.0s						
RSO	Redoubt South	21.53	59	P	P	23 35 53.1	+0.3
OHAK	Old Harbor	21.59	67	P	P	23 35 52.0	-1.1
OHAK				IAmb	IAmb	23 35 53.8	
	comp=Z,60nm,0.9s						
OHAK	Old Harbor	21.59	67	P	P	23 35 53.3	+0.2
	baz=280						
O20K	Slope Mountain	21.61	60	P	P	23 35 53.4	-0.1
	baz=273						
IMAR	Indian Mountai	21.61	43	P	P	23 35 53.3	-0.1
SPCR	Spurr Chakacha	21.78	57	P	P	23 35 56.1	+0.9
	baz=271						
G21K	Allakaket	21.83	42	P	P	23 35 55.8	0.0
	baz=256						
PPLA	Purkeypile	21.83	52	P	P	23 35 55.9	-0.1
PPLA				IAmb	IAmb	23 35 59.9	
	comp=Z,97nm,1.3s						
PPLA	Purkeypile	21.83	52	P	P	23 35 56.6	+0.6
	baz=266,SNR=13						
Q20K	Shuyak Island	21.86	64	P	P	23 35 56.3	+0.3
	baz=277						
CHUM	Lake Minchumin	21.86	49	P	P	23 35 57.4	+1.3
	baz=264,SNR=11						
KDAK	Kodiak Island	21.87	66	P	P	23 35 55.3	-0.9
	comp=Z,33nm,1.0s,baz=268,slow=6.3,SNR=13						
	comp=Z,33nm,1.0s						
KDAK	Kodiak Island	21.87	66	P	P	23 35 55.3	-0.9
CAST	Castle Rocks	21.92	51	P	P	23 35 57.4	+0.6
CAST	Castle Rocks	21.92	51	P	P	23 35 57.2	+0.5
	baz=265,SNR=15						
H21K	Melozitna Rive	21.93	44	P	P	23 35 57.0	+0.3
H21K	Melozitna Rive	21.93	44	P	P	23 35 57.2	+0.4
	baz=259						
F21K	Alatna River	22.02	40	P	P	23 35 57.8	-0.1
	baz=254						
SKT	Skwentna	22.10	54	P	P	23 35 59.5	+0.7
SKT				IAmb	IAmb	23 36 01.9	
	comp=Z,34nm,1.0s						
SKT	Skwentna	22.10	54	P	P	23 35 59.4	+0.7
	baz=269,SNR=14						
HOM	Homer	22.13	61	P	P	23 35 59.8	+0.8
	baz=275						
I21K	Tanana	22.18	46	P	P	23 35 59.8	+0.3
I21K	Tanana	22.18	46	P	P	23 35 59.6	+0.1
	baz=261						
CNPM	China Poot	22.35	61	P	P	23 36 01.2	-0.2
CNPM				IAmb	IAmb	23 36 02.5	
	comp=Z,55nm,1.2s						
KTH	Kantishna Hill	22.45	50	P	P	23 36 03.2	+0.7

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KTH                                   IAmb     IAmb     23 36 05.1
      comp=Z,71nm,1.2s
BPAW  Bear Paw Mtn.      22.47  49    P        P        23 36 03.0 +0.4
BPAW                                  IAmb     IAmb     23 36 05.0
      comp=Z,38nm,1.1s
BPAW  Bear Paw Mtn.      22.47  49    P        P        23 36 03.3 +0.7
      baz=265,SNR=18
SUA   Susitna One        22.48  56    P        P        23 36 03.2 +0.4
SUA                                   IAmb     IAmb     23 36 04.8
      comp=Z,38nm,0.9s
SUA   Susitna One        22.48  56    P        P        23 36 02.7 -0.1
      baz=271
BRLK  Bradley Lake       22.50  60    P        P        23 36 03.0 -0.1
BRLK                                  IAmb     IAmb     23 36 07.2
      comp=Z,33nm,1.0s
H22K  Ishtalitna Cre     22.55  44    P        P        23 36 03.8 +0.3
      baz=260,SNR=14
A21K  Barrow             22.56  29    P        P        23 36 02.9 -0.6
A21K                                  IAmb     IAmb     23 36 19.7
      comp=Z,39nm,1.1s
A21K  Barrow             22.56  29    P        P        23 36 03.4 -0.1
      baz=241,SNR=5.9
BRSE  Bradley Lake S     22.58  60    P        P        23 36 04.4 +0.6
      baz=276
F22K  John River         22.59  40    P        P        23 36 04.0 +0.1
      baz=255
MLY   Manley             22.68  46    IAmb     IAmb     23 36 07.2
      comp=Z,32nm,1.0s
MLY   Manley             22.68  46    P        P        23 36 05.1 +0.2
      baz=263,SNR=26
JTM   Tenmabayashi       22.69 243    P        P        23 36 05.8 +0.7
JTM                                   IAmb     IAmb     23 36 16.1
      comp=Z,90nm,1.3s
CUT   Chulitna           22.70  53    P        P        23 36 05.5 +0.5
      baz=270,SNR=5.5
M22K  Willow             22.77  55    P        P        23 36 06.7 +0.9
      baz=271
KLR   Kul'dur            22.85 271    P        P        23 36 06.3 -0.4
      comp=Z,11nm,0.7s,baz=62,slow=9.8,SNR=40
KLR                                   LR       LR       23 45 56.1
      comp=Z,144nm,18.0s,baz=62,slow=39
      comp=Z,11nm,0.7s
KLR   Kul'dur            22.85 271ceP          P        23 36 06.8 +0.1
KLR                                   pmax     pmax
      comp=Z,30nm,1.3s
RC01  Rabbit Creek A     22.98  57    P        P        23 36 08.5 +0.5
RC01                                  IAmb     IAmb     23 36 19.0
      comp=Z,60nm,1.6s
RC01  Rabbit Creek A     22.98  57    P        P        23 36 07.5 -0.5
      baz=273
O22K  Cooper Landing     23.02  58    P        P        23 36 08.7 +0.2
O22K                                  IAmb     IAmb     23 36 23.6
      comp=Z,83nm,1.2s
O22K  Cooper Landing     23.02  58    P        P        23 36 08.0 -0.5
      baz=274
BWN   Browne             23.14  49    P        P        23 36 11.7 +2.1
SEW   Seward             23.19  59    P        P        23 36 10.4 +0.3
SEW   Seward             23.19  59    P        P        23 36 09.2 -1.0
      baz=276
G23K  Bananza Creek      23.23  42    P        P        23 36 09.8 -0.8
      baz=260
PMR   Palmer             23.25  55    P        P        23 36 11.6 +1.0
PMR                                   IAmb     IAmb     23 36 13.4
      comp=Z,34nm,1.2s
PMR   Palmer             23.25  55    P        P        23 36 11.6 +1.0
PMR                                   pmax     pmax
      comp=Z,34nm,1.2s
PMR   Palmer             23.25  55    P        P        23 36 10.2 -0.5
      baz=272
COLD  Coldfoot           23.27  41    P        P        23 36 10.9  0.0
      baz=258,SNR=25
I23K  Minto, Yukon-K     23.27  46    P        P        23 36 11.2 +0.4
      baz=264,SNR=12
H23K  Yukon River        23.28  45    IAmb     IAmb     23 36 22.7
      comp=Z,58nm,1.5s
H23K  Yukon River        23.28  45    P        P        23 36 11.3 +0.3
      baz=262
NEA2  Nenana             23.34  48    P        P        23 36 11.5 -0.1
      baz=265,SNR=11
MCK   McKinley           23.35  50    P        P        23 36 12.1 +0.4
MCK                                   IAmb     IAmb     23 36 12.5
      comp=Z,38nm,1.0s
MCK   McKinley           23.35  50    P        P        23 36 12.1 +0.4
MCK                                   pmax     pmax
      comp=Z,38nm,1.0s
MCK   McKinley           23.35  50    P        P        23 36 11.2 -0.5
      baz=268,SNR=12
RND   Reindeer           23.37  51    P        P        23 36 11.8 -0.2
RND                                   IAmb     IAmb     23 36 12.3
      comp=Z,133nm,1.9s
RND   Reindeer           23.37  51    P        P        23 36 11.8 -0.2
RND                                   pmax     pmax
      comp=Z,133nm,1.9s
D23K  Nanushuk River     23.52  37    P        P        23 36 12.8 -0.5
      baz=254,SNR=17
KNK   Knik Glacier       23.58  56    IAmb     IAmb     23 36 15.4
      comp=Z,24nm,0.7s
KNK   Knik Glacier       23.58  56    P        P        23 36 13.7 -0.3
      baz=273,SNR=6.7
SML   Sawmill            23.62  55    P        P        23 36 14.1 -0.3
SML   Sawmill            23.62  55    P        P        23 36 14.1 -0.3
SML                                   pmax     pmax
      comp=Z,66nm,0.8s
SML   Sawmill            23.62  55    P        P        23 36 13.9 -0.5
      baz=273,SNR=12
ZEA   Zeya               23.65 285  eP         P        23 36 12.9 -1.8
ZEA                                   pmax     pmax
      comp=Z,10.0nm,0.7s
ZEA                                   MLR      MLR
      comp=N,200nm,14.0s
ZEA                                   MLR      MLR
      comp=E,200nm,15.0s
ZEA                                   MLR      MLR
      comp=Z,200nm,16.0s
E23K  Chandalar          23.67  39    P        P        23 36 15.0 +0.2
      baz=257
PWL   Port Wells         23.68  57    P        P        23 36 14.2 -0.7
PWL   Port Wells         23.68  57    P        P        23 36 14.4 -0.5
      baz=275,SNR=6.0
MDM   Murphy Dome        23.73  47    P        P        23 36 15.7 +0.3
TIXI  Tiksi              23.82 330    P        P        23 36 14.8 -1.3
      comp=Z,6.2nm,0.7s,baz=127,slow=20,SNR=16
      comp=Z,6.2nm,0.7s
TIXI  Tiksi              23.82 330    P        P        23 36 15.7 -0.4
TIXI                                  IAmb     IAmb     23 36 25.8
      comp=Z,60nm,1.6s
TIXI  Tiksi              23.82 330    P        P        23 36 15.7 -0.4
TIXI                                  pmax     pmax
      comp=Z,60nm,1.6s
TOLK  Toolik Lake Re     23.82  38    P        P        23 36 16.0 -0.3
      baz=256,SNR=63
TCOL  CIGO, UAF Yank     23.88  47    P        P        23 36 16.6 -0.2
      baz=266
COLA  College            23.89  47c iP         P        23 36 16.4 -0.4
COLA                                  pmax     pmax
      comp=Z,49nm,0.8s
COLA  College            23.89  47    P        P        23 36 16.6 -0.2
      baz=266
CCB   Clear Creek Bu     23.89  48    P        P        23 36 16.9 +0.1
CCB                                   IAmb     IAmb     23 36 18.9
      comp=Z,43nm,1.0s
M23K  Glacier View       23.91  55    P        P        23 36 17.3 +0.2
      baz=273,SNR=5.5
H24K  Noodor Dome        23.96  45    IAmb     IAmb     23 36 28.2
      comp=Z,41nm,1.5s
H24K  Noodor Dome        23.96  45    P        P        23 36 17.3 -0.3
      baz=264
POKR  Poker Plat Res     24.08  47    IAmb     IAmb     23 36 20.0
      comp=Z,24nm,0.8s
POKR  Poker Plat Res     24.08  47    P        P        23 36 18.6 -0.1
      baz=266,SNR=8.8
E24K  Your Creek         24.09  39    P        P        23 36 18.7  0.0
      baz=258
SCM   Sheep Creek Mo     24.10  55    IAmb     IAmb     23 36 20.1
      comp=Z,68nm,1.0s
SCM   Sheep Creek Mo     24.10  55    P        P        23 36 18.6 -0.3
      baz=273,SNR=11
F24K  Squaw Lake         24.20  41    P        P        23 36 19.5 -0.3
      baz=260
P23K  Montague Islan     24.23  59    P        P        23 36 19.8 -0.2
      baz=277
G24K  Hadweenzic Riv     24.23  43    P        P        23 36 20.4 +0.4
      baz=262
HDA   Harding Lake       24.25  48    P        P        23 36 19.4 -0.7
HDA                                   IAmb     IAmb     23 36 20.9
      comp=Z,24nm,0.9s
HDA   Harding Lake       24.25  48    P        P        23 36 19.5 -0.7
      baz=268,SNR=14
IL31                     24.29  48    IAmb     IAmb     23 36 22.2
      comp=Z,38nm,0.9s
ILAR  Eielson Array      24.29  48    P        P        23 36 19.7 -0.9
      comp=Z,33nm,1.0s,baz=248,slow=8.1,SNR=125
ILAR                                  PcP      PcP      23 39 58.4 -1.2
      comp=Z,0.9nm,0.8s,baz=280,slow=3.6,SNR=4.1
ILAR                                  LR       LR       23 46 14.1
      comp=Z,117nm,18.1s,baz=248,slow=38
      comp=Z,33nm,1.0s
C24K  Franklin Bluff     24.41  35    P        P        23 36 21.3 -0.3
      baz=254
M24K  Tolsona, Glenn     24.62  54    P        P        23 36 24.1 +0.5
M24K  Tolsona, Glenn     24.62  54    P        P        23 36 24.6 +0.9
      baz=274,SNR=16
K24K  Donnelly Dome      24.75  50    P        P        23 36 24.3 -0.5
      baz=270,SNR=15
G25K  Bearman Lake       24.78  43    P        P        23 36 25.0 +0.1
      baz=264
KLU   Klutina            24.79  55    IAmb     IAmb     23 36 39.6
      comp=Z,35nm,0.8s
KLU   Klutina            24.79  55    P        P        23 36 25.4 +0.2
      baz=275,SNR=9.8
DIV   Divide             24.90  56    IAmb     IAmb     23 36 40.1
      comp=Z,90nm,1.7s
HEH   HeiHe              24.90 277  eP         P        23 36 25.0 -1.2
HEH                                   pmax     pmax
      comp=Z,35nm,1.0s
PAX   Paxson             24.91  52    P        P        23 36 26.9 +0.6
PAX                                   IAmb     IAmb     23 36 27.8
      comp=Z,21nm,0.8s
PAX   Paxson             24.91  52    P        P        23 36 26.9 +0.6
PAX                                   pmax     pmax
      comp=Z,21nm,0.8s
PAX   Paxson             24.91  52    P        P        23 36 26.1 -0.2
      baz=272,SNR=12
PRP   Porcupine Dome     24.91  46    P        P        23 36 27.5 +1.2
PRP   Porcupine Dome     24.91  46    P        P        23 36 25.7 -0.6
      baz=267,SNR=36
EYAK  Cordova Ski Ar     24.97  58    P        P        23 36 27.0 +0.2
      baz=277
F25K  Christian Rive     25.07  41    P        P        23 36 27.9 +0.3
      baz=262
HARP  HAARP              25.08  53    P        P        23 36 28.1 +0.3
      baz=274
D25K  Kavik River        25.10  37    P        P        23 36 27.8 -0.2
      baz=258
FYU   Fort Yukon         25.11  43    IAmb     IAmb     23 36 39.6
      comp=Z,48nm,0.8s
RIDG  Independent Ri     25.16  50    IAmb     IAmb     23 36 30.1
      comp=Z,27nm,0.8s
RIDG  Independent Ri     25.16  50    P        P        23 36 27.4 -1.1
      baz=271,SNR=15
E25K  Arctic Village     25.17  40    P        P        23 36 28.4 -0.2
      baz=261,SNR=21
N25K  Chitina, Valde     25.41  55    P        P        23 36 30.5 -0.3
      baz=276
USA0B Ussuriysk Arra     25.42 261  i P        P        23 36 30.9 -0.1
USRK  Ussuriysk Ar.      25.42 261    P        P        23 36 30.2 -0.8
      comp=Z,3.6nm,0.7s,baz=51,slow=11,SNR=5.2
USRK                                  LR       LR       23 46 10.7
      comp=Z,269nm,21.0s,baz=62,slow=36
      comp=Z,3.6nm,0.7s
USRK  Ussuriysk Ar.      25.42 261    P        P        23 36 31.5 +0.5
USRK  Ussuriysk Ar.      25.42 261    P        P        23 36 31.5 +0.5
DOT   Dot Lake           25.52  50    IAmb     IAmb     23 36 33.5
      comp=Z,58nm,1.0s
SCRK  Sand Creek         25.54  49    IAmb     IAmb     23 36 32.3
      comp=Z,29nm,0.9s
SCRK  Sand Creek         25.54  49    P        P        23 36 30.9 -1.2
      baz=272,SNR=26
F26K  Sheenjek River     25.65  41    P        P        23 36 32.4 -0.5
      baz=264
MENT  Mentasta           25.71  52    P        P        23 36 34.0 +0.5
MENT                                  IAmb     IAmb     23 36 39.0
      comp=Z,21nm,0.9s
G26K  Porcupine Rive     25.71  43    P        P        23 36 33.6 +0.2
      baz=266
J26L  Joseph Creek       25.72  48    P        P        23 36 32.8 -0.8
      baz=271
C26K  Camden Bay         25.73  36    P        P        23 36 33.8 +0.3
      baz=258
L26K  Log Cabin Wild     25.87  52    P        P        23 36 34.9  0.0
      baz=274
I26K  Coal Creek Min     25.89  46    P        P        23 36 35.3 +0.2
I26K  Coal Creek Min     25.89  46    P        P        23 36 35.4 +0.4
      baz=270
VRDI  Verde Repeater     26.00  56    IAmb     IAmb     23 36 39.2
      comp=Z,20nm,0.8s
M26K  Nabesna, AK        26.08  53    P        P        23 36 38.0 +1.1
M26K  Nabesna, AK        26.08  53    P        P        23 36 37.4 +0.5
      baz=276
C27K  Jago River         26.09  36    P        P        23 36 37.0 +0.2
      baz=260
MCARA McCarthy VSAT      26.19  55    P        P        23 36 41.0 +3.2
MCARA                                 IAmb     IAmb     23 37 03.6
      comp=Z,25nm,0.9s
MCARA McCarthy VSAT      26.19  55    P        P        23 36 38.7 +0.9
      baz=278
K27K  Chicken            26.38  49    IAmb     IAmb     23 36 43.0
      comp=Z,46nm,1.1s
K27K  Chicken            26.38  49    P        P        23 36 39.4 -0.1
      baz=273
I27K  Kandik River       26.54  46    P        P        23 36 40.2 -0.8
      baz=270
G27K  Doyon Strip        26.54  43    P        P        23 36 41.5 +0.5
      baz=268
MDJ   Mudanjiang         26.55 264    P        P        23 36 41.5 +0.3
MDJ                                   pP       pP       23 36 52.4 +3.0
MDJ                                   sP       sP       23 36 55.4 +2.7
MDJ                                   S        S        23 41 14.2 +0.5
MDJ                                   sS       sS       23 41 30.6 +3.4
MDJ                                   PcS      PcS      23 43 45.8 -0.3
MDJ                                   ScS      ScS      23 47 31.8 -1.2
MDJ                                   pmax     pmax
      comp=Z,24nm,1.2s
MDJ                                   pmax     pmax
      comp=Z,360nm,4.1s
MDJ                                   LR       LR
      comp=Z,350nm,5.3s
MDJ                                   LR       LR
      comp=Z,420nm,5.4s
MDJ                                   LR       LR
      comp=Z,500nm,6.3s
MDJ   Mudanjiang         26.55 264    IAmb     IAmb     23 36 44.1
      comp=Z,29nm,1.2s
L27K  Beaver Creek,      26.56  51    P        P        23 36 41.7 +0.5
      baz=275
H27K  Steamboat Moun     26.58  44    P        P        23 36 41.0 -0.3
      baz=269
M27K  Edge Creek, AK     26.61  53    P        P        23 36 41.9 +0.2
      baz=277
E27K  Coleen River       26.65  40    P        P        23 36 42.1 +0.2
      baz=265
EGAK  Eagle              26.75  48    IAmb     IAmb     23 36 43.1
      comp=Z,42nm,0.8s
EGAK  Eagle              26.75  48    P        P        23 36 41.7 -1.0
      baz=272,SNR=23
BARN  Barnard Glacie     26.89  56    IAmb     IAmb     23 36 49.3
      comp=Z,28nm,0.9s
BVCY  Beaver Creek       27.07  53    P        P        23 36 45.9 +0.1
      baz=277
BNX   BinXian            27.17 268  ⇑P         P        23 36 46.8  0.0
BNX                                   pmax     pmax
      comp=Z,18nm,1.0s
BNX                                   pmax     pmax
      comp=Z,260nm,5.2s
YUK3  Moose Creek        27.34  54    P        P        23 36 48.8 +0.3
      baz=279
MJB9  Matsu-Tunnel       27.36 241    P        P        23 36 51.1 +2.6
MAJO  Matsushiro         27.36 241    P        P        23 36 50.1 +1.6
MAJO  Matsushiro         27.36 241    P        P        23 36 50.1 +1.6
MAJO                                  pmax     pmax
      comp=Z,45nm,0.8s
MJAR  Matsushiro Arr     27.36 241    P        P        23 36 49.6 +1.0
      comp=Z,16nm,0.9s,baz=26,slow=8.8,SNR=26
MJAR                                  LR       LR       23 49 02.5
      comp=Z,69nm,19.6s,baz=72,slow=40
      comp=Z,16nm,0.9s
DAWY  Dawson             27.56  49    IAmb     IAmb     23 36 55.2
      comp=Z,35nm,1.1s
DAWY  Dawson             27.56  49    P        P        23 36 50.2  0.0
      baz=275,SNR=28
O28M  Mount Upton        27.64  56    P        P        23 36 51.0 -0.2
      baz=281
YUK8  Steele Glacier     27.75  55    P        P        23 36 52.1  0.0
      baz=280
I29M  Ogilvie Camp,      27.92  46    P        P        23 36 52.7 -0.7
      baz=274
J29M  Klondike Camp      28.03  48             PcP      23 40 09.4 +1.1
M29M  Somme Creek        28.17  52    P        P        23 36 55.6 -0.1
      baz=279
L29M  L29M               28.23  51    P        P        23 36 56.1  0.0
      baz=278
YUK4  Talbot Arm         28.27  55    P        P        23 36 56.8  0.0
      baz=281
K29M  Barlow Dome        28.40  49    P        P        23 36 58.0 +0.3
      baz=277,SNR=11
EPYK  Eagle Plains       28.52  44    P        P        23 36 57.6 -1.1
      baz=273,SNR=27
JGF   Kuroka             28.52 241    P        P        23 36 59.0 +0.1
JGF                                   IAmb     IAmb     23 37 03.5
      comp=Z,29nm,1.3s
G30M  tAoh Zraii Nji     28.69  43    P        P        23 36 58.8 -1.3
      baz=272,SNR=7.8
M30M  Minto, Yukon       28.91  52    P        P        23 37 02.6 +0.4
M30M                                  IAmb     IAmb     23 37 26.4
      comp=Z,36nm,1.6s
M30M  Minto, Yukon       28.91  52    P        P        23 37 02.5 +0.4
      baz=280
HYT   Haines Junctio     28.92  55    P        P        23 37 03.0 +0.6
HYT                                   IAmb     IAmb     23 37 03.8
      comp=Z,19nm,0.9s
HYT   Haines Junctio     28.92  55    P        P        23 37 03.0 +0.6
      baz=283,SNR=6.2
CN2   Changchun          29.43 266    P        P        23 37 05.2 -1.7
CN2                                   pmax     pmax
      comp=Z,10.0nm,0.6s
CN2                                   LR       LR
      comp=Z,500nm,14.0s
CN2                                   LR       LR
      comp=Z,300nm,14.0s
CN2                                   LR       LR
      comp=Z,300nm,14.0s
N31M  Braeburn, Yuko     29.59  54    P        P        23 37 09.4 +1.1
O30N  Mendenhall         29.61  55    P        P        23 37 08.6 +0.1
      baz=284
F31M  Tsiigehtchic       29.63  42    P        P        23 37 08.1 -0.3
      baz=274,SNR=12
INK   Inuvik             29.66  40    P        P        23 37 08.9 +0.2
      comp=Z,7.3nm,0.7s,baz=277,slow=7.0,SNR=31
INK                                   LR       LR       23 48 33.6
      comp=Z,130nm,20.8s,baz=242,slow=36
      comp=Z,7.3nm,0.7s
INK   Inuvik             29.66  40    P        P        23 37 09.1 +0.4
INK   Inuvik             29.66  40    P        P        23 37 09.1 +0.4
INK                                   pmax     pmax
      comp=Z,8.0nm,0.8s
INK   Inuvik             29.66  40    P        P        23 37 08.8 +0.1
      baz=272,SNR=11
HIA   Hailar             29.76 280  i P        P        23 37 08.4 -1.5
HIA                                   pmax     pmax
      comp=Z,11nm,1.5s
M31M  Drury Creek, Y     30.09  52    P        P        23 37 13.7 +1.1
M31M                                  IAmb     IAmb     23 37 14.6
      comp=Z,27nm,0.8s
M31M  Drury Creek, Y     30.09  52    P        P        23 37 13.4 +0.9
      baz=282,SNR=17
FARO  Faro, Yukon        30.55  52    P        P        23 37 17.5 +0.7
      baz=283
P33M  Teslin, Yukon      31.32  56    P        P        23 37 24.5 +0.9
P33M                                  IAmb     IAmb     23 37 25.6
      comp=Z,20nm,0.9s
P33M  Teslin, Yukon      31.32  56    P        P        23 37 24.4 +0.9
      baz=287,SNR=8.5
MMPY  Sheldon Lake,      31.41  51    P        P        23 37 25.0 +0.7
      baz=284,SNR=6.2
Q32M  Nakina River       31.97  58    P        P        23 37 29.7 +0.3
      baz=289
KSRS  Korea Array        32.20 254    P        P        23 37 33.0 +1.7
      comp=Z,6.2nm,0.8s,baz=43,slow=9.0,SNR=20
KSRS                                  LR       LR       23 50 05.8
      comp=Z,110nm,20.2s,baz=35,slow=36
      comp=Z,6.2nm,0.8s
A36M  Sachs Harbour      32.29  32    IAmb     IAmb     23 37 33.5
      comp=Z,21nm,0.8s
A36M  Sachs Harbour      32.29  32    P        P        23 37 32.1 +0.3
      baz=274,SNR=15
WRAK  Wrangell Islan     32.83  62    P        P        23 37 38.1 +1.4
      baz=293
S34M  Telegraph Cree     32.89  59    P        P        23 37 38.3 +1.1
      baz=291
C36M  Paulatuk           32.98  37    P        P        23 37 37.9 +0.1
      baz=279,SNR=42
DLBC  Dease Lake         33.25  58    P        P        23 37 42.0 +1.6
DLBC                                  IAmb     IAmb     23 37 43.2
      comp=Z,16nm,1.1s
DLBC  Dease Lake         33.25  58    P        P        23 37 41.6 +1.1
      baz=291
T35M  Bob Quinn          33.68  60    P        P        23 37 45.6 +1.5
      baz=293
JNU   Nakatsue           33.81 246    LR       LR       23 50 53.7
      comp=Z,67nm,20.6s,baz=69,slow=35
WRGLY Wrigley            34.67  48    P        P        23 37 53.4 +0.8
      baz=288
LIRD  Liard River Hi     34.79  55    P        P        23 37 54.7 +1.0
      baz=292
XLT   XiLinHaoTe         34.81 274⇓iP          P        23 37 54.4 +0.3
XLT                                   sS       sS       23 43 34.4 -2.2
XLT                                   pmax     pmax
      comp=Z,10.0nm,1.0s
XLT                                   pmax     pmax
      comp=Z,130nm,4.8s
XLT                                   LR       LR
      comp=Z,38nm,15.7s
XLT                                   LR       LR
      comp=Z,350nm,15.5s
XLT                                   LR       LR
      comp=Z,180nm,15.2s
H11N2 WAKE ISLAND Hy     34.92 182    T        T        00 14 39.8
      baz=1.7,slow=76,SNR=2225
H11N3 WAKE ISLAND Hy     34.93 182    T        T        00 14 43.6
      baz=1.7,slow=76,SNR=1776
H11N1 WAKE ISLAND Hy     34.94 182    T        T        00 14 44.0
      baz=1.7,slow=76,SNR=1977
KOTAN Kotaneelee Air     35.48  53    P        P        23 38 00.6 +0.9
      baz=292
H11S1 WAKE ISLAND Hy     36.14 182    T        T        00 16 14.6
      baz=1.4,slow=76,SNR=1046
H11S3 WAKE ISLAND Hy     36.15 182    T        T        00 16 15.5
      baz=1.4,slow=76,SNR=364
H11S2 WAKE ISLAND Hy     36.16 182    T        T        00 16 16.3
      baz=1.4,slow=76,SNR=836
BBB   Bella Bella        36.94  67    LR       LR       23 51 41.0
      comp=Z,108nm,20.0s,baz=288,slow=34
SONM  Songino Array      38.06 286    P        P        23 38 22.0 +0.1
      comp=Z,2.9nm,0.7s,baz=56,slow=7.8,SNR=15
SONM                                  PcP      PcP      23 40 36.7 +0.1
      comp=Z,0.7nm,0.7s,baz=79,slow=2.6,SNR=3.5
      comp=Z,2.9nm,0.7s
SONM  Songino Array      38.06 286    P        P        23 38 22.1 +0.1
ZAK   Zakamensk          38.38 291  eP         P        23 38 24.3 -0.3
ZAK                                   pmax     pmax
      comp=Z,3.0nm,1.2s
YKA   Yellowknife Ar     38.71  46    P        P        23 38 27.3 +0.3
      comp=Z,11nm,0.8s,baz=293,slow=7.8,SNR=76
      comp=Z,11nm,0.8s
YKA   Yellowknife Ar     38.71  46ceP          P        23 38 27.2 +0.2
YKA                                   pmax     pmax
      comp=Z,10.0nm,0.7s
MOY   Mondy              38.93 294  eP         P        23 38 28.6 -0.5
HNS   HongShan           39.79 267  ⇓P         P        23 38 37.2 +0.9
HNS                                   pmax     pmax
      comp=Z,24nm,1.1s
RES   Resolute Bay       39.99  24    P        P        23 38 37.7 +0.2
RES   Resolute Bay       39.99  24    P        P        23 38 37.7 +0.2
RES                                   pmax     pmax
      comp=Z,7.0nm,0.9s
BTO   Baotou             40.37 274  eP         P        23 38 40.8 -0.5
BTO                                   S        S        23 44 46.6 -0.8
BTO                                   LR       LR
      comp=Z,1µm,18.5s
BTO                                   LR       LR
      comp=Z,2µm,15.0s
ALE   Alert              40.66   9    P        P        23 38 43.0  0.0
ALE                                   pP       pwP      23 38 52.5 -2.0
ALE                                   sP       sP       23 38 56.5 +3.2
CLRS  Cowichan Lake      40.89  69    P        P        23 38 46.6 +1.4
LLLB  Lillooet           41.08  66    P        P        23 38 47.0 +0.1
NJ2   Nanjing            41.23 257  eP         P        23 38 47.6 -0.6
NJ2                                   pmax     pmax
      comp=Z,10.0nm,0.5s
BRLDA Berland Lookou     41.48  59    P        P        23 38 51.1 +0.9
NLWA  Neilton Lookou     41.86  71    P        P        23 38 53.9 +0.6
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D05A	Enumclaw	43.01	70	P	P	23 39 04.1	+1.5
LYN	LuoYang	43.08	266	*e*P	P	23 39 04.4	+1.1
LYN				pP	sP	23 39 17.6	+2.9
LYN				pmax	pmax		
	comp=Z,15nm,1.4s						
LYN				LR	LR		
	comp=Z,260nm,22.1s						
LYN				LR	LR		
	comp=Z,210nm,21.9s						
LYN				LR	LR		
	comp=Z,140nm,20.2s						
LON	Longmire	43.37	70	P	P	23 39 06.3	+0.7
LON				IAmb	IAmb	23 39 11.0	
	comp=Z,67nm,2.0s						
LON	Longmire	43.37	70	P	P	23 39 06.3	+0.7
LON				pmax	pmax		
	comp=Z,67nm,2.0s						
B08A	Colville Reser	43.74	67	P	P	23 39 08.7	+0.1
I02E	Swisshome, OR	43.88	75	P	P	23 39 10.4	+0.8
TULEG	Thule	44.17	16	P	P	23 39 12.0	+0.5
TULEG				IAmb	IAmb	23 39 21.6	
	comp=Z,45nm,1.9s						
BUCK	Buck Mountain	44.30	74	P	P	23 39 14.4	+1.3
J01E	Myrtle Point	44.43	76	P	P	23 39 15.5	+1.4
G05A	Wamic	44.57	72	P	P	23 39 16.5	+1.2
HAWA	Hanford	44.83	69	P	P	23 39 17.9	+0.6
DBO	Dodson Butte	44.84	75	P	P	23 39 18.6	+1.1
GUMO	Guam	44.85	213	LR	LR	23 58 27.9	
	comp=Z,57nm,18.2s,baz=72,slow=37						
I04A	Tendick Farm,	44.88	74	P	P	23 39 18.4	+0.6
K02D	Willamette Mer	44.88	76	P	P	23 39 16.9	-0.9
NEW	Newport	44.97	66	LR	LR	23 58 19.4	
	comp=Z,75nm,18.6s,baz=299,slow=36						
NEW	Newport	44.97	66	P	P	23 39 18.7	+0.3
NEW	Newport	44.97	66	P	P	23 39 18.7	+0.3
NEW				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NEW	Newport	44.97	66	P	P	23 39 18.4	0.0
	baz=308,SNR=5.8						
HUMO	Hull Mountain	45.34	76	P	P	23 39 22.4	+1.1
HUMO				IAmb	IAmb	23 39 42.5	
	comp=Z,52nm,2.0s						
XAN	Xi'an	45.50	268	⇑P	P	23 39 23.3	+0.6
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
XAN				LR	LR		
	comp=Z,190nm,15.6s						
XAN				LR	LR		
	comp=Z,250nm,15.9s						
XAN				LR	LR		
	comp=Z,160nm,16.8s						
E09A	Wood Farm, Sta	45.51	68	P	P	23 39 22.6	0.0
E09A				IAmb	IAmb	23 39 23.7	
	comp=Z,16nm,0.9s						
PINE	Pine Mountain	45.70	73	P	P	23 39 25.8	+1.3
PINE				IAmb	IAmb	23 40 13.3	
	comp=Z,22nm,1.4s						
ZALV	Zalesovo Beam	45.80	305	P	P	23 39 22.2	-2.6
	comp=Z,2.1nm,0.8s,baz=48,slow=6.6,SNR=7.2						
ZALV				PcP	PcP	23 41 01.8	-0.1
	comp=Z,0.8nm,0.5s,baz=28,slow=3.4,SNR=2.5						
ZALV				LR	LR	00 00 29.5	
	comp=Z,94nm,18.4s,baz=37,slow=39						
	comp=Z,2.1nm,0.8s						
ZALV	Zalesovo Beam	45.80	305	*i* P	P	23 39 26.1	+1.3
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.8s						
G08A	Pilot Rock	45.84	70	P	P	23 39 25.6	+0.2
J05D	Fort Rock, OR	45.86	74	P	P	23 39 26.1	+0.5
NEEM	North Greenlan	45.89	11	*i* P	P	23 39 23.5	-2.1
NEEM				IAmb	IAmb	23 39 26.6	
	comp=Z,16nm,1.0s						
L04D	Klamath Falls	45.95	76	P	P	23 39 27.1	+0.8
KHMM	Horse Mountain	46.03	78	P	P	23 39 28.3	+1.3
KHMM				IAmb	IAmb	23 40 42.2	
	comp=Z,26nm,1.5s						
YBH	Yreka Blue Hor	46.05	76	P	P	23 39 28.3	+1.3
YBH				IAmb	IAmb	23 39 29.2	
	comp=Z,20nm,1.6s						
YBH	Yreka Blue Hor	46.05	76	P	P	23 39 28.3	+1.3
YBH				pmax	pmax		
	comp=Z,20nm,1.6s						
WALA	Waterton Lakes	46.17	63	P	P	23 39 28.2	+0.3
SPITS	Spitsbergen Ar	46.26	352	P	P	23 39 28.1	-0.1
SPITS				pmax	pmax		
	comp=Z,42nm,1.1s						
SPB2	Spitsbergen Ar	46.26	352	P	P	23 39 27.9	-0.3
K05A	Summer Lake	46.41	74	P	P	23 39 31.3	+1.2
K05A				IAmb	IAmb	23 39 31.7	
	comp=Z,16nm,1.0s						
KCPM	Cahto Peak	46.91	79	P	P	23 39 34.8	+0.9
LZH	Lanzhou	47.00	274	⇑P	P	23 39 35.3	+0.6
LZH				pP	sP	23 39 44.9	-1.3
LZH				pmax	pmax		
	comp=Z,39nm,1.6s						
LZH				LR	LR		
	comp=Z,430nm,15.1s						
LZH				LR	LR		
	comp=Z,410nm,13.7s						
LZH				LR	LR		
	comp=Z,200nm,14.1s						
BMO	Blue Mountains	47.02	70	P	P	23 39 34.5	-0.1
BMO	Blue Mountains	47.02	70	P	P	23 39 34.5	-0.1
BMO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA	Gaotai	47.04	280	*e*P	P	23 39 34.8	-0.1
GTA				pP	pP	23 39 45.8	+2.5
GTA				sP	sP	23 39 51.1	+4.6
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GTA				LR	LR		
	comp=Z,160nm,16.7s						
GTA				LR	LR		
	comp=Z,200nm,14.3s						
GTA				LR	LR		
	comp=Z,240nm,18.3s						
DGZ	Jazzator, Alta	47.11	299	*i* P	P	23 39 33.6	-1.7
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MOD	Modoc Plateau	47.29	75	P	P	23 39 36.4	-0.4
MOD				IAmb	IAmb	23 39 38.5	
	comp=Z,7.8nm,0.8s						
KULLO	Kullorsuaq	47.52	15	*i* P	P	23 39 37.4	-0.6
KULLO				IAmb	IAmb	23 39 38.8	
	comp=Z,15nm,0.8s						
MSO	Missoula	47.55	66	P	P	23 39 38.8	0.0
MSO				IAmb	IAmb	23 39 39.3	
	comp=Z,7.7nm,0.8s						
MSO	Missoula	47.55	66	P	P	23 39 38.6	-0.2
	baz=310						
FFC	Flin Flon	48.43	51	P	P	23 39 45.6	+0.3
FFC				IAmb	IAmb	23 39 46.4	
	comp=Z,8.9nm,1.0s						
FFC	Flin Flon	48.43	51	P	P	23 39 45.6	+0.3
FFC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
FFC	Flin Flon	48.43	51	P	P	23 39 45.3	0.0
FFC				pP	sP	23 39 55.0	-1.9
FFC				sP	pwP	23 39 59.1	+1.8
DAG	Danmarks Havn	48.73	2	*i* P	P	23 39 45.0	-2.3
MFID	Camas Ranch	48.76	70	P	P	23 39 48.1	0.0
EGMT	Eagleton	48.96	62	IAmb	IAmb	23 39 49.9	
	comp=Z,9.0nm,0.8s						
EGMT	Eagleton	48.96	62	P	P	23 39 49.2	-0.4
	baz=310,SNR=7.1						
LRM	Limekiln Ridge	48.99	66	P	P	23 39 50.0	-0.1
PAHR	Pah Rah Range	49.28	76	P	P	23 39 52.0	-0.2
HLID	Hailey	49.43	69	P	P	23 39 53.4	0.0
HLID	Hailey	49.43	69	P	P	23 39 53.8	+0.4
	baz=312,SNR=5.8						
BOZ	Bozeman (W)	49.58	65	P	P	23 39 53.8	-0.6
BOZ				IAmb	IAmb	23 39 55.2	
	comp=Z,9.7nm,0.8s						
BOZ	Bozeman (W)	49.58	65	P	P	23 39 53.8	-0.6
BOZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BOZ	Bozeman (W)	49.58	65	P	P	23 39 53.7	-0.7
	baz=311						
YERR	Yerington	49.85	77	P	P	23 39 56.6	0.0
KVN	Kaiserville	50.45	76	P	P	23 40 01.7	+0.5
KVN				IAmb	IAmb	23 40 03.0	
	comp=Z,9.4nm,0.9s						
KVN	Kaiserville	50.45	76	P	P	23 40 01.7	+0.5
KVN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GCMT	Greycliff	50.48	64	P	P	23 40 01.4	+0.2
YMR	Madison River	50.54	66	P	P	23 40 03.1	+1.2
YMR				IAmb	IAmb	23 40 03.4	
	comp=Z,15nm,0.8s						
YNR	Norris Junctio	50.66	66	P	P	23 40 02.5	-0.2
CD2	Chengdu	50.76	270	P	P	23 40 03.8	+0.4
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
NVAR	Mina Array Bea	50.77	77	P	P	23 40 04.3	+0.7
	comp=Z,5.3nm,0.7s,baz=297,slow=7.4,SNR=40						
NVAR				LR	LR	00 00 54.3	
	comp=Z,56nm,18.1s,baz=237,slow=35						
	comp=Z,5.3nm,0.7s						
LHV	Little Huntoon	50.78	77	P	P	23 40 04.2	+0.9
KURK	Kurchatov	50.79	305	P	P	23 40 02.2	-1.1
KURK				IAmb	IAmb	23 40 03.3	
	comp=Z,14nm,1.0s						
KURK	Kurchatov	50.79	305	P	P	23 40 02.2	-1.1
KURK				pmax	pmax		
	comp=Z,14nm,1.0s						
KURK	Kurchatov	50.79	305	P	P	23 40 02.1	-1.2
WMQ	Urumqi	50.79	293	*e*P	P	23 40 03.2	-0.3
WMQ				pP	pP	23 40 17.1	+5.0
WMQ				sP	sP	23 40 23.1	+7.8
WMQ				pmax	pmax		
	comp=Z,11nm,1.1s						
WMQ				LR	LR		
	comp=Z,260nm,16.3s						
WMQ				LR	LR		
	comp=Z,200nm,18.3s						
NV11	Mina Array Sit	50.85	77	P	P	23 40 04.6	+0.4
MDPB	Devils Postpil	50.88	78	P	P	23 40 04.8	+0.3
KURBB	Kurchatov Arra	50.90	305	P	P	23 40 02.8	-1.4
	comp=Z,5.1nm,0.8s,baz=52,slow=7.6,SNR=44						
	comp=Z,5.1nm,0.8s						
LKWY	Lake	50.91	66	P	P	23 40 05.0	+0.3
LKWY				IAmb	IAmb	23 40 07.3	
	comp=Z,12nm,0.8s						
LKWY	Lake	50.91	66	P	P	23 40 05.0	+0.3
LKWY				pmax	pmax		
	comp=Z,12nm,0.8s						
H17A	Grant Village	50.93	66	P	P	23 40 05.8	+1.0
H17A				IAmb	IAmb	23 40 07.7	
	comp=Z,11nm,0.8s						
H17A	Grant Village	50.93	66	P	P	23 40 06.0	+1.2
	baz=312,SNR=8.8						
IMW	Indian Meadow	51.08	67	P	P	23 40 06.5	+0.6
IMW				IAmb	IAmb	23 40 07.7	
	comp=Z,12nm,0.8s						
FLWY	Flagg Ranch	51.08	66	P	P	23 40 06.6	+0.7
RLMT	Red Lodge	51.13	64	P	P	23 40 06.7	+0.4
RLMT	Red Lodge	51.13	64	P	P	23 40 07.0	+0.8
	baz=312,SNR=20						
MOOW	Moose Ponds	51.28	67	P	P	23 40 07.5	+0.1
DGMT	Dagmar	51.46	58	P	P	23 40 08.1	-0.4
DGMT				IAmb	IAmb	23 40 09.2	
	comp=Z,12nm,0.8s						
DGMT	Dagmar	51.46	58	P	P	23 40 08.8	+0.3
	baz=312						
HVU	Hansel Valley	51.53	70	P	P	23 40 09.8	+0.6
HVU				IAmb	IAmb	23 40 10.8	
	comp=Z,9.1nm,0.8s						
HVU	Hansel Valley	51.53	70	P	P	23 40 09.8	+0.6
HVU				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MK31	Makanchi Array	51.61	299	*i* P	P	23 40 07.7	-1.9
MKAR	Makanchi Array	51.61	299	P	P	23 40 07.3	-2.2
	comp=Z,1.8nm,0.7s,baz=52,slow=7.3,SNR=22						
MKAR				LR	LR	00 02 24.7	
	comp=Z,79nm,19.3s,baz=147,slow=37						
	comp=Z,1.8nm,0.7s						
MKAR	Makanchi Array	51.61	299	*i* P	P	23 40 07.9	-1.7
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
TPH	Tonopah	51.62	76	P	P	23 40 10.7	+0.7
TPH	Tonopah	51.62	76	P	P	23 40 10.7	+0.7
TPH				pmax	pmax		
	comp=Z,47nm,0.9s						
LAO	LASA Array	51.65	61	P	P	23 40 10.2	+0.3
LAO				IAmb	IAmb	23 40 11.7	
	comp=Z,24nm,1.0s						
LAO	LASA Array	51.65	61	P	P	23 40 10.1	+0.2
	baz=313,SNR=8.1						
SUMG	Summit	51.69	10	*i* P	P	23 40 09.5	-0.8
DSP	Deep Springs	51.69	77	P	P	23 40 11.1	+0.8
MAKZ	Makanchi	51.76	299	P	P	23 40 09.2	-1.5
MAKZ	Makanchi	51.76	299	P	P	23 40 09.2	-1.5
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAKZ	Makanchi	51.76	299	P	P	23 40 08.9	-1.8
AHID	Auburn Hatcher	51.76	68	P	P	23 40 10.8	-0.2
TIN	Tinemaha, Big	51.77	78	P	P	23 40 11.7	+0.7
	baz=315						
LCH	Last Change Ra	51.97	77	P	P	23 40 12.4	-0.2
BGU	Big Grassy Mou	51.98	71	P	P	23 40 12.9	+0.4
SMMC	Simmler	51.99	81	P	P	23 40 13.8	+1.2
	baz=316						
SPUT	South Promonto	52.03	70	P	P	23 40 12.3	-0.6
GOMU	GeErMu	52.11	281	P	P	23 40 13.1	-0.8
GOMU				PcP	PcP	23 41 29.1	+3.6
GOMU				pmax	pmax		
	comp=Z,5.0nm,1.1s						
VES	Vestal, Richgr	52.14	80	P	P	23 40 14.3	+0.7
	baz=316						
CWC	Cottonwood Cre	52.29	78	P	P	23 40 16.0	+1.1
	baz=315						
HWUT	Hardware Ranch	52.30	69	P	P	23 40 14.7	-0.3
HWUT				IAmb	IAmb	23 40 16.7	
	comp=Z,7.3nm,0.8s						
R11A	Troy Canyon, C	52.35	75	P	P	23 40 15.4	0.0
R11A	Troy Canyon, C	52.35	75	P	P	23 40 16.1	+0.7
	baz=315,SNR=7.0						
PKM	Mcpherson Peak	52.40	81	P	P	23 40 16.7	+0.9
	baz=316						
GYA	Guiyang	52.41	263	*e*P	P	23 40 16.3	+0.4
GYA				pP	sP	23 40 28.6	+1.1
GYA				pmax	pmax		
	comp=Z,16nm,1.6s						
BW06	Boulder Array	52.58	67	IAmb	IAmb	23 40 18.5	
	comp=Z,12nm,0.8s						
BW06	Boulder Array	52.58	67	P	P	23 40 17.2	+0.1
	baz=314,SNR=15						
PD31	Pinedale Array	52.58	67	P	P	23 40 17.3	+0.2
PD31				IAmb	IAmb	23 40 18.5	
	comp=Z,11nm,0.8s						
PDAR	Pinedale Array	52.58	67	P	P	23 40 17.4	+0.2
	comp=Z,9.3nm,0.8s,baz=313,slow=3.9,SNR=77						
	comp=Z,9.3nm,0.8s						
SPR3	Spring Creek 3	52.59	73	P	P	23 40 18.1	+0.7
DUG	Dugway, Tooele	52.60	71	P	P	23 40 17.5	+0.4
	baz=314,SNR=5.7						
ISA	Isabella, Lake	52.61	79	P	P	23 40 17.1	-0.1
	baz=316						
TCUT	Toone Canyon	52.73	69	P	P	23 40 18.3	+0.1
SBC	Santa Barbara	52.78	81	P	P	23 40 19.1	+0.7
	baz=316						
CTU	Camp Tracy	52.84	70	P	P	23 40 19.3	+0.3
CTU				IAmb	IAmb	23 40 20.3	
	comp=Z,7.7nm,0.8s						
WCT	Wildcat Mounta	52.86	77	P	P	23 40 19.4	+0.3
MPMC	Manual Prospec	52.89	78	P	P	23 40 19.6	+0.1
	baz=316,SNR=5.9						
FURC	Furnace Creek,	52.96	77	P	P	23 40 20.3	+0.6
	baz=316,SNR=6.5						
TPNV	Topopah Spring	52.96	77	P	P	23 40 20.3	+0.4
TPNV				IAmb	IAmb	23 40 21.9	
	comp=Z,10nm,0.9s						
TPNV	Topopah Spring	52.96	77	P	P	23 40 20.3	+0.4
TPNV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TPNV	Topopah Spring	52.96	77	P	P	23 40 20.2	+0.2
	baz=315,SNR=10						
BVAR	Borovoye Array	52.98	311	LR	LR	00 05 45.5	
	comp=Z,118nm,18.2s,baz=44,slow=39						
BRVK	Borovoye	53.00	312	P	P	23 40 19.0	-0.8
BRVK				IAmb	IAmb	23 40 20.0	
	comp=Z,15nm,1.1s						
BRVK	Borovoye	53.00	312	P	P	23 40 19.0	-0.8
BRVK				pmax	pmax		
	comp=Z,15nm,1.1s						
BRVK	Borovoye	53.00	312	P	P	23 40 19.1	-0.8
ARCES	ARCESS Array B	53.12	344	P	P	23 40 19.4	-1.0
	comp=Z,2.3nm,0.7s,baz=28,slow=8.3,SNR=14						
ARCES				LR	LR	00 06 21.8	
	comp=Z,23nm,18.7s,baz=358,slow=40						
	comp=Z,2.3nm,0.7s						
LRMC	Laurel Mtn Rad	53.20	79	P	P	23 40 21.6	0.0
	baz=316,SNR=5.1						
GWY	Greenwater Val	53.27	77	P	P	23 40 22.1	0.0
GWY				IAmb	IAmb	23 40 23.9	
	comp=Z,9.9nm,0.8s						
QSM	Queen of Sheba	53.31	78	P	P	23 40 22.7	+0.4
PRN	Pahroc Range	53.31	75	IAmb	IAmb	23 40 24.6	
	comp=Z,14nm,0.9s						
MPU	Maple Canyon	53.37	71	P	P	23 40 23.8	+0.8
MPU				IAmb	IAmb	23 40 24.7	
	comp=Z,43nm,2.0s						
EDW2	Edwards Air Fo	53.45	80	P	P	23 40 23.6	+0.2
	baz=316						
BSUT	Blindstream Ca	53.48	70	P	P	23 40 23.5	-0.4
SHOC	Shoshone, Teco	53.70	77	P	P	23 40 25.8	+0.7
	baz=316						
GSC	Goldstone, Bar	53.82	78	IAmb	IAmb	23 40 27.9	
	comp=Z,9.8nm,0.8s						
GSC	Goldstone, Bar	53.82	78	P	P	23 40 26.9	+0.7
	baz=316,SNR=7.5						
SHPR	Sheep Range	53.89	76	P	P	23 40 26.7	0.0
TCRU	Three Creeks R	53.91	72	P	P	23 40 26.9	-0.1
TCRU				IAmb	IAmb	23 40 29.3	
	comp=Z,8.2nm,0.8s						
FRB	Frobisher Bay	54.04	27	LR	LR	00 06 17.0	
	comp=Z,49nm,18.4s,baz=16,slow=39						
RDMU	Red Mountain	54.11	69	P	P	23 40 28.4	+0.1
RDMU				IAmb	IAmb	23 40 30.3	
	comp=Z,18nm,1.0s						
TMUT	Trail Mountain	54.11	71	P	P	23 40 29.8	+1.3
FMP	Fort Macarthur	54.12	81	P	P	23 40 28.6	+0.4
	baz=317						
MVU	Marysvale	54.12	72	P	P	23 40 29.8	+1.3
MDND	Maddock	54.13	56	P	P	23 40 28.7	+0.5
	baz=314,SNR=5.5						
MSU	Marysvale	54.13	72	P	P	23 40 28.7	+0.2
MSU	Marysvale	54.13	72	P	P	23 40 28.7	+0.2
ULM	Lac du Bonnet	54.20	52	P	P	23 40 28.6	0.0
	comp=Z,9.3nm,0.8s,baz=314,slow=8.6,SNR=16						
	comp=Z,9.3nm,0.8s						
ULM	Lac du Bonnet	54.20	52	IAmb	IAmb	23 40 29.7	
	comp=Z,11nm,0.9s						
TUQ	Turquoise Moun	54.23	78	P	P	23 40 29.7	+0.5
	baz=316,SNR=5.5						
P17A	Butcher Ranch,	54.24	70	IAmb	IAmb	23 40 32.3	
	comp=Z,6.4nm,0.7s						
K22A	Casper	54.27	65	IAmb	IAmb	23 40 43.1	
	comp=Z,11nm,1.1s						
K22A	Casper	54.27	65	P	P	23 40 29.4	0.0
	baz=315						
Q16A	Castle Valley	54.40	71	P	P	23 40 31.0	+0.5
Q16A				IAmb	IAmb	23 40 32.5	
	comp=Z,14nm,0.8s						
P18A	Preston Nutter	54.40	70	P	P	23 40 31.0	+0.4
P18A				IAmb	IAmb	23 40 34.6	
	comp=Z,8.4nm,1.0s						
HEC	Hector,Ludlow	54.43	78	P	P	23 40 31.0	+0.4
	baz=316						
MTPU	Mount Pierson	54.46	73	IAmb	IAmb	23 40 33.1	
	comp=Z,8.2nm,0.9s						
RSSD	Black Hills	54.53	62	P	P	23 40 31.7	+0.3
RSSD	Black Hills	54.53	62	P	P	23 40 31.7	+0.3
RSSD				pmax	pmax		
	comp=Z,18nm,0.8s						
RSSD	Black Hills	54.53	62	P	P	23 40 31.4	0.0
	baz=315						
RSSD	Black Hills	54.53	62	P	P	23 40 31.6	+0.3
RSSD				pP	pwP	23 40 41.6	0.0
RSSD				sP	sP	23 40 45.6	+3.4
LCMT	Little Creek M	54.61	74	IAmb	IAmb	23 40 34.2	
	comp=Z,13nm,0.9s						
ELS	Elsinore Mount	54.66	80	P	P	23 40 32.6	+0.3
PKCU	Pink Cliffs	54.82	73	IAmb	IAmb	23 40 36.2	
	comp=Z,15nm,0.8s						
MURC	Murrieta	54.83	80	P	P	23 40 34.2	+0.8
	baz=317						
KNB	Kanab	54.84	74	IAmb	IAmb	23 40 36.1	
	comp=Z,15nm,0.9s						
GMRC	Granite Mounta	54.84	78	P	P	23 40 34.2	+0.6
	baz=317,SNR=11						
ICESG	Greenland Ices	54.86	12	*i* P	P	23 40 27.3	-6.3
O20A	White River Ci	55.13	68	IAmb	IAmb	23 40 37.3	
	comp=Z,14nm,0.8s						
O20A	White River Ci	55.13	68	P	P	23 40 35.6	-0.2
	baz=316						
SFJD	Kangerlussuaq	55.20	17	LR	LR	00 06 50.4	
	comp=Z,62nm,18.0s,baz=342,slow=39						
BELC	Belle Mtn. Jos	55.22	79	P	P	23 40 36.4	0.0
	baz=317,SNR=6.2						
PZH	PanZhiHua	55.23	268	P	P	23 40 36.3	-0.2
PZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PZH				pmax	pmax		
	comp=Z,130nm,5.3s						
PFO	Pinyon Flats O	55.24	80	P	P	23 40 36.0	-0.5
PFO	Pinyon Flats O	55.24	80	P	P	23 40 36.0	-0.5
PFO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
PFO	Pinyon Flats O	55.24	80	P	P	23 40 36.6	0.0
	baz=317						
TPFO	Pinon Flats	55.25	80	P	P	23 40 36.5	-0.1
	baz=317						
PMD	Palm Desert	55.26	79	P	P	23 40 35.9	-0.6
ARU	Arti	55.29	320	LR	LR	00 07 03.0	
	comp=Z,81nm,18.1s,baz=184,slow=39						
ARU	Arti	55.29	320	P	P	23 40 35.5	-0.9
ARU				IAmb	IAmb	23 40 47.6	
	comp=Z,9.5nm,1.0s						
ARU	Arti	55.29	320	*c i*P	P	23 40 35.4	-1.0
ARU						23 41 31.7	
ARU						23 42 37.2	
ARU				S	S	23 48 19.0	+0.9
ARU				SS	SS	23 52 05.5	+3.8
ARU				pmax	pmax		
	comp=Z,12nm,1.3s						
ARU	Arti	55.29	320	P	P	23 40 35.1	-1.3
ADZR	Andozero	55.50	336	*e*P	P	23 40 35.0	-2.8
ADZR				pmax	pmax		
	comp=Z,13nm,0.9s						
U15A	North Rim	55.56	74	P	P	23 40 39.6	+0.7
U15A				IAmb	IAmb	23 40 41.2	
	comp=Z,9.9nm,0.9s						
AGMN	Agassiz Nation	55.59	54	P	P	23 40 38.9	+0.3
AGMN				IAmb	IAmb	23 40 39.8	
	comp=Z,15nm,0.8s						
AGMN	Agassiz Nation	55.59	54	P	P	23 40 38.4	-0.2
	baz=316,SNR=7.2						
IRM	Iron Mountain	55.59	78	P	P	23 40 39.6	+0.7
	baz=317,SNR=10						
W13A	Hualapai Mount	55.62	76	IAmb	IAmb	23 40 41.2	
	comp=Z,8.8nm,0.9s						
BC3	Big Chuckawall	55.78	79	P	P	23 40 41.0	+0.6
	baz=317,SNR=6.1						
MONP2	Monument Peak	55.79	80	P	P	23 40 41.3	+0.7
	baz=317						
N23A	Red Feather La	55.82	66	IAmb	IAmb	23 40 42.7	
	comp=Z,14nm,0.8s						
N23A	Red Feather La	55.82	66	P	P	23 40 41.4	+0.6
	baz=316,SNR=12						
PV23	Carpenter Ridg	55.91	70	IAmb	IAmb	23 40 43.4	
	comp=Z,16nm,0.8s						
PV10	Paradox Valley	55.95	70	P	P	23 40 42.9	+1.2
PDMCI	Parker Dam,Lak	56.05	77	P	P	23 40 43.0	+0.9
	baz=317,SNR=9.5						
CBX	Cerro Bola	56.07	81	P	P	23 40 41.1	-1.4
CBX				IAmb	IAmb	23 40 44.4	
	comp=Z,7.1nm,0.8s						
PV11	David Mesa, Pa	56.10	70	P	P	23 40 43.2	+0.5
SWSC	Sam W. Stewart	56.10	80	P	P	23 40 43.0	+0.4
	baz=317						
PV07	Paradox Valley	56.12	70	P	P	23 40 42.4	-0.6
PV07				IAmb	IAmb	23 40 47.0	
	comp=Z,14nm,0.7s						
IKP	In-Ko-Pah, Jac	56.14	80	P	P	23 40 43.6	+0.7
	baz=318						
PV13	Radium Mtn., P	56.23	70	P	P	23 40 43.9	+0.2
BLYC	Blythe	56.24	78	P	P	23 40 44.1	+0.6
BLYC				IAmb	IAmb	23 40 45.4	
	comp=Z,9.3nm,0.7s						
YUH	Yuha Desert	56.25	80	P	P	23 40 43.6	0.0
PV15	Paradox Valley	56.28	70	P	P	23 40 44.5	+0.4
SMCO	Snowmass	56.50	68	IAmb	IAmb	23 40 47.1	
	comp=Z,7.1nm,0.8s						
GLA	Glamis	56.58	79	P	P	23 40 47.4	+1.3
	baz=318						
WUAZ	Wupatki	56.73	74	P	P	23 40 47.4	+0.2

WUAZ				IAmb	IAmb	23 40 49.1	
	comp=Z,9.2nm,0.7s						
WUAZ	Wupatki	56.73	74	P	P	23 40 48.6	+1.5
	baz=317,SNR=8.5						
KIRV	Kirov	56.78	327	ceP	P	23 40 45.8	-1.1
ISCO	Idaho Springs	56.78	67	IAmb	IAmb	23 40 50.2	
	comp=Z,14nm,0.8s						
ISCO	Idaho Springs	56.78	67	P	P	23 40 48.9	+1.3
	baz=316,SNR=15						
SUSD	Miller	56.87	59	P	P	23 40 48.3	+0.4
SUSD	Miller	56.87	59	P	P	23 40 48.6	+0.7
	baz=316						
Y14A	Wickenburg	56.96	77	P	P	23 40 48.9	+0.2
MVCO	Mesa Verde	57.09	71	P	P	23 40 50.4	+0.5
MVCO				IAmb	IAmb	23 40 51.6	
	comp=Z,8.2nm,0.8s						
MVCO	Mesa Verde	57.09	71	P	P	23 40 50.4	+0.5
	baz=317						
113A	Mohawk Valley,	57.39	78	P	P	23 40 52.4	+0.7
113A				IAmb	IAmb	23 40 53.4	
	comp=Z,7.5nm,0.8s						
S22A	4UR Ranch, Cre	57.61	69	P	P	23 40 54.8	+1.2
S22A				IAmb	IAmb	23 40 56.1	
	comp=Z,14nm,0.9s						
S22A	4UR Ranch, Cre	57.61	69	P	P	23 40 54.8	+1.2
	baz=317,SNR=14						
Q24A	Divide	57.63	67	P	P	23 40 53.8	+0.1
Q24A				IAmb	IAmb	23 40 55.8	
	comp=Z,7.9nm,0.8s						
Q24A	Divide	57.63	67	P	P	23 40 54.5	+0.8
	baz=317						
KLMR	Klimovskoe	57.79	333	eP	P	23 40 51.4	-2.7
KLMR				AMP		23 40 54.9	
	comp=Z,36nm,1.5s						
KLMR	Klimovskoe	57.79	333	eP	P	23 40 51.3	-2.8
KLMR				pmax	pmax		
	comp=Z,36nm,1.5s						
OGNE	Ogallala	57.84	63	P	P	23 40 54.9	0.0
OGNE				IAmb	IAmb	23 40 57.7	
	comp=Z,13nm,0.8s						
OGNE	Ogallala	57.84	63	P	P	23 40 54.8	0.0
	baz=317						
EYMN	Ely	57.85	51	P	P	23 40 54.8	0.0
	baz=318,SNR=9.6						
W18A	Petrified Fore	57.93	73	P	P	23 40 56.8	+1.1
W18A				IAmb	IAmb	23 40 58.0	
	comp=Z,9.9nm,0.8s						
W18A	Petrified Fore	57.93	73	P	P	23 40 56.8	+1.1
	baz=318,SNR=6.0						
X18A	Snowflake	58.25	74	P	P	23 40 58.5	+0.6
X18A					P	23 40 59.0	+1.1
SDCO	Great Sand Dun	58.33	68	P	P	23 40 59.4	+0.8
SDCO	Great Sand Dun	58.33	68	P	P	23 40 59.5	+0.8
	baz=317,SNR=8.5						
PIX	Pinacate	58.46	79	P	P	23 40 59.6	+0.4
PIX				IAmb	IAmb	23 41 00.4	
	comp=Z,9.2nm,1.1s						
AAK	Ala-Archa	58.47	300	LR	LR	00 09 06.7	
	comp=Z,40nm,21.1s,baz=20,slow=39						
AAK	Ala-Archa	58.47	300	P	P	23 40 58.5	-0.8
AAK				IAmb	IAmb	23 41 06.5	
	comp=Z,9.5nm,1.1s						
AAK	Ala-Archa	58.47	300	ceP	P	23 40 57.7	-1.7
AAK				pmax	pmax		
	comp=Z,13nm,1.7s						
AAK	Ala-Archa	58.47	300	P	P	23 40 58.4	-1.0
214A	Organ Pipe Nat	58.53	78	IAmb	IAmb	23 41 01.8	
	comp=Z,12nm,0.8s						
214A	Organ Pipe Nat	58.53	78	P	P	23 41 00.9	+1.2
	baz=318,SNR=8.7						
ECSD	EROS Data Cent	58.54	58	IAmb	IAmb	23 41 00.2	
	comp=Z,8.8nm,0.9s						
ECSD	EROS Data Cent	58.54	58	P	P	23 40 59.7	+0.1
	baz=318,SNR=7.5						
KSCO	Kaye Shedlock’	58.94	65	P	P	23 41 03.3	+0.6
	baz=318						
SPMN	Marine on St.	59.27	54	P	P	23 41 04.9	+0.3
	baz=318						
T25A	Trinidad	59.37	68	IAmb	IAmb	23 41 07.7	
	comp=Z,9.8nm,0.8s						
T25A	Trinidad	59.37	68	P	P	23 41 06.7	+1.0
	baz=318,SNR=9.6						
TUC	Tucson	59.42	76	P	P	23 41 06.4	+0.4
TUC	Tucson	59.42	76	P	P	23 41 06.4	+0.4
TUC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TUC	Tucson	59.42	76	P	P	23 41 06.8	+0.8
	baz=318						
TUC	Tucson	59.42	76	P	P	23 41 06.9	+1.0
BGNE	Belgrade	59.49	61	P	P	23 41 06.5	+0.3
	baz=318						
ANMO	Albuquerque	59.87	71	LR	LR	00 04 29.4	
	comp=Z,36nm,21.7s,baz=56,slow=34						
ANMO	Albuquerque	59.87	71	P	P	23 41 10.3	+1.0
ANMO				IAmb	IAmb	23 41 11.1	
	comp=Z,6.4nm,0.8s						
ANMO	Albuquerque	59.87	71	ceP	P	23 41 10.4	+1.2
ANMO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ANMO	Albuquerque	59.87	71	P	P	23 41 09.7	+0.5
	baz=318						
ANMO	Albuquerque	59.87	71	P	P	23 41 10.2	+1.0
KSH	Kashi	60.02	297	P	P	23 41 13.0	+2.9
KSH				sP	sP	23 41 30.7	+8.8
KSH				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KSH				LR	LR		
	comp=Z,350nm,23.1s						
KSH				LR	LR		
	comp=Z,260nm,24.7s						
AKTO	Aktyubinsk	60.08	316	LR	LR	00 11 04.4	
	comp=Z,63nm,21.6s,baz=78,slow=40						
KKAR	Karatay Array	60.10	303	P	P	23 41 09.1	-1.3
KKAR	Karatay Array	60.10	303	IAmb	IAmb	23 41 15.2	
	comp=Z,4.5nm,0.8s						
KKAR	Karatay Array	60.10	303	P	P	23 41 09.1	-1.3
LENM	Lemitar	60.17	72	P	P	23 41 13.0	+1.8
DUN6	Lazy B Ranch	60.19	75	P	P	23 41 11.8	+0.5
ABKAR	Akbulak array	60.21	314	P	P	23 41 09.9	-1.1
ABKAR	Akbulak array	60.21	314	IAmb	IAmb	23 41 11.2	
	comp=Z,6.9nm,1.1s						
KRVT	Keravat (AS076	60.29	198	P	P	23 41 12.9	+1.0
	comp=Z,43nm,0.7s,baz=287,slow=19,SNR=4.6						
KRVT				LR	LR	00 02 14.6	
	comp=Z,55nm,21.1s,baz=152,slow=31						
	comp=Z,43nm,0.7s						
BNM	Barren Site	60.37	72	P	P	23 41 12.5	-0.2
FINES	FINESS Array B	60.37	340	P	P	23 41 11.2	-0.8
	comp=Z,2.5nm,0.7s,baz=27,slow=6.5,SNR=8.8						
FINES				LR	LR	00 13 46.4	
	comp=Z,26nm,18.4s,baz=36,slow=43						
	comp=Z,2.5nm,0.7s						
CBKS	Cedar Bluff	60.60	64	P	P	23 41 14.0	0.0
	baz=318						
BORG	Borgarnes	60.67	5	LR	LR	00 07 57.4	
	comp=Z,38nm,19.8s,baz=9.6,slow=37						
CRAI	Chiangrai	60.87	264	P	P	23 41 15.7	-0.2
CRAI				IAmb	IAmb	23 41 18.0	
	comp=Z,11nm,1.2s						
121A	Cookes Peak, D	60.94	74	IAmb	IAmb	23 41 18.9	
	comp=Z,17nm,1.6s						
121A	Cookes Peak, D	60.94	74	P	P	23 41 17.4	+1.0
	baz=319						
319A	Douglas	60.97	76	IAmb	IAmb	23 41 18.2	
	comp=Z,9.8nm,0.7s						
SCIA	State Center	61.57	57	P	P	23 41 19.1	-1.3
SCIA	State Center	61.57	57	P	P	23 41 20.4	0.0
	baz=319						
SHL	Shillong	61.66	275	P	P	23 41 20.7	-0.7
SHL	Shillong	61.66	275	P	P	23 41 20.7	-0.7
SHL				pmax	pmax		
	comp=Z,13nm,0.4s						
HSIG		61.80	79	P	P	23 41 22.0	-0.1
HSIG				IAmb	IAmb	23 41 23.4	
	comp=Z,9.1nm,0.8s						
SCHQ	Schefferville	61.90	32	P	P	23 41 21.9	-0.6
	comp=Z,6.4nm,0.8s,baz=22,slow=6.2,SNR=5.9						
SCHQ				LR	LR	00 11 03.0	
	comp=Z,42nm,18.8s,baz=122,slow=39						
	comp=Z,6.4nm,0.8s						
KSU1	Kansas State U	61.99	61	P	P	23 41 22.8	-0.5
	baz=319						
JFWS	Jewell Farm	62.22	54	P	P	23 41 23.5	-1.2
	baz=320						
PHRA	Phrae	62.31	263	P	P	23 41 26.1	+0.4
BELG	Belogornoye	62.40	323	LR	LR	00 11 10.0	
	comp=Z,39nm,18.1s,baz=327,slow=39						
BELG	Belogornoye	62.40	323	c iP	P	23 41 24.9	-0.9
BELG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MSTX	Muleshoe	62.62	69	P	P	23 41 27.7	0.0
	baz=319						
TAPN	Taplejung	62.70	279	eP	P	23 41 27.7	-0.8
	comp=Z,34nm,1.0s						
CHTO	Chiang Mai	62.81	264	P	P	23 41 29.4	+0.4
CHTO	Chiang Mai	62.81	264	P	P	23 41 29.4	+0.4
MNTX	Cornudas Mount	62.90	73	P	P	23 41 30.5	+1.1
	baz=320,SNR=20						
NC405	NORSAR Array S	63.02	347	P	P	23 41 30.1	+0.3
GDL2	Guadalupe Moun	63.09	72	P	P	23 41 30.7	-0.1
CMAR	Chiang Mai Arr	63.09	264	P	P	23 41 30.7	-0.1
	comp=Z,2.6nm,0.3s,baz=24,slow=7.1,SNR=6.3						
CMAR				LR	LR	00 10 31.9	
	comp=Z,67nm,18.9s,baz=45,slow=38						
	comp=Z,2.6nm,0.3s						
CMAR	Chiang Mai Arr	63.09	264	P	P	23 41 30.5	-0.3
NB2	NORSAR Subarra	63.16	348	P	P	23 41 30.0	-0.8
	comp=Z,9.1nm,0.9s,baz=16,slow=6.9						
NOA	NORSAR Array B	63.16	348	P	P	23 41 29.8	-1.0
	comp=Z,2.7nm,0.7s,baz=16,slow=6.7,SNR=19						
NOA				LR	LR	00 09 21.0	
	comp=Z,17nm,21.0s,baz=5.0,slow=36						
	comp=Z,2.7nm,0.7s						
HTMS	Hat Mesa	63.28	71	P	P	23 41 32.5	+0.4
GAR	Garm	63.30	300	P	P	23 41 30.6	-1.5
GAR				IAmb	IAmb	23 41 37.0	
	comp=Z,15nm,0.9s						
CLNB	Carlsbad	63.30	71	P	P	23 41 32.5	+0.2
GLMI	Grayling	63.31	49	P	P	23 41 31.9	-0.1
GLMI	Grayling	63.31	49	P	P	23 41 31.5	-0.5
	baz=322						
GUN	Gumba	63.32	281	eP	P	23 41 31.5	-1.2
JIRN	Jiri	63.33	281	eP	P	23 41 31.8	-1.0
	comp=Z,50nm,1.4s						
OBN	Obninsk	63.54	331	⇑eP	P	23 41 31.9	-1.4
OBN				e		23 43 52.2	
OBN				pmax	pmax		
	comp=Z,17nm,1.7s						
OBN				MLR	MLR		
	comp=Z,48nm,16.0s						
RAMN	Ramite	63.64	280	eP	P	23 41 33.5	-1.2
HFS	Hagfors	63.70	346	LR	LR	00 11 44.5	
	comp=Z,27nm,19.1s,baz=358,slow=38						
PKI	Pulchoki	63.85	281	eP	P	23 41 34.9	-1.3
PKIN	Phulchoki	63.85	281	eP	P	23 41 34.9	-1.2
	comp=Z,23nm,0.9s						
GKN	Gorkha	63.95	282	eP	P	23 41 35.3	-1.4
POST	Post	63.99	69	IAmb	IAmb	23 41 38.1	
	comp=Z,12nm,0.8s						
CHGR	Chuyangaron	64.14	301	P	P	23 41 36.6	-1.1
CHGR				pmax	pmax		
	comp=Z,27nm,0.9s						
WMOK	Wichita Mounta	64.18	66	IAmb	IAmb	23 41 39.1	
	comp=Z,16nm,0.9s						
WMOK	Wichita Mounta	64.18	66	P	P	23 41 37.7	-0.2
	baz=320,SNR=7.6						
DANN	Dangsing	64.19	283	eP	P	23 41 37.3	-1.1
	comp=Z,27nm,1.0s						
HDIL	Hopedale	64.50	55	P	P	23 41 39.2	-0.6
	baz=321,SNR=13						
KOLN	Koldanda	64.72	283	eP	P	23 41 40.4	-1.4
PYUN	Piuthan	64.81	283	eP	P	23 41 41.0	-1.4
	comp=Z,34nm,1.0s						
TUL1	Leonard	64.85	63	P	P	23 41 41.6	-0.6
	baz=321						
ABTX	Abilene, Hawle	65.33	68	P	P	23 41 45.2	-0.2
	baz=321,SNR=5.1						
VRH	Novokhopyorsk	65.38	326	eP	P	23 41 43.9	-1.5
VRH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CCM	Cathedral Cave	65.49	58	P	P	23 41 45.9	-0.4
CCM				IAmb	IAmb	23 41 46.5	
	comp=Z,9.0nm,0.8s						
CCM	Cathedral Cave	65.49	58	P	P	23 41 45.9	-0.4
CCM				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CCM	Cathedral Cave	65.49	58	P	P	23 41 45.7	-0.6
	baz=321						
CCM	Cathedral Cave	65.49	58	P	P	23 41 45.5	-0.8
HHAR	Hobbs	65.51	62	IAmb	IAmb	23 43 32.8	
	comp=Z,27nm,1.8s						
TXAR	Lajitas Array	65.66	73	P	P	23 41 48.3	+0.7
	comp=Z,16nm,0.7s,baz=300,slow=4.3,SNR=164						
	comp=Z,16nm,0.7s						
SFIN	Lafayette	65.68	54	P	P	23 41 47.1	-0.4
	baz=322						
VORR	Voronezh	65.77	328	P	P	23 41 47.3	-0.6
VORR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NIL	Nilore	65.89	294	P	P	23 41 49.4	+0.4
NIL	Nilore	65.89	294	P	P	23 41 49.4	+0.4
NIL				pmax	pmax		
	comp=Z,23nm,1.0s						
FVM	French Village	65.95	58	IAmb	IAmb	23 41 49.4	
	comp=Z,10nm,0.7s						
VSR	Storozhevoye	66.18	328	eP	P	23 41 47.6	-3.0
VSR				pmax	pmax		
	comp=Z,10.0nm,1.5s						
PMG	Port Moresby	66.24	203	P	P	23 41 52.1	+0.8
	comp=Z,13nm,0.8s,baz=42,slow=8.3,SNR=4.7						
	comp=Z,13nm,0.8s						
PMG	Port Moresby	66.24	203	ceP	P	23 41 52.4	+1.1
PMG				pmax	pmax		
	comp=Z,17nm,1.3s						
SANI	Sanana	66.32	227	P	P	23 41 52.5	+0.7
	comp=Z,23nm,1.0s,comp=Z,594nm						
MNK	Minsk	66.33	336	i P	P	23 41 51.3	-0.2
MNK				i P	P	23 41 51.3	-0.2
MNK				i P	P	23 41 51.3	-0.2
	comp=Z,22nm,1.2s,baz=24						
MNK				i PcP	PcP	23 42 21.3	+0.1
MNK				i PP	PP	23 44 17.2	+0.2
MNK				i PPP	PPP	23 45 51.6	
MNK				i S	S	23 50 38.9	0.0
MNK				i SS	SS	23 55 01.6	+7.3
MNK				i SSS	SSS	23 58 06.2	
MNK				i LQ	LQ	00 04 28.8	
MNK				i LR	LR	00 09 17.2	
MNK				i LRM	MLR	00 12 48.6	
	comp=E,2.0nm,1.2s						
MNK				i LRM	MLR	00 13 03.5	
	comp=N,12nm,1.2s						
MNK				i LRM	MLR	00 13 18.9	
	comp=Z,38nm,18.1s						
MNK	Minsk	66.33	336	i P	P	23 41 51.3	-0.2
MNK				i		23 42 21.2	
MNK				i		23 44 17.2	
MNK				i PPP	PPP	23 45 51.6	
MNK				i S	S	23 50 38.9	0.0
MNK				i SS	SS	23 55 01.6	+7.3
MNK				pmax	pmax		
	comp=Z,22nm,1.2s						
MNK				MLR	MLR		
	comp=E,2.0nm,1.0s						
MNK				MLR	MLR		
	comp=N,12nm,1.0s						
MNK				MLR	MLR		
	comp=Z,38nm,18.0s						
VORD	Divnogorie	66.36	327	eP	P	23 41 49.7	-2.0
VORD				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TRQ	Mont Tremblant	66.38	42	IAmb	IAmb	23 41 51.5	
	comp=Z,13nm,0.8s						
O48B	Farmland	66.68	53	P	P	23 41 52.9	-1.0
	baz=323						
JCT	Junction City	66.90	70	P	P	23 41 55.6	0.0
	baz=321						
MPSI	Mapaga	66.93	234	P	P	23 41 55.5	-0.2
	comp=Z,11nm,1.0s						
WHTX	Lake Whitney,	67.00	67	P	P	23 41 56.2	+0.1
	baz=321						
MIAR	Mount Ida	67.05	62	IAmb	IAmb	23 41 57.2	
	comp=Z,11nm,0.8s						
MIAR	Mount Ida	67.05	62	P	P	23 41 56.4	0.0
	baz=322						
WHAR	Wooly Hollow	67.12	61	IAmb	IAmb	23 41 56.6	
	comp=Z,14nm,1.0s						
KBL	Kabul	67.39	298	P	P	23 41 56.3	-2.5
KBL				IAmb	IAmb	23 42 02.4	
	comp=Z,5.9nm,0.8s						
KBL	Kabul	67.39	298	P	P	23 41 56.3	-2.5
KBL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
P49A	Miami Univ. Ec	67.46	53	IAmb	IAmb	23 41 59.0	
	comp=Z,16nm,1.1s						
P49A	Miami Univ. Ec	67.46	53	P	P	23 41 58.2	-0.7
	baz=323						
ERPA	Erie	67.50	48	P	P	23 41 58.8	-0.4
	baz=324						
ACSO	Alum Creek Sta	67.70	52	P	P	23 42 00.1	-0.3
	baz=324						
M53A	WI Miller and	67.75	49	P	P	23 42 00.3	-0.5
	baz=324						
WCI	Wyandotte Cave	67.76	55	P	P	23 42 00.8	0.0
WCI	Wyandotte Cave	67.76	55	P	P	23 42 00.8	0.0
WCI				pmax	pmax		
	comp=Z,17nm,0.7s						
WCI	Wyandotte Cave	67.76	55	P	P	23 42 00.3	-0.5
	baz=323						
WCI	Wyandotte Cave	67.76	55	P	P	23 42 00.5	-0.3
O53A	New Philadelph	68.48	50	P	P	23 42 04.4	-0.9
	baz=324						
P52A	Corning	68.56	51	IAmb	IAmb	23 42 06.1	
	comp=Z,12nm,0.8s						
P52A	Corning	68.56	51	P	P	23 42 05.2	-0.6
	baz=324						
NATX	Nacogdoches	68.66	65	P	P	23 42 06.7	+0.2
	baz=322						
WVT	Waverly	68.69	57	P	P	23 42 06.7	+0.1
WVT				IAmb	IAmb	23 42 07.1	
	comp=Z,9.7nm,0.8s						
WVT	Waverly	68.69	57	P	P	23 42 06.7	+0.1
WVT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WVT	Waverly	68.69	57	P	P	23 42 06.4	-0.3
	baz=323						
WVT	Waverly	68.69	57	P	P	23 42 06.6	-0.1
WVT				pP	sP	23 42 17.2	-1.0
833A	Chaparral WMA,	68.80	71	P	P	23 42 07.5	0.0
	baz=322						
SBUM	Sibu	68.89	242	P	P	23 42 08.6	+0.5
SBUM				IAmb	IAmb	23 42 10.5	
	comp=Z,14nm,1.0s						
LBNH	Lisbon	69.06	42	P	P	23 42 08.0	-0.9
	baz=328						
OXF	Oxford	69.19	60	P	P	23 42 09.7	-0.1
OXF	Oxford	69.19	60	P	P	23 42 09.7	-0.1
OXF				pmax	pmax		
	comp=Z,35nm,0.9s						
OXF	Oxford	69.19	60	P	P	23 42 09.4	-0.4
	baz=323						
CLTN	Cedars of Leba	69.45	56	P	P	23 42 11.5	+0.2
PLAL	Pickwick Lake	69.48	58	IAmb	IAmb	23 42 12.1	
	comp=Z,13nm,0.8s						
AKASG	Malin Array Be	69.48	333	P	P	23 42 10.3	-1.0
	comp=Z,1.2nm,0.4s,baz=27,slow=5.5,SNR=13						
AKASG				LR	LR	00 17 36.1	
	comp=Z,57nm,18.0s,baz=12,slow=40						
	comp=Z,1.2nm,0.4s						
AKASG	Malin Array Be	69.48	333	P	P	23 42 11.2	-0.1
AKASG	Malin Array Be	69.48	333	P	P	23 42 11.2	-0.1
AKASG				pmax	pmax		
	comp=Z,4.0nm,1.3s						
AKBB	Malin Array Si	69.48	333	P	P	23 42 10.7	-0.6
AKBB				IAmb	IAmb	23 42 11.1	
	comp=Z,7.8nm,1.0s						
AKBB	Malin Array Si	69.48	333	P	P	23 42 10.7	-0.6
AKBB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MCWV	Mont Chateau	69.57	50	P	P	23 42 11.2	-0.9
	baz=325						
SSPA	Standing Stone	69.62	48	P	P	23 42 11.9	-0.5
	baz=326						
SSPA	Standing Stone	69.62	48	P	P	23 42 11.5	-0.9
SSPA				pP	sP	23 42 21.9	-2.1
GEYT	Alibeck	70.01	308	P	P	23 42 14.2	-0.7
	comp=Z,5.1nm,0.9s,baz=318,slow=2.0,SNR=13						
GEYT				LR	LR	00 17 10.8	
	comp=Z,73nm,18.2s,baz=110,slow=40						
	comp=Z,5.1nm,0.9s						
TZTN	Tazewell	70.41	54	P	P	23 42 17.3	0.0
	baz=324						
CPCT	Cooper Cave	70.83	56	P	P	23 42 19.7	-0.2
CPCT				IAmb	IAmb	23 42 20.4	
	comp=Z,15nm,0.9s						
TKL	Tuckaleechee C	71.02	55	LR	LR	00 15 13.7	
	comp=Z,41nm,18.3s,baz=3.0,slow=37						
TKL	Tuckaleechee C	71.02	55	P	P	23 42 20.6	-0.4
TKL	Tuckaleechee C	71.02	55	P	P	23 42 20.6	-0.4
TKL				pmax	pmax		
	comp=Z,64nm,2.0s						
BLA	Blacksburg	71.31	52	P	P	23 42 22.6	-0.2
	baz=325						
KBZ	Khabaz	71.43	321	P	P	23 42 23.2	-0.1
	comp=Z,4.7nm,0.9s,baz=100,slow=1.8,SNR=6.5						
	comp=Z,4.7nm,0.9s						
AKT	Akhty	71.52	317	eP	P	23 42 23.3	-0.8
AKT				e		23 42 41.9	
AKT				pmax	pmax		
	comp=Z,14nm,1.2s						
HORU	Horodok	71.56	335	P	P	23 42 23.7	-0.4
LRAL	Lakeview Retre	71.57	59	IAmb	IAmb	23 42 23.9	
	comp=Z,10nm,0.9s						
LRAL	Lakeview Retre	71.57	59	P	P	23 42 23.5	-0.9
	baz=324						
LVV	L'vov	71.58	336	eP	P	23 42 24.2	+0.1
LVV				e		23 51 39.4	
COEN	Coen	71.58	206	IAmb	IAmb	23 42 26.4	
	comp=Z,14nm,0.8s						
ZEI	Tsey	71.87	320	eP	P	23 42 24.0	-2.3
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BG3	Lake Jocassee	71.96	55	IAmb	IAmb	23 42 27.6	
	comp=Z,12nm,0.7s						
SORM	Soroca	72.06	333	⇓P	P	23 42 26.7	-0.4
SORM	Soroca	72.06	333	P	P	23 42 26.6	-0.4
OJC	Ojcow	72.13	339	eP	P	23 42 28.0	+0.5
OJC	Ojcow	72.13	339	P	P	23 42 27.2	-0.3
OJC	Ojcow	72.13	339	P	P	23 42 27.2	-0.3
OJC				pmax	pmax		
	comp=Z,44nm,1.8s						
KSP	Ksiaz	72.21	342	eP	P	23 42 27.2	-0.7
CLL	Collm	72.33	344	esP	sP	23 42 43.0	+3.7
CLL	Collm	72.33	344	eP	P	23 42 28.0	-0.6
CLL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CLL	Collm	72.33	344	eP	P	23 42 28.0	-0.6
	comp=Z,3.0nm,0.9s						
STHS	Stebnicka Huta	72.58	338	eP	P	23 42 30.7	+0.5
STHS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
STHS	Stebnicka Huta	72.58	338	eP	P	23 42 30.7	+0.5
KMSC	Kings Mountain	72.59	54	P	P	23 42 29.6	-0.9
	baz=326						
DPC	Dobruska-Polom	72.68	341	eP	P	23 42 30.8	0.0
DPC	Dobruska-Polom	72.68	341	eP	P	23 42 30.8	0.0
KSV	Kosov	72.73	335	P	P	23 42 29.4	-1.7
KRLC	Kraliky	72.86	341	eP	P	23 42 32.1	+0.2
KRLC	Kraliky	72.86	341	eP	P	23 42 32.1	+0.2
HODGE	Hodges	72.90	55	IAmb	IAmb	23 42 32.6	
	comp=Z,15nm,0.7s						
MORC	Moravsky Berou	73.00	341	P	P	23 42 33.2	+0.5
MORC				IAmb	IAmb	23 43 21.5	
	comp=Z,24nm,2.0s						
MORC	Moravsky Berou	73.00	341	eP	P	23 42 32.8	+0.1
MORC	Moravsky Berou	73.00	341	P	P	23 42 33.2	+0.5
MORC				pmax	pmax		
	comp=Z,24nm,2.0s						
LANS	Liptovska Anna	73.21	339	eP	P	23 42 35.6	+1.6
LANS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LANS	Liptovska Anna	73.21	339	eP	P	23 42 35.6	+1.6
BUR08	Bucovina Ar. S	73.32	335	P	P	23 42 34.3	-0.4
BURAR	Bucovina Array	73.35	335	⇑P	P	23 42 34.6	-0.2
BURAR	Bucovina Array	73.35	335	P	P	23 42 34.4	-0.5
BURAR	Bucovina Array	73.35	335	P	P	23 42 34.6	-0.2
PRU	Pruhonice	73.35	343	eP	P	23 42 35.0	+0.3
PRU	Pruhonice	73.35	343	eP	P	23 42 35.0	+0.3
TRPA	Tarpa	73.50	337	⇑P	P	23 42 36.5	+0.9
VRAC	Vranov	73.63	341	⇓P	P	23 42 37.2	+0.8
VRAC	Vranov	73.63	341	eP	P	23 42 36.8	+0.4
VRAC	Vranov	73.63	341	P	P	23 42 37.2	+0.8
GNI	Garni	73.83	318	LR	LR	00 20 59.8	
	comp=Z,83nm,18.1s,baz=26,slow=41						
GNI	Garni	73.83	318	i P	P	23 42 36.5	-1.4
GNI				pmax	pmax		
	comp=Z,11nm,1.5s						

JAVC	**Velka Javorina**	73.85	340	*e*P	P	23 42 39.1	+1.4
KRUC	**Moravsky**	73.90	341	*e*P	P	23 42 39.2	+1.2
VYHS	**Vyhne**	73.96	339	*e*P	P	23 42 38.8	+0.4
VYHS				pmax	pmax		
	comp=Z,8.0nm,1.3s						
VYHS	**Vyhne**	73.96	339	*e*P	P	23 42 38.8	+0.4
TESR	**Tescani**	74.01	333	⇓P	P	23 42 38.7	0.0
MTN	**Manton Dam**	74.17	218	P	P	23 42 40.0	+0.2
KHC	**Kasperske Hory**	74.34	343	*e*P	P	23 42 41.0	+0.4
KHC	**Kasperske Hory**	74.34	343	*e*P	P	23 42 41.0	+0.4
MODS	**Modra-Piesok**	74.39	340	*e*P	P	23 42 42.7	+1.8
MODS				pmax	pmax		
	comp=Z,49nm,1.9s						
MODS	**Modra-Piesok**	74.39	340	*e*P	P	23 42 42.7	+1.8
CKRC	**Cesky Krumlov**	74.52	342	*e*P	P	23 42 41.7	+0.1
CKRC	**Cesky Krumlov**	74.52	342	*e*P	P	23 42 41.7	+0.1
CKRC				smax	smax		
	comp=N,3.0nm,0.4s						
TIGA	**Tifton**	74.55	57	P	P	23 42 41.9	-0.1
	baz=325						
VRI	**Vrincioaia**	74.58	333	⇓P	P	23 42 42.2	+0.1
VRI	**Vrincioaia**	74.58	333	P	P	23 42 42.1	+0.1
GERES	**GERESS Array B**	74.60	343	P	P	23 42 41.9	-0.2
	comp=N,0.9nm,0.6s,baz=36,slow=5.7,SNR=9.5						
	comp=N,0.9nm,0.6s						
GERES	**GERESS Array B**	74.60	343	P	P	23 42 42.0	-0.2
GERES	**GERESS Array B**	74.60	343	P	P	23 42 42.0	-0.2
DRGR		74.72	336	⇓P	P	23 42 43.3	+0.4
DRGR		74.72	336	P	P	23 42 43.3	+0.4
COVR	**Voineasa-Covas**	74.74	333	⇓P	P	23 42 44.1	+1.1
CFR	**Carcaliu**	74.84	332	⇓P	P	23 42 43.5	0.0
CFR	**Carcaliu**	74.84	332	P	P	23 42 43.4	0.0
JURR	**Jurilovca**	75.02	331	⇓P	P	23 42 44.7	+0.2
TPGR	**Topolog**	75.06	332	⇓P	P	23 42 45.1	+0.3
CONA	**Conrad Observa**	75.09	341	*i* P	P	23 42 45.2	+0.2
	comp=N,7.9nm,1.5s						
MLR	**Muntele Rosu**	75.14	333	⇑P	P	23 42 46.7	+1.3
MLR	**Muntele Rosu**	75.14	333	LR	LR	00 19 47.2	
	comp=N,59nm,18.5s,baz=30,slow=39						
MLR	**Muntele Rosu**	75.14	333	P	P	23 42 45.4	0.0
MLR	**Muntele Rosu**	75.14	333	P	P	23 42 45.4	0.0
MLR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RONA	**Rosalia, Austr**	75.23	341	*e*P	P	23 42 45.5	-0.2
	comp=Z,10nm,1.7s						
VOIR		75.42	334	⇓P	P	23 42 47.6	+0.6
VOIR		75.42	334	P	P	23 42 47.5	+0.6
TIRR	**Tirgusor**	75.43	331	⇑P	P	23 42 46.9	+0.1
TIRR	**Tirgusor**	75.43	331	P	P	23 42 46.6	-0.2
TIRR				IAmb	IAmb	23 42 48.0	
	comp=Z,22nm,1.3s						
TIRR	**Tirgusor**	75.43	331	P	P	23 42 46.6	-0.2
TIRR				pmax	pmax		
	comp=Z,22nm,1.3s						
SIRR	**Siria**	75.46	337	⇑P	P	23 42 48.3	+1.2
MOA	**Molln**	75.46	342	*e*P	P	23 42 47.1	0.0
	comp=Z,9.2nm,1.4s						
ARR	**Arges**	75.59	334	⇑P	P	23 42 48.9	+1.0
BIOA	**Bad Ischl, Aus**	75.72	342	*i* P	P	23 42 50.1	+1.6
	comp=Z,2.0nm,0.7s						
ARSA	**Arzberg**	75.81	341	*i* P	P	23 42 50.1	+1.0
	comp=Z,2.6nm,0.6s						
SURR	**Surduc**	75.83	336	⇑P	P	23 42 50.0	+0.8
GZR	**Gura Zlata**	76.02	336	⇑P	P	23 42 50.6	+0.2
GZR	**Gura Zlata**	76.02	336	P	P	23 42 50.5	+0.2
GEVA	**Gevas**	76.07	318	P	P	23 42 50.8	-0.1
BZS	**Buzias**	76.08	336	⇓P	P	23 42 51.0	+0.4
BZS	**Buzias**	76.08	336	P	P	23 42 51.0	+0.4
MORH	**Mrgy, Hungar**	76.17	339	⇓P	P	23 42 51.4	+0.3
KBA	**Koelnbreinsper**	76.37	343	*e*P	P	23 42 53.6	+1.2
	comp=Z,11nm,1.0s,SNR=7.6						
WATA	**Walderalm**	76.42	344	*i* P	P	23 42 52.8	+0.1
	comp=Z,5.1nm,1.0s						
SOKA	**Soboth**	76.45	341	*i* P	P	23 42 53.5	+0.7
	comp=Z,9.8nm,1.2s,SNR=5.6						
WTTA	**Wattenberg**	76.47	344	*i* P	P	23 42 53.6	+0.6
	comp=Z,3.3nm,0.6s						
MOTA	**Moosalm**	76.48	344	*i* P	P	23 42 53.3	+0.2
	comp=Z,9.3nm,1.5s						
GROS	**Grobnik**	76.57	341	*i* P	P	23 42 54.0	+0.5
SQTA	**Sankt Quirin**	76.59	344	*i* P	P	23 42 53.9	+0.3
	comp=Z,6.3nm,0.9s						
HERR	**Herculane**	76.59	336	⇓P	P	23 42 53.7	+0.2
OBKA	**Obir**	76.70	342	*e*P	P	23 42 55.0	+0.8
	comp=Z,11nm,0.8s,SNR=9.3						
CTA	**Charters Tower**	76.79	201	P	P	23 42 55.4	+0.7
	comp=Z,18nm,1.0s,baz=2.2,slow=6.8,SNR=12						
	comp=Z,18nm,1.0s						
CTAO	**Charters Tower**	76.79	201	P	P	23 42 54.8	0.0
CTAO				IAmb	IAmb	23 42 56.6	
	comp=Z,18nm,0.9s						
CTAO	**Charters Tower**	76.79	201	P	P	23 42 54.8	0.0
CTAO				pmax	pmax		
	comp=Z,18nm,0.9s						
ABTA	**Abfaltersbach**	76.83	343	*i* P	P	23 42 55.1	+0.2
	comp=Z,8.0nm,1.2s						
FETA	**Feichten**	76.86	344	*i* P	P	23 42 54.8	-0.4
	comp=Z,5.5nm,1.4s						
FRGS	**Fruska Gora**	76.93	338	⇑P	P	23 42 56.5	+1.1
FUORN	**Ofenpass-Fuorn**	77.32	345	P	P	23 42 58.6	+0.7
FUORN				IAmb	IAmb	23 44 14.7	
	comp=Z,18nm,1.9s						
PLVB	**Pleven**	77.44	334	⇓P	P	23 42 58.4	+0.1
GBRS	**Gornja Briga**	77.60	341	*i* P	P	23 42 59.4	+0.2
DIVS	**Divibare**	77.89	337	P	P	23 43 00.6	-0.3
DIVS				IAmb	IAmb	23 43 02.1	
	comp=Z,12nm,1.4s						
BOVS	**Bovan**	77.93	336	⇓P	P	23 43 00.8	-0.3
BR131	**Keskin Array S**	78.17	326	P	P	23 43 01.8	-0.8
BR131	**Keskin Array S**	78.17	326	P	P	23 43 01.8	-0.8
BR131				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BRTR	**Keskin Array B**	78.17	326	P	P	23 43 02.4	-0.3
	comp=Z,1.4nm,0.9s,baz=45,slow=3.7,SNR=8.6						
	comp=Z,1.4nm,0.9s						
BRTR	**Keskin Array B**	78.17	326	*ce*P	P	23 43 02.5	-0.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BNN	**Bunyan**	78.22	324	IAmb	IAmb	23 43 11.6	
	comp=Z,16nm,0.9s						
TEOL	**Teolo**	78.32	343	P	P	23 43 03.1	-0.1
TEOL				IAmb	IAmb	23 43 04.5	
	comp=Z,19nm,0.9s						
VTS	**Vitosha**	78.52	334	IAmb	IAmb	23 45 45.8	
	comp=Z,6.4nm,0.5s						
BORA	**Eskisehir**	79.04	328	P	P	23 43 07.0	-0.3
BORA				IAmb	IAmb	23 43 12.4	
	comp=Z,20nm,1.7s						
PRMA	**PARMA**	79.12	344	P	P	23 43 07.8	+0.3
RDO	**Rodhopi**	79.29	332	P	P	23 43 08.7	+0.2
RDO				IAmb	IAmb	23 43 10.2	
	comp=Z,16nm,1.4s						
ALN	**Alexandroupoli**	79.38	332	P	P	23 43 09.1	0.0
ALN				IAmb	IAmb	23 45 56.9	
	comp=Z,24nm,1.8s						
ALN	**Alexandroupoli**	79.38	332	P	P	23 43 09.1	0.0
ALN				pmax	pmax		
	comp=Z,24nm,1.8s						
PDG	**Podgorica**	79.64	337	⇓P	P	23 43 10.7	+0.3
PDG	**Podgorica**	79.64	337	P	P	23 43 10.4	-0.1
WR0	**Warramunga Arr**	79.69	212	IAmb	IAmb	23 43 12.3	
	comp=Z,15nm,1.0s						
WRAB	**Tennant Creek**	79.73	212	P	P	23 43 11.8	+0.8
WRAB	**Tennant Creek**	79.73	212	P	P	23 43 11.8	+0.8
WRAB				pmax	pmax		
	comp=Z,31nm,1.1s						
WRA	**Warramunga Arr**	79.74	212	P	P	23 43 11.5	+0.4
	comp=Z,18nm,1.0s,baz=24,slow=5.8,SNR=58						
	comp=Z,18nm,1.0s						
MURB	**Monte Urbino**	80.21	342	P	P	23 43 14.3	+0.7
TIP	**Timpagrande**	83.31	338	⇓P	P	23 43 29.9	-0.1
TIP	**Timpagrande**	83.31	338	P	P	23 43 29.5	-0.4
TIP				IAmb	IAmb	23 43 31.7	
	comp=Z,18nm,1.3s						
AS31	**Alice Springs**	83.37	211	P	P	23 43 30.8	+0.5
ASAR	**Alice Springs**	83.37	211	P	P	23 43 31.1	+0.9
	comp=Z,16nm,0.9s,baz=20,slow=4.8,SNR=87						
	comp=Z,16nm,0.9s						
RAO	**Raoul Island**	84.47	168	LR	LR	00 14 23.3	
	comp=Z,249nm,20.8s,baz=126,slow=31						
ESDC	**Sonseca Array**	85.75	354	P	P	23 43 42.3	0.0
	comp=Z,3.9nm,1.0s,baz=352,slow=4.9,SNR=8.6						
	comp=Z,3.9nm,1.0s						
ESDC	**Sonseca Array**	85.75	354	P	P	23 43 42.2	-0.1
ESDC				IAmb	IAmb	23 43 44.5	
	comp=Z,20nm,1.8s						
PSA00	**Pilbara Seismi**	86.43	224	P	P	23 43 45.4	-0.2
PSA00				IAmb	IAmb	23 43 46.2	
	comp=Z,8.1nm,0.9s						
RAYN	**Ar Rayn**	87.91	309	P	P	23 43 52.2	-0.9
RAYN				IAmb	IAmb	23 43 53.3	
	comp=Z,6.3nm,1.2s						
RAYN	**Ar Rayn**	87.91	309	P	P	23 43 52.2	-0.9
RAYN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
STKA	**Stephens Creek**	89.19	202	P	P	23 43 59.6	+1.0
	comp=Z,8.8nm,1.1s,baz=6.5,slow=7.8,SNR=6.9						
	comp=Z,8.8nm,1.1s						
STKA	**Stephens Creek**	89.19	202	P	P	23 43 59.3	+0.7
STKA	**Stephens Creek**	89.19	202	P	P	23 43 59.3	+0.7
STKA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
TORD	**Torodi Ar. Bea**	111.44	346	PKiKP	PKiKP	23 49 36.2	-1.3
	comp=Z,0.2nm,0.6s,baz=357,slow=2.3,SNR=1.3						
PLCA	**Paso Flores**	139.38	95	PKP	PKPdf	23 50 29.8	0.0
	comp=Z,2.6nm,0.9s,baz=297,slow=4.5,SNR=3.7						
ELIB	**Princess Elisa**	157.14	208	*d*PKP	PKPab	23 51 28.6	+0.3

ROM 03 23:40:23.5±0.1, 42°.663N±0°.003×13°.209E±0°.004, h12^{km}, ML1.3/11, 5C-7D, Error ellipse: s-maj=0.3km s-min=0.2km az=336.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1218	**Civita (PG)**	0.07	276	P	Pg	23 40 26.4	+0.2
T1218				S	Sg	23 40 28.1	0.0
T1218				AML	AML		
	comp=E,639µm,0.4s						
T1218				AML	AML		
	comp=N,577µm,0.2s						
T1218				AML	AML		
	comp=E,632µm,0.4s						
T1218				AML	AML		
	comp=E,640µm,0.4s						
T1218				AML	AML		
	comp=N,576µm,0.2s						
T1218				AML	AML		
	comp=E,632µm,0.4s						
T1218				AML	AML		
	comp=N,600µm,0.1s						
SMA1	**SAN MARTINO**	0.10	109	⇑P	Pg	23 40 26.9	+0.5
SMA1				S	Sg	23 40 29.4	+0.8
SMA1				AML	AML		
	comp=E,570µm,0.3s						
SMA1				AML	AML		
	comp=N,356µm,1.1s						
SMA1				AML	AML		
	comp=N,356µm,0.9s						
LNSS	**Leonessa**	0.14	244	⇑P	Pg	23 40 27.4	+0.5
LNSS				S	Sg	23 40 30.1	+0.6
LNSS				AML	AML		
	comp=E,360µm,0.2s						
LNSS				AML	AML		
	comp=N,355µm,0.5s						
T1212	**Cascia, Frazio**	0.15	306	⇓P	Pg	23 40 27.5	+0.3
T1212				S	Sg	23 40 30.1	+0.3
T1212				AML	AML		
	comp=E,152µm,0.7s						
T1212				AML	AML		
	comp=N,166µm,0.4s						
T1212				AML	AML		
	comp=E,152µm,0.7s						
T1212				AML	AML		
	comp=N,166µm,0.3s						
T1212				AML	AML		
	comp=N,186µm,0.6s						
T1212				AML	AML		
	comp=E,188µm,0.7s						
RM33	**Pellescritta (**	0.15	178	⇓P	Pg	23 40 27.7	+0.5
RM33				S	Sg	23 40 30.6	+0.8
RM33				AML	AML		
	comp=N,139µm,0.3s						
RM33				AML	AML		
	comp=N,160µm,0.3s						
RM33				AML	AML		
	comp=E,202µm,1.8s						
RM33				AML	AML		
	comp=E,160µm,0.3s						
T1245	**Castelsantange**	0.19	355	⇑P	Pg	23 40 28.4	+0.5
T1245				S	Sg	23 40 31.8	+0.8
T1245				AML	AML		
	comp=E,113µm,1.0s						
T1245				AML	AML		
	comp=E,185µm,2.5s						
T1245				AML	AML		
	comp=N,156µm,0.2s						
T1245				AML	AML		
	comp=E,113µm,1.0s						
T1217	**Poggiodomo (PG**	0.21	284	P	Pg	23 40 28.5	+0.4
T1217				S	Sg	23 40 31.9	+0.7
T1217				AML	AML		
	comp=N,111µm,0.9s						
T1217				AML	AML		
	comp=E,98µm,0.5s						
MC2	**Monte Cornacci**	0.25	357	P	Pg	23 40 29.3	+0.4
MC2				S	Sb	23 40 33.7	-0.9
MMO1	**Montemonaco**	0.25	20	⇑P	Pg	23 40 29.1	+0.3
MMO1				S	Sg	23 40 33.3	+0.9
T1241	**Roccafluvione,**	0.25	40	P	Pg	23 40 29.1	+0.3
T1241				S	Sg	23 40 33.1	+0.7
T1216	**Preci, Frazion**	0.27	329	P	Pg	23 40 29.6	+0.5
T1216				S	Sb	23 40 34.4	-0.4
T1215	**Vallo di Nera,**	0.29	299	⇓P	Pg	23 40 29.7	+0.3
T1215				S	Sg	23 40 34.2	+0.8
T1222	**Castel Sant'An**	0.29	206	P	Pg	23 40 29.7	+0.2
T1222				S	Sg	23 40 34.4	+0.9
T1211	**Morro Reatino**	0.29	244	⇑P	Pg	23 40 29.9	+0.3
T1211				S	Sb	23 40 34.6	-0.9
T1211				AML	AML		
	comp=E,73µm,0.3s						
T1211				AML	AML		
	comp=N,98µm,0.3s						
TERO	**Teramo**	0.29	98	P	Pg	23 40 29.7	+0.1
TERO				S	Sg	23 40 34.1	+0.5
TERO				AML	AML		
	comp=E,38µm,1.3s						
TERO				AML	AML		
	comp=N,58µm,1.3s						
TERO				AML	AML		
	comp=E,38µm,0.7s						
ARRO	**Arrone**	0.34	256	⇓P	Pg	23 40 30.6	+0.3
ARRO				S	Sb	23 40 36.1	-0.7
ARRO				AML	AML		
	comp=E,27µm,0.9s						
ARRO				AML	AML		
	comp=N,33µm,1.6s						
ARRO				AML	AML		
	comp=N,33µm,0.4s						
GIGS	**Gran Sasso**	0.34	128	⇓P	Pg	23 40 30.7	+0.3
GIGS				S	Sg	23 40 35.7	+0.7
GIGS				AML	AML		
	comp=N,7µm,3.0s						
GIGS				AML	AML		
	comp=E,11µm,2.5s						
GUMA	**Gualdo di Mace**	0.41	13	⇓P	Pb	23 40 32.3	-0.4
GUMA				AML	AML		
	comp=E,90µm,0.4s						
GUMA				AML	AML		
	comp=N,61µm,1.4s						
T1219	**Muccia, Frazio**	0.42	339	S	Sb	23 40 38.6	-0.6
T1220	**Camerino, Fraz**	0.46	349	⇓P	Pg	23 40 32.4	-0.1
ARVD	**Arcevia**	0.86	347	S	Sg	23 40 50.7	-0.6
LIK	**San Giovanni I**	1.19	167	P	Pg	23 40 47.0	+0.7

*ISK **03** 23:41:25.4, 39°.52N×26°.16E, h8^{km}, ML1.7/15*

DDA 03 23:41:25.8±0.0, 39°.54N×26°.19E, h7^{km}, ML1.4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	0.05	227	P	Pg	23 41 27.7	+0.4
KOCA				S	Sg	23 41 29.0	+0.6
GPNR	**Gulpinar-Canak**	0.09	207	Pg	Pg	23 41 27.8	-0.1
GPNR				Sg	Sg	23 41 29.4	+0.1
EZN	**Ezine**	0.31	20	Pg	Pg	23 41 32.4	+0.5
EZN				Sg	Sb	23 41 37.7	-1.2
BOZC	**Bozcaada**	0.32	342	Pg	Pg	23 41 32.4	+0.3
BOZC	**Bozcaada**	0.32	342	P	Pg	23 41 32.5	+0.4
BOZC				S	Sg	23 41 36.9	+0.5
BAYC	**CANAKKALE_Bayr**	0.35	54	P	Pg	23 41 33.0	+0.4
BAYC				S	Sg	23 41 37.9	+0.7
BAYC				*i* AML	AML	23 41 38.0	
	comp=E,39nm,0.3s						
SIGR	**SIGRI**	0.41	218	Pg	Pg	23 41 33.6	-0.2
SIGR				Sg	Sg	23 41 39.5	+0.3
AYVA	**Ayvalik**	0.45	120	P	Pg	23 41 35.0	+0.4
AYVA				S	Sg	23 41 41.5	+1.0
COMU	**Canakkale**	0.60	21	Pg	Pg	23 41 37.9	+0.4
GOKA	**anakkale-Gk**	0.69	342	P	Pg	23 41 39.1	+0.1
GOKA				S	Sg	23 41 48.8	+0.8
GOKA				*i* AML	AML	23 41 53.0	
	comp=N,20nm,0.2s						
GOKA				*i* AML	AML	23 41 56.0	
	comp=E,19nm,0.2s						
GADA	**Gvkgeada**	0.69	341	Pg	Pg	23 41 39.3	+0.2
BUHA	**Balikesir, Bur**	0.69	93	P	Pg	23 41 39.1	0.0
BUHA				S	Sb	23 41 49.0	-0.9
DKL	**Dikili**	0.73	129	Pg	Pg	23 41 40.1	+0.3
CANM	**Can-anakkale**	0.82	54	Pg	Pb	23 41 42.1	-0.3
GELI	**Tayfur-Gelibol**	0.89	14	Pg	Pg	23 41 42.9	0.0
KARB	**zmir-Karabur**	0.89	168	P	Pb	23 41 43.2	-0.3
KARB				S	Sg	23 41 54.9	+0.5
KARB				*i* AML	AML	23 41 57.0	
	comp=N,18nm,0.4s						
KARB				*i* AML	AML	23 42 04.0	
	comp=Z,34nm,1.4s						
KARB				*i* AML	AML	23 42 13.0	
	comp=E,28nm,1.7s						
ZEDA	**zmir-Bergama**	0.90	129	P	Pg	23 41 43.1	+0.1
ZEDA				S	Sb	23 41 56.1	+0.3
LPK	**Lapseki**	0.94	28	Pg	Pg	23 41 44.2	+0.2
ERIK	**Erikli-Kesan**	1.16	12	Pn	Pg	23 41 47.8	-0.3
ENEZ	**Enez**	1.20	359	Pn	Pn	23 41 49.0	0.0
KRBG	**Karabiga-Canak**	1.21	45	Pn	Pn	23 41 49.3	+0.2
URLA	**Izmir**	1.22	165	Pn	Pg	23 41 48.2	-0.9
ALN	**Alexandroupoli**	1.36	356	Pn	Pn	23 41 51.4	+0.2
RKY	**Sarkoy-Tekirda**	1.38	33	Pn	Pn	23 41 51.6	+0.1

*KRNET **03** 23:43:17.5±0.1, 40°.87N×71°.16E, h12^{km}, mb2.3*

*ISU **03** 23:43:18.4, 40°.82N×71°.11E, h25^{km}*

*NNC **03** 23:43:21.0±4.9, 40°.92N×71°.48E, h0^{km}, mb2.6, mpv2.2, Error ellipse: s-maj=41.3km s-min=17.0km az=7.0*

*SOME **03** 23:43:22.0, 41°.05N×71°.27E, h5^{km}*

ISC 03 23:43:19.2±1.3, 40°.92N±0°.03×71°.14E±0°.03, h4^{km}±11^{km}, n21, σ1^{s}.57/28, 16C-6D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSNS	**Kasansay**	0.37	50	P	Pg	23 43 25.8	-0.5
KSNS				S	Sg	23 43 33.0	+1.8
NAM	**Namangan**	0.40	80	P	Pn	23 43 32.7	+1.0
TRKS	**Terek-Say**	0.60	360	⇑*i*P	Pg	23 43 29.4	-1.4
	baz=1.0						
TRKS				⇑*i*S	Sg	23 43 37.6	-1.1
	baz=1.0						
CHMI	**Chimion**	0.71	156	P	Pn	23 43 39.1	+3.0
FRG	**Fergana**	0.73	138	P	Pg	23 43 31.9	-1.3
FRG				S	Sg	23 43 41.7	-1.1
BTK	**Batken**	0.90	196	⇑*i*P	Pg	23 43 34.0	-2.4
	baz=98						
BTK				⇑*i*S	Sg	23 43 45.9	-2.2
	baz=98						
ANR	**Andizhan**	0.94	100	P	Sn	23 43 54.7	+1.7
CHMG	**Chimgan**	1.06	307	P	Pg	23 43 38.5	-1.0
ARK	**Arkit**	1.07	35	⇑*i*P	Pg	23 43 39.0	-0.7
	baz=33						
ARK				⇑*i*S	Sn	23 43 54.3	-2.1
	baz=33						
CHRV	**Charvak**	1.15	309	P	Sn	23 43 58.8	+0.5
YBZ	**Yangibazar**	1.24	288	P	Pn	23 43 42.0	-1.3
OHH	**Osh**	1.31	107	⇑*i*P	Pn	23 43 42.1	-2.2
	baz=5.0						
OHH				⇑*i*S	Sb	23 43 59.6	-2.0
	baz=5.0						
TAS	**Tashkent**	1.45	287	⇓*i*P	Pn	23 43 45.4	-0.8
	baz=89						
TAS				⇓*i*S	Sn	23 44 06.1	+0.4
	baz=89						
IUG	**Iuzhnay**	1.48	326	*e*P	Pn	23 43 47.4	+0.7
	4.4nm,0.1s						
IUG				*e*S	Sb	23 44 07.5	+1.0
	26nm,0.1s						
DRK	**Karamyk**	1.53	161	⇓*i*P	Pn	23 43 45.2	-2.3
	baz=60						
DRK				⇓*i*S	Sn	23 44 05.6	-2.4
	baz=60						
GAR	**Garm**	2.02	199	⇑*i*P	Pn	23 43 54.2	0.0
	baz=99						
GAR				⇑*i*S	Sn	23 44 21.1	+1.1
	baz=99						
KK31	**Karatay Array**	2.23	348	⇓Pg	Pg	23 44 03.6	+1.8
	0.3nm,0.2s,baz=157,slow=15,SNR=5.8						
KK31				⇑Lg	Lg	23 44 32.5	
	1.0nm,0.3s,baz=162,slow=29,SNR=7.9						
AML	**Almayashu**	2.26	57	⇑Pg	Pn	23 43 57.2	-0.5
	0.5nm,0.9s						
AML				⇑Lg	Lg	23 44 27.7	
	1.1nm,0.6s						
MRKS	**Merke**	2.39	40	*e*Pg	Pb	23 44 03.0	+0.1
	1.2nm,0.2s						
MRKS				*e*Lg	Lg	23 44 34.3	
	10nm,0.2s						
ARLS	**Aral**	2.57	68	⇑*i*P	Pn	23 44 03.1	+1.4
	baz=66						
ARLS				⇑*i*S	Sb	23 44 36.2	-1.7
	baz=66						
TKM2	**Tokmak 2**	3.88	58	⇓Pg	Pb	23 44 30.3	+2.1
	4.6nm,1.4s						
TKM2				⇑Lg	Lg	23 45 16.8	
	1.3nm,0.6s						

*IDC **03** 23:46:41.4±1.8, 42°.69N×80°.31E, h0^{km}, mb3.5/3, mbtmp3.4/8, ML3.1/5, MS3.2/2, Error ellipse: s-maj=34.1km s-min=17.3km az=145.0*

*SOME **03** 23:46:45.5, 43°.00N×80°.17E, h25^{km}*

*NNC **03** 23:46:45.6±0.7, 42°.98N×80°.14E, h0^{km}, mb4.1, mpv3.9, Error ellipse: s-maj=4.3km s-min=3.6km az=179.0*

*KRNET **03** 23:46:46.1±0.1, 43°.02N×80°.16E, mb3.6*

ISC 03 23:46:44.6±1.5, 42°.98N±0°.04×80°.15E±0°.04, h4^{km}±9^{km}, n84, σ1^{s}.96/119, mb3.6/3, 41C-10D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode**	0.53	290	P	Pg	23 46 52.3	-2.5
SHLS				S	Sg	23 46 57.0	-4.8
SHLS	**Shalkode**	0.53	290	⇓*i*P	Pg	23 46 52.3	-2.5
	baz=318						
SHLS	**Shalkode**	0.53	290	*e*P	Pg	23 46 52.3	-2.5
	4µm,0.1s						
SHLS				*e*S	Sg	23 46 57.0	-4.8
	19µm,0.1s						
PDGK	**Podgornoye**	0.59	306	P	Pg	23 46 57.3	+1.3
PDGK				S	Sg	23 47 05.4	+1.7
PDGK	**Podgornoye**	0.59	306	⇑P	Pg	23 46 57.3	+1.3
	204nm,0.5s						
PDGK				⇓S	Sb	23 47 05.7	-0.8
	1µm,0.6s						
UZB	**Uzynbulak**	0.84	282	P	Pg	23 47 01.5	+0.8
	72nm,0.2s						
UZB				S	Sg	23 47 12.4	+0.7
	667nm,0.2s						
UZB	**Uzynbulak**	0.84	282	*e*P	Pg	23 47 01.5	+0.8
	baz=281						
UZB	**Uzynbulak**	0.84	282	*e*P	Pg	23 47 01.5	+0.8
	72nm,0.2s						
UZB				*e*S	Sg	23 47 12.4	+0.7
	667nm,0.2s						
KPKS	**Kokpek**	1.17	295	P	Pb	23 47 07.3	-0.3
	129nm,0.2s						
KPKS				S	Sb	23 47 22.5	-0.7
	2µm,0.4s						
KPKS	**Kokpek**	1.17	295	⇓*i*P	Pb	23 47 07.2	-0.3
	baz=294						
KPKS	**Kokpek**	1.17	295	*e*P	Pb	23 47 07.3	-0.3
	129nm,0.2s						
KPKS				*e*S	Sb	23 47 22.5	-0.7
	2µm,0.4s						
ZHN	**Zhinishke**	1.27	279	P	Pn	23 47 09.0	-0.2
	298nm,0.2s						
ZHN				S	Sb	23 47 25.5	-0.3
	2µm,0.2s						

ZHN	Zhinishke baz=278	1.27	279	*i* P	Pn	23 47 08.9	-0.4
ZHN	Zhinishke 298nm,0.2s	1.27	279	*e*P	Pn	23 47 09.0	-0.2
ZHN	2µm,0.2s			*e*S	Sb	23 47 25.5	-0.3
SATY	Saty 173nm,0.2s	1.28	274	P	Pg	23 47 10.5	+1.4
SATY	795nm,0.2s			S	Sn	23 47 28.2	+1.1
SATY	Saty baz=273	1.28	274	*i* P	Pn	23 47 09.2	-0.2
SATY	Saty 37nm,0.2s	1.28	274	*e*P	Pg	23 47 10.1	+1.0
SATY	538nm,0.1s			*e*S	Sn	23 47 28.2	+1.1
DJR	Jarkent 114nm,0.1s	1.38	349	P	Pg	23 47 11.5	+0.6
DJR	944nm,0.3s			S	Sg	23 47 29.9	+1.1
DJR	Jarkent 114nm,0.1s	1.38	349	*e*P	Pg	23 47 11.6	+0.6
DJR	765nm,0.2s			*e*S	Sg	23 47 29.9	+1.1
PRZ	Przheval'sk baz=49	1.38	249	⇑*i*P	Pg	23 47 12.0	+1.0
PRZ	baz=49			⇑*i*S	Sg	23 47 30.8	+1.9
KURS	Kuram 101nm,0.7s	1.53	290	P	Pb	23 47 13.8	+0.2
KURS	343nm,0.6s			S	Sg	23 47 34.8	+1.0
KURS	Kuram 101nm,0.7s	1.53	290	*e*P	Pb	23 47 13.8	+0.2
KURS	343nm,0.6s			*e*S	Sg	23 47 34.3	+0.6
ANVS	Anan'yevo baz=64	1.83	265	⇑*i*P	Pg	23 47 19.8	+0.1
ANVS	baz=64			⇑*i*S	Sg	23 47 44.6	+1.1
ARXS	Arharly 44nm,0.5s	2.09	307	*e*Pg	Pb	23 47 22.6	-0.5
ARXS	329nm,0.7s			*e*Lg	Lg	23 47 49.8	
TARG	Taragay, Kyrgy baz=34	2.14	235	⇑*i*P	Pb	23 47 24.6	+0.4
TARG	baz=34			⇑*i*S	Sb	23 47 52.5	+1.3
KOTS	Kotyrbulak 70nm,0.3s	2.24	278	Pg	Pb	23 47 26.2	+0.5
KOTS	886nm,0.5s			Lg	Lg	23 47 55.7	
KOTS	Kotyrbulak 70nm,0.3s	2.24	278	*e*Pg	Pb	23 47 26.2	+0.5
KOTS	764nm,0.1s			*e*Lg	Lg	23 47 55.7	
MDOK	Medeo 45nm,0.6s	2.28	276	⇑Pn	Pb	23 47 25.8	-0.6
MDOK	29nm,0.2s			Pg	Pg	23 47 26.3	-2.0
MDOK	216nm,0.5s			Lg	Lg	23 47 56.1	
MDOK	171nm,0.6s			⇓Lg	Lg	23 47 57.1	
MDOK	Medeo baz=275	2.28	276	*e*Pn	Pb	23 47 24.9	-1.4
MDOK	baz=275			*e*Pg	Pg	23 47 26.6	-1.6
KNDC	Almaty 112nm,0.6s	2.34	277	⇑Pn	Pn	23 47 25.8	+1.8
KNDC	832nm,0.7s			⇑Lg	Lg	23 47 59.4	
TNSS	Tian-Shan 82nm,0.4s	2.35	272	Pg	Pb	23 47 27.7	0.0
TNSS	187nm,0.4s			Lg	Lg	23 47 58.9	
TNSS	Tian-Shan 82nm,0.4s	2.35	272	*e*Pg	Pb	23 47 27.7	0.0
TNSS	186nm,0.1s			*e*Lg	Lg	23 47 58.7	
KDJ	Kajisay baz=49	2.35	250	⇑*i*P	Pb	23 47 27.2	-0.4
KDJ	baz=49			⇑*i*S	Sb	23 47 57.1	0.0
AAA	Alma-Ata 82nm,0.4s	2.38	277	Pg	Pb	23 47 28.7	+0.7
AAA	679nm,0.7s			Lg	Lg	23 47 59.9	
AAA	Alma-Ata 82nm,0.4s	2.38	277	*e*Pg	Pb	23 47 28.7	+0.7
AAA	679nm,0.7s			*e*Lg	Lg	23 47 59.9	
CHKK	Chushkaly 13nm,0.3s	2.46	292	Pg	Pb	23 47 29.9	+0.5
CHKK	399nm,0.3s			Lg	Lg	23 48 01.2	
CHKK	Chushkaly baz=292	2.46	292	*e*Pn	Pn	23 47 27.0	+1.4
CHKK	baz=292			*e*Pg	Pb	23 47 30.8	+1.4
CHKK	Chushkaly 13nm,0.3s	2.46	292	*e*Pg	Pb	23 47 29.9	+0.5
CHKK	399nm,0.3s			*e*Lg	Lg	23 48 01.4	
IZV	Izvestkoviy 15nm,0.2s	2.59	272	Pg	Pb	23 47 33.2	+1.4
IZV	279nm,0.7s			Lg	Lg	23 48 06.8	
IZV	Izvestkoviy 15nm,0.2s	2.59	272	*e*Pg	Pb	23 47 32.7	+1.0
IZV	279nm,0.7s			*e*Lg	Lg	23 48 06.8	
KTBS	Karatobe	2.63	287	Pg	Pb	23 47 33.3	+1.0
KTBS				Lg	Lg	23 48 06.9	
KTBS	Karatobe 11nm,0.1s	2.63	287	*e*Pg	Pb	23 47 32.8	+0.4
KTBS	508nm,0.1s			*e*Lg	Lg	23 48 06.8	
MTBS	Maitube 14nm,0.4s	2.73	274	Pg	Pb	23 47 34.0	0.0
MTBS	274nm,0.5s			Lg	Lg	23 48 09.4	
MTBS	Maitube 14nm,0.4s	2.73	274	*e*Pg	Pb	23 47 34.0	0.0
MTBS	274nm,0.5s			*e*Lg	Lg	23 48 09.4	
KUU	Kurty baz=289	2.92	290	*i* Pn	Pn	23 47 32.5	+0.6
KUU	baz=289			*e*Pg	Pb	23 47 38.7	+1.5
KUU	Kurty 16nm,0.2s	2.92	290	*e*Pg	Pb	23 47 37.3	+0.1
KUU	211nm,0.5s			*e*Lg	Lg	23 48 14.1	
ULHL	Ulahol baz=56	2.97	257	⇑*e*P	Pb	23 47 35.9	-2.4
ULHL	baz=56			⇑*i*S	Sb	23 48 12.3	-2.8
BOOM	Boomskoye usch baz=62	3.14	262	⇑*i*P	Pn	23 47 38.1	+3.1
BOOM	baz=62			⇑*i*S	Sb	23 48 16.2	-3.5
DGS	Degeres 18nm,0.5s	3.21	276	Pg	Pb	23 47 43.5	+1.2
DGS	174nm,0.6s			Lg	Lg	23 48 24.1	
DGS	Degeres 18nm,0.5s	3.21	276	*e*Pg	Pb	23 47 43.1	+0.8
DGS	174nm,0.6s			*e*Lg	Lg	23 48 24.1	
TKM2	Tokmak 2 2.0nm,0.3s	3.34	271	⇑Pn	Pn	23 47 40.7	+2.8
TKM2	12nm,0.4s			⇓Pg	Pg	23 47 48.6	0.0
TKM2	44nm,0.5s			⇑Lg	Lg	23 48 30.9	
TKM2	Tokmak 2 baz=70	3.34	271	⇑*i*P	Pn	23 47 41.0	+3.2
TKM2	baz=70			⇑*i*S	Sn	23 48 20.9	+2.8
NRN	Naryn baz=44	3.45	245	⇑*i*P	Pn	23 47 42.9	+3.5
NRN	baz=44			⇑*i*S	Sn	23 48 24.3	+3.5
KBK	Karagaybulak baz=66	3.84	267	⇑*e*P	Pn	23 47 47.8	+3.2
KBK	baz=66			⇑*i*S	Sn	23 48 32.8	+2.5
CHMS	Chumysh baz=72	3.96	272	⇑*e*P	Pn	23 47 49.3	+3.1
CHMS	baz=72			⇑*i*S	Sn	23 48 35.5	+2.5
MAKZ	Makanchi 3.1nm,0.2s	4.04	18	⇓Pn	Pn	23 47 49.4	+2.1
MAKZ	10nm,0.5s			⇑Sn	Sn	23 48 36.6	+1.5
MAKZ	12nm,0.4s			⇓Lg	Lg	23 48 50.1	
SGDS	Sogindy baz=278	4.06	279	*e*Pg	Pb	23 47 59.3	+2.6
MK31	Makanchi Array 1.5nm,0.2s,baz=198,slow=13,SNR=522	4.11	21	⇓Pn	Pn	23 47 50.0	+1.8
MK31	4.3nm,0.2s,baz=198,slow=28,SNR=6.0			⇑Sn	Sn	23 48 38.6	+1.9
MK31	17nm,0.3s			⇓Lg	Lg	23 48 51.6	
MKAR	Makanchi Array 6.5nm,0.3s,baz=203,slow=13,SNR=431	4.11	21	Pn	Pn	23 47 50.4	+2.2
MKAR	8.6nm,0.3s,baz=201,slow=26,SNR=6.3			Sn	Sn	23 48 38.5	+1.8
MKAR	12nm,0.3s,baz=198,slow=28,SNR=6.6			Lg	Lg	23 48 51.2	
MKAR	comp=Z,53nm,18.9s,baz=246,slow=32 11nm,0.3s			LR	LR	23 49 00.0	
AAK	Ala-Archa 0.4nm,0.3s,baz=116,slow=12,SNR=5.6	4.17	267	Pn	Pn	23 47 51.4	+2.2
AAK	3.9nm,0.3s,baz=274,slow=21,SNR=2.3 0.8nm,0.3s			Lg	Lg	23 48 54.9	
AAK	Ala-Archa baz=67	4.17	267	⇑*e*P	Pn	23 47 52.5	+3.3
AAK	baz=67			⇑*i*S	Sn	23 48 40.8	+2.3
ARLS	Aral baz=57	4.45	257	⇑*i*P	Pn	23 47 56.1	+3.0
ARLS	baz=57			⇑*i*S	Sn	23 48 47.7	+2.2
AML	Almayashu 0.8nm,0.5s	4.84	262	⇑Pg	Pg	23 48 16.5	-0.9
AML	4.5nm,0.8s			⇑Lg	Lg	23 49 22.4	
BTLS	Baital	4.86	297	Pg	Pb	23 48 13.4	+3.1
BTLS	20nm,0.4s			Lg	Lg	23 49 16.1	
BTLS	Baital baz=297	4.86	297	*e*Pn	Pn	23 47 59.6	+1.1
BTLS	baz=297			*e*Pg	Pb	23 48 13.4	+3.1
BTLS	Baital 5.4nm,0.2s	4.86	297	*e*Pg	Pb	23 48 13.4	+3.1
BTLS	20nm,0.4s			*e*Lg	Lg	23 49 16.1	
MRKS	Merke 2.0nm,0.3s	5.09	270	Pg	Pb	23 48 17.0	+2.7
MRKS	23nm,0.4s			Lg	Lg	23 49 22.8	
MRKS	Merke 2.0nm,0.3s	5.09	270	*e*Pg	Pb	23 48 17.0	+2.7
MRKS	23nm,0.2s			*e*Lg	Lg	23 49 22.8	
ZSN	Zaisan baz=36	5.58	35	*e*Pn	Pn	23 48 10.1	+1.8
ZSN	Zaisan 9.1nm,0.5s	5.58	35	*e*Pg	Pb	23 48 25.0	+2.5
ZSN	35nm,0.7s			*e*Lg	Lg	23 49 37.1	
KK31	Karatay Array 1.1nm,0.5s,baz=79,slow=14,SNR=9.2	7.06	274	⇑Pg	Pg	23 48 56.0	-3.8
KK31	8.6nm,0.6s,baz=75,slow=26,SNR=6.8			⇑Lg	Lg	23 50 27.9	
IUG	Iuzhnay baz=267	7.51	267	*e*Pg	Pb	23 49 02.3	+6.7
OTUK	Ortayu 4.6nm,1.4s	7.59	317	⇓Pn	Pn	23 48 36.5	+0.4
OTUK	9.9nm,0.7s			⇑Sn	Sn	23 50 07.8	+5.3
OTUK	9.6nm,0.5s			⇑Lg	Lg	23 50 45.2	
KURBB	Kurchatov Arra 0.1nm,0.3s,baz=176,slow=11,SNR=7.4	7.72	352	Pn	Pn	23 48 39.7	+1.9
KURBB	0.6nm,0.3s,baz=166,slow=29,SNR=5.4 0.2nm,0.4s			Lg	Lg	23 50 46.4	
KURBB	Kurchatov Arra 45nm,0.7s	7.72	352	⇑Lg	Lg	23 50 52.6	
KURK	Kurchatov 2.6nm,0.9s	7.81	353	⇑Pn	Pn	23 48 39.8	+0.9
KURK	22nm,0.7s			⇑Lg	Lg	23 50 52.4	
BRZS	Berezniki baz=326	8.69	326	*e*Pn	Pn	23 48 52.3	+1.2
ZALV	Zalesovo Beam 0.4nm,0.3s,baz=205,slow=13,SNR=7.2	11.40	14	Pn	Pn	23 49 28.3	+0.2
ZALV	0.7nm,0.3s,baz=202,slow=23,SNR=6.3			Sn	Sn	23 51 30.7	-5.2
ZALV	0.1nm,0.3s,baz=198,slow=29,SNR=2.2 1.0nm,0.3s			Lg	Lg	23 52 41.3	
BVAR	Borovoye Array baz=137,slow=30,SNR=3.7	11.97	330	Lg	Lg	23 52 59.1	
SONM	Songino Array 0.1nm,0.3s,baz=270,slow=12,SNR=6.5 0.6nm,0.6s	19.02	66	P	P	23 51 06.7	-0.7
ILAR	Eielson Array 0.3nm,0.5s,baz=313,slow=4.8,SNR=4.4 0.3nm,0.5s	66.46	20	P	P	23 57 33.1	-1.6
TORD	Torodi Ar. Bea 0.4nm,0.7s,baz=36,slow=6.5,SNR=4.1 0.4nm,0.7s	72.74	272	P	P	23 58 12.1	-2.2
YKA	Yellowknife Ar 0.3nm,0.6s,baz=340,slow=5.9,SNR=4.7 0.3nm,0.6s	74.21	7	P	P	23 58 20.6	-1.5
KRVT	Keravat (AS076 comp=Z,63nm,19.5s,baz=272,slow=37	79.81	106	LR	LR	00 36 02.1	

IDC 03 23:49:44.7±12.0**, 11°.74S×164°.40E, h0**^{km}**, mb3.6**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=373.9km s-min=56.2km az=125.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.3nm,0.9s,baz=81,slow=9.0,SNR=2.3 0.3nm,0.9s	30.01	250	P	P	23 55 55.5	0.0
SONM	Songino Array 0.6nm,0.8s,baz=140,slow=6.6,SNR=4.7 0.6nm,0.8s	78.45	324	P	P	00 01 47.7	+0.1
MKAR	Makanchi Array 0.2nm,0.6s,baz=96,slow=6.1,SNR=2.4 0.2nm,0.6s	93.13	317	P	P	00 03 00.7	-0.1

*KRNET **03** 23:52:15.6±0.1, 43°.04N×80°.52E, mb2.6*
*SOME **03** 23:52:18.2, 43°.00N×80°.12E, h20*^{km}
ISC 03 23:52:19.4±2.4**, 43°.10N**±0°.06×**80°.03E**±0°.09**, h2**^{km}±13^{km}**, n23,** σ1^{s}.**52**/35**, 4C-8D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	Shalkode 162nm,0.2s	0.42	278	*e*P	Pg	23 52 23.8	-3.5
SHLS	1µm,0.3s			*e*S	Sg	23 52 28.4	-4.4
UZB	Uzynbulak 3.2nm,0.1s	0.74	274	*e*P	Pg	23 52 33.2	-0.2
UZB	47nm,0.2s			*e*S	Sg	23 52 44.5	+1.4
KPKS	Kokpek 5.7nm,0.2s	1.05	291	*e*P	Pb	23 52 39.2	-1.1
KPKS	77nm,0.3s			*e*S	Sb	23 52 54.4	-0.1
ZHN	Zhinishke 4.0nm,0.1s	1.17	274	*e*P	Pn	23 52 40.8	-2.1
ZHN	116nm,0.1s			*e*S	Sb	23 52 57.1	-0.8
SATY	Saty 5.0nm,0.2s	1.19	269	*e*P	Pn	23 52 42.4	-0.7
SATY	56nm,0.2s			*e*S	Sg	23 53 00.1	+2.6
DJR	Jarkent 3.6nm,0.0s	1.24	352	*e*P	Pn	23 52 43.3	-0.6
DJR	63nm,0.3s			*e*S	Sg	23 53 01.5	+2.1
PRZ	Przheval'sk baz=52	1.34	243	⇓*i*P	Pn	23 52 44.8	-0.5
PRZ	baz=52			⇓*i*S	Sg	23 53 06.2	+3.6
KURS	Kuram 2.6nm,0.4s	1.41	287	*e*P	Pn	23 52 46.4	+0.3
KURS	9.0nm,0.1s			*e*S	Sg	23 53 06.4	+1.8
ANVS	Anan'yevo baz=64	1.76	260	⇑*e*P	Pn	23 52 51.1	+0.1
ANVS	baz=64			⇑*i*S	Sg	23 53 17.1	+1.2
ARXS	Arharly 3.9nm,0.0s	1.94	306	*e*Pg	Pb	23 52 55.5	0.0
ARXS	10.0nm,0.0s			*e*Lg	Lg	23 53 22.2	
KOTS	Kotyrbulak 3.2nm,0.4s	2.14	275	*e*Pg	Pb	23 52 57.9	-1.0
KOTS	31nm,0.1s			*e*Lg	Lg	23 53 27.0	
TARG	Taragay, Kyrgy baz=38	2.14	231	⇑*i*P	Pn	23 52 55.3	-1.2
TARG	baz=38			⇑*i*S	Sn	23 53 24.0	+0.2
MDOK	Medeo 1.8nm,0.2s	2.18	273	*e*Pg	Pb	23 52 59.0	-0.6
MDOK	8.5nm,0.5s			*e*Lg	Lg	23 53 28.0	
TNSS	Tian-Shan 1.8nm,0.0s	2.26	269	*e*Pg	Pb	23 53 00.3	-0.7
TNSS	4.2nm,0.0s			*e*Lg	Lg	23 53 30.6	
KDJ	Kajisay baz=51	2.31	246	⇓*i*P	Pn	23 52 58.3	-0.3
KDJ	baz=51			⇓*i*S	Sb	23 53 29.2	-1.8
CHKK	Chushkaly 0.3nm,0.0s	2.34	290	*e*Pg	Pb	23 53 01.4	-0.8
CHKK	14nm,0.3s			*e*Lg	Lg	23 53 32.5	
IZV	Izvestkoviy 0.7nm,0.1s	2.50	270	*e*Pg	Pb	23 53 05.0	-0.1
IZV	12nm,0.4s			*e*Lg	Lg	23 53 38.9	
KTBS	Karatobe 1.9nm,0.6s	2.51	285	*e*Pg	Pb	23 53 04.7	-0.5
KTBS	22nm,0.4s			*e*Lg	Lg	23 53 38.2	
MTBS	Maitube 0.7nm,0.1s	2.63	272	*e*Pg	Pb	23 53 07.1	-0.2
MTBS	9.8nm,0.4s			*e*Lg	Lg	23 53 42.3	
KUU	Kurty 1.1nm,0.3s	2.80	288	*e*Pg	Pb	23 53 09.2	-0.8
KUU	11nm,0.5s			*e*Lg	Lg	23 53 45.7	
BOOM	Boomskoye usch baz=62	3.07	260	⇓*i*P	Pn	23 53 09.5	+0.5
BOOM	baz=62			⇓*i*S	Sn	23 53 48.6	+2.3
DGS	Degeres 0.8nm,0.1s	3.12	274	*e*Pg	Pb	23 53 15.2	-0.3
DGS	7.8nm,0.2s			*e*Lg	Lg	23 53 55.5	
NRN	Naryn baz=46	3.42	242	⇓*i*P	Pn	23 53 13.7	-0.3
NRN	baz=46			⇓*i*S	Sn	23 53 56.3	+1.1

*IDC **03** 23:53:33.8±0.5, 55°.00S×129°.59W, h0*^{km}*, mb4.3/13, mbtmp4.3/13, MS4.5/43, Error ellipse: s-maj=24.2km s-min=15.2km az=168.0*
*NEIC **03** 23:53:36.2±0.9, 54°.9S±0°.1×129°.6W±0°.2, h10*^{km}±1^{km}*, mb5.1/69, Error ellipse: s-maj=20.6km s-min=16.4km az=342.0*
*GCMT **03** 23:53:40.2±0.1, 55°.24S±0°.01×129°.56W±0°.01, h20*^{km}*, MW5.4/142, Moment Tensor Solution. s109,c180; s142,c238; Duration: 1*^{s}*.2 Moment tensor: Scale 10*^{17} *Nm;* M_{rr}*-0.10±.02;* $M_{\theta\theta}$*0.92±.02;* $M_{\phi\phi}$*-0.82±.02;* $M_{r\theta}$*-0.17±.04;* $M_{\theta\phi}$*1.18±.02;* $M_{\phi r}$*0.06±.04; Best double couple:* M_0*1.47800×10*^{17} *NP1:*ϕ_s*108.00000°, δ89.00000°, λ-7.00000°. NP2:*ϕ_s*198.00000°, δ83.00000°, λ-179.00000°. Principal axes: T 1.5260, Plg4.0000°, Azm153.0000°; N -0.0980, Plg83.0000°, Azm280.0000°; P -1.4290, Plg6.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 03 23:53:35.7±0.3**, 54°.91S**±0°.09×**129°.64W**±0°.07**, h10**^{km}**, n188,** σ1^{s}.**35**/132**, mb5.1**/46**, MS4.7**/46**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTCN	Pitcairn Islan	29.81	359	P	P	23 59 42.1	-0.5
RPN	Rapa Nui comp=Z,484nm,18.2s,baz=204,slow=30	31.47	36	LR	LR	00 09 20.8	
SBA	Scott Base	31.54	201	P	P	23 59 57.5	+0.1
SBA	comp=Z,50nm,1.4s			IAmb	IAmb	00 00 12.1	
VNDA	Vanda comp=Z,2.9nm,1.1s,baz=90,slow=5.1,SNR=2.3	32.55	202	P	P	00 00 06.3	0.0
VNDA	comp=Z,462nm,18.8s,baz=84,slow=31 comp=Z,2.9nm,1.1s			LR	LR	00 10 30.3	
PMSA	Palmer Station comp=Z,2µm,21.4s,baz=253,slow=29	32.87	134	LR	LR	00 09 32.1	
MG05	Puerto Natales	33.49	109	P	P	00 00 13.7	-1.0
MG02	Cerro Sombrero	34.74	112	P	P	00 00 25.1	-0.5
TBI	Tubuai comp=Z,1µm,29.8s	34.81	327	*e*S	S	00 05 44.0	-13
TBI	comp=Z,13µm,30.2s			*e*LR	LR	00 09 27.8	
TBI	comp=Z,34µm,26.5s			*e*LR	LR	00 09 28.2	
TBI	Tubuai comp=Z,135nm,0.3s	34.81	327	*e*T	T	00 36 55.8	
GO08	Villa O'Higgin	35.10	104	P	P	00 00 27.8	-0.9
QSPA	South Pole Qui comp=Z,8.8nm,1.0s,baz=96,slow=1.7,SNR=14	35.26	180	P	P	00 00 30.1	-0.1
QSPA	comp=Z,2µm,18.6s,baz=84,slow=34 comp=Z,8.8nm,1.0s			LR	LR	00 13 13.9	
QSPA	South Pole Qui	35.26	180	P	P	00 00 30.8	+0.5
COYC	Coyhaique	36.99	100		pP	00 00 46.2	-0.2
COYC	Coyhaique	36.99	100	P	P	00 00 45.1	0.0
COYC	comp=Z,27nm,1.2s			IAmb	IAmb	00 00 47.3	
AY01	Puyuhuapi	37.36	98	P	P	00 00 48.0	-0.1
RPZ	Rata Peaks comp=Z,1µm,21.9s,baz=118,slow=30	39.11	261	LR	LR	00 13 23.9	
URZ	Urewera comp=Z,1µm,20.8s,baz=216,slow=31	39.15	273	LR	LR	00 13 31.2	
NNZ	Nelson	39.35	266	P	P	00 01 04.1	-0.8
WHZ	Wether Hill Ro	39.55	256	P	P	00 01 06.6	0.0
WHZ	comp=Z,57nm,1.4s			IAmb	IAmb	00 01 11.3	
MEH	Mehetia comp=Z,17nm,0.2s	39.58	332	*e*T	T	00 42 51.8	
LL04	Puerto Octay	39.69	94	P	P	00 01 07.5	-0.3
LR04	Corral	39.78	92	P	P	00 01 08.6	+0.1
LR04	comp=Z,74nm,1.4s			IAmb	IAmb	00 01 16.6	
TVO	Taravao comp=Z,3.4nm,0.3s	40.00	330	*e*T	T	00 43 38.5	
PPT2	Papeete2 comp=Z,481nm,26.0s	40.27	330	*e*S	S	00 07 06.6	-14
PPT2	comp=Z,3µm,27.0s			*e*LR	LR	00 11 59.0	
PPT2	comp=Z,2µm,29.5s			*e*LR	LR	00 11 59.0	
PPT	Papeete comp=Z,764nm,18.5s,baz=158,slow=30	40.29	330	LR	LR	00 13 26.4	
RAR	Rarotonga comp=Z,304nm,21.1s,baz=148,slow=29	40.57	314	LR	LR	00 13 07.2	
LR03	Panguipulli	40.57	92	P	P	00 01 14.7	-0.3
LR03	comp=Z,27nm,0.8s			IAmb	IAmb	00 01 17.7	
H03S2	Juan Fernandez baz=221,slow=74,SNR=376	40.81	80	T	T	00 44 39.6	
H03S1	Juan Fernandez baz=221,slow=74,SNR=376	40.82	80	T	T	00 44 40.9	
H03S3	Juan Fernandez baz=221,slow=74,SNR=340	40.83	80	T	T	00 44 37.9	
PLCA	Paso Flores comp=Z,10nm,1.2s,baz=228,slow=8.7,SNR=7.4	40.88	95	P	P	00 01 17.3	-0.4

PLCA				LR	LR	00 14 27.1	
	comp=Z,940nm,18.1s,baz=228,slow=31						
	comp=Z,10nm,1.2s						
PLCA	Paso Flores	40.88	95	P	P	00 01 18.2	+0.5
PLCA	Paso Flores	40.88	95	*e*P	P	00 01 17.7	0.0
H03N3	Juan Fernandez	41.09	80	T	T	00 45 08.4	
	baz=224,slow=72,SNR=2367						
H03N2	Juan Fernandez	41.10	80	T	T	00 44 58.5	
	baz=224,slow=72,SNR=2947						
GO06	Curarrehue	41.10	93	P	P	00 01 20.2	+0.5
H03N1	Juan Fernandez	41.11	80	T	T	00 44 54.7	
	baz=224,slow=72,SNR=2545						
VAH	Vaihoa	41.98	334	*e*T	T	00 45 57.3	
	comp=Z,306nm,0.3s						
BI05	Punta Hualpn	42.04	88	P	P	00 01 27.8	+0.7
PMOR	Pomariorio Ree	42.27	333	*e*T	T	00 46 28.4	
	comp=Z,16nm,0.3s						
GO05	Huala	43.99	88	P	P	00 01 43.4	+0.4
GO05				IAmb	IAmb	00 01 44.7	
	comp=Z,62nm,1.4s						
BO02	Sierra Bellavi	44.80	88	P	P	00 01 49.2	-0.4
BO02				IAmb	IAmb	00 01 51.4	
	comp=Z,47nm,1.3s						
LMEL	Las Melosas	45.81	88	P	P	00 01 57.5	-0.2
MT13	San Alfonso	45.84	88	P	P	00 01 58.2	+0.3
MT13				IAmb	IAmb	00 02 09.9	
	comp=Z,27nm,1.1s						
MT03	Universidad Ad	45.89	87	P	P	00 01 57.6	-0.7
MT03				IAmb	IAmb	00 02 24.1	
	comp=Z,27nm,1.1s						
ROC1	El Roble	45.98	86	P	P	00 01 59.0	-0.1
ROC1				IAmb	IAmb	00 02 03.3	
	comp=Z,39nm,1.3s						
PEL	Peldehue	46.04	87	P	P	00 01 59.8	+0.4
VA06	Catapilco	46.12	86	P	P	00 01 59.8	-0.1
MT08	Bocatoma Ro	46.21	88	P	P	00 02 01.5	+0.6
MT08				IAmb	IAmb	00 02 03.4	
	comp=Z,35nm,1.4s						
VA03	San Esteban	46.40	87	P	P	00 02 02.1	-0.1
TAOE	Nuku Hiva Isla	46.69	346	*e*LR	LR	00 14 55.3	
	comp=Z,2µm,28.9s						
CO02	Combarbal	47.28	85	P	P	00 02 09.2	0.0
CO06	Fray Jorge	47.31	84	P	P	00 02 09.8	+0.6
CO06				IAmb	IAmb	00 02 33.1	
	comp=Z,32nm,1.3s						
TRQA	Tornquist	47.59	99	P	P	00 02 11.0	-0.4
TRQA				IAmb	IAmb	00 02 13.3	
	comp=Z,32nm,1.1s						
SNAA	Sanae	48.31	160	P	P	00 02 14.9	-1.7
	comp=Z,7.7nm,1.1s,baz=255,slow=12,SNR=3.3						
SNAA				LR	LR	00 21 17.9	
	comp=Z,1µm,20.3s,baz=205,slow=34						
	comp=Z,7.7nm,1.1s						
CFA	Coronel Fontan	48.58	88	P	P	00 02 18.1	-1.0
	comp=Z,13nm,1.1s,baz=252,slow=5.1,SNR=8.7						
CFA				LR	LR	00 18 26.8	
	comp=Z,698nm,18.6s,baz=236,slow=31						
	comp=Z,13nm,1.1s						
AC05	El Transito	49.47	83	P	P	00 02 27.1	+1.0
AC05				IAmb	IAmb	00 02 27.9	
	comp=Z,27nm,1.2s						
AC02	Maricunga	51.64	83		P	00 02 43.6	+0.7
PB15	IPOC Station P	54.26	80	P	P	00 03 02.5	+0.5
PB15				IAmb	IAmb	00 03 04.0	
	comp=Z,14nm,0.9s						
MSVF	Nonsavu	54.29	292	LR	LR	00 21 31.6	
	comp=Z,69nm,19.3s,baz=299,slow=31						
MSVF	Nonsavu	54.29	292	P	P	00 03 02.0	0.0
MSVF				IAmb	IAmb	00 03 17.6	
	comp=Z,29nm,1.4s						
PB06	IPOC Station P	54.59	79	P	P	00 03 04.0	-0.3
PB06				IAmb	IAmb	00 03 25.5	
	comp=Z,20nm,1.0s						
LVC	Limon Verde	55.04	80	LR	LR	00 23 00.3	
	comp=Z,200nm,18.4s,baz=220,slow=32						
LVC	Limon Verde	55.04	80	P	P	00 03 07.9	0.0
LVC				IAmb	IAmb	00 03 10.6	
	comp=Z,23nm,1.2s						
LVC	Limon Verde	55.04	80	*e*P	P	00 03 08.1	+0.2
PB01	IPOC Station P	55.95	78	P	P	00 03 13.8	-0.3
PB01				IAmb	IAmb	00 03 27.0	
	comp=Z,27nm,1.4s						
ITQB	Itaqui	56.71	95	*e*P	P	00 03 18.6	-0.7
PSGCX	Pisagua	56.75	76	P	P	00 03 19.2	-0.6
PSGCX				IAmb	IAmb	00 03 28.0	
	comp=Z,41nm,1.4s						
PB11	IPOC Station P	56.88	77	P	P	00 03 20.6	-0.2
PB11				IAmb	IAmb	00 03 23.0	
	comp=Z,25nm,1.1s						
PLTB	Pedras Altas	56.88	99	P	P	00 03 21.2	+0.7
PLTB	Pedras Altas	56.88	99	*e*P	P	00 03 20.4	-0.1
DZM	Mont Dzumac	57.28	278	*e*SS	SS	00 15 02.0	-6.5
	comp=Z,133nm,25.7s						
DZM				*e*LR	LR	00 20 02.0	
	comp=Z,1µm,29.2s						
DZM	Mont Dzumac	57.28	278	LR	LR	00 22 59.1	
	comp=Z,270nm,21.1s,baz=190,slow=31						
MNMC	Minye Minye	57.41	76	P	P	00 03 24.9	+0.2
MNMC				IAmb	IAmb	00 03 38.3	
	comp=Z,26nm,0.9s						
MAW	Mawson	57.44	186	LR	LR	00 25 26.0	
	comp=Z,495nm,20.3s,baz=166,slow=33						
MAW	Mawson	57.44	186	P	P	00 03 24.1	+0.2
CPSB	Cacapava Do Su	57.98	98	*e*P	P	00 03 27.0	-1.3
PB16	IPOC Station P	58.10	76	P	P	00 03 29.5	-0.4
PB16				IAmb	IAmb	00 03 32.7	
	comp=Z,23nm,1.4s						
CPUP	Villa Florida	58.83	92	P	P	00 03 32.0	-2.2
	comp=Z,4.1nm,1.0s,baz=235,slow=3.8,SNR=4.7						
CPUP				LR	LR	00 25 34.2	
	comp=Z,1µm,18.3s,baz=226,slow=33						
	comp=Z,4.1nm,1.0s						
CPUP	Villa Florida	58.83	92		P	00 03 33.6	-0.5
CPUP				IAmb	IAmb	00 03 39.1	
	comp=Z,23nm,1.5s						
NNA	Nana	59.33	65	LR	LR	00 21 08.6	
	comp=Z,92nm,21.7s,baz=214,slow=28						
ALGR	Alto Alegre (B	59.43	97	*e*P	P	00 03 37.3	-1.2
LPAZ	La Paz	60.52	76	P	P	00 03 45.9	-0.8
	comp=Z,10nm,1.2s,baz=189,slow=5.9,SNR=8.6						
LPAZ				LR	LR	00 24 31.3	
	comp=Z,121nm,18.7s,baz=219,slow=31						
	comp=Z,10nm,1.2s						
LPAZ	La Paz	60.52	76	P	P	00 03 46.4	-0.3
ITAB	Concordia	61.13	97	P	P	00 03 49.5	-0.5
ITAB				IAmb	IAmb	00 04 01.2	
	comp=Z,24nm,1.3s						
ATAH	Atahualpa	62.65	61	LR	LR	00 25 03.4	
	comp=Z,625nm,21.1s,baz=226,slow=30						
BBRB	Robore, Bolivi	63.66	84	*e*P	P	00 04 06.2	-0.8
STKA	Stephens Creek	63.92	251	P	P	00 04 08.2	-0.4
	comp=Z,1.6nm,0.5s,baz=145,slow=12,SNR=2.0						
STKA				LR	LR	00 26 13.4	
	comp=Z,600nm,21.7s,baz=164,slow=31						
	comp=Z,1.6nm,0.5s						
STKA	Stephens Creek	63.92	251	P	P	00 04 08.8	+0.3
BBSD	Serra de San D	64.07	83	*e*P	P	00 04 08.6	-1.2
MCRA	Macar, Loja	64.26	58	P	P	00 04 11.0	0.0
MCRA				IAmb	IAmb	00 04 13.2	
	comp=Z,11nm,1.2s						
SIV	San Ignacio	64.76	82	LR	LR	00 27 31.6	
	comp=Z,174nm,21.2s,baz=273,slow=32						
PANT	Pantanal (Braz	64.94	88	*e*P	P	00 04 15.7	+0.3
CZSB	Cruzeiro do Su	65.08	66	P	P	00 04 16.4	+0.1
CZSB				IAmb	IAmb	00 04 18.8	
	comp=Z,16nm,1.0s						
CZSB	Cruzeiro do Su	65.08	66	*e*P	P	00 04 16.5	+0.1
FRTB	Fartura	65.60	96	*e*P	P	00 04 18.2	-1.5
PTLB	Pontes e Lacer	66.30	83	P	P	00 04 23.8	-0.5
PTLB	Pontes e Lacer	66.30	83	*e*P	P	00 04 23.4	-0.8
SPB	Sao Paulo	66.63	98	P	P	00 04 26.4	+0.1
SPB				IAmb	IAmb	00 04 46.8	
	comp=Z,18nm,1.3s						
ETMB	Extrema	66.87	73	P	P	00 04 27.5	-0.4
ETMB	Extrema	66.87	73	*e*P	P	00 04 26.5	-1.4
PP1B	Ponte de Pedra	67.04	88	*e*P	P	00 04 27.6	-1.3
VILB	Vilhena	67.70	81	P	P	00 04 31.6	-1.6
VILB	Vilhena	67.70	81	*e*P	P	00 04 32.4	-0.8
SALV	Santo Antonio	67.92	86	*e*P	P	00 04 34.4	-0.1
ITRB	Iturama	67.99	93	*e*P	P	00 04 34.7	-0.3
SLOR	San Lorenzo -	68.13	57	P	P	00 04 36.4	+0.1
OTAV	Otavalo	68.99	57	P	P	00 04 41.4	-0.4
OTAV				IAmb	IAmb	00 04 43.3	
	comp=Z,12nm,1.4s						
OTAV	Otavalo	68.99	57	*e*P	P	00 04 42.5	+0.8
SAML	Samuel	69.27	76	P	P	00 04 41.9	-1.0
SAML				IAmb	IAmb	00 04 55.6	
	comp=Z,16nm,1.3s						
SAML	Samuel	69.27	76	*e*P	P	00 04 42.2	-0.7
CTA	Charters Tower	70.46	263	LR	LR	00 33 16.0	
	comp=Z,212nm,18.1s,baz=104,slow=34						
IPMB	Ipameri, GO	70.58	94	*e*P	P	00 04 49.9	-1.2
HNR	Honiara	71.10	281	LR	LR	00 28 48.1	
	comp=Z,2µm,21.6s,baz=121,slow=30						
BDFB	Brasilia	72.56	92	P	P	00 05 02.2	-0.9
	comp=Z,3.5nm,0.9s,baz=193,slow=1.8,SNR=3.6						
BDFB				LR	LR	00 33 08.0	
	comp=Z,801nm,21.9s,baz=210,slow=33						
	comp=Z,3.5nm,0.9s						
SNDB	Serra Nova Dou	73.59	87	*e*P	P	00 05 07.1	-2.0
SJMB	Sao Joao De Ma	74.04	100	*e*P	P	00 05 11.8	+0.2
AS31	Alice Springs	74.55	251	P	P	00 05 14.6	0.0
ASAR	Alice Springs	74.55	251	P	P	00 05 13.4	-1.3
	comp=Z,2.0nm,0.8s,baz=143,slow=6.3,SNR=14						
ASAR				LR	LR	00 34 00.5	
	comp=Z,528nm,19.5s,baz=142,slow=33						
	comp=Z,2.0nm,0.8s						
ASAR	Alice Springs	74.55	251	P	P	00 05 14.8	+0.1
JTS	Las Juntas de	74.98	46	LR	LR	00 31 28.3	
	comp=Z,416nm,18.1s,baz=94,slow=30						
JTS	Las Juntas de	74.98	46	P	P	00 05 18.2	+1.1
ROSC	El Rosal	74.99	58	LR	LR	00 32 19.4	
	comp=Z,334nm,18.7s,baz=224,slow=31						
ROSC	El Rosal	74.99	58	P	P	00 05 17.8	+0.2
ROSC				IAmb	IAmb	00 05 21.8	
	comp=Z,46nm,1.5s						
H01W1	Cape Leeuwin H	75.20	230	T	T	01 28 46.1	
	baz=147,slow=76,SNR=91						
H01W2	Cape Leeuwin H	75.21	230	T	T	01 28 48.4	
	baz=147,slow=76,SNR=98						
H01W3	Cape Leeuwin H	75.22	230	T	T	01 28 47.3	
	baz=147,slow=76,SNR=87						
NPGB	Novo Progresso	75.24	81	*e*P	P	00 05 17.0	-1.7
NAN01	Guarapari, ES	75.33	100	*e*P	P	00 05 20.0	+0.9
CNGN	Cerro Negro	76.28	43	P	P	00 05 25.4	+0.9
WB2	Warramunga Arr	77.29	254	P	P	00 05 32.2	+1.9
WB2				IAmb	IAmb	00 05 43.8	
	comp=Z,18nm,1.4s						
WRA	Warramunga Arr	77.30	254	P	P	00 05 29.1	-1.3
	comp=Z,1.3nm,0.6s,baz=146,slow=5.1,SNR=15						
WRA				LR	LR	00 35 59.0	
	comp=Z,378nm,19.9s,baz=136,slow=33						
	comp=Z,1.3nm,0.6s						
WRA	Warramunga Arr	77.30	254	P	P	00 05 30.9	+0.5
TGUH	Tegucigalpa,Un	77.47	42	P	P	00 05 31.8	+0.5
TGUH				IAmb	IAmb	00 05 45.9	
	comp=Z,19nm,1.0s						
PMG	Port Moresby	78.46	270	LR	LR	00 36 19.3	
	comp=Z,356nm,19.0s,baz=138,slow=33						
CRZF	Crozet Islands	79.02	181	P	P	00 05 40.1	+0.6
SDV	Santo Domingo	80.30	59	LR	LR	00 36 36.5	
	comp=Z,218nm,18.6s,baz=190,slow=32						
LPIG	La Paz	80.42	18	LR	LR	00 33 32.3	
	comp=Z,161nm,18.3s,baz=202,slow=30						
BAUV	El Baul	81.65	61	P	P	00 05 54.1	+0.1
BAUV				IAmb	IAmb	00 06 05.1	
	comp=Z,17nm,0.8s						
FITZ	Fitzroy Crossi	83.54	248	P	P	00 06 04.0	+0.1
MDP	Montagnes des	86.72	76	LR	LR	00 41 33.2	
	comp=Z,166nm,18.9s,baz=166,slow=33						
TXAR	Lajitas Array	86.83	23	P	P	00 06 21.1	+1.1
	comp=Z,0.5nm,0.9s,baz=170,slow=5.5,SNR=2.7						
	comp=Z,0.5nm,0.9s						
PFO	Pinyon Flats O	88.89	11	LR	LR	00 36 44.1	
	comp=Z,275nm,21.9s,baz=206,slow=29						
SUR	Sutherland	89.42	155	LR	LR	00 41 39.4	
	comp=Z,130nm,18.7s,baz=192,slow=32						
SJG	San Juan	90.41	58	LR	LR	00 41 59.1	
	comp=Z,124nm,21.6s,baz=248,slow=32						
237A	Washetta, Mont	91.32	28	P	P	00 06 39.9	-1.1
ANMO	Albuquerque	91.69	19	LR	LR	00 39 02.9	
	comp=Z,98nm,21.5s,baz=290,slow=30						
H11N3	WAKE ISLAND Hy	91.76	303	T	T	01 48 30.0	
	baz=148,slow=76,SNR=24						
H11N1	WAKE ISLAND Hy	91.76	303	T	T	01 48 31.9	
	baz=148,slow=76,SNR=26						
H11N2	WAKE ISLAND Hy	91.78	303	T	T	01 48 30.8	
	baz=148,slow=76,SNR=27						
NVAR	Mina Array Bea	93.48	9	P	P	00 06 52.9	+1.8
	comp=Z,0.5nm,0.7s,baz=178,slow=6.3,SNR=1.9						
NVAR				LR	LR	00 39 26.7	
	comp=Z,298nm,21.1s,baz=182,slow=29						
	comp=Z,0.5nm,0.7s						
146A	Union	93.91	33	P	P	00 06 49.4	-3.6
BOSA	Boshof	94.06	158	LR	LR	00 46 30.8	
	comp=Z,440nm,18.7s,baz=191,slow=34						
ELK	Elko	96.08	11	LR	LR	00 41 23.0	
	comp=Z,168nm,21.1s,baz=209,slow=30						
YBH	Yreka Blue Hor	96.45	5	LR	LR	00 41 54.5	
	comp=Z,329nm,19.2s,baz=180,slow=30						
KAPI	Kappang	97.56	250	LR	LR	00 48 11.9	
	comp=Z,301nm,20.0s,baz=154,slow=34						
LBTB	Lobatse	97.61	157	LR	LR	00 47 39.3	
	comp=Z,459nm,19.0s,baz=206,slow=33						
PDAR	Pinedale Array	98.80	15	LR	LR	00 43 21.6	
	comp=Z,244nm,20.3s,baz=203,slow=30						
ILAR	Eielson Array	120.09	352	PKP	PKPdf	00 12 25.0	-0.1
	comp=Z,2.2nm,1.1s,baz=207,slow=2.3,SNR=9.5						
TORD	Torodi Ar. Bea	123.78	118	PKP	PKPdf	00 12 33.0	-0.7
	comp=Z,0.5nm,0.8s,baz=226,slow=1.0,SNR=2.2						
ESDC	Sonseca Array	141.18	90	PKP	PKPdf	00 13 06.8	+1.1
	comp=Z,0.7nm,0.7s,baz=298,slow=2.8,SNR=2.1						
TIXI	Tiksi	144.18	328	PKP	PKPab	00 13 07.3	-0.5
	comp=Z,10nm,0.7s,baz=90,slow=22,SNR=24						
ULN	Ulaanbaatar	144.80	283		PKPdf	00 13 11.9	0.0
SONM	Songino Array	145.15	282	PKPbc	PKPbc	00 13 11.8	-0.4
	comp=Z,2.0nm,0.8s,baz=136,slow=2.9,SNR=10						
SCO	Scoresbysund	145.89	35		PKiKP	00 13 16.1	-0.9
SCO	Scoresbysund	145.89	35	*i* P	PKiKP	00 13 17.3	+0.2
DBG	Daneborg	146.92	28	*i* P	PKiKP	00 13 19.4	+0.3
NOR	Nord	147.22	14	*i* P	PKPbc	00 13 18.0	+0.7
DAG	Danmarks Havn	147.37	23	*i* P	PKPab	00 13 19.0	-0.7
RAYN	Ar Rayn	148.44	171		PKiKP	00 13 24.5	+0.6
DAVA	Damuels	153.77	90	*e*PKP	PKiKP	00 13 37.4	+3.1
	comp=Z,8.5nm,1.1s						
FETA	Feichten	154.12	91	*e*PKP	PKiKP	00 13 38.2	+3.2
	comp=Z,9.6nm,1.2s						
SQTA	Sankt Quirin	154.50	91	*e*PKP	PKiKP	00 13 38.9	+3.2
	comp=Z,4.3nm,0.9s						
MOTA	Moosalm	154.51	91	*e*PKP	PKiKP	00 13 40.2	+4.4
	comp=Z,5.9nm,1.2s						
WTTA	Wattenberg	154.77	91	*e*PKP	PKiKP	00 13 40.8	+4.4
	comp=Z,8.9nm,1.2s						
ABTA	Abfaltersbach	155.00	93	*e*PKP		00 13 39.1	
	comp=Z,5.5nm,1.6s						
KBA	Koelnbreinsper	155.66	93	*e*PKP	PKPdf	00 13 39.0	+10
	comp=Z,4.1nm,1.3s						
BIOA	Bad Ischl, Aus	156.15	92	*e*PKP	PKPdf	00 13 40.4	+11
	comp=Z,6.4nm,1.1s						
MOA	Molln	156.60	93	*e*PKP	PKPdf	00 13 40.2	+10
	comp=Z,5.0nm,1.2s						
GERES	GERESS Array B	156.77	90	PKP	PKPdf	00 13 31.1	+0.9
	comp=Z,0.7nm,0.7s,baz=172,slow=2.7,SNR=3.4						
MK31	Makanchi Array	158.42	261		PKPab	00 14 06.3	-0.7
MKAR	Makanchi Array	158.42	261	PKPab	PKPab	00 14 06.0	-1.1
	comp=Z,1.5nm,0.7s,baz=114,slow=5.9,SNR=10						
NOA	NORSAR Array B	158.62	57	PKPab	PKPab	00 14 07.1	-0.5
	comp=Z,0.6nm,0.8s,baz=268,slow=4.3,SNR=2.2						
ZALV	Zalesovo Beam	160.05	281	PKPab	PKPab	00 14 14.1	+0.3
	comp=Z,1.3nm,0.7s,baz=105,slow=3.3,SNR=3.8						
BRTR	Keskin Array B	161.12	137	PKPab	PKPab	00 14 18.9	-0.1
	comp=Z,1.8nm,0.8s,baz=186,slow=6.5,SNR=9.4						
KURBB	Kurchatov Arra	162.48	267	PP	PP	00 18 15.8	+6.0
	comp=Z,0.4nm,1.0s,baz=101,slow=4.8,SNR=4.4						
AKASG	Malin Array Be	166.56	100	PKPab	PKPab	00 14 41.5	-1.1
	comp=Z,0.5nm,0.6s,baz=256,slow=3.7,SNR=2.1						
BVAR	Borovoye Array	168.06	269	PKPab	PKPab	00 14 50.0	+0.8
	comp=Z,0.5nm,0.7s,baz=90,slow=5.8,SNR=3.1						

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*IPEC **03** 23:55:25.0±0.2, 50°.27N×18°.74E, h1^{km}, ML2.2/4, Error ellipse: s-maj=2.2km s-min=1.1km az=166.0*

PRU 03 23:55:25.4±0.0**, 50°.28N×18°.67E, h0^{km}, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.56	217	*e*PG	Pg	23 55 36.3	+0.3
OKC				*e*SG	Sg	23 55 43.8	+0.6
	comp=Z,24nm,0.6s						
OJC	Ojcow	0.73	94	*e*Pg	Pg	23 55 38.2	-1.1
OJC				*e*Sg	Sg	23 55 47.9	-0.8
MORC	Moravsky Berou	0.89	236	*e*Pg	Pg	23 55 42.2	-0.1
	baz=57						
MORC				*e*Sg	Sg	23 55 53.6	-0.2
	42nm,0.6s,baz=57						
KRLC	Kraliky	1.23	261	*e*PG	Pg	23 55 48.0	-1.0
KRLC				*e*SG	Sb	23 56 05.5	-0.5
	comp=Z,20nm,0.6s						
LANS	Liptovska Anna	1.24	155	*e*PG	Pg	23 55 48.3	-0.9
LANS				*e*SG	Sg	23 56 05.2	-0.1
LANS				*e*LG	Lg	23 56 08.9	
NIE	Niedzica	1.36	129	*e*Pg	Pg	23 55 50.7	-0.8
NIE				*e*Sg	Sb	23 56 09.6	-0.1
DPC	Dobruska-Polom	1.51	274	*e*PG	Pn	23 55 53.2	-0.5
DPC				*e*SG	Sn	23 56 14.3	+0.2
	comp=Z,21nm,0.6s						
OSTC	Ostas	1.59	281	*e*PG	Pn	23 55 54.5	-0.4
OSTC				*e*SG	Sg	23 56 16.6	0.0
	comp=Z,12nm,0.7s						
KSP	Ksiaz	1.62	291	*e*Pg	Pg	23 55 56.3	0.0
KSP				*e*Sg	Sg	23 56 18.2	+0.9
VRAC	Vranov	1.66	235	*e*Pn	Pn	23 55 55.6	-0.2
	baz=55						
VRAC				*e*Sg	Sn	23 56 18.0	+0.2
	20nm,0.6s,baz=55						
CHVC	Chvalec	1.70	281	*e*PG	Pn	23 55 56.0	-0.4
CHVC				*e*SG	Sb	23 56 19.5	0.0
	comp=Z,8.8nm,0.5s						
VYHS	Vyhne	1.79	176	*e*PN	Pn	23 55 56.1	-1.5
VYHS				*e*SN	Sn	23 56 20.1	-0.9
STHS	Stebnicka Huta	1.88	116	*e*PN	Pn	23 55 58.6	-0.2
STHS				*e*LG	Lg	23 56 36.4	
KRUC	Moravsky	1.92	231	*e*Pn	Pn	23 55 59.1	-0.2
	baz=51						
KRUC				*e*Sg	Sb	23 56 26.1	+0.5
	12nm,0.5s,baz=51						
GOPC	GO Pecny, Ondr	2.53	263	*e*SG	Sg	23 56 46.3	-0.2
	comp=Z,7.5nm,0.6s						
PRU	Pruhonice	2.67	265	*e*SG	Sg	23 56 49.8	-1.4
BRG	Berggiesshubel	3.07	283	Sg	Sg	23 57 04.5	+0.4
BRG				Amp		23 57 07.1	
	comp=Z,4.1nm,0.5s						
CKRC	Cesky Krumlov	3.19	244	*e*SG	Sg	23 57 06.0	-1.9
	comp=Z,3.3nm,0.4s						
KHC	Kasperske Hory	3.50	253	*e*PN	Pn	23 56 20.2	-0.9
KHC				*e*PG	Pb	23 56 28.2	0.0
KHC				*e*SG	Sg	23 57 14.8	-3.0
	comp=Z,5.4nm,0.5s						
CLL	Collm	3.74	288	*e*Sg	Sg	23 57 27.0	+1.5

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*IDC **04** 00:14:54.0±0.7, 55°.04S×129°.19W, h0^{km}, mb4.0/6, mbtmp4.0/6, MS3.9/33, Error ellipse: s-maj=36.2km s-min=22.7km az=160.0*

*NEIC **04** 00:14:54.1±2.0, 55°.0S±0°.1×129°.1W±0°.2, h10^{km}±1^{km}, mb5.0/24, Error ellipse: s-maj=25.4km s-min=18.1km az=191.0*

*GCMT **04** 00:15:01.2±0.3, 55°.31S±0°.02×129°.06W±0°.03, h25^{km}±1^{km}, MW4.9/83, Moment Tensor Solution. s17,c17; s83,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.55±.19; M$_{\theta\theta}$2.21±.19; M$_{\phi\phi}$-1.65±.16; M$_{r\theta}$-0.67±.30; M$_{\theta\phi}$2.41±.09; M$_{\phi r}$0.51±.27; Best double couple: M$_0$3.22100×10^{16} NP1:ϕ_s108.00000°,δ82.00000°,λ-16.00000°. NP2: ϕ_s200.00000°,δ74.00000°,λ-172.00000°. Principal axes: T 3.4050, Plg6.0000°, Azm155.0000°; N -0.3620, Plg72.0000°, Azm263.0000°; P -3.0360, Plg17.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 00:14:54.2±0.5**, 55°.0S**±0°.2×**129°.10W**±0°.09**, h10^{km}, n84, σ1^{s}07**/34**, mb4.8**/15**, MS4.0**/36**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	31.34	35	LR	LR	00 31 15.6	
	comp=Z,183nm,18.0s,baz=211,slow=31						
PMSA	Palmer Station	32.59	134	LR	LR	00 30 46.2	
	comp=Z,320nm,21.7s,baz=264,slow=29						
VNDA	Vanda	32.60	202	LR	LR	00 30 06.7	
	comp=Z,89nm,21.1s,baz=234,slow=28						
MG04	Isla Riesco	33.13	111	P	P	00 21 29.7	-0.5
MG04				IAmb	IAmb	00 21 30.7	
	comp=Z,34nm,1.1s						
TBI	Tubuai	35.05	326	*e*LR	LR	00 30 26.6	
	comp=Z,8µm,25.5s						
TBI				*e*LR	LR	00 30 26.8	
	comp=Z,2µm,29.0s						
TBI	Tubuai	35.05	326	*e*T	T	00 58 36.5	
	comp=Z,44nm,0.3s						
QSPA	South Pole Qui	35.19	180	P	P	00 21 49.6	+1.5
	comp=Z,3.5nm,0.9s,baz=91,slow=5.2,SNR=7.1						
QSPA				LR	LR	00 34 40.4	
	comp=Z,280nm,18.9s,baz=90,slow=34						
	comp=Z,3.5nm,0.9s						
QSPA	South Pole Qui	35.19	180	P	P	00 21 48.7	+0.5
ESPZ	Base Esperanza	35.96	133	P	P	00 21 53.1	-1.3
RPZ	Rata Peaks	39.41	261	LR	LR	00 35 18.7	
	comp=Z,298nm,18.2s,baz=128,slow=31						
URZ	Urewera	39.47	272	LR	LR	00 34 55.1	
	comp=Z,278nm,19.6s,baz=216,slow=30						
NNZ	Nelson	39.66	266	P	P	00 22 26.7	+0.7
PPT2	Papeete2	40.49	329	*e*LR	LR	00 32 58.2	
	comp=Z,408nm,28.2s						
PPT2				*e*LR	LR	00 32 58.4	
	comp=Z,616nm,26.2s						
PPT	Papeete	40.51	329	LR	LR	00 34 38.5	
	comp=Z,242nm,18.4s,baz=172,slow=29						
H03S2	Juan Fernandez	40.52	80	T	T	01 05 35.8	
	baz=221,slow=74,SNR=34						
H03S1	Juan Fernandez	40.52	80	T	T	01 05 37.5	
	baz=221,slow=74,SNR=36						
H03S3	Juan Fernandez	40.53	80	T	T	01 05 36.8	
	baz=221,slow=74,SNR=35						
PLCA	Paso Flores	40.56	94	LR	LR	00 35 20.9	
	comp=Z,139nm,18.1s,baz=216,slow=30						
H03N3	Juan Fernandez	40.80	79	T	T	01 05 54.1	
	baz=224,slow=72,SNR=208						
H03N2	Juan Fernandez	40.80	79	T	T	01 05 51.4	
	baz=224,slow=72,SNR=216						
H03N1	Juan Fernandez	40.81	79	T	T	01 05 51.6	
	baz=224,slow=72,SNR=227						
RAR	Rarotonga	40.84	313	LR	LR	00 34 52.3	
	comp=Z,151nm,20.9s,baz=167,slow=29						
VAH	Vaihoa	42.19	333	*e*T	T	01 07 33.2	
	comp=Z,70nm,0.3s						
PMOR	Pomariorio Ree	42.48	333	*e*T	T	01 08 05.2	
	comp=Z,7.1nm,0.3s						
BO02	Sierra Bellavi	44.49	88	P	P	00 23 04.5	-1.1
BO02				IAmb	IAmb	00 23 16.9	
	comp=Z,10nm,1.0s						
VA01	Torpederas	45.27	85	P	P	00 23 10.9	-0.8
LMEL	Las Melosas	45.50	87	P	P	00 23 13.1	-0.6
MT05	Renca	45.52	87	P	P	00 23 13.0	-0.8
MT05				IAmb	IAmb	00 23 16.4	
	comp=Z,62nm,1.5s						
MT08	Bocatoma Ro	45.90	87	P	P	00 23 16.5	-0.5
MT08				IAmb	IAmb	00 23 35.5	
	comp=Z,12nm,1.2s						
NIUE	Niue	47.32	303	P	P	00 23 26.0	-1.9
CO05	La Serena	47.80	83	P	P	00 23 31.1	-0.4
CO05				IAmb	IAmb	00 23 55.0	
	comp=Z,25nm,0.9s						
CFA	Coronel Fontan	48.27	87	P	P	00 23 36.1	+0.9
	comp=Z,1.1nm,0.7s,baz=249,slow=8.6,SNR=1.8						
CFA				LR	LR	00 38 58.6	
	comp=Z,164nm,21.7s,baz=166,slow=30						
	comp=Z,1.1nm,0.7s						
LCO	Las Campanas	48.79	83	P	P	00 23 38.5	-1.1
LCO				IAmb	IAmb	00 23 51.4	
	comp=Z,24nm,1.3s						
AFI	Afiamalu	52.65	304	LR	LR	00 40 28.3	
	comp=Z,71nm,19.7s,baz=118,slow=29						
LVC	Limon Verde	54.75	79	LR	LR	00 42 28.1	
	comp=Z,41nm,21.1s,baz=216,slow=30						
MAW	Mawson	57.41	185	LR	LR	00 46 56.4	
	comp=Z,127nm,19.3s,baz=164,slow=34						
DZM	Mont Dzumac	57.60	278	*e*LR	LR	00 40 55.1	
	comp=Z,140nm,27.7s						
CPUP	Villa Florida	58.51	92	LR	LR	00 46 47.1	
	comp=Z,146nm,19.0s,baz=226,slow=33						
NNA	Nana	59.08	64	LR	LR	00 44 45.7	
	comp=Z,28nm,21.4s,baz=180,slow=30						
ARMA	Armidale	59.71	259	P	P	00 24 57.3	-1.7
ARMA				IAmb	IAmb	00 25 10.3	
	comp=Z,13nm,1.4s						
KOUNC	Koumac, New Ca	60.03	277	P	P	00 25 01.2	+0.2

KOUNC				IAmb	IAmb	00 25 06.5	
	comp=Z,29nm,1.5s						
LPAZ	La Paz	60.23	75	P	P	00 25 05.4	+2.2
	comp=Z,3.3nm,0.8s,baz=217,slow=4.7,SNR=8.5						
	comp=Z,3.3nm,0.8s						
LPAZ	La Paz	60.23	75	P	P	00 25 03.7	+0.5
LPAZ				IAmb	IAmb	00 25 06.8	
	comp=Z,7.2nm,1.1s						
ATAH	Atahualpa	62.41	60	LR	LR	00 46 06.9	
	comp=Z,103nm,21.2s,baz=210,slow=30						
STKA	Stephens Creek	64.19	251	LR	LR	00 47 59.6	
	comp=Z,79nm,21.1s,baz=198,slow=31						
PTLB	Pontes e Lacer	66.00	83	P	P	00 25 40.5	-0.2
ETMB	Extrema	66.59	73	P	P	00 25 44.2	-0.4
SAML	Samuel	68.98	75	P	P	00 25 60.0	+0.3
CTA	Charters Tower	70.76	262	LR	LR	00 53 17.3	
	comp=Z,38nm,18.4s,baz=94,slow=33						
ROSC	El Rosal	74.76	58	LR	LR	00 53 54.0	
	comp=Z,128nm,19.4s,baz=257,slow=31						
ASAR	Alice Springs	74.83	251	P	P	00 26 35.5	+0.7
	comp=Z,1.2nm,0.9s,baz=139,slow=5.2,SNR=7.0						
ASAR				LR	LR	00 56 20.1	
	comp=Z,94nm,18.2s,baz=123,slow=33						
	comp=Z,1.2nm,0.9s						
ASAR	Alice Springs	74.83	251	P	P	00 26 34.1	-0.7
H01W1	Cape Leeuwin H	75.40	229	T	T	01 50 02.4	
	baz=147,slow=76,SNR=35						
H01W2	Cape Leeuwin H	75.41	229	T	T	01 50 04.1	
	baz=147,slow=76,SNR=38						
H01W3	Cape Leeuwin H	75.42	229	T	T	01 50 05.2	
	baz=147,slow=76,SNR=33						
WRA	Warramunga Arr	77.58	253	P	P	00 26 51.1	+0.6
	comp=Z,1.0nm,0.7s,baz=143,slow=5.0,SNR=7.0						
WRA				LR	LR	00 57 12.8	
	comp=Z,114nm,19.4s,baz=142,slow=33						
	comp=Z,1.0nm,0.7s						
WRAB	Tennant Creek	77.58	253	P	P	00 26 50.3	-0.1
WRAB				IAmb	IAmb	00 26 58.0	
	comp=Z,9.7nm,0.8s						
MLOA	Mauna Loa Obse	77.59	334	P	P	00 26 49.6	-1.1
PMG	Port Moresby	78.78	270	LR	LR	00 58 21.3	
	comp=Z,80nm,18.6s,baz=20,slow=33						
LPIG	La Paz	80.39	17	LR	LR	00 54 25.7	
	comp=Z,61nm,19.1s,baz=10,slow=30						
BIRV	Birongo	83.61	62	P	P	00 27 22.6	-0.1
FITZ	Fitzroy Crossi	83.80	247	P	P	00 27 23.9	+0.2
TXAR	Lajitas Array	86.77	22	P	P	00 27 40.4	+2.1
	comp=Z,0.5nm,0.9s,baz=190,slow=6.4,SNR=4.9						
	comp=Z,0.5nm,0.9s						
PFO	Pinyon Flats O	88.90	11	LR	LR	00 58 15.3	
	comp=Z,69nm,21.0s,baz=244,slow=29						
SUR	Sutherland	89.22	155	LR	LR	01 00 48.2	
	comp=Z,67nm,20.1s,baz=182,slow=31						
H11S2	WAKE ISLAND Hy	91.12	301	T	T	02 09 10.6	
	baz=149,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	91.13	301	T	T	02 09 14.1	
	baz=149,slow=76,SNR=13						
H11S1	WAKE ISLAND Hy	91.14	301	T	T	02 09 16.5	
	baz=149,slow=76,SNR=9.9						
ANMO	Albuquerque	91.66	18	LR	LR	01 01 28.9	
	comp=Z,37nm,18.2s,baz=269,slow=30						
H11N3	WAKE ISLAND Hy	92.06	302	T	T	02 10 17.4	
	baz=156,slow=79						
H11N1	WAKE ISLAND Hy	92.07	302	T	T	02 10 17.7	
	baz=156,slow=79						
H11N2	WAKE ISLAND Hy	92.08	302	T	T	02 10 18.6	
	baz=156,slow=79						
NVAR	Mina Array Bea	93.50	8	LR	LR	01 00 35.7	
	comp=Z,73nm,21.0s,baz=270,slow=29						
BOSA	Boshof	93.87	158	LR	LR	01 07 36.2	
	comp=Z,89nm,18.2s,baz=188,slow=34						
ELK	Elko	96.09	11	LR	LR	01 05 28.0	
	comp=Z,38nm,18.6s,baz=165,slow=32						
YBH	Yreka Blue Hor	96.50	5	LR	LR	01 03 33.8	
	comp=Z,85nm,18.4s,baz=170,slow=30						
LBTB	Lobatse	97.42	157	LR	LR	01 08 35.0	
	comp=Z,63nm,19.2s,baz=208,slow=33						
KAPI	Kappang	97.83	250	LR	LR	01 09 04.7	
	comp=Z,65nm,20.9s,baz=195,slow=33						
PDAR	Pinedale Array	98.79	14	LR	LR	01 05 01.1	
	comp=Z,55nm,20.1s,baz=195,slow=30						
ILAR	Eielson Array	120.20	351	PKP	PKiKP	00 33 45.6	+1.7
	comp=Z,0.7nm,0.8s,baz=185,slow=1.8,SNR=7.2						
TORD	Torodi Ar. Bea	123.47	118	PKP	PKPdf	00 33 51.4	-0.2
	comp=Z,0.2nm,0.6s,baz=202,slow=2.3,SNR=1.4						
SONM	Songino Array	145.47	282	PKPbc	PKPab	00 34 32.4	+0.5
	comp=Z,0.7nm,0.5s,baz=128,slow=4.4,SNR=6.1						
MKAR	Makanchi Array	158.72	260	PKPab	PKPab	00 35 27.4	+0.5
	comp=Z,0.2nm,0.3s,baz=125,slow=4.4,SNR=2.5						
ZALV	Zalesovo Beam	160.37	281	PKPab	PKPab	00 35 35.5	+1.7
	comp=Z,0.5nm,0.6s,baz=94,slow=4.8,SNR=4.1						

THE ***04*** *00:25:16.8, 38°.65N×23°.77E, h2^{km}±21^{km}, ML1.7/5, Error ellipse: s-maj=21.8km s-min=0.6km az=57.0*

ATH 04 00:25:16.9, 38°.63N×23°.78E, h10^{km}±2^{km}, ML1.7/16, Error ellipse: s-maj=2.0km s-min=0.6km az=82.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EREA	Eretria	0.24	150	P	Pg	00 25 21.9	-0.1
EREA				S	Sg	00 25 25.5	+0.2
	520nm,0.2s						
EREA	Eretria	0.24	150	P	Pg	00 25 21.8	-0.2
EREA				S	Sg	00 25 25.6	+0.2
EREA				AML	AML	00 25 26.1	
	comp=N,844µm,0.3s						
EREA				AML	AML	00 25 26.2	
	comp=E,1218µm,0.2s						
KYMI	Kymi, Euboea I	0.26	90	P	Pg	00 25 22.1	0.0
KYMI				S	Sg	00 25 25.5	-0.1
	comp=E,155nm,0.2s						
KYMI	Kymi, Euboea I	0.26	90	P	Pg	00 25 22.1	-0.1
KYMI				S	Sg	00 25 25.5	-0.1
KYMI				AML	AML	00 25 26.8	
	comp=N,305µm,0.1s						
KYMI				AML	AML	00 25 27.6	
	comp=E,311µm,0.2s						
DION	Dionisos Attik	0.57	167	P	Pg	00 25 28.3	+0.4
DION				S	Sg	00 25 35.9	+0.5
	comp=E,280nm,0.2s						
DION	Dionisos Attik	0.57	167	P	Pg	00 25 28.1	+0.2
DION				S	Sg	00 25 35.7	+0.3
DION				AML	AML	00 25 39.4	
	comp=N,384µm,0.4s						
DION				AML	AML	00 25 39.5	
	comp=E,315µm,0.2s						
VIL2	Platees	0.58	224	P	Pg	00 25 27.6	-0.5
VIL2				S	Sg	00 25 36.3	+0.5
VIL2				AML	AML	00 25 39.5	
	comp=E,152µm,0.3s						
VIL2				AML	AML	00 25 40.7	
	comp=N,196µm,0.2s						
PTL	Penteli	0.59	173	P	Pg	00 25 28.3	0.0
PTL				S	Sg	00 25 36.4	+0.4
PTL				AML	AML	00 25 39.6	
	comp=E,206µm,0.5s						
PTL				AML	AML	00 25 39.7	
	comp=N,425µm,0.3s						
ATAL	Atalanti	0.59	276	P	Pg	00 25 28.0	-0.4
ATAL				S	Sg	00 25 36.9	+0.7
	comp=N,20nm,0.2s						
ATAL	Atalanti	0.59	276	P	Pg	00 25 28.3	-0.1
ATAL				S	Sg	00 25 36.5	+0.3
ATAL				AML	AML	00 25 39.8	
	comp=E,46µm,0.2s						
ATAL				AML	AML	00 25 39.8	
	comp=N,51µm,0.2s						
LKR	Lokris	0.61	272	P	Pg	00 25 28.3	-0.4
LKR				S	Sg	00 25 37.1	+0.4
LKR				AML	AML	00 25 40.3	
	comp=N,90µm,0.2s						
LKR				AML	AML	00 25 40.9	
	comp=E,137µm,0.2s						
ATH	Athens Observa	0.66	184	P	Pg	00 25 29.5	-0.2
ATH				S	Sg	00 25 38.7	+0.3
ATH				AML	AML	00 25 41.4	
	comp=N,310µm,0.2s						
ATH				AML	AML	00 25 41.5	
	comp=E,305µm,0.3s						
ATHU	Athens Univers	0.66	179	P	Pg	00 25 28.9	-0.8
ATHU				S	Sg	00 25 38.5	+0.1
ATHU				AML	AML	00 25 41.0	
	comp=E,72µm,0.2s						
ATHU				AML	AML	00 25 41.1	
	comp=N,110µm,0.4s						
VLY	Voula,Athens	0.78	179	P	Pg	00 25 31.2	-0.7
VLY				AML	AML	00 25 44.0	
	comp=N,251µm,0.3s						
VLY				AML	AML	00 25 44.4	
	comp=E,253µm,0.2s						
NEO	Neokhori	0.80	328	P	Pg	00 25 32.0	-0.4
NEO				S	Sg	00 25 42.6	-0.2
	comp=E,72nm,0.4s						
NEO	Neokhori	0.80	328	P	Pg	00 25 32.0	-0.3
NEO				S	Sg	00 25 42.6	-0.2
NEO				AML	AML	00 25 45.5	
	comp=E,125µm,0.2s						
NEO				AML	AML	00 25 47.1	
	comp=N,238µm,0.4s						
XOR	Xorichti	0.86	328	P	Pg	00 25 33.1	-0.5
XOR				S	Sb	00 25 45.4	-0.2
XOR				AML	AML	00 25 48.6	
	comp=E,57µm,0.4s						
XOR				AML	AML	00 25 48.9	
	comp=N,125µm,0.4s						
AXAR	Agios Charalam	0.88	279	P	Pg	00 25 33.7	-0.2
AXAR				S	Sg	00 25 45.2	-0.3
AXAR				AML	AML	00 25 50.2	
	comp=N,74µm,0.3s						
AXAR				AML	AML	00 25 50.6	
	comp=E,79µm,0.4s						
LOUT	Loutraki	0.90	225	P	Pg	00 25 33.8	-0.4
LOUT				S	Sg	00 25 46.1	+0.2
LOUT				AML	AML	00 25 49.1	
	comp=N,37µm,0.2s						
LOUT				AML	AML	00 25 50.2	
	comp=E,38µm,0.3s						
THAL	Thalero	1.06	236	P	Pg	00 25 36.5	-0.8
THAL				S	Sb	00 25 51.3	+0.2
THAL				AML	AML	00 25 55.2	
	comp=N,110µm,0.2s						
THAL				AML	AML	00 25 55.4	
	comp=E,96µm,0.2s						
AGG	Agios Georgios	1.19	290	P	Pb	00 25 39.0	-0.6
KRND	KRANIDI	1.34	202	P	Pn	00 25 40.5	-1.2
KRND				AML	AML	00 26 02.4	
	comp=E,44µm,0.4s						
KRND				AML	AML	00 26 03.4	
	comp=N,37µm,0.4s						
KLV	Kalavryta, Ach	1.41	246	P	Pn	00 25 41.8	-0.8
ANX	Ano Chora	1.45	269	P	Pn	00 25 42.4	-0.9

ISK 04 00:25:22.8, 39°.48N×26°.05E, h13^{km}, ML1.6/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GPNR	Gulpinar-Canak	0.07	109	Pg	Pg	00 25 25.5	+0.1
SIGR	SIGRI	0.31	209	Pg	Pb	00 25 29.8	-0.4
SIGR				Sg	Sb	00 25 34.3	-0.8
BOZC	Bozcaada	0.36	0	Pg	Pg	00 25 30.5	+0.4
BOZC				Sg	Sb	00 25 35.9	-0.9
EZN	Ezine	0.41	32	Pg	Pg	00 25 31.1	+0.2
COMU	Canakkale	0.70	28	Pg	Pb	00 25 36.9	0.0
GADA	Gvkgeada	0.72	351	Pg	Pb	00 25 37.3	+0.1
DKL	Dikili	0.78	121	Pg	Pb	00 25 38.3	+0.1
GELI	Tayfur-Gelibol	0.97	19	Pg	Pg	00 25 41.9	+0.3
LPK	Lapseki	1.05	31	Pg	Pn	00 25 43.5	+0.3
URLA	Izmir	1.20	159	Pn	Pb	00 25 45.5	+0.1
ERIK	Erikli-Kesan	1.24	16	Pn	Pn	00 25 46.0	+0.1
ENEZ	Enez	1.26	4	Pn	Pb	00 25 46.4	0.0
ALN	Alexandroupoli	1.42	360	Pn	Pb	00 25 49.1	0.0
RKY	Sarkoy-Tekirda	1.48	35	Pn	Pn	00 25 49.5	+0.2

ISK ***04*** *00:47:12.4, 37°.51N×38°.56E, h24^{km}, ML2.0/8*

DDA 04 00:47:11.3±0.0, 37°.58N×38°.50E, h7^{km}±2^{km}, ML1.8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URFA	Urfa	0.29	119	Pg	Pb	00 47 18.8	-0.1
URFA				Sg	Sb	00 47 22.9	-1.0
HANM	anlurfa/Hi	0.30	90	P	Pg	00 47 17.6	+0.4
HANM				S	Sg	00 47 21.6	+0.5
AZEY	Adyaman-Merk	0.31	319	P	Pg	00 47 17.8	+0.4
AZEY				S	Sg	00 47 22.3	+0.9
NARI	Adyaman-Kaht	0.36	34	P	Pg	00 47 18.6	+0.1
NARI				S	Sg	00 47 22.7	-0.6
SANL	SANLIURFA_Merk	0.56	136	P	Pb	00 47 22.9	-0.6
SANL				S	Sg	00 47 30.6	+1.1
SANL				*i* AML	AML	00 47 36.0	
	comp=E,54nm,0.3s						
AKCA	Adyaman/G¶l	0.68	288	P	Pg	00 47 24.9	+0.4
AKCA				S	Sg	00 47 34.3	+0.9
AKCA				*i* AML	AML	00 47 35.0	
	comp=E,30nm,0.2s						
SURC	SANLIURFA_SURC	0.71	173	P	Pb	00 47 25.4	-0.5
SURC				S	Sb	00 47 35.2	-0.6
SURC				*i* AML	AML	00 47 39.0	
	comp=E,47nm,0.4s						
MAYA	Malatya/Merkez	0.75	355	P	Pg	00 47 25.6	-0.1
MAYA				S	Sg	00 47 34.8	-0.6
GZT	Gaziantep	0.78	254	P	Pb	00 47 27.7	+0.4
GZT				S	Sb	00 47 37.4	-0.7
GZT				*i* AML	AML	00 47 41.0	
	comp=E,60nm,0.2s						
AKCD	Akcadag	0.85	327	P	Pg	00 47 27.6	-0.1
AKCD				S	Sg	00 47 37.8	-0.9
NZIP	Nizip/Gaziante	0.85	231	P	Pn	00 47 29.6	-0.2
NZIP				S	Sb	00 47 40.2	+0.1
NZIP				*i* AML	AML	00 47 42.0	
	comp=E,27nm,0.3s						
ELZG	Elazig	0.99	22	P	Pg	00 47 29.8	-0.6
ELZG				S	Sb	00 47 44.8	+0.6
GAZ	Gaziantep	1.11	249	Pn	Pn	00 47 33.7	+0.4
GAZ				Sn	Sb	00 47 48.1	+0.6
KAHM	Kahramanmaras,	1.21	267	P	Pn	00 47 37.7	+3.1
KAHM				S	Sg	00 47 49.3	-0.8
DARE	Darende-Malaty	1.27	321	Pn	Pg	00 47 36.6	+0.8
DARE				Sn	Sn	00 47 54.1	+1.0
HCB	Kahramanmara	1.29	260	P	Pn	00 47 35.2	-0.6
HCB				S	Sb	00 47 50.6	-2.2
DYBB	Diyarbakir	1.35	74	Pn	Pn	00 47 36.3	-0.3
DYBB				Sn	Sb	00 47 53.2	-1.2
HEKM	Malatya_Hekimh	1.36	342	P	Pn	00 47 37.0	0.0
HEKM				S	Sg	00 47 55.3	+0.1
HEKM				*i* AML	AML	00 48 00.0	
	comp=E,12nm,0.5s						
KUZU	Kuzuini	1.40	235	P	Pg	00 47 39.1	+1.0
KUZU				S	Sg	00 47 56.4	+0.2
KUZU				*i* AML	AML	00 48 03.0	
	comp=E,47nm,0.3s						
KUZU	Kuzuini	1.40	235	P	Pg	00 47 39.1	+1.0
KUZU				S	Sg	00 47 56.8	+0.6
KUZU				*i* AML	AML	00 48 03.0	
	comp=E,47nm,0.3s						
ARPR	Arapgir-MALATY	1.52	355	Pn	Pb	00 47 39.7	-0.1
KAMA	Osmaniye	1.52	255	P	Pb	00 47 39.5	-0.3
KOVA	Elazig, Kovanc	1.52	42	P	Pg	00 47 41.3	+0.7
KOVA				S	Sg	00 48 00.1	-0.3
KEMA	Kemaliye	1.69	360	P	Pn	00 47 39.1	-2.2
KEMA				S	Sg	00 48 05.8	+0.3
KEMA	Kemaliye	1.69	360	P	Pn	00 47 38.3	-2.9
KEMA				S	Sg	00 48 04.9	-0.5
HANI	Diyarbakir_Han	1.71	60	P	Pg	00 47 44.6	+0.4
HANI				S	Sb	00 48 04.9	-0.1
HANI				*i* AML	AML	00 48 09.0	
	comp=E,7.9nm,0.4s						
SARI	SarD1z-Kayseri	1.84	297	Pn	Pn	00 47 44.1	+0.6
KOZT	Kozan	2.13	268	Pn	Pn	00 47 48.3	+1.0
SVAN	Silvan-Diyarba	2.21	74	Pn	Pn	00 47 47.8	-0.6

ISK ***04*** *00:49:41.6, 37°.54N×38°.55E, h19^{km}, ML1.7/4*

DDA 04 00:49:39.6±0.0, 37°.58N×38°.49E, h7^{km}±2^{km}, ML1.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URFA	Urfa	0.30	118	Pg	Pb	00 49 47.4	+0.1
URFA				Sg	Sb	00 49 51.9	-0.6
AZEY	Adyaman-Merk	0.30	320	P	Pg	00 49 46.2	+0.7
AZEY				S	Sg	00 49 50.3	+0.8
HANM	anlurfa/Hi	0.31	90	P	Pg	00 49 46.2	+0.5
HANM				*i* AML	AML	00 49 50.0	
	comp=N,50nm,0.2s						
HANM				S	Sg	00 49 50.5	+0.8
NARI	Adyaman-Kaht	0.37	35	P	Pg	00 49 47.2	+0.4
NARI				S	Sg	00 49 52.4	+0.7
SANL	SANLIURFA_Merk	0.57	136	P	Pg	00 49 50.9	+0.3
SANL				S	Sg	00 49 59.0	+1.0
AKCA	Adyaman/G¶l	0.67	289	P	Pb	00 49 53.3	-0.4
AKCA				S	Sb	00 50 02.4	-0.9
MAYA	Malatya/Merkez	0.74	356	P	Pg	00 49 54.1	+0.2
MAYA				S	Sg	00 50 04.4	+0.8
GZT	Gaziantep	0.77	253	P	Pg	00 49 54.9	+0.4
GZT				S	Sb	00 50 07.4	+1.2
AKCD	Akcadag	0.84	328	P	Pg	00 49 56.0	+0.2
AKCD				S	Sb	00 50 07.6	-0.6
NZIP	Nizip/Gaziante	0.85	231	P	Pn	00 49 58.6	+0.6
NZIP				S	Sb	00 50 07.9	-0.3
NZIP				*i* AML	AML	00 50 14.0	
	comp=E,13nm,0.4s						
ELZG	Elazig	0.99	23	P	Pb	00 49 59.1	-0.1
ELZG				S	Sn	00 50 13.7	-0.8
GAZ	Gaziantep	1.10	249	Pn	Pn	00 50 03.2	+1.7
GAZ				Sn	Sn	00 50 18.5	+1.5
DARE	Darende-Malaty	1.27	321	Pn	Pg	00 50 05.6	+1.7
DARE				Sn	Sn	00 50 23.6	+2.4
MAZI	Mazidag	1.56	94	Pn	Pn	00 50 07.9	+0.1

NOU ***04*** *01:09:19.0, 41°.38S×172°.09E, h4^{km}, MLv3.8/7, South Island, New Zealand*

WEL ***04*** *01:09:19.7±0.4, 41°S±2°×17°2E±°, h5^{km}, M3.3/13, ML3.5/13, MLv3.3/13, Error ellipse: s-maj=0.0km s-min=0.0km az=152.9, confirmed*

ISC 04 01:09:18.8±1.2, 41°.41S±0°.03×172°.24E±0°.03, h7^{km}±11^{km}, n70, σ1^{s}.06/83, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRNZ	Matariki Terra	0.39	89	P	Pg	01 09 26.8	+0.4
MRNZ				S	Sg	01 09 31.8	+0.2
MCASZ	Murchison	0.40	170	P	Pg	01 09 26.1	-0.5
MCASZ				S	Sg	01 09 31.9	+0.1
DSZ	Denniston Nort	0.47	224	P	Pb	01 09 29.3	-0.1
DSZ				S	Sb	01 09 36.2	-0.5
THZ	Tophouse	0.61	125	P	Pg	01 09 30.5	-0.2
THZ				S	Sg	01 09 38.0	-0.6
QRZ	Quartz Range	0.62	21	P	Pb	01 09 31.7	-0.4
QRZ	Quartz Range	0.62	21	P	Pb	01 09 31.7	-0.4
QRZ				S	Sg	01 09 39.7	+0.8
TKNZ	Takaka Hill	0.66	56	P	Pg	01 09 31.7	+0.1
TKNZ				S	Sg	01 09 40.2	0.0
NNZ	Nelson	0.88	78	P	Pg	01 09 35.0	-0.7
NNZ				S	Sg	01 09 47.1	0.0
BSWZ	Blackbirch Sta	1.27	105	P	Pn	01 09 42.7	-0.3
BSWZ				S	Sg	01 09 59.0	-0.5
TUWZ	Tuamarina	1.28	92	P	Pn	01 09 42.0	-1.2
TUWZ				S	Sg	01 09 59.5	-0.6
LTZ	Lake Taylor	1.37	179	P	Pb	01 09 45.3	+0.4
LTZ				S	Sb	01 10 03.3	+0.6
KHZ	Kahutara	1.40	136	P	Pg	01 09 46.0	+0.3
KHZ	Kahutara	1.40	136	P	Pg	01 09 45.9	+0.3
KHZ				S	Sg	01 10 04.9	+1.1
DUWZ	D'Urville Isla	1.41	65	P	Pn	01 09 44.5	-0.5
DUWZ				S	Sb	01 10 02.6	-1.1
INZ	Inchbonnie	1.44	204	P	Pn	01 09 45.1	-0.3
CMWZ	Cape Campbell	1.52	104	P	Pg	01 09 48.0	+0.1
CMWZ				S	Sg	01 10 09.4	+1.7
TCW	Tory Channel	1.55	83	P	Pn	01 09 47.0	+0.1
TCW				S	Sn	01 10 07.1	-0.1
GVZ	Greta Valley S	1.67	159	P	Pb	01 09 50.1	+0.2
AMCZ	Amberley	1.79	170	P	Pn	01 09 50.9	+0.6
WVZ	Waitaha Valley	2.00	213	P	Pn	01 09 53.3	+0.2
KIW	Kapiti Island	2.09	76	P	Pb	01 09 56.0	-1.1
CAW	Cannon Point	2.15	83	P	Pn	01 09 56.5	+1.3
MHCZ	Mount Hutt	2.18	193	P	Pn	01 09 55.7	+0.1
PLWZ	Palliser	2.27	95	P	Pn	01 09 57.4	+0.6
OGWZ	Otaki Gorge	2.29	76	P	Pn	01 09 58.6	+1.5
MQZ	McQueen's Vall	2.32	172	P	Pn	01 09 57.1	-0.3
RACZ	Rakaia	2.32	182	P	Pn	01 09 57.3	-0.1
GCSZ	Gaunt Creek Bo	2.38	216	P	Pn	01 09 58.4	+0.2
PAWZ	Paruwai Farm	2.40	90	P	Pn	01 09 58.6	0.0
RPZ	Rata Peaks	2.46	200	P	Pn	01 10 01.1	+1.6
RPZ	Rata Peaks	2.46	200	P	Pn	01 10 00.6	+1.1
MTW	Mount Morrison	2.47	85	P	Pn	01 09 59.7	+0.1
KHEZ	Kahui Hut	2.51	33	P	Pn	01 10 01.2	+1.0
KHEZ	Kahui Hut	2.51	33	P	Pn	01 10 01.3	+1.2
AKCZ	Akaroa Harbour	2.51	169	P	Pn	01 10 00.8	+0.7
HOWZ	Holdsworth Sta	2.53	79	P	Pn	01 10 00.8	+0.5
MRZ	Mangatainoka R	2.64	75	P	Pn	01 10 03.7	+1.9
ARCZ	Arundel	2.66	197	P	Pn	01 10 02.0	-0.1
TMWZ	Te Maipa	2.77	85	P	Pn	01 10 05.7	+2.0
FOZ	Fox Glacier	2.78	219	P	Pn	01 10 03.5	-0.3
TIWZ	Tintock	2.83	78	P	Pb	01 10 10.1	+0.4
POWZ	Post Office Ro	2.86	70	P	Pb	01 10 07.7	-2.5
PRWZ	Pori Road	2.95	74	P	Pn	01 10 07.3	+1.2
VRZ	Vera Road	2.99	41	P	Pn	01 10 07.5	+0.9
CPWZ	Castlepoint	3.04	82	P	Pn	01 10 10.1	+2.8
TMZ	Timaru	3.11	197	P	Pn	01 10 08.1	-0.3
BFZ	Birch Farm	3.12	78	P	Pn	01 10 06.7	-1.8
PKVZ	Pokaka	3.18	49	P	Pn	01 10 11.0	+1.7
MTVZ	Mangateitei	3.19	52	P	Pn	01 10 12.2	+2.7
TRVZ	Turoa	3.29	51	P	Pn	01 10 12.2	+1.1
WNVZ	Wahianoa	3.30	52	P	Pn	01 10 11.4	+0.3
FWVZ	Far West T-bar	3.32	51	P	Pn	01 10 12.5	+1.0
WHVZ	Whangaehu Hut	3.33	51	P	Pn	01 10 12.0	+0.5
TUVZ	Tukino	3.38	52	P	Pn	01 10 11.6	-0.5
TWVZ	Taurewa	3.38	47	P	Pn	01 10 14.8	+2.6
NGZ	Ngauruhoe	3.41	50	P	Pn	01 10 13.0	+0.5
SNVZ	South Ngauruho	3.42	51	P	Pn	01 10 12.6	-0.2
WTVZ	West Tongariro	3.44	49	P	Pn	01 10 13.8	+0.8
NNVZ	North Ngauruho	3.44	50	P	Pn	01 10 13.4	+0.4
ETVZ	East Tongariro	3.50	51	P	Pn	01 10 12.7	-1.0
TMVZ	Te Maari	3.50	50	P	Pn	01 10 12.6	-1.2
HIZ	Hauiti	3.52	36	P	Pn	01 10 15.0	+1.0
HIZ	Hauiti	3.52	36	P	Pn	01 10 14.3	+0.3
JCZ	Jackson Bay	3.68	223	P	Pn	01 10 15.7	-0.6
JCZ	Jackson Bay	3.68	223	P	Pn	01 10 15.8	-0.4
RITZ	Rihia Road	3.69	50	P	Pn	01 10 14.5	-1.8
ODZ	Otahua Downs	3.82	197	P	Pn	01 10 17.4	-0.6
ODZ	Otahua Downs	3.82	197	P	Pn	01 10 17.6	-0.4
RAGZ	Rawiri	4.93	56	P	Pn	01 10 36.4	+3.0
TWGZ	Tauwhareparae	5.47	56	P	Pb	01 10 48.1	-6.7

LDG ***04*** *01:29:25.6±0.1, 47°.82N×9°.40E, h20^{km}, Ml2.7/18, Error ellipse: s-maj=1.3km s-min=1.1km az=68.0*

BGR ***04*** *01:29:25.7±0.1, 47°.86N×9°.42E, h10^{km}, ML2.5/18, Error ellipse: s-maj=2.2km s-min=1.1km az=162.0*

PRU ***04*** *01:29:25.2±0.0, 47°.84N×9°.47E, h23^{km}*

ZUR ***04*** *01:29:25.4, 47°.82N×9°.41E, h20^{km}, MLh2.6/58, Error ellipse: s-maj=1.1km s-min=0.6km az=149.0*

STR ***04*** *01:29:27.6±1.1, 48°N±4°×°±°, h21^{km}±5^{km}, MLv2.5/18, Error ellipse: s-maj=0.0km s-min=0.0km az=96.3, preliminary*

ISC 04 01:29:25.1±0.8, 47°.83N±0°.01×9°.40E±0°.01, h19^{km}±1^{km}, n173, σ1^{s}.54/278, 33C-17D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WALHA	Wallhausen, DE	0.20	248	⇑*i*Pg	Pb	01 29 30.8	+1.2
WALHA				Sg	Sg	01 29 34.6	+1.1
WALHA	Wallhausen, DE	0.20	248	⇑Pg	Pb	01 29 30.8	+1.2
TETT	Tettnang	0.22	139	⇓*i*Pg	Pb	01 29 30.8	+0.6
TETT				Sg	Sb	01 29 34.7	+1.1
SKRK	Kreuzlingen, K	0.23	219	⇑Pg	Pb	01 29 31.2	+0.7
SKRK				Sg	Sg	01 29 35.4	+1.1
ROMAN	Romanshorn, Fo	0.27	189	⇑Pg	Pg	01 29 31.5	+0.4
ROMAN				Sg	Sb	01 29 35.9	+0.6
GUT	Gutenstein	0.31	322	⇓*i*Pg	Pg	01 29 32.4	+0.6
GUT				Sg	Sg	01 29 37.4	+1.0
GUT	Gutenstein	0.31	322	⇓Pg	Pg	01 29 32.4	+0.6
GUT				Sg	Sg	01 29 37.4	+1.0
SARE	Arbon, Evangel	0.32	176	⇓Pg	Pg	01 29 32.3	+0.4
SARE				Sg	Sg	01 29 37.3	+0.8
EMING	Emmingen-Lipti	0.38	280	⇑*i*Pg	Pg	01 29 33.7	+0.7
EMING				Sg	Sg	01 29 39.5	+1.1
EMING	Emmingen-Lipti	0.38	280	⇑Pg	Pg	01 29 33.7	+0.7
EMING				Sg	Sg	01 29 39.5	+1.1
SGT05	Eggersriet	0.39	174	⇓Pg	Pg	01 29 33.5	+0.3
SGT05				Sg	Sg	01 29 39.3	+0.6
STEIN	Stein am Rhein	0.39	246	⇑*i*Pg	Pg	01 29 33.9	+0.7
STEIN				Sg	Sg	01 29 40.0	+1.2
STEIN	Stein am Rhein	0.39	246	⇑Pg	Pg	01 29 33.9	+0.7

STEIN				Sg	Sg	01 29 39.8	+1.0
STGK	St. Gallen Klo	0.41	182	Pg	Pg	01 29 33.8	+0.3
SGT00	Sennhlsen	0.41	188	⇓Pg	Pg	01 29 33.7	+0.2
SGT00				Sg	Sg	01 29 39.7	+0.4
WEIN	Weingarten	0.41	223	⇑Pg	Pg	01 29 34.0	+0.5
WEIN				Sg	Sg	01 29 40.3	+1.0
SWIK	Wil, Kantonssc	0.44	214	Sg	Sg	01 29 41.1	+0.8
SGT04	Schlatt-Haslen	0.48	184	⇓Pg	Pg	01 29 35.3	+0.4
SAPK	Appenzell, Kan	0.50	179	⇓Pg	Pg	01 29 35.4	+0.3
UBR	Ueberruh	0.50	107	⇑*i*Pg	Pg	01 29 35.6	+0.4
UBR				PmP		01 29 36.7	
UBR				Sg	Sg	01 29 42.8	+0.7
UBR	Ueberruh	0.50	107	⇑Pg	Pg	01 29 35.6	+0.4
UBR				Sg	Sg	01 29 42.8	+0.7
TRULL	Truellikon	0.52	250	⇑Pg	Pg	01 29 36.0	+0.5
SCHS	Schaffhausen,	0.53	257	⇑Pg	Pg	01 29 36.2	+0.6
WILA	Wila	0.53	219	⇑*i*Pg	Pg	01 29 36.1	+0.3
WILA				PmP		01 29 37.0	
WILA				Sg	Sg	01 29 43.7	+0.8
WILA	Wila	0.53	219	⇑Pg	Pg	01 29 36.1	+0.3
WILA				Sg	Sg	01 29 43.8	+0.8
ERPF	Erpfingen	0.54	344	⇓*i*Pg	Pb	01 29 36.7	+0.8
LIENZ	Kamor/St.Gall	0.54	173	⇓Pg	Pg	01 29 36.2	+0.3
LIENZ				Sg	Sg	01 29 44.2	+1.0
LIENZ				SmS		01 29 46.6	
LIENZ	Kamor/St.Gall	0.54	173	⇓Pg	Pg	01 29 36.2	+0.3
JUNG	Jungingen	0.56	334	⇓Pg	Pb	01 29 36.9	+0.7
JUNG				PmP		01 29 37.5	
JUNG				Sg	Sg	01 29 44.9	+1.2
JUNG				SmS		01 29 46.5	
BALG	Balingen, Zoll	0.57	321	⇑Pg	Pb	01 29 37.3	+0.8
BALG				Sg	Sb	01 29 45.4	+1.1
STIEG	Stiegenhof Hun	0.60	237	⇑Pg	Pb	01 29 37.3	+0.3
SLE	Schleitheim	0.61	264	⇑*i*Pg	Pb	01 29 37.7	+0.6
SLE				Sg	Sb	01 29 46.1	+0.7
SLE	Schleitheim	0.61	264	Sg	Sb	01 29 46.1	+0.7
SLE	Schleitheim	0.61	264	Pg	Pb	01 29 37.7	+0.6
SLE	Schleitheim	0.61	264	⇑Pg	Pb	01 29 37.7	+0.6
SLE				Sg	Sb	01 29 46.0	+0.7
FLACH	Flaach	0.62	246	⇑Pg	Pb	01 29 37.7	+0.5
BUCH	Bad Urach	0.62	357	⇓*i*Pg	Pb	01 29 38.1	+0.8
BUCH				Sg	Sb	01 29 46.9	+1.3
MSGN	Moessingen, Su	0.62	339	PmP		01 29 38.3	
MSGN				Sg	Sb	01 29 46.9	+1.3
MSGN				SmS		01 29 48.1	
DAVA	Damuels	0.63	149	*i* Pg	Pb	01 29 37.8	+0.3
	11nm,0.1s,SNR=27						
DAVA				*i* Sg	Sb	01 29 46.8	+0.7
	84nm,0.2s						
DAVA	Damuels	0.63	149	⇓Pg	Pb	01 29 37.9	+0.3
DAVA				Sg	Sb	01 29 46.9	+0.7
DAVA	Damuels	0.63	149	⇓Pg	Pb	01 29 37.9	+0.3
SKLW	Kloten, Waffen	0.67	237	⇑Pg	Pb	01 29 38.6	+0.4
SBUA2	Buchs, Altendo	0.67	176	Pg	Pb	01 29 38.4	+0.2
SWAS	Walenstadt, Sp	0.71	185	Pg	Pb	01 29 39.5	+0.6
ZUR	Degenried	0.72	231	Pg	Pb	01 29 39.4	+0.4
ZUR	Degenried	0.72	231	Sg	Sb	01 29 49.3	+0.8
ZUR	Degenried	0.72	231	⇑Pg	Pb	01 29 39.5	+0.4
TUBL	Tuebingen-Lenn	0.72	343	Pg	Pb	01 29 39.6	+0.4
TUBL				Sg	Sb	01 29 49.7	+1.0
OBER	Oberstdorf	0.74	125	Pg	Pb	01 29 39.8	+0.5
OBER				PmP		01 29 40.4	
OBER				*e*Sg	Sb	01 29 50.2	+1.1
	SNR=28						
OBER				SmS		01 29 50.4	
OBER	Oberstdorf	0.74	125	Pg	Pb	01 29 39.9	+0.5
BOBI	Bbikon, Wasse	0.77	249	⇑Pg	Pb	01 29 40.5	+0.6
METMA	Mettma DE	0.78	262	⇑Pg	Pb	01 29 40.1	+0.1
METMA				Sg	Sb	01 29 50.9	+0.6
METMA	Mettma DE	0.78	262	⇑Pg	Pb	01 29 40.1	+0.1
PLONS	Plons/SG	0.78	181	*e*Pg	Pb	01 29 40.3	+0.2
	SNR=25						
PLONS				*e*Sg	Sb	01 29 51.1	+0.7
	SNR=25						
PLONS	Plons/SG	0.78	181	⇓Pg	Pb	01 29 40.4	+0.2
EWZT2	Wettswil, ZR	0.79	232	Pg	Pb	01 29 40.4	+0.3
DEGG	Deggingen-Nord	0.81	15	⇑Pn	Pb	01 29 40.5	-0.1
DEGG				Pg	Pg	01 29 41.1	+0.3
DEGG				PmP		01 29 41.4	
DEGG				Sg	Sb	01 29 52.2	+1.1
ACHB	Acheberg	0.81	253	Pg	Pb	01 29 40.6	0.0
BERGE	Lenzkirch (DE)	0.82	273	⇑Pn	Pb	01 29 40.8	0.0
BERGE				Pg	Pg	01 29 41.3	+0.1
BERGE				Sg	Sb	01 29 52.5	+0.9
BERGE	Lenzkirch (DE)	0.82	273	⇑Pn	Pb	01 29 40.8	0.0
BFO	Black Forest	0.87	305	Pn	Pb	01 29 41.7	0.0
BFO				Pg	Pb	01 29 42.1	+0.5
BFO				Sg	Sb	01 29 54.1	+1.1
BFO	Black Forest	0.87	305	P	Pb	01 29 42.1	+0.5
SULZ	Cheisacher	0.92	251	⇑Pn	Pb	01 29 42.0	-0.4
SULZ				Pg	Pb	01 29 43.0	+0.6
SULZ				Sg	Sb	01 29 55.4	+1.0
SULZ	Cheisacher	0.92	251	Pg	Pb	01 29 42.0	-0.4
SULZ	Cheisacher	0.92	251	Pn	Pb	01 29 43.1	+0.6
SULZ	Cheisacher	0.92	251	Sg	Sb	01 29 54.3	0.0
SULZ	Cheisacher	0.92	251	⇑Pn	Pb	01 29 42.1	-0.4
HDH	Heidenheim-Cha	0.93	35	⇑Pn	Pb	01 29 41.8	-0.8
HDH				Pg	Pn	01 29 43.1	-0.1
HDH				Sg	Sb	01 29 55.7	+1.1
FELD	Feldberg im Sc	0.94	273	⇑Pn	Pb	01 29 42.4	-0.4
FELD				Pg	Pb	01 29 43.2	+0.3
FELD				Sg	Sb	01 29 56.2	+1.2
FELD	Feldberg im Sc	0.94	273	Sn	Sb	01 29 56.3	+1.3
FELD	Feldberg im Sc	0.94	273	Pg	Pb	01 29 42.5	-0.4
FELD	Feldberg im Sc	0.94	273	Pn	Pb	01 29 43.1	+0.3
STU	Stuttgart	0.95	352	Pg	Pb	01 29 43.4	+0.4
STU				Sg	Sb	01 29 56.6	+1.3
RETA	Reutte	0.98	110	*e*Pg	Pb	01 29 43.3	-0.2
	14nm,0.2s,SNR=40						
RETA				*e*Sg	Sb	01 29 56.6	+0.4
	20nm,0.1s						
RETA	Reutte	0.98	110	Pg	Pb	01 29 43.8	+0.2
KIZ	Kirchzarten	1.00	278	Pn	Pb	01 29 43.3	-0.6
KIZ				Pg	Pn	01 29 44.2	0.0
KIZ				Sg	Sb	01 29 57.9	+1.1
URBA	Urbach, Forsts	1.02	7	Pg	Pb	01 29 44.4	+0.3
URBA				Sg	Sb	01 29 58.3	+1.2
GALG	Neuhausen (Enz	1.04	337	⇓Pn	Pb	01 29 44.0	-0.6
GALG				Pg	Pn	01 29 45.0	+0.3
GALG				Sg	Sb	01 29 59.2	+1.3
OPP	Oppenau	1.05	310	Pg	Pb	01 29 45.1	+0.4
OPP				Sg	Sb	01 29 59.0	+0.9
ENDD	Endenburg	1.12	265	Pn	Pn	01 29 44.8	-1.1
ENDD				Pg	Pb	01 29 46.2	+0.2
ENDD				Sg	Sb	01 30 01.1	+0.9
VOGT	Vogtsburg - To	1.19	283	Pg	Pn	01 29 47.4	+0.7
VOGT				Sg	Sb	01 30 03.6	+1.6
VOGT	Vogtsburg - To	1.19	283	Pn	Pn	01 29 47.3	+0.5
BABA	Baden-Baden-Ne	1.20	318	Pg	Pn	01 29 47.7	+0.8
BABA				Sg	Sb	01 30 03.4	+1.0
NORI	Noerdlinger Ri	1.21	42	*e*Pg	Pn	01 29 45.5	-1.5
	SNR=5.0						
NORI				*e*Sg	Sb	01 30 04.3	+1.5
	SNR=13						
FETA	Feichten	1.21	131	*e*Pg	Pn	01 29 48.0	+0.8
	0.2nm,0.1s						
FETA				*e*Sg	Sb	01 30 03.5	+0.6
	7.9nm,0.1s,SNR=15						
MOTA	Moosalm	1.25	112	*i* Pg	Pn	01 29 48.0	+0.2
	2.0nm,0.1s,SNR=13						
MOTA				*i* Sn	Sb	01 30 03.3	-0.7
	4.6nm,0.1s						
MOTA				*i* Sg	Sn	01 30 04.9	+0.7
	43nm,0.2s						
BALST	Balsthal	1.25	247	Pn	Pn	01 29 46.5	-1.2
BALST				Pg	Pn	01 29 48.7	+1.1
BALST				Sn	Sb	01 30 02.3	-1.6
BALST				*e*Sg	Sn	01 30 04.7	+0.6
	SNR=25						
BALST	Balsthal	1.25	247	Pn	Pn	01 29 48.8	+1.1
BALST	Balsthal	1.25	247	Sn	Sb	01 30 04.9	+0.9
BRET	Bretten	1.27	339	Pg	Pn	01 29 49.3	+1.3
BRET				Sg	Sb	01 30 06.4	+1.8
FUR	Furstenfeldbru	1.31	74	*e*Pg	Pn	01 29 49.3	+0.9
	SNR=6.5						
FUR				*e*Sg	Sg	01 30 07.9	+0.5
	SNR=6.4						
SQTA	Sankt Quirin	1.37	116	*i* Pg	Pn	01 29 50.4	+1.0
	3.8nm,0.2s						
SQTA				*e*Sg	Sn	01 30 08.3	+1.2
	90nm,0.2s,SNR=41						
WLS	Welschbruch	1.49	294	Pg	Pb	01 29 54.1	+2.0
SUBF	Surbourg	1.50	317	Sn	Sb	01 30 13.3	+2.4
SUBF	Surbourg	1.50	317	Pg	Pg	01 29 54.8	+0.9
SIND	Sindeldorf	1.53	5	Pn	Pn	01 29 50.1	-1.3
SIND				Pg	Pb	01 29 53.5	+0.7
SIND				Sg	Sb	01 30 13.6	+1.8
BOURR	Bourrignon	1.53	254	Pn	Pn	01 29 50.3	-1.1
BOURR	Bourrignon	1.53	254	Pn	Pn	01 29 50.4	-1.1
CDF	Champ du Feu	1.54	293	*e*Pn	Pn	01 29 50.7	-0.9
CDF	Champ du Feu	1.54	293	*e*Pg	Pb	01 29 54.9	+1.9
CDF				*e*Sg	Sb	01 30 15.0	+2.9
	18nm,0.1s						
ECH	Echery	1.55	285	Pg	Pb	01 29 54.4	+1.1
ECH				Sn	Sn	01 30 08.3	-3.1
ECH				*e*Sg	Sb	01 30 14.8	+2.3
	SNR=3.4						
ECH	Echery	1.55	285	Pn	Pn	01 29 51.8	0.0
ECH				Pg	Pb	01 29 54.9	+1.6
ECH				Sg	Sb	01 30 14.0	+1.5
WATA	Walderalm	1.56	108	*i* Pg	Pn	01 29 53.4	+1.5
	1.3nm,0.1s						
WATA				*e*Sg	Sb	01 30 13.9	+1.2
	28nm,0.2s,SNR=4.5						
WTTA	Wattenberg	1.62	110	*i* Pg	Pn	01 29 54.7	+1.9
	0.4nm,0.1s						
WTTA				*e*Sg	Sb	01 30 16.1	+1.5
	6.5nm,0.1s						
CIEL	Dossenheim-sur	1.69	307	Pg	Pg	01 29 58.2	+0.6
HINF	Hinteralfeld	1.71	271	*e*Pn	Pn	01 29 52.9	-1.1
HINF	Hinteralfeld	1.71	271	*e*Pg	Pb	01 29 58.0	+2.0
HINF				*e*Sn	Sn	01 30 13.0	-2.4
HINF				*e*Sg	Sb	01 30 20.2	+3.0
	18nm,0.2s						
KTD	Kalmit	1.73	330	*e*Pg	Pg	01 29 59.9	+1.6
	SNR=4.5						
KTD				*e*Sg	Sg	01 30 21.7	+0.9
	SNR=4.4						
KTD	Kalmit	1.73	330	Pn	Pg	01 29 59.1	+0.8
KTD	Kalmit	1.73	330	Sn	Sb	01 30 20.1	+2.5
GRC1	Grafenberg Arr	1.83	50	⇑Pn	Pn	01 29 53.8	-1.8
GRC1				Pg	Pb	01 29 59.7	+1.7
RONF	Ronchamp	1.86	267	Pn	Pn	01 29 55.0	-1.0
WBA	Furth	1.87	348	Pn	Pn	01 29 55.1	-0.9
WBA				Pg	Pb	01 29 59.8	+1.2
EMBD	Embd, Matterta	1.94	214	Sg	Sb	01 30 25.5	+1.9
EMBD	Embd, Matterta	1.94	214	Pg	Pb	01 30 01.1	+1.3
CHMF	Charmoille	1.95	254	Pg	Pb	01 30 02.4	+2.4
TORNY	Torny/Romont	1.97	238	Pg	Pb	01 30 02.7	+2.4
TORNY	Torny/Romont	1.97	238	Sn	Sn	01 30 20.0	-1.6
MILB	Miltenberg	2.00	358	*e*Pg	Pg	01 30 04.2	+0.6
	SNR=7.6						
MILB				*e*Sg	Sg	01 30 29.4	-0.1
	SNR=8.0						
HAU	Haudompre	2.06	276	*e*Pn	Pn	01 29 57.8	-0.9
HAU	Haudompre	2.06	276	*e*Pg	Pb	01 30 04.2	+2.3
HAU				*e*Sg	Sg	01 30 31.0	-0.3
	28nm,0.3s						
BRANT	Les Verrieres	2.18	247	Pn	Pn	01 29 59.2	-1.3
BOUC	Bouclans	2.21	256	Pn	Pn	01 29 59.4	-1.3
BOUC				Pg	Pb	01 30 06.5	+2.1
DIX	Grande Dixence	2.22	219	Pg	Pb	01 30 07.3	+2.6
GRF	Grafenberg Arr	2.22	32	*e*Sn	Sn	01 30 25.5	-2.4
GRF				*e*Sg	Sb	01 30 34.5	+2.8
	SNR=5.6						
AIGLE	Aigle	2.24	229	Pg	Pb	01 30 06.9	+2.0
AIGLE	Aigle	2.24	229	Pn	Pn	01 29 59.9	-1.3
RJOB	Jochberg	2.29	91	*e*Pn	Pn	01 30 03.2	+1.2
RJOB				*e*Pg	Pg	01 30 09.8	+0.7
	SNR=5.6						
RJOB				*e*Sg	Sg	01 30 38.6	-0.3
	SNR=3.6						
ABTA	Abfaltersbach	2.38	116	*e*Pg	Pb	01 30 08.0	+0.7
	0.5nm,0.1s						
ABTA				*e*Sg	Sb	01 30 38.6	+2.2
	1.0nm,0.1s						
ABH	Alteburg	2.39	330	*e*Sg	Sg	01 30 42.0	+0.1
	SNR=3.4						
TNS	Taunus Mts	2.48	346	*e*Sn	Sn	01 30 33.5	-0.7
PAGF	Fort de Pagny	2.56	288	*e*Pg	Pg	01 30 14.3	+0.1
	baz=109						
PAGF				*e*Sg	Sg	01 30 46.6	-0.8
	9.4nm,0.2s						
CABF	La Chapelle	2.56	243	*e*Pn	Pn	01 30 04.4	-1.3
CABF	La Chapelle	2.56	243	*e*Pg	Pb	01 30 13.4	+2.9
CABF				*e*Sg	Sg	01 30 46.3	-1.2
	5.9nm,0.2s						
RIVEL	MONT RIVEL	2.60	247	Pg	Pb	01 30 14.2	+3.1
ROTZ	Rotzenmuhle	2.69	43	*e*Sg	Sg	01 30 50.0	-1.4
	SNR=5.8						
KBA	Koelnbreinsper	2.78	104	*i* Pn	Pn	01 30 10.2	+1.4
	0.3nm,0.1s						
KBA				*e*Sg	Sb	01 30 51.6	+3.5
	1.0nm,0.1s						
MANZ	Manzenberg	2.80	39	*e*Sn	Sn	01 30 38.8	-3.5
MANZ				*e*Sg	Sb	01 30 53.4	+4.9
	SNR=2.9						
WLF	Walferdange	2.83	312	*e*Sg	Sg	01 30 55.1	-0.8
	SNR=2.8						
BIOA	Bad Ischl, Aus	2.86	91	*i* Pn	Pn	01 30 10.0	+0.2
	0.3nm,0.1s						
SFTF	Sexfontaines	2.95	279	*e*Pg	Pb	01 30 20.7	+3.7
SFTF				*e*Sg	Sg	01 30 58.9	-0.9
	3.9nm,0.2s						
SAVF	Savonnieres en	2.96	287	*e*Pg	Pb	01 30 21.0	+3.7
SAVF				*e*Sg	Sg	01 30 59.3	-0.9
	2.6nm,0.2s						
MEZF	Maizieres J’vi	2.99	285	*e*Pg	Pb	01 30 21.4	+3.8
	baz=104						
MEZF				*e*Sg	Sg	01 31 00.0	-0.9
	4.5nm,0.3s						
GEC2	GERESS Array S	3.05	69	*e*Pn	Pn	01 30 11.6	-0.7
GEC2				*e*Sn	Sn	01 30 46.7	-1.7
GEC2				*e*Sg	Sg	01 31 00.8	-2.1
	SNR=3.0						
KHC	Kasperske Hory	3.07	63	*e*PN	Pn	01 30 11.6	-1.0
KHC				*e*x	x	01 30 21.5	
KHC				*e*SG	Sg	01 31 02.0	-1.7
	comp=Z,7.1nm,0.3s						
KHC	Kasperske Hory	3.07	63	*e*Pn	Pn	01 30 11.8	-0.9
KHC				*e*Sg	Sg	01 31 02.1	-1.6
	SNR=6.8						
MYKA	Terra Mystica	3.13	111	*i* Pn	Pn	01 30 14.8	+1.3
	0.9nm,0.2s						
NKC	Novy Kostel	3.13	39	*e*SG	Sg	01 31 03.5	-2.2
	comp=Z,7.7nm,0.4s						
NKC	Novy Kostel	3.13	39	*e*Sg	Sg	01 31 04.2	-1.4
	SNR=3.9						
WERN	Wernitzgruen	3.15	37	*e*Sg	Sb	01 31 03.8	+5.5
	SNR=5.4						
MOX	Moxa	3.17	26	*e*Sg	Sg	01 31 05.0	-1.9
	SNR=6.1						
GUNZ	Gunzen	3.19	36	*e*Sg	Sb	01 31 04.9	+5.4
	SNR=4.6						
WERD	Werda	3.24	35	*e*Sn	Sn	01 30 50.0	-3.1
MOA	Molln	3.28	88	*i* Pn	Pn	01 30 15.7	+0.2
	0.6nm,0.1s						
MOA				*i* Sn	Sn	01 30 52.5	-1.5
	0.7nm,0.1s						
CKRC	Cesky Krumlov	3.42	71	*e*PN	Pn	01 30 16.8	-0.7
CKRC				*e*SG	Sg	01 31 13.2	-1.8
MBDF	Montbardon	3.60	211	*e*Pg	Pg	01 30 32.3	-1.7
MBDF				*e*Sg	Sg	01 31 18.4	-2.2
	1.5nm,0.4s						
OBKA	Obir	3.75	109	*i* Pn	Pn	01 30 22.5	+0.5
	0.3nm,0.1s						
LOR	Lormes	3.79	264	*e*Pn	Pn	01 30 21.2	-1.3
	baz=84						
LOR	Lormes	3.79	264	*e*Pg	Pg	01 30 36.2	-1.5
LOR				*e*Sg	Sg	01 31 24.3	-2.5
	2.6nm,0.2s						
ORIF	Oris-en-Rattie	3.79	221	*e*Pg	Pb	01 30 35.7	+4.2
ORIF				*e*Sg	Sg	01 31 24.6	-2.3
	2.3nm,0.3s						
SMF	Signal de Mont	3.97	255	*e*Pg	Pg	01 30 39.3	-1.7
SMF				*e*Sn	Sn	01 31 06.3	-4.6
SMF				*e*Sg	Sg	01 31 30.3	-2.1
	4.3nm,0.2s						
PRU	Pruhonice	4.02	56	*e*SG	Sg	01 31 31.6	-2.5
SSF	Saint Saulge	4.07	261	*e*Pn	Pn	01 30 25.1	-1.2
SSF	Saint Saulge	4.07	261	*e*Pg	Pg	01 30 41.2	-1.8
SSF				*e*Sg	Sg	01 31 33.5	-2.2
	1.5nm,0.2s						
CLL	Collm	4.20	33	*e*Sn	Sn	01 31 13.0	-3.6
CLL				*e*Sg	Sg	01 31 38.0	-1.8
	comp=Z,5.0nm,0.5s						
AVF	Avril sur Loir	4.24	258	*e*Sg	Sg	01 31 38.8	-2.4
	comp=Z,0.9nm,0.2s						
BRG	Berggiesshubel	4.25	43	Sg	Sg	01 31 38.7	-2.8
BRG				Amp		01 31 42.3	
	comp=Z,5.2nm,0.5s						
PVCC	Panska Ves	4.34	50	*e*SG	Sg	01 31 41.8	-2.4
	comp=Z,5.4nm,0.4s						
CONA	Conrad Observa	4.35	86	*i* Pn	Pn	01 30 30.0	-0.3
	comp=Z,0.2nm,0.1s						
VIVF	Saint-Julien-l	4.42	229	*e*Sg	Sg	01 31 44.1	-2.8
	comp=Z,1.9nm,0.2s						
BGF	Bois d'Agland	4.64	257	*e*Sg	Sg	01 31 51.4	-2.7
	comp=Z,2.3nm,0.3s						
CHVC	Chvalec	5.16	55	*e*SG	Sg	01 32 06.5	-4.2
DPC	Dobruska-Polom	5.20	58	*e*SG	Sg	01 32 08.6	-3.3

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*IDC **04** 01:36:13.5±2.8, 47°.99N × 155°.02E, h0^{km}, mb3.5/4, mbtmp3.5/5, ML2.2/1, MS2.6/1, Error ellipse: s-maj=68.2km s-min=38.9km az=175.0*

*KRSC **04** 01:36:21.0±1.1, 48°.22N × 156°.35E, h39^{km}±25^{km}, Ml4.1*

ISC 04 01:36:19.6±1.7**, 48°.1N**±0°.2×**155°.1E**±0°.2**, h35**^{km}**, n17, σ1**^{s}**.47**/11**, mb3.6**/4**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	2.65	14	*e*P	Pn	01 37 01.1	+1.4
SKR				*e*S	Sn	01 37 30.2	-0.3
PAU	Pauzhetka	3.52	17	*e*S	Sn	01 37 53.3	+1.1
KDTR	Khodutka, Kamc	4.16	26	*e*S	Sn	01 38 04.6	-3.1
GRL	Gorelyy	4.82	22	*e*P	Pn	01 37 30.5	+0.7
PETK	Petropavlovsk-	5.26	17	Pn	Pn	01 37 36.0	+0.4
	0.4nm,0.3s,baz=181,slow=12,SNR=1.5						
PETK				LR	LR	01 40 07.0	
	comp=Z,66nm,21.4s,baz=128,slow=43 1.4nm,0.4s						
KOK	Koryaka	5.64	22	*e*P	Pn	01 37 42.2	+1.3
H11N2	WAKE ISLAND Hy	29.89	157	T	T	02 14 08.2	
	baz=344						
H11N1	WAKE ISLAND Hy	29.90	157	T	T	02 14 05.8	
	baz=344						
H11N3	WAKE ISLAND Hy	29.90	157	T	T	02 14 07.5	
	baz=344						
H11S1	WAKE ISLAND Hy	31.01	158	T	T	02 15 27.9	
	baz=345,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	31.02	158	T	T	02 15 30.1	
	baz=345,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	31.03	158	T	T	02 15 29.3	
	baz=345,slow=76,SNR=11						
MKAR	Makanchi Array	47.52	297	P	P	01 44 50.6	-0.5
	0.6nm,0.7s,baz=71,slow=8.9,SNR=6.8 0.6nm,0.7s						
FINES	FINESS Array B	63.37	335	P	P	01 46 43.6	-1.2
	1.4nm,0.9s,baz=37,slow=9.4,SNR=4.2 1.4nm,0.9s						
NOA	NORSAR Array B	67.36	342	P	P	01 47 11.1	+0.5
	0.3nm,0.7s,baz=29,slow=6.9,SNR=1.4 0.3nm,0.7s						
TXAR	Lajitas Array	75.64	62	P	P	01 48 01.4	+0.2
	0.1nm,0.4s,baz=323,slow=2.3,SNR=1.4 0.1nm,0.4s						
H03N2	Juan Fernandez	137.40	90	T	T	04 25 27.6	
	SNR=4.7						

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*BGR **04** 02:11:42.4, 23°.31N × 94°.50E, h33^{km}, mb5.2, Ms3.8*

*MOS **04** 02:11:47.5±0.9, 25°.01N × 94°.87E, h46^{km}, mb5.3/71, Error ellipse: s-maj=7.4km s-min=3.3km az=127.0*

*BJI **04** 02:11:51.2±0.0, 25°.28N × 94°.70E, h74^{km}, mb5.0/59, mB5.0/40, Ms4.3/48, Ms7 3.9/45*

*NDI **04** 02:11:52.3±3.5, 25°.22N × 94°.72E, h92^{km}±13^{km}, ML5.0, mb5.1(NEIC)*

*GCMT **04** 02:11:53.8±0.4, 25°.16N±0°.03 × 94°.76E±0°.03, h98^{km}±3^{km}, MW5.0/49, Moment Tensor Solution. s32,c38; s49,c66; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.04±.20; $M_{\theta\theta}$-2.23±.20; $M_{\phi\phi}$2.27±.19; $M_{r\theta}$-0.14±.23; $M_{\theta\phi}$3.53±.19; $M_{\phi r}$1.24±.19; Best double couple: $M_0$4.36600×10^{16} NP1:ϕ_s343.00000°, δ88.00000°, λ164.00000°. NP2: ϕ_s74.00000°, δ74.00000°, λ2.00000°. Principal axes: T 4.4410, Plg13.0000°, Azm298.0000°; N -0.1450, Plg74.0000°, Azm156.0000°; P -4.2920, Plg10.0000°, Azm30.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **04** 02:11:53.8±1.9, 25°.19N±0°.05 × 94°.67E±0°.07, h74^{km}±5^{km}, mb5.1/181 Error ellipse: s-maj=9.4km s-min=7.8km az=69.0*

*IDC **04** 02:11:53.3±0.5, 25°.12N × 94°.88E, h79^{km}±4^{km}, mb4.4/29, mbtmp4.7/30, MS3.6/28, Error ellipse: s-maj=12.7km s-min=9.9km az=51.0*

ISC 04 02:11:52.6±0.2**, 25°.18N**±0°.03×**94°.69E**±0°.03**, h70**^{km}±1^{km}**, h70**^{km}**:pP-P, n928, σ1**^{s}**.61**/983**, mb5.0**/234**, 96C-35D, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOHI	KOHIMA	0.76	316	*e*P	Pn	02 12 09.2	+0.9
KOHI				*e*S	Sn	02 12 22.0	+2.1
KOHI				IAML		02 12 25.8	
	comp=N,19µm,0.4s						
KOHI				IAML		02 12 28.1	
	comp=E,16µm,0.6s						
IMP	Imphal	0.76	243	*e*P	Pn	02 12 09.7	+1.5
IMP				*e*S	Sn	02 12 21.4	+1.6
IMP				IAML		02 12 22.1	
	comp=N,64µm,0.6s						
IMP				IAML		02 12 22.3	
	comp=E,27µm,0.5s						
MOKO	MOKOCHONG	1.15	352	*e*P	Pn	02 12 14.5	+1.4
MOKO				*e*P	Sn	02 12 30.0	+1.5
MOKO				IAML		02 12 30.3	
	comp=N,39µm,0.5s						
MOKO				IAML		02 12 30.9	
	comp=E,80µm,0.6s						
JORH	JORHAT	1.61	346	*e*P	Pn	02 12 19.8	+0.9
JORH				*e*S	Sn	02 12 39.8	+0.8
JORH				IAML		02 12 43.1	
	comp=E,47µm,0.4s						
SILR	SILCHAR	1.76	257	*e*P	Pn	02 12 23.3	+2.3
SILR				IAML		02 12 48.5	
	comp=N,45µm,0.2s						
SILR				IAML		02 12 48.6	
	comp=E,61µm,0.3s						
TEZP	TEZPUR	2.23	310	*e*P	Pn	02 12 26.9	-0.4
TEZP				*e*S	Sn	02 12 51.8	-2.0
TEZP				IAML		02 12 54.2	
	comp=E,19µm,0.1s						
LKP	Lekhapani	2.38	26	*e*P	Pn	02 12 30.2	+0.8
ZIRO	ZIRO	2.46	342	*e*P	Pn	02 12 30.8	+0.2
ZIRO				*e*S	Sn	02 12 57.6	-2.1
ZIRO				IAML		02 12 59.8	
	comp=E,48µm,0.4s						
SHL	Shillong	2.57	279	Pn	Pn	02 12 32.0	-0.1
SHL				Sn	Sn	02 13 01.3	-1.1
SHL	Shillong	2.57	279	*e*P	Pn	02 12 32.1	0.0
SHL				*e*S	Sn	02 13 01.0	-1.4
SHL				IAML		02 13 02.7	
	comp=E,11µm,0.2s						
SHL	Shillong	2.57	279	P	Pn	02 12 32.0	-0.1
SHL						02 13 01.3	
SAIH	SAIHA	3.10	211	*e*P	Pn	02 12 38.9	-0.3
SAIH				*e*S	Sn	02 13 15.8	+0.5
SAIH				IAML		02 13 21.8	
	comp=E,6µm,0.4s						
AGT	Agartala	3.39	248	*e*S	Sn	02 13 23.0	+0.9
AGT				IAML		02 13 25.5	
	comp=N,15µm,0.5s						
AGT				IAML		02 13 25.5	
	comp=E,22µm,0.5s						
TNCH	TengChong	3.47	92	P	Pn	02 12 46.0	+1.6
TNCH				S	Sn	02 13 24.7	+0.2
TNCH				smax	smax		
	comp=E,3µm,1.2s						
TNCH				smax	smax		
	comp=E,3µm,1.4s						
TNCH				LR	LR		
	comp=E,1µm,4.0s						
BRDH	Bariadhala	3.74	229	P	Pn	02 12 47.2	-0.6
	comp=E,140nm,0.3s,baz=270,slow=21,SNR=21						
BRDH				S	Sn	02 13 30.9	+0.2
	comp=E,2µm,0.5s,baz=270,slow=22,SNR=8.8						
LSA	Lhasa	5.50	326	P	Pn	02 13 14.0	+1.7

LSA				S	Sn	02 14 13.2	-1.1
LSA				smax	smax		
	comp=E,590nm,0.9s						
LSA				smax	smax		
	comp=E,950nm,1.0s						
LSA	Lhasa	5.50	326	Pn	Pn	02 13 13.9	+1.7
LSA	Lhasa	5.50	326	P	Pn	02 13 13.9	+1.7
LSA	Lhasa	5.50	326	P	Pn	02 13 14.3	+2.0
GTK	Tadong	5.87	293	*e*P	Pn	02 13 17.5	+0.4
GTK				*e*S	Sn	02 14 21.4	-1.7
GTK				IAML		02 14 28.1	
	comp=N,676nm,0.4s						
GTK				IAML		02 14 31.0	
	comp=E,869nm,0.5s						
PZH	PanZhiHua	6.49	77	P	Pn	02 13 29.6	+4.0
PZH				S	Sn	02 14 43.3	+5.1
PZH				pmax	pmax		
	comp=E,380nm,1.1s						
PZH				pmax	pmax		
	comp=E,800nm,3.5s						
PZH				LR	LR		
	comp=E,2µm,6.3s						
PZH				LR	LR		
	comp=E,830nm,4.2s						
PZH				LR	LR		
	comp=E,710nm,6.8s						
TAPN	Taplejung	6.63	291	*e*Pn	Pn	02 13 27.6	-0.1
TAPN				*e*Sn	Sn	02 14 38.7	-3.3
	comp=E,1µm,0.6s						
ODAN	Odare	6.78	286	*e*Pn	Pn	02 13 29.9	+0.3
CRAI	Chiangrai	7.19	132	Pn	Pn	02 13 35.5	+0.3
KMI	Kunming	7.29	89	⇓P	Pn	02 13 41.2	+4.5
KMI				S	Sn	02 15 01.2	+3.1
KMI				smax	smax		
	comp=E,100nm,1.8s						
KMI				smax	smax		
	comp=E,92nm,1.7s						
KMI				LR	LR		
	comp=E,3µm,9.5s						
KMI				LR	LR		
	comp=E,900nm,9.5s						
KMI				LR	LR		
	comp=E,1µm,10.0s						
CHTO	Chiang Mai	7.46	147	Pn	Pn	02 13 39.8	+1.0
CHTO	Chiang Mai	7.46	147	P	Pn	02 13 39.8	+1.0
RAMN	Ramite	7.49	285	*e*Pn	Pn	02 13 39.5	+0.2
RAMN				*e*Sn	Sn	02 15 03.0	+0.1
	comp=E,1µm,0.5s						
CM31	Chiang Mai Arr	7.76	149		Pn	02 13 43.8	+0.8
CMAR	Chiang Mai Arr	7.76	149	P	Pn	02 13 43.7	+0.7
	comp=E,21nm,0.8s,baz=325,slow=13,SNR=67						
CMAR				LR	LR	02 17 02.7	
	comp=E,366nm,18.7s,baz=320,slow=41						
CMAR	Chiang Mai Arr	7.76	149	Pn	Pn	02 13 43.3	+0.4
JIRN	Jiri	8.01	290	*e*Pn	Pn	02 13 46.4	-0.2
JIRN				*e*Sn	Sn	02 15 11.8	-4.1
	comp=E,555nm,0.3s						
BOK	Bokaro	8.14	262	*e*P	Pn	02 13 47.2	-0.8
BOK				*e*S	Sn	02 15 11.2	-7.4
BOK				IAML		02 15 15.4	
	comp=N,456nm,0.3s						
GUN	Gumba	8.35	291	*e*Pn	Pn	02 13 50.2	-1.0
GUN				*e*Sn	Sn	02 15 20.5	-3.6
	comp=N,927nm,0.6s						
PHRA	Phrae	8.40	141	Pn	Pn	02 13 52.2	+0.6
PKI	Pulchoki	8.66	288	*e*Pn	Pn	02 13 54.6	-0.8
PKI				*e*Sn	Sn	02 15 28.3	-3.4
PKIN	Phulchoki	8.67	288	*e*Pn	Pn	02 13 54.8	-0.7
PKIN				*e*Sn	Sn	02 15 28.2	-3.7
KKN	Kakani	8.82	289	*e*Pn	Pn	02 13 56.8	-0.8
KKN	Kakani	8.82	289	*e*Pn	Pn	02 13 57.0	-0.6
DMN	Daman	8.93	288	*e*Pn	Pn	02 13 58.0	-1.1
DMN				*e*Sn	Sn	02 15 35.1	-3.1
	comp=N,579nm,0.5s						
GKN	Gorkha	9.43	290	*e*Pn	Pn	02 14 04.8	-1.0
GKN				*e*Sn	Sn	02 15 45.8	-4.5
	comp=N,891nm,0.5s						
CD2	Chengdu	9.83	52	⇑P	Pn	02 14 10.9	-0.3
CD2				pmax	pmax		
	comp=N,30nm,0.8s						
CD2				pmax	pmax		
	comp=N,140nm,4.5s						
CD2				LR	LR		
	comp=N,1µm,8.8s						
CD2				LR	LR		
	comp=N,630nm,9.3s						
CD2				LR	LR		
	comp=N,410nm,9.8s						
VLK	Valmikinagar	9.95	285	*e*P	Pn	02 14 11.9	-0.8
DANN	Dangsing	10.27	290	*e*Pn	Pn	02 14 14.9	-2.5
DANN				*e*Sn	Sn	02 16 04.8	-6.2
	comp=N,428nm,0.4s						
KOLN	Koldanda	10.27	287	*e*Pn	Pn	02 14 16.0	-1.3
KOLN				*e*Sn	Sn	02 16 06.9	-4.0
	comp=N,888nm,0.4s						
JHSG	JHARSUGUGA	10.58	253	*e*P	Pn	02 14 21.8	+0.4
JHSG				*e*S	Sn	02 16 07.3	-11
GYA	Guiyang	10.86	81	⇑P	Pn	02 14 27.3	+2.0
GYA				S	Sn	02 16 25.9	+0.7
GYA				pmax	pmax		
	comp=N,64nm,1.0s						
GYA				pmax	pmax		
	comp=N,280nm,3.5s						
GYA				LR	LR		
	comp=N,450nm,6.0s						
GYA				LR	LR		
	comp=N,360nm,6.5s						
GYA				LR	LR		
	comp=N,470nm,7.0s						
PYUN	Piuthan	10.87	288	*e*Pn	Pn	02 14 23.0	-2.4
PYUN				*e*Sn	Sn	02 16 21.7	-3.8
	comp=N,630nm,0.7s						
GOMU	GeErMu	10.99	1	P	Pn	02 14 25.8	-1.4
GOMU				S	Sn	02 16 24.0	-4.5
GOMU				pmax	pmax		
	comp=N,43nm,0.9s						
GOMU				LR	LR		
	comp=N,440nm,11.0s						
GOMU				LR	LR		
	comp=N,520nm,10.8s						
GOMU				LR	LR		
	comp=N,430nm,9.7s						
ALBI	Allahabad	11.66	273	*e*P	Pn	02 14 35.1	-1.0
ALBI				*e*S	Sn	02 16 34.0	-11
RAGD	RAYAGADA	11.96	243	*e*P	Pn	02 14 40.3	0.0
RAGD				*e*S	Sn	02 16 41.3	-11
LZH	Lanzhou	13.42	34	*e*P	Pn	02 14 57.7	-2.3
LZH				pP	P	02 15 08.2	+1.2
LZH				pmax	pmax		
	comp=N,120nm,1.5s						
LZH				LR	LR		
	comp=N,520nm,13.4s						
LZH				LR	LR		
	comp=N,1µm,13.4s						
LZH				LR	LR		
	comp=N,540nm,13.4s						
LGTI	Lohaghat	13.53	292	*e*P	Pn	02 14 59.5	-1.9
JBP	Jabalpur	13.57	265	*e*P	Pn	02 15 01.1	-0.9
JBP				⇓*e*S	Sn	02 17 21.0	-10
PBA	Port Blair	13.58	188		Pn	02 15 00.1	-2.0
PTH	Pithoragarh	13.58	292	*e*P	Pn	02 14 58.7	-3.5
ENH	Enshi	14.05	66	Pn	Pn	02 15 07.9	-0.3
GULI	GuiLin	14.19	86	P	P	02 15 16.2	+0.8
GULI				S	Sn	02 17 49.8	+3.7
GULI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GULI				LR	LR		
	comp=N,2µm,9.2s						
GULI				LR	LR		
	comp=E,6µm,0.3s						
GULI				LR	LR		
	comp=Z,8µm,0.5s						
JHNI	Jhansi	14.61	275	*e*P	Pn	02 15 10.3	-5.3
JHNI				*e*S	Sn	02 17 38.9	-18
GTA	Gaotai	14.83	16	⇓P	P	02 15 23.4	+0.7
GTA				pP	Pn	02 15 37.6	+19
GTA				S	S	02 18 11.2	-4.9
GTA	Gaotai	14.83	16	ScS	ScS	02 27 28.8	-1.8
GTA				pmax	pmax		
	comp=Z,74nm,1.1s						
GTA				pmax	pmax		
	comp=Z,190nm,6.8s						
GTA				LR	LR		
	comp=N,210nm,13.9s						
GTA				LR	LR		
	comp=E,670nm,8.0s						
GTA				LR	LR		
	comp=Z,210nm,9.2s						
GTA	Gaotai	14.83	16	*e*P	Pn	02 15 16.2	-2.3
GTA				pmax	pmax		
	comp=Z,14nm,1.1s						
XAN	Xi'an	15.19	51	⇑P	Pn	02 15 19.4	-3.7
XAN				pP	pP	02 15 34.3	-6.7
XAN				pmax	pmax		
	comp=Z,14nm,0.9s						
XAN				LR	LR		
	comp=Z,670nm,8.6s						
XAN				LR	LR		
	comp=Z,300nm,10.5s						
XAN				LR	LR		
	comp=Z,290nm,13.0s						
QIZ	Qiongzhong	15.31	111	P	P	02 15 28.0	0.0
QIZ				S	Sn	02 18 18.0	+4.6
QIZ				sS	S	02 18 31.8	+5.9
QIZ				pmax	pmax		
	comp=Z,29nm,0.9s						
QIZ				LR	LR		
	comp=Z,740nm,12.7s						
QIZ				LR	LR		
	comp=Z,440nm,11.4s						
QIZ				LR	LR		
	comp=Z,260nm,10.4s						
DDI	Dehra Dun	15.59	293	*e*P	Pn	02 15 26.1	-2.1
BHPL	Bhopal	15.87	267	*e*P	Pn	02 15 30.1	-1.8
BHPL				*e*S	Sn	02 18 10.9	-16
NDI	New Delhi	15.97	286	*e*P	P	02 15 35.0	-0.2
NDI				*e*S	Sn	02 18 14.4	-15
SONA	Sohna	16.03	285	*e*P	Pn	02 15 30.6	-3.1
KUDL	Kundal	16.54	284	*e*S	Sn	02 18 28.2	-15
SMLA	Simla	16.55	295	*e*P	Pn	02 15 37.3	-2.8
CNSH	ChangSha	16.57	76	⇑P	Pn	02 15 38.8	-1.7
CNSH				S	Sn	02 18 35.3	-8.6
CNSH				pmax	pmax		
	comp=Z,15nm,0.9s						
CNSH				LR	LR		
	comp=Z,650nm,6.5s						
CNSH				LR	LR		
	comp=Z,310nm,5.2s						
CNSH				LR	LR		
	comp=Z,380nm,8.0s						
AKL	Akola	16.88	258	*e*P	Pn	02 15 44.7	+0.4
AKL				*e*S	Sn	02 18 34.9	-16
HYB	Hyderabad	16.89	246	*e*P	P	02 15 46.3	+0.7
SRIT	Nakonsritamara	17.14	163		Pn	02 15 47.9	+0.3
LYN	LuoYang	18.00	55	*e*P	P	02 15 52.4	-5.2
LYN				S	Sn	02 19 12.3	-6.0
LYN				pmax	pmax		
	comp=Z,320nm,5.0s						
LYN				LR	LR		
	comp=Z,510nm,15.1s						
LYN				LR	LR		
	comp=Z,310nm,16.7s						
LYN				LR	LR		
	comp=Z,300nm,12.5s						
WMQ	Urumqi	19.46	345	*e*P	Pn	02 16 15.3	-0.1
WMQ				pP	pP	02 16 32.1	+3.6
WMQ				S	S	02 19 49.2	-0.6
WMQ				SS	SnSn	02 20 14.5	+5.6
WMQ				pmax	pmax		
	comp=Z,46nm,0.7s						
BTO	Baotou	20.01	36	*e*P	P	02 16 18.9	-0.8
BTO				LR	LR		
	comp=Z,1µm,10.1s						
BTO				LR	LR		
	comp=Z,1µm,5.7s						
SARP	Sargodha	20.46	294	P	P	02 16 24.5	0.0
CHCP	Chirah Chowk	20.46	299	P	P	02 16 25.5	+1.0
NIL	Nilore	20.47	299	P	P	02 16 25.4	+0.8
NIL	Nilore	20.47	299	P	P	02 16 25.4	+0.8
NIL				pmax	pmax		
	comp=Z,229nm,0.7s						
MLSI	Meulaboh, Aceh	20.86	175	P	P	02 16 28.6	-0.2
	comp=Z,64nm,0.7s						
HNS	HongShan	20.95	50	⇑P	P	02 16 28.0	-1.7
HNS				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC	Hu-ho-hao-te	21.02	38	*e*P	P	02 16 30.2	-0.4
HHC				S	S	02 20 17.8	-3.0
HHC				pmax	pmax		
	comp=Z,99nm,1.2s						
HHC				pmax	pmax		
	comp=Z,260nm,6.2s						
HHC				LR	LR		
	comp=Z,580nm,15.1s						
HHC				LR	LR		
	comp=Z,700nm,10.4s						
HHC				LR	LR		
	comp=Z,880nm,11.6s						
KSH	Kashi	21.26	317	P	P	02 16 34.6	+1.5
KSH				pP	sP	02 16 54.4	-2.9
KSH				sP	pP	02 17 02.6	+14
KSH				S	S	02 20 26.5	+0.9
KSH				sS	sS	02 20 45.4	-5.1
KSH				SS	SnSn	02 21 01.1	+8.1
KSH				ScP	ScP	02 24 09.0	+2.6
KSH				pmax	pmax		
	comp=Z,170nm,0.8s						
KSH				LR	LR		
	comp=Z,260nm,12.6s						
KSH				LR	LR		
	comp=Z,180nm,13.7s						
KSH				LR	LR		
	comp=Z,260nm,12.4s						
THW	Thamme Wali	21.43	296	P	P	02 16 35.4	+0.4
IPM	Ipoh	21.46	163	P	P	02 16 35.2	-0.1
CEP	Cherat	21.59	299	P	P	02 16 38.1	+1.4
CEP				S	S	02 20 32.0	-0.2
KCSI	Kotacane, Aceh	21.73	172	P	P	02 16 39.5	+1.3
	comp=Z,47nm,0.8s						
SHLS	Shalkode	21.86	329	⇑*i*P	P	02 16 39.0	-0.5
	comp=Z,57nm,1.0s,baz=330						
SHLS	Shalkode	21.86	329	*c i*P	P	02 16 39.0	-0.5
SHLS				pmax	pmax		
	comp=Z,57nm,1.0s						
UZB	Uzynbulak	22.06	328	*e*P	P	02 16 42.9	+1.3
	baz=328						
UZB				*e*S	S	02 20 43.1	+2.2
	baz=328						
UZB	Uzynbulak	22.06	328	*e*P	P	02 16 42.9	+1.3
UZB				*e*S	S	02 20 43.1	+2.2
NJ2	Nanjing	22.26	67	*e*P	P	02 16 45.5	+1.7
NJ2				pP	pP	02 17 01.4	+2.7
NJ2				sP	sP	02 17 12.7	+5.2
NJ2				SS	SnSn	02 21 23.0	+5.7
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,220nm,3.9s						
PALK	Pallekele	22.27	219	P	P	02 16 44.1	+0.1
	comp=Z,21nm,1.0s,baz=140,slow=9.0,SNR=8.7						
PALK				S	S	02 20 42.1	-2.6
	comp=Z,4.9nm,0.7s,baz=41,slow=19,SNR=2.6						
PALK				LR	LR	02 27 53.2	
	comp=Z,128nm,19.6s,baz=144,slow=43						
	comp=Z,21nm,1.0s						
PALK	Pallekele	22.27	219	P	P	02 16 43.0	-0.9
PALK				IAmb	IAmb	02 16 47.2	
	comp=Z,71nm,1.2s						
PALK	Pallekele	22.27	219	P	P	02 16 43.1	-0.9
PALK				pmax	pmax		
	comp=Z,71nm,1.3s						
SATY	Saty	22.29	327	⇑*i*P	P	02 16 45.5	+1.4
	comp=Z,36nm,0.9s,baz=327						
SATY				*e*S	S	02 20 47.0	+2.1
	baz=327						
SATY	Saty	22.29	327	*c i*P	P	02 16 45.5	+1.4
SATY				*e*S	S	02 20 47.0	+2.1
SATY				pmax	pmax		
	comp=Z,36nm,0.9s						
ZHN	Zhinishke	22.36	327	*e*P	P	02 16 46.0	+1.1
	baz=327						
ZHN	Zhinishke	22.36	327	*e*P	P	02 16 46.0	+1.1
KPKS	Kokpek	22.46	328	⇑*i*P	P	02 16 47.0	+1.0
	baz=328						
KPKS	Kokpek	22.46	328	*c i*P	P	02 16 46.9	+1.0
PSI	Prapat	22.62	169	P	P	02 16 48.8	+1.0
PSI				pmax	pmax		
	comp=Z,19nm,0.8s						
SNSI	Sinabang, Aceh	22.69	176	P	P	02 16 48.5	0.0
	comp=Z,38nm,0.7s,comp=Z,1µm						
RPSI	Rantau Prapat	22.72	169	P	P	02 16 48.8	0.0
ULHL	Ulahol	22.84	323	P	P	02 16 51.6	+1.6
	SNR=12						
MDOK	Medeo	23.05	325	*e*P	P	02 16 53.3	+1.2
	baz=326						
MDOK				*e*S	S	02 20 59.9	+2.4
	baz=326						
MDOK	Medeo	23.05	325	*e*P	P	02 16 53.2	+1.2
MDOK				*e*S	S	02 20 59.8	+2.3
AAA	Alma-Ata	23.15	325	*e*P	P	02 16 54.9	+1.9
	baz=325						
AAA	Alma-Ata	23.15	325	*e*P	P	02 16 54.9	+1.9
ARXS	Arharly	23.43	328	*e*P	P	02 16 56.3	+0.7
ZSN	Zaisan	23.56	343	*e*P	P	02 16 58.5	+1.8
	baz=343						
ZSN				*e*S	S	02 21 08.2	+2.8
	baz=343						
ZSN	Zaisan	23.56	343	*e*P	P	02 16 58.4	+1.8
ZSN				*e*S	S	02 21 08.2	+2.8
CHKK	Chushkaly	23.57	327	*e*P	P	02 16 57.8	+0.9
	baz=327						
CHKK	Chushkaly	23.57	327	*e*P	P	02 16 57.7	+0.9
TKM2	Tokmak 2	23.65	323	P	P	02 16 59.4	+1.7
	SNR=125						
MK31	Makanchi Array	23.73	338	P	P	02 16 59.1	+0.8
MK31				IAmb	IAmb	02 17 01.0	
	comp=Z,93nm,1.1s						
MK31	Makanchi Array	23.73	338	P	P	02 16 59.1	+0.8
MK31				pmax	pmax		
	comp=Z,93nm,1.2s						
MKAR	Makanchi Array	23.73	338	P	P	02 16 59.2	+1.0
	comp=Z,44nm,0.7s,baz=150,slow=9.2,SNR=300						
MKAR				S	S	02 21 08.0	-0.3
	comp=Z,3.9nm,1.0s,baz=147,slow=2.9,SNR=2.3						
MKAR				ScP	ScP	02 24 11.3	-1.2
	comp=Z,4.4nm,1.0s,baz=131,slow=5.0,SNR=9.8						
MKAR				LR	LR	02 27 34.1	
	comp=Z,187nm,20.9s,baz=152,slow=39						
	comp=Z,44nm,0.7s						
MKAR	Makanchi Array	23.73	338	P	P	02 16 59.1	+0.8
TDK	Taldyqorghan	23.77	330	*e*P	P	02 16 60.0	+1.4
	comp=Z,36nm,1.1s,baz=330						
TDK	Taldyqorghan	23.77	330	*e*P	P	02 16 59.9	+1.4
TDK				pmax	pmax		
	comp=Z,36nm,1.1s						
UCH	Uchtor	23.80	321	P	P	02 17 01.3	+1.9
	SNR=46						
KBK	Karagaybulak	23.83	322	P	P	02 17 01.7	+2.4
	SNR=32						
MAKZ	Makanchi	23.85	338	P	P	02 17 00.1	+0.8
MAKZ				IAmb	IAmb	02 17 02.8	
	comp=Z,71nm,0.9s						
MAKZ	Makanchi	23.85	338	P	P	02 17 00.1	+0.8
MAKZ				pmax	pmax		
	comp=Z,71nm,1.0s						
KUU	Kurty	23.93	326	*e*P	P	02 17 01.2	+1.2
	comp=Z,36nm,0.8s,baz=326						
KUU	Kurty	23.93	326	*e*P	P	02 17 01.2	+1.2
KUU				pmax	pmax		
	comp=Z,36nm,0.8s						
KBL	Kabul	24.07	299	P	P	02 17 02.8	+1.2
KBL	Kabul	24.07	299	P	P	02 17 02.8	+1.2
KBL				pmax	pmax		
	comp=Z,208nm,1.0s						
AAK	Ala-Archa	24.07	321	P	P	02 17 03.9	+2.4
	SNR=32						
AAK	Ala-Archa	24.07	321	P	P	02 17 03.8	+2.2
	comp=Z,39nm,0.9s,baz=142,slow=8.5,SNR=55						
	comp=Z,39nm,0.9s						
AAK	Ala-Archa	24.07	321	P	P	02 17 02.9	+1.4
AAK				IAmb	IAmb	02 17 05.8	
	comp=Z,86nm,1.1s						
AAK	Ala-Archa	24.07	321	*ce*P	P	02 17 03.7	+2.2
AAK				pmax	pmax		
	comp=Z,100nm,1.3s						
AAK	Ala-Archa	24.07	321	*i* P	P	02 17 03.9	+2.4
	SNR=34						
CHMS	Chumysh	24.16	322	P	P	02 17 04.1	+2.0
	SNR=36						
TWG	Pinlang	24.20	90	P	P	02 17 02.5	-0.2
AML	Almayashu	24.22	319	P	P	02 17 05.4	+2.3
	SNR=46						
YULB	Yu-li	24.30	89	P	P	02 17 03.3	-0.3
SONM	Songino Array	24.43	19	P	P	02 17 05.6	+0.9
	comp=Z,34nm,0.8s,baz=196,slow=9.7,SNR=198						
SONM				ScP	ScP	02 24 12.2	-2.3
	comp=Z,1.7nm,0.8s,baz=187,slow=3.5,SNR=8.5						
SONM				LR	LR	02 28 02.5	
	comp=Z,235nm,18.5s,baz=207,slow=40						
	comp=Z,34nm,0.8s						
SONM	Songino Array	24.43	19	P	P	02 17 05.2	+0.5
SONM				IAmb	IAmb	02 17 07.8	
	comp=Z,45nm,1.0s						
SONM	Songino Array	24.43	19	P	P	02 17 05.2	+0.5
SONM				pmax	pmax		
	comp=Z,45nm,1.0s						
USP	Ospenovka	24.48	323	P	P	02 17 07.0	+2.0
	SNR=50						
EKS2	Erkin-Say	24.50	321	P	P	02 17 07.6	+2.3
	SNR=159						
SGDS	Sogindy	24.53	323	⇑*i*P	P	02 17 07.1	+1.6
	baz=323						
SGDS	Sogindy	24.53	323	*c i*P	P	02 17 07.1	+1.6
ULN	Ulaanbaatar	24.66	20	P	P	02 17 06.8	0.0
ULN				IAmb	IAmb	02 17 09.3	
	comp=Z,46nm,0.8s						
ULN	Ulaanbaatar	24.66	20	P	P	02 17 06.8	0.0
ULN				pmax	pmax		
	comp=Z,46nm,0.9s						
GAR	Garm	24.73	310	P	P	02 17 08.3	+0.8
DGZ	Jazzator, Alta	25.12	349	*i* P	P	02 17 13.2	+2.2
DGZ				pmax	pmax		
	comp=Z,28nm,1.2s						
PBSI	Pulau Batu	25.32	172	P	P	02 17 13.3	+0.4
	comp=Z,81nm,0.8s						
CHGR	Chuyangaron	25.40	308	P	P	02 17 13.7	+0.1
CHGR	Chuyangaron	25.40	308	P	P	02 17 13.7	+0.1
CHGR				pmax	pmax		
	comp=Z,132nm,0.8s						
BKNI	Bangkinang	25.46	165	P	P	02 17 13.7	-0.4
BKNI				IAmb	IAmb	02 17 43.2	
	comp=Z,32nm,0.8s						
XLT	XiLinHaoTe	25.55	38	⇑*i*P	P	02 17 15.3	+0.5
XLT				pP	pP	02 17 31.2	-0.5
XLT				sP	sP	02 17 41.8	+1.7
XLT				PP	PnPn	02 17 59.4	+5.2
XLT				pmax	pmax		
	comp=Z,22nm,1.3s						
XLT				pmax	pmax		
	comp=Z,78nm,3.7s						
XLT				LR	LR		
	comp=Z,510nm,10.0s						
XLT				LR	LR		
	comp=Z,290nm,10.2s						
BTLS	Baital	25.91	325	⇑*i*P	P	02 17 19.0	+1.0
	baz=325						
BTLS	Baital	25.91	325	*c i*P	P	02 17 18.9	+1.0
ZAK	Zakamensk	26.02	13	*e*P	P	02 17 20.7	+1.6
ZAK				pmax	pmax		
	comp=Z,18nm,1.2s						
DZA	Taraz	26.07	318	*e*P	P	02 17 21.0	+1.5
	baz=318						
DZA	Taraz	26.07	318	*e*P	P	02 17 21.0	+1.5
IUG	Iuzhnay	26.46	316	*i* P	P	02 17 25.1	+1.9
	comp=Z,49nm,0.6s,baz=316						
IUG	Iuzhnay	26.46	316	*i* P	P	02 17 25.0	+1.9
IUG				pmax	pmax		
	comp=Z,49nm,0.6s						
TAS	Tashkent	26.52	314	P	P	02 17 24.6	+1.1
TAS	Tashkent	26.52	314	P	P	02 17 24.6	+1.1
TAS				pmax	pmax		
	comp=Z,84nm,0.8s						
KK31	Karatay Array	26.69	318	P	P	02 17 25.3	+0.3
KK31	Karatay Array	26.69	318	P	P	02 17 25.3	+0.3
KK31				pmax	pmax		
	comp=Z,16nm,0.8s						
KKAR	Karatay Array	26.69	318	P	P	02 17 25.8	+0.8
KKAR	Karatay Array	26.69	318	P	P	02 17 25.8	+0.8
KKAR				pmax	pmax		
	comp=Z,16nm,0.8s						
CHM	Chimkent	26.82	316	*e*P	P	02 17 27.8	+1.5
	comp=Z,30nm,0.7s,baz=316						
CHM	Chimkent	26.82	316	*e*P	P	02 17 27.7	+1.5
CHM				pmax	pmax		
	comp=Z,30nm,0.7s						
MOY	Mondy	26.88	9	*e*P	P	02 17 28.9	+2.1

MOY				pmax	pmax		
	comp=Z,36nm,3.6s						
SEM	**Semipalatinsk**	27.55	340	eP	P	02 17 33.5	+0.6
	baz=340						
SEM	**Semipalatinsk**	27.55	340	eP	P	02 17 33.5	+0.6
KURBB	**Kurchatov Arra**	28.30	338	P	P	02 17 40.6	+1.3
	comp=Z,14nm,0.8s,baz=150,slow=8.7,SNR=53						
KURBB				PcP	PcP	02 20 51.2	+0.5
	comp=Z,1.1nm,0.4s,baz=164,slow=2.2,SNR=1.7						
KURBB				pPcP		02 21 13.3	
	comp=Z,0.9nm,0.2s,baz=160,slow=2.1,SNR=6.1						
KURBB				ScP	ScP	02 24 25.2	-0.5
	comp=Z,4.3nm,0.7s,baz=151,slow=2.7,SNR=16						
KURBB				LR	LR	02 29 15.6	
	comp=Z,90nm,19.7s,baz=193,slow=37						
	comp=Z,14nm,0.8s						
KURK	**Kurchatov**	28.35	338	P	P	02 17 40.0	+0.3
KURK	**Kurchatov**	28.35	338	ceP	P	02 17 40.5	+0.8
KURK				pmax	pmax		
	comp=Z,20nm,0.8s						
ZAA0	**Zalesovo Array**	29.67	348	P	P	02 17 52.1	+0.7
ZALV	**Zalesovo Beam**	29.67	348	P	P	02 17 52.9	+1.5
	comp=Z,2.3nm,0.4s,baz=172,slow=7.7,SNR=14						
ZALV				pP	pP	02 18 11.5	+3.0
	comp=Z,5.3nm,0.7s,baz=171,slow=8.3,SNR=5.5						
	comp=Z,2.3nm,0.4s						
ZALV	**Zalesovo Beam**	29.67	348	P	P	02 17 51.7	+0.3
ZALV	**Zalesovo Beam**	29.67	348	i P	P	02 17 53.5	+2.1
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BRZS	**Berezniki**	30.07	331	⇑iP	P	02 17 56.8	+1.7
	baz=331						
BRZS	**Berezniki**	30.07	331	ceP	P	02 17 56.5	+1.4
BRZS				pmax	pmax		
	comp=Z,13nm,0.8s						
JOW	**Kunigami**	30.18	79	LR	LR	02 30 36.6	
	comp=Z,125nm,20.1s,baz=272,slow=37						
KSRS	**Korea Array**	30.76	59	P	P	02 17 59.8	-1.4
	comp=Z,0.5nm,0.3s,baz=244,slow=10.0,SNR=1.9						
KSRS				PcP	PcP	02 20 56.5	-0.8
	comp=Z,0.8nm,0.8s,baz=230,slow=2.5,SNR=4.5						
KSRS				LR	LR	02 30 56.4	
	comp=Z,58nm,20.5s,baz=90,slow=37						
	comp=Z,0.5nm,0.3s						
HIA	**Hailar**	30.98	33	P	P	02 18 02.7	-0.3
HIA	**Hailar**	30.98	33	i P	P	02 18 02.8	-0.3
HIA				pmax	pmax		
	comp=Z,19nm,0.8s						
CN2	**Changchun**	31.17	46	eP	P	02 18 05.1	+0.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
JNU	**Nakatsue**	32.46	67	LR	LR	02 33 07.9	
	comp=Z,109nm,18.4s,baz=264,slow=39						
WSAR	**Wadi Sarin**	32.89	274	LR	LR	02 34 14.8	
	comp=Z,71nm,18.3s,baz=101,slow=41						
BVAR	**Borovoye Array**	33.28	333	LR	LR	02 33 34.9	
	comp=Z,192nm,18.0s,baz=137,slow=39						
BNX	**BinXian**	33.29	44	⇑P	P	02 18 22.3	-1.0
BNX				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BNX				pmax	pmax		
	comp=Z,150nm,6.6s						
BRVK	**Borovoye**	33.35	333	P	P	02 18 24.4	+0.6
BRVK				IAmb	IAmb	02 18 26.0	
	comp=Z,18nm,0.9s						
BRVK	**Borovoye**	33.35	333	P	P	02 18 24.4	+0.6
BRVK				pmax	pmax		
	comp=Z,18nm,1.0s						
BRVK	**Borovoye**	33.35	333	P	P	02 18 25.0	+1.2
BRVK				pP	pP	02 18 42.2	+1.2
BRVK				ScP	ScP	02 24 41.9	-0.4
GEYT	**Alibeck**	33.45	301	P	P	02 18 27.2	+2.3
	comp=Z,13nm,0.7s,baz=124,slow=7.9,SNR=30						
GEYT				ScP	ScP	02 24 43.0	-0.1
	comp=Z,1.6nm,0.6s,baz=121,slow=2.6,SNR=4.4						
GEYT				LR	LR	02 34 55.0	
	comp=Z,115nm,19.0s,baz=184,slow=41						
	comp=Z,13nm,0.7s						
UOSS	**Minazif**	34.79	278	P	P	02 18 35.5	-1.0
UOSS	**Minazif**	34.79	278	P	P	02 18 36.8	+0.2
HATD	**Hatta, Dubai**	34.87	278	i P	P	02 18 38.9	+1.6
	SNR=6.4						
ASHO	**Ashiyiah**	34.96	278	i P	P	02 18 39.7	+1.6
	SNR=14						
BOD	**Bodaibo**	35.41	18	eP	P	02 18 42.1	+0.6
BOD				pmax	pmax		
	comp=Z,24nm,1.6s						
HEH	**HeiHe**	35.53	37	eP	P	02 18 43.1	+0.4
HEH				PcP	PcP	02 21 10.0	-0.4
HEH				pmax	pmax		
	comp=Z,42nm,0.7s						
ASUD	**Al Ashush, Dub**	35.62	278	P	P	02 18 45.4	+1.7
USRK	**Ussuriysk Ar.**	35.67	48	P	P	02 18 41.9	-2.0
	comp=Z,5.5nm,0.9s,baz=256,slow=9.8,SNR=7.8						
	comp=Z,5.5nm,0.9s						
ABKAR	**Akbulak array**	36.16	321	P	P	02 18 49.2	+1.2
KLR	**Kul'dur**	37.48	40	LR	LR	02 35 12.9	
	comp=Z,128nm,18.1s,baz=276,slow=37						
KLR	**Kul'dur**	37.48	40	i P	P	02 18 58.6	-0.7
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SPSI	**Sidrap Palu**	37.84	136	P	P	02 19 03.0	+0.3
	comp=Z,19nm,0.9s						
KAPI	**Kappang**	38.65	138	LR	LR	02 38 14.3	
	comp=Z,70nm,18.3s,baz=295,slow=41						
MJAR	**Matsushiro Arr**	38.74	62	P	P	02 19 07.6	-2.5
	comp=Z,1.0nm,0.4s,baz=273,slow=9.4,SNR=2.5						
	comp=Z,1.0nm,0.4s						
SVE	**Sverdlovsk**	39.99	331	deP	P	02 19 22.0	+1.8
SVE				eS	S	02 25 22.9	+2.5
SVE				pmax	pmax		
	comp=Z,62nm,1.0s						
PLAI	**Plampang**	40.60	143	P	P	02 19 23.7	-1.9
	comp=Z,38nm,0.9s,comp=Z,472nm						
ARU	**Arti**	40.68	330	LR	LR	02 38 01.6	
	comp=Z,111nm,20.9s,baz=156,slow=38						
ARU	**Arti**	40.68	330	P	P	02 19 26.0	+0.2
ARU				IAmb	IAmb	02 19 28.0	
	comp=Z,58nm,1.4s						
ARU	**Arti**	40.68	330	c iP	P	02 19 27.1	+1.2
ARU				*PP	pP	02 19 42.6	-0.9
ARU						02 21 24.3	
ARU				S	S	02 25 33.9	+3.2
ARU				SS	SS	02 28 27.9	-5.4
ARU				pmax	pmax		
	comp=Z,49nm,1.5s						
ARU	**Arti**	40.68	330	P	P	02 19 27.1	+1.2
LKRN	**Lenkeran, Azer**	40.82	301	P	P	02 19 28.8	+1.5
GRNR	**Gornyy**	40.87	40	⇑iP	P	02 19 35.1	+7.6
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,450nm,18.0s						
GRNR				MLR	MLR		
	comp=N,160nm,17.0s						
GRNR				MLR	MLR		
	comp=Z,180nm,15.0s						
AKT	**Akhty**	41.94	305	eP	P	02 19 38.2	+1.6
AKT				e*PP	pP	02 19 54.6	+0.2
AKT				e		02 21 17.6	
AKT				pmax	pmax		
	comp=Z,44nm,0.7s						
SEKA	**Sheki**	42.30	304	P	P	02 19 39.7	+0.2
MNGR	**Mingechevir, A**	42.34	304	P	P	02 19 41.1	+1.5
ZKTA	**Zakatala**	42.79	305	P	P	02 19 44.2	+0.9
GANJ	**Ganja**	42.90	303	P	P	02 19 46.0	+1.7
MMRI	**Maumere**	43.01	138	P	P	02 19 43.3	-1.9
MMRI	**Maumere**	43.01	138	P	P	02 19 43.4	-1.9
	comp=Z,91nm,0.7s						
ASAJ	**Asahikawa**	43.03	52	LR	LR	02 38 22.3	
	comp=Z,62nm,20.4s,baz=99,slow=37						
NAX	**Nakhchivan**	43.41	301	P	P	02 19 50.0	+1.5
GROC	**Groznyy**	43.60	307	eP	P	02 19 51.4	+1.6
GROC				e*PP	pP	02 20 10.3	+2.7
GROC				e		02 21 37.6	
GROC				pmax	pmax		
	comp=Z,224nm,1.1s						
YAK	**Yakutsk**	43.69	23	P	P	02 19 49.9	-0.3
	comp=Z,16nm,0.4s,baz=3.7,slow=1.8,SNR=5.2						
YAK				LR	LR	02 38 47.0	
	comp=Z,93nm,20.0s,baz=247,slow=37						
	comp=Z,16nm,0.4s						
YAK	**Yakutsk**	43.69	23	eP	P	02 19 50.6	+0.4
YAK				e*PP	pP	02 20 02.7	-5.4
YAK				e		02 21 40.5	
YAK				ePPP	PPP	02 22 18.3	
YAK				eS	S	02 26 14.9	+0.1
YAK				e		02 29 41.3	
YAK				pmax	pmax		
	comp=Z,51nm,1.1s						
YAK				pmax	pmax		
	comp=N,16nm,1.2s						
YAK				pmax	pmax		
	comp=E,12nm,1.3s						
YAK				smax	smax		
	comp=E,221nm,4.8s						
YAK				smax	smax		
	comp=N,85nm,4.0s						
GNI	**Garni**	44.06	302	P	P	02 19 55.6	+1.9
GNI				IAmb	IAmb	02 19 57.5	
	comp=Z,49nm,1.1s						
GNI	**Garni**	44.06	302	ceP	P	02 19 55.7	+1.9
GNI				pmax	pmax		
	comp=Z,58nm,1.3s						
GNI	**Garni**	44.06	302	P	P	02 19 56.5	+2.7
GNI	**Garni**	44.06	302	P	P	02 19 56.5	+2.7
GNI				pP	pP	02 20 13.7	+1.9
GNI				sP	sP	02 20 22.6	+2.6
TASB	**TASBURUN-IGDIR**	44.43	302	eP	P	02 19 59.2	+2.6
BELG	**Belogornoye**	44.56	320	LR	LR	02 40 33.1	
	comp=Z,74nm,20.1s,baz=165,slow=38						
BELG	**Belogornoye**	44.56	320	c iP	P	02 19 57.9	+0.6
BELG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
RAYN	**Ar Rayn**	44.65	279	P	P	02 19 58.5	0.0
RAYN	**Ar Rayn**	44.65	279	P	P	02 19 58.5	0.0
RAYN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
RAYN	**Ar Rayn**	44.65	279	i P	P	02 19 59.4	+0.9
	SNR=11						
RAYN	**Ar Rayn**	44.65	279	⇑P	P	02 19 59.5	+0.9
RAYN				pP	pP	02 20 15.6	-0.9
RAYN				sP	sP	02 20 23.9	-0.9
RAYN				ScP	ScP	02 25 25.2	-1.1
CUKT	**Cukurca**	44.83	298	eP	P	02 20 01.3	+1.4
ZEI	**Tsey**	44.93	306	eP	P	02 19 59.9	-0.8
ZEI				pmax	pmax		
	comp=Z,47nm,1.0s						
SOEI	**Soe**	45.12	137	P	P	02 20 00.7	-1.7
SOEI	**Soe**	45.12	137	P	P	02 20 01.0	-1.4
	comp=Z,140nm,0.9s,comp=Z,1µm						
NCK	**Nalchik**	45.23	307	i P	P	02 20 03.4	+0.6
NCK				pmax	pmax		
	comp=Z,30nm,0.5s						
ONI	**Oni**	45.23	306	eP	P	02 20 05.8	+2.8
ONI	**Oni**	45.23	306	P	P	02 20 05.1	+2.1
ONI				IAmb	IAmb	02 20 07.5	
	comp=Z,30nm,1.0s						
ONI	**Oni**	45.23	306	P	P	02 20 05.1	+2.1
ONI				pmax	pmax		
	comp=Z,30nm,1.0s						
AKDM	**Akdamar-Van**	45.34	300	eP	P	02 20 06.3	+2.3
KARS	**Kars**	45.36	303	P	P	02 20 06.0	+1.9
KARS	**Kars**	45.36	303	P	P	02 20 06.0	+1.9
AGRB	**Hanur-Agry**	45.37	302	eP	P	02 20 07.0	+2.8
KBZ	**Khabaz**	45.76	307	P	P	02 20 08.0	+1.0
	comp=Z,2.7nm,0.4s,baz=210,slow=1.7,SNR=19						
KBZ				LR	LR	02 42 20.3	
	comp=Z,80nm,19.3s,baz=64,slow=40						
	comp=Z,2.7nm,0.4s						
KBZ	**Khabaz**	45.76	307	ceP	P	02 20 07.8	+0.9
KBZ				pmax	pmax		
	comp=Z,12nm,1.5s						
NEY	**Neytrino**	45.84	307	i P	P	02 20 10.1	+2.3
NEY				pmax	pmax		
	comp=Z,6.0nm,0.6s						
FAKI	**Fak Fak**	45.90	122	P	P	02 20 06.7	-1.7
SHA1	**Shidzhatmaz**	45.93	307	i P	P	02 20 09.3	+0.7
KIV	**Kislovodsk**	45.94	308	⇑P	P	02 20 09.7	+1.2
KIV	**Kislovodsk**	45.94	308	eP	P	02 20 09.9	+1.4
KIV	**Kislovodsk**	45.94	308	P	P	02 20 09.4	+0.9
KIV	**Kislovodsk**	45.94	308	eP	P	02 20 08.5	0.0
KIV				pmax	pmax		
	comp=Z,32nm,1.0s						
KIV				MLR	MLR		
	comp=Z,41nm,16.0s						
KIV	**Kislovodsk**	45.94	308	i P	P	02 20 09.9	+1.4
	SNR=12						
KIV	**Kislovodsk**	45.94	308	P	P	02 20 09.8	+1.4
KIV				pP	pP	02 20 26.2	-0.2
KIRV	**Kirov**	46.02	329	ceP	P	02 20 10.1	+1.3
GURO	**Guroymak-BITLI**	46.09	300	eP	P	02 20 12.2	+2.3
GURO	**Guroymak-BITLI**	46.09	300	P	P	02 20 11.4	+1.5
GURO				IAmb	IAmb	02 20 13.8	
	comp=Z,24nm,0.9s						
SVAN	**Silvan-Diyarba**	46.74	300	eP	P	02 20 16.8	+1.9
BNGB	**Bingl**	47.15	301	eP	P	02 20 19.2	+1.1
KOPT	**Kop Dagi**	47.31	302	P	P	02 20 20.8	+1.3
KOPT				IAmb	IAmb	02 20 24.8	
	comp=Z,24nm,1.2s						
VRH	**Novokhopyorsk**	47.77	317	c iP	P	02 20 22.9	+0.4
VRH				e*PP	pP	02 20 35.3	-5.4
VRH				e*SP	sP	02 20 42.2	-6.7
VRH				e		02 21 51.6	
VRH				eS	S	02 27 11.7	-2.0
VRH				pmax	pmax		
	comp=Z,56nm,0.8s						
MSEY	**Mahe Island**	48.28	238	P	P	02 20 25.9	-1.1
MSEY	**Mahe Island**	48.28	238	P	P	02 20 25.9	-1.1
MSEY				pmax	pmax		
	comp=Z,225nm,1.6s						
ARPR	**Arapgir-MALATY**	48.98	301	eP	P	02 20 34.2	+2.0
VSR	**Storozhevoye**	49.34	317	eP	P	02 20 33.3	-1.3
VSR				eS	S	02 27 32.2	-3.7
VSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
VSR				smax	smax		
	comp=N,30nm,1.4s						
VORR	**Voronezh**	49.40	317	eP	P	02 20 35.5	+0.5
VORR				e*PP	pP	02 20 47.2	-6.0
VORR				e*SP	sP	02 20 54.2	-7.2
VORR				eS	S	02 27 34.3	-2.4
VORR				pmax	pmax		
	comp=Z,60nm,0.6s						
VORR				smax	smax		
	comp=N,20nm,1.1s						
DARE	**Darende-Malaty**	49.66	300	eP	P	02 20 39.5	+2.1
RSDY	**Resadiye-TOKAT**	49.74	303	eP	P	02 20 39.9	+2.0
LPSR	**Galich'ya Gora**	49.74	319	eP	P	02 20 36.7	-0.9
LPSR				eS	S	02 27 40.3	-1.2
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
LPSR				smax	smax		
	comp=E,30nm,1.9s						
GAZ	**Gaziantep**	49.94	298	eP	P	02 20 41.0	+1.5
SVSK	**Karacayir**	50.00	302	eP	P	02 20 42.4	+2.7
TIXI	**Tiksi**	50.30	13	LR	LR	02 45 38.6	
	comp=E,29nm,18.8s,baz=355,slow=40						
TIXI	**Tiksi**	50.30	13	P	P	02 20 41.8	+0.2
TIXI				IAmb	IAmb	02 20 42.8	
	comp=Z,12nm,0.8s						
TIXI	**Tiksi**	50.30	13	ceP	P	02 20 41.8	+0.2
TIXI				pmax	pmax		
	comp=Z,43nm,1.7s						
TIXI	**Tiksi**	50.30	13	P	P	02 20 41.6	+0.1
TIXI				pP	pP	02 20 58.7	-1.3
TOKT	**Tokat**	50.34	302	eP	P	02 20 44.5	+2.1
SARI	**SarD1z-Kayseri**	50.50	300	eP	P	02 20 45.8	+2.0
KVT	**Kavak**	50.70	303	eP	P	02 20 47.0	+1.8
BNN	**Bunyan**	50.92	301	eP	P	02 20 48.7	+1.7
KOZT	**Kozan**	51.02	299	eP	P	02 20 48.9	+1.3
CEYT	**Ceyhan**	51.12	298	eP	P	02 20 50.1	+1.9
MOS	**Moscow**	51.13	322	eP	P	02 20 46.3	-1.8
MOS				e*PP	pP	02 21 04.6	-1.7
MOS				eS	S	02 27 57.6	-3.0
MOS				pmax	pmax		
	comp=Z,73nm,1.0s						
MOS				pmax	pmax		
	comp=Z,100nm,1.1s						
KLMR	**Klimovskoe**	51.52	329	⇑iP	P	02 20 51.9	+1.0
KLMR				eP	P	02 20 51.9	+1.0
KLMR				eP	P	02 20 51.9	+1.0
KLMR				AMP		02 20 53.0	
	comp=Z,81nm,1.4s						
KLMR				epP	pP	02 21 10.7	+1.5
KLMR				eS	S	02 28 04.8	-1.0
KLMR				eS	S	02 28 04.8	-1.0
KLMR	**Klimovskoe**	51.52	329	c iP	P	02 20 51.8	+0.9
KLMR				e*PP	pP	02 21 10.6	+1.4
KLMR				eS	S	02 28 04.8	-1.0
KLMR				pmax	pmax		
	comp=Z,81nm,1.4s						
MA2	**Magadan**	51.57	33	LR	LR	02 45 00.2	
	comp=Z,83nm,19.9s,baz=242,slow=39						
OBN	**Obninsk**	51.60	321	P	P	02 20 52.0	+0.4
OBN	**Obninsk**	51.60	321	eP	P	02 20 51.9	+0.4
OBN				e		02 22 03.5	
OBN				e		02 22 47.0	
OBN				pmax	pmax		
	comp=Z,60nm,1.7s						
OBN				MLR	MLR		
	comp=Z,36nm,16.0s						
KARA	**Karaisali**	51.65	299	eP	P	02 20 53.7	+1.4
CORM	**Corum**	51.80	302	eP	P	02 20 55.1	+1.6
MBWA	**Marble Bar**	52.09	150	P	P	02 20 54.5	-1.1
SIM	**Simferopol'**	52.12	308	c iP	P	02 20 56.4	+0.8
SIM				*PP	pP	02 21 13.3	-0.7
SIM				e		02 22 07.0	
SIM				eS	S	02 28 17.3	+2.7
SIM				eSS	SS	02 31 52.0	-0.4
SIM				pmax	pmax		
	comp=Z,32nm,0.8s						
KNRA	**Kununurra**	52.46	137	P	P	02 20 57.0	-1.4
ILGA	**Ilgaz**	52.46	303	P	P	02 20 59.2	+0.7
FITZ	**Fitzroy Crossi**	52.52	142	P	P	02 20 57.5	-1.3
CANT	**Cankiri**	52.56	303	eP	P	02 21 00.8	+1.8
BR131	**Keskin Array S**	52.59	302	c iP	P	02 21 00.0	+0.6
BRTR	**Keskin Array B**	52.59	302	P	P	02 21 00.2	+0.9
	comp=Z,12nm,0.7s,baz=122,slow=8.1,SNR=112						
BRTR				ScP	ScP	02 25 59.7	-0.2
	comp=Z,0.2nm,0.5s,baz=112,slow=1.1,SNR=2.1						
	comp=Z,12nm,0.7s						
EIL	**Elat**	52.72	289	LR	LR	02 47 45.4	
	comp=Z,48nm,19.5s,baz=57,slow=41						
EIL	**Elat**	52.72	289	eP	P	02 20 59.9	-0.4
SULT	**Sultanhani-AKS**	52.79	300	eP	P	02 21 02.8	+2.0
ANTO	**Ankara**	53.23	302	⇑P	P	02 21 05.2	+1.3
ANTO	**Ankara**	53.23	302	P	P	02 21 05.0	+1.0
ANTO	**Ankara**	53.23	302	P	P	02 21 05.0	+1.0
ANTO				pmax	pmax		
	comp=Z,31nm,0.6s						
ANTO	**Ankara**	53.23	302	P	P	02 21 05.3	+1.3
BR231	**Keskin MP Arra**	53.24	302	P	P	02 21 04.9	+0.7
CSS	**Mathiatis**	53.27	296	eP	P	02 21 04.6	+0.3
CSS	**Mathiatis**	53.27	296	P	P	02 21 04.7	+0.3
SEY	**Seymchan**	53.29	29	ceP	P	02 21 02.0	-1.9
SEY				pmax	pmax		
	comp=Z,25nm,1.8s						
LADK	**Ladik-KONYA**	53.69	300	eP	P	02 21 07.7	+0.2
PETK	**Petropavlovsk-**	54.16	42	P	P	02 21 09.0	-1.5
	comp=Z,3.5nm,0.9s,baz=264,slow=4.1,SNR=1.6						
	comp=Z,3.5nm,0.9s						
PETK	**Petropavlovsk-**	54.16	42	P	P	02 21 09.0	-1.5
KDZE	**Karadeniz Ereo**	54.16	304	⇑P	P	02 21 11.9	+1.2
SEYD	**Seydisehir-KON**	54.19	299	eP	P	02 21 12.4	+1.3
SVRH	**Sivrihisar-ESK**	54.24	302	eP	P	02 21 12.4	+1.0
MDUB	**Mudurnu**	54.41	303	eP	P	02 21 13.9	+1.3
MDUB	**Mudurnu**	54.41	303	P	P	02 21 13.6	+1.0
SUTC	**Sutluce-Ispart**	54.84	299	eP	P	02 21 16.4	+0.5
BORA	**Eskisehir**	55.02	302	P	P	02 21 17.1	+0.1
SHUT	**Suhut-Afyon**	55.08	301	eP	P	02 21 18.5	+1.0
PURM	**Purcari**	55.09	310	⇑P	P	02 21 18.3	+1.0
ISP	**Isparta**	55.18	300	P	P	02 21 17.8	-0.5
ISP				IAmb	IAmb	02 21 19.3	
	comp=Z,21nm,0.8s						
ISP	**Isparta**	55.18	300	P	P	02 21 17.8	-0.5
ISP				pmax	pmax		
	comp=Z,21nm,0.8s						
ADVT	**Abdulvahap**	55.52	303	eP	P	02 21 20.9	+0.4
SILT	**Sile**	55.53	304	eP	P	02 21 21.4	+0.9
HRT	**Hereke**	55.54	303	eP	P	02 21 21.9	+1.2
AKASG	**Malin Array Be**	55.55	315	P	P	02 21 20.6	+0.1
	comp=Z,8.6nm,0.4s,baz=80,slow=6.5,SNR=106						
AKASG				PP	PP	02 23 27.0	+2.1
	comp=Z,2.8nm,0.9s,baz=73,slow=8.4,SNR=2.1						
AKASG				ScP	ScP	02 26 11.0	-1.4
	comp=Z,1.6nm,0.9s,baz=77,slow=4.1,SNR=4.4						
AKASG				LR	LR	02 49 45.8	
	comp=Z,67nm,18.1s,baz=69,slow=41						
	comp=Z,8.6nm,0.4s						
AKBB	**Malin Array Si**	55.55	315	P	P	02 21 20.2	-0.3
AKBB	**Malin Array Si**	55.55	315	ceP	P	02 21 20.6	+0.1
AKBB				pmax	pmax		
	comp=Z,46nm,0.9s						
PUL	**Pulkovo**	55.72	326	ceP	P	02 21 22.9	+1.3
PUL				pmax	pmax		
	comp=Z,97nm,0.5s						
ELL	**Elmali**	55.80	299	eP	P	02 21 23.7	+1.0
JURR	**Jurilovca**	55.85	308	⇑P	P	02 21 24.0	+1.3
TLCR		55.87	309	⇑P	P	02 21 23.4	+0.5
TLCR		55.87	309	P	P	02 21 23.4	+0.5
GEMT	**Gemlik**	55.94	303	eP	P	02 21 24.0	+0.5
APA	**Apatity**	56.10	336	⇓iP	P	02 21 24.5	+0.3
APA				i		02 22 29.8	
APA				i S	S	02 29 04.0	-3.5
APA				pmax	pmax		
	comp=Z,11nm,0.8s						
APA				MLR	MLR		
	comp=Z,600nm,17.0s						
SORM	**Soroca**	56.10	312	⇓P	P	02 21 24.9	+0.3
SORM	**Soroca**	56.10	312	P	P	02 21 24.8	+0.3
MANR	**Mangalia**	56.11	307	⇑P	P	02 21 25.7	+1.1
AKAS	**Kas**	56.11	298	IAmb	IAmb	02 21 38.2	
	comp=Z,16nm,0.8s						
TPGR	**Topolog**	56.17	308	⇓P	P	02 21 25.7	+0.5
TIRR	**Tirgusor**	56.20	308	⇓P	P	02 21 26.2	+1.0
TIRR	**Tirgusor**	56.20	308	P	P	02 21 25.8	+0.5
TIRR	**Tirgusor**	56.20	308	P	P	02 21 25.8	+0.5
TIRR				pmax	pmax		
	comp=Z,51nm,1.0s						
KALB	**Balgarevo**	56.26	307	⇓P	P	02 21 27.3	+1.5
CFR	**Carcaliu**	56.35	309	⇑P	P	02 21 27.0	+0.7
CFR	**Carcaliu**	56.35	309	P	P	02 21 27.0	+0.7
VLDR	**Vladesti**	56.36	310	⇑P	P	02 21 27.6	+1.2
TLBR	**Topalu**	56.45	308	⇑P	P	02 21 28.5	+1.4
MNK	**Minsk**	56.51	320	i P	P	02 21 28.2	+0.8
	comp=E,7.0nm,1.0s						
MNK				i P	P	02 21 28.2	+0.8
	comp=N,43nm,1.0s						
MNK				i P	P	02 21 28.2	+0.8
	comp=Z,39nm,0.8s,baz=93						
MNK				i pP	pP	02 21 45.1	-0.7
MNK				i PP	PP	02 23 34.5	+1.0
MNK				i PPP	PPP	02 24 50.2	
MNK				i S	S	02 29 20.1	+6.7
MNK				i sS	sS	02 29 44.6	+0.2
MNK				i SS	SS	02 33 04.8	+3.6
MNK				i SSS	SSS	02 35 09.5	
MNK	**Minsk**	56.51	320	i P	P	02 21 28.1	+0.8
MNK				i *PP	pP	02 21 45.1	-0.7
MNK				i		02 23 34.5	
MNK				i PPP	PPP	02 24 50.1	
MNK				i S	S	02 29 20.0	+6.7
MNK				i SS	SS	02 33 04.8	+3.6
MNK				pmax	pmax		
	comp=N,43nm,1.0s						
MNK				pmax	pmax		
	comp=E,7.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,39nm,0.8s						
VASR	**Vaslui**	56.53	311	⇓P	P	02 21 28.6	+1.0
HARR	**Harsova**	56.53	308	⇑P	P	02 21 29.1	+1.4
HARR	**Harsova**	56.53	308	P	P	02 21 29.0	+1.4
SLCR	**Slobozia Conac**	56.59	309	⇑P	P	02 21 29.8	+1.8
MANT	**Manisa**	56.64	301	IAmb	IAmb	02 21 49.3	
	comp=Z,34nm,1.5s						
BIR	**Birlad**	56.66	310	⇑P	P	02 21 29.7	+1.2
BIR	**Birlad**	56.66	310	P	P	02 21 29.7	+1.2
ICOR	**Ion Corvin**	56.66	308	⇑P	P	02 21 30.6	+2.0
TUDR		56.66	309	⇓P	P	02 21 30.3	+1.8
GHRR		56.82	310	⇑P	P	02 21 31.1	+1.5
PANC	**Panciu**	57.01	310	⇓P	P	02 21 32.6	+1.6
ODBI	**Odobesti**	57.08	310	⇑P	P	02 21 33.6	+2.1
TURN	**Turunc**	57.12	299	eP	P	02 21 32.7	+0.8
NACGM	**Naroch**	57.17	320	eP	P	02 21 33.0	+1.0
	comp=E,2µm,1.0s						
IDID	**Didziasalis**	57.21	321	eP	P	02 21 27.2	-5.1
VRI	**Vrincioaia**	57.30	310	⇑P	P	02 21 34.7	+1.6
VRI	**Vrincioaia**	57.30	310	eP	P	02 21 34.8	+1.6
VRI	**Vrincioaia**	57.30	310	P	P	02 21 34.7	+1.6
TESR	**Tescani**	57.32	310	⇑P	P	02 21 33.9	+0.7
PLOR	**Plostina**	57.36	310	⇑P	P	02 21 35.3	+1.7
PLOR	**Plostina**	57.36	310	P	P	02 21 35.2	+1.7

VSU	Vasula	57.41	325	eP	P	02 21 34.7	+1.2
MLSB	Milas	57.41	299	eP	P	02 21 32.9	-1.2
ISR	Istrita	57.48	309	⇑P	P	02 21 36.5	+2.0
ISR	Istrita	57.48	309	P	P	02 21 36.5	+2.0
IIGN	Ignalina	57.51	321	eP	P	02 21 30.5	-3.9
ISAL	Salakas	57.57	321	eP	P	02 21 36.4	+1.6
RAZG	Razgrad	57.63	307	⇑P	P	02 21 36.2	+0.8
NEHR	Nehoiu	57.63	309	⇑P	P	02 21 37.4	+1.9
COVR	Voineasa-Covas	57.67	310	⇓P	P	02 21 37.2	+1.4
SULR		57.72	308	⇑P	P	02 21 38.0	+1.9
MLR	Muntele Rosu	57.88	309	⇑P	P	02 21 38.8	+1.5
MLR	Muntele Rosu	57.88	309	eP	P	02 21 37.6	+0.3
MLR	Muntele Rosu	57.88	309	P	P	02 21 38.8	+1.5
OZUR		57.94	310	⇑P	P	02 21 38.9	+1.3
FIA1	FINESS Array S	58.01	328	P	P	02 21 38.5	+0.8
FINES	FINESS Array B	58.01	328	P	P	02 21 38.7	+1.0
	comp=E,19nm,0.6s,baz=94,slow=6.5,SNR=114						
FINES				LR	LR	02 47 40.5	
	comp=E,73nm,19.0s,baz=88,slow=37						
	comp=E,19nm,0.6s						
DOPR	Dopca	58.23	310	⇓P	P	02 21 41.1	+1.4
BURAR	Bucovina Array	58.23	312	⇑P	P	02 21 40.5	+0.7
BURAR	Bucovina Array	58.23	312	IAmb	IAmb	02 21 41.2	
	comp=Z,13nm,0.7s						
BURAR	Bucovina Array	58.23	312	P	P	02 21 40.4	+0.7
BUR08	Bucovina Ar. S	58.24	312	P	P	02 21 39.7	-0.1
BUR08				IAmb	IAmb	02 21 41.5	
	comp=Z,8.7nm,0.8s						
ZIMR		58.45	307	⇑P	P	02 21 42.3	+1.1
ZIMR		58.45	307	P	P	02 21 42.2	+1.1
VOIR		58.51	309	⇓P	P	02 21 42.5	+0.9
VOIR		58.51	309	P	P	02 21 42.5	+0.9
COPA	Copaceanca	58.51	308	⇓P	P	02 21 42.9	+1.4
RDO	Rodhopi	58.61	304	P	P	02 21 42.4	+0.1
RDO				IAmb	IAmb	02 21 44.1	
	comp=Z,19nm,1.3s						
STFAR	Stefanesti-Arg	58.62	309	⇑P	P	02 21 44.4	+2.0
HUMR	Humele	58.64	308	⇑P	P	02 21 43.0	+0.5
MEF	Metsahovi	58.73	327	eP	P	02 21 44.2	+1.5
PABE	Paberze	58.79	321	P	P	02 21 43.9	+0.5
PABE	Paberze	58.79	321	eP	P	02 21 44.6	+1.3
ARR	Arges	58.81	309	⇑P	P	02 21 44.6	+0.8
ARCR	ARCALIA	58.85	311	⇑P	P	02 21 45.1	+1.1
LVV	L'vov	58.89	314	eP	P	02 21 44.5	+0.4
MTSE	Matsula	58.95	325	eP	P	02 21 45.4	+1.1
PLVB	Pleven	59.02	307	⇑P	P	02 21 46.0	+0.9
WB0	Warramunga Arr	59.05	135	P	P	02 21 44.5	-1.1
VLAD	Vladila	59.11	308	⇑P	P	02 21 47.3	+1.6
WRA	Warramunga Arr	59.14	136	P	P	02 21 45.3	-0.9
	comp=Z,15nm,0.8s,baz=325,slow=7.6,SNR=81						
	comp=Z,15nm,0.8s						
WRAB	Tennant Creek	59.14	136	ceP	P	02 21 45.0	-1.2
WRAB				pmax	pmax		
	comp=Z,20nm,0.8s						
WRAB	Tennant Creek	59.14	136	P	P	02 21 45.0	-1.2
WRAB				pP	pP	02 22 03.8	-0.7
WRAB				sP	sP	02 22 10.9	-1.5
WB2	Warramunga Arr	59.15	136	P	P	02 21 45.7	-0.6
WB2				IAmb	IAmb	02 21 46.3	
	comp=Z,24nm,0.9s						
ARA0	ARCESS Array S	59.38	338	eP	P	02 21 48.0	+0.7
ARCES	ARCESS Array B	59.38	338	P	P	02 21 47.7	+0.5
	comp=Z,1.6nm,0.5s,baz=102,slow=5.9,SNR=19						
ARCES				LR	LR	02 50 50.3	
	comp=Z,44nm,19.6s,baz=116,slow=39						
	comp=Z,1.6nm,0.5s						
BMR	Baia Mare	59.39	312	⇑P	P	02 21 49.1	+1.4
BMR	Baia Mare	59.39	312	P	P	02 21 49.0	+1.4
CJR	Cluj-Napoca	59.40	311	⇓P	P	02 21 49.6	+1.8
CJR	Cluj-Napoca	59.40	311	P	P	02 21 49.6	+1.8
LOT	Lotru	59.40	309	⇓P	P	02 21 48.9	+1.0
MARR	Marisel-Cluj	59.73	311	⇓P	P	02 21 51.7	+1.5
MESR	Meseseni	59.80	311	⇓P	P	02 21 52.3	+1.8
BAIL	Bailesti	59.86	308	⇑P	P	02 21 52.8	+1.8
PBUR	Paburge	59.94	322	eP	P	02 21 51.8	+0.6
DEV	Deva	59.96	310	⇓P	P	02 21 53.4	+1.8
DEV	Deva	59.96	310	P	P	02 21 53.4	+1.8
TRPA	Tarpa	59.99	313	⇑P	P	02 21 52.9	+1.2
DRGR		60.00	311	⇑P	P	02 21 53.1	+1.2
DRGR		60.00	311	P	P	02 21 53.1	+1.2
BILL	Bilibino	60.02	24	P	P	02 21 51.8	+0.2
BILL				IAmb	IAmb	02 21 52.8	
	comp=Z,28nm,1.1s						
BILL	Bilibino	60.02	24	eP	P	02 21 51.3	-0.3
BILL				e*PP	pP	02 22 08.9	-1.3
BILL				e		02 22 31.5	
BILL				e		02 24 06.7	
BILL				ePPP	PPP	02 25 28.8	
BILL				pmax	pmax		
	comp=Z,29nm,1.3s						
BILL				MLR	MLR		
	comp=Z,55nm,16.0s						
BILL	Bilibino	60.02	24	⇑P	P	02 21 51.9	+0.4
BILL				sP	sP	02 22 19.0	+0.8
IDI	Anoyia	60.05	298	⇑P	P	02 21 53.0	+0.6
IDI	Anoyia	60.05	298	eP	P	02 21 52.1	-0.3
IDI	Anoyia	60.05	298	P	P	02 21 52.6	+0.2
IDI				IAmb	IAmb	02 21 53.9	
	comp=Z,24nm,1.1s						
RAF	Rauma	60.06	328	eP	P	02 21 53.1	+1.2
KTK1	Kautokeino	60.10	337	eP	P	02 21 53.3	+1.2
KTK1				IAmb	IAmb	02 21 55.6	
	comp=Z,7.6nm,0.8s						
GZR	Gura Zlata	60.10	309	⇑P	P	02 21 53.5	+0.8
VTS	Vitosha	60.12	306	⇑P	P	02 21 54.3	+1.3
VTS	Vitosha	60.12	306	P	P	02 21 53.2	+0.3
VTS				IAmb	IAmb	02 21 55.4	
	comp=Z,21nm,1.1s						
VTS	Vitosha	60.12	306	P	P	02 21 53.2	+0.3
VTS				pmax	pmax		
	comp=Z,21nm,1.1s						
PUNG	Punghina	60.13	308	⇑P	P	02 21 54.4	+1.7
HAMF	Hammerfest	60.19	339	eP	P	02 21 54.3	+1.7
HERR	Herculane	60.42	309	⇑P	P	02 21 56.0	+1.3
SURR	Surduc	60.52	310	⇓P	P	02 21 57.0	+1.6
STHS	Stebnicka Huta	60.73	314	eP	P	02 21 56.4	-0.4
STHS				pmax	pmax		
	comp=Z,4.0nm,0.6s						
STHS	Stebnicka Huta	60.73	314	eP	P	02 21 56.4	-0.4
IMMV	Iera Moni Meta	60.74	298	eP	P	02 21 57.5	+0.4
BEL	Belsk	60.81	317	eP	P	02 21 58.6	+1.3
BZS	Buzias	60.89	310	⇑P	P	02 21 58.6	+0.7
BZS	Buzias	60.89	310	P	P	02 21 58.6	+0.7
LODK	Lodwar	60.89	259	P	P	02 21 59.3	+0.8
AAL	Aland	60.92	327	eP	P	02 21 58.5	+0.6
MDVR	Moldovita	60.93	309	⇓P	P	02 21 59.8	+1.5
LIT	Litokhoron	61.06	303	eP	P	02 21 58.3	-0.9
LIT	Litokhoron	61.06	303	IAmb	IAmb	02 21 59.9	
	comp=Z,21nm,1.1s						
BOVS	Bovan	61.09	308	⇓P	P	02 21 59.8	+0.5
JETT	Jettan, Norway	61.16	337	eP	P	02 22 00.4	+1.0
JETT				IAmb	IAmb	02 22 00.5	
	comp=Z,37nm,1.3s						
COEN	Coen	61.20	124	P	P	02 21 59.1	-1.3
COEN				IAmb	IAmb	02 23 46.0	
	comp=Z,21nm,1.4s						
KECS	Kecovo	61.32	313	eP	P	02 22 02.4	+1.6
KECS	Kecovo	61.32	313	eP	P	02 22 02.4	+1.6
NIE	Niedzica	61.34	314	eP	P	02 22 01.1	+0.2
KMBO	Kilima Mbogo	61.36	254	P	P	02 22 02.2	+0.4
KMBO	Kilima Mbogo	61.36	254	P	P	02 22 02.2	+0.4
KMBO				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KMBO	Kilima Mbogo	61.36	254	P	P	02 22 03.4	+1.6
KMBO	Kilima Mbogo	61.36	254	P	P	02 22 03.4	+1.6
KMBO				pP	pP	02 22 21.5	+0.8
KMBO				sP	sP	02 22 30.6	+1.9
AGG	Agios Georgios	61.37	302	P	P	02 22 00.4	-0.9
PMG	Port Moresby	61.58	117	P	P	02 22 02.1	-0.8
PMG				IAmb	IAmb	02 22 03.2	
	comp=Z,20nm,0.8s						
PMG	Port Moresby	61.58	117	P	P	02 22 02.1	-0.8
PMG				pmax	pmax		
	comp=Z,20nm,0.8s						
OJC	Ojcow	61.58	315	eP	P	02 22 03.4	+0.9
OJC	Ojcow	61.58	315	IAmb	IAmb	02 22 05.3	
	comp=Z,24nm,1.2s						
ASAR	Alice Springs	61.65	139	P	P	02 22 02.5	-0.8
	comp=Z,10nm,0.9s,baz=320,slow=6.5,SNR=72						
	comp=Z,10nm,0.9s						
ASAR	Alice Springs	61.65	139	P	P	02 22 02.4	-0.9
TRO	Tromso	61.68	337	eP	P	02 22 03.8	+1.0
LANS	Liptovska Anna	61.91	314	eP	P	02 22 06.7	+1.9
LANS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LANS	Liptovska Anna	61.91	314	eP	P	02 22 06.7	+1.9
ITM	Ithomi	62.03	300	IAmb	IAmb	02 22 37.8	
	comp=Z,23nm,1.1s						
UPP	Uppsala	62.12	326	eP	P	02 22 07.1	+1.2
FRGS	Fruska Gora	62.21	309	⇓P	P	02 22 07.4	+0.5
FRGS	Fruska Gora	62.21	309	⇑iP	P	02 22 07.2	+0.3
DIVS	Divibare	62.25	308	IAmb	IAmb	02 22 08.8	
	comp=Z,12nm,0.9s						
DIVS	Divibare	62.25	308	⇑iP	P	02 22 07.7	+0.5
SJES	Sjenica	62.40	307	⇑iP	P	02 22 09.1	+0.9
VYHS	Vyhne	62.41	313	eP	P	02 22 08.8	+0.7
VYHS				pmax	pmax		
	comp=Z,16nm,1.4s						
VYHS	Vyhne	62.41	313	eP	P	02 22 08.8	+0.7
VIKU	Vikbolandet	62.67	325	eP	P	02 22 10.8	+1.2
OKC	Ostrava-Krasne	62.68	315	eP	P	02 22 11.2	+1.3
OKC	Ostrava-Krasne	62.68	315	eP	P	02 22 11.2	+1.3
RUDO	Rudo	62.77	308	eP	P	02 22 10.4	-0.2
GKP	Gorka Klasztor	62.84	319	eP	P	02 22 11.7	+0.9
GKP	Gorka Klasztor	62.84	319	eP	P	02 22 11.3	+0.5
SRO	Srobarova	62.85	313	eP	P	02 22 12.3	+1.3
SRO				pmax	pmax		
	comp=Z,17nm,0.7s						
SRO	Srobarova	62.85	313	eP	P	02 22 12.3	+1.3
MORH	Mrgy, Hungar	62.86	311	⇓P	P	02 22 12.0	+0.9
FAUS	Fauske	62.96	335	eP	P	02 22 12.4	+1.0
STEI	Steigen	62.97	335	eP	P	02 22 12.0	+0.6
HAPS	Han Pijesak,Bl	62.99	308	⇑iP	P	02 22 12.9	+0.7
PDG	Podgorica	63.06	307	⇑P	P	02 22 12.7	+0.3
PDG	Podgorica	63.06	307	IAmb	IAmb	02 22 13.4	
	comp=Z,16nm,0.9s						
MORC	Moravsky Berou	63.08	315	⇑P	P	02 22 13.7	+1.1
MORC	Moravsky Berou	63.08	315	IAmb	IAmb	02 22 14.6	
	comp=Z,16nm,0.8s						
MORC	Moravsky Berou	63.08	315	eP	P	02 22 13.5	+0.9
MORC	Moravsky Berou	63.08	315	P	P	02 22 13.6	+1.1
JAVC	Velka Javorina	63.12	314	eP	P	02 22 14.4	+1.5
SPA0	Spitsbergen Ar	63.14	347	eP	P	02 22 14.0	+1.5
SPA0				IAmb	IAmb	02 22 23.5	
	comp=Z,35nm,1.2s						
DRME	Dracevica, Mon	63.15	306	⇑iP	P	02 22 12.9	-0.2
MOR8	Moi Rana	63.33	333	eP	P	02 22 13.9	0.0
MOR8				IAmb	IAmb	02 22 14.9	
	comp=Z,15nm,1.0s						
SMOL	Smolenice	63.33	313	eP	P	02 22 15.0	+0.8
MODS	Modra-Piesok	63.45	313	eP	P	02 22 16.4	+1.4
MODS				pmax	pmax		
	comp=Z,21nm,1.0s						
MODS	Modra-Piesok	63.45	313	eP	P	02 22 16.4	+1.4
DOB	Doboj	63.48	309	eP	P	02 22 15.1	-0.1
BRY	Bratogost	63.49	307	⇑iP	P	02 22 15.6	+0.1
KRLC	Kraliky	63.52	315	eP	P	02 22 16.6	+1.1
KRLC	Kraliky	63.52	315	eP	P	02 22 16.6	+1.1
LOF	Lofoten	63.61	336	eP	P	02 22 15.9	+0.3
LOF				IAmb	IAmb	02 22 16.7	
	comp=Z,29nm,1.2s						
TREB	Trebinje	63.66	307	eP	P	02 22 16.1	-0.4
KSP	Ksiaz	63.72	316	eP	P	02 22 17.7	+1.0
ABPO	Ambohimpanom	63.74	231	P	P	02 22 17.9	+0.5
ABPO				pP	pP	02 22 36.0	-0.3
ABPO				sP	sP	02 22 44.6	+0.3
VRAC	Vranov	63.76	314	⇑P	P	02 22 18.2	+1.1
VRAC	Vranov	63.76	314	LR	LR	02 53 15.9	
	comp=Z,51nm,18.8s,baz=58,slow=39						
VRAC	Vranov	63.76	314	eP	P	02 22 18.4	+1.4
VRAC	Vranov	63.76	314	P	P	02 22 18.1	+1.1
DPC	Dobruska-Polom	63.78	316	eP	P	02 22 18.5	+1.3
DPC	Dobruska-Polom	63.78	316	eP	P	02 22 18.5	+1.3
OSTC	Ostas	63.81	316	eP	P	02 22 18.7	+1.3
OSTC	Ostas	63.81	316	eP	P	02 22 18.7	+1.3
CHVC	Chvalec	63.91	316	eP	P	02 22 19.3	+1.3
CHVC	Chvalec	63.91	316	eP	P	02 22 19.3	+1.3
KRUC	Moravsky	63.92	314	eP	P	02 22 19.2	+1.1
UPC	Upice	63.95	316	eP	P	02 22 19.6	+1.4
UPC	Upice	63.95	316	eP	P	02 22 19.6	+1.4
BSD	Bornholm Skovb	63.98	321	eP	P	02 22 19.3	+1.0
BSD	Bornholm Skovb	63.98	321	i P	P	02 22 17.8	-0.5
BSD				IAmb	IAmb	02 22 19.1	
	comp=Z,9.2nm,0.8s						
STON	Ston	64.10	307	⇑iP	P	02 22 18.7	-0.6
BLY	Banja Luka	64.12	309	eP	P	02 22 19.7	+0.3
RONA	Rosalia, Austr	64.21	313	i P	P	02 22 20.7	+0.6
	comp=Z,12nm,1.0s						
A051A	Mrakovica	64.27	310	eP	P	02 22 20.6	+0.1
DEL	Delary	64.39	323	eP	P	02 22 23.1	+2.1
DEL	Delary	64.39	323	i P	P	02 22 21.7	+0.7
PRIJ	Prijedor	64.41	310	eP	P	02 22 21.6	+0.3
CONA	Conrad Observa	64.46	313	eP	P	02 22 22.6	+0.9
	comp=Z,18nm,0.9s,SNR=17						
NSS	Namsos	64.46	332	eP	P	02 22 22.0	+0.7
NSS				IAmb	IAmb	02 22 24.1	
	comp=Z,14nm,1.1s						
A050A	Klekovaca	64.63	309	eP	P	02 22 23.2	+0.3
LUNU	Lund	64.74	322	i P	P	02 22 23.3	0.0
ARSA	Arzberg	64.80	312	i P	P	02 22 24.5	+0.6
	comp=Z,10nm,0.7s,SNR=6.2						
GOPC	GO Pecny, Ondr	64.82	315	eP	P	02 22 25.3	+1.3
GOPC	GO Pecny, Ondr	64.82	315	eP	P	02 22 25.3	+1.3
BORU	Boraas	64.84	324	i P	P	02 22 23.3	-0.6
PVCC	Panska Ves	64.86	316	eP	P	02 22 25.5	+1.4
PVCC	Panska Ves	64.86	316	eP	P	02 22 25.5	+1.4
BJUU	Bjuv	64.92	322	i P	P	02 22 24.5	+0.1
NC405	NORSAR Array S	64.93	328	P	P	02 22 24.7	+0.2
FABU	Falkenberg	64.95	323	i P	P	02 22 24.9	+0.3
PRU	Pruhonice	64.96	315	eP	P	02 22 26.2	+1.3
PRU	Pruhonice	64.96	315	eP	P	02 22 26.2	+1.3
GCIS	Gornji Cirnik	64.99	311	eP	P	02 22 25.8	+0.7
NC602	NORSAR Array S	65.06	327	eP	P	02 22 25.9	+0.6
NC602				IAmb	IAmb	02 22 26.7	
	comp=Z,12nm,0.7s						
CRES	Cresnjev	65.11	311	eP	P	02 22 26.7	+0.8
NB2	NORSAR Subarra	65.19	328	P	P	02 22 26.4	+0.2
	comp=Z,7.7nm,0.6s,baz=83,slow=6.5						
NB2	NORSAR Subarra	65.19	328	P	P	02 22 26.4	+0.2
	slow=6.5						
NOA	NORSAR Array B	65.19	328	P	P	02 22 26.5	+0.4
	comp=Z,6.5nm,0.6s,baz=84,slow=6.3,SNR=45						
NOA				pP	pP	02 22 46.4	+1.3
	comp=Z,5.1nm,0.8s,baz=83,slow=6.5,SNR=5.8						
NOA				LR	LR	02 52 20.6	
	comp=Z,56nm,20.1s,baz=85,slow=37						
	comp=Z,6.5nm,0.6s						
BRG	Berggiesshubel	65.19	316	i P	P	02 22 27.6	+1.2
BRG				Amp		02 22 28.1	
	comp=Z,17nm,0.6s						
BRG	Berggiesshubel	65.19	316	P	P	02 22 32.8	+6.5
BRG				Amp		02 22 33.6	
	comp=Z,7.9nm,0.9s						
BRG	Berggiesshubel	65.19	316	i P	P	02 22 27.5	+1.2
BRG						02 22 43.7	
BRG				pmax	pmax		
	comp=Z,17nm,0.6s						
BRG	Berggiesshubel	65.19	316	eP	P	02 22 27.5	+1.2
	comp=Z,12nm,0.5s,baz=79,slow=6.3						
SOKA	Soboth	65.24	312	i P	P	02 22 27.5	+0.7
	comp=Z,7.7nm,0.5s,SNR=8.7						
BOJS	Bojanci	65.32	310	⇑iP	P	02 22 27.8	+0.6
CKRC	Cesky Krumlov	65.32	314	eP	P	02 22 28.3	+1.1
CKRC	Cesky Krumlov	65.32	314	eP	P	02 22 28.3	+1.1
ONAU	Onsala	65.33	324	i P	P	02 22 27.1	+0.1
STRU	Stroemstad	65.47	326	i P	P	02 22 27.5	-0.5
MOA	Molln	65.53	313	i P	P	02 22 29.2	+0.6
	comp=Z,16nm,0.6s						
FBE	Freiberg	65.55	317	eP	P	02 22 30.1	+1.4
	baz=79,slow=6.3						
OSL	Oslo	65.58	327	eP	P	02 22 29.9	+1.3
OSL				IAmb	IAmb	02 22 30.2	
	comp=Z,32nm,0.5s						
TIP	Timpagrande	65.58	303	⇓P	P	02 22 29.6	+0.4
TIP	Timpagrande	65.58	303	P	P	02 22 29.2	+0.1
OBKA	Obir	65.60	312	i P	P	02 22 29.8	+0.6
	comp=Z,8.7nm,0.8s						
OBKA	Obir	65.60	312	⇑iP	P	02 22 29.2	0.0
CLL	Collm	65.70	317	IAmb	IAmb	02 22 31.2	
	comp=Z,23nm,1.2s						
CLL	Collm	65.70	317	i P	P	02 22 29.8	+0.2
	comp=Z,19nm,1.1s						
CLL				esP	PcP	02 22 59.0	-1.4
CLL				ex	x	02 23 04.0	
CLL				ePP	PP	02 24 58.0	+3.4
CLL				ex	x	02 25 19.0	
CLL	Collm	65.70	317	i P	P	02 22 29.8	+0.2
CLL				pmax	pmax		
	comp=Z,19nm,1.1s						
CLL	Collm	65.70	317	eP	P	02 22 30.3	+0.7
	comp=Z,8.9nm,0.7s,baz=79,slow=6.3						
LJU	Ljubljana	65.71	311	eP	P	02 22 30.5	+0.7
GEC2	GERESS Array S	65.71	314	IAmb	IAmb	02 22 31.7	
	comp=Z,28nm,1.0s						
GEC2	GERESS Array S	65.71	314	eP	P	02 22 30.9	+1.0
	comp=Z,15nm,0.5s,baz=79,slow=6.3						
GERES	GERESS Array B	65.71	314	P	P	02 22 30.9	+1.0
	comp=Z,12nm,0.5s,baz=74,slow=7.1,SNR=69						
	comp=Z,12nm,0.5s						
KHC	Kasperske Hory	65.73	315	eP	P	02 22 30.8	+0.9
KHC	Kasperske Hory	65.73	315	i P	P	02 22 29.7	-0.2
KHC				pmax	pmax		
	comp=Z,18nm,0.8s						
CEY	Cerknica	65.84	311	⇑iP	P	02 22 31.2	+0.6
BIOA	Bad Ischl, Aus	65.97	313	eP	P	02 22 32.0	+0.5
	comp=Z,12nm,0.6s,SNR=7.6						
JAVS	Javornik	66.06	311	eP	P	02 22 32.4	+0.2
DOMB	Dombas	66.06	329	eP	P	02 22 32.7	+0.9
DOMB				IAmb	IAmb	02 22 33.5	
	comp=Z,16nm,0.8s						
CUC	Castrocucco	66.10	304	P	P	02 22 32.6	+0.1
SKDS	Skadanscina	66.16	311	eP	P	02 22 31.4	-1.3
KONO	Kongsberg	66.18	326	eP	P	02 22 33.5	+1.0
MYKA	Terra Mystica	66.19	312	i P	P	02 22 32.9	0.0
	comp=Z,5.2nm,0.8s						
TANN	Tannenbergstha	66.20	316	eP	P	02 22 33.9	+1.0
	comp=Z,8.0nm,0.6s,baz=79,slow=6.3						
NKC	Novy Kostel	66.24	316	eP	P	02 22 34.6	+1.5
NKC	Novy Kostel	66.24	316	eP	P	02 22 34.6	+1.5
OVD	Ostervraa, Den	66.26	324	i P	P	02 22 34.5	+1.4
OVD				IAmb	IAmb	02 22 35.0	
	comp=Z,21nm,0.5s						
WERN	Wernitzgruen	66.28	316	eP	P	02 22 34.5	+1.1
	baz=79,slow=6.3						
WERD	Werda	66.29	316	eP	P	02 22 34.5	+1.0
	baz=79,slow=6.3						
GUNZ	Gunzen	66.29	316	eP	P	02 22 34.7	+1.2
	baz=79,slow=6.3						
KBA	Koelnbreinsper	66.30	312	i P	P	02 22 33.8	+0.1
	comp=Z,8.0nm,0.5s,SNR=5.6						
TRI	Trieste	66.30	311	IAmb	IAmb	02 22 34.5	
	comp=Z,24nm,0.7s						
SABO	M.te Sabotino	66.35	311	IAmb	IAmb	02 22 55.0	
	comp=Z,60nm,2.0s						
ROBS	Robic	66.36	312	eP	P	02 22 33.9	0.0
PLN	Plauen	66.38	316	eP	P	02 22 34.9	+0.9
	baz=79,slow=6.3						
NEUB	Neuenburg	66.47	317	eP	P	02 22 35.6	+1.0
	comp=Z,17nm,0.6s,baz=79,slow=6.3						
ROTZ	Rotzenmuhle	66.49	315	eP	P	02 22 36.2	+1.6
	comp=Z,6.7nm,0.5s,baz=79,slow=6.3						
MANZ	Manzenberg	66.51	316	eP	P	02 22 36.2	+1.4
	comp=Z,3.3nm,1.0s,baz=79,slow=6.3						
SKAR	Skarslia	66.65	328	eP	P	02 22 37.2	+1.6
SKAR				IAmb	IAmb	02 22 38.0	
	comp=Z,98nm,1.9s						
MOL	Molde	66.68	330	eP	P	02 22 37.1	+1.5
MOX	Moxa	66.68	317	eP	P	02 22 36.9	+1.0
	comp=Z,11nm,0.9s,baz=79,slow=6.3						
MOX				eL	L	02 53 51.8	
	comp=Z,63nm,18.3s						
MBAR	Mbarara	66.83	258	LR	LR	02 53 59.2	
	comp=Z,53nm,18.8s,baz=64,slow=38						
MBAR	Mbarara	66.83	258	P	P	02 22 38.2	+0.6
MBAR	Mbarara	66.83	258	P	P	02 22 38.3	+0.6
MBAR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MBAR	Mbarara	66.83	258	P	P	02 22 39.0	+1.4
MBAR				pP	pP	02 22 58.5	+1.8
STAL	STALIGIAL	66.90	312	IAmb	IAmb	02 22 38.0	
	comp=Z,27nm,1.0s						
ABTA	Abfaltersbach	66.92	312	i P	P	02 22 37.2	-0.4
	comp=Z,8.1nm,0.7s						
MUD	Monsted U'grnd	66.97	323	i P	P	02 22 38.6	+1.1
MUD				IAmb	IAmb	02 22 39.8	
	comp=Z,6.7nm,0.6s						
HOMB	Homborsund	66.98	325	i P	P	02 22 38.0	+0.4
HOMB	Homborsund	66.98	325	eP	P	02 22 38.8	+1.2
AKN	Aaknes	67.00	329	eP	P	02 22 39.3	+1.6
AKN				IAmb	IAmb	02 22 43.4	
	comp=Z,322nm,2.5s						
INTR	Introdacqua	67.03	307	IAmb	IAmb	02 22 46.3	
	comp=Z,34nm,1.5s						
CIMO	Cimolais	67.07	312	IAmb	IAmb	02 22 39.2	
	comp=Z,16nm,0.9s						
GRA1	Grafenberg Arr	67.13	316	IAmb	IAmb	02 22 40.7	
	comp=Z,17nm,1.0s						
GRF	Grafenberg Arr	67.13	316	eP	P	02 22 40.0	+1.2
	comp=Z,15nm,0.8s,baz=79,slow=6.3						
GRF				eL	L	02 56 04.1	
	comp=Z,48nm,20.2s						
GRFO	Grafenberg	67.13	316	P	P	02 22 39.3	+0.5
GRFO				IAmb	IAmb	02 22 40.7	
	comp=Z,15nm,0.9s						
GRFO	Grafenberg	67.13	316	P	P	02 22 39.3	+0.5
GRFO				pmax	pmax		
	comp=Z,15nm,0.9s						
CLZ	Clausthal	67.20	318	eP	P	02 22 40.5	+1.2
	comp=Z,24nm,0.7s,baz=79,slow=6.3						
NRDL	Niedersach Rie	67.23	319	eP	P	02 22 41.0	+1.8
	comp=Z,18nm,0.9s,baz=79,slow=6.3						
CAMP	Campotosto	67.26	308	IAmb	IAmb	02 22 41.1	
	comp=Z,19nm,0.7s						
AQU	L'Aquila	67.31	307	IAmb	IAmb	02 22 41.8	
	comp=Z,18nm,0.9s						
CTAO	Charters Tower	67.36	127	P	P	02 22 39.8	-0.7
CTAO				IAmb	IAmb	02 22 41.4	
	comp=Z,30nm,1.1s						
CTAO	Charters Tower	67.36	127	P	P	02 22 39.8	-0.7
CTAO				pmax	pmax		
	comp=Z,30nm,1.2s						
CTAO	Charters Tower	67.36	127	P	P	02 22 39.9	-0.7
FDMO	Fiordimonte	67.38	308	IAmb	IAmb	02 22 42.0	
	comp=Z,14nm,0.9s						
WTTA	Wattenberg	67.39	313	i P	P	02 22 40.6	-0.1
	comp=Z,12nm,0.5s,SNR=6.2						
WATA	Walderalm	67.42	313	i P	P	02 22 40.6	-0.2
	comp=Z,8.7nm,0.7s						
ODD1	Odda	67.61	327	eP	P	02 22 42.8	+1.2
SQTA	Sankt Quirin	67.69	313	i P	P	02 22 42.4	-0.1
	comp=Z,15nm,0.5s,SNR=9.9						
MURB	Monte Urbino	67.72	309	IAmb	IAmb	02 22 45.2	
	comp=Z,30nm,1.0s						
MOTA	Moosalm	67.73	313	i P	P	02 22 42.5	-0.3
	comp=Z,21nm,1.1s,SNR=6.3						
BLS5	Blasjo	67.80	327	eP	P	02 22 44.1	+1.2
TEOL	Teolo	67.81	311	IAmb	IAmb	02 22 44.4	
	comp=Z,25nm,0.9s						
RETA	Reutte	67.92	313	i P	P	02 22 44.1	+0.2
	comp=Z,26nm,1.0s,SNR=8.9						
FETA	Feichten	68.05	313	i P	P	02 22 44.8	0.0
	comp=Z,6.6nm,0.5s						
UBR	Ueberruh	68.31	314	eP	P	02 22 46.6	+0.3
	comp=Z,11nm,0.6s,baz=79,slow=6.3						
FUORN	Ofenpass-Fuorn	68.46	312	P	P	02 22 46.8	-0.7
SALO	Salr	68.53	311	IAmb	IAmb	02 22 49.5	
	comp=Z,29nm,0.8s						
DAVA	Damuels	68.55	313	i P	P	02 22 48.1	+0.1
	comp=Z,23nm,1.0s						
STU	Stuttgart	68.63	315	IAmb	IAmb	02 22 50.2	
	comp=Z,29nm,0.9s						
DAVOX	Davos/Dischmat	68.67	313	LR	LR	02 54 53.7	
	comp=Z,45nm,21.7s,baz=80,slow=38						
TNS	Taunus Mts	68.75	317	eP	P	02 22 50.0	+1.0
	comp=Z,25nm,1.0s,baz=79,slow=6.3						
BFO	Black Forest	69.30	315	eP	P	02 22 52.7	+0.3
	comp=Z,3.9nm,0.6s,baz=79,slow=6.3						
BFO	Black Forest	69.30	315	P	P	02 22 52.7	+0.3
ECH	Echery	70.09	315	IAmb	IAmb	02 23 53.5	
	comp=Z,44nm,1.9s						
ECH	Echery	70.09	315	P	P	02 22 57.4	+0.2
ECH				sP	sP	02 23 23.6	-0.8
MEM	Membach	70.16	317	dP	P	02 22 56.7	-0.9
WLF	Walferdange	70.33	316	dP	P	02 23 00.3	+1.7
	comp=Z,29nm,1.0s						
WLF	Walferdange	70.33	316	eP	P	02 23 00.1	+1.4
	comp=Z,41nm,1.0s,baz=79,slow=6.3						
TNA	Tin City	70.35	26	P	P	02 22 58.6	+0.1
TNA	Tin City	70.35	26	P	P	02 22 58.8	+0.4
	baz=288						
BSTI	Sart Tilman	70.44	317	dP	P	02 23 00.9	+1.6

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BCLA  Clavier           70.65 317 dP      P       02 23 02.0 +1.5
RCHB  Rochefort         70.77 317 dP      P       02 23 00.5 -0.8
RCHB                              dPcP    PcP     02 23 21.3 -0.4
BGES  Gesves            70.79 317 dP      P       02 23 01.8 +0.4
DAG   Danmarks Havn     70.79 347 i P     P       02 23 01.8 +0.8
DAG                                 IAmb  IAmb    02 23 04.3
      comp=Z,0.9nm,0.7s
BMRD  Maredsous         71.01 317 dP      P       02 23 03.4 +0.6
LPL   La Plagne         71.12 312 eP      P       02 23 04.3 +0.5
LPL                                 pmax  pmax
      comp=Z,16nm,0.5s
RDOG  Red Dog Mine      71.40  23   P     P       02 23 05.1 +0.4
RDOG  Red Dog Mine      71.40  23   P     P       02 23 05.2 +0.4
      baz=291
ANM   Nome              71.69  27   P     P       02 23 07.2 +0.6
      baz=290
A21K  Barrow            72.12  19   P     P       02 23 10.2 +1.1
      baz=296
KEST  Kesra             72.19 302   P     P       02 23 11.2 +0.9
      comp=Z,20nm,0.8s,baz=325,slow=1.7,SNR=17
      comp=Z,20nm,0.8s
KEST  Kesra             72.19 302   IAmb  IAmb    02 23 12.2
      comp=Z,30nm,1.0s
STKA  Stephens Creek    72.28 139   P     P       02 23 09.1 -1.5
      comp=Z,3.3nm,0.7s,baz=314,slow=3.9,SNR=6.4
      comp=Z,3.3nm,0.7s
DBG   Daneborg          72.35 345 i P     P       02 23 12.8 +2.4
DBG                                 IAmb  IAmb    02 23 15.1
      comp=Z,1.1nm,0.8s
SSF   Saint Saulge      72.78 314 eP      P       02 23 13.6 +0.1
SSF                                 pmax  pmax
      comp=Z,19nm,0.9s
EIDS  Eidsvold          74.13 128   P     P       02 23 21.2 -0.4
CAF   Calviac           74.44 313 eP      P       02 23 23.8 +0.5
CAF                                 pmax  pmax
      comp=Z,14nm,0.9s
F21K  Alatna River      75.02  22   P     P       02 23 26.9 +0.7
      baz=300
D23K  Nanushuk River    75.03  20   P     P       02 23 27.6 +1.4
      baz=302
C24K  Franklin Bluff    75.22  19   P     P       02 23 28.3 +1.0
      baz=303
MFF   Saint Martin d    75.30 315 eP      P       02 23 29.9 +1.8
MFF                                 pmax  pmax
      comp=Z,130nm,1.9s
F22K  John River        75.31  21   P     P       02 23 29.0 +1.1
      baz=301
LFF   La Frestale       75.31 313 eP      P       02 23 28.9 +0.6
LFF                                 pmax  pmax
      comp=Z,8.0nm,0.6s
G21K  Allakaket         75.36  23   P     P       02 23 28.7 +0.6
      baz=300
TOLK  Toolik Lake Re    75.55  20   IAmb  IAmb    02 23 31.1
      comp=Z,18nm,0.7s
TOLK  Toolik Lake Re    75.55  20   P     P       02 23 30.3 +1.1
      baz=303
NEEM  North Greenlan    75.58 353 i P     P       02 23 30.4 +0.8
NEEM                                IAmb  IAmb    02 23 35.5
      comp=Z,4.6nm,0.7s
E23K  Chandalar         75.85  20   P     P       02 23 32.1 +1.1
      baz=303
H21K  Melozitna Rive    76.04  23   IAmb  IAmb    02 23 33.9
      comp=Z,26nm,0.8s
H21K  Melozitna Rive    76.04  23   P     P       02 23 33.0 +1.0
      baz=300
COLD  Coldfoot          76.11  21   P     P       02 23 33.2 +0.8
      baz=302
D25K  Kavik River       76.12  19   P     P       02 23 33.5 +1.0
      baz=305
N16K  Nishlik Lake      76.13  29   P     P       02 23 33.3 +0.7
      baz=297
TTA   Tatalina          76.16  26   P     P       02 23 33.4 +0.5
      baz=298
C26K  Camden Bay        76.19  18   P     P       02 23 34.5 +1.7
      baz=306
E24K  Your Creek        76.20  20   P     P       02 23 34.3 +1.3
      baz=304
LSZ   Lusaka            76.24 246   P     P       02 23 34.7 +0.6
LSZ                                 IAmb  IAmb    02 23 56.2
      comp=Z,12nm,0.7s
LSZ   Lusaka            76.24 246   P     P       02 23 34.7 +0.6
LSZ                                 pmax  pmax
      comp=Z,12nm,0.7s
H22K  Ishtalitna Cre    76.42  23   P     P       02 23 35.3 +1.1
      baz=302
G23K  Bananza Creek     76.45  22   P     P       02 23 35.2 +0.8
      baz=303
I21K  Tanana            76.58  23   IAmb  IAmb    02 23 37.6
      comp=Z,17nm,1.0s
I21K  Tanana            76.58  23   P     P       02 23 36.2 +1.1
      baz=301
F24K  Squaw Lake        76.70  21   P     P       02 23 36.8 +1.1
      baz=304
C27K  Jago River        76.70  18   P     P       02 23 37.3 +1.6
      baz=308
K20K  Telida            76.72  26   P     P       02 23 37.0 +1.0
      baz=300,SNR=7.3
O16K  Kokwok River B    76.83  30   P     P       02 23 37.7 +1.2
      baz=297
L19K  White Mountain    76.99  27   P     P       02 23 36.6 -0.9
L19K                                IAmb  IAmb    02 23 38.9
      comp=Z,13nm,0.9s
L19K  White Mountain    76.99  27   P     P       02 23 38.4 +0.9
      baz=299
E25K  Arctic Village    77.07  20   P     P       02 23 38.9 +1.0
      baz=306
H23K  Yukon River       77.09  22   P     P       02 23 39.2 +1.2
      baz=303,SNR=8.7
MLY   Manley            77.10  23   IAmb  IAmb    02 23 40.4
      comp=Z,20nm,0.9s
MLY   Manley            77.10  23   P     P       02 23 39.1 +1.0
      baz=302,SNR=20
CHUM  Lake Minchumin    77.13  25   P     P       02 23 39.3 +1.2
      baz=301,SNR=9.3
P16K  Nushagak River    77.13  30   P     P       02 23 38.4 +0.1
      baz=298
O17K  Koliganek Bris    77.19  30   P     P       02 23 39.3 +0.8
      baz=298
L20K  Farewell, AK      77.24  26   P     P       02 23 39.7 +0.8
      baz=300
G24K  Hadweenzic Riv    77.30  21   P     P       02 23 40.2 +1.1
      baz=305
M19K  Big River Lodg    77.32  27   IAmb  IAmb    02 25 01.7
      comp=Z,60nm,1.9s
M19K  Big River Lodg    77.32  27   P     P       02 23 40.4 +1.1
      baz=300
F25K  Christian Rive    77.36  20   P     P       02 23 41.1 +1.7
      baz=306
CAST  Castle Rocks      77.46  25   IAmb  IAmb    02 23 41.8
      comp=Z,20nm,0.9s
CAST  Castle Rocks      77.46  25   P     P       02 23 40.9 +0.8
      baz=302,SNR=16
SUMG  Summit            77.48 347 i P     P       02 23 40.8 +0.3
SUMG                                IAmb  IAmb    02 23 45.0
      comp=Z,2.2nm,0.6s
BPAW  Bear Paw Mtn.     77.51  24   IAmb  IAmb    02 23 42.6
      comp=Z,19nm,0.8s
BPAW  Bear Paw Mtn.     77.51  24   P     P       02 23 41.0 +0.7
      baz=302,SNR=14
I23K  Minto, Yukon-K    77.53  23   P     P       02 23 41.4 +1.0
      baz=304,SNR=6.5
H24K  Noodor Dome       77.66  22   P     P       02 23 42.2 +1.1
      baz=305
PPLA  Purkeypile        77.69  26   IAmb  IAmb    02 26 23.7
      comp=Z,75nm,2.0s
PPLA  Purkeypile        77.69  26   P     P       02 23 42.3 +0.8
      baz=302
G25K  Bearman Lake      77.70  21   P     P       02 23 43.0 +1.6
      baz=306
F26K  Sheenjek River    77.76  20   P     P       02 23 43.2 +1.5
      baz=308
BMAR  Burnt Mountain    77.78  20   P     P       02 23 42.1 +0.3
N19K  Bonanza Creek     77.83  28   IAmb  IAmb    02 23 43.9
      comp=Z,14nm,0.8s
N19K  Bonanza Creek     77.83  28   P     P       02 23 43.0 +0.8
      baz=300
M20K  Styx River        77.84  27   IAmb  IAmb    02 23 44.0
      comp=Z,16nm,0.8s
M20K  Styx River        77.84  27   P     P       02 23 43.3 +0.9
      baz=301
Q16K  King Salmon       77.91  30   P     P       02 23 42.5 -0.1
      baz=299
NEA2  Nenana            77.94  23   IAmb  IAmb    02 23 44.6
      comp=Z,16nm,1.0s
NEA2  Nenana            77.94  23   P     P       02 23 43.0 +0.3
      baz=304,SNR=11
BWN   Browne            78.03  24   IAmb  IAmb    02 23 45.8
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      comp=Z,18nm,0.8s
MDM   Murphy Dome       78.03  23   IAmb  IAmb    02 23 45.3
      comp=Z,33nm,0.9s
CHGN  Chignik           78.20  33   P     P       02 23 44.7 +0.4
      baz=298
E27K  Coleen River      78.20  19   P     P       02 23 45.3 +1.2
      baz=310
O19K  Port Alsworth     78.21  28   P     P       02 23 44.7 +0.5
      baz=300
P18K  Big Mountain,     78.21  29   P     P       02 23 44.8 +0.4
      baz=300
TCOL  CIGO, UAF Yank    78.21  23   P     P       02 23 45.3 +1.1
      baz=305
COLA  College           78.22  23   P     P       02 23 44.0 -0.2
COLA  College           78.22  23   P     P       02 23 45.2 +1.0
      baz=305
POKR  Poker Plat Res    78.22  22   P     P       02 23 44.5 +0.3
POKR                                IAmb  IAmb    02 23 46.4
      comp=Z,26nm,0.8s
POKR  Poker Plat Res    78.22  22   P     P       02 23 45.0 +0.7
      baz=305,SNR=12
G26K  Porcupine Rive    78.33  20   P     P       02 23 46.4 +1.7
      baz=308
SKT   Skwentna          78.44  26   P     P       02 23 45.0 -0.6
SKT                                 IAmb  IAmb    02 23 46.6
      comp=Z,16nm,0.8s
SKT   Skwentna          78.44  26   P     P       02 23 45.4 -0.2
      baz=302,SNR=8.2
MCK   McKinley          78.47  24   IAmb  IAmb    02 23 47.4
      comp=Z,15nm,1.0s
MCK   McKinley          78.47  24   P     P       02 23 46.1 +0.3
      baz=304
IL31                    78.61  23   IAmb  IAmb    02 23 46.8
      comp=Z,24nm,1.4s
ILAR  Eielson Array     78.61  23   P     P       02 23 45.6 -0.8
      comp=Z,7.5nm,0.9s,baz=299,slow=5.1,SNR=68
ILAR                                PP    PP      02 26 44.0 -0.5
      comp=Z,0.9nm,0.7s,baz=301,slow=6.7,SNR=6.1
      comp=Z,7.5nm,0.9s
PRP   Porcupine Dome    78.64  22   IAmb  IAmb    02 23 48.6
      comp=Z,21nm,0.9s
PRP   Porcupine Dome    78.64  22   P     P       02 23 47.6 +0.9
      baz=307,SNR=17
Q18K  Katmai Hardscr    78.68  30   P     P       02 23 46.5 -0.5
      baz=300
CUT   Chulitna          78.71  25   P     P       02 23 46.9  0.0
      baz=303
HDA   Harding Lake      78.80  23   IAmb  IAmb    02 25 53.9
      comp=Z,32nm,1.8s
HDA   Harding Lake      78.80  23   P     P       02 23 47.2 -0.3
      baz=306
KULLO Kullorsuaq        78.83 353 i P     P       02 23 45.4 -2.0
KULLO                               IAmb  IAmb    02 23 50.5
      comp=Z,5.1nm,0.8s
SUA   Susitna One       79.03  26   IAmb  IAmb    02 23 50.0
      comp=Z,28nm,1.0s
SUA   Susitna One       79.03  26   P     P       02 23 48.6 -0.3
      baz=303
G27K  Doyon Strip       79.07  20   P     P       02 23 50.1 +1.2
      baz=310,SNR=12
M22K  Willow            79.12  26   P     P       02 23 49.7 +0.5
      baz=304
Q19K  Cape Douglas,     79.15  29   P     P       02 23 51.3 +1.8
      baz=301
CAPN  Captain Cook N    79.24  27   P     P       02 23 51.0 +1.1
      baz=303
A36M  Sachs Harbour     79.28  12   P     P       02 23 50.8 +0.9
      baz=324,SNR=49
H27K  Steamboat Moun    79.48  20   P     P       02 23 52.5 +1.3
      baz=310
I26K  Coal Creek Min    79.55  21   P     P       02 23 52.3 +0.8
      baz=309
K24K  Donnelly Dome     79.58  23   P     P       02 23 51.4 -0.3
      baz=307,SNR=16
PMR   Palmer            79.61  26   IAmb  IAmb    02 23 52.6
      comp=Z,26nm,1.1s
PMR   Palmer            79.61  26   P     P       02 23 51.7 -0.2
      baz=304
RC01  Rabbit Creek A    79.65  26   P     P       02 23 52.2 +0.1
RC01                                IAmb  IAmb    02 23 52.8
      comp=Z,16nm,0.8s
RC01  Rabbit Creek A    79.65  26   P     P       02 23 51.7 -0.4
      baz=304
SML   Sawmill           79.80  25   IAmb  IAmb    02 23 57.6
      comp=Z,19nm,0.9s
SML   Sawmill           79.80  25   P     P       02 23 53.1 +0.1
      baz=305
I27K  Kandik River      79.86  21   P     P       02 23 54.7 +1.4
      baz=310,SNR=15
J26L  Joseph Creek      79.92  22   IAmb  IAmb    02 23 55.4
      comp=Z,13nm,0.8s
J26L  Joseph Creek      79.92  22   P     P       02 23 53.8 +0.1
      baz=309
RIDG  Independent Ri    79.94  23   IAmb  IAmb    02 23 55.3
      comp=Z,16nm,0.8s
RIDG  Independent Ri    79.94  23   P     P       02 23 53.6 -0.1
      baz=308,SNR=7.9
KNK   Knik Glacier      79.97  26   P     P       02 23 54.2 +0.2
      baz=305
BRSE  Bradley Lake S    79.98  28   P     P       02 23 53.5 -0.5
      baz=303
O22K  Cooper Landing    79.99  27   P     P       02 23 53.5 -0.4
      baz=304
M23K  Glacier View      80.04  25   P     P       02 23 54.6 +0.4
      baz=305
SCRK  Sand Creek        80.10  22   P     P       02 23 55.0 +0.4
      baz=308,SNR=6.3
SCM   Sheep Creek Mo    80.17  25   P     P       02 23 55.9 +0.8
      baz=306
PAX   Paxson            80.19  24   P     P       02 23 56.2 +1.0
      baz=307
OHAK  Old Harbor        80.20  31   P     P       02 23 55.0 -0.1
      baz=302
DOT   Dot Lake          80.28  23   IAmb  IAmb    02 24 23.1
      comp=Z,48nm,1.9s
INK   Inuvik            80.31  16   IAmb  IAmb    02 23 56.6
      comp=Z,12nm,0.6s
INK   Inuvik            80.31  16   P     P       02 23 56.2 +0.6
      baz=317,SNR=17
SEW   Seward            80.31  27   P     P       02 23 55.5 -0.2
      baz=304
PWL   Port Wells        80.34  26   P     P       02 23 55.8 -0.1
      baz=305
ICESG Greenland Ices    80.36 345 i P     P       02 23 56.8 +0.5
ICESG                               IAmb  IAmb    02 24 05.6
      comp=Z,4.1nm,0.8s
M24K  Tolsona, Glenn    80.45  25   P     P       02 23 57.3 +0.8
      baz=307
EGAK  Eagle             80.54  21   IAmb  IAmb    02 23 58.8
      comp=Z,13nm,0.9s
EGAK  Eagle             80.54  21   P     P       02 23 57.5 +0.6
      baz=311,SNR=7.1
G30M  tAoh Zraii Nji    80.54  18   P     P       02 23 57.1 +0.3
      baz=315
ESDC  Sonseca Array     80.57 309   P     P       02 23 58.4 +0.8
      comp=Z,3.3nm,0.9s,baz=53,slow=4.3,SNR=12
ESDC                                pP    pP      02 24 18.0 +0.8
      comp=Z,4.5nm,1.0s,baz=49,slow=5.0,SNR=7.0
ESDC                                PP    PP      02 27 02.2 +0.7
      comp=Z,1.3nm,0.9s,baz=72,slow=9.2,SNR=5.0
      comp=Z,3.3nm,0.9s
ESDC  Sonseca Array     80.57 309   P     P       02 23 57.1 -0.5
HARP  HAARP             80.65  24   P     P       02 23 58.3 +0.7
      baz=308
K27K  Chicken           80.72  22   IAmb  IAmb    02 24 00.2
      comp=Z,23nm,1.1s
K27K  Chicken           80.72  22   P     P       02 23 58.7 +0.9
      baz=310
EPYK  Eagle Plains      80.83  19   P     P       02 23 58.3 -0.1
      baz=314,SNR=5.7
F31M  Tsiigehtchic      80.89  17   P     P       02 23 59.1 +0.5
      baz=317,SNR=6.4
KLU   Klutina           80.91  25   P     P       02 23 59.5 +0.5
KLU                                 IAmb  IAmb    02 24 00.8
      comp=Z,27nm,1.1s
KLU   Klutina           80.91  25   P     P       02 23 59.5 +0.5
      baz=307
L26K  Log Cabin Wild    80.92  23   P     P       02 24 00.0 +1.1
      baz=309
N25K  Chitina, Valde    81.35  25   IAmb  IAmb    02 24 03.3
      comp=Z,22nm,1.1s
N25K  Chitina, Valde    81.35  25   P     P       02 24 01.9 +0.6
      baz=308
L27K  Beaver Creek,     81.43  23   IAmb  IAmb    02 24 04.2
      comp=Z,22nm,0.8s
L27K  Beaver Creek,     81.43  23   P     P       02 24 03.4 +1.7
      baz=310
M26K  Nabesna, AK       81.44  23   P     P       02 24 03.6 +1.8
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      baz=309
DAWY  Dawson            81.59  21   P     P       02 24 02.8 +0.2
      baz=312
C36M  Paulatuk          81.67  13   P     P       02 24 02.9 +0.2
      baz=325,SNR=32
M27K  Edge Creek, AK    81.87  23   P     P       02 24 03.9 -0.2
M27K                                IAmb  IAmb    02 24 07.0
      comp=Z,24nm,0.9s
M27K  Edge Creek, AK    81.87  23   P     P       02 24 05.5 +1.4
      baz=310
MCARA McCarthy VSAT     82.08  24   P     P       02 24 06.4 +1.3
      baz=309
BVCY  Beaver Creek      82.19  23   P     P       02 24 06.9 +1.2
      baz=311
K29M  Barlow Dome       82.35  21   P     P       02 24 07.3 +0.7
      baz=314
L29M  L29M              82.66  21   P     P       02 24 09.3 +1.2
      baz=313
YUK3  Moose Creek       82.76  23   P     P       02 24 10.1 +1.3
      baz=312
BARN  Barnard Glacie    82.79  24   IAmb  IAmb    02 24 12.0
      comp=Z,12nm,0.8s
M29M  Somme Creek       83.00  22   P     P       02 24 11.4 +1.4
      baz=313
YUK8  Steele Glacier    83.33  23   P     P       02 24 13.2 +1.3
      baz=312
LBTB  Lobatse           83.37 239   P     P       02 24 13.3 +0.8
LBTB                                IAmb  IAmb    02 24 37.7
      comp=Z,38nm,1.6s
LBTB  Lobatse           83.37 239   P     P       02 24 13.3 +0.8
LBTB                                pmax  pmax
      comp=Z,38nm,1.6s
M30M  Minto, Yukon      83.47  21   P     P       02 24 13.7 +1.4
      baz=314
O28M  Mount Upton       83.52  24   P     P       02 24 13.7 +0.7
      baz=312
YUK4  Talbot Arm        83.69  23   P     P       02 24 14.5 +0.9
      baz=313
MDT   Midelt            83.98 303   P     P       02 24 16.0 +0.4
      comp=Z,2.0nm,0.8s,baz=45,slow=2.9,SNR=1.4
      comp=Z,2.0nm,0.8s
YUK6  Outpost Mounta    84.06  23   P     P       02 24 16.7 +1.0
      baz=313
N30M  Aishikik Lake     84.15  22   P     P       02 24 17.3 +1.4
      baz=314
HYT   Haines Junctio    84.45  23   IAmb  IAmb    02 24 20.0
      comp=Z,13nm,1.0s
HYT   Haines Junctio    84.45  23   P     P       02 24 18.1 +0.7
      baz=314
M31M  Drury Creek, Y    84.52  21   P     P       02 24 18.3 +0.6
      baz=317
PNL   Peninsula         84.56  24   P     P       02 24 18.0 +0.1
      baz=313
N31M  Braeburn, Yuko    84.58  22   IAmb  IAmb    02 24 20.1
      comp=Z,20nm,1.0s
N31M  Braeburn, Yuko    84.58  22   P     P       02 24 18.8 +0.9
      baz=316
FARO  Faro, Yukon       84.83  20   P     P       02 24 20.7 +1.5
      baz=318
O30N  Mendenhall        84.98  22   P     P       02 24 21.5 +1.4
      baz=315
MMPY  Sheldon Lake,     85.19  19   P     P       02 24 22.4 +1.3
      baz=319
BOSA  Boshof            85.51 236   P     P       02 24 23.6 +0.4
      comp=Z,1.7nm,0.6s,baz=112,slow=1.5,SNR=5.7
BOSA                                pP    pP      02 24 44.3 +1.3
      comp=Z,10nm,0.7s,baz=56,slow=4.2,SNR=9.5
      comp=Z,1.7nm,0.6s
BOSA  Boshof            85.51 236   P     P       02 24 23.2  0.0
BOSA                                IAmb  IAmb    02 24 45.4
      comp=Z,11nm,0.8s
BOSA  Boshof            85.51 236   P     P       02 24 23.2  0.0
BOSA                                pmax  pmax
      comp=Z,11nm,0.8s
N32M  Quiet Lake        85.72  21   P     P       02 24 24.5 +0.8
      baz=318
PLBC  Pleasant Camp     85.82  23   P     P       02 24 25.5 +1.4
      baz=315
SKAG  Skagway           86.19  23   P     P       02 24 27.4 +1.5
      baz=316
P33M  Teslin, Yukon     86.50  22   P     P       02 24 28.4 +0.7
      baz=318
WRGLY Wrigley           86.87  16   P     P       02 24 29.7 +0.5
      baz=326
TORD  Torodi Ar. Bea    87.16 283   P     P       02 24 32.2 +0.7
      comp=Z,1.9nm,0.9s,baz=58,slow=4.0,SNR=9.7
TORD                                PP    PP      02 27 57.4 +1.4
      comp=Z,2.1nm,1.0s,baz=50,slow=7.3,SNR=3.7
      comp=Z,1.9nm,0.9s
TORD  Torodi Ar. Bea    87.16 283   P     P       02 24 31.0 -0.6
WTLY  Watson Lake, Y    87.88  20   P     P       02 24 34.5 +0.4
      baz=322
YKA   Yellowknife Ar    89.55  13   P     P       02 24 41.8 -0.1
      comp=Z,1.0nm,0.7s,baz=326,slow=3.4,SNR=14
YKA                                 PP    PP      02 28 12.8 -0.7
      comp=Z,0.3nm,0.6s,baz=334,slow=7.6,SNR=5.0
      comp=Z,1.0nm,0.7s
YKA   Yellowknife Ar    89.55  13ceP      P       02 24 41.7 -0.2
YKA                                 pmax  pmax
      comp=Z,1.0nm,0.8s
T35M  Bob Quinn         89.83  23   P     P       02 24 44.1 +0.7
      baz=320
PDAR  Pinedale Array   108.79  19   PKiKP PKiKP   02 30 13.4 -0.7
      comp=Z,0.3nm,0.7s,baz=153,slow=0.2,SNR=3.8
NVAR  Mina Array Bea   109.57  27   PKiKP PKiKP   02 30 16.9 +1.2
      comp=Z,0.1nm,0.3s,baz=317,slow=2.1,SNR=2.8
WUAZ  Wupatki          114.79  23   P     PKiKP   02 30 24.9 -0.8
      baz=334
O48B  Farmland         114.90 360   P     PKiKP   02 30 25.1 -0.4
      baz=0.2
CCM   Cathedral Cave   116.85   5   P     PKPdf   02 30 29.0 -0.3
      baz=354
121A  Cookes Peak, D   118.74  22   P     PKPdf   02 30 32.8 -0.6
      baz=337
MSTX  Muleshoe         118.88  17   P     PKPdf   02 30 33.0 -0.5
      baz=342
WVT   Waverly          118.98   2   P     PKPdf   02 30 32.9 -0.6
      baz=357
WMOK  Wichita Mounta   119.06  13   P     PKPdf   02 30 33.4 -0.3
      baz=346
MNTX  Cornudas Mount   120.28  20   P     PKPdf   02 30 35.9 -0.3
      baz=339
OXF   Oxford           120.51   4   P     PKPdf   02 30 36.3 -0.2
      baz=356
WHTX  Lake Whitney,    121.98  12   P     PKPdf   02 30 38.9 -0.4
      baz=347
JCT   Junction City    122.94  15         PKPdf   02 30 40.9 -0.4
JCT   Junction City    122.94  15   PKIKP PKPdf   02 30 40.9 -0.4
JCT   Junction City    122.94  15   P     PKPdf   02 30 41.2 -0.1
      baz=344
TX32  Lajitas Array    123.00  19         PKiKP   02 30 41.8  0.0
TXAR  Lajitas Array    123.00  19   PKP   PKPdf   02 30 41.5 -0.1
      comp=Z,0.8nm,0.6s,baz=179,slow=0.8,SNR=14
TXAR                                pPKP  pPKPdf  02 31 03.8 +1.6
      comp=Z,2.0nm,0.8s,baz=241,slow=1.2,SNR=7.6
SDV   Santo Domingo    143.25 335         PKPbc   02 31 17.1 +0.2
BDFB  Brasilia         143.88 278   PKP   PKPbc   02 31 19.0 +0.4
      comp=Z,2.3nm,0.6s,baz=109,slow=5.1,SNR=3.4
BDFB  Brasilia         143.88 278   PKPdf PKPbc   02 31 19.0 +0.4
BDFB  Brasilia         143.88 278   PKIKP PKPbc   02 31 19.0 +0.4
RIMA  Rio Macho        145.24 358   PKPbc PKPbc   02 31 21.1 -1.9
UREC  San Jos de Ur    145.91 343 eP      PKPbc   02 31 24.9  0.0
BRRC  Barranca, Sant   145.98 339 eP      PKPdf   02 31 23.3 -1.0
APAC  Apartado, Choc   146.04 344 eP      PKiKP   02 31 32.3 +3.7
BARC  Barichara        146.29 338 eP      PKiKP   02 31 31.1 +1.6
PTBC  PUERTO BERRIO,146.75 340 eP      PKPdf   02 31 23.5 -2.2
DBBC  Dabeiba          146.80 343 eP      PKPdf   02 31 24.5 -1.3
RUSC  La Rusia         146.91 337   PKPbc PKPdf   02 31 27.1 +0.6
RUSC  La Rusia         146.91 337 eP      PKPdf   02 31 22.9 -3.6
HELC  Santa Helena     147.40 342   PKPbc PKPbc   02 31 28.7 -1.0
HELC  Santa Helena     147.40 342 eP      PKPbc   02 31 29.5 -0.2
FRTB  Fartura          147.42 266 eP      PKPab   02 31 30.2 -0.9
MACA  Manacapuru-AM    147.74 309   PKPbc PKPdf   02 31 28.5 +1.2
NORC  Norcasia         147.80 340 eP      PKPdf   02 31 24.4 -3.1
PTGC  Puerto Gaitan,   148.12 335 eP      PKPdf   02 31 27.3 -0.6
CHIC  Chingaza         148.31 338 eP      PKPdf   02 31 26.1 -2.6
ROSC  El Rosal         148.31 339   PKPbc PKiKP   02 31 33.4 -0.4
      comp=Z,16nm,0.5s,baz=104,slow=9.5,SNR=9.0
ROSC                                pPKPbc pPKPab 02 31 55.2 -0.2
      comp=Z,54nm,0.8s,baz=182,slow=7.0,SNR=6.4
ROSC  El Rosal         148.31 339   PKPbc PKPdf   02 31 30.3 +1.6
ROSC  El Rosal         148.31 339 eP      PKPab   02 31 34.6 -0.7
VILC  Villavicencio,   148.78 337 eP      PKPab   02 31 46.6 +10
YOTC  Yotoco, Valle    149.73 342 eP      PKPdf   02 31 30.1 -0.6
PTGB  Pitanga          149.90 264 eP      PKPbc   02 31 34.0 -1.4
JAMC  Jamundi, Valle   150.56 342 eP      PKPdf   02 31 33.3 +1.2
GARC  Garzon, Huila    151.18 339 eP      PKPdf   02 31 31.6 -1.5
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POPC	Popayan, Colom	151.20	342	eP	PKiKP	02 31 41.1	+1.6
CPSB	Cacapava Do Su	151.39	252	eP	PKPdf	02 31 34.6	+2.0
AQDB	Aquidauana	152.34	274		PKPbc	02 31 39.0	-2.2
CPUP	Villa Florida	154.79	261	PKPbc	PKPbc	02 31 44.8	-1.5
	comp=Z,1.3nm,0.7s,baz=169,slow=3.9,SNR=2.0						
CPUP				pPKPbc	pPKPbc	02 32 07.9	+1.0
	comp=Z,1.9nm,0.6s,baz=57,slow=2.9,SNR=3.1						
PLCA	Paso Flores	160.20	215	PKPab	PKPab	02 32 23.6	-0.9
	comp=Z,1.1nm,0.7s,baz=171,slow=1.8,SNR=5.0						
LPAZ	La Paz	161.68	296	PKP	PKPdf	02 31 46.4	-0.6
	comp=Z,0.9nm,0.7s,baz=145,slow=4.6,SNR=4.5						

MOS ***04*** *02:58:17.5±0.9,7°.16S×155°.68E,h14^{km},mb6.1/69,MS5.7/40,Error ellipse: s-maj=6.8km s-min=4.9km az=114.9*

IDC ***04*** *02:58:18.8±1.4,7°.23S×155°.77E,h17^{km}±7^{km},mb5.3/42,mbtmp5.4/47,ML4.5/3,MS5.6/58,Error ellipse: s-maj=10.7km s-min=7.3km az=56.0*

NEIC ***04*** *02:58:20.7,7°.33S×155°.74E,h19^{km}*

NEIC ***04*** *02:58:20.3±2.1,7°.33S±0°.07×155°.75E±0°.06,h17^{km}±1^{km},mb5.8/312,Ms_20 5.9/386,Mwb5.9/55,Mww6.1/31,Error ellipse: s-maj=11.5km s-min=9.4km az=197.0,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}6.93; $M_{\theta\theta}$-4.10; $M_{\phi\phi}$-2.83; $M_{r\theta}$1.78; $M_{\theta\phi}$4.30; $M_{\phi r}$-3.05; Fault plane solution: $M_0$8.20000×10^{17} NP1: ϕ_s139.69000°,δ57.85000°,λ100.21000°. NP2: ϕ_s300.99000°,δ33.57000°,λ74.25000°. Principal axes: T 7.8290, Plg75.0000°, Azm78.0000°; N 0.7042, Plg9.0000°, Azm314.0000°; P -8.5331, Plg12.0000°, Azm222.0000°;*

BJI ***04*** *02:58:22.4±0.0,6°.89S×155°.96E,h57^{km},mb5.6/89,mB5.9/74,Ms5.8/96,Ms7 5.6/91*

NEIC ***04*** *02:58:23.5,7°.31S×155°.74E,h30^{km}*

NEIC ***04*** *02:58:23.5,7°.31S×155°.74E,h30^{km},Moment Tensor Solution. Duration: 5^{s}5 Moment tensor: Scale 10^{18}Nm; M_{rr}1.38; $M_{\theta\theta}$-1.04; $M_{\phi\phi}$-0.34; $M_{r\theta}$0.33; $M_{\theta\phi}$0.74; $M_{\phi r}$-0.40; Fault plane solution: $M_0$1.53000×10^{18} NP1: ϕ_s128.71000°,δ54.78000°,λ97.62000°. NP2: ϕ_s295.65000°,δ35.93000°,λ79.36000°. Principal axes: T 1.4797, Plg79.0000°, Azm67.0000°; N 0.1066, Plg6.0000°, Azm304.0000°; P -1.5862, Plg9.0000°, Azm213.0000°;*

GCMT ***04*** *02:58:24.3±0.1,7°.45S×155°.73E,h22^{km},MW6.0/173,Moment Tensor Solution. s173,c393; s170,c569; Duration: 2^{s}5 Moment tensor: Scale 10^{18}Nm; M_{rr}1.05±.01; $M_{\theta\theta}$-0.83±.01; $M_{\phi\phi}$-0.21±.01; $M_{r\theta}$0.45±.01; $M_{\theta\phi}$0.57±.01; $M_{\phi r}$-0.49±.01; Best double couple: $M_0$1.29900×10^{18} NP1:ϕ_s130.00000°,δ61.00000°,λ100.00000°. NP2:ϕ_s291.00000°,δ31.00000°,λ73.00000°. Principal axes: T 1.2540, Plg73.0000°, Azm63.0000°; N 0.0890, Plg9.0000°, Azm305.0000°; P -1.3450, Plg15.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

DJA ***04*** *02:58:26.9±0.4,7°S±2°×15°6E±°,h79^{km}±4^{km},M5.7/108,mB6.1/88,mb5.7/108,MLv6.0/2,Mw(mB)5.8/88,MwMwp5.6/60,Mwp5.8/60*

ISC 04 02:58:22.4±0.3**,7°.29S**±0°.03×**155°.76E**±0°.03**,h41**^{km}±2^{km}**,h42**^{km}**:pP-P,n1869,**σ**1^{s}47**/1833**,mb5.8**/334**,MS5.8**/313**,133C-59D,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.65	117	Pn	Pn	02 59 30.3	0.0
	6µm,0.7s,baz=327,slow=1.9,SNR=4.2						
HNR				Sn	Sn	03 00 23.5	+0.5
	1µm,0.3s,baz=270,slow=23,SNR=1.9						
HNR	Honiara	4.65	117		Pn	02 59 30.0	-0.2
HNR	Honiara	4.65	117	P	Pn	02 59 34.8	+4.6
HNR	Honiara	4.65	117	⇑P	Pn	02 59 28.7	-1.5
RABL	Rabaul	4.72	311		Pn	02 59 31.8	+0.6
RABL	Rabaul	4.72	311	⇓P	Pn	02 59 34.6	+3.4
KRVT	Keravat (AS076	4.75	308	Pn	Pn	02 59 31.2	-0.4
	5.2nm,0.3s,baz=189,slow=21,SNR=2.5						
KRVT				Sn	Sn	03 00 24.2	-1.3
	115nm,0.3s,baz=193,slow=8.7,SNR=6.3						
KRVT				LR	LR	03 01 38.9	
	comp=Z,102µm,18.3s,baz=274,slow=42						
	44nm,0.3s						
PMG	Port Moresby	8.77	256	Pn	Pn	03 00 27.2	+0.5
	204nm,0.9s,baz=72,slow=7.1,SNR=34						
PMG				Sn	Sn	03 02 05.2	+0.9
	7.6nm,0.3s,baz=80,slow=21,SNR=1.6						
PMG				LR	LR	03 03 38.6	
	comp=Z,82µm,20.4s,baz=58,slow=36						
PMG	Port Moresby	8.77	256	Pn	Pn	03 00 26.7	0.0
PMG	Port Moresby	8.77	256	P	Pn	03 00 28.3	+1.6
PMG	Port Moresby	8.77	256	P	Pn	03 00 28.5	+1.8
COEN	Coen	14.03	241	P	Pn	03 01 38.9	+0.2
	baz=14,SNR=16						
COEN	Coen	14.03	241	Pn	Pn	03 01 37.8	-0.8
COEN	Coen	14.03	241	P	Pn	03 01 40.0	+1.3
COEN	Coen	14.03	241	⇓P	Pn	03 01 37.9	-0.8
PATS	Pohnpei	14.27	10	P	Pn	03 01 42.2	+0.3
	baz=14,SNR=5.6						
PATS	Pohnpei	14.27	10	Pn	Pn	03 01 41.7	-0.2
PATS	Pohnpei	14.27	10	P	Pn	03 01 43.3	+1.4
TV1H	Townsville Har	14.74	215	P	Pn	03 01 50.1	+1.8
	434nm,1.1s						
MTSU	Mount Surprise	15.50	225	P	P	03 02 00.6	-1.6
	baz=16,SNR=105						
MTSU	Mount Surprise	15.50	225	P	Pn	03 02 00.1	+1.8
KOUNC	Koumac, New Ca	15.55	149		Pn	03 01 59.2	+0.3
KOUNC	Koumac, New Ca	15.55	149	P	P	03 02 02.7	+0.1
KOUNC	Koumac, New Ca	15.55	149	⇑P	Pn	03 02 00.3	+1.4
CTA	Charters Tower	15.71	215	Pn	Pn	03 02 02.1	+1.2
	1.9nm,0.3s,baz=34,slow=13,SNR=40						
CTA				Sn	Sn	03 04 56.0	+2.0
	0.3nm,0.3s,baz=38,slow=20,SNR=0.9						
CTA				LR	LR	03 07 38.6	
	comp=Z,43µm,18.2s,baz=43,slow=36						
	104nm,0.8s						
CTAO	Charters Tower	15.71	215		Pn	03 02 02.6	+1.7
CTAO	Charters Tower	15.71	215	P	Pn	03 02 02.6	+1.7
CTAO	Charters Tower	15.71	215	⇓P	Pn	03 02 01.7	+0.7
CTAO	Charters Tower	15.71	215	P	Pn	03 02 02.6	+1.7
CTAO				pmax	pmax		
	comp=Z,490nm,1.3s						
RTV	Rentapao	16.16	131	P	P	03 02 09.2	-0.2
GENI	Genyem	16.22	286	P	P	03 02 10.9	+0.8
GENI	Genyem	16.22	286	P	P	03 02 10.6	+0.5
	comp=Z,356nm,1.5s,comp=Z,7µmcomp=Z,11µm						
GD1S	Gladstone Soft	17.04	194	P	P	03 02 20.7	+1.7
	comp=Z,183nm,1.4s						
LIFNC	LIFOU	17.41	142		P	03 02 23.8	+0.6
LIFNC				IAmb	IAmb	03 02 37.2	
	comp=Z,1µm,1.8s						
LIFNC	LIFOU	17.41	142	P	P	03 02 25.0	+1.8
NOUC	Port Laguerre	17.89	146	P	P	03 02 29.8	+1.3
DZM	Mont Dzumac	17.95	146	ePn	Pn	03 02 29.1	+0.1
	comp=Z,537nm,1.2s						
DZM				epP	pP	03 02 37.3	-1.7
	comp=Z,643nm,1.2s						
DZM				eLR	LR	03 06 42.5	
	comp=Z,29µm,24.1s						
DZM	Mont Dzumac	17.95	146	P	P	03 02 29.8	+0.5
	comp=Z,3.1nm,0.3s,baz=1.2,slow=12,SNR=30						
DZM				S	S	03 05 50.8	-2.4
	comp=Z,14nm,1.1s,baz=220,slow=19,SNR=1.2						
DZM				LR	LR	03 07 49.7	
	comp=Z,19µm,21.1s,baz=315,slow=32						
	comp=Z,208nm,1.1s						
DZM	Mont Dzumac	17.95	146		P	03 02 29.7	+0.5
DZM	Mont Dzumac	17.95	146	P	P	03 02 30.2	+1.0
DZM	Mont Dzumac	17.95	146	⇑P	P	03 02 29.7	+0.5
ONTNC	Ouen Toro	18.14	147		Pn	03 02 32.1	+0.8
ONTNC				IAmb	IAmb	03 02 41.9	
	comp=Z,992nm,1.7s						
ONTNC	Ouen Toro	18.14	147	P	Pn	03 02 32.7	+1.4
ONTNC	Ouen Toro	18.14	147	⇓P	Pn	03 02 32.3	+1.0
YATNC	Mamie plateau,	18.19	145	P	Pn	03 02 34.0	+2.1
OUENC	Ouen Island, N	18.44	146	P	Pn	03 02 36.1	+1.1
OUENC				IAmb	IAmb	03 02 50.3	
	comp=Z,2µm,2.0s						
OUENC	Ouen Island, N	18.44	146	P	Pn	03 02 36.9	+1.9
EIDS	Eidsvold	18.52	193	P	Pn	03 02 37.2	+1.2
	baz=19,SNR=11						
EIDS	Eidsvold	18.52	193	P	Pn	03 02 36.4	+0.4
EIDS	Eidsvold	18.52	193	P	Pn	03 02 36.7	+0.8
EIDS	Eidsvold	18.52	193	⇑P	Pn	03 02 36.2	+0.2
PINNC	Pines Island,	18.94	145	P	Pn	03 02 43.7	+2.7
TARA	Tarawa	19.16	64		Pn	03 02 44.5	+0.8
TARA	Tarawa	19.16	64	P	Pn	03 02 47.1	+3.4
TARA	Tarawa	19.16	64	⇑P	Pn	03 02 44.0	+0.3
KWAJ	Kwajalein Atol	19.88	37		Pn	03 02 53.2	+1.0
KWAJ	Kwajalein Atol	19.88	37	P	Pn	03 02 54.0	+1.8
KWAJ	Kwajalein Atol	19.88	37	⇑P	Pn	03 02 52.7	+0.4
KWAJ	Kwajalein Atol	19.88	37	P	Pn	03 02 53.2	+1.0
KWAJ				pmax	pmax		
	comp=Z,6µm,1.6s						
AUWSH	Wavell State H	20.16	187	P	Pn	03 02 54.8	-0.7
SRPI	Serui, Papua	20.18	285	P	P	03 02 54.7	+1.0
	comp=Z,201nm,1.0s,comp=Z,9µm						
RMQ	Roma	20.22	198	P	Pn	03 02 55.5	-0.7
	baz=20,SNR=234						
RMQ	Roma	20.22	198	P	Pn	03 02 56.0	-0.2
QIS	Mount Isa	20.46	228	P	P	03 02 57.6	+0.9
	baz=20,SNR=83						
QIS	Mount Isa	20.46	228	P	P	03 02 58.0	+1.3
GC1S	Gold Coast 1 S	20.86	186	P	Pn	03 03 03.0	-0.7
QLP	Quilpie	22.10	208	P	P	03 03 14.2	0.0
	baz=22,SNR=57						
QLP	Quilpie	22.10	208	P	P	03 03 15.0	+0.8
QLP	Quilpie	22.10	208	⇓P	P	03 03 14.0	-0.2
RKPI	Ransiki, Papua	22.27	284	P	P	03 03 16.9	+0.7
	comp=Z,807nm,1.6s,comp=Z,17µmcomp=Z,14µm						
AULRC	Lightning Ridg	23.21	197	P	P	03 03 27.3	+1.5
FUNA	Funafuti	23.24	95	P	P	03 03 26.4	0.0
FUNA	Funafuti	23.24	95	P	P	03 03 26.5	+0.2
FUNA	Funafuti	23.24	95	⇑P	P	03 03 26.4	0.0
YSA	Yasawairara	23.27	116	P	P	03 03 27.3	+0.7
ARMA	Armidale	23.33	189	P	P	03 03 27.7	+0.5
	baz=24,SNR=6.5						
ARMA	Armidale	23.33	189	P	P	03 03 27.9	+0.8
ARMA	Armidale	23.33	189	P	P	03 03 27.4	+0.3
ARMA	Armidale	23.33	189	⇓P	P	03 03 27.8	+0.7
GUMO	Guam	23.40	332	P	P	03 03 26.3	-1.4
	comp=Z,75nm,0.6s,baz=158,slow=12,SNR=2.4						
GUMO				LR	LR	03 11 52.2	
	comp=Z,7µm,19.5s,baz=145,slow=35						
	comp=Z,75nm,0.6s						
GUMO	Guam	23.40	332	P	P	03 03 28.7	+0.9
GUMO				IAmb	IAmb	03 03 40.9	
	comp=Z,588nm,1.4s						
GUMO	Guam	23.40	332	P	P	03 03 28.7	+0.9
GUMO				pmax	pmax		
	comp=Z,588nm,1.5s						
GUMO				MLR	MLR		
	comp=Z,7µm,20.0s						
KDU	Kakadu	23.54	255	P	P	03 03 28.7	-0.5
	baz=24,SNR=33						
KDU	Kakadu	23.54	255	P	P	03 03 29.6	+0.4
KDU	Kakadu	23.54	255	⇓P	P	03 03 28.9	-0.4
FAKI	Fak Fak	23.81	279	P	P	03 03 30.1	-1.7
FAKI	Fak Fak	23.81	279	P	P	03 03 34.2	+2.4
FAKI	Fak Fak	23.81	279	P	P	03 03 31.0	-0.8
	comp=Z,172nm,0.9s,comp=Z,5µmcomp=Z,13µm						
MSVF	Nonsavu	24.08	118	P	P	03 03 34.4	+0.1
	comp=Z,220nm,1.1s,baz=264,slow=3.4,SNR=66						
MSVF				PcP	PcP	03 07 15.3	+0.1
	comp=Z,11nm,0.7s,baz=49,slow=3.9,SNR=4.2						
MSVF				LR	LR	03 12 06.1	
	comp=Z,10µm,21.6s,baz=302,slow=34						
	comp=Z,220nm,1.1s						
MSVF	Nonsavu	24.08	118	P	P	03 03 34.4	+0.1
MSVF	Nonsavu	24.08	118	P	P	03 03 35.2	+0.9
MSVF	Nonsavu	24.08	118	⇑P	P	03 03 34.2	-0.1
MSVF	Nonsavu	24.08	118	c iP	P	03 03 34.1	-0.2
MSVF				pmax	pmax		
	comp=Z,1µm,2.0s						
MSVF				MLR	MLR		
	comp=Z,11µm,14.0s						
AUPHS	Peel High Scho	24.12	190	P	P	03 03 35.5	+1.0
WR0	Warramunga Arr	24.12	236	IAmb	IAmb	03 03 48.8	
	comp=Z,318nm,1.1s						
WB0	Warramunga Arr	24.15	237	IAmb	IAmb	03 03 49.1	
	comp=Z,322nm,1.1s						
SAUI	Saumlaki	24.25	267	P	P	03 03 37.4	+1.5
SAUI	Saumlaki	24.25	267	P	P	03 03 38.0	+2.1
SAUI	Saumlaki	24.25	267	P	P	03 03 38.8	+2.9
	comp=Z,837nm,0.8s,comp=Z,17µmcomp=Z,18µm						
WRAB	Tennant Creek	24.27	237	P	P	03 03 36.7	+0.8
WRAB				IAmb	IAmb	03 03 49.4	
	comp=Z,214nm,1.0s						
WRAB	Tennant Creek	24.27	237	IAMs_20	IAMs_20	03 12 55.3	
	comp=Z,38µm,18.0s						
WRAB	Tennant Creek	24.27	237	P	P	03 03 35.9	-0.1
WRAB	Tennant Creek	24.27	237	⇑P	P	03 03 35.4	-0.6
WRAB	Tennant Creek	24.27	237	ceP	P	03 03 35.0	-1.0
WRAB				pmax	pmax		
	comp=Z,302nm,1.7s						
WRAB				MLR	MLR		
	comp=Z,42µm,16.0s						
WB2	Warramunga Arr	24.27	237	IAmb	IAmb	03 03 50.3	
	comp=Z,367nm,1.2s						
WRA	Warramunga Arr	24.28	237	P	P	03 03 35.2	-0.9
	comp=Z,66nm,0.8s,baz=62,slow=9.3,SNR=93						
WRA				PcP	PcP	03 07 14.7	-0.8
	comp=Z,8.6nm,0.7s,baz=58,slow=2.4,SNR=5.8						
WRA				S	S	03 07 50.8	-1.7
	comp=Z,4.5nm,1.0s,baz=57,slow=2.7,SNR=1.3						
WRA				ScP	ScP	03 10 52.5	+1.4
	comp=Z,3.2nm,1.1s,baz=64,slow=3.6,SNR=3.8						
WRA				LR	LR	03 12 57.4	
	comp=Z,32µm,18.8s,baz=70,slow=36						
WRA				ScS	ScS	03 14 41.6	+2.9
	comp=Z,2.1nm,1.0s,baz=72,slow=7.1,SNR=5.9						
WRA				PKiKP	PKiKP	03 14 57.1	-1.2
	comp=Z,0.8nm,0.6s,baz=299,slow=0.9,SNR=4.6						
	comp=Z,66nm,0.8s						
WRA	Warramunga Arr	24.28	237	i P	P	03 03 36.2	+0.1
WRA				pmax	pmax		
	comp=Z,66nm,0.8s						
WB1	Warramunga Ar.	24.28	237	P	P	03 03 36.3	+0.2
LHI	Lord Howe Isla	24.30	173	P	P	03 03 36.5	+0.4
LHI				IAmb	IAmb	03 03 50.3	
	comp=Z,765nm,1.7s						
INKA	Innaminka	24.82	213	P	P	03 03 42.4	+1.6
MTN	Manton Dam	24.86	255	P	P	03 03 42.1	+0.8
	baz=25,SNR=24						
MTN	Manton Dam	24.86	255	P	P	03 03 42.2	+0.9
MTN				IAmb	IAmb	03 03 58.6	
	comp=Z,527nm,1.3s						
MTN	Manton Dam	24.86	255	P	P	03 03 42.5	+1.1
MTN	Manton Dam	24.86	255	⇑P	P	03 03 42.1	+0.8
TAVE	Taveuni	25.55	114	P	P	03 03 48.5	+0.9
BNDI	Bandanaira	25.86	275	P	P	03 03 52.0	+1.5
	comp=Z,604nm,1.0s,comp=Z,23µm						
CMSA	Cobar Meteorol	25.89	200	P	P	03 03 50.7	+0.2
	baz=26,SNR=45						
CMSA	Cobar Meteorol	25.89	200	P	P	03 03 50.7	+0.2
MGCD	Mangrove Creek	26.15	189	P	P	03 03 53.8	+0.9
	baz=26,SNR=8.4						
MGCD	Mangrove Creek	26.15	189	P	P	03 03 53.9	+1.1
AS01	Alice Springs	26.52	230	P	P	03 03 56.6	+0.2
	comp=Z,61nm,0.8s						
ASAR	Alice Springs	26.55	230	P	P	03 03 56.0	-0.6
	comp=Z,14nm,0.9s,baz=61,slow=8.8,SNR=56						
ASAR				PcP	PcP	03 07 20.3	-0.4
	comp=Z,5.8nm,0.7s,baz=67,slow=2.5,SNR=5.4						
ASAR				S	S	03 08 30.7	+2.1
	comp=Z,2.7nm,0.9s,baz=21,slow=32,SNR=2.0						
ASAR				ScP	ScP	03 10 59.4	+1.8
	comp=Z,1.8nm,0.6s,baz=69,slow=3.1,SNR=3.3						
ASAR				LR	LR	03 14 25.1	
	comp=Z,28µm,18.0s,baz=103,slow=36						
ASAR				ScS	ScS	03 14 48.6	+0.4
	comp=Z,0.3nm,0.4s,baz=152,slow=6.4,SNR=5.1						
	comp=Z,14nm,0.9s						
ASAR	Alice Springs	26.55	230	P	P	03 03 55.9	-0.8
FUTU	Fugatoga	26.57	107	P	P	03 04 00.2	+3.4
SYDH	Sydney Hard Ro	26.75	189	P	P	03 04 00.5	+2.3
MSAI	Masohi	27.00	277	P	P	03 04 00.7	-0.1
	comp=Z,19nm,0.7s						
LKBA	Tubou, Lakemba	27.03	116	P	P	03 04 01.0	0.0
AAI	Ambon	27.67	276	P	P	03 04 05.9	-0.9
	comp=Z,153nm,1.0s,comp=Z,3µmcomp=Z,7µm						
KNRA	Kununurra	27.71	250	P	P	03 04 07.7	+0.6
	baz=28,SNR=21						
KNRA	Kununurra	27.71	250	P	P	03 04 06.6	-0.5
KNRA	Kununurra	27.71	250	P	P	03 04 08.9	+1.8
STKA	Stephens Creek	27.80	207	P	P	03 04 07.5	-0.2
	comp=Z,38nm,0.7s,baz=9.6,slow=9.9,SNR=23						
STKA				S	S	03 08 49.3	+1.3
	comp=Z,3.8nm,0.6s,baz=206,slow=9.5,SNR=1.6						
STKA				ScP	ScP	03 11 03.1	+2.0
	comp=Z,6.0nm,0.7s,baz=90,slow=1.0,SNR=4.6						
STKA				ScS	ScS	03 14 51.5	-1.8
	comp=Z,1.0nm,0.4s,baz=223,slow=22,SNR=1.2						
STKA				LR	LR	03 15 19.9	
	comp=Z,31µm,18.1s,baz=23,slow=37						
	comp=Z,38nm,0.7s						
STKA	Stephens Creek	27.80	207	P	P	03 04 07.8	0.0
	baz=28,SNR=37						
STKA	Stephens Creek	27.80	207	P	P	03 04 07.5	-0.2
STKA	Stephens Creek	27.80	207	P	P	03 04 07.9	+0.2
H11S3	WAKE ISLAND Hy	27.80	23	T	T	03 32 36.5	
	baz=202,slow=75,SNR=985						
H11S2	WAKE ISLAND Hy	27.80	23	T	T	03 32 38.7	
	baz=202,slow=75,SNR=845						
H11S1	WAKE ISLAND Hy	27.82	23	T	T	03 32 37.7	
	baz=202,slow=75,SNR=602						
OOD	Oodnadatta	27.88	221	P	P	03 04 08.5	0.0
LCRK	Leigh Creek	28.31	213	P	P	03 04 12.5	+0.2
CNB	Canberra Magne	28.50	191	P	P	03 04 16.4	+2.4
CAN	Canberra	28.58	192	IAMs_20	IAMs_20	03 15 09.5	
	comp=Z,25µm,19.0s						
NLAI	Namlea	28.82	277	P	P	03 04 18.3	+1.3
	comp=Z,72nm,1.0s,comp=Z,5µm						
LBMI	Labuha	28.94	282	P	P	03 04 20.8	+2.7
	comp=Z,516nm,1.0s,comp=Z,10µm						
TNTI	Ternate	29.44	285	P	P	03 04 23.0	+0.5
TNTI	Ternate	29.44	285	P	P	03 04 24.9	+2.4
	comp=Z,82nm,1.3s,comp=Z,2µmcomp=Z,3µm						
SANI	Sanana	30.12	278	P	P	03 04 31.4	+2.9
SANI	Sanana	30.12	278	P	P	03 04 30.4	+1.9
	comp=Z,167nm,1.7s,comp=Z,2µmcomp=Z,7µm						
HTT	Hallett	30.33	209	P	P	03 04 30.6	+0.3
	baz=30,SNR=13						
HTT	Hallett	30.33	209	P	P	03 04 29.8	-0.4
HTT	Hallett	30.33	209	⇓P	P	03 04 30.1	-0.1
MULG	Mulgathing	30.62	219	P	P	03 04 31.9	-0.9
WHYH	Whyalla	30.67	211	P	P	03 04 33.0	-0.2
	comp=Z,155nm,1.0s						
SOEI	Soe	31.23	263	P	P	03 04 38.7	+0.1
SOEI				IAmb	IAmb	03 04 57.1	
	comp=Z,76nm,0.7s						
SOEI				IAMs_20	IAMs_20	03 18 32.6	
	comp=Z,24µm,20.0s						
SOEI	Soe	31.23	263	P	P	03 04 38.5	-0.1
	comp=Z,179nm,1.0s,comp=Z,2µmcomp=Z,8µm						
BBOO	Buckleboo	31.30	213	P	P	03 04 38.1	-0.6
	baz=31,SNR=22						
BBOO	Buckleboo	31.30	213	IAmb	IAmb	03 04 47.5	
	comp=Z,116nm,1.1s						
BBOO	Buckleboo	31.30	213	P	P	03 04 38.2	-0.5
TOO	Toolangi	31.55	196	P	P	03 04 42.4	+1.5
	baz=32,SNR=4.2						
TOO	Toolangi	31.55	196	P	P	03 04 40.6	-0.4
TOO	Toolangi	31.55	196	P	P	03 04 43.2	+2.3
TOO	Toolangi	31.55	196	⇑P	P	03 04 43.4	+2.5
TOO	Toolangi	31.55	196	P	P	03 04 40.6	-0.4
TOO				pmax	pmax		
	comp=Z,129nm,1.7s						
WRKA	Warakurna	31.62	233	P	P	03 04 40.9	-0.8
	baz=32,SNR=42						
WRKA	Warakurna	31.62	233	P	P	03 04 41.7	-0.1
WRKA	Warakurna	31.62	233	⇓P	P	03 04 40.8	-1.0
ARPS	Mount Arapiles	31.97	201	P	P	03 04 44.9	+0.3
	baz=32,SNR=9.2						
ARPS	Mount Arapiles	31.97	201	P	P	03 04 45.1	+0.5
BRAT	Ballarat	31.98	198	P	P	03 04 46.2	+1.6
SGSI	Sangihe	32.08	289	P	P	03 04 47.1	+1.2
	comp=Z,606nm,1.4s						
OUZ	Omahuta	32.26	152	⇑P	P	03 04 49.5	+2.4
OUZ	Omahuta	32.26	152	P	P	03 04 49.7	+2.6
AFI	Afiamalu	32.55	104	P	P	03 04 49.4	-0.6
	comp=Z,90nm,1.0s,baz=246,slow=6.5,SNR=13						
AFI				LR	LR	03 16 47.8	
	comp=Z,16µm,18.1s,baz=284,slow=34						
	comp=Z,90nm,1.0s						
RAO	Raoul Island	33.03	135	P	P	03 04 53.3	-0.7
	comp=Z,131nm,0.4s,baz=287,slow=20,SNR=1.7						
RAO				LR	LR	03 16 55.6	
	comp=Z,10µm,18.5s,baz=311,slow=34						
	comp=Z,131nm,0.4s						
RAO	Raoul Island	33.03	135	P	P	03 04 53.9	-0.1
RAO	Raoul Island	33.03	135	P	P	03 04 53.9	-0.1
RAO				pmax	pmax		
	comp=Z,2µm,1.6s						
WCZ	Waipu Caves	33.20	152	P	P	03 05 00.5	+5.2
MMRI	Maumere	33.22	265	P	P	03 04 55.5	-0.3
MMRI	Maumere	33.22	265	P	P	03 04 55.2	-0.6
	comp=Z,299nm,0.6s,comp=Z,5µm						
DAV	Davao City (W)	33.31	295	LR	LR	03 19 10.8	
	comp=Z,8µm,18.2s,baz=86,slow=38						
DAV	Davao City (W)	33.31	295	P	P	03 04 58.2	+1.6
LUWI	Luwuk	33.47	279	P	P	03 04 59.2	+1.3
LUWI	Luwuk	33.47	279	P	P	03 04 59.3	+1.3
	comp=Z,195nm,1.1s,comp=Z,8µmcomp=Z,5µm						
GTOI	Gorontalo	33.60	282	P	P	03 05 00.8	+1.6
	comp=Z,68nm,0.7s,comp=Z,912nm						
GLAD	Gladstone	34.25	190	P	P	03 05 05.8	+1.4
MRSI	Marisa	34.61	281	P	P	03 05 07.7	-0.2
	comp=Z,110nm,1.0s,comp=Z,1µmcomp=Z,5µm						
AULHS	Lilydale High	34.66	191	P	P	03 05 09.6	+1.7
BASI	Baing, Sumba	34.88	263	P	P	03 05 11.1	+0.8
	comp=Z,446nm,1.4s,comp=Z,5µmcomp=Z,5µm						
FORT	Forrest	34.90	224	P	P	03 05 10.0	-0.2
	baz=35,SNR=28						
FORT	Forrest	34.90	224	P	P	03 05 09.2	-1.0
FORT				IAmb	IAmb	03 05 26.6	
	comp=Z,133nm,0.8s						
FORT	Forrest	34.90	224	P	P	03 05 11.2	+1.0
FORT	Forrest	34.90	224	⇑P	P	03 05 08.5	-1.7
BSSI	Bau Bau, Buton	35.04	270	P	P	03 05 12.0	+0.3
	comp=Z,516nm,1.0s,comp=Z,5µmcomp=Z,6µm						
NIUE	Niue	35.32	113	P	P	03 05 15.5	+1.5
	baz=35,SNR=3.2						
NIUE	Niue	35.32	113	P	P	03 05 14.5	+0.6
BKSI	Bulukumba	35.47	271	P	P	03 05 15.5	+0.2
	comp=Z,243nm,1.0s,comp=Z,2µm						
HIZ	Hauiti	35.55	154	IAmb	IAmb	03 05 27.7	
	comp=Z,183nm,1.3s						
HIZ	Hauiti	35.55	154	P	P	03 05 19.2	+3.6
MOO	Moorlands	35.82	191	P	P	03 05 19.8	+1.9
KAPI	Kappang	35.87	272	P	P	03 05 18.5	-0.3
	comp=Z,111nm,0.9s,baz=89,slow=4.6,SNR=37						
KAPI				S	S	03 10 55.8	+1.7
	comp=Z,5.5nm,0.8s,baz=322,slow=19,SNR=2.0						
KAPI				LR	LR	03 23 00.4	
	comp=Z,4µm,18.3s,baz=104,slow=41						
	comp=Z,111nm,0.9s						
KAPI	Kappang	35.87	272	P	P	03 05 18.9	+0.1
KAPI	Kappang	35.87	272	P	P	03 05 19.6	+0.9
KAPI	Kappang	35.87	272	⇑P	P	03 05 18.6	-0.2
KAPI	Kappang	35.87	272	P	P	03 05 18.9	+0.1
KAPI				pmax	pmax		
	comp=Z,267nm,0.9s						
KAPI	Kappang	35.87	272	P	P	03 05 20.6	+1.9
KAPI				P	P	03 05 20.6	+1.9
TOLI2	Tolitoli	35.88	282	P	P	03 05 17.8	-1.1
TOLI2	Tolitoli	35.88	282	P	P	03 05 19.7	+0.8
OMRZ	Omania	35.91	152	P	P	03 05 22.0	+3.2
SPSI	Sidrap Palu	35.96	273	P	P	03 05 18.5	-1.0
	comp=Z,148nm,1.0s,comp=Z,2µm						
TAU	Tasmania Unive	36.24	191	P	P	03 05 21.6	+0.1
TAU				IAmb	IAmb	03 05 38.2	
	comp=Z,294nm,1.4s						
TAU	Tasmania Unive	36.24	191	P	P	03 05 22.7	+1.2
TAU	Tasmania Unive	36.24	191	⇑P	P	03 05 23.3	+1.7
TAU	Tasmania Unive	36.24	191	P	P	03 05 21.6	+0.1
TAU				pmax	pmax		
	comp=Z,294nm,1.5s						
URZ	Urewera	36.38	151	P	P	03 05 22.7	-0.1
	comp=Z,22nm,0.9s,baz=79,slow=3.9,SNR=7.9						
URZ				S	S	03 11 03.0	+1.7
	comp=Z,7.4nm,1.1s,baz=95,slow=21,SNR=1.6						
URZ				LR	LR	03 18 36.1	
	comp=Z,5µm,19.1s,baz=65,slow=33						
	comp=Z,22nm,0.9s						
URZ	Urewera	36.38	151	⇓P	P	03 05 23.4	+0.6
RUGZ	Raukumara Rang	36.42	150	P	P	03 05 24.1	+0.8
MPSI	Mapaga	36.56	280	P	P	03 05 23.4	-1.3
	comp=Z,118nm,0.8s,comp=Z,2µm						
JCJ	Chichijima	36.63	339	LR	LR	03 19 41.4	
	comp=Z,4µm,19.8s,baz=159,slow=35						
MWZ	Matawai	36.64	151	P	P	03 05 27.0	+2.0
BKZ	Black Stump Fm	36.81	153	P	P	03 05 27.1	+0.5
BKZ				IAmb	IAmb	03 05 31.7	
	comp=Z,199nm,1.7s						

BKZ	**Black Stump Fm**	**36.81**	**153**	P	**P**	**03 05 29.8**	**+3.2**
BKZ	**Black Stump Fm**	**36.81**	**153**	P	**P**	**03 05 27.2**	**+0.6**
RAHZ	**Arahi**	**36.89**	**152**	P	**P**	**03 05 29.4**	**+2.2**
NMHZ	**Naumai**	**36.90**	**152**	P	**P**	**03 05 29.6**	**+2.3**
RIGZ	**Rimuhau**	**37.04**	**151**	P	**P**	**03 05 30.1**	**+1.6**
WHHZ	**Waihua**	**37.09**	**152**	P	**P**	**03 05 31.0**	**+2.2**
CNGZ	**Carnagh Statio**	**37.09**	**150**	P	**P**	**03 05 29.4**	**+0.6**
ARHZ	**Aropaoanui**	**37.12**	**152**	P	**P**	**03 05 31.4**	**+2.3**
MCHZ	**McNeill Hill**	**37.13**	**153**	P	**P**	**03 05 30.6**	**+1.4**
DSZ	**Denniston Nort**	**37.15**	**160**	IAMs_20	IAMs_20	03 19 09.9	
	comp=Z,20µm,19.0s						
MBWA	**Marble Bar**	**37.43**	**245**	P	**P**	**03 05 32.0**	**0.0**
MBWA				IAMs_20	IAMs_20	03 21 13.4	
	comp=Z,17µm,19.0s						
MBWA	**Marble Bar**	**37.43**	**245**	P	**P**	**03 05 33.1**	**+1.1**
MBWA	**Marble Bar**	**37.43**	**245**	⇑P	**P**	**03 05 32.4**	**+0.4**
MBWA	**Marble Bar**	**37.43**	**245**	P	**P**	**03 05 34.4**	**+2.4**
PSA00	**Pilbara Seismi**	**37.45**	**244**	P	**P**	**03 05 32.1**	**0.0**
PSA00	**Pilbara Seismi**	**37.45**	**244**	P	**P**	**03 05 32.1**	**0.0**
KAHZ	**Kahuranaki**	**37.50**	**153**	P	**P**	**03 05 33.6**	**+1.3**
PLAI	**Plampang**	**37.63**	**265**	P	**P**	**03 05 32.6**	**-1.2**
PLAI	**Plampang**	**37.63**	**265**	P	**P**	**03 05 32.3**	**-1.5**
	comp=Z,223nm,0.9s,comp=Z,2µmcomp=Z,4µm						
INZ	**Inchbonnie**	**37.90**	**161**	IAMs_20	IAMs_20	03 21 01.9	
	comp=Z,23µm,18.0s						
BFZ	**Birch Farm**	**37.94**	**154**	IAMs_20	IAMs_20	03 22 23.1	
	comp=Z,12µm,18.0s						
BFZ	**Birch Farm**	**37.94**	**154**	P	**P**	**03 05 39.8**	**+3.8**
FOZ	**Fox Glacier**	**38.15**	**163**	IAMs_20	IAMs_20	03 21 23.2	
	comp=Z,16µm,18.0s						
LTZ	**Lake Taylor**	**38.23**	**160**	IAMs_20	IAMs_20	03 19 54.4	
	comp=Z,23µm,19.0s						
PLWZ	**Palliser**	**38.27**	**156**	P	**P**	**03 05 38.0**	**-0.9**
KHZ	**Kahutara**	**38.35**	**159**	IAMs_20	IAMs_20	03 20 28.6	
	comp=Z,13µm,18.0s						
KHZ	**Kahutara**	**38.35**	**159**	⇓P	**P**	**03 05 38.9**	**-0.5**
TWSI	**Taliwang, Sumb**	**38.52**	**265**	P	**P**	**03 05 39.2**	**-2.0**
	comp=Z,112nm,0.8s,comp=Z,1µmcomp=Z,4µm						
OXZ	**Oxford**	**38.63**	**161**	IAMs_20	IAMs_20	03 20 52.2	
	comp=Z,20µm,18.0s						
GVZ	**Greta Valley S**	**38.65**	**160**	IAMs_20	IAMs_20	03 20 17.7	
	comp=Z,18µm,19.0s						
RPZ	**Rata Peaks**	**38.68**	**162**	P	**P**	**03 05 42.7**	**+0.5**
	comp=Z,48nm,0.8s,baz=357,slow=3.4,SNR=9.7						
RPZ				LR	LR	03 19 52.7	
	comp=Z,9µm,20.4s,baz=331,slow=33						
	comp=Z,48nm,0.8s						
LBZ	**Lake Benmore**	**39.03**	**164**	IAMs_20	IAMs_20	03 21 24.8	
	comp=Z,21µm,18.0s						
MQZ	**McQueen's Vall**	**39.18**	**161**	IAMs_20	IAMs_20	03 21 17.6	
	comp=Z,16µm,18.0s						
MYLDM	**Lahad Datu**	**39.19**	**287**	P	**P**	**03 05 47.7**	**+0.8**
MYLDM				IAmb	IAmb	03 05 59.9	
	comp=Z,179nm,1.1s						
MYLDM	**Lahad Datu**	**39.19**	**287**	⇓P	**P**	**03 05 48.4**	**+1.6**
BKB	**Balikpapan**	**39.20**	**277**	P	**P**	**03 05 48.2**	**+1.3**
	comp=Z,245nm,1.2s,comp=Z,8µm						
MLZ	**Mavora Lakes**	**39.41**	**166**	IAMs_20	IAMs_20	03 20 18.7	
	comp=Z,17µm,19.0s						
KMBL	**Kambalda**	**39.66**	**228**	P	**P**	**03 05 50.7**	**+0.1**
	baz=40,SNR=21						
KMBL	**Kambalda**	**39.66**	**228**	P	**P**	**03 05 50.7**	**+0.1**
ODZ	**Otahua Downs**	**39.77**	**163**	IAMs_20	IAMs_20	03 22 14.2	
	comp=Z,13µm,19.0s						
PYZ	**Puysegur Point**	**39.86**	**168**	IAMs_20	IAMs_20	03 21 01.5	
	comp=Z,14µm,18.0s						
MEEK	**Meekatharra**	**40.18**	**237**	P	**P**	**03 05 56.5**	**+1.5**
IGBI	**Denpasar**	**40.23**	**265**	P	**P**	**03 05 55.3**	**-0.2**
	comp=Z,130nm,0.8s						
BBKI	**Banjar Baru**	**40.90**	**273**	P	**P**	**03 06 01.3**	**+0.2**
	comp=Z,356nm,0.9s,comp=Z,36µm						
ABJI	**Asem Bagus**	**41.16**	**267**	P	**P**	**03 06 03.3**	**+0.1**
	comp=Z,51nm,1.8s,comp=Z,3µmcomp=Z,5µm						
JAGI	**Jajag, Banyuwa**	**41.22**	**265**	P	**P**	**03 06 02.1**	**-1.6**
JAGI	**Jajag, Banyuwa**	**41.22**	**265**	P	**P**	**03 06 04.8**	**+1.1**
JAGI	**Jajag, Banyuwa**	**41.22**	**265**	P	**P**	**03 06 01.2**	**-2.5**
	comp=Z,101nm,0.9s,comp=Z,2µmcomp=Z,4µm						
MTKI	**Muara Teweh, K**	**41.22**	**277**	P	**P**	**03 06 03.5**	**-0.2**
	comp=Z,114nm,0.5s,comp=Z,5µm						
KKM	**Kota Kinabalu**	**41.62**	**288**	P	**P**	**03 06 07.5**	**+0.4**
KKM				IAmb	IAmb	03 06 10.4	
	comp=Z,182nm,0.9s						
KKM	**Kota Kinabalu**	**41.62**	**288**	P	**P**	**03 06 09.6**	**+2.5**
KKM	**Kota Kinabalu**	**41.62**	**288**	⇑P	**P**	**03 06 06.4**	**-0.7**
BLJI	**Banyuglugur**	**41.79**	**267**	P	**P**	**03 06 08.0**	**-0.4**
	comp=Z,47nm,0.5s,comp=Z,13µm						
JOHN	**Johnston Islan**	**41.81**	**55**	IAMs_20	IAMs_20	03 21 30.1	
	comp=Z,12µm,20.0s						
GMJI	**Gumukmas**	**41.92**	**266**	P	**P**	**03 06 09.8**	**+0.3**
	comp=Z,30nm,1.0s,comp=Z,1µm						
GIRL	**Giralia**	**42.75**	**244**	P	**P**	**03 06 16.3**	**+0.2**
	baz=43,SNR=4.8						
GIRL	**Giralia**	**42.75**	**244**	⇑P	**P**	**03 06 19.8**	**+3.8**
KLBR	**Kellerberrin**	**42.88**	**231**	P	**P**	**03 06 16.4**	**-0.6**
	baz=43,SNR=84						
KLBR	**Kellerberrin**	**42.88**	**231**	P	**P**	**03 06 16.6**	**-0.4**
JHJ	**Hachijo jima 2**	**42.97**	**340**	LR	LR	03 23 58.6	
	comp=Z,3µm,18.5s,baz=170,slow=36						
JOW	**Kunigami**	**43.14**	**323**	P	**P**	**03 06 17.4**	**-1.6**
	comp=Z,49nm,0.8s,baz=156,slow=7.8,SNR=23						
JOW				PcP	**PcP**	**03 08 08.4**	**0.0**
	comp=Z,28nm,0.9s,baz=140,slow=5.3,SNR=4.6						
	comp=Z,49nm,0.8s						
JOW	**Kunigami**	**43.14**	**323**	IAmb	IAmb	03 06 22.7	
	comp=Z,184nm,1.3s						
JOW	**Kunigami**	**43.14**	**323**	P	**P**	**03 06 19.4**	**+0.3**
JOW	**Kunigami**	**43.14**	**323**	⇑P	**P**	**03 06 18.8**	**-0.3**
MORW	**Morawa**	**43.20**	**235**	P	**P**	**03 06 21.1**	**+1.4**
	baz=43,SNR=7.4						
MORW	**Morawa**	**43.20**	**235**	P	**P**	**03 06 20.2**	**+0.5**
MORW	**Morawa**	**43.20**	**235**	P	**P**	**03 06 20.2**	**+0.5**
MORW	**Morawa**	**43.20**	**235**	⇓P	**P**	**03 06 19.9**	**+0.2**
BLDU	**Ballidu**	**43.28**	**232**	P	**P**	**03 06 20.2**	**0.0**
	baz=43,SNR=14						
BLDU	**Ballidu**	**43.28**	**232**	P	**P**	**03 06 20.1**	**-0.2**
PWJI	**Pagerwojo**	**43.56**	**266**	P	**P**	**03 06 23.4**	**+0.7**
	comp=Z,156nm,0.9s,comp=Z,3µm						
MIDW	**Midway**	**43.81**	**35**	IAMs_20	IAMs_20	03 21 31.9	
	comp=Z,15µm,21.0s						
PBKI	**Pangkalan Bun**	**44.14**	**274**	P	**P**	**03 06 29.2**	**+1.8**
	comp=Z,505nm,1.1s						
MUN	**Mundaring**	**44.23**	**231**	P	**P**	**03 06 27.9**	**0.0**
	baz=44,SNR=14						
MUN	**Mundaring**	**44.23**	**231**	P	**P**	**03 06 28.4**	**+0.5**
AUALB	**St Joseph's Co**	**44.36**	**226**	P	**P**	**03 06 29.6**	**+0.8**
UWJI	**Ujung Watu**	**44.49**	**268**	P	**P**	**03 06 30.1**	**-0.1**
	comp=Z,94nm,1.0s						
SBUM	**Sibu**	**44.51**	**281**	IAmb	IAmb	03 06 34.2	
	comp=Z,393nm,1.9s						
SBUM	**Sibu**	**44.51**	**281**	⇑P	**P**	**03 06 30.5**	**+0.1**
UGM	**Wanagama**	**44.83**	**266**	P	**P**	**03 06 35.2**	**+2.2**
UGM	**Wanagama**	**44.83**	**266**	P	**P**	**03 06 34.8**	**+1.8**
	comp=Z,258nm,1.0s,comp=Z,6µm						
RKGY	**Rocky Gully**	**44.84**	**227**	P	**P**	**03 06 33.6**	**+1.0**
	baz=45,SNR=8.0						
RKGY	**Rocky Gully**	**44.84**	**227**	P	**P**	**03 06 32.9**	**+0.2**
YOJ	**Yonaguni jima**	**44.90**	**316**	P	**P**	**03 06 33.0**	**-0.2**
YOJ	**Yonaguni jima**	**44.90**	**316**	⇑P	**P**	**03 06 34.6**	**+1.4**
SMRI	**Semarang**	**44.95**	**267**	P	**P**	**03 06 34.4**	**+0.5**
SMRI				IAmb	IAmb	03 06 41.2	
	comp=Z,188nm,1.2s						
SMRI	**Semarang**	**44.95**	**267**	P	**P**	**03 06 35.5**	**+1.6**
SMRI	**Semarang**	**44.95**	**267**	P	**P**	**03 06 36.4**	**+2.5**
	comp=Z,145nm,1.0s,comp=Z,6µmcomp=Z,8µm						
YOGI	**Yogyakarta**	**45.06**	**266**	P	**P**	**03 06 35.6**	**+0.8**
	comp=Z,259nm,1.1s,comp=Z,3µm						
RAR	**Rarotonga**	**45.09**	**113**	P	**P**	**03 06 33.8**	**-1.1**
	comp=Z,32nm,0.7s,baz=237,slow=8.1,SNR=8.1						
RAR				LR	LR	03 22 08.8	
	comp=Z,6µm,21.6s,baz=283,slow=32						
	comp=Z,32nm,0.7s						
RAR	**Rarotonga**	**45.09**	**113**	P	**P**	**03 06 36.0**	**+1.1**
RAR				IAmb	IAmb	03 06 41.6	
	comp=Z,164nm,1.4s						
RAR	**Rarotonga**	**45.09**	**113**	P	**P**	**03 06 38.0**	**+3.1**
	comp=Z,109nm,1.6s						
RAR	**Rarotonga**	**45.09**	**113**	⇓P	**P**	**03 06 37.2**	**+2.3**
RAR	**Rarotonga**	**45.09**	**113**	P	**P**	**03 06 36.0**	**+1.1**
RAR				pmax	pmax		
	comp=Z,165nm,1.5s						
TWGBT	**Beinan**	**45.25**	**312**	P	**P**	**03 06 36.7**	**+0.6**
TWG	**Pinlang**	**45.26**	**312**	IAmb	IAmb	03 06 45.9	
	comp=Z,102nm,1.2s						
YULB	**Yu-li**	**45.44**	**313**	IAmb	IAmb	03 06 42.2	
	comp=Z,189nm,1.0s						
YULB	**Yu-li**	**45.44**	**313**	P	**P**	**03 06 39.8**	**+2.2**
JSU	**Suzuyama**	**45.54**	**329**	IAmb	IAmb	03 06 41.1	
	comp=Z,293nm,1.9s						
JSU	**Suzuyama**	**45.54**	**329**	P	**P**	**03 06 39.0**	**+0.7**
NACB	**Ninganchiao**	**45.71**	**314**	P	**P**	**03 06 40.6**	**+0.9**
JMN	**Monobe**	**45.77**	**334**	IAmb	IAmb	03 06 42.5	
	comp=Z,247nm,1.4s						
JMN	**Monobe**	**45.77**	**334**	P	**P**	**03 06 41.5**	**+1.4**
JMN	**Monobe**	**45.77**	**334**	⇑P	**P**	**03 06 39.1**	**-1.0**
TPUB	**Ta-pu**	**45.87**	**313**	P	**P**	**03 06 41.8**	**+0.8**
SSLB	**Suanglung**	**45.93**	**313**	P	**P**	**03 06 40.9**	**-0.6**
SSLB				IAmb	IAmb	03 06 45.1	
	comp=Z,172nm,1.0s						
SSLB				IAMs_20	IAMs_20	03 21 58.1	
	comp=Z,12µm,22.0s						
SSLB	**Suanglung**	**45.93**	**313**	P	**P**	**03 06 42.2**	**+0.7**
INU	**Inuyama**	**45.95**	**339**	P	**P**	**03 06 40.9**	**-0.5**
INU	**Inuyama**	**45.95**	**339**	P	**P**	**03 06 41.2**	**-0.2**
INU	**Inuyama**	**45.95**	**339**	⇓P	**P**	**03 06 40.9**	**-0.5**
JGF	**Kuroka**	**46.05**	**339**	P	**P**	**03 06 42.9**	**+0.6**
JGF	**Kuroka**	**46.05**	**339**	⇓P	**P**	**03 06 41.8**	**-0.5**
YHNB	**Yeheng**	**46.17**	**315**	IAMs_20	IAMs_20	03 22 53.6	
	comp=Z,12µm,22.0s						
YHNB	**Yeheng**	**46.17**	**315**	P	**P**	**03 06 44.6**	**+1.1**
KSM	**Kuching**	**46.18**	**279**	P	**P**	**03 06 43.6**	**0.0**
KSM	**Kuching**	**46.18**	**279**	P	**P**	**03 06 45.2**	**+1.6**
	comp=Z,90nm,0.8s						
TATO	**Taipei**	**46.29**	**315**	IAMs_20	IAMs_20	03 22 58.4	
	comp=Z,11µm,22.0s						
TATO	**Taipei**	**46.29**	**315**	P	**P**	**03 06 46.4**	**+2.2**
TATO	**Taipei**	**46.29**	**315**	P	**P**	**03 06 44.1**	**-0.1**
TATO				P	**P**	**03 06 44.1**	**-0.1**
KPJI	**Karang Pucung**	**46.43**	**267**	P	**P**	**03 06 47.3**	**+1.7**
	comp=Z,140nm,1.0s,comp=Z,4µm						
MJAR	**Matsushiro Arr**	**46.61**	**340**	P	**P**	**03 06 45.1**	**-1.5**
	comp=Z,48nm,0.8s,baz=163,slow=7.8,SNR=61						
MJAR				PcP	**PcP**	**03 08 19.4**	**-0.7**
	comp=Z,30nm,0.8s,baz=158,slow=4.8,SNR=8.4						
MJAR				S	**S**	**03 13 30.2**	**-2.7**
	comp=Z,0.5nm,0.4s,baz=43,slow=54,SNR=1.6						
MJAR				LR	LR	03 24 24.1	
	comp=Z,3µm,21.9s,baz=168,slow=34						
	comp=Z,48nm,0.8s						
MAJO	**Matsushiro**	**46.61**	**340**	P	**P**	**03 06 46.6**	**0.0**
MAJO				IAmb	IAmb	03 06 48.4	
	comp=Z,120nm,0.8s						
MAJO	**Matsushiro**	**46.61**	**340**	P	**P**	**03 06 46.1**	**-0.5**
MAJO	**Matsushiro**	**46.61**	**340**	⇓P	**P**	**03 06 45.4**	**-1.2**
MAJO	**Matsushiro**	**46.61**	**340**	P	**P**	**03 06 46.7**	**0.0**
MAJO				pmax	pmax		
	comp=Z,120nm,0.8s						
MJB9	**Matsu-Tunnel**	**46.62**	**340**	P	**P**	**03 06 46.5**	**-0.2**
MJB9				IAmb	IAmb	03 06 49.3	
	comp=Z,114nm,0.8s						
JNU	**Nakatsue**	**46.64**	**331**	P	**P**	**03 06 45.7**	**-1.2**
	comp=Z,74nm,0.8s,baz=116,slow=3.6,SNR=30						
JNU				S	**S**	**03 13 32.1**	**-1.3**
	comp=Z,1.5nm,0.7s,baz=57,slow=18,SNR=1.2						
JNU				LR	LR	03 24 03.3	
	comp=Z,1µm,20.1s,baz=124,slow=33						
JNU				PKPPKP	**P'P'df**	**03 38 09.2**	**+1.2**
	comp=Z,2.2nm,0.8s,baz=256,slow=4.2,SNR=3.9						
	comp=Z,74nm,0.8s						
JNU	**Nakatsue**	**46.64**	**331**	IAmb	IAmb	03 06 48.2	
	comp=Z,129nm,1.1s						
JNU	**Nakatsue**	**46.64**	**331**	P	**P**	**03 06 46.7**	**-0.2**
JNU	**Nakatsue**	**46.64**	**331**	⇑P	**P**	**03 06 45.2**	**-1.7**
CMJI	**Cimerak**	**46.89**	**266**	P	**P**	**03 06 48.7**	**-0.5**
	comp=Z,125nm,0.9s,comp=Z,2µmcomp=Z,4µm						
JMM	**Marumori**	**47.05**	**344**	P	**P**	**03 06 50.9**	**+0.9**
JMM	**Marumori**	**47.05**	**344**	⇓P	**P**	**03 06 50.0**	**+0.1**
JCJI	**Jatiwangi**	**47.14**	**268**	P	**P**	**03 06 51.5**	**+0.4**
	comp=Z,338nm,0.9s						
JHS	**Saijyo**	**47.19**	**334**	P	**P**	**03 06 51.2**	**+0.1**
JHS	**Saijyo**	**47.19**	**334**	⇑P	**P**	**03 06 50.5**	**-0.6**
XMAS	**Kiritimati**	**47.60**	**81**	P	**P**	**03 06 55.7**	**+0.9**
BBJI	**Bungbulang**	**47.69**	**267**	P	**P**	**03 06 55.9**	**+0.4**
JSD	**Sado**	**47.96**	**341**	IAmb	IAmb	03 07 00.2	
	comp=Z,91nm,0.7s						
JSD	**Sado**	**47.96**	**341**	P	**P**	**03 06 59.9**	**+2.9**
	comp=Z,158nm,0.8s						
JSD	**Sado**	**47.96**	**341**	⇓P	**P**	**03 06 58.0**	**+1.0**
KNMB	**Chin-men Tao**	**48.20**	**312**	P	**P**	**03 06 59.6**	**+0.4**
JTU	**Tsushima**	**48.49**	**331**	IAmb	IAmb	03 07 02.5	
	comp=Z,121nm,1.3s						
JTU	**Tsushima**	**48.49**	**331**	P	**P**	**03 07 03.7**	**+2.5**
	comp=Z,67nm,1.3s						
JTU	**Tsushima**	**48.49**	**331**	⇑P	**P**	**03 07 01.4**	**+0.2**
CBJI	**Citeko**	**48.55**	**268**	P	**P**	**03 07 00.9**	**-1.2**
	comp=Z,236nm,0.9s						
SKJI	**Sukabumi**	**48.80**	**267**	P	**P**	**03 07 02.1**	**-1.9**
	comp=Z,166nm,0.6s,comp=Z,2µm						
SBJI	**Serang**	**49.29**	**268**	P	**P**	**03 07 08.4**	**+0.7**
	comp=Z,111nm,0.6s,comp=Z,7µm						
CGJI	**Cibinong**	**49.69**	**268**	P	**P**	**03 07 09.4**	**-1.3**
	comp=Z,343nm,0.9s						
PPBI	**Pangkal Pinang**	**49.69**	**273**	P	**P**	**03 07 11.5**	**+0.7**
	comp=Z,54nm,0.8s,comp=Z,12µm						
JTM	**Tenmabayashi**	**49.72**	**345**	P	**P**	**03 07 10.8**	**+0.3**
JTM	**Tenmabayashi**	**49.72**	**345**	⇑P	**P**	**03 07 10.0**	**-0.5**
BLSI	**Bandar Lampung**	**50.23**	**269**	P	**P**	**03 07 13.5**	**-1.4**
HKC	**Hong Kong Obse**	**50.24**	**307**	⇑P	**P**	**03 07 15.0**	**+0.2**
HKPS	**Hong Kong Po S**	**50.26**	**307**	IAMs_20	IAMs_20	03 25 19.6	
	comp=Z,13µm,21.0s						
HKPS	**Hong Kong Po S**	**50.26**	**307**	P	**P**	**03 07 16.9**	**+2.0**
ERM	**Erimo**	**50.41**	**348**	P	**P**	**03 07 16.3**	**+0.6**
ERM				IAmb	IAmb	03 07 22.4	
	comp=Z,82nm,0.9s						
ERM	**Erimo**	**50.41**	**348**	IAMs_20	IAMs_20	03 25 27.0	
	comp=Z,10µm,20.0s						
ERM	**Erimo**	**50.41**	**348**	P	**P**	**03 07 16.7**	**+1.0**
ERM	**Erimo**	**50.41**	**348**	⇑P	**P**	**03 07 17.4**	**+1.8**
ERM	**Erimo**	**50.41**	**348**	P	**P**	**03 07 16.3**	**+0.6**
ERM				pmax	pmax		
	comp=Z,82nm,0.9s						
JEM	**Erimo**	**50.41**	**348**	P	**P**	**03 07 17.0**	**+1.3**
SSE	**Sheshan**	**50.52**	**321**	P	**P**	**03 07 18.1**	**+1.4**
SSE				S	**S**	**03 14 28.4**	**+0.3**
SSE				pmax	pmax		
	comp=Z,29nm,1.2s						
SSE				pmax	pmax		
	comp=Z,540nm,9.0s						
SSE				LR	LR		
	comp=Z,1µm,20.3s						
SSE				LR	LR		
	comp=Z,1µm,20.6s						
DLV	**T Lat**	**50.75**	**292**	P	**P**	**03 07 19.4**	**+0.4**
DLV	**T Lat**	**50.75**	**292**	⇑P	**P**	**03 07 18.6**	**-0.4**
PMBI	**Palembang**	**50.95**	**272**	P	**P**	**03 07 21.2**	**+0.9**
KASI	**Kota Agung**	**50.95**	**269**	P	**P**	**03 07 20.1**	**-0.3**
	comp=Z,139nm,1.2s,comp=Z,1µm						
TJN	**Taejon**	**50.97**	**330**	P	**P**	**03 07 20.9**	**+0.9**
TJN	**Taejon**	**50.97**	**330**	*ce*P	**P**	**03 07 19.3**	**-0.7**
MDSI	**Maura Dua**	**51.37**	**270**	P	**P**	**03 07 20.8**	**-2.6**
	comp=Z,69nm,1.8s,comp=Z,2µmcomp=Z,3µm						
LWLI	**Liwa**	**51.43**	**269**	P	**P**	**03 07 22.6**	**-1.5**
	comp=Z,191nm,0.5s,comp=Z,13µmcomp=Z,4µm						
DSRI	**Dabo**	**51.48**	**275**	P	**P**	**03 07 25.3**	**+1.0**
	comp=Z,61nm,0.9s,comp=Z,2µm						
KSRS	**Korea Array**	**51.56**	**332**	P	**P**	**03 07 23.6**	**-0.8**
	comp=Z,40nm,0.8s,baz=149,slow=8.0,SNR=91						
KSRS				PcP	**PcP**	**03 08 38.0**	**0.0**
	comp=Z,12nm,0.7s,baz=142,slow=4.5,SNR=7.1						
KSRS				S	**S**	**03 14 42.3**	**0.0**
	comp=Z,0.4nm,0.3s,baz=194,slow=37,SNR=1.4						
KSRS				LR	LR	03 26 22.1	
	comp=Z,2µm,21.7s,baz=145,slow=33						
	comp=Z,40nm,0.8s						
KSAR	**Wonju Array Be**	**51.57**	**332**	P	**P**	**03 07 23.6**	**-0.9**
KSAR				PcP	**PcP**	**03 08 39.8**	**+1.7**
KSAR	**Wonju Array Be**	**51.57**	**332**	P	**P**	**03 07 23.6**	**-0.9**
KS19	**Wonju Array Si**	**51.62**	**332**	P	**P**	**03 07 24.7**	**-0.3**
KS19				IAmb	IAmb	03 07 27.7	
	comp=Z,68nm,0.8s						
KS19				PcP	**PcP**	**03 08 39.4**	**+1.1**
TPRI	**Tanjung Pinang**	**51.75**	**277**	P	**P**	**03 07 26.7**	**+0.3**
YUK	**Yuzh-Kuril'sk**	**51.87**	**351**	*c* *i*P	**P**	**03 07 24.0**	**-2.6**
YUK				*e*		03 09 22.0	
YUK				*i* S	**S**	**03 14 43.0**	**-3.3**
YUK				*i* SS	**SS**	**03 18 24.5**	**+0.8**
YUK				*e*SSS	SSS	03 20 01.5	
YUK				pmax	pmax		
	comp=Z,371nm,1.0s						
YUK				pmax	pmax		
	comp=Z,660nm,2.0s						
INCN	**Inchon**	**52.20**	**331**	P	**P**	**03 07 29.2**	**0.0**
INCN	**Inchon**	**52.20**	**331**	P	**P**	**03 07 30.0**	**+0.7**
INCN	**Inchon**	**52.20**	**331**	P	**P**	**03 07 29.2**	**0.0**
INCN				pmax	pmax		
	comp=Z,248nm,1.2s						
INCN				MLR	MLR		
	comp=Z,4µm,20.0s						
INCN	**Inchon**	**52.20**	**331**	P	**P**	**03 07 29.9**	**+0.6**
INCN				P	**P**	**03 07 29.9**	**+0.6**
JMBI	**JAMBI**	**52.23**	**274**	P	**P**	**03 07 31.1**	**+1.2**
	comp=Z,100nm,0.4s						
QIZ	**Qiongzhong**	**52.27**	**301**	P	**P**	**03 07 30.8**	**+0.7**
QIZ				pP	**pP**	**03 07 40.4**	**-1.2**
QIZ				S	**S**	**03 14 53.9**	**+1.3**
QIZ				sS	**sS**	**03 15 09.8**	**-2.0**
QIZ				pmax	pmax		
	comp=Z,160nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,1µm,2.7s						
QIZ				LR	LR		
	comp=Z,2µm,19.6s						
QIZ				LR	LR		
	comp=Z,6µm,19.6s						
QIZ				LR	LR		
	comp=Z,10µm,18.9s						
QIZ	**Qiongzhong**	**52.27**	**301**	IAMs_20	IAMs_20	03 26 38.8	
	comp=Z,11µm,21.0s						
QIZ	**Qiongzhong**	**52.27**	**301**	P	**P**	**03 07 31.6**	**+1.5**
JKA	**Kamikawa-asahi**	**52.54**	**348**	IAmb	IAmb	03 07 36.2	
	comp=Z,134nm,0.8s						
ASAJ	**Asahikawa**	**52.54**	**348**	P	**P**	**03 07 32.1**	**+0.5**
	comp=Z,116nm,0.8s,baz=226,slow=13,SNR=26						
ASAJ				LR	LR	03 28 06.2	
	comp=Z,9µm,20.2s,baz=154,slow=34						
	comp=Z,116nm,0.8s						
MYKOM	**Kota Tinggi**	**52.57**	**278**	P	**P**	**03 07 33.3**	**+0.9**
MYKOM				IAmb	IAmb	03 07 46.8	
	comp=Z,104nm,1.3s						
NJ2	**Nanjing**	**52.63**	**320**	⇑*i*P	**P**	**03 07 32.4**	**-0.1**
NJ2				pP	**sP**	**03 07 48.7**	**-0.2**
NJ2				sP	pP	03 07 58.0	+14
NJ2				PcP	**PcP**	**03 08 43.6**	**+1.4**
NJ2				S	**S**	**03 14 59.6**	**+2.4**
NJ2				pmax	pmax		
	comp=Z,63nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,910nm,5.3s						
NJ2				LR	LR		
	comp=Z,4µm,22.3s						
NJ2				LR	LR		
	comp=Z,2µm,20.8s						
NJ2				LR	LR		
	comp=Z,6µm,22.0s						
HJU	**Haeju**	**53.08**	**330**	P	**P**	**03 07 34.8**	**-0.9**
HJU				S	**S**	**03 15 01.3**	**-1.8**
HJU				AmB			
	comp=Z,728nm,2.1s						
HJU				AMS	AMS		
	comp=Z,6µm,20.1s						
MASI	**Maura Aman, Be**	**53.43**	**271**	P	**P**	**03 07 37.8**	**-1.1**
	comp=Z,60nm,1.6s						
KIP	**Kipapa**	**53.58**	**57**	IAMs_20	IAMs_20	03 27 01.9	
	comp=Z,8µm,21.0s						
HHU	**Hamhung**	**53.74**	**333**	P	**P**	**03 07 39.8**	**-0.8**
HHU				S	**S**	**03 15 10.9**	**-1.0**
HHU				AmB			
	comp=Z,328nm,2.2s						
HHU				AMS	AMS		
	comp=Z,2µm,14.7s						
PYAG	**Pyongyang**	**53.86**	**331**	P	**P**	**03 07 40.5**	**-0.9**
PYAG				S	**S**	**03 15 12.5**	**-1.1**
PYAG				AmB			
	comp=Z,650nm,2.3s						
PYAG				AMS	AMS		
	comp=Z,3µm,16.3s						
PPT	**Papeete**	**54.18**	**106**	P	**P**	**03 07 45.7**	**+1.5**
	comp=Z,45nm,0.8s,baz=6.8,slow=22,SNR=3.4						
PPT				LR	LR	03 27 31.2	
	comp=Z,3µm,18.7s,baz=272,slow=32						
	comp=Z,45nm,0.8s						
PPT2	**Papeete2**	**54.19**	**106**	*e*S	**S**	**03 15 18.3**	**-0.7**
	comp=Z,3µm,28.8s						
PPT2				*e*LQ	LQ	03 21 14.8	
	comp=Z,13µm,27.8s						
PPT2				*e*LR	LR	03 23 31.7	
	comp=Z,4µm,27.8s						
PPT2				*e*LR	LR	03 23 32.0	
	comp=Z,6µm,27.0s						
CNSH	**ChangSha**	**54.34**	**312**	⇑P	**P**	**03 07 45.4**	**+0.3**
CNSH				S	**S**	**03 15 23.6**	**+3.1**
CNSH				pmax	pmax		
	comp=Z,96nm,2.0s						
CNSH				LR	LR		
	comp=Z,3µm,18.8s						
CNSH				LR	LR		
	comp=Z,4µm,21.3s						
CNSH				LR	LR		
	comp=Z,5µm,21.8s						
TIAR	**Tiarei**	**54.40**	**106**	*e*P	**P**	**03 07 47.4**	**+1.6**
	comp=Z,29nm,1.2s						
TVO	**Taravao**	**54.51**	**107**	*e*P	**P**	**03 07 47.5**	**+0.9**
	comp=Z,113nm,1.3s						
SDSI	**Sungai Dareh**	**54.52**	**274**	P	**P**	**03 07 45.9**	**-0.9**
	comp=Z,56nm,1.1s,comp=Z,1µmcomp=Z,2µm						
VLA	**Vladivostok**	**54.67**	**339**	*i* P	**P**	**03 07 46.1**	**-1.1**
VLA				pmax	pmax		
	comp=Z,646nm,2.0s						
KHU	**Kahuku**	**54.68**	**60**	P	**P**	**03 07 48.3**	**+0.3**
KHU	**Kahuku**	**54.68**	**60**	P	**P**	**03 07 48.3**	**+0.3**
KHU				pmax	pmax		
	comp=Z,430nm,1.4s						
WHN	**Wuhan**	**54.68**	**316**	⇑*i*P	**P**	**03 07 47.6**	**0.0**
WHN				S	**S**	**03 15 27.7**	**+2.6**
WHN				pmax	pmax		
	comp=Z,2µm,2.1s						
WHN				pmax	pmax		
	comp=Z,3µm,4.8s						
WHN				LR	LR		
	comp=Z,6µm,15.7s						
WHN				LR	LR		
	comp=Z,11µm,21.0s						
WHN				LR	LR		
	comp=Z,20µm,20.1s						
GULI	**GuiLin**	**54.76**	**308**	⇑P	P	03 07 54.6	+6.3
GULI				S	**S**	**03 15 33.8**	**+7.5**
GULI				pmax	pmax		
	comp=Z,200nm,1.3s						
GULI				LR	LR		
	comp=N,3µm,21.7s						
GULI				LR	LR		
	comp=E,4µm,19.5s						
GULI				LR	LR		
	comp=Z,7µm,20.6s						
TBI	**Tubuai**	**54.86**	**113**	*e*S	**S**	**03 15 26.6**	**-1.2**
	comp=Z,10µm,33.2s						
TBI				*e*LQ	LQ	03 21 31.8	
	comp=Z,82µm,29.8s						
TBI				*e*LR	LR	03 23 49.6	
	comp=Z,116µm,31.0s						
TBI				*e*LR	LR	03 23 50.0	
	comp=Z,58µm,32.2s						
TEY	**Ternei**	**54.87**	**343**	⇓*e*P	**P**	**03 07 49.1**	**+0.5**
TEY				pmax	pmax		
	comp=Z,30nm,1.6s						
TEY				pmax	pmax		
	comp=N,20nm,1.6s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.6s						
TEY				pmax	pmax		
	comp=Z,100nm,13.6s						
POHA	**Pohakuloa**	**54.96**	**60**	IAMs_20	IAMs_20	03 32 47.2	
	comp=Z,11µm,18.0s						
BKNI	**Bangkinang**	**55.09**	**275**	P	**P**	**03 07 50.5**	**-0.4**
BKNI				IAmb	IAmb	03 08 05.1	
	comp=Z,120nm,1.1s						
BKNI	**Bangkinang**	**55.09**	**275**	P	**P**	**03 07 53.5**	**+2.6**
BKNI	**Bangkinang**	**55.09**	**275**	P	**P**	**03 07 52.2**	**+1.3**
	comp=Z,113nm,1.0s,comp=Z,3µmcomp=Z,5µm						
YSS	**Yuzh-Sakhalins**	**55.23**	**349**	P	**P**	**03 07 51.2**	**-0.1**
YSS	**Yuzh-Sakhalins**	**55.23**	**349**	P	**P**	**03 07 52.2**	**+1.0**
YSS	**Yuzh-Sakhalins**	**55.23**	**349**	⇑P	**P**	**03 07 51.1**	**-0.1**
YSS	**Yuzh-Sakhalins**	**55.23**	**349**	⇓*e*P	**P**	**03 07 51.5**	**+0.3**
YSS				*e*		03 08 52.3	
YSS				*e*		03 10 01.3	
YSS				*e*S	**S**	**03 15 29.8**	**-2.0**
YSS				*e*SS	**SS**	**03 19 19.9**	**+3.1**
YSS				pmax	pmax		

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      comp=Z,1µm,8.0s
YSS                              pmax     pmax
      comp=Z,160nm,0.9s
YSS                              MLR      MLR
      comp=E,2µm,16.0s
YSS                              MLR      MLR
      comp=Z,5µm,16.0s
YSS                              MLR      MLR
      comp=N,3µm,17.0s
SUJ   Sinuiju          55.29 331 P        P        03 07 50.2  -1.6
SUJ                              pP       PcP      03 08 52.3 +0.1
SUJ                              S        S        03 15 30.7  -2.1
SUJ                              AmB
      comp=Z,1µm,2.9s
SUJ                              AMS      AMS
      comp=Z,2µm,13.5s
PDSI  Padang           55.48 274 P        P        03 07 51.2  -2.5
      comp=Z,82nm,1.1s,comp=Z,14µm
USA0B Ussuriysk Arra   55.57 339c iP      P        03 07 52.9  -0.8
USRK  Ussuriysk Ar.    55.57 339 P        P        03 07 53.6  -0.1
      comp=Z,97nm,0.7s,baz=181,slow=7.6,SNR=77
USRK                             LR       LR       03 28 07.9
      comp=Z,3µm,21.8s,baz=143,slow=32
      comp=Z,97nm,0.7s
USRK  Ussuriysk Ar.    55.57 339 P        P        03 07 53.9 +0.2
USRK  Ussuriysk Ar.    55.57 339 P        P        03 07 53.9 +0.2
MEH   Mehetia          55.64 107 eP       P        03 07 54.9 +0.1
      comp=Z,90nm,1.6s
PMOR  Pomariorio Ree   55.69 103 eP       P        03 07 55.0  -0.1
      comp=Z,1µm,1.7s
PPSI  Pulau Pagai      55.69 272 P        P        03 07 54.7  -0.5
      comp=Z,86nm,0.8s,comp=Z,2µm
DL2   Dalian           55.82 328 P        P        03 07 56.4 +0.8
DL2                              sP       sP       03 08 19.0 +6.7
DL2                              S        S        03 15 37.6  -2.4
DL2                              pmax     pmax
      comp=Z,93nm,1.0s
DL2                              pmax     pmax
      comp=Z,1µm,10.4s
DL2                              LR       LR
      comp=Z,2µm,21.0s
DL2                              LR       LR
      comp=Z,3µm,16.1s
DL2                              LR       LR
      comp=Z,3µm,22.5s
IPM   Ipoh             55.86 280 IAmb     IAmb     03 08 12.1
      comp=Z,72nm,0.8s
IPM   Ipoh             55.86 280 P        P        03 07 57.6 +1.2
IPM   Ipoh             55.86 280 ⇑P       P        03 07 55.0  -1.5
VAH   Vaihoa           55.95 103 eP       P        03 07 56.6  -0.4
      comp=Z,411nm,1.5s
MDJ   Mudanjiang       56.80 338 P        P        03 08 02.6 +0.1
MDJ                              pP       pP       03 08 17.3 +3.0
MDJ                              sP       sP       03 08 23.0 +3.9
MDJ                              PcP      PcP      03 08 57.8  -0.1
MDJ                              PP       PP       03 10 09.4 +0.1
MDJ                              ScP      ScP      03 12 48.8  -5.6
MDJ                              PcS      PcS      03 12 57.3  -1.3
MDJ                              ScS      ScS      03 17 46.0  -2.5
MDJ                              pmax     pmax
      comp=Z,110nm,1.8s
MDJ                              pmax     pmax
      comp=Z,2µm,11.5s
MDJ                              LR       LR
      comp=Z,2µm,19.0s
MDJ                              LR       LR
      comp=Z,870nm,17.5s
MDJ                              LR       LR
      comp=Z,2µm,23.1s
MDJ   Mudanjiang       56.80 338 P        P        03 08 02.6 +0.1
MDJ                              IAmb     IAmb     03 08 06.4
      comp=Z,199nm,1.2s
MDJ   Mudanjiang       56.80 338 P        P        03 08 03.7 +1.2
SKLT  Songkhla         56.84 283 P        P        03 08 05.6 +2.2
      comp=Z,81nm,1.2s
SNY   Shenyang         57.06 332 ⇓P       P        03 08 04.0  -0.4
SNY                              pP       sP       03 08 20.4  -0.6
SNY                              S        S        03 15 53.3  -3.0
SNY                              pmax     pmax
      comp=Z,84nm,1.9s
SNY                              pmax     pmax
      comp=Z,1µm,9.2s
SNY                              LR       LR
      comp=Z,3µm,19.2s
SNY                              LR       LR
      comp=Z,3µm,18.6s
SNY                              LR       LR
      comp=Z,5µm,18.8s
UGL   Uglegorsk        57.40 349⇑iP       P        03 08 08.2 +1.6
UGL                             eS        S        03 16 00.0  -0.5
UGL                              pmax     pmax
      comp=Z,200nm,1.5s
UGL                              smax     smax
      comp=E,2µm,14.0s
UGL                              smax     smax
      comp=N,4µm,16.0s
UGL                              MLR      MLR
      comp=E,4µm,16.0s
UGL                              MLR      MLR
      comp=N,3µm,17.0s
UGL                              MLR      MLR
      comp=Z,4µm,17.0s
RPSI  Rantau Prapat    57.58 278 P        P        03 08 07.7  -0.9
PSI   Prapat           57.60 278 P        P        03 08 10.7 +1.8
PSI   Prapat           57.60 278 P        P        03 08 07.7  -1.2
PSI                              pmax     pmax
      comp=Z,57nm,1.6s
NONG  Nongkai          57.72 297 P        P        03 08 12.3 +2.8
SKR   Severo-Kuril's   57.74   0 eP       P        03 08 09.0   0.0
SKR                              eS       S        03 16 19.6  +15
SKR                              pmax     pmax
      comp=Z,59nm,0.8s
SKR                              pmax     pmax
      comp=Z,400nm,2.7s
SKR                              MLR      MLR
      comp=N,3µm,16.0s
PBSI  Pulau Batu       57.76 275 P        P        03 08 09.3  -0.6
      comp=N,93nm,1.2s,comp=N,3µm
CN2   Changchun        57.79 334 eP       P        03 08 08.3  -1.2
CN2                              S        S        03 16 03.9  -1.9
CN2                              SS       SS       03 19 52.9  -4.2
CN2                              pmax     pmax
      comp=N,10.0nm,0.7s
CN2                              pmax     pmax
      comp=N,1µm,3.0s
CN2                              LR       LR
      comp=N,2µm,19.0s
CN2                              LR       LR
      comp=N,2µm,19.0s
CN2                              LR       LR
      comp=N,3µm,17.2s
ENH   Enshi            58.00 313 P        P        03 08 10.7  -0.6
ENH   Enshi            58.00 313 P        P        03 08 11.8 +0.5
NAYO  Nakonayok        58.11 292 P        P        03 08 13.8 +1.5
      comp=N,1µm,1.2s
SRIT  Nakonsritamara   58.16 285 IAmb     IAmb     03 08 22.2
      comp=Z,68nm,0.9s
SRIT  Nakonsritamara   58.16 285 P        P        03 08 13.7 +1.1
      comp=Z,89nm,0.9s
COCO  West Island      58.19 260 P        P        03 08 12.5  -0.4
COCO  West Island      58.19 260 P        P        03 08 12.5  -0.4
COCO                             pmax     pmax
      comp=Z,265nm,1.3s
GYA   Guiyang          58.24 307 ⇓P       P        03 08 13.7 +0.5
GYA                              pP       sP       03 08 32.2 +2.7
GYA                              PcP      PcP      03 09 07.1 +2.9
GYA                              S        S        03 16 08.8  -3.8
GYA                              pmax     pmax
      comp=Z,93nm,1.4s
GYA                              pmax     pmax
      comp=Z,2µm,8.3s
GYA                              LR       LR
      comp=Z,3µm,20.8s
GYA                              LR       LR
      comp=Z,5µm,20.8s
GYA                              LR       LR
      comp=Z,8µm,20.6s
SURA  Surathani        58.27 285 P        P        03 08 14.4 +1.0
      comp=Z,68nm,1.0s
LYN   LuoYang          58.35 318⇓iP       P        03 08 13.2  -0.4
LYN                              PcP      PcP      03 09 07.1 +2.8
LYN                              S        S        03 16 11.3  -2.2
LYN                              pmax     pmax
      comp=Z,72nm,1.3s
LYN                              pmax     pmax
      comp=Z,1µm,8.9s
LYN                              LR       LR
      comp=Z,4µm,18.5s
LYN                              LR       LR
      comp=Z,4µm,19.6s
LYN                              LR       LR
      comp=Z,6µm,19.8s
BNX   BinXian          58.58 337 ⇑P       P        03 08 13.9  -1.1
BNX                              pP       sP       03 08 31.7 +0.1
BNX                              PcP      PcP      03 09 05.7 +0.8
BNX                              S        S        03 16 14.8  -1.3
BNX                              pmax     pmax
      comp=Z,210nm,1.7s
BNX                              pmax     pmax
      comp=Z,2µm,8.6s
BNX                              LR       LR
      comp=Z,3µm,18.4s
BNX                              LR       LR
      comp=Z,2µm,18.6s
BNX                              LR       LR
      comp=Z,3µm,18.6s
HNS   HongShan         58.70 322 ⇑P       P        03 08 15.4  -0.6
HNS                              PP       PP       03 10 21.8  -4.5
HNS                              S        S        03 16 10.4  -7.6
HNS                              pmax     pmax
      comp=Z,1µm,5.4s
HNS                              LR       LR
      comp=Z,2µm,20.7s
HNS                              LR       LR
      comp=Z,4µm,20.6s
HNS                              LR       LR
      comp=Z,4µm,20.2s
KCSI  Kotacane, Aceh   58.86 279 P        P        03 08 15.8  -1.8
TYV   Tymovskoe        59.02 350 eP       P        03 08 18.4 +0.5
TYV                              eS       S        03 16 24.6 +3.0
TYV                              pmax     pmax
      comp=Z,2µm,5.9s
TYV                              pmax     pmax
      comp=Z,98nm,1.0s
TYV                              smax     smax
      comp=N,1µm,8.8s
TYV                              smax     smax
      comp=E,600nm,8.8s
BJT   Baijiatuau       59.58 325 P        P        03 08 22.7 +0.6
BJI   Beijing          59.59 325 P        P        03 08 20.9  -1.2
BJI                              PcP      PcP      03 09 08.9  -0.2
BJI                              S        S        03 16 27.7  -1.7
BJI                              pmax     pmax
      comp=E,22nm,1.9s
BJI                              LR       LR
      comp=E,1µm,20.7s
BJI                              LR       LR
      comp=E,1µm,23.0s
BJI                              LR       LR
      comp=E,3µm,20.5s
LHMI  Lhok Sumawe      59.99 280 P        P        03 08 25.0  -0.4
      comp=E,114nm,1.0s
KLR   Kul'dur          60.08 342 P        P        03 08 25.2  -0.1
      comp=E,70nm,0.7s,baz=158,slow=3.3,SNR=107
KLR                              LR       LR       03 33 34.7
      comp=E,4µm,20.5s,baz=158,slow=35
KLR                              PKPPKP   P'P'df   03 37 49.9 +1.8
      comp=E,2.2nm,0.9s,baz=328,slow=5.8,SNR=5.4
KLR                              PKP2bc            03 38 00.6
      comp=E,5.0nm,1.2s,baz=354,slow=1.1,SNR=3.8
      comp=E,70nm,0.7s
SNSI  Sinabang, Aceh   60.08 277 P        P        03 08 25.5  -0.5
      comp=E,42nm,0.9s
PET   Petropavlovsk    60.13   2 P        P        03 08 26.2 +0.7
PET   Petropavlovsk    60.13   2 P        P        03 08 25.9 +0.4
PET   Petropavlovsk    60.13   2 eP       P        03 08 28.2 +2.7
PET                              eS       S        03 16 40.1 +4.3
PET                              eSS      SS       03 20 31.3  -2.4
PET                              pmax     pmax
      comp=Z,122nm,1.9s
PET                              pmax     pmax
      comp=Z,2µm,14.2s
PET                              MLR      MLR
      comp=Z,5µm,17.0s
SRDT  SRDT             60.16 291 P        P        03 08 28.0 +1.6
PEA0B Petropavlovsk-   60.19   1 P        P        03 08 26.3 +0.3
PEA0B Petropavlovsk-   60.19   1 P        P        03 08 26.3 +0.3
PEA0B                            pmax     pmax
      comp=Z,160nm,1.2s
PETK  Petropavlovsk-   60.19   1 P        P        03 08 26.3 +0.3
      comp=Z,36nm,0.7s,baz=182,slow=7.4,SNR=20
PETK                             LR       LR       03 32 34.1
      comp=Z,5µm,20.2s,baz=173,slow=34
      comp=Z,36nm,0.7s
PETK  Petropavlovsk-   60.19   1 P        P        03 08 26.4 +0.4
GRNR  Gornyy           60.20 346⇑iP       P        03 08 26.3 +0.2
GRNR                            eS        S        03 16 40.2 +3.3
GRNR                             pmax     pmax
      comp=E,20nm,0.9s
GRNR                             pmax     pmax
      comp=N,40nm,1.1s
GRNR                             pmax     pmax
      comp=Z,80nm,1.3s
GRNR                             smax     smax
      comp=N,3.0nm,0.8s
TIY   Taiyuan          60.30 321 eP       P        03 08 27.5 +0.4
TIY                              PcP      PcP      03 09 12.5 +0.4
TIY                              S        S        03 16 38.3  -0.5
TIY                              pmax     pmax
      comp=N,33nm,0.9s
TIY                              pmax     pmax
      comp=N,960nm,11.8s
TIY                              LR       LR
      comp=N,1µm,16.7s
TIY                              LR       LR
      comp=N,3µm,19.6s
TIY                              LR       LR
      comp=N,2µm,23.5s
MLSI  Meulaboh, Aceh   60.34 279 P        P        03 08 26.5  -1.3
      comp=N,87nm,0.8s
XAN   Xi'an            60.45 316 ⇑P       P        03 08 27.0  -1.2
XAN                              S        S        03 16 37.9  -2.9
XAN                              pmax     pmax
      comp=N,73nm,1.3s
XAN                              pmax     pmax
      comp=N,1µm,10.5s
XAN                              LR       LR
      comp=N,4µm,20.9s
XAN                              LR       LR
      comp=N,4µm,21.3s
XAN                              LR       LR
      comp=N,6µm,20.9s
KMI   Kunming          60.81 304 ⇑P       P        03 08 31.7 +0.6
KMI                              sP       sP       03 08 50.8 +3.3
KMI                              S        S        03 16 45.6  -0.5
KMI                              pmax     pmax
      comp=N,230nm,1.4s
KMI                              pmax     pmax
      comp=N,1µm,5.3s
KMI                              LR       LR
      comp=N,1µm,21.5s
KMI                              LR       LR
      comp=N,4µm,23.3s
KMI                              LR       LR
      comp=N,6µm,22.6s
CRAI  Chiangrai        60.94 298 P        P        03 08 31.5  -0.2
NKL   Nikolayevsk      61.56 350 eP       P        03 08 31.1  -4.1
NKL                              eS       S        03 16 59.1 +5.1
NKL                              pmax     pmax
      comp=E,74nm,1.4s
NKL                              pmax     pmax
      comp=N,122nm,1.6s
NKL                              pmax     pmax
      comp=Z,320nm,1.6s
NKL                              smax     smax
      comp=E,166nm,2.2s
NKL                              smax     smax
      comp=N,356nm,4.8s
NKL                              MLR      MLR
      comp=E,28µm,14.0s
NKL                              MLR      MLR
      comp=N,4µm,12.0s
NKL                              MLR      MLR
      comp=Z,15µm,17.0s
CM31  Chiang Mai Arr   61.60 295 P        P        03 08 37.3 +1.0
CM31  Chiang Mai Arr   61.60 295 P        P        03 08 37.0 +0.7
      SNR=110
CM31                             P        P        03 08 37.0 +0.7
      SNR=110
CMAR  Chiang Mai Arr   61.60 295 P        P        03 08 36.6 +0.3
      comp=Z,103nm,0.9s,baz=119,slow=4.1,SNR=100
CMAR                             S        S        03 16 57.7 +1.8
      comp=Z,0.9nm,0.3s,baz=0.2,slow=36,SNR=1.3
CMAR                             LR       LR       03 34 00.3
      comp=Z,3µm,20.7s,baz=105,slow=35
CMAR                             PKP2bc            03 37 56.1
      comp=Z,1.2nm,0.3s,baz=273,slow=5.5,SNR=10
      comp=Z,103nm,0.9s
CMAR  Chiang Mai Arr   61.60 295ceP       P        03 08 36.5 +0.3
CMAR                             pmax     pmax
      comp=Z,98nm,0.8s
CHTO  Chiang Mai       61.72 296 P        P        03 08 37.1 +0.1
CHTO  Chiang Mai       61.72 296 P        P        03 08 37.1 +0.1
CHTO                             pmax     pmax
      comp=Z,13nm,1.3s
CHTO                             MLR      MLR
      comp=Z,5µm,22.0s
SHEM  Shemya Is, Ala   61.80  13 LR       LR       03 31 54.9
      comp=Z,6µm,21.0s,baz=198,slow=33
PZH   PanZhiHua        62.21 305 P        P        03 08 39.8  -0.5
PZH                              sP       sP       03 08 59.7 +2.9
PZH                              PcS      PcS      03 13 21.8  -1.8
PZH                              S        S        03 17 01.3  -2.2
PZH                              SS       SS       03 21 04.2  -3.2
PZH                              pmax     pmax
      comp=Z,120nm,1.3s
PZH                              pmax     pmax
      comp=Z,1µm,6.6s
PZH                              LR       LR
      comp=Z,4µm,21.2s
PZH                              LR       LR
      comp=Z,3µm,22.4s
PZH                              LR       LR
      comp=Z,5µm,23.1s
XLT   XiLinHaoTe       62.31 329⇑iP       P        03 08 40.1  -0.5
XLT                              pP       sP       03 08 56.5  -0.9
XLT                              PcP      PcP      03 09 19.5  -0.6
XLT                              S        S        03 17 03.7  -0.4
XLT                              sS       sS       03 17 29.8 +5.8
XLT                              pmax     pmax
      comp=Z,150nm,1.7s
XLT                              pmax     pmax
      comp=Z,1µm,8.2s
XLT                              LR       LR
      comp=Z,3µm,18.4s
XLT                              LR       LR
      comp=Z,4µm,19.0s
HEH   HeiHe            62.37 340 eP       P        03 08 40.1  -0.7
HEH                              pP       pP       03 08 55.8 +3.0
HEH                              PcP      PcP      03 09 20.1 +0.1
HEH                              S        S        03 17 01.0  -3.4
HEH                              pmax     pmax
      comp=Z,80nm,1.1s
HEH                              pmax     pmax
      comp=Z,2µm,10.3s
HEH                              LR       LR
      comp=Z,2µm,16.9s
HEH                              LR       LR
      comp=Z,2µm,17.7s
HEH                              LR       LR
      comp=Z,3µm,19.4s
CD2   Chengdu          62.59 310 P        P        03 08 42.1  -0.6
CD2                              pP       pP       03 08 55.9 +1.4
CD2                              PP       PP       03 11 00.6  -0.3
CD2                              S        S        03 17 05.1  -2.9
CD2                              SS       SS       03 21 12.6  -0.5
CD2                              pmax     pmax
      comp=Z,220nm,0.8s
CD2                              pmax     pmax
      comp=Z,2µm,7.1s
CD2                              LR       LR
      comp=Z,920nm,20.4s
CD2                              LR       LR
      comp=Z,620nm,15.9s
CD2                              LR       LR
      comp=Z,5µm,23.5s
HHC   Hu-ho-hao-te     62.78 324 eP       P        03 08 44.4 +0.5
HHC                              S        S        03 17 09.0  -1.2
HHC                              pmax     pmax
      comp=Z,150nm,1.7s
HHC                              pmax     pmax
      comp=Z,2µm,9.6s
HHC                              LR       LR
      comp=Z,4µm,21.7s
HHC                              LR       LR
      comp=Z,5µm,20.6s
HHC                              LR       LR
      comp=Z,6µm,21.2s
TAOE  Nuku Hiva Isla   63.41  96 eP       P        03 08 47.0  -1.5
      comp=Z,634nm,1.5s
TAOE  Nuku Hiva Isla   63.41  96 eSS      SS       03 21 26.6 +0.2
      comp=Z,1µm,30.4s
TAOE                             eLR      LR       03 27 48.0
      comp=Z,6µm,21.2s
TAOE  Nuku Hiva Isla   63.41  96 P        P        03 08 49.6 +1.0
TAOE  Nuku Hiva Isla   63.41  96 P        P        03 08 49.8 +1.3
ADK   Adak             63.50  19 IAMs_20  IAMs_20  03 32 47.8
      comp=Z,11µm,21.0s
BTO   Baotou           63.55 322 eP       P        03 08 50.6 +1.6
BTO                              LR       LR
      comp=Z,7µm,22.5s
BTO                              LR       LR
      comp=Z,12µm,22.0s
TNCH  TengChong        64.28 302 ⇑P       P        03 08 54.3 +0.1
TNCH                             S        S        03 17 31.9 +2.2
TNCH                             pmax     pmax
      comp=Z,240nm,0.8s
TNCH                             pmax     pmax
      comp=Z,1µm,3.6s
TNCH                             LR       LR
      comp=Z,1µm,14.6s
TNCH                             LR       LR
      comp=Z,1µm,14.2s
TNCH                             LR       LR
      comp=Z,3µm,20.1s
HIA   Hailar           64.51 335 P        P        03 08 55.4 +0.4
HIA   Hailar           64.51 335c iP      P        03 08 54.0  -1.0
HIA                              pmax     pmax
      comp=Z,176nm,1.0s
HIA                              MLR      MLR
      comp=Z,3µm,18.0s
LZH   Lanzhou          65.06 315 eP       P        03 08 58.5  -0.5
LZH                              pP       pP       03 09 14.0 +3.1
LZH                              sP       sP       03 09 20.6 +5.0
LZH                              PP       PP       03 11 19.4  -3.3
LZH                              S        S        03 17 35.4  -3.4
LZH                              SS       SS       03 21 52.6 +0.8
LZH                              pmax     pmax
      comp=Z,120nm,1.6s
LZH                              pmax     pmax
      comp=Z,1µm,7.9s
LZH                              LR       LR
      comp=Z,3µm,17.9s
LZH                              LR       LR
      comp=Z,3µm,18.9s
LZH                              LR       LR
      comp=Z,4µm,18.6s
ZEA   Zeya             65.39 342 eP       P        03 09 00.6   0.0
ZEA                              eS       S        03 17 44.7 +2.9
ZEA                              pmax     pmax
      comp=E,200nm,3.8s
ZEA                              pmax     pmax
      comp=N,500nm,1.6s
ZEA                              pmax     pmax
      comp=Z,900nm,2.0s
ZEA                              pmax     pmax
      comp=E,70nm,0.9s
ZEA                              pmax     pmax
      comp=N,160nm,0.8s
ZEA                              pmax     pmax
      comp=Z,350nm,1.0s
ZEA                              smax     smax
      comp=E,300nm,14.4s
ZEA                              smax     smax
      comp=N,600nm,9.4s
CASY  Casey            66.55 198 P        P        03 09 06.1  -1.8
CASY  Casey            66.55 198 IAMs_20  IAMs_20  03 34 17.9
      comp=Z,6µm,21.0s
MA2   Magadan          66.77 357 P        P        03 09 09.9 +0.6
      comp=Z,59nm,0.9s,baz=150,slow=9.0,SNR=13
MA2                              LR       LR       03 38 16.2
      comp=Z,3µm,19.1s,baz=178,slow=36
      comp=Z,59nm,0.9s
MA2   Magadan          66.77 357 P        P        03 09 09.4 +0.1
MA2                              IAmb     IAmb     03 09 12.0
      comp=Z,87nm,1.0s
MA2   Magadan          66.77 357 P        P        03 09 10.1 +0.8
      comp=Z,117nm,1.2s
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MA2	Magadan	66.77	357	⇓P	P	03 09 10.5	+1.1
MA2	Magadan	66.77	357	ceP	P	03 09 07.7	-1.6
MA2				pmax	pmax		
	comp=Z,195nm,1.7s						
NIKH	Nikolski High	67.13	22	P	P	03 09 11.4	-0.2
	baz=218						
IMP	Imphal	68.09	300	eP	P	03 09 17.4	-1.1
IMP				IAmb	IAmb	03 09 21.4	
	comp=Z,613nm,1.7s						
MOKO	MOKOCHONG	68.12	302	eP	P	03 09 17.5	-1.2
MOKO				IAmb	IAmb	03 09 20.8	
	comp=Z,168nm,0.9s						
SAIH	SAIHA	68.17	298	eP	P	03 09 18.6	-0.5
SAIH				IAmb	IAmb	03 09 24.8	
	comp=Z,214nm,0.8s						
KOHI	KOHIMA	68.26	301	eP	P	03 09 18.1	-1.5
KOHI				IAmb	IAmb	03 09 22.6	
	comp=Z,781nm,1.5s						
UNV	Unalaska Valle	68.70	23	P	P	03 09 21.9	+0.4
	baz=221						
ITAN	ITANAGAR	69.07	303	eP	P	03 09 24.9	+0.4
CIT	Chita	69.21	334	eP	P	03 09 25.0	+0.1
CIT				e		03 09 33.4	
CIT				e		03 09 47.6	
CIT				pmax	pmax		
	comp=Z,610nm,1.9s						
BRDH	Bariadhala	69.42	297	P	P	03 09 27.2	+0.5
	comp=Z,126nm,0.3s,baz=90,slow=7.5,SNR=18						
BRDH				LR	LR	03 37 58.4	
	comp=Z,3µm,21.8s,baz=174,slow=34						
	comp=Z,126nm,0.3s						
GTA	Gaotai	69.48	317	⇑P	P	03 09 26.9	0.0
GTA				sP	PcP	03 09 48.8	-1.2
GTA				S	S	03 18 30.2	-1.5
GTA				pmax	pmax		
	comp=Z,60nm,1.8s						
GTA				pmax	pmax		
	comp=Z,890nm,6.0s						
GTA				LR	LR		
	comp=Z,2µm,19.9s						
GTA				LR	LR		
	comp=Z,2µm,19.5s						
GTA				LR	LR		
	comp=Z,4µm,22.3s						
ULN	Ulaanbaatar	69.66	327	P	P	03 09 28.1	+0.2
ULN	Ulaanbaatar	69.66	327	⇑P	P	03 09 28.0	+0.2
ULN	Ulaanbaatar	69.66	327	P	P	03 09 28.1	+0.2
ULN	Ulaanbaatar	69.66	327	P	P	03 09 28.7	+0.8
ULN				P	P	03 09 28.7	+0.8
TEZP	TEZPUR	69.67	302	eP	P	03 09 26.6	-1.6
SONM	Songino Array	70.00	327	P	P	03 09 30.0	0.0
	comp=Z,67nm,0.7s,baz=137,slow=5.2,SNR=160						
SONM				PKP2bc		03 37 30.9	
	comp=Z,5.4nm,1.1s,baz=298,slow=3.1,SNR=16						
	comp=Z,67nm,0.7s						
SONM	Songino Array	70.00	327	P	P	03 09 30.0	0.0
SEY	Seymchan	70.07	358	P	P	03 09 29.1	-0.7
	comp=Z,42nm,1.0s,baz=166,slow=4.8,SNR=27						
SEY				PKP2bc		03 37 31.1	
	comp=Z,1.1nm,0.4s,baz=4.9,slow=2.6,SNR=11						
SEY				LR	LR	03 43 41.7	
	comp=Z,2µm,18.2s,baz=157,slow=39						
	comp=Z,42nm,1.0s						
SEY	Seymchan	70.07	358	ceP	P	03 09 29.7	-0.2
SEY				pmax	pmax		
	comp=Z,163nm,1.7s						
SEY				MLR	MLR		
	comp=Z,3µm,20.0s						
SHL	Shillong	70.10	300	eP	P	03 09 30.3	-0.8
SHL				IAmb	IAmb	03 09 33.7	
	comp=Z,314nm,1.0s						
SHL	Shillong	70.10	300	P	P	03 09 31.0	-0.1
	SNR=192						
VNDA	Vanda	70.27	179	P	P	03 09 31.0	0.0
	comp=Z,7.8nm,0.9s,baz=341,slow=7.2,SNR=13						
VNDA				S	S	03 18 40.0	+0.4
	comp=Z,1.7nm,1.0s,baz=119,slow=8.7,SNR=1.4						
VNDA				LR	LR	03 35 04.5	
	comp=Z,3µm,20.3s,baz=5.0,slow=31						
	comp=Z,7.8nm,0.9s						
VNDA	Vanda	70.27	179	P	P	03 09 31.8	+0.9
VNDA				IAmb	IAmb	03 09 40.8	
	comp=Z,195nm,1.6s						
VNDA	Vanda	70.27	179	P	P	03 09 31.8	+0.9
VNDA				pmax	pmax		
	comp=Z,195nm,1.7s						
FALS	False Pass	70.66	24	P	P	03 09 33.8	+0.2
	baz=223						
SBA	Scott Base	70.76	178	P	P	03 09 35.1	+1.1
SBA	Scott Base	70.76	178	IAMs_20	IAMs_20	03 37 20.2	
	comp=Z,5µm,18.0s						
SBA	Scott Base	70.76	178	P	P	03 09 35.1	+1.1
SBA				pmax	pmax		
	comp=Z,346nm,1.7s						
GOMU	GeErMu	71.61	312	P	P	03 09 40.1	-0.2
GOMU				sP	PcP	03 10 02.2	+2.8
GOMU				PP	PP	03 12 19.3	-0.4
GOMU				S	S	03 18 56.5	-0.7
GOMU				SS	SS	03 23 31.8	-1.6
GOMU				pmax	pmax		
	comp=Z,39nm,2.3s						
GOMU				pmax	pmax		
	comp=Z,820nm,6.4s						
GOMU				LR	LR		
	comp=Z,2µm,20.7s						
GOMU				LR	LR		
	comp=Z,3µm,21.1s						
GOMU				LR	LR		
	comp=Z,3µm,20.5s						
YAK	Yakutsk	72.01	347	S	S	03 19 02.3	+2.3
	comp=Z,11nm,0.4s,baz=324,slow=0.5,SNR=1.6						
YAK				LR	LR	03 39 32.3	
	comp=Z,2µm,21.3s,baz=147,slow=34						
YAK	Yakutsk	72.01	347	P	P	03 09 42.8	+1.2
YAK	Yakutsk	72.01	347	eP	P	03 09 43.0	+1.4
YAK				e*PP	pP	03 09 50.5	-3.3
YAK				e		03 10 01.1	
YAK				ePPP	PPP	03 13 59.7	
YAK				eS	S	03 19 05.0	+5.0
YAK				e*SS	ScS	03 19 44.1	+0.1
YAK				pmax	pmax		
	comp=Z,229nm,1.2s						
YAK				pmax	pmax		
	comp=N,78nm,1.9s						
YAK				pmax	pmax		
	comp=E,45nm,2.0s						
YAK				smax	smax		
	comp=N,2µm,9.1s						
YAK				smax	smax		
	comp=E,457nm,6.9s						
YAK				MLR	MLR		
	comp=Z,4µm,23.0s						
YAK				MLR	MLR		
	comp=N,3µm,22.0s						
YAK				MLR	MLR		
	comp=E,820nm,22.0s						
LSA	Lhasa	72.07	304	P	P	03 09 43.5	+0.2
LSA				pP	pP	03 09 53.6	-1.7
LSA				S	S	03 19 04.5	+1.6
LSA				pmax	pmax		
	comp=E,100nm,1.6s						
LSA				pmax	pmax		
	comp=E,510nm,3.0s						
LSA				LR	LR		
	comp=E,1µm,25.6s						
LSA				LR	LR		
	comp=E,2µm,31.3s						
LSA				LR	LR		
	comp=E,5µm,24.9s						
LSA	Lhasa	72.07	304	IAmb	IAmb	03 09 54.5	
	comp=Z,106nm,0.9s						
LSA	Lhasa	72.07	304	P	P	03 09 44.0	+0.7
LSA				P	P	03 09 44.0	+0.7
SDPT	Sand Point	72.20	25	P	P	03 09 43.4	+0.5
	baz=226						
ZAK	Zakamensk	73.15	328	eP	P	03 09 48.1	-0.7
ZAK				pmax	pmax		
	comp=Z,158nm,1.6s						
BOD	Bodaibo	73.17	338	eP	P	03 09 48.2	-0.4
BOD				pmax	pmax		
	comp=Z,311nm,1.9s						
GTK	Tadong	73.44	301	eP	P	03 09 51.5	+0.4
GTK				IAmb	IAmb	03 09 54.4	
	comp=Z,410nm,1.2s						
IRK	Irkutsk	73.72	330	eP	P	03 09 51.0	-1.0
IRK				eS	S	03 19 22.3	+2.4
IRK				pmax	pmax		
	comp=Z,392nm,2.2s						
TAPN	Taplejung	74.21	301	eP	P	03 09 55.7	-0.1
	comp=Z,739nm,1.0s						
ODAN	Odare	74.34	300	eP	P	03 09 56.2	-0.3
BOK	Bokaro	74.81	297	eP	P	03 09 59.3	+0.4
R16K	Pilot Point	74.89	24	P	P	03 09 59.1	+0.5
	baz=228						
RAMN	Ramite	75.04	300	eP	P	03 10 00.1	-0.5
	comp=Z,198nm,0.8s						
MOY	Mondy	75.06	328	eP	P	03 09 59.5	-0.5
MOY				pmax	pmax		
	comp=Z,331nm,2.1s						
R17K	Ugashik Creek	75.42	24	P	P	03 10 02.4	+0.6
	baz=229						
BILL	Bilibino	75.52	4	P	P	03 10 02.3	+0.2
BILL	Bilibino	75.52	4	eP	P	03 10 01.0	-1.1
BILL				e		03 10 11.0	
BILL				e*PP	pP	03 10 15.9	+1.4
BILL				e		03 12 51.5	
BILL				ePPP	PPP	03 14 32.0	
BILL				eS	S	03 19 46.4	+7.0
BILL				eSS	SS	03 24 30.7	-0.3
BILL				eSSS	SSS	03 27 53.5	
BILL				pmax	pmax		
	comp=Z,399nm,1.7s						
BILL				MLR	MLR		
	comp=Z,3µm,18.0s						
JIRN	Jiri	75.59	301	eP	P	03 10 03.5	-0.4
	comp=Z,292nm,1.0s						
VIS	Vishakhapatnam	75.69	290	eP	P	03 10 04.0	-0.1
P16K	Nushagak River	75.71	23	P	P	03 10 03.3	0.0
	baz=228						
GUN	Gumba	75.92	301	eP	P	03 10 05.5	-0.2
	comp=Z,998nm,0.9s						
Q17K	Contact Creek	76.03	24	P	P	03 10 05.6	+0.2
	baz=230						
O16K	Kokwok River B	76.05	22	P	P	03 10 06.1	+0.8
	baz=227						
PKI	Pulchoki	76.23	301	eP	P	03 10 06.8	-0.7
	comp=Z,2µm,1.7s						
PALK	Pallekele	76.24	279	LR	LR	03 45 20.1	
	comp=Z,2µm,21.7s,baz=213,slow=37						
PALK	Pallekele	76.24	279	P	P	03 10 07.8	+0.4
PALK				IAmb	IAmb	03 10 10.7	
	comp=Z,97nm,1.4s						
PALK	Pallekele	76.24	279	⇑P	P	03 10 07.3	-0.1
PALK				⇓P	P	03 10 09.6	+2.1
PALK	Pallekele	76.24	279	P	P	03 10 07.8	+0.4
PALK				pmax	pmax		
	comp=Z,97nm,1.4s						
PALK	Pallekele	76.24	279	P	P	03 10 09.0	+1.5
PALK				P	P	03 10 09.0	+1.5
PALK				P	P	03 10 09.1	+1.7
PALK				P	P	03 10 09.1	+1.7
PKIN	Phulchoki	76.24	301	eP	P	03 10 06.9	-0.6
	comp=Z,764nm,1.2s						
AIS	Amsterdam Isla	76.24	233	IAMs_20	IAMs_20	03 40 23.8	
	comp=Z,7µm,19.0s						
KKN	Kakani	76.40	301	eP	P	03 10 07.8	-0.5
N16K	Nishlik Lake	76.41	21	P	P	03 10 08.0	+0.6
	baz=227,SNR=14						
OHAK	Old Harbor	76.46	26	P	P	03 10 07.8	+0.1
	baz=232						
DMN	Daman	76.50	301	eP	P	03 10 08.8	-0.1
	comp=Z,666nm,0.9s						
O17K	Koliganek Bris	76.55	22	P	P	03 10 08.4	+0.3
	baz=228						
Q18K	Katmai Hardscr	76.63	24	P	P	03 10 08.8	0.0
	baz=230						
GKN	Gorkha	77.00	301	eP	P	03 10 10.9	-0.7
	comp=Z,813nm,1.1s						
P18K	Big Mountain,	77.02	23	P	P	03 10 11.0	+0.2
	baz=230						
KDAK	Kodiak Island	77.10	26	P	P	03 10 10.6	-0.7
	comp=Z,17nm,0.7s,baz=270,slow=5.2,SNR=9.7						
KDAK				LR	LR	03 41 53.2	
	comp=Z,3µm,19.3s,baz=246,slow=34						
	comp=Z,17nm,0.7s						
KDAK	Kodiak Island	77.10	26	IAMs_20	IAMs_20	03 47 00.7	
	comp=Z,4µm,19.0s						
ANM	Nome	77.30	16	IAmb	IAmb	03 10 15.7	
	comp=Z,60nm,1.0s						
ANM				IAMs_20	IAMs_20	03 40 29.6	
	comp=Z,8µm,20.0s						
ANM	Nome	77.30	16	P	P	03 10 12.1	-0.2
	baz=220						
O18K	Koktuh Hills	77.33	23	P	P	03 10 11.9	-0.6
	baz=230						
Q19K	Cape Douglas,	77.36	24	IAMs_20	IAMs_20	03 42 39.5	
	comp=Z,5µm,19.0s						
Q19K	Cape Douglas,	77.36	24	P	P	03 10 12.5	-0.3
	baz=232						
TNA	Tin City	77.42	15	⇓P	P	03 10 12.6	-0.3
TNA	Tin City	77.42	15	P	P	03 10 12.6	-0.3
	baz=217						
Q20K	Shuyak Island	77.68	25	P	P	03 10 14.2	-0.3
	baz=233						
KOLN	Koldanda	77.83	300	eP	P	03 10 15.6	-0.7
	comp=Z,186nm,2.0s						
DANN	Dangsing	77.84	301	eP	P	03 10 15.6	-0.9
	comp=Z,427nm,1.1s						
O19K	Port Alsworth	77.89	23	P	P	03 10 15.6	0.0
	baz=231						
P19K	Oil Pt	77.98	24	P	P	03 10 15.9	-0.3
	baz=232						
SVW2	Sparrevohn	77.99	22	P	P	03 10 17.7	+1.5
N19K	Bonanza Creek	78.22	22	IAmb	IAmb	03 10 20.1	
	comp=Z,125nm,1.8s						
N19K				IAMs_20	IAMs_20	03 39 37.0	
	comp=Z,6µm,21.0s						
N19K	Bonanza Creek	78.22	22	P	P	03 10 17.7	+0.1
	baz=231						
ILSW	Iliamna Southw	78.22	24	IAmb	IAmb	03 10 30.9	
	comp=Z,242nm,1.9s						
PYUN	Piuthan	78.44	301	eP	P	03 10 18.6	-1.1
	comp=Z,727nm,1.3s						
CNPM	China Poot	78.71	25	IAmb	IAmb	03 10 29.4	
	comp=Z,146nm,1.2s						
CNPM				IAMs_20	IAMs_20	03 41 03.1	
	comp=Z,5µm,20.0s						
M19K	Big River Lodg	78.94	22	IAmb	IAmb	03 10 37.6	
	comp=Z,142nm,1.4s						
M19K	Big River Lodg	78.94	22	P	P	03 10 21.5	+0.1
	baz=230						
L19K	White Mountain	78.95	21	IAmb	IAmb	03 10 25.9	
	comp=Z,73nm,1.1s						
L19K	White Mountain	78.95	21	P	P	03 10 21.6	0.0
	baz=230,SNR=26						
BRLK	Bradley Lake	79.00	24	P	P	03 10 23.4	+1.6
BRLK				IAMs_20	IAMs_20	03 41 09.2	
	comp=Z,5µm,20.0s						
TTA	Tatalina	79.03	20	P	P	03 10 23.1	+1.1
TTA	Tatalina	79.03	20	⇓P	P	03 10 21.8	-0.3
TTA	Tatalina	79.03	20	P	P	03 10 22.0	0.0
	baz=229,SNR=19						
BRSE	Bradley Lake S	79.04	24	P	P	03 10 21.9	-0.1
	baz=234						
M20K	Styx River	79.40	22	IAMs_20	IAMs_20	03 40 49.2	
	comp=Z,8µm,21.0s						
M20K	Styx River	79.40	22	P	P	03 10 23.3	-0.7
	baz=232						
CAPN	Captain Cook N	79.48	24	P	P	03 10 24.1	-0.3
	baz=234						
L20K	Farewell, AK	79.50	21	P	P	03 10 24.1	-0.4
	baz=231						
WMQ	Urumqi	79.56	317	⇓iP	P	03 10 25.5	+0.2
WMQ				PcP	PcP	03 10 34.3	+1.2
WMQ				PP	PP	03 13 28.6	+2.2
WMQ				S	S	03 20 25.9	+1.6
WMQ				pmax	pmax		
	comp=Z,96nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,2µm,3.9s						
WMQ				LR	LR		
	comp=Z,2µm,17.7s						
WMQ				LR	LR		
	comp=Z,2µm,16.1s						
WMQ				LR	LR		
	comp=Z,2µm,20.5s						
SEW	Seward	79.78	25	IAmb	IAmb	03 10 41.4	
	comp=Z,116nm,1.4s						
SEW	Seward	79.78	25	P	P	03 10 25.5	-0.5
	baz=235						
O22K	Cooper Landing	79.89	24	IAMs_20	IAMs_20	03 43 28.2	
	comp=Z,5µm,20.0s						
O22K	Cooper Landing	79.89	24	P	P	03 10 26.0	-0.5
	baz=235						
GCSA	Galena City Sc	79.96	19	P	P	03 10 27.0	+0.1
	baz=228						
K20K	Telida	79.98	21	IAmb	IAmb	03 10 30.4	
	comp=Z,217nm,1.9s						
K20K	Telida	79.98	21	P	P	03 10 27.0	-0.1
	baz=231,SNR=23						
SUA	Susitna One	80.05	23	IAmb	IAmb	03 10 29.4	
	comp=Z,235nm,2.0s						
SUA	Susitna One	80.05	23	P	P	03 10 27.4	-0.3
	baz=234,SNR=9.2						
SKT	Skwentna	80.06	22	IAMs_20	IAMs_20	03 49 42.7	
	comp=Z,5µm,19.0s						
SKT	Skwentna	80.06	22	P	P	03 10 27.5	0.0
	baz=233						
HYB	Hyderabad	80.09	289	eP	P	03 10 27.6	-1.0
HYB				IAmb	IAmb	03 10 30.5	
	comp=Z,54nm,0.9s						
HYB	Hyderabad	80.09	289	eP	P	03 10 28.3	-0.4
HYB				IVmB_BB		03 10 30.1	
	comp=Z,770nm,2.5s						
HYB				eS	S	03 20 30.0	-0.7
RC01	Rabbit Creek A	80.23	24	P	P	03 10 28.5	0.0
RC01				IAMs_20	IAMs_20	03 41 56.3	
	comp=Z,4µm,19.0s						
RC01	Rabbit Creek A	80.23	24	P	P	03 10 28.0	-0.5
	baz=235						
PPLA	Purkeypile	80.37	21	IAmb	IAmb	03 10 31.1	
	comp=Z,188nm,1.8s						
PPLA	Purkeypile	80.37	21	P	P	03 10 28.1	-1.2
	baz=232						
M22K	Willow	80.46	23	IAmb	IAmb	03 10 43.9	
	comp=Z,119nm,1.3s						
M22K	Willow	80.46	23	P	P	03 10 28.1	-1.6
	baz=235						
P23K	Montague Islan	80.58	25	P	P	03 10 28.9	-1.4
	baz=237						
RDOG	Red Dog Mine	80.61	15	IAmb	IAmb	03 10 34.3	
	comp=Z,74nm,0.8s						
RDOG				IAMs_20	IAMs_20	03 41 32.0	
	comp=Z,6µm,22.0s						
RDOG	Red Dog Mine	80.61	15	P	P	03 10 29.9	-0.5
	baz=222						
PWL	Port Wells	80.67	24	IAmb	IAmb	03 10 42.4	
	comp=Z,92nm,1.0s						
PWL				IAMs_20	IAMs_20	03 44 01.8	
	comp=Z,4µm,20.0s						
PWL	Port Wells	80.67	24	P	P	03 10 29.9	-0.9
	baz=236						
CAST	Castle Rocks	80.72	21	P	P	03 10 30.1	-1.0
	baz=232,SNR=30						
PMR	Palmer	80.76	23	IAmb	IAmb	03 10 46.1	
	comp=Z,126nm,1.7s						
PMR	Palmer	80.76	23	P	P	03 10 31.7	+0.5
	comp=Z,66nm,1.5s						
PMR	Palmer	80.76	23	P	P	03 10 29.8	-1.5
	baz=236,SNR=7.9						
TIXI	Tiksi	80.76	352	P	P	03 10 29.8	-1.2
	comp=Z,18nm,0.7s,baz=270,slow=24,SNR=23						
TIXI				S	S	03 20 38.2	+2.6
	comp=Z,0.9nm,0.3s,baz=90,slow=24,SNR=1.3						
TIXI				LR	LR	03 47 44.6	
	comp=Z,2µm,19.0s,baz=90,slow=37						
	comp=Z,18nm,0.7s						
TIXI	Tiksi	80.76	352	P	P	03 10 31.4	+0.4
TIXI				IAmb	IAmb	03 10 34.8	
	comp=Z,144nm,1.5s						
TIXI	Tiksi	80.76	352	⇑P	P	03 10 30.1	-0.9
TIXI	Tiksi	80.76	352	ceP	P	03 10 30.2	-0.9
TIXI				pmax	pmax		
	comp=Z,129nm,1.7s						
TIXI				MLR	MLR		
	comp=Z,3µm,18.0s						
CUT	Chulitna	80.79	22	IAmb	IAmb	03 10 34.2	
	comp=Z,96nm,1.2s						
CUT	Chulitna	80.79	22	P	P	03 10 30.7	-0.6
	baz=234						
KNK	Knik Glacier	80.92	24	IAmb	IAmb	03 10 46.6	
	comp=Z,252nm,1.8s						
KNK	Knik Glacier	80.92	24	P	P	03 10 30.9	-1.3
	baz=236,SNR=8.4						
CHUM	Lake Minchumin	80.93	21	P	P	03 10 31.0	-1.1
	baz=232,SNR=24						
GHO	Glory Hole Cre	80.94	23	IAmb	IAmb	03 10 45.6	
	comp=Z,275nm,1.9s						
PCHI	Peechi	81.01	282	⇑eP	P	03 10 33.1	-0.5
PCHI				eS	S	03 20 40.3	-0.1
SML	Sawmill	81.19	23	P	P	03 10 32.9	-0.8
	baz=236,SNR=9.9						
M23K	Glacier View	81.43	24	P	P	03 10 33.5	-1.4
	baz=237						
BPAW	Bear Paw Mtn.	81.53	21	IAmb	IAmb	03 10 37.0	
	comp=Z,110nm,1.8s						
BPAW				IAMs_20	IAMs_20	03 41 55.4	
	comp=Z,8µm,21.0s						
BPAW	Bear Paw Mtn.	81.53	21	P	P	03 10 34.7	-0.6
	baz=233,SNR=6.6						
SCM	Sheep Creek Mo	81.61	24	P	P	03 10 35.5	-0.4
	baz=237,SNR=6.6						
IMAR	Indian Mountai	81.76	19	P	P	03 10 36.6	+0.1
I21K	Tanana	81.84	20	IAmb	IAmb	03 10 40.1	
	comp=Z,83nm,1.3s						
I21K	Tanana	81.84	20	P	P	03 10 36.6	-0.3
	baz=232						
DGZ	Jazzator, Alta	81.84	322	c iP	P	03 10 36.0	-1.5
DGZ				pmax	pmax		
	comp=Z,267nm,1.8s						
DGZ				MLR	MLR		
	comp=Z,4µm,19.0s						
H21K	Melozitna Rive	81.86	19	IAMs_20	IAMs_20	03 41 56.2	
	comp=Z,7µm,21.0s						
H21K	Melozitna Rive	81.86	19	P	P	03 10 36.4	-0.7
	baz=232,SNR=21						
DIV	Divide	81.86	25	IAmb	IAmb	03 10 52.6	
	comp=Z,177nm,1.8s						
RND	Reindeer	81.89	22	IAMs_20	IAMs_20	03 42 10.1	
	comp=Z,6µm,21.0s						
KLU	Klutina	81.99	24	IAMs_20	IAMs_20	03 45 33.9	
	comp=Z,4µm,20.0s						
KLU	Klutina	81.99	24	P	P	03 10 37.1	-0.8
	baz=238,SNR=12						
MCK	McKinley	82.05	22	IAmb	IAmb	03 10 40.5	
	comp=Z,91nm,0.9s						
MCK	McKinley	82.05	22	P	P	03 10 37.5	-0.6
	baz=235,SNR=38						
BWN	Browne	82.11	21	IAmb	IAmb	03 10 49.7	
	comp=Z,147nm,1.2s						
MLY	Manley	82.17	20	IAmb	IAmb	03 10 50.7	
	comp=Z,151nm,1.8s						
MLY	Manley	82.17	20	P	P	03 10 38.1	-0.6
	baz=234,SNR=20						
G21K	Allakaket	82.18	18	P	P	03 10 38.7	0.0
	baz=231						
M24K	Tolsona, Glenn	82.21	24	IAmb	IAmb	03 10 42.9	
	comp=Z,97nm,1.1s						
M24K	Tolsona, Glenn	82.21	24	P	P	03 10 39.0	-0.1
	baz=238						
BHPL	Bhopal	82.24	295	eP	P	03 10 39.6	-0.4
BHPL				IAmb	IAmb	03 10 50.1	
	comp=Z,82nm,0.8s						
H22K	Ishtalitna Cre	82.47	19	P	P	03 10 39.9	-0.4
	baz=233						
NEA2	Nenana	82.49	21	IAMs_20	IAMs_20	03 41 40.0	
	comp=Z,7µm,22.0s						
NEA2	Nenana	82.49	21	P	P	03 10 39.0	-1.4
	baz=235,SNR=16						
N25K	Chitina, Valde	82.59	25	IAmb	IAmb	03 10 44.1	
	comp=Z,240nm,1.9s						
N25K	Chitina, Valde	82.59	25	P	P	03 10 40.1	-0.9
	baz=240,SNR=9.2						
F21K	Alatna River	82.63	18	P	P	03 10 39.9	-1.2
	baz=231						
ZSN	Zaisan	82.66	320	⇑iP	P	03 10 41.0	-0.7
	comp=Z,268nm,1.6s,baz=320						
ZSN				eS	S	03 20 55.7	-0.6
	baz=320						
ZSN	Zaisan	82.66	320	c iP	P	03 10 41.0	-0.7
ZSN				eS	S	03 20 55.6	-0.6
ZSN				pmax	pmax		
	comp=Z,267nm,1.6s						
QSPA	South Pole Qui	82.68	180	LR	LR	03 42 58.1	
	comp=Z,3µm,18.9s,baz=13,slow=32						
QSPA	South Pole Qui	82.68	180	P	P	03 10 41.6	0.0
QSPA	South Pole Qui	82.68	180	IAMs_20	IAMs_20	03 45 21.2	
	comp=Z,3µm,18.0s						
QSPA	South Pole Qui	82.68	180	⇑P	P	03 10 41.7	0.0
I23K	Minto, Yukon-K	82.71	20	P	P	03 10 40.7	-0.7
	baz=235						

HARP	**HAARP**	**82.77**	**24**	P	**P**	**03 10 40.7**	**-1.2**
	baz=239						
WRH	**Wood River Hil**	**82.77**	**21**	IAmb	IAmb	03 10 44.1	
	comp=Z,99nm,1.5s						
GLB	**Gilahina Butte**	**82.84**	**25**	IAmb	IAmb	03 10 45.7	
	comp=Z,96nm,1.2s						
VRDI	**Verde Repeater**	**82.88**	**25**	IAmb	IAmb	03 10 57.1	
	comp=Z,148nm,1.6s						
VRDI				IAMs_20	IAMs_20	03 44 57.5	
	comp=Z,4µm,20.0s						
PAX	**Paxson**	**82.94**	**23**	P	**P**	**03 10 41.7**	**-1.2**
	baz=239						
CCB	**Clear Creek Bu**	**82.97**	**21**	IAMs_20	IAMs_20	03 42 49.7	
	comp=Z,8µm,21.0s						
MDM	**Murphy Dome**	**83.00**	**21**	IAMs_20	IAMs_20	03 43 23.3	
	comp=Z,7µm,21.0s						
H23K	**Yukon River**	**83.04**	**20**	IAmb	IAmb	03 10 58.7	
	comp=Z,60nm,1.2s						
H23K	**Yukon River**	**83.04**	**20**	P	**P**	**03 10 42.0**	**-1.2**
	baz=235						
TCOL	**CIGO, UAF Yank**	**83.08**	**21**	IAMs_20	IAMs_20	03 43 35.5	
	comp=Z,8µm,21.0s						
TCOL	**CIGO, UAF Yank**	**83.08**	**21**	P	**P**	**03 10 42.0**	**-1.4**
	baz=236						
COLA	**College**	**83.08**	**21**	P	**P**	**03 10 42.5**	**-0.9**
COLA				IAmb	IAmb	03 10 54.5	
	comp=Z,63nm,0.9s						
COLA	**College**	**83.08**	**21**	IAMs_20	IAMs_20	03 43 36.5	
	comp=Z,7µm,21.0s						
COLA	**College**	**83.08**	**21**	P	**P**	**03 10 43.0**	**-0.4**
COLA	**College**	**83.08**	**21**	⇓P	**P**	**03 10 41.9**	**-1.5**
COLA	**College**	**83.08**	**21**	P	**P**	**03 10 42.5**	**-0.9**
COLA				pmax	pmax		
	comp=Z,63nm,0.9s						
COLA	**College**	**83.08**	**21**	P	**P**	**03 10 41.8**	**-1.5**
	baz=236						
MCARA	**McCarthy VSAT**	**83.14**	**25**	IAmb	IAmb	03 10 56.4	
	comp=Z,99nm,1.3s						
MCARA				IAMs_20	IAMs_20	03 45 14.3	
	comp=Z,4µm,20.0s						
MCARA	**McCarthy VSAT**	**83.14**	**25**	P	**P**	**03 10 42.1**	**-1.7**
	baz=241,SNR=8.4						
DDI	**Dehra Dun**	**83.15**	**302**	*e*P	**P**	**03 10 44.5**	**-0.2**
HDA	**Harding Lake**	**83.15**	**22**	IAmb	IAmb	03 10 55.4	
	comp=Z,113nm,1.4s						
HDA	**Harding Lake**	**83.15**	**22**	P	**P**	**03 10 42.4**	**-1.4**
	baz=237,SNR=23						
K24K	**Donnelly Dome**	**83.26**	**22**	P	**P**	**03 10 42.9**	**-1.5**
	baz=238,SNR=9.5						
POKR	**Poker Plat Res**	**83.37**	**21**	IAmb	IAmb	03 10 46.2	
	comp=Z,127nm,1.9s						
POKR				IAMs_20	IAMs_20	03 43 02.1	
	comp=Z,8µm,21.0s						
POKR	**Poker Plat Res**	**83.37**	**21**	P	**P**	**03 10 44.0**	**-0.9**
	baz=237						
IL31		**83.37**	**21**	P	**P**	**03 10 44.0**	**-0.9**
IL31				IAmb	IAmb	03 10 58.0	
	comp=Z,66nm,1.4s						
ILAR	**Eielson Array**	**83.37**	**21**	P	**P**	**03 10 43.1**	**-1.8**
	comp=Z,5.5nm,0.6s,baz=250,slow=5.7,SNR=53						
ILAR				S	**S**	**03 21 01.6**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=319,slow=33,SNR=2.8						
ILAR				LR	LR	03 43 02.9	
	comp=Z,8µm,21.9s,baz=239,slow=32						
	comp=Z,5.5nm,0.6s						
G23K	**Bananza Creek**	**83.40**	**19**	P	**P**	**03 10 44.4**	**-0.7**
	baz=234						
BARN	**Barnard Glacie**	**83.57**	**26**	IAmb	IAmb	03 10 49.9	
	comp=Z,34nm,0.8s						
RIDG	**Independent Ri**	**83.58**	**23**	IAMs_20	IAMs_20	03 45 51.9	
	comp=Z,4µm,20.0s						
RIDG	**Independent Ri**	**83.58**	**23**	P	**P**	**03 10 45.7**	**-0.4**
	baz=239,SNR=14						
H24K	**Noodor Dome**	**83.61**	**20**	IAmb	IAmb	03 10 56.8	
	comp=Z,81nm,1.9s						
H24K	**Noodor Dome**	**83.61**	**20**	P	**P**	**03 10 45.8**	**-0.4**
	baz=236						
MENT	**Mentasta**	**83.62**	**24**	IAmb	IAmb	03 11 00.9	
	comp=Z,78nm,1.6s						
MENT	**Mentasta**	**83.62**	**24**	P	**P**	**03 10 48.5**	**+2.2**
M26K	**Nabesna, AK**	**83.65**	**24**	IAmb	IAmb	03 10 49.4	
	comp=Z,138nm,2.0s						
M26K	**Nabesna, AK**	**83.65**	**24**	P	**P**	**03 10 45.6**	**-0.8**
	baz=241						
COLD	**Coldfoot**	**83.65**	**18**	IAmb	IAmb	03 11 01.3	
	comp=Z,171nm,1.9s						
COLD	**Coldfoot**	**83.65**	**18**	P	**P**	**03 10 46.4**	**+0.1**
	baz=234						
PCA	**Pinnacle**	**83.75**	**27**	IAmb	IAmb	03 10 59.5	
	comp=Z,66nm,1.0s						
PINM	**Pinnacle**	**83.75**	**27**	P	**P**	**03 10 46.6**	**-0.5**
	baz=244						
L26K	**Log Cabin Wild**	**83.81**	**24**	IAmb	IAmb	03 11 00.9	
	comp=Z,61nm,1.4s						
L26K				IAMs_20	IAMs_20	03 44 57.9	
	comp=Z,4µm,19.0s						
L26K	**Log Cabin Wild**	**83.81**	**24**	P	**P**	**03 10 46.9**	**-0.3**
	baz=241,SNR=12						
DOT	**Dot Lake**	**83.84**	**23**	IAmb	IAmb	03 10 57.5	
	comp=Z,57nm,1.0s						
PNL	**Peninsula**	**83.95**	**28**	P	**P**	**03 10 47.4**	**-0.7**
	baz=244						
SCRK	**Sand Creek**	**84.03**	**23**	IAmb	IAmb	03 10 51.2	
	comp=Z,188nm,1.9s						
SCRK	**Sand Creek**	**84.03**	**23**	P	**P**	**03 10 48.1**	**-0.4**
	baz=240,SNR=26						
SMLA	**Simla**	**84.07**	**302**	*e*P	**P**	**03 10 48.1**	**-1.1**
SMLA				IAmb	IAmb	03 10 51.4	
	comp=Z,293nm,1.1s						
O28M	**Mount Upton**	**84.08**	**26**	P	**P**	**03 10 48.5**	**-0.5**
	baz=244,SNR=6.9						
M27K	**Edge Creek, AK**	**84.08**	**25**	IAmb	IAmb	03 10 59.8	
	comp=Z,100nm,1.1s						
M27K	**Edge Creek, AK**	**84.08**	**25**	P	**P**	**03 10 48.4**	**-0.4**
	baz=242						
MK31	**Makanchi Array**	**84.13**	**319**	P	**P**	**03 10 48.8**	**-0.5**
MK31	**Makanchi Array**	**84.13**	**319**	P	**P**	**03 10 48.8**	**-0.5**
MK31				pmax	pmax		
	comp=Z,225nm,1.0s						
MKAR	**Makanchi Array**	**84.13**	**319**	P	**P**	**03 10 48.7**	**-0.5**
	comp=Z,166nm,0.8s,baz=102,slow=5.5,SNR=322						
MKAR				PP	**PP**	**03 14 01.9**	**-2.1**
	comp=Z,4.7nm,1.0s,baz=121,slow=11,SNR=2.2						
MKAR				S	**S**	**03 21 08.2**	**-2.9**
	comp=Z,0.4nm,0.9s,baz=54,slow=6.3,SNR=1.7						
MKAR				PKPPKP	**P'P'df**	**03 37 09.1**	**+0.8**
	comp=Z,1.3nm,1.0s,baz=276,slow=2.3,SNR=6.5						
MKAR				LR	LR	03 46 56.4	
	comp=Z,2µm,21.6s,baz=110,slow=35						
	comp=Z,166nm,0.8s						
G24K	**Hadweenzic Riv**	**84.23**	**20**	P	**P**	**03 10 48.7**	**-0.6**
	baz=236						
PRP	**Porcupine Dome**	**84.26**	**21**	IAMs_20	IAMs_20	03 45 03.7	
	comp=Z,7µm,20.0s						
PRP	**Porcupine Dome**	**84.26**	**21**	P	**P**	**03 10 49.3**	**-0.3**
	baz=238						
E23K	**Chandalar**	**84.32**	**18**	P	**P**	**03 10 49.7**	**-0.1**
	baz=234						
MAKZ	**Makanchi**	**84.34**	**318**	P	**P**	**03 10 50.1**	**-0.2**
MAKZ	**Makanchi**	**84.34**	**318**	P	**P**	**03 10 50.1**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,413nm,1.1s						
YUK3	**Moose Creek**	**84.41**	**25**	P	**P**	**03 10 49.8**	**-0.8**
	baz=243,SNR=6.4						
MAW	**Mawson**	**84.42**	**203**	P	**P**	**03 10 50.3**	**+0.1**
	comp=Z,79nm,1.0s,baz=116,slow=5.0,SNR=6.7						
MAW				LR	LR	03 46 23.5	
	comp=Z,2µm,19.1s,baz=88,slow=34						
	comp=Z,79nm,1.0s						
MAW	**Mawson**	**84.42**	**203**	P	**P**	**03 10 51.5**	**+1.3**
	baz=84,SNR=8.9						
MAW	**Mawson**	**84.42**	**203**	P	**P**	**03 10 50.6**	**+0.4**
MAW				IAmb	IAmb	03 11 00.8	
	comp=Z,68nm,1.3s						
MAW	**Mawson**	**84.42**	**203**	⇑P	**P**	**03 10 51.8**	**+1.6**
MAW				⇑P	**PcP**	**03 10 53.7**	**-0.1**
MAW	**Mawson**	**84.42**	**203**	P	**P**	**03 10 50.6**	**+0.4**
MAW				pmax	pmax		
	comp=Z,68nm,1.3s						
L27K	**Beaver Creek,**	**84.44**	**24**	IAmb	IAmb	03 10 53.7	
	comp=Z,186nm,2.0s						
L27K	**Beaver Creek,**	**84.44**	**24**	P	**P**	**03 10 50.1**	**-0.4**
	baz=242,SNR=18						
J26L	**Joseph Creek**	**84.46**	**22**	IAMs_20	IAMs_20	03 43 47.9	
	comp=Z,7µm,21.0s						
J26L	**Joseph Creek**	**84.46**	**22**	P	**P**	**03 10 49.8**	**-0.8**
	baz=240,SNR=18						
A21K	**Barrow**	**84.49**	**14**	IAMs_20	IAMs_20	03 49 01.5	
	comp=Z,6µm,20.0s						
A21K	**Barrow**	**84.49**	**14**	P	**P**	**03 10 50.1**	**-0.3**
	baz=227						
YUK8	**Steele Glacier**	**84.49**	**26**	P	**P**	**03 10 50.0**	**-1.1**
	baz=244,SNR=8.7						
D23K	**Nanushuk River**	**84.54**	**17**	P	**P**	**03 10 51.1**	**+0.2**
	baz=233						
F24K	**Squaw Lake**	**84.55**	**19**	P	**P**	**03 10 50.5**	**-0.4**
	baz=236						
O29M	**Mount Kennedy**	**84.59**	**27**	P	**P**	**03 10 50.6**	**-0.8**
	baz=245						
TOLK	**Toolik Lake Re**	**84.67**	**17**	IAMs_20	IAMs_20	03 44 53.5	
	comp=Z,7µm,20.0s						
TOLK	**Toolik Lake Re**	**84.67**	**17**	P	**P**	**03 10 51.0**	**-0.5**
	baz=234						
E24K	**Your Creek**	**84.68**	**18**	P	**P**	**03 10 50.9**	**-0.6**
	baz=235						
POO	**Poona**	**84.69**	**289**	*e*P	**P**	**03 10 51.9**	**-0.8**
G25K	**Bearman Lake**	**84.72**	**20**	P	**P**	**03 10 51.3**	**-0.4**
	baz=238						
K27K	**Chicken**	**84.80**	**23**	IAmb	IAmb	03 10 55.9	
	comp=Z,208nm,2.0s						
K27K				IAMs_20	IAMs_20	03 46 38.9	
	comp=Z,5µm,20.0s						
K27K	**Chicken**	**84.80**	**23**	P	**P**	**03 10 52.3**	**+0.1**
	baz=242						
ZALV	**Zalesovo Beam**	**84.85**	**326**	P	**P**	**03 10 51.8**	**-0.9**
	comp=Z,85nm,0.7s,baz=113,slow=5.7,SNR=151						
ZALV				PKPPKP	**P'P'df**	**03 37 05.8**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=276,slow=5.8,SNR=5.0						
ZALV				LR	LR	03 50 13.4	
	comp=Z,2µm,19.9s,baz=108,slow=37						
	comp=Z,85nm,0.7s						
ZALV	**Zalesovo Beam**	**84.85**	**326**	P	**P**	**03 10 51.5**	**-1.1**
SIT	**Sitka**	**84.87**	**31**	P	**P**	**03 10 52.5**	**-0.1**
	baz=248						
FYU	**Fort Yukon**	**84.91**	**20**	IAMs_20	IAMs_20	03 44 10.8	
	comp=Z,6µm,21.0s						
YUK6	**Outpost Mounta**	**84.96**	**27**	P	**P**	**03 10 52.5**	**-0.8**
	baz=245						
YUK4	**Talbot Arm**	**85.00**	**26**	P	**P**	**03 10 53.3**	**-0.3**
	baz=245,SNR=9.2						
I26K	**Coal Creek Min**	**85.01**	**22**	IAmb	IAmb	03 11 03.5	
	comp=Z,76nm,1.6s						
I26K	**Coal Creek Min**	**85.01**	**22**	P	**P**	**03 10 52.5**	**-0.8**
	baz=241						
SHLS	**Shalkode**	**85.07**	**314**	⇑*i*P	**P**	**03 10 52.1**	**-2.1**
	comp=Z,224nm,2.2s,baz=314						
SHLS	**Shalkode**	**85.07**	**314**	*c* *i*P	**P**	**03 10 52.1**	**-2.1**
SHLS				pmax	pmax		
	comp=Z,225nm,2.2s						
P30M	**Million Dollar**	**85.26**	**28**	P	**P**	**03 10 54.1**	**-0.5**
	baz=247						
PLBC	**Pleasant Camp**	**85.27**	**28**	P	**P**	**03 10 54.4**	**-0.2**
	baz=247						
HYT	**Haines Junctio**	**85.29**	**27**	IAmb	IAmb	03 10 59.0	
	comp=Z,47nm,1.0s						
HYT	**Haines Junctio**	**85.29**	**27**	P	**P**	**03 10 54.7**	**-0.3**
	baz=246,SNR=7.1						
F25K	**Christian Rive**	**85.31**	**19**	P	**P**	**03 10 55.2**	**+0.4**
	baz=238						
UZB	**Uzynbulak**	**85.38**	**314**	*e*P	**P**	**03 10 55.2**	**-0.6**
	comp=Z,248nm,2.2s,baz=314						
UZB				*e*S	**SKSac**	**03 21 15.3**	**-2.6**
	baz=314						
UZB	**Uzynbulak**	**85.38**	**314**	*e*P	**P**	**03 10 55.1**	**-0.6**
UZB				*e*S	**SKSac**	**03 21 15.2**	**-2.6**
UZB				pmax	pmax		
	comp=Z,248nm,2.2s						
EGAK	**Eagle**	**85.50**	**23**	IAmb	IAmb	03 11 09.6	
	comp=Z,53nm,1.1s						
EGAK				IAMs_20	IAMs_20	03 43 58.5	
	comp=Z,5µm,21.0s						
EGAK	**Eagle**	**85.50**	**23**	P	**P**	**03 10 55.5**	**-0.2**
	baz=242,SNR=18						
M29M	**Somme Creek**	**85.55**	**25**	P	**P**	**03 10 56.0**	**-0.1**
	baz=245						
C24K	**Franklin Bluff**	**85.55**	**17**	P	**P**	**03 10 55.6**	**-0.2**
	baz=235						
G26K	**Porcupine Rive**	**85.60**	**20**	P	**P**	**03 10 55.8**	**-0.3**
	baz=240						
E25K	**Arctic Village**	**85.62**	**19**	P	**P**	**03 10 56.4**	**+0.1**
	baz=238						
U33K	**Whale Pass**	**85.68**	**32**	P	**P**	**03 10 56.1**	**-0.6**
	baz=250						
KPKS	**Kokpek**	**85.69**	**315**	*e*P	**P**	**03 10 56.8**	**-0.5**
	comp=Z,238nm,2.4s,baz=315						
KPKS	**Kokpek**	**85.69**	**315**	*e*P	**P**	**03 10 56.7**	**-0.5**
KPKS				pmax	pmax		
	comp=Z,237nm,2.4s						
I27K	**Kandik River**	**85.71**	**22**	P	**P**	**03 10 56.3**	**-0.5**
	baz=242						
N30M	**Aishikik Lake**	**85.73**	**26**	P	**P**	**03 10 56.1**	**-0.9**
	baz=246						
SKAG	**Skagway**	**85.76**	**29**	P	**P**	**03 10 57.1**	**0.0**
	baz=248						
JIS	**Juneau Island**	**85.79**	**30**	IAMs_20	IAMs_20	03 44 10.5	
	comp=Z,5µm,20.0s						
SATY	**Saty**	**85.79**	**314**	⇑*i*P	**P**	**03 10 57.3**	**-0.6**
	comp=Z,192nm,2.7s,baz=314						
SATY	**Saty**	**85.79**	**314**	*c* *i*P	**P**	**03 10 57.2**	**-0.6**
SATY				pmax	pmax		
	comp=Z,192nm,2.7s						
ZHN	**Zhinishke**	**85.80**	**314**	*e*P	**P**	**03 10 57.2**	**-0.6**
	baz=314						
ZHN	**Zhinishke**	**85.80**	**314**	*e*P	**P**	**03 10 57.2**	**-0.6**
DAWY	**Dawson**	**85.86**	**24**	P	**P**	**03 10 57.8**	**+0.2**
DAWY				IAmb	IAmb	03 11 10.8	
	comp=Z,110nm,1.6s						
DAWY	**Dawson**	**85.86**	**24**	⇓P	**P**	**03 10 57.8**	**+0.2**
DAWY	**Dawson**	**85.86**	**24**	P	**P**	**03 10 58.0**	**+0.4**
	baz=244,SNR=16						
O30N	**Mendenhall**	**85.91**	**27**	P	**P**	**03 10 57.9**	**0.0**
	baz=247						
TARG	**Taragay, Kyrgy**	**85.91**	**313**	P	**P**	**03 10 58.8**	**0.0**
TARG	**Taragay, Kyrgy**	**85.91**	**313**	P	**P**	**03 10 58.8**	**0.0**
TARG				pmax	pmax		
	comp=Z,308nm,1.6s						
L29M	**L29M**	**85.97**	**25**	P	**P**	**03 10 58.2**	**+0.1**
	baz=245,SNR=13						
T33K	**Petersburg**	**86.00**	**31**	P	**P**	**03 10 58.0**	**-0.3**
	baz=250						
D25K	**Kavik River**	**86.01**	**18**	P	**P**	**03 10 57.9**	**-0.3**
	baz=237						
H27K	**Steamboat Moun**	**86.04**	**21**	P	**P**	**03 10 58.5**	**0.0**
	baz=242						
WRAK	**Wrangell Islan**	**86.19**	**32**	IAMs_20	IAMs_20	03 43 14.2	
	comp=Z,5µm,21.0s						
V35K	**Ketchikan**	**86.23**	**33**	P	**P**	**03 10 58.6**	**-0.8**
	baz=252						
TDK	**Taldyqorghan**	**86.26**	**316**	*e*P	**P**	**03 10 59.5**	**-0.4**
	baz=316						
TDK				LR	LR	03 50 23.4	
	baz=316						
TDK	**Taldyqorghan**	**86.26**	**316**	*e*P	**P**	**03 10 59.5**	**-0.4**
G27K	**Doyon Strip**	**86.27**	**21**	P	**P**	**03 10 59.2**	**-0.3**
	baz=242						
M30M	**Minto, Yukon**	**86.31**	**25**	IAMs_20	IAMs_20	03 47 56.0	
	comp=Z,4µm,20.0s						
M30M	**Minto, Yukon**	**86.31**	**25**	P	**P**	**03 10 59.3**	**-0.5**
	baz=247,SNR=10						
N31M	**Braeburn, Yuko**	**86.32**	**27**	IAmb	IAmb	03 11 15.2	
	comp=Z,169nm,1.8s						
N31M				IAMs_20	IAMs_20	03 49 15.5	
	comp=Z,5µm,19.0s						
N31M	**Braeburn, Yuko**	**86.32**	**27**	P	**P**	**03 10 59.4**	**-0.5**
	baz=248						
SEM	**Semipalatinsk**	**86.45**	**322**	*e*P	**P**	**03 10 59.5**	**-1.5**
	comp=Z,292nm,2.2s,baz=322						
SEM	**Semipalatinsk**	**86.45**	**322**	*e*P	**P**	**03 10 59.5**	**-1.5**
SEM				pmax	pmax		
	comp=Z,292nm,2.2s						
ARXS	**Arharly**	**86.48**	**315**	*e*P	**P**	**03 11 00.0**	**-1.1**
J29M	**Klondike Camp**	**86.49**	**23**	IAMs_20	IAMs_20	03 45 42.9	
	comp=Z,4µm,21.0s						
K29M	**Barlow Dome**	**86.52**	**24**	P	**P**	**03 11 00.3**	**-0.6**
	baz=246						
P32M	**Atlin**	**86.58**	**29**	P	**P**	**03 11 00.5**	**-0.7**
	baz=250						
C26K	**Camden Bay**	**86.76**	**17**	P	**P**	**03 11 01.6**	**-0.2**
	baz=239						
KSH	**Kashi**	**86.78**	**310**	P	**P**	**03 11 03.8**	**+1.0**
KSH				pP	sP	03 11 23.0	+3.4
KSH				sP	pP	03 11 28.9	+14
KSH				PP	**PP**	**03 14 31.4**	**+5.6**
KSH				SKS	**SKSac**	**03 21 22.6**	**-4.2**
KSH				S	**ScS**	**03 21 41.6**	**-4.0**
KSH				sS	sS	03 22 01.3	+3.2
KSH				SS	**SS**	**03 27 22.2**	**+1.7**
KSH				pmax	pmax		
	comp=Z,130nm,1.3s						
KSH				pmax	pmax		
	comp=Z,2µm,9.0s						
KSH				LR	LR		
	comp=Z,1µm,20.4s						
KSH				LR	LR		
	comp=Z,2µm,21.0s						
KSH				LR	LR		
	comp=Z,3µm,23.4s						
MDOK	**Medeo**	**86.78**	**314**	*i* P	**P**	**03 11 02.3**	**-0.4**
	baz=314						
MDOK				*e*S	**SKSac**	**03 21 24.5**	**-2.2**
	baz=314						
MDOK				LR	LR	03 50 40.5	
	baz=314						
MDOK	**Medeo**	**86.78**	**314**	*i* P	**P**	**03 11 02.3**	**-0.4**
MDOK				*e*S	**SKSac**	**03 21 24.4**	**-2.2**
TNSS	**Tian-Shan**	**86.83**	**314**	*e*P	**P**	**03 11 02.8**	**-0.5**
	baz=314						
TNSS	**Tian-Shan**	**86.83**	**314**	*e*P	**P**	**03 11 02.7**	**-0.5**
I29M	**Ogilvie Camp,**	**86.84**	**23**	IAMs_20	IAMs_20	03 44 39.0	
	comp=Z,6µm,22.0s						
I29M	**Ogilvie Camp,**	**86.84**	**23**	P	**P**	**03 11 01.1**	**-1.2**
	baz=245,SNR=15						
AAA	**Alma-Ata**	**86.89**	**314**	*e*P	**P**	**03 11 02.9**	**-0.2**
	comp=Z,117nm,1.2s,baz=314						
AAA	**Alma-Ata**	**86.89**	**314**	*e*P	**P**	**03 11 02.9**	**-0.2**
AAA				pmax	pmax		
	comp=Z,117nm,1.2s						
E27K	**Coleen River**	**86.94**	**19**	P	**P**	**03 11 02.1**	**-0.6**
	baz=242						
C27K	**Jago River**	**86.97**	**18**	P	**P**	**03 11 02.3**	**-0.6**
	baz=240						
CHKK	**Chushkaly**	**86.98**	**315**	*e*P	**P**	**03 11 02.3**	**-1.3**
	baz=315						
CHKK	**Chushkaly**	**86.98**	**315**	*e*P	**P**	**03 11 02.2**	**-1.3**
Q32M	**Nakina River**	**87.06**	**30**	P	**P**	**03 11 02.2**	**-1.5**
	baz=251						
MAYO	**Mayo, Yukon**	**87.08**	**25**	P	**P**	**03 11 03.2**	**-0.4**
	baz=247						
ULHL	**Ulahol**	**87.16**	**313**	P	**P**	**03 11 04.5**	**-0.2**
	SNR=10						
M31M	**Drury Creek, Y**	**87.20**	**26**	IAMs_20	IAMs_20	03 46 35.7	
	comp=Z,4µm,20.0s						
M31M	**Drury Creek, Y**	**87.20**	**26**	P	**P**	**03 11 03.0**	**-1.1**
	baz=249						
P33M	**Teslin, Yukon**	**87.22**	**28**	IAmb	IAmb	03 11 18.2	
	comp=Z,98nm,1.8s						
P33M				IAMs_20	IAMs_20	03 52 44.2	
	comp=Z,5µm,18.0s						
P33M	**Teslin, Yukon**	**87.22**	**28**	P	**P**	**03 11 02.9**	**-1.5**
	baz=250						
S34M	**Telegraph Cree**	**87.29**	**31**	P	**P**	**03 11 03.7**	**-0.9**
	baz=252,SNR=11						
BBB	**Bella Bella**	**87.30**	**37**	LR	LR	03 47 34.8	
	comp=Z,9µm,18.1s,baz=280,slow=34						
JCC	**Jacoby Creek,**	**87.37**	**48**	IAMs_20	IAMs_20	03 42 56.3	
	comp=Z,5µm,22.0s						
N32M	**Quiet Lake**	**87.42**	**27**	P	**P**	**03 11 04.0**	**-1.2**
	baz=250						
KUU	**Kurty**	**87.45**	**315**	⇑*i*P	**P**	**03 11 04.4**	**-1.4**
	baz=315						
KUU				*e*S	**SKSac**	**03 21 27.7**	**-2.7**
	baz=315						
KUU				LR	LR	03 51 07.1	
	baz=315						
KUU	**Kurty**	**87.45**	**315**	*c* *i*P	**P**	**03 11 04.3**	**-1.4**
KUU				*e*S	**SKSac**	**03 21 27.7**	**-2.7**
T35M	**Bob Quinn**	**87.46**	**32**	P	**P**	**03 11 04.4**	**-1.1**
	baz=253						
KURK	**Kurchatov**	**87.54**	**322**	P	**P**	**03 11 05.6**	**-0.3**
KURK	**Kurchatov**	**87.54**	**322**	P	**P**	**03 11 05.6**	**-0.3**
KURK				pmax	pmax		
	comp=Z,367nm,1.5s						
KURK				MLR	MLR		
	comp=Z,3µm,20.0s						
KURK	**Kurchatov**	**87.54**	**322**	P	**P**	**03 11 07.1**	**+1.2**
KURK				P	**P**	**03 11 07.1**	**+1.2**
KURBB	**Kurchatov Arra**	**87.57**	**322**	LR	LR	03 50 26.7	
	comp=Z,3µm,20.4s,baz=101,slow=36						
FARO	**Faro, Yukon**	**87.67**	**26**	P	**P**	**03 11 05.4**	**-1.0**
	baz=250,SNR=5.4						
MCCM	**Marconi Confer**	**87.71**	**51**	IAMs_20	IAMs_20	03 52 25.5	
	comp=Z,4µm,18.0s						
HOPS	**Hopland Field**	**87.73**	**50**	IAMs_20	IAMs_20	03 52 01.8	
	comp=Z,5µm,18.0s						
TKM2	**Tokmak 2**	**87.77**	**314**	P	**P**	**03 11 06.8**	**-0.8**
	SNR=73						
NIL	**Nilore**	**87.80**	**304**	P	**P**	**03 11 06.7**	**-1.0**
NIL	**Nilore**	**87.80**	**304**	P	**P**	**03 11 06.7**	**-1.0**
NIL				pmax	pmax		
	comp=Z,161nm,1.0s						
NIL				MLR	MLR		
	comp=Z,2µm,22.0s						
NIL	**Nilore**	**87.80**	**304**	P	**P**	**03 11 08.3**	**+0.6**
NIL				P	**P**	**03 11 08.3**	**+0.6**
EPYK	**Eagle Plains**	**87.85**	**22**	IAMs_20	IAMs_20	03 45 52.7	
	comp=Z,6µm,21.0s						
EPYK	**Eagle Plains**	**87.85**	**22**	P	**P**	**03 11 06.3**	**-0.9**
	baz=246						
DLBC	**Dease Lake**	**88.01**	**30**	P	**P**	**03 11 07.5**	**-0.7**
	comp=Z,23nm,1.1s,baz=252,slow=6.3,SNR=9.9						
DLBC				PP	**PP**	**03 14 35.4**	**+0.3**
	comp=Z,1.9nm,0.9s,baz=248,slow=10,SNR=1.4						
DLBC				LR	LR	03 44 13.3	
	comp=Z,4µm,20.8s,baz=269,slow=31						
	comp=Z,23nm,1.1s						
DLBC	**Dease Lake**	**88.01**	**30**	IAmb	IAmb	03 11 23.4	
	comp=Z,117nm,1.5s						
DLBC	**Dease Lake**	**88.01**	**30**	P	**P**	**03 11 07.3**	**-0.9**
	baz=253,SNR=9.0						
KBK	**Karagaybulak**	**88.18**	**313**	P	**P**	**03 11 09.6**	**+0.1**
	SNR=24						
G30M	**tAoh Zraii Nji**	**88.28**	**21**	P	**P**	**03 11 08.3**	**-0.9**
	baz=247						
CHMS	**Chumysh**	**88.39**	**314**	P	**P**	**03 11 09.6**	**-0.7**
	SNR=50						
UCH	**Uchtor**	**88.42**	**313**	P	**P**	**03 11 11.1**	**+0.1**
	SNR=63						
AAK	**Ala-Archa**	**88.51**	**313**	P	**P**	**03 11 10.7**	**-0.3**
	SNR=32						
AAK	**Ala-Archa**	**88.51**	**313**	S	**SKSac**	**03 21 37.1**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=54,slow=21,SNR=1.3						
AAK				LR	LR	03 51 22.2	
	comp=Z,2µm,21.2s,baz=104,slow=36						
AAK	**Ala-Archa**	**88.51**	**313**	P	**P**	**03 11 10.7**	**-0.3**
AAK				IAmb	IAmb	03 11 14.1	
	comp=Z,91nm,1.1s						
AAK	**Ala-Archa**	**88.51**	**313**	*ce*P	**P**	**03 11 10.4**	**-0.6**
AAK				pmax	pmax		
	comp=Z,146nm,1.7s						
AAK				MLR	MLR		
	comp=Z,2µm,21.0s						
HUMO	**Hull Mountain**	**88.51**	**47**	IAMs_20	IAMs_20	03 47 54.5	
	comp=Z,5µm,19.0s						
YBH	**Yreka Blue Hor**	**88.52**	**48**	P	**P**	**03 11 11.7**	**+0.7**
	comp=Z,3.0nm,0.9s,baz=299,slow=5.7,SNR=4.4						
YBH				LR	LR	03 46 36.0	
	comp=Z,6µm,18.8s,baz=258,slow=33						
	comp=Z,3.0nm,0.9s						
SGDS	**Sogindy**	**88.57**	**314**	⇑*i*P	**P**	**03 11 10.3**	**-0.9**
	baz=314						
SGDS				LR	LR	03 52 17.5	
	baz=314						
SGDS	**Sogindy**	**88.57**	**314**	*c* *i*P	**P**	**03 11 10.3**	**-0.9**
USP	**Ospenovka**	**88.63**	**314**	P	**P**	**03 11 10.8**	**-0.6**
	SNR=58						
COR	**Corvallis**	**88.66**	**45**	IAMs_20	IAMs_20	03 47 36.2	
	comp=Z,5µm,20.0s						
MMPY	**Sheldon Lake,**	**88.71**	**26**	P	**P**	**03 11 10.1**	**-1.2**
	baz=252						
AML	**Almayashu**	**88.99**	**313**	P	**P**	**03 11 13.5**	**-0.1**
	SNR=69						
ORV	**Oroville**	**89.03**	**50**	P	**P**	**03 11 12.8**	**-0.5**
ORV	**Oroville**	**89.03**	**50**	P	**P**	**03 11 12.8**	**-0.5**
ORV				pmax	pmax		
	comp=Z,16nm,1.5s						
EKS2	**Erkin-Say**	**89.03**	**313**	P	**P**	**03 11 14.6**	**+1.2**
	SNR=37						
WTLY	**Watson Lake, Y**	**89.10**	**29**	P	**P**	**03 11 11.7**	**-1.5**
	baz=254						
BTLS	**Baital**	**89.29**	**315**	⇑*i*P	**P**	**03 11 13.6**	**-0.9**
	comp=Z,148nm,1.7s,baz=315						
BTLS	**Baital**	**89.29**	**315**	*c* *i*P	**P**	**03 11 13.5**	**-0.9**

BTLS				pmax	pmax		
	comp=Z,148nm,1.7s						
F31M	**Tsiigehtchic**	**89.34**	**21**	P	**P**	**03 11 12.9**	**-1.2**
	baz=249						
SMMC	**Simmler**	**89.50**	**54**	P	**P**	**03 11 15.9**	**+0.3**
	baz=261						
PKM	**Mcpherson Peak**	**89.58**	**55**	P	**P**	**03 11 14.0**	**-2.2**
	baz=261						
CMB	**Columbia Colle**	**89.63**	**52**	IAmb	IAmb	03 11 19.8	
	comp=Z,78nm,1.9s						
INK	**Inuvik**	**89.73**	**21**	P	**P**	**03 11 15.1**	**-0.8**
	comp=Z,24nm,1.0s,baz=286,slow=4.6,SNR=37						
INK				PKKPbc	**PKKPdf**	**03 28 49.5**	**+1.9**
	comp=Z,2.4nm,0.9s,baz=43,slow=4.0,SNR=7.0						
INK				LR	LR	03 47 34.7	
	comp=Z,7µm,21.4s,baz=231,slow=33						
	comp=Z,24nm,1.0s						
INK	**Inuvik**	**89.73**	**21**	IAmb	IAmb	03 11 20.2	
	comp=Z,113nm,1.6s						
INK	**Inuvik**	**89.73**	**21**	P	**P**	**03 11 14.6**	**-1.2**
	baz=249						
ROCAM	**Rodrigues Isla**	**89.81**	**250**	IAMs_20	IAMs_20	03 50 51.1	
	comp=Z,7µm,20.0s						
BCW	**Bitter Crk WRg**	**89.91**	**55**	IAmb	IAmb	03 11 21.0	
	comp=Z,72nm,1.3s						
LIRD	**Liard River Hi**	**90.23**	**30**	P	**P**	**03 11 18.0**	**-0.5**
	baz=256,SNR=11						
MDPB	**Devils Postpil**	**90.59**	**52**	IAmb	IAmb	03 11 23.6	
	comp=Z,76nm,1.9s						
OMMB	**Old Mammoth Mi**	**90.64**	**52**	IAmb	IAmb	03 11 26.1	
	comp=Z,95nm,2.0s						
YERR	**Yerington**	**90.67**	**51**	IAmb	IAmb	03 11 26.0	
	comp=Z,137nm,2.0s						
PAHR	**Pah Rah Range**	**90.67**	**50**	IAmb	IAmb	03 11 23.8	
	comp=Z,97nm,1.9s						
ISA	**Isabella, Lake**	**90.78**	**54**	P	**P**	**03 11 22.3**	**+0.6**
ISA	**Isabella, Lake**	**90.78**	**54**	P	**P**	**03 11 22.3**	**+0.6**
ISA				pmax	pmax		
	comp=Z,53nm,1.8s						
PASC	**Pasadena Art C**	**90.80**	**56**	IAmb	IAmb	03 11 24.2	
	comp=Z,80nm,1.6s						
DZA	**Taraz**	**90.85**	**313**	*e*P	**P**	**03 11 20.7**	**-1.1**
	baz=313						
DZA	**Taraz**	**90.85**	**313**	*e*P	**P**	**03 11 20.7**	**-1.1**
EDW2	**Edwards Air Fo**	**91.05**	**55**	P	**P**	**03 11 21.8**	**-1.2**
	baz=262,SNR=9.3						
RPN	**Rapa Nui**	**91.05**	**117**	P	**P**	**03 11 22.8**	**-0.2**
	comp=Z,56nm,1.0s,baz=338,slow=5.5,SNR=5.4						
RPN				LR	LR	03 44 16.0	
	comp=Z,4µm,21.9s,baz=270,slow=30						
	comp=Z,56nm,1.0s						
RPN	**Rapa Nui**	**91.05**	**117**	P	**P**	**03 11 25.1**	**+2.0**
RPN				IAMs_20	IAMs_20	03 44 04.3	
	comp=Z,5µm,20.0s						
RPN	**Rapa Nui**	**91.05**	**117**	P	**P**	**03 11 25.1**	**+2.0**
RPN				pmax	pmax		
	comp=Z,409nm,1.5s						
BRZS	**Berezniki**	**91.10**	**320**	⇑*i*P	**P**	**03 11 20.6**	**-2.1**
	baz=320						
BRZS	**Berezniki**	**91.10**	**320**	*ce*P	**P**	**03 11 20.5**	**-2.3**
BRZS				pmax	pmax		
	comp=Z,56nm,1.8s						
LHV	**Little Huntoon**	**91.13**	**52**	IAmb	IAmb	03 11 28.4	
	comp=Z,128nm,1.9s						
CWC	**Cottonwood Cre**	**91.20**	**54**	P	**P**	**03 11 22.4**	**-1.4**
	baz=262						
NVAR	**Mina Array Bea**	**91.31**	**52**	P	**P**	**03 11 23.7**	**-0.6**
	comp=Z,2.8nm,0.8s,baz=246,slow=4.1,SNR=34						
NVAR				PP	**PP**	**03 15 02.3**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=251,slow=5.6,SNR=2.1						
NVAR				LR	LR	03 44 53.4	
	comp=Z,2µm,21.9s,baz=281,slow=31						
	comp=Z,2.8nm,0.8s						
LRMC	**Laurel Mtn Rad**	**91.39**	**55**	P	**P**	**03 11 23.0**	**-1.6**
	baz=262						
KBL	**Kabul**	**91.39**	**304**	P	**P**	**03 11 23.9**	**-0.9**
KBL				IAmb	IAmb	03 11 33.7	
	comp=Z,35nm,0.8s						
KBL	**Kabul**	**91.39**	**304**	P	**P**	**03 11 23.9**	**-0.9**
KBL				pmax	pmax		
	comp=Z,35nm,0.8s						
KBL	**Kabul**	**91.39**	**304**	P	**P**	**03 11 25.3**	**+0.5**
	SNR=30						
KBL				P	**P**	**03 11 25.3**	**+0.5**
	SNR=30						
KOTAN	**Kotaneelee Air**	**91.41**	**30**	P	**P**	**03 11 23.4**	**-0.5**
	baz=258						
DSP	**Deep Springs**	**91.42**	**53**	IAmb	IAmb	03 11 27.6	
	comp=Z,95nm,1.9s						
NV11	**Mina Array Sit**	**91.42**	**52**	P	**P**	**03 11 26.0**	**+1.3**
NV11				IAmb	IAmb	03 11 27.4	
	comp=Z,95nm,1.7s						
KK31	**Karatay Array**	**91.47**	**313**	P	**P**	**03 11 23.5**	**-1.2**
KK31	**Karatay Array**	**91.47**	**313**	P	**P**	**03 11 23.5**	**-1.2**
KK31				pmax	pmax		
	comp=Z,113nm,1.3s						
KKAR	**Karatay Array**	**91.47**	**313**	P	**P**	**03 11 23.5**	**-1.2**
KKAR	**Karatay Array**	**91.47**	**313**	P	**P**	**03 11 23.5**	**-1.2**
KKAR				pmax	pmax		
	comp=Z,113nm,1.3s						
109C	**Camp Elliot, M**	**91.51**	**57**	IAmb	IAmb	03 11 27.9	
	comp=Z,72nm,1.6s						
109C				IAMs_20	IAMs_20	03 48 12.5	
	comp=Z,5µm,19.0s						
109C	**Camp Elliot, M**	**91.51**	**57**	P	**P**	**03 11 24.2**	**-0.8**
	baz=262						
MURC	**Murrieta**	**91.53**	**56**	P	**P**	**03 11 24.1**	**-1.1**
	baz=262						
KVN	**Kaiserville**	**91.55**	**51**	IAmb	IAmb	03 11 28.0	
	comp=Z,92nm,1.8s						
MPMC	**Manual Prospec**	**91.62**	**54**	P	**P**	**03 11 25.6**	**-0.2**
	baz=262,SNR=12						
WVOR	**Wild Horse Val**	**91.63**	**48**	⇑P	**P**	**03 11 26.5**	**+0.9**
WVOR				⇓P	**PcP**	**03 11 27.5**	**+1.1**
IUG	**Iuzhnay**	**91.68**	**312**	⇑*i*P	**P**	**03 11 25.1**	**-0.7**
	comp=Z,158nm,1.9s,baz=312						
IUG				*e*S	**SKSac**	**03 21 52.7**	**-2.9**
	baz=312						
IUG	**Iuzhnay**	**91.68**	**312**	*c i*P	**P**	**03 11 25.1**	**-0.7**
IUG				*e*S	**SKSac**	**03 21 52.6**	**-2.9**
IUG				pmax	pmax		
	comp=Z,158nm,1.9s						
CCX	**Cicese**	**91.75**	**58**	P	**P**	**03 11 26.0**	**-0.1**
GRAC	**Grapevine Rang**	**91.85**	**53**	IAmb	IAmb	03 11 30.6	
	comp=Z,126nm,2.0s						
GRAC	**Grapevine Rang**	**91.85**	**53**	P	**P**	**03 11 26.7**	**+0.1**
	baz=262,SNR=9.0						
BAR	**Barrett**	**91.85**	**57**	IAmb	IAmb	03 11 29.3	
	comp=Z,66nm,1.9s						
J08A	**Circle Bar Ran**	**91.88**	**47**	IAmb	IAmb	03 11 28.7	
	comp=Z,50nm,1.7s						
B08A	**Colville Reser**	**92.02**	**42**	IAmb	IAmb	03 11 28.0	
	comp=Z,50nm,1.9s						
CHM	**Chimkent**	**92.02**	**312**	*e*P	**P**	**03 11 26.6**	**-0.6**
	comp=Z,153nm,1.9s,baz=312						
CHM				LR	LR	03 55 30.5	
	baz=312						
CHM	**Chimkent**	**92.02**	**312**	*e*P	**P**	**03 11 26.6**	**-0.6**
CHM				pmax	pmax		
	comp=Z,153nm,1.9s						
GSC	**Goldstone, Bar**	**92.08**	**55**	IAmb	IAmb	03 11 33.8	
	comp=Z,50nm,1.8s						
GSC	**Goldstone, Bar**	**92.08**	**55**	P	**P**	**03 11 28.0**	**+0.2**
	baz=263						
MONP2	**Monument Peak**	**92.08**	**57**	P	**P**	**03 11 28.4**	**+0.5**
	baz=263,SNR=8.9						
D08A	**Wollman Farm,**	**92.10**	**43**	IAmb	IAmb	03 11 29.1	
	comp=Z,44nm,1.7s						
QSM	**Queen of Sheba**	**92.11**	**54**	IAmb	IAmb	03 11 30.3	
	comp=Z,56nm,1.8s						
TAS	**Tashkent**	**92.11**	**311**	P	**P**	**03 11 27.9**	**+0.2**
TAS	**Tashkent**	**92.11**	**311**	P	**P**	**03 11 27.9**	**+0.2**
TAS				pmax	pmax		
	comp=Z,302nm,1.2s						
PFO	**Pinyon Flats O**	**92.14**	**57**	P	**P**	**03 11 28.3**	**+0.2**
	comp=Z,2.3nm,0.9s,baz=245,slow=5.9,SNR=12						
PFO				LR	LR	03 48 31.8	
	comp=Z,8µm,18.2s,baz=274,slow=33						
	comp=Z,2.3nm,0.9s						
PFO	**Pinyon Flats O**	**92.14**	**57**	P	**P**	**03 11 28.4**	**+0.2**
PFO				IAmb	IAmb	03 11 30.7	
	comp=Z,52nm,1.9s						
PFO	**Pinyon Flats O**	**92.14**	**57**	P	**P**	**03 11 28.4**	**+0.2**
PFO				pmax	pmax		
	comp=Z,53nm,1.9s						
PFO	**Pinyon Flats O**	**92.14**	**57**	P	**P**	**03 11 28.0**	**-0.1**
	baz=263,SNR=7.2						
TPFO	**Pinon Flats**	**92.15**	**57**	P	**P**	**03 11 28.1**	**-0.1**
	baz=263						
FURC	**Furnace Creek,**	**92.18**	**54**	P	**P**	**03 11 28.3**	**+0.3**
	baz=263,SNR=8.5						
PMD	**Palm Desert**	**92.22**	**57**	IAmb	IAmb	03 11 30.8	
	comp=Z,58nm,1.9s						
GWY	**Greenwater Val**	**92.30**	**54**	IAmb	IAmb	03 11 31.3	
	comp=Z,52nm,1.8s						
IKP	**In-Ko-Pah, Jac**	**92.31**	**58**	P	**P**	**03 11 28.8**	**-0.1**
	baz=263						
WRGLY	**Wrigley**	**92.32**	**27**	P	**P**	**03 11 29.6**	**+1.6**
	baz=258						
ESJX	**Sierra Juarez**	**92.37**	**58**	IAmb	IAmb	03 11 34.9	
	comp=Z,51nm,1.8s						
HEC	**Hector,Ludlow**	**92.40**	**55**	P	**P**	**03 11 29.3**	**+0.1**
	baz=263						
WCT	**Wildcat Mounta**	**92.41**	**53**	IAmb	IAmb	03 11 31.8	
	comp=Z,72nm,1.9s						
VTX	**Valle De La Tr**	**92.44**	**59**	IAmb	IAmb	03 11 33.8	
	comp=Z,65nm,1.9s						
YUH	**Yuha Desert**	**92.47**	**58**	P	**P**	**03 11 30.2**	**+0.7**
E09A	**Wood Farm, Sta**	**92.55**	**44**	IAmb	IAmb	03 11 31.2	
	comp=Z,55nm,1.7s						
BELC	**Belle Mtn. Jos**	**92.57**	**56**	P	**P**	**03 11 30.1**	**0.0**
	baz=263,SNR=12						
SHOC	**Shoshone, Teco**	**92.58**	**54**	P	**P**	**03 11 29.9**	**0.0**
	baz=263,SNR=5.5						
SWSC	**Sam W. Stewart**	**92.61**	**57**	P	**P**	**03 11 30.5**	**+0.4**
	baz=263						
TPNV	**Topopah Spring**	**92.73**	**53**	IAmb	IAmb	03 11 33.5	
	comp=Z,97nm,1.9s						
TPNV				IAMs_20	IAMs_20	03 46 45.4	
	comp=Z,4µm,20.0s						
TPNV	**Topopah Spring**	**92.73**	**53**	⇑P	**P**	**03 11 32.5**	**+1.7**
TPNV	**Topopah Spring**	**92.73**	**53**	P	**P**	**03 11 30.9**	**+0.1**
	baz=263,SNR=9.4						
TUQ	**Turquoise Moun**	**92.81**	**55**	P	**P**	**03 11 31.4**	**+0.3**
	baz=263						
BMO	**Blue Mountains**	**92.92**	**45**	IAMs_20	IAMs_20	03 48 41.0	
	comp=Z,5µm,20.0s						
GMRC	**Granite Mounta**	**92.94**	**55**	P	**P**	**03 11 32.2**	**+0.4**
	baz=263,SNR=8.3						
BC3	**Big Chuckawall**	**92.98**	**57**	P	**P**	**03 11 32.2**	**+0.2**
	baz=263,SNR=9.3						
BVAR	**Borovoye Array**	**92.99**	**323**	LR	LR	03 53 58.2	
	comp=Z,1µm,19.8s,baz=93,slow=36						
BRVK	**Borovoye**	**93.06**	**323**	P	**P**	**03 11 30.6**	**-1.1**
BRVK	**Borovoye**	**93.06**	**323**	P	**P**	**03 11 30.6**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,144nm,1.2s						
BRVK	**Borovoye**	**93.06**	**323**	P	**P**	**03 11 33.1**	**+1.4**
BRVK				P	**P**	**03 11 33.1**	**+1.4**
S11A	**Rachel**	**93.21**	**53**	IAmb	IAmb	03 11 41.1	
	comp=Z,61nm,1.7s						
IRM	**Iron Mountain**	**93.30**	**56**	P	**P**	**03 11 33.6**	**+0.2**
	baz=263,SNR=17						
C36M	**Paulatuk**	**93.31**	**20**	IAMs_20	IAMs_20	03 49 42.0	
	comp=Z,5µm,21.0s						
C36M	**Paulatuk**	**93.31**	**20**	P	**P**	**03 11 33.0**	**+0.6**
	baz=258						
R11A	**Troy Canyon, C**	**93.42**	**52**	IAmb	IAmb	03 11 36.5	
	comp=Z,56nm,1.9s						
R11A	**Troy Canyon, C**	**93.42**	**52**	P	**P**	**03 11 33.9**	**-0.1**
	baz=263,SNR=20						
NEW	**Newport**	**93.47**	**42**	P	**P**	**03 11 31.7**	**-2.1**
	comp=Z,3.0nm,0.8s,baz=159,slow=8.0,SNR=3.8						
NEW				LR	LR	03 47 28.7	
	comp=Z,8µm,20.3s,baz=262,slow=32						
	comp=Z,3.0nm,0.8s						
NEW	**Newport**	**93.47**	**42**	P	**P**	**03 11 33.7**	**-0.1**
NEW	**Newport**	**93.47**	**42**	P	**P**	**03 11 33.7**	**-0.1**
NEW				pmax	pmax		
	comp=Z,19nm,1.5s						
NEW	**Newport**	**93.47**	**42**	P	**P**	**03 11 33.8**	**0.0**
	baz=263						
A36M	**Sachs Harbour**	**93.49**	**18**	IAmb	IAmb	03 11 36.4	
	comp=Z,37nm,0.9s						
A36M				IAMs_20	IAMs_20	03 52 23.6	
	comp=Z,4µm,20.0s						
A36M	**Sachs Harbour**	**93.49**	**18**	P	**P**	**03 11 34.0**	**+0.7**
	baz=257						
V12A	**Nelson**	**93.71**	**55**	IAmb	IAmb	03 11 41.5	
	comp=Z,50nm,1.9s						
PRN	**Pahroc Range**	**93.73**	**53**	⇑P	**P**	**03 11 36.6**	**+1.2**
PRN				⇑P	**PcP**	**03 11 37.0**	**+1.1**
BLYC	**Blythe**	**93.76**	**57**	IAmb	IAmb	03 11 38.4	
	comp=Z,63nm,2.0s						
MFID	**Camas Ranch**	**93.80**	**47**	IAmb	IAmb	03 11 39.8	
	comp=Z,57nm,2.0s						
MFID				IAMs_20	IAMs_20	03 47 24.5	
	comp=Z,5µm,20.0s						
PLID	**Pearl Lake**	**93.86**	**45**	IAMs_20	IAMs_20	03 49 29.0	
	comp=Z,4µm,20.0s						
ELK	**Elko**	**93.95**	**50**	LR	LR	03 46 47.7	
	comp=Z,4µm,21.9s,baz=266,slow=31						
ELK	**Elko**	**93.95**	**50**	P	**P**	**03 11 36.4**	**-0.1**
ELK				IAmb	IAmb	03 11 39.8	
	comp=Z,97nm,1.9s						
ELK				IAMs_20	IAMs_20	03 46 25.5	
	comp=Z,4µm,22.0s						
ELK	**Elko**	**93.95**	**50**	P	**P**	**03 11 36.4**	**-0.1**
ELK				pmax	pmax		
	comp=Z,97nm,2.0s						
Q12A	**Willow Creek R**	**94.08**	**51**	IAmb	IAmb	03 11 41.8	
	comp=Z,84nm,1.6s						
PDMCI	**Parker Dam,Lak**	**94.14**	**56**	P	**P**	**03 11 36.7**	**-0.4**
	baz=264						
CRZF	**Crozet Islands**	**94.23**	**222**	IAMs_20	IAMs_20	03 49 19.0	
	comp=Z,4µm,20.0s						
SPR3	**Spring Creek 3**	**94.46**	**51**	IAmb	IAmb	03 11 43.6	
	comp=Z,73nm,1.6s						
HLID	**Hailey**	**94.84**	**47**	IAMs_20	IAMs_20	03 47 46.0	
	comp=Z,5µm,20.0s						
HLID	**Hailey**	**94.84**	**47**	P	**P**	**03 11 40.6**	**+0.2**
	baz=265						
214A	**Organ Pipe Nat**	**95.02**	**59**	P	**P**	**03 11 41.3**	**0.0**
	baz=264						
ELIB	**Princess Elisa**	**95.09**	**193**	*d*P	**P**	**03 11 39.2**	**-1.7**
	comp=Z,45nm,1.3s						
KNB	**Kanab**	**95.47**	**53**	IAmb	IAmb	03 11 46.5	
	comp=Z,60nm,1.9s						
MSO	**Missoula**	**95.47**	**44**	IAMs_20	IAMs_20	03 55 28.2	
	comp=Z,5µm,18.0s						
WALA	**Waterton Lakes**	**95.67**	**41**	IAmb	IAmb	03 11 54.5	
	comp=Z,51nm,2.0s						
DUG	**Dugway, Tooele**	**95.74**	**50**	IAmb	IAmb	03 11 48.0	
	comp=Z,52nm,1.9s						
DUG				IAMs_20	IAMs_20	03 50 54.9	
	comp=Z,3µm,20.0s						
DUG	**Dugway, Tooele**	**95.74**	**50**	P	**P**	**03 11 44.2**	**-0.3**
	baz=265						
HVU	**Hansel Valley**	**95.89**	**49**	IAmb	IAmb	03 11 52.4	
	comp=Z,41nm,1.7s						
PKCU	**Pink Cliffs**	**95.91**	**53**	IAmb	IAmb	03 12 02.2	
	comp=Z,95nm,1.8s						
MTPU	**Mount Pierson**	**96.05**	**53**	IAmb	IAmb	03 11 50.0	
	comp=Z,63nm,1.9s						
SPUT	**South Promonto**	**96.10**	**49**	P	**P**	**03 11 46.9**	**+0.8**
SPUT				IAmb	IAmb	03 11 48.4	
	comp=Z,47nm,2.0s						
YKA	**Yellowknife Ar**	**96.24**	**28**	P	**P**	**03 11 45.5**	**-0.6**
	comp=Z,9.4nm,0.8s,baz=264,slow=4.7,SNR=39						
YKA				PP	**PP**	**03 15 40.4**	**+0.8**
	comp=Z,0.9nm,0.9s,baz=272,slow=6.7,SNR=2.8						
YKA				PKKPbc	**PKKPbc**	**03 28 30.5**	**-4.4**
	comp=Z,1.3nm,0.8s,baz=90,slow=2.5,SNR=14						
YKA				LR	LR	03 51 51.3	
	comp=Z,2µm,19.1s,baz=298,slow=33						
	comp=Z,9.4nm,0.8s						
NLU	**North Lily Min**	**96.28**	**51**	IAmb	IAmb	03 11 49.5	
	comp=Z,36nm,1.7s						
DLMT	**Dillon**	**96.29**	**45**	IAMs_20	IAMs_20	03 50 58.1	
	comp=Z,4µm,20.0s						
LPIG	**La Paz**	**96.51**	**67**	LR	LR	03 47 43.7	
	comp=Z,6µm,20.4s,baz=276,slow=31						
WUAZ	**Wupatki**	**96.51**	**55**	P	**P**	**03 11 48.0**	**-0.2**
	baz=266						
MPU	**Maple Canyon**	**96.63**	**51**	IAmb	IAmb	03 11 56.9	
	comp=Z,52nm,2.0s						
TUC	**Tucson**	**96.76**	**58**	IAMs_20	IAMs_20	03 51 17.4	
	comp=Z,5µm,19.0s						
SLBS	**Sierra La Lagu**	**96.80**	**67**	IAMs_20	IAMs_20	03 51 39.0	
	comp=Z,4µm,19.0s						
TCUT	**Toone Canyon**	**96.87**	**49**	IAmb	IAmb	03 11 53.0	
	comp=Z,14nm,0.7s						
TMUT	**Trail Mountain**	**96.91**	**51**	IAmb	IAmb	03 11 51.9	
	comp=Z,38nm,1.9s						
BOZ	**Bozeman (W)**	**96.98**	**45**	IAMs_20	IAMs_20	03 53 45.4	
	comp=Z,3µm,18.0s						
BOZ	**Bozeman (W)**	**96.98**	**45**	P	**P**	**03 11 49.8**	**-0.2**
	baz=267						
HMU	**Henry Mountain**	**97.18**	**53**	IAmb	IAmb	03 11 56.1	
	comp=Z,41nm,1.6s						
NGCH	**Negor - Chabah**	**97.24**	**295**	P	Pdif	03 11 52.3	+0.8
IMW	**Indian Meadow**	**97.38**	**47**	IAMs_20	IAMs_20	03 49 60.0	
	comp=Z,5µm,20.0s						
REDW	**Red Top Meadow**	**97.41**	**47**	IAMs_20	IAMs_20	03 49 20.1	
	comp=Z,5µm,21.0s						
SNOW	**Snow King Moun**	**97.49**	**47**	IAMs_20	IAMs_20	03 50 04.1	
	comp=Z,5µm,20.0s						
MOOW	**Moose Ponds**	**97.51**	**47**	IAMs_20	IAMs_20	03 49 22.6	
	comp=Z,5µm,21.0s						
FLWY	**Flagg Ranch**	**97.56**	**47**	IAMs_20	IAMs_20	03 50 45.9	
	comp=Z,5µm,20.0s						
P18A	**Preston Nutter**	**97.67**	**51**	IAmb	IAmb	03 11 56.0	
	comp=Z,41nm,1.8s						
BW06	**Boulder Array**	**98.33**	**48**	P	**P**	**03 11 55.6**	**-0.7**
	baz=268						
PD31	**Pinedale Array**	**98.33**	**48**	P	Pdif	03 11 56.4	+0.1
PDAR	**Pinedale Array**	**98.33**	**48**	P	**P**	**03 11 55.5**	**-0.9**
	comp=Z,2.7nm,0.9s,baz=276,slow=1.8,SNR=17						
PDAR				PP	**PP**	**03 15 57.0**	**+0.4**
	comp=Z,0.2nm,0.8s,baz=302,slow=5.2,SNR=1.1						
PDAR				LR	LR	03 53 31.2	
	comp=Z,5µm,18.6s,baz=283,slow=34						
	comp=Z,2.7nm,0.9s						
EGMT	**Eagleton**	**98.37**	**43**	IAMs_20	IAMs_20	03 49 17.0	
	comp=Z,5µm,21.0s						
NVL	**N'lazarevskaya**	**98.44**	**191**	*e*P	Pdif	03 12 02.8	+6.9
NVL				*e*S	**SKSac**	**03 22 32.9**	**+2.6**
NVL				*e*SS	**SS**	**03 30 08.5**	**+3.7**
NVL				pmax	pmax		
	comp=Z,17nm,1.0s						
NVL				MLR	MLR		
	comp=Z,9µm,17.0s						
JLN	**Jalan Bani Buh**	**98.57**	**291**	P	Pdif	03 11 58.5	+1.0
	SNR=7.7						
JLN				P	Pdif	03 11 58.5	+1.0
	SNR=7.7						
PV23	**Carpenter Ridg**	**98.57**	**52**	P	Pdif	03 11 58.5	+0.9
RLMT	**Red Lodge**	**98.62**	**46**	IAMs_20	IAMs_20	03 54 03.9	
	comp=Z,4µm,18.0s						
SVE	**Sverdlovsk**	**98.86**	**326**	*de*P	**P**	**03 11 56.1**	**-1.9**
SVE				*e*		03 15 53.8	
SVE				*e*S	**SKSac**	**03 22 29.4**	**-3.4**
SVE				*e*		03 30 09.0	
SVE				pmax	pmax		
	comp=Z,130nm,1.9s						
MVCO	**Mesa Verde**	**98.93**	**54**	IAMs_20	IAMs_20	03 56 08.6	
	comp=Z,4µm,18.0s						
MVCO	**Mesa Verde**	**98.93**	**54**	P	**P**	**03 11 58.8**	**-0.3**
	baz=268						
SMAI	**San Martin Ant**	**98.94**	**165**	P	Pdif	03 11 58.3	+0.1
WBK	**Wadi Bani Khal**	**99.01**	**292**	P	**Pdif**	**03 12 00.4**	**+0.9**
	SNR=6.7						
WBK				P	**Pdif**	**03 12 00.4**	**+0.9**
	SNR=6.7						
O20A	**White River Ci**	**99.23**	**51**	P	**Pdif**	**03 11 59.6**	**-0.8**
	baz=268						
ABKAR	**Akbulak array**	**99.28**	**319**		**Pdif**	**03 11 58.2**	**-1.8**
WSAR	**Wadi Sarin**	**99.37**	**292**	LR	LR	03 58 35.4	
	comp=Z,728nm,20.8s,baz=114,slow=36						
WSAR	**Wadi Sarin**	**99.37**	**292**	P	**Pdif**	**03 12 02.2**	**+1.1**
	SNR=7.0						
MHTO	**MHTO**	**99.82**	**290**	P	**Pdif**	**03 12 03.3**	**+0.2**
	SNR=9.5						
MHTO				P	**Pdif**	**03 12 03.3**	**+0.2**
	SNR=9.5						
BIDO	**Bidbid**	**99.85**	**293**	P	**Pdif**	**03 12 04.0**	**+0.8**
	SNR=10						
SMDO	**Samad**	**99.89**	**292**	P	**Pdif**	**03 12 04.4**	**+0.9**
	SNR=5.8						
SMDO				P	**Pdif**	**03 12 04.4**	**+0.9**
	SNR=5.8						
SNAA	**Sanae**	**99.94**	**187**	LR	LR	03 56 43.8	
	comp=Z,3µm,18.1s,baz=160,slow=35						
SNAA	**Sanae**	**99.94**	**187**	IAMs_20	IAMs_20	03 56 33.0	
	comp=Z,3µm,19.0s						
ARU	**Arti**	**100.02**	**326**	P	**Pdif**	**03 12 00.6**	**-2.6**
	comp=Z,20nm,0.8s,baz=123,slow=1.6,SNR=12						
ARU				PKKPbc	**PKKPbc**	**03 28 23.5**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=265,slow=8.0,SNR=4.7						
	comp=Z,20nm,0.8s						
ARU	**Arti**	**100.02**	**326**	Pdif	**Pdif**	**03 12 01.1**	**-2.1**
ARU	**Arti**	**100.02**	**326**	*c i*P	**Pdif**	**03 12 00.8**	**-2.4**
ARU						03 16 07.1	
ARU				S	**SKSac**	**03 22 35.1**	**-3.4**
ARU				SP	**SP**	**03 25 02.9**	**+0.2**
ARU				pmax	pmax		
	comp=Z,91nm,1.5s						
ARU				MLR	MLR		
	comp=Z,2µm,19.0s						
RWWY	**Rawlins**	**100.05**	**49**	IAMs_20	IAMs_20	03 54 58.9	
	comp=Z,5µm,20.0s						
Y22D	**IRIS PASSCAL I**	**100.09**	**57**	IAMs_20	IAMs_20	03 54 59.5	
	comp=Z,4µm,18.0s						
SMCO	**Snowmass**	**100.19**	**52**	IAMs_20	IAMs_20	03 53 25.7	
	comp=Z,4µm,20.0s						
JASK	**Jask - Hormozg**	**100.22**	**295**	P	**Pdif**	**03 12 07.2**	**+2.4**
	SNR=7.3						
S22A	**4UR Ranch, Cre**	**100.27**	**53**	P	**Pdif**	**03 12 04.3**	**-0.9**
	baz=269						
GEYT	**Alibeck**	**100.46**	**307**	P	**Pdif**	**03 12 03.7**	**-1.9**
	comp=Z,6.3nm,0.8s,baz=104,slow=3.6,SNR=3.7						
GEYT				PP	**PP**	**03 16 14.0**	**+1.2**
	comp=Z,5.8nm,1.0s,baz=76,slow=6.1,SNR=7.4						
ANMO	**Albuquerque**	**100.50**	**56**	IAMs_20	IAMs_20	03 54 32.3	
	comp=Z,3µm,19.0s						
ANMO	**Albuquerque**	**100.50**	**56**	P	**Pdif**	**03 12 05.3**	**-0.8**
	baz=268						
K22A	**Casper**	**100.57**	**48**	P	**Pdif**	**03 12 05.8**	**-0.4**
	baz=270						
HOQ	**Hoqain**	**100.60**	**293**	P	**Pdif**	**03 12 08.6**	**+2.0**
	SNR=11						
LAO	**LASA Array**	**100.76**	**44**	IAMs_20	IAMs_20	03 55 43.4	
	comp=Z,4µm,19.0s						
LAO	**LASA Array**	**100.76**	**44**	P	**Pdif**	**03 12 06.8**	**0.0**
	baz=271						
N23A	**Red Feather La**	**101.00**	**50**	P	**Pdif**	**03 12 07.7**	**-0.6**
	baz=270						
ISCO	**Idaho Springs**	**101.25**	**51**	IAMs_20	IAMs_20	03 56 24.7	
	comp=Z,3µm,20.0s						
ISCO	**Idaho Springs**	**101.25**	**51**	P	**Pdif**	**03 12 08.9**	**-0.5**
	baz=270						
ARQ	**Araqi**	**101.31**	**292**	P	**Pdif**	**03 12 10.8**	**+1.1**
	SNR=5.8						
MNTX	**Cornudas Mount**	**101.31**	**59**	P	**Pdif**	**03 12 09.1**	**-0.5**
	baz=268						
SDCO	**Great Sand Dun**	**101.32**	**53**	IAMs_20	IAMs_20	03 52 29.9	
	comp=Z,5µm,20.0s						
SDCO	**Great Sand Dun**	**101.32**	**53**	P	**Pdif**	**03 12 09.0**	**-0.8**
	baz=270						
PHWY	**Pilot Hill**	**101.36**	**49**	IAMs_20	IAMs_20	03 56 02.7	
	comp=Z,5µm,19.0s						
BANOM	**Banah**	**101.64**	**295**	P	**Pdif**	**03 12 11.8**	**+0.7**
UOSS	**Minazif**	**101.68**	**294**	Pdif	**Pdif**	**03 12 09.7**	**-1.7**
MASF	**Masafi**	**101.74**	**294**	P	**Pdif**	**03 12 13.4**	**+1.8**
	SNR=6.4						
ASHO	**Ashiyiah**	**101.80**	**294**	P	**Pdif**	**03 12 14.0**	**+2.1**
	SNR=5.5						
ALNE	**Al Ain**	**102.05**	**293**	P	**Pdif**	**03 12 13.2**	**+0.3**
	SNR=10						
RES	**Resolute Bay**	**102.06**	**15**	P	**Pdif**	**03 12 12.4**	**+0.6**
	comp=Z,2.2nm,0.9s,baz=335,slow=2.7,SNR=8.7						
RES	**Resolute Bay**	**102.06**	**15**	Pdif	**Pdif**	**03 12 12.9**	**+1.0**
RES	**Resolute Bay**	**102.06**	**15**	*i* P	**Pdif**	**03 12 12.9**	**+1.0**
DGMT	**Dagmar**	**102.08**	**42**	IAMs_20	IAMs_20	03 51 57.1	
	comp=Z,6µm,21.0s						
BRIGG	**Briggsdale**	**102.23**	**50**	IAMs_20	IAMs_20	03 52 54.8	
	comp=Z,3µm,20.0s						
RSSD	**Black Hills**	**102.36**	**47**	P	**Pdif**	**03 12 14.0**	**-0.2**
	baz=272						
TXAR	**Lajitas Array**	**102.73**	**62**	PKiKP	**PKiKP**	**03 16 36.2**	**-0.5**
	comp=Z,0.8nm,0.9s,baz=242,slow=2.7,SNR=4.0						
TXAR				PKKPbc	**PKKPbc**	**03 28 16.3**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=126,slow=4.3,SNR=6.9						
DOK	**Doka**	**103.28**	**287**	P	**Pdif**	**03 12 17.8**	**-0.7**
WHFO	**Wadi Hawf**	**103.58**	**287**	P	**Pdif**	**03 12 20.3**	**+0.4**
OGNE	**Ogallala**	**103.96**	**50**	IAMs_20	IAMs_20	03 53 13.4	
	comp=Z,5µm,21.0s						
MZR	**Muzera**	**104.09**	**292**	P	**Pdif**	**03 12 22.3**	**+0.2**
	SNR=6.1						
AMTX	**Amarillo**	**104.43**	**56**	IAMs_20	IAMs_20	04 00 49.3	
	comp=Z,4µm,18.0s						
VOI	**Vohitsoka**	**104.64**	**245**	IAMs_20	IAMs_20	03 57 08.6	

	comp=Z,3µm,18.0s						
KIRV	**Kirov**	**104.69**	**329**	Pdiff	**Pdif**	**03 12 21.6**	**-2.3**
	comp=Z,7.2nm,0.5s,baz=47,slow=4.6,SNR=3.3						
KIRV				PP	**PP**	**03 16 45.0**	**+1.3**
	comp=Z,5.6nm,0.7s,baz=93,slow=8.9,SNR=3.8						
ABPO	**Ambohimpanom**	**104.92**	**248**	IAMs_20	IAMs_20	03 56 45.4	
	comp=Z,4µm,19.0s						
CBKS	**Cedar Bluff**	**105.83**	**52**	IAMs_20	IAMs_20	03 56 13.1	
	comp=Z,4µm,20.0s						
KBS	**Kingsbay**	**106.17**	**353**	IAMs_20	IAMs_20	04 02 36.2	
	comp=Z,2µm,19.0s						
KBS	**Kingsbay**	**106.17**	**353**	*e*Pdif	**Pdif**	**03 12 31.3**	**+1.1**
KBS				*e*PP	**PP**	**03 16 54.9**	**+0.8**
KBS				*e*SKSac	**SKSac**	**03 23 04.9**	**-1.6**
KBS				*e*PS	**PS**	**03 26 13.7**	**+1.2**
KBS				*e*SS	**SS**	**03 31 57.2**	**+5.2**
KBS				IVMs_BB	IVMs_BB	04 02 03.3	
	comp=Z,1µm,21.6s						
SPA0	**Spitsbergen Ar**	**106.18**	**352**	*e*Pdif	**Pdif**	**03 12 30.6**	**+0.3**
SPA0				IVmB_BB		03 12 32.3	
	comp=Z,523nm,2.1s						
SPA0				*e*PP	**PP**	**03 16 54.8**	**+0.7**
SPA0				*e*SKSac	**SKSac**	**03 23 05.8**	**-0.9**
SPA0				*e*SP	**SP**	**03 26 07.9**	**+1.4**
SPA0				IVMs_BB	IVMs_BB	04 03 12.3	
	comp=Z,1µm,22.1s						
SPITS	**Spitsbergen Ar**	**106.18**	**352**	PKiKP	**PKiKP**	**03 16 41.1**	**-0.5**
	comp=Z,15nm,1.0s,baz=116,slow=1.9,SNR=5.5						
TULEG	**Thule**	**106.75**	**10**	Pdif	**Pdif**	**03 12 34.3**	**+1.6**
TULEG				IAMs_20	IAMs_20	04 01 12.4	
	comp=Z,3µm,20.0s						
WMOK	**Wichita Mounta**	**106.81**	**56**	IAMs_20	IAMs_20	03 57 45.5	
	comp=Z,4µm,20.0s						
ULM	**Lac du Bonnet**	**107.30**	**40**	PKiKP	**PKiKP**	**03 16 43.3**	**-1.1**
	comp=Z,0.7nm,0.4s,baz=17,slow=0.6,SNR=3.4						
AGMN	**Agassiz Nation**	**107.62**	**42**	IAMs_20	IAMs_20	03 56 00.7	
	comp=Z,4µm,20.0s						
ECSD	**EROS Data Cent**	**107.73**	**46**	IAMs_20	IAMs_20	03 56 39.1	
	comp=Z,4µm,20.0s						
OK029	**Liberty Lake**	**107.84**	**55**	IAMs_20	IAMs_20	03 58 17.5	
	comp=Z,4µm,19.0s						
OK025	**Westminster Rd**	**107.95**	**55**	IAMs_20	IAMs_20	04 00 07.4	
	comp=Z,4µm,19.0s						
OK033	**Mehan**	**108.24**	**55**	IAMs_20	IAMs_20	03 57 35.1	
	comp=Z,5µm,20.0s						
MAK	**Makhachkala**	**108.29**	**313**	*i* P	**Pdif**	**03 12 32.5**	**-7.7**
MAK				*e*		03 17 07.8	
MAK				*e*		03 23 11.7	
MAK				*e*PS	**PS**	**03 26 30.2**	**-5.3**
MAK				*e*SSS	SSS	03 36 20.6	
OK052	**Battle Ridge R**	**108.35**	**55**	IAMs_20	IAMs_20	03 57 19.1	
	comp=Z,5µm,20.0s						
OK030	**Cody Creek RV**	**108.37**	**55**	IAMs_20	IAMs_20	03 57 10.6	
	comp=Z,5µm,20.0s						
BJO1	**Bjornoya**	**108.41**	**349**	*e*Pdif	**Pdif**	**03 12 40.2**	**+0.1**
BJO1				*e*PP	**PP**	**03 17 10.9**	**+0.4**
BJO1				*e*SP	SP	03 26 30.1	+0.7
VADS	**Vadso**	**108.66**	**343**	*e*Pdif	**Pdif**	**03 12 44.3**	**+3.0**
VADS				*e*PP	**PP**	**03 17 14.7**	**+2.4**
VADS				*e*SKSac	**SKSac**	**03 23 17.6**	**0.0**
VADS				*e*SP	**SP**	**03 26 32.0**	**-0.1**
VADS				IVMs_BB	IVMs_BB	04 02 48.7	
	comp=Z,2µm,3.5s						
KLMR	**Klimovskoe**	**108.95**	**332**	*e*Pdif	**Pdif**	**03 12 39.1**	**-3.7**
KLMR				AMP		03 12 44.5	
	comp=Z,70nm,1.2s						
KLMR				*e*PKiKP	**PKiKP**	**03 16 43.8**	**-3.3**
KLMR				PP	**PP**	**03 17 07.2**	**-7.6**
KLMR				SP	SP	03 26 21.5	-14
KLMR				*e*PKKPbc	**PKKPbc**	**03 27 54.2**	**-3.1**
KLMR				LQ	LQ	03 50 10.6	
KLMR				LQ	LQ	03 50 10.6	
KLMR				LR	LR	03 54 52.8	
KLMR				AMP		04 08 13.6	
	comp=Z,3µm,18.2s						
KLMR	**Klimovskoe**	**108.95**	**332**	*e*P	**Pdif**	**03 12 39.0**	**-3.7**
KLMR				pmax	pmax		
	comp=Z,70nm,1.2s						
TUL1	**Leonard**	**109.18**	**55**	IAMs_20	IAMs_20	03 57 33.9	
	comp=Z,5µm,20.0s						
KEV	**Kevo**	**109.53**	**343**	IAMs_20	IAMs_20	04 01 10.0	
	comp=Z,3µm,22.0s						
HAMF	**Hammerfest**	**109.91**	**345**	IVmB_BB		03 12 50.1	
	comp=Z,962nm,4.0s						
HAMF				*e*PP	**PP**	**03 17 26.1**	**+4.7**
HAMF				*e*SKSac	**SKSac**	**03 23 22.8**	**0.0**
HAMF				*e*SP	**SP**	**03 26 44.7**	**0.0**
ARA0	**ARCESS Array S**	**110.09**	**343**	*e*Pdif	**Pdif**	**03 12 47.8**	**+0.1**
ARA0				*e*PP	**PP**	**03 17 23.7**	**+0.9**
ARA0				*e*PKSdf	**PKSdf**	**03 20 27.2**	**+1.9**
ARA0				*e*SKSac	**SKSac**	**03 23 23.5**	**-0.2**
ARA0				*e*SP	**SP**	**03 26 47.9**	**+1.4**
ARA0				*e*SS	**SS**	**03 32 45.6**	**+0.4**
ARCES	**ARCESS Array B**	**110.09**	**343**	PKiKP	**PKiKP**	**03 16 47.8**	**-1.3**
	comp=Z,4.1nm,0.6s,baz=94,slow=1.7,SNR=26						
DAG	**Danmarks Havn**	**110.49**	**359**	*i* P	**PKiKP**	**03 16 49.6**	**-0.1**
VRH	**Novokhopyorsk**	**110.63**	**322**	*e*P	**Pdif**	**03 12 47.9**	**-2.6**
VRH				*i*		03 16 48.6	
VRH				pmax	pmax		
	comp=Z,20nm,1.8s						
VRH				pmax	pmax		
	comp=Z,40nm,1.7s						
ZEI	**Tsey**	**110.93**	**313**	*e*P	**Pdif**	**03 12 51.5**	**-0.8**
ZEI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KTK1	**Kautokeino**	**111.05**	**343**	*e*Pdif	**Pdif**	**03 12 52.5**	**+0.5**
KTK1				*e*PP	**PP**	**03 17 30.6**	**+0.9**
KTK1				*e*SP	SP	03 26 57.4	+2.0
KTK1				*e*SS	**SS**	**03 33 01.6**	**+3.6**
KTK1				IVMs_BB	IVMs_BB	04 10 26.4	
	comp=Z,1µm,3.9s						
ONI	**Oni**	**111.29**	**313**	Pdif	**Pdif**	**03 12 53.5**	**-0.2**
ONI	**Oni**	**111.29**	**313**	*i* P	**Pdif**	**03 12 53.5**	**-0.2**
RAYN	**Ar Rayn**	**111.43**	**292**	PKIKP	**PKiKP**	**03 16 53.2**	**+0.2**
RAYN	**Ar Rayn**	**111.43**	**292**	P	**PKiKP**	**03 16 53.9**	**+0.8**
JETT	**Jettan, Norway**	**111.47**	**345**	*e*PP	**PP**	**03 17 34.9**	**+2.2**
KBZ	**Khabaz**	**111.49**	**314**	Pdiff	**Pdif**	**03 12 54.9**	**+0.4**
	comp=Z,2.6nm,0.9s,baz=153,slow=4.5,SNR=3.1						
KBZ				PKiKP	**PKiKP**	**03 16 52.9**	**+0.5**
	comp=Z,2.9nm,0.8s,baz=134,slow=3.5,SNR=4.7						
KBZ				PP	**PP**	**03 17 35.1**	**+1.4**
	comp=Z,3.8nm,1.1s,baz=100,slow=6.1,SNR=2.4						
KBZ	**Khabaz**	**111.49**	**314**	*i* PKIKP	**PKiKP**	**03 16 51.4**	**-1.0**
KBZ				MLR	MLR		
	comp=Z,2µm,21.0s						
KIV	**Kislovodsk**	**111.59**	**314**	*e*P	**Pdif**	**03 12 52.6**	**-2.5**
KIV				*i*		03 16 49.9	
KIV				*e*		03 17 32.1	
KIV				*e*PS	**PS**	**03 27 05.3**	**-2.3**
KIV				*e*SS	SS	03 33 04.7	-2.4
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,2µm,21.0s						
MOS	**Moscow**	**111.63**	**328**	*i* P	**Pdif**	**03 12 52.2**	**-2.6**
MOS				*i*		03 16 50.6	
MOS				*e*		03 17 32.1	
MOS				pmax	pmax		
	comp=Z,32nm,1.2s						
TRO	**Tromso**	**111.81**	**345**	*e*Pdif	**Pdif**	**03 12 54.6**	**-0.7**
TRO				*e*PP	**PP**	**03 17 36.9**	**+1.9**
TRO				*e*SP	SP	03 27 03.8	+1.6
TRO				*e*SS	**SS**	**03 33 11.0**	**+3.1**
LPSR	**Galich'ya Gora**	**111.91**	**324**	*e*P	**Pdif**	**03 12 54.1**	**-2.0**
LPSR				*i*		03 16 52.5	
LPSR				pmax	pmax		
	comp=Z,20nm,1.5s						
LPSR				pmax	pmax		
	comp=Z,20nm,1.6s						
VORR	**Voronezh**	**112.01**	**323**	*e*P	**Pdif**	**03 12 53.9**	**-2.7**
VORR				*i*		03 16 53.9	
VORR				pmax	pmax		
	comp=Z,16nm,1.8s						
VORR				pmax	pmax		
	comp=Z,54nm,1.8s						
VORD	**Divnogorie**	**112.17**	**322**	*e*P	**Pdif**	**03 12 54.1**	**-3.2**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.9s						
VSR	**Storozhevoye**	**112.17**	**323**	*e*P	**Pdif**	**03 12 54.0**	**-3.3**
VSR				*i*		03 16 51.8	
VSR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
VSR				pmax	pmax		
	comp=Z,40nm,1.8s						
OBN	**Obninsk**	**112.41**	**327**	Pdif	**Pdif**	**03 12 57.7**	**-0.5**
OBN				IAMs_20	IAMs_20	04 07 38.9	
	comp=Z,3µm,20.0s						
OBN	**Obninsk**	**112.41**	**327**	*i* PKIKP	**PKiKP**	**03 16 54.0**	**+0.2**
OBN				*e*		03 17 38.9	
OBN				*e*PPP	PPP	03 20 02.0	
OBN				*e*		03 24 07.0	
OBN				*e*SS	SS	03 33 25.9	+9.1
OBN				*e*SSS	SSS	03 37 29.2	
OBN				pmax	pmax		
	comp=Z,13nm,1.7s						
PAYG	**Puerto Ayora**	**113.66**	**94**	IAMs_20	IAMs_20	03 59 32.6	
	comp=Z,2µm,18.0s						
SOC	**Sochi**	**113.78**	**314**	*i* PKIKP	**PKiKP**	**03 16 52.7**	**-4.1**
SOC				*e*		03 17 45.8	
SOC				*e*PPP	PPP	03 20 09.2	
SOC				*e*		03 23 36.7	
SOC				*e*PS	**PS**	**03 27 30.5**	**+3.0**
SOC				*e*SS	SS	03 33 33.4	-2.4
SOC				*e*SSS	SSS	03 37 46.2	
SOC				MLR	MLR		
	comp=Z,2µm,20.0s						
ATD	**Arta Tunnel**	**113.80**	**279**	*e*P	**PKiKP**	**03 16 55.0**	**-2.8**
STEI	**Steigen**	**113.96**	**345**	*e*PP	**PP**	**03 17 51.3**	**+0.9**
STEI				*e*PS	**PS**	**03 27 29.3**	**+1.2**
SUMG	**Summit**	**114.20**	**5**	*i* P	**PKiKP**	**03 16 58.0**	**+0.6**
LOF	**Lofoten**	**114.25**	**345**	*e*Pdif	**Pdif**	**03 13 04.9**	**-1.3**
LOF				*e*PKPdf	PKPdf	03 16 56.6	-0.4
LOF				IVmB_BB		03 17 10.3	
	comp=Z,816nm,1.9s						
LOF				*e*PP	**PP**	**03 17 54.2**	**+1.8**
LOF				*e*SP	SP	03 27 25.8	+1.2
LOF				IVMs_BB	IVMs_BB	04 02 20.9	
	comp=Z,928nm,3.9s						
L44A	**Lake County Fo**	**114.29**	**47**	IAMs_20	IAMs_20	03 59 30.7	
	comp=Z,5µm,21.0s						
FAUS	**Fauske**	**114.35**	**344**	*e*Pdif	**Pdif**	**03 13 05.3**	**-1.4**
FAUS				*e*PP	**PP**	**03 17 54.6**	**+1.5**
FAUS				*e*SP	SP	03 27 26.3	+0.8
FINES	**FINESS Array B**	**114.52**	**336**	Pdiff	**Pdif**	**03 13 06.2**	**-1.3**
	comp=Z,3.8nm,0.7s,baz=65,slow=4.4,SNR=15						
FINES				PKP	**PKiKP**	**03 16 57.4**	**-0.4**
	comp=Z,9.3nm,0.7s,baz=100,slow=2.8,SNR=35						
FINES				PP	**PP**	**03 17 54.1**	**-0.4**
	comp=Z,5.9nm,1.0s,baz=99,slow=8.6,SNR=1.6						
FINES				PKKPbc	**PKKPbc**	**03 27 36.6**	**-2.2**
	comp=Z,2.5nm,0.8s,baz=270,slow=5.1,SNR=5.8						
FINES				PKKPab	**PKKPab**	**03 27 42.6**	**-0.2**
	comp=Z,3.2nm,0.8s,baz=90,slow=0.8,SNR=5.7						
OXF	**Oxford**	**114.53**	**55**	IAMs_20	IAMs_20	04 04 19.7	
	comp=Z,3µm,19.0s						
OXF	**Oxford**	**114.53**	**55**	P	PKPdf	03 16 57.3	-1.2
	baz=278						
ANN	**Anapa**	**115.07**	**316**	*i* PKIKP	**PKPdf**	**03 17 01.8**	**+2.5**
ANN				*e*		03 17 56.1	
ANN				*e*		03 23 40.0	
ANN				*e*PS	**PKKPbc**	**03 27 28.9**	**-7.5**
ANN				*e*SS	SS	03 33 51.5	-1.1
ANN				pmax	pmax		
	comp=Z,32nm,0.9s						
ANN				MLR	MLR		
	comp=Z,1µm,20.0s						
MOR8	**Moi Rana**	**115.46**	**344**	*e*PKPdf	**PKPdf**	**03 16 59.5**	**0.0**
MOR8				*e*PP	**PP**	**03 18 01.2**	**+0.2**
MOR8				*e*SP	SP	03 27 33.7	-2.0
MOR8				*e*SS	**SS**	**03 33 58.3**	**+2.0**
MOR8				IVMs_BB	IVMs_BB	04 04 31.7	
	comp=Z,894nm,13.9s						
WVT	**Waverly**	**115.55**	**53**	IAMs_20	IAMs_20	04 03 14.5	
	comp=Z,4µm,20.0s						
LR03	**Panguipulli**	**115.56**	**140**	PKPdf	**PKPdf**	**03 17 02.0**	**+1.5**
KONS	**Konsvik**	**115.58**	**344**	*e*PKPdf	**PKPdf**	**03 16 59.6**	**0.0**
JMIC	**Jan Mayen**	**115.60**	**354**	*e*PP	**PP**	**03 18 07.3**	**+5.6**
JMIC				*e*PS	**PS**	**03 27 44.9**	**+1.9**
ILULI	**Ilulissat**	**115.70**	**10**	IAMs_20	IAMs_20	04 02 28.1	
	comp=Z,4µm,22.0s						
VSU	**Vasula**	**115.83**	**333**	*e*P	**PKPdf**	**03 17 00.7**	**+0.4**
MEF	**Metsahovi**	**115.89**	**335**	*e*P	**PKiKP**	**03 17 00.3**	**0.0**
SNET	**Serv Nac Est T**	**115.93**	**78**	IAMs_20	IAMs_20	03 59 53.0	
	comp=Z,2µm,19.0s						
PLCA	**Paso Flores**	**116.02**	**142**	PKP	**PKiKP**	**03 17 00.7**	**-0.7**
	comp=Z,7.6nm,1.0s,baz=273,slow=1.3,SNR=11						
PLCA				PP	**PP**	**03 18 02.8**	**-2.7**
	comp=Z,1.1nm,1.0s,baz=241,slow=7.5,SNR=0.8						
PLCA				PKKPbc	**PKKPbc**	**03 27 32.8**	**-0.5**
	comp=Z,4.1nm,0.7s,baz=46,slow=3.0,SNR=7.9						
RAF	**Rauma**	**116.47**	**337**	*e*P	**PKPdf**	**03 17 01.0**	**-0.4**
LRAL	**Lakeview Retre**	**116.73**	**57**	P	**PKPdf**	**03 17 02.0**	**-0.9**
	baz=279						
ANKE	**Ethiopia-Afar**	**116.75**	**277**	*e*P	**PKiKP**	**03 17 04.2**	**+0.3**
TEIG	**Tepich**	**116.82**	**71**	IAMs_20	IAMs_20	03 57 19.4	
	comp=Z,5µm,22.0s						
SCO	**Scoresbysund**	**116.87**	**359**	IAMs_20	IAMs_20	04 08 52.5	
	comp=Z,2µm,20.0s						
SCO	**Scoresbysund**	**116.87**	**359**	*i* P	**PKPdf**	**03 17 01.5**	**-0.5**
DESE	**Dese**	**116.93**	**279**	*e*P	**PKPdf**	**03 17 01.1**	**-3.0**
BRAL	**Brewton**	**116.97**	**59**	IAMs_20	IAMs_20	04 02 45.5	
	comp=Z,4µm,20.0s						
MTSE	**Matsula**	**116.98**	**334**	*e*P	**PKPdf**	**03 17 02.3**	**-0.2**
GAZ	**Gaziantep**	**117.04**	**308**	PKPdf	**PKiKP**	**03 17 04.8**	**+1.4**
KIBK	**Kibwezi**	**117.12**	**264**	PKPdf	**PKPdf**	**03 17 03.6**	**-0.7**
KIBK	**Kibwezi**	**117.12**	**264**	P	**PKiKP**	**03 17 05.4**	**+1.1**
MNK	**Minsk**	**117.24**	**329**	*i* PKP	**PKiKP**	**03 17 04.3**	**+1.1**
	comp=E,3.0nm,1.6s						
MNK				*i* PKP	**PKiKP**	**03 17 04.3**	**+1.1**
	comp=N,35nm,1.0s						
MNK				*i* PKP	**PKiKP**	**03 17 04.3**	**+1.1**
	comp=Z,26nm,1.6s,baz=62						
MNK				*i* pPKP	**pPKPdf**	**03 17 19.4**	**+3.4**
MNK				*i* PP	PP	03 18 26.7	+13
MNK				*i* PPP	PPP	03 20 51.7	
MNK				*i* SKS	**SKSdf**	**03 24 15.3**	**+3.3**
MNK				*i* PS	**PS**	**03 27 59.3**	**+0.8**
MNK				*i* SS	**SS**	**03 34 23.6**	**+3.4**
MNK				*i* SSS	SSS	03 38 40.7	
MNK				*i* LQ	LQ	03 55 54.9	
MNK				*i* LR	LR	04 02 10.7	
MNK				*i* LRM	MLR	04 10 12.4	
	comp=N,1µm,17.5s						
MNK				*i* LRM	MLR	04 13 38.4	
	comp=Z,2µm,16.0s						
MNK				*i* LRM	MLR	04 13 49.5	
	comp=E,306nm,17.9s						
MNK	**Minsk**	**117.24**	**329**	*i* PKIKP	**PKiKP**	**03 17 04.3**	**+1.1**
MNK				*i* PPP	PPP	03 20 51.6	
MNK				*i*		03 24 15.3	
MNK				*i* PS	**PS**	**03 27 59.3**	**+0.8**
MNK				*i* SS	SS	03 34 23.5	+3.3
MNK				*i* SSS	SSS	03 38 40.6	
MNK				pmax	pmax		
	comp=Z,26nm,1.6s						
MNK				pmax	pmax		
	comp=N,35nm,1.0s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.6s						
P49A	**Miami Univ. Ec**	**117.26**	**49**	IAMs_20	IAMs_20	04 02 21.4	
	comp=Z,4µm,20.0s						
P49A	**Miami Univ. Ec**	**117.26**	**49**	P	**PKPdf**	**03 17 03.0**	**-0.7**
	baz=284						
IDID	**Didziasalis**	**117.42**	**330**	*e*P	**PKPdf**	**03 16 59.5**	**-4.0**
ICESG	**Greenland Ices**	**117.45**	**6**	*i* P	**PKPdf**	**03 17 02.1**	**-1.5**
ISAL	**Salakas**	**117.59**	**330**	*e*P	**PKiKP**	**03 17 04.8**	**+0.9**
NACGM	**Naroch**	**117.60**	**330**	*e*PKP	**PKiKP**	**03 17 05.1**	**+1.3**
	comp=Z,19nm,0.9s,baz=60						
IIGN	**Ignalina**	**117.66**	**330**	*e*P	**PKPdf**	**03 17 00.9**	**-3.0**
AAE	**Adis Abeba**	**117.67**	**276**	*e*P	**PKiKP**	**03 17 06.0**	**+0.4**
AAL	**Aland**	**117.68**	**337**	*e*P	**PKiKP**	**03 17 04.0**	**+0.2**
SFJD	**Kangerlussuaq**	**117.73**	**11**	PKP	**PKPdf**	**03 17 03.1**	**-0.6**
	comp=Z,6.1nm,0.7s,baz=330,slow=8.9,SNR=3.1						
FURI	**Furi**	**117.75**	**276**	IAMs_20	IAMs_20	04 09 54.0	
	comp=Z,2µm,19.0s						
FURI	**Furi**	**117.75**	**276**	*e*P	**PKPdf**	**03 17 04.8**	**-0.9**
TGUH	**Tegucigalpa,Un**	**117.84**	**78**	IAMs_20	IAMs_20	04 01 30.6	
	comp=Z,2µm,19.0s						
DILA	**Dilla**	**117.96**	**273**	*e*P	**PKPdf**	**03 17 03.6**	**-2.4**
KMBO	**Kilima Mbogo**	**118.09**	**265**	PKP	**PKPdf**	**03 17 05.4**	**-1.0**
	comp=Z,0.1nm,0.5s,baz=37,slow=23,SNR=3.7						
KMBO	**Kilima Mbogo**	**118.09**	**265**	PKPdf	**PKiKP**	**03 17 07.3**	**+0.9**
KMBO	**Kilima Mbogo**	**118.09**	**265**	PKIKP	**PKiKP**	**03 17 07.3**	**+0.9**
KMBO	**Kilima Mbogo**	**118.09**	**265**	*e*P	PKiKP	03 17 16.9	+11
KMBO	**Kilima Mbogo**	**118.09**	**265**	P	**PKiKP**	**03 17 07.1**	**+0.7**
AKASG	**Malin Array Be**	**118.22**	**325**	Pdiff	**Pdif**	**03 13 22.8**	**-1.5**
	comp=Z,1.4nm,0.8s,baz=52,slow=3.7,SNR=14						
AKASG				PKP	**PKPdf**	**03 17 04.3**	**-0.8**
	comp=Z,6.2nm,0.6s,baz=58,slow=2.4,SNR=27						
AKASG				PP	**PP**	**03 18 22.5**	**+1.7**
	comp=Z,3.7nm,0.8s,baz=50,slow=7.8,SNR=9.2						
AKASG				PKKPbc	**PKKPbc**	**03 27 23.7**	**-1.8**
	comp=Z,1.2nm,0.6s,baz=251,slow=3.9,SNR=11						
AKBB	**Malin Array Si**	**118.22**	**325c**	*i*PKIKP	**PKPdf**	**03 17 04.0**	**-1.2**
PABE	**Paberze**	**118.67**	**331**	IAMs_20	IAMs_20	04 13 31.3	
	comp=Z,2µm,20.0s						
PABE	**Paberze**	**118.67**	**331**	*e*P	**PKiKP**	**03 17 06.4**	**+0.5**
UPP	**Uppsala**	**118.80**	**337**	*e*P	**PKPdf**	**03 17 05.1**	**-0.9**
TZTN	**Tazewell**	**118.85**	**52**	P	**PKPdf**	**03 17 06.3**	**-0.6**
	baz=283						
DY2G	**Dye2**	**118.99**	**10**	*i* P	**PKPdf**	**03 17 04.1**	**-2.5**
MATN	**Matagalpa**	**119.13**	**79**	PKPdf	**PKPdf**	**03 17 06.0**	**-2.0**
BR131	**Keskin Array S**	**119.15**	**312**	P	**PKiKP**	**03 17 07.6**	**0.0**
	SNR=11						
BRTR	**Keskin Array B**	**119.15**	**312**	PKP	**PKPdf**	**03 17 06.5**	**-1.0**
	comp=Z,2.5nm,0.7s,baz=138,slow=3.5,SNR=15						
BRTR				PP	**PP**	**03 18 26.8**	**-1.1**
	comp=Z,2.3nm,0.9s,baz=74,slow=3.6,SNR=2.4						
BRTR				PKKPbc	**PKKPbc**	**03 27 22.1**	**+0.1**
	comp=Z,2.4nm,0.7s,baz=231,slow=3.9,SNR=16						
P52A	**Corning**	**119.16**	**49**	P	**PKPdf**	**03 17 06.7**	**-0.6**
	baz=286						
BO02	**Sierra Bellavi**	**119.33**	**137**		**PKPdf**	**03 17 07.9**	**-0.1**
PURM	**Purcari**	**119.52**	**320**	⇑P	**PKPdf**	**03 17 07.6**	**-0.2**
M53A	**WI Miller and**	**119.70**	**46**	IAMs_20	IAMs_20	04 08 32.8	
	comp=Z,3µm,20.0s						
M53A	**WI Miller and**	**119.70**	**46**	P	**PKPdf**	**03 17 07.4**	**-0.9**
	baz=288						
ANTO	**Ankara**	**119.73**	**312**	⇓P	**PKiKP**	**03 17 08.6**	**-0.1**
ANTO	**Ankara**	**119.73**	**312**		**PKiKP**	**03 17 09.1**	**+0.5**
ANTO	**Ankara**	**119.73**	**312**	PKIKP	**PKiKP**	**03 17 09.1**	**+0.5**
ANTO				MLR	MLR		
	comp=Z,900nm,22.0s						
ANTO	**Ankara**	**119.73**	**312**	P	**PKPdf**	**03 17 07.9**	**-0.7**
SORM	**Soroca**	**119.82**	**322**	⇑P	**PKKPbc**	**03 27 17.7**	**-1.8**
TIGA	**Tifton**	**119.85**	**58**	P	**PKPdf**	**03 17 07.6**	**-1.3**
	baz=280						
JTS	**Las Juntas de**	**120.00**	**82**	IAMs_20	IAMs_20	03 58 53.9	
	comp=Z,2µm,21.0s						
KIS	**Kishinev**	**120.00**	**321**	*e*PKP	**PKiKP**	**03 17 09.0**	**+0.2**
	comp=Z,70nm,2.1s						
KIS	**Kishinev**	**120.00**	**321**	*e*PP	PP	03 18 43.0	+10
KIS	**Kishinev**	**120.00**	**321**	*e*PS	PS	03 28 18.0	-5.8
KIS				*e*L	L	04 00 58.0	
KIS				LRM	MLR	04 10 11.0	
	comp=Z,400nm,20.0s						
KIS	**Kishinev**	**120.00**	**321**	*e*PKIKP	**PKiKP**	**03 17 09.0**	**+0.2**
KIS				*e*PS	**PS**	**03 28 18.0**	**-5.8**
KIS				pmax	pmax		
	comp=Z,70nm,2.1s						
VIKU	**Vikbolandet**	**120.05**	**337**	*e*P	**PKiKP**	**03 17 08.7**	**+0.2**
DOMB	**Dombas**	**120.13**	**343**	*e*PKPdf	**PKPdf**	**03 17 07.5**	**-1.0**
DOMB				*e*PP	**PP**	**03 18 33.6**	**+0.2**
DOMB				*e*PS	**PS**	**03 28 22.6**	**-1.7**
MOL	**Molde**	**120.15**	**344**	*e*Pdif	**Pdif**	**03 13 29.3**	**-3.3**
MOL				*e*PKPdf	**PKPdf**	**03 17 04.8**	**-3.7**
NC204	**NORSAR Array S**	**120.20**	**341**		**PKPdf**	**03 17 08.1**	**-0.7**
NB2	**NORSAR Subarra**	**120.23**	**341**	PKPdf	**PKPdf**	**03 17 07.3**	**-1.5**
	comp=Z,5.9nm,0.7s,baz=39,slow=1.9						
NB2				PKKP	**PKKPab**	**03 27 17.2**	**-0.6**
	comp=Z,66nm,2.5s,baz=223,slow=4.1						
NB2	**NORSAR Subarra**	**120.23**	**341**	PKPdf	**PKPdf**	**03 17 07.3**	**-1.5**
	slow=1.9						
NOA	**NORSAR Array B**	**120.23**	**341**	PKP	**PKPdf**	**03 17 07.9**	**-0.9**
	comp=Z,11nm,0.7s,baz=45,slow=2.0,SNR=61						
NOA				PP	**PP**	**03 18 31.7**	**-2.5**
	comp=Z,1.7nm,0.8s,baz=39,slow=7.6,SNR=3.3						
NOA				PKKPbc	**PKKPab**	**03 27 17.7**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=223,slow=4.1,SNR=3.4						
NC602	**NORSAR Array S**	**120.35**	**341**	*e*PKPdf	**PKPdf**	**03 17 08.0**	**-1.0**
NC602				*e*PP	**PP**	**03 18 36.3**	**+1.3**
BOSA	**Boshof**	**120.43**	**231**	PKP	**PKPdf**	**03 17 09.8**	**-0.5**
	comp=Z,9.5nm,0.8s,baz=135,slow=2.1,SNR=26						
BOSA				PP	**PP**	**03 18 38.1**	**+1.5**
	comp=Z,2.2nm,0.9s,baz=90,slow=6.1,SNR=1.5						
BOSA	**Boshof**	**120.43**	**231**	PKPdf	**PKPdf**	**03 17 09.4**	**-0.9**
LODK	**Lodwar**	**120.57**	**270**	*e*P	**PKiKP**	**03 17 13.6**	**+2.6**
PAULI	**Pauline**	**120.62**	**54**	PKPdf	**PKPdf**	**03 17 10.2**	**-0.1**
AKN	**Aaknes**	**120.62**	**344**	*e*PKPdf	**PKPdf**	**03 17 08.8**	**-0.7**
AKN				*e*PP	**PP**	**03 18 37.6**	**+0.9**
AKN				*e*PS	**PS**	**03 28 30.1**	**+1.5**
AKN				*e*SS	SS	03 35 07.1	+4.0
TLCR		**120.72**	**319**	⇑P	**PKPdf**	**03 17 10.1**	**0.0**
TLCR		**120.72**	**319**	PKIKP	**PKPdf**	**03 17 10.1**	**0.0**
HDC	**Heredia**	**120.81**	**83**	IAMs_20	IAMs_20	04 06 00.5	
	comp=Z,3µm,18.0s						
JURR	**Jurilovca**	**120.84**	**318**	⇑P	**PKPdf**	**03 17 10.0**	**-0.4**
KMSC	**Kings Mountain**	**120.93**	**53**	P	**PKPdf**	**03 17 09.8**	**-1.1**
	baz=284						
ANGG	**Ammassalik, Gr**	**121.02**	**6**	IAMs_20	IAMs_20	04 05 51.5	
	comp=Z,3µm,20.0s						
TPGR	**Topolog**	**121.11**	**319**	⇑P	**PKiKP**	**03 17 11.0**	**0.0**
TPGR	**Topolog**	**121.11**	**319**	⇑P	**PKKPbc**	**03 27 13.4**	**-1.4**
BLA	**Blacksburg**	**121.11**	**51**	P	**PKPdf**	**03 17 10.1**	**-1.1**
	baz=286						
CFR	**Carcaliu**	**121.17**	**319**	⇓P	**PKPdf**	**03 17 10.5**	**-0.5**
CFR	**Carcaliu**	**121.17**	**319**	⇑P	**PKKPbc**	**03 27 14.3**	**-0.2**
CFR	**Carcaliu**	**121.17**	**319**	PKIKP	**PKPdf**	**03 17 10.5**	**-0.5**
OSL	**Oslo**	**121.22**	**340**	*e*PKPdf	**PKiKP**	**03 17 10.9**	**+0.1**
OSL				*e*PP	**PP**	**03 18 41.0**	**+0.2**
TIRR	**Tirgusor**	**121.27**	**318**	⇑P	**PKPdf**	**03 17 10.1**	**-1.1**
TIRR	**Tirgusor**	**121.27**	**318**	⇓P	**PKKPbc**	**03 27 13.5**	**-0.6**
TIRR	**Tirgusor**	**121.27**	**318**	PKIKP	**PKPdf**	**03 17 10.1**	**-1.1**
GHRR		**121.27**	**320**	⇑P	**PKiKP**	**03 17 11.9**	**+0.6**
MFTR	**Murfatlar**	**121.37**	**318**	⇑P	**PKPdf**	**03 17 11.1**	**-0.3**
MANR	**Mangalia**	**121.39**	**317**	⇑P	**PKiKP**	**03 17 11.8**	**+0.2**
SKAR	**Skarslia**	**121.42**	**342**	*e*PKPdf	**PKPdf**	**03 17 11.0**	**-0.2**
SKAR				*e*PP	**PP**	**03 18 43.1**	**+0.8**
SKAR				*e*SP	SP	03 28 30.0	+0.4
SKAR				*e*SS	**SS**	**03 35 15.3**	**+1.8**
SKAR				IVMs_BB	IVMs_BB	04 11 23.0	
	comp=Z,2µm,3.9s						
TLBR	**Topalu**	**121.47**	**318**	⇓P	**PKPdf**	**03 17 11.3**	**-0.3**
HARR	**Harsova**	**121.49**	**319**	⇑P	**PKPdf**	**03 17 11.2**	**-0.4**
HARR	**Harsova**	**121.49**	**319**	PKIKP	**PKPdf**	**03 17 11.2**	**-0.4**
TESR	**Tescani**	**121.56**	**321**	⇑P	**PKPdf**	**03 17 11.0**	**-0.8**
LVV	**L'vov**	**121.59**	**325**	*e*PKIKP	**PKPdf**	**03 17 11.5**	**-0.2**
LVV				*e*		03 18 45.9	
LVV				*e*		03 21 23.3	
LVV				*e*		03 24 17.0	
LVV				*e*		03 35 39.8	
FOO	**Floro**	**121.63**	**344**	*e*PKPdf	**PKPdf**	**03 17 10.8**	**-0.5**
FOO				IVmB_BB		03 17 26.5	
	comp=Z,2µm,3.2s						
FOO				*e*PP	**PP**	**03 18 43.5**	**-0.1**
FOO				*e*SP	SP	03 28 30.6	-0.6
FOO				*e*SS	**SS**	**03 35 20.8**	**+4.9**
FOO				IVMs_BB	IVMs_BB	04 05 45.6	
	comp=Z,3µm,3.8s						
SCHQ	**Schefferville**	**121.69**	**27**	PKP	**PKPdf**	**03 17 10.2**	**-1.6**
	comp=Z,2.8nm,0.7s,baz=244,slow=5.6,SNR=5.7						
SCHQ				PKKPbc	**PKKPab**	**03 27 11.8**	**+0.3**
	comp=Z,4.2nm,0.8s,baz=93,slow=3.3,SNR=4.0						
STRU	**Stroemstad**	**121.73**	**339**	*i* P	**PKPdf**	**03 17 10.9**	**-0.8**
VRI	**Vrincioaia**	**121.79**	**320**	⇓P	**PKKPbc**	**03 27 11.9**	**-0.3**
KONO	**Kongsberg**	**121.81**	**341**	IAMs_20	IAMs_20	04 12 19.6	
	comp=Z,2µm,21.0s						
KONO	**Kongsberg**	**121.81**	**341**	PKIKP	**PKPdf**	**03 17 11.4**	**-0.4**
KONO	**Kongsberg**	**121.81**	**341**	*e*PKPdf	**PKiKP**	**03 17 11.9**	**-0.1**
KONO				*e*PP	**PP**	**03 18 42.8**	**-2.1**
KONO				*e*SP	SP	03 28 31.8	-1.1
KONO				*e*SS	**SS**	**03 35 19.4**	**+1.1**
KONO				IVMs_BB	IVMs_BB	04 05 57.2	
	comp=Z,1µm,4.0s						
LBTB	**Lobatse**	**121.83**	**235**	PKPdf	**PKPdf**	**03 17 12.7**	**-0.4**
LBTB	**Lobatse**	**121.83**	**235**	PKIKP	**PKPdf**	**03 17 12.7**	**-0.4**
PLOR	**Plostina**	**121.84**	**320**	⇓P	**PKiKP**	**03 17 12.7**	**+0.1**
PLOR	**Plostina**	**121.84**	**320**	⇓P	**PKKPbc**	**03 27 11.6**	**-0.4**
PLOR	**Plostina**	**121.84**	**320**	PKIKP	**PKiKP**	**03 17 12.6**	**+0.1**
BLEU	**Blekinge**	**121.87**	**335**	*i* P	**PKPdf**	**03 17 10.9**	**-1.1**
BURAR	**Bucovina Array**	**121.95**	**323**	⇑P	**PKiKP**	**03 17 12.9**	**+0.1**
BURAR	**Bucovina Array**	**121.95**	**323**	⇑P	**PKKPbc**	**03 27 12.1**	**+0.3**
BURAR	**Bucovina Array**	**121.95**	**323**	PKIKP	**PKiKP**	**03 17 12.9**	**+0.1**
SSPA	**Standing Stone**	**121.96**	**46**		**PKPdf**	**03 17 12.3**	**-0.4**
COVR	**Voineasa-Covas**	**122.13**	**320**	⇑P	**PKPdf**	**03 17 12.3**	**-0.6**
SUE	**Sulen**	**122.16**	**344**	*e*PKPdf	**PKPdf**	**03 17 12.0**	**-0.4**
SUE				*e*PP	**PP**	**03 18 48.6**	**+1.4**
SUE				*e*SP	SP	03 28 37.3	+1.4
SUE				IVMs_BB	IVMs_BB	04 04 10.3	
	comp=Z,3µm,3.7s						
BORU	**Boraas**	**122.17**	**338**	*i* P	**PKPdf**	**03 17 11.3**	**-1.2**

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NEHR  Nehoiu             122.25 320 ⇑P       PKPdf    03 17 12.8 -0.3
DWPF  Disney Wildern     122.27  61  IAMs_20 IAMs_20  04 08 32.1
      comp=Z,3µm,19.0s
BEL   Belsk              122.27 329 ePKP     PKiKP    03 17 14.0 +0.9
OZUR                     122.28 321 ⇑P       PKiKP    03 17 13.7 +0.3
TJOU  Tjoern             122.31 338 i P      PKPdf    03 17 11.8 -1.0
PRD   Provadia           122.43 317 i P      PKPdf    03 17 13.2 -0.3
MLR   Muntele Rosu       122.44 320 ⇑P       PKPdf    03 17 13.3 -0.3
MLR   Muntele Rosu       122.44 320 ⇓P       PKKPbc   03 27 10.2 +0.3
MLR   Muntele Rosu       122.44 320  IAMs_20 IAMs_20  04 14 46.8
      comp=Z,2µm,21.0s
MLR   Muntele Rosu       122.44 320  PKIKP   PKPdf    03 17 13.3 -0.3
LCO   Las Campanas       122.53 131  PKPdf   PKPdf    03 17 13.5 -1.0
LCO   Las Campanas       122.53 131  IAMs_20 IAMs_20  03 59 15.9
      comp=Z,2µm,21.0s
LCO   Las Campanas       122.53 131  PKIKP   PKPdf    03 17 13.5 -1.0
ODD1  Odda               122.55 342 ePKPdf   PKiKP    03 17 16.1 +2.6
ODD1                                ePP      PP       03 18 50.9 +0.9
ODD1                                eSP      SP       03 28 38.9 -0.6
ODD1                                eSS      SS       03 35 28.7 +0.9
ODD1                                 IVMs_BB IVMs_BB  04 03 16.3
      comp=Z,2µm,4.1s
BER   Bergen             122.55 343 ePdif    Pdif     03 13 46.3 +3.1
BER                                 ePKPdf   PKPdf    03 17 11.9 -1.3
BER                                 ePP      PP       03 18 51.8 +2.0
BER                                 eSP      SP       03 28 40.6 +1.2
BER                                 eSS      SS       03 35 32.2 +4.6
BER                                  IVMs_BB IVMs_BB  04 13 10.2
      comp=Z,2µm,3.6s
DEL   Delary             122.55 336 eP       PKPdf    03 17 13.4 +0.1
DEL   Delary             122.55 336 i P      PKPdf    03 17 12.6 -0.7
SECR                     122.56 320 ⇑P       PKPdf    03 17 13.7  0.0
BORG  Borgarnes          122.61 359  PKP     PKPdf    03 17 11.9 -1.3
      comp=Z,6.6nm,0.6s,baz=19,slow=3.4,SNR=9.4
FABU  Falkenberg         122.64 337 i P      PKPdf    03 17 12.6 -0.8
ONAU  Onsala             122.66 338 i P      PKPdf    03 17 12.0 -1.5
LONY  Lake Ozonia        122.71  41  P       PKPdf    03 17 13.2 -0.8
      baz=295
BINY  Binghamton         122.74  44  P       PKPdf    03 17 13.3 -0.9
      baz=292
TRQA  Tornquist          122.81 145  PKPdf   PKPdf    03 17 14.2 -0.3
TRQA                                 IAMs_20 IAMs_20  04 10 33.5
      comp=Z,2µm,18.0s
TRQA  Tornquist          122.81 145  PKIKP   PKPdf    03 17 14.2 -0.3
TRQA                                 MLR     MLR
      comp=Z,2µm,18.0s
TRQA  Tornquist          122.81 145 eP       PKPdf    03 17 14.2 -0.3
RAZG  Razgrad            122.88 318 ⇑P       PKPdf    03 17 13.5 -0.9
BLS5  Blasjo             122.99 342 ePKPdf   PKiKP    03 17 14.9 +0.6
BLS5                                ePP      PP       03 18 53.4 +0.5
VOIR                     123.03 320 ⇑P       PKiKP    03 17 15.0  0.0
VOIR                     123.03 320  PKIKP   PKiKP    03 17 14.9  0.0
BSD   Bornholm Skovb     123.04 334 eP       PKPdf    03 17 14.2 -0.1
BSD   Bornholm Skovb     123.04 334 i P      PKPdf    03 17 13.7 -0.5
BJUU  Bjuv               123.17 336 i P      PKPdf    03 17 14.1 -0.5
GKP   Gorka Klasztor     123.18 332 ePKP     PKiKP    03 17 14.9  0.0
GKP   Gorka Klasztor     123.18 332 eP       PKiKP    03 17 15.2 +0.4
KULA  Kula-Manisa        123.21 312  P       PKPdf    03 17 12.8 -2.5
MCRA  Macar, Loja        123.21 100 eP       PKPdf    03 17 09.8 -6.2
HOMB  Homborsund         123.23 340 i P      PKPdf    03 17 13.7 -0.8
HOMB  Homborsund         123.23 340 ePKPdf   PKPdf    03 17 14.1 -0.4
HOMB                                ePP      PP       03 18 54.7 +0.2
HOMB                                ePS      PS       03 28 52.0 +0.2
HOMB                                 IVMs_BB IVMs_BB  04 12 21.9
      comp=Z,1µm,3.7s
KSL   Kastellorizon      123.23 309  P       PKPdf    03 17 13.5 -1.8
JMB   Yambol             123.27 317 i P      PKPdf    03 17 15.1  0.0
TRPA  Tarpa              123.28 324 ⇑P       PKPdf    03 17 15.0  0.0
TRPA  Tarpa              123.28 324 ⇑P       PKKPbc   03 27 04.8 -1.6
LUNU  Lund               123.30 335 i P      PKPdf    03 17 14.5 -0.2
ARR   Arges              123.33 321 ⇓P       PKiKP    03 17 15.8 +0.3
ARR   Arges              123.33 321 ⇑P       PKKPbc   03 27 06.1 -0.2
STHS  Stebnicka Huta     123.35 326 ePKIKP   PKPdf    03 17 15.2 +0.1
STHS  Stebnicka Huta     123.35 326 ePKP     PKPdf    03 17 15.2 +0.1
OVD   Ostervraa, Den     123.35 338 i P      PKPdf    03 17 14.5 -0.3
OVD                                 i P      PKiKP    03 17 14.7 -0.4
SZH   Strazhica          123.38 318 i P      PKPdf    03 17 14.4 -1.0
LSZ   Lusaka             123.42 246          PKPdf    03 17 15.4 -0.9
LSZ   Lusaka             123.42 246  PKIKP   PKPdf    03 17 15.4 -0.9
LSZ                                  MLR     MLR
      comp=Z,5µm,19.0s
HUMR  Humele             123.48 320 ⇓P       PKPdf    03 17 14.8 -0.7
SNART Snartemo           123.61 341 i P      PKPdf    03 17 14.8 -0.4
SNART Snartemo           123.61 341 ePKPdf   PKPdf    03 17 15.2 -0.1
MARR  Marisel-Cluj       123.65 323 ⇑P       PKPdf    03 17 14.9 -1.0
MARR  Marisel-Cluj       123.65 323 ⇑P       PKKPbc   03 27 04.8 -0.3
OJC   Ojcow              123.69 328 ePKP     PKPdf    03 17 15.4 -0.3
DRGR                     123.84 323 ⇑P       PKPdf    03 17 15.6 -0.7
DRGR                     123.84 323 ⇓P       PKKPbc   03 27 00.8 -3.5
DRGR                     123.84 323  PKIKP   PKPdf    03 17 15.5 -0.7
NIE   Niedzica           123.87 327 ePKP     PKiKP    03 17 17.4 +1.0
RGN   Rugen              124.10 335  IAMs_20 IAMs_20  04 18 17.5
      comp=Z,2µm,20.0s
ATAH  Atahualpa          124.12 104  PKP     PKiKP    03 17 18.6 +0.2
      comp=Z,17nm,0.8s,baz=216,slow=1.5,SNR=12
DEV   Deva               124.17 322 ⇑P       PKPdf    03 17 15.9 -0.8
DEV   Deva               124.17 322  PKIKP   PKPdf    03 17 15.9 -0.8
PLVB  Pleven             124.20 318 ⇑P       PKPdf    03 17 16.6 -0.3
ENEZ  Enez               124.23 315  P       PKPdf    03 17 15.4 -1.6
ALN   Alexandroupoli     124.25 315  P       PKPdf    03 17 14.5 -2.6
NNA   Nana               124.30 110  PKP     PKiKP    03 17 18.4 +0.1
      comp=Z,12nm,0.8s,baz=229,slow=6.4,SNR=2.6
NNA   Nana               124.30 110  IAMs_20 IAMs_20  04 11 32.5
      comp=Z,2µm,18.0s
MUD   Monsted U'grnd     124.38 338 i P      PKPdf    03 17 16.1 -0.7
KDZ   Kurdzhali          124.39 316 i P      PKPdf    03 17 16.3 -1.1
EZN   Ezine              124.45 314  P       PKPdf    03 17 15.7 -1.8
LANS  Liptovska Anna     124.47 327 ePKIKP   PKiKP    03 17 19.0 +1.3
LANS  Liptovska Anna     124.47 327 ePKP     PKiKP    03 17 18.9 +1.3
LRW   Lerwick            124.47 346 eP       PKPdf    03 17 16.1 -0.8
GZR   Gura Zlata         124.48 321 ⇑P       PKPdf    03 17 17.2 -0.3
GZR   Gura Zlata         124.48 321 ⇑P       PKKPbc   03 27 02.0 +0.2
GZR   Gura Zlata         124.48 321  PKIKP   PKPdf    03 17 17.2 -0.3
RDO   Rodhopi            124.50 316  P       PKPdf    03 17 16.1 -1.4
MBAR  Mbarara            124.61 264  PKPdf   PKPdf    03 17 18.9 +0.1
MBAR  Mbarara            124.61 264  IAMs_20 IAMs_20  04 07 53.4
      comp=Z,2µm,21.0s
MBAR  Mbarara            124.61 264  PKIKP   PKPdf    03 17 18.9 +0.1
MBAR  Mbarara            124.61 264 eP       PKiKP    03 17 20.2 +1.1
PAL   Palisades          124.63  45  P       PKPdf    03 17 16.9 -0.9
      baz=293
PRK   Paraskevi          124.70 313  P       PKPdf    03 17 16.8 -1.2
SURR  Surduc             124.70 322 ⇑P       PKPdf    03 17 17.0 -0.8
SURR  Surduc             124.70 322 ⇓P       Sdif     03 27 01.2  0.0
SMTH  Samothraki Isl     124.77 315  P       PKPdf    03 17 13.7 -4.4
OKC   Ostrava-Krasne     124.79 328 ePKPDF   PKiKP    03 17 18.3 +0.1
OKC                                 epPKP    pPKPdf   03 17 27.3 -3.4
OKC                                  AMS     AMS      04 16 20.0
      comp=Z,3µm,18.2s
OKC   Ostrava-Krasne     124.79 328 ePKIKP   PKiKP    03 17 18.3 +0.1
OKC                                 e                 03 17 27.3
OKC                                  MLR     MLR
      comp=Z,3µm,18.2s
RZN   Rozhen             124.85 316 i P      PKPdf    03 17 17.4 -1.1
PGB   Panagyurishte      124.86 318 i P      PKPdf    03 17 17.9 -0.4
L61B  Northampton        124.88  42  P       PKPdf    03 17 16.8 -1.4
      baz=295
PSZ   Piszkesteto        124.91 325  IAMs_20 IAMs_20  04 15 03.6
      comp=Z,3µm,20.0s
HERR  Herculane          124.94 321 ⇑P       PKPdf    03 17 18.0 -0.3
BCIP  Isla Barro Col     124.99  84  IAMs_20 IAMs_20  04 09 23.1
      comp=Z,2µm,19.0s
SIGR  SIGRI              125.02 313  P       PKPdf    03 17 14.8 -3.8
BZS   Buzias             125.08 322 ⇑P       PKPdf    03 17 17.6 -0.9
BZS   Buzias             125.08 322  PKIKP   PKPdf    03 17 17.6 -0.9
KSP   Ksiaz              125.14 330 ePKP     PKPdf    03 17 18.4  0.0
MORC  Moravsky Berou     125.14 328 ⇑P       PKPdf    03 17 18.5 -0.2
MORC  Moravsky Berou     125.14 328 ePKP     PKPdf    03 17 17.7 -0.9
MORC  Moravsky Berou     125.14 328  PKIKP   PKPdf    03 17 18.4 -0.2
YLE   Yale               125.18  44  IAMs_20 IAMs_20  04 08 25.8
      comp=Z,4µm,20.0s
VYHS  Vyhne              125.18 326 ePKIKP   PKPdf    03 17 18.8 +0.1
VYHS  Vyhne              125.18 326 ePDIFF   Pdif     03 13 56.4 +1.1
VYHS  Vyhne              125.18 326 ePKP     PKPdf    03 17 18.8 +0.1
LIA   Limnos Island      125.24 314  P       PKPdf    03 17 17.4 -1.6
KAVA  Kavala             125.27 316  P       PKPdf    03 17 16.6 -2.4
THAS  Thassos island     125.29 315  P       PKPdf    03 17 16.1 -3.0
RUE   Ruedersdorf        125.29 333 eP       PKiKP    03 17 19.7 +0.7
RUE   Ruedersdorf        125.29 333 ePKPdf   PKPdf    03 17 18.5 -0.2
      baz=47,slow=1.9
OSTC  Ostas              125.35 330 ePKPDF   PKiKP    03 17 19.7 +0.4
OSTC                                 AMS     AMS      04 12 10.0
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      comp=Z,3µm,22.9s
OSTC  Ostas              125.35 330 ePKIKP   PKiKP    03 17 19.7 +0.4
OSTC                                 MLR     MLR
      comp=Z,3µm,22.9s
KRLC  Kraliky            125.36 329 ePKPDF   PKiKP    03 17 19.7 +0.3
KRLC                                ePP      PP       03 19 10.2 +1.0
KRLC                                 AMS     AMS      04 14 30.0
      comp=Z,3µm,20.6s
KRLC  Kraliky            125.36 329 ePKIKP   PKiKP    03 17 19.7 +0.3
KRLC                                e                 03 19 10.2
KRLC                                 MLR     MLR
      comp=Z,3µm,20.6s
CHVC  Chvalec            125.42 330 ePKPDF   PKPdf    03 17 18.7 -0.4
CHVC                                 AMS     AMS      04 12 00.0
      comp=Z,3µm,20.4s
CHVC  Chvalec            125.42 330 ePKIKP   PKPdf    03 17 18.7 -0.4
CHVC                                 MLR     MLR
      comp=Z,3µm,20.4s
DPC   Dobruska-Polom     125.43 329 ePKP     PKPdf    03 17 19.2 +0.1
DPC                                  AMS     AMS      04 15 00.0
      comp=Z,3µm,21.2s
DPC   Dobruska-Polom     125.43 329 ePKIKP   PKPdf    03 17 19.2 +0.1
DPC                                  MLR     MLR
      comp=Z,3µm,21.2s
VTS   Vitosha            125.45 318 ⇑P       PKPdf    03 17 19.3 -0.3
VTS   Vitosha            125.45 318  PKIKP   PKPdf    03 17 19.2 -0.3
VTS   Vitosha            125.45 318 i P      PKPdf    03 17 19.5  0.0
PIAT  Ana Tenorio        125.49  96 eP       PKPdf    03 17 19.7 -1.0
UPC   Upice              125.49 330 ePKPDF   PKPdf    03 17 19.2  0.0
UPC                                  AMS     AMS      04 17 00.0
      comp=Z,2µm,18.9s
UPC   Upice              125.49 330 ePKIKP   PKPdf    03 17 19.2  0.0
UPC                                  MLR     MLR
      comp=Z,2µm,18.9s
OTAV  Otavalo            125.50  95          PKPdf    03 17 19.8 -1.0
OTAV  Otavalo            125.50  95  IAMs_20 IAMs_20  04 03 06.4
      comp=Z,2µm,19.0s
OTAV  Otavalo            125.50  95  PKIKP   PKPdf    03 17 19.8 -1.0
OTAV  Otavalo            125.50  95 eP       PKPdf    03 17 16.0 -4.9
OTAV  Otavalo            125.50  95 eP       PKPdf    03 17 19.6 -1.3
MMB   Musomiste          125.57 317 i P      PKPdf    03 17 18.4 -1.2
NVR   Nevrokopi          125.58 316  P       PKPdf    03 17 19.2 -0.5
JAVC  Velka Javorina     125.61 327 ePKP     PKiKP    03 17 20.1 +0.2
PKME  Peaks-Kenny Pk     125.75  38  P       PKPdf    03 17 18.4 -1.4
      baz=300
PQI   Presque Isle       125.78  36          PKPdf    03 17 18.4 -1.4
SRO   Srobarova          125.85 326 ePKIKP   PKiKP    03 17 22.1 +1.8
SRO   Srobarova          125.85 326 ePKP     PKiKP    03 17 22.1 +1.8
SRS   Serrai             125.86 316  P       PKPdf    03 17 16.9 -3.3
KKB   Krupnik            125.88 317 i P      PKPdf    03 17 19.8 -0.4
VRAC  Vranov             125.92 328 ⇑P       PKPdf    03 17 19.1 -0.9
VRAC  Vranov             125.92 328 ePKP     PKPdf    03 17 20.2 +0.2
VRAC  Vranov             125.92 328  PKIKP   PKPdf    03 17 19.1 -0.9
BOVS  Bovan              125.98 320 ⇑P       PKPdf    03 17 19.3 -1.0
MODS  Modra-Piesok       126.10 327 ePKIKP   PKiKP    03 17 21.1 +0.2
MODS  Modra-Piesok       126.10 327 ePKP     PKiKP    03 17 21.1 +0.2
GR1C  Gorgona, Isla      126.15  92 eP       PKPdf    03 17 20.2 -1.3
KRUC  Moravsky           126.17 328 ePKP     PKPdf    03 17 19.7 -0.8
PVCC  Panska Ves         126.19 330 ePKPDF   PKPdf    03 17 20.5  0.0
PVCC                                 AMS     AMS      04 19 00.0
      comp=Z,2µm,18.3s
PVCC  Panska Ves         126.19 330 ePKIKP   PKPdf    03 17 20.5  0.0
PVCC                                 MLR     MLR
      comp=Z,2µm,18.3s
CMBC  Cumbal             126.22  94 eP       PKiKP    03 17 23.2 +0.5
BRG   Berggiesshubel     126.27 331 i PKP    PKiKP    03 17 20.8 -0.3
BRG                                  Amp              03 17 24.6
      comp=Z,153nm,1.5s
BRG   Berggiesshubel     126.27 331  P       PKiKP    03 17 30.4 +9.3
BRG                                  Amp              03 17 31.4
      comp=Z,54nm,1.2s
BRG   Berggiesshubel     126.27 331  P       PKiKP    03 17 35.7  +15
BRG                                  Amp              03 17 36.7
      comp=Z,29nm,1.2s
BRG                                  PP      PP       03 19 14.9 -0.2
BRG                                  Amp              03 19 19.5
      comp=Z,74nm,1.8s
BRG   Berggiesshubel     126.27 331  SP      SP       03 29 11.0 -1.8
BRG   Berggiesshubel     126.27 331  SS      SS       03 36 13.0 -2.3
BRG   Berggiesshubel     126.27 331 i PKIKP  PKiKP    03 17 20.8 -0.3
BRG                                                   03 17 30.4
BRG                                                   03 19 14.9
BRG                                  pmax    pmax
      comp=Z,153nm,1.5s
BRG                                  pmax    pmax
      comp=Z,75nm,1.8s
BRG   Berggiesshubel     126.27 331 ePKPdf   PKPdf    03 17 20.4 -0.2
      baz=47,slow=1.9
KNT   Kendrikon          126.31 317  P       PKPdf    03 17 17.3 -3.8
FRGS  Fruska Gora        126.41 322 ⇑P       PKPdf    03 17 21.2  0.0
FRGS  Fruska Gora        126.41 322 eP       PKPdf    03 17 20.1 -1.0
CLL   Collm              126.43 332  PKPdf   PKPdf    03 17 20.6 -0.3
CLL                                  IAMs_20 IAMs_20  04 18 23.4
      comp=Z,3µm,19.0s
CLL   Collm              126.43 332 ePKPdf   PKPdf    03 17 20.0 -0.9
      comp=Z,63nm,1.1s
CLL                                 epPKPdf  PKiKP    03 17 27.0 +5.6
CLL                                 esPKPdf  pPKPdf   03 17 29.0 -4.8
CLL                                 ePP      PP       03 19 17.0 +0.8
CLL                                 ex       x        03 19 34.0
CLL                                 ex       x        03 20 38.0
CLL                                 ePPP     PPP      03 21 57.0
CLL                                 eSKKSac  SKKSac   03 26 12.0 +0.7
CLL                                 e(PS)             03 29 12.0
CLL                                 ePKKSbc  PKKSbc   03 30 46.0 -1.7
      comp=Z,47nm,2.0s
CLL                                 ePPS     PPS      03 30 51.0
CLL                                 ePPPrev           03 34 23.0
CLL                                 ex       x        03 35 48.0
CLL                                 eSS      SS       03 36 18.0 +0.8
CLL                                 ex       x        03 37 24.0
CLL                                 eSSS     SSS      03 41 00.0
CLL                                 eSSSS             03 44 36.0
CLL                                  AMS     AMS      04 18 00.0
CLL                                  AMS     AMS      04 18 00.0
      comp=N,2µm,19.9s
CLL                                  AMS     AMS      04 18 00.0
      comp=E,1µm,19.2s
CLL                                  AMS     AMS      04 18 00.0
      comp=Z,3µm,19.0s
CLL   Collm              126.43 332 ePKIKP   PKPdf    03 17 20.0 -0.9
CLL                                 e                 03 17 29.0
CLL                                 e                 03 19 17.0
CLL                                  pmax    pmax
      comp=Z,63nm,1.1s
CLL                                  MLR     MLR
      comp=Z,3µm,19.0s
CLL   Collm              126.43 332 ePKPdf   PKPdf    03 17 20.4 -0.5
      baz=47,slow=1.9
CLL                                 eL       L        04 15 02.9
      comp=Z,3µm,21.8s
BONI  La Bonita          126.44  95 eP       PKiKP    03 17 24.7 +1.8
VAY   Valandovo          126.47 317 eP       PKPdf    03 17 19.4 -1.9
GOPC  GO Pecny, Ondr     126.47 330 ePKPDF   PKPdf    03 17 21.1  0.0
GOPC                                 AMS     AMS      04 13 10.0
      comp=Z,2µm,18.8s
GOPC  GO Pecny, Ondr     126.47 330 ePKIKP   PKPdf    03 17 21.1  0.0
GOPC                                 MLR     MLR
      comp=Z,2µm,18.8s
THE   Thessaloniki       126.49 316  P       PKPdf    03 17 20.0 -1.4
TREC  Trest              126.50 329 ePKPDF   PKiKP    03 17 21.6  0.0
TREC                                 AMS     AMS      04 15 30.0
      comp=Z,4µm,22.1s
TREC  Trest              126.50 329 ePKIKP   PKiKP    03 17 21.6  0.0
TREC                                 MLR     MLR
      comp=Z,4µm,22.1s
KYMI  Kymi, Euboea I     126.50 313  P       PKPdf    03 17 19.0 -2.5
FBE   Freiberg           126.52 331 ePKPdf   PKPdf    03 17 21.1 -0.1
      baz=47,slow=1.9
FLTG  Flechtingen        126.54 334 ePKPdf   PKPdf    03 17 20.7 -0.4
      baz=47,slow=1.9
MORH  Mrgy, Hungar       126.55 324 ⇑P       PKPdf    03 17 20.8 -0.5
PRU   Pruhonice          126.55 330 ePKPDF   PKPdf    03 17 21.3 +0.1
PRU                                 epPKP    pPKPdf   03 17 30.5 -3.6
PRU                                 ePP      PP       03 19 18.0 +1.0
PRU                                 eSP      SP       03 29 13.1 -2.2
PRU                                  AMS     AMS      04 19 10.0
      comp=Z,2µm,18.5s
PRU   Pruhonice          126.55 330 ePKIKP   PKPdf    03 17 21.3 +0.1
PRU                                 e                 03 17 30.5
PRU                                 e                 03 19 18.0
PRU                                 eSP      SP       03 29 13.1 -2.2
PRU                                  MLR     MLR
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      comp=Z,2µm,18.5s
STIP  Stip               126.56 318 eP       PKPdf    03 17 19.6 -1.8
GCUF  Volcan Galeras     126.73  94 eP       PKiKP    03 17 25.3 +1.6
GRG   Griva              126.74 317  P       PKPdf    03 17 20.0 -1.9
DION  Dionisos Attik     126.84 313  P       PKPdf    03 17 21.2 -1.0
DIVS  Divibare           126.84 321 eP       PKPdf    03 17 20.9 -1.2
NEO   Neokhori           126.86 314  P       PKPdf    03 17 20.8 -1.4
PTL   Penteli            126.90 313  P       PKPdf    03 17 21.1 -1.2
NRDL  Niedersach Rie     126.91 334 ePKPdf   PKPdf    03 17 21.8 +0.1
      baz=47,slow=1.9
ASSE  Asse, Remlinge     126.92 334 ePKPdf   PKPdf    03 17 21.7 -0.1
      baz=47,slow=1.9
SKO   Skopje             126.93 318 eP       PKPdf    03 17 21.2 -1.0
BBAC  Balboa, Cauca      126.94  93 eP       PKPdf    03 17 21.2 -2.1
ATHU  Athens Univers     126.99 313  P       PKPdf    03 17 21.4 -1.0
VLY   Voula,Athens       127.03 313  P       PKPdf    03 17 18.6 -3.9
RONA  Rosalia, Austr     127.03 327 i PKP    PKPdf    03 17 21.9 -0.4
      comp=Z,60nm,1.4s,SNR=18
ATH   Athens Observa     127.04 313  P       PKPdf    03 17 20.7 -1.8
LIT   Litokhoron         127.05 316  P       PKPdf    03 17 19.9 -2.6
RETH  Rethem/Aller,      127.05 335 ePKPdf   PKPdf    03 17 22.0 -0.1
      baz=47,slow=1.9
NEUB  Neuenburg          127.07 332 ePKPdf   PKPdf    03 17 21.8 -0.3
      baz=47,slow=1.9
MALC  Bahia Malaga       127.08  90 eP       PKiKP    03 17 25.1 +1.3
IDI   Anoyia             127.13 309  P       PKPdf    03 17 21.4 -1.5
CONA  Conrad Observa     127.13 327 i PKP    PKPdf    03 17 22.0 -0.5
      comp=Z,89nm,1.8s,SNR=30
LVC   Limon Verde        127.13 125  PKPdf   PKPdf    03 17 23.7 +0.1
LVC   Limon Verde        127.13 125  IAMs_20 IAMs_20  04 00 27.7
      comp=Z,3µm,22.0s
LVC   Limon Verde        127.13 125  PKIKP   PKPdf    03 17 23.7 +0.1
LVC   Limon Verde        127.13 125 eP       PKPdf    03 17 22.4 -1.2
CRUC  La Cruz            127.17  94 eP       PKPdf    03 17 20.8 -3.1
ATAL  Atalanti           127.26 314  P       PKPdf    03 17 20.5 -2.4
CLZ   Clausthal          127.26 334 ePKPdf   PKPdf    03 17 22.6  0.0
      baz=47,slow=1.9
SJES  Sjenica            127.27 320 eP       PKPdf    03 17 22.3 -0.7
TANN  Tannenbergstha     127.28 331 ePKPdf   PKPdf    03 17 22.4 -0.3
      baz=47,slow=1.9
WERD  Werda              127.34 331 ePKPdf   PKPdf    03 17 22.5 -0.3
      baz=47,slow=1.9
GUNZ  Gunzen             127.38 331 ePKPdf   PKPdf    03 17 22.7 -0.1
      baz=47,slow=1.9
PLN   Plauen             127.38 332 ePKPdf   PKPdf    03 17 22.5 -0.3
      baz=47,slow=1.9
CKRC  Cesky Krumlov      127.40 329 ePKPDF   PKPdf    03 17 23.0 +0.1
CKRC                                ex       x        03 17 32.4
CKRC                                 AMS     AMS      04 16 30.0
      comp=Z,2µm,17.8s
CKRC  Cesky Krumlov      127.40 329 ePKIKP   PKPdf    03 17 23.0 +0.1
CKRC                                e                 03 17 32.4
CKRC                                 MLR     MLR
      comp=Z,2µm,17.8s
WERN  Wernitzgruen       127.41 331 ePKPdf   PKPdf    03 17 22.8 -0.1
      baz=47,slow=1.9
NKC   Novy Kostel        127.41 331 ePKPDF   PKiKP    03 17 23.4  0.0
NKC                                 ePP      PP       03 19 25.7 +3.0
NKC                                  AMS     AMS      04 13 40.0
      comp=Z,2µm,20.2s
NKC   Novy Kostel        127.41 331 ePKIKP   PKiKP    03 17 23.4  0.0
NKC                                 e                 03 19 25.7
NKC                                  MLR     MLR
      comp=Z,2µm,20.2s
RUDO  Rudo               127.47 321 eP       PKPdf    03 17 21.9 -1.3
AXAR  Agios Charalam     127.48 314  P       PKPdf    03 17 21.9 -1.5
HAPS  Han Pijesak,Bl     127.49 322 eP       PKPdf    03 17 22.5 -0.9
FNA   Florina            127.52 317  P       PKPdf    03 17 21.2 -2.2
MOX   Moxa               127.53 332 ePKPdf   PKPdf    03 17 22.8 -0.3
      baz=47,slow=1.9
MOX                                 eL       L        04 17 11.6
      comp=Z,3µm,19.5s
POPC  Popayan, Colom     127.57  92 eP       PKPdf    03 17 22.9 -1.7
KHC   Kasperske Hory     127.58 329  PKPdf   PKPdf    03 17 22.5 -0.8
KHC   Kasperske Hory     127.58 329 ePKPDF   PKPdf    03 17 22.8 -0.5
KHC                                 epPKP    pPKPdf   03 17 32.9 -3.2
KHC                                 ex       x        03 18 02.0
KHC                                 ePP      PP       03 19 26.0 +2.1
KHC                                 eSP      SP       03 29 25.1 +0.7
KHC                                  AMS     AMS      04 13 30.0
      comp=Z,4µm,20.4s
KHC   Kasperske Hory     127.58 329 ePKIKP   PKPdf    03 17 22.8 -0.5
KHC                                 e                 03 19 26.0
KHC                                 eSP      SP       03 29 25.1 +0.7
KHC                                  MLR     MLR
      comp=Z,4µm,20.4s
THL   Klokotos Trika     127.61 315  P       PKPdf    03 17 20.0 -3.5
AGG   Agios Georgios     127.61 314  P       PKPdf    03 17 22.7 -0.9
GTTG  Gottingen          127.65 334 ePKPdf   PKPdf    03 17 23.2  0.0
      baz=47,slow=1.9
JAMC  Jamundi, Valle     127.65  92 eP       PKPdf    03 17 24.7 +0.1
KRND  KRANIDI            127.68 312  P       PKPdf    03 17 22.0 -1.7
GEC2  GERESS Array S     127.70 329 ePKPdf   PKPdf    03 17 23.1 -0.5
      baz=47,slow=1.9
GEC2                                eL       L        04 14 11.9
      comp=Z,3µm,22.0s
GERES GERESS Array B     127.70 329  PKP     PKPdf    03 17 22.4 -1.1
      comp=Z,10nm,0.7s,baz=64,slow=3.1,SNR=50
ARSA  Arzberg            127.72 327 ePKP     PKPdf    03 17 22.9 -0.7
      comp=Z,30nm,1.3s
PHP   Peshkopia          127.73 318  P       PKPdf    03 17 22.9 -0.9
MANZ  Manzenberg         127.74 331 ePKPdf   PKPdf    03 17 23.3 -0.2
      baz=47,slow=1.9
OHR   Ohrid              127.76 317 eP       PKPdf    03 17 22.9 -1.0
MAKR  Makrakomi, Fth     127.76 314  P       PKPdf    03 17 22.5 -1.4
IMMV  Iera Moni Meta     127.76 310  P       PKPdf    03 17 23.6 -0.4
THAL  Thalero            127.78 313  P       PKPdf    03 17 21.9 -2.0
A052A Srbac              127.82 323 eP       PKPdf    03 17 22.5 -1.3
ROTZ  Rotzenmuhle        127.84 331 ePKPdf   PKPdf    03 17 23.4 -0.3
      baz=47,slow=1.9
ROTZ                                ePP      PP       03 19 28.4 +2.8
RODP  Rodopos            127.90 310  P       PKiKP    03 17 24.7 -0.1
EVR   Evrytania          128.03 315  P       PKPdf    03 17 24.7 +0.2
MOA   Molln              128.03 328 ePKP     PKPdf    03 17 22.8 -1.4
      comp=Z,47nm,1.8s
IBBN  Ibbenburen         128.03 336 ePKPdf   PKPdf    03 17 23.8 -0.1
      baz=47,slow=1.9
SERG  Sergoula           128.06 314  P       PKPdf    03 17 23.4 -1.1
YOTC  Yotoco, Valle      128.06  91 eP       PKPdf    03 17 23.2 -2.1
KNDR  Palaiochora Ch     128.07 309  P       PKPdf    03 17 23.4 -1.1
ANX   Ano Chora          128.08 314  P       PKPdf    03 17 23.8 -0.8
VLI   Veliai             128.09 312  P       PKPdf    03 17 22.3 -2.3
PDG   Podgorica          128.14 320 ⇑P       PKPdf    03 17 24.5  0.0
PDG   Podgorica          128.14 320  IAMs_20 IAMs_20  04 21 28.5
      comp=Z,2µm,20.0s
APAC  Apartado, Choc     128.14  86 eP       PKPdf    03 17 25.2 -0.1
KLV   Kalavryta, Ach     128.14 313  P       PKPdf    03 17 22.7 -2.0
UBBA  Unterbreizbach     128.15 333 ePKPdf   PKPdf    03 17 22.9 -1.2
      baz=47,slow=1.9
EFP   Efpalio            128.16 314  P       PKPdf    03 17 22.8 -1.8
KTHA  Kythira Island     128.17 311  P       PKPdf    03 17 22.5 -2.3
LAKA  Lakka              128.19 314  P       PKPdf    03 17 23.7 -1.0
BLY   Banja Luka         128.21 323 eP       PKPdf    03 17 23.2 -1.3
A051A Mrakovica          128.23 324 eP       PKPdf    03 17 23.8 -0.9
TIR   Tirane             128.27 318          PKPdf    03 17 24.8  0.0
TIR   Tirane             128.27 318  PKIKP   PKPdf    03 17 24.8  0.0
DRME  Dracevica, Mon     128.31 319 eP       PKPdf    03 17 24.6 -0.2
LSK   Leskovik           128.33 316  P       PKPdf    03 17 24.1 -0.9
SOKA  Soboth             128.33 326 i PKP    PKPdf    03 17 23.8 -1.0
      comp=Z,71nm,1.6s,SNR=30
PVO   Paravola           128.35 314  P       PKPdf    03 17 23.3 -1.7
BRY   Bratogost          128.36 320 eP       PKPdf    03 17 24.3 -0.8
GRF   Grafenberg Arr     128.36 331 ePKPdf   PKPdf    03 17 24.4 -0.3
      baz=47,slow=1.9
GRF                                 eL       L        04 15 15.1
      comp=Z,2µm,21.7s
GRFO  Grafenberg         128.37 331  PKPdf   PKiKP    03 17 25.3  0.0
GRFO  Grafenberg         128.37 331  PKIKP   PKiKP    03 17 25.3  0.0
GRFO                                 MLR     MLR
      comp=Z,2µm,21.0s
JAN   Janina             128.38 316  P       PKPdf    03 17 24.5 -0.6
MGRS  Mrkonjic Grad      128.45 323 eP       PKPdf    03 17 25.2 +0.1
DBBC  Dabeiba            128.46  87 eP       PKPdf    03 17 22.8 -3.2
FLOC  Florencia          128.46  94 eP       PKiKP    03 17 27.6 +1.1
BIOA  Bad Ischl, Aus     128.46 328 i PKP    PKPdf    03 17 24.0 -1.0
      comp=Z,68nm,1.7s,SNR=20
INVG  Invergeldie, C     128.47 346 eP       PKPdf    03 17 24.4 -0.2
DRO   Drossia            128.50 313  P       PKPdf    03 17 24.5 -0.8
CBOC  Ciudad Bolivar     128.57  88 eP       PKPdf    03 17 25.2 -1.1
KASTN Kahler Asten       128.57 334 ePKPdf   PKPdf    03 17 24.9 -0.2
      baz=47,slow=1.9
TREB  Trebinje           128.57 320 eP       PKPdf    03 17 22.6 -2.7
CRES  Cresnjev           128.60 325 eP       PKPdf    03 17 23.6 -1.7
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HCY	Herceg Novi	128.62	320	eP	PKPdf	03 17 24.8	-0.6
RLS	Riolos of Patr	128.63	314	P	PKPdf	03 17 24.6	-0.9
ITM	Ithomi	128.66	312	P	PKPdf	03 17 24.7	-1.0
GARC	Garzon, Huila	128.70	93	eP	PKPdf	03 17 26.4	-0.3
OBKA	Obir	128.70	326	i PKP	PKPdf	03 17 24.6	-1.0
	comp=Z,36nm,1.8s,SNR=12						
OBKA	Obir	128.70	326	eP	PKPdf	03 17 24.6	-1.0
A050A	Klekovaca	128.75	323	eP	PKPdf	03 17 25.1	-0.6
IGT	Igoumenitsa	128.79	316	P	PKPdf	03 17 24.2	-1.6
BETC	Betania	128.81	92	eP	PKiKP	03 17 29.1	+1.7
SRN	Sarande	128.86	316	P	PKPdf	03 17 24.1	-1.8
RJOB	Jochberg	128.87	329	ePKPdf	PKPdf	03 17 24.9	-0.9
	baz=47,slow=1.9						
BUG	Bochum--Univer	128.88	335	ePKPdf	PKPdf	03 17 25.3	-0.3
	baz=47,slow=1.9						
LKD2	Lefkada island	128.89	315	P	PKPdf	03 17 25.3	-0.8
NYDR	Nydri-Lefkada	128.90	315	P	PKPdf	03 17 25.5	-0.5
STON	Ston	128.90	321	eP	PKPdf	03 17 22.3	-3.6
PYL	PYLOS	128.90	312	P	PKPdf	03 17 24.2	-1.9
BOJS	Bojanci	128.91	325	eP	PKPdf	03 17 25.2	-0.6
LAWE	Loch Awe, Argy	128.94	347	eP	PKPdf	03 17 23.2	-2.4
EVGI	Lefkada island	128.97	315	P	PKiKP	03 17 26.7	-0.2
KBA	Koelnbreinsper	129.00	328	i PKP	PKPdf	03 17 25.0	-1.2
	comp=Z,37nm,1.6s,SNR=14						
ANIL	Santa Ana	129.05	90	eP	PKPdf	03 17 26.0	-1.4
HELC	Santa Helena	129.07	88		PKPdf	03 17 26.0	-1.5
HELC	Santa Helena	129.07	88	eP	PKPdf	03 17 22.9	-4.6
KEK	Kerkira	129.08	316	P	PKPdf	03 17 26.3	-0.1
FSK	Fiskardo	129.10	315	P	PKPdf	03 17 24.6	-1.8
MYKA	Terra Mystica	129.12	327	i PKP	PKPdf	03 17 25.1	-1.2
	comp=Z,43nm,1.6s,SNR=13						
ORTC	Ortega, Tolima	129.15	91	eP	PKPdf	03 17 23.7	-3.6
UREC	San Jos de Ur	129.17	86	eP	PKPdf	03 17 22.6	-4.7
GTBY	Guantanamo Bay	129.18	70	IAMs_20	IAMs_20	04 11 15.8	
	comp=Z,2µm,19.0s						
LTHK	Lithakia	129.23	314	P	PKPdf	03 17 24.0	-2.7
CEY	Cerknica	129.23	326	eP	PKPdf	03 17 26.0	-0.5
ESK	Eskdalemuir	129.25	345	eP	PKPdf	03 17 25.8	-0.4
TNS	Taunus Mts	129.27	333	ePKPdf	PKPdf	03 17 26.4	-0.1
	baz=47,slow=1.9						
TNS				eL	L	04 18 05.9	
	comp=Z,2µm,21.6s						
KEF4	Livadi, Kephal	129.29	314	P	PKPdf	03 17 25.8	-1.0
EDMD	Edmundbyers	129.34	344	eP	PKPdf	03 17 25.9	-0.5
FUR	Furstenfeldbru	129.37	330	ePKPdf	PKPdf	03 17 26.3	-0.4
	baz=47,slow=1.9						
FUR				eL	L	04 17 42.5	
	comp=Z,2µm,20.1s						
SKDS	Skadanscina	129.58	326	eP	PKPdf	03 17 24.5	-2.7
SJCC	San Jacinto, C	129.60	83	eP	PKiKP	03 17 28.9	0.0
AHRW	Bad Neuenahr-A	129.63	334	ePKPdf	PKPdf	03 17 27.0	0.0
	baz=47,slow=1.9						
ABTA	Abfaltersbach	129.65	328	i PKP	PKPdf	03 17 26.1	-1.3
	comp=Z,82nm,1.5s,SNR=22						
ABTA				eSKP		03 20 52.8	
	comp=Z,46nm,1.7s						
NORC	Norcasia	129.68	89	eP	PKPdf	03 17 28.2	-0.1
NEWG	New Galloway	129.70	345	eP	PKiKP	03 17 27.8	0.0
WATA	Walderalm	129.76	329	i PKP	PKPdf	03 17 26.7	-0.9
	comp=Z,102nm,1.6s,SNR=22						
WATA				eSKP		03 20 53.4	
	comp=Z,39nm,1.4s						
WTTA	Wattenberg	129.78	329	i PKP	PKPdf	03 17 27.0	-0.7
	comp=Z,166nm,1.8s,SNR=30						
WTTA				eSKP		03 20 54.3	
	comp=Z,94nm,1.8s						
WIN	Windhoek	129.82	233	IAMs_20	IAMs_20	04 10 18.5	
	comp=Z,3µm,20.0s						
ZARC	Zaragoza, Cauc	129.82	86	eP	PKPdf	03 17 25.8	-2.7
STAL	STALIGIAL	129.86	327	PKPdf	PKiKP	03 17 28.1	-0.4
STU	Stuttgart	129.96	332	IAMs_20	IAMs_20	04 19 00.7	
	comp=Z,2µm,20.0s						
STU	Stuttgart	129.96	332	ePKPdf	PKPdf	03 17 27.5	-0.3
	baz=47,slow=1.9						
CIMO	Cimolais	129.97	327	PKPdf	PKPdf	03 17 27.0	-0.9
MOTA	Moosalm	130.00	329	i PKP	PKPdf	03 17 27.3	-0.7
	comp=Z,67nm,1.2s,SNR=13						
MOTA				eSKP		03 20 45.1	
	comp=Z,35nm,1.6s						
HPK	Haverah Park	130.01	343	eP	PKPdf	03 17 27.0	-0.6
BEBN	Eben Emael	130.03	336	dPKP	PKiKP	03 17 28.6	+0.1
SQTA	Sankt Quirin	130.03	329	i PKP	PKPdf	03 17 27.1	-1.0
	comp=Z,56nm,1.0s,SNR=21						
SQTA				eSKP		03 20 45.5	
	comp=Z,33nm,1.4s						
MEM	Membach	130.03	335	dPKP	PKPdf	03 17 27.5	-0.3
GAL1	Galloway	130.04	345	eP	PKPdf	03 17 27.3	-0.4
RETA	Reutte	130.08	329	i PKP	PKPdf	03 17 27.6	-0.6
	comp=Z,46nm,1.4s,SNR=15						
ROSC	El Rosal	130.16	90	PKP	PKPdf	03 17 28.5	-1.1
	comp=Z,15nm,0.5s,baz=115,slow=8.1,SNR=7.8						
ROSC				SKPbc	SKPbc	03 20 51.2	+1.7
	comp=Z,6.2nm,0.5s,baz=277,slow=3.3,SNR=5.3						
ROSC	El Rosal	130.16	90	eP	PKPdf	03 17 27.2	-2.4
PTBC	PUERTO BERRIO,	130.16	88	eP	PKPdf	03 17 27.8	-1.3
BHOU	Houvegnez	130.23	335	dPKP	PKPdf	03 17 26.4	-1.8
BSTI	Sart Tilman	130.24	335	dPKP	PKiKP	03 17 28.8	-0.3
UBR	Ueberruh	130.27	330	ePKPdf	PKPdf	03 17 27.9	-0.6
	baz=47,slow=1.9						
MACC	Macarena, Meta	130.32	93	eP	PKPdf	03 17 26.8	-2.7
WACR	West Acre	130.36	340	eP	PKPdf	03 17 28.7	+0.4
BOG	Bogota	130.39	90	eP	PKiKP	03 17 42.8	+12
FETA	Feichten	130.40	329	i PKP	PKPdf	03 17 27.4	-1.5
	comp=Z,47nm,1.1s,SNR=16						
FETA				i SKP		03 20 48.3	
	comp=Z,70nm,1.6s						
BCLA	Clavier	130.47	336	dPKP	PKPdf	03 17 28.7	0.0
SPBC	San Pablo de B	130.48	89	eP	PKPdf	03 17 27.1	-2.7
BGES	Gesves	130.58	336	dPKP	PKPdf	03 17 28.6	-0.2
LPAZ	La Paz	130.65	119	PKP	PKPdf	03 17 30.6	-0.2
	comp=Z,42nm,1.3s,baz=200,slow=5.2,SNR=6.9						
LPAZ				SKPbc	SKPab	03 20 53.0	+1.5
	comp=Z,4.1nm,0.6s,baz=270,slow=5.0,SNR=9.2						
LPAZ	La Paz	130.65	119	eP	PKPdf	03 17 27.8	-2.9
DAVA	Damuels	130.65	330	i PKP	PKPdf	03 17 28.1	-1.2
	comp=Z,81nm,1.9s,SNR=9.0						
DAVA				eSKP		03 20 48.4	
	comp=Z,42nm,1.6s						
BFO	Black Forest	130.68	332	PKPdf	PKPdf	03 17 29.1	-0.1
BFO				IAMs_20	IAMs_20	04 19 11.7	
	comp=Z,2µm,20.0s						
BFO	Black Forest	130.68	332	PKIKP	PKPdf	03 17 29.1	-0.1
BFO	Black Forest	130.68	332	ePKPdf	PKPdf	03 17 28.6	-0.6
	baz=47,slow=1.9						
BFO				ePP	PP	03 19 44.6	+0.5
BFO				eL	L	04 19 12.6	
	comp=Z,2µm,20.3s						
WLF	Walferdange	130.68	334	IAMs_20	IAMs_20	04 15 39.7	
	comp=Z,2µm,22.0s						
WLF	Walferdange	130.68	334	dPKP	PKiKP	03 17 30.0	0.0
WLF	Walferdange	130.68	334	ePKPdf	PKiKP	03 17 29.6	-0.4
	baz=47,slow=1.9						
RCHB	Rochefort	130.70	335	dPKP	PKPdf	03 17 27.7	-1.4
VILC	Villavicencio,	130.71	91	eP	PKPdf	03 17 30.2	-0.2
CHIC	Chingaza	130.72	90	eP	PKPdf	03 17 29.0	-1.7
ELMS	Elmsett, Ipswi	130.76	340	eP	PKPdf	03 17 28.1	-1.0
BMRD	Maredsous	130.78	336	dPKP	PKPdf	03 17 28.5	-0.7
SNF	Seneffe	130.81	336	dPcP	PKPdf	03 17 29.5	+0.2
FUORN	Ofenpass-Fuorn	130.91	329	IAMs_20	IAMs_20	04 19 42.1	
	comp=Z,2µm,20.0s						
STNC	Stoke	130.94	343	eP	PKiKP	03 17 29.9	-0.4
BRRC	Barranca, Sant	130.94	87	eP	PKiKP	03 17 32.0	+0.5
CWF	Charnwood Fore	130.97	342	eP	PKPdf	03 17 29.8	+0.3
DAVOX	Davos/Dischmat	131.00	329	PKP	PKPdf	03 17 29.3	-0.7
	comp=Z,18nm,0.6s,baz=233,slow=8.8,SNR=12						
DAVOX				SKPbc	SKPab	03 20 53.5	+2.0
	comp=Z,21nm,1.0s,baz=290,slow=19,SNR=15						
DOU	Dourbes	131.01	336	dPKP	PKPdf	03 17 28.2	-1.5
MECA	Mercedes	131.11	140	eP	PKPdf	03 17 30.2	-0.4
WME	Myndd Eilian	131.26	344	eP	PKPdf	03 17 30.2	+0.2
ECH	Echery	131.31	332	IAMs_20	IAMs_20	04 20 08.3	
	comp=Z,2µm,20.0s						
WLF1	Llynfaes	131.38	344	eP	PKiKP	03 17 31.0	-0.3
TIP	Timpagrande	131.40	317	⇓P	PKPdf	03 17 30.5	-0.4
TIP	Timpagrande	131.40	317	PKPdf	PKPdf	03 17 29.9	-1.0
FOEL	Foel Wylfa	131.40	343	eP	PKiKP	03 17 31.0	-0.3
BARC	Barichara	131.43	88	eP	PKPdf	03 17 26.8	-5.0
RUSC	La Rusia	131.48	89	eP	PKPdf	03 17 31.0	-1.3
TUE	Stuetta	131.48	329	IAMs_20	IAMs_20	04 19 57.0	
	comp=Z,3µm,20.0s						
LLW	Llanuwychllyn	131.57	343	eP	PKPdf	03 17 30.7	0.0
HLM1	Long Mynd	131.64	343	eP	PKPdf	03 17 31.2	+0.3
INTR	Introdacqua	131.72	322	PKPdf	PKPdf	03 17 31.6	+0.2
AQU	L'Aquila	131.83	323	IAMs_20	IAMs_20	04 20 47.0	
	comp=Z,3µm,20.0s						
ITQB	Itaqui	131.83	141	eP	PKPdf	03 17 32.0	+0.1
PAMC	Pamplona, Colo	131.95	87	eP	PKPdf	03 17 32.0	-1.2
STRD	Stroud	132.06	342	eP	PKPdf	03 17 31.9	+0.3
PLTB	Pedras Altas	132.09	146	PKPdf	PKPdf	03 17 32.3	-0.1
PLTB	Pedras Altas	132.09	146	eP	PKPdf	03 17 31.8	-0.6
MCH1	Michaelchurch	132.13	342	eP	PKPdf	03 17 32.0	+0.2
WOL	Wolverton	132.16	341	eP	PKPdf	03 17 32.1	+0.2
RODS	Rosario do Sul	132.22	143	eP	PKPdf	03 17 31.8	-0.9
PTGC	Puerto Gaitan,	132.26	91	eP	PKPdf	03 17 28.1	-5.0
GRTK	Grand Turk	132.63	68	IAMs_20	IAMs_20	04 17 08.0	
	comp=Z,3µm,18.0s						
SDDR	Presa de Saban	132.88	71	IAMs_20	IAMs_20	04 12 14.8	
	comp=Z,3µm,19.0s						
TBTG	Tabatinga, AM	133.02	103	eP	PKPdf	03 17 32.0	-2.5
TBTG	Tabatinga, AM	133.02	103	eP	PKPdf	03 17 33.7	-0.8
CPSB	Cacapava Do Su	133.21	145	eP	PKPdf	03 17 33.6	-0.9
AZCA	Azaras, Argent	133.34	140	eP	PKPdf	03 17 34.3	-0.5
CLF	Chambon-Foret	133.59	336	PKPdf	PKiKP	03 17 36.7	+0.9
CLF				IAMs_20	IAMs_20	04 20 02.3	
	comp=Z,3µm,22.0s						
CPUP	Villa Florida	133.65	137	PKP	PKPdf	03 17 35.5	+0.1
	comp=Z,20nm,1.1s,baz=257,slow=2.1,SNR=14						
CPUP				PP	PP	03 20 02.3	-1.3
	comp=Z,1.3nm,0.7s,baz=236,slow=11,SNR=1.7						
CPUP				SKPbc	SKPab	03 21 04.1	+0.8
	comp=Z,3.9nm,1.0s,baz=314,slow=3.6,SNR=4.0						
CPUP	Villa Florida	133.65	137	eP	PKPdf	03 17 35.6	+0.2
ESFA	Espinillo Form	133.74	135	eP	PKPdf	03 17 35.1	-0.5
BNI	Bardonecchia	133.81	330	IAMs_20	IAMs_20	04 22 27.7	
	comp=Z,2µm,20.0s						
SDV	Santo Domingo	134.06	85	PKP	PKPdf	03 17 35.2	-1.5
	comp=Z,21nm,0.8s,baz=235,slow=2.6,SNR=12						
SDV				SKPbc	SKPab	03 21 04.1	-1.7
	comp=Z,2.0nm,0.3s,baz=207,slow=2.3,SNR=8.9						
SDV	Santo Domingo	134.06	85	PKPdf	PKPdf	03 17 36.2	-0.5
ALGR	Alto Alegre (B	134.64	144	eP	PKPdf	03 17 37.1	-0.2
SSB	Saint Sauveur	134.68	331	IAMs_20	IAMs_20	04 22 07.7	
	comp=Z,2µm,20.0s						
ETMB	Extrema	134.87	112	PKPdf	PKPdf	03 17 37.8	-0.2
ETMB	Extrema	134.87	112	eP	PKPdf	03 17 37.3	-0.7
CRSM	Crissiumal (Br	134.97	141	eP	PKPdf	03 17 37.2	-0.7
CNLB	Canela	135.49	146	eP	PKPdf	03 17 38.5	-0.4
HATO	Hato, Curacao	135.70	80	IAMs_20	IAMs_20	04 27 26.0	
	comp=Z,2µm,19.0s						
ITAB	Concordia	136.32	143	eP	PKPdf	03 17 40.7	+0.3
ITAB	Concordia	136.32	143	eP	PKPdf	03 17 38.8	-1.6
MURT	Porto Murtinho	136.42	132	eP	PKPdf	03 17 38.0	-2.7
FRBT	Francisco Belt	136.67	141	eP	PKPdf	03 17 40.8	-0.4
BBRB	Robore, Bolivi	136.67	126	eP	PKPdf	03 17 41.6	+0.3
SGCB	S£o Gabriel d	136.69	98	eP	PKPdf	03 17 40.0	-1.5
SIV	San Ignacio	136.81	123	PKhKP	PKPpre	03 17 29.2	
	comp=Z,3.4nm,0.6s,baz=218,slow=3.4,SNR=13						
SIV				PKP	PKPdf	03 17 40.5	-1.1
	comp=Z,15nm,1.0s,baz=245,slow=1.9,SNR=13						
SIV				PP	PP	03 20 22.9	-1.3
	comp=Z,1.2nm,0.7s,baz=225,slow=7.1,SNR=4.6						
SIV				SKPbc	SKPbc	03 21 13.3	+2.0
	comp=Z,4.9nm,0.9s,baz=264,slow=2.3,SNR=4.2						
MCR1	Marechal Candi	137.10	138	eP	PKPdf	03 17 40.8	-1.2
BDQN	Bodoquena, MS	137.79	131	eP	PKPdf	03 17 42.4	-0.9
SAML	Samuel	137.97	112	PKPdf	PKPdf	03 17 43.0	-0.7
SAML	Samuel	137.97	112	IAMs_20	IAMs_20	04 09 01.6	
	comp=Z,2µm,20.0s						
SAML	Samuel	137.97	112	PKIKP	PKPdf	03 17 43.1	-0.7
SAML	Samuel	137.97	112	eP	PKPdf	03 17 42.4	-1.4
HUMP	Col San Antoni	138.10	71		PKPdf	03 17 43.1	-0.8
PTGB	Pitanga	138.20	140	eP	PKPdf	03 17 37.4	-6.7
PTGB	Pitanga	138.20	140	eP	PKPdf	03 17 41.2	-2.9
KEST	Kesra	138.22	318	PKhKP	PKPpre	03 17 34.6	
	comp=Z,5.1nm,1.0s,baz=248,slow=20,SNR=2.6						
KEST				PKP	PKPdf	03 17 41.4	-2.4
	comp=Z,6.7nm,0.8s,baz=14,slow=4.8,SNR=4.9						
KEST	Kesra	138.22	318	P	PKPdf	03 17 44.4	+0.6
TEFE	Tefe	138.28	104	eP	PKPdf	03 17 43.5	-0.8
AQDB	Aquidauana	138.55	132	PKPdf	PKPdf	03 17 45.4	+0.7
AQDB	Aquidauana	138.55	132	eP	PKPdf	03 17 43.5	-1.1
PTLB	Pontes e Lacer	138.69	123	eP	PKPdf	03 17 42.8	-2.2
VILB	Vilhena	139.00	119	eP	PKPdf	03 17 45.2	-0.5
TIJ01	Guaruva-PR	139.60	144	eP	PKPdf	03 17 46.7	+0.1
SMRT	St. Maarten	140.72	70	IAMs_20	IAMs_20	04 23 28.5	
	comp=Z,2µm,22.0s						
FRTB	Fartura	140.76	142	eP	PKPdf	03 17 46.9	-1.8
FRTB	Fartura	140.76	142	eP	PKPdf	03 17 48.0	-0.7
PCMB	Pacaembu	140.91	138	eP	PKPdf	03 17 43.2	-5.8
SALV	Santo Antonio	141.25	127	eP	PKPdf	03 17 47.1	-2.6
PET01	Itanhaem-SP	141.39	145	eP	PKPdf	03 17 48.7	-1.0
C2SB	Chapadao do Su	141.71	133	eP	PKPdf	03 17 48.7	-1.7
SPB	Sao Paulo	141.84	144	IAMs_20	IAMs_20	04 15 47.7	
	comp=Z,1µm,18.0s						
SPB	Sao Paulo	141.84	144	eP	PKPdf	03 17 49.9	-0.7
ANWB	Willy Bob	141.99	71	IAMs_20	IAMs_20	04 28 15.3	
	comp=Z,2µm,19.0s						
MACA	Manacapuru-AM	142.18	105	eP	PKPdf	03 17 49.6	-1.8
PBRG	Braganca	142.29	338	ePKPdf	PKPdf	03 17 49.0	-1.9
VAO	Valinhos	142.57	144	eP	PKPdf	03 17 50.3	-1.7
PGAV	Gavieira, Arco	142.68	340	ePKPdf	PKPdf	03 17 49.9	-1.8
RCLB	Rio Claro- Sao	142.68	143	eP	PKPdf	03 17 50.3	-1.9
PCAB	Cabril	142.83	340	ePKPdf	PKPdf	03 17 48.9	-2.9
ITRB	Iturama	142.84	137	eP	PKPdf	03 17 49.1	-3.3
ITRB	Iturama	142.84	137	eP	PKPdf	03 17 50.7	-1.8
MVO	Moncorvo	142.95	338	ePKPdf	PKPdf	03 17 49.5	-2.6
ESDC	Sonseca Array	142.98	334	PKhKP	PKPpre	03 17 48.5	
	comp=Z,16nm,0.9s,baz=18,slow=2.8,SNR=28						
ESDC				PP	PP	03 20 55.4	-5.6
	comp=Z,2.6nm,0.9s,baz=34,slow=5.9,SNR=4.0						
FDF	Fort de France	143.06	75	IAMs_20	IAMs_20	04 16 30.1	
	comp=Z,2µm,21.0s						
PARB	Paraibuna	143.07	146	eP	PKPbc	03 17 50.7	+1.0
BB19B	Bebedouro	143.08	140	eP	PKPbc	03 17 49.7	0.0
BB19B	Bebedouro	143.08	140	eP	PKPdf	03 17 51.9	-1.0
PVRL	Vila Real	143.10	339	ePKPdf	PKPbc	03 17 49.1	-0.1
BIM	Bigot	143.17	76	IAMs_20	IAMs_20	04 24 47.9	
	comp=Z,2µm,19.0s						
CART	Cartagena	143.20	328	IAMs_20	IAMs_20	04 21 55.4	
	comp=Z,2µm,22.0s						
PAB	San Pablo	143.25	334	PKPdf	PKPbc	03 17 50.7	+1.0
PAB	San Pablo	143.25	334	IAMs_20	IAMs_20	04 29 39.3	
	comp=Z,2µm,19.0s						
PAB	San Pablo	143.25	334	PKIKP	PKPbc	03 17 50.7	+1.0
PTO	Porto	143.53	340	ePKPdf	PKPdf	03 17 51.9	-1.1
BOAV	Boa Vista	143.53	96	PKPdf	PKPbc	03 17 51.4	+0.2
BOAV	Boa Vista	143.53	96	eP	PKPab	03 17 47.3	-2.9
PVIS	Viseu	143.66	339	ePKPdf	PKPbc	03 17 51.1	+0.3
MTE	Manteigas	143.81	338	ePKPdf	PKPbc	03 17 51.6	+0.3
PCBR	Castelo Branco	144.28	338	ePKPdf	PKPdf	03 17 53.7	-0.7
COI	Coimbra	144.29	339	PKPdf	PKPdf	03 17 53.5	-0.8
COI				IAMs_20	IAMs_20	04 26 43.5	
	comp=Z,3µm,19.0s						
COI	Coimbra	144.29	339	PKIKP	PKPbc	03 17 53.5	+0.8
COI	Coimbra	144.29	339	ePKP	PKPbc	03 17 53.5	+0.8
PCAS	Casmilo, Conde	144.46	339	ePKP	PKPbc	03 17 53.8	+0.6
PMRV	Marv??o	144.60	337	ePKP	PKPbc	03 17 54.0	+0.3
PSBE	So Bento	145.04	339	ePKP	PKPdf	03 17 55.8	0.0
PESTR	Estremoz	145.16	337		PKPbc	03 17 55.0	-0.5
PESTR	Estremoz	145.16	337	ePKP	PKPbc	03 17 55.1	-0.5
PMTG	Montargil	145.23	338	ePKP	PKPbc	03 17 55.5	-0.2
IPMB	Ipameri, GO	145.49	137	eP	PKPdf	03 17 56.9	-0.2
PBAR	Barrancos	145.54	336	ePKP	PKPdf	03 17 56.4	-0.2
EVO	Evora	145.62	337	ePKP	PKPbc	03 17 57.1	+0.1
PMAFR	Mafra	145.71	339	ePKP	PKPab	03 17 57.8	+0.2
LIS	Lisbon	145.88	339	ePKP2	PKPbc	03 17 57.5	-0.2
LIS	Lisbon	145.88	339	ePKP	PKPab	03 17 59.3	+1.1
LIS	Lisbon	145.88	339	ePKPdf	PKPbc	03 17 57.5	-0.2
PBEJ	Beja	146.00	337	ePKP	PKPab	03 17 58.9	+0.2
TAF	Taforalt	146.04	327	P	PKiKP	03 18 02.0	+0.1
PNCL	Nicolau / Gran	146.18	337	ePKP	PKPab	03 17 59.1	-0.3
PMNB	Patos De Minas	146.26	140	eP	PKPdf	03 17 59.0	+0.5
MESJ	Messejana	146.30	337	ePKP2	PKPdf	03 17 58.3	+0.4
MESJ	Messejana	146.30	337	ePKP	PKPab	03 17 59.5	-0.4
MESJ	Messejana	146.30	337	ePKPdf	PKPdf	03 17 58.3	+0.4
MESJ				IAMs_20	IAMs_20	04 33 10.1	
	comp=Z,3µm,18.2s						
PCVE	Castro Verde	146.41	336	ePKP	PKPbc	03 17 59.3	-0.1
EKNA	AfricaArray -	146.47	267⇑	eP	PKPab	03 18 01.0	-0.3
PVAQ	Vaqueiros	146.47	336	P	PKiKP	03 18 03.2	+0.6
PVAQ	Vaqueiros	146.47	336	ePKP	PKPbc	03 18 00.0	+0.4
PTEO	Sao Teotonio	146.75	337	ePKP	PKPdf	03 17 58.6	-0.1
MORF	Marmelete	146.93	337	ePKP2	PKPdf	03 17 59.5	+0.4
MORF	Marmelete	146.93	337	ePKP	PKPab	03 18 02.3	-0.1
MORF	Marmelete	146.93	337	ePKPdf	PKPdf	03 17 59.5	+0.4
PFVI	Vila Bisbo	147.15	337	PKPbc	PKPab	03 18 02.7	-0.4
PFVI	Vila Bisbo	147.15	337	P	PKiKP	03 18 03.6	-0.4
PFVI	Vila Bisbo	147.15	337	ePKP	PKPab	03 18 02.4	-0.8
BDFB	Brasilia	147.23	134	PKPbc	PKPdf	03 18 00.3	+0.1
	comp=Z,55nm,0.7s,baz=245,slow=1.3,SNR=42						
BDFB	Brasilia	147.23	134		PKPdf	03 18 00.4	+0.2
FIGM	Figuig	147.31	322	P	PKPbc	03 18 03.0	+0.6
CHEFC	Chefchaouen	147.32	331	P	PKPbc	03 18 03.0	+0.8
H07S1	FLORES T-PHASE	147.45	10	ePKP	PKiKP	03 18 04.5	-0.1
TAM	Tamanrasset	147.49	302		PKPdf	03 18 00.9	+0.4
TAM				IAMs_20	IAMs_20	04 36 42.7	
	comp=Z,2µm,19.0s						
TAM	Tamanrasset	147.49	302	PKIKP	PKPdf	03 18 00.9	+0.4
SRBC	Serra Branca	148.21	6	ePKP	PKPab	03 18 07.0	-0.3
PGRA	Graciosa	148.22	6	ePKP	PKiKP	03 18 05.9	-0.2
PSBA	Serra de Santa	148.54	5	ePKP	PKPbc	03 18 04.5	-0.8
PMAN	Manadas	148.61	6	ePKP	PKPdf	03 18 03.1	+1.4
PSCM	Serra do Cume	148.62	4	ePKP	PKPbc	03 18 04.5	-1.0
MDT	Midelt	148.74	327	P	PKPdf	03 18 04.0	+1.7
PPNO	Prainha do Nor	148.75	6	ePKP	PKPdf	03 18 02.8	+0.7
PID	Ribeirinha	148.79	6	ePKP	PKPdf	03 18 02.3	+0.2
PSET	Sete Cidades	149.58	2	ePKP	PKPdf	03 18 04.5	+1.1
PCALD	Caldeiras da R	149.61	2	ePKP	PKiKP	03 18 08.9	-0.1
BART	Pico Bartolome	149.64	1	ePKP	PKPbc	03 18 08.1	-0.1
PGRON	Lagoa das Cont	149.64	2	ePKP	PKPdf	03 18 04.5	+1.0
CMLA	Cha da Macela	149.65	2	ePKP	PKiKP	03 18 09.5	+0.4
PDA	Ponta Delgada	149.66	2	ePKP	PKiKP	03 18 08.9	-0.2
GOLM	Goulmima	149.77	326	P	PKPbc	03 18 08.0	-0.8
AVE	Averroes	149.79	331	PKPbc	PKPbc	03 18 07.3	-1.3
JANB	Januaria	150.18	138	eP	PKPdf	03 18 04.3	-0.6
PSMN	Pico do Norte,	150.42	1	ePKP	PKiKP	03 18 11.1	+0.4
PSMA	Santa Maria	150.42	1	ePKP	PKPbc	03 18 07.8	-2.1
SHEL	Horse Pasture	150.52	218	IAMs_20	IAMs_20	04 19 16.9	
	comp=Z,2µm,20.0s						
TZRR	Tazzarine	150.81	326	P	PKPbc	03 18 09.1	-2.1
MDP	Montagnes des	151.68	93	PKP	PKPdf	03 18 05.5	-1.7
	comp=Z,30nm,0.7s,baz=160,slow=2.7,SNR=3.3						
MDP				PKPbc	PKPbc	03 18 13.6	0.0
	comp=Z,79nm,1.0s,baz=255,slow=4.6,SNR=14						
OUK	Oukaimeden	151.71	329	P	PKPbc	03 18 11.0	-2.6
PMOZ	Porto Moniz, M	153.77	346	ePKPbc	PKiKP	03 18 19.5	+1.6
PMAR	Madeira	153.80	346	ePKPbc	PKiKP	03 18 18.9	+0.8
TORD	Torodi Ar. Bea	153.84	285	PKP	PKPdf	03 18 08.7	-1.7
	comp=Z,4.0nm,0.9s,baz=34,slow=1.4,SNR=17						
TORD				PKPbc	PKPbc	03 18 17.8	-0.5
	comp=Z,17nm,1.0s,baz=64,slow=1.9,SNR=20						
TORD				PP	PP	03 22 06.8	+0.8
	comp=Z,3.8nm,1.0s,baz=76,slow=1.3,SNR=4.2						
TORD	Torodi Ar. Bea	153.84	285		PKPdf	03 18 09.4	-1.0
FUL	Funchal	153.86	346	ePKPbc	PKiKP	03 18 18.7	+0.8
KIC	Kosan Boka	160.62	268⇑	ePKP2	PKPab	03 19 01.1	+0.4
	comp=Z,16nm,0.6s						
KIC	Kosan Boka	160.62	268⇑	eP	PKPdf	03 18 20.4	+1.4
	comp=Z,7.3nm,1.0s						
DBIC	Dimbokro	160.75	269	PKP	PKPdf	03 18 18.0	-1.1
	comp=Z,14nm,1.0s,baz=326,slow=0.1,SNR=10						
DBIC				PKPab	PKPab	03 19 01.0	-0.3
	comp=Z,16nm,0.7s,baz=95,slow=4.1,SNR=20						
DBIC				PP	PP	03 22 45.8	+1.5
	comp=Z,3.6nm,0.9s,baz=94,slow=8.2,SNR=2.2						
DBIC	Dimbokro	160.75	269	PKPdf	PKPdf	03 18 18.0	-1.1
DBIC				PKPab	PKPab	03 18 60.0	-1.3
LIC	Lamto	160.89	268⇑	ePKP2	PKPab	03 19 02.4	+0.5
	comp=Z,86nm,1.0s						
LIC	Lamto	160.89	268⇑	eP	PKPdf	03 18 20.6	+1.3
	comp=Z,44nm,1.0s						
TIC	Toumodi	160.91	269⇓	ePKP2	PKPab	03 19 02.0	0.0
	comp=Z,41nm,0.8s						
TIC	Toumodi	160.91	269⇑	eP	PKPdf	03 18 17.8	-1.5
	comp=Z,20nm,0.8s						
BBTS	Babate	169.47	315	PKPab	PKPab	03 19 40.1	+0.7
	comp=Z,114nm,1.0s,baz=0.0,slow=4.0,SNR=4.8						

JMA 04 03:06:19.9±0.1,**36°.2N**±0°.2×**136°.3E**±0°.1,**h11**^{km},**MV0.1**/6, **CENTRAL FUKUI PREF,Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKG	Kaga	0.09	36	P	Pg	03 06 22.7	+0.1
JKG				S	Sg	03 06 24.4	-0.1

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*NEIC **04** 03:16:32.0±1.7,7°.27S±0°.04×155°.71E±0°.07,h24^{km}±3^{km}, mb5.2/92,Error ellipse: s-maj=10.0km s-min=5.2km az=86.0*

*MOS **04** 03:16:31.0±0.9,7°.14S×155°.65E,h30^{km},mb5.3/37,Error ellipse: s-maj=8.8km s-min=6.6km az=117.1*

*GCMT **04** 03:16:33.0±0.4,7°.47S±0°.03×155°.76E±0°.03,h27^{km}±1^{km}, MW5.2/65,Moment Tensor Solution. s19,c21; s65,c92; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.68±.07; $M_{\theta\theta}$-0.52±.04; $M_{\phi\phi}$-0.15±.04; $M_{r\theta}$0.26±.06; $M_{\theta\phi}$0.35±.02; $M_{\phi r}$-0.47±.06; Best double couple: $M_0$0.88900×10^{17} NP1:ϕ_s138.00000°,δ64.00000°, λ106.00000°. NP2:ϕ_s285.00000°,δ31.00000°,λ60.00000°. Principal axes: T 0.8960, Plg67.0000°, Azm79.0000°; N -0.0140, Plg15.0000°, Azm311.0000°; P -0.8820, Plg17.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **04** 03:16:33.2±0.0,6°.95S×155°.98E,h53^{km},mb4.9/51, mB5.5/16,Ms5.4/7,Ms7 5.2/7*

*IDC **04** 03:16:34.5±2.0,7°.33S×155°.79E,h55^{km}±18^{km},mb4.5/27, mbtmp4.8/31,ML4.0/4,MS5.0/6,Error ellipse: s-maj=12.7km s-min=9.9km az=54.0*

*DJA **04** 03:16:38.7±0.9,8°S±7°×15°6E±°,h71^{km}±10^{km},M5.0/12, mB5.2/2,mb4.8/12,MLv5.0/1,Mw(mB)4.5/2*

*BGR **04** 03:16:40.8,7°.46S×155°.73E,h33^{km},Ms5.4*

ISC 04 03:16:33.3±0.2,**7°.30S**±0°.05×**155°.77E**±0°.04,**h44**^{km},**n456**, σ**1^{s}03**/428,**mb5.1**/106,**MS5.0**/6,**5C-6D**, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.64	117	P	Pn	03 17 42.4	+1.5
	7µm,0.7s,baz=218,slow=2.3,SNR=9.4						
HNR				S	Sn	03 18 30.7	-2.9
	18µm,0.8s,baz=66,slow=22,SNR=1.4						
HNR				LR	LR	03 19 29.2	
	comp=Z,102µm,20.0s,baz=288,slow=38						
HNR	Honiara	4.64	117		Pn	03 17 42.0	+1.1
HNR	Honiara	4.64	117	P	Pn	03 17 43.6	+2.6
RABL	Rabaul	4.74	310		Pn	03 17 42.1	-0.2
RABL	Rabaul	4.74	310	P	Pn	03 17 44.9	+2.6
KRVT	Keravat (AS076	4.77	308	P	Pn	03 17 44.5	+1.8
	27nm,0.3s,baz=194,slow=5.2,SNR=5.5						
KRVT				S	Sn	03 18 34.9	-1.9
	608nm,0.8s,baz=154,slow=23,SNR=4.3						
	57nm,0.3s						
PMG	Port Moresby	8.78	256	P	Pn	03 18 38.9	+1.2
	23nm,0.3s,baz=52,slow=11,SNR=15						
PMG				S	Sn	03 20 18.1	+2.7
	19nm,0.4s,baz=348,slow=8.8,SNR=1.4						
PMG				LR	LR	03 21 46.5	
	comp=Z,7µm,18.3s,baz=26,slow=36						
	112nm,0.6s						
PMG	Port Moresby	8.78	256	Pn	Pn	03 18 37.0	-0.7
PMG	Port Moresby	8.78	256	P	Pn	03 18 38.6	+0.9
COEN	Coen	14.04	241	P	Pn	03 19 50.3	+0.6
	baz=14,SNR=5.1						
COEN	Coen	14.04	241	Pn	Pn	03 19 48.9	-0.8
COEN	Coen	14.04	241	P	Pn	03 19 49.4	-0.3
TV1H	Townsville Har	14.75	215	P	Pn	03 20 00.5	+1.3
MTSU	Mount Surprise	15.51	225	P	Pn	03 20 10.0	+0.8
	baz=15,SNR=8.7						
MTSU	Mount Surprise	15.51	225	P	Pn	03 20 10.6	+1.4
KOUNC	Koumac, New Ca	15.54	149	Pn	Pn	03 20 10.6	+1.1
KOUNC	Koumac, New Ca	15.54	149	P	P	03 20 11.8	-1.4
CTA	Charters Tower	15.71	215	P	Pn	03 20 12.6	+0.8
	0.9nm,0.3s,baz=33,slow=14,SNR=18						
CTA				LR	LR	03 25 05.2	
	comp=Z,3µm,19.8s,baz=336,slow=32						
	21nm,0.9s						
CTAO	Charters Tower	15.71	215	Pn	Pn	03 20 12.2	+0.4
CTAO				IAmb	IAmb	03 20 22.7	
	comp=Z,250nm,1.7s						
CTAO	Charters Tower	15.71	215	P	Pn	03 20 13.3	+1.5
CTAO	Charters Tower	15.71	215	P	Pn	03 20 12.2	+0.4
CTAO				pmax	pmax		
	comp=Z,250nm,1.7s						
GD1S	Gladstone Soft	17.03	195	P	P	03 20 29.8	+0.1

NOUC	**Port Laguerre**	**17.88**	**146**	P	**P**	**03 20 40.3**	**+1.2**
DZM	**Mont Dzumac**	**17.93**	**146**	*e*Pn	**P**	**03 20 40.9**	**+1.1**
	comp=Z,115nm,1.2s						
DZM				*e*LR	LR	03 24 53.8	
	comp=Z,2µm,22.1s						
DZM	**Mont Dzumac**	**17.93**	**146**	P	**P**	**03 20 41.0**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=347,slow=14,SNR=4.8						
	comp=Z,20nm,1.0s						
DZM	**Mont Dzumac**	**17.93**	**146**		**Pn**	**03 20 39.1**	**-0.5**
DZM	**Mont Dzumac**	**17.93**	**146**	P	**P**	**03 20 41.1**	**+1.3**
EIDS	**Eidsvold**	**18.52**	**193**	P	**Pn**	**03 20 47.5**	**+0.8**
	baz=18,SNR=4.3						
EIDS	**Eidsvold**	**18.52**	**193**	P	**P**	**03 20 46.1**	**0.0**
EIDS	**Eidsvold**	**18.52**	**193**	P	**Pn**	**03 20 46.8**	**+0.1**
TARA	**Tarawa**	**19.15**	**64**	P	**Pn**	**03 20 56.2**	**+1.9**
AUWSH	**Wavell State H**	**20.16**	**187**	P	**P**	**03 21 04.4**	**+0.4**
RMQ	**Roma**	**20.22**	**198**	P	Pn	03 21 06.2	-0.7
	baz=20,SNR=56						
RMQ	**Roma**	**20.22**	**198**	P	**P**	**03 21 05.8**	**+1.1**
QIS	**Mount Isa**	**20.47**	**228**	P	**P**	**03 21 08.1**	**+0.6**
	baz=20,SNR=30						
QIS	**Mount Isa**	**20.47**	**228**	P	**P**	**03 21 08.6**	**+1.1**
QLP	**Quilpie**	**22.10**	**208**	P	**P**	**03 21 25.3**	**+0.4**
	baz=22,SNR=12						
QLP	**Quilpie**	**22.10**	**208**	P	**P**	**03 21 25.1**	**+0.2**
AULRC	**Lightning Ridg**	**23.21**	**197**	P	**P**	**03 21 36.6**	**+0.1**
FUNA	**Funafuti**	**23.23**	**95**	P	**P**	**03 21 37.8**	**+0.9**
FUNA	**Funafuti**	**23.23**	**95**	P	**P**	**03 21 37.7**	**+0.8**
YSA	**Yasawairara**	**23.26**	**116**	P	**P**	**03 21 38.4**	**+1.2**
ARMA	**Armidale**	**23.33**	**189**	P	**P**	**03 21 37.7**	**-0.1**
	baz=23,SNR=5.7						
ARMA	**Armidale**	**23.33**	**189**	P	**P**	**03 21 37.2**	**-0.6**
ARMA				IAmb	IAmb	03 21 54.2	
	comp=Z,191nm,1.9s						
ARMA	**Armidale**	**23.33**	**189**	P	**P**	**03 21 38.1**	**+0.3**
KDU	**Kakadu**	**23.55**	**255**	P	**P**	**03 21 39.4**	**-0.6**
	baz=24,SNR=6.2						
KDU	**Kakadu**	**23.55**	**255**	P	**P**	**03 21 39.8**	**-0.2**
MSVF	**Nonsavu**	**24.06**	**118**	P	**P**	**03 21 45.1**	**+0.2**
	comp=Z,51nm,1.0s,baz=328,slow=2.7,SNR=18						
	comp=Z,51nm,1.0s						
MSVF	**Nonsavu**	**24.06**	**118**	P	**P**	**03 21 45.4**	**+0.6**
MSVF	**Nonsavu**	**24.06**	**118**	P	**P**	**03 21 45.5**	**+0.6**
MSVF	**Nonsavu**	**24.06**	**118**	P	**P**	**03 21 45.4**	**+0.6**
MSVF				pmax	pmax		
	comp=Z,178nm,1.3s						
AUPHS	**Peel High Scho**	**24.12**	**190**	P	**P**	**03 21 45.4**	**+0.3**
WR0	**Warramunga Arr**	**24.13**	**236**	P	**P**	**03 21 45.2**	**-0.2**
WR0				IAmb	IAmb	03 21 46.7	
	comp=Z,107nm,1.3s						
WB0	**Warramunga Arr**	**24.16**	**237**	P	**P**	**03 21 45.5**	**-0.2**
WB0				IAmb	IAmb	03 21 47.0	
	comp=Z,104nm,1.3s						
WRAB	**Tennant Creek**	**24.27**	**237**	P	**P**	**03 21 45.7**	**-1.0**
WRAB				IAmb	IAmb	03 21 48.0	
	comp=Z,94nm,1.4s						
WRAB	**Tennant Creek**	**24.27**	**237**	P	**P**	**03 21 46.7**	**0.0**
WRAB	**Tennant Creek**	**24.27**	**237**	P	**P**	**03 21 45.7**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,94nm,1.4s						
WB2	**Warramunga Arr**	**24.28**	**237**	P	**P**	**03 21 45.8**	**-0.9**
WB2				IAmb	IAmb	03 21 48.1	
	comp=Z,95nm,1.3s						
WRA	**Warramunga Arr**	**24.29**	**237**	P	**P**	**03 21 46.7**	**-0.1**
	comp=Z,63nm,1.2s,baz=63,slow=9.6,SNR=46						
WRA				S	**S**	**03 25 57.9**	**-5.1**
	comp=Z,1.8nm,1.0s,baz=34,slow=29,SNR=1.3						
WRA				LR	LR	03 31 39.4	
	comp=Z,4µm,18.1s,baz=2.0,slow=37						
	comp=Z,63nm,1.2s						
WRA	**Warramunga Arr**	**24.29**	**237**	P	**P**	**03 21 46.0**	**-0.8**
WRA	**Warramunga Arr**	**24.29**	**237**	P	**P**	**03 21 46.0**	**-0.8**
INKA	**Innaminka**	**24.82**	**213**	P	**P**	**03 21 51.4**	**-0.1**
MTN	**Manton Dam**	**24.87**	**255**	P	**P**	**03 21 52.2**	**+0.1**
	baz=25,SNR=3.7						
MTN	**Manton Dam**	**24.87**	**255**	P	**P**	**03 21 52.2**	**+0.1**
MTN				IAmb	IAmb	03 22 01.5	
	comp=Z,53nm,1.2s						
MTN	**Manton Dam**	**24.87**	**255**	P	**P**	**03 21 52.6**	**+0.5**
TAVE	**Taveuni**	**25.53**	**114**	P	**P**	**03 21 58.8**	**+0.7**
CMSA	**Cobar Meteorol**	**25.89**	**200**	P	**P**	**03 22 01.6**	**+0.4**
	baz=26,SNR=12						
CMSA	**Cobar Meteorol**	**25.89**	**200**	P	**P**	**03 22 01.1**	**-0.1**
AS01	**Alice Springs**	**26.52**	**230**	P	**P**	**03 22 06.3**	**-0.8**
AS31	**Alice Springs**	**26.56**	**230**	P	**P**	**03 22 06.2**	**-1.2**
ASAR	**Alice Springs**	**26.56**	**230**	P	**P**	**03 22 06.6**	**-0.8**
	comp=Z,2.6nm,0.4s,baz=60,slow=9.7,SNR=42						
	comp=Z,2.6nm,0.4s						
ASAR	**Alice Springs**	**26.56**	**230**	P	**P**	**03 22 05.9**	**-1.5**
LKBA	**Tubou, Lakemba**	**27.02**	**116**	P	**P**	**03 22 11.8**	**+0.3**
KNRA	**Kununurra**	**27.72**	**250**	P	**P**	**03 22 18.6**	**+0.8**
	baz=28,SNR=4.0						
KNRA	**Kununurra**	**27.72**	**250**	P	**P**	**03 22 17.7**	**-0.1**
KNRA	**Kununurra**	**27.72**	**250**	P	**P**	**03 22 17.5**	**-0.3**
H11S3	**WAKE ISLAND Hy**	**27.80**	**23**	T	T	03 50 56.8	
	baz=202,slow=75,SNR=65						
STKA	**Stephens Creek**	**27.80**	**207**	P	**P**	**03 22 17.9**	**-0.4**
	comp=Z,10nm,0.9s,baz=25,slow=14,SNR=10						
	comp=Z,10nm,0.9s						
STKA	**Stephens Creek**	**27.80**	**207**	P	**P**	**03 22 18.6**	**+0.2**
	baz=28,SNR=9.5						
STKA	**Stephens Creek**	**27.80**	**207**	P	**P**	**03 22 18.4**	**0.0**
STKA	**Stephens Creek**	**27.80**	**207**	P	**P**	**03 22 18.3**	**-0.1**
STKA	**Stephens Creek**	**27.80**	**207**	P	**P**	**03 22 18.4**	**0.0**
STKA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**27.80**	**23**	T	T	03 50 56.2	
	baz=202,slow=75,SNR=54						
H11S1	**WAKE ISLAND Hy**	**27.82**	**23**	T	T	03 50 51.2	
	baz=202,slow=75,SNR=38						
OOD	**Oodnadatta**	**27.88**	**221**	P	**P**	**03 22 18.6**	**-0.6**
LCRK	**Leigh Creek**	**28.31**	**213**	P	**P**	**03 22 22.5**	**-0.4**
LBMI	**Labuha**	**28.95**	**282**	P	P	03 22 49.4	+21
H11N1	**WAKE ISLAND Hy**	**28.99**	**22**	T	T	03 52 23.4	
	baz=202,slow=76,SNR=11						
H11N3	**WAKE ISLAND Hy**	**29.00**	**22**	T	T	03 52 25.0	
	baz=202,slow=76,SNR=15						
H11N2	**WAKE ISLAND Hy**	**29.00**	**22**	T	T	03 52 18.9	
	baz=202,slow=76,SNR=8.2						
HTT	**Hallett**	**30.33**	**209**	P	**P**	**03 22 41.1**	**+0.2**
	baz=30,SNR=6.9						
HTT	**Hallett**	**30.33**	**209**	P	**P**	**03 22 41.1**	**+0.2**
MULG	**Mulgathing**	**30.62**	**219**	P	**P**	**03 22 43.5**	**0.0**
WHYH	**Whyalla**	**30.67**	**211**	P	**P**	**03 22 42.9**	**-0.9**
FITZ	**Fitzroy Crossi**	**31.24**	**247**	P	**P**	**03 22 47.9**	**-1.2**
BBOO	**Buckleboo**	**31.30**	**213**	P	**P**	**03 22 48.7**	**-0.7**
	baz=31,SNR=8.4						
BBOO	**Buckleboo**	**31.30**	**213**	P	**P**	**03 22 48.5**	**-0.9**
WRKA	**Warakurna**	**31.63**	**233**	P	**P**	**03 22 51.4**	**-1.0**
	baz=32,SNR=27						
WRKA	**Warakurna**	**31.63**	**233**	P	**P**	**03 22 51.5**	**-1.0**
ARPS	**Mount Arapiles**	**31.97**	**201**	P	**P**	**03 22 55.9**	**+0.7**
AFI	**Afiamalu**	**32.54**	**104**	P	**P**	**03 23 00.1**	**-0.4**
	comp=Z,15nm,0.3s,baz=316,slow=10,SNR=5.8						
AFI				LR	LR	03 33 40.2	
	comp=Z,1µm,18.2s,baz=286,slow=32						
	comp=Z,15nm,0.3s						
MMRI	**Maumere**	**33.23**	**265**	P	**P**	**03 23 06.7**	**+0.1**
LUWI	**Luwuk**	**33.48**	**279**	P	**P**	**03 23 09.8**	**+1.1**
LUWI	**Luwuk**	**33.48**	**279**	P	**P**	**03 23 08.7**	**0.0**
LUWI	**Luwuk**	**33.48**	**279**	P	P	03 23 26.0	+17
FORT	**Forrest**	**34.91**	**224**	P	**P**	**03 23 20.4**	**-0.5**
	baz=35,SNR=9.9						
BKSI	**Bulukumba**	**35.48**	**271**	P	**P**	**03 23 29.9**	**+3.8**
	comp=Z,19nm,0.9s						
KAPI	**Kappang**	**35.88**	**272**	P	**P**	**03 23 31.0**	**+1.5**
	comp=Z,12nm,0.6s,baz=13,slow=0.4,SNR=3.6						
	comp=Z,12nm,0.6s						
KAPI	**Kappang**	**35.88**	**272**	P	**P**	**03 23 29.9**	**+0.4**
KAPI				IAmb	IAmb	03 23 38.4	
	comp=Z,21nm,0.8s						
KAPI	**Kappang**	**35.88**	**272**	P	**P**	**03 23 29.7**	**+0.2**
KAPI	**Kappang**	**35.88**	**272**	P	**P**	**03 23 29.9**	**+0.4**
KAPI				pmax	pmax		
	comp=Z,21nm,0.8s						
SPSI	**Sidrap Palu**	**35.97**	**273**	P	P	03 23 46.4	+16
URZ	**Urewera**	**36.37**	**151**	P	**P**	**03 23 33.0**	**-0.3**
	comp=Z,23nm,1.2s,baz=181,slow=9.6,SNR=3.8						
	comp=Z,23nm,1.2s						
MPSI	**Mapaga**	**36.58**	**280**	P	**P**	**03 23 36.3**	**+0.9**
RTZ	**Ruatahuna**	**36.59**	**152**	P	**P**	**03 23 36.7**	**+1.4**
RTZ				IAmb	IAmb	03 23 40.8	
	comp=Z,27nm,1.1s						
MWZ	**Matawai**	**36.63**	**151**	P	**P**	**03 23 38.3**	**+2.7**
BKZ	**Black Stump Fm**	**36.81**	**153**	P	**P**	**03 23 39.8**	**+2.7**
RIGZ	**Rimuhau**	**37.03**	**151**	P	P	03 23 45.8	+6.8
MHGZ	**Mahia Peninsul**	**37.45**	**151**	P	P	03 23 48.9	+6.4
PSA00	**Pilbara Seismi**	**37.46**	**244**	P	**P**	**03 23 42.5**	**-0.3**
PSA00	**Pilbara Seismi**	**37.46**	**244**	P	**P**	**03 23 43.6**	**+0.8**
KAHZ	**Kahuranaki**	**37.49**	**153**	P	P	03 23 48.8	+5.9
MRZ	**Mangatainoka R**	**37.63**	**155**	P	P	03 23 49.5	+5.4
PLAI	**Plampang**	**37.64**	**265**	P	**P**	**03 23 45.0**	**+0.5**
PLAI	**Plampang**	**37.64**	**265**	P	P	03 24 00.4	+16
HOWZ	**Holdsworth Sta**	**37.81**	**155**	P	**P**	**03 23 46.1**	**+0.5**
KHZ	**Kahutara**	**38.34**	**159**	P	**P**	**03 23 50.4**	**+0.5**
RPZ	**Rata Peaks**	**38.67**	**162**	P	**P**	**03 23 53.3**	**+0.5**
	comp=Z,8.6nm,0.8s,baz=311,slow=21,SNR=2.1						
	comp=Z,8.6nm,0.8s						
KMBL	**Kambalda**	**39.67**	**228**	P	**P**	**03 24 00.7**	**-0.6**
	baz=40,SNR=4.7						
KMBL	**Kambalda**	**39.67**	**228**	P	**P**	**03 24 00.9**	**-0.4**
MEEK	**Meekatharra**	**40.19**	**237**	P	**P**	**03 24 05.7**	**0.0**
KLBR	**Kellerberrin**	**42.89**	**231**	P	**P**	**03 24 27.1**	**-0.6**
	baz=43,SNR=30						
KLBR	**Kellerberrin**	**42.89**	**231**	P	**P**	**03 24 26.9**	**-0.8**
BLDU	**Ballidu**	**43.28**	**232**	P	**P**	**03 24 31.6**	**+0.7**
	baz=43,SNR=4.9						
SBUM	**Sibu**	**44.53**	**281**	P	**P**	**03 24 41.3**	**+0.2**
RAR	**Rarotonga**	**45.08**	**113**	P	**P**	**03 24 43.4**	**-2.0**
	comp=Z,27nm,1.0s,baz=149,slow=21,SNR=2.4						
RAR				LR	LR	03 40 30.5	
	comp=Z,573nm,19.0s,baz=296,slow=32						
	comp=Z,27nm,1.0s						
MJAR	**Matsushiro Arr**	**46.62**	**340**	P	**P**	**03 24 56.0**	**-1.3**
	comp=Z,4.2nm,0.8s,baz=170,slow=7.6,SNR=9.0						
MJAR				PcP	**PcP**	**03 26 29.9**	**-0.8**
	comp=Z,4.3nm,0.9s,baz=167,slow=4.1,SNR=4.6						
	comp=Z,4.2nm,0.8s						
MAJO	**Matsushiro**	**46.62**	**340**	*i* P	**P**	**03 24 54.5**	**-2.8**
MAJO				pmax	pmax		
	comp=Z,39nm,2.3s						
MJB9	**Matsu-Tunnel**	**46.62**	**340**	P	**P**	**03 24 57.0**	**-0.3**
JNU	**Nakatsue**	**46.65**	**331**	P	**P**	**03 24 57.2**	**-0.4**
	comp=Z,5.6nm,0.6s,baz=48,slow=23,SNR=5.6						
	comp=Z,5.6nm,0.6s						
JNU	**Nakatsue**	**46.65**	**331**	P	**P**	**03 24 56.9**	**-0.7**
JNU				IAmb	IAmb	03 24 58.5	
	comp=Z,43nm,1.5s						
DLV	**T Lat**	**50.76**	**292**	P	**P**	**03 25 29.6**	**-0.1**
KSRS	**Korea Array**	**51.57**	**332**	P	**P**	**03 25 35.0**	**-0.1**
	comp=Z,2.6nm,0.5s,baz=148,slow=7.9,SNR=15						
	comp=Z,2.6nm,0.5s						
KSAR	**Wonju Array Be**	**51.58**	**332**	P	**P**	**03 25 34.9**	**-0.3**
KSAR	**Wonju Array Be**	**51.58**	**332**	P	**P**	**03 25 34.9**	**-0.3**
KS19	**Wonju Array Si**	**51.63**	**332**	P	**P**	**03 25 34.7**	**-0.9**
INCN	**Inchon**	**52.21**	**331**	P	**P**	**03 25 39.0**	**-1.0**
INCN				IAmb	IAmb	03 25 41.3	
	comp=Z,57nm,1.4s						
INCN	**Inchon**	**52.21**	**331**	P	**P**	**03 25 39.0**	**-1.0**
INCN				pmax	pmax		
	comp=Z,57nm,1.5s						
ASAJ	**Asahikawa**	**52.54**	**348**	P	**P**	**03 25 43.5**	**+1.3**
	comp=Z,18nm,0.8s,baz=256,slow=33,SNR=7.3						
	comp=Z,18nm,0.8s						
NJ2	**Nanjing**	**52.64**	**320**	*e*P	**P**	**03 25 45.6**	**+2.4**
NJ2				pP	**pP**	**03 25 57.0**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
TBI	**Tubuai**	**54.85**	**113**	*e*LR	LR	03 42 02.0	
	comp=Z,4µm,32.2s						
YSS	**Yuzh-Sakhalins**	**55.24**	**349**	P	**P**	**03 26 03.2**	**+1.3**
YSS	**Yuzh-Sakhalins**	**55.24**	**349**	P	**P**	**03 26 01.6**	**-0.3**
YSS	**Yuzh-Sakhalins**	**55.24**	**349**	*e*P	**P**	**03 26 02.3**	**+0.4**
YSS				*e*		03 26 10.8	
YSS				pmax	pmax		
	comp=Z,40nm,1.3s						
USA0B	**Ussuriysk Arra**	**55.58**	**339**	*i* P	**P**	**03 26 03.5**	**-0.9**
USRK	**Ussuriysk Ar.**	**55.58**	**339**	P	**P**	**03 26 05.2**	**+0.8**
	comp=Z,25nm,1.0s,baz=155,slow=6.9,SNR=21						
	comp=Z,25nm,1.0s						
USRK	**Ussuriysk Ar.**	**55.58**	**339**	P	**P**	**03 26 04.9**	**+0.5**
PMOR	**Pomariorio Ree**	**55.67**	**103**	*e*P	**P**	**03 26 07.2**	**+1.6**
	comp=Z,318nm,1.5s						
MDJ	**Mudanjiang**	**56.81**	**338**	P	**P**	**03 26 13.9**	**+0.7**
MDJ				pP	pP	03 26 27.6	+2.0
MDJ				sP	sP	03 26 33.0	+2.4
MDJ				PP	**PP**	**03 28 21.8**	**+1.8**
MDJ				PcS	**PcS**	**03 31 07.0**	**-2.2**
MDJ				pmax	pmax		
	comp=Z,22nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,860nm,6.8s						
MDJ				LR	LR		
	comp=Z,740nm,18.3s						
MDJ				LR	LR		
	comp=Z,840nm,16.1s						
MDJ				LR	LR		
	comp=Z,2µm,15.9s						
MDJ	**Mudanjiang**	**56.81**	**338**	P	**P**	**03 26 13.4**	**+0.3**
MDJ				IAmb	IAmb	03 26 14.9	
	comp=Z,39nm,1.4s						
MDJ	**Mudanjiang**	**56.81**	**338**	P	**P**	**03 26 13.6**	**+0.4**
NONG	**Nongkai**	**57.73**	**297**	P	**P**	**03 26 21.4**	**+1.2**
CN2	**Changchun**	**57.79**	**334**	*e*P	**P**	**03 26 19.4**	**-0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ENH	**Enshi**	**58.01**	**313**	P	**P**	**03 26 21.2**	**-0.8**
ENH	**Enshi**	**58.01**	**313**	P	**P**	**03 26 22.7**	**+0.7**
	comp=Z,16nm,1.2s						
LYN	**LuoYang**	**58.36**	**318**	⇓*i*P	**P**	**03 26 24.4**	**+0.1**
LYN				PP	**PP**	**03 28 33.0**	**-1.0**
LYN				pmax	pmax		
	comp=Z,14nm,1.1s						
BNX	**BinXian**	**58.59**	**337**	⇓P	**P**	**03 26 26.1**	**+0.5**
BNX				pmax	pmax		
	comp=Z,28nm,1.6s						
HNS	**HongShan**	**58.71**	**322**	⇑P	**P**	**03 26 26.7**	**0.0**
HNS				pmax	pmax		
	comp=Z,21nm,1.5s						
BJT	**Baijiatuau**	**59.59**	**325**	P	**P**	**03 26 32.8**	**+0.1**
BJT				IAmb	IAmb	03 26 50.8	
	comp=Z,31nm,1.8s						
BJT	**Baijiatuau**	**59.59**	**325**	P	**P**	**03 26 32.8**	**+0.1**
BJT				pmax	pmax		
	comp=Z,31nm,1.8s						
KLR	**Kul'dur**	**60.09**	**342**	*c* *i*P	**P**	**03 26 34.9**	**-1.0**
KLR				pmax	pmax		
	comp=Z,39nm,1.5s						
PETK	**Petropavlovsk-**	**60.19**	**1**	P	**P**	**03 26 36.5**	**-0.1**
	comp=Z,4.5nm,0.6s,baz=178,slow=10,SNR=10						
	comp=Z,4.5nm,0.6s						
XAN	**Xi'an**	**60.46**	**316**	⇓P	**P**	**03 26 38.8**	**-0.1**
XAN				pmax	pmax		
	comp=Z,11nm,1.1s						
KMI	**Kunming**	**60.82**	**304**	⇑P	**P**	**03 26 43.0**	**+1.2**
KMI				pmax	pmax		
	comp=Z,23nm,1.4s						
CRAI	**Chiangrai**	**60.95**	**298**	P	**P**	**03 26 42.9**	**+0.5**
CRAI				IAmb	IAmb	03 26 44.7	
	comp=Z,32nm,1.3s						
CM31	**Chiang Mai Arr**	**61.61**	**295**	P	**P**	**03 26 47.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**61.61**	**295**	P	**P**	**03 26 48.0**	**+1.1**
	comp=Z,2.4nm,0.3s,baz=108,slow=4.9,SNR=30						
	comp=Z,2.4nm,0.3s						
CHTO	**Chiang Mai**	**61.73**	**296**	P	**P**	**03 26 48.6**	**+0.9**
CHTO	**Chiang Mai**	**61.73**	**296**	P	**P**	**03 26 48.6**	**+0.9**
PZH	**PanZhiHua**	**62.22**	**305**	P	**P**	**03 26 51.4**	**+0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
XLT	**XiLinHaoTe**	**62.31**	**329**	⇑*i*P	**P**	**03 26 51.3**	**0.0**
XLT				pmax	pmax		
	comp=Z,16nm,1.4s						
XLT				pmax	pmax		
	comp=Z,570nm,11.2s						
HEH	**HeiHe**	**62.38**	**340**	*e*P	**P**	**03 26 51.2**	**-0.2**
HEH				PcP	**PcP**	**03 27 30.0**	**-0.6**
HEH				pmax	pmax		
	comp=Z,15nm,1.2s						
CD2	**Chengdu**	**62.60**	**310**	P	**P**	**03 26 53.4**	**0.0**
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC	**Hu-ho-hao-te**	**62.79**	**324**	*e*P	P	03 26 59.6	+5.0
HHC				pmax	pmax		
	comp=Z,27nm,0.7s						
HHC				pmax	pmax		
	comp=Z,410nm,4.8s						
TNCH	**TengChong**	**64.30**	**302**	⇑P	P	03 27 13.9	+9.0
TNCH				pP	PcP	03 27 38.9	-0.4
TNCH				pmax	pmax		
	comp=Z,460nm,9.5s						
HIA	**Hailar**	**64.52**	**335**	P	**P**	**03 27 06.0**	**+0.3**
HIA				IAmb	IAmb	03 27 07.3	
	comp=Z,20nm,0.9s						
HIA	**Hailar**	**64.52**	**335**	P	**P**	**03 27 06.6**	**+0.9**
HIA	**Hailar**	**64.52**	**335**	P	**P**	**03 27 06.0**	**+0.3**
HIA				pmax	pmax		
	comp=Z,20nm,0.9s						
LZH	**Lanzhou**	**65.07**	**315**	*e*P	**P**	**03 27 10.4**	**+0.7**
LZH				pP	sP	03 27 25.0	-2.2
LZH				pmax	pmax		
	comp=Z,21nm,1.5s						
ZEA	**Zeya**	**65.40**	**342**	*e*P	**P**	**03 27 11.7**	**+0.5**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=N,20nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.0s						
MA2	**Magadan**	**66.78**	**357**	P	**P**	**03 27 20.9**	**+0.9**
	comp=Z,14nm,0.9s,baz=136,slow=8.0,SNR=4.7						
	comp=Z,14nm,0.9s						
GTA	**Gaotai**	**69.49**	**317**	*e*P	**P**	**03 27 38.8**	**+1.2**
GTA				sP	PcP	03 28 01.2	+0.6
GTA				pmax	pmax		
	comp=Z,11nm,1.0s						
ULN	**Ulaanbaatar**	**69.67**	**327**	P	**P**	**03 27 39.5**	**+0.9**
ULN	**Ulaanbaatar**	**69.67**	**327**	P	**P**	**03 27 39.5**	**+0.9**
ULN				pmax	pmax		
	comp=Z,38nm,1.3s						
SONM	**Songino Array**	**70.01**	**327**	P	**P**	**03 27 41.3**	**+0.7**
	comp=Z,6.7nm,0.5s,baz=137,slow=5.6,SNR=58						
	comp=Z,6.7nm,0.5s						
SONM	**Songino Array**	**70.01**	**327**	P	**P**	**03 27 41.3**	**+0.7**
SEY	**Seymchan**	**70.07**	**358**	P	**P**	**03 27 40.2**	**-0.2**
	comp=Z,5.1nm,0.8s,baz=157,slow=7.0,SNR=8.1						
	comp=Z,5.1nm,0.8s						
SEY	**Seymchan**	**70.07**	**358**	*i* P	**P**	**03 27 40.1**	**-0.4**
SEY				pmax	pmax		
	comp=Z,24nm,1.6s						
VNDA	**Vanda**	**70.26**	**179**	P	**P**	**03 27 40.0**	**-1.5**
	comp=Z,2.7nm,1.1s,baz=295,slow=1.6,SNR=3.1						
	comp=Z,2.7nm,1.1s						
VNDA	**Vanda**	**70.26**	**179**	P	**P**	**03 27 40.0**	**-1.5**
YAK	**Yakutsk**	**72.02**	**347**	P	**P**	**03 27 53.0**	**+0.7**
YAK				IAmb	IAmb	03 27 54.9	
	comp=Z,31nm,1.1s						
LSA	**Lhasa**	**72.08**	**304**	P	**P**	**03 27 53.7**	**-0.3**
LSA	**Lhasa**	**72.08**	**304**	P	**P**	**03 27 53.7**	**-0.3**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ZAK	**Zakamensk**	**73.16**	**328**	*e*P	**P**	**03 27 59.4**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,25nm,1.3s						
BOD	**Bodaibo**	**73.18**	**338**	*e*P	**P**	**03 27 58.2**	**-1.1**
BOD				pmax	pmax		
	comp=Z,30nm,1.8s						
IRK	**Irkutsk**	**73.73**	**330**	*e*P	**P**	**03 28 02.3**	**-0.4**
IRK				pmax	pmax		
	comp=Z,60nm,2.2s						
TAPN	**Taplejung**	**74.22**	**301**	*e*P	**P**	**03 28 06.9**	**+0.5**
	comp=Z,51nm,1.0s						
ODAN	**Odare**	**74.35**	**300**	*e*P	**P**	**03 28 07.4**	**+0.3**
	comp=Z,23nm,1.4s						
GAMB	**Gambell**	**75.02**	**14**	P	**P**	**03 28 12.8**	**+3.0**
	baz=214						
RAMN	**Ramite**	**75.05**	**300**	*e*P	**P**	**03 28 11.4**	**+0.2**
	comp=Z,14nm,0.6s						
MOY	**Mondy**	**75.07**	**328**	*e*P	**P**	**03 28 11.6**	**+1.0**
MOY				pmax	pmax		
	comp=Z,39nm,1.6s						
BILL	**Bilibino**	**75.52**	**4**	P	**P**	**03 28 13.1**	**+0.4**
BILL	**Bilibino**	**75.52**	**4**	⇓*e*P	**P**	**03 28 12.9**	**+0.2**
BILL				*e*		03 28 21.6	
BILL				*e**PP	**pP**	**03 28 26.3**	**+0.6**
BILL				*e*		03 31 01.7	
BILL				*e*PPP	PPP	03 32 48.5	
BILL				pmax	pmax		
	comp=Z,36nm,0.9s						
BILL				MLR	MLR		
	comp=Z,1µm,17.0s						
JIRN	**Jiri**	**75.60**	**301**	*e*P	**P**	**03 28 14.8**	**+0.3**
	comp=Z,21nm,0.6s						
GUN	**Gumba**	**75.93**	**301**	*e*P	**P**	**03 28 16.8**	**+0.4**
	comp=Z,24nm,0.6s						
PKI	**Pulchoki**	**76.24**	**301**	*e*P	**P**	**03 28 18.3**	**+0.2**
	comp=Z,98nm,1.3s						
N16K	**Nishlik Lake**	**76.41**	**21**	P	**P**	**03 28 21.5**	**+3.6**
	baz=227						
DMN	**Daman**	**76.51**	**301**	*e*P	**P**	**03 28 20.0**	**+0.4**
	comp=Z,18nm,0.4s						
GKN	**Gorkha**	**77.02**	**301**	*e*P	**P**	**03 28 22.5**	**+0.2**
ANM	**Nome**	**77.30**	**16**	P	**P**	**03 28 23.7**	**+0.8**
	baz=220						
TNA	**Tin City**	**77.42**	**15**	P	**P**	**03 28 24.4**	**+0.9**
	baz=217						
DANN	**Dangsing**	**77.86**	**301**	*e*P	**P**	**03 28 26.9**	**-0.2**
	comp=Z,19nm,0.5s						
SVW2	**Sparrevohn**	**77.99**	**22**	P	**P**	**03 28 28.3**	**+1.5**
SVW2				IAmb	IAmb	03 28 30.5	
	comp=Z,32nm,1.3s						
SVW2	**Sparrevohn**	**77.99**	**22**	P	**P**	**03 28 29.1**	**+2.3**
PYUN	**Piuthan**	**78.45**	**301**	*e*P	**P**	**03 28 29.9**	**-0.4**
	comp=Z,78nm,1.1s						
M19K	**Big River Lodg**	**78.94**	**22**	IAmb	IAmb	03 28 36.2	
	comp=Z,17nm,1.1s						
M19K	**Big River Lodg**	**78.94**	**22**	P	**P**	**03 28 33.2**	**+1.1**
	baz=231						
L19K	**White Mountain**	**78.95**	**21**	IAmb	IAmb	03 28 36.7	
	comp=Z,28nm,1.1s						
L19K	**White Mountain**	**78.95**	**21**	P	**P**	**03 28 33.3**	**+1.2**
	baz=230						
TTA	**Tatalina**	**79.03**	**20**	P	**P**	**03 28 33.6**	**+1.1**
TTA				IAmb	IAmb	03 28 46.3	
	comp=Z,33nm,1.9s						
TTA	**Tatalina**	**79.03**	**20**	P	**P**	**03 28 33.5**	**+0.9**
TTA	**Tatalina**	**79.03**	**20**	P	**P**	**03 28 33.7**	**+1.1**
TTA				pmax	pmax		
	comp=Z,33nm,1.9s						
TTA	**Tatalina**	**79.03**	**20**	P	**P**	**03 28 33.3**	**+0.7**
	baz=229						
WMQ	**Urumqi**	**79.57**	**317**	*e*P	**P**	**03 28 37.8**	**+1.8**
K20K	**Telida**	**79.98**	**21**	P	**P**	**03 28 38.9**	**+1.2**
	baz=231						
HYB	**Hyderabad**	**80.10**	**289**	*e*P	**P**	**03 28 38.7**	**-0.6**
RDOG	**Red Dog Mine**	**80.61**	**15**	P	**P**	**03 28 41.8**	**+0.8**
RDOG				IAmb	IAmb	03 28 46.1	
	comp=Z,15nm,0.7s						
CAST	**Castle Rocks**	**80.72**	**21**	P	**P**	**03 28 41.4**	**-0.3**
	baz=233						
TIXI	**Tiksi**	**80.76**	**352**	P	**P**	**03 28 42.2**	**+0.5**
TIXI	**Tiksi**	**80.76**	**352**	*i* P	**P**	**03 28 39.0**	**-2.7**
TIXI				pmax	pmax		
	comp=Z,12nm,1.6s						
DGZ	**Jazzator, Alta**	**81.85**	**322**	*i* P	**P**	**03 28 47.4**	**-0.7**
DGZ				pmax	pmax		
	comp=Z,20nm,1.5s						
MCK	**McKinley**	**82.05**	**22**	P	**P**	**03 28 48.4**	**-0.3**
	baz=236						
MLY	**Manley**	**82.17**	**20**	IAmb	IAmb	03 28 52.3	
	comp=Z,40nm,1.9s						
MLY	**Manley**	**82.17**	**20**	P	**P**	**03 28 49.7**	**+0.4**
	baz=234						
G21K	**Allakaket**	**82.18**	**18**	P	**P**	**03 28 49.4**	**+0.1**
	baz=231						
NEA2	**Nenana**	**82.49**	**21**	IAmb	IAmb	03 28 53.3	
	comp=Z,18nm,1.4s						
F21K	**Alatna River**	**82.63**	**18**	P	**P**	**03 28 52.0**	**+0.4**
	baz=231						
ZSN	**Zaisan**	**82.67**	**320**	*e*P	**P**	**03 28 51.6**	**-0.8**
	comp=Z,29nm,1.6s,baz=320						
ZSN	**Zaisan**	**82.67**	**320**	*e*P	**P**	**03 28 51.5**	**-0.8**
ZSN				pmax	pmax		
	comp=Z,29nm,1.6s						
QSPA	**South Pole Qui**	**82.68**	**180**	P	**P**	**03 28 51.7**	**-0.5**
CCB	**Clear Creek Bu**	**82.97**	**21**	IAmb	IAmb	03 28 54.8	
	comp=Z,21nm,1.5s						
H23K	**Yukon River**	**83.04**	**20**	IAmb	IAmb	03 28 57.9	
	comp=Z,15nm,1.2s						
H23K	**Yukon River**	**83.04**	**20**	P	**P**	**03 28 54.6**	**+0.7**
	baz=235						
TCOL	**CIGO, UAF Yank**	**83.08**	**21**	IAmb	IAmb	03 28 56.8	
	comp=Z,24nm,1.3s						
TCOL	**CIGO, UAF Yank**	**83.08**	**21**	P	**P**	**03 28 53.6**	**-0.4**
	baz=236						
COLA	**College**	**83.08**	**21**	P	**P**	**03 28 54.2**	**+0.3**
COLA				IAmb	IAmb	03 28 56.8	

	comp=Z,30nm,1.4s						
COLA	College	83.08	21	P	P	03 28 54.2	+0.3
COLA				pmax	pmax		
	comp=Z,30nm,1.4s						
HDA	Harding Lake	83.15	22	IAmb	IAmb	03 28 56.9	
	comp=Z,36nm,1.6s						
IL31		83.37	21	IAmb	IAmb	03 29 08.9	
	comp=Z,20nm,1.8s						
ILAR	Eielson Array	83.37	21	P	P	03 28 54.1	-1.4
	comp=Z,2.0nm,0.5s,baz=245,slow=4.6,SNR=35						
	comp=Z,2.0nm,0.5s						
ILAR	Eielson Array	83.37	21	P	P	03 28 55.0	-0.5
ILAR	Eielson Array	83.37	21	P	P	03 28 55.0	-0.5
G23K	Bananza Creek	83.40	19	P	P	03 28 56.7	+1.0
	baz=234						
RIDG	Independent Ri	83.58	23	IAmb	IAmb	03 29 03.0	
	comp=Z,14nm,1.0s						
DOT	Dot Lake	83.84	23	IAmb	IAmb	03 28 58.9	
	comp=Z,16nm,1.3s						
SCRK	Sand Creek	84.03	23	IAmb	IAmb	03 29 00.1	
	comp=Z,33nm,1.9s						
SCRK	Sand Creek	84.03	23	P	P	03 28 59.6	+0.5
	baz=240						
M27K	Edge Creek, AK	84.08	25	P	P	03 29 00.6	+1.3
	baz=242						
MK31	Makanchi Array	84.14	319	P	P	03 29 00.1	+0.2
MK31	Makanchi Array	84.14	319	P	P	03 29 00.1	+0.2
MK31				pmax	pmax		
	comp=Z,37nm,1.2s						
MKAR	Makanchi Array	84.14	319	P	P	03 29 00.0	+0.1
	comp=Z,22nm,1.0s,baz=101,slow=6.3,SNR=87						
	comp=Z,22nm,1.0s						
G24K	Hadweenzic Riv	84.23	20	P	P	03 29 00.7	+0.9
	baz=236						
E23K	Chandalar	84.32	18	P	P	03 29 01.5	+1.1
	baz=234						
MAKZ	Makanchi	84.35	318	P	P	03 29 01.0	+0.1
MAKZ	Makanchi	84.35	318	P	P	03 29 01.0	+0.1
MAKZ				pmax	pmax		
	comp=Z,53nm,1.2s						
L27K	Beaver Creek,	84.43	24	IAmb	IAmb	03 29 05.0	
	comp=Z,22nm,1.4s						
A21K	Barrow	84.49	14	IAmb	IAmb	03 29 05.1	
	comp=Z,17nm,0.9s						
A21K	Barrow	84.49	14	P	P	03 29 01.8	+0.7
	baz=227						
D23K	Nanushuk River	84.54	17	P	P	03 29 02.4	+1.0
	baz=233						
F24K	Squaw Lake	84.55	19	P	P	03 29 02.6	+1.1
	baz=236						
TOLK	Toolik Lake Re	84.67	17	P	P	03 29 02.7	+0.6
	baz=234						
ZALV	Zalesovo Beam	84.86	326	P	P	03 29 03.0	-0.3
	comp=Z,4.9nm,0.5s,baz=111,slow=6.5,SNR=37						
	comp=Z,4.9nm,0.5s						
ZALV	Zalesovo Beam	84.86	326	P	P	03 29 02.6	-0.7
ZALV	Zalesovo Beam	84.86	326	P	P	03 29 03.0	-0.3
F25K	Christian Rive	85.31	19	P	P	03 29 06.4	+1.0
	baz=238						
UZB	Uzynbulak	85.39	314	*e*P	P	03 29 05.8	-0.7
	comp=Z,35nm,2.2s,baz=314						
UZB	Uzynbulak	85.39	314	*e*P	P	03 29 05.7	-0.7
UZB				pmax	pmax		
	comp=Z,35nm,2.2s						
C24K	Franklin Bluff	85.55	17	P	P	03 29 07.1	+0.7
	baz=235						
G26K	Porcupine Rive	85.60	20	P	P	03 29 08.0	+1.3
	baz=240						
E25K	Arctic Village	85.62	19	P	P	03 29 08.1	+1.3
	baz=238						
KPKS	Kokpek	85.70	315	*e*P	P	03 29 07.2	-0.7
	comp=Z,18nm,1.6s,baz=315						
KPKS	Kokpek	85.70	315	*e*P	P	03 29 07.2	-0.7
KPKS				pmax	pmax		
	comp=Z,18nm,1.6s						
SATY	Saty	85.80	314	*e*P	P	03 29 07.5	-0.9
	comp=Z,14nm,1.5s,baz=314						
SATY	Saty	85.80	314	*e*P	P	03 29 07.5	-0.9
SATY				pmax	pmax		
	comp=Z,14nm,1.5s						
F26K	Sheenjek River	85.86	19	P	P	03 29 09.1	+1.1
	baz=240						
DAWY	Dawson	85.86	24	IAmb	IAmb	03 29 13.0	
	comp=Z,19nm,1.4s						
D25K	Kavik River	86.01	18	P	P	03 29 09.7	+0.9
	baz=237						
TDK	Taldyqorghan	86.27	316	*e*P	P	03 29 10.3	-0.3
	baz=316						
TDK	Taldyqorghan	86.27	316	*e*P	P	03 29 10.3	-0.3
SEM	Semipalatinsk	86.46	322	*e*P	P	03 29 10.2	-1.5
	baz=322						
SEM	Semipalatinsk	86.46	322	*e*P	P	03 29 10.1	-1.5
K29M	Barlow Dome	86.52	24	P	P	03 29 12.1	+0.6
	baz=246						
C26K	Camden Bay	86.76	17	P	P	03 29 13.4	+1.0
	baz=239						
KSH	Kashi	86.79	310	P	P	03 29 15.1	+1.7
KSH				sP	sP	03 29 40.3	+9.1
KSH				pmax	pmax		
	comp=Z,22nm,1.2s						
MDOK	Medeo	86.80	314	*e*P	P	03 29 13.2	-0.2
	baz=314						
MDOK	Medeo	86.80	314	*e*P	P	03 29 13.1	-0.2
I29M	Ogilvie Camp,	86.84	23	IAmb	IAmb	03 29 14.2	
	comp=Z,20nm,1.4s						
E27K	Coleen River	86.94	19	P	P	03 29 14.0	+0.7
	baz=242						
C27K	Jago River	86.97	18	P	P	03 29 14.3	+0.9
	baz=240						
CHKK	Chushkaly	86.99	315	*e*P	P	03 29 13.6	-0.6
	baz=315						
CHKK	Chushkaly	86.99	315	*e*P	P	03 29 13.5	-0.6
KURK	Kurchatov	87.55	322	P	P	03 29 16.3	-0.3
KURK	Kurchatov	87.55	322	P	P	03 29 16.3	-0.3
KURK				pmax	pmax		
	comp=Z,61nm,1.8s						
NIL	Nilore	87.82	304	P	P	03 29 18.7	+0.4
NIL				IAmb	IAmb	03 29 26.7	
	comp=Z,11nm,0.9s						
NIL	Nilore	87.82	304	P	P	03 29 18.7	+0.4
NIL				pmax	pmax		
	comp=Z,11nm,0.9s						
AAK	Ala-Archa	88.52	313	P	P	03 29 21.4	-0.3
AAK				IAmb	IAmb	03 29 24.4	
	comp=Z,23nm,1.6s						
AAK	Ala-Archa	88.52	313	P	P	03 29 21.4	-0.3
AAK				pmax	pmax		
	comp=Z,23nm,1.7s						
BTLS	Baital	89.30	315	*e*P	P	03 29 24.8	-0.2
	baz=316						
BTLS	Baital	89.30	315	*e*P	P	03 29 24.8	-0.2
F31M	Tsiigehtchic	89.34	21	P	P	03 29 25.3	+0.6
	baz=249						
INK	Inuvik	89.73	21	P	P	03 29 26.6	+0.2
	comp=Z,4.8nm,1.0s,baz=273,slow=4.0,SNR=9.0						
	comp=Z,4.8nm,1.0s						
INK	Inuvik	89.73	21	IAmb	IAmb	03 29 30.4	
	comp=Z,15nm,1.3s						
INK	Inuvik	89.73	21	P	P	03 29 26.6	+0.2
	baz=250						
BRZS	Berezniki	91.11	320	*e*P	P	03 29 32.6	-0.8
	baz=320						
BRZS	Berezniki	91.11	320	*e*P	P	03 29 32.5	-0.8
NVAR	Mina Array Bea	91.30	52	P	P	03 29 35.5	+0.6
	comp=Z,1.7nm,1.0s,baz=244,slow=3.3,SNR=8.5						
	comp=Z,1.7nm,1.0s						
NVAR	Mina Array Bea	91.30	52	P	P	03 29 35.8	+1.0
NV11	Mina Array Sit	91.42	52	P	P	03 29 37.2	+1.9
NV11				IAmb	IAmb	03 29 55.6	
	comp=Z,23nm,1.9s						
KK31	Karatay Array	91.48	313	P	P	03 29 35.2	-0.1
KK31				IAmb	IAmb	03 29 37.1	
	comp=Z,20nm,1.6s						
KK31	Karatay Array	91.48	313	P	P	03 29 35.2	-0.1
KK31				pmax	pmax		
	comp=Z,20nm,1.7s						
KKAR	Karatay Array	91.48	313	P	P	03 29 35.2	-0.1
KKAR				IAmb	IAmb	03 29 37.1	
	comp=Z,20nm,1.6s						
KKAR	Karatay Array	91.48	313	P	P	03 29 35.2	-0.1
KKAR				pmax	pmax		
	comp=Z,20nm,1.7s						
KVN	Kaiserville	91.55	51	P	P	03 29 36.5	+0.6
KVN				IAmb	IAmb	03 29 38.1	
	comp=Z,10nm,1.5s						
KVN	Kaiserville	91.55	51	P	P	03 29 36.5	+0.6
KVN				pmax	pmax		
	comp=Z,10.0nm,1.5s						
BRVK	Borovoye	93.07	323	P	P	03 29 41.6	-0.7
BRVK	Borovoye	93.07	323	P	P	03 29 41.6	-0.7
BRVK				pmax	pmax		
	comp=Z,22nm,1.3s						
C36M	Paulatuk	93.31	20	IAmb	IAmb	03 29 45.6	
	comp=Z,8.7nm,0.9s						
C36M	Paulatuk	93.31	20	P	P	03 29 42.8	-0.3
	baz=258						
A36M	Sachs Harbour	93.49	18	IAmb	IAmb	03 29 45.1	
	comp=Z,7.1nm,0.9s						
ELIB	Princess Elisa	95.09	193	*d*x	P	03 29 59.9	+8.3
YKA	Yellowknife Ar	96.24	28	P	P	03 29 55.8	-0.9
	comp=Z,1.3nm,0.8s,baz=264,slow=4.3,SNR=8.4						
YKA				PKKPbc	PKKPbc	03 46 42.0	-3.5
	comp=Z,0.2nm,0.6s,baz=80,slow=2.5,SNR=4.2						
YKA				PKKP	PKKPdf	03 46 50.3	+3.9
	comp=Z,0.1nm,0.3s,baz=86,slow=3.5,SNR=4.3						
	comp=Z,1.3nm,0.8s						
PDAR	Pinedale Array	98.33	48	P	Pdif	03 30 07.2	+0.2
	comp=Z,0.8nm,0.9s,baz=226,slow=2.4,SNR=4.4						
	comp=Z,0.8nm,0.9s						
PDAR	Pinedale Array	98.33	48	P	Pdif	03 30 06.9	0.0
ARU	Arti	100.03	326	P	Pdif	03 30 12.3	-1.5
	comp=Z,1.2nm,0.3s,baz=110,slow=5.4,SNR=4.0						
OBN	Obninsk	112.42	327	*i* PKIKP	PKiKP	03 35 00.1	-4.3
OBN				*e*		03 35 49.8	
OBN				*e*PPP	PPP	03 38 14.5	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
FINES	FINESS Array B	114.53	336	PKP	PKiKP	03 35 07.9	-0.4
	comp=Z,2.0nm,0.8s,baz=90,slow=2.5,SNR=9.6						
FINES				PP	PP	03 36 02.1	-3.1
	comp=Z,2.5nm,0.9s,baz=323,slow=16,SNR=2.5						
PLCA	Paso Flores	116.01	142	PKP	PKiKP	03 35 11.7	-0.3
	comp=Z,4.0nm,1.1s,baz=249,slow=3.3,SNR=10						
AKASG	Malin Array Be	118.23	325	PKP	PKPdf	03 35 14.9	-0.8
	comp=Z,1.4nm,0.4s,baz=48,slow=2.4,SNR=9.1						
AKASG				PP	PP	03 36 33.3	+1.8
	comp=Z,0.1nm,0.2s,baz=46,slow=4.5,SNR=4.3						
AKASG	Malin Array Be	118.23	325	*i* PKIKP	PKPdf	03 35 14.5	-1.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	118.23	325	*i* PKIKP	PKPdf	03 35 15.0	-0.8
BRTR	Keskin Array B	119.16	312	PKP	PKPdf	03 35 16.6	-1.5
	comp=Z,0.3nm,0.4s,baz=185,slow=1.0,SNR=4.4						
BRTR				PKKPbc	PKKPbc	03 45 33.0	+0.4
	comp=Z,1.3nm,0.9s,baz=208,slow=2.4,SNR=7.0						
NB2	NORSAR Subarra	120.24	341	PKPdf	PKPdf	03 35 18.7	-0.7
	comp=Z,9.8nm,1.7s,baz=39,slow=1.9						
NB2	NORSAR Subarra	120.24	341	PKPdf	PKPdf	03 35 18.7	-0.7
	baz=39,slow=1.9						
NOA	NORSAR Array B	120.24	341	PKP	PKPdf	03 35 19.1	-0.3
	comp=Z,0.3nm,0.6s,baz=262,slow=3.6,SNR=7.9						
BOSA	Boshof	120.43	231	PKP	PKiKP	03 35 21.1	+0.1
	comp=Z,2.2nm,0.9s,baz=173,slow=7.1,SNR=2.2						
MLR	Muntele Rosu	122.45	320		PKPdf	03 35 23.2	-1.0
MLR	Muntele Rosu	122.45	320	PKIKP	PKPdf	03 35 23.2	-1.0
CFA	Coronel Fontan	122.89	135	PKP	PKPdf	03 35 25.0	-0.4
	comp=Z,4.4nm,0.8s,baz=234,slow=3.2,SNR=9.2						
ATAH	Atahualpa	124.11	104	PKP	PKPdf	03 35 27.9	-0.7
	comp=Z,5.3nm,0.8s,baz=264,slow=4.3,SNR=4.5						
MORC	Moravsky Berou	125.15	328	PKPdf	PKPdf	03 35 29.2	0.0
MORC	Moravsky Berou	125.15	328	*e*PKP	PKiKP	03 35 30.2	+0.7
MORC	Moravsky Berou	125.15	328	PKIKP	PKPdf	03 35 29.2	0.0
VYHS	Vyhne	125.19	326	*e*PKIKP	PKiKP	03 35 29.9	+0.3
VYHS	Vyhne	125.19	326	*e*PKP	PKiKP	03 35 29.9	+0.3
OSTC	Ostas	125.36	330	*e*PKPDF	PKiKP	03 35 29.9	0.0
OSTC	Ostas	125.36	330	*e*PKIKP	PKiKP	03 35 29.9	0.0
DPC	Dobruska-Polom	125.44	329	*e*PKPDF	PKPdf	03 35 29.4	-0.3
DPC	Dobruska-Polom	125.44	329	*e*PKIKP	PKPdf	03 35 29.4	-0.3
VTS	Vitosha	125.46	318	PKPdf	PKiKP	03 35 30.6	+0.1
VTS	Vitosha	125.46	318	PKIKP	PKiKP	03 35 30.6	+0.1
JAVC	Velka Javorina	125.62	327	*e*PKP	PKiKP	03 35 31.1	+0.6
VRAC	Vranov	125.93	328	*e*PKP	PKiKP	03 35 31.2	+0.2
KRUC	Moravsky	126.18	328	*e*PKP	PKiKP	03 35 31.7	+0.2
BRG	Berggiesshubel	126.28	331	*e*PKP	PKiKP	03 35 32.0	+0.3
BRG				Amp		03 35 33.5	
	comp=Z,14nm,1.2s						
BRG	Berggiesshubel	126.28	331	*e*PKIKP	PKiKP	03 35 32.0	+0.3
BRG				pmax	pmax		
	comp=Z,15nm,1.2s						
BRG	Berggiesshubel	126.28	331	*e*PKPdf	PKiKP	03 35 31.7	0.0
	baz=47,slow=0.0						
CLL	Collm	126.44	332	*i* PKPdf	PKPdf	03 35 31.7	+0.2
	comp=Z,9.0nm,1.0s						
CLL				*e*x	x	03 37 49.0	
CLL	Collm	126.44	332	*i* PKIKP	PKPdf	03 35 31.7	+0.2
CLL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CLL	Collm	126.44	332	*e*PKPdf	PKPdf	03 35 31.7	+0.2
	baz=47,slow=0.0						
FBE	Freiberg	126.53	331	*e*PKPdf	PKiKP	03 35 32.4	+0.2
	baz=47,slow=0.0						
FLTG	Flechtingen	126.55	334	*e*PKPdf	PKiKP	03 35 32.1	0.0
	baz=47,slow=0.0						
PRU	Pruhonice	126.56	330	*e*PKPDF	PKiKP	03 35 32.6	+0.3
PRU	Pruhonice	126.56	330	*e*PKIKP	PKiKP	03 35 32.6	+0.3
PRA	Prague	126.56	330	PKIKP	PKiKP	03 35 37.3	+5.1
DIVS	Divibare	126.85	321	PKPdf	PKPdf	03 35 32.2	-0.5
NRDL	Niedersach Rie	126.92	334	*e*PKPdf	PKiKP	03 35 33.0	+0.2
	baz=47,slow=0.0						
RONA	Rosalia, Austr	127.04	327	*e*PKiKP	PKiKP	03 35 33.8	+0.4
	comp=Z,3.9nm,0.8s						
RETH	Rethem/Aller,	127.06	335	*e*PKPdf	PKiKP	03 35 33.3	+0.2
	baz=47,slow=0.0						
LVC	Limon Verde	127.12	125	PKP	PKiKP	03 35 35.1	+0.4
	comp=Z,2.9nm,0.7s,baz=248,slow=5.4,SNR=2.5						
CONA	Conrad Observa	127.14	327	*i* PKiKP	PKiKP	03 35 34.3	+0.7
	comp=Z,7.7nm,1.2s						
CLZ	Clausthal	127.27	334	*e*PKPdf	PKiKP	03 35 33.9	+0.2
	baz=47,slow=0.0						
WERD	Werda	127.35	331	*e*PKPdf	PKiKP	03 35 33.9	0.0
	baz=47,slow=0.0						
GUNZ	Gunzen	127.39	331	*e*PKPdf	PKiKP	03 35 33.9	-0.1
	baz=47,slow=0.0						
PLN	Plauen	127.39	332	*e*PKPdf	PKPdf	03 35 33.5	+0.1
	baz=47,slow=0.0						
CKRC	Cesky Krumlov	127.41	329	*e*PKPDF	PKiKP	03 35 34.0	0.0
CKRC	Cesky Krumlov	127.41	329	*e*PKIKP	PKiKP	03 35 34.0	0.0
WERN	Wernitzgruen	127.42	331	*e*PKPdf	PKiKP	03 35 34.0	0.0
	baz=47,slow=0.0						
FNA	Florina	127.53	317	PKPdf	PKPdf	03 35 33.5	-0.5
FNA	Florina	127.53	317	PKIKP	PKPdf	03 35 33.5	-0.5
MOX	Moxa	127.54	332	*e*L	L	04 34 03.6	
	comp=Z,767nm,18.1s						
KHC	Kasperske Hory	127.59	329	*e*PKPDF	PKiKP	03 35 34.4	0.0
KHC	Kasperske Hory	127.59	329	*e*PKIKP	PKiKP	03 35 34.4	0.0
GTTG	Gottingen	127.66	334	*e*PKPdf	PKiKP	03 35 34.7	+0.3
	baz=47,slow=0.0						
GEC2	GERESS Array S	127.71	329	*e*PKPdf	PKPdf	03 35 34.4	+0.2
	baz=47,slow=0.0						
GERES	GERESS Array B	127.71	329	PKP	PKiKP	03 35 34.6	-0.1
	comp=Z,1.6nm,0.6s,baz=62,slow=3.2,SNR=20						
MANZ	Manzenberg	127.75	331	*e*PKPdf	PKiKP	03 35 34.8	+0.1
	baz=47,slow=0.0						
MOA	Molln	128.04	328	*e*PKP	PKiKP	03 35 35.1	-0.2
	comp=Z,5.4nm,1.4s						
MNMC	Minye Minye	128.16	121		PKPdf	03 35 36.1	0.0
SOKA	Soboth	128.34	326	*i* PKiKP	PKiKP	03 35 36.1	0.0
	comp=Z,5.1nm,1.2s						
GRF	Grafenberg Arr	128.37	331	*e*L	L	04 35 17.1	
	comp=Z,712nm,18.2s						
BIOA	Bad Ischl, Aus	128.47	328	*e*PKP	PKPdf	03 35 35.8	+0.2
	comp=Z,3.5nm,0.8s						
KBA	Koelnbreinsper	129.01	328	*i* PKP	PKPdf	03 35 36.8	-0.1
	comp=Z,7.7nm,1.4s						
PRAC	Prado	129.47	91		PKPdf	03 35 37.3	-1.2
WATA	Walderalm	129.77	329	*i* PKiKP	PKiKP	03 35 38.8	-0.2
	comp=Z,7.5nm,0.9s						
WTTA	Wattenberg	129.79	329	*i* PKiKP	PKiKP	03 35 39.2	+0.1
	comp=Z,14nm,1.1s						
STAL	STALIGIAL	129.87	327		PKPdf	03 35 37.4	-0.9
CIMO	Cimolais	129.98	327	PKPdf	PKPdf	03 35 38.4	-0.1
MOTA	Moosalm	130.01	329	*e*PKiKP	PKiKP	03 35 39.3	-0.1
	comp=Z,16nm,1.4s						
SQTA	Sankt Quirin	130.03	329	*i* PKiKP	PKiKP	03 35 39.6	+0.1
	comp=Z,4.8nm,1.0s						
LPAZ	La Paz	130.64	119	PKP	PKiKP	03 35 42.2	+0.1
	comp=Z,17nm,1.3s,baz=330,slow=1.6,SNR=14						
LPAZ	La Paz	130.64	119	PKPdf	PKPdf	03 35 41.4	+0.1
BMRD	Maredsous	130.79	336	*d*PKP	PKPdf	03 35 39.4	-0.4
TBTG	Tabatinga, AM	133.01	103	PKPdf	PKPdf	03 35 44.5	-0.6
CPUP	Villa Florida	133.64	137	PKP	PKiKP	03 35 46.7	-0.6
	comp=Z,1.1nm,0.5s,baz=208,slow=6.0,SNR=3.3						
CPUP	Villa Florida	133.64	137		PKiKP	03 35 47.4	+0.2
CPUP	Villa Florida	133.64	137	PKIKP	PKiKP	03 35 47.4	+0.2
SDV	Santo Domingo	134.05	85	PKP	PKPdf	03 35 47.3	0.0
	comp=Z,5.7nm,0.7s,baz=269,slow=4.7,SNR=5.6						
SDV	Santo Domingo	134.05	85	PKPdf	PKPdf	03 35 46.5	-0.7
ETMB	Extrema	134.86	112	PKPdf	PKPdf	03 35 47.2	-1.3
SIV	San Ignacio	136.80	123	PKP	PKPdf	03 35 52.3	+0.2
	comp=Z,3.9nm,0.9s,baz=284,slow=2.5,SNR=11						
SAML	Samuel	137.96	112	PKPdf	PKPdf	03 35 53.0	-1.3
SAML	Samuel	137.96	112	PKIKP	PKPdf	03 35 53.0	-1.3
PTLB	Pontes e Lacer	138.68	123	PKPdf	PKPdf	03 35 54.5	-1.0
MVO	Moncorvo	142.96	338	*e*PKPdf	PKPdf	03 36 00.5	-2.2
ESDC	Sonseca Array	142.98	334	PKhKP	PKPpre	03 35 59.5	
	comp=Z,3.8nm,1.1s,baz=34,slow=3.5,SNR=7.8						
PVIS	Viseu	143.67	339	*e*PKPdf	PKPbc	03 36 02.1	+0.7
PCBR	Castelo Branco	144.28	338	*e*PKPdf	PKPdf	03 36 04.7	-0.2
PMRV	Marv??o	144.61	337	*e*PKP	PKPdf	03 36 05.0	-0.6
PSBE	So Bento	145.05	339	*e*PKP	PKPdf	03 36 06.6	+0.2
PESTR	Estremoz	145.17	337		PKPbc	03 36 05.2	-1.0
PESTR	Estremoz	145.17	337	*e*PKP	PKPdf	03 36 06.6	0.0
PMTG	Montargil	145.24	338	*e*PKP	PKPab	03 36 06.4	0.0
PBAR	Barrancos	145.55	336	*e*PKP	PKPab	03 36 08.1	+0.5
EVO	Evora	145.62	337	*e*PKP	PKPab	03 36 08.2	+0.3
PBEJ	Beja	146.01	337	*e*PKP	PKPab	03 36 09.8	+0.5
PNCL	Nicolau / Gran	146.19	337	*e*PKP	PKPab	03 36 10.0	0.0
MESJ	Messejana	146.31	337	*e*PKP	PKPab	03 36 10.5	0.0
BDFB	Brasilia	147.22	134	PKPbc	PKPdf	03 36 11.6	+0.8
	comp=Z,23nm,0.6s,baz=199,slow=2.5,SNR=31						
BDFB	Brasilia	147.22	134		PKPbc	03 36 11.9	-1.1
BDFB	Brasilia	147.22	134	PKIKP	PKPbc	03 36 11.9	-1.1
TAM	Tamanrasset	147.50	302	PKPbc	PKPdf	03 36 12.4	+1.3
TAM	Tamanrasset	147.50	302	PKP2	PKPdf	03 36 12.4	+1.3
MDP	Montagnes des	151.67	93	PKPbc	PKPbc	03 36 24.2	+0.1
	comp=Z,29nm,0.9s,baz=277,slow=4.0,SNR=7.8						
TORD	Torodi Ar. Bea	153.85	285	PKPbc	PKPbc	03 36 28.1	-0.8
	comp=Z,1.5nm,0.7s,baz=44,slow=1.5,SNR=14						
TORD	Torodi Ar. Bea	153.85	285		PKPbc	03 36 26.1	-2.8
DBIC	Dimbokro	160.76	269	PKPab	PKPab	03 37 11.2	-0.8
	comp=Z,2.0nm,0.5s,baz=87,slow=4.8,SNR=5.1						

BJI ***04*** *03:18:39.2±0.0, 6.°94S×155.°97E, h33^{km}, mb4.9/45, mB5.6/8, Ms5.3/3, Ms7 5.3/3*

MOS ***04*** *03:18:39.0±0.9, 7.°17S×155.°67E, h31^{km}, mb5.3/22, Error ellipse: s-maj=10.3km s-min=9.0km az=112.1*

NEIC ***04*** *03:18:39.3±1.7, 7.°3S±0.°1×155.°8E±0.°1, h25^{km}±3^{km}, mb5.0/41, Error ellipse: s-maj=15.8km s-min=14.8km az=175.0*

IDC ***04*** *03:18:42.8±2.5, 7.°28S×155.°87E, h55^{km}±21^{km}, mb4.4/20, mbtmp4.7/23, ML3.2/3, Error ellipse: s-maj=16.6km s-min=12.6km az=59.0*

ISC 04 03:18:40.9±0.3**, 7.°38S**±0.°06×**155.°86E**±0.°06**, h44^{km}, n193,** σ1.^{s}**20**/189**, mb5.0**/57**, 8D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	4.89	308	P	Pn	03 19 54.6	+2.7
	1µm,1.0s,baz=30,slow=22,SNR=1.3						
KRVT				S	Sn	03 20 47.9	+0.6
	405nm,0.6s,baz=151,slow=22,SNR=1.4						
PMG	Port Moresby	8.84	256	P	Pn	03 20 48.8	+2.6
	4.7nm,0.3s,baz=50,slow=14,SNR=3.6						
PMG				S	Sn	03 22 27.1	+2.4
	22nm,0.6s,baz=96,slow=15,SNR=1.9						
	90nm,0.8s						
PMG	Port Moresby	8.84	256	Pn	Pn	03 20 45.0	-1.2
PMG	Port Moresby	8.84	256	P	Pn	03 20 45.0	-1.2
COEN	Coen	14.07	241	Pn	Pn	03 21 55.9	-1.9
CTA	Charters Tower	15.70	215	P	P	03 22 20.9	-1.7
	0.1nm,0.3s,baz=24,slow=14,SNR=3.1						
	14nm,0.9s						
CTAO	Charters Tower	15.70	215	Pn	Pn	03 22 20.1	+0.9
CTAO	Charters Tower	15.70	215	P	Pn	03 22 20.1	+0.9
CTAO				pmax	pmax		
	comp=Z,94nm,1.7s						
DZM	Mont Dzumac	17.82	146	P	P	03 22 48.0	+1.8
	comp=Z,0.1nm,0.3s,baz=94,slow=8.5,SNR=3.7						
	comp=Z,17nm,0.9s						
DZM	Mont Dzumac	17.82	146		Pn	03 22 45.1	-0.7
ARMA	Armidale	23.26	189	P	P	03 23 46.7	+1.9
ARMA				IAmb	IAmb	03 24 01.9	
	comp=Z,77nm,1.8s						
MSVF	Nonsavu	23.95	118	P	P	03 23 53.5	+2.1
	comp=Z,3.2nm,0.3s,baz=85,slow=17,SNR=6.3						
	comp=Z,3.2nm,0.3s						
MSVF	Nonsavu	23.95	118	P	P	03 23 52.2	+0.8
MSVF				IAmb	IAmb	03 23 55.1	
	comp=Z,69nm,1.3s						
MSVF	Nonsavu	23.95	118	P	P	03 23 52.2	+0.8
MSVF				pmax	pmax		
	comp=Z,69nm,1.3s						
WR0	Warramunga Arr	24.16	237	P	P	03 23 52.4	-0.8
WB2	Warramunga Arr	24.31	237	P	P	03 23 54.9	+0.2
WRA	Warramunga Arr	24.32	237	P	P	03 23 55.1	+0.4
	comp=Z,8.9nm,0.9s,baz=62,slow=9.9,SNR=3.5						
	comp=Z,8.9nm,0.9s						
WRA	Warramunga Arr	24.32	237	P	P	03 23 54.4	-0.3
WRA	Warramunga Arr	24.32	237	P	P	03 23 54.4	-0.3
ASAR	Alice Springs	26.57	230	P	P	03 24 16.5	+1.4
	comp=Z,2.9nm,0.8s,baz=60,slow=8.9,SNR=2.5						
	comp=Z,2.9nm,0.8s						
STKA	Stephens Creek	27.77	207	P	P	03 24 28.6	+2.8
	comp=Z,5.5nm,0.9s,baz=22,slow=12,SNR=2.5						
	comp=Z,5.5nm,0.9s						
STKA	Stephens Creek	27.77	207	P	P	03 24 24.5	-1.2
STKA	Stephens Creek	27.77	207	P	P	03 24 24.5	-1.2
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
H11S3	WAKE ISLAND Hy	27.84	22	T	T	03 52 52.1	
	baz=203,slow=75,SNR=19						
H11S2	WAKE ISLAND Hy	27.84	22	T	T	03 52 51.5	
	baz=203,slow=75,SNR=18						
H11S1	WAKE ISLAND Hy	27.86	22	T	T	03 52 54.9	
	baz=203,slow=75,SNR=17						
H11N1	WAKE ISLAND Hy	29.03	22	T	T	03 54 24.9	
	baz=203						
H11N3	WAKE ISLAND Hy	29.04	22	T	T	03 54 24.5	
	baz=203						
H11N2	WAKE ISLAND Hy	29.05	22	T	T	03 54 24.5	
	baz=203						
FITZ	Fitzroy Crossi	31.29	247	P	P	03 24 57.4	+0.3
AFI	Afiamalu	32.43	104	P	P	03 25 07.0	-0.3
	comp=Z,22nm,0.8s,baz=315,slow=4.3,SNR=2.6						
	comp=Z,22nm,0.8s						
AFI	Afiamalu	32.43	104	P	P	03 25 07.0	-0.3
FORT	Forrest	34.91	225	P	P	03 25 27.4	-1.2
FORT				IAmb	IAmb	03 25 29.9	
	comp=Z,20nm,0.9s						
KAPI	Kappang	35.97	272	P	P	03 25 37.6	-0.3
	comp=Z,9.6nm,0.6s,baz=119,slow=10,SNR=3.7						
	comp=Z,9.6nm,0.6s						
KAPI	Kappang	35.97	272	P	P	03 25 35.9	-1.9
KAPI				IAmb	IAmb	03 25 46.5	
	comp=Z,26nm,0.9s						
KAPI	Kappang	35.97	272	P	P	03 25 35.9	-1.9
KAPI				pmax	pmax		
	comp=Z,26nm,1.0s						
MJAR	Matsushiro Arr	46.72	340	P	P	03 27 04.5	-1.3
	comp=Z,3.9nm,0.7s,baz=166,slow=7.7,SNR=6.7						
MJAR				PcP	PcP	03 28 39.1	+0.4
	comp=Z,3.0nm,0.7s,baz=151,slow=3.8,SNR=5.6						
	comp=Z,3.9nm,0.7s						
JNU	Nakatsue	46.76	331	P	P	03 27 05.8	-0.3
	comp=Z,9.1nm,0.8s,baz=86,slow=3.7,SNR=4.0						
	comp=Z,9.1nm,0.8s						
KSRS	Korea Array	51.68	332	P	P	03 27 43.5	0.0
	comp=Z,4.3nm,0.7s,baz=151,slow=8.4,SNR=8.5						
KSRS				PcP	PcP	03 28 57.9	+1.2
	comp=Z,1.8nm,0.7s,baz=145,slow=3.8,SNR=5.3						
	comp=Z,4.3nm,0.7s						
ASAJ	Asahikawa	52.64	348	P	P	03 27 51.1	+0.5
	comp=Z,12nm,0.8s,baz=242,slow=20,SNR=2.8						
	comp=Z,12nm,0.8s						
NJ2	Nanjing	52.76	320	*e*P	P	03 27 53.5	+1.8
NJ2				pP	pP	03 28 00.1	-3.7
NJ2				sP	sP	03 28 07.2	-1.6
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
YSS	Yuzh-Sakhalins	55.33	349	*e*P	P	03 28 10.3	+0.1
YSS				pmax	pmax		
	comp=Z,30nm,1.2s						
USA0B	Ussuriysk Arra	55.69	339	P	P	03 28 12.5	-0.3
USA0B				IAmb	IAmb	03 28 14.2	
	comp=Z,19nm,0.9s						
USA0B	Ussuriysk Arra	55.69	339	P	P	03 28 12.5	-0.3

USA0B				pmax	pmax		
	comp=Z,19nm,1.0s						
USRK	**Ussuriysk Ar.**	**55.69**	**339**	P	**P**	**03 28 13.3**	**+0.5**
	comp=Z,18nm,1.0s,baz=156,slow=7.1,SNR=11						
	comp=Z,18nm,1.0s						
USRK	**Ussuriysk Ar.**	**55.69**	**339**	P	**P**	**03 28 12.7**	**-0.1**
USRK	**Ussuriysk Ar.**	**55.69**	**339**	P	**P**	**03 28 12.7**	**-0.1**
MDJ	**Mudanjiang**	**56.91**	**338**	P	**P**	**03 28 22.6**	**+1.0**
MDJ				pmax	pmax		
	comp=Z,15nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,930nm,12.0s						
ENH	**Enshi**	**58.13**	**312**	P	**P**	**03 28 29.4**	**-1.0**
ENH				IAmb	IAmb	03 28 30.7	
	comp=Z,14nm,1.0s						
GYA	**Guiyang**	**58.37**	**307**	*e*P	**P**	**03 28 32.0**	**-0.3**
GYA				pmax	pmax		
	comp=Z,12nm,1.5s						
LYN	**LuoYang**	**58.48**	**318**	⇓P	**P**	**03 28 32.4**	**-0.3**
LYN				pmax	pmax		
	comp=Z,12nm,1.1s						
BNX	**BinXian**	**58.69**	**337**	⇓P	**P**	**03 28 33.9**	**-0.1**
BNX				pmax	pmax		
	comp=Z,21nm,1.3s						
HNS	**HongShan**	**58.83**	**322**	⇓P	**P**	**03 28 35.2**	**+0.1**
HNS				pmax	pmax		
	comp=Z,17nm,1.4s						
PETK	**Petropavlovsk-**	**60.27**	**1**	P	**P**	**03 28 45.2**	**+0.5**
	comp=Z,13nm,1.0s,baz=145,slow=6.2,SNR=4.3						
	comp=Z,13nm,1.0s						
CRAI	**Chiangrai**	**61.06**	**298**	P	**P**	**03 28 50.4**	**-0.4**
CM31	**Chiang Mai Arr**	**61.72**	**295**	P	**P**	**03 28 54.6**	**-0.7**
CM31				IAmb	IAmb	03 28 57.3	
	comp=Z,16nm,1.0s						
CMAR	**Chiang Mai Arr**	**61.72**	**295**	P	**P**	**03 28 56.2**	**+0.9**
	comp=Z,8.0nm,0.8s,baz=115,slow=4.9,SNR=12						
	comp=Z,8.0nm,0.8s						
CHTO	**Chiang Mai**	**61.84**	**296**	P	**P**	**03 28 55.4**	**-0.7**
CHTO	**Chiang Mai**	**61.84**	**296**	P	**P**	**03 28 55.4**	**-0.7**
PZH	**PanZhiHua**	**62.34**	**305**	P	**P**	**03 28 59.5**	**+0.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XLT	**XiLinHaoTe**	**62.43**	**329**	⇓*i*P	**P**	**03 29 00.0**	**+0.3**
XLT				pmax	pmax		
	comp=Z,23nm,0.8s						
XLT				pmax	pmax		
	comp=Z,500nm,8.3s						
HEH	**HeiHe**	**62.48**	**340**	*e*P	**P**	**03 28 59.4**	**-0.4**
HEH				PcP	**PcP**	**03 29 38.5**	**-0.2**
HEH				pmax	pmax		
	comp=Z,12nm,0.9s						
CD2	**Chengdu**	**62.72**	**310**	P	**P**	**03 29 01.6**	**-0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TNCH	**TengChong**	**64.41**	**302**	P	**P**	**03 29 16.4**	**+3.1**
TNCH				pmax	pmax		
	comp=Z,570nm,12.1s						
HIA	**Hailar**	**64.63**	**335**	P	**P**	**03 29 13.7**	**-0.3**
HIA				IAmb	IAmb	03 29 15.2	
	comp=Z,20nm,1.1s						
HIA	**Hailar**	**64.63**	**335**	P	**P**	**03 29 13.7**	**-0.3**
HIA				pmax	pmax		
	comp=Z,20nm,1.1s						
ULN	**Ulaanbaatar**	**69.79**	**327**	P	**P**	**03 29 47.4**	**+0.5**
ULN				IAmb	IAmb	03 29 48.7	
	comp=Z,21nm,1.2s						
ULN	**Ulaanbaatar**	**69.79**	**327**	P	**P**	**03 29 47.4**	**+0.5**
ULN				pmax	pmax		
	comp=Z,21nm,1.3s						
SONM	**Songino Array**	**70.12**	**327**	P	**P**	**03 29 49.5**	**+0.5**
	comp=Z,11nm,0.9s,baz=142,slow=7.0,SNR=11						
	comp=Z,11nm,0.9s						
SONM	**Songino Array**	**70.12**	**327**	P	**P**	**03 29 48.9**	**0.0**
SONM				IAmb	IAmb	03 29 50.5	
	comp=Z,20nm,1.1s						
SONM	**Songino Array**	**70.12**	**327**	P	**P**	**03 29 48.9**	**0.0**
SONM				pmax	pmax		
	comp=Z,20nm,1.1s						
SHL	**Shillong**	**70.23**	**300**	P	**P**	**03 29 49.5**	**-0.6**
SHL	**Shillong**	**70.23**	**300**	P	**P**	**03 29 49.5**	**-0.6**
SHL				pmax	pmax		
	comp=Z,23nm,0.8s						
LSA	**Lhasa**	**72.20**	**304**	P	**P**	**03 30 02.2**	**-0.1**
LSA				IAmb	IAmb	03 30 04.0	
	comp=Z,11nm,0.9s						
LSA	**Lhasa**	**72.20**	**304**	P	**P**	**03 30 02.2**	**-0.1**
LSA				pmax	pmax		
	comp=Z,11nm,0.9s						
TAPN	**Taplejung**	**74.33**	**301**	*e*P	**P**	**03 30 14.9**	**+0.1**
	comp=Z,61nm,1.0s						
ODAN	**Odare**	**74.47**	**300**	*e*Pg	**P**	**03 30 15.4**	**0.0**
RAMN	**Ramite**	**75.17**	**300**	*e*P	**P**	**03 30 19.3**	**-0.2**
MOY	**Mondy**	**75.19**	**328**	*e*P	**P**	**03 30 19.1**	**+0.2**
MOY				pmax	pmax		
	comp=Z,17nm,1.4s						
BILL	**Bilibino**	**75.60**	**4**	P	**P**	**03 30 21.4**	**+0.6**
BILL				IAmb	IAmb	03 30 24.8	
	comp=Z,20nm,0.9s						
BILL	**Bilibino**	**75.60**	**4**	*e*P	**P**	**03 30 20.6**	**-0.2**
BILL				*e*		03 30 32.9	
BILL				*e*		03 33 08.3	
BILL				pmax	pmax		
	comp=Z,16nm,0.9s						
JIRN	**Jiri**	**75.72**	**301**	*e*P	**P**	**03 30 22.8**	**0.0**
	comp=Z,44nm,0.9s						
GUN	**Gumba**	**76.05**	**301**	*e*P	**P**	**03 30 24.5**	**-0.2**
	comp=Z,59nm,0.8s						
PKI	**Pulchoki**	**76.36**	**301**	*e*P	**P**	**03 30 25.9**	**-0.5**
PKIN	**Phulchoki**	**76.37**	**301**	*e*P	**P**	**03 30 26.1**	**-0.3**
DMN	**Daman**	**76.63**	**301**	*e*P	**P**	**03 30 28.0**	**+0.2**
	comp=Z,89nm,1.0s						
GKN	**Gorkha**	**77.13**	**301**	*e*P	**P**	**03 30 30.3**	**-0.3**
ANM	**Nome**	**77.36**	**16**	P	**P**	**03 30 31.3**	**+0.5**
ANM	**Nome**	**77.36**	**16**	P	**P**	**03 30 31.3**	**+0.5**
ANM				pmax	pmax		
	comp=Z,13nm,1.2s						
TNA	**Tin City**	**77.47**	**15**	P	**P**	**03 30 32.4**	**+1.0**
KOLN	**Koldanda**	**77.96**	**300**	*e*P	**P**	**03 30 34.8**	**-0.4**
DANN	**Dangsing**	**77.97**	**301**	*e*P	**P**	**03 30 34.7**	**-0.7**
	comp=Z,25nm,0.7s						
PYUN	**Piuthan**	**78.56**	**301**	*e*P	**P**	**03 30 37.3**	**-1.3**
	comp=Z,39nm,0.9s						
WMQ	**Urumqi**	**79.69**	**317**	*e*P	**P**	**03 30 44.5**	**+0.3**
RDOG	**Red Dog Mine**	**80.67**	**15**	P	**P**	**03 30 49.7**	**+0.9**
	baz=222						
IMAR	**Indian Mountai**	**81.81**	**19**	P	**P**	**03 30 55.3**	**+0.3**
MCK	**McKinley**	**82.09**	**22**	P	**P**	**03 30 56.6**	**0.0**
	baz=235						
G21K	**Allakaket**	**82.23**	**18**	P	**P**	**03 30 58.3**	**+1.1**
	baz=231						
QSPA	**South Pole Qui**	**82.60**	**180**	P	**P**	**03 30 59.7**	**+0.3**
QSPA				IAmb	IAmb	03 31 09.8	
	comp=Z,17nm,1.1s						
H23K	**Yukon River**	**83.09**	**20**	P	**P**	**03 31 01.8**	**+0.1**
IL31		**83.42**	**21**	P	**P**	**03 31 02.7**	**-0.6**
IL31				IAmb	IAmb	03 31 06.7	
	comp=Z,14nm,1.5s						
ILAR	**Eielson Array**	**83.42**	**21**	P	**P**	**03 31 03.0**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=238,slow=5.3,SNR=6.5						
	comp=Z,1.2nm,0.5s						
MK31	**Makanchi Array**	**84.26**	**319**	P	**P**	**03 31 08.6**	**+0.5**
MK31	**Makanchi Array**	**84.26**	**319**	P	**P**	**03 31 08.6**	**+0.5**
MK31				pmax	pmax		
	comp=Z,18nm,0.9s						
MKAR	**Makanchi Array**	**84.26**	**319**	P	**P**	**03 31 08.6**	**+0.5**
	comp=Z,18nm,0.8s,baz=106,slow=5.6,SNR=22						
	comp=Z,18nm,0.8s						
MAKZ	**Makanchi**	**84.47**	**318**	P	**P**	**03 31 08.7**	**-0.5**
MAKZ	**Makanchi**	**84.47**	**318**	P	**P**	**03 31 08.7**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,28nm,0.9s						
A21K	**Barrow**	**84.55**	**14**	P	**P**	**03 31 09.0**	**+0.1**
	baz=227						
D23K	**Nanushuk River**	**84.59**	**17**	P	**P**	**03 31 10.8**	**+1.5**
	baz=233						
ZAA0	**Zalesovo Array**	**84.98**	**326**	P	**P**	**03 31 10.8**	**-0.7**
ZALV	**Zalesovo Beam**	**84.98**	**326**	P	**P**	**03 31 11.1**	**-0.4**
	comp=Z,12nm,0.7s,baz=113,slow=5.7,SNR=19						
	comp=Z,12nm,0.7s						
ZALV	**Zalesovo Beam**	**84.98**	**326**	P	**P**	**03 31 10.3**	**-1.2**
ZALV	**Zalesovo Beam**	**84.98**	**326**	P	**P**	**03 31 10.3**	**-1.2**
C24K	**Franklin Bluff**	**85.61**	**17**	P	**P**	**03 31 15.6**	**+1.3**
	baz=235						
BMAR	**Burnt Mountain**	**85.62**	**19**	P	**P**	**03 31 14.4**	**-0.1**
G26K	**Porcupine Rive**	**85.65**	**20**	P	**P**	**03 31 16.2**	**+1.6**
	baz=240						
D25K	**Kavik River**	**86.06**	**18**	P	**P**	**03 31 17.8**	**+1.1**
	baz=237						
C26K	**Camden Bay**	**86.81**	**17**	P	**P**	**03 31 22.4**	**+2.1**
	baz=239						
KSH	**Kashi**	**86.91**	**310**	P	**P**	**03 31 23.6**	**+2.0**
KSH				sP	sP	03 31 38.6	-0.7
KSH				PP	**PP**	**03 34 49.4**	**+4.3**
KSH				pmax	pmax		
	comp=Z,17nm,0.9s						
E27K	**Coleen River**	**86.99**	**19**	P	**P**	**03 31 22.7**	**+1.5**
	baz=242						
C27K	**Jago River**	**87.02**	**18**	P	**P**	**03 31 22.7**	**+1.4**
	baz=240						
KURK	**Kurchatov**	**87.66**	**322**	P	**P**	**03 31 24.3**	**-0.5**
KURK				IAmb	IAmb	03 31 24.6	
	comp=Z,9.8nm,1.1s						
KURK	**Kurchatov**	**87.66**	**322**	P	**P**	**03 31 24.3**	**-0.5**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
EPYK	**Eagle Plains**	**87.89**	**22**	P	**P**	**03 31 26.6**	**+1.0**
	baz=246						
NIL	**Nilore**	**87.93**	**304**	P	**P**	**03 31 25.8**	**-0.8**
NIL	**Nilore**	**87.93**	**304**	P	**P**	**03 31 25.8**	**-0.8**
NIL				pmax	pmax		
	comp=Z,16nm,0.9s						
AAK	**Ala-Archa**	**88.64**	**313**	P	**P**	**03 31 28.9**	**-0.9**
AAK				IAmb	IAmb	03 31 35.7	
	comp=Z,4.6nm,0.8s						
AAK	**Ala-Archa**	**88.64**	**313**	P	**P**	**03 31 28.9**	**-0.9**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NVAR	**Mina Array Bea**	**91.28**	**52**	P	**P**	**03 31 43.1**	**+0.7**
	comp=Z,1.0nm,1.0s,baz=267,slow=3.0,SNR=2.6						
	comp=Z,1.0nm,1.0s						
KBL	**Kabul**	**91.52**	**304**	P	**P**	**03 31 41.8**	**-1.7**
KBL				IAmb	IAmb	03 31 50.5	
	comp=Z,5.1nm,0.8s						
KBL	**Kabul**	**91.52**	**304**	P	**P**	**03 31 41.8**	**-1.7**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KK31	**Karatay Array**	**91.60**	**313**	P	**P**	**03 31 42.7**	**-0.8**
KK31	**Karatay Array**	**91.60**	**313**	P	**P**	**03 31 42.7**	**-0.8**
KK31				pmax	pmax		
	comp=Z,26nm,2.0s						
KKAR	**Karatay Array**	**91.60**	**313**	P	**P**	**03 31 42.7**	**-0.8**
KKAR	**Karatay Array**	**91.60**	**313**	P	**P**	**03 31 42.7**	**-0.8**
KKAR				pmax	pmax		
	comp=Z,26nm,2.0s						
G08A	**Pilot Rock**	**91.81**	**45**	P	**P**	**03 31 44.4**	**-0.1**
BRVK	**Borovoye**	**93.19**	**323**	P	**P**	**03 31 49.8**	**-0.7**
BRVK				IAmb	IAmb	03 31 50.4	
	comp=Z,8.4nm,0.9s						
BRVK	**Borovoye**	**93.19**	**323**	P	**P**	**03 31 49.8**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
C36M	**Paulatuk**	**93.36**	**20**	P	**P**	**03 31 51.3**	**+0.4**
C36M				IAmb	IAmb	03 31 58.3	
	comp=Z,10nm,1.2s						
C36M	**Paulatuk**	**93.36**	**20**	P	**P**	**03 31 51.1**	**+0.2**
	baz=258						
A36M	**Sachs Harbour**	**93.54**	**18**	IAmb	IAmb	03 32 03.2	
	comp=Z,5.9nm,0.9s						
ELIB	**Princess Elisa**	**95.03**	**193**	*d*P	**P**	**03 31 59.7**	**+0.8**
YKA	**Yellowknife Ar**	**96.27**	**28**	P	**P**	**03 32 02.5**	**-1.9**
	comp=Z,1.2nm,0.8s,baz=264,slow=4.6,SNR=5.4						
	comp=Z,1.2nm,0.8s						
PDAR	**Pinedale Array**	**98.32**	**48**	P	**P**	**03 32 13.9**	**-0.6**
	comp=Z,0.8nm,0.9s,baz=186,slow=2.8,SNR=3.8						
	comp=Z,0.8nm,0.9s						
OBN	**Obninsk**	**112.53**	**327**	*i* PKIKP	**PKiKP**	**03 37 12.9**	**+0.6**
OBN				*e*		03 37 59.4	
OBN				*e*PPP	PPP	03 40 21.3	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.4s						
FINES	**FINESS Array B**	**114.64**	**336**	PKP	PKPdf	03 37 16.4	+0.3
	comp=Z,3.2nm,0.8s,baz=134,slow=8.2,SNR=6.0						
AKASG	**Malin Array Be**	**118.35**	**325**	PKP	**PKPdf**	**03 37 23.5**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=46,slow=2.6,SNR=5.7						
BRTR	**Keskin Array B**	**119.28**	**312**	PKP	**PKPdf**	**03 37 25.5**	**-0.5**
	comp=Z,0.5nm,0.9s,baz=3.4,slow=4.9,SNR=2.4						
BRTR				PKKPbc	**PKKPab**	**03 47 41.4**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=204,slow=2.7,SNR=5.4						
NB2	**NORSAR Subarra**	**120.34**	**341**	PKPdf	**PKPdf**	**03 37 27.2**	**0.0**
	comp=Z,2.4nm,0.7s,baz=41,slow=1.9						
NOA	**NORSAR Array B**	**120.34**	**341**	PKP	**PKPdf**	**03 37 27.3**	**0.0**
	comp=Z,1.7nm,0.7s,baz=46,slow=1.9,SNR=10						
CFA	**Coronel Fontan**	**122.77**	**135**	PKP	**PKiKP**	**03 37 33.5**	**+0.4**
	comp=Z,4.0nm,0.8s,baz=73,slow=1.0,SNR=7.3						
VYHS	**Vyhne**	**125.31**	**326**	*e*PKIKP	**PKiKP**	**03 37 38.9**	**+1.4**
VYHS	**Vyhne**	**125.31**	**326**	*e*PKP	**PKiKP**	**03 37 38.9**	**+1.4**
BRG	**Berggiesshubel**	**126.39**	**331**	P	**Pdif**	**03 34 26.0**	**+7.2**
BRG	**Berggiesshubel**	**126.39**	**331**	Amp		04 17 12.0	
	comp=Z,3.0nm,21.4s						
BRG	**Berggiesshubel**	**126.39**	**331**	*e*PKIKP	**PKiKP**	**03 37 40.2**	**+0.7**
BRG				pmax	pmax		
	comp=Z,8.0nm,1.4s						
BRG	**Berggiesshubel**	**126.39**	**331**	*e*PKP	**PKiKP**	**03 37 40.2**	**+0.7**
BRG	**Berggiesshubel**	**126.39**	**331**	Amp		03 37 41.0	
	comp=Z,8.4nm,1.4s						
BRG	**Berggiesshubel**	**126.39**	**331**	Amp		04 17 05.0	
	comp=N,1.6nm,19.2s						
BRG	**Berggiesshubel**	**126.39**	**331**	Amp		04 17 07.0	
	comp=E,1.5nm,19.1s						
CLL	**Collm**	**126.56**	**332**	*i* PKPdf	**PKiKP**	**03 37 39.6**	**-0.2**
	comp=Z,7.0nm,1.2s						
CLL				*e*pPKPdf	**pPKPdf**	**03 37 48.0**	**-4.8**
CLL	**Collm**	**126.56**	**332**	*i* PKIKP	**PKiKP**	**03 37 39.6**	**-0.2**
CLL				*e*		03 37 48.0	
CLL				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KHC	**Kasperske Hory**	**127.70**	**329**	PKPdf	**PKPdf**	**03 37 41.6**	**-0.1**
KHC	**Kasperske Hory**	**127.70**	**329**	PKIKP	**PKPdf**	**03 37 41.6**	**-0.1**
GEC2	**GERESS Array S**	**127.82**	**329**		**PKPdf**	**03 37 41.7**	**-0.3**
GERES	**GERESS Array B**	**127.82**	**329**	PKP	**PKiKP**	**03 37 43.1**	**+0.5**
	comp=Z,2.1nm,0.8s,baz=90,slow=1.6,SNR=9.2						
CZSB	**Cruzeiro do Su**	**129.30**	**106**		**PKiKP**	**03 37 46.4**	**-0.1**
LPAZ	**La Paz**	**130.52**	**119**	PKP	**PKiKP**	**03 37 49.9**	**+0.3**
	comp=Z,3.4nm,0.9s,baz=344,slow=1.2,SNR=7.3						
LPAZ	**La Paz**	**130.52**	**119**	PKPdf	**PKPdf**	**03 37 47.9**	**-0.8**
LPAZ	**La Paz**	**130.52**	**119**	PKIKP	**PKPdf**	**03 37 47.9**	**-0.8**
RCHB	**Rochefort**	**130.82**	**335**	*d*PKP	**PKPdf**	**03 37 47.4**	**-0.1**
BMRD	**Maredsous**	**130.90**	**336**	*d*PKP	**PKiKP**	**03 37 48.7**	**+0.2**
TEOL	**Teolo**	**131.12**	**327**	PKPdf	**PKiKP**	**03 37 49.5**	**+0.4**
DOU	**Dourbes**	**131.13**	**336**	*d*PKP	**PKPdf**	**03 37 47.5**	**-0.6**
ETMB	**Extrema**	**134.75**	**112**	PKPdf	**PKPdf**	**03 37 54.8**	**-1.2**
PTLB	**Pontes e Lacer**	**138.57**	**123**	PKPdf	**PKPdf**	**03 38 02.4**	**-0.6**
ESDC	**Sonseca Array**	**143.09**	**334**	PKP	PKPbc	03 38 08.1	+0.6
	comp=Z,1.7nm,0.9s,baz=353,slow=2.5,SNR=6.5						
PVIS	**Viseu**	**143.78**	**339**	*e*PKP	PKPbc	03 38 10.4	+1.0
PMRV	**Marv??o**	**144.72**	**337**	*e*PKP	**PKPdf**	**03 38 13.1**	**-0.3**
PSBE	**So Bento**	**145.16**	**339**	*e*PKP	**PKPdf**	**03 38 15.1**	**+0.9**
PESTR	**Estremoz**	**145.28**	**337**	PKPbc	**PKPbc**	**03 38 12.5**	**-1.6**
PESTR	**Estremoz**	**145.28**	**337**	*e*PKP	**PKPdf**	**03 38 14.8**	**+0.4**
PMTG	**Montargil**	**145.34**	**338**	*e*PKP	**PKPdf**	**03 38 14.9**	**+0.5**
PBAR	**Barrancos**	**145.66**	**336**	*e*PKP	**PKPab**	**03 38 16.1**	**+0.5**
EVO	**Evora**	**145.73**	**337**	*e*PKP	**PKPab**	**03 38 16.3**	**+0.4**
PMAFR	**Mafra**	**145.83**	**339**	*e*PKP	**PKPab**	**03 38 16.8**	**+0.5**
PBEJ	**Beja**	**146.12**	**337**	*e*PKP	**PKPab**	**03 38 17.8**	**+0.4**
PNCL	**Nicolau / Gran**	**146.30**	**338**	*e*PKP	**PKPab**	**03 38 18.7**	**+0.7**
PCVE	**Castro Verde**	**146.53**	**336**	*e*PKP	**PKPab**	**03 38 19.1**	**+0.2**
BDFB	**Brasilia**	**147.10**	**134**	PKPbc	**PKPbc**	**03 38 19.7**	**-0.6**
	comp=Z,20nm,0.8s,baz=191,slow=3.8,SNR=10						
BDFB	**Brasilia**	**147.10**	**134**		**PKPdf**	**03 38 19.0**	**+0.8**
TORD	**Torodi Ar. Bea**	**153.95**	**285**	PKPbc	**PKiKP**	**03 38 36.8**	**0.0**
	comp=Z,1.2nm,0.8s,baz=42,slow=2.0,SNR=3.5						
DBIC	**Dimbokro**	**160.85**	**269**	PKPab	**PKPab**	**03 39 19.9**	**-0.1**
	comp=Z,3.5nm,0.8s,baz=107,slow=2.7,SNR=3.7						

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*NEIC **04** 03:30:03.9±1.3, 7°.3S±0°.1×155°.81E±0°.09, h21^{km}±5^{km}, mb4.3/14, Error ellipse: s-maj=16.9km s-min=11.3km az=205.0*

*IDC **04** 03:30:06.7±1.5, 7°.32S×155°.79E, h48^{km}±14^{km}, mb3.8/12, mbtmp4.1/15, ML3.2/3, MS4.4/1, Error ellipse: s-maj=17.0km s-min=11.4km az=36.0*

ISC 04 03:30:06.2±0.5, **7°.34S**±0°.08×**155°.77E**±0°.07, **h44^{km}, n44,** σ**0^{s}.76**/42, **mb4.2**/18, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.62**	**117**	P	**Pn**	**03 31 15.2**	**+1.6**
	3µm,0.6s,baz=249,slow=10.0,SNR=1.9						
HNR				S	**Sn**	**03 32 07.1**	**+1.1**
	3µm,0.7s,baz=278,slow=20,SNR=1.4						
HNR	**Honiara**	**4.62**	**117**	Pn	**Pn**	**03 31 12.6**	**-1.0**
RABL	**Rabaul**	**4.76**	**311**	Pn	**Pn**	**03 31 14.5**	**-1.0**
KRVT	**Keravat (AS076**	**4.79**	**309**	P	**Pn**	**03 31 15.8**	**-0.1**
	5.5nm,0.3s,baz=348,slow=17,SNR=1.5						
KRVT				S	**Sn**	**03 32 12.1**	**+1.9**
	144nm,0.7s,baz=300,slow=23,SNR=2.8						
	45nm,0.7s						
PMG	**Port Moresby**	**8.77**	**256**	P	**Pn**	**03 32 10.1**	**-0.4**
	2.7nm,0.3s,baz=35,slow=6.4,SNR=9.7						
	32nm,0.8s						
CTA	**Charters Tower**	**15.68**	**215**	P	**Pn**	**03 33 43.9**	**-0.4**
	0.1nm,0.3s,baz=43,slow=15,SNR=4.5						
	1.9nm,0.8s						
WR0	**Warramunga Arr**	**24.11**	**237**	P	**P**	**03 35 17.9**	**-0.1**
WR0				IAmb	IAmb	03 35 19.3	
	comp=Z,7.0nm,1.0s						
WRAB	**Tennant Creek**	**24.25**	**237**	P	**P**	**03 35 18.7**	**-0.7**
WRAB				IAmb	IAmb	03 35 20.5	
	comp=Z,9.8nm,1.1s						
WB2	**Warramunga Arr**	**24.26**	**237**	P	**P**	**03 35 19.0**	**-0.4**
WB2				IAmb	IAmb	03 35 20.7	
	comp=Z,9.3nm,0.9s						
WRA	**Warramunga Arr**	**24.27**	**237**	P	**P**	**03 35 19.6**	**+0.2**
	comp=Z,4.5nm,0.9s,baz=62,slow=9.6,SNR=13						
	comp=Z,4.5nm,0.9s						
WRA	**Warramunga Arr**	**24.27**	**237**	P	**P**	**03 35 18.6**	**-0.9**
AS31	**Alice Springs**	**26.53**	**230**	P	**P**	**03 35 38.6**	**-1.4**
ASAR	**Alice Springs**	**26.53**	**230**	P	**P**	**03 35 39.8**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=63,slow=8.8,SNR=6.8						
	comp=Z,0.9nm,0.8s						
STKA	**Stephens Creek**	**27.76**	**207**	P	**P**	**03 35 51.6**	**+0.7**
	comp=Z,3.4nm,0.8s,baz=33,slow=14,SNR=6.1						
	comp=Z,3.4nm,0.8s						
STKA	**Stephens Creek**	**27.76**	**207**	P	**P**	**03 35 51.0**	**+0.1**
STKA				IAmb	IAmb	03 36 02.9	
	comp=Z,1.0nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**27.84**	**23**	T	T	04 04 18.6	
	baz=202,slow=75,SNR=20						
H11S2	**WAKE ISLAND Hy**	**27.84**	**23**	T	T	04 04 18.1	
	baz=202,slow=75,SNR=19						
H11S1	**WAKE ISLAND Hy**	**27.85**	**23**	T	T	04 04 20.3	
	baz=202,slow=75,SNR=10						
FITZ	**Fitzroy Crossi**	**31.23**	**247**	P	**P**	**03 36 22.2**	**+0.4**
DAV	**Davao City (W)**	**33.34**	**295**	LR	LR	03 49 17.9	
	comp=Z,636nm,20.1s,baz=46,slow=34						
TOLI2	**Tolitoli**	**35.90**	**282**	P	**P**	**03 37 02.7**	**+0.2**
TOLI2				IAmb	IAmb	03 37 29.4	
	comp=Z,4.5nm,0.9s						
KSRS	**Korea Array**	**51.60**	**332**	P	**P**	**03 39 08.4**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=147,slow=8.1,SNR=2.7						
	comp=Z,0.8nm,0.6s						
USRK	**Ussuriysk Ar.**	**55.62**	**339**	P	**P**	**03 39 36.4**	**-1.1**
	comp=Z,2.8nm,0.8s,baz=158,slow=9.0,SNR=5.2						
	comp=Z,2.8nm,0.8s						
USRK	**Ussuriysk Ar.**	**55.62**	**339**	P	**P**	**03 39 37.0**	**-0.6**
KLR	**Kul'dur**	**60.13**	**342**	P	**P**	**03 40 09.3**	**+0.3**
	comp=Z,2.8nm,1.1s,baz=133,slow=3.9,SNR=4.8						
	comp=Z,2.8nm,1.1s						
CMAR	**Chiang Mai Arr**	**61.63**	**295**	P	**P**	**03 40 20.6**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=111,slow=5.1,SNR=6.1						
	comp=Z,1.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**61.63**	**295**	P	**P**	**03 40 19.3**	**-0.6**
SONM	**Songino Array**	**70.04**	**327**	P	**P**	**03 41 14.3**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=139,slow=7.5,SNR=8.7						
	comp=Z,1.7nm,0.8s						
SONM	**Songino Array**	**70.04**	**327**	P	**P**	**03 41 14.3**	**+0.6**
SONM				IAmb	IAmb	03 41 15.0	
	comp=Z,3.2nm,1.0s						
SHL	**Shillong**	**70.13**	**300**	P	**P**	**03 41 15.1**	**+0.3**
BILL	**Bilibino**	**75.56**	**4**	P	**P**	**03 41 46.4**	**+0.6**
BILL				IAmb	IAmb	03 41 49.3	
	comp=Z,4.5nm,0.9s						
ILAR	**Eielson Array**	**83.41**	**21**	P	**P**	**03 42 27.0**	**-1.6**
	comp=Z,0.6nm,0.6s,baz=243,slow=4.8,SNR=10						
	comp=Z,0.6nm,0.6s						
MK31	**Makanchi Array**	**84.17**	**319**	P	**P**	**03 42 33.1**	**+0.2**
MKAR	**Makanchi Array**	**84.17**	**319**	P	**P**	**03 42 33.7**	**+0.8**
	comp=Z,2.7nm,0.7s,baz=106,slow=5.6,SNR=26						
	comp=Z,2.7nm,0.7s						
MKAR	**Makanchi Array**	**84.17**	**319**	P	**P**	**03 42 33.4**	**+0.4**
MAKZ	**Makanchi**	**84.38**	**318**	P	**P**	**03 42 34.4**	**+0.4**
ZAA0	**Zalesovo Array**	**84.89**	**326**	P	**P**	**03 42 35.4**	**-0.9**
ZAA0				IAmb	IAmb	03 42 36.8	
	comp=Z,2.6nm,0.8s						
ZALV	**Zalesovo Beam**	**84.89**	**326**	P	**P**	**03 42 36.1**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=102,slow=5.9,SNR=9.8						
	comp=Z,2.2nm,0.6s						
ZALV	**Zalesovo Beam**	**84.89**	**326**	P	**P**	**03 42 36.0**	**-0.4**
YKA	**Yellowknife Ar**	**96.28**	**28**	P	**P**	**03 43 29.7**	**0.0**
	comp=Z,0.3nm,0.7s,baz=266,slow=4.5,SNR=5.8						
	comp=Z,0.3nm,0.7s						
NOA	**NORSAR Array B**	**120.28**	**341**	PKP	**PKPdf**	**03 48 51.8**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=40,slow=17,SNR=3.4						
GERES	**GERESS Array B**	**127.74**	**329**	PKP	**PKPdf**	**03 49 07.2**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=64,slow=3.1,SNR=3.5						
BDFB	**Brasilia**	**147.19**	**134**	PKPbc	**PKPbc**	**03 49 45.3**	**-0.5**
	comp=Z,5.4nm,0.7s,baz=174,slow=6.5,SNR=8.9						
TORD	**Torodi Ar. Bea**	**153.86**	**285**	PKPbc	**PKPbc**	**03 50 01.9**	**+0.1**
	comp=Z,0.6nm,0.9s,baz=292,slow=7.8,SNR=2.5						

ROM 04 03:35:48.1±0.1, **42°.791N**±0°.004×**13°.045E**±0°.004, **h10^{km}, Md1.2**/2, **4D, Error ellipse: s-maj=0.5km s-min=0.2km az=169.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.10**	**349**	P	Pb	03 35 51.7	-0.5
T1216				S	Sg	03 35 53.5	+0.7
T1216				END			
T1217	**Poggiodomo (PG**	**0.12**	**227**	P	Pg	03 35 51.6	+0.6
T1217				S	Sg	03 35 53.7	+0.6
T1245	**Castelsantange**	**0.12**	**58**	⇓P	Pg	03 35 51.8	+0.5
T1245				S	Sg	03 35 54.0	+0.5
T1245				AML	AML		
	comp=E,51µm,1.1s						
T1245				AML	AML		
	comp=N,52µm,1.0s						
T1245				END			
T1214	**Arquata del Tr**	**0.12**	**105**	⇓P	Pg	03 35 51.8	+0.6
T1214				S	Sg	03 35 54.0	+0.5
T1215	**Vallo di Nera,**	**0.13**	**275**	⇓P	Pg	03 35 51.9	+0.6
T1215				S	Sg	03 35 54.0	+0.5
MMO1	**Montemonaco**	**0.23**	**62**	⇓P	Pg	03 35 53.6	+0.6
MMO1				S	Sg	03 35 57.6	+1.3
FDMO	**Fiordimonte**	**0.25**	**7**	P	Pg	03 35 54.0	+0.7

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*IDC **04** 03:36:29.9±0.5, 10°.39N×126°.67E, h0^{km}, mb4.3/23, mbtmp4.3/24, ML4.1/1, Error ellipse: s-maj=23.6km s-min=11.5km az=80.0*

*MAN **04** 03:36:33.4, 10°.58N×126°.78E, h21^{km}, mb5.1, ML4.0, MS4.1*

*NEIC **04** 03:36:34.4±1.5, 10°.46N±0°.07×126°.8E±0°.1, h30^{km}±5^{km}, mb4.8/42, Error ellipse: s-maj=17.3km s-min=10.2km az=92.0*

ISC 04 03:36:31.6±0.8, **10°.47N**±0°.03×**126°.86E**±0°.05, **h13^{km}**±5^{km}, **n114,** σ**1^{s}.37**/139, **mb4.5**/41, **14C-8D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.99**	**227**	⇑*e*P	**Pb**	**03 36 50.0**	**-0.6**
GLSP				*e*S	**Sb**	**03 37 02.2**	**-1.4**
SCPH	**Surigao**	**1.51**	**243**	⇑*e*P	**Pn**	**03 36 58.1**	**-0.2**
SCPH				*e*S	**Sn**	**03 37 18.2**	**+0.2**
BUTP	**Butuan**	**1.93**	**219**	⇓*e*P	**Pn**	**03 37 05.5**	**+1.4**
BUTP				*e*S	**Sn**	**03 37 29.8**	**+1.6**
MSLP	**Maasin**	**2.00**	**261**	⇑*e*P	**Pn**	**03 37 05.2**	**+0.1**
MSLP				*e*S	**Sn**	**03 37 30.2**	**+0.3**
OCLP	**Ormoc**	**2.29**	**285**	⇑*e*P	**Pn**	**03 37 08.4**	**-0.7**
OCLP				*e*S	**Sb**	**03 37 41.7**	**+0.7**
BIPH	**Bislig**	**2.32**	**192**	⇑*e*P	**Pn**	**03 37 09.1**	**-0.5**
BIPH				*e*S	**Sn**	**03 37 37.2**	**-0.8**
TABP	**Talibon, Bohol**	**2.52**	**262**	⇑*e*P	**Pn**	**03 37 13.3**	**+1.1**
GHBP	**Garcia Hernand**	**2.63**	**252**	⇓*e*P	**Pn**	**03 37 15.1**	**+1.2**
LLP	**Lapu-Lapu**	**2.85**	**267**	⇓*e*P	**Pn**	**03 37 17.9**	**+1.0**
LLP				*i* S	**Sn**	**03 37 52.1**	**+1.1**
CGP	**Cagayan de Oro**	**2.93**	**227**	⇓*e*P	**Pb**	**03 37 25.7**	**+2.0**
CGP				*e*S	**Sn**	**03 37 49.8**	**-3.1**
CNP	**Catarman**	**2.96**	**314**	⇓*e*P	**Pn**	**03 37 17.2**	**-1.1**
CNP				*e*S	**Sn**	**03 37 52.1**	**-1.6**
TBP	**Tagbilaran**	**3.05**	**256**	*e*P	**Pn**	**03 37 21.2**	**+1.6**
TBP				*i* S	**Sn**	**03 37 56.8**	**+0.8**

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BUKP  Musuan            3.12 215⇑eP    Pn     03 37 24.6 +4.0
BUKP                             eS    Sb     03 38 03.2 -2.0
LSIP  Lazi, Siquijor    3.45 248⇑eP    Pn     03 37 26.6 +1.6
MATI  Mati              3.55 190⇑eP    Pn     03 37 30.3 +3.8
MATI                             eS    Sn     03 38 10.8 +2.5
DAV   Davao City (W)    3.61 201  Pn   Pn     03 37 29.0 +1.8
      baz=195,slow=19
DAV                               Sn   Sn     03 38 10.1 +0.4
      61nm,0.3s,baz=94,slow=18,SNR=1.8
DAV   Davao City (W)    3.61 201  Pn   Pn     03 37 28.9 +1.6
SNPH  Sibulan           3.74 253 eP    Pn     03 37 26.4 -2.7
KCP   Kidapawan         3.86 207⇓eP    Pn     03 37 26.7 -4.0
DCPH  Dipolog City      3.93 242⇑eP    Pn     03 37 34.1 +2.4
DCPH                             eS    Sn     03 38 19.8 +2.0
PVCP  Virac             4.08 320⇑eP    Pn     03 37 33.2 -0.6
PVCP                             eS    Sn     03 38 20.9 -0.5
RCP   Roxas             4.18 285⇓eP    Pn     03 37 37.3 +2.1
RCP                              eS    Sn     03 38 25.9 +2.0
CNOP  Candoni, Negro    4.20 262⇑eP    Pn     03 37 37.3 +1.8
CNOP                             eS    Sn     03 38 25.5 +1.1
PAGZ  Pagadian          4.31 233⇑eP    Pn     03 37 40.1 +3.2
PAGZ                             eS    Sn     03 38 29.3 +2.3
SKMP  Bagumbayan, Su    4.54 210⇓eP    Pn     03 37 43.4 +3.2
OTRP  Odiongan          5.10 292⇑eP    Pn     03 37 48.8 +1.0
TNTI  Ternate           9.65 177  Pn   Pn     03 38 50.1 -0.1
TOLI2 Tolitoli         11.09 213  Pn   Pn     03 39 10.9 +0.9
NACB  Ninganchiao      14.52 340  Pn   Pn     03 39 57.4 +0.4
JOW   Kunigami         16.33   5  Pn   Pn     03 40 20.6 -0.2
SBUM  Sibu             16.57 242  Pn   Pn     03 40 23.9  0.0
KAPI  Kappang          16.93 205  Pn   Pn     03 40 26.9 -1.5
      0.7nm,0.3s,baz=58,slow=20,SNR=2.0
      3.7nm,0.5s
KAPI  Kappang          16.93 205  Pn   Pn     03 40 28.4  0.0
KSM   Kuching          18.71 243       P      03 40 49.1 -1.0
KSM                               IAmb IAmb   03 40 55.1
      comp=Z,29nm,0.8s
JNU   Nakatsue         22.85   9  P    P      03 41 36.9 +2.2
      comp=Z,11nm,0.9s,baz=170,slow=6.7,SNR=6.1
      comp=Z,11nm,0.9s
MTN   Manton Dam       23.55 170  P    P      03 41 40.9 -1.0
MTN                               IAmb IAmb   03 41 53.0
      comp=Z,48nm,1.3s
ENH   Enshi            25.49 323  P    P      03 41 58.1 -1.7
ENH                               IAmb IAmb   03 42 02.4
      comp=Z,31nm,1.4s
KNRA  Kununurra        26.05 176  P    P      03 42 04.1 -0.7
KNRA                              IAmb IAmb   03 42 20.2
      comp=Z,11nm,0.9s
IPM   Ipoh             26.28 259  P    P      03 42 06.1 -1.0
IPM                               IAmb IAmb   03 42 09.9
      comp=Z,18nm,0.7s
KSAR  Wonju Array Be   26.87   2  P    P      03 42 12.7 +0.6
KSRS  Korea Array      26.89   2  P    P      03 42 13.2 +1.0
      comp=Z,2.4nm,0.6s,baz=177,slow=9.8,SNR=9.7
      comp=Z,2.4nm,0.6s
CMAR  Chiang Mai Arr   28.14 290  P    P      03 42 22.8 -1.1
      comp=Z,1.1nm,0.3s,baz=105,slow=6.9,SNR=5.9
      comp=Z,1.1nm,0.3s
WB0   Warramunga Arr   30.95 166  P    P      03 42 48.2 -0.4
WB0                               IAmb IAmb   03 42 59.6
      comp=Z,10.0nm,1.4s
WRA   Warramunga Arr   31.10 166  P    P      03 42 49.3 -0.6
      comp=Z,1.0nm,0.5s,baz=349,slow=9.2,SNR=12
WRA                               PcP  PcP    03 45 45.2 -0.2
      comp=Z,0.6nm,0.5s,baz=342,slow=2.7,SNR=6.0
      comp=Z,1.0nm,0.5s
WRA   Warramunga Arr   31.10 166  P    P      03 42 49.4 -0.5
MBWA  Marble Bar       32.20 193  P    P      03 42 58.5 -1.1
MBWA                              IAmb IAmb   03 43 04.0
      comp=Z,18nm,1.3s
PSA00 Pilbara Seismi   32.58 192  P    P      03 43 02.4 -0.5
PSA00                             IAmb IAmb   03 43 03.7
      comp=Z,27nm,1.5s
USRK  Ussuriysk Ar.    33.90   7  P    P      03 43 15.4 +1.2
      comp=Z,2.3nm,0.6s,baz=179,slow=8.7,SNR=8.9
      comp=Z,2.3nm,0.6s
USRK  Ussuriysk Ar.    33.90   7  P    P      03 43 13.2 -1.0
AS31  Alice Springs    34.62 169  P    P      03 43 18.8 -1.9
ASAR  Alice Springs    34.62 169  P    P      03 43 20.4 -0.3
      comp=Z,1.9nm,0.5s,baz=351,slow=6.8,SNR=30
ASAR                              PcP  PcP    03 45 55.3 +0.2
      comp=Z,1.2nm,0.5s,baz=345,slow=2.6,SNR=12
      comp=Z,1.9nm,0.5s
ASAR  Alice Springs    34.62 169  P    P      03 43 18.6 -2.1
CTA   Charters Tower   35.87 148  P    P      03 43 32.5 +1.0
      comp=Z,4.7nm,1.1s,baz=30,slow=20,SNR=3.1
      comp=Z,4.7nm,1.1s
SHL   Shillong         36.35 299  P    P      03 43 34.5 -1.3
SHL                               IAmb IAmb   03 43 36.4
      comp=Z,8.4nm,0.5s
KLR   Kul'dur          38.85   5  P    P      03 43 58.0 +1.5
      comp=Z,3.3nm,0.6s,baz=181,slow=6.4,SNR=18
      comp=Z,3.3nm,0.6s
MORW  Morawa           40.67 195  P    P      03 44 11.0 -0.8
MORW                              IAmb IAmb   03 44 15.8
      comp=Z,43nm,1.8s
ULN   Ulaanbaatar      40.84 340  P    P      03 44 13.2  0.0
ULN   Ulaanbaatar      40.84 340  P    P      03 44 14.9 +1.7
FORT  Forrest          41.03 178  P    P      03 44 13.8 -0.8
SONM  Songino Array    41.04 339  P    P      03 44 15.6 +0.8
      comp=Z,2.1nm,0.8s,baz=160,slow=8.9,SNR=9.6
      comp=Z,2.1nm,0.8s
SONM  Songino Array    41.04 339  P    P      03 44 13.8 -1.1
BBOO  Buckleboo        43.92 169  P    P      03 44 37.6 -0.6
STKA  Stephens Creek   44.41 162  P    P      03 44 43.0 +0.8
      comp=Z,1.6nm,0.3s,baz=351,slow=7.4,SNR=8.1
      comp=Z,1.6nm,0.3s
STKA  Stephens Creek   44.41 162  P    P      03 44 41.8 -0.4
PETK  Petropavlovsk-   49.22  24  P    P      03 45 21.2 +1.6
      comp=Z,2.5nm,0.6s,baz=194,slow=3.1,SNR=5.2
      comp=Z,2.5nm,0.6s
PETK  Petropavlovsk-   49.22  24  P    P      03 45 19.1 -0.5
WUS   Wushi            51.79 315  P    P      03 45 40.4 +0.9
MK31  Makanchi Array   52.22 322  P    P      03 45 43.3 +0.9
MK31                              IAmb IAmb   03 45 45.2
      comp=Z,8.1nm,0.8s
MKAR  Makanchi Array   52.22 322  P    P      03 45 43.6 +1.2
      comp=Z,16nm,0.8s,baz=116,slow=8.1,SNR=82
MKAR                              PcP  PcP    03 46 54.4 +0.5
      comp=Z,1.7nm,0.8s,baz=104,slow=4.6,SNR=8.2
      comp=Z,16nm,0.8s
MAKZ  Makanchi         52.42 322  P    P      03 45 43.0 -0.9
MAKZ                              IAmb IAmb   03 45 46.1
      comp=Z,10nm,0.8s
MAKZ  Makanchi         52.42 322  P    P      03 45 44.7 +0.9
MAKZ                              pP   pwP    03 45 55.8 -0.7
MAKZ                              sP   sP     03 46 00.2  +14
ZAA0  Zalesovo Array   54.73 331       P      03 45 58.4 -2.3
ZAA0                              IAmb IAmb   03 46 03.4
      comp=Z,5.8nm,1.2s
ZALV  Zalesovo Beam    54.73 331  P    P      03 46 00.8 +0.1
      comp=Z,1.4nm,0.3s,baz=123,slow=7.3,SNR=9.7
ZALV                              PcP  PcP    03 47 02.4 -0.7
      comp=Z,0.8nm,0.5s,baz=129,slow=3.9,SNR=2.1
      comp=Z,1.4nm,0.3s
ZALV  Zalesovo Beam    54.73 331       P      03 45 58.9 -1.7
SEY   Seymchan         55.49  14  P    P      03 46 09.1 +3.1
      comp=Z,0.6nm,0.3s,baz=358,slow=23,SNR=1.8
      comp=Z,0.6nm,0.3s
KURK  Kurchatov        56.23 325  P    P      03 46 11.5  0.0
KURK  Kurchatov        56.23 325  P    P      03 46 12.3 +0.8
KURK                              pP   pwP    03 46 23.5 -0.7
GAR   Garm             57.61 310  P    P      03 46 20.0 -1.7
GAR                               IAmb IAmb   03 46 23.8
      comp=Z,9.9nm,0.7s
KBL   Kabul            57.70 304  P    P      03 46 20.6 -1.9
KBL                               IAmb IAmb   03 46 23.6
      comp=Z,3.6nm,0.7s
KK31  Karatay Array    58.53 314  P    P      03 46 26.7 -1.2
KK31                              IAmb IAmb   03 46 30.0
      comp=Z,14nm,1.8s
KKAR  Karatay Array    58.53 314  P    P      03 46 26.7 -1.2
KKAR                              IAmb IAmb   03 46 30.0
      comp=Z,14nm,1.8s
TIXI  Tiksi            61.15   1  P    P      03 46 45.1 -0.2
      comp=Z,1.1nm,0.3s,baz=270,slow=24,SNR=6.1
      comp=Z,1.1nm,0.3s
TIXI  Tiksi            61.15   1  P    P      03 46 45.4  0.0
TIXI                              IAmb IAmb   03 46 58.3
      comp=Z,8.2nm,1.4s
BRVK  Borovoye         61.91 325  P    P      03 46 50.6 -0.3
BRVK  Borovoye         61.91 325  P    P      03 46 51.9 +1.1
BRVK                              pP   pwP    03 47 02.7 +0.8
ABKAR Akbulak array    67.11 319  P    P      03 47 25.1 +0.1
ARU   Arti             69.38 327  P    P      03 47 39.7 +0.6
ARU                               pP   pwP    03 47 50.5 +0.1
AKH   Akhalkalaki      78.20 310  P    P      03 48 31.3 -0.1
GEVA  Gevas            78.75 307  P    P      03 48 34.3 -0.2
ILAR  Eielson Array    79.01  26  P    P      03 48 35.1  0.0
      comp=Z,0.6nm,0.7s,baz=234,slow=5.0,SNR=13
      comp=Z,0.6nm,0.7s
GURO  Guroymak-BITLI   79.54 307  P    P      03 48 37.8 -0.9
KLMR  Klimovskoe       79.64 330 e     P      03 48 37.1 -1.5
KLMR                              AMP         03 48 39.8
      comp=Z,14nm,0.7s
BMAR  Burnt Mountain   79.86  23  P    P      03 48 39.9 +0.1
INK   Inuvik           83.89  22  P    P      03 49 01.4 +0.6
      comp=Z,0.8nm,0.4s,baz=281,slow=4.4,SNR=13
      comp=Z,0.8nm,0.4s
ARCES ARCESS Array B   84.21 340  P    P      03 49 02.8 +0.3
      comp=Z,2.4nm,0.4s,baz=77,slow=4.9,SNR=42
      comp=Z,2.4nm,0.4s
BR131 Keskin Array S   85.85 309  IAmb IAmb   03 49 12.4
      comp=Z,5.4nm,0.7s
BRTR  Keskin Array B   85.85 309  P    P      03 49 11.2 -0.4
      comp=Z,2.4nm,0.7s,baz=122,slow=5.0,SNR=18
      comp=Z,2.4nm,0.7s
BRTR  Keskin Array B   85.85 309  P    P      03 49 10.1 -1.5
FINES FINESS Array B   85.99 332  P    P      03 49 11.8 +0.2
      comp=Z,4.0nm,0.4s,baz=72,slow=4.7,SNR=85
      comp=Z,4.0nm,0.4s
FINES FINESS Array B   85.99 332  P    P      03 49 11.3 -0.3
ANTO  Ankara           86.47 310  P    P      03 49 12.8 -1.7
ANTO                              IAmb IAmb   03 49 15.6
      comp=Z,6.6nm,0.7s
AKASG Malin Array Be   86.78 321  P    P      03 49 15.7 +0.1
      comp=Z,1.7nm,0.6s,baz=64,slow=4.9,SNR=17
      comp=Z,1.7nm,0.6s
AKASG Malin Array Be   86.78 321  P    P      03 49 15.1 -0.5
AKASG                             IAmb IAmb   03 49 16.9
      comp=Z,13nm,1.4s
AKBB  Malin Array Si   86.78 321  P    P      03 49 15.1 -0.5
C36M  Paulatuk         86.86  20  P    P      03 49 15.8 +0.2
TIRR  Tirgusor         88.71 315  P    P      03 49 25.2 +0.1
BURAR Bucovina Array   90.08 318  P    P      03 49 31.3 -0.3
BURAR                             IAmb IAmb   03 49 33.5
      comp=Z,3.5nm,0.7s
NB2   NORSAR Subarra   92.84 334  P    P      03 49 43.4 -0.5
      comp=Z,2.5nm,0.9s,baz=61,slow=4.6
NOA   NORSAR Array B   92.84 334  P    P      03 49 43.5 -0.5
      comp=Z,0.8nm,0.6s,baz=64,slow=4.7,SNR=8.1
      comp=Z,0.8nm,0.6s
YKA   Yellowknife Ar   93.34  24  P    P      03 49 46.9 +0.7
      comp=Z,0.6nm,0.6s,baz=297,slow=4.4,SNR=8.1
      comp=Z,0.6nm,0.6s
TXAR  Lajitas Array   117.26  49  PKP  PKiKP  03 55 18.8 +1.1
      comp=Z,0.2nm,0.4s,baz=60,slow=0.5,SNR=5.2
TORD  Torodi Ar. Bea  120.73 292  PKP  PKPdf  03 55 23.8 -0.7
      comp=Z,0.5nm,0.5s,baz=64,slow=2.0,SNR=8.3
PLCA  Paso Flores     146.15 156  PKPbc PKPab 03 56 13.4 +0.7
      comp=Z,2.7nm,0.6s,baz=235,slow=2.9,SNR=23
PLCA  Paso Flores     146.15 156  PKPbc PKPbc 03 56 12.3 +0.2
```

NEIC ***04*** *03:49:55.0±2.2, 7°.17S±0°.10×155°.81E±0°.08, h10^{km}±1^{km}, mb5.0/34, Error ellipse: s-maj=17.5km s-min=11.7km az=208.0*

MOS ***04*** *03:49:58.3±1.0, 7°.12S×155°.57E, h45^{km}, mb5.1/22, Error ellipse: s-maj=10.0km s-min=7.9km az=119.1*

BJI ***04*** *03:49:59.1±0.0, 6°.83S×156°.04E, h56^{km}, mb4.7/37, mB5.5/16, Ms5.0/4, Ms7 4.8/4*

IDC ***04*** *03:50:01.5±1.6, 7°.26S×155°.75E, h68^{km}±14^{km}, mb4.1/20, mbtmp4.4/23, MS4.2/4, Error ellipse: s-maj=15.0km s-min=10.0km az=39.0*

ISC 04 03:49:59.6±0.3, **7°.26S**±0°.06×**155°.72E**±0°.06, **h50**^{km}**, n165,** σ**1^s.18**/166, **mb4.9**/56, **MS4.5**/4, **2C-3D,**
Bougainville-Solomon Islands region

```
Code  Station Name      Δ°   AZ°   Phase ID        Time    Res
                                   Op   ISC      h  m  s   ISC
RABL  Rabaul            4.67 311  Pn   Pn     03 51 05.5 -2.2
HNR   Honiara           4.70 118  P    Pn     03 51 11.4 +3.3
      3μm,0.9s,baz=285,slow=4.9,SNR=2.1
HNR                               S    Sn     03 52 02.9 +1.4
      3μm,0.6s,baz=206,slow=20,SNR=1.6
HNR   Honiara           4.70 118  Pn   Pn     03 51 04.5 -3.6
KRVT  Keravat (AS076    4.70 308  P    Pn     03 51 11.9 +3.8
      45nm,0.6s,baz=333,slow=21,SNR=1.2
KRVT                              S    Sn     03 52 02.6 +1.2
      243nm,0.8s,baz=323,slow=19,SNR=2.0
KRVT                              LR   LR     03 53 13.6
      comp=Z,2μm,20.3s,baz=274,slow=41
PMG   Port Moresby      8.74 255  P    Pn     03 52 06.4 +3.0
      38nm,0.9s,baz=313,slow=3.8,SNR=8.2
PMG                               S    Sn     03 53 37.9 -2.7
      8.8nm,0.4s,baz=255,slow=15,SNR=1.5
PMG   Port Moresby      8.74 255  Pn   Pn     03 52 02.6 -0.9
PMG   Port Moresby      8.74 255  P    Pn     03 52 02.6 -0.9
CTA   Charters Tower   15.71 215  P    Pn     03 53 38.0 +0.2
      9.4nm,0.9s,baz=31,slow=16,SNR=4.0
CTA                               LR   LR     03 59 42.7
      comp=Z,723nm,18.7s,baz=12,slow=37
WR0   Warramunga Arr   24.11 236  P    P      03 55 11.0  0.0
MSVF  Nonsavu          24.13 118  P    P      03 55 10.5 -0.7
      14nm,0.9s,baz=88,slow=5.0,SNR=6.4
      14nm,0.9s
MSVF  Nonsavu          24.13 118  P    P      03 55 10.8 -0.3
MSVF                              IAmb IAmb   03 55 12.0
      comp=Z,62nm,1.4s
MSVF  Nonsavu          24.13 118  P    P      03 55 10.8 -0.3
MSVF                              pmax pmax
      comp=Z,62nm,1.4s
WB0   Warramunga Arr   24.14 237  P    P      03 55 10.9 -0.3
WRAB  Tennant Creek    24.25 237ceP    P      03 55 09.9 -2.4
WRAB                              pmax pmax
      comp=Z,16nm,1.7s
WB2   Warramunga Arr   24.26 237  P    P      03 55 11.7 -0.6
WRA   Warramunga Arr   24.27 237  P    P      03 55 12.0 -0.4
      comp=Z,4.2nm,1.0s,baz=59,slow=9.4,SNR=11
WRA                               PcP  PcP    03 58 51.7  0.0
      comp=Z,0.6nm,0.7s,baz=68,slow=2.9,SNR=4.7
      comp=Z,4.2nm,1.0s
ASAR  Alice Springs    26.55 230  P    P      03 55 33.3 +0.3
      comp=Z,1.9nm,0.9s,baz=62,slow=8.6,SNR=9.4
ASAR                              PcP  PcP    03 58 57.0 +0.1
      comp=Z,1.1nm,0.8s,baz=48,slow=2.7,SNR=5.7
      comp=Z,1.9nm,0.9s
H11S3 WAKE ISLAND Hy   27.78  23  T    T      04 24 15.9
      baz=202,slow=75,SNR=29
H11S2 WAKE ISLAND Hy   27.79  23  T    T      04 24 17.3
      baz=202,slow=75,SNR=31
H11S1 WAKE ISLAND Hy   27.80  23  T    T      04 24 17.9
      baz=202,slow=75,SNR=18
STKA  Stephens Creek   27.81 206  P    P      03 55 45.1 +0.8
      comp=Z,2.8nm,0.6s,baz=10.0,slow=13,SNR=6.0
STKA                              LR   LR     04 06 25.4
      comp=Z,682nm,18.4s,baz=346,slow=35
      comp=Z,2.8nm,0.6s
STKA  Stephens Creek   27.81 206  P    P      03 55 46.5 +2.2
STKA  Stephens Creek   27.81 206  P    P      03 55 46.5 +2.2
STKA                              pmax pmax
      comp=Z,1.0nm,0.7s
FITZ  Fitzroy Crossi   31.21 247  P    P      03 56 14.1 -0.4
AFI   Afiamalu         32.60 104  LR   LR     04 06 48.1
      comp=Z,328nm,18.2s,baz=327,slow=31
TOLI2 Tolitoli         35.84 282  P    P      03 56 54.9 +0.1
JMZ   Minamidaito 2    40.60 325  P    P      03 57 35.5 +0.8
KKM   Kota Kinabalu    41.57 288  P    P      03 57 43.8 +0.8
KKM                               IAmb IAmb   03 57 52.8
      comp=Z,31nm,1.2s
MJAR  Matsushiro Arr   46.57 341  P    P      03 58 21.6 -1.0
      comp=Z,2.4nm,0.7s,baz=162,slow=7.3,SNR=6.8
      comp=Z,2.4nm,0.7s
JNU   Nakatsue         46.59 331  P    P      03 58 22.4 -0.5
      comp=Z,6.6nm,0.9s,baz=52,slow=3.3,SNR=3.2
      comp=Z,6.6nm,0.9s
KSRS  Korea Array      51.51 332  P    P      03 59 00.7 +0.3
      comp=Z,2.5nm,0.7s,baz=152,slow=8.4,SNR=11
      comp=Z,2.5nm,0.7s
KSAR  Wonju Array Be   51.52 332  P    P      03 58 59.7 -0.7
KSAR  Wonju Array Be   51.52 332  P    P      03 58 59.7 -0.7
KS19  Wonju Array Si   51.58 332  P    P      03 59 00.4 -0.5
NJ2   Nanjing          52.58 320 eP    P      03 59 10.4 +2.0
NJ2                               pmax pmax
      comp=Z,15nm,0.5s
YSS   Yuzh-Sakhalins   55.19 349 eP    P      03 59 27.7 +0.5
YSS                               pmax pmax
      comp=Z,150nm,1.3s
USA0B Ussuriysk Arra   55.53 339  P    P      03 59 30.4 +0.7
USA0B                             IAmb IAmb   03 59 31.2
      comp=Z,14nm,0.9s
USA0B Ussuriysk Arra   55.53 339  P    P      03 59 30.4 +0.7
USA0B                             pmax pmax
      comp=Z,14nm,1.0s
USRK  Ussuriysk Ar.    55.53 339  P    P      03 59 30.2 +0.5
      comp=Z,12nm,1.0s,baz=162,slow=8.4,SNR=9.7
      comp=Z,12nm,1.0s
MDJ   Mudanjiang       56.75 338  P    P      03 59 38.7 +0.2
MDJ                               pmax pmax
      comp=Z,14nm,1.7s
MDJ                               pmax pmax
      comp=Z,790nm,5.0s
ENH   Enshi            57.95 313  P    P      03 59 47.8 +0.6
ENH                               IAmb IAmb   03 59 58.8
      comp=Z,7.1nm,0.7s
BNX   BinXian          58.53 337 ⇓P    P      03 59 50.9  0.0
BNX                               pmax pmax
      comp=Z,16nm,1.3s
BNX                               pmax pmax
      comp=Z,210nm,4.2s
HNS   HongShan         58.65 322 ⇓P    P      03 59 52.3 +0.4
HNS                               pmax pmax
      comp=Z,9.0nm,1.3s
KLR   Kul'dur          60.03 342 i P   P      03 59 57.9 -3.4
KLR                               pmax pmax
      comp=Z,12nm,1.2s
PETK  Petropavlovsk-   60.16   1  P    P      04 00 02.2 +0.2
      comp=Z,10nm,1.1s,baz=169,slow=8.7,SNR=3.6
      comp=Z,10nm,1.1s
XAN   Xi'an            60.40 316  P    P      04 00 03.5 -0.6
XAN                               pmax pmax
      comp=Z,6.0nm,0.9s
CRAI  Chiangrai        60.88 298  P    P      04 00 07.6 -0.1
CRAI                              IAmb IAmb   04 00 09.6
      comp=Z,15nm,1.0s
CM31  Chiang Mai Arr   61.55 295  P    P      04 00 13.5 +1.3
CM31                              IAmb IAmb   04 00 14.9
      comp=Z,11nm,0.9s
CMAR  Chiang Mai Arr   61.55 295  P    P      04 00 12.6 +0.4
      comp=Z,3.8nm,0.7s,baz=109,slow=4.8,SNR=14
      comp=Z,3.8nm,0.7s
CMAR  Chiang Mai Arr   61.55 295  P    P      04 00 12.4 +0.2
CMAR  Chiang Mai Arr   61.55 295  P    P      04 00 12.4 +0.2
CHTO  Chiang Mai       61.67 296  P    P      04 00 13.5 +0.5
CHTO  Chiang Mai       61.67 296  P    P      04 00 13.5 +0.5
PZH   PanZhiHua        62.16 305  P    P      04 00 18.9 +2.6
PZH                               pmax pmax
      comp=Z,10.0nm,0.5s
PZH                               pmax pmax
      comp=Z,80nm,4.1s
HEH   HeiHe            62.33 340 eP    P      04 00 16.3 -0.4
HEH                               pmax pmax
      comp=Z,8.0nm,0.8s
HHC   Hu-ho-hao-te     62.73 324 eP    P      04 00 24.2 +4.4
HHC                               pmax pmax
      comp=Z,14nm,0.7s
HHC                               pmax pmax
      comp=Z,190nm,6.2s
TNCH  TengChong        64.23 302  P    P      04 00 30.8 +0.6
TNCH                              pP   sP     04 00 49.4 -0.1
TNCH                              pmax pmax
      comp=Z,390nm,10.9s
HIA   Hailar           64.47 335  P    P      04 00 31.1 +0.1
HIA                               IAmb IAmb   04 00 32.8
      comp=Z,13nm,1.0s
HIA   Hailar           64.47 335  P    P      04 00 31.1 +0.1
HIA                               pmax pmax
      comp=Z,13nm,1.0s
ZEA   Zeya             65.35 342 eP    P      04 00 36.9 +0.3
ZEA                               pmax pmax
      comp=N,10.0nm,1.2s
ZEA                               pmax pmax
      comp=Z,30nm,0.9s
ULN   Ulaanbaatar      69.61 327  P    P      04 01 04.5 +0.6
ULN                               IAmb IAmb   04 01 05.8
      comp=Z,17nm,1.2s
ULN   Ulaanbaatar      69.61 327  P    P      04 01 04.5 +0.6
ULN                               pmax pmax
      comp=Z,17nm,1.3s
SONM  Songino Array    69.95 327  P    P      04 01 06.8 +0.9
      comp=Z,6.5nm,0.9s,baz=144,slow=7.0,SNR=35
      comp=Z,6.5nm,0.9s
SONM  Songino Array    69.95 327  P    P      04 01 06.5 +0.6
SONM                              IAmb IAmb   04 01 07.6
      comp=Z,15nm,1.2s
SONM  Songino Array    69.95 327  P    P      04 01 06.5 +0.6
SONM                              pmax pmax
      comp=Z,15nm,1.2s
SHL   Shillong         70.05 300  P    P      04 01 07.2 +0.2
SHL   Shillong         70.05 300  P    P      04 01 07.3 +0.2
SHL                               pmax pmax
      comp=Z,17nm,0.8s
YAK   Yakutsk          71.97 347ceP    P      04 01 16.2 -1.4
YAK                               pmax pmax
      comp=Z,8.0nm,0.6s
LSA   Lhasa            72.02 304  P    P      04 01 18.8 -0.4
LSA                               IAmb IAmb   04 01 21.0
      comp=Z,8.7nm,0.9s
LSA   Lhasa            72.02 304  P    P      04 01 18.8 -0.4
LSA                               pmax pmax
      comp=Z,9.0nm,0.9s
ZAK   Zakamensk        73.10 328 eP    P      04 01 23.8 -1.0
ZAK                               pmax pmax
      comp=Z,10.0nm,1.3s
TAPN  Taplejung        74.16 301 eP    P      04 01 31.8 +0.1
      comp=Z,34nm,1.0s
ODAN  Odare            74.29 300 eP    P      04 01 32.5 +0.1
RAMN  Ramite           74.99 300 eP    P      04 01 36.0 -0.5
      comp=Z,5.7nm,0.4s
BILL  Bilibino         75.49   4  P    P      04 01 38.6 +0.4
BILL                              IAmb IAmb   04 01 40.0
      comp=Z,9.5nm,0.9s
BILL  Bilibino         75.49   4 eP    P      04 01 37.3 -0.9
BILL                             e            04 04 25.2
BILL                              pmax pmax
      comp=Z,12nm,1.0s
BILL                              MLR  MLR
      comp=Z,302nm,16.0s
GUN   Gumba            75.87 301 eP    P      04 01 41.9 +0.2
      comp=Z,31nm,0.8s
PKI   Pulchoki         76.18 301 eP    P      04 01 43.0 -0.4
DMN   Daman            76.45 301 eP    P      04 01 44.3 -0.6
      comp=Z,52nm,1.0s
GKN   Gorkha           76.95 301 eP    P      04 01 47.6  0.0
      comp=Z,57nm,1.0s
ANM   Nome             77.28  16  P    P      04 01 50.1 +1.7
ANM                               IAmb IAmb   04 01 52.6
      comp=Z,24nm,2.0s
ANM   Nome             77.28  16  P    P      04 01 50.1 +1.7
ANM                               pmax pmax
      comp=Z,24nm,2.0s
DANN  Dangsing         77.79 301 eP    P      04 01 51.9 -0.5
PYUN  Piuthan          78.39 301 eP    P      04 01 54.8 -0.8
      comp=Z,16nm,1.1s
WMQ   Urumqi           79.51 317 eP    P      04 02 02.6 +1.3
TIXI  Tiksi            80.72 352  P    P      04 02 06.3 -0.7
      comp=Z,1.7nm,0.5s,baz=270,slow=23,SNR=5.1
      comp=Z,1.7nm,0.5s
IMAR  Indian Mountai   81.74  19  P    P      04 02 12.9 +0.2
DGZ   Jazzator, Alta   81.79 322 i P   P      04 02 12.6 -0.8
DGZ                               pmax pmax
      comp=Z,7.0nm,0.9s
QSPA  South Pole Qui   82.72 180  P    P      04 02 18.0  0.0
QSPA                              IAmb IAmb   04 02 26.8
      comp=Z,16nm,1.1s
IL31                   83.35  21  P    P      04 02 19.7 -1.3
IL31                              IAmb IAmb   04 02 22.0
      comp=Z,19nm,1.7s
ILAR  Eielson Array    83.35  21  P    P      04 02 19.9 -1.1
      comp=Z,1.1nm,0.9s,baz=243,slow=5.8,SNR=6.7
      comp=Z,1.1nm,0.9s
ILAR  Eielson Array    83.35  21  P    P      04 02 20.0 -1.1
MK31  Makanchi Array   84.08 319  P    P      04 02 25.5 +0.3
MK31  Makanchi Array   84.08 319  P    P      04 02 25.5 +0.3
MK31                              pmax pmax
      comp=Z,13nm,1.0s
MKAR  Makanchi Array   84.08 319  P    P      04 02 25.5 +0.3
      comp=Z,13nm,0.8s,baz=105,slow=5.6,SNR=84
      comp=Z,13nm,0.8s
MAKZ  Makanchi         84.29 318  P    P      04 02 25.9 -0.4
MAKZ  Makanchi         84.29 318  P    P      04 02 25.9 -0.4
MAKZ                              pmax pmax
      comp=Z,22nm,1.0s
MAW   Mawson           84.43 203  P    P      04 02 28.8 +2.2
MAW   Mawson           84.43 203  P    P      04 02 28.8 +2.2
A21K  Barrow           84.47  14  P    P      04 02 25.7 -0.9
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ZAA0	Zalesovo Array	84.80	326	P	P	04 02 28.0	-0.6
ZAA0				IAmb	IAmb	04 02 28.9	
	comp=Z,10nm,0.9s						
ZALV	Zalesovo Beam	84.80	326	P	P	04 02 28.1	-0.6
	comp=Z,8.0nm,0.8s,baz=110,slow=5.1,SNR=34						
	comp=Z,8.0nm,0.8s						
ZALV	Zalesovo Beam	84.80	326	P	P	04 02 27.6	-1.0
KSH	Kashi	86.73	310	P	P	04 02 40.9	+2.2
KSH				sP	sP	04 03 04.9	+6.4
KSH				pmax	pmax		
	comp=Z,12nm,1.2s						
KURK	Kurchatov	87.48	322	P	P	04 02 41.5	-0.4
KURK				IAmb	IAmb	04 02 42.2	
	comp=Z,10nm,1.2s						
KURK	Kurchatov	87.48	322	P	P	04 02 41.5	-0.4
KURK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KURBB	Kurchatov Arra	87.52	322	P	P	04 02 41.5	-0.5
	comp=Z,1.8nm,0.7s,baz=103,slow=3.2,SNR=22						
	comp=Z,1.8nm,0.7s						
NIL	Nilore	87.75	304	P	P	04 02 43.2	-0.5
NIL	Nilore	87.75	304	P	P	04 02 43.2	-0.5
NIL				pmax	pmax		
	comp=Z,10.0nm,0.4s						
AAK	Ala-Archa	88.46	313	P	P	04 02 47.2	+0.2
	comp=Z,3.5nm,0.9s,baz=228,slow=3.3,SNR=8.7						
	comp=Z,3.5nm,0.9s						
AAK	Ala-Archa	88.46	313	P	P	04 02 47.4	+0.4
AAK				IAmb	IAmb	04 02 48.0	
	comp=Z,3.3nm,0.8s						
AAK	Ala-Archa	88.46	313	P	P	04 02 47.4	+0.4
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GAR	Garm	90.96	309	P	P	04 02 58.2	-0.5
NVAR	Mina Array Bea	91.32	52	P	P	04 03 01.9	+1.4
	comp=Z,0.3nm,0.7s,baz=222,slow=4.0,SNR=4.7						
	comp=Z,0.3nm,0.7s						
NVAR	Mina Array Bea	91.32	52	P	P	04 03 01.3	+0.8
KK31	Karatay Array	91.42	313	P	P	04 03 00.1	-0.6
KK31	Karatay Array	91.42	313	P	P	04 03 00.1	-0.6
KK31				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KKAR	Karatay Array	91.42	313	P	P	04 03 00.4	-0.2
KKAR	Karatay Array	91.42	313	P	P	04 03 00.4	-0.2
BVAR	Borovoye Array	92.94	323	P	P	04 03 06.4	-1.0
	comp=Z,5.9nm,0.8s,baz=104,slow=5.0,SNR=22						
	comp=Z,5.9nm,0.8s						
BRVK	Borovoye	93.01	323	P	P	04 03 06.2	-1.5
BRVK				IAmb	IAmb	04 03 07.5	
	comp=Z,6.8nm,1.0s						
BRVK	Borovoye	93.01	323	P	P	04 03 06.2	-1.5
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ELIB	Princess Elisa	95.12	193	dP	P	04 03 16.1	-1.1
YKA	Yellowknife Ar	96.23	28	P	P	04 03 21.5	-0.7
	comp=Z,0.7nm,0.8s,baz=265,slow=4.5,SNR=9.7						
	comp=Z,0.7nm,0.8s						
OBN	Obninsk	112.36	327	i PKIKP	PKiKP	04 08 28.6	-1.3
OBN				e		04 09 14.1	
OBN				pmax	pmax		
	comp=Z,3.0nm,1.2s						
OBN				MLR	MLR		
	comp=Z,228nm,17.0s						
FINES	FINESS Array B	114.47	336	PKP	PKiKP	04 08 33.1	-0.7
	comp=Z,0.9nm,0.8s,baz=152,slow=8.4,SNR=4.1						
BRTR	Keskin Array B	119.10	312	PKKPbc	PKKPbc	04 18 58.8	+0.3
	comp=Z,0.4nm,0.8s,baz=248,slow=6.5,SNR=3.9						
NB2	NORSAR Subarra	120.18	341	PKPdf	PKPdf	04 08 44.6	-0.3
	comp=Z,0.7nm,0.6s,baz=39,slow=1.9						
NOA	NORSAR Array B	120.18	341	PKP	PKPdf	04 08 44.1	-0.8
	comp=Z,1.2nm,0.8s,baz=45,slow=1.9,SNR=6.8						
DPC	Dobruska-Polom	125.38	329	ePKPDF	PKiKP	04 08 55.9	+0.3
DPC	Dobruska-Polom	125.38	329	ePKIKP	PKiKP	04 08 55.9	+0.3
VTS	Vitosha	125.40	318	PKPdf	PKiKP	04 08 56.9	+0.9
VTS	Vitosha	125.40	318	PKIKP	PKiKP	04 08 56.9	+0.9
CLL	Collm	126.39	332	ePKPdf	PKPdf	04 08 57.0	0.0
	comp=Z,4.0nm,1.2s						
CLL				i pPKPdf	PKiKP	04 09 00.1	+2.7
CLL	Collm	126.39	332	ePKIKP	PKPdf	04 08 57.0	0.0
CLL				pmax	pmax		
	comp=Z,4.0nm,1.2s						
DIVS	Divibare	126.79	321	PKPdf	PKPdf	04 08 58.0	-0.2
CKRC	Cesky Krumlov	127.35	329	ePKPDF	PKiKP	04 08 59.6	+0.1
CKRC	Cesky Krumlov	127.35	329	ePKIKP	PKiKP	04 08 59.6	+0.1
KHC	Kasperske Hory	127.53	329	PKPdf	PKPdf	04 08 57.2	-2.1
KHC	Kasperske Hory	127.53	329	ePKPDF	PKiKP	04 08 59.8	-0.1
KHC	Kasperske Hory	127.53	329	ePKIKP	PKiKP	04 08 59.8	-0.1
GERES	GERESS Array B	127.65	329	PKP	PKPdf	04 08 59.8	+0.1
	comp=Z,0.8nm,0.6s,baz=62,slow=3.2,SNR=8.5						
GERES	GERESS Array B	127.65	329	PKPdf	PKPdf	04 08 59.6	-0.1
GERES	GERESS Array B	127.65	329	PKIKP	PKPdf	04 08 59.6	-0.1
HELC	Santa Helena	129.11	88	PKPdf	PKPdf	04 09 03.0	-0.8
CZSB	Cruzeiro do Su	129.47	106		PKPdf	04 09 03.0	-1.0
LPAZ	La Paz	130.70	119	PKP	PKPdf	04 09 06.6	-0.4
	comp=Z,2.3nm,0.8s,baz=262,slow=3.5,SNR=9.1						
LPAZ	La Paz	130.70	119	PKPdf	PKPdf	04 09 06.2	-0.8
LPAZ	La Paz	130.70	119	PKIKP	PKPdf	04 09 06.2	-0.8
PTLB	Pontes e Lacer	138.75	123		PKPdf	04 09 19.6	-1.6
ESDC	Sonseca Array	142.93	334	PKP	PKPdf	04 09 25.0	-3.3
	comp=Z,0.8nm,0.9s,baz=62,slow=19,SNR=1.9						
PMRV	Marv??o	144.55	337	ePKP	PKPdf	04 09 30.5	-0.6
PSBE	So Bento	145.00	339	ePKP	PKPdf	04 09 32.2	+0.4
PESTR	Estremoz	145.12	337	ePKP	PKPdf	04 09 32.1	0.0
PMTG	Montargil	145.18	338	ePKP	PKPdf	04 09 32.3	+0.2
PBAR	Barrancos	145.49	336	ePKP	PKPab	04 09 33.4	+0.4
EVO	Evora	145.57	337	ePKP	PKPab	04 09 33.8	+0.5
PBEJ	Beja	145.95	337	ePKP	PKPab	04 09 35.5	+0.8
PNCL	Nicolau / Gran	146.13	337	ePKP	PKPab	04 09 35.4	0.0
BDFB	Brasilia	147.28	134	PKPbc	PKPdf	04 09 36.8	+0.4
	comp=Z,16nm,0.8s,baz=181,slow=2.7,SNR=18						
BDFB	Brasilia	147.28	134		PKPdf	04 09 37.6	+1.2
BDFB	Brasilia	147.28	134	PKIKP	PKPdf	04 09 37.6	+1.2
TAM	Tamanrasset	147.44	302	PKPbc	PKPdf	04 09 37.8	+1.2
TAM	Tamanrasset	147.44	302	PKP2	PKPdf	04 09 37.8	+1.2
TORD	Torodi Ar. Bea	153.79	285	PKPbc	PKPbc	04 09 53.0	-1.4
	comp=Z,2.0nm,1.0s,baz=33,slow=0.9,SNR=6.0						

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*IDC **04** 03:51:10.3±2.8, 10°.03N×126°.89E, h0km, mb4.1/4, mbtmp4.1/5, ML3.7/1, Error ellipse: s-maj=104.9km s-min=59.7km az=82.0*

*MAN **04** 03:51:16.7, 9°.00N×126°.49E, h25km, mb4.4, ML3.2, MS3.0*

ISC 04 03:51:15.0±1.6**, 10°.4N**±0°.2×**126°.9E**±0°.1**, h20**km**, n11, σ0^{s}53**/14**, mb4.1**/4**, 4C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.95	233⇑	eP	Pb	03 51 32.8	-0.1
GLSP				eS	Sb	03 51 45.3	+0.2
SCPH	Surigao	1.50	248⇓	eP	Pn	03 51 41.0	+0.1
SCPH				eS	Sn	03 52 00.4	+0.5
MSLP	Maasin	2.02	264⇑	eP	Pn	03 51 48.3	+0.3
MSLP				eS	Sn	03 52 12.4	-0.3
TABP	Talibon, Bohol	2.54	264⇑	eP	Pn	03 51 55.7	+0.6
TABP				i S	Sn	03 52 24.5	-1.0
LSIP	Lazi, Siquijor	3.45	250⇑	eP	Pn	03 52 00.5	-7.1
JOW	Kunigami	16.44	4	Pn	P	03 55 07.5	+0.2
	0.4nm,0.3s,baz=68,slow=27,SNR=1.3						
	1.2nm,0.3s						
MKAR	Makanchi Array	52.34	322	P	P	04 00 26.0	+0.5
	1.4nm,0.6s,baz=117,slow=8.1,SNR=19						
	1.4nm,0.6s						
KURBB	Kurchatov Arra	56.35	325	P	P	04 00 55.0	+0.4
	0.8nm,0.4s,baz=126,slow=7.1,SNR=12						
	0.8nm,0.4s						
ARCES	ARCESS Array B	84.33	340	P	P	04 03 45.2	-0.2
	2.5nm,0.9s,baz=82,slow=6.5,SNR=5.8						
	2.5nm,0.9s						
FINES	FINESS Array B	86.11	332	P	P	04 03 54.2	-0.2
	0.8nm,0.6s,baz=46,slow=4.0,SNR=10						
	0.8nm,0.6s						
TORD	Torodi Ar. Bea	120.81	292	PKP	PKPdf	04 10 06.0	-0.9
	0.6nm,0.5s,baz=75,slow=2.9,SNR=7.9						

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*SSNC **04** 03:55:15.0±1.4, 18°.03N×76°.57W, h7km±16km, MD2.8, ML1.2, MW2.3*

*JSN **04** 03:55:15.3±0.3, 18°.05N×76°.63W, h14km±10km, MD2.6*

ISC 04 03:55:13.5±1.2**, 18°.27N**±0°.07×**76°.63W**±0°.08**, h18**km**, n6, σ2^{s}29**/10**, Jamaica region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GWJ	Greenwich	0.22	206	i P	Pg	03 55 18.6	-0.2
STH	Stony Hill	0.26	222	i P	Pg	03 55 19.3	0.0
STH				i S	Sg	03 55 22.3	-1.0
HOJ	Hope	0.29	203	i P	Pg	03 55 18.6	-1.2
MTDJ	Mount Denham	0.86	267	eP	Pb	03 55 31.8	+1.9
MTDJ				eS	Sb	03 55 42.7	+1.5
LMGC	Las Mercedes	1.82	349	eP	Pn	03 55 40.4	-3.5
LMGC				eS	Sn	03 56 01.7	-4.8
LMGC				IAML		03 56 04.3	
	comp=E,3.7nm,0.0s						
LMGC				IAML		03 56 04.4	
	comp=N,5.0nm,0.1s						
RCC	Rio Carpintero	1.93	27	eP	Pb	03 55 49.6	+1.4
RCC				eS	Sb	03 56 13.8	+1.9
RCC				eSg	Sg	03 56 15.7	0.0
RCC				IAML		03 56 16.7	
	comp=E,0.3nm,0.1s						
RCC				IAML		03 56 16.9	
	comp=N,0.2nm,0.1s						

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*IDC **04** 03:59:36.1±1.3, 7°.63S×156°.21E, h0km, mb3.6/7, mbtmp3.6/7, Error ellipse: s-maj=49.6km s-min=29.9km az=117.0*

ISC 04 03:59:42.5±1.2**, 7°.7S**±0°.3×**156°.2E**±0°.3**, h44**km**, n13, σ0^{s}44**/11**, mb3.6**/7**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.42	238	P	P	04 04 57.4	+0.2
	0.5nm,0.7s,baz=59,slow=9.3,SNR=2.3						
	0.5nm,0.7s						
ASAR	Alice Springs	26.63	231	P	P	04 05 17.4	+0.2
	0.1nm,0.5s,baz=56,slow=9.3,SNR=1.2						
ASAR				PcP	PcP	04 08 40.2	-0.3
	0.3nm,0.8s,baz=57,slow=3.4,SNR=2.0						
	0.1nm,0.5s						
H11S3	WAKE ISLAND Hy	28.00	22	T	T	04 34 05.3	
	baz=202,slow=75,SNR=12						
H11S2	WAKE ISLAND Hy	28.00	22	T	T	04 34 00.5	
	baz=202,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	28.02	22	T	T	04 34 01.4	
	baz=202,slow=75,SNR=5.3						
SONM	Songino Array	70.55	327	P	P	04 10 52.5	-0.6
	0.5nm,0.6s,baz=142,slow=6.6,SNR=4.4						
	0.5nm,0.6s						
ILAR	Eielson Array	83.58	21	P	P	04 12 06.1	+0.3
	0.1nm,0.5s,baz=268,slow=4.7,SNR=1.1						
	0.1nm,0.5s						
MKAR	Makanchi Array	84.70	318	P	P	04 12 12.4	+0.6
	1.2nm,0.8s,baz=106,slow=5.8,SNR=11						
	1.2nm,0.8s						
ZALV	Zalesovo Beam	85.41	326	P	P	04 12 15.4	+0.2
	1.1nm,0.6s,baz=100,slow=8.3,SNR=4.2						
	1.1nm,0.6s						
KURBB	Kurchatov Arra	88.13	321	P	P	04 12 28.6	0.0
	0.2nm,0.5s,baz=111,slow=4.8,SNR=2.2						
	0.2nm,0.5s						
NOA	NORSAR Array B	120.73	341	PKP	PKiKP	04 18 30.0	+0.4
	0.4nm,0.8s,baz=27,slow=4.9,SNR=1.5						
BDFB	Brasilia	146.66	134	PKPbc	PKPbc	04 19 20.4	-0.2
	1.3nm,0.8s,baz=66,slow=12,SNR=1.6						
TORD	Torodi Ar. Bea	154.34	284	PKPbc	PKPbc	04 19 38.5	-0.6
	0.1nm,0.3s,baz=90,slow=2.6,SNR=1.1						

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*DDA **04** 04:00:41.5±0.0, 37°.60N×38°.48E, h12km±1km, MW3.7*

*ISK **04** 04:00:42.4, 37°.55N×38°.46E, h17km, ML3.7/25*

ISC 04 04:00:41.6±1.0**, 37°.60N**±0°.02×**38°.47E**±0°.01**, h9**km±9km**, n75, σ1^{s}16**/119**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AZEY	Adyaman-Merk	0.27	320	P	Pg	04 00 47.3	+0.3
AZEY				S	Sg	04 00 51.3	+0.6
URFA	Urfa	0.32	120	Pg	Pb	04 00 49.3	-0.3
URFA				Sg	Sb	04 00 54.3	-0.7
HANM	anlurfa/Hi	0.33	94	SPECP		04 00 48.0	
HANM				P	Pg	04 00 48.1	0.0
HANM				S	Sg	04 00 53.0	+0.5
NARI	Adyaman-Kaht	0.36	40	SPECP		04 00 48.0	
NARI				P	Pg	04 00 48.9	+0.1
NARI				S	Sg	04 00 53.8	+0.2
SANL	SANLIURFA_Merk	0.60	136	P	Pb	04 00 53.5	-0.8
SANL				S	Sb	04 01 01.6	-1.2
AKCA	Adyaman/G¶l	0.65	287	P	Pg	04 00 54.2	+0.1
AKCA				S	Sb	04 01 03.8	-0.5
MAYA	Malatya/Merkez	0.72	357	P	Pg	04 00 55.3	-0.2
MAYA				S	Sg	04 01 03.9	-1.0
GZT	Gaziantep	0.76	251	P	Pg	04 00 56.5	+0.3
GZT				S	Sb	04 01 08.1	+0.5
AKCD	Akcadag	0.81	328	SPECP		04 00 57.0	
AKCD				P	Pg	04 00 57.2	-0.1
AKCD				S	Sg	04 01 07.3	-0.6
NZIP	Nizip/Gaziante	0.84	229	SPECP		04 00 58.0	
NZIP				P	Pb	04 00 58.4	0.0
NZIP				S	Sb	04 01 09.9	-0.1
ELZG	Elazig	0.98	24	SPECP		04 01 00.0	
ELZG				P	Pg	04 01 00.4	-0.1
ELZG				S	Sb	04 01 14.3	+0.2
GAZ	Gaziantep	1.09	247	Pg	Pn	04 01 02.9	-0.2
GAZ				Sg	Sn	04 01 18.3	-0.1
KAHM	Kahramanmaras,	1.18	266	SPECP		04 01 03.0	
KAHM				P	Pb	04 01 03.9	-0.3
KAHM				S	Sb	04 01 19.1	-0.5
DARE	Darende-Malaty	1.24	322	Pn	Pg	04 01 06.1	+0.7
DARE				Sn	Sn	04 01 23.6	+1.4
HCB	Kahramanmara	1.27	259	P	Pn	04 01 05.0	-0.5
HCB				S	Sb	04 01 21.7	-0.4
HEKM	Malatya_Hekimh	1.34	343	SPECP		04 01 06.0	
HEKM				P	Pn	04 01 06.4	-0.2
HEKM				S	Sb	04 01 24.0	-0.3
DYBB	Diyarbakir	1.37	75	Pn	Pb	04 01 07.2	-0.3
DYBB				Sn	Sg	04 01 26.1	+0.4
KUZU	Kuzuini	1.39	234	P	Pg	04 01 08.8	+0.6
KUZU				S	Sg	04 01 26.9	+0.8
CUGUR	Gurin_SVAS	1.46	320	P	Pg	04 01 10.3	+0.7
CUGUR				S	Sg	04 01 30.7	+2.1
ARPR	Arapgir-MALATY	1.49	356	Pn	Pb	04 01 08.9	-0.7
KAMA	Osmaniye	1.49	254	P	Pn	04 01 08.2	-0.5
KAMA				S	Sb	04 01 28.4	-0.3
KOVA	Elazig, Kovanc	1.53	43	P	Pg	04 01 11.0	+0.1
KOVA				S	Sg	04 01 31.0	+0.3
MAZI	Mazidag	1.58	95	Pn	Pb	04 01 10.0	-1.1
KEMA	Kemaliye	1.66	1	P	Pn	04 01 11.1	0.0
KEMA				S	Sn	04 01 31.2	-1.4
ANDN	Andirin	1.69	270	P	Pn	04 01 11.1	-0.3
ANDN				S	Sn	04 01 33.0	-0.2
HANI	Diyarbakir_Han	1.73	61	P	Pb	04 01 12.4	-1.2
HANI				S	Sb	04 01 35.0	-0.4
TNCL	Tunceli-Merkez	1.73	29	P	Pg	04 01 14.0	-0.8
TNCL				S	Sg	04 01 37.8	+0.5
SARI	SarD1z-Kayseri	1.81	297	Pn	Pb	04 01 14.2	-0.8
SARI				Sn	Sb	04 01 37.0	-0.8
CUKAN	kangal_SIVAS	1.88	336	P	Pb	04 01 15.9	-0.4
CUKAN				S	Sb	04 01 40.7	+0.7
SAIM	ADANA	1.93	282	P	Pn	04 01 15.0	+0.4
SAIM				S	Sg	04 01 43.3	-0.2
RHAN	Hatay/Reyhanl	2.01	229	P	Pg	04 01 20.7	+0.7
RHAN				S	Sg	04 01 45.7	-0.4
KOZT	Kozan	2.10	267	Pn	Pn	04 01 16.9	-0.1
CUAYA	Sivas-Altinyay	2.14	321	P	Pb	04 01 20.1	-0.5
CUAYA				S	Sb	04 01 45.5	-1.9
ERZN	Erzincan	2.21	26	Pn	Pb	04 01 20.5	-1.3
BNGB	Bingl	2.23	51	Pn	Pb	04 01 20.3	-1.8
SVAN	Silvan-Diyarba	2.23	75	Pn	Pn	04 01 19.9	+1.1
SVAN	Silvan-Diyarba	2.23	75	P	Pn	04 01 19.0	+0.2
SVAN				S	Sb	04 01 49.5	-0.4
BTMN	Batman	2.24	82	P	Pn	04 01 19.6	+0.7
BTMN				S	Sb	04 01 48.1	-2.1
CEYT	Ceyhan	2.25	256	Pn	Pn	04 01 19.7	+0.7
MIDY	Mardin/Midyat-	2.34	94	P	Pn	04 01 20.5	+0.1
MIDY				S	Sg	04 01 55.9	-0.8
CUZAR	Zara_SIVAS	2.35	347	P	Pb	04 01 22.4	-1.7
CUZAR				S	Sg	04 01 55.6	-1.4
YURE	YUREGIR	2.39	252	P	Pn	04 01 22.1	+1.1
YURE				S	Sg	04 02 00.1	+1.7
AKO	Adana	2.41	268	P	Pn	04 01 20.2	-1.0
AKO				S	Sg	04 02 00.1	+1.2
BNN	Bunyan	2.41	302	Pn	Pn	04 01 22.5	+1.1
SLHN	Bingol, Solhan	2.42	55	P	Pb	04 01 23.9	-1.5
SLHN				S	Sb	04 01 56.2	+0.7
CUSAR	Sarkisla-SIVAS	2.52	317	P	Pn	04 01 24.4	+1.6
CUSAR				S	Sg	04 02 00.7	-1.7
SVSK	Karacayir	2.58	334	Pn	Pb	04 01 25.5	-2.5
GUNE	Kayseri	2.59	301	P	Pg	04 01 30.6	-0.6
GUNE				S	Sg	04 02 05.5	+0.8
SUSE	Susehri	2.61	356	P	Pn	04 01 25.6	+1.4
KELT	Kelkit	2.62	13	P	Pn	04 01 25.1	+0.9
KARA	Karaisali	2.74	264	Pn	Pn	04 01 27.0	+1.2
ALUC	Giresun/Alucra	2.75	5	P	Pn	04 01 27.4	+1.3
ECAT	Cat-ERZURUM	2.80	44	P	Pn	04 01 28.8	+1.9
KOPT	Kop Dagi	2.89	33	P	Pb	04 01 33.2	-0.2
RSDY	Resadiye-TOKAT	2.93	343	Pn	Pn	04 01 29.6	+1.2
NIDE	Nigde/Merkez-G	2.95	279	P	Pn	04 01 29.0	+0.2
GURO	Guroymak-BITLI	2.97	70	Pn	Pn	04 01 30.2	+1.2
BLIS	Bitlis-Merkez	2.99	73	P	Pb	04 01 34.2	-0.9
BLIS				S	Sb	04 02 13.7	+1.8
HACI	Hacifakili, Ak	3.00	315	P	Pn	04 01 30.0	+0.6
HACI				S	Sb	04 02 14.5	+2.5
BAYT	Aydıntepe-Bayb	3.08	25	Pn	Pn	04 01 32.6	+2.0
TOKT	Tokat	3.10	332	Pn	Pn	04 01 32.4	+1.6
EJDE	Erzurum, Palan	3.14	44	P	Pn	04 01 33.8	+2.1
YOZ	Yozgat	3.20	310	Pn	Pn	04 01 33.6	+1.4
PERV	Siirt/Pervari-	3.25	83	P	Pn	04 01 35.3	+2.5
PERV				S	Sg	04 02 24.9	-0.9
KOZK	Kozakli-Nevseh	3.25	301	Pn	Pn	04 01 35.2	+2.3
KRIK	Erzurum-spir	3.34	34	P	Pn	04 01 36.6	+2.5
CKRK	Yozgat, Cekere	3.38	318	P	Pn	04 01 35.3	+0.6
CKRK				S	Sg	04 02 30.3	0.0
KERG	Konya-Eregli	3.46	268	P	Pn	04 01 36.2	+0.5
MLAZ	Malazgirt-MUS	3.56	63	Pn	Pn	04 01 39.6	+2.5
KOPR	Koprukoy-ERZUR	3.56	47	Pn	Pn	04 01 39.9	+2.7
BEIL	Beino	3.57	212	eP	Pn	04 01 38.4	+1.2
AKDM	Akdamar-Van	3.64	77	Pn	Pn	04 01 40.4	+2.1
CDAG	Cicekdag	3.79	303	P	Pn	04 01 39.5	-0.8
CDAG				S	Sb	04 02 33.6	-1.2
HWQ	Hawqa	3.90	212	eP	Pb	04 01 48.0	-2.6
AKPI	Kirsehir/Akpin	3.99	300	P	Pn	04 01 44.4	+1.4

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*JMA **04** 04:04:31.9±0.1, 24°N±2°×122°.8E±0°.5, h63km±2km, MV2.0/10, NW OFF ISHIGAKIJIMA IS*

*TAP **04** 04:04:32.1, 24°.15N×122°.86E, h53km, ML2.9, C*

ISC 04 04:04:32.3±1.2**, 24°.02N**±0°.03×**122°.87E**±0°.02**, h50**km**, n79, σ1^{s}13**/148**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.43	9	i P	Pn	04 04 42.2	-0.7
JYNG				eS	Sn	04 04 49.4	-1.0
YOJ	Yonaguni jima	0.46	16	P	Pn	04 04 42.5	-0.6
YOJ				S	Sn	04 04 50.0	-0.9
YOJ	Yonaguni jima	0.46	16	i P	Pn	04 04 42.4	-0.7
	baz=22						
YOJ				i S	Sn	04 04 49.8	-1.0
	baz=22						
EOS4	EOS4	0.52	281	eP	Pn	04 04 43.6	+0.2
	baz=270						
EOS4				eS	Sn	04 04 51.9	+0.5
	baz=270						
EOS2	EOS2	0.71	304	eP	Pn	04 04 46.4	+0.3
	baz=292						
IRIF	Iriomote-Funau	0.85	68	P	Pn	04 04 48.0	+0.1
IRIF				eS	Sn	04 05 00.7	+1.2
HATJ	Hateruma jima	0.85	87	P	Pn	04 04 48.9	+0.8
JKRS	Kuro-shima	1.06	78	P	Pn	04 04 51.4	+0.5
JKRS				eS	Sn	04 05 06.0	+1.4
TWC	Suao	1.10	302	eP	Pn	04 04 50.8	-0.6
	baz=287						
TWC				eS	Sn	04 05 04.2	-1.3
	baz=287						
HWA	Hwalien	1.16	268	eS	Sn	04 05 06.8	-0.1
	baz=261						
TWD	Chiawan	1.17	273	eP	Pn	04 04 51.8	-0.5
	baz=266						
TWD				S	Sn	04 05 05.8	-1.3
	baz=266						
NACB	Ninganchiao	1.18	278	P	Pn	04 04 51.8	-0.7
	baz=261						
NACB				S	Sn	04 05 06.2	-1.2
	baz=261						
JIJ	Ishigaki jima	1.21	73	P	Pn	04 04 52.7	-0.2
JIJ				S	Sn	04 05 08.2	-0.1
NDS	Dongshan	1.22	300	eP	Pn	04 04 52.6	-0.4
	baz=287						
NDS				eS	Sn	04 05 08.0	-0.4
	baz=287						
ETLH	Xiulin Townshi	1.28	279	P	Pn	04 04 53.6	-0.4
	baz=272						
ETLH				S	Sn	04 05 09.4	-0.7
	baz=272						
TWE	Neicheng	1.30	303	eP	Pn	04 04 54.2	+0.1
	baz=306						
TWE				eS	Sn	04 05 11.2	+0.8
	baz=306						
LATG	Datong	1.33	293	eP	Pn	04 04 54.4	-0.2
	baz=277						
LATG				eS	Sn	04 05 10.9	-0.4
	baz=277						
ESL	Shilin	1.33	261	eP	Pn	04 04 53.5	-1.1
	baz=255						
ESL				eS	Sn	04 05 10.2	-1.0
	baz=255						
ENTT	Nioudou	1.34	298	eP	Pn	04 04 54.9	+0.2
	baz=282						
ENTT				eS	Sn	04 05 11.0	-0.4
	baz=282						
TIPB	Shuangxi	1.34	315	eP	Pn	04 04 54.0	-0.8
	baz=311						
TIPB				eS	Sn	04 05 09.5	-2.0
	baz=311						
EGFH	Guangfu	1.37	255	eP	Pn	04 04 54.5	-0.5
	baz=249						
EGFH				eS	Sn	04 05 11.3	-0.7
	baz=249						
FUSB	Fushanzhiwuyua	1.38	302	eP	Pn	04 04 55.5	+0.2
	baz=303						
FUSB				eS	Sn	04 05 12.5	0.0
	baz=303						
SXI1	Grass Mountain	1.40	320	eP	Pn	04 04 55.4	-0.2
	baz=325						
SXI1				eS	Sn	04 05 11.2	-1.9
	baz=325						
NNSB	Datong	1.42	287	eP	Pn	04 04 55.6	-0.3
	baz=272						
NNSB				eS	Sn	04 05 12.5	-0.9
	baz=272						
HGSD	Ruisui	1.43	249	eP	Pn	04 04 55.3	-0.5
	baz=243						
HGSD				eS	Sn	04 05 12.5	-0.9
	baz=243						
NNS	Nan Shan	1.43	287	eP	Pn	04 04 55.6	-0.4
	baz=272						
NNS				eS	Sn	04 05 12.4	-1.3
	baz=272						
JISG	Ishigakijimahi	1.43	66	P	Pn	04 04 55.4	-0.5
JISG				eS	Sn	04 05 13.1	-0.5
NWLT	Wulai	1.46	301	eP	Pn	04 04 56.4	+0.1
	baz=306						
NWLT				eS	Sn	04 05 13.9	-0.4
	baz=306						
WHF	Hehuan Shan	1.47	275	eP	Pn	04 04 56.5	-0.4
	baz=260						
WHF				eS	Sn	04 05 14.1	-1.1
	baz=260						
EHY	Hungye	1.51	250	eP	Pn	04 04 56.6	-0.3
	baz=245						
EHY				eS	Sn	04 05 14.7	-0.8
	baz=245						
YHNB	Yeheng	1.51	296	eP	Pn	04 04 57.2	+0.2
	baz=279						
YHNB				eS	Sn	04 05 14.8	-0.8
	baz=279						
NSK	Sanguang	1.53	296	eP	Pn	04 04 57.3	0.0
	baz=279						
NSK				eS	Sn	04 05 15.0	-1.1
	baz=279						
CHGB	Renai	1.55	272	eP	Pn	04 04 57.6	-0.2
	baz=266						
CHGB				eS	Sn	04 05 15.5	-1.4
	baz=266						
OWD	Renai	1.55	268	eP	Pn	04 04 57.3	-0.4
	baz=262						
OWD				eS	Sn	04 05 15.5	-1.3
	baz=262						
TWT	Tachien	1.57	279	eP	Pn	04 04 58.4	+0.5
	baz=263						
TWT				eS	Sn	04 05 17.1	-0.1

	baz=263						
YULB	Yu-li	1.57	247	*e*P	Pn	04 04 57.6	-0.3
	baz=234						
YULB				*e*S	Sn	04 05 16.2	-0.9
	baz=234						
EYUL	Yuli	1.57	245	*e*P	Pn	04 04 58.0	+0.1
	baz=232						
EYUL				*e*S	Sn	04 05 16.1	-0.9
	baz=232						
TDCB	Techi	1.58	279	*e*P	Pn	04 04 58.0	-0.2
	baz=263						
TDCB				*e*S	Sn	04 05 16.6	-0.9
	baz=263						
WUSB	Renai	1.60	269	*e*P	Pn	04 04 58.4	+0.1
	baz=264						
WUSB				*e*S	Sn	04 05 17.4	-0.6
	baz=264						
VWDT	VWDT	1.60	261	*e*P	Pn	04 04 58.4	+0.1
	baz=256						
VWDT				*e*S	Sn	04 05 17.0	-0.9
	baz=256						
YM01	YM01	1.63	314	*e*P	Pn	04 04 59.1	+0.4
	baz=310						
YM01				*e*S	Sn	04 05 17.7	-0.8
	baz=310						
FULB	Fuli	1.66	241	*e*P	Pn	04 04 58.2	-0.8
	baz=227						
FULB				*e*S	Sn	04 05 18.4	-0.9
	baz=227						
NFF	Wufeng Townshi	1.71	291	*e*P	Pn	04 05 00.6	+0.8
	baz=278						
NFF				*e*S	Sn	04 05 20.8	+0.3
	baz=278						
EHD	Haiduan	1.76	241	*e*P	Pn	04 05 00.0	-0.4
	baz=229						
EHD				*e*S	Sn	04 05 19.9	-1.7
	baz=229						
SSLB	Suanglung	1.77	263	*e*P	Pn	04 05 01.2	+0.6
	baz=258						
SSLB				*e*S	Sn	04 05 21.6	-0.4
	baz=258						
EDH	Donghe	1.78	234	*e*P	Pn	04 04 59.7	-0.9
	baz=224						
EDH				*e*S	Sn	04 05 19.8	-2.2
	baz=224						
WHP	Taichung City	1.78	279	*e*P	Pn	04 05 02.2	+1.5
	baz=265						
JTJ	Tarama	1.78	69	P	Pn	04 05 01.0	+0.3
JTJ				*e*S	Sn	04 05 22.4	+0.2
WCS	Beigang Elemen	1.79	272	*e*P	Pn	04 05 01.3	+0.5
	baz=267						
WCS				*e*S	Sn	04 05 22.0	-0.4
	baz=267						
LIOB	Emei	1.80	291	*e*P	Pn	04 05 01.8	+0.8
	baz=278						
LIOB				*e*S	Sn	04 05 23.2	+0.5
	baz=278						
SMLT	Sun Moon Lake	1.81	266	*e*P	Pn	04 05 01.7	+0.5
	baz=261						
SMLT				*e*S	Sn	04 05 23.1	+0.1
	baz=261						
TYC	Yuchr	1.84	267	*e*P	Pn	04 05 02.1	+0.6
	baz=262						
TYC				*e*S	Sn	04 05 22.7	-1.0
	baz=262						
LDUT	Ludao	1.86	224	*e*P	Pn	04 05 00.8	-1.0
	baz=221						
LDUT				*e*S	Sn	04 05 22.1	-1.9
	baz=221						
ELDTW	Lidau	1.89	244	*e*P	Pn	04 05 01.9	-0.4
	baz=240						
ELDTW				*e*S	Sn	04 05 23.5	-1.5
	baz=240						
TWQ1	Liyutan	1.94	280	*e*P	Pn	04 05 05.1	+2.2
	baz=275						
TWQ1				*e*S	Sn	04 05 27.5	+1.3
	baz=275						
LONT	Longtian	1.94	236	*e*P	Pn	04 05 02.6	-0.4
	baz=226						
LONT				*e*S	Sn	04 05 25.7	-0.5
	baz=226						
ALS	Alishan	1.96	255	*e*P	Pn	04 05 04.4	+1.0
	baz=250						
ALS				*e*S	Sn	04 05 27.2	+0.2
	baz=250						
WNT	Mingjian	2.00	266	*e*P	Pn	04 05 05.2	+1.4
	baz=261						
WNT				*e*S	Sn	04 05 29.9	+2.2
	baz=261						
STYH	Taoyuan	2.10	247	*e*P	Pn	04 05 06.1	+1.1
	baz=236						
STYH				*e*S	Sn	04 05 30.3	+0.4
	baz=236						
WDLH	Douliu	2.16	262	*e*P	Pn	04 05 07.8	+1.9
	baz=257						
WDLH				*e*S	Sn	04 05 34.0	+2.5
	baz=257						
TPUB	Ta-pu	2.18	251	*e*P	Pn	04 05 07.9	+1.8
	baz=254						
TPUB				*e*S	Sn	04 05 33.6	+1.7
	baz=254						
CHN4	Tsaushan	2.19	253	*e*P	Pn	04 05 08.3	+2.0
	baz=249						
CHN4				*e*S	Sn	04 05 34.7	+2.4
	baz=249						
WTP	Ta-pu	2.21	250	*e*P	Pn	04 05 08.2	+1.6
	baz=245						
WTP				*e*S	Sn	04 05 34.9	+2.1
	baz=245						
ECL	Taimali	2.26	232	*e*S	Sn	04 05 32.1	-1.8
	baz=237						
WRL	Guolierlin Hig	2.28	268	*e*P	Pn	04 05 09.3	+1.7
	baz=262						
WRL				*e*S	Sn	04 05 36.3	+1.8
	baz=262						
WTK	Tuku	2.30	262	*e*P	Pn	04 05 09.6	+1.9
	baz=250						
SGST	Jiashian	2.30	246	*e*P	Pn	04 05 09.8	+2.0
	baz=234						
SGST				*e*S	Sn	04 05 37.3	+2.4
	baz=234						
CHN1	Nanshi	2.30	249	*e*P	Pn	04 05 09.5	+1.6
	baz=245						
CHN1				*e*S	Sn	04 05 37.3	+2.2
	baz=245						
TWK	Hsinying	2.31	252	*e*P	Pn	04 05 10.0	+2.0
	baz=247						
TWK				*e*S	Sn	04 05 37.4	+2.2
	baz=247						
LAY	Lan-yu	2.32	212	*e*S	Sn	04 05 33.3	-2.1
	baz=211						
LYUB	Lan-yu	2.33	211	*e*S	Sn	04 05 33.2	-2.5
	baz=211						
WSL	Shuilin Townsh	2.47	259	*e*P	Pn	04 05 12.1	+2.0
	baz=254						
WSL				*e*S	Sn	04 05 41.2	+2.1
	baz=254						
EAST	Anshuo	2.47	229	*e*P	Pn	04 05 10.0	-0.2
	baz=232						
EAST				*e*S	Sn	04 05 37.4	-1.8
	baz=232						
MASBT	Mashibuluo	2.49	236	*e*P	Pn	04 05 11.9	+1.5
	baz=229						
MASBT				*e*S	Sn	04 05 39.6	0.0
	baz=229						
SMST	Manzhou Townsh	2.73	224	*e*S	Sn	04 05 44.8	-0.7
	baz=227						
WDGT	Dungji	3.04	256	*e*P	Pn	04 05 18.9	+1.0
	baz=250						
WDGT				*e*S	Sn	04 05 53.4	+0.3
	baz=250						
PHUB	P'eng-hu	3.06	261	*e*P	Pn	04 05 18.8	+0.6
	baz=268						
PHUB				*e*S	Sn	04 05 53.9	+0.2
	baz=268						
PNG	Penghu	3.07	262	*e*P	Pn	04 05 19.6	+1.3
	baz=257						
PNG				*e*S	Sn	04 05 53.8	-0.1
	baz=257						
VWUC	VWUC	3.26	288	*e*P	Pn	04 05 19.9	-1.1
	baz=284						

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*IDC **04** 04:04:53.6±2.1, 7°.07S×155°.50E, h0km, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=74.2km s-min=25.1km az=112.0*

ISC 04 04:05:00.8±0.9**, 7°.1S**±0°.2×**155°.4E**±0°.1**, h50km, n11, σ0s.47**/8**, mb3.6**/7**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.05	118	Sn	Sn	04 07 11.3	+0.1
	134nm,0.3s,baz=198,slow=6.6,SNR=1.3						
WRA	Warramunga Arr	24.10	236	P	P	04 10 12.4	+0.3
	1.2nm,0.9s,baz=61,slow=9.8,SNR=4.7						
	1.2nm,0.9s						
ASAR	Alice Springs	26.41	229	P	P	04 10 32.4	-0.7
	0.2nm,0.6s,baz=58,slow=10.0,SNR=5.0						
	0.2nm,0.6s						
H11S3	WAKE ISLAND Hy	27.76	23	T	T	04 39 10.6	
	baz=202,slow=75,SNR=8.1						
H11S2	WAKE ISLAND Hy	27.76	24	T	T	04 39 11.4	
	baz=202,slow=75,SNR=7.1						
H11S1	WAKE ISLAND Hy	27.77	23	T	T	04 39 11.9	
	baz=202,slow=75,SNR=5.6						
STKA	Stephens Creek	27.82	206	P	P	04 10 45.6	+0.1
	0.8nm,0.5s,baz=24,slow=11,SNR=3.0						
	0.8nm,0.5s						
SONM	Songino Array	69.65	327	P	P	04 16 05.5	+0.2
	0.6nm,0.8s,baz=132,slow=4.5,SNR=3.8						
	0.6nm,0.8s						
ILAR	Eielson Array	83.32	21	P	P	04 17 21.7	-0.3
	0.2nm,0.5s,baz=229,slow=6.4,SNR=2.0						
	0.2nm,0.5s						
MKAR	Makanchi Array	83.75	319	P	P	04 17 25.2	+0.5
	0.8nm,0.7s,baz=110,slow=5.6,SNR=7.9						
	0.8nm,0.7s						
ZALV	Zalesovo Beam	84.50	326	P	P	04 17 28.0	-0.2
	0.7nm,0.6s,baz=114,slow=3.6,SNR=2.5						
	0.7nm,0.6s						

HEL 04 04:06:35.2±0.3**, 67°.69N×33°.62E, h0km, ML1.1, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVZ	Lovozero	0.44	62	PG	Pg	04 06 43.6	0.0
LVZ				SG	Sg	04 06 47.9	-1.5
VRF	Varrio	1.53	274	PG	Pn	04 07 02.6	-1.2
VRF				MSG		04 07 21.1	
	comp=Z,1.2nm,0.2s						
VRF				SG	Sg	04 07 23.0	-1.2
OLKF	Oulanka, Finla	2.16	232	PG	Pn	04 07 13.3	+0.9
OLKF				MSG		04 07 39.2	
	comp=Z,0.9nm,0.2s						
OLKF				SG	Sb	04 07 41.9	-0.4
KU6	Riekki	2.23	223	PB	Pn	04 07 14.2	+0.9
KU6				MSG		04 07 41.3	
	comp=Z,0.5nm,0.2s						
KU6				SG	Sb	04 07 44.1	-0.3
MSF	Maaselka	2.55	227	SG	Sb	04 07 53.1	-0.5
SGF	Sodankyl	2.73	268	SG	Sb	04 07 58.0	-0.8
KEV	Kevo	3.18	314	PN	Pn	04 07 26.5	+0.1
ARA0	ARCESS Array S	3.50	306	PN	Pn	04 07 30.1	-0.7
ARA0				SN	Sn	04 08 11.9	-1.0
KLF	Kolari	3.75	267	SG	Sg	04 08 32.2	-3.2
ERTU	Ertsjaerv	4.61	261	SN	Sn	04 08 39.3	-0.8

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*NOU **04** 04:11:54.8, 42°.76S×172°.68E, h3km, MLv4.1/12, South Island, New Zealand*

*WEL **04** 04:11:55.5±0.3, 43°S±2°×17°3E±°, h10km±4km, M3.9/71, ML4.0/13, MLv3.9/71, Error ellipse: s-maj=0.0km s-min=0.0km az=98.7, confirmed*

ISC 04 04:11:54.6±1.3**, 42°.70S**±0°.02×**172°.69E**±0°.03**, h5km**±12km**, n82, σ1s.35**/89**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTZ	Lake Taylor	0.32	255	P	Pb	04 12 02.5	-0.3
LTZ				S	Sb	04 12 07.4	-0.9
GVZ	Greta Valley S	0.37	137	P	Pb	04 12 04.2	+0.5
GVZ				S	Sb	04 12 10.7	+0.9
AMCZ	Amberley	0.48	183	P	Pb	04 12 06.8	+1.3
AMCZ				S	Sb	04 12 15.4	+2.5
KHZ	Kahutara	0.69	66	P	Pg	04 12 08.8	+1.0
KHZ	Kahutara	0.69	66	P	Pg	04 12 09.0	+1.2
OXZ	Oxford	0.79	217	P	Pn	04 12 11.9	-0.5
OXZ				S	Sn	04 12 23.9	-0.6
INZ	Inchbonnie	0.92	268	P	Pb	04 12 13.1	+0.1
THZ	Tophouse	0.95	10	P	Pg	04 12 12.3	-0.5
THZ				S	Sg	04 12 24.2	-0.8
MQZ	McQueen's Vall	1.01	181	P	Pb	04 12 14.6	0.0
MQZ				S	Sn	04 12 29.4	-0.5
RACZ	Rakaia	1.10	201	P	Pg	04 12 16.1	+0.3
DSZ	Denniston Nort	1.16	325	P	Pg	04 12 17.0	+0.2
DSZ				S	Sb	04 12 33.3	+0.9
MHCZ	Mount Hutt	1.17	224	P	Pg	04 12 17.1	+0.1
AKCZ	Akaroa Harbour	1.19	172	P	Pg	04 12 17.3	0.0
AKCZ				S	Sb	04 12 33.6	+0.4
MRNZ	Matariki Terra	1.30	2	P	Pn	04 12 18.8	-0.6
BSWZ	Blackbirch Sta	1.32	42	P	Pn	04 12 19.6	0.0
WACZ	Wakanui South	1.39	206	P	Pn	04 12 20.0	-0.7
CMWZ	Cape Campbell	1.48	51	P	Pb	04 12 23.3	+0.8
WVZ	Waitaha Valley	1.48	255	P	Pb	04 12 22.7	0.0
NNZ	Nelson	1.57	19	P	Pn	04 12 22.8	-0.2
RPZ	Rata Peaks	1.57	229	P	Pn	04 12 22.7	-0.4
RPZ	Rata Peaks	1.57	229	P	Pn	04 12 22.7	-0.4
TUWZ	Tuamarina	1.57	37	P	Pn	04 12 23.4	+0.3
ARCZ	Arundel	1.67	221	P	Pn	04 12 23.8	-0.7
TKNZ	Takaka Hill	1.68	7	P	Pn	04 12 24.8	+0.3
GCSZ	Gaunt Creek Bo	1.84	250	P	Pn	04 12 27.5	+0.7
QRZ	Quartz Range	1.87	356	P	Pn	04 12 27.7	+0.4
QRZ	Quartz Range	1.87	356	P	Pn	04 12 27.2	0.0
TCW	Tory Channel	1.90	39	P	Pn	04 12 27.6	-0.1
SNZO	South Karori	2.04	48	P	Pn	04 12 30.9	+1.3
TMZ	Timaru	2.08	215	P	Pn	04 12 29.6	-0.6
DUWZ	D'Urville Isla	2.11	26	P	Pn	04 12 31.2	+0.7
PLWZ	Palliser	2.22	60	P	Pn	04 12 30.7	-1.3
FOZ	Fox Glacier	2.26	247	P	Pn	04 12 33.5	+0.8
CAW	Cannon Point	2.38	49	P	Pn	04 12 33.3	-0.9
PAWZ	Paruwai Farm	2.43	58	P	Pn	04 12 33.8	-1.1
KIW	Kapiti Island	2.47	43	P	Pn	04 12 35.4	-0.1
LBZ	Lake Benmore	2.48	226	P	Pn	04 12 35.4	-0.3
TRWZ	Traveller	2.58	61	P	Pn	04 12 36.4	-0.6
MTW	Mount Morrison	2.60	55	P	Pn	04 12 35.8	-1.4
OGWZ	Otaki Gorge	2.64	45	P	Pn	04 12 36.9	-0.9
ODZ	Otahua Downs	2.77	212	P	Pn	04 12 38.7	-1.0
ODZ	Otahua Downs	2.77	212	P	Pn	04 12 38.8	-0.8
HOWZ	Holdsworth Sta	2.77	51	P	Pn	04 12 38.3	-1.4
TMWZ	Te Maipa	2.87	57	P	Pn	04 12 39.9	-1.1
MRZ	Mangatainoka R	2.97	48	P	Pn	04 12 40.8	-1.5
JCZ	Jackson Bay	3.16	243	P	Pn	04 12 45.1	0.0
JCZ	Jackson Bay	3.16	243	P	Pn	04 12 45.0	0.0
BFZ	Birch Farm	3.34	54	P	Pn	04 12 47.2	-0.2
NMEZ	Namu Road	3.40	16	P	Pn	04 12 50.7	+2.5
WKZ	Wanaka	3.41	230	P	Pn	04 12 47.3	-1.1
WAZ	Wanganui	3.41	31	P	Pn	04 12 50.7	+2.3
EAZ	Earnscleugh	3.52	223	P	Pn	04 12 48.8	-1.1
HHSZ	Highcliff Hill	3.52	205	P	Pn	04 12 49.3	-0.7
NBEZ	Newall Road No	3.54	15	P	Pn	04 12 52.7	+2.5
DVHZ	Dannevirke	3.54	49	P	Pb	04 12 55.8	-2.0
KHEZ	Kahui Hut	3.54	17	P	Pn	04 12 52.3	+2.0
KHEZ	Kahui Hut	3.54	17	P	Pn	04 12 52.3	+2.0
NEZ	North Egmont	3.58	18	P	Pn	04 12 54.5	+3.6
PKE	Pukeiti	3.63	16	P	Pn	04 12 53.9	+2.3
PNHZ	Pukenui	3.84	45	P	Pn	04 12 52.8	-1.5
VRZ	Vera Road	3.90	24	P	Pn	04 12 56.8	+1.7
PKVZ	Pokaka	3.95	31	P	Pn	04 12 57.1	+1.2
MOVZ	Moawhango	4.02	36	P	Pn	04 13 01.8	+4.9
WNVZ	Wahianoa	4.02	34	P	Pn	04 12 57.6	+0.7
TUVZ	Tukino	4.09	34	P	Pn	04 12 57.9	0.0
NGZ	Ngauruhoe	4.15	33	P	Pn	04 13 00.4	+1.6
TWVZ	Taurewa	4.18	31	P	Pn	04 12 59.6	+0.6
OTVZ	Oturere	4.19	34	P	Pb	04 13 05.2	-3.6
NNVZ	North Ngauruho	4.20	33	P	Pn	04 12 59.7	+0.3
ETVZ	East Tongariro	4.23	34	P	Pn	04 13 04.0	+4.2
MLZ	Mavora Lakes	4.24	229	P	Pn	04 12 58.5	-1.4
HIZ	Hauiti	4.49	22	P	Pn	04 13 04.3	+1.0
HIZ	Hauiti	4.49	22	P	Pn	04 13 04.1	+0.9
BKZ	Black Stump Fm	4.55	40	P	Pn	04 13 05.0	+0.8
SYZ	Scrubby Hill	4.60	212	P	Pn	04 13 04.2	-0.5
SYZ	Scrubby Hill	4.60	212	P	Pn	04 13 04.2	-0.5
TLZ	Tolley Road	4.87	27	P	Pn	04 13 11.3	+2.8
TOZ	Tahuroa Road	5.41	24	P	Pn	04 13 18.8	+3.0
URZ	Urewera	5.57	39	P	Pn	04 13 19.4	+1.4
MKAZ	Moumakai	5.90	20	P	Pn	04 13 23.5	+0.9
KUZ	Kuaotunu	6.39	22	P	Pn	04 13 30.8	+1.5
WMGZ	Waiomatatini S	6.55	44	P	Pn	04 13 31.4	-0.1

IDC 04 04:20:39.4±6.4**, 6°.88S×154°.79E, h0km, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=183.9km s-min=38.9km az=111.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.72	235	P	P	04 25 54.1	+0.7
	0.9nm,1.0s,baz=60,slow=9.6,SNR=3.4						
	0.9nm,1.0s						
ASAR	Alice Springs	26.10	228	P	P	04 26 14.4	-0.8
	0.3nm,0.8s,baz=55,slow=9.1,SNR=2.6						
	0.3nm,0.8s						
SONM	Songino Array	69.13	327	P	P	04 31 47.9	+0.2
	0.6nm,0.7s,baz=121,slow=5.5,SNR=3.3						
	0.6nm,0.7s						

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*IDC **04** 04:23:23.4±0.7, 37°.32N×141°.49E, h0km, mb3.8/18, mbtmp3.8/22, ML3.4/3, Error ellipse: s-maj=17.4km s-min=16.6km az=124.0*

*JMA **04** 04:23:25.2±0.2, 37°.3N±0°.5×14°2E±°, h34km±2km, MV3.9/37, E OFF FUKUSHIMA PREF*

JMA Felt I J1 at E OFF FUKUSHIMA PREF .

*NEIC **04** 04:23:29.8±1.2, 37°.45N±0°.07×141°.41E±0°.09, h46km±9km, mb4.1/10, Error ellipse: s-maj=11.3km s-min=9.7km az=48.0*

ISC 04 04:23:27.2±1.4**, 37°.32N**±0°.04×**141°.45E**±0°.06**, h30km**±9km**, n61, σ1s.38**/62**, mb3.9**/24**, 2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.46	276	P	Pn	04 23 37.5	-0.4
JFK				S	Sn	04 23 46.1	+1.0
ONAJ	Iwakimizuishiy	0.57	247	⇓P	Pb	04 23 38.8	+0.1
ONAJ				⇓S	Sn	04 23 48.9	+1.2
JMST	Minamisoumatoc	0.60	312	*i* P	Pb	04 23 39.1	-0.2
JMST				S	Sb	04 23 49.1	+1.5
JFFD	Fukushimafurud	0.75	252	P	Pb	04 23 41.7	-0.1
JFFD				*e*S	Sb	04 23 53.2	+1.6
JMM	Marumori	0.76	316		Pb	04 23 41.6	-0.2
JMM					Sb	04 23 51.7	-0.1
JMM	Marumori	0.76	316	*i* P	Pb	04 23 41.4	-0.5
JMM				S	Sb	04 23 53.0	+1.2
JOTO	OTAMA OYAMA	0.92	285	P	Pb	04 23 45.2	+0.5
JHO	Hitachi	1.00	225	P	Pb	04 23 44.4	-1.6
JHO				S	Sb	04 23 59.4	+0.6
JIO	Ouri	1.13	356	*i* P	Pb	04 23 45.7	-2.5
JIO				S	Sn	04 23 60.0	-1.7
JOU	Okura	1.22	329	*i* P	Pb	04 23 48.9	-0.8
JOU				S	Sb	04 24 06.0	+1.1
JSD	Sado	2.63	287	Pn	Pb	04 24 09.8	-3.8
MJAR	Matsushiro Arr	2.71	254	Pn	Pb	04 24 10.4	-4.7
	1.1nm,0.3s,baz=103,slow=13,SNR=26						
MJAR				Sn	Sb	04 24 47.8	-0.1
	1.2nm,0.3s,baz=202,slow=29,SNR=2.5						
	10nm,0.4s						
MAJO	Matsushiro	2.71	254		Pb	04 24 11.8	-3.3
MJB9	Matsu-Tunnel	2.72	254		Pb	04 24 11.4	-3.7
JTM	Tenmabayashi	3.47	355		Pn	04 24 18.5	-0.7
JGF	Kuroka	3.72	244		Pn	04 24 24.1	+1.3
INU	Inuyama	4.09	243		Pn	04 24 29.5	+1.8
JHJ	Hachijo jima 2	4.41	199	Pn	Pn	04 24 32.9	+0.7
	12nm,0.3s,baz=223,slow=21,SNR=2.0						
JHJ				Sn	Sn	04 25 21.7	-0.8
	13nm,0.3s,baz=72,slow=23,SNR=2.1						
	184nm,0.7s						
ERM	Erimo	4.87	15	Pn	Pn	04 24 38.8	+0.4
ASAJ	Asahikawa	6.84	7	Pn	Pn	04 25 04.6	-0.9
	1.1nm,0.3s,baz=216,slow=28,SNR=1.3						
	2.0nm,0.3s						
KSRS	Korea Array	10.77	275	Pn	Pn	04 25 57.9	-1.4
	0.4nm,0.3s,baz=90,slow=15,SNR=1.5						
ULN	Ulaanbaatar	27.22	304	P	P	04 29 08.3	-0.3
ENH	Enshi	27.39	265	P	P	04 29 08.7	-1.4
ENH				IAmb	IAmb	04 29 40.2	
	comp=Z,8.4nm,1.2s						
SONM	Songino Array	27.65	304	P	P	04 29 12.2	-0.2
	comp=Z,0.7nm,0.6s,baz=97,slow=8.8,SNR=4.8						
	comp=Z,0.7nm,0.6s						
SONM	Songino Array	27.65	304	P	P	04 29 10.3	-2.1
H11N2	WAKE ISLAND Hy	28.27	121	T	T	04 58 38.3	
	baz=314,slow=75,SNR=103						
H11N1	WAKE ISLAND Hy	28.28	121	T	T	04 58 38.9	
	baz=314,slow=75,SNR=79						
H11N3	WAKE ISLAND Hy	28.29	121	T	T	04 58 39.5	
	baz=314,slow=75,SNR=66						
H11S1	WAKE ISLAND Hy	28.99	123	T	T	04 59 36.6	
	baz=316,slow=76,SNR=34						
H11S3	WAKE ISLAND Hy	28.99	123	T	T	04 59 32.2	
	baz=316,slow=76,SNR=36						
H11S2	WAKE ISLAND Hy	29.01	123	T	T	04 59 38.0	
	baz=316,slow=76,SNR=32						
ZAA0	Zalesovo Array	41.74	312	P	P	04 31 13.2	-0.3
ZAA0				IAmb	IAmb	04 31 15.5	
	comp=Z,2.2nm,0.8s						
ZALV	Zalesovo Beam	41.74	312	P	P	04 31 13.5	+0.1
	comp=Z,1.1nm,0.5s,baz=87,slow=9.2,SNR=7.9						
	comp=Z,1.1nm,0.5s						
ZALV	Zalesovo Beam	41.74	312	P	P	04 31 13.2	-0.3
SHL	Shillong	43.44	269	P	P	04 31 26.8	-1.0
SHL				IAmb	IAmb	04 31 28.9	
	comp=Z,4.8nm,0.4s						
MK31	Makanchi Array	43.99	302	P	P	04 31 30.7	-1.1
MK31				IAmb	IAmb	04 31 34.1	
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	43.99	302	P	P	04 31 33.2	+1.4
	comp=Z,1.9nm,0.7s,baz=88,slow=9.7,SNR=23						
	comp=Z,1.9nm,0.7s						
MKAR	Makanchi Array	43.99	302	P	P	04 31 31.4	-0.4
MAKZ	Makanchi	44.20	302	P	P	04 31 32.6	-0.9
MAKZ				IAmb	IAmb	04 31 35.8	
	comp=Z,2.0nm,0.8s						
KURK	Kurchatov	45.78	308	P	P	04 31 45.1	-0.8
KURK				IAmb	IAmb	04 31 48.7	
	comp=Z,3.5nm,0.8s						
KURBB	Kurchatov Arra	45.85	308	P	P	04 31 47.5	+1.0
	comp=Z,1.3nm,0.4s,baz=84,slow=8.2,SNR=18						
	comp=Z,1.3nm,0.4s						
ILAR	Eielson Array	49.23	32	P	P	04 32 13.3	+0.8
	comp=Z,0.6nm,0.7s,baz=269,slow=6.3,SNR=2.4						
	comp=Z,0.6nm,0.7s						
BVAR	Borovoye Array	50.40	312	P	P	04 32 22.9	+1.3
	comp=Z,0.8nm,0.4s,baz=76,slow=7.4,SNR=5.1						
	comp=Z,0.8nm,0.4s						
INK	Inuvik	54.12	27	P	P	04 32 48.6	-0.3
	comp=Z,1.2nm,0.9s,baz=237,slow=2.9,SNR=2.7						
	comp=Z,1.2nm,0.9s						
WRA	Warramunga Arr	57.35	188	P	P	04 33 12.5	-0.1
	comp=Z,0.6nm,0.5s,baz=5.7,slow=7.6,SNR=9.5						
	comp=Z,0.6nm,0.5s						
ABKAR	Akbulak array	57.78	310	P	P	04 33 15.4	0.0
AKTO	Aktyubinsk	58.51	312	P	P	04 33 21.9	+1.3
	comp=Z,0.8nm,0.5s,baz=166,slow=4.8,SNR=2.5						
	comp=Z,0.8nm,0.5s						
ASAR	Alice Springs	61.08	188	P	P	04 33 38.8	+0.4
	comp=Z,0.6nm,0.7s,baz=7.8,slow=6.7,SNR=6.3						
	comp=Z,0.6nm,0.7s						
YKA	Yellowknife Ar	63.54	30	P	P	04 33 55.6	+1.1
	comp=Z,0.3nm,0.7s,baz=299,slow=6.1,SNR=2.2						
	comp=Z,0.3nm,0.7s						
FINES	FINESS Array B	68.58	332	P	P	04 34 27.7	+1.0
	comp=Z,2.2nm,0.9s,baz=57,slow=7.0,SNR=8.4						
	comp=Z,2.2nm,0.9s						
KARS	Kars	72.35	308	P	P	04 34 50.1	-0.3
NOA	NORSAR Array B	73.93	337	P	P	04 35 00.3	+1.0
	comp=Z,0.4nm,0.7s,baz=41,slow=2.6,SNR=2.1						
	comp=Z,0.4nm,0.7s						
AKASG	Malin Array Be	74.09	322	P	P	04 35 00.1	-0.2
	comp=Z,0.5nm,0.4s,baz=45,slow=6.1,SNR=7.4						
	comp=Z,0.5nm,0.4s						
NVAR	Mina Array Bea	74.79	53	P	P	04 35 06.2	+1.3
	comp=Z,0.3nm,0.5s,baz=333,slow=1.7,SNR=3.7						
	comp=Z,0.3nm,0.5s						
PDAR	Pinedale Array	77.44	46	P	P	04 35 21.3	+1.3
	comp=Z,0.4nm,0.6s,baz=305,slow=3.2,SNR=2.0						
	comp=Z,0.4nm,0.6s						
BRTR	Keskin Array B	78.69	312	P	P	04 35 28.9	+2.2
	comp=Z,0.2nm,0.6s,baz=64,slow=3.4,SNR=1.6						
	comp=Z,0.2nm,0.6s						
TXAR	Lajitas Array	89.92	52	P	P	04 36 25.1	+1.2
	comp=Z,0.3nm,0.5s,baz=278,slow=2.4,SNR=7.0						
	comp=Z,0.3nm,0.5s						
LPAZ	La Paz	146.52	59	PKPbc	PKiKP	04 43 07.0	-2.8

	comp=Z,0.5nm,0.4s,baz=347,slow=8.0,SNR=1.5						
H03N2	Juan Fernandez	147.02	96	T	T	07 27 11.9	
	baz=292,slow=76,SNR=7.1						
H03N3	Juan Fernandez	147.03	96	T	T	07 27 14.8	
	baz=292,slow=76,SNR=11						
H03N1	Juan Fernandez	147.04	96	T	T	07 27 12.7	
	baz=292,slow=76,SNR=8.4						

*IDC **04** 04:46:38.0±1.6, 53°.39N×165°.93W, h0^{km}, mb3.7/8, mbtmp3.6/10, ML2.9/2, Error ellipse: s-maj=37.2km s-min=20.8km az=7.0*
*NEIC **04** 04:46:44.4±1.0, 53°.39N±0°.04×165°.63W±0°.07, h15^{km}±12^{km}, ML3.7/6, ML3.5(AEIC), Error ellipse: s-maj=6.9km s-min=4.3km az=134.0*
*AEIC **04** 04:46:45.7±1.6, 53°.49N±0°.04×165°.67W±0°.09, h23^{km}±7^{km}, Error ellipse: s-maj=7.4km s-min=6.0km az=86.0*
ISC 04 04:46:42.8±0.8**, 53°.32N**±0°.08×**165°.57W**±0°.05**, h32^{km}, n27, σ1^{s}.95**/20**, mb3.6**/8**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	Unalaska Valle	0.77	314		Pb	04 46 57.8	0.0
UNV					Pn	04 47 06.5	+9.1
UNV	Unalaska Valle	0.77	314		Sn	04 47 07.2	-0.7
AKUT	Akutan	0.83	352		Pb	04 46 58.5	-0.2
AKUT				Sg	Sn	04 47 08.8	-0.5
AKUT				IAML		04 47 13.7	
	comp=E,3µm,0.4s						
FALS	False Pass	2.00	38		Pb	04 47 17.4	-1.0
NIKH	Nikolski High	2.01	261		Pb	04 47 17.0	-1.6
SDPT	Sand Point	3.61	54	Pn	Pn	04 47 38.8	+2.4
SDPT				IAML		04 48 35.9	
	comp=E,148nm,0.7s						
SDPT				IAML		04 48 38.2	
	comp=N,118nm,1.2s						
SPIA	Saint Paul Isl	4.71	327	Pn	Pn	04 47 53.9	+2.4
CHGN	Chignik	5.10	51	Pn	Pn	04 47 59.3	+2.4
CHGN				IAML		04 49 20.8	
	comp=E,47nm,2.6s						
KDAK	Kodiak Island	8.61	54	Pn	Pn	04 48 45.3	+0.3
	comp=E,0.3nm,0.3s,baz=235,slow=6.9,SNR=10						
KDAK				Sn	Sn	04 50 15.6	-5.2
	comp=E,0.2nm,0.3s,baz=72,slow=8.3,SNR=2.7						
	comp=E,13nm,1.0s						
ILAR	Eielson Array	14.89	32	Pn	Pn	04 50 10.7	0.0
	baz=211,slow=13,SNR=0.8						
	comp=E,0.1nm,0.6s						
YKA	Yellowknife Ar	27.87	50	P	P	04 52 30.4	+1.3
	comp=E,0.2nm,0.6s,baz=273,slow=8.0,SNR=6.4						
	comp=E,0.2nm,0.6s						
NVAR	Mina Array Bea	35.41	95	P	P	04 53 38.4	+2.5
	comp=E,0.6nm,0.8s,baz=297,slow=8.0,SNR=3.1						
	comp=E,0.6nm,0.8s						
H11N2	WAKE ISLAND Hy	39.68	223	T	T	05 37 02.3	
	baz=25,slow=76,SNR=40						
H11N3	WAKE ISLAND Hy	39.69	223	T	T	05 37 02.6	
	baz=25,slow=76,SNR=36						
H11N1	WAKE ISLAND Hy	39.70	223	T	T	05 37 02.9	
	baz=25,slow=76,SNR=34						
H11S1	WAKE ISLAND Hy	40.86	222	T	T	05 38 24.5	
	baz=25,slow=76,SNR=49						
H11S2	WAKE ISLAND Hy	40.87	222	T	T	05 38 26.8	
	baz=25,slow=76,SNR=32						
H11S3	WAKE ISLAND Hy	40.87	222	T	T	05 38 25.4	
	baz=25,slow=76,SNR=19						
TXAR	Lajitas Array	50.45	93	P	P	04 55 38.7	+1.3
	comp=E,0.4nm,0.7s,baz=297,slow=3.0,SNR=5.4						
	comp=E,0.4nm,0.7s						
SONM	Songino Array	52.77	302	P	P	04 55 54.0	-0.6
	comp=E,0.3nm,0.6s,baz=55,slow=5.5,SNR=3.0						
	comp=E,0.3nm,0.6s						
ARCES	ARCESS Array B	57.19	355	P	P	04 56 24.5	-1.5
	comp=E,4.2nm,1.0s,baz=0.0,slow=5.5,SNR=1.8						
	comp=E,4.2nm,1.0s						
MKAR	Makanchi Array	64.79	315	P	P	04 57 16.9	-1.1
	comp=E,0.2nm,0.3s,baz=45,slow=5.2,SNR=7.4						
	comp=E,0.2nm,0.3s						
FINES	FINESS Array B	65.21	354	P	P	04 57 19.7	-0.7
	comp=E,1.8nm,0.9s,baz=360,slow=6.4,SNR=7.9						
	comp=E,1.8nm,0.9s						
AKASG	Malin Array Be	75.61	350	P	P	04 58 22.7	-1.3
	comp=E,0.7nm,0.5s,baz=13,slow=6.2,SNR=4.8						
	comp=E,0.7nm,0.5s						
H03N2	Juan Fernandez	114.16	114	T	T	07 09 59.7	
	baz=321,slow=77,SNR=60						
H03N1	Juan Fernandez	114.17	114	T	T	07 10 09.2	
	baz=321,slow=77,SNR=64						
H03N3	Juan Fernandez	114.18	114	T	T	07 10 03.3	
	baz=321,slow=77,SNR=61						

IDC 04 04:49:31.4±2.7**, 0°.81S**×**127°.85E, h0^{km}, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=226.6km s-min=27.9km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.04	162	P	P	04 54 05.0	-1.3
	0.8nm,0.9s,baz=340,slow=12,SNR=3.3						
	0.8nm,0.9s						
ASAR	Alice Springs	23.46	166	P	P	04 54 43.5	+0.7
	1.4nm,0.7s,baz=348,slow=11,SNR=20						
	1.4nm,0.7s						
MKAR	Makanchi Array	61.92	326	P	P	04 59 52.8	-0.1
	0.4nm,0.7s,baz=112,slow=7.3,SNR=3.6						
	0.4nm,0.7s						

*IDC **04** 04:49:28.8±1.6, 10°.31N×126°.94E, h0^{km}, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=153.6km s-min=23.9km az=67.0*
*MAN **04** 04:49:34.2, 10°.43N×126°.60E, h1^{km}, mb4.1, ML2.8, MS2.5*
ISC 04 04:49:32.0±1.1**, 10°.4N**±0°.1×**126°.91E**±0°.10**, h20^{km}, n10, σ0^{s}.91**/14**, mb3.8**/4**, 3C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	General Luna,	0.97	232	⇑*e*P	Pb	04 49 49.8	-0.4
GLSP				*e*S	Sb	04 50 02.5	-0.1
SCPH	Surigao	1.52	247	⇓*e*P	Pn	04 49 58.1	+0.1
SCPH				*e*S	Sn	04 50 17.4	+0.1
BUTP	Butuan	1.90	222	⇓*e*P	Pb	04 50 05.6	-0.3
BUTP				*e*S	Sn	04 50 28.5	+2.0
MSLP	Maasin	2.03	263	⇑*e*P	Pn	04 50 05.4	+0.3
MSLP				*e*S	Sn	04 50 28.4	-1.4
TABP	Talibon, Bohol	2.55	264	⇑*e*P	Pn	04 50 12.9	+0.6
WRA	Warramunga Arr	31.02	166	P	P	04 55 47.8	-0.7
	0.4nm,0.8s,baz=347,slow=9.3,SNR=1.7						
	0.4nm,0.8s						
ASAR	Alice Springs	34.53	169	P	P	04 56 18.4	-0.8
	0.3nm,0.6s,baz=345,slow=7.4,SNR=4.3						
	0.3nm,0.6s						
MKAR	Makanchi Array	52.31	322	P	P	04 58 43.4	+1.0
	1.6nm,0.7s,baz=119,slow=8.3,SNR=19						
	1.6nm,0.7s						
FINES	FINESS Array B	86.08	332	P	P	05 02 11.1	-0.1
	1.5nm,0.9s,baz=88,slow=4.7,SNR=6.5						
	1.5nm,0.9s						
PLCA	Paso Flores	146.06	156	PKPbc	PKPdf	05 09 10.1	0.0
	1.6nm,1.0s,baz=277,slow=6.9,SNR=4.1						

*NOU **04** 05:23:59.1, 39°.07S×178°.45E, h137^{km}, MLv4.0/6, Off E. Coast of N. Island, N.Z.*
*WEL **04** 05:24:18.6±0.7, 40°S±2°×17°6E±°, h26^{km}±7^{km}, M3.0/9, ML3.3/9, MLv3.0/9, Error ellipse: s-maj=0.0km s-min=0.0km az=32.9, confirmed*
ISC 04 05:24:18.2±1.0**, 39°.64S**±0°.02×**176°.24E**±0°.02**, h18^{km}**±3^{km}**, n97, σ1^{s}.40**/114**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHHZ	Black Hill Sta	0.20	318	P	Pg	05 24 25.7	+2.4
KWHZ	Kaweka Forest	0.26	33	P	Pb	05 24 25.7	+1.5
KWHZ				S	Sn	05 24 31.8	-0.9
PNHZ	Pukenui	0.27	186	P	Pn	05 24 26.6	-0.8
PNHZ				S	Sn	05 24 33.7	+0.6
MCHZ	McNeill Hill	0.41	61	P	Pb	05 24 27.9	+1.0
MCHZ				S	Sb	05 24 35.5	+2.7
MOVZ	Moawhango	0.44	302	P	Pn	05 24 29.2	-0.5
MOVZ				S	Sn	05 24 37.4	+0.2
WPHZ	Waipukurau	0.45	160	P	Pb	05 24 28.9	+1.3
WPHZ				S	Sn	05 24 37.3	0.0
TSZ	Takapari Road	0.47	207	P	Pn	05 24 29.3	-0.8
TSZ				S	Sn	05 24 38.0	+0.1
BKZ	Black Stump Fm	0.52	23	P	Pg	05 24 28.6	0.0
BKZ	Black Stump Fm	0.52	23	P	Pg	05 24 28.8	+0.2
BKZ				S	Sb	05 24 36.5	+0.7
KAHZ	Kahuranaki	0.52	107	P	Pb	05 24 29.3	+0.6
KAHZ				S	Sg	05 24 38.9	+3.3
TUVZ	Tukino	0.59	309	P	Pn	05 24 31.7	-0.1
TUVZ				S	Sn	05 24 41.5	+0.6
WNVZ	Wahianoa	0.59	302	P	Pn	05 24 31.7	-0.1
WNVZ				S	Sn	05 24 41.5	+0.6
PXZ	Pawanui	0.62	129	P	Pb	05 24 30.4	+0.1
PXZ				S	Sg	05 24 42.1	+3.4
WHVZ	Whangaehu Hut	0.62	305	P	Pn	05 24 32.2	-0.1
WHVZ				S	Sn	05 24 41.8	0.0
TRVZ	Turoa	0.64	302	P	Pn	05 24 32.3	-0.2
TRVZ				S	Sn	05 24 42.4	+0.1
DRZ	Dome Shelter	0.64	305	P	Pn	05 24 32.5	-0.1
MTVZ	Mangateitei	0.65	293	P	Pn	05 24 32.6	+0.1
CKHZ	Cape Kidnapper	0.65	92	P	Pb	05 24 30.8	-0.1
CKHZ				S	Sg	05 24 42.2	+2.5
SNVZ	South Ngauruho	0.65	314	P	Pn	05 24 32.5	-0.1
ETVZ	East Tongariro	0.65	321	P	Pn	05 24 32.2	-0.4
ETVZ				S	Sn	05 24 42.6	+0.2
OTVZ	Oturere	0.65	317	P	Pn	05 24 32.4	-0.2
FWVZ	Far West T-bar	0.66	306	P	Pn	05 24 32.5	-0.3
DVHZ	Dannevirke	0.66	185	P	Pg	05 24 31.8	+0.5
TMVZ	Te Maari	0.67	322	P	Pn	05 24 32.4	-0.4
NGZ	Ngauruhoe	0.68	313	P	Pn	05 24 32.7	-0.3
PRHZ	Porangahau	0.69	154	P	Pb	05 24 32.0	+0.3
NTVZ	North Tongarir	0.70	321	P	Pn	05 24 32.8	-0.5
ARHZ	Aropaoanui	0.70	57	P	Pb	05 24 31.7	0.0
ARHZ				S	Sg	05 24 42.9	+1.7
NMHZ	Naumai	0.70	39	P	Pb	05 24 32.2	+0.3
NMHZ				S	Sn	05 24 43.6	0.0
NNVZ	North Ngauruho	0.70	316	P	Pn	05 24 33.0	-0.3
KRVZ	Karewarewa	0.72	320	P	Pn	05 24 33.1	-0.3
RITZ	Rihia Road	0.73	336	P	Pn	05 24 33.1	-0.5
WTVZ	West Tongariro	0.73	316	P	Pn	05 24 33.2	-0.4
PKVZ	Pokaka	0.78	297	P	Pn	05 24 34.1	-0.2
KATZ	Kakaramea	0.79	327	P	Pn	05 24 33.9	-0.5
POWZ	Post Office Ro	0.83	206	P	Pg	05 24 34.6	+0.1
ANWZ	Angora Road	0.84	168	P	Pb	05 24 34.1	0.0
TWVZ	Taurewa	0.84	312	P	Pn	05 24 34.4	-0.8
RATZ	Rangitukua	0.85	335	P	Pn	05 24 35.1	-0.2
OHWZ	Ohakea	0.91	231	P	Pn	05 24 36.9	+0.9
MTHZ	Maungataniwha	0.92	31	P	Pb	05 24 34.8	-0.7
PRWZ	Pori Road	0.94	193	P	Pb	05 24 35.9	+0.1
WHHZ	Waihua	0.96	54	P	Pb	05 24 35.1	-1.1
WAZ	Wanganui	0.97	263	P	Pn	05 24 38.1	+1.1
RAHZ	Arahi	0.98	42	P	Pb	05 24 35.4	-1.2
WATZ	Wairara	1.01	337	P	Pb	05 24 36.2	-0.9
BFZ	Birch Farm	1.04	180	P	Pb	05 24 36.4	-1.2
BFZ	Birch Farm	1.04	180	P	Pb	05 24 36.4	-1.2
ALRZ	Allen Road	1.08	4	P	Pb	05 24 36.8	-1.6
WPRZ	Whakapapatarin	1.12	357	P	Pn	05 24 37.5	-1.5
MRZ	Mangatainoka R	1.14	206	P	Pn	05 24 38.1	-1.1
PRRZ	Plateau Road	1.15	6	P	Pn	05 24 37.8	-1.6
TIWZ	Tintock	1.17	193	P	Pn	05 24 38.5	-1.1
RTZ	Ruatahuna	1.18	30	P	Pn	05 24 38.1	-1.7
KUTZ	Kaahu Road	1.20	344	P	Pn	05 24 38.7	-1.2
SNGZ	Shannon Statio	1.21	45	P	Pn	05 24 38.2	-2.0
MUGZ	Murupara	1.23	20	P	Pn	05 24 38.7	-1.8
HRRZ	Handcock Road	1.25	2	P	Pn	05 24 39.5	-1.3
VRZ	Vera Road	1.26	294	P	Pn	05 24 39.8	-1.0
CPWZ	Castlepoint	1.27	181	P	Pn	05 24 39.9	-1.0
KNZ	Kokohu	1.27	61	P	Pn	05 24 38.3	-2.7
GRRZ	Galatos Road	1.29	356	P	Pn	05 24 40.1	-1.2
HSRZ	Hossack Road	1.33	0	P	Pn	05 24 40.3	-1.5
HOWZ	Holdsworth Sta	1.37	204	P	Pn	05 24 40.8	-1.7
MHGZ	Mahia Peninsul	1.38	70	P	Pn	05 24 40.2	-2.4
HLRZ	Highlands Stat	1.39	4	P	Pn	05 24 41.1	-1.6
TARZ	Mount Tarawera	1.42	9	P	Pn	05 24 41.7	-1.4
TLZ	Tolley Road	1.42	337	P	Pn	05 24 41.4	-1.7
OGWZ	Otaki Gorge	1.43	215	P	Pn	05 24 42.0	-1.2
RAGZ	Rawiri	1.47	39	P	Pn	05 24 41.7	-2.0
TMWZ	Te Maipa	1.49	190	P	Pn	05 24 42.3	-1.7
RIGZ	Rimuhau	1.51	52	P	Pn	05 24 41.8	-2.5
URZ	Urewera	1.54	27	P	Pn	05 24 42.3	-2.4
HIZ	Hauiti	1.56	316	P	Pn	05 24 44.1	-0.8
HIZ	Hauiti	1.56	316	P	Pn	05 24 44.1	-0.8
KIW	Kapiti Island	1.59	219	P	Pn	05 24 44.3	-1.1
MTW	Mount Morrison	1.62	200	P	Pn	05 24 44.0	-1.7
PREZ	Palmer Road	1.64	280	P	Pg	05 24 47.9	-1.8
MWZ	Matawai	1.65	38	P	Pn	05 24 43.7	-2.5
NEZ	North Egmont	1.70	282	P	Pb	05 24 48.4	-0.5
CAW	Cannon Point	1.72	211	P	Pn	05 24 45.4	-1.8
KHEZ	Kahui Hut	1.76	281	P	Pg	05 24 51.7	-0.3
KHEZ	Kahui Hut	1.76	281	P	Pb	05 24 49.5	-0.4
PKE	Pukeiti	1.80	284	P	Pb	05 24 50.1	-0.5
TRWZ	Traveller	1.80	193	P	Pn	05 24 46.2	-2.2
PAWZ	Paruwai Farm	1.84	199	P	Pn	05 24 46.7	-2.3
TOZ	Tahuroa Road	1.99	343	P	Pn	05 24 49.5	-1.4
TWGZ	Tauwhareparae	2.00	43	P	Pn	05 24 49.6	-1.4
RUGZ	Raukumara Rang	2.02	34	P	Pn	05 24 48.6	-2.7
SNZO	South Karori	2.04	215	P	Pg	05 24 55.8	-1.5
PLWZ	Palliser	2.07	201	P	Pn	05 24 49.4	-2.5
DUWZ	D'Urville Isla	2.12	236	P	Pn	05 24 52.4	-0.3
TCW	Tory Channel	2.17	223	P	Pn	05 24 51.5	-1.9
HAZ	Te Kaha	2.24	33	P	Pn	05 24 51.1	-3.2
PKGZ	Pakihiroa	2.27	40	P	Pn	05 24 52.4	-2.3
TUWZ	Tuamarina	2.50	224	P	Pn	05 24 56.0	-1.8
QRZ	Quartz Range	3.08	246	P	Pb	05 25 10.1	-2.2

*IDC **04** 05:37:20.2±3.6, 1°.46S×100°.84E, h0^{km}, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=162.7km s-min=23.7km az=56.0*
*DJA **04** 05:37:24.0±0.6, 2°S±3°×10°0E±°, h10^{km}, M3.8/7, MLv3.8/7*
ISC 04 05:37:23.1±1.0**, 1°.86S**±0°.05×**100°.1E**±0°.1**, h34^{km}, n16, σ1^{s}.33**/14**, mb4.0**/5**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	0.90	185	P	Pb	05 37 41.0	+0.7
PDSI	Padang	1.01	21	P	Pb	05 37 43.3	+1.1
PDSI				S	Sb	05 37 56.7	+1.5
SDSI	Sungai Dareh	1.62	55	P	Pb	05 37 52.1	-0.3
BKNI	Bangkinang	2.37	24	P	Pb	05 38 03.7	-1.4
MASI	Maura Aman, Be	2.49	121	P	Pn	05 38 01.5	+0.2
DSRI	Dabo	4.69	73	P	Pn	05 38 33.5	+2.0
MDSI	Maura Dua	4.84	123	P	Pn	05 38 34.9	+1.3
H08S2	Diego Garcia H	28.09	257	T	T	06 12 12.0	
	baz=80,slow=75,SNR=6.8						
H08S3	Diego Garcia H	28.09	257	T	T	06 12 11.0	
	baz=80,slow=75,SNR=5.1						
H08S1	Diego Carcia H	28.11	257	T	T	06 12 17.0	
	baz=80,slow=75,SNR=6.6						
WRA	Warramunga Arr	37.98	121	P	P	05 44 36.8	-1.3
	0.3nm,0.8s,baz=304,slow=9.0,SNR=1.0						
	0.3nm,0.8s						
ASAR	Alice Springs	39.26	126	P	P	05 44 47.7	-1.1
	0.2nm,0.7s,baz=304,slow=8.0,SNR=1.8						
	0.2nm,0.7s						
SONM	Songino Array	49.80	6	P	P	05 46 11.1	-1.6
	1.0nm,0.5s,baz=191,slow=8.6,SNR=5.3						
	1.0nm,0.5s						
MKAR	Makanchi Array	50.92	344	P	P	05 46 22.3	+1.3
	0.9nm,0.5s,baz=160,slow=8.4,SNR=17						
	0.9nm,0.5s						
ZALV	Zalesovo Beam	57.05	349	P	P	05 47 05.8	+0.2
	0.5nm,0.3s,baz=157,slow=4.7,SNR=4.8						
	0.5nm,0.3s						
TXAR	Lajitas Array	144.53	37	PKP	PKPdf	05 56 56.2	-0.7
	0.1nm,0.4s,baz=254,slow=1.3,SNR=4.7						

*IDC **04** 05:42:03.2±0.7, 57°.86N×142°.34E, h0^{km}, mb3.8/11, mbtmp3.8/17, ML4.1/4, Error ellipse: s-maj=15.6km s-min=9.9km az=178.0*
*MOS **04** 05:42:04.2±1.1, 57°.60N×142°.56E, h13^{km}, mb4.2/13, Error ellipse: s-maj=15.1km s-min=8.0km az=83.0*
*NEIC **04** 05:42:05.4±1.6, 57°.7N±0°.1×142°.5E±0°.2, h10^{km}±2^{km}, mb4.2/11, Error ellipse: s-maj=21.9km s-min=13.3km az=148.0*
*NERS **04** 05:42:08.2±0.0, 57°.65N×142°.90E, h33^{km}*
ISC 04 05:42:05.2±0.5**, 57°.79N**±0°.05×**142°.36E**±0°.04**, h10^{km}, n68, σ2^{s}.14**/81**, mb4.0**/24**, 3C-1D, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLON	Talon	3.82	56	*e*P	Pn	05 43 05.0	+0.9
TLON				*e*Pg	Pb	05 43 15.4	+2.7
TLON				Pgmax		05 43 18.6	
	100nm,0.7s						
TLON				*e*S	Sn	05 43 47.4	-1.6
TLON				*e*Sg	Sb	05 44 03.0	+4.0
TLON				Sgmax		05 44 17.2	
	790nm,0.7s						
TLON				Sgmax		05 44 17.2	
	470nm,0.9s						
MA2	Magadan	4.74	64	Pn	Pn	05 43 15.9	-0.7
	2.0nm,0.3s,baz=278,slow=13,SNR=17						
MA2				Sn	Sn	05 44 11.7	+0.1
	2.9nm,0.3s,baz=128,slow=6.8,SNR=5.4						
MA2				Lg	Lg	05 44 29.8	
	4.1nm,0.3s,baz=353,slow=22,SNR=1.7						
	7.1nm,0.4s						
MA2	Magadan	4.74	64	Pn	Pn	05 43 14.3	-2.4
MA2	Magadan	4.74	64	*e*P	Pn	05 43 16.1	-0.5
MA2				Pmax		05 43 44.6	
	10.0nm,0.4s						
MA2				*e*S	Sn	05 44 12.3	+0.7
MA2				*e*Sg	Sb	05 44 29.4	+4.1
MA2				Sgmax		05 44 56.5	
	160nm,1.3s						
MA2				Sgmax		05 44 56.5	
	80nm,1.3s						
NKL	Nikolayevsk	4.75	192	*e*P	Pn	05 43 15.4	-1.4
NKL				*e*S	Sn	05 44 12.0	+0.1
NKL				pmax	pmax		
	comp=N,112nm,0.8s						
NKL				pmax	pmax		
	comp=E,4.0nm,0.4s						
NKL				pmax	pmax		
	comp=Z,30nm,0.4s						
NKL				smax	smax		
	comp=E,38nm,0.9s						
NKL				smax	smax		
	comp=N,112nm,0.8s						
MGD	Magadan 1	4.89	59	*e*S	Sn	05 44 14.7	-0.6
MGD				*e*Sg	Sb	05 44 35.5	+5.8
MGD				Smax		05 44 52.1	
	comp=N,40nm,0.8s						
MGD				Smax		05 44 52.1	
	comp=N,80nm,0.8s						
SUUS	Susuman	5.77	28	*e*P	Pn	05 43 33.6	+2.7
SUUS				*e*Sg	Sg	05 45 08.9	-1.5
SUUS				Sgmax		05 45 10.1	
	comp=N,70nm,1.1s						
SUUS				Sgmax		05 45 10.1	
	comp=N,120nm,1.1s						
TLAR	Talaya	6.11	53	*e*P	Pn	05 43 36.3	+0.8
TLAR				Pmax		05 43 38.8	
	comp=N,10.0nm,0.2s						
TLAR				*e*Sg	Sg	05 45 15.4	-5.8
TLAR				Sgmax		05 45 33.7	
	comp=N,200nm,0.8s						
SEY	Seymchan	7.16	40	Pn	Pn	05 43 49.7	-0.1
	comp=N,0.8nm,0.3s,baz=218,slow=16,SNR=8.4						
SEY				Sn	Sn	05 45 06.6	-4.4
	comp=N,0.5nm,0.3s,baz=138,slow=22,SNR=1.9						
SEY				Lg	Lg	05 45 43.4	
	comp=N,0.7nm,0.3s,baz=140,slow=5.8,SNR=3.5						
	comp=N,2.2nm,0.3s						
SEY	Seymchan	7.16	40	*e*P	Pn	05 43 51.3	+1.5
SEY				*e*		05 45 05.5	
SEY				*e*Sg	Sg	05 45 48.1	-6.5
SEY	Seymchan	7.16	40	⇓*i*P	Pn	05 43 51.3	+1.5
YAK	Yakutsk	7.65	309	Pn	Pn	05 43 55.4	-1.2
	comp=N,0.1nm,0.3s,baz=234,slow=1.4,SNR=0.9						
YAK				Sn	Sn	05 45 21.5	-1.7
	comp=N,0.2nm,0.3s,baz=267,slow=2.8,SNR=1.6						
YAK				Lg	Lg	05 46 01.9	
	comp=N,0.4nm,0.3s,baz=7.2,slow=18,SNR=8.0						
	comp=N,4.0nm,0.3s						
YAK	Yakutsk	7.65	309	*e*P	Pn	05 44 02.1	+5.5
YAK				*e*S	Sn	05 45 27.7	+4.4
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.4s						
YAK				smax	smax		
	comp=E,283nm,5.2s						
YAK				smax	smax		
	comp=N,67nm,2.9s						
YAK				MLR	MLR		
	comp=Z,193nm,18.0s						
YAK				MLR	MLR		
	comp=E,64nm,15.0s						
YAK				MLR	MLR		
	comp=N,186nm,20.0s						
GRNR	Gornyy	7.85	209	*e*P	Pn	05 43 58.6	-0.7
GRNR				*e*		05 45 24.1	
GRNR				pmax	pmax		
	comp=E,2.0nm,0.4s						
GRNR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
GRNR				pmax	pmax		
	comp=N,2.0nm,0.3s						
GRNR				smax	smax		
	comp=E,5.0nm,0.4s						
PEA0B	Petropavlovsk-	9.89	112	Pn	Pn	05 44 27.2	-0.1
PEA0B	Petropavlovsk-	9.89	112	P	Pn	05 44 27.2	-0.1
PETK	Petropavlovsk-	9.89	112	Pn	Pn	05 44 27.5	+0.2
	comp=E,2.5nm,0.7s,baz=346,slow=3.8,SNR=8.1						
PETK	Petropavlovsk-	9.89	112	Pn	Pn	05 44 27.8	+0.5
PETK	Petropavlovsk-	9.89	112	P	Pn	05 44 27.8	+0.5
KLR	Kul'dur	10.64	221	Pn	Pn	05 44 36.9	-0.7
	comp=E,0.3nm,0.3s,baz=49,slow=20,SNR=5.8						
KLR				Lg	Lg	05 47 35.2	
	baz=338,slow=20,SNR=1.9						
	comp=E,0.8nm,0.3s						
BILL	Bilibino	14.84	37	*e*P	Pn	05 45 36.4	+1.6
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TIXI	Tiksi	14.99	343	Pn	Pn	05 45 34.1	-2.7
	comp=Z,2.2nm,0.4s,baz=270,slow=24,SNR=3.1						
TIXI	Tiksi	14.99	343	⇑*e*P	P	05 45 41.6	-0.7
TIXI				pmax	pmax		
	comp=Z,15nm,3.4s						
USA0B	Ussuriysk Arra	15.07	210	Pn	Pn	05 45 34.8	-3.2
USA0B				IAmb	IAmb	05 46 12.5	
	comp=Z,18nm,1.4s						
USA0B	Ussuriysk Arra	15.07	210	P	Pn	05 45 34.8	-3.2
USA0B				pmax	pmax		
	comp=Z,18nm,1.5s						
JSD	Sado	19.95	190	P	P	05 46 34.1	-3.1
MJA0	Matsu Arr-Jizo	21.43	189	*e*P	P	05 46 57.0	+3.7
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MJAR	Matsushiro Arr	21.44	189	P	P	05 46 54.9	+1.6
	comp=Z,2.4nm,0.6s,baz=2.9,slow=11,SNR=4.9						
	comp=Z,2.4nm,0.6s						
TNA	Tin City	24.21	51	P	P	05 47 21.6	+0.1
TNA				IAmb	IAmb	05 47 23.0	
	comp=Z,8.7nm,1.3s						
ANM	Nome	25.41	53	P	P	05 47 33.3	+0.8
ANM				IAmb	IAmb	05 47 34.1	
	comp=Z,2.5nm,0.8s						
ANM	Nome	25.41	53	P	P	05 47 33.3	+0.8
ANM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
IMAR	Indian Mountai	29.89	48	P	P	05 48 12.2	-0.4
DGZ	Jazzator, Alta	32.64	280	⇑*e*P	P	05 48 40.4	+3.3
DGZ				pmax	pmax		
	comp=Z,7.0nm,2.5s						
BMAR	Burnt Mountain	32.94	43	P	P	05 48 40.2	+0.8
IL31		33.00	48	P	P	05 48 39.8	0.0
IL31				IAmb	IAmb	05 48 42.6	
	comp=Z,4.6nm,1.4s						
ILAR	Eielson Array	33.00	48	P	P	05 48 39.4	-0.5
	comp=Z,1.8nm,0.9s,baz=283,slow=9.0,SNR=17						
	comp=Z,1.8nm,0.9s						
ILAR	Eielson Array	33.00	48	P	P	05 48 39.8	0.0
ILAR	Eielson Array	33.00	48	*e*P	P	05 48 39.9	0.0
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DOT	Dot Lake	34.58	49	P	P	05 48 52.5	-1.2
DOT				IAmb	IAmb	05 49 04.1	
	comp=Z,2.8nm,1.1s						
L27K	Beaver Creek,	35.75	49	P	P	05 49 03.6	-0.2
L27K				IAmb	IAmb	05 49 36.2	
	comp=Z,4.6nm,1.3s						
BCAR	Beaver Creek A	35.76	49	P	P	05 49 03.6	-0.3

MCARA	McCarthy VSAT	36.04	52	P	P	05 49 06.6	+0.3
BARN	Barnard Glacie	36.77	52	P	P	05 49 13.4	+0.6
BARN				IAmb	IAmb	05 49 36.8	
	comp=Z,16nm,1.5s						
MK31	Makanchi Array	37.14	279	P	P	05 49 16.2	+0.4
MK31	Makanchi Array	37.14	279	P	P	05 49 16.2	+0.4
MK31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MKAR	Makanchi Array	37.14	279	P	P	05 49 14.6	-1.2
	comp=Z,1.7nm,1.0s,baz=57,slow=8.8,SNR=8.4						
	comp=Z,1.7nm,1.0s						
MKAR	Makanchi Array	37.14	279	P	P	05 49 16.3	+0.5
MKAR	Makanchi Array	37.14	279	eP	P	05 49 18.0	+2.2
MKAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MAKZ	Makanchi	37.29	280	P	P	05 49 19.2	+2.1
MAKZ	Makanchi	37.29	280	P	P	05 49 19.2	+2.1
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.2s						
BRVK	Borovoye	39.39	295	eP	P	05 49 38.4	+3.7
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.6s						
YKA	Yellowknife Ar	46.22	39	P	P	05 50 29.6	-0.2
	comp=Z,1.2nm,0.9s,baz=312,slow=7.2,SNR=16						
	comp=Z,1.2nm,0.9s						
YKA	Yellowknife Ar	46.22	39	eP	P	05 50 30.1	+0.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FINES	FINESS Array B	51.19	326	P	P	05 51 07.2	-0.9
	comp=Z,1.2nm,0.8s,baz=51,slow=7.3,SNR=2.2						
	comp=Z,1.2nm,0.8s						
FINES	FINESS Array B	51.19	326	P	P	05 51 09.4	+1.4
FINES	FINESS Array B	51.19	326	P	P	05 51 09.4	+1.4
OBN	Obninsk	52.59	316	eP	P	05 51 20.2	+1.7
OBN				e		05 52 28.4	
OBN				e		05 53 16.0	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NOA	NORSAR Array B	55.51	334	P	P	05 51 37.9	-2.0
	comp=Z,0.7nm,0.7s,baz=28,slow=7.4,SNR=1.7						
	comp=Z,0.7nm,0.7s						
AKASG	Malin Array Be	58.80	317	P	P	05 52 02.6	-0.6
	comp=Z,0.9nm,0.7s,baz=34,slow=7.1,SNR=6.3						
	comp=Z,0.9nm,0.7s						
AKASG	Malin Array Be	58.80	317	i P	P	05 52 04.5	+1.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKBB	Malin Array Si	58.80	317	⇑eP	P	05 52 04.1	+0.9
AKBB				pmax	pmax		
	comp=Z,10.0nm,3.1s						
NVAR	Mina Array Bea	62.97	60	P	P	05 52 32.0	0.0
	comp=Z,1.1nm,0.8s,baz=309,slow=5.9,SNR=5.7						
	comp=Z,1.1nm,0.8s						
PDAR	Pinedale Array	63.32	52	P	P	05 52 33.5	-0.8
	comp=Z,0.7nm,0.6s,baz=356,slow=3.1,SNR=7.0						
	comp=Z,0.7nm,0.6s						
CLL	Collm	63.62	327	i P	P	05 52 32.1	-3.8
CLL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TXAR	Lajitas Array	77.20	55	P	P	05 53 59.9	+0.6
	comp=Z,0.6nm,1.1s,baz=248,slow=2.4,SNR=2.7						
	comp=Z,0.6nm,1.1s						
ASAR	Alice Springs	81.45	188	P	P	05 54 21.0	-1.2
	comp=Z,0.4nm,0.8s,baz=7.4,slow=5.2,SNR=4.1						
	comp=Z,0.4nm,0.8s						
PPT	Papeete	93.58	118	P	P	05 55 20.8	-0.5
	comp=Z,16nm,0.6s,baz=213,slow=22,SNR=1.5						
CPUP	Villa Florida	145.60	32	PKPbc	PKPdf	06 01 42.4	-0.9
	comp=Z,4.1nm,0.9s,baz=339,slow=5.4,SNR=7.9						

IDC 04 05:46:44.7±2.2**, 8°.02S×122°.78E, h0^{km}, mb3.2**/1**, mbtmp3.4**/3**, ML3.6**/2**, MS3.3**/1**, Error ellipse: s-maj=272.8km s-min=31.1km az=56.0, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	15.25	11	LR	LR	05 57 01.1	
	comp=Z,119nm,21.4s,baz=272,slow=40						
WRA	Warramunga Arr	16.30	138	Pn	Pn	05 50 34.7	-0.6
	0.3nm,0.3s,baz=313,slow=14,SNR=8.6						
WRA				Sn	Sn	05 53 18.7	-18
	0.2nm,0.3s,baz=273,slow=21,SNR=5.4						
	0.3nm,0.3s						
ASAR	Alice Springs	18.86	147	P	Pn	05 51 06.9	-0.2
	0.1nm,0.3s,baz=327,slow=12,SNR=11						
	0.6nm,0.6s						
MKAR	Makanchi Array	65.37	331	P	P	05 57 29.0	0.0
	0.2nm,0.8s,baz=139,slow=7.7,SNR=2.2						
	0.2nm,0.8s						

IDC 04 05:58:25.8±3.9**, 10°.68S×115°.42E, h0^{km}, mb3.2**/3**, mbtmp3.2**/3**, Error ellipse: s-maj=206.5km s-min=31.5km az=52.0, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	21.85	129	P	P	06 03 20.2	+0.1
	0.4nm,0.7s,baz=306,slow=9.3,SNR=6.1						
	0.4nm,0.7s						
SONM	Songino Array	58.80	353	P	P	06 08 26.0	0.0
	0.2nm,0.5s,baz=165,slow=7.4,SNR=1.6						
	0.2nm,0.5s						
MKAR	Makanchi Array	64.42	335	P	P	06 09 03.7	-0.1
	0.2nm,0.7s,baz=131,slow=7.0,SNR=2.0						
	0.2nm,0.7s						

WEL 04 06:15:04.9±0.5**, 42°S**±3°**×17°4E**±°**, h25^{km}**±4^{km}**, M3.3**/6**, ML3.5**/6**, MLv3.3**/6**, Error ellipse: s-maj=0.0km s-min=0.0km az=115.9, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSWZ	Blackbirch Sta	0.40	358	P	Pn	06 15 15.0	0.0
BSWZ				S	Sn	06 15 22.3	+0.6
KHZ	Kahutara	0.40	221	P	Pn	06 15 14.9	-0.2
KHZ				S	Sn	06 15 21.8	0.0
CMWZ	Cape Campbell	0.43	33	P	Pn	06 15 15.9	+0.4
CMWZ				S	Sn	06 15 23.8	+1.2
TUWZ	Tuamarina	0.69	3	P	Pn	06 15 19.1	+0.1
TUWZ				S	Sn	06 15 28.7	0.0
THZ	Tophouse	0.82	295	P	Pn	06 15 21.2	+0.3
TCW	Tory Channel	0.95	18	P	Pn	06 15 22.5	-0.1
TCW				S	Sb	06 15 34.7	0.0
NNZ	Nelson	0.98	336	P	Pb	06 15 23.4	+0.3
NNZ				S	Sn	06 15 36.9	+0.9
WEL	Wellington	1.05	38	P	Pn	06 15 23.9	-0.1
GVZ	Greta Valley S	1.06	217	P	Pn	06 15 24.2	0.0
MRNZ	Matariki Terra	1.11	310	P	Pb	06 15 25.8	+0.4
PLWZ	Palliser	1.15	62	P	Pn	06 15 24.4	-0.9
TKNZ	Takaka Hill	1.29	327	P	Pb	06 15 28.2	-0.3
DUWZ	D'Urville Isla	1.31	1	P	Pn	06 15 28.1	+0.5
CAW	Cannon Point	1.33	41	P	Pn	06 15 27.5	-0.4
PAWZ	Paruwai Farm	1.36	58	P	Pn	06 15 27.1	-1.1
LTZ	Lake Taylor	1.38	240	P	Pn	06 15 28.8	+0.3
AMCZ	Amberley	1.41	221	P	Pn	06 15 28.7	-0.2
KIW	Kapiti Island	1.47	32	P	Pn	06 15 29.7	0.0
TRWZ	Traveller	1.52	62	P	Pn	06 15 29.0	-1.4
MTW	Mount Morrison	1.54	52	P	Pn	06 15 29.5	-1.1
DSZ	Denniston Nort	1.61	283	P	Pb	06 15 33.1	-0.8
OGWZ	Otaki Gorge	1.61	37	P	Pn	06 15 31.3	-0.4
QRZ	Quartz Range	1.65	321	P	Pb	06 15 33.5	-1.0
HOWZ	Holdsworth Sta	1.72	45	P	Pn	06 15 32.2	-1.0
TMWZ	Te Maipa	1.80	57	P	Pn	06 15 32.9	-1.5
OXZ	Oxford	1.83	228	P	Pn	06 15 33.8	-0.9
MQZ	McQueen's Vall	1.83	209	P	Pn	06 15 33.2	-1.6
AKCZ	Akaroa Harbour	1.90	202	P	Pn	06 15 34.5	-1.1
INZ	Inchbonnie	1.92	251	P	Pn	06 15 36.8	+1.0
MRZ	Mangatainoka R	1.93	42	P	Pn	06 15 35.1	-0.9
TIWZ	Tintock	2.00	49	P	Pn	06 15 34.8	-2.3
RACZ	Rakaia	2.07	218	P	Pn	06 15 36.7	-1.2
POWZ	Post Office Ro	2.23	40	P	Pn	06 15 39.2	-0.9
BFZ	Birch Farm	2.27	52	P	Pn	06 15 38.9	-1.9
WACZ	Wakanui South	2.37	219	P	Pn	06 15 41.4	-0.7
DVHZ	Dannevirke	2.49	44	P	Pn	06 15 42.0	-1.9
WAZ	Wanganui	2.50	20	P	Pn	06 15 45.6	+1.8
WVZ	Waitaha Valley	2.52	247	P	Pn	06 15 45.0	+0.8
TSZ	Takapari Road	2.58	38	P	Pn	06 15 43.8	-1.2
RPZ	Rata Peaks	2.63	232	P	Pn	06 15 45.4	-0.3
ARCZ	Arundel	2.71	227	P	Pn	06 15 46.1	-0.7
PNHZ	Pukenui	2.81	39	P	Pn	06 15 46.7	-1.5
GCSZ	Gaunt Creek Bo	2.89	244	P	Pn	06 15 50.7	+1.4
PKVZ	Pokaka	3.03	22	P	Pn	06 15 49.5	-1.7
MOVZ	Moawhango	3.05	28	P	Pn	06 15 51.2	-0.4
VRZ	Vera Road	3.06	13	P	Pn	06 15 53.5	+1.9
WNVZ	Wahianoa	3.07	25	P	Pn	06 15 52.4	+0.5
TRVZ	Turoa	3.08	25	P	Pn	06 15 52.9	+0.8
BHHZ	Black Hill Sta	3.09	33	P	Pn	06 15 51.4	-0.8
TMZ	Timaru	3.10	222	P	Pn	06 15 51.3	-0.9
NGZ	Ngauruhoe	3.21	24	P	Pn	06 15 54.8	+1.0
NNVZ	North Ngauruho	3.25	24	P	Pn	06 15 55.4	+0.9
WTVZ	West Tongariro	3.26	24	P	Pn	06 15 55.3	+0.8
HIZ	Hauiti	3.67	12	P	Pn	06 16 01.6	+1.5
ODZ	Otahua Downs	3.76	218	P	Pn	06 16 00.0	-1.2
RUGZ	Raukumara Rang	5.06	36	P	Pn	06 16 16.0	-3.2
MKAZ	Moumakai	5.10	11	P	Pn	06 16 20.3	+0.7

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*NEIC **04** 06:32:14.3±1.9, 5°.9S±0°.1×155°.04E±0°.05, h170^{km}±8^{km}, mb4.2/16, Error ellipse: s-maj=16.8km s-min=5.4km az=195.0*

*IDC **04** 06:32:14.1±1.8, 5°.96S×154°.86E, h168^{km}±15^{km}, mb3.6/11, mbtmp4.1/15, MS3.1/1, Error ellipse: s-maj=20.0km s-min=12.3km az=77.0*

ISC 04 06:32:16.9±0.6**, 5°.97S**±0°.07×**154°.79E**±0°.09**, h200^{km}, n51, σ1^{s}44**/49**, mb4.0**/16**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.16	304	Pn	Pn	06 33 06.6	-1.8
KRVT	Keravat (AS076	3.21	301	P	Pn	06 33 06.5	-2.5
	63nm,0.5s,baz=188,slow=6.5,SNR=10						
KRVT				S	Sn	06 33 45.3	-4.5
	81nm,0.3s,baz=185,slow=23,SNR=8.8						
PMG	Port Moresby	8.29	245	P	Pn	06 34 13.7	-0.3
	6.9nm,0.4s,baz=204,slow=8.4,SNR=2.2						
COEN	Coen	13.91	234		P	06 35 27.6	-0.2
CTA	Charters Tower	16.30	210	P	Pn	06 35 55.9	+1.0
	4.9nm,0.7s,baz=25,slow=12,SNR=7.1						
CTAO	Charters Tower	16.30	210	P	Pn	06 35 55.6	+0.8
CTAO				IAmb	IAmb	06 35 57.2	
	comp=Z,14nm,1.1s						
DZM	Mont Dzumac	19.57	146	P	Pn	06 36 28.9	-4.8
	comp=Z,14nm,0.5s,baz=267,slow=9.0,SNR=37						
DZM	Mont Dzumac	19.57	146	P	P	06 36 28.3	-1.6
EIDS	Eidsvold	19.61	190	P	Pn	06 36 33.7	-0.3
EIDS				IAmb	IAmb	06 36 56.2	
	comp=Z,13nm,1.4s						
WB0	Warramunga Arr	24.11	233	P	P	06 37 14.8	+0.3
WB0				IAmb	IAmb	06 37 16.8	
	comp=Z,7.6nm,1.3s						
WRA	Warramunga Arr	24.24	233	P	P	06 37 16.6	+0.9
	comp=Z,2.0nm,0.5s,baz=58,slow=10,SNR=19						
WRA				PcP	PcP	06 40 51.4	+0.8
	comp=Z,0.3nm,0.5s,baz=48,slow=1.7,SNR=1.8						
	comp=Z,2.0nm,0.5s						
WRA	Warramunga Arr	24.24	233	P	P	06 37 16.4	+0.7
MTN	Manton Dam	24.30	252	P	P	06 37 18.7	+2.5
ARMA	Armidale	24.50	187	P	P	06 37 18.2	+0.2
ARMA				IAmb	IAmb	06 37 51.5	
	comp=Z,20nm,1.5s						
ASAR	Alice Springs	26.71	227	P	P	06 37 37.8	-0.1
	comp=Z,0.4nm,0.6s,baz=58,slow=8.9,SNR=10.0						
ASAR				PcP	PcP	06 40 56.8	+0.6
	comp=Z,0.5nm,0.5s,baz=56,slow=2.3,SNR=7.3						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	26.71	227	P	P	06 37 40.2	+2.3
H11S3	WAKE ISLAND Hy	27.00	26	T	T	07 05 51.1	
	baz=207,slow=74,SNR=5.2						
H11S2	WAKE ISLAND Hy	27.00	26	T	T	07 05 51.4	
	baz=207,slow=74,SNR=6.8						
H11S1	WAKE ISLAND Hy	27.02	26	T	T	07 05 52.3	
	baz=207,slow=74,SNR=7.6						
STKA	Stephens Creek	28.57	204	P	P	06 37 54.8	+0.5
	comp=Z,0.7nm,0.5s,baz=12,slow=14,SNR=1.5						
	comp=Z,0.7nm,0.5s						
FITZ	Fitzroy Crossi	30.89	244	P	P	06 38 17.6	+2.7
HAZ	Te Kaha	37.93	150	P	P	06 39 15.0	0.0
RUGZ	Raukumara Rang	38.04	150	P	P	06 39 16.0	-0.1
PKGZ	Pakihiroa	38.18	150	P	P	06 39 16.9	-0.3
MWZ	Matawai	38.26	151	P	P	06 39 17.9	+0.1
MTHZ	Maungataniwha	38.34	152	P	P	06 39 18.5	0.0
BKZ	Black Stump Fm	38.42	152	P	P	06 39 18.5	-0.7
NMHZ	Naumai	38.52	152	P	P	06 39 20.1	+0.1
RIGZ	Rimuhau	38.66	151	P	P	06 39 20.7	-0.5
CNGZ	Carnagh Statio	38.71	150	P	P	06 39 19.7	-1.8
TUWZ	Tuamarina	39.23	157	P	P	06 39 24.9	-0.8
RPZ	Rata Peaks	40.22	162	P	P	06 39 33.9	-0.1
	comp=Z,12nm,0.8s,baz=247,slow=2.9,SNR=5.3						
	comp=Z,12nm,0.8s						
RPZ	Rata Peaks	40.22	162	P	P	06 39 33.5	-0.5
MQZ	McQueen's Vall	40.74	160	P	P	06 39 37.2	-1.0
SSLB	Suanglung	44.33	313	P	P	06 40 06.3	-1.1
SSLB				IAmb	IAmb	06 40 36.9	
	comp=Z,15nm,1.2s						
KLR	Kul'dur	58.54	342	LR	LR	07 04 04.6	
	comp=Z,19nm,21.6s,baz=314,slow=33						
CMAR	Chiang Mai Arr	60.16	295	P	P	06 42 06.0	+1.9
	comp=Z,1.0nm,0.3s,baz=132,slow=5.2,SNR=1.1						
	comp=Z,1.0nm,0.3s						
SONM	Songino Array	68.37	327	P	P	06 42 58.8	+1.9
	comp=Z,1.0nm,0.4s,baz=145,slow=5.6,SNR=11						
	comp=Z,1.0nm,0.4s						
SONM	Songino Array	68.37	327	P	P	06 42 58.3	+1.4
SONM				IAmb	IAmb	06 42 59.5	
	comp=Z,3.2nm,1.2s						
L19K	White Mountain	78.09	22	P	P	06 43 54.3	+0.9
L19K				IAmb	IAmb	06 44 10.0	
	comp=Z,3.8nm,1.3s						
CAST	Castle Rocks	79.85	21	P	P	06 44 02.6	-0.2
CAST				IAmb	IAmb	06 44 46.1	
	comp=Z,5.1nm,1.2s						
IMAR	Indian Mountai	80.83	19	P	P	06 44 08.9	+0.9
ILAR	Eielson Array	82.50	22	P	P	06 44 17.1	+0.3
	comp=Z,0.2nm,0.4s,baz=238,slow=5.1,SNR=8.2						
	comp=Z,0.2nm,0.4s						
MK31	Makanchi Array	82.51	319	P	P	06 44 18.0	+0.8
MKAR	Makanchi Array	82.51	319	P	P	06 44 18.2	+1.0
	comp=Z,2.2nm,0.8s,baz=105,slow=5.5,SNR=20						
	comp=Z,2.2nm,0.8s						
MKAR	Makanchi Array	82.51	319	P	P	06 44 17.6	+0.4
ZALV	Zalesovo Beam	83.22	326	P	P	06 44 21.0	+0.4
	comp=Z,1.4nm,0.6s,baz=134,slow=6.4,SNR=5.9						
	comp=Z,1.4nm,0.6s						
QSPA	South Pole Qui	84.00	180	P	P	06 44 24.3	-0.3
NVAR	Mina Array Bea	91.25	52	P	P	06 45 01.2	+1.1
	comp=Z,0.6nm,0.9s,baz=246,slow=6.8,SNR=3.5						
	comp=Z,0.6nm,0.9s						
YKA	Yellowknife Ar	95.53	28	P	P	06 45 19.7	+0.8
	comp=Z,0.5nm,0.8s,baz=268,slow=4.6,SNR=5.4						
	comp=Z,0.5nm,0.8s						
TORD	Torodi Ar. Bea	152.54	287	PKPbc	PKiKP	06 51 50.3	-0.5
	comp=Z,0.2nm,0.4s,baz=93,slow=2.0,SNR=6.2						

IDC 04 06:46:15.0±1.9**, 4°.95N×122°.82E, h0^{km}, mb4.1**/3**, mbtmp4.1**/3**, Error ellipse: s-maj=218.9km s-min=25.2km az=63.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.20	156	P	P	06 52 00.2	-0.5
	1.6nm,0.6s,baz=333,slow=10,SNR=24						
	1.6nm,0.6s						
ASAR	Alice Springs	30.43	160	P	P	06 52 29.9	+0.5
	2.1nm,0.3s,baz=341,slow=7.2,SNR=79						
	2.1nm,0.3s						
MKAR	Makanchi Array	54.37	327	P	P	06 55 43.6	-0.1
	0.7nm,0.8s,baz=148,slow=8.5,SNR=7.0						
	0.7nm,0.8s						

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*NNC **04** 06:59:09.8±1.4, 41°.54N×71°.21E, h0^{km}, mb3.1, mpv3.2, Error ellipse: s-maj=15.0km s-min=4.0km az=10.0*

*SOME **04** 06:59:10.9, 41°.63N×71°.25E, h10^{km}*

*KRNET **04** 06:59:10.4±0.1, 41°.60N×71°.20E, h23^{km}, mb2.4*

*ISU **04** 06:59:11.4, 41°.25N×71°.92E, h7^{km}*

ISC 04 06:59:11.6±0.9**, 41°.61N**±0°.02×**71°.21E**±0°.02**, h13^{km}**±6^{km}**, n28, σ0^{s}85**/48**, 21C-3D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRKS	Terek-Say	0.09	214	⇑eP	Pg	06 59 14.7	0.0
	baz=90						
TRKS				⇑eS	Sg	06 59 17.2	+0.3
	baz=90						
KSNS	Kasansay	0.51	152	P	Pg	06 59 20.8	-0.7
KSNS				S	Sg	06 59 25.9	-2.4
ARK	Arkit	0.59	71	⇑eP	Pg	06 59 22.4	-0.8
	baz=70						
ARK				⇑eS	Sg	06 59 30.9	-0.3
	baz=70						
ARK	Arkit	0.59	71	P	Pg	06 59 22.5	-0.8
ARK				S	Sg	06 59 30.9	-0.3
IUG	Iuzhnay	1.03	302	P	Pb	06 59 30.8	-0.5
	38nm,0.1s						
IUG				S	Sb	06 59 44.5	-0.3
	38nm,0.2s						
IUG	Iuzhnay	1.03	302	eP	Pb	06 59 30.8	-0.5
	38nm,0.1s						
IUG				eS	Sb	06 59 44.5	-0.3
	38nm,0.2s						
YBZ	Yangibazar	1.26	257	P	Sg	06 59 53.9	+1.7
DZA	Taraz	1.29	4	P	Pn	06 59 35.2	-0.1
	74nm,0.1s						
DZA				S	Sn	06 59 52.4	0.0
	94nm,0.1s						
DZA	Taraz	1.29	4	eP	Pn	06 59 35.2	-0.1
	74nm,0.1s						
DZA				eS	Sn	06 59 52.4	0.0
	94nm,0.1s						
MNAS	Manas	1.30	47	⇑iP	Pn	06 59 34.7	-0.9
	baz=47						
MNAS				⇑iS	Sb	06 59 52.0	-0.8
	baz=47						
CHMI	Chimion	1.36	170	P	Sg	06 59 57.3	+2.0
BTK	Batken	1.58	191	⇑iP	Pn	06 59 38.9	-0.4
	baz=91						
BTK				⇑iS	Sb	06 59 59.5	-0.9
	baz=91						
BTK	Batken	1.58	191	P	Pn	06 59 38.9	-0.4
BTK				S	Sb	06 59 59.6	-0.9
KK31	Karatay Array	1.58	341	⇑P	Pn	06 59 39.8	+0.4
	2.4nm,0.4s,baz=167,slow=18,SNR=21						
KK31				S	Sg	07 00 02.1	-0.4
	5.9nm,0.7s,baz=169,slow=27,SNR=15						
KKAR	Karatay Array	1.58	341	⇑eP	Pn	06 59 39.7	+0.4
	baz=41						
KKAR				⇑eS	Sb	07 00 00.5	-0.1
	baz=41						
MRKS	Merke	1.88	52	P	Pb	06 59 45.5	-0.3
	7.3nm,0.2s						
MRKS				S	Sb	07 00 09.6	+0.3
	11nm,0.4s						
MRKS	Merke	1.88	52	eP	Pb	06 59 45.5	-0.3
	2.3nm,0.3s						
MRKS				eS	Sb	07 00 09.6	+0.3
	13nm,0.5s						
AML	Almayashu	1.93	73	⇑Pn	Pn	06 59 43.6	-0.8
	0.3nm,0.4s						
AML				⇑Sn	Sb	07 00 11.0	+0.1
	1.3nm,0.5s						
AML	Almayashu	1.93	73	⇑eP	Pn	06 59 44.8	+0.4
	baz=73						
AML				⇑eS	Sb	07 00 10.0	-0.9
	baz=73						
DRK	Karamyk	2.17	168	⇓iP	Pn	06 59 47.9	+0.2
	baz=68						
DRK				⇓iS	Sn	07 00 15.2	+0.6
	baz=68						
EKS2	Erkin-Say	2.18	60	⇑eP	Pn	06 59 48.1	+0.4
	baz=60						
EKS2				⇑eS	Sn	07 00 15.5	+0.9
	baz=60						
ARLS	Aral	2.34	83	⇑eP	Pn	06 59 50.3	+0.4
	baz=83						
ARLS				⇑eS	Sn	07 00 19.3	+0.6
	baz=83						
UCH	Uchtor	2.54	75	⇑eP	Pn	06 59 53.3	+0.4
	baz=75						
UCH				⇑eS	Sn	07 00 24.5	+0.5
	baz=75						
TKM2	Tokmak 2	3.51	67	⇓Lg	Lg	07 01 01.0	
	6.3nm,0.6s						
DGS	Degeres	3.75	63	Pg	Pb	07 00 18.8	+1.1
	1.1nm,0.3s						
DGS				Lg	Lg	07 01 06.8	
	4.2nm,0.2s						
DGS	Degeres	3.75	63	ePg	Pb	07 00 18.8	+1.1
	1.1nm,0.3s						
DGS				eLg	Lg	07 01 06.8	
	4.2nm,0.2s						
KST	Kastek	3.81	66	Pg	Pb	07 00 20.3	+1.7
	1.0nm,0.2s						
KST				Lg	Lg	07 01 09.6	
	8.4nm,0.4s						
KST	Kastek	3.81	66	ePg	Pb	07 00 20.3	+1.7
	1.0nm,0.2s						
KST				eLg	Lg	07 01 09.6	
	8.4nm,0.4s						

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*IDC **04** 06:59:38.2±1.4, 21°.11N×121°.99E, h0^{km}, mb3.3/4, mbtmp3.4/5, ML3.8/1, MS3.0/3, Error ellipse: s-maj=77.3km s-min=24.0km az=69.0*

*TAP **04** 06:59:40.6, 21°.59N×122°.20E, h20^{km}±1^{km}, ML3.6, D*

*JMA **04** 06:59:44.6±0.5, 22°N±2°×12°2E±°, h61^{km}, MV3.9/10, TAIWAN REGION*

*NIED **04** 06:59:44.6, 21°.63N×121°.90E, h61^{km}, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}7.22; $M_{\theta\theta}$-4.12; $M_{\phi\phi}$-3.10; $M_{r\theta}$4.37; $M_{\theta\phi}$0.67; $M_{\phi r}$5.07; Fault plane solution: $M_0$8.41000×10^{14} NP1:ϕ_s48.00000°, δ71.00000°, λ84.00000°. NP2:ϕ_s245.00000°, δ20.00000°, λ106.00000°.*

*MAN **04** 06:59:46.7, 21°.07N×121°.62E, h3^{km}, mb4.6, ML3.4, MS3.3*

ISC 04 06:59:38.5±1.3**, 21°.60N**±0°.03×**122°.26E**±0°.03**, h7^{km}**±10^{km}**, n57, σ1^{s}47**/88**, mb3.3**/4**, 4C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LYUB	Lan-yu	0.74	303	i S	Sb	07 00 04.2	+0.1
	baz=306						
LAY	Lan-yu	0.79	304	P	Pb	06 59 54.5	0.0
	baz=307						
LAY				eS	Sg	07 00 03.7	-0.3
	baz=307						
BBP	Basco	1.19	194	⇓eP	Pn	07 00 00.8	-0.6
BBP				eS	Sb	07 00 14.9	-1.9
LDUT	Ludao	1.30	326	P	Pn	07 00 02.7	-0.3
	baz=329						
LDUT				eS	Sb	07 00 17.8	-2.2
	baz=329						
TSEB	Hengchuen, Pin	1.30	284	eP	Pn	07 00 03.1	+0.1
	baz=284						
TSEB				eS	Sb	07 00 20.0	-0.1
	baz=284						
SMST	Manzhou Townsh	1.39	288	eP	Pn	07 00 02.8	-1.4
	baz=289						
SMST				eS	Sb	07 00 19.8	-2.8
	baz=289						
TWKBT	Hengchun	1.39	284	i P	Pn	07 00 04.7	+0.4
	baz=285						
TWKBT				eS	Sb	07 00 21.4	-1.3
	baz=285						
TWK1	Hengchun	1.40	284	P	Pn	07 00 04.8	+0.5
	baz=285						
TWK1				eS	Sg	07 00 24.9	+1.5
	baz=285						
HEN	Hengchun	1.47	286	eP	Pg	07 00 08.2	+1.5
	baz=287						
HEN				eS	Sb	07 00 25.3	+0.3
	baz=287						
TAWH	Dawu Township	1.47	300	eP	Pn	07 00 04.0	-1.4
	baz=302						
TAWH				eS	Sn	07 00 21.0	-3.9
	baz=302						
TAW	Tawu	1.47	301	eP	Pb	07 00 06.4	+0.2
	baz=303						
EAST	Anshuo	1.52	301	eP	Pn	07 00 04.9	-1.3
	baz=303						
EAST				eS	Sn	07 00 22.4	-3.8
	baz=303						
EDH	Donghe	1.63	327	i P	Pn	07 00 07.6	+0.1
	baz=330						
EDH				eS	Sn	07 00 26.9	-1.9
	baz=330						
TWGBT	Beinan	1.63	318	P	Pb	07 00 08.2	-0.7
	baz=305						
TWGBT				i S	Sb	07 00 29.2	-0.5
	baz=305						
LONT	Longtian	1.67	321	eP	Pb	07 00 09.9	+0.3
	baz=307						
LONT				eS	Sn	07 00 28.5	-1.3

	baz=307						
SCZT	Fangliau	1.71	297	P	Pn	07 00 08.6	0.0
	baz=298						
SCZT				iS	Sn	07 00 29.8	-0.9
	baz=298						
MASBT	Mashibuluo	1.81	304	P	Pn	07 00 10.8	+0.6
	baz=305						
EHD	Haiduan	1.82	328	iP	Pb	07 00 11.2	-1.0
	baz=339						
EHD				eS	Sb	07 00 34.1	-1.1
	baz=339						
FULB	Fuli	1.82	331	iP	Pn	07 00 10.8	+0.5
	baz=333						
FULB				eS	Sn	07 00 32.0	-1.7
	baz=333						
ECBN	Changbin	1.86	336	P	Pn	07 00 11.1	+0.3
	baz=339						
ECBN				eS	Sn	07 00 33.9	-0.7
	baz=339						
YULB	Yu-li	1.99	334	P	Pn	07 00 13.3	+0.7
	baz=345						
YULB				eS	Sn	07 00 38.2	+0.4
	baz=345						
HGSD	Ruisui	2.04	338	eP	Pg	07 00 16.5	-1.0
	baz=340						
HGSD				S	Sn	07 00 38.4	-0.5
	baz=340						
STYH	Taoyuan	2.08	319	eP	Pb	07 00 15.8	-0.8
	baz=321						
STYH				eS	Sn	07 00 40.2	+0.2
	baz=321						
EHY	Hungye	2.09	336	eP	Pb	07 00 16.4	-0.3
	baz=338						
EHY				S	Sn	07 00 40.3	+0.2
	baz=338						
WTP	Ta-pu	2.24	317	eP	Pb	07 00 19.3	0.0
	baz=319						
WTP				eS	Sb	07 00 48.4	+1.2
	baz=319						
CHN1	Nanshi	2.25	315	eP	Pb	07 00 20.0	+0.6
	baz=317						
CHN1				S	Sb	07 00 46.9	-0.6
	baz=317						
TPUB	Ta-pu	2.27	319	P	Pb	07 00 18.9	-0.8
	baz=320						
TPUB				iS	Sb	07 00 46.8	-1.2
	baz=320						
CHN4	Tsaushan	2.33	319	eP	Pb	07 00 20.8	0.0
	baz=321						
CHN4				eS	Sb	07 00 47.9	-1.8
	baz=321						
ALS	Alishan	2.33	325	eP	Pb	07 00 20.9	-0.1
	baz=313						
ALS				eS	Sb	07 00 49.9	-0.1
	baz=313						
TWK	Hsinying	2.33	316	eS	Sb	07 00 49.3	-0.6
	baz=318						
VWDT	VWDT	2.38	334	eP	Pb	07 00 21.1	-0.5
	baz=336						
VWDT				eS	Sn	07 00 47.2	-0.1
	baz=336						
CICP	Calayan Island	2.44	198	⇑iP	Pn	07 00 17.7	-1.0
CICP				iS	Sn	07 00 50.3	+1.6
CHN5	Tsauling	2.47	324	eP	Pg	07 00 24.6	-1.2
	baz=312						
CHN5				eS	Sb	07 00 54.0	+0.2
	baz=312						
HATJ	Hateruma jima	2.83	30	P	Pg	07 00 30.8	-1.9
HATJ				S	Sb	07 01 05.5	+1.3
JYNG	Yonagunijimaku	2.91	12	eP	Pb	07 00 30.5	-0.2
JYNG				eS	Sb	07 01 05.1	-1.3
YOJ	Yonaguni jima	2.93	13	eP	Pb	07 00 31.3	+0.3
YOJ				eS	Sb	07 01 06.5	-0.6
IRIF	Iriomote-Funau	3.04	26	P	Pb	07 00 33.6	+0.7
IRIF				S	Sb	07 01 11.0	+0.8
JKRS	Kuro-shima	3.08	31	P	Pb	07 00 34.4	+0.8
JKRS				S	Sb	07 01 11.7	+0.3
PACPP	Pamplona Cagay	3.24	195	⇑iP	Pn	07 00 30.7	+1.0
JIJ	Ishigaki jima	3.25	32	P	Pb	07 00 36.2	-0.4
JIJ				S	Sb	07 01 15.1	-1.3
SGCP	Gonzaga	3.35	183	⇑eP	Pn	07 00 34.1	+2.8
SGCP				eS	Sn	07 01 09.5	-1.7
JISG	Ishigakijimahi	3.52	32	P	Pb	07 00 40.0	-1.2
JISG				eS	Sb	07 01 22.1	-2.0
JTJ	Tarama	3.77	36	P	Pb	07 00 44.7	-0.6
JTJ				S	Sb	07 01 29.5	-1.8
APYP	Conner	3.84	195	⇑eP	Pn	07 00 39.3	+1.3
APYP				eS	Sn	07 01 19.8	-3.6
JNU	Nakatsue	13.79	32	LR	LR	07 08 59.5	
	comp=Z,54nm,18.5s,baz=196,slow=39						
KSRS	Korea Array	16.54	16	Pn	P	07 03 38.0	+4.5
	0.3nm,0.3s,baz=199,slow=12,SNR=4.7						
KSRS				LR	LR	07 10 26.4	
	comp=Z,23nm,18.3s,baz=205,slow=38						
	1.1nm,0.5s						
MKAR	Makanchi Array	40.89	318	P	P	07 07 24.2	+2.9
	0.3nm,0.6s,baz=113,slow=9.6,SNR=3.2						
	0.3nm,0.6s						
H11N1	WAKE ISLAND Hy	41.70	84	T	T	07 52 54.9	
	baz=283						
H11N2	WAKE ISLAND Hy	41.70	84	T	T	07 52 49.7	
	baz=283						
H11N3	WAKE ISLAND Hy	41.72	84	T	T	07 52 47.7	
	baz=283						
H11S3	WAKE ISLAND Hy	41.75	86	T	T	07 52 39.8	
	baz=282,slow=75,SNR=5.0						
H11S1	WAKE ISLAND Hy	41.76	86	T	T	07 52 50.4	
	baz=282,slow=75,SNR=7.7						
H11S2	WAKE ISLAND Hy	41.76	86	T	T	07 52 38.4	
	baz=282,slow=75,SNR=4.8						
WRA	Warramunga Arr	42.94	163	P	P	07 07 35.7	-2.5
	0.7nm,0.9s,baz=343,slow=9.3,SNR=2.4						
	0.7nm,0.9s						
ZALV	Zalesovo Beam	42.95	328	P	P	07 07 40.3	+2.4
	0.4nm,0.4s,baz=108,slow=9.4,SNR=1.5						
	0.4nm,0.4s						
ASAR	Alice Springs	46.40	165	P	P	07 08 03.3	-2.5
	0.1nm,0.6s,baz=338,slow=7.0,SNR=1.1						
	0.1nm,0.6s						
TIXI	Tiksi	50.21	3	LR	LR	07 32 35.2	
	comp=Z,25nm,18.1s,baz=178,slow=39						

IDC ***04*** *07:04:42.3±2.5, 10°.50S×161°.56E, h61km±20km, mb3.8/13, mbtmp4.2/16, MS3.5/20, Error ellipse: s-maj=21.9km s-min=13.5km az=75.0*

NEIC ***04*** *07:04:42.8±1.5, 10°.5S±0°.1×161°.6E±0°.1, h54km±8km, mb4.4/25, Error ellipse: s-maj=20.4km s-min=11.7km az=55.0*

NOU ***04*** *07:04:42.2, 10°.45S×161°.65E, h36km, mb4.8/13, Solomon Islands*

ISC 04 07:04:42.6±0.6**, 10°.46S**±0°.07×**161°.58E**±0°.08**, h61km, n82, σ1°.04**/62**, mb4.3**/25**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HNR	Honiara	1.91	302	P	Pn	07 05 12.8	0.0
	5µm,0.3s,baz=146,slow=7.1,SNR=31						
HNR				S	Sn	07 05 35.9	+0.1
	17µm,0.4s,baz=31,slow=23,SNR=5.5						
HNR				LR	LR	07 06 09.8	
	comp=Z,14µm,20.1s,baz=151,slow=46						
HNR	Honiara	1.91	302		Pn	07 05 12.2	-0.6
HNR	Honiara	1.91	302	P	Pn	07 05 13.0	+0.2
DVP	Devils Point	9.65	139	P	Pn	07 06 58.1	-0.7
KOUNC	Koumac, New Ca	10.37	166		Pn	07 07 08.3	-0.2
KOUNC	Koumac, New Ca	10.37	166	P	Pn	07 07 07.8	-0.7
KRVT	Keravat (AS076	11.28	302	LR	LR	07 12 17.0	
	comp=Z,238nm,19.2s,baz=249,slow=40						
LIFNC	LIFOU	11.61	153	Pn	Pn	07 07 23.6	-2.0
LIFNC	LIFOU	11.61	153	P	Pn	07 07 23.8	-1.8
NOUC	Port Laguerre	12.43	159	P	Pn	07 07 37.1	+0.4
DZM	Mont Dzumac	12.45	159	P	Pn	07 07 36.7	-0.5
	3.5nm,0.3s,baz=20,slow=9.1,SNR=46						
DZM				LR	LR	07 11 50.7	
	comp=Z,101nm,18.7s,baz=32,slow=34						
DZM	Mont Dzumac	12.45	159	Pn	Pn	07 07 36.5	-0.6
DZM	Mont Dzumac	12.45	159	P	Pn	07 07 37.3	+0.2
OUENC	Ouen Island, N	12.91	158	Pn	Pn	07 07 43.7	+0.3
OUENC	Ouen Island, N	12.91	158	P	Pn	07 07 43.6	+0.3
PMG	Port Moresby	14.25	273	P	Pn	07 08 01.9	+0.6
	4.1nm,0.3s,baz=235,slow=14,SNR=1.4						
PMG				LR	LR	07 13 06.6	
	comp=Z,397nm,20.7s,baz=109,slow=35						
MSVF	Nonsavu	17.52	116	LR	LR	07 13 59.3	
	comp=Z,130nm,20.6s,baz=258,slow=32						
CTA	Charters Tower	17.60	235	P	P	07 08 44.7	+0.6
	9.1nm,0.5s,baz=57,slow=11,SNR=12						
CTA				LR	LR	07 14 58.1	
	comp=Z,167nm,18.5s,baz=74,slow=35						
CTAO	Charters Tower	17.60	235	P	P	07 08 45.0	+0.9
CTAO				IAmb	IAmb	07 08 49.0	
	comp=Z,13nm,0.7s						
CTAO	Charters Tower	17.60	235	P	P	07 08 46.0	+1.9
EIDS	Eidsvold	17.86	213	P	Pn	07 08 48.5	+1.6
COEN	Coen	18.32	257	P	Pn	07 08 54.5	+1.9
COEN				IAmb	IAmb	07 08 58.4	
	comp=Z,21nm,1.2s						
COEN	Coen	18.32	257	P	Pn	07 08 53.9	+1.3
ARMA	Armidale	21.91	204	P	P	07 09 30.8	-0.1
ARMA				IAmb	IAmb	07 09 51.5	
	comp=Z,27nm,1.5s						
GENI	Genyem	22.65	289	P	P	07 09 37.5	-1.4
	comp=Z,33nm,0.6s						
WB0	Warramunga Arr	27.80	247	P	P	07 10 25.7	-0.5
WB0				IAmb	IAmb	07 10 26.5	
	comp=Z,13nm,0.9s						
WRA	Warramunga Arr	27.89	247	P	P	07 10 26.4	-0.6
	comp=Z,5.5nm,0.7s,baz=74,slow=9.2,SNR=31						
WRA				LR	LR	07 21 07.4	
	comp=Z,140nm,18.8s,baz=80,slow=35						
	comp=Z,5.5nm,0.7s						
WRA	Warramunga Arr	27.89	247	P	P	07 10 26.1	-0.9
STKA	Stephens Creek	28.21	218	P	P	07 10 29.0	-0.7
	comp=Z,2.2nm,0.7s,baz=36,slow=9.5,SNR=4.5						
STKA				LR	LR	07 21 21.8	
	comp=Z,260nm,19.1s,baz=24,slow=36						
	comp=Z,2.2nm,0.7s						
STKA	Stephens Creek	28.21	218	P	P	07 10 30.4	+0.7
H11S2	WAKE ISLAND Hy	29.21	10	T	T	07 41 31.0	
	baz=189,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	29.21	10	T	T	07 41 31.2	
	baz=189,slow=76,SNR=17						
H11S1	WAKE ISLAND Hy	29.22	10	T	T	07 41 32.3	
	baz=189,slow=76,SNR=20						
AS31	Alice Springs	29.47	240	P	P	07 10 39.3	-1.7
ASAR	Alice Springs	29.47	240	P	P	07 10 39.5	-1.6
	comp=Z,1.0nm,0.3s,baz=64,slow=10,SNR=22						
ASAR				LR	LR	07 22 19.8	
	comp=Z,264nm,18.8s,baz=72,slow=36						
	comp=Z,1.0nm,0.3s						
ASAR	Alice Springs	29.47	240	P	P	07 10 39.6	-1.4
MTN	Manton Dam	29.91	262	P	P	07 10 44.5	-0.4
H11N1	WAKE ISLAND Hy	30.43	10	T	T	07 43 05.3	
	baz=188,slow=76,SNR=9.6						
H11N3	WAKE ISLAND Hy	30.44	10	T	T	07 43 21.9	
	baz=188,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	30.45	10	T	T	07 43 04.6	
	baz=188,slow=76,SNR=11						
TOO	Toolangi	30.64	206	P	P	07 10 51.2	+0.1
RTZ	Ruatahuna	31.24	156	P	P	07 10 59.4	+2.9
RTZ				IAmb	IAmb	07 11 04.4	
	comp=Z,15nm,1.2s						
BKZ	Black Stump Fm	31.53	158	P	P	07 10 59.4	+0.4
BBOO	Buckleboo	32.36	223	P	P	07 11 05.8	-0.6
KNRA	Kununurra	32.36	257	P	P	07 11 06.2	-0.4
TCW	Tory Channel	32.61	162	P	P	07 11 08.6	+0.2
RPZ	Rata Peaks	34.14	168	P	P	07 11 20.7	-1.0
	comp=Z,5.9nm,0.8s,baz=204,slow=23,SNR=1.3						
	comp=Z,5.9nm,0.8s						
FITZ	Fitzroy Crossi	35.60	254	P	P	07 11 34.1	-0.5
KAPI	Kappang	41.77	274	LR	LR	07 32 30.0	
	comp=Z,21nm,18.4s,baz=92,slow=40						
PPT	Papeete	47.80	104	LR	LR	07 29 45.1	
	comp=Z,31nm,19.1s,baz=296,slow=31						
JMN	Monobe	51.24	330	P	P	07 13 40.3	0.0
JNU	Nakatsue	52.29	327	LR	LR	07 35 10.9	
	comp=Z,16nm,18.5s,baz=80,slow=35						
KSRS	Korea Array	57.16	328	P	P	07 14 23.7	+0.5
	comp=Z,0.6nm,0.4s,baz=134,slow=7.0,SNR=2.0						
	comp=Z,0.6nm,0.4s						
USRK	Ussuriysk Ar.	60.67	336	P	P	07 14 47.9	+0.5
	comp=Z,3.7nm,0.8s,baz=148,slow=8.8,SNR=5.6						
	comp=Z,3.7nm,0.8s						
PETK	Petropavlovsk-	63.40	357	LR	LR	07 37 57.3	
	comp=Z,24nm,21.4s,baz=181,slow=31						
VNDA	Vanda	67.05	180	P	P	07 15 29.2	+0.4
	comp=Z,2.3nm,1.0s,baz=128,slow=11,SNR=2.3						
	comp=Z,2.3nm,1.0s						
CMAR	Chiang Mai Arr	68.14	295	P	P	07 15 36.6	-0.2
	comp=Z,1.1nm,0.3s,baz=120,slow=5.3,SNR=1.8						
CMAR				LR	LR	07 44 29.6	
	comp=Z,4.3nm,20.9s,baz=40,slow=35						
	comp=Z,1.1nm,0.3s						
SONM	Songino Array	75.82	325	P	P	07 16 22.4	+0.1
	comp=Z,1.2nm,0.6s,baz=141,slow=6.0,SNR=9.0						
	comp=Z,1.2nm,0.6s						
SONM	Songino Array	75.82	325	P	P	07 16 23.3	+1.0
YAK	Yakutsk	76.43	345	LR	LR	07 46 54.7	
	comp=Z,23nm,21.9s,baz=26,slow=33						
KDAK	Kodiak Island	77.59	23	LR	LR	07 45 36.1	
	comp=Z,52nm,19.2s,baz=209,slow=32						
SVW2	Sparrevohn	78.89	20	P	P	07 16 40.6	+1.6
SVW2				IAmb	IAmb	07 16 42.1	
	comp=Z,5.9nm,0.8s						
QSPA	South Pole Qui	79.54	180	P	P	07 16 42.5	-0.2
QSPA				IAmb	IAmb	07 17 19.4	
	comp=Z,2.5nm,0.9s						
M19K	Big River Lodg	79.87	20	P	P	07 16 46.6	+2.2
M19K				IAmb	IAmb	07 16 48.5	
	comp=Z,7.1nm,1.1s						
L19K	White Mountain	79.92	19	P	P	07 16 46.4	+1.8
L19K				IAmb	IAmb	07 17 06.0	
	comp=Z,3.3nm,0.8s						
TTA	Tatalina	80.10	18	P	P	07 16 46.7	+1.0
TTA				IAmb	IAmb	07 16 47.7	
	comp=Z,3.7nm,1.0s						
CAST	Castle Rocks	81.69	19	P	P	07 16 54.5	+0.4
CAST				IAmb	IAmb	07 16 55.0	
	comp=Z,3.5nm,0.9s						
PALK	Pallekele	82.42	279	LR	LR	07 56 48.2	
	comp=Z,9.3nm,19.1s,baz=229,slow=38						
I21K	Tanana	82.96	18	P	P	07 17 02.1	+1.5
I21K				IAmb	IAmb	07 17 15.5	
	comp=Z,8.2nm,1.4s						
IMAR	Indian Mountai	83.01	17	P	P	07 17 01.7	+0.8
H23K	Yukon River	84.14	18	P	P	07 17 07.2	+0.5
H23K				IAmb	IAmb	07 17 08.1	
	comp=Z,6.5nm,1.5s						
ILAR	Eielson Array	84.30	20	P	P	07 17 07.2	-0.3
	comp=Z,0.7nm,0.8s,baz=244,slow=4.8,SNR=11						
	comp=Z,0.7nm,0.8s						
H02S1	DAWSON INLET T	84.42	33	T	T	08 50 24.0	
	SNR=8.4						
NVAR	Mina Array Bea	88.80	51	P	P	07 17 29.3	-1.1
	comp=Z,0.2nm,0.6s,baz=236,slow=6.0,SNR=2.5						
	comp=Z,0.2nm,0.6s						
PFO	Pinyon Flats O	89.11	56	LR	LR	07 48 51.2	
	comp=Z,37nm,21.6s,baz=36,slow=30						
MKAR	Makanchi Array	90.31	318	P	P	07 17 36.8	-0.2
	comp=Z,0.3nm,0.4s,baz=92,slow=7.0,SNR=10.0						
	comp=Z,0.3nm,0.4s						
INK	Inuvik	90.70	20	LR	LR	07 54 27.7	
	comp=Z,47nm,21.4s,baz=296,slow=33						
H06E1	SOCORRO T-PHAS	90.97	71	T	T	08 57 59.5	
	SNR=12						
ELK	Elko	91.63	49	LR	LR	07 53 07.4	
	comp=Z,23nm,19.2s,baz=155,slow=32						
YKA	Yellowknife Ar	96.34	28	P	P	07 18 04.4	0.0
	comp=Z,0.2nm,0.6s,baz=264,slow=5.5,SNR=1.6						
	comp=Z,0.2nm,0.6s						
SNAA	Sanae	97.39	185	LR	LR	08 00 49.2	
	comp=Z,21nm,18.2s,baz=10.0,slow=35						
ARCES	ARCESS Array B	114.71	344	PKP	PKiKP	07 23 14.7	-0.9
	comp=Z,5.1nm,1.1s,baz=57,slow=3.3,SNR=1.9						

SOME ***04*** *07:14:51.8, 39°.52N×74°.97E, h15km*

KRNET ***04*** *07:14:54.5±0.1, 39°.32N×75°.43E, mb3.4*

NNC ***04*** *07:14:56.0±1.4, 39°.59N×75°.15E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=11.0km s-min=7.4km az=159.0*

ISC 04 07:14:57.9±1.2**, 39°.75N**±0°.06×**75°.04E**±0°.03**, h10km, n70, σ1°.94**/94**, 34C-13D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NRN	Naryn	1.84	23	⇑eP	Pn	07 15 30.7	+0.9
	baz=11						
NRN				⇑eS	Sg	07 15 57.0	0.0
	baz=11						
OHH	Osh	1.89	295	⇑eP	Pg	07 15 33.7	-0.5
	baz=2.0						
OHH				⇑eS	Sg	07 16 02.3	+3.5
	baz=2.0						
ARLS	Aral	2.18	346	⇑iP	Pb	07 15 38.0	+0.4
	baz=42						
ARLS				⇑eS	Sg	07 16 09.7	+1.7
	baz=42						
UCH	Uchtor	2.51	351	P	Pb	07 15 43.2	-0.1
	SNR=21						
UCH	Uchtor	2.51	351	⇑eP	Pb	07 15 42.6	-0.8
	baz=47						
UCH				⇑eS	Sg	07 16 17.6	-1.0
	baz=47						
DRK	Karamyk	2.52	265	⇓eP	Pn	07 15 39.8	+0.7
	baz=75						
DRK				⇓eS	Sb	07 16 13.3	-1.2
	baz=75						
AML	Almayashu	2.59	337	P	Pb	07 15 44.9	+0.2
	SNR=30						
AML	Almayashu	2.59	337	⇑Pn	Pb	07 15 43.3	-1.4
	1.1nm,0.5s						
AML				⇓Lg	Lg	07 16 28.2	
	8.3nm,0.8s						
AML	Almayashu	2.59	337	⇑eP	Pb	07 15 44.1	-0.6
	baz=35						
AML				⇑eS	Sg	07 16 20.2	-1.0
	baz=35						
ULHL	Ulahol	2.66	20	P	Pb	07 15 46.1	+0.4
	SNR=14						
BOOM	Boomskoye usch	2.83	14	⇑eP	Pn	07 15 45.4	+2.1
	baz=7.0						
BOOM				⇑eS	Sb	07 16 22.4	-0.9
	baz=7.0						
KDJ	Kajisay	2.88	34	⇑iP	Pn	07 15 44.1	0.0
	baz=25						
KDJ				⇑iS	Sn	07 16 20.2	+1.3
	baz=25						
TARG	Taragay, Kyrgy	2.89	46	⇓eP	Pn	07 15 42.9	-1.5
	baz=36						
TARG				⇓eS	Sn	07 16 18.0	-1.4
	baz=36						
KBK	Karagaybulak	2.91	359	P	Pb	07 15 48.7	-1.3
	SNR=20						
KBK	Karagaybulak	2.91	359	⇑eP	Pb	07 15 47.7	-2.3
	baz=54						
KBK				⇑eS	Sb	07 16 26.1	+0.4
	baz=54						
AAK	Ala-Archa	2.92	352	P	Pb	07 15 49.7	-0.4
	SNR=7.6						
AAK	Ala-Archa	2.92	352	⇓eP	Pb	07 15 48.1	-2.0
	baz=48						
AAK				⇓eS	Sb	07 16 26.9	+1.0
	baz=48						
EKS2	Erkin-Say	3.06	342	⇑eP	Pb	07 15 50.5	-2.1
	baz=40						
EKS2				⇑eS	Sb	07 16 31.0	+0.9
	baz=40						
ARK	Arkit	3.11	312	⇑iP	Pb	07 15 51.2	-2.1
	baz=14						
ARK				⇑iS	Sb	07 16 32.4	+1.1
	baz=14						
TKM2	Tokmak 2	3.20	7	P	Pb	07 15 52.2	-2.7
	SNR=14						
TKM2	Tokmak 2	3.20	7	⇑Pn	Pb	07 15 52.1	-2.9
	12nm,0.4s						
TKM2				⇑Sn	Sb	07 16 33.8	-0.3
	11nm,0.6s						
TKM2				⇓Lg	Lg	07 16 43.6	
	18nm,0.4s						
TKM2	Tokmak 2	3.20	7	⇓eP	Pn	07 15 51.1	+2.6
	baz=2.0						
TKM2				⇓eS	Sb	07 16 32.0	-2.1
	baz=2.0						
CHMS	Chumysh	3.26	356	P	Sg	07 16 47.2	+4.7
	SNR=5.4						
BTK	Batken	3.26	277	⇑iP	Pn	07 15 51.3	+2.1
	baz=83						
BTK				⇑iS	Sb	07 16 32.8	-2.9
	baz=83						
MRKS	Merke	3.29	336	Pg	Pb	07 15 56.4	-0.1
	11nm,0.6s						
MRKS				Lg	Lg	07 16 42.8	
	8.6nm,0.3s						
MRKS	Merke	3.29	336	ePg	Pb	07 15 57.5	+1.0
	11nm,0.6s						
MRKS				eLg	Lg	07 16 43.7	
	8.6nm,0.3s						
MNAS	Manas	3.34	326	⇑iP	Pb	07 15 54.3	-3.0
	baz=26						
MNAS				⇑iS	Sb	07 16 38.7	+0.6
	baz=26						
KST	Kastek	3.37	12	Pg	Pb	07 15 58.6	+0.8
	7.6nm,0.4s						
KST				Lg	Lg	07 16 46.3	
	46nm,0.5s						
KST	Kastek	3.37	12	ePg	Pb	07 15 58.6	+0.8
	7.6nm,0.4s						
KST				eLg	Lg	07 16 46.3	
	46nm,0.5s						
TRKS	Terek-Say	3.46	302	⇓iP	Pn	07 15 54.9	+2.9
	baz=5.0						
TRKS				⇓iS	Sb	07 16 39.4	-2.1
	baz=5.0						
IZV	Izvestkoviy	3.49	19	Pg	Pb	07 16 01.5	+1.6
	5.9nm,0.3s						
IZV				Lg	Lg	07 16 51.7	
	27nm,0.6s						
IZV	Izvestkoviy	3.49	19	ePg	Pb	07 16 01.5	+1.6
	5.9nm,0.3s						
IZV				eLg	Lg	07 16 51.7	
	27nm,0.6s						
DGS	Degeres	3.54	9	Pg	Pb	07 16 01.7	+1.1
	13nm,0.6s						
DGS				Lg	Lg	07 16 51.8	
	29nm,0.6s						
DGS	Degeres	3.54	9	ePg	Pb	07 16 01.7	+1.1
	13nm,0.6s						
DGS				eLg	Lg	07 16 51.8	
	29nm,0.6s						
MTBS	Maitube	3.54	17	Pg	Pb	07 16 01.6	+0.9
	6.5nm,0.3s						
MTBS				Lg	Lg	07 16 51.7	
	36nm,0.5s						
MTBS	Maitube	3.54	17	eP	Pb	07 16 01.6	+0.9
	6.5nm,0.3s						
MTBS				eS	Sg	07 16 51.7	+0.1
	36nm,0.5s						
TNSS	Tian-Shan	3.59	23	Pg	Pb	07 16 02.8	+1.1
	5.3nm,0.2s						
TNSS				Lg	Lg	07 16 53.7	
	12nm,0.7s						
TNSS	Tian-Shan	3.59	23	eP	Pb	07 16 02.8	+1.1
	5.3nm,0.2s						
TNSS				eS	Sg	07 16 53.7	+0.6
	12nm,0.7s						
ANVS	Anan'yevo	3.62	32	⇑iP	Pn	07 15 54.2	-0.1
	baz=25						
ANVS				⇑iS	Sn	07 16 38.3	+1.1
	baz=25						
MDOK	Medeo	3.73	23	⇑Pn	Pn	07 15 57.7	+2.0
	2.8nm,0.7s						
MDOK				Pg	Pb	07 16 05.0	+1.0
	4.7nm,0.3s						
MDOK				Pg	Pg	07 16 05.7	-3.8
	8.4nm,1.1s						
MDOK				Lg	Lg	07 16 57.6	
	23nm,0.5s						
MDOK				⇑Lg	Lg	07 16 58.2	
	26nm,0.8s						
KOTS	Kotyrbulak	3.82	23	Pg	Pb	07 16 06.9	+1.5
	5.3nm,0.3s						
KOTS				Lg	Lg	07 17 00.7	
	106nm,0.5s						
KOTS	Kotyrbulak	3.82	23	ePg	Pb	07 16 06.9	+1.5
	5.3nm,0.3s						
KOTS				eLg	Lg	07 17 00.7	
	106nm,0.5s						
KRBS	Karabastau	3.98	7	Pg	Pb	07 16 10.1	+2.0
	5.7nm,0.4s						
KRBS				Lg	Lg	07 17 06.4	
	14nm,0.6s						
KRBS	Karabastau	3.98	7	ePg	Pb	07 16 10.1	+2.0
	5.7nm,0.4s						
KRBS				eLg	Lg	07 17 06.4	
	14nm,0.6s						
KTBS	Karatobe	4.15	17	Pg	Pb	07 16 13.1	+2.1
	4.9nm,0.3s						
KTBS				Lg	Lg	07 17 11.5	
	22nm,0.5s						

KTBS	Karatobe	4.15	17	*e*Pg	Pb	07 16 13.1	+2.1
	4.9nm,0.3s						
KTBS				*e*Lg	Lg	07 17 11.5	
	22nm,0.5s						
SATY	Saty	4.17	36	Pg	Pb	07 16 12.9	+1.5
	8.2nm,0.4s						
SATY				Lg	Lg	07 17 11.1	
	13nm,0.3s						
SATY	Saty	4.17	36	*e*Pg	Pb	07 16 12.9	+1.5
	8.2nm,0.4s						
SATY				*e*Lg	Lg	07 17 11.1	
	13nm,0.3s						
KUU	Kurty	4.26	13	Pg	Pb	07 16 15.1	+2.3
	3.7nm,0.1s						
KUU				Lg	Lg	07 17 14.8	
	23nm,0.3s						
KUU	Kurty	4.26	13	*e*Pg	Pb	07 16 15.1	+2.3
	3.7nm,0.1s						
KUU				*e*Lg	Lg	07 17 14.8	
	23nm,0.3s						
CHKK	Chushkaly	4.36	19	Pg	Pb	07 16 16.9	+2.4
	7.5nm,0.3s						
CHKK				Lg	Lg	07 17 17.8	
	20nm,0.4s						
CHKK	Chushkaly	4.36	19	*e*Pg	Pb	07 16 16.9	+2.4
	7.5nm,0.3s						
CHKK				*e*Lg	Lg	07 17 17.8	
	20nm,0.4s						
KURS	Kuram	4.41	31	Pg	Pb	07 16 18.1	+2.6
	3.0nm,0.5s						
KURS				Lg	Lg	07 17 20.0	
	11nm,0.9s						
KURS	Kuram	4.41	31	*e*Pg	Pb	07 16 18.1	+2.6
	3.0nm,0.5s						
KURS				*e*Lg	Lg	07 17 19.9	
	11nm,0.9s						
IUG	Iuzhnay	4.49	304	Pg	Pb	07 16 16.5	-0.3
	7.0nm,0.3s						
IUG				Lg	Lg	07 17 17.4	
	30nm,0.5s						
IUG	Iuzhnay	4.49	304	*e*Pg	Pb	07 16 16.5	-0.3
	7.0nm,0.3s						
IUG				*e*Lg	Lg	07 17 17.4	
	30nm,0.5s						
UZB	Uzynbulak	4.53	40	Pg	Pb	07 16 19.5	+1.9
	7.3nm,0.4s						
UZB				Lg	Lg	07 17 22.0	
	7.4nm,0.6s						
UZB	Uzynbulak	4.53	40	*e*Pg	Pb	07 16 19.5	+1.9
	7.3nm,0.4s						
UZB				*e*Lg	Lg	07 17 22.0	
	7.4nm,0.6s						
KPKS	Kokpek	4.61	35	Pg	Pb	07 16 20.0	+1.1
	6.2nm,0.4s						
KPKS				Lg	Lg	07 17 23.5	
	18nm,0.4s						
KPKS	Kokpek	4.61	35	*e*Pg	Pb	07 16 20.1	+1.1
	6.2nm,0.4s						
KPKS				*e*Lg	Lg	07 17 23.5	
	18nm,0.4s						
SHLS	Shalkode	4.76	43	Pg	Pg	07 16 27.6	-1.4
	8.5nm,0.3s						
SHLS				Lg	Lg	07 17 36.4	
	15nm,0.4s						
SHLS	Shalkode	4.76	43	*e*Pg	Pg	07 16 27.6	-1.4
	8.5nm,0.3s						
SHLS				*e*Lg	Lg	07 17 36.4	
	15nm,0.4s						
KK31	Karatay Array	4.78	316	Pn	Pn	07 16 12.3	+2.4
	0.4nm,0.3s,baz=284,slow=11,SNR=10						
KK31				⇑Pg	Pg	07 16 28.3	-1.1
	2.0nm,0.5s,baz=140,slow=16,SNR=9.8						
KK31				⇑Lg	Lg	07 17 34.9	
	2.9nm,0.5s,baz=132,slow=29,SNR=4.2						
PDGK	Podgornoye	4.90	42	Pg	Pb	07 16 26.5	+2.7
	2.7nm,0.4s						
PDGK				Lg	Lg	07 17 34.3	
	7.1nm,0.6s						
PDGK	Podgornoye	4.90	42	⇓Pg	Pb	07 16 25.0	+1.2
	3.8nm,0.6s						
PDGK				⇑Lg	Lg	07 17 33.0	
	17nm,0.8s						
BLB	Baldybastay	5.05	29	Pg	Pb	07 16 29.5	+3.1
	6.1nm,0.2s						
BLB				Lg	Lg	07 17 39.7	
	6.8nm,0.4s						
BTLS	Baital	5.34	352	Pg	Pg	07 16 36.4	-3.8
	1.8nm,0.2s						
BTLS				Lg	Lg	07 17 51.4	
	3.9nm,0.4s						
BTLS	Baital	5.34	352	*e*Pg	Pg	07 16 36.4	-3.8
	1.8nm,0.2s						
BTLS				*e*Lg	Lg	07 17 51.4	
	3.9nm,0.4s						
DJR	Jarkent	5.79	36	Pg	Pg	07 16 44.5	-4.2
	2.1nm,0.3s						
DJR	Jarkent	5.79	36	*e*Pg	Pg	07 16 44.5	-4.2
	2.1nm,0.3s						
DJR				*e*Lg	Lg	07 18 05.3	
	3.8nm,0.5s						

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*IDC **04** 07:18:15.3±2.2, 42°.92N×29°.37W, h0^{km}, mb3.7/6, mbtmp3.6/7, ML4.0/1, MS3.3/5, Error ellipse: s-maj=60.1km s-min=29.2km az=37.0*

ISC 04 07:18:16.9±1.8**, 42°.9N**±0°.3×**29°.3W**±0°.2**, h10^{km}, n12, σ0^{s}.14**/7**, mb3.6**/6**, MS3.4**/5**, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESDC	Sonseca Array	19.31	91	P	Pn	07 22 42.9	-0.2
	0.1nm,0.3s,baz=290,slow=13,SNR=4.8						
	0.6nm,0.6s						
SCHQ	Schefferville	27.06	309	LR	LR	07 33 19.7	
	comp=Z,87nm,18.2s,baz=92,slow=34						
NOA	NORSAR Array B	30.19	39	LR	LR	07 34 02.5	
	comp=Z,17nm,21.5s,baz=245,slow=31						
FRB	Frobisher Bay	30.60	326	LR	LR	07 34 32.0	
	comp=Z,85nm,18.7s,baz=287,slow=32						
VRAC	Vranov	32.07	62	LR	LR	07 36 50.4	
	comp=Z,48nm,18.2s,baz=345,slow=35						
TORD	Torodi Ar. Bea	39.95	129	P	P	07 25 51.5	0.0
	0.7nm,0.8s,baz=335,slow=6.4,SNR=2.8						
	0.7nm,0.8s						
BRTR	Keskin Array B	46.42	71	P	P	07 26 43.8	0.0
	0.9nm,0.7s,baz=281,slow=9.7,SNR=5.1						
	0.9nm,0.7s						
YKA	Yellowknife Ar	51.03	323	P	P	07 27 18.6	-0.1
	0.3nm,0.7s,baz=75,slow=7.5,SNR=4.3						
	0.3nm,0.7s						
TXAR	Lajitas Array	59.75	283	LR	LR	07 53 50.3	
	comp=Z,47nm,20.0s,baz=238,slow=36						
ZALV	Zalesovo Beam	68.31	35	P	P	07 29 17.9	0.0
	1.0nm,0.7s,baz=297,slow=6.3,SNR=4.5						
	1.0nm,0.7s						
MKAR	Makanchi Array	72.13	42	P	P	07 29 41.6	+0.2
	0.8nm,0.8s,baz=328,slow=5.8,SNR=9.8						
	0.8nm,0.8s						
SONM	Songino Array	81.55	28	P	P	07 30 34.7	0.0
	0.3nm,0.8s,baz=328,slow=5.1,SNR=2.2						
	0.3nm,0.8s						

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*WEL **04** 07:27:00, 41°.83S×174°.12E, h11^{km}, ML4.5, Mw4.3, Moment Tensor Solution. s7 Moment tensor: Scale 10^{15} Nm; M$_{rr}$2.86; M$_{\theta\theta}$0.36; M$_{\phi\phi}$-3.22; M$_{r\theta}$-1.11; M$_{\theta\phi}$-1.48; M$_{\phi r}$1.16; Fault plane solution: M$_0$3.75000×10^{15} NP1: φ$_s$225.00000°, δ45.00000°, λ130.00000°. NP2: φ$_s$355.00000°, δ57.00000°, λ57.00000°. Principal axes: T 367.6200, Plg62.0000°, Azm211.0000°; N 15.7400, Plg27.0000°, Azm14.0000°; P -383.3500, Plg7.0000°, Azm108.0000°;*

*IDC **04** 07:27:35.0±0.8, 41°.68S×174°.07E, h0^{km}, mb4.4/6, mbtmp4.4/8, ML3.8/2, MS3.3/4 Error ellipse: s-maj=24.7km s-min=21.3km az=96.0*

*NEIC **04** 07:27:37.8±1.6, 41°.82S±0°.03×174°.19E±0°.03, h19^{km}±5^{km}, mb4.5/7, Mwr4.3/32, Error ellipse: s-maj=4.4km s-min=3.1km az=206.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$3.10; M$_{\theta\theta}$-0.82; M$_{\phi\phi}$-2.28; M$_{r\theta}$1.11; M$_{\theta\phi}$-1.73; M$_{\phi r}$1.18; Fault plane solution: M$_0$3.66000×10^{15} NP1: φ$_s$208.33000°, δ32.15000°, λ81.61000°. NP2: φ$_s$38.21000°, δ58.23000°, λ95.24000°. Principal axes: T 3.4951, Plg76.0000°, Azm324.0000°; N 0.3097, Plg4.0000°, Azm215.0000°; P -3.8049, Plg13.0000°, Azm124.0000°;*

*NEIC **04** 07:27:37.6, 41°.84S×174°.20E, h17^{km}*

*NOU **04** 07:27:38.6, 41°.99S×174°.29E, h18^{km}, MLv4.6/15, Cook Strait, New Zealand*

*WEL **04** 07:27:38.5±0.6, 42°S±5°×17°4E±°, h9^{km}±4^{km}, M4.5/123, ML4.6/13, MLv4.5/123, Error ellipse: s-maj=0.0km s-min=0.0km az=166.4, confirmed*

ISC 04 07:27:37.2±0.7**, 41°.91S**±0°.03×**174°.21E**±0°.03**, h17^{km}**±4^{km}**, n194, σ1^{s}.32**/195**, mb4.4**/11**, MS3.4**/6**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.16	1		Pb	07 27 41.4	-0.3
CMWZ				Sg	Sg	07 27 44.5	+0.1
CMWZ	Cape Campbell	0.16	1	P	Pg	07 27 41.5	0.0
CMWZ				S	Sg	07 27 45.2	+0.8
BSWZ	Blackbirch Sta	0.31	307		Pg	07 27 43.2	-0.7
BSWZ				Sg	Sg	07 27 47.4	-1.1
BSWZ	Blackbirch Sta	0.31	307	P	Pg	07 27 43.3	-0.7
BSWZ				S	Sg	07 27 47.8	-0.7
TUWZ	Tuamarina	0.52	337		Pg	07 27 47.0	-0.5
TUWZ				Sg	Sg	07 27 53.8	-0.7
TUWZ	Tuamarina	0.52	337	P	Pg	07 27 47.1	-0.5
TUWZ				S	Sg	07 27 54.1	-0.4
TCW	Tory Channel	0.70	4		Pb	07 27 50.3	-0.6
TCW	Tory Channel	0.70	4	P	Pb	07 27 50.6	-0.3
TCW				S	Sg	07 28 00.5	+0.3
BHW	Baring Head	0.70	45		Pn	07 27 52.1	-0.2
SNZO	South Karori	0.70	32		Pn	07 27 52.0	-0.3
SNZO	South Karori	0.70	32	P	Pn	07 27 52.5	+0.2
KHZ	Kahutara	0.71	224		Pn	07 27 52.9	+0.5
KHZ	Kahutara	0.71	224	P	Pn	07 27 53.6	+1.1
KHZ	Kahutara	0.71	224	P	Pn	07 27 52.8	+0.3
WEL	Wellington	0.75	34	P	Pn	07 27 53.0	0.0
PLWZ	Palliser	0.85	67	Pn	Pn	07 27 55.5	+1.0
PLWZ	Palliser	0.85	67	P	Pn	07 27 55.4	+1.0
MSWZ	Moikau Station	0.92	58		Pn	07 27 56.1	+0.7
MSWZ	Moikau Station	0.92	58	P	Pn	07 27 56.8	+1.5
NNZ	Nelson	0.93	318		Pb	07 27 53.9	-0.9
NNZ	Nelson	0.93	318	P	Pb	07 27 54.3	-0.5
THZ	Tophouse	0.98	278		Pb	07 27 56.0	+0.2
THZ	Tophouse	0.98	278	P	Pn	07 27 56.2	-0.1
CAW	Cannon Point	1.02	39	P	Pg	07 27 57.8	+0.6
DUWZ	D'Urville Isla	1.12	349	P	Pn	07 27 57.9	-0.3
KIW	Kapiti Island	1.17	27	P	Pg	07 27 59.7	-0.1
MRNZ	Matariki Terra	1.20	294		Pb	07 27 59.7	+0.3
MRNZ	Matariki Terra	1.20	294	P	Pb	07 27 59.9	+0.4
TRWZ	Traveller	1.22	66	P	Pb	07 28 00.2	+0.4
MTW	Mount Morrison	1.23	53	P	Pb	07 28 00.3	+0.4
TKNZ	Takaka Hill	1.28	312		Pn	07 28 00.5	+0.2
TKNZ	Takaka Hill	1.28	312	P	Pb	07 28 00.9	0.0
OGWZ	Otaki Gorge	1.31	34	P	Pb	07 28 01.9	+0.6
GVZ	Greta Valley S	1.37	219		Pb	07 28 02.6	+0.2
GVZ	Greta Valley S	1.37	219	P	Pb	07 28 03.0	+0.5
HOWZ	Holdsworth Sta	1.41	45	P	Pb	07 28 02.9	-0.2
TMWZ	Te Maipa	1.49	58	P	Pn	07 28 03.7	+0.5
MRZ	Mangatainoka R	1.62	40	Pn	Pn	07 28 05.7	+0.8
MRZ	Mangatainoka R	1.62	40	P	Pn	07 28 05.7	+0.8
QRZ	Quartz Range	1.66	310		Pn	07 28 06.6	+1.1
QRZ	Quartz Range	1.66	310	P	Pb	07 28 07.7	+0.3
QRZ	Quartz Range	1.66	310	P	Pb	07 28 07.2	-0.2
LTZ	Lake Taylor	1.68	238	Pn	Pn	07 28 06.7	+0.8
LTZ	Lake Taylor	1.68	238	P	Pb	07 28 07.2	-0.5
TIWZ	Tintock	1.69	49	P	Pn	07 28 06.6	+0.6
AMCZ	Amberley	1.71	222		Pn	07 28 07.0	+0.8
AMCZ	Amberley	1.71	222	P	Pn	07 28 07.3	+1.0
CPWZ	Castlepoint	1.80	57	P	Pn	07 28 08.5	+1.1
DSZ	Denniston Nort	1.80	274	Pn	Pn	07 28 08.6	+1.1
DSZ	Denniston Nort	1.80	274	P	Pb	07 28 09.5	-0.3
OHWZ	Ohakea	1.89	27	P	Pb	07 28 11.5	+0.2
PRWZ	Pori Road	1.89	45	P	Pn	07 28 09.5	+0.7
POWZ	Post Office Ro	1.92	38	P	Pn	07 28 10.1	+1.1
BFZ	Birch Farm	1.96	52		Pn	07 28 09.5	-0.2
BFZ	Birch Farm	1.96	52	P	Pn	07 28 10.4	+0.7
BFZ	Birch Farm	1.96	52	P	Pn	07 28 09.8	+0.2
MQZ	McQueen's Vall	2.13	212		Pn	07 28 11.6	-0.4
MQZ	McQueen's Vall	2.13	212	P	Pn	07 28 11.9	-0.1
OXZ	Oxford	2.14	228		Pn	07 28 11.8	-0.3
OXZ	Oxford	2.14	228	P	Pn	07 28 12.5	+0.4
DVHZ	Dannevirke	2.18	43	P	Pn	07 28 12.9	+0.2
AKCZ	Akaroa Harbour	2.19	205	P	Pn	07 28 13.5	+0.7
INZ	Inchbonnie	2.21	247	Pn	Pn	07 28 14.0	+1.0
INZ	Inchbonnie	2.21	247	P	Pn	07 28 14.5	+1.5
WAZ	Wanganui	2.23	16	P	Pb	07 28 17.3	+0.3
ANWZ	Angora Road	2.24	51	P	Pn	07 28 13.9	+0.4
TSZ	Takapari Road	2.27	36	P	Pn	07 28 14.8	+0.8
RACZ	Rakaia	2.37	219	P	Pn	07 28 15.4	+0.1
LREZ	Lake Rotokare	2.45	4	P	Pb	07 28 20.4	-0.4
PRHZ	Porangahau	2.46	49	P	Pn	07 28 16.6	+0.1
PNHZ	Pukenui	2.50	38	P	Pn	07 28 17.4	+0.3
WPHZ	Waipukurau	2.50	43	P	Pn	07 28 17.5	+0.4
NMEZ	Namu Road	2.50	354	P	Pb	07 28 22.4	+0.7
KHEZ	Kahui Hut	2.61	357	P	Pb	07 28 22.1	-1.5
KHEZ	Kahui Hut	2.61	357	P	Pb	07 28 23.7	+0.1
NEZ	North Egmont	2.63	358	P	Pb	07 28 23.4	-0.6
NBEZ	Newall Road No	2.65	354	P	Pb	07 28 24.3	+0.2
WACZ	Wakanui South	2.68	220	P	Pn	07 28 19.9	+0.4
MTVZ	Mangateitei	2.69	21	P	Pb	07 28 23.2	-1.8
DREZ	Durham Road	2.71	360	P	Pb	07 28 24.9	-0.4
PKE	Pukeiti	2.71	356	P	Pb	07 28 24.8	-0.6
PXZ	Pawanui	2.75	48	P	Pn	07 28 19.9	-0.6
PKVZ	Pokaka	2.75	19	P	Pn	07 28 23.3	+2.6
MOVZ	Moawhango	2.76	26	P	Pn	07 28 22.0	+1.3
WNVZ	Wahianoa	2.79	23	P	Pn	07 28 23.3	+2.2
BHHZ	Black Hill Sta	2.79	31	P	Pn	07 28 22.7	+1.5
TRVZ	Turoa	2.80	22	P	Pn	07 28 24.0	+2.6
VRZ	Vera Road	2.81	9	P	Pb	07 28 24.4	-2.6
WVZ	Waitaha Valley	2.82	244	P	Pn	07 28 22.6	+1.2
DRZ	Dome Shelter	2.82	22	P	Pb	07 28 25.2	-2.2
WHVZ	Whangaehu Hut	2.82	22	P	Pb	07 28 25.7	-1.6
MHEZ	Mangahewa	2.83	2	P	Pb	07 28 28.5	+1.3
FWVZ	Far West T-bar	2.84	22	P	Pn	07 28 24.5	+2.5
TUVZ	Tukino	2.86	23	P	Pn	07 28 24.3	+2.2
KAHZ	Kahuranaki	2.92	45	P	Pn	07 28 23.0	+0.1
NGZ	Ngauruhoe	2.93	22	P	Pn	07 28 25.4	+2.3
SNVZ	South Ngauruho	2.93	22	P	Pn	07 28 25.6	+2.5
RPZ	Rata Peaks	2.94	231	Pn	Pn	07 28 23.7	+0.5
	28nm,0.3s,baz=78,slow=1.1,SNR=128						
RPZ				Sn	Sn	07 28 57.5	-0.6
	21nm,0.3s,baz=312,slow=22,SNR=19						
	178nm,0.6s						
RPZ	Rata Peaks	2.94	231	P	Pn	07 28 23.7	+0.5
RPZ	Rata Peaks	2.94	231	P	Pn	07 28 23.8	+0.7
OTVZ	Oturere	2.96	23	P	Pn	07 28 25.8	+2.4
NNVZ	North Ngauruho	2.97	22	P	Pn	07 28 26.0	+2.3
WTVZ	West Tongariro	2.98	21	P	Pn	07 28 26.4	+2.6
TWVZ	Taurewa	2.98	19	P	Pn	07 28 25.9	+2.1
ETVZ	East Tongariro	3.00	23	P	Pn	07 28 25.9	+1.9
KWHZ	Kaweka Forest	3.00	35	P	Pn	07 28 24.3	+0.3
TMVZ	Te Maari	3.01	23	P	Pn	07 28 26.1	+1.8
KRVZ	Karewarewa	3.01	22	P	Pb	07 28 31.9	+1.4
NTVZ	North Tongarir	3.02	22	P	Pn	07 28 26.4	+2.1
ARCZ	Arundel	3.02	226	P	Pn	07 28 24.8	+0.6
MCHZ	McNeill Hill	3.10	38	P	Pn	07 28 25.6	+0.2
KATZ	Kakaramea	3.14	22	P	Pb	07 28 34.1	+1.4
RITZ	Rihia Road	3.19	24	P	Pb	07 28 31.1	-2.3
GCSZ	Gaunt Creek Bo	3.19	243	P	Pn	07 28 28.4	+1.8
BKZ	Black Stump Fm	3.24	33	P	Pn	07 28 28.4	+1.1
BKZ	Black Stump Fm	3.24	33	P	Pn	07 28 26.6	-0.8
RATZ	Rangitukua	3.26	22	P	Pb	07 28 33.1	-1.6
ARHZ	Aropaoanui	3.39	40	P	Pn	07 28 29.6	+0.3
WATZ	Wairara	3.40	21	P	Pb	07 28 34.9	-2.1
TMZ	Timaru	3.41	222	P	Pn	07 28 29.9	+0.3
HIZ	Hauiti	3.42	9	P	Pn	07 28 33.0	+3.2
HIZ	Hauiti	3.42	9	P	Pn	07 28 32.6	+2.8
NMHZ	Naumai	3.43	36	P	Pn	07 28 29.9	-0.1
FOZ	Fox Glacier	3.62	242	P	Pn	07 28 34.4	+1.9
WHHZ	Waihua	3.65	40	P	Pn	07 28 31.8	-1.1
MTHZ	Maungataniwha	3.65	34	P	Pn	07 28 33.8	+0.8
WPRZ	Whakapapatarin	3.70	24	P	Pb	07 28 39.2	-2.9
TLZ	Tolley Road	3.71	16	P	Pn	07 28 37.3	+3.4
PRRZ	Plateau Road	3.79	27	P	Pn	07 28 37.9	+3.0
LBZ	Lake Benmore	3.85	229	P	Pn	07 28 36.7	+1.0
HRRZ	Handcock Road	3.85	25	P	Pn	07 28 38.7	+2.9
MUGZ	Murupara	3.95	31	P	Pn	07 28 38.6	+1.6
ODZ	Otahua Downs	4.07	218		Pn	07 28 38.2	-0.5
ODZ	Otahua Downs	4.07	218	P	Pn	07 28 38.8	+0.2
ODZ	Otahua Downs	4.07	218	P	Pn	07 28 38.6	0.0
RIGZ	Rimuhau	4.20	42	P	Pn	07 28 39.2	-1.2
URZ	Urewera	4.27	32	Pn	Pn	07 28 41.1	-0.3
	2.6nm,0.3s,baz=328,slow=5.0,SNR=16						
URZ				Sn	Sn	07 29 30.2	-0.6
	7.1nm,0.3s,baz=176,slow=8.6,SNR=4.0						
	12nm,0.6s						
URZ	Urewera	4.27	32	P	Pn	07 28 42.2	+0.8
URZ	Urewera	4.27	32	P	Pn	07 28 41.8	+0.4
TOZ	Tahuroa Road	4.29	14	P	Pn	07 28 44.4	+2.8
TGRZ	Tauranga	4.46	21	P	Pn	07 28 48.7	+4.7
JCZ	Jackson Bay	4.53	240	P	Pn	07 28 46.1	+1.0
JCZ	Jackson Bay	4.53	240	P	Pn	07 28 45.8	+0.7
TWGZ	Tauwhareparae	4.72	39	P	Pn	07 28 47.3	-0.3
RUGZ	Raukumara Rang	4.75	35	P	Pn	07 28 47.0	-1.2
WKZ	Wanaka	4.78	231		Pn	07 28 48.5	+0.1
WKZ	Wanaka	4.78	231	P	Pn	07 28 48.8	+0.4
AWAZ	Awhitu Peninsu	4.85	4	P	Pn	07 28 53.1	+3.8
MKAZ	Moumakai	4.85	9	P	Pn	07 28 51.2	+1.9
EAZ	Earnscleugh	4.87	225	P	Pn	07 28 50.0	+0.3
HAZ	Te Kaha	4.97	35	P	Pn	07 28 51.1	+0.1
WTAZ	Waiatarua	4.97	3	P	Pn	07 28 56.0	+4.9
ETAZ	East Tamaki Re	4.98	7	P	Pn	07 28 56.0	+4.9
RVAZ	Riverhead Bore	5.14	3	P	Pn	07 28 57.4	+4.1
MBAZ	Motutapu North	5.16	6	P	Pn	07 28 58.2	+4.6
KUZ	Kuaotunu	5.29	13	P	Pn	07 28 58.7	+3.4
KUZ	Kuaotunu	5.29	13	P	Pn	07 28 59.2	+3.8
MSZ	Milford Sound	5.36	237	P	Pn	07 29 02.4	+6.1
MXZ	Matakaoa Point	5.37	37	P	Pn	07 28 58.2	+1.8
MXZ	Matakaoa Point	5.37	37	P	Pn	07 28 58.0	+1.6
MLZ	Mavora Lakes	5.61	230		Pn	07 28 59.5	-0.4
MLZ	Mavora Lakes	5.61	230	P	Pn	07 29 00.8	+1.0
SYZ	Scrubby Hill	5.89	216	P	Pn	07 29 04.9	+1.3
SYZ	Scrubby Hill	5.89	216	P	Pn	07 29 06.0	+2.4
WCZ	Waipu Caves	5.96	1	P	Pn	07 29 08.8	+4.1
CTZ	Chatham Island	6.99	108	P	Pn	07 29 19.9	+1.2
CTZ	Chatham Island	6.99	108	P	Pn	07 29 19.6	+0.9
DZM	Mont Dzumac	20.83	339	*e*LR	LR	07 37 13.3	
	comp=Z,82nm,28.0s						
TBI	Tubuai	35.42	70	*e*LR	LR	07 44 00.5	
	comp=Z,1µm,37.8s						
TBI				*e*LR	LR	07 44 01.1	
	comp=Z,548nm,38.0s						
AS31	Alice Springs	38.04	286	P	P	07 34 53.4	-1.3
AS31				IAmb	IAmb	07 34 57.5	
	comp=Z,1.8nm,1.1s						
ASAR	Alice Springs	38.04	286	P	P	07 34 54.1	-0.6
	comp=Z,1.0nm,0.5s,baz=122,slow=6.5,SNR=36						
ASAR				PcP	PcP	07 37 08.8	-1.2
	comp=Z,0.5nm,0.7s,baz=127,slow=3.5,SNR=4.8						
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	38.04	286	P	P	07 34 53.8	-0.9
COEN	Coen	38.70	307	P	P	07 34 60.0	-0.3
COEN				IAmb	IAmb	07 35 17.7	
	comp=Z,12nm,1.4s						
PPT	Papeete	39.27	63	LR	LR	07 51 00.2	
	comp=Z,64nm,18.2s,baz=210,slow=36						
WRA	Warramunga Arr	40.13	291	P	P	07 35 11.8	-0.4
	comp=Z,1.5nm,0.6s,baz=126,slow=8.5,SNR=19						
WRA				PcP	PcP	07 37 15.3	-1.2
	comp=Z,0.9nm,0.8s,baz=121,slow=3.5,SNR=5.1						
	comp=Z,1.5nm,0.6s						
WRA	Warramunga Arr	40.13	291	P	P	07 35 11.1	-1.1
PMG	Port Moresby	40.18	316	P	P	07 35 10.9	-1.7
	comp=Z,8.5nm,0.5s,baz=28,slow=7.8,SNR=5.1						
	comp=Z,8.5nm,0.5s						
PMG	Port Moresby	40.18	316	P	P	07 35 10.9	-1.7
PMG				IAmb	IAmb	07 35 12.6	
	comp=Z,19nm,0.9s						
WB0	Warramunga Arr	40.21	291	P	P	07 35 11.9	-0.9
WB0				IAmb	IAmb	07 35 33.7	
	comp=Z,11nm,1.3s						
QSPA	South Pole Qui	48.22	180	P	P	07 36 19.6	+3.0
	comp=Z,7.0nm,1.0s,baz=352,slow=1.0,SNR=15						
	comp=Z,7.0nm,1.0s						
MAW	Mawson	59.30	205	P	P	07 37 38.6	+1.2
KAPI	Kappang	60.66	292	LR	LR	08 05 53.1	
	comp=Z,34nm,18.1s,baz=120,slow=38						
RPN	Rapa Nui	62.77	103	LR	LR	08 00 22.4	
	comp=Z,15nm,18.6s,baz=9.5,slow=31						
SBUM	Sibu	71.22	291	P	P	07 38 55.1	-0.4
SBUM				IAmb	IAmb	07 39 08.2	
	comp=Z,11nm,1.4s						
KSRS	Korea Array	89.57	325	P	P	07 40 33.6	+0.3
	comp=Z,1.9nm,0.8s,baz=137,slow=5.3,SNR=7.1						
	comp=Z,1.9nm,0.8s						
CMAR	Chiang Mai Arr	91.67	293	P	P	07 40 44.4	+0.7
	comp=Z,1.5nm,0.4s,baz=164,slow=4.6,SNR=7.4						
CMAR				LR	LR	08 27 42.7	
	comp=Z,10nm,18.0s,baz=185,slow=39						
	comp=Z,1.5nm,0.4s						
PZH	PanZhiHua	95.38	301	P	P	07 40 59.7	-1.0
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YKA	Yellowknife Ar	118.53	30	PKP	PKiKP	07 46 23.3	+0.4
	comp=Z,0.6nm,0.7s,baz=240,slow=1.6,SNR=10						
KBZ	Khabaz	144.65	290	PKP	PKPab	07 47 10.9	-0.1
	comp=Z,1.6nm,0.8s,baz=271,slow=17,SNR=2.6						
DBIC	Dimbokro	144.90	182	PKPbc	PKPdf	07 47 13.5	-0.3
	comp=Z,2.0nm,0.8s,baz=212,slow=17,SNR=1.4						
ARCES	ARCESS Array B	147.91	340	PKPbc	PKPdf	07 47 18.7	+1.6
	comp=Z,5.3nm,1.0s,baz=50,slow=6.5,SNR=4.0						
BRTR	Keskin Array B	150.26	279	PKP	PKPdf	07 47 20.9	-1.1
	comp=Z,0.3nm,0.3s,baz=115,slow=2.3,SNR=2.5						
BRTR				PKPab	pPKPbc	07 47 32.7	-0.4
	comp=Z,1.4nm,0.9s,baz=113,slow=1.8,SNR=4.5						
TORD	Torodi Ar. Bea	150.62	195	PKP	PKPdf	07 47 24.3	+1.2
	comp=Z,0.3nm,0.6s,baz=207,slow=1.6,SNR=2.0						
TORD				PKPbc	pPKPdf	07 47 29.8	+0.7
	comp=Z,1.9nm,0.5s,baz=166,slow=2.5,SNR=15						
FINES	FINESS Array B	152.65	326	PKPbc	PKPbc	07 47 30.1	-1.6
	comp=Z,1.1nm,0.8s,baz=294,slow=1.9,SNR=4.8						

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*IDC **04** 07:33:07.2±4.4, 7°.24S×155°.52E, h88^{km}±44^{km}, mb3.5/7, mbtmp3.8/7, MS3.6/4, Error ellipse: s-maj=32.5km s-min=20.3km az=142.0*

ISC 04 07:33:03.8±0.8**, 7°.1S**±0°.2×**155°.4E**±0°.1**, h50^{km}, n14, σ0^{s}.92**/10**, mb3.8**/7**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.08	117	P	Pn	07 34 17.9	+0.5
	649nm,0.3s,baz=186,slow=5.4,SNR=2.3						
HNR				S	Sn	07 35 14.7	-0.1
	710nm,0.4s,baz=90,slow=23,SNR=1.4						
HNR				LR	LR	07 35 59.9	
	comp=Z,4µm,19.7s,baz=282,slow=35						
PMG	Port Moresby	8.44	254	LR	LR	07 38 24.9	
	comp=Z,134nm,18.9s,baz=140,slow=37						
CTA	Charters Tower	15.63	214	LR	LR	07 42 15.7	
	comp=Z,110nm,18.2s,baz=80,slow=35						
WRA	Warramunga Arr	24.05	236	P	P	07 38 15.9	+1.3
	2.3nm,0.8s,baz=61,slow=9.7,SNR=9.2						
	2.3nm,0.8s						
ASAR	Alice Springs	26.37	229	P	P	07 38 35.9	+0.3
	0.3nm,0.5s,baz=58,slow=9.0,SNR=5.3						
	0.3nm,0.5s						
STKA	Stephens Creek	27.78	206	P	P	07 38 46.5	-1.6
	1.2nm,0.5s,baz=31,slow=11,SNR=5.1						
STKA				LR	LR	07 48 37.8	
	comp=Z,85nm,20.4s,baz=30,slow=34						
	1.2nm,0.5s						
H11S3	WAKE ISLAND Hy	27.79	24	T	T	08 07 22.4	
	baz=202,slow=75,SNR=11						
H11S2	WAKE ISLAND Hy	27.80	24	T	T	08 07 22.7	
	baz=202,slow=75,SNR=7.5						
H11S1	WAKE ISLAND Hy	27.81	24	T	T	08 07 23.6	
	baz=202,slow=75,SNR=6.2						
SONM	Songino Array	69.64	327	P	P	07 44 08.3	+0.1
	0.5nm,0.5s,baz=140,slow=6.2,SNR=5.0						
	0.5nm,0.5s						
ILAR	Eielson Array	83.35	21	P	P	07 45 24.4	-0.8
	0.6nm,1.0s,baz=253,slow=4.9,SNR=5.4						
	0.6nm,1.0s						
MKAR	Makanchi Array	83.74	319	P	P	07 45 28.0	+0.3
	1.2nm,0.8s,baz=109,slow=5.0,SNR=11						
	1.2nm,0.8s						
ZALV	Zalesovo Beam	84.49	326	P	P	07 45 31.2	0.0
	0.5nm,0.4s,baz=79,slow=7.7,SNR=4.3						
	0.5nm,0.4s						
BDFB	Brasilia	147.63	134	PKPbc	PKPdf	07 52 41.9	+0.6
	2.8nm,0.7s,baz=216,slow=10,SNR=5.1						

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*IDC **04** 07:38:54.2±2.8, 36°.77N×141°.66E, h0^{km}, mb3.4/2, mbtmp3.2/3, ML1.8/1, Error ellipse: s-maj=56.5km s-min=35.6km az=37.0*

*JMA **04** 07:38:56.4±0.1, 37°.3N±0°.3×141°.4E±0°.8, h33^{km}±1^{km}, MV3.3/39, E OFF FUKUSHIMA PREF*

ISC 04 07:38:55.1±2.5, **37°.31N**±0°.06×**141°.5E**±0°.1, **h28**^{km}±17^{km}, **n19**, σ**0^{s}.82**/20, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.49	277	*i* P	Pb	07 39 05.6	+0.4
JFK				S	Sb	07 39 12.0	-0.1
ONAJ	Iwakimizuishiy	0.58	249	P	Pb	07 39 07.1	+0.3
ONAJ				S	Sb	07 39 14.4	-0.4
JMST	Minamisoumatoc	0.63	311	P	Pb	07 39 07.6	+0.1
JMST				S	Sb	07 39 15.7	-0.3
JFFD	Fukushimafurud	0.77	254	P	Pn	07 39 09.9	-0.2
JFFD				S	Sb	07 39 19.4	-0.6
JMM	Marumori	0.78	316	P	Pn	07 39 09.9	-0.3
JMM				S	Sb	07 39 19.5	-0.7
JOTO	OTAMA OYAMA	0.95	286	P	Pb	07 39 13.2	+0.3
JOTO				*e*S	Sb	07 39 24.9	-0.2
JHO	Hitachi	1.01	227	P	Pn	07 39 13.4	0.0
JIO	Ouri	1.15	355	*e*P	Pn	07 39 15.4	+0.1
JOU	Okura	1.23	329	P	Pn	07 39 17.6	+1.0
JOU				*e*S	Sb	07 39 32.8	-0.5
JFY	Yanaizu	1.42	274	*e*P	Pb	07 39 20.3	-0.6
MJAR	Matsushiro Arr	2.73	255	Pn	Pn	07 39 39.4	+2.3
	0.2nm,0.3s,baz=82,slow=16,SNR=4.0						
MJAR				Sn	Sb	07 40 14.8	-1.5
	0.5nm,0.3s,baz=32,slow=2.9,SNR=2.2						
	1.1nm,0.4s						
H11N2	WAKE ISLAND Hy	28.25	121	T	T	08 14 16.6	
	baz=314,slow=75,SNR=14						
H11N1	WAKE ISLAND Hy	28.25	121	T	T	08 14 18.6	
	baz=314,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	28.26	121	T	T	08 14 18.9	
	baz=314,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	28.97	123	T	T	08 15 12.6	
	baz=316,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	28.97	123	T	T	08 15 12.0	
	baz=316,slow=76,SNR=9.0						
H11S2	WAKE ISLAND Hy	28.98	123	T	T	08 15 18.1	
	baz=316,slow=76,SNR=9.2						
MKAR	Makanchi Array	44.02	302	P	P	07 47 06.7	+6.7
	0.3nm,0.8s,baz=87,slow=8.1,SNR=2.3						
	0.3nm,0.8s						
WRA	Warramunga Arr	57.34	188	P	P	07 48 40.4	-0.3
	0.5nm,0.8s,baz=6.9,slow=7.6,SNR=2.3						
	0.5nm,0.8s						

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*IDC **04** 07:43:08.0±3.2, 38°.16N×20°.94E, h0^{km}, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=387.8km s-min=30.5km az=136.0*

*ATH **04** 07:43:11.4, 37°.77N×21°.20E, h19^{km}±3^{km}, ML3.0/10, Error ellipse: s-maj=3.9km s-min=1.0km az=213.0*

*THE **04** 07:43:11.7, 37°.78N×21°.18E, h0^{km}±1^{km}, ML3.1/17, Error ellipse: s-maj=1.9km s-min=0.6km az=219.0*

ISC 04 07:43:12.0±0.9, **37°.78N**±0°.03×**21°.18E**±0°.02, **h16**^{km}±6^{km}, **n48**, σ**1^{s}.34**/73, **mb3.3**/3, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTHK	Lithakia	0.28	256	P	Pg	07 43 17.9	-0.1
LTHK				S	Sg	07 43 22.3	+0.2
	16µm,0.2s						
LTHK	Lithakia	0.28	256	P	Pg	07 43 18.0	-0.1
LTHK				S	Sb	07 43 22.8	-0.4
LTHK				AML	AML	07 43 24.8	
	comp=E,27148µm,0.2s						
LTHK				AML	AML	07 43 24.9	
	comp=N,35326µm,0.2s						
RLS	Riolos of Patr	0.36	39	P	Pg	07 43 18.9	-0.4
RLS				S	Sg	07 43 24.2	-0.2
	comp=N,2µm,0.3s						
RLS	Riolos of Patr	0.36	39	P	Pg	07 43 18.9	-0.4
RLS				S	Sg	07 43 24.5	+0.1
RLS				AML	AML	07 43 26.4	
	comp=E,3003µm,0.2s						
RLS				AML	AML	07 43 27.1	
	comp=N,4129µm,0.4s						
DRO	Drossia	0.45	67	P	Pg	07 43 20.4	-0.7
DRO				S	Sb	07 43 28.0	-0.1
	comp=N,8µm,0.5s						
DRO	Drossia	0.45	67	P	Pg	07 43 20.2	-0.9
DRO				S	Sg	07 43 26.0	-1.3
DRO				AML	AML	07 43 33.0	
	comp=N,9926µm,0.5s						
DRO				AML	AML	07 43 33.2	
	comp=E,20356µm,0.5s						
PSDA	Pessada-Kefalo	0.58	305	P	Pg	07 43 22.5	-0.9
PSDA				S	Sg	07 43 31.5	+0.4
	comp=E,5µm,0.3s						
PSDA	Pessada-Kefalo	0.58	305	P	Pg	07 43 22.6	-0.8
PSDA				S	Sg	07 43 31.1	0.0
VLS	Valsamata	0.61	311	P	Pg	07 43 23.1	-1.0
VLS				S	Sg	07 43 32.7	+0.5
	comp=E,2µm,0.2s						
VLS	Valsamata	0.61	311	P	Pg	07 43 22.6	-1.4
VLS				S	Sb	07 43 32.9	+0.1
VLS				AML	AML	07 43 34.6	
	comp=E,3770µm,0.2s						
VLS				AML	AML	07 43 35.6	
	comp=N,3375µm,0.3s						
KEF4	Livadi, Kephal	0.77	309	P	Pg	07 43 25.9	-1.0
KEF4	Livadi, Kephal	0.77	309	P	Pg	07 43 25.7	-1.2
LAKA	Lakka	0.78	54	P	Pg	07 43 25.6	-1.6
LAKA				S	Sg	07 43 37.7	+0.2
	comp=N,3µm,0.8s						
KEF3	Kipouria, Keph	0.78	303	P	Pg	07 43 25.9	-1.3
KEF3				S	Sb	07 43 38.3	+0.7
	comp=N,3µm,0.3s						
KEF3	Kipouria, Keph	0.78	303	P	Pg	07 43 25.9	-1.3
KEF3				S	Sg	07 43 37.8	+0.3
DMLN	Damoulianata-K	0.79	306	P	Pg	07 43 26.2	-1.1
DMLN				S	Sb	07 43 38.9	+1.2
	comp=N,2µm,0.5s						
KLV	Kalavryta, Ach	0.81	71	P	Pg	07 43 26.3	-1.4
KLV				S	Sb	07 43 39.5	+1.0
	comp=N,572nm,0.7s						
KLV	Kalavryta, Ach	0.81	71	P	Pg	07 43 26.3	-1.4
KLV				AML	AML	07 43 43.4	
	comp=N,1090µm,0.5s						
KLV				AML	AML	07 43 44.0	
	comp=E,1200µm,0.8s						
FSK	Fiskardo	0.84	324	P	Pg	07 43 26.7	-1.5
FSK	Fiskardo	0.84	324	P	Pg	07 43 26.4	-1.8
FSK				S	Sb	07 43 39.5	+0.4
FSK				AML	AML	07 43 46.0	
	comp=N,1523µm,0.6s						
FSK				AML	AML	07 43 51.2	
	comp=E,2115µm,0.5s						
ITM	Ithomi	0.84	135	P	Pg	07 43 27.0	-1.3
ITM				S	Sb	07 43 40.4	+1.1
	comp=E,1µm,0.6s						
ITM	Ithomi	0.84	135	P	Pg	07 43 26.9	-1.5
EFP	Efpalio	0.86	41	P	Pg	07 43 27.2	-1.5
EFP	Efpalio	0.86	41	P	Pg	07 43 27.3	-1.5
EFP				AML	AML	07 43 44.0	
	comp=N,1133µm,0.7s						
EFP				AML	AML	07 43 46.5	
	comp=E,1331µm,0.4s						
PVO	Paravola	0.88	18	P	Pg	07 43 27.2	-1.8
PVO				S	Sb	07 43 41.8	+1.4
	comp=E,580nm,0.5s						
EVGI	Lefkada island	0.94	334	P	Pg	07 43 28.6	-1.5
EVGI				S	Sb	07 43 43.2	+1.1
EVGI	Lefkada island	0.94	334	P	Pg	07 43 28.6	-1.5
SERG	Sergoula	0.94	47	P	Pg	07 43 28.5	-1.6
PYL	PYLOS	0.99	153	P	Pg	07 43 29.1	-2.0
PYL	PYLOS	0.99	153	P	Pg	07 43 29.2	-2.0
PYL				AML	AML	07 43 50.2	
	comp=N,1258µm,0.5s						
PYL				AML	AML	07 43 52.1	
	comp=E,983µm,0.4s						
ANX	Ano Chora	1.00	35	P	Pg	07 43 29.8	-1.5
ANX	Ano Chora	1.00	35	P	Pg	07 43 29.9	-1.5
ANX				AML	AML	07 43 53.2	
	comp=E,1429µm,0.5s						
ANX				AML	AML	07 43 54.4	
	comp=N,1577µm,0.6s						
NYDR	Nydri-Lefkada	1.01	338	P	Pg	07 43 29.5	-2.0
DRAG	Dragano-Lefkad	1.02	332	P	Pg	07 43 30.5	-1.3
DRAG				S	Sb	07 43 45.8	+1.3
	comp=N,4µm,0.3s						
LKD2	Lefkada island	1.09	338	P	Pg	07 43 31.2	-1.8
LKD2	Lefkada island	1.09	338	P	Pg	07 43 31.4	-1.6
LKD2				AML	AML	07 43 53.4	
	comp=E,3413µm,0.5s						
LKD2				AML	AML	07 43 57.5	
	comp=N,1291µm,0.7s						
TSLK	Tsoukalades, L	1.12	339	P	Pg	07 43 31.8	-1.9
TSLK	Tsoukalades, L	1.12	339	P	Pg	07 43 32.1	-1.6
THAL	Thalero	1.20	77	P	Pg	07 43 34.2	-0.9
THAL				S	Sn	07 43 51.8	+1.8
	comp=N,2µm,0.8s						
EVR	Evrytania	1.24	23	P	Pg	07 43 34.8	-1.1
LOUT	Loutraki	1.43	81	P	Pn	07 43 38.7	+1.4
AXAR	Agios Charalam	1.52	49	P	Pn	07 43 39.4	+0.8
AXAR				S	Sb	07 44 00.4	+1.4
	comp=N,780nm,1.0s						
KRND	KRANIDI	1.61	104	P	Pn	07 43 41.5	+1.7
KRND				S	Sn	07 44 02.0	+1.8
	comp=N,260nm,1.0s						
ATAL	Atalanti	1.71	57	P	Pn	07 43 42.4	+1.2
ATAL				S	Sn	07 44 05.2	+2.5
	comp=N,258nm,0.8s						
VILL	Villia	1.73	76	P	Pn	07 43 43.0	+1.6
VILL				S	Sb	07 44 06.4	+1.6
	comp=N,270nm,0.8s						
TORD	Torodi Ar. Bea	30.06	220	P	P	07 49 20.4	-0.1
	comp=N,0.3nm,0.6s,baz=29,slow=9.0,SNR=2.1						
	comp=N,0.3nm,0.6s						
MKAR	Makanchi Array	45.07	58	P	P	07 51 25.2	-1.9
	comp=N,0.1nm,0.5s,baz=275,slow=7.8,SNR=2.1						
	comp=N,0.1nm,0.5s						
ZALV	Zalesovo Beam	45.57	48	P	P	07 51 28.3	-2.6
	comp=N,0.4nm,0.6s,baz=270,slow=7.2,SNR=1.7						
	comp=N,0.4nm,0.6s						

YARS 04 07:56:28.4, 65°.03N×146°.70E, h10^{km}, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKR	Artyk	1.09	219	*e*Pg	Pg	07 56 47.3	-2.0
	7.3nm,0.6s						
ATKR				*e*Sg	Sg	07 57 01.0	-2.5
	43nm,0.3s						
ATKR	Artyk	1.09	219	*i* Pg	Pg	07 56 48.1	-1.2
	2.8nm,0.2s						
ATKR				*e*Sg	Sg	07 57 02.5	-1.0
	32nm,0.2s						
ATKR				*e*Sg	Sg	07 57 02.5	-1.0
	46nm,0.2s						
UNR	Ust'-Nera	1.56	254	*e*Pg	Pn	07 56 56.0	-0.2
	59nm,0.7s						
UNR				*e*Sg	Sn	07 57 16.4	0.0
	68nm,0.6s						
UNR	Ust'-Nera	1.56	254	*e*Pg	Pb	07 56 57.2	-0.1
	1.6nm,0.2s						
UNR				*e*Sg	Sn	07 57 16.5	+0.1
	17nm,0.8s						
UNR				*e*Sg	Sn	07 57 16.5	+0.1
	24nm,0.6s						
MOMR	Moma	2.04	317	*e*Pg	Pb	07 57 05.2	-0.3
	19nm,0.6s						
MOMR				*e*Sg	Sb	07 57 32.3	+1.4
	17nm,0.3s						
MOMR	Moma	2.04	317	*e*Pg	Pb	07 57 06.0	+0.5
	34nm,0.5s						
MOMR				*e*Sg	Sb	07 57 32.2	+1.3
	41nm,0.3s						
MOMR				*e*Sg	Sb	07 57 32.2	+1.3
	36nm,0.2s						
YBGR	Belaya Gora	3.52	357	*e*Pg	Pb	07 57 31.2	+0.4
	3.5nm,0.9s						
YBGR				*e*Sg	Sb	07 58 17.0	+3.4
	7.9nm,1.0s						
YBGR	Belaya Gora	3.52	357	*e*Pg	Pb	07 57 32.3	+1.5
	2.4nm,0.5s						
YBGR				*e*Sg	Sg	07 58 18.1	-3.4
	3.0nm,0.4s						
YBGR				*e*Sg	Sg	07 58 18.1	-3.4
	3.6nm,0.4s						

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*IDC **04** 08:02:10.0±2.2, 7°.46S×156°.01E, h0^{km}, mb3.6/7, mbtmp3.6/7, MS2.7/1, Error ellipse: s-maj=79.2km s-min=28.8km az=126.0*

ISC 04 08:02:16.3±1.9, **7°.5S**±0°.4×**156°.0E**±0°.4, **h44**^{km}, **n8**, σ**0^{s}.79**/7, **mb3.5**/7, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	8.93	257	LR	LR	08 07 07.4	
	comp=Z,47nm,21.7s,baz=18,slow=33						
WRA	Warramunga Arr	24.34	237	P	P	08 07 30.6	+0.2
	1.6nm,1.1s,baz=58,slow=9.1,SNR=4.0						
	1.6nm,1.1s						
ASAR	Alice Springs	26.58	230	P	P	08 07 50.3	-0.3
	0.1nm,0.4s,baz=73,slow=7.0,SNR=1.3						
	0.1nm,0.4s						
SONM	Songino Array	70.30	327	P	P	08 13 25.5	+0.1
	0.3nm,0.5s,baz=144,slow=5.1,SNR=3.6						
	0.3nm,0.5s						
ILAR	Eielson Array	83.50	21	P	P	08 14 38.1	-1.1
	0.3nm,0.9s,baz=248,slow=4.8,SNR=2.0						
	0.3nm,0.9s						
MKAR	Makanchi Array	84.44	319	P	P	08 14 44.6	+0.2
	0.7nm,0.7s,baz=103,slow=5.5,SNR=8.8						
	0.7nm,0.7s						
ZALV	Zalesovo Beam	85.16	326	P	P	08 14 47.6	-0.2
	0.7nm,0.6s,baz=92,slow=8.9,SNR=1.8						
	0.7nm,0.6s						
YKA	Yellowknife Ar	96.34	28	P	P	08 15 41.1	+1.0
	0.2nm,0.8s,baz=256,slow=4.4,SNR=2.5						
	0.2nm,0.8s						

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*IDC **04** 08:20:08.9±1.4, 3°.74S×138°.99E, h0^{km}, mb4.0/6, mbtmp4.2/7, ML4.6/1, MS2.8/1, Error ellipse: s-maj=54.9km s-min=24.1km az=96.0*

*NEIC **04** 08:20:20.1±2.4, 3°.92S±0°.10×138°.6E±0°.1, h93^{km}±9^{km}, mb4.4/29, Error ellipse: s-maj=17.2km s-min=13.7km az=69.0*

*DJA **04** 08:20:21.6±0.5, 4°S±7°×13°9E±°, h120^{km}±10^{km}, M4.4/4, mb4.5/2, mB5.0/1, MLv4.4/4, Mw(mB)4.3/1*

ISC 04 08:20:21.1±0.5, **4°.03S**±0°.06×**138°.56E**±0°.07, **h100**^{km}, **n65**, σ**1^{s}.18**/63, **mb4.3**/20, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	2.15	48	P	Pn	08 20 55.4	-0.2
GENI	Genyem	2.15	48	P	Pn	08 20 55.4	-0.2
GENI				S	Sn	08 21 22.7	+0.8
SRPI	Serui, Papua	3.16	313	P	Pn	08 21 13.6	+4.6
FAKI	Fak Fak	6.40	280	Pn	Pn	08 21 52.4	-0.4
FAKI	Fak Fak	6.40	280	P	Pn	08 21 54.6	+1.8
FAKI	Fak Fak	6.40	280	P	Pn	08 21 55.8	+3.0
	40nm,1.6s,0.3nm						
KDU	Kakadu	10.50	215	P	Pn	08 22 48.7	+0.1
COEN	Coen	10.86	156	Pn	Pn	08 22 53.0	-0.6
COEN	Coen	10.86	156	P	Pn	08 22 53.3	-0.3
MTN	Manton Dam	11.43	220	Pn	Pn	08 23 01.0	-0.2
MTN	Manton Dam	11.43	220	P	Pn	08 23 01.0	-0.2
TNTI	Ternate	12.16	293	Pn	Pn	08 23 09.2	-1.9
KNRA	Kununurra	15.06	219		Pn	08 23 49.2	+0.5
KNRA	Kununurra	15.06	219	P	Pn	08 23 49.3	+0.6
MTSU	Mount Surprise	15.11	159	P	P	08 23 51.5	-0.6
SOEI	Soe	15.28	247	P	P	08 23 53.2	-1.0
SOEI				IAmb	IAmb	08 24 10.1	
	comp=Z,24nm,0.8s						
SOEI	Soe	15.28	247	P	P	08 23 55.2	+1.0
WB0	Warramunga Arr	16.16	194	P	Pn	08 24 02.9	+0.5
WB0				IAmb	IAmb	08 24 07.1	
	comp=Z,16nm,0.6s						
WR0	Warramunga Arr	16.31	194	P	Pn	08 24 03.7	-0.6
WR0				IAmb	IAmb	08 24 08.0	
	comp=Z,15nm,0.5s						
WRAB	Tennant Creek	16.33	194	P	Pn	08 24 04.6	+0.1
WRA	Warramunga Arr	16.34	194	Pn	Pn	08 24 04.9	+0.2
	comp=Z,2.3nm,0.3s,baz=19,slow=12,SNR=60						
WRA				Sn	Sn	08 26 56.0	-10
	comp=Z,1.3nm,0.3s,baz=14,slow=22,SNR=6.4						
	comp=Z,14nm,0.5s						
WRA	Warramunga Arr	16.34	194	P	Pn	08 24 04.5	-0.1
QIS	Mount Isa	16.46	177	P	P	08 24 07.6	+0.5
DAV	Davao City (W)	17.02	310	LR	LR	08 32 23.7	
	comp=Z,30nm,18.1s,baz=347,slow=43						
CTA	Charters Tower	17.63	155	P	Pn	08 24 21.6	+1.2
	comp=Z,7.7nm,0.7s,baz=334,slow=12,SNR=10						
CTAO	Charters Tower	17.63	155	P	Pn	08 24 20.8	+0.3
CTAO	Charters Tower	17.63	155	P	Pn	08 24 22.2	+1.7
TOLI2	Tolitoli	18.49	286	P	Pn	08 24 30.3	-0.5
FITZ	Fitzroy Crossi	18.85	221	P	P	08 24 34.6	+1.2
AS01	Alice Springs	20.02	192	P	Pn	08 24 48.2	-0.5
AS31	Alice Springs	20.03	193	P	P	08 24 46.9	+0.7
ASAR	Alice Springs	20.03	193	P	Pn	08 24 48.4	-0.5
	comp=Z,8.3nm,0.4s,baz=13,slow=9.2,SNR=221						
ASAR				S	S	08 28 23.7	-2.4
	comp=Z,0.8nm,0.5s,baz=30,slow=17,SNR=2.3						
	comp=Z,8.3nm,0.4s						
ASAR	Alice Springs	20.03	193	P	P	08 24 47.7	+1.5
EIDS	Eidsvold	24.39	152	P	P	08 25 32.3	+2.2
EIDS				IAmb	IAmb	08 25 33.3	
	comp=Z,8.3nm,0.7s						
MBWA	Marble Bar	25.00	225	P	P	08 25 36.0	+0.3
MBWA				IAmb	IAmb	08 26 12.0	
	comp=Z,19nm,1.2s						
PSA00	Pilbara Seismi	25.18	225	P	P	08 25 37.3	-0.1
FORT	Forrest	28.39	199	P	P	08 26 05.6	-0.5
MORW	Morawa	32.81	218	P	P	08 26 45.0	-0.1
CMAR	Chiang Mai Arr	44.98	301	P	P	08 28 27.1	+0.4
	comp=Z,0.6nm,0.3s,baz=119,slow=5.6,SNR=1.3						
	comp=Z,0.6nm,0.3s						
PZH	PanZhiHua	46.80	313	P	P	08 28 41.9	+0.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,5.4s						
USRK	Ussuriysk Ar.	48.37	354	P	P	08 28 51.0	-1.8
	comp=Z,0.9nm,0.6s,baz=148,slow=8.5,SNR=2.0						
	comp=Z,0.9nm,0.6s						
HHC	Hu-ho-hao-te	51.04	334	*e*P	P	08 29 14.5	+1.3
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,230nm,5.5s						
KLR	Kul'dur	53.37	354	P	P	08 29 29.4	-0.8
	comp=Z,1.7nm,0.6s,baz=195,slow=5.2,SNR=8.1						
	comp=Z,1.7nm,0.6s						
SONM	Songino Array	58.85	335	P	P	08 30 08.8	-0.5
	comp=Z,0.3nm,0.4s,baz=162,slow=6.9,SNR=2.8						
	comp=Z,0.3nm,0.4s						
WMQ	Urumqi	65.95	322	*e*P	P	08 30 57.8	+1.1
KSH	Kashi	71.88	314	P	P	08 31 35.4	+1.7
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TTA	Tatalina	82.66	25	P	P	08 32 32.4	-0.9
TTA				IAmb	IAmb	08 33 10.1	
	comp=Z,4.7nm,1.3s						
CAST	Castle Rocks	84.50	25	P	P	08 32 42.0	-0.7
CAST				IAmb	IAmb	08 33 23.1	
	comp=Z,6.4nm,1.4s						
KTH	Kantishna Hill	85.03	25	P	P	08 32 43.8	-1.6
ABKAR	Akbulak array	85.63	320	P	P	08 32 46.6	-2.0
SML	Sawmill	85.63	27	P	P	08 32 46.6	-1.7
QSPA	South Pole Qui	85.92	180	P	P	08 32 49.2	-0.7
QSPA				IAmb	IAmb	08 33 16.6	
	comp=Z,7.8nm,1.5s						
MCK	McKinley	85.93	25	P	P	08 32 48.0	-1.8
MCK				IAmb	IAmb	08 32 55.2	
	comp=Z,4.3nm,1.2s						
I23K	Minto, Yukon-K	86.19	24	P	P	08 32 50.2	-0.8
I23K				IAmb	IAmb	08 33 01.2	
	comp=Z,7.8nm,1.5s						
WRH	Wood River Hil	86.51	25	P	P	08 32 50.7	-1.9
WRH				IAmb	IAmb	08 33 01.0	
	comp=Z,5.6nm,1.4s						
COLD	Coldfoot	86.53	22	P	P	08 32 51.7	-0.8
COLD				IAmb	IAmb	08 32 53.2	
	comp=Z,3.7nm,0.9s						
CCB	Clear Creek Bu	86.67	24	P	P	08 32 51.5	-1.8
CCB				IAmb	IAmb	08 32 52.4	
	comp=Z,2.3nm,0.6s						
IL31		87.09	24	P	P	08 32 53.4	-1.9
IL31				IAmb	IAmb	08 32 54.5	
	comp=Z,7.6nm,1.4s						
ILAR	Eielson Array	87.09	24	P	P	08 32 53.2	-2.1
	comp=Z,1.1nm,0.4s,baz=262,slow=4.5,SNR=43						
	comp=Z,1.1nm,0.4s						
RIDG	Independent Ri	87.69	26	P	P	08 32 57.7	-0.6
RIDG				IAmb	IAmb	08 33 04.0	
	comp=Z,5.2nm,1.2s						
DOT	Dot Lake	88.00	26	P	P	08 32 59.1	-0.7
BMAR	Burnt Mountain	88.67	22	P	P	08 33 03.2	+0.3
BCAR	Beaver Creek A	88.89	27	P	P	08 33 03.6	-0.3
EGAK	Eagle	89.48	25	P	P	08 33 06.4	-0.2
DAWY	Dawson	90.12	26	P	P	08 33 09.9	+0.2

DJA 04 08:26:24.5±0.5, **0°N**±6°×**12°3E**±°, **h161**^{km}±6^{km}, **M4.0**/9, **mb4.1**/3, **MLv4.0**/9, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	Gorontalo	0.63	356	P	Pn	08 26 49.3	+1.5
LUWI	Luwuk	1.07	196	P	Pn	08 26 51.1	+0.1
MRSI	Marisa	1.22	293	P	Pn	08 26 51.8	-0.4
MRSI				S	Sn	08 27 13.6	+0.2
MPSI	Mapaga	3.18	276	P	Pn	08 27 15.2	+0.6
SANI	Sanana	3.57	125	P	Pn	08 27 18.1	-1.4
NLAI	Namlea	5.16	129	P	Pn	08 27 40.7	+0.4
	32nm,0.4s,0.3nm						

IDC 04 08:39:23.4±2.1, **0°.00N**×**123°.50E**, **h0**^{km}, **mb3.2**/3, **mbtmp3.2**/3, **MS3.0**/1, **Error ellipse: s-maj=328.0km s-min=28.3km az=62.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.49	152	P	P	08 44 23.5	-1.1
	0.4nm,1.0s,baz=331,slow=12,SNR=1.6						
	0.4nm,1.0s						
ASAR	Alice Springs	25.60	157	P	P	08 44 55.4	+0.8
	0.5nm,0.7s,baz=332,slow=10,SNR=7.4						
	0.5nm,0.7s						
BRDH	Bariadhala	38.33	308	LR	LR	09 04 08.9	
	comp=Z,19nm,18.9s,baz=78,slow=39						
MKAR	Makanchi Array	58.88	328	P	P	08 49 24.0	-0.2
	0.4nm,0.9s,baz=120,slow=5.2,SNR=3.3						
	0.4nm,0.9s						

RSNC 04 08:43:19.9±0.9, **6°.80N**×**73°.35W**, **h117**^{km}±4^{km}, **ML1.4**, **2D**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.26	142	⇓ *i*P	Pn	08 43 35.9	-0.8
BARC				*e*S	Sn	08 43 49.2	0.0
BARC				*i*		08 43 49.6	
	comp=Z,15nm,0.2s						
BARC	Barichara	0.26	142	⇓ *i*P	Pn	08 43 35.9	-0.8
BARC				*e*S	Sn	08 43 49.2	0.0
BARC				*i*		08 43 49.6	
	comp=Z,15nm,0.2s						
BRRC	Barranca, Sant	0.48	310	*e*P	Pn	08 43 36.5	-0.9
BRRC				*e*S	Sn	08 43 50.2	-0.3
BRRC				*i*		08 43 50.9	
	comp=Z,17nm,0.1s						
BRRC	Barranca, Sant	0.48	310	*e*P	Pn	08 43 36.5	-0.9
BRRC				*e*S	Sn	08 43 50.2	-0.3
BRRC				*i*		08 43 50.9	
	comp=Z,17nm,0.1s						
PAMC	Pamplona, Colo	0.84	50	*e*P	Pn	08 43 40.6	0.0
PAMC				*e*S	Sn	08 43 56.7	+0.4
PAMC				*i*		08 43 58.0	
	comp=Z,3.7nm,0.2s						
PAMC	Pamplona, Colo	0.84	50	*e*P	Pn	08 43 40.6	0.0
PAMC				*e*S	Sn	08 43 56.7	+0.4
PAMC				*i*		08 43 58.0	
	comp=Z,3.7nm,0.2s						
RUSC	La Rusia	0.94	164	*e*P	Pn	08 43 41.0	-0.7
RUSC				*e*S	Sn	08 43 57.6	-0.4
RUSC				*i*		08 43 58.5	
	comp=Z,6.4nm,0.2s						
RUSC	La Rusia	0.94	164	*e*P	Pn	08 43 41.0	-0.7
RUSC				*e*S	Sn	08 43 57.6	-0.4
RUSC				*i*		08 43 58.5	
	comp=Z,6.4nm,0.2s						
SPBC	San Pablo de B	1.35	212	*e*P	Pn	08 43 45.6	0.0
SPBC				*e*S	Sn	08 44 04.3	-0.6
SPBC				*i*		08 44 08.2	
	comp=Z,3.4nm,0.1s						
SPBC	San Pablo de B	1.35	212	*e*P	Pn	08 43 45.6	0.0

SPBC				*e*S	Sn	08 44 04.3	-0.6
SPBC				*i*		08 44 08.2	
	comp=Z,3.4nm,0.1s						
TAMC	**Tame, Arauca**	**1.58**	**103**	*e*P	Pn	08 43 47.5	-0.7
ZARC	**Zaragoza, Cauc**	**1.65**	**295**	*e*P	Pn	08 43 48.2	-0.8
ZARC				*e*S	Sn	08 44 10.8	-0.3
ZARC				*i*		08 44 15.1	
	comp=Z,3.6nm,0.0s						
ZARC	**Zaragoza, Cauc**	**1.65**	**295**	*e*P	Pn	08 43 48.2	-0.8
ZARC				*e*S	Sn	08 44 10.8	-0.3
ZARC				*i*		08 44 15.1	
	comp=Z,3.6nm,0.0s						
NORC	**Norcasia**	**1.95**	**231**	*e*P	Pn	08 43 52.0	-0.6
NORC				*e*S	Sn	08 44 17.9	+0.3
NORC				*i*		08 44 21.3	
	comp=Z,2.1nm,0.2s						
NORC	**Norcasia**	**1.95**	**231**	*e*P	Pn	08 43 52.0	-0.6
NORC				*e*S	Sn	08 44 17.9	+0.3
NORC				*i*		08 44 21.3	
	comp=Z,2.1nm,0.2s						
CHIC	**Chingaza**	**2.19**	**190**	*e*P	Pn	08 43 56.2	+0.1
CHIC				*e*S	Sn	08 44 25.3	+1.6
CHIC				*i*		08 44 34.2	
	comp=Z,0.8nm,0.3s						
CHIC	**Chingaza**	**2.19**	**190**	*e*P	Pn	08 43 56.2	+0.1
CHIC				*e*S	Sn	08 44 25.3	+1.6
CHIC				*i*		08 44 34.2	
	comp=Z,0.8nm,0.3s						
UREC	**San Jos de Ur**	**2.37**	**294**	*e*P	Pn	08 43 56.9	-1.0
UREC				*e*S	Sn	08 44 24.1	-3.0
UREC				*i*		08 44 28.1	
	comp=Z,2.7nm,0.2s						
CBOC	**Ciudad Bolivar**	**2.81**	**251**	*e*P	Pn	08 44 04.1	+0.4
CBOC				*e*S	Sn	08 44 36.8	-0.7
CBOC				*i*		08 44 38.5	
	comp=Z,0.4nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.85**	**155**	*e*P	Pn	08 44 02.1	-2.1
PTGC				*e*S	Sn	08 44 36.4	-1.9
PRAC	**Prado**	**3.43**	**207**	*e*P	Pn	08 44 13.0	+1.1
PRAC				*e*S	Sn	08 44 53.0	+1.1
PRAC				*i*		08 44 58.8	
	comp=Z,1.4nm,0.2s						
ORTC	**Ortega, Tolima**	**3.44**	**213**	*e*S	Sn	08 44 55.6	+3.3
ORTC				*i*		08 44 60.0	
	comp=Z,0.9nm,0.3s						
SJCC	**San Jacinto, C**	**3.57**	**330**	*e*P	Pn	08 44 10.8	-2.9
SJCC				*e*S	Sn	08 44 51.4	-4.1

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*IDC **04** 08:43:40.1±7.8, 7.°08S×155.°92E, h112^{km}±52^{km}, mb3.6/7, mbtmp4.0/9, MS3.1/5, Error ellipse: s-maj=71.0km s-min=24.0km az=94.0*

ISC 04 08:43:38.2±1.5**, 7.°1S**±0.°1×**156.°1E**±0.°2**, h100^{km}, n14,** σ**0.^{s}55**/10**, mb3.8**/7**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.50**	**122**	LR	LR	08 46 28.5	
	comp=Z,5μm,20.8s,baz=295,slow=36						
KRVT	**Keravat (AS076**	**4.87**	**304**	P	**Pn**	**08 44 49.2**	**+0.1**
	38nm,0.4s,baz=317,slow=20,SNR=1.5						
KRVT				S	**Sn**	**08 45 44.5**	**+0.1**
	58nm,0.8s,baz=181,slow=13,SNR=1.5						
KRVT				LR	LR	08 46 22.1	
	comp=Z,53nm,20.6s,baz=285,slow=34						
PMG	**Port Moresby**	**9.11**	**255**	P	**Pn**	**08 45 46.9**	**+0.2**
	17nm,0.9s,baz=102,slow=18,SNR=4.0						
PMG				LR	LR	08 48 47.1	
	comp=Z,194nm,19.3s,baz=62,slow=34						
CTA	**Charters Tower**	**16.05**	**215**	LR	LR	08 52 39.8	
	comp=Z,66nm,19.1s,baz=82,slow=34						
WRA	**Warramunga Arr**	**24.64**	**237**	P	**P**	**08 48 48.7**	**-1.0**
	0.5nm,0.5s,baz=61,slow=9.6,SNR=3.5						
WRA				LR	LR	08 57 46.1	
	comp=Z,91nm,18.8s,baz=77,slow=34						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**26.91**	**230**	P	**P**	**08 49 11.0**	**+0.8**
	0.3nm,0.8s,baz=60,slow=9.8,SNR=2.4						
ASAR				LR	LR	08 59 15.7	
	comp=Z,71nm,19.7s,baz=106,slow=35						
	0.3nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**27.49**	**22**	T	T	09 17 48.4	
	baz=202,slow=75,SNR=19						
H11S2	**WAKE ISLAND Hy**	**27.50**	**22**	T	T	09 17 55.7	
	baz=202,slow=75,SNR=15						
H11S1	**WAKE ISLAND Hy**	**27.51**	**22**	T	T	09 17 48.1	
	baz=202,slow=75,SNR=9.6						
CMAR	**Chiang Mai Arr**	**61.77**	**295**	P	**P**	**08 53 46.3**	**-0.5**
	1.9nm,0.3s,baz=81,slow=5.8,SNR=6.5						
	1.9nm,0.3s						
SONM	**Songino Array**	**69.98**	**327**	P	**P**	**08 54 39.3**	**+0.3**
	0.6nm,0.5s,baz=152,slow=5.3,SNR=5.8						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**84.17**	**318**	P	**P**	**08 55 58.7**	**+0.3**
	1.5nm,0.8s,baz=103,slow=6.1,SNR=13						
	1.5nm,0.8s						
ZALV	**Zalesovo Beam**	**84.84**	**326**	P	**P**	**08 56 01.8**	**+0.2**
	0.5nm,0.4s,baz=89,slow=6.1,SNR=4.1						
	0.5nm,0.4s						
BVAR	**Borovoye Array**	**93.00**	**323**	P	**P**	**08 56 40.1**	**-0.2**
	0.6nm,0.7s,baz=96,slow=4.5,SNR=4.3						
	0.6nm,0.7s						

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*IDC **04** 08:56:10.7±2.0, 18.°34S×167.°49E, h0^{km}, mb3.9/6, mbtmp3.9/6, MS3.3/8, Error ellipse: s-maj=85.2km s-min=26.7km az=145.0*

*NOU **04** 08:56:24.6, 17.°78S×168.°20E, h56^{km}, MLv2.9/4, Vanuatu Islands*

ISC 04 08:56:12.8±1.3**, 18.°3S**±0.°4×**167.°4E**±0.°2**, h10^{km}, n15,** σ**1.^{s}13**/8**, mb3.8**/6**, MS3.1**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.98**	**52**	P	**Pn**	**08 56 33.6**	**+1.1**
RTV	**Rentapao**	**1.13**	**62**	P	**Pn**	**08 56 35.1**	**+0.5**
DZM	**Mont Dzumac**	**3.83**	**193**	LR	LR	08 58 25.2	
	comp=Z,270nm,18.2s,baz=30,slow=35						
MSVF	**Nonsavu**	**10.17**	**88**	LR	LR	09 02 03.5	
	comp=Z,223nm,18.9s,baz=326,slow=35						
HNR	**Honiara**	**11.41**	**320**	LR	LR	09 02 56.2	
	comp=Z,582nm,18.6s,baz=151,slow=35						
CTA	**Charters Tower**	**20.02**	**262**	LR	LR	09 06 29.5	
	comp=Z,52nm,18.9s,baz=85,slow=31						
STKA	**Stephens Creek**	**26.88**	**235**	P	**P**	**09 01 55.1**	**+1.2**
	1.3nm,0.6s,baz=32,slow=19,SNR=2.9						
	1.3nm,0.6s						
RAR	**Rarotonga**	**31.02**	**101**	LR	LR	09 13 22.2	
	comp=Z,37nm,18.6s,baz=140,slow=33						
WRA	**Warramunga Arr**	**31.23**	**262**	P	**P**	**09 02 32.6**	**-0.2**
	0.5nm,1.1s,baz=90,slow=9.6,SNR=1.1						
	0.5nm,1.1s						
ASAR	**Alice Springs**	**31.65**	**255**	P	**P**	**09 02 36.0**	**-0.4**
	2.6nm,0.7s,baz=82,slow=9.0,SNR=35						
ASAR				LR	LR	09 13 42.1	
	comp=Z,50nm,19.1s,baz=105,slow=33						
	2.6nm,0.7s						
GUMO	**Guam**	**38.71**	**323**	LR	LR	09 19 18.1	
	comp=Z,26nm,21.2s,baz=112,slow=36						
PPT	**Papeete**	**40.89**	**96**	LR	LR	09 19 50.4	
	comp=Z,27nm,18.0s,baz=156,slow=35						
SONM	**Songino Array**	**85.44**	**324**	P	**P**	**09 08 51.6**	**+0.8**
	2.3nm,0.8s,baz=142,slow=5.3,SNR=10						
	2.3nm,0.8s						
NVAR	**Mina Array Bea**	**89.53**	**49**	P	**P**	**09 09 10.0**	**-0.8**
	0.4nm,0.7s,baz=249,slow=7.6,SNR=3.7						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**89.90**	**18**	P	**P**	**09 09 10.2**	**-1.4**
	0.4nm,0.8s,baz=231,slow=5.7,SNR=4.7						
	0.4nm,0.8s						

IDC 04 09:04:31.0±2.1**, 1.°50N**×**127.°02E, h0^{km}, mb3.5**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=183.1km s-min=24.5km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.48**	**162**	P	P	09 09 32.8	+0.6
	1.1nm,0.4s,baz=340,slow=11,SNR=11						
	1.1nm,0.4s						
ASAR	**Alice Springs**	**25.89**	**165**	P	P	09 10 04.2	-0.7
	0.2nm,0.4s,baz=348,slow=7.1,SNR=5.2						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.55**	**326**	P	P	09 14 36.4	0.0
	0.4nm,0.4s,baz=115,slow=6.9,SNR=11						
	0.4nm,0.4s						

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*IDC **04** 09:12:44.4±2.3, 23.°11S×179.°46E, h512^{km}±23^{km}, mb2.8/5, mbtmp3.9/7, Error ellipse: s-maj=31.4km s-min=22.4km az=147.0*

ISC 04 09:12:43.6±0.9**, 23.°2S**±0.°1×**179.°4E**±0.°1**, h500^{km}, n14,** σ**1.^{s}45**/15**, mb3.3**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.62**	**347**	P	**P**	**09 14 16.0**	**-0.5**
	2.1nm,0.3s,baz=204,slow=20,SNR=1.8						
DZM	**Mont Dzumac**	**11.99**	**273**	P	**P**	**09 15 20.2**	**-2.0**
	4.7nm,0.9s,baz=139,slow=16,SNR=1.3						
URZ	**Urewera**	**15.10**	**187**	P	**P**	**09 15 56.3**	**+1.7**
	4.7nm,0.4s,baz=340,slow=3.1,SNR=12						
URZ				S	**S**	**09 18 29.4**	**-2.7**
	2.8nm,0.6s,baz=291,slow=22,SNR=8.5						
CTA	**Charters Tower**	**30.90**	**269**	P	**P**	**09 18 20.4**	**+1.6**
	2.6nm,0.5s,baz=96,slow=10,SNR=7.9						
	2.6nm,0.5s						
STKA	**Stephens Creek**	**34.44**	**247**	P	**P**	**09 18 50.2**	**+1.4**
	0.9nm,0.4s,baz=85,slow=7.4,SNR=3.3						
	0.9nm,0.4s						
ASAR	**Alice Springs**	**41.57**	**260**	P	**P**	**09 19 48.0**	**+0.7**
	0.5nm,0.8s,baz=90,slow=7.1,SNR=5.1						
ASAR				PcP	**PcP**	**09 21 32.8**	**-0.2**
	0.3nm,0.6s,baz=89,slow=5.8,SNR=1.7						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**41.87**	**266**	P	**P**	**09 19 49.7**	**0.0**
	0.4nm,0.8s,baz=96,slow=8.4,SNR=6.4						
	0.4nm,0.8s						
TXAR	**Lajitas Array**	**90.58**	**58**	P	**P**	**09 24 53.1**	**+0.7**
	0.3nm,0.8s,baz=220,slow=3.6,SNR=2.9						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**111.28**	**313**	PKiKP	**PKiKP**	**09 30 18.5**	**-1.6**
	0.1nm,0.4s,baz=106,slow=2.6,SNR=1.6						
FINES	**FINESS Array B**	**137.64**	**341**	PKP	**PKPdf**	**09 31 09.7**	**-0.1**
	1.5nm,0.9s,baz=56,slow=3.4,SNR=4.0						
AKASG	**Malin Array Be**	**144.10**	**327**	PKP	PKPbc	09 31 20.0	-1.1
	0.8nm,0.4s,baz=49,slow=3.3,SNR=7.6						
BRTR	**Keskin Array B**	**146.72**	**308**	PKPbc	**PKPdf**	**09 31 27.8**	**+1.0**
	0.6nm,0.6s,baz=114,slow=3.6,SNR=2.7						
GERES	**GERESS Array B**	**152.04**	**340**	PKPbc	**PKPbc**	**09 31 40.9**	**-1.0**
	0.3nm,0.4s,baz=2.5,slow=8.8,SNR=2.5						
TORD	**Torodi Ar. Bea**	**169.72**	**193**	PKPab	**PKPab**	**09 33 10.7**	**-0.8**
	0.4nm,0.8s,baz=156,slow=7.4,SNR=2.1						

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*SJA **04** 09:13:01.3±0.6, 23.°54S×66.°58W, h223^{km}±4^{km}, ML3.4, MW3.7, Hypocentre not reviewed by the ISC*

*IDC **04** 09:13:01.3±1.0, 23.°67S×66.°52W, h199^{km}±13^{km}, mb3.5/2, mbtmp3.7/9, MS2.4/1, Error ellipse: s-maj=19.3km s-min=17.3km az=54.0*

*NEIC **04** 09:13:02.5±1.0, 23.°67S±0.°07×66.°9W±0.°2, h230^{km}±10^{km}, mb4.3/5, Error ellipse: s-maj=21.1km s-min=9.7km az=93.0*

*GUC **04** 09:13:03.9±0.6, 23.°54S×67.°05W, h251^{km}±9^{km}, ML4.3*

ISC 04 09:13:01.3±0.7**, 23.°65S**±0.°05×**66.°71W**±0.°08**, h219^{km}**±10^{km}**, n58,** σ**1.^{s}21**/72**, mb4.1**/4**, 2C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HJA	**Humahuaca**	**1.27**	**70**	*e*P		09 13 35.7	
HJA				*e*S		09 14 00.5	
HJA				IAML		09 14 07.2	
	comp=Z,34nm,0.7s						
SLA	**San Lorenzo**	**1.53**	**134**	*e*P		09 13 38.1	
SLA				*e*S		09 14 04.9	
SLA				IAML		09 14 08.8	
	comp=Z,56nm,1.6s						
AZAP	**Zapla**	**1.60**	**111**	*e*P		09 13 38.4	
AZAP				*e*S		09 14 05.6	
AZAP				IAML		09 14 07.8	
	comp=Z,128nm,0.8s						
ASTB	**Santa Barbara**	**2.08**	**99**	*e*P		09 13 42.4	
ASTB				*e*S		09 14 12.5	
ASTB				IAML		09 14 15.6	
	comp=Z,1.3nm,0.3s						
LVC	**Limon Verde**	**2.28**	**297**	P	**Pn**	**09 13 46.1**	**+1.6**
	comp=Z,40nm,0.2s,baz=153,slow=5.6,SNR=90						
LVC				S	**S**	**09 14 18.3**	**+0.4**
	comp=Z,72nm,0.3s,baz=122,slow=10,SNR=5.9						
LVC				LR	LR	09 14 37.4	
	comp=Z,72nm,20.6s,baz=184,slow=40						
LVC	**Limon Verde**	**2.28**	**297**	*i* P	**Pn**	**09 13 46.1**	**+1.6**
LVC				*i* S	**S**	**09 14 18.2**	**+0.3**
LVC	**Limon Verde**	**2.28**	**297**	*e*P		09 13 45.8	
LVC				*e*S		09 14 19.1	
LVC				IAML		09 14 21.9	
	comp=Z,86nm,0.4s						
ALOL	**LOMAS DE OLMED**	**2.50**	**94**	*e*P		09 13 45.8	
ALOL				*e*P		09 13 46.4	
PB15	**IPOC Station P**	**2.58**	**279**		**Pn**	**09 13 48.1**	**+0.6**
PB15				Sn	**S**	**09 14 23.7**	**+0.4**
PB15	**IPOC Station P**	**2.58**	**279**	*i* P	**Pn**	**09 13 49.0**	**+1.6**
PB15				*i* S	**S**	**09 14 23.7**	**+0.4**
PB15	**IPOC Station P**	**2.58**	**279**	*e*P		09 13 49.2	
PB15				*e*S		09 14 25.0	
PB15				IAML		09 14 29.3	
	comp=Z,2μm,0.2s						
PB06	**IPOC Station P**	**2.80**	**289**		**Pn**	**09 13 50.8**	**+0.9**
PB06				Sn	**S**	**09 14 27.6**	**-0.1**
PB06	**IPOC Station P**	**2.80**	**289**	*e*P	**Pn**	**09 13 51.3**	**+1.4**
PB06				*e*S	**S**	**09 14 27.4**	**-0.3**
PB06				IAML		09 14 29.4	
	comp=N,831nm,0.4s						
PB09	**IPOC Station P**	**2.98**	**308**		**Pn**	**09 13 53.3**	**+1.4**
PB09	**IPOC Station P**	**2.98**	**308**	*i* P	**Pn**	**09 13 53.9**	**+2.0**
PB09				*i* S	**S**	**09 14 31.6**	**+0.2**
PB09				IAML		09 14 34.8	
	comp=N,227nm,0.4s						
PB03	**IPOC Station P**	**3.23**	**299**		**Pn**	**09 13 55.8**	**+1.0**
PB03	**IPOC Station P**	**3.23**	**299**	*e*P	**Pn**	**09 13 55.9**	**+1.0**
PB03				*e*S	**S**	**09 14 35.1**	**-1.5**
PB04	**IPOC Station P**	**3.43**	**292**		**Pn**	**09 13 58.2**	**+1.0**
PB04	**IPOC Station P**	**3.43**	**292**	*i* P	**Pn**	**09 13 58.2**	**+1.0**
PB04				*i* S	**S**	**09 14 39.7**	**-1.1**
PB04	**IPOC Station P**	**3.43**	**292**	*e*P		09 13 58.7	
PB04				*e*S		09 14 40.6	
PB04				IAML		09 14 44.0	
	comp=Z,410nm,0.2s						
PB07	**IPOC Station P**	**3.51**	**302**		**Pn**	**09 13 58.9**	**+0.8**
PB07				Sn	**S**	**09 14 40.9**	**-1.4**
PB07	**IPOC Station P**	**3.51**	**302**	⇑*i*P	**Pn**	**09 13 59.0**	**+0.9**
PB07				*i* S	**S**	**09 14 40.7**	**-1.7**
PB07	**IPOC Station P**	**3.51**	**302**	*e*P		09 13 59.0	
PB07				*e*S		09 14 41.2	
PB07				IAML		09 14 42.9	
	comp=Z,581nm,0.4s						
PB14	**IPOC Station P**	**3.52**	**253**		**Pn**	**09 13 59.0**	**+0.8**
PB14	**IPOC Station P**	**3.52**	**253**	*e*P	**Pn**	**09 13 59.2**	**+0.9**
PB14				*e*S	**S**	**09 14 41.7**	**-1.1**
PB10	**IPOC Station P**	**3.53**	**271**		**Pn**	**09 13 59.0**	**+0.8**
PB10	**IPOC Station P**	**3.53**	**271**	⇑*i*P	**Pn**	**09 13 59.5**	**+1.3**
PB10				*i* S	**S**	**09 14 40.9**	**-1.7**
PB01	**IPOC Station P**	**3.66**	**315**		**Pn**	**09 14 00.4**	**+0.7**
PB01	**IPOC Station P**	**3.66**	**315**	*e*S	**S**	**09 14 44.2**	**-1.2**
PB02	**IPOC Station P**	**3.75**	**308**		**Pn**	**09 14 01.7**	**+0.7**
PB02	**IPOC Station P**	**3.75**	**308**	*e*S	**S**	**09 14 45.2**	**-2.4**
AC02	**Maricunga**	**3.86**	**214**		**Pn**	**09 14 03.1**	**+0.6**
AC01	**Pan de Azucar**	**4.32**	**234**	Pn	**Pn**	**09 14 07.6**	**-0.1**
AC01	**Pan de Azucar**	**4.32**	**234**	*i* P	**Pn**	**09 14 07.8**	**+0.1**
TA01	**Diego Aracena**	**4.45**	**313**	Pn	**Pn**	**09 14 09.4**	**+0.1**
GO01	**Chusmiza**	**4.59**	**329**		**Pn**	**09 14 12.2**	**+0.6**
PB11	**IPOC Station P**	**4.74**	**324**	Pn	**Pn**	**09 14 13.6**	**+0.4**
PB11	**IPOC Station P**	**4.74**	**324**	*e*P	**Pn**	**09 14 13.0**	**-0.1**
PB11				*e*S	**S**	**09 15 07.0**	**-2.8**
GO03	**Copiap**	**5.06**	**218**	Pn	**Pn**	**09 14 16.5**	**-0.4**
PSGCX	**Pisagua**	**5.13**	**321**	Pn	**Pn**	**09 14 17.5**	**-0.5**
MNMC	**Minye Minye**	**5.24**	**329**		**Pn**	**09 14 20.0**	**+0.4**
MNMC	**Minye Minye**	**5.24**	**329**	⇓*e*P	**Pn**	**09 14 19.9**	**+0.4**
PB16	**IPOC Station P**	**5.90**	**333**		**Pn**	**09 14 29.1**	**+0.9**
PB12	**IPOC Station P**	**6.04**	**325**	Pn	**Pn**	**09 14 30.2**	**+0.7**
AC05	**El Transito**	**6.08**	**211**	Pn	**Pn**	**09 14 30.1**	**+0.2**
LCO	**Las Campanas**	**6.43**	**213**	Pn	**Pn**	**09 14 34.1**	**-0.5**
LPAZ	**La Paz**	**7.45**	**349**	P	**Pn**	**09 14 49.1**	**+1.1**
	comp=Z,1.0nm,0.3s,baz=171,slow=6.1,SNR=8.8						
LPAZ				S	**S**	**09 16 11.2**	**-1.9**
	comp=Z,1.6nm,0.4s,baz=244,slow=16,SNR=4.7						
LPAZ	**La Paz**	**7.45**	**349**	Pn	**Pn**	**09 14 48.9**	**+0.9**
GO04	**Tololo Observa**	**7.45**	**208**	Pn	**Pn**	**09 14 46.8**	**-0.9**
CFA	**Coronel Fontan**	**8.04**	**189**	P	**Pn**	**09 14 54.4**	**-0.7**
	comp=Z,1.5nm,0.3s,baz=345,slow=13,SNR=25						
CO02	**Combarbal**	**8.44**	**206**	Pn	**Pn**	**09 14 59.9**	**-0.3**
CPUP	**Villa Florida**	**8.91**	**109**	P	**Pn**	**09 15 04.7**	**-1.6**
	comp=Z,1.8nm,0.8s,baz=304,slow=11,SNR=4.7						
SIV	**San Ignacio**	**9.28**	**36**	P	**Pn**	**09 15 09.8**	**-1.3**
	comp=Z,1.2nm,0.6s,baz=259,slow=19,SNR=7.4						
ETMB	**Extrema**	**13.76**	**2**	Pn	**Pn**	**09 16 07.4**	**-0.3**
TRQA	**Tornquist**	**14.92**	**165**		**Pn**	**09 16 22.1**	**+0.5**
SAML	**Samuel**	**15.00**	**14**		**Pn**	**09 16 24.0**	**+1.2**
PLCA	**Paso Flores**	**17.34**	**190**	P	**Pn**	**09 16 51.1**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=61,slow=17,SNR=2.1						
BDFB	**Brasilia**	**19.31**	**69**	P	**P**	**09 17 10.8**	**+0.6**
	comp=Z,1.5nm,0.4s,baz=250,slow=8.4,SNR=4.0						
BDFB	**Brasilia**	**19.31**	**69**	P	**P**	**09 17 11.3**	**+1.1**
BDFB				IAmb	IAmb	09 17 12.0	
	comp=Z,4.2nm,1.0s						
PORT	**Chimborazo Vol**	**24.96**	**330**	P	**P**	**09 18 04.0**	**-1.6**
PORT				IAmb	IAmb	09 18 20.0	
	comp=Z,16nm,1.5s						
BOAV	**Boa Vista**	**26.58**	**14**	P	**P**	**09 18 20.5**	**+1.1**
BOAV				IAmb	IAmb	09 18 26.3	
	comp=Z,16nm,1.5s						
SNAA	**Sanae**	**59.59**	**161**	P	**P**	**09 22 41.8**	**+0.1**
TORD	**Torodi Ar. Bea**	**76.19**	**69**	P	**P**	**09 24 26.4**	**+0.5**
	comp=Z,0.9nm,0.4s,baz=268,slow=7.1,SNR=15						
	comp=Z,0.9nm,0.4s						
YKA	**Yellowknife Ar**	**93.89**	**340**	P	**P**	**09 25 56.3**	**+3.0**
	comp=Z,0.1nm,0.4s,baz=138,slow=4.5,SNR=2.2						
	comp=Z,0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**142.96**	**28**	PKhKP	PKPpre	09 32 06.7	
	comp=Z,0.3nm,0.4s,baz=323,slow=2.2,SNR=1.8						
MKAR	**Makanchi Array**	**146.08**	**39**	PKPbc	**PKPab**	**09 32 17.2**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=290,slow=3.6,SNR=13						
PZH	**PanZhiHua**	**169.15**	**72**	PKP	**PKPdf**	**09 32 39.2**	**-3.6**

WEL 04 09:19:10.9±0.3**, 42°S**±2°×**17°4E**±°**, h11^{km}**±2^{km}**, M2.5**/6**, ML2.7**/14**, MLv2.5**/6**, Error ellipse: s-maj=0.0km s-min=0.0km az=106.5, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHZ	**Kahutara**	**0.21**	**187**	P	Pb	09 19 16.7	-0.1
KHZ				S	Sg	09 19 20.5	+2.2
BSWZ	**Blackbirch Sta**	**0.55**	**25**	P	Pg	09 19 22.0	+0.4
BSWZ				S	Sb	09 19 30.0	-0.4
CMWZ	**Cape Campbell**	**0.67**	**46**	P	Pb	09 19 25.0	+0.4
THZ	**Tophouse**	**0.67**	**312**	P	Pg	09 19 24.1	+0.2
THZ				S	Sg	09 19 33.1	+0.4
TUWZ	**Tuamarina**	**0.83**	**20**	P	Pg	09 19 27.1	+0.2
TUWZ				S	Sb	09 19 38.5	0.0
GVZ	**Greta Valley S**	**0.85**	**208**	P	Pn	09 19 28.7	-0.3
NNZ	**Nelson**	**1.00**	**352**	P	Pg	09 19 29.8	-0.4
NNZ				S	Sg	09 19 43.0	-0.3
MRNZ	**Matariki Terra**	**1.01**	**323**	P	Pg	09 19 30.3	-0.2
MRNZ				S	Sn	09 19 44.9	-0.5
LTZ	**Lake Taylor**	**1.12**	**239**	P	Pb	09 19 32.0	-0.3
LTZ				S	Sb	09 19 46.3	-0.6
TCW	**Tory Channel**	**1.13**	**28**	P	Pb	09 19 32.1	-0.4
AMCZ	**Amberley**	**1.18**	**215**	P	Pb	09 19 32.6	-0.8
DSZ	**Denniston Nort**	**1.40**	**289**	P	Pb	09 19 37.4	+0.3
DSZ				S	Sg	09 19 57.2	+1.3
DUWZ	**D'Urville Isla**	**1.43**	**11**	P	Pb	09 19 37.4	-0.3
DUWZ				S	Sb	09 19 56.2	+0.2
QRZ	**Quartz Range**	**1.59**	**330**	P	Pb	09 19 40.0	-0.4
QRZ				S	Sb	09 20 00.4	-0.1
MQZ	**McQueen's Vall**	**1.64**	**204**	P	Pn	09 19 37.9	-1.8
MQZ				S	Sn	09 19 58.2	-2.6
INZ	**Inchbonnie**	**1.66**	**251**	P	Pn	09 19 40.4	+0.4
INZ				S	Sb	09 20 02.0	-0.4
WACZ	**Wakanui South**	**2.15**	**216**	P	Pn	09 19 45.5	-1.2
MRZ	**Mangatainoka R**	**2.16**	**45**	P	Pn	09 19 45.6	-1.3

IDC 04 09:19:56.4±1.7**, 30.°31S**×**178.°53W, h134^{km}**±20^{km}**, mb3.3**/2**, mbtmp3.7**/3**, Error ellipse: s-maj=58.4km s-min=29.1km az=115.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.18**	**27**	P	Pn	09 20 21.2	-0.2
	236nm,0.2s,baz=246,slow=20,SNR=5.5						
RAO				S	Sn	09 20 40.5	+0.1
	220nm,0.3s,baz=120,slow=20,SNR=2.4						
URZ	**Urewera**	**8.71**	**203**	P	Pn	09 21 59.3	0.0
	5.6nm,1.0s,baz=80,slow=15,SNR=1.6						
URZ				S	Sn	09 23 30.1	-5.8
	4.5nm,0.8s,baz=319,slow=19,SNR=1.6						
ASAR	**Alice Springs**	**42.66**	**267**	P	P	09 27 39.6	-0.3
	0.2nm,0.4s,baz=108,slow=7.1,SNR=5.6						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**43.63**	**272**	P	P	09 27 47.8	0.0
	0.7nm,0.3s,baz=110,slow=8.1,SNR=18						
	0.7nm,0.3s						
FINES	**FINESS Array B**	**144.90**	**340**	PKP	PKPbc	09 39 16.2	-0.1
	0.9nm,0.4s,baz=45,slow=2.8,SNR=12						

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*NOU **04** 09:29:27.9, 38.°51S×175.°26E, h265^{km}, MLv4.0/13, North Island, New Zealand*

*WEL **04** 09:29:32.6±0.5, 38°S±5°×17°5E±°, h222^{km}±4^{km}, M3.3/54, ML3.0/6, MLv3.3/54, Error ellipse: s-maj=0.0km s-min=0.0km az=177.5, confirmed*

ISC 04 09:29:26.7±1.9**, 38.°55S**±0.°07×**175.°27E**±0.°05**, h265^{km}**±10^{km}**, n148,** σ**1.^{s}72**/169**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLZ	**Tolley Road**	**0.30**	**43**	P	**Pn**	**09 30 02.3**	**+1.3**
HIZ	**Hauiti**	**0.33**	**277**	P	**Pn**	**09 30 02.3**	**+1.4**
HIZ	**Hauiti**	**0.33**	**277**	P	**Pn**	**09 30 02.3**	**+1.4**
WATZ	**Wairara**	**0.39**	**114**	P	**Pn**	**09 30 02.6**	**+1.5**
KUTZ	**Kaahu Road**	**0.44**	**82**	P	**Pn**	**09 30 02.5**	**+1.3**
RATZ	**Rangitukua**	**0.50**	**129**	P	**Pn**	**09 30 02.3**	**+1.0**
TWVZ	**Taurewa**	**0.54**	**166**	P	**Pn**	**09 30 02.9**	**+1.4**
WTVZ	**West Tongariro**	**0.62**	**156**	P	**Pn**	**09 30 03.3**	**+1.5**
RITZ	**Rihia Road**	**0.63**	**133**	P	**Pn**	**09 30 03.6**	**+1.9**
NNVZ	**North Ngauruho**	**0.64**	**155**	P	**Pn**	**09 30 03.6**	**+1.7**
TMVZ	**Te Maari**	**0.66**	**149**	P	**Pn**	**09 30 03.6**	**+1.7**
NGZ	**Ngauruhoe**	**0.68**	**158**	P	**Pn**	**09 30 03.7**	**+1.7**
ETVZ	**East Tongariro**	**0.68**	**150**	P	**Pn**	**09 30 03.6**	**+1.7**
OTVZ	**Oturere**	**0.68**	**153**	P	**Pn**	**09 30 04.0**	**+2.0**
SNVZ	**South Ngauruho**	**0.70**	**156**	P	**Pn**	**09 30 04.0**	**+1.9**
SNVZ				S	**S**	**09 30 28.5**	**-1.7**
VRZ	**Vera Road**	**0.70**	**215**	P	**Pn**	**09 30 03.4**	**+1.5**
VRZ				S	**S**	**09 30 29.7**	**-0.1**
FWVZ	**Far West T-bar**	**0.74**	**163**	P	**Pn**	**09 30 04.0**	**+1.7**
FWVZ				S	**S**	**09 30 27.9**	**-2.6**
PKVZ	**Pokaka**	**0.74**	**176**	P	**Pn**	**09 30 03.6**	**+1.4**
PKVZ				S	**S**	**09 30 28.3**	**-1.9**
DRZ	**Dome Shelter**	**0.76**	**163**	P	**Pn**	**09 30 04.5**	**+2.0**
DRZ				S	**S**	**09 30 29.1**	**-1.7**
WHVZ	**Whangaehu Hut**	**0.77**	**161**	P	**Pn**	**09 30 04.3**	**+1.9**
WHVZ				S	**S**	**09 30 28.8**	**-2.0**
TUVZ	**Tukino**	**0.78**	**157**	P	**Pn**	**09 30 04.2**	**+1.8**
TUVZ				S	**S**	**09 30 29.3**	**-1.4**
TRVZ	**Turoa**	**0.78**	**164**	P	**Pn**	**09 30 04.2**	**+1.7**
TRVZ				S	**S**	**09 30 29.1**	**-1.7**
HSRZ	**Hossack Road**	**0.80**	**73**	P	**Pn**	**09 30 04.1**	**+1.7**
WNVZ	**Wahianoa**	**0.82**	**162**	P	**Pn**	**09 30 04.3**	**+1.7**
WNVZ				S	**S**	**09 30 28.9**	**-2.1**
TOZ	**Tahuroa Road**	**0.84**	**13**	P	**Pn**	**09 30 03.8**	**+1.2**
ALRZ	**Allen Road**	**0.84**	**91**	P	**Pn**	**09 30 04.0**	**+1.4**
MTVZ	**Mangateitei**	**0.85**	**170**	P	**Pn**	**09 30 04.3**	**+1.7**
MTVZ				S	**S**	**09 30 29.3**	**-1.8**
PRRZ	**Plateau Road**	**0.88**	**87**	P	**Pn**	**09 30 04.3**	**+1.6**
PRRZ				S	**S**	**09 30 29.1**	**-2.1**
MHEZ	**Mangahewa**	**0.91**	**234**	P	**Pn**	**09 30 05.1**	**+2.3**
MOVZ	**Moawhango**	**0.93**	**156**	P	**Pn**	**09 30 04.5**	**+1.5**
MOVZ				S	**S**	**09 30 28.2**	**-3.5**
TARZ	**Mount Tarawera**	**1.02**	**72**	P	**Pn**	**09 30 06.2**	**+2.6**
DREZ	**Durham Road**	**1.05**	**232**	P	**Pn**	**09 30 05.7**	**+2.1**
BHHZ	**Black Hill Sta**	**1.12**	**147**	P	**Pn**	**09 30 05.6**	**+1.6**
BHHZ				S	**S**	**09 30 30.5**	**-3.0**
LREZ	**Lake Rotokare**	**1.13**	**216**	P	**Pn**	**09 30 06.1**	**+2.1**
BKZ	**Black Stump Fm**	**1.13**	**123**	P	**Pn**	**09 30 05.7**	**+1.6**
BKZ	**Black Stump Fm**	**1.13**	**123**	P	**Pn**	**09 30 05.7**	**+1.6**
BKZ				S	**S**	**09 30 30.9**	**-2.8**
NEZ	**North Egmont**	**1.17**	**232**	P	**Pn**	**09 30 06.5**	**+2.2**
NEZ				S	**S**	**09 30 33.6**	**-0.4**
PREZ	**Palmer Road**	**1.17**	**227**	P	**Pn**	**09 30 06.5**	**+2.2**
MUGZ	**Murupara**	**1.18**	**87**	P	**Pn**	**09 30 05.2**	**+0.9**
MUGZ				S	**S**	**09 30 31.2**	**-2.8**

PKE	**Pukeiti**	**1.19**	**237**	P	**Pn**	**09 30 06.7**	**+2.3**
WAZ	**Wanganui**	**1.22**	**190**	P	**Pn**	**09 30 06.6**	**+2.1**
WAZ				S	**S**	**09 30 33.4**	**-1.1**
KHEZ	**Kahui Hut**	**1.23**	**232**	P	**Pn**	**09 30 07.0**	**+2.3**
KHEZ	**Kahui Hut**	**1.23**	**232**	P	**Pn**	**09 30 06.9**	**+2.3**
KHEZ				S	**S**	**09 30 35.0**	**+0.3**
OPRZ	**Ohinepanea**	**1.23**	**55**	P	**Pn**	**09 30 05.7**	**+1.0**
KWHZ	**Kaweka Forest**	**1.25**	**135**	P	**Pn**	**09 30 06.9**	**+2.1**
KWHZ				S	**S**	**09 30 33.6**	**-1.4**
MTHZ	**Maungataniwha**	**1.26**	**104**	P	**Pn**	**09 30 06.4**	**+1.6**
MTHZ				S	**S**	**09 30 32.5**	**-2.5**
NBEZ	**Newall Road No**	**1.31**	**236**	P	**Pn**	**09 30 07.4**	**+2.4**
NMHZ	**Naumai**	**1.32**	**115**	P	**Pn**	**09 30 07.8**	**+2.6**
NMHZ				S	**S**	**09 30 35.4**	**-0.3**
RTZ	**Ruatahuna**	**1.34**	**93**	P	**Pn**	**09 30 06.7**	**+1.2**
NMEZ	**Namu Road**	**1.39**	**231**	P	**Pn**	**09 30 08.0**	**+2.4**
MCHZ	**McNeill Hill**	**1.42**	**129**	P	**Pn**	**09 30 08.5**	**+2.7**
MKAZ	**Moumakai**	**1.45**	**356**	P	**Pn**	**09 30 07.3**	**+1.2**
RAHZ	**Arahi**	**1.47**	**105**	P	**Pn**	**09 30 08.3**	**+2.1**
URZ	**Urewera**	**1.47**	**79**	P	**Pn**	**09 30 06.9**	**+0.7**
URZ	**Urewera**	**1.47**	**79**	P	**Pn**	**09 30 06.9**	**+0.7**
ARHZ	**Aropaoanui**	**1.52**	**118**	P	**Pn**	**09 30 08.9**	**+2.4**
PNHZ	**Pukenui**	**1.54**	**152**	P	**Pn**	**09 30 08.7**	**+2.0**
AWAZ	**Awhitu Peninsu**	**1.57**	**341**	P	**Pn**	**09 30 08.4**	**+1.5**
TSZ	**Takapari Road**	**1.60**	**161**	P	**Pn**	**09 30 09.2**	**+2.1**
ETAZ	**East Tamaki Re**	**1.62**	**350**	P	**Pn**	**09 30 08.9**	**+1.5**
WHHZ	**Waihua**	**1.62**	**110**	P	**Pn**	**09 30 09.6**	**+2.3**
WHHZ				S	**S**	**09 30 38.3**	**-1.1**
SNGZ	**Shannon Statio**	**1.64**	**99**	P	**Pn**	**09 30 09.3**	**+1.9**
OHWZ	**Ohakea**	**1.65**	**179**	P	**Pn**	**09 30 10.1**	**+2.6**
RAGZ	**Rawiri**	**1.68**	**89**	P	**Pn**	**09 30 09.3**	**+1.4**
WTAZ	**Waiatarua**	**1.71**	**341**	P	**Pn**	**09 30 09.1**	**+1.1**
KAHZ	**Kahuranaki**	**1.76**	**135**	P	**Pn**	**09 30 10.9**	**+2.5**
WPHZ	**Waipukurau**	**1.76**	**149**	P	**Pn**	**09 30 10.6**	**+2.2**
MWZ	**Matawai**	**1.79**	**84**	P	**Pn**	**09 30 09.8**	**+1.1**
CKHZ	**Cape Kidnapper**	**1.79**	**129**	P	**Pn**	**09 30 11.2**	**+2.6**
MBAZ	**Motutapu North**	**1.80**	**350**	P	**Pn**	**09 30 10.4**	**+1.5**
KUZ	**Kuaotunu**	**1.84**	**11**	P	**Pn**	**09 30 10.2**	**+1.1**
KUZ	**Kuaotunu**	**1.84**	**11**	P	**Pn**	**09 30 10.2**	**+1.1**
RVAZ	**Riverhead Bore**	**1.86**	**343**	P	**Pn**	**09 30 11.0**	**+1.7**
DVHZ	**Dannevirke**	**1.88**	**159**	P	**Pn**	**09 30 11.2**	**+1.9**
POWZ	**Post Office Ro**	**1.88**	**168**	P	**Pn**	**09 30 11.3**	**+2.0**
PXZ	**Pawanui**	**1.93**	**141**	P	**Pn**	**09 30 11.8**	**+2.1**
KNZ	**Kokohu**	**1.94**	**105**	P	**Pn**	**09 30 11.7**	**+2.0**
RIGZ	**Rimuhau**	**1.96**	**95**	P	**Pn**	**09 30 12.0**	**+1.9**
RUGZ	**Raukumara Rang**	**1.98**	**74**	P	**Pn**	**09 30 10.6**	**+0.2**
PRHZ	**Porangahau**	**2.01**	**149**	P	**Pn**	**09 30 12.6**	**+2.1**
TKGZ	**Te Karaka**	**2.02**	**88**	P	**Pn**	**09 30 12.4**	**+1.8**
PRWZ	**Pori Road**	**2.07**	**165**	P	**Pn**	**09 30 13.1**	**+2.1**
MRZ	**Mangatainoka R**	**2.12**	**174**	P	**Pn**	**09 30 13.2**	**+1.8**
ANWZ	**Angora Road**	**2.12**	**154**	P	**Pn**	**09 30 13.7**	**+2.3**
HAZ	**Te Kaha**	**2.13**	**69**	P	**Pn**	**09 30 11.9**	**+0.3**
MHGZ	**Mahia Peninsul**	**2.14**	**107**	P	**Pn**	**09 30 13.9**	**+2.3**
TWGZ	**Tauwhareparae**	**2.16**	**81**	P	**Pn**	**09 30 13.6**	**+1.8**
BFZ	**Birch Farm**	**2.26**	**161**	P	**Pn**	**09 30 14.3**	**+1.7**
BFZ	**Birch Farm**	**2.26**	**161**	P	**Pn**	**09 30 14.4**	**+1.8**
OGWZ	**Otaki Gorge**	**2.26**	**182**	P	**Pn**	**09 30 14.8**	**+2.1**
TIWZ	**Tintock**	**2.27**	**168**	P	**Pn**	**09 30 14.6**	**+1.8**
GRZ	**Great Barrier**	**2.30**	**4**	P	**Pn**	**09 30 14.6**	**+1.4**
CNGZ	**Carnagh Statio**	**2.30**	**89**	P	**Pn**	**09 30 15.4**	**+2.3**
PKGZ	**Pakihiroa**	**2.31**	**74**	P	**Pn**	**09 30 14.4**	**+1.2**
KIW	**Kapiti Island**	**2.32**	**187**	P	**Pn**	**09 30 15.0**	**+1.7**
HOWZ	**Holdsworth Sta**	**2.35**	**175**	P	**Pn**	**09 30 15.1**	**+1.6**
PUZ	**Puketiti**	**2.40**	**79**	P	**Pn**	**09 30 15.3**	**+1.2**
CPWZ	**Castlepoint**	**2.46**	**163**	P	**Pn**	**09 30 16.9**	**+2.4**
DUWZ	**D'Urville Isla**	**2.48**	**204**	P	**Pn**	**09 30 16.3**	**+1.5**
CAW	**Cannon Point**	**2.56**	**183**	P	**Pn**	**09 30 17.3**	**+1.8**
WMGZ	**Waiomatatini S**	**2.58**	**75**	P	**Pn**	**09 30 17.1**	**+1.2**
MXZ	**Matakaoa Point**	**2.59**	**69**	P	**Pn**	**09 30 17.5**	**+1.6**
MXZ	**Matakaoa Point**	**2.59**	**69**	P	**Pn**	**09 30 17.2**	**+1.3**
TMWZ	**Te Maipa**	**2.60**	**170**	P	**Pn**	**09 30 17.6**	**+1.7**
MTW	**Mount Morrison**	**2.61**	**176**	P	**Pn**	**09 30 17.5**	**+1.5**
WCZ	**Waipu Caves**	**2.71**	**344**	P	**Pn**	**09 30 18.9**	**+1.7**
WEL	**Wellington**	**2.76**	**188**	P	**Pn**	**09 30 19.2**	**+1.8**
TCW	**Tory Channel**	**2.76**	**196**	P	**Pn**	**09 30 19.4**	**+1.9**
SNZO	**South Karori**	**2.79**	**189**	P	**Pn**	**09 30 19.4**	**+1.6**
TRWZ	**Traveller**	**2.86**	**174**	P	**Pn**	**09 30 20.2**	**+1.6**
PLWZ	**Palliser**	**3.02**	**180**	P	**Pn**	**09 30 21.6**	**+1.4**
NNZ	**Nelson**	**3.04**	**208**	P	**Pn**	**09 30 21.6**	**+1.2**
TUWZ	**Tuamarina**	**3.05**	**199**	P	**Pn**	**09 30 22.2**	**+1.6**
TKNZ	**Takaka Hill**	**3.05**	**215**	P	**Pn**	**09 30 21.4**	**+0.8**
QRZ	**Quartz Range**	**3.10**	**222**	P	**Pn**	**09 30 21.9**	**+0.8**
QRZ	**Quartz Range**	**3.10**	**222**	P	**Pn**	**09 30 21.9**	**+0.8**
CMWZ	**Cape Campbell**	**3.30**	**194**	P	**Pn**	**09 30 25.5**	**+2.3**
BSWZ	**Blackbirch Sta**	**3.34**	**198**	P	**Pn**	**09 30 25.6**	**+2.0**
MRNZ	**Matariki Terra**	**3.44**	**213**	P	**Pn**	**09 30 25.5**	**+0.7**
THZ	**Tophouse**	**3.69**	**209**	P	**Pn**	**09 30 28.5**	**+1.0**
KHZ	**Kahutara**	**4.08**	**198**	P	**Pn**	**09 30 33.9**	**+1.9**
KHZ	**Kahutara**	**4.08**	**198**	P	**Pn**	**09 30 33.6**	**+1.6**
DSZ	**Denniston Nort**	**4.15**	**219**	P	**Pn**	**09 30 33.5**	**+0.7**
GVZ	**Greta Valley S**	**4.73**	**200**	P	**Pn**	**09 30 40.8**	**+1.2**
LTZ	**Lake Taylor**	**4.80**	**207**	P	**Pn**	**09 30 41.7**	**+1.1**
AMCZ	**Amberley**	**5.03**	**202**	P	**Pn**	**09 30 44.2**	**+1.0**
INZ	**Inchbonnie**	**5.08**	**214**	P	**Pn**	**09 30 44.4**	**+0.5**
OXZ	**Oxford**	**5.36**	**206**	P	**Pn**	**09 30 47.6**	**+0.4**
MQZ	**McQueen's Vall**	**5.52**	**200**	P	**Pn**	**09 30 49.4**	**+0.3**
AKCZ	**Akaroa Harbour**	**5.61**	**198**	P	**Pn**	**09 30 51.4**	**+1.2**
WVZ	**Waitaha Valley**	**5.68**	**216**	P	**Pn**	**09 30 51.0**	**-0.1**
RACZ	**Rakaia**	**5.69**	**204**	P	**Pn**	**09 30 51.8**	**+0.7**
WACZ	**Wakanui South**	**5.97**	**205**	P	**Pn**	**09 30 55.7**	**+1.0**
GCSZ	**Gaunt Creek Bo**	**6.05**	**217**	P	**Pn**	**09 30 56.8**	**+1.1**
RPZ	**Rata Peaks**	**6.06**	**210**	P	**Pn**	**09 30 56.1**	**+0.3**
RPZ	**Rata Peaks**	**6.06**	**210**	P	**Pn**	**09 30 56.0**	**+0.3**
ARCZ	**Arundel**	**6.21**	**208**	P	**Pn**	**09 30 58.0**	**+0.4**
FOZ	**Fox Glacier**	**6.46**	**218**	P	**Pn**	**09 31 01.4**	**+0.7**
TMZ	**Timaru**	**6.65**	**207**	P	**Pn**	**09 31 04.1**	**+1.1**
LBZ	**Lake Benmore**	**6.97**	**212**	P	**Pn**	**09 31 07.9**	**+0.9**
ODZ	**Otahua Downs**	**7.35**	**207**	P	**Pn**	**09 31 14.0**	**+2.2**
ODZ	**Otahua Downs**	**7.35**	**207**	P	**Pn**	**09 31 13.6**	**+1.8**
JCZ	**Jackson Bay**	**7.37**	**219**	P	**Pn**	**09 31 13.7**	**+1.6**
JCZ	**Jackson Bay**	**7.37**	**219**	P	**Pn**	**09 31 11.7**	**-0.3**
WKZ	**Wanaka**	**7.82**	**215**	P	Pn	09 31 16.9	-0.8
EAZ	**Earnscleugh**	**8.02**	**212**	P	**Pn**	**09 31 20.5**	**+0.4**
MSZ	**Milford Sound**	**8.22**	**220**	P	**Pn**	**09 31 22.7**	**0.0**
WHZ	**Wether Hill Ro**	**9.12**	**214**	P	**Pn**	**09 31 35.2**	**+1.2**

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*IDC **04** 09:42:27.5±2.7,7°.86S×157°.00E,h0^{km},mb4.0/6, mbtmp4.0/7,ML4.0/1,MS3.2/1,Error ellipse: s-maj=72.5km s-min=38.5km az=114.0*

ISC 04 09:42:34.1±1.6,**7°.8S**±0°.2×**156°.7E**±0°.2,**h35**^{km},**n8**,σ**0^{s}.89**/8, **mb4.0**/6,**Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**5.86**	**306**	Pn	**Pn**	**09 43 59.9**	**+1.4**
	3.7nm,0.3s,baz=108,slow=20,SNR=1.4						
KRVT				Sn	**Sn**	**09 45 03.3**	**-1.2**
	6.9nm,0.3s,baz=162,slow=20,SNR=1.7						
	27nm,0.5s						
WRA	**Warramunga Arr**	**24.82**	**239**	P	**P**	**09 47 53.1**	**-0.2**
	2.6nm,0.9s,baz=62,slow=9.7,SNR=8.7						
	2.6nm,0.9s						
STKA	**Stephens Creek**	**27.77**	**208**	LR	LR	09 58 51.5	
	comp=Z,42nm,18.1s,baz=205,slow=35						
SONM	**Songino Array**	**70.98**	**327**	P	**P**	**09 53 48.0**	**-0.4**
	0.4nm,0.5s,baz=141,slow=7.9,SNR=4.9						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**85.18**	**318**	P	**P**	**09 55 07.1**	**+0.2**
	1.1nm,0.7s,baz=100,slow=5.8,SNR=13						
	1.1nm,0.7s						
ZALV	**Zalesovo Beam**	**85.84**	**326**	P	**P**	**09 55 09.8**	**-0.2**
	0.7nm,0.4s,baz=101,slow=5.0,SNR=4.5						
	0.7nm,0.4s						
KURBB	**Kurchatov Arra**	**88.59**	**321**	P	**P**	**09 55 23.2**	**-0.3**
	0.2nm,0.2s,baz=104,slow=1.9,SNR=2.5						
	0.2nm,0.2s						
BVAR	**Borovoye Array**	**94.01**	**323**	P	**P**	**09 55 48.2**	**-0.4**
	0.4nm,0.6s,baz=113,slow=3.7,SNR=3.0						
	0.4nm,0.6s						

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*NOU **04** 09:52:38.6,36°.07S×178°.95E,h266^{km},MLv3.9/6,Off E. Coast of N. Island, N.Z.*

*WEL **04** 09:52:41.6±0.8,36°S±10°×17°8E±1°0,h217^{km}±12^{km}, M3.6/23,ML3.8/22,MLv3.6/23,Error ellipse: s-maj=0.0km s-min=0.0km az=158.2,confirmed*

ISC 04 09:52:41.2±3.8,**36°.1S**±0°.2×**178°.6E**±0°.1,**h249**^{km}±16^{km}, **n69**,σ**0^{s}.74**/89,**Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.52**	**188**	P	**Pn**	**09 53 19.1**	**-0.4**
MXZ	**Matakaoa Point**	**1.52**	**188**	P	**Pn**	**09 53 19.0**	**-0.6**
MXZ				S	**S**	**09 53 49.4**	**-0.4**
WMGZ	**Waiomatatini S**	**1.77**	**184**	P	**Pn**	**09 53 21.9**	**+0.4**
WMGZ				S	**S**	**09 53 54.6**	**+1.2**
HAZ	**Te Kaha**	**1.82**	**200**	P	**Pn**	**09 53 21.2**	**-0.6**
HAZ				S	**S**	**09 53 52.0**	**-2.1**
PKGZ	**Pakihiroa**	**1.88**	**192**	P	**Pn**	**09 53 22.4**	**-0.1**
PKGZ				S	**S**	**09 53 54.5**	**-0.7**
PUZ	**Puketiti**	**2.03**	**187**	P	**Pn**	**09 53 23.9**	**0.0**
PUZ				S	**S**	**09 53 57.2**	**-0.4**
RUGZ	**Raukumara Rang**	**2.04**	**200**	P	**Pn**	**09 53 23.2**	**-0.9**
RUGZ				S	**S**	**09 53 57.6**	**-0.3**
TWGZ	**Tauwhareparae**	**2.18**	**193**	P	**Pn**	**09 53 25.9**	**+0.7**
TWGZ				S	**S**	**09 54 00.3**	**+0.3**
OPRZ	**Ohinepanea**	**2.42**	**222**	P	**Pn**	**09 53 27.5**	**0.0**
MWZ	**Matawai**	**2.43**	**200**	P	**Pn**	**09 53 27.8**	**+0.2**
MWZ				S	**S**	**09 54 05.3**	**+0.9**
CNGZ	**Carnagh Statio**	**2.45**	**187**	P	**Pn**	**09 53 28.8**	**+1.1**
TKGZ	**Te Karaka**	**2.46**	**194**	P	**Pn**	**09 53 28.2**	**+0.4**
TKGZ				S	**S**	**09 54 05.6**	**+0.8**
MARZ	**Manawahe**	**2.46**	**218**	P	**Pn**	**09 53 27.9**	**0.0**
URZ	**Urewera**	**2.50**	**208**	P	**Pn**	**09 53 27.9**	**-0.4**
URZ	**Urewera**	**2.50**	**208**	P	**Pn**	**09 53 27.8**	**-0.4**
URZ				S	**S**	**09 54 04.9**	**-0.6**
RAGZ	**Rawiri**	**2.61**	**201**	P	**Pn**	**09 53 30.2**	**+0.6**
RAGZ				S	**S**	**09 54 09.5**	**+1.7**
KARZ	**Kaharoa**	**2.71**	**223**	P	**Pn**	**09 53 31.3**	**+0.8**
RIGZ	**Rimuhau**	**2.73**	**194**	P	**Pn**	**09 53 31.1**	**+0.4**
RRRZ	**Republican Roa**	**2.82**	**215**	P	**Pn**	**09 53 32.5**	**+0.8**
MUGZ	**Murupara**	**2.82**	**210**	P	**Pn**	**09 53 31.7**	**+0.1**
MUGZ				S	**S**	**09 54 10.1**	**-1.4**
RTZ	**Ruatahuna**	**2.86**	**206**	P	**Pn**	**09 53 31.9**	**-0.2**
RTZ				S	**S**	**09 54 12.5**	**+0.1**
SNGZ	**Shannon Statio**	**2.90**	**200**	P	**Pn**	**09 53 33.1**	**+0.6**
TOZ	**Tahuroa Road**	**2.98**	**235**	P	**Pn**	**09 53 32.7**	**-0.6**
PRRZ	**Plateau Road**	**3.00**	**215**	P	**Pn**	**09 53 33.7**	**+0.1**
KNZ	**Kokohu**	**3.05**	**193**	P	**Pn**	**09 53 34.2**	**+0.1**
RAHZ	**Arahi**	**3.10**	**202**	P	**Pn**	**09 53 35.1**	**+0.5**
RAHZ				S	**S**	**09 54 17.9**	**+0.9**
MTHZ	**Maungataniwha**	**3.12**	**206**	P	**Pn**	**09 53 35.1**	**+0.2**
MTHZ				S	**S**	**09 54 18.5**	**+1.1**
MHGZ	**Mahia Peninsul**	**3.14**	**190**	P	**Pn**	**09 53 35.9**	**+0.8**
WHHZ	**Waihua**	**3.21**	**199**	P	**Pn**	**09 53 36.7**	**+0.9**
KUTZ	**Kaahu Road**	**3.28**	**221**	P	**Pn**	**09 53 37.6**	**+1.0**
TLZ	**Tolley Road**	**3.33**	**226**	P	**Pn**	**09 53 37.9**	**+0.7**
NMHZ	**Naumai**	**3.35**	**204**	P	**Pn**	**09 53 38.1**	**+0.6**
WCZ	**Waipu Caves**	**3.44**	**271**	P	Pn	09 53 34.0	-4.4
ARHZ	**Aropaoanui**	**3.44**	**201**	P	**Pn**	**09 53 38.9**	**+0.5**
WATZ	**Wairara**	**3.49**	**220**	P	**Pn**	**09 53 40.0**	**+1.0**
BKZ	**Black Stump Fm**	**3.52**	**207**	P	**Pn**	**09 53 39.4**	**0.0**
BKZ	**Black Stump Fm**	**3.52**	**207**	P	**Pn**	**09 53 39.2**	**-0.2**
MCHZ	**McNeill Hill**	**3.70**	**203**	P	**Pn**	**09 53 41.9**	**+0.5**
KWHZ	**Kaweka Forest**	**3.78**	**206**	P	**Pn**	**09 53 42.3**	**-0.1**
CKHZ	**Cape Kidnapper**	**3.79**	**198**	P	**Pn**	**09 53 42.8**	**+0.4**
NTVZ	**North Tongarir**	**3.82**	**216**	P	**Pn**	**09 53 43.3**	**+0.4**
TMVZ	**Te Maari**	**3.82**	**216**	P	**Pn**	**09 53 43.0**	**+0.1**
ETVZ	**East Tongariro**	**3.83**	**216**	P	**Pn**	**09 53 43.1**	**+0.1**
HIZ	**Hauiti**	**3.86**	**229**	P	**Pn**	**09 53 44.1**	**+0.9**
HIZ	**Hauiti**	**3.86**	**229**	P	**Pn**	**09 53 44.3**	**+1.1**
NNVZ	**North Ngauruho**	**3.87**	**217**	P	**Pn**	**09 53 44.2**	**+0.6**
NGZ	**Ngauruhoe**	**3.92**	**216**	P	**Pn**	**09 53 44.7**	**+0.7**
TWVZ	**Taurewa**	**3.92**	**219**	P	**Pn**	**09 53 44.0**	**0.0**
BHHZ	**Black Hill Sta**	**3.97**	**209**	P	**Pn**	**09 53 43.9**	**-0.7**
KAHZ	**Kahuranaki**	**3.97**	**199**	P	**Pn**	**09 53 45.0**	**+0.4**
FWVZ	**Far West T-bar**	**4.00**	**216**	P	**Pn**	**09 53 45.1**	**0.0**
MOVZ	**Moawhango**	**4.03**	**213**	P	**Pn**	**09 53 44.3**	**-1.0**
WNVZ	**Wahianoa**	**4.04**	**215**	P	**Pn**	**09 53 45.2**	**-0.3**
TRVZ	**Turoa**	**4.04**	**216**	P	**Pn**	**09 53 45.4**	**-0.2**
PKVZ	**Pokaka**	**4.13**	**217**	P	**Pn**	**09 53 46.2**	**-0.2**
MTVZ	**Mangateitei**	**4.14**	**216**	P	**Pn**	**09 53 46.6**	**0.0**
PXZ	**Pawanui**	**4.20**	**198**	P	**Pn**	**09 53 47.0**	**-0.2**
PNHZ	**Pukenui**	**4.29**	**205**	P	**Pn**	**09 53 47.7**	**-0.6**
VRZ	**Vera Road**	**4.32**	**224**	P	**Pn**	**09 53 49.3**	**+0.7**
WPHZ	**Waipukurau**	**4.35**	**202**	P	**Pn**	**09 53 48.6**	**-0.4**
WPHZ				S	**S**	**09 54 43.1**	**+0.1**
PRHZ	**Porangahau**	**4.48**	**199**	P	**Pn**	**09 53 50.5**	**0.0**
PRHZ				S	**S**	**09 54 47.5**	**+1.7**
TSZ	**Takapari Road**	**4.50**	**207**	P	**Pn**	**09 53 50.1**	**-0.8**
TSZ				S	**S**	**09 54 45.5**	**-0.9**
DVHZ	**Dannevirke**	**4.65**	**203**	P	**Pn**	**09 53 51.9**	**-0.7**
DVHZ				S	**S**	**09 54 47.6**	**-1.9**
ANWZ	**Angora Road**	**4.70**	**200**	P	**Pn**	**09 53 53.4**	**+0.2**
ANWZ				S	**S**	**09 54 51.0**	**+0.3**
NEZ	**North Egmont**	**4.79**	**227**	P	**Pn**	**09 53 55.7**	**+1.2**
KHEZ	**Kahui Hut**	**4.86**	**227**	P	**Pn**	**09 53 55.7**	**+0.4**
PRWZ	**Pori Road**	**4.94**	**204**	P	**Pn**	**09 53 55.9**	**-0.3**
PRWZ				S	**S**	**09 54 54.8**	**-1.2**
BFZ	**Birch Farm**	**4.97**	**201**	P	**Pn**	**09 53 56.0**	**-0.5**
SNZO	**South Karori**	**6.06**	**209**	P	**Pn**	**09 54 08.9**	**-1.1**

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*ISK **04** 09:57:49.4,39°.52N×26°.10E,h13^{km},ML2.6/13*

*DDA **04** 09:57:50.2±0.0,39°.53N×26°.13E,h12^{km},ML2.3*

ISC 04 09:57:49.9±0.8,**39°.52N**±0°.02×**26°.11E**±0°.03,**h15**^{km}±5^{km}, **n28**,σ**0^{s}.40**/48,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	**Canakkale, Ayv**	**0.03**	**134**	P	**Pg**	**09 57 52.6**	**0.0**
KOCA				S	**Sg**	**09 57 54.3**	**-0.2**
GPNR	**Gulpinar-Canak**	**0.07**	**166**	Pg	**Pg**	**09 57 52.6**	**-0.3**
GPNR				Sg	**Sg**	**09 57 54.6**	**-0.2**
BOZC	**Bozcaada**	**0.32**	**352**	Pg	**Pg**	**09 57 56.8**	**+0.1**
BOZC				Sg	**Sg**	**09 58 01.6**	**+0.4**
BOZC	**Bozcaada**	**0.32**	**352**	P	**Pg**	**09 57 56.6**	**0.0**
BOZC				P	**Pg**	**09 57 56.8**	**+0.1**
BOZC				S	**Sg**	**09 58 01.6**	**+0.4**
BOZC				S	**Sg**	**09 58 01.7**	**+0.4**
BOZC				*i* AML	AML	09 58 02.0	
	comp=E,327nm,0.2s						
BOZC				*i* AML	AML	09 58 02.0	
	comp=E,297nm,0.2s						
EZN	**Ezine**	**0.35**	**28**	Pg	**Pg**	**09 57 56.9**	**-0.1**
EZN				Sg	**Sb**	**09 58 02.5**	**-0.5**
SIGR	**SIGRI**	**0.37**	**213**	Pg	**Pg**	**09 57 57.3**	**-0.1**
SIGR				Sg	**Sg**	**09 58 02.5**	**0.0**
BAYC	**CANAKKALE_Bayr**	**0.40**	**57**	P	**Pg**	**09 57 58.1**	**+0.1**
BAYC				S	**Sg**	**09 58 03.6**	**0.0**
BAYC				*i* AML	AML	09 58 08.0	
	comp=E,152nm,0.1s						
COMU	**Canakkale**	**0.64**	**26**	Pg	**Pg**	**09 58 02.0**	**-0.5**
GOKA	**anakkale-Gk**	**0.69**	**347**	P	**Pb**	**09 58 03.4**	**-0.1**
GOKA				S	**Sb**	**09 58 13.1**	**+0.3**
GOKA				*i* AML	AML	09 58 14.0	
	comp=N,228nm,0.2s						
GOKA				*i* AML	AML	09 58 14.0	
	comp=E,177nm,0.2s						
GADA	**Gvkgeada**	**0.69**	**346**	Pg	**Pg**	**09 58 02.9**	**-0.5**
BUHA	**Balikesir, Bur**	**0.75**	**91**	P	**Pb**	**09 58 04.5**	**0.0**
BUHA				S	**Sg**	**09 58 14.2**	**0.0**
BUHA				*i* AML	AML	09 58 19.0	
	comp=E,65nm,0.7s						
BUHA				*i* AML	AML	09 58 20.0	
	comp=N,75nm,0.4s						
DKL	**Dikili**	**0.76**	**126**	Pg	**Pb**	**09 58 04.8**	**0.0**
CANM	**Can-anakkale**	**0.87**	**56**	Pg	**Pb**	**09 58 06.8**	**0.0**
KARB	**zmir-Karabur**	**0.89**	**165**	P	**Pb**	**09 58 07.5**	**+0.5**
KARB				S	**Sg**	**09 58 18.5**	**-0.2**
KARB				*i* AML	AML	09 58 20.0	
	comp=N,93nm,0.2s						
KARB				*i* AML	AML	09 58 21.0	
	comp=E,164nm,0.3s						
GELI	**Tayfur-Gelibol**	**0.92**	**17**	Pg	**Pg**	**09 58 07.4**	**-0.3**
GELI				Sg	**Sn**	**09 58 20.8**	**-0.4**
ZEDA	**zmir-Bergama**	**0.93**	**126**	P	**Pb**	**09 58 08.2**	**+0.5**
ZEDA				S	**Sn**	**09 58 21.4**	**-0.1**
ZEDA				*i* AML	AML	09 58 22.0	
	comp=N,90nm,0.2s						
ZEDA				*i* AML	AML	09 58 22.0	
	comp=E,66nm,0.2s						
LPK	**Lapseki**	**0.98**	**30**	Pg	**Pg**	**09 58 08.8**	**-0.2**
BALY	**Balya**	**1.18**	**79**	P	**Pb**	**09 58 12.2**	**+0.1**
BALY				S	**Sg**	**09 58 28.0**	**-0.2**
BALY				*i* AML	AML	09 58 30.0	
	comp=N,60nm,0.2s						
ERIK	**Erikli-Kesan**	**1.19**	**15**	Pn	**Pn**	**09 58 12.1**	**+0.2**
ENEZ	**Enez**	**1.21**	**1**	Pn	**Pn**	**09 58 12.3**	**0.0**
URLA	**Izmir**	**1.22**	**162**	Pn	**Pn**	**09 58 12.6**	**+0.2**
URLA	**Izmir**	**1.22**	**162**	P	**Pn**	**09 58 12.1**	**-0.3**
URLA				S	**Sb**	**09 58 28.0**	**-0.2**
URLA				*i* AML	AML	09 58 30.0	
	comp=E,78nm,0.5s						
URLA				*i* AML	AML	09 58 32.0	
	comp=N,83nm,0.6s						
STEP	**BALIKESIR_Sava**	**1.25**	**96**	P	**Pg**	**09 58 13.6**	**-0.4**
STEP				S	**Sg**	**09 58 31.8**	**+1.4**
STEP				*i* AML	AML	09 58 34.0	
	comp=N,36nm,0.4s						
STEP				*i* AML	AML	09 58 34.0	
	comp=E,46nm,1.0s						
KRBG	**Karabiga-Canak**	**1.26**	**46**	Pn	**Pb**	**09 58 13.3**	**0.0**
KESN	**Edirne-Kesan**	**1.37**	**18**	P	**Pn**	**09 58 14.9**	**+0.1**
KESN				S	**Sn**	**09 58 33.4**	**+0.4**
KESN				*i* AML	AML	09 58 34.0	
	comp=N,83nm,0.5s						
KESN				*i* AML	AML	09 58 37.0	
	comp=E,99nm,0.4s						
BKES	**Balkesir-Mer**	**1.42**	**81**	P	**Pb**	**09 58 16.2**	**+0.2**
BKES				S	**Sg**	**09 58 35.3**	**-0.3**
BKES				*i* AML	AML	09 58 38.0	
	comp=E,45nm,0.2s						
BAND	**Balkesir-Ban**	**1.74**	**61**	P	**Pn**	**09 58 20.4**	**+0.9**
BAND				S	**Sn**	**09 58 40.5**	**-1.0**
BAND				*i* AML	AML	09 58 43.0	
	comp=E,26nm,0.3s						
BAND				*i* AML	AML	09 58 43.0	
	comp=N,20nm,0.2s						
DURS	**Dursunbey**	**1.83**	**87**	P	**Pn**	**09 58 21.2**	**+0.4**

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*SOME **04** 10:00:52.5,38°.68N×79°.42E,h15^{km}*

*IDC **04** 10:01:00.2±2.0,38°.76N×79°.10E,h0^{km},mb3.6/5, mbtmp3.6/7,ML3.1/2,MS3.5/1,Error ellipse: s-maj=37.9km s-min=24.4km az=147.0*

*NNC **04** 10:01:04.4±2.2,38°.97N×79°.07E,h0^{km},mb3.9,mpv3.6, Error ellipse: s-maj=15.5km s-min=14.0km az=165.0*

ISC 04 10:01:02.5±1.3,**38°.89N**±0°.09×**79°.34E**±0°.07,**h10**^{km},**n56**, σ**2^{s}.41**/56,**mb3.6**/5,**10C-3D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**4.22**	**351**	Pg	**Pn**	**10 02 11.4**	**+4.4**
	12nm,0.4s						
SATY				Lg	Lg	10 03 04.6	
	32nm,0.5s						
SATY	**Saty**	**4.22**	**351**	*e*Pg	**Pb**	**10 02 15.9**	**-1.0**
	12nm,0.4s						
SATY				*e*Lg	Lg	10 03 16.6	
	32nm,0.5s						
UZB	**Uzynbulak**	**4.26**	**357**	Pg	**Pn**	**10 02 10.1**	**+2.6**
	8.4nm,0.4s						
UZB				Lg	Lg	10 03 02.6	
	12nm,0.2s						
UZB	**Uzynbulak**	**4.26**	**357**	*e*Pg	**Pb**	**10 02 14.1**	**-3.4**
	4.1nm,0.2s						
UZB				*e*Lg	Lg	10 03 14.0	
	11nm,0.6s						
SHLS	**Shalkode**	**4.26**	**1**	Pg	**Pn**	**10 02 11.2**	**+3.6**
	8.7nm,0.1s						
SHLS				Lg	Lg	10 03 04.2	
	37nm,0.2s						
SHLS	**Shalkode**	**4.26**	**1**	*e*Pg	**Pb**	**10 02 16.9**	**-0.7**
	8.0nm,0.5s						
SHLS				*e*Lg	Lg	10 03 18.8	
	32nm,0.8s						
ZHN	**Zhinishke**	**4.33**	**351**	Pg	**Pn**	**10 02 12.0**	**+3.6**
	2.4nm,0.1s						
ZHN				Lg	Lg	10 03 05.6	
	27nm,0.1s						
ZHN	**Zhinishke**	**4.33**	**351**	*e*Pg	**Pb**	**10 02 16.5**	**-2.2**
	1.2nm,0.3s						
ZHN				*e*Lg	Lg	10 03 17.6	
	36nm,0.3s						
PDGK	**Podgornoye**	**4.43**	**1**	Pg	**Pn**	**10 02 13.5**	**+3.6**
	5.5nm,0.2s						
PDGK				Lg	Lg	10 03 07.9	
	16nm,0.4s						
PDGK	**Podgornoye**	**4.43**	**1**	⇑Pn	**Pn**	**10 02 13.5**	**+3.6**
	3.4nm,0.3s						
PDGK				⇑Sn	**Sn**	**10 03 06.9**	**+5.3**
	18nm,0.5s						
PDGK				⇑Lg	Lg	10 03 23.5	
	40nm,0.9s						
TNSS	**Tian-Shan**	**4.52**	**337**	Pg	**Pb**	**10 02 22.2**	**+0.1**
	5.8nm,0.2s						
TNSS				Lg	Lg	10 03 22.8	
	7.8nm,0.4s						
TNSS	**Tian-Shan**	**4.52**	**337**	*e*Pg	**Pb**	**10 02 20.6**	**-1.5**
	5.8nm,0.2s						
TNSS				*e*Lg	Lg	10 03 24.4	
	7.8nm,0.4s						
KPKS	**Kokpek**	**4.60**	**354**	Pg	**Pn**	**10 02 16.0**	**+3.9**
	5.0nm,0.3s						
KPKS				Lg	Lg	10 03 12.1	
	20nm,0.4s						
KPKS	**Kokpek**	**4.60**	**354**	*e*Pg	**Pb**	**10 02 20.8**	**-2.4**
	2.6nm,0.3s						
KPKS				*e*Lg	Lg	10 03 25.1	
	25nm,0.4s						
MDOK	**Medeo**	**4.61**	**339**	Pg	**Pb**	**10 02 22.5**	**-0.9**
	4.1nm,0.3s						
MDOK				⇑Pg	Pg	10 02 25.6	-5.0
	3.3nm,0.6s						
MDOK				Lg	Lg	10 03 23.2	
	15nm,0.6s						
MDOK				⇑Lg	Lg	10 03 27.4	
	31nm,1.0s						
MDOK	**Medeo**	**4.61**	**339**	*e*Pg	**Pb**	**10 02 21.4**	**-2.0**
	4.1nm,0.3s						
MDOK				*e*Lg	Lg	10 03 26.1	
	15nm,0.6s						
IZV	**Izvestkoviy**	**4.63**	**334**	Pg	**Pb**	**10 02 24.8**	**+1.1**
	3.0nm,0.4s						
IZV				Lg	Lg	10 03 27.1	
	30nm,0.4s						
IZV	**Izvestkoviy**	**4.63**	**334**	*e*Pg	**Pb**	**10 02 22.3**	**-1.5**
	3.0nm,0.4s						
IZV				*e*Lg	Lg	10 03 27.1	
	30nm,0.4s						
KOTS	**Kotyrbulak**	**4.65**	**340**	Pg	**Pb**	**10 02 23.2**	**-1.0**
	2.5nm,0.1s						
KOTS				Lg	Lg	10 03 24.4	
	38nm,0.5s						
KOTS	**Kotyrbulak**	**4.65**	**340**	*e*Pg	**Pb**	**10 02 23.2**	**-1.0**
	2.5nm,0.1s						
KOTS				*e*Lg	Lg	10 03 29.3	
	38nm,0.5s						
KURS	**Kuram**	**4.68**	**350**	Pg	Pb	10 02 19.4	-5.2
	6.1nm,0.5s						
KURS				Lg	Lg	10 03 17.7	
	12nm,0.4s						
KURS	**Kuram**	**4.68**	**350**	*e*Pg	**Pb**	**10 02 23.4**	**-1.2**
	2.0nm,0.5s						
KURS				*e*Lg	Lg	10 03 29.4	
	12nm,0.4s						
MTBS	**Maitube**	**4.77**	**333**	Pg	**Pb**	**10 02 25.9**	**-0.4**
	2.5nm,0.2s						
MTBS				Lg	Lg	10 03 29.2	
	8.6nm,0.3s						
MTBS	**Maitube**	**4.77**	**333**	*e*Pg	**Pb**	**10 02 23.9**	**-2.4**
	2.5nm,0.2s						
MTBS				*e*Lg	Lg	10 03 30.2	
	8.6nm,0.3s						
TKM2	**Tokmak 2**	**4.92**	**326**	⇑Pg	**Pb**	**10 02 31.1**	**+2.3**
	1.1nm,0.3s						
TKM2				⇓Lg	Lg	10 03 35.8	
	11nm,0.6s						
DGS	**Degeres**	**5.11**	**329**	Pg	**Pg**	**10 02 37.1**	**-3.3**
	3.8nm,0.3s						
DGS				Lg	Lg	10 03 48.5	
	18nm,0.3s						
DGS	**Degeres**	**5.11**	**329**	*e*Pg	**Pb**	**10 02 34.5**	**+2.5**
	3.8nm,0.3s						
DGS				*e*Lg	Lg	10 03 48.5	
	18nm,0.3s						
KTBS	**Karatobe**	**5.21**	**338**	Pg	**Pb**	**10 02 35.9**	**+2.1**
	2.3nm,0.3s						
KTBS				Lg	Lg	10 03 46.2	
	26nm,0.3s						
KTBS	**Karatobe**	**5.21**	**338**	*e*Pg	**Pb**	**10 02 33.0**	**-0.7**
	2.3nm,0.3s						
KTBS				*e*Lg	Lg	10 03 46.2	
	26nm,0.3s						
BLB	**Baldybastay**	**5.24**	**353**	Pg	**Pb**	**10 02 31.0**	**-3.3**
	4.7nm,0.2s						

BLB				Lg	Lg	10 03 37.9	
	17nm,0.3s						
AAK	**Ala-Archa**	**5.25**	**317**	Pg	**Pb**	**10 02 35.1**	**+0.7**
	0.9nm,0.3s,baz=146,slow=9.4,SNR=7.2						
AAK				Lg	Lg	10 03 37.1	
	1.1nm,0.3s,baz=23,slow=19,SNR=3.5						
CHKK	**Chushkaly**	**5.26**	**341**	Pg	**Pb**	**10 02 37.2**	**+2.7**
	2.8nm,0.0s						
CHKK				Lg	Lg	10 03 48.7	
	17nm,0.2s						
CHKK	**Chushkaly**	**5.26**	**341**	*e*Pg	**Pb**	**10 02 34.7**	**+0.2**
	2.8nm,0.0s						
CHKK				*e*Lg	Lg	10 03 48.8	
	17nm,0.2s						
AML	**Almayashu**	**5.38**	**309**	⇓Pn	**Pn**	**10 02 24.8**	**+1.6**
	0.2nm,0.5s						
AML				⇑Pg	**Pb**	**10 02 39.1**	**+2.3**
	0.3nm,0.6s						
AML				⇑Lg	Lg	10 03 50.0	
	2.2nm,0.7s						
DJR	**Jarkent**	**5.45**	**3**	Pg	Pn	10 02 30.8	+7.0
	3.5nm,0.1s						
DJR				Lg	Lg	10 03 37.6	
	8.4nm,0.3s						
DJR	**Jarkent**	**5.45**	**3**	*e*Pg	**Pb**	**10 02 36.3**	**-1.4**
	2.7nm,0.3s						
DJR				*e*Lg	Lg	10 03 51.6	
	8.4nm,0.3s						
KUU	**Kurty**	**5.48**	**337**	Pg	**Pb**	**10 02 40.0**	**+1.7**
	1.5nm,0.2s						
KUU				Lg	Lg	10 03 53.4	
	15nm,0.4s						
KUU	**Kurty**	**5.48**	**337**	*e*Pg	**Pb**	**10 02 37.2**	**-1.1**
	1.5nm,0.2s						
KUU				*e*Lg	Lg	10 03 53.4	
	15nm,0.4s						
KRBS	**Karabastau**	**5.54**	**331**	Pg	Pg	10 02 42.8	-5.6
	1.9nm,0.2s						
KRBS				Lg	Lg	10 03 58.1	
	13nm,0.7s						
KRBS	**Karabastau**	**5.54**	**331**	*e*Pg	**Pb**	**10 02 37.6**	**-1.7**
	1.9nm,0.2s						
KRBS				*e*Lg	Lg	10 03 53.7	
	13nm,0.7s						
MRKS	**Merke**	**6.03**	**312**	P	**Pg**	**10 02 57.3**	**-0.5**
	3.4nm,0.7s						
MRKS	**Merke**	**6.03**	**312**	*e*Pg	**Pb**	**10 02 44.8**	**-2.8**
	1.2nm,0.5s						
MRKS				*e*Lg	Lg	10 04 06.2	
	4.8nm,0.8s						
BTLS	**Baital**	**7.30**	**329**	*e*Pg	**Pb**	**10 03 10.3**	**+1.1**
	0.6nm,0.6s						
BTLS				*e*Lg	Lg	10 04 48.8	
	2.6nm,0.9s						
IUG	**Iuzhnay**	**7.80**	**298**	Pg	**Pg**	**10 03 33.4**	**+1.6**
	4.0nm,0.4s						
IUG				Lg	Lg	10 05 25.4	
	11nm,0.4s						
KK31	**Karatay Array**	**7.89**	**305**	⇑Lg	Lg	10 05 11.6	
	2.0nm,0.6s,baz=121,slow=25,SNR=3.6						
MAKZ	**Makanchi**	**8.14**	**13**	⇑Pn	**Pn**	**10 03 04.0**	**+3.2**
	1.9nm,0.4s						
MAKZ				⇓Sn	**Sn**	**10 04 35.8**	**+2.9**
	2.4nm,0.7s						
MK31	**Makanchi Array**	**8.19**	**14**	Pn	**Pn**	**10 03 04.3**	**+2.9**
	0.3nm,0.2s,baz=202,slow=14,SNR=83						
MK31				Sn	**Sn**	**10 04 36.8**	**+2.9**
	1.0nm,0.3s,baz=197,slow=24,SNR=13						
MKAR	**Makanchi Array**	**8.19**	**14**	Pn	**Pn**	**10 03 04.6**	**+3.2**
	0.8nm,0.3s,baz=199,slow=13,SNR=48						
MKAR				Sn	**Sn**	**10 04 35.8**	**+1.8**
	1.6nm,0.3s,baz=200,slow=24,SNR=14						
	1.0nm,0.3s						
BVAR	**Borovoye Array**	**15.43**	**339**	Pn	**P**	**10 04 46.0**	**+1.4**
	baz=148,slow=11,SNR=17						
ZALV	**Zalesovo Beam**	**15.52**	**12**	Pn	**Pn**	**10 04 42.2**	**+0.9**
	0.1nm,0.3s,baz=186,slow=10,SNR=2.2						
	0.3nm,0.4s						
SONM	**Songino Array**	**21.52**	**57**	P	**P**	**10 05 54.0**	**+2.4**
	0.5nm,0.4s,baz=250,slow=11,SNR=3.6						
	0.5nm,0.4s						
BRTR	**Keskin Array B**	**35.08**	**286**	P	**P**	**10 07 55.5**	**-0.3**
	0.4nm,0.5s,baz=54,slow=7.3,SNR=2.2						
	0.4nm,0.5s						
FINES	**FINESS Array B**	**39.41**	**323**	P	**P**	**10 08 31.0**	**-1.1**
	1.1nm,0.8s,baz=111,slow=15,SNR=3.6						
	1.1nm,0.8s						
MJAR	**Matsushiro Arr**	**45.92**	**74**	LR	LR	10 30 16.8	
	comp=Z,56nm,18.6s,baz=178,slow=38						
TORD	**Torodi Ar. Bea**	**72.30**	**273**	P	**P**	**10 12 25.9**	**-2.6**
	0.5nm,0.7s,baz=50,slow=6.5,SNR=3.3						
	0.5nm,0.7s						
YKA	**Yellowknife Ar**	**78.34**	**7**	P	**P**	**10 13 02.1**	**-0.4**
	0.7nm,1.1s,baz=337,slow=4.9,SNR=4.1						
	0.7nm,1.1s						

*NEIC **04** 10:05:20.2±1.7, 7.°39S±0.°08×155.°75E±0.°07, h10km±1km, mb4.9/77, Error ellipse: s-maj=14.7km s-min=10.7km az=39.0*

*MOS **04** 10:05:24.3±0.9, 7.°15S×155.°63E, h49km, mb5.2/26, Error ellipse: s-maj=9.3km s-min=7.1km az=105.2*

*BJI **04** 10:05:24.1±0.0, 6.°89S×155.°91E, h49km, mb4.8/53, mB5.3/21, Ms4.8/7, Ms7 4.6/5*

*IDC **04** 10:05:29.1±1.4, 7.°25S×155.°68E, h85km±12km, mb4.3/19, mbtmp4.6/24, MS3.7/25, Error ellipse: s-maj=13.3km s-min=9.1km az=43.0*

*DJA **04** 10:05:34.1±0.6, 7°S±5°×15°5E±°, h114km±8km, M4.8/9, mB4.7/2, mb4.6/9, MLv5.0/2, Mw(mB)3.9/2*

ISC 04 10:05:23.9±0.7**, 7.°33S**±0.°05×**155.°78E**±0.°06**, h42**km±6km**, n223, σ1.°18**/206**, mb4.9**/90**, MS3.8**/23**, 7C-6D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.62**	**117**	P	Pn	10 06 37.8	+6.7
	922nm,0.4s,baz=217,slow=6.2,SNR=2.9						
HNR				S	Sn	10 07 33.3	+10
	8µm,0.8s,baz=336,slow=2.9,SNR=5.8						
HNR	**Honiara**	**4.62**	**117**		**Pn**	**10 06 32.4**	**+1.2**
RABL	**Rabaul**	**4.76**	**311**		**Pn**	**10 06 31.8**	**-1.4**
KRVT	**Keravat (AS076**	**4.79**	**309**	P	Pn	10 06 37.5	+3.9
	42nm,0.7s,baz=161,slow=22,SNR=2.2						
KRVT				S	**Sn**	**10 07 31.1**	**+3.1**
	241nm,0.7s,baz=101,slow=5.7,SNR=4.1						
KRVT				LR	LR	10 08 50.0	
	comp=Z,2µm,18.1s,baz=275,slow=43						
PMG	**Port Moresby**	**8.78**	**256**	P	Pn	10 07 32.3	+4.0
	13nm,0.6s,baz=84,slow=16,SNR=4.3						
PMG				S	**Sn**	**10 09 09.6**	**+3.6**
	12nm,0.8s,baz=270,slow=22,SNR=1.8						
PMG				LR	LR	10 11 02.4	
	comp=Z,595nm,18.4s,baz=54,slow=38						
PMG	**Port Moresby**	**8.78**	**256**	Pn	**Pn**	**10 07 26.2**	**-2.1**
COEN	**Coen**	**14.03**	**241**	Pn	**Pn**	**10 08 36.9**	**-3.3**
PATS	**Pohnpei**	**14.30**	**10**	Pn	**Pn**	**10 08 42.5**	**-1.3**
KOUNC	**Koumac, New Ca**	**15.51**	**149**	Pn	**Pn**	**10 08 57.7**	**-2.1**
CTA	**Charters Tower**	**15.69**	**215**	P	**P**	**10 09 04.5**	**-1.2**
	7.1nm,0.8s,baz=29,slow=8.8,SNR=5.6						
CTA				LR	LR	10 14 40.6	
	comp=Z,211nm,18.8s,baz=74,slow=35						
CTAO	**Charters Tower**	**15.69**	**215**		**Pn**	**10 09 00.3**	**-1.8**
CTAO	**Charters Tower**	**15.69**	**215**	P	**Pn**	**10 09 02.8**	**+0.6**
DZM	**Mont Dzumac**	**17.90**	**146**	P	**P**	**10 09 32.1**	**+1.9**
	8.2nm,0.9s,baz=357,slow=19,SNR=1.8						
DZM				LR	LR	10 15 00.0	
	comp=Z,233nm,19.1s,baz=235,slow=32						
DZM	**Mont Dzumac**	**17.90**	**146**		**Pn**	**10 09 28.9**	**-1.0**
EIDS	**Eidsvold**	**18.49**	**194**	P	**P**	**10 09 35.6**	**-1.0**
SRPI	**Serui, Papua**	**20.21**	**285**	P	**P**	**10 09 56.7**	**+1.2**
ARMA	**Armidale**	**23.30**	**189**	P	**P**	**10 10 27.3**	**-0.9**
GUMO	**Guam**	**23.44**	**332**	LR	LR	10 18 25.1	
	comp=Z,79nm,21.2s,baz=142,slow=33						
FAKI	**Fak Fak**	**23.84**	**279**	P	**P**	**10 10 32.6**	**-0.9**
FAKI				IAmb	IAmb	10 10 40.0	
	comp=Z,61nm,1.3s						
WR0	**Warramunga Arr**	**24.12**	**237**	P	**P**	**10 10 35.8**	**-0.2**
WR0				IAmb	IAmb	10 10 51.7	
	comp=Z,24nm,1.1s						
WB0	**Warramunga Arr**	**24.15**	**237**	P	**P**	**10 10 36.4**	**0.0**
LHI	**Lord Howe Isla**	**24.26**	**173**	P	**P**	**10 10 37.6**	**+0.5**
WRAB	**Tennant Creek**	**24.27**	**237**	P	**P**	**10 10 37.3**	**-0.1**
WRAB	**Tennant Creek**	**24.27**	**237**	P	**P**	**10 10 37.3**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,15nm,1.0s						
WB2	**Warramunga Arr**	**24.27**	**237**	P	**P**	**10 10 36.8**	**-0.6**
WB2				IAmb	IAmb	10 10 53.7	
	comp=Z,20nm,1.1s						
WRA	**Warramunga Arr**	**24.28**	**237**	P	**P**	**10 10 37.6**	**+0.1**
	comp=Z,6.2nm,0.9s,baz=63,slow=9.5,SNR=19						
WRA				PcP	**PcP**	**10 14 17.1**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=66,slow=2.7,SNR=3.8						
	comp=Z,6.2nm,0.9s						
WRA	**Warramunga Arr**	**24.28**	**237**	P	**P**	**10 10 36.6**	**-0.9**
WRA	**Warramunga Arr**	**24.28**	**237**	*i* P	**P**	**10 10 38.2**	**+0.7**
WRA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MTN	**Manton Dam**	**24.87**	**255**	P	**P**	**10 10 43.3**	**+0.4**
AS31	**Alice Springs**	**26.55**	**230**	P	**P**	**10 10 58.4**	**+0.3**
ASAR	**Alice Springs**	**26.55**	**230**	P	**P**	**10 10 58.0**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=59,slow=9.8,SNR=11						
ASAR				PcP	**PcP**	**10 14 21.5**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=65,slow=2.8,SNR=5.7						
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**26.55**	**230**	P	**P**	**10 10 58.3**	**+0.3**
KNRA	**Kununurra**	**27.72**	**250**	P	**P**	**10 11 08.0**	**-0.6**
KNRA				IAmb	IAmb	10 11 24.9	
	comp=Z,34nm,1.5s						
STKA	**Stephens Creek**	**27.78**	**207**	P	**P**	**10 11 10.0**	**+1.1**
	comp=Z,2.5nm,0.6s,baz=48,slow=11,SNR=3.4						
STKA				LR	LR	10 22 21.0	
	comp=Z,230nm,18.1s,baz=29,slow=36						
	comp=Z,2.5nm,0.6s						
STKA	**Stephens Creek**	**27.78**	**207**	P	**P**	**10 11 08.6**	**-0.3**
STKA	**Stephens Creek**	**27.78**	**207**	P	**P**	**10 11 10.3**	**+1.4**
STKA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
H11S3	**WAKE ISLAND Hy**	**27.82**	**23**	T	T	10 39 33.2	
	baz=202,slow=75,SNR=95						
H11S2	**WAKE ISLAND Hy**	**27.83**	**23**	T	T	10 39 36.2	
	baz=202,slow=75,SNR=47						
H11S1	**WAKE ISLAND Hy**	**27.84**	**23**	T	T	10 39 35.4	
	baz=202,slow=75,SNR=53						
CAN	**Canberra**	**28.55**	**192**	P	**P**	**10 11 14.1**	**-1.7**
CAN				IAmb	IAmb	10 11 17.5	
	comp=Z,42nm,1.4s						
CAN	**Canberra**	**28.55**	**192**	P	**P**	**10 11 14.1**	**-1.7**
CAN				pmax	pmax		
	comp=Z,42nm,1.4s						
TNTI	**Ternate**	**29.47**	**285**	P	**P**	**10 11 22.9**	**-1.3**
FITZ	**Fitzroy Crossi**	**31.24**	**247**	P	**P**	**10 11 39.3**	**-0.5**
SOEI	**Soe**	**31.25**	**263**	P	P	10 11 31.2	-8.9
BBOO	**Buckleboo**	**31.28**	**213**	P	**P**	**10 11 39.1**	**-0.9**
BBOO				IAmb	IAmb	10 11 43.5	
	comp=Z,16nm,1.2s						
AFI	**Afiamalu**	**32.52**	**104**	LR	LR	10 22 37.8	
	comp=Z,63nm,19.2s,baz=11,slow=32						
DAV	**Davao City (W)**	**33.35**	**295**	LR	LR	10 26 12.1	
	comp=Z,89nm,18.2s,baz=74,slow=37						
FORT	**Forrest**	**34.89**	**224**	P	**P**	**10 12 11.2**	**-0.3**
FORT				IAmb	IAmb	10 12 34.1	
	comp=Z,15nm,0.7s						
KAPI	**Kappang**	**35.89**	**272**	LR	LR	10 29 54.7	
	comp=Z,51nm,18.1s,baz=117,slow=41						
KAPI	**Kappang**	**35.89**	**272**	P	**P**	**10 12 20.1**	**-0.2**
KAPI				IAmb	IAmb	10 12 32.8	
	comp=Z,14nm,0.8s						
KAPI	**Kappang**	**35.89**	**272**	P	**P**	**10 12 20.1**	**-0.2**
KAPI				pmax	pmax		
	comp=Z,14nm,0.8s						
TOLI2	**Tolitoli**	**35.91**	**282**	P	**P**	**10 12 19.4**	**-1.2**
URZ	**Urewera**	**36.34**	**151**	P	**P**	**10 12 25.7**	**+1.9**
	comp=Z,6.6nm,1.0s,baz=18,slow=9.6,SNR=1.5						
	comp=Z,6.6nm,1.0s						
RTZ	**Ruatahuna**	**36.56**	**152**	P	**P**	**10 12 26.4**	**+0.6**
RTZ				IAmb	IAmb	10 12 30.8	
	comp=Z,20nm,1.3s						
BKZ	**Black Stump Fm**	**36.77**	**153**	P	**P**	**10 12 28.1**	**+0.5**
BKZ				IAmb	IAmb	10 12 33.5	
	comp=Z,34nm,1.4s						
MBWA	**Marble Bar**	**37.44**	**245**	P	**P**	**10 12 33.6**	**+0.2**
RPZ	**Rata Peaks**	**38.64**	**162**	P	**P**	**10 12 46.7**	**+3.4**
	comp=Z,11nm,1.1s,baz=39,slow=6.5,SNR=1.6						
RPZ				LR	LR	10 28 34.3	
	comp=Z,198nm,18.1s,baz=335,slow=36						
	comp=Z,11nm,1.1s						
JOW	**Kunigami**	**43.18**	**323**	LR	LR	10 30 54.5	
	comp=Z,69nm,18.6s,baz=105,slow=35						
JOW	**Kunigami**	**43.18**	**323**	P	**P**	**10 13 21.0**	**+0.2**
JOW				IAmb	IAmb	10 13 21.9	
	comp=Z,23nm,1.2s						
MORW	**Morawa**	**43.20**	**235**	P	**P**	**10 13 21.6**	**+0.5**
YOJ	**Yonaguni jima**	**44.94**	**316**	P	**P**	**10 13 35.7**	**+0.8**
YOJ	**Yonaguni jima**	**44.94**	**316**	P	**P**	**10 13 35.7**	**+0.8**
YOJ				pmax	pmax		
	comp=Z,169nm,1.5s						
RAR	**Rarotonga**	**45.06**	**113**	LR	LR	10 31 51.3	
	comp=Z,84nm,20.1s,baz=284,slow=35						
NACB	**Ninganchiao**	**45.75**	**314**	P	**P**	**10 13 41.6**	**+0.2**
JMN	**Monobe**	**45.82**	**334**	P	**P**	**10 13 41.7**	**-0.2**
JMN				IAmb	IAmb	10 14 00.5	
	comp=Z,17nm,1.2s						
TPUB	**Ta-pu**	**45.91**	**313**	P	**P**	**10 13 42.6**	**-0.1**
JGF	**Kuroka**	**46.09**	**339**	P	**P**	**10 13 43.4**	**-0.6**
JGF				IAmb	IAmb	10 13 44.5	
	comp=Z,9.5nm,0.9s						
YHNB	**Yeheng**	**46.22**	**315**	P	**P**	**10 13 44.1**	**-1.0**
YHNB				IAmb	IAmb	10 13 46.7	
	comp=Z,16nm,0.8s						
MJAR	**Matsushiro Arr**	**46.65**	**340**	P	**P**	**10 13 47.2**	**-1.2**
	comp=Z,6.4nm,0.8s,baz=162,slow=7.5,SNR=21						
MJAR				PcP	**PcP**	**10 15 20.9**	**-0.8**
	comp=Z,2.1nm,0.7s,baz=166,slow=4.3,SNR=4.8						
	comp=Z,6.4nm,0.8s						
MAJO	**Matsushiro**	**46.65**	**340**	P	**P**	**10 13 47.9**	**-0.5**
MAJO				IAmb	IAmb	10 13 50.0	
	comp=Z,13nm,0.8s						
MAJO	**Matsushiro**	**46.65**	**340**	P	**P**	**10 13 47.9**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,13nm,0.8s						
MJB9	**Matsu-Tunnel**	**46.66**	**340**	P	**P**	**10 13 48.8**	**+0.4**
MJB9				IAmb	IAmb	10 13 51.0	
	comp=Z,12nm,0.7s						
JNU	**Nakatsue**	**46.68**	**331**	LR	LR	10 29 41.3	
	comp=Z,44nm,21.7s,baz=148,slow=31						
JNU	**Nakatsue**	**46.68**	**331**	P	**P**	**10 13 48.3**	**-0.3**
JNU				IAmb	IAmb	10 13 49.0	
	comp=Z,15nm,1.0s						
JHS	**Saijyo**	**47.23**	**334**	P	**P**	**10 13 53.2**	**+0.3**
PPBI	**Pangkal Pinang**	**49.72**	**273**	P	P	10 14 07.7	-4.7
TJN	**Taejon**	**51.01**	**330**	P	**P**	**10 14 21.3**	**-0.4**
TJN	**Taejon**	**51.01**	**330**	P	**P**	**10 14 21.3**	**-0.4**
TJN				pmax	pmax		
	comp=Z,110nm,1.2s						
KSRS	**Korea Array**	**51.60**	**332**	P	**P**	**10 14 26.1**	**-0.1**
	comp=Z,6.6nm,0.9s,baz=151,slow=8.6,SNR=22						
KSRS				PcP	**PcP**	**10 15 39.6**	**0.0**
	comp=Z,1.5nm,0.7s,baz=162,slow=3.7,SNR=5.3						
	comp=Z,6.6nm,0.9s						
KSAR	**Wonju Array Be**	**51.61**	**332**	P	**P**	**10 14 26.0**	**-0.2**
KSAR	**Wonju Array Be**	**51.61**	**332**	P	**P**	**10 14 26.0**	**-0.2**
KS19	**Wonju Array Si**	**51.66**	**332**	P	**P**	**10 14 25.8**	**-0.9**
KS19				IAmb	IAmb	10 14 27.4	
	comp=Z,11nm,1.0s						
INCN	**Inchon**	**52.24**	**331**	P	**P**	**10 14 30.9**	**-0.1**
INCN				IAmb	IAmb	10 14 32.4	
	comp=Z,23nm,1.0s						
INCN	**Inchon**	**52.24**	**331**	P	**P**	**10 14 30.9**	**-0.1**
INCN				pmax	pmax		
	comp=Z,23nm,1.0s						
QIZ	**Qiongzhong**	**52.30**	**301**	P	**P**	**10 14 32.1**	**+0.4**
QIZ				S	**S**	**10 21 54.6**	**+0.1**
QIZ				LR	LR		
	comp=Z,150nm,6.2s						
QIZ				LR	LR		
	comp=Z,92nm,6.9s						
QIZ				LR	LR		
	comp=Z,130nm,11.4s						
JKA	**Kamikawa-asahi**	**52.58**	**348**	P	**P**	**10 14 34.0**	**+0.7**
ASAJ	**Asahikawa**	**52.58**	**348**	LR	LR	10 34 27.1	
	comp=Z,90nm,20.9s,baz=126,slow=33						
ASAJ	**Asahikawa**	**52.58**	**348**	P	**P**	**10 14 34.0**	**+0.7**
ASAJ				pmax	pmax		
	comp=Z,36nm,1.2s						
NJ2	**Nanjing**	**52.67**	**320**	*e*P	**P**	**10 14 36.2**	**+2.0**
NJ2				pP	**sP**	**10 14 48.9**	**-1.8**
NJ2				sP	pP	10 14 55.1	+9.2
YSS	**Yuzh-Sakhalins**	**55.27**	**349**	*e*P	**P**	**10 14 53.1**	**+0.2**
YSS				pmax	pmax		
	comp=Z,140nm,1.0s						
USA0B	**Ussuriysk Arra**	**55.61**	**339**	P	**P**	**10 14 55.9**	**+0.5**
USA0B				IAmb	IAmb	10 14 57.3	
	comp=Z,21nm,1.1s						
USA0B	**Ussuriysk Arra**	**55.61**	**339**	P	**P**	**10 14 55.9**	**+0.5**
USA0B				pmax	pmax		
	comp=Z,21nm,1.1s						
USRK	**Ussuriysk Ar.**	**55.61**	**339**	P	**P**	**10 14 55.4**	**-0.1**
	comp=Z,19nm,1.0s,baz=142,slow=7.3,SNR=14						
	comp=Z,19nm,1.0s						
USRK	**Ussuriysk Ar.**	**55.61**	**339**	P	**P**	**10 14 55.9**	**+0.5**
USRK	**Ussuriysk Ar.**	**55.61**	**339**	P	**P**	**10 14 55.9**	**+0.5**
MDJ	**Mudanjiang**	**56.84**	**338**	P	**P**	**10 15 04.6**	**+0.4**
MDJ				pP	sP	10 15 19.2	-1.5
MDJ				PcP	**PcP**	**10 15 59.8**	**+0.3**
MDJ				PP	**PP**	**10 17 12.2**	**+1.2**
MDJ				ScP	**ScP**	**10 19 52.7**	**-3.2**
MDJ				PcS	**PcS**	**10 20 01.9**	**+1.7**
MDJ				S	**S**	**10 22 48.0**	**-6.7**
MDJ				ScS	**ScS**	**10 24 49.3**	**-0.8**
MDJ				pmax	pmax		
	comp=Z,14nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,240nm,7.1s						
MDJ				LR	LR		
	comp=Z,360nm,5.2s						
MDJ				LR	LR		
	comp=Z,130nm,5.1s						
MDJ				LR	LR		
	comp=Z,170nm,6.7s						
CN2	**Changchun**	**57.83**	**334**	*e*P	**P**	**10 15 11.2**	**0.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ENH	**Enshi**	**58.04**	**313**	P	**P**	**10 15 12.5**	**-0.4**
ENH				IAmb	IAmb	10 15 13.9	
	comp=Z,10nm,0.8s						
BNX	**BinXian**	**58.62**	**337**	⇑P	**P**	**10 15 17.2**	**+0.5**
BNX				pmax	pmax		
	comp=Z,13nm,0.6s						
BNX				pmax	pmax		
	comp=Z,260nm,5.3s						
HNS	**HongShan**	**58.74**	**322**	⇑P	**P**	**10 15 17.4**	**-0.3**
HNS				pmax	pmax		
	comp=Z,11nm,1.2s						
KLR	**Kul'dur**	**60.12**	**342**	*de*P	**P**	**10 15 26.1**	**-0.9**
KLR				pmax	pmax		
	comp=Z,13nm,1.3s						
PETK	**Petropavlovsk-**	**60.23**	**1**	P	**P**	**10 15 27.4**	**-0.2**
	comp=Z,8.1nm,0.7s,baz=152,slow=6.7,SNR=12						
PETK				LR	LR	10 39 04.0	
	comp=Z,65nm,20.4s,baz=152,slow=34						
	comp=Z,8.1nm,0.7s						
XAN	**Xi'an**	**60.49**	**316**	⇑P	**P**	**10 15 29.0**	**-0.9**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KMI	**Kunming**	**60.85**	**304**	⇑P	**P**	**10 15 33.9**	**+1.2**
KMI				pmax	pmax		
	comp=Z,23nm,0.8s						
CRAI	**Chiangrai**	**60.97**	**298**	P	**P**	**10 15 33.4**	**0.0**
CRAI				IAmb	IAmb	10 15 35.2	
	comp=Z,11nm,0.8s						
CMAR	**Chiang Mai Arr**	**61.63**	**295**	P	**P**	**10 15 38.6**	**+0.8**
	comp=Z,7.6nm,0.9s,baz=112,slow=4.9,SNR=32						
CMAR				LR	LR	10 40 53.0	
	comp=Z,20nm,20.7s,baz=105,slow=34						
	comp=Z,7.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**61.63**	**295**	P	**P**	**10 15 38.0**	**+0.1**
CMAR	**Chiang Mai Arr**	**61.63**	**295**	*i* P	**P**	**10 15 39.0**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CHTO	**Chiang Mai**	**61.75**	**296**	P	**P**	**10 15 38.6**	**0.0**
CHTO	**Chiang Mai**	**61.75**	**296**	P	**P**	**10 15 38.7**	**0.0**
SHEM	**Shemya Is, Ala**	**61.83**	**13**	LR	LR	10 39 14.0	
	comp=Z,81nm,19.3s,baz=242,slow=33						
PZH	**PanZhiHua**	**62.24**	**305**	P	**P**	**10 15 42.1**	**+0.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,110nm,4.8s						
XLT	**XiLinHaoTe**	**62.35**	**329**	⇓*i*P	**P**	**10 15 42.8**	**+0.5**
XLT				pmax	pmax		
	comp=Z,21nm,0.9s						
XLT				pmax	pmax		
	comp=Z,110nm,5.3s						
HEH	**HeiHe**	**62.41**	**340**	*e*P	**P**	**10 15 42.2**	**-0.2**
HEH				pmax	pmax		
	comp=Z,11nm,0.9s						
CD2	**Chengdu**	**62.62**	**310**	P	**P**	**10 15 44.0**	**-0.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**62.82**	**324**	*e*P	P	10 15 50.6	+5.0
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,250nm,5.5s						
TNCH	**TengChong**	**64.32**	**302**	P	**P**	**10 15 59.5**	**+3.6**
TNCH				pmax	pmax		
	comp=Z,340nm,5.6s						
HIA	**Hailar**	**64.56**	**335**	P	**P**	**10 15 57.1**	**+0.4**
HIA	**Hailar**	**64.56**	**335**	P	**P**	**10 15 57.1**	**+0.4**
HIA				pmax	pmax		
	comp=Z,14nm,0.9s						
LZH	**Lanzhou**	**65.10**	**315**	⇓P	**P**	**10 16 01.6**	**+0.9**
LZH				pP	pP	10 16 11.9	-0.8
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
ZEA	**Zeya**	**65.43**	**342**	*e*P	**P**	**10 16 03.1**	**+0.9**
ZEA				pmax	pmax		
	comp=N,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
MA2	**Magadan**	**66.81**	**357**	LR	LR	10 42 37.4	
	comp=Z,39nm,21.2s,baz=194,slow=33						
MA2	**Magadan**	**66.81**	**357**	⇑*e*P	**P**	**10 16 10.5**	**-0.5**
MA2				pmax	pmax		
	comp=Z,29nm,1.9s						
GTA	**Gaotai**	**69.52**	**317**	*e*P	**P**	**10 16 29.0**	**+0.4**
GTA				sP	PcP	10 16 51.7	+0.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ULN	**Ulaanbaatar**	**69.70**	**327**	P	**P**	**10 16 30.6**	**+1.0**
ULN	**Ulaanbaatar**	**69.70**	**327**	P	**P**	**10 16 30.6**	**+1.0**
ULN				pmax	pmax		
	comp=Z,20nm,1.2s						
SONM	**Songino Array**	**70.04**	**327**	P	**P**	**10 16 32.2**	**+0.6**
	comp=Z,10nm,0.9s,baz=134,slow=6.1,SNR=45						
SONM				LR	LR	10 46 46.7	
	comp=Z,27nm,20.9s,baz=158,slow=35						
	comp=Z,10nm,0.9s						
SONM	**Songino Array**	**70.04**	**327**	P	**P**	**10 16 32.3**	**+0.7**
SONM	**Songino Array**	**70.04**	**327**	P	**P**	**10 16 32.3**	**+0.7**
SONM				pmax	pmax		
	comp=Z,19nm,1.1s						
SEY	**Seymchan**	**70.11**	**358**	⇓*e*P	**P**	**10 16 31.0**	**-0.5**
SEY				pmax	pmax		
	comp=Z,19nm,2.0s						
SHL	**Shillong**	**70.14**	**300**	P	**P**	**10 16 33.0**	**+0.3**
SHL	**Shillong**	**70.14**	**300**	P	**P**	**10 16 33.0**	**+0.3**
SHL				pmax	pmax		
	comp=Z,24nm,0.6s						
YAK	**Yakutsk**	**72.05**	**347**	LR	LR	10 46 22.8	
	comp=Z,32nm,21.2s,baz=67,slow=34						
YAK	**Yakutsk**	**72.05**	**347**	*e*P	**P**	**10 16 43.5**	**+0.2**
YAK				pmax	pmax		
	comp=Z,21nm,1.3s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
ZAK	**Zakamensk**	**73.19**	**328**	*e*P	**P**	**10 16 50.5**	**0.0**
ZAK				pmax	pmax		
	comp=Z,13nm,1.1s						
TAPN	**Taplejung**	**74.24**	**301**	*e*P	**P**	**10 16 57.7**	**+0.3**
	comp=Z,50nm,0.9s						
ODAN	**Odare**	**74.38**	**300**	*e*P	**P**	**10 16 58.4**	**+0.3**
	comp=Z,11nm,0.7s						
RAMN	**Ramite**	**75.08**	**300**	*e*P	**P**	**10 17 02.0**	**-0.2**
	comp=Z,17nm,0.5s						
MOY	**Mondy**	**75.11**	**328**	*e*P	**P**	**10 17 01.4**	**-0.2**
MOY				pmax	pmax		
	comp=Z,16nm,1.3s						
BILL	**Bilibino**	**75.55**	**4**	P	**P**	**10 17 04.2**	**+0.5**
BILL				IAmb	IAmb	10 17 08.1	
	comp=Z,9.0nm,0.8s						
BILL	**Bilibino**	**75.55**	**4** *c*	*i*P	**P**	**10 17 03.9**	**+0.2**
BILL				pmax	pmax		
	comp=Z,15nm,1.3s						
JIRN	**Jiri**	**75.62**	**301**	*e*P	**P**	**10 17 05.4**	**-0.1**
	comp=Z,30nm,0.6s						
GUN	**Gumba**	**75.96**	**301**	*e*P	**P**	**10 17 07.5**	**+0.2**
	comp=Z,62nm,0.7s						

PKI	Pulchoki	76.27	301	eP	P	10 17 08.4	-0.7
PKIN	Phulchoki	76.28	301	eP	P	10 17 08.8	-0.3
KKN	Kakani	76.44	301	eP	P	10 17 09.7	-0.2
DMN	Daman	76.54	301	eP	P	10 17 10.7	+0.2
GKN	Gorkha	77.04	301	eP	P	10 17 13.2	0.0
KOLN	Koldanda	77.87	300	eP	P	10 17 17.5	-0.4
DANN	Dangsing	77.88	301	eP	P	10 17 17.6	-0.5
	comp=Z,30nm,0.6s						
PYUN	Piuthan	78.47	301	eP	P	10 17 20.6	-0.7
M19K	Big River Lodg	78.97	22	IAmb	IAmb	10 17 27.0	
	comp=Z,6.9nm,0.8s						
WMQ	Urumqi	79.60	317	eP	P	10 17 28.2	+1.3
WMQ				pmax	pmax		
	comp=Z,12nm,1.1s						
RDOG	Red Dog Mine	80.64	15	IAmb	IAmb	10 17 35.3	
	comp=Z,7.6nm,0.7s						
CAST	Castle Rocks	80.75	21	P	P	10 17 33.0	+0.4
CAST				IAmb	IAmb	10 17 35.1	
	comp=Z,8.7nm,1.0s						
TIXI	Tiksi	80.80	352	P	P	10 17 33.0	+0.4
TIXI	Tiksi	80.80	352	⇓eP	P	10 17 33.9	+1.3
TIXI				pmax	pmax		
	comp=Z,15nm,2.7s						
CUT	Chulitna	80.81	22	P	P	10 17 33.8	+0.9
IMAR	Indian Mountai	81.79	19	P	P	10 17 37.5	-0.5
I21K	Tanana	81.86	20	IAmb	IAmb	10 17 43.8	
	comp=Z,5.5nm,0.9s						
DGZ	Jazzator, Alta	81.88	322	d iP	P	10 17 39.5	+0.4
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MCK	McKinley	82.07	22	P	P	10 17 38.9	-0.7
MCK				IAmb	IAmb	10 17 42.0	
	comp=Z,14nm,0.9s						
MCK	McKinley	82.07	22	P	P	10 17 38.9	-0.7
MCK				pmax	pmax		
	comp=Z,14nm,0.9s						
QSPA	South Pole Qui	82.65	180	P	P	10 17 43.5	+0.7
QSPA				IAmb	IAmb	10 17 53.2	
	comp=Z,13nm,1.3s						
WRH	Wood River Hil	82.80	21	P	P	10 17 44.3	+1.0
TCOL	CIGO, UAF Yank	83.10	21	IAmb	IAmb	10 17 47.0	
	comp=Z,9.0nm,0.8s						
COLA	College	83.11	21	P	P	10 17 46.5	+1.6
COLA				IAmb	IAmb	10 17 47.0	
	comp=Z,9.2nm,0.8s						
COLA	College	83.11	21	P	P	10 17 46.5	+1.6
COLA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
IL31		83.40	21	IAmb	IAmb	10 17 48.9	
	comp=Z,5.7nm,1.1s						
ILAR	Eielson Array	83.40	21	P	P	10 17 44.8	-1.6
	comp=Z,2.1nm,0.8s,baz=245,slow=5.0,SNR=18						
ILAR				LR	LR	10 49 16.0	
	comp=Z,73nm,20.0s,baz=249,slow=32						
	comp=Z,2.1nm,0.8s						
MK31	Makanchi Array	84.17	319	P	P	10 17 51.7	+0.8
MK31	Makanchi Array	84.17	319	P	P	10 17 51.7	+0.8
MK31				pmax	pmax		
	comp=Z,17nm,0.8s						
MKAR	Makanchi Array	84.17	319	P	P	10 17 50.8	0.0
	comp=Z,20nm,0.7s,baz=103,slow=5.7,SNR=232						
	comp=Z,20nm,0.7s						
MKAR	Makanchi Array	84.17	319	P	P	10 17 51.6	+0.8
MKAR	Makanchi Array	84.17	319	i P	P	10 17 51.2	+0.4
MKAR				pmax	pmax		
	comp=Z,20nm,0.7s						
MAKZ	Makanchi	84.38	318	P	P	10 17 52.7	+0.8
MAKZ	Makanchi	84.38	318	P	P	10 17 52.7	+0.8
MAKZ				pmax	pmax		
	comp=Z,25nm,0.9s						
ZAA0	Zalesovo Array	84.89	326	P	P	10 17 53.9	-0.3
ZALV	Zalesovo Beam	84.89	326	P	P	10 17 53.7	-0.6
	comp=Z,10nm,0.8s,baz=109,slow=5.7,SNR=48						
	comp=Z,10nm,0.8s						
ZALV	Zalesovo Beam	84.89	326	P	P	10 17 54.0	-0.2
ZALV	Zalesovo Beam	84.89	326	P	P	10 17 54.0	-0.2
BMAR	Burnt Mountain	85.60	20	P	P	10 17 58.8	+1.2
KSH	Kashi	86.82	310	P	P	10 18 06.2	+1.8
KSH				pP	sP	10 18 21.6	+0.1
KSH				PP	PP	10 21 34.0	+6.5
KSH				pmax	pmax		
	comp=Z,13nm,0.8s						
KSH				LR	LR		
	comp=Z,370nm,17.0s						
KSH				LR	LR		
	comp=Z,350nm,18.5s						
I29M	Ogilvie Camp,	86.86	23	IAmb	IAmb	10 18 07.0	
	comp=Z,6.8nm,1.1s						
BBB	Bella Bella	87.32	37	LR	LR	10 53 38.3	
	comp=Z,86nm,18.3s,baz=256,slow=33						
KURK	Kurchatov	87.58	322	P	P	10 18 07.6	+0.1
KURK				IAmb	IAmb	10 18 07.8	
	comp=Z,14nm,1.2s						
KURK	Kurchatov	87.58	322	P	P	10 18 07.6	+0.1
KURK				pmax	pmax		
	comp=Z,14nm,1.3s						
KURBB	Kurchatov Arra	87.61	322	P	P	10 18 06.8	-0.8
	comp=Z,2.8nm,0.6s,baz=104,slow=3.8,SNR=22						
	comp=Z,2.8nm,0.6s						
AAK	Ala-Archa	88.55	313	ceP	P	10 18 12.5	-0.1
AAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NRIK	Noril'sk	89.31	341	P	P	10 18 14.9	-0.5
	comp=Z,4.7nm,0.5s,baz=111,slow=4.6,SNR=2.7						
	comp=Z,4.7nm,0.5s						
NRIK	Noril'sk	89.31	341	P	P	10 18 14.8	-0.5
NRIK				IAmb	IAmb	10 18 15.3	
	comp=Z,7.3nm,0.7s						
NRIK	Noril'sk	89.31	341	P	P	10 18 14.8	-0.5
NRIK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
INK	Inuvik	89.75	21	LR	LR	10 55 14.6	
	comp=Z,60nm,19.2s,baz=249,slow=33						
INK	Inuvik	89.75	21	P	P	10 18 17.3	-0.1
INK				IAmb	IAmb	10 18 39.2	
	comp=Z,7.6nm,1.5s						
INK	Inuvik	89.75	21	P	P	10 18 17.3	-0.1
INK				pmax	pmax		
	comp=Z,8.0nm,1.5s						
NVAR	Mina Array Bea	91.31	52	P	P	10 18 27.6	+1.9
	comp=Z,0.2nm,0.6s,baz=270,slow=3.6,SNR=2.4						
	comp=Z,0.2nm,0.6s						
BVAR	Borovoye Array	93.03	323	P	P	10 18 32.0	-1.0
	comp=Z,9.8nm,0.8s,baz=102,slow=5.5,SNR=41						
	comp=Z,9.8nm,0.8s						
BRVK	Borovoye	93.10	323	P	P	10 18 32.9	-0.4
BRVK				IAmb	IAmb	10 18 33.0	
	comp=Z,6.3nm,0.8s						
BRVK	Borovoye	93.10	323	P	P	10 18 32.9	-0.4
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
C36M	Paulatuk	93.34	20	P	P	10 18 33.9	-0.1
NEW	Newport	93.48	42	LR	LR	10 55 17.5	
	comp=Z,58nm,18.9s,baz=241,slow=32						
A36M	Sachs Harbour	93.52	18	P	P	10 18 35.1	+0.3
A36M				IAmb	IAmb	10 18 40.2	
	comp=Z,3.4nm,0.9s						
YKA	Yellowknife Ar	96.26	28	P	P	10 18 46.9	-0.7
	comp=Z,0.9nm,0.8s,baz=266,slow=4.6,SNR=10.0						
	comp=Z,0.9nm,0.8s						
LPIG	La Paz	96.50	67	LR	LR	10 53 58.1	
	comp=Z,36nm,19.9s,baz=316,slow=30						
ABKAR	Akbulak array	99.31	319	P	Pdif	10 19 00.3	-1.4
ABKAR	Akbulak array	99.31	319	IAmb	IAmb	10 19 09.6	
	comp=Z,2.8nm,0.7s						
ARCES	ARCESS Array B	110.13	343	PKiKP	PKiKP	10 23 49.5	-1.1
	comp=Z,6.3nm,1.1s,baz=93,slow=3.1,SNR=4.1						
OBN	Obninsk	112.45	327	i PKIKP	PKiKP	10 23 54.1	-1.2
OBN				e		10 24 38.8	
OBN				ePPP	PPP	10 27 03.2	
OBN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	FINESS Array B	114.56	336	PKP	PKiKP	10 23 58.7	-0.5
	comp=Z,1.2nm,0.7s,baz=54,slow=2.4,SNR=4.4						
AKASG	Malin Array Be	118.26	325	PKP	PKPdf	10 24 05.9	-0.7
	comp=Z,0.3nm,0.3s,baz=60,slow=2.2,SNR=4.9						
BRTR	Keskin Array B	119.19	312	PKP	PKPdf	10 24 07.6	-1.4
	comp=Z,0.2nm,0.3s,baz=80,slow=3.5,SNR=1.7						
NB2	NORSAR Subarra	120.27	341	PKPdf	PKPdf	10 24 10.0	-0.3
	comp=Z,0.9nm,0.6s,baz=39,slow=1.9						
NOA	NORSAR Array B	120.27	341	PKP	PKPdf	10 24 09.6	-0.7
	comp=Z,1.3nm,0.7s,baz=43,slow=1.8,SNR=7.3						
BOSA	Boshof	120.42	231	PKP	PKPdf	10 24 11.7	0.0
	comp=Z,1.8nm,0.8s,baz=126,slow=2.9,SNR=3.9						
BRG	Berggiesshubel	126.31	331	ePKP	PKiKP	10 24 23.1	+0.5
BRG				Amp		10 24 23.4	
	comp=Z,5.5nm,0.9s						
BRG	Berggiesshubel	126.31	331	ePKIKP	PKiKP	10 24 23.0	+0.5
BRG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CLL	Collm	126.47	332	i PKPdf	PKiKP	10 24 22.8	-0.1
	comp=Z,5.0nm,0.7s						
CLL				ex	x	10 24 34.0	
CLL	Collm	126.47	332	i PKIKP	PKiKP	10 24 22.8	-0.1
CLL				e		10 24 34.0	
CLL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GERES	GERESS Array B	127.74	329	PKP	PKiKP	10 24 25.6	0.0
	comp=Z,1.6nm,0.7s,baz=66,slow=3.2,SNR=11						
LPAZ	La Paz	130.61	119	PKP	PKPdf	10 24 32.4	+0.3
	comp=Z,1.7nm,0.7s,baz=14,slow=3.4,SNR=6.8						
ESDC	Sonseca Array	143.02	334	PKhKP	PKPpre	10 24 49.6	
	comp=Z,1.6nm,1.0s,baz=8.8,slow=2.0,SNR=5.4						
BDFB	Brasilia	147.19	134	PKPbc	PKPbc	10 25 03.0	-0.8
	comp=Z,14nm,0.7s,baz=229,slow=1.6,SNR=17						
TORD	Torodi Ar. Bea	153.87	285	PKPbc	PKPbc	10 25 18.8	-0.9
	comp=Z,0.9nm,0.7s,baz=68,slow=1.8,SNR=5.7						

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*IDC **04** 10:14:28.9±1.8, 30.°19N×69.°29E, h0^{km}, mb3.8/12, mbtmp3.8/14, ML3.9/1, MS3.0/5, Error ellipse: s-maj=38.1km s-min=22.2km az=163.0*

ISC 04 10:14:30.6±1.1**, 30.°2N**±0.°2×**69.°29E**±0.°10**, h10^{km}, n25,** σ**1.^{s}35**/20**, mb3.6**/12**, MS2.8**/5**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYUN	Piuthan	12.16	97	eP	Pn	10 17 27.9	+3.7
DANN	Dangsing	12.77	95	eP	Pn	10 17 32.5	-0.1
	55nm,0.7s						
AAK	Ala-Archa	13.08	17	Pn	Pn	10 17 37.4	+0.7
	0.6nm,0.3s,baz=190,slow=11,SNR=4.5						
	3.3nm,0.6s						
GKN	Gorkha	13.60	96	eP	Pn	10 17 43.5	-0.3
GUN	Gumba	14.69	95	eP	Pn	10 17 56.8	-2.1
	48nm,0.5s						
JIRN	Jiri	15.02	96	eP	Pn	10 18 02.0	-1.3
	31nm,0.7s						
RAMN	Ramite	15.55	98	eP	Pn	10 18 09.9	-0.4
	25nm,0.7s						
MKAR	Makanchi Array	19.39	28	P	P	10 18 56.8	+0.2
	1.0nm,0.7s,baz=198,slow=8.6,SNR=1.2						
KURBB	Kurchatov Arra	21.53	16	P	P	10 19 19.0	-0.8
	0.7nm,0.5s,baz=208,slow=9.1,SNR=2.6						
	0.7nm,0.5s						
AKTO	Aktyubinsk	21.90	340	P	P	10 19 24.8	+0.9
	2.1nm,0.9s,baz=152,slow=14,SNR=3.0						
	2.1nm,0.9s						
BVAR	Borovoye Array	22.81	2	P	P	10 19 33.7	+0.3
	5.5nm,0.8s,baz=176,slow=9.1,SNR=10.0						
	5.5nm,0.8s						
ZALV	Zalesovo Beam	26.25	21	P	P	10 20 06.7	+0.9
	3.6nm,0.8s,baz=218,slow=9.4,SNR=9.6						
	3.6nm,0.8s						
BELG	Belogornoye	27.30	330	LR	LR	10 34 11.2	
	comp=Z,25nm,19.8s,baz=288,slow=43						
EIL	Elat	29.70	278	LR	LR	10 32 50.6	
	comp=Z,22nm,20.8s,baz=243,slow=37						
BRTR	Keskin Array B	30.55	298	P	P	10 20 45.4	+0.9
	0.4nm,0.5s,baz=116,slow=9.8,SNR=2.6						
	0.4nm,0.5s						
SONM	Songino Array	33.37	48	P	P	10 21 10.2	+1.1
	0.5nm,0.7s,baz=255,slow=10,SNR=3.8						
	0.5nm,0.7s						
OBN	Obninsk	34.08	326	LR	LR	10 38 22.0	
	comp=Z,18nm,18.1s,baz=242,slow=42						
AKASG	Malin Array Be	36.13	316	P	P	10 21 31.2	-1.5
	0.3nm,0.4s,baz=98,slow=7.1,SNR=4.7						
	0.3nm,0.4s						
FINES	FINESS Array B	42.08	331	P	P	10 22 22.1	-0.3
	0.9nm,0.9s,baz=114,slow=14,SNR=1.3						
	0.9nm,0.9s						
ARCES	ARCESS Array B	46.49	340	P	P	10 22 56.9	-0.7
	8.1nm,1.2s,baz=125,slow=7.8,SNR=2.4						
	8.1nm,1.2s						
HFS	Hagfors	47.29	326	LR	LR	10 47 54.2	
	comp=Z,42nm,18.4s,baz=86,slow=42						
KSRS	Korea Array	48.56	65	P	P	10 23 13.0	-1.2
	1.2nm,0.8s,baz=258,slow=8.3,SNR=3.5						
	1.2nm,0.8s						
NOA	NORSAR Array B	48.69	327	LR	LR	10 45 13.4	
	comp=Z,11nm,20.1s,baz=305,slow=38						
TORD	Torodi Ar. Bea	64.24	271	P	P	10 25 07.1	+0.8
	0.4nm,0.8s,baz=57,slow=6.5,SNR=2.4						
	0.4nm,0.8s						
YKA	Yellowknife Ar	87.56	2	P	P	10 27 17.7	-0.9
	0.5nm,0.7s,baz=349,slow=4.5,SNR=9.3						
	0.5nm,0.7s						

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*JMA **04** 10:33:36.7±0.1, 24.°4N±0.°6×121.°9E±0.°8, h40^{km}±3^{km}, MV3.5/11, TAIWAN REGION*

*NIED **04** 10:33:36.7, 24.°39N×121.°85E, h40^{km}, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.44; $M_{\theta\theta}$0.40; $M_{\phi\phi}$2.04; $M_{r\theta}$-5.01; $M_{\theta\phi}$5.22; $M_{\phi r}$2.88; Fault plane solution: $M_0$7.86000×10^{14} NP1:ϕ_s80.00000°, δ70.00000°, λ-39.00000°. NP2:ϕ_s185.00000°, δ54.00000°, λ-155.00000°.*

*TAP **04** 10:33:37.2, 24.°45N×121.°88E, h23^{km}, ML4.0, B*

*ASIES **04** 10:33:37.3, 24.°45N×121.°87E, h23^{km}, MW3.7*

ISC 04 10:33:37.0±0.8**, 24.°44N**±0.°01×**121.°95E**±0.°02**, h17^{km}**±6^{km}**, n152,** σ**0.^{s}80**/267**, 21C-13D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EWUT	Wuta	0.16	271	⇓iP	Pb	10 33 41.5	0.0
	baz=266						
EWUT				i S	Sg	10 33 44.5	+0.4
	baz=266						
TWC	Suao	0.19	331	⇓iP	Pb	10 33 42.3	+0.2
	baz=353						
TWC				i S	Sg	10 33 45.5	+0.6
	baz=353						
ENA	Nanau	0.19	265	⇓iP	Pb	10 33 41.9	-0.2
	baz=258						
ENA				i S	Sg	10 33 45.1	+0.2
	baz=258						
EHP	Heping Village	0.23	235	P	Pb	10 33 42.5	-0.4
	baz=220						
EHP				eS	Sg	10 33 46.2	+0.1
	baz=220						
EOS2	EOS2	0.26	95	i P	Pn	10 33 44.7	-1.2
	baz=96						
EOS2				i S	Sb	10 33 50.4	+3.2
	baz=96						
NDS	Dongshan	0.29	311	⇑iP	Pb	10 33 43.5	-0.2
	baz=321						
NDS				eS	Sb	10 33 47.7	-0.5
	baz=321						
ILA	Ilan	0.37	330	⇑iP	Pb	10 33 45.2	+0.1
	baz=340						
ILA				eS	Sb	10 33 50.9	+0.3
	baz=340						
TWE	Neicheng	0.38	317	⇑iP	Pb	10 33 44.9	-0.4
	baz=326						
TWE				S	Sb	10 33 50.1	-0.8
	baz=326						
LATG	Datong	0.40	283	⇓iP	Pg	10 33 45.0	-0.2
	baz=284						
LATG				S	Sg	10 33 50.3	-0.5
	baz=284						
EGS		0.40	358	⇑iP	Pb	10 33 45.9	+0.2
	baz=8.0						
EGS				S	Sb	10 33 51.7	+0.2
	baz=8.0						
ENTT	Nioudou	0.40	299	⇑iP	Pb	10 33 45.2	-0.5
	baz=304						
ENTT				S	Sg	10 33 50.6	-0.3
	baz=304						
ETL	Fush Village	0.41	227	P	Pg	10 33 45.2	-0.2
	baz=219						
ETL				eS	Sb	10 33 51.7	-0.2
	baz=219						
NACB	Ninganchiao	0.42	231	P	Pg	10 33 45.3	-0.3
NACB	Ninganchiao	0.42	231	⇓iP	Pg	10 33 45.1	-0.5
	baz=223						
NACB				eS	Sb	10 33 51.7	-0.4
	baz=223						
NTC	Toucheng	0.42	345	⇑P	Pb	10 33 45.8	-0.2
	baz=353						
NTC				eS	Sb	10 33 51.7	-0.5
	baz=353						
FUSB	Fushanzhiwuyua	0.46	314	⇑iP	Pb	10 33 46.3	-0.4
	baz=319						
FUSB				S	Sg	10 33 52.2	-0.3
	baz=319						
EOS4	EOS4	0.46	134	i P	Pb	10 33 47.3	+0.8
	baz=130						
EOS4				S	Sb	10 33 55.2	+2.2
	baz=130						
TWD	Chiawan	0.49	222	⇓iP	Pg	10 33 46.3	-0.5
	baz=214						
TWD				eS	Sb	10 33 55.5	+1.5
	baz=214						
ETLH	Xiulin Townshi	0.49	241	⇓iP	Pg	10 33 46.2	-0.7
	baz=236						
ETLH				eS	Sb	10 33 54.6	+0.4
	baz=236						
NNSB	Datong	0.52	268	⇓eP	Pg	10 33 46.9	-0.5
	baz=267						
NNSB				eS	Sg	10 33 53.7	-0.7
	baz=267						
NNSH	Datong	0.52	268	eP	Pg	10 33 46.9	-0.5
	baz=267						
NNSH				eS	Sg	10 33 53.5	-0.9
	baz=267						
NWLT	Wulai	0.53	309	⇑iP	Pg	10 33 47.2	-0.3
	baz=313						
NWLT				eS	Sg	10 33 53.8	-0.9
	baz=313						
NNS	Nan Shan	0.53	270	eP	Pg	10 33 46.9	-0.7
	baz=268						
NNS				eS	Sg	10 33 53.8	-1.0
	baz=268						
TIPB	Shuangxi	0.54	348	⇑iP	Pb	10 33 47.9	-0.1
	baz=354						
TIPB				S	Sb	10 33 55.1	-0.4
	baz=354						
HWA	Hwalien	0.56	214	P	Pb	10 33 49.0	+0.6
	baz=207						
HWA				eS	Sn	10 33 59.3	+0.2
	baz=207						
TWB1	Santiao Chiao	0.56	3	⇑iP	Pb	10 33 48.5	0.0
	baz=11						
TWB1				eS	Sb	10 33 56.0	-0.2
	baz=11						
YHNB	Yeheng	0.57	293	P	Pg	10 33 48.1	-0.3
YHNB	Yeheng	0.57	293	P	Pb	10 33 48.2	-0.4
YHNB	Yeheng	0.57	293	⇑iP	Pg	10 33 48.0	-0.4
	baz=295						
YHNB				eS	Sg	10 33 55.0	-1.0
	baz=295						
NSK	Sanguang	0.59	293	⇑iP	Pg	10 33 48.2	-0.5
	baz=295						
NSK				eS	Sg	10 33 55.4	-1.2
	baz=295						
TWA	Mucha	0.63	328	⇑P	Pb	10 33 49.5	-0.1
	baz=333						
TWA				eS	Sb	10 33 58.1	-0.1
	baz=333						
ETM	Tongmen	0.63	221	eP	Pg	10 33 49.1	-0.4
	baz=216						
ETM				eS	Sb	10 33 59.8	+1.6
	baz=216						
NWF	Wu-fen Shan	0.64	346	⇑P	Pb	10 33 50.0	+0.2
	baz=352						
NWF				eS	Sb	10 33 58.9	+0.3
	baz=352						
WFSB	Wu-fen Shan	0.64	346	⇑P	Pb	10 33 50.0	+0.2
	baz=352						
WFSB				eS	Sb	10 33 59.1	+0.6
	baz=352						
NHDH	Xindian Distri	0.65	323	⇑P	Pb	10 33 49.7	-0.1
	baz=328						
NHDH				eS	Sg	10 33 58.1	-0.3
	baz=328						
SXI1	Grass Mountain	0.65	354	⇑P	Pb	10 33 50.1	+0.1
	baz=360						
SXI1				eS	Sb	10 33 58.9	0.0
	baz=360						
TEYL	Yanliau Villag	0.66	209	eP	Pb	10 33 50.4	+0.3
	baz=205						
TEYL				eS	Sn	10 34 01.9	+0.4
	baz=205						
TATO	Taipei	0.68	322	P	Pb	10 33 50.3	-0.1
TATO	Taipei	0.68	322	P	Pb	10 33 50.4	0.0
TATO	Taipei	0.68	322	⇑eP	Pb	10 33 50.2	-0.1
	baz=326						
TATO				eS	Sg	10 33 58.9	-0.5
	baz=326						
NHY	Taipei	0.69	330	eP	Pn	10 33 51.3	-0.7
	baz=334						
WHF	Hehuan Shan	0.69	245	⇓P	Pg	10 33 49.9	-0.8
	baz=241						
WHF				eS	Sb	10 34 00.8	+0.4
	baz=241						
TAP1	Taipei	0.71	327	eP	Pn	10 33 52.6	+0.3
	baz=330						
TAP1				eS	Sn	10 34 02.0	-0.8
	baz=330						
TAP	Taipei	0.72	326	eP	Pb	10 33 51.3	+0.3
	baz=330						
TAP				eS	Sb	10 34 01.3	+0.6
	baz=330						
BACT	New Taipei Cit	0.72	320	eP	Pn	10 33 51.8	-0.6
	baz=324						
TNOU	National Taiwa	0.72	347	⇑eP	Pb	10 33 51.4	+0.2
	baz=352						
TNOU				eS	Sb	10 34 00.6	-0.2
	baz=352						
TWT	Tachien	0.73	255	eP	Pg	10 33 51.1	-0.3
	baz=253						
TWT				eS	Sb	10 34 01.2	0.0
	baz=253						
TDCB	Techi	0.75	255	P	Pg	10 33 51.1	-0.6
	baz=253						
TDCB				eS	Sg	10 34 00.9	-0.7
	baz=253						
YM01	YM01	0.78	334	⇑eP	Pb	10 33 52.3	+0.1
	baz=338						
YM01				eS	Sb	10 34 03.8	+1.2
	baz=338						
NFF	Wufeng Townshi	0.78	284	⇑eP	Pg	10 33 51.5	-0.8
	baz=284						
NFF				eS	Sg	10 34 01.3	-1.4
	baz=284						
ESL	Shilin	0.79	217	P	Pg	10 33 51.8	-0.6
	baz=212						
ESL				eS	Sb	10 34 03.9	+1.3
	baz=212						
NWRT	Kuosheng	0.80	341	eP	Pb	10 33 52.5	0.0
	baz=345						
CHGB	Renai	0.81	242	⇓eP	Pg	10 33 52.0	-0.8
	baz=239						
CHGB				eS	Sb	10 34 03.9	+0.5
	baz=239						
YM08	YM08	0.81	336	eP	Pb	10 33 52.4	-0.3
	baz=340						
YM08				eS	Sb	10 34 03.1	-0.3
	baz=340						
NTY	Taoyuan	0.81	313	eP	Pn	10 33 53.7	0.0
	baz=316						
TWS1	Kuangyinshan	0.81	324	eP	Pb	10 33 53.0	+0.2
	baz=327						
TWS1				eS	Sb	10 34 04.7	+1.2
	baz=327						
TEGC	Jichi Village	0.82	207	eP	Pn	10 33 53.9	+0.1
	baz=202						
ANP	Anpu	0.84	332	eP	Pb	10 33 53.3	+0.2
	baz=336						
ANP				eS	Sn	10 34 05.8	-0.3
	baz=336						
NJD	Zhudong	0.84	290	eP	Pn	10 33 53.9	-0.2
	baz=291						
NTST	Danshui	0.85	328	eP	Pn	10 33 53.9	-0.4
	baz=331						
NTST				eS	Sn	10 34 06.3	0.0
	baz=331						
OWD	Renai	0.86	236	eP	Pg	10 33 52.8	-1.0
	baz=232						
OWD				eS	Sb	10 34 05.6	+0.7
	baz=232						
NCU	National Centr	0.87	307	eP	Pn	10 33 54.4	-0.1
	baz=309						
NCU				eS	Sb	10 34 06.3	+1.2
	baz=309						
NCUH	Zhongli	0.87	307	eP	Pn	10 33 54.2	-0.3
	baz=309						
NCUH				eS	Sn	10 34 06.7	-0.1
	baz=309						
LIOB	Emei	0.88	283	eP	Pb	10 33 53.8	0.0

	baz=284						
LIOB				eS	Sb	10 34 06.0	+0.8
	baz=284						
WUSB	**Renai**	**0.88**	**240**	⇓eP	**Pg**	**10 33 53.4**	**-0.8**
	baz=237						
WUSB				eS	Sb	10 34 06.5	+0.9
	baz=237						
NSTT	**Nanjuang**	**0.89**	**282**	eP	**Pb**	**10 33 53.8**	**-0.1**
	baz=283						
NSTT				eS	Sg	10 34 05.5	-0.4
	baz=283						
TWY	**Chenhua**	**0.89**	**339**	eP	**Pn**	**10 33 54.5**	**-0.2**
	baz=343						
TWY				eS	Sb	10 34 06.2	+0.6
	baz=343						
JYNG	**Yonagunijimaku**	**0.91**	**89**	P	**Pn**	**10 33 54.8**	**-0.1**
JYNG				S	Sn	10 34 07.6	-0.1
EGFH	**Guangfu**	**0.91**	**212**	P	**Pg**	**10 33 53.7**	**-1.0**
	baz=208						
EGFH				eS	Sb	10 34 07.3	+1.2
	baz=208						
HSN1	**Hsinchu**	**0.91**	**292**	eP	**Pn**	**10 33 55.2**	**+0.2**
	baz=293						
WHP	**Taichung City**	**0.93**	**260**	eP	**Pb**	**10 33 55.2**	**+0.4**
	baz=259						
WHP				eS	Sg	10 34 06.7	-0.8
	baz=259						
SBCB	**Hsinchu**	**0.94**	**292**	eP	**Pb**	**10 33 55.2**	**+0.2**
	baz=293						
SBCB				eS	Sn	10 34 08.8	+0.2
	baz=293						
HSN	**Hsinchu**	**0.96**	**292**	eP	**Pb**	**10 33 55.3**	**+0.1**
	baz=295						
HSN				eS	Sb	10 34 08.4	+0.8
	baz=295						
YOJ	**Yonaguni jima**	**0.97**	**89**	P	**Pn**	**10 33 55.9**	**+0.1**
YOJ	**Yonaguni jima**	**0.97**	**89**	P	**Pn**	**10 33 56.0**	**+0.1**
YOJ	**Yonaguni jima**	**0.97**	**89**	P	**Pn**	**10 33 55.6**	**-0.2**
YOJ				S	Sn	10 34 08.8	-0.3
YOJ	**Yonaguni jima**	**0.97**	**89**	⇓iP	**Pb**	**10 33 55.4**	**+0.1**
	baz=89						
YOJ				S	Sn	10 34 08.9	-0.3
	baz=89						
NHW	**Xinwu Township**	**0.99**	**304**	eP	**Pn**	**10 33 56.1**	**-0.1**
	baz=306						
NHW				eS	Sn	10 34 10.2	+0.3
	baz=306						
WPL	**Puli Township**	**1.00**	**245**	eP	**Pb**	**10 33 56.2**	**+0.3**
	baz=243						
WPL				eS	Sb	10 34 09.4	+0.5
	baz=243						
VWDT	**VWDT**	**1.01**	**227**	⇓eP	**Pb**	**10 33 55.6**	**-0.4**
	baz=224						
VWDT				eS	Sn	10 34 10.7	+0.5
	baz=224						
NJN	**Zhunan**	**1.01**	**284**	eP	**Pn**	**10 33 57.2**	**+0.8**
	baz=284						
NJN				eS	Sn	10 34 11.6	+1.3
	baz=284						
DPDB	**Guoxing**	**1.02**	**247**	eP	**Pn**	**10 33 56.7**	**+0.1**
	baz=244						
DPDB				eS	Sb	10 34 10.2	+0.8
	baz=244						
WCS	**Beigang Elemen**	**1.02**	**248**	eP	**Pg**	**10 33 56.5**	**-0.4**
	baz=246						
WCS				eS	Sg	10 34 09.6	-0.7
	baz=246						
NMLH	**Miaoli**	**1.06**	**275**	eP	**Pn**	**10 33 57.8**	**+0.7**
	baz=275						
NMLH				eS	Sn	10 34 12.5	+1.0
	baz=275						
HGSD	**Ruisui**	**1.06**	**207**	P	**Pb**	**10 33 56.6**	**-0.3**
	baz=204						
HGSD				eS	Sn	10 34 13.1	+1.5
	baz=204						
TWQ1	**Liyutan**	**1.08**	**265**	eP	**Pn**	**10 33 58.7**	**+1.3**
	baz=264						
TWQ1				eS	Sn	10 34 12.1	+0.2
	baz=264						
NSY	**Sanyi**	**1.08**	**269**	eP	**Pn**	**10 33 58.5**	**+1.1**
	baz=268						
NSY				eS	Sn	10 34 13.6	+1.5
	baz=268						
EHY	**Hungye**	**1.10**	**212**	eP	**Pb**	**10 33 56.3**	**-1.3**
	baz=208						
EHY				eS	Sb	10 34 11.3	-0.3
	baz=208						
SMLT	**Sun Moon Lake**	**1.11**	**240**	eP	**Pb**	**10 33 57.7**	**-0.2**
	baz=237						
SMLT				eS	Sn	10 34 13.2	+0.3
	baz=237						
SSLB	**Suanglung**	**1.12**	**235**	P	**Pb**	**10 33 58.0**	**+0.1**
SSLB	**Suanglung**	**1.12**	**235**	P	**Pb**	**10 33 58.1**	**+0.1**
SSLB	**Suanglung**	**1.12**	**235**	eP	**Pb**	**10 33 57.4**	**-0.6**
	baz=232						
SSLB				eS	Sg	10 34 12.9	-0.5
	baz=232						
TYC	**Yuchr**	**1.14**	**242**	eP	**Pb**	**10 33 58.2**	**0.0**
	baz=239						
TYC				eS	Sg	10 34 13.3	-0.6
	baz=239						
PCYT	**Pengchaiyu**	**1.19**	**5**	eP	**Pb**	**10 33 57.9**	**-1.2**
	baz=9.0						
WDJ	**Dajia District**	**1.20**	**266**	eP	**Pg**	**10 34 01.0**	**+0.8**
	baz=265						
WDJ				eS	Sn	10 34 16.9	+2.0
	baz=265						
TCU	**Taichung**	**1.20**	**256**	eP	**Pg**	**10 34 00.5**	**+0.3**
	baz=254						
TCU				eS	Sn	10 34 17.4	+2.5
	baz=254						
YULB	**Yu-li**	**1.21**	**210**	P	**Pn**	**10 33 58.9**	**-0.2**
YULB	**Yu-li**	**1.21**	**210**	P	**Pg**	**10 33 59.9**	**-0.4**
YULB	**Yu-li**	**1.21**	**210**	eP	**Pn**	**10 33 57.4**	**-1.7**
	baz=207						
YULB				eS	Sb	10 34 14.0	-0.7
	baz=207						
WWF	**Wufeng**	**1.21**	**251**	eP	**Pg**	**10 34 00.8**	**+0.4**
	baz=249						
WWF				eS	Sn	10 34 18.7	+3.5
	baz=249						
ECBN	**Changbin**	**1.21**	**202**	eP	**Pn**	**10 33 58.7**	**-0.5**
	baz=199						
EYUL	**Yuli**	**1.23**	**208**	eP	**Pn**	**10 33 58.4**	**-1.2**
	baz=205						
TWF1	**Yuli**	**1.24**	**209**	eP	**Pn**	**10 33 58.1**	**-1.5**
	baz=206						
WJS	**Zhushan**	**1.28**	**241**	eP	**Pg**	**10 34 01.6**	**-0.1**
	baz=239						
WJS				eS	Sg	10 34 19.4	+1.0
	baz=239						
WNT	**Mingjian**	**1.29**	**244**	eP	**Pg**	**10 34 02.0**	**+0.1**
	baz=242						
WCHH	**Zhanghua**	**1.32**	**254**	eP	**Pg**	**10 34 02.2**	**-0.3**
	baz=253						
WCHH				eS	Sg	10 34 20.2	+0.4
	baz=253						
FULB	**Fuli**	**1.38**	**206**	eP	**Pn**	**10 34 01.1**	**-0.4**
	baz=203						
ALS	**Alishan**	**1.40**	**229**	eP	**Pn**	**10 34 02.5**	**+0.4**
	baz=226						
ALS				eS	Sg	10 34 22.1	-0.3
	baz=226						
CHKT	**Chengkung**	**1.44**	**202**	eP	**Pn**	**10 34 01.4**	**-0.9**
	baz=199						
EHD	**Haiduan**	**1.46**	**208**	eP	**Pn**	**10 34 01.5**	**-1.1**
	baz=205						
WGK	**Gukeng**	**1.48**	**240**	eP	**Pb**	**10 34 04.2**	**+0.2**
	baz=237						
WGK				eS	Sg	10 34 25.5	+0.8
	baz=237						
WDLH	**Douliu**	**1.49**	**240**	eP	**Pg**	**10 34 04.9**	**-0.9**
	baz=238						
WDLH				eS	Sg	10 34 25.3	+0.1
	baz=238						
ELDTW	**Lidau**	**1.51**	**215**	eP	**Pn**	**10 34 02.3**	**-1.2**
	baz=212						
ELDTW				eS	Sg	10 34 24.9	-1.0
	baz=212						
WRL	**Guolierlin Hig**	**1.54**	**250**	eP	**Pn**	**10 34 03.3**	**-0.3**
	baz=248						
WRL				eS	Sb	10 34 24.7	+0.5
	baz=248						
EDH	**Donghe**	**1.58**	**202**	eP	**Pn**	**10 34 03.1**	**-1.1**
	baz=200						
EDH				eS	Sn	10 34 23.8	-0.6
	baz=200						
WCKO	**Fanlu**	**1.59**	**231**	eP	**Pb**	**10 34 06.5**	**+0.6**
	baz=229						
WCKO				eS	Sg	10 34 28.5	+0.3
	baz=229						
WTK	**Tuku**	**1.61**	**243**	eP	**Pb**	**10 34 06.2**	**-0.2**
	baz=241						
WTK				eS	Sg	10 34 28.1	-1.1
	baz=241						
IRIF	**Iriomote-Funau**	**1.63**	**93**	P	**Pn**	**10 34 05.0**	**+0.1**
IRIF				S	Sn	10 34 25.6	+0.2
CHN4	**Tsaushan**	**1.65**	**229**	eP	**Pb**	**10 34 07.3**	**+0.3**
	baz=227						
CHN4				eS	Sg	10 34 30.5	+0.2
	baz=227						
TPUB	**Ta-pu**	**1.66**	**227**	P	**Pb**	**10 34 07.1**	**-0.1**
TPUB	**Ta-pu**	**1.66**	**227**	P	**Pb**	**10 34 07.5**	**+0.3**
TPUB	**Ta-pu**	**1.66**	**227**	eP	**Pb**	**10 34 07.4**	**+0.3**
	baz=225						
TPUB				eS	Sg	10 34 29.3	-1.3
	baz=225						
STYH	**Taoyuan**	**1.66**	**221**	eP	**Pn**	**10 34 06.2**	**+0.8**
	baz=218						
STYH				eS	Sb	10 34 28.4	+0.5
	baz=218						
STYT	**Tauyuan**	**1.68**	**221**	eP	**Pb**	**10 34 07.1**	**-0.5**
	baz=218						
CHY	**Chiayi**	**1.69**	**236**	eP	**Pb**	**10 34 07.6**	**0.0**
	baz=234						
CHY				eS	Sg	10 34 30.9	-0.4
	baz=234						
LONT	**Longtian**	**1.71**	**206**	eP	**Pn**	**10 34 05.1**	**-0.9**
	baz=204						
LONT				eS	Sn	10 34 27.5	+0.1
	baz=204						
WTP	**Ta-pu**	**1.71**	**226**	eP	**Pb**	**10 34 07.9**	**-0.1**
	baz=224						
WTP				eS	Sg	10 34 31.8	-0.3
	baz=224						
HATJ	**Hateruma jima**	**1.73**	**102**	eP	**Pn**	**10 34 06.2**	**-0.1**
HATJ				eS	Sn	10 34 26.3	-1.9
WSF	**Szhu**	**1.77**	**243**	eP	**Pn**	**10 34 06.9**	**0.0**
	baz=242						
WSF				eS	Sb	10 34 32.0	+1.0
	baz=242						
TWK	**Hsinying**	**1.78**	**229**	eP	**Pb**	**10 34 08.9**	**-0.4**
	baz=227						
TWK				eS	Sb	10 34 32.6	+1.3
	baz=227						
TWGBT	**Beinan**	**1.81**	**206**	P	**Pn**	**10 34 08.5**	**+1.1**
TWGBT	**Beinan**	**1.81**	**206**	P	**Pb**	**10 34 10.1**	**+0.5**
TWGBT	**Beinan**	**1.81**	**206**	eP	**Pn**	**10 34 06.3**	**-1.1**
	baz=204						
TWGBT				eS	Sn	10 34 29.0	-0.9
	baz=204						
TWG	**Pinlang**	**1.81**	**207**	eP	**Pn**	**10 34 06.3**	**-1.1**
	baz=204						
TWG				eS	Sn	10 34 30.5	+0.6
	baz=204						
CHN1	**Nanshi**	**1.81**	**226**	eP	**Pb**	**10 34 09.3**	**-0.4**
	baz=224						
CHN1				eS	Sb	10 34 33.6	+1.5
	baz=224						
LDUT	**Ludao**	**1.82**	**194**	eP	**Pn**	**10 34 05.8**	**-1.7**
	baz=192						
LDUT				eS	Sn	10 34 28.7	-1.5
	baz=192						
WSL	**Shuilin Townsh**	**1.82**	**240**	eP	**Pb**	**10 34 09.2**	**-0.8**
	baz=239						
WSL				eS	Sb	10 34 32.9	+0.4
	baz=239						
SGST	**Jiashian**	**1.85**	**223**	eP	**Pn**	**10 34 08.9**	**+1.0**
	baz=221						
ICHU	**Yijhu**	**1.87**	**235**	eP	**Pb**	**10 34 10.5**	**-0.3**
	baz=233						
ICHU				eS	Sg	10 34 36.2	-1.1
	baz=233						
SLGT	**Liugui**	**1.88**	**220**	eP	**Pb**	**10 34 11.6**	**+0.7**
	baz=218						
JKRS	**Kuro-shima**	**1.89**	**96**	P	**Pn**	**10 34 09.3**	**+0.8**
JKRS				S	Sn	10 34 32.5	+0.5
CHN8	**Yiju**	**1.93**	**236**	eP	**Pn**	**10 34 09.0**	**-0.1**
	baz=234						
JIJ	**Ishigaki jima**	**2.00**	**92**	P	**Pn**	**10 34 10.3**	**+0.2**
JIJ				S	Sn	10 34 33.8	-0.9
ECL	**Taimali**	**2.05**	**207**	eP	**Pn**	**10 34 10.4**	**-0.3**
	baz=205						
SSD	**Sandimen**	**2.08**	**216**	eP	**Pb**	**10 34 13.6**	**-0.7**
	baz=214						
JISG	**Ishigakijimahi**	**2.15**	**86**	P	**Pn**	**10 34 11.9**	**-0.2**
JISG				S	Sn	10 34 38.9	+0.4
MASBT	**Mashibuluo**	**2.19**	**214**	eP	**Pn**	**10 34 13.8**	**+1.1**
	baz=212						
MASBT				eS	Sb	10 34 42.5	-0.5
	baz=212						
PHUB	**P'eng-hu**	**2.37**	**247**	eP	**Pn**	**10 34 15.0**	**-0.1**
	baz=246						
PHUB				eS	Sn	10 34 43.0	-0.7
	baz=246						
WDGT	**Dungji**	**2.41**	**241**	eP	**Pn**	**10 34 16.1**	**+0.5**
	baz=240						
WDGT				eS	Sn	10 34 45.6	+0.9
	baz=240						
LAY	**Lan-yu**	**2.42**	**189**	eP	**Pn**	**10 34 14.2**	**-1.7**
	baz=187						
LAY				eS	Sn	10 34 42.4	-2.8
	baz=187						
JTJ	**Tarama**	**2.51**	**85**	P	**Pn**	**10 34 18.4**	**+1.3**
JTJ				eS	Sn	10 34 48.2	+0.9
JOW	**Kunigami**	**6.18**	**66**	P	**Pn**	**10 35 09.2**	**+1.6**

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*IDC **04** 10:34:22.8±2.2, 18.°89N×145.°59E, h228^{km}±22^{km}, mb3.0/6, mbtmp3.8/9, Error ellipse: s-maj=28.7km s-min=13.8km az=87.0*

*NEIC **04** 10:34:23.8±0.7, 18.°85N±0.°08×145.°7E±0.°2, h228^{km}±13^{km}, mb3.9/14, Error ellipse: s-maj=28.2km s-min=7.1km az=111.0*

ISC 04 10:34:21.7±0.8**, 18.°93N**±0.°07×**145.°7E**±0.°2**, h214**^{km}**, n25,** σ0.^{s}99/26**, mb3.8**/13**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.36**	**188**	P	**Pn**	**10 35 42.9**	**+1.8**
	47nm,0.6s,baz=357,slow=19,SNR=1.6						
GUMO				S	**S**	**10 36 44.6**	**+0.8**
	46nm,0.5s,baz=7.1,slow=23,SNR=1.6						
GUMO	**Guam**	**5.36**	**188**	Pn	**Pn**	**10 35 42.0**	**+0.9**
JOW	**Kunigami**	**17.83**	**299**	P	**P**	**10 38 15.3**	**+0.5**
	8.1nm,0.4s,baz=140,slow=12,SNR=11						
JOW	**Kunigami**	**17.83**	**299**	P	**P**	**10 38 15.9**	**+1.1**
INU	**Inuyama**	**18.06**	**337**	P	**P**	**10 38 18.7**	**+1.5**
INU				IAmb	IAmb	10 38 32.7	
	comp=Z,3.6nm,0.7s						
JMN	**Monobe**	**18.11**	**327**	P	**P**	**10 38 19.1**	**+1.3**
JGF	**Kuroka**	**18.16**	**338**	P	**P**	**10 38 19.6**	**+1.3**
MJAR	**Matsushiro Arr**	**18.73**	**341**	P	**P**	**10 38 24.1**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=169,slow=11,SNR=4.4						
COEN	**Coen**	**32.77**	**184**	P	**P**	**10 40 34.0**	**-0.8**
COEN				IAmb	IAmb	10 40 48.6	
	comp=Z,3.4nm,1.1s						
WB0	**Warramunga Arr**	**40.01**	**197**	P	**P**	**10 41 35.8**	**-0.2**
WB0				IAmb	IAmb	10 41 36.0	
	comp=Z,5.6nm,0.9s						
WR0	**Warramunga Arr**	**40.15**	**196**	P	**P**	**10 41 36.6**	**-0.5**
WR0				IAmb	IAmb	10 41 58.4	
	comp=Z,3.7nm,1.1s						
WRAB	**Tennant Creek**	**40.18**	**197**	P	**P**	**10 41 37.4**	**0.0**
WRAB				IAmb	IAmb	10 41 37.8	
	comp=Z,4.0nm,0.6s						
WB2	**Warramunga Arr**	**40.19**	**197**	P	**P**	**10 41 37.4**	**0.0**
WB2				IAmb	IAmb	10 41 38.7	
	comp=Z,4.0nm,0.8s						
WRA	**Warramunga Arr**	**40.19**	**197**	P	**P**	**10 41 37.0**	**-0.5**
	comp=Z,2.7nm,0.7s,baz=15,slow=8.9,SNR=27						
	comp=Z,2.7nm,0.7s						
WRA	**Warramunga Arr**	**40.19**	**197**	P	**P**	**10 41 37.2**	**-0.3**
FITZ	**Fitzroy Crossi**	**41.72**	**209**	P	**P**	**10 41 49.4**	**-0.5**
AS31	**Alice Springs**	**43.86**	**196**	P	**P**	**10 42 05.1**	**-2.0**
ASAR	**Alice Springs**	**43.86**	**196**	P	**P**	**10 42 06.1**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=14,slow=7.3,SNR=14						
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**43.86**	**196**		**P**	**10 42 06.3**	**-0.7**
CM31	**Chiang Mai Arr**	**44.15**	**277**	P	**P**	**10 42 09.2**	**-0.3**
CM31				IAmb	IAmb	10 42 16.4	
	comp=Z,4.9nm,1.1s						
MBWA	**Marble Bar**	**47.24**	**214**	P	**P**	**10 42 32.6**	**-0.9**
MBWA				IAmb	IAmb	10 42 38.0	
	comp=Z,3.6nm,1.0s						
MKAR	**Makanchi Array**	**58.27**	**314**	P	**P**	**10 43 53.2**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=97,slow=7.2,SNR=2.6						
	comp=Z,0.2nm,0.6s						
ILAR	**Eielson Array**	**63.46**	**26**	P	**P**	**10 44 27.9**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=267,slow=5.4,SNR=2.7						
	comp=Z,0.3nm,0.8s						
YKA	**Yellowknife Ar**	**77.81**	**28**	P	**P**	**10 45 55.0**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=291,slow=5.2,SNR=2.3						
	comp=Z,0.2nm,0.6s						
NVAR	**Mina Array Bea**	**83.03**	**52**	P	**P**	**10 46 24.8**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=270,slow=5.4,SNR=2.9						
	comp=Z,0.3nm,0.6s						

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*IDC **04** 10:35:42.7±0.6, 56.°77S×150.°68W, h0^{km}, mb4.4/7, mbtmp4.4/7, MS3.6/11, Error ellipse: s-maj=36.5km s-min=17.6km az=9.0*

*NEIC **04** 10:35:44.4±0.8, 56.°6S±0.°2×150.°8W±0.°2, h10^{km}±1^{km}, mb4.9/34, Error ellipse: s-maj=26.4km s-min=18.9km az=359.0*

ISC 04 10:35:43.9±0.5**, 56.°6S**±0.°1×**150.°75W**±0.°09**, h10**^{km}**, n74,** σ0.^{s}69/52**, mb4.8**/22**, MS3.5**/11**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBA	**Scott Base**	**25.72**	**199**	P	**P**	**10 41 11.6**	**-2.2**
SBA				IAmb	IAmb	10 41 12.7	
	comp=Z,55nm,1.4s						
VNDA	**Vanda**	**26.50**	**201**	LR	LR	10 49 42.3	
	comp=Z,96nm,18.6s,baz=57,slow=32						
RPZ	**Rata Peaks**	**27.27**	**282**	LR	LR	10 49 49.9	
	comp=Z,121nm,18.6s,baz=142,slow=31						
QSPA	**South Pole Qui**	**33.51**	**180**	P	**P**	**10 42 22.8**	**-0.4**
	comp=Z,3.4nm,1.0s,baz=87,slow=2.6,SNR=7.8						
QSPA				PcP	**PcP**	**10 45 02.8**	**-0.8**
	comp=Z,2.4nm,1.0s,baz=260,slow=2.0,SNR=2.6						
QSPA				LR	LR	10 54 08.8	
	comp=Z,69nm,18.4s,baz=30,slow=33						
	comp=Z,3.4nm,1.0s						
QSPA	**South Pole Qui**	**33.51**	**180**	P	**P**	**10 42 23.2**	**0.0**
PTCN	**Pitcairn Islan**	**34.91**	**34**	P	**P**	**10 42 33.9**	**-1.6**
RAR	**Rarotonga**	**36.01**	**346**	LR	LR	10 55 24.3	
	comp=Z,106nm,18.5s,baz=272,slow=33						
PMSA	**Palmer Station**	**39.94**	**138**	P	**P**	**10 43 18.0**	**+0.4**
TAU	**Tasmania Unive**	**40.85**	**262**	P	**P**	**10 43 25.3**	**-0.2**
TAU				IAmb	IAmb	10 43 31.7	
	comp=Z,53nm,1.5s						
RPN	**Rapa Nui**	**41.64**	**63**	LR	LR	10 56 38.4	
	comp=Z,49nm,18.5s,baz=264,slow=30						
DZM	**Mont Dzumac**	**46.58**	**300**	LR	LR	11 01 39.5	
	comp=Z,57nm,18.6s,baz=180,slow=33						
ARMA	**Armidale**	**47.51**	**278**	P	**P**	**10 44 19.1**	**0.0**
ARMA				IAmb	IAmb	10 44 26.5	
	comp=Z,30nm,1.5s						
STKA	**Stephens Creek**	**51.92**	**268**	P	**P**	**10 44 53.3**	**+0.7**
	comp=Z,3.0nm,0.8s,baz=150,slow=8.1,SNR=4.5						
STKA				LR	LR	11 04 10.0	
	comp=Z,63nm,18.9s,baz=199,slow=33						
	comp=Z,3.0nm,0.8s						
STKA	**Stephens Creek**	**51.92**	**268**	P	**P**	**10 44 52.6**	**+0.1**
PLCA	**Paso Flores**	**52.17**	**109**	P	**P**	**10 44 54.1**	**-0.3**
	comp=Z,3.9nm,0.9s,baz=222,slow=4.6,SNR=6.4						
	comp=Z,3.9nm,0.9s						
PLCA	**Paso Flores**	**52.17**	**109**	P	**P**	**10 44 54.2**	**-0.3**
PLCA				IAmb	IAmb	10 44 56.5	
	comp=Z,11nm,1.2s						
H03S2	**Juan Fernandez**	**52.74**	**96**	T	T	11 42 06.3	
	baz=219,slow=74,SNR=31						
H03S1	**Juan Fernandez**	**52.74**	**96**	T	T	11 42 07.1	
	baz=219,slow=74,SNR=26						
H03S3	**Juan Fernandez**	**52.76**	**96**	T	T	11 42 06.7	
	baz=219,slow=74,SNR=35						
H03N3	**Juan Fernandez**	**53.03**	**96**	T	T	11 42 28.1	
	baz=222,slow=72,SNR=27						
H03N2	**Juan Fernandez**	**53.03**	**96**	T	T	11 42 19.7	
	baz=222,slow=72,SNR=63						
H03N1	**Juan Fernandez**	**53.04**	**96**	T	T	11 42 23.5	
	baz=222,slow=72,SNR=43						
BO02	**Sierra Bellavi**	**56.45**	**103**	P	**P**	**10 45 26.6**	**+1.0**
BO02				IAmb	IAmb	10 45 30.2	
	comp=Z,19nm,1.3s						
MT02	**Curacav**	**57.42**	**102**	P	**P**	**10 45 32.9**	**+0.4**
PEL	**Peldehue**	**57.75**	**102**	P	**P**	**10 45 35.0**	**+0.1**
TRQA	**Tornquist**	**58.60**	**112**	P	**P**	**10 45 41.0**	**+0.3**
TRQA				IAmb	IAmb	10 45 41.1	
	comp=Z,9.0nm,1.1s						
FORT	**Forrest**	**60.18**	**259**	P	**P**	**10 45 50.5**	**-1.2**
ASAR	**Alice Springs**	**62.56**	**268**	P	**P**	**10 46 08.4**	**+0.5**
	comp=Z,4.7nm,0.8s,baz=140,slow=6.5,SNR=40						
	comp=Z,4.7nm,0.8s						
ASAR	**Alice Springs**	**62.56**	**268**	P	**P**	**10 46 08.1**	**+0.2**
AS31	**Alice Springs**	**62.56**	**268**	P	**P**	**10 46 08.1**	**+0.2**
H01W1	**Cape Leeuwin H**	**64.26**	**245**	T	T	11 56 24.8	
	baz=142,slow=75,SNR=11						
H01W2	**Cape Leeuwin H**	**64.27**	**245**	T	T	11 56 24.4	
	baz=142,slow=75,SNR=10						
H01W3	**Cape Leeuwin H**	**64.28**	**245**	T	T	11 56 25.9	
	baz=142,slow=75,SNR=8.1						
WR0	**Warramunga Arr**	**65.17**	**271**	P	**P**	**10 46 24.9**	**-0.2**
WR0				IAmb	IAmb	10 46 34.5	
	comp=Z,15nm,1.4s						
WRA	**Warramunga Arr**	**65.30**	**271**	P	**P**	**10 46 26.2**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=151,slow=5.7,SNR=7.9						
	comp=Z,1.7nm,0.8s						
WRA	**Warramunga Arr**	**65.30**	**271**	P	**P**	**10 46 26.3**	**+0.3**
WRAB	**Tennant Creek**	**65.30**	**271**	P	**P**	**10 46 26.7**	**+0.8**
WRAB				IAmb	IAmb	10 46 30.9	
	comp=Z,15nm,1.3s						
WB0	**Warramunga Arr**	**65.41**	**271**	P	**P**	**10 46 27.0**	**+0.4**
PB03	**IPOC Station P**	**66.96**	**95**	P	**P**	**10 46 36.9**	**+0.2**
LVC	**Limon Verde**	**66.98**	**96**	P	**P**	**10 46 37.8**	**+0.7**
LVC				IAmb	IAmb	10 46 39.2	
	comp=Z,9.7nm,0.7s						
PB01	**IPOC Station P**	**67.92**	**95**	P	**P**	**10 46 43.5**	**+0.8**
PB01				IAmb	IAmb	10 46 54.5	
	comp=Z,5.8nm,1.0s						
MNMC	**Minye Minye**	**69.40**	**94**	P	**P**	**10 46 52.6**	**+0.4**
CPUP	**Villa Florida**	**70.23**	**108**	P	**P**	**10 46 56.8**	**-0.2**
	comp=Z,7.2nm,0.9s,baz=236,slow=6.0,SNR=13						
	comp=Z,7.2nm,0.9s						
CPUP	**Villa Florida**	**70.23**	**108**	P	**P**	**10 46 57.1**	**+0.2**
CPUP				IAmb	IAmb	10 46 58.0	
	comp=Z,9.5nm,0.9s						
NNA	**Nana**	**71.22**	**83**	LR	LR	11 10 16.3	
	comp=Z,55nm,20.1s,baz=229,slow=29						
PSA00	**Pilbara Seismi**	**71.94**	**258**	P	**P**	**10 47 07.5**	**+0.2**
PSA00				IAmb	IAmb	10 47 12.4	
	comp=Z,5.1nm,0.8s						
MBWA	**Marble Bar**	**72.34**	**258**	P	**P**	**10 47 10.6**	**+0.9**
MBWA				IAmb	IAmb	10 47 14.9	
	comp=Z,8.3nm,0.8s						
LPAZ	**La Paz**	**72.51**	**93**	P	**P**	**10 47 11.9**	**+0.3**
	comp=Z,5.7nm,0.8s,baz=207,slow=4.6,SNR=19						
	comp=Z,5.7nm,0.8s						
LPAZ	**La Paz**	**72.51**	**93**	P	**P**	**10 47 11.6**	**0.0**
LPAZ				IAmb	IAmb	10 47 14.1	
	comp=Z,10nm,1.1s						
AQDB	**Aquidauana**	**75.86**	**106**	P	**P**	**10 47 30.3**	**0.0**
CZSB	**Cruzeiro do Su**	**77.01**	**84**	P	**P**	**10 47 37.5**	**+0.6**
CZSB				IAmb	IAmb	10 47 39.2	
	comp=Z,20nm,1.0s						
ETMB	**Extrema**	**78.87**	**91**	P	**P**	**10 47 47.8**	**+0.6**
VILB	**Vilhena**	**79.60**	**98**	P	**P**	**10 47 51.9**	**+0.6**
VILB				IAmb	IAmb	10 47 56.1	
	comp=Z,13nm,1.0s						
OTAV	**Otavalo**	**80.53**	**75**	P	**P**	**10 47 55.0**	**-1.7**
OTAV				IAmb	IAmb	10 48 01.2	
	comp=Z,12nm,1.4s						
SAML	**Samuel**	**81.26**	**93**	P	**P**	**10 48 00.6**	**+0.4**
TBTG	**Tabatinga, AM**	**81.48**	**85**	P	**P**	**10 48 01.7**	**+0.4**
TBTG				IAmb	IAmb	10 48 03.1	
	comp=Z,24nm,1.3s						
KAPI	**Kappang**	**85.58**	**268**	LR	LR	11 24 49.0	
	comp=Z,37nm,18.8s,baz=146,slow=34						
MACA	**Manacapuru-AM**	**87.42**	**92**	P	**P**	**10 48 32.0**	**+0.6**
TXAR	**Lajitas Array**	**94.46**	**40**	LR	LR	11 23 50.2	
	comp=Z,13nm,18.2s,baz=29,slow=30						
PFO	**Pinyon Flats O**	**94.49**	**28**	LR	LR	11 22 56.6	
	comp=Z,23nm,18.6s,baz=208,slow=30						
H10S3	**ASCENSION HYDR**	**105.33**	**135**	T	T	12 48 22.3	
	baz=16,slow=74,SNR=15						
H10S2	**ASCENSION HYDR**	**105.33**	**135**	T	T	12 48 14.8	
	baz=204,slow=74,SNR=6.9						
H10N3	**ASCENSION HYDR**	**106.40**	**134**	T	T	12 49 48.1	
	baz=203,slow=74,SNR=91						

H10N1	**ASCENSION HYDR**	**106.41**	**134**	T	T	12 49 31.0	
	baz=203,slow=74,SNR=143						
H10N2	**ASCENSION HYDR**	**106.42**	**134**	T	T	12 49 30.5	
	baz=203,slow=74,SNR=114						
ILAR	**Eielson Array**	**121.12**	**2**	PKP	**PKiKP**	**10 54 36.0**	**+0.7**
	comp=Z,2.3nm,0.8s,baz=192,slow=1.7,SNR=26						
YKA	**Yellowknife Ar**	**122.08**	**19**	PKP	**PKPdf**	**10 54 37.1**	**+0.1**
	comp=Z,1.1nm,1.1s,baz=190,slow=2.3,SNR=8.4						
TORD	**Torodi Ar. Bea**	**131.72**	**143**	PKP	**PKPdf**	**10 54 56.8**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=211,slow=1.4,SNR=2.5						
SONM	**Songino Array**	**134.33**	**293**	PKP	**PKiKP**	**10 55 02.4**	**0.0**
	comp=Z,0.3nm,0.7s,baz=166,slow=4.0,SNR=2.2						
MKAR	**Makanchi Array**	**146.50**	**276**	PKPbc	**PKPbc**	**10 55 24.9**	**+0.5**
	comp=Z,9.9nm,0.8s,baz=117,slow=4.5,SNR=90						
ZALV	**Zalesovo Beam**	**148.98**	**289**	PKPbc	**PKPbc**	**10 55 30.4**	**-0.4**
	comp=Z,4.2nm,0.7s,baz=111,slow=4.1,SNR=22						
NRIK	**Noril'sk**	**151.92**	**320**	PKPbc	**PKiKP**	**10 55 38.5**	**+0.8**
	comp=Z,4.4nm,0.7s,baz=102,slow=2.1,SNR=6.7						
ESDC	**Sonseca Array**	**152.47**	**114**	PKPbc	**PKiKP**	**10 55 39.9**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=234,slow=1.6,SNR=6.8						
CLL	**Collm**	**169.05**	**112**	*e*PKPab	**PKPab**	**10 57 03.0**	**+1.3**

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*IDC **04** 10:47:44.3±1.9, 49°.63N×83°.96E, h0^{km}, mbtmp2.4/2, ML2.0/2, Error ellipse: s-maj=64.1km s-min=12.9km az=104.0*

*NNC **04** 10:47:48.6±2.5, 49°.53N×83°.20E, h0^{km}, mb2.9, mpv2.6, Error ellipse: s-maj=28.0km s-min=8.3km az=59.0, Suspected Mining explosion.*

ISC 04 10:47:46.0±1.3**, 49°.69N**±0°.07×**83°.5E**±0°.1**, h0**^{km}**, n7, σ0^{s}.65**/8**, 4C-4D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**3.02**	**196**	⇓Pn	**Pn**	**10 48 35.0**	**-0.1**
	0.7nm,0.6s,baz=22,slow=13,SNR=25						
MK31				⇓Lg	Lg	10 49 17.0	
	4.1nm,0.5s,baz=26,slow=30,SNR=16						
MKAR	**Makanchi Array**	**3.02**	**196**	Pn	**Pn**	**10 48 35.0**	**0.0**
	0.7nm,0.3s,baz=20,slow=13,SNR=20						
MKAR				Sn	**Sn**	**10 49 11.3**	**-0.6**
	0.8nm,0.3s,baz=14,slow=23,SNR=8.4						
MKAR				Lg	Lg	10 49 16.2	
	2.3nm,0.3s,baz=23,slow=31,SNR=22						
	1.3nm,0.4s						
MAKZ	**Makanchi**	**3.07**	**200**	⇑Pn	**Pn**	**10 48 35.7**	**-0.1**
	1.2nm,0.5s						
MAKZ				⇑Lg	Lg	10 49 18.2	
	4.8nm,0.5s						
KURK	**Kurchatov**	**3.32**	**290**	⇑Pg	**Pb**	**10 48 46.0**	**+0.3**
	4.1nm,1.3s						
KURK				⇓Lg	Lg	10 49 30.0	
	3.7nm,0.4s						
KURBB	**Kurchatov Arra**	**3.35**	**288**	⇓Pg	**Pb**	**10 48 46.8**	**+0.5**
	2.1nm,0.7s						
KURBB				⇑Lg	Lg	10 49 30.8	
	11nm,0.6s						
ZALV	**Zalesovo Beam**	**4.33**	**10**	Pn	**Pn**	**10 48 52.3**	**-0.8**
	0.1nm,0.3s,baz=212,slow=14,SNR=2.3						
ZALV				Pg	**Pb**	**10 49 03.8**	**+0.8**
	0.4nm,0.3s,baz=186,slow=17,SNR=6.4						
ZALV				Lg	Lg	10 50 01.8	
	0.4nm,0.3s,baz=189,slow=28,SNR=5.2						
	0.3nm,0.4s						
I46RU	**ZALESOVO INFRA**	**4.33**	**10**	I	I	11 14 40.0	
	baz=186,slow=331,SNR=5.8						

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*NNC **04** 11:29:09.9±0.4, 50°.03N×78°.80E, h0^{km}, mb2.9, mpv2.5, Error ellipse: s-maj=6.6km s-min=1.8km az=73.0, Suspected Mining explosion.*

*IDC **04** 11:29:11.0±0.9, 50°.08N×78°.80E, h0^{km}, mbtmp2.7/3, ML2.1/3, Error ellipse: s-maj=15.0km s-min=6.1km az=61.0*

ISC 04 11:29:10.1±0.9**, 49°.98N**±0°.05×**78°.68E**±0°.06**, h0**^{km}**, n20, σ1^{s}.09**/34**, 18C-11D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.61**	**350**	⇓P	**Pg**	**11 29 21.4**	**-0.4**
KUR07				⇓S	**Sg**	**11 29 30.0**	**+0.3**
KUR06	**Kurchatov Arra**	**0.63**	**351**	⇑P	**Pg**	**11 29 21.5**	**-0.6**
KUR06				⇑S	**Sg**	**11 29 30.4**	**+0.1**
KUR14	**Kurchatov Arra**	**0.64**	**355**	⇑P	**Pg**	**11 29 21.5**	**-0.7**
KUR14				⇑S	**Sg**	**11 29 30.3**	**-0.3**
KUR15	**Kurchatov Arra**	**0.64**	**353**	⇑P	**Pg**	**11 29 21.7**	**-0.7**
KUR15				⇑S	**Sg**	**11 29 30.5**	**-0.3**
KURBB	**Kurchatov Arra**	**0.65**	**352**	Pg	**Pg**	**11 29 21.8**	**-0.8**
	1.7nm,0.3s,baz=167,slow=16,SNR=85						
KURBB				Lg	Lg	11 29 31.0	
	3.7nm,0.3s,baz=117,slow=34,SNR=36						
KURBB	**Kurchatov Arra**	**0.65**	**352**	⇑P	**Pg**	**11 29 22.0**	**-0.5**
KURBB				⇓S	**Sg**	**11 29 31.4**	**+0.5**
	92nm,0.6s						
KUR16	**Kurchatov Arra**	**0.66**	**350**	⇑P	**Pg**	**11 29 22.0**	**-0.6**
KUR16				⇑S	**Sg**	**11 29 30.7**	**-0.5**
KUR17	**Kurchatov Arra**	**0.67**	**348**	⇓P	**Pg**	**11 29 22.2**	**-0.6**
KUR17				⇓S	**Sg**	**11 29 31.0**	**-0.5**
KUR05	**Kurchatov Arra**	**0.67**	**352**	⇑P	**Pg**	**11 29 22.2**	**-0.7**
KUR05				⇑S	**Sg**	**11 29 31.0**	**-0.6**
KUR04	**Kurchatov Arra**	**0.69**	**353**	⇑P	**Pg**	**11 29 22.6**	**-0.7**
KUR04				⇑S	**Sg**	**11 29 31.6**	**-0.5**
KURK	**Kurchatov**	**0.74**	**357**	⇓P	**Pg**	**11 29 23.2**	**-1.0**
KURK				⇓S	**Sg**	**11 29 32.9**	**-0.8**
	11nm,0.6s						
MAKZ	**Makanchi**	**3.86**	**144**	⇑Pn	**Pn**	**11 30 11.1**	**+0.4**
	0.7nm,0.6s						
MAKZ				⇑Pg	**Pb**	**11 30 19.6**	**+0.6**
	1.7nm,0.8s						
MAKZ				⇑Lg	Lg	11 31 12.3	
	4.3nm,0.7s						
MK31	**Makanchi Array**	**4.00**	**142**	Pn	**Pn**	**11 30 13.2**	**+0.6**
	0.1nm,0.2s,baz=79,slow=20,SNR=21						
MK31				⇓Pg	**Pb**	**11 30 22.7**	**+1.4**
	0.2nm,0.2s,baz=324,slow=13,SNR=12						
MK31				⇑Lg	Lg	11 31 16.3	
	6.6nm,0.7s,baz=335,slow=27,SNR=11						
MKAR	**Makanchi Array**	**4.00**	**142**	Pn	**Pn**	**11 30 13.6**	**+1.1**
	0.2nm,0.3s,baz=322,slow=10.0,SNR=29						
MKAR				Pg	**Pb**	**11 30 22.4**	**+1.1**
	0.5nm,0.3s,baz=323,slow=15,SNR=14						
MKAR				Sn	**Sn**	**11 30 56.2**	**-3.8**
	0.3nm,0.3s,baz=323,slow=16,SNR=3.7						
MKAR				Lg	Lg	11 31 16.3	
	1.0nm,0.3s,baz=328,slow=27,SNR=11						
	0.3nm,0.4s						
OTUK	**Ortayu**	**4.51**	**250**	⇑Pn	**Pn**	**11 30 21.2**	**+1.5**
	0.6nm,0.3s						
OTUK				⇓Lg	Lg	11 31 35.4	
	2.5nm,0.6s						
ZALV	**Zalesovo Beam**	**5.49**	**41**	Pn	**Pn**	**11 30 34.3**	**+1.2**
	0.4nm,0.3s,baz=230,slow=14,SNR=7.1						
ZALV				Sn	**Sn**	**11 31 37.0**	**0.0**
	0.1nm,0.3s,baz=221,slow=22,SNR=2.3						
ZALV				Lg	Lg	11 31 57.7	
	0.2nm,0.3s,baz=231,slow=18,SNR=2.9						
	0.9nm,0.3s						
I46RU	**ZALESOVO INFRA**	**5.50**	**41**	I	I	12 00 20.0	
	baz=225,slow=325,SNR=1.6						
BVA0	**Borovoye Array**	**6.01**	**304**	⇓Sn	**Sn**	**11 31 50.3**	**+0.8**
	2.0nm,0.7s,baz=115,slow=23,SNR=4.3						
BVA0				⇓Lg	Lg	11 32 22.2	
	2.6nm,0.9s,baz=115,slow=23,SNR=4.3						
BVAR	**Borovoye Array**	**6.01**	**304**	Pn	**Pn**	**11 30 41.2**	**+1.0**
	baz=113,slow=13,SNR=1.9						
BVAR				Sn	**Sn**	**11 31 47.4**	**-2.1**
	0.1nm,0.3s,baz=123,slow=16,SNR=5.7						
BVAR				Lg	Lg	11 32 18.2	
	0.1nm,0.3s,baz=54,slow=7.3,SNR=2.3						
	0.3nm,0.4s						
AAK	**Ala-Archa**	**7.89**	**203**	Lg	Lg	11 33 19.4	
	0.1nm,0.3s,baz=122,slow=12,SNR=1.5						

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*DDA **04** 11:31:47.7±0.0, 37°.61N×38°.47E, h7^{km}±1^{km}, ML2.2*

*ISK **04** 11:31:47.9, 37°.59N×38°.43E, h14^{km}, ML2.5/7*

ISC 04 11:31:48.0±0.9**, 37°.60N**±0°.03×**38°.46E**±0°.02**, h12**^{km}±7^{km}**, n15, σ0^{s}.50**/27**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	**Bozova**	**0.19**	**224**	P	**Pg**	**11 31 52.2**	**0.0**
ATAB				*i* AML	AML	11 31 55.0	
	comp=N,702nm,0.3s						
ATAB				*i* AML	AML	11 31 55.0	
	comp=E,929nm,0.5s						
ATAB				S	**Sg**	**11 31 55.7**	**+0.6**
AZEY	**Adyaman-Merk**	**0.27**	**321**	P	**Pg**	**11 31 53.4**	**-0.2**
AZEY				*i* AML	AML	11 31 57.0	
	comp=E,564nm,0.2s						
AZEY				S	**Sg**	**11 31 57.4**	**+0.1**
AZEY				*i* AML	AML	11 32 00.0	
	comp=N,229nm,0.2s						
URFA	**Urfa**	**0.33**	**119**	Pg	**Pb**	**11 31 55.7**	**-0.3**
URFA				Sg	**Sb**	**11 32 00.4**	**-0.9**
HANM	**anlurfa/Hi**	**0.34**	**94**	P	**Pg**	**11 31 54.3**	**-0.5**
HANM				*i* AML	AML	11 31 59.0	
	comp=N,274nm,0.3s						
HANM				S	**Sg**	**11 31 59.2**	**-0.2**
HANM				*i* AML	AML	11 32 02.0	
	comp=E,153nm,0.6s						
NARI	**Adyaman-Kaht**	**0.37**	**40**	P	**Pg**	**11 31 54.8**	**-0.7**
NARI				*i* AML	AML	11 32 00.0	
	comp=N,128nm,0.6s						
NARI				S	**Sg**	**11 32 00.3**	**-0.1**
NARI				*i* AML	AML	11 32 10.0	
	comp=E,175nm,0.7s						
AKCA	**Adyaman/G¶l**	**0.64**	**288**	P	**Pg**	**11 32 00.5**	**0.0**
AKCA				S	**Sb**	**11 32 09.9**	**-0.4**
AKCA				*i* AML	AML	11 32 14.0	
	comp=E,79nm,0.2s						
AKCA				*i* AML	AML	11 32 15.0	
	comp=N,183nm,0.4s						
GZT	**Gaziantep**	**0.75**	**251**	P	**Pb**	**11 32 02.7**	**-0.5**
GZT				S	**Sb**	**11 32 13.6**	**+0.1**
GZT				*i* AML	AML	11 32 16.0	
	comp=N,204nm,0.3s						
GZT				*i* AML	AML	11 32 17.0	
	comp=E,167nm,0.2s						
AKCD	**Akcadag**	**0.81**	**329**	P	**Pg**	**11 32 03.5**	**-0.2**
AKCD				S	**Sb**	**11 32 14.6**	**-0.6**
GAZ	**Gaziantep**	**1.08**	**247**	Pg	**Pg**	**11 32 08.4**	**-0.5**
GAZ				Sg	**Sn**	**11 32 23.9**	**-0.3**
DARE	**Darende-Malaty**	**1.24**	**322**	Pn	**Pb**	**11 32 11.2**	**-0.2**
DARE				Sn	**Sn**	**11 32 28.3**	**+0.3**
DYBB	**Diyarbakir**	**1.38**	**75**	Pn	**Pb**	**11 32 13.7**	**-0.1**
DYBB				Sn	**Sg**	**11 32 32.7**	**+0.3**
MAZI	**Mazidag**	**1.59**	**95**	Pn	**Pn**	**11 32 16.5**	**+0.4**
MAZI				Sn	**Sb**	**11 32 37.9**	**+0.4**
KOZT	**Kozan**	**2.10**	**267**	Pn	**Pn**	**11 32 23.2**	**+0.2**
BNGB	**Bingl**	**2.23**	**51**	Pn	**Pn**	**11 32 25.9**	**+0.9**
SVAN	**Silvan-Diyarba**	**2.23**	**75**	Pn	**Pn**	**11 32 26.1**	**+1.1**

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*NOU **04** 11:43:40.3, 19°.02S×169°.76E, h251^{km}, MLv4.5/12, Vanuatu Islands*

*IDC **04** 11:43:41.2±2.0, 18°.94S×169°.53E, h275^{km}±22^{km}, mb3.3/8, mbtmp4.0/10, Error ellipse: s-maj=21.8km s-min=16.1km az=164.0*

ISC 04 11:43:39.3±0.7**, 18°.92S**±0°.09×**169°.5E**±0°.1**, h246**^{km}**, n21, σ2^{s}.13**/21**, mb3.6**/7**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**1.74**	**313**	P	**Pn**	**11 44 22.9**	**+3.7**
LIFNC	**LIFOU**	**2.84**	**229**	P	**Pn**	**11 44 31.5**	**+1.7**
YATNC	**Mamie plateau,**	**3.99**	**218**	P	**Pn**	**11 44 43.7**	**+0.9**
DZM	**Mont Dzumac**	**4.27**	**222**	P	**Pn**	**11 44 48.6**	**+2.4**
	35nm,0.5s,baz=53,slow=15,SNR=64						
DZM	**Mont Dzumac**	**4.27**	**222**	P	**Pn**	**11 44 48.6**	**+2.4**
OUENC	**Ouen Island, N**	**4.30**	**215**	P	**Pn**	**11 44 48.7**	**+2.3**
NOUC	**Port Laguerre**	**4.38**	**223**	P	**Pn**	**11 44 49.8**	**+2.4**
ONTNC	**Ouen Toro**	**4.44**	**220**	P	**Pn**	**11 44 50.4**	**+2.3**
KOUNC	**Koumac, New Ca**	**5.20**	**251**	P	**Pn**	**11 45 01.2**	**+3.8**
MSVF	**Nonsavu**	**8.18**	**83**	P	**Pn**	**11 45 37.8**	**+2.8**
	15nm,0.7s,baz=239,slow=17,SNR=8.5						
URZ	**Urewera**	**20.37**	**163**	P	**P**	**11 47 57.2**	**-0.3**
	12nm,0.7s,baz=14,slow=1.9,SNR=12						
	12nm,0.7s						
STKA	**Stephens Creek**	**28.25**	**237**	P	**P**	**11 49 10.1**	**+0.2**
	1.9nm,0.7s,baz=89,slow=11,SNR=3.3						
	1.9nm,0.7s						
WRA	**Warramunga Arr**	**33.17**	**262**	P	**P**	**11 49 51.8**	**-1.3**
	0.2nm,0.3s,baz=83,slow=5.9,SNR=2.1						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**33.47**	**256**	P	**P**	**11 49 55.1**	**-0.6**
	0.8nm,0.4s,baz=83,slow=9.0,SNR=16						
	0.8nm,0.4s						
MJAR	**Matsushiro Arr**	**62.60**	**332**	P	**P**	**11 53 36.7**	**-0.8**
	1.1nm,0.8s,baz=146,slow=7.2,SNR=2.8						
	1.1nm,0.8s						
SONM	**Songino Array**	**87.13**	**323**	P	**P**	**11 55 57.1**	**-0.4**
	0.3nm,0.4s,baz=132,slow=6.4,SNR=1.8						
	0.3nm,0.4s						
NVAR	**Mina Array Bea**	**88.38**	**48**	P	**P**	**11 56 03.1**	**-0.7**
	0.8nm,0.8s,baz=228,slow=7.3,SNR=4.8						
	0.8nm,0.8s						
ILAR	**Eielson Array**	**89.84**	**17**	P	**P**	**11 56 06.9**	**-2.8**
	0.5nm,0.8s,baz=239,slow=6.3,SNR=7.8						
	0.5nm,0.8s						
YKA	**Yellowknife Ar**	**100.26**	**27**	P	**Pdif**	**11 56 56.8**	**-0.3**
	0.2nm,0.6s,baz=252,slow=4.8,SNR=3.8						
MKAR	**Makanchi Array**	**101.70**	**316**	P	**Pdif**	**11 57 03.3**	**-0.7**
	0.9nm,1.1s,baz=90,slow=7.2,SNR=3.7						
GERES	**GERESS Array B**	**144.34**	**332**	PKP	**PKPab**	**12 02 43.3**	**-1.6**
	0.5nm,0.5s,baz=38,slow=3.7,SNR=4.3						

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*IDC **04** 12:02:27.6±1.3, 5°.91S×153°.72E, h0^{km}, mb3.8/8, mbtmp3.8/10, ML1.6/1, MS3.2/10, Error ellipse: s-maj=38.1km s-min=22.3km az=108.0*

ISC 04 12:02:33.4±1.0**, 5°.85S**±0°.08×**153°.5E**±0°.1**, h32**^{km}**, n19, σ1^{s}.44**/16**, mb3.8**/8**, MS3.2**/8**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.12**	**316**	Pn	**Pn**	**12 03 06.4**	**-0.2**
	39nm,0.5s,baz=324,slow=3.6,SNR=12						
KRVT				Sn	**Sn**	**12 03 31.9**	**-0.1**
	55nm,0.3s,baz=166,slow=21,SNR=14						
PMG	**Port Moresby**	**7.21**	**240**	Pn	**Pn**	**12 04 17.0**	**+0.3**
	0.6nm,0.3s,baz=35,slow=9.9,SNR=1.3						
PMG				Sn	**Sn**	**12 05 35.6**	**-1.9**
	2.5nm,0.3s,baz=172,slow=19,SNR=7.1						
PMG				LR	LR	12 06 47.6	
	comp=Z,113nm,20.0s,baz=19,slow=35						
	4.6nm,0.4s						
CTA	**Charters Tower**	**15.81**	**206**	Pn	**Pn**	**12 06 15.2**	**+1.4**
	0.1nm,0.3s,baz=42,slow=14,SNR=2.0						
CTA				LR	LR	12 11 23.7	
	comp=Z,46nm,21.0s,baz=82,slow=34						
GUMO	**Guam**	**21.13**	**336**	LR	LR	12 15 54.2	
	comp=Z,27nm,18.9s,baz=111,slow=38						
WRA	**Warramunga Arr**	**23.31**	**231**	P	**P**	**12 07 37.3**	**-1.5**
	0.3nm,0.4s,baz=53,slow=9.9,SNR=2.5						
WRA				PcP	**PcP**	**12 11 27.3**	**+1.7**
	0.3nm,0.6s,baz=55,slow=2.7,SNR=1.8						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**25.88**	**225**	P	**P**	**12 08 01.2**	**-1.3**
	1.1nm,0.8s,baz=51,slow=9.0,SNR=11						
ASAR				PcP	**PcP**	**12 11 31.4**	**+0.1**
	0.5nm,1.0s,baz=54,slow=3.0,SNR=2.5						
ASAR				LR	LR	12 16 52.4	
	comp=Z,55nm,20.5s,baz=86,slow=33						
	1.1nm,0.8s						
STKA	**Stephens Creek**	**28.19**	**202**	LR	LR	12 19 01.2	
	comp=Z,40nm,20.1s,baz=23,slow=35						
JOW	**Kunigami**	**40.65**	**324**	LR	LR	12 22 56.5	
	comp=Z,16nm,21.4s,baz=84,slow=30						
JNU	**Nakatsue**	**44.31**	**332**	P	**P**	**12 10 39.4**	**-1.1**
	3.8nm,0.7s,baz=131,slow=4.3,SNR=5.8						
	3.8nm,0.7s						
RAR	**Rarotonga**	**47.72**	**113**	LR	LR	12 29 44.7	
	comp=Z,39nm,19.4s,baz=196,slow=34						
CMAR	**Chiang Mai Arr**	**58.95**	**295**	P	**P**	**12 12 32.6**	**+2.4**
	0.5nm,0.3s,baz=121,slow=3.5,SNR=1.2						
	0.5nm,0.3s						
SONM	**Songino Array**	**67.58**	**328**	P	**P**	**12 13 28.0**	**+1.0**
	0.5nm,0.5s,baz=138,slow=4.3,SNR=4.2						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**81.57**	**319**	P	**P**	**12 14 48.8**	**+0.7**
	0.7nm,0.7s,baz=109,slow=6.2,SNR=6.9						
	0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**82.41**	**326**	P	**P**	**12 14 52.0**	**-0.2**
	1.3nm,0.4s,baz=121,slow=5.3,SNR=9.5						
	1.3nm,0.4s						
ILAR	**Eielson Array**	**82.86**	**22**	P	**P**	**12 14 52.1**	**-2.4**
	0.4nm,0.9s,baz=256,slow=4.3,SNR=4.8						
	0.4nm,0.9s						
YBH	**Yreka Blue Hor**	**89.23**	**48**	LR	LR	12 48 48.2	
	comp=Z,34nm,20.4s,baz=332,slow=31						
NEW	**Newport**	**93.90**	**42**	LR	LR	12 52 18.8	
	comp=Z,27nm,18.8s,baz=29,slow=32						
ELK	**Elko**	**94.73**	**50**	LR	LR	12 53 46.9	
	comp=Z,25nm,18.3s,baz=31,slow=33						
TORD	**Torodi Ar. Bea**	**151.28**	**287**	PKPbc	**PKPbc**	**12 22 25.0**	**+0.2**
	0.6nm,0.6s,baz=60,slow=2.3,SNR=4.2						

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*SOME **04** 12:31:14.8, 39°.15N×73°.77E, h10^{km}*

*NNC **04** 12:31:18.0±2.6, 39°.30N×74°.10E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=20.0km s-min=14.1km az=157.0*

*IDC **04** 12:31:22.0±1.1, 39°.24N×73°.62E, h0^{km}, mb3.6/8, mbtmp3.6/11, ML2.7/3, MS2.5/1, Error ellipse: s-maj=23.2km s-min=17.5km az=88.0*

*KRNET **04** 12:31:23.5±0.1, 39°.36N×73°.38E, mb3.4*

ISC 04 12:31:23.2±0.8**, 39°.43N**±0°.05×**73°.65E**±0°.04**, h10**^{km}**, n51, σ2^{s}.05**/66**, mb3.6**/8**, 23C-8D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.28**	**329**	⇓*e*P	**Pg**	**12 31 47.2**	**-0.6**
	baz=39						
OHH				⇓*e*S	**Sn**	**12 32 04.5**	**-0.1**
	baz=39						
DRK	**Karamyk**	**1.44**	**273**	⇑*e*P	**Pn**	**12 31 46.9**	**-2.6**
	baz=76						
DRK				⇑*e*S	**Sn**	**12 32 03.9**	**-4.7**
	baz=76						
BTK	**Batken**	**2.27**	**287**	⇑*e*P	**Pb**	**12 32 01.8**	**-2.6**
	baz=90						
BTK				⇑*i*S	**Sn**	**12 32 29.3**	**+0.3**
	baz=90						
ARLS	**Aral**	**2.49**	**12**	⇑*e*P	**Pg**	**12 32 08.6**	**-2.2**
	baz=16						
ARLS				⇑*e*S	**Sg**	**12 32 41.5**	**-1.6**
	baz=16						
GAR	**Garm**	**2.63**	**262**	⇑*i*P	**Pn**	**12 32 06.0**	**+0.2**
	baz=62						
GAR				⇑*e*S	**Sn**	**12 32 37.0**	**-0.7**
	baz=62						
NRN	**Naryn**	**2.69**	**41**	⇑*e*P	**Pg**	**12 32 12.3**	**-2.4**
	baz=43						
NRN				⇑*e*S	**Sg**	**12 32 47.9**	**-1.7**
	baz=43						
ARK	**Arkit**	**2.70**	**332**	⇑*i*P	**Pb**	**12 32 09.6**	**-2.0**
	baz=37						
ARK				⇑*i*S	**Sb**	**12 32 43.1**	**-1.7**
	baz=37						
AML	**Almayashu**	**2.70**	**1**	P	**Pb**	**12 32 11.1**	**-0.8**
	SNR=40						
AML	**Almayashu**	**2.70**	**1**	⇑Pg	**Pb**	**12 32 10.9**	**-1.0**
	1.1nm,0.5s						
AML				⇓Lg	Lg	12 32 49.2	
	38nm,1.1s						
AML	**Almayashu**	**2.70**	**1**	⇑*i*P	**Pb**	**12 32 11.0**	**-0.8**
	baz=5.0						
AML				⇑*i*S	**Sb**	**12 32 46.2**	**+1.0**
	baz=5.0						
TRKS	**Terek-Say**	**2.84**	**318**	⇑*i*P	**Pn**	**12 32 09.9**	**+1.1**
	baz=22						
TRKS				⇑*e*S	**Sn**	**12 32 43.9**	**+0.7**
	baz=22						
UCH	**Uchtor**	**2.87**	**13**	P	**Pb**	**12 32 14.9**	**+0.1**
	SNR=10						
UCH	**Uchtor**	**2.87**	**13**	⇑*e*P	**Pb**	**12 32 14.1**	**-0.7**
	baz=16						
UCH				⇑*e*S	**Sb**	**12 32 51.4**	**+1.2**
	baz=16						
MNAS	**Manas**	**3.18**	**344**	⇓*i*P	**Pb**	**12 32 16.7**	**-3.1**
	baz=48						
MNAS				⇓*i*S	**Sb**	**12 32 56.3**	**-2.4**
	baz=48						
EKS2	**Erkin-Say**	**3.23**	**2**	P	**Pb**	**12 32 19.6**	**-1.2**
	SNR=8.3						
EKS2	**Erkin-Say**	**3.23**	**2**	⇓*e*P	**Pb**	**12 32 18.7**	**-2.1**
	baz=5.0						
EKS2				⇓*i*S	**Sb**	**12 32 58.6**	**-1.7**
	baz=5.0						
AAK	**Ala-Archa**	**3.27**	**11**	Pn	**Pb**	**12 32 20.0**	**-1.5**
	1.6nm,0.3s,baz=165,slow=7.2,SNR=19						
AAK				Sn	**Sb**	**12 33 02.7**	**+1.4**
	1.7nm,0.3s,baz=132,slow=23,SNR=1.7						
AAK				LR	LR	12 33 46.5	
	comp=Z,63nm,20.3s,baz=188,slow=42						
	5.8nm,0.5s						
AAK	**Ala-Archa**	**3.27**	**11**	⇑*e*P	**Pb**	**12 32 19.5**	**-1.9**
	baz=14						
AAK				⇑*i*S	**Sb**	**12 33 00.4**	**-1.0**
	baz=14						
MRKS	**Merke**	**3.33**	**355**	Pg	**Pb**	**12 32 19.5**	**-2.9**
	7.2nm,0.2s						
MRKS				Lg	Lg	12 33 07.9	
	73nm,0.4s						
MRKS	**Merke**	**3.33**	**355**	*e*Pg	**Pb**	**12 32 20.3**	**-2.1**
	7.2nm,0.2s						
MRKS				*e*Lg	Lg	12 33 06.9	
	73nm,0.4s						
KBK	**Karagaybulak**	**3.37**	**16**	P	**Pb**	**12 32 22.4**	**-0.8**
	SNR=6.5						
ULHL	**Ulahol**	**3.43**	**34**	P	**Pg**	**12 32 27.3**	**-1.7**
	SNR=14						
TKM2	**Tokmak 2**	**3.79**	**22**	⇑Pg	**Pb**	**12 32 26.8**	**-3.4**
	10nm,1.1s						
TKM2				⇓Lg	Lg	12 33 19.6	
	15nm,0.7s						
IUG	**Iuzhnay**	**3.87**	**316**	Pg	**Pn**	**12 32 20.9**	**-1.9**
	16nm,0.3s						
IUG				Lg	Lg	12 33 10.1	
	40nm,0.3s						
IUG	**Iuzhnay**	**3.87**	**316**	*e*Pg	**Pb**	**12 32 30.7**	**-0.8**
	16nm,0.3s						
IUG				*e*Lg	Lg	12 33 25.3	
	62nm,0.6s						
USP	**Ospenovka**	**3.89**	**9**	P	**Pg**	**12 32 35.2**	**-2.5**
	SNR=5.8						
KST	**Kastek**	**4.01**	**25**	Pg	**Pb**	**12 32 30.2**	**-3.9**
	6.6nm,0.4s						
KST				Lg	Lg	12 33 26.8	
	23nm,0.6s						
KST	**Kastek**	**4.01**	**25**	*e*Pg	**Pb**	**12 32 31.9**	**-2.1**
	2.3nm,0.6s						
KST				*e*Lg	Lg	12 33 27.8	
	23nm,0.6s						
DGS	**Degeres**	**4.13**	**22**	Pg	**Pb**	**12 32 32.5**	**-3.6**
	11nm,0.9s						
DGS				Lg	Lg	12 33 30.8	
	19nm,0.3s						
DGS	**Degeres**	**4.13**	**22**	*e*Pg	**Pb**	**12 32 35.4**	**-0.7**
	11nm,0.9s						
DGS				*e*Lg	Lg	12 33 33.3	
	19nm,0.3s						
MTBS	**Maitube**	**4.25**	**29**	Pg	**Pb**	**12 32 34.1**	**-4.0**
	4.7nm,0.3s						
MTBS				Lg	Lg	12 33 33.7	
	11nm,0.6s						
MTBS	**Maitube**	**4.25**	**29**	*e*Pg	**Pb**	**12 32 37.2**	**-0.9**
	4.2nm,0.4s						
MTBS				*e*Lg	Lg	12 33 36.7	
	11nm,0.6s						
KK31	**Karatay Array**	**4.37**	**328**	Pn	**Pn**	**12 32 32.2**	**+2.6**
	1.2nm,0.5s,baz=138,slow=12,SNR=29						
KK31				⇑Pg	**Pb**	**12 32 41.6**	**+1.5**
	1.6nm,0.4s,baz=146,slow=15,SNR=7.8						
KK31				Lg	Lg	12 33 45.1	
	5.8nm,0.4s,baz=158,slow=31,SNR=5.8						
TNSS	**Tian-Shan**	**4.38**	**33**	Pg	**Pb**	**12 32 36.7**	**-3.7**
	7.3nm,0.4s						
TNSS				Lg	Lg	12 33 38.3	
	5.8nm,0.4s						
TNSS	**Tian-Shan**	**4.38**	**33**	*e*Pg	**Pb**	**12 32 40.5**	**0.0**
	3.1nm,0.4s						
TNSS				*e*Lg	Lg	12 33 42.3	
	5.8nm,0.4s						
MDOK	**Medeo**	**4.53**	**33**	Pg	**Pb**	**12 32 38.4**	**-4.3**
	5.2nm,0.4s						
MDOK	**Medeo**	**4.53**	**33**	*e*Pg	**Pb**	**12 32 43.4**	**+0.6**
	2.0nm,0.6s						
MDOK				*e*Lg	Lg	12 33 47.2	
	12nm,0.7s						
KRBS	**Karabastau**	**4.53**	**19**	*e*Pg	**Pb**	**12 32 42.0**	**-0.8**
	0.9nm,0.6s						
KRBS				*e*Lg	Lg	12 33 45.3	
	23nm,0.6s						
MKAR	**Makanchi Array**	**9.70**	**38**	Sn	**Sn**	**12 35 31.7**	**0.0**
	0.4nm,0.3s,baz=222,slow=15,SNR=5.0						
KURBB	**Kurchatov Arra**	**11.71**	**15**	Sn	**Sn**	**12 36 18.8**	**-2.2**
	baz=218,slow=36,SNR=3.5						

BVAR	Borovoye Array baz=145,slow=18,SNR=3.1 0.7nm,0.6s	13.79	352	Pn	Pn	12 34 40.6	+2.0
ZALV	Zalesovo Beam 0.1nm,0.3s,baz=223,slow=7.9,SNR=6.7 1.2nm,0.8s	16.39	24	Pn	P	12 35 17.4	+1.4
SONM	Songino Array 0.2nm,0.3s,baz=251,slow=9.0,SNR=1.8 0.2nm,0.3s	25.00	60	P	P	12 36 50.1	+2.9
FINES	FINESS Array B 0.5nm,0.4s,baz=120,slow=11,SNR=10 0.5nm,0.4s	36.31	323	P	P	12 38 27.6	+0.9
ARCES	ARCESS Array B 3.3nm,1.0s,baz=116,slow=10,SNR=1.8 3.3nm,1.0s	39.30	336	P	P	12 38 54.9	+3.1
GERES	GERESS Array B 0.4nm,0.6s,baz=318,slow=24,SNR=1.6 0.4nm,0.6s	43.02	303	P	P	12 39 24.5	+1.7
NB2	NORSAR Subarra comp=Z,1.7nm,0.8s,baz=88,slow=7.9	43.37	321	P	P	12 39 26.3	+0.9
NOA	NORSAR Array B comp=Z,0.5nm,0.6s,baz=92,slow=7.8,SNR=5.0 comp=Z,0.5nm,0.6s	43.37	321	P	P	12 39 25.9	+0.5
TORD	Torodi Ar. Bea comp=Z,0.3nm,0.6s,baz=47,slow=6.0,SNR=2.2 comp=Z,0.3nm,0.6s	67.87	269	P	P	12 42 21.8	-0.3
WRA	Warramunga Arr comp=Z,0.7nm,0.9s,baz=320,slow=4.5,SNR=3.4 comp=Z,0.7nm,0.9s	81.82	124	P	P	12 43 42.8	+0.2
ASAR	Alice Springs comp=Z,0.2nm,0.6s,baz=311,slow=5.9,SNR=4.8 comp=Z,0.2nm,0.6s	84.27	127	P	P	12 43 54.6	-0.6

NNC ***04*** *12:33:45.0±0.2, 43°.25N×78°.14E, h2km±2km, mb3.5, mpv4.0, Error ellipse: s-maj=2.6km s-min=1.1km az=176.0*
SOME ***04*** *12:33:46.2, 43°.25N×78°.10E, h15km*
KRNET ***04*** *12:33:46.9±0.1, 43°.20N×77°.97E, h28km, mb2.8*
KNET ***04*** *12:33:48.4±0.5, 43°.13N×77°.84E, h0km, ml2.8, Error ellipse: s-maj=4.1km s-min=2.5km az=126.0*
ISC 04 12:33:45.3±0.9, **43°.24N**±0°.02×**78°.13E**±0°.01, **h11**km±7km, **n63**, σ1ˢ**25**/117, **32C-21D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZHN	Zhinishke 151nm,0.1s	0.23	107	P	Pb	12 33 50.6	-0.9
ZHN	2µm,0.3s			S	Sg	12 33 53.8	+0.3
ZHN	Zhinishke 151nm,0.1s	0.23	107	eP	Pb	12 33 50.6	-0.9
ZHN	2µm,0.3s			eS	Sg	12 33 53.8	+0.3
KURS	Kuram 176nm,0.1s	0.25	6	P	Pb	12 33 51.0	-0.9
KURS	340nm,0.2s			S	Sg	12 33 54.4	+0.4
KURS	Kuram 176nm,0.1s	0.25	6	eP	Pb	12 33 51.0	-0.9
KURS	340nm,0.2s			eS	Sg	12 33 54.4	+0.4
SATY	Saty 276nm,0.1s	0.27	132	P	Pb	12 33 51.5	-0.8
SATY	4µm,0.2s			S	Sb	12 33 55.2	-1.6
SATY	Saty 276nm,0.1s	0.27	132	eP	Pb	12 33 51.5	-0.8
SATY	4µm,0.2s			eS	Sb	12 33 55.2	-1.6
KPKS	Kokpek 517nm,0.1s	0.46	60	P	Pb	12 33 54.6	-0.9
KPKS	1µm,0.4s			S	Sb	12 34 00.9	-1.6
KPKS	Kokpek 517nm,0.1s	0.46	60	eP	Pb	12 33 54.6	-0.9
KPKS	1µm,0.4s			eS	Sb	12 34 00.8	-1.6
ANVS	Anan'yevo baz=8.0	0.57	217	⇑eP	Pg	12 33 56.7	+0.3
ANVS	baz=8.0			⇑eS	Sg	12 34 03.9	0.0
UZB	Uzynbulak 270nm,0.1s	0.66	98	P	Pb	12 33 58.2	-0.6
UZB	539nm,0.1s			S	Sb	12 34 06.8	-1.2
UZB	Uzynbulak 270nm,0.1s	0.66	98	eP	Pb	12 33 58.2	-0.6
UZB	539nm,0.1s			eS	Sb	12 34 06.8	-1.2
KOTS	Kotyrbulak 124nm,0.1s	0.75	270	P	Pg	12 33 60.0	+0.3
KOTS	213nm,0.3s			S	Sg	12 34 10.1	+0.6
KOTS	Kotyrbulak 124nm,0.1s	0.75	270	eP	Pg	12 33 60.0	+0.3
KOTS	213nm,0.3s			eS	Sg	12 34 10.1	+0.6
PRZ	Przheval'sk baz=56	0.78	165	⇑eP	Pn	12 34 01.7	-0.7
PRZ	baz=56			⇑eS	Sb	12 34 12.4	+0.8
MDOK	Medeo 27nm,0.6s	0.80	265	⇑P	Pg	12 34 00.6	0.0
MDOK	61nm,0.2s			Pg	Pg	12 34 00.8	+0.1
MDOK	118nm,0.2s			Lg	Lg	12 34 11.5	
MDOK	17nm,0.2s			⇑S	Sg	12 34 11.6	+0.4
MDOK	Medeo 61nm,0.2s	0.80	265	eP	Pg	12 34 00.8	+0.1
MDOK	118nm,0.2s			eS	Sg	12 34 11.5	+0.4
KNDC	Almaty 36nm,0.4s	0.85	269	⇓P	Pg	12 34 01.8	0.0
KNDC	41nm,0.4s			⇑S	Sb	12 34 14.2	+0.6
TNSS	Tian-Shan 145nm,0.2s	0.89	257	P	Pg	12 34 02.3	-0.2
TNSS	57nm,0.3s			S	Sg	12 34 14.1	-0.1
TNSS	Tian-Shan 145nm,0.2s	0.89	257	eP	Pg	12 34 02.3	-0.2
TNSS	57nm,0.3s			eS	Sg	12 34 14.1	-0.1
BLB	Baldybastay 217nm,0.2s	0.89	16	P	Pg	12 34 02.3	-0.2
BLB	484nm,0.3s			S	Sg	12 34 13.9	-0.3
SHLS	Shalkode 34nm,0.3s	0.97	94	P	Pn	12 34 09.5	+4.4
SHLS	119nm,0.2s			S	Sn	12 34 26.3	+7.4
SHLS	Shalkode 34nm,0.3s	0.97	94	eP	Pn	12 34 09.5	+4.4
SHLS	119nm,0.2s			eS	Sn	12 34 26.4	+7.4
PDGK	Podgornoye 23nm,0.1s	0.99	84	P	Pb	12 34 04.1	-0.5
PDGK	35nm,0.3s			S	Sb	12 34 16.8	-1.0
PDGK	Podgornoye 14nm,0.4s	0.99	84	⇑P	Pg	12 34 03.6	-0.8
PDGK	32nm,0.3s			⇑S	Sb	12 34 17.0	-0.8
ARXS	Arharly 40nm,0.2s	1.00	347	P	Pg	12 34 04.2	-0.3
ARXS	107nm,0.3s			S	Sg	12 34 17.2	-0.3
ARXS	Arharly 40nm,0.2s	1.00	347	eP	Pg	12 34 04.2	-0.3
ARXS	107nm,0.3s			eS	Sg	12 34 17.2	-0.3
CHKK	Chushkaly 36nm,0.2s	1.04	307	P	Pg	12 34 04.7	-0.5
CHKK	328nm,0.1s			S	Sg	12 34 18.0	-0.6
CHKK	Chushkaly 36nm,0.2s	1.04	307	eP	Pg	12 34 04.7	-0.5
CHKK	328nm,0.1s			eS	Sg	12 34 18.0	-0.6
IZV	Izvestkoviy 63nm,0.1s	1.13	260	P	Pb	12 34 06.8	-0.1
IZV	177nm,0.4s			S	Sg	12 34 21.9	+0.2
IZV	Izvestkoviy 63nm,0.1s	1.13	260	eP	Pb	12 34 06.8	-0.1
IZV	177nm,0.4s			eS	Sg	12 34 21.9	+0.2
KTBS	Karatobe 72nm,0.1s	1.16	295	P	Pb	12 34 07.1	-0.3
KTBS	407nm,0.4s			S	Sb	12 34 22.3	-0.1
KTBS	Karatobe 72nm,0.1s	1.16	295	eP	Pb	12 34 07.1	-0.3
KTBS	407nm,0.4s			eS	Sb	12 34 22.3	-0.1
MTBS	Maitube 42nm,0.1s	1.25	266	P	Pb	12 34 09.1	+0.2
MTBS	100nm,0.2s			S	Sb	12 34 25.7	+0.6
MTBS	Maitube 42nm,0.1s	1.25	266	eP	Pb	12 34 09.1	+0.2
MTBS	100nm,0.2s			eS	Sb	12 34 25.7	+0.6
KDJ	Kajisay baz=8.0	1.31	213	⇑eP	Pn	12 34 09.5	-0.2
KDJ	baz=8.0			⇑eS	Sb	12 34 25.7	-1.2
KST	Kastek 15nm,0.2s	1.60	264	eP	Pb	12 34 14.8	-0.1
KST	43nm,0.2s			eS	Sb	12 34 35.7	+0.5
DJR	Jarkent 24nm,0.2s	1.62	47	eP	Pg	12 34 15.4	-1.0
DJR	166nm,0.3s			eS	Sg	12 34 36.5	-0.9
ULHL	Ulahol 9.4nm,0.1s,SNR=14	1.71	235	⇑P	Pb	12 34 16.9	+0.1
ULHL	46nm,0.1s			⇑S	Sb	12 34 38.5	+0.1
ULHL	Ulahol baz=34	1.71	235	⇓eP	Pn	12 34 15.7	+0.5
ULHL	baz=34			⇓eS	Sn	12 34 36.5	-0.7
DGS	Degeres 46nm,0.2s	1.73	271	P	Pb	12 34 17.0	0.0
DGS	188nm,0.4s			S	Sb	12 34 39.4	+0.6
DGS	Degeres 46nm,0.2s	1.73	271	eP	Pb	12 34 16.8	-0.2
DGS	188nm,0.4s			eS	Sb	12 34 39.1	+0.4
BOOM	Boomskoye usch baz=45	1.78	246	⇓eP	Pn	12 34 16.1	0.0
BOOM	baz=45			⇓eS	Sn	12 34 37.9	-0.9
KRBS	Karabastau 35nm,0.1s	1.85	285	P	Pb	12 34 18.9	-0.2
KRBS	139nm,0.4s			S	Sb	12 34 42.8	+0.5
KRBS	Karabastau 35nm,0.1s	1.85	285	eP	Pb	12 34 18.9	-0.2
KRBS	139nm,0.4s			eS	Sb	12 34 42.8	+0.5
TKM2	Tokmak 2 14nm,0.1s,SNR=101	1.89	261	⇑P	Pb	12 34 19.8	0.0
TKM2	99nm,0.1s			⇓S	Sg	12 34 45.2	-0.7
TKM2	Tokmak 2 4.4nm,0.3s	1.89	261	⇑Pn	Pb	12 34 19.0	-0.9
TKM2	35nm,0.3s			⇑Sn	Sg	12 34 45.4	-0.5
TKM2	Tokmak 2 baz=62	1.89	261	⇑eP	Pn	12 34 17.9	+0.3
TKM2	baz=62			⇑eS	Sn	12 34 40.6	-0.9
NRN	Naryn baz=21	2.40	222	⇑eP	Pn	12 34 25.7	+0.9
NRN	baz=21			⇑eS	Sn	12 34 53.9	-0.4
KBK	Karagaybulak 13nm,0.1s,SNR=22	2.41	257	⇑P	Pb	12 34 28.8	+0.1
KBK	37nm,0.2s			⇑S	Sb	12 35 00.3	+1.8
KBK	Karagaybulak baz=57	2.41	257	⇓eP	Pn	12 34 25.1	+0.3
KBK	baz=57			⇓eS	Sn	12 34 53.1	-1.3
CHMS	Chumysh 5.0nm,0.1s,SNR=8.8	2.49	266	⇓P	Pb	12 34 29.5	-0.4
CHMS	51nm,0.2s			⇓S	Sb	12 35 02.4	+1.8
CHMS	Chumysh baz=66	2.49	266	⇓eP	Pn	12 34 26.1	+0.4
CHMS	baz=66			⇓eS	Sn	12 34 55.1	-1.0
FRU1	Bishkek baz=62	2.60	262	⇓eP	Pn	12 34 28.0	+0.6
FRU1	baz=62			⇓eS	Sn	12 34 57.9	-1.2
USP	Ospenovka baz=73	2.66	272	⇓iP	Pn	12 34 28.4	+0.3
USP	baz=73			⇓eS	Sn	12 34 59.2	-1.1
AAK	Ala-Archa 7.1nm,0.2s,SNR=14	2.74	259	⇓P	Pb	12 34 33.7	-0.6
AAK	25nm,0.3s			⇑S	Sb	12 35 08.4	+0.4
AAK	Ala-Archa baz=59	2.74	259	⇑eP	Pn	12 34 29.8	+0.5
AAK	baz=59			⇑eS	Sn	12 35 00.9	-1.6
UCH	Uchtor baz=50	2.85	250	⇓eP	Pn	12 34 31.4	+0.3
UCH	baz=50			⇓eS	Sn	12 35 03.9	-1.8
ARLS	Aral baz=45	3.13	245	⇑eP	Pn	12 34 35.0	+0.3
ARLS	baz=45			⇑eS	Sn	12 35 10.3	-1.9
AML	Almayashu 2.8nm,0.6s	3.46	253	⇑Lg	Lg	12 35 35.0	
MAKZ	Makanchi 1.0nm,0.8s	4.49	36	⇑Pn	Pn	12 34 54.7	+1.5
MAKZ	3.2nm,0.5s			⇑Lg	Lg	12 36 05.3	
MK31	Makanchi Array 0.1nm,0.1s,baz=211,slow=14,SNR=31	4.62	38	⇓Pn	Pn	12 34 56.5	+1.5
MK31	1.7nm,0.3s,baz=224,slow=26,SNR=13			⇑Lg	Lg	12 36 08.8	
KK31	Karatay Array 2.5nm,0.5s,baz=80,slow=28,SNR=5.7	5.58	271	⇑Lg	Lg	12 36 42.9	
KURK	Kurchatov 14nm,1.2s	7.49	2	⇓Lg	Lg	12 37 42.2	

IDC 04 12:39:44.0±8.5, **16°.74S**×**162°.90E**, **h0**km, **mb3.9**/3, **mbtmp3.9**/4, **ML3.0**/1, **MS3.0**/2, **Error ellipse: s-maj=169.7km s-min=38.7km az=33.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac 0.3nm,0.3s,baz=311,slow=20,SNR=1.4	6.27	148	Pn	Pn	12 41 17.4	-0.4
DZM	baz=314,slow=21 7.6nm,0.9s			Sn	Sn	12 42 39.5	+9.3
MSVF	Nonsavu comp=Z,48nm,19.2s,baz=331,slow=35	14.51	96	LR	LR	12 48 16.1	
STKA	Stephens Creek 1.7nm,0.6s,baz=45,slow=7.1,SNR=5.2 1.7nm,0.6s	24.50	228	P	P	12 45 06.3	+1.2
WRA	Warramunga Arr 1.5nm,0.8s,baz=91,slow=9.3,SNR=9.2	27.28	259	P	P	12 45 29.6	-0.9
WRA	comp=Z,40nm,18.3s,baz=206,slow=35 1.5nm,0.8s			LR	LR	12 55 50.6	
ASAR	Alice Springs 0.8nm,0.6s,baz=76,slow=9.5,SNR=17 0.8nm,0.6s	28.03	251	P	P	12 45 37.1	0.0
H11S2	WAKE ISLAND Hy baz=194,slow=76,SNR=5.8	35.21	6	T	T	13 24 03.9	
H11S3	WAKE ISLAND Hy baz=194,slow=76,SNR=5.6	35.22	6	T	T	13 24 03.9	
H11S1	WAKE ISLAND Hy baz=194,slow=76,SNR=5.8	35.23	6	T	T	13 24 03.9	
H11N1	WAKE ISLAND Hy baz=194	36.44	6	T	T	13 25 34.2	
H11N3	WAKE ISLAND Hy baz=194	36.45	6	T	T	13 25 34.2	
H11N2	WAKE ISLAND Hy baz=194	36.46	6	T	T	13 25 34.2	

MAN 04 12:43:25.3, 10°.44N×120°.28E, h104km**, mb4.2, ML3.0, MS2.7, Sulu Sea**

FUNV ***04*** *12:43:59.2, 10°.38N×62°.28W, h14km, MW3.4*
TRN ***04*** *12:44:05.0, 10°.60N×61°.85W, h9km, MD3.2*
ISC 04 12:43:56.9±1.2, **10°.31N**±0°.08×**62°.33W**±0°.04, **h10**km, **n11**, σ**2ˢ19**/16, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPP	Pointe-a-Pierr	0.86	90	eP	Pg	12 44 14.5	+0.9
CRUV	Carupano	0.96	292	eP	Pg	12 44 15.4	-0.1
CRUV				eS	Sg	12 44 28.9	+0.8
TRN	Trinidad (W)	0.97	70	eP	Pg	12 44 14.0	-1.6
GRGR	Grenville	1.93	20	eP	Pb	12 44 32.4	+0.3
GRGR				eS	Sn	12 44 52.8	-1.3
GRHS	Sauteurs	2.01	19	e	Sn	12 44 51.1	-5.1
TOSP	Speyside	2.01	61	eP	Pn	12 44 32.0	+1.0
GCMP	Grenada, Carri	2.33	22	eP	Pn	12 44 38.2	+2.8
GCMP				eS	Sn	12 45 03.7	-0.4
BIRV	Birongo	3.88	273	eP	Pn	12 44 58.7	+2.0
BIRV				eS	Sn	12 45 41.1	-1.3
TACV	Tcata	4.63	268	eP	Pn	12 45 08.8	+1.7
BENV	Beln	5.20	267	eP	Pn	12 45 15.9	+1.0
BAUV	El Baul	5.80	257	eP	Pn	12 45 23.4	+0.4
BAUV				eS	Sn	12 46 26.3	-3.4

IDC 04 12:49:26.4±1.6, **9°.22S**×**159°.09E**, **h0**km, **mb3.4**/3, **mbtmp3.4**/3, **MS2.8**/1, **Error ellipse: s-maj=55.5km s-min=16.5km az=4.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara 4µm,0.3s,baz=218,slow=7.9,SNR=96	0.87	104	Pn	Pn	12 49 46.5	+0.7
HNR	13µm,0.3s,baz=101,slow=22,SNR=21			Sn	Sn	12 49 58.4	-0.9
CTA	Charters Tower comp=Z,34nm,18.5s,baz=85,slow=32	16.45	228	LR	LR	12 58 17.0	
WRA	Warramunga Arr 0.4nm,0.5s,baz=70,slow=9.3,SNR=1.1 0.4nm,0.5s	26.18	243	P	P	12 55 03.3	+0.4
ASAR	Alice Springs 0.7nm,1.1s,baz=60,slow=10,SNR=4.1 0.7nm,1.1s	28.03	236	P	P	12 55 18.9	-0.7
MKAR	Makanchi Array 0.2nm,0.7s,baz=107,slow=3.7,SNR=2.5 0.2nm,0.7s	87.75	318	P	P	13 02 17.3	0.0

TRN ***04*** *12:53:03.6, 10°.35N×62°.36W, h3km, MD3.7*
FUNV ***04*** *12:53:05.7, 10°.33N×62°.26W, h5km, MW3.5*
ISC 04 12:53:04.7±1.6, **10°.34N**±0°.06×**62°.33W**±0°.03, **h10**km±12km, **n17**, σ**1ˢ37**/30, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPP	Pointe-a-Pierr	0.87	91	eP	Pg	12 53 21.1	-0.3
CRUV	Carupano	0.95	291	eP	Pg	12 53 23.0	0.0
CRUV				eS	Sb	12 53 36.5	+0.5
TRN	Trinidad (W)	0.96	71	eP	Pg	12 53 21.9	-1.3
TRN				eS	Sb	12 53 36.5	+0.1
TBH	Brigand Hill	1.25	83	eP	Pg	12 53 29.1	+0.3
GRGR	Grenville	1.90	20	eP	Pn	12 53 37.5	+0.2
GRGR				eS	Sn	12 54 01.5	+0.1
TOSP	Speyside	2.01	61	eP	Pn	12 53 39.8	+1.1
TOSP				eS	Sb	12 54 05.7	-0.7
GCMP	Grenada, Carri	2.31	22	eP	Pn	12 53 44.0	+1.1
GCMP				eS	Sn	12 54 11.9	+0.4
PRGV	PARIAGUAN	2.77	236	eP	Pn	12 53 50.5	+1.2
PRGV				eS	Sn	12 54 23.9	+1.1
SVB	Belmont	3.10	20	eP	Pn	12 53 53.0	-0.8
SVB				eS	Sn	12 54 32.1	+1.1
BIRV	Birongo	3.88	272	eP	Pn	12 54 06.9	+2.4
BIRV				eS	Sn	12 54 49.9	-0.2
MERV	Las Mercedes	4.05	255	eP	Pn	12 54 08.1	+1.2
MERV				eS	Sn	12 54 54.4	-0.2
TACV	Tcata	4.63	268	eP	Pn	12 54 16.5	+1.7
TACV				eS	Sn	12 55 08.0	-0.7
BENV	Beln	5.20	266	eP	Pn	12 54 24.1	+1.4
BENV				eS	Sn	12 55 21.3	-1.6
BAUV	El Baul	5.80	257	eP	Pn	12 54 31.7	+0.8
BAUV				eS	Sn	12 55 34.8	-2.7
BAUV	El Baul	5.80	257	eP	Pn	12 54 30.7	-0.2
BAUV	El Baul	5.80	257	eS	Sn	12 55 35.8	-1.8
MAPV	Macapo	6.05	266	eP	Pn	12 54 34.4	0.0
MAPV				eS	Sn	12 55 40.4	-3.5

LDG ***04*** *13:00:05.7±0.2, 36°.58N×6°.51E, h10km, Ml3.6/15, Error ellipse: s-maj=4.7km s-min=4.3km az=166.0*
CRAAG ***04*** *13:00:09.3, 36°.65N×6°.49E, Ml3.0, Algerie 06km SW Oum-Toub*
IDC ***04*** *13:00:10.0±1.9, 36°.24N×6°.40E, h0km, mb3.0/1, mbtmp3.3/4, ML3.7/3, Error ellipse: s-maj=31.8km s-min=31.0km az=23.0*
ISC 04 13:00:05.8±0.8, **36°.86N**±0°.04×**6°.46E**±0°.06, **h10**km, **n30**, σ**1ˢ36**/34, **Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAEH	'Ain El Ouahch	0.33	105	P	Pg	13 00 16.7	+4.3
CKFL	Kef-Lekhel	0.51	155	P	Pb	13 00 16.9	0.0
DFRA	Djebel Bou Aff	0.56	236	P	Pn	13 00 20.8	+0.8
CASM	Ain Smara	0.60	177	P	Pg	13 00 16.3	-1.2
CMAH	Djebel Manchou	0.81	107	P	Pn	13 00 26.7	+3.3
ABSA	Djebel Ababsia	1.01	125	P	Pn	13 00 27.0	+0.8
SET	Setif	1.08	232	P	Pn	13 00 29.0	+1.9
KEST	Kesra 7.1nm,0.3s,baz=264,slow=2.3,SNR=41 124nm,1.1s	2.59	115	Pn	Pb	13 00 50.7	-1.8
PGF	Pioggiola	6.01	18	ePn	Pn	13 01 36.5	+1.6
PGF	13nm,0.5s			eSn	Sn	13 02 44.2	+0.5
LMR	La Mourre	6.46	0	ePn	Pn	13 01 42.7	+1.7
LMR	13nm,0.3s			eSn	Sn	13 02 56.5	+1.7
SBF	Sospel	7.03	6	ePn	Pn	13 01 49.5	+0.6
SBF	25nm,0.5s			eSn	Sn	13 03 08.3	-0.6
SMRF	Simiane la Rot	7.14	355	ePn	Pn	13 01 51.6	+1.3
SMRF	6.4nm,0.4s			eSn	Sn	13 03 11.3	-0.2
MTLF	Montolieu	7.24	335	ePn	Pn	13 01 52.4	+0.7
MTLF	1.5nm,0.2s			eSn	Sn	13 03 13.0	-0.9
LASF	Ste Croix	7.47	345	ePn	Pn	13 01 55.9	+1.0
LASF	Ste Croix	7.47	345	eP	Pn	13 02 01.4	+6.5
LASF	4.3nm,0.4s			eSn	Sn	13 03 20.2	+0.5
EPF	Esparros	7.75	325	eP	Pn	13 02 06.2	+7.5
EPF	2.7nm,0.4s			eSn	Sn	13 03 24.8	-1.7
MBDF	Montbardon	7.86	2	eP	Pn	13 02 07.1	+6.8
MBDF	Montbardon	7.86	2	ePg	Pg	13 02 34.6	-1.7
MBDF	4.2nm,0.5s			eSn	Sn	13 03 28.5	-0.9
ORIF	Oris-en-Rattie	8.06	357	ePn	Pn	13 02 03.8	+0.8
ORIF	Oris-en-Rattie	8.06	357	ePg	Pg	13 02 37.6	-2.5
ORIF	10nm,0.9s			eSn	Sn	13 03 33.5	-0.7
ETSF	Etsaut	8.09	320	eP	Pn	13 02 10.3	+6.9
VIVF	Saint-Julien-l	8.10	351	eP	Pn	13 02 10.6	+7.1
VIVF	6.7nm,0.4s			eSn	Sn	13 03 34.0	-1.1
SJPF	Ste Jean	8.58	319	eP	Pn	13 02 16.5	+6.4
SJPF	35nm,1.1s			eSn	Sn	13 03 44.9	-2.1
LPL	La Plagne	8.65	1	ePn	Pn	13 02 12.5	+1.3
LPL	12nm,0.8s			eSn	Sn	13 03 47.9	-1.0
ESDC	Sonseca Array 0.2nm,0.3s,baz=95,slow=14,SNR=10.0 0.7nm,0.6s	8.66	292	Pn	Pn	13 02 18.8	+7.5
CAF	Calviac	8.71	339	ePn	Pn	13 02 13.0	+1.1
CAF	2.4nm,0.3s			eSn	Sn	13 03 48.4	-1.8
CAF	1.5nm,0.2s			eSg	Sg	13 04 46.1	+0.8
LFF	La Frestale	9.15	334	eP	Pn	13 02 24.8	+6.9

GERES	GERESS Array B	13.09	22	Pn	P	13 03 24.7	+2.5
	0.2nm,0.3s,baz=206,slow=18,SNR=2.0						
	0.2nm,0.3s						
ROSF	Rostrenen	13.51	331	*e*Pn	Pn	13 03 18.5	+1.1
TORD	Torodi Ar. Bea	24.00	191	P	P	13 05 20.8	+0.1
	0.3nm,0.6s,baz=355,slow=12,SNR=1.6						
	0.3nm,0.6s						

IDC ***04*** *13:04:14.9±1.2, 36°.50N×6°.47E, h0^{km}, mb3.1/4, mbtmp3.4/8, ML3.7/4, MS3.0/1, Error ellipse: s-maj=26.0km s-min=22.4km az=149.0*

CRAAG ***04*** *13:04:16.0, 36°.58N×6°.51E, Ml3.0, Algerie 13km SW Oum-Toub*

LDG ***04*** *13:04:16.5±0.4, 36°.72N×6°.28E, h10^{km}, Ml3.6/15, Error ellipse: s-maj=7.2km s-min=5.5km az=166.0*

ISC 04 13:04:16.1±0.7**, 36°.61N**±0°.05×**6°.49E**±0°.05**, h9^{km}, n42, σ1^{s}.79**/39**, mb3.2**/4**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CKFL	Kef-Lekhel	0.28	139	P	Pg	13 04 22.2	+0.5
CAEH	'Ain El Ouahch	0.33	59	P	Pg	13 04 23.7	+0.9
CASM	Ain Smara	0.35	180	P	Pg	13 04 23.0	0.0
DFRA	Djebel Bou Aff	0.50	263	P	Pb	13 04 27.5	+0.3
CMAH	Djebel Manchou	0.75	89	P	Pb	13 04 31.7	+0.4
ABSA	Djebel Ababsia	0.86	113	P	Pg	13 04 28.0	-4.7
SET	Setif	0.97	245	P	Pn	13 04 36.0	0.0
KEST	Kesra	2.47	110	Pn	Pn	13 04 57.5	+0.9
	13nm,0.3s,baz=101,slow=4.5,SNR=59						
	62nm,0.4s						
PGF	Pioggiola	6.24	17	*e*Pn	Pn	13 05 45.8	-2.6
PGF				*e*Sn	Sn	13 06 54.4	-5.5
	20nm,0.4s						
LMR	La Mourre	6.72	0	*e*Pn	Pn	13 05 54.9	0.0
LMR				*e*Sn	Sn	13 07 00.6	-11
	12nm,0.2s						
SBF	Sospel	7.28	5	*e*Sn	Sn	13 07 15.4	-10
	37nm,0.7s						
SMRF	Simiane la Rot	7.39	355	*e*P	Pn	13 06 05.3	+1.1
SMRF				*e*Sn	Sn	13 07 18.6	-10
	35nm,1.1s						
MTLF	Montolieu	7.48	335	*e*P	Pn	13 06 05.6	+0.2
MTLF				*e*Sn	Sn	13 07 18.8	-12
	14nm,0.8s						
LASF	Ste Croix	7.72	346	*e*P	Pn	13 06 09.1	+0.3
LASF				*e*Sn	Sn	13 07 25.5	-11
	69nm,1.4s						
EPF	Esparros	7.97	325	*e*P	Pn	13 06 13.4	+1.3
EPF				*e*Sn	Sn	13 07 30.6	-12
	4.2nm,0.3s						
MBDF	Montbardon	8.11	1	*e*P	Pn	13 06 16.0	+1.8
MBDF				*e*Sn	Sn	13 07 36.4	-10
	12nm,1.0s						
ETSF	Etsaut	8.30	321	*e*P	Pn	13 06 17.8	+1.1
ETSF				*e*Sn	Sn	13 07 38.0	-13
	9.3nm,1.0s						
ORIF	Oris-en-Rattie	8.31	357	*e*P	Pn	13 06 18.5	+1.6
ORIF				*e*Sn	Sn	13 07 40.4	-11
	5.2nm,0.6s						
VIVF	Saint-Julien-l	8.35	351	*e*P	Pn	13 06 14.1	-3.3
VIVF				*e*Sn	Sn	13 07 41.4	-10
	12nm,0.6s						
ESDC	Sonseca Array	8.79	294	Pn	Pn	13 06 25.7	+2.3
	0.3nm,0.3s,baz=95,slow=14,SNR=10						
	0.6nm,0.5s						
SJPF	Ste Jean	8.79	320	*e*P	Pn	13 06 24.3	+0.9
SJPF				*e*Sn	Sn	13 07 49.5	-13
	18nm,1.1s						
LPL	La Plagne	8.90	1	*e*P	Pn	13 06 27.6	+2.5
LFF	La Frestale	9.39	334	*e*P	Pn	13 06 32.3	+0.7
MDT	Midelt	9.89	251	Pn	Pn	13 06 38.6	+0.1
	0.3nm,0.3s,baz=289,slow=7.5,SNR=4.7						
	8.5nm,0.7s						
CABF	La Chapelle	10.00	358	*e*P	Pn	13 06 42.4	+2.4
TCF	Toulx Ste Croi	10.19	343	*e*Pn	Pn	13 06 38.1	-4.4
SMF	Signal de Mont	10.22	350	*e*P	Pn	13 06 44.0	+1.0
BGF	Bois d'Agland	10.31	346	*e*P	Pn	13 06 46.0	+1.9
AVF	Avril sur Loir	10.44	348	*e*P	Pn	13 06 46.9	+1.0
SSF	Saint Saulge	10.68	349	*e*P	Pn	13 06 50.7	+1.5
LOR	Lormes	10.83	350	*e*Pn	Pn	13 06 47.8	-3.5
SFTF	Sexfontaines	11.64	355	*e*P	Pn	13 07 04.5	+2.2
CDF	Champ du Feu	11.81	3	*e*P	Pn	13 07 06.5	+1.7
MEZF	Maizieres J'vi	11.93	355	*e*P	Pn	13 07 07.6	+1.3
GERES	GERESS Array B	13.32	21	Pn	Pn	13 07 26.7	+1.3
	0.2nm,0.3s,baz=198,slow=9.3,SNR=1.9						
	0.2nm,0.3s						
QUIF	Quistinic	13.36	331	*e*Pn	Pn	13 07 21.2	-4.6
GIVF	Givet	13.54	355	*e*P	Pn	13 07 29.0	+0.7
BAIF	Baives	13.54	354	*e*P	Pn	13 07 29.5	+1.2
AKASG	Malin Array Be	21.54	42	P	P	13 09 05.9	+0.5
	0.2nm,0.3s,baz=243,slow=11,SNR=1.7						
	0.2nm,0.3s						
TORD	Torodi Ar. Bea	23.76	192	P	P	13 09 27.4	-1.5
	0.4nm,0.6s,baz=9.1,slow=9.4,SNR=4.6						
TORD				LR	LR	13 20 07.8	
	comp=Z,40nm,19.7s,baz=128,slow=40						
	0.4nm,0.6s						
MKAR	Makanchi Array	55.45	54	P	P	13 13 51.5	+0.4
	0.2nm,0.6s,baz=284,slow=5.7,SNR=2.7						
	0.2nm,0.6s						
YKA	Yellowknife Ar	70.55	335	P	P	13 15 31.0	-0.1
	0.2nm,0.7s,baz=50,slow=5.6,SNR=4.6						
	0.2nm,0.7s						

IDC ***04*** *13:05:02.3±1.5, 60°.23N×152°.58W, h83^{km}±25^{km}, mb3.5/5, mbtmp3.7/10, Error ellipse: s-maj=27.8km s-min=9.3km az=114.0*

NEIC ***04*** *13:05:03.3±1.1, 60°.15N±0°.05×152°.45W±0°.09, h116^{km}±7^{km}, Error ellipse: s-maj=7.0km s-min=6.4km az=153.0*

AEIC ***04*** *13:05:05.2±1.2, 60°.18N±0°.04×152°.43W±0°.08, h102^{km}±6^{km}, ML3.3, ML3.6/122(NEIC), Error ellipse: s-maj=6.6km s-min=6.0km az=158.0*

ISC 04 13:05:04.0±0.7**, 60°.16N**±0°.05×**152°.39W**±0°.04**, h113^{km}**±6^{km}**, n221, σ0^{s}.73**/230**, mb3.8**/5**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
O20K	Slope Mountain	0.14	234	P	Pn	13 05 19.2	-0.6
	baz=42						
O20K				S	Sn	13 05 30.7	-0.8
	baz=42						
RSO	Redoubt South	0.35	329		Pn	13 05 19.8	-0.8
ILSW	Iliamna Southw	0.42	245	Pn	Pn	13 05 19.8	-1.1
RDJH	Redoubt Jeurge	0.47	335		Pn	13 05 20.2	-1.0
HOM	Homer	0.63	143	Pn	Pn	13 05 22.2	+0.2
HOM	Homer	0.63	143		Sn	13 05 35.9	+0.2
HOM	Homer	0.63	143	P	Pn	13 05 22.3	+0.2
	baz=324						
HOM				S	Sn	13 05 35.9	+0.2
	baz=324						
OPT	Oil Point	0.67	220	P	Pn	13 05 22.0	-0.4
	baz=36						
P19K	Oil Pt	0.67	220		Pn	13 05 22.0	-0.4
P19K				IAML		13 05 36.1	
	comp=N,1µm,0.6s						
P19K				IAML		13 05 36.3	
	comp=E,1µm,0.5s						
P19K	Oil Pt	0.67	220	P	Pn	13 05 22.0	-0.4
	baz=36						
P19K				S	Sn	13 05 35.5	-0.8
	baz=36						
BRLK	Bradley Lake	0.86	117	Pn	Pn	13 05 23.7	-0.4
BRLK				IAML		13 05 39.6	
	comp=E,2µm,0.1s						
CAPN	Captain Cook N	0.86	45		Pn	13 05 25.6	+1.5
CAPN	Captain Cook N	0.86	45	P	Pn	13 05 25.4	+1.3
	baz=228						
CNPM	China Poot	0.87	137	Pn	Pn	13 05 24.0	-0.1
CNPM	China Poot	0.87	137		Sn	13 05 38.9	-0.5
BRSE	Bradley Lake S	0.93	116		Pn	13 05 24.7	-0.1
BRSE					Sn	13 05 39.8	-0.7
BRSE	Bradley Lake S	0.93	116	P	Pn	13 05 24.7	-0.1
	baz=298						
BRSE				S	Sn	13 05 39.9	-0.5
	baz=298						
O19K	Port Alsworth	0.96	273		Pn	13 05 24.2	-0.8
O19K				IAML		13 05 39.7	
	comp=E,2µm,0.5s						
O19K	Port Alsworth	0.96	273	P	Pn	13 05 24.3	-0.8
	baz=90						
SPU	Mount Spurr	1.03	9	Pn	Pn	13 05 25.1	-0.8
SPCR	Spurr Chakacha	1.04	5	P	Pn	13 05 25.3	-0.7
	baz=186						
SLKM	Skilak Lake	1.13	71		Pn	13 05 26.2	-0.6
N19K	Bonanza Creek	1.22	303		Pn	13 05 27.1	-0.8
N19K				IAML		13 05 44.7	
	comp=N,580nm,0.7s						
N19K				IAML		13 05 45.0	
	comp=E,481nm,0.8s						
N19K	Bonanza Creek	1.22	303	P	Pn	13 05 27.1	-0.8
	baz=121						
O22K	Cooper Landing	1.36	75		Pn	13 05 29.3	-0.1
O22K	Cooper Landing	1.36	75	P	Pn	13 05 29.2	-0.1
	baz=259						
Q19K	Cape Douglas,	1.39	208		Pn	13 05 29.1	-0.7
Q19K				IAML		13 05 51.4	
	comp=E,621nm,0.7s						
Q19K				IAML		13 05 54.0	
	comp=N,748nm,0.6s						
Q19K	Cape Douglas,	1.39	208	P	Pn	13 05 29.1	-0.7
	baz=26						
O18K	Koktuh Hills	1.45	259		Pn	13 05 29.8	-0.6
O18K				IAML		13 05 49.4	
	comp=E,370nm,0.6s						
O18K	Koktuh Hills	1.45	259	P	Pn	13 05 29.8	-0.6
	baz=75						
FIS	Fire Island	1.45	46		Pn	13 05 31.4	+1.0
FIS				IAML		13 05 52.5	
	comp=N,1µm,0.8s						
FIS				IAML		13 05 53.1	
	comp=E,1µm,0.7s						
SEW	Seward	1.47	91	Pn	Pn	13 05 30.2	-0.5
SEW	Seward	1.47	91	P	Pn	13 05 30.1	-0.5
	baz=274						
SUA	Susitna One	1.53	31		Pn	13 05 31.7	+0.2
SUA				IAML		13 05 54.3	
	comp=N,995nm,0.8s						
SUA	Susitna One	1.53	31	P	Pn	13 05 31.6	+0.1
	baz=214						
Q20K	Shuyak Island	1.56	180	P	Pn	13 05 31.7	0.0
	baz=359						
RC01	Rabbit Creek A	1.60	54	Pn	Pn	13 05 32.0	-0.2
RC01	Rabbit Creek A	1.60	54	P	Pn	13 05 32.0	-0.2
	baz=237						
P18K	Big Mountain,	1.63	243		Pn	13 05 32.1	-0.5
P18K	Big Mountain,	1.63	243	P	Pn	13 05 31.9	-0.7
	baz=59						
M20K	Styx River	1.76	349		Pn	13 05 34.1	-0.1
M20K	Styx River	1.76	349	P	Pn	13 05 34.0	-0.2
	baz=168						
SVW2	Sparrevohn	1.83	302	Pn	Pn	13 05 34.0	-1.0
SKT	Skwentna	1.87	13		Pn	13 05 34.8	-0.6
SKT				IAML		13 06 02.2	
	comp=N,266nm,0.3s						
SKT	Skwentna	1.87	13	P	Pn	13 05 35.0	-0.5
	baz=194						
M22K	Willow	1.94	34		Pn	13 05 36.5	+0.2
M22K	Willow	1.94	34	P	Pn	13 05 36.4	+0.2
	baz=217						
M19K	Big River Lodg	2.00	332		Pn	13 05 36.8	-0.3
M19K	Big River Lodg	2.00	332	P	Pn	13 05 36.8	-0.3
	baz=150						
Q18K	Katmai Hardscr	2.02	222	P	Pn	13 05 37.2	-0.3
	baz=39						
PWL	Port Wells	2.12	69	Pn	Pn	13 05 37.2	-1.5
PWL				IAML		13 06 06.8	
	comp=E,479nm,0.3s						
PWL				IAML		13 06 07.0	
	comp=N,568nm,0.3s						
PWL	Port Wells	2.12	69	P	Pn	13 05 37.6	-1.1
	baz=253						
PMR	Palmer	2.14	47	Pn	Pn	13 05 38.6	-0.3
PMR				IAML		13 06 04.4	
	comp=N,416nm,0.2s						
PMR				IAML		13 06 04.6	
	comp=E,411nm,0.4s						
PMR	Palmer	2.14	47	P	Pn	13 05 38.0	-0.9
	baz=230						
P17K	Kvichak River	2.27	246	P	Pn	13 05 40.5	0.0
	baz=62						
KNK	Knik Glacier	2.30	55	Pn	Pn	13 05 40.7	-0.2
KNK	Knik Glacier	2.30	55	P	Pn	13 05 40.0	-0.9
	baz=239						
GHO	Glory Hole Cre	2.34	45	Pn	Pn	13 05 40.7	-0.8
GHO				IAML		13 06 16.5	
	comp=N,359nm,0.3s						
GHO				IAML		13 06 17.0	
	comp=E,429nm,0.6s						
L19K	White Mountain	2.35	331		Pn	13 05 41.3	-0.3
L19K	White Mountain	2.35	331	P	Pn	13 05 41.3	-0.3
	baz=149						
KDAK	Kodiak Island	2.39	182	P	Pn	13 05 40.8	-1.3
	comp=E,29nm,0.3s,baz=50,slow=12,SNR=843						
KDAK				S	Sn	13 06 09.7	-1.5
	comp=E,53nm,0.3s,baz=212,slow=18,SNR=17						
KDAK	Kodiak Island	2.39	182	Pn	Pn	13 05 41.0	-1.1
KDAK				IAML		13 06 11.2	
	comp=E,163nm,0.2s						
KDAK				IAML		13 06 11.2	
	comp=E,171nm,0.2s						
O17K	Koliganek Bris	2.40	263	P	Pn	13 05 41.7	-0.5
	baz=78						
L20K	Farewell, AK	2.43	343	P	Pn	13 05 42.6	-0.1
	baz=162						
CUT	Chulitna	2.47	24	Pn	Pn	13 05 42.8	-0.3
CUT				IAML		13 06 17.7	
	comp=N,450nm,0.4s						
CUT	Chulitna	2.47	24	P	Pn	13 05 42.7	-0.3
	baz=206						
P23K	Montague Islan	2.51	92	P	Pn	13 05 43.4	-0.2
	baz=276						
SML	Sawmill	2.58	48	Pn	Pn	13 05 43.6	-0.9
SML				IAML		13 06 15.4	
	comp=E,262nm,0.9s						
SML				IAML		13 06 16.4	
	comp=N,264nm,0.5s						
SML	Sawmill	2.58	48	P	Pn	13 05 43.8	-0.7
	baz=233						
Q17K	Contact Creek	2.62	225	P	Pn	13 05 45.0	-0.2
	baz=41						
Q16K	King Salmon	2.64	237	P	Pn	13 05 45.4	+0.1
	baz=53						
PPLA	Purkeypile	2.74	2	Pn	Pn	13 05 46.9	+0.1
PPLA	Purkeypile	2.74	2	P	Pn	13 05 47.0	+0.1
	baz=183						
M23K	Glacier View	2.80	52	P	Pn	13 05 46.7	-0.8
	baz=237						
O16K	Kokwok River B	2.93	261	P	Pn	13 05 48.8	-0.3
	baz=76						
SCM	Sheep Creek Mo	2.98	54	Pn	Pn	13 05 49.7	-0.2
SCM				IAML		13 06 24.1	
	comp=E,335nm,0.8s						
SCM				IAML		13 06 25.7	
	comp=N,223nm,0.5s						
SCM	Sheep Creek Mo	2.98	54	P	Pn	13 05 49.5	-0.4
	baz=239						
OHAK	Old Harbor	2.99	189	Pn	Pn	13 05 48.5	-1.4
OHAK	Old Harbor	2.99	189	P	Pn	13 05 48.3	-1.6
	baz=8.2						
P16K	Nushagak River	3.06	251	P	Pn	13 05 51.2	+0.3
	baz=65						
Q23K	Middleton Isla	3.14	101	Pn	Pn	13 05 51.8	-0.1
Q23K				IAML		13 06 46.8	
	comp=N,298nm,3.0s						
Q23K	Middleton Isla	3.14	101	P	Pn	13 05 52.0	+0.2
	baz=286						
MID	Middleton Isla	3.15	101	Pn	Pn	13 05 52.4	+0.5
MID				IAML		13 07 51.9	
	comp=N,285nm,3.0s						
N16K	Nishlik Lake	3.19	278	P	Pn	13 05 52.2	-0.3
	baz=92						
CAST	Castle Rocks	3.27	2	Pn	Pn	13 05 53.2	-0.4
CAST	Castle Rocks	3.27	2	P	Pn	13 05 53.1	-0.5
	baz=183						
R17K	Ugashik Creek	3.27	221	P	Pn	13 05 53.9	+0.2
	baz=37						
TTA	Tatalina	3.27	330	Pn	Pn	13 05 52.8	-0.9
TTA	Tatalina	3.27	330	P	Pn	13 05 53.0	-0.7
	baz=147						
K20K	Telida	3.30	347		Pn	13 05 53.3	-0.7
K20K	Telida	3.30	347	P	Pn	13 05 53.8	-0.2
	baz=166						
EYAK	Cordova Ski Ar	3.32	80	Pn	Pn	13 05 54.0	-0.3
EYAK	Cordova Ski Ar	3.32	80	P	Pn	13 05 54.2	0.0
	baz=267						
DIV	Divide	3.40	71		Pn	13 05 54.3	-1.1
KLU	Klutina	3.44	64		Pn	13 05 55.0	-0.9
KLU	Klutina	3.44	64	P	Pn	13 05 55.0	-0.9
	baz=250						
TRF	Thorofare Moun	3.45	16	Pn	Pn	13 05 55.5	-0.6
TRF				IAML		13 06 58.6	
	comp=E,79nm,0.6s						
TRF				IAML		13 07 03.2	
	comp=N,73nm,0.9s						
KTH	Kantishna Hill	3.47	11	Pn	Pn	13 05 57.1	+0.7
KTH				IAML		13 07 02.3	
	comp=N,65nm,1.0s						
M24K	Tolsona, Glenn	3.59	54		Pn	13 05 58.0	+0.1
M24K				IAML		13 06 42.4	
	comp=N,181nm,0.9s						
M24K	Tolsona, Glenn	3.59	54	P	Pn	13 05 58.0	+0.1
	baz=240						
RND	Reindeer	3.66	26	Pn	Pn	13 05 59.0	+0.2
RND				IAML		13 06 41.6	
	comp=E,56nm,0.3s						
CHUM	Lake Minchumin	3.73	1		Pn	13 05 59.3	-0.4
CHUM	Lake Minchumin	3.73	1	P	Pn	13 05 59.3	-0.4
	baz=181						
R16K	Pilot Point	3.74	228	P	Pn	13 05 60.0	+0.1
	baz=43						
MCK	McKinley	3.94	23	Pn	Pn	13 06 02.9	+0.4
MCK	McKinley	3.94	23	P	Pn	13 06 02.8	+0.4
	baz=206						
BPAW	Bear Paw Mtn.	4.00	9	Pn	Pn	13 06 02.2	-1.2
BPAW	Bear Paw Mtn.	4.00	9	P	Pn	13 06 03.0	-0.4
	baz=190						
N25K	Chitina, Valde	4.07	66		Pn	13 06 03.6	-0.8
N25K				IAML		13 06 51.4	
	comp=E,144nm,0.6s						
N25K				IAML		13 06 51.4	
	comp=N,159nm,0.5s						
N25K	Chitina, Valde	4.07	66	P	Pn	13 06 03.6	-0.8
	baz=253						
HARP	HAARP	4.15	54	P	Pn	13 06 05.1	-0.2
	baz=241						
PAX	Paxson	4.34	47	Pn	Pn	13 06 07.8	-0.2
PAX	Paxson	4.34	47	P	Pn	13 06 07.8	-0.2
	baz=233						
GLB	Gilahina Butte	4.39	69		Pn	13 06 07.8	-0.9
GLB				IAML		13 06 59.3	
	comp=N,71nm,0.6s						
GLB				IAML		13 07 01.1	
	comp=E,42nm,0.4s						
VRDI	Verde Repeater	4.52	72	Pn	Pn	13 06 09.9	-0.6
VRDI				IAML		13 06 55.0	
	comp=E,29nm,3.5s						
VRDI				IAML		13 07 03.0	
	comp=N,53nm,0.8s						
NEA2	Nenana	4.71	18	Pn	Pn	13 06 12.2	-0.5
NEA2				IAML		13 07 13.8	
	comp=N,26nm,4.7s						
NEA2	Nenana	4.71	18	P	Pn	13 06 12.3	-0.5
	baz=201						
MCARA	McCarthy VSAT	4.75	71		Pn	13 06 13.0	-0.4
MCARA				IAML		13 07 14.4	
	comp=E,73nm,0.7s						
MCARA				IAML		13 07 14.9	
	comp=N,77nm,0.5s						
MCARA	McCarthy VSAT	4.75	71	P	Pn	13 06 13.4	-0.1
	baz=260						
WRH	Wood River Hil	4.76	23	Pn	Pn	13 06 13.3	-0.3
WRH				IAML		13 09 14.3	
	comp=E,25nm,4.2s						
K24K	Donnelly Dome	4.80	38	P	Pn	13 06 15.2	+1.1
	baz=224						
MLY	Manley	4.94	8	Pn	Pn	13 06 16.3	+0.2
MLY	Manley	4.94	8	P	Pn	13 06 16.5	+0.4
	baz=190						
HDA	Harding Lake	4.96	28		Pn	13 06 15.8	-0.3
HDA	Harding Lake	4.96	28	P	Pn	13 06 16.0	-0.2
	baz=214						
CCB	Clear Creek Bu	4.98	23		Pn	13 06 15.8	-0.6
CCB				IAML		13 06 59.2	
	comp=N,24nm,4.3s						
CCB				IAML		13 07 14.1	
	comp=E,27nm,0.4s						
MENT	Mentasta	4.99	52	Pn	Pn	13 06 16.4	-0.3
MENT				IAML		13 07 32.8	
	comp=N,62nm,0.5s						
MENT				IAML		13 07 37.3	
	comp=E,56nm,0.7s						
CHGN	Chignik	5.01	222	Pn	Pn	13 06 17.0	+0.1
CHGN				IAML		13 07 14.7	
	comp=E,43nm,0.1s						
CHGN				IAML		13 07 22.2	
	comp=N,48nm,0.1s						
KIAG	Kiagna River	5.01	77		Pn	13 06 17.1	0.0
BALM	Baldy	5.03	76		Pn	13 06 16.1	-1.1
I21K	Tanana	5.04	2		Pn	13 06 16.6	-0.6
I21K				IAML		13 07 50.7	
	comp=N,28nm,4.6s						
I21K				IAML		13 08 12.4	
	comp=E,23nm,4.0s						
I21K	Tanana	5.04	2	P	Pn	13 06 17.2	-0.1
	baz=183						
GCSA	Galena City Sc	5.05	338		Pn	13 06 17.0	-0.3
GCSA	Galena City Sc	5.05	338	P	Pn	13 06 17.0	-0.3
	baz=154						
RIDG	Independent Ri	5.05	42	Pn	Pn	13 06 17.8	+0.2
RIDG				IAML		13 07 22.6	
	comp=N,59nm,0.9s						
RIDG				IAML		13 07 30.3	
	comp=E,64nm,0.9s						
RIDG	Independent Ri	5.05	42	P	Pn	13 06 17.6	+0.1
	baz=228						
M26K	Nabesna, AK	5.06	60		Pn	13 06 17.5	-0.1
M26K				IAML		13 07 15.4	
	comp=E,48nm,0.6s						
M26K				IAML		13 07 15.7	
	comp=N,56nm,0.6s						
TCOL	CIGO, UAF Yank	5.17	22		Pn	13 06 18.5	-0.5
TCOL	CIGO, UAF Yank	5.17	22	P	Pn	13 06 18.9	-0.1
	baz=206						
COLA	College	5.17	22		Pn	13 06 18.8	-0.2
MDM	Murphy Dome	5.18	20		Pn	13 06 18.8	-0.4
MDM				IAML		13 08 01.3	
	comp=N,21nm,4.2s						
MDM				IAML		13 08 23.1	
	comp=E,24nm,3.9s						
L26K	Log Cabin Wild	5.18	52		Pn	13 06 19.5	+0.3
L26K				IAML		13 07 45.2	
	comp=E,45nm,0.4s						
L26K	Log Cabin Wild	5.18	52	P	Pn	13 06 19.3	0.0
	baz=241						
I23K	Minto, Yukon-K	5.19	14		Pn	13 06 19.5	+0.2
I23K				IAML		13 07 13.0	
	comp=E,22nm,4.6s						
I23K				IAML		13 07 50.6	
	comp=N,24nm,0.9s						
I23K	Minto, Yukon-K	5.19	14	P	Pn	13 06 19.2	-0.1
	baz=197						
DOT	Dot Lake	5.26	45		Pn	13 06 20.1	-0.2
IL31		5.28	27		Pn	13 06 19.9	-0.6
ILAR	Eielson Array	5.28	27	P	Pn	13 06 19.7	-0.8
	comp=N,8.1nm,0.4s,baz=213,slow=14,SNR=159						
ILAR				S	Sn	13 07 17.1	-3.1
	comp=N,2.6nm,0.3s,baz=193,slow=13,SNR=5.8						
BARN	Barnard Glacie	5.36	76		Pn	13 06 22.2	+0.3
BARN				IAML		13 07 43.7	
	comp=N,42nm,3.7s						
BARN				IAML		13 10 01.1	
	comp=E,33nm,4.2s						
POKR	Poker Plat Res	5.47	23		Pn	13 06 22.2	-0.9
POKR	Poker Plat Res	5.47	23	P	Pn	13 06 22.9	-0.1
	baz=207						
SCRK	Sand Creek	5.50	42	Pn	Pn	13 06 22.9	-0.6
SCRK	Sand Creek	5.50	42	P	Pn	13 06 23.5	-0.1
	baz=230						
H21K	Melozitna Rive	5.52	358		Pn	13 06 22.8	-0.9
H21K	Melozitna Rive	5.52	358	P	Pn	13 06 22.8	-0.9
	baz=178						
M27K	Edge Creek, AK	5.53	62	Pn	Pn	13 06 24.3	+0.2
M27K	Edge Creek, AK	5.53	62	P	Pn	13 06 24.1	+0.1
	baz=252						
H22K	Ishtalitna Cre	5.77	4	P	Pn	13 06 26.9	-0.3
	baz=185						
SAMH	Samovar Hills	5.80	85		Pn	13 06 28.5	+0.8
L27K	Beaver Creek,	5.82	55	Pn	Pn	13 06 28.2	+0.4
H23K	Yukon River	5.83	12		Pn	13 06 27.9	0.0
H23K	Yukon River	5.83	12	P	Pn	13 06 27.9	0.0
	baz=194						
BCAR	Beaver Creek A	5.84	56	Pn	Pn	13 06 28.2	+0.1
IMAR	Indian Mountai	5.87	355	Pn	Pn	13 06 28.0	-0.6

J26L	Joseph Creek	5.98	40		Pn	13 06 29.9	-0.2
YUK3	Moose Creek	6.03	69	P	Pn	13 06 30.7	-0.2
	baz=260						
H24K	Noodor Dome	6.05	18		Pn	13 06 30.8	-0.2
H24K	Noodor Dome	6.05	18	P	Pn	13 06 30.5	-0.5
	baz=202						
PCA	Pinnacle	6.07	85		Pn	13 06 31.8	+0.5
O28M	Mount Upton	6.07	79	P	Pn	13 06 32.3	+0.9
	baz=270						
PINM	Pinnacle	6.07	85	P	Pn	13 06 31.7	+0.5
	baz=276						
K27K	Chicken	6.20	47	Pn	Pn	13 06 33.4	+0.5
PRP	Porcupine Dome	6.22	27	Pn	Pn	13 06 33.1	-0.3
PRP	Porcupine Dome	6.22	27	P	Pn	13 06 33.0	-0.3
	baz=214						
G21K	Allakaket	6.40	356	P	Pn	13 06 35.1	-0.5
	baz=175						
PNL	Peninsula	6.55	89		Pn	13 06 37.8	0.0
PNL	Peninsula	6.55	89	P	Pn	13 06 38.0	+0.2
	baz=280						
G23K	Bananza Creek	6.66	8	P	Pn	13 06 39.2	0.0
	baz=190						
I26K	Coal Creek Min	6.68	35		Pn	13 06 38.9	-0.4
I26K	Coal Creek Min	6.68	35	P	Pn	13 06 38.6	-0.8
	baz=224						
YUK4	Talbot Arm	6.84	74	P	Pn	13 06 42.2	+0.4
	baz=266						
G24K	Hadweenzic Riv	6.92	16	P	Pn	13 06 42.0	-0.6
	baz=201						
EGAK	Eagle	6.96	44		Pn	13 06 42.6	-0.6
EGAK	Eagle	6.96	44	P	Pn	13 06 42.6	-0.6
	baz=234						
YUK6	Outpost Mounta	6.96	77	P	Pn	13 06 43.5	0.0
	baz=270						
M29M	Somme Creek	7.08	65	P	Pn	13 06 45.0	0.0
	baz=258						
COLD	Coldfoot	7.16	7	Pn	Pn	13 06 45.8	-0.1
COLD	Coldfoot	7.16	7	P	Pn	13 06 45.9	0.0
	baz=189						
DAWY	Dawson	7.24	52	Pn	Pn	13 06 46.9	-0.2
I27K	Kandik River	7.34	37	P	Pn	13 06 47.7	-0.7
	baz=227						
HYT	Haines Junctio	7.38	78	Pn	Pn	13 06 49.4	+0.3
HYT	Haines Junctio	7.38	78	P	Pn	13 06 48.7	-0.4
	baz=272						
ANM	Nome	7.47	312	Pn	Pn	13 06 50.5	+0.4
N30M	Aishikik Lake	7.59	74	P	Pn	13 06 51.1	-0.8
	baz=267						
BMAR	Burnt Mountain	8.06	22	Pn	Pn	13 06 56.9	-1.2
PLBC	Pleasant Camp	8.11	88	P	Pn	13 06 58.9	+0.1
	baz=282						
E24K	Your Creek	8.12	10	P	Pn	13 06 58.5	-0.5
	baz=194						
G27K	Doyon Strip	8.21	31	P	Pn	13 06 59.3	-0.8
	baz=221						
F26K	Sheenjek River	8.38	22	P	Pn	13 07 01.0	-1.4
	baz=210						
TOLK	Toolik Lake Re	8.60	7	Pn	Pn	13 07 06.6	+1.2
TOLK	Toolik Lake Re	8.60	7	P	Pn	13 07 04.8	-0.6
	baz=190						
S31K	Pelican	8.61	98	P	Pn	13 07 05.5	-0.1
	baz=292						
D23K	Nanushuk River	8.87	4	P	Pn	13 07 08.7	-0.3
	baz=186						
TNA	Tin City	8.91	314	Pn	Pn	13 07 11.7	+2.1
M31M	Drury Creek, Y	8.93	69	Pn	Pn	13 07 09.5	-0.4
EPYK	Eagle Plains	9.39	42	Pn	Pn	13 07 17.1	+0.9
FARO	Faro, Yukon	9.42	69	Pn	Pn	13 07 15.3	-1.2
JIS	Juneau Island	9.42	94	Pn	Pn	13 07 18.3	+1.7
SIT	Sitka	9.43	102	Pn	Pn	13 07 16.8	+0.2
CRAG	Craig	11.28	106	Pn	Pn	13 07 42.6	+1.0
A21K	Barrow	11.34	353	Pn	Pn	13 07 39.9	-2.3
INK	Inuvik	11.52	37	P	Pn	13 07 44.0	-0.7
	comp=E,1.1nm,0.7s,baz=239,slow=15,SNR=4.1						
INK				S	Sn	13 09 50.8	-0.4
	comp=E,0.8nm,0.6s,baz=100,slow=5.3,SNR=2.6						
DLBC	Dease Lake	11.55	89	P	Pn	13 07 47.0	+1.7
	comp=E,1.7nm,0.4s,baz=287,slow=6.5,SNR=19						
DLBC				S	Sn	13 09 51.6	-0.5
	comp=E,1.2nm,0.8s,baz=328,slow=8.1,SNR=1.5						
H02S1	DAWSON INLET T	12.94	114	P	Pn	13 08 04.8	+1.4
	SNR=22						
KIWB	Kanaga Island	16.07	250	Pn	Pn	13 08 40.4	-2.8
YKA	Yellowknife Ar	18.11	66	P	P	13 09 07.7	+1.0
	comp=E,0.2nm,0.6s,baz=276,slow=9.6,SNR=7.9						
PETK	Petropavlovsk-	27.74	278	P	P	13 10 40.1	-1.5
	comp=E,2.6nm,1.0s,baz=68,slow=19,SNR=1.3						
	comp=E,2.6nm,1.0s						
KSRS	Korea Array	53.44	283	P	P	13 14 13.5	+1.6
	comp=E,0.6nm,0.5s,baz=34,slow=7.5,SNR=2.5						
	comp=E,0.6nm,0.5s						
SONM	Songino Array	54.94	306	P	P	13 14 24.3	+1.4
	comp=E,1.1nm,0.5s,baz=36,slow=5.7,SNR=11						
	comp=E,1.1nm,0.5s						
ZALV	Zalesovo Beam	57.42	324	P	P	13 14 40.4	+0.1
	comp=E,0.3nm,0.3s,baz=23,slow=7.8,SNR=2.1						
	comp=E,0.3nm,0.3s						
MKAR	Makanchi Array	64.49	322	P	P	13 15 28.3	+0.1
	comp=E,0.1nm,0.5s,baz=33,slow=7.1,SNR=2.5						
	comp=E,0.1nm,0.5s						

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*IDC **04** 13:08:16.8±0.9, 9°.24S×159°.13E, h0^{km}, mb3.6/7, mbtmp3.7/8, ML3.4/1, MS3.3/2, Error ellipse: s-maj=27.9km s-min=15.3km az=5.0*

ISC 04 13:08:22.0±0.8, **9°.3S**±0°.2×**159°.12E**±0°.09, **h35**^{km}, **n11**, σ**0ˢ.67**/10, **mb3.5**/7, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	0.82	97	Pn	Pn	13 08 36.4	-0.6
	3μm,0.3s,baz=193,slow=16,SNR=105						
HNR				Sn	Sn	13 08 48.4	+0.5
	9μm,0.3s,baz=253,slow=18,SNR=15						
PMG	Port Moresby	11.81	269	LR	LR	13 15 23.4	
	comp=Z,105nm,19.8s,baz=70,slow=36						
CTA	Charters Tower	16.40	228	Pn	P	13 12 11.6	-0.5
	0.1nm,0.3s,baz=47,slow=19,SNR=1.6						
	4.1nm,1.1s						
WRA	Warramunga Arr	26.16	243	P	P	13 13 53.5	+0.2
	0.6nm,0.5s,baz=71,slow=9.7,SNR=6.2						
	0.6nm,0.5s						
ASAR	Alice Springs	28.00	236	P	P	13 14 09.5	-0.3
	0.2nm,0.4s,baz=66,slow=11,SNR=2.4						
	0.2nm,0.4s						
SONM	Songino Array	73.52	326	P	P	13 19 52.1	+0.8
	0.4nm,0.7s,baz=134,slow=4.2,SNR=2.7						
	0.4nm,0.7s						
QSPA	South Pole Qui	80.66	180	P	P	13 20 32.0	+0.8
	1.1nm,0.9s,baz=333,slow=2.3,SNR=2.1						
	1.1nm,0.9s						
ILAR	Eielson Array	84.08	20	P	P	13 20 47.9	-0.9
	0.2nm,0.5s,baz=242,slow=5.0,SNR=5.6						
	0.2nm,0.5s						
MKAR	Makanchi Array	87.86	318	P	P	13 21 07.7	-0.2
	0.2nm,0.5s,baz=93,slow=6.2,SNR=2.3						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	88.40	325	LR	LR	14 01 58.7	
	comp=Z,16nm,18.7s,baz=42,slow=36						
YKA	Yellowknife Ar	96.48	28	P	P	13 21 47.8	+0.4
	0.3nm,0.9s,baz=268,slow=6.1,SNR=2.6						
	0.3nm,0.9s						

IDC 04 13:10:44.5±56.0, **15°.82S**×**173°.63W**, **h0**^{km}, **mb4.1**/3, **mbtmp4.1**/3, **Error ellipse: s-maj=1068.0km s-min=191.6km az=79.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	43.64	240	P	P	13 18 51.4	+0.4
	1.6nm,0.8s,baz=103,slow=14,SNR=2.1						
	1.6nm,0.8s						
WRA	Warramunga Arr	49.53	257	P	P	13 19 37.1	-0.4
	0.5nm,0.6s,baz=95,slow=7.3,SNR=12						
	0.5nm,0.6s						
ASAR	Alice Springs	49.77	252	P	P	13 19 39.2	-0.1
	3.3nm,0.4s,baz=90,slow=7.6,SNR=76						
	3.3nm,0.4s						

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*ISK **04** 13:13:31.7, 39°.36N×25°.99E, h8^{km}, ML2.5/7*
*ATH **04** 13:13:32.4, 39°.34N×25°.98E, h13^{km}±1^{km}, ML2.3/7, Error ellipse: s-maj=1.7km s-min=0.8km az=196.0*
*DDA **04** 13:13:32.3±0.0, 39°.36N×26°.02E, h12^{km}±1^{km}, ML2.4*
*THE **04** 13:13:32.2, 39°.37N×25°.98E, h2^{km}±2^{km}, ML2.3/5, Error ellipse: s-maj=2.1km s-min=0.5km az=185.0*

ISC 04 13:13:32.0±0.8, **39°.36N**±0°.02×**25°.98E**±0°.02, **h13**^{km}±5^{km}, **n43**, σ**0ˢ.41**/78, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GPNR	Gulpinar-Canak	0.16	50	Pg	Pg	13 13 35.3	-0.5
GPNR				Sg	Sg	13 13 38.2	-0.2
SIGR	SIGRI	0.17	214	P	Pg	13 13 36.0	0.0
SIGR				S	Sg	13 13 39.0	+0.2
	1μm,0.3s						
SIGR	SIGRI	0.17	214	Pg	Pg	13 13 36.0	0.0
SIGR				Sg	Sg	13 13 38.9	+0.2
SIGR	SIGRI	0.17	214	P	Pg	13 13 36.0	0.0
SIGR				S	Sg	13 13 38.7	0.0
SIGR				AML	AML	13 13 39.3	
	comp=E,2483μm,0.3s						
SIGR				AML	AML	13 13 39.8	
	comp=N,2695μm,0.3s						
KOCA	Canakkale, Ayv	0.19	40	P	Pg	13 13 36.4	0.0
KOCA				S	Sg	13 13 39.3	0.0
PRK	Paraskevi	0.25	115	P	Pg	13 13 37.4	+0.1
PRK				S	Sg	13 13 41.1	+0.2
	comp=N,2μm,0.3s						
PRK	Paraskevi	0.25	115	P	Pg	13 13 37.4	+0.1
PRK				S	Sg	13 13 41.2	+0.2
PRK				AML	AML	13 13 41.5	
	comp=N,4558μm,0.3s						
PRK				AML	AML	13 13 43.0	
	comp=E,2967μm,0.4s						
BOZC	Bozcaada	0.49	7	Pg	Pg	13 13 41.7	0.0
BOZC				Sg	Sg	13 13 48.8	+0.6
BOZC	Bozcaada	0.49	7	P	Pg	13 13 41.7	0.0
BOZC				P	Pg	13 13 41.7	0.0
BOZC				S	Sg	13 13 48.6	+0.3
BOZC				S	Sb	13 13 49.0	-0.6
EZN	Ezine	0.54	30	P	Pg	13 13 42.4	-0.2
EZN				S	Sb	13 13 50.4	-0.6
EZN	Ezine	0.54	30	Pg	Pg	13 13 42.4	-0.2
EZN				Sg	Sb	13 13 50.5	-0.6
AYVA	Ayvalik	0.55	95	P	Pg	13 13 42.7	-0.2
BAYC	CANAKKALE_Bayr	0.58	49	P	Pg	13 13 42.9	-0.6
BAYC				S	Sg	13 13 51.0	-0.3
ECEA	Canakkale, Ece	0.70	12	P	Pg	13 13 46.0	+0.3
ECEA				S	Sb	13 13 55.9	+0.1
ECEA				*i* AML	AML	13 13 57.0	
	comp=E,173nm,0.4s						
ECEA				*i* AML	AML	13 13 57.0	
	comp=E,139nm,0.6s						
KARB	zmir-Karabur	0.77	154	P	Pg	13 13 47.1	+0.3
KARB				S	Sg	13 13 56.8	-0.1
KARB				*i* AML	AML	13 14 00.0	
	comp=E,166nm,0.3s						
KARB				*i* AML	AML	13 14 00.0	
	comp=E,177nm,0.3s						
DKL	Dikili	0.77	111	Pg	Pg	13 13 47.1	+0.1
DKL				Sg	Sb	13 13 57.9	+0.2
LIA	Limnos Island	0.82	312	P	Pg	13 13 48.0	+0.2
LIA				S	Sb	13 13 59.3	+0.3
	comp=E,452nm,0.2s						
LIA	Limnos Island	0.82	312	P	Pg	13 13 48.1	+0.2
LIA				S	Sb	13 13 59.7	+0.7
LIA				AML	AML	13 14 00.3	
	comp=E,1041μm,0.2s						
LIA				AML	AML	13 14 02.4	
	comp=N,787μm,0.3s						
COMU	Canakkale	0.84	27	Pg	Pg	13 13 48.0	-0.2
COMU				Sg	Sb	13 14 00.4	+0.9
GOKA	anakkale-Gk	0.84	356	P	Pg	13 13 48.1	-0.1
GOKA				S	Sb	13 13 59.7	+0.2
GOKA				*i* AML	AML	13 14 02.0	
	comp=N,211nm,0.3s						
BUHA	Balikesir, Bur	0.86	80	P	Pn	13 13 49.9	+0.1
BUHA				S	Sg	13 13 59.5	-0.5
BUHA				*i* AML	AML	13 14 03.0	
	comp=N,214nm,0.4s						
BUHA				*i* AML	AML	13 14 04.0	
	comp=N,143nm,0.4s						
PSRA	Psara	0.87	202	P	Pg	13 13 49.2	+0.4
PSRA				AML	AML	13 14 04.8	
	comp=N,742μm,0.2s						
PSRA				AML	AML	13 14 06.0	
	comp=E,939μm,0.2s						
ZEDA	zmir-Bergama	0.94	114	P	Pg	13 13 50.0	-0.1
ZEDA				S	Sn	13 14 03.9	-0.2
ZEDA				*i* AML	AML	13 14 05.0	
	comp=E,80nm,0.5s						
ZEDA				*i* AML	AML	13 14 05.0	
	comp=E,93nm,0.3s						
CHOS	Chios island	0.97	176	P	Pg	13 13 50.3	-0.4
CHOS				S	Sn	13 14 05.0	+0.1
CHOS	Chios island	0.97	176	Pg	Pg	13 13 50.6	-0.1
CHOS	Chios island	0.97	176	P	Pg	13 13 50.2	-0.4
CHOS				S	Sg	13 14 03.5	+0.2
CANM	Can-anakkale	1.06	51	Pg	Pb	13 13 52.1	0.0
URLA	Izmir	1.10	154	Pn	Pb	13 13 52.5	-0.4
URLA	Izmir	1.10	154	P	Pb	13 13 52.6	-0.4
URLA				S	Sb	13 14 07.4	+0.2
URLA				*i* AML	AML	13 14 10.0	
	comp=E,89nm,0.3s						
URLA				*i* AML	AML	13 14 10.0	
	comp=E,134nm,0.3s						
SMTH	Samothraki Isl	1.17	343	P	Pb	13 13 54.2	+0.2
SMTH				S	Sg	13 14 09.7	0.0
	comp=E,102nm,0.2s						
SMTH	Samothraki Isl	1.17	343	P	Pb	13 13 53.9	-0.1
SMTH				S	Sb	13 14 09.1	0.0
SMTH				AML	AML	13 14 10.5	
	comp=N,219μm,0.3s						
SMTH				AML	AML	13 14 11.2	
	comp=E,214μm,0.2s						
BLCB	Balcova	1.27	139	Pn	Pb	13 13 56.1	+0.3
BALY	Balya	1.33	73	P	Pb	13 13 57.2	+0.5
BALY				S	Sg	13 14 15.4	+0.6
BALY				*i* AML	AML	13 14 16.0	
	comp=E,106nm,0.5s						
STEP	BALIKESIR_Sava	1.35	89	P	Pg	13 13 58.4	+0.5
STEP				S	Sg	13 14 15.7	+0.2
STEP				*i* AML	AML	13 14 19.0	
	comp=E,62nm,0.5s						
STEP				*i* AML	AML	13 14 20.0	
	comp=E,73nm,0.5s						
KNL	Balıkesir	1.50	52	P	Pn	13 13 59.2	+0.6
KNL				*i* AML	AML	13 14 18.0	
	comp=E,58nm,1.2s						
KNL				S	Sn	13 14 18.2	+0.1
KNL				*i* AML	AML	13 14 23.0	
	comp=E,46nm,0.4s						
ALN	Alexandroupoli	1.54	2	P	Pn	13 13 59.7	+0.6
ALN				S	Sb	13 14 20.4	+0.6
	comp=E,42nm,0.3s						
ALN	Alexandroupoli	1.54	2	P	Pn	13 13 59.1	-0.1
ALN				S	Sn	13 14 18.2	-0.8
ALN				AML	AML	13 14 22.3	
	comp=N,79μm,0.4s						
ALN				AML	AML	13 14 22.5	
	comp=E,94μm,0.3s						
THAS	Thassos island	1.58	323	P	Pn	13 13 59.9	+0.2
THAS				S	Sn	13 14 19.4	-0.5
THAS				AML	AML	13 14 24.0	
	comp=E,68μm,0.3s						
THAS				AML	AML	13 14 24.8	
	comp=N,70μm,0.3s						
KYMI	Kymi, Euboea I	1.63	244	P	Pn	13 14 00.0	-0.3
RDO	Rodhopi	1.82	349	P	Pn	13 14 02.3	-0.7
EREA	Eretria	1.85	240	P	Pn	13 14 02.9	-0.5
DURS	Dursunbey	1.95	82	P	Pn	13 14 05.6	+0.8
DURS				S	Sn	13 14 27.6	-1.6
DURS				*i* AML	AML	13 14 36.0	
	comp=N,23nm,0.5s						
DURS				*i* AML	AML	13 14 38.0	
	comp=N,24nm,0.3s						
KAVA	Kavala	1.99	326	P	Pn	13 14 05.7	+0.5

JMA 04 13:14:32.5±0.3, **24°.1N**±0°.8×**123°.8E**±0°.7, **h25**^{km}±1^{km}, **MV0.7**/6, **NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.06	117	P	Pb	13 14 36.8	-0.1
HATJ				*e*S	Sb	13 14 39.6	-0.3
IRIF	Iriomote-Funau	0.25	356	P	Pb	13 14 38.8	-0.1
JKRS	Kuro-shima	0.28	57	P	Pb	13 14 39.4	+0.1
JKRS				*e*S	Sb	13 14 44.0	0.0
JIJ	Ishigaki jima	0.46	52	P	Pb	13 14 41.7	-0.3
JIJ				*e*S	Sb	13 14 48.2	-0.3
JISG	Ishigakijimahi	0.72	45	*e*P	Pb	13 14 46.2	-0.2
JISG				*e*S	Sb	13 14 55.6	-0.3

TAP 04 13:14:55.5, 24°.16N×121°.64E, h3^{km}, ML0.8, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	Fush Village	0.02	270	*i* P	Pg	13 14 56.0	-0.1
	baz=266						
ETL				*e*S	Sg	13 14 56.5	-0.1
	baz=266						
NACB	Ninganchiao	0.05	289	P	Pg	13 14 56.5	0.0
	baz=288						
NACB				*e*S	Sg	13 14 57.1	0.0
	baz=288						
TWD	Chiawan	0.09	208	*e*P	Pg	13 14 57.2	0.0
	baz=203						
TWD				*e*S	Sg	13 14 58.3	-0.1
	baz=203						

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*CNRM **04** 13:18:27.3, 36°.69N×6°.89W, h25^{km}, ml2.0*
*MDD **04** 13:18:29.9±0.6, 36°.79N×6°.96W, h38^{km}±7^{km}, mb_Lg2.8/11, Error ellipse: s-maj=5.8km s-min=3.0km az=7.0*
*SFS **04** 13:18:29.9, 36°.90N×6°.93W, h39^{km}, ML2.7/13, MLv2.7/13*
*IGIL **04** 13:18:30.5, 36°.80N×6°.97W, h30^{km}, ML2.2*
*INMG **04** 13:18:30.6±1.6, 36°.80N×6°.95W, h45^{km}±10^{km}, ML2.3, Error ellipse: s-maj=4.1km s-min=3.1km az=8.0*

ISC 04 13:18:28.8±1.2, **36°.82N**±0°.03×**6°.92W**±0°.03, **h55**^{km}±10^{km}, **n60**, σ**1ˢ.34**/111, **5C-4D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARNO	Arenosillo	0.32	28	P	Pn	13 18 38.8	+0.2
ARNO				S	Sn	13 18 45.7	0.0
EGRO	El Granado	0.84	328	S	Sn	13 18 56.1	-0.2
EGRO				P	Pn	13 18 45.3	+0.6
EGRO	El Granado	0.84	328	⇑P	Pn	13 18 45.2	+0.6
EGRO				S	Sn	13 18 55.1	-1.2
EGRO				*i* Vmb_Lg		13 18 56.8	
PVAQ	Vaqueiros	0.86	313	P	Pn	13 18 45.4	+0.4
PVAQ				S	Sn	13 18 57.8	+1.0
PVAQ	Vaqueiros	0.86	313	⇑*e*P	Pn	13 18 45.3	+0.4
PVAQ				*e*S	Sn	13 18 56.4	-0.4
PVAQ				A	A	13 18 57.0	
	124nm,0.3s						
PBDV	Barranco-do-Ve	0.91	298	⇑*e*P	Pn	13 18 37.1	-8.5
PBDV				*e*S	Sn	13 18 48.7	-9.2
PBDV				A	A	13 18 50.0	
	20nm,0.2s						
EMIN	Mina Concepcio	0.97	12	P	Pn	13 18 46.9	+0.6
EMIN				S	Sn	13 18 59.2	0.0
EMIN				*i* Vmb_Lg		13 19 00.5	
PCVE	Castro Verde	1.21	313	S	Sn	13 19 04.0	-0.9
PCVE				P	Pn	13 18 50.0	+0.5
PCVE	Castro Verde	1.21	313	⇑*e*P	Pn	13 18 50.0	+0.5
PCVE				*e*S	Sn	13 19 04.3	-0.6
PCVE				A	A	13 19 04.9	
	18nm,0.1s						
PBAR	Barrancos	1.36	356	S	Sn	13 19 07.9	-0.6
PBAR				P	Pn	13 18 52.5	+1.0
PBAR	Barrancos	1.36	356	⇓*e*P	Pn	13 18 52.5	+1.0
PBAR				*e*S	Sn	13 19 08.7	+0.2
PBAR				A	A	13 19 09.4	
	12nm,0.1s						
PBEJ	Beja	1.42	328	*e*S	Sn	13 19 10.1	0.0
PBEJ				A	A	13 19 15.3	
	5.7nm,0.1s						
MESJ	Messejana	1.45	315	⇑*e*P	Pn	13 18 53.4	+0.6
MESJ				*e*S	Sn	13 19 10.4	-0.4
MESJ				A	A	13 19 11.1	
	23nm,0.1s						
MESJ	Messejana	1.45	315	*e*P	Pn	13 18 53.4	+0.6
MESJ				*e*S	Sn	13 19 09.7	-1.1
MESJ				IAML		13 19 11.3	
	comp=N,40nm,0.1s						
MORF	Marmelete	1.47	290	*e*P	Pn	13 18 53.1	0.0
MORF				*e*S	Sn	13 19 10.2	-1.0
MORF				A	A	13 19 13.7	
	comp=N,12nm,0.1s						
MORF	Marmelete	1.47	290	*e*P	Pn	13 18 53.0	0.0
MORF				*e*S	Sn	13 19 09.8	-1.4
MORF				IAML		13 19 11.9	
	comp=E,22nm,0.3s						
PFVI	Vila Bisbo	1.56	282	P	Pn	13 18 54.3	+0.1
PFVI				S	Sn	13 19 14.8	+1.5
PFVI	Vila Bisbo	1.56	282	S	Sn	13 19 13.4	+0.1
PFVI				P	Pn	13 18 54.3	+0.1
PFVI	Vila Bisbo	1.56	282	⇓*e*P	Pn	13 18 54.3	+0.1
PFVI				*e*S	Sn	13 19 12.3	-1.0
PFVI				A	A	13 19 14.0	
	comp=E,15nm,0.8s						
PTEO	Sao Teotonio	1.61	297	*e*P	Pn	13 18 55.6	+0.7
PTEO				*e*S	Sn	13 19 14.5	-0.1
PTEO				A	A	13 19 19.1	
	comp=E,13nm,0.6s						
ECAB	El Cabril	1.73	43	P	Pn	13 18 57.1	+0.5
ECAB				S	Sn	13 19 16.5	-1.2
ECAB				*i* Vmb_Lg		13 19 18.4	
EMIJ	Mijas	1.75	98	P	Pn	13 18 57.8	+1.1
EMIJ				S	Sn	13 19 19.8	+1.9
PNCL	Nicolau / Gran	1.82	316	P	Pn	13 18 58.4	+0.6
PNCL				S	Sn	13 19 18.8	-0.9
PNCL	Nicolau / Gran	1.82	316	*e*P	Pn	13 18 58.5	+0.8
PNCL				*e*S	Sn	13 19 18.5	-1.2
PNCL				A	A	13 19 20.4	
	comp=E,22nm,0.1s						
EVO	Evora	1.92	334	*e*P	Pn	13 19 00.0	+0.9
EVO				*e*S	Sn	13 19 21.8	-0.3
EVO				A	A	13 19 23.4	
	comp=E,38nm,0.1s						
EBAD	Badajoz	1.94	358	P	Pn	13 19 00.3	+0.9
EBAD				S	Sn	13 19 22.0	-0.5
EBAD	Badajoz	1.94	358	⇓P	Pn	13 19 00.3	+0.9
EBAD				S	Sn	13 19 22.1	-0.5
EMAL	Malaga-Limoner	2.00	91	P	Pn	13 19 01.2	+0.9
EMAL				S	Sn	13 19 25.9	+1.8
PESTR	Estremoz	2.11	346	P	Pn	13 19 03.9	+2.0
PESTR				S	Sn	13 19 30.7	+3.8
PESTR	Estremoz	2.11	346	P	Pn	13 19 02.6	+0.8
PESTR				S	Sn	13 19 26.3	-0.6
PESTR	Estremoz	2.11	346	*e*P	Pn	13 19 02.6	+0.8
PESTR				*e*S	Sn	13 19 26.4	-0.6
PESTR				A	A	13 19 41.3	
	comp=E,5.5nm,0.3s						
EADA	Adamuz	2.30	53	P	Pn	13 19 05.4	+1.0
EADA				S	Sn	13 19 30.1	-1.4
EADA	Adamuz	2.30	53	P	Pn	13 19 05.1	+0.8
EADA				S	Sn	13 19 30.2	-1.3
EADA				*i* Vmb_Lg		13 19 32.5	
PMTG	Montargil	2.47	336	*e*P	Pn	13 19 07.6	+0.9
PMTG				*e*S	Sn	13 19 35.9	+0.2
PMTG				A	A	13 19 38.5	
	comp=E,7.5nm,0.1s						
PMRV	Marv??o	2.63	352	⇓*e*P	Pn	13 19 10.0	+1.1
PMRV				*e*S	Sn	13 19 38.5	-1.2
PMRV				A	A	13 19 40.8	
	comp=E,7.3nm,0.2s						
ELGU	Los Guajares,	2.64	88	P	Pn	13 19 10.3	+1.2
ELGU	Los Guajares,	2.64	88	P	Pn	13 19 10.1	+1.0
ELGU				S	Sn	13 19 39.4	-0.6
ELGU				*i* Vmb_Lg		13 19 43.2	
PMAFR	Mafra	2.84	320	*e*P	Pn	13 19 13.1	+1.4
PMAFR				*e*S	Sn	13 19 44.3	-0.3
PCBR	Castelo Branco	3.05	352	*e*P	Pn	13 19 15.8	+1.2
PCBR				*e*S	Sn	13 19 48.5	-1.3
PCBR				A	A	13 19 51.1	
	comp=E,7.0nm,0.2s						
PSBE	So Bento	3.07	332	*e*P	Pn	13 19 16.7	+1.8
PSBE				*e*S	Sn	13 19 49.1	-1.3
EQES	Quesada	3.22	71	P	Pn	13 19 17.7	+0.7
EQES				S	Sn	13 19 52.6	-1.7
EQES				*i* Vmb_Lg		13 19 56.1	
EPLA	Plasencia	3.31	11	P	Pn	13 19 19.3	+1.1
EPLA				S	Sn	13 19 54.6	-1.7
EPLA				*i* Vmb_Lg		13 19 57.4	
ZHG	ZHG	3.37	176	P	Pn	13 19 17.8	-1.3

ZHG				S	Sn	13 19 58.8	+0.9
PAB	San Pablo	3.40	36	P	Pn	13 19 20.5	+1.1
PAB				S	Sn	13 19 55.9	-2.5
PAB				*i* Vmb_Lg		13 19 57.5	
PCAS	Casmilo, Conde	3.46	340	*e*S	Sn	13 20 00.2	+0.3
PCAS				A	A	13 20 00.9	
	comp=E,4.1nm,0.7s						
PVIS	Viseu	3.97	349	*e*S	Sn	13 20 11.8	-0.6
MD31	MD31	4.32	155	P	Pn	13 19 29.7	-2.4
MD31				S	Sn	13 20 18.7	-2.6
MVO	Moncorvo	4.34	359	*e*P	Pn	13 19 33.9	+1.6
MVO				*e*S	Sn	13 20 19.9	-1.8
MVO				A	A	13 20 22.3	
	comp=E,5.4nm,0.2s						
GUD	Guadarrama	4.39	29	P	Pn	13 19 34.5	+1.4
GUD				S	Sn	13 20 20.2	-2.7
GUD				*i* Vmb_Lg		13 20 23.5	
MDT	Midelt	4.42	154	P	Pn	13 19 31.3	-2.2
MDT				S	Sn	13 20 20.4	-3.4
PVRL	Vila Real	4.50	352	*e*S	Sn	13 20 23.3	-2.1
POLO	Lamas de Olo	4.60	352	*e*P	Pn	13 19 36.8	+0.9
POLO				*e*S	Sn	13 20 25.7	-2.4
POLO				A	A	13 20 28.0	
	comp=E,2.0nm,0.4s						
PBRG	Braganca	4.98	2	*e*P	Pn	13 19 42.1	+1.0
ECAL	Calabor	5.12	2	P	Pn	13 19 44.5	+1.5
ECAL				S	Sn	13 20 39.0	-1.8
ECAL				*i* Vmb_Lg		13 20 43.5	
ELOB	Lobios	5.12	350	P	Pn	13 19 44.0	+1.0
ELOB				S	Sn	13 20 38.1	-2.8
ELOB				*i* Vmb_Lg		13 20 41.8	
PGAV	Gavieira, Arco	5.25	349	*e*P	Pn	13 19 45.8	+1.0
PGAV				*e*S	Sn	13 20 41.7	-2.2
ETOR	Torete	5.51	42	P	Pn	13 19 49.9	+1.5
ETOR				S	Sn	13 20 47.8	-2.7
OUK	Oukaimeden	5.65	188	P	Pn	13 19 50.3	-0.3
OUK				S	Sn	13 20 51.7	-2.6
OUZM	OUZ	5.89	179	P	Pn	13 19 54.9	+1.2
OUZM				S	Sn	13 21 01.2	+1.2
EALK	Alkurruntz	7.62	31	P	Pn	13 20 19.1	+1.8

IDC 04 13:19:06.7±3.4**, 4°.28S**×**134°.95E, h0^{km}, mb3.2**/1**, mbtmp3.3**/3**, ML3.3**/2**, Error ellipse: s-maj=151.6km s-min=33.1km az=79.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.58	182	Pn	Pn	13 22 45.7	-2.1
	0.1nm,0.3s,baz=1.1,slow=13,SNR=5.4						
WRA				Sn	Sn	13 25 34.5	-6.9
	baz=4.0,slow=23,SNR=2.5						
	0.2nm,0.4s						
ASAR	Alice Springs	19.30	183	P	Pn	13 23 34.3	-0.1
	0.2nm,0.3s,baz=8.8,slow=11,SNR=23						
	1.3nm,0.6s						
MKAR	Makanchi Array	68.79	324	P	P	13 30 12.7	0.0
	0.1nm,0.5s,baz=115,slow=6.5,SNR=2.2						
	0.1nm,0.5s						

*TRN **04** 13:19:43.3, 10°.33N×62°.39W, h2^{km}, MD3.7*
*FUNV **04** 13:19:46.5, 10°.36N×62°.25W, h13^{km}, MW3.8*
ISC 04 13:19:44.5±1.6**, 10°.29N**±0°.07×**62°.32W**±0°.04**, h10^{km}**±14^{km}**, n19, σ1^{s}.31**/28**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPP	Pointe-a-Pierr	0.86	88	*e*P	Pg	13 20 00.9	-0.1
TRN	Trinidad (W)	0.97	68	*e*P	Pg	13 20 02.3	-0.9
TRN				*e*S	Sb	13 20 17.1	+0.7
CRUV	Carupano	0.98	293	*e*P	Pb	13 20 03.4	-0.2
CRUV				*e*S	Sb	13 20 16.8	+0.2
TBH	Brigand Hill	1.25	81	*e*P	Pg	13 20 09.3	+0.7
TPR	Prospect	1.76	59	*e*P	Pb	13 20 16.4	-0.6
GRGR	Grenville	1.95	20	*e*P	Pn	13 20 17.9	+0.1
GRGR				*e*S	Sn	13 20 42.9	+0.6
TOSP	Speyside	2.02	60	*e*P	Pb	13 20 20.2	-1.2
TOSP				*e*S	Sb	13 20 45.9	-0.8
GRHS	Sauteurs	2.04	19	*e*S	Sn	13 20 44.6	+0.1
GCMP	Grenada, Carri	2.35	22	*e*P	Pn	13 20 24.2	+0.9
GCMP				*e*S	Sn	13 20 52.3	0.0
PRGV	PARIAGUAN	2.75	237	*e*P	Pn	13 20 30.7	+1.9
PRGV				*e*S	Sn	13 21 03.0	+0.9
SVV	Soufriere Volc	3.20	20	*e*P	Pn	13 20 35.1	+0.1
BIRV	Birongo	3.89	273	*e*P	Pn	13 20 46.2	+1.8
BIRV				*e*S	Sn	13 21 29.2	-1.1
MERV	Las Mercedes	4.05	256	*e*P	Pn	13 20 48.2	+1.5
MERV				*e*S	Sn	13 21 32.9	-1.3
TACV	Tcata	4.63	269	*e*P	Pn	13 20 57.1	+2.3
BENV	Beln	5.21	267	*e*P	Pn	13 21 04.1	+1.4
BAUV	El Baul	5.80	257	*e*P	Pn	13 21 11.2	+0.5
BAUV				*e*S	Sn	13 22 13.6	-3.7
BAUV	El Baul	5.80	257	*e*P	Pn	13 21 11.3	+0.6
MAPV	Macapo	6.06	266	*e*P	Pn	13 21 14.6	+0.2
SOCV	Socops	8.65	257	*e*P	Pn	13 21 50.6	+0.6

WEL 04 13:28:18.3±0.6**, 42°S**±3°×**17°4E**±°**, h9^{km}**±3^{km}**, M3.1**/12**, ML3.3**/12**, MLv3.1**/12**, Error ellipse: s-maj=0.0km s-min=0.0km az=124.1, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.31	244	P	Pg	13 28 24.7	+0.3
KHZ				S	Sb	13 28 30.3	-0.9
BSWZ	Blackbirch Sta	0.57	357	P	Pg	13 28 29.2	0.0
BSWZ				S	Sb	13 28 39.4	+0.8
CMWZ	Cape Campbell	0.58	23	P	Pb	13 28 30.2	-0.3
TUWZ	Tuamarina	0.85	1	P	Pg	13 28 34.7	+0.1
THZ	Tophouse	0.92	304	P	Pg	13 28 35.2	-0.7
THZ				S	Sg	13 28 47.8	+0.1
GVZ	Greta Valley S	0.94	223	P	Pb	13 28 37.3	+0.5
GVZ				S	Sn	13 28 52.1	+0.7
TCW	Tory Channel	1.10	14	P	Pg	13 28 39.1	-0.3
NNZ	Nelson	1.14	339	P	Pg	13 28 39.1	-1.0
WEL	Wellington	1.18	33	P	Pb	13 28 40.4	-0.5
PLWZ	Palliser	1.23	55	P	Pb	13 28 40.4	-1.3
MRNZ	Matariki Terra	1.24	315	P	Pn	13 28 41.4	-0.4
MRNZ				S	Sn	13 28 59.1	+0.5
AMCZ	Amberley	1.29	226	P	Pn	13 28 42.2	-0.3
LTZ	Lake Taylor	1.31	247	P	Pn	13 28 42.4	-0.5
TKNZ	Takaka Hill	1.44	330	P	Pn	13 28 44.7	+0.1
CAW	Cannon Point	1.46	37	P	Pn	13 28 43.9	-0.9
DUWZ	D'Urville Isla	1.48	0	P	Pn	13 28 45.0	-0.2
TRWZ	Traveller	1.59	57	P	Pn	13 28 45.4	-1.3
KIW	Kapiti Island	1.60	28	P	Pn	13 28 46.3	-0.5
MTW	Mount Morrison	1.63	47	P	Pn	13 28 45.7	-1.5
DSZ	Denniston Nort	1.66	288	P	Pn	13 28 48.2	+0.5
MQZ	McQueen's Vall	1.70	213	P	Pn	13 28 46.4	-1.7
OXZ	Oxford	1.73	232	P	Pn	13 28 47.4	-1.2
OGWZ	Otaki Gorge	1.74	33	P	Pn	13 28 47.8	-0.9
AKCZ	Akaroa Harbour	1.75	205	P	Pn	13 28 48.5	-0.4
QRZ	Quartz Range	1.79	324	P	Pb	13 28 50.3	-0.9
HOWZ	Holdsworth Sta	1.83	41	P	Pn	13 28 48.5	-1.4
INZ	Inchbonnie	1.88	256	P	Pn	13 28 50.3	-0.4
TMWZ	Te Maipa	1.89	52	P	Pn	13 28 49.0	-1.8
RACZ	Rakaia	1.95	221	P	Pn	13 28 50.2	-1.3
MRZ	Mangatainoka R	2.05	38	P	Pn	13 28 51.6	-1.3
WACZ	Wakanui South	2.25	222	P	Pn	13 28 54.5	-1.2
BFZ	Birch Farm	2.37	48	P	Pn	13 28 55.3	-2.0
WVZ	Waitaha Valley	2.48	250	P	Pn	13 28 58.6	-0.2
RPZ	Rata Peaks	2.54	235	P	Pn	13 28 58.5	-1.2
ARCZ	Arundel	2.61	229	P	Pn	13 28 59.6	-1.0
DVHZ	Dannevirke	2.61	41	P	Pn	13 28 58.4	-2.2
WAZ	Wanganui	2.65	18	P	Pn	13 29 02.4	+1.2
TSZ	Takapari Road	2.71	35	P	Pn	13 29 00.3	-1.6
GCSZ	Gaunt Creek Bo	2.84	247	P	Pn	13 29 04.0	+0.2
PNHZ	Pukenui	2.93	37	P	Pn	13 29 03.1	-2.0
TMZ	Timaru	2.99	224	P	Pn	13 29 04.9	-0.9
MTVZ	Mangateitei	3.12	23	P	Pn	13 29 09.0	+1.2
WNVZ	Wahianoa	3.22	24	P	Pn	13 29 09.2	0.0
VRZ	Vera Road	3.22	12	P	Pn	13 29 10.2	+1.2
TRVZ	Turoa	3.23	23	P	Pn	13 29 09.9	+0.5
BHHZ	Black Hill Sta	3.23	31	P	Pn	13 29 08.3	-1.0
FOZ	Fox Glacier	3.26	246	P	Pn	13 29 09.7	+0.1
TUVZ	Tukino	3.29	24	P	Pn	13 29 10.0	-0.1
NGZ	Ngauruhoe	3.36	23	P	Pn	13 29 11.4	+0.3
NNVZ	North Ngauruho	3.40	23	P	Pn	13 29 12.2	+0.5
WTVZ	West Tongariro	3.41	22	P	Pn	13 29 12.5	+0.8
ETVZ	East Tongariro	3.43	24	P	Pn	13 29 11.9	0.0
TMVZ	Te Maari	3.44	24	P	Pn	13 29 11.9	-0.3
NTVZ	North Tongarir	3.45	23	P	Pn	13 29 12.3	0.0
ODZ	Otahua Downs	3.64	220	P	Pn	13 29 13.8	-1.0
BKZ	Black Stump Fm	3.68	33	P	Pn	13 29 13.2	-2.1
HIZ	Hauiti	3.83	11	P	Pn	13 29 18.6	+1.2
JCZ	Jackson Bay	4.16	243	P	Pn	13 29 21.7	-0.3

IDC 04 13:38:01.9±4.1**, 3°.92S**×**135°.80E, h0^{km}, mb3.1**/1**, mbtmp3.2**/3**, ML3.1**/2**, Error ellipse: s-maj=183.3km s-min=33.3km az=80.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.99	185	Pn	Pn	13 41 46.3	-2.2
	baz=4.3,slow=13,SNR=2.4						
WRA				Sn	Sn	13 44 36.8	-10
	baz=2.1,slow=23,SNR=1.2						
	0.2nm,0.5s						
ASAR	Alice Springs	19.72	185	P	Pn	13 42 34.1	-0.5
	0.2nm,0.3s,baz=8.1,slow=12,SNR=23						
	1.2nm,0.6s						
MKAR	Makanchi Array	69.00	324	P	P	13 49 09.3	0.0
	0.1nm,0.5s,baz=104,slow=6.1,SNR=1.8						
	0.1nm,0.5s						

IDC 04 13:41:48.2±3.8**, 4°.00S**×**135°.03E, h0^{km}, mb3.3**/1**, mbtmp3.6**/3**, ML3.5**/2**, MS3.0**/2**, Error ellipse: s-maj=179.3km s-min=33.0km az=79.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.86	182	Pn	Pn	13 45 31.0	-2.0
	0.1nm,0.3s,baz=1.1,slow=13,SNR=5.3						
WRA				Sn	Sn	13 48 19.9	-10
	0.1nm,0.3s,baz=8.9,slow=23,SNR=4.5						
	1.2nm,0.8s						
ASAR	Alice Springs	19.59	183	P	Pn	13 46 18.9	-0.4
	0.4nm,0.3s,baz=9.7,slow=12,SNR=47						
ASAR				S	Sn	13 49 51.4	-8.5
	0.4nm,0.7s,baz=14,slow=24,SNR=4.5						
ASAR				LR	LR	13 54 34.2	
	comp=Z,69nm,19.2s,baz=58,slow=39						
	2.8nm,0.6s						
GUMO	Guam	20.02	29	LR	LR	13 53 52.7	
	comp=Z,26nm,18.2s,baz=94,slow=36						
MKAR	Makanchi Array	68.61	324	P	P	13 52 53.2	0.0
	0.2nm,0.6s,baz=107,slow=7.7,SNR=2.5						
	0.2nm,0.6s						

*MOS **04** 14:06:19.6±2.4, 43°.25N×148°.22E, h46^{km}, mb4.0/1, Error ellipse: s-maj=32.6km s-min=16.5km az=37.6*
*JMA **04** 14:06:24.9±0.3, 43°N±1°×14°8E±°, h18^{km}, MV3.3/28, E OFF HOKKAIDO*
*SKHL **04** 14:06:25.1±0.2, 43°.50N×147°.70E, h61^{km}±5^{km}, mb4.4/4*
*IDC **04** 14:06:30.1±9.6, 43°.43N×147°.79E, h100^{km}±56^{km}, mb3.2/3, mbtmp3.5/4, Error ellipse: s-maj=150.9km s-min=62.8km az=178.0*
ISC 04 14:06:25.1±1.5**, 43°.56N**±0°.08×**147°.73E**±0°.09**, h45^{km}, n28, σ0^{s}.90**/38**, mb3.4**/3**, 1C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.72	296	*i* P	Pn	14 06 38.0	-0.9
SHO				AMB	AMB	14 06 39.1	
	130nm,0.2s						
SHO				*i* S	Sn	14 06 47.8	-1.0
SHO				A	A	14 06 49.1	
	640nm,0.3s						
SHO				A	A	14 06 49.1	
	900nm,0.3s						
YUK	Yuzh-Kuril'sk	1.43	290	*d i*PN	Pn	14 06 48.1	-0.4
YUK				pmax	pmax		
	comp=Z,127nm,0.2s						
YUK				pmax	pmax		
	comp=E,57nm,0.3s						
YUK	Yuzh-Kuril'sk	1.43	290	*e*P	Pn	14 06 48.1	-0.4
YUK				AMB	AMB	14 06 51.0	
	comp=E,130nm,0.2s						
YUK				*i* S	Sn	14 07 05.2	-0.9
YUK				A	A	14 07 07.5	
	comp=E,1µm,0.5s						
YUK				A	A	14 07 07.5	
	comp=E,830nm,0.5s						
NEM2	Nemuro 2	1.46	263	*e*P	Pn	14 06 48.3	-0.6
NEM2				*e*S	Sn	14 07 05.3	-1.5
NMR	Nemuro--Hokkai	1.47	263	⇑*i*PN	Pn	14 06 48.1	-0.9
NMR				*e*S	Sn	14 07 05.7	-1.3
NMR	Nemuro--Hokkai	1.47	263	*i* P	Pn	14 06 48.6	-0.5
NMR				AMB	AMB	14 06 49.3	
	comp=E,40nm,0.2s						
NMR				*e*S	Sn	14 07 05.8	-1.3
NMR				A	A	14 07 07.5	
	comp=E,80nm,0.2s						
NMR				A	A	14 07 07.5	
	comp=E,60nm,0.2s						
KUR	Kuril'sk	1.67	3	*e*PN	Pn	14 06 52.1	+0.2
KUR				*e*S	Sn	14 07 11.2	-0.8
KUR				pmax	pmax		
	comp=Z,24nm,0.4s						
KUR				smax	smax		
	comp=N,183nm,0.2s						
KUR				smax	smax		
	comp=E,79nm,0.3s						
KUR	Kuril'sk	1.67	3	*e*P	Pn	14 06 52.0	+0.2
KUR				AMB	AMB	14 06 54.2	
	comp=E,40nm,0.2s						
KUR				*e*S	Sn	14 07 11.3	-0.8
KUR				A	A	14 07 13.2	
	comp=E,180nm,0.4s						
KUR				A	A	14 07 13.2	
	comp=E,260nm,0.4s						
RUSJ	Misakicho	1.87	288	*e*PN	Pn	14 06 55.3	+0.7
RUSJ				*i* S	Sn	14 07 18.6	+1.6
JRA	Rausu	1.92	282	*e*P	Pn	14 06 55.7	+0.4
JRA				*e*S	Sn	14 07 18.3	+0.1
JNSB	Nemuroshibetsu	1.98	277	*e*P	Pn	14 06 56.6	+0.5
JNSB				*e*S	Sn	14 07 20.0	+0.2
AKK	Akkeshi	2.17	256	*e*P	Pn	14 06 59.0	+0.2
AKK				*e*S	Sn	14 07 23.3	-1.2
JNK	Nakash	2.18	272	*e*P	Pn	14 06 58.6	-0.3
JNK				*e*S	Sn	14 07 23.8	-1.0
JAK	Akkeshi	2.28	257	*e*P	Pn	14 07 00.2	-0.1
JAK				*e*S	Sn	14 07 26.0	-1.1
JTKR	Abashiri--Toko	2.79	280	*e*P	Pn	14 07 08.7	+1.4
JAR	Ashorobuto	2.89	266	*e*P	Pn	14 07 09.5	+0.9
JAR				*e*S	Sn	14 07 42.3	+0.1
JOB	Onbets	2.92	258	*e*S	Sn	14 07 42.3	-0.5
JCH	Churui	3.33	255	*e*P	Pn	14 07 14.9	+0.3
JEM	Erimo	3.70	247	*e*P	Pn	14 07 20.6	+0.9
ASAJ	Asahikawa	3.75	280	P	Pn	14 07 26.9	+6.5
	comp=E,8.4nm,0.9s,baz=335,slow=18,SNR=1.6						
ASAJ				S	Sn	14 08 11.4	+8.2
	comp=E,5.1nm,0.6s,baz=43,slow=30,SNR=1.4						
JFR	Furan	3.76	266	*e*P	Pn	14 07 22.7	+2.1
JNBK	Urakawa-nobuka	3.87	252	*e*P	Pn	14 07 23.0	+0.9
SONM	Songino Array	28.93	293	P	P	14 12 20.2	+0.3
	comp=E,0.3nm,0.5s,baz=95,slow=8.7,SNR=2.1						
	comp=E,0.3nm,0.5s						
H11S1	WAKE ISLAND Hy	29.66	141	T	T	14 44 08.5	
	baz=332,slow=76,SNR=10						
H11S3	WAKE ISLAND Hy	29.67	141	T	T	14 44 08.7	
	baz=332,slow=76,SNR=9.6						
H11S2	WAKE ISLAND Hy	29.68	141	T	T	14 44 09.8	
	baz=332,slow=76,SNR=11						
MKAR	Makanchi Array	45.04	298	P	P	14 14 36.5	+0.3
	comp=E,0.3nm,0.5s,baz=80,slow=7.5,SNR=6.4						
	comp=E,0.3nm,0.5s						
FINES	FINESS Array B	65.23	333	P	P	14 17 01.2	-0.2
	comp=E,1.0nm,0.8s,baz=38,slow=5.3,SNR=5.9						
	comp=E,1.0nm,0.8s						

*IDC **04** 14:12:12.2±1.5, 19°.85S×177°.88W, h593^{km}±17^{km}, mb3.1/9, mbtmp4.1/13, Error ellipse: s-maj=27.9km s-min=15.6km az=144.0*
ISC 04 14:12:12.5±0.8**, 19°.8S**±0°.2×**177°.8W**±0°.1**, h600^{km}, n16, σ1^{s}.38**/17**, mb3.7**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.47	297	P	P	14 13 41.1	-0.3
	18nm,0.6s,baz=155,slow=7.9,SNR=13						
AFI	Afiamalu	8.18	45	P	P	14 14 13.2	-0.5
	21nm,0.6s,baz=142,slow=17,SNR=1.9						
AFI				S	S	14 15 49.9	-3.0
	29nm,0.8s,baz=254,slow=23,SNR=2.1						
DZM	Mont Dzumac	14.94	258	P	P	14 15 20.8	+0.6
	14nm,1.2s,baz=105,slow=20,SNR=1.8						
URZ	Urewera	18.94	193	P	P	14 15 54.9	-1.6
	3.0nm,0.4s,baz=34,slow=3.6,SNR=5.7						
ASAR	Alice Springs	44.91	256	P	P	14 19 34.7	-0.7
	3.0nm,0.7s,baz=85,slow=8.2,SNR=23						
ASAR				PcP	PcP	14 21 03.8	+0.1
	0.6nm,0.7s,baz=90,slow=3.9,SNR=2.9						
	3.0nm,0.7s						
WRA	Warramunga Arr	44.93	261	P	P	14 19 34.1	-1.5
	1.1nm,0.3s,baz=97,slow=7.7,SNR=16						
	1.1nm,0.3s						
MJAR	Matsushiro Arr	69.78	323	P	P	14 22 23.3	-0.5
	1.2nm,0.5s,baz=151,slow=5.9,SNR=9.5						
	1.2nm,0.5s						
PETK	Petropavlovsk-	75.64	345	P	P	14 22 57.8	+0.9
	5.2nm,1.0s,baz=159,slow=6.2,SNR=2.5						
	5.2nm,1.0s						
NVAR	Mina Array Bea	80.35	43	P	P	14 23 24.9	+2.2
	0.3nm,0.8s,baz=218,slow=4.2,SNR=2.6						
	0.3nm,0.8s						
TXAR	Lajitas Array	86.48	57	P	P	14 23 55.5	+2.4
	0.2nm,0.6s,baz=201,slow=7.3,SNR=2.0						
	0.2nm,0.6s						
ILAR	Eielson Array	87.57	13	P	P	14 23 56.9	-0.3
	1.1nm,1.0s,baz=213,slow=5.4,SNR=12						
	1.1nm,1.0s						
PDAR	Pinedale Array	88.29	43	P	P	14 24 01.4	0.0
	0.4nm,0.8s,baz=220,slow=6.7,SNR=2.0						
	0.4nm,0.8s						
CMAR	Chiang Mai Arr	90.09	289	P	P	14 24 10.6	+0.5
	0.4nm,0.4s,baz=127,slow=2.4,SNR=4.4						
	0.4nm,0.4s						
AKASG	Malin Array Be	142.50	332	PKhKP	PKPpre	14 30 34.8	
	0.6nm,0.4s,baz=40,slow=3.8,SNR=6.7						
BRTR	Keskin Array B	146.53	313	PKPbc	PKPbc	14 30 47.8	-0.2
	0.7nm,0.6s,baz=49,slow=2.7,SNR=4.2						
GERES	GERESS Array B	149.58	345	PKPbc	PKiKP	14 30 55.9	-0.1
	1.0nm,0.8s,baz=0.0,slow=1.3,SNR=6.2						

*TAP **04** 14:35:57.8, 23°.06N×120°.55E, h22^{km}, ML3.8, B*
*JMA **04** 14:35:57.3±0.4, 23°N±1°×12°1E±°, h0^{km}, MV3.7/10, TAIWAN REGION*
ISC 04 14:35:58.8±0.8**, 23°.06N**±0°.01×**120°.54E**±0°.01**, h25^{km}**±3^{km}**, n136, σ0^{s}.96**/250**, 9C-44D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGST	Jiashian	0.05	62	⇑*e*P	Pb	14 36 01.1	-2.2
	baz=58						
SLGT	Liugui	0.12	122	⇓*i*P	Pb	14 36 03.2	-0.5
	baz=126						
SLGT				*i* S	Sb	14 36 06.6	-0.4
	baz=126						
CHN1	Nanshi	0.13	357	⇑*i*P	Pb	14 36 02.8	-1.0
	baz=350						
CHN1				*i* S	Sb	14 36 06.3	-0.8
	baz=350						
CHN3	Shinhua	0.16	276	*i* P	Pb	14 36 04.2	+0.2
	baz=276						
CHN3				*e*S	Sb	14 36 09.2	+1.6
	baz=276						
SNST	Tainan City	0.16	348	⇑*e*P	Pn	14 36 05.1	-0.6
	baz=343						
SCST	Cishan	0.18	193	⇓*i*P	Pb	14 36 03.5	-0.7
	baz=197						
SCST				*i* S	Sb	14 36 07.7	-0.2
	baz=197						
SHHT	Tainan City	0.18	258	⇑*i*P	Pb	14 36 04.4	+0.2
	baz=259						
SHHT				*e*S	Sb	14 36 09.8	+1.9
	baz=259						
WTP	Ta-pu	0.20	21	⇑*i*P	Pb	14 36 03.7	-0.9
	baz=19						
WTP				*i* S	Sb	14 36 08.0	-0.6
	baz=19						
TWK	Hsinying	0.21	348	⇓*i*P	Pb	14 36 04.0	-0.7
	baz=347						
TWK				*e*S	Sb	14 36 08.2	-0.6
	baz=347						
STYT	Tauyuan	0.23	63	⇓*i*P	Pb	14 36 04.0	-1.0
	baz=62						
STYT				S	Sb	14 36 08.6	-0.6
	baz=62						
SSHA	Shanhua	0.24	289	*e*P	Pb	14 36 05.4	+0.4
	baz=288						
SSHA				*e*S	Sn	14 36 11.7	+2.4
	baz=288						
STYH	Taoyuan	0.25	63	⇓*i*P	Pb	14 36 04.2	-0.9
	baz=60						
STYH				S	Sb	14 36 08.8	-0.6
	baz=60						
TPUB	Ta-pu	0.26	20	⇓*i*P	Pb	14 36 04.4	-0.9
	baz=16						
TPUB				S	Sb	14 36 09.0	-0.7
	baz=16						
TWM1	Shoushan	0.26	204	⇓*i*P	Pb	14 36 05.5	+0.2
	baz=205						
TWM1				*e*S	Sn	14 36 11.9	-0.3
	baz=205						
TAI1	Yung-k'ang	0.28	266	*e*P	Pb	14 36 06.1	+0.5
	baz=266						
TAI1				*e*S	Sn	14 36 12.3	-0.5
	baz=266						
CHN4	Tsaushan	0.30	10	⇓*i*P	Pb	14 36 05.2	-0.7
	baz=8.0						
CHN4				S	Sb	14 36 10.7	0.0
	baz=8.0						
TAI	Tainan	0.32	259	*e*P	Pb	14 36 06.6	+0.5
	baz=259						
TAI				*e*S	Sn	14 36 13.0	-0.7
	baz=259						
SSD	Sandimen	0.32	164	⇓*i*P	Pb	14 36 05.4	-0.8
	baz=165						
SSD				S	Sb	14 36 10.9	-0.4
	baz=165						
SGLT	Jiouru	0.33	187	⇓P	Pb	14 36 06.6	+0.2
	baz=188						
SGLT				*e*S	Sn	14 36 13.3	-0.7
	baz=188						
SCLT	Jiali	0.34	290	⇓*i*P	Pb	14 36 06.4	0.0
	baz=290						
SCLT				S	Sn	14 36 13.6	-0.5
	baz=290						
SNJT	Kaohsiung City	0.36	211	*e*P	Pb	14 36 05.8	-0.9
	baz=213						
TSMG	Majia	0.36	164	*e*P	Pb	14 36 06.0	-0.9
	baz=166						
TSMG				*e*S	Sb	14 36 11.8	-0.5
	baz=166						
TSPT	Pingtung City	0.38	186	*e*P	Pn	14 36 07.8	-0.9
	baz=188						
ICHU	Yijhu	0.38	322	⇓P	Pb	14 36 06.9	-0.2
	baz=320						
ICHU				*e*S	Sb	14 36 13.8	+1.0
	baz=320						
WCKO	Fanlu	0.38	10	⇓*i*P	Pb	14 36 06.5	-0.7
	baz=7.0						
WCKO				S	Sb	14 36 13.1	+0.2
	baz=7.0						
CHN8	Yiju	0.41	314	⇓*i*P	Pb	14 36 07.4	-0.2
	baz=314						
CHN8				*e*S	Sn	14 36 15.4	-0.7
	baz=314						
TSCK	Chigu Township	0.42	282	⇓*i*P	Pb	14 36 07.7	-0.1
	baz=282						
TSCK				*e*S	Sb	14 36 15.1	+1.2
	baz=282						
CHY	Chiayi	0.45	347	⇓*i*P	Pb	14 36 08.0	-0.2
	baz=346						
CHY				*e*S	Sb	14 36 15.2	+0.6
	baz=346						
MASBT	Mashibuluo	0.45	169	⇓*i*P	Pb	14 36 07.4	-0.9
	baz=170						
MASBT				S	Sb	14 36 14.3	-0.4
	baz=170						
ELDTW	Lidau	0.46	74	⇓*i*P	Pb	14 36 07.8	-0.7
	baz=74						
ELDTW				*e*S	Sb	14 36 14.7	-0.4
	baz=74						
CHN2	Minshiung	0.47	353	P	Pb	14 36 08.7	0.0
	baz=351						
CHN2				*e*S	Sn	14 36 16.9	-0.7

	baz=351						
ALS	**Alishan**	0.51	29	⇓*i*P	Pb	14 36 08.8	-0.7
	baz=28						
ALS				*e*S	Sb	14 36 17.1	+0.3
	baz=28						
KAU	**Kaohsiung**	0.53	203	*e*P	Pn	14 36 10.4	-0.4
	baz=204						
WSL	**Shuilin Townsh**	0.54	329	⇓*i*P	Pb	14 36 09.6	-0.2
	baz=327						
WSL				*e*S	Sb	14 36 18.3	+1.1
	baz=327						
TWG	**Pinlang**	0.55	115	⇓P	Pb	14 36 09.4	-0.5
	baz=116						
TWG				*e*S	Sb	14 36 17.7	+0.4
	baz=116						
CHN5	**Tsauling**	0.55	14	⇓P	Pb	14 36 09.5	-0.5
	baz=12						
CHN5				*e*S	Sn	14 36 18.7	-0.9
	baz=12						
TWGBT	**Beinan**	0.56	115	⇓*i*P	Pb	14 36 09.4	-0.6
	baz=116						
TWGBT				*e*S	Sb	14 36 17.6	0.0
	baz=116						
LONT	**Longtian**	0.57	105	⇓*i*P	Pb	14 36 09.6	-0.6
	baz=106						
LONT				*e*S	Sb	14 36 17.9	-0.1
	baz=106						
ECL	**Taimali**	0.60	140	⇓P	Pb	14 36 10.2	-0.6
	baz=141						
ECL				*e*S	Sb	14 36 18.8	0.0
	baz=141						
EHD	**Haiduan**	0.62	82	⇓*i*P	Pb	14 36 10.4	-0.8
	baz=81						
EHD				*e*S	Sb	14 36 18.9	-0.6
	baz=81						
WGK	**Gukeng**	0.62	2	*e*P	Pb	14 36 11.2	0.0
	baz=2.0						
WGK				*e*S	Sn	14 36 21.7	+0.4
	baz=2.0						
WDLH	**Douliu**	0.63	0	⇓P	Pb	14 36 11.1	-0.1
	baz=359						
WDLH				*e*S	Sn	14 36 21.3	-0.1
	baz=359						
ECS	**Chishang**	0.63	87	*e*P	Pb	14 36 11.0	-0.3
	baz=87						
ECS				*e*S	Sn	14 36 20.1	-1.3
	baz=87						
TTN	**Taitung**	0.64	118	⇓*e*P	Pn	14 36 11.6	-0.7
	baz=119						
TTN				*e*S	Sn	14 36 22.7	+1.0
	baz=119						
WTK	**Tuku**	0.64	348	⇓*i*P	Pb	14 36 11.1	-0.4
	baz=347						
WTK				*e*S	Sn	14 36 21.2	-0.5
	baz=347						
WSF	**Szhu**	0.65	334	⇓P	Pb	14 36 11.2	-0.3
	baz=333						
WSF				*e*S	Sn	14 36 21.6	-0.2
	baz=333						
SCZT	**Fangliau**	0.69	173	P	Pb	14 36 11.6	-0.6
	baz=174						
SCZT				*e*S	Sn	14 36 23.3	+0.5
	baz=174						
FULB	**Fuli**	0.71	79	⇓P	Pn	14 36 12.7	-0.7
	baz=78						
FULB				*e*S	Sn	14 36 23.6	+0.2
	baz=78						
EDH	**Donghe**	0.71	97	⇓*e*P	Pb	14 36 12.3	-0.3
	baz=97						
EDH				*e*S	Sn	14 36 23.2	-0.3
	baz=97						
TWP	**Hsiaoliuchiu**	0.73	193	*e*P	Pn	14 36 13.7	+0.2
	baz=193						
TWP				*e*S	Sn	14 36 28.2	+4.4
	baz=193						
EAST	**Anshuo**	0.73	157	*e*P	Pb	14 36 12.4	-0.6
	baz=157						
EAST				*e*S	Sn	14 36 23.6	-0.3
	baz=157						
TWF1	**Yuli**	0.76	67	⇓P	Pb	14 36 13.0	-0.5
	baz=67						
TWF1				*e*S	Sb	14 36 23.2	-0.1
	baz=67						
CHKT	**Chengkung**	0.77	87	*e*P	Pn	14 36 13.5	-0.5
	baz=87						
CHKT				*e*S	Sn	14 36 25.5	+0.8
	baz=87						
TAW	**Tawu**	0.77	154	*e*P	Pb	14 36 13.3	-0.4
	baz=155						
TAW				*e*S	Sn	14 36 24.2	-0.7
	baz=155						
YULB	**Yu-li**	0.78	64	⇓P	Pb	14 36 13.0	-0.7
	baz=64						
YULB				*e*S	Sb	14 36 23.1	-0.8
	baz=64						
EYUL	**Yuli**	0.78	68	⇓*e*P	Pb	14 36 13.3	-0.4
	baz=68						
EYUL				*e*S	Sb	14 36 23.5	-0.4
	baz=68						
WJS	**Zhushan**	0.78	13	⇓P	Pb	14 36 13.4	-0.4
	baz=12						
WJS				*e*S	Sn	14 36 25.4	+0.2
	baz=12						
TAWH	**Dawu Township**	0.79	155	⇓*e*P	Pb	14 36 13.3	-0.5
	baz=157						
TAWH				*e*S	Sn	14 36 24.5	-0.8
	baz=157						
WMLT	**Mailiao**	0.80	339	*e*P	Pb	14 36 14.0	0.0
	baz=338						
WMLT				*e*S	Sn	14 36 25.5	0.0
	baz=338						
SSLB	**Suanglung**	0.82	28	⇓*e*P	Pb	14 36 13.8	-0.7
	baz=27						
SSLB				*e*S	Sn	14 36 25.6	-0.6
	baz=27						
WNT	**Mingjian**	0.83	9	*e*P	Pb	14 36 14.2	-0.4
	baz=9.0						
WNT				*e*S	Sn	14 36 26.8	+0.5
	baz=9.0						
WDGT	**Dungji**	0.83	284	⇓P	Pb	14 36 13.7	-0.9
	baz=284						
WDGT				*e*S	Sb	14 36 25.4	0.0
	baz=284						
WTCT	**Ta-ch'eng**	0.83	344	*e*P	Pb	14 36 14.0	-0.7
	baz=343						
WTCT				*e*S	Sn	14 36 26.5	0.0
	baz=343						
EHY	**Hungye**	0.85	58	*e*P	Pb	14 36 14.5	-0.5
	baz=58						
EHY				*e*S	Sb	14 36 25.8	-0.2
	baz=58						
WRL	**Guolierlin Hig**	0.85	350	P	Pb	14 36 14.2	-0.8
	baz=349						
WRL				*e*S	Sb	14 36 26.3	+0.3
	baz=349						
WNT1	**Nantou City**	0.85	9	*e*P	Pn	14 36 15.1	-0.1
	baz=8.0						
WNT1				*e*S	Sn	14 36 27.9	+0.9
	baz=8.0						
ECBN	**Changbin**	0.88	73	*e*P	Pn	14 36 16.2	+0.6
	baz=73						
SMLT	**Sun Moon Lake**	0.89	22	P	Pb	14 36 15.2	-0.5
	baz=22						
SMLT				*e*S	Sn	14 36 28.8	+0.9
	baz=22						
VWDT	**VWDT**	0.89	39	*e*P	Pb	14 36 15.2	-0.4
	baz=38						
VWDT				*e*S	Sn	14 36 28.9	+1.2
	baz=38						
TYC	**Yuchr**	0.89	19	⇓*e*P	Pb	14 36 15.2	-0.5
	baz=19						
TYC				*e*S	Sn	14 36 28.0	+0.1
	baz=19						
WYL	**Yuanlin Townsh**	0.90	3	*e*P	Pb	14 36 14.7	-1.1
	baz=2.0						
HGSD	**Ruisui**	0.92	62	*e*P	Pn	14 36 16.5	+0.3
	baz=62						
HGSD				*e*S	Sn	14 36 29.8	+1.1
	baz=62						
LDUT	**Ludao**	0.94	114	*e*P	Pb	14 36 15.7	-0.9
	baz=114						
LDUT				*e*S	Sn	14 36 29.1	0.0
	baz=114						
WWF	**Wufeng**	0.99	9	*e*P	Pn	14 36 17.0	-0.2
	baz=8.0						
WWF				*e*S	Sn	14 36 31.6	+1.2
	baz=8.0						
PHUB	**P'eng-hu**	0.99	297	⇓P	Pn	14 36 15.9	-1.2
	baz=297						
PHUB				*e*S	Sb	14 36 29.0	-1.1
	baz=297						
WCHH	**Zhanghua**	1.02	1	*e*P	Pn	14 36 17.2	-0.3
WCHH				*e*S	Sn	14 36 31.6	+0.6
EGFH	**Guangfu**	1.02	53	*e*P	Pb	14 36 17.6	-0.2
	baz=53						
EGFH				*e*S	Sn	14 36 31.0	-0.1
	baz=53						
WPL	**Puli Township**	1.02	22	*e*P	Pb	14 36 17.8	-0.1
	baz=21						
VCHM	**Qimei**	1.03	279	⇓*e*P	Pn	14 36 16.5	-1.2
	baz=278						
VCHM				*e*S	Sb	14 36 29.9	-1.2
	baz=278						
PNG	**Penghu**	1.03	300	⇓*e*P	Pn	14 36 16.6	-1.1
	baz=299						
PNG				*e*S	Sb	14 36 30.3	-0.9
	baz=299						
DPDB	**Guoxing**	1.03	20	*e*P	Pn	14 36 17.6	-0.2
	baz=19						
DPDB				*e*S	Sn	14 36 32.4	+0.9
	baz=19						
WCS	**Beigang Elemen**	1.05	19	*e*P	Pn	14 36 18.0	0.0
	baz=18						
WCS				*e*S	Sn	14 36 32.4	+0.6
	baz=18						
HEN	**Hengchun**	1.06	170	*e*P	Pb	14 36 18.2	-0.4
	baz=170						
HEN				*e*S	Sn	14 36 33.7	+1.6
	baz=170						
OWD	**Renai**	1.07	33	*e*P	Pn	14 36 18.3	0.0
	baz=33						
OWD				*e*S	Sn	14 36 33.2	+0.8
	baz=33						
SMST	**Manzhou Townsh**	1.07	165	⇑*e*P	Pn	14 36 17.9	-0.3
	baz=166						
SMST				*e*S	Sn	14 36 33.5	+1.3
	baz=166						
WUSB	**Renai**	1.07	30	*e*P	Pn	14 36 18.2	-0.2
	baz=29						
WUSB				*e*S	Sn	14 36 33.0	+0.5
	baz=29						
TCU	**Taichung**	1.09	7	*e*P	Pn	14 36 18.6	+0.1
	baz=6.0						
TCU				*e*S	Sn	14 36 33.9	+1.1
	baz=6.0						
ESL	**Shilin**	1.12	47	⇓*e*P	Pb	14 36 19.4	-0.1
	baz=47						
ESL				*e*S	Sn	14 36 34.1	+0.7
	baz=47						
TEGC	**Jichi Village**	1.13	55	*e*P	Pb	14 36 20.8	+1.2
	baz=55						
TWK1	**Hengchun**	1.14	167	⇑*e*P	Pn	14 36 19.1	0.0
	baz=168						
TWK1				*e*S	Sb	14 36 36.1	+2.0
	baz=168						
TWKBT	**Hengchun**	1.14	167	⇑*e*P	Pn	14 36 19.0	-0.2
	baz=168						
TWKBT				*e*S	Sb	14 36 36.8	+2.5
	baz=168						
CHGB	**Renai**	1.16	30	⇑*e*P	Pb	14 36 20.1	-0.2
	baz=30						
CHGB				*e*S	Sb	14 36 35.2	+0.2
	baz=30						
TSEB	**Hengchuen, Pin**	1.20	164	*e*P	Pn	14 36 19.8	-0.2
	baz=166						
TSEB				*e*S	Sb	14 36 37.3	+1.3
	baz=166						
ETM	**Tongmen**	1.26	44	*e*P	Pb	14 36 22.0	+0.1
	baz=44						
ETM				*e*S	Sb	14 36 39.3	+1.6
	baz=44						
TEYL	**Yanliau Villag**	1.27	50	*e*P	Pb	14 36 23.0	+1.0
	baz=49						
TEYL				*e*S	Sb	14 36 40.5	+2.6
	baz=49						
WHP	**Taichung City**	1.27	17	*e*P	Pb	14 36 21.6	-0.6
	baz=17						
WHP				*e*S	Sb	14 36 38.6	+0.5
	baz=17						
WHF	**Hehuan Shan**	1.27	32	*e*P	Pb	14 36 22.2	-0.2
	baz=31						
WHF				*e*S	Sb	14 36 39.7	+1.2
	baz=31						
WDJ	**Dajia District**	1.29	4	*e*P	Pb	14 36 21.8	-0.6
	baz=4.0						
WDJ				*e*S	Sb	14 36 40.1	+1.6
	baz=4.0						
TWQ1	**Liyutan**	1.30	10	*e*P	Pb	14 36 22.1	-0.6
	baz=9.0						
TWQ1				*e*S	Sb	14 36 40.0	+1.0
	baz=9.0						
TDCB	**Techi**	1.32	26	*e*P	Pb	14 36 22.8	-0.3
	baz=25						
TDCB				*e*S	Sb	14 36 40.2	+0.6
	baz=25						
TWT	**Tachien**	1.33	26	*e*P	Pn	14 36 22.4	+0.5
	baz=25						
TWT				*e*S	Sb	14 36 39.9	+0.1
	baz=25						
NSY	**Sanyi**	1.37	9	*e*P	Pb	14 36 23.2	-0.6
	baz=8.0						
NSY				*e*S	Sb	14 36 42.3	+1.5
	baz=8.0						
LAY	**Lan-yu**	1.38	137	*e*P	Pn	14 36 21.6	-0.9
	baz=138						
LAY				*e*S	Sn	14 36 39.6	-0.4
	baz=138						
TWD	**Chiawan**	1.41	44	*e*P	Pb	14 36 23.7	-0.7
	baz=43						
LYUB	**Lan-yu**	1.43	137	*e*P	Pn	14 36 21.6	-1.5
	baz=138						
LYUB				*e*S	Sn	14 36 39.2	-1.9
	baz=138						
ETLH	**Xiulin Townshi**	1.44	37	*e*P	Pb	14 36 24.3	-0.7
	baz=37						
ETLH				*e*S	Sb	14 36 43.3	+0.5
	baz=37						
NACB	**Ninganchiao**	1.48	41	*e*P	Pb	14 36 24.6	-1.0
	baz=41						
NMLH	**Miaoli**	1.49	9	*e*P	Pb	14 36 25.0	-0.8
	baz=8.0						
NNSB	**Datong**	1.57	29	*e*P	Pb	14 36 26.1	-1.2
	baz=29						
NNSB				*e*S	Sb	14 36 46.1	-0.7
	baz=29						
NNSH	**Datong**	1.57	29	*e*P	Pb	14 36 26.1	-1.2
	baz=29						
NNS	**Nan Shan**	1.57	29	*e*P	Pb	14 36 26.6	-0.8
	baz=29						
NNS				*e*S	Sb	14 36 47.1	+0.1
	baz=29						
NSTT	**Nanjuang**	1.62	15	*e*P	Pn	14 36 26.3	+0.5
	baz=15						
NSTT				*e*S	Sb	14 36 48.5	+0.4
	baz=15						
LIOB	**Emei**	1.64	15	*e*P	Pn	14 36 26.6	+0.5
	baz=15						
LIOB				*e*S	Sb	14 36 48.5	-0.2
	baz=15						
NFF	**Wufeng Townshi**	1.66	19	*e*P	Pn	14 36 26.5	+0.2
	baz=18						
NFF				*e*S	Sb	14 36 49.2	+0.1
	baz=18						
LATG	**Datong**	1.73	31	*e*P	Pb	14 36 28.6	-1.3
	baz=31						
LATG				*e*S	Sb	14 36 50.8	-0.5
	baz=31						
ENA	**Nanau**	1.75	39	*e*P	Pn	14 36 28.6	+1.0
	baz=39						
NSK	**Sanguang**	1.78	25	*e*P	Pn	14 36 28.3	+0.3
	baz=25						
NSK				*e*S	Sb	14 36 52.2	-0.5
	baz=25						
YHNB	**Yeheng**	1.78	25	*e*P	Pn	14 36 28.8	+0.7
	baz=25						
YHNB				*e*S	Sb	14 36 52.0	-0.8
	baz=25						
EWUT	**Wuta**	1.79	39	*e*P	Pb	14 36 30.2	-0.7
	baz=39						
ENTT	**Nioudou**	1.83	31	*e*P	Pb	14 36 30.5	-1.3
	baz=31						
ENTT				*e*S	Sb	14 36 54.3	0.0
	baz=31						
NWLT	**Wulai**	1.93	27	*e*P	Pn	14 36 31.1	+1.0
	baz=27						
EOS4	**EOS4**	1.95	57	*e*P	Pn	14 36 30.9	+0.9
	baz=57						
EOS4				*e*S	Sb	14 36 55.6	-1.5
	baz=57						
FUSB	**Fushanzhiwuyua**	1.95	29	*e*P	Pb	14 36 31.9	-1.7
	baz=29						
TWE	**Neicheng**	1.95	32	*e*P	Pb	14 36 32.5	-1.2
	baz=32						
TWE				*e*S	Sb	14 36 57.6	-0.1
	baz=32						
VWUC	**VWUC**	2.17	333	*e*P	Pn	14 36 32.2	-1.1
	baz=332						
VWUC				*e*S	Sb	14 37 03.4	-0.4
	baz=332						
TIPB	**Shuangxi**	2.24	32	*e*P	Pn	14 36 35.6	+1.2
	baz=31						
KNMB	**Chin-men Tao**	2.41	306	*e*P	Pn	14 36 36.1	-0.6
	baz=305						
KNMB				*e*S	Sn	14 37 04.8	-0.6
	baz=305						
JYNG	**Yonagunijimaku**	2.61	57	S	Sn	14 37 12.8	+2.6
YOJ	**Yonaguni jima**	2.66	58	P	Pn	14 36 41.9	+1.8
YOJ				S	Sb	14 37 14.8	-3.3
YOJ	**Yonaguni jima**	2.66	58	*e*P	Pn	14 36 37.7	-2.4
	baz=58						
ZPLA	**Ao Xicun**	2.70	289	*e*P	Pn	14 36 39.9	-0.7
	baz=289						
HATJ	**Hateruma jima**	3.16	71	S	Sn	14 37 25.8	+1.9
IRIF	**Iriomote-Funau**	3.19	66	P	Pn	14 36 49.2	+1.8
IRIF				*e*S	Sn	14 37 28.2	+3.6
JKRS	**Kuro-shima**	3.39	69	P	Pn	14 36 51.7	+1.5
JKRS				*e*S	Sn	14 37 32.1	+2.4
JIJ	**Ishigaki jima**	3.55	68	P	Pn	14 36 53.4	+1.1
JIJ				*e*S	Sn	14 37 34.5	+0.9
JISG	**Ishigakijimahi**	3.78	65	P	Pn	14 36 56.3	+0.9
JISG				S	Sn	14 37 39.1	0.0

IDC 04 14:45:43.1±5.5**,2°.61N**×**90°.18E,h0**^{km}**,mb3.6**/3**,**
mbtmp3.6/3**,MS3.2**/2**,Error ellipse: s-maj=179.1km**
s-min=35.5km az=61.0,Off west coast of northern
Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**20.37**	**240**	T	T	15 10 54.8	
	baz=59,slow=76,SNR=6.7						
H08S3	**Diego Garcia H**	**20.37**	**240**	T	T	15 10 55.7	
	baz=59,slow=76,SNR=5.4						
H08S1	**Diego Carcia H**	**20.39**	**240**	T	T	15 11 00.2	
	baz=59,slow=76,SNR=5.0						
WSAR	**Wadi Sarin**	**36.80**	**307**	LR	LR	15 06 06.3	
	comp=Z,31nm,19.6s,baz=218,slow=33						
H01W3	**Cape Leeuwin H**	**43.55**	**151**	T	T	15 40 29.0	
	baz=326						
H01W2	**Cape Leeuwin H**	**43.56**	**151**	T	T	15 40 20.3	
	baz=326						
H01W1	**Cape Leeuwin H**	**43.56**	**151**	T	T	15 40 34.1	
	baz=326						
MKAR	**Makanchi Array**	**44.55**	**352**	P	P	14 53 56.1	-0.6
	0.6nm,0.8s,baz=162,slow=8.0,SNR=6.0						
	0.6nm,0.8s						
SONM	**Songino Array**	**47.18**	**15**	P	P	14 54 18.2	+0.5
	0.7nm,0.5s,baz=195,slow=9.8,SNR=9.9						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**48.78**	**119**	P	P	14 54 30.0	-0.4
	0.5nm,0.9s,baz=300,slow=8.4,SNR=2.9						
	0.5nm,0.9s						
BVAR	**Borovoye Array**	**52.86**	**345**	LR	LR	15 18 57.1	
	comp=Z,29nm,21.7s,baz=328,slow=38						

IDC ***04*** *14:51:07.2±0.8,61°.30N×27°.68W,h0*^{km}*,mb3.7/16,*
mbtmp3.7/20,ML3.0/4,MS3.6/47,Error ellipse:
s-maj=27.4km s-min=13.0km az=7.0

ISC 04 14:51:08.8±0.7**,61°.4N**±0°.1×**27°.58W**±0°.07**,h10**^{km}**,n54,**
σ**0**^{s}**.91**/24**,mb3.8**/15**,MS3.6**/41**,Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**4.41**	**37**	Pn	**Pn**	**14 52 14.5**	**-1.1**
	4.7nm,0.3s,baz=267,slow=4.7,SNR=23						
BORG				Sn	**Sn**	**14 53 06.1**	**-0.8**
	baz=196,slow=15						
BORG				LR	LR	14 53 47.4	
	comp=Z,528nm,19.2s,baz=226,slow=36						
	20nm,0.4s						
SFJD	**Kangerlussuaq**	**11.45**	**309**	LR	LR	14 57 44.4	
	comp=Z,513nm,20.9s,baz=116,slow=35						
EKA	**Eskdalemuir Ar**	**14.12**	**104**	Pn	**Pn**	**14 54 28.2**	**-0.4**
	baz=306,slow=9.6						
EKA				LR	LR	14 58 51.5	
	comp=Z,361nm,19.3s,baz=318,slow=33						
	1.5nm,0.8s						
NOA	**NORSAR Array B**	**18.50**	**74**	P	**P**	**14 55 25.0**	**+0.1**
	baz=286,slow=11,SNR=1.9						
NOA				LR	LR	15 01 40.9	
	comp=Z,110nm,20.4s,baz=285,slow=34						
	0.5nm,0.8s						
FRB	**Frobisher Bay**	**18.79**	**295**	P	**Pn**	**14 55 29.0**	**+0.7**
	0.2nm,0.3s,baz=77,slow=18,SNR=1.5						
FRB				LR	LR	15 01 51.1	
	comp=Z,327nm,19.3s,baz=147,slow=34						
	0.5nm,0.3s						
HFS	**Hagfors**	**19.96**	**75**	P	**Pn**	**14 55 42.6**	**+0.1**
	1.5nm,0.8s,baz=281,slow=15,SNR=2.2						
HFS				LR	LR	15 02 35.8	
	comp=Z,140nm,19.8s,baz=296,slow=34						
	1.5nm,0.8s						
SCHQ	**Schefferville**	**21.48**	**270**	LR	LR	15 02 25.9	
	comp=Z,208nm,20.1s,baz=73,slow=32						
ARCES	**ARCESS Array B**	**22.75**	**47**	LR	LR	15 03 31.3	
	comp=Z,74nm,20.0s,baz=278,slow=33						
FINES	**FINESS Array B**	**25.07**	**66**	P	**P**	**14 56 34.4**	**+1.4**
	3.3nm,1.0s,baz=280,slow=11,SNR=3.6						
FINES				LR	LR	15 05 57.4	
	comp=Z,64nm,19.2s,baz=293,slow=35						
	3.3nm,1.0s						
DAVOX	**Davos/Dischmat**	**25.93**	**107**	LR	LR	15 05 36.5	
	comp=Z,82nm,20.9s,baz=71,slow=34						
ESDC	**Sonseca Array**	**26.14**	**135**	LR	LR	15 05 18.6	
	comp=Z,71nm,19.0s,baz=328,slow=33						
GERES	**GERESS Array B**	**26.23**	**100**	P	**P**	**14 56 45.4**	**+1.7**
	0.4nm,0.8s,baz=294,slow=11,SNR=2.0						
GERES				LR	LR	15 06 52.3	
	comp=Z,126nm,18.7s,baz=278,slow=36						
	0.4nm,0.8s						
RES	**Resolute Bay**	**26.58**	**327**	LR	LR	15 07 03.3	
	comp=Z,136nm,18.1s,baz=78,slow=36						
VRAC	**Vranov**	**27.29**	**96**	LR	LR	15 08 26.0	
	comp=Z,128nm,18.5s,baz=316,slow=38						
MDT	**Midelt**	**32.23**	**142**	LR	LR	15 08 53.9	
	comp=Z,22nm,21.1s,baz=350,slow=33						
AKASG	**Malin Array Be**	**32.43**	**83**	P	**P**	**14 57 38.1**	**-0.4**
	0.8nm,0.6s,baz=310,slow=8.8,SNR=7.1						
AKASG				LR	LR	15 10 40.8	
	comp=Z,61nm,18.8s,baz=350,slow=36						
	0.8nm,0.6s						
SADO	**Sadowa**	**34.07**	**265**	LR	LR	15 09 50.5	
	comp=Z,158nm,20.2s,baz=142,slow=33						
MLR	**Muntele Rosu**	**34.48**	**92**	LR	LR	15 12 45.1	
	comp=Z,72nm,18.8s,baz=352,slow=38						
KEST	**Kesra**	**34.64**	**121**	LR	LR	15 11 14.2	
	comp=Z,87nm,20.6s,baz=256,slow=35						
VAE	**Valguarnera**	**35.34**	**113**	LR	LR	15 13 17.7	
	comp=Z,107nm,18.7s,baz=337,slow=38						
KIRV	**Kirov**	**36.54**	**59**	LR	LR	15 12 11.6	
	comp=Z,55nm,18.1s,baz=313,slow=34						
YKA	**Yellowknife Ar**	**38.01**	**311**	P	**P**	**14 58 27.1**	**+0.6**
	1.4nm,0.9s,baz=52,slow=9.1,SNR=11						
YKA				PcP	**PcP**	**15 00 41.5**	**-0.1**
	0.3nm,0.7s,baz=43,slow=3.2,SNR=5.5						
YKA				LR	LR	15 13 06.7	
	comp=Z,172nm,20.4s,baz=294,slow=35						
	1.4nm,0.9s						
ULM	**Lac du Bonnet**	**38.16**	**285**	LR	LR	15 13 12.2	
	comp=Z,167nm,19.9s,baz=7.0,slow=35						
BELG	**Belogornoye**	**39.82**	**68**	LR	LR	15 14 35.6	
	comp=Z,43nm,18.1s,baz=216,slow=35						
INK	**Inuvik**	**40.13**	**326**	LR	LR	15 14 37.1	
	comp=Z,114nm,19.8s,baz=4.5,slow=35						
IDI	**Anoyia**	**41.93**	**104**	LR	LR	15 17 17.4	
	comp=Z,40nm,18.4s,baz=308,slow=37						
BRTR	**Keskin Array B**	**42.55**	**92**	P	**P**	**14 59 05.6**	**+1.1**
	0.7nm,0.8s,baz=310,slow=5.6,SNR=3.5						
	0.7nm,0.8s						
TKL	**Tuckaleechee C**	**43.38**	**260**	LR	LR	15 15 44.9	
	comp=Z,161nm,19.0s,baz=32,slow=34						
KBZ	**Khabaz**	**43.91**	**80**	P	**P**	**14 59 16.1**	**+0.8**
	1.8nm,0.9s,baz=282,slow=19,SNR=2.4						

KBZ				LR	LR	15 17 48.7	
	comp=Z,74nm,20.4s,baz=342,slow=36						
	1.8nm,0.9s						
ILAR	**Eielson Array**	**46.29**	**329**	P	**P**	**14 59 34.2**	**+0.3**
	0.2nm,0.8s,baz=27,slow=9.1,SNR=4.1						
ILAR				PcP	**PcP**	**15 01 07.8**	**-1.3**
	0.4nm,0.8s,baz=23,slow=1.8,SNR=6.2						
ILAR				LR	LR	15 18 58.6	
	comp=Z,83nm,20.7s,baz=52,slow=36						
	0.2nm,0.8s						
DLBC	**Dease Lake**	**46.30**	**315**	LR	LR	15 17 14.8	
	comp=Z,67nm,18.4s,baz=70,slow=34						
NEW	**Newport**	**49.10**	**298**	LR	LR	15 20 20.4	
	comp=Z,137nm,18.3s,baz=44,slow=36						
PDAR	**Pinedale Array**	**50.02**	**288**	P	**P**	**15 00 03.5**	**+0.1**
	1.2nm,0.7s,baz=58,slow=5.3,SNR=11						
PDAR				LR	LR	15 20 15.5	
	comp=Z,69nm,19.1s,baz=56,slow=35						
	1.2nm,0.7s						
BBB	**Bella Bella**	**50.47**	**308**	LR	LR	15 21 37.8	
	comp=Z,129nm,18.5s,baz=306,slow=36						
EIL	**Elat**	**51.32**	**98**	LR	LR	15 24 25.5	
	comp=Z,17nm,18.7s,baz=309,slow=39						
TORD	**Torodi Ar. Bea**	**52.62**	**143**	P	**P**	**15 00 21.4**	**-1.4**
	2.0nm,0.9s,baz=338,slow=8.8,SNR=4.5						
	2.0nm,0.9s						
ZALV	**Zalesovo Beam**	**53.23**	**43**	P	**P**	**15 00 27.6**	**+0.8**
	0.3nm,0.4s,baz=333,slow=11,SNR=1.5						
	0.3nm,0.4s						
KDAK	**Kodiak Island**	**53.68**	**327**	LR	LR	15 23 09.7	
	comp=Z,41nm,19.4s,baz=90,slow=36						
ELK	**Elko**	**54.21**	**291**	LR	LR	15 22 23.3	
	comp=Z,130nm,20.8s,baz=50,slow=35						
ANMO	**Albuquerque**	**54.83**	**280**	LR	LR	15 22 57.7	
	comp=Z,129nm,18.4s,baz=136,slow=35						
YBH	**Yreka Blue Hor**	**56.70**	**297**	LR	LR	15 24 47.5	
	comp=Z,79nm,18.5s,baz=29,slow=36						
DBIC	**Dimbokro**	**57.17**	**153**	LR	LR	15 23 00.3	
	comp=Z,40nm,18.3s,baz=348,slow=34						
NVAR	**Mina Array Bea**	**57.47**	**291**	P	**P**	**15 00 56.5**	**-1.3**
	0.4nm,0.7s,baz=34,slow=8.2,SNR=2.0						
NVAR				LR	LR	15 24 25.7	
	comp=Z,122nm,19.9s,baz=1.5,slow=35						
	0.4nm,0.7s						
TXAR	**Lajitas Array**	**58.11**	**273**	P	**P**	**15 01 02.2**	**-0.1**
	0.3nm,0.8s,baz=46,slow=3.9,SNR=2.4						
TXAR				LR	LR	15 25 35.8	
	comp=Z,100nm,18.1s,baz=19,slow=36						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**58.36**	**49**	P	**P**	**15 01 04.0**	**+0.2**
	0.8nm,0.7s,baz=335,slow=6.2,SNR=12						
	0.8nm,0.7s						
AAK	**Ala-Archa**	**58.85**	**57**	LR	LR	15 27 32.3	
	comp=Z,43nm,18.3s,baz=27,slow=37						
PFO	**Pinyon Flats O**	**60.61**	**287**	LR	LR	15 26 26.2	
	comp=Z,91nm,20.9s,baz=47,slow=35						
CMIG	**Matias Romero**	**64.30**	**258**	LR	LR	15 29 39.7	
	comp=Z,37nm,19.9s,baz=17,slow=36						
SONM	**Songino Array**	**65.00**	**32**	P	**P**	**15 01 49.6**	**+0.9**
	0.6nm,0.8s,baz=314,slow=6.6,SNR=6.5						
	0.6nm,0.8s						
LPIG	**La Paz**	**65.69**	**276**	LR	LR	15 30 03.0	
	comp=Z,75nm,19.3s,baz=26,slow=36						
WSAR	**Wadi Sarin**	**68.09**	**82**	LR	LR	15 34 36.9	
	comp=Z,25nm,18.9s,baz=39,slow=38						
CMAR	**Chiang Mai Arr**	**89.77**	**50**	P	**P**	**15 04 07.3**	**-0.1**
	0.3nm,0.3s,baz=322,slow=5.7,SNR=1.8						
	0.3nm,0.3s						
PALK	**Pallekele**	**92.26**	**71**	LR	LR	15 48 47.4	
	comp=Z,21nm,18.2s,baz=346,slow=38						
ASAR	**Alice Springs**	**140.20**	**27**	PKP	**PKPdf**	**15 10 36.5**	**-0.9**
	0.3nm,0.9s,baz=347,slow=3.8,SNR=1.8						

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*IDC **04** 15:02:57.8±2.6, 7°.54S×155°.72E, h96^{km}±25^{km}, mb3.3/7, mbtmp3.8/9, MS3.6/2, Error ellipse: s-maj=28.2km s-min=25.0km az=142.0*

ISC 04 15:02:58.5±0.8**, 7°.5S**±0°.2×**155°.6E**±0°.1**, h100^{km}, n10, σ1^{s}.33**/10**, mb3.5**/7**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.67**	**115**	P	**Pn**	**15 04 04.9**	**-2.0**
	367nm,0.5s,baz=342,slow=20,SNR=1.5						
HNR				S	**Sn**	**15 05 02.6**	**+2.6**
	950nm,0.7s,baz=259,slow=19,SNR=2.0						
HNR				LR	LR	15 06 06.2	
	comp=Z,2μm,19.2s,baz=156,slow=41						
KRVT	**Keravat (AS076**	**4.79**	**311**	P	**Pn**	**15 04 08.9**	**+0.4**
	15nm,0.5s,baz=90,slow=3.0,SNR=2.9						
CTA	**Charters Tower**	**15.47**	**215**	LR	LR	15 11 18.5	
	comp=Z,83nm,18.3s,baz=72,slow=32						
WRA	**Warramunga Arr**	**24.07**	**237**	P	**P**	**15 08 04.9**	**+0.2**
	1.1nm,0.9s,baz=60,slow=9.5,SNR=4.6						
	1.1nm,0.9s						
ASAR	**Alice Springs**	**26.33**	**230**	P	**P**	**15 08 24.9**	**-0.3**
	0.6nm,1.1s,baz=58,slow=9.8,SNR=5.2						
	0.6nm,1.1s						
CMAR	**Chiang Mai Arr**	**61.58**	**296**	P	**P**	**15 13 06.7**	**+0.9**
	0.5nm,0.7s,baz=128,slow=5.1,SNR=5.7						
	0.5nm,0.7s						
SONM	**Songino Array**	**70.11**	**327**	P	**P**	**15 13 59.7**	**-0.4**
	0.4nm,0.5s,baz=138,slow=6.8,SNR=3.6						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**83.61**	**21**	P	**P**	**15 15 15.5**	**0.0**
	0.4nm,0.9s,baz=238,slow=5.4,SNR=6.0						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**84.20**	**319**	P	**P**	**15 15 19.1**	**+0.2**
	0.8nm,0.7s,baz=107,slow=5.3,SNR=9.8						
	0.8nm,0.7s						
ZALV	**Zalesovo Beam**	**84.95**	**326**	P	**P**	**15 15 21.9**	**-0.5**
	0.6nm,0.6s,baz=114,slow=3.5,SNR=2.3						
	0.6nm,0.6s						

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*NEIC **04** 15:39:51.5±2.7, 44°.67S±0°.06×81°.8W±0°.2, h10^{km}±1^{km}, mb4.6/8, Error ellipse: s-maj=24.3km s-min=9.5km az=282.0*

*IDC **04** 15:39:55.9±1.5, 45°.09S×80°.85W, h0^{km}, mb3.9/6, mbtmp3.9/8, ML4.0/2, MS3.8/20, Error ellipse: s-maj=43.5km s-min=25.8km az=126.0*

ISC 04 15:39:53.3±1.2**, 44°.65S**±0°.09×**81°.6W**±0°.1**, h10^{km}, n51, σ2^{s}.02**/32**, mb4.2**/8**, MS3.8**/18**, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LL07	**Hotel Espejo d**	**6.16**	**76**	Pn	**Pn**	**15 41 22.5**	**-1.8**
AY02	**Valle Explorad**	**6.18**	**110**	Pn	**Pn**	**15 41 23.2**	**-1.3**
LL06	**Loncomilla**	**6.29**	**70**	Pn	**Pn**	**15 41 24.8**	**-1.3**
LL05	**Los Muermos**	**6.78**	**64**		**Pn**	**15 41 31.8**	**-1.0**
GO08	**Villa O'Higgin**	**7.30**	**125**	Pn	**Pn**	**15 41 39.2**	**-0.8**
LL04	**Puerto Octay**	**7.72**	**64**	Pn	**Pn**	**15 41 44.2**	**-1.6**
PLCA	**Paso Flores**	**9.03**	**68**	Pn	**Pn**	**15 42 03.1**	**-0.6**
	0.4nm,0.3s,baz=234,slow=17,SNR=20						
PLCA				Sn	**Sn**	**15 43 45.2**	**-0.3**
	0.1nm,0.3s,baz=254,slow=19,SNR=1.9						
PLCA				LR	LR	15 45 03.3	
	comp=Z,251nm,20.4s,baz=239,slow=35						
	6.0nm,0.8s						
PLCA	**Paso Flores**	**9.03**	**68**	Pn	**Pn**	**15 42 03.9**	**+0.1**
GO06	**Curarrehue**	**9.07**	**60**	Pn	**Pn**	**15 42 04.6**	**+0.3**
GO09	**Cerro Castillo**	**9.07**	**140**		**Pn**	**15 42 03.7**	**-0.6**
MG05	**Puerto Natales**	**9.29**	**142**	Pn	**Pn**	**15 42 06.1**	**-1.1**
H03S1	**Juan Fernandez**	**10.99**	**12**	T	T	15 54 10.1	
	baz=186,slow=73,SNR=130						
H03S2	**Juan Fernandez**	**11.00**	**12**	T	T	15 54 10.2	
	baz=186,slow=73,SNR=100						
H03S3	**Juan Fernandez**	**11.01**	**12**	T	T	15 54 09.6	
	baz=186,slow=73,SNR=121						
MG03	**Isla Dawson**	**11.72**	**146**	Pn	**Pn**	**15 42 40.0**	**-0.4**
GO05	**Huala**	**12.15**	**41**	Pn	**Pn**	**15 42 47.2**	**+0.7**
BO02	**Sierra Bellavi**	**12.88**	**44**	Pn	**Pn**	**15 42 56.5**	**0.0**
MT09	**Talagante**	**13.61**	**41**		**Pn**	**15 43 07.3**	**+0.8**
MT02	**Curacav**	**13.97**	**39**	Pn	**Pn**	**15 43 10.8**	**-0.6**
VA06	**Catapilco**	**14.50**	**37**	Pn	**Pn**	**15 43 17.6**	**-0.9**
VA03	**San Esteban**	**14.65**	**40**	Pn	**Pn**	**15 43 18.6**	**-2.2**
CO02	**Combarbal**	**15.80**	**35**	Pn	**Pn**	**15 43 32.8**	**-3.1**
CFA	**Coronel Fontan**	**16.71**	**43**	Pn	**P**	**15 43 51.7**	**+1.9**
	0.7nm,0.3s,baz=208,slow=13,SNR=7.2						
CFA				LR	LR	15 49 50.1	
	comp=Z,103nm,19.3s,baz=229,slow=36						
	2.0nm,0.4s						
PMSA	**Palmer Station**	**22.41**	**160**	LR	LR	15 49 57.8	
	comp=Z,192nm,18.9s,baz=356,slow=28						
PB15	**IPOC Station P**	**23.59**	**29**	P	**P**	**15 45 01.4**	**-2.9**
LVC	**Limon Verde**	**24.33**	**30**	P	**P**	**15 45 16.9**	**+5.3**
	4.5nm,0.8s,baz=225,slow=10.0,SNR=4.6						
LVC				LR	LR	15 52 34.3	
	comp=Z,118nm,20.6s,baz=200,slow=31						
	4.5nm,0.8s						
PB01	**IPOC Station P**	**25.59**	**27**	P	**P**	**15 45 19.1**	**-3.6**
PB01				IAmb	IAmb	15 45 58.8	
	comp=Z,13nm,1.1s						
PB11	**IPOC Station P**	**26.74**	**26**	P	**P**	**15 45 32.1**	**-1.1**
PB11				IAmb	IAmb	15 45 54.3	
	comp=Z,20nm,1.3s						
CPUP	**Villa Florida**	**26.76**	**55**	P	**P**	**15 45 35.6**	**+2.4**
	comp=Z,2.4nm,0.8s,baz=225,slow=14,SNR=4.2						
CPUP				LR	LR	15 55 37.1	
	comp=Z,133nm,22.0s,baz=221,slow=35						
	comp=Z,2.4nm,0.8s						
CPUP	**Villa Florida**	**26.76**	**55**	P	**P**	**15 45 31.6**	**-1.6**
CPUP				IAmb	IAmb	15 45 41.2	
	comp=Z,15nm,1.2s						
RPN	**Rapa Nui**	**28.27**	**299**	LR	LR	15 53 56.6	
	comp=Z,228nm,21.0s,baz=120,slow=29						
NNA	**Nana**	**32.81**	**9**	LR	LR	15 56 13.8	
	comp=Z,116nm,18.7s,baz=184,slow=30						
SIV	**San Ignacio**	**33.42**	**38**	P	**P**	**15 46 35.8**	**+3.5**
	comp=Z,0.5nm,0.5s,baz=204,slow=10.0,SNR=4.3						
SIV				LR	LR	15 59 40.4	
	comp=Z,94nm,20.9s,baz=346,slow=35						
	comp=Z,0.5nm,0.5s						
ATAH	**Atahualpa**	**37.48**	**5**	LR	LR	15 59 09.4	
	comp=Z,131nm,20.3s,baz=199,slow=30						
SAML	**Samuel**	**38.99**	**30**	P	**P**	**15 47 17.7**	**-2.1**
BDFB	**Brasilia**	**40.49**	**55**	P	**P**	**15 47 35.1**	**+2.6**
	comp=Z,3.1nm,1.0s,baz=187,slow=8.1,SNR=1.8						
	comp=Z,3.1nm,1.0s						
QSPA	**South Pole Qui**	**45.59**	**180**	P	**P**	**15 48 14.0**	**+0.7**
	comp=Z,2.2nm,1.1s,baz=122,slow=5.4,SNR=2.0						
	comp=Z,2.2nm,1.1s						
QSPA	**South Pole Qui**	**45.59**	**180**	P	**P**	**15 48 12.0**	**-1.3**
QSPA				IAmb	IAmb	15 48 27.6	
	comp=Z,7.8nm,1.4s						
ROSC	**El Rosal**	**49.70**	**10**	LR	LR	16 07 46.3	
	comp=Z,212nm,18.2s,baz=262,slow=33						
VNDA	**Vanda**	**52.10**	**194**	P	P	15 48 59.8	-3.2
SDV	**Santo Domingo**	**54.20**	**13**	LR	LR	16 11 20.7	
	comp=Z,86nm,18.2s,baz=240,slow=35						
JTS	**Las Juntas de**	**54.77**	**356**	LR	LR	16 06 36.0	
	comp=Z,86nm,21.7s,baz=106,slow=29						
MDP	**Montagnes des**	**55.93**	**36**	LR	LR	16 11 56.2	
	comp=Z,83nm,21.0s,baz=200,slow=34						
MAW	**Mawson**	**64.89**	**166**	LR	LR	16 16 55.9	
	comp=Z,71nm,18.5s,baz=222,slow=34						
RPZ	**Rata Peaks**	**70.85**	**227**	LR	LR	16 13 41.5	
	comp=Z,162nm,21.3s,baz=92,slow=29						
SUR	**Sutherland**	**75.91**	**122**	LR	LR	16 18 36.5	
	comp=Z,60nm,19.0s,baz=174,slow=31						
TXAR	**Lajitas Array**	**76.34**	**340**	P	P	15 51 50.3	+7.8
	comp=Z,0.3nm,0.9s,baz=179,slow=8.7,SNR=1.4						
	comp=Z,0.3nm,0.9s						
BBTS	**Babate**	**83.39**	**62**	LR	LR	16 25 33.7	
	comp=Z,72nm,20.9s,baz=220,slow=33						
PFO	**Pinyon Flats O**	**84.10**	**331**	LR	LR	16 23 29.8	
	comp=Z,42nm,19.0s,baz=68,slow=31						
DZM	**Mont Dzumac**	**89.19**	**239**	LR	LR	16 29 01.3	
	comp=Z,54nm,18.0s,baz=205,slow=33						
STKA	**Stephens Creek**	**94.28**	**216**	LR	LR	16 29 33.4	
	comp=Z,63nm,18.2s,baz=200,slow=32						

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*IDC **04** 15:44:33.9±6.2, 14°.83S×167°.29E, h117^{km}±60^{km}, mb3.4/6, mbtmp3.9/7, Error ellipse: s-maj=52.6km s-min=31.8km az=148.0*

*NOU **04** 15:44:35.5, 14°.79S×167°.48E, h87^{km}, MLv4.8/15, Vanuatu Islands*

ISC 04 15:44:34.8±1.0**, 14°.83S**±0°.09×**167°.5E**±0°.2**, h129^{km}, n17, σ1^{s}.38**/19**, mb3.6**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.96**	**166**	P	**Pn**	**15 45 21.3**	**+0.5**
LIFNC	**LIFOU**	**5.91**	**182**	P	**Pn**	**15 45 59.7**	**-0.5**
KOUNC	**Koumac, New Ca**	**6.44**	**208**	P	**Pn**	**15 46 08.9**	**+1.6**
YATNC	**Mamie plateau,**	**7.21**	**184**	P	**Pn**	**15 46 18.2**	**+0.6**
DZM	**Mont Dzumac**	**7.26**	**187**	P	**Pn**	**15 46 17.4**	**-1.0**
	31nm,0.3s,baz=21,slow=18,SNR=113						
DZM				S	**Sn**	**15 47 39.0**	**-0.5**
	8.6nm,0.3s,baz=295,slow=23,SNR=2.0						
DZM	**Mont Dzumac**	**7.26**	**187**	P	**Pn**	**15 46 19.2**	**+0.8**
NOUC	**Port Laguerre**	**7.31**	**188**	P	**Pn**	**15 46 20.2**	**+1.2**
ONTNC	**Ouen Toro**	**7.49**	**187**	P	**Pn**	**15 46 23.5**	**+2.0**
OUENC	**Ouen Island, N**	**7.57**	**184**	P	**Pn**	**15 46 25.0**	**+2.6**
PINNC	**Pines Island,**	**7.74**	**180**	P	**Pn**	**15 46 25.1**	**+0.4**
STKA	**Stephens Creek**	**29.07**	**230**	P	**P**	**15 50 23.6**	**+0.5**
	0.8nm,0.4s,baz=15,slow=12,SNR=3.7						
	0.8nm,0.4s						
WRA	**Warramunga Arr**	**31.98**	**256**	P	**P**	**15 50 46.6**	**-2.4**
	0.4nm,0.7s,baz=85,slow=8.9,SNR=2.8						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**32.81**	**249**	P	**P**	**15 50 54.4**	**-1.9**
	0.6nm,0.4s,baz=78,slow=9.2,SNR=32						
ASAR				PcP	**PcP**	**15 53 38.0**	**-0.4**
	0.3nm,0.8s,baz=80,slow=3.2,SNR=2.6						
	0.6nm,0.4s						
SONM	**Songino Array**	**82.69**	**324**	P	**P**	**15 56 45.6**	**+1.5**
	0.4nm,0.6s,baz=134,slow=4.2,SNR=4.4						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**86.57**	**18**	P	**P**	**15 57 02.6**	**-0.4**
	0.3nm,0.7s,baz=235,slow=5.7,SNR=2.9						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**97.41**	**316**	P	**P**	**15 57 54.5**	**+0.7**
	0.5nm,0.7s,baz=90,slow=6.0,SNR=6.4						
	0.5nm,0.7s						
ARCES	**ARCESS Array B**	**120.40**	**345**	PKP	**PKPdf**	**16 03 09.9**	**-0.4**
	1.8nm,0.8s,baz=48,slow=1.3,SNR=4.2						

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*IDC **04** 15:49:30.9±2.5, 35°.33N×139°.34E, h134^{km}±21^{km}, mb2.8/2, mbtmp3.3/2, Error ellipse: s-maj=49.4km s-min=34.0km az=64.0*

*JMA **04** 15:49:30.5±0.2, 35°.5N±0°.7×139°.6E±0°.9, h131^{km}±1^{km}, MV2.8/40, TOKYO BAY REGION*

ISC 04 15:49:30.2±1.1**, 35°.47N**±0°.06×**139°.55E**±0°.08**, h137^{km}**±7^{km}**, n15, σ0^{s}.73**/27**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYO	**Yokosk**	**0.26**	**159**	P	**Pn**	**15 49 49.2**	**+0.1**
JYO				S	**Sn**	**15 50 03.9**	**+0.6**
TOK	**Tokyo**	**0.28**	**38**	P	**Pn**	**15 49 49.6**	**+0.6**
TOK				S	**Sn**	**15 50 04.8**	**+1.4**
JSGW	**Sagamiharawaka**	**0.31**	**295**	P	**Pn**	**15 49 48.8**	**-0.4**
JSGW				S	**Sn**	**15 50 02.6**	**-1.0**
JOD2	**Odawara 2**	**0.43**	**242**	*i* P	**Pn**	**15 49 49.4**	**-0.3**
JOD2				S	**Sn**	**15 50 03.7**	**-0.8**
JIM2	**Oshima 3**	**0.76**	**188**	P	**Pn**	**15 49 51.1**	**-0.6**
JIM2				S	**Sn**	**15 50 06.3**	**-1.7**
JFNN	**Fujinakano**	**0.76**	**249**	P	**Pn**	**15 49 52.0**	**+0.3**
JFNN				S	**Sn**	**15 50 09.0**	**+0.9**
JRY	**Ryogami san**	**0.76**	**316**	*i* P	**Pn**	**15 49 51.9**	**+0.2**
JRY				S	**Sn**	**15 50 08.3**	**+0.1**
JYN	**Shimob**	**0.82**	**272**	*i* P	**Pn**	**15 49 52.4**	**+0.1**
JYN				S	**Sn**	**15 50 09.6**	**+0.5**
JIZS	**Izushimoda**	**0.93**	**217**	*i* P	**Pn**	**15 49 53.2**	**+0.1**
JIZS				S	**Sn**	**15 50 10.5**	**0.0**
JAG	**Ashikaga**	**0.96**	**355**	*i* P	**Pn**	**15 49 53.1**	**-0.3**
JAG				S	**Sn**	**15 50 09.7**	**-1.3**
BSO1	**Boso 1**	**1.43**	**124**	P	**Pn**	**15 49 57.2**	**-0.2**
MJAR	**Matsushiro Arr**	**1.53**	**315**	P	**Pn**	**15 49 58.6**	**-0.5**
	9.2nm,0.5s,baz=144,slow=10,SNR=94						
MJAR				S	**Sn**	**15 50 20.9**	**-0.2**
	3.2nm,0.4s,baz=142,slow=17,SNR=3.5						
MAT	**Matsushiro**	**1.53**	**315**	P	**Pn**	**15 49 59.0**	**-0.1**
MAT				*e*S	**Sn**	**15 50 20.5**	**-0.7**
MKAR	**Makanchi Array**	**43.69**	**303**	P	**P**	**15 57 21.9**	**+0.5**
	0.3nm,0.7s,baz=82,slow=8.1,SNR=3.5						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**55.33**	**186**	P	**P**	**15 58 49.7**	**-0.1**
	0.4nm,0.9s,baz=358,slow=7.7,SNR=1.4						
	0.4nm,0.9s						

WEL 04 15:49:34.8±0.3**, 42°S**±2°×**17°4E**±°**, h9^{km}**±2^{km}**, M3.1**/17**, ML3.2**/19**, MLv3.1**/17**, Error ellipse: s-maj=0.0km s-min=0.0km az=108.7, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.24**	**181**	P	Pg	15 49 40.9	+1.2
KHZ				S	Sg	15 49 44.6	+1.7
BSWZ	**Blackbirch Sta**	**0.52**	**28**	P	Pb	15 49 45.6	-0.5
BSWZ				S	Sb	15 49 52.9	-0.9
THZ	**Tophouse**	**0.63**	**311**	P	Pg	15 49 47.5	+0.4
THZ				S	Sb	15 49 56.3	-0.8
CMWZ	**Cape Campbell**	**0.66**	**49**	P	Pb	15 49 48.7	+0.2
TUWZ	**Tuamarina**	**0.81**	**22**	P	Pg	15 49 50.5	+0.1
GVZ	**Greta Valley S**	**0.87**	**205**	P	Pn	15 49 52.8	-0.5
NNZ	**Nelson**	**0.97**	**353**	P	Pg	15 49 53.2	-0.2
MRNZ	**Matariki Terra**	**0.98**	**323**	P	Pb	15 49 53.9	0.0
TCW	**Tory Channel**	**1.11**	**30**	P	Pg	15 49 55.6	-0.6
AMCZ	**Amberley**	**1.20**	**213**	P	Pb	15 49 57.1	-0.6
TKNZ	**Takaka Hill**	**1.23**	**339**	P	Pn	15 49 58.0	-0.1
WEL	**Wellington**	**1.28**	**46**	P	Pn	15 49 58.7	-0.1
DSZ	**Denniston Nort**	**1.37**	**288**	P	Pg	15 50 01.1	0.0
DUWZ	**D'Urville Isla**	**1.40**	**12**	P	Pn	15 50 00.5	-0.1
PLWZ	**Palliser**	**1.41**	**65**	P	Pn	15 49 59.4	-1.3
QRZ	**Quartz Range**	**1.55**	**330**	P	Pb	15 50 03.6	-0.1
CAW	**Cannon Point**	**1.56**	**47**	P	Pn	15 50 02.0	-0.8
OXZ	**Oxford**	**1.60**	**224**	P	Pn	15 50 02.0	-1.2
INZ	**Inchbonnie**	**1.65**	**250**	P	Pn	15 50 04.4	+0.5
MQZ	**McQueen's Vall**	**1.66**	**203**	P	Pn	15 50 02.2	-1.9
KIW	**Kapiti Island**	**1.67**	**38**	P	Pn	15 50 04.1	-0.1
AKCZ	**Akaroa Harbour**	**1.76**	**195**	P	Pn	15 50 04.0	-1.4
MTW	**Mount Morrison**	**1.78**	**56**	P	Pn	15 50 04.4	-1.4
OGWZ	**Otaki Gorge**	**1.83**	**42**	P	Pn	15 50 05.7	-0.7
RACZ	**Rakaia**	**1.86**	**213**	P	Pn	15 50 05.2	-1.6
HOWZ	**Holdsworth Sta**	**1.96**	**50**	P	Pb	15 50 10.3	-0.3
TMWZ	**Te Maipa**	**2.06**	**59**	P	Pg	15 50 16.1	+1.8
MRZ	**Mangatainoka R**	**2.15**	**46**	P	Pn	15 50 09.6	-1.3
WACZ	**Wakanui South**	**2.16**	**215**	P	Pn	15 50 09.4	-1.6
WVZ	**Waitaha Valley**	**2.26**	**246**	P	Pn	15 50 12.4	+0.1
RPZ	**Rata Peaks**	**2.39**	**229**	P	Pn	15 50 13.1	-1.0
PRWZ	**Pori Road**	**2.44**	**49**	P	Pb	15 50 16.8	-2.0
ARCZ	**Arundel**	**2.48**	**224**	P	Pn	15 50 14.1	-1.3
GCSZ	**Gaunt Creek Bo**	**2.63**	**243**	P	Pn	15 50 17.7	+0.3
WAZ	**Wanganui**	**2.66**	**25**	P	Pb	15 50 22.3	-0.3
LREZ	**Lake Rotokare**	**2.79**	**14**	P	Pb	15 50 23.6	-1.3
TSZ	**Takapari Road**	**2.79**	**42**	P	Pb	15 50 24.6	-0.3
TMZ	**Timaru**	**2.88**	**219**	P	Pn	15 50 19.9	-1.0
KHEZ	**Kahui Hut**	**2.90**	**7**	P	Pb	15 50 25.3	-1.5
NBEZ	**Newall Road No**	**2.92**	**5**	P	Pb	15 50 28.3	+1.3
NEZ	**North Egmont**	**2.94**	**8**	P	Pb	15 50 26.0	-1.4
PNHZ	**Pukenui**	**3.02**	**42**	P	Pb	15 50 29.7	+0.9
FOZ	**Fox Glacier**	**3.06**	**243**	P	Pn	15 50 23.9	+0.6
MTVZ	**Mangateitei**	**3.15**	**28**	P	Pb	15 50 30.7	-0.3
VRZ	**Vera Road**	**3.19**	**17**	P	Pb	15 50 28.4	-3.2
PKVZ	**Pokaka**	**3.19**	**26**	P	Pb	15 50 30.9	-0.8
MOVZ	**Moawhango**	**3.24**	**32**	P	Pb	15 50 31.1	-1.4
WNVZ	**Wahianoa**	**3.25**	**29**	P	Pb	15 50 29.4	-3.3
TRVZ	**Turoa**	**3.25**	**29**	P	Pb	15 50 33.2	+0.4
FWVZ	**Far West T-bar**	**3.29**	**28**	P	Pb	15 50 32.3	-1.3
BHHZ	**Black Hill Sta**	**3.29**	**36**	P	Pb	15 50 32.8	-0.7
LBZ	**Lake Benmore**	**3.30**	**227**	P	Pn	15 50 26.4	-0.2
OTVZ	**Oturere**	**3.42**	**29**	P	Pb	15 50 32.1	-3.5
WTVZ	**West Tongariro**	**3.43**	**28**	P	Pb	15 50 34.6	-1.2
ETVZ	**East Tongariro**	**3.46**	**29**	P	Pb	15 50 33.9	-2.4
ODZ	**Otahua Downs**	**3.56**	**215**	P	Pn	15 50 28.2	-1.9
HIZ	**Hauiti**	**3.80**	**16**	P	Pn	15 50 36.1	+2.7
JCZ	**Jackson Bay**	**3.97**	**240**	P	Pn	15 50 36.3	+0.4
TLZ	**Tolley Road**	**4.13**	**22**	P	Pn	15 50 42.1	+3.9
WHHZ	**Waihua**	**4.18**	**43**	P	Pn	15 50 38.0	-0.7
SNGZ	**Shannon Statio**	**4.46**	**42**	P	Pn	15 50 40.2	-2.3
TOZ	**Tahuroa Road**	**4.69**	**19**	P	Pn	15 50 48.8	+3.1
WMGZ	**Waiomatatini S**	**5.74**	**42**	P	Pn	15 51 02.8	+2.7

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*LDG **04** 16:46:07.9±0.1, 51°.57N×16°.22E, h1^{km}, Ml4.3/17, Error ellipse: s-maj=3.4km s-min=1.9km az=13.0, Suspected Mining induced.*

*DNK **04** 16:46:08.9±1.9, 51°.66N×16°.01E, h0^{km}, ML3.0, Suspected explosion*

*BNS **04** 16:46:09.3±0.7, 51°.60N×16°.08E, h1^{km}, ML3.8*

*MCSM **04** 16:46:09.4±1.5, 52°N±7°×1°6E±1°2, h5^{km}±3^{km}, ML3.9*

*IPEC **04** 16:46:09.0±0.2, 51°.60N×16°.21E, h1^{km}, ML3.1/7, Error ellipse: s-maj=1.6km s-min=1.0km az=33.0*

*IDC **04** 16:46:10.4±1.1, 51°.53N×16°.03E, h12^{km}±8^{km}, mb3.6/10, mbtmp3.7/19, ML3.4/9, Error ellipse: s-maj=9.7km s-min=6.0km az=95.0*

*BGR **04** 16:46:10.6±0.2, 51°.53N×16°.12E, h1^{km}, ML3.7/11, Error ellipse: s-maj=3.3km s-min=2.2km az=22.0*

*UPP **04** 16:46:11.8±2.7, 51°.76N×15°.55E, h0^{km}, ML2.9*

*VIE **04** 16:46:12.9, 51°.34N×15°.92E, h0^{km}, mb3.3/18, ml3.4/15, ms3.8/2 81 km WNW of Wroclaw Suspected Mining induced.*

*PRU **04** 16:46:12.3±0.0, 51°.47N×16°.08E, h0^{km}*

ISC 04 16:46:07.7±0.4**, 51°.61N**±0°.02×**16°.12E**±0°.02**, h0^{km}, n192, σ1^{s}.79**/299**, mb3.8**/10**, 12C-4D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.78**	**172**	*i* Pg	**Pb**	**16 46 23.8**	**-0.3**
KSP				*e*Sg	**Sg**	**16 46 33.5**	**+0.8**
KSP	**Ksiaz**	**0.78**	**172**	*e*Pg	**Pb**	**16 46 23.9**	**-0.3**
	SNR=151						
KSP				*e*Sg	**Sg**	**16 46 33.3**	**+0.6**
	SNR=1.8						
KSP	**Ksiaz**	**0.78**	**172**	Pg	**Pg**	**16 46 23.5**	**+0.9**
CHVC	**Chvalec**	**1.03**	**182**	*e*PG	**Pb**	**16 46 28.6**	**+0.2**
CHVC				*e*SG	**Sg**	**16 46 41.6**	**+1.0**
	comp=Z,452nm,0.4s						
CHVC	**Chvalec**	**1.03**	**182**	Pg	**Pb**	**16 46 28.5**	**+0.2**
CHVC				Sg	**Sb**	**16 46 42.4**	**0.0**
OSTC	**Ostas**	**1.06**	**177**	*e*PG	**Pb**	**16 46 29.2**	**+0.4**
OSTC				*e*SG	**Sg**	**16 46 42.4**	**+0.7**
	comp=Z,401nm,0.5s						
OSTC	**Ostas**	**1.06**	**177**	Pg	**Pb**	**16 46 29.3**	**+0.4**
OSTC				Sg	**Sb**	**16 46 43.3**	**0.0**
UPC	**Upice**	**1.11**	**183**	*e*PG	**Pb**	**16 46 29.9**	**+0.2**
UPC				*e*SG	**Sg**	**16 46 43.4**	**+0.1**
UPC	**Upice**	**1.11**	**183**	Pg	**Pb**	**16 46 29.8**	**+0.1**
DPC	**Dobruska-Polom**	**1.27**	**174**	*e*PG	**Pb**	**16 46 32.5**	**0.0**
DPC				*e*SG	**Sg**	**16 46 48.0**	**-0.5**
	comp=Z,628nm,0.8s						
DPC	**Dobruska-Polom**	**1.27**	**174**	*e*Pg	**Pb**	**16 46 32.7**	**+0.2**
	SNR=157						
PVCC	**Panska Ves**	**1.46**	**223**	*e*PG	**Pb**	**16 46 36.2**	**+0.5**
PVCC				*e*SG	**Sn**	**16 46 56.0**	**+0.9**
	comp=Z,893nm,0.2s						
PVCC	**Panska Ves**	**1.46**	**223**	*e*Pn	**Pb**	**16 46 36.2**	**+0.5**
	SNR=8.8						
PVCC				*e*Pg	**Pg**	**16 46 37.1**	**+1.4**
	SNR=154						
PVCC				*e*Sg	**Sn**	**16 46 56.3**	**+1.2**
	SNR=3.8						
BRG	**Berggiesshubel**	**1.55**	**242**	Pn	**Pn**	**16 46 36.9**	**+0.4**
BRG				Pg	**Pg**	**16 46 38.9**	**+1.5**
BRG				Sg	**Sg**	**16 46 59.3**	**+1.7**
BRG				Amp		16 46 59.8	
	comp=Z,561nm,0.4s						
BRG	**Berggiesshubel**	**1.55**	**242**	*e*Pn	**Pn**	**16 46 36.8**	**+0.2**
	SNR=3.5						
BRG				*e*Pg	**Pg**	**16 46 38.6**	**+1.2**
	SNR=141						
BRG				*e*Sg	**Sg**	**16 46 59.3**	**+1.7**
	SNR=2.7						
KRLC	**Kraliky**	**1.60**	**164**	*e*PG	**Pn**	**16 46 37.6**	**+0.4**
KRLC				*e*SG	**Sn**	**16 46 57.9**	**-0.7**
RUE	**Ruedersdorf**	**1.68**	**302**	*e*Pn	**Pb**	**16 46 39.4**	**0.0**
	SNR=9.7						
RUE				*e*Sn	**Sg**	**16 47 02.1**	**+0.4**
RUE				*e*Sg	**Sb**	**16 47 05.1**	**+3.9**
	SNR=4.5						
RUE	**Ruedersdorf**	**1.68**	**302**	*e*P	**Pg**	**16 46 39.8**	**-0.1**
GKP	**Gorka Klasztor**	**1.79**	**22**	*e*Pg	Pg	16 46 48.8	+6.8
	SNR=6.0						
GKP	**Gorka Klasztor**	**1.79**	**22**	*e*P	Pg	16 46 49.6	+7.6
FBE	**Freiberg**	**1.87**	**249**	*e*Pg	**Pg**	**16 46 44.3**	**+0.9**
	SNR=43						
GOPC	**GO Pecny, Ondr**	**1.90**	**207**	*e*PG	**Pg**	**16 46 43.8**	**-0.2**
PRU	**Pruhonice**	**1.91**	**212**	*e*PN	**Pn**	**16 46 41.9**	**+0.5**
PRU				*e*PG	**Pg**	**16 46 44.0**	**-0.2**
PRU				*e*SG	**Sg**	**16 47 08.5**	**-0.5**
	comp=Z,318nm,0.6s						
PRU	**Pruhonice**	**1.91**	**212**	*e*Pn	**Pn**	**16 46 42.0**	**+0.6**
	SNR=18						
CLL	**Collm**	**1.97**	**262**	*e*Pn	**Pn**	**16 46 43.0**	**+0.7**
CLL				*e*Pg	**Pg**	**16 46 47.0**	**+1.6**
CLL				*i* x	x	16 46 50.0	
CLL				*e*x	x	16 47 01.0	
CLL				*e*Sg	**Sg**	**16 47 13.0**	**+2.0**

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       comp=Z,280nm,0.4s
CLL    Collm              1.97 262  ePn    Pn     16 46 42.9 +0.7
       SNR=49
CLL                                 eSg    Sg     16 47 12.7 +1.8
       SNR=3.5
RAC    Raciborz           2.02 139  ePG    Pg     16 46 47.2 +0.8
RAC                                 eSG    Sg     16 47 14.0 +1.5
MORC   Moravsky Berou     2.05 153  ⇊P     Pn     16 46 43.8 +0.4
MORC                                ⇈S     Sn     16 47 10.6 +0.9
MORC   Moravsky Berou     2.05 153  ePn    Pn     16 46 44.0 +0.5
       SNR=41
MORC   Moravsky Berou     2.05 153  ePn    Pn     16 46 43.8 +0.4
       baz=336
MORC                                eSg    Sb     16 47 12.3 +0.5
       comp=Z,286nm,0.7s,baz=336
OKC    Ostrava-Krasne     2.20 143  ePG    Pg     16 46 49.7  -0.1
VRAC   Vranov             2.33 172  ⇈P     Pn     16 46 48.2 +1.0
VRAC                                ⇈S     Sn     16 47 17.3 +0.8
VRAC   Vranov             2.33 172   Pn    Pn     16 46 48.1 +0.9
       comp=Z,11nm,0.3s,baz=345,slow=15,SNR=63
VRAC                                 Pg    Pg     16 46 52.8 +0.6
       comp=Z,18nm,0.3s,baz=358,slow=15,SNR=29
VRAC                                 Sn    Sn     16 47 14.1  -2.4
       comp=Z,12nm,0.3s,baz=326,slow=20,SNR=5.1
VRAC                                 Lg    Lg     16 47 19.9
       comp=Z,32nm,0.3s,baz=270,slow=20,SNR=10
       comp=Z,46nm,0.3s
VRAC   Vranov             2.33 172  ePn    Pn     16 46 48.1 +0.9
       SNR=7.5
VRAC                                eSg    Sg     16 47 21.9  -0.5
       SNR=3.5
VRAC   Vranov             2.33 172  ePn    Pn     16 46 48.1 +0.9
       baz=354
TREC   Trest              2.36 190  ePN    Pn     16 46 48.6 +1.0
TREC                                ePG    Pg     16 46 52.5  -0.3
TREC                                eSG    Sg     16 47 23.0  -0.3
       comp=Z,218nm,0.5s
TREC   Trest              2.36 190  ePn    Pn     16 46 48.7 +1.0
       SNR=4.0
KRUC   Moravsky           2.56 176  ePn    Pn     16 46 51.5 +1.0
       SNR=10
KRUC                                ePg    Pg     16 46 56.1  -0.6
       SNR=5.4
KRUC   Moravsky           2.56 176  ePn    Pn     16 46 51.4 +1.0
       baz=357
KRUC   Moravsky           2.56 176  ePg    Pb     16 46 55.3 +0.8
       baz=357
KRUC                                eSg    Sn     16 47 21.3  -1.0
       comp=Z,221nm,0.8s,baz=357
TANN   Tannenbergstha     2.60 244  ePn    Pn     16 46 52.2 +1.2
       SNR=19
TANN                                ePg    Pg     16 46 59.5 +2.0
       SNR=5.8
TANN                                eSg    Sg     16 47 32.4 +1.2
       SNR=4.3
WERD   Werda              2.67 246  ePn    Pn     16 46 53.0 +1.0
       SNR=6.3
WERD                                ePg    Pg     16 47 00.1 +1.2
       SNR=7.4
WERD                                eSg    Sg     16 47 34.4 +0.9
       SNR=3.9
GUNZ   Gunzen             2.70 244  ePn    Pn     16 46 53.5 +1.1
       SNR=10
NKC    Novy Kostel        2.70 241  ePN    Pn     16 46 53.6 +1.2
NKC                                 ePG    Pg     16 47 00.1 +0.7
NKC                                 eSG    Sg     16 47 34.6 +0.2
       comp=Z,378nm,0.6s
NKC    Novy Kostel        2.70 241  ePn    Pn     16 46 53.6 +1.2
       SNR=17
WERN   Wernitzgruen       2.71 242  ePn    Pn     16 46 53.8 +1.3
       SNR=18
OJC    Ojcow              2.72 119  ePn    Pn     16 46 51.7  -0.8
OJC                                 ePg    Pg     16 46 59.7   0.0
OJC                                 eSg    Sg     16 47 35.1 +0.2
OJC    Ojcow              2.72 119  ePn    Pn     16 46 51.8  -0.8
       SNR=11
OJC                                 ePg    Pg     16 46 60.0 +0.3
       SNR=8.9
OJC                                 eSg    Sg     16 47 36.3 +1.4
       SNR=3.2
PLN    Plauen             2.74 247  ePn    Pn     16 46 53.9 +1.0
       SNR=7.5
PLN                                 eSg    Sg     16 47 36.7 +1.0
       SNR=4.2
NEUB   Neuenburg          2.75 263  ePg    Pg     16 47 01.3 +1.0
       SNR=14
NEUB                                eSg    Sg     16 47 38.3 +2.4
       SNR=4.7
JAVC   Velka Javorina     2.93 160  ePn    Pn     16 46 56.5 +0.9
       baz=342
JAVC                                eSg    Sg     16 47 39.8  -2.0
       comp=Z,126nm,0.7s,baz=342
KHC    Kasperske Hory     2.97 214  ePN    Pn     16 46 56.8 +0.8
KHC                                 ePG    Pg     16 47 03.3  -1.2
KHC                                 eSN    Sn     16 47 31.0  -1.4
KHC                                 eSG    Sg     16 47 42.4  -0.6
       comp=Z,135nm,0.5s
KHC    Kasperske Hory     2.97 214  ePn    Pn     16 46 56.8 +0.8
       SNR=22
MOX    Moxa               3.00 253  ePn    Pn     16 46 57.4 +1.0
       SNR=8.6
MOX                                 eSg    Sg     16 47 46.1 +2.2
       SNR=7.9
MANZ   Manzenberg         3.02 239  ePn    Pn     16 46 58.2 +1.5
       SNR=18
CKRC   Cesky Krumlov      3.03 203  ePN    Pn     16 46 58.0 +1.2
CKRC                                ePG    Pg     16 47 04.3  -1.4
CKRC                                eSG    Sb     16 47 42.4 +2.5
       comp=Z,140nm,0.5s
CKRC   Cesky Krumlov      3.03 203  ePn    Pn     16 46 57.7 +0.9
       SNR=18
ROTZ   Rotzenmuhle        3.10 235  ePn    Pn     16 46 58.8 +1.0
       SNR=26
GEC2   GERESS Array S     3.18 210  ePn    Pn     16 46 59.9 +1.0
       SNR=32
GERES  GERESS Array B     3.18 210   Pn    Pn     16 46 59.4 +0.5
       comp=Z,7.9nm,0.3s,baz=30,slow=13,SNR=196
GERES                                Pg    Pb     16 47 06.5 +1.5
       comp=Z,19nm,0.3s,baz=33,slow=17,SNR=26
GERES                                Sn    Sn     16 47 32.9  -4.7
       comp=Z,12nm,0.3s,baz=29,slow=22,SNR=7.8
GERES                                Lg    Lg     16 47 47.6
       comp=Z,27nm,0.3s,baz=25,slow=22,SNR=10
       comp=Z,18nm,0.4s
LANS   Liptovska Anna     3.27 138  ePN    Pn     16 47 01.2 +1.0
LANS                                ePG    Pg     16 47 09.9  -0.4
LANS                                eSG    Sg     16 47 51.8  -0.8
MODS   Modra-Piesok       3.33 167  ePN    Pn     16 47 02.6 +1.6
MODS                                ePG    Pg     16 47 11.9 +0.5
MODS                                eSG    Sg     16 47 57.3 +2.7
NIE    Niedzica           3.46 128  ePg    Pg     16 47 14.8 +0.9
NIE                                 eSg    Sg     16 47 59.8 +1.1
CLZ    Clausthal          3.58 276  ePn    Pn     16 47 06.5 +2.1
       SNR=16
BSD    Bornholm Skovb     3.58 349  eP     Pn     16 47 04.8 +0.5
BSD    Bornholm Skovb     3.58 349  i P    Pn     16 47 04.8 +0.5
BSD                                 eS     Sn     16 47 44.8  -2.5
BSD                                  IAML         16 47 49.7
       comp=Z,19nm,0.6s
VYHS   Vyhne              3.58 150  ePN    Pn     16 47 04.9 +0.5
VYHS                                ePG    Pg     16 47 17.6 +1.3
VYHS                                eSG    Sg     16 48 04.0 +1.3
GRF    Grafenberg Arr     3.66 240  ePn    Pn     16 47 07.0 +1.5
       SNR=6.4
CONA   Conrad Observa     3.69 183  i Pn   Pn     16 47 07.3 +1.2
       comp=Z,15nm,0.4s,SNR=11
CONA                                eSg    Sg     16 48 04.2  -2.1
       comp=Z,66nm,0.4s
NRDL   Niedersach Rie     3.81 286  ePn    Pn     16 47 10.0 +2.5
       SNR=5.8
RONA   Rosalia, Austr     3.92 178  i Pn   Pn     16 47 09.9 +0.8
       comp=Z,1.7nm,0.2s
RONA                                 Sg    Sg     16 48 11.3  -2.3
       comp=Z,53nm,0.5s
UBBA   Unterbreizbach     3.93 261  ePn    Pn     16 47 09.2 +0.2
       SNR=5.0
STHS   Stebnicka Huta     3.94 122  ePN    Pn     16 47 09.3  -0.1
STHS                                ePG    Pg     16 47 22.9  -0.3
STHS                                eSG    Sg     16 48 16.8 +2.5
MOA    Molln              3.96 198  i Pn   Pn     16 47 10.9 +1.3
       comp=Z,54nm,0.4s
MOA                                 eSg    Sg     16 48 14.3  -0.4
       comp=Z,147nm,0.6s
KECS   Kecovo             4.21 136  ePN    Pn     16 47 13.8 +0.7
KECS                                ePG    Pg     16 47 27.9  -0.5
KECS                                eSG    Sg     16 48 25.4 +2.5
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BIOA   Bad Ischl, Aus     4.24 203  i Pn   Pn     16 47 14.8 +1.2
       comp=Z,28nm,0.4s,SNR=24
LUNU   Lund               4.33 340   P     Pn     16 47 14.8 +0.1
LUNU                                 S     Sn     16 48 03.9  -1.8
LUNU   Lund               4.33 340   P     Pn     16 47 14.8 +0.1
LUNU                                i P    Pb     16 47 14.9   -10
LUNU                                 S     Sn     16 48 03.9  -1.8
LUNU                                i S    Sn     16 48 04.0  -1.8
ARSA   Arzberg            4.38 185  i Pn   Pn     16 47 17.8 +2.3
       comp=Z,13nm,0.3s,SNR=18
ARSA                                eSg    Sg     16 48 26.0  -2.5
       comp=Z,57nm,0.7s
BLEU   Blekinge           4.70 358   P     Pn     16 47 20.6 +0.8
BLEU                                 S     Sn     16 48 12.5  -2.5
BLEU   Blekinge           4.70 358  i P    Pn     16 47 20.2 +0.4
BLEU                                 P     Pn     16 47 20.6 +0.8
BLEU                                 S     Sn     16 48 12.5  -2.5
BLEU                                i S    Sn     16 48 12.9  -2.1
BJUU   Bjuv               4.83 339  i P    Pn     16 47 22.0 +0.5
BJUU                                i S    Sn     16 48 15.9  -2.2
KASTN  Kahler Asten       4.84 268  ePn    Pn     16 47 22.7 +1.0
       SNR=11
KBA    Koelnbreinsper     4.89 203  i Pn   Pn     16 47 24.1 +1.6
       comp=Z,28nm,0.4s,SNR=14
KBA                                 eSg    Sg     16 48 44.6   0.0
       comp=Z,68nm,0.5s
SOKA   Soboth             4.99 189  i Pn   Pn     16 47 25.4 +1.5
       comp=Z,4.8nm,0.4s,SNR=11
SOKA                                 Sg    Sg     16 48 49.4 +1.5
       comp=Z,38nm,0.9s
DEL    Delary             5.04 346   P     Pn     16 47 24.9 +0.4
DEL                                  S     Sn     16 48 20.5  -2.8
DEL    Delary             5.04 346  eP     Pn     16 47 24.5   0.0
DEL    Delary             5.04 346  i P    Pn     16 47 24.7 +0.2
DEL                                  P     Pn     16 47 24.9 +0.4
DEL                                 i S    Sn     16 48 20.3  -3.0
DEL                                  S     Sn     16 48 20.5  -2.8
TNS    Taunus Mts         5.05 257  ePn    Pn     16 47 25.7 +1.0
       SNR=7.8
WATA   Walderalm          5.21 216  i Pn   Pn     16 47 28.5 +1.7
       comp=Z,5.8nm,0.3s,SNR=13
OBKA   Obir               5.21 192  i Pn   Pn     16 47 28.4 +1.5
       comp=Z,4.2nm,0.5s
OBKA                                eSg    Sg     16 48 55.8 +0.8
       comp=Z,66nm,0.8s
IBBN   Ibbenburen         5.22 281  ePn    Pn     16 47 28.9 +2.0
       SNR=8.5
WTTA   Wattenberg         5.24 216  i Pn   Pn     16 47 29.4 +2.0
       comp=Z,8.3nm,0.5s,SNR=11
WTTA                                eSg    Sg     16 48 54.8  -1.2
       comp=Z,37nm,0.6s
VXJU   Vaexsjoe           5.36 353   P     Pn     16 47 30.0 +1.2
VXJU                                 S     Sn     16 48 29.3  -2.0
VXJU   Vaexsjoe           5.36 353   P     Pn     16 47 30.0 +1.2
VXJU                                 S     Sn     16 48 29.3  -2.0
MOTA   Moosalm            5.38 219  i Pn   Pn     16 47 30.3 +1.0
       comp=Z,6.4nm,0.4s,SNR=8.4
MOTA                                eSg    Sg     16 48 60.0  -0.4
       comp=Z,25nm,0.5s
RETA   Reutte             5.40 222  i Pn   Pn     16 47 30.3 +0.8
       comp=Z,4.4nm,0.4s,SNR=6.5
RETA                                 Sg    Sg     16 49 03.8 +2.7
       comp=Z,50nm,0.6s
ABTA   Abfaltersbach      5.41 207  i Pn   Pn     16 47 31.4 +1.7
       comp=Z,5.8nm,0.4s,SNR=8.9
ABTA                                i Sg   Sg     16 49 02.2 +0.8
       comp=Z,46nm,0.7s
TRPA   Tarpa              5.42 128  ⇈P     Pn     16 47 30.1 +0.5
KOE    Koeppel            5.42 261  ePn    Pn     16 47 29.5  -0.3
HOBG   Hohbusch           5.55 267  ePn    Pn     16 47 31.6 +0.2
OSKU   Oskarshamn         5.59 360   P     Pn     16 47 33.4 +1.4
OSKU   Oskarshamn         5.59 360   P     Pn     16 47 33.4 +1.4
VNDS   Vrh nad Dolski     5.60 190  i Pn   Pn     16 47 33.5 +1.4
MORH   Mrgy, Hungar       5.66 162  ⇈P     Pn     16 47 33.9 +1.0
BYXU   Byxelkrok          5.71   5   P     Pn     16 47 35.0 +1.4
BYXU   Byxelkrok          5.71   5   P     Pn     16 47 35.0 +1.4
BGG    Burgeitz           5.73 259  ePn    Pn     16 47 33.7  -0.2
LAUG   Laupendahl         5.74 271  ePn    Pn     16 47 33.7  -0.3
FETA   Feichten           5.79 220  ePn    Pn     16 47 36.7 +1.8
       comp=Z,1.3nm,0.2s
FETA                                 Sg    Sg     16 49 13.4  -0.2
       comp=Z,14nm,0.5s
AHRW   Bad Neuenahr-A     5.80 263  ePn    Pn     16 47 36.7 +1.9
       SNR=7.5
CRES   Cresnjev           5.81 185  i Pn   Pn     16 47 36.5 +1.5
STB    Steinbach          5.93 264  ePn    Pn     16 47 37.5 +0.8
STB                                 eSn    Sn     16 48 42.8  -2.5
       comp=Z,21nm,1.2s
DAVA   Damuels            5.94 226  i Pn   Pn     16 47 37.4 +0.4
       comp=Z,3.5nm,0.3s
DAVA                                eSg    Sg     16 49 21.3 +2.9
       comp=Z,37nm,0.5s
EKSU   Eksjoe             5.99 356   P     Pn     16 47 38.6 +1.1
EKSU   Eksjoe             5.99 356   P     Pn     16 47 38.6 +1.1
VSTU   Vaestervik         6.06   2   P     Pn     16 47 39.9 +1.4
VSTU   Vaestervik         6.06   2   P     Pn     16 47 39.9 +1.4
PABE   Paberze            6.09  47  eP     Pn     16 47 41.7 +2.9
GBRS   Gornja Briga       6.15 189  i Pn   Pn     16 47 40.9 +1.2
BMR    Baia Mare          6.21 127  ⇊P     Pn     16 47 40.9 +0.4
KLL    Kalltalsperre      6.25 265  ePn    Pn     16 47 40.2  -0.9
ONAU   Onsala             6.29 339  i P    Pn     16 47 39.5  -2.1
ONAU                                i S    Sn     16 48 51.7  -2.3
DAVOX  Davos/Dischmat     6.33 223   Pn    Pn     16 47 42.2  -0.2
       comp=Z,0.5nm,0.3s,baz=17,slow=16,SNR=4.8
DAVOX                                Sn    Sn     16 48 51.6  -3.8
       comp=Z,0.8nm,0.3s,baz=42,slow=22,SNR=1.4
DAVOX                                Lg    Lg     16 49 25.7
       comp=Z,1.3nm,0.3s,baz=29,slow=23,SNR=2.3
       comp=Z,3.6nm,0.5s
BORU   Boraas             6.34 343  eP     Pn     16 47 43.0 +0.8
BORU                                eS     Sn     16 48 54.6  -0.6
DRGR                      6.48 136  ⇊P     Pn     16 47 45.1 +0.8
SIRR   Siria              6.48 144  ⇈P     Pn     16 47 44.9 +0.7
CDF    Champ du Feu       6.54 244  ePn    Pn     16 47 44.3  -0.8
CDF                                 eSg    Sg     16 49 34.4  -3.1
       comp=Z,139nm,0.9s
MARR   Marisel-Cluj       6.75 134  ⇈P     Pn     16 47 49.0 +1.0
VIKU   Vikbolandet        6.91   3  eP     Pn     16 47 50.7 +0.6
CJR    Cluj-Napoca        6.94 132  ⇊P     Pn     16 47 51.8 +1.3
BZS    Buzias             7.02 147  ⇈P     Pn     16 47 53.5 +1.9
SURR   Surduc             7.08 144  ⇈P     Pn     16 47 54.3 +1.7
IIGN   Ignalina           7.10  54  eP     Pg     16 48 20.2  -3.3
HINF   Hinteralfeld       7.11 241  ePn    Pn     16 47 53.2 +0.3
HINF                                eSg    Sg     16 49 52.2  -3.5
       comp=Z,66nm,0.9s
BURAR  Bucovina Array     7.14 121  ⇈P     Pn     16 47 54.4 +1.1
NACGM  Naroch             7.20  59  eP     Pn     16 47 55.0 +1.0
       comp=Z,10.0nm,1.1s,baz=247
HAU    Haudompre          7.28 244  ePn    Pn     16 47 55.0  -0.2
HAU                                 eSg    Sg     16 49 56.4  -4.9
       comp=Z,70nm,0.8s
MI28   Mi28,Pidlybu       7.28  91   Pn    Pn     16 47 55.7 +0.5
GIVF   Givet              7.31 262  ePn    Pn     16 47 54.2  -1.4
GIVF                                eSg    Sg     16 49 57.3  -4.9
       comp=Z,99nm,1.4s
KMPD   K-Podol'skiy       7.32 111   Pn    Pn     16 47 56.0 +0.3
IDID   Didziasalis        7.34  56  eP     Pb     16 48 22.0 +6.1
PAGF   Fort de Pagny      7.35 249  ePn    Pn     16 47 55.5  -0.7
       baz=72
PAGF                                eSn    Sn     16 49 13.6  -6.7
PAGF                                eSg    Sg     16 50 00.1  -3.5
       comp=Z,73nm,1.0s
GZR    Gura Zlata         7.63 142  ⇈P     Pn     16 47 60.0  -0.1
MI30   MI30,Zelenitsa     7.64  92   Pn    Pn     16 48 00.4 +0.3
SAVF   Savonnieres en     7.68 251  ePn    Pn     16 48 00.3  -0.3
       baz=68
SAVF                                eSg    Sg     16 50 09.8  -4.2
       comp=Z,95nm,1.2s
BAIF   Baives             7.70 263  ePn    Pn     16 47 58.7  -2.2
BAIF                                eSg    Sg     16 50 09.8  -5.0
       comp=Z,66nm,1.2s
MEZF   Maizieres J'vi     7.77 251  ePn    Pn     16 48 00.8  -1.1
       baz=71
MEZF                                eSg    Sg     16 50 13.3  -3.8
       comp=Z,153nm,1.5s
SFTF   Sexfontaines       7.92 249  ePn    Pn     16 48 01.8  -2.2
       baz=67
SFTF                                eSg    Sg     16 50 17.8  -4.1
       comp=Z,116nm,1.3s
CABF   La Chapelle        8.26 237  ePg    Pg     16 48 45.1  -0.8
CABF                                eSg    Sg     16 50 28.2  -4.7
       comp=Z,262nm,1.5s
AKASG  Malin Array Be     8.29  91   Pn    Pn     16 48 07.6  -1.4
       comp=Z,3.2nm,0.3s,baz=279,slow=12,SNR=22
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AKASG                                Pg    Pb     16 48 29.1  -2.9
       comp=Z,1.3nm,0.3s,baz=285,slow=15,SNR=5.1
AKASG                                Sn    Sn     16 49 32.7   -11
       comp=Z,0.1nm,0.3s,baz=352,slow=34,SNR=0.9
AKASG                                Lg    Lg     16 50 35.6
       comp=Z,0.4nm,0.3s,baz=273,slow=26,SNR=4.0
       comp=Z,3.9nm,0.6s
MTSE   Matsula            8.36  29  eP     Pn     16 48 10.7 +0.7
HFS    Hagfors            8.65 352   Pn    Pn     16 48 13.8  -0.1
       comp=Z,0.4nm,0.3s,baz=160,slow=15,SNR=15
HFS                                  Sn    Sn     16 49 48.5  -3.5
       comp=Z,0.3nm,0.3s,baz=170,slow=27,SNR=1.9
HFS                                  Lg    Lg     16 50 47.8
       comp=Z,0.6nm,0.3s,baz=166,slow=26,SNR=2.2
       comp=Z,0.9nm,0.3s
LPL    La Plagne          8.71 229  ePn    Pn     16 48 12.4  -2.6
AAL    Aland              8.86  13  eP     Pn     16 48 17.2 +0.5
MLR    Muntele Rosu       8.94 129  ⇈P     Pn     16 48 18.8 +0.7
LOR    Lormes             9.09 246  ePn    Pn     16 48 19.1  -0.9
       baz=65
LOR                                 eSg    Sn     16 50 53.7   +51
       comp=Z,46nm,1.1s
MBDF   Montbardon         9.29 226  eP     Pn     16 48 25.4 +2.5
MBDF                                eSg    Sn     16 50 58.4   +50
       comp=Z,117nm,1.6s
SSF    Saint Saulge       9.40 246  ePn    Pn     16 48 23.0  -1.3
SSF                                 eSg    Sn     16 51 03.8   +53
       comp=Z,88nm,1.4s
SMF    Signal de Mont     9.46 243  ePg    Pn     16 49 04.7   +40
SMF                                 eSg    Sn     16 51 05.3   +53
       comp=Z,32nm,0.9s
ORIF   Oris-en-Rattie     9.56 229  ePn    Pn     16 48 24.5  -2.0
AVF    Avril sur Loir     9.64 245  ePn    Pn     16 48 26.0  -1.6
AVF                                 eSg    Sn     16 51 10.7   +54
       comp=Z,93nm,1.6s
SBF    Sospel             9.71 220  ePn    Pn     16 48 26.0  -2.5
MEF    Metsahovi          9.79  25  eP     Pn     16 48 30.6 +1.2
NOA    NORSAR Array B     9.83 346   Pn    Pn     16 48 28.1  -2.0
       baz=174,slow=13,SNR=8.3
NOA                                  Sn    Sn     16 50 14.2  -6.9
       baz=216,slow=24,SNR=1.7
NOA                                  Lg    Lg     16 51 21.9
       baz=200,slow=12,SNR=4.2
       comp=Z,0.2nm,0.4s
RAF    Rauma              9.94  16  eP     Pn     16 48 30.9  -0.6
VIVF   Saint-Julien-l    10.19 233  ePn    Pn     16 48 32.3  -2.8
VIVF                                eSg    Sn     16 51 26.4   +56
       comp=Z,184nm,1.9s
PGF    Pioggiola         10.28 211  ePn    Pn     16 48 34.4  -2.0
PGF                                 eSg    Sn     16 51 28.8   +56
       comp=Z,9.8nm,0.5s
LMR    La Mourre         10.52 222  ePn    Pn     16 48 38.7  -0.9
LASF   Ste Croix         11.16 232  ePn    Pn     16 48 44.8  -3.6
FINES  FINESS Array B    11.27  25   Pn    Pn     16 48 48.5  -1.2
       comp=Z,0.7nm,0.3s,baz=207,slow=11,SNR=27
FINES                                Sn    Sn     16 50 48.3  -7.9
       comp=Z,0.6nm,0.3s,baz=221,slow=20,SNR=5.1
FINES                                Lg    Lg     16 52 09.5
       comp=Z,0.2nm,0.3s,baz=200,slow=24,SNR=1.5
       comp=Z,1.4nm,0.3s
CAF    Calviac           11.50 240  eP     Pn     16 48 56.7 +3.7
RJF    Les Rejaudoux     11.56 243  ePn    Pn     16 48 51.0  -2.8
RJF    Les Rejaudoux     11.56 243  ePg    Pn     16 49 41.8   +48
EKA    Eskdalemuir Ar    12.06 296   Pn    Pn     16 48 57.8  -2.9
       baz=102,slow=14
EKA                                  Sn    Sn     16 51 06.0   -10
       baz=103,slow=25
LFF    La Frestale       12.21 243  ePn    Pn     16 49 00.1  -2.7
LFF    La Frestale       12.21 243  ePg    Pn     16 49 54.7   +52
MTLF   Montolieu         12.51 234  ePn    Pn     16 49 03.8  -3.0
EPF    Esparros          13.70 237  ePn    Pn     16 49 19.5  -3.6
BELG   Belogornoye       19.34  75  P      Pn     16 50 35.3   0.0
       comp=Z,0.5nm,0.3s,baz=263,slow=3.6,SNR=3.7
       comp=Z,5.5nm,0.7s
KVAR   Kislovodsk Arr    19.36 103  Pn     P      16 50 33.2  -1.5
       baz=270,slow=10
       comp=Z,1.6nm,0.7s
ARU    Arti              25.09  62  P      P      16 51 34.6 +1.0
       comp=Z,2.2nm,0.6s,baz=295,slow=14,SNR=3.8
       comp=Z,2.2nm,0.6s
AKTO   Aktyubinsk        26.12  76  P      P      16 51 44.1 +1.1
       comp=Z,1.8nm,0.7s,baz=282,slow=8.3,SNR=5.1
       comp=Z,1.8nm,0.7s
TORD   Torodi Ar. Bea    40.10 202  P      P      16 53 45.1 +0.2
       comp=Z,0.5nm,0.8s,baz=10,slow=8.6,SNR=3.7
       comp=Z,0.5nm,0.8s
ZALV   Zalesovo Beam     40.14  59  P      P      16 53 46.7 +1.8
       comp=Z,0.2nm,0.3s,baz=310,slow=6.8,SNR=1.7
       comp=Z,0.2nm,0.3s
MKAR   Makanchi Array    42.17  69  P      P      16 54 02.8 +1.0
       comp=Z,0.4nm,0.7s,baz=294,slow=3.9,SNR=5.2
       comp=Z,0.4nm,0.7s
SONM   Songino Array     54.85  55  P      P      16 55 41.5 +2.0
       comp=Z,0.6nm,0.8s,baz=300,slow=11,SNR=6.1
       comp=Z,0.6nm,0.8s
YKA    Yellowknife Ar    59.76 336  P      P      16 56 15.6 +1.8
       comp=Z,0.8nm,0.7s,baz=30,slow=6.5,SNR=12
       comp=Z,0.8nm,0.7s
KLR    Kul'dur           65.57  40  P      P      16 56 53.7 +0.9
       comp=Z,1.0nm,0.7s,baz=327,slow=8.7,SNR=3.8
       comp=Z,1.0nm,0.7s
CMAR   Chiang Mai Arr    71.34  84  P      P      16 57 29.7 +0.4
       comp=Z,0.4nm,0.6s,baz=321,slow=7.0,SNR=2.8
       comp=Z,0.4nm,0.6s
TXAR   Lajitas Array     83.65 310  P      P      16 58 40.0 +1.9
       comp=Z,0.5nm,0.8s,baz=49,slow=2.3,SNR=4.6
       comp=Z,0.5nm,0.8s
ASAR   Alice Springs    125.35  84  PKP    PKPdf  17 05 10.2  -0.1
       comp=Z,0.3nm,0.8s,baz=359,slow=3.7,SNR=2.7
```

IDC 04 16:46:13.4±6.9**, 23.°56S**×**179.°71E, h0**^{km}**, mb3.6**/2**, mbtmp3.6**/2**, Error ellipse: s-maj=327.3km s-min=72.3km az=154.0, South of Fiji Islands**

```
Code   Station Name        Δ°   AZ°   Phase ID        Time        Res
                                     Op     ISC      h  m  s     ISC
ASAR   Alice Springs     41.83 260   P      P       16 54 05.5  +0.1
       0.5nm,0.8s,baz=97,slow=7.6,SNR=12
       0.5nm,0.8s
WRA    Warramunga Arr    42.17 266   P      P       16 54 07.7  -0.4
       0.6nm,0.4s,baz=103,slow=8.3,SNR=13
       0.6nm,0.4s
BRTR   Keskin Array B   147.17 307   PKPbc  PKPbc   17 05 58.2  -0.7
       0.2nm,0.4s,baz=65,slow=3.8,SNR=2.3
```

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*KRSC **04** 16:47:24.0±1.3, 56.°05N×164.°75E, h61^{km}±19^{km}, Ml4.3*

*IDC **04** 16:47:23.3±1.1, 56.°13N×164.°54E, h0^{km}, mb3.7/12, mbtmp3.8/14, ML3.9/2, MS3.2/13, Error ellipse: s-maj=22.9km s-min=14.9km az=122.0*

*MOS **04** 16:47:25.7±0.9, 56.°05N×164.°80E, h38^{km}, mb4.2/8, Error ellipse: s-maj=7.5km s-min=5.2km az=56.8*

*NEIC **04** 16:47:25.9±1.7, 55.°9N±0.°2×165.°3E±0.°2, h36^{km}±14^{km}, mb4.3/6, Error ellipse: s-maj=27.0km s-min=14.5km az=147.0*

ISC 04 16:47:25.7±1.2**, 56.°07N**±0.°04×**164.°85E**±0.°04**, h37**^{km}±2^{km}**, n136,** σ1.^{s}55/125**, mb3.8**/16**, MS3.3**/11**, 2C-5D, Komandorsky Islands region**

```
Code   Station Name        Δ°   AZ°   Phase ID        Time        Res
                                     Op     ISC      h  m  s     ISC
BKI    Bering             1.07 143    PN    Pn      16 47 44.5  +0.4
BKI                                   S     Sn      16 47 58.3  +0.6
BKI    Bering             1.07 143   eP     Pn      16 47 44.5  +0.4
BKI                                  eS     Sn      16 47 58.3  +0.6
KBTR   Krutoberegovo      1.15 278    PN    Pn      16 47 43.6  -1.6
KBTR                                  S     Sn      16 47 57.7  -1.9
KBTR   Krutoberegovo      1.15 278   eP     Pn      16 47 43.6  -1.6
KBTR                                 eS     Sn      16 47 57.7  -1.9
KBG    Krutoberegovo      1.22 280    PN    Pn      16 47 44.6  -1.5
KBG                                   S     Sn      16 47 59.7  -1.6
KBG    Krutoberegovo      1.22 280   eP     Pn      16 47 44.6  -1.5
KBG                                  eS     Sn      16 47 59.7  -1.6
SMKR   Semkarok           1.95 287    PN    Pn      16 47 57.0  +0.7
SMKR                                  S     Sn      16 48 18.6  -1.0
SMKR   Semkarok           1.95 287   eP     Pn      16 47 57.0  +0.7
SMKR                                 eS     Sn      16 48 18.6  -1.0
SRKR   Sorokina           2.13 288    PN    Pn      16 47 59.8  +1.0
SRKR                                  S     Sn      16 48 25.8  +1.8
SRKR   Sorokina           2.13 288   eP     Pn      16 47 59.8  +1.0
SRKR                                 eS     Sn      16 48 25.8  +1.8
CIRR   Tsirk              2.30 273    PN    Pn      16 48 02.5  +1.3
CIRR   Tsirk              2.30 273   eP     Pn      16 48 02.5  +1.3
BZGR   Bezymyannyi-Gr     2.34 269    PN    Pn      16 48 02.7  +1.1
```

BZGR	**Bezymyannyi-Gr**	**2.34**	**269**	*e*P	**Pn**	**16 48 02.7**	**+1.1**
KLY	**Klyuchi**	**2.36**	**278**	PN	**Pn**	**16 48 01.2**	**-0.6**
KLY				S	**Sn**	**16 48 28.0**	**-1.5**
KLY	**Klyuchi**	**2.36**	**278**	*e*P	**Pn**	**16 48 01.2**	**-0.6**
KLY				*e*S	**Sn**	**16 48 28.0**	**-1.5**
BZP	**Bezymyannyi-Pe**	**2.43**	**268**	*e*P	**Pn**	**16 48 04.0**	**+1.1**
BZWR	**Bezymyannyi-We**	**2.45**	**269**	PN	**Pn**	**16 48 04.7**	**+1.5**
BZWR	**Bezymyannyi-We**	**2.45**	**269**	*e*P	**Pn**	**16 48 04.7**	**+1.5**
BZMR	**Bezymyannaya**	**2.45**	**269**	PN	**Pn**	**16 48 04.5**	**+1.2**
BZMR	**Bezymyannaya**	**2.45**	**269**	*e*P	**Pn**	**16 48 04.5**	**+1.2**
KIRR	**Kirishev**	**2.53**	**269**	PN	**Pn**	**16 48 06.0**	**+1.6**
KIRR				S	**Sn**	**16 48 34.1**	**+0.1**
KIRR	**Kirishev**	**2.53**	**269**	*e*P	**Pn**	**16 48 06.0**	**+1.6**
KIRR				*e*S	**Sn**	**16 48 34.1**	**+0.1**
KPT	**Kopyto**	**2.60**	**270**	PN	**Pn**	**16 48 06.5**	**+1.3**
KPT	**Kopyto**	**2.60**	**270**	*e*P	**Pn**	**16 48 06.5**	**+1.3**
KMNR	**Kamenistaya**	**2.62**	**265**	PN	**Pn**	**16 48 07.5**	**+2.0**
KMNR	**Kamenistaya**	**2.62**	**265**	*e*P	**Pn**	**16 48 07.5**	**+2.0**
TUMD	**Tumrok D**	**2.67**	**253**	*e*P	**Pn**	**16 48 07.4**	**+1.3**
TUMD				*e*S	**Sn**	**16 48 36.7**	**-0.4**
TUMR	**Tumrok**	**2.78**	**256**	PN	**Pn**	**16 48 07.4**	**-0.3**
TUMR	**Tumrok**	**2.78**	**256**	*e*P	**Pn**	**16 48 09.6**	**+1.9**
KOZ	**Kozyrevsk**	**2.79**	**272**	PN	**Pn**	**16 48 10.0**	**+2.2**
KOZ	**Kozyrevsk**	**2.79**	**272**	*e*P	**Pn**	**16 48 09.9**	**+2.2**
SRDR	**Sredinnyy**	**2.88**	**277**	PN	**Pn**	**16 48 10.9**	**+1.9**
SRDR				S	**Sn**	**16 48 44.3**	**+1.9**
SRDR	**Sredinnyy**	**2.88**	**277**	*e*P	**Pn**	**16 48 10.9**	**+1.9**
SRDR				*e*S	**Sn**	**16 48 44.3**	**+1.9**
OSSR	**Ossora**	**3.34**	**344**	PN	**Pn**	**16 48 15.5**	**+0.3**
OSSR	**Ossora**	**3.34**	**344**	*e*P	**Pn**	**16 48 15.5**	**+0.3**
OSSR				*e*S	**Sn**	**16 48 52.1**	**-1.4**
ESO	**Esso**	**3.46**	**270**	PN	**Pn**	**16 48 18.3**	**+1.4**
ESO	**Esso**	**3.46**	**270**	*e*P	**Pn**	**16 48 18.3**	**+1.4**
PALN	**Palana**	**4.01**	**321**	PN	**Pn**	**16 48 25.0**	**+0.5**
PALN	**Palana**	**4.01**	**321**	*e*P	**Pn**	**16 48 25.0**	**+0.5**
SPN	**Mys Shipunski**	**4.09**	**225**	PN	**Pn**	**16 48 25.1**	**-0.5**
SPN	**Mys Shipunski**	**4.09**	**225**	*e*P	**Pn**	**16 48 25.1**	**-0.5**
SPN				*e*S	**Sn**	**16 49 09.8**	**-2.3**
NLC	**Nalytchevo**	**4.32**	**230**	*e*S	**Sn**	**16 49 17.5**	**-0.2**
TILK	**Tilichiki**	**4.45**	**8**	PN	**Pn**	**16 48 32.2**	**+1.8**
TILK	**Tilichiki**	**4.45**	**8**	*e*P	**Pn**	**16 48 32.2**	**+1.8**
SDLR	**Sedlovina**	**4.45**	**234**	PN	**Pn**	**16 48 32.3**	**+1.6**
SDLR	**Sedlovina**	**4.45**	**234**	*e*P	**Pn**	**16 48 32.3**	**+1.6**
SDLR				*e*S	**Sn**	**16 49 21.3**	**+0.2**
KRER	**Koryakskii**	**4.49**	**235**	PN	**Pn**	**16 48 32.9**	**+1.6**
KRER	**Koryakskii**	**4.49**	**235**	*e*P	**Pn**	**16 48 32.9**	**+1.6**
KRER				*e*S	**Sn**	**16 49 22.1**	**-0.2**
SMAR	**Somma**	**4.50**	**234**	PN	**Pn**	**16 48 33.0**	**+1.6**
SMAR	**Somma**	**4.50**	**234**	*e*P	**Pn**	**16 48 33.0**	**+1.6**
SMAR				*e*S	**Sn**	**16 49 21.0**	**-1.5**
KRX	**Arik**	**4.50**	**236**	PN	**Pn**	**16 48 33.1**	**+1.7**
KRX	**Arik**	**4.50**	**236**	*e*P	**Pn**	**16 48 33.1**	**+1.7**
KRX				*e*S	**Sn**	**16 49 22.3**	**-0.2**
UGLR	**Uglovaya**	**4.52**	**233**	PN	**Pn**	**16 48 33.5**	**+1.9**
UGLR	**Uglovaya**	**4.52**	**233**	*e*P	**Pn**	**16 48 33.5**	**+1.9**
UGLR				*e*S	**Sn**	**16 49 22.6**	**-0.3**
AVH	**Avacha**	**4.52**	**234**	PN	**Pn**	**16 48 33.7**	**+2.1**
AVH	**Avacha**	**4.52**	**234**	*e*P	**Pn**	**16 48 33.7**	**+2.1**
AVH				*e*S	**Sn**	**16 49 22.8**	**-0.1**
KOK	**Koryaka**	**4.55**	**235**	PN	**Pn**	**16 48 33.8**	**+1.8**
KOK	**Koryaka**	**4.55**	**235**	*e*P	**Pn**	**16 48 33.8**	**+1.8**
GNL	**Ganaly**	**4.64**	**242**	PN	**Pn**	**16 48 35.1**	**+1.8**
GNL	**Ganaly**	**4.64**	**242**	*e*P	**Pn**	**16 48 35.1**	**+1.8**
DALK	**Dalny**	**4.67**	**232**	PN	**Pn**	**16 48 34.7**	**+1.1**
DALK	**Dalny**	**4.67**	**232**	*e*P	**Pn**	**16 48 34.7**	**+1.1**
DALK				*e*S	**Sn**	**16 49 24.3**	**-2.1**
PET	**Petropavlovsk**	**4.72**	**232**	Pn	**Pn**	**16 48 35.7**	**+1.5**
PET	**Petropavlovsk**	**4.72**	**232**	PN	**Pn**	**16 48 35.8**	**+1.5**
PET	**Petropavlovsk**	**4.72**	**232**	*e*P	**Pn**	**16 48 35.8**	**+1.5**
PET				*e*S	**Sn**	**16 49 26.7**	**-0.9**
KRMR	**Karymshinskiy**	**5.09**	**233**	PN	**Pn**	**16 48 40.6**	**+1.3**
KRMR	**Karymshinskiy**	**5.09**	**233**	*e*P	**Pn**	**16 48 40.6**	**+1.3**
KRMR				*e*S	**Sn**	**16 49 36.6**	**-0.1**
PEA0B	**Petropavlovsk-**	**5.11**	**238**	Pn	**Pn**	**16 48 41.4**	**+1.8**
PEA0B	**Petropavlovsk-**	**5.11**	**238**	*ce*PN	**Pn**	**16 48 41.5**	**+1.9**
PETK	**Petropavlovsk-**	**5.11**	**238**	Pn	**Pn**	**16 48 39.5**	**-0.1**
	3.2nm,0.3s,baz=69,slow=16,SNR=54						
PETK				Sn	**Sn**	**16 49 40.8**	**+3.6**
	2.0nm,0.3s,baz=49,slow=15,SNR=2.4						
PETK				LR	LR	16 50 23.4	
	comp=Z,67nm,19.8s,baz=50,slow=36						
	2.9nm,0.4s						
PETK	**Petropavlovsk-**	**5.11**	**238**	Pn	**Pn**	**16 48 40.7**	**+1.1**
RUS	**Russkaya**	**5.20**	**228**	*e*S	**Sn**	**16 49 37.6**	**-1.9**
GRL	**Gorelyy**	**5.30**	**231**	PN	**Pn**	**16 48 44.7**	**+2.3**
GRL	**Gorelyy**	**5.30**	**231**	*e*P	Pn	16 48 44.7	+2.4
APC	**Apacha**	**5.48**	**238**	PN	Pn	16 48 47.2	+2.6
APC	**Apacha**	**5.48**	**238**	*e*P	Pn	16 48 47.2	+2.6
KMSK	**Kamenskaya**	**6.46**	**6**	PN	**Pn**	**16 49 00.0**	**+1.9**
KMSK	**Kamenskaya**	**6.46**	**6**	*e*P	**Pn**	**16 48 60.0**	**+1.9**
SKR	**Severo-Kuril's**	**7.50**	**228**	PN	**Pn**	**16 49 14.2**	**+1.8**
SKR	**Severo-Kuril's**	**7.50**	**228**	*e*P	**Pn**	**16 49 14.2**	**+1.8**
SKR				*e*S	**Sn**	**16 50 33.7**	**-2.4**
BILL	**Bilibino**	**12.04**	**3**		Pn	16 50 17.7	+3.3
BILL	**Bilibino**	**12.04**	**3**	*e*PN	Pn	16 50 17.8	+3.4
BILL				pmax	pmax		
	comp=Z,1.0nm,0.2s						
BILL				MLR	MLR		
	comp=Z,91nm,13.0s						
GAMB	**Gambell**	**13.99**	**47**	Pn	**Pn**	**16 50 41.1**	**+0.1**
YSS	**Yuzh-Sakhalins**	**16.44**	**246**	⇓*e*P	**P**	**16 51 13.4**	**-2.2**
JKA	**Kamikawa-asahi**	**18.52**	**239**	P	**Pn**	**16 51 40.6**	**+1.6**
JKA				IAmb	IAmb	16 51 42.4	
	comp=Z,35nm,1.1s						
ASAJ	**Asahikawa**	**18.52**	**239**	P	**Pn**	**16 51 40.5**	**+1.4**
	comp=Z,2.0nm,0.3s,baz=75,slow=6.0,SNR=8.6						
ASAJ				LR	LR	16 58 18.5	
	comp=Z,95nm,19.1s,baz=60,slow=36						
	comp=Z,27nm,1.1s						
ASAJ	**Asahikawa**	**18.52**	**239**	P	**Pn**	**16 51 40.6**	**+1.5**
ASAJ				pmax	pmax		
	comp=Z,35nm,1.1s						
ERM	**Erimo**	**19.88**	**234**	P	**Pn**	**16 51 53.7**	**-1.5**
ERM	**Erimo**	**19.88**	**234**	P	**Pn**	**16 51 53.7**	**-1.5**
ERM				pmax	pmax		
	comp=Z,45nm,1.0s						
KLR	**Kul'dur**	**21.06**	**265**	LR	LR	17 01 19.2	
	comp=Z,38nm,18.0s,baz=26,slow=40						
KLR	**Kul'dur**	**21.06**	**265**	⇑*e*P	**P**	**16 52 06.4**	**+0.2**
KLR				pmax	pmax		
	comp=Z,18nm,4.5s						
TIXI	**Tiksi**	**21.71**	**330**	P	**P**	**16 52 15.6**	**+2.5**
	comp=Z,1.3nm,0.6s,baz=90,slow=22,SNR=7.1						
TIXI				S	Sn	16 56 13.3	-7.8
	comp=Z,1.0nm,0.3s,baz=90,slow=20,SNR=2.6						
TIXI				LR	LR	17 01 27.8	
	comp=Z,54nm,19.6s,baz=52,slow=39						
	comp=Z,1.3nm,0.6s						
TIXI	**Tiksi**	**21.71**	**330**	P	**P**	**16 52 15.8**	**+2.8**
TIXI	**Tiksi**	**21.71**	**330**	⇓*e*P	P	16 52 16.9	+3.9
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.4s						
M20K	**Styx River**	**22.10**	**57**	P	**P**	**16 52 14.4**	**-3.0**
M20K				IAmb	IAmb	16 52 14.9	
	comp=Z,8.2nm,0.7s						
TOLK	**Toolik Lake Re**	**23.91**	**40**	P	**P**	**16 52 38.3**	**+2.6**
TOLK				IAmb	IAmb	16 52 48.8	
	comp=Z,4.2nm,0.7s						
USRK	**Ussuriysk Ar.**	**23.93**	**254**	P	**P**	**16 52 35.8**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=48,slow=14,SNR=5.3						
USRK				LR	LR	17 02 11.0	
	comp=Z,96nm,20.8s,baz=67,slow=37						
	comp=Z,0.5nm,0.4s						
ILAR	**Eielson Array**	**24.76**	**50**	P	P	16 52 47.5	+4.1
	comp=Z,0.9nm,0.5s,baz=264,slow=8.6,SNR=2.0						
	comp=Z,0.9nm,0.5s						
MJA0	**Matsu Arr-Jizo**	**26.54**	**234**	*e*P	P	16 53 02.9	+3.2
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MJAR	**Matsushiro Arr**	**26.55**	**234**	P	**P**	**16 53 01.2**	**+1.4**
	comp=Z,0.7nm,0.4s,baz=47,slow=7.5,SNR=11						
	comp=Z,0.7nm,0.4s						
INK	**Inuvik**	**29.81**	**41**	LR	LR	17 05 45.1	
	comp=Z,66nm,20.1s,baz=238,slow=37						
INK	**Inuvik**	**29.81**	**41**	P	**P**	**16 53 27.2**	**-1.3**
INK				IAmb	IAmb	16 53 30.7	
	comp=Z,4.4nm,0.9s						
INK	**Inuvik**	**29.81**	**41**	P	**P**	**16 53 27.2**	**-1.3**
INK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KSRS	**Korea Array**	**30.89**	**249**	P	P	16 53 40.7	+2.3
	comp=Z,0.7nm,0.6s,baz=34,slow=8.9,SNR=4.3						
KSRS				LR	LR	17 07 20.7	
	comp=Z,20nm,19.2s,baz=45,slow=39						
	comp=Z,0.7nm,0.6s						
KSRS	**Korea Array**	**30.89**	**249**	*e*P	P	16 53 41.5	+3.1
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM	**Songino Array**	**35.95**	**282**	P	P	16 54 24.1	+1.6
	comp=Z,0.2nm,0.4s,baz=61,slow=7.8,SNR=6.6						
	comp=Z,0.2nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**36.31**	**177**	T	T	17 33 22.9	
	baz=357,slow=76,SNR=3.3						
H11N3	**WAKE ISLAND Hy**	**36.32**	**177**	T	T	17 33 27.6	
	baz=357,slow=76,SNR=29						
H11N1	**WAKE ISLAND Hy**	**36.33**	**177**	T	T	17 33 33.9	
	baz=357,slow=76,SNR=5.1						
H11S1	**WAKE ISLAND Hy**	**37.52**	**177**	T	T	17 33 40.5	
	baz=359,slow=74						
H11S3	**WAKE ISLAND Hy**	**37.53**	**177**	T	T	17 33 34.6	
	baz=359						
H11S2	**WAKE ISLAND Hy**	**37.54**	**177**	T	T	17 33 39.9	
	baz=359,slow=74						
YKA	**Yellowknife Ar**	**39.10**	**47**	P	P	16 54 51.0	+2.3
	comp=Z,0.2nm,0.4s,baz=298,slow=8.0,SNR=3.8						
	comp=Z,0.2nm,0.4s						
YKA	**Yellowknife Ar**	**39.10**	**47**	*e*P	P	16 54 50.8	+2.1
SPITS	**Spitsbergen Ar**	**44.64**	**351**	P	P	16 55 36.8	+3.0
	comp=Z,6.8nm,0.8s,baz=71,slow=7.5,SNR=6.5						
	comp=Z,6.8nm,0.8s						
GUMO	**Guam**	**45.10**	**208**	LR	LR	17 10 59.5	
	comp=Z,12nm,20.4s,baz=116,slow=31						
KURK	**Kurchatov**	**48.51**	**302**	⇓*e*P	P	16 56 04.9	+0.5
KURK				pmax	pmax		
	comp=Z,3.0nm,1.6s						
MK31	**Makanchi Array**	**49.35**	**296**	⇓*e*P	P	16 56 12.3	+1.3
MKAR	**Makanchi Array**	**49.35**	**296**	P	P	16 56 12.3	+1.3
	comp=Z,0.2nm,0.4s,baz=56,slow=6.9,SNR=11						
	comp=Z,0.2nm,0.4s						
NVAR	**Mina Array Bea**	**52.21**	**75**	LR	LR	17 16 57.8	
	comp=Z,72nm,18.3s,baz=339,slow=34						
ARU	**Arti**	**53.06**	**318**	P	P	16 56 40.6	+2.0
	comp=Z,1.9nm,0.5s,baz=330,slow=4.1,SNR=4.4						
	comp=Z,1.9nm,0.5s						
ARU	**Arti**	**53.06**	**318**	*d i*P	P	16 56 40.8	+2.2
ARU						16 58 45.7	
ARU				S	S	17 04 08.5	+3.0
ARU				SS	**SKiKP**	**17 07 51.9**	**-1.1**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.8s						
FINES	**FINESS Array B**	**58.44**	**338**	P	P	16 57 19.3	+2.2
	comp=Z,1.1nm,0.8s,baz=32,slow=7.0,SNR=4.2						
FINES				LR	LR	17 27 45.2	
	comp=Z,48nm,18.6s,baz=12,slow=42						
	comp=Z,1.1nm,0.8s						
FINES	**FINESS Array B**	**58.44**	**338**	*e*P	P	16 57 18.1	+1.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BELG	**Belogornoye**	**60.20**	**321**	LR	LR	17 26 59.3	
	comp=Z,40nm,18.8s,baz=160,slow=40						
GUN	**Gumba**	**61.28**	**278**	*e*P	P	16 57 39.7	+2.2
	comp=Z,7.4nm,0.4s						
CMAR	**Chiang Mai Arr**	**61.45**	**261**	P	P	16 57 40.6	+2.3
	comp=Z,0.5nm,0.5s,baz=14,slow=6.3,SNR=5.4						
CMAR				LR	LR	17 25 37.4	
	comp=Z,21nm,19.5s,baz=115,slow=37						
	comp=Z,0.5nm,0.5s						
RAMN	**Ramite**	**61.63**	**277**	*e*P	P	16 57 41.7	+2.0
	comp=Z,6.0nm,0.4s						
PKI	**Pulchoki**	**61.81**	**278**	*e*P	P	16 57 42.9	+1.9
	comp=Z,3.4nm,0.4s						
PKIN	**Phulchoki**	**61.81**	**278**	*e*P	P	16 57 43.1	+2.1
	comp=Z,5.4nm,0.4s						
GKN	**Gorkha**	**61.90**	**279**	*e*P	P	16 57 43.5	+2.1
	comp=Z,4.4nm,0.3s						
DANN	**Dangsing**	**62.12**	**280**	*e*P	P	16 57 45.3	+2.3
	comp=Z,4.2nm,0.4s						
KOLN	**Koldanda**	**62.66**	**280**	*e*P	P	16 57 48.5	+2.0
BRTR	**Keskin Array B**	**75.99**	**323**	*i* P	P	16 59 11.1	+2.3
IDI	**Anoyia**	**82.83**	**328**	LR	LR	17 39 43.6	
	comp=Z,14nm,18.7s,baz=290,slow=38						

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*IDC **04** 17:08:17.2±13.0, 36°.54N×71°.22E, h267^{km}±178^{km}, mb3.2/4, mbtmp3.7/6, MS3.1/1, Error ellipse: s-maj=109.0km s-min=54.6km az=98.0*

*NNC **04** 17:08:20.6±2.5, 37°.09N×71°.23E, h212^{km}±54^{km}, mb1.9, mpv2.9, Error ellipse: s-maj=34.6km s-min=17.4km az=36.0*

ISC 04 17:08:20.8±2.3, **37°.1N**±0°.2×**71°.2E**±0°.2, **h250**^{km}, **n10**, σ**1^{s}29**/10, **mb3.4**/4, **2C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.33**	**20**	⇓P	**Pn**	**17 09 40.5**	**-0.5**
	0.7nm,0.5s						
AML				⇑S	**S**	**17 10 44.1**	**-0.8**
	7.5nm,0.6s						
KK31	**Karatay Array**	**5.98**	**355**	P	**Pn**	**17 09 48.4**	**-0.2**
	0.5nm,0.3s,baz=180,slow=12,SNR=31						
KK31				S	**S**	**17 10 58.7**	**-0.2**
	3.1nm,0.5s,baz=183,slow=17,SNR=17						
MKAR	**Makanchi Array**	**12.66**	**37**	P	**P**	**17 11 15.3**	**+0.7**
	0.2nm,0.3s,baz=219,slow=11,SNR=4.6						
AB31	**Akbulak array**	**14.62**	**329**	⇑P	**P**	**17 11 38.0**	**+1.7**
	0.1nm,0.3s,baz=141,slow=12,SNR=8.5						
ZALV	**Zalesovo Beam**	**19.25**	**25**	P	**P**	**17 12 27.3**	**+0.7**
	0.5nm,0.3s,baz=220,slow=9.6,SNR=4.2						
MMAI	**Mount Meron Ar**	**29.50**	**273**	LR	LR	17 28 26.2	
	comp=Z,37nm,20.2s,baz=242,slow=41						
FINES	**FINESS Array B**	**37.06**	**326**	P	**P**	**17 15 04.9**	**-1.8**
	2.3nm,1.0s,baz=122,slow=12,SNR=2.0						
	2.3nm,1.0s						
ARCES	**ARCESS Array B**	**40.62**	**337**	P	**P**	**17 15 36.4**	**+0.3**
	3.4nm,0.9s,baz=119,slow=9.4,SNR=1.5						
	3.4nm,0.9s						
NOA	**NORSAR Array B**	**43.98**	**323**	P	**P**	**17 16 01.4**	**-1.8**
	0.5nm,0.7s,baz=110,slow=8.0,SNR=1.5						
	0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**65.92**	**268**	P	P	17 18 34.9	-5.5
	0.2nm,0.4s,baz=50,slow=6.8,SNR=4.5						
	0.2nm,0.4s						

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*SSNC **04** 17:13:40.1±1.0, 17°.29N×72°.62W, h26^{km}±459^{km}, MW3.7*

*OSPL **04** 17:13:42.5±1.5, 17°.55N×72°.71W, h0^{km}±8^{km}, ML2.8*

ISC 04 17:13:38.3±2.8, **17°.5N**±0°.1×**72°.76W**±0°.06, **h4**^{km}±13^{km}, **n8**, σ**1^{s}01**/16, **Haiti region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOPE2	**Hotel El Peder**	**1.12**	**59**	*i* P	**Pn**	**17 14 00.8**	**+0.1**
LOPE2				*e*S	**Sg**	**17 14 14.5**	**+0.1**
LOPE2				IAML		17 14 15.4	
	comp=Z,138nm,0.4s						
PAPH	**Port-au-Prince**	**1.15**	**22**	*e*P	**Pg**	**17 14 00.4**	**0.0**
PAPH				*e*S	**Sg**	**17 14 14.8**	**-0.4**
PAPH	**Port-au-Prince**	**1.15**	**22**	*i* P	**Pg**	**17 14 00.6**	**+0.2**
PAPH				*e*S	**Sg**	**17 14 15.0**	**-0.2**
PAPH				IAML		17 14 15.5	
	comp=Z,710nm,0.7s						
PODR	**Polo**	**1.57**	**63**	*i* P	**Pg**	**17 14 08.3**	**-0.1**
PODR				*e*S	**Sn**	**17 14 28.1**	**0.0**
SDDR	**Presa de Saban**	**2.06**	**42**	*i* P	**Pb**	**17 14 15.8**	**-0.5**
SDDR				*e*S	**Sn**	**17 14 40.4**	**+0.5**
SDDR				IAML		17 14 43.6	
	comp=Z,75nm,0.6s						
MASC	**Masc**	**3.05**	**333**	*e*P	**Pn**	**17 14 28.1**	**+0.8**
MASC				*e*S	**Sn**	**17 15 02.6**	**-1.5**
RCC	**Rio Carpintero**	**3.76**	**313**	*e*P	**Pn**	**17 14 37.5**	**+0.5**
RCC				*e*S	**Sn**	**17 15 19.7**	**-2.1**
MOAC	**Moa**	**3.81**	**327**	*e*P	**Pn**	**17 14 39.4**	**+1.7**
MOAC				*e*S	**Sn**	**17 15 24.0**	**+1.0**

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*NIED **04** 17:16:01.5, 32°.59N×130°.73E, h10^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.17; $M_{\theta\theta}$0.70; $M_{\phi\phi}$-0.53; $M_{r\theta}$0.02; $M_{\theta\phi}$2.65; $M_{\phi r}$-0.21; Fault plane solution: $M_0$2.73000×10^{14} NP1:ϕ_s7.00000°, δ89.00000°, λ-176.00000°. NP2:ϕ_s276.00000°, δ86.00000°, λ-1.00000°.*

JMA 04 17:16:01.5±0.1, **32°.6N**±0°.2×**130°.7E**±0°.2, **h10**^{km}, **MV3.7**/20, **2D, SOUTHERN KUMAMOTO PREF, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIU3	**Izumi3**	**0.08**	**120**	*i* P	Pg	17 16 03.8	0.0
JIU3				S	Sg	17 16 05.5	0.0
JTA	**Tamana**	**0.41**	**336**	*i* P	Pg	17 16 09.8	+0.2
JZO	**Okuchi**	**0.46**	**194**	⇓*i*P	Pg	17 16 10.5	0.0
JZO				⇓S	Sg	17 16 16.4	-0.3
JTZ	**Takazaki**	**0.75**	**156**	*i* P	Pb	17 16 16.4	-0.3
JTZ				S	Sb	17 16 26.4	-0.6

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*IDC **04** 17:22:14.3±0.6, 64°.79S×177°.73E, h0^{km}, mb4.1/7, mbtmp4.1/8, ML4.1/1, MS3.8/24, Error ellipse: s-maj=32.7km s-min=18.0km az=50.0*

*NEIC **04** 17:22:16.6±2.6, 64°.93S±0°.05×178°.0E±0°.4, h10^{km}±1^{km}, mb4.8/14, Error ellipse: s-maj=25.5km s-min=8.2km az=94.0*

ISC 04 17:22:16.2±0.5, **64°.94S**±0°.09×**177°.9E**±0°.1, **h10**^{km}, **n82**, σ**1^{s}28**/45, **mb4.6**/11, **MS3.9**/27, **Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBA	**Scott Base**	**13.41**	**190**	Pn	**Pn**	**17 25 26.8**	**+0.6**
VNDA	**Vanda**	**13.56**	**195**	Pn	**Pn**	**17 25 28.3**	**+0.1**
	0.8nm,0.3s,baz=31,slow=15,SNR=19						
VNDA				LR	LR	17 29 24.9	
	comp=Z,234nm,20.9s,baz=28,slow=32						
	3.3nm,0.4s						
VNDA	**Vanda**	**13.56**	**195**		**Pn**	**17 25 28.5**	**+0.2**
RPZ	**Rata Peaks**	**21.61**	**346**	LR	LR	17 33 19.9	
	comp=Z,190nm,21.3s,baz=168,slow=31						
QSPA	**South Pole Qui**	**25.15**	**180**	P	**P**	**17 27 42.5**	**+1.3**
	9.6nm,1.0s,baz=36,slow=5.2,SNR=15						
QSPA				LR	LR	17 36 00.3	
	comp=Z,133nm,19.0s,baz=52,slow=33						
	9.6nm,1.0s						
QSPA	**South Pole Qui**	**25.15**	**180**	P	**P**	**17 27 41.7**	**+0.5**
QSPA				IAmb	IAmb	17 27 51.2	
	comp=Z,21nm,1.2s						
STKA	**Stephens Creek**	**39.87**	**308**	P	**P**	**17 29 47.2**	**-2.5**
	comp=Z,3.0nm,0.8s,baz=158,slow=7.1,SNR=4.2						
STKA				LR	LR	17 42 36.1	
	comp=Z,68nm,18.6s,baz=197,slow=31						
	comp=Z,3.0nm,0.8s						
STKA	**Stephens Creek**	**39.87**	**308**	P	**P**	**17 29 50.7**	**+1.0**
MAW	**Mawson**	**39.95**	**213**	LR	LR	17 46 15.9	
	comp=Z,420nm,20.3s,baz=138,slow=36						
MAW	**Mawson**	**39.95**	**213**	P	**P**	**17 29 51.4**	**+1.4**
PMSA	**Palmer Station**	**42.98**	**146**	LR	LR	17 46 15.6	
	comp=Z,69nm,18.3s,baz=223,slow=33						
OUENC	**Ouen Island, N**	**43.12**	**345**	P	**P**	**17 30 18.6**	**+2.2**
EIDS	**Eidsvold**	**43.16**	**323**	P	**P**	**17 30 19.7**	**+3.0**
DZM	**Mont Dzumac**	**43.51**	**344**	*e*LR	LR	17 42 37.9	
	comp=Z,215nm,22.8s						
DZM	**Mont Dzumac**	**43.51**	**344**	LR	LR	17 45 08.6	
	comp=Z,150nm,21.0s,baz=208,slow=32						
RAR	**Rarotonga**	**46.12**	**29**	LR	LR	17 45 13.0	
	comp=Z,123nm,18.7s,baz=214,slow=30						
TBI	**Tubuai**	**46.67**	**43**	*e*LR	LR	17 43 28.7	
	comp=Z,4µm,25.5s						
TBI				*e*LR	LR	17 43 28.7	
	comp=Z,2µm,29.0s						
TBI	**Tubuai**	**46.67**	**43**	*e*T	T	18 20 23.0	
	comp=Z,22nm,0.3s						
H01W1	**Cape Leeuwin H**	**47.92**	**277**	T	T	18 22 39.5	
	baz=148,slow=76,SNR=20						
H01W2	**Cape Leeuwin H**	**47.93**	**277**	T	T	18 22 42.1	
	baz=148,slow=76,SNR=18						
H01W3	**Cape Leeuwin H**	**47.94**	**277**	T	T	18 22 40.7	
	baz=148,slow=76,SNR=19						
CTA	**Charters Tower**	**49.48**	**320**	LR	LR	17 49 18.4	
	comp=Z,88nm,18.0s,baz=152,slow=33						
ASAR	**Alice Springs**	**50.05**	**304**	P	**P**	**17 31 08.9**	**-1.9**
	comp=Z,1.0nm,0.8s,baz=150,slow=7.5,SNR=9.7						
ASAR				LR	LR	17 50 18.6	
	comp=Z,58nm,19.0s,baz=145,slow=34						
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**50.05**	**304**	P	**P**	**17 31 10.6**	**-0.2**
AFI	**Afiamalu**	**51.46**	**13**	LR	LR	17 52 42.8	
	comp=Z,38nm,18.0s,baz=133,slow=36						
TVO	**Taravao**	**52.00**	**41**	*e*T	T	18 27 01.8	
	comp=Z,4.5nm,0.3s						
PPT2	**Papeete2**	**52.10**	**41**	*e*LR	LR	17 46 00.9	
	comp=Z,321nm,29.0s						
PPT2				*e*LR	LR	17 46 01.2	
	comp=Z,197nm,31.0s						
PPT	**Papeete**	**52.12**	**41**	LR	LR	17 48 00.4	
	comp=Z,73nm,19.0s,baz=176,slow=30						
WRA	**Warramunga Arr**	**53.33**	**306**	P	**P**	**17 31 33.0**	**-2.4**
	comp=Z,1.2nm,0.9s,baz=162,slow=6.3,SNR=7.6						
WRA				LR	LR	17 51 07.5	
	comp=Z,114nm,20.2s,baz=139,slow=33						
	comp=Z,1.2nm,0.9s						
WRAB	**Tennant Creek**	**53.34**	**306**	P	**P**	**17 31 33.2**	**-2.2**
WRAB				IAmb	IAmb	17 32 03.1	
	comp=Z,29nm,1.6s						
WB0	**Warramunga Arr**	**53.48**	**306**	P	**P**	**17 31 34.4**	**-2.0**
WB0				IAmb	IAmb	17 31 51.4	
	comp=Z,47nm,1.9s						
VAH	**Vaihoa**	**54.88**	**42**	*e*T	T	18 30 35.2	
	comp=Z,58nm,0.2s						
COEN	**Coen**	**56.17**	**318**	P	**P**	**17 31 56.5**	**+0.6**
COEN				IAmb	IAmb	17 34 00.1	
	comp=Z,7.1nm,1.1s						
FUNA	**Funafuti**	**56.33**	**2**	P	**P**	**17 31 56.2**	**-0.8**
HNR	**Honiara**	**56.83**	**339**	LR	LR	17 52 23.6	
	comp=Z,1µm,20.9s,baz=174,slow=32						
RPN	**Rapa Nui**	**58.48**	**87**	LR	LR	17 51 06.5	
	comp=Z,222nm,21.1s,baz=200,slow=30						
GIRL	**Giralia**	**58.61**	**284**	P	**P**	**17 32 13.3**	**+0.2**
PMG	**Port Moresby**	**59.46**	**324**	LR	LR	17 53 59.6	
	comp=Z,67nm,20.3s,baz=70,slow=32						
MTN	**Manton Dam**	**61.02**	**306**	P	**P**	**17 32 31.1**	**+1.4**
PLCA	**Paso Flores**	**62.02**	**127**	P	**P**	**17 32 36.6**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=202,slow=6.7,SNR=7.4						
PLCA				LR	LR	17 53 39.3	
	comp=Z,36nm,18.0s,baz=198,slow=30						
	comp=Z,2.8nm,0.8s						
PLCA	**Paso Flores**	**62.02**	**127**	P	**P**	**17 32 37.4**	**+1.1**
PLCA				IAmb	IAmb	17 32 38.2	
	comp=Z,6.3nm,1.1s						
TAOE	**Nuku Hiva Isla**	**63.16**	**48**	*e*LR	LR	17 51 05.7	
	comp=Z,205nm,29.4s						
H03S2	**Juan Fernandez**	**65.13**	**117**	T	T	18 44 30.5	
	baz=205,slow=74,SNR=18						
H03S1	**Juan Fernandez**	**65.13**	**117**	T	T	18 44 35.2	
	baz=205,slow=74,SNR=15						
H03S3	**Juan Fernandez**	**65.14**	**117**	T	T	18 44 36.1	
	baz=205,slow=74,SNR=15						
H03N3	**Juan Fernandez**	**65.47**	**117**	T	T	18 44 59.9	
	baz=157,slow=74,SNR=8.1						
H03N2	**Juan Fernandez**	**65.48**	**117**	T	T	18 44 58.4	
	baz=157,slow=74,SNR=14						
H03N1	**Juan Fernandez**	**65.48**	**117**	T	T	18 45 11.2	
	baz=157,slow=74,SNR=7.3						
TRQA	**Tornquist**	**67.26**	**132**	P	**P**	**17 33 10.6**	**+0.1**
TRQA				IAmb	IAmb	17 33 11.7	
	comp=Z,8.2nm,0.9s						
FAKI	**Fak Fak**	**69.93**	**311**	P	**P**	**17 33 28.5**	**+1.1**
KAPI	**Kappang**	**72.39**	**297**	LR	LR	18 03 27.1	
	comp=Z,45nm,18.3s,baz=177,slow=34						
CPUP	**Villa Florida**	**79.57**	**131**	P	**P**	**17 34 22.9**	**-0.2**
	comp=Z,2.7nm,0.9s,baz=213,slow=9.2,SNR=5.2						
	comp=Z,2.7nm,0.9s						
SUR	**Sutherland**	**81.36**	**199**	LR	LR	18 08 15.9	
	comp=Z,57nm,19.8s,baz=168,slow=34						
BOSA	**Boshof**	**84.35**	**204**	LR	LR	18 09 05.0	
	comp=Z,120nm,21.6s,baz=186,slow=33						
LPAZ	**La Paz**	**85.07**	**118**	P	**P**	**17 34 53.4**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=269,slow=4.2,SNR=1.8						
	comp=Z,1.0nm,0.7s						
NNA	**Nana**	**85.58**	**109**	LR	LR	18 06 02.4	
	comp=Z,48nm,18.2s,baz=207,slow=31						
LBTB	**Lobatse**	**87.81**	**205**	LR	LR	18 11 48.3	
	comp=Z,177nm,19.9s,baz=180,slow=34						
ATAH	**Atahualpa**	**89.34**	**105**	LR	LR	18 06 25.2	
	comp=Z,90nm,19.6s,baz=220,slow=30						
H08S2	**Diego Garcia H**	**89.58**	**253**	T	T	19 14 59.0	
	baz=155,slow=76,SNR=11						
H08S1	**Diego Carcia H**	**89.58**	**253**	T	T	19 14 59.7	
	baz=155,slow=76,SNR=10						
H08S3	**Diego Garcia H**	**89.59**	**253**	T	T	19 15 01.1	
	baz=155,slow=76,SNR=16						
JOW	**Kunigami**	**99.18**	**316**	LR	LR	18 17 53.5	
	comp=Z,21nm,19.6s,baz=26,slow=34						
PALK	**Pallekele**	**99.60**	**267**	LR	LR	18 13 32.6	
	comp=Z,70nm,18.7s,baz=246,slow=31						
H02S1	**DAWSON INLET T**	**123.83**	**33**	T	T	19 57 07.5	
	SNR=9.4						
TORD	**Torodi Ar. Bea**	**128.21**	**185**	PKP	**PKPdf**	**17 41 22.2**	**-0.2**

	comp=Z,0.6nm,0.9s,baz=225,slow=1.4,SNR=3.7						
ILAR	Eielson Array	131.93	19	PKP	PKPdf	17 41 27.4	-0.6
	comp=Z,0.1nm,0.5s,baz=207,slow=3.7,SNR=2.1						
MKAR	Makanchi Array	133.31	290	PKP	PKPdf	17 41 30.2	-0.9
	comp=Z,0.1nm,0.5s,baz=215,slow=4.8,SNR=1.7						
ABKAR	Akbulak array	144.52	274	PKPdf	PKPab	17 41 48.0	-1.9
ABKAR	Akbulak array	144.52	274	PKPdf	PKPab	17 41 49.0	-0.9
AKH	Akhalkalaki	145.12	250		PKPbc	17 41 50.3	-2.3
IDI	Anoyia	146.19	222	PKPbc	PKPbc	17 41 55.7	-0.3
	comp=Z,7.0nm,1.0s,baz=78,slow=13,SNR=6.8						
AKTO	Aktyubinsk	146.23	274	PKPbc	PKPab	17 41 55.8	-0.5
	comp=Z,2.2nm,0.8s,baz=112,slow=5.1,SNR=4.1						
KBZ	Khabaz	147.30	252	PKPbc	PKPbc	17 41 59.2	+0.5
	comp=Z,2.9nm,1.0s,baz=148,slow=8.7,SNR=3.9						
BR131	Keskin Array S	147.41	237		PKPdf	17 41 56.2	-0.7
BRTR	Keskin Array B	147.41	237	PKPbc	PKPbc	17 41 58.8	-0.6
	comp=Z,1.9nm,1.0s,baz=158,slow=3.6,SNR=9.0						
BRTR	Keskin Array B	147.41	237		PKPdf	17 41 56.1	-0.8
KIV	Kislovodsk	147.58	252		PKPdf	17 41 57.4	+0.5
NRIK	Noril'sk	147.86	318	PKPbc	PKPbc	17 41 59.2	-0.3
	comp=Z,2.4nm,0.9s,baz=138,slow=4.5,SNR=3.8						
NRIK	Noril'sk	147.86	318	PKPdf	PKPbc	17 41 58.6	-0.9
RES	Resolute Bay	150.07	32	PKPbc	PKPbc	17 42 03.9	-1.0
	comp=Z,0.9nm,0.6s,baz=190,slow=6.6,SNR=3.9						
RES				PKPab	PKPab	17 42 11.1	+0.1
	comp=Z,2.6nm,1.0s,baz=152,slow=2.1,SNR=4.8						
ARU	Arti	150.25	283	PKPbc	PKPbc	17 42 05.5	-0.4
	comp=Z,0.9nm,0.3s,baz=225,slow=5.7,SNR=3.8						
ESDC	Sonseca Array	154.68	177	PKP	PKPdf	17 42 06.2	-1.7
	comp=Z,0.7nm,1.0s,baz=352,slow=9.4,SNR=1.5						
ESDC				PKPab	PKPab	17 42 30.3	-1.1
	comp=Z,1.2nm,0.9s,baz=172,slow=5.4,SNR=4.3						

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*JMA **04** 17:29:07.8±0.1, 33°.3N±0°.3×131°.7E±0°.4, h91^{km}, MV3.1/40, IYONADA SETONAIKAI*

*IDC **04** 17:29:07.3±1.0, 33°.16N×131°.48E, h96^{km}±6^{km}, mb3.0/7, mbtmp3.4/10, Error ellipse: s-maj=23.5km s-min=17.5km az=77.0*

ISC 04 17:29:07.1±0.7, **33°.27N**±0°.05×**131°.65E**±0°.04, **h95**^{km}±5^{km}, **n27**, σ**1^{s}01**/38, **mb3.4**/7, **Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OIT2	Oita 2	0.17	273	P	Pn	17 29 20.9	+0.3
OIT2				*e*S	Sn	17 29 30.8	+0.1
JBEP	Beppuamama	0.21	288	P	Pn	17 29 20.9	+0.1
JBEP				*e*S	Sn	17 29 30.9	0.0
JUS	Usuki	0.22	158	*i* P	Pn	17 29 21.1	+0.4
JUS				S	Sn	17 29 30.6	-0.3
JKI	Kunimi	0.37	349	*i* P	Pn	17 29 21.7	+0.2
JKI				S	Sn	17 29 31.9	-0.2
JNU	Nakatsue	0.67	257	P	Pn	17 29 23.8	0.0
	244nm,0.3s,baz=82,slow=3.4,SNR=1941						
JNU				S	Sn	17 29 36.1	-0.1
	560nm,0.5s,baz=194,slow=14,SNR=39						
JNU	Nakatsue	0.67	257	P	Pn	17 29 24.1	+0.3
JNA	Nagahama	0.75	67	*i* P	Pn	17 29 24.7	+0.2
JNA				S	Sn	17 29 37.6	+0.1
UWA2	Uwa jima 2	0.82	94	*i* P	Pn	17 29 25.1	-0.1
UWA2				S	Sn	17 29 38.5	-0.3
JIU3	Izumi3	1.01	225	P	Pn	17 29 27.7	+0.5
JIU3				S	Sn	17 29 42.2	-0.1
JTO	Tosashimizu	1.05	113	*i* P	Pn	17 29 27.5	-0.2
JTO				S	Sn	17 29 42.5	-0.6
JTZ	Takazaki	1.45	199	*i* P	Pn	17 29 33.3	+0.9
JTZ				S	Sn	17 29 52.5	+0.9
JHT	Toyohira	1.53	25	*i* P	Pn	17 29 34.2	+0.7
JHT				S	Sn	17 29 53.9	+0.4
JMN	Monobe	1.92	76	P	Pn	17 29 39.0	+0.5
JHS	Saijyo	2.11	35	P	Pn	17 29 41.6	+0.6
JTU	Tsushima	2.25	304	P	Pn	17 29 42.5	-0.3
INU	Inuyama	4.90	63	P	Pn	17 30 20.0	+1.6
KSRS	Korea Array	5.17	325	P	Pn	17 30 22.9	+0.8
	1.2nm,0.4s,baz=145,slow=14,SNR=11						
MJAR	Matsushiro Arr	6.30	57	P	Pn	17 30 40.1	+2.7
	3.1nm,0.3s,baz=238,slow=14,SNR=42						
MJAR				S	Sn	17 31 44.1	-3.8
	1.5nm,0.7s,baz=219,slow=15,SNR=2.1						
KLR	Kul'dur	15.95	0	P	P	17 32 48.6	+1.0
	1.1nm,0.7s,baz=113,slow=6.3,SNR=3.5						
SONM	Songino Array	23.94	315	P	P	17 34 13.2	+0.7
	1.2nm,0.9s,baz=130,slow=10,SNR=8.7 1.2nm,0.9s						
MKAR	Makanchi Array	39.50	305	P	P	17 36 27.8	-0.6
	0.2nm,0.6s,baz=86,slow=2.0,SNR=1.7 0.2nm,0.6s						
BVAR	Borovoye Array	47.28	314	P	P	17 37 30.5	-0.3
	0.3nm,0.5s,baz=108,slow=9.8,SNR=2.3 0.3nm,0.5s						
WRA	Warramunga Arr	52.98	177	P	P	17 38 13.8	-0.3
	0.4nm,0.9s,baz=358,slow=7.6,SNR=1.1 0.4nm,0.9s						
OHAK	Old Harbor	54.86	40	P	P	17 38 21.7	-5.7
ASAR	Alice Springs	56.66	178	P	P	17 38 39.8	-0.8
	0.3nm,0.8s,baz=0.6,slow=6.6,SNR=8.2 0.3nm,0.8s						
FINES	FINESS Array B	68.24	330	P	P	17 39 56.2	-1.1
	0.5nm,0.6s,baz=57,slow=6.3,SNR=1.2 0.5nm,0.6s						
YKA	Yellowknife Ar	70.92	27	P	P	17 40 14.7	+1.0
	0.1nm,0.4s,baz=309,slow=6.6,SNR=4.3 0.1nm,0.4s						

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*NEIC **04** 17:36:38.7±1.9, 24°.97S±0°.10×179°.7E±0°.1, h490^{km}±7^{km}, mb4.7/62, Error ellipse: s-maj=15.8km s-min=13.8km az=83.0*

*NOU **04** 17:36:39.7, 24°.90S×179°.91E, h520^{km}, mb4.8/49, South of Fiji Islands*

*IDC **04** 17:36:40.5±1.0, 24°.83S×179°.53E, h507^{km}±8^{km}, mb3.9/17, mbtmp4.8/19, Error ellipse: s-maj=11.9km s-min=11.7km az=133.0*

ISC 04 17:36:39.8±0.4, **24°.92S**±0°.05×**179°.62E**±0°.07, **h507**^{km}, **n240**, σ**1^{s}45**/262, **mb4.7**/79, **1C-2D**, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	4.83	154	P	P	17 38 06.0	+0.5
GLKZ	Green Lake	4.85	154	P	P	17 38 07.6	+1.9
GLKZ				S	S	17 39 15.3	-0.6
LKBA	Tubou, Lakemba	6.81	13	P	P	17 38 24.5	0.0
MSVF	Nonsavu	7.30	348	P	P	17 38 28.8	-0.7
	40nm,0.6s,baz=154,slow=10,SNR=26						
MSVF				S	S	17 39 57.6	-1.6
	10nm,0.9s,baz=208,slow=9.5,SNR=1.3						
MSVF	Nonsavu	7.30	348	P	P	17 38 27.8	-1.7
MSVF				S	S	17 39 58.1	-1.1
MSVF	Nonsavu	7.30	348	P	P	17 38 28.9	-0.6
TAVE	Taveuni	8.18	3	P	P	17 38 39.2	+0.8
YSA	Yasawairara	8.40	346	P	P	17 38 40.6	-0.1
NIUE	Niue	11.30	61	P	P	17 39 09.4	-1.7
PINNC	Pines Island,	11.38	279	P	P	17 39 12.6	+0.7
OUENC	Ouen Island, N	11.97	279	P	P	17 39 18.1	-0.1
LIFNC	LIFOU	12.14	287	P	P	17 39 17.8	-2.1
ONTNC	Ouen Toro	12.35	279	P	P	17 39 19.6	-2.6
DZM	Mont Dzumac	12.42	281	P	P	17 39 23.1	+0.1
	41nm,1.0s,baz=79,slow=15,SNR=15						
DZM	Mont Dzumac	12.42	281		P	17 39 22.6	-0.4
DZM	Mont Dzumac	12.42	281	P	P	17 39 25.1	+2.1
NOUC	Port Laguerre	12.54	280	P	P	17 39 26.6	+2.5
MXZ	Matakaoa Point	12.65	185	P	P	17 39 23.9	-1.2
HAZ	Te Kaha	12.89	187	P	P	17 39 27.8	+0.2
HAZ				S	S	17 41 48.5	+2.6
PKGZ	Pakihiroa	12.99	185	P	P	17 39 29.5	+0.8
RUGZ	Raukumara Rang	13.11	187	P	P	17 39 29.7	-0.3
RUGZ				S	S	17 41 52.0	+1.7
PUZ	Puketiti	13.16	185	P	P	17 39 30.0	-0.5
PUZ				S	S	17 41 46.4	-4.7
TOZ	Tahuroa Road	13.24	194	P	P	17 39 33.3	+2.0
TWGZ	Tauwhareparae	13.29	186	P	P	17 39 33.1	+1.3
TWGZ				S	S	17 41 49.3	-4.4
URZ	Urewera	13.47	189	P	P	17 39 31.4	-2.3
	8.2nm,0.3s,baz=349,slow=4.2,SNR=29						
URZ				S	S	17 41 53.3	-3.7
	8.0nm,0.6s,baz=295,slow=22,SNR=8.8						
URZ	Urewera	13.47	189	P	P	17 39 33.0	-0.7
URZ	Urewera	13.47	189	P	P	17 39 31.2	-2.4
URZ				S	S	17 41 53.2	-3.7
MWZ	Matawai	13.49	187	P	P	17 39 33.2	-0.8
MWZ				S	S	17 41 54.2	-3.4
CNGZ	Carnagh Statio	13.57	185	P	P	17 39 35.8	+1.0
CNGZ				S	S	17 41 56.7	-2.3
AFI	Afiamalu	13.62	38	P	P	17 39 30.5	-5.3
	16nm,0.6s,baz=243,slow=18,SNR=4.7						
AFI				S	S	17 41 49.6	-11
	6.7nm,0.3s,baz=219,slow=22,SNR=1.3						
MUGZ	Murupara	13.73	189	P	P	17 39 35.5	-0.9
TLZ	Tolley Road	13.81	194	P	P	17 39 40.5	+3.2
RIGZ	Rimuhau	13.83	186	P	P	17 39 37.3	-0.2
RIGZ				S	S	17 42 00.7	-3.4
RTZ	Ruatahuna	13.84	189	P	P	17 39 35.5	-2.2
RTZ					S	17 42 01.9	-2.3
RTZ	Ruatahuna	13.84	189	P	P	17 39 37.5	-0.1
RTZ				S	S	17 42 03.0	-1.2
SNGZ	Shannon Statio	13.95	187	P	P	17 39 38.6	-0.2
SNGZ				S	S	17 42 05.2	-1.2
MTHZ	Maungataniwha	14.09	189	P	P	17 39 40.5	+0.2
MTHZ				S	S	17 42 04.7	-4.4
RAHZ	Arahi	14.12	188	P	P	17 39 40.1	-0.5
WATZ	Wairara	14.13	193	P	P	17 39 42.6	+1.9
HIZ	Hauiti	14.14	195	P	P	17 39 41.9	+1.1
HIZ	Hauiti	14.14	195	P	P	17 39 46.3	+5.6
NMHZ	Naumai	14.33	189	P	P	17 39 42.8	-0.1
NMHZ				S	S	17 42 16.8	+3.1
BKZ	Black Stump Fm	14.45	190	P	P	17 39 41.5	-2.6
BKZ	Black Stump Fm	14.45	190	P	P	17 39 41.6	-2.4
BKZ				S	S	17 42 15.4	-0.5
NTVZ	North Tongarir	14.52	192	P	P	17 39 46.2	+1.3
TMVZ	Te Maari	14.54	192	P	P	17 39 45.0	0.0
TWVZ	Taurewa	14.54	193	P	P	17 39 46.9	+1.8
ETVZ	East Tongariro	14.55	192	P	P	17 39 45.1	-0.1
WTVZ	West Tongariro	14.56	193	P	P	17 39 45.3	+0.1
NNVZ	North Ngauruho	14.57	192	P	P	17 39 46.7	+1.3
NGZ	Ngauruhoe	14.61	192	P	P	17 39 47.3	+1.4
FWVZ	Far West T-bar	14.70	193	P	P	17 39 47.5	+0.7
TRVZ	Turoa	14.74	193	P	P	17 39 47.2	-0.1
VRZ	Vera Road	14.74	195	P	P	17 39 49.9	+2.9
WNVZ	Wahianoa	14.76	192	P	P	17 39 47.0	-0.4
PKVZ	Pokaka	14.77	193	P	P	17 39 47.4	0.0
KOUNC	Koumac, New Ca	14.80	284	P	P	17 39 49.0	+1.0
BHHZ	Black Hill Sta	14.83	191	P	P	17 39 45.0	-3.1
KAHZ	Kahuranaki	15.01	188	P	P	17 39 50.7	+0.8
PNHZ	Pukenui	15.22	190	P	P	17 39 50.6	-1.6
PXZ	Pawanui	15.24	188	P	P	17 39 51.2	-1.0
TSZ	Takapari Road	15.40	191	P	P	17 39 48.4	-5.6
BFZ	Birch Farm	15.97	189	P	P	17 39 57.0	-2.9
BFZ				IAmb	IAmb	17 39 59.7	
	comp=Z,33nm,1.1s						
MRZ	Mangatainoka R	16.06	191	P	P	17 39 57.1	-3.7
MRZ				IAmb	IAmb	17 40 20.9	
	comp=Z,37nm,1.3s						
TCW	Tory Channel	16.84	194	P	P	17 40 05.8	-3.0
BHW	Baring Head	16.91	192	P	P	17 40 06.9	-2.5
QRZ	Quartz Range	16.93	199	P	P	17 40 08.4	-1.3
QRZ	Quartz Range	16.93	199	P	P	17 40 09.9	+0.2
PLWZ	Palliser	17.00	191	P	P	17 40 06.6	-3.8
NNZ	Nelson	17.06	196	P	P	17 40 08.8	-2.1
CMWZ	Cape Campbell	17.37	194	P	P	17 40 12.2	-1.8
RPZ	Rata Peaks	20.02	198	P	P	17 40 36.5	-1.5
	comp=Z,8.0nm,0.4s,baz=54,slow=2.8,SNR=7.1						
RPZ	Rata Peaks	20.02	198	P	P	17 40 38.4	+0.3
FOZ	Fox Glacier	20.23	201	P	P	17 40 39.0	-0.9
ODZ	Otahua Downs	21.35	198	P	P	17 40 51.2	+1.1
HNR	Honiara	24.25	306	P	P	17 41 15.3	-1.1
	comp=Z,2µm,0.7s,baz=139,slow=11,SNR=14						
HNR	Honiara	24.25	306	P	P	17 41 15.0	-1.4
HNR	Honiara	24.25	306	P	P	17 41 16.4	0.0
ARMA	Armidale	25.35	251	P	P	17 41 27.6	+1.3
ARMA				IAmb	IAmb	17 41 29.0	
	comp=Z,36nm,0.8s						
ARMA	Armidale	25.35	251	P	P	17 41 28.6	+2.4
EIDS	Eidsvold	25.82	263	P	P	17 41 30.8	+0.6
EIDS				IAmb	IAmb	17 41 32.1	
	comp=Z,32nm,0.8s						
EIDS	Eidsvold	25.82	263	P	P	17 41 31.7	+1.4
RMQ	Roma	27.82	260	P	P	17 41 50.3	+2.4
CAN	Canberra	28.34	241	P	P	17 41 53.8	+1.5
CAN				IAmb	IAmb	17 41 55.5	
	comp=Z,54nm,1.3s						
AULRC	Lightning Ridg	28.45	254	P	P	17 41 54.8	+1.4
CMSA	Cobar Meteorol	30.53	250	P	P	17 42 12.3	+0.9
TV1H	Townsville Har	30.88	274	P	P	17 42 15.6	+1.1
	comp=Z,121nm,0.9s						
CTA	Charters Tower	31.15	272	P	P	17 42 17.1	+0.2
	comp=Z,72nm,0.5s,baz=94,slow=10,SNR=310 comp=Z,72nm,0.5s						
CTA	Charters Tower	31.15	272	P	P	17 42 18.0	+1.1
CTAO	Charters Tower	31.15	272	P	P	17 42 17.6	+0.7
CTAO	Charters Tower	31.15	272	P	P	17 42 17.9	+1.1
CORO	Coronation Par	31.55	230	P	P	17 42 21.4	+1.4
TOO	Toolangi	31.61	238	P	P	17 42 21.4	+0.8
TOO				IAmb	IAmb	17 42 22.9	
	comp=Z,12nm,0.9s						
QLP	Quilpie	31.86	259	P	P	17 42 24.0	+1.2
TAU	Tasmania Unive	31.99	228	P	P	17 42 24.8	+1.1
TAU				IAmb	IAmb	17 42 47.9	
	comp=Z,44nm,1.5s						
BRAT	Ballarat	32.82	239	P	P	17 42 31.8	+1.0
MTSU	Mount Surprise	33.46	275	P	P	17 42 37.8	+1.2
RABL	Rabaul	33.49	304	P	P	17 42 36.8	-0.1
RABL	Rabaul	33.49	304	P	P	17 42 37.9	+1.0
KRVT	Keravat (AS076	33.52	303	P	P	17 42 35.6	-1.5
	comp=Z,72nm,0.6s,baz=151,slow=2.4,SNR=31 comp=Z,72nm,0.6s						
STKA	Stephens Creek	34.03	249	P	P	17 42 42.1	+0.9
	comp=Z,9.6nm,0.6s,baz=93,slow=10,SNR=29 comp=Z,9.6nm,0.6s						
STKA	Stephens Creek	34.03	249	P	P	17 42 42.0	+0.8
STKA	Stephens Creek	34.03	249	P	P	17 42 42.3	+1.1
ARPS	Mount Arapiles	34.31	241	P	P	17 42 45.2	+1.7
	comp=Z,30nm,0.8s						
PMG	Port Moresby	34.52	291	P	P	17 42 45.7	+0.3
	comp=Z,46nm,0.7s,baz=101,slow=5.1,SNR=22 comp=Z,46nm,0.7s						
PMG	Port Moresby	34.52	291	P	P	17 42 45.3	-0.2
PMG	Port Moresby	34.52	291	P	P	17 42 46.2	+0.7
INKA	Innaminka	34.86	257	P	P	17 42 50.0	+1.8
COEN	Coen	35.95	281	P	P	17 42 57.4	-0.1
COEN	Coen	35.95	281	P	P	17 42 58.1	+0.7
	comp=Z,54nm,0.9s						
HTT	Hallett	36.35	247	P	P	17 43 01.5	+0.9
LCRK	Leigh Creek	36.93	252	P	P	17 43 06.2	+0.9
QIS	Mount Isa	37.07	268	P	P	17 43 07.0	+0.3
BBOO	Buckleboo	38.73	248	P	P	17 43 19.6	-0.5
BBOO				IAmb	IAmb	17 43 20.8	
	comp=Z,24nm,0.9s						
BBOO	Buckleboo	38.73	248	P	P	17 43 20.6	+0.5
	comp=Z,34nm,0.9s						
OOD	Oodnadatta	39.32	256	P	P	17 43 26.2	+1.3
MULG	Mulgathing	40.52	252	P	P	17 43 34.8	+0.3
AS01	Alice Springs	41.50	262	P	P	17 43 42.7	+0.3
	comp=Z,47nm,0.9s						
AS31	Alice Springs	41.54	262	P	P	17 43 42.8	+0.1
ASAR	Alice Springs	41.54	262	P	P	17 43 42.9	+0.1
	comp=Z,35nm,0.9s,baz=92,slow=7.4,SNR=233						
ASAR				ScP	ScP	17 48 29.6	-0.6
	comp=Z,0.5nm,0.7s,baz=99,slow=4.8,SNR=4.0						
ASAR				S	S	17 49 20.7	-1.1
	comp=Z,1.2nm,1.0s,baz=100,slow=14,SNR=5.4 comp=Z,35nm,0.9s						
WR0	Warramunga Arr	41.82	267	P	P	17 43 44.5	-0.4
WR0				IAmb	IAmb	17 43 45.5	
	comp=Z,33nm,1.1s						
WB2	Warramunga Arr	41.99	267	P	P	17 43 46.0	-0.4
WRAB	Tennant Creek	42.00	267	P	P	17 43 45.9	-0.5
WRAB				IAmb	IAmb	17 43 46.9	
	comp=Z,39nm,1.0s						
WRAB	Tennant Creek	42.00	267	P	P	17 43 46.1	-0.3
WB0	Warramunga Arr	42.00	268	P	P	17 43 45.9	-0.6
WRA	Warramunga Arr	42.00	267	P	P	17 43 45.9	-0.6
	comp=Z,28nm,0.8s,baz=99,slow=6.5,SNR=325						
WRA				ScP	ScP	17 48 33.1	+1.1
	comp=Z,2.1nm,0.8s,baz=99,slow=3.8,SNR=8.2						
WRA				S	S	17 49 15.8	-13
	comp=Z,0.9nm,0.5s,baz=54,slow=10,SNR=11 comp=Z,28nm,0.8s						
WRA	Warramunga Arr	42.00	267	P	P	17 43 45.5	-1.0
GENI	Genyem	44.01	294	P	P	17 44 03.2	+1.0
	comp=Z,48nm,0.9s						
GENI	Genyem	44.01	294	P	P	17 44 02.0	-0.2
	comp=Z,49nm,0.9s						
FORT	Forrest	45.64	251	P	P	17 44 12.8	-1.7
FORT	Forrest	45.64	251	P	P	17 44 14.8	+0.3
	comp=Z,51nm,0.7s						
WRKA	Warakurna	46.29	258	P	P	17 44 19.5	-0.1
MTN	Manton Dam	47.20	276	P	P	17 44 25.7	-0.9
KNRA	Kununurra	48.35	271	P	P	17 44 35.2	+0.1
FITZ	Fitzroy Crossi	50.41	267	P	P	17 44 50.6	+0.2
FITZ	Fitzroy Crossi	50.41	267	P	P	17 44 51.3	+0.9
FAKI	Fak Fak	50.56	288	P	P	17 44 50.4	-1.1
FAKI				IAmb	IAmb	17 45 15.3	
	comp=Z,28nm,1.1s						
VNDA	Vanda	53.34	185	P	P	17 45 11.7	+1.1
	comp=Z,2.5nm,1.0s,baz=72,slow=7.9,SNR=2.2 comp=Z,2.5nm,1.0s						
VNDA	Vanda	53.34	185	P	P	17 45 11.9	+1.3
AAI	Ambon	53.72	285	P	P	17 45 10.8	-3.5
KLBR	Kellerberrin	54.28	248	P	P	17 45 18.0	-0.1
	comp=Z,45nm,0.7s						
SOEI	Soe	54.59	276	P	P	17 45 21.2	+0.5
SOEI				IAmb	IAmb	17 45 31.2	
	comp=Z,52nm,1.2s						
SOEI	Soe	54.59	276	P	P	17 45 21.1	+0.5
SOEI	Soe	54.59	276	P	P	17 45 21.8	+1.2
PSA00	Pilbara Seismi	54.65	260	P	P	17 45 20.0	-0.8
MBWA	Marble Bar	54.86	261	P	P	17 45 20.9	-1.4
NLAI	Namlea	54.89	284	P	P	17 45 21.8	-0.8
	comp=Z,15nm,0.9s,comp=Z,9µm						
LBMI	Labuha	55.80	287	P	P	17 45 28.8	-0.1
	comp=Z,33nm,1.0s						
MORW	Morawa	56.21	251	P	P	17 45 30.9	-0.7
MORW				IAmb	IAmb	17 46 09.2	
	comp=Z,27nm,1.5s						
SANI	Sanana	56.43	285	P	P	17 45 34.3	+1.0
SANI	Sanana	56.43	285	P	P	17 45 32.3	-1.0
	comp=Z,21nm,0.7s						
LUWI	Luwuk	59.73	284	P	P	17 45 55.2	-0.5
LUWI				IAmb	IAmb	17 45 56.4	
	comp=Z,34nm,0.9s						
LUWI	Luwuk	59.73	284	P	P	17 45 53.7	-2.0
	comp=Z,45nm,0.8s,comp=Z,3µm						
BKSI	Bulukumba	60.17	278	P	P	17 45 57.8	-0.8
	comp=Z,26nm,0.7s						
PLAI	Plampang	60.84	274	P	P	17 46 03.0	0.0
PLAI	Plampang	60.84	274	P	P	17 46 02.7	-0.3
	comp=Z,53nm,0.8s,comp=Z,486nm						
SPSI	Sidrap Palu	61.07	280	P	P	17 46 01.6	-3.0
MRSI	Marisa	61.19	285	P	P	17 46 03.7	-1.6
	comp=Z,13nm,0.7s						
TWSI	Taliwang, Sumb	61.68	273	P	P	17 46 08.3	-0.3
	comp=Z,30nm,1.1s						
TOLI2	Tolitoli	62.51	285	P	P	17 46 13.2	-0.7
TOLI2				IAmb	IAmb	17 46 15.2	
	comp=Z,16nm,0.7s						
TOLI2	Tolitoli	62.51	285	P	P	17 46 14.4	+0.4
MPSI	Mapaga	62.91	284	P	P	17 46 15.8	-0.8
	comp=Z,17nm,0.8s						
IGBI	Denpasar	63.23	273	P	P	17 46 18.9	+0.3
	comp=Z,47nm,1.1s						
GMJI	Gumukmas	64.98	272	P	P	17 46 29.2	-0.6
	comp=Z,29nm,1.6s						
QSPA	South Pole Qui	65.17	180	P	P	17 46 31.6	+1.4
	comp=Z,12nm,1.0s,baz=33,slow=13,SNR=49 comp=Z,12nm,1.0s						
GRJI	Gresik	66.40	273	P	P	17 46 39.1	+0.4
	comp=Z,54nm,0.8s						
PWJI	Pagerwojo	66.57	272	P	P	17 46 39.4	-0.3
	comp=Z,15nm,0.6s						
UGM	Wanagama	67.78	271	P	P	17 46 45.8	-1.4
KPJI	Karang Pucung	69.45	271	P	P	17 46 56.7	-0.6
	comp=Z,15nm,1.5s						
KSM	Kuching	71.94	280	P	P	17 47 12.2	+0.1
KSM				IAmb	IAmb	17 47 12.8	
	comp=Z,16nm,0.8s						
INU	Inuyama	72.24	324	P	P	17 47 13.3	+0.1
INU				IAmb	IAmb	17 47 14.6	
	comp=Z,15nm,1.1s						
JGF	Kuroka	72.26	325	P	P	17 47 12.8	-0.6
JGF				IAmb	IAmb	17 47 44.1	
	comp=Z,15nm,1.3s						
MJAR	Matsushiro Arr	72.54	326	P	P	17 47 14.8	-0.2
	comp=Z,9.9nm,0.9s,baz=159,slow=5.9,SNR=34 comp=Z,9.9nm,0.9s						
MAJO	Matsushiro	72.55	326	P	P	17 47 14.9	-0.2
MAJO				IAmb	IAmb	17 47 16.1	
	comp=Z,9.5nm,0.8s						
MJB9	Matsu-Tunnel	72.55	326	P	P	17 47 15.3	+0.3
MJB9				IAmb	IAmb	17 47 17.1	
	comp=Z,9.3nm,0.8s						
CGJI	Cibinong	72.68	271	P	P	17 47 15.2	-1.1
	comp=Z,34nm,0.8s						
JSU	Suzuyama	73.19	318	P	P	17 47 19.0	+0.1
JSU				IAmb	IAmb	17 47 19.7	
	comp=Z,20nm,0.6s						
KASI	Kota Agung	74.21	271	P	P	17 47 23.9	-1.2
	comp=Z,28nm,0.9s						
TPUB	Ta-pu	74.62	305	P	P	17 47 25.6	-1.5
TPUB				IAmb	IAmb	17 48 01.4	
	comp=Z,61nm,1.5s						
SSLB	Suanglung	74.67	306	P	P	17 47 25.5	-2.0
MDSI	Maura Dua	74.92	272	P	P	17 47 27.4	-1.7
	comp=Z,24nm,0.8s						
BELA	Belgrano 2	75.47	173	P	P	17 47 30.7	-0.4
BELA				IAmb	IAmb	17 47 58.4	
	comp=Z,25nm,1.3s						
MASI	Maura Aman, Be	77.24	272	P	P	17 47 41.2	-0.8
	comp=Z,32nm,0.9s						
KSRS	Korea Array	78.81	320	P	P	17 47 50.5	+0.8
	comp=Z,4.3nm,0.7s,baz=134,slow=5.7,SNR=20 comp=Z,4.3nm,0.7s						
KSAR	Wonju Array Be	78.82	320	P	P	17 47 50.6	+0.7
PETK	Petropavlovsk-	80.01	347	P	P	17 47 56.0	+0.3
	comp=Z,3.5nm,0.7s,baz=101,slow=7.7,SNR=9.5 comp=Z,3.5nm,0.7s						
NJ2	Nanjing	81.07	311	*e*P	P	17 48 01.9	+0.1
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
USRK	Ussuriysk Ar.	81.43	327	P	P	17 48 03.7	+0.3
	comp=Z,3.1nm,0.6s,baz=88,slow=5.0,SNR=4.8 comp=Z,3.1nm,0.6s						
ELIB	Princess Elisa	82.01	187	*d*P	P	17 48 06.3	+0.1
	comp=Z,5.6nm,0.9s						
MDJ	Mudanjiang	82.92	327	P	P	17 48 12.2	+1.3
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,100nm,7.8s						
ESJX	Sierra Juarez	83.57	50	P	P	17 48 15.7	+1.0
YUH	Yuha Desert	83.95	50	P	P	17 48 16.5	+0.1
CMB	Columbia Colle	84.18	43	P	P	17 48 17.5	+0.1
YBH	Yreka Blue Hor	85.09	39	P	P	17 48 23.1	+1.2
	comp=Z,2.0nm,0.9s,baz=270,slow=7.1,SNR=3.7 comp=Z,2.0nm,0.9s						
LL02	Futaleuf	85.71	136	P	P	17 48 25.0	+0.1
LL02				IAmb	IAmb	17 48 27.3	
	comp=Z,12nm,0.8s						
NVAR	Mina Array Bea	85.72	44	P	P	17 48 26.1	+0.9
	comp=Z,1.5nm,0.7s,baz=228,slow=8.0,SNR=9.1 comp=Z,1.5nm,0.7s						
TPH	Tonopah	86.20	45	P	P	17 48 27.4	0.0
TPH				IAmb	IAmb	17 48 29.1	
	comp=Z,20nm,0.9s						
ENH	Enshi	86.75	305	P	P	17 48 29.9	0.0
ENH				IAmb	IAmb	17 48 31.3	
	comp=Z,6.6nm,0.8s						
LYN	LuoYang	86.88	310	*e*P	P	17 48 31.7	+1.3
HNS	HongShan	86.95	314	⇓P	P	17 48 31.9	+1.2
HNS				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TUC	Tucson	87.41	53	P	P	17 48 33.5	+0.4
PLCA	Paso Flores	87.80	134	P	P	17 48 35.9	+0.9
	comp=Z,1.5nm,0.8s,baz=215,slow=6.4,SNR=5.4 comp=Z,1.5nm,0.8s						
HEH	HeiHe	87.94	329	*e*P	P	17 48 34.6	-0.4
XAN	Xi'an	89.10	308	⇑P	P	17 48 42.2	+1.3
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CMAR	Chiang Mai Arr	89.56	290	P	P	17 48 44.5	+1.2
	comp=Z,2.9nm,0.8s,baz=138,slow=3.5,SNR=18 comp=Z,2.9nm,0.8s						
CMAR	Chiang Mai Arr	89.56	290	P	P	17 48 43.7	+0.4
CHTO	Chiang Mai	89.71	291	P	P	17 48 44.8	+0.7
TMUT	Trail Mountain	90.79	46	P	P	17 48 49.9	+0.9
TMUT				IAmb	IAmb	17 48 51.2	
	comp=Z,5.6nm,0.7s						
PZH	PanZhiHua	90.87	299	P	P	17 48 49.8	+0.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,110nm,5.9s						
HHC	Hu-ho-hao-te	90.90	315	*e*P	P	17 48 52.1	+3.0

HHC				pmax	pmax		
	comp=Z,22nm,0.9s						
HHC				pmax	pmax		
	comp=Z,82nm,6.2s						
SPUT	**South Promonto**	**91.06**	**44**	P	**P**	**17 48 50.9**	**+0.9**
SPUT				IAmb	IAmb	17 48 51.8	
	comp=Z,5.9nm,1.1s						
HVU	**Hansel Valley**	**91.11**	**44**	P	**P**	**17 48 51.1**	**+0.9**
SRU	**San Rafael Swe**	**91.15**	**47**	P	**P**	**17 48 51.5**	**+1.0**
SRU				IAmb	IAmb	17 48 52.0	
	comp=Z,3.6nm,0.8s						
TX31	**Lajitas Ar. Si**	**91.26**	**58**	P	**P**	**17 48 51.0**	**-0.1**
TX31				IAmb	IAmb	17 48 53.2	
	comp=Z,9.8nm,0.9s						
TX32	**Lajitas Array**	**91.26**	**58**	P	**P**	**17 48 51.8**	**+0.7**
TXAR	**Lajitas Array**	**91.26**	**58**	P	**P**	**17 48 52.3**	**+1.2**
	comp=Z,2.2nm,0.8s,baz=216,slow=6.5,SNR=25						
	comp=Z,2.2nm,0.8s						
CD2	**Chengdu**	**91.35**	**304**	P	**P**	**17 48 52.8**	**+1.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BSUT	**Blindstream Ca**	**91.73**	**46**	P	**P**	**17 48 54.0**	**+0.6**
BSUT				IAmb	IAmb	17 48 55.2	
	comp=Z,4.7nm,0.8s						
MKAR	**Makanchi Array**	**112.59**	**312**	SKP		17 57 04.7	
	comp=Z,0.7nm,0.7s,baz=82,slow=2.6,SNR=8.2						
MKAR				PKKPbc	PKKPbc	18 05 09.2	-0.1
	comp=Z,0.8nm,0.8s,baz=284,slow=3.0,SNR=7.1						
KURBB	**Kurchatov Arra**	**115.74**	**316**	PKP	**PKPdf**	**17 54 23.5**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=18,slow=3.3,SNR=1.6						
KURBB				SKP		17 57 10.6	
	comp=Z,0.4nm,0.3s,baz=110,slow=2.0,SNR=7.1						
BVAR	**Borovoye Array**	**120.97**	**318**	PKP	**PKPdf**	**17 54 32.5**	**-1.6**
	comp=Z,0.7nm,0.3s,baz=105,slow=1.9,SNR=9.8						
BVAR				SKP		17 57 20.7	
	comp=Z,0.9nm,0.6s,baz=158,slow=1.6,SNR=4.7						
GEYT	**Alibeck**	**129.18**	**300**	SKPbc	SKPbc	17 57 24.8	+0.7
	comp=Z,1.7nm,0.7s,baz=98,slow=3.0,SNR=5.1						
KIRV	**Kirov**	**131.60**	**328**	SKPbc	**SKPbc**	**17 57 31.8**	**-0.3**
	comp=Z,6.3nm,0.5s,baz=40,slow=5.1,SNR=4.6						
ARCES	**ARCESS Array B**	**132.81**	**348**	PKP	**PKPdf**	**17 54 56.0**	**-0.1**
	comp=Z,4.1nm,1.1s,baz=10,slow=1.5,SNR=6.5						
ARCES				SKPbc	**SKPbc**	**17 57 36.7**	**+0.7**
	comp=Z,5.8nm,0.8s,baz=40,slow=4.0,SNR=12						
BELG	**Belogornoye**	**134.70**	**320**	SKPbc	**SKPbc**	**17 57 42.1**	**-0.5**
	comp=Z,20nm,1.2s,baz=346,slow=6.1,SNR=5.1						
FINES	**FINESS Array B**	**139.30**	**341**	PKhKP	PKPpre	17 54 59.3	
	comp=Z,3.5nm,1.1s,baz=48,slow=2.8,SNR=6.5						
FINES				SKPbc	**SKPbc**	**17 57 56.3**	**+0.6**
	comp=Z,5.5nm,0.7s,baz=46,slow=3.2,SNR=21						
NB2	**NORSAR Subarra**	**143.03**	**351**	PKP	PKPab	17 55 12.3	-0.2
	comp=Z,0.7nm,0.6s,baz=17,slow=2.6						
NB2				SKPa	**SKPbc**	**17 58 06.2**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**143.03**	**351**	PKhKP	PKPpre	17 55 11.9	
	comp=Z,0.5nm,0.8s,baz=17,slow=4.8,SNR=5.5						
NOA				SKPbc	**SKPbc**	**17 58 04.9**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=17,slow=4.2,SNR=6.0						
HFS	**Hagfors**	**143.47**	**348**	PKP	PKPab	17 55 13.6	-0.6
	comp=Z,6.4nm,0.3s,baz=63,slow=3.6,SNR=68						
HFS				SKPbc	**SKPbc**	**17 58 05.6**	**-0.7**
	comp=Z,2.0nm,0.8s,baz=66,slow=1.7,SNR=4.0						
NACGM	**Naroch**	**143.96**	**333**	*e*PKP	PKPab	17 55 16.1	0.0
	comp=Z,25nm,0.9s,baz=45						
PABE	**Paberze**	**144.61**	**336**		**PKPdf**	**17 55 17.1**	**-0.8**
AKASG	**Malin Array Be**	**145.63**	**326**	PKPbc	**PKPdf**	**17 55 20.5**	**+0.7**
	comp=Z,2.4nm,0.5s,baz=42,slow=4.2,SNR=13						
AKASG				SKPbc	**SKiKP**	**17 58 12.0**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=48,slow=3.2,SNR=6.8						
AKBB	**Malin Array Si**	**145.63**	**326**		**PKPdf**	**17 55 20.0**	**+0.2**
BR131	**Keskin Array S**	**147.90**	**306**		**PKPbc**	**17 55 27.5**	**-0.5**
BRTR	**Keskin Array B**	**147.90**	**306**	PKPbc	**PKPbc**	**17 55 27.8**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=138,slow=4.7,SNR=8.3						
BRTR				PKPab	**PKPab**	**17 55 32.5**	**+0.1**
	comp=Z,3.7nm,0.7s,baz=101,slow=3.8,SNR=21						
BRTR	**Keskin Array B**	**147.90**	**306**		**PKPbc**	**17 55 27.3**	**-0.7**
CLL	**Collm**	**151.72**	**342**	*i* PKPbc	**PKiKP**	**17 55 39.9**	**+3.2**
	comp=Z,6.0nm,1.0s						
CLL				*i* PKPab	**PKPab**	**17 55 47.7**	**+0.1**
	comp=Z,4.0nm,0.7s						
VYHS	**Vyhne**	**152.03**	**332**	*e*PKP	**PKiKP**	**17 55 38.0**	**+0.6**
VYHS				*e*		17 55 49.3	
LIT	**Litokhoron**	**155.58**	**314**	PKPdf	**PKPdf**	**17 55 33.9**	**-1.5**
LIT					**PKPab**	**17 56 04.0**	**-0.6**
TORD	**Torodi Ar. Bea**	**168.13**	**190**	PKP	**PKPdf**	**17 55 47.1**	**-1.6**
	comp=Z,0.5nm,0.8s,baz=90,slow=2.9,SNR=2.5						
TORD				PKPab	**PKPab**	**17 56 59.8**	**-0.1**
	comp=Z,2.1nm,0.9s,baz=179,slow=3.4,SNR=7.1						

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*IDC **04** 17:59:52.1±0.8, 56°.07N×164°.69E, h0^{km}, mb3.6/18, mbtmp3.7/20, ML3.9/2, MS3.1/6, Error ellipse: s-maj=25.0km s-min=13.3km az=151.0*

*KRSC **04** 17:59:53.1±1.3, 56°.06N×164°.83E, h54^{km}±19^{km}, Ml4.3*

*MOS **04** 17:59:55.4±0.8, 56°.06N×164°.79E, h37^{km}, mb4.3/13, Error ellipse: s-maj=7.0km s-min=5.0km az=60.5*

*NEIC **04** 17:59:56.5±1.7, 56°.07N±0°.08×164°.68E±0°.06, h31^{km}±5^{km}, mb4.3/33, Error ellipse: s-maj=11.8km s-min=3.9km az=194.0*

ISC 04 17:59:55.9±0.9, **56°.08N**±0°.04×**164°.86E**±0°.04, **h36**^{km}±2^{km}, **n177**, σ**1^{s}.44**/155, **mb4.0**/37, **MS3.4**/5, **5C-5D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**1.08**	**144**	PN	**Pn**	**18 00 13.9**	**-0.6**
BKI				S	**Sn**	**18 00 27.6**	**-0.6**
BKI	**Bering**	**1.08**	**144**	*e*P	**Pn**	**18 00 13.9**	**-0.6**
BKI				*e*S	**Sn**	**18 00 27.6**	**-0.6**
KBTR	**Krutoberegovo**	**1.15**	**277**	PN	**Pn**	**18 00 13.4**	**-2.0**
KBTR				S	**Sn**	**18 00 27.6**	**-2.2**
KBTR	**Krutoberegovo**	**1.15**	**277**	*e*P	**Pn**	**18 00 13.4**	**-2.0**
KBTR				*e*S	**Sn**	**18 00 27.6**	**-2.2**
KBG	**Krutoberegovo**	**1.22**	**279**	PN	**Pn**	**18 00 14.1**	**-2.2**
KBG				S	**Sn**	**18 00 29.7**	**-1.8**
KBG	**Krutoberegovo**	**1.22**	**279**	*e*P	**Pn**	**18 00 14.1**	**-2.2**
KBG				*e*S	**Sn**	**18 00 29.7**	**-1.8**
SMKR	**Semkarok**	**1.95**	**286**	PN	**Pn**	**18 00 26.3**	**-0.2**
SMKR				S	**Sn**	**18 00 49.5**	**-0.3**
SMKR	**Semkarok**	**1.95**	**286**	*e*P	**Pn**	**18 00 26.3**	**-0.2**
SMKR				*e*S	**Sn**	**18 00 49.5**	**-0.3**
SRKR	**Sorokina**	**2.13**	**287**	PN	**Pn**	**18 00 29.3**	**+0.3**
SRKR				S	**Sn**	**18 00 54.7**	**+0.5**
SRKR	**Sorokina**	**2.13**	**287**	*e*P	**Pn**	**18 00 29.3**	**+0.3**
SRKR				*e*S	**Sn**	**18 00 54.7**	**+0.5**
BZGR	**Bezymyannyi-Gr**	**2.34**	**268**	PN	**Pn**	**18 00 32.5**	**+0.6**
BZGR	**Bezymyannyi-Gr**	**2.34**	**268**	*e*P	**Pn**	**18 00 32.5**	**+0.6**
KLY	**Klyuchi**	**2.36**	**277**	PN	**Pn**	**18 00 30.9**	**-1.1**
KLY				S	**Sn**	**18 00 58.0**	**-1.7**
KLY	**Klyuchi**	**2.36**	**277**	*e*P	**Pn**	**18 00 30.9**	**-1.1**
KLY				*e*S	**Sn**	**18 00 58.0**	**-1.7**
BZP	**Bezymyannyi-Pe**	**2.43**	**268**	*e*P	**Pn**	**18 00 33.6**	**+0.4**
BZWR	**Bezymyannyi-We**	**2.45**	**269**	PN	**Pn**	**18 00 34.5**	**+1.0**
BZWR	**Bezymyannyi-We**	**2.45**	**269**	*e*P	**Pn**	**18 00 34.5**	**+1.0**
BZMR	**Bezymyannaya**	**2.46**	**268**	PN	**Pn**	**18 00 34.0**	**+0.5**
BZMR	**Bezymyannaya**	**2.46**	**268**	*e*P	**Pn**	**18 00 34.0**	**+0.5**
KIRR	**Kirishev**	**2.54**	**269**	PN	**Pn**	**18 00 35.6**	**+0.9**
KIRR				S	**Sn**	**18 01 05.8**	**+1.4**
KIRR	**Kirishev**	**2.54**	**269**	*e*P	**Pn**	**18 00 35.6**	**+0.9**
KIRR				*e*S	**Sn**	**18 01 05.8**	**+1.4**
KPT	**Kopyto**	**2.60**	**269**	PN	**Pn**	**18 00 36.4**	**+0.9**
KPT	**Kopyto**	**2.60**	**269**	*e*P	**Pn**	**18 00 36.4**	**+0.9**
KMNR	**Kamenistaya**	**2.62**	**265**	PN	**Pn**	**18 00 36.7**	**+1.0**
KMNR	**Kamenistaya**	**2.62**	**265**	*e*P	**Pn**	**18 00 36.7**	**+1.0**
TUMD	**Tumrok D**	**2.68**	**253**	*e*P	**Pn**	**18 00 37.0**	**+0.5**
TUMR	**Tumrok**	**2.79**	**255**	PN	**Pn**	**18 00 39.2**	**+1.2**
TUMR	**Tumrok**	**2.79**	**255**	*e*P	**Pn**	**18 00 39.2**	**+1.2**
KOZ	**Kozyrevsk**	**2.79**	**272**	PN	**Pn**	**18 00 39.3**	**+1.2**
KOZ				S	**Sn**	**18 01 14.0**	**+3.5**
KOZ	**Kozyrevsk**	**2.79**	**272**	*e*P	**Pn**	**18 00 39.3**	**+1.2**
KOZ				*e*S	**Sn**	**18 01 14.0**	**+3.5**
SRDR	**Sredinnyy**	**2.88**	**277**	PN	**Pn**	**18 00 40.5**	**+1.2**
SRDR				S	**Sn**	**18 01 15.4**	**+2.7**
SRDR	**Sredinnyy**	**2.88**	**277**	*e*P	**Pn**	**18 00 40.5**	**+1.2**
SRDR				*e*S	**Sn**	**18 01 15.4**	**+2.7**
OSSR	**Ossora**	**3.32**	**344**	PN	**Pn**	**18 00 45.2**	**0.0**
OSSR	**Ossora**	**3.32**	**344**	*e*P	**Pn**	**18 00 45.2**	**0.0**
OSSR				*e*S	**Sn**	**18 01 21.7**	**-1.7**
ESO	**Esso**	**3.46**	**270**	PN	**Pn**	**18 00 49.0**	**+1.8**
ESO	**Esso**	**3.46**	**270**	*e*P	**Pn**	**18 00 49.0**	**+1.8**
TIGL	**Tigil**	**3.79**	**299**	*e*P	Pn	18 00 54.5	+2.9
PALN	**Palana**	**4.00**	**321**	PN	**Pn**	**18 00 54.6**	**0.0**
PALN	**Palana**	**4.00**	**321**	*e*P	**Pn**	**18 00 54.6**	**0.0**
SPN	**Mys Shipunski**	**4.10**	**225**	PN	**Pn**	**18 00 55.0**	**-1.0**
SPN	**Mys Shipunski**	**4.10**	**225**	*e*P	**Pn**	**18 00 55.0**	**-1.0**
SPN				*e*S	**Sn**	**18 01 39.3**	**-3.4**
TILK	**Tilichiki**	**4.43**	**8**	PN	**Pn**	**18 01 02.0**	**+1.6**
TILK	**Tilichiki**	**4.43**	**8**	*e*P	**Pn**	**18 01 02.0**	**+1.6**
SDLR	**Sedlovina**	**4.46**	**233**	PN	**Pn**	**18 01 01.7**	**+0.7**
SDLR	**Sedlovina**	**4.46**	**233**	*e*P	**Pn**	**18 01 01.7**	**+0.7**
KRER	**Koryakskii**	**4.51**	**234**	PN	**Pn**	**18 01 02.4**	**+0.7**
KRER	**Koryakskii**	**4.51**	**234**	*e*P	**Pn**	**18 01 02.4**	**+0.7**
KRER				*e*S	**Sn**	**18 01 52.6**	**-0.3**
SMAR	**Somma**	**4.51**	**234**	PN	**Pn**	**18 01 02.6**	**+0.8**
SMAR	**Somma**	**4.51**	**234**	*e*P	**Pn**	**18 01 02.6**	**+0.8**
SMAR				*e*S	**Sn**	**18 01 51.5**	**-1.5**
KRX	**Arik**	**4.52**	**235**	PN	**Pn**	**18 01 02.3**	**+0.5**
KRX	**Arik**	**4.52**	**235**	*e*P	**Pn**	**18 01 02.3**	**+0.5**
KRX				*e*S	**Sn**	**18 01 53.0**	**-0.1**
UGLR	**Uglovaya**	**4.54**	**233**	PN	**Pn**	**18 01 02.9**	**+0.9**
UGLR	**Uglovaya**	**4.54**	**233**	*e*P	**Pn**	**18 01 02.9**	**+0.9**
AVH	**Avacha**	**4.54**	**234**	PN	**Pn**	**18 01 03.1**	**+1.1**
AVH	**Avacha**	**4.54**	**234**	*e*P	**Pn**	**18 01 03.1**	**+1.1**
AVH				*e*S	**Sn**	**18 01 53.3**	**-0.1**
KOK	**Koryaka**	**4.56**	**235**	PN	**Pn**	**18 01 03.3**	**+0.9**
KOK	**Koryaka**	**4.56**	**235**	*e*P	**Pn**	**18 01 03.3**	**+0.9**
GNL	**Ganaly**	**4.65**	**242**	PN	**Pn**	**18 01 04.7**	**+1.0**
GNL	**Ganaly**	**4.65**	**242**	*e*P	**Pn**	**18 01 04.7**	**+1.0**
DALK	**Dalny**	**4.69**	**232**	PN	**Pn**	**18 01 04.2**	**+0.2**
DALK	**Dalny**	**4.69**	**232**	*e*P	**Pn**	**18 01 04.2**	**+0.2**
DALK				*e*S	**Sn**	**18 01 55.7**	**-1.3**
PET	**Petropavlovsk**	**4.74**	**232**		**Pn**	**18 01 05.0**	**+0.4**
PET				Sn	**Sn**	**18 01 57.0**	**-1.2**
PET	**Petropavlovsk**	**4.74**	**232**	PN	**Pn**	**18 01 05.3**	**+0.6**
PET	**Petropavlovsk**	**4.74**	**232**	*e*P	**Pn**	**18 01 05.3**	**+0.6**
PET				*e*S	**Sn**	**18 01 56.5**	**-1.8**
KRMR	**Karymshinskiy**	**5.10**	**233**	PN	**Pn**	**18 01 11.1**	**+1.4**
KRMR	**Karymshinskiy**	**5.10**	**233**	*e*P	**Pn**	**18 01 11.1**	**+1.4**
PEA0B	**Petropavlovsk-**	**5.12**	**237**	Pn	**Pn**	**18 01 09.3**	**-0.6**
PEA0B				Sn	**Sn**	**18 02 08.8**	**+1.1**
PEA0B	**Petropavlovsk-**	**5.12**	**237**	⇑*e*PN	**Pn**	**18 01 10.5**	**+0.6**
PETK	**Petropavlovsk-**	**5.12**	**237**	Pn	**Pn**	**18 01 09.0**	**-0.9**
	2.8nm,0.3s,baz=78,slow=14,SNR=57						
PETK				Sn	**Sn**	**18 02 10.6**	**+2.9**
	1.9nm,0.3s,baz=8.0,slow=33,SNR=1.6						
PETK				LR	LR	18 02 58.2	
	comp=Z,76nm,19.1s,baz=39,slow=37						
	3.2nm,0.5s						
PETK	**Petropavlovsk-**	**5.12**	**237**	Pn	**Pn**	**18 01 09.7**	**-0.3**
PETK	**Petropavlovsk-**	**5.12**	**237**	PN	**Pn**	**18 01 09.7**	**-0.3**
GRL	**Gorelyy**	**5.32**	**231**	PN	**Pn**	**18 01 14.3**	**+1.5**
GRL	**Gorelyy**	**5.32**	**231**	*e*P	**Pn**	**18 01 14.3**	**+1.5**
APC	**Apacha**	**5.49**	**238**	PN	Pn	18 01 16.7	+1.7
APC	**Apacha**	**5.49**	**238**	*e*P	Pn	18 01 16.7	+1.7
SMY	**Shemya**	**6.35**	**118**	Pn	Pn	18 01 29.4	+2.5
SMY	**Shemya**	**6.35**	**118**	PN	Pn	18 01 29.4	+2.5
KMSK	**Kamenskaya**	**6.44**	**6**	PN	**Pn**	**18 01 29.3**	**+1.3**
KMSK	**Kamenskaya**	**6.44**	**6**	*e*P	**Pn**	**18 01 29.3**	**+1.3**
KMSK				*e*S	**Sn**	**18 02 39.7**	**-0.5**
BILL	**Bilibino**	**12.02**	**3**		**Pn**	**18 02 46.1**	**+1.7**
BILL	**Bilibino**	**12.02**	**3**	*de*PN	P	18 02 47.4	-9.4
BILL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BILL				MLR	MLR		
	comp=Z,50nm,8.0s						
GRNR	**Gornyy**	**17.69**	**264**	⇓*i*P	**P**	**18 04 01.5**	**+1.8**
GRNR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,210nm,12.0s						
GRNR				MLR	MLR		
	comp=N,190nm,13.0s						
GRNR				MLR	MLR		
	comp=Z,170nm,15.0s						
JKA	**Kamikawa-asahi**	**18.53**	**239**	P	**Pn**	**18 04 10.0**	**+0.6**
JKA				IAmb	IAmb	18 04 12.3	
	comp=Z,40nm,1.0s						
ASAJ	**Asahikawa**	**18.54**	**239**	P	**Pn**	**18 04 08.0**	**-1.5**
	comp=Z,1.7nm,0.3s,baz=67,slow=9.1,SNR=7.3						
ASAJ				LR	LR	18 10 48.0	
	comp=Z,72nm,19.4s,baz=332,slow=36						
	comp=Z,26nm,0.9s						
ASAJ	**Asahikawa**	**18.54**	**239**	P	**Pn**	**18 04 10.0**	**+0.5**
ASAJ				pmax	pmax		
	comp=Z,40nm,1.0s						
ERM	**Erimo**	**19.89**	**234**	P	**Pn**	**18 04 24.6**	**-1.1**
ERM				IAmb	IAmb	18 04 42.7	
	comp=Z,41nm,0.9s						
ERM	**Erimo**	**19.89**	**234**	P	**Pn**	**18 04 24.6**	**-1.1**
ERM				pmax	pmax		
	comp=Z,41nm,0.9s						
TTA	**Tatalina**	**20.72**	**55**	P	Pn	18 04 37.3	+1.9
TTA	**Tatalina**	**20.72**	**55**	P	Pn	18 04 37.3	+1.9
TTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KLR	**Kul'dur**	**21.07**	**265**	P	**P**	**18 04 36.2**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=50,slow=8.7,SNR=5.0						
KLR				LR	LR	18 13 28.1	
	comp=Z,33nm,19.8s,baz=18,slow=39						
	comp=Z,0.8nm,0.5s						
KLR	**Kul'dur**	**21.07**	**265**	⇓*e*P	**P**	**18 04 36.5**	**-0.1**
KLR				pmax	pmax		
	comp=Z,2.0nm,1.2s						
TIXI	**Tiksi**	**21.70**	**330**	P	**P**	**18 04 44.2**	**+1.0**
	comp=Z,2.8nm,0.7s,baz=90,slow=20,SNR=9.4						
	comp=Z,2.8nm,0.7s						
TIXI	**Tiksi**	**21.70**	**330**	P	**P**	**18 04 44.2**	**+1.0**
TIXI				IAmb	IAmb	18 04 58.3	
	comp=Z,4.9nm,0.6s						
TIXI	**Tiksi**	**21.70**	**330**	⇑*e*P	**P**	**18 04 45.6**	**+2.4**
TIXI				pmax	pmax		
	comp=Z,10.0nm,2.1s						
JTM	**Tenmabayashi**	**21.82**	**235**	P	**P**	**18 04 43.1**	**-1.6**
CAST	**Castle Rocks**	**22.51**	**53**	P	P	18 04 58.4	+6.4
HEH	**HeiHe**	**22.98**	**271**	*e*P	**P**	**18 04 54.0**	**-2.9**
HEH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HEH				pmax	pmax		
	comp=Z,150nm,5.3s						
CNPM	**China Poot**	**23.32**	**63**	P	**P**	**18 05 02.1**	**+1.8**
USRK	**Ussuriysk Ar.**	**23.94**	**254**	P	**P**	**18 05 04.8**	**-1.5**
	comp=Z,1.7nm,0.7s,baz=85,slow=15,SNR=3.6						
	comp=Z,1.7nm,0.7s						
USRK	**Ussuriysk Ar.**	**23.94**	**254**	P	**P**	**18 05 05.7**	**-0.6**
USRK	**Ussuriysk Ar.**	**23.94**	**254**	P	**P**	**18 05 05.7**	**-0.6**
KNK	**Knik Glacier**	**24.36**	**58**		**P**	**18 05 11.7**	**+1.7**
KNK				IAmb	IAmb	18 05 46.7	
	comp=Z,27nm,1.4s						
CCB	**Clear Creek Bu**	**24.36**	**50**	P	**P**	**18 05 12.1**	**+2.1**
CCB				IAmb	IAmb	18 05 23.1	
	comp=Z,4.5nm,0.8s						
SML	**Sawmill**	**24.36**	**57**	P	**P**	**18 05 12.9**	**+2.8**
SML				IAmb	IAmb	18 05 30.2	
	comp=Z,8.4nm,1.0s						
PWL	**Port Wells**	**24.50**	**59**	P	**P**	**18 05 13.2**	**+1.8**
ILAR	**Eielson Array**	**24.75**	**50**	P	**P**	**18 05 15.6**	**+2.0**
	comp=Z,0.3nm,0.8s,baz=244,slow=5.9,SNR=2.4						
	comp=Z,0.3nm,0.8s						
ILAR	**Eielson Array**	**24.75**	**50**	P	**P**	**18 05 14.8**	**+1.3**
SCM	**Sheep Creek Mo**	**24.83**	**57**	P	**P**	**18 05 16.5**	**+2.1**
SCM				IAmb	IAmb	18 05 34.6	
	comp=Z,16nm,1.1s						
SCM	**Sheep Creek Mo**	**24.83**	**57**	P	**P**	**18 05 16.5**	**+2.1**
SCM				pmax	pmax		
	comp=Z,16nm,1.1s						
PRP	**Porcupine Dome**	**25.30**	**48**	P	**P**	**18 05 19.6**	**+0.9**
PRP				IAmb	IAmb	18 05 40.6	
	comp=Z,6.9nm,1.3s						
JSD	**Sado**	**25.32**	**236**	P	**P**	**18 05 18.5**	**-0.4**
M24K	**Tolsona, Glenn**	**25.33**	**56**	P	**P**	**18 05 18.9**	**+0.1**
BMAR	**Burnt Mountain**	**25.66**	**44**	P	**P**	**18 05 23.3**	**+1.5**
Q23K	**Middleton Isla**	**25.77**	**62**	P	**P**	**18 05 23.4**	**+0.5**
MID	**Middleton Isla**	**25.78**	**62**	P	**P**	**18 05 24.1**	**+1.2**
MID	**Middleton Isla**	**25.78**	**62**	P	**P**	**18 05 24.1**	**+1.2**
N25K	**Chitina, Valde**	**26.15**	**57**	P	**P**	**18 05 28.1**	**+1.7**
N25K				IAmb	IAmb	18 05 49.2	
	comp=Z,9.1nm,1.3s						
MJA0	**Matsu Arr-Jizo**	**26.55**	**234**	*e*P	**P**	**18 05 32.5**	**+2.4**
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MJB9	**Matsu-Tunnel**	**26.57**	**234**	P	**P**	**18 05 29.1**	**-1.2**
MJB9				IAmb	IAmb	18 05 44.5	
	comp=Z,5.1nm,0.7s						
MAJO	**Matsushiro**	**26.57**	**234**	P	**P**	**18 05 28.5**	**-1.8**
MAJO				IAmb	IAmb	18 05 43.5	
	comp=Z,5.3nm,0.8s						
MAJO	**Matsushiro**	**26.57**	**234**	⇑*e*P	**P**	**18 05 32.4**	**+2.1**
MAJO				pmax	pmax		
	comp=Z,28nm,3.3s						
MJAR	**Matsushiro Arr**	**26.57**	**234**	P	**P**	**18 05 31.8**	**+1.6**
	comp=Z,2.4nm,0.8s,baz=40,slow=8.4,SNR=7.9						
	comp=Z,2.4nm,0.8s						
K27K	**Chicken**	**26.90**	**51**	P	**P**	**18 05 34.9**	**+1.9**
K27K				IAmb	IAmb	18 06 07.3	
	comp=Z,5.6nm,1.3s						
M27K	**Edge Creek, AK**	**27.27**	**55**	P	**P**	**18 05 38.2**	**+1.8**
M27K				IAmb	IAmb	18 06 16.3	
	comp=Z,12nm,1.5s						
KSRS	**Korea Array**	**30.90**	**249**	P	P	18 06 10.1	+1.3
	comp=Z,0.5nm,0.5s,baz=38,slow=8.4,SNR=4.7						
KSRS				LR	LR	18 18 07.9	
	comp=Z,16nm,18.2s,baz=110,slow=36						
	comp=Z,0.5nm,0.5s						
SONM	**Songino Array**	**35.95**	**282**	P	P	18 06 53.5	+0.6
	comp=Z,0.5nm,0.7s,baz=52,slow=8.1,SNR=5.1						
	comp=Z,0.5nm,0.7s						
SONM	**Songino Array**	**35.95**	**282**	P	P	18 06 53.2	+0.4
SONM	**Songino Array**	**35.95**	**282**	P	P	18 06 53.2	+0.4
SONM				pmax	pmax		
	comp=Z,1.0nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**36.33**	**177**	T	T	18 45 49.0	
	baz=357,slow=76,SNR=82						
H11N3	**WAKE ISLAND Hy**	**36.34**	**177**	T	T	18 45 50.8	
	baz=357,slow=76,SNR=12						
H11N1	**WAKE ISLAND Hy**	**36.34**	**177**	T	T	18 46 03.1	
	baz=357,slow=76,SNR=11						
BBB	**Bella Bella**	**38.07**	**67**	LR	LR	18 21 13.1	
	comp=Z,59nm,19.3s,baz=242,slow=34						
YKA	**Yellowknife Ar**	**39.08**	**47**	P	P	18 07 21.0	+2.1
	comp=Z,0.2nm,0.4s,baz=297,slow=8.0,SNR=3.8						
	comp=Z,0.2nm,0.4s						
SPITS	**Spitsbergen Ar**	**44.62**	**351**	P	P	18 08 06.2	+2.2
	comp=Z,2.3nm,0.6s,baz=54,slow=8.4,SNR=6.5						
	comp=Z,2.3nm,0.6s						
SPITS	**Spitsbergen Ar**	**44.62**	**351**	P	P	18 08 06.3	+2.3
SPITS				pmax	pmax		
	comp=Z,37nm,1.4s						
SPB2	**Spitsbergen Ar**	**44.62**	**351**	P	P	18 08 06.2	+2.2
DGZ	**Jazzator, Alta**	**44.84**	**296**	⇑*e*P	P	18 08 07.2	+0.9
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.5s						
KWAJ	**Kwajalein Atol**	**47.21**	**176**	P	P	18 08 25.4	+0.4
KWAJ	**Kwajalein Atol**	**47.21**	**176**	P	P	18 08 25.4	+0.4
KURK	**Kurchatov**	**48.50**	**302**	⇑*e*P	P	18 08 35.4	+0.8
KURK				pmax	pmax		
	comp=Z,18nm,4.8s						
MK31	**Makanchi Array**	**49.34**	**296**	P	P	18 08 41.7	+0.5
MK31	**Makanchi Array**	**49.34**	**296**	⇓*e*P	P	18 08 41.7	+0.5
MKAR	**Makanchi Array**	**49.34**	**296**	P	P	18 08 42.1	+0.9
	comp=Z,0.2nm,0.4s,baz=54,slow=6.2,SNR=12						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**49.34**	**296**	P	**P**	**18 08 41.1**	**-0.2**
MAKZ	**Makanchi**	**49.49**	**296**	P	P	18 08 42.6	+0.3
MAKZ	**Makanchi**	**49.49**	**296**	P	P	18 08 42.7	+0.4
MAKZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRVK	**Borovoye**	**50.71**	**309**	P	P	18 08 52.5	+1.1
BRVK				IAmb	IAmb	18 08 53.8	
	comp=Z,2.1nm,0.6s						
BRVK	**Borovoye**	**50.71**	**309**	P	P	18 08 52.5	+1.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NVAR	**Mina Array Bea**	**52.20**	**75**	P	P	18 09 03.8	+0.7
	comp=Z,0.1nm,0.3s,baz=302,slow=11,SNR=1.9						
	comp=Z,0.1nm,0.3s						
ARU	**Arti**	**53.05**	**318**	*d i*P	P	18 09 10.4	+1.6
ARU						18 11 08.8	
ARU				S	**S**	**18 16 35.0**	**-0.8**
ARU				SS	**SS**	**18 20 09.8**	**-4.7**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.2s						
PDAR	**Pinedale Array**	**53.70**	**66**	P	P	18 09 17.4	+3.4
	comp=Z,0.1nm,0.3s,baz=22,slow=5.1,SNR=2.0						
	comp=Z,0.1nm,0.3s						
KK31	**Karatay Array**	**57.81**	**300**	P	**P**	**18 09 42.3**	**-1.0**
KK31	**Karatay Array**	**57.81**	**300**	P	**P**	**18 09 42.3**	**-1.0**
KK31				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KKAR	**Karatay Array**	**57.81**	**300**	P	**P**	**18 09 41.7**	**-1.6**
KKAR	**Karatay Array**	**57.81**	**300**	P	**P**	**18 09 42.0**	**-1.3**
KKAR				IAmb	IAmb	18 09 56.4	
	comp=Z,1.0nm,0.7s						
KKAR	**Karatay Array**	**57.81**	**300**	P	**P**	**18 09 41.7**	**-1.6**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ABKAR	**Akbulak array**	**57.92**	**312**	P	P	18 09 45.3	+1.4
ABKAR	**Akbulak array**	**57.92**	**312**	P	P	18 09 45.2	+1.3
ABKAR				IAmb	IAmb	18 09 57.2	
	comp=Z,3.4nm,1.4s						
FINES	**FINESS Array B**	**58.42**	**338**	P	P	18 09 49.0	+1.8
	comp=Z,1.3nm,0.8s,baz=28,slow=8.6,SNR=4.6						
	comp=Z,1.3nm,0.8s						
FINES	**FINESS Array B**	**58.42**	**338**	P	P	18 09 49.0	+1.8
TAPN	**Taplejung**	**60.70**	**276**	*e*P	P	18 10 05.1	+1.3
GUN	**Gumba**	**61.29**	**278**	*e*P	P	18 10 09.0	+1.2
NOA	**NORSAR Array B**	**61.38**	**346**	P	P	18 10 09.4	+1.7
	comp=Z,0.5nm,0.7s,baz=94,slow=6.9,SNR=2.4						
	comp=Z,0.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**61.46**	**261**	P	P	18 10 10.4	+1.7
	comp=Z,1.1nm,0.7s,baz=19,slow=7.0,SNR=11						
	comp=Z,1.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**61.46**	**261**	P	P	18 10 09.9	+1.2
CMAR	**Chiang Mai Arr**	**61.46**	**261**	*e*P	P	18 10 10.9	+2.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
RAMN	**Ramite**	**61.63**	**277**	*e*P	P	18 10 11.1	+1.1
	comp=Z,8.5nm,0.4s						
PKI	**Pulchoki**	**61.81**	**278**	*e*P	P	18 10 12.5	+1.2
	comp=Z,7.2nm,0.6s						
PKIN	**Phulchoki**	**61.81**	**278**	*e*P	P	18 10 12.7	+1.4
	comp=Z,8.2nm,0.6s						
DANN	**Dangsing**	**62.12**	**280**	*e*P	P	18 10 15.0	+1.6
	comp=Z,8.1nm,0.6s						
OK033	**Mehan**	**65.15**	**62**	P	P	18 10 34.8	+1.9
TXAR	**Lajitas Array**	**66.98**	**72**	P	P	18 10 47.3	+2.5
	comp=Z,0.2nm,0.8s,baz=224,slow=5.0,SNR=1.9						
	comp=Z,0.2nm,0.8s						
AKASG	**Malin Array Be**	**67.40**	**331**	P	**P**	**18 10 47.0**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=292,slow=8.9,SNR=1.8						
	comp=Z,0.4nm,0.6s						
AKASG	**Malin Array Be**	**67.40**	**331**	P	**P**	**18 10 47.0**	**-0.1**
KIV	**Kislovodsk**	**69.07**	**319**	*e*P	P	18 11 00.6	+2.8
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,31nm,17.0s						
KBZ	**Khabaz**	**69.19**	**319**	LR	LR	18 42 58.6	
	comp=Z,52nm,18.4s,baz=150,slow=37						
MLR	**Muntele Rosu**	**73.06**	**331**	P	P	18 11 23.5	+1.6
	comp=Z,1.8nm,0.6s,baz=243,slow=21,SNR=2.4						
	comp=Z,1.8nm,0.6s						

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*SOME **04** 18:12:14.1, 41°.82N×80°.27E, h10^{km}*

*NNC **04** 18:12:16.7±3.0, 41°.83N×80°.13E, h0^{km}, mb2.8, mpv2.7, Error ellipse: s-maj=19.9km s-min=17.3km az=119.0*

*IDC **04** 18:12:16.4±9.2, 41°.84N×80°.20E, h0^{km}, mbtmp2.7/1, ML2.7/1, Error ellipse: s-maj=105.1km s-min=77.8km az=119.0*

ISC 04 18:12:19.7±2.5, **41°.9N**±0°.1×**79°.98E**±0°.08, **h10**^{km}, **n25**, σ**2^{s}.25**/30, **4C-2D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**1.27**	**343**	P	**Pn**	**18 12 39.6**	**-4.1**
	4.0nm,0.3s						
SHLS				S	**Sn**	**18 12 58.4**	**-2.5**
	787nm,0.2s						
SHLS	**Shalkode**	**1.27**	**343**	*e*P	**Pn**	**18 12 39.6**	**-4.1**
	4.0nm,0.3s						
SHLS				*e*S	**Sn**	**18 12 58.4**	**-2.5**
	787nm,0.2s						
PDGK	**Podgornoye**	**1.43**	**346**	P	**Pn**	**18 12 43.7**	**-2.1**
	0.7nm,0.6s						
PDGK				S	**Sn**	**18 13 05.6**	**+0.7**
	4.8nm,0.4s						
PDGK	**Podgornoye**	**1.43**	**346**	⇓P	**Pg**	**18 12 46.8**	**-0.4**
	2.6nm,0.6s						
PDGK				⇓S	**Sg**	**18 13 09.8**	**+4.0**
	6.0nm,0.4s						
SATY	**Saty**	**1.61**	**314**	*e*P	**Pg**	**18 12 50.2**	**-0.4**
	1.1nm,0.3s						
SATY				*e*S	**Sg**	**18 13 16.1**	**+4.6**

	11nm,0.3s						
KPKS	**Kokpek**	**1.80**	**328**	Pg	**Pb**	**18 12 51.4**	**-1.4**
	1.7nm,0.1s						
KPKS				Lg	Lg	18 13 18.4	
	25nm,0.5s						
KPKS	**Kokpek**	**1.80**	**328**	*e*Pg	**Pb**	**18 12 52.0**	**-0.8**
	1.7nm,0.1s						
KPKS				*e*Lg	Lg	18 13 19.2	
	25nm,0.5s						
KURS	**Kuram**	**2.04**	**320**	Pg	**Pb**	**18 12 56.2**	**-0.7**
	2.9nm,0.5s						
KURS				Lg	Lg	18 13 26.5	
	6.0nm,0.6s						
KURS	**Kuram**	**2.04**	**320**	*e*Pg	**Pb**	**18 12 56.2**	**-0.7**
	2.9nm,0.5s						
KURS				*e*Lg	Lg	18 13 26.5	
	6.0nm,0.6s						
DJR	**Jarkent**	**2.39**	**357**	Pg	**Pb**	**18 12 60.0**	**-2.9**
	1.4nm,0.7s						
DJR				Lg	Lg	18 13 32.9	
	7.4nm,0.1s						
DJR	**Jarkent**	**2.39**	**357**	*e*Pg	**Pb**	**18 13 00.0**	**-2.9**
	1.4nm,0.7s						
DJR				*e*Lg	Lg	18 13 32.9	
	7.4nm,0.1s						
BLB	**Baldybastay**	**2.42**	**333**	Pg	**Pb**	**18 13 01.7**	**-1.7**
	6.9nm,0.0s						
BLB				Lg	Lg	18 13 36.4	
	18nm,0.0s						
KOTS	**Kotyrbulak**	**2.48**	**302**	Pg	**Pb**	**18 13 04.4**	**0.0**
	2.2nm,0.4s						
KOTS				Lg	Lg	18 13 40.6	
	16nm,0.4s						
KOTS	**Kotyrbulak**	**2.48**	**302**	*e*Pg	**Pb**	**18 13 04.4**	**0.0**
	2.2nm,0.4s						
KOTS				*e*Lg	Lg	18 13 40.6	
	16nm,0.4s						
MDOK	**Medeo**	**2.48**	**300**	Pn	**Pb**	**18 13 04.2**	**-0.4**
	1.1nm,0.4s						
MDOK				⇑Lg	Lg	18 13 42.5	
	5.2nm,0.5s						
TNSS	**Tian-Shan**	**2.49**	**297**	*e*Pg	**Pb**	**18 13 03.8**	**-1.0**
	0.5nm,0.3s						
TNSS				*e*Lg	Lg	18 13 39.3	
	2.8nm,0.3s						
KTBS	**Karatobe**	**3.00**	**307**	Pg	**Pb**	**18 13 12.3**	**-0.9**
	0.8nm,0.4s						
KTBS				Lg	Lg	18 13 54.2	
	14nm,0.3s						
KTBS	**Karatobe**	**3.00**	**307**	*e*Pg	**Pb**	**18 13 12.3**	**-0.9**
	0.8nm,0.4s						
KTBS				*e*Lg	Lg	18 13 54.2	
	14nm,0.3s						
KRBS	**Karabastau**	**3.62**	**300**	Pg	**Pb**	**18 13 24.1**	**+0.3**
	0.6nm,0.5s						
KRBS				Lg	Lg	18 14 14.4	
	2.5nm,0.4s						
KRBS	**Karabastau**	**3.62**	**300**	*e*Pg	**Pb**	**18 13 24.1**	**+0.3**
	0.6nm,0.5s						
KRBS				*e*Lg	Lg	18 14 14.4	
	2.5nm,0.4s						
MAKZ	**Makanchi**	**5.07**	**16**	⇑Pn	**Pn**	**18 13 37.6**	**+1.9**
	1.2nm,0.9s						
MK31	**Makanchi Array**	**5.13**	**18**	⇑Pn	**Pn**	**18 13 37.8**	**+1.2**
	0.2nm,0.3s,baz=199,slow=13,SNR=12						
MK31				⇑Sn	**Sn**	**18 14 38.9**	**+3.1**
	1.2nm,0.8s,baz=186,slow=23,SNR=3.6						
MKAR	**Makanchi Array**	**5.13**	**18**	Pn	**Pn**	**18 13 37.2**	**+0.7**
	0.3nm,0.3s,baz=196,slow=14,SNR=14						
MKAR				Sn	**Sn**	**18 14 38.2**	**+2.4**
	0.1nm,0.3s,baz=203,slow=24,SNR=6.2						
	0.4nm,0.3s						
I46RU	**ZALESOVO INFRA**	**12.44**	**13**	I	I	19 29 30.0	
	baz=196,slow=333,SNR=0.8						
I34MN	**SONGINO INFRAS**	**19.58**	**64**	I	I	20 11 30.0	
	baz=261,slow=334,SNR=1.2						

IDC 04 18:29:11.1±4.8, 40°.54N×97°.58E, h0^{km}, mb4.2/1, mbtmp3.5/5, ML3.0/4, Error ellipse: s-maj=66.1km s-min=29.5km az=167.0, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.65**	**38**	Pn	Pn	18 31 32.9	+1.6
	0.5nm,0.3s,baz=223,slow=15,SNR=21						
SONM				Lg	Lg	18 34 15.5	
	0.4nm,0.3s,baz=217,slow=31,SNR=9.7						
	0.8nm,0.3s						
MKAR	**Makanchi Array**	**12.70**	**305**	Pn	Pn	18 32 10.1	-2.8
	0.1nm,0.3s,baz=115,slow=14,SNR=2.2						
MKAR				Lg	Lg	18 35 51.7	
	0.1nm,0.3s,baz=113,slow=26,SNR=1.5						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**15.93**	**332**	Pn	Pn	18 32 57.2	+0.7
	0.1nm,0.3s,baz=144,slow=12,SNR=3.0						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**16.67**	**314**	Pn	Pn	18 33 04.6	-1.3
	baz=122,slow=12,SNR=2.2						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**46.84**	**321**	P	P	18 37 41.3	-1.1
	3.9nm,1.1s,baz=76,slow=7.3,SNR=3.4						
	3.9nm,1.1s						

MAN 04 19:10:00.7, 9°.78N×125°.36E, h22^{km}, mb3.6, ML2.3, MS1.8, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.13**	**90**	⇓*e*P	Pb	19 10 05.9	0.0
SCPH				*e*S	Sb	19 10 10.2	+0.6
MSLP	**Maasin**	**0.61**	**305**	⇑*e*P	Pb	19 10 12.7	0.0
MSLP				*e*S	Sn	19 10 24.4	+1.3
GLSP	**General Luna,**	**0.76**	**90**	⇓*e*P	Pn	19 10 15.8	-0.2
GLSP				*e*S	Sn	19 10 27.3	+0.6

IDC ***04*** *19:16:51.0±2.1, 6°.64S×153°.82E, h62^{km}±21^{km}, mb3.3/4, mbtmp3.7/6, Error ellipse: s-maj=24.1km s-min=15.9km az=65.0*

ISC 04 19:16:50.4±1.0, 6°.64S±0°.10×153°.8E±0°.1, h48^{km}, n7, σ1^s.18/8, mb3.5/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.92**	**322**	P	**Pn**	**19 17 34.2**	**-0.2**
	58nm,0.3s,baz=170,slow=3.2,SNR=69						
KRVT				S	**Sn**	**19 18 10.0**	**+1.7**
	75nm,0.3s,baz=127,slow=20,SNR=8.7						
HNR	**Honiara**	**6.67**	**115**	P	**Pn**	**19 18 26.8**	**+0.9**
	337nm,0.3s,baz=345,slow=23,SNR=15						
PMG	**Port Moresby**	**7.15**	**247**	P	**Pn**	**19 18 33.2**	**+0.7**
	17nm,1.1s,baz=32,slow=16,SNR=1.4						
WRA	**Warramunga Arr**	**23.08**	**233**	P	**P**	**19 21 51.2**	**-0.9**
	1.3nm,0.8s,baz=56,slow=8.8,SNR=9.6						
	1.3nm,0.8s						
ASAR	**Alice Springs**	**25.56**	**226**	P	**P**	**19 22 14.2**	**-0.8**
	0.4nm,0.6s,baz=56,slow=8.9,SNR=5.5						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**82.37**	**319**	P	**P**	**19 29 06.3**	**-1.1**
	0.2nm,0.4s,baz=101,slow=6.7,SNR=7.8						
	0.2nm,0.4s						
YKA	**Yellowknife Ar**	**96.56**	**28**	P	**P**	**19 30 14.6**	**-0.1**
	0.1nm,0.3s,baz=270,slow=5.3,SNR=1.7						
	0.1nm,0.3s						

RSNC 04 19:21:22.2±1.2, 5°.26N×73°.73W, h147^{km}±4^{km}, ML3.1, Mw3.6, 9C-3D, Fault plane solution: NP1:ϕ_s148.00000°, δ67.00000°, λ78.00000°., Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPBC	**San Pablo de B**	**0.52**	**319**	⇑*e*P	Pn	19 21 43.5	+0.1
SPBC				*e*S	Sn	19 21 59.7	+0.1
SPBC				*i*		19 22 02.6	
	comp=Z,378nm,0.2s						
CHIC	**Chingaza**	**0.63**	**180**	⇑*e*P	Pn	19 21 44.6	+0.2
CHIC				*e*S	Sn	19 22 00.5	-0.9
CHIC				*i*		19 22 04.7	
	comp=Z,305nm,0.3s						
ROSC	**El Rosal**	**0.72**	**235**	⇑*i*P	Pn	19 21 46.2	+1.2
ROSC				*e*S	Sn	19 22 03.2	+0.9
ROSC				*i*		19 22 06.6	
	comp=Z,273nm,0.3s						
RUSC	**La Rusia**	**0.90**	**46**	⇓*e*P	Pn	19 21 46.8	+0.4
RUSC				*e*S	Sn	19 22 05.2	+0.3
RUSC				*i*		19 22 07.8	
	comp=Z,192nm,0.4s						
VILC	**Villavicencio,**	**1.14**	**178**	⇑*e*P	Pn	19 21 47.9	-0.2
VILC				*e*S	Sn	19 22 07.8	-0.2
NORC	**Norcasia**	**1.17**	**285**	⇑*e*P	Pn	19 21 47.9	-0.4
NORC				*e*S	Sn	19 22 08.0	-0.3
NORC				*i*		19 22 09.6	
	comp=Z,148nm,0.2s						
BARC	**Barichara**	**1.43**	**22**	*e*P	Pn	19 21 50.6	-0.5
BARC				*e*S	Sn	19 22 12.0	-1.3
BARC				*i*		19 22 14.0	
	comp=Z,269nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.46**	**330**	⇑*e*P	Pn	19 21 50.1	-1.0
PTBC				*e*S	Sn	19 22 11.5	-1.9
PTBC				*i*		19 22 15.1	
	comp=Z,100nm,0.1s						
ANIL	**Santa Ana**	**1.83**	**245**	*e*P	Pn	19 21 55.5	-0.1
ANIL				*e*S	Sn	19 22 20.1	-0.9
ANIL				*i*		19 22 27.5	
	comp=Z,118nm,0.2s						
BRRC	**Barranca, Sant**	**1.83**	**1**	*e*P	Pn	19 21 55.4	+0.2
BRRC				*e*S	Sn	19 22 19.5	-1.3
BRRC				*i*		19 22 22.9	
	comp=Z,170nm,0.2s						
PTGC	**Puerto Gaitan,**	**1.91**	**123**	⇓*e*P	Pn	19 21 55.8	-0.4
PTGC				*e*S	Sn	19 22 20.8	-1.4
PTGC				*i*		19 22 23.4	
	comp=Z,162nm,0.3s						
HELC	**Santa Helena**	**2.01**	**297**	*e*P	Pn	19 21 57.5	-0.2
HELC				*e*S	Sn	19 22 24.1	-0.8
HELC				*i*		19 22 27.4	
	comp=Z,86nm,0.4s						
ORTC	**Ortega, Tolima**	**2.02**	**228**	⇑*e*P	Pn	19 21 57.1	-0.3
ORTC				*e*S	Sn	19 22 23.8	-0.7
ORTC				*i*		19 22 27.6	
	comp=Z,61nm,0.2s						
TAMC	**Tame, Arauca**	**2.26**	**59**	⇓*e*P	Pn	19 22 00.4	+0.1
TAMC				*e*S	Sn	19 22 28.2	-1.4
TAMC				*i*		19 22 31.4	
	comp=Z,87nm,0.4s						
PAMC	**Pamplona, Colo**	**2.31**	**26**	*e*P	Pn	19 22 01.2	-0.2
PAMC				*e*S	Sn	19 22 31.7	+0.3
PAMC				*i*		19 22 33.6	
	comp=Z,72nm,0.3s						
CBOC	**Ciudad Bolivar**	**2.35**	**285**	*e*P	Pn	19 22 01.1	-0.4
CBOC				*e*S	Sn	19 22 31.4	-0.3
ZARC	**Zaragoza, Cauc**	**2.48**	**333**	*e*P	Pn	19 22 01.0	-2.0
ZARC				*e*S	Sn	19 22 32.2	-2.3
ZARC				*i*		19 22 39.7	
	comp=Z,136nm,0.4s						
DBBC	**Dabeiba**	**3.02**	**305**	*e*P	Pn	19 22 09.6	-0.2
DBBC				*e*S	Sn	19 22 46.1	-0.5
DBBC				*i*		19 22 49.1	
	comp=Z,44nm,0.3s						
UREC	**San Jos de Ur**	**3.05**	**324**	⇑*e*P	Pn	19 22 07.9	-2.3
UREC				*e*S	Sn	19 22 43.9	-3.4
UREC				*i*		19 22 44.9	
	comp=Z,74nm,0.2s						
BETC	**Betania**	**3.08**	**214**	*e*P	Pn	19 22 09.6	-0.9
BETC				*i*		19 22 50.0	
	comp=Z,18nm,0.4s						
MACC	**Macarena, Meta**	**3.10**	**182**	*e*P	Pn	19 22 09.5	-1.3
MACC				*e*S	Sn	19 22 45.4	-3.0
GARC	**Garzon, Huila**	**3.52**	**210**	⇑*e*P	Pn	19 22 15.5	-1.0
APAC	**Apartado, Choc**	**3.86**	**313**	*e*P	Pn	19 22 20.5	0.0
APAC				*e*S	Sn	19 23 04.5	-1.3
APAC				*i*		19 23 10.0	
	comp=Z,27nm,0.3s						
SJCC	**San Jacinto, C**	**4.83**	**343**	*e*P	Pn	19 22 30.1	-3.2
SJCC				*e*S	Sn	19 23 23.2	-5.6
SJCC				*i*		19 23 27.1	
	comp=Z,24nm,0.6s						
CRJC	**Cerrejon, Guaj**	**5.79**	**8**	*e*P	Pn	19 22 43.8	-2.3
CRJC				*e*S	Sn	19 23 46.5	-5.3
CRJC				*i*		19 24 02.7	
	comp=Z,20nm,0.4s						

IDC ***04*** *19:45:41.5±11.0, 7°.36S×127°.74E, h108^{km}±113^{km}, mb3.2/2, mbtmp3.6/4, ML3.7/2, Error ellipse: s-maj=275.0km s-min=44.0km az=62.0*

ISC 04 19:45:46.1±0.9, 7°.5S±0°.1×127°.8E±0°.1, h150^{km}, n15, σ1^s.54/15, mb3.7/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**6.28**	**149**	P	**Pn**	**19 47 15.6**	**-1.0**
FAKI	**Fak Fak**	**6.32**	**45**	P	**Pn**	**19 47 17.1**	**-0.1**
KDU	**Kakadu**	**6.94**	**139**	P	**Pn**	**19 47 23.7**	**-1.7**
KNRA	**Kununurra**	**8.22**	**173**	P	**Pn**	**19 47 40.4**	**-2.1**
PLAI	**Plampang**	**10.01**	**262**	P	**Pn**	**19 48 06.5**	**+0.1**
WRA	**Warramunga Arr**	**13.94**	**154**	P	**Pn**	**19 48 54.6**	**-2.7**
	0.3nm,0.3s,baz=327,slow=12,SNR=11						
WRA				S	Sn	19 51 18.8	-13
	0.5nm,0.3s,baz=331,slow=22,SNR=2.9						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**17.15**	**161**	P	**P**	**19 49 37.0**	**+0.8**
	0.4nm,0.3s,baz=342,slow=11,SNR=48						
ASAR				S	S	19 52 35.9	-12
	0.5nm,0.6s,baz=315,slow=16,SNR=1.6						
	2.6nm,0.6s						
AS01	**Alice Springs**	**17.16**	**161**	P	**P**	**19 49 36.9**	**+0.6**
	5.9nm,0.7s						
QIS	**Mount Isa**	**17.33**	**140**	P	**P**	**19 49 38.6**	**+0.5**
WRKA	**Warakurna**	**17.49**	**178**	P	**Pn**	**19 49 41.1**	**+0.2**
OOD	**Oodnadatta**	**21.56**	**161**	P	**P**	**19 50 25.1**	**+1.3**
MULG	**Mulgathing**	**23.45**	**166**	P	**P**	**19 50 43.8**	**+1.8**
RMQ	**Roma**	**27.48**	**136**	P	**P**	**19 51 21.0**	**+2.5**
	3.0nm,1.6s						
STKA	**Stephens Creek**	**27.49**	**154**	P	**P**	**19 51 18.4**	**0.0**
	1.0nm,0.6s,baz=333,slow=9.0,SNR=1.7						
	1.0nm,0.6s						
MKAR	**Makanchi Array**	**67.43**	**328**	P	**P**	**19 56 24.8**	**-0.7**
	0.1nm,0.5s,baz=126,slow=7.3,SNR=1.8						
	0.1nm,0.5s						

NEIC ***04*** *20:03:45.2±1.8, 20°.4S±0°.1×178°.5W±0°.1, h586^{km}±6^{km}, mb4.9/126, Error ellipse: s-maj=16.1km s-min=13.2km az=151.0*

MOS ***04*** *20:03:45.7±0.8, 20°.36S×178°.54W, h607^{km}, mb4.8/30, Error ellipse: s-maj=9.5km s-min=8.4km az=122.2*

NOU ***04*** *20:03:46.2, 20°.41S×178°.40W, h604^{km}, mb4.8/88, Fiji Islands Region*

IDC ***04*** *20:03:46.9±0.8, 20°.36S×178°.53W, h608^{km}±9^{km}, mb4.1/30, mbtmp5.1/33, Error ellipse: s-maj=9.5km s-min=8.2km az=161.0*

GCMT ***04*** *20:03:49.2±0.5, 20°.02S±0°.04×178°.56W±0°.04, h617^{km}±3^{km}, MW5.3/63, Moment Tensor Solution. s63,c79; Duration: 1^s.0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.56±.03; $M_{\theta\theta}$0.35±.07; $M_{\phi\phi}$0.20±.06; $M_{r\theta}$-0.35±.06; $M_{\theta\phi}$0.18±.05; $M_{\phi r}$-0.76±.06; Best double couple: $M_0$0.97500×10^{17} NP1:ϕ_s31.00000°, δ75.00000°, λ-100.00000°. NP2:ϕ_s244.00000°, δ18.00000°, λ-58.00000°. Principal axes: T 0.8940, Plg29.0000°, Azm129.0000°; N 0.1620, Plg9.0000°, Azm33.0000°; P -1.0560, Plg59.0000°, Azm287.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 04 20:03:45.7±0.4, 20°.37S±0°.05×178°.42W±0°.04, h601^{km}±4^{km}, h603^{km}:pP-P, n918, σ1^s.28/962, mb4.8/154, 59C-72D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**2.16**	**350**	P	**P**	**20 05 02.4**	**+1.5**
TAVE	**Taveuni**	**3.91**	**339**	P	**P**	**20 05 12.3**	**+1.6**
MSVF	**Nonsavu**	**4.25**	**308**	P	**P**	**20 05 14.3**	**+1.2**
	168nm,0.6s,baz=174,slow=8.2,SNR=49						
MSVF				S	**S**	**20 06 25.5**	**+1.2**
	50nm,1.0s,baz=177,slow=21,SNR=0.7						
MSVF	**Nonsavu**	**4.25**	**308**	P	**P**	**20 05 14.5**	**+1.3**
MSVF	**Nonsavu**	**4.25**	**308**	P	**P**	**20 05 14.6**	**+1.5**
YSA	**Yasawairara**	**5.27**	**313**	P	**P**	**20 05 21.8**	**+1.0**
FUTU	**Fugatoga**	**6.04**	**3**	P	**P**	**20 05 28.5**	**+1.2**
NIUE	**Niue**	**8.11**	**82**	P	**P**	**20 05 45.9**	**-0.2**
RAO	**Raoul Island**	**8.85**	**177**	S	**S**	**20 07 34.6**	**-2.9**
	210nm,0.4s,baz=90,slow=22,SNR=2.1						
AFI	**Afiamalu**	**9.04**	**46**	P	**P**	**20 05 53.5**	**-1.6**
	144nm,0.4s,baz=22,slow=1.4,SNR=23						
AFI				S	**S**	**20 07 34.5**	**-6.8**
	216nm,0.7s,baz=9.2,slow=22,SNR=14						
PINNC	**Pines Island,**	**13.34**	**258**	P	**P**	**20 06 37.8**	**-0.2**
OUENC	**Ouen Island, N**	**13.88**	**259**	P	**P**	**20 06 41.9**	**-1.4**
DZM	**Mont Dzumac**	**14.21**	**260**	*e*Pn	**P**	**20 06 45.2**	**-1.5**
	56nm,0.7s						
DZM				*e*S	**S**	**20 09 11.6**	**-3.0**
	984nm,24.5s						
DZM	**Mont Dzumac**	**14.21**	**260**	P	**P**	**20 06 46.6**	**-0.1**
	34nm,0.6s,baz=109,slow=12,SNR=42						
DZM	**Mont Dzumac**	**14.21**	**260**	P	**P**	**20 06 45.9**	**-0.8**
DZM	**Mont Dzumac**	**14.21**	**260**	P	**P**	**20 06 46.8**	**+0.1**
ONTNC	**Ouen Toro**	**14.22**	**260**	P	**P**	**20 06 46.0**	**-0.6**
NOUC	**Port Laguerre**	**14.35**	**260**	P	**P**	**20 06 47.9**	**+0.1**
KOUNC	**Koumac, New Ca**	**16.21**	**266**	P	**P**	**20 07 06.8**	**+1.9**
KOUNC	**Koumac, New Ca**	**16.21**	**266**	P	**P**	**20 07 07.2**	**+2.3**
KUZ	**Kuaotunu**	**17.10**	**196**	P	**P**	**20 07 15.0**	**+2.2**
RAR	**Rarotonga**	**17.46**	**96**	P	**P**	**20 07 16.3**	**-0.1**
	43nm,0.9s,baz=244,slow=6.0,SNR=10						
RAR	**Rarotonga**	**17.46**	**96**	P	**P**	**20 07 16.7**	**+0.3**
RAR	**Rarotonga**	**17.46**	**96**	P	**P**	**20 07 17.8**	**+1.4**
RAR	**Rarotonga**	**17.46**	**96**	P	**P**	**20 07 16.7**	**+0.3**
HAZ	**Te Kaha**	**17.63**	**190**	P	**P**	**20 07 14.1**	**-3.6**
HAZ				S	**S**	**20 10 20.0**	**+10**
PKGZ	**Pakihiroa**	**17.72**	**189**	P	**P**	**20 07 17.0**	**-1.5**
PKGZ				S	**S**	**20 10 19.6**	**+8.1**
RUGZ	**Raukumara Rang**	**17.85**	**190**	P	**P**	**20 07 18.5**	**-1.4**
RUGZ				S	**S**	**20 10 23.1**	**+9.3**
PUZ	**Puketiti**	**17.87**	**189**	P	**P**	**20 07 18.7**	**-1.1**
TGRZ	**Tauranga**	**17.90**	**194**	P	**P**	**20 07 21.7**	**+1.5**
MWZ	**Matawai**	**18.24**	**190**	P	**P**	**20 07 21.1**	**-2.2**
MWZ				S	**S**	**20 10 13.2**	**-6.7**
URZ	**Urewera**	**18.24**	**191**	P	**P**	**20 07 20.5**	**-2.7**
	30nm,0.5s,baz=36,slow=0.5,SNR=34						
URZ				S	**S**	**20 10 15.8**	**-3.9**
	12nm,0.7s,baz=281,slow=23,SNR=5.9						
URZ	**Urewera**	**18.24**	**191**	P	**P**	**20 07 20.7**	**-2.5**
URZ	**Urewera**	**18.24**	**191**	P	**P**	**20 07 20.7**	**-2.5**
URZ				S	**S**	**20 10 14.4**	**-5.4**
CNGZ	**Carnagh Statio**	**18.28**	**188**	P	**P**	**20 07 24.3**	**+0.7**
RTZ	**Ruatahuna**	**18.61**	**191**	P	**P**	**20 07 24.1**	**-2.6**
RTZ	**Ruatahuna**	**18.61**	**191**	P	**P**	**20 07 24.8**	**-1.9**
BKZ	**Black Stump Fm**	**19.23**	**192**	P	**P**	**20 07 29.3**	**-3.0**
QRZ	**Quartz Range**	**21.80**	**199**	P	**P**	**20 07 55.5**	**+0.2**
THZ	**Tophouse**	**22.55**	**197**	P	**P**	**20 08 00.6**	**-1.5**
RPZ	**Rata Peaks**	**24.88**	**198**	P	**P**	**20 08 24.0**	**+1.4**
	10nm,0.6s,baz=325,slow=1.2,SNR=8.2						
	10nm,0.6s						
TBI	**Tubuai**	**27.02**	**102**	*e*P	**P**	**20 08 42.8**	**+1.1**
	113nm,1.1s						
TBI				*e*sS	**sS**	**20 15 35.9**	**+1.3**
	680nm,28.0s						
PPT2	**Papeete2**	**27.40**	**89**	*e*P	**P**	**20 08 44.9**	**-0.2**
	94nm,1.1s						
PPT2				*e*sS	**sS**	**20 15 44.1**	**+2.8**
	273nm,24.0s						
PPT	**Papeete**	**27.41**	**89**	P	**P**	**20 08 46.3**	**+1.1**
	80nm,1.0s,baz=205,slow=2.5,SNR=5.5						
	80nm,1.0s						
PPTF	**Pamatai, Papee**	**27.41**	**89**	P	**P**	**20 08 46.8**	**+1.6**
	129nm,1.3s						
TIAR	**Tiarei**	**27.63**	**89**	*e*P	**P**	**20 08 47.0**	**0.0**
	9.3nm,0.9s						
TVO	**Taravao**	**27.67**	**90**	*e*P	**P**	**20 08 47.5**	**0.0**
	15nm,0.7s						
EIDS	**Eidsvold**	**28.50**	**254**	P	**P**	**20 08 54.5**	**+0.1**
EIDS				IAmb	IAmb	20 08 56.2	
	comp=Z,72nm,2.0s						
ARMA	**Armidale**	**28.77**	**244**	P	**P**	**20 08 56.9**	**+0.1**
MEH	**Mehetia**	**28.77**	**90**	*e*P	**P**	**20 08 56.4**	**-0.5**
	comp=Z,25nm,1.0s						
PMOR	**Pomariorio Ree**	**29.55**	**85**	*e*P	**P**	**20 09 04.0**	**+0.4**
	comp=Z,113nm,0.9s						
VAH	**Vaihoa**	**29.74**	**85**	*e*P	**P**	**20 09 05.2**	**0.0**
	comp=Z,78nm,1.1s						
RMQ	**Roma**	**30.66**	**252**	P	**P**	**20 09 14.5**	**+1.4**
AULRC	**Lightning Ridg**	**31.69**	**247**	P	**P**	**20 09 23.6**	**+1.8**
	comp=Z,24nm,1.8s						
TV1H	**Townsville Har**	**32.70**	**266**	P	**P**	**20 09 31.1**	**+0.6**
RABL	**Rabaul**	**32.83**	**295**	P	**P**	**20 09 34.2**	**+2.5**
	comp=Z,28nm,0.5s						
KRVT	**Keravat (AS076**	**32.89**	**295**	P	**P**	**20 09 32.3**	**+0.2**
	comp=Z,32nm,0.7s,baz=144,slow=5.5,SNR=11						
	comp=Z,32nm,0.7s						
CTA	**Charters Tower**	**33.11**	**264**	P	**P**	**20 09 34.0**	**+0.1**
	comp=Z,17nm,0.4s,baz=89,slow=10.0,SNR=139						
	comp=Z,17nm,0.4s						
CTAO	**Charters Tower**	**33.11**	**264**	P	**P**	**20 09 33.3**	**-0.6**
CTAO				IAmb	IAmb	20 09 35.2	
	comp=Z,47nm,1.1s						
CTAO	**Charters Tower**	**33.11**	**264**	P	**P**	**20 09 34.3**	**+0.4**
CTAO	**Charters Tower**	**33.11**	**264**	P	**P**	**20 09 33.3**	**-0.6**
CTAO				pmax	pmax		
	comp=Z,47nm,1.2s						
CTAO	**Charters Tower**	**33.11**	**264**	P	**P**	**20 09 34.0**	**+0.1**
CMSA	**Cobar Meteorol**	**33.98**	**244**	P	**P**	**20 09 41.2**	**+0.1**
QLP	**Quilpie**	**34.72**	**253**	P	**P**	**20 09 47.6**	**+0.4**
PMG	**Port Moresby**	**34.93**	**283**	P	**P**	**20 09 49.4**	**+0.3**
	comp=Z,71nm,0.9s,baz=87,slow=4.2,SNR=22						
	comp=Z,71nm,0.9s						
PMG	**Port Moresby**	**34.93**	**283**	P	**P**	**20 09 48.7**	**-0.4**
PMG	**Port Moresby**	**34.93**	**283**	P	**P**	**20 09 49.8**	**+0.6**
PMG	**Port Moresby**	**34.93**	**283**	P	**P**	**20 09 49.7**	**+0.6**
PMG	**Port Moresby**	**34.93**	**283**	*d i*P	**P**	**20 09 49.1**	**0.0**
PMG				pmax	pmax		
	comp=Z,95nm,1.0s						
PMG	**Port Moresby**	**34.93**	**283**	P	**P**	**20 09 49.1**	**0.0**
PMG				pP	**pP**	**20 11 27.6**	**+0.6**
MTSU	**Mount Surprise**	**35.20**	**267**	P	**P**	**20 09 51.6**	**+0.2**
	comp=Z,18nm,0.9s						
TOO	**Toolangi**	**35.65**	**233**	P	**P**	**20 09 54.4**	**-0.5**
TOO				IAmb	IAmb	20 10 28.9	
	comp=Z,68nm,1.9s						
TOO	**Toolangi**	**35.65**	**233**	P	**P**	**20 09 54.4**	**-0.5**
TOO				pmax	pmax		
	comp=Z,68nm,2.0s						
COEN	**Coen**	**37.18**	**274**	P	**P**	**20 10 07.3**	**-0.3**
COEN				IAmb	IAmb	20 10 09.1	
	comp=Z,38nm,0.9s						
COEN	**Coen**	**37.18**	**274**	P	**P**	**20 10 08.1**	**+0.5**
STKA	**Stephens Creek**	**37.49**	**244**	P	**P**	**20 10 10.2**	**+0.3**
	comp=Z,4.5nm,0.4s,baz=80,slow=10,SNR=40						
	comp=Z,4.5nm,0.4s						
STKA	**Stephens Creek**	**37.49**	**244**	P	**P**	**20 10 09.5**	**-0.4**
STKA	**Stephens Creek**	**37.49**	**244**	P	**P**	**20 10 10.4**	**+0.5**
STKA	**Stephens Creek**	**37.49**	**244**	P	**P**	**20 10 09.5**	**-0.4**
STKA				pmax	pmax		
	comp=Z,13nm,1.9s						
INKA	**Innaminka**	**37.87**	**251**	P	**P**	**20 10 14.2**	**+1.2**
TAOE	**Nuku Hiva Isla**	**38.67**	**78**	P	**P**	**20 10 20.1**	**+0.4**
QIS	**Mount Isa**	**39.24**	**262**	P	**P**	**20 10 24.4**	**+0.2**
HTT	**Hallett**	**39.93**	**242**	P	**P**	**20 10 30.0**	**+0.4**
LCRK	**Leigh Creek**	**40.22**	**247**	P	**P**	**20 10 32.2**	**+0.3**
BBOO	**Buckleboo**	**42.25**	**243**	P	**P**	**20 10 47.2**	**-0.6**
BBOO				IAmb	IAmb	20 10 48.8	
	comp=Z,90nm,1.6s						
BBOO	**Buckleboo**	**42.25**	**243**	P	**P**	**20 10 47.7**	**-0.1**
OOD	**Oodnadatta**	**42.35**	**251**	P	**P**	**20 10 49.2**	**+0.6**
MULG	**Mulgathing**	**43.80**	**247**	P	**P**	**20 10 59.6**	**-0.3**
WR0	**Warramunga Arr**	**44.03**	**262**	P	**P**	**20 11 01.0**	**-0.9**
WR0				IAmb	IAmb	20 11 02.4	
	comp=Z,27nm,1.0s						
GENI	**Genyem**	**44.07**	**288**	P	**P**	**20 11 03.0**	**+0.8**
	comp=Z,107nm,1.5s						
GENI	**Genyem**	**44.07**	**288**	P	**P**	**20 11 03.7**	**+1.5**
	comp=Z,107nm,1.5s						
AS01	**Alice Springs**	**44.12**	**257**	P	**P**	**20 11 02.3**	**-0.2**
AS31	**Alice Springs**	**44.16**	**257**	P	**P**	**20 11 02.1**	**-0.7**
ASAR	**Alice Springs**	**44.16**	**257**	P	**P**	**20 11 02.5**	**-0.3**
	comp=Z,22nm,0.7s,baz=90,slow=7.9,SNR=278						
ASAR				PcP	**PcP**	**20 12 34.2**	**0.0**
	comp=Z,10nm,1.0s,baz=99,slow=4.2,SNR=13						
ASAR				S	**S**	**20 16 51.6**	**-1.9**
	comp=Z,4.1nm,0.9s,baz=93,slow=15,SNR=17						
	comp=Z,22nm,0.7s						
WB0	**Warramunga Arr**	**44.20**	**262**	P	**P**	**20 11 02.4**	**-0.8**
WB0				IAmb	IAmb	20 11 03.6	
	comp=Z,53nm,1.1s						
WRAB	**Tennant Creek**	**44.22**	**262**	P	**P**	**20 11 02.8**	**-0.4**
WRAB	**Tennant Creek**	**44.22**	**262**	*d i*P	**P**	**20 11 02.4**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,55nm,1.3s						
WRAB	**Tennant Creek**	**44.22**	**262**	P	**P**	**20 11 02.4**	**-0.9**
WRAB				pP	**pP**	**20 12 46.5**	**-1.3**
WRA	**Warramunga Arr**	**44.22**	**262**	P	**P**	**20 11 02.8**	**-0.6**
	comp=Z,10nm,0.3s,baz=97,slow=7.6,SNR=282						
WRA				PcP	**PcP**	**20 12 34.8**	**+0.4**

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      comp=Z,3.8nm,0.8s,baz=97,slow=3.4,SNR=6.4
WRA                                S      S      20 16 52.8 -1.8
      comp=Z,2.3nm,1.2s,baz=90,slow=13,SNR=4.7
      comp=Z,10nm,0.3s
WRA   Warramunga Arr  44.22 262    P      P      20 11 01.8 -1.5
KDU   Kakadu          47.55 271    P      P      20 11 28.3 -0.2
MTN   Manton Dam      48.76 271    P      P      20 11 36.9 -0.6
MTN                                IAmb   IAmb   20 11 37.1
      comp=Z,28nm,0.9s
FORT  Forrest         48.98 247    P      P      20 11 38.2 -0.7
FORT                               IAmb   IAmb   20 11 39.1
      comp=Z,78nm,1.3s
FORT  Forrest         48.98 247    P      P      20 11 38.5 -0.4
WRKA  Warakurna       49.12 254    P      P      20 11 39.5 -0.6
KNRA  Kununurra       50.27 266    P      P      20 11 47.6 -0.9
FITZ  Fitzroy Crossi  52.65 262    P      P      20 12 05.1 -0.5
FITZ  Fitzroy Crossi  52.65 262    P      P      20 12 05.4 -0.2
DRV   Dumont d'Urvil  53.34 199    P      P      20 12 09.2 -0.4
SOEI  Soe             56.10 272    P      P      20 12 31.1 +1.2
SOEI  Soe             56.10 272    P      P      20 12 31.2 +1.3
SOEI  Soe             56.10 272    P      P      20 12 31.7 +1.8
      comp=Z,128nm,1.0s,comp=Z,3μm
TNTI  Ternate         57.04 285    P      P      20 12 35.8 -0.4
TNTI                               IAmb   IAmb   20 12 37.3
      comp=Z,66nm,1.0s
PSA00 Pilbara Seismi  57.31 257    P      P      20 12 36.9 -1.0
PSA00 Pilbara Seismi  57.31 257    P      P      20 12 36.9 -1.0
PSA00                              IAmb   IAmb   20 12 38.3
      comp=Z,43nm,1.1s
PSA00 Pilbara Seismi  57.31 257    P      P      20 12 37.3 -0.6
MBWA  Marble Bar      57.49 257    P      P      20 12 38.0 -1.1
MBWA  Marble Bar      57.49 257    P      P      20 12 38.6 -0.6
MBWA  Marble Bar      57.49 257    P      P      20 12 38.3 -0.9
KLBR  Kellerberrin    57.75 245    P      P      20 12 40.5 -0.3
SBA   Scott Base      57.97 184    P      P      20 12 43.7 +2.3
SBA                                IAmb   IAmb   20 14 40.7
      comp=Z,125nm,1.6s
SBA   Scott Base      57.97 184    P      P      20 12 43.7 +2.3
SBA                                pmax   pmax
      comp=Z,125nm,1.7s
VNDA  Vanda           58.00 185    P      P      20 12 43.3 +1.7
      comp=Z,2.4nm,0.7s,baz=17,slow=7.3,SNR=2.7
      comp=Z,2.4nm,0.7s
VNDA  Vanda           58.00 185    P      P      20 12 43.2 +1.7
VNDA  Vanda           58.00 185    P      P      20 12 43.3 +1.7
VNDA                               pmax   pmax
      comp=Z,38nm,1.8s
VNDA  Vanda           58.00 185    P      P      20 12 43.1 +1.5
MMRI  Maumere         58.35 272    P      P      20 12 44.1 -1.0
MMRI                               IAmb   IAmb   20 12 45.5
      comp=Z,45nm,1.0s
MORW  Morawa          59.51 248    P      P      20 12 52.2 -0.4
BKSI  Bulukumba       61.42 275    P      P      20 13 06.3 +0.9
      comp=Z,19nm,1.3s
GIRL  Giralia         62.20 255    P      P      20 13 10.6 +0.3
PLAI  Plampang        62.47 271    P      P      20 13 12.0 -0.2
CCD   Concordia, Ant  62.49 194    P      P      20 13 12.4 +0.7
CCD                                pP     pP     20 15 09.6 +1.2
TWSI  Taliwang, Sumb  63.34 270    P      P      20 13 17.1 -0.6
      comp=Z,65nm,1.2s,comp=Z,840nm
MPSI  Mapaga          63.70 281    P      P      20 13 20.1 +0.1
      comp=Z,38nm,1.1s
IGBI  Denpasar        64.95 270    P      P      20 13 27.9 +0.1
      comp=Z,60nm,1.3s
JAGI  Jajag, Banyuwa  65.99 270    P      P      20 13 32.5 -1.9
JAGI                               IAmb   IAmb   20 13 34.0
      comp=Z,39nm,1.0s
JAGI  Jajag, Banyuwa  65.99 270    P      P      20 13 32.8 -1.6
JAGI  Jajag, Banyuwa  65.99 270    P      P      20 13 33.3 -1.1
      comp=Z,40nm,1.1s
ABJI  Asem Bagus      66.12 270    P      P      20 13 35.4 +0.2
      comp=Z,45nm,1.1s
JHJ2  Mitsune         66.47 322    P      P      20 13 37.5 +0.6
JHJ   Hachijo jima 2  66.50 322    P      P      20 13 37.5 +0.5
      comp=Z,129nm,0.9s,baz=224,slow=5.8,SNR=3.7
PWJI  Pagerwojo       68.33 269    P      P      20 13 52.5 +3.8
KKM   Kota Kinabalu   69.34 285    P      P      20 13 55.1 +0.2
KKM                                IAmb   IAmb   20 13 56.2
      comp=Z,28nm,1.0s
JMM   Marumori        69.47 326    P      P      20 13 54.6 -0.3
JMM                                IAmb   IAmb   20 13 56.2
      comp=Z,41nm,1.0s
UGM   Wanagama        69.57 269    P      P      20 13 55.6 -0.6
JGF   Kuroka          69.67 323    P      P      20 13 55.6 -0.6
JGF   Kuroka          69.67 323    P      P      20 13 56.6 +0.3
INU   Inuyama         69.69 322    P      P      20 13 56.6 +0.3
INU   Inuyama         69.69 322    P      P      20 13 56.6 +0.3
QSPA  South Pole Qui  69.69 180    P      P      20 13 56.9 +0.9
      comp=Z,18nm,0.8s,baz=221,slow=1.0,SNR=107
      comp=Z,18nm,0.8s
QSPA  South Pole Qui  69.69 180    P      P      20 13 56.9 +0.9
QSPA  South Pole Qui  69.69 180    P      P      20 13 57.0 +0.9
QSPA                               pP     pwP    20 15 58.9  0.0
JOW   Kunigami        69.78 310    P      P      20 13 57.7 +0.6
      comp=Z,28nm,0.8s,baz=148,slow=4.6,SNR=9.6
      comp=Z,28nm,0.8s
JOW   Kunigami        69.78 310    P      P      20 13 57.5 +0.4
JOW                                IAmb   IAmb   20 13 58.8
      comp=Z,52nm,1.0s
JOW   Kunigami        69.78 310    P      P      20 13 58.0 +0.9
MJAR  Matsushiro Arr  69.87 324    P      P      20 13 57.4  0.0
      comp=Z,12nm,0.7s,baz=156,slow=5.9,SNR=50
      comp=Z,12nm,0.7s
MAJO  Matsushiro      69.88 324    P      P      20 13 57.0 -0.4
MAJO                               IAmb   IAmb   20 13 57.9
      comp=Z,24nm,1.0s
MAJO  Matsushiro      69.88 324    P      P      20 13 57.4  0.0
MAJO  Matsushiro      69.88 324    P      P      20 13 57.0 -0.4
MAJO                               pmax   pmax
      comp=Z,24nm,1.0s
MAJO  Matsushiro      69.88 324    P      P      20 13 57.2 -0.2
MJB9  Matsu-Tunnel    69.88 324    P      P      20 13 58.0 +0.5
MJB9                               IAmb   IAmb   20 13 58.9
      comp=Z,23nm,1.0s
JSD   Sado            70.94 325    P      P      20 14 04.7 +1.1
JSD                                IAmb   IAmb   20 14 05.7
      comp=Z,39nm,0.9s
JSU   Suzuyama        71.16 315    P      P      20 14 04.9 -0.1
JSU                                IAmb   IAmb   20 14 06.5
      comp=Z,32nm,0.9s
JSU   Suzuyama        71.16 315    P      P      20 14 05.5 +0.4
KPJI  Karang Pucung   71.25 269    P      P      20 14 06.1 +0.1
      comp=Z,23nm,1.2s
JTM   Tenmabayashi    71.55 329    P      P      20 14 07.2 +0.1
JHS   Saijyo          71.75 320    P      P      20 14 08.5 +0.1
JHS                                IAmb   IAmb   20 14 10.3
      comp=Z,50nm,0.9s
JHS   Saijyo          71.75 320    P      P      20 14 09.2 +0.8
JNU   Nakatsue        71.91 317    P      P      20 14 09.3 -0.1
      comp=Z,40nm,1.0s,baz=83,slow=4.2,SNR=25
      comp=Z,40nm,1.0s
JNU   Nakatsue        71.91 317    P      P      20 14 09.1 -0.3
JNU                                IAmb   IAmb   20 14 10.7
      comp=Z,53nm,1.0s
JNU   Nakatsue        71.91 317    P      P      20 14 09.7 +0.3
ADK   Adak            71.96   1    P      P      20 14 09.7 +0.5
ADK   Adak            71.96   1    P      P      20 14 09.7 +0.5
ADK                                pmax   pmax
      comp=Z,327nm,1.6s
ADK   Adak            71.96   1    P      P      20 14 09.0 -0.2
KSM   Kuching         73.00 278    P      P      20 14 16.6 +0.5
YULB  Yu-li           73.10 303    P      P      20 14 15.7 -0.8
NACB  Ninganchiao     73.28 304    P      P      20 14 16.4 -1.1
NACB  Ninganchiao     73.28 304    P      P      20 14 16.3 -1.1
ASAJ  Asahikawa       73.43 332    P      P      20 14 18.9 +1.1
      comp=Z,51nm,0.9s,baz=201,slow=8.0,SNR=15
      comp=Z,51nm,0.9s
NIKH  Nikolski High   73.51   6    P      P      20 14 17.6 -0.5
      baz=189
SSLB  Suanglung       73.57 304    P      P      20 14 18.1 -1.0
SSLB                               IAmb   IAmb   20 14 18.9
      comp=Z,36nm,1.0s
SSLB  Suanglung       73.57 304    P      P      20 14 18.3 -0.8
TPUB  Ta-pu           73.58 303    P      P      20 14 17.9 -1.2
TPUB  Ta-pu           73.58 303    P      P      20 14 17.9 -1.2
YHNB  Yeheng          73.71 305    P      P      20 14 20.0 +0.1
CGJI  Cibinong        74.52 269    P      P      20 14 24.1 -0.6
      comp=Z,52nm,1.2s
UNV   Unalaska Valle  74.62   7    P      P      20 14 23.8 -0.5
UNV                                IAmb   IAmb   20 14 24.5
      comp=Z,40nm,0.7s
UNV   Unalaska Valle  74.62   7    P      P      20 14 24.3  0.0
UNV   Unalaska Valle  74.62   7    P      P      20 14 23.7 -0.6
      baz=192
AKUT  Akutan          75.00   8    P      P      20 14 25.6 -0.7
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PPBI  Pangkal Pinang  75.60 273    P      P      20 14 31.6 +0.9
      comp=Z,44nm,1.4s,comp=Z,737nm
YSS   Yuzh-Sakhalins  75.61 334    P      P      20 14 31.3 +1.4
YSS   Yuzh-Sakhalins  75.61 334    P      P      20 14 31.4 +1.5
      comp=Z,94nm,1.1s
YSS   Yuzh-Sakhalins  75.61 334d iP    P      20 14 30.9 +1.0
YSS                                pmax   pmax
      comp=Z,86nm,1.1s
KASI  Kota Agung      76.00 269    P      P      20 14 32.6 -0.3
      comp=Z,78nm,1.3s,comp=Z,782nm
FALS  False Pass      76.02   9    P      P      20 14 31.1 -0.9
      baz=194
PEA0B Petropavlovsk-  76.05 345    P      P      20 14 32.5 +0.3
PEA0B                              IAmb   IAmb   20 14 33.6
      comp=Z,47nm,0.9s
PEA0B Petropavlovsk-  76.05 345    P      P      20 14 32.5 +0.3
PEA0B                              pmax   pmax
      comp=Z,47nm,1.0s
PETK  Petropavlovsk-  76.05 345    P      P      20 14 32.0 -0.2
      comp=Z,39nm,1.0s,baz=129,slow=8.8,SNR=41
      comp=Z,39nm,1.0s
PETK  Petropavlovsk-  76.05 345    P      P      20 14 32.2  0.0
PETK  Petropavlovsk-  76.05 345    P      P      20 14 32.2  0.0
TJN   Taejon          76.21 318d iP    P      20 14 34.9 +1.4
KSRS  Korea Array     76.53 319    P      P      20 14 36.0 +0.8
      comp=Z,8.1nm,0.8s,baz=140,slow=6.3,SNR=25
      comp=Z,8.1nm,0.8s
KSAR  Wonju Array Be  76.55 319    P      P      20 14 35.9 +0.6
KSAR  Wonju Array Be  76.55 319    P      P      20 14 35.9 +0.6
LWLI  Liwa            76.58 270    P      P      20 14 35.7 -0.5
      comp=Z,81nm,1.0s
PMBI  Palembang       76.62 272    P      P      20 14 35.9 -0.3
MDSI  Maura Dua       76.65 270    P      P      20 14 35.0 -1.4
      comp=Z,32nm,1.0s
SDPT  Sand Point      76.96  10    P      P      20 14 36.8 -0.3
      baz=197
S12K  Black Hills     77.04   9    P      P      20 14 37.4 -0.2
      baz=196,SNR=7.0
INCN  Inchon          77.35 318    P      P      20 14 40.4 +0.7
INCN                               IAmb   IAmb   20 14 41.7
      comp=Z,36nm,1.1s
INCN  Inchon          77.35 318    P      P      20 14 40.7 +1.0
INCN  Inchon          77.35 318    P      P      20 14 40.4 +0.7
INCN                               pmax   pmax
      comp=Z,36nm,1.1s
UGL   Uglegorsk       77.57 335   eP      P      20 14 41.5 +0.9
UGL                                pmax   pmax
      comp=Z,100nm,0.9s
SCZ2  Santa Cruz Isl  77.80  47    P      P      20 14 41.0 -1.2
      baz=235
CHGN  Chignik         78.23  11    P      P      20 14 44.1 +0.2
CHGN                               IAmb   IAmb   20 14 44.8
      comp=Z,38nm,0.8s
HOPS  Hopland Field   78.53  41    P      P      20 14 47.4 +1.4
HOPS                               IAmb   IAmb   20 17 22.3
      comp=Z,100nm,1.6s
USRK  Ussuriysk Ar.   78.64 326    P      P      20 14 47.8 +1.4
      comp=Z,22nm,0.8s,baz=136,slow=3.1,SNR=18
      comp=Z,22nm,0.8s
USRK  Ussuriysk Ar.   78.64 326    P      P      20 14 47.5 +1.1
USA0B Ussuriysk Arra  78.64 326    P      P      20 14 47.7 +1.3
USA0B                              IAmb   IAmb   20 14 48.8
      comp=Z,33nm,0.9s
USA0B Ussuriysk Arra  78.64 326    P      P      20 14 47.7 +1.3
USA0B                              pmax   pmax
      comp=Z,33nm,0.9s
TYV   Tymovskoe       78.76 336   eP      P      20 14 47.7 +0.8
TYV                               eS      S      20 23 51.8 -4.3
TYV                                pmax   pmax
      comp=Z,200nm,2.1s
TYV                                pmax   pmax
      comp=Z,46nm,1.4s
TYV                                smax   smax
      comp=N,600nm,5.3s
KMRM  Mail Ridge      78.91  40    P      P      20 14 50.2 +2.1
KMRM                               IAmb   IAmb   20 14 51.2
      comp=Z,47nm,0.9s
MASI  Maura Aman, Be  78.92 271    P      P      20 14 48.6 -0.1
      comp=Z,30nm,1.2s
MYKOM Kota Tinggi     79.13 276    P      P      20 14 49.5 -0.2
MYKOM                              IAmb   IAmb   20 14 51.4
      comp=Z,43nm,1.1s
VES   Vestal, Richgr  79.22  45    P      P      20 14 49.4 -0.4
      baz=235
BFSC  Mount Baldy Ra  79.29  47    P      P      20 14 49.5 -0.8
      baz=236
EDW2  Edwards Air Fo  79.42  47    P      P      20 14 51.5 +0.6
      baz=236,SNR=5.0
MONP2 Monument Peak   79.43  49    P      P      20 14 51.2 +0.1
      baz=237,SNR=5.3
NJ2   Nanjing         79.49 310   eP      P      20 14 52.5 +1.3
NJ2                                pmax   pmax
      comp=Z,9.0nm,0.6s
IKP   In-Ko-Pah, Jac  79.52  49    P      P      20 14 51.5 +0.1
      baz=238
ISA   Isabella, Lake  79.53  46    P      P      20 14 52.3 +0.9
ISA   Isabella, Lake  79.53  46    P      P      20 14 52.3 +0.9
ISA                                pmax   pmax
      comp=Z,20nm,1.4s
ISA   Isabella, Lake  79.53  46    P      P      20 14 51.6 +0.2
      baz=236
R16K  Pilot Point     79.58  11    P      P      20 14 51.8 +0.8
      baz=200
YUH   Yuha Desert     79.65  50    P      P      20 14 53.1 +1.1
PFO   Pinyon Flats O  79.79  48    P      P      20 14 52.2 -0.7
      baz=237
TPFO  Pinon Flats     79.79  48    P      P      20 14 53.1 +0.2
      baz=237
ORV   Oroville        79.84  41    P      P      20 14 53.9 +1.0
ORV   Oroville        79.84  41    P      P      20 14 53.9 +1.0
ORV                                pmax   pmax
      comp=Z,14nm,1.0s
R17K  Ugashik Creek   79.87  12    P      P      20 14 53.3 +0.8
      baz=201
MDJ   Mudanjiang      80.19 325    P      P      20 14 56.0 +1.4
MDJ                                S      S      20 24 22.4  +11
MDJ                                pmax   pmax
      comp=Z,42nm,1.1s
MDJ                                pmax   pmax
      comp=Z,160nm,9.6s
MDJ   Mudanjiang      80.19 325    P      P      20 14 55.3 +0.8
MDJ                                IAmb   IAmb   20 14 56.9
      comp=Z,37nm,1.0s
MDJ   Mudanjiang      80.19 325    P      P      20 14 55.9 +1.4
CWC   Cottonwood Cre  80.23  45    P      P      20 14 55.5 +0.3
      baz=236
BELC  Belle Mtn. Jos  80.32  48    P      P      20 14 55.2 -0.5
      baz=237
MPMC  Manual Prospec  80.42  46    P      P      20 14 56.4 +0.2
      baz=236,SNR=6.5
SDSI  Sungai Dareh    80.44 273    P      P      20 14 55.7 -0.9
      comp=Z,12nm,1.2s,comp=Z,759nm
YBH   Yreka Blue Hor  80.44  39    P      P      20 14 57.5 +1.4
YBH   Yreka Blue Hor  80.44  39    P      P      20 14 57.5 +1.4
YBH                                pmax   pmax
      comp=Z,16nm,0.8s
GSC   Goldstone, Bar  80.46  47    P      P      20 14 56.5 +0.2
      baz=237
TIN   Tinemaha, Big   80.48  45    P      P      20 14 56.4  0.0
      baz=236
BC3   Big Chuckawall  80.52  49    P      P      20 14 56.8 +0.2
      baz=238
HEC   Hector,Ludlow   80.53  47    P      P      20 14 56.6 -0.1
      baz=237
Q17K  Contact Creek   80.55  12    P      P      20 14 55.9 -0.3
      baz=201,SNR=10
GLA   Glamis          80.65  50    P      P      20 14 57.6 +0.3
      baz=238
Q16K  King Salmon     80.79  11    P      P      20 14 56.8 -0.5
      baz=201,SNR=9.6
DSP   Deep Springs    80.83  45    P      P      20 14 59.3 +1.3
P16K  Nushagak River  80.89  11    P      P      20 14 57.2 -0.6
      baz=199,SNR=27
GMRC  Granite Mounta  80.97  48    P      P      20 14 58.2 -0.8
      baz=238
IRM   Iron Mountain   81.00  49    P      P      20 14 59.0 -0.1
      baz=238,SNR=6.7
FURC  Furnace Creek,  81.06  46    P      P      20 14 58.0 -1.2
      baz=236
Q18K  Katmai Hardscr  81.08  12    P      P      20 14 58.7 -0.2
      baz=202,SNR=9.3
SHOC  Shoshone, Teco  81.15  47    P      P      20 14 58.7 -1.1
      baz=237
NVAR  Mina Array Bea  81.21  44    P      P      20 15 02.0 +1.7
      comp=Z,4.6nm,0.6s,baz=225,slow=8.9,SNR=21
      comp=Z,4.6nm,0.6s
NVAR  Mina Array Bea  81.21  44    P      P      20 15 00.0 -0.2
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GRNR  Gornyy          81.21 333⇓iP    P      20 15 00.7 +1.0
GRNR                               pmax   pmax
      comp=N,6.0nm,1.1s
GRNR                               pmax   pmax
      comp=E,6.0nm,1.1s
GRNR                               pmax   pmax
      comp=Z,20nm,1.1s
BKNI  Bangkinang      81.24 274    P      P      20 14 59.7 -1.0
BKNI                               IAmb   IAmb   20 15 03.4
      comp=Z,57nm,1.2s
BKNI  Bangkinang      81.24 274    P      P      20 15 03.3 +2.6
      comp=Z,42nm,1.4s
BKNI  Bangkinang      81.24 274    P      P      20 15 00.4 -0.3
      comp=Z,43nm,1.4s
NV11  Mina Array Sit  81.30  44    P      P      20 15 01.7 +1.0
P17K  Kvichak River   81.31  11    P      P      20 14 59.7 -0.3
      baz=201,SNR=14
O16K  Kokwok River B  81.40  10    P      P      20 14 59.7 -0.7
      baz=199
214A  Organ Pipe Nat  81.55  52    P      P      20 15 01.0 -0.9
      baz=240
Q19K  Cape Douglas,   81.61  13    P      P      20 15 00.4 -1.2
      baz=203
TPH   Tonopah         81.71  44    P      P      20 15 03.6 +0.9
TPH   Tonopah         81.71  44    P      P      20 15 03.7 +0.9
TPH                                pmax   pmax
      comp=Z,74nm,1.0s
P18K  Big Mountain,   81.72  12    P      P      20 15 01.5 -0.6
      baz=202
TPNV  Topopah Spring  81.74  46    P      P      20 15 04.3 +1.4
TPNV  Topopah Spring  81.74  46    P      P      20 15 04.3 +1.4
TPNV                               pmax   pmax
      comp=Z,12nm,0.8s
TPNV  Topopah Spring  81.74  46    P      P      20 15 01.3 -1.6
      baz=237
O17K  Koliganek Bris  81.74  11    P      P      20 15 02.4 +0.3
      baz=200,SNR=11
PDMCI Parker Dam,Lak  81.79  49    P      P      20 15 01.8 -1.2
      baz=239
MOD   Modoc Plateau   81.97  40    P      P      20 15 05.1 +1.1
MOD                                IAmb   IAmb   20 15 06.4
      comp=Z,18nm,0.8s
WHN   Wuhan           82.05 307    P      P      20 15 05.6 +1.2
WHN                                pmax   pmax
      comp=Z,48nm,1.0s
BNX   BinXian         82.09 325  ⇓P      P      20 15 04.4 +0.1
BNX                                pmax   pmax
      comp=Z,32nm,0.9s
BNX                                pmax   pmax
      comp=Z,72nm,4.8s
K05A  Summer Lake     82.11  39    P      P      20 15 06.2 +1.5
K05A                               IAmb   IAmb   20 15 07.5
      comp=Z,34nm,0.9s
N16K  Nishlik Lake    82.13  10    P      P      20 15 04.2 +0.1
      baz=199
O18K  Koktuh Hills    82.16  12    P      P      20 15 03.6 -0.7
      baz=202
KLR   Kul'dur         82.22 330    P      P      20 15 05.5 +0.6
      comp=Z,10nm,1.0s,baz=95,slow=2.8,SNR=23
      comp=Z,10nm,1.0s
KLR   Kul'dur         82.22 330d iP    P      20 15 05.8 +1.0
KLR                                pmax   pmax
      comp=Z,16nm,1.1s
P19K  Oil Pt          82.36  13    P      P      20 15 05.1 -0.2
      baz=204
W13A  Hualapai Mount  82.38  48    P      P      20 15 07.2 +0.9
O19K  Port Alsworth   82.64  12    P      P      20 15 06.5 -0.2
O19K  Port Alsworth   82.64  12    P      P      20 15 06.1 -0.6
      baz=203,SNR=22
HOM   Homer           82.70  13    P      P      20 15 06.4 -0.5
      baz=205
IPM   Ipoh            82.72 277    P      P      20 15 08.4 +0.2
IPM                                IAmb   IAmb   20 15 09.8
      comp=Z,33nm,1.0s
IPM   Ipoh            82.72 277    P      P      20 15 08.8 +0.6
O20K  Slope Mountain  82.88  13    P      P      20 15 08.0 +0.1
      baz=204
R11A  Troy Canyon, C  82.94  45    P      P      20 15 07.6 -1.4
      baz=237
BRSE  Bradley Lake S  82.97  14    P      P      20 15 09.3 +0.9
      baz=206
N19K  Bonanza Creek   83.19  12    P      P      20 15 09.1 -0.4
      baz=203
TUC   Tucson          83.22  52    P      P      20 15 11.7 +1.3
TUC   Tucson          83.22  52    P      P      20 15 11.7 +1.3
TUC                                pmax   pmax
      comp=Z,9.0nm,1.0s
TUC   Tucson          83.22  52    P      P      20 15 11.2 +0.9
      baz=241
WVOR  Wild Horse Val  83.29  40    P      P      20 15 11.4 +0.9
WVOR  Wild Horse Val  83.29  40    P      P      20 15 11.4 +0.9
WVOR                               pmax   pmax
      comp=Z,18nm,1.2s
NLWA  Neilton Lookou  83.35  34    P      P      20 15 12.0 +1.4
KULM  Kulim           83.36 278    P      P      20 15 10.9 -0.4
KULM                               IAmb   IAmb   20 15 13.2
      comp=Z,22nm,1.0s
MA2   Magadan         83.56 345    P      P      20 15 10.8 -0.4
      comp=Z,17nm,0.9s,baz=151,slow=2.4,SNR=6.7
      comp=Z,17nm,0.9s
MA2   Magadan         83.56 345    P      P      20 15 11.0 -0.2
MA2                                IAmb   IAmb   20 15 12.0
      comp=Z,19nm,0.9s
MA2   Magadan         83.56 345    P      P      20 15 11.4 +0.1
MA2   Magadan         83.56 345ceP     P      20 15 11.1 -0.2
MA2                                pmax   pmax
      comp=Z,59nm,2.5s
SEW   Seward          83.59  14    P      P      20 15 11.4  0.0
      baz=207
Q23K  Middleton Isla  83.75  16    P      P      20 15 12.0 -0.1
      baz=210
CAPN  Captain Cook N  83.81  13    P      P      20 15 12.9 +0.5
      baz=206
P23K  Montague Islan  83.98  15    P      P      20 15 13.8 +0.5
      baz=209
SPCR  Spurr Chakacha  83.99  12    P      P      20 15 13.1 -0.3
      baz=205
RPSI  Rantau Prapat   84.05 275    P      P      20 15 13.5 -1.3
RPSI                               IAmb   IAmb   20 15 15.4
      comp=Z,36nm,1.2s
PSI   Prapat          84.08 275    P      P      20 15 14.3 -0.8
PSI   Prapat          84.08 275    P      P      20 15 13.5 -1.6
PSI                                pmax   pmax
      comp=Z,36nm,1.2s
M19K  Big River Lodg  84.21  11    P      P      20 15 14.2 -0.2
      baz=203
WUAZ  Wupatki         84.36  49    P      P      20 15 16.1 +0.1
      baz=240
L19K  White Mountain  84.39  11    P      P      20 15 16.0 +0.6
L19K                               IAmb   IAmb   20 15 17.0
      comp=Z,28nm,1.1s
L19K  White Mountain  84.39  11    P      P      20 15 15.9 +0.5
      baz=202,SNR=12
RC01  Rabbit Creek A  84.41  14    P      P      20 15 15.5 +0.1
      baz=207,SNR=5.9
M20K  Styx River      84.43  12    P      P      20 15 15.6  0.0
      baz=204
ELK   Elko            84.46  43    P      P      20 15 17.6 +1.1
ELK   Elko            84.46  43    P      P      20 15 17.6 +1.1
ELK                                pmax   pmax
      comp=Z,4.0nm,0.9s
PWL   Port Wells      84.52  14    P      P      20 15 16.1 +0.1
      baz=208
SUA   Susitna One     84.53  13    P      P      20 15 16.2  0.0
SUA                                IAmb   IAmb   20 15 16.9
      comp=Z,26nm,0.8s
SUA   Susitna One     84.53  13    P      P      20 15 16.3 +0.2
      baz=206,SNR=9.7
CRAG  Craig           84.76  24    P      P      20 15 17.2  0.0
      baz=222
GSI   Gunungsitoli    84.82 273    P      P      20 15 18.7 +0.2
SKT   Skwentna        84.83  12    P      P      20 15 17.0 -0.4
      baz=205
EYAK  Cordova Ski Ar  84.87  16    P      P      20 15 17.3 -0.3
      baz=211
TTA   Tatalina        84.89  10    P      P      20 15 18.8 +1.0
      comp=Z,16nm,1.4s
TTA   Tatalina        84.89  10    P      P      20 15 18.7 +0.9
      baz=201,SNR=9.7
M22K  Willow          84.92  13    P      P      20 15 18.1 +0.3
      baz=206,SNR=5.8
KNK   Knik Glacier    84.98  14    P      P      20 15 18.7 +0.5
KNK                                IAmb   IAmb   20 15 19.4
      comp=Z,31nm,0.9s
KNK   Knik Glacier    84.98  14    P      P      20 15 18.2  0.0
      baz=208,SNR=6.2
PMR   Palmer          84.99  14    P      P      20 15 18.0 -0.2
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PMR   Palmer           84.99  14   P       P       20 15 18.3 +0.2
      baz=207,SNR=7.4
HEH   HeiHe            85.00 329 ⇓P       P       20 15 18.8 +0.3
HEH                               pmax    pmax
      comp=Z,26nm,1.3s
HEH                               pmax    pmax
      comp=Z,350nm,4.7s
HAWA  Hanford          85.08  36   P       P       20 15 19.5 +0.5
HAWA                              IAmb    IAmb    20 15 21.6
      comp=Z,24nm,1.1s
HNS   HongShan         85.17 313 ⇓P       P       20 15 20.5 +0.9
HNS                               pmax    pmax
      comp=Z,24nm,1.3s
V35K  Ketchikan        85.24  25   P       P       20 15 20.1 +0.6
      baz=223
U33K  Whale Pass       85.24  24   P       P       20 15 20.1 +0.6
      baz=222
ANM   Nome             85.27   6   P       P       20 15 20.3 +0.8
ANM   Nome             85.27   6   P       P       20 15 20.3 +0.8
ANM                               pmax    pmax
      comp=Z,4.0nm,0.9s
ANM   Nome             85.27   6   P       P       20 15 20.3 +0.8
      baz=192
SML   Sawmill          85.36  14   P       P       20 15 21.4 +1.4
      baz=208
DIV   Divide           85.37  15   P       P       20 15 20.1  0.0
DIV                               IAmb    IAmb    20 15 21.3
      comp=Z,38nm,1.0s
LYN   LuoYang          85.37 309⇓iP       P       20 15 21.7 +1.0
LYN                               pmax    pmax
      comp=Z,38nm,1.0s
BMO   Blue Mountains   85.47  39   P       P       20 15 21.6 +0.6
BMO   Blue Mountains   85.47  39   P       P       20 15 21.6 +0.6
BMO                               pmax    pmax
      comp=Z,7.0nm,0.9s
CUT   Chulitna         85.47  13   P       P       20 15 20.2 -0.3
      baz=206
M23K  Glacier View     85.48  14   P       P       20 15 20.8 +0.2
      baz=209
BJT   Baijiatuau       85.52 316   P       P       20 15 21.7 +0.5
BJT                               IAmb    IAmb    20 15 23.0
      comp=Z,80nm,1.9s
BJT   Baijiatuau       85.52 316   P       P       20 15 22.4 +1.1
BJT   Baijiatuau       85.52 316   P       P       20 15 21.7 +0.5
BJT                               pmax    pmax
      comp=Z,80nm,1.9s
SRIT  Nakonsritamara   85.52 281   P       P       20 15 23.0 +1.1
SRIT  Nakonsritamara   85.52 281   P       P       20 15 23.8 +2.0
S31K  Pelican          85.54  21   P       P       20 15 21.0 +0.1
      baz=219
121A  Cookes Peak, D   85.56  53   P       P       20 15 21.8 -0.1
      baz=242
SCM   Sheep Creek Mo   85.61  14   P       P       20 15 21.5 +0.2
SCM   Sheep Creek Mo   85.61  14   P       P       20 15 21.5 +0.2
SCM                               pmax    pmax
      comp=Z,38nm,0.8s
SCM   Sheep Creek Mo   85.61  14   P       P       20 15 21.7 +0.4
      baz=209,SNR=8.5
K20K  Telida           85.62  11   P       P       20 15 21.5 +0.3
      baz=203,SNR=12
ENH   Enshi            85.64 304   P       P       20 15 22.5 +0.3
ENH   Enshi            85.64 304   P       P       20 15 22.8 +0.7
KLU   Klutina          85.64  15   P       P       20 15 21.8 +0.3
KLU                               IAmb    IAmb    20 15 22.7
      comp=Z,16nm,1.0s
KLU   Klutina          85.64  15   P       P       20 15 21.6 +0.2
      baz=210
SURA  Surathani        85.70 281   P       P       20 15 24.6 +1.9
S32K  Killisnoo        85.73  22   P       P       20 15 22.5 +0.7
      baz=221
WRAK  Wrangell Islan   85.76  24   P       P       20 15 22.6 +0.6
      baz=223
NONG  Nongkai          85.85 291   P       P       20 15 24.4 +1.1
PNL   Peninsula        85.89  19   P       P       20 15 23.3 +0.7
      baz=216
PINM  Pinnacle         85.98  18   P       P       20 15 23.4 +0.3
      baz=216
CAST  Castle Rocks     86.03  12   P       P       20 15 22.0 -1.2
      baz=205,SNR=17
TNA   Tin City         86.04   4   P       P       20 15 23.3 +0.2
TNA   Tin City         86.04   4   P       P       20 15 22.8 -0.3
      baz=190
N25K  Chitina, Valde   86.07  15   P       P       20 15 23.5  0.0
      baz=212,SNR=8.6
M24K  Tolsona, Glenn   86.12  15   P       P       20 15 23.5 -0.1
      baz=210
GLB   Gilahina Butte   86.13  16   P       P       20 15 23.8 +0.1
SEY   Seymchan         86.16 347   P       P       20 15 23.6 -0.1
      comp=Z,28nm,0.8s,baz=148,slow=5.7,SNR=63
      comp=Z,28nm,0.8s
SEY   Seymchan         86.16 347⇓iP       P       20 15 23.9 +0.2
SEY                               pmax    pmax
      comp=Z,77nm,1.7s
GYA   Guiyang          86.24 300 ⇑P       P       20 15 26.2 +1.0
GYA                               pmax    pmax
      comp=Z,17nm,1.6s
MCARA McCarthy VSAT    86.28  16   P       P       20 15 24.3 -0.1
      baz=213
B08A  Colville Reser   86.36  35   P       P       20 15 25.0 -0.1
B08A                              IAmb    IAmb    20 15 26.7
      comp=Z,13nm,0.8s
PLID  Pearl Lake       86.36  39   P       P       20 15 26.0 +0.5
PLID                              IAmb    IAmb    20 15 27.5
      comp=Z,48nm,1.6s
R32K  Eaglecrest       86.37  22   P       P       20 15 24.7 -0.2
      baz=221
LLLB  Lillooet         86.40  32   P       P       20 15 25.7 +0.5
LLLB                              IAmb    IAmb    20 15 27.3
      comp=Z,24nm,1.2s
CHUM  Lake Minchumin   86.42  11   P       P       20 15 24.2 -0.7
      baz=204,SNR=8.3
HLID  Hailey           86.49  41   P       P       20 15 26.8 +0.7
HLID  Hailey           86.49  41   P       P       20 15 25.6 -0.4
      baz=238,SNR=12
O28M  Mount Upton      86.55  18   P       P       20 15 26.2 +0.2
      baz=216
HVU   Hansel Valley    86.58  43   P       P       20 15 27.2 +0.7
HVU   Hansel Valley    86.58  43   P       P       20 15 27.2 +0.7
HVU                               pmax    pmax
      comp=Z,12nm,1.6s
HARP  HAARP            86.61  15   P       P       20 15 26.3 +0.3
      baz=211
O29M  Mount Kennedy    86.64  19   P       P       20 15 26.5 +0.2
      baz=217
PLBC  Pleasant Camp    86.66  20   P       P       20 15 27.0 +0.8
      baz=219
ELIB  Princess Elisa   86.72 187  dP       P       20 15 25.6 -1.0
      comp=Z,22nm,0.7s
BPAW  Bear Paw Mtn.    86.86  12   P       P       20 15 26.1 -1.0
      baz=206
MCK   McKinley         86.94  13   P       P       20 15 26.8 -0.6
      baz=208,SNR=14
P30M  Million Dollar   87.00  19   P       P       20 15 27.3 -0.5
      baz=218
SKAG  Skagway          87.00  20   P       P       20 15 28.2 +0.5
      baz=220
MNTX  Cornudas Mount   87.00  55   P       P       20 15 29.6 +1.1
MNTX  Cornudas Mount   87.00  55   P       P       20 15 28.5  0.0
      baz=244
PAX   Paxson           87.03  14   P       P       20 15 27.9 -0.1
      baz=211
YUK8  Steele Glacier   87.09  18   P       P       20 15 28.0 -0.5
      baz=216,SNR=10
M26K  Nabesna, AK      87.15  16   P       P       20 15 28.4 -0.1
      baz=213,SNR=15
YUK6  Outpost Mounta   87.22  18   P       P       20 15 28.8 -0.3
      baz=217
YUK3  Moose Creek      87.30  17   P       P       20 15 29.5 +0.1
      baz=215,SNR=15
S34M  Telegraph Cree   87.31  23   P       P       20 15 29.5 +0.2
      baz=224,SNR=7.1
TX31  Lajitas Ar. Si   87.32  57   P       P       20 15 31.9 +1.8
TX31                              IAmb    IAmb    20 15 33.1
      comp=Z,24nm,0.9s
TXAR  Lajitas Array    87.32  57   P       P       20 15 31.9 +1.8
      comp=Z,5.7nm,0.8s,baz=220,slow=6.3,SNR=48
TXAR                              PKKPbc  PKKPbc  20 33 17.2 +0.3
      comp=Z,0.1nm,0.4s,baz=46,slow=2.6,SNR=3.5
      comp=Z,5.7nm,0.8s
TXAR  Lajitas Array    87.32  57   P       P       20 15 31.4 +1.3
ZEA   Zeya             87.33 331  eP       P       20 15 29.9 +0.5
ZEA                               pmax    pmax
      comp=N,10.0nm,0.7s
ZEA                               pmax    pmax
      comp=Z,10.0nm,0.7s
HYT   Haines Junctio   87.38  19   P       P       20 15 30.9 +1.2
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HYT                               IAmb    IAmb    20 15 31.7
      comp=Z,18nm,1.0s
HYT   Haines Junctio   87.38  19   P       P       20 15 29.9 +0.2
      baz=218,SNR=6.4
M27K  Edge Creek, AK   87.40  16   P       P       20 15 30.5 +0.7
      baz=214
MENT  Mentasta         87.42  15   P       P       20 15 30.4 +0.7
YUK4  Talbot Arm       87.46  18   P       P       20 15 31.0 +0.8
      baz=217,SNR=5.8
NEW   Newport          87.50  36   P       P       20 15 30.4 -0.1
      baz=235
XLT   XiLinHaoTe       87.58 319⇑iP       P       20 15 31.4 +0.4
XLT                               pmax    pmax
      comp=Z,12nm,1.3s
XLT                               pmax    pmax
      comp=Z,73nm,5.5s
L26K  Log Cabin Wild   87.58  15   P       P       20 15 30.6 +0.1
      baz=213,SNR=6.9
ANMO  Albuquerque      87.64  51   P       P       20 15 32.1 +0.5
ANMO  Albuquerque      87.64  51   P       P       20 15 32.1 +0.5
ANMO                              pmax    pmax
      comp=Z,9.0nm,1.2s
ANMO  Albuquerque      87.64  51   P       P       20 15 30.6 -1.1
      baz=243
P32M  Atlin            87.64  21   P       P       20 15 30.9 +0.1
      baz=221
I21K  Tanana           87.66  11   P       P       20 15 31.0 +0.2
      baz=205
Q32M  Nakina River     87.66  22   P       P       20 15 31.4 +0.2
      baz=223
NEA2  Nenana           87.68  12   P       P       20 15 30.4 -0.5
      baz=207,SNR=5.4
K24K  Donnelly Dome    87.68  14   P       P       20 15 31.0 +0.1
      baz=210,SNR=15
BVCY  Beaver Creek     87.71  17   P       P       20 15 30.9 -0.2
      baz=215
XAN   Xi'an            87.74 308 ⇓P       P       20 15 32.9 +1.0
XAN                               pmax    pmax
      comp=Z,36nm,1.1s
MLY   Manley           87.75  11   P       P       20 15 30.5 -0.7
      baz=206,SNR=20
WRH   Wood River Hil   87.77  13   P       P       20 15 30.5 -0.8
O30N  Mendenhall       87.77  19   P       P       20 15 31.1 -0.3
      baz=219,SNR=7.0
RIDG  Independent Ri   87.84  14   P       P       20 15 31.5 -0.2
RIDG                              IAmb    IAmb    20 15 32.4
      comp=Z,18nm,1.0s
RIDG  Independent Ri   87.84  14   P       P       20 15 31.3 -0.4
      baz=211,SNR=5.4
HDA   Harding Lake     87.95  13   P       P       20 15 31.9 -0.2
      baz=209,SNR=22
H21K  Melozitna Rive   87.95  10   P       P       20 15 31.9 -0.3
      baz=204
CCB   Clear Creek Bu   87.98  13   P       P       20 15 31.5 -0.7
L27K  Beaver Creek,    88.00  16   P       P       20 15 32.4 -0.1
      baz=214
N30M  Aishikik Lake    88.01  19   P       P       20 15 32.8 +0.3
      baz=218
BCAR  Beaver Creek A   88.01  16   P       P       20 15 32.5 -0.1
DLBC  Dease Lake       88.09  23   P       P       20 15 33.5 +0.4
      baz=225,SNR=5.2
IMAR  Indian Mountai   88.10  10   P       P       20 15 32.7 -0.1
I23K  Minto, Yukon-K   88.11  12   P       P       20 15 33.4 +0.5
      baz=207,SNR=8.7
TCOL  CIGO, UAF Yank   88.17  13   P       P       20 15 32.6 -0.5
      baz=208,SNR=9.0
COLA  College          88.17  13   P       P       20 15 32.7 -0.4
COLA  College          88.17  13   P       P       20 15 32.7 -0.4
COLA  College          88.17  13   P       P       20 15 32.7 -0.4
COLA                              pmax    pmax
      comp=Z,45nm,0.9s
COLA  College          88.17  13   P       P       20 15 32.6 -0.4
      baz=208
SCRK  Sand Creek       88.24  14   P       P       20 15 33.6  0.0
SCRK                              IAmb    IAmb    20 15 36.2
      comp=Z,10.0nm,0.8s
SCRK  Sand Creek       88.24  14   P       P       20 15 34.0 +0.4
      baz=212,SNR=9.8
IL31                   88.28  13   P       P       20 15 32.8 -0.8
IL31                              IAmb    IAmb    20 15 34.2
      comp=Z,29nm,1.1s
ILAR  Eielson Array    88.28  13   P       P       20 15 33.2 -0.4
      comp=Z,17nm,1.0s,baz=218,slow=5.2,SNR=103
ILAR                              PP      PP      20 19 14.4 +1.4
      comp=Z,0.9nm,0.8s,baz=224,slow=7.9,SNR=4.1
ILAR                              PKiKP   PKiKP   20 20 29.5 -0.8
      comp=Z,0.3nm,0.5s,baz=284,slow=3.0,SNR=4.5
      comp=Z,17nm,1.0s
ILAR  Eielson Array    88.28  13   P       P       20 15 32.9 -0.8
HIA   Hailar           88.36 325   P       P       20 15 34.3 -0.1
HIA                               IAmb    IAmb    20 15 35.6
      comp=Z,10nm,0.7s
HIA   Hailar           88.36 325   P       P       20 15 34.9 +0.5
HIA   Hailar           88.36 325   P       P       20 15 34.3 -0.1
HIA                               pmax    pmax
      comp=Z,10.0nm,0.7s
M29M  Somme Creek      88.39  17   P       P       20 15 34.6 +0.2
      baz=217
P33M  Teslin, Yukon    88.40  21   P       P       20 15 34.6 +0.2
      baz=222
H22K  Ishtalitna Cre   88.42  11   P       P       20 15 34.7 +0.4
      baz=205
N31M  Braeburn, Yuko   88.42  19   P       P       20 15 35.0 +0.5
      baz=220,SNR=5.1
POKR  Poker Plat Res   88.47  13   P       P       20 15 33.5 -1.1
POKR                              IAmb    IAmb    20 15 34.9
      comp=Z,16nm,0.8s
POKR  Poker Plat Res   88.47  13   P       P       20 15 34.0 -0.6
      baz=209,SNR=11
MSO   Missoula         88.52  38   P       P       20 15 35.5 +0.1
      baz=238
PHRA  Phrae            88.58 290   P       P       20 15 36.7 +0.6
REDW  Red Top Meadow   88.61  42   P       P       20 15 37.1 +1.1
REDW                              IAmb    IAmb    20 15 38.3
      comp=Z,22nm,1.1s
G21K  Allakaket        88.63  10   P       P       20 15 35.2  0.0
      baz=203
S22A  4UR Ranch, Cre   88.63  49   P       P       20 15 35.7 -0.6
      baz=243
H23K  Yukon River      88.69  11   P       P       20 15 35.7 +0.1
      baz=207
K27K  Chicken          88.74  15   P       P       20 15 36.2 +0.4
      baz=214
O20A  White River Ci   88.76  46   P       P       20 15 36.4 -0.4
      baz=242
J26L  Joseph Creek     88.78  14   P       P       20 15 36.9 +0.8
      baz=212
NVL   N'lazarevskaya   88.82 183  eP       P       20 15 35.8 -0.4
NVL                               pmax    pmax
      comp=Z,16nm,0.8s
LRM   Limekiln Ridge   88.87  40   P       P       20 15 38.0 +0.9
BILL  Bilibino         88.87 354   P       P       20 15 37.1 +0.8
BILL                              IAmb    IAmb    20 15 38.9
      comp=Z,11nm,1.1s
BILL  Bilibino         88.87 354c iP       P       20 15 35.9 -0.4
BILL                             e*PP     pP      20 17 49.3 +3.6
BILL                             e*SP     sP      20 18 42.7 -2.9
BILL                             e                20 19 24.8
BILL                              pmax    pmax
      comp=Z,8.0nm,0.8s
RDOG  Red Dog Mine     88.91   6   P       P       20 15 36.8 +0.3
RDOG                              IAmb    IAmb    20 15 38.0
      comp=Z,13nm,1.0s
RDOG  Red Dog Mine     88.91   6   P       P       20 15 36.9 +0.3
      baz=195
KMI   Kunming          88.94 297 ⇓P       P       20 15 39.6 +1.7
KMI                               pmax    pmax
      comp=Z,24nm,1.1s
M30M  Minto, Yukon     88.97  18   P       P       20 15 37.4 +0.4
      baz=219,SNR=19
HHC   Hu-ho-hao-te     88.98 315  eP       P       20 15 40.5 +2.9
HHC                               pmax    pmax
      comp=Z,22nm,0.7s
HHC                               pmax    pmax
      comp=Z,300nm,6.8s
L29M  L29M             89.02  17   P       P       20 15 38.1 +0.9
      baz=217
N32M  Quiet Lake       89.02  20   P       P       20 15 37.4 +0.2
      baz=222
CRAI  Chiangrai        89.10 292   P       P       20 15 39.0 +0.5
CRAI                              IAmb    IAmb    20 15 40.8
      comp=Z,16nm,1.1s
BW06  Boulder Array    89.14  43   P       P       20 15 38.6 +0.1
BW06                              IAmb    IAmb    20 15 40.2
      comp=Z,8.0nm,0.8s
BW06  Boulder Array    89.14  43   P       P       20 15 39.0 +0.5
      baz=241,SNR=8.8
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PDAR  Pinedale Array   89.14  43   P       P       20 15 39.7 +1.2
      comp=Z,5.0nm,0.7s,baz=211,slow=3.2,SNR=40
      comp=Z,5.0nm,0.7s
PDAR  Pinedale Array   89.14  43   P       P       20 15 39.0 +0.5
PRP   Porcupine Dome   89.22  13   P       P       20 15 38.3 +0.2
      baz=211,SNR=8.3
BOZ   Bozeman (W)      89.25  40   P       P       20 15 39.6 +0.8
      baz=240,SNR=6.0
F21K  Alatna River     89.29   9   P       P       20 15 38.5 +0.2
      baz=203
H17A  Grant Village    89.29  42   P       P       20 15 39.0 -0.2
      baz=240
G23K  Bananza Creek    89.39  11   P       P       20 15 39.6 +0.8
      baz=206
M31M  Drury Creek, Y   89.40  19   P       P       20 15 38.9 -0.1
      baz=221
DAWY  Dawson           89.45  16   P       P       20 15 39.7 +0.6
DAWY                              IAmb    IAmb    20 15 40.7
      comp=Z,21nm,0.9s
DAWY  Dawson           89.45  16   P       P       20 15 39.8 +0.6
      baz=216,SNR=18
I26K  Coal Creek Min   89.56  14   P       P       20 15 40.2 +0.7
      baz=213
SDCO  Great Sand Dun   89.57  49   P       P       20 15 39.8 -0.9
      baz=244
EGAK  Eagle            89.59  15   P       P       20 15 39.9 +0.2
EGAK  Eagle            89.59  15   P       P       20 15 39.8 +0.1
      baz=215,SNR=14
PLCA  Paso Flores      89.65 134   P       P       20 15 42.3 +1.4
      comp=Z,1.6nm,0.8s,baz=238,slow=6.9,SNR=5.5
      comp=Z,1.6nm,0.8s
CM31  Chiang Mai Arr   89.70 290   P       P       20 15 42.6 +1.3
CMAR  Chiang Mai Arr   89.70 290   P       P       20 15 42.4 +1.1
      comp=Z,17nm,1.0s,baz=120,slow=2.9,SNR=81
CMAR                              PP      PP      20 19 27.9 +2.9
      comp=Z,1.2nm,1.1s,baz=128,slow=6.7,SNR=4.6
      comp=Z,17nm,1.0s
CMAR  Chiang Mai Arr   89.70 290   P       P       20 15 42.5 +1.2
FARO  Faro, Yukon      89.74  19   P       P       20 15 41.0 +0.5
      baz=222
F22K  John River       89.75  10   P       P       20 15 41.0 +0.5
      baz=204
K29M  Barlow Dome      89.77  17   P       P       20 15 40.7  0.0
      baz=218,SNR=15
CHTO  Chiang Mai       89.83 290   P       P       20 15 42.4 +0.5
CHTO  Chiang Mai       89.83 290   P       P       20 15 42.4 +0.5
CHTO                              pmax    pmax
      comp=Z,1.0nm,0.9s
COLD  Coldfoot         89.83  11   P       P       20 15 41.6 +0.8
      baz=206
G24K  Hadweenzic Riv   89.85  12   P       P       20 15 41.5 +0.6
      baz=209
MSTX  Muleshoe         89.96  54   P       P       20 15 42.3 -0.1
      baz=245
MAYO  Mayo, Yukon      90.03  18   P       P       20 15 42.5 +0.7
      baz=219,SNR=6.6
J29M  Klondike Camp    90.07  16   P       P       20 15 43.3 +1.3
      baz=217
T25A  Trinidad         90.09  50   P       P       20 15 42.7 -0.3
      baz=244
I27K  Kandik River     90.16  14   P       P       20 15 43.0 +0.6
      baz=214
G25K  Bearman Lake     90.18  12   P       P       20 15 43.1 +0.7
      baz=210
PZH   PanZhiHua        90.30 298   P       P       20 15 44.6 +0.5
PZH                               pmax    pmax
      comp=Z,10.0nm,1.2s
PZH                               pmax    pmax
      comp=Z,110nm,4.7s
CD2   Chengdu          90.39 303   P       P       20 15 45.3 +1.0
CD2                               pmax    pmax
      comp=Z,10.0nm,1.1s
F24K  Squaw Lake       90.50  11   P       P       20 15 44.8 +0.9
      baz=208
N23A  Red Feather La   90.66  46   P       P       20 15 45.8 +0.2
      baz=243
E23K  Chandalar        90.67  10   P       P       20 15 45.3 +0.5
      baz=207
MMPY  Sheldon Lake,    90.68  20   P       P       20 15 45.3 +0.4
      baz=224,SNR=6.0
H27K  Steamboat Moun   90.70  14   P       P       20 15 45.6 +0.7
      baz=214
I29M  Ogilvie Camp,    90.77  16   P       P       20 15 45.5 +0.3
      baz=217
G26K  Porcupine Rive   90.81  13   P       P       20 15 45.8 +0.5
      baz=212
E24K  Your Creek       90.88  11   P       P       20 15 46.0 +0.3
      baz=208
F25K  Christian Rive   90.99  12   P       P       20 15 47.0 +0.8
      baz=210
BMAR  Burnt Mountain   91.06  12   P       P       20 15 46.7 +0.2
K22A  Casper           91.06  45   P       P       20 15 47.2 -0.1
      baz=243
G27K  Doyon Strip      91.15  14   P       P       20 15 47.7 +0.7
      baz=214
D23K  Nanushuk River   91.32  10   P       P       20 15 48.7 +1.1
      baz=206,SNR=9.3
F26K  Sheenjek River   91.37  12   P       P       20 15 48.7 +0.7
      baz=212
E25K  Arctic Village   91.46  12   P       P       20 15 49.2 +0.8
      baz=211
KOTAN Kotaneelee Air   91.49  24   P       P       20 15 49.4 +0.8
      baz=230
YAK   Yakutsk          91.85 338   P       P       20 15 49.9 -0.3
      comp=Z,12nm,0.7s,baz=94,slow=1.6,SNR=22
      comp=Z,12nm,0.7s
YAK   Yakutsk          91.85 338   P       P       20 15 49.1 -1.1
YAK   Yakutsk          91.85 338  eP       P       20 15 49.7 -0.5
YAK                               eS      SKSac   20 25 29.6 +4.1
YAK                               e               20 26 05.6
YAK                               eSS     SS      20 32 35.0 +6.8
YAK                               pmax    pmax
      comp=Z,35nm,1.1s
YAK                               pmax    pmax
      comp=N,4.0nm,1.6s
YAK                               pmax    pmax
      comp=E,3.0nm,1.4s
YAK                               smax    smax
      comp=E,242nm,6.9s
YAK                               smax    smax
      comp=N,278nm,6.2s
EPYK  Eagle Plains     91.97  16   P       P       20 15 50.8  0.0
      baz=219,SNR=7.6
C24K  Franklin Bluff   92.31  10   P       P       20 15 52.6 +0.5
      baz=208,SNR=7.2
E27K  Coleen River     92.31  13   P       P       20 15 53.0 +0.8
      baz=214
LZH   Lanzhou          92.38 308 ⇑P       P       20 15 55.0 +1.5
LZH                               pP      pwP     20 18 05.4 -1.5
LZH                               pmax    pmax
      comp=N,19nm,1.4s
G30M  tAoh Zraii Nji   92.57  15   P       P       20 15 53.5  0.0
      baz=219,SNR=12
A21K  Barrow           92.69   7   P       P       20 15 54.3 +0.4
      baz=200
C27K  Jago River       93.10  12   P       P       20 15 55.9 +0.1
      baz=212,SNR=6.5
C26K  Camden Bay       93.13  11   P       P       20 15 56.4 +0.5
      baz=211,SNR=8.8
F31M  Tsiigehtchic     93.55  16   P       P       20 15 58.0 +0.2
      baz=221,SNR=14
INK   Inuvik           94.25  15   P       P       20 16 00.9 -0.1
      comp=N,6.4nm,1.0s,baz=212,slow=4.5,SNR=13
      comp=N,6.4nm,1.0s
INK   Inuvik           94.25  15   P       P       20 16 00.6 -0.5
INK                               IAmb    IAmb    20 16 01.7
      comp=Z,11nm,1.1s
INK   Inuvik           94.25  15   P       P       20 16 00.6 -0.5
INK                               pmax    pmax
      comp=Z,11nm,1.2s
INK   Inuvik           94.25  15   P       P       20 16 01.3 +0.3
      baz=222
ULN   Ulaanbaatar      95.01 319   P       P       20 16 04.5 -0.7
ULN                               IAmb    IAmb    20 17 42.0
      comp=Z,6.1nm,0.8s
ULN   Ulaanbaatar      95.01 319   P       P       20 16 04.5 -0.7
ULN                               pmax    pmax
      comp=Z,6.0nm,0.8s
SONM  Songino Array    95.40 319   P       P       20 16 07.1 +0.2
      comp=Z,1.0nm,0.7s,baz=138,slow=4.0,SNR=8.1
      comp=Z,1.0nm,0.7s
YKA   Yellowknife Ar   96.56  25   P       P       20 16 11.8 +0.2
      comp=Z,1.2nm,0.7s,baz=243,slow=4.4,SNR=20
      comp=Z,1.2nm,0.7s
GTA   Gaotai           96.59 309  eP       P       20 16 12.9 +0.4
GTA                               pmax    pmax
      comp=Z,4.0nm,1.3s
C36M  Paulatuk         97.45  17   P       P       20 16 15.9 +0.5
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	baz=230						
TIXI	Tiksi	98.52	345	⇓*i*P	Pdif	20 16 20.0	-0.1
TIXI				pmax	pmax		
	comp=Z,12nm,3.7s						
A36M	Sachs Harbour	98.86	15	P	P	20 16 22.3	+0.7
	baz=230						
CCM	Cathedral Cave	100.14	53	P	Pdif	20 16 26.4	-1.7
	baz=252						
LRAL	Lakeview Retre	101.97	59	P	Pdif	20 16 35.0	-1.4
	baz=253						
WVT	Waverly	102.18	56	P	Pdif	20 16 36.0	-1.2
	baz=254						
EYMN	Ely	102.85	44	P	Pdif	20 16 39.4	-0.5
	baz=254						
ZALV	Zalesovo Beam	110.15	321	PKiKP	PKiKP	20 21 08.7	-1.1
	comp=Z,2.6nm,0.7s,baz=143,slow=0.9,SNR=11						
MK31	Makanchi Array	110.82	313	⇑*i*PKIKP	PKiKP	20 21 09.1	-2.2
MKAR	Makanchi Array	110.82	313	PKiKP	PKiKP	20 21 10.2	-1.1
	comp=Z,3.2nm,0.8s,baz=72,slow=1.6,SNR=17						
MKAR				PKKPbc	PKKPbc	20 32 11.1	-0.9
	comp=Z,0.1nm,0.5s,baz=313,slow=3.3,SNR=3.6						
KURK	Kurchatov	113.63	317	*c* *i*PKIKP	PKiKP	20 21 15.2	-1.3
KSH	Kashi	114.49	305	PKP	PKiKP	20 21 20.7	+2.0
AAK	Ala-Archa	115.91	308	⇑*i*PKIKP	PKPdf	20 21 20.7	-0.7
BRVK	Borovoye	118.79	320	*d* *i*PKIKP	PKPdf	20 21 25.4	-0.9
GAR	Garm	118.82	304	PKPdf	PKPdf	20 21 26.4	-0.6
KK31	Karatay Array	118.86	309	PKPdf	PKPdf	20 21 25.7	-1.1
KK31	Karatay Array	118.86	309	PKIKP	PKPdf	20 21 25.7	-1.1
KKAR	Karatay Array	118.86	309	PKPdf	PKPdf	20 21 25.7	-1.1
KKAR	Karatay Array	118.86	309		PKPdf	20 21 25.6	-1.1
KKAR	Karatay Array	118.86	309	PKIKP	PKPdf	20 21 25.7	-1.1
KBL	Kabul	119.48	299	PKPdf	PKPdf	20 21 28.0	-0.6
KBL	Kabul	119.48	299	PKIKP	PKPdf	20 21 28.0	-0.6
CHGR	Chuyangaron	119.70	304	PKPdf	PKPdf	20 21 28.2	-0.5
CHGR	Chuyangaron	119.70	304	PKIKP	PKPdf	20 21 28.2	-0.5
KBS	Kingsbay	121.20	358	*e*PKPdf	PKiKP	20 21 30.8	+0.4
SPA0	Spitsbergen Ar	121.72	356	*e*PKPdf	PKiKP	20 21 31.5	-0.1
HOPEN	Hopen	122.58	354	*e*PKPdf	PKPdf	20 21 33.0	0.0
SVE	Sverdlovsk	123.66	325	*e*PKIKP	PKPdf	20 21 35.4	-0.2
SVE				pmax	pmax		
	comp=Z,18nm,1.0s						
SUR	Sutherland	124.41	200	PKP	PKiKP	20 21 38.6	0.0
	comp=Z,11nm,0.9s,baz=222,slow=0.7,SNR=7.5						
ARU	Arti	124.87	325	PKPdf	PKPdf	20 21 37.1	-0.8
ARU	Arti	124.87	325	*i* PKIKP	PKPdf	20 21 37.1	-0.8
ARU						20 23 37.0	
ARU						20 27 51.8	
ARU				SP	SP	20 32 31.4	-5.8
ARU				SS	SS	20 39 48.2	+2.1
ABKAR	Akbulak array	125.72	317	PKPdf	PKPdf	20 21 38.9	-0.9
ABKAR	Akbulak array	125.72	317		PKPdf	20 21 38.9	-0.9
BOSA	Boshof	126.20	206	PKP	PKiKP	20 21 42.0	-0.1
	comp=Z,2.1nm,0.9s,baz=157,slow=7.0,SNR=3.0						
SCO	Scoresbysund	127.96	10		PKPdf	20 21 42.9	-0.5
SCO	Scoresbysund	127.96	10	PKIKP	PKPdf	20 21 42.9	-0.5
HAMF	Hammerfest	128.03	351	*e*PKPdf	PKPdf	20 21 43.5	0.0
GEYT	Alibeck	128.38	303	PKP	PKiKP	20 21 46.0	+0.1
	comp=Z,5.5nm,0.8s,baz=222,slow=2.0,SNR=11						
KIRV	Kirov	128.66	330	*d* *i*PKIKP	PKiKP	20 21 45.7	-0.1
ARA0	ARCESS Array S	128.72	349	*e*PKPdf	PKPdf	20 21 44.6	-0.3
ARCES	ARCESS Array B	128.72	349	PKP	PKPdf	20 21 44.6	-0.3
	comp=Z,2.9nm,0.4s,baz=36,slow=1.2,SNR=25						
JETT	Jettan, Norway	129.50	352	*e*PKPdf	PKPdf	20 21 46.6	+0.2
KTK1	Kautokeino	129.57	350	*e*PKPdf	PKPdf	20 21 46.4	-0.2
TRO	Tromso	129.62	352	*e*PKPdf	PKiKP	20 21 47.3	-0.1
KLMR	Klimovskoe	131.60	336	*e*PKPdf	PKPdf	20 21 49.7	-0.9
KLMR				AMP		20 21 51.9	
	comp=Z,17nm,1.3s						
KLMR				pPKPdf	pPKPdf	20 24 06.8	-2.0
KLMR				*e*PP	PP	20 24 14.0	-5.4
KLMR	Klimovskoe	131.60	336	*e*PKIKP	PKPdf	20 21 49.6	-1.0
KLMR						20 24 06.8	
KLMR				pmax	pmax		
	comp=Z,17nm,1.3s						
STEI	Steigen	131.68	353	*e*PKPdf	PKPdf	20 21 50.8	+0.3
BELG	Belogornoye	132.26	323	*d* *i*PKIKP	PKPdf	20 21 52.1	+0.1
KONS	Konsvik	133.29	354	*e*PKPdf	PKPdf	20 21 53.6	0.0
FINES	FINESS Array B	135.54	343	PKhKP	PKPpre	20 21 46.1	
	comp=Z,1.6nm,0.8s,baz=57,slow=3.2,SNR=9.8						
FINES				PKP	PKPdf	20 21 57.1	-0.8
	comp=Z,4.2nm,0.7s,baz=8.3,slow=3.0,SNR=7.6						
AKT	Akhty	135.78	309	*e*PKIKP	PKiKP	20 22 01.2	+0.2
AKT				*e*		20 24 50.4	
AKT				pmax	pmax		
	comp=Z,17nm,1.2s						
VRH	Novokhopyorsk	136.07	324	*e*PKIKP	PKPdf	20 21 58.7	-0.5
VRH				pmax	pmax		
	comp=Z,10.0nm,1.4s						
OBN	Obninsk	136.46	331	⇓*e*PKIKP	PKPdf	20 21 58.0	-1.8
OBN				*e*		20 24 55.5	
OBN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LPSR	Galich'ya Gora	136.81	327	*e*PKIKP	PKPdf	20 21 56.9	-3.7
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
VORR	Voronezh	137.18	326	*e*PKIKP	PKPdf	20 22 00.1	-1.2
VORR				pmax	pmax		
	comp=Z,20nm,1.2s						
VSR	Storozhevoye	137.45	325	*e*PKIKP	PKPdf	20 21 59.9	-1.9
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VORD	Divnogorie	137.51	325	*e*PKIKP	PKPdf	20 22 00.3	-1.6
VORD				pmax	pmax		
	comp=Z,7.0nm,0.6s						
NCK	Nalchik	138.12	313	⇓*i*PKIKP	PKiKP	20 22 04.8	-0.8
ZEI	Tsey	138.15	312	*i* PKIKP	PKiKP	20 22 05.4	-0.5
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GNI	Garni	138.31	308	*c* *i*PKIKP	PKPdf	20 22 04.4	+0.4
KBZ	Khabaz	138.52	314	PKP	PKPdf	20 22 04.1	+0.2
	comp=Z,2.5nm,0.8s,baz=294,slow=2.8,SNR=5.2						
KBZ				PP	PP	20 25 03.0	0.0
	comp=Z,1.8nm,0.9s,baz=132,slow=3.1,SNR=3.5						
KBZ	Khabaz	138.52	314	*d* *i*PKIKP	PKiKP	20 22 06.8	+0.5
KIV	Kislovodsk	138.58	314	*i* PKIKP	PKPdf	20 22 03.5	-0.7
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,61nm,24.0s						
NB2	NORSAR Subarra	138.81	353	PKP	PKPdf	20 21 55.3	-8.7
	comp=Z,1.4nm,0.6s,baz=16,slow=3.2						
NB2				SKPa		20 24 44.5	
	comp=Z,1.0nm,0.8s,baz=12,slow=3.0						
NEY	Neytrino	138.81	313	⇓*e*PKIKP	PKPdf	20 22 03.0	-1.8
NOA	NORSAR Array B	138.81	353	PKhKP	PKPpre	20 21 55.1	
	comp=Z,3.2nm,0.8s,baz=17,slow=2.4,SNR=11						
NOA				PKP	PKPdf	20 22 05.2	+1.1
	comp=Z,0.8nm,0.5s,baz=14,slow=4.0,SNR=5.5						
NOA				SKPbc	SKPbc	20 24 43.3	+0.2
	comp=Z,1.8nm,0.9s,baz=14,slow=4.5,SNR=4.3						
NC602	NORSAR Array S	139.07	353	*e*	PKPdf	20 21 57.8	-6.6
HYA	Hoyanger	139.12	357	*e*PKPdf	PKPdf	20 22 02.2	-2.2
RAYN	Ar Rayn	139.25	283	PKPdf	PKPdf	20 22 05.5	-0.4
RAYN	Ar Rayn	139.25	283	PKIKP	PKPdf	20 22 05.6	-0.4
IDID	Didziasalis	140.30	338	*e*P	PKPdf	20 21 55.3	-12
ISAL	Salakas	140.31	338	*e*P	PKPdf	20 21 58.1	-8.7
ODD1	Odda	140.34	356	*e*	PKPdf	20 22 01.8	-5.1
KONO	Kongsberg	140.35	354	*e*	PKPdf	20 22 00.9	-5.9
IIGN	Ignalina	140.45	338	*e*P	PKPdf	20 21 56.7	-10
MNK	Minsk	140.50	336	*i* SSS	SSS	20 48 26.1	
MNK	Minsk	140.50	336	*i* PKIKP	PKiKP	20 22 09.7	-0.3
MNK				*i*		20 24 28.8	
MNK				*i*		20 25 19.2	
MNK				*i* PPP	PPP	20 28 19.7	
MNK				*i* SS	SS	20 42 58.6	+6.7
MNK				*i* SSS	SSS	20 48 26.0	
MNK				pmax	pmax		
	comp=E,2.0nm,1.3s						
MNK				pmax	pmax		
	comp=N,18nm,0.7s						
MNK				pmax	pmax		
	comp=Z,19nm,1.3s						
MNK	Minsk	140.50	336	*i* PKP	PKiKP	20 22 09.8	-0.3
	comp=E,2.0nm,1.3s						
MNK	Minsk	140.50	336	*i* PKP	PKiKP	20 22 10.1	+0.1
	comp=N,18nm,0.7s						
MNK	Minsk	140.50	336	*i* PKP	PKiKP	20 22 10.1	+0.1
	comp=Z,19nm,1.3s,baz=41						
MNK	Minsk	140.50	336	*i* pPKP	pPKPdf	20 24 28.8	+3.2
MNK	Minsk	140.50	336	*i* PP	PP	20 25 19.2	+5.0
MNK	Minsk	140.50	336	*i* PPP	PPP	20 28 19.8	
MNK	Minsk	140.50	336	*i* SKKS		20 37 18.6	
MNK	Minsk	140.50	336	*i* SS	SS	20 42 58.6	+6.7
NACGM	Naroch	140.60	337	*e*PKP	PKPdf	20 22 00.5	-6.9
	comp=Z,15nm,0.9s,baz=39						
VSVD	Vaisvydziai	140.71	340	*e*P	PKPdf	20 21 59.5	-8.1
PABE	Paberze	141.09	340	*e*P	PKPdf	20 22 01.1	-7.1
ANN	Anapa	141.66	318	*i* PKIKP	PKPdf	20 22 10.8	+1.2
ANN				pmax	pmax		
	comp=Z,26nm,1.0s						
BORU	Boraas	141.89	350	*i* P	PKPdf	20 22 04.8	-4.8
ONAU	Onsala	142.25	351	*i* P	PKPdf	20 22 06.2	-4.0
FABU	Falkenberg	142.50	350	*i* P	PKPdf	20 22 07.0	-3.6
MCD	Coleburn Disti	142.67	4	*e*P	PKPdf	20 22 07.1	-3.9
KPL	Plockton	142.70	6	*e*P	PKPdf	20 22 06.9	-4.1
AKASG	Malin Array Be	142.71	331	PKhKP	PKPpre	20 22 07.8	
	comp=Z,18nm,0.4s,baz=42,slow=4.4,SNR=181						
AKASG				SKPbc	SKiKP	20 24 54.6	+0.1
	comp=Z,0.5nm,0.5s,baz=50,slow=1.9,SNR=5.3						
AKBB	Malin Array Si	142.71	331	*d* *i*PKHKP	PKPpre	20 22 07.6	
AKBB				*i*		20 22 11.4	
DEL	Delary	142.81	349	*e*P	PKPdf	20 22 08.0	-3.3
DEL	Delary	142.81	349	*i* P	PKPdf	20 22 06.9	-4.4
LODK	Lodwar	143.03	247	PKPdf	PKPbc	20 22 11.5	+0.2
BJUU	Bjuv	143.34	349	*i* P	PKPab	20 22 09.4	-1.2
MUD	Monsted U'grnd	143.53	353	*i* P	PKPab	20 22 10.3	-1.1
SIM	Simferopol'	143.64	320	*d* *i*PKIKP	PKPab	20 22 12.4	+0.2
SIM				pmax	pmax		
	comp=Z,154nm,1.0s						
LUNU	Lund	143.68	349	*i* P	PKPbc	20 22 10.4	-1.5
LAWE	Loch Awe, Argy	143.79	7	*e*P	PKPbc	20 22 12.0	-0.3
BSD	Bornholm Skovb	143.88	347	*e*P	PKPbc	20 22 11.8	-0.7
PGBU	Glenifferbraes	144.32	6	*e*P	PKPdf	20 22 13.6	-0.3
ESY	Stoneypath	144.37	4	*e*P	PKPdf	20 22 13.5	-0.5
EBL	Broad Law	144.48	4	*e*P	PKPdf	20 22 13.9	-0.3
MBAR	Mbarara	144.65	237		PKPbc	20 22 16.4	-0.1
MBAR	Mbarara	144.65	237	PKIKP	PKPbc	20 22 16.4	-0.1
GAZ	Gaziantep	144.81	306	PKPdf	PKPdf	20 22 15.1	-0.4
SORM	Soroca	144.89	328	⇑P	PKPdf	20 22 14.5	-0.6
SORM	Soroca	144.89	328	⇑PKIKP	PKPdf	20 22 14.5	-0.6
GKP	Gorka Klasztor	145.01	344	*e*PKP	PKPbc	20 22 15.6	-0.5
GKP	Gorka Klasztor	145.01	344	*e*P	PKPbc	20 22 15.6	-0.5
NEWG	New Galloway	145.03	6	*e*P	PKPdf	20 22 14.8	-0.4
PURM	Purcari	145.16	325	⇑P	PKPbc	20 22 16.9	+0.2
BEL	Belsk	145.20	339	*e*PKP	PKPbc	20 22 16.4	-0.3
BZK	Bozkurt	145.20	316	⇓P	PKPdf	20 22 14.7	-1.2
BZK	Bozkurt	145.20	316	PKPdf	PKPdf	20 22 14.2	-1.6
GAL1	Galloway	145.23	6	*e*P	PKPdf	20 22 16.0	+0.5
BNN	Bunyan	145.25	310		PKPdf	20 22 16.7	+0.4
LVV	L'vov	145.62	334	*e*PKIKP	PKPbc	20 22 17.6	-0.4
KESW	Keswick, Cumbr	145.66	5	*e*P	PKPdf	20 22 17.0	+0.7
HLG	Helgoland	145.90	353	*e*PKPbc	PKPbc	20 22 19.0	+0.4
	baz=18,slow=2.4						
WIM	Isle of Man	145.95	7	*e*P	PKPbc	20 22 18.5	-0.3
HPK	Haverah Park	146.38	3	*e*P	PKPbc	20 22 20.1	+0.1
BR131	Keskin Array S	146.46	312		PKPbc	20 22 19.6	-1.3
BR131	Keskin Array S	146.46	312	⇑*e*PKIKP	PKPdf	20 22 18.3	0.0
BRTR	Keskin Array B	146.46	312	PKPbc	PKPbc	20 22 20.3	-0.6
	comp=Z,10nm,0.8s,baz=108,slow=1.6,SNR=50						
BRTR	Keskin Array B	146.46	312	PKPdf	PKPdf	20 22 18.8	+0.5
VLDR	Vladesti	146.55	326	⇓P	PKPbc	20 22 20.8	+0.1
TLCR		146.57	324	⇓P	PKPbc	20 22 21.1	+0.4
TLCR		146.57	324	⇓PKP2	PKPbc	20 22 21.1	+0.4
WME	Myndd Eilian	146.73	6	*e*P	PKPdf	20 22 18.7	+0.7
BUR08	Bucovina Ar. S	146.74	330		PKPbc	20 22 20.7	-0.6
BURAR	Bucovina Array	146.76	330	⇑P	PKPbc	20 22 21.9	+0.6
BURAR	Bucovina Array	146.76	330		PKPdf	20 22 19.5	+1.0
BURAR	Bucovina Array	146.76	330	⇑PKP2	PKPbc	20 22 21.9	+0.6
GHRR		146.76	326	⇑P	PKiKP	20 22 22.2	-0.9
TESR	Tescani	146.84	328	⇓P	PKPbc	20 22 21.3	-0.1
OJC	Ojcow	146.90	338	*e*PKP	PKPbc	20 22 21.4	-0.1
OJC	Ojcow	146.90	338	PKPdf	PKPdf	20 22 18.0	-0.5
OJC	Ojcow	146.90	338	PKIKP	PKPdf	20 22 18.0	-0.5
LBWR	Ladybower, Pea	146.93	4	*e*P	PKPdf	20 22 19.6	+1.1
CFR	Carcaliu	146.95	325	⇓P	PKPbc	20 22 21.6	-0.1
CFR	Carcaliu	146.95	325	⇓PKP2	PKPbc	20 22 21.6	-0.1
ANTO	Ankara	146.98	313	⇑P	PKPbc	20 22 22.1	-0.1
ANTO	Ankara	146.98	313	PKPdf	PKPdf	20 22 18.6	-0.4
ANTO	Ankara	146.98	313	⇑PKP2	PKPbc	20 22 22.1	-0.1
TPGR	Topolog	147.00	324	⇓P	PKPbc	20 22 22.1	+0.1
BR231	Keskin MP Arra	147.01	313		PKPdf	20 22 18.9	-0.2
STHS	Stebnicka Huta	147.04	336	*e*PKP2	PKPbc	20 22 21.7	-0.2
STHS	Stebnicka Huta	147.04	336	*e*PKP	PKPbc	20 22 21.7	-0.2
STHS				*e*		20 22 25.3	
RETH	Rethem/Aller,	147.14	351	*e*PKPbc	PKPbc	20 22 22.2	+0.3
	baz=18,slow=2.4						
FLTG	Flechtingen	147.23	349	*e*PKPbc	PKPbc	20 22 22.1	-0.1
	baz=18,slow=2.4						
VRI	Vrincioaia	147.25	327	⇓P	PKPbc	20 22 22.5	0.0
VRI	Vrincioaia	147.25	327	⇓PKP2	PKPbc	20 22 22.5	0.0
TIRR	Tirgusor	147.25	323	⇓P	PKPbc	20 22 23.2	+0.6
TIRR	Tirgusor	147.25	323		PKPbc	20 22 21.4	-1.2
TIRR	Tirgusor	147.25	323	PKIKP	PKPbc	20 22 21.4	-1.2
UZH	Uzhgorod	147.26	334	PKP2	PKPbc	20 22 23.1	+0.7
NRDL	Niedersach Rie	147.26	350	*e*PKPbc	PKPbc	20 22 22.5	+0.3
	baz=18,slow=2.4						
PLOR	Plostina	147.29	327	⇓P	PKPbc	20 22 22.3	-0.4
PLOR	Plostina	147.29	327	⇓PKIKP	PKPbc	20 22 22.3	-0.4
LLW	Llanuwychllyn	147.33	6	*e*P	PKPbc	20 22 22.1	-0.3
FOEL	Foel Wylfa	147.33	5	*e*P	PKPbc	20 22 21.7	-0.8
NIE	Niedzica	147.39	337	*e*PKP	PKPdf	20 22 20.5	+1.1
TRSU	Trosnyk	147.40	333	PKP2	PKPbc	20 22 22.7	-0.1
KSP	Ksiaz	147.45	343	*e*PKP	PKPbc	20 22 22.8	-0.1
BMR	Baia Mare	147.49	332	⇑P	PKPbc	20 22 23.5	+0.4
BMR	Baia Mare	147.49	332	⇑PKP2	PKPbc	20 22 23.5	+0.4
ASSE	Asse, Remlinge	147.52	350	*e*PKPbc	PKPbc	20 22 23.2	+0.3
	baz=18,slow=2.4						
COVR	Voineasa-Covas	147.53	327	⇑P	PKPbc	20 22 23.1	-0.2
TRPA	Tarpa	147.55	333	⇓P	PKPbc	20 22 23.3	+0.1
OZUR		147.56	328	⇑P	PKPbc	20 22 23.5	+0.1
CWF	Charnwood Fore	147.62	3	*e*P	PKPbc	20 22 22.4	-0.9
GHAJ	Ghor Haditha	147.65	297		PKPbc	20 22 23.5	-0.4
HLM1	Long Mynd	147.73	5	*e*P	PKPbc	20 22 23.1	-0.5
OSTC	Ostas	147.73	342	⇑*e*PKP	PKiKP	20 22 24.5	-0.6
OSTC	Ostas	147.73	342	*e*PKP2	PKiKP	20 22 24.5	-0.6
CHVC	Chvalec	147.75	343	⇑*e*PKP	PKiKP	20 22 24.4	-0.7
CHVC	Chvalec	147.75	343	*e*PKP2	PKiKP	20 22 24.4	-0.7
NEHR	Nehoiu	147.76	326	⇑P	PKPbc	20 22 24.0	+0.1
MDUB	Mudurnu	147.78	315		PKPbc	20 22 23.5	-0.7
OKC	Ostrava-Krasne	147.78	340	⇑*e*PKP	PKPbc	20 22 24.0	+0.3
OKC	Ostrava-Krasne	147.78	340	*e*PKP2	PKPbc	20 22 24.0	+0.3
UPC	Upice	147.83	343	⇑*e*PKP	PKPbc	20 22 24.2	+0.3
UPC	Upice	147.83	343	*e*PKP2	PKPbc	20 22 24.2	+0.3
CLL	Collm	147.85	346		PKPdf	20 22 19.7	-0.3
CLL					PKPbc	20 22 23.8	0.0
CLL	Collm	147.85	346	*e*PKPdf	PKPdf	20 22 20.0	0.0
CLL				⇓*i*PKPbc	PKPbc	20 22 23.9	0.0
	comp=Z,67nm,0.8s						
CLL				*i* PKPab	PKPab	20 22 28.1	-0.5
	comp=Z,31nm,0.8s						
CLL				*e*pPKPab	pPKPab	20 24 42.0	+0.7
CLL	Collm	147.85	346	⇓*e*PKIKP	PKPdf	20 22 20.0	0.0
CLL				*i*		20 22 28.1	
CLL				pmax	pmax		
	comp=Z,67nm,0.8s						
CLL				pmax	pmax		
	comp=Z,31nm,0.8s						
CLZ	Clausthal	147.85	350	*e*PKPbc	PKPbc	20 22 24.3	+0.4
	baz=18,slow=2.4						
DOPR	Dopca	147.85	328	⇓P	PKPbc	20 22 24.6	+0.5
DPC	Dobruska-Polom	147.89	342	*e*PKPDF	PKPdf	20 22 21.1	+0.9
DPC				⇑*e*PKP	PKPbc	20 22 24.6	+0.5
DPC				*e*PKPAB	PKPab	20 22 30.1	+1.2
DPC	Dobruska-Polom	147.89	342	*e*PKIKP	PKPdf	20 22 21.1	+0.9
DPC				*e*		20 22 30.1	
MLR	Muntele Rosu	147.90	327	⇑P	PKPbc	20 22 24.3	-0.1
MLR	Muntele Rosu	147.90	327	PKPdf	PKPdf	20 22 19.8	-0.6
MLR				PKPbc	PKPbc	20 22 24.0	-0.4
MLR	Muntele Rosu	147.90	327	PKHKP	PKPpre	20 22 19.8	
LANS	Liptovska Anna	147.91	338	*e*PKP2	PKiKP	20 22 25.4	-0.1
LANS	Liptovska Anna	147.91	338	*e*PKP	PKiKP	20 22 25.4	-0.1
LANS				*e*		20 22 31.1	
KRLC	Kraliky	148.00	341	⇑*e*PKP	PKPbc	20 22 24.8	+0.4
KRLC				*e*PKPAB	PKPab	20 22 30.5	+1.1
KRLC	Kraliky	148.00	341	*e*PKP2	PKPbc	20 22 24.8	+0.4
MORC	Moravsky Berou	148.03	340	⇑P	PKPbc	20 22 25.0	+0.6
MORC	Moravsky Berou	148.03	340		PKPbc	20 22 24.0	-0.5
MORC	Moravsky Berou	148.03	340	*e*PKP	PKPbc	20 22 24.9	+0.5
MORC	Moravsky Berou	148.03	340	PKHKP	PKPpre	20 22 24.0	
BRG	Berggiesshubel	148.04	345	⇓*e*PKPf		20 22 20.6	
BRG				Amp		20 22 21.6	
	comp=Z,18nm,1.6s						
BRG				⇑PKP	PKPbc	20 22 24.9	+0.6
BRG				Amp		20 22 25.8	
	comp=Z,42nm,1.0s						
BRG				PKPab	PKPab	20 22 30.1	+0.7
BRG				Amp		20 22 30.5	
	comp=Z,23nm,0.8s						
BRG	Berggiesshubel	148.04	345	*e*PKHKP	PKPpre	20 22 20.5	
BRG				pmax	pmax		
	comp=Z,18nm,1.6s						
BRG	Berggiesshubel	148.04	345	*e*PKPbc	PKPbc	20 22 24.6	+0.2
	baz=18,slow=2.4						
LEHL	Lehliu	148.12	325	⇑P	PKPbc	20 22 25.2	+0.5
MESR	Meseseni	148.13	332	⇑P	PKiKP	20 22 25.5	-0.4
FBE	Freiberg	148.13	346	*e*PKPbc	PKPbc	20 22 25.1	+0.6
	baz=18,slow=2.4						
SECR		148.15	326	⇑P	PKPbc	20 22 25.2	+0.4
CJR	Cluj-Napoca	148.17	331	⇓P	PKiKP	20 22 25.7	-0.4
CJR	Cluj-Napoca	148.17	331	⇓PKP2	PKiKP	20 22 25.7	-0.4
NEUB	Neuenburg	148.20	348	*e*PKPbc	PKPbc	20 22 24.9	+0.2
	baz=18,slow=2.4						
PVCC	Panska Ves	148.20	344	⇑*e*PKP	PKPbc	20 22 25.2	+0.4
PVCC	Panska Ves	148.20	344	*e*PKP2	PKPbc	20 22 25.2	+0.4
GTTG	Gottingen	148.20	350	*e*PKPbc	PKPbc	20 22 25.0	+0.2
	baz=18,slow=2.4						
MCH1	Michaelchurch	148.24	5	*e*P	PKPbc	20 22 23.4	-1.4
VOIR		148.39	328	⇑P	PKiKP	20 22 26.2	-0.4
VOIR		148.39	328	⇑PKP2	PKiKP	20 22 26.2	-0.4
MARR	Marisel-Cluj	148.41	331	⇑P	PKPbc	20 22 25.6	0.0
CSS	Mathiatis	148.50	304		PKPbc	20 22 25.1	-1.0
DRGR		148.51	332	⇑P	PKPbc	20 22 26.0	+0.2
DRGR		148.51	332	⇑PKP2	PKPbc	20 22 26.0	+0.2
BORA	Eskisehir	148.56	315		PKPbc	20 22 25.7	-0.5
ARR	Arges	148.65	328	⇓P	PKPdf	20 22 22.2	+0.6
BUG	Bochum--Univer	148.68	353	*e*PKPbc	PKPbc	20 22 26.0	+0.2
	baz=18,slow=2.4						
VYHS	Vyhne	148.69	338	*e*PKHKP	PKPpre	20 22 26.5	
VYHS				*e*		20 22 32.7	
VYHS	Vyhne	148.69	338	*e*PKP	PKPbc	20 22 26.5	+0.4
VYHS				*e*		20 22 32.7	
PRU	Pruhonice	148.70	344	⇑*e*PKP	PKPbc	20 22 26.1	+0.1
PRU				*e*PKPAB	PKPab	20 22 32.6	+0.4
PRU	Pruhonice	148.70	344	*e*PKHKP	PKPpre	20 22 26.1	
PRU				*e*		20 22 32.6	
GOPC	GO Pecny, Ondr	148.71	343	⇑*e*PKP	PKPbc	20 22 26.5	+0.4
GOPC	GO Pecny, Ondr	148.71	343	*e*PKHKP	PKPpre	20 22 26.5	
VRAC	Vranov	148.73	341	⇓P	PKPbc	20 22 24.5	-1.7
VRAC	Vranov	148.73	341	*e*PKP	PKPbc	20 22 26.3	+0.1
VRAC				*e*		20 22 33.1	
VRAC	Vranov	148.73	341	⇓PKHKP	PKPpre	20 22 24.5	
KASTN	Kahler Asten	148.77	352	*e*PKPbc	PKPbc	20 22 26.4	+0.2
	baz=18,slow=2.4						
MOX	Moxa	148.77	348	*e*PKPbc	PKPbc	20 22 26.4	+0.2
	baz=18,slow=2.4						
MOX				*e*L	L	21 07 19.1	
	comp=Z,77nm,19.1s						
JAVC	Velka Javorina	148.78	339	*e*PKP	PKiKP	20 22 27.7	+0.4
JAVC				*e*		20 22 34.2	
PSZ	Piszkesteto	148.78	336	⇑P	PKPdf	20 22 17.4	-4.3
PSZ	Piszkesteto	148.78	336	⇑PKIKP	PKPdf	20 22 17.4	-4.3
PLN	Plauen	148.81	347	*e*PKPbc	PKPbc	20 22 26.5	+0.2
	baz=18,slow=2.4						
TANN	Tannenbergstha	148.81	347	*e*PKPbc	PKPbc	20 22 26.5	+0.2
	baz=18,slow=2.4						
WERD	Werda	148.81	347	*e*PKPbc	PKPbc	20 22 26.5	+0.2
	baz=18,slow=2.4						
GUNZ	Gunzen	148.88	347	*e*PKPbc	PKPbc	20 22 26.8	+0.3
	baz=18,slow=2.4						
NKC	Novy Kostel	148.98	346	⇑*e*PKP	PKiKP	20 22 27.2	-0.4
NKC				*e*PKPAB	PKPab	20 22 33.6	+0.2
NKC	Novy Kostel	148.98	346	*e*PKHKP	PKPpre	20 22 27.2	
NKC				*e*		20 22 33.6	
KRUC	Moravsky	149.01	341	*e*PKP	PKPbc	20 22 26.9	+0.1
KRUC				*e*		20 22 33.9	
LOT	Lotru	149.02	329	⇑P	PKPbc	20 22 26.6	-0.5
HUMR	Humele	149.06	326	⇓P	PKPbc	20 22 25.3	-1.8
DEV	Deva	149.11	330	⇓P	PKiKP	20 22 27.8	-0.2
DEV	Deva	149.11	330	⇓PKHKP	PKPpre	20 22 27.8	
SMOL	Smolenice	149.16	339	*e*PKP2	PKiKP	20 22 28.3	+0.3
MANZ	Manzenberg	149.29	347	*e*PKPbc	PKPbc	20 22 27.8	+0.3
	baz=18,slow=2.4						
MODS	Modra-Piesok	149.33	339	*e*PKHKP	PKPpre	20 22 28.4	
MODS	Modra-Piesok	149.33	339	*e*PKP	PKiKP	20 22 28.4	0.0
SRO	Srobarova	149.46	338	*e*PKHKP	PKPpre	20 22 28.7	
SRO				*e*		20 22 36.6	
SRO	Srobarova	149.46	338	*e*PKP	PKiKP	20 22 28.7	+0.1
SRO				*e*		20 22 36.6	
ROTZ	Rotzenmuhle	149.47	346	*e*PKPbc	PKPbc	20 22 28.1	+0.2
	baz=18,slow=2.4						
GZR	Gura Zlata	149.53	330	⇑P	PKPbc	20 22 28.2	-0.1
GZR	Gura Zlata	149.53	330	⇑PKIKP	PKPbc	20 22 28.2	-0.1
SURR	Surduc	149.56	331	⇑P	PKPbc	20 22 28.2	0.0
MEM	Membach	149.62	354	*d*PKiKP	PKPbc	20 22 28.2	-0.1
BSTI	Sart Tilman	149.69	355	*d*PKiKP	PKPbc	20 22 28.4	0.0
TNS	Taunus Mts	149.72	351	*e*PKPbc	PKPbc	20 22 28.7	+0.1
	baz=18,slow=2.4						
TNS				*e*L	L	21 10 16.3	
	comp=Z,92nm,21.7s						
VLAD	Vladila	149.73	326	⇑P	PKiKP	20 22 29.1	-0.2
KHC	Kasperske Hory	149.74	344	PKPdf	PKPdf	20 22 22.6	-0.6
KHC				PKPbc	PKPbc	20 22 28.4	-0.2
KHC				PKPab	PKPab	20 22 37.2	+0.6
KHC	Kasperske Hory	149.74	344	*e*PKPDF	PKPdf	20 22 23.5	+0.3
KHC				⇑*e*PKP	PKPbc	20 22 28.8	+0.2
KHC				*e*PKPAB	PKPab	20 22 37.2	+0.6
KHC	Kasperske Hory	149.74	344	PKIKP	PKPdf	20 22 22.6	-0.6
KHC						20 22 37.2	
GRF	Grafenberg Arr	149.75	348	*e*L	L	21 06 16.3	
	comp=Z,59nm,19.3s						
EDRB	Edirne	149.82	321	P	PKPbc	20 22 27.7	-1.3
CKRC	Cesky Krumlov	149.83	343	⇑*e*PKP	PKPbc	20 22 29.0	+0.2
CKRC	Cesky Krumlov	149.83	343	*e*PKHKP	PKPpre	20 22 29.0	
SNF	Seneffe	149.85	357	*d*PKiKP	PKPbc	20 22 29.0	+0.3
SNF				*d*PKP	PKPab	20 22 36.7	-0.2
SRE	Strehaia	149.86	328	⇓P	PKPbc	20 22 29.3	+0.3
SRE	Strehaia	149.86	328	⇓PKHKP	PKPpre	20 22 29.3	
BCLA	Clavier	149.87	355	*d*PKiKP	PKPbc	20 22 28.3	-0.5
BCLA				*d*PKP	PKPab	20 22 36.7	-0.4
BHOU	Houvegnez	149.88	354	*d*PKiKP	PKPbc	20 22 28.9	0.0
BHOU				*d*PKP	PKPab	20 22 36.8	-0.3
BZS	Buzias	149.90	331	⇑P	PKPbc	20 22 29.1	+0.1
BZS	Buzias	149.90	331	⇑PKHKP	PKPpre	20 22 29.1	
BGES	Gesves	149.92	356	*d*PKiKP	PKPbc	20 22 28.7	-0.2
BGES				*d*PKPab	PKPab	20 22 36.7	-0.6
GEC2	GERESS Array S	149.97	344	PKPdf	PKPdf	20 22 23.4	-0.2
GEC2				PKPbc	PKPbc	20 22 28.7	-0.5
GEC2	GERESS Array S	149.97	344	*e*PKPbc	PKPbc	20 22 29.2	-0.1
	baz=18,slow=2.4						
GERES	GERESS Array B	149.97	344	PKP	PKPdf	20 22 24.3	+0.7
	comp=Z,3.3nm,1.0s,baz=104,slow=0.4,SNR=5.2						
GERES				PKPbc	PKPbc	20 22 29.1	-0.2
	comp=Z,12nm,0.9s,baz=216,slow=6.4,SNR=26						
GERES				PKPab	PKPab	20 22 37.3	-0.4
	comp=Z,4.1nm,0.9s,baz=36,slow=5.0,SNR=6.2						
GERES	GERESS Array B	149.97	344	PKPdf	PKPdf	20 22 22.8	-0.8
GERES				PKPbc	PKPbc	20 22 28.7	-0.5
GERES				PKPab	PKPab	20 22 37.5	-0.2
GERES	GERESS Array B	149.97	344	PKIKP	PKPdf	20 22 22.8	-0.8
GERES						20 22 37.5	
BMRD	Maredsous	150.03	356	*d*PKiKP	PKPbc	20 22 29.0	-0.2
BMRD				*d*PKPab	PKPab	20 22 37.0	-0.6
PLVB	Pleven	150.03	325	⇑P	PKiKP	20 22 29.8	-0.2
HERR	Herculane	150.08	330	⇑P	PKPbc	20 22 29.5	0.0
RCHB	Rochefort	150.14	355	*d*PKiKP	PKPbc	20 22 29.1	-0.3
CONA	Conrad Observa	150.18	341	*i* PKiKP	PKPbc	20 22 29.9	+0.2
	comp=Z,23nm,0.8s,SNR=9.3						
CONA				*e*PKP	PKPab	20 22 39.6	+1.0
	comp=Z,11nm,0.9s						
RONA	Rosalia, Austr	150.24	340	*i* PKiKP	PKPbc	20 22 30.0	+0.1
	comp=Z,37nm,1.0s,SNR=9.6						
RONA				*e*PKP	PKPab	20 22 39.9	+1.1
	comp=Z,15nm,0.9s						
DOU	Dourbes	150.25	356	*d*PKiKP	PKPbc	20 22 29.6	-0.1
BANR	Banloc	150.29	332	⇓P	PKiKP	20 22 31.3	+0.8
BALB	Balikesir	150.38	316		PKPbc	20 22 29.2	-1.1
BALB				PKPab	PKPab	20 22 39.8	+0.2
KULA	Kula-Manisa	150.45	314	P	PKPbc	20 22 29.9	-0.8
MDVR	Moldovita	150.49	330	⇓P	PKiKP	20 22 31.0	+0.1
MANT	Manisa	150.53	314		PKPbc	20 22 30.4	-0.6
WLF	Walferdange	150.55	354		PKPbc	20 22 30.3	-0.1
WLF					PKPab	20 22 39.6	-0.3
WLF	Walferdange	150.55	354	PKIKP	PKPbc	20 22 30.3	-0.1
WLF						20 22 39.6	
WLF	Walferdange	150.55	354	*d*PKiKP	PKiKP	20 22 31.0	+0.1
WLF				*d*PKP	PKPab	20 22 39.6	-0.3
WLF	Walferdange	150.55	354	*e*PKPbc	PKiKP	20 22 31.1	+0.2

	baz=18,slow=2.4						
MORH	Mrgy, Hungar	150.67	335	⇑P	PKPdf	20 22 24.1	-0.5
MOA	Molln	150.73	342	ePKiKP	PKPbc	20 22 30.7	-0.2
	comp=Z,5.8nm,0.5s						
MOA				ePKP	PKPab	20 22 41.5	+0.8
	comp=Z,14nm,1.0s						
ALN	Alexandroupoli	150.81	320	P	PKPbc	20 22 29.7	-1.6
AKAS	Kas	150.84	309		PKPbc	20 22 30.8	-0.9
AKAS				PKPab	PKPab	20 22 40.2	-1.6
ARSA	Arzberg	150.89	340	ePKiKP	PKPbc	20 22 30.8	-0.5
	comp=Z,8.8nm,1.1s						
RDO	Rodhopi	150.97	321	P	PKPbc	20 22 30.5	-1.1
RDO	Rodhopi	150.97	321		PKPbc	20 22 30.6	-1.1
RDO				PKPab	PKPab	20 22 42.6	+0.6
BIOA	Bad Ischl, Aus	151.05	343	ePKiKP	PKPbc	20 22 31.2	-0.5
	comp=Z,7.1nm,0.6s						
BIOA				ePKP	PKPab	20 22 43.0	+0.9
	comp=Z,34nm,1.1s						
FRGS	Fruska Gora	151.05	333	⇓P	PKiKP	20 22 32.3	+0.2
RJOB	Jochberg	151.23	344	ePKPbc	PKiKP	20 22 32.5	+0.1
	baz=18,slow=2.4						
EZN	Ezine	151.27	318	P	PKPbc	20 22 31.6	-0.8
VTS	Vitosha	151.30	325	⇓P	PKiKP	20 22 32.9	+0.1
VTS	Vitosha	151.30	325		PKPbc	20 22 32.5	0.0
VTS	Vitosha	151.30	325	PKIKP	PKPbc	20 22 32.5	0.0
BOVS	Bovan	151.35	329	⇑P	PKPbc	20 22 31.7	-0.7
SMTH	Samothraki Isl	151.38	320	P	PKPbc	20 22 30.4	-2.2
SOKA	Soboth	151.55	340	ePKiKP	PKPbc	20 22 32.1	-0.8
	comp=Z,12nm,0.8s						
SOKA				ePKP	PKPab	20 22 45.6	+1.2
	comp=Z,14nm,1.2s						
BFO	Black Forest	151.58	351		PKPbc	20 22 32.4	-0.5
BFO					PKPab	20 22 44.2	-0.1
BFO	Black Forest	151.58	351	PKIKP	PKPbc	20 22 32.4	-0.5
BFO						20 22 44.2	
PRK	Paraskevi	151.64	317	P	PKPbc	20 22 31.8	-1.4
KBA	Koelnbreinsper	151.69	343	ePKiKP	PKPbc	20 22 32.3	-1.0
	comp=Z,6.4nm,0.7s						
NVR	Nevrokopi	151.81	323	P	PKPbc	20 22 33.0	-0.6
UBR	Ueberruh	151.89	348	ePKPbc	PKPbc	20 22 33.3	-0.3
	baz=18,slow=2.4						
WATA	Walderalm	151.90	345	ePKiKP	PKPbc	20 22 33.3	-0.4
	comp=Z,10nm,0.5s						
WATA				ePKP	PKPab	20 22 46.3	+0.4
	comp=Z,15nm,0.9s						
ARG	Arkhangelos	151.92	310		PKPbc	20 22 33.0	-0.9
ARG	Arkhangelos	151.92	310	PKIKP	PKPbc	20 22 33.0	-0.9
SIGR	SIGRI	151.92	317	P	PKPab	20 22 45.4	-0.7
RETA	Reutte	151.94	347	ePKiKP	PKPbc	20 22 33.0	-0.7
	comp=Z,10nm,0.9s						
RETA				ePKP	PKPab	20 22 46.3	+0.3
	comp=Z,20nm,1.0s						
WTTA	Wattenberg	151.96	345	ePKiKP	PKPbc	20 22 33.6	-0.3
	comp=Z,15nm,0.5s						
WTTA				ePKP	PKPab	20 22 46.7	+0.5
	comp=Z,17nm,0.8s						
MOTA	Moosalm	152.00	346	ePKiKP	PKPbc	20 22 33.3	-0.7
	comp=Z,20nm,0.9s						
MOTA				ePKP	PKPab	20 22 46.5	+0.2
	comp=Z,21nm,1.0s						
MYKA	Terra Mystica	152.01	342	ePKP	PKPbc	20 22 32.8	-1.1
	comp=Z,7.3nm,0.5s						
MYKA				ePKP	PKPab	20 22 46.0	-0.3
	comp=Z,7.0nm,0.7s						
ABTA	Abfaltersbach	152.22	344	ePKiKP	PKPbc	20 22 33.5	-0.9
	comp=Z,26nm,1.0s						
ABTA				ePKP	PKPab	20 22 46.9	-0.2
	comp=Z,21nm,0.9s						
DAVA	Damuels	152.32	348	ePKiKP	PKPbc	20 22 34.5	-0.2
	comp=Z,16nm,1.2s						
DAVA				ePKP	PKPab	20 22 47.8	+0.1
	comp=Z,19nm,1.1s						
FETA	Feichten	152.39	346	ePKiKP	PKPbc	20 22 34.7	-0.1
	comp=Z,12nm,0.7s						
FETA				ePKP	PKPab	20 22 48.3	+0.3
	comp=Z,17nm,1.1s						
SOH	Sokhos	152.44	323	P	PKPab	20 22 44.5	-3.8
KNT	Kendrikon	152.48	324	P	PKPab	20 22 46.9	-1.5
STAL	STALIGIAL	152.61	343		PKPbc	20 22 33.7	-1.5
CIMO	Cimolais	152.64	343		PKPbc	20 22 34.2	-1.1
FUORN	Ofenpass-Fuorn	152.87	347		PKPbc	20 22 35.8	-0.3
FUORN				PKPab	PKPab	20 22 50.4	+0.2
KARP	Karpathos	152.92	309	P	PKPab	20 22 50.0	-0.5
KYMI	Kymi, Euboea I	153.37	318	P	PKPab	20 22 50.8	-1.5
LIT	Litokhoron	153.42	322	P	PKPab	20 22 51.9	-0.6
ANX	Ano Chora	154.74	320	P	PKiKP	20 22 39.8	-0.2
KLV	Kalavryta, Ach	154.94	319	P	PKPab	20 22 57.3	-1.8
ITM	Ithomi	155.62	318	PKPab	PKPab	20 23 01.4	-0.6
ESDC	Sonseca Array	160.18	13	PKPab	PKPab	20 23 21.8	0.0
	comp=Z,6.9nm,1.1s,baz=337,slow=4.4,SNR=12						
ESDC	Sonseca Array	160.18	13	PKPab	PKPab	20 23 21.4	-0.3
KEST	Kesra	163.25	338	PKPab	PKPab	20 23 35.5	+0.1
	comp=Z,3.7nm,0.7s,baz=36,slow=2.6,SNR=5.6						
DBIC	Dimbokro	165.02	155	PKPab	PKPab	20 23 44.1	+0.6
	comp=Z,3.5nm,0.8s,baz=204,slow=8.6,SNR=3.1						
TORD	Torodi Ar. Bea	172.81	181	PKP	PKPdf	20 22 46.5	-1.1
	comp=Z,4.5nm,1.1s,baz=299,slow=0.2,SNR=14						
TORD				PKPab	PKPab	20 24 17.8	-0.1
	comp=Z,1.2nm,0.7s,baz=177,slow=4.2,SNR=4.0						
TORD				PP	PP	20 28 08.3	-0.5
	comp=Z,1.1nm,0.9s,baz=163,slow=6.0,SNR=4.4						

DJA ***04*** *20:09:12.6±0.6, 3°N±4°×12°8E±°, h163^{km}±5^{km}, M4.4/13, mB4.9/6, mb4.6/9, MLv4.5/13, Mw(mB)4.2/6*

IDC ***04*** *20:09:13.1±4.1, 2°.56N×128°.45E, h170^{km}±38^{km}, mb3.9/21, mbtmp4.3/21, Error ellipse: s-maj=22.1km s-min=9.5km az=81.0*

NEIC ***04*** *20:09:13.1±1.1, 2°.58N±0°.07×128°.33E±0°.10, h167^{km}±6^{km}, mb4.4/42, Error ellipse: s-maj=15.5km s-min=8.8km az=65.0*

ISC 04 20:09:12.8±0.4, **2°.55N**±0°.04×**128°.32E**±0°.07, **h167**^{km}, **n109**, σ**1^{s}.16**/120, **mb4.3**/47, **7C-1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	2.01	208	Pn	Pn	20 09 49.8	+0.6
TNTI				Sn	Sn	20 10 17.8	+0.6
TNTI	Ternate	2.01	208	P	Pn	20 09 49.7	+0.6
SGSI	Sangihe	3.00	292	P	Pn	20 10 00.6	-0.3
SGSI				S	Sn	20 10 37.1	-1.2
LBMI	Labuha	3.27	194	P	Pn	20 10 04.8	+0.5
LBMI				S	Sn	20 10 46.2	+1.8
SANI	Sanana	5.13	207	P	Pn	20 10 26.9	-1.4
	44nm,0.6s,1µm0.2nm						
SANI				S	Sn	20 11 20.9	-6.5
	44nm,0.6s,1µm0.2nm						
SKMP	Bagumbayan, Su	5.45	316	⇑eP	Pn	20 10 32.9	+0.5
SKMP				eS	Sn	20 11 33.6	-1.3
KCP	Kidapawan	5.47	324	⇑iP	Pn	20 10 30.2	-2.6
KCP				i S	Sn	20 11 35.8	+0.2
GTOI	Gorontalo	5.64	250	P	Pn	20 10 35.6	+0.7
	59nm,0.7s,734nm0.2nm						
NLAI	Namlea	5.88	192	P	Pn	20 10 38.6	+0.5
	14nm,0.4s,6µm0.1nm						
CTBH	Cotabato--PC H	6.16	319	⇑iP	Pn	20 10 51.4	+10
BUKP	Musuan	6.21	329	⇑eP	Pn	20 10 43.5	+1.0
BUKP				eS	Sn	20 11 51.0	-1.9
LUWI	Luwuk	6.59	237	Pn	Pn	20 10 48.5	+0.9
LUWI	Luwuk	6.59	237	P	Pn	20 10 48.1	+0.5
	95nm,0.6s,4µm0.8nm						
MRSI	Marisa	6.70	252	P	Pn	20 10 48.9	-0.1
	220nm,0.5s,2µm0.9nm						
FAKI	Fak Fak	6.71	144	Pn	Pn	20 10 49.8	+0.7
TOLI2	Tolitoli	7.67	259	Pn	Pn	20 11 01.0	-0.8
MPSI	Mapaga	8.70	255	P	Pn	20 11 15.5	0.0
	43nm,0.7s						
MYLDM	Lahad Datu	10.14	285	Pn	Pn	20 11 34.3	-0.2
SPSI	Sidrap Palu	10.72	233	P	Pn	20 11 42.2	+0.1
BKSI	Bulukumba	11.32	226	P	Pn	20 11 53.2	+3.3
CAUP	Cauayan	15.66	336	⇑eP	P	20 12 47.7	+2.4
SBUM	Sibu	16.08	270	P	Pn	20 12 50.1	+0.2
PACPP	Pamplona Cagay	17.22	337	⇑iP	Pn	20 13 04.4	+0.9
KNRA	Kununurra	18.12	179	P	P	20 13 12.2	0.0
FITZ	Fitzroy Crossi	20.69	187	P	P	20 13 39.3	-0.7
TPUB	Ta-pu	21.93	341	P	P	20 13 51.1	-2.0
SSLB	Suanglung	22.28	342	P	P	20 13 55.1	-1.4
WB0	Warramunga Arr	22.97	165	P	P	20 14 01.9	-1.0
WB0				IAmb	IAmb	20 14 03.4	
	comp=Z,9.1nm,0.8s						
WRA	Warramunga Arr	23.12	165	P	P	20 14 03.8	-0.5
	comp=Z,4.5nm,0.6s,baz=345,slow=10.0,SNR=17						
WRA				PcP	PcP	20 17 48.1	0.0
	comp=Z,0.2nm,0.5s,baz=345,slow=2.3,SNR=1.5						
	comp=Z,4.5nm,0.6s						
WRA	Warramunga Arr	23.12	165	P	P	20 14 02.9	-1.5
WR0	Warramunga Arr	23.19	165	P	P	20 14 04.5	-0.4
WR0				IAmb	IAmb	20 14 05.4	
	comp=Z,5.9nm,0.8s						
JOW	Kunigami	24.14	360	P	P	20 14 12.6	-0.9
JOW				IAmb	IAmb	20 14 13.5	
	comp=Z,16nm,1.0s						
MBWA	Marble Bar	25.02	199	P	P	20 14 21.7	+0.2
MBWA				IAmb	IAmb	20 14 26.6	
	comp=Z,17nm,1.4s						
AS31	Alice Springs	26.62	169	P	P	20 14 35.5	-0.5
ASAR	Alice Springs	26.62	169	P	P	20 14 35.5	-0.4
	comp=Z,1.1nm,0.7s,baz=5.9,slow=8.5,SNR=6.4						
ASAR				PcP	PcP	20 17 55.6	-0.2
	comp=Z,1.1nm,0.4s,baz=353,slow=2.1,SNR=14						
	comp=Z,1.1nm,0.7s						
JNU	Nakatsue	30.51	4	P	P	20 15 09.9	-0.4
	comp=Z,2.9nm,0.4s,baz=341,slow=1.2,SNR=9.0						
	comp=Z,2.9nm,0.4s						
JNU	Nakatsue	30.51	4	P	P	20 15 09.7	-0.6
JNU				IAmb	IAmb	20 15 11.8	
	comp=Z,7.7nm,1.0s						
CMAR	Chiang Mai Arr	32.83	301	P	P	20 15 32.6	+1.8
	comp=Z,1.4nm,0.9s,baz=119,slow=7.5,SNR=8.8						
	comp=Z,1.4nm,0.9s						
CHTO	Chiang Mai	32.98	301	P	P	20 15 32.6	+0.4
INU	Inuyama	33.62	13	P	P	20 15 36.7	-0.7
JGF	Kuroka	33.94	13	P	P	20 15 39.2	-1.0
JGF				IAmb	IAmb	20 15 57.5	
	comp=Z,10nm,1.2s						
KSRS	Korea Array	34.73	359	P	P	20 15 47.2	+0.2
	comp=Z,3.6nm,0.5s,baz=176,slow=9.5,SNR=26						
	comp=Z,3.6nm,0.5s						
KS19	Wonju Array Si	34.78	359	P	P	20 15 46.7	-0.7
KS19				IAmb	IAmb	20 15 55.7	
	comp=Z,13nm,1.2s						
PZH	PanZhiHua	34.89	316	P	P	20 15 52.1	+3.5
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,80nm,5.1s						
MAJO	Matsushiro	35.03	14	P	P	20 15 48.2	-1.4
MAJO				IAmb	IAmb	20 15 50.0	
	comp=Z,8.6nm,0.7s						
MJAR	Matsushiro Arr	35.03	14	P	P	20 15 48.2	-1.4
	comp=Z,4.2nm,0.7s,baz=185,slow=8.6,SNR=17						
	comp=Z,4.2nm,0.7s						
MJB9	Matsu-Tunnel	35.04	14	P	P	20 15 49.0	-0.6
MJB9				IAmb	IAmb	20 15 51.0	
	comp=Z,8.5nm,0.7s						
LYN	LuoYang	35.09	337	⇓iP	P	20 15 52.0	+1.9
BBOO	Buckleboo	35.93	169	P	P	20 15 56.5	-0.7
BBOO				IAmb	IAmb	20 16 24.7	
	comp=Z,13nm,1.1s						
STKA	Stephens Creek	36.49	161	P	P	20 16 01.9	-0.1
	comp=Z,2.6nm,0.3s,baz=338,slow=8.2,SNR=17						
STKA				PcP	PcP	20 18 22.2	-0.1
	comp=Z,1.7nm,1.0s,baz=27,slow=2.3,SNR=2.0						
	comp=Z,2.6nm,0.3s						
STKA	Stephens Creek	36.49	161	P	P	20 16 01.5	-0.5
JMM	Marumori	36.96	17	P	P	20 16 05.0	-0.9
BJT	Baijiatuau	38.89	345	P	P	20 16 21.8	-0.2
BJT				IAmb	IAmb	20 16 22.9	
	comp=Z,8.0nm,1.0s						
ARMA	Armidale	39.62	148	P	P	20 16 28.2	-0.2
ARMA				IAmb	IAmb	20 16 38.1	
	comp=Z,12nm,1.2s						
JTM	Tenmabayashi	39.77	15	P	P	20 16 29.1	-0.2
LZH	Lanzhou	40.32	329	⇑P	P	20 16 35.9	+1.7
LZH				sP	sP	20 17 27.2	-1.1
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
HHC	Hu-ho-hao-te	41.02	341	eP	P	20 16 42.3	+2.6
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,240nm,7.6s						
USRK	Ussuriysk Ar.	41.60	4	P	P	20 16 44.5	+0.2
	comp=Z,3.0nm,0.5s,baz=181,slow=7.3,SNR=6.6						
	comp=Z,3.0nm,0.5s						
SHL	Shillong	41.85	306	P	P	20 16 47.1	+0.3
LSA	Lhasa	44.40	311	P	P	20 17 08.6	+0.9
GTA	Gaotai	44.92	328	eP	P	20 17 12.0	+0.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TAPN	Taplejung	45.99	306	eP	P	20 17 20.8	+0.9
ODAN	Odare	46.04	306	eP	P	20 17 21.0	+0.7
KLR	Kul'dur	46.60	3	P	P	20 17 23.4	-0.6
	comp=Z,1.4nm,0.6s,baz=219,slow=7.6,SNR=5.0						
	comp=Z,1.4nm,0.6s						
RAMN	Ramite	46.72	305	eP	P	20 17 26.5	+0.9
	comp=Z,25nm,0.6s						
JIRN	Jiri	47.34	306	eP	P	20 17 31.4	+0.8
	comp=Z,22nm,0.5s						
GUN	Gumba	47.70	306	eP	P	20 17 33.9	+0.6
	comp=Z,24nm,0.5s						
PKI	Pulchoki	47.94	306	eP	P	20 17 35.4	+0.3
	comp=Z,4.4nm,0.3s						
PKIN	Phulchoki	47.95	306	eP	P	20 17 35.3	+0.2
	comp=Z,4.7nm,0.3s						
DMN	Daman	48.20	305	eP	P	20 17 37.5	+0.5
ULN	Ulaanbaatar	48.73	341	P	P	20 17 40.8	+0.2
GKN	Gorkha	48.74	306	eP	P	20 17 41.4	+0.4
SONM	Songino Array	48.92	341	P	P	20 17 42.4	+0.4
	comp=Z,2.8nm,0.6s,baz=153,slow=8.5,SNR=19						
SONM				PcP	PcP	20 19 04.0	+0.3
	comp=Z,0.5nm,0.6s,baz=162,slow=3.4,SNR=3.2						
	comp=Z,2.8nm,0.6s						
SONM	Songino Array	48.92	341	P	P	20 17 42.0	0.0
KOLN	Koldanda	49.49	305	eP	P	20 17 47.7	+0.9
DANN	Dangsing	49.59	306	eP	P	20 17 48.3	+0.7
	comp=Z,34nm,0.6s						
PYUN	Piuthan	50.12	305	eP	P	20 17 52.4	+0.9
	comp=Z,9.3nm,0.3s						
WMQ	Urumqi	54.59	325	eP	P	20 18 25.2	+1.1
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
PETK	Petropavlovsk-	55.94	21	P	P	20 18 33.3	-0.1
	comp=Z,1.2nm,0.6s,baz=193,slow=2.3,SNR=6.9						
	comp=Z,1.2nm,0.6s						
YAK	Yakutsk	59.34	1	P	P	20 18 57.2	+0.2
	comp=Z,12nm,0.5s,baz=282,slow=0.9,SNR=14						
	comp=Z,12nm,0.5s						
YAK	Yakutsk	59.34	1	P	P	20 18 55.7	-1.3
MK31	Makanchi Array	59.42	325	P	P	20 18 58.0	+0.1
MK31				IAmb	IAmb	20 18 58.9	
	comp=Z,2.9nm,0.7s						
MKAR	Makanchi Array	59.42	325	P	P	20 18 58.1	+0.3
	comp=Z,5.4nm,0.6s,baz=114,slow=8.1,SNR=96						
MKAR				PcP	PcP	20 19 43.4	-0.5
	comp=Z,1.4nm,0.7s,baz=116,slow=4.8,SNR=7.5						
	comp=Z,5.4nm,0.6s						
MAKZ	Makanchi	59.61	325	P	P	20 18 59.1	-0.1
MAKZ				IAmb	IAmb	20 19 00.1	
	comp=Z,5.0nm,0.6s						
KSH	Kashi	59.99	315	P	P	20 19 03.4	+1.3
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZALV	Zalesovo Beam	62.35	333	P	P	20 19 16.6	-0.8
	comp=Z,0.9nm,0.4s,baz=106,slow=5.3,SNR=7.8						
	comp=Z,0.9nm,0.4s						
ZALV	Zalesovo Beam	62.35	333	P	P	20 19 15.8	-1.6
SEY	Seymchan	62.83	12	P	P	20 19 21.2	+0.8
	comp=Z,1.5nm,0.5s,baz=240,slow=6.6,SNR=7.6						
	comp=Z,1.5nm,0.5s						
KURK	Kurchatov	63.58	327	P	P	20 19 25.5	-0.1
KK31	Karatay Array	65.17	317	P	P	20 19 35.9	-0.2
KK31				IAmb	IAmb	20 19 36.9	
	comp=Z,4.2nm,1.1s						
KKAR	Karatay Array	65.17	317	P	P	20 19 35.9	-0.2
TIXI	Tiksi	69.00	0	P	P	20 19 59.1	-0.6
	comp=Z,5.7nm,0.4s,baz=91,slow=24,SNR=18						
	comp=Z,5.7nm,0.4s						
BRVK	Borovoye	69.24	327	P	P	20 20 01.2	-0.3
BRVK				IAmb	IAmb	20 20 01.7	
	comp=Z,4.6nm,0.6s						
NRIK	Noril'sk	71.95	346	P	P	20 20 18.1	+0.5
	comp=Z,1.2nm,0.3s,baz=137,slow=6.7,SNR=3.8						
	comp=Z,1.2nm,0.3s						
GEYT	Alibeck	72.86	309	P	P	20 20 24.3	+0.6
	comp=Z,1.2nm,0.3s,baz=122,slow=5.4,SNR=5.7						
	comp=Z,1.2nm,0.3s						
ABKAR	Akbulak array	74.06	321	P	P	20 20 30.0	-0.4
ABKAR	Akbulak array	74.06	321	P	P	20 20 29.9	-0.6
ABKAR				IAmb	IAmb	20 20 30.6	
	comp=Z,2.7nm,0.8s						
ARU	Arti	76.77	328	P	P	20 20 45.1	-0.6
ARU				IAmb	IAmb	20 20 45.5	
	comp=Z,2.8nm,0.6s						
TTA	Tatalina	81.23	27	P	P	20 21 10.0	0.0
TTA				IAmb	IAmb	20 21 10.9	
	comp=Z,8.0nm,1.5s						
M19K	Big River Lodg	81.78	28	P	P	20 21 13.8	+1.0
M19K				IAmb	IAmb	20 21 36.4	
	comp=Z,9.9nm,1.4s						
VNDA	Vanda	82.07	173	P	P	20 21 13.6	-0.4
VNDA				IAmb	IAmb	20 21 30.4	
	comp=Z,13nm,1.4s						
M20K	Styx River	82.36	28	P	P	20 21 15.9	0.0
M20K				IAmb	IAmb	20 21 21.3	
	comp=Z,12nm,1.4s						
IMAR	Indian Mountai	82.77	24	P	P	20 21 18.4	+0.5
CAST	Castle Rocks	83.07	26	P	P	20 21 20.3	+0.8
SML	Sawmill	84.61	28	P	P	20 21 27.7	+0.4
ILAR	Eielson Array	85.48	25	P	P	20 21 30.5	-1.1
	comp=Z,0.2nm,0.7s,baz=252,slow=5.0,SNR=5.7						
	comp=Z,0.2nm,0.7s						
ARCES	ARCESS Array B	92.09	340	P	P	20 22 01.3	-1.4
	comp=Z,4.4nm,0.9s,baz=82,slow=6.1,SNR=4.7						
	comp=Z,4.4nm,0.9s						
QSPA	South Pole Qui	92.47	180	P	P	20 22 03.9	-0.7
	comp=Z,1.6nm,0.9s,baz=290,slow=1.5,SNR=1.6						
	comp=Z,1.6nm,0.9s						
TORD	Torodi Ar. Bea	124.79	288	PKP	PKPdf	20 27 53.5	-0.3
	comp=Z,0.7nm,0.6s,baz=68,slow=1.7,SNR=6.3						

IDC ***04*** *20:11:48.7±0.7, 58°.89S×17°.79W, h0^{km}, mb4.3/8, mbtmp4.3/8, MS4.2/36, Error ellipse: s-maj=29.3km s-min=20.9km az=34.0*

NEIC ***04*** *20:11:49.8±1.8, 59°.12S±0°.09×17°.7W±0°.2, h10^{km}±1^{km}, mb5.0/38, Error ellipse: s-maj=17.6km s-min=15.1km az=255.0*

GCMT ***04*** *20:11:51.8±0.2, 59°.26S±0°.01×17°.42W±0°.02, h17^{km}±1^{km}, MW5.1/120, Moment Tensor Solution. s42,c48; s120,c168; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.29±.16; $M_{\theta\theta}$-1.90±.16; $M_{\phi\phi}$2.19±.13; $M_{r\theta}$2.17±.42; $M_{\theta\phi}$4.75±.11; $M_{\phi r}$-0.47±.33; Best double couple: $M_0$5.62500×10^{16} NP1:ϕ_s257.00000°,δ82.00000°, λ-21.00000°. NP2:ϕ_s350.00000°,δ69.00000°, λ-171.00000°. Principal axes: T 5.4360, Plg9.0000°, Azm305.0000°; N 0.3730, Plg67.0000°, Azm56.0000°; P -5.8130, Plg21.0000°, Azm212.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 20:11:49.8±0.5, **59°.13S**±0°.09×**17°.78W**±0°.10, **h10**^{km}, **n125**, σ**1^{s}.24**/92, **mb4.9**/27, **MS4.3**/38, **East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	11.36	287	Pn	Pn	20 14 31.5	-0.4
VNA1	Neumayer--Stat	12.23	165	P	Pn	20 14 42.5	-1.2
VNA2	Neumayer--Watz	12.60	164	P	Pn	20 14 46.6	-2.2
	baz=331,slow=16						
VNA2				S	Sn	20 16 56.7	-12
	baz=335,slow=28						
VNA3	Neumayer Olymp	12.61	168	P	Pn	20 14 46.9	-2.1
VNA3				S	Sn	20 16 57.7	-12
SNAA	Sanae	13.97	160	P	Pn	20 15 05.8	-1.8
SNAA	Sanae	13.97	160	Pn	Pn	20 15 06.0	-1.6
	6.1nm,0.3s,baz=27,slow=11,SNR=110						
SNAA				Sn	Sn	20 17 29.8	-13
	0.3nm,0.3s,baz=321,slow=14,SNR=1.8						
SNAA				LR	LR	20 19 29.9	
	comp=Z,1µm,18.6s,baz=3.5,slow=32						
SNAA	Sanae	13.97	160	Pn	Pn	20 15 05.2	-2.4
TROLL	Troll, Antarti	15.28	156	P	Pn	20 15 22.6	-2.8
BELA	Belgrano 2	19.65	190		P	20 16 18.7	+0.5
PMSA	Palmer Station	22.05	236	LR	LR	20 24 11.0	
	comp=Z,271nm,20.6s,baz=108,slow=34						
EFI	East Falkland	23.74	270	P	P	20 17 02.3	+0.5
QSPA	South Pole Qui	31.11	180	P	P	20 18 10.0	+1.9
	4.1nm,0.8s,baz=199,slow=4.2,SNR=9.1						
	4.1nm,0.8s						
QSPA	South Pole Qui	31.11	180	P	P	20 18 07.2	-0.9
MAW	Mawson	34.56	138	LR	LR	20 30 25.5	
	comp=Z,780nm,21.6s,baz=232,slow=32						
TRQA	Tornquist	35.14	287		P	20 18 42.2	-1.1
TRQA				IAmb	IAmb	20 19 02.0	
	comp=Z,26nm,1.8s						
AY01	Puyuhuapi	35.88	269	P	P	20 18 48.6	-0.9
AY01				IAmb	IAmb	20 19 01.5	
	comp=Z,17nm,1.1s						
PLTB	Pedras Altas	36.39	303	P	P	20 18 54.3	+0.2
PLTB				IAmb	IAmb	20 18 55.7	
	comp=Z,28nm,1.3s						
SUR	Sutherland	37.09	61	LR	LR	20 30 10.4	
	comp=Z,524nm,20.5s,baz=209,slow=30						
PLCA	Paso Flores	37.44	276	P	P	20 19 03.1	+0.1
	comp=Z,1.7nm,0.8s,baz=152,slow=7.5,SNR=6.3						
PLCA				LR	LR	20 34 05.5	
	comp=Z,406nm,19.1s,baz=134,slow=36						
	comp=Z,1.7nm,0.8s						
PLCA	Paso Flores	37.44	276	P	P	20 19 02.3	-0.7
SPB	Sao Paulo	41.23	316	P	P	20 19 34.9	+0.2
SPB				IAmb	IAmb	20 19 38.9	
	comp=Z,51nm,1.6s						
VAO	Valinhos	41.61	317	eP	P	20 19 38.3	+0.4
PTGB	Pitanga	41.95	310	eP	P	20 19 41.6	+0.9
BOSA	Boshof	42.30	63	LR	LR	20 33 05.0	
	comp=Z,367nm,20.8s,baz=208,slow=30						
BOSA	Boshof	42.30	63	P	P	20 19 42.2	-1.4
CPUP	Villa Florida	42.71	303	P	P	20 19 45.8	-1.0
	comp=Z,4.0nm,0.8s,baz=157,slow=4.9,SNR=7.3						
CPUP				LR	LR	20 37 40.4	
	comp=Z,210nm,19.5s,baz=156,slow=36						
	comp=Z,4.0nm,0.8s						
CPUP	Villa Florida	42.71	303	P	P	20 19 46.0	-0.7
MT03	Universidad Ad	42.99	283	P	P	20 19 49.4	+0.4
MT03				IAmb	IAmb	20 19 53.2	
	comp=Z,42nm,1.1s						
MT09	Talagante	43.00	282		P	20 19 49.0	-0.3
MT09				IAmb	IAmb	20 19 52.6	
	comp=Z,23nm,0.9s						
PEL	Peldehue	43.35	283	P	P	20 19 51.1	-0.9
PEL				IAmb	IAmb	20 19 56.1	
	comp=Z,33nm,1.0s						
CFA	Coronel Fontan	43.37	287	P	P	20 19 51.3	-0.9
	comp=Z,13nm,0.8s,baz=151,slow=9.2,SNR=23						
CFA				LR	LR	20 38 17.6	
	comp=Z,194nm,19.5s,baz=121,slow=37						
	comp=Z,13nm,0.8s						
VNDA	Vanda	43.60	180	LR	LR	20 37 04.3	
	comp=Z,185nm,19.4s,baz=179,slow=35						
VNDA	Vanda	43.60	180	P	P	20 19 55.5	+2.1
VNDA				IAmb	IAmb	20 20 28.2	
	comp=Z,30nm,1.7s						
LBTB	Lobatse	45.54	61	LR	LR	20 35 40.0	
	comp=Z,392nm,19.3s,baz=228,slow=32						
PMNB	Patos De Minas	45.57	320	eP	P	20 20 10.9	+1.1
CO01	Juntas del Tor	45.62	286	P	P	20 20 10.0	-0.4
CO01				IAmb	IAmb	20 20 15.0	
	comp=Z,22nm,0.8s						
CO06	Fray Jorge	45.82	284	P	P	20 20 12.1	+0.5
AC05	El Transito	46.64	287	P	P	20 20 17.4	-0.9
AC05				IAmb	IAmb	20 20 46.3	
	comp=Z,22nm,1.0s						
IPMB	Ipameri, GO	46.68	318	eP	P	20 20 19.6	+1.1
AQDB	Aquidauana	47.21	308	eP	P	20 20 24.5	+1.9
BDFB	Brasilia	48.80	320	P	P	20 20 34.2	-0.8
	comp=Z,2.1nm,0.7s,baz=180,slow=3.7,SNR=3.3						
BDFB				LR	LR	20 38 25.1	
	comp=Z,678nm,19.5s,baz=140,slow=33						
	comp=Z,2.1nm,0.7s						
PP1B	Ponte de Pedra	49.48	311	eP	P	20 20 42.3	+2.1
BBRB	Robore, Bolivi	50.88	305	eP	P	20 20 51.6	+0.9
LVC	Limon Verde	51.21	293	LR	LR	20 40 49.4	
	comp=Z,150nm,21.4s,baz=186,slow=34						
LVC	Limon Verde	51.21	293	P	P	20 20 53.9	+0.2
LVC				IAmb	IAmb	20 20 58.6	
	comp=Z,13nm,1.0s						
LVC	Limon Verde	51.21	293	eP	P	20 20 55.2	+1.6
SALV	Santo Antonio	51.34	311	eP	P	20 20 55.7	+1.5
PB09	IPOC Station P	52.06	293	P	P	20 21 00.1	+0.3
PB03	IPOC Station P	52.09	292	P	P	20 20 60.0	0.0
BBSD	Serra de San D	52.19	305	eP	P	20 21 00.0	-0.5
PTLB	Pontes e Lacer	53.13	307		P	20 21 07.3	-0.2
PTLB				IAmb	IAmb	20 21 10.3	

	comp=Z,25nm,1.3s						
PTLB	Pontes e Lacer	53.13	307	eP	P	20 21 07.6	+0.1
SIV	San Ignacio	53.45	305	LR	LR	20 43 49.5	
	comp=Z,191nm,18.9s,baz=125,slow=36						
SMTB	Santa Maria do	55.02	323	eP	P	20 21 23.7	+2.4
LSZ	Lusaka	55.23	58	LR	LR	20 41 57.4	
	comp=Z,230nm,19.1s,baz=206,slow=33						
VILB	Vilhena	55.81	307	P	P	20 21 26.0	-1.0
VILB				IAmb	IAmb	20 21 42.2	
	comp=Z,19nm,0.8s						
LPAZ	La Paz	56.30	297	P	P	20 21 31.2	-0.1
	comp=Z,6.4nm,1.1s,baz=75,slow=5.3,SNR=10						
LPAZ				LR	LR	20 44 31.4	
	comp=Z,202nm,21.7s,baz=152,slow=35						
	comp=Z,6.4nm,1.1s						
LPAZ	La Paz	56.30	297	P	P	20 21 30.9	-0.4
LPAZ				IAmb	IAmb	20 21 34.8	
	comp=Z,23nm,1.4s						
LPAZ	La Paz	56.30	297	eP	P	20 21 31.6	+0.3
NPGB	Novo Progresso	59.34	315	eP	P	20 21 53.9	+2.0
SAML	Samuel	60.66	306		P	20 21 59.7	-1.2
SAML				IAmb	IAmb	20 22 04.2	
	comp=Z,17nm,1.4s						
ETMB	Extrema	61.17	303	P	P	20 22 03.0	-1.3
ETMB	Extrema	61.17	303	eP	P	20 22 04.0	-0.4
MACA	Manacapuru-AM	64.91	311	P	P	20 22 27.9	-1.4
CZSB	Cruzeiro do Su	65.91	297	P	P	20 22 34.7	-1.1
CZSB				IAmb	IAmb	20 22 38.0	
	comp=Z,9.4nm,0.6s						
DBIC	Dimbokro	66.40	14	LR	LR	20 43 57.5	
	comp=Z,88nm,21.2s,baz=192,slow=29						
RPN	Rapa Nui	67.91	254	LR	LR	20 44 36.6	
	comp=Z,163nm,20.9s,baz=130,slow=29						
ATAH	Atahualpa	69.10	292	LR	LR	20 54 02.8	
	comp=Z,115nm,21.0s,baz=80,slow=37						
MBAR	Mbarara	69.48	53	LR	LR	20 49 42.0	
	comp=Z,409nm,21.3s,baz=188,slow=33						
MDP	Montagnes des	69.77	323	LR	LR	20 49 48.9	
	comp=Z,163nm,21.5s,baz=119,slow=33						
BOAV	Boa Vista	69.95	314	P	P	20 23 00.7	-0.5
BOAV				IAmb	IAmb	20 23 03.3	
	comp=Z,28nm,1.5s						
MCRA	Macar, Loja	72.25	292	P	P	20 23 15.2	0.0
BBTS	Babate	73.53	1	LR	LR	20 49 42.4	
	comp=Z,156nm,18.2s,baz=230,slow=31						
TORD	Torodi Ar. Bea	73.75	20	P	P	20 23 22.8	-1.0
	comp=Z,1.1nm,0.6s,baz=193,slow=6.0,SNR=6.7						
TORD				LR	LR	20 48 21.4	
	comp=Z,145nm,20.7s,baz=186,slow=30						
	comp=Z,1.1nm,0.6s						
SLOR	San Lorenzo -	74.75	295	P	P	20 23 30.4	0.0
PULU	Pululahua	75.42	296	P	P	20 23 34.5	+0.4
IMBA	Imbabura, San	75.50	296	P	P	20 23 34.5	-0.2
OTAV	Otavalo	75.58	296	P	P	20 23 34.1	-1.1
OTAV				IAmb	IAmb	20 23 39.4	
	comp=Z,17nm,1.2s						
OTAV	Otavalo	75.58	296	eP	P	20 23 35.5	+0.4
TULM	Tulcn-Chalpat	75.70	297	P	P	20 23 36.3	+0.4
ROSC	El Rosal	77.79	302	LR	LR	20 59 42.6	
	comp=Z,126nm,19.0s,baz=92,slow=37						
ROSC	El Rosal	77.79	302	P	P	20 23 47.1	-0.5
ROSC				IAmb	IAmb	20 23 55.7	
	comp=Z,16nm,1.1s						
RUSC	La Rusia	78.19	303	P	P	20 23 48.9	-1.0
RUSC				IAmb	IAmb	20 23 52.7	
	comp=Z,34nm,1.4s						
SDV	Santo Domingo	79.85	307	LR	LR	20 58 25.9	
	comp=Z,278nm,20.7s,baz=154,slow=35						
SDV	Santo Domingo	79.85	307	P	P	20 23 57.9	-0.7
URZ	Urewera	82.18	192	LR	LR	20 58 31.6	
	comp=Z,107nm,18.7s,baz=348,slow=34						
SJG	San Juan	86.50	315	LR	LR	21 01 00.0	
	comp=Z,216nm,21.5s,baz=137,slow=34						
STKA	Stephens Creek	87.72	163	LR	LR	21 01 11.9	
	comp=Z,122nm,20.3s,baz=200,slow=34						
TBI	Tubuai	88.71	223	eLR	LR	20 52 56.0	
	comp=Z,2μm,22.0s						
TBI				eLR	LR	20 52 56.2	
	comp=Z,271nm,23.2s						
MDT	Midelt	92.25	11	LR	LR	21 00 58.5	
	comp=Z,104nm,19.2s,baz=134,slow=32						
PPT2	Papeete2	94.04	225	eLR	LR	20 55 23.7	
	comp=Z,103nm,23.2s						
PPT2				eLR	LR	20 55 24.7	
	comp=Z,145nm,26.0s						
PPT	Papeete	94.06	225	LR	LR	21 02 03.0	
	comp=Z,65nm,18.0s,baz=180,slow=32						
RAR	Rarotonga	94.07	215	LR	LR	21 00 58.0	
	comp=Z,64nm,19.6s,baz=132,slow=31						
ASAR	Alice Springs	94.25	154	P	P	20 25 11.6	+2.5
	comp=Z,0.6nm,1.0s,baz=203,slow=4.5,SNR=2.7						
ASAR				LR	LR	21 04 50.5	
	comp=Z,119nm,19.1s,baz=198,slow=34						
	comp=Z,0.6nm,1.0s						
KEST	Kesra	97.17	22	LR	LR	21 04 35.1	
	comp=Z,127nm,18.6s,baz=234,slow=33						
WRA	Warramunga Arr	97.95	154	LR	LR	21 05 51.0	
	comp=Z,89nm,20.6s,baz=182,slow=33						
TAOE	Nuku Hiva Isla	98.15	237	eLR	LR	20 57 18.2	
	comp=Z,140nm,27.1s						
DZM	Mont Dzumac	99.03	184	eLR	LR	20 57 41.8	
	comp=Z,141nm,22.1s						
DZM	Mont Dzumac	99.03	184	LR	LR	21 07 33.2	
	comp=Z,77nm,19.9s,baz=32,slow=34						
ESDC	Sonseca Array	99.11	11	LR	LR	21 06 37.7	
	comp=Z,90nm,18.6s,baz=200,slow=33						
VAE	Valguarnera	99.90	25	LR	LR	21 06 30.2	
	comp=Z,111nm,18.0s,baz=162,slow=33						
NACGM	Naroch	119.16	28	ePKP	PKiKP	20 30 42.7	+5.1
	comp=Z,7.0nm,0.8s,baz=204						
FINES	FINESS Array B	124.94	24	PKP	PKiKP	20 30 48.8	0.0
	comp=Z,1.3nm,0.8s,baz=114,slow=2.3,SNR=6.0						
MKAR	Makanchi Array	133.19	68	PKP	PKPdf	20 31 04.1	-0.6
	comp=Z,0.1nm,0.6s,baz=114,slow=1.7,SNR=1.6						
YKA	Yellowknife Ar	141.94	312	PKP	PKPdf	20 31 17.6	-2.6
	comp=Z,0.7nm,1.1s,baz=118,slow=3.1,SNR=3.2						
KOTAN	Kotaneelee Air	144.50	304	P	PKPdf	20 31 24.6	-0.3
	baz=122						
LIRD	Liard River Hi	145.00	302	P	PKPdf	20 31 26.0	+0.3
	baz=121						
SONM	Songino Array	145.92	84	PKPbc	PKPdf	20 31 27.1	-0.8
	comp=Z,0.9nm,0.9s,baz=226,slow=3.4,SNR=5.8						
SONM	Songino Array	145.92	84	PKPdf	PKPdf	20 31 27.8	0.0
DLBC	Dease Lake	146.24	299	P	PKPdf	20 31 27.7	-0.3
	baz=121						
WTLY	Watson Lake, Y	146.54	302	P	PKPab	20 31 30.5	-0.5
	baz=119						
NRIK	Noril'sk	148.15	40	PKPbc	PKPbc	20 31 33.2	-0.9
	comp=Z,1.0nm,0.4s,baz=197,slow=0.7,SNR=1.6						
NRIK	Noril'sk	148.15	40		PKPab	20 31 36.8	-0.2
A36M	Sachs Harbour	149.59	324	PKPbc	PKiKP	20 31 38.5	-0.1
M31M	Drury Creek, Y	149.90	303	P	PKiKP	20 31 39.4	-0.2
	baz=113						
F31M	Tsiigehtchic	151.35	314	P	PKiKP	20 31 42.5	+0.1
	baz=105						
YUK4	Talbot Arm	151.43	300	P	PKiKP	20 31 44.4	+1.4
	baz=112						
INK	Inuvik	151.48	315	PKPbc	PKiKP	20 31 42.5	-0.1
	comp=Z,3.0nm,1.0s,baz=69,slow=3.7,SNR=8.7						
INK	Inuvik	151.48	315	PKPbc	PKiKP	20 31 42.7	+0.1
INK	Inuvik	151.48	315	P	PKiKP	20 31 42.9	+0.3
	baz=103						
M29M	Somme Creek	151.75	302	P	PKiKP	20 31 44.3	+0.8
	baz=110						
L29M	L29M	151.84	304	P	PKiKP	20 31 44.5	+0.9
	baz=109						
MJAR	Matsushiro Arr	152.53	135	PKPbc	PKiKP	20 31 47.9	+2.1
	comp=Z,0.8nm,0.8s,baz=211,slow=2.7,SNR=2.9						
BCAR	Beaver Creek A	153.40	303	PKPbc	PKiKP	20 31 47.0	+0.1
ILAR	Eielson Array	156.00	305	PKPbc	PKPdf	20 31 52.9	+10
	comp=Z,0.3nm,0.7s,baz=126,slow=1.2,SNR=2.7						

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*NEIC **04** 20:16:59.3±1.5, 17°.11S±0°.09×172°.3W±0°.2, h10^{km}±2^{km}, mb4.3/6, Error ellipse: s-maj=27.1km s-min=12.2km az=69.0*

*IDC **04** 20:17:06.3±5.1, 16°.58S×173°.59W, h0^{km}, mb3.9/2, mbtmp3.8/3, ML3.4/1, Error ellipse: s-maj=219.8km s-min=24.6km az=137.0*

ISC 04 20:17:01.3±1.1**, 17°.0S**±0°.1×**172°.4W**±0°.3**, h17**^{km}**, n15, σ1^{s}.69**/14**, mb4.3**/6**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	3.13	131		Pn	20 17 45.6	-4.3
AFI	Afiamalu	3.18	12	Pn	Pb	20 17 56.5	-0.9
	4.3nm,0.3s,baz=249,slow=8.6,SNR=4.7						
AFI				Sn	Sb	20 18 36.0	+0.1
	7.3nm,0.3s,baz=26,slow=22,SNR=2.0						
	10nm,0.4s						
AFI	Afiamalu	3.18	12	Pn	Pn	20 17 49.7	-0.9
RAR	Rarotonga	12.67	111		Pn	20 19 56.6	-4.2
RTZ	Ruatahuna	23.40	201	P	P	20 22 08.9	-0.5
RTZ				IAmb	IAmb	20 22 22.6	
	comp=Z,13nm,1.2s						
BKZ	Black Stump Fm	24.07	201	P	P	20 22 14.4	-1.4
WB0	Warramunga Arr	50.35	258	P	P	20 25 57.0	-0.8
WB0				IAmb	IAmb	20 26 23.2	
	comp=Z,7.2nm,1.4s						
WRA	Warramunga Arr	50.38	258	P	P	20 25 58.2	+0.2
	comp=Z,0.3nm,0.3s,baz=97,slow=7.6,SNR=8.7						
	comp=Z,0.3nm,0.3s						
WRA	Warramunga Arr	50.38	258	P	P	20 25 57.7	-0.3
AS31	Alice Springs	50.50	253	P	P	20 25 57.5	-1.4
AS31				IAmb	IAmb	20 26 16.0	
	comp=Z,0.9nm,0.7s						
ASAR	Alice Springs	50.50	253	P	P	20 25 59.1	+0.2
	comp=Z,1.9nm,0.6s,baz=89,slow=8.7,SNR=26						
	comp=Z,1.9nm,0.6s						
ASAR	Alice Springs	50.50	253	P	P	20 25 57.2	-1.7
QSPA	South Pole Qui	73.01	180	P	P	20 28 29.8	-0.2
QSPA				IAmb	IAmb	20 28 31.5	
	comp=Z,3.6nm,1.2s						
GERES	GERESS Array B	147.89	352	PKPbc	PKPab	20 36 52.2	+4.1
	comp=Z,0.1nm,0.3s,baz=358,slow=3.0,SNR=1.5						
BRTR	Keskin Array B	148.00	320	PKPbc	PKPab	20 36 51.2	+2.2
	comp=Z,0.4nm,0.7s,baz=66,slow=3.7,SNR=3.2						

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*IDC **04** 20:52:02.4±1.3, 6°.93S×81°.62W, h0^{km}, mb3.7/4, mbtmp3.8/7, ML3.6/3, MS3.6/1, Error ellipse: s-maj=32.5km s-min=23.6km az=37.0*

*NEIC **04** 20:52:04.8±1.1, 6°.87S±0°.08×81°.35W±0°.09, h10^{km}±2^{km}, mb4.3/13, Error ellipse: s-maj=15.9km s-min=13.0km az=235.0*

ISC 04 20:52:06.0±0.7**, 6°.82S**±0°.08×**81°.36W**±0°.07**, h25**^{km}**, n38, σ1^{s}.22**/35**, mb4.1**/8**, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCRA	Macar, Loja	2.81	30	Pn	Pn	20 52 50.1	+0.7
ATAH	Atahualpa	2.96	96	Pn	Pn	20 52 54.5	+2.7
	14nm,0.3s,baz=355,slow=6.0,SNR=80						
ATAH				Sn	Sb	20 53 34.1	-0.2
	14nm,0.3s,baz=296,slow=20,SNR=6.1						
	29nm,0.3s						
CHSH	Refugio Sur-Vo	5.85	25		Pn	20 53 32.1	+0.4
PORT	Chimborazo Vol	5.92	26		Pn	20 53 33.4	+0.7
SLOR	San Lorenzo -	6.69	25		Pn	20 53 44.9	+1.7
PULU	Pululahua	7.37	23		Pn	20 53 53.9	+1.4
OTAV	Otavalo	7.59	23		Pn	20 53 56.4	+0.8
IMBA	Imbabura, San	7.72	24	Pn	Pn	20 53 57.9	+0.5
TULM	Tulcn-Chalpat	8.29	26	Pn	Pn	20 54 06.0	+0.8
CZSB	Cruzeiro do Su	8.63	97	Pn	Pn	20 54 07.7	-1.8
PAYG	Puerto Ayora	10.79	304	Pn	Pn	20 54 39.6	+0.5
RUSC	La Rusia	15.09	33	Pn	Pn	20 55 38.2	0.0
RUSC				IAmb	IAmb	20 55 47.2	
	comp=Z,8.6nm,1.1s						
LPAZ	La Paz	16.00	127	Pn	P	20 55 52.4	-1.2
	comp=Z,0.2nm,0.3s,baz=322,slow=13,SNR=8.0						
	comp=Z,2.6nm,0.7s						
LPAZ	La Paz	16.00	127	Pn	Pn	20 55 49.6	-0.6
PB16	IPOC Station P	16.26	136	Pn	Pn	20 55 53.1	-0.3
SAML	Samuel	18.13	98		Pn	20 56 14.2	-2.1
SAML				IAmb	IAmb	20 56 18.8	
	comp=Z,12nm,1.3s						
SDV	Santo Domingo	18.92	35	P	Pn	20 56 27.6	+1.6
	comp=Z,0.3nm,0.3s,baz=271,slow=17,SNR=4.1						
	comp=Z,3.3nm,0.8s						
BAUV	El Baul	20.53	40		P	20 56 43.5	+0.7
MACA	Manacapuru-AM	20.91	81	P	P	20 56 46.4	-0.5
VILB	Vilhena	21.71	108		P	20 56 55.8	+0.3
VILB				IAmb	IAmb	20 56 59.1	
	comp=Z,31nm,0.9s						
SIV	San Ignacio	21.86	116	P	P	20 56 58.9	+1.8
	comp=Z,2.3nm,0.7s,baz=292,slow=8.8,SNR=8.7						
	comp=Z,2.3nm,0.7s						
BOAV	Boa Vista	22.73	67	P	P	20 57 06.2	-0.2
BOAV				IAmb	IAmb	20 57 10.8	
	comp=Z,12nm,1.1s						
BIRV	Birongo	22.83	41	P	P	20 57 06.3	-1.1
BIRV				IAmb	IAmb	20 57 10.7	
	comp=Z,31nm,1.1s						
PTLB	Pontes e Lacer	23.41	113	P	P	20 57 14.0	+0.6
PTLB				IAmb	IAmb	20 57 16.8	
	comp=Z,3.8nm,0.8s						
H03N2	Juan Fernandez	26.58	175	T	T	21 25 26.6	
	baz=356,slow=75,SNR=18						
H03N1	Juan Fernandez	26.59	175	T	T	21 25 22.6	
	baz=356,slow=75,SNR=30						
H03N3	Juan Fernandez	26.60	175	T	T	21 25 39.8	
	baz=356,slow=75,SNR=23						
BO04	La Punta	28.81	161	P	P	20 58 03.6	+1.3
RPN	Rapa Nui	33.37	229	LR	LR	21 08 01.2	
	comp=Z,94nm,18.0s,baz=1.0,slow=29						
PLCA	Paso Flores	35.12	166	P	P	20 58 57.3	-0.3
	comp=Z,2.7nm,1.1s,baz=340,slow=8.8,SNR=3.3						
	comp=Z,2.7nm,1.1s						
PLCA	Paso Flores	35.12	166	P	P	20 58 57.3	-0.3
PLCA				IAmb	IAmb	20 58 58.9	
	comp=Z,4.9nm,1.1s						
TXAR	Lajitas Array	41.87	330	P	P	20 59 54.5	+0.1
	comp=Z,0.3nm,0.8s,baz=131,slow=9.7,SNR=1.8						
	comp=Z,0.3nm,0.8s						
QSPA	South Pole Qui	83.27	180	P	P	21 04 30.8	+0.4
TORD	Torodi Ar. Bea	84.82	76	P	P	21 04 40.8	+1.6
	comp=Z,0.6nm,0.9s,baz=270,slow=4.8,SNR=2.2						
	comp=Z,0.6nm,0.9s						
ASAR	Alice Springs	134.13	228	PKP	PKPdf	21 11 21.8	-0.6
	comp=Z,0.3nm,0.6s,baz=121,slow=2.1,SNR=5.7						
WRA	Warramunga Arr	135.94	232	PKP	PKPdf	21 11 25.3	-0.5
	comp=Z,0.3nm,0.5s,baz=117,slow=2.2,SNR=5.3						
KSH	Kashi	141.59	29	PKP	PKPdf	21 11 32.7	-3.1
PZH	PanZhiHua	160.20	352	PKP	PKPdf	21 12 03.8	-0.5

IDC 04 20:52:30.2±2.4**, 1°.17N**×**126°.37E, h0**^{km}**, mb3.0**/3**, mbtmp3.1**/3**, Error ellipse: s-maj=222.5km s-min=27.7km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.39	160	P	P	20 57 29.7	-0.7
	0.3nm,0.5s,baz=339,slow=11,SNR=3.1						
	0.3nm,0.5s						
ASAR	Alice Springs	25.76	164	P	P	20 58 03.3	+0.5
	0.1nm,0.3s,baz=351,slow=15,SNR=5.9						
	0.1nm,0.3s						
MKAR	Makanchi Array	59.45	326	P	P	21 02 34.8	-0.1
	0.1nm,0.3s,baz=131,slow=7.2,SNR=4.2						
	0.1nm,0.3s						

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*IDC **04** 21:11:33.7±1.4, 17°.93N×147°.56E, h0^{km}, mb3.5/8, mbtmp3.6/9, ML4.2/1, MS3.0/1, Error ellipse: s-maj=43.2km s-min=18.6km az=93.0*

*NEIC **04** 21:11:36.9±1.2, 17°.98N±0°.06×147°.4E±0°.2, h10^{km}±2^{km}, mb4.0/8, Error ellipse: s-maj=19.2km s-min=9.2km az=94.0*

ISC 04 21:11:41.4±1.0**, 17°.90N**±0°.09×**147°.4E**±0°.2**, h53**^{km}**, n24, σ0^{s}.68**/25**, mb3.7**/10**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.91	210	Pn	Pn	21 12 51.8	-0.7
	8.9nm,0.3s,baz=180,slow=20,SNR=7.8						
GUMO				Sn	Sn	21 13 48.7	+0.6
	8.7nm,0.3s,baz=358,slow=14,SNR=1.8						
	30nm,0.3s						
GUMO	Guam	4.91	210	Pn	Pn	21 12 51.7	-0.9
GUMO				Sn	Sn	21 13 48.0	-0.1
JGF	Kuroka	19.75	335	P	P	21 16 06.4	-0.5
MJAR	Matsushiro Arr	20.26	338	P	P	21 16 11.6	-0.8
	0.4nm,0.5s,baz=166,slow=10,SNR=2.2						
	0.4nm,0.5s						
MAJO	Matsushiro	20.26	338		P	21 16 12.6	+0.1
DAV	Davao City (W)	23.80	246	LR	LR	21 27 18.1	
	comp=Z,30nm,18.6s,baz=320,slow=39						
KSRS	Korea Array	25.90	323	P	P	21 17 08.6	+0.2
	1.3nm,0.7s,baz=149,slow=7.7,SNR=5.1						
	1.3nm,0.7s						
WB0	Warramunga Arr	39.53	199	P	P	21 19 08.2	+0.9
WB0				IAmb	IAmb	21 19 16.7	
	comp=Z,5.1nm,1.1s						
WRA	Warramunga Arr	39.71	199	P	P	21 19 08.5	-0.3
	comp=Z,1.1nm,0.9s,baz=26,slow=9.6,SNR=4.7						
	comp=Z,1.1nm,0.9s						
WRA	Warramunga Arr	39.71	199	P	P	21 19 09.9	+1.0
ASAR	Alice Springs	43.35	198	P	P	21 19 38.5	0.0
	comp=Z,0.3nm,0.7s,baz=20,slow=8.9,SNR=2.2						
	comp=Z,0.3nm,0.7s						
SONM	Songino Array	44.75	321	P	P	21 19 49.7	0.0
	comp=Z,0.4nm,0.6s,baz=133,slow=7.5,SNR=4.8						
	comp=Z,0.4nm,0.6s						
SONM	Songino Array	44.75	321	P	P	21 19 49.7	0.0
SONM				IAmb	IAmb	21 20 01.0	
	comp=Z,3.4nm,1.4s						
ZALV	Zalesovo Beam	59.61	323	P	P	21 21 39.5	-0.2
	comp=Z,1.0nm,0.6s,baz=108,slow=8.0,SNR=4.8						
	comp=Z,1.0nm,0.6s						
MK31	Makanchi Array	60.15	314	P	P	21 21 43.9	+0.3
MK31				IAmb	IAmb	21 22 11.0	
	comp=Z,2.0nm,1.4s						
MKAR	Makanchi Array	60.15	314	P	P	21 21 43.9	+0.2
	comp=Z,0.3nm,0.6s,baz=97,slow=8.2,SNR=4.4						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	60.15	314	P	P	21 21 43.4	-0.3
BMAR	Burnt Mountain	65.22	23	P	P	21 22 17.1	+0.1
KKAR	Karatay Array	68.49	310	P	P	21 22 38.7	+0.4
ABKAR	Akbulak array	75.00	317	P	P	21 23 16.2	-1.0
ABKAR	Akbulak array	75.00	317	P	P	21 23 16.6	-0.6
ABKAR				IAmb	IAmb	21 23 39.9	
	comp=Z,1.2nm,0.9s						
YKA	Yellowknife Ar	77.95	28	P	P	21 23 33.0	-0.6
	comp=Z,0.3nm,0.4s,baz=283,slow=5.6,SNR=5.8						
	comp=Z,0.3nm,0.4s						
FIA1	FINESS Array S	88.27	336	P	P	21 24 28.2	+1.5
FINES	FINESS Array B	88.27	336	P	P	21 24 28.0	+1.2

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*NIC **04** 21:13:25.6±0.0, 37°.10N×30°.49E, h118^{km}±1^{km}, Ml3.5/6*

*ISK **04** 21:13:26.2, 37°.28N×30°.44E, h96^{km}±1^{km}, ML2.8/28*

*GII **04** 21:13:28.2±0.0, 36°.90N×30°.63E, h20^{km}, Mm2.9/3*

ISC 04 21:13:25.1±1.4**, 37°.23N**±0°.04×**30°.47E**±0°.04**, h110**^{km}±9^{km}**, n53, σ1^{s}.20**/70**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KORT	Korkueli	0.24	204	Pg	Pn	21 13 40.7	-0.1
BCK	Bucak	0.25	21	Pg	Pn	21 13 40.5	-0.3
ANTB	Antalya	0.35	156	Pg	Pn	21 13 41.3	+0.2
SUTC	Sutluce-Ispart	0.49	59	Pg	Pn	21 13 41.4	-0.6
ISP	Isparta	0.60	4	Pg	Pn	21 13 42.5	-0.3
ISP				Sg	Sn	21 13 54.5	-1.5
ELL	Elmali	0.66	224	Pg	Pn	21 13 44.5	+1.3
ELL	Elmali	0.66	224	P	Pn	21 13 44.4	+1.1
ELL				S	Sn	21 13 58.6	+1.8
BASM	Basmaki-Afyon	0.77	334	Pg	Pn	21 13 43.9	-0.2
BASM				Sg	Sn	21 13 57.2	-1.3
APMY	Acipayam-Deniz	0.97	285	Pg	Pn	21 13 46.2	+0.2
CAME	Cameli-Denizli	0.98	254	Pg	Pn	21 13 46.8	+0.6
SEYD	Seydisehir-KON	1.10	80	Pn	Pn	21 13 48.5	+1.0
AKAS	Kas	1.21	215	Pn	Pn	21 13 50.1	+1.4
FETY	Fethiye	1.26	243	Pn	Pn	21 13 49.8	+0.7
KSL	Kastellorizon	1.29	214	P	Pn	21 13 49.9	+0.5
KSL				S	Sn	21 14 08.7	+0.9
KSL				AML	AML	21 14 20.8	
	0.2nm,0.4s						
KSL				AML	AML	21 14 20.8	
	0.2nm,0.4s						
KSL				AML	AML	21 14 21.3	
	0.2nm,0.3s						
KSL				AML	AML	21 14 21.3	
	0.2nm,0.3s						
SHUT	Suhut-Afyon	1.33	3	Pn	Pn	21 13 50.8	+0.8
KHL	Karahalli	1.33	326	Pn	Pn	21 13 50.1	+0.1
DALY	Dalyan (Mula)	1.51	255	Pn	Pn	21 13 52.9	+0.9
HDMB	Hadim	1.63	99	Pn	Pn	21 13 55.7	+2.0
KONT	Konya--Tatoy	1.66	64	Pn	Pn	21 13 55.5	+1.6
YER	Yerkesik	1.75	268	Pn	Pn	21 13 55.9	+0.9
GAZI	Gazipasa	1.78	123	Pn	Pn	21 13 57.2	+1.9
LADK	Ladik-KONYA	1.79	56	Pn	Pn	21 13 56.8	+1.3
TURN	Turunc	1.84	257	Pn	Pn	21 13 57.2	+1.2
KULA	Kula-Manisa	1.93	312	Pn	Pn	21 13 57.7	+0.5
KIZT	Kizilcal	1.99	33	Pn	Pn	21 13 59.1	+1.0
GEDZ	Gediz	2.00	336	Pn	Pn	21 13 59.1	+1.0
ARG	Arkhangelos	2.14	243	P	Pn	21 14 00.6	+0.7
ARG				AML	AML	21 14 48.4	
	0.1nm,0.3s						
ARG				AML	AML	21 14 49.1	
	0.1nm,0.3s						
CIFT	Cifteler, Eski	2.18	12	Pn	Pn	21 14 01.2	+0.7
SIMA	Simav-Kutahya	2.20	328	Pn	Pn	21 14 01.3	+0.6
KRMN	Karaman	2.23	90	Pn	Pn	21 14 03.6	+2.5
CHBY	Cihanbeyli	2.34	54	Pn	Pn	21 14 03.9	+1.3
AKMS	Akamas	2.67	145	P	Pn	21 14 07.2	+0.4
AKMS				AML	AML	21 14 51.2	
	1.0nm,0.4s						
AKMS				AML	AML	21 14 53.7	
	0.6nm,0.6s						
ALFC	Alefka	2.69	140	P	Pn	21 14 06.9	-0.1
ALFC				AML	AML	21 14 50.0	
	0.5nm,0.3s						
ALFC				AML	AML	21 14 51.9	
	0.4nm,0.4s						
NATA	Nata	2.98	145	P	Pn	21 14 11.3	+0.5
TROD	Troodos	2.99	139	P	Pn	21 14 11.0	-0.1
TROD				S	Sn	21 14 46.4	-0.2
TROD				AML	AML	21 14 58.3	
	0.2nm,0.5s						
TROD				AML	AML	21 14 58.3	
	0.2nm,0.5s						
TROD				AML	AML	21 15 04.5	
	0.2nm,0.5s						
TROD				AML	AML	21 15 04.5	
	0.2nm,0.5s						
SZAC	Souni	3.15	141	P	Pn	21 14 13.4	+0.4
SZAC				S	Sn	21 14 50.3	+0.3
SZAC				AML	AML	21 14 57.1	
	0.3nm,0.5s						
SZAC				AML	AML	21 14 57.1	
	0.3nm,0.5s						
SZAC				AML	AML	21 14 59.2	
	0.2nm,0.3s						
SZAC				AML	AML	21 14 59.2	
	0.2nm,0.3s						
ATHAL	Athalassa	3.15	130	S	Sn	21 14 52.2	+2.1
CSS	Mathiatis	3.23	133	P	Pn	21 14 14.7	+0.5
CSS				S	Sn	21 14 53.2	+1.1
ASGA	Asgata	3.31	136	P	Pn	21 14 15.8	+0.5
ASGA				S	Sn	21 14 54.9	+0.9
MVOU	Mavrovouni	3.38	130	P	Pn	21 14 16.3	+0.2
MVOU				S	Sn	21 14 56.1	+0.7
OSC1	CSNet OBS 1	3.77	170	P	Pn	21 14 21.8	+0.3
HNTI	Hanita	5.65	136	Pn	Pn	21 14 47.1	+0.4
HNTI				Sn	Sn	21 15 48.8	-1.5
MMA0B	Mount Meron ar	5.83	135	Pn	Pn	21 14 49.8	+0.6
GEM	Giv'at Ha'Em	5.84	132	Pn	Pn	21 14 49.6	+0.3
GEM				Sn	Sn	21 15 52.1	-2.8
NATI	Neve Ativ	5.85	131	Pn	Pn	21 14 49.8	+0.5
NATI				Sn	Sn	21 15 53.1	-1.9
OFRI	`Ofer	5.90	140	Pn	Pn	21 14 49.9	-0.3
MMLI	Mount Malkishu	6.27	138	Pn	Pn	21 14 55.8	+0.6
MMLI				Sn	Sn	21 16 02.9	-2.6
HMDT	Nahal Hemdat	6.47	139	Pn	Pn	21 14 58.7	+0.8
HMDT				Sn	Sn	21 16 08.6	-1.7
DSI	Dead Sea	6.95	143	Pn	Pn	21 15 04.7	+0.4
DSI				Sn	Sn	21 16 19.6	-2.2
KZIT	Kziot	7.09	152	Pn	Pn	21 15 06.6	+0.3
KZIT				Sn	Sn	21 16 22.4	-3.0
PRNI	Paran	7.82	150	Pn	Pn	21 15 15.8	-0.4
KRMI	Paran Flat	7.92	152	Pn	Pn	21 15 18.5	+0.9
HRFI	Mount Harif	8.12	151	Pn	Pn	21 15 20.8	+0.6
HRFI				Sn	Sn	21 16 48.6	-1.7

IDC 04 21:24:04.5±2.4**, 6°.74S**×**129°.33E, h0**^{km}**, mb3.0**/1**, mbtmp3.4**/3**, ML3.7**/2**, Error ellipse: s-maj=155.8km s-min=33.1km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.99	160	Pn	Pn	21 27 24.1	-0.2
	0.5nm,0.3s,baz=339,slow=10,SNR=20						
WRA				Sn	Sn	21 29 51.0	-9.4

	0.4nm,0.3s,baz=352,slow=19,SNR=8.1						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**17.39**	**166**	P	Pn	21 28 09.0	+0.2
	0.2nm,0.3s,baz=342,slow=9.4,SNR=16						
ASAR				S	Sn	21 31 16.8	-6.4
	0.2nm,0.6s,baz=342,slow=27,SNR=1.8						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**67.65**	**327**	P	P	21 35 03.4	0.0
	0.1nm,0.5s,baz=121,slow=6.9,SNR=1.4						
	0.1nm,0.5s						

IDC 04 21:29:45.7±2.3,**2°.70N×128°.33E,h0^{km},mb3.3**/3,**mbtmp3.3**/3,**Error ellipse: s-maj=153.0km s-min=26.4km az=68.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.26**	**166**	P	P	21 34 54.9	-0.1
	0.8nm,0.8s,baz=345,slow=11,SNR=7.3						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**26.76**	**169**	P	P	21 35 27.1	-0.3
	0.2nm,0.6s,baz=355,slow=9.2,SNR=4.7						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**59.31**	**325**	P	P	21 39 49.6	+0.2
	0.2nm,0.4s,baz=113,slow=7.9,SNR=5.4						
	0.2nm,0.4s						

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*IDC **04** 21:41:29.7±5.7,37°.58S×74°.62W,h0^{km},mb3.6/2,mbtmp3.5/3,ML3.5/1,MS2.3/1,Error ellipse: s-maj=136.9km s-min=22.7km az=62.0*

*GUC **04** 21:41:31.9±0.3,37°.31S×74°.42W,h24^{km}±7^{km},ML3.6*

*NEIC **04** 21:41:32.7±1.4,37°.37S±0°.05×74°.2W±0°.1,h23^{km}±4^{km},mb4.1/5,ML3.5(GUC),Error ellipse: s-maj=14.1km s-min=7.3km az=99.0*

ISC 04 21:41:34.2±0.8,**37°.35S**±0°.04×**74°.30W**±0°.06,**h35^{km},n59,σ1^{s}.63**/70,**mb3.8**/3,**2C,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BI05	**Punta Hualpn**	**1.07**	**56**		**Pn**	**21 41 51.1**	**-1.7**
BI05	**Punta Hualpn**	**1.07**	**56**	*e*P	**Pn**	**21 41 51.0**	**-1.7**
BI05				IAML		21 42 10.7	
	comp=E,3µm,0.2s						
CCSP	**San Pedro de C**	**1.08**	**62**	*e*P	**Pn**	**21 41 51.3**	**-1.5**
BI04	**Isla Mocha**	**1.11**	**163**	*e*P	**Pn**	**21 41 51.9**	**-1.3**
LC02	**Puerto Saavedr**	**1.61**	**154**		**Pn**	**21 41 58.4**	**-1.7**
LC02				Sn	**Sn**	**21 42 18.1**	**-1.5**
LC02	**Puerto Saavedr**	**1.61**	**154**	*e*P	**Pn**	**21 42 00.4**	**+0.3**
LR04	**Corral**	**2.62**	**165**		**Pn**	**21 42 12.5**	**-1.4**
LR04	**Corral**	**2.62**	**165**	⇑*e*P	**Pn**	**21 42 13.2**	**-0.7**
LR04				*i* S	**Sn**	**21 42 40.7**	**-3.7**
LR03	**Panguipulli**	**2.75**	**147**		**Pn**	**21 42 13.6**	**-2.2**
GO05	**Huala**	**3.02**	**40**		**Pn**	**21 42 19.1**	**-0.5**
GO06	**Curarrehue**	**3.15**	**136**		**Pn**	**21 42 20.6**	**-0.8**
LR05	**Currie**	**3.39**	**149**	*e*P	**Pn**	**21 42 25.2**	**+0.6**
LR05				*i* S	**Sn**	**21 43 02.7**	**-0.8**
BO02	**Sierra Bellavi**	**3.83**	**49**		**Pn**	**21 42 29.6**	**-1.1**
LL04	**Puerto Octay**	**3.85**	**158**		**Pn**	**21 42 28.7**	**-2.1**
BO01	**Tunca**	**3.94**	**42**		**Pn**	**21 42 32.0**	**-0.1**
BO01	**Tunca**	**3.94**	**42**	*e*P	**Pn**	**21 42 32.1**	**-0.1**
LL03	**Petrohue**	**4.06**	**159**	Pn	**Pn**	**21 42 33.0**	**-0.8**
LL05	**Los Muermos**	**4.10**	**171**		**Pn**	**21 42 33.3**	**-1.0**
MT01	**Popeta**	**4.27**	**36**		**Pn**	**21 42 35.4**	**-1.4**
VA05	**Santo Domingo**	**4.29**	**32**	Pn	**Pn**	**21 42 35.5**	**-1.4**
PLCA	**Paso Flores**	**4.46**	**140**	Pn	**Pn**	**21 42 40.0**	**+0.6**
	comp=E,0.5nm,0.3s,baz=310,slow=11,SNR=14						
PLCA				Sn	**Sn**	**21 43 33.2**	**+3.1**
	comp=E,1.0nm,0.3s,baz=1.5,slow=9.7,SNR=3.3						
PLCA				Lg	Lg	21 43 50.4	
	comp=E,0.9nm,0.3s,baz=205,slow=23,SNR=3.8						
PLCA				LR	LR	21 44 06.3	
	comp=E,32nm,20.2s,baz=326,slow=35						
	comp=E,2.1nm,0.4s						
PLCA	**Paso Flores**	**4.46**	**140**		**Pn**	**21 42 39.1**	**-0.3**
MT09	**Talagante**	**4.47**	**38**		**Pn**	**21 42 39.0**	**-0.6**
BO04	**La Punta**	**4.50**	**43**	Pn	**Pn**	**21 42 39.7**	**-0.2**
LMEL	**Las Melosas**	**4.83**	**45**		**Pn**	**21 42 43.7**	**-0.9**
MT02	**Curacav**	**4.83**	**33**		**Pn**	**21 42 43.5**	**-0.9**
MT02	**Curacav**	**4.83**	**33**	*e*P	**Pn**	**21 42 43.4**	**-1.1**
MT13	**San Alfonso**	**4.86**	**43**	Pn	**Pn**	**21 42 44.3**	**-0.7**
LL06	**Loncomilla**	**4.88**	**174**	Pn	**Pn**	**21 42 44.7**	**-0.4**
MT05	**Renca**	**4.91**	**37**	Pn	**Pn**	**21 42 44.6**	**-0.9**
MT03	**Universidad Ad**	**4.94**	**40**	Pn	**Pn**	**21 42 44.8**	**-1.2**
ROC1	**El Roble**	**5.13**	**33**		**Pn**	**21 42 48.0**	**-0.7**
H03S1	**Juan Fernandez**	**5.13**	**312**	Pn	**Pn**	**21 42 51.7**	**+3.4**
H03S1				Sn	**Sn**	**21 43 42.4**	**-3.7**
H03S1				T	T	21 48 13.3	
	baz=131,slow=73,SNR=185						
PEL	**Peldehue**	**5.13**	**36**		**Pn**	**21 42 48.2**	**-0.4**
H03S3	**Juan Fernandez**	**5.15**	**312**	Pn	**Pn**	**21 42 51.0**	**+2.5**
H03S3				Sn	**Sn**	**21 43 44.1**	**-2.4**
H03S3				T	T	21 48 14.2	
	baz=131,slow=73,SNR=141						
H03S2	**Juan Fernandez**	**5.15**	**312**	Pn	**Pn**	**21 42 51.3**	**+2.8**
H03S2				Sn	**Sn**	**21 43 42.3**	**-4.2**
H03S2				T	T	21 48 15.0	
	baz=131,slow=73,SNR=205						
FCH	**Farellones**	**5.18**	**40**	⇑*e*P	**Pn**	**21 42 48.5**	**-1.0**
FCH				*i* S	**Sn**	**21 43 48.0**	**-0.2**
MT08	**Bocatoma Ro**	**5.24**	**43**	Pn	**Pn**	**21 42 50.2**	**0.0**
VA06	**Catapilco**	**5.38**	**28**	Pn	**Pn**	**21 42 50.7**	**-1.2**
H03N3	**Juan Fernandez**	**5.42**	**314**	Pn	**Pn**	**21 42 54.8**	**+2.6**
H03N3				Sn	**Sn**	**21 43 52.9**	**-0.4**
	baz=30,slow=80						
H03N1	**Juan Fernandez**	**5.42**	**315**	Pn	**Pn**	**21 42 53.6**	**+1.3**
H03N1				Sn	**Sn**	**21 43 51.7**	**-1.6**
	baz=30,slow=80						
H03N2	**Juan Fernandez**	**5.43**	**315**	Pn	**Pn**	**21 42 54.3**	**+1.9**
H03N2				Sn	**Sn**	**21 43 53.6**	**0.0**
	baz=30,slow=80						
LL07	**Hotel Espejo d**	**5.51**	**174**	Pn	**Pn**	**21 42 52.8**	**-0.9**
VA03	**San Esteban**	**5.51**	**35**		**Pn**	**21 42 53.3**	**-0.6**
CO02	**Combarbal**	**6.71**	**25**		**Pn**	**21 43 09.2**	**-1.2**
CO06	**Fray Jorge**	**7.02**	**19**	Pn	**Pn**	**21 43 12.5**	**-2.0**
GO04	**Tololo Observa**	**7.73**	**23**	Pn	**Pn**	**21 43 23.1**	**-1.3**
CO01	**Juntas del Tor**	**8.14**	**27**	Pn	**Pn**	**21 43 29.8**	**-0.4**
LCO	**Las Campanas**	**8.85**	**21**	Pn	**Pn**	**21 43 38.3**	**-1.4**
AC05	**El Transito**	**9.14**	**23**	Pn	**Pn**	**21 43 42.5**	**-1.1**
TRQA	**Tornquist**	**9.79**	**98**	Pn	**Pn**	**21 43 52.2**	**-0.3**
AC02	**Maricunga**	**11.36**	**24**	Pn	**Pn**	**21 44 12.6**	**-1.9**
EFI	**East Falkland**	**18.35**	**146**	P	**P**	**21 45 45.4**	**-0.2**
EFI				IAmb	IAmb	21 46 06.4	
	comp=Z,52nm,1.4s						
MNMC	**Minye Minye**	**18.61**	**14**	P	**P**	**21 45 49.0**	**+0.1**
ITAB	**Concordia**	**21.24**	**68**	P	**P**	**21 46 17.1**	**0.0**
LPAZ	**La Paz**	**21.68**	**16**	P	**P**	**21 46 26.2**	**+3.7**
	comp=Z,1.8nm,1.1s,baz=202,slow=11,SNR=2.5						
	comp=Z,1.8nm,1.1s						
LPAZ	**La Paz**	**21.68**	**16**	P	**P**	**21 46 22.4**	**-0.1**
LPAZ				IAmb	IAmb	21 46 29.5	
	comp=Z,6.9nm,1.4s						
QSPA	**South Pole Qui**	**52.89**	**180**	P	**P**	**21 50 46.6**	**+0.3**
QSPA				IAmb	IAmb	21 51 10.2	
	comp=Z,1.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**87.06**	**71**	P	**P**	**21 54 18.5**	**+2.1**
	comp=Z,0.3nm,0.5s,baz=232,slow=4.6,SNR=4.8						
	comp=Z,0.3nm,0.5s						

IDC 04 21:53:00.6±1.9,**0°.90N×126°.27E,h0^{km},mb3.5**/3,**mbtmp3.5**/3,**Error ellipse: s-maj=175.0km s-min=24.5km az=65.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.17**	**160**	P	P	21 57 57.9	-0.5
	1.2nm,0.5s,baz=338,slow=11,SNR=7.5						
	1.2nm,0.5s						
ASAR	**Alice Springs**	**25.52**	**164**	P	P	21 58 31.3	+0.3
	0.4nm,0.6s,baz=342,slow=11,SNR=8.6						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**59.63**	**326**	P	P	22 03 06.4	-0.1
	0.4nm,0.5s,baz=117,slow=8.1,SNR=9.5						
	0.4nm,0.5s						

IDC 04 22:02:50.7±2.6,**4°.42S×135°.59E,h0^{km},mb3.6**/1,**mbtmp3.7**/3,**ML3.7**/2,**MS3.1**/1,**Error ellipse: s-maj=106.1km s-min=30.3km az=80.0,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**12.50**	**114**	LR	LR	22 11 23.7	
	comp=Z,74nm,18.1s,baz=353,slow=41						
WRA	**Warramunga Arr**	**15.47**	**184**	Pn	Pn	22 06 28.5	-2.0
	0.3nm,0.3s,baz=6.1,slow=13,SNR=10						
WRA				Sn	Sn	22 09 14.9	-7.8
	0.1nm,0.3s,baz=6.3,slow=24,SNR=2.0						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**19.20**	**185**	P	Pn	22 07 17.2	0.0
	0.4nm,0.3s,baz=8.6,slow=11,SNR=22						
	1.0nm,0.5s						
MKAR	**Makanchi Array**	**69.28**	**324**	P	P	22 13 59.9	0.0
	0.3nm,0.4s,baz=112,slow=7.8,SNR=9.7						
	0.3nm,0.4s						

MAN 04 22:08:04.2,15°.24N×122°.84E,h20^{km},mb4.2,ML3.0,MS2.7,8C-3D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCNP	**Jose Panganiba**	**0.95**	**188**	⇑*e*P	Pb	22 08 21.1	-1.0
JCNP				*e*S	Sb	22 08 33.6	-0.6
GQP	**Guinayangan**	**1.38**	**196**	⇓*e*P	Pn	22 08 28.2	-0.1
GQP				*e*S	Sn	22 08 46.2	+0.2
LQP	**Lukban**	**1.68**	**229**	⇑*e*P	Pn	22 08 33.6	+0.9
LQP				*e*S	Sn	22 08 51.9	-2.0
SCSP	**San Jose Seism**	**1.71**	**157**	⇑*e*P	Pb	22 08 35.5	+0.6
SCSP				*e*S	Sb	22 08 59.3	+3.3
CAUP	**Cauayan**	**1.96**	**330**	⇓*e*P	Pn	22 08 36.0	-0.3
CAUP				*e*S	Sn	22 09 00.6	+0.3
BOAC	**Boac**	**2.01**	**209**	⇑*e*P	Pb	22 08 39.0	-1.2
BOAC				*e*S	Sb	22 09 04.4	-0.4
PVCP	**Virac**	**2.07**	**142**	⇑*e*P	Pb	22 08 41.7	+0.6
PVCP				*e*S	Sb	22 09 12.6	+6.2
TGY	**Tagaytay City**	**2.16**	**239**	⇓*e*P	Pn	22 08 26.8	-12
SAMP	**Sagada Mountai**	**2.61**	**315**	⇑*e*P	Pn	22 08 45.8	+0.5
SAMP				*e*S	Sn	22 09 17.0	+0.5
OTRP	**Odiongan**	**2.97**	**196**	⇑*e*P	Pn	22 08 52.0	+1.8
OTRP				*e*S	Sb	22 09 35.2	+2.9
BIPH	**Bislig**	**7.81**	**153**	⇑*i*P	Pn	22 10 02.3	+5.5
BIPH				*i* S	Pb	22 10 15.7	-3.4

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*IDC **04** 22:10:43.3±26.0,22°.05S×173°.32W,h0^{km},mb4.7/4,mbtmp4.7/4,MS3.4/1,Error ellipse: s-maj=481.1km s-min=147.2km az=76.0*

*NEIC **04** 22:12:20.5±1.3,23°.6S±0°.2×179°.67W±0°.05,h540^{km}±16^{km},mb4.3/21,Error ellipse: s-maj=24.9km s-min=5.7km az=189.0*

ISC 04 22:12:20.2±0.9,**23°.6S**±0°.2×**179°.7W**±0°.1,**h536^{km},n30,σ0^{s}.81**/29,**mb4.2**/14,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**10.17**	**66**	P	**P**	**22 14 40.0**	**+0.2**
PINNC	**Pines Island,**	**11.85**	**272**	P	**P**	**22 14 58.6**	**+1.4**
DZM	**Mont Dzumac**	**12.85**	**274**	P	**P**	**22 15 07.8**	**+0.2**
BKZ	**Black Stump Fm**	**15.85**	**191**	P	**P**	**22 15 36.5**	**-2.0**
BKZ				IAmb	IAmb	22 15 42.2	
	comp=Z,28nm,1.5s						
MLZ	**Mavora Lakes**	**23.87**	**202**	P	**P**	**22 16 52.7**	**+1.3**
MLZ				IAmb	IAmb	22 17 09.3	
	comp=Z,31nm,1.2s						
HNR	**Honiara**	**24.00**	**303**	P	**P**	**22 16 52.4**	**-0.6**
ARMA	**Armidale**	**26.37**	**249**	P	**P**	**22 17 14.1**	**+0.2**
ARMA				IAmb	IAmb	22 17 14.6	
	comp=Z,12nm,1.2s						
EIDS	**Eidsvold**	**26.61**	**260**	P	**P**	**22 17 16.8**	**+0.9**
EIDS				IAmb	IAmb	22 17 32.3	
	comp=Z,6.8nm,1.3s						
CAN	**Canberra**	**29.52**	**240**	P	**P**	**22 17 41.9**	**+0.6**
CTA	**Charters Tower**	**31.73**	**270**	P	**P**	**22 18 01.1**	**+0.6**
	comp=Z,11nm,0.4s,baz=97,slow=12,SNR=15						
	comp=Z,11nm,0.4s						
CTAO	**Charters Tower**	**31.73**	**270**	P	**P**	**22 18 00.6**	**+0.1**
TOO	**Toolangi**	**32.83**	**237**	P	**P**	**22 18 09.9**	**+0.4**
TOO				IAmb	IAmb	22 18 13.2	
	comp=Z,15nm,1.5s						
STKA	**Stephens Creek**	**35.07**	**248**	P	**P**	**22 18 29.4**	**+0.9**
	comp=Z,2.5nm,0.4s,baz=111,slow=8.6,SNR=5.7						
	comp=Z,2.5nm,0.4s						
STKA	**Stephens Creek**	**35.07**	**248**	P	**P**	**22 18 28.9**	**+0.4**
COEN	**Coen**	**36.32**	**279**	P	**P**	**22 18 39.2**	**+0.1**
COEN				IAmb	IAmb	22 18 42.0	
	comp=Z,7.6nm,1.2s						
BBOO	**Buckleboo**	**39.80**	**247**	P	**P**	**22 19 06.7**	**-0.4**
BBOO				IAmb	IAmb	22 19 09.2	
	comp=Z,9.2nm,1.1s						
AS31	**Alice Springs**	**42.34**	**260**	P	**P**	**22 19 27.2**	**-0.2**
ASAR	**Alice Springs**	**42.34**	**260**	P	**P**	**22 19 27.4**	**0.0**
	comp=Z,3.2nm,0.4s,baz=95,slow=7.3,SNR=78						
	comp=Z,3.2nm,0.4s						
ASAR	**Alice Springs**	**42.34**	**260**	P	**P**	**22 19 26.8**	**-0.6**
WR0	**Warramunga Arr**	**42.50**	**266**	P	**P**	**22 19 27.6**	**-1.1**
WR0				IAmb	IAmb	22 19 28.4	
	comp=Z,3.5nm,0.6s						
WRA	**Warramunga Arr**	**42.68**	**266**	P	**P**	**22 19 29.6**	**-0.6**
	comp=Z,4.8nm,0.5s,baz=102,slow=8.3,SNR=17						
	comp=Z,4.8nm,0.5s						
WRA	**Warramunga Arr**	**42.68**	**266**	P	**P**	**22 19 29.6**	**-0.6**
FORT	**Forrest**	**46.66**	**249**	P	**P**	**22 19 59.8**	**-0.8**
KNRA	**Kununurra**	**48.95**	**269**	P	**P**	**22 20 17.4**	**-0.5**
GUMO	**Guam**	**50.65**	**313**	LR	LR	22 42 21.0	
	comp=Z,29nm,18.0s,baz=106,slow=35						
FITZ	**Fitzroy Crossi**	**51.11**	**265**	P	**P**	**22 20 33.2**	**-0.5**
PSA00	**Pilbara Seismi**	**55.47**	**259**	P	**P**	**22 21 03.4**	**-1.2**
MBWA	**Marble Bar**	**55.68**	**260**	P	**P**	**22 21 05.3**	**-0.8**
MBWA				IAmb	IAmb	22 21 14.0	
	comp=Z,12nm,1.2s						
MORW	**Morawa**	**57.22**	**250**	P	**P**	**22 21 16.2**	**-0.4**
MORW				IAmb	IAmb	22 21 34.4	
	comp=Z,20nm,1.4s						
QSPA	**South Pole Qui**	**66.49**	**180**	P	**P**	**22 22 17.1**	**+0.6**
QSPA				IAmb	IAmb	22 22 25.1	
	comp=Z,5.8nm,1.4s						

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*IDC **04** 22:32:40.0±4.5,36°.31N×71°.42E,h162^{km}±31^{km},mb3.2/4,mbtmp3.8/10,Error ellipse: s-maj=54.1km s-min=22.1km az=148.0*

*SOME **04** 22:32:43.0,38°.02N×72°.23E,h10^{km}*

*NNC **04** 22:32:50.0±1.5,37°.20N×71°.28E,h194^{km}±20^{km},mb2.8,mpv3.8,Error ellipse: s-maj=15.2km s-min=9.5km az=13.0*

ISC 04 22:32:46.6±1.3,**36°.9N**±0°.1×**71°.18E**±0°.08,**h200^{km},n41,σ1^{s}.69**/35,**mb3.3**/4,**2C-5D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**5.28**	**351**	*e*Pg	**Pn**	**22 34 05.3**	**+0.7**
	151nm,0.2s						
IUG				*e*Lg	Lg	22 35 04.9	
	84nm,0.5s						
CHM	**Chimkent**	**5.51**	**348**	*e*Pg	**Pn**	**22 34 11.0**	**+3.5**
	159nm,0.2s						
CHM				*e*Lg	Lg	22 35 14.3	
	324nm,0.5s						
AML	**Almayashu**	**5.54**	**20**	P	**Pn**	**22 34 07.9**	**-0.3**
	SNR=100						
AML	**Almayashu**	**5.54**	**20**	⇑P	**Pn**	**22 34 07.8**	**-0.5**
	1.8nm,0.5s						
AML				⇓S	**Sn**	**22 35 09.7**	**-3.0**
	30nm,0.7s						
UCH	**Uchtor**	**5.88**	**25**	P	**Pn**	**22 34 12.3**	**-0.4**
	SNR=42						
MRKS	**Merke**	**6.01**	**15**	*e*Pg	**Pn**	**22 34 14.0**	**0.0**
	19nm,0.5s						
MRKS				*e*Lg	Lg	22 35 19.8	
	31nm,0.6s						
EKS2	**Erkin-Say**	**6.06**	**18**	P	**Pn**	**22 34 14.9**	**+0.3**
	SNR=14						
KK31	**Karatay Array**	**6.18**	**355**	P	**Pn**	**22 34 16.6**	**+0.4**
	6.9nm,0.3s,baz=172,slow=11,SNR=220						
KK31				⇓S	**Sn**	**22 35 24.9**	**-2.2**
	6.2nm,0.3s,baz=185,slow=24,SNR=6.3						
AAK	**Ala-Archa**	**6.24**	**23**	P	**Pn**	**22 34 16.9**	**-0.2**
	SNR=9.6						
AAK	**Ala-Archa**	**6.24**	**23**	P	**Pn**	**22 34 17.2**	**+0.1**
	9.0nm,0.5s,baz=190,slow=6.0,SNR=78						
AAK				S	**Sn**	**22 35 27.6**	**-1.1**
	5.1nm,0.4s,baz=144,slow=23,SNR=28						
KBK	**Karagaybulak**	**6.41**	**26**	P	**Pn**	**22 34 19.9**	**+0.7**
	SNR=6.8						
CHMS	**Chumysh**	**6.65**	**23**	P	**Pn**	**22 34 21.8**	**-0.3**
	SNR=7.0						
USP	**Ospenovka**	**6.82**	**21**	P	**Pn**	**22 34 24.6**	**+0.3**
	SNR=7.0						
TKM2	**Tokmak 2**	**6.87**	**28**	P	**Pn**	**22 34 25.3**	**0.0**
	SNR=9.7						
TKM2	**Tokmak 2**	**6.87**	**28**	⇑P	**Pn**	**22 34 25.0**	**-0.2**
	5.9nm,0.7s						
TKM2				⇓S	**Sn**	**22 35 41.1**	**-2.5**
	3.8nm,0.6s						
KST	**Kastek**	**7.12**	**30**	*e*Pg	**Pn**	**22 34 30.3**	**+1.9**
	2.2nm,0.5s						
KST				*e*Lg	Lg	22 35 46.8	
	8.7nm,0.7s						
DGS	**Degeres**	**7.21**	**28**	*e*Pg	**Pn**	**22 34 31.1**	**+1.4**
	1.9nm,1.4s						
DGS				*e*Lg	Lg	22 35 48.3	
	4.3nm,0.4s						
MDOK	**Medeo**	**7.67**	**34**	⇓P	**Pn**	**22 34 35.8**	**+0.1**
	2.9nm,0.6s						
GEYT	**Alibeck**	**10.44**	**279**	P	Pn	22 35 09.8	-1.7
	1.0nm,0.5s,baz=80,slow=10,SNR=7.2						
GEYT				S	**Sn**	**22 37 03.4**	**-4.6**
	1.0nm,0.4s,baz=94,slow=15,SNR=2.9						
MK31	**Makanchi Array**	**12.85**	**37**	P	**Pn**	**22 35 42.5**	**+0.4**
	1.4nm,0.8s,baz=207,slow=11,SNR=9.1						
MKAR	**Makanchi Array**	**12.85**	**37**	P	**Pn**	**22 35 42.3**	**+0.2**
	0.4nm,0.6s,baz=205,slow=10,SNR=4.6						
PYUN	**Piuthan**	**13.29**	**128**	*e*P	Pn	22 35 41.3	-6.6
DANN	**Dangsing**	**13.61**	**125**	*e*P	Pn	22 35 46.5	-5.5
	3.0nm,0.2s						
KOLN	**Koldanda**	**13.90**	**128**	*e*P	Pn	22 35 49.7	-5.9
GKN	**Gorkha**	**14.42**	**124**	*e*P	Pn	22 35 56.9	-5.0
	8.3nm,0.3s						
KURBB	**Kurchatov Arra**	**14.66**	**19**	P	**Pn**	**22 36 03.2**	**-1.3**
	0.6nm,0.6s,baz=205,slow=11,SNR=5.6						
AB31	**Akbulak array**	**14.78**	**330**	⇓P	**Pn**	**22 36 05.8**	**-0.1**
	0.4nm,0.3s,baz=140,slow=12,SNR=54						
PKIN	**Phulchoki**	**15.20**	**124**	*e*P	Pn	22 36 07.3	-4.3
	7.7nm,0.4s						
PKI	**Pulchoki**	**15.22**	**124**	*e*P	Pn	22 36 07.4	-4.4
	2.5nm,0.3s						
GUN	**Gumba**	**15.31**	**122**	*e*P	Pn	22 36 08.9	-4.1
	3.5nm,0.3s						
JIRN	**Jiri**	**15.68**	**122**	*e*P	P	22 36 13.8	-3.6
BVA0	**Borovoye Array**	**16.10**	**358**	P	**Pn**	**22 36 22.9**	**+1.0**
	5.4nm,1.3s,baz=161,slow=11,SNR=16						
BVAR	**Borovoye Array**	**16.10**	**358**	P	**Pn**	**22 36 23.5**	**+1.6**
	2.2nm,0.6s,baz=165,slow=12,SNR=19						
RAMN	**Ramite**	**16.42**	**123**	*e*P	P	22 36 21.3	-4.1
	3.2nm,0.4s						
AKTO	**Aktyubinsk**	**16.48**	**329**	P	**Pn**	**22 36 28.3**	**+1.8**
	3.2nm,0.3s,baz=144,slow=6.4,SNR=13						
TAPN	**Taplejung**	**16.93**	**120**	*e*P	**P**	**22 36 28.2**	**-2.8**
	6.8nm,0.5s						
ZALV	**Zalesovo Beam**	**19.46**	**25**	P	**P**	**22 36 58.6**	**+0.7**
	1.5nm,0.4s,baz=216,slow=11,SNR=7.3						
FINES	**FINESS Array B**	**37.21**	**326**	P	**P**	**22 39 40.4**	**+2.2**
	2.7nm,1.0s,baz=120,slow=11,SNR=5.2						
	2.7nm,1.0s						
NOA	**NORSAR Array B**	**44.12**	**323**	P	**P**	**22 40 37.0**	**+2.1**
	0.4nm,0.8s,baz=102,slow=8.1,SNR=1.1						
	0.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**65.88**	**269**	P	P	22 43 09.5	-1.6
	0.6nm,0.5s,baz=46,slow=6.1,SNR=10						
	0.6nm,0.5s						
YKA	**Yellowknife Ar**	**80.81**	**3**	P	**P**	**22 44 39.1**	**+1.6**
	0.1nm,0.4s,baz=357,slow=4.8,SNR=2.6						
	0.1nm,0.4s						

ISK 04 22:40:37.9,39°.52N×26°.13E,h6^{km},ML1.4/9,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GPNR	**Gulpinar-Canak**	**0.06**	**179**	Pg	Pg	22 40 40.1	+0.6
GPNR				Sg	Sg	22 40 41.5	+0.9
BOZC	**Bozcaada**	**0.33**	**349**	Pg	Pg	22 40 45.2	+0.9
BOZC				Sg	Sg	22 40 49.8	+1.1
EZN	**Ezine**	**0.34**	**26**	Pg	Pg	22 40 45.1	+0.5
EZN				Sg	Sg	22 40 50.1	+1.0
SIGR	**SIGRI**	**0.37**	**215**	Pg	Pg	22 40 45.5	+0.4
SIGR				Sg	Sg	22 40 51.2	+1.2
COMU	**Canakkale**	**0.64**	**24**	Pg	Pg	22 40 50.8	+0.6
DKL	**Dikili**	**0.75**	**126**	Pg	Pb	22 40 52.8	-0.5
GELI	**Tayfur-Gelibol**	**0.92**	**17**	Pg	Pb	22 40 55.9	-0.3
GELI				Sg	Sb	22 41 08.9	+0.2
KRBG	**Karabiga-Canak**	**1.25**	**45**	Pn	Pg	22 41 01.4	-0.5
ALN	**Alexandroupoli**	**1.38**	**357**	Pn	Pb	22 41 04.2	+0.1

DDA 04 22:41:27.8±0.0,**39°.54N×26°.10E,h7^{km}**±1^{km},**ML1.1,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.05**	**141**	P	Pg	22 41 29.4	+0.1
KOCA				S	Sg	22 41 31.2	+0.7
BOZC	**Bozcaada**	**0.30**	**353**	P	Pg	22 41 33.8	0.0
BOZC				S	Sg	22 41 38.9	+1.1
BOZC				*i* AML	AML	22 41 39.0	
	comp=N,35nm,0.2s						
BOZC				*i* AML	AML	22 41 39.0	
	comp=E,18nm,0.3s						
BAYC	**CANAKKALE_Bayr**	**0.40**	**60**	P	Pb	22 41 36.5	-0.8
BAYC				S	Sg	22 41 41.6	+0.8

IDC 04 22:50:09.9±4.4,**29°.05S×61°.19E,h0^{km},mb3.6**/4,**mbtmp3.6**/4,**MS3.2**/1,**Error ellipse: s-maj=167.5km s-min=39.5km az=48.0,Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**23.80**	**29**	T	T	23 20 05.9	
	baz=204,slow=76,SNR=5.3						
H08S2	**Diego Garcia H**	**23.81**	**29**	T	T	23 20 06.7	
	baz=204,slow=76,SNR=6.3						
H08S3	**Diego Garcia H**	**23.82**	**29**	T	T	23 20 07.4	
	baz=204,slow=76,SNR=6.8						
MBAR	**Mbarara**	**40.55**	**309**	LR	LR	23 12 00.7	
	comp=Z,34nm,21.1s,baz=170,slow=32						
H01W2	**Cape Leeuwin H**	**44.87**	**112**	T	T	23 46 08.3	
	baz=261,slow=75,SNR=10.0						
H01W3	**Cape Leeuwin H**	**44.87**	**112**	T	T	23 46 02.5	
	baz=261,slow=75,SNR=11						
H01W1	**Cape Leeuwin H**	**44.88**	**112**	T	T	23 46 01.8	
	baz=261,slow=75,SNR=11						
ASAR	**Alice Springs**	**64.45**	**104**	P	P	23 00 48.2	-0.3
	0.2nm,0.6s,baz=244,slow=5.5,SNR=4.8						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**66.27**	**100**	P	P	23 01 00.8	+0.5
	0.5nm,1.1s,baz=244,slow=5.6,SNR=1.7						
	0.5nm,1.1s						
MKAR	**Makanchi Array**	**77.86**	**15**	P	P	23 02 08.8	-0.3
	0.6nm,0.9s,baz=180,slow=3.6,SNR=5.6						
	0.6nm,0.9s						
ZALV	**Zalesovo Beam**	**85.15**	**14**	P	P	23 02 47.8	+0.3
	0.6nm,0.6s,baz=204,slow=3.2,SNR=2.4						
	0.6nm,0.6s						
YKA	**Yellowknife Ar**	**146.43**	**356**	PKPbc	PKPdf	23 09 51.4	+0.6
	0.2nm,0.7s,baz=343,slow=2.9,SNR=5.0						

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*KMA **04** 22:52:04.6±0.0,35°.75N×129°.17E,h16^{km},Error ellipse: s-maj=0.5km s-min=0.4km az=303.0*

*JMA **04** 22:52:04.3±0.1,35°.7N±0°.5×12°9E±°,h3^{km}±1^{km},MV2.6/5,S KOREAN PENINSULA REG*

ISC 04 22:52:04.0±0.9,**35°.74N**±0°.03×**129°.19E**±0°.04,**h10^{km},n29,σ0^{s}.49**/31,**South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSDAG	**Daegu**	**0.24**	**276**	P	**Pg**	**22 52 10.0**	**+1.0**
	SNR=327						
YOCB	**Yeongcheon**	**0.30**	**320**	P	**Pg**	**22 52 11.0**	**+0.8**
	SNR=29						
KSPHA	**Pohang**	**0.47**	**18**	P	**Pg**	**22 52 14.1**	**+0.8**
	SNR=26						
KSDAU	**Deagu-acc**	**0.49**	**287**	P	**Pg**	**22 52 14.1**	**+0.6**
	SNR=27						
KSBUS	**Busan**	**0.50**	**188**	P	**Pg**	**22 52 14.5**	**+0.7**
	SNR=79						
KSCHR	**CHANGNYEONG**	**0.61**	**251**	P	**Pg**	**22 52 16.0**	**+0.3**
	SNR=23						
KSADO	**Andong**	**0.69**	**344**	P	**Pg**	**22 52 17.7**	**+0.2**
	SNR=196						

YODB	Yeongdeok	0.81	12	P	Pg	22 52 20.0	+0.4
	SNR=11						
KSGUM	GUMI	0.88	304	P	Pg	22 52 21.1	+0.1
	SNR=8.8						
YEYB	Yeongyang	0.88	355	P	Pg	22 52 21.2	+0.2
	SNR=28						
ADOA	Andong Acc Bor	0.92	334	P	Pg	22 52 22.0	+0.3
	SNR=14						
KSGIC	Gimchen	0.95	291	P	Pg	22 52 22.1	-0.1
	SNR=24						
KSULJ	Uljin	0.97	10	P	Pg	22 52 22.6	-0.1
	SNR=112						
KSSAJ	Sangju	1.07	309	P	Pg	22 52 24.3	-0.3
	SNR=15						
DUSB	Deogyusan	1.16	278	P	Pb	22 52 26.0	-0.3
	SNR=28						
HAMB	Hamyang	1.20	259	P	Pb	22 52 26.4	-0.5
	SNR=14						
CHYB	Chungyang	1.22	349	P	Pn	22 52 27.0	-0.2
	SNR=18						
JTU	Tsushima	1.23	172	*e*P	Pn	22 52 27.0	-0.2
JTU				*e*S	Sb	22 52 43.0	-0.2
OKCB	Cheongsan-myeo	1.28	298	P	Pn	22 52 28.0	0.0
	SNR=8.9						
KSMGY	Mungyeong	1.29	315	P	Pn	22 52 28.0	-0.1
	SNR=29						
YKDB	Yokjido	1.35	214	P	Pn	22 52 29.0	+0.1
	SNR=20						
KSBON	Boeun	1.36	304	P	Pn	22 52 29.4	+0.4
	SNR=28						
KSTBA	Taebaek	1.39	352	P	Pn	22 52 30.1	+0.5
	SNR=17						
JTSM	Tsushimamitsus	1.41	174	*e*P	Pn	22 52 30.1	+0.4
JTSM				*e*S	Sn	22 52 48.5	+0.2
KSCHJ	Chungju	1.50	319	P	Pn	22 52 31.5	+0.6
	SNR=12						
KSJEO	Jeonju	1.56	278	P	Pn	22 52 32.6	+0.9
	SNR=29						
KSKWJ	Gwangju	1.89	253	P	Pn	22 52 36.0	-0.4
	SNR=6.9						
JII	Iki	1.99	167	S	Sb	22 53 04.7	-0.6
JTY	Toyota	2.13	133	*e*S	Sb	22 53 08.5	-0.7

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*INET **04** 22:58:41.2±1.7, 10°.55N×84°.02W, h81^{km}±24^{km}, MW3.0*
*UCR **04** 22:58:41.1±1.3, 10°.31N×84°.15W, h108^{km}±6^{km}, MW3.5*
ISC 04 22:58:39.4±2.1**, 10°.41N**±0°.07×**84°.11W**±0°.06**,**
h119^{km}±13^{km}**, n43, σ0^{s}.90**/53**, 1D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HDC	Heredia	0.41	180	*e*P	Pn	22 58 57.0	+0.1
HDC3	Heredia 3	0.41	180	*e*P	Pn	22 58 57.0	+0.1
CORON	Coronado	0.45	166	*e*P	Pn	22 58 57.5	+0.4
SANTA	Santa Ana	0.48	189	*e*P	Pn	22 58 57.2	0.0
SANTA				*e*S	Sn	22 59 09.9	-0.7
SOCE	Pocosol	0.50	267	*e*P	Pn	22 58 57.6	+0.4
VICA	Volcano Irazu	0.50	148	*e*P	Pn	22 58 57.9	+0.2
HAYA	Volcan Irazu	0.51	148	*e*P	Pn	22 58 58.1	+0.4
RVLA	Villa Bonita	0.60	120	*e*P	Pn	22 58 59.0	+1.2
ARE1	Arenal 1	0.60	275	*e*P	Pn	22 58 58.3	+0.5
REPA	Paraso	0.63	158	*e*P	Pn	22 58 58.6	+0.3
REPA				*e*S	Sn	22 59 13.3	+0.8
RVSTA	Santa Teresita	0.63	133	*e*P	Pn	22 58 59.1	+0.9
LCOCO	El Coco	0.64	121	*e*P	Pn	22 58 59.1	+1.0
LCR2	La Lucha 2	0.68	171	*e*P	Pn	22 58 58.6	-0.1
LCR2	La Lucha 2	0.68	171	*e*P	Pn	22 58 58.6	-0.1
LCR2				*e*S	Sn	22 59 11.9	-1.2
ABE2	San Pablo	0.71	175	*e*P	Pn	22 58 59.2	+0.2
COTE	Lago Cote	0.81	282	⇓*i*P	Pn	22 59 00.4	+0.8
VERA	Finca Concepci	0.86	301	*e*P	Pn	22 59 01.1	+1.1
CDM	Cerro de Muert	0.92	158	*e*P	Pn	22 59 01.0	0.0
CDM				*e*S	Sn	22 59 16.3	-1.0
CDM	Cerro de Muert	0.92	158	*e*P	Pn	22 59 01.1	0.0
JACO	JACO, Garabito	0.92	216	*e*P	Pn	22 59 01.1	+0.6
JACO				*e*S	Sn	22 59 16.8	+0.3
JACO	JACO, Garabito	0.92	216	*e*P	Pn	22 59 01.1	+0.6
BUS1	Rivas	0.93	157	*e*P	Pn	22 59 00.8	-0.2
BUS1				*e*S	Sn	22 59 16.5	-0.9
ACAL	Aguas Claras	0.93	284	*i* P	Pn	22 59 01.7	+1.0
LLNJ	Naranjito	0.93	179	*e*P	Pn	22 59 01.4	+0.8
MOTZ	Rio Naranjo	0.98	286	*i* P	Pn	22 59 02.5	+1.3
LAFE	Finca La Fe, P	0.99	233	*e*P	Pn	22 59 02.5	+1.3
LAFE	Finca La Fe, P	0.99	233	*e*P	Pn	22 59 01.8	+0.6
VMAR	Armenia, Volca	1.06	292	*e*P	Pn	22 59 03.2	+1.2
PEZE	Perez Zeledon,	1.11	157	*e*P	Pn	22 59 02.8	+0.3
PEZE				*e*S	Sn	22 59 19.9	-0.1
PEZE	Perez Zeledon,	1.11	157	*e*P	Pn	22 59 02.9	+0.3
EDDO	Dominical	1.18	168	*e*P	Pn	22 59 04.0	+0.9
REF1	Hacienda Santa	1.24	286	*i* P	Pn	22 59 05.3	+1.5
ORTG	Ortega, Santa	1.33	268	*e*P	Pn	22 59 05.8	+1.0
ORTG				*e*S	Sn	22 59 24.1	0.0
ORTG	Ortega, Santa	1.33	268	*e*P	Pn	22 59 05.5	+0.7
SRBA	San Rafael, Bu	1.39	148	*e*P	Pn	22 59 06.2	+0.7
DUNO	Dulce Nombre,	1.40	256	*e*P	Pn	22 59 06.2	+0.7
DUNO				*e*S	Sn	22 59 22.6	-2.9
HZTE	Horizontes, Gu	1.49	282	*e*P	Pn	22 59 07.7	+1.2
HZTE				*e*S	Sn	22 59 26.4	-0.9
HZTE	Horizontes, Gu	1.49	282	*e*P	Pn	22 59 07.9	+1.3
EDBA	Buenos Aires	1.49	146	*e*P	Pn	22 59 06.6	0.0
SAJU	San Juanillo,	1.61	258	*e*P	Pn	22 59 07.9	-0.1
EDP2	Potrero Grande	1.67	146	*e*P	Pn	22 59 10.2	+1.5
ACON	Acoyapa	1.86	326	*e*P	Pn	22 59 10.0	-1.1
EDAD	Golfito	1.98	152	*e*P	Pn	22 59 12.8	+0.2

HEL 04 23:02:10.3±0.1**, 67°.17N×20°.66E, h0**^{km}**, ML1.1,**
Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERTU	Ertsjaerv	0.86	135	*e*P	Pg	23 02 25.7	-1.1
PAJU	Pajala	0.97	97	*e*P	Pg	23 02 27.8	-1.0
LANU	Lannavaara	1.02	29	*e*P	Pg	23 02 28.5	-1.3
KLF	Kolari	1.29	86	*e*P	Pg	23 02 33.4	-1.6
HEF	Hetta	1.69	41	*e*P	Pn	23 02 40.2	-0.8
HEF				*e*S	Sn	23 03 01.9	-1.4
TOF	Tornio	1.82	125	*e*P	Pn	23 02 43.1	+0.2
KIF	Kilpisjarvi	1.85	2	*e*P	Pn	23 02 43.5	+0.4
KIF				MSG		23 03 10.4	
	comp=Z,1.3nm,0.1s						
KTK1	Kautokeino	2.09	26	*e*P	Pn	23 02 47.4	+0.9
RNF	Rovaniemi	2.19	102	*e*PB	Pn	23 02 48.5	+0.7
SGF	Sodankyl	2.29	80	*e*PB	Pn	23 02 50.0	+0.7
SGF				MSG		23 03 23.0	
	comp=Z,0.4nm,0.1s						

UPP 04 23:02:46.4±0.1**, 67°.19N×20°.64E, h0**^{km}**, ML1.6,**
Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.07	204	P	Pg	23 02 48.0	+0.3
DUNU				S	Sg	23 02 49.2	+0.6
MASU	Masugnsbyn	0.59	62	P	Pg	23 02 57.8	+0.1
MASU				S	Sg	23 03 05.1	-0.3
RATU	Laukkuluspa	0.76	328	P	Pg	23 03 00.5	-0.4
ERTU	Ertsjaerv	0.88	135	P	Pg	23 03 02.3	-1.0

IDC 04 23:04:10.3±25.0**, 22°.59S×172°.63W, h0**^{km}**, mb4.3**/4**,**
mbtmp4.3/4**, Error ellipse: s-maj=473.6km**
s-min=151.3km az=76.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	38.29	266	P	P	23 11 32.8	-0.1
	6.7nm,0.3s,baz=94,slow=11,SNR=25						
	6.7nm,0.3s						
STKA	Stephens Creek	41.48	247	P	P	23 11 59.3	0.0
	1.2nm,0.3s,baz=101,slow=6.2,SNR=4.5						
	1.2nm,0.3s						
ASAR	Alice Springs	48.94	258	P	P	23 12 58.4	-0.2
	0.6nm,0.3s,baz=94,slow=7.3,SNR=25						
	0.6nm,0.3s						
WRA	Warramunga Arr	49.28	263	P	P	23 13 01.1	-0.1
	2.0nm,0.4s,baz=104,slow=8.0,SNR=51						
	2.0nm,0.4s						

JMA 04 23:10:35.5±0.0**, 32°.8N**±0°.1×**130°.6E**±0°.2**, h10**^{km}**, MV1.0**/10**,**
NW KUMAMOTO PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTA	Tamana	0.20	338	P	Pg	23 10 39.9	+0.2

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*ATH **05** 00:04:22.2, 37°.19N×20°.92E, h3^{km}±1^{km}, ML3.4/39, Error ellipse: s-maj=1.9km s-min=0.8km az=47.0*
*THE **05** 00:04:22.2, 37°.22N×20°.96E, h0^{km}±1^{km}, ML3.5/19, Error ellipse: s-maj=2.1km s-min=0.6km az=228.0*
*IDC **05** 00:04:25.8±1.9, 37°.10N×20°.98E, h61^{km}±24^{km}, mb3.7/7, mbtmp3.7/15, ML3.1/7, Error ellipse: s-maj=32.2km s-min=17.1km az=12.0*
*GII **05** 00:04:28.0±0.0, 36°.39N×21°.36E, h20^{km}*
ISC 05 00:04:22.5±1.1**, 37°.22N**±0°.03×**20°.98E**±0°.03**, h16**^{km}±7^{km}**,**
n108, σ1^{s}.32/143**, mb3.8**/7**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTHK	Lithakia	0.50	347	P	Pg	00 04 32.1	-0.4
LTHK				S	Sg	00 04 39.0	-0.3
	10μm,0.4s						
LTHK	Lithakia	0.50	347	P	Pg	00 04 32.5	0.0
LTHK				S	Sb	00 04 40.2	0.0
LTHK				AML	AML	00 04 46.5	
	comp=E,21084μm,0.3s						
LTHK				AML	AML	00 04 48.1	
	comp=N,16456μm,0.4s						
PYL	PYLOS	0.69	118	P	Pg	00 04 35.4	-0.5
PYL				S	Sb	00 04 45.8	+0.4
	comp=N,6μm,0.5s						
PYL	PYLOS	0.69	118	P	Pg	00 04 35.7	-0.2
PYL				S	Sb	00 04 46.5	+1.1
PYL				AML	AML	00 04 48.9	
	comp=N,11670μm,0.5s						
PYL				AML	AML	00 04 49.1	
	comp=E,12046μm,0.4s						
ITM	Ithomi	0.76	93	P	Pg	00 04 36.1	-1.1
ITM				S	Sb	00 04 48.1	+0.7
	comp=E,5μm,0.5s						
ITM	Ithomi	0.76	93	P	Pg	00 04 36.8	-0.4
ITM				S	Sn	00 04 48.7	-1.0
ITM				AML	AML	00 04 51.1	
	comp=E,11950μm,0.7s						
ITM				AML	AML	00 04 51.5	
	comp=N,8652μm,0.3s						
RLS	Riolos of Patr	0.92	24	P	Pg	00 04 39.3	-1.1
RLS				S	Sb	00 04 52.7	+0.5
	comp=N,2μm,0.4s						
RLS	Riolos of Patr	0.92	24	P	Pg	00 04 39.8	-0.6
RLS				S	Sn	00 04 54.3	+0.5
RLS				AML	AML	00 04 56.9	
	comp=E,4189μm,0.4s						
RLS				AML	AML	00 04 59.0	
	comp=N,3881μm,0.5s						
DRO	Drossia	0.93	38	P	Pg	00 04 39.5	-1.1
DRO				S	Sb	00 04 53.0	+0.5
	comp=N,7μm,0.4s						
DRO	Drossia	0.93	38	P	Pg	00 04 39.8	-0.8
DRO				S	Sn	00 04 54.3	+0.2
DRO				AML	AML	00 04 59.8	
	comp=N,9914μm,0.4s						
DRO				AML	AML	00 05 02.8	
	comp=E,17002μm,0.5s						
PSDA	Pessada-Kefalo	0.95	341	P	Pg	00 04 39.3	-1.6
PSDA				S	Sb	00 04 54.0	+1.1
	comp=E,3μm,0.4s						
PSDA	Pessada-Kefalo	0.95	341	P	Pg	00 04 40.0	-0.8
VLS	Valsamata	1.01	342	P	Pb	00 04 40.6	-1.0
VLS				S	Sg	00 04 55.8	+0.6
	comp=E,1μm,0.4s						
VLS	Valsamata	1.01	342	P	Pb	00 04 40.6	-1.0
VLS				S	Sn	00 04 56.0	+0.1
VLS				AML	AML	00 05 01.9	
	comp=E,2106μm,0.4s						
VLS				AML	AML	00 05 06.7	
	comp=N,2356μm,0.3s						
KEF3	Kipouria, Keph	1.10	333	P	Pb	00 04 42.8	-0.4
KEF3				S	Sg	00 04 58.2	-0.1
	comp=N,5μm,0.4s						
KEF3	Kipouria, Keph	1.10	333	P	Pb	00 04 43.0	-0.2
KEF3				S	Sn	00 04 58.8	+0.5
DMLN	Damoulianata-K	1.13	335	P	Pb	00 04 43.1	-0.6
DMLN				S	Sn	00 04 59.8	+0.9
	comp=N,3μm,0.5s						
KEF4	Livadi, Kephal	1.13	337	P	Pb	00 04 43.0	-0.6
KEF4				S	Sn	00 05 00.3	+1.4
	comp=N,8μm,0.3s						
KEF4	Livadi, Kephal	1.13	337	P	Pb	00 04 43.2	-0.4
KEF4				S	Sg	00 04 59.2	+0.2
UPR	University Cam	1.24	31	P	Pn	00 04 45.0	-0.2
KLV	Kalavryta, Ach	1.24	48	P	Pn	00 04 44.3	-1.0
KLV				S	Sg	00 05 04.3	+1.7
	comp=N,1μm,0.8s						
KLV	Kalavryta, Ach	1.24	48	P	Pn	00 04 45.2	-0.1
KLV				AML	AML	00 05 09.0	
	comp=N,3005μm,0.5s						
KLV				AML	AML	00 05 13.4	
	comp=E,2331μm,0.7s						
FSK	Fiskardo	1.28	345	P	Pn	00 04 45.9	+0.1
FSK				AML	AML	00 05 10.5	
	comp=E,1726μm,0.6s						
FSK				AML	AML	00 05 19.0	
	comp=N,1948μm,1.0s						
LAKA	Lakka	1.29	37	P	Pn	00 04 45.4	-0.5
LAKA				S	Sg	00 05 05.9	+1.7
	comp=N,4μm,0.5s						
LAKA	Lakka	1.29	37	P	Pn	00 04 46.2	+0.3
LAKA				S	Sg	00 05 04.4	+0.2
LAKA				AML	AML	00 05 13.1	
	comp=E,6853μm,0.5s						
LAKA				AML	AML	00 05 13.8	
	comp=N,7694μm,0.5s						
EFP	Efpalio	1.41	31	P	Pb	00 04 48.7	+0.2
EFP				AML	AML	00 05 18.9	
	comp=N,1909μm,0.7s						
EFP				AML	AML	00 05 22.7	
	comp=E,2128μm,0.5s						
EVGI	Lefkada island	1.42	350	P	Pn	00 04 47.9	+0.2
EVGI				S	Sb	00 05 06.9	+0.3
PVO	Paravola	1.46	17	P	Pn	00 04 48.0	-0.3
PVO				S	Sg	00 05 10.9	+1.3
	comp=E,1μm,0.4s						
PVO	Paravola	1.46	17	P	Pn	00 04 48.6	+0.3
SERG	Sergoula	1.47	35	P	Pn	00 04 48.6	+0.3
SERG				S	Sg	00 05 10.8	+1.0
	comp=E,1μm,0.5s						
SERG	Sergoula	1.47	35	P	Pn	00 04 49.0	+0.7
SERG				AML	AML	00 05 19.5	
	comp=N,3009μm,0.4s						
SERG				AML	AML	00 05 26.4	
	comp=E,2729μm,0.8s						
ANX	Ano Chora	1.56	28	P	Pb	00 04 51.1	0.0
ANX				AML	AML	00 05 25.0	
	comp=N,3292μm,0.5s						
ANX				AML	AML	00 05 25.9	
	comp=E,2953μm,0.5s						
THAL	Thalero	1.56	58	P	Pb	00 04 50.9	-0.2
THAL				S	Sg	00 05 13.3	+0.4
	comp=E,3μm,0.5s						
THAL	Thalero	1.56	58	P	Pb	00 04 50.9	-0.2
THAL				AML	AML	00 05 26.2	
	comp=N,4250μm,1.1s						
THAL				AML	AML	00 05 28.6	
	comp=E,6540μm,0.5s						
LKD2	Lefkada island	1.59	351	P	Pn	00 04 50.8	+0.8
LKD2				S	Sb	00 05 11.7	+0.3
LKD2				AML	AML	00 05 24.5	
	comp=E,2513μm,0.6s						
LKD2				AML	AML	00 05 27.7	
	comp=N,1707μm,0.5s						
TSLK	Tsoukalades, L	1.62	351	P	Pb	00 04 51.7	-0.4
TSLK				AML	AML	00 05 20.1	
	comp=N,3025μm,0.6s						
TSLK				AML	AML	00 05 24.1	
	comp=E,2030μm,0.5s						
VLI	Veliai	1.64	107	P	Pb	00 04 52.6	+0.2
VLI				S	Sg	00 05 15.5	+0.1
	comp=E,562nm,0.6s						
VLI	Veliai	1.64	107	P	Pb	00 04 52.3	-0.1
VLI				S	Sb	00 05 12.6	-0.3
VLI				AML	AML	00 05 31.3	
	comp=E,1217μm,0.5s						
VLI				AML	AML	00 05 39.6	
	comp=N,1257μm,0.7s						
MNVA	Monemvasia	1.73	107	P	Pn	00 04 52.9	+1.0
KRND	KRANIDI	1.74	84	P	Pb	00 04 53.4	-0.6
KRND				S	Sb	00 05 16.4	+0.8
	comp=N,518nm,0.7s						
KRND	KRANIDI	1.74	84	P	Pb	00 04 53.4	-0.6
KRND				AML	AML	00 05 27.8	
	comp=N,1052μm,0.8s						
KRND				AML	AML	00 05 39.0	
	comp=E,1008μm,0.6s						
DLFA	Delphi	1.74	43	P	Pb	00 04 54.1	+0.1
DLFA				AML	AML	00 05 28.9	
	comp=E,706μm,0.7s						
DLFA				AML	AML	00 05 29.6	
	comp=N,888μm,1.0s						
LOUT	Loutraki	1.76	63	P	Pb	00 04 53.9	-0.5
LOUT				S	Sg	00 05 18.2	-0.9
	comp=N,740nm,0.7s						
LOUT	Loutraki	1.76	63	P	Pb	00 04 53.8	-0.5
EVR	Evrytania	1.82	21	P	Pb	00 04 54.8	-0.7
EVR				S	Sn	00 05 16.8	+0.7
EVR				AML	AML	00 05 35.4	
	comp=E,1178μm,0.8s						
EVR				AML	AML	00 05 40.6	
	comp=N,1164μm,0.6s						
KTHA	Kythira Island	1.93	119	P	Pb	00 04 56.6	-0.7
KTHA	Kythira Island	1.93	119	P	Pn	00 04 56.0	+1.3
KTHA				AML	AML	00 05 31.4	
	comp=N,870μm,0.4s						
KTHA				AML	AML	00 05 37.4	
	comp=E,1342μm,0.5s						
YDRA	Hydra	1.98	85	P	Pn	00 04 56.7	+1.3
YDRA				AML	AML	00 05 35.4	
	comp=E,1271μm,0.8s						
YDRA				AML	AML	00 05 37.8	
	comp=N,871μm,0.9s						
MAKR	Makrakomi, Fth	2.01	26	P	Pb	00 04 57.7	-1.0
MAKR				AML	AML	00 05 31.8	
	comp=N,1889μm,1.3s						
MAKR				AML	AML	00 05 38.7	
	comp=E,2237μm,0.9s						
AXAR	Agios Charalam	2.04	40	P	Pb	00 04 58.2	-0.9
AXAR				AML	AML	00 05 43.4	
	comp=N,2482μm,0.6s						
AXAR				AML	AML	00 05 44.2	
	comp=E,2817μm,0.7s						
VIL2	Platees	2.07	61	P	Pn	00 04 57.5	+0.9
VIL2				AML	AML	00 05 37.6	
	comp=N,1026μm,1.1s						
VIL2				AML	AML	00 05 40.1	
	comp=E,1162μm,1.0s						
AGG	Agios Georgios	2.09	30	P	Pb	00 04 59.0	-1.1
LKR	Lokris	2.14	48	P	Pn	00 04 59.4	+1.8
LKR				AML	AML	00 05 40.2	
	comp=N,844μm,0.8s						
LKR				AML	AML	00 05 43.7	
	comp=E,513μm,0.4s						
ATAL	Atalanti	2.18	47	P	Pn	00 04 60.0	+1.8
ATAL				AML	AML	00 05 41.7	
	comp=E,432μm,0.6s						
ATAL				AML	AML	00 05 47.4	
	comp=N,498μm,1.0s						
ATH	Athens Observa	2.30	70	P	Pn	00 05 01.4	+1.6
ATH				AML	AML	00 05 44.3	
	comp=E,776μm,0.5s						
ATH				AML	AML	00 05 46.1	
	comp=N,740μm,0.7s						
ANKY	Antikythira Is	2.30	125	P	Pn	00 05 01.6	+1.8
ANKY				S	Sb	00 05 30.7	-1.2
	comp=N,285nm,0.8s						
ANKY	Antikythira Is	2.30	125	P	Pn	00 05 01.2	+1.4
ANKY				AML	AML	00 05 50.4	
	comp=N,594μm,0.5s						
ANKY				AML	AML	00 05 55.7	
	comp=E,513μm,0.6s						
VLY	Voula,Athens	2.32	73	P	Pn	00 05 00.9	+0.8
VLY				AML	AML	00 05 50.6	
	comp=E,643μm,0.8s						
VLY				AML	AML	00 05 53.6	
	comp=N,466μm,0.7s						
ATHU	Athens Univers	2.35	71	P	Pn	00 05 01.3	+0.9
IGT	Igoumenitsa	2.37	348	P	Pn	00 05 01.8	+1.1
JAN	Janina	2.44	358	P	Pn	00 05 02.1	+0.3
JAN				AML	AML	00 05 55.3	
	comp=N,363μm,0.8s						
JAN				AML	AML	00 05 58.6	
	comp=E,506μm,0.5s						
THL	Klokotos Trika	2.48	19	P	Pn	00 05 04.6	+2.3
THL				AML	AML	00 05 53.5	
	comp=N,257μm,0.7s						
THL				AML	AML	00 05 54.6	
	comp=E,383μm,0.7s						
DION	Dionisos Attik	2.49	69	P	Pn	00 05 04.5	+2.0
DION				AML	AML	00 05 47.7	
	comp=N,805μm,0.5s						
DION				AML	AML	00 05 50.8	
	comp=E,735μm,0.6s						
EREA	Eretria	2.63	62	P	Pn	00 05 05.2	+0.9
EREA				AML	AML	00 05 54.3	
	comp=N,313μm,0.7s						
EREA				AML	AML	00 05 57.6	
	comp=E,388μm,0.8s						
KEK	Kerkira	2.66	340	P	Pn	00 05 05.8	+1.1
TYRN	Tyrnavos	2.67	21	P	Pn	00 05 06.7	+1.8
NEO	Neokhori	2.73	40	P	Pn	00 05 07.6	+1.8
KPRO	Kipourio	2.75	6	P	Pn	00 05 07.9	+1.8
XOR	Xorichti	2.76	38	P	Pn	00 05 07.7	+1.5
MHLO	Agia Marina, M	2.79	100	P	Pn	00 05 07.3	+0.8
KYMI	Kymi, Euboea I	2.84	59	P	Pn	00 05 08.3	+1.0
KYMI				AML	AML	00 06 04.9	
	comp=N,336μm,0.8s						
KYMI				AML	AML	00 06 08.4	
	comp=E,348μm,1.3s						
KNDR	Palaiochora Ch	2.95	131	P	Pn	00 05 09.3	+0.6
KNDR				AML	AML	00 06 02.5	
	comp=N,322μm,0.5s						
KNDR				AML	AML	00 06 10.2	
	comp=E,399μm,0.8s						
PENT	Pentalofos	2.98	2	P	Pn	00 05 11.2	+2.0
IMMV	Iera Moni Meta	2.99	125	P	Pn	00 05 10.2	+0.9
IMMV				AML	AML	00 06 21.0	
	comp=E,461μm,0.8s						
IMMV				AML	AML	00 06 24.2	
	comp=N,419μm,0.8s						
LIT	Litokhoron	3.11	22	P	Pn	00 05 12.5	+1.6
KZN	Kozani	3.15	11	P	Pn	00 05 12.9	+1.4
KZN				AML	AML	00 05 57.4	
	comp=E,208μm,0.6s						
KZN				AML	AML	00 06 17.2	
	comp=N,165μm,0.5s						
GVD	Gavdhos	3.46	132	P	Pn	00 05 16.8	+1.1
GVD				AML	AML	00 05 59.1	
	comp=E,228μm,0.3s						
GVD				AML	AML	00 06 01.5	
	comp=N,235μm,0.4s						
FNA	Florina	3.57	5	P	Pn	00 05 18.4	+1.1
IDI	Anoyia	3.70	120	P	Pn	00 05 19.8	+0.8
	comp=N,1.0nm,0.3s,baz=304,slow=11,SNR=16						
IDI				S	Sn	00 06 05.3	+2.9
	comp=N,12nm,0.3s,baz=298,slow=16,SNR=4.7						
	comp=N,3.2nm,0.3s						
IDI	Anoyia	3.70	120	P	Pn	00 05 19.9	+0.8
IDI				AML	AML	00 06 07.2	
	comp=N,273μm,0.4s						
IDI				AML	AML	00 06 07.4	
	comp=E,158μm,0.5s						
KSTL	Kastelli Herak	3.82	119	P	Pn	00 05 25.0	+4.4
MMB	Musomiste	4.86	25	P	Pn	00 05 35.7	+0.8
KKB	Krupnik	4.92	19	*e*P	Pn	00 05 33.7	-2.1
VAE	Valguarnera	5.24	275	P	Pn	00 05 42.0	+1.8
	comp=E,1.3nm,0.3s,baz=163,slow=14,SNR=6.1						
VAE				S	Sn	00 06 40.3	-0.1
	comp=E,12nm,0.5s,baz=101,slow=14,SNR=1.3						
	comp=E,13nm,0.7s						
RZN	Rozhen	5.32	32	P	Pn	00 05 42.7	+1.3
KDZ	Kurdzhali	5.60	36	P	Pn	00 05 45.1	-0.1
MLR	Muntele Rosu	9.07	23	P	Pn	00 06 35.2	+2.3
	comp=E,0.1nm,0.3s,baz=185,slow=22,SNR=1.8						
	comp=E,1.0nm,0.5s						
KEST	Kesra	9.49	264	P	Pn	00 06 39.8	+1.2
	comp=E,0.3nm,0.3s,baz=42,slow=13,SNR=6.8						
KEST				S	Sn	00 08 24.3	-0.7
	comp=E,1.8nm,0.8s,baz=81,slow=20,SNR=1.5						
	comp=E,2.4nm,0.7s						
BRTR	Keskin Array B	10.23	72	P	Pn	00 06 50.8	+1.9
	baz=254,slow=12,SNR=2.6						
	comp=E,0.2nm,0.5s						

NATI	**Neve Ativ**	**12.69**	**104**	Pn	**Pn**	**00 07 20.6**	**-1.7**
KZIT	**Kziot**	**12.77**	**116**	Pn	**Pn**	**00 07 20.2**	**-3.3**
KZIT				Sn	Sn	00 09 35.7	-10
AMAZ	**Amatzia**	**12.83**	**112**	Pn	**Pn**	**00 07 22.0**	**-2.2**
DSI	**Dead Sea**	**13.15**	**111**	Pn	**Pn**	**00 07 27.0**	**-1.7**
MSBI	**Mazada**	**13.26**	**112**	Pn	**Pn**	**00 07 26.3**	**-3.8**
KRMI	**Paran Flat**	**13.45**	**118**	Pn	**Pn**	**00 07 28.3**	**-4.5**
PRNI	**Paran**	**13.52**	**116**	Pn	**Pn**	**00 07 31.1**	**-2.5**
PRNI				Sn	Sn	00 09 53.2	-10
EIL	**Elat**	**13.87**	**119**	P	**Pn**	**00 07 37.9**	**-0.6**
	comp=E,0.3nm,0.3s,baz=256,slow=1.2,SNR=11						
EIL				S	Sn	00 09 58.2	-14
	comp=E,3.0nm,0.6s,baz=315,slow=20,SNR=1.5						
	comp=E,2.6nm,0.7s						
AKASG	**Malin Array Be**	**14.71**	**21**	P	**Pn**	**00 07 53.1**	**+3.3**
	comp=E,0.7nm,0.5s,baz=210,slow=9.1,SNR=8.8						
KBZ	**Khabaz**	**17.87**	**62**	P	**P**	**00 08 32.2**	**+1.2**
	comp=E,0.1nm,0.3s,baz=223,slow=7.4,SNR=4.1						
	comp=E,0.9nm,0.6s						
GNI	**Garni**	**18.77**	**74**	P	**Pn**	**00 08 42.9**	**+1.3**
	comp=E,2.5nm,0.8s,baz=45,slow=4.5,SNR=3.8						
ESDC	**Sonseca Array**	**19.68**	**285**	P	**Pn**	**00 08 54.2**	**+1.8**
	comp=E,0.3nm,0.7s,baz=83,slow=10,SNR=4.5						
BELG	**Belogornoye**	**24.05**	**42**	P	**P**	**00 09 35.1**	**-1.7**
	comp=E,14nm,0.8s,baz=83,slow=20,SNR=5.4						
	comp=E,14nm,0.8s						
EKA	**Eskdalemuir Ar**	**24.42**	**326**	P	**P**	**00 09 40.0**	**-0.2**
	comp=E,1.1nm,0.7s,baz=119,slow=7.7,SNR=4.3						
	comp=E,1.1nm,0.7s						
FINES	**FINESS Array B**	**24.46**	**6**	P	**P**	**00 09 39.1**	**-1.4**
	comp=E,0.6nm,0.5s,baz=162,slow=10,SNR=10						
	comp=E,0.6nm,0.5s						
ARCES	**ARCESS Array B**	**32.47**	**3**	P	**P**	**00 10 50.6**	**-1.2**
	comp=E,1.7nm,0.8s,baz=186,slow=9.1,SNR=11						
	comp=E,1.7nm,0.8s						
KURBB	**Kurchatov Arra**	**42.51**	**53**	P	**P**	**00 12 15.2**	**-1.8**
	comp=E,0.6nm,0.3s,baz=282,slow=8.9,SNR=6.8						
	comp=E,0.6nm,0.3s						
MKAR	**Makanchi Array**	**45.50**	**58**	P	**P**	**00 12 39.6**	**-1.4**
	comp=E,0.6nm,0.5s,baz=271,slow=7.4,SNR=13						
	comp=E,0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**46.06**	**47**	P	**P**	**00 12 44.2**	**-1.2**
	comp=E,0.8nm,0.4s,baz=272,slow=8.4,SNR=4.4						
	comp=E,0.8nm,0.4s						

IDC 05 00:05:06.6±2.5**,6°.93S**×**128°.77E,h0^{km},mb3.3**/1**,**
mbtmp3.6/3**,ML4.0**/2**,Error ellipse: s-maj=201.9km**
s-min=33.8km az=66.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.02**	**158**	Pn	Pn	00 08 26.1	-0.6
	0.7nm,0.3s,baz=332,slow=14,SNR=19						
WRA				Sn	Sn	00 10 52.9	-10
	0.6nm,0.3s,baz=336,slow=22,SNR=6.0						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**17.36**	**164**	Pn	Pn	00 09 11.0	+0.5
	0.4nm,0.3s,baz=342,slow=9.7,SNR=16						
ASAR				Sn	Sn	00 12 12.9	-11
	0.1nm,0.3s,baz=344,slow=27,SNR=2.0						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**67.50**	**327**	P	P	00 16 04.6	0.0
	0.1nm,0.5s,baz=140,slow=4.7,SNR=2.3						
	0.1nm,0.5s						

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*IDC **05** 00:08:16.4±0.3, 9°.86N×125°.29E, h0^{km}, mb5.3/52, mbtmp5.3/55, ML4.8/3, MS5.1/66, Error ellipse: s-maj=9.0km s-min=7.4km az=47.0*
*MOS **05** 00:08:16.8±0.9, 9°.81N×125°.40E, h18^{km}, mb5.9/101, MS5.3/46, Error ellipse: s-maj=7.1km s-min=3.6km az=117.7*
*BJI **05** 00:08:16.8±0.0, 9°.67N×125°.66E, h30^{km}, mb5.3/84, mB5.6/71, Ms5.6/91, Ms7 5.3/85*
*NEIC **05** 00:08:17.7, 9°.83N×125°.52E, h8^{km}*
*MAN **05** 00:08:18.5, 9°.76N×125°.38E, h10^{km}, mb6.2, ML5.3, MS5.9*
MAN INTENSITY VI - SURIGAO CITY; INTENSITY V - BASILISA CAGDIANAO AND SAN JOSE DINAGAT ISLANDS; MALIMONO SURIGAO DEL NORTE; INTENSITY IV - BUTUAN CITY; JABONGA AGUSAN DEL NORTE; LIBJO DINAGAT ISLANDS; ALEGRIA AND MAINIT SURIGAO DEL NORTE; LIMASAWA AND SAN RICARDO SOUTHERN LEYTE; ; INTENSITY III - GINGOOG CITY; REMEDIOS T. ROMUALDEZ AGUSAN DEL NORTE; SAN FRANCISCO AND SAN JUAN SOUTHERN LEYTE; CLAVER SURIGAO DEL NORTE; ; INTENSITY II - GENERAL LUNA SURIGAO DEL NORTE; ORMOC CITY; CAGAYAN DE ORO CITY.
*NEIC **05** 00:08:18.0±1.5, 9°.83N±0°.06×125°.50E±0°.07, h11^{km}±3^{km}, mb5.8/208, Ms_20 5.3/107, Mwb5.5/26, Mww5.7, Error ellipse: s-maj=10.6km s-min=8.7km az=77.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.39; M$_{\theta\theta}$1.35; M$_{\phi\phi}$-1.74; M$_{r\theta}$-0.64; M$_{\theta\phi}$-1.86; M$_{\phi r}$-0.78; Fault plane solution: M$_0$2.64000×10^{17} NP1: φ$_s$338.82000°, δ72.23000°, λ-5.85000°. NP2: φ$_s$70.61000°, δ84.43000°, λ-162.14000°. Principal axes: T 2.2607, Plg8.0000°, Azm203.0000°; N 0.6471, Plg71.0000°, Azm87.0000°; P -2.9079, Plg17.0000°, Azm296.0000°;*
*DJA **05** 00:08:18.7±0.5, 10°N±3°×12°6E±°, h20^{km}±3^{km}, M5.6/76, mb5.7/76, mB6.1/70, MLv6.3/2, Mw5.6/38, Mw(mB)5.7/70, MwMwp5.3/36, Mwp5.5/36*
*NEIC **05** 00:08:20, 9°.82N×125°.55E, h20^{km}*
*GCMT **05** 00:08:22.0±0.1, 9°.84N±0°.01×125°.48E±0°.01, h20^{km}, MW5.7/152, Moment Tensor Solution. s119,c213; s152,c300; Duration: 1^{s}8 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.14±.05; M$_{\theta\theta}$3.31±.05; M$_{\phi\phi}$-3.17±.05; M$_{r\theta}$-1.75±.11; M$_{\theta\phi}$-2.48±.04; M$_{\phi r}$-1.87±.12; Best double couple: M$_0$4.78100×10^{17} NP1: φ$_s$65.00000°, δ83.00000°, λ-151.00000°. NP2: φ$_s$331.00000°, δ61.00000°, λ-8.00000°. Principal axes: T 4.4350, Plg15.0000°, Azm194.0000°; N 0.6950, Plg60.0000°, Azm77.0000°; P -5.1280, Plg26.0000°, Azm292.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*KLM **05** 00:08:25, 9°.59N×125°.65E, h60^{km}, mb5.6*
*NEIC **05** 00:08:26, 9°.82N×125°.45E, h16^{km}, Moment Tensor Solution. Duration: 12^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.39; M$_{\theta\theta}$3.25; M$_{\phi\phi}$-1.86; M$_{r\theta}$-0.93; M$_{\theta\phi}$-2.19; M$_{\phi r}$-1.96; Fault plane solution: M$_0$4.18000×10^{17} NP1: φ$_s$329.00000°, δ63.00000°, λ-26.00000°. NP2: φ$_s$71.00000°, δ67.00000°, λ-150.00000°. Principal axes: T 4.0662, Plg2.0000°, Azm200.0000°; N 0.2231, Plg53.0000°, Azm106.0000°; P -4.2892, Plg37.0000°, Azm291.0000°;*
*BGR **05** 00:08:50.7, 14°.81N×121°.50E, h33^{km}, mb5.5, Ms5.6*
ISC 05 00:08:20.6±0.3**,9°.78N**±0°.02×**125°.45E**±0°.02**,h27^{km}**±2^{km}**,**
h27^{km}:pP-P,n1471,σ**1^{s}62**/1657**,mb5.6**/325**,MS5.3**/182**,**
58C-62D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.04**	**82**	⇓*i*P	**Pb**	**00 08 21.6**	**-3.6**
SCPH				*i* S	**Sb**	**00 08 24.2**	**-4.1**
MSLP	**Maasin**	**0.69**	**301**	⇑*e*P	**Pb**	**00 08 32.0**	**-2.0**
MSLP				*i* S	**Sb**	**00 08 42.0**	**-1.0**
GHBP	**Garcia Hernand**	**1.13**	**263**	⇑*e*P	**Pn**	**00 08 39.5**	**-1.0**
TABP	**Talibon, Bohol**	**1.15**	**286**	⇓*i*P	**Pn**	**00 08 38.7**	**-2.2**
TASP	**Talacogon, Agu**	**1.36**	**165**	⇑*e*P	**Pn**	**00 08 44.6**	**+0.8**
TASP				*i* S	**Sb**	**00 09 10.7**	**+8.3**
CGP	**Cagayan de Oro**	**1.51**	**210**	⇑*i*P	**Pn**	**00 08 44.7**	**-1.2**
CGP				*i* S	**Sb**	**00 09 06.8**	**0.0**
LLP	**Lapu-Lapu**	**1.56**	**290**	⇓*i*P	**Pn**	**00 08 44.9**	**-1.6**
LLP				*e*S	**Sn**	**00 09 04.7**	**-1.2**
BIPH	**Bislig**	**1.82**	**150**	⇓*e*P	**Pn**	**00 08 49.5**	**-0.6**
BIPH				*e*S	**Sb**	**00 09 14.1**	**-1.5**
LSIP	**Lazi, Siquijor**	**1.91**	**250**	⇓*e*P	**Pn**	**00 08 50.5**	**-0.8**
BUKP	**Musuan**	**1.93**	**192**	⇑*e*P	**Pn**	**00 08 51.8**	**+0.2**
BUKP				*i* S	**Sb**	**00 09 26.4**	**+7.7**
CDOP	**Cateel, Davao**	**2.21**	**154**	⇓*e*P	**Pn**	**00 08 56.6**	**+1.2**
CDOP				*i* S	**Sn**	**00 09 22.3**	**+0.4**
SNPH	**Sibulan**	**2.23**	**259**	⇓*i*P	**Pn**	**00 08 54.9**	**-0.9**
SNPH				*i* S	Sb	00 09 49.3	+22
DCPH	**Dipolog City**	**2.39**	**240**	⇓*e*P	**Pn**	**00 08 57.1**	**-0.9**
DCPH				*e*S	**Sn**	**00 09 25.9**	**-0.5**
DAV	**Davao City (W)**	**2.69**	**177**	Pn	**Pn**	**00 09 03.0**	**+0.9**
	448nm,0.3s,baz=303,slow=3.5,SNR=29						
DAV				Sn	**Sb**	**00 09 41.6**	**+0.9**
	424nm,0.3s,baz=215,slow=19,SNR=4.7						
DAV				Lg	Lg	00 09 51.7	
	476nm,0.3s,baz=338,slow=22,SNR=4.5						
	2μm,0.5s						
DAV	**Davao City (W)**	**2.69**	**177**	Pn	**Pn**	**00 09 02.0**	**-0.1**
DAV	**Davao City (W)**	**2.69**	**177**	P	**Pb**	**00 09 05.4**	**-2.7**
DAV	**Davao City (W)**	**2.69**	**177**	P	**Pn**	**00 09 04.7**	**+2.5**
DAV				S	**Sb**	**00 09 39.6**	**-1.1**
CNOP	**Candoni, Negro**	**2.77**	**271**	⇑*e*P	**Pn**	**00 09 05.5**	**+2.2**
CNOP				*i* S	**Sb**	**00 09 47.8**	**+4.8**
PAGZ	**Pagadian**	**2.81**	**227**	⇑*e*P	**Pn**	**00 09 03.9**	**+0.3**
PAGZ				*i* S	**Sn**	**00 09 38.5**	**+1.8**
CTBH	**Cotabato--PC H**	**2.81**	**205**	⇓*i*P	**Pn**	**00 09 04.0**	**+0.3**
MMPH	**Masbate**	**3.13**	**325**	⇑*i*P	**Pn**	**00 09 09.9**	**+1.7**
MMPH				*i* S	Sb	00 10 15.8	+23
RCP	**Roxas**	**3.20**	**304**	⇓*e*P	**Pn**	**00 09 08.7**	**-0.4**
JAP	**San Jose, Anti**	**3.58**	**286**	⇑*e*P	**Pn**	**00 09 16.6**	**+2.2**
GSPH	**General Santos**	**3.70**	**188**	⇑*e*P	**Pb**	**00 09 21.5**	**-3.9**
GSPH				*e*S	**Sb**	**00 10 17.4**	**+7.5**
IBAJ	**Ibajay, Aklan**	**3.81**	**302**	⇓*e*P	**Pn**	**00 09 18.9**	**+1.4**
ZCP	**Zamboanga City**	**4.38**	**230**	⇑*i*P	**Pn**	**00 09 28.0**	**+2.7**
ZCP				*i* S	**Sb**	**00 10 23.1**	**-6.1**
GQP	**Guinayangan**	**5.05**	**325**	⇑*e*P	**Pn**	**00 09 35.9**	**+1.4**
GQP				*e*S	Sb	00 11 11.3	+23
JCNP	**Jose Panganiba**	**5.23**	**329**	⇑*e*P	**Pn**	**00 09 40.0**	**+2.9**
JCNP				*i* S	Sb	00 11 04.3	+10
PGP	**Puerto Galera**	**5.76**	**310**	⇓*e*P	**Pn**	**00 09 44.8**	**+0.5**
LQP	**Lukban**	**5.76**	**319**	⇑*e*P	**Pn**	**00 09 47.9**	**+3.3**
SGSI	**Sangihe**	**6.05**	**179**	P	**Pn**	**00 09 50.8**	**+2.5**
	2μm,0.7s,19μm13nm						
TGY	**Tagaytay City**	**6.17**	**315**	⇓*e*P	**Pn**	**00 09 51.5**	**+1.6**
TGY				*e*S	**Sb**	**00 11 25.1**	**+4.4**
LUBP	**Lubang**	**6.44**	**308**	⇓*e*P	**Pn**	**00 09 57.5**	**+3.9**
LUBP				*i* S	Sb	00 11 49.9	+21
PCPH	**Palayan**	**7.15**	**324**	⇓*e*P	**Pn**	**00 10 05.2**	**+1.8**
MYLDM	**Lahad Datu**	**8.27**	**237**	Pn	**Pn**	**00 10 19.9**	**+1.1**
TNTI	**Ternate**	**9.15**	**168**	Pn	**Pn**	**00 10 30.5**	**-0.3**
TNTI	**Ternate**	**9.15**	**168**	P	**Pn**	**00 10 33.5**	**+2.7**
TNTI	**Ternate**	**9.15**	**168**	P	**Pn**	**00 10 32.2**	**+1.4**
	1μm,1.4s,11μm4μm						
I39PW	**PALAU INFRASON**	**9.26**	**103**	I	I	01 03 40.0	
	0.1nm,0.6s,baz=283,slow=308,SNR=8.9						
GTOI	**Gorontalo**	**9.40**	**195**	P	**Pn**	**00 10 34.4**	**+0.1**
	222nm,1.1s,2μm						
PACPP	**Pamplona Cagay**	**9.50**	**336**	⇓*e*P	**Pn**	**00 10 38.7**	**+3.1**
TOLI2	**Tolitoli**	**9.78**	**209**	Pn	**Pn**	**00 10 40.0**	**+0.4**
TOLI2	**Tolitoli**	**9.78**	**209**	P	**Pn**	**00 10 43.7**	**+4.1**
KKM	**Kota Kinabalu**	**9.87**	**249**	Pn	**Pn**	**00 10 41.7**	**+0.8**
KKM	**Kota Kinabalu**	**9.87**	**249**	P	**Pn**	**00 10 43.7**	**+2.8**
MRSI	**Marisa**	**9.88**	**201**	P	**Pn**	**00 10 41.4**	**+0.5**
	282nm,1.0s,3μm17μm						
SPMM	**Sapulut**	**10.24**	**241**	P	Pn	00 10 53.0	+7.1
LBMI	**Labuha**	**10.55**	**169**	P	**Pn**	**00 10 51.6**	**+1.6**
	1μm,1.8s,25μm						
MPSI	**Mapaga**	**10.89**	**211**	P	**Pn**	**00 10 57.6**	**+2.9**
	72nm,1.1s,1μm14μm						
LUWI	**Luwuk**	**11.07**	**194**	Pn	**Pn**	**00 10 58.0**	**+0.7**
LUWI	**Luwuk**	**11.07**	**194**	P	**Pn**	**00 11 00.8**	**+3.5**
LUWI	**Luwuk**	**11.07**	**194**	P	**Pn**	**00 10 59.9**	**+2.6**
	1μm,1.3s,16μm14μm						
SANI	**Sanana**	**11.76**	**177**	P	**Pn**	**00 11 02.2**	**-4.5**
NLAI	**Namlea**	**13.03**	**173**	P	**Pn**	**00 11 20.9**	**-3.2**
MSAI	**Masohi**	**13.49**	**165**	P	**Pn**	**00 11 32.3**	**+2.0**
	44nm,1.1s,982nm						
TWGBT	**Beinan**	**13.63**	**343**	P	**P**	**00 11 36.6**	**-4.1**
TWG	**Pinlang**	**13.63**	**343**	Pn	**Pn**	**00 11 30.5**	**-1.7**
AAI	**Ambon**	**13.65**	**168**	P	**Pn**	**00 11 33.8**	**+1.3**
	295nm,1.3s,5μm						
BKB	**Balikpapan**	**13.89**	**218**		**Pn**	**00 11 34.6**	**-1.1**
BKB	**Balikpapan**	**13.89**	**218**	P	**Pn**	**00 11 39.5**	**+3.8**
BKB	**Balikpapan**	**13.89**	**218**	P	**P**	**00 11 46.5**	**+2.8**
YULB	**Yu-li**	**14.11**	**344**		**Pn**	**00 11 37.3**	**-1.5**
YULB	**Yu-li**	**14.11**	**344**	P	**Pn**	**00 11 42.2**	**+3.4**
RKPI	**Ransiki, Papua**	**14.19**	**142**	P	**Pn**	**00 11 42.1**	**+2.3**
TPUB	**Ta-pu**	**14.22**	**342**		**Pn**	**00 11 40.1**	**-0.1**
TPUB	**Ta-pu**	**14.22**	**342**	P	**Pn**	**00 11 43.5**	**+3.3**
FAKI	**Fak Fak**	**14.31**	**151**	Pn	**Pn**	**00 11 40.5**	**-1.1**
FAKI	**Fak Fak**	**14.31**	**151**	P	**Pn**	**00 11 44.2**	**+2.6**
FAKI	**Fak Fak**	**14.31**	**151**	P	**Pn**	**00 11 43.3**	**+1.7**
	251nm,1.2s,5μm8μm						
SSLB	**Suanglung**	**14.58**	**343**		**Pn**	**00 11 43.7**	**-1.5**
SSLB	**Suanglung**	**14.58**	**343**	P	**Pn**	**00 11 47.7**	**+2.5**
SPSI	**Sidrap Palu**	**14.78**	**203**	P	**Pn**	**00 11 50.3**	**+2.4**
	286nm,1.1s,6μm9μm						
NACB	**Ninganchiao**	**14.78**	**346**		**Pn**	**00 11 45.7**	**-2.2**
NACB	**Ninganchiao**	**14.78**	**346**	P	**P**	**00 11 50.8**	**-2.8**
YOJ	**Yonaguni jima**	**14.79**	**351**		**Pn**	**00 11 47.1**	**-0.8**
YOJ	**Yonaguni jima**	**14.79**	**351**	P	**P**	**00 11 51.8**	**-1.8**
YOJ	**Yonaguni jima**	**14.79**	**351**	P	**Pn**	**00 11 47.1**	**-0.8**
BNDI	**Bandanaira**	**14.88**	**162**	P	**Pn**	**00 11 49.5**	**+0.2**
	688nm,1.3s,17μm6μm						
SBUM	**Sibu**	**15.03**	**242**		**Pn**	**00 11 51.8**	**+0.5**
SBUM	**Sibu**	**15.03**	**242**	P	**P**	**00 11 57.0**	**+0.6**
YHNB	**Yeheng**	**15.31**	**346**		**Pn**	**00 11 54.7**	**-0.3**
YHNB	**Yeheng**	**15.31**	**346**	P	**P**	**00 11 58.0**	**-1.5**
TATO	**Taipei**	**15.58**	**346**		**Pn**	**00 11 57.2**	**-1.1**
TATO	**Taipei**	**15.58**	**346**	P	**P**	**00 12 01.0**	**-1.4**
TATO	**Taipei**	**15.58**	**346**	P	**Pn**	**00 12 00.4**	**+2.0**
TATO				P	**Pn**	**00 12 00.4**	**+2.0**
TATO				S	**Sn**	**00 14 47.5**	**-2.8**
TATO				S	**Sn**	**00 14 47.5**	**-2.8**
KAPI	**Kappang**	**15.75**	**201**	Pn	**Pn**	**00 12 01.4**	**+0.7**
	0.9nm,0.3s,baz=353,slow=8.2,SNR=15						
KAPI				Sn	**Sn**	**00 14 58.5**	**+3.9**
	0.5nm,0.3s,baz=31,slow=16,SNR=1.3						
	117nm,1.1s						
KAPI	**Kappang**	**15.75**	**201**		**Pn**	**00 12 00.8**	**+0.1**
KAPI	**Kappang**	**15.75**	**201**	P	**P**	**00 12 04.2**	**-0.2**
KAPI	**Kappang**	**15.75**	**201**	P	**Pn**	**00 12 01.4**	**+0.7**
KAPI				P	**Pn**	**00 12 01.4**	**+0.7**
KAPI				P	**Pn**	**00 12 01.4**	**+0.7**
KAPI				S	**S**	**00 15 03.0**	**-5.9**
KAPI				S	**S**	**00 15 03.0**	**-5.9**
KAPI				S	**S**	**00 15 03.0**	**-5.9**
SRPI	**Serui, Papua**	**15.79**	**137**	P	**Pn**	**00 12 02.2**	**+1.0**
	469nm,1.3s,11μm8μm						
BKSI	**Bulukumba**	**15.91**	**200**	P	**P**	**00 12 04.8**	**-1.4**
	122nm,2.1s,5μm10μm						
HKC	**Hong Kong Obse**	**16.50**	**320**	⇑P	**Pn**	**00 12 11.0**	**+0.8**
HKPS	**Hong Kong Po S**	**16.50**	**320**		**Pn**	**00 12 08.7**	**-1.5**
HKPS				IAmb	IAmb	00 12 16.3	
	comp=Z,765nm,1.3s						
HKPS	**Hong Kong Po S**	**16.50**	**320**	P	**P**	**00 12 14.4**	**+1.7**
BSSI	**Bau Bau, Buton**	**16.57**	**198**	P	**P**	**00 12 13.5**	**0.0**
	comp=Z,385nm,2.0s,comp=Z,10μmcomp=Z,10μm						
MCO	**Taipa Grande**	**16.76**	**318**	P	**P**	**00 12 16.0**	**+0.4**
DLV	**T Lat**	**16.80**	**279**	P	**P**	**00 12 18.1**	**+1.8**
	comp=Z,143nm,1.6s						
JMZ	**Minamidaito 2**	**16.87**	**18**		**Pn**	**00 12 12.1**	**-2.7**
JMZ	**Minamidaito 2**	**16.87**	**18**	P	**P**	**00 12 17.5**	**+0.8**
BBKI	**Banjar Baru**	**16.88**	**219**	P	**P**	**00 12 17.2**	**+0.3**
	comp=Z,473nm,1.2s,comp=Z,8μm						
JOW	**Kunigami**	**17.17**	**9**	P	**P**	**00 12 20.3**	**+0.2**
	comp=Z,107nm,0.8s,baz=159,slow=14,SNR=23						
JOW				S	**Sn**	**00 15 32.5**	**+3.6**
	comp=Z,4.8nm,0.3s,baz=100,slow=27,SNR=1.2						
JOW				LR	LR	00 17 54.3	
	comp=Z,11μm,20.9s,baz=166,slow=34						
JOW	**Kunigami**	**17.17**	**9**	P	**Pn**	**00 12 18.9**	**+0.2**
JOW	**Kunigami**	**17.17**	**9**	P	**P**	**00 12 21.0**	**+0.9**
KSM	**Kuching**	**17.17**	**242**		**Pn**	**00 12 18.2**	**-0.5**
KSM	**Kuching**	**17.17**	**242**	P	**P**	**00 12 22.1**	**+1.9**
KSM	**Kuching**	**17.17**	**242**	P	**P**	**00 12 24.0**	**+3.8**
QIZ	**Qiongzhong**	**17.68**	**303**	⇓P	**P**	**00 12 25.7**	**-0.1**
QIZ				sP	**sP**	**00 12 35.1**	**-1.4**
QIZ				S	**Sn**	**00 15 44.1**	**+2.6**
QIZ				pmax	pmax		
	comp=Z,100nm,2.7s						
QIZ				pmax	pmax		
	comp=Z,5μm,9.2s						
QIZ				LR	LR		
	comp=Z,9μm,15.9s						
QIZ				LR	LR		
	comp=Z,7μm,14.3s						
QIZ				LR	LR		
	comp=Z,9μm,16.7s						
QIZ	**Qiongzhong**	**17.68**	**303**	P	**Pn**	**00 12 25.3**	**+0.2**
QIZ	**Qiongzhong**	**17.68**	**303**	P	**P**	**00 12 28.1**	**+2.3**
MMRI	**Maumere**	**18.57**	**190**	P	**P**	**00 12 35.0**	**-0.6**
MMRI	**Maumere**	**18.57**	**190**	P	**Pn**	**00 12 38.7**	**+2.8**
MMRI	**Maumere**	**18.57**	**190**	P	**Pn**	**00 12 36.8**	**+0.9**
	comp=Z,354nm,1.0s,comp=Z,7μmcomp=Z,9μm						
SAUI	**Saumlaki**	**18.58**	**162**	P	**P**	**00 12 34.0**	**-1.7**
SAUI				IAmb	IAmb	00 12 45.8	
	comp=Z,935nm,1.4s						
GENI	**Genyem**	**19.13**	**129**	P	**Pn**	**00 12 45.6**	**+2.9**
GENI	**Genyem**	**19.13**	**129**	P	**P**	**00 12 42.1**	**+0.4**
	comp=Z,1μm,2.6s,comp=Z,30μmcomp=Z,20μm						
GUMO	**Guam**	**19.38**	**77**	P	**Pn**	**00 12 45.7**	**-0.1**
	comp=Z,3.8nm,0.3s,baz=5.5,slow=16,SNR=1.5						
GUMO				S	**Sn**	**00 16 30.9**	**+8.3**
	comp=Z,21nm,0.3s,baz=22,slow=20,SNR=1.1						
	comp=Z,116nm,1.1s						
GUMO	**Guam**	**19.38**	**77**	P	**Pn**	**00 12 46.7**	**+0.9**
SOEI	**Soe**	**19.44**	**184**	P	**P**	**00 12 45.5**	**+0.2**
SOEI				IAmb	IAmb	00 12 58.0	
	comp=Z,326nm,1.0s						
SOEI	**Soe**	**19.44**	**184**	P	**Pn**	**00 12 49.0**	**+2.5**
SOEI	**Soe**	**19.44**	**184**	P	**Pn**	**00 12 48.7**	**+2.2**
PLAI	**Plampang**	**20.00**	**203**	P	**P**	**00 12 52.1**	**+0.8**
PLAI	**Plampang**	**20.00**	**203**	P	**P**	**00 12 51.7**	**+0.5**
	comp=Z,307nm,0.9s,comp=Z,5μmcomp=Z,6μm						
BWJI	**Bawean**	**20.09**	**220**	P	Pn	00 12 53.8	-0.3
	comp=Z,2μm,1.4s,comp=Z,24μmcomp=Z,6μm						
TWSI	**Taliwang, Sumb**	**20.28**	**205**	P	Pn	00 12 55.3	-1.0
	comp=Z,626nm,1.3s,comp=Z,6μmcomp=Z,6μm						
BASI	**Baing, Sumba**	**20.45**	**194**	P	Pn	00 12 59.7	+1.4
ABJI	**Asem Bagus**	**20.73**	**213**	P	**P**	**00 13 00.0**	**+0.9**
	comp=Z,281nm,1.3s,comp=Z,5μmcomp=Z,5μm						
GRJI	**Gresik**	**21.02**	**218**	P	**P**	**00 13 04.3**	**+2.0**
	comp=Z,735nm,1.1s,comp=Z,7μmcomp=Z,3μm						
BLJI	**Banyuglugur**	**21.04**	**215**	P	**P**	**00 13 03.9**	**+1.4**
	comp=Z,213nm,1.2s,comp=Z,4μm						
GULI	**GuiLin**	**21.06**	**319**	⇓P	**P**	**00 13 08.9**	**+6.2**
GULI				S	**S**	**00 16 59.2**	**+3.3**
GULI				pmax	pmax		
	comp=Z,420nm,0.7s						
GULI				LR	LR		
	comp=N,12μm,19.5s						
GULI				LR	LR		
	comp=E,14μm,20.6s						
GULI				LR	LR		
	comp=Z,7μm,16.7s						
IGBI	**Denpasar**	**21.13**	**209**	P	**P**	**00 13 05.2**	**+1.7**
	comp=Z,214nm,1.1s,comp=Z,4μm						
JAGI	**Jajag, Banyuwa**	**21.34**	**212**	P	**P**	**00 13 04.5**	**-1.2**
JAGI				IAmb	IAmb	00 13 19.6	
	comp=Z,423nm,1.0s						
JAGI	**Jajag, Banyuwa**	**21.34**	**212**	P	**P**	**00 13 08.0**	**+2.3**
JAGI	**Jajag, Banyuwa**	**21.34**	**212**	P	**P**	**00 13 06.3**	**+0.6**
	comp=Z,693nm,1.3s,comp=Z,7μmcomp=Z,4μm						
TBJI	**Tambak Boyo**	**21.34**	**220**	P	**P**	**00 13 07.3**	**+1.5**
	comp=Z,625nm,1.3s,comp=Z,9μmcomp=Z,5μm						
SSE	**Sheshan**	**21.58**	**350**	P	**P**	**00 13 08.3**	**+0.1**
SSE				S	**S**	**00 17 05.8**	**-0.2**
SSE				pmax	pmax		
	comp=Z,73nm,1.2s						
SSE				pmax	pmax		
	comp=Z,820nm,7.9s						
SSE				LR	LR		
	comp=Z,2μm,16.8s						
SSE				LR	LR		
	comp=Z,2μm,16.8s						
UWJI	**Ujung Watu**	**21.63**	**222**	P	**P**	**00 13 10.4**	**+1.6**
	comp=Z,722nm,1.4s,comp=Z,9μm						
CNSH	**ChangSha**	**21.77**	**329**	⇓P	**P**	**00 13 10.5**	**+0.2**
CNSH				S	**S**	**00 17 11.2**	**+1.4**
CNSH				pmax	pmax		
	comp=Z,100nm,1.4s						
CNSH				LR	LR		
	comp=Z,14μm,21.8s						
CNSH				LR	LR		
	comp=Z,15μm,21.4s						
CNSH				LR	LR		
	comp=Z,16μm,18.6s						
NGJI	**Ngawi**	**22.01**	**220**	P	**P**	**00 13 14.4**	**+1.5**
	comp=Z,636nm,1.1s,comp=Z,8μm						
JSU	**Suzuyama**	**22.11**	**11**	P	**P**	**00 13 11.9**	**-2.0**
JSU	**Suzuyama**	**22.11**	**11**	P	**P**	**00 13 14.4**	**+0.4**
PWJI	**Pagerwojo**	**22.30**	**218**	P	**P**	**00 13 14.3**	**-1.8**
SMRI	**Semarang**	**22.43**	**222**	P	**P**	**00 13 17.6**	**+0.1**
SMRI	**Semarang**	**22.43**	**222**	P	**P**	**00 13 21.1**	**+3.6**
SMRI	**Semarang**	**22.43**	**222**	P	**P**	**00 13 18.9**	**+1.4**
	comp=Z,861nm,1.4s,comp=Z,13μmcomp=Z,7μm						
PPBI	**Pangkal Pinang**	**22.60**	**239**	P	**P**	**00 13 19.9**	**+0.6**
	comp=Z,118nm,1.6s,comp=Z,12μm						
MYKOM	**Kota Tinggi**	**22.90**	**251**	P	**P**	**00 13 21.9**	**-0.5**
MYKOM				IAmb	IAmb	00 13 45.0	
	comp=Z,415nm,1.8s						
MYKOM	**Kota Tinggi**	**22.90**	**251**	P	**P**	**00 13 27.0**	**+4.6**
NJ2	**Nanjing**	**22.99**	**346**	⇓P	**P**	**00 13 22.8**	**-0.4**
NJ2				pP	**pP**	**00 13 25.5**	**-5.1**
NJ2				PP	**PnPn**	**00 13 48.1**	**-0.5**
NJ2				S	**S**	**00 17 31.5**	**-0.6**
NJ2				sS	**pS**	**00 17 37.6**	**-3.1**
NJ2				pmax	pmax		
	comp=Z,67nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,2μm,4.0s						
NJ2				LR	LR		
	comp=Z,4μm,14.7s						
NJ2				LR	LR		
	comp=Z,7μm,17.1s						
NJ2				LR	LR		
	comp=Z,6μm,21.8s						
UGM	**Wanagama**	**23.02**	**221**	P	**P**	**00 13 22.7**	**-1.0**
UGM	**Wanagama**	**23.02**	**221**	P	**P**	**00 13 25.3**	**+1.6**
UGM	**Wanagama**	**23.02**	**221**	P	**P**	**00 13 23.4**	**-0.3**
	comp=Z,813nm,1.7s,comp=Z,13μmcomp=Z,7μm						
YOGI	**Yogyakarta**	**23.10**	**221**	P	**P**	**00 13 25.3**	**+0.8**
	comp=Z,340nm,1.4s,comp=Z,7μm						
WHN	**Wuhan**	**23.11**	**335**	⇓*i*P	**P**	**00 13 24.4**	**0.0**
WHN				S	**S**	**00 17 35.4**	**+1.3**
WHN				pmax	pmax		
	comp=Z,940nm,1.3s						
WHN				pmax	pmax		
	comp=Z,6μm,4.2s						
WHN				LR	LR		
	comp=Z,21μm,13.4s						
WHN				LR	LR		
	comp=Z,15μm,13.5s						
WHN				LR	LR		
	comp=Z,36μm,16.4s						
DSRI	**Dabo**	**23.14**	**245**	P	**P**	**00 13 26.0**	**+1.0**
	comp=Z,108nm,1.6s,comp=Z,2μm						
NONG	**Nongkai**	**23.15**	**293**	P	**P**	**00 13 25.1**	**+0.1**
	comp=Z,235nm,1.5s						
MTN	**Manton Dam**	**23.17**	**166**	P	**P**	**00 13 25.0**	**-0.2**
	baz=23,SNR=20						
MTN	**Manton Dam**	**23.17**	**166**	P	**P**	**00 13 21.9**	**-3.3**
MTN				IAmb	IAmb	00 13 33.4	
	comp=Z,353nm,1.1s						
MTN	**Manton Dam**	**23.17**	**166**	P	**P**	**00 13 25.2**	**0.0**
JCJ	**Chichijima**	**23.37**	**40**	P	**P**	**00 13 27.9**	**+0.8**
	comp=Z,209nm,0.8s,baz=279,slow=5.7,SNR=9.7						
JCJ				LR	LR	00 20 38.7	
	comp=Z,2μm,20.6s,baz=220,slow=32						
	comp=Z,209nm,0.8s						
JCJ	**Chichijima**	**23.37**	**40**	P	**P**	**00 13 24.8**	**-2.3**
JCJ				IAmb	IAmb	00 13 34.5	
	comp=Z,324nm,0.9s						
JCJ	**Chichijima**	**23.37**	**40**	P	**P**	**00 13 30.2**	**+3.1**
KDU	**Kakadu**	**23.38**	**163**	P	**P**	**00 13 26.9**	**-0.4**
	baz=23,SNR=37						
KDU	**Kakadu**	**23.38**	**163**	P	**P**	**00 13 27.7**	**+0.4**
JRMM	**Jerantut**	**23.54**	**257**	P	**P**	**00 13 31.0**	**+2.1**
KPJI	**Karang Pucung**	**23.66**	**225**	P	**P**	**00 13 31.3**	**+1.3**
	comp=Z,312nm,1.1s,comp=Z,7μm						
JNU	**Nakatsue**	**23.77**	**11**	P	**P**	**00 13 29.8**	**-1.1**
	comp=Z,50nm,0.9s,baz=214,slow=2.5,SNR=26						
JNU				S	**S**	**00 17 45.0**	**+0.2**
	comp=Z,6.4nm,1.0s,baz=350,slow=12,SNR=1.9						
JNU				LR	LR	00 21 52.0	
	comp=Z,4μm,21.4s,baz=186,slow=34						
	comp=Z,50nm,0.9s						
JNU	**Nakatsue**	**23.77**	**11**	P	**P**	**00 13 28.8**	**-2.1**
JNU	**Nakatsue**	**23.77**	**11**	P	**P**	**00 13 31.1**	**+0.2**
NAYO	**Nakonayok**	**24.02**	**283**	P	**P**	**00 13 33.6**	**+0.2**
	comp=Z,1μm,1.4s						
PMBI	**Palembang**	**24.16**	**240**	P	**P**	**00 13 34.1**	**-0.6**
PMBI	**Palembang**	**24.16**	**240**	P	**P**	**00 13 37.4**	**+2.7**
	comp=Z,508nm,1.3s						
PMBI	**Palembang**	**24.16**	**240**	P	**P**	**00 13 36.4**	**+1.7**
	comp=Z,513nm,1.3s,comp=Z,7μm						
CMJI	**Cimerak**	**24.32**	**225**	P	**P**	**00 13 37.2**	**+1.1**
	comp=Z,208nm,1.5s,comp=Z,5μmcomp=Z,3μm						
GYA	**Guiyang**	**24.32**	**315**	⇑*i*P	**P**	**00 13 37.3**	**+1.1**
GYA				pP	pP	00 13 43.5	-0.6
GYA				S	**S**	**00 17 57.2**	**+3.2**

GYA				pmax	pmax		
	comp=Z,160nm,2.2s						
GYA				pmax	pmax		
	comp=Z,4µm,3.5s						
GYA				LR	LR		
	comp=Z,9µm,13.6s						
GYA				LR	LR		
	comp=Z,5µm,14.5s						
GYA				LR	LR		
	comp=Z,5µm,16.4s						
CBJI	**Citeko**	24.55	230	P	P	00 13 40.5	+2.3
	comp=Z,387nm,1.2s,comp=Z,12µm						
BBJI	**Bungbulang**	24.65	227	P	P	00 13 41.0	+1.7
SKLT	**Songkhla**	24.70	266	P	P	00 13 40.5	+0.9
IPM	**Ipoh**	24.80	259	P	P	00 13 39.9	-0.7
IPM				IAmb	IAmb	00 13 58.6	
	comp=Z,117nm,1.1s						
IPM				IAMs_20	IAMs_20	00 25 03.4	
	comp=Z,7µm,21.0s						
IPM	**Ipoh**	24.80	259	P	P	00 13 41.3	+0.7
JTU	**Tsushima**	24.89	8	P	P	00 13 40.0	-1.2
JTU	**Tsushima**	24.89	8	P	P	00 13 41.6	+0.4
SBJI	**Serang**	24.90	231	P	P	00 13 42.6	+1.1
	comp=Z,455nm,1.6s,comp=Z,10µm						
CNJI	**Cibinong**	24.93	228	P	P	00 13 40.6	-1.1
	comp=Z,218nm,1.3s,comp=Z,3µm						
KULM	**Kulim**	24.98	262	P	P	00 13 40.8	-1.4
KULM				IAmb	IAmb	00 13 53.0	
	comp=Z,170nm,1.3s						
JMN	**Monobe**	25.07	17	P	P	00 13 41.7	-1.1
JMN				IAmb	IAmb	00 13 49.6	
	comp=Z,338nm,1.3s						
JMN	**Monobe**	25.07	17	P	P	00 13 43.3	+0.5
BLSI	**Bandar Lampung**	25.14	234	P	P	00 13 44.8	+1.2
	comp=Z,234nm,1.2s,comp=Z,4µm						
ENH	**Enshi**	25.25	326	P	P	00 13 43.3	-1.2
ENH				IAmb	IAmb	00 13 46.9	
	comp=Z,280nm,1.0s						
ENH	**Enshi**	25.25	326	P	P	00 13 44.6	0.0
SURA	**Surathani**	25.48	271	P	P	00 13 48.0	+1.3
	comp=Z,74nm,1.2s						
MDSI	**Maura Dua**	25.50	237	P	P	00 13 46.2	-0.7
	comp=Z,156nm,1.5s,comp=Z,2µmcomp=Z,2µm						
KNRA	**Kununurra**	25.50	173	P	P	00 13 45.9	-1.0
	baz=26,SNR=30						
KNRA	**Kununurra**	25.50	173	P	P	00 13 45.5	-1.3
KNRA				IAmb	IAmb	00 13 54.6	
	comp=Z,383nm,1.1s						
KNRA	**Kununurra**	25.50	173	P	P	00 13 47.1	+0.3
SRIT	**Nakonsritamara**	25.55	269	P	P	00 13 46.0	-1.4
SRIT	**Nakonsritamara**	25.55	269	P	P	00 13 48.2	+0.9
	comp=Z,58nm,1.5s						
CGJI	**Cibinong**	25.55	231	P	P	00 13 46.4	-0.9
	comp=Z,174nm,1.3s,comp=Z,6µm						
KASI	**Kota Agung**	25.83	235	P	P	00 13 49.4	-0.5
	comp=Z,186nm,1.3s,comp=Z,2µm						
LWLI	**Liwa**	25.89	236	P	P	00 13 51.7	+1.1
	comp=Z,408nm,1.2s,comp=Z,9µmcomp=Z,2µm						
PHRA	**Phrae**	25.92	292	P	P	00 13 50.4	-0.4
BKNI	**Bangkinang**	26.04	250	P	P	00 13 51.7	-0.1
BKNI				IAmb	IAmb	00 14 09.6	
	comp=Z,434nm,1.4s						
BKNI	**Bangkinang**	26.04	250	P	P	00 13 55.0	+3.1
	comp=Z,205nm,1.1s						
BKNI	**Bangkinang**	26.04	250	P	P	00 13 53.2	+1.3
	comp=Z,203nm,1.1s,comp=Z,3µm						
JHS	**Saijyo**	26.06	14	P	P	00 13 50.7	-1.2
JHS				IAmb	IAmb	00 14 00.9	
	comp=Z,120nm,1.1s						
JHS	**Saijyo**	26.06	14	P	P	00 13 52.8	+0.9
SDSI	**Sungai Dareh**	26.18	247	P	P	00 13 53.5	+0.4
	comp=Z,81nm,1.3s,comp=Z,1µmcomp=Z,899nm						
CRAI	**Chiangrai**	26.32	296	P	P	00 13 53.9	-0.5
CRAI				IAmb	IAmb	00 14 06.9	
	comp=Z,260nm,1.3s						
KMI	**Kunming**	26.44	308	⇓P	P	00 13 56.5	+0.9
KMI				S	S	00 18 29.8	+1.8
KMI				pmax	pmax		
	comp=Z,200nm,1.2s						
KMI				LR	LR		
	comp=Z,4µm,18.2s						
KMI				LR	LR		
	comp=Z,7µm,19.9s						
KMI				LR	LR		
	comp=Z,7µm,16.2s						
TJN	**Taejon**	26.54	3	P	P	00 13 54.2	-1.9
TJN				IAmb	IAmb	00 14 08.8	
	comp=Z,192nm,0.8s						
TJN	**Taejon**	26.54	3	P	P	00 13 55.7	-0.4
TJN	**Taejon**	26.54	3	P	P	00 13 54.2	-1.9
TJN				pmax	pmax		
	comp=Z,192nm,0.8s						
JHJ	**Hachijo jima 2**	26.72	28	LR	LR	00 23 00.0	
	comp=Z,2µm,21.9s,baz=232,slow=33						
PDSI	**Padang**	27.05	248	P	P	00 14 01.4	+0.4
	comp=Z,53nm,1.2s						
CM31	**Chiang Mai Arr**	27.09	291	P	P	00 14 00.9	-0.4
CM31				IAmb	IAmb	00 14 04.5	
	comp=Z,353nm,1.6s						
CM31	**Chiang Mai Arr**	27.09	291	P	P	00 14 02.1	+0.8
	SNR=69						
CM31				P	P	00 14 02.1	+0.8
	SNR=69						
CM31				S	S	00 18 41.6	+3.6
CM31				S	S	00 18 41.6	+3.6
CMAR	**Chiang Mai Arr**	27.09	291	P	P	00 14 00.5	-0.8
	comp=Z,15nm,0.8s,baz=104,slow=6.6,SNR=110						
CMAR				PcP	PcP	00 17 22.1	+0.1
	comp=Z,2.2nm,0.3s,baz=80,slow=1.5,SNR=4.4						
CMAR				ScP	ScP	00 21 04.7	+4.0
	comp=Z,1.7nm,0.3s,baz=86,slow=1.7,SNR=4.7						
CMAR				LR	LR	00 24 56.7	
	comp=Z,4µm,20.9s,baz=110,slow=37						
	comp=Z,15nm,0.8s						
CMAR	**Chiang Mai Arr**	27.09	291	P	P	00 14 01.2	0.0
CMAR	**Chiang Mai Arr**	27.09	291	*ce*P	P	00 14 01.7	+0.4
CMAR				pmax	pmax		
	comp=Z,38nm,0.9s						
CHTO	**Chiang Mai**	27.18	292	P	P	00 14 01.8	-0.3
CHTO	**Chiang Mai**	27.18	292	P	P	00 14 01.8	-0.3
PSI	**Prapat**	27.25	257	P	P	00 14 02.2	-0.7
PSI				pmax	pmax		
	comp=Z,87nm,1.1s						
PSI				MLR	MLR		
	comp=Z,4µm,22.0s						
RPSI	**Rantau Prapat**	27.28	257	P	P	00 14 02.1	-0.9
LYN	**LuoYang**	27.38	336	⇓*i*P	P	00 14 03.2	-0.5
LYN				pP	sP	00 14 14.5	-0.5
LYN				sP	pP	00 14 20.5	+9.1
LYN				PP	PnPn	00 14 51.1	+2.7
LYN				pmax	pmax		
	comp=Z,100nm,1.2s						
LYN				LR	LR		
	comp=Z,7µm,15.8s						
LYN				LR	LR		
	comp=Z,6µm,15.8s						
LYN				LR	LR		
	comp=Z,6µm,22.9s						
JSG	**Sagara**	27.38	23	P	P	00 14 02.7	-1.0
JSG				IAmb	IAmb	00 14 05.2	
	comp=Z,222nm,1.1s						
JSG	**Sagara**	27.38	23	P	P	00 14 05.0	+1.3
	comp=Z,207nm,1.2s						
INU	**Inuyama**	27.55	21	P	P	00 14 04.0	-1.2
INU				IAMs_20	IAMs_20	00 23 03.5	
	comp=Z,6µm,21.0s						
INU	**Inuyama**	27.55	21	P	P	00 14 04.8	-0.4
INCN	**Inchon**	27.61	2	IAMs_20	IAMs_20	00 23 39.0	
	comp=Z,6µm,21.0s						
INCN	**Inchon**	27.61	2	P	P	00 14 04.5	-1.2
KSAR	**Wonju Array Be**	27.63	4	P	P	00 14 04.9	-1.0
KSAR	**Wonju Array Be**	27.63	4	P	P	00 14 04.9	-1.0
KSRS	**Korea Array**	27.64	4	P	P	00 14 05.6	-0.4
	comp=Z,17nm,0.7s,baz=185,slow=10,SNR=61						
KSRS				LR	LR	00 24 24.5	
	comp=Z,4µm,20.3s,baz=190,slow=35						
	comp=Z,17nm,0.7s						
KS19	**Wonju Array Si**	27.69	4	P	P	00 14 05.2	-1.2
KS19				IAmb	IAmb	00 14 21.3	
	comp=Z,183nm,1.4s						
FITZ	**Fitzroy Crossi**	27.70	180	P	P	00 14 06.4	-0.2
	baz=28						
FITZ	**Fitzroy Crossi**	27.70	180	P	P	00 14 05.3	-1.4
FITZ	**Fitzroy Crossi**	27.70	180	P	P	00 14 05.9	-0.7
JGF	**Kuroka**	27.90	21	P	P	00 14 06.4	-2.0
JGF				IAmb	IAmb	00 14 16.1	
	comp=Z,124nm,1.4s						
JGF	**Kuroka**	27.90	21	P	P	00 14 07.8	-0.6
PZH	**PanZhiHua**	27.92	310	P	P	00 14 08.6	-0.2
PZH				sP	pP	00 14 17.0	+0.3
PZH				PP	PnPn	00 14 56.2	+0.1
PZH				S	S	00 18 49.8	-1.4
PZH				SS	SnSn	00 20 16.9	+11
PZH				pmax	pmax		
	comp=Z,140nm,1.5s						
PZH				pmax	pmax		
	comp=Z,1µm,4.6s						
PZH				LR	LR		
	comp=Z,5µm,18.5s						
PZH				LR	LR		
	comp=Z,6µm,20.0s						
PZH				LR	LR		
	comp=Z,5µm,16.7s						
XMI	**Christmas Isla**	28.11	225	P	P	00 14 11.9	+1.4
KCSI	**Kotacane, Aceh**	28.18	259	P	P	00 14 10.5	-0.6
	comp=Z,59nm,0.8s						
XAN	**Xi'an**	28.52	330	⇓P	P	00 14 12.4	-1.6
XAN				pP	pP	00 14 22.5	+0.7
XAN				PP	PnPn	00 15 03.8	-0.3
XAN				S	S	00 18 56.5	-3.8
XAN				pmax	pmax		
	comp=Z,130nm,1.2s						
XAN				LR	LR		
	comp=Z,7µm,22.5s						
XAN				LR	LR		
	comp=Z,8µm,21.9s						
XAN				LR	LR		
	comp=Z,8µm,18.1s						
LHMI	**Lhok Sumawe**	28.61	263	P	P	00 14 14.5	-0.5
LHMI				IAmb	IAmb	00 14 55.4	
	comp=Z,302nm,1.3s						
LHMI	**Lhok Sumawe**	28.61	263	P	P	00 14 16.3	+1.3
	comp=Z,170nm,1.4s						
LHMI	**Lhok Sumawe**	28.61	263	P	P	00 14 16.2	+1.3
	comp=Z,185nm,1.1s,comp=Z,3µmcomp=Z,3µm						
PMG	**Port Moresby**	28.81	131	P	P	00 14 16.4	-0.2
	comp=Z,36nm,0.8s,baz=321,slow=7.3,SNR=14						
PMG				S	S	00 19 00.3	-4.7
	comp=Z,6.1nm,0.3s,baz=192,slow=22,SNR=2.7						
PMG				LR	LR	00 26 46.9	
	comp=Z,1µm,21.1s,baz=314,slow=38						
	comp=Z,36nm,0.8s						
PMG	**Port Moresby**	28.81	131	P	P	00 14 15.6	-1.0
PMG	**Port Moresby**	28.81	131	P	P	00 14 17.2	+0.6
PMG	**Port Moresby**	28.81	131	P	P	00 14 17.1	+0.5
PMG	**Port Moresby**	28.81	131	P	P	00 14 15.6	-1.0
PMG				pmax	pmax		
	comp=Z,519nm,1.7s						
GSI	**Gunungsitoli**	28.97	255	P	P	00 14 17.3	-0.9
GSI				IAmb	IAmb	00 14 31.6	
	comp=Z,219nm,1.4s						
GSI	**Gunungsitoli**	28.97	255	P	P	00 14 20.4	+2.3
MJAR	**Matsushiro Arr**	29.05	21	P	P	00 14 16.8	-1.7
	comp=Z,26nm,1.0s,baz=193,slow=8.6,SNR=54						
MJAR				LR	LR	00 24 12.8	
	comp=Z,6µm,21.6s,baz=194,slow=33						
	comp=Z,26nm,1.0s						
MAJO	**Matsushiro**	29.05	21	P	P	00 14 15.7	-2.9
MAJO	**Matsushiro**	29.05	21	IAMs_20	IAMs_20	00 23 28.4	
	comp=Z,6µm,21.0s						
MAJO	**Matsushiro**	29.05	21	P	P	00 14 17.2	-1.4
MAJO	**Matsushiro**	29.05	21	*di*P	P	00 14 16.4	-2.2
MAJO				pmax	pmax		
	comp=Z,53nm,1.1s						
MAJO				MLR	MLR		
	comp=Z,3µm,14.0s						
MJB9	**Matsu-Tunnel**	29.05	21	P	P	00 14 16.9	-1.7
CD2	**Chengdu**	29.14	319	P	P	00 14 18.9	-0.7
CD2				PP	PnPn	00 15 09.3	-3.4
CD2				S	S	00 19 11.5	+1.3
CD2				pmax	pmax		
	comp=Z,60nm,0.6s						
CD2				pmax	pmax		
	comp=Z,740nm,8.9s						
CD2				LR	LR		
	comp=Z,4µm,16.1s						
CD2				LR	LR		
	comp=Z,5µm,17.1s						
CD2				LR	LR		
	comp=Z,14µm,16.3s						
HNS	**HongShan**	29.16	342	⇓P	P	00 14 18.9	-0.6
HNS				S	S	00 19 09.2	-0.9
HNS				SS	SnSn	00 20 35.8	-0.2
HNS				pmax	pmax		
	comp=Z,76nm,1.3s						
HNS				LR	LR		
	comp=Z,4µm,17.1s						
HNS				LR	LR		
	comp=Z,4µm,15.3s						
HNS				LR	LR		
	comp=Z,6µm,16.5s						
DL2	**Dalian**	29.21	354	P	P	00 14 19.9	0.0
DL2				S	S	00 19 12.5	+1.7
DL2				pmax	pmax		
	comp=Z,110nm,1.1s						
DL2				pmax	pmax		
	comp=Z,740nm,6.4s						
DL2				LR	LR		
	comp=Z,5µm,16.0s						
DL2				LR	LR		
	comp=Z,3µm,15.2s						
DL2				LR	LR		
	comp=Z,6µm,17.3s						
COEN	**Coen**	29.41	143	P	P	00 14 21.3	-0.7
	baz=29,SNR=61						
COEN	**Coen**	29.41	143	P	P	00 14 20.7	-1.3
COEN	**Coen**	29.41	143	P	P	00 14 21.0	-1.0
TNCH	**TengChong**	29.75	304	⇓P	P	00 14 25.7	+0.5
TNCH				pP	pP	00 14 30.4	-2.8
TNCH				sP	sP	00 14 34.8	-1.4
TNCH				PP	PnPn	00 15 22.8	+1.6
TNCH				S	S	00 19 20.0	-0.2
TNCH				sS	pS	00 19 30.4	+1.2
TNCH				SS	SnSn	00 20 55.3	+4.4
TNCH				pmax	pmax		
	comp=Z,620nm,1.4s						
TNCH				pmax	pmax		
	comp=Z,2µm,3.7s						
TNCH				LR	LR		
	comp=Z,2µm,12.9s						
TNCH				LR	LR		
	comp=Z,3µm,15.6s						
TNCH				LR	LR		
	comp=Z,5µm,17.5s						
KRVT	**Keravat (AS076**	29.94	117	P	P	00 14 27.8	+1.0
	comp=Z,25nm,0.7s,baz=291,slow=9.1,SNR=20						
	comp=Z,25nm,0.7s						
RABL	**Rabaul**	30.01	116	P	P	00 14 27.3	-0.1
RABL				IAmb	IAmb	00 14 48.4	
	comp=Z,165nm,1.3s						
RABL	**Rabaul**	30.01	116	P	P	00 14 31.1	+3.7
TIY	**Taiyuan**	30.19	339	⇓P	P	00 14 28.3	-0.4
TIY				S	S	00 19 27.4	+0.9
TIY				pmax	pmax		
	comp=Z,38nm,0.8s						
TIY				pmax	pmax		
	comp=Z,520nm,3.7s						
TIY				LR	LR		
	comp=Z,9µm,16.7s						
TIY				LR	LR		
	comp=Z,2µm,13.7s						
TIY				LR	LR		
	comp=Z,6µm,16.1s						
JSD	**Sado**	30.41	20	P	P	00 14 29.0	-1.6
JSD				IAmb	IAmb	00 14 37.4	
	comp=Z,104nm,1.3s						
JSD	**Sado**	30.41	20	P	P	00 14 30.0	-0.5
WB0	**Warramunga Arr**	30.65	163	P	P	00 14 31.2	-1.7
WB0				IAmb	IAmb	00 15 12.9	
	comp=Z,65nm,0.9s						
WRAB	**Tennant Creek**	30.80	163	P	P	00 14 33.2	-0.9
WRAB	**Tennant Creek**	30.80	163	P	P	00 14 33.3	-0.9
WRAB	**Tennant Creek**	30.80	163	P	P	00 14 33.3	-0.9
WRAB				pmax	pmax		
	comp=Z,55nm,1.0s						
WRAB				MLR	MLR		
	comp=Z,4µm,18.0s						
WRA	**Warramunga Arr**	30.80	164	P	P	00 14 32.4	-1.9
	comp=Z,13nm,0.8s,baz=343,slow=9.6,SNR=18						
WRA				LR	LR	00 29 26.0	
	comp=Z,3µm,18.3s,baz=332,slow=41						
WRA	**Warramunga Arr**	30.80	164	P	P	00 14 32.3	-1.9
WB2	**Warramunga Arr**	30.80	163	P	P	00 14 33.4	-0.9
	baz=31						
WB2	**Warramunga Arr**	30.80	163	P	P	00 14 33.5	-0.9
JMM	**Marumori**	31.19	24	P	P	00 14 35.8	-1.7
JMM				IAmb	IAmb	00 14 43.9	
	comp=Z,146nm,1.0s						
JMM	**Marumori**	31.19	24	P	P	00 14 37.2	-0.3
BJT	**Baijiatuau**	31.23	346	P	P	00 14 36.2	-1.6
BJT				IAmb	IAmb	00 14 52.5	
	comp=Z,216nm,1.5s						
BJT	**Baijiatuau**	31.23	346	P	P	00 14 37.9	+0.1
BJT	**Baijiatuau**	31.23	346	P	P	00 14 36.2	-1.6
BJT				pmax	pmax		
	comp=Z,216nm,1.5s						
BJT				MLR	MLR		
	comp=Z,3µm,20.0s						
BJI	**Beijing**	31.25	346	P	P	00 14 37.0	-0.9
BJI				S	S	00 19 44.7	+1.9
BJI				pmax	pmax		
	comp=Z,42nm,1.7s						
BJI				pmax	pmax		
	comp=Z,430nm,4.0s						
BJI				LR	LR		
	comp=Z,1µm,18.1s						
BJI				LR	LR		
	comp=Z,3µm,15.5s						
BJI				LR	LR		
	comp=Z,2µm,20.6s						
MBWA	**Marble Bar**	31.25	190	P	P	00 14 36.8	-1.4
MBWA	**Marble Bar**	31.25	190	P	P	00 14 37.9	-0.3
MBWA	**Marble Bar**	31.25	190	P	P	00 14 36.8	-1.4
MBWA				S	S	00 19 54.5	+11
PSA00	**Pilbara Seismi**	31.64	190	P	P	00 14 40.1	-1.4
PSA00				IAmb	IAmb	00 14 48.5	
	comp=Z,74nm,0.9s						
PSA00	**Pilbara Seismi**	31.64	190	P	P	00 14 39.8	-1.8
PSA00				IAmb	IAmb	00 14 48.5	
	comp=Z,47nm,0.9s						
PSA00	**Pilbara Seismi**	31.64	190	P	P	00 14 41.9	+0.3
SNY	**Shenyang**	31.97	357	⇓P	P	00 14 43.8	-0.4
SNY				S	S	00 19 54.0	0.0
SNY				pmax	pmax		
	comp=Z,150nm,1.2s						
SNY				pmax	pmax		
	comp=Z,1µm,4.3s						
SNY				LR	LR		
	comp=Z,3µm,18.2s						
SNY				LR	LR		
	comp=Z,4µm,15.9s						
SNY				LR	LR		
	comp=Z,6µm,22.9s						
LZH	**Lanzhou**	32.73	327	⇓P	P	00 14 51.7	+0.4
LZH				pP	pP	00 15 00.2	+1.1
LZH				sP	sP	00 15 03.8	+1.4
LZH				sS	sS	00 20 19.0	-0.5
LZH				pmax	pmax		
	comp=Z,97nm,1.3s						
LZH				pmax	pmax		
	comp=Z,500nm,6.2s						
LZH				LR	LR		
	comp=Z,15µm,17.2s						
LZH				LR	LR		
	comp=Z,11µm,16.5s						
LZH				LR	LR		
	comp=Z,20µm,16.2s						
QIS	**Mount Isa**	33.20	155	P	P	00 14 54.5	-0.9
	baz=33,SNR=30						
QIS	**Mount Isa**	33.20	155	P	P	00 14 54.8	-0.5
HHC	**Hu-ho-hao-te**	33.30	341	*e*P	P	00 14 55.9	-0.2
HHC				S	S	00 20 13.1	-2.0
HHC				SS	SnSn	00 22 13.7	-3.1
HHC				pmax	pmax		
	comp=Z,160nm,1.1s						
HHC				pmax	pmax		
	comp=Z,1µm,4.2s						
HHC				LR	LR		
	comp=Z,4µm,16.5s						
HHC				LR	LR		
	comp=Z,10µm,15.9s						
HHC				LR	LR		
	comp=Z,12µm,16.1s						
MTSU	**Mount Surprise**	33.41	146	P	P	00 14 57.2	0.0
	baz=34,SNR=180						
MTSU	**Mount Surprise**	33.41	146	P	P	00 14 57.5	+0.3
IMP	**Imphal**	33.49	301	*e*P	P	00 14 56.9	-1.0
IMP				IAML		00 14 58.8	
	comp=Z,180nm,1.0s						
SAIH	**SAIHA**	33.56	296	*e*P	P	00 14 58.6	-0.1
SAIH				IAmb	IAmb	00 15 08.4	
	comp=Z,290nm,1.1s						
MOKO	**MOKOCHONG**	33.57	303	*e*P	P	00 14 58.3	-0.5
MOKO				IAmb	IAmb	00 15 00.6	
	comp=Z,733nm,1.2s						
BTO	**Baotou**	33.62	339	*e*P	P	00 14 59.4	+0.6
BTO				S	S	00 20 22.0	+2.1
BTO				LR	LR		
	comp=Z,16µm,21.6s						
BTO				LR	LR		
	comp=Z,15µm,18.0s						
KOHI	**KOHIMA**	33.68	302	*e*P	P	00 14 58.8	-0.8
KOHI				IAmb	IAmb	00 15 00.7	
	comp=Z,1µm,1.6s						
JTM	**Tenmabayashi**	33.84	22	P	P	00 14 59.4	-1.3
JTM				IAmb	IAmb	00 15 04.7	
	comp=Z,346nm,2.0s						
CN2	**Changchun**	33.90	360	*e*P	P	00 15 00.9	-0.2
CN2				*e*pP	pP	00 15 10.0	+0.8
CN2				*e*S	S	00 20 22.9	-1.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,400nm,4.0s						
CN2				LR	LR		
	comp=Z,2µm,14.0s						
CN2				LR	LR		
	comp=Z,4µm,14.0s						
CN2				LR	LR		
	comp=Z,3µm,16.0s						
GIRL	**Giralia**	34.04	199	P	P	00 15 02.6	0.0
	baz=34,SNR=3.1						
GIRL	**Giralia**	34.04	199	P	P	00 15 01.6	-1.0
GIRL				IAmb	IAmb	00 15 10.0	
	comp=Z,224nm,1.2s						
GIRL	**Giralia**	34.04	199	P	P	00 15 03.9	+1.3
AS31	**Alice Springs**	34.25	166	P	P	00 15 03.8	-0.6
ASAR	**Alice Springs**	34.25	166	P	P	00 15 03.9	-0.6
	comp=Z,7.7nm,0.8s,baz=343,slow=5.8,SNR=40						
ASAR				ScP	ScP	00 21 23.7	-0.5
	comp=Z,3.6nm,1.1s,baz=347,slow=5.1,SNR=4.4						
ASAR				LR	LR	00 30 19.9	
	comp=Z,2µm,21.0s,baz=344,slow=38						
	comp=Z,7.7nm,0.8s						
ASAR	**Alice Springs**	34.25	166	P	P	00 15 03.5	-1.0
AS01	**Alice Springs**	34.26	166	P	P	00 15 05.7	+1.2
	comp=Z,42nm,1.1s						
ITAN	**ITANAGAR**	34.55	304	*e*P	P	00 15 08.0	+1.0
ITAN				IAmb	IAmb	00 15 09.2	
	comp=Z,461nm,0.9s						
ZIRO	**ZIRO**	34.61	305	*e*P	P	00 15 07.6	-0.1
ZIRO				IAmb	IAmb	00 15 09.7	
	comp=Z,866nm,1.4s						
WRKA	**Warakurna**	34.71	175	P	P	00 15 08.1	-0.3
	baz=35,SNR=53						
WRKA	**Warakurna**	34.71	175	P	P	00 15 08.1	-0.3
USA0B	**Ussuriysk Arra**	34.76	8	P	P	00 15 07.8	-0.8
USA0B				IAmb	IAmb	00 15 09.9	
	comp=Z,119nm,0.9s						
USA0B	**Ussuriysk Arra**	34.76	8	P	P	00 15 07.8	-0.8
USA0B				pmax	pmax		
	comp=Z,119nm,1.0s						
USRK	**Ussuriysk Ar.**	34.76	8	P	P	00 15 08.8	+0.2
	comp=Z,100nm,0.8s,baz=192,slow=7.6,SNR=112						
USRK				LR	LR	00 27 44.2	
	comp=Z,4µm,21.4s,baz=183,slow=34						
	comp=Z,100nm,0.8s						
USRK	**Ussuriysk Ar.**	34.76	8	P	P	00 15 08.4	-0.2
BRDH	**Bariadhala**	34.81	296	LR	LR	00 30 50.5	
	comp=Z,5µm,18.7s,baz=78,slow=39						
MDJ	**Mudanjiang**	34.90	5	P	P	00 15 08.4	-1.3
MDJ				pP	pP	00 15 13.7	-4.1
MDJ				PP	PnPn	00 16 26.1	-0.7
MDJ				PcP	PcP	00 17 42.1	-0.1
MDJ				S	S	00 20 41.1	+1.7
MDJ				PcS	PcS	00 21 26.4	-2.4
MDJ				SS	SnSn	00 22 51.1	-4.0

MDJ				ScS	**ScS**	**00 25 26.2**	**-3.2**
MDJ				pmax	pmax		
	comp=Z,75nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,810nm,4.6s						
MDJ				LR	LR		
	comp=Z,2µm,18.3s						
MDJ				LR	LR		
	comp=Z,5µm,17.9s						
MDJ				LR	LR		
	comp=Z,3µm,18.9s						
MDJ	**Mudanjiang**	**34.90**	**5**	P	**P**	**00 15 09.4**	**-0.4**
MDJ				IAmb	IAmb	00 15 24.5	
	comp=Z,112nm,1.1s						
MDJ	**Mudanjiang**	**34.90**	**5**	P	**P**	**00 15 10.7**	**+1.0**
XLT	**XiLinHaoTe**	**34.96**	**348**	⇓*i*P	**P**	**00 15 09.9**	**-0.5**
XLT				pP	pP	00 15 16.8	-1.7
XLT				sP	sP	00 15 19.4	-2.4
XLT				PP	**PP**	**00 16 32.6**	**+2.6**
XLT				S	**S**	**00 20 38.2**	**-2.4**
XLT				sS	sS	00 20 57.1	+3.2
XLT				pmax	pmax		
	comp=Z,81nm,1.7s						
XLT				pmax	pmax		
	comp=Z,810nm,4.2s						
XLT				LR	LR		
	comp=Z,370nm,19.9s						
XLT				LR	LR		
	comp=Z,3µm,15.8s						
XLT				LR	LR		
	comp=Z,5µm,21.5s						
TEZP	**TEZPUR**	**35.10**	**303**	*e*P	**P**	**00 15 11.3**	**-0.5**
TEZP				IAmb	IAmb	00 15 13.7	
	comp=Z,685nm,1.3s						
SHL	**Shillong**	**35.49**	**301**	P	**P**	**00 15 14.9**	**-0.5**
SHL	**Shillong**	**35.49**	**301**	*e*P	**P**	**00 15 15.1**	**-0.3**
SHL				IAmb	IAmb	00 15 17.4	
	comp=Z,584nm,0.8s						
SHL	**Shillong**	**35.49**	**301**	P	**P**	**00 15 14.9**	**-0.5**
SHL				pmax	pmax		
	comp=Z,899nm,0.9s						
SHL	**Shillong**	**35.49**	**301**	P	**P**	**00 15 15.7**	**+0.3**
	SNR=378						
SHL				S	**S**	**00 20 51.9**	**+2.5**
ERM	**Erimo**	**35.68**	**23**	IAMs_20	IAMs_20	00 28 24.7	
	comp=Z,6µm,22.0s						
TV1H	**Townsville Har**	**35.71**	**144**	P	**P**	**00 15 17.7**	**+0.7**
	comp=Z,127nm,1.2s						
BNX	**BinXian**	**35.87**	**2**	⇑P	**P**	**00 15 17.6**	**-0.5**
BNX				pP	**sP**	**00 15 29.0**	**-0.5**
BNX				sP	**pP**	**00 15 33.4**	**+7.2**
BNX				S	**S**	**00 20 52.4**	**-2.0**
BNX				sS	**sS**	**00 21 11.5**	**+3.9**
BNX				pmax	pmax		
	comp=Z,39nm,1.1s						
BNX				pmax	pmax		
	comp=Z,570nm,7.6s						
BNX				LR	LR		
	comp=Z,3µm,18.4s						
BNX				LR	LR		
	comp=Z,3µm,16.8s						
BNX				LR	LR		
	comp=Z,4µm,21.7s						
CTA	**Charters Tower**	**36.06**	**145**	P	**P**	**00 15 20.2**	**+0.2**
	comp=Z,204nm,1.1s,baz=322,slow=9.5,SNR=43						
CTA				S	**S**	**00 20 56.5**	**-1.2**
	comp=Z,2.6nm,0.9s,baz=11,slow=18,SNR=1.0						
	comp=Z,204nm,1.1s						
CTA	**Charters Tower**	**36.06**	**145**	P	**P**	**00 15 20.1**	**+0.1**
CTAO	**Charters Tower**	**36.06**	**145**	P	**P**	**00 15 19.3**	**-0.7**
CTAO	**Charters Tower**	**36.06**	**145**	P	**P**	**00 15 20.2**	**+0.2**
CTAO	**Charters Tower**	**36.06**	**145**	P	**P**	**00 15 19.3**	**-0.7**
CTAO				pmax	pmax		
	comp=Z,467nm,1.3s						
CTAO				MLR	MLR		
	comp=Z,4µm,22.0s						
TEY	**Ternei**	**36.42**	**13**	⇑*e*P	**P**	**00 15 23.3**	**+0.5**
TEY				*e*		00 20 57.7	
TEY				pmax	pmax		
	comp=E,10.0nm,0.9s						
TEY				pmax	pmax		
	comp=Z,60nm,0.9s						
TEY				pmax	pmax		
	comp=N,40nm,0.8s						
TEY				pmax	pmax		
	comp=Z,200nm,2.5s						
MEEK	**Meekatharra**	**36.80**	**190**	P	**P**	**00 15 25.3**	**-1.0**
	baz=37,SNR=40						
MEEK	**Meekatharra**	**36.80**	**190**	P	**P**	**00 15 25.6**	**-0.7**
ASAJ	**Asahikawa**	**37.30**	**21**	P	**P**	**00 15 31.3**	**+0.9**
	comp=Z,40nm,0.6s,baz=228,slow=12,SNR=24						
	comp=Z,40nm,0.6s						
ASAJ	**Asahikawa**	**37.30**	**21**	P	**P**	**00 15 29.4**	**-1.0**
ASAJ				pmax	pmax		
	comp=Z,296nm,1.5s						
JKA	**Kamikawa-asahi**	**37.30**	**21**	P	**P**	**00 15 29.4**	**-1.0**
JKA				IAmb	IAmb	00 15 35.9	
	comp=Z,296nm,1.5s						
GTA	**Gaotai**	**37.34**	**326**	⇓P	**P**	**00 15 30.7**	**-0.2**
GTA				pP	pP	00 15 38.5	-0.3
GTA				sP	sP	00 15 42.2	+0.1
GTA				PP	**PnPn**	**00 17 02.1**	**+5.1**
GTA				S	**S**	**00 21 18.1**	**+0.9**
GTA				sS	sS	00 21 30.2	-0.1
GTA				pmax	pmax		
	comp=Z,45nm,1.7s						
GTA				pmax	pmax		
	comp=Z,440nm,4.8s						
GTA				LR	LR		
	comp=Z,10µm,21.1s						
GTA				LR	LR		
	comp=Z,8µm,21.9s						
GTA				LR	LR		
	comp=Z,8µm,19.5s						
LSA	**Lhasa**	**37.67**	**307**	P	**P**	**00 15 34.7**	**+0.5**
LSA				IAMs_20	IAMs_20	00 33 07.6	
	comp=Z,3µm,19.0s						
LSA	**Lhasa**	**37.67**	**307**	P	**P**	**00 15 34.7**	**+0.5**
LSA				pmax	pmax		
	comp=Z,774nm,1.5s						
LSA				MLR	MLR		
	comp=Z,3µm,19.0s						
LSA	**Lhasa**	**37.67**	**307**	P	**P**	**00 15 35.3**	**+1.0**
GOMU	**GeErMu**	**38.26**	**318**	P	**P**	**00 15 39.9**	**+0.8**
GOMU				PP	**PnPn**	**00 17 08.9**	**+0.4**
GOMU				S	**S**	**00 21 26.2**	**-5.6**
GOMU				pmax	pmax		
	comp=Z,39nm,1.3s						
GOMU				pmax	pmax		
	comp=Z,720nm,4.6s						
GOMU				LR	LR		
	comp=Z,2µm,16.8s						
GOMU				LR	LR		
	comp=Z,6µm,15.8s						
GOMU				LR	LR		
	comp=Z,7µm,16.2s						
OOD	**Oodnadatta**	**38.64**	**165**	P	**P**	**00 15 43.1**	**+1.3**
GTK	**Tadong**	**38.85**	**302**	*e*P	**P**	**00 15 45.6**	**+1.8**
GTK				IAmb	IAmb	00 15 47.1	
	comp=Z,300nm,0.8s						
HNR	**Honiara**	**39.28**	**118**	LR	LR	00 30 02.3	
	comp=Z,11µm,20.6s,baz=287,slow=33						
TAPN	**Taplejung**	**39.61**	**301**	*e*P	**P**	**00 15 49.5**	**-0.9**
	comp=Z,1µm,1.5s						
HIA	**Hailar**	**39.65**	**354**	P	**P**	**00 15 48.4**	**-1.7**
HIA	**Hailar**	**39.65**	**354**	IAMs_20	IAMs_20	00 32 17.6	
	comp=Z,4µm,20.0s						
HIA	**Hailar**	**39.65**	**354**	P	**P**	**00 15 50.0**	**-0.1**
HIA	**Hailar**	**39.65**	**354**	P	**P**	**00 15 48.4**	**-1.7**
HIA				pmax	pmax		
	comp=Z,40nm,1.0s						
HIA				MLR	MLR		
	comp=Z,4µm,20.0s						
MORW	**Morawa**	**39.67**	**193**	P	**P**	**00 15 49.8**	**-0.7**
	baz=40,SNR=16						
MORW	**Morawa**	**39.67**	**193**	P	**P**	**00 15 49.7**	**-0.8**
MORW	**Morawa**	**39.67**	**193**	P	**P**	**00 15 50.9**	**+0.5**
KLR	**Kul'dur**	**39.68**	**6**	P	**P**	**00 15 49.8**	**-0.4**
	comp=Z,19nm,0.5s,baz=179,slow=6.4,SNR=78						
KLR				S	**S**	**00 21 50.9**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=309,slow=16,SNR=2.0						
KLR				LR	LR	00 35 56.4	
	comp=Z,2µm,18.0s,baz=194,slow=42						
	comp=Z,19nm,0.5s						
KLR	**Kul'dur**	**39.68**	**6**	*d i*P	**P**	**00 15 49.9**	**-0.3**
KLR				pmax	pmax		
	comp=Z,44nm,1.1s						
KLR				MLR	MLR		
	comp=Z,2µm,18.0s						
ODAN	**Odare**	**39.73**	**300**	*e*P	**P**	**00 15 50.7**	**-0.6**
	comp=Z,171nm,1.5s						
YSS	**Yuzh-Sakhalins**	**39.86**	**19**	P	**P**	**00 15 50.5**	**-1.3**
YSS	**Yuzh-Sakhalins**	**39.86**	**19**	P	**P**	**00 15 52.4**	**+0.6**
	comp=Z,119nm,1.3s						
YSS	**Yuzh-Sakhalins**	**39.86**	**19**	*e*P	**P**	**00 15 52.2**	**+0.4**
YSS				*e*		00 17 27.9	
YSS				*e*S	**S**	**00 21 56.7**	**+1.9**
YSS				pmax	pmax		
	comp=Z,900nm,3.7s						
YSS				pmax	pmax		
	comp=Z,100nm,1.0s						
YSS				smax	smax		
	comp=N,900nm,8.5s						
YSS				MLR	MLR		
	comp=Z,1µm,14.0s						
INKA	**Innaminka**	**40.13**	**159**	P	**P**	**00 15 55.3**	**+1.1**
BOK	**Bokaro**	**40.21**	**295**	*e*P	**P**	**00 15 56.0**	**+0.9**
BOK				IAmb	IAmb	00 16 05.9	
	comp=Z,305nm,1.7s						
HEH	**HeiHe**	**40.38**	**2**	*e*P	**P**	**00 15 55.3**	**-0.8**
HEH				pP	**sP**	**00 16 09.1**	**+1.6**
HEH				PP	**PP**	**00 17 30.7**	**+1.4**
HEH				S	**S**	**00 22 00.8**	**-1.7**
HEH				pmax	pmax		
	comp=Z,70nm,1.1s						
HEH				pmax	pmax		
	comp=Z,1µm,4.5s						
HEH				LR	LR		
	comp=Z,3µm,19.0s						
HEH				LR	LR		
	comp=Z,4µm,17.4s						
HEH				LR	LR		
	comp=Z,4µm,19.3s						
FORT	**Forrest**	**40.40**	**177**	P	**P**	**00 15 56.5**	**+0.1**
	baz=41,SNR=40						
FORT	**Forrest**	**40.40**	**177**	P	**P**	**00 15 55.6**	**-0.8**
FORT	**Forrest**	**40.40**	**177**	P	**P**	**00 15 57.7**	**+1.3**
RAMN	**Ramite**	**40.43**	**300**	*e*P	**P**	**00 15 57.2**	**+0.1**
	comp=Z,2µm,1.4s						
QLP	**Quilpie**	**40.49**	**154**	P	**P**	**00 15 57.6**	**+0.4**
MULG	**Mulgathing**	**40.68**	**169**	P	**P**	**00 15 58.9**	**+0.2**
JIRN	**Jiri**	**40.99**	**301**	*e*P	**P**	**00 16 01.8**	**-0.1**
	comp=Z,1µm,1.2s						
ULN	**Ulaanbaatar**	**41.02**	**341**	P	**P**	**00 16 00.7**	**-0.9**
ULN	**Ulaanbaatar**	**41.02**	**341**	IAMs_20	IAMs_20	00 35 24.1	
	comp=Z,5µm,18.0s						
ULN	**Ulaanbaatar**	**41.02**	**341**	P	**P**	**00 16 00.7**	**-0.9**
ULN				MLR	MLR		
	comp=Z,5µm,18.0s						
ULN	**Ulaanbaatar**	**41.02**	**341**	P	**P**	**00 16 01.1**	**-0.5**
ULN				P	**P**	**00 16 01.1**	**-0.5**
ULN				P	**P**	**00 16 01.1**	**-0.5**
ULN				S	**S**	**00 22 12.6**	**+0.2**
ULN				S	**S**	**00 22 12.6**	**+0.2**
ULN				S	**S**	**00 22 12.6**	**+0.2**
BLDU	**Ballidu**	**41.03**	**192**	P	**P**	**00 16 00.4**	**-1.2**
	baz=41,SNR=8.5						
BLDU	**Ballidu**	**41.03**	**192**	P	**P**	**00 16 02.2**	**+0.6**
KMBL	**Kambalda**	**41.05**	**185**	P	**P**	**00 16 01.9**	**+0.1**
	baz=41,SNR=54						
KMBL	**Kambalda**	**41.05**	**185**	P	**P**	**00 16 01.6**	**-0.2**
RK1H	**Rockhampton Ha**	**41.07**	**144**	P	**P**	**00 16 02.4**	**+0.3**
	comp=Z,150nm,1.4s						
H11N1	**WAKE ISLAND Hy**	**41.17**	**71**	T	T	00 59 27.7	
	baz=265,slow=74,SNR=251						
H11N2	**WAKE ISLAND Hy**	**41.18**	**71**	T	T	00 59 25.3	
	baz=265,slow=74,SNR=24						
H11N3	**WAKE ISLAND Hy**	**41.19**	**71**	T	T	00 59 29.2	
	baz=265,slow=74,SNR=199						
SONM	**Songino Array**	**41.20**	**340**	P	**P**	**00 16 02.4**	**-0.7**
	comp=Z,12nm,0.9s,baz=161,slow=7.9,SNR=76						
SONM				LR	LR	00 35 49.2	
	comp=Z,6µm,18.8s,baz=152,slow=40						
	comp=Z,12nm,0.9s						
SONM	**Songino Array**	**41.20**	**340**	P	**P**	**00 16 02.2**	**-0.9**
SONM	**Songino Array**	**41.20**	**340**	P	**P**	**00 16 02.2**	**-0.9**
SONM				pmax	pmax		
	comp=Z,95nm,1.6s						
GUN	**Gumba**	**41.33**	**301**	*e*P	**P**	**00 16 05.0**	**+0.3**
	comp=Z,2µm,1.3s						
UGL	**Uglegorsk**	**41.57**	**16**	*e*P	**P**	**00 16 06.6**	**+0.8**
UGL				*e*S	**S**	**00 22 20.5**	**+0.4**
UGL				pmax	pmax		
	comp=Z,190nm,0.9s						
UGL				smax	smax		
	comp=E,2µm,8.0s						
UGL				smax	smax		
	comp=N,1µm,12.0s						
UGL				MLR	MLR		
	comp=N,1µm,18.0s						
UGL				MLR	MLR		
	comp=Z,2µm,14.0s						
VIS	**Vishakhapatnam**	**41.60**	**286**	*e*P	**P**	**00 16 07.2**	**+0.6**
PKI	**Pulchoki**	**41.62**	**301**	*e*P	**P**	**00 16 06.8**	**-0.3**
	comp=Z,1µm,1.4s						
PKIN	**Phulchoki**	**41.64**	**301**	*e*P	**P**	**00 16 06.9**	**-0.2**
	comp=Z,1µm,1.5s						
KLBR	**Kellerberrin**	**41.79**	**190**	P	**P**	**00 16 07.5**	**-0.4**
	baz=42,SNR=21						
KLBR	**Kellerberrin**	**41.79**	**190**	P	**P**	**00 16 08.4**	**+0.5**
KKN	**Kakani**	**41.80**	**301**	*e*P	**P**	**00 16 07.4**	**-1.0**
	comp=Z,150nm,1.7s						
GD1S	**Gladstone Soft**	**41.81**	**143**	P	**P**	**00 16 09.0**	**+0.9**
LCRK	**Leigh Creek**	**41.83**	**163**	P	**P**	**00 16 10.0**	**+1.8**
GRNR	**Gornyy**	**41.86**	**10**	⇓*i*P	**P**	**00 16 08.9**	**+0.7**
GRNR				*e*		00 17 45.3	
GRNR				*e*S	**S**	**00 22 31.1**	**+6.6**
GRNR				pmax	pmax		
	comp=E,6.0nm,0.9s						
GRNR				pmax	pmax		
	comp=N,10.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,30nm,0.9s						
GRNR				smax	smax		
	comp=N,4.0nm,0.9s						
GRNR				MLR	MLR		
	comp=N,1µm,18.0s						
GRNR				MLR	MLR		
	comp=E,760nm,18.0s						
GRNR				MLR	MLR		
	comp=Z,2µm,16.0s						
DMN	**Daman**	**41.89**	**301**	*e*P	**P**	**00 16 08.9**	**-0.3**
	comp=Z,659nm,1.1s						
GKN	**Gorkha**	**42.41**	**301**	*e*P	**P**	**00 16 12.7**	**-0.6**
	comp=Z,761nm,1.2s						
MUN	**Mundaring**	**42.45**	**192**	P	**P**	**00 16 14.2**	**+1.0**
	baz=43,SNR=8.3						
MUN	**Mundaring**	**42.45**	**192**	P	**P**	**00 16 14.4**	**+1.1**
RMQ	**Roma**	**42.57**	**148**	P	**P**	**00 16 14.5**	**+0.2**
	baz=43,SNR=26						
RMQ	**Roma**	**42.57**	**148**	P	**P**	**00 16 15.9**	**+1.6**
EIDS	**Eidsvold**	**42.94**	**145**	P	**P**	**00 16 16.6**	**-0.8**
	baz=43,SNR=32						
EIDS	**Eidsvold**	**42.94**	**145**	P	**P**	**00 16 16.3**	**-1.1**
EIDS				IAmb	IAmb	00 16 21.7	
	comp=Z,169nm,1.1s						
EIDS	**Eidsvold**	**42.94**	**145**	P	**P**	**00 16 16.8**	**-0.5**
KOLN	**Koldanda**	**43.22**	**300**	*e*P	**P**	**00 16 19.0**	**-0.9**
	comp=Z,179nm,1.4s						
DANN	**Dangsing**	**43.25**	**301**	*e*P	**P**	**00 16 20.0**	**-0.2**
TYV	**Tymovskoe**	**43.35**	**16**	*e*P	**P**	**00 16 21.2**	**+0.9**
TYV				*e*S	**S**	**00 22 50.4**	**+4.1**
TYV				pmax	pmax		
	comp=Z,800nm,4.3s						
TYV				pmax	pmax		
	comp=Z,65nm,1.1s						
TYV				smax	smax		
	comp=N,19nm,1.8s						
TYV				smax	smax		
	comp=E,18nm,1.8s						
TYV				smax	smax		
	comp=N,1µm,5.1s						
TYV				smax	smax		
	comp=E,1µm,5.1s						
BBOO	**Buckleboo**	**43.54**	**167**	P	**P**	**00 16 22.6**	**+0.5**
	baz=44,SNR=43						
BBOO	**Buckleboo**	**43.54**	**167**	P	**P**	**00 16 22.1**	**0.0**
BBOO	**Buckleboo**	**43.54**	**167**	P	**P**	**00 16 23.0**	**+0.9**
AUHAR	**St Anne's Scho**	**43.59**	**192**	P	**P**	**00 16 24.7**	**+2.3**
	comp=E,166nm,1.1s						
PYUN	**Piuthan**	**43.83**	**301**	*e*P	**P**	**00 16 24.6**	**-0.2**
ZEA	**Zeya**	**43.87**	**2**	*e*P	**P**	**00 16 23.5**	**-0.9**
ZEA				*e*		00 26 20.9	
ZEA				pmax	pmax		
	comp=N,20nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,200nm,4.4s						
ZEA				MLR	MLR		
	comp=E,2µm,16.0s						
ZEA				MLR	MLR		
	comp=N,2µm,13.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,15.0s						
WHYH	**Whyalla**	**44.11**	**165**	P	**P**	**00 16 28.6**	**+2.0**
	comp=Z,88nm,0.8s						
STKA	**Stephens Creek**	**44.20**	**160**	P	**P**	**00 16 27.6**	**+0.1**
	comp=Z,21nm,0.6s,baz=345,slow=7.6,SNR=37						
STKA				LR	LR	00 37 45.3	
	comp=Z,2µm,20.3s,baz=338,slow=40						
	comp=Z,21nm,0.6s						
STKA	**Stephens Creek**	**44.20**	**160**	P	**P**	**00 16 27.6**	**+0.1**
	baz=44,SNR=69						
STKA	**Stephens Creek**	**44.20**	**160**	P	**P**	**00 16 27.0**	**-0.4**
STKA	**Stephens Creek**	**44.20**	**160**	P	**P**	**00 16 27.4**	**0.0**
STKA	**Stephens Creek**	**44.20**	**160**	P	**P**	**00 16 27.0**	**-0.4**
STKA				pmax	pmax		
	comp=Z,49nm,1.2s						
PALK	**Pallekele**	**44.30**	**270**	P	**P**	**00 16 27.9**	**-0.7**
PALK	**Pallekele**	**44.30**	**270**	P	**P**	**00 16 27.9**	**-0.7**
PALK				pmax	pmax		
	comp=Z,127nm,1.9s						
PALK	**Pallekele**	**44.30**	**270**	P	**P**	**00 16 29.1**	**+0.5**
PALK				P	**P**	**00 16 29.1**	**+0.5**
PALK				S	**S**	**00 23 03.3**	**+1.9**
PALK				S	**S**	**00 23 03.3**	**+1.9**
MDRS	**Chennai**	**44.39**	**279**	*e*P	**P**	**00 16 30.0**	**+0.8**
ZAK	**Zakamensk**	**44.44**	**340**	*e*P	**P**	**00 16 28.0**	**-1.2**
ZAK				*e*		00 18 12.9	
ZAK				pmax	pmax		
	comp=Z,25nm,1.7s						
ZAK				pmax	pmax		
	comp=Z,17nm,1.4s						
AULRC	**Lightning Ridg**	**44.62**	**152**	P	**P**	**00 16 32.2**	**+1.4**
HTT	**Hallett**	**44.84**	**164**	P	**P**	**00 16 32.8**	**+0.3**
	baz=45,SNR=14						
HTT	**Hallett**	**44.84**	**164**	P	**P**	**00 16 33.6**	**+1.1**
RKGY	**Rocky Gully**	**44.87**	**190**	P	**P**	**00 16 33.3**	**+0.6**
	baz=45,SNR=12						
RKGY	**Rocky Gully**	**44.87**	**190**	P	**P**	**00 16 34.4**	**+1.7**
AUALB	**St Joseph's Co**	**45.10**	**189**	P	**P**	**00 16 36.9**	**+2.4**
	comp=Z,97nm,1.4s						
JBP	**Jabalpur**	**45.40**	**293**	*e*P	**P**	**00 16 37.9**	**+0.8**
JBP				*e*S	**S**	**00 23 14.4**	**-2.6**
CMSA	**Cobar Meteorol**	**45.42**	**156**	P	**P**	**00 16 38.1**	**+1.0**
	baz=46,SNR=23						
CMSA	**Cobar Meteorol**	**45.42**	**156**	P	**P**	**00 16 37.7**	**+0.5**
AUWSH	**Wavell State H**	**45.62**	**145**	P	**P**	**00 16 38.5**	**-0.2**
IRK	**Irkutsk**	**45.72**	**342**	*e*P	**P**	**00 16 38.8**	**-0.5**
IRK				pmax	pmax		
	comp=Z,148nm,2.2s						
HYB	**Hyderabad**	**46.12**	**285**	*e*P	**P**	**00 16 42.9**	**0.0**
HYB				IAmb	IAmb	00 17 01.7	
	comp=Z,116nm,1.5s						
HYB	**Hyderabad**	**46.12**	**285**	*e*P	**P**	**00 16 43.1**	**+0.1**
HYB				IVmB_BB		00 16 43.8	
	comp=Z,503nm,3.3s						
HYB				*e*PP	**PP**	**00 18 29.5**	**-1.9**
HYB				*e*S	**S**	**00 23 28.8**	**+1.3**
HYB				*e*ScS	**ScS**	**00 26 39.3**	**+1.9**
HYB				IVMs_BB	IVMs_BB	00 34 09.7	
	comp=Z,359nm,27.5s						
MOY	**Mondy**	**46.31**	**339**	*e*P	**P**	**00 16 43.8**	**-0.2**
MOY				pmax	pmax		
	comp=Z,153nm,3.3s						
GC1S	**Gold Coast 1 S**	**46.47**	**145**	P	**P**	**00 16 46.9**	**+1.5**
WMQ	**Urumqi**	**47.12**	**323**	⇓P	**P**	**00 16 50.5**	**0.0**
WMQ				sP	sP	00 17 04.1	+2.5
WMQ				S	**S**	**00 23 38.2**	**-3.1**
WMQ				sS	sS	00 23 52.7	-2.0
WMQ				pmax	pmax		
	comp=Z,41nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,610nm,4.7s						
WMQ				LR	LR		
	comp=Z,15µm,17.1s						
WMQ				LR	LR		
	comp=Z,5µm,16.1s						
WMQ				LR	LR		
	comp=Z,6µm,21.7s						
ARMA	**Armidale**	**47.22**	**149**	P	**P**	**00 16 52.1**	**+0.7**
	baz=47,SNR=37						
ARMA	**Armidale**	**47.22**	**149**	P	**P**	**00 16 51.5**	**+0.1**
ARMA	**Armidale**	**47.22**	**149**	P	**P**	**00 16 52.3**	**+0.8**
AUDCS	**Dubbo College**	**47.28**	**153**	P	**P**	**00 16 53.9**	**+2.2**
AUPHS	**Peel High Scho**	**47.40**	**150**	P	**P**	**00 16 54.2**	**+1.5**
BHPL	**Bhopal**	**47.74**	**292**	*e*P	**P**	**00 16 56.5**	**+0.9**
BHPL				IAmb	IAmb	00 16 57.8	
	comp=Z,48nm,0.9s						
SKR	**Severo-Kuril's**	**47.97**	**26**	*e*P	P	00 17 11.0	+14
SKR				*e*S	**S**	**00 23 55.9**	**+3.0**
SKR				pmax	pmax		
	comp=Z,200nm,4.6s						
SKR				MLR	MLR		
	comp=Z,900nm,22.0s						
PCHI	**Peechi**	**48.31**	**275**	⇓*e*P	**P**	**00 16 59.6**	**-0.4**
PCHI				*e*S	**S**	**00 23 59.8**	**+1.1**
KOUNC	**Koumac, New Ca**	**48.65**	**128**	P	**P**	**00 17 01.0**	**-1.5**
KOUNC				IAmb	IAmb	00 17 08.8	
	comp=Z,156nm,1.7s						
KOUNC	**Koumac, New Ca**	**48.65**	**128**	P	**P**	**00 17 03.8**	**+1.3**
BOD	**Bodaibo**	**48.74**	**352**	*e*P	**P**	**00 17 02.3**	**-0.3**
BOD				pmax	pmax		
	comp=Z,40nm,1.9s						
ARPS	**Mount Arapiles**	**48.80**	**162**	P	**P**	**00 17 03.8**	**+0.5**
	baz=49,SNR=16						
ARPS	**Mount Arapiles**	**48.80**	**162**	P	**P**	**00 17 04.9**	**+1.5**
NDI	**New Delhi**	**48.90**	**300**	*e*P	**P**	**00 17 04.0**	**-0.4**
YNG	**Young**	**48.94**	**155**	P	**P**	**00 17 07.5**	**+2.9**
	comp=Z,344nm,1.5s						
MGCD	**Mangrove Creek**	**49.24**	**151**	P	**P**	**00 17 08.0**	**+1.2**
	baz=49,SNR=4.1						
MGCD	**Mangrove Creek**	**49.24**	**151**	P	**P**	**00 17 07.1**	**+0.3**
NTLH	**Newcastle Hard**	**49.27**	**151**	P	**P**	**00 17 09.0**	**+2.0**
SMLA	**Simla**	**49.52**	**303**	*e*P	**P**	**00 17 09.1**	**0.0**
SMLA				IAmb	IAmb	00 17 11.3	
	comp=Z,930nm,1.7s						
SYDH	**Sydney Hard Ro**	**49.52**	**152**	P	**P**	**00 17 12.0**	**+3.0**
	comp=Z,172nm,1.1s						
RIV	**Riverview**	**49.77**	**152**	P	**P**	**00 17 12.9**	**+2.0**
	baz=50,SNR=3.5						
RIV	**Riverview**	**49.77**	**152**	P	**P**	**00 17 12.5**	**+1.6**
CAN	**Canberra**	**50.07**	**155**	P	**P**	**00 17 12.6**	**-0.6**
CAN	**Canberra**	**50.07**	**155**	P	**P**	**00 17 14.8**	**+1.6**
CAN	**Canberra**	**50.07**	**155**	P	**P**	**00 17 12.6**	**-0.6**
CAN				pmax	pmax		
	comp=Z,632nm,1.3s						
WOLH	**Wollongong Har**	**50.12**	**152**	P	**P**	**00 17 16.9**	**+3.4**
BRAT	**Ballarat**	**50.16**	**161**	P	**P**	**00 17 15.4**	**+1.7**
	comp=Z,38nm,1.2s						
CNB	**Canberra Magne**	**50.22**	**154**	P	**P**	**00 17 15.7**	**+1.3**
PEA0B	**Petropavlovsk-**	**50.42**	**25**	P	**P**	**00 17 15.1**	**-0.5**
PEA0B				IAmb	IAmb	00 17 21.8	
	comp=Z,225nm,1.3s						
PEA0B	**Petropavlovsk-**	**50.42**	**25**	P	**P**	**00 17 15.1**	**-0.5**
PEA0B				pmax	pmax		
	comp=Z,225nm,1.3s						
PETK	**Petropavlovsk-**	**50.42**	**25**	P	**P**	**00 17 16.3**	**+0.7**
	comp=Z,20nm,0.7s,baz=212,slow=5.7,SNR=28						
PETK				LR	LR	00 36 33.9	
	comp=Z,3µm,22.0s,baz=224,slow=34						
	comp=Z,20nm,0.7s						
PETK	**Petropavlovsk-**	**50.42**	**25**	P	**P**	**00 17 14.8**	**-0.7**
TOO	**Toolangi**	**50.70**	**159**	P	**P**	**00 17 19.2**	**+1.2**
	baz=51,SNR=16						
TOO	**Toolangi**	**50.70**	**159**	P	**P**	**00 17 18.1**	**+0.2**
TOO				IAmb	IAmb	00 17 25.0	
	comp=Z,290nm,1.5s						
TOO	**Toolangi**	**50.70**	**159**	P	**P**	**00 17 18.9**	**+1.0**
TOO	**Toolangi**	**50.70**	**159**	P	**P**	**00 17 18.1**	**+0.2**
TOO				pmax	pmax		
	comp=Z,290nm,1.5s						
MLBS	**Spotswood, Mel**	**50.73**	**160**	P	**P**	**00 17 19.3**	**+1.2**
AUUHS	**Ulladulla High**	**50.74**	**153**	P	**P**	**00 17 19.4**	**+1.2**
PET	**Petropavlovsk**	**50.75**	**25**	P	**P**	**00 17 17.1**	**-0.9**
PET	**Petropavlovsk**	**50.75**	**25**	P	**P**	**00 17 20.4**	**+2.4**

	comp=Z,587nm,1.3s						
PET	**Petropavlovsk**	**50.75**	**25**	*e*P	**P**	**00 17 19.0**	**+1.0**
PET				*e*S	**S**	**00 24 34.0**	**+2.2**
PET				pmax	pmax		
	comp=Z,202nm,1.3s						
PET				pmax	pmax		
	comp=Z,300nm,16.8s						
DGZ	**Jazzator, Alta**	**50.77**	**329**	⇓*i*P	**P**	**00 17 18.0**	**-0.5**
DGZ				pmax	pmax		
	comp=Z,34nm,1.5s						
DGZ				MLR	MLR		
	comp=Z,6µm,18.0s						
ZSN	**Zaisan**	**50.81**	**325**	*e*P	**P**	**00 17 17.8**	**-0.8**
	baz=325						
ZSN				*e*S	**S**	**00 24 34.9**	**+1.9**
	baz=325						
ZSN	**Zaisan**	**50.81**	**325**	*e*P	**P**	**00 17 17.8**	**-0.8**
ZSN				*e*S	**S**	**00 24 34.8**	**+1.9**
AUSMG	**Snowy Mountain**	**50.86**	**156**	P	**P**	**00 17 20.8**	**+1.6**
GEXS	**Deakin Univers**	**50.87**	**161**	P	**P**	**00 17 20.7**	**+1.6**
NOUC	**Port Laguerre**	**51.07**	**129**	P	**P**	**00 17 21.9**	**+1.0**
LIFNC	**LIFOU**	**51.08**	**127**	P	**P**	**00 17 20.6**	**-0.3**
LIFNC	**LIFOU**	**51.08**	**127**	P	**P**	**00 17 22.2**	**+1.2**
DZM	**Mont Dzumac**	**51.16**	**129**	*e*P	**P**	**00 17 21.7**	**0.0**
	comp=Z,266nm,1.1s						
DZM				*e*S	**S**	**00 24 38.3**	**-0.3**
	comp=Z,758nm,35.9s						
DZM				*e*SS	**SS**	**00 28 15.3**	**+0.9**
	comp=Z,943nm,29.1s						
DZM				*e*LR	LR	00 32 00.5	
	comp=Z,4µm,25.2s						
DZM	**Mont Dzumac**	**51.16**	**129**	P	**P**	**00 17 22.1**	**+0.3**
	comp=Z,62nm,0.8s,baz=263,slow=9.0,SNR=39						
DZM				LR	LR	00 37 09.5	
	comp=Z,732nm,21.9s,baz=339,slow=34						
	comp=Z,62nm,0.8s						
DZM	**Mont Dzumac**	**51.16**	**129**	P	**P**	**00 17 20.4**	**-1.3**
DZM				IAmb	IAmb	00 17 30.5	
	comp=Z,96nm,0.9s						
DZM	**Mont Dzumac**	**51.16**	**129**	P	**P**	**00 17 22.8**	**+1.1**
ONTNC	**Ouen Toro**	**51.30**	**129**	P	**P**	**00 17 21.6**	**-1.0**
ONTNC				IAmb	IAmb	00 17 30.7	
	comp=Z,210nm,1.4s						
ONTNC	**Ouen Toro**	**51.30**	**129**	P	**P**	**00 17 25.8**	**+3.1**
YATNC	**Mamie plateau,**	**51.50**	**128**	P	**P**	**00 17 27.7**	**+3.5**
MILA	**Mila**	**51.63**	**156**	P	**P**	**00 17 27.7**	**+2.8**
OUENC	**Ouen Island, N**	**51.66**	**129**	P	**P**	**00 17 24.6**	**-0.7**
OUENC				IAmb	IAmb	00 17 31.9	
	comp=Z,186nm,1.3s						
OUENC	**Ouen Island, N**	**51.66**	**129**	P	**P**	**00 17 26.9**	**+1.6**
MK31	**Makanchi Array**	**51.94**	**323**	P	**P**	**00 17 26.1**	**-0.9**
MK31	**Makanchi Array**	**51.94**	**323**	P	**P**	**00 17 26.2**	**-0.9**
MK31				pmax	pmax		
	comp=Z,40nm,1.1s						
MKAR	**Makanchi Array**	**51.94**	**323**	P	**P**	**00 17 27.2**	**+0.1**
	comp=Z,15nm,0.6s,baz=123,slow=7.9,SNR=184						
MKAR				S	**S**	**00 24 47.5**	**-1.0**
	comp=Z,0.3nm,0.8s,baz=5.7,slow=4.9,SNR=1.0						
MKAR				PKPPKP	**P'P'df**	**00 48 05.2**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=39,slow=0.9,SNR=3.4						
MKAR				P4KPbc		00 54 49.5	
	comp=Z,0.1nm,0.5s,baz=113,slow=28,SNR=3.1						
	comp=Z,15nm,0.6s						
MKAR	**Makanchi Array**	**51.94**	**323**	P	**P**	**00 17 26.2**	**-0.9**
SHLS	**Shalkode**	**51.97**	**318**	*e*P	**P**	**00 17 25.1**	**-2.5**
	comp=Z,66nm,1.7s,baz=318						
SHLS	**Shalkode**	**51.97**	**318**	*e*P	**P**	**00 17 25.0**	**-2.5**
SHLS				pmax	pmax		
	comp=Z,66nm,1.7s						
MAKZ	**Makanchi**	**52.13**	**323**	P	**P**	**00 17 27.7**	**-0.8**
MAKZ				IAmb	IAmb	00 17 53.2	
	comp=Z,92nm,1.3s						
MAKZ				IAMs_20	IAMs_20	00 38 17.8	
	comp=Z,4µm,22.0s						
MAKZ	**Makanchi**	**52.13**	**323**	P	**P**	**00 17 27.7**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,93nm,1.3s						
PINNC	**Pines Island,**	**52.23**	**129**	P	**P**	**00 17 29.4**	**-0.1**
PINNC	**Pines Island,**	**52.23**	**129**	P	**P**	**00 17 30.7**	**+1.1**
YAK	**Yakutsk**	**52.25**	**3**	P	**P**	**00 17 28.9**	**-0.1**
	comp=Z,18nm,0.5s,baz=182,slow=4.7,SNR=14						
YAK				LR	LR	00 40 47.6	
	comp=Z,2µm,20.0s,baz=184,slow=37						
	comp=Z,18nm,0.5s						
YAK	**Yakutsk**	**52.25**	**3**	P	**P**	**00 17 28.2**	**-0.9**
YAK				IAmb	IAmb	00 17 32.9	
	comp=Z,116nm,1.0s						
YAK				IAMs_20	IAMs_20	00 43 24.2	
	comp=Z,2µm,18.0s						
YAK	**Yakutsk**	**52.25**	**3**	*e*P	**P**	**00 17 29.0**	**-0.1**
YAK				*e**PP	**sP**	**00 17 39.5**	**-1.2**
YAK				*e*		00 18 42.3	
YAK				*e*S	**S**	**00 24 51.8**	**-0.4**
YAK				*e*		00 27 15.8	
YAK				*e*SS	**SS**	**00 28 33.0**	**+3.1**
YAK				pmax	pmax		
	comp=Z,88nm,0.9s						
YAK				pmax	pmax		
	comp=N,21nm,1.0s						
YAK				pmax	pmax		
	comp=E,7.0nm,0.9s						
YAK				smax	smax		
	comp=N,189nm,3.0s						
YAK				smax	smax		
	comp=E,168nm,2.8s						
UZB	**Uzynbulak**	**52.25**	**318**	*e*P	**P**	**00 17 29.2**	**-0.5**
	comp=E,28nm,0.9s,baz=318						
UZB	**Uzynbulak**	**52.25**	**318**	*e*P	**P**	**00 17 29.2**	**-0.5**
UZB				pmax	pmax		
	comp=Z,28nm,0.9s						
TARG	**Taragay, Kyrgy**	**52.49**	**316**	P	**P**	**00 17 31.2**	**-0.6**
TARG				IAmb	IAmb	00 17 45.7	
	comp=Z,161nm,1.7s						
TARG	**Taragay, Kyrgy**	**52.49**	**316**	P	**P**	**00 17 31.2**	**-0.6**
TARG				pmax	pmax		
	comp=Z,161nm,1.7s						
KPKS	**Kokpek**	**52.61**	**318**	*e*P	**P**	**00 17 31.6**	**-0.7**
	comp=Z,77nm,2.1s,baz=318						
KPKS	**Kokpek**	**52.61**	**318**	*e*P	**P**	**00 17 31.6**	**-0.7**
KPKS				pmax	pmax		
	comp=Z,77nm,2.1s						
SATY	**Saty**	**52.62**	**318**	*e*P	**P**	**00 17 31.8**	**-0.7**
	comp=Z,81nm,1.9s,baz=318						
SATY	**Saty**	**52.62**	**318**	*e*P	**P**	**00 17 31.7**	**-0.7**
SATY				pmax	pmax		
	comp=Z,81nm,1.9s						
ZHN	**Zhinishke**	**52.65**	**318**	*e*P	**P**	**00 17 32.0**	**-0.6**
	comp=Z,54nm,1.9s,baz=318						
ZHN	**Zhinishke**	**52.65**	**318**	*e*P	**P**	**00 17 32.0**	**-0.6**
ZHN				pmax	pmax		
	comp=Z,54nm,1.9s						
KSH	**Kashi**	**52.97**	**313**	P	**P**	**00 17 36.5**	**+1.5**
KSH				pP	sP	00 17 48.1	+1.9
KSH				sP	pP	00 17 51.8	+8.5
KSH				PP	**PP**	**00 19 39.8**	**+5.0**
KSH				S	**S**	**00 25 08.5**	**+5.4**
KSH				pmax	pmax		
	comp=Z,98nm,1.5s						
KSH				pmax	pmax		
	comp=Z,500nm,4.0s						
KSH				LR	LR		
	comp=Z,4µm,21.8s						
KSH				LR	LR		
	comp=Z,5µm,21.2s						
KSH				LR	LR		
	comp=Z,4µm,22.4s						
MA2	**Magadan**	**53.22**	**16**	P	**P**	**00 17 36.4**	**0.0**
	comp=Z,16nm,0.7s,baz=236,slow=3.5,SNR=8.4						
MA2				PcP	**PcP**	**00 18 47.1**	**+3.1**
	comp=Z,26nm,0.9s,baz=164,slow=6.4,SNR=3.8						
	comp=Z,16nm,0.7s						
MA2	**Magadan**	**53.22**	**16**	P	**P**	**00 17 36.1**	**-0.2**
MA2				IAmb	IAmb	00 17 52.6	
	comp=Z,149nm,1.7s						
MA2				IAMs_20	IAMs_20	00 43 26.7	
	comp=Z,3µm,20.0s						
MA2	**Magadan**	**53.22**	**16**	P	**P**	**00 17 37.9**	**+1.5**
MA2	**Magadan**	**53.22**	**16**	⇑*i*P	**P**	**00 17 37.1**	**+0.7**
MA2				pmax	pmax		
	comp=Z,125nm,2.0s						
MA2				MLR	MLR		
	comp=Z,2µm,20.0s						
NIL	**Nilore**	**53.35**	**305**	P	**P**	**00 17 37.5**	**-0.3**
NIL	**Nilore**	**53.35**	**305**	P	**P**	**00 17 37.5**	**-0.3**
NIL				pmax	pmax		
	comp=Z,664nm,1.3s						
NIL	**Nilore**	**53.35**	**305**	P	**P**	**00 17 37.9**	**+0.1**
NIL				P	**P**	**00 17 37.9**	**+0.1**
TDK	**Taldyqorghan**	**53.46**	**320**	*e*P	**P**	**00 17 37.6**	**-0.8**
	comp=Z,66nm,1.4s,baz=320						
TDK				LR	LR	00 40 37.6	
	comp=Z,3µm,17.0s,baz=320						
TDK	**Taldyqorghan**	**53.46**	**320**	*e*P	**P**	**00 17 37.6**	**-0.8**
TDK				pmax	pmax		
	comp=Z,66nm,1.4s						
TDK				MLR	MLR		
	comp=Z,3µm,17.0s						
ARXS	**Arharly**	**53.49**	**319**	*e*P	**P**	**00 17 37.8**	**-1.0**
MDOK	**Medeo**	**53.58**	**317**	*e*P	**P**	**00 17 38.6**	**-0.9**
	baz=317						
MDOK				*e*S	**S**	**00 25 12.7**	**+1.4**
	baz=317						
MDOK				LR	LR	00 40 19.5	
	comp=Z,2µm,18.9s,baz=317						
MDOK	**Medeo**	**53.58**	**317**	*e*P	**P**	**00 17 38.6**	**-0.9**
MDOK				*e*S	**S**	**00 25 12.6**	**+1.4**
MDOK				MLR	MLR		
	comp=Z,2µm,19.0s						
TNSS	**Tian-Shan**	**53.59**	**317**	*e*P	**P**	**00 17 40.0**	**+0.1**
	baz=317						
TNSS	**Tian-Shan**	**53.59**	**317**	*e*P	**P**	**00 17 40.0**	**+0.1**
AAA	**Alma-Ata**	**53.68**	**317**	*e*P	**P**	**00 17 40.0**	**-0.2**
	comp=Z,94nm,1.4s,baz=317						
AAA	**Alma-Ata**	**53.68**	**317**	*e*P	**P**	**00 17 39.9**	**-0.2**
AAA				pmax	pmax		
	comp=Z,94nm,1.4s						
ULHL	**Ulahol**	**53.76**	**316**	P	**P**	**00 17 41.3**	**+0.3**
	SNR=32						
CHKK	**Chushkaly**	**53.89**	**318**	*e*P	**P**	**00 17 40.3**	**-1.3**
	baz=318						
CHKK	**Chushkaly**	**53.89**	**318**	*e*P	**P**	**00 17 40.3**	**-1.3**
KUU	**Kurty**	**54.34**	**318**	*e*P	**P**	**00 17 44.1**	**-0.8**
	baz=318						
KUU				*e*S	**S**	**00 25 22.1**	**+0.8**
	baz=318						
KUU				LR	LR	00 42 52.9	
	comp=Z,1µm,15.2s,baz=318						
KUU	**Kurty**	**54.34**	**318**	*e*P	**P**	**00 17 44.1**	**-0.8**
KUU				*e*S	**S**	**00 25 22.9**	**+1.6**
KUU				MLR	MLR		
	comp=Z,1µm,15.0s						
TKM2	**Tokmak 2**	**54.46**	**316**	P	**P**	**00 17 46.0**	**0.0**
	SNR=40						
AULHS	**Lilydale High**	**54.59**	**160**	P	**P**	**00 17 48.3**	**+1.7**
ZAA0	**Zalesovo Array**	**54.67**	**332**	P	**P**	**00 17 45.3**	**-1.8**
ZALV	**Zalesovo Beam**	**54.67**	**332**	P	**P**	**00 17 45.8**	**-1.3**
	comp=Z,16nm,0.8s,baz=119,slow=6.7,SNR=59						
ZALV				LR	LR	00 42 41.1	
	comp=Z,3µm,18.3s,baz=128,slow=38						
ZALV				PKP2bc	P'P'df	00 48 08.5	+8.1
	comp=Z,0.1nm,0.3s,baz=186,slow=2.7,SNR=4.0						
	comp=Z,16nm,0.8s						
ZALV	**Zalesovo Beam**	**54.67**	**332**	P	**P**	**00 17 45.3**	**-1.8**
CORO	**Coronation Par**	**54.75**	**160**	P	**P**	**00 17 48.9**	**+1.2**
KBK	**Karagaybulak**	**54.81**	**316**	P	**P**	**00 17 48.6**	**+0.2**
	SNR=60						
BHUJ	**Bhuj**	**54.85**	**292**	*e*P	**P**	**00 17 49.5**	**+0.7**
UCH	**Uchtor**	**54.95**	**315**	P	**P**	**00 17 50.0**	**+0.1**
	SNR=129						
SEM	**Semipalatinsk**	**54.97**	**326**	*e*P	**P**	**00 17 47.9**	**-1.7**
	comp=Z,55nm,2.0s,baz=326						
SEM				LR	LR	00 43 31.0	
	baz=326						
SEM	**Semipalatinsk**	**54.97**	**326**	*e*P	**P**	**00 17 47.8**	**-1.7**
SEM				pmax	pmax		
	comp=Z,55nm,2.0s						
CHMS	**Chumysh**	**55.07**	**316**	P	**P**	**00 17 50.5**	**+0.3**
	SNR=48						
AAK	**Ala-Archa**	**55.11**	**316**	P	**P**	**00 17 50.7**	**0.0**
	SNR=33						
AAK	**Ala-Archa**	**55.11**	**316**	P	**P**	**00 17 50.9**	**+0.3**
	comp=Z,13nm,1.1s,baz=106,slow=7.4,SNR=48						
AAK				S	**S**	**00 25 32.7**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=8.3,slow=18,SNR=1.6						
AAK				LR	LR	00 43 41.3	
	comp=Z,8µm,19.8s,baz=93,slow=39						
	comp=Z,13nm,1.1s						
AAK	**Ala-Archa**	**55.11**	**316**	P	**P**	**00 17 50.2**	**-0.5**
AAK				IAmb	IAmb	00 17 56.1	
	comp=Z,204nm,1.8s						
AAK	**Ala-Archa**	**55.11**	**316**	*i* P	**P**	**00 17 50.5**	**-0.2**
	SNR=58						
AAK	**Ala-Archa**	**55.11**	**316**	P	**P**	**00 17 50.8**	**+0.1**
AAK				P	**P**	**00 17 50.8**	**+0.1**
AAK				S	**S**	**00 25 34.9**	**+2.8**
AAK				S	**S**	**00 25 34.9**	**+2.8**
SGDS	**Sogindy**	**55.31**	**317**	*e*P	**P**	**00 17 51.3**	**-0.8**
	comp=Z,51nm,2.0s,baz=317						
SGDS	**Sogindy**	**55.31**	**317**	*e*P	**P**	**00 17 51.2**	**-0.8**
SGDS				pmax	pmax		
	comp=Z,51nm,2.0s						
USP	**Ospenovka**	**55.34**	**316**	P	**P**	**00 17 51.8**	**-0.3**
	SNR=68						
AML	**Almayashu**	**55.49**	**315**	P	**P**	**00 17 54.0**	**+0.3**
	SNR=83						
EKS2	**Erkin-Say**	**55.61**	**315**	P	**P**	**00 17 54.7**	**+0.4**
	SNR=77						
KURK	**Kurchatov**	**56.02**	**326**	P	**P**	**00 17 55.5**	**-1.3**
KURK				IAmb	IAmb	00 18 01.2	
	comp=Z,162nm,1.2s						
KURK	**Kurchatov**	**56.02**	**326**	IAMs_20	IAMs_20	00 43 53.1	
	comp=Z,3µm,18.0s						
KURK	**Kurchatov**	**56.02**	**326**	P	**P**	**00 17 55.5**	**-1.3**
KURK				pmax	pmax		
	comp=Z,162nm,1.3s						
KURK				MLR	MLR		
	comp=Z,3µm,18.0s						
KURK	**Kurchatov**	**56.02**	**326**	P	**P**	**00 17 56.2**	**-0.6**
KURK				P	**P**	**00 17 56.2**	**-0.6**
KURK				P	**P**	**00 17 56.2**	**-0.6**
KURK				S	**S**	**00 25 43.9**	**+0.4**
KURK				S	**S**	**00 25 43.9**	**+0.4**
KURK				S	**S**	**00 25 43.9**	**+0.4**
KURBB	**Kurchatov Arra**	**56.02**	**326**	P	**P**	**00 17 56.2**	**-0.7**
	comp=Z,20nm,0.7s,baz=124,slow=6.7,SNR=127						
	comp=Z,20nm,0.7s						
TAU	**Tasmania Unive**	**56.11**	**161**	P	**P**	**00 17 57.1**	**-0.3**
TAU				IAmb	IAmb	00 18 21.3	
	comp=Z,124nm,1.4s						
TAU	**Tasmania Unive**	**56.11**	**161**	P	**P**	**00 17 59.1**	**+1.6**
TAU	**Tasmania Unive**	**56.11**	**161**	P	**P**	**00 17 57.2**	**-0.3**
TAU				pmax	pmax		
	comp=Z,124nm,1.5s						
BTLS	**Baital**	**56.30**	**318**	*e*P	**P**	**00 17 58.0**	**-1.0**
	comp=Z,46nm,1.8s,baz=318						
BTLS	**Baital**	**56.30**	**318**	*e*P	**P**	**00 17 57.9**	**-1.0**
BTLS				pmax	pmax		
	comp=Z,46nm,1.8s						
SEY	**Seymchan**	**56.49**	**14**	P	**P**	**00 18 01.4**	**+1.5**
	comp=Z,11nm,0.7s,baz=211,slow=5.8,SNR=22						
SEY				LR	LR	00 40 44.8	
	comp=Z,1µm,21.8s,baz=212,slow=34						
	comp=Z,11nm,0.7s						
SEY	**Seymchan**	**56.49**	**14**	⇑*i*P	**P**	**00 18 01.5**	**+1.5**
SEY				pmax	pmax		
	comp=Z,114nm,1.9s						
SEY				MLR	MLR		
	comp=Z,2µm,18.0s						
FUNA	**Funafuti**	**56.51**	**107**	P	**P**	**00 18 03.6**	**+2.7**
KBL	**Kabul**	**56.95**	**305**	P	**P**	**00 18 03.2**	**-0.9**
KBL				IAmb	IAmb	00 18 05.4	
	comp=Z,168nm,1.1s						
KBL	**Kabul**	**56.95**	**305**	P	**P**	**00 18 03.2**	**-0.9**
KBL				pmax	pmax		
	comp=Z,168nm,1.1s						
KBL	**Kabul**	**56.95**	**305**	P	**P**	**00 18 04.0**	**0.0**
	SNR=106						
KBL				P	**P**	**00 18 04.0**	**0.0**
	SNR=106						
KBL				S	**S**	**00 25 59.1**	**+2.2**
KBL				S	**S**	**00 25 59.1**	**+2.2**
GAR	**Garm**	**56.99**	**310**	P	**P**	**00 18 03.5**	**-0.6**
CHGR	**Chuyangaron**	**57.78**	**310**	P	**P**	**00 18 08.7**	**-1.0**
CHGR	**Chuyangaron**	**57.78**	**310**	P	**P**	**00 18 08.7**	**-1.0**
CHGR				pmax	pmax		
	comp=Z,192nm,1.0s						
SHEM	**Shemya Is, Ala**	**57.99**	**33**	P	**P**	**00 18 13.5**	**+2.7**
	comp=Z,122nm,0.9s,baz=124,slow=3.4,SNR=3.8						
SHEM				LR	LR	00 38 26.7	
	comp=Z,627nm,21.6s,baz=257,slow=31						
KK31	**Karatay Array**	**58.03**	**315**	P	**P**	**00 18 10.3**	**-0.9**
KK31				IAmb	IAmb	00 18 12.4	
	comp=Z,183nm,1.4s						
KK31	**Karatay Array**	**58.03**	**315**	P	**P**	**00 18 10.3**	**-0.9**
KK31				pmax	pmax		
	comp=Z,183nm,1.5s						
KKAR	**Karatay Array**	**58.03**	**315**	P	**P**	**00 18 10.1**	**-1.1**
KKAR				IAmb	IAmb	00 18 12.4	
	comp=Z,183nm,1.4s						
KKAR	**Karatay Array**	**58.03**	**315**	P	**P**	**00 18 10.4**	**-0.9**
KKAR	**Karatay Array**	**58.03**	**315**	P	**P**	**00 18 10.1**	**-1.1**
KKAR				pmax	pmax		
	comp=Z,183nm,1.5s						
IUG	**Iuzhnay**	**58.08**	**314**	*e*P	**P**	**00 18 11.4**	**-0.3**
	baz=314						
IUG	**Iuzhnay**	**58.08**	**314**	*de*P	**P**	**00 18 11.6**	**-0.1**
IUG				pmax	pmax		
	comp=Z,167nm,1.8s						
TAS	**Tashkent**	**58.37**	**313**	P	**P**	**00 18 13.5**	**-0.2**
TAS	**Tashkent**	**58.37**	**313**	P	**P**	**00 18 13.5**	**-0.2**
TAS				pmax	pmax		
	comp=Z,418nm,1.6s						
CHM	**Chimkent**	**58.43**	**314**	*e*P	**P**	**00 18 13.6**	**-0.5**
	comp=Z,55nm,1.4s,baz=314						
CHM				LR	LR	00 43 39.5	
	baz=314						
CHM	**Chimkent**	**58.43**	**314**	*e*P	**P**	**00 18 13.6**	**-0.5**
CHM				pmax	pmax		
	comp=Z,55nm,1.4s						
MSVF	**Nonsavu**	**58.70**	**118**	P	**P**	**00 18 18.2**	**+1.9**
	comp=Z,25nm,0.9s,baz=314,slow=6.4,SNR=8.3						
MSVF				LR	LR	00 39 37.6	
	comp=Z,574nm,20.9s,baz=303,slow=32						
	comp=Z,25nm,0.9s						
MSVF	**Nonsavu**	**58.70**	**118**	P	**P**	**00 18 15.7**	**-0.7**
MSVF				IAmb	IAmb	00 18 22.8	
	comp=Z,196nm,1.6s						
MSVF	**Nonsavu**	**58.70**	**118**	P	**P**	**00 18 18.0**	**+1.7**
BRZS	**Berezniki**	**59.09**	**323**	*e*P	**P**	**00 18 17.3**	**-1.1**
	baz=323						
BRZS				*e*S	**S**	**00 26 24.9**	**+1.1**
	baz=323						
BRZS	**Berezniki**	**59.09**	**323**	*e*P	**P**	**00 18 17.3**	**-1.1**
BRZS				*e*S	**S**	**00 26 24.9**	**+1.1**
FUTU	**Fugatoga**	**60.86**	**112**	P	**P**	**00 18 31.7**	**+0.6**
BVAR	**Borovoye Array**	**61.62**	**326**	P	**P**	**00 18 34.9**	**-0.8**
	comp=Z,31nm,1.0s,baz=117,slow=8.5,SNR=65						
BVAR				LR	LR	00 47 24.2	
	comp=Z,3µm,18.6s,baz=107,slow=38						
	comp=Z,31nm,1.0s						
BRVK	**Borovoye**	**61.69**	**326**	P	**P**	**00 18 34.8**	**-1.3**
BRVK				IAmb	IAmb	00 18 38.6	
	comp=Z,45nm,0.9s						
BRVK	**Borovoye**	**61.69**	**326**	IAMs_20	IAMs_20	00 46 53.7	
	comp=Z,3µm,20.0s						
BRVK	**Borovoye**	**61.69**	**326**	P	**P**	**00 18 34.8**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,45nm,1.0s						
BRVK				MLR	MLR		
	comp=Z,3µm,20.0s						
BRVK	**Borovoye**	**61.69**	**326**	P	**P**	**00 18 35.4**	**-0.8**
BRVK				P	**P**	**00 18 35.4**	**-0.8**
BRVK				P	**P**	**00 18 35.4**	**-0.8**
BRVK				S	**S**	**00 26 56.6**	**-0.4**
BRVK				S	**S**	**00 26 56.6**	**-0.4**
BRVK				S	**S**	**00 26 56.6**	**-0.4**
TIXI	**Tiksi**	**61.86**	**1**	P	**P**	**00 18 36.1**	**-0.9**
	comp=Z,12nm,0.6s,baz=90,slow=23,SNR=35						
TIXI				LR	LR	00 45 28.3	
	comp=Z,4µm,22.0s,baz=180,slow=36						
	comp=Z,12nm,0.6s						
TIXI	**Tiksi**	**61.86**	**1**	P	**P**	**00 18 35.0**	**-2.0**
TIXI				IAmb	IAmb	00 18 53.8	
	comp=Z,81nm,1.2s						
TIXI				IAMs_20	IAMs_20	00 44 55.3	
	comp=Z,4µm,21.0s						
TIXI	**Tiksi**	**61.86**	**1**	*d i*P	**P**	**00 18 35.1**	**-1.8**
TIXI				pmax	pmax		
	comp=Z,41nm,0.9s						
TIXI				MLR	MLR		
	comp=Z,3µm,19.0s						
NGCH	**Negor - Chabah**	**62.72**	**293**	P	**P**	**00 18 44.6**	**+1.0**
NGCH				S	**S**	**00 27 14.8**	**+3.8**
BILL	**Bilibino**	**64.09**	**16**	P	**P**	**00 18 51.0**	**-0.9**
BILL				IAmb	IAmb	00 19 12.8	
	comp=Z,71nm,1.1s						
BILL				IAMs_20	IAMs_20	00 50 07.4	
	comp=Z,1µm,19.0s						
BILL	**Bilibino**	**64.09**	**16**	⇑*i*P	**P**	**00 18 51.3**	**-0.6**
BILL				*e*		00 21 15.2	
BILL				pmax	pmax		
	comp=Z,121nm,2.0s						
BILL				MLR	MLR		
	comp=Z,1µm,19.0s						
NRIK	**Noril'sk**	**64.29**	**346**	P	**P**	**00 18 51.5**	**-1.7**
	comp=Z,13nm,0.7s,baz=139,slow=5.9,SNR=22						
NRIK				PKP2ab	**P'P'ab**	**00 47 57.5**	**+1.7**
	comp=Z,1.0nm,0.3s,baz=32,slow=3.7,SNR=3.6						
NRIK				LR	LR	00 50 38.3	
	comp=Z,3µm,18.1s,baz=146,slow=40						
	comp=Z,13nm,0.7s						
NRIK	**Noril'sk**	**64.29**	**346**	P	**P**	**00 18 51.5**	**-1.7**
NRIK				IAmb	IAmb	00 19 09.6	
	comp=Z,107nm,1.4s						
NRIK	**Noril'sk**	**64.29**	**346**	P	**P**	**00 18 51.5**	**-1.7**
NRIK				pmax	pmax		
	comp=Z,107nm,1.4s						
WSAR	**Wadi Sarin**	**64.97**	**291**	P	**P**	**00 18 57.5**	**-1.0**
	comp=Z,4.9nm,0.6s,baz=147,slow=5.5,SNR=9.0						
WSAR				S	**S**	**00 27 36.4**	**-2.7**
	comp=Z,1.6nm,0.7s,baz=6.3,slow=14,SNR=1.2						
WSAR				LR	LR	00 50 48.9	
	comp=Z,628nm,19.9s,baz=96,slow=39						
	comp=Z,4.9nm,0.6s						
WSAR	**Wadi Sarin**	**64.97**	**291**	P	**P**	**00 18 58.0**	**-0.5**
	SNR=7.6						
WSAR				S	**S**	**00 27 38.7**	**-0.5**
BIDO	**Bidbid**	**65.44**	**291**	P	**P**	**00 19 01.0**	**-0.5**
	SNR=23						
BIDO				P	**P**	**00 19 01.0**	**-0.5**
	SNR=23						
BIDO				S	**S**	**00 27 46.5**	**+1.8**
BIDO				S	**S**	**00 27 46.5**	**+1.8**
JMDO	**Jabal Madar**	**65.47**	**290**	P	**P**	**00 19 00.9**	**-0.9**
	SNR=11						
JMDO				P	**P**	**00 19 00.9**	**-0.9**
	SNR=11						
JMDO				S	**S**	**00 27 45.5**	**+0.3**
JMDO				S	**S**	**00 27 45.5**	**+0.3**
SMDO	**Samad**	**65.51**	**291**	P	**P**	**00 19 01.2**	**-0.9**
	SNR=9.1						
SMDO				P	**P**	**00 19 01.2**	**-0.9**
	SNR=9.1						
SMDO				S	**S**	**00 27 47.6**	**+1.7**
SMDO				S	**S**	**00 27 47.6**	**+1.7**
JASK	**Jask - Hormozg**	**65.68**	**294**	P	**P**	**00 19 04.1**	**+1.0**
	SNR=12						
JASK				S	**S**	**00 27 52.1**	**+4.4**
KUZ	**Kuaotunu**	**66.07**	**137**	P	**P**	**00 19 08.2**	**+3.0**
HOQ	**Hoqain**	**66.19**	**291**	P	**P**	**00 19 05.8**	**-0.6**
	SNR=27						
HOQ				P	**P**	**00 19 05.8**	**-0.6**
	SNR=27						
HOQ				S	**S**	**00 27 55.7**	**+1.8**
HOQ				S	**S**	**00 27 55.7**	**+1.8**
GEYT	**Alibeck**	**66.20**	**307**	P	**P**	**00 19 06.5**	**+0.3**
	comp=Z,157nm,1.1s,baz=128,slow=2.4,SNR=247						
GEYT				S	**S**	**00 27 54.9**	**+1.2**
	comp=Z,0.6nm,0.5s,baz=31,slow=40,SNR=1.7						
GEYT				PKP2ab	**P'P'ab**	**00 47 49.7**	**0.0**
	comp=Z,0.9nm,0.5s,baz=232,slow=4.9,SNR=4.2						
GEYT				LR	LR	00 52 38.5	
	comp=Z,3µm,18.8s,baz=81,slow=40						
	comp=Z,157nm,1.1s						
BSY	**Bisya**	**66.30**	**291**	P	**P**	**00 19 06.1**	**-1.0**
	SNR=14						
BSY				P	**P**	**00 19 06.1**	**-1.0**
	SNR=14						
BSY				S	**S**	**00 27 56.5**	**+1.1**
BSY				S	**S**	**00 27 56.5**	**+1.1**
JCZ	**Jackson Bay**	**66.43**	**147**	P	**P**	**00 19 09.7**	**+2.2**
AFI	**Afiamalu**	**66.57**	**110**	LR	LR	00 42 46.0	
	comp=Z,1µm,21.8s,baz=294,slow=31						
ABKAR	**Akbulak array**	**66.72**	**320**	P	**P**	**00 19 08.0**	**-1.3**
ABKAR	**Akbulak array**	**66.72**	**320**	P	**P**	**00 19 08.1**	**-1.2**
ABKAR				IAmb	IAmb	00 19 09.9	
	comp=Z,195nm,1.8s						
SOHO	**SOHO**	**66.89**	**292**	*i* P	**P**	**00 19 09.3**	**-1.5**

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      SNR=12
ARQ   Araqi            66.91 291   P        P        00 19 10.4 -0.6
      SNR=13
ARQ                                P        P        00 19 10.4 -0.6
      SNR=13
ARQ                                S        S        00 28 03.4 +0.6
ARQ                                S        S        00 28 03.4 +0.6
RAO   Raoul Island     66.93 128   LR       LR       00 44 07.4
      comp=Z,412nm,20.2s,baz=32,slow=32
MRNZ  Matariki Terra   66.94 143   P        P        00 19 09.9 -0.8
BANOM Banah            67.09 294   P        P        00 19 12.2  0.0
MDH   Madha            67.10 293   P        P        00 19 10.5 -1.6
UOSS  Minazif          67.18 293   P        P        00 19 11.2 -1.5
UOSS                               IAmb     IAmb     00 19 27.2
      comp=Z,35nm,0.9s
UOSS  Minazif          67.18 293   P        P        00 19 11.6 -1.1
MASF  Masafi           67.22 293   P        P        00 19 13.9 +0.9
      SNR=7.1
MASF                               P        P        00 19 13.9 +0.9
      SNR=7.1
MASF                               S        S        00 28 06.5  0.0
MASF                               S        S        00 28 06.5  0.0
MSFE  Esma-Masafi      67.22 293   P        P        00 19 12.1 -0.8
SHME  Shamm            67.24 294   P        P        00 19 12.5 -0.4
HATD  Hatta, Dubai     67.25 293 i P        P        00 19 11.9 -1.2
      SNR=12
HATD  Hatta, Dubai     67.25 293   P        P        00 19 12.8 -0.3
      SNR=11
HATD                               P        P        00 19 12.8 -0.3
      SNR=11
HATD                               S        S        00 28 06.7 -0.1
HATD                               S        S        00 28 06.7 -0.1
THZ   Tophouse         67.25 143   P        P        00 19 12.8  0.0
ASHO  Ashiyiah         67.32 293 i P        P        00 19 12.5 -1.0
      SNR=13
ASHO  Ashiyiah         67.32 293   P        P        00 19 13.3 -0.3
      SNR=12
ASHO                               P        P        00 19 13.3 -0.3
      SNR=12
ASHO                               S        S        00 28 09.9 +2.2
ASHO                               S        S        00 28 09.9 +2.2
NNVZ  North Ngauruho   67.35 140   P        P        00 19 16.3 +2.8
LBZ   Lake Benmore     67.39 147   P        P        00 19 13.2 -0.3
TMVZ  Te Maari         67.40 140   P        P        00 19 18.1 +4.3
RPZ   Rata Peaks       67.43 146   LR       LR       00 46 17.7
      comp=Z,2µm,21.9s,baz=294,slow=34
WNVZ  Wahianoa         67.45 140   P        P        00 19 18.1 +3.9
ALNE  Al Ain           67.61 292 i P        P        00 19 14.2 -1.2
      SNR=24
ALNE  Al Ain           67.61 292   P        P        00 19 15.2 -0.2
      SNR=13
ALNE                               P        P        00 19 15.2 -0.2
      SNR=13
ALNE                               S        S        00 28 10.6 -0.5
ALNE                               S        S        00 28 10.6 -0.5
NIKH  Nikolski High    67.68  37   P        P        00 19 14.5 -0.8
      baz=256
FAQ   Al Faqa, Dubai   67.74 293 i P        P        00 19 16.0 -0.2
      SNR=6.9
URZ   Urewera          67.83 138   LR       LR       00 45 50.8
      comp=Z,1µm,22.0s,baz=24,slow=33
URZ   Urewera          67.83 138   P        P        00 19 19.5 +3.1
BHHZ  Black Hill Sta   67.84 140   P        P        00 19 18.8 +2.3
BKZ   Black Stump Fm   67.93 139   P        P        00 19 17.0 -0.1
BKZ   Black Stump Fm   67.93 139   P        P        00 19 18.0 +0.9
BKZ   Black Stump Fm   67.93 139   P        P        00 19 17.8 +0.6
RTZ   Ruatahuna        67.94 139   P        P        00 19 18.5 +1.3
SHAO  Shalim           67.96 286   P        P        00 19 18.1 +0.4
SHAO                               P        P        00 19 18.1 +0.4
SHAO                               P        P        00 19 18.1 +0.4
SHAO                               S        S        00 28 18.0 +2.5
SHAO                               S        S        00 28 18.0 +2.5
SHAO                               S        S        00 28 18.0 +2.5
MTHZ  Maungataniwha    67.98 139   P        P        00 19 18.1 +0.7
SPIA  Saint Paul Isl   68.02  32   P        P        00 19 16.6 -0.6
      baz=253
KHZ   Kahutara         68.02 144   P        P        00 19 17.9 +0.4
SNZO  South Karori     68.05 142   IAMs_20  IAMs_20  00 45 26.2
      comp=Z,2µm,22.0s
SNZO  South Karori     68.05 142   P        P        00 19 19.6 +1.9
NMHZ  Naumai           68.10 139   P        P        00 19 20.2 +2.0
RAHZ  Arahi            68.18 139   P        P        00 19 20.1 +1.5
AKTO  Aktyubinsk       68.19 320   P        P        00 19 17.5 -1.0
      comp=Z,11nm,0.7s,baz=95,slow=5.7,SNR=41
      comp=Z,11nm,0.7s
SVE   Sverdlovsk       68.19 328⇓eP       P        00 19 17.8 -0.6
SVE                              eS       S        00 28 18.8 +1.9
SVE                                pmax     pmax
      comp=Z,133nm,1.8s
SVE                                MLR      MLR
      comp=Z,2µm,16.0s
MCHZ  McNeill Hill     68.22 139   P        P        00 19 21.9 +3.1
MXZ   Matakaoa Point   68.25 137   P        P        00 19 20.2 +1.2
BFZ   Birch Farm       68.64 141   P        P        00 19 23.9 +2.5
ARU   Arti             69.19 327   P        P        00 19 23.3 -1.3
      comp=Z,19nm,0.5s,baz=129,slow=2.9,SNR=46
ARU                                LR       LR       00 52 04.8
      comp=Z,3µm,19.2s,baz=98,slow=38
      comp=Z,19nm,0.5s
ARU   Arti             69.19 327   P        P        00 19 23.0 -1.7
ARU                                IAmb     IAmb     00 19 30.5
      comp=Z,36nm,0.8s
ARU   Arti             69.19 327d iP        P        00 19 22.8 -1.9
ARU                                                  00 19 47.0
ARU                                                  00 21 52.5
ARU                                S        S        00 28 30.3 +1.5
ARU                                                  00 29 14.7
ARU                                SS       SS       00 32 59.0 +3.7
ARU                                pmax     pmax
      comp=Z,43nm,0.8s
ARU                                MLR      MLR
      comp=Z,3µm,17.0s
UNV   Unalaska Valle   69.25  36   P        P        00 19 24.6 -0.4
UNV                                IAmb     IAmb     00 19 30.1
      comp=Z,48nm,0.9s
UNV   Unalaska Valle   69.25  36   P        P        00 19 25.3 +0.3
      baz=258
DOK   Doka             69.34 286   P        P        00 19 26.1 -0.2
      SNR=31
DOK                                P        P        00 19 26.1 -0.2
      SNR=31
DOK                                P        P        00 19 26.1 -0.2
      SNR=31
DOK                                S        S        00 28 32.7 +0.9
DOK                                S        S        00 28 32.7 +0.9
DOK                                S        S        00 28 32.7 +0.9
MZR   Muzera           69.72 291 i P        P        00 19 27.3 -1.3
      SNR=14
MZR   Muzera           69.72 291   P        P        00 19 28.6  0.0
      SNR=13
MZR                                P        P        00 19 28.6  0.0
      SNR=13
MZR                                S        S        00 28 36.7 +0.5
MZR                                S        S        00 28 36.7 +0.5
WHFO  Wadi Hawf        69.73 286   P        P        00 19 28.2 -0.5
      SNR=12
WHFO                               P        P        00 19 28.2 -0.5
      SNR=12
WHFO                               S        S        00 28 37.9 +1.4
WHFO                               S        S        00 28 37.9 +1.4
ABTO  Aybut            70.22 285   P        P        00 19 31.9 +0.1
      SNR=41
ABTO                               P        P        00 19 31.9 +0.1
      SNR=41
ABTO                               S        S        00 28 44.7 +2.4
ABTO                               S        S        00 28 44.7 +2.4
GHWR  Ruwais           70.24 292   P        P        00 19 31.5 -0.2
GHWR                               P        P        00 19 31.5 -0.2
GHWR                               S        S        00 28 40.9 -1.3
GHWR                               S        S        00 28 40.9 -1.3
FALS  False Pass       71.22  35   P        P        00 19 39.2 +2.1
FALS  False Pass       71.22  35   P        P        00 19 37.1  0.0
      baz=260
TNA   Tin City         71.57  24   P        P        00 19 39.0  0.0
TNA   Tin City         71.57  24   P        P        00 19 39.6 +0.6
      baz=252
SHMA  Al-Shehemyia     71.90 294   P        P        00 19 41.6 -0.2
SHMA                               S        S        00 29 02.7 +1.3
SMRA  Abu-Samra        72.08 293   P        P        00 19 42.9 +0.1
SMRA                               S        S        00 29 04.7 +1.3
S12K  Black Hills      72.12  35   P        P        00 19 43.0 +0.4
      baz=261
SAKB  Bahrain          72.28 294   P        P        00 19 44.0 -0.1
SAKB                               S        S        00 29 06.9 +1.1
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ANM   Nome             72.33  25   P        P        00 19 44.8 +1.2
      baz=255
SDPT  Sand Point       72.96  35   P        P        00 19 47.3 -0.2
SDPT                               IAmb     IAmb     00 19 56.9
      comp=Z,67nm,0.8s
SDPT  Sand Point       72.96  35   P        P        00 19 48.5 +1.0
SDPT  Sand Point       72.96  35   P        P        00 19 47.5  0.0
      baz=262
LKRN  Lenkeran, Azer   73.57 307   P        P        00 19 50.7 -0.8
RDOG  Red Dog Mine     74.15  22   P        P        00 19 54.4 +0.1
RDOG                               IAmb     IAmb     00 20 17.9
      comp=Z,113nm,1.5s
RDOG  Red Dog Mine     74.15  22   P        P        00 19 55.2 +0.9
      baz=256,SNR=9.8
CHGN  Chignik          74.23  34   P        P        00 19 55.0  0.0
      baz=264
AKT   Akhty            74.41 310 eP       P        00 19 55.1 -1.4
AKT                              e                   00 20 09.5
AKT                              e                   00 22 40.6
AKT                                pmax     pmax
      comp=Z,36nm,1.0s
KIRV  Kirov            74.44 328   P        P        00 19 55.2 -0.8
      comp=Z,61nm,0.8s,baz=97,slow=4.5,SNR=45
KIRV                               LR       LR       00 55 38.7
      comp=Z,5µm,18.2s,baz=97,slow=38
      comp=Z,61nm,0.8s
KIRV  Kirov            74.44 328d iP        P        00 19 54.3 -1.8
N16K  Nishlik Lake     74.54  30   P        P        00 19 58.3 +1.5
      baz=262
MAK   Makhachkala      74.59 312 eP       P        00 19 53.0 -4.3
MAK                              eS       S        00 29 26.9 -4.5
MAK                              eSSS     SSS      00 37 35.3
MAK                                pmax     pmax
      comp=Z,572nm,1.8s
P16K  Nushagak River   74.76  31   P        P        00 19 59.2 +1.2
      baz=264,SNR=6.7
O16K  Kokwok River B   74.77  31   P        P        00 19 59.0 +1.0
      baz=263
SEKA  Sheki            74.81 310   P        P        00 19 57.4 -1.3
R16K  Pilot Point      74.82  33   P        P        00 19 59.2 +0.8
      baz=264
MNGR  Mingechevir, A   74.89 310   P        P        00 19 58.3 -0.8
BELG  Belogornoye      74.89 322   P        P        00 19 57.8 -1.1
      comp=Z,130nm,0.9s,baz=308,slow=0.6,SNR=49
BELG                               LR       LR       00 55 04.8
      comp=Z,1µm,18.7s,baz=94,slow=38
      comp=Z,130nm,0.9s
BELG  Belogornoye      74.89 322d iP        P        00 19 57.2 -1.6
BELG                               pmax     pmax
      comp=Z,40nm,1.0s
BELG                               MLR      MLR
      comp=Z,171nm,15.0s
ZKTA  Zakatala         75.24 310   P        P        00 20 00.3 -0.9
O17K  Koliganek Bris   75.29  31   P        P        00 20 02.1 +1.1
      baz=264,SNR=12
Q16K  King Salmon      75.41  32   P        P        00 20 01.6 -0.2
      baz=265
R17K  Ugashik Creek    75.46  33   P        P        00 20 02.2 +0.1
      baz=265
GANJ  Ganja            75.47 309   P        P        00 20 01.6 -0.9
P17K  Kvichak River    75.57  31   P        P        00 20 03.3 +0.6
      baz=265
Q17K  Contact Creek    75.78  32   P        P        00 20 03.9 -0.1
      baz=266
GROC  Groznyy          75.85 312 eP       P        00 20 03.9 -0.7
GROC                             e                   00 20 16.2
GROC                             e                   00 22 56.4
GROC                               pmax     pmax
      comp=Z,1µm,1.4s
NAX   Nakhchivan       76.13 308   P        P        00 20 05.4 -1.0
TTA   Tatalina         76.13  28   P        P        00 20 07.1 +1.2
TTA   Tatalina         76.13  28   P        P        00 20 05.8 -0.1
      baz=264
SVW2  Sparrevohn       76.17  29   P        P        00 20 07.4 +1.3
P18K  Big Mountain,    76.20  31   P        P        00 20 06.1 -0.3
P18K                               IAmb     IAmb     00 20 17.5
      comp=Z,67nm,1.6s
P18K  Big Mountain,    76.20  31   P        P        00 20 06.4 +0.1
      baz=266
O18K  Koktuh Hills     76.25  31   P        P        00 20 07.8 +1.3
      baz=266,SNR=9.8
Q18K  Katmai Hardscr   76.27  32   P        P        00 20 07.5 +0.7
      baz=266
L19K  White Mountain   76.60  28   P        P        00 20 09.1 +0.6
      baz=266
CASY  Casey            76.64 186   P        P        00 20 08.8 +0.3
CASY                               IAmb     IAmb     00 20 15.7
      comp=Z,74nm,1.0s
N19K  Bonanza Creek    76.68  30   P        P        00 20 10.1 +1.1
      baz=266
GNI   Garni            76.69 309   P        P        00 20 10.2 +0.5
      comp=Z,126nm,1.2s,baz=170,slow=1.4,SNR=47
GNI                                LR       LR       00 56 16.0
      comp=Z,735nm,21.4s,baz=78,slow=38
      comp=Z,126nm,1.2s
GNI   Garni            76.69 309   P        P        00 20 10.4 +0.8
GNI   Garni            76.69 309   P        P        00 20 09.5 -0.1
GNI   Garni            76.69 309d iP        P        00 20 10.0 +0.4
GNI                                pmax     pmax
      comp=Z,327nm,1.5s
GNI                                MLR      MLR
      comp=Z,607nm,20.0s
GNI   Garni            76.69 309   P        P        00 20 10.1 +0.5
GNI                                P        P        00 20 10.1 +0.5
GNI                                S        S        00 29 58.7 +3.6
GNI                                S        S        00 29 58.7 +3.6
O19K  Port Alsworth    76.72  30   P        P        00 20 10.0 +0.9
      baz=266
M19K  Big River Lodg   76.80  29   P        P        00 20 10.2 +0.6
      baz=266
A21K  Barrow           76.93  19   P        P        00 20 10.1  0.0
A21K                               IAmb     IAmb     00 20 16.8
      comp=Z,99nm,1.0s
A21K                               IAMs_20  IAMs_20  00 57 57.6
      comp=Z,2µm,20.0s
A21K  Barrow           76.93  19   P        P        00 20 10.8 +0.7
      baz=262
Q19K  Cape Douglas,    76.99  32   P        P        00 20 11.0 +0.2
      baz=267
RAYN  Ar Rayn          77.01 292   P        P        00 20 11.0 -0.6
RAYN                               IAmb     IAmb     00 20 12.7
      comp=Z,128nm,0.9s
RAYN  Ar Rayn          77.01 292   IAMs_20  IAMs_20  01 00 32.9
      comp=Z,971nm,19.0s
RAYN  Ar Rayn          77.01 292   P        P        00 20 11.0 -0.6
RAYN                               pmax     pmax
      comp=Z,129nm,0.9s
RAYN  Ar Rayn          77.01 292 i P        P        00 20 11.8 +0.2
      SNR=12
K20K  Telida           77.05  27   P        P        00 20 12.0 +1.0
      baz=266
L20K  Farewell, AK     77.08  28   P        P        00 20 12.0 +0.8
      baz=266
TASB  TASBURUN-IGDIR   77.08 309   P        P        00 20 12.4 +0.7
OHAK  Old Harbor       77.11  33   P        P        00 20 12.3 +0.9
      baz=268
P19K  Oil Pt           77.24  31   P        P        00 20 12.3 +0.2
      baz=268
ZEI   Tsey             77.25 312 eP       P        00 20 09.5 -3.3
ZEI                                pmax     pmax
      comp=Z,173nm,1.3s
IMAR  Indian Mountai   77.38  24   P        P        00 20 12.7 -0.1
M20K  Styx River       77.39  29   P        P        00 20 13.7 +0.6
      baz=267
NCK   Nalchik          77.45 312deP       P        00 20 13.0 -0.7
NCK                                pmax     pmax
      comp=Z,100nm,1.0s
KDAK  Kodiak Island    77.51  33   P        P        00 20 14.3 +0.7
      comp=Z,25nm,0.7s,baz=281,slow=5.1,SNR=16
KDAK                               LR       LR       00 51 51.9
      comp=Z,606nm,20.7s,baz=280,slow=34
      comp=Z,25nm,0.7s
G21K  Allakaket        77.52  24   P        P        00 20 14.9 +1.3
      baz=266
O20K  Slope Mountain   77.56  31   P        P        00 20 15.0 +1.0
      baz=268
ONI   Oni              77.58 312   P        P        00 20 14.9 +0.4
ONI   Oni              77.58 312   P        P        00 20 14.0 -0.5
ONI   Oni              77.58 312   P        P        00 20 14.0 -0.5
ONI                                pmax     pmax
      comp=Z,200nm,1.3s
F21K  Alatna River     77.58  23   P        P        00 20 14.8 +0.8
      baz=266,SNR=12
AKH   Akhalkalaki      77.59 310   P        P        00 20 15.6 +0.9
AKH   Akhalkalaki      77.59 310   P        P        00 20 14.2 -0.5
AKH   Akhalkalaki      77.59 310   P        P        00 20 14.2 -0.5
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AKH                                pmax     pmax
      comp=Z,622nm,1.1s
Q20K  Shuyak Island    77.63  32   P        P        00 20 15.6 +1.3
      baz=268
CUKT  Cukurca          77.69 306   P        P        00 20 15.2 -0.1
H21K  Melozitna Rive   77.75  25   P        P        00 20 15.9 +1.0
      baz=266
VANB  Van              77.79 307   P        P        00 20 16.1 +0.3
CHUM  Lake Minchumin   77.86  27   P        P        00 20 16.5 +1.0
      baz=267
PPLA  Purkeypile       77.88  28   P        P        00 20 16.6 +0.8
      baz=268
KARS  Kars             77.94 310   P        P        00 20 17.2 +0.6
KARS  Kars             77.94 310   P        P        00 20 16.4 -0.2
KARS  Kars             77.94 310   P        P        00 20 16.4 -0.2
KARS                               pmax     pmax
      comp=Z,489nm,1.2s
CAST  Castle Rocks     77.94  27   P        P        00 20 17.0 +1.0
      baz=268
KBZ   Khabaz           77.95 313   P        P        00 20 15.7 -0.7
      comp=Z,63nm,1.0s,baz=94,slow=3.1,SNR=71
KBZ                                LR       LR       01 00 11.4
      comp=Z,3µm,18.3s,baz=72,slow=40
      comp=Z,63nm,1.0s
KBZ   Khabaz           77.95 313d iP        P        00 20 15.2 -1.2
KBZ                                pmax     pmax
      comp=Z,143nm,1.3s
AGRB  Hanur-Agry       78.05 308   P        P        00 20 17.9 +0.5
I21K  Tanana           78.06  25   P        P        00 20 17.7 +1.1
      baz=267
GEVA  Gevas            78.07 307   P        P        00 20 17.2 -0.2
KIV   Kislovodsk       78.09 313 ⇑P       P        00 20 17.3  0.0
KIV   Kislovodsk       78.09 313   P        P        00 20 17.1 -0.3
KIV   Kislovodsk       78.09 313   P        P        00 20 16.8 -0.6
KIV                                IAmb     IAmb     00 20 18.9
      comp=Z,133nm,1.0s
KIV   Kislovodsk       78.09 313 eP       P        00 20 16.1 -1.2
KIV                              e                   00 23 12.9
KIV                              eS       S        00 30 11.0 +1.0
KIV                                pmax     pmax
      comp=Z,133nm,1.0s
KIV                                pmax     pmax
      comp=Z,56nm,4.2s
KIV                                MLR      MLR
      comp=Z,3µm,19.0s
KIV   Kislovodsk       78.09 313 i P        P        00 20 17.4  0.0
      SNR=46
KIV   Kislovodsk       78.09 313   P        P        00 20 17.1 -0.3
KIV                                P        P        00 20 17.1 -0.3
KIV                                S        S        00 30 10.1 +0.1
KIV                                S        S        00 30 10.1 +0.1
NEY   Neytrino         78.09 312c iP        P        00 20 17.9 +0.4
NEY                                pmax     pmax
      comp=Z,34nm,1.4s
F22K  John River       78.11  23   P        P        00 20 18.0 +1.2
      baz=267
AKDM  Akdamar-Van      78.13 307   P        P        00 20 18.3 +0.5
SKT   Skwentna         78.15  29   P        P        00 20 16.8 -0.4
SKT   Skwentna         78.15  29   P        P        00 20 17.7 +0.5
      baz=268,SNR=9.9
CAPN  Captain Cook N   78.31  30   P        P        00 20 19.1 +1.1
      baz=269
G22K  Bettles          78.34  24   P        P        00 20 18.5 +0.4
      baz=267
H22K  Ishtalitna Cre   78.35  25   P        P        00 20 19.6 +1.4
      baz=268
MLAZ  Malazgirt-MUS    78.42 308   P        P        00 20 20.2 +0.9
BRLK  Bradley Lake     78.43  31   P        P        00 20 17.5 -1.3
BRLK                               IAmb     IAmb     00 20 43.5
      comp=Z,99nm,1.3s
BPAW  Bear Paw Mtn.    78.45  26   P        P        00 20 19.0 +0.1
BPAW                               IAmb     IAmb     00 20 22.4
      comp=Z,52nm,0.8s
BPAW  Bear Paw Mtn.    78.45  26   P        P        00 20 19.3 +0.5
      baz=268,SNR=42
SENK  Senkaya-Erzuru   78.50 309   P        P        00 20 20.3 +0.5
BRSE  Bradley Lake S   78.50  31   P        P        00 20 19.9 +0.8
      baz=270
SUA   Susitna One      78.52  29   P        P        00 20 18.9 -0.5
SUA   Susitna One      78.52  29   P        P        00 20 19.8 +0.5
      baz=269,SNR=7.3
VRH   Novokhopyorsk    78.53 320 eP       P        00 20 18.0 -1.4
VRH                                pmax     pmax
      comp=Z,120nm,0.9s
MLY   Manley           78.59  25   IAMs_20  IAMs_20  00 52 55.3
      comp=Z,1µm,22.0s
MLY   Manley           78.59  25   P        P        00 20 20.0 +0.4
      baz=268,SNR=31
D23K  Nanushuk River   78.73  21   P        P        00 20 20.9 +0.7
      baz=268
CUT   Chulitna         78.75  28   P        P        00 20 21.0 +0.6
      baz=270
M22K  Willow           78.82  29   P        P        00 20 20.8  0.0
      baz=270,SNR=7.1
GURO  Guroymak-BITLI   78.86 307   P        P        00 20 22.5 +0.8
GURO  Guroymak-BITLI   78.86 307   P        P        00 20 21.8  0.0
COLD  Coldfoot         78.86  23   P        P        00 20 21.8 +0.8
      baz=269,SNR=37
KOPR  Koprukoy-ERZUR   78.91 309   P        P        00 20 23.4 +1.4
G23K  Bananza Creek    78.92  24   P        P        00 20 22.5 +1.1
      baz=269
RC01  Rabbit Creek A   79.00  30   P        P        00 20 21.9  0.0
      baz=270
O22K  Cooper Landing   79.01  30   P        P        00 20 21.9  0.0
      baz=270
H23K  Yukon River      79.10  25   IAMs_20  IAMs_20  00 53 30.1
      comp=Z,1µm,22.0s
H23K  Yukon River      79.10  25   P        P        00 20 22.8 +0.4
      baz=270
E23K  Chandalar        79.10  22   P        P        00 20 22.7 +0.3
      baz=269,SNR=34
SEW   Seward           79.15  31   P        P        00 20 22.0 -0.7
SEW                                IAmb     IAmb     00 20 53.0
      comp=Z,165nm,1.6s
SEW   Seward           79.15  31   P        P        00 20 22.8 +0.1
      baz=271
I23K  Minto, Yukon-K   79.17  25   IAMs_20  IAMs_20  00 53 47.0
      comp=Z,1µm,22.0s
I23K  Minto, Yukon-K   79.17  25   P        P        00 20 23.2 +0.5
      baz=270,SNR=27
VRTB  Varto-Mus        79.27 308   P        P        00 20 25.2 +1.2
PMR   Palmer           79.29  29   P        P        00 20 24.9 +1.5
PMR   Palmer           79.29  29   P        P        00 20 23.4  0.0
      baz=271,SNR=8.4
NEA2  Nenana           79.30  26   P        P        00 20 24.2 +0.8
      baz=270,SNR=14
MCK   McKinley         79.36  27   P        P        00 20 23.1 -0.7
MCK                                IAmb     IAmb     00 20 25.1
      comp=Z,56nm,0.7s
MCK   McKinley         79.36  27   P        P        00 20 23.1 -0.7
MCK                                pmax     pmax
      comp=Z,56nm,0.7s
MCK   McKinley         79.36  27   P        P        00 20 23.6 -0.2
      baz=270,SNR=35
GHO   Glory Hole Cre   79.39  29   P        P        00 20 23.8 -0.3
C24K  Franklin Bluff   79.45  21   P        P        00 20 24.9 +0.7
      baz=270
E24K  Your Creek       79.53  22   P        P        00 20 25.5 +0.8
      baz=270
SVAN  Silvan-Diyarba   79.54 307   P        P        00 20 25.6 +0.2
KLMR  Klimovskoe       79.55 330⇓iP       P        00 20 22.9 -2.0
KLMR                             eP       P        00 20 22.9 -2.0
KLMR                             eP       P        00 20 22.9 -2.0
KLMR                               AMP               00 20 27.2
      comp=Z,240nm,1.4s
KLMR                               PP       PP       00 23 21.4 -4.0
KLMR                               S        S        00 30 22.8 -1.9
KLMR                               S        S        00 30 22.8 -1.9
KLMR                               LQ       LQ       00 47 40.2
KLMR                               LQ       LQ       00 47 40.2
KLMR                               LR       LR       00 50 47.7
KLMR                               AMP               01 00 09.9
      comp=Z,3µm,15.9s
KLMR  Klimovskoe       79.55 330d iP        P        00 20 22.8 -2.1
KLMR                                                 00 23 21.3
KLMR                               S        S        00 30 22.8 -1.9
KLMR                               pmax     pmax
      comp=Z,240nm,1.4s
KLMR                               MLR      MLR
      comp=Z,3µm,16.0s
RAR   Rarotonga        79.58 114   LR       LR       00 49 30.5
      comp=Z,622nm,20.0s,baz=268,slow=31
KNK   Knik Glacier     79.61  29   P        P        00 20 26.0 +0.8
      baz=271,SNR=6.9
MDM   Murphy Dome      79.65  26   P        P        00 20 25.2 -0.2
CHOM  Cayeli-Rize      79.67 310   P        P        00 20 26.7 +0.8
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SML   Sawmill           79.67  29   P         P         00 20 26.1 +0.5
      baz=271,SNR=9.8
PWL   Port Wells        79.69  30   P         P         00 20 25.0 -0.6
PWL                                 IAmb      IAmb      00 20 28.8
      comp=Z,63nm,0.8s
PWL   Port Wells        79.69  30   P         P         00 20 26.0 +0.3
      baz=272,SNR=8.3
WRH   Wood River Hil    79.72  26   P         P         00 20 25.0 -0.7
WRH                                 IAmb      IAmb      00 20 45.5
      comp=Z,124nm,1.7s
F24K  Squaw Lake        79.76  23   P         P         00 20 26.6 +0.7
      baz=271
H24K  Noodor Dome       79.78  25   P         P         00 20 27.1 +0.9
      baz=271
TCOL  CIGO, UAF Yank    79.81  26   P         P         00 20 25.9 -0.3
TCOL  CIGO, UAF Yank    79.81  26   P         P         00 20 27.0 +0.8
      baz=271
COLA  College           79.81  26   P         P         00 20 27.1 +0.9
COLA  College           79.81  26deP        P         00 20 26.3 +0.1
COLA                                pmax      pmax
      comp=Z,19nm,0.9s
COLA                                MLR       MLR
      comp=Z,984nm,19.0s
COLA  College           79.81  26   P         P         00 20 26.3 +0.1
      baz=271
BNGB  Bingl             79.88 308   P         P         00 20 27.9 +0.6
G24K  Hadweenzic Riv    79.93  24   P         P         00 20 27.2 +0.3
      baz=271,SNR=28
KOPT  Kop Dagi          79.94 309   P         P         00 20 27.8  0.0
M23K  Glacier View      79.95  29   P         P         00 20 27.3 +0.2
      baz=272,SNR=7.5
POKR  Poker Plat Res    79.99  25   IAMs_20   IAMs_20   00 53 36.5
      comp=Z,1µm,22.0s
POKR  Poker Plat Res    79.99  25   P         P         00 20 27.1  0.0
      baz=272
ADZR  Andozero          80.05 333  eP         P         00 20 24.6 -2.8
ADZR                                pmax      pmax
      comp=Z,111nm,1.5s
VORD  Divnogorie        80.07 320  eP         P         00 20 26.2 -1.7
VORD                                pmax      pmax
      comp=Z,50nm,0.9s
VORR  Voronezh          80.08 321  eP         P         00 20 26.9 -1.0
VORR                                pmax      pmax
      comp=Z,106nm,0.6s
VSR   Storozhevoye      80.14 320  eP         P         00 20 26.2 -2.0
VSR                                 pmax      pmax
      comp=Z,70nm,0.9s
SCM   Sheep Creek Mo    80.14  29   P         P         00 20 27.9 -0.3
SCM                                 IAmb      IAmb      00 20 52.1
      comp=Z,352nm,1.9s
SCM   Sheep Creek Mo    80.14  29   P         P         00 20 27.9 -0.3
SCM                                 pmax      pmax
      comp=Z,352nm,1.9s
SCM   Sheep Creek Mo    80.14  29   P         P         00 20 28.7 +0.6
      baz=272,SNR=11
P23K  Montague Islan    80.18  31   P         P         00 20 28.7 +0.4
      baz=272
MAZI  Mazidag           80.19 306   P         P         00 20 29.1 +0.1
LPSR  Galich'ya Gora    80.20 322  eP         P         00 20 27.0 -1.6
LPSR                                pmax      pmax
      comp=Z,100nm,0.8s
HDA   Harding Lake      80.22  26   P         P         00 20 27.3 -1.2
      baz=272,SNR=18
IL31                    80.23  26   P         P         00 20 27.0 -1.4
ILAR  Eielson Array     80.23  26   P         P         00 20 26.9 -1.6
      comp=Z,6.9nm,0.7s,baz=247,slow=4.4,SNR=82
ILAR                                PKKPbc    PKKPbc    00 39 10.8 -3.3
      comp=Z,0.5nm,1.0s,baz=98,slow=1.9,SNR=3.3
ILAR                                LR        LR        00 54 30.9
      comp=Z,630nm,21.9s,baz=270,slow=35
      comp=Z,6.9nm,0.7s
ILAR  Eielson Array     80.23  26   P         P         00 20 26.9 -1.5
ILAR  Eielson Array     80.23  26   P         P         00 20 27.0 -1.5
SOC   Sochi             80.26 313  eP         P         00 20 26.3 -2.8
SOC                                e                    00 23 28.3
SOC                                ePPP       PPP       00 25 17.1
SOC                                eS         S         00 30 32.4 -0.5
SOC                                eSS        SS        00 35 47.7 +3.7
SOC                                eSSS       SSS       00 39 05.7
SOC                                 pmax      pmax
      comp=Z,62nm,1.1s
SOC                                 MLR       MLR
      comp=Z,1µm,20.0s
D25K  Kavik River       80.28  21   P         P         00 20 29.3 +0.6
      baz=272
DYBB  Diyarbakir        80.39 307   P         P         00 20 30.7 +0.7
G25K  Bearman Lake      80.47  24   P         P         00 20 29.8  0.0
      baz=272
ERZN  Erzincan          80.57 309   P         P         00 20 31.6 +0.6
F25K  Christian Rive    80.61  23   P         P         00 20 30.9 +0.3
      baz=273
E25K  Arctic Village    80.62  22   P         P         00 20 30.6 +0.1
      baz=273,SNR=31
M24K  Tolsona, Glenn    80.67  28   P         P         00 20 31.8 +0.8
      baz=273,SNR=8.2
Q23K  Middleton Isla    80.74  31   P         P         00 20 32.2 +0.9
      baz=274
K24K  Donnelly Dome     80.76  27   P         P         00 20 31.2 -0.2
      baz=273,SNR=11
C26K  Camden Bay        80.76  20   P         P         00 20 31.7 +0.4
      baz=273
PRP   Porcupine Dome    80.77  25   P         P         00 20 31.9 +0.3
      baz=273,SNR=7.3
MOS   Moscow            80.78 325  eP         P         00 20 28.1 -3.5
MOS                                e                    00 20 38.8
MOS                                eS         S         00 30 34.2 -3.6
MOS                                ePS        PnS       00 31 31.2 +5.2
MOS                                 pmax      pmax
      comp=Z,167nm,1.5s
MOS                                 pmax      pmax
      comp=Z,400nm,2.0s
MOS                                 MLR       MLR
      comp=E,3µm,19.0s
MOS                                 MLR       MLR
      comp=Z,3µm,19.0s
KLU   Klutina           80.83  29   P         P         00 20 32.2 +0.3
      baz=274,SNR=6.9
ATD   Arta Tunnel       80.92 280   P         P         00 20 34.2 +1.0
      comp=Z,1.9nm,1.1s,baz=55,slow=5.1,SNR=11
ATD                                 S         S         00 30 44.0 +3.2
      comp=Z,0.1nm,0.3s,baz=89,slow=23,SNR=1.1
ATD                                 LR        LR        00 54 04.4
      comp=Z,16nm,21.9s,baz=70,slow=34
ATD   Arta Tunnel       80.92 280   P         P         00 20 33.1 -0.1
ATD                                 IAmb      IAmb      00 20 35.9
      comp=Z,65nm,1.1s
PAX   Paxson            80.95  28   P         P         00 20 32.8 +0.3
      baz=274,SNR=17
EYAK  Cordova Ski Ar    80.97  30   P         P         00 20 32.8 +0.3
      baz=274
BMAR  Burnt Mountain    81.03  23   P         P         00 20 33.2 +0.4
HARP  HAARP             81.13  28   P         P         00 20 34.0 +0.6
      baz=274
RIDG  Independent Ri    81.18  27   P         P         00 20 33.4 -0.3
      baz=274,SNR=24
F26K  Sheenjek River    81.18  23   P         P         00 20 34.2 +0.6
      baz=274
C27K  Jago River        81.20  21   P         P         00 20 34.3 +0.7
      baz=274
LVZ   Lovozero          81.32 337c iP         P         00 20 33.7 -0.6
LVZ                                 pmax      pmax
      comp=Z,138nm,1.7s
G26K  Porcupine Rive    81.38  23   P         P         00 20 36.0 +1.5
      baz=274,SNR=13
OBN   Obninsk           81.42 324  ⇓P         P         00 20 34.4 -0.6
OBN   Obninsk           81.42 324   P         P         00 20 34.1 -0.9
      comp=Z,7.7nm,0.8s,baz=83,slow=4.5,SNR=24
OBN                                 LR        LR        00 59 18.2
      comp=Z,667nm,18.1s,baz=82,slow=38
      comp=Z,7.7nm,0.8s
OBN   Obninsk           81.42 324   P         P         00 20 33.4 -1.7
OBN                                 IAmb      IAmb      00 20 37.2
      comp=Z,197nm,1.5s
OBN   Obninsk           81.42 324d iP         P         00 20 33.3 -1.7
OBN                                e                    00 20 41.3
OBN                                e                    00 23 38.7
OBN                                i S        S         00 30 33.3  -11
OBN                                 pmax      pmax
      comp=Z,185nm,1.7s
OBN                                 MLR       MLR
      comp=Z,2µm,16.0s
N25K  Chitina, Valde    81.45  29   P         P         00 20 36.1 +0.9
      baz=275,SNR=11
URFA  Urfa              81.48 307   P         P         00 20 37.5 +1.7
SCRK  Sand Creek        81.54  26   P         P         00 20 35.2 -0.4
SCRK  Sand Creek        81.54  26   P         P         00 20 36.2 +0.5
      baz=275,SNR=20
J26L  Joseph Creek      81.68  26   P         P         00 20 36.7 +0.4
      baz=275
ARPR  Arapgir-MALATY    81.69 308   P         P         00 20 37.4 +0.4
MENT  Mentasta          81.75  28   P         P         00 20 37.9 +1.2
I26K  Coal Creek Min    81.78  25   P         P         00 20 36.9 +0.2
      baz=275
ANN   Anapa             81.80 314  eP         P         00 20 35.6 -1.6
ANN                                e*PP       PcP       00 20 39.6 -3.3
ANN                                eS         S         00 30 50.2 +1.4
ANN                                eSS        SS        00 36 03.2 -3.6
ANN                                 pmax      pmax
      comp=Z,210nm,1.2s
L26K  Log Cabin Wild    81.91  27   P         P         00 20 37.9 +0.4
      baz=276,SNR=14
E27K  Coleen River      82.09  22   P         P         00 20 38.8 +0.4
      baz=276
M26K  Nabesna, AK       82.13  28   P         P         00 20 39.0 +0.2
      baz=276
ABPO  Ambohimpanom      82.20 249   P         P         00 20 39.4 -0.6
ABPO  Ambohimpanom      82.20 249   IAMs_20   IAMs_20   00 54 29.0
      comp=Z,858nm,20.0s
ABPO  Ambohimpanom      82.20 249   P         P         00 20 39.4 -0.6
ABPO                                pmax      pmax
      comp=Z,16nm,1.1s
MCARA McCarthy VSAT     82.22  29   P         P         00 20 38.3 -0.9
MCARA                               IAmb      IAmb      00 21 07.0
      comp=Z,101nm,1.3s
MCARA McCarthy VSAT     82.22  29   P         P         00 20 39.8 +0.6
      baz=276
G27K  Doyon Strip       82.23  24   P         P         00 20 39.8 +0.7
      baz=276
RSDY  Resadiye-TOKAT    82.33 310   P         P         00 20 40.0 -0.2
H27K  Steamboat Moun    82.35  24   P         P         00 20 39.4 -0.4
      baz=277
K27K  Chicken           82.37  26   P         P         00 20 39.5 -0.3
      baz=276
I27K  Kandik River      82.38  25   P         P         00 20 40.3 +0.3
      baz=277
DARE  Darende-Malaty    82.41 308   P         P         00 20 41.4 +0.7
L27K  Beaver Creek,     82.59  27   P         P         00 20 41.1  0.0
      baz=277
BCAR  Beaver Creek A    82.61  27   P         P         00 20 40.7 -0.5
SVSK  Karacayir         82.63 309   P         P         00 20 42.2 +0.5
M27K  Edge Creek, AK    82.66  28   P         P         00 20 41.4 -0.1
      baz=277
EGAK  Eagle             82.68  26   P         P         00 20 40.7 -0.7
EGAK  Eagle             82.68  26   P         P         00 20 41.9 +0.4
      baz=277,SNR=13
GAZ   Gaziantep         82.78 306   P         P         00 20 43.0 +0.3
GAZ   Gaziantep         82.78 306   P         P         00 20 42.3 -0.3
BARN  Barnard Glacie    82.92  29   IAMs_20   IAMs_20   01 04 01.0
      comp=Z,974nm,22.0s
TOKT  Tokat             82.93 310   P         P         00 20 43.1 -0.2
VADS  Vadso             82.95 340  eP         P         00 20 42.8 +0.1
VADS                                IAmb      IAmb      00 20 44.0
      comp=Z,39nm,0.9s
TOKA  Tokat             82.98 310   P         P         00 20 42.3 -1.3
TOKA                                IAmb      IAmb      00 20 44.8
      comp=Z,96nm,1.4s
HOPEN Hopen             82.99 347  eP         P         00 20 42.8  0.0
HOPEN                               IAmb      IAmb      00 20 45.5
      comp=Z,95nm,1.5s
BVCY  Beaver Creek      83.12  28   P         P         00 20 45.0 +1.1
      baz=278,SNR=10
KVT   Kavak             83.22 310   P         P         00 20 44.3 -0.5
SARI  SarD1z-Kayseri    83.26 308   P         P         00 20 45.6 +0.4
VOI   Vohitsoka         83.26 246   P         P         00 20 44.7 -0.7
VOI                                 IAmb      IAmb      00 20 48.7
      comp=Z,106nm,1.8s
YUK3  Moose Creek       83.39  29   P         P         00 20 45.7 +0.2
      baz=278,SNR=13
DAWY  Dawson            83.53  26   P         P         00 20 45.5 -0.4
DAWY                                IAmb      IAmb      00 20 52.3
      comp=Z,56nm,1.1s
DAWY  Dawson            83.53  26   P         P         00 20 46.8 +0.8
      baz=279,SNR=45
BNN   Bunyan            83.65 308   P         P         00 20 47.0 -0.2
BNN   Bunyan            83.65 308   P         P         00 20 46.4 -0.8
ASF   Jabal al Asfar    83.66 301   P         P         00 20 48.1 +0.8
      comp=Z,86nm,1.3s,baz=19,slow=1.0,SNR=44
      comp=Z,86nm,1.3s
O28M  Mount Upton       83.67  29   P         P         00 20 47.7 +0.7
      baz=279
DIKM  Dikmen            83.73 311  ⇓P         P         00 20 47.6 +0.3
PINM  Pinnacle          83.74  30   P         P         00 20 48.6 +1.5
      baz=279,SNR=12
I29M  Ogilvie Camp,     83.78  25   P         P         00 20 47.9 +0.7
      baz=280,SNR=27
YUK8  Steele Glacier    83.80  29   P         P         00 20 48.6 +0.9
      baz=279,SNR=16
KEV   Kevo              83.81 340   IAMs_20   IAMs_20   01 01 00.6
      comp=Z,1µm,20.0s
KOZT  Kozan             83.84 307   P         P         00 20 48.0  0.0
YOZ   Yozgat            83.95 309   P         P         00 20 48.2 -0.5
CEYT  Ceyhan            83.96 306   P         P         00 20 49.9 +1.3
J29M  Klondike Camp     83.98  26   IAMs_20   IAMs_20   00 58 06.0
      comp=Z,1µm,21.0s
J29M  Klondike Camp     83.98  26   P         P         00 20 49.8 +1.6
      baz=280
SIM   Simferopol'       84.12 314  eP         P         00 20 48.3 -1.0
SIM                                e                    00 20 52.7
SIM                                eS         S         00 31 09.1 -3.4
SIM                                 smax      smax
      comp=N,93nm,16.7s
PUL   Pulkovo           84.21 330c iP         P         00 20 49.1 -0.3
PUL                                 pmax      pmax
      comp=Z,96nm,0.8s
PUL                                 MLR       MLR
      comp=Z,3µm,16.0s
M29M  Somme Creek       84.22  28   P         P         00 20 50.3 +0.8
      baz=280
PNL   Peninsula         84.23  31   P         P         00 20 50.8 +1.2
PNL   Peninsula         84.23  31   P         P         00 20 50.2 +0.6
      baz=279,SNR=9.5
EPYK  Eagle Plains      84.24  24   P         P         00 20 49.6 +0.1
      baz=281,SNR=29
L29M  L29M              84.25  27   P         P         00 20 50.3 +0.7
      baz=280
G30M  tAoh Zraii Nji    84.32  23   P         P         00 20 50.7 +0.8
      baz=281
YUK4  Talbot Arm        84.32  29   P         P         00 20 51.3 +1.0
      baz=280,SNR=16
SPB2  Spitsbergen Ar    84.34 349   P         P         00 20 49.4 -0.4
SPA0  Spitsbergen Ar    84.34 349  eP         P         00 20 49.5 -0.2
SPA0                                IAmb      IAmb      00 20 51.9
      comp=Z,164nm,1.3s
SPITS Spitsbergen Ar    84.34 349   LR        LR        01 05 01.7
      comp=Z,2µm,18.9s,baz=32,slow=40
SPITS Spitsbergen Ar    84.34 349   P         P         00 20 49.3 -0.5
SPITS                               pmax      pmax
      comp=Z,166nm,1.3s
KOZK  Kozakli-Nevseh    84.35 309   P         P         00 20 50.8 +0.1
ARA0  ARCESS Array S    84.37 340  eP         P         00 20 50.2 +0.1
ARA0                                IAML                00 20 52.4
      comp=Z,4.5nm,0.4s
ARCES ARCESS Array B    84.37 340   P         P         00 20 49.7 -0.4
      comp=Z,12nm,0.7s,baz=82,slow=4.3,SNR=24
ARCES                               LR        LR        01 02 50.3
      comp=Z,2µm,18.4s,baz=80,slow=39
      comp=Z,12nm,0.7s
ARCES ARCESS Array B    84.37 340   P         P         00 20 49.2 -0.9
ARCES                               IAmb      IAmb      00 20 50.3
      comp=Z,150nm,1.7s
ARCES ARCESS Array B    84.37 340   P         P         00 20 49.2 -0.9
ARCES                               pmax      pmax
      comp=Z,150nm,1.7s
K29M  Barlow Dome       84.39  26   P         P         00 20 51.2 +0.8
      baz=281
CORM  Corum             84.40 310   P         P         00 20 50.9 -0.1
KARA  Karaisali         84.48 307   P         P         00 20 51.1 -0.2
YUK6  Outpost Mounta    84.52  29   P         P         00 20 51.9 +0.6
      baz=280,SNR=10
O29M  Mount Kennedy     84.53  30   P         P         00 20 51.6 +0.4
      baz=280
BZK   Bozkurt           84.62 312   P         P         00 20 48.1 -3.7
BZK   Bozkurt           84.62 312   P         P         00 20 50.7 -1.2
HAMF  Hammerfest        84.72 341  eP         P         00 20 51.5 -0.3
HAMF                                IAmb      IAmb      00 20 52.8
      comp=Z,19nm,0.8s
MMAI  Mount Meron Ar    84.79 302   P         P         00 20 53.7 +0.7
      comp=Z,193nm,1.4s,baz=108,slow=1.8,SNR=37
MMAI                                S         S         00 31 20.5 +0.7
MMAI                                LR        LR        01 02 31.7
      comp=Z,366nm,20.4s,baz=76,slow=38
      comp=Z,193nm,1.4s
MMLI  Mount Malkishu    84.86 302   P         P         00 20 53.8 +0.5
KBS   Kingsbay          84.86 350  eP         P         00 20 52.7 +0.3
UJAP  Al Uja            84.89 301   P         P         00 20 53.7 +0.3
GHAJ  Ghor Haditha      84.90 301   P         P         00 20 53.2 -0.2
GHAJ                                IAMs_20   IAMs_20   01 05 56.1
      comp=Z,891nm,20.0s
M30M  Minto, Yukon      84.95  27   P         P         00 20 54.6 +1.4
      baz=281,SNR=37
HYT   Haines Junctio    84.96  29   P         P         00 20 53.4 +0.1
HYT                                 IAmb      IAmb      00 20 59.8
      comp=Z,69nm,1.1s
HYT   Haines Junctio    84.96  29   P         P         00 20 54.8 +1.4
      baz=281,SNR=21
ILGA  Ilgaz             84.96 311   P         P         00 20 53.0 -1.0
GULA  Gulagac           84.97 308   P         P         00 20 53.4 -0.4
INK   Inuvik            85.03  21   P         P         00 20 53.1 -0.2
      comp=Z,17nm,0.7s,baz=298,slow=5.4,SNR=58
INK                                 LR        LR        01 00 51.0
      comp=Z,408nm,21.5s,baz=284,slow=37
      comp=Z,17nm,0.7s
INK   Inuvik            85.03  21   P         P         00 20 53.0 -0.4
INK                                 IAmb      IAmb      00 20 58.9
      comp=Z,62nm,1.0s
INK   Inuvik            85.03  21   P         P         00 20 53.0 -0.4
INK                                 pmax      pmax
      comp=Z,62nm,1.0s
INK   Inuvik            85.03  21   P         P         00 20 53.5 +0.2
      baz=284,SNR=46
N30M  Aishikik Lake     85.03  29   P         P         00 20 54.9 +1.3
      baz=281
CANT  Cankiri           85.10 310   P         P         00 20 54.0 -0.4
MAYO  Mayo, Yukon       85.15  26   P         P         00 20 54.3 +0.2
MAYO  Mayo, Yukon       85.15  26   P         P         00 20 55.1 +1.0
      baz=282
F31M  Tsiigehtchic      85.16  22   P         P         00 20 54.1 +0.1
      baz=284,SNR=25
YAYX  Yaylak            85.21 309   P         P         00 20 54.1 -0.9
KAMT  Kaman             85.22 309   P         P         00 20 53.7 -1.4
BR131 Keskin Array S    85.22 309   P         P         00 20 54.1 -1.1
BR131 Keskin Array S    85.22 309   P         P         00 20 53.4 -1.7
BR131                               IAmb      IAmb      00 20 55.5
      comp=Z,109nm,1.5s
BR131 Keskin Array S    85.22 309   P         P         00 20 53.4 -1.7
BR131                               pmax      pmax
      comp=Z,109nm,1.5s
BR131 Keskin Array S    85.22 309   P         P         00 20 54.1 -1.0
      SNR=17
BRTR  Keskin Array B    85.22 309   P         P         00 20 54.0 -1.1
      comp=Z,14nm,1.1s,baz=120,slow=4.9,SNR=67
BRTR                                LR        LR        01 01 55.3
      comp=Z,871nm,21.6s,baz=68,slow=38
      comp=Z,14nm,1.1s
BRTR  Keskin Array B    85.22 309   P         P         00 20 53.4 -1.8
BRTR  Keskin Array B    85.22 309ceP        P         00 20 54.0 -1.1
BRTR                                pmax      pmax
      comp=Z,15nm,1.1s
KTK1  Kautokeino        85.28 339  eP         P         00 20 54.5 -0.1
KIZK  Mersin            85.31 306   P         P         00 20 54.8 -0.7
P30M  Million Dollar    85.36  30   P         P         00 20 55.1 -0.2
      baz=281
FURI  Furi              85.37 278   IAMs_20   IAMs_20   00 59 41.4
      comp=Z,2µm,19.0s
SERE  Sereflikochisa    85.40 309   P         P         00 20 55.3 -0.7
YESY  Yesilyurt         85.43 307   P         P         00 20 55.0 -1.2
EREN  Erenkoy           85.44 305   P         P         00 20 56.1  0.0
SILI  Silifke-Mersin    85.51 306   P         P         00 20 56.7 +0.3
SULT  Sultanhani-AKS    85.55 308   P         P         00 20 56.0 -0.7
N31M  Braeburn, Yuko    85.64  28   P         P         00 20 57.3 +0.6
      baz=282,SNR=28
O30N  Mendenhall        85.65  29   P         P         00 20 57.4 +0.7
      baz=282,SNR=11
EIL   Elat              85.67 299   P         P         00 20 57.5 +0.1
      comp=Z,105nm,1.3s,baz=101,slow=1.3,SNR=36
EIL                                 S         S         00 31 22.6 -5.8
      comp=Z,2.1nm,0.8s,baz=341,slow=18,SNR=1.3
EIL                                 LR        LR        01 02 41.9
      comp=Z,559nm,21.6s,baz=62,slow=38
      comp=Z,105nm,1.3s
EIL   Elat              85.67 299   P         P         00 20 57.8 +0.4
AFSR  Afar-Bala (An     85.70 309   P         P         00 20 56.5 -1.0
IKL   Isikli            85.72 306   P         P         00 20 57.3 -0.2
PLBC  Pleasant Camp     85.79  30   P         P         00 20 58.2 +0.9
      baz=282,SNR=6.8
KULU  Kulu              85.81 309   P         P         00 20 57.5 -0.6
ANTO  Ankara            85.84 310  ⇑P         P         00 20 57.6 -0.6
ANTO  Ankara            85.84 310   P         P         00 20 57.6 -0.6
ANTO  Ankara            85.84 310   P         P         00 20 56.9 -1.2
ANTO                                IAmb      IAmb      00 20 58.6
      comp=Z,116nm,1.4s
ANTO  Ankara            85.84 310   P         P         00 20 56.9 -1.2
ANTO                                pmax      pmax
      comp=Z,116nm,1.4s
ANTO  Ankara            85.84 310   P         P         00 20 57.5 -0.6
ANTO                                S         SKSac     00 31 17.4 -5.0
BR231 Keskin MP Arra    85.86 310   P         P         00 20 57.5 -0.8
BR231                               IAmb      IAmb      00 20 58.7
      comp=Z,72nm,1.2s
KRMN  Karaman           85.91 307   P         P         00 20 58.3 -0.2
FIA1  FINESS Array S    85.94 332   P         P         00 20 56.6 -1.4
FINES FINESS Array B    85.94 332   P         P         00 20 56.8 -1.2
      comp=Z,57nm,1.0s,baz=67,slow=4.8,SNR=66
FINES                               LR        LR        01 01 44.4
      comp=Z,2µm,19.8s,baz=82,slow=37
      comp=Z,57nm,1.0s
FINES FINESS Array B    85.94 332   P         P         00 20 56.7 -1.3
CHBY  Cihanbeyli        85.97 308   P         P         00 20 57.4 -1.5
LFK   Lefkose           85.99 305   P         P         00 20 59.8 +0.9
BERE  Bereket-Mersin    86.07 306   P         P         00 20 59.3 -0.1
JETT  Jettan, Norway    86.10 340  eP         P         00 20 57.5 -1.2
JETT                                IAmb      IAmb      00 21 05.4
      comp=Z,38nm,0.7s
M31M  Drury Creek, Y    86.13  28   P         P         00 20 59.8 +0.7
      baz=284,SNR=10
S31K  Pelican           86.17  32   P         P         00 20 59.9 +0.6
      baz=282
CSS   Mathiatis         86.20 305   P         P         00 20 59.9 -0.1
CSS   Mathiatis         86.20 305   P         P         00 20 58.7 -1.3
CSS                                 IAMs_20   IAMs_20   01 03 21.2
      comp=Z,1µm,22.0s
VSU   Vasula            86.27 329c iP         P         00 20 58.4 -1.3
VSU                                 pmax      pmax
      comp=Z,393nm,1.5s
VSU                                 MLR       MLR
      comp=Z,7µm,15.0s
VSU   Vasula            86.27 329  eP         P         00 20 59.0 -0.7
SKAG  Skagway           86.31  30   P         P         00 21 01.8 +1.9
SKAG  Skagway           86.31  30   P         P         00 21 00.2 +0.3
      baz=283
AKASG Malin Array Be    86.43 321   P         P         00 20 59.0 -1.8
      comp=Z,51nm,1.0s,baz=66,slow=4.5,SNR=157
AKASG                               LR        LR        00 59 54.0
      comp=Z,987nm,21.4s,baz=72,slow=36
      comp=Z,51nm,1.0s
AKASG Malin Array Be    86.43 321ceP        P         00 20 58.9 -1.8
AKASG                               pmax      pmax
      comp=Z,68nm,1.0s
AKBB  Malin Array Si    86.43 321   P         P         00 20 59.0 -1.7
AKBB  Malin Array Si    86.43 321ceP        P         00 20 58.4 -2.3
AKBB                                pmax      pmax
      comp=Z,146nm,1.2s
AKBB                                MLR       MLR
      comp=Z,1µm,18.0s
LADK  Ladik-KONYA       86.44 308   P         P         00 20 59.8 -1.4
MNK   Minsk             86.48 325  i P        P         00 21 00.3 -0.6
      comp=E,11nm,1.1s
MNK                                i P        P         00 21 00.3 -0.6
      comp=N,30nm,0.9s
MNK                                i P        P         00 21 00.3 -0.6
      comp=Z,90nm,1.0s,baz=258
MNK                                i PP       PP        00 24 21.4 -0.9
MNK                                i PPP      PPP       00 26 15.4
MNK                                i S        SKSac     00 31 26.0 +0.4
MNK                                i SS       SS        00 37 18.0 +2.5
MNK                                i SSS      SSS       00 40 50.1
MNK                                i LQ       LQ        00 53 10.4
MNK                                i LR       LR        01 00 39.2
MNK                                i LRM      MLR       01 02 32.9
      comp=E,481nm,19.1s
MNK                                i LRM      MLR       01 02 38.0
      comp=Z,3µm,16.6s
MNK                                i LRM      MLR       01 03 08.1
      comp=N,1µm,15.3s
MNK   Minsk             86.48 325  i P        P         00 21 00.2 -0.6
MNK                                i                    00 24 21.4
MNK                                i PPP      PPP       00 26 15.4
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MNK				iS	SKSac	00 31 26.0	+0.4
MNK				iSS	SS	00 37 18.0	+2.5
MNK				iSSS	SSS	00 40 50.1	
MNK				pmax	pmax		
	comp=E,11nm,1.0s						
MNK				pmax	pmax		
	comp=Z,90nm,1.0s						
MNK				pmax	pmax		
	comp=N,30nm,0.9s						
MNK				MLR	MLR		
	comp=E,481nm,19.0s						
MNK				MLR	MLR		
	comp=Z,3µm,17.0s						
MNK				MLR	MLR		
	comp=N,1µm,15.0s						
KONT	Konya--Tatoy	86.49	308	P	P	00 21 00.1	-1.2
LEF	Lefka	86.53	305	P	P	00 21 00.5	-1.0
HDMB	Hadim	86.55	307	P	P	00 21 00.6	-1.3
FARO	Faro, Yukon	86.59	27	P	P	00 21 01.8	+0.5
	baz=284,SNR=35						
A36M	Sachs Harbour	86.62	17	P	P	00 21 01.5	+0.3
	baz=291,SNR=58						
KIZT	Kizilcal	86.70	309	P	P	00 21 01.4	-1.1
PURM	Purcari	86.80	317	⇑P	P	00 21 01.9	-0.7
GAZI	Gazipasa	86.81	306	P	P	00 21 01.7	-1.2
SIT	Sitka	86.85	33	P	P	00 21 02.9	+0.4
	baz=283						
SVRH	Sivrihisar-ESK	86.88	309	P	P	00 21 01.9	-1.4
MDUB	Mudurnu	86.95	310	P	P	00 21 02.5	-1.1
MDUB	Mudurnu	86.95	310	P	P	00 21 02.1	-1.5
IDID	Didziasalis	86.96	326	eP	P	00 20 57.2	-6.0
SEYD	Seydisehir-KON	86.99	307	P	P	00 21 03.3	-0.6
N32M	Quiet Lake	86.99	28	P	P	00 21 04.2	+0.9
	baz=285						
NOR	Nord	86.99	355	iP	P	00 21 02.2	-0.7
NOR				IAmb	IAmb	00 21 08.5	
	comp=Z,3.9nm,0.8s						
NACGM	Naroch	87.02	325	eP	P	00 21 02.4	-1.1
	comp=E,3µm,1.9s						
MEF	Metsahovi	87.03	331	eP	P	00 21 02.9	-0.5
P32M	Atlin	87.08	30	P	P	00 21 04.2	+0.4
	baz=284						
S32K	Killisnoo	87.15	32	P	P	00 21 05.1	+1.1
	baz=284						
IIGN	Ignalina	87.24	326	eP	P	00 20 57.9	-6.6
ISAL	Salakas	87.24	326	eP	P	00 21 03.7	-0.8
CIFT	Cifteler, Eski	87.25	309	P	P	00 21 03.7	-1.3
P33M	Teslin, Yukon	87.36	29	P	P	00 21 05.6	+0.5
	baz=285						
KIS	Kishinev	87.42	317	⇓iP	P	00 21 03.5	-2.1
	comp=E,100nm,3.9s						
KIS	Kishinev	87.42	317	d iP	P	00 21 03.5	-2.1
KIS				pmax	pmax		
	comp=Z,100nm,3.9s						
MMPY	Sheldon Lake,	87.43	27	P	P	00 21 06.4	+1.0
	baz=286,SNR=10						
GULT	Gulveren	87.47	310	P	P	00 21 04.7	-1.4
SORM	Soroca	87.50	318	⇑P	P	00 21 04.5	-1.5
SORM	Soroca	87.50	318	P	P	00 21 04.4	-1.5
SAUV	Serdivan-Sakar	87.55	311	P	P	00 21 04.9	-1.5
BORA	Eskisehir	87.61	310	P	P	00 21 05.1	-1.7
BORA				IAmb	IAmb	00 21 07.4	
	comp=Z,99nm,1.8s						
SUTC	Sutluce-Ispart	87.63	307	P	P	00 21 04.9	-2.1
MTSE	Matsula	87.70	329	eP	P	00 21 05.7	-0.9
TLCR		87.78	315	⇓P	P	00 21 06.7	-0.6
TLCR		87.78	315	P	P	00 21 06.7	-0.6
SHUT	Suhut-Afyon	87.78	309	P	P	00 21 06.5	-1.2
KIBK	Kibwezi	87.84	267	P	P	00 21 07.5	-0.9
KIBK				IAmb	IAmb	00 21 13.9	
	comp=Z,55nm,1.5s						
KIBK	Kibwezi	87.84	267	P	P	00 21 09.1	+0.7
	SNR=16						
ISP	Isparta	87.94	308	IAMs_20	IAMs_20	01 07 10.0	
	comp=Z,949nm,20.0s						
C36M	Paulatuk	87.97	19	IAMs_20	IAMs_20	00 56 19.3	
	comp=Z,997nm,22.0s						
C36M	Paulatuk	87.97	19	P	P	00 21 07.9	+0.2
	baz=292,SNR=43						
CAVI	Cavuskoy	88.01	310	P	P	00 21 07.6	-1.0
RAF	Rauma	88.06	332	eP	P	00 21 07.2	-1.1
TPGR	Topolog	88.12	315	⇑P	P	00 21 08.2	-0.8
PPT	Papeete	88.18	108	LR	LR	00 55 08.0	
	comp=Z,302nm,19.4s,baz=280,slow=32						
PPT2	Papeete2	88.18	108	eP	P	00 21 11.5	+1.7
	comp=Z,72nm,1.3s						
PPT2	Papeete2	88.18	108	eS	S	00 31 51.8	-1.4
	comp=Z,732nm,25.8s						
PPT2				eSS	SS	00 37 42.0	-0.6
	comp=Z,431nm,30.0s						
PPT2	Papeete2	88.18	108	eLR	LR	00 49 03.8	
	comp=Z,1µm,29.2s						
PPT2				eLR	LR	00 49 09.7	
	comp=Z,2µm,27.8s						
TIRR	Tirgusor	88.21	315	P	P	00 21 07.7	-1.7
TIRR	Tirgusor	88.21	315	P	P	00 21 07.7	-1.7
TIRR				pmax	pmax		
	comp=Z,217nm,1.6s						
KORT	Korkueli	88.23	307	P	P	00 21 08.2	-1.7
CFR	Carcaliu	88.25	315	⇑P	P	00 21 08.6	-1.0
CFR	Carcaliu	88.25	315	P	P	00 21 08.6	-1.0
VSVD	Vaisvydziai	88.35	327	eP	P	00 21 07.8	-2.0
KMBO	Kilima Mbogo	88.42	269	P	P	00 21 10.3	-1.0
	comp=Z,0.1nm,0.7s,baz=49,slow=23,SNR=11						
KMBO				S	SKKSac	00 31 47.9	-2.2
	baz=47,slow=24,SNR=1.2						
KMBO				LR	LR	00 59 05.3	
	comp=Z,6.0nm,20.2s,baz=86,slow=34						
KMBO	Kilima Mbogo	88.42	269	P	P	00 21 10.8	-0.4
KMBO				IAmb	IAmb	00 21 16.8	
	comp=Z,57nm,1.5s						
KMBO	Kilima Mbogo	88.42	269	IAMs_20	IAMs_20	01 03 29.6	
	comp=Z,798nm,18.0s						
KMBO	Kilima Mbogo	88.42	269	P	P	00 21 10.9	-0.4
KMBO				pmax	pmax		
	comp=Z,57nm,1.5s						
KMBO				MLR	MLR		
	comp=Z,800nm,18.0s						
KMBO	Kilima Mbogo	88.42	269	iP	P	00 21 12.0	+0.7
	SNR=8.0						
KMBO	Kilima Mbogo	88.42	269	P	P	00 21 12.0	+0.7
KMBO				S	SKSac	00 31 38.9	-0.5
CRAG	Craig	88.42	34	P	P	00 21 10.5	+0.3
	baz=285						
STEI	Steigen	88.42	339	eP	P	00 21 08.8	-1.1
STEI				IAmb	IAmb	00 21 12.1	
	comp=Z,25nm,0.8s						
PABE	Paberze	88.45	326	P	P	00 21 08.3	-1.9
PABE				IAmb	IAmb	00 21 10.6	
	comp=Z,86nm,1.1s						
PABE	Paberze	88.45	326	eP	P	00 21 09.6	-0.7
FAUS	Fauske	88.62	339	eP	P	00 21 09.0	-1.8
FAUS				IAmb	IAmb	00 21 11.8	
	comp=Z,25nm,0.9s						
ELL	Elmali	88.62	307	P	P	00 21 10.6	-1.1
PANC	Panciu	88.78	316	⇓P	P	00 21 11.6	-0.5
S34M	Telegraph Cree	88.82	31	P	P	00 21 12.2	+0.2
	baz=286						
LOF	Lofoten	88.93	340	eP	P	00 21 12.0	-0.3
MAW	Mawson	88.96	200	LR	LR	01 02 36.4	
	comp=Z,242nm,18.5s,baz=89,slow=37						
TESR	Tescani	88.98	317	⇑P	P	00 21 12.2	-0.8
VRI	Vrincioaia	89.07	316	⇑P	P	00 21 13.0	-0.5
VRI	Vrincioaia	89.07	316	P	P	00 21 13.0	-0.5
PLOR	Plostina	89.13	316	⇑P	P	00 21 13.0	-0.9
PLOR	Plostina	89.13	316	P	P	00 21 12.9	-0.9
AAL	Aland	89.15	331	eP	P	00 21 12.7	-0.8
DLBC	Dease Lake	89.22	31	LR	LR	00 54 58.8	
	comp=Z,315nm,21.3s,baz=286,slow=31						
DLBC	Dease Lake	89.22	31	P	P	00 21 12.8	-1.3
DLBC	Dease Lake	89.22	31	P	P	00 21 14.0	0.0
	baz=287						
KULA	Kula-Manisa	89.25	309	P	P	00 21 08.4	-6.2
KULA	Kula-Manisa	89.25	309	P	P	00 21 13.4	-1.2
V35K	Ketchikan	89.29	34	P	P	00 21 14.9	+0.6
	baz=286						
FETY	Fethiye	89.30	307	P	P	00 21 12.6	-2.2
MANT	Manisa	89.33	309	P	P	00 21 13.7	-1.5
MANT				IAmb	IAmb	00 21 14.8	
	comp=Z,62nm,1.4s						
TBI	Tubuai	89.36	114	eP	P	00 21 15.2	0.0
	comp=Z,181nm,1.3s						
TBI	Tubuai	89.36	114	eS	S	00 32 02.4	-1.5
	comp=Z,3µm,25.5s						
TBI				eSS	SS	00 37 59.6	+0.1
	comp=Z,2µm,34.2s						
TBI	Tubuai	89.36	114	eLR	LR	00 49 42.1	
	comp=Z,9µm,28.8s						
TBI				eLR	LR	00 49 42.2	
	comp=Z,34µm,23.8s						
MOR8	Moi Rana	89.39	338	eP	P	00 21 13.3	-1.3
COVR	Voineasa-Covas	89.43	316	⇑P	P	00 21 13.6	-1.6
NEHR	Nehoiu	89.47	316	⇑P	P	00 21 15.1	-0.3
EDC	Edincik	89.47	311	P	P	00 21 13.8	-1.7
LODK	Lodwar	89.52	273	P	P	00 21 15.8	-0.5
LODK	Lodwar	89.52	273	P	P	00 21 16.3	0.0
	SNR=10						
T35M	Bob Quinn	89.55	32	P	P	00 21 15.6	+0.1
	baz=287						
VNDA	Vanda	89.55	173	P	P	00 21 15.2	+0.3
	comp=Z,19nm,0.9s,baz=319,slow=5.8,SNR=15						
	comp=Z,19nm,0.9s						
VNDA	Vanda	89.55	173	P	P	00 21 15.2	+0.3
VNDA				IAmb	IAmb	00 21 22.2	
	comp=Z,78nm,1.4s						
VNDA	Vanda	89.55	173	P	P	00 21 15.2	+0.3
VNDA				pmax	pmax		
	comp=Z,78nm,1.4s						
BALB	Balikesir	89.61	310	P	P	00 21 14.4	-1.7
BALB				IAmb	IAmb	00 21 16.5	
	comp=Z,77nm,1.5s						
MEH	Mehetia	89.65	108	eP	P	00 21 18.3	+1.6
	comp=Z,35nm,1.2s						
OZUR		89.66	317	⇑P	P	00 21 14.9	-1.4
BURAR	Bucovina Array	89.67	318	⇑P	P	00 21 16.0	-0.4
BURAR	Bucovina Array	89.67	318	P	P	00 21 15.0	-1.4
BURAR	Bucovina Array	89.67	318	P	P	00 21 16.0	-0.4
BUR08	Bucovina Ar. S	89.68	318	P	P	00 21 15.4	-1.1
MLR	Muntele Rosu	89.69	316	⇑P	P	00 21 15.4	-1.1
MLR	Muntele Rosu	89.69	316	P	P	00 21 15.2	-1.3
	comp=Z,7.3nm,0.9s,baz=100,slow=1.6,SNR=8.6						
MLR				LR	LR	01 04 25.3	
	comp=Z,3µm,21.7s,baz=62,slow=38						
	comp=Z,7.3nm,0.9s						
MLR	Muntele Rosu	89.69	316	P	P	00 21 15.5	-1.1
MLR	Muntele Rosu	89.69	316	P	P	00 21 15.0	-1.6
MLR				IAmb	IAmb	00 21 43.3	
	comp=Z,36nm,1.2s						
MLR	Muntele Rosu	89.69	316	P	P	00 21 15.0	-1.6
MLR				pmax	pmax		
	comp=Z,36nm,1.2s						
MLR				MLR	MLR		
	comp=Z,3µm,22.0s						
LVV	L'vov	89.88	321	eP	P	00 21 16.0	-1.2
LVV				e		00 26 45.2	
LVV				e		00 31 38.5	
LVV				eS	S	00 32 04.7	-3.2
LVV				e		00 33 14.8	
LVV				e		00 38 04.2	
LVV				e		00 41 44.6	
LVV				pmax	pmax		
	comp=Z,110nm,1.5s						
TURN	Turunc	89.93	307	P	P	00 21 15.1	-2.5
DOPR	Dopca	89.96	317	⇓P	P	00 21 16.4	-1.3
ARG	Arkhangelos	90.14	307	P	P	00 21 16.6	-2.1
ARG	Arkhangelos	90.14	307	P	P	00 21 17.3	-1.4
ARG	Arkhangelos	90.14	307	P	P	00 21 17.2	-1.4
ARG				IAmb	IAmb	00 21 20.1	
	comp=Z,113nm,1.3s						
ARG	Arkhangelos	90.14	307	P	P	00 21 17.2	-1.4
ARG				pmax	pmax		
	comp=Z,113nm,1.3s						
MLSB	Milas	90.19	308	P	P	00 21 17.3	-1.6
UPP	Uppsala	90.38	331	eP	P	00 21 18.1	-1.1
DAT	Datca	90.46	307	P	P	00 21 16.0	-4.3
BLCB	Balcova	90.52	309	P	P	00 21 17.4	-3.0
BLCB	Balcova	90.52	309	P	P	00 21 18.7	-1.7
HUMR	Humele	90.59	315	⇑P	P	00 21 18.8	-1.8
ARR	Arges	90.62	316	⇑P	P	00 21 20.0	-0.8
BMR	Baia Mare	90.78	319	⇑P	P	00 21 21.0	-0.5
BMR	Baia Mare	90.78	319	P	P	00 21 20.9	-0.5
CJR	Cluj-Napoca	90.97	318	⇓P	P	00 21 21.6	-0.8
CJR	Cluj-Napoca	90.97	318	P	P	00 21 21.5	-0.8
NSS	Namsos	91.02	337	eP	P	00 21 20.7	-1.4
KARP	Karpathos	91.05	306	P	P	00 21 19.7	-3.3
KARP	Karpathos	91.05	306	P	P	00 21 21.9	-1.1
VLAD	Vladila	91.12	315	⇑P	P	00 21 22.6	-0.4
PLVB	Pleven	91.12	314	⇑P	P	00 21 22.3	-0.8
DAG	Danmarks Havn	91.13	352	iP	P	00 21 20.8	-1.7
DAG				IAmb	IAmb	00 21 24.4	
	comp=Z,6.9nm,0.8s						
LOT	Lotru	91.19	316	⇓P	P	00 21 23.2	-0.3
TRPA	Tarpa	91.28	319	⇑P	P	00 21 23.0	-0.7
BEL	Belsk	91.29	323	eP	P	00 21 23.2	-0.5
VIKU	Vikbolandet	91.31	330	eP	P	00 21 22.2	-1.3
KOTAN	Kotaneelee Air	91.53	28	P	P	00 21 25.0	+0.4
	baz=293						
DRGR		91.54	318	⇑P	P	00 21 24.1	-0.9
DRGR		91.54	318	P	P	00 21 24.1	-0.9
DEV	Deva	91.66	317	⇑P	P	00 21 25.3	-0.3
DEV	Deva	91.66	317	P	P	00 21 25.2	-0.3
STHS	Stebnicka Huta	91.73	321	eP	P	00 21 24.9	-0.9
STHS				pmax	pmax		
	comp=Z,21nm,1.1s						
STHS	Stebnicka Huta	91.73	321	eP	P	00 21 24.9	-0.9
THAS	Thassos island	91.74	312	P	P	00 21 19.3	-6.7
GZR	Gura Zlata	91.87	317	⇓P	P	00 21 26.1	-0.6
GZR	Gura Zlata	91.87	317	P	P	00 21 26.0	-0.6
ZKR	Zakros	91.90	306	P	P	00 21 25.7	-1.2
HFS	Hagfors	92.11	332	LR	LR	01 06 09.4	
	comp=Z,2µm,18.7s,baz=68,slow=38						
RES	Resolute Bay	92.12	10	LR	LR	01 07 57.9	
	comp=Z,593nm,18.9s,baz=337,slow=39						
RES	Resolute Bay	92.12	10	P	P	00 21 26.4	-0.6
RES	Resolute Bay	92.12	10	P	P	00 21 26.4	-0.6
RES				pmax	pmax		
	comp=Z,21nm,1.1s						
BBB	Bella Bella	92.22	36	LR	LR	01 02 40.8	
	comp=Z,141nm,18.6s,baz=296,slow=35						
HERR	Herculane	92.26	316	⇓P	P	00 21 27.9	-0.5
VTS	Vitosha	92.30	314	⇑P	P	00 21 28.4	-0.3
VTS	Vitosha	92.30	314	P	P	00 21 27.4	-1.4
VTS				IAmb	IAmb	00 21 30.6	
	comp=Z,57nm,1.7s						
VTS	Vitosha	92.30	314	P	P	00 21 27.4	-1.4
VTS				pmax	pmax		
	comp=Z,57nm,1.7s						
NIE	Niedzica	92.32	321	eP	P	00 21 29.4	+0.8
OJC	Ojcow	92.38	322	eP	P	00 21 26.4	-2.4
OJC	Ojcow	92.38	322	P	P	00 21 27.2	-1.6
OJC				IAmb	IAmb	00 21 29.2	
	comp=Z,33nm,1.1s						
OJC	Ojcow	92.38	322	P	P	00 21 27.2	-1.6
OJC				pmax	pmax		
	comp=Z,33nm,1.1s						
NC405	NORSAR Array S	92.59	334	P	P	00 21 27.8	-1.7
BZS	Buzias	92.59	317	⇑P	P	00 21 28.6	-1.3
BZS	Buzias	92.59	317	P	P	00 21 28.5	-1.3
KSTL	Kastelli Herak	92.77	306	P	P	00 21 28.2	-2.7
NC602	NORSAR Array S	92.83	333	eP	P	00 21 29.5	-1.1
NB2	NORSAR Subarra	92.84	334	P	P	00 21 28.4	-2.3
	comp=Z,70nm,1.7s,baz=65,slow=4.6						
NB2	NORSAR Subarra	92.84	334	P	P	00 21 28.4	-2.3
	slow=4.6						
NOA	NORSAR Array B	92.84	334	P	P	00 21 29.4	-1.4
	comp=Z,5.8nm,0.8s,baz=64,slow=4.6,SNR=17						
NOA				LR	LR	01 06 54.5	
	comp=Z,3µm,19.9s,baz=55,slow=38						
	comp=Z,5.8nm,0.8s						
GKP	Gorka Klasztor	92.88	325	eP	P	00 21 30.1	-0.9
NEEM	North Greenlan	92.90	359	iP	P	00 21 30.8	-0.2
NEEM				IAmb	IAmb	00 21 34.2	
	comp=Z,20nm,0.8s						
IDI	Anoyia	92.91	306	⇑P	P	00 21 31.0	-0.7
IDI	Anoyia	92.91	306	P	P	00 21 30.7	-1.0
	comp=Z,13nm,0.9s,baz=113,slow=9.0,SNR=9.6						
IDI				LR	LR	01 11 02.1	
	comp=Z,418nm,18.2s,baz=86,slow=41						
	comp=Z,13nm,0.9s						
IDI	Anoyia	92.91	306	P	P	00 21 29.4	-2.2
IDI	Anoyia	92.91	306	P	P	00 21 29.5	-2.2
IDI				IAmb	IAmb	00 21 37.7	
	comp=Z,56nm,1.4s						
LANS	Liptovska Anna	92.92	321	eP	P	00 21 31.9	+0.5
LANS				pmax	pmax		
	comp=Z,23nm,1.8s						
LANS	Liptovska Anna	92.92	321	eP	P	00 21 31.9	+0.5
PSZ	Piszkesteto	93.04	320	IAMs_20	IAMs_20	01 08 05.4	
	comp=Z,2µm,20.0s						
BOVS	Bovan	93.10	315	⇓P	P	00 21 31.1	-1.1
DOMB	Dombas	93.31	335	eP	P	00 21 31.6	-1.2
DBG	Daneborg	93.39	351	iP	P	00 21 31.4	-1.5
TULEG	Thule	93.43	3	P	P	00 21 32.3	-0.8
TULEG				IAmb	IAmb	00 21 35.7	
	comp=Z,43nm,1.3s						
TULEG				IAMs_20	IAMs_20	01 01 16.3	
	comp=Z,1µm,20.0s						
OKC	Ostrava-Krasne	93.51	322	AMS	AMS	01 06 50.0	
	comp=Z,2µm,17.8s						
VYHS	Vyhne	93.53	320	eP	P	00 21 33.5	-0.6
VYHS				pmax	pmax		
	comp=Z,39nm,1.6s						
VYHS	Vyhne	93.53	320	eP	P	00 21 33.5	-0.6
OSL	Oslo	93.55	333	eP	P	00 21 32.9	-1.0
IMMV	Iera Moni Meta	93.59	307	P	P	00 21 33.0	-1.7
IMMV	Iera Moni Meta	93.59	307	P	P	00 21 33.5	-1.2
GVDS	Gavdos	93.66	306	P	P	00 21 30.1	-4.9
GVD	Gavdhos	93.66	306	P	P	00 21 32.9	-2.1
GVD	Gavdhos	93.66	306	P	P	00 21 33.2	-1.8
JMIC	Jan Mayen	93.72	346	LR	LR	01 07 14.5	
	comp=Z,986nm,21.1s,baz=53,slow=38						
RODP	Rodopos	93.74	307	P	P	00 21 35.1	-0.3
MORC	Moravsky Berou	93.90	322	⇑P	P	00 21 34.3	-1.5
MORC	Moravsky Berou	93.90	322	P	P	00 21 34.2	-1.7
MORC	Moravsky Berou	93.90	322	eP	P	00 21 35.4	-0.5
MORC	Moravsky Berou	93.90	322	P	P	00 21 34.2	-1.7
MORC				pmax	pmax		
	comp=Z,23nm,1.3s						
FRGS	Fruska Gora	93.95	317	⇑P	P	00 21 34.8	-1.3
SRO	Srobarova	94.08	320	eP	P	00 21 36.4	-0.2
SRO	Srobarova	94.08	320	eP	P	00 21 36.4	-0.2
AKN	Aaknes	94.09	336	eP	P	00 21 35.6	-0.8
KTHA	Kythira Island	94.11	308	P	P	00 21 34.6	-2.5
JAVC	Velka Javorina	94.14	321	eP	P	00 21 37.8	+0.8
KONO	Kongsberg	94.18	333	eP	P	00 21 35.6	-1.3
SKAR	Skarslia	94.27	334	eP	P	00 21 36.2	-1.1
KSP	Ksiaz	94.28	323	eP	P	00 21 37.3	-0.2
KLV	Kalavryta, Ach	94.33	310	P	P	00 21 34.2	-3.9
MORH	Mrgy, Hungar	94.39	318	⇑P	P	00 21 36.2	-1.9
SMOL	Smolenice	94.40	321	eP	P	00 21 38.0	-0.1
SMOL				pmax	pmax		
	comp=Z,11nm,1.6s						
OSTC	Ostas	94.43	323	AMS	AMS	01 07 00.0	
	comp=Z,3µm,20.4s						
DPC	Dobruska-Polom	94.44	323	eP	P	00 21 37.9	-0.4
DPC				AMS	AMS	01 06 50.0	
	comp=Z,2µm,17.7s						
DPC	Dobruska-Polom	94.44	323	eP	P	00 21 37.9	-0.4
DPC				MLR	MLR		
	comp=Z,2µm,17.7s						
YKA	Yellowknife Ar	94.53	24	P	P	00 21 38.2	-0.1
	comp=Z,35nm,1.2s,baz=299,slow=4.4,SNR=80						
YKA				PP	PP	00 25 31.7	+5.9
	comp=Z,3.7nm,1.1s,baz=301,slow=7.0,SNR=5.2						
YKA				PKiKP	PKiKP	00 26 21.8	+0.6
	comp=Z,0.4nm,0.6s,baz=310,slow=1.8,SNR=2.3						
YKA				S	SKSac	00 32 12.9	+1.2
	comp=Z,0.3nm,0.9s,baz=338,slow=5.3,SNR=3.6						
YKA				PKKP	PKKPdf	00 38 34.8	-3.1
	comp=Z,0.3nm,0.6s,baz=119,slow=2.8,SNR=5.0						
YKA				LR	LR	01 07 36.1	
	comp=Z,267nm,20.0s,baz=304,slow=38						
	comp=Z,35nm,1.2s						
YKA	Yellowknife Ar	94.53	24	P	P	00 21 37.8	-0.6
MODS	Modra-Piesok	94.55	321	eP	P	00 21 38.5	-0.3
MODS				pmax	pmax		
	comp=Z,59nm,1.5s						
MODS	Modra-Piesok	94.55	321	eP	P	00 21 38.5	-0.3
UPC	Upice	94.57	323	eP	P	00 21 38.5	-0.3
UPC				AMS	AMS	01 07 10.0	
	comp=Z,3µm,19.3s						
UPC	Upice	94.57	323	eP	P	00 21 38.5	-0.3
UPC				MLR	MLR		
	comp=Z,3µm,19.3s						
VRAC	Vranov	94.64	322	⇑P	P	00 21 38.2	-1.0
VRAC	Vranov	94.64	322	LR	LR	01 07 52.9	
	comp=Z,2µm,19.0s,baz=79,slow=38						
VRAC	Vranov	94.64	322	eP	P	00 21 39.1	-0.1
VRAC	Vranov	94.64	322	P	P	00 21 38.2	-1.0
DRO	Drossia	94.69	310	P	P	00 21 36.9	-2.8
ITM	Ithomi	94.74	309	P	P	00 21 35.9	-4.0
ITM	Ithomi	94.74	309	P	P	00 21 38.5	-1.4
ITM	Ithomi	94.74	309	P	P	00 21 37.7	-2.3
MBAR	Mbarara	94.75	270	LR	LR	01 04 40.7	
	comp=Z,587nm,19.3s,baz=52,slow=36						
MBAR	Mbarara	94.75	270	IAMs_20	IAMs_20	01 06 30.3	
	comp=Z,840nm,18.0s						
RLS	Riolos of Patr	94.85	310	P	P	00 21 36.6	-3.8
KRUC	Moravsky	94.85	321	eP	P	00 21 39.6	-0.6
PYL	PYLOS	94.96	309	P	P	00 21 35.2	-5.7
RUE	Ruedersdorf	95.12	325	eP	P	00 21 40.6	-0.7
RUE	Ruedersdorf	95.12	325	eP	P	00 21 41.0	-0.3
	baz=65,slow=4.6						
PDG	Podgorica	95.17	314	IAMs_20	IAMs_20	01 09 13.4	
	comp=Z,1µm,20.0s						
TREC	Trest	95.33	322	eP	P	00 21 42.3	-0.1
TREC				AMS	AMS	01 08 00.0	
	comp=Z,2µm,19.5s						
TREC	Trest	95.33	322	eP	P	00 21 42.3	-0.1
TREC				MLR	MLR		
	comp=Z,2µm,19.5s						
RONA	Rosalia, Austr	95.40	320	eP	P	00 21 41.7	-1.0
	comp=Z,9.9nm,1.2s						
PVCC	Panska Ves	95.42	323	eP	P	00 21 42.9	+0.2
PVCC				AMS	AMS	01 07 40.0	
	comp=Z,3µm,19.5s						
PVCC	Panska Ves	95.42	323	eP	P	00 21 42.9	+0.2
PVCC				MLR	MLR		
	comp=Z,3µm,19.5s						
HILA	High Level	95.46	28	P	P	00 21 42.3	-0.5
GOPC	GO Pecny, Ondr	95.52	323	AMS	AMS	01 07 50.0	
	comp=Z,2µm,18.2s						
CONA	Conrad Observa	95.59	320	eP	P	00 21 42.7	-0.9
	comp=Z,22nm,1.4s,SNR=6.9						
PRU	Pruhonice	95.64	323	eP	P	00 21 43.2	-0.5
PRU				AMS	AMS	01 07 50.0	
	comp=Z,2µm,17.6s						
PRU	Pruhonice	95.64	323	eP	P	00 21 43.2	-0.5
PRU				MLR	MLR		
	comp=Z,2µm,17.6s						
BRG	Berggiesshubel	95.65	324	iP	P	00 21 43.5	-0.3
BRG				Amp		00 21 44.9	
	comp=Z,37nm,1.4s						
BRG				PP	PP	00 25 28.4	-6.5
BRG				Amp		00 25 31.0	
	comp=Z,35nm,2.0s						
BRG	Berggiesshubel	95.65	324	S	S	00 33 04.0	+4.7
BRG				Amp		01 08 20.0	
	comp=Z,2.3nm,17.0s						
BRG				Amp		01 08 25.0	
	comp=E,1.7nm,19.2s						
BRG				Amp		01 08 27.0	
	comp=N,0.9nm,17.4s						
BRG	Berggiesshubel	95.65	324	iP	P	00 21 43.4	-0.3
BRG						00 32 21.0	
BRG				S	S	00 33 04.0	+4.7
BRG				pmax	pmax		
	comp=Z,37nm,1.4s						
BRG				smax	smax		
	comp=Z,2µm,17.0s						
BRG				MLR	MLR		
	comp=E,2µm,19.2s						
BRG				MLR	MLR		
	comp=N,922nm,17.4s						
BRG	Berggiesshubel	95.65	324	eP	P	00 21 43.0	-0.7
	comp=N,37nm,1.4s,baz=65,slow=4.6						
BLS5	Blasjo	95.70	333	eP	P	00 21 42.9	-0.9
TAOE	Nuku Hiva Isla	95.77	98	eS	S	00 32 58.5	-3.3
	comp=N,401nm,26.8s						
TAOE				eSS	SS	00 39 31.6	-0.4
	comp=N,239nm,26.6s						
TAOE	Nuku Hiva Isla	95.77	98	eLR	LR	00 52 39.5	
	comp=N,2µm,28.1s						
KULLO	Kullorsuaq	95.79	1	iP	P	00 21 43.6	-0.3
KULLO				IAmb	IAmb	00 21 46.9	
	comp=Z,13nm,0.9s						
FBE	Freiberg	95.97	324	eP	P	00 21 44.1	-1.2
	comp=Z,71nm,1.8s,baz=65,slow=4.6						
CLL	Collm	96.02	324	P	P	00 21 44.3	-1.1
CLL				IAmb	IAmb	00 21 47.0	
	comp=Z,57nm,1.9s						
CLL	Collm	96.02	324	iP	P	00 21 44.2	-1.2
	comp=Z,50nm,1.7s						
CLL				ix	x	00 21 53.4	

CLL				*e*PP	**PP**	**00 25 36.0**	**-1.7**
CLL				*e*S	**S**	**00 32 57.0**	**-5.5**
CLL				*e*PS	**PS**	**00 34 18.0**	**-6.6**
CLL				*e*PPS	PPS	00 35 06.0	
CLL				*e*SS	SS	00 39 48.0	+15
CLL				*e*SSS	SSS	00 43 18.0	
CLL				*e*SSSS		00 46 36.0	
CLL				*e*x	x	00 48 18.0	
CLL				AMS	AMS	01 08 00.0	
	comp=Z,2µm,20.1s						
CLL	**Collm**	**96.02**	**324**	*i* P	**P**	**00 21 44.2**	**-1.2**
CLL				*i* *PP	**pP**	**00 21 53.4**	**-0.9**
CLL				*e*S	**S**	**00 32 57.0**	**-5.5**
CLL				pmax	pmax		
	comp=Z,50nm,1.7s						
CLL				MLR	MLR		
	comp=Z,2µm,20.1s						
CLL	**Collm**	**96.02**	**324**	*e*P	**P**	**00 21 44.7**	**-0.8**
	comp=Z,37nm,1.7s,baz=65,slow=4.6						
CLL				*e*L	L	01 08 34.9	
	comp=Z,2µm,20.2s						
ARSA	**Arzberg**	**96.05**	**320**	*e*P	**P**	**00 21 44.9**	**-0.9**
	comp=Z,15nm,1.5s,SNR=5.5						
CKRC	**Cesky Krumlov**	**96.22**	**322**	*e*P	**P**	**00 21 45.9**	**-0.6**
CKRC				*e*SKS	**SKSac**	**00 32 16.7**	**-4.7**
CKRC				AMS	AMS	01 08 30.0	
	comp=Z,2µm,19.2s						
CKRC	**Cesky Krumlov**	**96.22**	**322**	*e*P	**P**	**00 21 45.9**	**-0.6**
CKRC				*e*		00 32 16.7	
CKRC				MLR	MLR		
	comp=Z,2µm,19.2s						
KHC	**Kasperske Hory**	**96.55**	**322**	P	**P**	**00 21 45.9**	**-2.0**
KHC	**Kasperske Hory**	**96.55**	**322**	*e*P	**P**	**00 21 46.2**	**-1.8**
KHC				*e*SKS	**SKSac**	**00 32 19.9**	**-3.2**
KHC				AMS	AMS	01 08 20.0	
	comp=Z,2µm,18.7s						
KHC	**Kasperske Hory**	**96.55**	**322**	*e*P	**P**	**00 21 46.2**	**-1.8**
KHC				*e*		00 32 19.9	
KHC				MLR	MLR		
	comp=Z,2µm,18.7s						
SOKA	**Soboth**	**96.57**	**319**	*e*P	**P**	**00 21 47.2**	**-1.0**
	comp=Z,12nm,1.1s						
GEC2	**GERESS Array S**	**96.58**	**322**	P	**P**	**00 21 47.1**	**-1.1**
GEC2				IAmb	IAmb	00 21 48.5	
	comp=Z,19nm,1.1s						
GEC2	**GERESS Array S**	**96.58**	**322**	*e*P	**P**	**00 21 47.1**	**-1.1**
	comp=Z,54nm,1.8s,baz=65,slow=4.6						
GEC2				*e*L	L	01 07 07.6	
	comp=Z,1µm,21.7s						
GERES	**GERESS Array B**	**96.58**	**322**	P	**P**	**00 21 47.3**	**-0.9**
	comp=Z,5.8nm,0.9s,baz=62,slow=6.3,SNR=30						
GERES				LR	LR	01 09 02.6	
	comp=Z,1µm,18.5s,baz=78,slow=38						
	comp=Z,5.8nm,0.9s						
GERES	**GERESS Array B**	**96.58**	**322**	P	**P**	**00 21 47.1**	**-1.1**
FLTG	**Flechtingen**	**96.60**	**326**	*e*P	**P**	**00 21 46.4**	**-1.7**
	comp=Z,64nm,2.2s,baz=65,slow=4.6						
MOA	**Molln**	**96.62**	**321**	*e*P	**P**	**00 21 47.7**	**-0.6**
	comp=Z,37nm,1.2s						
TANN	**Tannenbergstha**	**96.70**	**324**	*e*P	**P**	**00 21 47.7**	**-0.9**
	comp=Z,20nm,1.3s,baz=65,slow=4.6						
NEUB	**Neuenburg**	**96.77**	**325**	*e*P	**P**	**00 21 48.4**	**-0.4**
	comp=Z,62nm,1.5s,baz=65,slow=4.6						
WERD	**Werda**	**96.78**	**324**	*e*P	**P**	**00 21 48.2**	**-0.7**
	comp=Z,56nm,1.9s,baz=65,slow=4.6						
NKC	**Novy Kostel**	**96.78**	**323**	AMS	AMS	01 08 30.0	
	comp=Z,3µm,18.2s						
GUNZ	**Gunzen**	**96.80**	**324**	*e*P	**P**	**00 21 48.3**	**-0.7**
	comp=Z,27nm,1.2s,baz=65,slow=4.6						
WERN	**Wernitzgruen**	**96.80**	**324**	*e*P	**P**	**00 21 48.6**	**-0.4**
	comp=Z,31nm,1.4s,baz=65,slow=4.6						
PLN	**Plauen**	**96.85**	**324**	*e*P	**P**	**00 21 48.7**	**-0.6**
	comp=Z,25nm,1.3s,baz=65,slow=4.6						
SCO	**Scoresbysund**	**96.90**	**349**	P	**P**	**00 21 48.4**	**-0.6**
SCO				IAmb	IAmb	00 21 49.7	
	comp=Z,28nm,1.4s						
SCO	**Scoresbysund**	**96.90**	**349**	P	**P**	**00 21 48.4**	**-0.6**
SCO				pmax	pmax		
	comp=Z,28nm,1.4s						
SCO	**Scoresbysund**	**96.90**	**349**	*i* P	**P**	**00 21 49.4**	**+0.3**
SCO				IAmb	IAmb	00 21 52.6	
	comp=Z,3.1nm,0.7s						
BIOA	**Bad Ischl, Aus**	**97.07**	**321**	*e*P	**P**	**00 21 49.4**	**-1.0**
	comp=Z,9.0nm,1.3s						
MANZ	**Manzenberg**	**97.08**	**323**	*e*P	**P**	**00 21 50.0**	**-0.3**
	comp=Z,5.9nm,1.5s,baz=65,slow=4.6						
MOX	**Moxa**	**97.10**	**324**	*e*P	**P**	**00 21 49.7**	**-0.6**
	comp=Z,26nm,1.4s,baz=65,slow=4.6						
MOX				*e*L	L	01 10 15.2	
	comp=Z,2µm,18.3s						
ROTZ	**Rotzenmuhle**	**97.11**	**323**	*e*P	**P**	**00 21 50.0**	**-0.5**
	comp=Z,8.5nm,1.3s,baz=65,slow=4.6						
NRDL	**Niedersach Rie**	**97.15**	**326**	*e*P	**P**	**00 21 50.2**	**-0.3**
	comp=Z,52nm,1.4s,baz=65,slow=4.6						
CLZ	**Clausthal**	**97.29**	**325**	*e*P	**P**	**00 21 51.1**	**-0.2**
	comp=Z,39nm,1.3s,baz=65,slow=4.6						
RETH	**Rethem/Aller,**	**97.45**	**327**	*e*P	**P**	**00 21 51.6**	**-0.3**
	comp=Z,36nm,1.4s,baz=65,slow=4.6						
KBA	**Koelnbreinsper**	**97.49**	**320**	*e*P	**P**	**00 21 50.7**	**-1.8**
	comp=Z,15nm,1.4s						
RJOB	**Jochberg**	**97.58**	**321**	*e*P	**P**	**00 21 52.0**	**-0.7**
	comp=Z,30nm,1.4s,baz=65,slow=4.6						
GRF	**Grafenberg Arr**	**97.73**	**323**	*e*L	L	01 09 27.7	
	comp=Z,3µm,19.2s						
TIP	**Timpagrande**	**98.01**	**312**	IAMs_20	IAMs_20	01 12 38.0	
	comp=Z,801nm,19.0s						
ABTA	**Abfaltersbach**	**98.15**	**320**	*e*P	**P**	**00 21 53.3**	**-2.0**
	comp=Z,20nm,1.3s						
FUR	**Furstenfeldbru**	**98.33**	**322**	*e*P	**P**	**00 21 55.6**	**-0.4**
	comp=Z,122nm,1.8s,baz=65,slow=4.6						
FUR				*e*L	L	01 09 56.6	
	comp=Z,2µm,20.4s						
WTTA	**Wattenberg**	**98.49**	**321**	*e*Pdiff	**P**	**00 21 55.6**	**-1.4**
	comp=Z,27nm,1.2s,SNR=5.5						
WATA	**Walderalm**	**98.49**	**321**	*e*Pdiff	**P**	**00 21 55.6**	**-1.3**
	comp=Z,32nm,1.5s,SNR=6.0						
IBBN	**Ibbenburen**	**98.52**	**327**	*e*P	**P**	**00 21 56.2**	**-0.5**
	comp=Z,58nm,1.4s,baz=65,slow=4.6						
KASTN	**Kahler Asten**	**98.67**	**325**	*e*P	**P**	**00 21 56.7**	**-0.7**
	comp=Z,36nm,1.6s,baz=65,slow=4.6						
MOTA	**Moosalm**	**98.78**	**321**	*i* Pdiff	**P**	**00 21 56.8**	**-1.4**
	comp=Z,13nm,1.2s						
B08A	**Colville Reser**	**98.88**	**38**		**P**	**00 21 57.9**	**-0.6**
CEL	**Celeste**	**98.96**	**311**	IAMs_20	IAMs_20	01 14 17.1	
	comp=Z,709nm,20.0s						
TNS	**Taunus Mts**	**99.10**	**325**	*e*P	**Pdif**	**00 21 59.2**	**-0.3**
	comp=Z,37nm,1.6s,baz=65,slow=4.6						
TNS				*e*L	L	01 11 16.8	
	comp=Z,2µm,19.1s						
FETA	**Feichten**	**99.15**	**321**	*e*Pdiff	**Pdif**	**00 21 58.8**	**-1.1**
	comp=Z,18nm,1.2s						
AQU	**L'Aquila**	**99.27**	**316**	IAMs_20	IAMs_20	01 14 10.6	
	comp=Z,1µm,18.0s						
LSZ	**Lusaka**	**99.47**	**256**	LR	LR	01 07 41.2	
	comp=Z,455nm,18.8s,baz=84,slow=36						
LSZ	**Lusaka**	**99.47**	**256**	IAMs_20	IAMs_20	01 10 06.8	
	comp=Z,1µm,18.0s						
DAVA	**Damuels**	**99.56**	**321**	*e*Pdiff	**Pdif**	**00 22 00.2**	**-1.5**
	comp=Z,16nm,1.2s						
FUORN	**Ofenpass-Fuorn**	**99.61**	**321**		**Pdif**	**00 22 00.0**	**-2.0**
FUORN				IAMs_20	IAMs_20	01 11 20.1	
	comp=Z,918nm,20.0s						
QSPA	**South Pole Qui**	**99.64**	**180**	IAMs_20	IAMs_20	01 10 35.0	
	comp=Z,996nm,20.0s						
DAVOX	**Davos/Dischmat**	**99.78**	**321**	LR	LR	01 13 02.7	
	comp=Z,1µm,18.5s,baz=68,slow=39						
BFO	**Black Forest**	**100.03**	**323**	*e*L	L	01 10 47.0	
	comp=Z,2µm,19.1s						
NEW	**Newport**	**100.24**	**37**	P	**Pdif**	**00 22 04.2**	**-0.4**
	baz=297						
MSO	**Missoula**	**102.82**	**37**	P	**Pdif**	**00 22 16.0**	**-0.2**
	baz=300						
NVAR	**Mina Array Bea**	**103.76**	**46**	Pdiff	**Pdif**	**00 22 22.8**	**+2.2**
	comp=Z,1.0nm,0.8s,baz=6.6,slow=33,SNR=2.1						
NVAR				PP	**PKiKP**	**00 26 39.3**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=286,slow=6.6,SNR=5.1						
HLID	**Hailey**	**104.11**	**40**	P	**Pdif**	**00 22 21.2**	**-0.8**
	baz=299						
PDAR	**Pinedale Array**	**107.58**	**39**	PKKPab	PKKPab	00 38 17.5	+1.5
	comp=Z,0.4nm,0.7s,baz=116,slow=6.8,SNR=4.2						
WIN	**Windhoek**	**110.56**	**250**	IAMs_20	IAMs_20	01 08 42.6	
	comp=Z,2µm,22.0s						
CART	**Cartagena**	**111.27**	**317**	IAMs_20	IAMs_20	01 14 37.2	
	comp=Z,948nm,20.0s						
TAM	**Tamanrasset**	**112.88**	**300**	IAMs_20	IAMs_20	01 18 50.2	
	comp=Z,596nm,21.0s						
ECSD	**EROS Data Cent**	**114.47**	**32**	P	**PKiKP**	**00 26 58.1**	**-0.3**
	baz=314						
CBKS	**Cedar Bluff**	**115.94**	**38**	IAMs_20	IAMs_20	01 21 09.1	
	comp=Z,1µm,20.0s						
MNTX	**Cornudas Mount**	**116.26**	**47**	P	**PKiKP**	**00 27 02.8**	**+0.7**
	baz=302						
OK035	**E0210 Rd and N**	**117.89**	**39**	IAMs_20	IAMs_20	01 05 14.0	
	comp=Z,1µm,20.0s						
TXAR	**Lajitas Array**	**118.75**	**49**	PKP	**PKPdf**	**00 27 07.2**	**0.0**
	comp=Z,0.9nm,0.7s,baz=273,slow=0.5,SNR=10						
TXAR				PKKPbc	**PKKPbc**	**00 37 22.1**	**-1.1**
	comp=Z,0.6nm,1.0s,baz=138,slow=7.6,SNR=3.6						
TXAR				PKKPab	**PKKPab**	**00 37 28.7**	**+2.5**
	comp=Z,0.7nm,0.9s,baz=132,slow=6.9,SNR=4.2						
TXAR				SKKP	**SKKPdf**	**00 41 18.1**	**-8.3**
	comp=Z,1.8nm,1.2s,baz=134,slow=8.9,SNR=4.2						
TORD	**Torodi Ar. Bea**	**119.70**	**291**	PKP	**PKPdf**	**00 27 07.7**	**-1.4**
	comp=Z,6.1nm,0.8s,baz=49,slow=1.7,SNR=34						
TORD				PP	**PP**	**00 28 30.8**	**-1.2**
	comp=Z,11nm,1.2s,baz=63,slow=6.2,SNR=7.2						
TORD				PKKPab	**PKKPab**	**00 37 22.4**	**+0.7**
	comp=Z,1.9nm,0.9s,baz=257,slow=3.3,SNR=6.0						
JCT	**Junction City**	**120.92**	**46**	P	**PKPdf**	**00 27 11.1**	**-0.1**
	baz=305						
CCM	**Cathedral Cave**	**121.35**	**34**	P	**PKiKP**	**00 27 11.9**	**0.0**
	baz=316						
833A	**Chaparral WMA,**	**122.44**	**47**	P	**PKiKP**	**00 27 14.9**	**+0.6**
	baz=305						
MIAR	**Mount Ida**	**122.47**	**38**	P	**PKiKP**	**00 27 14.4**	**+0.3**
	baz=313						
O48B	**Farmland**	**122.72**	**28**	P	**PKiKP**	**00 27 15.1**	**+0.6**
	baz=324						
ERPA	**Erie**	**123.33**	**22**	P	**PKiKP**	**00 27 15.8**	**+0.1**
	baz=330						
ACSO	**Alum Creek Sta**	**123.71**	**26**	P	**PKiKP**	**00 27 16.8**	**+0.3**
	baz=326						
WCI	**Wyandotte Cave**	**123.79**	**30**	P	**PKPdf**	**00 27 16.5**	**+0.1**
	baz=322						
O53A	**New Philadelph**	**124.44**	**25**	P	**PKPdf**	**00 27 17.1**	**-0.5**
	baz=328						
P52A	**Corning**	**124.57**	**26**		**PKPdf**	**00 27 17.6**	**-0.3**
P52A	**Corning**	**124.57**	**26**	P	**PKPdf**	**00 27 17.4**	**-0.5**
	baz=326						
WVT	**Waverly**	**124.61**	**33**	P	**PKPdf**	**00 27 17.7**	**-0.4**
	baz=319						
BINY	**Binghamton**	**124.67**	**19**	P	**PKPdf**	**00 27 17.7**	**-0.3**
	baz=334						
OXF	**Oxford**	**124.94**	**35**	P	**PKPdf**	**00 27 18.7**	**0.0**
	baz=317						
PLAL	**Pickwick Lake**	**125.34**	**34**	PKPdf	**PKPdf**	**00 27 18.7**	**-0.8**
SSPA	**Standing Stone**	**125.40**	**22**	P	**PKPdf**	**00 27 19.6**	**+0.1**
	baz=331						
L61B	**Northampton**	**125.44**	**16**	P	**PKPdf**	**00 27 19.6**	**+0.1**
	baz=338						
MCWV	**Mont Chateau**	**125.50**	**24**	P	**PKPdf**	**00 27 19.5**	**-0.1**
	baz=329						
BLA	**Blacksburg**	**127.33**	**26**	P	**PKiKP**	**00 27 23.6**	**-0.2**
	baz=327						
LRAL	**Lakeview Retre**	**127.38**	**35**	P	**PKiKP**	**00 27 24.0**	**0.0**
	baz=318						
DBIC	**Dimbokro**	**127.87**	**286**	PKP	**PKPdf**	**00 27 24.3**	**-0.6**
	comp=Z,6.9nm,0.7s,baz=357,slow=0.6,SNR=8.5						
KMSC	**Kings Mountain**	**128.64**	**28**	P	**PKPdf**	**00 27 25.1**	**-0.7**
	baz=325						
BRAL	**Brewton**	**128.73**	**36**	P	**PKiKP**	**00 27 26.8**	**0.0**
	baz=317						
PLCA	**Paso Flores**	**146.06**	**158**	PKPbc	**PKPab**	**00 27 59.0**	**0.0**
	comp=Z,38nm,1.2s,baz=203,slow=4.1,SNR=22						
PLCA	**Paso Flores**	**146.06**	**158**	*e*P	**PKPdf**	**00 27 56.5**	**-1.2**
SDDR	**Presa de Saban**	**147.00**	**30**	IAMs_20	IAMs_20	01 33 29.9	
	comp=Z,828nm,19.0s						
BCIP	**Isla Barro Col**	**148.57**	**54**	*e*P	PKPab	00 28 20.2	+11
CELP	**Cerrillos**	**149.88**	**23**		**PKPbc**	**00 28 07.8**	**-1.5**
SJG	**San Juan**	**150.01**	**23**	IAMs_20	IAMs_20	01 38 54.2	
	comp=Z,602nm,22.0s						
TRQA	**Tornquist**	**151.06**	**168**	IAMs_20	IAMs_20	01 34 32.2	
	comp=Z,636nm,19.0s						
TRQA	**Tornquist**	**151.06**	**168**	*e*P	**PKPdf**	**00 28 05.2**	**-0.6**
SABA	**Saba**	**151.45**	**18**	IAMs_20	IAMs_20	01 35 18.9	
	comp=Z,610nm,19.0s						
BO04	**La Punta**	**151.75**	**151**		**PKPab**	**00 28 19.7**	**-2.3**
APAC	**Apartado, Choc**	**151.89**	**52**	*e*P	**PKiKP**	**00 28 15.0**	**+0.5**
CRJC	**Cerrejon, Guaj**	**152.44**	**42**	*e*P	**PKPdf**	**00 28 07.1**	**-1.5**
DBBC	**Dabeiba**	**152.72**	**53**	*e*P	**PKiKP**	**00 28 19.6**	**+3.2**
VA03	**San Esteban**	**152.77**	**149**		**PKPbc**	**00 28 13.2**	**-2.5**
UREC	**San Jos de Ur**	**152.79**	**51**	*e*P	**PKPdf**	**00 28 09.0**	**-0.1**
CBOC	**Ciudad Bolivar**	**153.56**	**55**	*e*P	**PKiKP**	**00 28 20.2**	**+2.0**
PAC1	**Pacto, Paraso**	**153.89**	**69**	*e*P	**PKPdf**	**00 28 13.8**	**+3.0**
OTAV	**Otavalo**	**154.21**	**69**	IAMs_20	IAMs_20	01 52 44.8	
	comp=Z,432nm,20.0s						
OTAV	**Otavalo**	**154.21**	**69**	*e*P	**PKPdf**	**00 28 13.8**	**+2.2**
OTAV	**Otavalo**	**154.21**	**69**	*e*P	**PKPdf**	**00 28 09.9**	**-1.7**
MCRA	**Macar, Loja**	**154.23**	**80**	*e*P	**PKPbc**	**00 28 18.6**	**-0.8**
YOTC	**Yotoco, Valle**	**154.34**	**59**	*e*P	**PKPbc**	**00 28 17.4**	**-2.3**
PTBC	**PUERTO BERRIO,**	**154.38**	**52**	*e*P	**PKPdf**	**00 28 07.0**	**-4.4**
JAMC	**Jamundi, Valle**	**154.46**	**61**	*e*P	**PKPbc**	**00 28 18.6**	**-1.5**
BBAC	**Balboa, Cauca**	**154.53**	**64**	*e*P	**PKPbc**	**00 28 19.6**	**-0.7**
BRRC	**Barranca, Sant**	**154.59**	**49**	*e*P	**PKPbc**	**00 28 16.9**	**-3.1**
NORC	**Norcasia**	**154.66**	**54**	*e*P	**PKPbc**	**00 28 16.2**	**-4.1**
POPC	**Popayan, Colom**	**154.79**	**62**	*e*P	**PKPdf**	**00 28 12.1**	**-0.1**
GCUF	**Volcan Galeras**	**154.81**	**66**	*e*P	**PKPdf**	**00 28 15.0**	**+2.5**
ANIL	**Santa Ana**	**154.84**	**57**	*e*P	**PKPdf**	**00 28 09.0**	**-3.3**
BONI	**La Bonita**	**154.97**	**67**	*e*P	**PKPbc**	**00 28 19.1**	**-2.1**
PAMC	**Pamplona, Colo**	**155.18**	**47**	*e*P	**PKPdf**	**00 28 11.8**	**-1.2**
SPBC	**San Pablo de B**	**155.23**	**53**	*e*P	**PKPdf**	**00 28 13.0**	**+0.4**
ORTC	**Ortega, Tolima**	**155.30**	**58**	*e*P	**PKPdf**	**00 28 13.8**	**+1.2**
SDV	**Santo Domingo**	**155.50**	**41**	IAMs_20	IAMs_20	01 46 29.5	
	comp=Z,536nm,20.0s						
SDV	**Santo Domingo**	**155.50**	**41**	*e*P	**PKPdf**	**00 28 12.6**	**-0.4**
RUSC	**La Rusia**	**155.85**	**51**	*e*P	**PKPdf**	**00 28 13.9**	**0.0**
GARC	**Garzon, Huila**	**155.99**	**61**	*e*P	**PKPdf**	**00 28 15.0**	**+1.2**
CHIC	**Chingaza**	**156.12**	**54**	*e*P	**PKPdf**	**00 28 11.0**	**-3.2**
FLOC	**Florencia**	**156.14**	**63**	*e*P	**PKPdf**	**00 28 14.9**	**+1.2**
TAMC	**Tame, Arauca**	**156.45**	**48**	*e*P	PKPdf	00 28 27.1	+13
MACC	**Macarena, Meta**	**157.42**	**59**	*e*P	**PKPdf**	**00 28 20.2**	**+4.8**
PTGC	**Puerto Gaitan,**	**157.64**	**52**	*e*P	PKPab	00 28 35.2	-12
PLTB	**Pedras Altas**	**158.10**	**182**	*e*P	**PKPdf**	**00 28 15.5**	**-0.2**
ALGR	**Alto Alegre (B**	**161.02**	**184**	*e*P	**PKPdf**	**00 28 19.0**	**-0.2**
RCBR	**Riachuelo**	**161.12**	**281**	*e*P	**PKPdf**	**00 28 19.7**	**0.0**
VACA	**Villa Angela C**	**161.31**	**163**	*e*P	**PKPdf**	**00 28 19.4**	**0.0**
CZSB	**Cruzeiro do Su**	**161.94**	**85**	*e*P	**PKPdf**	**00 28 20.3**	**-0.2**
CRSM	**Crissiumal (Br**	**162.37**	**181**	*e*P	**PKPdf**	**00 28 20.5**	**-0.1**
CPUP	**Villa Florida**	**163.33**	**171**	PKP	**PKPdf**	**00 28 24.1**	**+2.6**
	comp=Z,7.1nm,1.1s,baz=190,slow=1.6,SNR=3.9						
CPUP				PKPab	**PKPab**	**00 29 12.0**	**+0.1**
	comp=Z,6.5nm,0.9s,baz=195,slow=5.2,SNR=6.9						
CPUP				PP	**PP**	**00 32 55.9**	**+0.3**
	comp=Z,9.1nm,1.3s,baz=201,slow=7.0,SNR=3.8						
CPUP	**Villa Florida**	**163.33**	**171**	PKP2	**PKPab**	**00 29 12.0**	**+0.1**
TBTG	**Tabatinga, AM**	**163.78**	**71**	*e*P	**PKPdf**	**00 28 21.9**	**-0.3**
GUA01	**Guaratinga, BA**	**164.14**	**243**	*e*P	**PKPdf**	**00 28 23.0**	**+0.5**
SGCB	**S£o Gabriel d**	**164.30**	**53**	*e*P	**PKPdf**	**00 28 22.1**	**-0.6**
SJMB	**Sao Joao De Ma**	**164.31**	**234**	*e*P	**PKPdf**	**00 28 23.2**	**+0.6**
LPAZ	**La Paz**	**165.27**	**117**	PKP	**PKPdf**	**00 28 25.3**	**+1.1**
	comp=Z,9.9nm,1.1s,baz=288,slow=1.5,SNR=5.5						
LPAZ				PKPab	**PKPab**	**00 29 22.2**	**+0.4**
	comp=Z,8.2nm,1.0s,baz=278,slow=5.6,SNR=1.9						
LPAZ	**La Paz**	**165.27**	**117**	*e*P	**PKPdf**	**00 28 30.6**	**+6.3**

TAP 05 00:08:46.0, 24°.45N×121°.86E, h20^{km}±1^{km}, ML1.9, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.07**	**268**	P	Pg	00 08 50.2	+0.5
	baz=267						
EWUT				*e*S	Sg	00 08 52.8	+0.5
	baz=267						
ENA	**Nanau**	**0.11**	**260**	*i* P	Pg	00 08 50.6	+0.6
	baz=258						
ENA				S	Sg	00 08 53.8	+1.0
	baz=258						
TWC	**Suao**	**0.16**	**356**	*i* P	Pg	00 08 51.0	+0.3
	baz=359						
TWC				S	Sg	00 08 54.2	+0.5
	baz=359						
LATG	**Datong**	**0.32**	**286**	P	Pb	00 08 54.0	+0.8
	baz=285						
LATG				*e*S	Sg	00 08 59.1	+1.2
	baz=285						
TWE	**Neicheng**	**0.32**	**327**	*e*P	Pb	00 08 53.5	+0.3
	baz=328						
TWE				*e*S	Sb	00 08 58.8	+0.8
	baz=328						
ENTT	**Nioudou**	**0.33**	**305**	P	Pb	00 08 54.0	+0.7
	baz=305						
ENTT				S	Sb	00 08 59.2	+1.0
	baz=305						
NACB	**Ninganchiao**	**0.36**	**222**	P	Pb	00 08 54.0	+0.1
	baz=221						
NACB				*e*S	Sb	00 09 00.1	+0.9
	baz=221						
FUSB	**Fushanzhiwuyua**	**0.40**	**321**	P	Pb	00 08 55.1	+0.6
	baz=321						
FUSB				*e*S	Sb	00 09 01.0	+0.8
	baz=321						
ETLH	**Xiulin Townshi**	**0.42**	**235**	P	Pb	00 08 55.2	+0.3
	baz=235						
ETLH				*e*S	Sb	00 09 01.6	+0.7
	baz=235						
NWLT	**Wulai**	**0.46**	**315**	*e*P	Pg	00 08 56.1	+0.6
	baz=315						
NWLT				*e*S	Sb	00 09 02.6	+0.6
	baz=315						
YHNB	**Yeheng**	**0.49**	**297**	P	Pg	00 08 56.9	+0.7
	baz=296						
YHNB				*e*S	Sb	00 09 03.8	+0.8
	baz=296						
NSK	**Sanguang**	**0.51**	**296**	*e*P	Pg	00 08 56.9	+0.4
	baz=296						
TIPB	**Shuangxi**	**0.52**	**356**	*e*P	Pg	00 08 56.9	+0.2
	baz=356						
TIPB				*e*S	Sg	00 09 04.0	+0.2
	baz=356						
SXI1	**Grass Mountain**	**0.64**	**1**	*e*P	Pg	00 08 59.4	+0.5
	baz=1.0						

SOME ***05*** *00:11:10.3, 42°.17N×75°.10E, h10^{km}*
KNET ***05*** *00:11:10.1±0.5, 42°.21N×75°.17E, h0^{km}, ml1.2, Error ellipse: s-maj=5.6km s-min=2.3km az=18.0*
NNC ***05*** *00:11:11.3±1.4, 42°.27N×75°.06E, h0^{km}, mb3.0, mpv2.5, Error ellipse: s-maj=16.0km s-min=5.1km az=155.0*
ISC 05 00:11:10.3±1.3**, 42°.20N**±0°.05×**75°.12E**±0°.02**, h4^{km}**±12^{km}**, n29, σ0^{s}.73**/54**, 10C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UCH	**Uchtor**	**0.45**	**274**	⇑P	**Pg**	**00 11 19.2**	**+0.1**
	2.2nm,0.1s,SNR=14						
UCH				⇓S	**Sg**	**00 11 25.6**	**+0.6**
	5.2nm,0.1s						
KBK	**Karagaybulak**	**0.47**	**345**	⇓P	**Pb**	**00 11 20.5**	**-0.9**
	8.6nm,0.1s,SNR=11						
KBK				⇑S	**Sb**	**00 11 27.4**	**-1.5**
	17nm,0.1s						
AAK	**Ala-Archa**	**0.64**	**314**	⇑P	**Pg**	**00 11 23.0**	**+0.5**
	8.3nm,0.1s,SNR=32						
AAK				⇑S	**Sg**	**00 11 31.8**	**+0.9**
	8.8nm,0.2s						
TKM2	**Tokmak 2**	**0.81**	**26**	⇑P	**Pg**	**00 11 25.1**	**-0.7**
	1.3nm,0.6s						
TKM2				⇓S	**Sg**	**00 11 37.0**	**+0.7**
	1.4nm,0.2s						
ULHL	**Ulahol**	**0.84**	**86**	⇓P	**Pg**	**00 11 25.5**	**-0.9**
	1.2nm,0.1s,SNR=10						
ULHL				⇑S	**Sg**	**00 11 37.0**	**-0.4**
	5.9nm,0.2s						
CHMS	**Chumysh**	**0.84**	**342**	⇑P	**Pg**	**00 11 26.6**	**0.0**
	1.7nm,0.2s						
CHMS				⇑S	**Sb**	**00 11 38.2**	**-1.2**
	2.8nm,0.1s						
KST	**Kastek**	**1.05**	**36**	P	**Pg**	**00 11 30.6**	**+0.1**
	0.7nm,0.1s						
KST				S	**Sg**	**00 11 43.5**	**-0.6**
	2.5nm,0.3s						
KST	**Kastek**	**1.05**	**36**	*e*P	**Pg**	**00 11 29.0**	**-1.5**
	0.5nm,0.3s						
KST				*e*S	**Sg**	**00 11 42.9**	**-1.3**
	2.5nm,0.3s						
AML	**Almayashu**	**1.06**	**267**	⇑P	**Pg**	**00 11 30.3**	**-0.3**
AML				⇑S	**Sg**	**00 11 44.4**	**0.0**
DGS	**Degeres**	**1.15**	**25**	P	**Pb**	**00 11 33.1**	**+0.3**
	0.6nm,0.1s						
DGS				S	**Sb**	**00 11 47.9**	**-0.3**
	4.4nm,0.2s						
DGS	**Degeres**	**1.15**	**25**	*e*P	**Pg**	**00 11 32.0**	**-0.4**
	0.6nm,0.1s						
DGS				*e*S	**Sg**	**00 11 47.4**	**+0.1**
	4.4nm,0.2s						
USP	**Ospenovka**	**1.16**	**337**	⇓P	**Pg**	**00 11 32.5**	**-0.1**
	1.5nm,0.2s,SNR=8.5						
USP				⇓S	**Sb**	**00 11 48.4**	**-0.1**
	1.3nm,0.1s						
MTBS	**Maitube**	**1.34**	**46**	*e*P	**Pg**	**00 11 35.4**	**-0.7**
	1.0nm,0.2s						
MTBS				*e*S	**Sg**	**00 11 53.4**	**-0.1**
	2.2nm,0.4s						
IZV	**Izvestkoviy**	**1.39**	**52**	P	**Pb**	**00 11 37.3**	**+0.3**
	0.4nm,0.1s						
IZV				S	**Sg**	**00 11 55.0**	**+0.1**
	1.9nm,0.1s						
IZV	**Izvestkoviy**	**1.39**	**52**	*e*P	**Pg**	**00 11 36.5**	**-0.5**
	0.4nm,0.1s						
IZV				*e*S	**Sg**	**00 11 55.0**	**+0.1**
	1.9nm,0.1s						
MRKS	**Merke**	**1.50**	**292**	P	**Pb**	**00 11 39.4**	**+0.6**
	0.6nm,0.1s						
MRKS				S	**Sn**	**00 11 58.6**	**+0.4**
	3.4nm,0.2s						
MRKS	**Merke**	**1.50**	**292**	*e*P	**Pn**	**00 11 37.7**	**-0.5**
	0.6nm,0.1s						
MRKS				*e*S	**Sg**	**00 11 57.5**	**-1.1**
	3.4nm,0.2s						
KRBS	**Karabastau**	**1.55**	**15**	P	**Pg**	**00 11 40.5**	**+0.4**
	0.6nm,0.2s						
KRBS				S	**Sb**	**00 12 00.6**	**+0.8**
	1.5nm,0.2s						
KRBS	**Karabastau**	**1.55**	**15**	*e*P	**Pb**	**00 11 39.7**	**0.0**
	0.6nm,0.2s						
KRBS				*e*S	**Sb**	**00 12 00.5**	**+0.7**
	1.5nm,0.2s						
MDOK	**Medeo**	**1.72**	**55**	*e*P	**Pb**	**00 11 42.5**	**-0.2**
	0.4nm,0.2s						
MDOK				*e*S	**Sg**	**00 12 05.8**	**+0.2**
	1.9nm,0.6s						
KOTS	**Kotyrbulak**	**1.80**	**54**	P	**Pg**	**00 11 45.8**	**+1.0**
	1.0nm,0.1s						
KOTS				S	**Sg**	**00 12 10.3**	**+2.1**
	5.1nm,0.5s						
KOTS	**Kotyrbulak**	**1.80**	**54**	*e*P	**Pg**	**00 11 44.7**	**-0.2**
	1.0nm,0.1s						
KOTS				*e*S	**Sg**	**00 12 09.1**	**+0.9**
	5.1nm,0.5s						
KTBS	**Karatobe**	**1.90**	**37**	P	**Pb**	**00 11 45.8**	**+0.2**
	0.8nm,0.2s						
KTBS				S	**Sb**	**00 12 10.3**	**+0.5**
	6.1nm,0.3s						
KTBS	**Karatobe**	**1.90**	**37**	*e*P	**Pb**	**00 11 45.2**	**-0.5**
	0.8nm,0.2s						
KTBS				*e*S	**Sb**	**00 12 10.6**	**+0.9**
	6.1nm,0.3s						
KUU	**Kurty**	**1.92**	**28**	*e*P	**Pb**	**00 11 45.7**	**-0.2**
	0.4nm,0.2s						
KUU				*e*S	**Sb**	**00 12 11.1**	**+0.9**
	3.9nm,0.3s						
CHKK	**Chushkaly**	**2.15**	**39**	Pg	**Pg**	**00 11 51.2**	**-0.3**
	0.8nm,0.1s						
CHKK				Lg	Lg	00 12 19.0	
	4.9nm,0.2s						
CHKK	**Chushkaly**	**2.15**	**39**	*e*Pg	**Pb**	**00 11 50.5**	**+0.6**
	0.8nm,0.1s						
CHKK				*e*Lg	Lg	00 12 19.0	
	4.9nm,0.2s						
ARXS	**Arharly**	**2.83**	**44**	Pg	**Pb**	**00 12 02.5**	**+1.0**
	1.6nm,0.2s						
ARXS				Lg	Lg	00 12 38.3	
	2.8nm,0.4s						
ARXS	**Arharly**	**2.83**	**44**	*e*Pg	**Pb**	**00 12 01.7**	**+0.3**
	1.6nm,0.2s						
ARXS				*e*Lg	Lg	00 12 38.3	
	2.8nm,0.4s						

HEL 05 00:17:03.0±0.4**, 67°.87N×20°.06E, h0^{km}, ML1.0, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.75**	**75**	PG	Pg	00 17 17.4	0.0
	baz=258						
LANU				SG	Sg	00 17 26.9	-0.2
KIF	**Kilpisjarvi**	**1.18**	**13**	*e*P	Pn	00 17 27.3	+0.6
KIF	**Kilpisjarvi**	**1.18**	**13**	PN	Pn	00 17 27.5	+0.8

KIF				MSG		00 17 39.8	
	comp=Z,1.4nm,0.2s						
KIF				SN	Sn	00 17 44.0	+0.6
PAJU	**Pajala**	**1.45**	**124**	PG	Pn	00 17 28.9	-1.6
PAJU				SG	Sg	00 17 47.3	-2.2
HEF	**Hetta**	**1.45**	**66**	*e*P	Pn	00 17 30.1	-0.4
HEF	**Hetta**	**1.45**	**66**	PN	Pn	00 17 30.1	-0.5
	baz=254						
HEF				MSG		00 17 46.8	
	comp=Z,0.9nm,0.2s						
HEF				SN	Sb	00 17 49.8	-0.1
ERTU	**Ertsjaerv**	**1.56**	**147**	PG	Pn	00 17 31.5	-0.4
ERTU				SG	Sn	00 17 50.9	-1.9
KALU	**Kalix**	**2.40**	**146**	SG	Sb	00 18 16.1	-0.9
TOF	**Tornio**	**2.46**	**135**	PG	Pb	00 17 46.4	-1.6
TOF				MSG		00 18 15.6	
	comp=Z,0.5nm,0.2s						
TOF				SG	Sb	00 18 17.3	-1.3
SGF	**Sodankyl**	**2.51**	**97**	PG	Pb	00 17 47.0	-1.9
SGF				SG	Sb	00 18 19.9	-0.3
ARA0	**ARCESS Array S**	**2.60**	**47**	PB	Pn	00 17 48.3	+2.0
ARA0				SB	Sb	00 18 21.1	-1.8
RNF	**Rovaniemi**	**2.64**	**116**	PB	Pn	00 17 48.6	+1.9
RNF				SB	Sb	00 18 21.9	-2.0

UPP 05 00:18:01.4±0.2**, 67°.82N**×**20°.30E, h0^{km}, ML1.6, Suspected explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOVU	**Salmi**	**0.41**	**353**	P	Pg	00 18 09.2	0.0
KOVU				S	Sg	00 18 14.7	+0.2
PAJU	**Pajala**	**1.35**	**125**	P	Pg	00 18 26.3	-0.9
ERTU	**Ertsjaerv**	**1.47**	**149**	P	Pn	00 18 28.6	-0.5
HARU	**Harads**	**1.69**	**171**	P	Pn	00 18 32.3	+0.2

MOS ***05*** *00:57:32.9±1.2, 42°.49N×143°.23E, h78^{km}, mb4.3/1, Error ellipse: s-maj=24.2km s-min=11.0km az=61.3*

SKHL ***05*** *00:57:33.3±0.8, 42°.50N×143°.30E, h76^{km}±4^{km}, mb4.8/4*

JMA ***05*** *00:57:34.2±0.1, 42°.5N±0°.4×143°.3E±0°.7, h55^{km}±1^{km}, MV3.4/40, TOKACHI REGION*

JMA Felt I J1 at TOKACHI REGION .

IDC ***05*** *00:57:35.5±2.1, 42°.59N×143°.03E, h77^{km}±15^{km}, mb3.2/5, mbtmp3.5/7, Error ellipse: s-maj=28.2km s-min=13.5km az=107.0*

ISC 05 00:57:33.4±0.8**, 42°.44N**±0°.05×**143°.36E**±0°.04**, h65**^{km}±6^{km}**, n32, σ1^{s}.32**/49**, mb3.3**/5**, 2C-11D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTHR	**Tokachihiroo**	**0.16**	**196**	⇓*i*P	**Pn**	**00 57 43.0**	**-0.3**
JTHR				⇓*e*S	**Sn**	**00 57 49.8**	**-0.6**
JCH	**Churui**	**0.17**	**2**	⇓P	**Pn**	**00 57 42.6**	**-0.7**
JCH				⇓*e*S	**Sn**	**00 57 48.7**	**-1.9**
JEM	**Erimo**	**0.45**	**199**	*e*P	**Pn**	**00 57 45.5**	**+0.2**
JNBK	**Urakawa-nobuka**	**0.48**	**250**	⇓P	**Pn**	**00 57 45.4**	**-0.2**
JNBK				⇓*e*S	**Sn**	**00 57 54.5**	**+0.1**
JOB	**Onbets**	**0.58**	**37**	⇓*e*P	**Pn**	**00 57 47.0**	**+0.4**
JOB				⇓*e*S	**Sn**	**00 57 57.3**	**+1.1**
JSHD	**Hidakashinhida**	**0.66**	**267**	⇓P	**Pn**	**00 57 47.7**	**+0.2**
JBT2	**Biratori 2**	**0.81**	**295**	⇓P	**Pn**	**00 57 48.2**	**-1.0**
JAR	**Ashorobuto**	**0.91**	**19**	*e*P	**Pn**	**00 57 50.2**	**-0.3**
JAR				*e*S	**Sn**	**00 58 02.4**	**-0.7**
JFR	**Furan**	**0.91**	**322**	*e*P	**Pn**	**00 57 49.2**	**-1.4**
JIAM	**Iburiatsuma**	**1.08**	**280**	*e*P	**Pn**	**00 57 54.2**	**+1.5**
JAK	**Akkeshi**	**1.13**	**60**	*e*P	**Pn**	**00 57 53.3**	**0.0**
JAK				*e*S	**Sn**	**00 58 08.4**	**+0.2**
AKK	**Akkeshi**	**1.24**	**62**	*e*P	**Pn**	**00 57 54.5**	**-0.2**
JAB	**Ashibetsu**	**1.35**	**322**	⇓*e*P	**Pn**	**00 57 56.0**	**-0.2**
JEW	**Eniwo**	**1.46**	**286**	*e*P	**Pn**	**00 57 58.4**	**+0.7**
JEW				*e*S	**Sn**	**00 58 17.0**	**+1.0**
JKK2	**Kamakawa 2**	**1.50**	**343**	*e*P	**Pn**	**00 57 57.9**	**-0.3**
JKA	**Kamikawa-asahi**	**1.76**	**342**	*e*P	**Pn**	**00 58 02.0**	**+0.3**
ASAJ	**Asahikawa**	**1.76**	**342**	P	**Pn**	**00 58 02.0**	**+0.3**
	20nm,0.3s,baz=204,slow=17,SNR=34						
ASAJ				S	**Sn**	**00 58 20.9**	**-2.3**
	76nm,0.4s,baz=112,slow=27,SNR=7.3						
NMR	**Nemuro--Hokkai**	**1.97**	**61**	⇑*i*PN	**Pn**	**00 58 03.6**	**-1.0**
NMR				*i* S	**Sn**	**00 58 26.8**	**-1.5**
NMR	**Nemuro--Hokkai**	**1.97**	**61**	*i* P	**Pn**	**00 58 03.8**	**-0.8**
NMR				*i* S	**Sn**	**00 58 26.9**	**-1.4**
RUSJ	**Misakicho**	**2.16**	**39**	*e*PN	**Pn**	**00 58 07.9**	**+0.8**
RUSJ				*e*S	**Sn**	**00 58 36.5**	**+3.7**
YUK	**Yuzh-Kuril'sk**	**2.42**	**48**	*c i*PN	**Pn**	**00 58 12.2**	**+1.5**
YUK				*i* S	**Sn**	**00 58 39.6**	**+0.4**
YUK				pmax	pmax		
	comp=Z,241nm,0.3s						
YUK				pmax	pmax		
	comp=N,65nm,0.1s						
YUK				smax	smax		
	comp=N,393nm,0.6s						
YUK				smax	smax		
	comp=E,735nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**2.42**	**48**	*e*P	**Pn**	**00 58 10.8**	**+0.1**
YUK				AMB	AMB	00 58 14.9	
	comp=E,240nm,0.2s						
YUK				*e*S	**Sn**	**00 58 39.6**	**+0.4**
YUK				A	A	00 58 43.9	
	comp=E,390nm,0.4s						
YUK				A	A	00 58 43.9	
	comp=E,740nm,0.4s						
SHO	**Shikotan**	**2.91**	**60**	*e*P	**Pn**	**00 58 17.2**	**-0.1**
SHO				AMB	AMB	00 58 19.1	
	comp=E,80nm,0.2s						
SHO				*i* S	**Sn**	**00 58 49.8**	**-1.4**
SHO				A	A	00 58 53.2	
	comp=E,350nm,0.3s						
SHO				A	A	00 58 53.2	
	comp=E,360nm,0.3s						
KUR	**Kuril'sk**	**4.29**	**48**	*e*PN	**Pn**	**00 58 38.7**	**+2.5**
KUR				*e*S	**Sn**	**00 59 28.0**	**+3.1**
KUR				pmax	pmax		
	comp=Z,35nm,0.5s						
KUR				smax	smax		
	comp=N,98nm,0.6s						
KUR				smax	smax		
	comp=E,69nm,0.3s						
KUR	**Kuril'sk**	**4.29**	**48**	*e*P	**Pn**	**00 58 37.2**	**+1.0**
KUR				AMB	AMB	00 58 46.9	
	comp=E,40nm,0.4s						
KUR				*e*S	**Sn**	**00 59 24.8**	**-0.1**
KUR				A	A	00 59 41.9	
	comp=E,100nm,0.4s						
KUR				A	A	00 59 41.9	
	comp=E,70nm,0.4s						
MJAR	**Matsushiro Arr**	**7.11**	**216**	P	**Pn**	**00 59 16.9**	**+2.1**
	comp=E,0.6nm,0.4s,baz=29,slow=13,SNR=3.1						
MJAR				S	**Sn**	**01 00 35.7**	**+1.5**
	comp=E,0.7nm,0.3s,baz=348,slow=4.0,SNR=1.7						
PETK	**Petropavlovsk-**	**14.35**	**37**	P	**Pn**	**01 00 54.4**	**+1.4**
	comp=E,1.8nm,0.7s,baz=224,slow=10.0,SNR=4.0						
MKAR	**Makanchi Array**	**42.73**	**298**	P	**P**	**01 05 23.3**	**-0.7**
	comp=E,0.2nm,0.4s,baz=84,slow=7.6,SNR=7.4						
	comp=E,0.2nm,0.4s						
ILAR	**Eielson Array**	**44.17**	**35**	P	**P**	**01 05 35.5**	**+0.1**
	comp=E,0.3nm,0.9s,baz=265,slow=5.9,SNR=4.2						
	comp=E,0.3nm,0.9s						
BVAR	**Borovoye Array**	**48.18**	**309**	P	**P**	**01 06 05.2**	**-1.8**
	comp=E,0.6nm,0.3s,baz=75,slow=9.2,SNR=7.8						
	comp=E,0.6nm,0.3s						
YKA	**Yellowknife Ar**	**58.41**	**32**	P	**P**	**01 07 23.6**	**+1.8**
	comp=E,0.1nm,0.4s,baz=304,slow=6.8,SNR=2.6						
	comp=E,0.1nm,0.4s						
FINES	**FINESS Array B**	**64.74**	**332**	P	**P**	**01 08 03.1**	**-1.3**
	comp=E,2.2nm,0.9s,baz=54,slow=7.2,SNR=8.6						
	comp=E,2.2nm,0.9s						

IDC ***05*** *00:57:44.9±0.7, 64°.97S×177°.96E, h0^{km}, mb4.2/8, mbtmp4.3/9, ML4.9/1, MS4.3/18, Error ellipse: s-maj=44.3km s-min=18.0km az=42.0*

NEIC ***05*** *00:57:46.4±1.1, 65°.0S±0°.1×177°.7E±0°.3, h10^{km}±1^{km}, mb4.8/13, Error ellipse: s-maj=28.1km s-min=19.0km az=45.0*

GCMT ***05*** *00:57:48.4±0.3, 64°.92S±0°.02×177°.82E±0°.04, h18^{km}±2^{km}, MW5.1/91, Moment Tensor Solution. s22,c27; s91,c123; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.56±.24; M$_{\theta\theta}$4.58±.20; M$_{\phi\phi}$-4.02±.18; M$_{r\theta}$-4.74±.78; M$_{\theta\phi}$0.40±.15; M$_{\phi r}$1.44±.52; Best double couple: M$_0$6.29900×10^{16} NP1:φ$_s$125.00000°, δ89.00000°, λ-49.00000°. NP2: φ$_s$217.00000°, δ41.00000°, λ-178.00000°. Principal axes: T 7.4160, Plg31.0000°, Azm182.0000°; N -2.2330, Plg41.0000°, Azm304.0000°; P -5.1830, Plg33.0000°, Azm69.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 00:57:46.4±0.6**, 65°.08S**±0°.08×**177°.7E**±0°.1**, h10**^{km}**, n60, σ0^{s}.87**/38**, mb4.6**/13**, MS4.2**/18**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBA	**Scott Base**	**13.25**	**190**		**Pn**	**01 00 55.0**	**+0.8**
VNDA	**Vanda**	**13.40**	**195**	Pn	**Pn**	**01 00 57.2**	**+1.0**
	5.8nm,0.3s,baz=41,slow=18,SNR=131						
VNDA				Sn	**Sn**	**01 03 22.9**	**-2.0**
	0.3nm,0.3s,baz=65,slow=12,SNR=1.8						
	22nm,0.4s						
VNDA	**Vanda**	**13.40**	**195**		**Pn**	**01 00 56.8**	**+0.6**
RPZ	**Rata Peaks**	**21.72**	**347**	LR	LR	01 09 37.2	
	comp=Z,923nm,18.1s,baz=164,slow=33						
QSPA	**South Pole Qui**	**25.01**	**180**	P	**P**	**01 03 11.6**	**+1.4**
URZ	**Urewera**	**26.86**	**359**	LR	LR	01 13 33.2	
	comp=Z,648nm,18.1s,baz=254,slow=35						
RAO	**Raoul Island**	**35.95**	**7**	LR	LR	01 18 46.6	
	comp=Z,220nm,18.9s,baz=146,slow=35						
MAW	**Mawson**	**39.77**	**213**	LR	LR	01 21 44.2	
	comp=Z,1µm,18.1s,baz=132,slow=36						
STKA	**Stephens Creek**	**39.87**	**309**	P	**P**	**01 05 21.4**	**+1.5**
	1.2nm,0.3s,baz=153,slow=12,SNR=4.4						
STKA				LR	LR	01 19 45.7	
	comp=Z,230nm,18.2s,baz=301,slow=33						
	1.2nm,0.3s						
EIDS	**Eidsvold**	**43.21**	**324**	P	**P**	**01 05 47.9**	**+0.5**
DZM	**Mont Dzumac**	**43.62**	**345**	LR	LR	01 20 57.4	
	comp=Z,224nm,21.7s,baz=206,slow=32						
RAR	**Rarotonga**	**46.30**	**30**	LR	LR	01 20 14.8	
	comp=Z,284nm,21.8s,baz=205,slow=29						
MSVF	**Nonsavu**	**47.31**	**1**	LR	LR	01 24 08.2	
	comp=Z,249nm,18.0s,baz=155,slow=34						
H01W1	**Cape Leeuwin H**	**47.84**	**277**	T	T	01 58 17.5	
	baz=148,slow=76,SNR=37						
H01W2	**Cape Leeuwin H**	**47.84**	**277**	T	T	01 58 17.1	
	baz=148,slow=76,SNR=50						
H01W3	**Cape Leeuwin H**	**47.85**	**277**	T	T	01 58 21.6	
	baz=148,slow=76,SNR=47						
CTA	**Charters Tower**	**49.52**	**320**	P	**P**	**01 06 36.2**	**-0.8**
	5.0nm,1.0s,baz=146,slow=6.3,SNR=6.6						
	5.0nm,1.0s						
CTAO	**Charters Tower**	**49.52**	**320**	P	**P**	**01 06 36.3**	**-0.6**
CTAO				IAmb	IAmb	01 06 38.3	
	comp=Z,11nm,1.1s						
ASAR	**Alice Springs**	**50.04**	**304**	P	**P**	**01 06 41.3**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=159,slow=7.9,SNR=10.0						
ASAR				LR	LR	01 25 50.2	
	comp=Z,173nm,18.8s,baz=130,slow=34						
	comp=Z,1.5nm,0.7s						
ASAR	**Alice Springs**	**50.04**	**304**	P	**P**	**01 06 40.5**	**-0.5**
AFI	**Afiamalu**	**51.62**	**13**	LR	LR	01 23 38.7	
	comp=Z,141nm,21.8s,baz=182,slow=30						
MG05	**Puerto Natales**	**51.74**	**132**	P	**P**	**01 06 53.9**	**+0.6**
MG05				IAmb	IAmb	01 07 07.7	
	comp=Z,16nm,1.1s						
PPT	**Papeete**	**52.30**	**41**	LR	LR	01 25 40.4	
	comp=Z,126nm,19.3s,baz=196,slow=32						
WB2	**Warramunga Arr**	**53.33**	**306**	P	**P**	**01 07 04.7**	**-0.8**
WB2				IAmb	IAmb	01 07 23.0	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**53.33**	**306**	P	**P**	**01 07 04.4**	**-1.1**
	comp=Z,2.0nm,1.1s,baz=144,slow=7.5,SNR=5.2						
WRA				LR	LR	01 27 50.6	
	comp=Z,401nm,19.1s,baz=156,slow=34						
	comp=Z,2.0nm,1.1s						
WB0	**Warramunga Arr**	**53.48**	**307**	P	**P**	**01 07 05.4**	**-1.2**
EFI	**East Falkland**	**55.94**	**142**	P	**P**	**01 07 25.7**	**+1.7**
COEN	**Coen**	**56.20**	**319**	P	**P**	**01 07 25.8**	**-0.5**
HNR	**Honiara**	**56.92**	**339**	LR	LR	01 27 57.6	
	comp=Z,3µm,20.8s,baz=308,slow=32						
RPN	**Rapa Nui**	**58.59**	**87**	LR	LR	01 27 14.0	
	comp=Z,244nm,20.2s,baz=233,slow=30						
PLCA	**Paso Flores**	**62.02**	**127**	P	**P**	**01 08 06.0**	**-0.5**
	comp=Z,3.6nm,0.9s,baz=219,slow=7.0,SNR=8.0						
	comp=Z,3.6nm,0.9s						
PLCA	**Paso Flores**	**62.02**	**127**	P	**P**	**01 08 06.0**	**-0.5**
H03S2	**Juan Fernandez**	**65.16**	**117**	T	T	02 19 43.9	
	baz=204,slow=74,SNR=12						
H03S1	**Juan Fernandez**	**65.16**	**117**	T	T	02 19 48.0	
	baz=204,slow=74,SNR=12						
H03S3	**Juan Fernandez**	**65.17**	**117**	T	T	02 19 47.5	
	baz=204,slow=74,SNR=30						
TRQA	**Tornquist**	**67.24**	**132**	P	**P**	**01 08 39.5**	**-1.1**
TRQA				IAmb	IAmb	01 08 42.6	
	comp=Z,6.0nm,1.0s						
KAPI	**Kappang**	**72.36**	**298**	LR	LR	01 37 11.6	
	comp=Z,101nm,21.6s,baz=173,slow=33						
AC02	**Maricunga**	**75.08**	**122**	P	**P**	**01 09 28.5**	**-0.3**
AC02				IAmb	IAmb	01 09 30.0	
	comp=Z,8.9nm,1.1s						
LVC	**Limon Verde**	**79.02**	**120**	P	**P**	**01 09 51.0**	**+0.2**
LVC				IAmb	IAmb	01 09 54.1	
	comp=Z,12nm,1.0s						
CPUP	**Villa Florida**	**79.55**	**132**	P	**P**	**01 09 52.8**	**-0.4**
	comp=Z,3.0nm,0.8s,baz=227,slow=3.9,SNR=7.6						
	comp=Z,3.0nm,0.8s						
SUR	**Sutherland**	**81.19**	**200**	LR	LR	01 43 48.3	
	comp=Z,338nm,19.0s,baz=170,slow=34						
BOSA	**Boshof**	**84.18**	**204**	P	**P**	**01 10 18.6**	**+0.9**
	comp=Z,2.6nm,1.1s,baz=180,slow=8.1,SNR=1.9						
BOSA				LR	LR	01 45 12.9	
	comp=Z,184nm,19.6s,baz=150,slow=34						
	comp=Z,2.6nm,1.1s						
LPAZ	**La Paz**	**85.09**	**118**	P	**P**	**01 10 23.6**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=172,slow=5.8,SNR=6.8						
	comp=Z,1.6nm,0.7s						
LPAZ	**La Paz**	**85.09**	**118**	P	**P**	**01 10 22.7**	**-0.3**
LPAZ				IAmb	IAmb	01 10 48.5	
	comp=Z,9.0nm,1.2s						
LBTB	**Lobatse**	**87.63**	**205**	LR	LR	01 47 14.0	
	comp=Z,232nm,19.4s,baz=91,slow=34						
H08S2	**Diego Garcia H**	**89.43**	**253**	T	T	02 50 39.2	
	baz=155,slow=76,SNR=8.4						
H08S1	**Diego Carcia H**	**89.44**	**253**	T	T	02 50 42.3	
	baz=155,slow=76,SNR=11						
H08S3	**Diego Garcia H**	**89.45**	**253**	T	T	02 50 31.5	
	baz=155,slow=76,SNR=10						
TORD	**Torodi Ar. Bea**	**128.06**	**185**	PKP	**PKiKP**	**01 16 52.7**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=160,slow=1.5,SNR=4.7						
ILAR	**Eielson Array**	**132.10**	**20**	PKP	**PKiKP**	**01 16 58.9**	**-0.5**
	comp=Z,0.1nm,0.6s,baz=235,slow=3.2,SNR=2.7						
ABKAR	**Akbulak array**	**144.43**	**274**		**PKPdf**	**01 17 20.7**	**-0.8**
ABKAR	**Akbulak array**	**144.43**	**274**		**PKPdf**	**01 17 20.9**	**-0.6**
BNN	**Bunyan**	**145.68**	**239**		**PKPbc**	**01 17 24.5**	**0.0**
IDI	**Anoyia**	**146.01**	**222**		**PKPbc**	**01 17 25.5**	**-0.1**
KBZ	**Khabaz**	**147.16**	**252**	PKPbc	**PKPab**	**01 17 29.8**	**-0.4**
	comp=Z,4.8nm,1.1s,baz=203,slow=2.9,SNR=5.9						
BR131	**Keskin Array S**	**147.25**	**237**		**PKPbc**	**01 17 28.5**	**-0.6**
BRTR	**Keskin Array B**	**147.25**	**237**	PKPbc	**PKPbc**	**01 17 29.5**	**+0.3**
	comp=Z,3.6nm,0.9s,baz=164,slow=6.2,SNR=15						
BRTR	**Keskin Array B**	**147.25**	**237**		**PKPbc**	**01 17 28.6**	**-0.6**
AGG	**Agios Georgios**	**150.22**	**221**		**PKPbc**	**01 17 36.8**	**+0.1**
ESDC	**Sonseca Array**	**154.54**	**177**	PKPbc	**PKPbc**	**01 17 44.7**	**-1.7**
	comp=Z,0.8nm,1.0s,baz=230,slow=0.1,SNR=4.0						

MOS ***05*** *01:18:51.9±1.1, 35°.68N×140°.83E, h39^{km}, mb5.1/54, Error ellipse: s-maj=6.6km s-min=4.1km az=113.8*

BJI ***05*** *01:18:53.4±0.0, 35°.72N×140°.74E, h63^{km}, mb4.8/67, mB5.0/36, Ms4.4/44, Ms7 4.2/43*

JMA ***05*** *01:18:54.6±0.2, 35°.7N±0°.6×140°.7E±0°.8, h52^{km}±1^{km}, MD4.7/39, MW4.8/39, NEAR CHOSHI CITY*

JMA Felt III J1 at NEAR CHOSHI CITY .

NIED ***05*** *01:18:54.6, 35°.74N×140°.72E, h52^{km}, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.34; M$_{\theta\theta}$0.40; M$_{\phi\phi}$-1.74; M$_{r\theta}$0.35; M$_{\theta\phi}$0.06; M$_{\phi r}$1.55; Fault plane solution: M$_0$2.22000×10^{16} NP1:φ$_s$10.00000°, δ69.00000°, λ101.00000°. NP2:φ$_s$162.00000°, δ24.00000°, λ64.00000°.*

NEIC ***05*** *01:18:54.5±1.4, 35°.66N±0°.05×140°.87E±0°.09, h44^{km}±5^{km}, mb4.9/111, Mwr4.8/17 Error ellipse: s-maj=10.3km s-min=7.1km az=110.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.33; M$_{\theta\theta}$-0.18; M$_{\phi\phi}$-1.15; M$_{r\theta}$-0.09; M$_{\theta\phi}$0.07; M$_{\phi r}$1.65; Fault plane solution: M$_0$2.07000×10^{16} NP1:φ$_s$175.69000°, δ18.52000°, λ89.02000°. NP2:φ$_s$356.72000°, δ71.48000°, λ90.33000°. Principal axes: T 2.1496, Plg64.0000°, Azm267.0000°; N -0.1713, Plg0.0000°, Azm177.0000°; P -1.9783, Plg26.0000°, Azm86.0000°;*

NEIC ***05*** *01:18:54.5, 35°.66N×140°.87E, h44^{km}*

IDC ***05*** *01:18:57.4±1.2, 35°.61N×140°.67E, h68^{km}±11^{km}, mb4.3/30, mbtmp4.6/38, MS4.0/37, Error ellipse: s-maj=11.3km s-min=6.8km az=73.0*

GCMT ***05*** *01:18:59.3±0.5, 35°.59N±0°.03×140°.78E±0°.04, h46^{km}±1^{km}, MW5.0/62, Moment Tensor Solution. s27,c30; s62,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.94±.24; M$_{\theta\theta}$0.14±.16; M$_{\phi\phi}$-3.08±.14; M$_{r\theta}$0.11±.12; M$_{\theta\phi}$-0.55±.10; M$_{\phi r}$1.33±.09; Best double couple: M$_0$3.33400×10^{16} NP1:φ$_s$7.00000°, δ57.00000°, λ88.00000°. NP2: φ$_s$192.00000°, δ33.00000°, λ94.00000°. Principal axes: T 3.2210, Plg78.0000°, Azm269.0000°; N 0.2250, Plg2.0000°, Azm9.0000°; P -3.4480, Plg12.0000°, Azm99.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 01:18:54.3±0.3**, 35°.70N**±0°.03×**140°.79E**±0°.04**, h46**^{km}±2^{km}**, h46^{km}:pP-P, n716, σ1^{s}.48**/677**, mb4.8**/151**, MS4.1**/50**, 20C-28D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.06**	**87**	*i* P	**Pn**	**01 19 02.6**	**+1.1**
CHOJ				S	**Sn**	**01 19 08.9**	**+2.4**
CHOJ	**Chosi**	**0.06**	**87**	A	A	01 19 02.6	
	comp=E,200nm,1.6s,comp=E,130nm,1.6s						
JSMT	**Sammumatsuo**	**0.28**	**258**	⇓*i*P	**Pn**	**01 19 03.8**	**+0.9**
JSMT				⇓S	**Sn**	**01 19 11.0**	**+2.1**
JSMT	**Sammumatsuo**	**0.28**	**258**	A	A	01 19 03.8	
	comp=E,844nm,1.0s,comp=E,385nm,1.0s						
JIHU	**Itakohorinouch**	**0.34**	**321**	⇓*i*P	**Pn**	**01 19 04.3**	**+0.8**
JIHU				⇓S	**Sn**	**01 19 11.4**	**+1.5**
JIHU	**Itakohorinouch**	**0.34**	**321**	A	A	01 19 04.3	
	comp=E,431nm,3.7s,comp=E,178nm,2.7s						
JCN	**Nagara**	**0.56**	**240**	⇓*i*P	**Pn**	**01 19 07.1**	**+1.1**
JCN				⇓*e*S	**Sn**	**01 19 16.0**	**+1.6**
JCN	**Nagara**	**0.56**	**240**	A	A	01 19 07.1	
	comp=E,209nm,2.5s,comp=E,99nm,1.3s						
JHYU	**Hitachinakayam**	**0.66**	**346**	A	A	01 19 07.3	
	comp=E,142nm,0.6s,comp=E,73nm,0.4s						
JYT	**Yasato**	**0.71**	**318**	⇓*i*P	**Pn**	**01 19 07.8**	**-0.3**
JYT	**Yasato**	**0.71**	**318**	A	A	01 19 07.8	
	comp=E,74nm,0.4s,comp=E,58nm,0.7s						
JKUC	**kamogawauchiur**	**0.72**	**222**	A	A	01 19 08.7	
	comp=E,45nm,1.1s,comp=E,39nm,2.6s						
BSO4	**Boso 4**	**0.80**	**208**	*i* P	**Pn**	**01 19 10.2**	**+1.1**
TOK	**Tokyo**	**0.84**	**269**	A	A	01 19 09.6	
	comp=E,101nm,1.2s,comp=E,79nm,1.7s						
BSO3	**Boso 3**	**0.93**	**194**	*i* P	**Pn**	**01 19 11.9**	**+1.2**
JHO	**Hitachi**	**0.93**	**349**	⇓*i*P	**Pn**	**01 19 11.4**	**+0.4**
JHO	**Hitachi**	**0.93**	**349**	A	A	01 19 11.4	
	comp=E,44nm,0.9s,comp=E,30nm,1.6s						
TATJ	**Tateyama 2**	**0.99**	**228**	A	A	01 19 12.2	
	comp=E,55nm,2.1s,comp=E,63nm,3.9s						
JYO	**Yokosk**	**1.03**	**243**	A	A	01 19 12.6	
	comp=E,57nm,1.1s,comp=E,97nm,1.1s						
BSO1	**Boso 1**	**1.05**	**171**	P	**Pn**	**01 19 13.8**	**+1.7**
JHU	**Hanno**	**1.23**	**277**	A	A	01 19 15.1	
	comp=E,25nm,1.4s,comp=E,20nm,0.6s						
JSGW	**Sagamiharawaka**	**1.29**	**266**	A	A	01 19 15.9	
	comp=E,18nm,1.1s,comp=E,18nm,2.5s						
JAG	**Ashikaga**	**1.30**	**304**	*i* P	**Pn**	**01 19 15.5**	**-0.6**
JAG	**Ashikaga**	**1.30**	**304**	A	A	01 19 15.5	
	comp=E,29nm,0.6s,comp=E,17nm,1.9s						
ONAJ	**Iwakimizuishiy**	**1.40**	**0**	A	A	01 19 17.8	
	comp=E,21nm,0.3s,comp=E,9.0nm,0.7s						
JFFD	**Fukushimafurud**	**1.40**	**353**	A	A	01 19 17.6	
	comp=E,16nm,2.6s,comp=E,16nm,1.4s						
JSB	**Shiboa**	**1.45**	**331**	A	A	01 19 18.1	
	comp=E,30nm,3.3s,comp=E,39nm,2.6s						
JOD2	**Odawara 2**	**1.46**	**253**	A	A	01 19 18.4	
	comp=E,20nm,2.9s,comp=E,19nm,1.8s						
JIM2	**Oshima 3**	**1.48**	**229**	A	A	01 19 19.1	
	comp=E,30nm,1.3s,comp=E,33nm,1.1s						
JRY	**Ryogami san**	**1.56**	**282**	A	A	01 19 19.8	
	comp=E,12nm,7.0s,comp=E,15nm,1.7s						
JHTM	**Izuhatsuma**	**1.63**	**244**	A	A	01 19 21.1	
	comp=E,41nm,0.9s,comp=E,35nm,1.3s						
JKT	**Katashina**	**1.64**	**311**	A	A	01 19 20.8	
	comp=E,23nm,0.5s,comp=E,20nm,0.3s						
JFK	**Kawauchi**	**1.67**	**2**	A	A	01 19 21.6	
	comp=E,8.0nm,2.6s,comp=E,5.0nm,1.5s						
JTHY	**Toshimahigashi**	**1.70**	**227**	A	A	01 19 22.3	
	comp=E,20nm,3.2s,comp=E,18nm,2.6s						
JFNN	**Fujinakano**	**1.79**	**254**	A	A	01 19 23.2	
	comp=E,23nm,2.8s,comp=E,25nm,2.8s						
JNIO	**Niijimaoohara**	**1.83**	**223**	A	A	01 19 24.2	
	comp=E,21nm,1.7s,comp=E,16nm,3.0s						
JYN	**Shimob**	**1.84**	**264**	A	A	01 19 23.8	
	comp=E,12nm,2.7s,comp=E,18nm,2.9s						
JIZS	**Izushimoda**	**1.85**	**238**	A	A	01 19 24.2	
	comp=E,11nm,2.2s,comp=E,11nm,2.1s						
JSKK	**Shikinejimakit**	**1.88**	**224**	A	A	01 19 24.9	
	comp=E,14nm,1.2s,comp=E,9.0nm,1.8s						
JOTO	**OTAMA OYAMA**	**1.89**	**349**	A	A	01 19 24.6	
	comp=E,31nm,1.8s,comp=E,28nm,1.6s						
JFY	**Yanaizu**	**1.91**	**333**	A	A	01 19 24.8	
	comp=E,9.0nm,4.5s,comp=E,8.0nm,4.4s						
JMYK	**Miyake Tsubota**	**1.93**	**212**	A	A	01 19 25.8	
	comp=E,12nm,4.7s,comp=E,11nm,3.1s						
JGK	**Kuni**	**1.94**	**297**	A	A	01 19 25.1	
	comp=E,13nm,2.6s,comp=E,10.0nm,1.0s						
JMST	**Minamisoumatoc**	**2.02**	**2**	A	A	01 19 26.6	
	comp=E,9.0nm,0.5s,comp=E,6.0nm,1.5s						
JKO	**Kozu shima**	**2.03**	**222**	A	A	01 19 27.0	
	comp=E,20nm,5.3s,comp=E,14nm,1.9s						
JMKN	**Mikurajimanish**	**2.06**	**209**	A	A	01 19 27.6	
	comp=E,8.0nm,11.7s,comp=E,7.0nm,7.5s						
JMM	**Marumori**	**2.16**	**0**		**Pn**	**01 19 29.5**	**+1.7**
JMM	**Marumori**	**2.16**	**0**	P	**Pn**	**01 19 29.6**	**+1.7**
JMM	**Marumori**	**2.16**	**0**	A	A	01 19 28.6	
	comp=E,11nm,1.4s,comp=E,11nm,1.1s						
JNT	**Takato**	**2.16**	**275**	A	A	01 19 28.3	
	comp=E,7.0nm,1.3s,comp=E,8.0nm,6.4s						
SHZ3	**Shizuoka 3**	**2.20**	**254**	A	A	01 19 29.0	
	comp=E,17nm,1.4s,comp=E,25nm,1.1s						
MJAR	**Matsushiro Arr**	**2.25**	**293**	P	**Pn**	**01 19 29.7**	**+0.6**
	78nm,0.4s,baz=96,slow=14,SNR=502						
MJAR				S	**Sn**	**01 19 58.9**	**+3.2**
	298nm,0.6s,baz=119,slow=20,SNR=12						
MJAR				LR	LR	01 20 32.0	
	comp=Z,4µm,21.3s,baz=115,slow=43						
MAJO	**Matsushiro**	**2.25**	**293**		**Pn**	**01 19 30.2**	**+1.1**
MAJO	**Matsushiro**	**2.25**	**293**	P	**Pn**	**01 19 30.6**	**+1.5**
MAJO	**Matsushiro**	**2.25**	**293**	*d i*P	**Pn**	**01 19 30.3**	**+1.1**
MJB9	**Matsu-Tunnel**	**2.26**	**293**		**Pn**	**01 19 31.2**	**+2.0**
JYAR	**Yonezawaarcadi**	**2.27**	**347**	A	A	01 19 29.9	
	comp=E,21nm,1.1s,comp=E,15nm,1.2s						
JNG	**Nsakai**	**2.29**	**289**	A	A	01 19 30.0	
	comp=E,5.0nm,1.4s,comp=E,8.0nm,1.6s						
JSG	**Sagara**	**2.37**	**245**		**Pn**	**01 19 32.2**	**+1.6**
JSG	**Sagara**	**2.37**	**245**	P	**Pn**	**01 19 33.7**	**+3.1**
JSG	**Sagara**	**2.37**	**245**	A	A	01 19 31.5	
	comp=E,14nm,2.6s,comp=E,21nm,6.1s						
JNY	**Yasuok**	**2.41**	**263**	A	A	01 19 31.9	
	comp=E,6.0nm,1.8s,comp=E,10.0nm,4.5s						
JNS	**Sasagawa**	**2.42**	**331**	A	A	01 19 32.0	
	comp=E,7.0nm,6.2s,comp=E,5.0nm,1.8s						
JIZZ	**Izumozaki**	**2.48**	**318**	A	A	01 19 32.7	
	comp=E,27nm,2.5s,comp=E,24nm,3.8s						
JKKS	**Kakegawashinom**	**2.48**	**248**	A	A	01 19 33.1	
	comp=E,18nm,4.5s,comp=E,12nm,2.9s						
JJN	**Nakama**	**2.54**	**304**	A	A	01 19 33.6	
	comp=E,12nm,2.3s,comp=E,10.0nm,3.8s						
JYS	**Shirataka**	**2.58**	**347**	A	A	01 19 34.4	
	comp=E,25nm,2.0s,comp=E,17nm,2.0s						
HMMJ	**Hamamatsu 2**	**2.65**	**252**	A	A	01 19 35.4	
	comp=E,5.0nm,8.1s,comp=E,5.0nm,5.5s						
JOU	**Okura**	**2.66**	**358**	A	A	01 19 35.7	
	comp=E,14nm,1.6s,comp=E,14nm,2.1s						
JHJ2	**Mitsune**	**2.70**	**198**	Pn	**Pn**	**01 19 35.2**	**-0.1**
JHJ2	**Mitsune**	**2.70**	**198**	P	**Pn**	**01 19 36.0**	**+0.7**
JHJ	**Hachijo jima 2**	**2.71**	**198**	P	**Pn**	**01 19 35.5**	**+0.2**
	542nm,0.3s,baz=24,slow=2.8,SNR=26						
JHJ				S	**Sn**	**01 20 08.1**	**+1.3**
	1µm,0.3s,baz=73,slow=23,SNR=8.9						
JHJ				LR	LR	01 20 51.8	
	comp=Z,1µm,19.8s,baz=282,slow=44						
JGF	**Kuroka**	**2.80**	**269**		**Pn**	**01 19 38.2**	**+1.6**
JGF	**Kuroka**	**2.80**	**269**	P	**Pn**	**01 19 38.8**	**+2.2**
JOFO	**Osakifurukawao**	**2.90**	**2**	A	A	01 19 39.1	

	comp=E,35nm,1.8s,comp=E,30nm,1.6s						
JAO	Obara	2.91	262	A	A	01 19 39.1	
	comp=E,5.0nm,1.3s,comp=E,6.0nm,1.9s						
JTT	Ttatey	2.94	289	A	A	01 19 39.2	
	comp=E,8.0nm,2.2s,comp=E,9.0nm,2.0s						
JYA	Atsumi	3.01	344	A	A	01 19 40.5	
	comp=E,21nm,1.3s,comp=E,12nm,1.3s						
JSD	Sado	3.09	320	Pn	Pn	01 19 41.6	+1.0
JSD	Sado	3.09	320	P	Pn	01 19 41.8	+1.2
INU	Inuyama	3.10	265		Pn	01 19 41.6	+0.9
INU	Inuyama	3.10	265	P	Pn	01 19 41.6	+0.9
JYK	Kaneyama	3.23	354	A	A	01 19 43.7	
	comp=E,7.0nm,2.5s,comp=E,6.0nm,1.2s						
JICN	Ichinomiyachia	3.24	264	A	A	01 19 43.7	
	comp=E,12nm,2.4s,comp=E,12nm,2.0s						
JRG	Rokugo	3.69	358	A	A	01 19 50.2	
	comp=E,5.0nm,5.9s,comp=E,5.0nm,4.6s						
JYW	Yuwa	3.86	353	A	A	01 19 52.5	
	comp=E,11nm,3.9s,comp=E,11nm,2.5s						
JTM	Tenmabayashi	5.08	2	Pn	Pn	01 20 09.5	+1.6
JTM	Tenmabayashi	5.08	2	P	Pn	01 20 09.8	+1.9
JMN	Monobe	6.02	253	Pn	Pn	01 20 22.2	+1.4
JMN	Monobe	6.02	253	P	Pn	01 20 23.6	+2.7
JHS	Saijyo	6.31	266	Pn	Pn	01 20 27.1	+2.4
JHS	Saijyo	6.31	266	P	Pn	01 20 27.2	+2.4
ERM	Erimo	6.57	16	Pn	Pn	01 20 28.4	0.0
ERM	Erimo	6.57	16	P	Pn	01 20 29.1	+0.8
ERM	Erimo	6.57	16	*de*P	Pn	01 20 28.6	+0.3
JEM	Erimo	6.57	16	P	Pn	01 20 29.1	+0.8
ASAJ	Asahikawa	8.52	9	P	Pn	01 20 54.2	-0.8
	11nm,0.4s,baz=215,slow=11,SNR=18						
ASAJ				S	Sn	01 22 23.0	-6.7
	13nm,0.6s,baz=9.1,slow=30,SNR=1.1						
ASAJ				LR	LR	01 24 51.7	
	comp=Z,308nm,20.6s,baz=307,slow=41						
ASAJ	Asahikawa	8.52	9	P	Pn	01 20 53.5	-1.5
JKA	Kamikawa-asahi	8.52	9	Pn	Pn	01 20 53.5	-1.5
NMR	Nemuro--Hokkai	8.55	25	⇑*i*P	Pn	01 20 53.6	-1.9
JNU	Nakatsue	8.58	255	P	Pn	01 20 57.7	+1.7
	20nm,0.8s,baz=56,slow=11,SNR=14						
JNU				LR	LR	01 24 35.4	
	comp=Z,3µm,19.4s,baz=76,slow=40						
JNU	Nakatsue	8.58	255	Pn	Pn	01 20 55.8	-0.2
JNU	Nakatsue	8.58	255	P	Pn	01 20 57.8	+1.8
JCJ	Chichijima	8.66	172	P	Pn	01 20 57.5	+0.5
	76nm,0.3s,baz=351,slow=12,SNR=16						
JCJ				S	Sn	01 22 26.1	-7.2
	73nm,0.4s,baz=164,slow=23,SNR=1.5						
JCJ	Chichijima	8.66	172	Pn	Pn	01 20 54.7	-2.4
RUSJ	Misakicho	9.06	21	*e*P	Pn	01 21 01.4	-1.1
RUSJ				*e*S	Sn	01 22 37.9	-5.2
YUK	Yuzh-Kuril'sk	9.19	24	*e*P	Pn	01 21 03.1	-1.1
YUK				*i* S	Sn	01 22 39.3	-6.9
YUK				pmax	pmax		
	comp=Z,91nm,0.3s						
YUK				pmax	pmax		
	comp=E,27nm,0.2s						
JSU	Suzuyama	9.58	247	Pn	Pn	01 21 09.6	-0.1
KSRS	Korea Array	10.49	283	P	Pn	01 21 25.9	+3.9
	comp=E,20nm,1.0s,baz=100,slow=14,SNR=40						
KSRS				LR	LR	01 25 27.8	
	comp=E,1µm,20.1s,baz=95,slow=37						
KSAR	Wonju Array Be	10.52	283	Pn	Pn	01 21 23.2	+0.7
KSAR	Wonju Array Be	10.52	283	P	Pn	01 21 23.2	+0.7
KS19	Wonju Array Si	10.54	284		Pn	01 21 25.0	+2.2
USA0B	Ussuriysk Arra	10.84	324		Pn	01 21 28.3	+1.5
USA0B	Ussuriysk Arra	10.84	324	*de*P	Pn	01 21 29.3	+2.5
USRK	Ussuriysk Ar.	10.84	324	P	Pn	01 21 29.4	+2.6
	comp=E,17nm,1.0s,baz=135,slow=13,SNR=13						
USRK				LR	LR	01 25 09.9	
	comp=E,813nm,21.8s,baz=138,slow=34						
USRK	Ussuriysk Ar.	10.84	324		Pn	01 21 27.3	+0.5
TJN	Taejon	10.89	277	⇓*e*P	Pn	01 21 32.9	+5.4
KUR	Kuril'sk	10.94	27	*e*P	Pn	01 21 27.1	-1.0
KUR				*i* S	Sn	01 23 21.6	-7.3
KUR				pmax	pmax		
	comp=N,17nm,0.6s						
KUR				pmax	pmax		
	comp=Z,47nm,0.6s						
KUR				pmax	pmax		
	comp=E,24nm,0.3s						
KUR				smax	smax		
	comp=E,122nm,0.6s						
KUR				smax	smax		
	comp=N,106nm,0.4s						
YSS	Yuzh-Sakhalins	11.34	7		Pn	01 21 33.5	-0.1
YSS	Yuzh-Sakhalins	11.34	7	⇓*e*P	Pn	01 21 36.3	+2.7
YSS				pmax	pmax		
	comp=Z,70nm,1.7s						
MDJ	Mudanjiang	12.35	320	P	Pn	01 21 50.1	+2.8
MDJ				pP	P	01 21 57.7	-0.6
MDJ				sP		01 22 03.9	
MDJ				S	Sn	01 24 03.4	0.0
MDJ				SS	SnSn	01 24 17.2	+1.4
MDJ				pmax	pmax		
	comp=Z,14nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,290nm,7.5s						
MDJ				LR	LR		
	comp=Z,500nm,15.2s						
MDJ				LR	LR		
	comp=Z,310nm,12.8s						
MDJ				LR	LR		
	comp=Z,900nm,18.6s						
JMZ	Minamidaito 2	12.82	222	Pn	Pn	01 21 53.8	-0.2
JOW	Kunigami	13.87	234	P	Pn	01 22 09.6	+1.3
	comp=Z,6.2nm,0.5s,baz=338,slow=29,SNR=1.5						
JOW				LR	LR	01 27 14.2	
	comp=Z,568nm,21.5s,baz=340,slow=36						
BNX	BinXian	14.25	319	⇓P	Pn	01 22 12.6	-0.6
BNX				pmax	pmax		
	comp=Z,12nm,1.3s						
BNX				pmax	pmax		
	comp=Z,210nm,8.8s						
CN2	Changchun	14.29	309	*e*P	Pn	01 22 14.4	+0.6
CN2				*e*pP	P	01 22 24.3	+4.3
CN2				*e*S	Sn	01 24 50.9	0.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,300nm,5.0s						
CN2				LR	LR		
	comp=Z,500nm,13.0s						
CN2				LR	LR		
	comp=Z,600nm,13.0s						
CN2				LR	LR		
	comp=Z,600nm,14.0s						
SNY	Shenyang	14.75	300	⇑P	Pn	01 22 19.9	0.0
SNY				pmax	pmax		
	comp=Z,11nm,0.7s						
KLR	Kul'dur	15.06	337	P	Pn	01 22 24.9	+0.9
	comp=Z,2.4nm,0.5s,baz=166,slow=9.5,SNR=6.6						
KLR				LR	LR	01 27 54.6	
	comp=Z,401nm,20.5s,baz=158,slow=36						
TYV	Tymovskoe	15.22	5	*e*P	Pn	01 22 25.5	-0.5
TYV				pmax	pmax		
	comp=Z,300nm,4.0s						
TYV				pmax	pmax		
	comp=Z,34nm,0.8s						
DL2	Dalian	15.58	288	P	P	01 22 34.2	-0.1
DL2				S	Sn	01 25 25.7	+3.5
DL2				pmax	pmax		
	comp=Z,58nm,1.1s						
DL2				pmax	pmax		
	comp=Z,520nm,8.6s						
DL2				LR	LR		
	comp=Z,330nm,6.3s						
DL2				LR	LR		
	comp=Z,550nm,7.3s						
DL2				LR	LR		
	comp=Z,440nm,12.5s						
HEH	HeiHe	17.49	330	*e*P	Pn	01 22 51.6	-3.1
HEH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HEH				pmax	pmax		
	comp=Z,430nm,8.6s						
HEH				LR	LR		
	comp=Z,230nm,12.5s						
HEH				LR	LR		
	comp=Z,420nm,13.4s						
HEH				LR	LR		
	comp=Z,720nm,15.5s						
NJ2	Nanjing	18.57	265	*e*P	Pn	01 23 08.4	+0.4
NJ2				pP	pP	01 23 17.5	-0.7
NJ2				sP	sP	01 23 21.6	-2.4
NJ2				pmax	pmax		
	comp=Z,16nm,0.6s						
BJI	Beijing	19.89	290	P	P	01 23 20.8	-0.9
BJI				PP	PnPn	01 23 38.7	+0.1
BJI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BJI				LR	LR		
	comp=Z,150nm,21.6s						
BJI				LR	LR		
	comp=Z,160nm,20.9s						
BJI				LR	LR		
	comp=Z,240nm,20.4s						
BJT	Baijiatuau	19.89	290	P	P	01 23 21.6	-0.2
BJT	Baijiatuau	19.89	290	P	P	01 23 21.6	-0.2
BJT				pmax	pmax		
	comp=Z,18nm,0.9s						
ZEA	Zeya	20.38	336	*e*P	P	01 23 24.6	-2.3
ZEA				*e*		01 23 40.6	
ZEA				*e*		01 27 35.6	
ZEA				pmax	pmax		
	comp=E,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,300nm,16.0s						
XLT	XiLinHaoTe	20.62	301	⇓*i*P	P	01 23 27.5	-2.3
XLT				PP	PnPn	01 23 53.7	+5.0
XLT				S	S	01 27 07.5	-10
XLT				pmax	pmax		
	comp=Z,17nm,0.9s						
XLT				pmax	pmax		
	comp=Z,170nm,4.1s						
XLT				LR	LR		
	comp=Z,400nm,19.6s						
XLT				LR	LR		
	comp=Z,530nm,18.3s						
HNS	HongShan	21.00	282	⇑P	P	01 23 31.0	-2.9
HNS				*e*S	S	01 27 19.5	-5.7
HNS				pmax	pmax		
	comp=Z,28nm,1.1s						
HNS				LR	LR		
	comp=Z,470nm,15.9s						
HNS				LR	LR		
	comp=Z,430nm,18.3s						
PEA0B	Petropavlovsk-	21.09	29	*i* P	P	01 23 32.9	-1.8
PETK	Petropavlovsk-	21.09	29	P	P	01 23 37.4	+2.7
	comp=Z,15nm,1.0s,baz=203,slow=5.6,SNR=8.9						
PETK				LR	LR	01 33 02.0	
	comp=Z,186nm,18.5s,baz=227,slow=40						
	comp=Z,15nm,1.0s						
PETK	Petropavlovsk-	21.09	29	P	P	01 23 34.3	-0.4
TWG	Pinlang	21.41	239	P	P	01 23 38.1	-0.2
WHN	Wuhan	22.70	264	⇓*i*P	P	01 23 51.6	-0.5
WHN				pP	sP	01 24 07.5	-1.3
WHN				pmax	pmax		
	comp=Z,80nm,0.6s						
WHN				LR	LR		
	comp=Z,1µm,13.7s						
WHN				LR	LR		
	comp=Z,1µm,9.7s						
WHN				LR	LR		
	comp=Z,2µm,25.6s						
LYN	LuoYang	23.16	275	⇓*i*P	P	01 23 53.4	-3.4
LYN				pP	pP	01 24 07.8	-0.2
LYN				sP	sP	01 24 15.1	+1.4
LYN				pmax	pmax		
	comp=Z,32nm,0.9s						
LYN				LR	LR		
	comp=Z,430nm,17.1s						
LYN				LR	LR		
	comp=Z,360nm,17.2s						
LYN				LR	LR		
	comp=Z,480nm,20.8s						
HHC	Hu-ho-hao-te	23.45	291	*e*P	P	01 23 57.1	-2.6
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,410nm,5.7s						
MA2	Magadan	24.76	12	P	P	01 24 12.4	+1.1
	comp=Z,19nm,0.7s,baz=199,slow=6.5,SNR=9.9						
MA2				LR	LR	01 34 42.7	
	comp=Z,271nm,20.9s,baz=277,slow=38						
	comp=Z,19nm,0.7s						
MA2	Magadan	24.76	12	P	P	01 24 10.7	-0.6
MA2				IAmb	IAmb	01 24 14.6	
	comp=Z,22nm,0.8s						
MA2	Magadan	24.76	12	*ce*P	P	01 24 13.4	+2.0
MA2				pmax	pmax		
	comp=Z,20nm,0.7s						
XAN	Xi'an	26.14	276	⇑P	P	01 24 22.7	-1.5
XAN				pP	sP	01 24 42.5	+0.8
XAN				pmax	pmax		
	comp=Z,22nm,0.9s						
XAN				LR	LR		
	comp=Z,360nm,15.6s						
XAN				LR	LR		
	comp=Z,540nm,19.4s						
XAN				LR	LR		
	comp=Z,580nm,19.4s						
ENH	Enshi	26.74	267	P	P	01 24 28.2	-1.5
YAK	Yakutsk	27.27	349	P	P	01 24 34.9	+0.9
	comp=Z,15nm,0.6s,baz=228,slow=0.3,SNR=10						
YAK				LR	LR	01 34 19.9	
	comp=Z,261nm,21.8s,baz=230,slow=34						
	comp=Z,15nm,0.6s						
YAK	Yakutsk	27.27	349	P	P	01 24 34.0	0.0
YAK				IAmb	IAmb	01 24 40.0	
	comp=Z,34nm,0.7s						
YAK	Yakutsk	27.27	349	*e*P	P	01 24 34.4	+0.4
YAK				*e**PP	pP	01 24 44.9	-1.1
YAK				*e*		01 25 19.4	
YAK				*e*S	S	01 29 09.7	-0.1
YAK				pmax	pmax		
	comp=Z,41nm,0.9s						
YAK				pmax	pmax		
	comp=N,27nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,118nm,3.3s						
YAK				pmax	pmax		
	comp=N,184nm,3.5s						
YAK				smax	smax		
	comp=N,160nm,3.8s						
YAK				smax	smax		
	comp=E,116nm,3.3s						
ULN	Ulaanbaatar	27.71	306	P	P	01 24 38.7	+0.3
ULN	Ulaanbaatar	27.71	306	P	P	01 24 38.7	+0.3
ULN				pmax	pmax		
	comp=Z,12nm,0.9s						
ULN	Ulaanbaatar	27.71	306	P	P	01 24 38.9	+0.5
ULN				P	P	01 24 38.9	+0.5
H11N2	WAKE ISLAND Hy	27.94	118	T	T	01 53 53.8	
	baz=310,slow=75,SNR=46						
H11N1	WAKE ISLAND Hy	27.94	118	T	T	01 54 00.5	
	baz=310,slow=75,SNR=44						
H11N3	WAKE ISLAND Hy	27.95	118	T	T	01 53 57.2	
	baz=310,slow=75,SNR=36						
SONM	Songino Array	28.14	306	P	P	01 24 41.8	-0.4
	comp=Z,7.6nm,0.8s,baz=106,slow=8.6,SNR=33						
	comp=Z,7.6nm,0.8s						
SONM	Songino Array	28.14	306	P	P	01 24 41.5	-0.6
SONM	Songino Array	28.14	306	P	P	01 24 41.5	-0.6
SONM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SEY	Seymchan	28.19	11	P	P	01 24 44.0	+1.7
	comp=Z,6.9nm,0.9s,baz=222,slow=8.1,SNR=13						
	comp=Z,6.9nm,0.9s						
SEY	Seymchan	28.19	11	⇑*e*P	P	01 24 44.1	+1.9
SEY				pmax	pmax		
	comp=Z,16nm,1.0s						
BOD	Bodaibo	28.41	330	*e*P	P	01 24 44.4	+0.2
BOD				pmax	pmax		
	comp=Z,19nm,1.6s						
H11S3	WAKE ISLAND Hy	28.59	120	T	T	01 54 41.8	
	baz=312,slow=75,SNR=55						
H11S1	WAKE ISLAND Hy	28.60	120	T	T	01 54 43.1	
	baz=312,slow=75,SNR=86						
H11S2	WAKE ISLAND Hy	28.61	120	T	T	01 54 46.5	
	baz=312,slow=75,SNR=57						
SHEM	Shemya Is, Ala	28.97	44	LR	LR	01 34 44.3	
	comp=Z,194nm,19.0s,baz=260,slow=32						
LZH	Lanzhou	29.82	282	*e*P	P	01 24 56.8	-0.4
LZH				pmax	pmax		
	comp=Z,24nm,1.4s						
LZH				LR	LR		
	comp=Z,330nm,16.1s						
LZH				LR	LR		
	comp=Z,540nm,17.2s						
LZH				LR	LR		
	comp=Z,630nm,18.9s						
GYA	Guiyang	30.52	262	*e*P	P	01 25 00.4	-3.0
GYA				pP	sP	01 25 18.7	-2.3
GYA				sP	pP	01 25 21.9	+6.4
GYA				S	S	01 29 48.1	-14
GYA				pmax	pmax		
	comp=Z,43nm,1.1s						
GYA				pmax	pmax		
	comp=Z,82nm,3.5s						
GYA				LR	LR		
	comp=Z,340nm,22.5s						
GYA				LR	LR		
	comp=Z,330nm,14.1s						
GYA				LR	LR		
	comp=Z,310nm,28.4s						
ZAK	Zakamensk	30.72	310	*e*P	P	01 25 03.2	-1.8
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CD2	Chengdu	31.19	272	P	P	01 25 07.4	-1.8
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
CD2				LR	LR		
	comp=Z,390nm,13.5s						
CD2				LR	LR		
	comp=Z,340nm,10.4s						
CD2				LR	LR		
	comp=Z,820nm,16.2s						
DAV	Davao City (W)	31.73	210	LR	LR	01 36 32.7	
	comp=Z,153nm,20.9s,baz=28,slow=33						
QIZ	Qiongzhong	31.93	247	P	P	01 25 16.6	+0.8
QIZ				S	S	01 30 26.0	+2.1
QIZ				LR	LR		
	comp=Z,340nm,28.7s						
QIZ				LR	LR		
	comp=Z,270nm,21.5s						
QIZ				LR	LR		
	comp=Z,350nm,24.7s						
GTA	Gaotai	32.50	289	*e*P	P	01 25 20.8	+0.1
GTA				pP	pP	01 25 35.4	+2.5
GTA				pmax	pmax		
	comp=Z,7.0nm,1.4s						
GTA				LR	LR		
	comp=Z,170nm,18.3s						
GTA				LR	LR		
	comp=Z,250nm,19.9s						
GTA				LR	LR		
	comp=Z,420nm,17.5s						
KMI	Kunming	34.28	263	⇓P	P	01 25 35.8	-0.7
KMI				sP	sP	01 25 53.1	-1.0
KMI				pmax	pmax		
	comp=Z,15nm,1.4s						
KMI				LR	LR		
	comp=Z,230nm,10.7s						
KMI				LR	LR		
	comp=Z,260nm,11.1s						
KMI				LR	LR		
	comp=Z,390nm,19.3s						
PZH	PanZhiHua	34.48	266	P	P	01 25 36.9	-1.2
PZH				sP	sP	01 25 54.2	-1.5
PZH				pmax	pmax		
	comp=Z,30nm,0.8s						
PZH				pmax	pmax		
	comp=Z,140nm,6.3s						
PZH				LR	LR		
	comp=Z,630nm,21.2s						
PZH				LR	LR		
	comp=Z,1µm,20.6s						
PZH				LR	LR		
	comp=Z,2µm,21.6s						
BILL	Bilibino	35.45	16	P	P	01 25 47.0	+1.2
BILL				IAmb	IAmb	01 26 00.1	
	comp=Z,14nm,1.3s						
BILL	Bilibino	35.45	16	⇑*e*P	P	01 25 45.7	-0.1
BILL				*i*		01 27 09.5	
BILL				pmax	pmax		
	comp=Z,12nm,1.7s						
BILL				MLR	MLR		
	comp=Z,124nm,22.0s						
BILL	Bilibino	35.45	16	P	P	01 25 47.6	+1.8
BILL				pP	pP	01 25 59.0	+1.1
TIXI	Tiksi	36.55	354	P	P	01 25 55.4	+0.3
	comp=Z,4.8nm,0.7s,baz=90,slow=23,SNR=25						
TIXI				LR	LR	01 41 14.4	
	comp=Z,210nm,21.9s,baz=188,slow=36						
	comp=Z,4.8nm,0.7s						
TIXI	Tiksi	36.55	354	P	P	01 25 55.3	+0.2
TIXI	Tiksi	36.55	354	*ce*P	P	01 25 55.6	+0.5
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TIXI	Tiksi	36.55	354	P	P	01 25 55.6	+0.5
TIXI				sP	sP	01 26 12.0	-0.9
GOMU	GeErMu	36.95	285	P	P	01 25 59.8	+0.3
GOMU				PcP	PcP	01 28 21.9	+1.9
GOMU				pmax	pmax		
	comp=Z,9.0nm,1.0s						
RKPI	Ransiki, Papua	37.53	191	P	pP	01 26 15.6	-0.7
TNCH	TengChong	37.74	266	P	P	01 26 11.0	+5.0
TNCH				pmax	pmax		
	comp=Z,330nm,4.4s						
GTOI	Gorontalo	38.61	209	P	P	01 26 11.1	-2.0
	comp=Z,5.9nm,0.9s						
CHTO	Chiang Mai	40.48	257	P	P	01 26 28.3	-0.5
CHTO	Chiang Mai	40.48	257	P	P	01 26 28.3	-0.5
CMAR	Chiang Mai Arr	40.68	256	P	P	01 26 30.1	-0.4
	comp=Z,1.8nm,0.4s,baz=51,slow=8.0,SNR=7.7						
CMAR				PcP	PcP	01 28 33.4	+1.9
	comp=Z,0.8nm,0.3s,baz=29,slow=2.7,SNR=6.2						
CMAR				LR	LR	01 43 47.6	
	comp=Z,266nm,21.1s,baz=130,slow=37						
	comp=Z,1.8nm,0.4s						
CMAR	Chiang Mai Arr	40.68	256	P	P	01 26 29.5	-1.0
DGZ	Jazzator, Alta	40.78	307	*i* P	P	01 26 32.3	+1.2
DGZ				pmax	pmax		
	comp=Z,38nm,0.9s						
NLAI	Namlea	40.80	201	P	P	01 26 33.3	+1.9
	comp=Z,15nm,0.9s						
AAI	Ambon	40.92	199	P	P	01 26 33.2	+0.9
	comp=Z,57nm,0.6s						
WMQ	Urumqi	41.01	298	*e*P	P	01 26 33.2	+0.3
WMQ				pP	pP	01 26 46.7	+1.4
WMQ				sP	sP	01 26 53.4	+2.7
WMQ				pmax	pmax		
	comp=Z,28nm,2.1s						
WMQ				pmax	pmax		
	comp=Z,150nm,3.9s						
WMQ				LR	LR		
	comp=Z,310nm,17.3s						
WMQ				LR	LR		
	comp=Z,200nm,19.5s						
WMQ				LR	LR		
	comp=Z,160nm,20.5s						
LSA	Lhasa	41.84	276	P	P	01 26 41.2	+0.8
LSA				IAmb	IAmb	01 26 42.6	
	comp=Z,21nm,0.9s						
LSA	Lhasa	41.84	276	P	P	01 26 41.2	+0.8
LSA				pmax	pmax		
	comp=Z,21nm,0.9s						
TNA	Tin City	42.26	29	P	P	01 26 44.0	+1.2
TNA	Tin City	42.26	29	P	P	01 26 45.1	+2.3
	baz=251						
ZAA0	Zalesovo Array	42.45	313	P	P	01 26 44.5	0.0
ZAA0				IAmb	IAmb	01 26 45.8	
	comp=Z,22nm,1.0s						
ZALV	Zalesovo Beam	42.45	313	P	P	01 26 45.0	+0.5
	comp=Z,15nm,0.8s,baz=90,slow=6.7,SNR=66						
ZALV				PcP	PcP	01 28 36.9	+0.2
	comp=Z,1.5nm,0.4s,baz=99,slow=3.8,SNR=3.6						
ZALV				LR	LR	01 43 21.0	
	comp=Z,96nm,20.4s,baz=313,slow=34						
	comp=Z,15nm,0.8s						
ZSN	Zaisan	42.59	304	⇑*i*P	P	01 26 46.6	+0.8
	comp=Z,22nm,0.8s,baz=304						
ZSN				*i* S	S	01 33 06.0	+0.7
	baz=304						
ZSN	Zaisan	42.59	304	*c i*P	P	01 26 46.6	+0.8
ZSN				*i* S	S	01 33 05.9	+0.7
ZSN				pmax	pmax		
	comp=Z,22nm,0.8s						
SHL	Shillong	42.90	270	P	P	01 26 46.9	-1.9
ANM	Nome	43.00	31	P	P	01 26 49.1	+0.3

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ANM   Nome             43.00  31   P     P      01 26 49.1 +0.3
ANM                                pmax  pmax
      comp=Z,8.0nm,1.0s
ANM   Nome             43.00  31   P     P      01 26 51.0 +2.2
      baz=254
S12K  Black Hills      43.21  44   P     P      01 26 51.8 +1.1
      baz=267
NRIK  Noril'sk         44.27 336   P     P      01 26 59.6 +0.7
      comp=Z,11nm,0.9s,baz=113,slow=7.7,SNR=13
NRIK                               PcP   PcP    01 28 43.8 +1.2
      comp=Z,3.2nm,0.6s,baz=155,slow=6.0,SNR=3.6
NRIK                               LR    LR     01 46 21.0
      comp=Z,211nm,19.1s,baz=164,slow=37
      comp=Z,11nm,0.9s
NRIK  Noril'sk         44.27 336   P     P      01 26 59.8 +0.8
NRIK                               IAmb  IAmb   01 27 01.1
      comp=Z,18nm,1.1s
NRIK  Noril'sk         44.27 336c iP     P      01 26 59.1 +0.2
NRIK                               pmax  pmax
      comp=Z,20nm,1.1s
BRDH  Bariadhala       44.40 267   LR    LR     01 49 00.7
      comp=Z,309nm,19.5s,baz=96,slow=41
MK31  Makanchi Array   44.41 303   P     P      01 27 00.5  0.0
MK31                               IAmb  IAmb   01 27 01.9
      comp=Z,15nm,1.0s
MK31  Makanchi Array   44.41 303   P     P      01 27 00.5  0.0
MK31                               pmax  pmax
      comp=Z,15nm,1.0s
MKAR  Makanchi Array   44.41 303   P     P      01 27 00.9 +0.5
      comp=Z,12nm,0.7s,baz=89,slow=9.7,SNR=100
MKAR                               LR    LR     01 46 05.5
      comp=Z,207nm,18.3s,baz=82,slow=37
      comp=Z,12nm,0.7s
MAKZ  Makanchi         44.62 303   P     P      01 27 02.7 +0.6
MAKZ                               IAmb  IAmb   01 27 03.2
      comp=Z,12nm,0.8s
MAKZ  Makanchi         44.62 303   P     P      01 27 02.7 +0.6
MAKZ                               pmax  pmax
      comp=Z,12nm,0.8s
MAKZ  Makanchi         44.62 303   P     P      01 27 02.6 +0.5
MAKZ                               pP    pP     01 27 14.1 -0.6
RDOG  Red Dog Mine     44.92  26   P     P      01 27 06.9 +2.7
      baz=253
PMG   Port Moresby     45.26 171   LR    LR     01 45 41.3
      comp=Z,25nm,20.5s,baz=352,slow=36
N16K  Nishlik Lake     45.29  37   P     P      01 27 09.2 +2.0
      baz=265
SEM   Semipalatinsk    45.36 308  eP     P      01 27 08.2  0.0
      baz=308
SEM   Semipalatinsk    45.36 308  eP     P      01 27 08.2  0.0
TAPN  Taplejung        45.54 275  eP     P      01 27 10.6 +0.6
      comp=Z,12nm,0.4s
O16K  Kokwok River B   45.56  39   P     P      01 27 11.6 +2.3
      baz=266
O17K  Koliganek Bris   46.08  38   P     P      01 27 16.0 +2.7
      baz=267
Q16K  King Salmon      46.26  40   P     P      01 27 17.2 +2.4
      baz=269
KURK  Kurchatov        46.37 309   P     P      01 27 15.9 +0.1
KURK  Kurchatov        46.37 309   P     P      01 27 15.9 +0.1
KURK                               pmax  pmax
      comp=Z,62nm,1.1s
KURK  Kurchatov        46.37 309   P     P      01 27 16.1 +0.3
KURK  Kurchatov        46.37 309   P     P      01 27 16.0 +0.1
KURK                               sP    sP     01 27 31.7 -2.0
KURBB Kurchatov Arra   46.44 309   LR    LR     01 47 25.9
      comp=Z,297nm,19.5s,baz=266,slow=37
RAMN  Ramite           46.61 275  eP     P      01 27 17.8 -0.5
      comp=Z,52nm,0.7s
JIRN  Jiri             46.65 276  eP     P      01 27 19.0 +0.2
      comp=Z,74nm,0.9s
GUN   Gumba            46.80 277  eP     P      01 27 20.9 +1.0
      comp=Z,42nm,0.8s
TTA   Tatalina         46.80  34   P     P      01 27 21.0 +1.8
      baz=265
P18K  Big Mountain,    47.01  39   P     P      01 27 22.9 +2.1
      baz=269
SHLS  Shalkode         47.02 299  eP     P      01 27 19.1 -2.1
      baz=299
SHLS  Shalkode         47.02 299  eP     P      01 27 19.1 -2.1
L19K  White Mountain   47.29  35   P     P      01 27 24.2 +1.3
      baz=267
PKI   Pulchoki         47.31 276  eP     P      01 27 24.7 +0.8
      comp=Z,18nm,0.7s
PKIN  Phulchoki        47.32 276  eP     P      01 27 24.5 +0.6
      comp=Z,17nm,0.5s
UZB   Uzynbulak        47.34 299  eP     P      01 27 24.1 +0.3
      baz=299
UZB   Uzynbulak        47.34 299  eP     P      01 27 24.0 +0.3
KPKS  Kokpek           47.51 299  eP     P      01 27 25.2 +0.2
      baz=299
KPKS  Kokpek           47.51 299  eP     P      01 27 25.2 +0.2
WUS   Wushi            47.65 296   P     P      01 27 27.1 +0.9
WUS                                sP    sP     01 27 42.8 -1.4
K20K  Telida           47.72  34   P     P      01 27 27.9 +1.7
      baz=266
L20K  Farewell, AK     47.76  35   P     P      01 27 27.8 +1.2
      baz=268
GKN   Gorkha           47.76 277  eP     P      01 27 27.0 -0.2
      comp=Z,48nm,0.7s
SATY  Saty             47.80 299  eP     P      01 27 27.8 +0.5
      baz=299
SATY  Saty             47.80 299  eP     P      01 27 27.7 +0.5
Q19K  Cape Douglas,    47.83  40   P     P      01 27 28.2 +1.0
      baz=271
A21K  Barrow           47.88  23   P     P      01 27 29.5 +2.2
      baz=257,SNR=8.2
M20K  Styx River       48.09  36   P     P      01 27 30.8 +1.6
      baz=269
G21K  Allakaket        48.20  29   P     P      01 27 32.5 +2.6
      baz=264
F21K  Alatna River     48.29  28   P     P      01 27 32.0 +1.4
      baz=264
DANN  Dangsing         48.33 278  eP     P      01 27 31.9 +0.2
      comp=Z,134nm,0.8s
HNR   Honiara          48.39 154   LR    LR     01 46 34.7
      comp=Z,819nm,21.9s,baz=342,slow=34
H21K  Melozitna Rive   48.41  31   P     P      01 27 33.4 +1.8
      baz=266
KDAK  Kodiak Island    48.43  41   P     P      01 27 32.9 +1.2
      comp=Z,14nm,1.0s,baz=222,slow=11,SNR=7.8
      comp=Z,14nm,1.0s
Q20K  Shuyak Island    48.49  40   P     P      01 27 33.3 +1.2
      baz=272
CHUM  Lake Minchumin   48.52  33   P     P      01 27 33.9 +1.6
      baz=268
CAST  Castle Rocks     48.61  34   P     P      01 27 34.0 +0.9
      baz=268
CHKK  Chushkaly        48.62 300  eP     P      01 27 33.8 +0.3
      baz=300
CHKK  Chushkaly        48.62 300  eP     P      01 27 33.7 +0.3
KOLN  Koldanda         48.69 278  eP     P      01 27 34.5  0.0
MDOK  Medeo            48.74 299  i P    P      01 27 35.4 +0.9
      baz=299
MDOK  Medeo            48.74 299  i P    P      01 27 35.3 +0.8
F22K  John River       48.82  28   P     P      01 27 36.0 +1.4
      baz=265,SNR=10
AAA   Alma-Ata         48.82 299  eP     P      01 27 34.6 -0.5
      baz=299
AAA   Alma-Ata         48.82 299  eP     P      01 27 34.6 -0.5
TNSS  Tian-Shan        48.84 299  eP     P      01 27 36.6 +0.9
      baz=299
TNSS  Tian-Shan        48.84 299  eP     P      01 27 36.5 +0.9
H22K  Ishtalitna Cre   49.02  30   P     P      01 27 37.2 +1.0
      baz=267
G22K  Bettles          49.03  29   P     P      01 27 37.9 +1.7
      baz=266
PYUN  Piuthan          49.05 278  eP     P      01 27 37.3 +0.1
      comp=Z,112nm,0.9s
KUU   Kurty            49.07 300⇑iP     P      01 27 37.0 +0.1
      comp=Z,20nm,1.1s,baz=300
KUU   Kurty            49.07 300c iP     P      01 27 36.9 +0.1
KUU                                pmax  pmax
      comp=Z,20nm,1.1s
MLY   Manley           49.25  31   P     P      01 27 38.8 +0.8
      baz=268,SNR=5.9
PLAI  Plampang         49.32 211   P     P      01 27 36.3 -2.7
COEN  Coen             49.44 177   P     P      01 27 40.2 +0.4
COEN                               IAmb  IAmb   01 27 58.4
      comp=Z,9.3nm,0.8s
D23K  Nanushuk River   49.51  26   P     P      01 27 40.7 +0.9
      baz=265
COLD  Coldfoot         49.56  29   P     P      01 27 41.8 +1.5
      baz=267
G23K  Bananza Creek    49.61  29   P     P      01 27 41.8 +1.1
      baz=267
TWSI  Taliwang, Sumb   49.62 212   P     P      01 27 40.1 -1.1
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      comp=Z,18nm,1.0s
H23K  Yukon River      49.77  30   IAmb  IAmb   01 27 46.3
      comp=Z,7.9nm,0.8s
H23K  Yukon River      49.77  30   P     P      01 27 42.3 +0.4
      baz=268
TKM2  Tokmak 2         49.83 299   P     P      01 27 44.2 +1.2
      SNR=18
E23K  Chandalar        49.83  27   P     P      01 27 43.5 +1.1
      baz=267,SNR=9.0
I23K  Minto, Yukon-K   49.83  31   P     P      01 27 42.9 +0.6
      baz=269
TOLK  Toolik Lake Re   49.89  27   P     P      01 27 43.7 +0.9
      baz=266
SEW   Seward           49.92  38   P     P      01 27 43.3 +0.3
      baz=273
NEA2  Nenana           49.95  32   IAmb  IAmb   01 27 47.6
      comp=Z,12nm,1.0s
NEA2  Nenana           49.95  32   P     P      01 27 43.6 +0.3
      baz=270,SNR=5.8
PMR   Palmer           50.00  36   P     P      01 27 44.2 +0.6
      baz=272
MCK   McKinley         50.02  33   P     P      01 27 43.9 +0.1
      baz=271
BRZS  Berezniki        50.24 309  eP     P      01 27 45.7 -0.1
      baz=309
BRZS  Berezniki        50.24 309  eP     P      01 27 45.6 -0.1
E24K  Your Creek       50.26  27   P     P      01 27 45.5 -0.2
      baz=268
C24K  Franklin Bluff   50.27  25   P     P      01 27 45.7 +0.1
      baz=266
MDM   Murphy Dome      50.31  32   IAmb  IAmb   01 27 50.2
      comp=Z,16nm,0.9s
KNK   Knik Glacier     50.33  36   P     P      01 27 46.3 +0.1
      baz=273
KBK   Karagaybulak     50.36 299   P     P      01 27 47.8 +0.9
      SNR=19
SML   Sawmill          50.37  36   P     P      01 27 47.2 +0.7
      baz=273
SGDS  Sogindy          50.38 300  eP     P      01 27 47.4 +0.4
      baz=300
SGDS  Sogindy          50.38 300  eP     P      01 27 47.3 +0.4
BTLS  Baital           50.39 302⇑iP     P      01 27 47.1 +0.2
      comp=Z,10nm,1.2s,baz=302
BTLS  Baital           50.39 302c iP     P      01 27 47.1 +0.2
BTLS                               pmax  pmax
      comp=Z,10.0nm,1.2s
PWL   Port Wells       50.42  37   P     P      01 27 46.9  0.0
      baz=274
H24K  Noodor Dome      50.45  30   IAmb  IAmb   01 28 02.2
      comp=Z,35nm,1.9s
H24K  Noodor Dome      50.45  30   P     P      01 27 47.9 +0.8
      baz=270
F24K  Squaw Lake       50.47  28   P     P      01 27 47.6 +0.4
      baz=269
COLA  College          50.48  32⇓iP     P      01 27 48.6 +1.4
COLA                               pmax  pmax
      comp=Z,32nm,3.5s
COLA  College          50.48  32   P     P      01 27 49.9 +2.7
COLA                               pP    pP     01 28 01.4 +1.5
KSH   Kashi            50.50 295   P     P      01 27 52.3 +4.4
KSH                                pP    sP     01 28 03.7 -2.3
KSH                                pmax  pmax
      comp=Z,7.0nm,0.9s
USP   Ospenovka        50.52 300   P     P      01 27 48.6 +0.6
      SNR=14
G24K  Hadweenzic Riv   50.62  29   P     P      01 27 49.5 +1.2
      baz=270
POKR  Poker Plat Res   50.65  31   IAmb  IAmb   01 27 53.0
      comp=Z,17nm,0.9s
POKR  Poker Plat Res   50.65  31   P     P      01 27 49.4 +0.8
      baz=271,SNR=5.5
AAK   Ala-Archa        50.69 299   P     P      01 27 50.0 +0.6
      SNR=7.1
AAK   Ala-Archa        50.69 299   LR    LR     01 50 36.6
      comp=Z,317nm,19.4s,baz=68,slow=38
AAK   Ala-Archa        50.69 299   P     P      01 27 49.3 -0.1
AAK                                IAmb  IAmb   01 28 06.3
      comp=Z,6.8nm,0.7s
AAK   Ala-Archa        50.69 299c iP     P      01 27 49.4  0.0
AAK                                pmax  pmax
      comp=Z,8.0nm,1.0s
AAK   Ala-Archa        50.69 299   P     P      01 27 50.1 +0.8
AAK                                P     P      01 27 50.1 +0.8
AAK   Ala-Archa        50.69 299   P     P      01 27 49.9 +0.6
AAK                                pP    pP     01 28 01.2 -0.9
AAK                                sP    sP     01 28 05.7 -1.7
HDA   Harding Lake     50.88  32   IAmb  IAmb   01 27 52.8
      comp=Z,8.7nm,1.0s
HDA   Harding Lake     50.88  32   P     P      01 27 51.1 +0.8
      baz=272
IL31                   50.89  32   P     P      01 27 50.6 +0.3
IL31                               IAmb  IAmb   01 27 53.4
      comp=Z,7.6nm,0.8s
ILAR  Eielson Array    50.89  32   P     P      01 27 52.3 +1.9
      comp=Z,5.6nm,0.8s,baz=270,slow=6.3,SNR=63
ILAR                               PcP   PcP    01 29 07.0 +0.7
      comp=Z,0.9nm,0.6s,baz=273,slow=3.1,SNR=4.3
ILAR                               LR    LR     01 50 51.4
      comp=Z,77nm,20.3s,baz=68,slow=38
      comp=Z,5.6nm,0.8s
BKNI  Bangkinang       51.02 235   P     P      01 27 52.8 +0.8
D25K  Kavik River      51.07  26   P     P      01 27 53.3 +1.6
      baz=269
BRVK  Borovoye         51.16 313   P     P      01 27 53.1 +0.5
BRVK                               IAmb  IAmb   01 27 54.8
      comp=Z,16nm,0.8s
BRVK  Borovoye         51.16 313   P     P      01 27 53.1 +0.5
BRVK                               pmax  pmax
      comp=Z,16nm,0.8s
BRVK  Borovoye         51.16 313   P     P      01 27 53.5 +0.9
BRVK  Borovoye         51.16 313   P     P      01 27 53.0 +0.5
BRVK                               pP    pP     01 28 04.6 -0.7
G25K  Bearman Lake     51.16  29   P     P      01 27 54.1 +1.7
      baz=271
F25K  Christian Rive   51.33  28   P     P      01 27 55.4 +1.7
      baz=271
PWJI  Pagerwojo        51.35 218   P     P      01 27 52.8 -1.5
      comp=Z,48nm,0.7s
E25K  Arctic Village   51.35  27   P     P      01 27 55.6 +1.8
      baz=270,SNR=7.2
AML   Almayashu        51.40 299   P     P      01 27 56.3 +1.3
      SNR=37
K24K  Donnelly Dome    51.42  33   P     P      01 27 56.3 +1.9
      baz=274
PRP   Porcupine Dome   51.44  31   P     P      01 27 55.8 +1.2
PRP   Porcupine Dome   51.44  31   P     P      01 27 56.3 +1.7
      baz=272
C26K  Camden Bay       51.59  25   P     P      01 27 57.4 +1.9
      baz=270
PAX   Paxson           51.62  34   P     P      01 27 56.9 +1.0
      baz=274
SDSI  Sungai Dareh     51.70 234   P     P      01 27 56.2 -0.8
EYAK  Cordova Ski Ar   51.72  37   P     P      01 27 57.8 +1.2
      baz=276
BMAR  Burnt Mountain   51.74  28   P     P      01 27 58.8 +2.1
HARP  HAARP            51.81  35   P     P      01 27 58.1 +0.8
      baz=275
RIDG  Independent Ri   51.84  33   P     P      01 27 59.4 +1.9
      baz=274
UGM   Wanagama         51.91 219   P     P      01 27 57.3 -1.3
      comp=Z,66nm,2.0s
C27K  Jago River       52.01  25   P     P      01 28 00.1 +1.4
      baz=271
G26K  Porcupine Rive   52.07  29   P     P      01 28 00.8 +1.7
      baz=273
SCRK  Sand Creek       52.20  33   IAmb  IAmb   01 28 18.7
      comp=Z,37nm,1.9s
SCRK  Sand Creek       52.20  33   P     P      01 28 01.4 +1.1
      baz=275,SNR=6.3
J26L  Joseph Creek     52.34  32   P     P      01 28 02.7 +1.4
      baz=275
L26K  Log Cabin Wild   52.58  34   IAmb  IAmb   01 28 07.5
      comp=Z,12nm,1.1s
L26K  Log Cabin Wild   52.58  34   P     P      01 28 04.5 +1.5
      baz=276
MDSI  Maura Dua        52.68 228   P     P      01 28 02.9 -1.4
      comp=Z,14nm,1.4s
M26K  Nabesna, AK      52.81  35   P     P      01 28 06.2 +1.4
      baz=277
E27K  Coleen River     52.84  27   P     P      01 28 06.9 +2.1
      baz=274
G27K  Doyon Strip      52.92  29   P     P      01 28 07.2 +1.7
      baz=275
MCARA McCarthy VSAT    52.93  36   P     P      01 28 07.3 +1.7
      baz=278
H27K  Steamboat Moun   53.03  30   P     P      01 28 08.3 +2.0
      baz=275
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K27K  Chicken          53.03  32   P     P      01 28 08.1 +1.8
      baz=277
I27K  Kandik River     53.05  31   P     P      01 28 08.0 +1.5
      baz=276
L27K  Beaver Creek,    53.26  34   P     P      01 28 10.0 +1.9
      baz=278
M27K  Edge Creek, AK   53.34  35   IAmb  IAmb   01 28 21.2
      comp=Z,15nm,1.2s
M27K  Edge Creek, AK   53.34  35   P     P      01 28 10.7 +1.9
      baz=278
EGAK  Eagle            53.34  32   P     P      01 28 10.9 +2.4
      baz=277
KK31  Karatay Array    53.36 301   P     P      01 28 09.2 +0.1
KK31                               IAmb  IAmb   01 28 23.2
      comp=Z,9.2nm,0.8s
KK31  Karatay Array    53.36 301   P     P      01 28 09.2 +0.1
KK31                               pmax  pmax
      comp=Z,9.0nm,0.9s
KKAR  Karatay Array    53.36 301   P     P      01 28 09.8 +0.7
KKAR                               IAmb  IAmb   01 28 23.2
      comp=Z,9.2nm,0.8s
KKAR  Karatay Array    53.36 301   P     P      01 28 09.8 +0.7
KKAR                               pmax  pmax
      comp=Z,9.0nm,0.9s
BVCY  Beaver Creek     53.80  34   P     P      01 28 13.7 +1.7
      baz=279
IUG   Iuzhnay          53.99 300⇑iP     P      01 28 14.7 +0.8
      comp=Z,14nm,1.0s,baz=300
IUG   Iuzhnay          53.99 300c iP     P      01 28 14.6 +0.8
IUG                                pmax  pmax
      comp=Z,14nm,1.0s
PPSI  Pulau Pagai      54.00 234   P     P      01 28 11.2 -2.8
YUK3  Moose Creek      54.09  35   P     P      01 28 15.5 +1.2
      baz=280
DAWY  Dawson           54.20  32   P     P      01 28 15.9 +1.0
      baz=279
I29M  Ogilvie Camp,    54.45  31   IAmb  IAmb   01 28 34.4
      comp=Z,10nm,1.0s
I29M  Ogilvie Camp,    54.45  31   P     P      01 28 18.5 +1.8
      baz=279,SNR=7.0
NIL   Nilore           54.56 289   P     P      01 28 17.5 -0.5
NIL                                IAmb  IAmb   01 28 35.5
      comp=Z,10nm,0.8s
NIL   Nilore           54.56 289   P     P      01 28 17.5 -0.5
NIL                                pmax  pmax
      comp=Z,10.0nm,0.8s
NIL   Nilore           54.56 289   P     P      01 28 18.8 +0.7
NIL   Nilore           54.56 289   P     P      01 28 18.7 +0.7
NIL                                sP    sP     01 28 34.8 -1.3
GAR   Garm             54.82 296   IAmb  IAmb   01 28 35.1
      comp=Z,9.9nm,0.6s
M29M  Somme Creek      54.89  34   P     P      01 28 21.0 +1.0
      baz=281
L29M  L29M             54.91  33   P     P      01 28 22.4 +2.2
      baz=281
EPYK  Eagle Plains     54.93  29   P     P      01 28 22.4 +2.2
      baz=280,SNR=12
YUK4  Talbot Arm       55.02  35   P     P      01 28 22.5 +1.4
      baz=281
G30M  tAoh Zraii Nji   55.03  28   P     P      01 28 22.6 +1.8
      baz=280
K29M  Barlow Dome      55.05  32   P     P      01 28 21.8 +0.7
      baz=281
YUK6  Outpost Mounta   55.23  36   P     P      01 28 22.9 +0.3
      baz=282
O29M  Mount Kennedy    55.27  37   P     P      01 28 24.5 +1.7
      baz=282
WB0   Warramunga Arr   55.49 187   P     P      01 28 24.2 -0.5
M30M  Minto, Yukon     55.62  34   IAmb  IAmb   01 28 33.1
      comp=Z,20nm,1.6s
M30M  Minto, Yukon     55.62  34   P     P      01 28 25.5 +0.3
      baz=282,SNR=5.3
WRAB  Tennant Creek    55.66 187  i P    P      01 28 25.9  0.0
WRAB                               pmax  pmax
      comp=Z,19nm,1.0s
WRAB  Tennant Creek    55.66 187   P     P      01 28 25.9  0.0
WRAB                               sP    pP     01 28 41.3 +2.6
HYT   Haines Junctio   55.67  36   P     P      01 28 26.1 +0.4
      baz=283
WR0   Warramunga Arr   55.67 187   IAmb  IAmb   01 28 41.9
      comp=Z,14nm,0.8s
WB2   Warramunga Arr   55.67 187   P     P      01 28 24.7 -1.3
WB2                                IAmb  IAmb   01 28 36.3
      comp=Z,18nm,0.9s
WRA   Warramunga Arr   55.67 187   P     P      01 28 25.9  0.0
      comp=Z,3.7nm,0.4s,baz=0.5,slow=7.6,SNR=58
      comp=Z,3.7nm,0.4s
WRA   Warramunga Arr   55.67 187  i P    P      01 28 25.8 -0.1
WRA                                pmax  pmax
      comp=Z,4.0nm,0.4s
CTA   Charters Tower   55.72 174   LR    LR     01 51 57.2
      comp=Z,20nm,20.5s,baz=1.0,slow=36
CHGR  Chuyangaron      55.79 296   P     P      01 28 26.7 -0.1
CHGR                               pmax  pmax
      comp=Z,46nm,0.8s
INK   Inuvik           55.80  27   P     P      01 28 28.0 +1.7
      comp=Z,4.0nm,0.7s,baz=300,slow=5.8,SNR=15
      comp=Z,4.0nm,0.7s
INK   Inuvik           55.80  27   P     P      01 28 28.0 +1.7
INK   Inuvik           55.80  27   P     P      01 28 27.6 +1.4
      baz=281
SVE   Sverdlovsk       55.82 319deP     P      01 28 27.5 +0.9
SVE                                pmax  pmax
      comp=Z,32nm,0.9s
F31M  Tsiigehtchic     55.89  28   P     P      01 28 28.2 +1.2
      baz=281
P30M  Million Dollar   56.09  37   P     P      01 28 29.5 +0.9
      baz=284
N31M  Braeburn, Yuko   56.33  35   P     P      01 28 31.1 +0.8
      baz=284
O30N  Mendenhall       56.36  36   P     P      01 28 31.5 +1.0
      baz=284
PLBC  Pleasant Camp    56.55  37   P     P      01 28 33.2 +1.4
      baz=284
M31M  Drury Creek, Y   56.80  34   P     P      01 28 34.9 +1.3
      baz=284
ARU   Arti             57.03 319   P     P      01 28 35.0 -0.2
ARU   Arti             57.03 319c iP     P      01 28 35.6 +0.4
ARU                                *PP   pP     01 28 49.9 +1.8
ARU                                             01 29 24.7
ARU                                             01 30 38.5
ARU                                S     S      01 36 27.1 +0.8
ARU                                SS    SS     01 40 14.4 -0.4
ARU                                pmax  pmax
      comp=Z,47nm,1.0s
ARU   Arti             57.03 319   P     P      01 28 35.6 +0.4
FARO  Faro, Yukon      57.26  34   P     P      01 28 37.5 +0.6
      baz=285
KBL   Kabul            57.43 292   P     P      01 28 38.6 -0.1
KBL   Kabul            57.43 292   P     P      01 28 38.6 -0.1
KBL                                pmax  pmax
      comp=Z,5.0nm,0.7s
KBL   Kabul            57.43 292   P     P      01 28 38.4 -0.3
A36M  Sachs Harbour    57.68  22   P     P      01 28 40.5 +1.0
      baz=286,SNR=9.5
P32M  Atlin            57.81  37   P     P      01 28 41.0 +0.2
      baz=286
P33M  Teslin, Yukon    58.07  36   IAmb  IAmb   01 28 52.4
      comp=Z,22nm,1.4s
P33M  Teslin, Yukon    58.07  36   P     P      01 28 42.8 +0.2
      baz=287
MMPY  Sheldon Lake,    58.09  33   P     P      01 28 43.0 +0.3
      baz=287
ABKAR Akbulak array    58.42 311   P     P      01 28 45.3 +0.2
C36M  Paulatuk         58.85  24   IAmb  IAmb   01 28 50.7
      comp=Z,11nm,1.0s
C36M  Paulatuk         58.85  24   P     P      01 28 48.5 +0.8
      baz=289,SNR=8.2
U33K  Whale Pass       59.18  41   P     P      01 28 50.0 -0.2
      baz=289
AS31  Alice Springs    59.40 187   P     P      01 28 51.4 -0.7
ASAR  Alice Springs    59.40 187   P     P      01 28 52.5 +0.4
      comp=Z,2.0nm,0.5s,baz=19,slow=11,SNR=53
ASAR                               LR    LR     01 54 54.3
      comp=Z,52nm,18.6s,baz=356,slow=36
      comp=Z,2.0nm,0.5s
ASAR  Alice Springs    59.40 187   P     P      01 28 50.9 -1.2
MBWA  Marble Bar       59.97 203   P     P      01 28 55.3 -0.8
MBWA  Marble Bar       59.97 203   P     P      01 28 56.1 +0.1
MBWA  Marble Bar       59.97 203   P     P      01 28 56.1 +0.1
MBWA                               sP    sP     01 29 12.3 -1.9
DLBC  Dease Lake       59.99  37   P     P      01 28 56.3 +0.4
      baz=290
WTLY  Watson Lake, Y   60.01  35   P     P      01 28 57.0 +1.0
      baz=290
PSA00 Pilbara Seismi   60.32 203   P     P      01 28 57.7 -0.8
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PSA00                                 IAmb     IAmb     01 29 02.2
      comp=Z,7.7nm,1.1s
KIRV  Kirov             61.01 323d iP      P        01 29 02.6 -0.1
HOPEN Hopen             61.21 346  eP      P        01 29 05.7 +1.8
WRGLY Wrigley           61.25  31  P       P        01 29 05.6 +1.3
      baz=292
ALE   Alert             61.47   3  P       P        01 29 06.5 +0.9
LIRD  Liard River Hi    61.53  36  P       P        01 29 07.4 +1.0
      baz=292,SNR=8.3
PALK  Pallekele         61.59 258  LR      LR       01 57 45.1
      comp=Z,119nm,19.7s,baz=158,slow=38
PALK  Pallekele         61.59 258  P       P        01 29 07.3 -0.1
PALK  Pallekele         61.59 258  P       P        01 29 07.3 -0.1
PALK                               pmax    pmax
      comp=Z,43nm,1.7s
PALK  Pallekele         61.59 258  P       P        01 29 07.6 +0.2
DZM   Mont Dzumac       62.38 153  eLR     LR       01 47 45.8
      comp=Z,219nm,26.9s
DZM   Mont Dzumac       62.38 153  LR      LR       01 58 00.3
      comp=Z,69nm,18.8s,baz=28,slow=38
ADZR  Andozero          63.69 331  eP      P        01 29 19.4 -1.1
ADZR                               pmax    pmax
      comp=Z,12nm,0.6s
MSVF  Nonsavu           63.80 140  LR      LR       01 58 31.5
      comp=Z,56nm,18.0s,baz=327,slow=37
RES   Resolute Bay      64.02  14  P       P        01 29 22.9 +0.4
RES                                IAmb    IAmb     01 29 24.8
      comp=Z,15nm,1.1s
RES   Resolute Bay      64.02  14  P       P        01 29 22.9 +0.4
RES                                pmax    pmax
      comp=Z,15nm,1.2s
GEYT  Alibeck           64.04 299  P       P        01 29 24.1 +0.6
      comp=Z,3.8nm,0.8s,baz=64,slow=3.4,SNR=13
      comp=Z,3.8nm,0.8s
BELG  Belogornoye       64.43 317c iP      P        01 29 25.8 +0.2
BELG                               pmax    pmax
      comp=Z,9.0nm,1.0s
KLMR  Klimovskoe        64.61 328  eP      P        01 29 25.0 -1.7
KLMR                               AMP              01 29 27.6
      comp=Z,10.0nm,0.8s
KLMR                               ePcP    PcP      01 29 58.3 -2.0
KLMR  Klimovskoe        64.61 328  eP      P        01 29 25.0 -1.7
KLMR                               e                01 29 58.3
KLMR                               pmax    pmax
      comp=Z,10.0nm,0.8s
ARA0  ARCESS Array S    65.07 339  eP      P        01 29 29.1 -0.4
ARCES ARCESS Array B    65.07 339  P       P        01 29 30.7 +1.2
      comp=Z,5.7nm,0.8s,baz=51,slow=7.5,SNR=8.7
      comp=Z,5.7nm,0.8s
YKA   Yellowknife Ar    65.21  30  P       P        01 29 32.1 +1.6
      comp=Z,2.1nm,0.8s,baz=299,slow=6.6,SNR=31
      comp=Z,2.1nm,0.8s
YKA   Yellowknife Ar    65.21  30  i P     P        01 29 32.0 +1.4
YKA                                pmax    pmax
      comp=Z,2.0nm,0.8s
KTK1  Kautokeino        66.03 340  eP      P        01 29 36.1 +0.4
JETT  Jettan, Norway    66.47 341  eP      P        01 29 39.2 +0.7
JETT                               IAmb    IAmb     01 29 44.7
      comp=Z,23nm,1.3s
AFI   Afiamalu          66.68 129  LR      LR       01 55 20.5
      comp=Z,63nm,20.2s,baz=355,slow=33
DAG   Danmarks Havn     67.06 355  i P     P        01 29 42.4 +0.2
FORT  Forrest           67.20 192  P       P        01 29 42.6 -0.9
STKA  Stephens Creek    67.23 179  P       P        01 29 43.9 +0.2
      comp=Z,2.8nm,0.7s,baz=14,slow=8.2,SNR=5.2
      comp=Z,2.8nm,0.7s
STKA  Stephens Creek    67.23 179  P       P        01 29 44.2 +0.5
STKA  Stephens Creek    67.23 179  P       P        01 29 44.2 +0.5
STKA                               pmax    pmax
      comp=Z,7.0nm,1.9s
MOS   Moscow            68.02 324  eP      P        01 29 44.5 -4.1
MOS                                e                01 30 00.8
OBN   Obninsk           68.86 323  P       P        01 29 55.4 +1.6
OBN   Obninsk           68.86 323d iP      P        01 29 54.1 +0.3
OBN                                e                01 30 13.7
OBN                                e                01 32 25.2
OBN                                pmax    pmax
      comp=Z,11nm,0.9s
OBN                                MLR     MLR
      comp=Z,370nm,19.0s
STEI  Steigen           68.96 341  eP      P        01 29 54.6 +0.5
STEI                               IAmb    IAmb     01 29 57.8
      comp=Z,36nm,1.5s
FAUS  Fauske            69.33 340  eP      P        01 29 57.5 +1.0
FAUS                               IAmb    IAmb     01 29 58.2
      comp=Z,15nm,1.0s
AKT   Akhty             69.47 307  eP      P        01 29 57.1 -0.9
AKT                                e*PP    pP       01 30 11.9 +0.7
AKT                                e                01 30 19.2
AKT                                pmax    pmax
      comp=Z,16nm,0.8s
FINES FINESS Array B    69.76 332  P       P        01 29 59.8 +0.5
      comp=Z,8.8nm,0.8s,baz=48,slow=7.3,SNR=31
      comp=Z,8.8nm,0.8s
FINES FINESS Array B    69.76 332  P       P        01 30 00.1 +0.8
GROC  Groznyy           69.85 309  eP      P        01 29 59.7 -0.5
GROC                               e*PP    sP       01 30 17.6 -1.0
GROC                               e                01 32 31.5
GROC                               pmax    pmax
      comp=Z,44nm,1.1s
SEKA  Sheki             69.95 307  P       P        01 29 59.3 -1.6
JASK  Jask - Hormozg    69.97 288  P       P        01 30 01.0 -0.3
ZKTA  Zakatala          70.11 307  P       P        01 30 00.7 -1.1
LKRN  Lenkeran, Azer    70.15 304  P       P        01 30 01.0 -1.1
MNGR  Mingechevir, A    70.25 306  P       P        01 30 01.5 -1.1
MOR8  Moi Rana          70.44 340  eP      P        01 30 03.2 -0.2
MOR8                               IAmb    IAmb     01 30 03.3
      comp=Z,16nm,0.7s
JLN   Jalan Bani Buh    70.68 284  P       P        01 30 05.6  0.0
WSAR  Wadi Sarin        70.73 285  P       P        01 30 06.3 +0.4
WBK   Wadi Bani Khal    70.79 284  P       P        01 30 07.0 +0.8
GANJ  Ganja             70.81 307  P       P        01 30 04.9 -1.2
BIDO  Bidbid            70.98 286  P       P        01 30 08.8 +1.4
NCK   Nalchik           71.08 310  i P     P        01 30 08.3 +0.6
NCK                                pmax    pmax
      comp=Z,25nm,1.4s
BANOM Banah             71.16 289  P       P        01 30 08.6 +0.1
MEF   Metsahovi         71.17 332  eP      P        01 30 08.3 +0.4
SHME  Shamm             71.21 289  P       P        01 30 09.7 +1.0
ZEI   Tsey              71.25 309  eP      P        01 30 07.9 -1.1
ZEI                                pmax    pmax
      comp=Z,15nm,1.5s
SMDO  Samad             71.28 285  P       P        01 30 09.2 -0.1
SMDO                               P       P        01 30 10.1 +0.8
KBZ   Khabaz            71.39 311  P       P        01 30 10.6 +1.1
      comp=Z,12nm,0.9s,baz=53,slow=3.5,SNR=24
      comp=Z,12nm,0.9s
KIV   Kislovodsk        71.40 311  P       P        01 30 10.7 +0.9
KIV   Kislovodsk        71.40 311  eP      P        01 30 10.1 +0.4
KIV                                pmax    pmax
      comp=Z,32nm,1.0s
KIV   Kislovodsk        71.40 311  P       P        01 30 10.7 +0.9
KIV   Kislovodsk        71.40 311  P       P        01 30 10.7 +0.9
NEW   Newport           71.44  44  P       P        01 30 11.0 +1.2
      baz=303
MASF  Masafi            71.55 288  P       P        01 30 11.9 +1.0
MASF                               P       P        01 30 11.9 +1.0
HOQ   Hoqain            71.58 286  P       P        01 30 11.8 +0.7
JMDO  Jabal Madar       71.59 285  P       P        01 30 11.5 +0.4
RAF   Rauma             71.63 333  eP      P        01 30 10.6 -0.1
ONI   Oni               71.64 309  IAmb    IAmb     01 30 13.5
      comp=Z,14nm,1.1s
UOSS  Minazif           71.74 288  P       P        01 30 12.3 +0.4
UOSS  Minazif           71.74 288  P       P        01 30 12.3 +0.4
UOSS                               sP      sP       01 30 29.3 -1.1
HATD  Hatta, Dubai      71.85 288  P       P        01 30 13.5 +0.8
      SNR=8.2
HATD                               P       P        01 30 13.5 +0.8
      SNR=8.2
SOHO  SOHO              71.90 287  P       P        01 30 13.2 +0.3
SOHO                               P       P        01 30 13.2 +0.3
ASHO  Ashiyiah          71.98 288  P       P        01 30 12.1 -1.4
GNI   Garni             72.10 307  LR      LR       02 04 19.3
      comp=Z,124nm,21.6s,baz=24,slow=38
GNI   Garni             72.10 307  P       P        01 30 14.4 +0.3
GNI                                IAmb    IAmb     01 30 16.8
      comp=Z,30nm,1.4s
GNI   Garni             72.10 307  P       P        01 30 14.4 +0.3
GNI                                pmax    pmax
      comp=Z,29nm,1.4s
GNI   Garni             72.10 307  P       P        01 30 15.1 +1.0
BSY   Bisya             72.11 285  P       P        01 30 14.2 -0.1
NAX   Nakhchivan        72.11 306  P       P        01 30 12.9 -1.2
FAQ   Al Faqa, Dubai    72.31 288  P       P        01 30 15.4  0.0
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ARQ   Araqi             72.33 286  P       P        01 30 16.1 +0.6
ARQ                                P       P        01 30 16.1 +0.6
NSS   Namsos            72.35 339  eP      P        01 30 15.4 +0.6
MTSE  Matsula           72.37 331  eP      P        01 30 15.9 +0.8
MHTO  MHTO              72.43 283  P       P        01 30 16.3 +0.2
ASUD  Al Ashush, Dub    72.58 288  P       P        01 30 17.6 +0.6
MNK   Minsk             73.31 326  i P     P        01 30 19.4 -1.4
      comp=E,2.0nm,1.0s
MNK                                i P     P        01 30 19.4 -1.4
      comp=N,52nm,0.8s
MNK                                i P     P        01 30 19.4 -1.4
      comp=Z,16nm,0.9s,baz=231
MNK                                i pP    PcP      01 30 35.9 -1.1
MNK                                i PP    PP       01 33 03.2 -0.8
MNK                                i PPP   PPP      01 34 48.0
MNK                                i S     S        01 39 44.1 -1.8
MNK                                i sS    sS       01 40 12.6 +4.4
MNK                                i SS    SS       01 44 28.0 +0.5
MNK                                i SSS   SSS      01 47 49.2
MNK                                i LQ    LQ       01 57 44.1
MNK                                i LR    LR       02 03 07.1
MNK                                i LRM   MLR      02 04 57.9
      comp=Z,134nm,17.1s
MNK                                i LRM   MLR      02 05 16.9
      comp=N,413nm,17.7s
MNK                                i LRM   MLR      02 05 18.2
      comp=E,24nm,16.4s
MNK   Minsk             73.31 326  i P     P        01 30 19.4 -1.4
MNK                                i *PP   PcP      01 30 35.9 -1.1
MNK                                i                01 33 03.1
MNK                                i PPP   PPP      01 34 48.0
MNK                                i S     S        01 39 44.0 -1.8
MNK                                i *SS   sS       01 40 12.5 +4.4
MNK                                i SS    SS       01 44 27.9 +0.5
MNK                                i SSS   SSS      01 47 49.2
MNK                                pmax    pmax
      comp=Z,16nm,0.9s
MNK                                pmax    pmax
      comp=E,2.0nm,1.0s
MNK                                pmax    pmax
      comp=N,52nm,0.8s
MNK                                MLR     MLR
      comp=Z,134nm,17.0s
MNK                                MLR     MLR
      comp=N,413nm,18.0s
MNK                                MLR     MLR
      comp=E,24nm,16.0s
IDID  Didziasalis       73.32 327  eP      P        01 30 16.0 -4.8
SOC   Sochi             73.41 312  eP      P        01 30 19.7 -1.9
SOC                                e                01 33 05.9
SOC                                ePPP    PPP      01 34 50.7
SOC                                eS      S        01 39 44.6 -2.7
SOC                                eSS     SS       01 44 28.5 -1.0
SOC                                eSSS    SSS      01 47 48.5
SOC                                MLR     MLR
      comp=Z,119nm,18.0s
ISAL  Salakas           73.43 327  eP      P        01 30 22.2 +0.8
IIGN  Ignalina          73.52 327  eP      P        01 30 18.0 -4.0
NACGM Naroch            73.56 327  eP      P        01 30 22.8 +0.5
      comp=Z,19nm,0.9s,baz=51
MSO   Missoula          74.03  44  P       P        01 30 26.6 +1.3
      baz=305
ANN   Anapa             74.09 314  eP      P        01 30 21.8 -3.7
ANN                                e*PP    PcP      01 30 41.4 +0.9
ANN                                eS      SKiKP    01 39 47.3 -2.1
ANN                                eSS     SS       01 44 37.1 -2.6
ANN                                eSSS    SSS      01 47 58.1
ANN                                pmax    pmax
      comp=Z,37nm,1.4s
PABE  Paberze           74.41 328  P       P        01 30 27.3 +0.2
PABE  Paberze           74.41 328  eP      P        01 30 28.5 +1.3
GURO  Guroymak-BITLI    74.73 307  IAmb    IAmb     01 30 32.0
      comp=Z,10nm,0.9s
MZR   Muzera            74.87 288  P       P        01 30 30.6 +0.1
NC405 NORSAR Array S    75.00 337  P       P        01 30 31.0 +0.4
AKASG Malin Array Be    75.04 322  P       P        01 30 31.1 +0.1
      comp=Z,6.3nm,0.6s,baz=46,slow=6.1,SNR=44
      comp=Z,6.3nm,0.6s
AKASG Malin Array Be    75.04 322  IAmb    IAmb     01 30 46.1
      comp=Z,18nm,1.6s
AKBB  Malin Array Si    75.04 322  P       P        01 30 31.1 +0.2
AKBB                               IAmb    IAmb     01 30 32.1
      comp=Z,16nm,0.9s
AKBB  Malin Array Si    75.04 322  P       P        01 30 31.2 +0.2
AKBB                               pmax    pmax
      comp=Z,16nm,0.9s
FFC   Flin Flon         75.10  32  P       P        01 30 31.6 +0.4
FFC   Flin Flon         75.10  32  P       P        01 30 31.6 +0.4
FFC                                pmax    pmax
      comp=Z,9.0nm,1.2s
DOMB  Dombas            75.10 339  eP      P        01 30 31.7 +0.6
NB2   NORSAR Subarra    75.22 337  P       P        01 30 32.3 +0.5
      comp=Z,3.9nm,0.6s,baz=41,slow=5.9
NB2   NORSAR Subarra    75.22 337  P       P        01 30 32.3 +0.5
      slow=5.9
NOA   NORSAR Array B    75.22 337  P       P        01 30 32.5 +0.7
      comp=Z,5.0nm,0.6s,baz=39,slow=5.7,SNR=24
      comp=Z,5.0nm,0.6s
VIKU  Vikbolandet       75.23 333  eP      P        01 30 32.0 +0.1
NC602 NORSAR Array S    75.35 337  eP      P        01 30 33.0 +0.5
FCC   Fort Churchill    75.42  26  IAmb    IAmb     01 30 35.3
      comp=Z,12nm,1.1s
LRM   Limekiln Ridge    75.45  44  P       P        01 30 34.8 +1.0
SAKB  Bahrain           75.53 292  P       P        01 30 33.9 -0.2
EGMT  Eagleton          75.61  41  P       P        01 30 35.4 +1.0
EGMT                               IAmb    IAmb     01 30 42.1
      comp=Z,12nm,1.0s
EGMT  Eagleton          75.61  41  P       P        01 30 35.8 +1.5
      baz=308
HLID  Hailey            75.65  47  P       P        01 30 36.4 +1.5
      baz=306
SLWR  Sila              75.68 289  P       P        01 30 35.0  0.0
SMRA  Abu-Samra         75.98 290  P       P        01 30 36.2 -0.5
NVAR  Mina Array Bea    76.19  53  P       P        01 30 41.0 +2.9
      comp=Z,2.0nm,0.7s,baz=292,slow=4.8,SNR=8.9
      comp=Z,2.0nm,0.7s
NVAR  Mina Array Bea    76.19  53  P       P        01 30 39.4 +1.4
SKAR  Skarslia          76.40 338  eP      P        01 30 38.4 -0.2
DMTO  DMTO              76.59 282  P       P        01 30 40.2 -0.1
DMTO                               P       P        01 30 40.2 -0.1
HYA   Hoyanger          76.64 339  eP      P        01 30 40.6 +0.8
DOK   Doka              76.74 283  P       P        01 30 40.4 -0.8
      SNR=8.5
KONO  Kongsberg         76.81 337  eP      P        01 30 40.6 -0.2
H17A  Grant Village     77.37  44  P       P        01 30 45.7 +1.0
      baz=308
WHFO  Wadi Hawf         77.41 283  P       P        01 30 44.5 -0.5
      SNR=9.8
CWC   Cottonwood Cre    77.47  54  P       P        01 30 45.9 +0.6
      baz=305
R11A  Troy Canyon, C    77.98  51  P       P        01 30 48.9 +0.8
      baz=306
MPMC  Manual Prospec    78.08  54  P       P        01 30 49.3 +0.6
      baz=306
ABTO  Aybut             78.10 283  P       P        01 30 48.6 -0.2
DGMT  Dagmar            78.20  38  P       P        01 30 49.8 +1.0
      baz=311
BEL   Belsk             78.28 327  eP      pP       01 31 03.5 +0.8
LAO   LASA Array        78.31  40  P       P        01 30 50.2 +0.6
      baz=310
DUG   Dugway, Tooele    78.61  49  P       P        01 30 52.2 +0.7
DUG   Dugway, Tooele    78.61  49  P       P        01 30 52.2 +0.7
DUG                                pmax    pmax
      comp=Z,5.0nm,1.2s
DUG   Dugway, Tooele    78.61  49  P       P        01 30 51.6 +0.1
      baz=307
GAZ   Gaziantep         78.64 308  P       P        01 30 52.9 +1.3
GAZ                                IAmb    IAmb     01 31 08.5
      comp=Z,18nm,1.2s
BW06  Boulder Array     78.96  45  P       P        01 30 53.8 +0.3
      baz=309
PD31  Pinedale Array    78.96  45  P       P        01 30 52.9 -0.6
PDAR  Pinedale Array    78.96  45  P       P        01 30 55.5 +2.1
      comp=Z,1.6nm,0.6s,baz=263,slow=2.8,SNR=20
      comp=Z,1.6nm,0.6s
GSC   Goldstone, Bar    78.98  54  P       P        01 30 54.6 +1.1
      baz=306
BUR08 Bucovina Ar. S    79.03 322  IAmb    IAmb     01 31 08.6
      comp=Z,12nm,1.2s
BR131 Keskin Array S    79.36 311  IAmb    IAmb     01 30 60.0
      comp=Z,11nm,0.9s
BR131 Keskin Array S    79.36 311d iP      P        01 30 56.7 +1.2
BR131 Keskin Array S    79.36 311  P       P        01 30 56.3 +0.8
      SNR=12
BR131                              P       P        01 30 56.3 +0.8
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      SNR=12
BRTR  Keskin Array B    79.36 311  P       P        01 30 56.2 +0.6
      comp=Z,4.6nm,0.8s,baz=113,slow=4.8,SNR=31
      comp=Z,4.6nm,0.8s
BRTR  Keskin Array B    79.36 311  P       P        01 30 55.9 +0.3
HEC   Hector,Ludlow     79.57  55  P       P        01 30 57.3 +0.6
      baz=306
MURC  Murrieta          79.71  56  P       P        01 30 58.8 +1.4
      baz=306
STHS  Stebnicka Huta    79.76 325  eP      P        01 30 58.4 +1.0
STHS                               pmax    pmax
      comp=Z,9.0nm,1.2s
STHS  Stebnicka Huta    79.76 325  eP      P        01 30 58.4 +1.0
STHS                               epP     pP       01 31 11.4 +0.6
RAR   Rarotonga         79.80 125  LR      LR       02 00 41.6
      comp=Z,107nm,19.6s,baz=297,slow=31
OJC   Ojcow             79.86 326  eP      P        01 30 58.4 +0.5
OJC   Ojcow             79.86 326  IAmb    IAmb     01 31 13.9
      comp=Z,23nm,1.2s
NIE   Niedzica          80.20 325  eP      P        01 31 01.3 +1.5
PFO   Pinyon Flats O    80.20  56  LR      LR       01 58 22.0
      comp=Z,165nm,20.8s,baz=59,slow=29
MONP2 Monument Peak     80.65  56  P       P        01 31 03.3 +0.6
      baz=306
RAYN  Ar Rayn           80.69 292  P       P        01 31 02.6 -0.3
RAYN                               IAmb    IAmb     01 31 04.5
      comp=Z,16nm,0.9s
RAYN  Ar Rayn           80.69 292  P       P        01 31 02.6 -0.3
RAYN                               pmax    pmax
      comp=Z,16nm,0.9s
RAYN  Ar Rayn           80.69 292  P       P        01 31 03.3 +0.4
IRM   Iron Mountain     80.76  55  P       P        01 31 04.0 +0.9
      baz=307
LANS  Liptovska Anna    80.77 325  eP      P        01 31 01.7 -1.2
LANS                               e                01 31 17.2
LANS  Liptovska Anna    80.77 325  eP      P        01 31 01.7 -1.2
LANS                               epP     pP       01 31 17.2 +0.8
ULM   Lac du Bonnet     80.89  33  P       P        01 31 04.9 +1.5
      comp=Z,1.3nm,0.4s,baz=280,slow=8.2,SNR=3.4
      comp=Z,1.3nm,0.4s
URZ   Urewera           80.91 152  LR      LR       02 01 07.5
      comp=Z,103nm,21.5s,baz=31,slow=31
KSP   Ksiaz             80.97 328  eP      P        01 31 04.3 +0.4
IKP   In-Ko-Pah, Jac    81.01  56  P       P        01 31 05.5 +1.0
      baz=307
SWSC  Sam W. Stewart    81.04  56  P       P        01 31 05.4 +0.9
      baz=307
RSSD  Black Hills       81.16  41  P       P        01 31 05.1 -0.2
      baz=312
MORC  Moravsky Berou    81.20 327  P       P        01 31 05.6 +0.4
MORC                               IAmb    IAmb     01 31 21.8
      comp=Z,17nm,1.4s
MORC  Moravsky Berou    81.20 327  eP      P        01 31 06.1 +1.0
MORC  Moravsky Berou    81.20 327  P       P        01 31 05.6 +0.4
MORC                               pmax    pmax
      comp=Z,17nm,1.4s
DPC   Dobruska-Polom    81.32 328  eP      P        01 31 07.1 +1.3
DPC                                epP     pP       01 31 19.2  0.0
DPC   Dobruska-Polom    81.32 328  eP      P        01 31 07.1 +1.3
DPC                                e*PP    pP       01 31 19.2  0.0
KRLC  Kraliky           81.32 327  eP      P        01 31 12.4 +6.6
PDMCI Parker Dam,Lak    81.33  54  P       P        01 31 06.2 +0.2
      baz=307
O20A  White River Ci    81.39  46  P       P        01 31 05.8 -0.8
      baz=310
VYHS  Vyhne             81.53 325  eP      P        01 31 08.2 +1.3
VYHS                               pmax    pmax
      comp=Z,8.0nm,1.2s
VYHS  Vyhne             81.53 325  eP      P        01 31 08.2 +1.3
VYHS                               epP     pP       01 31 22.0 +1.6
JAVC  Velka Javorina    81.81 326  eP      P        01 31 10.4 +2.0
PVCC  Panska Ves        81.94 329  eP      P        01 31 10.4 +1.4
PVCC  Panska Ves        81.94 329  eP      P        01 31 10.4 +1.4
BRG   Berggiesshubel    81.94 329  eP      P        01 31 10.1 +1.2
BRG                                Amp              01 31 10.9
      comp=Z,10nm,1.1s
BRG                                pP      pP       01 31 24.5 +2.0
BRG                                Amp              01 31 24.9
      comp=Z,10nm,1.2s
BRG   Berggiesshubel    81.94 329  eP      P        01 31 10.1 +1.2
BRG                                                 01 31 24.4
BRG                                pmax    pmax
      comp=Z,10.0nm,1.1s
VRAC  Vranov            81.96 327  eP      P        01 31 10.1 +1.0
CLL   Collm             82.00 330  IAmb    IAmb     01 31 10.8
      comp=Z,12nm,0.9s
CLL   Collm             82.00 330⇓ iP      P        01 31 09.6 +0.4
      comp=Z,14nm,1.0s
CLL                                ePcP    PcP      01 31 16.0 +1.3
CLL                                i x     x        01 31 23.2
CLL   Collm             82.00 330⇓ iP      P        01 31 09.6 +0.4
CLL                                i                01 31 23.2
CLL                                pmax    pmax
      comp=Z,14nm,1.0s
KRUC  Moravsky          82.23 327  eP      P        01 31 11.5 +1.0
N23A  Red Feather La    82.23  45  P       P        01 31 11.2 +0.1
      baz=311
GOPC  GO Pecny, Ondr    82.30 328  eP      P        01 31 12.2 +1.3
GOPC  GO Pecny, Ondr    82.30 328  eP      P        01 31 12.2 +1.3
MMAI  Mount Meron Ar    82.32 305  LR      LR       02 09 37.6
      comp=Z,139nm,20.9s,baz=23,slow=37
MODS  Modra-Piesok      82.34 326  epP     pP       01 31 27.3 +2.7
PRU   Pruhonice         82.35 328  eP      P        01 31 12.2 +1.1
PRU                                epP     pP       01 31 25.0 +0.3
PRU   Pruhonice         82.35 328  eP      P        01 31 12.2 +1.1
PRU                                e*PP    pP       01 31 25.0 +0.3
BALB  Balikesir         82.85 314  P       P        01 31 14.5 +0.6
BALB                               IAmb    IAmb     01 31 15.6
      comp=Z,14nm,1.0s
NKC   Novy Kostel       83.05 330  eP      P        01 31 15.9 +1.1
NKC   Novy Kostel       83.05 330  eP      P        01 31 15.9 +1.1
ALN   Alexandroupoli    83.07 316  IAmb    IAmb     01 31 16.9
      comp=Z,16nm,1.3s
MVCO  Mesa Verde        83.11  49  P       P        01 31 16.3 +0.7
      baz=310
ISCO  Idaho Springs     83.14  45  P       P        01 31 16.5 +0.7
      baz=311
RDO   Rodhopi           83.19 317  IAmb    IAmb     01 31 17.8
      comp=Z,15nm,1.1s
RONA  Rosalia, Austr    83.28 326  eP      P        01 31 17.8 +1.7
      comp=Z,9.9nm,1.0s
CONA  Conrad Observa    83.31 326  eP      P        01 31 17.7 +1.4
      comp=Z,11nm,1.3s
CKRC  Cesky Krumlov     83.33 328  eP      P        01 31 17.2 +0.9
CKRC  Cesky Krumlov     83.33 328  eP      P        01 31 17.2 +0.9
KHC   Kasperske Hory    83.41 328  IAmb    IAmb     01 31 32.7
      comp=Z,11nm,1.1s
KHC   Kasperske Hory    83.41 328  eP      P        01 31 17.5 +0.8
KHC                                epP     pP       01 31 30.3 +0.1
KHC   Kasperske Hory    83.41 328⇓ iP      P        01 31 17.3 +0.6
KHC                                pmax    pmax
      comp=Z,13nm,1.2s
VTS   Vitosha           83.45 319  IAmb    IAmb     01 31 20.3
      comp=Z,15nm,1.2s
GERES GERESS Array B    83.58 328  P       P        01 31 18.4 +0.7
      comp=Z,1.2nm,0.6s,baz=60,slow=5.3,SNR=8.3
      comp=Z,1.2nm,0.6s
GERES GERESS Array B    83.58 328  P       P        01 31 17.7 +0.1
214A  Organ Pipe Nat    83.65  55  P       P        01 31 19.7 +1.5
      baz=308
S22A  4UR Ranch, Cre    83.77  48  P       P        01 31 17.7 -1.4
      baz=311
Q24A  Divide            83.97  46  P       P        01 31 19.7 -0.4
      baz=312
MOA   Molln             84.08 327  ePcP    P        01 31 22.0 +1.9
      comp=Z,9.3nm,1.3s
PMOR  Pomariorio Ree    84.12 113  eT      T        03 03 47.9
      comp=Z,4.5nm,0.2s
PPT2  Papeete2          84.51 116  eLR     LR       01 58 00.9
      comp=Z,196nm,24.8s
PPT2                               eLR     LR       01 58 00.9
      comp=Z,262nm,25.0s
SDCO  Great Sand Dun    84.57  47  P       P        01 31 22.1 -1.1
      baz=312
SOKA  Soboth            84.62 326  eP      P        01 31 23.7 +0.8
      comp=Z,13nm,1.2s
TUC   Tucson            84.77  54  P       P        01 31 23.2 -0.8
      baz=309
ECSD  EROS Data Cent    85.28  38  P       P        01 31 25.7 -0.5
ECSD                               IAmb    IAmb     01 31 28.9
      comp=Z,5.0nm,0.8s
ECSD  EROS Data Cent    85.28  38  P       P        01 31 24.8 -1.4
      baz=317
MYKA  Terra Mystica     85.28 327  eP      P        01 31 26.1 -0.2
      comp=Z,5.5nm,0.9s
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T25A	Trinidad	85.62	47	P	P	01 31 27.3	-1.0
	baz=312						
ABTA	Abfaltersbach	85.69	327	*e*P	P	01 31 28.5	+0.2
	comp=Z,2.5nm,0.7s						
BGES	Gesves	85.79	333	*d*P	P	01 31 29.2	+0.5
ANMO	Albuquerque	85.83	49	P	P	01 31 29.2	-0.2
	baz=311						
MOTA	Moosalm	85.84	328	*e*PcP	P	01 31 30.4	+1.2
	comp=Z,12nm,1.5s						
RETA	Reutte	85.88	329	*e*P	P	01 31 30.1	+0.9
	comp=Z,8.9nm,1.0s						
BMRD	Maredsous	85.98	333	*d*P	P	01 31 30.2	+0.7
	comp=Z,9.2nm,1.1s						
SPMN	Marine on St.	86.01	35	P	P	01 31 28.1	-1.7
	baz=319						
KBN	Korca	86.16	319	P	P	01 31 31.7	+1.0
KBN	Korca	86.16	319	P	P	01 31 31.7	+1.0
KBN				pmax	pmax		
	comp=Z,48nm,1.3s						
BFO	Black Forest	86.22	330	P	P	01 31 30.4	-0.4
BFO				IAmb	IAmb	01 31 32.4	
	comp=Z,13nm,1.0s						
BFO	Black Forest	86.22	330	P	P	01 31 30.4	-0.4
BFO				pmax	pmax		
	comp=Z,13nm,1.0s						
TAOE	Nuku Hiva Isla	86.34	104	*e*LR	LR	01 58 50.8	
	comp=Z,249nm,26.9s						
DAVA	Damuels	86.41	329	*e*PcP	P	01 31 32.9	+1.0
	comp=Z,15nm,1.3s						
121A	Cookes Peak, D	86.57	52	P	P	01 31 34.4	+1.3
	baz=311						
SCHQ	Schefferville	86.75	16	P	P	01 31 34.4	+1.1
	comp=Z,4.4nm,0.8s,baz=297,slow=3.4,SNR=3.8						
SCHQ				LR	LR	02 13 56.0	
	comp=Z,133nm,18.7s,baz=183,slow=38						
	comp=Z,4.4nm,0.8s						
CBKS	Cedar Bluff	87.15	43	P	P	01 31 36.6	+1.0
	baz=315						
ITM	Ithomi	87.95	316	IAmb	IAmb	01 31 43.6	
	comp=Z,7.6nm,1.0s						
TBI	Tubuai	88.28	120	*e*LR	LR	01 59 45.2	
	comp=Z,863nm,27.8s						
TBI				*e*LR	LR	01 59 45.5	
	comp=Z,3µm,21.8s						
KSU1	Kansas State U	88.64	41	P	P	01 31 44.0	+1.3
	baz=317						
TX32	Lajitas Array	91.33	52	IAmb	IAmb	01 32 15.6	
	comp=Z,14nm,1.8s						
TXAR	Lajitas Array	91.34	52	P	P	01 31 57.9	+2.4
	comp=Z,1.0nm,0.7s,baz=298,slow=3.1,SNR=16						
	comp=Z,1.0nm,0.7s						
TXAR	Lajitas Array	91.34	52	P	P	01 31 56.1	+0.6
TUL1	Leonard	91.41	43	P	P	01 31 55.5	-0.1
	baz=317						
CCM	Cathedral Cave	92.22	39	P	P	01 31 58.9	-0.4
	baz=320						
AAM	Ann Arbor	92.38	31	P	P	01 32 01.5	+1.5
	baz=325						
MIAR	Mount Ida	93.64	42	P	P	01 32 07.6	+1.7
	baz=318						
LBNH	Lisbon	95.07	23	P	P	01 32 10.4	-1.9
	baz=334						
ZAIG	Zacatecas	96.51	56	P	P	01 32 18.5	-1.1
ZAIG				IAmb	IAmb	01 32 19.7	
	comp=Z,10nm,1.7s						
ESDC	Sonseca Array	98.26	333	LR	LR	02 20 37.3	
	comp=Z,158nm,18.9s,baz=327,slow=38						
NHSC	New Hope	101.54	34	P	Pdif	01 32 40.3	-1.2
	baz=327						
TORD	Torodi Ar. Bea	117.90	314	PKP	PKPdf	01 37 35.8	-0.6
	comp=Z,1.2nm,1.0s,baz=334,slow=2.7,SNR=5.6						
BOSA	Boshof	125.82	258	PKP	PKPdf	01 37 50.2	-1.1
	comp=Z,4.0nm,1.1s,baz=313,slow=5.5,SNR=3.3						
BOAV	Boa Vista	137.18	32	*e*P	PKiKP	01 38 18.0	+3.0
ETMB	Extrema	144.40	50	PKPdf	PKPbc	01 38 24.7	+0.2
ETMB	Extrema	144.40	50	*e*P	PKiKP	01 38 30.1	+0.5
SAML	Samuel	145.54	45		PKPdf	01 38 26.5	-1.5
SAML	Samuel	145.54	45	PKIKP	PKPdf	01 38 26.5	-1.5
H03N2	Juan Fernandez	147.37	98	T	T	04 23 15.5	
	baz=290,slow=76,SNR=12						
H03N3	Juan Fernandez	147.38	98	T	T	04 23 22.2	
	baz=290,slow=76,SNR=15						
H03N1	Juan Fernandez	147.38	98	T	T	04 23 25.5	
	baz=290,slow=76,SNR=14						
LPAZ	La Paz	147.79	61	PKPbc	PKiKP	01 38 37.2	-0.1
	comp=Z,5.1nm,0.7s,baz=328,slow=2.6,SNR=21						
LPAZ	La Paz	147.79	61	PKPbc	PKPdf	01 38 32.6	+0.1
NPGB	Novo Progresso	147.86	31	*e*P	PKiKP	01 38 36.5	-0.3
BBSD	Serra de San D	153.51	51	*e*P	PKPbc	01 38 45.8	-2.5

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*JMA **05** 01:33:08.8±0.2, 35°.7N±0°.6×140°.7E±0°.8, h51^{km}±1^{km}, MV3.1/37, NEAR CHOSHI CITY*
JMA Felt I J1 at NEAR CHOSHI CITY .
*IDC **05** 01:33:09.8±2.0, 35°.72N×140°.72E, h49^{km}±19^{km}, mb3.4/8, mbtmp3.7/11, ML3.3/3, MS3.2/1, Error ellipse: s-maj=30.3km s-min=12.2km az=85.0*
ISC 05 01:33:09.5±0.9,**35°.72N**±0°.05×**140°.79E**±0°.07,**h48**^{km}±6^{km}, **n24,**σ**0^{s}.98**/26,**mb3.6**/8,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.06	102	P	Pn	01 33 16.7	-0.2
CHOJ				S	Sn	01 33 22.5	+0.3
JSMT	Sammumatsuo	0.28	255	*i* P	Pn	01 33 17.8	-0.5
JSMT				S	Sn	01 33 25.0	+0.5
JIHU	Itakohorinouch	0.33	320	*i* P	Pn	01 33 18.3	-0.5
JIHU				S	Sn	01 33 25.6	+0.4
JCN	Nagara	0.56	238	P	Pn	01 33 21.2	-0.2
JCN				S	Sn	01 33 29.2	-0.6
JYT	Yasato	0.70	317	P	Pn	01 33 21.8	-1.4
BSO4	Boso 4	0.81	207	P	Pn	01 33 24.4	-0.1
JHO	Hitachi	0.91	349	P	Pn	01 33 25.4	-0.6
BSO3	Boso 3	0.94	194	P	Pn	01 33 26.2	0.0
JAG	Ashikaga	1.29	304	*i* P	Pn	01 33 30.0	-1.2
MJAR	Matsushiro Arr	2.24	292	P	Pn	01 33 43.6	-0.6
	1.9nm,0.3s,baz=97,slow=14,SNR=93						
MJAR				S	Sn	01 34 13.7	+3.0
	16nm,0.4s,baz=202,slow=18,SNR=3.3						
	7.4nm,0.3s						
JHJ	Hachijo jima 2	2.72	198	P	Pn	01 33 49.2	-1.5
	17nm,0.3s,baz=268,slow=22,SNR=1.6						
JHJ				S	Sn	01 34 23.3	+0.9
	134nm,0.3s,baz=327,slow=22,SNR=6.9						
	38nm,0.3s						
ASAJ	Asahikawa	8.51	9	P	Pn	01 35 09.5	-0.5
	0.6nm,0.3s,baz=286,slow=30,SNR=1.7						
	7.0nm,0.8s						
USRK	Ussuriysk Ar.	10.83	324	LR	LR	01 39 30.0	
	comp=Z,126nm,19.4s,baz=287,slow=35						
SONM	Songino Array	28.13	306	P	P	01 38 57.0	-0.1
	0.5nm,0.7s,baz=80,slow=7.2,SNR=3.6						
	0.5nm,0.7s						
H11S1	WAKE ISLAND Hy	28.61	120	T	T	02 08 57.9	
	baz=308						
H11S3	WAKE ISLAND Hy	28.61	120	T	T	02 08 60.0	
	baz=308						
H11S2	WAKE ISLAND Hy	28.62	120	T	T	02 08 59.8	
	baz=308						
ZALV	Zalesovo Beam	42.44	313	P	P	01 40 59.4	0.0
	0.6nm,0.6s,baz=101,slow=12,SNR=2.2						
	0.6nm,0.6s						
MKAR	Makanchi Array	44.40	303	P	P	01 41 15.0	-0.4
	0.7nm,0.6s,baz=88,slow=10,SNR=11						
	0.7nm,0.6s						
ILAR	Eielson Array	50.88	32	P	P	01 42 06.5	+1.2
	0.5nm,0.8s,baz=273,slow=7.0,SNR=4.1						
	0.5nm,0.8s						
WRA	Warramunga Arr	55.69	187	P	P	01 42 40.1	-0.9
	0.4nm,0.4s,baz=1.0,slow=7.5,SNR=10						
	0.4nm,0.4s						
ASAR	Alice Springs	59.42	187	P	P	01 43 07.9	+0.7
	0.2nm,0.5s,baz=16,slow=11,SNR=6.5						
	0.2nm,0.5s						
FINES	FINESS Array B	69.74	332	P	P	01 44 13.5	-0.6
	2.1nm,1.0s,baz=56,slow=7.1,SNR=3.9						
	2.1nm,1.0s						
NOA	NORSAR Array B	75.20	337	P	P	01 44 46.7	-0.1
	1.1nm,0.9s,baz=40,slow=5.8,SNR=2.2						
	1.1nm,0.9s						

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*IDC **05** 01:35:36.5±0.9, 30°.67N×141°.63E, h0^{km}, mb3.8/12, mbtmp3.8/15, ML3.2/3, MS3.4/3, Error ellipse: s-maj=34.8km s-min=16.8km az=79.0*
*NEIC **05** 01:35:39.1±0.8, 30°.87N±0°.06×142°.0E±0°.2, h22^{km}±6^{km}, mb4.2/13, Error ellipse: s-maj=21.1km s-min=7.8km az=76.0*
ISC 05 01:35:41.5±0.7,**30°.79N**±0°.07×**141°.7E**±0°.1,**h35**^{km},**n40,** σ**1^{s}.23**/40,**mb4.0**/18,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.82	326	Pn	Pn	01 36 24.3	+0.2
	9.3nm,0.3s,baz=65,slow=15,SNR=2.0						
JHJ				Sn	Sn	01 36 57.7	+0.9
	18nm,0.3s,baz=43,slow=19,SNR=4.5						
	77nm,0.6s						
JCJ	Chichijima	3.71	173	Pn	Pn	01 36 37.0	+0.7
	4.1nm,0.3s,baz=307,slow=22,SNR=2.0						
JCJ				Sn	Sn	01 37 17.6	-1.2
	31nm,0.3s,baz=271,slow=23,SNR=8.4						
JCJ	Chichijima	3.71	173	Pn	Pn	01 36 35.7	-0.6
JSG	Sagara	4.86	324	Pn	Pn	01 36 52.8	+0.7
JGF	Kuroka	6.00	324	Pn	Pn	01 37 06.3	-1.5
MJAR	Matsushiro Arr	6.42	334	Pn	Pn	01 37 15.0	+1.5
	0.2nm,0.3s,baz=152,slow=10,SNR=10						
	9.1nm,0.8s						
MAJO	Matsushiro	6.42	334		Pn	01 37 12.8	-0.7
MJB9	Matsu-Tunnel	6.42	334		Pn	01 37 13.1	-0.5
JMM	Marumori	7.10	354		Pn	01 37 20.6	-2.2
JNU	Nakatsue	9.45	287	LR	LR	01 41 27.2	
	comp=Z,174nm,18.1s,baz=120,slow=37						
KSRS	Korea Array	13.18	304	Pn	P	01 38 52.6	-2.9
	0.2nm,0.3s,baz=114,slow=15,SNR=5.0						
KSRS				LR	LR	01 43 45.2	
	comp=Z,100nm,18.8s,baz=115,slow=37						
USRK	Ussuriysk Ar.	15.42	333	Pn	Pn	01 39 15.5	-0.8
	0.2nm,0.3s,baz=129,slow=11,SNR=2.6						
	1.9nm,0.7s						
KLR	Kul'dur	19.89	341	P	P	01 40 10.4	+0.6
	1.8nm,0.6s,baz=189,slow=3.2,SNR=8.9						
	1.8nm,0.6s						
BJT	Baijiatuau	22.67	301	P	P	01 40 38.7	-1.1
BJT				IAmb	IAmb	01 41 02.9	
	comp=Z,6.8nm,0.9s						
HIA	Hailar	24.80	324	P	P	01 41 00.1	0.0
HIA				IAmb	IAmb	01 41 02.6	
	comp=Z,8.7nm,1.1s						
PET	Petropavlovsk	25.44	24	P	P	01 41 02.0	-3.8
ULN	Ulaanbaatar	31.41	313	P	P	01 41 58.9	-0.4
ULN				IAmb	IAmb	01 42 02.8	
	comp=Z,1.8nm,0.7s						
SONM	Songino Array	31.81	312	P	P	01 42 04.3	+1.4
	comp=Z,0.7nm,0.8s,baz=98,slow=8.1,SNR=4.4						
	comp=Z,0.7nm,0.8s						
ZALV	Zalesovo Beam	46.45	317	P	P	01 44 03.9	-0.8
	comp=Z,0.6nm,0.5s,baz=79,slow=7.8,SNR=2.5						
	comp=Z,0.6nm,0.5s						
MK31	Makanchi Array	47.83	307	P	P	01 44 16.6	+0.9
MK31				IAmb	IAmb	01 44 17.0	
	comp=Z,1.3nm,0.8s						
MKAR	Makanchi Array	47.83	307	P	P	01 44 16.6	+0.9
	comp=Z,1.1nm,0.6s,baz=89,slow=9.6,SNR=14						
	comp=Z,1.1nm,0.6s						
MAKZ	Makanchi	48.05	307	P	P	01 44 18.8	+1.5
MAKZ				IAmb	IAmb	01 44 28.1	
	comp=Z,2.1nm,1.1s						
KURK	Kurchatov	50.12	312	P	P	01 44 32.9	-0.2
KURK				IAmb	IAmb	01 44 34.7	
	comp=Z,4.9nm,1.1s						
WR0	Warramunga Arr	50.92	189	P	P	01 44 39.1	-0.3
WR0				IAmb	IAmb	01 45 07.3	
	comp=Z,9.6nm,1.4s						
WRA	Warramunga Arr	50.93	189	P	P	01 44 38.8	-0.7
	comp=Z,1.5nm,0.5s,baz=5.0,slow=7.7,SNR=17						
	comp=Z,1.5nm,0.5s						
WRA	Warramunga Arr	50.93	189	P	P	01 44 39.1	-0.4
ASAR	Alice Springs	54.66	189	P	P	01 45 06.4	-0.6
	comp=Z,0.7nm,0.5s,baz=4.5,slow=5.9,SNR=16						
	comp=Z,0.7nm,0.5s						
ILAR	Eielson Array	54.72	30	P	P	01 45 08.0	+1.0
	comp=Z,0.3nm,0.7s,baz=263,slow=7.2,SNR=2.3						
	comp=Z,0.3nm,0.7s						
KK31	Karatay Array	56.60	304	P	P	01 45 22.2	+1.3
KKAR	Karatay Array	56.60	304	P	P	01 45 21.4	+0.5
GAR	Garm	57.74	299	P	P	01 45 29.6	+0.5
ARU	Arti	61.25	321	P	P	01 45 52.6	-0.2
ABKAR	Akbulak array	62.23	313	P	P	01 46 00.3	+0.8
YKA	Yellowknife Ar	69.13	29	P	P	01 46 45.6	+1.8
	comp=Z,0.3nm,0.8s,baz=291,slow=5.2,SNR=2.3						
	comp=Z,0.3nm,0.8s						
FINES	FINESS Array B	74.45	333	P	P	01 47 16.7	+0.9
	comp=Z,1.3nm,0.6s,baz=75,slow=5.0,SNR=13						
	comp=Z,1.3nm,0.6s						
AKASG	Malin Array Be	79.39	323	P	P	01 47 44.4	+0.6
	comp=Z,0.4nm,0.4s,baz=52,slow=5.3,SNR=2.8						
	comp=Z,0.4nm,0.4s						
NB2	NORSAR Subarra	80.03	338	P	P	01 47 47.6	+0.5
	comp=Z,0.8nm,0.7s,baz=41,slow=5.3						
NOA	NORSAR Array B	80.03	338	P	P	01 47 47.8	+0.7
	comp=Z,1.5nm,0.8s,baz=41,slow=5.2,SNR=5.0						
	comp=Z,1.5nm,0.8s						
BRTR	Keskin Array B	83.17	312	P	P	01 48 05.3	+1.0
	comp=Z,1.1nm,0.8s,baz=74,slow=5.3,SNR=8.4						
	comp=Z,1.1nm,0.8s						
BORG	Borgarnes	83.85	353	LR	LR	02 27 30.7	
	comp=Z,47nm,18.2s,baz=239,slow=37						

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*NNC **05** 01:44:21.8±0.5, 42°.79N×78°.43E, h0^{km}, mb3.5, mpv3.6, Error ellipse: s-maj=4.2km s-min=1.9km az=167.0*
*KRNET **05** 01:44:23.0±0.1, 42°.84N×78°.44E, h24^{km}, mb3.0*
*SOME **05** 01:44:23.3, 42°.83N×78°.35E, h10^{km}*
*KNET **05** 01:44:24.5±0.5, 42°.65N×78°.21E, h5^{km}±4^{km}, ml2.6, Error ellipse: s-maj=6.2km s-min=3.5km az=163.0*
ISC 05 01:44:23.7±0.9,**42°.83N**±0°.02×**78°.41E**±0°.02,**h15**^{km}±6^{km}, **n87,**σ**1^{s}.24**/158,**33C-16D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.23	359	P	Pg	01 44 28.9	-0.1
	55nm,0.1s						
SATY				S	Sg	01 44 32.9	+0.5
	2µm,0.1s						
SATY	Saty	0.23	359	⇑*e*P	Pg	01 44 28.8	-0.1
	baz=53						
SATY				⇑*e*S	Sg	01 44 32.9	+0.5
	baz=53						
SATY	Saty	0.23	359	⇑*e*P	Pg	01 44 28.8	-0.1
	53nm,0.1s						
SATY				*e*S	Sg	01 44 32.9	+0.5
	2µm,0.1s						
ZHN	Zhinishke	0.34	3	P	Pg	01 44 30.4	-0.3
	54nm,0.2s						
ZHN				S	Sb	01 44 35.8	-1.0
	2µm,0.2s						
ZHN	Zhinishke	0.34	3	*e*P	Pg	01 44 30.4	-0.3
	baz=59						
ZHN				*e*S	Sb	01 44 35.7	-1.0
	baz=59						
ZHN	Zhinishke	0.34	3	*e*P	Pg	01 44 30.4	-0.3
	54nm,0.2s						
ZHN				*e*S	Sb	01 44 35.8	-1.0
	2µm,0.2s						
PRZ	Przheval'sk	0.35	182	⇑*i*P	Pg	01 44 30.4	-0.5
	baz=85						
PRZ				⇑*i*S	Sg	01 44 35.9	0.0
	baz=85						
UZB	Uzynbulak	0.55	55	P	Pg	01 44 33.4	-1.2
	27nm,0.2s						
UZB				S	Sg	01 44 40.6	-1.3
	187nm,0.1s						
UZB	Uzynbulak	0.55	55	*e*P	Pg	01 44 33.3	-1.2
	baz=54						
UZB				*e*S	Sg	01 44 40.6	-1.3
	baz=54						
UZB	Uzynbulak	0.55	55	*e*P	Pg	01 44 33.3	-1.2
	27nm,0.2s						
UZB				*e*S	Sg	01 44 40.6	-1.3
	187nm,0.1s						
ANVS	Anan'yevo	0.55	265	⇑*i*P	Pg	01 44 34.3	-0.3
	baz=65						
ANVS				⇑*i*S	Sg	01 44 42.7	+0.7
	baz=65						
KPKS	Kokpek	0.66	17	P	Pg	01 44 35.7	-1.0
	17nm,0.1s						
KPKS				S	Sg	01 44 44.5	-1.1
	148nm,0.2s						
KPKS	Kokpek	0.66	17	*e*P	Pg	01 44 35.7	-1.0
	baz=16						
KPKS				*e*S	Sg	01 44 44.5	-1.1
	baz=16						
KPKS	Kokpek	0.66	17	*e*P	Pg	01 44 35.7	-1.0
	17nm,0.1s						
KPKS				*e*S	Sg	01 44 44.5	-1.1
	148nm,0.2s						
KURS	Kuram	0.68	345	P	Pg	01 44 36.3	-0.7
	7.4nm,0.1s						
KURS				S	Sg	01 44 45.6	-0.4
	104nm,0.2s						
KURS	Kuram	0.68	345	*e*P	Pg	01 44 36.3	-0.7
	baz=43						
KURS				*e*S	Sg	01 44 45.6	-0.4
	baz=43						
KURS	Kuram	0.68	345	*e*P	Pg	01 44 36.3	-0.7
	7.4nm,0.1s						
KURS				*e*S	Sg	01 44 45.6	-0.4
	104nm,0.2s						
SHLS	Shalkode	0.84	67	P	Pn	01 44 43.6	+2.6
	29nm,0.1s						
SHLS				S	Sn	01 44 58.2	+5.1
	119nm,0.3s						
SHLS	Shalkode	0.84	67	*e*P	Pn	01 44 43.6	+2.6
	baz=73						
SHLS				*e*S	Sn	01 44 58.2	+5.1
	baz=73						
SHLS	Shalkode	0.84	67	*e*P	Pn	01 44 43.6	+2.6
	29nm,0.1s						
SHLS				*e*S	Sn	01 44 58.2	+5.1
	119nm,0.3s						
PDGK	Podgornoye	0.93	57	P	Pg	01 44 39.8	-2.0
	7.4nm,0.1s						
PDGK				S	Sg	01 44 51.8	-2.3
	30nm,0.3s						
PDGK	Podgornoye	0.93	57	⇓P	Pg	01 44 39.8	-2.0
	1.2nm,0.1s						
PDGK				⇓S	Sg	01 44 51.4	-2.6
	35nm,0.5s						
KOTS	Kotyrbulak	1.03	293	P	Pg	01 44 42.7	-1.0
	20nm,0.2s						
KOTS				S	Sg	01 44 56.5	-0.8
	56nm,0.2s						
KOTS	Kotyrbulak	1.03	293	*e*P	Pg	01 44 42.7	-1.0
	baz=92						
KOTS				*e*S	Sg	01 44 56.5	-0.8
	baz=92						
KOTS	Kotyrbulak	1.03	293	*e*P	Pg	01 44 42.7	-1.0
	20nm,0.2s						
KOTS				*e*S	Sg	01 44 56.5	-0.8
	56nm,0.2s						
MDOK	Medeo	1.05	289	⇓P	Pg	01 44 42.3	-1.8
	3.9nm,0.2s						
MDOK				Pg	Pg	01 44 42.8	-1.3
	19nm,0.2s						
MDOK				Lg	Lg	01 44 56.7	
	12nm,0.2s						
MDOK				⇓S	Sg	01 44 57.3	-0.6
	3.2nm,0.2s						
MDOK	Medeo	1.05	289	*e*P	Pg	01 44 42.8	-1.3
	baz=88						
MDOK				*e*S	Sg	01 44 56.7	-1.2
	baz=88						
MDOK	Medeo	1.05	289	*e*P	Pg	01 44 42.8	-1.3
	19nm,0.2s						
MDOK				*e*S	Sg	01 44 56.7	-1.2
	12nm,0.2s						
TNSS	Tian-Shan	1.10	281	P	Pg	01 44 43.5	-1.4
	34nm,0.1s						
TNSS				S	Sg	01 44 58.1	-1.2
	11nm,0.1s						
TNSS	Tian-Shan	1.10	281	*e*P	Pg	01 44 43.5	-1.4
	34nm,0.1s						
TNSS				*e*S	Sg	01 44 58.1	-1.2
	11nm,0.1s						
KDJ	Kajisay	1.15	233	⇑*i*P	Pb	01 44 44.4	-1.0
	baz=33						
KDJ				⇑*i*S	Sg	01 45 00.1	-0.8
	baz=33						
AAA	Alma-Ata	1.16	289	P	Pb	01 44 45.0	-0.5
	20nm,0.1s						
AAA				S	Sb	01 45 00.4	0.0
	35nm,0.1s						
AAA	Alma-Ata	1.16	289	*e*P	Pb	01 44 45.0	-0.5
	20nm,0.1s						
AAA				*e*S	Sb	01 45 00.4	0.0
	35nm,0.1s						
TARG	Taragay, Kyrgy	1.19	202	⇓*i*P	Pb	01 44 45.0	-1.2
	baz=3.0						
TARG				⇓*i*S	Sg	01 45 01.1	-1.2
	baz=3.0						
BLB	Baldybastay	1.27	2	P	Pn	01 44 46.6	-0.4
	18nm,0.1s						
BLB				S	Sb	01 45 03.1	-0.4
	78nm,0.2s						
IZV	Izvestkoviy	1.34	279	P	Pn	01 44 48.0	0.0
	9.6nm,0.2s						
IZV				S	Sb	01 45 05.5	-0.1
	32nm,0.1s						
IZV	Izvestkoviy	1.34	279	*e*P	Pn	01 44 48.0	0.0
	baz=79						
IZV				*e*S	Sb	01 45 05.5	-0.1
	baz=79						
IZV	Izvestkoviy	1.34	279	*e*P	Pn	01 44 48.0	0.0
	9.6nm,0.2s						
IZV				*e*S	Sb	01 45 05.5	-0.1
	32nm,0.1s						
ARXS	Arharly	1.45	343	P	Pb	01 44 50.1	-0.2
	7.2nm,0.1s						
ARXS				S	Sb	01 45 09.1	+0.6
	43nm,0.1s						
ARXS	Arharly	1.45	343	*e*P	Pb	01 44 50.1	-0.2
	7.2nm,0.1s						
ARXS				*e*S	Sb	01 45 09.1	+0.6
	43nm,0.1s						
CHKK	Chushkaly	1.46	315	P	Pn	01 44 49.9	+0.4
	31nm,0.1s						
CHKK				S	Sn	01 45 08.8	+0.4
	72nm,0.3s						
CHKK	Chushkaly	1.46	315	*e*P	Pn	01 44 49.9	+0.4
	baz=14						
CHKK				*e*S	Sn	01 45 08.8	+0.4
	baz=14						
CHKK	Chushkaly	1.46	315	*e*P	Pn	01 44 49.9	+0.4
	31nm,0.1s						
CHKK				*e*S	Sn	01 45 08.8	+0.4
	72nm,0.3s						
MTBS	Maitube	1.49	282	P	Pn	01 44 50.2	+0.2
	8.0nm,0.1s						
MTBS				S	Sn	01 45 09.4	+0.3
	38nm,0.2s						
MTBS	Maitube	1.49	282	*e*P	Pn	01 44 50.2	+0.2
	baz=82						
MTBS				*e*S	Sn	01 45 09.5	+0.3
	baz=82						
MTBS	Maitube	1.49	282	*e*P	Pn	01 44 50.2	+0.2
	8.0nm,0.1s						
MTBS				*e*S	Sn	01 45 09.4	+0.3
	38nm,0.2s						
KTBS	Karatobe	1.54	305	P	Pn	01 44 51.4	+0.7
	21nm,0.2s						
KTBS				S	Sn	01 45 11.4	+1.0
	57nm,0.1s						
KTBS	Karatobe	1.54	305	*e*P	Pn	01 44 51.4	+0.7
	baz=5.0						
KTBS				*e*S	Sn	01 45 11.4	+1.0
	baz=5.0						
KTBS	Karatobe	1.54	305	*e*P	Pn	01 44 51.4	+0.7
	21nm,0.2s						
KTBS				*e*S	Sn	01 45 11.4	+1.0
	57nm,0.1s						
KTMS	Ketmen	1.55	66	P	Pn	01 44 50.8	0.0
	5.5nm,0.1s						
KTMS				S	Sn	01 45 10.4	-0.3
	11nm,0.2s						
KTMS	Ketmen	1.55	66	*e*P	Pn	01 44 50.8	0.0
	baz=66						
KTMS				*e*S	Sn	01 45 10.4	-0.3
	baz=66						
KTMS	Ketmen	1.55	66	*e*P	Pn	01 44 50.8	0.0
	5.5nm,0.1s						
KTMS				*e*S	Sn	01 45 10.4	-0.3
	11nm,0.2s						
ULHL	Ulahol	1.71	251	⇑P	Pn	01 44 53.2	+0.1
	5.1nm,0.1s						
ULHL				⇑S	Sn	01 45 15.5	+0.7
	38nm,0.2s						
ULHL	Ulahol	1.71	251	⇑*i*P	Pn	01 44 53.9	+0.8
	baz=51						
ULHL				⇑*i*S	Sb	01 45 16.6	+0.3
	baz=51						

DJR	Jarkent	1.80	33	P	Pn	01 44 55.3	+1.0
	4.4nm,0.1s						
DJR				S	Sb	01 45 18.5	-0.4
	14nm,0.2s						
DJR	Jarkent	1.80	33	eP	Pn	01 44 55.3	+1.0
	4.4nm,0.1s						
DJR				eS	Sb	01 45 18.5	-0.4
	14nm,0.2s						
KST	Kastek	1.81	278	P	Pb	01 44 56.0	-0.6
	12nm,0.2s						
KST				S	Sb	01 45 19.3	+0.1
	35nm,0.2s						
KST	Kastek	1.81	278	eP	Pb	01 44 56.0	-0.6
	baz=77						
KST				eS	Sb	01 45 19.3	+0.1
	baz=77						
KST	Kastek	1.81	278	eP	Pb	01 44 56.0	-0.6
	12nm,0.2s						
KST				eS	Sb	01 45 19.3	+0.1
	35nm,0.2s						
KUU	Kurty	1.85	306	P	Pn	01 44 56.2	+1.3
	6.6nm,0.2s						
KUU				S	Sn	01 45 19.6	+1.7
	89nm,0.3s						
KUU	Kurty	1.85	306	eP	Pn	01 44 56.2	+1.3
	baz=5.0						
KUU				eS	Sn	01 45 19.6	+1.7
	baz=5.0						
KUU	Kurty	1.85	306	eP	Pn	01 44 56.2	+1.3
	6.6nm,0.2s						
KUU				eS	Sn	01 45 19.6	+1.7
	89nm,0.3s						
DGS	Degeres	1.98	283	Pg	Pb	01 44 59.4	-0.1
	14nm,0.3s						
DGS				Lg	Lg	01 45 25.6	
	69nm,0.5s						
DGS	Degeres	1.98	283	eP	Pb	01 44 59.4	-0.1
	14nm,0.3s						
DGS				eS	Sb	01 45 25.6	+1.6
	69nm,0.5s						
TKM2	Tokmak 2	2.07	273	⇓P	Pb	01 45 00.7	-0.5
	15nm,0.3s						
TKM2				⇑S	Sb	01 45 28.6	+1.9
	24nm,0.1s						
TKM2	Tokmak 2	2.07	273	⇑Pg	Pb	01 45 00.6	-0.5
	2.4nm,0.2s						
TKM2				⇑Lg	Lg	01 45 28.4	
	25nm,0.3s						
TKM2	Tokmak 2	2.07	273	⇓iP	Pn	01 44 59.1	+1.0
	baz=73						
TKM2				⇓iS	Sn	01 45 25.0	+1.2
	baz=73						
KRBS	Karabastau	2.18	294	Pg	Pb	01 45 02.0	-0.9
	7.7nm,0.2s						
KRBS				Lg	Lg	01 45 29.5	
	20nm,0.3s						
KRBS	Karabastau	2.18	294	ePg	Pb	01 45 02.0	-0.9
	7.7nm,0.2s						
KRBS				eLg	Lg	01 45 29.5	
	20nm,0.3s						
NRN	Naryn	2.27	233	⇑iP	Pn	01 45 02.1	+1.1
	baz=33						
NRN				⇑iS	Sn	01 45 30.6	+1.7
	baz=33						
KBK	Karagaybulak	2.56	267	⇑P	Pb	01 45 07.7	-1.7
	6.2nm,0.2s						
KBK				⇑S	Sb	01 45 41.1	+0.4
	52nm,0.4s						
KBK	Karagaybulak	2.56	267	⇑iP	Pn	01 45 05.9	+1.1
	baz=67						
KBK				⇑iS	Sn	01 45 36.6	+0.9
	baz=67						
CHMS	Chumysh	2.69	275	⇑P	Pb	01 45 10.1	-1.5
	5.3nm,0.2s						
CHMS				⇑S	Sb	01 45 44.7	+0.3
	23nm,0.4s						
CHMS	Chumysh	2.69	275	⇓iP	Pn	01 45 07.7	+1.2
	baz=75						
CHMS				⇓iS	Sn	01 45 39.9	+1.0
	baz=75						
SGDS	Sogindy	2.84	284	Pg	Pb	01 45 14.1	0.0
	3.1nm,0.1s						
SGDS				Lg	Lg	01 45 50.5	
	10nm,0.3s						
AAK	Ala-Archa	2.89	267	⇓P	Pn	01 45 11.8	+2.5
	3.2nm,0.2s						
AAK	Ala-Archa	2.89	267	⇑eP	Pn	01 45 10.5	+1.1
	baz=67						
AAK				⇑iS	Sn	01 45 44.7	+0.7
	baz=67						
USP	Ospenovka	2.90	280	⇓P	Pn	01 45 11.8	+2.4
	3.5nm,0.2s						
USP	Ospenovka	2.90	280	⇑eP	Pn	01 45 10.5	+1.1
	baz=80						
USP				⇑iS	Sn	01 45 44.9	+0.9
	baz=80						
UCH	Uchtor	2.94	259	⇑iP	Pn	01 45 11.4	+1.1
	baz=59						
UCH				⇑iS	Sn	01 45 46.0	+0.4
	baz=59						
ARLS	Aral	3.18	254	⇓iP	Pn	01 45 14.5	+1.2
	baz=53						
ARLS				⇓iS	Sn	01 45 52.0	+0.9
	baz=53						
AML	Almayashu	3.56	260	⇑Lg	Lg	01 46 12.3	
	0.5nm,0.6s						
MRKS	Merke	3.82	270	Pg	Pb	01 45 31.2	+0.4
	2.5nm,0.3s						
MRKS				Lg	Lg	01 46 19.7	
	7.1nm,0.3s						
MRKS	Merke	3.82	270	ePg	Pb	01 45 31.2	+0.4
	2.5nm,0.3s						
MRKS				eLg	Lg	01 46 19.7	
	7.1nm,0.3s						
MK31	Makanchi Array	4.83	34	⇑Lg	Lg	01 46 50.6	
	0.4nm,0.4s						
KK31	Karatay Array	5.80	275	⇓Lg	Lg	01 47 23.9	
	0.4nm,0.3s,baz=88,slow=30,SNR=7.7						
OTUK	Ortayu	6.89	324	⇑Lg	Lg	01 47 56.3	
	1.0nm,0.5s						

CRAAG ***05*** *01:46:53.9, 36°.56N×6°.76E, Ml4.6, Algerie 04km SE Ain-Bouziane*

MOS ***05*** *01:46:53.9±1.3, 36°.58N×6°.66E, h13^{km}, mb4.8/49, Error ellipse: s-maj=6.2km s-min=3.2km az=62.8*

IDC ***05*** *01:46:54.7±0.5, 36°.57N×6°.70E, h0^{km}, mb4.2/28, mbtmp4.2/36, ML4.1/8, MS4.0/55, Error ellipse: s-maj=12.6km s-min=10.3km az=160.0*

GCMT ***05*** *01:46:55.8±0.6, 36°.59N±0°.03×6°.70E±0°.04, h14^{km}±2^{km}, MW4.8/78, Moment Tensor Solution. s4,c4; s78,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.00±.09; $M_{\theta\theta}$-0.95±.12; $M_{\phi\phi}$0.94±.13; $M_{r\theta}$-0.25±.21; $M_{\theta\phi}$-1.51±.09; $M_{\phi r}$-0.41±.23; Best double couple: $M_0$1.84400×10^{16} NP1:ϕ_s16.00000°,δ86.00000°,λ-14.00000°. NP2: ϕ_s107.00000°,δ76.00000°,λ-176.00000°. Principal axes: T 1.8100, Plg8.0000°, Azm62.0000°; N 0.0670, Plg75.0000°, Azm182.0000°; P -1.8780, Plg13.0000°, Azm330.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***05*** *01:46:55.8±1.9, 36°.55N±0°.04×6°.74E±0°.08, h10^{km}±4^{km}, mb4.7/79 Error ellipse: s-maj=9.1km s-min=5.0km az=83.0*

LDG ***05*** *01:46:56.5, 36°.42N×6°.71E, h30^{km}*

MED_RC ***05*** *01:46:56.0±0.7, 36°.53N×6°.69E, h10^{km}, MW4.7/19, Moment Tensor Solution.Mantle waves: s19,c31; Duration: 1^{s}1 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.31±.06; $M_{\theta\theta}$-0.18±.08; $M_{\phi\phi}$0.49±.05; $M_{r\theta}$-0.53±.20; $M_{\theta\phi}$-1.02±.04; $M_{\phi r}$0.23±.16; Best double couple: $M_0$1.21000×10^{16} NP1:ϕ_s102.00000°,δ85.00000°,λ-150.00000°. NP2:ϕ_s9.00000°,δ60.00000°,λ-6.00000°. Principal axes: T 1.3800, Plg17.0000°, Azm232.0000°; N -0.3300, Plg60.0000°, Azm111.0000°; P -1.0500, Plg25.0000°, Azm330.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

CNRM ***05*** *01:46:59.7, 36°.47N×6°.19E, h0^{km}*

ISC 05 01:46:55.1±0.8**, 36°.60N**±0°.03×**6°.71E**±0°.03**, h9**^{km}±4^{km}**, n552,** σ**2^{s}27**/564**, mb4.6**/94**, MS4.1**/51**, 41C-29D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CKFL	Kef-Lekhel	0.20	178	P	Pg	01 46 58.4	-0.8
CAEH	'Ain El Ouahch	0.22	31	P	Pg	01 46 59.5	0.0
CASM	Ain Smara	0.38	208	P	Pg	01 47 01.9	-0.6
CMAH	Djebel Manchou	0.57	87	P	Pg	01 47 05.3	-0.9
DFRA	Djebel Bou Aff	0.67	266	P	Pb	01 47 09.2	+0.1
ABSA	Djebel Ababsia	0.70	117	P	Pg	01 47 07.8	-0.8
CKHR	Kef el Ahmar	1.13	240	P	Pg	01 47 07.7	-9.0
SET	Setif	1.13	250	P	Pb	01 47 17.0	+0.2
KEST	Kesra	2.30	111	Pn	Pn	01 47 33.0	-0.3
	182nm,0.3s,baz=248,slow=4.0,SNR=316						
KEST				Sn	Sn	01 48 00.1	-1.7
	74nm,0.3s,baz=88,slow=9.6,SNR=5.7						
	440nm,0.4s						
KEST	Kesra	2.30	111	Pn	Pn	01 47 32.8	-0.5
ETOS	Mallorca	4.41	317	P	Pn	01 48 03.4	+1.1
ETOS				S	Sn	01 48 51.7	-2.1
EANR	'Ain N'Sour	4.58	264	P	Pn	01 48 03.4	-1.2
EIBI	Ibiza	4.89	301	P	Pn	01 48 10.6	+1.7
EIBI				S	Sn	01 49 04.9	-0.7
RAFF	Raffo Rosso	6.16	82		Pn	01 48 26.7	+0.4
PGF	Pioggiola	6.20	16	ePn	Pn	01 48 26.1	-0.8
PGF				eSn	Sn	01 49 34.1	-3.9
	108nm,0.4s						
VAE	Valguarnera	6.22	80	Pn	Pn	01 48 29.3	+2.1
	2.9nm,0.3s,baz=71,slow=4.1,SNR=17						
VAE				Sn	Sn	01 49 41.2	+2.7
	1.7nm,0.3s,baz=65,slow=8.7,SNR=2.0						
VAE				LR	LR	01 51 25.3	
	comp=Z,1µm,18.5s,baz=319,slow=44						
	20nm,0.6s						
CART	Cartagena	6.24	281		Pn	01 48 28.6	+1.2
CART	Cartagena	6.24	281	P	Pn	01 48 27.0	-0.4
CART	Cartagena	6.24	281	P	Pn	01 48 27.9	+0.6
CART				S	Sn	01 49 40.0	+1.1
EMUR	La Murta	6.46	283	P	Pn	01 48 32.0	+1.6
EMUR				S	Sn	01 49 44.7	+0.2
LMR	La Mourre	6.73	359	ePn	Pn	01 48 32.8	-1.3
	SNR=1.0						
LMR				eSg	Sn	01 49 46.5	-4.4
	110nm,0.2s						
ECHE	Chera	6.75	299	P	Pn	01 48 35.7	+1.2
TLOR	Lorca, Murcia	6.79	281	P	Pn	01 48 36.4	+1.4
ETOB	Tobarra	6.87	290	P	Pn	01 48 38.2	+2.2
ENIJ	Nijar	7.17	276	P	Pn	01 48 40.8	+0.7
ENIJ				S	Sn	01 50 01.7	0.0
LATE	Laterza	7.18	32		Pn	01 48 39.8	-0.6
SBF	Sospel	7.28	4	ePn	Pn	01 48 40.8	-0.9
	SNR=1.0						
SBF				eSn	Sn	01 49 59.8	-4.7
	206nm,0.3s,SNR=1.0						
SBF	Sospel	7.28	4	P	Pn	01 48 40.8	-0.9
SMRF	Simiane la Rot	7.42	354	ePn	Pn	01 48 42.3	-1.3
	SNR=1.0						
SMRF				eSn	Sn	01 50 04.6	-3.4
	18nm,0.3s						
CEL	Celeste	7.49	74	Pn	Pn	01 48 43.1	-1.5
CESX	Cesi	7.52	35	Pn	Pn	01 48 47.0	+2.0
PAOL	Paolisi	7.56	52	Pn	Pn	01 48 45.2	-0.4
MTLF	Montolieu	7.57	334	ePn	Pn	01 48 44.1	-1.5
	SNR=1.0						
MTLF				eSn	Sn	01 50 05.3	-6.2
	14nm,0.2s						
ISO	Isola	7.58	2	P	Pn	01 48 46.7	+0.8
TAF	Taforalt	7.63	259	P	Pn	01 48 45.3	-1.2
EBER	Berja	7.71	275	P	Pn	01 48 49.1	+1.3
AQU	L'Aquila	7.74	40	Pn	Pn	01 48 48.9	+1.0
AQU	L'Aquila	7.74	40	P	Pn	01 48 48.9	+1.0
OSSC	Osservatorio P	7.74	25	Pn	Pn	01 48 49.4	+1.4
INTR	Introdacqua	7.77	44	Pn	Pn	01 48 49.8	+1.4
LASF	Ste Croix	7.78	345	ePn	Pn	01 48 46.3	-2.2
	SNR=1.0						
LASF				eSn	Sn	01 50 12.1	-4.7
	27nm,0.4s,SNR=1.0						
CAMP	Campotosto	7.87	39	Pn	Pn	01 48 51.7	+1.9
JBK	JBK	7.90	256	P	Pn	01 48 50.6	+0.3
CUC	Castrocucco	7.92	62	Pn	Pn	01 48 49.5	-1.0
FIGM	Figuig	7.95	238	P	Pn	01 48 50.1	-0.8
MSSA	Maissana	8.00	15	Pn	Pn	01 48 52.0	+0.3
MURB	Monte Urbino	8.02	32		Pn	01 48 53.3	+1.5
EPF	Esparros	8.08	325	ePn	Pn	01 48 54.1	+1.4
	SNR=1.0						
EPF				eSn	Sn	01 50 18.2	-6.0
	26nm,0.4s						
MBDF	Montbardon	8.12	0	ePn	Pn	01 48 53.5	+0.2
	SNR=1.0						
MBDF				eSn	Sn	01 50 20.1	-5.3
	29nm,0.4s						
ELGU	Los Guajares,	8.30	275	P	Pn	01 48 56.9	+1.1
ORIF	Oris-en-Rattie	8.34	356	ePn	Pn	01 48 55.5	-0.7
	SNR=1.0						
ORIF				eSn	Sn	01 50 25.5	-5.1
	11nm,0.4s						
TIP	Timpagrande	8.35	69	Pn	Pn	01 48 56.0	-0.4
VIVF	Saint-Julien-l	8.40	350	ePn	Pn	01 48 55.7	-1.3
	SNR=1.0						
VIVF				eSn	Sn	01 50 25.6	-6.3
	18nm,0.3s						
VIVF	Saint-Julien-l	8.40	350	P	Pn	01 48 55.7	-1.3
ETSF	Etsaut	8.42	321	eP	Pn	01 48 59.4	+2.0
ETSF				eSn	Sn	01 50 27.5	-5.1
	16nm,0.4s						
BNI	Bardonecchia	8.45	360	Pn	Pn	01 48 58.3	+0.5
BNI	Bardonecchia	8.45	360	P	Pn	01 48 58.3	+0.5
PRMA	PARMA	8.61	17	Pn	Pn	01 49 01.9	+2.1
UCM	Universidad Co	8.64	298	P	Pn	01 49 02.9	+2.5
EGOR	Sierra Gorda,	8.69	277	P	Pn	01 49 03.6	+2.5
MATE	Matera	8.81	60	P	Pn	01 49 04.1	+1.6
SSB	Saint Sauveur	8.83	350	Pn	Pn	01 49 02.3	-0.6
SSB	Saint Sauveur	8.83	350	P	Pn	01 49 02.3	-0.6
AKLM	AKL	8.86	260	P	Pn	01 49 05.0	+1.5
LPL	La Plagne	8.91	0	ePn	Pn	01 49 03.8	-0.4
LPL				eSn	Sn	01 50 39.2	-5.7
	14nm,0.4s						
SJPF	Ste Jean	8.92	319	eP	Pn	01 49 07.9	+3.8
SJPF				eSn	Sn	01 50 37.9	-6.8
	8.4nm,0.3s						
EMAL	Malaga-Limoner	8.95	274	P	Pn	01 49 07.0	+2.5
ESBB	Sonseca Array	8.95	293		Pn	01 49 04.5	-0.1
ESDC	Sonseca Array	8.95	293	Pn	Pn	01 49 06.5	+1.9
	0.7nm,0.3s,baz=100,slow=14,SNR=42						
ESDC				Sn	Sn	01 50 49.6	+3.9
	baz=109,slow=25						
ESDC				LR	LR	01 52 30.9	
	comp=Z,2µm,18.6s,baz=106,slow=38						
	3.8nm,0.5s						
ESDC	Sonseca Array	8.95	293	Pn	Pn	01 49 06.1	+1.4
CAF	Calviac	9.04	339	ePn	Pn	01 49 04.6	-1.1
	SNR=1.0						
CAF				eSn	Sn	01 50 41.3	-6.3
	12nm,0.4s						
CAF	Calviac	9.04	339	P	Pn	01 49 05.4	-0.3
EADA	Adamuz	9.12	283	P	Pn	01 49 08.7	+1.8
PAB	San Pablo	9.20	292	Pn	Pn	01 49 09.6	+1.5
PAB	San Pablo	9.20	292	P	Pn	01 49 09.6	+1.5
EMIJ	Mijas	9.24	273	P	Pn	01 49 09.4	+0.9
SALO	Salr	9.46	17		Pn	01 49 12.8	+1.2
LFF	La Frestale	9.48	333	ePn	Pn	01 49 10.9	-0.9
	SNR=1.0						
LFF				eSn	Sn	01 50 51.7	-6.8
	7.7nm,0.3s						
LFF	La Frestale	9.48	333	P	Pn	01 49 10.9	-0.9
LFF				SG	Sn	01 50 58.7	+0.2
TEOL	Teolo	9.52	22	Pn	Pn	01 49 15.2	+2.8
RJF	Les Rejaudoux	9.54	337	ePn	Pn	01 49 12.2	-0.5
	SNR=1.0						
RJF				eSn	Sn	01 50 53.4	-6.6
	5.8nm,0.3s						
SENIN	Lac Senin/Sane	9.77	2	Pn	Pn	01 49 16.1	+0.1
ECAB	El Cabril	9.77	282	P	Pn	01 49 17.2	+1.3
CABF	La Chapelle	10.02	358	ePn	Pn	01 49 18.7	-0.6
	SNR=1.0						
CABF				eSn	Sn	01 51 05.1	-6.7
	3.6nm,0.4s						
MDT	Midelt	10.05	251	Pn	Pn	01 49 20.5	+0.7
	0.3nm,0.3s,baz=10,slow=18,SNR=3.2						
MDT				Lg	Lg	01 52 15.8	
	0.1nm,0.3s,baz=336,slow=8.6,SNR=3.5						
MDT				LR	LR	01 53 36.6	
	comp=Z,1µm,20.4s,baz=65,slow=40						
	5.9nm,0.7s						
MDT	Midelt	10.05	251	P	Pn	01 49 20.7	+1.0
MD31	MD31	10.14	252	P	Pn	01 49 19.1	-1.9
CTI	Castel Tesino	10.15	20		Pn	01 49 21.6	+0.6
CTI	Castel Tesino	10.15	20	P	Pn	01 49 21.6	+0.6
IFR	Ifrane	10.18	256	P	Pn	01 49 23.3	+1.8
TCF	Toulx Ste Croi	10.25	342	ePn	Pn	01 49 21.7	-0.7
TCF				eSn	Sn	01 51 10.7	-6.8
	5.7nm,0.4s						
SMF	Signal de Mont	10.27	349	ePn	Pn	01 49 22.4	-0.2
	SNR=1.0						
SMF				eSn	Sn	01 51 11.2	-6.6
	3.7nm,0.3s						
BGF	Bois d'Agland	10.37	345	ePn	Pn	01 49 23.4	-0.5
	SNR=1.0						
BGF				eSn	Sn	01 51 13.6	-6.6
	10.0nm,0.4s						
ARF	Arif	10.43	244	P	Pn	01 49 25.2	+0.3
DAVOX	Davos/Dischmat	10.45	12	Pn	Pn	01 49 26.6	+1.3
	4.5nm,0.6s						
DAVOX				Sn	Sn	01 51 19.2	-3.3
	0.5nm,0.3s,baz=151,slow=14,SNR=2.7						
DAVOX				LR	LR	01 53 41.7	
	comp=Z,632nm,18.6s,baz=206,slow=39						
AVF	Avril sur Loir	10.49	347	ePn	Pn	01 49 24.9	-0.7
	SNR=1.0						
AVF				eSn	Sn	01 51 16.3	-6.9
	2.7nm,0.4s						
CIMO	Cimolais	10.61	22	Pn	Pn	01 49 29.9	+2.5
STAL	STALIGIAL	10.65	23	Pn	Pn	01 49 29.5	+1.7
SSF	Saint Saulge	10.73	348	ePn	Pn	01 49 28.6	-0.3
	SNR=1.0						
SSF				eSn	Sn	01 51 22.2	-6.8
	3.8nm,0.4s						
SSF	Saint Saulge	10.73	348	P	Pn	01 49 29.9	+1.0
FETA	Feichten	10.84	15	ePn	Pn	01 49 34.2	+3.6
	8.4nm,0.7s,SNR=7.8						
LOR	Lormes	10.87	350	ePn	Pn	01 49 31.2	+0.3
	baz=163,SNR=1.0						
LOR				eSn	Sn	01 51 26.2	-6.5
	4.2nm,0.4s						
CLUD	Cludinico	10.88	23	Pn	Pn	01 49 32.1	+1.1
DAVA	Damuels	10.94	11	ePn	Pn	01 49 35.5	+3.6
	16nm,1.1s,SNR=4.5						
DAVA				eSn	Sn	01 51 35.4	+1.0
	7.0nm,0.6s						
ABTA	Abfaltersbach	11.03	21	ePn	Pn	01 49 35.7	+2.6
	25nm,1.3s						
PBAR	Barrancos	11.05	282	eP	Pn	01 49 35.3	+1.9
PBAR				A	A	01 50 10.1	
	48nm,1.9s						
SQTA	Sankt Quirin	11.13	16	ePn	Pn	01 49 38.2	+3.7
	14nm,0.7s						
SQTA				eSn	Sn	01 51 44.3	+5.2
	14nm,0.9s						
HINF	Hinteralfeld	11.21	0	ePn	Pn	01 49 34.8	-0.8
	SNR=1.0						
HINF				eSn	Sn	01 51 33.4	-7.6
	2.6nm,0.4s						
MOTA	Moosalm	11.23	16	ePn	Pn	01 49 39.4	+3.6
	14nm,0.7s						
MFF	Saint Martin d	11.23	335	ePn	Pn	01 49 35.2	-0.6
MFF				eSn	Sn	01 51 33.8	-7.6
	2.5nm,0.4s						
WTTA	Wattenberg	11.27	17	ePn	Pn	01 49 40.1	+3.7
	12nm,0.8s,SNR=10						
WTTA				eSn	Sn	01 51 45.5	+2.9
	7.4nm,1.2s						
MYKA	Terra Mystica	11.28	25	ePn	Pn	01 49 40.6	+4.0
	12nm,1.0s						
RETA	Reutte	11.29	14	ePn	Pn	01 49 39.3	+2.7
	13nm,0.7s,SNR=15						
PDG	Podgorica	11.30	55	⇓P	Pn	01 49 38.3	+1.5
WATA	Walderalm	11.32	17	ePn	Pn	01 49 39.4	+2.3
	13nm,0.7s,SNR=6.9						
HAU	Haudompre	11.41	359	ePn	Pn	01 49 37.0	-1.2
	SNR=1.0						
HAU				eSn	Sn	01 51 38.0	-7.7
	7.7nm,0.4s						
PMRV	Marv??o	11.48	289	eLR	LR	01 53 23.3	
PMRV				A	A	01 54 20.1	
	1µm,16.0s						
PESTR	Estremoz	11.55	286	Pn	Pn	01 49 41.9	+1.7
PESTR	Estremoz	11.55	286	P	Pn	01 49 41.0	+0.8
PVAQ	Vaqueiros	11.57	278	Pn	Pn	01 49 40.8	+0.4
PVAQ	Vaqueiros	11.57	278	P	Pn	01 49 40.3	-0.1
PVAQ	Vaqueiros	11.57	278	P	Pn	01 49 40.9	+0.5
PVAQ	Vaqueiros	11.57	278	eP	Pn	01 49 40.7	+0.3
PVAQ				eLR	LR	01 53 36.0	
PVAQ				A	A	01 54 24.6	
	564nm,18.0s						
KBA	Koelnbreinsper	11.58	23	ePn	Pn	01 49 43.8	+3.2
	23nm,1.2s						
PCBR	Castelo Branco	11.62	290	eP	Pn	01 49 45.4	+4.3
PCBR				A	A	01 49 54.1	
	50nm,1.6s						
MVO	Moncorvo	11.64	297	eP	Pn	01 49 45.7	+4.3
MVO				eLR	LR	01 53 29.3	
MVO				A	A	01 54 39.6	
	2µm,16.0s						
PBRG	Braganca	11.66	301	eP	Pn	01 49 44.0	+2.4
SFTF	Sexfontaines	11.67	354	ePn	Pn	01 49 41.0	-0.7
SFTF				eSn	Sn	01 51 44.6	-7.5
	4.8nm,0.4s						
PBEJ	Beja	11.70	281	eP	Pn	01 49 44.8	+2.6
PBDV	Barranco-do-Ve	11.74	278	eLR	LR	01 53 29.6	
PBDV				A	A	01 54 23.6	
	627nm,18.0s						
TZRR	Tazzarine	11.75	244	P	Pn	01 49 42.7	-0.3
BFO	Black Forest	11.79	5	Pn	Pn	01 49 44.2	+0.8
BFO	Black Forest	11.79	5	P	Pn	01 49 44.2	+0.8
MTE	Manteigas	11.80	293	eLR	LR	01 53 21.7	
MTE				A	A	01 54 40.4	
	1µm,18.0s						
CDF	Champ du Feu	11.82	2	ePn	Pn	01 49 42.1	-1.8
CDF				eSn	Sn	01 51 47.9	-8.0
	1.8nm,0.3s						
PCVE	Castro Verde	11.82	279	eLR	LR	01 53 35.0	
PCVE				A	A	01 54 39.5	
	530nm,16.0s						
EVO	Evora	11.85	284	P	Pn	01 49 46.8	+2.6
EVO	Evora	11.85	284	eP	Pn	01 49 47.7	+3.5
EVO				A	A	01 50 02.6	
	49nm,1.6s						
MEZF	Maizieres J'vi	11.96	355	ePn	Pn	01 49 44.7	-1.0
	baz=174,SNR=1.0						
MEZF				eSn	Sn	01 51 52.0	-7.2
	3.1nm,0.4s						
MESJ	Messejana	11.97	280	Pn	Pn	01 49 47.5	+1.6
MESJ	Messejana	11.97	280	P	Pn	01 49 47.5	+1.6
MESJ	Messejana	11.97	280	eP	Pn	01 49 47.8	+1.9
MESJ				A	A	01 49 52.0	
	61nm,1.7s						
PAGF	Fort de Pagny	11.97	357	ePn	Pn	01 49 45.1	-0.8
PAGF				eSn	Sn	01 51 52.2	-7.4
	4.3nm,0.3s						
PYL	PYLOS	12.07	84	P	Pn	01 49 46.9	-0.3
SAVF	Savonnieres en	12.07	355	ePn	Pn	01 49 46.5	-0.7
	baz=169						
SAVF				eSn	Sn	01 51 54.0	-7.9
	3.0nm,0.4s						
ZGR	Zagora	12.16	241	P	Pn	01 49 48.5	-0.1
EVR	Evrytania	12.18	74	P	Pn	01 49 51.4	+2.6
FNA	Florina	12.20	65	Pn	Pn	01 49 49.5	+0.4
FNA	Florina	12.20	65	P	Pn	01 49 49.5	+0.4
ITM	Ithomi	12.20	83		Pn	01 49 49.3	+0.2
EFP	Efpalio	12.21	77	P	Pn	01 49 48.5	-0.6
ANX	Ano Chora	12.23	76	P	Pn	01 49 49.4	-0.2
PCAS	Casmilo, Conde	12.43	291	eP	Pn	01 49 57.4	+5.2
PCAS				eLR	LR	01 53 47.2	
PCAS				A	A	01 54 59.2	
	1µm,16.0s						
PFVI	Vila Bisbo	12.46	277	eLR	LR	01 54 14.5	
PFVI				A	A	01 55 11.9	
	644nm,16.0s						
ARSA	Arzberg	12.50	29	ePn	Pn	01 49 56.7	+3.6
	14nm,1.7s						
MOA	Molln	12.55	24	ePn	Pn	01 49 57.7	+3.8
	30nm,1.2s						
PSBE	So Bento	12.56	288	eLR	LR	01 53 58.7	
PSBE				A	A	01 55 02.9	
	1µm,16.0s						
AGG	Agios Georgios	12.59	74	P	Pn	01 49 52.4	-2.0
AGG	Agios Georgios	12.59	74		Pn	01 49 54.1	-0.3
AGG	Agios Georgios	12.59	74	P	Pn	01 49 54.1	-0.3
DIVS	Divibare	12.59	49	Pn	Pn	01 49 55.2	+0.8
PGAV	Gavieira, Arco	12.78	299	eLR	LR	01 54 24.1	
PGAV				A	A	01 55 24.6	

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            1µm,16.0s
LIT    Litokhoron         12.87  69   P      Pn     01 49 56.2 -2.0
PMAFR  Mafra              12.87 285  eLR     LR     01 54 07.7
PMAFR                                 A      A      01 55 11.3
            736nm,18.0s
LDF    La Druitiere       13.00 339  eSn     Sn     01 52 15.8 -8.7
            1.1nm,0.4s
GRR    Gorron             13.03 337  ePn     Pn     01 49 59.5 -0.8
            SNR=1.0
GRR                                  eSn     Sn     01 52 16.9 -8.5
            2.0nm,0.4s
WLF    Walferdange        13.07 358   Pn     Pn     01 50 01.2 +0.3
WLF    Walferdange        13.07 358   P      Pn     01 50 01.2 +0.3
WLF    Walferdange        13.07 358  dP      Pn     01 50 02.0 +1.1
ATAL   Atalanti           13.10  76   P      Pn     01 49 59.1 -2.2
RONA   Rosalia, Austr     13.17  30  ePn     Pn     01 50 03.0 +0.7
            8.6nm,1.1s
CONA   Conrad Observa     13.19  28  ePn     Pn     01 50 03.5 +0.9
            12nm,0.9s
FLN    La Foliniere       13.25 339  ePn     Pn     01 50 03.3  0.0
            baz=160,SNR=1.0
FLN                                  eSn     Sn     01 52 22.3 -8.5
            1.4nm,0.2s
GEC2   GERESS Array S     13.27  21          Pn     01 50 03.6  0.0
GERES  GERESS Array B     13.27  21   Pn     Pn     01 50 05.1 +1.4
            0.2nm,0.3s,baz=205,slow=12,SNR=4.7
GERES                                 Sn     Sn     01 52 29.2 -2.1
            0.1nm,0.3s,baz=211,slow=22,SNR=1.7
GERES                                 LR     LR     01 55 14.8
            comp=Z,466nm,18.4s,baz=202,slow=38
            2.0nm,0.7s
GERES  GERESS Array B     13.27  21   Pn     Pn     01 50 03.4 -0.3
CKRC   Cesky Krumlov      13.43  22  eP      Pn     01 50 07.9 +2.2
CKRC                                  AMS    AMS    01 55 10.0
            comp=Z,400nm,18.9s
CKRC   Cesky Krumlov      13.43  22  eP      Pn     01 50 07.9 +2.2
CKRC                                  MLR    MLR
            comp=Z,400nm,18.9s
BOVS   Bovan              13.45  54  ⇑P      Pn     01 50 07.7 +1.7
QUIF   Quistinic          13.46 330  ePn     Pn     01 50 06.0 -0.1
            SNR=1.0
QUIF                                 eSn     Sn     01 52 26.7 -9.1
            comp=Z,1.8nm,0.4s
KHC    Kasperske Hory     13.49  20   Pn     Pn     01 50 06.7  0.0
KHC    Kasperske Hory     13.49  20  eP      Pn     01 50 08.5 +1.8
KHC                                  ex      x      01 50 15.6
KHC                                   AMS    AMS    01 56 00.0
            comp=Z,1µm,15.0s
KHC    Kasperske Hory     13.49  20  eP      Pn     01 50 08.5 +1.8
KHC                                   MLR    MLR
            comp=Z,1µm,15.0s
SGMF   Saint Gilles       13.50 333  ePn     Pn     01 50 06.2 -0.5
GIVF   Givet              13.57 355  ePn     Pn     01 50 07.2 -0.5
BAIF   Baives             13.58 353  ePn     Pn     01 50 07.0 -0.8
            SNR=1.0
BAIF                                 eSn     Sn     01 52 30.2 -8.6
            comp=Z,1.2nm,0.3s
DOU    Dourbes            13.58 354  dP      Pn     01 50 08.8 +0.9
RCHB   Rochefort          13.60 356  dP      Pn     01 50 08.4 +0.4
BMRD   Maredsous          13.77 355  dP      Pn     01 50 11.1 +0.6
TAM    Tamanrasset        13.79 185   Pn     Pn     01 50 10.2 -0.8
TAM    Tamanrasset        13.79 185   P      Pn     01 50 10.2 -0.8
BGES   Gesves             13.83 356  dP      Pn     01 50 11.6 +0.3
BGES                                 dPP     P      01 50 20.1 +0.4
ROSF   Rostrenen          13.84 331  ePn     Pn     01 50 10.4 -1.0
BCLA   Clavier            13.86 356  dP      Pn     01 50 13.6 +2.0
BSTI   Sart Tilman        14.01 357  dP      Pn     01 50 14.0 +0.3
SNF    Seneffe            14.02 354  dP      Pn     01 50 14.9 +1.1
MEM    Membach            14.02 358  dP      Pn     01 50 15.1 +1.3
VTS    Vitosha            14.08  60  ⇑P      Pn     01 50 15.9 +1.1
VTS    Vitosha            14.08  60   Pn     Pn     01 50 14.9 +0.1
VTS    Vitosha            14.08  60  ⇑P      Pn     01 50 15.9 +1.1
MODS   Modra-Piesok       14.10  30  eP      P      01 50 24.6 +1.8
MODS   Modra-Piesok       14.10  30  eP      P      01 50 24.6 +1.8
TREC   Trest              14.21  24   AMS    AMS    01 55 50.0
            comp=Z,800nm,14.1s
NKC    Novy Kostel        14.25  15  eP      Pn     01 50 19.1 +2.1
NKC                                   AMS    AMS    01 55 40.0
            comp=Z,900nm,16.9s
NKC    Novy Kostel        14.25  15  eP      Pn     01 50 19.1 +2.1
NKC                                   MLR    MLR
            comp=Z,900nm,16.9s
KRUC   Moravsky           14.33  27  eP      P      01 50 26.2 +1.0
BZS    Buzias             14.39  47  ⇓P      Pn     01 50 20.5 +1.6
BZS    Buzias             14.39  47  ⇓P      Pn     01 50 20.5 +1.6
DJES   Djerdap            14.44  51   Pn     Pn     01 50 18.5 -1.2
HERR   Herculane          14.48  50  ⇑P      Pn     01 50 21.9 +1.6
PRU    Pruhonice          14.54  21  eP      Pn     01 50 24.2 +3.3
PRU                                   AMS    AMS    01 56 50.0
            comp=Z,500nm,16.8s
PRU    Pruhonice          14.54  21  eP      Pn     01 50 24.2 +3.3
PRU                                   MLR    MLR
            comp=Z,500nm,16.8s
GOPC   GO Pecny, Ondr     14.54  21   AMS    AMS    01 56 00.0
            comp=Z,500nm,16.0s
VRAC   Vranov             14.60  26  ⇑P      P      01 50 25.5 -2.9
VRAC   Vranov             14.60  26   Pn     Pn     01 50 25.2 +3.3
            comp=Z,0.1nm,0.3s,baz=218,slow=11,SNR=12
VRAC                                  LR     LR     01 56 38.2
            comp=Z,416nm,18.3s,baz=213,slow=40
VRAC   Vranov             14.60  26  eP      P      01 50 28.4 +0.1
VRAC   Vranov             14.60  26  ⇑P      P      01 50 25.5 -2.9
IDI    Anoyia             14.79  90  ⇓P      Pn     01 50 26.7 +2.3
IDI    Anoyia             14.79  90   Pn     Pn     01 50 25.7 +1.3
            comp=Z,0.3nm,0.3s,baz=307,slow=14,SNR=7.1
IDI                                   LR     LR     01 57 17.2
            comp=Z,258nm,19.8s,baz=280,slow=42
            comp=Z,6.2nm,0.8s
IDI    Anoyia             14.79  90   P      Pn     01 50 18.9 -5.6
IDI    Anoyia             14.79  90   Pn     Pn     01 50 25.0 +0.5
VYHS   Vyhne              14.85  33  eP      P      01 50 32.8 +1.7
VYHS   Vyhne              14.85  33  eP      P      01 50 32.8 +1.7
KSTL   Kastelli Herak     14.93  90   P      P      01 50 35.7 +3.7
GZR    Gura Zlata         14.96  49  ⇓P      Pn     01 50 28.0 +1.2
PVCC   Panska Ves         15.03  20   AMS    AMS    01 56 30.0
            comp=Z,600nm,16.4s
THR3   Thira Island,      15.04  85   P      P      01 50 33.6 +0.4
THR8   Santorini-Mono     15.10  85   P      P      01 50 33.9  0.0
BRG    Berggiesshubel     15.19  18  eP      P      01 50 33.8 -1.0
BRG                                   Amp           01 50 41.0
            comp=Z,12nm,1.3s
BRG                                   Amp           01 56 44.0
            comp=E,0.9nm,14.4s
BRG                                   Amp           01 56 47.0
            comp=Z,0.8nm,16.8s
BRG                                   Amp           01 56 57.0
            comp=N,0.6nm,12.7s
BRG    Berggiesshubel     15.19  18  eP      P      01 50 33.7 -1.0
BRG                                   pmax   pmax
            comp=Z,12nm,1.3s
BRG                                   MLR    MLR
            comp=E,927nm,14.4s
BRG                                   MLR    MLR
            comp=Z,834nm,16.8s
BRG                                   MLR    MLR
            comp=N,598nm,12.7s
MORC   Moravsky Berou     15.34  27  ⇑P      P      01 50 34.7 -1.8
MORC   Moravsky Berou     15.34  27          Pn     01 50 32.7 +0.9
MORC                                  IAmb   IAmb   01 50 41.7
            comp=Z,34nm,1.3s
MORC   Moravsky Berou     15.34  27  eP      P      01 50 36.1 -0.4
MORC   Moravsky Berou     15.34  27  ⇑P      P      01 50 34.7 -1.8
CLL    Collm              15.38  15  eP      Pn     01 50 33.0 +0.8
CLL                                  e(sP)   P      01 50 40.0 +3.1
            comp=Z,4.0nm,0.8s
CLL                                  i sPP          01 50 46.6
            comp=Z,12nm,1.2s
CLL                                   AMS    AMS    01 56 00.0
            comp=Z,600nm,19.4s
CLL    Collm              15.38  15  eP      P      01 50 40.0 +3.1
CLL                                   pmax   pmax
            comp=Z,4.0nm,0.8s
CLL                                   MLR    MLR
            comp=Z,600nm,19.4s
DPC    Dobruska-Polom     15.40  24  eP      P      01 50 35.7 -1.5
DPC                                  epP     pP     01 50 39.9 +0.1
DPC                                   AMS    AMS    01 56 30.0
            comp=Z,400nm,17.2s
DPC    Dobruska-Polom     15.40  24  eP      P      01 50 35.7 -1.5
DPC                                   MLR    MLR
            comp=Z,400nm,17.2s
UPC    Upice              15.44  23  eP      P      01 50 40.5 +2.9
UPC                                   AMS    AMS    01 57 00.0
            comp=Z,700nm,17.7s
UPC    Upice              15.44  23  eP      P      01 50 40.5 +2.9
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UPC                                   MLR    MLR
            comp=Z,700nm,17.7s
CHOS   Chios island       15.46  78   P      Pn     01 50 32.5 -1.0
CHOS   Chios island       15.46  78  eP      Pn     01 50 33.8 +0.3
OSTC   Ostas              15.54  23  eP      P      01 50 41.1 +2.3
OSTC                                  AMS    AMS    01 57 30.0
            comp=Z,600nm,16.2s
OSTC   Ostas              15.54  23  eP      P      01 50 41.1 +2.3
OSTC                                  MLR    MLR
            comp=Z,600nm,16.2s
LOT    Lotru              15.60  50  ⇓P      Pn     01 50 36.9 +1.7
OKC    Ostrava-Krasne     15.62  28  eP      P      01 50 41.4 +1.9
OKC                                   AMS    AMS    01 58 10.0
            comp=Z,600nm,13.3s
OKC    Ostrava-Krasne     15.62  28  eP      P      01 50 41.4 +1.9
OKC                                   MLR    MLR
            comp=Z,600nm,13.3s
LANS   Liptovska Anna     15.62  33  eP      P      01 50 42.8 +3.1
LANS   Liptovska Anna     15.62  33  eP      P      01 50 42.8 +3.1
DRGR                      15.68  45  ⇑P      Pn     01 50 37.5 +1.3
DRGR                      15.68  45  ⇑P      Pn     01 50 37.5 +1.3
STIA   Sitia Lasithi      15.77  89   P      Pn     01 50 35.1 -2.3
KSP    Ksiaz              15.82  23  eP      P      01 50 44.5 +2.8
URLA   Izmir              15.89  78  eP      Pn     01 50 39.1 +0.2
ZKR    Zakros             15.89  90   P      Pn     01 50 36.8 -2.1
COMU   Canakkale          15.89  71  eP      Pn     01 50 40.1 +1.1
HUMR   Humele             15.96  55  ⇑P      P      01 50 42.1 -1.4
ARR    Arges              16.10  51  ⇑P      Pn     01 50 43.1 +1.4
CJR    Cluj-Napoca        16.14  46  ⇑P      Pn     01 50 43.6 +1.5
CJR    Cluj-Napoca        16.14  46  ⇑P      Pn     01 50 43.6 +1.5
NIE    Niedzica           16.18  33  eP      P      01 50 49.1 +3.2
BLCB   Balcova            16.24  78   P      Pn     01 50 41.6 -1.8
BLCB   Balcova            16.24  78  eP      P      01 50 49.5 +3.0
TRPA   Tarpa              16.39  40  ⇑P      P      01 50 47.0 -1.1
VOIR                      16.39  52  ⇑P      P      01 50 47.8 -0.5
VOIR                      16.39  52  ⇑P      P      01 50 47.8 -0.5
KRBG   Karabiga-Canak     16.55  71  eP      Pn     01 50 47.7 +0.3
KARP   Karpathos          16.57  88   P      Pn     01 50 44.2 -3.5
KARP   Karpathos          16.57  88   Pn     Pn     01 50 47.2 -0.6
KARP                                  IAmb   IAmb   01 50 58.9
            comp=Z,70nm,1.2s
OJC    Ojcow              16.57  31  eP      P      01 50 49.5 -0.7
OJC    Ojcow              16.57  31   Pn     Pn     01 50 48.3 +0.7
OJC    Ojcow              16.57  31   P      Pn     01 50 48.3 +0.7
OJC                                   pmax   pmax
            comp=Z,16nm,1.1s
STHS   Stebnicka Huta     16.61  35  eP      P      01 50 53.2 +2.6
STHS   Stebnicka Huta     16.61  35  eP      P      01 50 53.2 +2.6
BMR    Baia Mare          16.62  43  ⇓P      P      01 50 51.1 +0.4
BMR    Baia Mare          16.62  43  ⇓P      P      01 50 51.1 +0.4
DAT    Datca              16.75  83   P      P      01 50 51.5 -0.8
DAT    Datca              16.75  83  eP      P      01 50 53.4 +1.1
DOPR   Dopca              16.84  50  ⇑P      P      01 50 52.4 -0.8
MLSB   Milas              16.86  81  eP      P      01 50 52.9 -0.5
SECR                      16.88  54  ⇑P      P      01 50 53.6  0.0
BALB   Balikesir          16.93  73  eP      Pn     01 50 53.1 +0.9
BALB   Balikesir          16.93  73          Pn     01 50 52.9 +0.7
BALB                                  IAmb   IAmb   01 50 55.5
            comp=Z,103nm,1.5s
EDC    Edincik            16.98  71  eP      Pn     01 50 53.5 +0.7
MLR    Muntele Rosu       16.98  53  ⇑P      P      01 50 54.9  0.0
MLR    Muntele Rosu       16.98  53   Pn     P      01 50 55.4 +0.5
            comp=Z,0.5nm,0.3s,baz=281,slow=5.1,SNR=23
MLR                                   LR     LR     01 58 14.0
            comp=Z,775nm,18.3s,baz=252,slow=40
MLR    Muntele Rosu       16.98  53   IAmb   IAmb   01 51 01.4
            comp=Z,81nm,1.1s
OZUR                      17.15  50  ⇑P      P      01 50 57.1 +0.6
ISR    Istrita            17.22  54  ⇑P      P      01 50 57.6 +0.2
ISR    Istrita            17.22  54  ⇑P      P      01 50 57.6 +0.2
ARG    Arkhangelos        17.25  85   P      Pn     01 50 54.9 -1.3
ARG    Arkhangelos        17.25  85   IAmb   IAmb   01 51 09.0
            comp=Z,54nm,1.1s
YER    Yerkesik           17.27  82   P      Pn     01 50 57.2 +0.6
YER    Yerkesik           17.27  82  eP      P      01 50 58.0 -0.1
COVR   Voineasa-Covas     17.30  52  ⇑P      P      01 50 58.7 +0.4
KCTX   Karacabey (Bur     17.34  71  eP      Pn     01 50 58.1 +0.7
MANT   Manisa             17.43  77   Pn     Pn     01 50 57.6 -1.0
KULA   Kula-Manisa        17.51  77  eP      P      01 51 00.9 +0.2
BURAR  Bucovina Array     17.55  45  ⇑P      P      01 51 03.2 +2.0
BURAR  Bucovina Array     17.55  45   P      P      01 51 02.5 +1.3
BURAR  Bucovina Array     17.55  45  ⇑P      P      01 51 03.2 +2.0
BUR08  Bucovina Ar. S     17.56  45   P      P      01 51 01.9 +0.7
PLOR   Plostina           17.58  52  ⇑P      P      01 51 02.8 +1.4
PLOR   Plostina           17.58  52  ⇑P      P      01 51 02.8 +1.4
DALY   Dalyan (Mula)      17.60  83  eP      P      01 51 02.3 +0.7
VRI    Vrincioaia         17.64  52  ⇑P      P      01 51 03.9 +1.9
VRI    Vrincioaia         17.64  52  ⇑P      P      01 51 03.9 +1.9
TESR   Tescani            17.87  50  ⇓P      P      01 51 05.8 +1.3
LVV    L'vov              18.22  38  eP      P      01 51 10.3 +2.0
LVV                                  eS      Sn     01 54 30.1 -1.4
LVV                                   MLR    MLR
            comp=E,200nm,8.0s
LVV                                   MLR    MLR
            comp=N,500nm,12.0s
LVV                                   MLR    MLR
            comp=Z,400nm,11.0s
BEL    Belsk              18.22  29  eP      P      01 51 13.6 +5.2
GKP    Gorka Klasztor     18.23  21  eP      P      01 51 11.9 +3.5
TIRR   Tirgusor           18.24  58   P      Pn     01 51 08.4  0.0
TIRR   Tirgusor           18.24  58   P      Pn     01 51 08.4  0.0
TIRR                                  pmax   pmax
            comp=Z,156nm,1.3s
CFR    Carcaliu           18.29  55  ⇑P      P      01 51 09.6 +0.5
CFR    Carcaliu           18.29  55  ⇑P      P      01 51 09.6 +0.5
TPGR   Topolog            18.37  57  ⇓P      P      01 51 12.1 +2.1
AKAS   Kas                18.43  84          P      01 51 08.1 -2.8
ELL    Elmali             18.61  83   P      P      01 51 12.6 -0.3
ELL    Elmali             18.61  83   P      P      01 51 12.6 -0.3
ELL                                   pmax   pmax
            comp=Z,111nm,1.1s
BORA   Eskisehir          18.93  73          Pn     01 51 16.7 -0.2
ISP    Isparta            19.00  79   P      Pn     01 51 18.1 +0.3
ISP    Isparta            19.00  79   P      Pn     01 51 18.1 +0.3
ISP                                   pmax   pmax
            comp=Z,21nm,0.8s
KIS    Kishinev           19.42  51⇑iP      P      01 51 21.0 -0.6
            comp=Z,90nm,1.7s
KIS    Kishinev           19.42  51  ePP     Pn     01 51 31.0 +8.3
KIS    Kishinev           19.42  51c iP      P      01 51 21.0 -0.6
KIS                                   pmax   pmax
            comp=Z,90nm,1.7s
SORM   Soroca             19.64  47  ⇓P      Pn     01 51 24.8 -0.5
SORM   Soroca             19.64  47  ⇓P      Pn     01 51 24.8 -0.5
EKA    Eskdalemuir Ar     19.92 343   P      Pn     01 51 29.6 +1.0
            baz=145,slow=11
            comp=Z,4.6nm,0.7s
PMOZ   Porto Moniz, M     20.00 266   P      P      01 51 27.9 -0.2
SEYD   Seydisehir-KON     20.07  80  eP      Pn     01 51 30.4 -0.3
KONT   Konya--Tatoy       20.44  78  eP      Pn     01 51 35.1 +0.2
GAZI   Gazipasa           20.60  83  eP      P      01 51 35.5 +1.0
BR231  Keskin MP Arra     20.71  73   P      Pn     01 51 37.4 -0.8
BR231                                 IAmb   IAmb   01 51 45.1
            comp=Z,35nm,1.1s
ANTO   Ankara             20.73  73  ⇑P      Pn     01 51 38.7 +0.4
ANTO   Ankara             20.73  73          P      01 51 36.8 +0.9
ANTO   Ankara             20.73  73   P      P      01 51 36.8 +0.9
ANTO                                  pmax   pmax
            comp=Z,22nm,1.0s
AFSR   Afar-Bala (An      20.94  74  eP      Pn     01 51 41.2 +0.4
SULT   Sultanhani-AKS     21.34  78  eP      P      01 51 44.1 +1.6
BR131  Keskin Array S     21.38  73  eP      P      01 51 45.5 +2.4
BR131  Keskin Array S     21.38  73   P      P      01 51 44.1 +1.1
BR131                                 IAmb   IAmb   01 51 54.9
            comp=Z,24nm,1.1s
BR131  Keskin Array S     21.38  73   P      P      01 51 44.1 +1.1
BR131                                 pmax   pmax
            comp=Z,25nm,1.1s
BRTR   Keskin Array B     21.38  73   P      P      01 51 45.0 +2.0
            comp=Z,10nm,1.0s,baz=260,slow=9.7,SNR=36
BRTR                                  LR     LR     02 00 46.0
            comp=Z,90nm,18.9s,baz=264,slow=39
            comp=Z,10nm,1.0s
BRTR   Keskin Array B     21.38  73   P      P      01 51 44.4 +1.3
BRTR   Keskin Array B     21.38  73  i P     P      01 51 45.4 +2.4
BRTR                                  pmax   pmax
            comp=Z,14nm,1.0s
CANT   Cankiri            21.38  71  eP      P      01 51 47.5 +4.6
AK05   Malin Array Si     21.38  42   P      P      01 51 41.7 -1.0
AKASG  Malin Array Be     21.43  42   P      P      01 51 42.7 -0.7
            comp=Z,53nm,0.9s,baz=240,slow=11,SNR=34
AKASG                                 LR     LR     02 00 31.6
            comp=Z,373nm,19.7s,baz=258,slow=38
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            comp=Z,53nm,0.9s
AKBB   Malin Array Si     21.43  42   P      P      01 51 42.2 -1.1
AKBB   Malin Array Si     21.43  42   P      P      01 51 42.2 -1.1
AKBB                                  pmax   pmax
            comp=Z,92nm,1.1s
KAMT   Kaman              21.44  74  eP      P      01 51 44.7 +1.1
ILGA   Ilgaz              21.47  70   P      P      01 51 44.3 +0.2
YESY   Yesilyurt          21.55  79  eP      P      01 51 47.5 +2.7
CSS    Mathiatis          21.64  86   P      P      01 51 46.7 +0.9
CSS                                   IAmb   IAmb   01 51 54.2
            comp=Z,28nm,1.0s
BZK    Bozkurt            21.75  67   P      P      01 51 47.2 +0.3
PABE   Paberze            22.27  26   P      P      01 51 51.9 -0.4
PABE   Paberze            22.27  26  eP      P      01 51 53.3 +1.0
SIM    Simferopol'        22.29  60  eP      P      01 51 54.3 +1.7
SIM                                  eS      S      01 55 53.7 -4.1
SIM                                   smax   smax
            comp=E,60nm,15.1s
SIM                                   MLR    MLR
            comp=Z,70nm,15.6s
VSVD   Vaisvydziai        22.63  26  eP      P      01 51 58.1 +2.0
NACGM  Naroch             22.91  31⇓iP      P      01 51 58.6 -0.4
            comp=Z,47nm,0.8s,baz=225
IIGN   Ignalina           23.00  29  eP      P      01 51 57.9 -2.2
MNK    Minsk              23.09  32  i P     P      01 51 59.7 -1.3
            comp=E,5.0nm,1.1s
MNK                                  i P     P      01 51 59.7 -1.3
            comp=N,50nm,1.0s
MNK                                  i P     P      01 51 59.7 -1.3
            comp=Z,25nm,1.1s,baz=48
MNK                                  i PP    PnPn   01 52 24.9 -1.1
MNK                                  i PPP   PPP    01 52 32.8
MNK                                  i PcP   PcP    01 55 47.9 -1.8
MNK                                  i S     S      01 56 12.2  0.0
MNK                                  i SS    SnSn   01 56 46.4 +1.8
MNK                                  i SSS   SSS    01 56 59.9
MNK                                  i LQ    LQ     01 59 08.3
MNK                                  i LR    LR     02 00 19.8
MNK                                  i LRM   MLR    02 01 51.2
            comp=E,30nm,15.9s
MNK                                  i LRM   MLR    02 02 05.9
            comp=Z,182nm,17.2s
MNK                                  i LRM   MLR    02 02 14.8
            comp=N,447nm,17.2s
MNK    Minsk              23.09  32  i P     P      01 51 59.6 -1.3
MNK                                  i PPP   PPP    01 52 32.8
MNK                                  i              01 55 47.8
MNK                                  i S     S      01 56 12.1  0.0
MNK                                  i SS    SnSn   01 56 46.4 +1.8
MNK                                   pmax   pmax
            comp=Z,25nm,1.1s
MNK                                   pmax   pmax
            comp=E,5.0nm,1.1s
MNK                                   pmax   pmax
            comp=N,50nm,1.0s
MNK                                   MLR    MLR
            comp=E,30nm,16.0s
MNK                                   MLR    MLR
            comp=Z,182nm,17.0s
MNK                                   MLR    MLR
            comp=N,447nm,17.0s
ISAL   Salakas            23.13  29  eP      P      01 52 02.1 +0.8
IDID   Didziasalis        23.18  30  eP      P      01 51 55.8 -6.0
KVT    Kavak              23.23  70  eP      P      01 52 04.1 +1.5
TOKT   Tokat              23.60  72  eP      P      01 52 07.4 +1.1
TORD   Torodi Ar. Bea     23.78 192   P      P      01 52 07.1 -1.0
            comp=N,6.4nm,0.7s,baz=6.2,slow=10,SNR=26
TORD                                  PcP    PcP    01 55 53.0 +1.3
            comp=N,0.3nm,0.5s,baz=20,slow=2.0,SNR=1.8
TORD                                  LR     LR     02 02 01.5
            comp=N,501nm,19.6s,baz=222,slow=38
            comp=N,6.4nm,0.7s
MMAI   Mount Meron Ar     23.79  90   P      P      01 52 11.1 +2.8
            comp=N,7.7nm,0.8s,baz=277,slow=8.1,SNR=9.8
            comp=N,7.7nm,0.8s
SVSK   Karacayir          23.96  73  eP      P      01 52 11.4 +1.8
MMLI   Mount Malkishu     23.98  91  eP      P      01 52 12.3 +2.3
HFS    Hagfors            23.98   9   P      P      01 52 10.1 +0.5
            comp=N,2.8nm,0.7s,baz=194,slow=21,SNR=5.7
HFS                                   LR     LR     02 02 22.3
            comp=N,334nm,18.6s,baz=108,slow=39
            comp=N,2.8nm,0.7s
UJAP   Al Uja             24.16  93  eP      P      01 52 14.3 +2.7
RSDY   Resadiye-TOKAT     24.20  72  eP      P      01 52 13.9 +1.9
GAZ    Gaziantep          24.36  79  eP      P      01 52 16.8 +3.3
GAZ    Gaziantep          24.36  79   P      P      01 52 14.5 +1.0
DARE   Darende-Malaty     24.41  76  eP      P      01 52 17.2 +3.2
GHAJ   Ghor Haditha       24.46  94   P      P      01 52 13.1 -1.3
GHAJ                                  IAmb   IAmb   01 52 39.2
            comp=Z,29nm,1.2s
ANN    Anapa              24.58  61  eP      P      01 52 13.1 -2.2
ANN                                  e*PP    pP     01 52 15.9 -2.2
ANN                                  e              01 52 44.4
ANN                                  eS      S      01 56 34.4 -1.9
ANN                                   pmax   pmax
            comp=Z,69nm,1.1s
EIL    Elat               24.58  98   P      P      01 52 16.7 +1.2
            comp=Z,2.7nm,0.7s,baz=21,slow=5.7,SNR=2.2
EIL                                   LR     LR     02 04 02.4
            comp=Z,243nm,19.1s,baz=240,slow=42
            comp=Z,2.7nm,0.7s
NB2    NORSAR Subarra     24.63   5   P      P      01 52 16.0 +0.3
            comp=Z,5.2nm,0.9s,baz=194,slow=9.3
NOA    NORSAR Array B     24.63   5   P      P      01 52 15.2 -0.5
            comp=Z,1.9nm,0.8s,baz=102,slow=15,SNR=4.6
            comp=Z,1.9nm,0.8s
ASF    Jabal al Asfar     25.25  91   P      P      01 52 23.5 +1.9
            comp=Z,9.3nm,1.1s,baz=336,slow=0.8,SNR=6.2
            comp=Z,9.3nm,1.1s
VSU    Vasula             25.52  25⇓eP      P      01 52 23.9 +0.2
VSU                                   pmax   pmax
            comp=Z,150nm,1.2s
VSU    Vasula             25.52  25  eP      P      01 52 24.9 +1.1
KOPT   Kop Dagi           26.64  72   P      P      01 52 35.2 +0.8
VSR    Storozhevoye       27.31  47  eP      P      01 52 47.7 +7.8
VSR                                   pmax   pmax
            comp=Z,20nm,1.0s
VORR   Voronezh           27.49  46  eP      P      01 52 40.7 -0.8
VORR                                  pmax   pmax
            comp=Z,10.0nm,0.4s
OBN    Obninsk            27.52  38   P      P      01 52 44.8 +3.0
            comp=Z,1.1nm,0.3s,baz=257,slow=18,SNR=3.1
OBN                                   LR     LR     02 03 41.3
            comp=Z,104nm,20.5s,baz=194,slow=36
            comp=Z,1.1nm,0.3s
OBN    Obninsk            27.52  38   P      P      01 52 42.5 +0.7
OBN    Obninsk            27.52  38⇑eP      P      01 52 41.8  0.0
OBN                                  e              01 53 31.0
OBN                                  eS      S      01 57 24.4 +1.7
OBN                                   pmax   pmax
            comp=Z,23nm,1.3s
OBN                                   MLR    MLR
            comp=Z,198nm,14.0s
LPSR   Galich'ya Gora     27.67  44  eP      P      01 52 42.9 -0.2
LPSR                                  pmax   pmax
            comp=Z,20nm,0.9s
FINES  FINESS Array B     27.70  20   P      P      01 52 43.8 +0.4
            comp=Z,2.2nm,0.7s,baz=207,slow=8.6,SNR=6.9
            comp=Z,2.2nm,0.7s
FINES  FINESS Array B     27.70  20   P      P      01 52 44.9 +1.6
FINES  FINESS Array B     27.70  20   P      P      01 52 44.9 +1.6
FIA1   FINESS Array S     27.70  20   P      P      01 52 45.1 +1.7
FIA1                                  IAmb   IAmb   01 52 54.8
            comp=Z,21nm,1.1s
GURO   Guroymak-BITLI     27.96  75   P      P      01 52 46.6 +0.4
KIV    Kislovodsk         28.25  64   P      P      01 52 49.5 +0.9
KIV                                   IAmb   IAmb   01 53 12.2
            comp=Z,20nm,1.2s
KIV    Kislovodsk         28.25  64  eP      P      01 52 50.1 +1.6
KIV                                   pmax   pmax
            comp=Z,12nm,1.1s
MOS    Moscow             28.36  38  eP      P      01 52 48.3 -0.9
KBZ    Khabaz             28.39  64   P      P      01 52 52.3 +2.6
            comp=Z,1.9nm,1.0s,baz=228,slow=17,SNR=4.9
KBZ                                   LR     LR     02 06 42.7
            comp=Z,158nm,19.7s,baz=268,slow=42
            comp=Z,1.9nm,1.0s
KBZ    Khabaz             28.39  64⇑eP      P      01 52 52.4 +2.7
KBZ                                   pmax   pmax
            comp=Z,18nm,1.6s
ONI    Oni                28.78  67   P      P      01 52 52.5 -0.8
ONI                                   IAmb   IAmb   01 53 04.8
            comp=Z,18nm,1.3s
ONI    Oni                28.78  67   P      P      01 52 52.5 -0.8
ONI                                   pmax   pmax
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      comp=Z,18nm,1.3s
GEVA  Gevas              28.79  75    P      P       01 52 54.7 +1.1
GEVA                                  IAmb   IAmb    01 53 22.5
      comp=Z,13nm,1.4s
VRH   Novokhopyorsk      28.83  48   eP      P       01 52 52.7 -0.8
VRH                                   pmax   pmax
      comp=Z,20nm,0.7s
AKH   Akhalkalaki        28.84  69    P      P       01 52 53.4 -0.6
AKH   Akhalkalaki        28.84  69    P      P       01 52 53.4 -0.6
AKH                                   pmax   pmax
      comp=Z,51nm,1.3s
ZEI   Tsey               29.11  66   eP      P       01 52 58.0 +1.6
ZEI                                   pmax   pmax
      comp=Z,5.0nm,1.0s
GNI   Garni              29.88  71    P      P       01 53 05.2 +2.1
      comp=Z,2.6nm,0.8s,baz=342,slow=2.7,SNR=4.7
      comp=Z,2.6nm,0.8s
GNI   Garni              29.88  71    P      P       01 53 02.9 -0.3
GNI                                   IAmb   IAmb    01 53 27.7
      comp=Z,20nm,1.2s
GNI   Garni              29.88  71    P      P       01 53 02.9 -0.3
GNI                                   pmax   pmax
      comp=Z,20nm,1.2s
BBTS  Babate             30.12 230    LR     LR      02 06 17.5
      comp=Z,654nm,19.3s,baz=4.0,slow=39
GROC  Groznyy            30.50  65   eP      P       01 53 09.5 +1.1
GROC                                  pmax   pmax
      comp=Z,69nm,1.2s
DBIC  Dimbokro           31.61 202    P      P       01 53 19.3 +1.0
      comp=Z,4.6nm,1.0s,baz=350,slow=4.0,SNR=2.9
DBIC                                  LR     LR      02 07 10.6
      comp=Z,581nm,18.3s,baz=7.5,slow=38
      comp=Z,4.6nm,1.0s
MAK   Makhachkala        31.75  66   eP      P       01 53 16.0 -3.4
MAK                                  eS      S       01 58 24.7 -4.7
KLMR  Klimovskoe         31.93  30   eP      P       01 53 19.2 -1.6
KLMR                                  AMP            01 53 33.3
      comp=Z,26nm,1.2s
KLMR                                  LR     LR      02 05 05.2
KLMR                                  AMP            02 06 53.2
      comp=Z,331nm,16.2s
KLMR  Klimovskoe         31.93  30   eP      P       01 53 19.1 -1.7
KLMR                                  pmax   pmax
      comp=Z,26nm,1.2s
KLMR                                  MLR    MLR
      comp=Z,331nm,16.0s
BELG  Belogornoye        32.67  48    LR     LR      02 08 51.0
      comp=Z,117nm,18.3s,baz=308,slow=40
BELG  Belogornoye        32.67  48deP    P       01 53 27.6 +0.2
BELG                                  pmax   pmax
      comp=Z,2.0nm,0.8s
BORG  Borgarnes          32.77 338    LR     LR      02 06 22.9
      comp=Z,175nm,19.4s,baz=156,slow=36
ARCES ARCESS Array B     34.55  12    P      P       01 53 44.0 +0.4
      comp=Z,3.7nm,1.1s,baz=196,slow=5.6,SNR=2.2
ARCES                                 PcP    PcP     01 56 17.8 -0.3
      comp=Z,2.5nm,0.9s,baz=183,slow=3.3,SNR=4.5
      comp=Z,3.7nm,1.1s
KIRV  Kirov              35.37  38    LR     LR      02 08 15.8
      comp=Z,287nm,21.6s,baz=248,slow=36
KIRV  Kirov              35.37  38⇓eP    P       01 53 51.6 +0.9
JMIC  Jan Mayen          35.38 351    LR     LR      02 07 19.0
      comp=Z,99nm,21.2s,baz=143,slow=35
ARU   Arti               39.67  43    P      P       01 54 26.8 -0.4
ARU                                   IAmb   IAmb    01 54 40.6
      comp=Z,19nm,1.1s
ARU   Arti               39.67  43d iP     P       01 54 26.8 -0.4
ARU                                                  01 56 32.4
ARU                                   S      S       02 00 32.3 +1.8
ARU                                   SS     SS      02 03 25.5 +0.1
ARU                                   pmax   pmax
      comp=Z,12nm,1.0s
FURI  Furi               40.02 126    P      P       01 54 30.0 -0.9
ABKAR Akbulak array      40.18  54    P      P       01 54 30.6 -1.0
GEYT  Alibeck            40.51  72    P      P       01 54 34.7 +0.2
      comp=Z,1.7nm,0.4s,baz=258,slow=5.9,SNR=7.7
      comp=Z,1.7nm,0.4s
SVE   Sverdlovsk         40.86  43   eP      P       01 54 37.0  0.0
SVE                                   pmax   pmax
      comp=Z,18nm,1.1s
LODK  Lodwar             42.25 135    P      P       01 54 47.9 -1.1
MBAR  Mbarara            43.21 144    LR     LR      02 11 57.7
      comp=Z,124nm,20.5s,baz=290,slow=35
MBAR  Mbarara            43.21 144    P      P       01 54 57.0 +0.1
MBAR  Mbarara            43.21 144    P      P       01 54 57.0 +0.1
MBAR                                  pmax   pmax
      comp=Z,6.0nm,1.3s
UOSS  Minazif            43.66  91    P      P       01 54 59.3 -1.0
UOSS                                  IAmb   IAmb    01 55 12.8
      comp=Z,10nm,1.0s
SFJD  Kangerlussuaq      44.23 332    LR     LR      02 12 21.0
      comp=Z,242nm,18.4s,baz=138,slow=34
ILULI Ilulissat          44.97 335    P      P       01 55 09.8 -0.3
ILULI                                 IAmb   IAmb    01 55 11.1
      comp=Z,19nm,1.2s
ILULI Ilulissat          44.97 335    P      P       01 55 09.8 -0.3
ILULI                                 pmax   pmax
      comp=Z,19nm,1.2s
BRVK  Borovoye           46.41  48    P      P       01 55 21.2 -0.6
BRVK  Borovoye           46.41  48    P      P       01 55 21.2 -0.6
BRVK                                  pmax   pmax
      comp=Z,22nm,1.1s
WSAR  Wadi Sarin         46.41  92    LR     LR      02 21 09.1
      comp=Z,69nm,18.1s,baz=299,slow=44
BVAR  Borovoye Array     46.48  48    LR     LR      02 15 07.3
      comp=Z,140nm,19.9s,baz=288,slow=36
KMBO  Kilima Mbogo       47.05 136    P      P       01 55 26.7 -0.7
KMBO                                  IAmb   IAmb    01 55 31.3
      comp=Z,6.3nm,1.1s
KMBO  Kilima Mbogo       47.05 136    P      P       01 55 26.7 -0.7
KMBO                                  pmax   pmax
      comp=Z,6.0nm,1.2s
KK31  Karatay Array      48.37  62    P      P       01 55 36.9 -0.3
KK31                                  IAmb   IAmb    01 55 49.7
      comp=Z,4.8nm,0.9s
KK31  Karatay Array      48.37  62    P      P       01 55 36.9 -0.3
KK31                                  pmax   pmax
      comp=Z,5.0nm,1.0s
KKAR  Karatay Array      48.37  62    P      P       01 55 36.4 -0.8
KKAR  Karatay Array      48.37  62    P      P       01 55 36.6 -0.6
KKAR                                  IAmb   IAmb    01 55 49.7
      comp=Z,4.8nm,0.9s
KKAR  Karatay Array      48.37  62    P      P       01 55 36.6 -0.6
KKAR                                  pmax   pmax
      comp=Z,5.0nm,1.0s
KBL   Kabul              49.95  73    P      P       01 55 49.5 -0.2
KBL   Kabul              49.95  73    P      P       01 55 49.5 -0.2
KBL                                   pmax   pmax
      comp=Z,5.0nm,1.1s
AAK   Ala-Archa          51.31  61    LR     LR      02 22 37.6
      comp=Z,90nm,18.6s,baz=307,slow=42
AAK   Ala-Archa          51.31  61⇑iP    P       01 56 00.4 +0.6
AAK                                   pmax   pmax
      comp=Z,13nm,4.4s
FRB   Frobisher Bay      51.48 327    LR     LR      02 16 48.1
      comp=Z,248nm,18.1s,baz=127,slow=35
KURK  Kurchatov          51.90  50    P      P       01 56 03.4 -0.4
KURK  Kurchatov          51.90  50    P      P       01 56 03.4 -0.4
KURK                                  pmax   pmax
      comp=Z,24nm,1.3s
SCHQ  Schefferville      51.97 315    P      P       01 56 03.7 -0.7
      comp=Z,4.3nm,0.6s,baz=28,slow=3.5,SNR=7.3
      comp=Z,4.3nm,0.6s
NRIK  Noril'sk           53.10  26    P      P       01 56 13.2 +0.7
      comp=Z,1.3nm,0.4s,baz=112,slow=1.8,SNR=1.4
      comp=Z,1.3nm,0.4s
NRIK  Noril'sk           53.10  26⇑iP    P       01 56 14.3 +1.8
NRIK                                  pmax   pmax
      comp=Z,7.0nm,1.4s
KSH   Kashi              53.37  64    P      P       01 56 15.0 -0.1
KSH                                   sP     sP      01 56 25.3 +6.2
KSH                                   pmax   pmax
      comp=Z,3.0nm,0.8s
NIL   Nilore             53.52  72    P      P       01 56 15.9 -0.2
NIL                                   IAmb   IAmb    01 56 39.4
      comp=Z,14nm,1.1s
NIL   Nilore             53.52  72    P      P       01 56 15.9 -0.2
NIL                                   pmax   pmax
      comp=Z,14nm,1.1s
ZAA0  Zalesovo Array     54.77  45    P      P       01 56 24.7 -0.3
ZAA0                                  IAmb   IAmb    01 56 36.5
      comp=Z,10.0nm,1.5s
ZALV  Zalesovo Beam      54.77  45    P      P       01 56 24.3 -0.6
      comp=Z,0.6nm,0.5s,baz=261,slow=7.4,SNR=4.7
ZALV                                  LR     LR      02 20 06.2
      comp=Z,114nm,18.6s,baz=286,slow=36
      comp=Z,0.6nm,0.5s
ZALV  Zalesovo Beam      54.77  45  i P      P       01 56 24.2 -0.7
ZALV                                  pmax   pmax
      comp=Z,1.0nm,0.7s
MAKZ  Makanchi           55.11  54    P      P       01 56 27.1 -0.5
MAKZ                                  IAmb   IAmb    01 56 41.1
      comp=Z,3.8nm,0.7s
MAKZ  Makanchi           55.11  54    P      P       01 56 27.1 -0.5
MAKZ                                  pmax   pmax
      comp=Z,4.0nm,0.7s
MK31  Makanchi Array     55.32  54    P      P       01 56 28.7 -0.4
MK31  Makanchi Array     55.32  54    P      P       01 56 28.7 -0.4
MK31                                  pmax   pmax
      comp=Z,5.0nm,1.0s
MKAR  Makanchi Array     55.32  54    P      P       01 56 28.8 -0.3
      comp=Z,4.0nm,0.7s,baz=288,slow=5.6,SNR=29
MKAR                                  LR     LR      02 21 39.9
      comp=Z,122nm,20.4s,baz=328,slow=38
      comp=Z,4.0nm,0.7s
LSZ   Lusaka             55.44 155    LR     LR      02 23 34.6
      comp=Z,504nm,18.3s,baz=332,slow=40
LSZ   Lusaka             55.44 155    P      P       01 56 30.1 -0.1
LSZ                                   IAmb   IAmb    01 56 33.4
      comp=Z,8.4nm,1.2s
LSZ   Lusaka             55.44 155    P      P       01 56 30.1 -0.1
LSZ                                   pmax   pmax
      comp=Z,8.0nm,1.2s
DGZ   Jazzator, Alta     57.61  49⇓eP    P       01 56 45.9 +0.4
DGZ                                   pmax   pmax
      comp=Z,8.0nm,1.9s
WMQ   Urumqi             59.95  56   eP      P       01 57 04.6 +2.9
WMQ                                   pP     sP      01 57 09.6 +3.8
WMQ                                   sP     pP      01 57 12.4 +7.7
WMQ                                   pmax   pmax
      comp=Z,9.0nm,0.7s
WMQ                                   LR     LR
      comp=N,310nm,17.9s
WMQ                                   LR     LR
      comp=E,270nm,19.5s
WMQ                                   LR     LR
      comp=Z,110nm,23.5s
MDP   Montagnes des      62.54 255    LR     LR      02 21 21.6
      comp=Z,137nm,20.0s,baz=107,slow=33
SADO  Sadowa             62.74 307    LR     LR      02 23 17.0
      comp=Z,237nm,18.3s,baz=145,slow=35
LBTB  Lobatse            63.82 161    LR     LR      02 28 06.4
      comp=Z,317nm,20.3s,baz=86,slow=39
A36M  Sachs Harbour      66.63 345    IAmb   IAmb    01 57 54.5
      comp=Z,4.9nm,0.7s
OPO   Ambohidratompo     66.87 138    LR     LR      02 27 58.2
      comp=Z,78nm,18.6s,baz=211,slow=37
BOSA  Boshof             67.17 162    P      P       01 57 49.8 +0.4
      comp=Z,1.6nm,0.8s,baz=40,slow=15,SNR=1.2
BOSA                                  LR     LR      02 28 37.3
      comp=Z,363nm,19.1s,baz=342,slow=37
      comp=Z,1.6nm,0.8s
ACSO  Alum Creek Sta     67.34 304    P      P       01 57 51.9 +1.4
BOD   Bodaibo            68.08  33   eP      P       01 57 53.6 -1.2
BOD                                   pmax   pmax
      comp=Z,12nm,1.8s
LSA   Lhasa              68.87  68    P      P       01 58 01.0 +0.1
LSA   Lhasa              68.87  68    P      P       01 58 01.0 +0.1
LSA                                   pmax   pmax
      comp=Z,4.0nm,0.5s
SONM  Songino Array      69.67  45    P      P       01 58 06.0 +0.9
      comp=Z,1.0nm,0.9s,baz=274,slow=7.8,SNR=7.7
SONM                                  LR     LR      02 30 40.4
      comp=Z,152nm,18.5s,baz=356,slow=38
      comp=Z,1.0nm,0.9s
SONM  Songino Array      69.67  45    P      P       01 58 05.1  0.0
SONM                                  IAmb   IAmb    01 58 18.5
      comp=Z,6.1nm,1.2s
SONM  Songino Array      69.67  45    P      P       01 58 05.1  0.0
SONM                                  pmax   pmax
      comp=Z,6.0nm,1.2s
SUR   Sutherland         69.88 167    LR     LR      02 30 37.9
      comp=Z,256nm,18.2s,baz=337,slow=38
ULM   Lac du Bonnet      69.97 318    P      P       01 58 08.9 +2.2
      comp=Z,2.9nm,0.6s,baz=68,slow=5.4,SNR=4.9
      comp=Z,2.9nm,0.6s
ULN   Ulaanbaatar        70.03  45    P      P       01 58 07.8 +0.5
ULN                                   IAmb   IAmb    01 58 23.0
      comp=Z,5.4nm,1.3s
ULN   Ulaanbaatar        70.03  45    P      P       01 58 07.8 +0.5
ULN                                   pmax   pmax
      comp=Z,5.0nm,1.3s
TKL   Tuckaleechee C     70.19 300    LR     LR      02 28 33.3
      comp=Z,100nm,18.1s,baz=108,slow=36
YKA   Yellowknife Ar     70.64 335    P      P       01 58 12.3 +1.8
      comp=Z,0.6nm,0.8s,baz=50,slow=6.2,SNR=11
YKA                                   LR     LR      02 27 30.9
      comp=Z,143nm,20.3s,baz=149,slow=34
      comp=Z,0.6nm,0.8s
INK   Inuvik             71.28 345    LR     LR      02 31 16.6
      comp=Z,127nm,18.8s,baz=107,slow=37
YAK   Yakutsk            71.52  25⇓eP    P       01 58 15.1 -0.8
YAK                                   pmax   pmax
      comp=Z,8.0nm,0.5s
SHL   Shillong           71.58  72    P      P       01 58 16.2 -1.0
SHL                                   IAmb   IAmb    01 58 17.8
      comp=Z,11nm,1.3s
SHL   Shillong           71.58  72    P      P       01 58 16.2 -1.0
SHL                                   pmax   pmax
      comp=Z,11nm,1.3s
PALK  Pallekele          72.85  94    LR     LR      02 33 07.0
      comp=Z,64nm,19.5s,baz=32,slow=38
BRDH  Bariadhala         72.95  74    LR     LR      02 34 27.5
      comp=Z,79nm,19.3s,baz=300,slow=39
BDFB  Brasilia           73.22 235    P      P       01 58 28.5 +1.7
      comp=Z,2.4nm,0.6s,baz=122,slow=15,SNR=4.6
      comp=Z,2.4nm,0.6s
PLAL  Pickwick Lake      73.52 301    P      P       01 58 28.1 -0.3
PLAL                                  IAmb   IAmb    01 58 30.8
      comp=Z,14nm,1.2s
ECSD  EROS Data Cent     74.07 313    P      P       01 58 31.5 +0.1
ECSD                                  IAmb   IAmb    01 58 34.5
      comp=Z,17nm,1.4s
SDV   Santo Domingo      74.61 270    P      P       01 58 35.6 +0.3
SDV                                   IAmb   IAmb    01 58 40.0
      comp=Z,14nm,1.2s
OXF   Oxford             74.70 302    P      P       01 58 35.6 +0.4
OXF   Oxford             74.70 302    P      P       01 58 35.6 +0.4
OXF                                   pmax   pmax
      comp=Z,25nm,1.1s
FCAR  Ozark Folk Cen     75.75 304    P      P       01 58 41.6 +0.3
FCAR                                  IAmb   IAmb    01 58 44.2
      comp=Z,8.4nm,1.2s
HIA   Hailar             75.98  38    P      P       01 58 43.6 +1.2
HIA                                   IAmb   IAmb    01 58 57.6
      comp=Z,8.2nm,1.0s
HIA   Hailar             75.98  38    P      P       01 58 43.6 +1.2
HIA                                   pmax   pmax
      comp=Z,8.0nm,1.0s
HHC   Hu-ho-hao-te       76.69  49   eP      P       01 58 47.4 +0.7
HHC                                   pmax   pmax
      comp=Z,15nm,0.7s
HHC                                   pmax   pmax
      comp=Z,380nm,4.7s
HHAR  Hobbs              76.73 305    P      P       01 58 47.3 +0.4
HHAR                                  IAmb   IAmb    01 58 49.1
      comp=Z,7.6nm,1.0s
PZH   PanZhiHua          78.45  66    P      P       01 58 56.5 -0.3
PZH                                   pmax   pmax
      comp=Z,10.0nm,0.5s
PZH                                   pmax   pmax
      comp=Z,120nm,5.3s
HEH   HeiHe              78.97  34   eP      P       01 58 59.9 +0.9
HEH                                   pmax   pmax
      comp=Z,4.0nm,1.1s
SAML  Samuel             79.54 251           P       01 59 02.2 -0.4
SAML                                  IAmb   IAmb    01 59 07.3
      comp=Z,10nm,1.4s
SAML  Samuel             79.54 251    P      P       01 59 02.2 -0.4
SAML                                  pmax   pmax
      comp=Z,10.0nm,1.5s
PHWY  Pilot Hill         80.71 315    P      P       01 59 10.5 +1.5
PHWY                                  IAmb   IAmb    01 59 12.4
      comp=Z,12nm,1.4s
HNS   HongShan           80.74  50 ⇑P      P       01 59 21.6  +13
HNS                                   pmax   pmax
      comp=Z,8.0nm,1.6s
CHTO  Chiang Mai         80.76  74    P      P       01 59 09.6 +0.3
CHTO  Chiang Mai         80.76  74    P      P       01 59 09.6 +0.3
CMAR  Chiang Mai Arr     80.97  74    P      P       01 59 10.2 -0.2
      comp=Z,0.5nm,0.3s,baz=301,slow=7.0,SNR=5.7
CMAR                                  LR     LR      02 43 52.4
      comp=Z,23nm,18.8s,baz=280,slow=42
      comp=Z,0.5nm,0.3s
CMAR  Chiang Mai Arr     80.97  74    P      P       01 59 09.9 -0.5
CMAR  Chiang Mai Arr     80.97  74  i P      P       01 59 10.1 -0.3
CMAR                                  pmax   pmax
      comp=Z,1.0nm,0.3s
ISCO  Idaho Springs      81.78 314    P      P       01 59 14.2 -0.6
ISCO  Idaho Springs      81.78 314    P      P       01 59 14.2 -0.6
ISCO                                  pmax   pmax
      comp=Z,5.0nm,1.3s
NEW   Newport            81.82 326    LR     LR      02 34 07.5
      comp=Z,153nm,20.5s,baz=64,slow=35
PD31  Pinedale Array     81.99 318    P      P       01 59 16.6 +0.8
PD31                                  IAmb   IAmb    01 59 44.8
      comp=Z,6.3nm,1.4s
PDAR  Pinedale Array     81.99 318    P      P       01 59 16.0 +0.3
      comp=Z,0.4nm,0.6s,baz=53,slow=5.7,SNR=4.5
      comp=Z,0.4nm,0.6s
BNX   BinXian            82.18  37 ⇑P      P       01 59 15.8 -0.6
BNX                                   pmax   pmax
      comp=Z,6.0nm,1.5s
BNX                                   pmax   pmax
      comp=Z,210nm,4.9s
SIV   San Ignacio        82.52 244    P      P       01 59 20.0 +1.4
      comp=Z,1.7nm,0.8s,baz=81,slow=7.0,SNR=5.5
SIV                                   LR     LR      02 35 09.1
      comp=Z,135nm,20.3s,baz=41,slow=35
      comp=Z,1.7nm,0.8s
BBB   Bella Bella        83.20 334    LR     LR      02 36 06.8
      comp=Z,123nm,19.3s,baz=94,slow=36
RDMU  Red Mountain       83.50 317    P      P       01 59 23.3 -0.4
RDMU                                  IAmb   IAmb    01 59 35.4
      comp=Z,7.4nm,1.3s
MDJ   Mudanjiang         84.06  37    P      P       01 59 25.7 -0.4
MDJ                                   S      S       02 09 19.5  -31
BMO   Blue Mountains     84.43 324    P      P       01 59 28.2  0.0
BMO                                   IAmb   IAmb    01 59 31.3
      comp=Z,9.6nm,1.4s
BMO   Blue Mountains     84.43 324    P      P       01 59 28.2  0.0
BMO                                   pmax   pmax
      comp=Z,10.0nm,1.4s
PV07  Paradox Valley     84.44 315    P      P       01 59 28.9 +0.4
PV07                                  IAmb   IAmb    01 59 32.5
      comp=Z,9.6nm,1.2s
P17A  Butcher Ranch,     84.91 316    IAmb   IAmb    01 59 31.8
      comp=Z,4.4nm,0.8s
OTAV  Otavalo            85.97 267    P      P       01 59 35.7 -1.0
OTAV  Otavalo            85.97 267    P      P       01 59 35.7 -1.0
OTAV                                  pmax   pmax
      comp=Z,16nm,1.5s
ELK   Elko               86.42 320    P      P       01 59 39.1 +0.7
ELK   Elko               86.42 320    P      P       01 59 39.1 +0.7
ELK                                   pmax   pmax
      comp=Z,2.0nm,1.1s
NJ2   Nanjing            86.80  52   eP      P       01 59 40.0  0.0
NJ2                                   pmax   pmax
      comp=Z,10.0nm,0.7s
CPUP  Villa Florida      86.89 234    LR     LR      02 39 11.6
      comp=Z,219nm,18.9s,baz=47,slow=36
TXAR  Lajitas Array      87.44 305    P      P       01 59 46.4 +3.1
      comp=Z,0.4nm,0.8s,baz=90,slow=4.5,SNR=4.2
TXAR                                  LR     LR      02 38 05.0
      comp=Z,102nm,19.0s,baz=56,slow=35
      comp=Z,0.4nm,0.8s
LPAZ  La Paz             87.90 248    LR     LR      02 36 13.9
      comp=Z,85nm,21.7s,baz=44,slow=34
CMIG  Matias Romero      88.93 290    LR     LR      02 34 40.8
      comp=Z,95nm,21.1s,baz=31,slow=32
YBH   Yreka Blue Hor     89.36 325    LR     LR      02 39 00.7
      comp=Z,100nm,18.8s,baz=88,slow=35
LVC   Limon Verde        92.42 244    LR     LR      02 41 42.8
      comp=Z,62nm,19.7s,baz=58,slow=36
MJAR  Matsushiro Arr     94.45  37    LR     LR      02 46 36.3
      comp=Z,120nm,19.5s,baz=318,slow=38
LPIG  La Paz             95.34 305    LR     LR      02 43 11.9
      comp=Z,106nm,18.2s,baz=61,slow=35
CFA   Coronel Fontan     97.54 236    LR     LR      02 44 54.7
      comp=Z,137nm,19.3s,baz=66,slow=36
WRA   Warramunga Arr    131.57  85    PKP    PKiKP   02 06 10.8 +1.2
      comp=Z,0.8nm,0.9s,baz=300,slow=1.5,SNR=3.4
ASAR  Alice Springs     133.08  89    PKP    PKiKP   02 06 12.2 -0.5
      comp=Z,1.0nm,0.8s,baz=303,slow=2.4,SNR=7.4
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*IDC **05** 01:51:60.0±1.8, 30.°46S×72.°29W, h0km, mb4.3/2, mbtmp3.9/8, ML3.6/6, Error ellipse: s-maj=45.3km s-min=23.5km az=100.0*

*SJA **05** 01:52:01.2±0.8, 30.°35S×71.°87W, h9km±4km, ML4.2, MW3.8, Hypocentre not reviewed by the ISC*

*GUC **05** 01:52:05.7±0.8, 30.°35S×71.°71W, h26km±5km, ML4.2*

*NEIC **05** 01:52:06.4±1.8, 30.°35S±0.°05×71.°7W±0.°1, h28km±12km, mb3.7/1, ML4.2(GUC), Error ellipse: s-maj=13.2km s-min=6.7km az=92.0*

ISC 05 01:52:04.8±1.0**, 30.°35S**±0.°04×**71.°79W**±0.°06**, h30**km±8km**, n63, σ1§60**/69**, mb3.7**/3**, 4C-3D, Near coast of central Chile**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                    Op     ISC       h  m  s   ISC
CO06  Fray Jorge          0.34 157         Pb       01 52 13.3 +0.4
CO06                                Sg     Sb       01 52 17.8 -0.6
CO06  Fray Jorge          0.34 157⇑iP      Pb       01 52 13.3 +0.4
CO06                              i S      Sb       01 52 18.2 -0.2
CO06                                IAML            01 52 19.3
      comp=N,56μm,0.2s
CO05  La Serena           0.65  48         Pb       01 52 17.8 +0.1
CO05  La Serena           0.65  48 i P     Pb       01 52 17.7 +0.1
GO04  Tololo Observa      0.88  78         Pb       01 52 21.1 -0.6
GO04  Tololo Observa      0.88  78⇓iP      Pb       01 52 21.0 -0.6
GO04                              i S      Sb       01 52 31.8 -1.3
GO04                                IAML            01 52 40.3
      comp=N,14μm,0.4s
GO04  Tololo Observa      0.88  78 eP               01 52 20.0
GO04                               eS               01 52 32.9
GO04                                IAML            01 52 36.4
      comp=Z,6μm,0.2s
CO02  Combarbal           1.08 141         Pn       01 52 24.6 +0.5
CO02  Combarbal           1.08 141⇑iP      Pn       01 52 24.4 +0.3
CO02                              i S      Sb       01 52 38.5 -0.4
CO02  Combarbal           1.08 141 eP               01 52 23.0
CO02                               eS               01 52 38.9
CO02                                IAML            01 52 41.5
      comp=Z,6μm,0.9s
CO01  Juntas del Tor      1.52  76         Pn       01 52 31.3 +1.1
CO01  Juntas del Tor      1.52  76⇓iP      Pn       01 52 31.2 +1.1
CO01                              i S      Sb       01 52 50.0 -1.4
CO01                                IAML            01 52 53.4
      comp=N,2μm,0.3s
CO01  Juntas del Tor      1.52  76 eP               01 52 31.5
CO01                               eS               01 52 51.7
CO01                                IAML            01 52 52.4
      comp=Z,2μm,1.2s
LCO   Las Campanas        1.64  36         Pn       01 52 33.0 +1.1
LCO   Las Campanas        1.64  36⇑iP      Pn       01 52 32.9 +1.1
LCO   Las Campanas        1.64  36 eP               01 52 33.0
LCO                                eP               01 52 33.0
LCO                                eS               01 52 56.6
LCO                                 IAML            01 53 00.7
      comp=Z,4μm,0.7s
AC05  El Transito         2.01  41         Pn       01 52 38.8 +2.0
AC05  El Transito         2.01  41⇑iP      Pn       01 52 38.7 +1.9
AC05                              i S      Sb       01 53 04.4 -1.0
AC05  El Transito         2.01  41 eP               01 52 38.0
AC05                               eS               01 53 06.8
AC04  Llanos de Chal      2.23  16 eP               01 52 40.6
AC04                               eS               01 53 08.6
AC04  Llanos de Chal      2.23  16         Pn       01 52 40.5 +0.7
AC04  Llanos de Chal      2.23  16 eP      Pn       01 52 40.4 +0.7
VA06  Catapilco           2.24 169         Pn       01 52 40.8 +0.9
VA06  Catapilco           2.24 169 i P     Pn       01 52 40.9 +1.1
VA06                               i S     Sb       01 53 11.5 -0.4
VA06                                IAML            01 53 18.8
      comp=N,3μm,0.5s
RTLS  Leoncito            2.58 125 eP               01 52 48.0
RTLS                               eS               01 53 19.6
RTLS                                IAML            01 53 36.1
      comp=Z,1μm,0.5s
VA03  San Esteban         2.62 157         Pn       01 52 48.0 +2.7
VA03  San Esteban         2.62 157 i P     Pn       01 52 47.2 +2.0
VA03                                IAML            01 53 32.4
      comp=E,2μm,0.3s
VA03  San Esteban         2.62 157 eP               01 52 46.0
VA03                               eS               01 53 20.6
VA03                                IAML            01 53 30.0
      comp=Z,1μm,0.6s
```

VA01	Torpederas	2.66	177	Pn	Pn	01 52 46.3	+0.7
VA01	Torpederas	2.66	177	eP		01 52 46.1	
VA01				eS		01 53 24.1	
ROCH	El Roble	2.69	166	⇓iP	Pn	01 52 47.6	+1.4
ROCH				IAML		01 53 30.3	
	comp=N,1μm,0.5s						
ROC1	El Roble	2.70	166		Pn	01 52 47.3	+1.0
ROC1	El Roble	2.70	166	eP		01 52 47.6	
ROC1				eS		01 53 21.1	
PEL	Peldehue	2.94	162		Pn	01 52 51.1	+1.7
PEL	Peldehue	2.94	162	eP	Pn	01 52 51.3	+1.9
PEL				IAML		01 53 36.9	
	comp=N,522nm,0.4s						
PEL	Peldehue	2.94	162	eP		01 52 46.1	
PEL				eP		01 52 51.2	
PEL				eS		01 53 31.1	
PEL				eS		01 53 31.1	
MT02	Curacav	2.95	169		Pn	01 52 51.2	+1.6
MT02	Curacav	2.95	169	eP	Pn	01 52 50.6	+1.0
MT02	Curacav	2.95	169	eP		01 52 50.5	
MT02				eS		01 53 29.1	
MT02				IAML		01 53 40.3	
	comp=Z,391nm,0.4s						
RTLL	Cerro Villicun	3.01	110	eP		01 52 53.0	
RTLL				eS		01 53 31.1	
RTLL				eS		01 53 31.1	
GO03	Copiap	3.07	27	eP		01 52 53.1	
GO03				eS		01 53 33.0	
GO03	Copiap	3.07	27		Pn	01 52 52.8	+1.4
GO03	Copiap	3.07	27	eP	Pn	01 52 52.8	+1.4
GO03				IAML		01 53 44.5	
	comp=E,357nm,0.7s						
MT05	Renca	3.16	164		Pn	01 52 54.3	+1.7
MT05	Renca	3.16	164	eP	Pn	01 52 54.0	+1.5
MT05	Renca	3.16	164	eP		01 52 53.0	
MT05				eP		01 52 54.3	
MT05				eS		01 53 33.5	
MT05				IAML		01 53 44.4	
	comp=Z,470nm,0.5s						
FCH	Farellones	3.23	157	eP	Pn	01 52 56.2	+2.5
CFA	Coronel Fontan	3.29	113	Pn	Pn	01 52 58.0	+3.6
	comp=Z,9.9nm,0.3s,baz=293,slow=13,SNR=48						
CFA				Sn	Sb	01 53 38.4	-3.9
	comp=Z,46nm,0.3s,baz=52,slow=16,SNR=5.8						
	comp=Z,24nm,0.3s						
VA05	Santo Domingo	3.30	177	eP	Pn	01 52 55.0	+0.6
MT03	Universidad Ad	3.31	161	eP	Pn	01 52 56.7	+2.0
MT03				IAML		01 53 54.5	
	comp=E,838nm,0.6s						
MT09	Talagante	3.48	169		Pn	01 52 58.4	+1.4
MT01	Popeta	3.53	173	eP	Pn	01 52 58.5	+0.9
LMEL	Las Melosas	3.73	159		Pn	01 53 03.6	+3.1
LMEL	Las Melosas	3.73	159	eP	Pn	01 53 03.6	+3.1
BO04	La Punta	3.76	165		Pn	01 53 02.6	+1.8
BO01	Tunca	4.07	172		Pn	01 53 05.7	+0.6
AC02	Maricunga	4.21	34		Pn	01 53 08.7	+1.2
BO02	Sierra Bellavi	4.51	169		Pn	01 53 12.2	+1.1
H03N1	Juan Fernandez	6.79	241	Pn	Pn	01 53 42.3	+0.2
	baz=111,slow=18						
H03N1				T	T	02 00 48.8	
	baz=69,slow=72,SNR=7015						
H03N2	Juan Fernandez	6.81	241	Pn	Pn	01 53 42.9	+0.5
	baz=111,slow=18						
H03N2				T	T	02 00 41.6	
	baz=69,slow=72,SNR=6830						
H03N3	Juan Fernandez	6.81	241	Pn	Pn	01 53 43.2	+0.7
	baz=111,slow=18						
H03N3				T	T	02 00 44.6	
	baz=69,slow=72,SNR=3602						
H03S3	Juan Fernandez	6.96	238	Pn	Pn	01 53 43.4	-1.1
H03S3				T	T	02 00 57.0	
	baz=46						
H03S1	Juan Fernandez	6.97	238	Pn	Pn	01 53 43.2	-1.4
H03S1				T	T	02 00 52.5	
	baz=46						
H03S2	Juan Fernandez	6.98	238	Pn	Pn	01 53 43.4	-1.3
H03S2				T	T	02 00 55.5	
	baz=46						
PB15	IPOC Station P	7.41	17	Pn	Pn	01 53 53.0	+1.8
LVC	Limon Verde	8.13	19	Pn	Pn	01 54 03.8	+2.6
	comp=E,0.3nm,0.3s,baz=134,slow=10,SNR=1.5						
LVC				Sn	Sn	01 55 33.2	+0.9
	comp=E,0.4nm,0.3s,baz=66,slow=5.2,SNR=1.8						
	comp=E,0.7nm,0.3s						
PB07	IPOC Station P	8.76	12	Pn	Pn	01 54 10.2	+0.6
PLCA	Paso Flores	10.40	175	Pn	Pn	01 54 31.4	-0.6
	comp=E,0.2nm,0.3s,baz=351,slow=15,SNR=9.9						
	comp=E,0.9nm,0.4s						
CPUP	Villa Florida	13.35	76	Pn	P	01 55 18.3	-3.2
	baz=191,slow=17,SNR=1.9						
	comp=E,1.3nm,0.9s						
LPAZ	La Paz	14.40	14	Pn	Pn	01 55 29.8	+2.6
	comp=E,0.1nm,0.3s,baz=195,slow=6.9,SNR=5.1						
	comp=E,1.3nm,0.7s						
SIV	San Ignacio	17.34	37	P	P	01 56 07.1	+1.1
	baz=207,slow=9.6,SNR=18						
	comp=E,3.9nm,0.8s						
ETMB	Extrema	21.09	15	P	P	01 56 45.0	-1.8
ETMB				IAmb	IAmb	01 56 52.3	
	comp=Z,2.9nm,0.9s						
USHA	Ushuaia	24.58	175	P	P	01 57 20.3	-1.6
	comp=Z,16nm,0.4s,baz=81,slow=1.0,SNR=1.8						
	comp=Z,16nm,0.4s						
TORD	Torodi Ar. Bea	82.78	70	P	P	02 04 27.4	+1.0
	comp=Z,0.7nm,1.0s,baz=249,slow=7.4,SNR=2.2						
	comp=Z,0.7nm,1.0s						
H11S2	WAKE ISLAND Hy	125.96	272	T	T	04 29 48.1	
	baz=114,slow=75,SNR=130						
H11S1	WAKE ISLAND Hy	125.97	272	T	T	04 29 49.1	
	baz=114,slow=75,SNR=190						
H11S3	WAKE ISLAND Hy	125.97	272	T	T	04 29 49.5	
	baz=114,slow=75,SNR=179						
ZALV	Zalesovo Beam	150.99	29	PKPbc	PKPbc	02 11 55.2	+1.1
	comp=Z,0.9nm,0.6s,baz=318,slow=4.1,SNR=6.7						

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*IDC **05** 01:52:32.9±1.7, 35°.85N×141°.19E, h0^{km}, mb3.5/3, mbtmp3.9/7, ML3.5/4, Error ellipse: s-maj=38.5km s-min=20.6km az=64.0*

*JMA **05** 01:52:40.1±0.2, 35°.7N±0°.5×140°.7E±0°.7, h49^{km}±1^{km}, MV3.1/39, NEAR CHOSHI CITY*

ISC 05 01:52:40.4±0.9**, 35°.70N**±0°.04×**140°.83E**±0°.06**, h44**^{km}±7^{km}**, n32, σ1^{s}43**/32**, mb3.4**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.02	86	iP	Pn	01 52 47.9	+0.6
CHOJ				eS	Sn	01 52 53.8	+1.7
JSMT	Sammumatsuo	0.32	260	iP	Pn	01 52 48.9	-0.3
JSMT				S	Sn	01 52 55.7	+0.3
JIHU	Itakohorinouch	0.36	317	iP	Pn	01 52 49.5	-0.2
JIHU				eS	Sn	01 52 55.8	-0.4
JCN	Nagara	0.59	241	P	Pn	01 52 52.2	-0.2
JCN				eS	Sn	01 53 00.9	-0.1
JYT	Yasato	0.74	316	P	Pn	01 52 53.0	-1.4
JYT				eS	Sn	01 53 02.4	-2.1
BSO4	Boso 4	0.82	210	P	Pn	01 52 55.5	+0.1
JHO	Hitachi	0.93	347	P	Pn	01 52 56.6	-0.4
BSO3	Boso 3	0.94	196	P	Pn	01 52 57.4	+0.5
BSO1	Boso 1	1.05	173	P	Pn	01 52 59.0	+0.8
JAG	Ashikaga	1.33	303	P	Pn	01 53 01.1	-1.4
JMM	Marumori	2.16	359	P	Pn	01 53 15.2	+1.3
MJAR	Matsushiro Arr	2.28	292	Pn	Pn	01 53 14.9	-0.7
	1.5nm,0.3s,baz=98,slow=14,SNR=99						
MJAR				Sn	Sn	01 53 46.7	+4.2
	1.2nm,0.3s,baz=135,slow=14,SNR=2.6						
	17nm,0.4s						
MAJO	Matsushiro	2.29	292	P	Pn	01 53 15.8	+0.2
JSG	Sagara	2.40	245	P	Pn	01 53 19.9	+2.8
JHJ	Hachijo jima 2	2.72	199	Pn	Pn	01 53 22.3	+0.7
	48nm,0.3s,baz=79,slow=11,SNR=7.4						
JHJ				Sn	Sn	01 53 51.7	-1.5
	67nm,0.3s,baz=82,slow=23,SNR=4.9						
	95nm,0.3s						
JGF	Kuroka	2.83	269	P	Pn	01 53 24.7	+1.6
JSD	Sado	3.11	319	P	Pn	01 53 27.3	+0.4
INU	Inuyama	3.13	265	P	Pn	01 53 28.3	+1.1
JTM	Tenmabayashi	5.08	2	P	Pn	01 53 55.6	+1.7
JHS	Saijyo	6.34	266	P	Pn	01 54 12.9	+1.5
ASAJ	Asahikawa	8.51	9	Pn	Pn	01 54 35.2	-5.8
	0.4nm,0.3s,baz=258,slow=33,SNR=1.3						
	6.8nm,0.8s						
JCJ	Chichijima	8.66	172	Pn	Pn	01 54 42.1	-1.0
	4.2nm,0.3s,baz=289,slow=22,SNR=2.0						
JCJ				Sn	Sn	01 56 11.2	-8.2
	3.1nm,0.3s,baz=277,slow=19,SNR=2.0						
	30nm,0.4s						
H11N2	WAKE ISLAND Hy	27.91	118	T	T	02 27 38.6	
	baz=310,slow=75,SNR=9.4						
H11N1	WAKE ISLAND Hy	27.91	118	T	T	02 27 36.9	
	baz=310,slow=75,SNR=5.9						
H11N3	WAKE ISLAND Hy	27.92	118	T	T	02 27 50.1	
	baz=310,slow=75,SNR=8.1						
H11S1	WAKE ISLAND Hy	28.57	120	T	T	02 28 20.3	
	baz=312,slow=75,SNR=14						
H11S3	WAKE ISLAND Hy	28.57	120	T	T	02 28 19.7	
	baz=312,slow=75,SNR=12						
H11S2	WAKE ISLAND Hy	28.58	120	T	T	02 28 27.2	
	baz=312,slow=75,SNR=9.0						
MKAR	Makanchi Array	44.44	303	P	P	02 00 46.7	-0.2
	0.5nm,0.7s,baz=90,slow=9.4,SNR=4.8						
	0.5nm,0.7s						
WRA	Warramunga Arr	55.68	187	P	P	02 02 11.0	-1.2
	0.4nm,0.4s,baz=0.9,slow=7.6,SNR=8.4						
	0.4nm,0.4s						
ASAR	Alice Springs	59.41	187	P	P	02 02 38.9	+0.5
	0.2nm,0.6s,baz=22,slow=11,SNR=7.2						
	0.2nm,0.6s						
NRS	Narsarsuaq	83.35	3	iP	P	02 05 01.0	-1.3

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*IDC **05** 02:45:32.6±2.6, 36°.33N×71°.16E, h210^{km}±23^{km}, mb3.4/13, mbtmp4.0/19, Error ellipse: s-maj=18.6km s-min=15.7km az=159.0*

*NNC **05** 02:45:43.5±4.0, 37°.17N×71°.35E, h268^{km}±43^{km}, mb2.7, mpv4.1, Error ellipse: s-maj=42.7km s-min=33.3km az=167.0*

ISC 05 02:45:38.1±0.8**, 36°.73N**±0°.08×**71°.21E**±0°.10**, h250**^{km}**, n35, σ1^{s}45**/38**, mb3.5**/12**, 4C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	3.50	151	P	Pn	02 46 36.2	+0.1
AML	Almayashu	5.73	19	P	Pn	02 47 03.5	+0.4
	SNR=269						
AML	Almayashu	5.73	19	⇓P	Pn	02 47 03.5	+0.4
	5.2nm,0.5s						
AML				⇑S	S	02 48 08.9	-2.2
	13nm,0.6s						
UCH	Uchtor	6.06	24	P	Pn	02 47 08.0	+0.7
	SNR=133						
EKS2	Erkin-Say	6.25	18	P	Pn	02 47 10.1	+0.7
	SNR=14						
KK31	Karatay Array	6.39	355	P	Pn	02 47 10.6	-0.4
	14nm,0.4s,baz=169,slow=12,SNR=242						
KK31				⇑S	S	02 48 21.2	-4.3
	6.1nm,0.5s,baz=161,slow=25,SNR=5.3						
AAK	Ala-Archa	6.42	22	P	Pn	02 47 12.2	+0.6
	SNR=33						
AAK	Ala-Archa	6.42	22	P	Pn	02 47 11.9	+0.3
	19nm,0.3s,baz=153,slow=3.7,SNR=76						
AAK				S	S	02 48 26.4	0.0
	3.4nm,0.3s,baz=338,slow=22,SNR=8.3						
KBK	Karagaybulak	6.59	25	P	Pn	02 47 14.9	+1.3
	SNR=10						
ULHL	Ulahol	6.75	34	P	Pn	02 47 16.5	+0.9
	SNR=15						
CHMS	Chumysh	6.83	22	P	Pn	02 47 17.0	+0.5
	SNR=12						
USP	Ospenovka	7.00	20	P	Pn	02 47 19.9	+1.2
	SNR=11						
TKM2	Tokmak 2	7.05	27	P	Pn	02 47 20.3	+0.9
	SNR=17						
TKM2	Tokmak 2	7.05	27	⇓P	Pn	02 47 19.8	+0.4
	8.6nm,0.5s						
TKM2				⇑S	S	02 48 36.4	-4.3
	4.9nm,0.6s						
MKAR	Makanchi Array	13.01	36	P	Pn	02 48 35.0	+1.0
	1.5nm,0.7s,baz=224,slow=14,SNR=14						
KURBB	Kurchatov Arra	14.86	18	P	P	02 48 56.0	-0.1
	0.5nm,0.3s,baz=207,slow=12,SNR=8.5						
AB31	Akbulak array	14.97	330	⇓P	Pn	02 48 57.8	+0.1
	0.4nm,0.3s,baz=139,slow=11,SNR=33						
BVA0	Borovoye Array	16.31	358	P	Pn	02 49 13.2	-0.3
	1.1nm,0.6s,baz=165,slow=10,SNR=18						
BVAR	Borovoye Array	16.31	358	P	Pn	02 49 14.1	+0.5
	1.4nm,0.4s,baz=164,slow=10.0,SNR=16						
AKTO	Aktyubinsk	16.67	329	P	P	02 49 16.9	+0.9
	5.0nm,0.3s,baz=142,slow=8.5,SNR=31						
AKTO	Aktyubinsk	16.67	329	⇑P	P	02 49 16.7	+0.7
	3.0nm,0.5s						
WSAR	Wadi Sarin	17.28	222	P	P	02 49 15.4	-7.5
	0.9nm,0.4s,baz=134,slow=18,SNR=1.3						
ZALV	Zalesovo Beam	19.64	24	P	P	02 49 49.0	+1.1
	2.6nm,0.4s,baz=217,slow=11,SNR=12						
	2.6nm,0.4s						
ARU	Arti	21.47	341	P	P	02 50 08.0	+1.2
	2.9nm,0.4s,baz=151,slow=8.4,SNR=6.2						
	2.9nm,0.4s						
BELG	Belogornoye	22.82	321	P	P	02 50 20.1	+0.9
	13nm,0.9s,baz=230,slow=2.5,SNR=7.2						
	13nm,0.9s						
BRTR	Keskin Array B	29.52	287	P	P	02 51 19.7	+0.2
	0.3nm,0.8s,baz=104,slow=9.1,SNR=1.9						
	0.3nm,0.8s						
NRIK	Noril'sk	33.87	10	P	P	02 51 58.5	+1.6
	1.9nm,0.5s,baz=189,slow=1.5,SNR=4.1						
	1.9nm,0.5s						
FINES	FINESS Array B	37.39	326	P	P	02 52 27.2	+0.5
	1.1nm,0.7s,baz=116,slow=8.7,SNR=9.0						
	1.1nm,0.7s						
ARCES	ARCESS Array B	41.00	337	P	P	02 52 57.4	+1.0
	1.1nm,0.5s,baz=108,slow=7.8,SNR=14						
	1.1nm,0.5s						
NOA	NORSAR Array B	44.30	323	P	P	02 53 22.6	-0.4
	0.6nm,0.7s,baz=98,slow=8.1,SNR=2.3						
	0.6nm,0.7s						
TORD	Torodi Ar. Bea	65.89	269	P	P	02 55 55.5	-1.9
	0.5nm,0.4s,baz=49,slow=6.0,SNR=22						
	0.5nm,0.4s						
INK	Inuvik	73.65	9	P	P	02 56 45.2	+1.5
	1.0nm,0.5s,baz=349,slow=7.1,SNR=14						
	1.0nm,0.5s						
YKA	Yellowknife Ar	81.01	3	P	P	02 57 25.4	+0.8
	0.5nm,0.4s,baz=351,slow=5.3,SNR=15						
	0.5nm,0.4s						
WRA	Warramunga Arr	81.97	122	P	P	02 57 27.6	-2.7
	0.5nm,0.8s,baz=330,slow=4.3,SNR=2.7						
	0.5nm,0.8s						
ASAR	Alice Springs	84.25	125	P	P	02 57 40.6	-1.3
	0.4nm,0.7s,baz=304,slow=4.7,SNR=6.1						
	0.4nm,0.7s						

MAN 05 03:18:45.8, 10°.00N×125°.54E, h32^{km}, mb4.6, ML3.4, MS3.3, 2C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.22	192	⇓iP	Pb	03 18 49.4	-3.2
SCPH				iS	Sb	03 18 51.5	-5.6
MSLP	Maasin	0.68	281	⇑eP	Pn	03 18 58.8	-0.4
MSLP				iS	Sn	03 19 10.0	+1.3
TABP	Talibon, Bohol	1.19	274	⇑eP	Pn	03 19 06.5	+0.2
TBP	Tagbilaran	1.68	260	eP	Pn	03 19 13.6	+0.6
TBP				eS	Sn	03 19 33.8	+0.4

IDC 05 03:28:06.2±4.5**, 2°.00N×130°.45E, h0**^{km}**, mb3.8**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=315.3km s-min=28.2km az=70.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.14	170	P	P	03 33 02.7	-1.0
	2.0nm,0.5s,baz=354,slow=11,SNR=39						
	2.0nm,0.5s						
ASAR	Alice Springs	25.73	173	P	P	03 33 39.3	+0.7
	3.4nm,0.9s,baz=354,slow=8.2,SNR=22						
	3.4nm,0.9s						
MKAR	Makanchi Array	61.11	324	P	P	03 38 22.2	-0.1
	0.3nm,0.6s,baz=126,slow=6.1,SNR=2.1						
	0.3nm,0.6s						

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*IDC **05** 03:29:40.7±1.2, 36°.32N×69°.77E, h0^{km}, mb3.7/15, mbtmp3.7/21, ML3.4/6, MS2.8/2, Error ellipse: s-maj=24.1km s-min=15.1km az=157.0*

*NNC **05** 03:29:41.5±4.0, 36°.52N×69°.28E, h0^{km}, mb4.1, mpv3.9, Error ellipse: s-maj=34.3km s-min=26.7km az=164.0*

ISC 05 03:29:42.3±0.7**, 36°.40N**±0°.07×**69°.59E**±0°.06**, h10**^{km}**, n34, σ1^{s}92**/38**, mb3.7**/14**, 3C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.73	6	Pn	Pn	03 31 21.2	0.0
	2.7nm,0.3s,baz=189,slow=14,SNR=149						
KK31				⇑Sn	Sn	03 32 39.5	+1.6
	5.1nm,0.5s						
KK31				Lg	Lg	03 33 10.2	
	15nm,0.7s,baz=191,slow=30,SNR=5.0						
AAK	Ala-Archa	7.29	30	Pn	Pn	03 31 29.8	+0.8
	2.7nm,0.3s,baz=208,slow=6.6,SNR=27						
AAK				Sn	Sn	03 32 48.8	-3.0
	0.1nm,0.3s,baz=248,slow=16,SNR=1.1						
AAK				LR	LR	03 34 34.8	
	comp=Z,77nm,21.6s,baz=106,slow=40						
	7.7nm,0.4s						
TKM2	Tokmak 2	7.99	34	⇓Pn	Pn	03 31 39.9	+1.3
	5.3nm,0.6s						
TKM2				⇓Sn	Sn	03 33 10.5	+1.4
	3.0nm,0.7s						
GEYT	Alibeck	9.29	283	Pn	Pn	03 31 56.3	0.0
	1.0nm,0.3s,baz=120,slow=10,SNR=6.2						
GEYT				Sn	Sn	03 33 35.9	-4.9
	0.6nm,0.3s,baz=248,slow=32,SNR=1.9						
	2.1nm,0.4s						
PYUN	Piuthan	14.03	122	eP	Pn	03 33 00.3	-1.1
	5.3nm,0.3s						
MK31	Makanchi Array	14.05	38	⇑P	Pn	03 33 02.1	+0.7
	1.8nm,0.8s,baz=220,slow=6.4,SNR=13						
MKAR	Makanchi Array	14.05	38	Pn	Pn	03 33 01.4	-0.1
	0.1nm,0.3s,baz=225,slow=15,SNR=5.7						
MKAR				LR	LR	03 38 38.8	
	comp=Z,38nm,20.6s,baz=22,slow=38						
	0.5nm,0.6s						
DANN	Dangsing	14.40	120	eP	Pn	03 33 05.2	-1.4
	2.0nm,0.3s						
AB31	Akbulak array	14.65	334	P	Pn	03 33 06.0	-3.5
	2.0nm,0.5s,baz=155,slow=12,SNR=68						
KURBB	Kurchatov Arra	15.60	22	Pn	Pn	03 33 19.5	-2.7
	baz=214,slow=12,SNR=6.5						
	0.6nm,0.6s						
PKIN	Phulchoki	16.02	119	eP	Pn	03 33 27.0	-1.1
PKI	Pulchoki	16.03	119	eP	Pn	03 33 26.9	-1.4
	6.2nm,0.4s						
GUN	Gumba	16.17	117	eP	Pn	03 33 28.2	-1.8
AKTO	Aktyubinsk	16.32	333	Pn	Pn	03 33 29.9	-1.6
	0.5nm,0.3s,baz=138,slow=13,SNR=13						
	4.0nm,0.6s						
AKTO	Aktyubinsk	16.32	333	⇑P	Pn	03 33 29.3	-2.2
	2.9nm,0.8s						
JIRN	Jiri	16.54	117	eP	Pn	03 33 34.8	0.0
	5.6nm,0.3s						
BVAR	Borovoye Array	16.63	2	Pn	Pn	03 33 32.4	-3.0
	baz=170,slow=41,SNR=5.8						
	1.3nm,0.7s						
TAPN	Taplejung	17.82	115	eP	P	03 33 51.9	+0.4
	7.6nm,0.4s						
ZALV	Zalesovo Beam	20.49	26	P	P	03 34 18.8	-1.4
	1.7nm,0.4s,baz=213,slow=10,SNR=9.8						
	1.7nm,0.4s						
ARU	Arti	21.37	343	P	P	03 34 30.6	+0.9
	2.6nm,0.4s,baz=156,slow=11,SNR=2.5						
	2.6nm,0.4s						
KBZ	Khabaz	21.64	298	P	P	03 34 34.4	+1.7
	2.2nm,0.8s,baz=109,slow=12,SNR=6.2						
	2.2nm,0.8s						
KVAR	Kislovodsk Arr	21.83	299	P	P	03 34 38.1	+3.3
	2.1nm,0.5s,baz=280,slow=13,SNR=1.9						
	2.1nm,0.5s						
BELG	Belogornoye	22.27	323	P	P	03 34 42.4	+3.1
	7.1nm,0.7s,baz=241,slow=10.0,SNR=2.7						
	7.1nm,0.7s						
BRTR	Keskin Array B	28.38	288	P	P	03 35 38.4	+1.4
	0.3nm,0.7s,baz=233,slow=19,SNR=2.4						
	0.3nm,0.7s						
SONM	Songino Array	29.32	56	P	P	03 35 44.6	-0.6
	0.3nm,0.6s,baz=236,slow=48,SNR=2.1						
	0.3nm,0.6s						
AKASG	Malin Array Be	32.12	309	P	P	03 36 11.9	+2.2
	0.2nm,0.3s,baz=85,slow=7.0,SNR=6.2						
	0.2nm,0.3s						
FINES	FINESS Array B	36.93	327	P	P	03 36 51.1	-0.1
	1.2nm,0.8s,baz=192,slow=18,SNR=1.7						
	1.2nm,0.8s						
NB2	NORSAR Subarra	43.78	323	P	P	03 37 48.4	+0.5
	comp=Z,3.1nm,0.8s,baz=99,slow=8.6						
NOA	NORSAR Array B	43.78	323	P	P	03 37 50.6	+2.7
	comp=Z,1.0nm,0.7s,baz=101,slow=7.2,SNR=2.7						
	comp=Z,1.0nm,0.7s						
ESDC	Sonseca Array	56.50	297	P	P	03 39 23.8	-0.9
	comp=Z,0.4nm,0.9s,baz=240,slow=36,SNR=1.7						
	comp=Z,0.4nm,0.9s						
TORD	Torodi Ar. Bea	64.58	268	P	P	03 40 20.3	+0.2
	comp=Z,0.3nm,0.5s,baz=49,slow=5.6,SNR=7.0						
	comp=Z,0.3nm,0.5s						
INK	Inuvik	74.18	9	P	P	03 41 19.2	+0.6
	comp=Z,0.7nm,0.9s,baz=323,slow=5.1,SNR=1.4						
	comp=Z,0.7nm,0.9s						
YKA	Yellowknife Ar	81.39	2	P	P	03 41 59.5	+0.5
	comp=Z,0.3nm,0.6s,baz=352,slow=5.5,SNR=6.3						
	comp=Z,0.3nm,0.6s						
ASAR	Alice Springs	85.14	124	P	P	03 42 18.8	0.0
	comp=Z,0.3nm,0.6s,baz=312,slow=4.9,SNR=2.7						
	comp=Z,0.3nm,0.6s						

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*IDC **05** 03:30:06.2±1.0, 20°.24N×119°.96E, h0^{km}, mb3.6/9, mbtmp3.6/10, ML3.5/1, MS2.8/1, Error ellipse: s-maj=34.5km s-min=19.3km az=72.0*

*MAN **05** 03:30:09.9, 20°.35N×120°.22E, h32^{km}, mb4.4, ML3.2, MS3.0*

ISC 05 03:30:09.9±1.0**, 20°.3N**±0°.1×**120°.2E**±0°.1**, h25**^{km}**, n12, σ1^{s}20**/12**, mb3.5**/9**, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	Basco	1.68	84	⇑eP	Pn	03 30 36.9	-0.8
BBP				iS	Sn	03 30 57.8	-0.7
KSRS	Korea Array	18.41	20	Pn	P	03 34 24.3	+1.0
	0.1nm,0.3s,baz=195,slow=11,SNR=4.1						
	0.8nm,0.8s						
CMAR	Chiang Mai Arr	20.12	268	LR	LR	03 42 24.6	
	comp=Z,28nm,18.9s,baz=90,slow=37						
MJAR	Matsushiro Arr	22.62	40	P	P	03 35 11.7	+2.7
	1.6nm,0.8s,baz=243,slow=12,SNR=6.7						
	1.6nm,0.8s						
SONM	Songino Array	29.69	341	P	P	03 36 13.9	0.0
	0.3nm,0.4s,baz=142,slow=7.3,SNR=2.7						
	0.3nm,0.4s						
MKAR	Makanchi Array	40.60	320	P	P	03 37 46.3	-1.4
	0.4nm,0.6s,baz=116,slow=9.8,SNR=4.5						
	0.4nm,0.6s						
WRA	Warramunga Arr	42.29	160	P	P	03 38 02.1	+0.4
	0.7nm,0.6s,baz=342,slow=8.8,SNR=5.1						
	0.7nm,0.6s						
ZALV	Zalesovo Beam	43.09	330	P	P	03 38 07.2	-0.7
	0.6nm,0.6s,baz=116,slow=9.8,SNR=2.4						
	0.6nm,0.6s						
KURBB	Kurchatov Arra	44.58	323	P	P	03 38 19.6	-0.3
	0.8nm,0.7s,baz=119,slow=8.0,SNR=5.0						
	0.8nm,0.7s						
ASAR	Alice Springs	45.66	162	P	P	03 38 29.4	+0.7
	0.7nm,0.8s,baz=334,slow=7.7,SNR=5.8						
	0.7nm,0.8s						
ILAR	Eielson Array	73.11	27	P	P	03 41 37.6	-0.4
	0.2nm,0.5s,baz=279,slow=5.8,SNR=4.1						
	0.2nm,0.5s						
YKA	Yellowknife Ar	86.93	22	P	P	03 42 52.7	+0.1
	0.5nm,0.9s,baz=308,slow=4.9,SNR=4.2						
	0.5nm,0.9s						

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*NCEDC **05** 03:31:28.4±1.1, 39°.76N±0°.01×123°.38W±0°.02, h6^{km}±5^{km}, Md3.0/52, ML2.7/26(NEIC), Error ellipse: s-maj=1.9km s-min=1.8km az=114.0*

NEIC 05 03:31:28.9±1.0**, 39°.76N**±0°.01×**123°.39W**±0°.02**, h5**^{km}±2^{km}**, Error ellipse: s-maj=3.0km s-min=2.2km az=264.0, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIPM	Iron Peak	0.09	306		Pg	03 31 30.6	-0.3
KFPM	Farley Peak	0.12	194		Pg	03 31 31.0	-0.3
KCPM	Cahto Peak	0.17	245		Pg	03 31 32.5	+0.3
KCPM					Sg	03 31 36.1	+1.7
KCPM	Cahto Peak	0.17	245	IAML		03 31 36.4	

	comp=N,40µm,0.5s						
KCPM				IAML		03 31 38.3	
	comp=E,27µm,0.4s						
KBNM	Bluenose Ridge	0.20	47		Pg	03 31 32.8	-0.1
KBSM	Bell Springs	0.23	315		Pg	03 31 33.4	0.0
KRKM	Rackout Spring	0.25	141		Pg	03 31 33.8	+0.1
GTC	Three Chop Rid	0.38	200		Pg	03 31 36.5	+0.3
GHMM	Hull Mountain	0.44	126		Pg	03 31 37.5	+0.2
KMRM	Mail Ridge	0.53	332		Pg	03 31 39.1	+0.1
KMRM					Sb	03 31 48.5	-0.2
GVV	Valley View	0.55	88		Pg	03 31 39.4	0.0
GWRM	Wonder Ranch	0.55	173		Pg	03 31 39.5	0.0
GROM	Round Mountain	0.57	73		Pg	03 31 39.9	0.0
LBPM	Beegum Peak	0.68	34		Pg	03 31 41.9	-0.1
KCRM	Chalk Rock	0.75	334		Pg	03 31 43.5	+0.3
GTSM	Trough Springs	0.75	126		Pg	03 31 43.4	+0.1
GHGM	Hogback Ridge	0.76	145		Pg	03 31 43.2	-0.3
GCK	Clark Valley	0.76	106		Pb	03 31 44.3	-0.4
GHLM	Highland Sprin	0.77	158		Pg	03 31 43.3	-0.4
HOPS	Hopland Field	0.80	162		Pg	03 31 44.0	-0.2
HOPS	Hopland Field	0.80	162		Pg	03 31 44.2	0.0
HOPS				IAML		03 31 58.5	
	comp=E,424nm,0.6s						
HOPS				IAML		03 31 58.9	
	comp=N,616nm,0.8s						
KMPM	Mount Pierce	0.87	320		Pg	03 31 45.3	-0.2
KHBM	Hayfork Bally	0.91	8		Pg	03 31 46.1	-0.3
GBMM	Baldy Mountain	0.92	131		Pb	03 31 47.1	-0.3
GFC	Funks Creek	0.95	116		Pn	03 31 48.5	-0.4
GPMM	Pine Mountain	0.97	159		Pn	03 31 49.8	+0.6
GACM	Adobe Creek	0.97	155		Pg	03 31 47.3	-0.2
GRTM	Round Top Moun	0.99	145		Pg	03 31 47.8	0.0
KCTM	Capetown	1.02	315		Pg	03 31 47.9	-0.6
GSGM	Seigler Mounta	1.03	149		Pb	03 31 48.9	-0.3
LTCM	Tuscan Springs	1.07	65		Pg	03 31 49.0	-0.4
KHMM	Horse Mountain	1.15	347		Pg	03 31 49.8	-1.1
KHMM	Horse Mountain	1.15	347	IAML		03 32 09.1	
	comp=N,234nm,0.5s						
KHMM				IAML		03 32 22.2	
	comp=E,236nm,0.8s						
GAXM	Alexander Vall	1.15	155		Pb	03 31 51.2	-0.1
JCC	Jacoby Creek,	1.17	335		Pg	03 31 49.9	-1.4
JCC	Jacoby Creek,	1.17	335	IAML		03 32 16.1	
	comp=N,154nm,1.4s						
JCC				IAML		03 32 21.1	
	comp=E,167nm,1.6s						
NMTM	Middletown	1.20	142		Pb	03 31 52.0	0.0
LGPM	Granite Peak	1.23	20		Pg	03 31 51.6	-0.9
NHSM	Mount Saint He	1.25	151		Pb	03 31 53.0	0.0
OSUM	Sutter Buttes	1.28	112		Pn	03 31 52.4	-1.0
OGOM	Van Goodin Ran	1.37	94		Pn	03 31 52.5	-2.2
NBPM	Berryessa Peak	1.43	139		Pn	03 31 53.2	-2.2
LBKM	Bonanza King	1.44	22		Pn	03 31 55.0	-0.7
LSHM	Sage Hen Hill	1.46	44		Pn	03 31 54.8	-1.1
KOMM	Orleans Mounta	1.52	358		Pn	03 31 54.9	-2.0
LAMM	Antelope Mount	1.94	17		Pn	03 32 02.1	-0.5
LMPM	Military Pass	1.97	28		Pn	03 32 03.5	+0.4
YBH	Yreka Blue Hor	2.04	14		Pn	03 32 03.3	-0.7
YBH	Yreka Blue Hor	2.04	14	Pn	Pn	03 32 03.0	-0.9
YBH				IAML		03 32 38.0	
	comp=E,33nm,0.8s						
YBH				IAML		03 32 45.0	
	comp=N,28nm,0.7s						
LHEM	Herd Peak	2.07	25		Pn	03 32 04.5	0.0
B040	Montague	2.20	19		Pn	03 32 05.8	-0.3
L04D	Klamath Falls	2.59	18	Pn	Pn	03 32 10.6	-1.0
HUMO	Hull Mountain	2.87	6	Pn	Pn	03 32 13.9	-1.4
HUMO				IAML		03 32 43.6	
	comp=E,20nm,4.0s						
HUMO				IAML		03 33 12.9	
	comp=N,21nm,3.2s						
CMB	Columbia Colle	2.90	125	Pn	Pn	03 32 14.2	-1.6
MOD	Modoc Plateau	3.17	46	Pn	Pn	03 32 17.3	-2.3
MOD				IAML		03 33 20.6	
	comp=E,21nm,1.2s						
MOD				IAML		03 33 22.2	
	comp=N,16nm,4.1s						
KVN	Kaiserville	4.16	98	Pn	Pn	03 32 32.7	-0.5
KVN				IAML		03 33 27.1	
	comp=N,6.2nm,4.6s						
KVN				IAML		03 34 33.9	
	comp=E,7.4nm,4.9s						
BHPR	Bishop	4.56	121		Pn	03 32 33.5	-5.2

*IDC **05** 03:37:28.6±2.5, 40°.15N×143°.60E, h0^{km}, mb3.6/3, mbtmp3.6/6, ML3.2/2, MS3.1/2, Error ellipse: s-maj=57.0km s-min=25.2km az=83.0*

*JMA **05** 03:37:33.1±0.3, 40°.2N±0°.5×143°.2E±0°.9, h20^{km}±3^{km}, MV3.6/37, FAR E OFF SANRIKU*

ISC 05 03:37:31.8±4.1, **40°.14N**±0°.06×**143°.35E**±0°.08, **h17**^{km}±27^{km}, **n27, σ1^{s}31**/26, **mb3.5**/3, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	Tanohata	1.16	261	*i* P	Pb	03 37 52.9	-0.4
JTH				*e*S	Sb	03 38 07.1	-0.9
JKEN	Kujiedanarisaw	1.25	274	P	Pn	03 37 54.2	-0.3
JKEN				*e*S	Sb	03 38 08.8	-2.0
MIYJ	Miyakonagasawa	1.30	245	P	Pn	03 37 55.4	+0.2
MIYJ				*e*S	Sb	03 38 10.8	-1.3
JANG	Nango	1.42	280	*i* P	Pn	03 37 56.8	0.0
JOM	Ohasama	1.71	248	*i* P	Pn	03 38 01.9	+1.0
JTM	Tenmabayashi	1.85	291	P	Pn	03 38 03.6	+0.8
JEM	Erimo	1.88	356	*e*P	Pn	03 38 03.6	+0.5
JMK	Ichinoseki	2.03	235	P	Pn	03 38 06.2	+1.1
JAH	Hinai	2.08	272	*i* P	Pn	03 38 07.1	+1.3
JOT	Ohata	2.14	306	P	Pn	03 38 08.5	+1.8
JOT				*e*S	Sn	03 38 33.5	+0.6
JNBK	Urakawa-nobuka	2.19	348	*e*P	Pn	03 38 08.9	+1.6
JNBK				*e*S	Sn	03 38 34.8	+0.9
JRG	Rokugo	2.22	251	P	Pn	03 38 09.8	+2.0
JCH	Churui	2.47	0	*e*P	Pn	03 38 10.8	-0.5
JCH				*e*S	Sn	03 38 38.9	-2.1
ASAJ	Asahikawa	4.01	352	Pn	Pn	03 38 33.4	+0.9
	1.2nm,0.3s,baz=342,slow=27,SNR=1.4						
ASAJ				Sn	Sn	03 39 19.4	+0.4
	1.0nm,0.3s,baz=54,slow=28,SNR=1.2						
	3.4nm,0.3s						
MJAR	Matsushiro Arr	5.40	230	Pn	Pn	03 38 53.1	+1.6
	4.0nm,0.6s,baz=42,slow=14,SNR=4.3						
USRK	Ussuriysk Ar.	9.36	299	Pn	Pn	03 39 48.4	+2.6
	0.2nm,0.3s,baz=106,slow=15,SNR=4.0						
	2.2nm,0.7s						
KLR	Kul'dur	12.26	322	LR	LR	03 45 40.6	
	comp=Z,53nm,18.2s,baz=108,slow=40						
H11N2	WAKE ISLAND Hy	28.66	128	T	T	04 13 37.5	
	baz=321,slow=75,SNR=9.8						
H11N1	WAKE ISLAND Hy	28.67	128	T	T	04 13 40.2	
	baz=321,slow=75,SNR=5.5						
H11N3	WAKE ISLAND Hy	28.68	128	T	T	04 13 28.3	
	baz=321,slow=75,SNR=5.7						
H11S1	WAKE ISLAND Hy	29.49	130	T	T	04 14 40.5	
	baz=324,slow=74						
H11S3	WAKE ISLAND Hy	29.49	130	T	T	04 14 38.6	
	baz=324						
H11S2	WAKE ISLAND Hy	29.50	130	T	T	04 14 42.6	
	baz=324,slow=74						
ZALV	Zalesovo Beam	41.02	310	P	P	03 45 13.9	+0.1
	0.5nm,0.5s,baz=97,slow=7.4,SNR=2.5						
	0.5nm,0.5s						
MKAR	Makanchi Array	43.82	300	P	P	03 45 36.7	0.0
	0.4nm,0.7s,baz=92,slow=8.6,SNR=2.9						
	0.4nm,0.7s						
WRA	Warramunga Arr	60.36	190	P	P	03 47 39.7	-0.1
	0.8nm,1.1s,baz=5.8,slow=7.0,SNR=2.4						
	0.8nm,1.1s						
PFO	Pinyon Flats O	76.08	58	LR	LR	04 16 30.9	
	comp=Z,20nm,21.8s,baz=244,slow=31						

*DDA **05** 03:52:58.7±0.0, 37°.59N×26°.56E, h3^{km}±2^{km}, ML3.0*

*ISK **05** 03:52:59.9, 37°.63N×26°.55E, h8^{km}, ML3.1/29*

*THE **05** 03:53:00.7, 37°.68N×26°.63E, h5^{km}±1^{km}, ML3.0/7, Error ellipse: s-maj=1.5km s-min=0.5km az=60.0*

*IDC **05** 03:53:00.4±2.0, 37°.03N×27°.24E, h0^{km}, mb3.2/2, mbtmp3.1/3, ML2.5/1, Error ellipse: s-maj=171.8km s-min=23.4km az=146.0*

*ATH **05** 03:53:01.0, 37°.66N×26°.59E, h10^{km}±1^{km}, ML2.9/21, Error ellipse: s-maj=1.9km s-min=0.7km az=107.0*

ISC 05 03:53:00.3±1.1, **37°.64N**±0°.02×**26°.57E**±0°.02, **h7**^{km}±9^{km}, **n111, σ0^{s}76**/149, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGB	zmir	0.48	31	P	Pg	03 53 09.1	-0.5
DGB				*i* AML	AML	03 53 20.0	
	comp=E,513nm,0.2s						
ZEYE	Izmir, Urla-Ze	0.60	355	P	Pg	03 53 11.4	-0.5
ZEYE				*i* AML	AML	03 53 23.0	
	comp=Z,554nm,0.5s						
ZEYE				*i* AML	AML	03 53 23.0	
	comp=E,883nm,0.3s						
ZEYE				*i* AML	AML	03 53 25.0	
	comp=N,608nm,0.4s						
URLA	Izmir	0.72	2	Pg	Pg	03 53 14.3	+0.1
URLA				Sg	Sb	03 53 24.8	-0.5
URLA	Izmir	0.72	2	P	Pg	03 53 13.5	-0.7
URLA				S	Sb	03 53 26.5	+1.2
URLA				*i* AML	AML	03 53 27.0	
	comp=E,2µm,0.5s						
URLA				*i* AML	AML	03 53 28.0	
	comp=Z,712nm,0.6s						
URLA				*i* AML	AML	03 53 29.0	
	comp=N,1µm,0.4s						
BLCB	Balcova	0.83	26	P	Pg	03 53 15.5	-0.8
BLCB				S	Sg	03 53 27.2	+0.1
BLCB	Balcova	0.83	26	Pg	Pg	03 53 16.5	+0.2
CHOS	Chios island	0.85	332	P	Pg	03 53 16.6	-0.1
CHOS				S	Sb	03 53 29.3	+0.3
CHOS	Chios island	0.85	332	P	Pg	03 53 16.7	+0.1
KOSK	Kos Island	0.94	160	P	Pb	03 53 19.0	+0.1
KOSK				S	Sn	03 53 32.7	-0.8
	1µm,0.5s						
KOSK	Kos Island	0.94	160	Pg	Pb	03 53 18.5	-0.4
KOSK				Sg	Sn	03 53 32.3	-1.2
KOSK	Kos Island	0.94	160	P	Pn	03 53 19.3	-0.6
KOSK				S	Sb	03 53 31.8	+0.3
KOSK				AML	AML	03 53 38.3	
	comp=E,5273µm,0.4s						
KOSK				AML	AML	03 53 40.0	
	comp=N,9624µm,0.5s						
MLSB	Milas	1.02	109	Pg	Pg	03 53 19.2	-0.6
MLSB				Sg	Sn	03 53 35.0	-0.5
KARB	zmir-Karabur	1.03	353	P	Pg	03 53 19.4	-0.6
KARB				S	Sb	03 53 34.8	+0.6
KARB				*i* AML	AML	03 53 36.0	
	comp=N,215nm,0.6s						
KARB				*i* AML	AML	03 53 40.0	
	comp=N,326nm,0.6s						
KARB				*i* AML	AML	03 53 41.0	
	comp=N,258nm,0.5s						
NISR	Nisiros	1.12	156	P	Pg	03 53 21.6	-0.1
NISR				S	Sn	03 53 38.6	+0.8
	comp=N,480nm,0.6s						
NISR	Nisiros	1.12	156	P	Pn	03 53 22.2	0.0
NISR				S	Sn	03 53 37.3	-0.5
NISR				AML	AML	03 53 44.8	
	comp=E,1178µm,0.3s						
NISR				AML	AML	03 53 55.6	
	comp=N,826µm,0.7s						
TNSA	Tinos	1.12	265	P	Pn	03 53 22.9	+0.6
TNSA				S	Sn	03 53 37.9	-0.1
TNSA				AML	AML	03 53 40.2	
	comp=N,2414µm,0.3s						
TNSA				AML	AML	03 53 40.6	
	comp=E,3820µm,0.4s						
PSRA	Psara	1.20	319	P	Pn	03 53 23.6	+0.2
PSRA				S	Sb	03 53 38.8	-0.2
DAT	Datca	1.21	138	P	Pb	03 53 22.9	-0.7
DAT				S	Sn	03 53 40.4	0.0
DAT	Datca	1.21	138	Pn	Pn	03 53 23.5	-0.2
DAT				Sn	Sn	03 53 41.1	+0.7
ZEDA	zmir-Bergama	1.38	17	P	Pn	03 53 25.2	-0.8
ZEDA				S	Sg	03 53 45.3	+0.5
ZEDA				*i* AML	AML	03 53 49.0	
	comp=E,152nm,0.5s						
YER	Yerkesik	1.45	110	P	Pn	03 53 26.7	-0.3
YER				S	Sn	03 53 44.9	-1.4
YER	Yerkesik	1.45	110	Pn	Pn	03 53 26.6	-0.4
DKL	Dikili	1.46	10	Pn	Pb	03 53 27.6	0.0
GOMA	Golmarmara-Man	1.50	44	Pn	Pn	03 53 27.9	+0.3
THR8	Santorini-Mono	1.51	216	P	Pn	03 53 27.2	-0.4
THR8	Santorini-Mono	1.51	216	P	Pn	03 53 27.3	-0.4
THR3	Thira Island,	1.54	218	P	Pn	03 53 28.0	-0.1
THR5	Thira Island,	1.56	219	P	Pn	03 53 28.4	0.0
THR6	Thira Island,	1.59	217	P	Pn	03 53 28.5	-0.2
TURN	Turunc	1.59	122	Pn	Pn	03 53 28.4	-0.4
THR9	Santorini-Faro	1.61	218	P	Pn	03 53 29.3	+0.3
PRK	Paraskevi	1.62	352	P	Pn	03 53 28.5	-0.7
PRK				S	Sn	03 53 50.0	-0.3
	comp=E,525nm,0.7s						
PRK	Paraskevi	1.62	352	P	Pn	03 53 28.3	-1.0
PRK				S	Sn	03 53 48.6	-1.7
PRK				AML	AML	03 54 00.2	
	comp=E,1112µm,0.5s						
PRK				AML	AML	03 54 03.0	
	comp=N,1116µm,0.6s						
SIGR	SIGRI	1.67	341	P	Pn	03 53 29.1	-0.8
SIGR				S	Sn	03 53 51.4	-0.1
	comp=N,310nm,0.5s						
SIGR	SIGRI	1.67	341	Pn	Pn	03 53 30.2	+0.3
SIGR	SIGRI	1.67	341	P	Pn	03 53 29.0	-0.8
SIGR				S	Sn	03 53 49.8	-1.7
SIGR				AML	AML	03 53 57.3	
	comp=N,572µm,0.5s						
SIGR				AML	AML	03 54 02.6	
	comp=E,667µm,0.5s						
AYVA	Ayvalik	1.67	3	P	Pb	03 53 31.2	-0.1
AYVA				S	Sg	03 53 55.7	+1.7
AYVA				*i* AML	AML	03 53 59.0	
	comp=E,97nm,0.6s						
AYVA				*i* AML	AML	03 54 02.0	
	comp=E,156nm,0.7s						
DALY	Dalyan (Mula)	1.85	116	Pn	Pn	03 53 32.7	+0.3
KULA	Kula-Manisa	1.87	61	P	Pn	03 53 30.7	-2.0
KULA	Kula-Manisa	1.87	61	Pn	Pn	03 53 33.5	+0.8
ARG	Arkhangelos	1.89	138	P	Pn	03 53 32.9	0.0
ARG				S	Sn	03 53 56.5	-0.4
	comp=E,205nm,0.7s						
ARG	Arkhangelos	1.89	138	Pn	Pn	03 53 33.3	+0.4
ARG	Arkhangelos	1.89	138	P	Pn	03 53 32.8	0.0
ARG				AML	AML	03 54 08.4	
	comp=N,429µm,0.9s						
ARG				AML	AML	03 54 11.5	
	comp=E,386µm,0.5s						
KOCA	Canakkale, Ayv	1.89	350	P	Pn	03 53 33.5	+0.6
KOCA				S	Sg	03 54 01.7	+0.7
BUHA	Balikesir, Bur	1.90	12	P	Pn	03 53 33.6	+0.6
BUHA				S	Sg	03 54 02.9	+1.5
BUHA				*i* AML	AML	03 54 06.0	
	comp=E,113nm,0.6s						
BUHA				*i* AML	AML	03 54 07.0	
	comp=E,133nm,0.5s						
STEP	BALIKESIR_Sava	1.96	27	P	Pb	03 53 37.0	+0.8
STEP				S	Sg	03 54 04.4	+1.3
STEP				*i* AML	AML	03 54 06.0	
	comp=E,198nm,0.5s						
STEP				*i* AML	AML	03 54 07.0	
	comp=E,100nm,0.4s						
STEP				*i* AML	AML	03 54 11.0	
	comp=E,232nm,0.9s						
MHLO	Agia Marina, M	1.98	242	P	Pn	03 53 34.1	0.0
MHLO				S	Sb	03 54 01.3	0.0
	comp=E,928nm,0.5s						
MHLO	Agia Marina, M	1.98	242	P	Pn	03 53 34.0	-0.1
MHLO				AML	AML	03 54 12.9	
	comp=N,1796µm,0.5s						
MHLO				AML	AML	03 54 13.2	
	comp=E,1920µm,0.6s						
BAYC	CANAKKALE_Bayr	2.10	359	P	Pn	03 53 34.7	-1.1
BAYC				S	Sg	03 54 08.6	+0.9
DION	Dionisos Attik	2.13	283	P	Pn	03 53 36.6	+0.3
DION				S	Sn	03 54 01.5	-1.5
DION				AML	AML	03 54 14.3	
	comp=E,723µm,0.4s						
DION				AML	AML	03 54 14.4	
	comp=N,404µm,0.5s						
KARP	Karpathos	2.14	167	P	Pn	03 53 36.2	-0.2
KARP	Karpathos	2.14	167	P	Pn	03 53 35.9	-0.5
KARP				AML	AML	03 54 17.2	
	comp=E,219µm,0.5s						
KARP				AML	AML	03 54 20.9	
	comp=N,171µm,0.6s						
APMY	Acipayam-Deniz	2.18	94	Pn	Pn	03 53 37.1	+0.2
PTL	Penteli	2.18	282	P	Pn	03 53 37.8	+0.8
KYMI	Kymi, Euboea I	2.19	298	P	Pn	03 53 37.7	+0.7
KYMI				S	Sn	03 54 04.1	-0.2
	comp=N,40nm,0.6s						
KYMI	Kymi, Euboea I	2.19	298	P	Pn	03 53 36.8	-0.2
KYMI				AML	AML	03 54 11.6	
	comp=E,89µm,0.7s						
KYMI				AML	AML	03 54 20.4	
	comp=N,72µm,0.5s						
EZN	Ezine	2.19	355	Pn	Pn	03 53 37.7	+0.6
VLY	Voula,Athens	2.21	276	P	Pn	03 53 37.9	+0.6
VLY				AML	AML	03 54 16.4	
	comp=N,480µm,0.6s						
VLY				AML	AML	03 54 22.0	
	comp=E,408µm,0.5s						
EREA	Eretria	2.23	291	P	Pn	03 53 37.7	+0.1
EREA				AML	AML	03 54 15.3	
	comp=E,189µm,0.5s						
EREA				AML	AML	03 54 16.2	
	comp=N,153µm,0.4s						
ATHU	Athens Univers	2.23	279	P	Pn	03 53 37.6	0.0
BOZC	Bozcaada	2.24	350	Pn	Pn	03 53 38.4	+0.7
BOZC	Bozcaada	2.24	350	P	Pn	03 53 37.3	-0.4
BOZC				S	Sg	03 54 12.8	+0.7
FETY	Fethiye	2.24	116	Pn	Pn	03 53 38.9	+1.1
BALB	Balikesir	2.25	27	Pn	Pn	03 53 38.8	+1.0
BALY	Balya	2.25	21	P	Pg	03 53 43.2	-0.3
BALY				S	Sg	03 54 13.0	+0.3
ATH	Athens Observa	2.29	279	P	Pn	03 53 37.9	-0.4
ATH				AML	AML	03 54 17.9	
	comp=N,415µm,0.4s						
ATH				AML	AML	03 54 19.1	
	comp=E,462µm,0.4s						
CAME	Cameli-Denizli	2.29	107	Pn	Pn	03 53 39.2	+0.7
BKES	Balkesir-Mer	2.35	27	P	Pb	03 53 43.3	+0.5
BKES				S	Sg	03 54 14.8	-0.9
SIMA	Simav-Kutahya	2.38	52	Pn	Pn	03 53 40.8	+1.0
CANM	Can-anakkale	2.40	9	Pn	Pn	03 53 41.1	+1.2
COMU	Canakkale	2.46	358	Pn	Pn	03 53 41.2	+0.4
DURS	Dursunbey	2.46	37	P	Pn	03 53 40.2	-0.7
DURS				S	Sg	03 54 18.0	-1.4
DURS				*i* AML	AML	03 54 28.0	
	comp=E,60nm,0.6s						
STIA	Sitia Lasithi	2.46	189	P	Pn	03 53 40.4	-0.4
STIA				AML	AML	03 54 32.5	
	comp=N,170µm,0.6s						
STIA				AML	AML	03 54 37.8	
	comp=E,222µm,1.0s						
LIA	Limnos Island	2.50	335	P	Pn	03 53 40.8	-0.6
LIA				AML	AML	03 54 23.0	
	comp=E,296µm,0.5s						
LIA				AML	AML	03 54 26.1	
	comp=N,225µm,0.8s						
ZKR	Zakros	2.54	187	P	Pn	03 53 42.1	+0.3
ZKR				AML	AML	03 54 33.2	
	comp=E,122µm,0.8s						
ZKR				AML	AML	03 54 34.0	
	comp=N,84µm,0.7s						
GONE	Gonen-Balikesi	2.56	20	Pn	Pn	03 53 43.2	+1.1
GOKA	anakkale-Gk	2.60	349	P	Pb	03 53 45.6	-1.6
GOKA				*i* AML	AML	03 54 29.0	
	comp=N,94nm,0.5s						
GOKA				*i* AML	AML	03 54 31.0	
	comp=N,63nm,0.5s						
GADA	Gvkgeada	2.60	349	Pn	Pn	03 53 43.2	+0.5
KSTL	Kastelli Herak	2.62	208	P	Pn	03 53 43.2	+0.2
GEDZ	Gediz	2.64	57	Pn	Pn	03 53 44.6	+1.3
VIL2	Platees	2.67	283	P	Pn	03 53 43.2	-0.5
VIL2				AML	AML	03 54 34.5	
	comp=N,235µm,0.7s						
VIL2				AML	AML	03 54 40.8	
	comp=E,298µm,0.6s						
FRMA	Ierapetra Chan	2.71	195	P	Pn	03 53 44.1	0.0
IDI	Anoyia	2.71	211	P	Pn	03 53 44.1	-0.1
IDI				AML	AML	03 54 42.5	
	comp=E,81µm,0.6s						
IDI				AML	AML	03 54 45.0	
	comp=N,50µm,0.6s						
KNL	Balıkesir	2.73	16	P	Pg	03 53 51.6	-1.1
KNL				S	Sg	03 54 26.9	-1.1
KRND	KRANIDI	2.73	266	P	Pn	03 53 44.3	-0.2
LPK	Lapseki	2.73	3	Pn	Pn	03 53 45.2	+0.7
GELI	Tayfur-Gelibol	2.76	358	Pn	Pn	03 53 45.7	+0.9
KRBG	Karabiga-Canak	2.81	11	Pn	Pn	03 53 46.5	+1.0
KSL	Kastellorizon	2.83	121	P	Pn	03 53 46.9	+1.0
KSL				S	Sn	03 54 19.0	-1.2
KSL				AML	AML	03 54 41.2	
	comp=N,106µm,1.2s						
KSL				AML	AML	03 54 41.7	
	comp=E,156µm,1.5s						
LOUT	Loutraki	2.87	278	P	Pn	03 53 46.3	-0.1
EDC	Edincik	2.89	20	Pn	Pn	03 53 47.9	+1.3
CHAN	Chania	2.94	225	P	Pn	03 53 47.0	-0.3
SMTH	Samothraki Isl	2.94	344	P	Pn	03 53 47.7	+0.3
KCTX	Karacabey (Bur	2.97	27	Pn	Pn	03 53 48.7	+0.9
IMMV	Iera Moni Meta	3.01	225	P	Pn	03 53 48.1	-0.3
IMMV				AML	AML	03 54 42.7	
	comp=E,250µm,0.9s						
IMMV				AML	AML	03 54 49.0	
	comp=N,209µm,0.6s						
ERIK	Erikli-Kesan	3.03	359	Pn	Pn	03 53 49.6	+1.1
VLI	Veliai	3.04	254	P	Pn	03 53 48.5	-0.3
RKY	Sarkoy-Tekirda	3.08	9	Pn	Pn	03 53 50.3	+1.0
ENEZ	Enez	3.11	354	Pn	Pn	03 53 50.1	+0.4
KTHA	Kythira Island	3.13	245	P	Pn	03 53 50.0	0.0
ANKY	Antikythira Is	3.17	237	P	Pn	03 53 50.7	+0.2
KESN	Edirne-Kesan	3.18	1	P	Pn	03 53 49.9	-1.2
KESN				S	Sg	03 54 41.8	-0.8
ALN	Alexandroupoli	3.28	353	Pn	Pn	03 53 52.9	+0.9
ALN	Alexandroupoli	3.28	353	P	Pn	03 53 51.9	-0.2
THAS	Thassos island	3.29	335	P	Pn	03 53 51.7	-0.5
KNDR	Palaiochora Ch	3.34	225	P	Pn	03 53 54.0	+1.1
GVD	Gavdhos	3.44	216	P	Pn	03 53 54.0	-0.3
GVD				AML	AML	03 55 02.6	
	comp=N,79µm,0.4s						
GVD				AML	AML	03 55 02.9	
	comp=E,94µm,0.5s						
RDO	Rodhopi	3.59	347	P	Pn	03 53 56.3	0.0
BRTR	Keskin Array B	5.91	67	Pn	Pn	03 54 29.0	+0.7
	comp=E,0.1nm,0.3s,baz=248,slow=14,SNR=7.0						
BRTR				Sn	Sn	03 55 34.2	-2.1
	baz=239,slow=24						
	comp=E,0.3nm,0.3s						
TORD	Torodi Ar. Bea	32.97	229	P	P	03 59 37.0	+1.4
	comp=E,0.3nm,0.6s,baz=40,slow=10,SNR=4.4						
	comp=E,0.3nm,0.6s						
MKAR	Makanchi Array	41.49	59	P	P	04 00 47.8	0.0
	comp=E,0.2nm,0.7s,baz=273,slow=8.4,SNR=2.4						
	comp=E,0.2nm,0.7s						

*IDC **05** 03:57:41.0±1.5, 41°.47N×50°.34E, h0^{km}, mb3.5/5, mbtmp3.5/8, ML3.3/3, MS2.0/1, Error ellipse: s-maj=40.1km s-min=16.3km az=16.0*

*TEH **05** 03:57:44.6, 41°.56N×50°.56E, h65^{km}, ML3.2*

*AZER **05** 03:57:45.8±0.1, 41°.52N×50°.43E, h40^{km}±1^{km}, Error ellipse: s-maj=1.5km s-min=1.1km az=239.0*

ISC 05 03:57:45.4±1.6, **41°.58N**±0°.05×**50°.47E**±0°.05, **h30**^{km}±12^{km}, **n57, σ1^{s}28**/80, **mb3.6**/5, **Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDR	Nardaran	1.06	200	P	Pb	03 58 05.6	+0.4
NDR				S	Sn	03 58 22.6	+4.6
NDR	Nardaran	1.06	200	Pg	Pb	03 58 05.5	+0.4
SIZA	Siyzn	1.29	248	P	Pb	03 58 08.8	-0.2
SIZA				S	Sb	03 58 25.8	+0.5
SIZA	Siyzn	1.29	248	Pg	Pb	03 58 08.9	-0.2
ATGJ	Altiaghaj	1.36	239	P	Pn	03 58 08.5	0.0
ATGJ				S	Sb	03 58 27.2	-0.2
ATGJ	Altiaghaj	1.36	239	Pg	Pn	03 58 09.0	+0.5
QUBA	Quba, Azerbaij	1.50	262	Pn	Pn	03 58 11.0	+0.6
	SNR=22						
QUBA				Sn	Sb	03 58 31.0	-0.4
GBS	Qobustan	1.56	229	Pn	Pb	03 58 13.5	-0.1
GBS				Sn	Sb	03 58 34.2	+1.3
GBS	Qobustan	1.56	229	Pg	Pb	03 58 12.6	-1.0
QUB	Quba	1.60	264	Pg	Pn	03 58 11.0	-0.7
PQL	Pirkuli	1.62	242	Pn	Pn	03 58 13.1	+0.9
	SNR=6.0						
PQL				Sn	Sb	03 58 35.5	+0.6
PQL	Pirkuli	1.62	242	Pg	Pn	03 58 13.0	+0.9
QSAR	Qusar	1.66	269	Pn	Pn	03 58 13.5	+1.0
	SNR=74						
QSAR				Sn	Sn	03 58 33.5	+0.7

QSAR	Qusar	1.66	269	Pg	Pn	03 58 13.7	+1.2
XNQ	Khinaliq	1.80	258	Pn	Pn	03 58 15.6	+1.0
	SNR=197						
XNQ				Sn	Sn	03 58 38.7	+2.1
XNQ	Khinaliq	1.80	258	Pn	Pn	03 58 15.7	+1.0
IML	Ismayilli	1.90	246	Pn	Pn	03 58 17.1	+1.3
IML				Sg	Sb	03 58 44.2	+1.5
IML	Ismayilli	1.90	246	Pn	Pn	03 58 17.1	+1.3
QBL	Gabala	2.09	253	Pn	Pn	03 58 19.7	+1.3
QBL				Sn	Sb	03 58 47.4	-0.7
QBL	Gabala	2.09	253	Pn	Pn	03 58 19.4	+1.0
ZRD	Zardab	2.48	239	Pn	Pn	03 58 24.5	+0.8
ZRD				Sn	Sb	03 58 57.0	-2.3
ZRD	Zardab	2.48	239	Pn	Pn	03 58 24.0	+0.3
SEKA	Sheki	2.49	263	Pn	Pn	03 58 26.0	+2.0
SEKA				Sn	Sb	03 58 57.9	-1.9
BRDA	Brd	2.82	243	Pn	Pn	03 58 30.1	+1.7
BRDA				Sn	Sn	03 59 02.9	+1.5
ZKTA	Zakatala	2.89	272	Pn	Pn	03 58 31.6	+2.2
ZKTA				Sn	Sn	03 59 06.6	+3.4
BLQ	Beylaqan	2.89	231	Pn	Pn	03 58 31.0	+1.6
BLQ				Sn	Sn	03 59 03.0	-0.2
BLQ	Beylaqan	2.89	231	Pn	Pn	03 58 30.4	+1.0
AGDM	Agdam	2.94	241	Pn	Pn	03 58 30.3	+0.2
	SNR=4.0						
AGDM				Sn	Sn	03 59 06.6	+2.1
YRD	Yardimli	3.16	213	Pn	Pn	03 58 34.3	+1.0
YRD				Sn	Sn	03 59 09.0	-1.1
YRD	Yardimli	3.16	213	Pn	Pn	03 58 33.5	+0.2
QRD	Qoradiz	3.20	230	Sn	Sn	03 59 10.6	-0.3
GANJ	Ganja	3.27	255	Pn	Pn	03 58 34.4	-0.3
	SNR=8.7						
GANJ				Sn	Sn	03 59 12.8	+0.2
GANJ	Ganja	3.27	255	Pn	Pn	03 58 34.3	-0.3
LRK	Lerik	3.36	210	Pn	Pn	03 58 39.2	+3.2
LRK				Sn	Sn	03 59 15.2	+0.3
GDB	GEDABAY	3.67	258	Pn	Pn	03 58 39.8	-0.4
GDB				Sn	Sn	03 59 22.0	-0.5
QZX	Qazax, Azerbai	3.88	264	Pn	Pn	03 58 43.2	+0.3
	SNR=10						
QZX				Sn	Sn	03 59 29.1	+1.5
QZX	Qazax, Azerbai	3.88	264	Pn	Pn	03 58 42.8	-0.2
IHRS	Heris	4.19	220	Pn	Pn	03 58 48.3	+0.8
ORD	Ordubad	4.33	234	Pn	Pn	03 58 49.1	-0.2
ORD				Sn	Sn	03 59 37.2	-1.6
ORD	Ordubad	4.33	234	Pn	Pn	03 58 49.1	-0.2
NAX	Nakhchivan	4.50	239	Sn	Sn	03 59 42.6	-0.3
GNI	Garni	4.58	254	LR	LR	04 00 43.0	
	comp=Z,17nm,19.7s,baz=352,slow=41						
KLST	Kelardasht - M	5.07	175	Pn	Pn	03 58 58.8	-0.9
QALM	Alamut, Qazvin	5.14	178	Pn	Pn	03 59 01.0	+0.4
IPRN	Peran	5.52	164	Pn	Pn	03 59 05.1	-0.6
IGLO	Ghaloghah	5.70	152	Pn	Pn	03 59 07.7	-0.6
MRVT	Maraveh tapeh	5.84	130	Pn	Pn	03 59 09.5	-0.5
KBZ	Khabaz	5.99	294	Pn	Pn	03 59 12.1	+0.2
	0.2nm,0.3s,baz=170,slow=2.1,SNR=10						
KBZ				Sn	Sn	04 00 19.2	-0.2
	0.3nm,0.3s,baz=167,slow=22,SNR=1.6						
	0.6nm,0.2s						
ISHM	Shahmirzad	6.17	158	Pn	Pn	03 59 15.0	+0.2
IFIR	Firoozkooh	6.19	163	Pn	Pn	03 59 16.1	+1.1
GEYT	Alibeck	6.92	119	Pn	Pn	03 59 24.0	-0.9
	0.5nm,0.3s,baz=332,slow=44,SNR=2.0						
GEYT				Sn	Sn	04 00 40.5	-2.2
	0.4nm,0.3s,baz=211,slow=28,SNR=1.2						
	1.0nm,0.4s						
AKASG	Malin Array Be	17.27	309	P	Pn	04 01 42.3	-1.9
	0.6nm,0.3s,baz=114,slow=12,SNR=3.3						
	0.8nm,0.5s						
MKAR	Makanchi Array	23.31	66	P	P	04 02 52.1	+1.4
	0.2nm,0.5s,baz=272,slow=5.3,SNR=2.3						
	0.2nm,0.5s						
FINES	FINESS Array B	24.75	332	P	P	04 03 04.0	0.0
	0.7nm,0.4s,baz=138,slow=11,SNR=13						
	0.7nm,0.4s						
HFS	Hagfors	29.17	322	P	P	04 03 43.6	-0.2
	0.6nm,0.3s,baz=106,slow=7.7,SNR=1.5						
	0.6nm,0.3s						
EKA	Eskdalemuir Ar	37.18	310	P	P	04 04 53.6	+0.1
	1.4nm,0.8s,baz=98,slow=9.4,SNR=1.8						
	1.4nm,0.8s						
TORD	Torodi Ar. Bea	50.87	251	P	P	04 06 42.4	-1.3
	0.1nm,0.5s,baz=42,slow=6.3,SNR=1.7						
	0.1nm,0.5s						

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*NEIC **05** 04:06:43.5±1.3, 9°.85N±0°.09×125°.5E±0°.1, h10^{km}±1^{km}, mb4.3/20, Error ellipse: s-maj=19.8km s-min=14.1km az=69.0*

*MAN **05** 04:06:43.8, 9°.79N×125°.37E, h9^{km}, mb5.1, ML4.0, MS4.1*

MAN INTENSITY IV- SURIGAO CITY; INTENSITY II - SAN RICARDO SOUTHERN LEYTE; INTENSITY I - SAN FRANCISCO SOUTHERN LEYTE AND GINGOOG CITY.

*IDC **05** 04:06:51.5±2.1, 9°.76N×125°.30E, h81^{km}±21^{km}, mb3.6/18, mbtmp3.9/19, MS3.4/4, Error ellipse: s-maj=27.1km s-min=13.0km az=72.0*

ISC 05 04:06:43.9±0.8**, 9°.79N**±0°.03×**125°.37E**±0°.03**, h16**^{km}±5^{km}**, n76,** σ1^{s}.**03**/85**, mb4.0**/26**, MS3.5**/4**, 14C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.12	96	⇓iP	Pg	04 06 47.1	-0.3
SCPH				i S	Sg	04 06 49.5	-0.3
MSLP	Maasin	0.61	304	⇑eP	Pb	04 06 56.2	+0.1
MSLP				i S	Sb	04 07 06.1	+1.6
GHBP	Garcia Hernand	1.05	261	⇑eP	Pg	04 07 02.4	-1.8
GHBP				eS	Sn	04 07 19.3	+1.0
TABP	Talibon, Bohol	1.07	286	⇑eP	Pg	04 07 03.4	-1.1
TASP	Talacogon, Agu	1.40	162	⇑eP	Pb	04 07 10.1	+0.3
LLP	Lapu-Lapu	1.48	291	⇑eP	Pn	04 07 09.9	0.0
LLP				i S	Sn	04 07 29.1	+0.1
CGP	Cagayan de Oro	1.49	207	⇑iP	Pn	04 07 10.3	+0.3
CGP				i S	Sg	04 07 32.9	+0.9
TBP	Tagbilaran	1.49	266	⇑iP	Pn	04 07 10.2	+0.1
TBP				i S	Sn	04 07 29.7	+0.4
LSIP	Lazi, Siquijor	1.84	249	⇑iP	Pn	04 07 14.9	0.0
BIPH	Bislig	1.88	149	⇓eP	Pn	04 07 15.0	-0.3
BIPH				i S	Sg	04 07 44.4	+0.1
BUKP	Musuan	1.93	189	⇑eP	Pn	04 07 16.7	+0.5
SNPH	Sibulan	2.15	258	i P	Pn	04 07 20.7	+1.5
SNPH				i S	Sb	04 07 49.4	+0.3
CDOP	Cateel, Davao	2.26	152	⇑eP	Pn	04 07 22.8	+2.2
DCPH	Dipolog City	2.33	239	⇑eP	Pn	04 07 21.2	-0.4
CNOP	Candoni, Negro	2.69	271	⇑eP	Pb	04 07 31.3	-0.4
CNOP				i S	Sg	04 08 11.7	+1.2
DAV	Davao City (W)	2.71	176	P	Pb	04 07 31.6	-0.5
	212nm,0.3s,baz=18,slow=20,SNR=7.3						
DAV				S	Sb	04 08 05.5	+0.2
	409nm,0.5s,baz=330,slow=20,SNR=4.5						
DAV	Davao City (W)	2.71	176		Pn	04 07 27.2	+0.3
PAGZ	Pagadian	2.76	226	⇑eP	Pn	04 07 28.5	+1.0
CTBH	Cotabato--PC H	2.79	204	⇑iP	Pn	04 07 29.0	+1.1
RCP	Roxas	3.12	304	⇓eP	Pn	04 07 34.1	+1.6
GSPH	General Santos	3.71	187	eP	Pn	04 07 44.3	+3.6
IBAJ	Ibajay, Aklan	3.73	303	⇓eP	Pn	04 07 42.4	+1.4
MYLDM	Lahad Datu	8.21	237	Pn	Pn	04 08 44.7	+2.2
MTN	Manton Dam	23.21	166	P	P	04 11 51.7	+1.4
KNRA	Kununurra	25.53	172	P	P	04 12 12.6	+0.5
CRAI	Chiangrai	26.24	296	P	P	04 12 19.0	+0.4
CRAI				IAmb	IAmb	04 12 31.3	
	comp=Z,4.5nm,0.9s						
CMAR	Chiang Mai Arr	27.01	292	P	P	04 12 26.4	+0.9
	comp=Z,0.7nm,0.4s,baz=108,slow=5.8,SNR=5.1						
CMAR				LR	LR	04 24 19.7	
	comp=Z,32nm,19.0s,baz=125,slow=39						
	comp=Z,0.7nm,0.4s						
CMAR	Chiang Mai Arr	27.01	292	P	P	04 12 25.9	+0.4
KSRS	Korea Array	27.63	4	P	P	04 12 31.1	+0.2
	comp=Z,0.4nm,0.5s,baz=312,slow=19,SNR=1.5						
	comp=Z,0.4nm,0.5s						
COEN	Coen	29.48	143	P	P	04 12 46.0	-1.5
COEN				IAmb	IAmb	04 12 55.3	
	comp=Z,4.3nm,0.8s						
WB0	Warramunga Arr	30.69	163	P	P	04 12 57.6	-0.6
WB0				IAmb	IAmb	04 13 09.7	
	comp=Z,9.9nm,1.3s						
WRA	Warramunga Arr	30.84	163	P	P	04 12 59.3	-0.2
	comp=Z,0.6nm,0.6s,baz=348,slow=10.0,SNR=3.2						
	comp=Z,0.6nm,0.6s						
WRA	Warramunga Arr	30.84	163	P	P	04 12 59.6	+0.1
AS31	Alice Springs	34.28	166	P	P	04 13 30.1	+0.4
ASAR	Alice Springs	34.29	166	P	P	04 13 28.7	-1.0
	comp=Z,0.4nm,0.3s,baz=349,slow=6.8,SNR=19						
	comp=Z,0.4nm,0.3s						
ASAR	Alice Springs	34.29	166	P	P	04 13 29.9	+0.2
CTAO	Charters Tower	36.12	145	P	P	04 13 45.0	-0.5
CTAO				IAmb	IAmb	04 13 53.4	
	comp=Z,8.0nm,1.5s						
TAPN	Taplejung	39.53	301	eP	P	04 14 16.4	+1.7
KLR	Kul'dur	39.67	7	P	P	04 14 15.3	+0.1
	comp=Z,0.9nm,0.5s,baz=173,slow=9.4,SNR=4.7						
	comp=Z,0.9nm,0.5s						
RAMN	Ramite	40.35	300	eP	P	04 14 23.1	+1.6
JIRN	Jiri	40.91	301	eP	P	04 14 27.2	+0.9
	comp=Z,11nm,0.5s						
ULN	Ulaanbaatar	40.98	341	P	P	04 14 26.9	+0.6
SONM	Songino Array	41.16	341	P	P	04 14 28.4	+0.7
	comp=Z,0.4nm,0.6s,baz=140,slow=11,SNR=2.6						
	comp=Z,0.4nm,0.6s						
GUN	Gumba	41.25	301	eP	P	04 14 30.6	+1.6
	comp=Z,20nm,0.7s						
PKI	Pulchoki	41.55	301	eP	P	04 14 33.4	+2.0
DANN	Dangsing	43.17	301	eP	P	04 14 45.7	+1.1
BBOO	Buckleboo	43.58	167	P	P	04 14 46.9	-0.4
PYUN	Piuthan	43.75	301	eP	P	04 14 50.5	+1.3
	comp=Z,20nm,1.0s						
STKA	Stephens Creek	44.25	160	P	P	04 14 53.2	+0.4
	comp=Z,2.2nm,0.7s,baz=353,slow=10,SNR=4.7						
STKA				LR	LR	04 37 32.3	
	comp=Z,32nm,19.5s,baz=23,slow=42						
	comp=Z,2.2nm,0.7s						
STKA	Stephens Creek	44.25	160	P	P	04 14 52.6	-0.1
PETK	Petropavlovsk-	50.44	25	P	P	04 15 42.1	+1.3
	comp=Z,5.2nm,1.0s,baz=215,slow=15,SNR=2.8						
	comp=Z,5.2nm,1.0s						
PETK	Petropavlovsk-	50.44	25	P	P	04 15 40.6	-0.1
MK31	Makanchi Array	51.87	323	P	P	04 15 51.2	-0.5
MKAR	Makanchi Array	51.87	323	P	P	04 15 51.9	+0.2
	comp=Z,1.0nm,0.6s,baz=125,slow=7.8,SNR=18						
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	51.87	323	P	P	04 15 51.5	-0.2
NIL	Nilore	53.27	305	P	P	04 16 02.2	-0.1
ZAA0	Zalesovo Array	54.62	332	P	P	04 16 12.1	+0.3
ZAA0				IAmb	IAmb	04 16 15.9	
	comp=Z,1.4nm,0.6s						
ZALV	Zalesovo Beam	54.62	332	P	P	04 16 11.2	-0.5
	comp=Z,0.3nm,0.3s,baz=130,slow=5.8,SNR=2.5						
	comp=Z,0.3nm,0.3s						
KURK	Kurchatov	55.96	326	P	P	04 16 21.2	-0.2
KURK				IAmb	IAmb	04 16 35.3	
	comp=Z,5.8nm,1.4s						
KURBB	Kurchatov Arra	55.96	326	P	P	04 16 21.0	-0.5
	comp=Z,0.8nm,0.5s,baz=125,slow=7.2,SNR=13						
KURBB				LR	LR	04 44 26.8	
	comp=Z,62nm,19.2s,baz=178,slow=40						
	comp=Z,0.8nm,0.5s						
KK31	Karatay Array	57.96	315	P	P	04 16 34.9	-0.9
KK31				IAmb	IAmb	04 16 37.4	
	comp=Z,1.3nm,0.8s						
KKAR	Karatay Array	57.96	315	P	P	04 16 35.2	-0.6
KKAR				IAmb	IAmb	04 16 37.4	
	comp=Z,1.3nm,0.8s						
BVAR	Borovoye Array	61.55	326	P	P	04 16 59.7	-0.7
	comp=Z,0.5nm,0.6s,baz=116,slow=8.9,SNR=3.8						
	comp=Z,0.5nm,0.6s						
TIXI	Tiksi	61.84	1	P	P	04 17 01.7	-0.2
	comp=Z,1.6nm,0.3s,baz=270,slow=23,SNR=9.5						
	comp=Z,1.6nm,0.3s						
TIXI	Tiksi	61.84	1	P	P	04 17 01.6	-0.3
TIXI				IAmb	IAmb	04 17 08.1	
	comp=Z,2.2nm,0.7s						
ABKAR	Akbulak array	66.66	320	P	P	04 17 33.8	-0.2
RAYN	Ar Rayn	76.93	292	P	P	04 18 36.5	+0.2
ILAR	Eielson Array	80.25	26	P	P	04 18 54.0	+0.3
	comp=Z,0.3nm,0.6s,baz=255,slow=4.5,SNR=6.2						
	comp=Z,0.3nm,0.6s						
SPITS	Spitsbergen Ar	84.31	349	LR	LR	05 00 56.1	
	comp=Z,50nm,18.1s,baz=256,slow=38						
ARCES	ARCESS Array B	84.33	340	P	P	04 19 14.2	-0.7
	comp=Z,1.9nm,0.8s,baz=81,slow=5.6,SNR=4.3						
	comp=Z,1.9nm,0.8s						
BR131	Keskin Array S	85.15	309	P	P	04 19 17.3	-2.6
BR131				IAmb	IAmb	04 19 29.2	
	comp=Z,2.9nm,1.1s						
BRTR	Keskin Array B	85.15	309	P	P	04 19 18.6	-1.2
	comp=Z,0.4nm,0.7s,baz=105,slow=2.2,SNR=3.9						
	comp=Z,0.4nm,0.7s						
FINES	FINESS Array B	85.89	332	P	P	04 19 21.7	-1.2
	comp=Z,0.9nm,0.6s,baz=57,slow=5.1,SNR=6.6						
	comp=Z,0.9nm,0.6s						
YKA	Yellowknife Ar	94.55	24	P	P	04 20 03.5	-0.1
	comp=Z,0.2nm,0.8s,baz=291,slow=3.9,SNR=2.8						
	comp=Z,0.2nm,0.8s						
TORD	Torodi Ar. Bea	119.62	291	PKP	PKPdf	04 25 32.4	-1.7
	comp=Z,0.4nm,0.8s,baz=81,slow=2.3,SNR=1.7						
PLCA	Paso Flores	146.11	158	PKPbc	PKPdf	04 26 23.5	+0.6
	comp=Z,1.0nm,0.6s,baz=219,slow=4.7,SNR=5.1						

MAN 05 04:14:32.8, 9°.87N×125°.45E, h15^{km}, mb4.4, ML3.2, MS3.0, 4C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.10	157	⇑eP	Pg	04 14 36.3	+0.3
SCPH				eS	Sg	04 14 38.7	+0.5
MSLP	Maasin	0.64	294	⇑eP	Pb	04 14 46.1	+0.3
TBP	Tagbilaran	1.58	264	eP	Pn	04 14 59.9	-0.4
TBP				i S	Sn	04 15 18.6	-1.8
CGP	Cagayan de Oro	1.59	208	⇑eP	Pn	04 14 57.0	-3.5
CGP				eS	Sn	04 15 20.3	-0.5
BIPH	Bislig	1.90	152	⇑iP	Pn	04 15 05.2	+0.4
BIPH				i S	Sn	04 15 28.5	+0.1

DJA 05 04:16:12.5±0.3**, 1°S**±3°×**12°0E**±°**, h10**^{km}**, M3.9**/11**, mb4.3**/3**, MLv3.8**/11**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPSI	Mapaga	1.23	340	P	Pn	04 16 34.2	-1.6
MRSI	Marisa	2.08	51	P	Pn	04 16 48.4	+1.0
LUWI	Luwuk	2.46	95	P	Pn	04 16 54.4	+1.7
GTOI	Gorontalo	3.06	62	P	Pn	04 17 00.2	-0.8
SPSI	Sidrap Palu	3.16	190	P	Pn	04 17 01.3	-1.1
BKSI	Bulukumba	4.47	183	P	Pn	04 17 20.4	+0.1
BSSI	Bau Bau, Buton	5.28	178	P	Pn	04 17 31.5	0.0
	46nm,0.7s,0.3nm						
SANI	Sanana	5.79	102	P	Pn	04 17 36.9	-1.7
	12nm,0.7s,0.1nm						

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*IDC **05** 04:18:21.7±0.7, 35°.60N×140°.99E, h0^{km}, mb3.8/14, mbtmp3.9/19, ML3.4/4, MS3.3/15, Error ellipse: s-maj=18.3km s-min=13.0km az=90.0*

*JMA **05** 04:18:25.0±0.2, 35°.8N±0°.6×14°1E±°, h26^{km}±1^{km}, MV3.9/36, NEAR CHOSHI CITY*

JMA Felt II J1 at NEAR CHOSHI CITY .

*NIED **05** 04:18:25.0, 35°.79N×141°.07E, h26^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.60; $M_{\theta\theta}$0.16; $M_{\phi\phi}$0.44; $M_{r\theta}$1.16; $M_{\theta\phi}$-0.27; $M_{\phi r}$0.27; Fault plane solution: $M_0$1.26000×10^{15} NP1: ϕ_s267.00000°, δ81.00000°, λ-103.00000°. NP2: ϕ_s142.00000°, δ16.00000°, λ-36.00000°.*

*NEIC **05** 04:18:25.8±1.8, 35°.67N±0°.06×141°.2E±0°.1, h33^{km}±8^{km}, mb4.1/9 Error ellipse: s-maj=14.1km s-min=8.2km az=107.0*

ISC 05 04:18:25.7±0.9**, 35°.70N**±0°.03×**141°.02E**±0°.05**, h28**^{km}±6^{km}**, n77,** σ1^{s}.**43**/69**, mb3.9**/19**, MS3.4**/9**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.13	273	P	Pb	04 18 30.6	-0.3
CHOJ				S	Sb	04 18 34.5	0.0
JSMT	Sammumatsuo	0.46	264	P	Pn	04 18 36.0	-0.5
JSMT				eS	Sn	04 18 44.5	+0.7
JIHU	Itakohorinouch	0.48	304	i P	Pb	04 18 35.5	-0.2
JIHU				eS	Sb	04 18 43.2	+0.7
JCN	Nagara	0.72	248	P	Pn	04 18 41.0	+1.0
JHYU	Hitachinakayam	0.73	332	P	Pb	04 18 38.4	-1.5
JHYU				eS	Sb	04 18 47.8	-1.7
JYT	Yasato	0.85	309	P	Pn	04 18 40.0	-1.9
JYT				S	Sb	04 18 50.4	-2.5
BSO4	Boso 4	0.90	218	P	Pb	04 18 43.3	+0.7
JHO	Hitachi	0.98	339	P	Pn	04 18 41.4	-2.2
BSO3	Boso 3	0.98	205	P	Pb	04 18 43.8	-0.1
BSO1	Boso 1	1.04	182	P	Pb	04 18 44.2	-0.5
JMM	Marumori	2.17	355		Pn	04 19 00.1	0.0
JMM	Marumori	2.17	355	P	Pn	04 18 59.1	-0.9
MJAR	Matsushiro Arr	2.42	291	Pn	Pn	04 19 03.0	-0.5
	1.3nm,0.3s,baz=91,slow=8.9,SNR=116						
MJAR				Sn	Sn	04 19 32.5	+0.3
	1.6nm,0.3s,baz=94,slow=8.1,SNR=4.9						
MJAR				LR	LR	04 20 03.5	
	comp=Z,257nm,20.5s,baz=146,slow=42						
	13nm,0.6s						
MAJO	Matsushiro	2.42	291		Pn	04 19 04.0	+0.5
MJB9	Matsu-Tunnel	2.43	291		Pn	04 19 03.5	-0.1
JSG	Sagara	2.53	247	Pn	Pn	04 19 05.5	+0.6
JHJ2	Mitsune	2.76	201	P	Pb	04 19 10.6	-3.8
JHJ	Hachijo jima 2	2.76	202	Pn	Pn	04 19 06.5	-1.7
	15nm,0.3s,baz=63,slow=17,SNR=1.6						
JHJ				Sn	Sn	04 19 39.4	-1.3
	19nm,0.3s,baz=49,slow=19,SNR=1.5						
JHJ				LR	LR	04 20 08.8	
	comp=Z,206nm,19.7s,baz=296,slow=40						
	44nm,0.6s						
JGF	Kuroka	2.98	269		Pn	04 19 12.9	+1.8
JGF	Kuroka	2.98	269	P	Pb	04 19 15.1	-3.0
JSD	Sado	3.21	317		Pn	04 19 15.8	+1.5
JSD	Sado	3.21	317	P	Pn	04 19 16.3	+1.9
INU	Inuyama	3.28	265		Pn	04 19 18.7	+3.5
INU	Inuyama	3.28	265	P	Pn	04 19 19.1	+3.9
JTM	Tenmabayashi	5.08	0		Pn	04 19 39.4	-0.7
JTM	Tenmabayashi	5.08	0	P	Pn	04 19 40.8	+0.8
JHS	Saijyo	6.49	266	Pn	Pn	04 19 59.6	+0.2
ERM	Erimo	6.53	14	Pn	Pn	04 19 58.2	-1.6
ERM	Erimo	6.53	14	P	Pn	04 19 58.4	-1.4
JEM	Erimo	6.53	14	P	Pn	04 19 58.7	-1.2
ASAJ	Asahikawa	8.50	8	Pn	Pn	04 20 27.8	+0.9
	1.4nm,0.3s,baz=201,slow=14,SNR=4.9						
ASAJ				Sn	Sn	04 22 00.7	-1.2
	0.5nm,0.3s,baz=103,slow=34,SNR=2.2						
ASAJ				LR	LR	04 24 48.6	
	comp=Z,133nm,19.8s,baz=167,slow=45						
	12nm,0.6s						
JCJ	Chichijima	8.63	173	Pn	Pn	04 20 26.9	-1.9
	24nm,0.3s,baz=356,slow=19,SNR=5.7						
JCJ				Sn	Sn	04 22 03.4	-1.9
	3.2nm,0.3s,baz=329,slow=19,SNR=2.1						
JCJ	Chichijima	8.63	173	P	Pn	04 20 28.7	-0.1
KSRS	Korea Array	10.68	283	Pn	Pn	04 20 56.7	0.0
	0.1nm,0.3s,baz=95,slow=22,SNR=1.4						
KSRS				LR	LR	04 24 58.4	
	comp=Z,106nm,21.4s,baz=95,slow=37						
	0.3nm,0.3s						
USRK	Ussuriysk Ar.	10.95	324	LR	LR	04 24 58.3	
	comp=Z,120nm,20.0s,baz=185,slow=36						
KLR	Kul'dur	15.14	336	LR	LR	04 27 08.6	
	comp=Z,117nm,21.5s,baz=82,slow=35						
PETK	Petropavlovsk-	21.01	29	P	P	04 23 08.7	+1.8
	4.8nm,0.9s,baz=234,slow=14,SNR=3.8						
PETK				LR	LR	04 32 41.6	
	comp=Z,53nm,18.4s,baz=227,slow=41						
	4.8nm,0.9s						
ENH	Enshi	26.93	267	P	P	04 24 04.4	-0.3
YAK	Yakutsk	27.31	348	LR	LR	04 34 46.3	
	comp=Z,58nm,18.1s,baz=88,slow=36						
H11N2	WAKE ISLAND Hy	27.77	118	T	T	04 53 09.2	
	baz=311,slow=75,SNR=103						
H11N1	WAKE ISLAND Hy	27.78	118	T	T	04 53 10.9	
	baz=311,slow=75,SNR=62						
H11N3	WAKE ISLAND Hy	27.79	118	T	T	04 53 10.6	
	baz=311,slow=75,SNR=106						
ULN	Ulaanbaatar	27.86	306	P	P	04 24 10.8	-2.3
ULN				IAmb	IAmb	04 24 18.5	
	comp=Z,2.0nm,0.9s						
SEY	Seymchan	28.16	11	P	P	04 24 18.0	+2.6
	comp=Z,0.9nm,0.7s,baz=191,slow=11,SNR=2.3						
SEY				LR	LR	04 37 18.6	
	comp=Z,111nm,20.5s,baz=234,slow=40						
	comp=Z,0.9nm,0.7s						
SONM	Songino Array	28.29	306	P	P	04 24 18.7	+1.9
	comp=Z,1.0nm,0.8s,baz=105,slow=8.6,SNR=5.8						
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	28.29	306	P	P	04 24 14.6	-2.2
H11S1	WAKE ISLAND Hy	28.43	120	T	T	04 54 04.9	
	baz=312,slow=75,SNR=92						
H11S3	WAKE ISLAND Hy	28.43	120	T	T	04 54 00.1	
	baz=312,slow=75,SNR=93						
H11S2	WAKE ISLAND Hy	28.45	120	T	T	04 54 06.0	
	baz=312,slow=75,SNR=79						
CHTO	Chiang Mai	40.66	257	P	P	04 26 04.5	+0.8
CMAR	Chiang Mai Arr	40.86	256	P	P	04 26 04.4	-1.0
	comp=Z,1.9nm,0.3s,baz=69,slow=11,SNR=2.4						
	comp=Z,1.9nm,0.3s						
ZALV	Zalesovo Beam	42.59	313	P	P	04 26 18.8	-0.3
	comp=Z,1.2nm,0.7s,baz=91,slow=8.0,SNR=5.0						
	comp=Z,1.2nm,0.7s						
ZALV	Zalesovo Beam	42.59	313	P	P	04 26 19.3	+0.2
NRIK	Noril'sk	44.35	336	LR	LR	04 45 23.7	
	comp=Z,49nm,18.1s,baz=112,slow=36						
MK31	Makanchi Array	44.57	303	P	P	04 26 35.8	+0.7
MK31				IAmb	IAmb	04 26 37.4	
	comp=Z,2.7nm,0.8s						
MKAR	Makanchi Array	44.57	303	P	P	04 26 35.7	+0.5
	comp=Z,2.8nm,0.7s,baz=90,slow=9.5,SNR=31						
MKAR				LR	LR	04 44 59.3	
	comp=Z,27nm,21.1s,baz=60,slow=36						
	comp=Z,2.8nm,0.7s						
MKAR	Makanchi Array	44.57	303	P	P	04 26 35.0	-0.1
KURK	Kurchatov	46.51	309	P	P	04 26 50.4	0.0
KURK				IAmb	IAmb	04 27 04.1	
	comp=Z,3.7nm,0.9s						
ILAR	Eielson Array	50.80	32	P	P	04 27 24.2	+1.0
	comp=Z,0.4nm,0.5s,baz=268,slow=6.1,SNR=1.0						
	comp=Z,0.4nm,0.5s						
KK31	Karatay Array	53.52	301	P	P	04 27 44.2	+0.3
KK31				IAmb	IAmb	04 27 55.7	
	comp=Z,1.7nm,0.9s						
KKAR	Karatay Array	53.52	301	P	P	04 27 43.9	+0.1
KKAR				IAmb	IAmb	04 27 55.8	
	comp=Z,1.7nm,0.9s						
WRA	Warramunga Arr	55.69	188	P	P	04 27 59.5	-0.2
	comp=Z,3.2nm,0.9s,baz=5.8,slow=7.4,SNR=15						
	comp=Z,3.2nm,0.9s						
ARU	Arti	57.15	319	P	P	04 28 10.0	+0.3
ABKAR	Akbulak array	58.56	311	P	P	04 28 20.0	+0.3
ASAR	Alice Springs	59.42	188	P	P	04 28 25.9	0.0
	comp=Z,0.7nm,0.8s,baz=15,slow=9.3,SNR=10						
	comp=Z,0.7nm,0.8s						
YKA	Yellowknife Ar	65.13	30	P	P	04 29 03.8	+0.2
	comp=Z,0.2nm,0.7s,baz=294,slow=6.2,SNR=3.2						
	comp=Z,0.2nm,0.7s						
ARCES	ARCESS Array B	65.13	340	LR	LR	05 00 50.1	
	comp=Z,39nm,18.2s,baz=306,slow=39						
AFI	Afiamalu	66.53	129	LR	LR	04 50 20.1	
	comp=Z,17nm,21.8s,baz=6.0,slow=29						
STKA	Stephens Creek	67.22	179	P	P	04 29 16.9	-0.3
	comp=Z,1.7nm,0.7s,baz=11,slow=18,SNR=2.4						
	comp=Z,1.7nm,0.7s						
FINES	FINESS Array B	69.85	332	P	P	04 29 33.5	+0.1
	comp=Z,0.9nm,0.7s,baz=68,slow=11,SNR=1.9						
	comp=Z,0.9nm,0.7s						
GNI	Garni	72.25	307	LR	LR	05 04 18.0	
	comp=Z,26nm,19.8s,baz=18,slow=38						
AKASG	Malin Array Be	75.16	322	P	P	04 30 05.2	-0.1
	comp=Z,0.1nm,0.3s,baz=50,slow=5.5,SNR=2.0						
	comp=Z,0.1nm,0.3s						
PDAR	Pinedale Array	78.83	45	P	P	04 30 26.4	0.0
	comp=Z,0.2nm,0.7s,baz=316,slow=3.8,SNR=2.7						
	comp=Z,0.2nm,0.7s						
IDI	Anoyia	87.66	313	LR	LR	05 15 03.7	
	comp=Z,24nm,18.1s,baz=268,slow=39						
H03N2	Juan Fernandez	147.18	98	T	T	07 22 31.9	
	baz=289,slow=76,SNR=23						
H03N3	Juan Fernandez	147.19	98	T	T	07 22 32.4	
	baz=289,slow=76,SNR=23						
H03N1	Juan Fernandez	147.20	98	T	T	07 22 28.6	
	baz=289,slow=76,SNR=26						

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*AUST **05** 04:58:29.6±1.5, 15°.49S×123°.88E, h10^{km}, Error ellipse: s-maj=19.8km s-min=12.2km az=151.0*

*NOU **05** 04:58:32.3, 15°.50S×123°.88E, h28^{km}, mb4.1/10, Western Australia*

ISC 05 04:58:29.9±1.0**, 15°.47S**±0°.09×**123°.92E**±0°.08**, h10**^{km}**, n22,** σ1^{s}.**12**/24**, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	3.09	148	P	Pn	04 59 20.5	+1.7
	baz=3.1						

FITZ				S	**Sn**	**04 59 56.6**	**+0.9**
	baz=3.1						
KNRA	**Kununurra**	**4.67**	**93**	P	**Pn**	**04 59 41.8**	**+1.4**
	baz=4.7,SNR=6.8						
KNRA				S	**Sn**	**05 00 33.7**	**-1.1**
	baz=4.7,SNR=5.1						
KNRA	**Kununurra**	**4.67**	**93**	P	**Pn**	**04 59 41.9**	**+1.4**
MBWA	**Marble Bar**	**6.92**	**214**	P	**Pn**	**05 00 10.7**	**-0.7**
PSA00	**Pilbara Seismi**	**7.20**	**212**	P	**Pn**	**05 00 14.9**	**-0.3**
MTN	**Manton Dam**	**7.47**	**70**	P	**Pn**	**05 00 19.4**	**+0.5**
	baz=7.5,SNR=5.6						
MTN	**Manton Dam**	**7.47**	**70**	P	**Pn**	**05 00 19.6**	**+0.7**
KDU	**Kakadu**	**8.75**	**73**	P	**Pn**	**05 00 36.5**	**0.0**
	baz=8.8,SNR=3.4						
PLAI	**Plampang**	**8.93**	**317**	P	**Pn**	**05 00 39.7**	**+0.7**
WRKA	**Warakurna**	**10.36**	**157**	P	**Pn**	**05 00 59.9**	**+1.2**
	baz=10,SNR=7.0						
WRKA	**Warakurna**	**10.36**	**157**	P	**Pn**	**05 01 00.2**	**+1.5**
WRAB	**Tennant Creek**	**10.88**	**116**	P	**Pn**	**05 01 06.1**	**+0.3**
WB2	**Warramunga Arr**	**10.89**	**116**	P	**Pn**	**05 01 05.0**	**-0.9**
	baz=11						
GIRL	**Giralia**	**11.61**	**231**	P	**Pn**	**05 01 15.1**	**-0.6**
	baz=12,SNR=10						
GIRL	**Giralia**	**11.61**	**231**	P	**Pn**	**05 01 15.7**	**0.0**
MEEK	**Meekatharra**	**12.16**	**203**	P	**Pn**	**05 01 22.4**	**-1.0**
	baz=12,SNR=7.8						
MEEK	**Meekatharra**	**12.16**	**203**	P	**Pn**	**05 01 22.6**	**-0.7**
ASPA	**Alice Springs**	**12.44**	**132**	P	**Pn**	**05 01 27.4**	**+0.3**
	baz=12						
AS01	**Alice Springs**	**12.48**	**132**	P	**Pn**	**05 01 28.0**	**+0.4**
MORW	**Morawa**	**15.36**	**207**	P	**Pn**	**05 02 03.9**	**-3.0**
	baz=15,SNR=3.8						
FORT	**Forrest**	**15.70**	**167**	P	**Pn**	**05 02 10.5**	**-0.8**
	baz=16						
MULG	**Mulgathing**	**17.43**	**149**	P	**P**	**05 02 34.3**	**-0.2**
	baz=18						

*IDC **05** 05:13:55.0±4.4, 12°78N×90°36W, h0^{km}, mb3.6/7, mbtmp3.7/8, ML3.1/1, MS3.6/4, Error ellipse: s-maj=89.6km s-min=44.2km az=15.0*

*SNET **05** 05:14:01.1±1.8, 12°93N×90°64W, h15^{km}±13^{km}, ML3.5*

ISC 05 05:13:59.7±3.2**, 12°9N**±0°1×**90°63W**±0°06**, h16**^{km}±17^{km}**, n22, σ1^{s}57**/25**, mb3.8**/6**, MS3.6**/4**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUBE	**Las Nubes**	**1.29**	**40**	*e*P	**Pn**	**05 14 23.5**	**+0.2**
CEVE	**Cerro Verde**	**1.34**	**47**	*e*P	**Pn**	**05 14 24.5**	**+0.5**
CEVE				*e*S	**Sg**	**05 14 43.8**	**+0.5**
JAYA	**Jayaque - finc**	**1.37**	**57**	*e*P	**Pn**	**05 14 24.9**	**+0.5**
JAYA				*e*S	**Sb**	**05 14 44.0**	**+1.5**
SLOZ	**Alcaldia de Sa**	**1.39**	**36**	*e*P	**Pn**	**05 14 24.6**	**+0.2**
SLOZ				*e*S	**Sn**	**05 14 43.5**	**+1.0**
CEDA	**San Andres**	**1.50**	**53**	*e*P	**Pn**	**05 14 26.4**	**+0.5**
CEDA				*e*S	**Sg**	**05 14 48.8**	**+0.6**
CEDA				IAML		05 14 56.9	
	comp=Z,1µm,0.5s						
PAVA	**Las Pavas**	**1.84**	**64**	*e*P	**Pn**	**05 14 32.6**	**+1.9**
TECO	**Alcaldia de Te**	**1.91**	**71**	*e*P	**Pn**	**05 14 32.9**	**+1.2**
SCLA	**Alcaldia de Sa**	**2.02**	**67**	*e*P	**Pn**	**05 14 35.4**	**+2.3**
PQSS	**Presa 15 de Se**	**2.14**	**70**	*e*P	**Pn**	**05 14 36.5**	**+1.7**
FAGO	**Alcalda de S**	**2.58**	**72**	*e*P	**Pn**	**05 14 41.8**	**+0.9**
LCND	**La Caada**	**2.70**	**81**	*e*P	**Pn**	**05 14 44.4**	**+1.9**
LCND				*e*S	**Sn**	**05 15 15.4**	**+0.6**
CMIG	**Matias Romero**	**5.85**	**316**	Pn	**Pn**	**05 15 26.4**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=136,slow=9.6,SNR=7.1						
CMIG				Sn	**Sn**	**05 16 36.7**	**+4.2**
	comp=Z,1.3nm,0.3s,baz=180,slow=20,SNR=4.3						
	comp=Z,2.5nm,0.6s						
TXAR	**Lajitas Array**	**20.34**	**325**	P	**P**	**05 18 37.4**	**+1.9**
	comp=Z,1.3nm,0.7s,baz=144,slow=12,SNR=11						
	comp=Z,1.3nm,0.7s						
TKL	**Tuckaleechee C**	**23.49**	**14**	P	**P**	**05 19 07.6**	**-1.2**
	comp=Z,3.3nm,0.7s,baz=181,slow=10,SNR=5.3						
TKL				LR	LR	05 29 04.2	
	comp=Z,92nm,18.6s,baz=216,slow=39						
	comp=Z,3.3nm,0.7s						
ANMO	**Albuquerque**	**26.21**	**330**	P	**P**	**05 19 34.4**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=141,slow=14,SNR=2.3						
	comp=Z,0.6nm,0.7s						
LPAZ	**La Paz**	**36.55**	**142**	LR	LR	05 35 16.7	
	comp=Z,32nm,19.9s,baz=124,slow=35						
YKA	**Yellowknife Ar**	**52.40**	**346**	P	**P**	**05 23 09.2**	**-1.8**
	comp=Z,0.4nm,0.7s,baz=144,slow=8.0,SNR=7.3						
	comp=Z,0.4nm,0.7s						
FRB	**Frobisher Bay**	**53.09**	**12**	LR	LR	05 48 32.1	
	comp=Z,109nm,18.3s,baz=182,slow=39						
DLBC	**Dease Lake**	**54.19**	**336**	P	**P**	**05 23 23.3**	**-1.0**
	comp=Z,1.9nm,0.8s,baz=200,slow=8.3,SNR=3.3						
	comp=Z,1.9nm,0.8s						
SFJD	**Kangerlussuaq**	**60.16**	**17**	LR	LR	05 53 27.1	
	comp=Z,101nm,18.1s,baz=164,slow=39						
INK	**Inuvik**	**61.86**	**343**	P	**P**	**05 24 16.4**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=153,slow=14,SNR=3.9						
	comp=Z,0.7nm,0.7s						
ILAR	**Eielson Array**	**64.36**	**337**	P	**P**	**05 24 34.6**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=116,slow=5.3,SNR=6.8						
	comp=Z,0.2nm,0.5s						

ATH 05 05:14:03.8, 39°56N×23°23E, h6^{km}±2^{km}**, ML1.5**/4**, Error ellipse: s-maj=2.9km s-min=0.9km az=156.0, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XOR	**Xorichti**	**0.19**	**188**	P	Pg	05 14 07.3	-0.4
XOR				S	Sg	05 14 10.2	0.0
XOR				AML	AML	05 14 11.4	
	comp=N,943µm,0.4s						
XOR				AML	AML	05 14 11.7	
	comp=E,261µm,0.2s						
NEO	**Neokhori**	**0.25**	**181**	P	Pg	05 14 08.2	-0.5
NEO				S	Sg	05 14 12.5	+0.4
NEO				AML	AML	05 14 13.1	
	comp=E,641µm,0.3s						
NEO				AML	AML	05 14 13.2	
	comp=N,742µm,0.3s						
TYRN	**Tyrnavos**	**0.78**	**282**	P	Pg	05 14 18.4	-0.5
LIT	**Litokhoron**	**0.79**	**314**	P	Pg	05 14 18.8	-0.1
AGG	**Agios Georgios**	**0.88**	**233**	P	Pg	05 14 20.1	-0.6
AGG				S	Sg	05 14 32.1	0.0
LKR	**Lokris**	**0.92**	**191**	P	Pg	05 14 21.1	-0.4
THL	**Klokotos Trika**	**0.94**	**271**	P	Pg	05 14 21.0	-0.9
THL				S	Sg	05 14 34.2	+0.2
THL				AML	AML	05 14 38.5	
	comp=N,27µm,0.5s						
THL				AML	AML	05 14 39.0	
	comp=E,25µm,0.3s						
OUR	**Ouranopolis**	**0.97**	**36**	P	Pg	05 14 22.0	-0.4
OUR				S	Sg	05 14 34.9	-0.1
OUR				AML	AML	05 14 38.5	
	comp=N,77µm,0.3s						
OUR				AML	AML	05 14 38.6	
	comp=E,59µm,0.3s						
KYMI	**Kymi, Euboea I**	**1.15**	**143**	P	Pg	05 14 25.6	-0.2
SOH	**Sokhos**	**1.27**	**4**	P	Pn	05 14 27.1	-1.1
KZN	**Kozani**	**1.35**	**304**	P	Pn	05 14 28.9	-0.4
ANX	**Ano Chora**	**1.40**	**227**	P	Pn	05 14 29.2	-0.8
GRG	**Griva**	**1.54**	**336**	P	Pn	05 14 30.8	-1.1
KNT	**Kendrikon**	**1.62**	**351**	P	Pn	05 14 31.6	-1.4

*IDC **05** 05:14:50.9±1.6, 43°11N×13°94E, h0^{km}, mb3.5/2, mbtmp3.5/4, ML3.5/2, MS2.9/1, Error ellipse: s-maj=36.3km s-min=16.8km az=88.0*

*ROM **05** 05:14:52.2±0.2, 43°126N±0°006×14°084E±0°010, h7^{km}±1^{km}, ML3.4/77, Error ellipse: s-maj=0.8km s-min=0.3km az=234.0*

*LDG **05** 05:14:52.7±0.2, 43°15N×14°30E, h10^{km}, Ml3.2/23, Error ellipse: s-maj=5.9km s-min=3.6km az=74.0*

*PRU **05** 05:14:54.1±0.0, 43°17N×14°24E, h10^{km}*

ISC 05 05:14:53.0±0.9**, 43°13N**±0°02×**14°05E**±0°02**, h17**^{km}±6^{km}**, n188, σ1^{s}59**/245**, 5D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CADA	**Capodarco di F**	**0.22**	**286**	P	**Pg**	**05 14 57.9**	**-0.3**
CADA				S	**Sg**	**05 15 02.4**	**+0.7**
CADA				AML	AML		
	comp=E,28850µm,0.4s						
CADA				AML	AML		
	comp=N,38700µm,0.2s						
CADA				AML	AML		
	comp=N,38700µm,0.2s						
CADA				AML	AML		
	comp=N,38650µm,0.2s						
CADA				AML	AML		
	comp=N,38650µm,1.8s						
CIMA	**Civitanova Mar**	**0.33**	**302**	P	**Pb**	**05 15 00.2**	**-0.2**
CIMA				S	**Sb**	**05 15 07.0**	**+1.7**
TRTR	**Tortoreto Alta**	**0.34**	**197**	P	**Pb**	**05 15 01.0**	**+0.4**
TRTR				S	**Sb**	**05 15 08.0**	**+2.3**
TRTR				AML	AML		
	comp=N,31250µm,0.6s						
TRTR				AML	AML		
	comp=E,43400µm,0.6s						
TRTR				AML	AML		
	comp=N,31250µm,1.4s						
PP3	**Marolino**	**0.40**	**307**	P	**Pb**	**05 15 01.3**	**-0.3**
PP3				S	**Sb**	**05 15 08.9**	**+1.4**
PP3				AML	AML		
	comp=E,3975µm,0.5s						
PP3				AML	AML		
	comp=N,2920µm,1.3s						
PP3				AML	AML		
	comp=E,3870µm,0.8s						
PP3				AML	AML		
	comp=N,3150µm,1.3s						
PP3				AML	AML		
	comp=E,3865µm,0.8s						
PP3				AML	AML		
	comp=E,3975µm,0.6s						
PP3				AML	AML		
	comp=N,2920µm,1.3s						
PP3				AML	AML		
	comp=N,2920µm,0.7s						
PP3				AML	AML		
	comp=N,3150µm,0.7s						
MNTP	**Montappone**	**0.42**	**271**	P	**Pb**	**05 15 01.8**	**-0.3**
MNTP				S	**Sb**	**05 15 09.7**	**+1.5**
MNTP				AML	AML		
	comp=N,4690µm,1.4s						
MNTP				AML	AML		
	comp=N,4695µm,1.4s						
MNTP				AML	AML		
	comp=E,9030µm,0.9s						
AOI	**Ancona**	**0.53**	**322**	P	**Pb**	**05 15 03.5**	**-0.3**
AOI				S	**Sb**	**05 15 12.8**	**+1.6**
GUMA	**Gualdo di Mace**	**0.53**	**262**	⇓P	**Pg**	**05 15 03.4**	**-0.2**
GUMA				S	**Sb**	**05 15 12.6**	**+1.4**
GUMA				AML	AML		
	comp=E,20050µm,0.4s						
GUMA				AML	AML		
	comp=N,12050µm,0.4s						
GUMA				AML	AML		
	comp=E,20050µm,0.4s						
GUMA				AML	AML		
	comp=N,12050µm,0.3s						
GUMA				AML	AML		
	comp=E,20100µm,0.3s						
GUMA				AML	AML		
	comp=N,12325µm,0.9s						
T1241	**Roccafluvione,**	**0.53**	**239**	⇓P	**Pg**	**05 15 03.0**	**-0.6**
T1241				S	**Sb**	**05 15 12.1**	**+0.8**
T1241				AML	AML		
	comp=E,7815µm,0.3s						
T1241				AML	AML		
	comp=N,4625µm,0.6s						
T1241				AML	AML		
	comp=N,4620µm,0.6s						
T1241				AML	AML		
	comp=N,4695µm,0.5s						
T1241				AML	AML		
	comp=E,7625µm,0.3s						
PCRO	**Pietralacroce**	**0.61**	**322**	P	**Pb**	**05 15 05.5**	**+0.4**
T1256	**Bolognola (MC)**	**0.62**	**258**	P	**Pg**	**05 15 04.5**	**-0.8**
T1256				S	**Sg**	**05 15 13.8**	**+0.2**
T1256				AML	AML		
	comp=E,3405µm,0.8s						
T1256				AML	AML		
	comp=N,2355µm,1.2s						
T1256				AML	AML		
	comp=N,2350µm,1.2s						
T1256				AML	AML		
	comp=N,2215µm,1.2s						
T1256				AML	AML		
	comp=E,3400µm,0.8s						
T1256				AML	AML		
	comp=N,2215µm,0.8s						
T1256				AML	AML		
	comp=E,3465µm,0.8s						
T1256				AML	AML		
	comp=N,2350µm,0.8s						
CSP1	**Cessapalombo**	**0.62**	**266**	⇓P	**Pg**	**05 15 04.6**	**-0.7**
CSP1				S	**Sb**	**05 15 15.0**	**+1.1**
CSP1				AML	AML		
	comp=E,2895µm,0.7s						
CSP1				AML	AML		
	comp=N,3125µm,0.4s						
CSP1				AML	AML		
	comp=E,2890µm,0.7s						
MC2	**Monte Cornacci**	**0.67**	**251**	P	**Pg**	**05 15 05.4**	**-0.9**
MC2				S	**Sb**	**05 15 15.9**	**+0.5**
CING	**Cingoli**	**0.67**	**291**	⇓P	**Pg**	**05 15 05.7**	**-0.5**
CING				S	**Sb**	**05 15 16.8**	**+1.5**
CING				AML	AML		
	comp=E,1265µm,0.4s						
CING				AML	AML		
	comp=E,1265µm,1.6s						
CING				AML	AML		
	comp=N,2180µm,0.5s						
T1246	**Crognaleto (TE**	**0.69**	**217**	P	**Pg**	**05 15 05.2**	**-1.3**
T1245	**Castelsantange**	**0.69**	**247**	P	**Pg**	**05 15 05.5**	**-1.1**
T1245				S	**Sb**	**05 15 17.0**	**+1.1**
T1245				AML	AML		
	comp=N,4995µm,0.6s						
T1245				AML	AML		
	comp=N,4995µm,0.6s						
T1245				AML	AML		
	comp=N,4570µm,0.6s						
T1245				AML	AML		
	comp=E,3125µm,0.3s						
T1245				AML	AML		
	comp=E,2825µm,1.4s						
T1220	**Camerino, Fraz**	**0.70**	**268**	P	**Pg**	**05 15 06.0**	**-0.8**
T1220				S	**Sb**	**05 15 17.9**	**+1.7**
T1220				AML	AML		
	comp=E,34800µm,0.4s						
T1220				AML	AML		
	comp=N,21150µm,0.3s						
T1220				AML	AML		
	comp=E,34800µm,0.4s						
T1220				AML	AML		
	comp=N,21850µm,0.3s						
T1220				AML	AML		
	comp=N,21150µm,0.3s						
T1220				AML	AML		
	comp=N,21850µm,0.3s						
T1220				AML	AML		
	comp=E,34800µm,0.4s						
T1220				AML	AML		
	comp=N,21850µm,1.7s						
T1220				AML	AML		
	comp=E,34750µm,0.4s						
T1220				AML	AML		
	comp=N,21150µm,1.7s						
T1214	**Arquata del Tr**	**0.72**	**239**	P	**Pg**	**05 15 06.0**	**-1.2**
T1214				S	**Sb**	**05 15 17.7**	**+0.8**
T1214				AML	AML		
	comp=N,3035µm,0.5s						
T1214				AML	AML		
	comp=N,2990µm,0.5s						
T1214				AML	AML		
	comp=E,2720µm,0.3s						
T1214				AML	AML		
	comp=E,2690µm,0.3s						
T1214				AML	AML		
	comp=N,2985µm,0.5s						
T1214				AML	AML		
	comp=E,2720µm,0.3s						
T1214				AML	AML		
	comp=E,2690µm,0.3s						
T1214				AML	AML		
	comp=N,3030µm,0.5s						
T1214				AML	AML		
	comp=N,2985µm,0.5s						
SMA1	**SAN MARTINO**	**0.73**	**226**	P	**Pg**	**05 15 05.8**	**-1.5**
SMA1				AML	AML		
	comp=N,3850µm,0.6s						
SMA1				AML	AML		
	comp=E,2575µm,0.7s						
VCEL	**Villa Celiera**	**0.76**	**192**	AML	AML		
	comp=N,3360µm,1.5s						
VCEL				AML	AML		
	comp=E,2860µm,0.5s						
VCEL				AML	AML		
	comp=E,2855µm,0.5s						
VCEL				AML	AML		
	comp=N,3365µm,1.5s						
VCEL				AML	AML		
	comp=E,2855µm,1.5s						
VCEL				AML	AML		
	comp=N,3365µm,0.5s						
CAMP	**Campotosto**	**0.76**	**218**	P	**Pg**	**05 15 06.3**	**-1.6**
CAMP				AML	AML		
	comp=N,1685µm,0.5s						
CAMP				AML	AML		
	comp=N,1685µm,1.5s						
CAMP				AML	AML		
	comp=E,1835µm,1.0s						
T1219	**Muccia, Frazio**	**0.77**	**264**	⇓P	**Pg**	**05 15 07.1**	**-1.0**
T1219				S	**Sb**	**05 15 19.4**	**+1.3**
T1219				AML	AML		
	comp=E,3275µm,0.3s						
T1219				AML	AML		
	comp=E,3280µm,0.3s						
T1219				AML	AML		
	comp=N,2290µm,1.0s						
T1219				AML	AML		
	comp=N,2355µm,1.0s						
T1219				AML	AML		
	comp=E,3410µm,0.3s						
GIGS	**Gran Sasso**	**0.77**	**208**	P	**Pg**	**05 15 06.9**	**-1.2**
GIGS				AML	AML		
	comp=E,567µm,0.7s						
GIGS				AML	AML		
	comp=N,502µm,0.6s						
GIGS				AML	AML		
	comp=E,567µm,1.3s						
T1216	**Preci, Frazion**	**0.80**	**253**	P	**Pg**	**05 15 07.3**	**-1.3**
T1216				S	**Sb**	**05 15 19.9**	**+1.1**
T1216				AML	AML		
	comp=E,3270µm,0.6s						
T1216				AML	AML		
	comp=N,2805µm,0.4s						
T1216				AML	AML		
	comp=E,3270µm,0.6s						
T1216				AML	AML		
	comp=N,2800µm,0.4s						
SNTG	**Esanatoglia**	**0.82**	**279**	P	**Pg**	**05 15 08.1**	**-0.9**
SNTG				S	**Sb**	**05 15 21.3**	**+1.7**
SNTG				AML	AML		
	comp=E,1078µm,1.2s						
SNTG				AML	AML		
	comp=N,1066µm,1.5s						
SNTG				AML	AML		
	comp=E,980µm,0.5s						
SNTG				AML	AML		
	comp=E,1076µm,1.3s						
SNTG				AML	AML		
	comp=E,1076µm,0.7s						
SNTG				AML	AML		
	comp=E,980µm,0.5s						
SNTG				AML	AML		
	comp=N,1065µm,0.3s						
SNTG				AML	AML		
	comp=N,1061µm,1.5s						
SENI	**Senigallia**	**0.82**	**314**	P	**Pb**	**05 15 09.4**	**+0.6**
SENI				AML	AML		
	comp=E,6985µm,0.3s						
SENI				AML	AML		
	comp=E,6980µm,0.3s						
SENI				AML	AML		
	comp=N,8000µm,0.3s						
T1218	**Civita (PG)**	**0.83**	**236**	P	**Pg**	**05 15 07.7**	**-1.5**
T1218				S	**Sb**	**05 15 20.7**	**+0.8**
T1218				AML	AML		
	comp=N,2710µm,0.8s						
T1218				AML	AML		
	comp=N,2720µm,0.8s						
T1218				AML	AML		
	comp=E,1850µm,0.8s						
T1218				AML	AML		
	comp=N,2715µm,0.8s						
T1218				AML	AML		
	comp=N,2720µm,1.2s						
T1218				AML	AML		
	comp=E,1775µm,0.8s						
T1218				AML	AML		
	comp=N,2715µm,1.2s						
T1212	**Cascia, Frazio**	**0.83**	**243**	P	**Pg**	**05 15 07.8**	**-1.5**
T1212				S	**Sb**	**05 15 21.3**	**+1.4**
T1212				AML	AML		
	comp=E,2365µm,1.0s						
T1212				AML	AML		
	comp=N,2185µm,0.6s						
T1212				AML	AML		
	comp=E,2365µm,1.0s						
T1212				AML	AML		
	comp=N,2155µm,0.5s						
T1212				AML	AML		
	comp=N,2185µm,0.5s						
T1212				AML	AML		
	comp=E,2335µm,1.0s						
T1212				AML	AML		
	comp=E,2365µm,1.0s						
RM33	**Pellescritta (**	**0.88**	**225**	P	**Pg**	**05 15 08.4**	**-1.7**
RM33				AML	AML		
	comp=E,3645µm,0.7s						
RM33				AML	AML		
	comp=N,3770µm,1.2s						
RM33				AML	AML		
	comp=N,3705µm,1.2s						
RM33				AML	AML		
	comp=E,3645µm,0.6s						
RM33				AML	AML		
	comp=N,3770µm,1.2s						
RM33				AML	AML		
	comp=E,3545µm,0.6s						
RM33				AML	AML		
	comp=N,3700µm,1.2s						
RM33				AML	AML		
	comp=E,3645µm,1.4s						
RM33				AML	AML		
	comp=N,3700µm,0.8s						
RM33				AML	AML		
	comp=E,3545µm,1.4s						
RM33				AML	AML		
	comp=N,3770µm,0.8s						
ARVD	**Arcevia**	**0.89**	**295**	P	**Pg**	**05 15 09.4**	**-0.8**
ARVD				AML	AML		
	comp=E,1355µm,0.5s						
ARVD				AML	AML		
	comp=N,1715µm,0.6s						
T1247	**Pizzolo (AQ)**	**0.89**	**219**	P	**Pg**	**05 15 08.9**	**-1.4**
T1247				AML	AML		
	comp=E,3330µm,0.5s						
T1247				AML	AML		
	comp=N,2915µm,1.3s						
T1247				AML	AML		
	comp=E,3330µm,1.5s						
T1247				AML	AML		
	comp=N,2915µm,0.7s						
COR1	**Corinaldo**	**0.91**	**303**	P	**Pb**	**05 15 10.7**	**+0.3**
COR1				AML	AML		
	comp=E,6730µm,0.7s						
COR1				AML	AML		
	comp=N,6980µm,0.5s						
COR1				AML	AML		
	comp=N,6910µm,1.1s						
COR1				AML	AML		
	comp=E,6730µm,0.6s						
COR1				AML	AML		
	comp=E,3310µm,0.6s						
LNSS	**Leonessa**	**0.91**	**235**	P	**Pg**	**05 15 09.3**	**-1.5**
LNSS				AML	AML		
	comp=E,4270µm,0.5s						
LNSS				AML	AML		
	comp=N,3680µm,0.9s						
LNSS				AML	AML		
	comp=E,4275µm,0.5s						
LNSS				AML	AML		
	comp=N,3680µm,1.1s						
AQU	**L'Aquila**	**0.92**	**212**	AML	AML		
	comp=E,2630µm,0.7s						

AQU				AML	AML		
	comp=N,2260µm,0.5s						
AQU				AML	AML		
	comp=E,2545µm,0.8s						
AQU				AML	AML		
	comp=N,2070µm,0.5s						
AQU				AML	AML		
	comp=N,2070µm,1.5s						
AQU				AML	AML		
	comp=N,2260µm,1.5s						
AQU				AML	AML		
	comp=E,2545µm,1.2s						
AQU				AML	AML		
	comp=E,2630µm,1.3s						
T1217	**Poggiodomo (PG**	0.92	243	P	Pg	05 15 09.3	-1.7
T1217				AML	AML		
	comp=E,1655µm,0.4s						
T1217				AML	AML		
	comp=N,1750µm,0.8s						
T1217				AML	AML		
	comp=E,1905µm,0.4s						
T1217				AML	AML		
	comp=N,1755µm,0.8s						
T1217				AML	AML		
	comp=E,1900µm,0.4s						
T1217				AML	AML		
	comp=N,1535µm,1.2s						
T1217				AML	AML		
	comp=N,1755µm,1.2s						
T1217				AML	AML		
	comp=N,1535µm,0.8s						
T1217				AML	AML		
	comp=E,1655µm,1.6s						
T1217				AML	AML		
	comp=E,1900µm,1.6s						
T0110	**Collepietro**	0.93	193	P	Pg	05 15 10.2	-0.9
T0110				AML	AML		
	comp=E,4505µm,0.5s						
T0110				AML	AML		
	comp=N,3230µm,0.7s						
T0110				AML	AML		
	comp=E,4505µm,1.5s						
T1215	**Vallo di Nera,**	0.93	249	P	Pg	05 15 09.6	-1.4
T1215				AML	AML		
	comp=E,947µm,0.9s						
T1215				AML	AML		
	comp=E,927µm,0.9s						
T1215				AML	AML		
	comp=N,828µm,1.0s						
T1215				AML	AML		
	comp=E,947µm,1.1s						
T1215				AML	AML		
	comp=E,927µm,1.1s						
T1215				AML	AML		
	comp=N,819µm,1.0s						
FAGN	**Fagnano**	0.93	202	P	Pb	05 15 10.7	-0.1
FAGN				AML	AML		
	comp=N,3960µm,0.4s						
FAGN				AML	AML		
	comp=E,5335µm,0.5s						
FOSV	**Fossato di Vic**	0.96	280	P	Pg	05 15 10.5	-1.1
FOSV				AML	AML		
	comp=E,2215µm,0.6s						
FOSV				AML	AML		
	comp=N,1845µm,0.6s						
FOSV				AML	AML		
	comp=N,1845µm,1.4s						
FOSV				AML	AML		
	comp=E,2215µm,1.4s						
SSFR	**Montelago di S**	0.97	288	P	Pg	05 15 11.0	-0.9
SSFR				AML	AML		
	comp=E,1920µm,0.2s						
SSFR				AML	AML		
	comp=N,2870µm,1.2s						
SSFR				AML	AML		
	comp=E,2015µm,0.2s						
SSFR				AML	AML		
	comp=N,2530µm,0.3s						
SSFR				AML	AML		
	comp=N,2870µm,0.8s						
ASSB	**Assisi San Ben**	1.02	265	AML	AML		
	comp=E,1750µm,0.5s						
ASSB				AML	AML		
	comp=N,2340µm,0.4s						
ATCC	**AVT- Casa Cast**	1.03	273	P	Pg	05 15 11.9	-1.2
ATCC				AML	AML		
	comp=N,2430µm,0.5s						
ATCC				AML	AML		
	comp=E,2445µm,1.1s						
ATCC				AML	AML		
	comp=N,2425µm,0.5s						
ATCC				AML	AML		
	comp=E,2445µm,0.9s						
T1222	**Castel Sant'An**	1.05	226	P	Pg	05 15 11.2	-2.0
T1222				AML	AML		
	comp=N,1880µm,0.4s						
T1222				AML	AML		
	comp=N,1760µm,0.4s						
T1222				AML	AML		
	comp=E,2515µm,0.7s						
T1222				AML	AML		
	comp=E,2530µm,0.6s						
MPAG	**Monte Paganucc**	1.06	298	P	Pg	05 15 13.0	-0.6
MPAG				AML	AML		
	comp=E,1620µm,1.6s						
MPAG				AML	AML		
	comp=N,1790µm,1.2s						
MPAG				AML	AML		
	comp=E,1485µm,1.6s						
MPAG				AML	AML		
	comp=N,1575µm,1.2s						
MPAG				AML	AML		
	comp=N,1575µm,0.8s						
MPAG				AML	AML		
	comp=E,1485µm,0.4s						
MPAG				AML	AML		
	comp=N,1790µm,0.8s						
MPAG				AML	AML		
	comp=E,1620µm,0.4s						
T1211	**Morro Reatino**	1.06	236	AML	AML		
	comp=N,2735µm,0.5s						
T1211				AML	AML		
	comp=N,2790µm,0.5s						
T1211				AML	AML		
	comp=E,1700µm,0.6s						
T1211				AML	AML		
	comp=E,1670µm,0.6s						
T1211				AML	AML		
	comp=N,2735µm,1.5s						
T1211				AML	AML		
	comp=N,2790µm,1.5s						
FSSB	**Fossombrone**	1.08	301	P	Pb	05 15 13.7	+0.5
FSSB				AML	AML		
	comp=E,2705µm,0.4s						
FSSB				AML	AML		
	comp=N,3655µm,0.4s						
FSSB				AML	AML		
	comp=E,2705µm,1.6s						
FSSB				AML	AML		
	comp=N,3655µm,1.6s						
LPEL	**Lama dei Pelig**	1.09	175	P	Pb	05 15 13.1	-0.3
LPEL				AML	AML		
	comp=E,2215µm,0.8s						
LPEL				AML	AML		
	comp=E,2215µm,1.2s						
LPEL				AML	AML		
	comp=N,1950µm,0.9s						
ATFO	**Monte Foce - G**	1.10	283	P	Pg	05 15 13.2	-1.2
ATFO				AML	AML		
	comp=N,1325µm,1.2s						
ATFO				AML	AML		
	comp=E,1550µm,0.4s						
FIAM	**Fiamignano**	1.11	219	P	Pb	05 15 13.8	+0.1
FIAM				AML	AML		
	comp=E,1430µm,0.6s						
FIAM				AML	AML		
	comp=E,1430µm,1.4s						
FIAM				AML	AML		
	comp=N,1440µm,0.7s						
MURB	**Monte Urbino**	1.12	277	P	Pg	05 15 13.6	-1.2
MURB				AML	AML		
	comp=N,3580µm,1.0s						
MURB				AML	AML		
	comp=E,5960µm,0.6s						
MURB				AML	AML		
	comp=E,6050µm,0.6s						
MURB				AML	AML		
	comp=N,3865µm,1.1s						
MURB				AML	AML		
	comp=N,3580µm,1.0s						
DUGI	**Dugi Otok**	1.13	40	*e*Pg	Pn	05 15 15.0	+1.1
DUGI				Sg	Sn	05 15 32.3	+3.3
INTR	**Introdacqua**	1.13	186	P	Pg	05 15 13.2	-1.6
INTR				AML	AML		
	comp=E,2µm,1.0s						
INTR				AML	AML		
	comp=N,3260µm,1.2s						
INTR				AML	AML		
	comp=E,1460µm,0.7s						
INTR				AML	AML		
	comp=N,2µm,1.2s						
PIEI	**Pieia**	1.18	290	P	Pg	05 15 14.6	-1.2
PIEI				AML	AML		
	comp=E,614µm,1.1s						
PIEI				AML	AML		
	comp=N,698µm,1.3s						
PIEI				AML	AML		
	comp=E,614µm,0.9s						
PIEI				AML	AML		
	comp=N,698µm,0.7s						
CESX	**Cesi**	1.20	245	P	Pb	05 15 15.4	+0.1
CESX				AML	AML		
	comp=E,2015µm,1.2s						
CESX				AML	AML		
	comp=N,1715µm,0.6s						
CESX				AML	AML		
	comp=E,2015µm,0.8s						
PTQR	**Pietraquaria**	1.21	204	P	Pn	05 15 16.9	+1.7
PTQR				AML	AML		
	comp=E,607µm,1.3s						
PTQR				AML	AML		
	comp=N,641µm,0.7s						
PTQR				AML	AML		
	comp=N,641µm,1.3s						
PTQR				AML	AML		
	comp=E,607µm,0.7s						
ATVO	**AVT- Monte Val**	1.23	282	P	Pn	05 15 15.3	0.0
ATVO				AML	AML		
	comp=E,1325µm,0.7s						
ATVO				AML	AML		
	comp=N,1130µm,0.5s						
ATVO				AML	AML		
	comp=N,1130µm,1.5s						
ATVO				AML	AML		
	comp=E,1325µm,1.3s						
ATTE	**AVT- Monte Tez**	1.24	274	P	Pn	05 15 15.7	0.0
ATTE				AML	AML		
	comp=E,902µm,0.5s						
ATTE				AML	AML		
	comp=N,878µm,1.4s						
ATTE				AML	AML		
	comp=E,902µm,1.5s						
ATPI	**Pietralunga -**	1.24	285	P	Pn	05 15 15.7	+0.1
FRES	**Fresagrandinar**	1.25	158	P	Pn	05 15 16.4	+0.8
ZIRJ	**Zirje**	1.27	65	*e*Pg	Pg	05 15 16.8	-0.8
ZIRJ				Sg	Sn	05 15 35.3	+2.7
VVLD	**Villa Vallelon**	1.30	194	P	Pg	05 15 17.2	-0.9
VVLD				AML	AML		
	comp=N,930µm,0.6s						
VVLD				AML	AML		
	comp=E,1355µm,0.7s						
VIRC	**Vir**	1.37	32	*e*Pg	Pg	05 15 18.5	-0.9
VIRC				Sg	Sg	05 15 38.1	+0.9
BADI	**Badiali**	1.37	287	P	Pn	05 15 18.0	+0.7
MORI	**Morici**	1.41	58	*e*Pg	Pg	05 15 19.1	-1.0
MORI				Sg	Sg	05 15 38.9	+0.3
TRIV	**Trivento**	1.42	165	P	Pg	05 15 19.1	-1.2
PARC	**Parchiule**	1.42	292	P	Pb	05 15 19.4	+0.4
PARC				AML	AML		
	comp=N,566µm,1.5s						
PARC				AML	AML		
	comp=E,528µm,1.5s						
PARC				AML	AML		
	comp=N,566µm,0.5s						
CERT	**Cerreto**	1.42	214	P	Pg	05 15 19.6	-0.8
CERT				AML	AML		
	comp=E,1440µm,1.4s						
CERT				AML	AML		
	comp=N,1325µm,0.5s						
RNI2	**Rionero Sannit**	1.43	177	P	Pg	05 15 19.7	-1.0
RNI2				AML	AML		
	comp=E,1590µm,0.7s						
RNI2				AML	AML		
	comp=E,1600µm,0.7s						
RNI2				AML	AML		
	comp=N,1425µm,1.1s						
RNI2				AML	AML		
	comp=N,1430µm,1.1s						
MGAB	**Montegabbione**	1.44	262	P	Pg	05 15 20.4	-0.3
MGAB				AML	AML		
	comp=N,1335µm,0.5s						
MGAB				AML	AML		
	comp=N,1340µm,0.5s						
MGAB				AML	AML		
	comp=N,1340µm,1.5s						
MGAB				AML	AML		
	comp=N,1335µm,1.5s						
MGAB				AML	AML		
	comp=E,1410µm,0.6s						
MGAB				AML	AML		
	comp=E,1500µm,0.5s						
SRES	**S.Oreste - Sor**	1.45	232	P	Pb	05 15 19.8	+0.3
SRES				AML	AML		
	comp=N,866µm,0.9s						
SRES				AML	AML		
	comp=E,718µm,0.6s						
MTCE	**Montecelio**	1.47	221	P	Pb	05 15 20.2	+0.3
MTCE				AML	AML		
	comp=E,728µm,0.7s						
MTCE				AML	AML		
	comp=N,567µm,0.9s						
MIDA	**Miranda**	1.50	174	P	Pb	05 15 19.9	-0.5
MIDA				AML	AML		
	comp=E,713µm,0.6s						
MIDA				AML	AML		
	comp=E,756µm,0.6s						
MIDA				AML	AML		
	comp=N,681µm,0.4s						
MIDA				AML	AML		
	comp=N,717µm,0.4s						
RCAV	**Rocca di Cave**	1.52	213	P	Pb	05 15 20.6	-0.2
RCAV				AML	AML		
	comp=N,945µm,0.9s						
RCAV				AML	AML		
	comp=E,796µm,0.5s						
RCAV				AML	AML		
	comp=N,945µm,1.1s						
LRP	**Arpino**	1.53	193	P	Pg	05 15 21.8	-0.6
LRP				AML	AML		
	comp=E,582µm,0.9s						
LRP				AML	AML		
	comp=N,704µm,1.4s						
LRP				AML	AML		
	comp=E,582µm,1.1s						
LRP				AML	AML		
	comp=N,704µm,0.6s						
CAFI	**Castiglion Fio**	1.54	278	P	Pb	05 15 21.5	+0.5
CAFI				AML	AML		
	comp=N,713µm,0.9s						
CAFI				AML	AML		
	comp=E,535µm,1.1s						
CAFI				AML	AML		
	comp=E,535µm,1.1s						
CAFI				AML	AML		
	comp=N,692µm,0.9s						
CERA	**Filignano**	1.54	181	P	Pb	05 15 20.9	-0.1
CERA				AML	AML		
	comp=E,1550µm,1.0s						
CERA				AML	AML		
	comp=N,1695µm,1.3s						
CERA				AML	AML		
	comp=N,1760µm,1.3s						
CERA				AML	AML		
	comp=N,1695µm,0.7s						
CERA				AML	AML		
	comp=N,1760µm,0.7s						
CERA				AML	AML		
	comp=E,1565µm,1.0s						
NVLJ	**Novalja**	1.55	22	*e*Pn	Pb	05 15 21.1	0.0
NVLJ				Sn	Sg	05 15 42.5	-0.5
SACS	**San Casciano d**	1.60	260	P	Pb	05 15 22.5	+0.4
SACS				AML	AML		
	comp=E,570µm,1.2s						
SACS				AML	AML		
	comp=N,500µm,1.3s						
SACS				AML	AML		
	comp=E,550µm,1.2s						
SACS				AML	AML		
	comp=E,550µm,0.8s						
SACS				AML	AML		
	comp=N,500µm,0.7s						
SACS				AML	AML		
	comp=E,570µm,0.8s						
SACS				AML	AML		
	comp=N,486µm,1.4s						
CIGN	**Sant'Elia a Pi**	1.61	157	P	Pb	05 15 21.8	-0.4
MELA	**Melanico ??? S**	1.64	150	P	Pb	05 15 21.8	-0.9
MELA				AML	AML		
	comp=E,2150µm,0.4s						
MELA				AML	AML		
	comp=N,1980µm,0.4s						
MELA				AML	AML		
	comp=E,2190µm,0.4s						
MELA				AML	AML		
	comp=N,2075µm,0.4s						
MELA				AML	AML		
	comp=E,2150µm,1.6s						
MELA				AML	AML		
	comp=E,2190µm,1.6s						
BSSO	**Busso**	1.64	166	P	Pb	05 15 22.0	-0.8
GIUL	**Giuliano Di Ro**	1.68	201	P	Pn	05 15 22.7	+1.1
GIUL				AML	AML		
	comp=E,370µm,1.3s						
GIUL				AML	AML		
	comp=N,581µm,0.9s						
RABC	**Rab**	1.70	18	*e*Pn	Pb	05 15 23.2	-0.5
RABC				Sn	Sg	05 15 46.4	-1.4
VAGA	**Valle Agricola**	1.72	175	P	Pb	05 15 23.3	-0.9
HVAR	**Hvar**	1.76	88	*e*Pn	Pb	05 15 24.0	-0.7
HVAR	**Hvar**	1.76	88	P	Pb	05 15 23.8	-0.9
SGG	**Gregorio Mates**	1.76	172	P	Pn	05 15 23.7	+0.9
APRC	**Apricena**	1.77	141	AML	AML		
	comp=E,657µm,0.4s						
APRC				AML	AML		
	comp=N,856µm,1.5s						
APRC				AML	AML		
	comp=N,856µm,0.5s						
BRJN	**Brijuni**	1.78	353	*e*Pn	Pn	05 15 23.2	+0.2
BRJN	**Brijuni**	1.78	353	P	Pn	05 15 23.5	+0.5
SACR	**S. Croce Del S**	1.80	164	P	Pn	05 15 24.0	+0.7
SGRT	**San Giovanni R**	1.86	137	P	Pn	05 15 24.6	+0.4
SGRT				AML	AML		
	comp=E,832µm,0.7s						
SGRT				AML	AML		
	comp=N,752µm,0.4s						
SGRT				AML	AML		
	comp=E,832µm,1.3s						
UDBI	**Udbina**	1.86	41	*e*Pn	Pb	05 15 26.9	+0.3
UDBI				Sn	Sg	05 15 51.7	-1.4
SMRN	**Sveta Marina**	1.90	2	*e*Pn	Pn	05 15 25.2	+0.6
SMRN				Sn	Sb	05 15 50.4	-0.2
KIJV	**Kijevo**	1.92	62	Sg	Sg	05 15 54.3	-0.5
MSAG	**Monte S. Angel**	1.98	135	P	Pn	05 15 26.3	+0.6
MSAG				AML	AML		
	comp=N,1575µm,0.5s						
MSAG				AML	AML		
	comp=E,1082µm,0.5s						
MSAG				AML	AML		
	comp=N,1580µm,1.1s						
MSAG				AML	AML		
	comp=E,1002µm,0.6s						
MSAG				AML	AML		
	comp=N,1580µm,0.9s						
RUFI	**Rufina**	1.98	292	P	Pb	05 15 27.8	-0.7
RUFI				AML	AML		
	comp=E,256µm,1.6s						
RUFI				AML	AML		
	comp=N,270µm,0.8s						
RUFI				AML	AML		
	comp=N,270µm,1.2s						
RUFI				AML	AML		
	comp=E,256µm,0.4s						
PLIT	**Plitvice**	2.08	33	*e*Pn	Pb	05 15 29.8	-0.5
PLIT				Sn	Sb	05 15 56.5	+0.7
RIY	**Rijeka**	2.21	8	*e*Pn	Pn	05 15 30.4	+1.5
A050A	**Klekovaca**	2.25	52	*e*Pn	Pb	05 15 32.0	-1.1
RICI	**Ricice**	2.28	80	Sn	Sb	05 16 02.1	+0.6
RICI	**Ricice**	2.28	80	*e*Pn	Pb	05 15 32.0	-1.6
SKDS	**Skadanscina**	2.41	359	*i* Pn	Pn	05 15 32.5	+0.8
SKDS				*i* Sn	Sn	05 16 03.6	+2.9
SKDS				IAML		05 16 04.5	
	comp=Z,28nm,0.2s						
SKDS	**Skadanscina**	2.41	359	*e*Pn	Pn	05 15 32.1	+0.4
BOJS	**Bojanci**	2.52	20	*e*Pn	Pn	05 15 33.8	+0.7
MGRS	**Mrkonjic Grad**	2.54	59	*e*Pn	Pb	05 15 36.8	-1.4
CEY	**Cerknica**	2.62	6	*e*Pn	Pn	05 15 35.3	+0.8
PII	**Pisa**	2.63	284	P	Pn	05 15 37.0	+2.3
PRIJ	**Prijedor**	2.66	45	*e*Pn	Pg	05 15 41.6	-2.4
OZLJ	**Ozalj**	2.68	22	*e*Pn	Pn	05 15 37.5	+2.2
STON	**Ston**	2.69	94	*e*Pn	Pn	05 15 36.3	+0.9
BLY	**Banja Luka**	2.78	53	P	Pb	05 15 40.3	-1.9
BLY	**Banja Luka**	2.78	53	*e*Pn	Pb	05 15 40.5	-1.7
A051A	**Mrakovica**	2.79	47	*e*Pn	Pb	05 15 40.0	-2.3
PTJ	**Puntijarka**	3.09	26	*e*Pn	Pn	05 15 43.9	+2.8
MOSL	**Moslavina**	3.15	37	*e*Pn	Pn	05 15 42.5	+0.8
VINO	**Villanova**	3.17	350	P	Pn	05 15 42.6	+0.6
VINO				AML	AML		
	comp=E,55µm,1.4s						
VINO				AML	AML		
	comp=E,55µm,0.6s						
VINO				AML	AML		
	comp=N,62µm,1.4s						
A052A	**Srbac**	3.18	51	*e*Pn	Pb	05 15 49.2	+0.3
TREB	**Trebinje**	3.19	96	*e*Pn	Pn	05 15 43.5	+1.2
BRY	**Bratogost**	3.30	93	*e*Pn	Pg	05 15 55.6	-0.6
LOBO	**Lobor**	3.35	25	*e*Pn	Pn	05 15 45.4	+0.9
LOBO				Sn	Sn	05 16 25.7	+1.9
CIMO	**Cimolais**	3.38	341	P	Pn	05 15 45.5	+0.6
CIMO				AML	AML		
	comp=E,29µm,1.6s						
CIMO				AML	AML		
	comp=E,29µm,0.4s						
CIMO				AML	AML		
	comp=N,34µm,1.3s						
CTI	**Castel Tesino**	3.38	330	P	Pn	05 15 45.8	+0.8
CTI				AML	AML		
	comp=E,101µm,0.6s						
CTI				AML	AML		
	comp=N,102µm,1.6s						
CTI				AML	AML		
	comp=E,101µm,1.4s						
CTI				AML	AML		
	comp=N,102µm,0.4s						
OBKA	**Obir**	3.39	6	*e*Pn	Pn	05 15 46.5	+1.3
	comp=N,0.4nm,0.1s						
OBKA	**Obir**	3.39	6	*e*Pn	Pn	05 15 46.1	+0.9
DOSS	**Dosso del Somm**	3.42	324	P	Pn	05 15 46.8	+1.1
DOSS				AML	AML		
	comp=N,99µm,0.5s						
DOSS				AML	AML		
	comp=E,109µm,0.6s						
ACOM	**Acomizza, Ital**	3.44	354	P	Pn	05 15 47.2	+1.3
ACOM				AML	AML		
	comp=E,143µm,1.3s						
ACOM				AML	AML		
	comp=N,141µm,1.3s						
ACOM				AML	AML		
	comp=E,129µm,1.6s						
ACOM				AML	AML		
	comp=N,124µm,0.5s						
ACOM				AML	AML		
	comp=N,141µm,0.7s						
ACOM				AML	AML		
	comp=N,124µm,1.5s						
ACOM				AML	AML		
	comp=E,129µm,0.4s						
ACOM				AML	AML		
	comp=E,143µm,0.7s						
KALN	**Kalnik**	3.45	29	*e*Pn	Pn	05 15 47.2	+1.3
MYKA	**Terra Mystica**	3.51	355	*e*Pn	Pn	05 15 47.8	+1.0
	comp=E,1.4nm,0.2s,SNR=4.3						
MYKA				*e*Sn	Sn	05 16 29.7	+1.9
	comp=E,5.6nm,0.4s						
SALO	**Salr**	3.54	316	P	Pn	05 15 48.6	+1.4
SALO				AML	AML		
	comp=E,146µm,0.8s						
SALO				AML	AML		
	comp=E,146µm,1.2s						
SALO				AML	AML		
	comp=N,190µm,0.2s						

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LUSI  Trento, Gardas     3.59 323   P       Pn      05 15 48.8 +0.9
LUSI                                AML     AML
      comp=E,92µm,1.5s
LUSI                                AML     AML
      comp=E,92µm,0.5s
LUSI                                AML     AML
      comp=N,122µm,0.7s
MAGA  Magasa             3.60 318   P       Pn      05 15 48.8 +0.7
MAGA                                AML     AML
      comp=N,223µm,1.4s
MAGA                                AML     AML
      comp=N,223µm,0.6s
MAGA                                AML     AML
      comp=E,286µm,0.5s
GAGG  Gaggia             3.68 324   P       Pn      05 15 50.4 +1.2
GAGG                                AML     AML
      comp=N,84µm,0.8s
GAGG                                AML     AML
      comp=E,106µm,1.1s
HAPS  Han Pijesak,Bl     3.68  73  ePn      Pn      05 15 52.8 +3.6
PGF   Pioggiola          3.76 263  ePn      Pn      05 15 52.3 +2.0
PGF                                eSn      Sn      05 16 35.4 +1.3
      comp=E,1.3nm,0.2s
ABTA  Abfaltersbach      3.77 344  i Pn     Pn      05 15 50.7 +0.3
      comp=E,1.1nm,0.2s,SNR=4.9
ABTA                               eSn      Sn      05 16 38.0 +3.5
      comp=E,19nm,0.8s
ZONE  Zone               3.85 314   P       Pn      05 15 52.5 +1.0
ZONE                                AML     AML
      comp=E,86µm,0.3s
ZONE                                AML     AML
      comp=N,92µm,1.3s
ZONE                                AML     AML
      comp=E,86µm,1.7s
APPI  Appiano            3.90 330   P       Pn      05 15 53.5 +1.3
APPI                                AML     AML
      comp=N,82µm,0.5s
APPI                                AML     AML
      comp=E,79µm,0.7s
DRME  Dracevica, Mon     3.90 102  ePn      Pn      05 15 53.5 +1.4
KBA   Koelnbreinsper     3.98 353  ePn      Pn      05 15 54.6 +1.3
      comp=E,0.7nm,0.2s
KBA                                eSn      Sn      05 16 40.5 +0.9
      comp=E,5.5nm,0.5s
MDI   Monti di Nese      4.08 312   P       Pn      05 15 55.4 +0.8
MDI                                 AML     AML
      comp=N,135µm,1.6s
MDI                                 AML     AML
      comp=N,135µm,0.4s
MDI                                 AML     AML
      comp=E,147µm,0.3s
ROSI  Rosskopf           4.23 335   P       Pn      05 15 58.4 +1.6
ROSI                                AML     AML
      comp=E,85µm,1.5s
ROSI                                AML     AML
      comp=N,91µm,0.8s
ROSI                                AML     AML
      comp=N,91µm,1.2s
ROSI                                AML     AML
      comp=E,85µm,0.5s
ARSA  Arzberg            4.25  14  ePn      Pn      05 15 57.8 +1.0
      comp=E,0.5nm,0.3s
SJES  Sjenica            4.33  86  ePn      Pn      05 16 00.6 +2.5
WTTA  Wattenberg         4.47 338  ePn      Pn      05 16 01.8 +1.8
      comp=E,0.9nm,0.2s
MUGIO Muggio             4.54 310   P       Pn      05 16 01.4 +0.5
FETA  Feichten           4.54 330  ePn      Pn      05 16 03.0 +1.9
      comp=E,2.5nm,0.6s
WATA  Walderalm          4.55 338  ePn      Pn      05 16 03.5 +2.4
      comp=E,1.1nm,0.2s
WATA                               eSn      Sn      05 16 56.8 +3.1
      comp=E,6.2nm,0.3s
SQTA  Sankt Quirin       4.55 335  ePn      Pn      05 16 03.6 +2.5
      comp=E,3.4nm,0.3s
BIOA  Bad Ischl, Aus     4.57 356  ePn      Pn      05 16 02.6 +1.3
      comp=E,0.9nm,0.3s
BIOA                               eSn      Sn      05 16 55.8 +1.9
      comp=E,5.4nm,0.3s
FRGS  Fruska Gora        4.61  62  ePn      Pn      05 16 03.3 +1.4
DAVOX Davos/Dischmat     4.70 322   Pn      Pn      05 16 04.7 +1.5
      comp=E,3.8nm,0.3s,baz=144,slow=13,SNR=24
DAVOX                               Sn      Sn      05 17 00.1 +2.8
      comp=E,0.3nm,0.3s,baz=167,slow=14,SNR=1.5
      comp=E,7.4nm,0.3s
MOTA  Moosalm            4.70 335  ePn      Pn      05 16 04.9 +1.8
      comp=E,3.1nm,0.6s
MOA   Molln              4.72   2  i Pn     Pn      05 16 05.2 +1.8
      comp=E,1.3nm,0.3s
MOA                                eSn      Sn      05 17 00.0 +2.4
      comp=E,5.5nm,0.4s
RONA  Rosalia, Austr     4.83  18  ePn      Pn      05 16 06.1 +1.2
      comp=E,0.8nm,0.3s
SBF   Sospel             4.87 281  ePn      Pn      05 16 06.8 +1.4
SBF                                eSn      Sn      05 17 02.0 +0.6
      comp=E,14nm,0.5s
RETA  Reutte             4.93 333  ePn      Pn      05 16 07.8 +1.5
      comp=E,1.7nm,0.4s,SNR=6.2
CONA  Conrad Observa     4.96  14  i Pn     Pn      05 16 08.0 +1.3
      comp=E,0.5nm,0.2s
CONA                               eSn      Sn      05 17 05.7 +2.0
      comp=E,2.9nm,0.4s
DAVA  Damuels            5.09 326  ePn      Pn      05 16 10.5 +2.0
      comp=E,2.7nm,0.3s,SNR=4.6
MBDF  Montbardon         5.49 289  ePn      Pn      05 16 15.4 +1.3
      SNR=1.0
MBDF                               eSn      Sn      05 17 16.6 -0.3
      comp=E,1.2nm,0.2s
LMR   La Mourre          5.51 275  ePn      Pn      05 16 15.9 +1.7
LMR                                eSn      Sn      05 17 17.0 -0.2
      comp=E,1.5nm,0.4s
CKRC  Cesky Krumlov      5.69   2  ePN      Pn      05 16 17.1 +0.4
CKRC                               eSN      Sn      05 17 20.6 -0.9
GERES GERESS Array B     5.72 358   Pn      Pn      05 16 18.0 +0.9
      comp=E,0.7nm,0.3s,baz=173,slow=13,SNR=23
GERES                               Sn      Sn      05 17 23.1 +0.8
      comp=E,1.5nm,0.3s,baz=181,slow=24,SNR=11
      comp=E,0.8nm,0.3s
LPL   La Plagne          5.76 297  ePn      Pn      05 16 18.2 +0.3
      SNR=1.0
LPL                                eSn      Sn      05 17 22.4 -1.3
      comp=E,18nm,0.4s,SNR=1.0
KHC   Kasperske Hory     6.01 357  ePN      Pn      05 16 21.4 +0.3
KHC                                eSN      Sn      05 17 27.5 -1.9
ORIF  Oris-en-Rattie     6.16 290  ePn      Pn      05 16 24.1 +1.0
      SNR=1.0
ORIF                               eSn      Sn      05 17 31.6 -1.5
      comp=E,0.7nm,0.2s
SMRF  Simiane la Rot     6.22 281  ePn      Pn      05 16 24.9 +1.0
SMRF                               eSn      Sn      05 17 32.9 -1.7
VYHS  Vyhne              6.32  30  ePN      Pn      05 16 22.1 -3.2
CABF  La Chapelle        6.64 304  ePn      Pn      05 16 30.1 +0.3
      SNR=1.0
CABF                               eSn      Sn      05 17 42.7 -2.3
      comp=E,0.9nm,0.2s
PRU   Pruhonice          6.87   3  eSN      Sn      05 17 48.5 -1.9
HINF  Hinteralfeld       6.89 315  ePn      Pn      05 16 33.2  0.0
      SNR=1.0
HINF                               eSn      Sn      05 17 47.4 -3.8
      comp=E,22nm,0.6s,SNR=1.0
VIVF  Saint-Julien-l     6.98 287  ePn      Pn      05 16 35.5 +1.1
VIVF                               eSn      Sn      05 17 51.8 -1.5
      comp=E,0.6nm,0.2s
CDF   Champ du Feu       7.09 320  ePn      Pn      05 16 36.7 +0.7
      SNR=1.0
CDF                                eSn      Sn      05 17 53.0 -3.1
      comp=E,4.1nm,0.4s,SNR=1.0
HAU   Haudompre          7.27 315  ePn      Pn      05 16 38.2 -0.2
      SNR=1.0
HAU                                eSn      Sn      05 17 56.8 -3.8
      comp=E,14nm,0.4s
LASF  Ste Croix          7.46 281  ePn      Pn      05 16 41.8 +0.8
LASF                               eSn      Sn      05 18 02.7 -2.4
      comp=E,0.7nm,0.3s
PAGF  Fort de Pagny      7.95 316  ePn      Pn      05 16 47.1 -0.5
PAGF                               eSn      Sn      05 18 12.5 -4.5
      comp=E,16nm,0.7s
SMF   Signal de Mont     8.05 299  ePn      Pn      05 16 49.4 +0.3
      SNR=1.0
SMF                                eSn      Sn      05 18 15.4 -4.3
      comp=E,20nm,0.7s
SFTF  Sexfontaines       8.09 312  ePn      Pn      05 16 49.7 +0.1
      baz=129
SFTF                               eSn      Sn      05 18 16.2 -4.5
      comp=E,0.2nm,0.1s
KEST  Kesra              8.24 208   Pn      Pn      05 16 59.2 +7.4
      comp=E,0.2nm,0.3s,baz=202,slow=13,SNR=2.6
MEZF  Maizieres J'vi     8.26 314  eSn      Sn      05 18 21.8 -3.0
      comp=E,2.1nm,0.3s
SAVF  Savonnieres en     8.29 314  ePn      Pn      05 16 51.0 -1.4
SAVF                               eSn      Sn      05 18 20.8 -4.8
      comp=E,17nm,1.0s
LOR   Lormes             8.30 303  ePn      Pn      05 16 52.6 +0.1
      baz=118,SNR=1.0
LOR                                eSn      Sn      05 18 21.7 -4.0
      comp=E,3.0nm,0.2s
AVF   Avril sur Loir     8.42 299  ePn      Pn      05 16 54.4 +0.3
      SNR=1.0
AVF                                eSn      Sn      05 18 24.4 -4.3
      comp=E,0.1nm,0.1s
SSF   Saint Saulge       8.43 301  ePn      Pn      05 16 54.4 +0.2
      SNR=1.0
SSF                                eSn      Sn      05 18 25.0 -3.9
      comp=E,4.2nm,0.4s
BGF   Bois d'Agland      8.66 297  ePn      Pn      05 16 57.7 +0.2
      SNR=1.0
BGF                                eSn      Sn      05 18 30.9 -3.8
      comp=E,7.8nm,0.5s
MLR   Muntele Rosu       8.85  70   LR      LR      05 21 21.2
      comp=E,70nm,18.6s,baz=326,slow=44
TCF   Toulx Ste Croi     9.00 295  ePn      Pn      05 17 01.6 -0.5
TCF                                eSn      Sn      05 18 37.9 -5.1
TORD  Torodi Ar. Bea    31.73 203   P       P       05 21 15.5 -0.4
      comp=E,1.1nm,1.2s,baz=17,slow=7.6,SNR=2.4
      comp=E,1.1nm,1.2s
MKAR  Makanchi Array    47.04  61   P       P       05 23 24.7 +1.3
      comp=E,0.3nm,0.6s,baz=272,slow=6.0,SNR=4.2
      comp=E,0.3nm,0.6s
```

IDC 05 05:17:06.2±4.7**, 18°.43N**×**121°.46E, h0^{km}, mb3.2**/3**,**
mbtmp3.2/3**, MS2.3**/1**, Error ellipse: s-maj=407.9km**
s-min=30.7km az=61.0, Luzon

```
Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC       h  m  s   ISC
CMAR  Chiang Mai Arr    21.36 274   LR      LR      05 29 19.7
      comp=Z,8.9nm,19.7s,baz=20,slow=34
WRA   Warramunga Arr    40.17 161   P       P       05 24 44.0 -0.3
      0.5nm,0.8s,baz=341,slow=8.9,SNR=2.1
      0.5nm,0.8s
MKAR  Makanchi Array    42.78 320   P       P       05 25 05.4 -0.1
      0.1nm,0.5s,baz=134,slow=6.2,SNR=1.6
      0.1nm,0.5s
ASAR  Alice Springs     43.56 163   P       P       05 25 12.1 +0.1
      0.4nm,0.9s,baz=346,slow=7.1,SNR=2.5
      0.4nm,0.9s
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*FUNV **05** 05:38:44.6, 10°.40N×72°.46W, h5^{km}, MW3.9*
*RSNC **05** 05:38:45.0±0.8, 10°.39N×72°.53W, h4^{km}±4^{km}, ML3.5, Mw3.5*
ISC 05 05:38:43.9±1.1**, 10°.46N**±0°.03×**72°.46W**±0°.03**, h16**^{km}±8^{km}**,**
n44, σ2^{s}45/80**, 6C-2D, Venezuela**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC       h  m  s   ISC
MCQV  Machiques          0.41 190⇑ iP      Pg      05 38 51.2 -1.1
MCQV                               eS      Sg      05 38 56.7 -1.2
CRJC  Cerrejon, Guaj     0.70 324⇓ iP      Pg      05 38 57.9 +0.3
CRJC                               eS      Sb      05 39 08.0 +0.9
CRJC                               i               05 39 08.9
      comp=Z,3µm,0.1s
URIC  Uribia, Colomb     1.32  20⇑ iP      Pb      05 39 09.3 +1.0
URIC                               eS      Sg      05 39 28.1 +1.5
URIC                               i               05 39 29.7
      comp=Z,1µm,0.4s
LL1C  La Loma 1 Cana     1.41 230⇑ iP      Pn      05 39 07.2 -1.7
LL1C                               eS      Sn      05 39 25.6 -1.6
ARGC  Ariguani, Magd     1.85 251⇑ iP      Pn      05 39 15.2 +0.1
ARGC                               eS      Sn      05 39 38.7 +0.5
ARGC                               i               05 39 43.3
      comp=Z,240nm,0.3s
SMRC  Santa Marta, M     1.87 292  eP      Pn      05 39 15.1 -0.2
SMRC                               eS      Sn      05 39 37.4 -1.1
SMRC                               i               05 39 45.1
      comp=Z,368nm,0.4s
CURV  Curarigua          2.50 100⇓ eP      Pn      05 39 25.2 +1.2
CURV                               eS      Sn      05 39 55.0 +0.8
CAPV  Capacho            2.58 177  eP      Pn      05 39 25.3  0.0
CAPV                               eS      Sn      05 39 56.0 -0.4
SIQV  Siquisique         2.62  86  eP      Pn      05 39 26.8 +1.3
SIQV                               eS      Sn      05 39 58.1 +1.1
SOCV  Socops             2.68 144  eP      Pn      05 39 26.9 +0.5
SOCV                               eS      Sn      05 39 57.6 -1.0
SJCC  San Jacinto, C     2.73 258⇑ iP      Pn      05 39 29.1 +1.9
SJCC                               eS      Sn      05 40 02.8 +2.8
SJCC                               i               05 40 19.0
      comp=Z,86nm,0.7s
PAMC  Pamplona, Colo     3.11 184  eP      Pn      05 39 33.7 +1.0
PAMC                               eS      Sb      05 40 15.8 -1.2
PAMC                               i               05 40 18.4
      comp=Z,282nm,0.2s
BRRC  Barranca, Sant     3.55 200  eP      Pn      05 39 38.8 +0.4
BRRC                               eS      Sb      05 40 27.9 -1.4
BRRC                               i               05 40 37.0
      comp=Z,86nm,0.2s
JACV  Jacura             3.62  80  eP      Pn      05 39 40.6 +1.2
JACV                               eS      Sn      05 40 21.7 -0.1
ZARC  Zaragoza, Cauc     3.78 219  eP      Pn      05 39 41.8 +0.2
ZARC                               eS      Sn      05 40 29.0 +3.2
ZARC                               i               05 40 40.8
      comp=Z,181nm,0.4s
BARC  Barichara          3.91 191  eP      Pn      05 39 44.5 +1.1
BARC                               eS      Sb      05 40 41.5 +1.8
BARC                               i               05 40 53.1
      comp=Z,224nm,0.5s
MAPV  Macapo             3.99  99  eP      Pn      05 39 45.3 +0.8
MAPV                               eS      Sn      05 40 30.6 -0.4
TAMC  Tame, Arauca       4.05 171  eP      Pn      05 39 45.3  0.0
TAMC                               eS      Sn      05 40 32.3 -0.2
TAMC                               i               05 40 59.5
      comp=Z,96nm,0.2s
UREC  San Jos de Ur      4.05 229  eP      Pn      05 39 47.2 +1.9
UREC                               eS      Sn      05 40 36.3 +3.8
UREC                               i               05 40 50.4
      comp=Z,49nm,0.3s
PTBC  PUERTO BERRIO,     4.36 207  eP      Pn      05 39 49.3 -0.3
PTBC                               eS      Sn      05 40 45.0 +4.8
PTBC                               i               05 41 12.6
      comp=Z,56nm,0.5s
TURV  Turiamo            4.54  90  eP      Pn      05 39 52.7 +0.6
TURV                               eS      Sn      05 40 42.0 -2.6
RUSC  La Rusia           4.58 188  eP      Pn      05 39 53.4 +0.4
RUSC                               eS      Sb      05 41 03.1 +3.8
RUSC                               i               05 41 05.2
      comp=Z,53nm,0.5s
BAUV  El Baul            4.61 109⇑ eP      Pn      05 39 53.2 +0.3
BAUV                               eS      Sn      05 40 43.7 -2.5
BENV  Beln               4.81  95  eP      Pn      05 39 57.0 +1.2
BENV                               eS      Sn      05 40 48.7 -2.6
SPBC  San Pablo de B     5.03 199  eP      Pn      05 40 00.8 +1.9
SPBC                               eS      Sn      05 41 01.1 +4.3
SPBC                               i               05 41 28.8
      comp=Z,43nm,0.3s
DBBC  Dabeiba            5.04 228  eP      Pn      05 40 03.6 +4.6
DBBC                               eS      Sn      05 40 56.0 -1.0
TACV  Tcata              5.36  93  eP      Pn      05 40 04.0 +0.7
TACV                               eS      Sn      05 41 01.6 -3.2
NORC  Norcasia           5.42 206  eP      Pn      05 40 07.9 +3.8
NORC                               eS      Sn      05 41 08.3 +2.1
NORC                               i               05 41 32.6
      comp=Z,19nm,0.5s
FUNV  FUNVISIS           5.56  89  eP      Pn      05 40 07.0 +0.9
CBOC  Ciudad Bolivar     5.76 218  eP      Pn      05 40 12.1 +3.2
CBOC                               eS      Sn      05 41 16.3 +1.4
CBOC                               i               05 41 49.5
      comp=Z,9.8nm,0.6s
UPD2  Meteti             5.80 251  eP      Pn      05 40 08.8 -0.5
UPD2                               eS      Sn      05 41 12.7 -2.8
UPD2                               i               05 41 19.6
      comp=Z,36nm,0.4s
ROSC  El Rosal           5.88 198   Pn     Pn      05 40 13.2 +2.4
      comp=Z,1.5nm,0.3s,baz=262,slow=9.5,SNR=5.2
ROSC                                Sn     Sn      05 41 06.7  -11
      comp=Z,2.3nm,0.3s,baz=288,slow=20,SNR=4.3
      comp=Z,3.3nm,0.3s
ROSC  El Rosal           5.88 198  eP      Pn      05 40 13.7 +3.0
ROSC                               eS      Sn      05 41 24.4 +6.4
ROSC                               i               05 41 53.0
      comp=Z,17nm,0.4s
CHIC  Chingaza           5.92 192  eP      Pn      05 40 12.2 +0.7
CHIC                               eS      Sn      05 41 22.7 +3.5
CHIC                               i               05 42 02.6
      comp=Z,17nm,0.5s
BIRV  Birongo            6.09  89  eP      Pn      05 40 13.7 +0.4
MERV  Las Mercedes       6.19 101  eP      Pn      05 40 15.4 +0.7
PTGC  Puerto Gaitan,     6.23 177  eP      Pn      05 40 14.1 -1.2
PTGC                               eS      Sn      05 41 22.9 -3.2
PTGC                               i               05 41 27.9
      comp=Z,27nm,0.3s
VILC  Villavicencio,     6.42 191  eP      Pn      05 40 15.2 -2.8
VILC                               eS      Sn      05 41 31.0 -0.1
VILC                               i               05 41 49.5
      comp=Z,28nm,0.3s
CACV  CAICARA DEL OR     6.52 116  eP      Pn      05 40 24.9 +5.8
CACV                               eS      Sn      05 41 41.1 +7.8
ORTC  Ortega, Tolima     7.07 203  eP      Pn      05 40 29.0 +2.2
ORTC                               eS      Sn      05 41 52.9 +6.0
ORTC                               i               05 42 00.6
      comp=Z,11nm,0.5s
PRGV  PARIAGUAN          7.89 102  eP      Pn      05 40 37.9 -0.1
PRGV                               eS      Sn      05 42 01.3 -5.7
SIV   San Ignacio       28.59 157   P      P       05 44 37.8 -1.8
      comp=Z,0.8nm,0.8s,baz=333,slow=14,SNR=4.0
      comp=Z,0.8nm,0.8s
ASAR  Alice Springs    151.65 239   PKP    PKPbc   05 58 36.9 -1.6
      comp=Z,0.1nm,0.4s,baz=125,slow=3.3,SNR=2.1
WRA   Warramunga Arr   152.51 247   PKP    PKPbc   05 58 39.5 -1.0
      comp=Z,0.2nm,0.5s,baz=103,slow=3.0,SNR=1.4
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*IDC **05** 05:40:21.4±1.3, 37°.06N×28°.73E, h0^{km}, mb3.6/3,*
mbtmp3.5/8, ML3.4/5, Error ellipse: s-maj=24.7km
s-min=17.2km az=144.0
*ISK **05** 05:40:21.5, 37°.16N×28°.56E, h1^{km}, ML3.2/24*
*DDA **05** 05:40:22.0±0.0, 37°.15N×28°.56E, h1^{km}, MW3.4*
*THE **05** 05:40:22.9, 37°.19N×28°.51E, h1^{km}±2^{km}, ML3.1/4, Error*
ellipse: s-maj=2.1km s-min=1.4km az=344.0
*ATH **05** 05:40:25.1, 37°.18N×28°.55E, h10^{km}±31^{km}, ML3.2/4, Error*
ellipse: s-maj=31.6km s-min=1.4km az=0.0
ISC 05 05:40:22.9±1.0**, 37°.16N**±0°.02×**28°.55E**±0°.01**, h7**^{km}±7^{km}**,**
n82, σ1^{s}60/125**, mb3.8**/3**, Turkey**

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Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC       h  m  s   ISC
MULA  Mugla, Merkez-     0.21 299   SPECP           05 40 26.0
MULA                                P      Pg      05 40 26.7 -0.5
MULA                                S      Sg      05 40 30.7 +0.7
YER   Yerkesik           0.21 264   P      Pg      05 40 27.0 -0.3
YER                                 S      Sg      05 40 30.9 +0.7
YER   Yerkesik           0.21 264   Pg     Pg      05 40 26.9 -0.3
YER                                 Sg     Sg      05 40 31.3 +1.1
DALY  Dalyan (Mula)      0.35 166   Pg     Pg      05 40 29.2 -0.5
TAVA  DENIZLI_Tavas      0.42  43   SPECP           05 40 30.0
TAVA                                P      Pg      05 40 30.2 -1.0
TAVA                                S      Sg      05 40 37.0 +0.2
TURN  Turunc             0.45 213   Pg     Pg      05 40 31.2 -0.5
TURN                                Sg     Sb      05 40 39.0 -1.1
TURN  Turunc             0.45 213   SPECP           05 40 31.0
TURN                                P      Pg      05 40 31.4 -0.3
TURN                                S      Sb      05 40 39.2 -0.9
DNIZ  Denizli-Tavas-     0.61  40   SPECP           05 40 33.0
DNIZ                                P      Pg      05 40 33.9 -0.8
DNIZ                                S      Sb      05 40 43.4 -1.4
CAEL  Denizli, Camel     0.62  93   SPECP  Pb      05 40 35.0 -1.1
CAEL                                P      Pb      05 40 35.0 -1.1
CAEL                                S      Sn      05 40 48.5 +0.1
CAME  Cameli-Denizli     0.64 109   Pg     Pg      05 40 34.1 -1.2
CAME                                Sg     Sb      05 40 44.6 -1.0
FETY  Fethiye            0.67 140   Pg     Pg      05 40 35.0 -0.9
FETY  Fethiye            0.67 140   P      Pg      05 40 35.2 -0.7
APMY  Acipayam-Deniz     0.68  62   Pg     Pg      05 40 35.0 -1.0
AYDN  Tasoluk            0.73 313   SPECP           05 40 37.0
AYDN                                P      Pb      05 40 37.0 -1.0
AYDN                                S      Sb      05 40 48.1 -0.2
GOLH  Golhisar           0.81  84   SPECP           05 40 39.0
GOLH                                P      Pb      05 40 39.1 -0.3
GOLH                                S      Sb      05 40 51.7 +1.1
DAT   Datca              0.89 242   P      Pg      05 40 39.2 -0.8
DAT                                 S      Sn      05 40 54.6 -0.5
DAT   Datca              0.89 242   Pg     Pb      05 40 40.1 -0.6
DAT   Datca              0.89 242   SPECP           05 40 41.0
DAT                                 P      Pn      05 40 41.4 -0.5
DAT                                 S      Sn      05 40 56.0 +1.0
BDRM  Kayabasi           0.89 264   SPECP           05 40 40.0
BDRM                                P      Pb      05 40 40.0 -0.6
BDRM                                S      Sn      05 40 55.6 +0.6
IZZE  Mula-Seydike       0.90 143   SPECP           05 40 39.0
IZZE                                P      Pg      05 40 39.2 -1.0
IZZE                                S      Sb      05 40 52.8 -0.2
ARG   Arkhangelos        1.00 200   P      Pg      05 40 41.6 -0.5
ARG                                 S      Sn      05 40 57.4 -0.2
      765nm,0.5s
ARG   Arkhangelos        1.00 200   Pg     Pb      05 40 41.9 -0.6
ARG   Arkhangelos        1.00 200   P      Pn      05 40 43.1 -0.3
ARG                                 S      Sn      05 40 57.8 +0.2
ARG                                 AML    AML     05 41 01.8
      comp=E,962µm,0.4s
ARG                                 AML    AML     05 41 04.1
      comp=N,1515µm,0.6s
DDIM  Aydin, Didim       1.08 286   SPECP           05 40 43.0
DDIM                                P      Pb      05 40 43.6 -0.4
DDIM                                S      Sn      05 41 03.4 +3.6
ELL   Elmali             1.16 110   Pn     Pb      05 40 45.0 -0.4
AKAS  Kas                1.25 137   Pn     Pb      05 40 46.6 -0.3
AKAS  Kas                1.25 137   SPECP           05 40 47.0
AKAS                                P      Pn      05 40 47.3 +0.4
AKAS                                S      Sn      05 41 09.4 +5.3
NISR  Nisiros            1.26 245   P      Pn      05 40 47.8 +0.9
NISR                                S      Sn      05 41 05.8 +1.7
KSL   Kastellorizon      1.30 140   P      Pn      05 40 48.6 +1.1
KSL                                 S      Sn      05 41 06.4 +1.3
      comp=N,495nm,0.9s
KSL   Kastellorizon      1.30 140   P      Pn      05 40 48.7 +1.1
KSL                                 S      Sn      05 41 06.6 +1.5
KSL                                 AML    AML     05 41 14.2
      comp=N,986µm,0.6s
KSL                                 AML    AML     05 41 16.1
      comp=E,988µm,0.7s
BRDR  BURDUR-Merkez      1.32  65   SPECP           05 40 47.0
BRDR                                P      Pb      05 40 47.5 -0.6
BRDR                                S      Sn      05 41 09.1 +3.4
KOSK  Kos Island         1.32 253   P      Pg      05 40 47.4 -0.9
KOSK                                S      Sn      05 41 05.9 +0.3
      comp=E,695nm,0.6s
KOSK  Kos Island         1.32 253   Pn     Pn      05 40 47.6 -0.1
KOSK  Kos Island         1.32 253   P      Pb      05 40 48.8 +0.8
KOSK                                S      Sn      05 41 07.4 +1.8
KOSK                                AML    AML     05 41 14.1
      comp=E,3733µm,0.7s
KOSK                                AML    AML     05 41 14.4
      comp=N,4010µm,0.6s
MANT  Manisa             1.33   0   SPECP           05 40 47.0
MANT                                P      Pg      05 40 47.2 -1.3
MANT                                S      Sb      05 41 05.3 -0.4
KULA  Kula-Manisa        1.36   4   P      Pg      05 40 47.4 -1.6
KULA                                S      Sg      05 41 05.2 -1.4
KULA  Kula-Manisa        1.36   4   Pn     Pg      05 40 47.6 -1.4
PASA  Karahalli, USA     1.40  32   SPECP           05 40 47.0
PASA                                P      Pn      05 40 47.8 -1.2
PASA                                S      Sn      05 41 07.9 +0.1
BASM  Basmaki-Afyon      1.42  57   Pn     Pb      05 40 49.5 -0.2
KORT  Korkueli           1.45  96   Pn     Pb      05 40 50.2 -0.1
KORT  Korkueli           1.45  96   SPECP           05 40 50.0
KORT                                P      Pb      05 40 50.9 +0.6
KORT                                S      Sn      05 41 14.1 +5.2
DGB   zmir               1.60 305   P      Pn      05 40 51.0 -0.5
DGB                                 S      Sg      05 41 20.5 +6.3
USAK  Uak-Merkez         1.60  13   P      Pn      05 40 50.9 -0.7
USAK                                S      Sg      05 41 13.4 -0.9
BCK   Bucak              1.65  79   Pn     Pb      05 40 52.8 -1.0
KZIL  AFYON_Kizioren     1.67  48   P      Pn      05 40 52.2 -0.5
KZIL                                S      Sg      05 41 19.8 +3.1
ANTB  Antalya            1.70  98   Pn     Pb      05 40 53.7 -0.8
ISP   Isparta            1.70  66   Pn     Pb      05 40 53.8 -0.8
ISP   Isparta            1.70  66   P      Pb      05 40 53.6 -1.1
ISP                                 S      Sb      05 41 15.8 -0.5
ISP                                 AML    AML     05 41 28.2
      comp=E,1280µm,1.0s
ISP                                 AML    AML     05 41 29.9
      comp=N,1234µm,1.0s
BLCB  Balcova            1.71 316   Pn     Pn      05 40 52.9 -0.2
DEMI  Demirci            1.89   4   SPECP           05 40 55.0
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DEMI				P	Pn	05 40 55.4	-0.2
DEMI				S	Sb	05 41 21.4	-0.2
ZEYE	Izmir, Urla-Ze	1.95	304	SPECP		05 40 56.0	
ZEYE				P	Pn	05 40 56.7	+0.3
ZEYE				S	Sg	05 41 27.9	+2.3
SIMA	Simav-Kutahya	1.95	10	Pn	Pn	05 40 56.0	-0.6
KARP	Karpathos	1.96	215	P	Pn	05 40 56.5	-0.1
KARP				S	Sn	05 41 21.0	-0.4
	comp=N,492nm,0.7s						
KARP	Karpathos	1.96	215	Pn	Pn	05 40 56.7	+0.1
KARP	Karpathos	1.96	215	P	Pb	05 40 58.0	-0.9
URLA	Izmir	1.96	308	Pn	Pb	05 40 57.7	-1.2
URLA	Izmir	1.96	308	SPECP		05 40 57.0	
URLA				P	Pn	05 40 57.2	+0.6
URLA				S	Sg	05 41 31.4	+5.5
SUTC	Sutluce-Ispart	1.98	80	Pn	Pn	05 40 57.3	+0.4
GEDZ	Gediz	2.00	20	Pn	Pn	05 40 57.7	+0.5
GDZ	Gediz	2.06	21	P	Pn	05 40 57.7	-0.4
GDZ				S	Sg	05 41 33.0	+3.7
ZEDA	zmir-Bergama	2.15	328	P	Pn	05 40 58.8	-0.3
ZEDA				S	Sg	05 41 35.8	+3.8
KARB	zmir-Karabur	2.26	312	SPECP		05 41 00.0	
KARB				P	Pn	05 41 00.8	0.0
KARB				S	Sn	05 41 29.7	+0.9
STEP	BALIKESIR_Sava	2.31	344	SPECP		05 41 02.0	
STEP				P	Pn	05 41 02.2	+0.8
STEP				S	Sg	05 41 36.9	-0.3
CHOS	Chios island	2.33	303	P	Pn	05 41 00.7	-1.0
CHOS	Chios island	2.33	303	P	Pn	05 41 02.5	+0.8
DURS	Dursunbey	2.44	359	P	Pn	05 41 02.5	-0.8
BUHA	Balikesir, Bur	2.61	334	P	Pn	05 41 04.9	-0.6
THR3	Thira Island,	2.64	254	P	Pn	05 41 07.0	+1.2
THR6	Thira Island,	2.66	253	P	Pn	05 41 07.5	+1.4
THR9	Santorini-Faro	2.69	254	P	Pn	05 41 07.5	+1.0
ZKR	Zakros	2.78	224	P	Pn	05 41 10.0	+2.2
STIA	Sitia Lasithi	2.79	226	P	Pb	05 41 10.3	-2.7
SIGR	SIGRI	2.95	315	P	Pn	05 41 10.7	+0.5
IDI	Anoyia	3.50	239	Pn	Pn	05 41 19.6	+1.8
	comp=N,1.9nm,0.3s,baz=64,slow=16,SNR=20						
IDI				Sn	Sb	05 42 03.9	-4.0
	comp=N,5.2nm,0.3s,baz=296,slow=19,SNR=7.6						
	comp=N,7.5nm,0.5s						
IDI	Anoyia	3.50	239	P	Pn	05 41 19.9	+2.1
BRTR	Keskin Array B	4.75	56	Pn	Pn	05 41 36.0	+0.9
	comp=N,0.6nm,0.3s,baz=236,slow=15,SNR=26						
BRTR				Sn	Sn	05 42 30.7	+0.3
	comp=N,0.4nm,0.3s,baz=222,slow=25,SNR=7.0						
	comp=N,4.5nm,0.7s						
MMAI	Mount Meron Ar	6.97	124	Pn	Pn	05 42 02.5	-3.1
	comp=N,1.7nm,0.3s,baz=304,slow=10,SNR=4.5						
	comp=N,0.9nm,0.3s						
MLR	Muntele Rosu	8.55	348	Pn	Pn	05 42 28.4	+1.2
	comp=N,0.1nm,0.3s,baz=243,slow=20,SNR=3.4						
	comp=N,3.4nm,1.0s						
GERES	GERESS Array B	15.92	322	Pn	P	05 44 11.1	0.0
	comp=N,0.1nm,0.3s,baz=126,slow=13,SNR=2.2						
	comp=N,0.2nm,0.4s						
FINES	FINESS Array B	24.36	357	P	P	05 45 41.9	+0.7
	comp=N,2.2nm,0.7s,baz=171,slow=14,SNR=6.4						
	comp=N,2.2nm,0.7s						
TORD	Torodi Ar. Bea	33.88	232	P	P	05 47 05.3	-1.0
	comp=N,0.9nm,0.8s,baz=32,slow=7.5,SNR=4.7						
	comp=N,0.9nm,0.8s						
MKAR	Makanchi Array	40.39	59	P	P	05 48 00.4	-1.1
	comp=N,0.4nm,0.9s,baz=280,slow=8.5,SNR=2.7						
	comp=N,0.4nm,0.9s						

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*IDC **05** 05:53:08.4±1.2,33°.99N×72°.53E,h0^{km},mb3.4/5, mbtmp3.6/10,ML3.3/5,MS2.6/2,Error ellipse: s-maj=30.8km s-min=21.3km az=91.0*

*NNC **05** 05:53:20.4±1.9,34°.38N×72°.37E,h84^{km}±24^{km},mb3.5, mpv3.8,Error ellipse: s-maj=28.4km s-min=13.6km az=109.0*

ISC 05 05:53:13.2±0.8**,33°.98N**±0°.07×**72°.56E**±0°.08**,h35^{km},n26, σ2^{s}.00**/31**,mb3.4**/5**,4C-4D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	8.19	6	P	Pn	05 55 12.2	+2.4
	SNR=22						
AML	Almayashu	8.19	6	⇑P	Pn	05 55 11.9	+2.0
	1.4nm,0.7s						
AML				⇑S	Sn	05 56 38.8	-2.6
	4.7nm,0.8s						
UCH	Uchtor	8.38	10	P	Pn	05 55 15.1	+2.6
	SNR=10						
EKS2	Erkin-Say	8.73	6	P	Pn	05 55 19.6	+2.7
	SNR=9.0						
AAK	Ala-Archa	8.78	9	P	Pn	05 55 21.4	+3.6
	SNR=7.3						
AAK	Ala-Archa	8.78	9	Pn	Pn	05 55 21.3	+3.6
	1.6nm,0.3s,baz=174,slow=8.6,SNR=19						
AAK				Sn	Sn	05 56 57.5	+2.0
	0.3nm,0.3s,baz=342,slow=21,SNR=6.9						
AAK				LR	LR	05 58 20.4	
	comp=Z,16nm,20.2s,baz=176,slow=36						
	4.8nm,0.5s						
TKM2	Tokmak 2	9.24	14	P	Pn	05 55 26.0	+1.9
	SNR=7.7						
TKM2	Tokmak 2	9.24	14	⇑P	Pn	05 55 26.2	+2.0
	2.6nm,0.4s						
TKM2				⇓S	Sn	05 57 05.7	-1.2
	1.3nm,0.4s						
KK31	Karatay Array	9.25	351	⇓P	Pn	05 55 24.9	+0.8
	3.2nm,0.4s,baz=172,slow=12,SNR=92						
KK31				⇓S	Sn	05 57 04.2	-2.7
	1.3nm,0.5s,baz=163,slow=22,SNR=4.7						
PYUN	Piuthan	10.69	120	*e*P	Pn	05 55 45.2	+1.2
PYUN				*e*S	Sn	05 57 39.4	-3.1
	22nm,0.5s						
DANN	Dangsing	11.11	117	*e*P	Pn	05 55 51.4	+1.6
DANN				*e*S	Sn	05 57 50.5	-2.4
KOLN	Koldanda	11.32	120	*e*P	Pn	05 55 53.4	+0.8
GEYT	Alibeck	12.35	293	Pn	Pn	05 56 05.1	-1.3
	0.4nm,0.3s,baz=102,slow=21,SNR=1.5						
	0.9nm,0.3s						
PKIN	Phulchoki	12.74	117	*e*P	Pn	05 56 12.9	+0.8
PKI	Pulchoki	12.75	117	*e*P	Pn	05 56 13.3	+1.0
MKAR	Makanchi Array	14.78	27	Pn	Pn	05 56 38.2	-1.3
	0.1nm,0.3s,baz=208,slow=11,SNR=2.7						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	17.20	13	P	Pn	05 57 09.1	-1.4
	baz=206,slow=10,SNR=2.5						
	0.6nm,0.2s						
AB31	Akbulak array	17.91	332	⇑P	Pn	05 57 18.6	-0.6
	1.0nm,0.5s,baz=156,slow=12,SNR=5.5						
BVAR	Borovoye Array	19.11	356	P	P	05 57 32.2	-0.5
	0.1nm,0.3s,baz=162,slow=11,SNR=8.6						
	0.8nm,0.5s						
AKTO	Aktyubinsk	19.60	331	⇓P	P	05 57 37.0	-1.3
	2.0nm,0.8s						
ZALV	Zalesovo Beam	21.77	20	P	P	05 58 01.0	-0.6
	1.4nm,0.4s,baz=222,slow=11,SNR=8.6						
	1.4nm,0.4s						
BELG	Belogornoye	25.66	323	LR	LR	06 11 04.7	
	comp=Z,33nm,18.5s,baz=244,slow=42						
TORD	Torodi Ar. Bea	66.98	271	P	P	06 04 03.3	+0.6
	0.2nm,0.5s,baz=62,slow=6.8,SNR=1.4						
	0.2nm,0.5s						
WRA	Warramunga Arr	79.57	123	P	P	06 05 18.8	+2.1
	0.3nm,0.8s,baz=322,slow=4.3,SNR=5.1						
	0.3nm,0.8s						
ASAR	Alice Springs	81.76	126	P	P	06 05 28.3	-0.1
	0.3nm,0.7s,baz=317,slow=5.4,SNR=2.3						
	0.3nm,0.7s						
YKA	Yellowknife Ar	83.69	3	P	P	06 05 38.0	+0.1
	0.1nm,0.6s,baz=351,slow=5.0,SNR=2.6						
	0.1nm,0.6s						

MAN 05 06:13:05.9,15°.48N×119°.45E,h31^{km},mb3.8,ML2.5, MS2.0,Luzon

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*DDA **05** 06:26:20.5±0.0,37°.58N×38°.50E,h10^{km}±1^{km},ML3.2*

*ISK **05** 06:26:22.0,37°.53N×38°.55E,h21^{km},ML3.5/18*

ISC 05 06:26:20.9±0.9**,37°.55N**±0°.02×**38°.50E**±0°.02**,h10^{km}**±7^{km}**, n42,σ0^{s}.88**/70**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	Bozova	0.18	243	P	Pg	06 26 25.3	+0.5
ATAB				S	Sg	06 26 28.5	+1.0
ATAB				*i* AML	AML	06 26 31.0	
	comp=E,6μm,0.5s						
ATAB				*i* AML	AML	06 26 31.0	
	comp=N,8μm,0.6s						
URFA	Urfa	0.28	114	Pg	Pb	06 26 28.1	0.0
URFA				Sg	Sb	06 26 32.4	-0.5
HANM	anlurfa/Hi	0.30	85	P	Pg	06 26 26.9	-0.1
HANM				S	Sg	06 26 31.3	+0.3
HANM				*i* AML	AML	06 26 38.0	
	comp=N,4μm,0.9s						
HANM				*i* AML	AML	06 26 46.0	
	comp=E,2μm,0.4s						
AZEY	Adyaman-Merk	0.33	322	P	Pg	06 26 27.2	-0.3
AZEY				S	Sg	06 26 31.1	-0.7
AZEY				*i* AML	AML	06 26 33.0	
	comp=E,3μm,0.5s						
AZEY				*i* AML	AML	06 26 39.0	
	comp=N,2μm,0.5s						
NARI	Adyaman-Kaht	0.39	32	P	Pg	06 26 28.2	-0.4
NARI				S	Sg	06 26 33.4	-0.4
NARI				*i* AML	AML	06 26 36.0	
	comp=E,2μm,0.4s						
NARI				*i* AML	AML	06 26 44.0	
	comp=N,2μm,0.7s						
SANL	SANLIURFA_Merk	0.54	134	P	Pb	06 26 32.1	-0.5
SANL				S	Sb	06 26 39.7	-0.8
SANL				*i* AML	AML	06 26 47.0	
	comp=N,3μm,0.5s						
SANL				*i* AML	AML	06 26 49.0	
	comp=E,2μm,0.4s						
SURC	SANLIURFA_SURC	0.68	172	P	Pb	06 26 34.5	-0.4
SURC				S	Sb	06 26 44.5	+0.2
SURC				*i* AML	AML	06 26 50.0	
	comp=N,753nm,0.5s						
SURC				*i* AML	AML	06 26 52.0	
	comp=E,1μm,0.7s						
AKCA	Adyaman/G¶l	0.69	291	P	Pb	06 26 34.3	-0.9
AKCA				S	Sg	06 26 43.1	-0.2
AKCA				*i* AML	AML	06 26 50.0	
	comp=E,1μm,0.5s						
AKCA				*i* AML	AML	06 26 51.0	
	comp=N,2μm,0.4s						
GZT	Gaziantep	0.77	255	P	Pb	06 26 36.2	-0.3
GZT				S	Sn	06 26 49.1	-0.7
GZT				*i* AML	AML	06 26 50.0	
	comp=N,1μm,0.6s						
GZT				*i* AML	AML	06 26 53.0	
	comp=E,711nm,0.5s						
MAYA	Malatya/Merkez	0.77	356	P	Pg	06 26 35.1	-0.8
MAYA				S	Sg	06 26 44.9	-1.1
MAYA				*i* AML	AML	06 26 46.0	
	comp=E,370nm,0.3s						
NZIP	Nizip/Gaziante	0.83	233	P	Pn	06 26 37.7	-1.2
NZIP				S	Sb	06 26 49.2	+0.3
NZIP				*i* AML	AML	06 26 53.0	
	comp=N,950nm,0.6s						
NZIP				*i* AML	AML	06 26 58.0	
	comp=E,597nm,0.8s						
AKCD	Akcadag	0.87	328	P	Pg	06 26 37.1	-0.6
AKCD				S	Sg	06 26 47.9	-1.2
AKCD				*i* AML	AML	06 26 49.0	
	comp=N,1μm,0.4s						
AKCD				*i* AML	AML	06 26 53.0	
	comp=E,753nm,0.7s						
ELZG	Elazig	1.02	22	P	Pg	06 26 39.3	-1.2
ELZG				S	Sb	06 26 54.8	+0.5
ELZG				*i* AML	AML	06 26 58.0	
	comp=N,710nm,0.5s						
ELZG				*i* AML	AML	06 27 00.0	
	comp=E,1μm,0.6s						
GAZ	Gaziantep	1.10	250	Pn	Pn	06 26 43.2	+0.7
GAZ				Sn	Sn	06 26 58.2	+0.5
HCB	Kahramanmara	1.29	261	P	Pn	06 26 44.5	-0.5
HCB				S	Sb	06 27 01.8	-0.1
HCB				*i* AML	AML	06 27 06.0	
	comp=N,306nm,0.5s						
HCB				*i* AML	AML	06 27 08.0	
	comp=E,270nm,0.7s						
DARE	Darende-Malaty	1.30	322	Pn	Pg	06 26 46.0	+0.2
DARE				Sn	Sn	06 27 03.9	+1.2
ELBS	KAHRAMANMARAS	1.33	306	P	Pg	06 26 46.5	+0.1
ELBS				S	Sb	06 27 03.1	-0.1
ELBS				*i* AML	AML	06 27 08.0	
	comp=N,751nm,0.5s						
ELBS				*i* AML	AML	06 27 11.0	
	comp=E,437nm,0.5s						
DYBB	Diyarbakir	1.36	72	Pn	Pb	06 26 46.2	-0.3
KUZU	Kuzuini	1.38	236	P	Pg	06 26 47.8	+0.4
KUZU				S	Sn	06 27 06.4	+1.7
KUZU				*i* AML	AML	06 27 11.0	
	comp=N,2μm,0.5s						
KUZU				*i* AML	AML	06 27 13.0	
	comp=E,1μm,0.6s						
HEKM	Malatya_Hekimh	1.39	342	P	Pn	06 26 46.1	-0.6
HEKM				S	Sb	06 27 05.6	+0.5
HEKM				*i* AML	AML	06 27 10.0	
	comp=N,590nm,0.5s						
HEKM				*i* AML	AML	06 27 10.0	
	comp=E,720nm,0.6s						
KAMA	Osmaniye	1.51	256	P	Pg	06 26 48.8	-1.0
KAMA				S	Sn	06 27 06.2	-1.7
CUGUR	Gurin_SVAS	1.52	321	P	Pg	06 26 49.5	-0.6
CUGUR				S	Sg	06 27 11.0	+1.2
CUGUR				*i* AML	AML	06 27 13.0	
	comp=N,716nm,0.6s						
CUGUR				*i* AML	AML	06 27 15.0	
	comp=E,907nm,0.5s						
ARPR	Arapgir-MALATY	1.54	355	Pn	Pb	06 26 49.4	-0.3
KOVA	Elazig, Kovanc	1.55	42	P	Pb	06 26 49.2	-0.5
KOVA				S	Sg	06 27 10.5	-0.2
KOVA				*i* AML	AML	06 27 15.0	
	comp=E,302nm,0.6s						
KOVA				*i* AML	AML	06 27 15.0	
	comp=N,284nm,0.7s						
KEMA	Kemaliye	1.71	360	P	Pn	06 26 50.4	-0.5
KEMA				S	Sb	06 27 15.4	+1.2
KEMA				*i* AML	AML	06 27 20.0	
	comp=E,164nm,0.7s						
KEMA				*i* AML	AML	06 27 21.0	
	comp=N,197nm,0.7s						
ANDN	Andirin	1.71	272	P	Pn	06 26 51.0	0.0
ANDN				S	Sg	06 27 14.8	-1.2
ANDN				*i* AML	AML	06 27 21.0	
	comp=N,391nm,0.4s						
ANDN				*i* AML	AML	06 27 24.0	
	comp=E,252nm,0.4s						
HANI	Diyarbakir_Han	1.73	60	P	Pn	06 26 50.9	-0.3
HANI				S	Sn	06 27 13.1	-0.3
HANI				*i* AML	AML	06 27 20.0	
	comp=N,359nm,1.0s						
HANI				*i* AML	AML	06 27 28.0	
	comp=E,351nm,0.6s						
TNCL	Tunceli-Merkez	1.76	27	P	Pn	06 26 52.3	+0.7
TNCL				S	Sg	06 27 17.3	-0.3
TNCL				*i* AML	AML	06 27 22.0	
	comp=E,258nm,0.6s						
TNCL				*i* AML	AML	06 27 25.0	
	comp=N,183nm,0.7s						
SARI	SarD1z-Kayseri	1.85	298	Pn	Pb	06 26 54.5	-0.5
CUKAN	kangal_SIVAS	1.94	336	P	Pb	06 26 55.6	-0.8
CUKAN				S	Sb	06 27 22.0	+1.2
CUKAN				*i* AML	AML	06 27 33.0	
	comp=E,63nm,0.6s						
KOZT	Kozan	2.13	269	Pn	Pb	06 26 57.9	-1.7
CUAYA	Sivas-Altinyay	2.20	322	P	Pn	06 26 59.0	+1.3
CUAYA				S	Sg	06 27 31.8	+0.3
CUAYA				*i* AML	AML	06 27 40.0	
	comp=N,130nm,0.8s						
CUAYA				*i* AML	AML	06 27 42.0	
	comp=E,117nm,0.8s						
SVAN	Silvan-Diyarba	2.22	74	Pn	Pn	06 26 58.2	+0.4
BNGB	Bingl	2.24	49	Pn	Pn	06 26 58.9	+0.7
ERZN	Erzincan	2.24	25	Pn	Pn	06 26 59.3	+1.0
BNN	Bunyan	2.46	303	Pn	Pn	06 27 02.8	+1.5
SVSK	Karacayir	2.64	334	Pn	Pn	06 27 05.3	+1.8
KARA	Karaisali	2.76	265	Pn	Pn	06 27 07.0	+1.7
GURO	Guroymak-BITLI	2.96	69	Pn	Pn	06 27 09.2	+1.1
BAYT	Aydıntepe-Bayb	3.11	24	Pn	Pn	06 27 11.4	+1.1
YOZ	Yozgat	3.25	311	Pn	Pn	06 27 13.8	+1.7
AKDM	Akdamar-Van	3.62	76	Pn	Pn	06 27 18.3	+1.0

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*ATH **05** 07:09:58.2,35°.64N×22°.00E,h7^{km}±2^{km},ML3.0/5,Error ellipse: s-maj=3.1km s-min=1.1km az=94.0*

*IDC **05** 07:09:59.8±3.1,36°.43N×22°.62E,h0^{km},mb3.9/6, mbtmp3.9/6,ML2.5/1,Error ellipse: s-maj=73.4km s-min=20.6km az=41.0*

*THE **05** 07:09:59.3,35°.77N×22°.06E,h2^{km}±1^{km},ML3.0/10,Error ellipse: s-maj=1.6km s-min=0.7km az=39.0*

ISC 05 07:09:57.4±1.7**,35°.63N**±0°.05×**21°.98E**±0°.05**,h14^{km}**±10^{km}**, n38,σ1^{s}.14**/53**,mb3.8**/6**,Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTHA	Kythira Island	1.08	54	P	Pg	07 10 17.2	-1.0
KTHA				S	Sg	07 10 30.7	-1.6
	838nm,0.6s						
KTHA	Kythira Island	1.08	54	P	Pg	07 10 17.9	-0.4
KTHA				S	Sg	07 10 32.5	+0.1
KTHA				AML	AML	07 10 35.6	
	comp=E,2140μm,0.4s						
KTHA				AML	AML	07 10 37.1	
	comp=N,1209μm,0.7s						
ANKY	Antikythira Is	1.10	77	P	Pg	07 10 18.7	0.0
ANKY				S	Sg	07 10 33.1	0.0
	comp=N,990nm,0.9s						
ANKY	Antikythira Is	1.10	77	P	Pg	07 10 19.0	+0.3
ANKY				S	Sg	07 10 33.3	+0.2
ANKY				AML	AML	07 10 39.5	
	comp=N,1575μm,0.8s						
ANKY				AML	AML	07 10 39.6	
	comp=E,2381μm,1.0s						
PYL	PYLOS	1.27	352	P	Pn	07 10 20.6	-0.2
PYL				S	Sb	07 10 37.2	-0.2
	comp=E,435nm,0.5s						
PYL	PYLOS	1.27	352	P	Pn	07 10 21.1	+0.4
PYL				S	Sb	07 10 38.9	+1.5
PYL				AML	AML	07 10 45.5	
	comp=N,674μm,0.7s						
PYL				AML	AML	07 10 46.5	
	comp=E,1064μm,0.5s						
VLI	Veliai	1.33	35	P	Pn	07 10 21.7	+0.1
VLI				S	Sb	07 10 38.8	-0.3
	comp=E,870nm,0.8s						
VLI	Veliai	1.33	35	P	Pn	07 10 22.3	+0.7
VLI				S	Sb	07 10 39.5	+0.4
VLI				AML	AML	07 10 48.4	
	comp=E,2137μm,0.8s						
VLI				AML	AML	07 10 48.5	
	comp=N,1342μm,0.7s						
MNVA	Monemvasia	1.36	39	P	Pn	07 10 22.9	+1.0
KNDR	Palaiochora Ch	1.45	105	P	Pn	07 10 22.5	-0.7
RODP	Rodopos	1.45	92	P	Pb	07 10 25.0	+0.8
RODP				S	Sg	07 10 44.8	+0.5
	comp=N,115nm,0.6s						
ITM	Ithomi	1.54	359	P	Pn	07 10 25.2	+0.7
ITM				S	Sn	07 10 44.4	+0.1
	comp=N,345nm,0.6s						
ITM	Ithomi	1.54	359	P	Pn	07 10 25.6	+1.1
ITM				S	Sn	07 10 45.0	+0.7
ITM				AML	AML	07 10 49.5	
	comp=E,755μm,0.4s						
ITM				AML	AML	07 10 52.9	
	comp=N,522μm,0.6s						
IMMV	Iera Moni Meta	1.64	95	P	Pn	07 10 27.1	+1.3
IMMV				S	Sb	07 10 49.8	+1.8
	comp=N,500nm,0.8s						
IMMV	Iera Moni Meta	1.64	95	P	Pn	07 10 27.1	+1.3
GVD	Gavdhos	1.90	114	P	Pg	07 10 33.8	-0.1
KRND	KRANIDI	1.98	28	P	Pn	07 10 30.6	+0.1
KRND				S	Sn	07 10 56.5	+1.3
	comp=N,315nm,1.2s						
KRND	KRANIDI	1.98	28	P	Pn	07 10 31.1	+0.6
MHLO	Agia Marina, M	2.23	61	P	Pn	07 10 34.1	+0.2
MHLO				S	Sn	07 11 02.3	+1.1
	comp=N,740nm,0.8s						
DRO	Drossia	2.32	355	P	Pn	07 10 36.6	+1.4
DRO				S	Sn	07 11 05.6	+2.0
	comp=N,308nm,0.8s						
DRO	Drossia	2.32	355	P	Pn	07 10 37.2	+2.0
IDI	Anoyia	2.40	97	Pn	Pn	07 10 37.5	+1.1
	comp=N,1.5nm,0.3s,baz=291,slow=10,SNR=2.2						
IDI				Sn	Sn	07 11 05.9	+0.3
	comp=N,3.0nm,0.3s,baz=310,slow=22,SNR=4.1						
IDI	Anoyia	2.40	97	P	Pn	07 10 37.2	+0.9
KLV	Kalavryta, Ach	2.41	3	P	Pn	07 10 38.2	+1.8
KLV	Kalavryta, Ach	2.41	3	P	Pn	07 10 37.2	+0.8
RLS	Riolos of Patr	2.45	351	P	Pn	07 10 38.1	+1.2
LAKA	Lakka	2.60	0	P	Pn	07 10 40.5	+1.5
VLY	Voula,Athens	2.65	33	P	Pn	07 10 40.8	+1.1
VLS	Valsamata	2.77	337	P	Pn	07 10 42.3	+0.9
VLS	Valsamata	2.77	337	P	Pn	07 10 42.3	+0.9
KEF3	Kipouria, Keph	2.88	334	P	Pn	07 10 43.9	+1.1
FSK	Fiskardo	3.04	339	P	Pn	07 10 46.2	+1.2
HFS	Hagfors	25.10	350	P	P	07 15 19.6	-1.7
	comp=N,5.9nm,1.0s,baz=154,slow=11,SNR=12						
	comp=N,5.9nm,1.0s						
FINES	FINESS Array B	25.96	5	P	P	07 15 26.6	-2.6
	comp=N,1.4nm,0.7s,baz=188,slow=8.4,SNR=4.0						
	comp=N,1.4nm,0.7s						
EKA	Eskdalemuir Ar	26.18	327	P	P	07 15 32.0	+0.8
	comp=N,0.6nm,0.5s,baz=126,slow=8.5,SNR=4.7						
	comp=N,0.6nm,0.5s						
NOA	NORSAR Array B	26.34	348	P	P	07 15 32.6	-0.1
	comp=N,1.1nm,0.9s,baz=156,slow=11,SNR=1.6						
	comp=N,1.1nm,0.9s						
ARCES	ARCESS Array B	34.01	2	P	P	07 16 37.2	-3.2
	comp=N,2.3nm,0.8s,baz=184,slow=9.2,SNR=9.2						
	comp=N,2.3nm,0.8s						
MKAR	Makanchi Array	45.68	57	P	P	07 18 15.1	-2.6
	comp=N,0.7nm,0.5s,baz=268,slow=8.0,SNR=15						
	comp=N,0.7nm,0.5s						

IDC 05 07:11:06.6±7.5**,18°.74S**×**178°.81W,h0^{km},mb3.6**/3**, mbtmp3.6**/3**,Error ellipse: s-maj=322.5km s-min=41.7km az=144.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.11	260	P	P	07 19 17.0	-0.1
	0.3nm,0.3s,baz=96,slow=7.5,SNR=9.6						
	0.3nm,0.3s						
ASAR	Alice Springs	44.20	255	P	P	07 19 17.6	-0.2
	0.3nm,0.4s,baz=88,slow=9.0,SNR=5.6						
	0.3nm,0.4s						
ILAR	Eielson Array	86.78	13	P	P	07 23 52.2	0.0
	0.7nm,1.1s,baz=196,slow=5.6,SNR=2.7						
	0.7nm,1.1s						

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*NEIC **05** 07:16:13.0±1.6,8°.1S±0°.1×156°.38E±0°.03,h10^{km}±1^{km}, mb4.7/20,Error ellipse: s-maj=22.8km s-min=3.5km az=11.0*

*IDC **05** 07:16:22.4±1.5,8°.42S×156°.09E,h49^{km}±16^{km},mb3.8/13, mbtmp4.1/16,ML3.3/3,MS3.9/23,Error ellipse: s-maj=17.4km s-min=11.3km az=33.0*

ISC 05 07:16:15.7±0.5**,8°.45S**±0°.07×**156°.28E**±0°.06**,h10^{km},n63, σ1^{s}.80**/45**,mb4.4**/19**,MS4.0**/22**,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.75	105	P	Pb	07 17 21.7	-0.3
	837nm,0.5s,baz=273,slow=7.6,SNR=1.7						
HNR				S	Sb	07 18 06.0	-1.6
	1μm,0.6s,baz=227,slow=23,SNR=1.4						
KRVT	Keravat (AS076	5.90	314	P	Pn	07 17 46.3	+3.0
	2.1nm,0.3s,baz=0.3,slow=23,SNR=1.5						
KRVT				S	Sn	07 18 50.0	-1.1
	69nm,0.6s,baz=39,slow=11,SNR=4.8						
KRVT				LR	LR	07 20 18.6	
	comp=Z,1μm,18.8s,baz=277,slow=41						
	27nm,0.7s						
PMG	Port Moresby	9.06	263	LR	LR	07 21 58.5	
	comp=Z,2μm,18.2s,baz=80,slow=38						
COEN	Coen	13.97	246	Pn	Pn	07 19 33.1	-0.8
KOUNC	Koumac, New Ca	14.30	148	Pn	Pn	07 19 38.5	+0.1
CTA	Charters Tower	15.10	219	P	Pn	07 19 49.5	+0.2
	0.1nm,0.3s,baz=58,slow=18,SNR=2.9						
CTA				LR	LR	07 25 22.7	
	comp=Z,1μm,18.3s,baz=51,slow=36						
	2.3nm,0.9s						
CTAO	Charters Tower	15.10	219	Pn	Pn	07 19 49.9	+0.6
CTAO				IAmb	IAmb	07 20 15.9	
	comp=Z,36nm,1.4s						
LIFNC	LIFOU	16.19	140		Pn	07 20 04.8	+1.3
LIFNC				IAmb	IAmb	07 20 17.7	
	comp=Z,108nm,1.1s						
DZM	Mont Dzumac	16.70	145	*e*Pn	P	07 20 15.8	+3.4
	comp=Z,87nm,1.8s						

DZM				*e*LR	LR	07 24 30.3	
	comp=Z,553nm,26.1s						
DZM	**Mont Dzumac**	**16.70**	**145**	P	**P**	**07 20 14.8**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=4.9,slow=9.1,SNR=4.7						
DZM				LR	LR	07 26 06.8	
	comp=Z,363nm,18.0s,baz=229,slow=35						
	comp=Z,8.0nm,1.1s						
DZM	**Mont Dzumac**	**16.70**	**145**		**Pn**	**07 20 08.2**	**-1.9**
ONTNC	**Ouen Toro**	**16.90**	**146**		**Pn**	**07 20 12.0**	**-0.4**
ONTNC				IAmb	IAmb	07 20 31.7	
	comp=Z,72nm,1.4s						
EIDS	**Eidsvold**	**17.54**	**196**	P	**P**	**07 20 21.1**	**-0.5**
ARMA	**Armidale**	**22.29**	**191**	P	**P**	**07 21 12.4**	**-1.0**
MSVF	**Nonsavu**	**23.10**	**116**	P	**P**	**07 21 25.5**	**+3.4**
	comp=Z,16nm,1.0s,baz=208,slow=12,SNR=4.3						
	comp=Z,16nm,1.0s						
MSVF	**Nonsavu**	**23.10**	**116**	P	**P**	**07 21 19.5**	**-2.6**
LHI	**Lord Howe Isla**	**23.10**	**174**	P	**P**	**07 21 22.7**	**+0.9**
WR0	**Warramunga Arr**	**23.95**	**239**	P	**P**	**07 21 30.3**	**-0.1**
WR0				IAmb	IAmb	07 21 42.1	
	comp=Z,25nm,1.0s						
WB0	**Warramunga Arr**	**23.99**	**240**	P	**P**	**07 21 29.5**	**-1.3**
WB0				IAmb	IAmb	07 21 43.2	
	comp=Z,45nm,1.4s						
WRAB	**Tennant Creek**	**24.10**	**239**	P	**P**	**07 21 31.3**	**-0.5**
WRAB				IAmb	IAmb	07 21 52.1	
	comp=Z,32nm,1.1s						
WB2	**Warramunga Arr**	**24.10**	**239**	P	**P**	**07 21 30.9**	**-1.0**
WB2				IAmb	IAmb	07 21 52.2	
	comp=Z,43nm,1.4s						
WRA	**Warramunga Arr**	**24.11**	**239**	P	**P**	**07 21 32.6**	**+0.7**
	comp=Z,7.4nm,0.9s,baz=64,slow=9.2,SNR=20						
WRA				LR	LR	07 30 25.7	
	comp=Z,874nm,21.1s,baz=62,slow=35						
	comp=Z,7.4nm,0.9s						
WRA	**Warramunga Arr**	**24.11**	**239**	P	**P**	**07 21 30.9**	**-1.0**
GUMO	**Guam**	**24.66**	**333**	LR	LR	07 30 13.4	
	comp=Z,78nm,19.2s,baz=146,slow=34						
ASAR	**Alice Springs**	**26.23**	**232**	P	**P**	**07 21 50.6**	**-0.5**
	comp=Z,0.7nm,0.9s,baz=63,slow=8.7,SNR=6.0						
ASAR				LR	LR	07 31 31.6	
	comp=Z,503nm,21.4s,baz=60,slow=35						
	comp=Z,0.7nm,0.9s						
ASAR	**Alice Springs**	**26.23**	**232**	P	**P**	**07 21 50.5**	**-0.6**
STKA	**Stephens Creek**	**27.02**	**208**	P	**P**	**07 22 00.3**	**+2.2**
	comp=Z,1.3nm,0.5s,baz=32,slow=12,SNR=3.6						
	comp=Z,1.3nm,0.5s						
STKA	**Stephens Creek**	**27.02**	**208**	P	**P**	**07 21 57.1**	**-1.0**
CAN	**Canberra**	**27.57**	**193**	P	**P**	**07 22 02.5**	**-0.5**
AFI	**Afiamalu**	**31.78**	**103**	LR	LR	07 34 00.3	
	comp=Z,87nm,18.1s,baz=282,slow=33						
URZ	**Urewera**	**35.12**	**151**	LR	LR	07 36 35.8	
	comp=Z,280nm,18.1s,baz=38,slow=34						
KAPI	**Kappang**	**36.43**	**273**	LR	LR	07 41 15.1	
	comp=Z,60nm,18.1s,baz=108,slow=41						
RPZ	**Rata Peaks**	**37.42**	**162**	LR	LR	07 37 54.7	
	comp=Z,237nm,18.0s,baz=344,slow=34						
JCJ	**Chichijima**	**37.89**	**339**	LR	LR	07 38 01.5	
	comp=Z,86nm,21.3s,baz=98,slow=34						
RAR	**Rarotonga**	**44.18**	**112**	LR	LR	07 38 52.4	
	comp=Z,105nm,21.6s,baz=276,slow=30						
MJAR	**Matsushiro Arr**	**47.87**	**340**	P	**P**	**07 24 53.0**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=148,slow=7.2,SNR=2.6						
	comp=Z,1.0nm,0.8s						
KSRS	**Korea Array**	**52.81**	**332**	P	**P**	**07 25 32.5**	**+1.1**
	comp=Z,1.9nm,0.9s,baz=152,slow=9.6,SNR=8.0						
	comp=Z,1.9nm,0.9s						
PPT2	**Papeete2**	**53.37**	**106**	*e*LR	LR	07 41 16.3	
	comp=Z,110nm,30.8s						
PPT2				*e*LR	LR	07 41 22.0	
	comp=Z,204nm,38.5s						
ASAJ	**Asahikawa**	**53.77**	**348**	LR	LR	07 47 53.9	
	comp=Z,102nm,19.2s,baz=128,slow=35						
TBI	**Tubuai**	**53.94**	**113**	*e*LR	LR	07 41 40.3	
	comp=Z,2μm,24.2s						
TBI				*e*LR	LR	07 41 40.4	
	comp=Z,618nm,31.2s						
USRK	**Ussuriysk Ar.**	**56.83**	**339**	P	**P**	**07 26 01.7**	**+1.3**
	comp=Z,3.4nm,0.9s,baz=191,slow=6.9,SNR=2.6						
	comp=Z,3.4nm,0.9s						
KLR	**Kul'dur**	**61.33**	**342**	LR	LR	07 51 01.5	
	comp=Z,30nm,21.4s,baz=347,slow=34						
CMAR	**Chiang Mai Arr**	**62.56**	**296**	P	**P**	**07 26 40.6**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=74,slow=6.7,SNR=2.1						
CMAR				LR	LR	07 53 10.6	
	comp=Z,28nm,20.2s,baz=150,slow=35						
	comp=Z,0.9nm,0.3s						
TAOE	**Nuku Hiva Isla**	**62.77**	**96**	*e*LR	LR	07 45 38.3	
	comp=Z,103nm,23.3s						
ULN	**Ulaanbaatar**	**70.91**	**327**	P	**P**	**07 27 29.1**	**-4.2**
SHL	**Shillong**	**71.13**	**301**	P	P	07 27 29.9	-5.3
SONM	**Songino Array**	**71.24**	**327**	P	**P**	**07 27 35.8**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=125,slow=7.4,SNR=4.7						
	comp=Z,1.4nm,0.8s						
SONM	**Songino Array**	**71.24**	**327**	P	**P**	**07 27 31.5**	**-3.9**
SONM				IAmb	IAmb	07 27 50.7	
	comp=Z,5.2nm,1.1s						
KDAK	**Kodiak Island**	**77.92**	**25**	LR	LR	08 02 00.6	
	comp=Z,80nm,18.1s,baz=188,slow=35						
QSPA	**South Pole Qui**	**81.53**	**180**	P	**P**	**07 28 31.2**	**-2.2**
QSPA				IAmb	IAmb	07 28 42.9	
	comp=Z,6.7nm,1.1s						
ILAR	**Eielson Array**	**84.26**	**21**	P	**P**	**07 28 48.9**	**+1.6**
	comp=Z,1.4nm,1.2s,baz=233,slow=4.6,SNR=2.6						
ILAR				LR	LR	08 03 44.1	
	comp=Z,91nm,19.5s,baz=250,slow=34						
	comp=Z,1.4nm,1.2s						
MK31	**Makanchi Array**	**85.33**	**318**	P	P	07 28 48.1	-5.1
MK31				IAmb	IAmb	07 28 59.9	
	comp=Z,2.6nm,0.8s						
MKAR	**Makanchi Array**	**85.33**	**318**	P	**P**	**07 28 53.2**	**0.0**
	comp=Z,2.7nm,0.9s,baz=103,slow=5.2,SNR=8.5						
	comp=Z,2.7nm,0.9s						
MKAR	**Makanchi Array**	**85.33**	**318**	P	**P**	**07 28 49.1**	**-4.1**
ZALV	**Zalesovo Beam**	**86.09**	**326**	P	**P**	**07 28 58.6**	**+1.9**
	comp=Z,0.5nm,0.6s,baz=110,slow=2.1,SNR=1.5						
	comp=Z,0.5nm,0.6s						
DLBC	**Dease Lake**	**88.74**	**30**	LR	LR	08 02 22.6	
	comp=Z,170nm,20.6s,baz=266,slow=31						
INK	**Inuvik**	**90.62**	**20**	LR	LR	08 03 32.2	
	comp=Z,55nm,21.7s,baz=294,slow=31						
PFO	**Pinyon Flats O**	**92.34**	**57**	LR	LR	08 03 55.8	
	comp=Z,132nm,20.1s,baz=249,slow=31						
LPIG	**La Paz**	**96.49**	**67**	LR	LR	08 07 36.9	
	comp=Z,71nm,18.9s,baz=340,slow=32						
YKA	**Yellowknife Ar**	**97.02**	**28**	P	**P**	**07 29 46.9**	**-0.6**
	comp=Z,0.4nm,0.9s,baz=260,slow=4.7,SNR=2.6						
YKA				LR	LR	08 13 06.9	
	comp=Z,82nm,18.1s,baz=350,slow=35						
	comp=Z,0.4nm,0.9s						
CLL	**Collm**	**127.69**	**332**	*e*PKPdf	**PKPdf**	**07 35 20.0**	**-1.4**
	comp=Z,6.0nm,1.0s						
ESDC	**Sonseca Array**	**144.24**	**333**	PKP	**PKPdf**	**07 35 53.4**	**+0.9**
	comp=Z,1.1nm,0.9s,baz=24,slow=3.2,SNR=4.4						
BDFB	**Brasilia**	**146.06**	**135**	PKPbc	**PKPab**	**07 35 58.6**	**+1.0**
	comp=Z,3.2nm,0.8s,baz=207,slow=4.5,SNR=2.6						

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*IDC **05** 07:19:09.4±0.6, 1°.45S×15°.70W, h0^{km}, mb4.1/20, mbtmp4.1/21, ML4.3/1, MS4.0/52, Error ellipse: s-maj=20.7km s-min=13.1km az=143.0*

*NEIC **05** 07:19:11.2±0.8, 1°.5S±0°.1×15°.5W±0°.1, h10^{km}±1^{km}, mb4.7/25, Error ellipse: s-maj=18.8km s-min=15.9km az=308.0*

*GCMT **05** 07:19:15.2±0.3, 1°.30S±0°.01×15°.64W±0°.01, h12^{km}, MW4.9/108, Moment Tensor Solution. s29,c32; s108,c148; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.32±.08; M$_{\theta\theta}$1.28±.07; M$_{\phi\phi}$-0.96±.08; M$_{r\theta}$-0.45±.22; M$_{\theta\phi}$-2.01±.06; M$_{\phi r}$1.52±.21; Best double couple: M$_0$2.80300×10^{16} NP1:ϕ_s163.00000°,δ86.00000°, λ-35.00000°. NP2:ϕ_s256.00000°,δ55.00000°, λ-175.00000°. Principal axes: T 2.9050, Plg21.0000°, Azm215.0000°; N -0.2080, Plg55.0000°, Azm338.0000°; P -2.7000, Plg27.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 07:19:11.0±0.4, **1°.51S**±0°.08×**15°.55W**±0°.07, **h12^{km}**, **n91**, σ**1^s.07**/55, **mb4.3**/29, **MS4.0**/50, **3C**, **North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**6.36**	**170**	Pn	**Pn**	**07 20 45.5**	**+1.1**
	baz=346,slow=13						
H10N2				T	T	07 27 26.0	
	baz=349,slow=74,SNR=183						
H10N3	**ASCENSION HYDR**	**6.37**	**171**	Pn	**Pn**	**07 20 45.4**	**+0.9**
	baz=346,slow=13						
H10N3				T	T	07 27 29.2	
	baz=349,slow=74,SNR=159						
H10N1	**ASCENSION HYDR**	**6.38**	**170**	Pn	**Pn**	**07 20 45.3**	**+0.6**
	baz=346,slow=13						
H10N1				T	T	07 27 27.5	
	baz=349,slow=74,SNR=166						
ASCN	**Ascension**	**6.49**	**169**	Pn	**Pn**	**07 20 47.4**	**+1.0**
H10S3	**ASCENSION HYDR**	**7.45**	**173**	T	T	07 28 51.0	
	baz=228,slow=74						
H10S2	**ASCENSION HYDR**	**7.45**	**173**	T	T	07 28 46.0	
	baz=352,slow=74						
LIC	**Lamto**	**13.02**	**54**	⇑*e*P	**Pn**	**07 22 17.6**	**+1.6**
	27nm,0.8s						
TIC	**Toumodi**	**13.27**	**52**	⇑*e*P	**Pn**	**07 22 19.8**	**+0.3**
	13nm,0.7s						
KIC	**Kosan Boka**	**13.33**	**54**	⇑*e*P	**Pn**	**07 22 19.7**	**-0.5**
	5.3nm,0.4s						
DBIC	**Dimbokro**	**13.42**	**53**	Pn	**Pn**	**07 22 20.1**	**-1.3**
	1.6nm,0.3s,baz=254,slow=13,SNR=23						
DBIC				Sn	**Sn**	**07 24 51.4**	**+0.7**
	0.3nm,0.3s,baz=166,slow=19,SNR=1.1						
DBIC				LR	LR	07 26 32.9	
	comp=Z,838nm,20.3s,baz=232,slow=33						
	6.7nm,0.4s						
DBIC	**Dimbokro**	**13.42**	**53**		**Pn**	**07 22 20.4**	**-1.1**
BBTS	**Babate**	**16.10**	**357**	LR	LR	07 28 35.8	
	comp=Z,1μm,19.4s,baz=205,slow=35						
TORD	**Torodi Ar. Bea**	**22.47**	**49**	P	**P**	**07 24 10.2**	**-0.2**
	4.6nm,0.5s,baz=233,slow=10,SNR=17						
TORD				LR	LR	07 31 56.8	
	comp=Z,750nm,19.7s,baz=228,slow=34						
	4.6nm,0.5s						
BDFB	**Brasilia**	**34.95**	**245**	P	**P**	**07 26 00.8**	**-2.6**
	6.9nm,1.0s,baz=68,slow=5.4,SNR=7.3						
	6.9nm,1.0s						
BDFB	**Brasilia**	**34.95**	**245**	P	**P**	**07 26 03.7**	**+0.3**
BDFB				IAmb	IAmb	07 26 04.3	
	comp=Z,11nm,1.1s						
MDT	**Midelt**	**35.67**	**16**	LR	LR	07 40 13.6	
	comp=Z,354nm,20.6s,baz=198,slow=36						
MDP	**Montagnes des**	**37.63**	**280**	LR	LR	07 38 07.5	
	comp=Z,231nm,21.8s,baz=96,slow=30						
SPB	**Sao Paulo**	**37.89**	**232**	P	**P**	**07 26 28.8**	**+0.5**
SPB				IAmb	IAmb	07 26 36.5	
	comp=Z,22nm,1.3s						
ESDC	**Sonseca Array**	**42.34**	**13**	P	**P**	**07 27 04.1**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=191,slow=7.9,SNR=5.0						
ESDC				LR	LR	07 45 03.7	
	comp=Z,362nm,19.9s,baz=201,slow=37						
	comp=Z,0.6nm,0.7s						
MTE	**Manteigas**	**42.35**	**9**	P	**P**	**07 27 03.7**	**-1.4**
MTE				IAmb	IAmb	07 27 20.6	
	comp=Z,21nm,1.1s						
AQDB	**Aquidauana**	**43.49**	**241**	P	**P**	**07 27 14.7**	**+0.1**
KEST	**Kesra**	**43.74**	**30**	P	**P**	**07 27 15.8**	**-0.6**
	comp=Z,1.8nm,0.6s,baz=191,slow=16,SNR=1.9						
KEST				LR	LR	07 46 29.0	
	comp=Z,372nm,19.6s,baz=180,slow=38						
	comp=Z,1.8nm,0.6s						
BOAV	**Boa Vista**	**45.13**	**275**	P	**P**	**07 27 28.1**	**+0.3**
BOAV				IAmb	IAmb	07 27 54.0	
	comp=Z,16nm,1.3s						
PTLB	**Pontes e Lacer**	**45.15**	**250**	P	**P**	**07 27 27.8**	**-0.2**
LSZ	**Lusaka**	**45.26**	**110**	P	**P**	**07 27 31.0**	**+2.0**
	comp=Z,1.0nm,0.3s,baz=286,slow=5.3,SNR=4.8						
LSZ				LR	LR	07 43 19.3	
	comp=Z,238nm,19.9s,baz=258,slow=32						
	comp=Z,1.0nm,0.3s						
LSZ	**Lusaka**	**45.26**	**110**	P	**P**	**07 27 27.5**	**-1.5**
VILB	**Vilhena**	**45.64**	**253**	P	**P**	**07 27 31.6**	**-0.3**
VILB				IAmb	IAmb	07 27 42.4	
	comp=Z,14nm,1.1s						
SUR	**Sutherland**	**45.97**	**136**	LR	LR	07 43 26.8	
	comp=Z,260nm,20.1s,baz=296,slow=32						
SUR	**Sutherland**	**45.97**	**136**	P	**P**	**07 27 32.4**	**-2.0**
LBTB	**Lobatse**	**46.05**	**124**	P	**P**	**07 27 36.6**	**+1.4**
	comp=Z,3.5nm,0.7s,baz=269,slow=9.7,SNR=3.8						
LBTB				LR	LR	07 45 24.8	
	comp=Z,166nm,18.1s,baz=357,slow=34						
	comp=Z,3.5nm,0.7s						
LBTB	**Lobatse**	**46.05**	**124**	P	**P**	**07 27 33.8**	**-1.4**
LBTB				IAmb	IAmb	07 27 37.6	
	comp=Z,6.3nm,0.9s						
MBAR	**Mbarara**	**46.29**	**89**	LR	LR	07 45 32.6	
	comp=Z,211nm,18.4s,baz=231,slow=34						
MBAR	**Mbarara**	**46.29**	**89**	P	**P**	**07 27 35.4**	**-1.8**
MBAR				IAmb	IAmb	07 27 42.0	
	comp=Z,8.9nm,1.1s						
SIV	**San Ignacio**	**47.09**	**250**	P	**P**	**07 27 42.9**	**-0.4**
	comp=Z,2.8nm,1.1s,baz=93,slow=8.8,SNR=6.5						
SIV				LR	LR	07 46 36.1	
	comp=Z,190nm,19.2s,baz=96,slow=35						
	comp=Z,2.8nm,1.1s						
CPUP	**Villa Florida**	**47.11**	**235**	P	**P**	**07 27 43.0**	**-0.3**
	comp=Z,1.7nm,0.7s,baz=66,slow=9.6,SNR=4.8						
CPUP				LR	LR	07 44 52.3	
	comp=Z,210nm,21.7s,baz=72,slow=33						
	comp=Z,1.7nm,0.7s						
CPUP	**Villa Florida**	**47.11**	**235**	P	**P**	**07 27 43.3**	**0.0**
CPUP				IAmb	IAmb	07 27 59.9	
	comp=Z,8.3nm,1.4s						
BOSA	**Boshof**	**47.33**	**129**	P	**P**	**07 27 46.2**	**+1.1**
	comp=Z,3.3nm,0.6s,baz=307,slow=8.4,SNR=13						
BOSA				LR	LR	07 45 28.6	
	comp=Z,127nm,18.4s,baz=282,slow=33						
	comp=Z,3.3nm,0.6s						
BOSA	**Boshof**	**47.33**	**129**	P	**P**	**07 27 44.2**	**-1.0**
BOSA				IAmb	IAmb	07 28 05.0	
	comp=Z,11nm,1.3s						
VAE	**Valguarnera**	**47.69**	**32**	LR	LR	07 47 50.6	
	comp=Z,153nm,18.7s,baz=170,slow=36						
SAML	**Samuel**	**47.96**	**259**	P	**P**	**07 27 50.3**	**+0.2**
SAML				IAmb	IAmb	07 28 00.5	
	comp=Z,8.7nm,1.1s						
ETMB	**Extrema**	**51.03**	**259**	P	**P**	**07 28 13.8**	**+0.3**
ETMB				IAmb	IAmb	07 28 23.0	
	comp=Z,8.1nm,1.2s						
LODK	**Lodwar**	**51.13**	**84**	P	**P**	**07 28 13.0**	**-1.4**
IDI	**Anoyia**	**52.60**	**42**	LR	LR	07 50 18.8	
	comp=Z,89nm,20.6s,baz=249,slow=36						
DAVOX	**Davos/Dischmat**	**53.03**	**22**	LR	LR	07 50 44.3	
	comp=Z,169nm,19.3s,baz=259,slow=36						
FUORN	**Ofenpass-Fuorn**	**53.04**	**22**	P	**P**	**07 28 28.1**	**-0.1**
SJG	**San Juan**	**53.46**	**294**	LR	LR	07 45 57.7	
	comp=Z,153nm,21.0s,baz=90,slow=30						
KIBK	**Kibwezi**	**53.57**	**92**	P	**P**	**07 28 31.1**	**-1.4**
LPAZ	**La Paz**	**53.79**	**251**	P	**P**	**07 28 34.5**	**-0.3**
	comp=Z,1.2nm,0.9s,baz=66,slow=12,SNR=2.2						
LPAZ				LR	LR	07 50 28.7	
	comp=Z,144nm,19.9s,baz=84,slow=35						
	comp=Z,1.2nm,0.9s						
WLF	**Walferdange**	**54.30**	**17**	P	**P**	**07 28 35.9**	**-1.2**
WLF				IAmb	IAmb	07 28 56.7	
	comp=Z,8.9nm,0.9s						
SDV	**Santo Domingo**	**55.85**	**282**	LR	LR	07 50 54.6	
	comp=Z,62nm,21.2s,baz=92,slow=34						
LVC	**Limon Verde**	**55.85**	**244**	LR	LR	07 51 34.2	
	comp=Z,53nm,21.9s,baz=78,slow=35						
GERES	**GERESS Array B**	**56.19**	**23**	P	**P**	**07 28 51.2**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=208,slow=6.7,SNR=9.8						
GERES				LR	LR	07 53 17.9	
	comp=Z,71nm,18.1s,baz=252,slow=36						
	comp=Z,0.8nm,0.5s						
GERES	**GERESS Array B**	**56.19**	**23**	P	**P**	**07 28 51.0**	**+0.1**
PB07	**IPOC Station P**	**56.52**	**245**	P	**P**	**07 28 53.9**	**0.0**
AC02	**Maricunga**	**57.17**	**239**	P	**P**	**07 28 58.8**	**0.0**
CZSB	**Cruzeiro do Su**	**57.26**	**262**	P	**P**	**07 28 59.3**	**+0.3**
CZSB				IAmb	IAmb	07 29 06.8	
	comp=Z,8.9nm,1.2s						
EIL	**Elat**	**57.28**	**53**	LR	LR	07 53 16.2	
	comp=Z,170nm,20.5s,baz=260,slow=36						
EKA	**Eskdalemuir Ar**	**57.56**	**8**	LR	LR	07 54 19.9	
	comp=Z,77nm,18.0s,baz=203,slow=37						
VRAC	**Vranov**	**57.71**	**24**	LR	LR	07 54 15.8	
	comp=Z,92nm,19.4s,baz=220,slow=36						
CFA	**Coronel Fontan**	**57.95**	**233**	LR	LR	07 51 09.5	
	comp=Z,353nm,22.0s,baz=72,slow=33						
MMAI	**Mount Meron Ar**	**59.01**	**50**	LR	LR	07 57 28.1	
	comp=Z,70nm,18.5s,baz=204,slow=39						
ROSC	**El Rosal**	**59.05**	**277**	P	**P**	**07 29 11.7**	**-0.4**
	comp=Z,5.5nm,0.6s,baz=217,slow=21,SNR=4.7						
ROSC				LR	LR	07 53 04.1	
	comp=Z,160nm,19.4s,baz=120,slow=34						
	comp=Z,5.5nm,0.6s						
ROSC	**El Rosal**	**59.05**	**277**	P	**P**	**07 29 12.1**	**+0.1**
MLR	**Muntele Rosu**	**59.47**	**33**	LR	LR	07 55 57.3	
	comp=Z,212nm,21.1s,baz=220,slow=37						
BRTR	**Keskin Array B**	**60.84**	**42**	P	**P**	**07 29 25.3**	**+1.7**
	comp=Z,1.0nm,0.7s,baz=241,slow=5.2,SNR=6.3						
BRTR				LR	LR	07 57 43.3	
	comp=Z,83nm,19.8s,baz=234,slow=38						
	comp=Z,1.0nm,0.7s						
NNA	**Nana**	**61.62**	**257**	LR	LR	07 57 24.6	
	comp=Z,70nm,18.2s,baz=66,slow=37						
ATAH	**Atahualpa**	**62.87**	**263**	LR	LR	07 56 02.7	
	comp=Z,102nm,19.5s,baz=96,slow=35						
PLCA	**Paso Flores**	**63.08**	**224**	P	**P**	**07 29 38.8**	**+0.2**
	comp=Z,1.7nm,1.0s,baz=45,slow=4.3,SNR=3.1						
PLCA				LR	LR	07 52 36.4	
	comp=Z,156nm,21.7s,baz=77,slow=32						
	comp=Z,1.7nm,1.0s						
AKASG	**Malin Array Be**	**64.47**	**30**	P	**P**	**07 29 47.9**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=195,slow=6.8,SNR=2.4						
AKASG				LR	LR	08 00 07.6	
	comp=Z,202nm,18.4s,baz=240,slow=38						
	comp=Z,0.3nm,0.5s						
BCIP	**Isla Barro Col**	**64.91**	**281**	P	**P**	**07 29 51.1**	**+0.2**
NOA	**NORSAR Array B**	**65.70**	**14**	P	**P**	**07 29 57.2**	**+1.9**
	comp=Z,1.1nm,0.9s,baz=208,slow=6.1,SNR=2.8						
NOA				LR	LR	07 59 21.1	
	comp=Z,95nm,21.4s,baz=205,slow=37						
	comp=Z,1.1nm,0.9s						
GNI	**Garni**	**68.72**	**46**	LR	LR	08 04 10.0	
	comp=Z,44nm,18.4s,baz=258,slow=39						
KBZ	**Khabaz**	**68.83**	**41**	P	**P**	**07 30 15.1**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=322,slow=18,SNR=2.0						
KBZ				LR	LR	08 04 37.8	
	comp=Z,31nm,18.1s,baz=254,slow=40						
	comp=Z,1.1nm,0.7s						
FINES	**FINESS Array B**	**70.36**	**20**	P	**P**	**07 30 23.8**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=200,slow=7.4,SNR=1.7						
FINES				LR	LR	08 03 42.2	
	comp=Z,102nm,18.1s,baz=225,slow=38						
	comp=Z,1.4nm,0.8s						
OBN	**Obninsk**	**70.66**	**29**	LR	LR	08 04 02.5	
	comp=Z,34nm,18.2s,baz=212,slow=38						
PMSA	**Palmer Station**	**72.09**	**200**	LR	LR	07 54 11.8	
	comp=Z,176nm,20.2s,baz=20,slow=29						
JMIC	**Jan Mayen**	**72.52**	**2**	LR	LR	07 58 21.6	
	comp=Z,54nm,21.0s,baz=244,slow=32						
BELG	**Belogornoye**	**75.18**	**34**	LR	LR	08 06 04.9	
	comp=Z,40nm,18.1s,baz=173,slow=37						
ARCES	**ARCESS Array B**	**76.08**	**14**	P	**P**	**07 31 00.3**	**+2.1**
	comp=Z,2.9nm,1.1s,baz=202,slow=4.5,SNR=1.6						
ARCES				LR	LR	08 05 32.6	
	comp=Z,119nm,19.9s,baz=248,slow=37						
	comp=Z,2.9nm,1.1s						
WSAR	**Wadi Sarin**	**76.09**	**66**	LR	LR	08 06 12.2	
	comp=Z,71nm,18.2s,baz=280,slow=37						
GEYT	**Alibeck**	**78.10**	**51**	LR	LR	08 08 15.7	
	comp=Z,88nm,19.5s,baz=296,slow=38						
AKTO	**Aktyubinsk**	**80.75**	**38**	LR	LR	08 10 02.8	
	comp=Z,33nm,21.3s,baz=225,slow=38						
TXAR	**Lajitas Array**	**89.09**	**299**	P	**P**	**07 32 06.0**	**-0.9**
	comp=Z,1.2nm,1.1s,baz=120,slow=7.4,SNR=6.5						
	comp=Z,1.2nm,1.1s						
AAK	**Ala-Archa**	**91.05**	**48**	LR	LR	08 17 31.7	
	comp=Z,45nm,19.6s,baz=304,slow=38						
RPN	**Rapa Nui**	**92.69**	**243**	LR	LR	08 09 53.0	
	comp=Z,70nm,20.9s,baz=160,slow=33						
NRIK	**Noril'sk**	**96.02**	**20**	LR	LR	08 20 57.8	
	comp=Z,67nm,18.2s,baz=318,slow=39						
MKAR	**Makanchi Array**	**96.47**	**43**	LR	LR	08 20 50.5	
	comp=Z,59nm,19.9s,baz=334,slow=38						
ZALV	**Zalesovo Beam**	**97.33**	**36**	LR	LR	08 20 24.5	
	comp=Z,74nm,19.0s,baz=310,slow=38						
ELK	**Elko**	**98.33**	**311**	LR	LR	08 10 46.8	
	comp=Z,119nm,22.0s,baz=70,slow=32						
ASAR	**Alice Springs**	**141.16**	**132**	PKhKP	PKPpre	07 38 35.9	
	comp=Z,0.4nm,0.5s,baz=224,slow=3.2,SNR=4.4						
WRA	**Warramunga Arr**	**143.58**	**127**	PKhKP	PKPpre	07 38 44.1	
	comp=Z,0.4nm,0.6s,baz=241,slow=2.7,SNR=2.5						

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*IDC **05** 07:35:01.0±2.5, 10°.73S×161°.79E, h61^{km}±21^{km}, mb3.5/8, mbtmp3.9/10, ML3.9/2, MS3.6/10, Error ellipse: s-maj=26.9km s-min=14.4km az=65.0*

ISC 05 07:35:00.2±0.8, **10°.70S**±0°.10×**161°.8E**±0°.1, **h54^{km}**, **n24**, σ**1^s.00**/14, **mb3.8**/8, **MS3.5**/5, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.24**	**304**	P	**Pn**	**07 35 34.0**	**-0.9**
	5μm,0.4s,baz=160,slow=7.3,SNR=19						
HNR				S	**Sn**	**07 36 03.1**	**+1.7**
	5μm,0.3s,baz=297,slow=22,SNR=5.3						
HNR				LR	LR	07 36 46.4	
	comp=Z,7μm,19.0s,baz=214,slow=47						
KRVT	**Keravat (AS076**	**11.61**	**302**	LR	LR	07 42 34.8	
	comp=Z,261nm,19.3s,baz=286,slow=39						
DZM	**Mont Dzumac**	**12.14**	**159**	P	**Pn**	**07 37 51.6**	**+1.0**
	0.5nm,0.3s,baz=358,slow=6.7,SNR=13						
DZM				S	**Sn**	**07 40 03.9**	**-0.7**
	6.7nm,0.8s,baz=324,slow=3.8,SNR=3.4						
DZM				LR	LR	07 41 48.1	
	comp=Z,111nm,19.2s,baz=30,slow=34						
	3.5nm,0.6s						
PMG	**Port Moresby**	**14.50**	**274**	LR	LR	07 43 31.8	
	comp=Z,211nm,18.9s,baz=110,slow=35						
CTA	**Charters Tower**	**17.66**	**236**	P	**P**	**07 39 03.6**	**+0.7**
	0.4nm,0.3s,baz=64,slow=12,SNR=14						
CTA				LR	LR	07 45 10.8	
	comp=Z,94nm,18.6s,baz=76,slow=35						
	7.8nm,0.8s						
AFI	**Afiamalu**	**25.98**	**100**	LR	LR	07 48 38.9	
	comp=Z,127nm,19.2s,baz=278,slow=31						
WRA	**Warramunga Arr**	**28.02**	**248**	P	**P**	**07 40 45.9**	**-0.6**
	0.8nm,0.7s,baz=78,slow=9.1,SNR=4.1						
WRA				LR	LR	07 52 15.3	
	comp=Z,115nm,18.3s,baz=69,slow=37						
	0.8nm,0.7s						
H11S2	**WAKE ISLAND Hy**	**29.41**	**9**	T	T	08 12 06.0	
	baz=188,slow=76,SNR=75						
H11S3	**WAKE ISLAND Hy**	**29.41**	**9**	T	T	08 12 06.5	
	baz=188,slow=76,SNR=66						
H11S1	**WAKE ISLAND Hy**	**29.42**	**9**	T	T	08 12 07.7	
	baz=188,slow=76,SNR=62						
ASAR	**Alice Springs**	**29.55**	**241**	P	**P**	**07 40 58.9**	**-1.2**
	0.2nm,0.4s,baz=64,slow=11,SNR=2.2						
ASAR				LR	LR	07 51 51.3	
	comp=Z,96nm,20.2s,baz=92,slow=34						
	0.2nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**30.63**	**9**	T	T	08 13 29.0	
	baz=188,slow=76,SNR=28						
H11N3	**WAKE ISLAND Hy**	**30.64**	**9**	T	T	08 13 30.5	
	baz=188,slow=76,SNR=28						
H11N2	**WAKE ISLAND Hy**	**30.65**	**9**	T	T	08 13 39.4	
	baz=188,slow=76,SNR=26						
RAR	**Rarotonga**	**38.28**	**111**	LR	LR	07 57 13.0	
	comp=Z,14nm,19.2s,baz=278,slow=35						
MJAR	**Matsushiro Arr**	**51.99**	**336**	P	**P**	**07 44 05.1**	**+0.9**
	0.7nm,0.4s,baz=152,slow=8.1,SNR=2.6						
	0.7nm,0.4s						
SONM	**Songino Array**	**76.15**	**325**	P	**P**	**07 46 41.9**	**-0.7**
	0.7nm,0.7s,baz=139,slow=9.2,SNR=3.9						
	0.7nm,0.7s						
QSPA	**South Pole Qui**	**79.30**	**180**	P	**P**	**07 47 00.7**	**+0.8**
	1.9nm,0.8s,baz=278,slow=1.2,SNR=12						
QSPA				LR	LR	08 16 30.5	
	comp=Z,151nm,21.0s,baz=48,slow=31						
	1.9nm,0.8s						
ILAR	**Eielson Array**	**84.45**	**20**	P	**P**	**07 47 27.4**	**+0.7**
	0.3nm,0.5s,baz=240,slow=5.3,SNR=6.4						
	0.3nm,0.5s						
H02S1	**DAWSON INLET T**	**84.50**	**33**	T	T	09 20 32.9	
	SNR=40						
MKAR	**Makanchi Array**	**90.65**	**317**	P	**P**	**07 47 56.2**	**-0.9**
	0.3nm,0.5s,baz=100,slow=6.5,SNR=5.3						
	0.3nm,0.5s						
H06E1	**SOCORRO T-PHAS**	**90.82**	**71**	T	T	09 28 43.2	
	SNR=12						
YKA	**Yellowknife Ar**	**96.45**	**28**	P	**P**	**07 48 22.6**	**-0.7**
	0.2nm,0.6s,baz=262,slow=4.6,SNR=5.0						
	0.2nm,0.6s						
ARCES	**ARCESS Array B**	**115.01**	**344**	PKP	**PKiKP**	**07 53 34.5**	**-0.2**
	6.5nm,1.1s,baz=64,slow=2.1,SNR=2.2						

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*INET **05** 08:05:33.8±0.8, 11°.78N×84°.01W, h15^{km}±4^{km}, MW3.7*

*UCR **05** 08:05:33.8±1.8, 11°.65N×84°.11W, h10^{km}±9^{km}, MW3.9*

ISC 05 08:05:31.1±1.6, **11°.76N**±0°.04×**84°.04W**±0°.05, **h14^{km}**±12^{km}, **n77**, σ**0^s.89**/92, **4D**, **Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESPN	Las Esperanzas	0.50	330	*e*P	Pn	08 05 43.8	-0.1
ESPN				*e*S	Sn	08 05 51.8	-0.5
ESPN	Las Esperanzas	0.50	330	*e*P	Pn	08 05 43.6	-0.3
COVE	Coope Vega, Sa	1.09	199	*e*P	Pb	08 05 51.1	-0.8
COVE				*e*S	Sb	08 06 04.6	-1.4
VERA	Finca Concepci	1.21	222	⇓*e*P	Pn	08 05 53.5	-0.3
SARA	Sarapiqu	1.30	179	*e*P	Pn	08 05 54.6	-0.4
ITAL	Pital	1.32	190	*e*P	Pn	08 05 55.2	-0.1
VMAR	Armenia, Volca	1.41	228	*e*P	Pn	08 05 56.7	+0.2
TUNA	La Fortuna	1.42	205	*e*P	Pb	08 05 57.4	0.0
VACR	Volcan Arenal	1.43	206	*e*P	Pn	08 05 57.0	+0.3
VACR				*e*S	Sn	08 06 15.2	-0.1
RIFO	Rio Frio, Sara	1.44	175	*e*P	Pn	08 05 57.4	+0.5
RIFO				*e*S	Sn	08 06 14.8	-0.9
ARE1	Arenal 1	1.45	207	*e*P	Pn	08 05 57.6	+0.5
ARE1				*e*S	Sn	08 06 15.9	-0.1
COTE	Lago Cote	1.46	216	⇓*i*P	Pn	08 05 57.4	+0.2
COTE				*i* S	Sn	08 06 16.0	-0.2
MOTZ	Rio Naranjo	1.47	223	*i* P	Pn	08 05 57.7	+0.4
MOTZ				*i* S	Sn	08 06 16.8	+0.3
SOCE	Pocosol	1.48	202	*e*P	Pn	08 05 58.1	+0.6
ACAL	Aguas Claras	1.49	221	*i* P	Pn	08 05 58.0	+0.5
ACAL				*i* S	Sn	08 06 16.9	0.0
CPMI	Catarata Coope	1.51	193	*e*P	Pn	08 05 58.6	+0.7
CUI	Cuipilapa	1.56	225	*e*P	Pn	08 05 58.4	0.0
CUI				*e*S	Sn	08 06 18.2	-0.3
CONN	Concepcion	1.56	263	*e*P	Pb	08 05 60.0	+0.1
GUAB	Guayabo de Bag	1.57	228	*e*P	Pg	08 06 01.8	+0.6
CRPO	Crater poas	1.57	187	*e*P	Pn	08 05 59.0	+0.1
VPS6	Volcano Poas	1.57	187	*e*P	Pn	08 05 59.5	+0.5
COLC	Colonia	1.58	226	*e*P	Pn	08 05 59.2	+0.5
VPTE	Poasito	1.59	186	*e*P	Pn	08 05 59.4	+0.3
REF1	Hacienda Santa	1.60	232	*i* P	Pn	08 05 59.8	+0.6
CNAS	Canas	1.68	218	*e*P	Pb	08 06 01.5	-0.4
NARAN	Naranjo de Ala	1.69	191	*e*P	Pb	08 06 03.1	+1.0
LCRUZ	La Cruz	1.70	247	*e*P	Pb	08 06 01.8	-0.3
RVLA	Villa Bonita	1.70	165	⇓*i*P	Pb	08 06 01.9	-0.3
RVLA				*e*P	Pb	08 06 02.0	-0.3
RVLA				*e*S	Sb	08 06 23.4	-0.1
BAGA	Bagaces	1.71	224	*e*P	Pn	08 05 59.4	-1.2
JTS	Las Juntas de	1.71	211	*e*P	Pn	08 06 00.6	0.0
JUNT	Juntas	1.73	212	*e*P	Pn	08 06 00.6	-0.1
BOAB	BOACO BROADBAN	1.73	293	*e*P	Pb	08 06 03.3	+0.6
BOAB				*e*S	Sg	08 06 25.9	-0.9
TCS1	Tacares	1.73	188	*e*P	Pb	08 06 02.9	+0.1
CVIMO	Finca Echandi	1.73	177	*e*P	Pb	08 06 02.5	-0.4
LCOCO	El Coco	1.74	164	*e*P	Pn	08 06 02.3	+1.4
LCOCO				*e*S	Sb	08 06 24.3	-0.3
IRES	Siquirres	1.74	162	*e*P	Pn	08 06 02.3	+1.4
HDC3	Heredia 3	1.75	182	*e*P	Pb	08 06 03.0	-0.1
HDC	Heredia	1.75	182	*e*P	Pb	08 06 02.8	-0.3
VICA	Volcano Irazu	1.78	174	*e*P	Pn	08 06 02.9	+1.0
CORON	Coronado	1.78	179	*e*P	Pn	08 06 03.0	+1.3
BELE	Belen	1.78	185	*e*P	Pb	08 06 03.5	-0.2
HAYA	Volcan Irazu	1.78	174	*e*P	Pn	08 06 02.8	+0.9
ICR3	Volcano Irazu	1.79	173	*e*P	Pn	08 06 03.0	+1.0
VIRE	VIRE	1.79	175	*e*P	Pn	08 06 02.9	+0.8
VTCV	VTCV, Calle Va	1.80	170	*e*P	Pn	08 06 02.9	+1.0
RVSTA	Santa Teresita	1.82	168	*e*P	Pn	08 06 03.3	+1.2
RVSTA				⇓*i*P	Pn	08 06 03.4	+1.2
RVSTA				*e*S	Sb	08 06 26.8	-0.2
SANTA	Santa Ana	1.82	184	*e*P	Pb	08 06 05.7	+1.3
LUJA	Lujan	1.83	181	*e*P	Pb	08 06 04.5	0.0
TRIO	Tres Rios	1.85	179	*e*P	Pb	08 06 04.5	-0.4
PCAYA	Pacayas	1.85	173	*e*P	Pn	08 06 04.2	+1.5
OCM	Ochomogo	1.86	178	*e*P	Pb	08 06 04.4	-0.6
ARZA	Esparza	1.86	199	*e*P	Pb	08 06 04.8	-0.2
TURIB	Turrialba	1.88	169	*e*P	Pn	08 06 04.0	+1.0
ALIBA	Liberia Airpor	1.88	232	*e*P	Pn	08 06 04.0	+1.1
REPA	Paraso	1.93	175	*e*P	Pn	08 06 05.4	+1.7
NADN	Granada	1.95	270	*e*P	Pb	08 06 06.4	-0.1
ORTG	Ortega, Santa	1.97	225	*e*P	Pn	08 06 04.4	+0.2
RIMA	Rio Macho	1.99	175	*e*P	Pn	08 06 06.0	+1.4
LCR2	La Lucha 2	2.01	179	*e*P	Pn	08 06 06.1	+1.3
MRVA	Moravia de Chi	2.02	163	*e*P	Pn	08 06 05.3	+0.4
ABE2	San Pablo	2.05	180	*e*P	Pb	08 06 07.6	-0.7
NYURE	Nandayure	2.12	214	*e*P	Pb	08 06 08.8	-0.6
LAFE	Finca La Fe, P	2.12	204	*e*P	Pn	08 06 07.0	+0.8
JUD3	Juan Diaz 3	2.16	223	*e*P	Pn	08 06 08.2	+1.3
JACO	JACO, Garabito	2.17	196	*e*P	Pn	08 06 08.2	+1.2
MATN	Matagalpa	2.17	302	*e*P	Pn	08 06 08.6	+1.6
MGAN	Managua	2.19	280	*e*P	Pb	08 06 10.3	-0.3
CMARA	Lajas Hojancha	2.20	218	*e*P	Pn	08 06 08.7	+1.3
TISN	Laguna Tiscapa	2.21	280	*e*P	Pb	08 06 10.5	-0.4
CDM	Cerro de Muert	2.21	173	*e*P	Pn	08 06 09.7	+1.8
BUS1	Rivas	2.21	172	*e*P	Pn	08 06 08.8	+0.9
SAJU	San Juanillo,	2.35	224	*e*P	Pn	08 06 11.1	+1.7
PEZE	Perez Zeledon,	2.39	171	*e*P	Pn	08 06 11.9	+1.9
EDBA	Buenos Aires	2.69	164	*e*P	Pb	08 06 17.6	-1.6
EDPN	Palmar Norte	2.84	168	*e*P	Pb	08 06 19.5	-2.2
POTG	Potrero Grande	2.84	161	*e*P	Pn	08 06 17.7	+1.5
EDP2	Potrero Grande	2.86	163	*e*P	Pn	08 06 17.8	+1.4

RSNC 05 08:34:48.2±1.3**, 5°.23N×73°.91W, h139^{km}±5^{km}, ML3.0, Mw3.5, 3C-6D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPBC	San Pablo de B	0.45	339	*e*P	Pn	08 35 07.7	-0.6
SPBC				*e*S	Sn	08 35 22.4	-1.0
ROSC	El Rosal	0.56	227	⇓*i*P	Pn	08 35 09.7	+0.5
ROSC				*e*S	Sn	08 35 25.9	+0.9
ROSC				*i*		08 35 29.2	
	comp=Z,395nm,0.5s						
CHIC	Chingaza	0.62	164	⇓*i*P	Pn	08 35 09.1	-0.4
CHIC				*e*S	Sn	08 35 25.3	-0.5
CHIC				*i*		08 35 27.1	
	comp=Z,177nm,0.5s						
NORC	Norcasia	1.01	289	⇑*i*P	Pn	08 35 11.3	-0.9
NORC				*e*S	Sn	08 35 28.7	-1.7
NORC				*i*		08 35 30.8	
	comp=Z,408nm,0.2s						
RUSC	La Rusia	1.05	51	⇓*i*P	Pn	08 35 13.2	+0.2
RUSC				*e*S	Sn	08 35 31.8	0.0
RUSC				*i*		08 35 36.0	
	comp=Z,82nm,0.6s						
VILC	Villavicencio,	1.13	169	⇓*i*P	Pn	08 35 13.0	-0.3
VILC				*e*S	Sn	08 35 32.0	-0.4
VILC				*i*		08 35 32.5	
	comp=Z,341nm,0.3s						
PTBC	PUERTO BERRIO,	1.42	337	*e*P	Pn	08 35 14.7	-1.4
PTBC				*e*S	Sn	08 35 35.8	-1.6
PTBC				*i*		08 35 36.8	
	comp=Z,118nm,0.4s						
BARC	Barichara	1.54	28	⇓*e*P	Pn	08 35 17.1	-0.5
BARC				*e*S	Sn	08 35 40.3	+0.2
ANIL	Santa Ana	1.66	244	*e*P	Pn	08 35 18.9	-0.1
ANIL				*e*S	Sn	08 35 42.2	-0.4
ANIL				*i*		08 35 53.5	
	comp=Z,106nm,0.3s						
ORTC	Ortega, Tolima	1.87	226	*e*P	Pn	08 35 20.6	-0.6
ORTC				*e*S	Sn	08 35 46.4	-0.1
ORTC				*i*		08 35 46.9	
	comp=Z,48nm,0.6s						
HELC	Santa Helena	1.88	301	⇑*i*P	Pn	08 35 20.8	-0.8
HELC				*e*S	Sn	08 35 47.3	+0.1
HELC				*i*		08 35 50.9	
	comp=Z,61nm,0.3s						
BRRC	Barranca, Sant	1.88	6	⇑*i*P	Pn	08 35 20.9	-0.4
BRRC				*e*S	Sn	08 35 46.2	-0.5
BRRC				*i*		08 35 54.1	
	comp=Z,114nm,0.2s						
PTGC	Puerto Gaitan,	2.04	120	⇓*i*P	Pn	08 35 22.6	-0.6
PTGC				*e*S	Sn	08 35 48.7	-1.4
PTGC				*i*		08 35 52.2	
	comp=Z,91nm,0.5s						
CBOC	Ciudad Bolivar	2.19	287	*e*P	Pn	08 35 24.5	-0.6
CBOC				*e*S	Sn	08 35 53.0	-0.5
CBOC				*i*		08 35 57.2	
	comp=Z,25nm,0.7s						
PAMC	Pamplona, Colo	2.42	30	*e*P	Pn	08 35 28.1	-0.2
PAMC				*e*S	Sn	08 35 59.3	+0.3
PAMC				*i*		08 36 12.7	
	comp=Z,22nm,0.2s						
TAMC	Tame, Arauca	2.42	60	*e*P	Pn	08 35 27.8	-0.1
TAMC				*e*S	Sn	08 35 57.5	-0.9
TAMC				*i*		08 35 60.0	
	comp=Z,28nm,0.2s						
ZARC	Zaragoza, Cauc	2.44	337	*e*P	Pn	08 35 25.7	-2.5
ZARC				*e*S	Sn	08 35 56.6	-2.3
ZARC				*i*		08 36 03.0	
	comp=Z,87nm,0.3s						
YOTC	Yotoco, Valle	2.73	243	*e*P	Pn	08 35 30.8	-1.0
DBBC	Dabeiba	2.90	308	*e*P	Pn	08 35 33.4	-0.6
DBBC				*e*S	Sn	08 36 09.5	+0.2
DBBC				*i*		08 36 11.1	
	comp=Z,29nm,0.3s						
UREC	San Jos de Ur	2.98	327	*i* P	Pn	08 35 32.2	-2.8
UREC				*e*S	Sn	08 36 07.2	-4.0
UREC				*i*		08 36 09.5	
	comp=Z,83nm,0.2s						
MACC	Macarena, Meta	3.06	179	*e*P	Pn	08 35 34.4	-1.6
MACC				*e*S	Sn	08 36 09.7	-3.2
MACC				*i*		08 36 20.6	
	comp=Z,23nm,0.4s						
GARC	Garzon, Huila	3.41	208	*e*P	Pn	08 35 39.6	-1.1
GARC				*i*		08 36 19.2	
	comp=Z,24nm,0.2s						
GARC				*e*S	Sn	08 36 19.3	-2.0
APAC	Apartado, Choc	3.76	315	*e*P	Pn	08 35 44.5	-0.5
APAC				*e*S	Sn	08 36 29.1	0.0
APAC				*i*		08 36 32.2	
	comp=Z,23nm,0.4s						
CRJC	Cerrejon, Guaj	5.84	10	*e*P	Pn	08 36 10.4	-2.5
CRJC				*e*S	Sn	08 37 13.0	-5.9
CRJC				*i*		08 37 26.1	
	comp=Z,20nm,0.4s						

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*IDC **05** 08:40:09.0±0.9, 49°.93N×28°.88W, h0^{km}, mb3.7/13, mbtmp3.7/14, ML3.8/1, MS3.4/17, Error ellipse: s-maj=29.8km s-min=16.1km az=12.0*

ISC 05 08:40:10.6±0.9**, 50°.0N**±0°.2×**28°.9W**±0°.1**, h10^{km}, n28, σ0^s.68**/16**, mb3.8**/12**, MS3.4**/16**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKA	Eskdalemuir Ar	16.45	61	Pn	Pn	08 44 00.5	-0.8
	baz=260,slow=12						
EKA				LR	LR	08 48 57.0	
	comp=Z,121nm,18.8s,baz=282,slow=32						
	2.1nm,0.8s						
ESDC	Sonseca Array	20.34	111	P	P	08 44 47.3	+0.3
	3.1nm,1.2s,baz=300,slow=13,SNR=5.0						
ESDC				LR	LR	08 50 57.5	
	comp=Z,91nm,20.8s,baz=295,slow=32						
	3.1nm,1.2s						
SCHQ	Schefferville	23.47	297	LR	LR	08 52 57.0	
	comp=Z,125nm,18.6s,baz=46,slow=33						
NOA	NORSAR Array B	24.85	48	LR	LR	08 54 13.2	
	comp=Z,62nm,19.3s,baz=260,slow=34						
FRB	Frobisher Bay	25.20	318	LR	LR	08 52 58.6	
	comp=Z,70nm,18.8s,baz=202,slow=30						
DAVOX	Davos/Dischmat	25.74	82	LR	LR	08 55 16.9	
	comp=Z,106nm,18.3s,baz=263,slow=35						
HFS	Hagfors	25.97	51	LR	LR	08 54 26.8	
	comp=Z,84nm,19.2s,baz=305,slow=33						
GERES	GERESS Array B	27.45	76	LR	LR	08 55 53.7	
	comp=Z,96nm,18.1s,baz=275,slow=34						
VRAC	Vranov	29.11	74	LR	LR	08 57 05.3	
	comp=Z,87nm,19.2s,baz=332,slow=35						
FINES	FINESS Array B	32.03	48	P	P	08 46 37.4	+0.5
	2.3nm,0.6s,baz=262,slow=8.6,SNR=16						
FINES				LR	LR	08 58 16.1	
	comp=Z,84nm,20.1s,baz=332,slow=34						
	2.3nm,0.6s						
AKASG	Malin Array Be	36.27	66	P	P	08 47 13.5	-0.2
	0.4nm,0.5s,baz=289,slow=9.0,SNR=2.5						
AKASG				LR	LR	09 02 17.3	
	comp=Z,56nm,18.6s,baz=284,slow=37						
	0.4nm,0.5s						
MLR	Muntele Rosu	36.44	75	LR	LR	09 02 02.6	
	comp=Z,57nm,18.4s,baz=324,slow=36						
BRTR	Keskin Array B	44.28	78	P	P	08 48 20.7	+0.2
	0.5nm,0.6s,baz=302,slow=8.3,SNR=2.5						
	0.5nm,0.6s						
TORD	Torodi Ar. Bea	44.41	135	P	P	08 48 21.5	+0.1
	0.6nm,0.5s,baz=322,slow=8.0,SNR=5.5						
	0.6nm,0.5s						
YKA	Yellowknife Ar	45.70	320	P	P	08 48 31.3	+0.1
	0.4nm,0.8s,baz=68,slow=8.3,SNR=4.0						
YKA				PcP	PcP	08 50 07.8	-1.1
	0.3nm,0.7s,baz=69,slow=3.7,SNR=4.7						
	0.4nm,0.8s						
ARU	Arti	49.40	47	LR	LR	09 09 07.1	
	comp=Z,43nm,19.2s,baz=275,slow=35						
INK	Inuvik	49.62	332	P	P	08 49 01.1	-0.5
	1.1nm,0.9s,baz=62,slow=8.5,SNR=4.9						
	1.1nm,0.9s						
AKTO	Aktyubinsk	52.46	54	LR	LR	09 12 19.6	
	comp=Z,30nm,18.1s,baz=266,slow=37						
PDAR	Pinedale Array	53.60	295	P	P	08 49 31.8	-0.3
	1.2nm,1.0s,baz=72,slow=6.6,SNR=5.1						
	1.2nm,1.0s						
SDV	Santo Domingo	53.61	235	LR	LR	09 12 30.3	
	comp=Z,29nm,18.4s,baz=55,slow=36						
ILAR	Eielson Array	55.97	333	P	P	08 49 49.4	+0.9
	0.3nm,0.8s,baz=41,slow=6.2,SNR=4.5						
	0.3nm,0.8s						
BVAR	Borovoye Array	56.93	45	LR	LR	09 13 35.7	
	comp=Z,56nm,18.9s,baz=258,slow=35						
TXAR	Lajitas Array	58.67	279	P	P	08 50 08.5	+0.3
	0.5nm,0.7s,baz=66,slow=7.5,SNR=6.7						
	0.5nm,0.7s						
NVAR	Mina Array Bea	61.48	297	P	P	08 50 27.9	+0.3
	0.7nm,0.5s,baz=52,slow=7.0,SNR=1.6						
	0.7nm,0.5s						
CMIG	Matias Romero	61.70	263	LR	LR	09 16 00.9	
	comp=Z,26nm,19.9s,baz=18,slow=35						
MKAR	Makanchi Array	66.77	44	P	P	08 51 02.4	+0.5
	1.6nm,0.8s,baz=325,slow=5.8,SNR=13						
	1.6nm,0.8s						
SONM	Songino Array	75.23	29	P	P	08 51 53.6	+0.2
	0.7nm,0.6s,baz=330,slow=5.5,SNR=2.1						
	0.7nm,0.6s						
ASAR	Alice Springs	150.50	33	PKPbc	PKPbc	09 00 01.0	-1.5
	0.6nm,1.0s,baz=1.9,slow=2.8,SNR=4.4						

DDA 05 08:49:13.9±0.0**, 39°.41N×28°.13E, h8^{km}±5^{km}, ML1.5, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STEP	BALIKESIR_Sava	0.32	264	P	Pb	08 49 21.3	-0.7
DURS	Dursunbey	0.33	54	P	Pg	08 49 20.3	-0.1
DURS				S	Sb	08 49 29.3	+1.8
DURS				*i* AML	AML	08 49 32.0	
	comp=N,61nm,0.6s						
DURS				*i* AML	AML	08 49 35.0	
	comp=E,83nm,1.0s						
BKES	Balkesir-Mer	0.36	334	P	Pg	08 49 20.4	-0.6
BKES				S	Sg	08 49 25.9	+0.2
BKES				*i* AML	AML	08 49 28.0	
	comp=E,43nm,0.6s						
BALY	Balya	0.52	310	P	Pg	08 49 24.3	+0.4
BALY				S	Sb	08 49 32.2	-0.8
BALY				*i* AML	AML	08 49 36.0	
	comp=N,44nm,0.8s						
BALY				*i* AML	AML	08 49 36.0	
	comp=E,28nm,0.5s						
DEMI	Demirci	0.58	129	P	Pg	08 49 24.9	-0.3
DEMI				*i* AML	AML	08 49 28.0	
	comp=E,27nm,0.2s						
DEMI				S	Sg	08 49 28.2	-4.5
DEMI				*i* AML	AML	08 49 29.0	
	comp=N,44nm,0.4s						
ULDT	Uludag	1.06	46	P	Pg	08 49 34.4	0.0
ULDT				S	Sn	08 49 51.3	+0.9
ULDT				*i* AML	AML	08 49 54.0	
	comp=N,29nm,0.4s						
ULDT				*i* AML	AML	08 49 56.0	
	comp=E,24nm,0.4s						

ISK 05 08:49:16.8, 39°.50N×26°.06E, h9^{km}±2^{km}, ML1.4/4**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GPNR	Gulpinar-Canak	0.07	127	Pg	Pg	08 49 19.1	+0.2
GPNR				Sg	Sg	08 49 20.9	+0.6
SIGR	SIGRI	0.33	209	Pg	Pg	08 49 23.9	+0.6
SIGR				Sg	Sg	08 49 28.7	+1.1
BOZC	Bozcaada	0.34	359	Pg	Pg	08 49 23.9	+0.3
BOZC				Sg	Sg	08 49 29.4	+1.3
EZN	Ezine	0.39	32	Pg	Pg	08 49 25.1	+0.7
EZN				Sg	Sg	08 49 30.6	+1.1

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*IDC **05** 08:49:52.9±8.7, 4°.53N×82°.84W, h0^{km}, mb3.5/3, mbtmp3.7/4, ML2.6/1, MS3.1/3, Error ellipse: s-maj=251.8km s-min=38.6km az=18.0*

ISC 05 08:49:53.6±1.1**, 4°.6N**±0°.1×**82°.5W**±0°.1**, h10^{km}, n24, σ2^s.48**/22**, mb3.7**/3**, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAPC	Malpelo	1.06	122	*e*P	Pg	08 50 12.5	-1.6
MAPC				*e*S	Sg	08 50 25.7	-2.2
MAPC				*i*		08 50 28.7	
	comp=Z,358nm,0.4s						
BRU2	Volcan	4.19	358	*e*P	Pn	08 50 56.2	-1.6
BBAC	Balboa, Cauca	5.83	116	*e*P	Pn	08 51 22.5	+2.1
BBAC				*e*S	Sn	08 52 25.8	-1.7
BBAC				*i*		08 52 34.2	
	comp=Z,4.6nm,0.3s						
UPD2	Meteti	5.95	48	*e*P	Pn	08 51 25.0	+3.1
GCUF	Volcan Galeras	6.14	123	*e*P	Pn	08 51 26.9	+2.1
POPC	Popayan, Colom	6.16	109	*e*P	Pn	08 51 26.0	+1.0
JTS	Las Juntas de	6.17	337	*e*P	Pn	08 51 22.1	-2.8
YOTC	Yotoco, Valle	6.17	95	*e*P	Pn	08 51 26.7	+1.7
YOTC				*e*S	Sn	08 52 36.4	+0.6
YOTC				*i*		08 52 41.2	
	comp=Z,6.6nm,0.4s						
CRUC	La Cruz	6.30	118	*e*P	Pn	08 51 29.9	+2.9
ORTC	Ortega, Tolima	7.27	95	*e*P	Pn	08 51 43.5	+3.4
BETC	Betania	7.30	105	*e*P	Pn	08 51 44.9	+4.4
PRAC	Prado	7.65	96	*e*P	Pn	08 51 48.3	+3.1
NORC	Norcasia	7.67	82	*e*P	Pn	08 51 49.3	+3.8
ROSC	El Rosal	8.16	88	Pn	Pn	08 51 58.1	+5.6
	comp=Z,1.6nm,0.3s,baz=262,slow=21,SNR=9.8						
	comp=Z,12nm,0.6s						
ROSC	El Rosal	8.16	88	*e*P	Pn	08 51 59.0	+6.4
VILC	Villavicencio,	8.80	93	*e*P	Pn	08 52 03.9	+2.7
MACC	Macarena, Meta	8.97	105	*e*P	Pn	08 52 04.8	+1.4
BARC	Barichara	9.49	77	*e*P	Pn	08 52 10.4	-0.3
ATAH	Atahualpa	12.34	161	LR	LR	08 57 10.4	
	comp=Z,74nm,20.6s,baz=14,slow=35						
SDV	Santo Domingo	12.54	69	LR	LR	08 58 36.5	
	comp=Z,69nm,18.5s,baz=226,slow=41						
RPN	Rapa Nui	40.81	218	LR	LR	09 09 54.4	
	comp=Z,34nm,20.9s,baz=46,slow=30						
NVAR	Mina Array Bea	46.83	321	P	P	08 58 24.3	+0.2
	comp=Z,0.5nm,0.3s,baz=133,slow=7.5,SNR=2.0						
	comp=Z,0.5nm,0.3s						
YKA	Yellowknife Ar	62.46	344	P	P	09 00 17.1	+0.2
	comp=Z,0.4nm,0.7s,baz=141,slow=6.8,SNR=8.3						
	comp=Z,0.4nm,0.7s						
ILAR	Eielson Array	75.14	336	P	P	09 01 35.9	+0.1
	comp=Z,0.3nm,0.8s,baz=124,slow=4.8,SNR=2.3						
	comp=Z,0.3nm,0.8s						

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*IDC **05** 08:53:40.0±2.5, 10°.52S×161°.32E, h58^{km}±21^{km}, mb3.4/4, mbtmp3.8/6, ML3.5/2, MS3.3/2, Error ellipse: s-maj=27.0km s-min=15.2km az=62.0*

ISC 05 08:53:40.0±1.1**, 10°.5S**±0°.1×**161°.3E**±0°.2**, h61^{km}, n8, σ0^s.74**/9**, mb3.6**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.74	308	P	Pn	08 54 07.2	-0.7
	2µm,0.3s,baz=146,slow=6.2,SNR=17						
HNR				S	Sn	08 54 29.1	0.0
	12µm,0.3s,baz=142,slow=16,SNR=24						
HNR				LR	LR	08 54 59.1	
	comp=Z,3µm,18.1s,baz=186,slow=46						
DZM	Mont Dzumac	12.50	158	P	Pn	08 56 35.7	+0.5
	0.2nm,0.3s,baz=339,slow=19,SNR=13						
DZM				S	Sn	08 58 51.6	-1.2
	3.3nm,0.8s,baz=233,slow=23,SNR=1.3						
	3.3nm,0.8s						
CTA	Charters Tower	17.38	235	P	P	08 57 39.7	+0.7
	0.2nm,0.3s,baz=70,slow=13,SNR=7.2						
	4.4nm,0.7s						
WRA	Warramunga Arr	27.65	247	P	P	08 59 22.8	+0.5
	1.4nm,0.8s,baz=77,slow=8.9,SNR=7.6						
WRA				LR	LR	09 09 58.8	
	comp=Z,84nm,18.9s,baz=64,slow=35						
	1.4nm,0.8s						
ASAR	Alice Springs	29.24	240	P	P	08 59 36.4	0.0
	0.3nm,0.4s,baz=63,slow=10.0,SNR=8.3						
	0.3nm,0.4s						
DAV	Davao City (W)	39.66	295	LR	LR	09 15 40.8	
	comp=Z,28nm,21.3s,baz=64,slow=33						
ILAR	Eielson Array	84.43	20	P	P	09 06 06.0	+0.5
	0.4nm,0.6s,baz=239,slow=5.2,SNR=7.6						
	0.4nm,0.6s						
MKAR	Makanchi Array	90.19	318	P	P	09 06 33.4	-0.4
	0.2nm,0.6s,baz=90,slow=3.0,SNR=1.9						
	0.2nm,0.6s						

IDC 05 09:03:29.3±2.1**, 8°.79S×127°.41E, h0^{km}, mb3.0**/1**, mbtmp3.3**/3**, ML3.2**/2**, Error ellipse: s-maj=126.9km s-min=27.4km az=62.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	12.95	150	Pn	Pn	09 06 35.2	+0.3
	0.1nm,0.3s,baz=319,slow=14,SNR=2.4						
WRA				Sn	Sn	09 08 59.9	+0.1
	0.3nm,0.3s,baz=332,slow=23,SNR=7.2						
	0.2nm,0.4s						
ASAR	Alice Springs	16.04	158	Pn	Pn	09 07 16.5	0.0
	0.2nm,0.3s,baz=339,slow=11,SNR=20						
ASAR				Sn	Sn	09 10 17.0	+1.8
	0.1nm,0.3s,baz=324,slow=26,SNR=4.8						
	0.8nm,0.4s						
MKAR	Makanchi Array	68.36	328	P	P	09 14 32.7	0.0
	0.1nm,0.4s,baz=123,slow=6.3,SNR=1.5						
	0.1nm,0.4s						

JMA 05 09:15:41.4±0.3**, 46°N**±2°×**14°4E**±°**, h325^{km}, MV3.5**/20**, NE OFF HOKKAIDO, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSE	Soyaes	1.06	224	*e*P	Pn	09 16 24.4	-0.2
JWK2	Keihoku	1.28	252	*e*P	Pn	09 16 25.6	-0.1
ASAJ	Asahikawa	1.77	205	*e*P	Pn	09 16 29.6	+0.8
JTKR	Abashiri--Toko	1.77	173	*e*P	Pn	09 16 29.3	+0.5
JAK	Akkeshi	2.84	164	*e*S	S	09 17 20.4	-1.8
JCH	Churui	3.12	184	*e*P	Pn	09 16 39.5	-0.5
JCH				*e*S	S	09 17 25.1	-2.0
JNBK	Urakawa-nobuka	3.50	191	*e*S	S	09 17 33.0	-0.9
JOT	Ohata	4.73	204	*e*P	Pn	09 16 57.0	+0.2
JANG	Nango	5.57	197	*e*P	Pn	09 17 06.2	-0.2

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*DDA **05** 09:25:59.7±0.0, 40°.75N×27°.38E, h7^{km}±2^{km}, ML2.3*

*ISK **05** 09:26:00.6, 40°.72N×27°.36E, h11^{km}±2^{km}, ML2.5/5*

*ATH **05** 09:26:01.2, 40°.62N×27°.32E, h13^{km}±5^{km}, ML2.1/2, Error ellipse: s-maj=13.4km s-min=4.4km az=66.0*

*THE **05** 09:26:02.3, 40°.72N×27°.37E, h31^{km}±4^{km}, ML2.1/4, Error ellipse: s-maj=4.9km s-min=0.8km az=166.0*

ISC 05 09:25:59.7±0.9**, 40°.74N**±0°.03×**27°.42E**±0°.03**, h15^{km}**±7^{km}**, n24, σ0^s.50**/41**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKY	Sarkoy-Tekirda	0.19	254	Pg	Pg	09 26 04.3	+0.1
RKY				Sg	Sg	09 26 06.9	-0.4
KRBG	Karabiga-Canak	0.36	195	Pg	Pb	09 26 07.8	0.0
KRBG				Sg	Sg	09 26 12.7	+0.7
KNL	Balıkesir	0.48	170	P	Pb	09 26 09.9	+0.2
KNL				S	Sb	09 26 16.9	+0.3
KESN	Edirne-Kesan	0.57	279	P	Pg	09 26 10.8	-0.3
KESN				S	Sg	09 26 17.9	-0.7
KESN				*i* AML	AML	09 26 19.0	
	comp=E,172nm,0.2s						
BAND	Balkesir-Ban	0.64	127	P	Pb	09 26 12.7	+0.1
BAND				S	Sn	09 26 22.6	-1.6
BAND				*i* AML	AML	09 26 26.0	
	comp=E,134nm,0.2s						
UKOP	Uzunkopru-Edir	0.71	303	Pg	Pb	09 26 14.2	+0.4
UKOP				Sg	Sb	09 26 24.2	+0.8
CAVK	Edirne/Enez-Ca	0.95	267	P	Pb	09 26 17.6	-0.3

CAVK				S	Sb	09 26 30.4	+0.1
CAVK				*i* AML	AML	09 26 33.0	
	comp=N,108nm,0.2s						
CAVK				*i* AML	AML	09 26 34.0	
	comp=E,78nm,0.3s						
ENEZ	**Enez**	0.96	270	P	Pb	09 26 17.9	-0.2
ENEZ				S	Sb	09 26 30.7	+0.1
BALY	**Balya**	1.01	171	P	Pn	09 26 19.5	+0.2
BALY				S	Sn	09 26 33.0	-0.4
BALY				*i* AML	AML	09 26 35.0	
	comp=N,85nm,0.4s						
ALN	**Alexandroupoli**	1.06	279	P	Pb	09 26 19.6	0.0
ALN				S	Sb	09 26 33.1	-0.2
	98nm,0.6s						
ALN	**Alexandroupoli**	1.06	279	P	Pb	09 26 19.8	+0.2
ALN				AML	AML	09 26 34.5	
	comp=E,161µm,0.4s						
ALN				AML	AML	09 26 35.0	
	comp=N,219µm,0.5s						
BKES	**Balkesir-Mer**	1.08	159	P	Pn	09 26 20.6	+0.3
BKES				S	Sn	09 26 36.1	+1.1
BKES				*i* AML	AML	09 26 37.0	
	comp=N,85nm,0.4s						
ARMN	**Kirklareli, Me**	1.12	0	P	Pg	09 26 21.6	+0.3
ARMN				S	Sn	09 26 36.2	+0.1
EDRB	**Edirne**	1.22	335	P	Pg	09 26 22.9	-0.2
EDRB				S	Sb	09 26 37.9	0.0
	comp=N,118nm,0.4s						
EDRB	**Edirne**	1.22	335	Pn	Pg	09 26 23.0	-0.2
ISK	**Istanbul-Kandi**	1.28	75	P	Pg	09 26 23.7	-0.6
ISK				S	Sg	09 26 41.1	+0.1
	comp=N,58nm,0.3s						
DURS	**Dursunbey**	1.40	144	P	Pg	09 26 26.5	0.0
DURS				S	Sg	09 26 45.2	+0.5
DURS				*i* AML	AML	09 26 48.0	
	comp=N,49nm,0.2s						
ULDT	**Uludag**	1.44	114	P	Pg	09 26 26.7	-0.6
SMTH	**Samothraki Isl**	1.47	260	P	Pn	09 26 25.4	-0.2
RDO	**Rodhopi**	1.48	286	P	Pn	09 26 26.2	+0.5
RDO				S	Sn	09 26 44.3	-0.6
	comp=N,60nm,0.3s						
RDO	**Rodhopi**	1.48	286	P	Pn	09 26 26.3	+0.5
RDO				S	Sn	09 26 44.7	-0.3
RDO				AML	AML	09 26 47.4	
	comp=N,141µm,0.2s						
RDO				AML	AML	09 26 48.7	
	comp=E,103µm,0.4s						
THAS	**Thassos island**	2.06	267	P	Pn	09 26 33.7	0.0
KAVA	**Kavala**	2.22	278	P	Pn	09 26 36.5	+0.6
OUR	**Ouranopolis**	2.65	262	P	Pn	09 26 41.5	-0.3

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*IDC **05** 09:28:25.2±1.9, 36°.25S×73°.78W, h0^{km}, mb3.5/3, mbtmp3.6/5, ML3.5/2, MS3.1/1, Error ellipse: s-maj=43.4km s-min=19.1km az=73.0*

*GUC **05** 09:28:26.7±0.6, 36°.11S×73°.68W, h18^{km}±8^{km}, ML3.8*

ISC 05 09:28:25.1±0.8**, 36°.18S**±0°.06×**73°.83W**±0°.06**, h10**^{km}**, n22, σ1^s.72**/24**, 4C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI05	**Punta Hualpn**	0.76	138	⇑*i*P	Pb	09 28 39.9	-0.5
BI05				*i* S	Sb	09 28 49.7	-1.2
BI05				IAML		09 28 51.3	
	comp=E,9µm,0.2s						
CCSP	**San Pedro de C**	0.88	139	⇓*i*P	Pg	09 28 41.8	-0.2
CCSP				*i* S	Sg	09 28 52.8	-0.6
CCSP				IAML		09 28 57.0	
	comp=N,15µm,0.3s						
GO05	**Huala**	1.94	53	⇑*i*P	Pn	09 28 56.6	-1.5
GO05				IAML		09 29 32.3	
	comp=E,943nm,0.3s						
BI04	**Isla Mocha**	2.22	181	IAML		09 29 54.8	
	comp=N,734nm,0.8s						
BO03	**Pichilemu**	2.27	43	⇑*i*P	Pn	09 29 01.7	-0.9
BO03				IAML		09 29 46.3	
	comp=N,448nm,0.6s						
BO02	**Sierra Bellavi**	2.85	62	⇓*i*P	Pn	09 29 10.2	-0.5
BO02				IAML		09 30 03.3	
	comp=N,777nm,0.3s						
BO01	**Tunca**	2.87	52	*e*P	Pn	09 29 10.6	-0.2
BO01				IAML		09 30 01.4	
	comp=N,196nm,0.4s						
VA05	**Santo Domingo**	3.11	36	⇑*i*P	Pn	09 29 13.0	-1.1
VA05				IAML		09 30 12.6	
	comp=N,233nm,0.4s						
VA05				IAML		09 30 18.6	
	comp=E,278nm,0.7s						
MT01	**Popeta**	3.13	43	⇓*i*P	Pn	09 29 13.5	-1.1
MT01				IAML		09 30 16.9	
	comp=E,121nm,0.8s						
MT09	**Talagante**	3.35	45	*e*P	Pn	09 29 17.4	-0.2
MT09				IAML		09 30 21.7	
	comp=N,309nm,0.4s						
FCH	**Farellones**	4.07	47	*e*P	Pn	09 29 27.7	-0.1
H03S1	**Juan Fernandez**	4.78	298	T	T	09 34 38.7	
	baz=118,slow=74,SNR=287						
H03S3	**Juan Fernandez**	4.79	298	T	T	09 34 39.9	
	baz=118,slow=74,SNR=318						
H03S2	**Juan Fernandez**	4.79	298	T	T	09 34 41.2	
	baz=118,slow=74,SNR=508						
H03N1	**Juan Fernandez**	5.00	302	Pn	Pn	09 29 42.4	+2.5
	baz=168,slow=25						
H03N1				Sn	Sn	09 30 34.8	-2.8
H03N1				T	T	09 34 55.2	
	baz=119,slow=72,SNR=15						
H03N3	**Juan Fernandez**	5.00	302	Pn	Pn	09 29 42.4	+2.5
	baz=168,slow=25						
H03N3				Sn	Sn	09 30 34.8	-2.8
H03N3				T	T	09 35 05.3	
	baz=119,slow=72,SNR=15						
H03N2	**Juan Fernandez**	5.01	302	Pn	Pn	09 29 42.6	+2.5
	baz=168,slow=25						
H03N2				Sn	Sn	09 30 35.0	-2.9
H03N2				T	T	09 35 08.7	
	baz=119,slow=72,SNR=14						
PLCA	**Paso Flores**	5.22	151	Pn	Pn	09 29 44.2	+0.9
	comp=N,0.3nm,0.3s,baz=336,slow=13,SNR=26						
PLCA				Sn	Sn	09 30 45.7	+2.2
	comp=N,0.6nm,0.3s,baz=354,slow=19,SNR=5.3						
PLCA				Lg	Lg	09 31 08.2	
	comp=N,1.6nm,0.3s,baz=250,slow=22,SNR=5.3						
	comp=N,0.8nm,0.3s						
CFA	**Coronel Fontan**	6.52	47	Pn	Pn	09 30 02.0	+0.9
	comp=N,2.6nm,0.3s,baz=230,slow=9.3,SNR=75						
CFA				Sn	Sn	09 31 16.0	+0.5
	comp=N,1.9nm,0.3s,baz=191,slow=20,SNR=1.7						
CFA				LR	LR	09 32 34.0	
	comp=N,140nm,18.3s,baz=299,slow=38						
	comp=N,6.1nm,0.3s						
LPAZ	**La Paz**	20.45	16	P	Pn	09 33 07.5	+1.9
	comp=N,2.0nm,0.8s,baz=187,slow=6.0,SNR=5.3						
	comp=N,2.0nm,0.8s						
SIV	**San Ignacio**	23.10	33	P	P	09 33 32.5	+1.3
	comp=N,2.5nm,1.0s,baz=200,slow=14,SNR=6.8						
	comp=N,2.5nm,1.0s						
TXAR	**Lajitas Array**	70.96	333	P	P	09 39 44.5	+1.8
	comp=N,0.4nm,0.8s,baz=148,slow=7.4,SNR=4.5						
	comp=N,0.4nm,0.8s						

IDC 05 09:39:46.6±2.0**, 2°.49N**×**128°.76E, h0**^{km}**, mb3.6**/5**, mbtmp3.6**/5**, Error ellipse: s-maj=171.3km s-min=22.1km az=69.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	22.96	166	P	P	09 44 52.6	-0.2
	0.5nm,0.8s,baz=345,slow=10,SNR=2.6						
	0.5nm,0.8s						
ASAR	**Alice Springs**	26.48	169	P	P	09 45 25.4	-0.3
	0.2nm,0.8s,baz=350,slow=7.4,SNR=2.1						
	0.2nm,0.8s						
MKAR	**Makanchi Array**	59.72	325	P	P	09 49 54.1	+0.9
	1.2nm,0.5s,baz=113,slow=8.2,SNR=26						
	1.2nm,0.5s						
ZALV	**Zalesovo Beam**	62.61	332	P	P	09 50 11.5	-1.1
	0.4nm,0.6s,baz=123,slow=7.1,SNR=2.4						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	63.87	327	P	P	09 50 20.9	-0.2
	1.1nm,0.5s,baz=126,slow=6.0,SNR=8.8						
	1.1nm,0.5s						

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*REN **05** 09:42:34±1.4, 39°.41N±0°.02×116°.85W±0°.03, h4^{km}±6^{km}, ML2.5/4, ML2.5/46(NEIC), Error ellipse: s-maj=3.8km s-min=2.0km az=66.0*

NEIC 05 09:42:33.7±0.9**, 39°.42N**±0°.03×**116°.80W**±0°.03**, h8**^{km}±5^{km}**, Error ellipse: s-maj=4.3km s-min=2.4km az=145.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
Q09A	**Carvers**	0.65	207		Pg	09 42 46.2	-0.2
Q09A					Sg	09 42 55.2	+0.2
Q09A	**Carvers**	0.65	207	IAML		09 42 58.1	
	comp=E,240nm,0.5s						
Q09A				IAML		09 43 03.0	
	comp=N,192nm,0.4s						
KVN	**Kaiserville**	1.07	250		Pg	09 42 53.7	-0.6
KVN					Sg	09 43 08.1	-0.1
KVN	**Kaiserville**	1.07	250	IAML		09 43 10.5	
	comp=N,66nm,0.5s						
KVN				IAML		09 43 12.0	
	comp=E,78nm,0.4s						
TPH	**Tonopah**	1.38	194		Pn	09 42 59.0	-0.4
R11A	**Troy Canyon, C**	1.43	138		Pn	09 42 59.7	-0.4
R11A					Sb	09 43 19.0	-0.1
R11A	**Troy Canyon, C**	1.43	138	IAML		09 43 21.7	
	comp=E,72nm,0.3s						
R11A				IAML		09 43 23.9	
	comp=N,49nm,0.2s						
NV11	**Mina Array Sit**	1.44	227		Pn	09 42 59.8	-0.4
NV11					Sn	09 43 19.2	-0.2
NVAR	**Mina Array Bea**	1.53	230		Pn	09 43 01.2	-0.3
Q12A	**Willow Creek R**	1.58	103		Pn	09 43 02.4	+0.2
LHV	**Little Huntoon**	1.77	229		Pb	09 43 06.3	0.0
LHV	**Little Huntoon**	1.77	229	IAML		09 43 37.1	
	comp=N,52nm,0.3s						
LHV				IAML		09 43 45.6	
	comp=E,61nm,0.8s						
ELK	**Elko**	1.79	42	Pn	Pn	09 43 05.0	-0.1
S11A	**Rachel**	1.96	155	Pn	Pn	09 43 07.5	+0.2
PAHR	**Pah Rah Range**	2.02	279		Pb	09 43 09.8	-0.9
PAHR				IAML		09 43 39.5	
	comp=E,35nm,0.8s						
PAHR				IAML		09 43 39.7	
	comp=N,34nm,0.9s						
MLNR	**Milner Canyon**	2.19	214		Pb	09 43 13.6	0.0
DSP	**Deep Springs**	2.24	205		Pb	09 43 13.8	-0.6
LCH	**Last Change Ra**	2.28	197		Pn	09 43 11.7	0.0
LCH	**Last Change Ra**	2.28	197	IAML		09 43 46.7	
	comp=N,36nm,0.5s						
LCH				IAML		09 43 47.4	
	comp=E,53nm,0.4s						
WVA	**Winnemucca Val**	2.39	284		Pb	09 43 17.4	+0.3
PRN	**Pahroc Range**	2.43	145		Pn	09 43 12.8	-1.1
PEAR	**Peavine Mounta**	2.45	275		Pb	09 43 18.1	0.0
TPNV	**Topopah Spring**	2.50	170		Pn	09 43 14.0	-0.8
WCT	**Wildcat Mounta**	2.62	177		Pn	09 43 16.4	0.0
WCT	**Wildcat Mounta**	2.62	177	IAML		09 43 57.5	
	comp=N,16nm,0.7s						
WCT				IAML		09 43 59.4	
	comp=E,30nm,0.6s						
BEKR	**Beckworth**	2.78	280		Pb	09 43 23.2	-0.6
AMDNV	**Amargosa**	2.99	172		Pn	09 43 20.4	-0.9
SHPR	**Sheep Range**	3.18	155		Pn	09 43 23.9	-0.3
KNB	**Kanab**	3.95	126		Pn	09 43 35.5	+0.8
KNB				IAML		09 44 55.9	
	comp=E,8.8nm,4.0s						
KNB				IAML		09 45 11.8	
	comp=N,7.7nm,4.7s						
V12A	**Nelson**	4.00	157		Pn	09 43 35.3	0.0
V12A	**Nelson**	4.00	157	IAML		09 44 41.7	
	comp=N,6.9nm,2.9s						
V12A				IAML		09 44 50.4	
	comp=E,6.4nm,2.5s						
HLID	**Hailey**	4.51	23	Pn	Pn	09 43 43.6	+1.1
HLID				IAML		09 44 39.3	
	comp=E,6.6nm,4.6s						
HLID				IAML		09 45 03.2	
	comp=E,7.0nm,5.0s						

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*IDC **05** 10:04:39.9±0.5, 37°.15N×141°.41E, h0^{km}, mb4.2/24, mbtmp4.2/31, ML3.3/6, MS3.5/27, Error ellipse: s-maj=14.8km s-min=11.9km az=113.0*

*NEIC **05** 10:04:43.0±1.8, 37°.24N±0°.04×141°.34E±0°.03, h14^{km}±4^{km}, mb4.6/49, Error ellipse: s-maj=5.2km s-min=3.0km az=167.0*

*JMA **05** 10:04:42.2±0.2, 37°.2N±0°.3×141°.4E±0°.9, h29^{km}±1^{km}, MD4.6/39, MW4.2/39, E OFF FUKUSHIMA PREF*

JMA Felt III J1 at E OFF FUKUSHIMA PREF .

*NIED **05** 10:04:42.2, 37°.19N×141°.43E, h29^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.90; $M_{\theta\theta}$1.10; $M_{\phi\phi}$0.80; $M_{r\theta}$1.09; $M_{\theta\phi}$0.99; $M_{\phi r}$1.17; Fault plane solution: $M_0$2.50000×10^{15} NP1: ϕ_s225.00000°, δ65.00000°, λ-94.00000°. NP2: ϕ_s54.00000°, δ25.00000°, λ-82.00000°.*

*MOS **05** 10:04:44.0±1.3, 37°.18N×141°.42E, h38^{km}, mb4.7/31 Error ellipse: s-maj=9.6km s-min=6.2km az=100.7*

ISC 05 10:04:44.8±0.8**, 37°.22N**±0°.03×**141°.33E**±0°.05**, h31**^{km}±4^{km}**, n262, σ1^s.28**/228**, mb4.5**/69**, MS3.6**/25**, 8C-8D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	0.39	292	P	Pb	10 04 51.7	-1.9
JFK				*e*S	Sb	10 04 59.0	-0.7
JFK	**Kawauchi**	0.39	292	A	A	10 04 51.7	
	comp=E,13nm,0.3s,comp=E,12nm,0.6s						
ONAJ	**Iwakimizuishiy**	0.44	254	P	Pb	10 04 52.4	-2.0
ONAJ				S	Sb	10 04 59.6	-1.3
ONAJ	**Iwakimizuishiy**	0.44	254	A	A	10 04 52.4	
	comp=E,179nm,0.3s,comp=E,68nm,0.3s						
JMST	**Minamisoumatoc**	0.61	325	P	Pb	10 04 55.3	-1.8
JMST				S	Sb	10 05 04.8	-0.7
JMST	**Minamisoumatoc**	0.61	325	A	A	10 04 55.3	
	comp=E,22nm,1.2s,comp=E,23nm,0.4s						
JFFD	**Fukushimafurud**	0.62	258	⇓P	Pb	10 04 55.6	-1.7
JFFD				⇓S	Sb	10 05 05.0	-0.9
JFFD	**Fukushimafurud**	0.62	258	A	A	10 04 55.6	
	comp=E,28nm,0.7s,comp=E,44nm,0.5s						
JMM	**Marumori**	0.77	327		Pn	10 04 57.5	-2.0
JMM				Sg	Sb	10 05 08.6	-1.3
JMM	**Marumori**	0.77	327	P	Pn	10 04 58.0	-1.5
JMM	**Marumori**	0.77	327	*i* P	Pn	10 04 57.8	-1.7
JMM				S	Sb	10 05 09.1	-0.9
JMM	**Marumori**	0.77	327	A	A	10 04 57.8	
	comp=E,13nm,0.4s,comp=E,14nm,0.3s						
JHO	**Hitachi**	0.86	225	⇓*i*P	Pn	10 04 58.0	-2.8
JHO				⇓S	Sb	10 05 10.1	-2.3
JHO	**Hitachi**	0.86	225	A	A	10 04 58.0	
	comp=E,6.0nm,1.0s,comp=E,7.0nm,0.8s						
JOTO	**OTAMA OYAMA**	0.86	294	*i* P	Pb	10 05 00.1	-1.1
JOTO				S	Sb	10 05 12.9	+0.4
JOTO	**OTAMA OYAMA**	0.86	294	A	A	10 05 00.1	
	comp=E,177nm,0.3s,comp=E,117nm,0.6s						
JHYU	**Hitachinakayam**	1.06	214	A	A	10 05 01.6	
	comp=E,10.0nm,1.0s,comp=E,11nm,0.4s						
JSB	**Shiboa**	1.15	258	⇓P	Pb	10 05 04.9	-1.3
JSB				⇓S	Sb	10 05 21.6	+0.8
JSB	**Shiboa**	1.15	258	A	A	10 05 04.9	
	comp=E,31nm,0.9s,comp=E,24nm,0.8s						
JYAR	**Yonezawaarcadi**	1.17	307	A	A	10 05 04.1	
	comp=E,60nm,1.1s,comp=E,60nm,0.9s						
JIO	**Ouri**	1.23	1	*i* P	Pn	10 05 04.0	-1.8
JIO				S	Sn	10 05 20.2	-1.3
JOU	**Okura**	1.26	336	*i* P	Pb	10 05 06.0	-2.0
JOU				S	Sb	10 05 23.4	-0.4
JOU	**Okura**	1.26	336	A	A	10 05 06.0	
	comp=E,16nm,0.9s,comp=E,22nm,0.9s						
JFY	**Yanaizu**	1.30	279	A	A	10 05 06.3	
	comp=E,12nm,1.2s,comp=E,12nm,0.5s						
JYT	**Yasato**	1.34	223	A	A	10 05 06.1	
	comp=E,21nm,0.3s,comp=E,11nm,0.4s						
JIHU	**Itakohorinouch**	1.41	207	A	A	10 05 06.7	
	comp=E,31nm,1.0s,comp=E,33nm,1.3s						
JYS	**Shirataka**	1.41	315	A	A	10 05 07.8	
	comp=E,32nm,0.8s,comp=E,42nm,1.5s						
JOFO	**Osakifurukawao**	1.42	347	A	A	10 05 07.4	
	comp=E,60nm,1.1s,comp=E,54nm,1.4s						
CHOJ	**Chosi**	1.56	194	A	A	10 05 08.7	
	comp=E,8.0nm,1.9s,comp=E,7.0nm,1.3s						
JAG	**Ashikaga**	1.70	243	A	A	10 05 11.7	
	comp=E,3.0nm,0.4s,comp=E,3.0nm,0.5s						
JNS	**Sasagawa**	1.70	291	A	A	10 05 12.2	
	comp=E,9.0nm,1.7s,comp=E,8.0nm,1.4s						
JSMT	**Sammumatsuo**	1.73	204	A	A	10 05 11.3	
	comp=E,16nm,1.4s,comp=E,26nm,2.0s						
JMK	**Ichinoseki**	1.73	357	A	A	10 05 11.8	
	comp=E,7.0nm,1.1s,comp=E,3.0nm,2.4s						
JUON	**Uonuma**	1.81	270	A	A	10 05 13.7	
	comp=E,7.0nm,0.8s,comp=E,8.0nm,1.2s						
JYK	**Kaneyama**	1.86	336	A	A	10 05 14.1	
	comp=E,5.0nm,1.9s,comp=E,5.0nm,1.8s						
JYA	**Atsumi**	1.87	318	A	A	10 05 14.5	
	comp=E,22nm,0.7s,comp=E,32nm,1.0s						
JYYZ	**Yamagatayuza**	2.10	329	A	A	10 05 17.7	
	comp=E,17nm,1.6s,comp=E,16nm,1.5s						
JIZZ	**Izumozaki**	2.11	279	A	A	10 05 18.0	
	comp=E,20nm,2.4s,comp=E,23nm,4.2s						
JRG	**Rokugo**	2.24	346	A	A	10 05 19.4	
	comp=E,4.0nm,3.2s,comp=E,4.0nm,4.5s						
JGK	**Kuni**	2.25	254	A	A	10 05 19.9	
	comp=E,4.0nm,2.7s,comp=E,6.0nm,2.4s						
JYW	**Yuwa**	2.48	340	A	A	10 05 22.9	
	comp=E,12nm,2.2s,comp=E,14nm,1.6s						
JJN	**Nakama**	2.53	268	A	A	10 05 24.0	
	comp=E,9.0nm,2.1s,comp=E,6.0nm,4.5s						
JSZI	**Iwateshizukuis**	2.53	354	A	A	10 05 23.9	
	comp=E,6.0nm,3.3s,comp=E,10.0nm,1.9s						
JSD	**Sado**	2.57	289	Pn	Pn	10 05 24.3	+0.1
JSD	**Sado**	2.57	289	P	Pn	10 05 25.0	+0.8
MJAR	**Matsushiro Arr**	2.59	256	Pn	Pn	10 05 24.1	-0.4
	3.6nm,0.3s,baz=324,slow=18,SNR=219						
MJAR				Sn	Sb	10 06 01.5	-0.5
	11nm,0.3s,baz=70,slow=16,SNR=3.3						
	27nm,0.3s						
MAJO	**Matsushiro**	2.59	256	Pn	Pn	10 05 25.4	+0.8
MAJO	**Matsushiro**	2.59	256	P	Pn	10 05 26.1	+1.5
MAJO	**Matsushiro**	2.59	256	*i* P	Pn	10 05 25.7	+1.1
JTM	**Tenmabayashi**	3.57	357	Pn	Pn	10 05 37.3	-0.6
JTM	**Tenmabayashi**	3.57	357	P	Pn	10 05 38.9	+0.9
JGF	**Kuroka**	3.58	244	Pn	Pn	10 05 38.7	+0.4
JGF	**Kuroka**	3.58	244	P	Pn	10 05 40.0	+1.7
JSG	**Sagara**	3.60	226	Pn	Pn	10 05 38.9	+0.5
JSG	**Sagara**	3.60	226	P	Pn	10 05 40.3	+1.9
INU	**Inuyama**	3.95	243	Pn	Pn	10 05 44.2	+1.0
INU	**Inuyama**	3.95	243	P	Pn	10 05 44.8	+1.6
JHJ2	**Mitsune**	4.28	197	Pn	Pn	10 05 47.9	+0.1
JHJ2	**Mitsune**	4.28	197	P	Pn	10 05 48.6	+0.8
JHJ	**Hachijo jima 2**	4.28	198	Pn	Pn	10 05 47.3	-0.5
	31nm,0.3s,baz=298,slow=21,SNR=8.8						
JHJ				Sn	Sn	10 06 36.0	-0.7
	39nm,0.3s,baz=54,slow=22,SNR=4.9						
	54nm,0.3s						
ERM	**Erimo**	4.99	16	Pn	Pn	10 05 56.3	-1.2
ERM	**Erimo**	4.99	16	P	Pn	10 05 57.7	+0.2
ERM	**Erimo**	4.99	16	P	Pn	10 05 56.3	-1.2
JEM	**Erimo**	4.99	16	P	Pn	10 05 57.8	+0.3
JKA	**Kamikawa-asahi**	6.96	8	Pn	Pn	10 06 23.1	-1.4
ASAJ	**Asahikawa**	6.96	8	Pn	Pn	10 06 23.5	-1.0
	1.3nm,0.3s,baz=213,slow=11,SNR=12						
ASAJ				Sn	Sn	10 07 40.8	-1.7
	baz=52,slow=34						
ASAJ				LR	LR	10 09 15.9	
	comp=Z,148nm,20.6s,baz=68,slow=39						
	4.7nm,0.3s						
JMN	**Monobe**	7.00	242	Pn	Pn	10 06 25.2	0.0
JMN	**Monobe**	7.00	242	P	Pn	10 06 26.4	+1.2
JHS	**Saijyo**	7.00	254	Pn	Pn	10 06 27.4	+2.2
JHS	**Saijyo**	7.00	254	P	Pn	10 06 27.5	+2.3
JNU	**Nakatsue**	9.48	248	Pn	Pn	10 06 58.7	-0.4
	0.1nm,0.3s,baz=35,slow=24,SNR=1.7						
	2.4nm,0.8s						
YSS	**Yuzh-Sakhalins**	9.78	6	*e*P	Pn	10 07 08.2	+4.9
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
USRK	**Ussuriysk Ar.**	9.94	317	Pn	Pn	10 07 06.9	+1.5
	comp=Z,0.3nm,0.3s,baz=132,slow=13,SNR=14						
USRK				LR	LR	10 10 39.5	
	comp=Z,245nm,19.3s,baz=140,slow=36						
	comp=Z,7.0nm,0.7s						
USRK	**Ussuriysk Ar.**	9.94	317	Pn	Pn	10 07 03.9	-1.4
USA0B	**Ussuriysk Arra**	9.94	317	Pn	Pn	10 07 04.2	-1.1
USA0B	**Ussuriysk Arra**	9.94	317	P	Pn	10 07 04.2	-1.1
JCJ	**Chichijima**	10.12	176	Pn	Pn	10 07 05.3	-2.6
	comp=Z,68nm,0.8s,baz=274,slow=18,SNR=1.9						
JCJ				Sn	Sn	10 08 53.6	-6.8
	comp=Z,1.8nm,0.3s,baz=300,slow=20,SNR=1.5						
JCJ				LR	LR	10 11 32.4	
	comp=Z,154nm,18.8s,baz=40,slow=41						
JCJ	**Chichijima**	10.12	176	Pn	Pn	10 07 08.4	+0.4
JCJ	**Chichijima**	10.12	176	P	Pn	10 07 08.8	+0.8
KSRS	**Korea Array**	10.68	275	Pn	Pn	10 07 19.4	+3.9
	comp=Z,0.1nm,0.3s,baz=82,slow=14,SNR=2.6						
KSRS				LR	LR	10 10 51.8	
	comp=Z,126nm,21.9s,baz=95,slow=34						
KSRS	**Korea Array**	10.68	275	*e*P	Pn	10 07 26.0	+11
KSAR	**Wonju Array Be**	10.71	275	Pn	Pn	10 07 15.0	-0.9
KSAR	**Wonju Array Be**	10.71	275	P	Pn	10 07 15.0	-0.9
TYV	**Tymovskoe**	13.67	4	*e*P	P	10 08 03.7	-1.0
TYV				pmax	pmax		
	comp=Z,300nm,5.7s						
TYV				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CN2	**Changchun**	13.74	304	*e*P	P	10 08 00.8	-4.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KLR	**Kul'dur**	13.87	333	Pn	P	10 08 02.3	-4.7
	comp=Z,0.1nm,0.3s,baz=294,slow=18,SNR=3.7						
KLR				LR	LR	10 13 14.2	
	comp=Z,164nm,18.4s,baz=148,slow=37						
KLR	**Kul'dur**	13.87	333	*ce*P	P	10 08 04.5	-2.5
KLR				pmax	pmax		
	comp=Z,11nm,2.5s						
HEH	**HeiHe**	16.42	327	*e*P	P	10 08 48.8	+14
HEH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HEH				pmax	pmax		
	comp=Z,320nm,5.1s						
ZEA	**Zeya**	19.18	334	*e*P	Pn	10 09 11.8	+5.1
ZEA				pmax	pmax		
	comp=N,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PETK	**Petropavlovsk-**	19.56	31	P	Pn	10 09 09.4	-1.9
	comp=Z,0.1nm,0.3s,baz=223,slow=7.7,SNR=2.5						
	comp=Z,3.0nm,0.9s						
MA2	**Magadan**	23.19	12	LR	LR	10 20 11.9	
	comp=Z,72nm,19.7s,baz=74,slow=40						
YAK	**Yakutsk**	25.87	347	LR	LR	10 20 26.5	
	comp=Z,92nm,20.9s,baz=186,slow=36						
YAK	**Yakutsk**	25.87	347	*ce*P	P	10 10 18.9	+5.5
YAK				pmax	pmax		
	comp=Z,15nm,0.6s						
SEY	**Seymchan**	26.62	11	P	P	10 10 20.6	+0.4
	comp=Z,4.5nm,1.0s,baz=208,slow=10,SNR=6.4						
	comp=Z,4.5nm,1.0s						
SEY	**Seymchan**	26.62	11	*ce*P	P	10 10 21.7	+1.5
SEY				pmax	pmax		
	comp=Z,26nm,1.3s						
BOD	**Bodaibo**	27.33	328	*e*P	P	10 10 26.9	+0.3
BOD				pmax	pmax		
	comp=Z,9.0nm,2.0s						
SONM	**Songino Array**	27.62	304	P	P	10 10 30.2	+0.7
	comp=Z,2.1nm,0.8s,baz=107,slow=8.2,SNR=12						
SONM				LR	LR	10 21 44.1	
	comp=Z,57nm,18.2s,baz=350,slow=37						
	comp=Z,2.1nm,0.8s						
SONM	**Songino Array**	27.62	304	P	P	10 10 30.1	+0.6
SONM	**Songino Array**	27.62	304	P	P	10 10 30.1	+0.6
SONM				pmax	pmax		
	comp=Z,4.0nm,1.1s						
H11N2	**WAKE ISLAND Hy**	28.30	121	T	T	10 40 06.7	
	baz=314,slow=75,SNR=295						
H11N1	**WAKE ISLAND Hy**	28.31	121	T	T	10 40 07.8	
	baz=314,slow=75,SNR=278						
H11N3	**WAKE ISLAND Hy**	28.32	121	T	T	10 40 10.8	
	baz=314,slow=75,SNR=230						
H11S1	**WAKE ISLAND Hy**	29.02	123	T	T	10 41 00.7	
	baz=316,slow=74						
H11S3	**WAKE ISLAND Hy**	29.02	123	T	T	10 41 00.4	
	baz=316						
H11S2	**WAKE ISLAND Hy**	29.04	123	T	T	10 41 02.6	
	baz=316,slow=74						
ZAK	**Zakamensk**	30.10	308	*e*P	P	10 10 52.4	+1.0
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BILL	**Bilibino**	33.87	17	⇑*e*P	P	10 11 24.9	+0.7
BILL				*e*		10 12 45.6	
BILL				*e*S	S	10 16 46.9	+0.8
BILL				pmax	pmax		
	comp=Z,2.0nm,1.3s						

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BILL                                MLR     MLR
         comp=Z,33nm,11.0s
PZH      PanZhiHua         35.05 264  P       P        10 11 34.8  -0.2
PZH                                 pmax    pmax
         comp=Z,10.0nm,0.6s
PZH                                 pmax    pmax
         comp=Z,150nm,5.7s
TIXI     Tiksi             35.10 353  P       P        10 11 34.2  -0.5
         comp=Z,0.5nm,0.2s,baz=270,slow=24,SNR=1.2
TIXI                                LR      LR       10 25 41.4
         comp=Z,37nm,21.3s,baz=201,slow=36
         comp=Z,0.5nm,0.2s
TIXI     Tiksi             35.10 353ceP     P        10 11 37.9 +3.2
TIXI                                pmax    pmax
         comp=Z,2.0nm,0.9s
DGZ      Jazzator, Alta    40.23 306 i P     P        10 12 20.2 +1.6
DGZ                                 pmax    pmax
         comp=Z,14nm,1.1s
CMAR     Chiang Mai Arr    41.48 255  P       P        10 12 29.3 +0.3
         comp=Z,0.9nm,0.5s,baz=52,slow=5.5,SNR=4.1
CMAR                                LR      LR       10 29 14.2
         comp=Z,18nm,18.0s,baz=55,slow=36
         comp=Z,0.9nm,0.5s
CMAR     Chiang Mai Arr    41.48 255 eP       P        10 12 32.0 +3.0
CMAR                                pmax    pmax
         comp=Z,1.0nm,0.6s
ZAA0     Zalesovo Array    41.74 312          P        10 12 30.1  -0.6
ZAA0                                IAmb    IAmb     10 12 38.5
         comp=Z,7.4nm,0.9s
ZALV     Zalesovo Beam     41.74 312  P       P        10 12 30.8 +0.1
         comp=Z,4.3nm,0.9s,baz=93,slow=7.4,SNR=15
ZALV                                PcP     PcP      10 14 26.1  -0.6
         comp=Z,1.1nm,0.7s,baz=96,slow=1.4,SNR=3.4
ZALV                                LR      LR       10 30 29.3
         comp=Z,50nm,19.2s,baz=81,slow=37
         comp=Z,4.3nm,0.9s
ZALV     Zalesovo Beam     41.74 312  P       P        10 12 30.4  -0.3
ZALV     Zalesovo Beam     41.74 312 eP       P        10 12 32.4 +1.7
ZALV                                pmax    pmax
         comp=Z,6.0nm,0.9s
NRIK     Noril'sk          43.07 335 i P     P        10 12 46.7 +5.4
NRIK                                pmax    pmax
         comp=Z,2.0nm,0.4s
MK31     Makanchi Array    43.96 302  P       P        10 12 48.2  -0.7
MK31     Makanchi Array    43.96 302  P       P        10 12 48.2  -0.7
MK31                                pmax    pmax
         comp=Z,6.0nm,1.0s
MKAR     Makanchi Array    43.96 302  P       P        10 12 49.6 +0.8
         comp=Z,3.8nm,0.8s,baz=89,slow=9.4,SNR=18
MKAR                                PcP     PcP      10 14 34.4 +0.1
         comp=Z,0.6nm,0.8s,baz=86,slow=4.6,SNR=2.2
MKAR                                LR      LR       10 31 16.1
         comp=Z,33nm,18.4s,baz=27,slow=36
         comp=Z,3.8nm,0.8s
MKAR     Makanchi Array    43.96 302  P       P        10 12 48.8  -0.1
MKAR     Makanchi Array    43.96 302 eP       P        10 12 50.3 +1.4
MKAR                                pmax    pmax
         comp=Z,4.0nm,0.8s
MAKZ     Makanchi          44.17 302  P       P        10 12 50.6   0.0
MAKZ                                IAmb    IAmb     10 12 58.1
         comp=Z,6.3nm,0.9s
MAKZ     Makanchi          44.17 302  P       P        10 12 50.6   0.0
MAKZ                                pmax    pmax
         comp=Z,6.0nm,1.0s
KURK     Kurchatov         45.76 308          P        10 13 03.4 +0.3
KURK     Kurchatov         45.76 308  P       P        10 13 03.4 +0.3
KURK                                pmax    pmax
         comp=Z,31nm,1.2s
K20K     Telida            46.22  34  P       P        10 13 06.9 +0.4
IMAR     Indian Mountai    46.53  31  P       P        10 13 10.2 +1.2
KDAK     Kodiak Island     47.01  42  P       P        10 13 11.4  -1.4
KDAK     Kodiak Island     47.01  42  P       P        10 13 11.4  -1.4
KDAK                                pmax    pmax
         comp=Z,54nm,1.5s
CAST     Castle Rocks      47.11  34  P       P        10 13 14.2 +0.7
CAST                                IAmb    IAmb     10 13 49.7
         comp=Z,12nm,1.5s
BPAW     Bear Paw Mtn.     47.61  33  P       P        10 13 17.4   0.0
BPAW                                IAmb    IAmb     10 13 33.8
         comp=Z,8.0nm,1.4s
KTH      Kantishna Hill    47.63  34  P       P        10 13 18.2 +0.5
KTH                                 IAmb    IAmb     10 13 24.9
         comp=Z,12nm,1.2s
MLY      Manley            47.73  32  P       P        10 13 19.7 +1.3
MLY                                 IAmb    IAmb     10 13 25.7
         comp=Z,4.5nm,1.0s
COLD     Coldfoot          48.02  29  P       P        10 13 20.5  -0.1
GHO      Glory Hole Cre    48.61  36  P       P        10 13 25.7 +0.5
MDM      Murphy Dome       48.80  32  P       P        10 13 26.2  -0.4
MDM                                 IAmb    IAmb     10 13 29.0
         comp=Z,8.4nm,1.0s
KNK      Knik Glacier      48.85  37  P       P        10 13 27.9 +0.9
SML      Sawmill           48.88  36  P       P        10 13 27.2  -0.1
H24K     Noodor Dome       48.93  31  P       P        10 13 27.8 +0.1
H24K                                IAmb    IAmb     10 13 35.3
         comp=Z,6.2nm,1.1s
SCM      Sheep Creek Mo    49.36  36  P       P        10 13 29.3  -1.7
SCM                                 IAmb    IAmb     10 14 12.9
         comp=Z,16nm,1.4s
SCM      Sheep Creek Mo    49.36  36  P       P        10 13 29.3  -1.7
SCM                                 pmax    pmax
         comp=Z,16nm,1.4s
IL31                       49.38  32  P       P        10 13 30.5  -0.4
IL31                                IAmb    IAmb     10 13 37.1
         comp=Z,5.9nm,0.9s
ILAR     Eielson Array     49.38  32  P       P        10 13 31.6 +0.7
         comp=Z,3.0nm,0.8s,baz=271,slow=6.4,SNR=38
         comp=Z,3.0nm,0.8s
ILAR     Eielson Array     49.38  32  P       P        10 13 30.6  -0.3
HNR      Honiara           49.59 156  LR      LR       10 32 05.1
         comp=Z,534nm,20.3s,baz=159,slow=33
BMAR     Burnt Mountain    50.20  29  P       P        10 13 38.5 +1.1
AAK      Ala-Archa         50.34 298  LR      LR       10 35 27.2
         comp=Z,68nm,18.8s,baz=67,slow=37
BVAR     Borovoye Array    50.39 312  LR      LR       10 36 18.1
         comp=Z,62nm,18.4s,baz=78,slow=38
BRVK     Borovoye          50.45 312  P       P        10 13 40.5 +1.2
BRVK     Borovoye          50.45 312ceP     P        10 13 41.4 +2.1
BRVK                                pmax    pmax
         comp=Z,13nm,2.5s
SCRK     Sand Creek        50.69  33  P       P        10 13 41.4 +0.3
SCRK                                IAmb    IAmb     10 13 47.4
         comp=Z,7.1nm,1.0s
COEN     Coen              50.93 178  P       P        10 13 44.7 +1.5
COEN                                IAmb    IAmb     10 13 44.9
         comp=Z,6.7nm,1.1s
K27K     Chicken           51.52  33  P       P        10 13 48.5 +1.3
K27K                                IAmb    IAmb     10 13 54.4
         comp=Z,6.2nm,1.0s
BCAR     Beaver Creek A    51.78  34  P       P        10 13 49.6 +0.4
EGAK     Eagle             51.82  32  P       P        10 13 49.8 +0.4
DAWY     Dawson            52.68  33  P       P        10 13 56.5 +0.6
I29M     Ogilvie Camp,     52.93  31  P       P        10 13 58.2 +0.5
I29M                                IAmb    IAmb     10 14 00.1
         comp=Z,7.5nm,0.8s
KK31     Karatay Array     52.97 300  P       P        10 13 58.5 +0.2
KK31     Karatay Array     52.97 300  P       P        10 13 58.5 +0.2
KK31                                pmax    pmax
         comp=Z,4.0nm,1.1s
KKAR     Karatay Array     52.97 300  P       P        10 13 57.9  -0.4
KKAR     Karatay Array     52.97 300  P       P        10 13 57.9  -0.4
EPYK     Eagle Plains      53.40  30  P       P        10 14 01.6 +0.5
KNRA     Kununurra         53.93 195  P       P        10 14 05.2  -0.3
INK      Inuvik            54.25  27  P       P        10 14 08.2 +1.0
         comp=Z,3.0nm,0.8s,baz=278,slow=6.7,SNR=10
         comp=Z,3.0nm,0.8s
INK      Inuvik            54.25  27  P       P        10 14 08.1 +0.8
INK                                 IAmb    IAmb     10 14 09.2
         comp=Z,4.7nm,0.9s
INK      Inuvik            54.25  27  P       P        10 14 08.1 +0.8
INK                                 pmax    pmax
         comp=Z,5.0nm,1.0s
SVE      Sverdlovsk        54.96 319 eP       P        10 14 14.2 +1.6
CHGR     Chuyangaron       55.52 295  P       P        10 14 17.6 +0.5
CHGR                                pmax    pmax
         comp=Z,18nm,0.6s
ARU      Arti              56.17 318  LR      LR       10 40 47.9
         comp=Z,78nm,18.9s,baz=138,slow=38
ARU      Arti              56.17 318c iP      P        10 14 21.1  -0.2
ARU                                                  10 15 16.8
ARU                                                  10 16 32.2
ARU                                 S       S        10 22 08.8 +0.5
ARU                                 SS      SS       10 25 52.5  -1.9
ARU                                 pmax    pmax
         comp=Z,7.0nm,0.9s
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WB0      Warramunga Arr    57.06 188  P       P        10 14 27.2  -0.7
WB0                                 IAmb    IAmb     10 15 00.2
         comp=Z,6.2nm,0.9s
WRAB     Tennant Creek     57.23 188  P       P        10 14 28.1  -1.0
WRAB                                IAmb    IAmb     10 15 05.1
         comp=Z,16nm,1.5s
WRAB     Tennant Creek     57.23 188  P       P        10 14 28.1  -1.0
WRAB                                pmax    pmax
         comp=Z,16nm,1.5s
WR0      Warramunga Arr    57.23 188  P       P        10 14 28.3  -0.8
WR0                                 IAmb    IAmb     10 15 00.0
         comp=Z,4.9nm,1.1s
WB2      Warramunga Arr    57.23 188  P       P        10 14 27.8  -1.3
WB2                                 IAmb    IAmb     10 14 28.8
         comp=Z,15nm,1.5s
WRA      Warramunga Arr    57.23 188  P       P        10 14 28.3  -0.9
         comp=Z,2.5nm,0.8s,baz=4.4,slow=7.2,SNR=21
         comp=Z,2.5nm,0.8s
WRA      Warramunga Arr    57.23 188  P       P        10 14 28.4  -0.8
WRA      Warramunga Arr    57.23 188 eP       P        10 14 28.0  -1.2
WRA                                 pmax    pmax
         comp=Z,3.0nm,0.8s
ABKAR    Akbulak array     57.77 310  P       P        10 14 33.1 +0.4
KIRV     Kirov             60.06 323  LR      LR       10 41 27.7
         comp=Z,61nm,18.6s,baz=17,slow=37
KIRV     Kirov             60.06 323ceP     P        10 14 48.9 +0.5
SPB2     Spitsbergen Ar    60.33 349  P       P        10 14 50.7 +0.7
ASAR     Alice Springs     60.96 188  P       P        10 14 54.5  -0.5
         comp=Z,1.7nm,0.8s,baz=11,slow=5.8,SNR=18
         comp=Z,1.7nm,0.8s
ASAR     Alice Springs     60.96 188  P       P        10 14 53.6  -1.4
DZM      Mont Dzumac       63.55 154  LR      LR       10 36 51.4
         comp=Z,39nm,21.0s,baz=34,slow=30
KLMR     Klimovskoe        63.56 328 eP       P        10 15 11.1  -0.8
KLMR                                AMP              10 15 13.4
         comp=Z,23nm,2.2s
KLMR     Klimovskoe        63.56 328 eP       P        10 15 11.1  -0.8
KLMR                                pmax    pmax
         comp=Z,23nm,2.2s
GEYT     Alibeck           63.68 299  P       P        10 15 13.9 +0.7
         comp=Z,2.0nm,0.6s,baz=198,slow=9.0,SNR=3.9
         comp=Z,2.0nm,0.6s
YKA      Yellowknife Ar    63.68  30  P       P        10 15 12.4  -0.3
         comp=Z,1.2nm,0.7s,baz=301,slow=6.7,SNR=20
         comp=Z,1.2nm,0.7s
YKA      Yellowknife Ar    63.68  30 eP       P        10 15 13.3 +0.6
YKA                                 pmax    pmax
         comp=Z,1.0nm,0.7s
ARCES    ARCESS Array B    63.80 339  P       P        10 15 13.7 +0.2
         comp=Z,3.4nm,0.9s,baz=62,slow=8.3,SNR=2.4
ARCES                               LR      LR       10 48 27.3
         comp=Z,40nm,18.2s,baz=322,slow=41
         comp=Z,3.4nm,0.9s
ARCES    ARCESS Array B    63.80 339 eP       P        10 15 18.7 +5.3
ARCES                               pmax    pmax
         comp=Z,3.0nm,0.8s
FIA1     FINESS Array S    68.61 332  P       P        10 15 44.3  -0.1
FINES    FINESS Array B    68.62 332  P       P        10 15 44.8 +0.4
         comp=Z,3.9nm,0.8s,baz=35,slow=7.0,SNR=9.7
FINES                               LR      LR       10 48 09.4
         comp=Z,57nm,18.6s,baz=15,slow=38
         comp=Z,3.9nm,0.8s
FINES    FINESS Array B    68.62 332  P       P        10 15 44.3  -0.1
FINES    FINESS Array B    68.62 332 eP       P        10 15 47.7 +3.3
FINES                               pmax    pmax
         comp=Z,7.0nm,0.7s
STKA     Stephens Creek    68.74 180  P       P        10 15 44.3  -1.1
         comp=Z,2.5nm,0.8s,baz=255,slow=5.0,SNR=4.6
         comp=Z,2.5nm,0.8s
STKA     Stephens Creek    68.74 180 eP       P        10 15 46.0 +0.6
STKA                                pmax    pmax
         comp=Z,3.0nm,0.8s
FORT     Forrest           68.78 192  P       P        10 15 46.0 +0.3
PINE     Pine Mountain     70.27  50  P       P        10 15 56.7 +1.4
KBZ      Khabaz            70.73 311  P       P        10 15 58.5 +0.8
         comp=Z,3.0nm,0.8s,baz=324,slow=2.4,SNR=8.3
         comp=Z,3.0nm,0.8s
KIV      Kislovodsk        70.73 311 eP       P        10 15 59.7 +1.8
KIV                                 pmax    pmax
         comp=Z,11nm,1.1s
WALA     Waterton Lakes    71.35  42  P       P        10 16 02.8 +1.2
WALA                                IAmb    IAmb     10 16 03.7
         comp=Z,3.7nm,0.8s
GNI      Garni             71.54 307  LR      LR       10 50 40.5
         comp=Z,23nm,18.9s,baz=57,slow=38
BMO      Blue Mountains    71.86  47  P       P        10 16 04.2  -0.5
BMO      Blue Mountains    71.86  47  P       P        10 16 04.2  -0.5
BMO                                 pmax    pmax
         comp=Z,3.0nm,0.9s
MNK      Minsk             72.30 326 i P      P        10 16 06.3  -0.7
         comp=E,3.0nm,1.0s
MNK                                i P      P        10 16 06.3  -0.7
         comp=N,45nm,0.8s
MNK                                i P      P        10 16 06.3  -0.7
         comp=Z,9.0nm,0.8s,baz=230
MNK                                i pP     PcP      10 16 22.8  -2.1
MNK                                i PcP    sP       10 16 23.5 +3.1
MNK                                i PP     PP       10 18 47.8 +0.5
MNK                                i PPP    PPP      10 20 32.1
MNK                                i S      S        10 25 26.3  -1.6
MNK                                i sS     SKSac    10 25 54.7   -14
MNK                                i ScS    SKKSac   10 26 07.7  -1.5
MNK                                i SS     SS       10 30 06.8 +1.6
MNK                                i SSS    SSS      10 33 27.3
MNK                                i LR     LR       10 48 48.9
MNK                                i LRM    MLR      10 50 25.6
         comp=Z,81nm,18.1s
MNK                                i LRM    MLR      10 50 32.6
         comp=N,398nm,16.8s
MNK                                i LRM    MLR      10 51 18.4
         comp=E,7.0nm,14.2s
MNK      Minsk             72.30 326 i P      P        10 16 06.3  -0.7
MNK                                i *PP    PcP      10 16 22.8  -2.1
MNK                                i                 10 16 23.5
MNK                                i                 10 18 47.8
MNK                                i PPP    PPP      10 20 32.1
MNK                                i S      S        10 25 26.2  -1.6
MNK                                i *SS    SKSac    10 25 54.7   -14
MNK                                i                 10 26 07.6
MNK                                i SS     SS       10 30 06.7 +1.6
MNK                                 pmax    pmax
         comp=Z,9.0nm,0.8s
MNK                                 pmax    pmax
         comp=N,45nm,0.8s
MNK                                 pmax    pmax
         comp=E,3.0nm,1.0s
MNK                                 MLR     MLR
         comp=Z,81nm,18.0s
MNK                                 MLR     MLR
         comp=N,398nm,17.0s
MNK                                 MLR     MLR
         comp=E,7.0nm,14.0s
NACGM    Naroch            72.53 327 eP       P        10 16 01.3  -7.0
         baz=49
SOC      Sochi             72.72 312 eP       P        10 16 04.3  -5.4
SOC                                e                 10 18 50.6
SOC                                ePPP     PPP      10 20 32.6
SOC                                eS       S        10 25 22.2   -11
SOC                                eSS      SS       10 30 12.5 +0.4
SOC                                eSSS     SSS      10 33 22.4
SOC                                 MLR     MLR
         comp=Z,155nm,20.0s
FFC      Flin Flon         73.59  33  P       P        10 16 14.9 +0.3
FFC                                 IAmb    IAmb     10 16 16.2
         comp=Z,6.4nm,1.0s
FFC      Flin Flon         73.59  33  P       P        10 16 14.9 +0.3
FFC                                 pmax    pmax
         comp=Z,6.0nm,1.0s
FCC      Fort Churchill    73.87  27  P       P        10 16 16.2 +0.1
FCC                                 IAmb    IAmb     10 16 18.2
         comp=Z,11nm,1.2s
FCC      Fort Churchill    73.87  27  P       P        10 16 16.3 +0.1
FCC                                 pmax    pmax
         comp=Z,11nm,1.3s
HFS      Hagfors           73.89 336  LR      LR       10 51 00.2
         comp=Z,83nm,18.7s,baz=346,slow=38
NC204    NORSAR Array S    73.94 338  P       P        10 16 16.4  -0.2
NB2      NORSAR Subarra    73.99 337  P       P        10 16 17.6 +0.7
         comp=Z,7.7nm,1.0s,baz=38,slow=6.2
NOA      NORSAR Array B    73.99 337  P       P        10 16 17.3 +0.3
         comp=Z,1.9nm,0.8s,baz=38,slow=5.9,SNR=5.8
NOA                                 LR      LR       10 51 08.8
         comp=Z,29nm,20.9s,baz=30,slow=38
         comp=Z,1.9nm,0.8s
NOA      NORSAR Array B    73.99 337 eP       P        10 16 22.1 +5.2
NOA                                 pmax    pmax
```

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         comp=Z,3.0nm,0.8s
LRM      Limekiln Ridge    74.06  44  P       P        10 16 18.7 +0.8
AKASG    Malin Array Be    74.11 322  P       P        10 16 17.9 +0.2
         comp=Z,3.2nm,0.5s,baz=46,slow=6.2,SNR=13
AKASG                               LR      LR       10 49 34.9
         comp=Z,45nm,18.7s,baz=28,slow=36
         comp=Z,3.2nm,0.5s
EGMT     Eagleton          74.18  41  P       P        10 16 18.7 +0.4
EGMT                                IAmb    IAmb     10 16 25.0
         comp=Z,9.9nm,1.0s
BOZ      Bozeman (W)       74.66  44  P       P        10 16 22.3 +1.0
BOZ                                 IAmb    IAmb     10 16 28.2
         comp=Z,3.7nm,0.8s
BOZ      Bozeman (W)       74.66  44  P       P        10 16 22.3 +1.0
BOZ                                 pmax    pmax
         comp=Z,4.0nm,0.8s
NVAR     Mina Array Bea    74.93  53  P       P        10 16 22.2  -0.9
         comp=Z,1.2nm,0.6s,baz=284,slow=6.0,SNR=5.5
         comp=Z,1.2nm,0.6s
FXWY     Fox Creek         76.20  45  P       P        10 16 31.3 +1.0
PDAR     Pinedale Array    77.59  45  P       P        10 16 38.1   0.0
         comp=Z,1.3nm,0.8s,baz=286,slow=1.8,SNR=12
         comp=Z,1.3nm,0.8s
PDAR     Pinedale Array    77.59  45  P       P        10 16 37.7  -0.3
BUR08    Bucovina Ar. S    78.11 322  P       P        10 16 41.5 +0.8
BUR08                               IAmb    IAmb     10 16 48.1
         comp=Z,4.6nm,1.0s
BURAR    Bucovina Array    78.12 322  P       P        10 16 40.2  -0.6
BRTR     Keskin Array B    78.67 311  P       P        10 16 44.3 +0.2
         comp=Z,1.1nm,1.0s,baz=92,slow=4.8,SNR=3.0
         comp=Z,1.1nm,1.0s
BRTR     Keskin Array B    78.67 311 eP       P        10 16 50.1 +6.0
BRTR                                pmax    pmax
         comp=Z,2.0nm,1.0s
ULM      Lac du Bonnet     79.39  33  P       P        10 16 47.0  -0.6
         comp=Z,2.6nm,0.8s,baz=319,slow=4.5,SNR=3.4
         comp=Z,2.6nm,0.8s
ULM      Lac du Bonnet     79.39  33 eP       P        10 16 48.4 +0.9
ULM                                 pmax    pmax
         comp=Z,3.0nm,0.7s
DRGR                       79.92 322  P       P        10 16 51.5 +0.9
DRGR                                pmax    pmax
         comp=Z,9.0nm,2.1s
MORC     Moravsky Berou    80.16 327  P       P        10 16 52.9 +1.1
MORC                                pmax    pmax
         comp=Z,8.0nm,0.9s
DPC      Dobruska-Polom    80.26 328 eP       P        10 16 53.5 +1.1
DPC                                epP      PcP      10 16 58.0  -1.5
DPC      Dobruska-Polom    80.26 328 eP       P        10 16 53.5 +1.1
KRLC     Kraliky           80.27 327 eP       P        10 16 59.4 +7.0
VYHS     Vyhne             80.53 325 eP       P        10 16 55.3 +1.4
VYHS     Vyhne             80.53 325 eP       P        10 16 55.2 +1.4
CLL      Collm             80.90 330 i P      P        10 16 56.3 +0.6
         comp=Z,5.0nm,0.9s
CLL                               ⇓ipP     PcP      10 17 00.9  -1.3
         comp=Z,11nm,1.2s
CLL      Collm             80.90 330⇓iP      P        10 16 56.3 +0.6
CLL                                 pmax    pmax
         comp=Z,5.0nm,0.9s
VRAC     Vranov            80.93 327  LR      LR       10 56 05.7
         comp=Z,36nm,18.0s,baz=350,slow=38
VRAC     Vranov            80.93 327  P       P        10 16 56.9 +1.0
VRAC                                pmax    pmax
         comp=Z,7.0nm,1.6s
PRU      Pruhonice         81.29 328 eP       P        10 16 58.7 +0.9
PRU      Pruhonice         81.29 328 eP       P        10 16 58.7 +0.9
KHC      Kasperske Hory    82.35 328 eP       P        10 17 03.9 +0.5
KHC                                ex       x        10 17 13.6
KHC      Kasperske Hory    82.35 328 eP       P        10 17 03.9 +0.5
KHC                                e                 10 17 13.6
GERES    GERESS Array B    82.52 328  P       P        10 17 04.7 +0.3
         comp=Z,0.5nm,0.5s,baz=0.0,slow=4.0,SNR=6.1
         comp=Z,0.5nm,0.5s
GERES    GERESS Array B    82.52 328 eP       P        10 17 05.0 +0.6
GERES                               pmax    pmax
         comp=Z,1.0nm,0.5s
VTS      Vitosha           82.59 319  P       P        10 17 06.5 +1.5
DAVOX    Davos/Dischmat    85.73 329  LR      LR       11 01 24.8
         comp=Z,55nm,18.6s,baz=259,slow=40
TXAR     Lajitas Array     90.06  52  P       P        10 17 42.8 +0.9
         comp=Z,1.1nm,0.7s,baz=300,slow=3.0,SNR=18
         comp=Z,1.1nm,0.7s
ESDC     Sonseca Array     97.09 334  LR      LR       11 06 01.0
         comp=Z,39nm,18.7s,baz=320,slow=38
TORD     Torodi Ar. Bea   117.15 315  PKP     PKiKP    10 23 26.4  -0.9
         comp=Z,0.2nm,0.5s,baz=16,slow=0.2,SNR=1.2
LPAZ     La Paz           146.66  59  PKPbc   PKiKP    10 24 25.2  -2.2
         comp=Z,2.7nm,0.6s,baz=333,slow=2.7,SNR=8.7
H03N2    Juan Fernandez   147.11  96  T       T        13 09 18.9
         baz=291,slow=76,SNR=18
H03N3    Juan Fernandez   147.12  96  T       T        13 09 19.9
         baz=291,slow=76,SNR=17
H03N1    Juan Fernandez   147.13  96  T       T        13 09 22.2
         baz=291,slow=76,SNR=25
```

IDC 05 10:10:40.8±4.9**, 27°.82S×64°.95E, h0**^{km}**, mb3.7**/3**,**
mbtmp3.7/3**, Error ellipse: s-maj=184.4km**
s-min=43.8km az=48.0, Southwest Indian Ridge

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Code     Station Name         Δ°   AZ°   Phase ID         Time      Res
                                    Op      ISC        h  m  s    ISC
H08S1    Diego Carcia H    21.29  21  T       T        10 37 45.7
         baz=200
H08S2    Diego Garcia H    21.30  21  T       T        10 37 17.2
         baz=200
H08S3    Diego Garcia H    21.31  21  T       T        10 37 18.8
         baz=200
ASAR     Alice Springs     61.51 103  P       P        10 20 60.0   0.0
         0.8nm,0.9s,baz=245,slow=6.9,SNR=6.4
         0.8nm,0.9s
MKAR     Makanchi Array    75.90  12  P       P        10 22 28.8  -0.2
         0.4nm,0.8s,baz=203,slow=7.7,SNR=3.9
         0.4nm,0.8s
ZALV     Zalesovo Beam     83.22  12  P       P        10 23 08.9 +0.3
         1.0nm,0.6s,baz=197,slow=3.9,SNR=5.2
         1.0nm,0.6s
YKA      Yellowknife Ar   145.32 360  PKPbc   PKPbc    10 30 18.8  -0.9
         0.5nm,0.9s,baz=345,slow=3.6,SNR=6.7
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*SKHL **05** 10:11:27.6±0.8, 47°.50N×147°.20E, h410^{km}±9^{km}, mb4.7/3,*
msh4.8/9
*MOS **05** 10:11:28.7±0.9, 47°.74N×146°.86E, h417^{km}, mb3.8/12,*
Error ellipse: s-maj=10.8km s-min=7.5km az=77.3
*IDC **05** 10:11:29.8±1.4, 47°.75N×146°.91E, h418^{km}±15^{km},*
mb3.1/20, mbtmp3.9/27, Error ellipse: s-maj=12.8km
s-min=9.9km az=138.0
*JMA **05** 10:11:29.8±0.5, 47°N±3°×14°7E±°, h451^{km}, MV3.8/20,*
SOUTHERN SEA OF OKHOTSK
*NEIC **05** 10:11:30.5±1.3, 47°.7N±0°.1×146°.9E±0°.2, h423^{km}±9^{km},*
mb4.0/21, Error ellipse: s-maj=20.2km s-min=14.4km
az=134.0
ISC 05 10:11:28.0±0.4**, 47°.50N**±0°.05×**147°.04E**±0°.05**, h403**^{km}**,**
n152, σ**2.s00**/174**, mb3.7**/33**, 2C-1D, Northwest of Kuril**
Islands

```
Code     Station Name         Δ°   AZ°   Phase ID         Time      Res
                                    Op      ISC        h  m  s    ISC
KUR      Kuril'sk           2.33 166 eP       P        10 12 28.1 +1.7
KUR                                 AMB     AMB      10 12 29.0
         20nm,0.3s
KUR                                eS       S        10 13 16.1 +2.4
KUR                                 A       A        10 13 19.5
         30nm,0.6s
KUR                                 A       A        10 13 19.5
         50nm,0.6s
YSS      Yuzh-Sakhalins     2.97 261  P       P        10 12 34.7 +3.6
YSS      Yuzh-Sakhalins     2.97 261  P       P        10 12 34.6 +3.6
YSS      Yuzh-Sakhalins     2.97 261α iPN     P        10 12 34.7 +3.6
YSS                                eS       S        10 13 25.0 +2.7
YSS                                 pmax    pmax
         comp=Z,120nm,0.9s
YSS                                 smax    smax
         comp=E,30nm,0.8s
YSS      Yuzh-Sakhalins     2.97 261 eP       P        10 12 34.0 +3.0
YSS                                 AMB     AMB      10 12 35.1
         comp=E,120nm,0.9s
YSS                                 AMB     AMB      10 12 37.6
         comp=E,300nm,2.0s
YSS                                eS       S        10 13 25.4 +3.1
YSS                                 A       A        10 13 27.3
         comp=E,30nm,0.5s
YSS                                 A       A        10 13 27.3
         comp=E,30nm,0.5s
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YSS				A	A	10 13 29.0	
	comp=E,300nm,3.0s						
YSS				A	A	10 13 29.0	
	comp=E,400nm,3.0s						
YUK	Yuzh-Kuril'sk	3.56	194	*e*P	P	10 12 37.2	+1.1
YUK				AMB	AMB	10 12 39.3	
	comp=E,50nm,0.3s						
YUK				*e*S	S	10 13 30.5	-1.0
YUK				A	A	10 13 41.1	
	comp=E,240nm,0.3s						
YUK				A	A	10 13 41.1	
	comp=E,240nm,0.3s						
SHO	Shikotan	3.63	182	*i* P	P	10 12 37.9	+1.2
SHO				AMB	AMB	10 12 39.6	
	comp=E,80nm,0.2s						
SHO				*i* S	S	10 13 32.0	-0.7
SHO				A	A	10 13 35.9	
	comp=E,360nm,0.3s						
SHO				A	A	10 13 35.9	
	comp=E,230nm,0.3s						
UGL	Uglegorsk	3.68	297	*e*P	P	10 12 39.4	+2.4
UGL				AMB	AMB	10 12 39.6	
	comp=E,70nm,0.4s						
UGL				AMB	AMB	10 12 43.0	
	comp=E,800nm,4.0s						
UGL				*e*S	S	10 13 34.6	+1.3
UGL				A	A	10 13 50.5	
	comp=E,600nm,4.0s						
UGL				A	A	10 13 50.5	
	comp=E,500nm,4.0s						
UGL				A	A	10 13 50.9	
	comp=E,30nm,0.4s						
UGL				A	A	10 13 50.9	
	comp=E,30nm,0.4s						
JRA	Rausu	3.80	201	P	P	10 12 41.3	+3.0
JTKR	Abashiri--Toko	4.15	213	*e*P	P	10 12 44.7	+3.2
JTKR				*e*S	S	10 13 44.1	+2.6
JWK2	Keihoku	4.17	240	*e*P	P	10 12 46.0	+4.3
NMR	Nemuro--Hokkai	4.23	193	*i* P	P	10 12 43.2	+0.9
NMR				*i* S	S	10 13 42.1	-0.8
NEM2	Nemuro 2	4.23	193	*e*P	P	10 12 43.0	+0.7
NEM2				*e*S	S	10 13 41.9	-1.1
JNK	Nakash	4.24	203	P	P	10 12 45.0	+2.6
TYV	Tymovskoe	4.43	321	*e*PN	P	10 12 45.7	+1.7
TYV				*e*S	S	10 13 45.9	-0.3
TYV				pmax	pmax		
	comp=Z,37nm,0.6s						
TYV				pmax	pmax		
	comp=Z,200nm,2.8s						
TYV				smax	smax		
	comp=N,18nm,0.9s						
TYV				smax	smax		
	comp=E,18nm,0.9s						
TYV				smax	smax		
	comp=N,200nm,5.3s						
TYV				smax	smax		
	comp=E,600nm,5.3s						
TYV	Tymovskoe	4.43	321	*e*P	P	10 12 45.7	+1.7
TYV				AMB	AMB	10 12 46.0	
	comp=E,40nm,0.6s						
TYV				AMB	AMB	10 12 46.1	
	comp=E,200nm,2.8s						
TYV				*e*S	S	10 13 46.3	+0.1
TYV				A	A	10 13 47.3	
	comp=E,20nm,0.8s						
TYV				A	A	10 13 47.3	
	comp=E,20nm,0.8s						
TYV				A	A	10 13 47.5	
	comp=E,200nm,4.5s						
TYV				A	A	10 13 47.5	
	comp=E,600nm,4.5s						
JKA	Kamikawa-asahi	4.59	224	P	P	10 12 49.4	+3.6
JKA	Kamikawa-asahi	4.59	224	*e*P	P	10 12 49.4	+3.6
ASAJ	Asahikawa	4.59	224	P	P	10 12 49.1	+3.3
	comp=E,2.4nm,0.3s,baz=52,slow=8.5,SNR=7.1						
ASAJ	Asahikawa	4.59	224	PN	P	10 12 49.4	+3.6
AKK	Akkeshi	4.74	200	*e*P	P	10 12 48.5	+1.2
AKK				*e*S	S	10 13 53.2	+1.1
JAR	Ashorobuto	4.79	210	*e*P	P	10 12 50.5	+2.6
JAK	Akkeshi	4.79	201	*e*P	P	10 12 49.1	+1.3
JAK				*e*S	S	10 13 51.8	-1.3
JCH	Churui	5.53	209	*e*P	P	10 12 56.5	+1.0
JCH				*e*S	S	10 14 04.3	-2.8
JBT2	Biratori 2	5.76	217	*e*P	P	10 13 00.2	+2.3
JNBK	Urakawa-nobuka	6.04	212	P	P	10 13 01.9	+1.0
JNBK				*e*S	S	10 14 13.8	-3.3
JEM	Erimo	6.14	208	P	P	10 13 05.2	+3.3
ERM	Erimo	6.14	208	P	P	10 13 05.1	+3.2
ERM	Erimo	6.14	208	P	P	10 13 05.1	+3.2
ERM	Erimo	6.14	208	PN	P	10 13 05.1	+3.2
SKR	Severo-Kuril's	6.76	59	*e*P	P	10 13 08.6	-0.8
SKR				AMB	AMB	10 13 14.8	
	comp=E,110nm,0.8s						
JOT	Ohata	7.46	217	*e*P	P	10 13 17.6	+0.2
JOT				*e*S	S	10 14 41.1	-5.0
PAU	Pauzhetka	7.50	54	*e*P	P	10 13 17.6	0.0
PAU				AMB	AMB	10 13 21.6	
	comp=E,150nm,0.6s						
JTM	Tenmabayashi	7.96	215	P	P	10 13 24.3	+1.3
JTM	Tenmabayashi	7.96	215	P	P	10 13 24.3	+1.3
JSI2	Shiura 2	8.00	219	*e*P	P	10 13 23.5	+0.2
JSI2				*e*S	S	10 14 52.3	-4.9
JANG	Nango	8.16	211	*e*S	S	10 14 55.2	-5.4
JIW	Iwasaki	8.56	219	*e*P	P	10 13 29.6	0.0
JIW				*e*S	S	10 15 05.0	-4.0
PEA0B	Petropavlovsk-	8.83	47	P	P	10 13 33.7	+1.3
PEA0B	Petropavlovsk-	8.83	47	PN	P	10 13 33.7	+1.3
PETK	Petropavlovsk-	8.83	47	P	P	10 13 33.2	+0.9
	comp=E,2.6nm,0.7s,baz=221,slow=9.2,SNR=7.3						
PETK				S	S	10 15 17.7	+3.2
	comp=E,4.4nm,0.9s,baz=74,slow=7.9,SNR=2.7						
PETK	Petropavlovsk-	8.83	47	P	P	10 13 33.5	+1.1
PETK	Petropavlovsk-	8.83	47	PN	P	10 13 33.5	+1.1
PET	Petropavlovsk	9.27	49	*e*PN	P	10 13 39.5	+2.4
PET				*e*S	S	10 15 22.3	-1.1
PET				MLR	MLR		
	comp=Z,200nm,14.0s						
PET	Petropavlovsk	9.27	49	*e*P	P	10 13 38.7	+1.6
PET				AMB	AMB	10 13 45.4	
	comp=Z,10.0nm,0.7s						
KLR	Kul'dur	10.32	285	P	P	10 13 50.2	+1.3
	comp=Z,5.2nm,0.6s,baz=83,slow=9.3,SNR=22						
KLR	Kul'dur	10.32	285	*i* PN	P	10 13 49.9	+0.9
KLR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KLR	Kul'dur	10.32	285	*e*P	P	10 13 50.4	+1.4
KLR				AMB	AMB	10 13 51.0	
	comp=Z,10.0nm,0.6s						
JMM	Marumori	10.66	208	P	P	10 13 55.9	+3.1
JMM	Marumori	10.66	208	P	P	10 13 56.2	+3.3
USRK	Ussuriysk Ar.	11.01	258	P	P	10 13 57.2	+0.6
	comp=Z,5.1nm,0.7s,baz=68,slow=10,SNR=8.4						
USRK	Ussuriysk Ar.	11.01	258	P	P	10 13 57.0	+0.5
JSD	Sado	11.44	217	P	P	10 14 04.6	+3.2
MJA0	Matsu Arr-Jizo	12.74	214	*e*PN	P	10 14 19.1	+3.3
MJA0				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MJB9	Matsu-Tunnel	12.75	214	P	P	10 14 20.1	+4.1
MAJO	Matsushiro	12.75	214	P	P	10 14 19.2	+3.3
MAJO	Matsushiro	12.75	214	PN	P	10 14 19.2	+3.3
MJAR	Matsushiro Arr	12.75	214	P	P	10 14 19.1	+3.2
	comp=Z,3.2nm,0.6s,baz=18,slow=11,SNR=15						
HEH	HeiHe	13.21	289	*e*P	P	10 14 20.6	-0.1
HEH				pmax	pmax		
	comp=Z,25nm,0.7s						
HEH				pmax	pmax		
	comp=Z,240nm,5.5s						
JGF	Kuroka	13.91	215	P	P	10 14 31.6	+3.0
JGF	Kuroka	13.91	215	P	P	10 14 31.6	+3.0
ZEA	Zeya	14.01	304	*e*P	P	10 14 31.5	+2.2
INU	Inuyama	14.26	215	P	P	10 14 35.1	+2.8
INU	Inuyama	14.26	215	P	P	10 14 35.9	+3.6
KROS	Kirovskiy	14.39	306	*e*P	P	10 14 34.0	+0.4
KROS				AMB	AMB	10 14 34.4	
	comp=Z,40nm,0.4s						
SEY	Seymchan	15.76	9	P	P	10 14 49.4	+1.3
	comp=Z,0.7nm,0.5s,baz=13,slow=23,SNR=1.5						
SEY	Seymchan	15.76	9	*i* P	P	10 14 47.2	-0.9
SEY	Seymchan	15.76	9	*e*P	P	10 14 47.2	-0.9
KSRS	Korea Array	17.27	241	P	P	10 15 07.1	+2.6
	comp=Z,5.3nm,0.7s,baz=45,slow=10,SNR=21						
KS19	Wonju Array Si	17.27	242	P	P	10 15 07.6	+3.0
KS19				IAmb	IAmb	10 15 08.2	
	comp=Z,15nm,1.1s						
KSAR	Wonju Array Be	17.30	241	P	P	10 15 07.1	+2.2
KSAR	Wonju Array Be	17.30	241	P	P	10 15 07.1	+2.2
KSAR	Wonju Array Be	17.30	241	*e*P	P	10 15 07.1	+2.2
YAK	Yakutsk	17.58	332	*i* P	P	10 15 05.2	-2.3
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
JNU	Nakatsue	18.87	226	P	P	10 15 23.0	+1.5
	comp=Z,10nm,0.8s,baz=96,slow=1.8,SNR=6.9						
SONM	Songino Array	27.16	286	P	P	10 16 35.8	-0.6
	comp=Z,0.4nm,0.5s,baz=81,slow=8.9,SNR=2.2						
	comp=Z,0.4nm,0.5s						
CHGN	Chignik	33.96	54	P	P	10 17 34.3	-0.8
IMAR	Indian Mountai	35.64	37	P	P	10 17 49.3	0.0
GHO	Glory Hole Cre	38.02	44	P	P	10 18 09.6	+0.3
COLA	College	38.14	39	*i* P	P	10 18 09.9	-0.1
ILAR	Eielson Array	38.56	39	P	P	10 18 13.2	-0.3
	comp=Z,0.5nm,0.8s,baz=258,slow=6.2,SNR=5.5						
	comp=Z,0.5nm,0.8s						
DGZ	Jazzator, Alta	38.58	296	*i* P	P	10 18 14.0	-0.1
DGZ				pmax	pmax		
	comp=Z,7.0nm,2.9s						
ZALV	Zalesovo Beam	38.77	303	P	P	10 18 13.6	-1.8
	comp=Z,0.4nm,0.3s,baz=78,slow=7.4,SNR=2.6						
	comp=Z,0.4nm,0.3s						
BMAR	Burnt Mountain	39.24	35	P	P	10 18 19.1	0.0
GOMU	GeErMu	39.81	273	P	P	10 18 23.1	-1.5
GOMU				pmax	pmax		
	comp=Z,8.0nm,0.8s						
K27K	Chicken	40.74	40	P	P	10 18 31.3	+0.1
K27K				IAmb	IAmb	10 18 50.0	
	comp=Z,8.5nm,1.4s						
M27K	Edge Creek, AK	41.18	42	P	P	10 18 35.7	+0.8
M27K				IAmb	IAmb	10 18 38.1	
	comp=Z,11nm,1.4s						
MK31	Makanchi Array	42.88	294	P	P	10 18 47.8	-0.8
MK31	Makanchi Array	42.88	294	P	P	10 18 47.8	-0.8
MK31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	Makanchi Array	42.88	294	P	P	10 18 47.7	-0.9
	comp=Z,1.1nm,0.5s,baz=74,slow=7.4,SNR=18						
	comp=Z,1.1nm,0.5s						
MKAR	Makanchi Array	42.88	294	P	P	10 18 48.0	-0.7
MKAR	Makanchi Array	42.88	294	*e*P	P	10 18 47.9	-0.7
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	42.88	294	*e*P	P	10 18 47.9	-0.7
INK	Inuvik	43.24	32	P	P	10 18 50.4	-0.6
	comp=Z,0.4nm,0.3s,baz=278,slow=7.2,SNR=5.6						
	comp=Z,0.4nm,0.3s						
INK	Inuvik	43.24	32	P	P	10 18 50.9	-0.1
INK				IAmb	IAmb	10 19 26.4	
	comp=Z,4.3nm,1.4s						
INK	Inuvik	43.24	32	P	P	10 18 50.9	-0.1
INK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
KURK	Kurchatov	43.46	301	*i* P	P	10 18 51.4	-1.6
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURK	Kurchatov	43.46	301	*i* P	P	10 18 51.4	-1.6
BRVK	Borovoye	47.18	307	*i* P	P	10 19 20.4	-1.3
BRVK				pmax	pmax		
	comp=Z,13nm,3.5s						
BRVK	Borovoye	47.18	307	*e*P	P	10 19 20.4	-1.3
PHRA	Phrae	47.76	249	P	P	10 19 27.8	+1.2
CMAR	Chiang Mai Arr	48.61	250	P	P	10 19 34.3	+1.3
	comp=Z,1.5nm,0.3s,baz=34,slow=7.8,SNR=4.8						
	comp=Z,1.5nm,0.3s						
CMAR	Chiang Mai Arr	48.61	250	*e*P	P	10 19 35.6	+2.6
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
TAPN	Taplejung	49.94	268	*e*P	P	10 19 44.2	+0.9
	comp=Z,6.2nm,0.3s						
JIRN	Jiri	50.77	270	*e*P	P	10 19 49.9	+0.4
GUN	Gumba	50.83	270	*e*P	P	10 19 49.9	+0.1
RAMN	Ramite	50.95	269	*e*P	P	10 19 50.9	+0.2
	comp=Z,25nm,0.5s						
RES	Resolute Bay	51.41	17	P	P	10 19 52.0	-0.9
RES	Resolute Bay	51.41	17	P	P	10 19 52.0	-0.9
ARU	Arti	51.60	315	*d i*P	P	10 19 53.1	-1.5
ARU				*PP	pP	10 21 17.1	+1.0
ARU						10 21 50.8	
ARU				S	S	10 26 40.5	-3.2
ARU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ARU	Arti	51.60	315	*i* P	P	10 19 53.1	-1.5
KK31	Karatay Array	51.97	295	P	P	10 19 57.0	-0.6
KK31	Karatay Array	51.97	295	P	P	10 19 57.0	-0.6
KKAR	Karatay Array	51.97	295	P	P	10 19 56.7	-0.8
KKAR	Karatay Array	51.97	295	P	P	10 19 56.7	-0.8
DANN	Dangsing	51.98	272	*e*P	P	10 19 58.9	+0.7
	comp=Z,20nm,0.6s						
PYUN	Piuthan	52.66	272	*e*P	P	10 20 03.5	+0.5
	comp=Z,11nm,0.5s						
YKA	Yellowknife Ar	52.76	35	P	P	10 20 01.5	-1.4
	comp=Z,0.3nm,0.7s,baz=304,slow=6.8,SNR=5.7						
	comp=Z,0.3nm,0.7s						
YKA	Yellowknife Ar	52.76	35	*e*P	P	10 20 03.6	+0.7
GAR	Garm	54.41	291	P	P	10 20 15.3	0.0
GAR				IAmb	IAmb	10 20 15.7	
	comp=Z,8.9nm,0.7s						
ABKAR	Akbulak array	54.71	307	P	P	10 20 16.0	-1.1
ABKAR				IAmb	IAmb	10 20 16.4	
	comp=Z,2.1nm,0.5s						
CHGR	Chuyangaron	55.34	291	P	P	10 20 21.5	-0.3
CHGR	Chuyangaron	55.34	291	P	P	10 20 21.5	-0.3
ARCES	ARCESS Array B	55.72	339	P	P	10 20 22.4	-1.4
	comp=Z,1.6nm,0.9s,baz=46,slow=7.8,SNR=1.2						
	comp=Z,1.6nm,0.9s						
COEN	Coen	61.27	184	P	P	10 21 04.7	+2.4
COEN				IAmb	IAmb	10 21 05.5	
	comp=Z,3.5nm,0.8s						
FIA1	FINESS Array S	61.51	332	P	P	10 21 02.0	-1.4
FINES	FINESS Array B	61.52	332	P	P	10 21 01.2	-2.1
	comp=Z,1.3nm,0.5s,baz=51,slow=8.5,SNR=14						
	comp=Z,1.3nm,0.5s						
FINES	FINESS Array B	61.52	332	P	P	10 21 01.8	-1.6
FINES	FINESS Array B	61.52	332	*e*P	P	10 21 01.7	-1.6
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GEYT	Alibeck	62.62	297	P	P	10 21 10.4	-0.6
	comp=Z,4.0nm,0.6s,baz=90,slow=1.6,SNR=6.2						
	comp=Z,4.0nm,0.6s						
NVAR	Mina Array Bea	65.69	59	P	P	10 21 31.2	+0.2
	comp=Z,1.2nm,0.7s,baz=308,slow=8.9,SNR=2.4						
	comp=Z,1.2nm,0.7s						
NOA	NORSAR Array B	66.09	338	P	P	10 21 31.6	-1.3
	comp=Z,0.8nm,0.6s,baz=32,slow=6.6,SNR=7.7						
	comp=Z,0.8nm,0.6s						
KBZ	Khabaz	67.28	310	P	P	10 21 40.6	0.0
	comp=Z,1.5nm,0.5s,baz=112,slow=4.0,SNR=7.1						
	comp=Z,1.5nm,0.5s						
KBZ	Khabaz	67.28	310	*i* P	P	10 21 39.6	-1.0
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KBZ	Khabaz	67.28	310	*i* P	P	10 21 39.6	-1.0
PD31	Pinedale Array	67.57	51	P	P	10 21 42.8	0.0
PD31				IAmb	IAmb	10 22 12.7	
	comp=Z,2.2nm,1.4s						
PDAR	Pinedale Array	67.57	51	P	P	10 21 43.3	+0.6
	comp=Z,1.2nm,0.7s,baz=8.4,slow=0.6,SNR=11						
	comp=Z,1.2nm,0.7s						
PDAR	Pinedale Array	67.57	51	P	P	10 21 43.6	+0.9
WB0	Warramunga Arr	67.91	193	P	P	10 21 45.9	+1.2
WB0				IAmb	IAmb	10 22 05.5	
	comp=Z,9.2nm,1.3s						
WR0	Warramunga Arr	68.08	193	P	P	10 21 46.4	+0.7
WR0				IAmb	IAmb	10 22 01.9	
	comp=Z,8.6nm,1.4s						
WRA	Warramunga Arr	68.09	193	P	P	10 21 46.9	+1.1
	comp=Z,0.9nm,0.6s,baz=8.3,slow=6.5,SNR=12						
	comp=Z,0.9nm,0.6s						
WRA	Warramunga Arr	68.09	193	P	P	10 21 46.7	+0.9
WRA	Warramunga Arr	68.09	193	*e*P	P	10 21 47.3	+1.5
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	68.53	323	P	P	10 21 46.3	-1.8
	comp=Z,0.5nm,0.4s,baz=34,slow=6.1,SNR=4.1						
	comp=Z,0.5nm,0.4s						
AKASG	Malin Array Be	68.53	323	*e*P	P	10 21 46.7	-1.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAR	Alice Springs	71.81	193	P	P	10 22 10.3	+2.3
	comp=Z,0.5nm,0.5s,baz=10,slow=5.8,SNR=14						
	comp=Z,0.5nm,0.5s						
BUR08	Bucovina Ar. S	72.57	323	P	P	10 22 11.6	-0.8
BUR08				IAmb	IAmb	10 22 38.9	
	comp=Z,6.6nm,1.5s						
BURAR	Bucovina Array	72.58	323	P	P	10 22 11.1	-1.4
BRTR	Keskin Array B	74.92	313	P	P	10 22 24.9	-1.2
	comp=Z,0.5nm,0.7s,baz=62,slow=3.9,SNR=2.7						
	comp=Z,0.5nm,0.7s						
GERES	GERESS Array B	75.86	330	P	P	10 22 30.2	-0.9
	comp=Z,0.1nm,0.4s,baz=358,slow=9.8,SNR=1.4						
	comp=Z,0.1nm,0.4s						
TXAR	Lajitas Array	80.64	57	P	P	10 22 57.1	-0.3
	comp=Z,1.2nm,0.6s,baz=262,slow=3.0,SNR=13						
	comp=Z,1.2nm,0.6s						
PLCA	Paso Flores	152.38	90	PKPbc	PKiKP	10 30 37.0	+0.2
	comp=Z,0.8nm,0.4s,baz=315,slow=3.8,SNR=10						

JMA 05 10:11:37.9±0.1**, 37°.2N**±0°.3×**141°.5E**±0°.5**, h18**^{km}±1^{km}**,**
MV1.4/23**, E OFF FUKUSHIMA PREF, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.50	291	P	Pg	10 11 47.6	-0.3
JFK				*e*S	Sb	10 11 55.0	-0.1
ONAJ	Iwakimizuishiy	0.53	261	*e*S	Sg	10 11 55.6	-0.2
JMST	Minamisoumatoc	0.70	320	*e*P	Pb	10 11 51.2	-0.3
JMST				*e*S	Sg	10 12 00.9	0.0
JFFD	Fukushimafurud	0.72	262	P	Pb	10 11 51.6	-0.3
JFFD				*e*S	Sb	10 12 01.2	-0.4
JMM	Marumori	0.86	322	*e*P	Pb	10 11 53.9	-0.3
JMM				*e*S	Sb	10 12 05.3	0.0
JOTO	OTAMA OYAMA	0.97	293	*e*P	Pb	10 11 56.1	-0.1
JOTO				*e*S	Sb	10 12 08.8	+0.2
JIO	Ouri	1.26	356	*e*P	Pn	10 12 00.5	-0.1
JIO				*e*S	Sn	10 12 17.2	+0.1

IDC ***05*** *10:16:03.1±1.8, 36°.17S×73°.43W, h0^{km}, mb3.4/3, mbtmp3.5/5, ML3.6/2, MS2.7/2, Error ellipse: s-maj=32.1km s-min=19.7km az=90.0*

GUC ***05*** *10:16:04.4±0.6, 36°.21S×73°.74W, h38^{km}±9^{km}, ML3.9*

ISC 05 10:16:06.7±1.1**, 36°.25S**±0°.04×**73°.59W**±0°.08**, h35**^{km}**, n27,**
σ1^s.01/26**, 6C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BI05	Punta Hualpn	0.59	147	⇑*i*P	Pn	10 16 17.4	-1.3
BI05				*i* S	Sn	10 16 26.5	-0.6
BI05				IAML		10 16 28.6	
	comp=E,8μm,0.3s						
CCSP	San Pedro de C	0.71	147	⇑*i*P	Pn	10 16 19.2	-1.1
CCSP				*i* S	Sn	10 16 30.2	+0.2
CCSP				IAML		10 16 34.4	
	comp=N,13μm,0.5s						
GO05	Huala	1.83	48	*e*P	Pn	10 16 34.3	-1.5
GO05				IAML		10 17 09.7	
	comp=E,990nm,0.4s						
BO03	Pichilemu	2.20	38	⇑*i*P	Pn	10 16 39.3	-1.4
BO03				IAML		10 17 21.7	
	comp=E,420nm,0.4s						
BO02	Sierra Bellavi	2.71	58	⇑*i*P	Pn	10 16 47.6	-0.3
BO02				*i* S	Sn	10 17 20.5	+1.0
BO02				IAML		10 17 38.5	
	comp=N,701nm,0.2s						
BO01	Tunca	2.76	49	*e*P	Pn	10 16 48.1	-0.4
BO01				IAML		10 17 38.5	
	comp=E,218nm,0.3s						
MT09	Talagante	3.26	42	*e*P	Pn	10 16 54.9	-0.6
MT09				IAML		10 17 59.0	
	comp=N,326nm,0.3s						
LR03	Panguipulli	3.52	164	*e*P	Pn	10 16 59.0	+0.1
LR04	Corral	3.63	178	*e*P	Pn	10 16 59.2	-1.1
LMEL	Las Melosas	3.67	50	⇑*i*P	Pn	10 17 01.9	+0.8
MT10	Hacienda Santa	3.89	41	⇓*i*P	Pn	10 17 03.6	-0.5
ROCH	El Roble	3.90	34	*e*P	Pn	10 17 03.7	-0.7
PEL	Peldehue	3.92	39	⇓*i*P	Pn	10 17 03.9	-0.5
VA03	San Esteban	4.29	37	⇑*i*P	Pn	10 17 08.9	-0.7
H03S1	Juan Fernandez	4.97	297	T	T	10 22 18.0	
	baz=117,slow=74,SNR=456						
H03S3	Juan Fernandez	4.99	297	T	T	10 22 24.1	
	baz=117,slow=74,SNR=460						
H03S2	Juan Fernandez	4.99	297	T	T	10 22 18.1	
	baz=117,slow=74,SNR=383						
PLCA	Paso Flores	5.07	153	Pn	Pn	10 17 20.4	+0.2
	comp=N,0.5nm,0.3s,baz=333,slow=12,SNR=28						
PLCA				Lg	Lg	10 18 45.0	
	comp=N,1.3nm,0.3s,baz=124,slow=22,SNR=3.1						
	comp=N,0.9nm,0.3s						
H03N1	Juan Fernandez	5.19	301	Pn	Pn	10 17 19.7	-1.9
	baz=291,slow=74						
H03N3	Juan Fernandez	5.19	301	Pn	Pn	10 17 21.2	-0.5
	baz=291						
H03N2	Juan Fernandez	5.21	301	Pn	Pn	10 17 21.6	-0.3
	baz=291,slow=74						
CFA	Coronel Fontan	6.42	45	Pn	Pn	10 17 38.5	-0.3
	comp=N,2.0nm,0.3s,baz=225,slow=13,SNR=2.1						
CFA				Sn	Sn	10 18 49.9	-1.1
	comp=N,0.8nm,0.3s,baz=219,slow=14,SNR=1.4						
CFA				Lg	Lg	10 19 22.2	
	comp=N,0.7nm,0.3s,baz=270,slow=14,SNR=2.0						
	comp=N,5.9nm,0.3s						
LVC	Limon Verde	14.19	18	LR	LR	10 24 20.7	
	comp=N,23nm,19.1s,baz=208,slow=35						
CPUP	Villa Florida	17.04	59	LR	LR	10 27 49.8	
	comp=N,39nm,19.4s,baz=224,slow=42						
LPAZ	La Paz	20.47	15	P	P	10 20 42.8	+0.8
	comp=N,1.6nm,0.8s,baz=205,slow=9.0,SNR=2.4						
	comp=N,1.6nm,0.8s						
SIV	San Ignacio	23.05	32	P	P	10 21 07.5	-1.6
	comp=N,1.1nm,0.9s,baz=214,slow=12,SNR=4.3						
	comp=N,1.1nm,0.9s						
TXAR	Lajitas Array	71.10	332	P	P	10 27 23.2	+1.8
	comp=N,0.3nm,0.8s,baz=146,slow=8.3,SNR=2.1						
	comp=N,0.3nm,0.8s						

IDC ***05*** *10:46:18.1±1.0, 30°.00N×139°.85E, h318^{km}±22^{km}, mb3.1/3, mbtmp3.7/7, Error ellipse: s-maj=76.8km s-min=13.0km az=71.0*

ISC 05 10:46:17.4±0.9**, 30°.1N**±0°.1×**139°.8E**±0°.2**, h300**^{km}**, n7,**
σ1^s.65/8**, mb3.2**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	3.01	0	P	Pn	10 47 16.9	+3.8
	20nm,0.3s,baz=295,slow=24,SNR=8.7						
JHJ				S	S	10 47 56.0	-1.6
	64nm,0.7s,baz=254,slow=22,SNR=1.7						
JCJ	Chichijima	3.67	144	P	Pn	10 47 21.4	+1.3
	34nm,0.4s,baz=275,slow=19,SNR=13						
JCJ				S	S	10 48 10.6	+0.2
	48nm,0.3s,baz=292,slow=20,SNR=13						
MJAR	Matsushiro Arr	6.55	349	P	Pn	10 47 53.8	+0.6
	0.3nm,0.3s,baz=163,slow=9.6,SNR=5.4						
KSRS	Korea Array	12.27	310	P	P	10 49 05.8	+1.6
	1.3nm,0.7s,baz=134,slow=11,SNR=5.0						
WRA	Warramunga Arr	50.03	187	P	P	10 54 40.5	-1.6
	0.7nm,0.6s,baz=2.5,slow=7.8,SNR=9.9						
	0.7nm,0.6s						
ASAR	Alice Springs	53.75	187	P	P	10 55 07.5	-1.9
	0.4nm,0.9s,baz=15,slow=13,SNR=6.5						
	0.4nm,0.9s						
FINES	FINESS Array B	74.31	333	P	P	10 57 21.5	-0.4
	4.3nm,1.1s,baz=76,slow=6.2,SNR=2.3						
	4.3nm,1.1s						

IDC ***05*** *11:11:00.4±0.8, 52°.35N×169°.64W, h0^{km}, mb3.9/18, mbtmp3.9/20, ML3.5/2, MS3.2/19, Error ellipse: s-maj=26.0km s-min=13.9km az=168.0*

AEIC ***05*** *11:11:03.2±2.8, 52°.12N±0°.10×169°.4W±0°.1, h21^{km}±8^{km}, Error ellipse: s-maj=16.9km s-min=8.3km az=143.0*

NEIC ***05*** *11:11:07.5±2.9, 52°.36N±0°.10×169°.6W±0°.1, h50^{km}±10^{km}, mb3.8/21, ML4.0/6, ML3.7(AEIC), Error ellipse: s-maj=16.1km s-min=8.3km az=146.0*

ISC 05 11:11:05.2±0.7**, 52°.2N**±0°.1×**169°.41W**±0°.07**, h35**^{km}**, n87,**
σ1^s.68/67**, mb3.9**/19**, MS3.2**/17**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLES	Cleveland East	0.69	335		Pn	11 11 17.8	-0.6
CLES				IAML		11 11 33.2	
	comp=N,9μm,0.2s						
CLES				IAML		11 11 40.0	
	comp=E,9μm,0.3s						
NIKH	Nikolski High	0.84	24		Pn	11 11 20.2	-0.3

NIKH	Nikolski High	0.84	24		Sn	11 11 33.4	+1.8
UNV	Unalaska Valle	2.40	46		Pn	11 11 43.2	+1.2
AKUT	Akutan	2.92	47		Pn	11 11 51.7	+2.7
AKUT				IAML		11 12 37.5	
	comp=E,356nm,1.2s						
GSTR	Great Sitkin T	4.10	271	Pn	Pn	11 12 06.0	+0.8
ADK	Adak	4.50	269		Pn	11 12 11.9	+1.1
ADK				IAML		11 13 21.0	
	comp=E,194nm,1.2s						
KIWB	Kanaga Island	4.79	269		Pn	11 12 14.4	-0.4
SPIA	Saint Paul Isl	5.00	355		Pn	11 12 20.3	+2.7
SDPT	Sand Point	6.16	56	Pn	Pn	11 12 37.2	+3.7
CHGN	Chignik	7.63	53	Pn	Pn	11 12 57.7	+4.0
SHEM	Shemya Is, Ala	10.08	279	LR	LR	11 17 14.5	
	comp=E,60nm,18.1s,baz=106,slow=38						
P18K	Big Mountain,	10.73	42	Pn	Pn	11 13 39.5	+3.4
KDAK	Kodiak Island	11.15	53	Pn	Pn	11 13 40.5	-1.3
	comp=E,0.3nm,0.3s,baz=191,slow=5.2,SNR=18						
KDAK				Sn	Sn	11 15 39.3	-5.8
	comp=E,0.1nm,0.3s,baz=68,slow=8.8,SNR=1.6						
M19K	Big River Lodg	12.66	34	Pn	Pn	11 14 06.6	+4.1
L19K	White Mountain	12.70	32	Pn	Pn	11 14 08.5	+5.5
TTA	Tatalina	12.90	28	Pn	P	11 14 11.7	-4.4
SEW	Seward	13.60	47	Pn	Pn	11 14 15.3	0.0
O22K	Cooper Landing	13.66	45	Pn	Pn	11 14 16.4	+0.4
K20K	Telida	13.80	30	Pn	Pn	11 14 20.1	+2.1
PPLA	Purkeypile	14.09	34	Pn	Pn	11 14 25.0	+2.9
PWL	Port Wells	14.44	45	Pn	Pn	11 14 26.5	-0.2
GHO	Glory Hole Cre	14.64	41	Pn	Pn	11 14 29.7	+0.1
KNK	Knik Glacier	14.65	43	Pn	Pn	11 14 31.6	+1.9
KTH	Kantishna Hill	14.96	33	Pn	Pn	11 14 35.4	+1.7
BPAW	Bear Paw Mtn.	15.30	32		P	11 14 41.3	-1.3
BPAW				IAmb	IAmb	11 14 48.2	
	comp=Z,7.3nm,0.8s						
SCM	Sheep Creek Mo	15.33	42	Pn	Pn	11 14 38.2	-0.5
KLU	Klutina	15.77	45	Pn	Pn	11 14 43.2	-1.2
KLU				IAmb	IAmb	11 14 51.2	
	comp=Z,12nm,1.0s						
MLY	Manley	16.02	29	P	P	11 14 51.0	+0.3
WRH	Wood River Hil	16.51	34	P	Pn	11 14 54.1	+0.5
I23K	Minto, Yukon-K	16.53	31	P	P	11 14 56.0	-0.2
I23K				IAmb	IAmb	11 15 33.9	
	comp=Z,15nm,1.4s						
H23K	Yukon River	16.94	29	P	Pn	11 15 00.0	+0.9
MCARA	McCarthy VSAT	17.01	47	P	P	11 15 01.5	0.0
ILAR	Eielson Array	17.10	34	Pn	Pn	11 14 57.5	-3.6
	comp=Z,0.1nm,0.3s,baz=232,slow=11,SNR=8.1						
ILAR				PcP	PcP	11 19 44.9	+0.7
	comp=Z,0.3nm,0.7s,baz=263,slow=3.4,SNR=5.7						
	comp=Z,0.2nm,0.5s						
M26K	Nabesna, AK	17.41	44	P	Pn	11 15 05.8	+0.8
M26K				IAmb	IAmb	11 15 32.7	
	comp=Z,15nm,1.4s						
H24K	Noodor Dome	17.45	30	P	P	11 15 06.8	+0.4
BARN	Barnard Glacie	17.52	49	P	P	11 15 07.5	0.0
BARN				IAmb	IAmb	11 15 38.4	
	comp=Z,10nm,1.0s						
M27K	Edge Creek, AK	17.87	45	P	Pn	11 15 10.7	-0.1
M27K				IAmb	IAmb	11 15 28.0	
	comp=Z,6.7nm,1.0s						
J26L	Joseph Creek	18.14	37	P	Pn	11 15 13.7	-0.4
J26L				IAmb	IAmb	11 15 21.3	
	comp=Z,4.7nm,0.6s						
I26K	Coal Creek Min	18.71	35	P	P	11 15 19.8	-0.4
I26K				IAmb	IAmb	11 15 32.2	
	comp=Z,5.5nm,1.1s						
EGAK	Eagle	19.18	38	P	P	11 15 25.8	+0.3
EGAK				IAmb	IAmb	11 15 49.6	
	comp=Z,6.9nm,1.4s						
HYT	Haines Junctio	19.42	51	P	Pn	11 15 31.1	+1.5
BMAR	Burnt Mountain	19.49	29	P	P	11 15 28.5	-0.3
DAWY	Dawson	19.57	41	P	Pn	11 15 32.2	+1.0
PEA0B	Petropavlovsk-	19.88	286	P	P	11 15 33.0	-0.1
PETK	Petropavlovsk-	19.88	286	P	P	11 15 32.5	-0.7
	comp=Z,1.6nm,0.3s,baz=87,slow=13,SNR=67						
PETK				LR	LR	11 23 18.2	
	comp=Z,50nm,18.2s,baz=80,slow=37						
	comp=Z,7.7nm,0.6s						
M31M	Drury Creek, Y	21.17	48	P	P	11 15 48.8	+1.7
M31M				IAmb	IAmb	11 16 32.6	
	comp=Z,5.8nm,1.0s						
FARO	Faro, Yukon	21.66	48	P	P	11 15 52.5	+0.3
H02S1	DAWSON INLET T	22.25	73	T	T	11 39 00.2	
DLBC	Dease Lake	22.99	59	P	P	11 16 06.2	-0.4
	comp=Z,3.0nm,1.1s,baz=219,slow=21,SNR=2.6						
	comp=Z,3.0nm,1.1s						
INK	Inuvik	23.50	33	P	P	11 16 10.3	-1.0
	comp=Z,1.0nm,0.5s,baz=249,slow=7.4,SNR=12						
INK				PcP	PcP	11 19 56.5	+0.7
	comp=Z,0.9nm,0.7s,baz=358,slow=3.6,SNR=4.5						
	comp=Z,1.0nm,0.5s						
INK	Inuvik	23.50	33	P	P	11 16 10.2	-1.1
INK				IAmb	IAmb	11 16 10.9	
	comp=Z,3.1nm,1.0s						
BBB	Bella Bella	25.07	74	LR	LR	11 24 33.8	
	comp=Z,47nm,19.1s,baz=313,slow=32						
YKA	Yellowknife Ar	30.37	49	P	P	11 17 13.9	+0.6
	comp=Z,0.7nm,0.6s,baz=269,slow=7.9,SNR=21						
	comp=Z,0.7nm,0.6s						
ASAJ	Asahikawa	32.50	275	LR	LR	11 28 52.9	
	comp=Z,55nm,21.8s,baz=122,slow=33						
TIXI	Tiksi	32.86	329	LR	LR	11 31 00.6	
	comp=Z,50nm,18.6s,baz=1.0,slow=37						
YBH	Yreka Blue Hor	33.01	90	LR	LR	11 28 07.1	
	comp=Z,53nm,21.5s,baz=263,slow=31						
YAK	Yakutsk	33.26	311	LR	LR	11 31 25.5	
	comp=Z,31nm,18.4s,baz=80,slow=37						
KLR	Kul'dur	36.49	289	LR	LR	11 33 20.7	
	comp=Z,45nm,20.4s,baz=54,slow=37						
H11N2	WAKE ISLAND Hy	37.31	219	T	T	11 58 07.9	
	baz=24,slow=76,SNR=4.5						
H11N3	WAKE ISLAND Hy	37.32	219	T	T	11 58 09.7	
	baz=24,slow=76,SNR=5.3						
H11N1	WAKE ISLAND Hy	37.33	219	T	T	11 58 03.6	
	baz=24,slow=76,SNR=4.7						
H11S1	WAKE ISLAND Hy	38.50	218	T	T	11 59 37.3	
	baz=23,slow=76,SNR=87						
H11S2	WAKE ISLAND Hy	38.51	218	T	T	11 59 38.4	
	baz=23,slow=76,SNR=56						
H11S3	WAKE ISLAND Hy	38.51	218	T	T	11 59 38.3	
	baz=23,slow=76,SNR=38						
MJAR	Matsushiro Arr	39.66	268	P	P	11 18 31.3	-2.3
	comp=Z,1.1nm,0.8s,baz=55,slow=8.7,SNR=3.3						
	comp=Z,1.1nm,0.8s						
PDAR	Pinedale Array	40.46	79	P	P	11 18 42.0	+1.7
	comp=Z,1.3nm,0.6s,baz=294,slow=3.6,SNR=19						
	comp=Z,1.3nm,0.6s						
PFO	Pinyon Flats O	41.95	95	LR	LR	11 33 05.4	
	comp=Z,54nm,18.2s,baz=214,slow=32						
ULM	Lac du Bonnet	44.25	62	LR	LR	11 36 58.9	
	comp=Z,33nm,18.7s,baz=345,slow=35						
KSRS	Korea Array	45.40	277	P	P	11 19 19.7	-0.3
	comp=Z,1.3nm,0.8s,baz=56,slow=7.6,SNR=4.1						
KSRS				LR	LR	11 37 12.0	
	comp=Z,17nm,21.0s,baz=60,slow=35						
	comp=Z,1.3nm,0.8s						
JNU	Nakatsue	46.44	270	LR	LR	11 42 39.5	
	comp=Z,19nm,18.7s,baz=60,slow=41						
SONM	Songino Array	51.36	301	P	P	11 20 04.8	-1.3
	comp=Z,0.7nm,0.6s,baz=54,slow=7.5,SNR=6.8						
SONM				LR	LR	11 43 42.9	
	comp=Z,67nm,18.8s,baz=25,slow=38						
	comp=Z,0.7nm,0.6s						
TXAR	Lajitas Array	52.78	89	P	P	11 20 18.1	+1.3
	comp=Z,0.5nm,0.6s,baz=308,slow=5.4,SNR=10						
	comp=Z,0.5nm,0.6s						
ZALV	Zalesovo Beam	57.53	318	LR	LR	11 47 41.3	
	comp=Z,19nm,18.1s,baz=358,slow=38						
ARCES	ARCESS Array B	58.08	354	P	P	11 20 53.4	-0.9
	comp=Z,2.6nm,0.8s,baz=36,slow=6.4,SNR=5.1						
	comp=Z,2.6nm,0.8s						
MKAR	Makanchi Array	63.90	313	P	P	11 21 32.5	-1.6
	comp=Z,0.8nm,0.8s,baz=51,slow=6.4,SNR=8.9						
MKAR				LR	LR	11 49 40.1	
	comp=Z,27nm,20.4s,baz=19,slow=36						
	comp=Z,0.8nm,0.8s						
ARU	Arti	64.75	333	LR	LR	11 52 01.3	
	comp=Z,17nm,20.1s,baz=251,slow=38						
FINES	FINESS Array B	66.03	352	P	P	11 21 47.1	-0.4
	comp=Z,0.8nm,0.5s,baz=17,slow=7.2,SNR=14						
	comp=Z,0.8nm,0.5s						
NOA	NORSAR Array B	67.10	360	P	P	11 21 54.4	-0.1
	comp=Z,0.8nm,0.7s,baz=0.5,slow=6.3,SNR=2.3						
NOA				LR	LR	11 50 16.7	
	comp=Z,7.4nm,20.0s,baz=300,slow=35						
	comp=Z,0.8nm,0.7s						
AAK	Ala-Archa	70.60	315	LR	LR	11 56 09.1	
	comp=Z,33nm,18.1s,baz=30,slow=38						
BELG	Belogornoye	71.23	337	LR	LR	11 57 06.3	
	comp=Z,38nm,18.6s,baz=283,slow=39						
AKASG	Malin Array Be	76.26	348	P	P	11 22 48.8	-0.8
	comp=Z,1.6nm,0.6s,baz=18,slow=6.3,SNR=6.7						
	comp=Z,1.6nm,0.6s						
CMAR	Chiang Mai Arr	76.63	283	P	P	11 22 52.4	+0.1
	comp=Z,3.1nm,0.4s,baz=26,slow=5.6,SNR=7.6						
	comp=Z,3.1nm,0.4s						
GERES	GERESS Array B	79.29	358	P	P	11 23 07.3	+0.6
	comp=Z,0.5nm,0.6s,baz=64,slow=3.1,SNR=5.1						
	comp=Z,0.5nm,0.6s						
KBZ	Khabaz	80.45	337	P	P	11 23 14.3	+1.4
	comp=Z,2.6nm,0.9s,baz=105,slow=1.4,SNR=6.1						
	comp=Z,2.6nm,0.9s						
ESDC	Sonseca Array	87.62	11	P	P	11 23 49.7	+0.1
	comp=Z,1.2nm,0.9s,baz=353,slow=5.2,SNR=4.8						
	comp=Z,1.2nm,0.9s						
ASAR	Alice Springs	90.27	230	P	P	11 24 02.1	0.0
	comp=Z,0.5nm,0.7s,baz=32,slow=5.0,SNR=7.6						
	comp=Z,0.5nm,0.7s						

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*NNC **05** 11:17:08.7±5.5, 36°.92N×70°.59E, h219^{km}±103^{km}, mb2.4, mpv3.5, Error ellipse: s-maj=60.4km s-min=31.0km az=10.0*

ISC 05 11:17:07.9±3.4**, 36°.9N**±0°.2×**70°.5E**±0°.2**, h200**^{km}**, n9, σ0^{s}.76**/12**, 5C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.83	24	P	Pn	11 18 33.1	-0.1
	SNR=50						
AML	Almayashu	5.83	24	⇑P	Pn	11 18 33.0	-0.3
	1.8nm,0.6s						
AML				⇑S	Sn	11 19 42.1	+1.4
	4.1nm,0.7s						
UCH	Uchtor	6.21	29	P	Pn	11 18 38.1	-0.1
	SNR=29						
KK31	Karatay Array	6.24	0	⇑P	Pn	11 18 37.8	-0.3
	1.1nm,0.4s,baz=176,slow=12,SNR=14						
KK31				⇑S	Sn	11 19 49.4	-0.2
	1.8nm,0.3s,baz=179,slow=22						
EKS2	Erkin-Say	6.33	23	P	Pn	11 18 39.9	+0.4
	SNR=17						
AAK	Ala-Archa	6.55	27	P	Pn	11 18 43.3	+0.9
	SNR=8.1						
TKM2	Tokmak 2	7.23	32	P	Pn	11 18 51.1	0.0
	SNR=5.5						
TKM2	Tokmak 2	7.23	32	⇑P	Pn	11 18 50.6	-0.5
	5.5nm,0.5s						
TKM2				⇓S	Sn	11 20 11.9	-1.3
	0.8nm,0.5s						
AB31	Akbulak array	14.56	332	P	P	11 20 25.7	+0.1
	0.3nm,0.5s,baz=151,slow=13,SNR=16						

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*NNC **05** 11:21:32.6±3.9, 39°.38N×71°.55E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=30.1km s-min=17.8km az=177.0*

*SOME **05** 11:21:36.6, 39°.62N×71°.58E, h10^{km}*

ISC 05 11:21:34.8±3.8**, 39°.5N**±0°.2×**71°.57E**±0°.08**, h10**^{km}**, n8, σ1^{s}.92**/10**, 7C, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	2.88	337	Pg	Pb	11 22 26.6	+0.3
	32nm,0.6s						
IUG				Lg	Lg	11 23 08.5	
	84nm,0.5s						
IUG	Iuzhnay	2.88	337	*e*Pg	Pg	11 22 28.6	-1.4
	32nm,0.6s						
IUG				*e*Lg	Lg	11 23 05.6	
	84nm,0.5s						
AML	Almayashu	3.08	31	⇑Pg	Pg	11 22 32.0	-1.7
	0.7nm,0.5s						
AML				⇑Lg	Lg	11 23 12.0	
	3.6nm,0.8s						
MRKS	Merke	3.47	21	Pg	Pb	11 22 36.2	0.0
	5.4nm,0.4s						
MRKS				Lg	Lg	11 23 25.0	
	7.7nm,0.6s						
MRKS	Merke	3.47	21	*e*Pg	Pb	11 22 37.1	+0.9
	3.1nm,0.6s						
MRKS				*e*Lg	Lg	11 23 20.9	
	7.7nm,0.6s						
KK31	Karatay Array	3.68	348	⇑Pn	Pn	11 22 32.1	+0.4
	2.8nm,0.3s,baz=170,slow=12,SNR=30						
KK31				⇑Sn	Sb	11 23 24.6	+0.1
	2.6nm,0.4s,baz=170,slow=22,SNR=4.0						
TKM2	Tokmak 2	4.56	40	⇑Pn	Pn	11 22 45.4	+1.3
	3.3nm,0.7s						
TKM2				⇑Sn	Sn	11 23 40.0	+2.8
	3.3nm,0.6s						
TKM2				⇑Lg	Lg	11 24 06.2	
	3.2nm,0.6s						
KUU	Kurty	5.65	38	Pg	Pg	11 23 19.7	-3.2
	2.2nm,0.4s						
KUU				Lg	Lg	11 24 40.8	
	2.7nm,0.2s						

IDC 05 11:23:29.7±2.1**, 8°.45S**×**30°.17E, h0**^{km}**, mb3.6**/2**, mbtmp3.3**/3**, ML2.2**/1**, MS2.8**/3**, Error ellipse: s-maj=42.8km s-min=27.7km az=127.0, Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSZ	Lusaka	7.06	196	LR	LR	11 28 18.4	
	comp=Z,54nm,20.4s,baz=82,slow=41						
MBAR	Mbarara	7.81	4	LR	LR	11 28 07.2	
	comp=Z,25nm,18.3s,baz=132,slow=36						
KMBO	Kilima Mbogo	10.13	44	Pn	Pn	11 25 56.7	-0.1
	baz=219,slow=24,SNR=6.8						
KMBO				Sn	Sn	11 27 45.4	-6.0
	baz=226,slow=24,SNR=1.9						
KMBO				Lg	Lg	11 28 52.2	
	baz=318,slow=24,SNR=7.9						
	0.1nm,0.4s						
BOSA	Boshof	20.59	192	P	P	11 28 10.8	+0.2
	0.8nm,0.4s,baz=22,slow=12,SNR=2.2						
	0.8nm,0.4s						
TORD	Torodi Ar. Bea	35.50	307	P	P	11 30 28.3	-0.2
	1.0nm,0.7s,baz=114,slow=8.0,SNR=6.7						
	1.0nm,0.7s						
BBTS	Babate	51.69	296	LR	LR	11 54 37.4	
	comp=Z,35nm,20.6s,baz=260,slow=36						

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*NEIC **05** 11:33:33.7±1.1, 35°.91N±0°.02×98°.27W±0°.01, h5^{km}±2^{km}, Error ellipse: s-maj=3.2km s-min=3.0km az=18.0*

*ANF **05** 11:33:33.6±0.2, 35°.87N×98°.31W, h5^{km}, ML3.5/12, Error ellipse: s-maj=2.8km s-min=1.9km az=17.0*

*TUL **05** 11:33:33.9±1.3, 35°.90N±0°.02×98°.29W±0°.02, h5^{km}±5^{km}, ML2.9, mb_Lg2.8/34(NEIC), ML3.1/50(NEIC), Error ellipse: s-maj=2.8km s-min=1.0km az=214.0*

ISC 05 11:33:33.4±1.2**, 35°.91N**±0°.02×**98°.28W**±0°.02**, h2**^{km}±11^{km}**, n64, σ0^{s}.66**/54**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSTR	Hydro, Custer	0.42	232	Pg	Pg	11 33 42.5	+1.1
CROK	Carrier	0.64	22		Pg	11 33 45.9	+0.1
CROK				Sg	Sg	11 33 55.5	+1.3
CROK				IAML		11 33 55.9	
	comp=E,1μm,0.3s						
CROK				IAML		11 34 05.2	
	comp=N,1μm,0.2s						
OK029	Liberty Lake	0.68	99		Pg	11 33 47.0	+0.6
OK038	West end E0370	0.68	327		Pg	11 33 46.3	-0.2
OK038				IAML		11 33 56.4	
	comp=N,817nm,0.3s						
OK038				IAML		11 34 09.8	
	comp=N,1μm,0.3s						
U32A	Winter Ranch,	0.75	309	Pg	Pg	11 33 48.3	+0.5
U32A	Winter Ranch,	0.75	309	P	Pg	11 33 48.1	+0.3
	baz=130,SNR=11						
U32A				S	Sb	11 33 58.8	-1.1
	baz=130						
OK025	Westminster Rd	0.83	113		Pg	11 33 50.0	+0.6
NOKA	Waynoka	0.90	324	Pg	Pg	11 33 51.0	+0.4
NOKA				IAML		11 34 09.3	
	comp=E,518nm,0.2s						
NOKA				IAML		11 34 14.0	
	comp=N,503nm,0.3s						
OK032	Salt Plains WL	0.90	4		Pg	11 33 50.9	+0.3
OK032				IAML		11 34 09.6	
	comp=N,592nm,0.2s						
ELIS	Ellis County	0.94	280		Pb	11 33 52.2	-0.2
ELIS				IAML		11 34 19.3	
	comp=N,475nm,0.5s						
ELIS				IAML		11 34 22.3	
	comp=E,357nm,0.2s						
FNO	Franklin	0.97	132		Pg	11 33 52.2	+0.2
FNO				IAML		11 34 07.4	
	comp=E,326nm,0.1s						
FNO				IAML		11 34 08.2	
	comp=N,405nm,0.7s						
GC02	Grant County #	1.00	20		Pg	11 33 52.7	+0.1
KAN14	Manchester OK	1.08	14		Pg	11 33 54.5	+0.4
KAN14				IAML		11 34 09.9	
	comp=E,479nm,0.1s						
KAN14				IAML		11 34 13.3	
	comp=N,372nm,0.2s						
OK033	Mehan	1.10	82		Pg	11 33 54.4	-0.1
OK033				IAML		11 34 12.2	
	comp=N,332nm,0.2s						
OK033				IAML		11 34 15.6	
	comp=N,301nm,0.2s						
OK050	Pawnee Station	1.16	65		Pg	11 33 55.8	+0.2
OK050				IAML		11 34 13.3	
	comp=N,547nm,0.2s						
OK050				IAML		11 34 15.9	
	comp=N,504nm,0.3s						
OK031	S. Brethren Rd	1.17	87		Pg	11 33 55.7	-0.2
OK031				IAML		11 34 12.8	
	comp=N,244nm,0.4s						
OK052	Battle Ridge R	1.20	85		Pg	11 33 56.2	-0.3
OK052				IAML		11 34 13.3	
	comp=N,325nm,0.3s						
OK052				IAML		11 34 19.5	
	comp=N,285nm,0.2s						
KAN17	Caldwell West	1.21	20		Pg	11 33 56.5	-0.1
BLOK	Blackwell	1.21	45		Pg	11 33 56.6	0.0
OK046	Pawnee Station	1.22	66		Pg	11 33 56.8	+0.1
OK046				IAML		11 34 14.8	
	comp=N,371nm,0.2s						
OK046				IAML		11 34 18.7	
	comp=N,318nm,0.2s						
OK030	Cody Creek RV	1.22	89		Pg	11 33 56.4	-0.3
OK030				IAML		11 34 18.0	
	comp=N,278nm,0.2s						
OK053	SW of W Deep R	1.22	84		Pg	11 33 56.4	-0.3
OK053				IAML		11 34 17.3	
	comp=N,364nm,0.2s						
OK053				IAML		11 34 17.6	
	comp=N,381nm,0.2s						
WMOK	Wichita Mounta	1.23	199		Pg	11 33 56.3	-0.8
WMOK	Wichita Mounta	1.23	199	P	Pg	11 33 56.4	-0.6
	baz=19						
WMOK				S	Sg	11 34 12.6	-0.5
	baz=19						
KAN13	South Haven SW	1.28	30		Pn	11 33 57.3	-1.1
QUOK	Quay	1.30	78	Pn	Pn	11 33 57.9	-0.8
KAN01	Argonia South	1.31	19	IAmb_Lg		11 34 17.2	
	comp=Z,78nm,0.7s						
KAN08	Anthony NE Sta	1.34	11		Pn	11 33 57.5	-1.7
X34A	Smith Ranch, M	1.35	164	Pn	Pb	11 33 59.4	-0.2
W35A	Tecumseh	1.37	123	Pn	Pn	11 33 59.2	-0.5
KS20	Mayfield South	1.45	24		Pn	11 33 59.8	-0.9
DEOK	Depew	1.45	92		Pn	11 33 59.6	-1.1
T35B	Sooner Cattle	1.75	54	P	Pn	11 34 05.1	+0.3
	baz=235,SNR=37						
T35B				S	Sb	11 34 28.7	+0.1
	baz=235						
TUL1	Leonard	2.02	89		Pn	11 34 09.1	+0.5
TUL1				IAmb_Lg		11 34 42.2	
	comp=Z,57nm,0.8s						
TUL1	Leonard	2.02	89	P	Pn	11 34 08.8	+0.3
	baz=270,SNR=36						
TUL1				S	Sb	11 34 35.4	-1.1
	baz=270						
LOOK	Love County	2.11	154		Pn	11 34 10.5	+0.7
LOOK				IAmb_Lg		11 34 45.1	
	comp=Z,51nm,0.9s						
WTFS	Witchita Falls	2.14	184		Pb	11 34 11.9	-1.0
R32A	Long Quarter,	2.54	352	P	Pn	11 34 15.8	+0.2
	baz=172						
R32A				S	Sn	11 34 47.8	+0.7
	baz=172						
Z35A	Perchaven, San	2.71	161	P	Pn	11 34 18.6	+0.6
	baz=342,SNR=13						
Z35A				S	Sn	11 34 52.0	+0.7
	baz=342						
X37A	Clayton	2.72	118	P	Pn	11 34 18.5	+0.3
	baz=300,SNR=21						
X37A				S	Sn	11 34 52.3	+0.6
	baz=300						
FW03	Perrin-Whitt E	2.87	176	IAmb_Lg		11 35 02.7	
	comp=Z,30nm,0.7s						
AMTX	Amarillo	2.96	251	IAmb_Lg		11 35 06.2	
	comp=Z,43nm,0.8s						
AMTX	Amarillo	2.96	251	P	Pn	11 34 21.3	-0.2
	baz=69						
AMTX				S	Sn	11 34 58.9	+1.2
	baz=69						
U38A	Gravette	3.20	79	P	Pn	11 34 25.0	+0.3
	baz=262						
FW07	Weatherford	3.22	173	IAmb_Lg		11 35 13.6	
	comp=Z,6.9nm,0.8s						
KSU1	Kansas State U	3.46	22	P	Pn	11 34 28.7	+0.4
	baz=203						
FW14	Alvarado	3.61	165	IAmb_Lg		11 35 34.5	
	comp=Z,14nm,0.9s						
POST	Post	3.88	224	IAmb_Lg		11 35 46.6	
	comp=Z,12nm,0.7s						
MIAR	Mount Ida	4.08	108	IAmb_Lg		11 35 47.5	
	comp=Z,19nm,0.7s						
MIAR	Mount Ida	4.08	108	P	Pn	11 34 37.5	+0.6
	baz=291,SNR=9.6						
S39A	Bolivar	4.36	64	P	Pn	11 34 41.1	+0.3
	baz=247,SNR=22						
KSCO	Kaye Shedlock'	4.64	313	IAmb_Lg		11 36 09.2	
	comp=Z,17nm,0.7s						
WLAR	White Oak Lake	4.79	116	IAmb_Lg		11 36 18.4	
	comp=Z,24nm,0.8s						
WHAR	Wooly Hollow	4.92	95	IAmb_Lg		11 36 17.7	
	comp=Z,19nm,1.1s						
UALR	University of	4.98	101	IAmb_Lg		11 36 13.4	
	comp=Z,15nm,0.9s						
R40A	Maddies Statio	5.36	62	P	Pn	11 34 54.6	+0.1
	baz=245,SNR=13						
CCAR	Cane Creek	5.71	108	IAmb_Lg		11 36 44.8	
	comp=Z,20nm,0.8s						
LCAR	Lake Charles	5.78	86	IAmb_Lg		11 36 48.4	
	comp=Z,14nm,1.0s						
OGNE	Ogallala	5.83	331	IAmb_Lg		11 36 47.0	
	comp=Z,18nm,0.9s						
CCM	Cathedral Cave	6.03	67	IAmb_Lg		11 36 51.0	
	comp=Z,11nm,1.0s						
Q24A	Divide	6.26	301	IAmb_Lg		11 36 58.9	
	comp=Z,15nm,0.7s						
FVM	French Village	6.62	69	IAmb_Lg		11 37 09.1	
	comp=Z,12nm,1.3s						
SLM	Saint Louis	6.97	65	IAmb_Lg		11 37 12.2	
	comp=Z,16nm,0.8s						
N23A	Red Feather La	7.81	312	IAmb_Lg		11 37 47.9	
	comp=Z,12nm,0.8s						

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*DJA **05** 11:48:38.7±0.5, 6°S±4°×12°8E±°, h386^{km}±8^{km}, M4.2/9, mb4.1/6, mB5.0/1, MLv4.2/9, Mw(mB)4.3/1*

*IDC **05** 11:48:38.6±4.4, 5°.86S×128°.20E, h389^{km}±56^{km}, mb3.2/8, mbtmp4.0/10, Error ellipse: s-maj=30.3km s-min=19.8km az=82.0*

ISC 05 11:48:38.6±0.6**, 5°.95S**±0°.07×**127°.97E**±0°.09**, h400**^{km}**, n19, σ1^{s}.86**/23**, mb3.6**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	2.39	54	P	Pn	11 49 37.1	-0.1
MSAI	Masohi	2.76	20	P	Pn	11 49 39.4	-0.5
MSAI				S	S	11 50 24.5	-5.0
NLAI	Namlea	2.83	342	P	Pn	11 49 41.0	+0.5
SAUI	Saumlaki	3.87	122	P	Pn	11 49 50.2	+0.7
SAUI				S	S	11 50 47.7	+0.8
FAKI	Fak Fak	5.22	55	P	Pn	11 50 02.7	-0.3
	100nm,0.7s,3μm0.5nm						
SOEI	Soe	5.26	224	P	Pn	11 50 02.5	-1.0
	84nm,0.6s,0.7nm						
SPSI	Sidrap Palu	8.41	283	P	Pn	11 50 37.5	-0.8
PLAI	Plampang	10.51	254	P	P	11 51 00.2	-1.6
WRA	Warramunga Arr	15.22	157	P	P	11 51 53.9	+0.4

	3.8nm,0.7s,baz=335,slow=11,SNR=30						
WRA				S	**S**	**11 54 30.9**	**-4.0**
	0.5nm,0.5s,baz=327,slow=20,SNR=2.7						
ASAR	**Alice Springs**	**18.51**	**163**	P	**P**	**11 52 29.2**	**+0.6**
	1.4nm,0.3s,baz=342,slow=11,SNR=43						
ASAR				S	**S**	**11 55 36.5**	**-1.8**
	1.6nm,0.8s,baz=341,slow=19,SNR=8.7						
CMAR	**Chiang Mai Arr**	**37.52**	**311**	P	**P**	**11 55 18.9**	**+2.4**
	0.9nm,0.5s,baz=143,slow=6.0,SNR=6.9						
	0.9nm,0.5s						
KSRS	**Korea Array**	**43.18**	**360**	P	**P**	**11 56 01.3**	**-0.6**
	1.1nm,0.8s,baz=168,slow=9.6,SNR=3.2						
	1.1nm,0.8s						
MJAR	**Matsushiro Arr**	**43.35**	**12**	P	**P**	**11 56 02.3**	**-1.1**
	0.8nm,0.4s,baz=188,slow=9.2,SNR=6.1						
	0.8nm,0.4s						
USRK	**Ussuriysk Ar.**	**50.05**	**4**	P	**P**	**11 56 54.9**	**+0.4**
	2.4nm,0.6s,baz=191,slow=9.1,SNR=3.1						
	2.4nm,0.6s						
SONM	**Songino Array**	**56.84**	**343**	P	**P**	**11 57 45.2**	**+2.0**
	0.5nm,0.6s,baz=170,slow=7.8,SNR=4.2						
	0.5nm,0.6s						
PETK	**Petropavlovsk-**	**63.99**	**19**	P	**P**	**11 58 31.4**	**+0.7**
	1.5nm,0.6s,baz=183,slow=3.6,SNR=8.1						
	1.5nm,0.6s						
MKAR	**Makanchi Array**	**66.26**	**328**	P	**P**	**11 58 46.2**	**+0.9**
	0.8nm,0.4s,baz=114,slow=8.6,SNR=23						
	0.8nm,0.4s						
ZALV	**Zalesovo Beam**	**69.77**	**334**	P	**P**	**11 59 05.9**	**-0.8**
	0.8nm,0.5s,baz=140,slow=7.0,SNR=2.8						
	0.8nm,0.5s						
SNAA	**Sanae**	**96.19**	**194**	P	**P**	**12 01 24.1**	**+2.2**
	2.1nm,0.5s,baz=260,slow=16,SNR=1.4						

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*NEIC **05** 12:09:15.9±0.7, 35°.90N±0°.02×98°.27W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.6km s-min=3.0km az=226.0*

*ANF **05** 12:09:16.0±0.7, 35°.89N×98°.31W, h6^{km}±6^{km}, ML3.7/13, Error ellipse: s-maj=3.7km s-min=2.8km az=89.0*

*TUL **05** 12:09:16.2±1.1, 35°.900N±0°.007×98°.29W±0°.02, h5^{km}±6^{km}, ML3.2, mb_Lg3.1/68(NEIC), ML3.4/42(NEIC), Error ellipse: s-maj=2.3km s-min=0.9km az=104.0*

ISC 05 12:09:15.5±1.4, **35°.90N**±0°.03×**98°.26W**±0°.03, **h4**^{km}±14^{km}, **n82**, σ**0^s.85**/52, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.65**	**20**	Sg	**Sb**	**12 09 37.9**	**-0.9**
OK029	**Liberty Lake**	**0.66**	**98**	Pg	**Pb**	**12 09 29.3**	**-0.4**
OK038	**West end E0370**	**0.70**	**326**		**Pg**	**12 09 28.5**	**-0.5**
OK038				IAML		12 09 49.6	
	2µm,0.3s						
OK038				IAML		12 09 52.2	
	2µm,0.3s						
U32A	**Winter Ranch,**	**0.77**	**309**	Pg	**Pg**	**12 09 30.6**	**+0.4**
U32A	**Winter Ranch,**	**0.77**	**309**	P	**Pg**	**12 09 30.7**	**+0.4**
	baz=130,SNR=16						
U32A				S	**Sb**	**12 09 41.2**	**-1.1**
	baz=130						
OK025	**Westminster Rd**	**0.81**	**112**	Pg	**Pb**	**12 09 32.1**	**-0.2**
OK035	**E0210 Rd and N**	**0.89**	**336**		**Pg**	**12 09 32.7**	**+0.1**
OK035				IAML		12 09 53.7	
	840nm,0.2s						
OK035				IAML		12 09 55.6	
	863nm,0.2s						
OK032	**Salt Plains WL**	**0.91**	**3**		**Pg**	**12 09 33.3**	**+0.4**
OK032				IAML		12 09 52.1	
	1µm,0.2s						
NOKA	**Waynoka**	**0.91**	**324**	Pg	**Pg**	**12 09 33.4**	**+0.3**
NOKA				IAML		12 09 56.5	
	comp=N,1µm,0.3s						
NOKA				IAML		12 10 00.6	
	comp=E,1µm,0.3s						
FNO	**Franklin**	**0.95**	**132**		**Pb**	**12 09 34.5**	**0.0**
FNO				IAML		12 09 50.5	
	comp=N,630nm,0.7s						
GC02	**Grant County #**	**1.01**	**19**		**Pb**	**12 09 35.5**	**-0.1**
OK033	**Mehan**	**1.08**	**82**		**Pb**	**12 09 36.5**	**-0.3**
OK033				IAML		12 09 55.4	
	comp=N,769nm,0.1s						
OK033				IAML		12 09 56.5	
	comp=N,674nm,0.2s						
KAN14	**Manchester OK**	**1.08**	**13**		**Pg**	**12 09 36.6**	**+0.2**
KAN14				IAML		12 09 55.7	
	comp=N,884nm,0.2s						
OK050	**Pawnee Station**	**1.15**	**64**		**Pb**	**12 09 38.0**	**0.0**
OK050				IAML		12 09 58.2	
	comp=N,1µm,0.3s						
OK050				IAML		12 09 59.1	
	comp=N,943nm,0.2s						
OK052	**Battle Ridge R**	**1.19**	**85**		**Pb**	**12 09 38.6**	**-0.1**
OK052				IAML		12 09 55.6	
	comp=N,770nm,0.3s						
OK052				IAML		12 09 57.3	
	comp=N,635nm,0.3s						
OK030	**Cody Creek RV**	**1.20**	**88**		**Pb**	**12 09 38.8**	**-0.1**
OK030				IAML		12 10 00.1	
	comp=N,579nm,0.2s						
OK053	**SW of W Deep R**	**1.20**	**84**		**Pn**	**12 09 38.8**	**-0.3**
OK053				IAML		12 09 60.0	
	comp=N,712nm,0.2s						
OK053				IAML		12 10 00.0	
	comp=N,976nm,0.2s						
OK046	**Pawnee Station**	**1.20**	**65**		**Pg**	**12 09 39.0**	**+0.4**
OK046				IAML		12 09 59.0	
	comp=N,837nm,0.2s						
OK046				IAML		12 09 59.6	
	comp=N,859nm,0.2s						
BLOK	**Blackwell**	**1.21**	**44**	Pg	**Pn**	**12 09 38.8**	**-0.4**
KAN17	**Caldwell West**	**1.21**	**19**		**Pg**	**12 09 39.0**	**+0.2**
WMOK	**Wichita Mounta**	**1.23**	**200**		**Pn**	**12 09 38.6**	**-0.9**
WMOK				IAML		12 09 55.6	
	comp=N,413nm,0.2s						
WMOK	**Wichita Mounta**	**1.23**	**200**	P	**Pn**	**12 09 38.7**	**-0.9**
	baz=19						
WMOK				S	**Sb**	**12 09 55.3**	**-0.4**
	baz=19						
QUOK	**Quay**	**1.29**	**77**	Pn	**Pb**	**12 09 40.3**	**-0.1**
X34A	**Smith Ranch, M**	**1.34**	**165**		**Pg**	**12 09 41.7**	**+0.5**
X34A				IAML		12 10 01.8	
	comp=N,460nm,0.5s						
KAN08	**Anthony NE Sta**	**1.35**	**10**		**Pg**	**12 09 41.6**	**+0.2**
W35A	**Tecumseh**	**1.35**	**123**		**Pb**	**12 09 41.5**	**0.0**
DEOK	**Depew**	**1.43**	**92**		**Pb**	**12 09 42.5**	**-0.3**
T35A	**Sooner Cattle**	**1.74**	**54**	IAmb_Lg		12 10 14.1	
	comp=Z,64nm,0.7s						
T35B	**Sooner Cattle**	**1.74**	**54**	P	**Pb**	**12 09 47.6**	**-0.4**
	baz=235,SNR=54						
T35B				S	**Sg**	**12 10 11.3**	**-0.2**
	baz=235						
TUL1	**Leonard**	**2.00**	**89**		**Pb**	**12 09 51.4**	**-1.1**
TUL1				IAmb_Lg		12 10 21.2	
	comp=Z,121nm,0.9s						
TUL1	**Leonard**	**2.00**	**89**	P	**Pn**	**12 09 51.2**	**+1.0**
	baz=270,SNR=32						
TUL1				Sb	**Sg**	**12 10 19.5**	**-0.5**
	baz=270						
LOOK	**Love County**	**2.10**	**155**	Pn	**Pb**	**12 09 53.5**	**-0.7**
LOOK				IAmb_Lg		12 10 27.5	
	comp=Z,119nm,0.8s						
WTFS	**Witchita Falls**	**2.13**	**185**		**Pb**	**12 09 54.2**	**-0.5**
R32A	**Long Quarter,**	**2.55**	**352**	IAmb_Lg		12 10 39.0	
	comp=Z,56nm,0.7s						
R32A	**Long Quarter,**	**2.55**	**352**	Sb	**Sb**	**12 10 34.9**	**+1.4**
	baz=172						
RLO	**Rose Lookout**	**2.64**	**83**		**Pn**	**12 09 59.9**	**+1.0**
Z35A	**Perchaven, San**	**2.69**	**162**	P	**Pn**	**12 10 01.4**	**+1.8**
	baz=342,SNR=51						
X37A	**Clayton**	**2.70**	**118**	P	**Pn**	**12 10 01.0**	**+1.2**
	baz=300,SNR=33						
X37A				S	**Sb**	**12 10 35.2**	**-2.7**
	baz=300						
FW03	**Perrin-Whitt E**	**2.85**	**177**	IAmb_Lg		12 10 45.1	
	comp=Z,56nm,0.7s						
AMTX	**Amarillo**	**2.97**	**251**	IAmb_Lg		12 10 48.7	
	comp=Z,89nm,0.8s						
AMTX	**Amarillo**	**2.97**	**251**	Sb	**Sb**	**12 10 46.5**	**+0.7**
	baz=69						
FW06	**Azle**	**2.98**	**169**	IAmb_Lg		12 10 51.6	
	comp=Z,15nm,0.7s						
U38A	**Gravette**	**3.18**	**79**	P	**Pn**	**12 10 08.0**	**+1.6**
	baz=261,SNR=9.7						
FW07	**Weatherford**	**3.21**	**173**	IAmb_Lg		12 10 56.8	
	comp=Z,24nm,0.7s						
KSU1	**Kansas State U**	**3.46**	**22**	IAmb_Lg		12 11 13.2	
	comp=Z,69nm,0.9s						
ABTX	**Abilene, Hawle**	**3.46**	**200**	IAmb_Lg		12 11 10.2	
	comp=Z,39nm,0.8s						
FW16	**Waxahatchie**	**3.59**	**161**	IAmb_Lg		12 11 20.9	
	comp=Z,31nm,0.8s						
FW14	**Alvarado**	**3.60**	**165**	IAmb_Lg		12 11 21.2	
	comp=Z,19nm,0.7s						
Z38A	**Mt. Pleasant**	**3.77**	**133**	IAmb_Lg		12 11 19.2	
	comp=Z,68nm,0.9s						
POST	**Post**	**3.89**	**224**	IAmb_Lg		12 11 18.5	
	comp=Z,22nm,0.8s						
WHTX	**Lake Whitney,**	**3.95**	**170**	P	**Pn**	**12 10 18.3**	**+1.3**
	baz=350						
MIAR	**Mount Ida**	**4.07**	**108**	IAmb_Lg		12 11 29.5	
	comp=Z,36nm,0.8s						
MIAR	**Mount Ida**	**4.07**	**108**	P	**Pn**	**12 10 20.2**	**+1.7**
	baz=291,SNR=11						
S39A	**Bolivar**	**4.35**	**64**	P	**Pn**	**12 10 23.2**	**+0.8**
	baz=247,SNR=26						
U40A	**Yellville**	**4.40**	**82**	P	**Pn**	**12 10 24.0**	**+0.8**
	baz=266,SNR=5.7						
U40A				P	**Pn**	**12 10 24.0**	**+0.8**
	baz=266,SNR=5.7						
KSCO	**Kaye Shedlock'**	**4.66**	**313**	IAmb_Lg		12 11 56.5	
	comp=Z,26nm,0.7s						
WLAR	**White Oak Lake**	**4.78**	**116**	IAmb_Lg		12 11 58.7	
	comp=Z,41nm,0.9s						
N33A	**J Bar K, Exete**	**4.88**	**7**	IAmb_Lg		12 12 04.2	
	comp=Z,37nm,0.8s						
UALR	**University of**	**4.97**	**101**	IAmb_Lg		12 11 55.8	
	comp=Z,25nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.98**	**88**	IAmb_Lg		12 11 58.9	
	comp=Z,31nm,0.7s						
T25A	**Trinidad**	**5.11**	**286**	IAmb_Lg		12 12 03.9	
	comp=Z,49nm,0.8s						
435B	**Jarrell**	**5.13**	**173**	IAmb_Lg		12 12 08.5	
	comp=Z,51nm,0.8s						
P38A	**Dawn**	**5.28**	**44**	IAmb_Lg		12 12 13.6	
	comp=Z,28nm,0.8s						
R40A	**Maddies Statio**	**5.35**	**62**	P	**Pn**	**12 10 36.7**	**+0.5**
	baz=245,SNR=18						
CCAR	**Cane Creek**	**5.69**	**108**	IAmb_Lg		12 12 27.2	
	comp=Z,41nm,0.8s						
LCAR	**Lake Charles**	**5.77**	**86**	IAmb_Lg		12 12 30.4	
	comp=Z,26nm,0.9s						
OGNE	**Ogallala**	**5.84**	**331**	IAmb_Lg		12 12 34.2	
	comp=Z,31nm,0.8s						
T42A	**Van Buren**	**5.89**	**77**	IAmb_Lg		12 12 29.2	
	comp=Z,18nm,0.9s						
T42A	**Van Buren**	**5.89**	**77**	P	**Pn**	**12 10 43.7**	**+0.2**
	baz=261						
Q24A	**Divide**	**6.28**	**301**	IAmb_Lg		12 12 34.9	
	comp=Z,30nm,0.7s						
143A	**Socs Landing,**	**6.51**	**117**	IAmb_Lg		12 12 59.8	
	comp=Z,16nm,0.8s						
FVM	**French Village**	**6.61**	**69**	P	**Pn**	**12 10 53.7**	**+0.2**
	baz=254,SNR=7.5						
BRIGG	**Briggsdale**	**6.68**	**316**	IAmb_Lg		12 12 51.6	
	comp=Z,32nm,0.9s						
SLM	**Saint Louis**	**6.96**	**64**	IAmb_Lg		12 12 57.5	
	comp=Z,26nm,0.7s						
CGM3	**Cape Girardeau**	**7.06**	**76**	IAmb_Lg		12 13 05.5	
	comp=Z,18nm,0.9s						
Y22D	**IRIS PASSCAL I**	**7.34**	**258**	IAmb_Lg		12 13 17.7	
	comp=Z,23nm,0.9s						
OXF	**Oxford**	**7.38**	**98**	P	**Pn**	**12 11 04.2**	**+0.2**
	baz=283						
S44A	**Carbondale**	**7.45**	**73**	IAmb_Lg		12 13 17.6	
	comp=Z,22nm,0.7s						
833A	**Chaparral WMA,**	**7.61**	**188**	IAmb_Lg		12 13 36.9	
	comp=Z,22nm,1.1s						
N23A	**Red Feather La**	**7.83**	**312**	IAmb_Lg		12 13 30.8	
	comp=Z,24nm,0.9s						
ECSD	**EROS Data Cent**	**7.93**	**9**	IAmb_Lg		12 13 33.9	
	comp=Z,17nm,1.1s						
K22A	**Casper**	**9.30**	**319**	IAmb_Lg		12 14 24.4	
	comp=Z,22nm,1.0s						

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*GCG **05** 12:21:35.8±0.3, 13°.73N×91°.24W, h6^{km}, MD3.8*

*SNET **05** 12:21:37.4±1.2, 13°.96N×91°.14W, h19^{km}±5^{km}, ML3.4*

ISC 05 12:21:33.9±2.3, **13°.8N**±0°.1×**91°.32W**±0°.09, **h10**^{km}, **n20**, σ**0^s.80**/24, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SULM	**Suchitepequez,**	**0.59**	**336**	*e*P	**Pn**	**12 21 48.5**	**+0.1**
FUG	**Fuego 3**	**0.83**	**34**	*e*P	**Pn**	**12 21 51.7**	**-0.1**
PCG	**Pacaya**	**0.93**	**47**	*e*P	**Pn**	**12 21 53.6**	**+0.2**
NBG	**Las Nubes**	**1.25**	**49**	*e*P	**Pg**	**12 21 58.7**	**+0.7**
NBG				*e*S	**Sg**	**12 22 15.4**	**+1.1**
NUBE	**Las Nubes**	**1.50**	**84**	*e*P	**Pn**	**12 22 01.3**	**+0.3**
NUBE				*e*S	**Sn**	**12 22 18.7**	**-2.1**
LOAL	**Lomas de Alarc**	**1.51**	**81**	*e*P	**Pn**	**12 22 01.2**	**+0.1**
SLOZ	**Alcaldia de Sa**	**1.51**	**80**	*e*P	**Pn**	**12 22 01.1**	**0.0**
HUEH	**Huehuetenango**	**1.56**	**353**	*e*P	**Pn**	**12 22 01.9**	**-0.1**
RTR	**El Retiro**	**1.63**	**85**	*e*P	**Pn**	**12 22 03.3**	**+0.5**
RTR				IAML		12 22 31.4	
	comp=Z,282nm,0.4s						
CEVE	**Cerro Verde**	**1.65**	**87**	*e*S	**Sn**	**12 22 23.3**	**-1.2**
SBLS	**San Blas**	**1.65**	**87**	*e*P	**Pn**	**12 22 03.3**	**+0.1**
UNIC	**Universidad Ca**	**1.73**	**82**	*e*S	**Sn**	**12 22 25.1**	**-1.3**
JAYA	**Jayaque - finc**	**1.82**	**93**	*e*P	**Pn**	**12 22 05.7**	**+0.3**
CEDA	**San Andres**	**1.87**	**88**	*e*P	**Pn**	**12 22 06.3**	**+0.3**
CEDA				IAML		12 22 34.5	
	comp=Z,753nm,0.4s						
PMON	**Piamonte**	**1.95**	**91**	*e*P	**Pn**	**12 22 07.5**	**+0.4**
PMON				*e*S	**Sn**	**12 22 30.6**	**-1.1**
BOQS	**Boqueron**	**1.98**	**90**	*e*P	**Pn**	**12 22 08.6**	**+0.9**
UEES	**Universidad Ev**	**2.02**	**91**	*e*P	**Pn**	**12 22 08.5**	**+0.4**
UEES				IAML		12 22 41.1	
	comp=Z,732nm,0.2s						
ESQI	**Esquipulas**	**2.08**	**67**	*e*P	**Pn**	**12 22 08.6**	**-0.3**
P5NO	**Presa 5 de nov**	**2.50**	**84**	*e*P	**Pn**	**12 22 14.2**	**-0.4**
P5NO				*e*S	**Sn**	**12 22 44.5**	**-0.6**
SCLA	**Alcaldia de Sa**	**2.52**	**91**	*e*P	**Pn**	**12 22 15.7**	**+0.8**

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*IDC **05** 12:22:15.6±0.4, 55°.29S×128°.83W, h0^{km}, mb4.6/14, mbtmp4.6/14, MS5.0/43, Error ellipse: s-maj=23.3km s-min=14.1km az=167.0*

*MOS **05** 12:22:16.1±1.4, 55°.35S×128°.78W, h11^{km}, mb5.3/14, Error ellipse: s-maj=21.4km s-min=16.5km az=56.9*

*NEIC **05** 12:22:16.4±1.9, 55°.18S±0°.05×129°.2W±0°.2, h10^{km}±1^{km}, mb5.3/59, Ms_20 5.4/160, Mwb5.6/18, Error ellipse: s-maj=18.3km s-min=8.5km az=269.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.16; $M_{\theta\theta}$2.18; $M_{\phi\phi}$-2.02; $M_{r\theta}$-0.74; $M_{\theta\phi}$2.66; $M_{\phi r}$0.18; Fault plane solution: $M_0$3.48000×10^{17} NP1:ϕ_s289.15000°, δ89.72000°, λ12.61000°. NP2:ϕ_s199.08000°, δ77.39000°, λ179.71000°. Principal axes: T 3.5650, Plg9.0000°, Azm155.0000°; N -0.1817, Plg77.0000°, Azm290.0000°; P -3.3833, Plg9.0000°, Azm63.0000°;*

*NEIC **05** 12:22:16.8, 55°.21S×129°.00W, h10^{km}*

*GCMT **05** 12:22:21.4±0.1, 55°.44S±0°.01×128°.81W±0°.01, h18^{km}, MW5.7/151, Moment Tensor Solution. s146,c271; s151,c306; Duration: 1^s.7 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.74±.04; $M_{\theta\theta}$2.87±.04; $M_{\phi\phi}$-2.12±.04; $M_{r\theta}$-0.89±.10; $M_{\theta\phi}$3.38±.03; $M_{\phi r}$-0.43±.09; Best double couple: $M_0$4.29000×10^{17} NP1:ϕ_s289.00000°, δ83.00000°, λ7.00000°. NP2:ϕ_s198.00000°, δ83.00000°, λ173.00000°. Principal axes: T 4.7540, Plg10.0000°, Azm153.0000°; N -0.9200, Plg80.0000°, Azm332.0000°; P -3.8260, Plg0.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 12:22:16.4±0.3, **55°.10S**±0°.07×**129°.03W**±0°.06, **h10**^{km}, **n394**, σ**1^s.76**/292, **mb5.2**/48, **MS5.3**/128, **1D**, **Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTCN	**Pitcairn Islan**	**30.01**	**358**	P	**P**	**12 28 22.4**	**-2.7**
PTCN	**Pitcairn Islan**	**30.01**	**358**	IAMs_20	IAMs_20	12 37 15.1	
	comp=Z,6µm,19.0s						
RPN	**Rapa Nui**	**31.42**	**35**	LR	LR	12 38 11.9	
	comp=Z,2µm,21.4s,baz=202,slow=30						
PMSA	**Palmer Station**	**32.48**	**134**	LR	LR	12 38 02.3	
	comp=Z,5µm,21.8s,baz=260,slow=29						
VNDA	**Vanda**	**32.51**	**202**	P	**P**	**12 28 51.2**	**+4.6**
	comp=Z,5.4nm,0.9s,baz=97,slow=10.0,SNR=3.8						
VNDA				LR	LR	12 38 37.8	
	comp=Z,1µm,19.9s,baz=82,slow=30						
VNDA	**Vanda**	**32.51**	**202**	P	**P**	**12 28 44.2**	**-2.5**
VNDA	**Vanda**	**32.51**	**202**	P	**P**	**12 28 44.2**	**-2.5**
VNDA				pmax	pmax		
	comp=Z,116nm,1.8s						
MG05	**Puerto Natales**	**33.10**	**108**	P	**P**	**12 28 52.5**	**+0.4**
MG05				IAmb	IAmb	12 29 00.6	
	comp=Z,54nm,1.3s						
MG03	**Isla Dawson**	**33.20**	**113**	P	**P**	**12 28 53.5**	**+0.6**
GO09	**Cerro Castillo**	**33.39**	**107**	P	**P**	**12 28 55.8**	**+1.2**
QSPA	**South Pole Qui**	**35.08**	**180**	P	**P**	**12 29 08.8**	**-0.5**
	comp=Z,20nm,0.9s,baz=107,slow=2.3,SNR=37						
QSPA				LR	LR	12 42 09.3	
	comp=Z,7µm,18.4s,baz=86,slow=34						
	comp=Z,20nm,0.9s						
QSPA	**South Pole Qui**	**35.08**	**180**	P	**P**	**12 29 10.2**	**+0.9**
QSPA				IAmb	IAmb	12 29 17.3	
	comp=Z,47nm,1.1s						
QSPA	**South Pole Qui**	**35.08**	**180**	IAMs_20	IAMs_20	12 41 30.6	
	comp=Z,7µm,20.0s						
TBI	**Tubuai**	**35.17**	**326**	*e*P	**P**	**12 29 09.9**	**-0.3**
	comp=Z,1µm,40.8s						
TBI				*e*S	**S**	**12 34 41.4**	**-1.8**
	comp=Z,4µm,30.0s						
TBI				*e*LR	LR	12 38 29.2	
	comp=Z,36µm,27.2s						
TBI				*e*LR	LR	12 38 29.2	
	comp=Z,119µm,26.2s						
TBI	**Tubuai**	**35.17**	**326**	*e*T	T	13 06 00.3	
	comp=Z,228nm,0.3s						
COYC	**Coyhaique**	**36.62**	**99**	P	**P**	**12 29 22.8**	**+0.2**
BELA	**Belgrano 2**	**37.77**	**160**	P	**P**	**12 29 31.9**	**0.0**
ODZ	**Otahua Downs**	**38.84**	**259**	IAMs_20	IAMs_20	12 41 48.3	
	comp=Z,4µm,20.0s						
LL04	**Puerto Octay**	**39.33**	**93**	P	**P**	**12 29 44.9**	**-0.5**
RPZ	**Rata Peaks**	**39.43**	**261**	LR	LR	12 42 05.7	
	comp=Z,4µm,21.4s,baz=121,slow=30						
RPZ	**Rata Peaks**	**39.43**	**261**	IAMs_20	IAMs_20	12 41 53.8	
	comp=Z,4µm,21.0s						
LBZ	**Lake Benmore**	**39.50**	**260**	IAMs_20	IAMs_20	12 41 56.8	
	comp=Z,5µm,20.0s						
URZ	**Urewera**	**39.51**	**272**	LR	LR	12 42 24.0	
	comp=Z,3µm,20.8s,baz=216,slow=30						
THZ	**Tophouse**	**39.60**	**265**	IAMs_20	IAMs_20	12 42 15.7	
	comp=Z,3µm,19.0s						
WKZ	**Wanaka**	**39.89**	**258**	IAMs_20	IAMs_20	12 42 11.0	
	comp=Z,5µm,22.0s						
MEH	**Mehetia**	**39.91**	**331**	*e*T	T	13 12 00.0	
	comp=Z,18nm,0.2s						
LR03	**Panguipulli**	**40.21**	**92**	P	**P**	**12 29 52.4**	**-0.4**
LR03				IAmb	IAmb	12 29 56.3	
	comp=Z,49nm,1.1s						
FOZ	**Fox Glacier**	**40.24**	**260**	IAMs_20	IAMs_20	12 42 30.4	
	comp=Z,6µm,20.0s						
QRZ	**Quartz Range**	**40.43**	**266**	P	**P**	**12 29 50.3**	**-4.3**
H03S2	**Juan Fernandez**	**40.50**	**80**	T	T	13 12 50.6	
	baz=221,slow=74,SNR=732						
H03S1	**Juan Fernandez**	**40.51**	**80**	T	T	13 12 51.9	
	baz=221,slow=74,SNR=702						
PLCA	**Paso Flores**	**40.51**	**94**	P	**P**	**12 29 55.9**	**+0.4**
	comp=Z,6.8nm,1.0s,baz=220,slow=9.1,SNR=7.7						
PLCA				PcP	**PcP**	**12 31 55.4**	**-2.3**
	comp=Z,2.5nm,1.0s,baz=252,slow=13,SNR=2.4						
PLCA				LR	LR	12 42 47.7	
	comp=Z,2µm,19.4s,baz=226,slow=30						
	comp=Z,6.8nm,1.0s						
PLCA	**Paso Flores**	**40.51**	**94**	P	**P**	**12 29 55.8**	**+0.4**
PLCA	**Paso Flores**	**40.51**	**94**	P	**P**	**12 29 55.8**	**+0.4**
PLCA				pmax	pmax		
	comp=Z,22nm,1.3s						
PLCA	**Paso Flores**	**40.51**	**94**	*e*P	**P**	**12 29 55.0**	**-0.4**
H03S3	**Juan Fernandez**	**40.52**	**80**	T	T	13 12 51.0	
	baz=221,slow=74,SNR=703						
TIAR	**Tiarei**	**40.58**	**329**	*e*T	T	13 12 49.9	
	comp=Z,1.7nm,0.3s						
PPT2	**Papeete2**	**40.61**	**329**	*e*P	**P**	**12 29 55.7**	**-0.7**
	comp=Z,227nm,26.0s						
PPT2				*e*S	**S**	**12 36 04.3**	**-1.6**
	comp=Z,1µm,26.0s						
PPT2				*e*LR	LR	12 41 00.7	
	comp=Z,8µm,29.2s						
PPT2				*e*LR	LR	12 41 00.8	
	comp=Z,11µm,26.8s						
PPT2	**Papeete2**	**40.61**	**329**	*e*T	T	13 12 54.0	
	comp=Z,5.0nm,0.3s						
PPT	**Papeete**	**40.63**	**329**	LR	LR	12 42 29.2	
	comp=Z,3µm,21.1s,baz=160,slow=30						
GO06	**Curarrehue**	**40.74**	**92**	P	**P**	**12 29 57.1**	**-0.2**
H03N3	**Juan Fernandez**	**40.78**	**79**	T	T	13 13 08.6	
	baz=224,slow=72,SNR=1519						
H03N2	**Juan Fernandez**	**40.79**	**79**	T	T	13 13 09.3	
	baz=224,slow=72,SNR=1063						
EFI	**East Falkland**	**40.80**	**116**	IAMs_20	IAMs_20	12 43 31.3	
	comp=Z,4µm,19.0s						
H03N1	**Juan Fernandez**	**40.80**	**79**	T	T	13 13 08.8	
	baz=224,slow=72,SNR=1195						
RAR	**Rarotonga**	**40.95**	**313**	LR	LR	12 42 19.8	
	comp=Z,1µm,20.9s,baz=146,slow=29						
VAH	**Vaihoa**	**42.31**	**333**	*e*T	T	13 15 01.0	
	comp=Z,154nm,0.3s						
PMOR	**Pomariorio Ree**	**42.60**	**333**	*e*T	T	13 15 27.7	
	comp=Z,23nm,0.3s						
BO02	**Sierra Bellavi**	**44.46**	**88**	P	**P**	**12 30 27.2**	**-0.3**
BO02				IAmb	IAmb	12 30 28.8	
	comp=Z,30nm,0.9s						
MT09	**Talagante**	**45.07**	**87**	P	**P**	**12 30 32.2**	**-0.3**
MT09				IAmb	IAmb	12 30 32.4	
	comp=Z,33nm,1.1s						
LMEL	**Las Melosas**	**45.47**	**87**	P	**P**	**12 30 34.9**	**-0.8**
LMEL				IAmb	IAmb	12 30 39.5	
	comp=Z,37nm,1.1s						
PEL	**Peldehue**	**45.70**	**86**	P	**P**	**12 30 37.0**	**-0.4**
PEL	**Peldehue**	**45.70**	**86**	P	**P**	**12 30 37.0**	**-0.4**
PEL				pmax	pmax		
	comp=Z,155nm,1.7s						
VA03	**San Esteban**	**46.06**	**86**	P	**P**	**12 30 40.3**	**0.0**
VA03				IAmb	IAmb	12 30 41.4	
	comp=Z,51nm,1.1s						
CO02	**Combarbal**	**46.95**	**84**	P	**P**	**12 30 47.6**	**+0.3**
TAOE	**Nuku Hiva Isla**	**46.97**	**345**	*e*P	**P**	**12 30 47.3**	**-0.2**
	comp=Z,199nm,26.2s						
TAOE				*e*S	**S**	**12 37 37.7**	**-1.0**
	comp=Z,1µm,25.4s						
TAOE				*e*LR	LR	12 43 58.9	
	comp=Z,8µm,28.3s						
TRQA	**Tornquist**	**47.21**	**98**	P	**P**	**12 30 48.8**	**-0.4**
TRQA	**Tornquist**	**47.21**	**98**	P	**P**	**12 30 48.8**	**-0.4**
TRQA				pmax	pmax		
	comp=Z,68nm,1.4s						
VNA2	**Neumayer--Watz**	**47.64**	**158**	P	**P**	**12 30 50.5**	**-1.6**
	baz=219,slow=9.0						
SNAA	**Sanae**	**48.02**	**160**	P	**P**	**12 30 55.8**	**+0.7**
SNAA	**Sanae**	**48.02**	**160**	LR	LR	12 50 10.8	
	comp=Z,4µm,19.7s,baz=230,slow=35						
SNAA	**Sanae**	**48.02**	**160**	P	**P**	**12 30 55.0**	**0.0**
SNAA				IAmb	IAmb	12 30 56.3	
	comp=Z,18nm,1.0s						
SNAA	**Sanae**	**48.02**	**160**	P	**P**	**12 30 55.0**	**0.0**
SNAA				pmax	pmax		
	comp=Z,18nm,1.0s						
CFA	**Coronel Fontan**	**48.24**	**87**	LR	LR	12 46 26.4	
	comp=Z,2µm,20.1s,baz=233,slow=30						
TROLL	**Troll, Antarti**	**48.75**	**162**	P	**P**	**12 31 00.7**	**-0.1**
LCO	**Las Campanas**	**48.77**	**82**	P	**P**	**12 31 02.0**	**+0.4**
LCO	**Las Campanas**	**48.77**	**82**	P	**P**	**12 31 02.0**	**+0.4**
LCO				pmax	pmax		
	comp=Z,61nm,1.3s						
AC05	**El Transito**	**49.14**	**83**	P	**P**	**12 31 04.9**	**+0.6**
AC05				IAmb	IAmb	12 31 07.1	
	comp=Z,47nm,1.1s						
AC01	**Pan de Azucar**	**51.02**	**80**	P	**P**	**12 31 18.7**	**+0.3**
AC01				IAmb	IAmb	12 31 20.1	
	comp=Z,74nm,1.5s						
AC02	**Maricunga**	**51.32**	**82**	P	**P**	**12 31 21.6**	**+0.4**
AC02				IAmb	IAmb	12 31 33.2	
	comp=Z,70nm,1.6s						
NVL	**N'lazarevskaya**	**51.36**	**164**	*e*P	**P**	**12 31 20.3**	**-0.1**
NVL				*e*S	**S**	**12 38 37.7**	**-1.5**
NVL				pmax	pmax		
	comp=Z,12nm,1.0s						
NVL				MLR	MLR		
	comp=Z,1µm,17.0s						
LPA	**La Plata**	**51.74**	**98**	*i* P	P	12 31 29.8	+6.1
LPA				pP	pwP	12 31 39.9	+8.4
LPA				sP	sP	12 31 46.0	+20
LPA				PCP	**PcP**	**12 32 34.6**	**-2.3**
LPA				PP	**PP**	**12 33 22.0**	**+0.9**

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LPA                                    PPP      PPP      12 34 29.1
LPA                                    S        S        12 38 39.4  -5.8
LPA                                    sS       sS       12 38 50.8  +2.7
LPA                                    PS       pS       12 38 56.6  +9.3
LPA                                    PPS      PPS      12 39 06.9
LPA                                    PKIKP    PKiKP    12 39 16.3  -1.7
LPA                                    SCS      ScS      12 41 16.6  +2.8
LPA                                    SS       SS       12 42 34.4  +13
LPA                                    SKIKP             12 42 46.2
LPA                                    PKIKS    SKiKP    12 42 51.1  +1.0
LPA                                    SSS      SSS      12 44 06.9
LPA                                    SKIKS             12 46 20.7
ELIB  Princess Elisa    51.77 169  dP       P        12 31 23.2  -0.5
      comp=Z,26nm,1.2s
PB14  IPOC Station P    52.31  79  P        P        12 31 27.6  -0.9
PB14                               IAmb     IAmb     12 31 30.1
      comp=Z,63nm,1.4s
AFI   Afiamalu          52.75 304  LR       LR       12 47 55.5
      comp=Z,701nm,19.7s,baz=144,slow=29
PB15  IPOC Station P    53.95  79  P        P        12 31 41.1  +0.7
PB15                               IAmb     IAmb     12 31 42.7
      comp=Z,54nm,1.2s
PB06  IPOC Station P    54.28  78  P        P        12 31 42.8   0.0
PB06                               IAmb     IAmb     12 31 44.0
      comp=Z,27nm,0.9s
MSVF  Nonsavu           54.69 291  LR       LR       12 49 47.7
      comp=Z,252nm,20.1s,baz=154,slow=30
LVC   Limon Verde       54.73  79  LR       LR       12 49 14.7
      comp=Z,541nm,19.1s,baz=220,slow=30
LVC   Limon Verde       54.73  79  P        P        12 31 45.5  -0.8
LVC                                IAmb     IAmb     12 31 49.0
      comp=Z,48nm,1.4s
LVC   Limon Verde       54.73  79  P        P        12 31 45.5  -0.8
LVC                                pmax     pmax
      comp=Z,48nm,1.4s
LVC   Limon Verde       54.73  79  eP       P        12 31 46.8  +0.5
MECA  Mercedes          55.73  93  eP       P        12 31 51.3  -1.8
ITQB  Itaqui            56.34  95  P        P        12 31 57.1  -0.3
ITQB                               IAmb     IAmb     12 32 02.7
      comp=Z,42nm,0.9s
ITQB  Itaqui            56.34  95  eP       P        12 31 57.3   0.0
PLTB  Pedras Altas      56.50  99  P        P        12 31 56.3  -2.2
PLTB  Pedras Altas      56.50  99  eP       P        12 31 55.7  -2.8
PB11  IPOC Station P    56.58  76  P        P        12 31 59.0  -0.4
MNMC  Minye Minye       57.12  76  P        P        12 32 03.4  +0.1
MAW   Mawson            57.29 185  LR       LR       12 54 26.3
      comp=Z,1µm,20.6s,baz=165,slow=34
CPSB  Cacapava Do Su    57.61  98  eP       P        12 32 05.8  -0.6
DZM   Mont Dzumac       57.65 278  eS       S        12 40 02.3  -2.9
      comp=Z,324nm,24.1s
DZM                                eLR      LR       12 48 52.6
      comp=Z,3µm,29.4s
DZM   Mont Dzumac       57.65 278  LR       LR       12 51 05.8
      comp=Z,606nm,21.1s,baz=139,slow=30
AZCA  Azaras, Argent    57.91  94  eP       P        12 32 07.8  -0.7
CPUP  Villa Florida     58.47  92  P        P        12 32 11.5  -0.9
      comp=Z,7.6nm,0.9s,baz=239,slow=10,SNR=12
CPUP                               PcP      PcP      12 33 02.6  -0.4
      comp=Z,5.0nm,0.9s,baz=225,slow=11,SNR=2.9
CPUP                               LR       LR       12 54 03.3
      comp=Z,3µm,18.2s,baz=226,slow=33
      comp=Z,7.6nm,0.9s
CPUP  Villa Florida     58.47  92  P        P        12 32 11.9  -0.4
CPUP                               IAmb     IAmb     12 32 18.1
      comp=Z,18nm,1.1s
CPUP  Villa Florida     58.47  92  P        P        12 32 12.0  -0.4
CPUP                               pmax     pmax
      comp=Z,18nm,1.2s
CNLB  Canela            59.90  99  eP       P        12 32 21.3  -1.1
LPAZ  La Paz            60.23  75  P        P        12 32 25.6  +0.2
      comp=Z,46nm,1.1s,baz=195,slow=3.8,SNR=37
LPAZ                               LR       LR       12 52 42.5
      comp=Z,175nm,21.5s,baz=218,slow=30
      comp=Z,46nm,1.1s
LPAZ  La Paz            60.23  75  P        P        12 32 25.8  +0.4
LPAZ  La Paz            60.23  75  P        P        12 32 25.8  +0.4
LPAZ                               pmax     pmax
      comp=Z,55nm,1.1s
LPAZ  La Paz            60.23  75  eP       P        12 32 26.2  +0.8
LPAZ  La Paz            60.23  75  eP       P        12 32 26.2  +0.8
FRBT  Francisco Belt    61.19  95  eP       P        12 32 30.8  -0.4
ATAH  Atahualpa         62.44  60  LR       LR       12 53 16.4
      comp=Z,2µm,18.2s,baz=218,slow=30
AMBA  Amambai (Brazi    62.44  91  eP       P        12 32 39.3  -0.3
PTGB  Pitanga           62.73  95  eP       P        12 32 40.9  -0.7
BBRB  Robore, Bolivi    63.33  84  eP       P        12 32 44.3  -1.3
BBSD  Serra de San D    63.74  82  eP       P        12 32 47.4  -0.9
AQDB  Aquidauana        63.95  89  P        P        12 32 49.7  +0.1
AQDB                               IAmb     IAmb     12 32 51.4
      comp=Z,44nm,1.8s
AQDB  Aquidauana        63.95  89  eP       P        12 32 48.0  -1.7
MCRA  Macar, Loja       64.07  57  P        P        12 32 51.1  +0.6
MCRA                               IAmb     IAmb     12 33 03.6
      comp=Z,22nm,1.2s
STKA  Stephens Creek    64.19 251  P        P        12 32 51.1   0.0
      comp=Z,0.8nm,0.3s,baz=166,slow=11,SNR=1.0
STKA                               LR       LR       12 55 04.6
      comp=Z,1µm,21.7s,baz=151,slow=31
      comp=Z,0.8nm,0.3s
SIV   San Ignacio       64.44  81  LR       LR       12 56 00.0
      comp=Z,456nm,21.5s,baz=242,slow=32
PANT  Pantanal (Braz    64.60  87  eP       P        12 32 53.4  -0.5
CZSB  Cruzeiro do Su    64.84  66  P        P        12 32 55.4  -0.1
CZSB  Cruzeiro do Su    64.84  66  eP       P        12 32 56.2  +0.7
FRTB  Fartura           65.23  96  eP       P        12 32 57.7  -0.4
RVDE  Rio Verde (Bra    65.53  88  eP       P        12 32 59.1  -0.9
PCMB  Pacaembu          65.61  93  eP       P        12 32 59.9  -0.6
PTLB  Pontes e Lacer    65.97  83  P        P        12 33 02.5  -0.3
PTLB                               IAmb     IAmb     12 33 04.4
      comp=Z,17nm,1.2s
PTLB  Pontes e Lacer    65.97  83  eP       P        12 33 02.5  -0.3
SPB   Sao Paulo         66.25  97  IAMs_20  IAMs_20  12 59 05.4
      comp=Z,2µm,19.0s
SPB   Sao Paulo         66.25  97  eP       P        12 33 04.5   0.0
ETMB  Extrema           66.59  73  P        P        12 33 06.9  +0.1
ETMB                               IAmb     IAmb     12 33 08.6
      comp=Z,19nm,1.0s
ETMB  Extrema           66.59  73  eP       P        12 33 06.7   0.0
PP1B  Ponte de Pedra    66.69  87  eP       P        12 33 06.7  -0.7
VAO   Valinhos          66.98  97  eP       P        12 33 09.2  -0.2
VILB  Vilhena           67.38  80  P        P        12 33 12.3  +0.5
VILB                               IAmb     IAmb     12 33 13.7
      comp=Z,28nm,0.9s
VILB  Vilhena           67.38  80  eP       P        12 33 11.4  -0.5
SALV  Santo Antonio     67.58  86  eP       P        12 33 12.6  -0.5
BB19B Bebedouro         67.61  95  eP       P        12 33 13.0  -0.3
ITRB  Iturama           67.63  93  eP       P        12 33 13.2  -0.2
OTAV  Otavalo           68.80  56  P        P        12 33 22.2  +0.9
OTAV                               IAmb     IAmb     12 33 35.7
      comp=Z,31nm,1.4s
OTAV  Otavalo           68.80  56  P        P        12 33 22.2  +0.9
OTAV                               pmax     pmax
      comp=Z,31nm,1.4s
OTAV  Otavalo           68.80  56  eP       P        12 33 23.6  +2.3
OTAV  Otavalo           68.80  56  eP       P        12 33 22.9  +1.6
SAML  Samuel            68.97  75  P        P        12 33 21.1  -0.7
SAML                               IAmb     IAmb     12 33 23.5
      comp=Z,18nm,0.9s
SAML  Samuel            68.97  75  P        P        12 33 21.1  -0.7
SAML                               pmax     pmax
      comp=Z,18nm,0.9s
SAML  Samuel            68.97  75  eP       P        12 33 21.1  -0.7
BSCB  Bom Sucesso       69.80  98  eP       P        12 33 26.5  -0.5
PDRB  Porto dos Gac     70.44  82  eP       P        12 33 29.9  -0.9
CTA   Charters Tower    70.78 262  P        P        12 33 36.1  +3.2
      comp=Z,4.5nm,0.8s,baz=132,slow=4.4,SNR=6.1
CTA                                LR       LR       12 59 32.7
      comp=Z,627nm,20.6s,baz=130,slow=32
      comp=Z,4.5nm,0.8s
CTAO  Charters Tower    70.78 262  P        P        12 33 34.0  +1.0
CTAO  Charters Tower    70.78 262  P        P        12 33 34.0  +1.0
CTAO                               pmax     pmax
      comp=Z,15nm,1.1s
HNR   Honiara           71.48 280  LR       LR       13 01 02.9
      comp=Z,3µm,18.9s,baz=116,slow=32
POPC  Popayan, Colom    71.66  56  eP       P        12 33 40.1  +1.6
BDFB  Brasilia          72.20  92  P        P        12 33 40.6  -1.0
      comp=Z,7.2nm,0.9s,baz=208,slow=2.3,SNR=7.8
BDFB                               LR       LR       13 03 01.7
      comp=Z,1µm,18.2s,baz=213,slow=34
      comp=Z,7.2nm,0.9s
BDFB  Brasilia          72.20  92  P        P        12 33 41.6   0.0
BDFB  Brasilia          72.20  92  P        P        12 33 41.6   0.0
BDFB                               pmax     pmax
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      comp=Z,14nm,1.1s
BDFB  Brasilia          72.20  92  eP       P        12 33 41.5  -0.2
JAMC  Jamundi, Valle    72.25  56  eP       P        12 33 44.8  +2.8
MACC  Macarena, Meta    72.69  59  eP       P        12 33 45.5  +1.1
SJMB  Sao Joao De Ma    73.66  99  eP       P        12 33 49.7  -0.4
SGCB  S£o Gabriel d     74.24  67  eP       P        12 33 52.3  -1.3
ROSC  El Rosal          74.80  57  P        P        12 33 58.5  +1.3
      comp=Z,6.7nm,0.4s,baz=200,slow=16,SNR=1.4
ROSC                               LR       LR       13 01 03.0
      comp=Z,1µm,19.4s,baz=230,slow=31
      comp=Z,6.7nm,0.4s
ASAR  Alice Springs     74.82 251  P        P        12 33 57.2  +0.2
      comp=Z,4.1nm,0.8s,baz=141,slow=5.9,SNR=30
ASAR                               LR       LR       13 02 51.2
      comp=Z,2µm,19.2s,baz=148,slow=32
      comp=Z,4.1nm,0.8s
ASAR  Alice Springs     74.82 251  P        P        12 33 56.0  -0.9
AS31  Alice Springs     74.82 251           P        12 33 56.2  -0.7
JTS   Las Juntas de     74.87  45  LR       LR       12 59 09.7
      comp=Z,837nm,19.9s,baz=282,slow=30
CHIC  Chingaza          74.90  58  eP       P        12 33 59.5  +1.7
NPGB  Novo Progresso    74.92  81  eP       P        12 33 56.5  -1.0
NAN01 Guarapari, ES     74.95 100  eP       P        12 33 56.8  -0.8
MACA  Manacapuru-AM     75.13  74  P        P        12 33 57.8  -0.9
MACA                               IAmb     IAmb     12 34 00.4
      comp=Z,30nm,0.9s
MACA  Manacapuru-AM     75.13  74  eP       P        12 33 58.5  -0.3
NORC  Norcasia          75.16  57  eP       P        12 33 59.4  +0.5
H01W1 Cape Leeuwin H    75.35 229  T        T        13 57 37.8
      baz=148,slow=76,SNR=298
H01W2 Cape Leeuwin H    75.36 229  T        T        13 57 42.0
      baz=148,slow=76,SNR=283
H01W3 Cape Leeuwin H    75.37 229  T        T        13 57 39.1
      baz=148,slow=76,SNR=292
DBBC  Dabeiba           75.79  55  eP       P        12 34 04.7  +2.2
GUA01 Guaratinga, BA    76.14  99  eP       P        12 34 04.4  -0.1
PTBC  PUERTO BERRIO,    76.21  56  eP       P        12 34 05.3  +0.5
RUSC  La Rusia          76.31  58  eP       P        12 34 05.9  -0.1
SDBA  SAO DESIDERIO     76.58  92  eP       P        12 34 06.9  -0.1
ITTB  Itaituba          76.90  79  eP       P        12 34 07.7  -1.1
CMIG  Matias Romero     77.53  33  LR       LR       13 01 24.3
      comp=Z,416nm,22.0s,baz=205,slow=30
WRA   Warramunga Arr    77.58 253  P        P        12 34 13.7  +1.0
      comp=Z,6.0nm,0.8s,baz=146,slow=5.1,SNR=18
      comp=Z,6.0nm,0.8s
WRA   Warramunga Arr    77.58 253  P        P        12 34 13.2  +0.6
WRA   Warramunga Arr    77.58 253  P        P        12 34 13.2  +0.6
WRAB  Tennant Creek     77.58 253  IAMs_20  IAMs_20  13 04 17.6
      comp=Z,1µm,20.0s
SMTB  Santa Maria do    77.89  88  eP       P        12 34 14.7  +0.3
GDU01 Guandu, BA        78.57  97  eP       P        12 34 17.3  -0.8
PMG   Port Moresby      78.81 270  LR       LR       13 05 31.4
      comp=Z,663nm,18.8s,baz=148,slow=33
BOAV  Boa Vista         79.84  71  P        P        12 34 23.5  -1.5
BOAV  Boa Vista         79.84  71  eP       P        12 34 23.2  -1.8
SDV   Santo Domingo     80.09  59  LR       LR       13 06 20.2
      comp=Z,511nm,18.5s,baz=194,slow=33
SDV   Santo Domingo     80.09  59  eP       P        12 34 27.0  +0.4
KRVT  Keravat (AS076    80.16 277  LR       LR       13 04 46.3
      comp=Z,351nm,21.4s,baz=286,slow=32
LPIG  La Paz            80.50  17  LR       LR       13 01 49.1
      comp=Z,746nm,19.9s,baz=196,slow=29
BAUV  El Baul           81.43  61  P        P        12 34 33.7  +0.2
BAUV                               IAmb     IAmb     12 34 35.0
      comp=Z,29nm,1.1s
MCPB  Macapa, AP        82.26  79  eP       P        12 34 37.9  -0.1
TMAB  Tom-Au,PA,Br      82.87  84  eP       P        12 34 41.6  +0.5
HPIG                    84.13  21  P        P        12 34 49.0  +1.6
HPIG                               IAmb     IAmb     12 35 04.1
      comp=Z,17nm,1.4s
TX32  Lajitas Array     86.87  22  P        P        12 35 02.9  +1.9
TXAR  Lajitas Array     86.87  22  P        P        12 35 02.6  +1.6
      comp=Z,2.2nm,0.9s,baz=186,slow=7.8,SNR=14
      comp=Z,2.2nm,0.9s
TX31  Lajitas Ar. Si    86.87  22  P        P        12 35 03.2  +2.3
TX31                               IAmb     IAmb     12 35 18.5
      comp=Z,23nm,1.1s
TX31  Lajitas Ar. Si    86.87  22  P        P        12 35 03.7  +2.8
      baz=194
833A  Chaparral WMA,    86.90  26  P        P        12 35 04.1  +3.2
      baz=196
RCBR  Riachuelo         87.06  96  IAMs_20  IAMs_20  13 07 51.9
      comp=Z,1µm,22.0s
ESJX  Sierra Juarez     87.48  11  P        P        12 35 06.2  +2.3
214A  Organ Pipe Nat    87.82  14  P        P        12 35 08.9  +3.5
      baz=189
BAR   Barrett           88.07  10  P        P        12 35 08.2  +1.7
BAR                                IAmb     IAmb     12 35 11.8
      comp=Z,12nm,1.3s
TUC   Tucson            88.46  15  P        P        12 35 11.8  +3.3
      baz=190
MNTX  Cornudas Mount    88.81  20  P        P        12 35 13.0  +3.0
      baz=193
ELS   Elsinore Mount    88.95  10  P        P        12 35 12.3  +1.6
ELS                                IAmb     IAmb     12 35 17.6
      comp=Z,31nm,1.9s
PFO   Pinyon Flats O    89.01  10  P        P        12 35 13.8  +2.7
      comp=Z,2.2nm,0.9s,baz=178,slow=4.9,SNR=3.2
PFO                                LR       LR       13 05 40.1
      comp=Z,1µm,21.7s,baz=212,slow=29
      comp=Z,2.2nm,0.9s
PFO   Pinyon Flats O    89.01  10  P        P        12 35 10.0  -1.1
PFO   Pinyon Flats O    89.01  10  P        P        12 35 10.0  -1.1
PFO                                pmax     pmax
      comp=Z,15nm,1.6s
PMD   Palm Desert       89.06  11  P        P        12 35 11.7  +0.5
SUR   Sutherland        89.10 155  LR       LR       13 13 18.3
      comp=Z,628nm,18.0s,baz=190,slow=34
PASC  Pasadena Art C    89.40   9  IAMs_20  IAMs_20  13 04 55.2
      comp=Z,1µm,18.0s
BELC  Belle Mtn. Jos    89.45  11  P        P        12 35 17.3  +4.2
      baz=188
IRM   Iron Mountain     89.70  11  P        P        12 35 17.8  +3.6
      baz=188
SJG   San Juan          90.21  58  LR       LR       13 10 42.2
      comp=Z,341nm,20.5s,baz=204,slow=32
HEC   Hector,Ludlow     90.23  10  P        P        12 35 20.4  +3.7
      baz=187
Y22A  Socorro           90.68  18  P        P        12 35 22.0  +3.0
      baz=192
Y22D  IRIS PASSCAL I    90.83  18  P        P        12 35 23.7  +4.2
      baz=192
MPMC  Manual Prospec    91.33   9  P        P        12 35 25.2  +3.3
      baz=187
SOEI  Soe               91.44 251  IAMs_20  IAMs_20  13 13 16.7
      comp=Z,2µm,20.0s
MSTX  Muleshoe          91.54  22  P        P        12 35 26.5  +3.6
      baz=195
SMRT  St. Maarten       91.68  60  IAMs_20  IAMs_20  13 10 16.0
      comp=Z,1µm,22.0s
ANMO  Albuquerque       91.76  18  P        P        12 35 25.9  +1.9
      comp=Z,2.2nm,0.9s,baz=225,slow=1.4,SNR=9.3
ANMO                               LR       LR       13 08 57.4
      comp=Z,283nm,19.4s,baz=292,slow=30
      comp=Z,2.2nm,0.9s
ANMO  Albuquerque       91.76  18  P        P        12 35 26.9  +2.9
      baz=193
ANMO  Albuquerque       91.76  18  P        P        12 35 26.4  +2.5
      baz=193
H11N3 WAKE ISLAND Hy    92.16 302  T        T        14 17 41.6
      baz=150,slow=80
H11N1 WAKE ISLAND Hy    92.16 302  T        T        14 17 43.5
      baz=150,slow=80
H11N2 WAKE ISLAND Hy    92.17 302  T        T        14 17 48.4
      baz=150,slow=80
FAKI  Fak Fak           92.61 261  IAMs_20  IAMs_20  13 12 21.6
      comp=Z,941nm,22.0s
MMRI  Maumere           93.46 250  IAMs_20  IAMs_20  13 13 35.3
      comp=Z,922nm,21.0s
NVAR  Mina Array Bea    93.61   8  P        P        12 35 35.4  +2.9
      comp=Z,0.9nm,0.9s,baz=173,slow=3.6,SNR=1.7
NVAR                               LR       LR       13 09 57.9
      comp=Z,976nm,18.1s,baz=182,slow=30
      comp=Z,0.9nm,0.9s
BOSA  Boshof            93.75 158  LR       LR       13 14 44.5
      comp=Z,1µm,18.9s,baz=194,slow=34
ELK   Elko              96.20  10  LR       LR       13 09 57.5
      comp=Z,573nm,20.6s,baz=202,slow=30
YBH   Yreka Blue Hor    96.61   5  LR       LR       13 09 21.9
      comp=Z,1µm,21.7s,baz=181,slow=29
LBTB  Lobatse           97.30 157  LR       LR       13 15 52.2
      comp=Z,1µm,19.4s,baz=193,slow=33
HWUT  Hardware Ranch    97.48  13  IAMs_20  IAMs_20  13 10 22.3
      comp=Z,1µm,22.0s
KAPI  Kappang           97.83 250  LR       LR       13 16 32.0
      comp=Z,760nm,20.8s,baz=148,slow=33
KAPI  Kappang           97.83 250  IAMs_20  IAMs_20  13 16 20.9
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      comp=Z,817nm,20.0s
MFID  Camas Ranch       98.78  10  IAMs_20  IAMs_20  13 11 20.6
      comp=Z,1µm,20.0s
PDAR  Pinedale Array    98.90  14  LR       LR       13 11 55.8
      comp=Z,917nm,21.2s,baz=202,slow=30
MYLDM Lahad Datu       106.99 254  IAMs_20  IAMs_20  13 23 56.1
      comp=Z,681nm,20.0s
LSZ   Lusaka           107.28 157  IAMs_20  IAMs_20  13 20 31.7
      comp=Z,1µm,20.0s
H02S1 DAWSON INLET T107.97 358  T        T        14 37 24.6
      SNR=68
WRAK  Wrangell Islan   111.19 358  IAMs_20  IAMs_20  13 16 32.5
      comp=Z,1µm,19.0s
JIS   Juneau Island    113.11 357  IAMs_20  IAMs_20  13 17 38.0
      comp=Z,1µm,22.0s
P33M  Teslin, Yukon    115.00 358  IAMs_20  IAMs_20  13 18 40.2
      comp=Z,1µm,19.0s
P18K  Big Mountain,    116.06 345  IAMs_20  IAMs_20  13 23 15.5
      comp=Z,1µm,19.0s
BARN  Barnard Glacie   116.25 353  IAMs_20  IAMs_20  13 23 55.9
      comp=Z,941nm,18.0s
N31M  Braeburn, Yuko   116.37 356  IAMs_20  IAMs_20  13 20 52.2
      comp=Z,1µm,20.0s
VRDI  Verde Repeater   116.55 352  IAMs_20  IAMs_20  13 18 16.7
      comp=Z,925nm,20.0s
PWL   Port Wells       116.62 350  IAMs_20  IAMs_20  13 18 19.7
      comp=Z,1µm,21.0s
MCARA McCarthy VSAT    116.67 353  IAMs_20  IAMs_20  13 17 45.0
      comp=Z,1µm,22.0s
O19K  Port Alsworth    116.70 346  IAMs_20  IAMs_20  13 21 07.6
      comp=Z,1µm,20.0s
GLB   Gilahina Butte   116.78 352  IAMs_20  IAMs_20  13 18 24.1
      comp=Z,1µm,21.0s
N25K  Chitina, Valde   117.01 352  IAMs_20  IAMs_20  13 19 13.0
      comp=Z,958nm,21.0s
KLU   Klutina          117.01 351  IAMs_20  IAMs_20  13 18 50.1
      comp=Z,1µm,22.0s
KNK   Knik Glacier     117.18 350  IAMs_20  IAMs_20  13 19 14.4
      comp=Z,944nm,20.0s
M27K  Edge Creek, AK   117.55 353  IAMs_20  IAMs_20  13 24 33.4
      comp=Z,949nm,18.0s
SML   Sawmill          117.55 350  IAMs_20  IAMs_20  13 19 56.3
      comp=Z,1µm,21.0s
GHO   Glory Hole Cre   117.58 349  IAMs_20  IAMs_20  13 20 15.0
      comp=Z,1µm,21.0s
M26K  Nabesna, AK      117.67 353  IAMs_20  IAMs_20  13 18 29.6
      comp=Z,1µm,22.0s
M22K  Willow           117.69 349  IAMs_20  IAMs_20  13 19 28.9
      comp=Z,1µm,20.0s
YKA   Yellowknife Ar   117.80   8  PKP      PKiKP    12 41 02.6  +1.2
      comp=Z,0.8nm,1.1s,baz=187,slow=2.8,SNR=4.4
L26K  Log Cabin Wild   118.32 353  IAMs_20  IAMs_20  13 19 14.6
      comp=Z,860nm,22.0s
CUT   Chulitna         118.34 349  IAMs_20  IAMs_20  13 19 51.2
      comp=Z,990nm,19.0s
RND   Reindeer         119.17 350  IAMs_20  IAMs_20  13 20 30.1
      comp=Z,994nm,22.0s
SCRK  Sand Creek       119.31 352  IAMs_20  IAMs_20  13 19 55.8
      comp=Z,709nm,20.0s
KTH   Kantishna Hill   119.53 349  IAMs_20  IAMs_20  13 20 50.6
      comp=Z,1µm,21.0s
J26L  Joseph Creek     119.80 353  IAMs_20  IAMs_20  13 27 25.7
      comp=Z,766nm,18.0s
HDA   Harding Lake     119.98 351  IAMs_20  IAMs_20  13 20 56.4
      comp=Z,1µm,22.0s
BWN   Browne           119.98 350  IAMs_20  IAMs_20  13 21 43.1
      comp=Z,1µm,21.0s
BPAW  Bear Paw Mtn.    120.07 349  IAMs_20  IAMs_20  13 21 27.9
      comp=Z,1µm,22.0s
WRH   Wood River Hil   120.14 351  IAMs_20  IAMs_20  13 21 31.8
      comp=Z,1µm,20.0s
CCB   Clear Creek Bu   120.29 351  IAMs_20  IAMs_20  13 21 14.6
      comp=Z,1µm,22.0s
IL31                   120.33 351           PKiKP    12 41 07.2  +1.0
ILAR  Eielson Array    120.33 351  PKP      PKPdf    12 41 06.0  -0.2
      comp=Z,2.0nm,0.9s,baz=190,slow=3.9,SNR=25
ILAR  Eielson Array    120.33 351  PKPdf    PKiKP    12 41 07.5  +1.2
ILAR  Eielson Array    120.33 351  PKIKP    PKiKP    12 41 07.5  +1.2
NEA2  Nenana           120.36 350  IAMs_20  IAMs_20  13 23 15.4
      comp=Z,686nm,20.0s
MJAR  Matsushiro Arr   120.49 291  PKP      PKPdf    12 41 06.4  -1.1
      comp=Z,0.4nm,0.4s,baz=126,slow=2.5,SNR=2.7
COLA  College          120.51 351  IAMs_20  IAMs_20  13 21 22.6
      comp=Z,1µm,22.0s
MDM   Murphy Dome      120.63 351  IAMs_20  IAMs_20  13 21 47.8
      comp=Z,1µm,22.0s
POKR  Poker Plat Res   120.72 351  IAMs_20  IAMs_20  13 21 05.9
      comp=Z,1µm,20.0s
PRP   Porcupine Dome   120.95 352  IAMs_20  IAMs_20  13 21 41.1
      comp=Z,768nm,21.0s
MLY   Manley           120.95 349  IAMs_20  IAMs_20  13 22 26.1
      comp=Z,801nm,20.0s
I21K  Tanana           121.23 349  IAMs_20  IAMs_20  13 22 23.5
      comp=Z,1µm,21.0s
EPYK  Eagle Plains     121.29 356  P        PKiKP    12 41 10.2  +2.0
      baz=175
H23K  Yukon River      121.61 350  IAMs_20  IAMs_20  13 21 55.4
      comp=Z,979nm,22.0s
KIBK  Kibwezi          121.77 165  IAMs_20  IAMs_20  13 29 16.7
      comp=Z,753nm,20.0s
H21K  Melozitna Rive   121.78 349  IAMs_20  IAMs_20  13 22 22.1
      comp=Z,960nm,22.0s
G30M  tAoh Zraii Nji   121.88 357  P        PKiKP    12 41 11.3  +2.0
      baz=175
ANM   Nome             122.56 342  IAMs_20  IAMs_20  13 25 46.4
      comp=Z,1µm,20.0s
ANM   Nome             122.56 342  P        PKiKP    12 41 13.4  +2.7
      baz=156
KMBO  Kilima Mbogo     122.84 164  IAMs_20  IAMs_20  13 34 14.6
      comp=Z,837nm,18.0s
F26K  Sheenjek River   123.00 353  P        PKiKP    12 41 13.4  +1.8
      baz=170
QIZ   Qiongzhong       123.11 255  PKP      PKPdf    12 41 11.3  -1.7
QIZ                                PP       PP       12 42 54.8  +2.1
QIZ                                AMB      AMB
      comp=Z,230nm,6.0s
QIZ                                LR       LR
      comp=Z,230nm,23.9s
QIZ                                LR       LR
      comp=Z,200nm,28.7s
QIZ                                LR       LR
      comp=Z,250nm,23.9s
INK   Inuvik           123.14 358  PKP      PKPdf    12 41 10.5  -1.0
      comp=Z,0.3nm,0.5s,baz=192,slow=1.8,SNR=3.6
E27K  Coleen River     123.33 354  P        PKiKP    12 41 13.3  +1.1
      baz=172
TORD  Torodi Ar. Bea   123.38 118  PKP      PKiKP    12 41 14.2  +0.3
      comp=Z,0.7nm,0.6s,baz=274,slow=2.9,SNR=3.9
E24K  Your Creek       123.71 351  P        PKiKP    12 41 15.9  +2.9
      baz=167
TOLK  Toolik Lake Re   124.35 351           PKiKP    12 41 15.0  +0.8
TOLK                               IAMs_20  IAMs_20  13 23 45.1
      comp=Z,1µm,21.0s
C27K  Jago River       124.88 354  P        PKiKP    12 41 17.8  +2.6
      baz=170
C26K  Camden Bay       125.24 353  P        PKiKP    12 41 18.6  +2.8
      baz=169
C24K  Franklin Bluff   125.33 352  P        PKiKP    12 41 17.6  +1.6
      baz=166
RDOG  Red Dog Mine     125.38 345           PKiKP    12 41 17.2  +1.0
RDOG                               IAMs_20  IAMs_20  13 24 12.0
      comp=Z,917nm,22.0s
A36M  Sachs Harbour    126.82   1  IAMs_20  IAMs_20  13 26 12.7
      comp=Z,821nm,21.0s
A21K  Barrow           127.63 349  IAMs_20  IAMs_20  13 26 02.7
      comp=Z,878nm,22.0s
NJ2   Nanjing          128.02 273  ePKP     PKPdf    12 41 20.7  -1.3
CMAR  Chiang Mai Arr   128.52 244  PKP      PKiKP    12 41 25.3  +1.3
      comp=Z,1.4nm,1.0s,baz=184,slow=3.2,SNR=6.5
CN2   Changchun        132.52 289  ePKP     PKPdf    12 41 26.9  -3.3
KLR   Kul'dur          132.72 298  PKP      PKiKP    12 41 32.5  +1.0
      comp=Z,1.4nm,0.7s,baz=135,slow=2.9,SNR=4.1
TAM   Tamanrasset      133.42 115  IAMs_20  IAMs_20  13 32 15.7
      comp=Z,547nm,21.0s
PZH   PanZhiHua        133.54 253  PKP      PKPdf    12 41 31.6  -1.2
PZH                                PP       PP       12 44 07.4  +6.1
PZH                                PKS      PKSdf    12 45 05.3  -4.1
PZH                                SS       SS       13 01 43.8  -3.1
PZH                                AMB      AMB
      comp=Z,120nm,8.2s
PZH                                LR       LR
      comp=Z,220nm,18.8s
PZH                                LR       LR
      comp=Z,200nm,19.0s
PZH                                LR       LR
      comp=Z,250nm,21.6s
TNCH  TengChong        134.12 249  PKP      PKPdf    12 41 31.7  -2.3
TNCH                               sPKP              12 41 37.3
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TNCH				SKS	**SKSdf**	**12 48 42.9**	**-2.4**
TNCH				AMB	AMB		
	comp=Z,91nm,4.8s						
HEH	**HeiHe**	**135.56**	**297**	*e*PKP	**PKPdf**	**12 41 32.0**	**-3.6**
HHC	**Hu-ho-hao-te**	**138.35**	**276**	*e*PKP	**PKPdf**	**12 41 37.7**	**-3.6**
ESDC	**Sonseca Array**	**140.82**	**90**	PKP	**PKPdf**	**12 41 46.1**	**+0.3**
	comp=Z,1.1nm,0.9s,baz=259,slow=2.0,SNR=4.6						
GTA	**Gaotai**	**144.14**	**265**	*e*PKP	**PKPab**	**12 41 49.4**	**-0.1**
GTA				pPKP	PKPdf	12 41 52.6	+0.8
GTA				LR	LR		
	comp=Z,130nm,23.5s						
GTA				LR	LR		
	comp=Z,170nm,17.9s						
GTA				LR	LR		
	comp=Z,170nm,18.7s						
TIXI	**Tiksi**	**144.53**	**328**	PKP	PKPbc	12 41 50.2	+0.3
	comp=Z,43nm,0.9s,baz=90,slow=23,SNR=36						
TIXI	**Tiksi**	**144.53**	**328**		**PKPab**	**12 41 49.4**	**-0.3**
GOMU	**GeErMu**	**144.73**	**256**	PKP	**PKPdf**	**12 41 55.0**	**+1.8**
GOMU				AMB	AMB		
	comp=Z,190nm,6.9s						
SONM	**Songino Array**	**145.53**	**281**	PKPbc	**PKPdf**	**12 41 53.7**	**-0.2**
	comp=Z,6.5nm,0.8s,baz=126,slow=4.9,SNR=15						
SONM	**Songino Array**	**145.53**	**281**		**PKPab**	**12 41 54.6**	**+0.3**
SONM	**Songino Array**	**145.53**	**281**	PKP2	**PKPab**	**12 41 54.7**	**+0.3**
KEST	**Kesra**	**145.62**	**107**	PKPbc	**PKPab**	**12 41 55.6**	**+0.6**
	comp=Z,19nm,1.1s,baz=252,slow=4.1,SNR=7.4						
KEST	**Kesra**	**145.62**	**107**	PKPdf	**PKPab**	**12 41 55.2**	**+0.2**
SCO	**Scoresbysund**	**145.84**	**35**	*i* P	**PKiKP**	**12 41 56.6**	**-1.0**
BOD	**Bodaibo**	**146.18**	**301**	*e*PKP2	**PKPab**	**12 41 56.9**	**+0.6**
BOD				pmax	pmax		
	comp=Z,23nm,1.4s						
DBG	**Daneborg**	**146.92**	**28**	*i* P	**PKiKP**	**12 42 00.6**	**+0.8**
NOR	**Nord**	**147.31**	**15**	*i* P	**PKPab**	**12 41 59.5**	**-0.7**
DAG	**Danmarks Havn**	**147.40**	**24**	*i* P	**PKPbc**	**12 41 59.0**	**+0.4**
ZAK	**Zakamensk**	**148.61**	**283**	*e*PKP2	**PKiKP**	**12 42 04.0**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,16nm,1.6s						
UOSS	**Minazif**	**149.63**	**189**	IAMs_20	IAMs_20	13 41 00.5	
	comp=Z,618nm,22.0s						
MOY	**Mondy**	**150.49**	**284**	*e*PKIKP	**PKiKP**	**12 42 09.4**	**+1.4**
MOY				pmax	pmax		
	comp=Z,23nm,1.8s						
CEL	**Celeste**	**151.03**	**111**	IAMs_20	IAMs_20	13 54 56.5	
	comp=Z,646nm,21.0s						
SENIN	**Lac Senin/Sane**	**151.43**	**89**	PKPdf	**PKPdf**	**12 42 02.5**	**-1.1**
SENIN				PKPab	**PKPab**	**12 42 16.5**	**-1.7**
TIP	**Timpagrande**	**152.17**	**111**	IAMs_20	IAMs_20	13 55 46.5	
	comp=Z,500nm,20.0s						
ECH	**Echery**	**152.35**	**86**	PKPdf	**PKPdf**	**12 42 05.0**	**+0.3**
ECH				PKPab	**PKPab**	**12 42 21.1**	**-0.6**
ECH	**Echery**	**152.35**	**86**	PKIKP	**PKPdf**	**12 42 05.0**	**+0.3**
ECH				PKP	**PKPab**	**12 42 21.1**	**-0.6**
WLF	**Walferdange**	**152.49**	**83**	PKPdf	**PKPdf**	**12 42 05.0**	**+0.2**
WLF					**PKPab**	**12 42 20.9**	**-1.4**
WLF	**Walferdange**	**152.49**	**83**	PKIKP	**PKPdf**	**12 42 05.0**	**+0.2**
WLF						12 42 20.9	
AQU	**L'Aquila**	**152.50**	**102**	IAMs_20	IAMs_20	13 58 35.9	
	comp=Z,704nm,22.0s						
IDI	**Anoyia**	**153.24**	**127**	PKPdf	**PKPdf**	**12 42 07.7**	**+1.2**
IDI				PKPab	**PKPab**	**12 42 25.6**	**-0.3**
IDI				IAMs_20	IAMs_20	13 58 21.6	
	comp=Z,580nm,19.0s						
NIL	**Nilore**	**153.50**	**225**	IAMs_20	IAMs_20	13 55 57.5	
	comp=Z,411nm,18.0s						
FETA	**Feichten**	**153.76**	**91**	*e*pPKP	**PKiKP**	**12 42 17.0**	**+2.1**
	comp=Z,7.0nm,1.0s						
WMQ	**Urumqi**	**153.91**	**260**	*e*PKPbc	**PKPdf**	**12 42 06.1**	**-1.1**
WMQ				LR	LR		
	comp=Z,210nm,18.9s						
WMQ				LR	LR		
	comp=Z,120nm,17.1s						
WMQ				LR	LR		
	comp=Z,350nm,25.3s						
RETA	**Reutte**	**154.03**	**90**	*e*PKP	**PKPab**	**12 42 30.2**	**+1.3**
	comp=Z,18nm,1.2s						
SQTA	**Sankt Quirin**	**154.15**	**91**	*e*pPKP	**PKiKP**	**12 42 18.0**	**+2.3**
	comp=Z,7.1nm,1.0s						
SQTA				*e*PKP	**PKPab**	**12 42 30.2**	**+0.7**
	comp=Z,16nm,1.2s						
MOTA	**Moosalm**	**154.16**	**91**	*e*PKiKP	**PKiKP**	**12 42 17.6**	**+1.8**
	comp=Z,9.4nm,1.2s						
WTTA	**Wattenberg**	**154.42**	**91**	*e*pPKP	**PKiKP**	**12 42 19.3**	**+3.0**
	comp=Z,10nm,1.2s						
KARP	**Karpathos**	**154.48**	**130**	IAMs_20	IAMs_20	13 53 07.0	
	comp=Z,653nm,21.0s						
STAL	**STALIGIAL**	**154.48**	**94**	PKPab	**PKPab**	**12 42 31.7**	**+0.8**
ABTA	**Abfaltersbach**	**154.64**	**93**	*e*pPKP	**PKiKP**	**12 42 19.4**	**+2.7**
	comp=Z,9.2nm,1.2s						
ABTA				*e*PKP	**pPKPab**	**12 42 32.6**	**-0.8**
	comp=Z,16nm,1.3s						
CLUD	**Cludinico**	**154.69**	**94**		**PKPab**	**12 42 32.6**	**+0.9**
KBA	**Koelnbreinsper**	**155.30**	**93**	*e*PKP	**PKPab**	**12 42 35.1**	**+0.6**
	comp=Z,7.6nm,1.1s						
OBKA	**Obir**	**155.67**	**95**	*e*PKP	**PKPab**	**12 42 36.8**	**+0.8**
	comp=Z,19nm,1.3s						
BIOA	**Bad Ischl, Aus**	**155.79**	**92**	*e*PKP	**PKPab**	**12 42 36.2**	**-0.2**
	comp=Z,13nm,1.5s						
SOKA	**Soboth**	**156.04**	**96**	*e*PKP	**PKPab**	**12 42 38.1**	**+0.5**
	comp=Z,5.7nm,0.8s						
MOA	**Molln**	**156.24**	**92**	*e*PKP	**PKPab**	**12 42 39.4**	**+1.1**
	comp=Z,15nm,1.2s						
GERES	**GERESS Array B**	**156.42**	**90**	PKP	**PKPdf**	**12 42 11.9**	**+1.4**
	comp=Z,1.0nm,0.8s,baz=211,slow=3.4,SNR=6.7						
CSS	**Mathiatis**	**156.44**	**141**	IAMs_20	IAMs_20	14 08 16.9	
	comp=Z,455nm,22.0s						
KHC	**Kasperske Hory**	**156.49**	**89**	*e*PKP	**PKPdf**	**12 42 12.9**	**+2.4**
KHC				*e*x	x	12 42 29.6	
KHC	**Kasperske Hory**	**156.49**	**89**	*e*PKIKP	**PKPdf**	**12 42 12.9**	**+2.4**
ARSA	**Arzberg**	**156.64**	**95**	pPKP	**pPKPdf**	**12 42 12.1**	**-0.5**
	comp=Z,2.9nm,0.9s						
ARSA				*e*PKP	**PKPab**	**12 42 40.2**	**+0.2**
	comp=Z,11nm,1.2s						
CKRC	**Cesky Krumlov**	**156.76**	**90**	*e*PKP	**PKPdf**	**12 42 16.8**	**+6.0**
CKRC				*e*x	x	12 42 40.7	
CKRC	**Cesky Krumlov**	**156.76**	**90**	*e*PKIKP	**PKPdf**	**12 42 16.8**	**+6.0**
CLL	**Collm**	**157.14**	**84**	*e*PKPdf	**PKPdf**	**12 42 13.0**	**+1.8**
CLL				*e*PKPab	**PKPab**	**12 42 42.0**	**0.0**
	comp=Z,8.0nm,1.2s						
CLL				*e*x	x	12 42 55.0	
CLL				*e*SKKSdf	SKKSdf	12 57 42.0	-4.6
CLL				*e*x	x	13 01 12.0	
CLL				*e*SS	**SS**	**13 06 14.0**	**-1.9**
CLL				*e*PSPS		13 07 36.0	
CLL				*e*SSS	SSS	13 12 12.0	
CLL				*e*PSSrev		13 15 18.0	
CLL				*e*SSSS		13 16 24.0	
CLL				AMS	AMS	13 50 00.0	
	comp=Z,300nm,21.7s						
CLL	**Collm**	**157.14**	**84**	*e*PKIKP	**PKPdf**	**12 42 13.0**	**+1.8**
CLL				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CLL				MLR	MLR		
	comp=Z,300nm,21.7s						
CONA	**Conrad Observa**	**157.20**	**94**	PKP	**PKPdf**	**12 42 12.8**	**+1.3**
	comp=Z,3.5nm,1.0s						
CONA				*e*PKP	**PKPab**	**12 42 43.3**	**+0.8**
	comp=Z,6.3nm,1.2s						
RONA	**Rosalia, Austr**	**157.32**	**95**	*e*PKP	**PKPab**	**12 42 43.3**	**+0.3**
	comp=Z,4.6nm,1.0s						
PRU	**Pruhonice**	**157.45**	**88**	*e*PKP	**PKPab**	**12 42 43.3**	**-0.1**
PRU	**Pruhonice**	**157.45**	**88**	*e*PKP2	**PKPab**	**12 42 43.3**	**-0.1**
BRG	**Berggiesshubel**	**157.50**	**85**	*e*PKP	PKPdf	12 42 24.8	+13
BRG				Amp		12 42 27.3	
	comp=Z,24nm,1.7s						
BRG	**Berggiesshubel**	**157.50**	**85**	*e*PKIKP	PKPdf	12 42 24.7	+13
BRG				pmax	pmax		
	comp=Z,24nm,1.7s						
ISP	**Isparta**	**157.84**	**133**	IAMs_20	IAMs_20	13 57 59.2	
	comp=Z,642nm,21.0s						
KRUC	**Moravsky**	**158.07**	**92**	*e*PKP	**PKPdf**	**12 42 14.9**	**+2.5**
NRIK	**Noril'sk**	**158.26**	**325**	PKPab	**PKPab**	**12 42 48.6**	**+2.2**
	comp=Z,5.9nm,1.1s,baz=77,slow=4.3,SNR=10.0						
VRAC	**Vranov**	**158.31**	**91**	*e*PKP	**PKPdf**	**12 42 14.8**	**+2.1**
DPC	**Dobruska-Polom**	**158.63**	**88**	*e*PKP	PKPdf	12 42 25.7	+13
DPC				*e*x	x	12 42 33.2	
DPC				*e*x	x	12 42 50.4	
DPC	**Dobruska-Polom**	**158.63**	**88**	*e*PKIKP	PKPdf	12 42 25.7	+13
DPC				*e*		12 42 33.2	
JAVC	**Velka Javorina**	**158.71**	**93**	*e*PKP	**PKPdf**	**12 42 16.9**	**+3.6**
MKAR	**Makanchi Array**	**158.74**	**260**	PKP	**PKPdf**	**12 42 12.2**	**-1.1**
	comp=Z,0.5nm,1.0s,baz=139,slow=1.3,SNR=2.4						
MKAR				PKPab	**sPKPab**	**12 42 51.6**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=108,slow=4.7,SNR=6.7						
KRLC	**Kraliky**	**158.77**	**89**	*e*PKIKP	**PKPdf**	**12 42 13.3**	**0.0**
KRLC				*e*		12 42 21.9	
MAKZ	**Makanchi**	**158.92**	**260**	IAMs_20	IAMs_20	14 10 52.9	
	comp=Z,340nm,20.0s						
VYHS	**Vyhne**	**159.19**	**95**	*e*PKIKP	**PKPdf**	**12 42 20.0**	**+6.2**
VYHS	**Vyhne**	**159.19**	**95**	*e*PKP	**PKPdf**	**12 42 20.0**	**+6.2**
BORA	**Eskisehir**	**159.53**	**130**	PKPdf	**PKPdf**	**12 42 13.0**	**-1.6**
AAK	**Ala-Archa**	**160.25**	**241**	PKPab	**PKPab**	**12 42 56.8**	**+0.9**
	comp=Z,2.3nm,0.8s,baz=192,slow=4.6,SNR=4.6						
ZALV	**Zalesovo Beam**	**160.43**	**281**	PKPab	**PKPab**	**12 42 56.6**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=93,slow=3.5,SNR=4.1						
BRTR	**Keskin Array B**	**160.74**	**136**	PKPab	**PKPab**	**12 43 00.0**	**+1.9**
	comp=Z,1.5nm,0.7s,baz=208,slow=4.9,SNR=2.5						
ARCES	**ARCESS Array B**	**161.54**	**29**	PKPab	**PKPab**	**12 43 03.1**	**+2.5**
	comp=Z,1.8nm,0.7s,baz=318,slow=3.8,SNR=1.9						
KURK	**Kurchatov**	**162.81**	**267**	PKIKP	**PKPdf**	**12 42 17.3**	**-0.3**
KURBB	**Kurchatov Arra**	**162.82**	**266**	PKP	**PKPdf**	**12 42 17.3**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=90,slow=1.0,SNR=2.6						
KURBB				PP	**PP**	**12 46 52.1**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=116,slow=4.3,SNR=5.6						
NACGM	**Naroch**	**166.13**	**81**	*e*PKP	PKPdf	12 42 29.3	+9.0
	comp=Z,10.0nm,1.1s,baz=259						
AKASG	**Malin Array Be**	**166.18**	**100**	PKP	**PKPdf**	**12 42 21.9**	**+1.4**
	comp=Z,0.2nm,0.4s,baz=259,slow=0.9,SNR=4.1						
AKASG				PKPab	**PKPab**	**12 43 21.1**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=255,slow=5.2,SNR=5.3						

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*IDC **05** 12:45:09.4±0.8, 52°.40N×169°.60W, h0^{km}, mb3.9/21, mbtmp4.0/22, ML3.6/1, MS4.1/6, Error ellipse: s-maj=24.4km s-min=14.2km az=173.0*

*AEIC **05** 12:45:11.7±2.5, 52°.16N±0°.06×169°.3W±0°.1, h9^{km}±5^{km}, Error ellipse: s-maj=10.7km s-min=7.6km az=113.0*

*NEIC **05** 12:45:13.1±2.5, 52°.24N±0°.04×169°.5W±0°.1, h19^{km}±8^{km}, mb3.9/32, ML4.0/6, ML3.7(AEIC), Error ellipse: s-maj=9.7km s-min=5.7km az=73.0*

ISC 05 12:45:11.1±0.6, **52°.28N**±0°.09×**169°.57W**±0°.06, **h10**^{km}, **n99**, σ**1^{s}.14**/92, **mb4.2**/34, **MS4.2**/6, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CLES	**Cleveland East**	**0.58**	**340**		**Pn**	**12 45 26.0**	**+0.6**
CLES				IAML		12 45 40.2	
	comp=E,7μm,0.3s						
CLES				IAML		12 45 44.7	
	comp=N,9μm,0.3s						
NIKH	**Nikolski High**	**0.82**	**32**		**Pb**	**12 45 28.2**	**+0.9**
NIKH					**Sn**	**12 45 41.6**	**+0.9**
UNV	**Unalaska Valle**	**2.42**	**48**	Pn	**Pn**	**12 45 51.4**	**+0.7**
UNV	**Unalaska Valle**	**2.42**	**48**		**Sn**	**12 46 21.3**	**+0.9**
AKUT	**Akutan**	**2.94**	**49**		**Pn**	**12 45 57.9**	**+0.1**
AKUT				IAML		12 46 46.3	
	comp=E,289nm,1.2s						
ADK	**Adak**	**4.41**	**268**	IAML		12 47 37.9	
	comp=E,168nm,1.4s						
ADK	**Adak**	**4.41**	**268**		**Pn**	**12 46 20.9**	**+2.9**
SPIA	**Saint Paul Isl**	**4.92**	**356**	Pn	**Pn**	**12 46 27.3**	**+2.3**
SDPT	**Sand Point**	**6.20**	**57**	Pn	**Pn**	**12 46 43.3**	**+0.8**
KDAK	**Kodiak Island**	**11.18**	**54**	Pn	**Pn**	**12 47 50.2**	**-0.6**
	comp=E,0.4nm,0.3s,baz=229,slow=9.3,SNR=11						
KDAK	**Kodiak Island**	**11.18**	**54**	Pn	**Pn**	**12 47 51.7**	**+1.0**
L19K	**White Mountain**	**12.69**	**33**		**Pn**	**12 48 15.6**	**+4.2**
TNA	**Tin City**	**13.35**	**3**	Pn	**Pn**	**12 48 23.0**	**+2.7**
RC01	**Rabbit Creek A**	**13.97**	**43**	Pn	**Pn**	**12 48 30.4**	**+1.6**
PPLA	**Purkeypile**	**14.08**	**34**	Pn	**Pn**	**12 48 30.1**	**-0.4**
PWL	**Port Wells**	**14.46**	**45**	Pn	**Pn**	**12 48 35.1**	**-0.4**
CAST	**Castle Rocks**	**14.47**	**33**		**Pn**	**12 48 35.7**	**+0.1**
GHO	**Glory Hole Cre**	**14.65**	**42**	Pn	**Pn**	**12 48 38.1**	**-0.2**
KTH	**Kantishna Hill**	**14.95**	**34**	Pn	**Pn**	**12 48 42.5**	**+0.2**
BPAW	**Bear Paw Mtn.**	**15.29**	**32**		**Pn**	**12 48 47.8**	**+1.1**
BPAW				IAmb	IAmb	12 48 57.0	
	comp=Z,6.6nm,0.9s						
SCM	**Sheep Creek Mo**	**15.34**	**43**	Pn	**Pn**	**12 48 47.0**	**-0.4**
I21K	**Tanana**	**15.74**	**28**		**Pn**	**12 48 54.4**	**+1.8**
I21K				IAmb	IAmb	12 49 22.3	
	comp=Z,7.9nm,1.1s						
KLU	**Klutina**	**15.78**	**45**	Pn	**Pn**	**12 48 52.4**	**-0.9**
KLU				IAmb	IAmb	12 49 13.8	
	comp=Z,9.2nm,0.8s						
MLY	**Manley**	**16.00**	**30**	P	**P**	**12 48 59.2**	**-0.3**
WRH	**Wood River Hil**	**16.50**	**34**		**Pn**	**12 49 02.9**	**+0.6**
WRH				IAmb	IAmb	12 49 20.0	
	comp=Z,10nm,1.2s						
I23K	**Minto, Yukon-K**	**16.51**	**31**	P	**P**	**12 49 04.4**	**-0.6**
I23K				IAmb	IAmb	12 49 24.0	
	comp=Z,12nm,1.4s						
CCB	**Clear Creek Bu**	**16.70**	**34**		**Pn**	**12 49 04.5**	**-0.4**
MDM	**Murphy Dome**	**16.75**	**32**	Pn	**Pn**	**12 49 05.6**	**0.0**
VRDI	**Verde Repeater**	**16.78**	**48**		**Pn**	**12 49 05.0**	**-1.1**
VRDI				IAmb	IAmb	12 49 48.6	
	comp=Z,16nm,1.4s						
HDA	**Harding Lake**	**16.86**	**35**		**Pn**	**12 49 07.9**	**+1.1**
HDA				IAmb	IAmb	12 49 38.0	
	comp=Z,11nm,1.4s						
H23K	**Yukon River**	**16.92**	**29**		**Pn**	**12 49 08.8**	**+1.2**
H23K				IAmb	IAmb	12 49 32.2	
	comp=Z,15nm,1.4s						
MCARA	**McCarthy VSAT**	**17.03**	**47**	P	**P**	**12 49 10.3**	**-0.6**
MCARA				IAmb	IAmb	12 49 25.1	
	comp=Z,14nm,1.0s						
IL31		**17.09**	**34**	Pn	**Pn**	**12 49 10.7**	**+0.9**
IL31				IAmb	IAmb	12 49 22.5	
	comp=Z,11nm,1.4s						
ILAR	**Eielson Array**	**17.09**	**34**	Pn	**Pn**	**12 49 09.1**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=231,slow=10,SNR=2.2						
ILAR	**Eielson Array**	**17.09**	**34**		**Pn**	**12 49 10.1**	**+0.3**
H24K	**Noodor Dome**	**17.43**	**31**	P	**P**	**12 49 16.0**	**+0.6**
SCRK	**Sand Creek**	**17.72**	**39**	P	**Pn**	**12 49 17.6**	**-0.1**
M27K	**Edge Creek, AK**	**17.89**	**45**	P	**Pn**	**12 49 19.8**	**0.0**
M27K				IAmb	IAmb	12 49 32.2	
	comp=Z,16nm,1.4s						
J26L	**Joseph Creek**	**18.14**	**38**	P	**Pn**	**12 49 22.4**	**-0.5**
BCAR	**Beaver Creek A**	**18.20**	**43**	P	**Pn**	**12 49 23.3**	**-0.3**
I26K	**Coal Creek Min**	**18.71**	**36**		**P**	**12 49 28.1**	**-1.2**
I26K				IAmb	IAmb	12 50 09.2	
	comp=Z,14nm,1.5s						
EGAK	**Eagle**	**19.18**	**38**	P	**P**	**12 49 33.7**	**-0.8**
HYT	**Haines Junctio**	**19.45**	**51**		**Pn**	**12 49 40.5**	**+1.7**
BMAR	**Burnt Mountain**	**19.47**	**29**	P	**P**	**12 49 38.3**	**+0.7**
DAWY	**Dawson**	**19.58**	**41**	P	**Pn**	**12 49 40.9**	**+0.7**
PEA0B	**Petropavlovsk-**	**19.77**	**285**	P	**P**	**12 49 41.3**	**+0.3**
PETK	**Petropavlovsk-**	**19.77**	**285**	P	**P**	**12 49 41.0**	**0.0**
	comp=Z,0.8nm,0.3s,baz=85,slow=14,SNR=46						
	comp=Z,8.6nm,0.8s						
PETK	**Petropavlovsk-**	**19.77**	**285**	P	**P**	**12 49 41.1**	**+0.1**
SKAG	**Skagway**	**20.32**	**56**	P	Pn	12 49 48.6	-0.4
N31M	**Braeburn, Yuko**	**20.40**	**50**	P	**P**	**12 49 48.8**	**+0.9**
M31M	**Drury Creek, Y**	**21.19**	**48**	P	**P**	**12 49 57.2**	**+0.7**
M31M				IAmb	IAmb	12 50 24.7	
	comp=Z,4.6nm,0.8s						
EPYK	**Eagle Plains**	**21.55**	**37**	P	**P**	**12 49 59.4**	**-0.8**
EPYK				IAmb	IAmb	12 50 04.9	
	comp=Z,8.9nm,0.8s						
P33M	**Teslin, Yukon**	**21.66**	**54**	P	**P**	**12 50 03.0**	**+1.6**
P33M				IAmb	IAmb	12 50 08.5	
	comp=Z,8.6nm,1.1s						
SEY	**Seymchan**	**22.64**	**313**	P	**P**	**12 50 11.0**	**-0.9**
	comp=Z,1.8nm,0.8s,baz=143,slow=2.7,SNR=2.5						
	comp=Z,1.8nm,0.8s						
INK	**Inuvik**	**23.49**	**33**	P	**P**	**12 50 18.9**	**-1.6**
	comp=Z,2.2nm,0.9s,baz=228,slow=7.1,SNR=7.2						
	comp=Z,2.2nm,0.9s						
YKA	**Yellowknife Ar**	**30.39**	**49**	P	**P**	**12 51 22.8**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=270,slow=8.2,SNR=20						
YKA				PcP	**PcP**	**12 54 19.9**	**-2.3**
	comp=Z,0.3nm,0.6s,baz=284,slow=2.2,SNR=3.5						
	comp=Z,1.3nm,0.9s						
YKA	**Yellowknife Ar**	**30.39**	**49**	P	**P**	**12 51 23.6**	**+0.7**
HEH	**HeiHe**	**38.38**	**293**	*e*P	**P**	**12 52 30.6**	**-1.5**
HEH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HEH				pmax	pmax		
	comp=Z,220nm,5.1s						
H11S1	**WAKE ISLAND Hy**	**38.50**	**218**	T	T	13 33 38.5	
	baz=23,slow=76,SNR=33						
H11S2	**WAKE ISLAND Hy**	**38.51**	**218**	T	T	13 33 40.5	
	baz=23,slow=76,SNR=18						
H11S3	**WAKE ISLAND Hy**	**38.51**	**218**	T	T	13 33 51.9	
	baz=23,slow=76,SNR=13						
MJAR	**Matsushiro Arr**	**39.57**	**268**	P	**P**	**12 52 41.9**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=42,slow=8.4,SNR=4.7						
	comp=Z,1.4nm,0.8s						
PD31	**Pinedale Array**	**40.54**	**79**	P	**P**	**12 52 50.9**	**+0.4**
PD31				IAmb	IAmb	12 53 02.6	
	comp=Z,2.5nm,1.1s						
PDAR	**Pinedale Array**	**40.54**	**79**	P	**P**	**12 52 50.4**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=298,slow=4.0,SNR=15						
	comp=Z,1.1nm,0.6s						
PDAR	**Pinedale Array**	**40.54**	**79**	P	**P**	**12 52 50.8**	**+0.4**
FCC	**Fort Churchill**	**41.09**	**50**	P	**P**	**12 52 55.2**	**+0.7**
KSRS	**Korea Array**	**45.29**	**277**	P	**P**	**12 53 29.1**	**+0.3**
	comp=Z,2.0nm,0.9s,baz=60,slow=8.2,SNR=4.9						
	comp=Z,2.0nm,0.9s						
NRIK	**Noril'sk**	**46.45**	**331**	P	**P**	**12 53 37.4**	**-0.1**
	comp=Z,3.1nm,0.5s,baz=18,slow=3.2,SNR=3.7						
	comp=Z,3.1nm,0.5s						
SONM	**Songino Array**	**51.24**	**301**	P	**P**	**12 54 13.4**	**-1.3**
	comp=Z,1.3nm,1.0s,baz=72,slow=6.2,SNR=5.7						
	comp=Z,1.3nm,1.0s						
JOW	**Kunigami**	**52.37**	**266**	P	**P**	**12 54 23.0**	**-0.2**
	comp=Z,9.9nm,0.5s,baz=54,slow=19,SNR=1.6						
HHC	**Hu-ho-hao-te**	**52.84**	**291**	*e*P	**P**	**12 54 30.5**	**+3.8**
HHC				pmax	pmax		
	comp=Z,22nm,0.8s						
HHC				pmax	pmax		
	comp=Z,200nm,5.3s						
TX31	**Lajitas Ar. Si**	**52.87**	**89**	P	**P**	**12 54 26.9**	**-0.1**
TX32	**Lajitas Array**	**52.87**	**89**	P	**P**	**12 54 26.9**	**-0.1**
TXAR	**Lajitas Array**	**52.87**	**89**	P	**P**	**12 54 26.9**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=301,slow=5.6,SNR=6.8						
	comp=Z,0.4nm,0.5s						
TXAR	**Lajitas Array**	**52.87**	**89**	P	**P**	**12 54 26.7**	**-0.3**
GUMO	**Guam**	**52.95**	**240**	LR	LR	13 16 17.1	
	comp=Z,47nm,18.8s,baz=139,slow=35						
SADO	**Sadowa**	**56.60**	**59**	LR	LR	13 19 13.5	
	comp=Z,254nm,20.8s,baz=236,slow=36						
ZALV	**Zalesovo Beam**	**57.41**	**317**	P	**P**	**12 54 58.9**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=46,slow=4.2,SNR=2.1						
	comp=Z,0.2nm,0.3s						
ARCES	**ARCESS Array B**	**58.00**	**354**	P	**P**	**12 55 02.2**	**-1.1**
	comp=Z,2.6nm,0.9s,baz=355,slow=4.5,SNR=3.6						
	comp=Z,2.6nm,0.9s						
WMQ	**Urumqi**	**63.49**	**308**	*e*P	**P**	**12 55 41.9**	**+0.8**
WMQ				pP	pwP	12 55 49.9	+3.5
WMQ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MKAR	**Makanchi Array**	**63.78**	**313**	P	**P**	**12 55 41.6**	**-1.4**
	comp=Z,1.1nm,0.8s,baz=47,slow=5.2,SNR=10						
	comp=Z,1.1nm,0.8s						
FINES	**FINESS Array B**	**65.94**	**352**	P	**P**	**12 55 55.5**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=14,slow=6.4,SNR=7.1						
	comp=Z,0.8nm,0.5s						
NOA	**NORSAR Array B**	**67.03**	**360**	P	**P**	**12 56 03.2**	**-0.6**
	comp=Z,1.6nm,0.8s,baz=0.8,slow=6.4,SNR=3.6						
	comp=Z,1.6nm,0.8s						
PZH	**PanZhiHua**	**68.73**	**286**	P	**P**	**12 56 15.3**	**+0.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=Z,130nm,6.3s						
PMG	**Port Moresby**	**71.74**	**225**	LR	LR	13 21 04.8	
	comp=Z,125nm,20.6s,baz=352,slow=30						
AKASG	**Malin Array Be**	**76.17**	**348**	P	**P**	**12 56 57.4**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=15,slow=5.9,SNR=5.0						
	comp=Z,0.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**76.52**	**283**	P	**P**	**12 57 01.5**	**+0.1**
	comp=Z,3.3nm,0.8s,baz=25,slow=6.5,SNR=22						
CMAR				LR	LR	13 35 10.4	
	comp=Z,45nm,18.7s,baz=160,slow=39						
	comp=Z,3.3nm,0.8s						
GERES	**GERESS Array B**	**79.21**	**358**	P	**P**	**12 57 16.1**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=22,slow=6.3,SNR=4.9						
	comp=Z,0.5nm,0.7s						
CONA	**Conrad Observa**	**80.06**	**356**	*e*P	**P**	**12 57 21.4**	**+0.7**
	comp=Z,0.9nm,0.5s						
KBZ	**Khabaz**	**80.34**	**337**	P	**P**	**12 57 21.9**	**-0.2**
	comp=Z,2.2nm,0.8s,baz=78,slow=9.3,SNR=5.5						
	comp=Z,2.2nm,0.8s						
MOTA	**Moosalm**	**80.75**	**360**	*e*P	**P**	**12 57 24.8**	**+0.3**
	comp=Z,8.0nm,1.6s						
WATA	**Walderalm**	**80.76**	**359**	*e*P	**P**	**12 57 25.1**	**+0.6**
	comp=Z,6.3nm,1.3s						
KBA	**Koelnbreinsper**	**80.99**	**358**	*e*P	**P**	**12 57 26.3**	**+0.6**
	comp=Z,3.4nm,0.9s						
GEYT	**Alibeck**	**81.03**	**324**	P	**P**	**12 57 24.8**	**-1.2**
	comp=Z,1.0nm,0.4s,baz=43,slow=20,SNR=2.4						
	comp=Z,1.0nm,0.4s						
FETA	**Feichten**	**81.08**	**360**	*e*P	**P**	**12 57 25.1**	**-1.2**
	comp=Z,4.7nm,1.2s						
ESDC	**Sonseca Array**	**87.57**	**11**	P	**P**	**12 57 58.7**	**-0.5**
	comp=Z,1.2nm,0.9s,baz=3.0,slow=5.3,SNR=5.8						
ESDC				LR	LR	13 38 08.7	
	comp=Z,166nm,20.2s,baz=216,slow=36						
	comp=Z,1.2nm,0.9s						
ASAR	**Alice Springs**	**90.25**	**230**	P	**P**	**12 58 10.8**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=31,slow=4.8,SNR=8.3						
	comp=Z,0.7nm,0.8s						
KEST	**Kesra**	**92.35**	**1**	LR	LR	13 41 08.2	
	comp=Z,360nm,19.4s,baz=166,slow=36						
PLCA	**Paso Flores**	**125.88**	**112**	PKP	**PKiKP**	**13 04 14.8**	**+1.9**
	comp=Z,2.2nm,1.0s,baz=306,slow=1.4,SNR=3.7						

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*IDC **05** 13:14:37.0±7.2, 40°.45S×174°.81E, h0^{km}, mb3.4/2, mbtmp3.4/2, Error ellipse: s-maj=441.9km s-min=44.5km az=31.0*

*WEL **05** 13:14:43.7±0.3, 42°S±3°×17°4E±°, h12^{km}±3^{km}, M3.7/23, ML3.9/23, MLv3.7/23, Error ellipse: s-maj=0.0km s-min=0.0km az=141.8, confirmed*

ISC 05 13:14:43.3±1.2, **41°.94S**±0°.03×**173°.54E**±0°.03, **h13**^{km}±10^{km}, **n108**, σ**1^{s}.49**/113, **South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BSWZ	**Blackbirch Sta**	**0.34**	**49**	P	**Pg**	**13 14 50.7**	**+0.5**
KHZ	**Kahutara**	**0.48**	**180**	P	**Pb**	**13 14 54.5**	**+0.9**
KHZ				S	**Sb**	**13 15 02.0**	**+1.5**
THZ	**Tophouse**	**0.50**	**290**	P	**Pb**	**13 14 53.5**	**-0.6**
THZ				S	**Sg**	**13 14 59.9**	**-0.1**
CMWZ	**Cape Campbell**	**0.54**	**70**	P	**Pb**	**13 14 56.0**	**+1.4**
CMWZ				S	**Sn**	**13 15 05.4**	**-0.4**
TUWZ	**Tuamarina**	**0.59**	**31**	P	**Pb**	**13 14 55.5**	**-0.1**
TUWZ				S	**Sb**	**13 15 03.7**	**-0.2**
NNZ	**Nelson**	**0.73**	**351**	P	**Pg**	**13 14 57.2**	**-0.3**
MRNZ	**Matariki Terra**	**0.79**	**313**	P	**Pb**	**13 14 58.8**	**-0.2**
TCW	**Tory Channel**	**0.92**	**38**	P	**Pg**	**13 15 00.7**	**-0.3**
TCW				S	**Sb**	**13 15 13.8**	**+0.6**
TKNZ	**Takaka Hill**	**1.00**	**334**	P	**Pb**	**13 15 02.2**	**-0.3**
GVZ	**Greta Valley S**	**1.09**	**200**	P	**Pn**	**13 15 05.4**	**+1.0**
WEL	**Wellington**	**1.13**	**55**	P	**Pn**	**13 15 05.3**	**+0.5**
DUWZ	**D'Urville Isla**	**1.17**	**14**	P	**Pb**	**13 15 05.1**	**-0.4**
LTZ	**Lake Taylor**	**1.26**	**228**	P	**Pn**	**13 15 06.9**	**+0.2**
DSZ	**Denniston Nort**	**1.31**	**278**	P	**Pg**	**13 15 08.2**	**-0.3**
PLWZ	**Palliser**	**1.34**	**75**	P	**Pn**	**13 15 08.0**	**+0.2**
QRZ	**Quartz Range**	**1.35**	**325**	P	**Pb**	**13 15 08.0**	**-0.4**
AMCZ	**Amberley**	**1.40**	**208**	P	**Pn**	**13 15 09.3**	**+0.8**
CAW	**Cannon Point**	**1.42**	**55**	P	**Pn**	**13 15 09.6**	**+0.8**
KIW	**Kapiti Island**	**1.49**	**44**	P	**Pn**	**13 15 10.5**	**+0.6**
OGWZ	**Otaki Gorge**	**1.67**	**48**	P	**Pn**	**13 15 13.0**	**+0.8**
MTW	**Mount Morrison**	**1.67**	**63**	P	**Pn**	**13 15 12.2**	**-0.1**
TRWZ	**Traveller**	**1.70**	**72**	P	**Pn**	**13 15 12.5**	**-0.2**
INZ	**Inchbonnie**	**1.74**	**242**	P	**Pn**	**13 15 14.5**	**+1.3**
OXZ	**Oxford**	**1.77**	**218**	P	**Pn**	**13 15 13.9**	**+0.2**
HOWZ	**Holdsworth Sta**	**1.82**	**56**	P	**Pn**	**13 15 14.3**	**0.0**
MQZ	**McQueen's Vall**	**1.88**	**200**	P	**Pn**	**13 15 14.5**	**-0.7**
TMWZ	**Te Maipa**	**1.95**	**66**	P	**Pn**	**13 15 15.7**	**-0.5**
AKCZ	**Akaroa Harbour**	**1.99**	**193**	P	**Pn**	**13 15 16.5**	**-0.1**
MRZ	**Mangatainoka R**	**2.00**	**51**	P	**Pn**	**13 15 17.0**	**+0.2**
RACZ	**Rakaia**	**2.06**	**209**	P	**Pn**	**13 15 17.3**	**-0.3**
OHWZ	**Ohakea**	**2.19**	**38**	P	**Pb**	**13 15 21.9**	**-0.9**
POWZ	**Post Office Ro**	**2.29**	**48**	P	**Pn**	**13 15 21.8**	**+1.0**
PRWZ	**Pori Road**	**2.30**	**54**	P	**Pn**	**13 15 21.6**	**+0.6**
WACZ	**Wakanui South**	**2.36**	**211**	P	**Pn**	**13 15 21.4**	**-0.3**
WVZ	**Waitaha Valley**	**2.36**	**240**	P	**Pn**	**13 15 23.4**	**+1.6**
BFZ	**Birch Farm**	**2.40**	**59**	P	**Pn**	**13 15 22.2**	**-0.1**
WAZ	**Wanganui**	**2.44**	**27**	P	**Pb**	**13 15 26.3**	**-0.9**
NMEZ	**Namu Road**	**2.54**	**6**	P	**Pb**	**13 15 27.8**	**-0.9**
RPZ	**Rata Peaks**	**2.55**	**225**	P	**Pn**	**13 15 24.5**	**+0.2**
LREZ	**Lake Rotokare**	**2.56**	**15**	P	**Pb**	**13 15 28.6**	**-0.5**
DVHZ	**Dannevirke**	**2.58**	**51**	P	**Pn**	**13 15 24.4**	**-0.4**
TSZ	**Takapari Road**	**2.63**	**45**	P	**Pn**	**13 15 25.9**	**+0.4**
PREZ	**Palmer Road**	**2.64**	**11**	P	**Pb**	**13 15 28.4**	**-2.0**
ARCZ	**Arundel**	**2.65**	**220**	P	**Pn**	**13 15 25.6**	**-0.2**
KHEZ	**Kahui Hut**	**2.67**	**8**	P	**Pb**	**13 15 28.7**	**-2.3**
NBEZ	**Newall Road No**	**2.68**	**6**	P	**Pb**	**13 15 28.7**	**-2.5**
NEZ	**North Egmont**	**2.70**	**9**	P	**Pb**	**13 15 29.8**	**-1.8**
GCSZ	**Gaunt Creek Bo**	**2.74**	**239**	P	**Pn**	**13 15 28.4**	**+1.4**
PKE	**Pukeiti**	**2.76**	**7**	P	**Pb**	**13 15 30.2**	**-2.4**
DREZ	**Durham Road**	**2.79**	**11**	P	**Pb**	**13 15 30.5**	**-2.6**
PNHZ	**Pukenui**	**2.86**	**46**	P	**Pn**	**13 15 29.1**	**+0.5**

WPHZ	Waipukurau	2.89	51	P	Pn	13 15 29.6	+0.6
MHEZ	Mangahewa	2.92	12	P	Pb	13 15 33.6	-1.7
MTVZ	Mangateitei	2.95	31	P	Pb	13 15 35.6	-0.2
VRZ	Vera Road	2.96	19	P	Pb	13 15 33.2	-2.7
PKVZ	Pokaka	2.98	28	P	Pb	13 15 35.7	-0.7
MOVZ	Moawhango	3.04	34	P	Pn	13 15 33.4	+2.2
WNVZ	Wahianoa	3.04	32	P	Pn	13 15 33.5	+2.2
TRVZ	Turoa	3.05	31	P	Pn	13 15 33.7	+2.3
TMZ	Timaru	3.06	216	P	Pn	13 15 31.1	-0.3
DRZ	Dome Shelter	3.08	31	P	Pb	13 15 38.7	+0.6
WHVZ	Whangaehu Hut	3.08	31	P	Pb	13 15 35.6	-2.5
FWVZ	Far West T-bar	3.09	30	P	Pn	13 15 34.7	+2.6
BHHZ	Black Hill Sta	3.11	39	P	Pn	13 15 34.9	+2.7
TUVZ	Tukino	3.12	32	P	Pn	13 15 34.5	+2.1
FOZ	Fox Glacier	3.17	239	P	Pn	13 15 34.2	+1.3
NGZ	Ngauruhoe	3.18	30	P	Pn	13 15 35.9	+2.7
SNVZ	South Ngauruho	3.18	31	P	Pb	13 15 39.0	-0.9
TWVZ	Taurewa	3.21	27	P	Pb	13 15 37.5	-2.7
OTVZ	Oturere	3.21	31	P	Pn	13 15 36.1	+2.5
NNVZ	North Ngauruho	3.22	30	P	Pn	13 15 36.7	+2.9
WTVZ	West Tongariro	3.23	30	P	Pn	13 15 37.2	+3.4
ETVZ	East Tongariro	3.25	31	P	Pn	13 15 36.4	+2.2
KRVZ	Karewarewa	3.26	30	P	Pb	13 15 39.4	-1.7
TMVZ	Te Maari	3.27	31	P	Pn	13 15 36.5	+2.1
NTVZ	North Tongarir	3.27	31	P	Pn	13 15 36.7	+2.3
KAHZ	Kahuranaki	3.32	51	P	Pn	13 15 35.4	+0.4
RITZ	Rihia Road	3.45	32	P	Pb	13 15 43.7	-0.6
LBZ	Lake Benmore	3.46	224	P	Pn	13 15 37.3	+0.4
HIZ	Hauiti	3.57	17	P	Pn	13 15 40.4	+2.0
BKZ	Black Stump Fm	3.57	40	P	Pn	13 15 39.2	+0.7
WATZ	Wairara	3.64	28	P	Pb	13 15 47.0	-0.5
ODZ	Otahua Downs	3.75	213	P	Pn	13 15 40.2	-0.6
NMHZ	Naumai	3.78	42	P	Pn	13 15 42.7	+1.4
TLZ	Tolley Road	3.92	24	P	Pn	13 15 46.1	+2.9
MTHZ	Maungataniwha	3.98	40	P	Pn	13 15 46.8	+2.6
JCZ	Jackson Bay	4.08	237	P	Pn	13 15 45.6	0.0
RTZ	Ruatahuna	4.24	40	P	Pn	13 15 49.0	+1.3
WKZ	Wanaka	4.38	227	P	Pn	13 15 49.0	-0.6
TOZ	Tahuroa Road	4.47	20	P	Pn	13 15 53.5	+2.8
HHSZ	Highcliff Hill	4.48	207	P	Pn	13 15 50.5	-0.4
EAZ	Earnscleugh	4.50	222	P	Pn	13 15 50.4	-0.8
URZ	Urewera	4.58	38	P	Pn	13 15 51.4	-1.0
MSZ	Milford Sound	4.92	234	P	Pn	13 15 56.2	-0.7
AWAZ	Awhitu Peninsu	4.94	10	P	Pn	13 15 59.5	+2.2
MKAZ	Moumakai	4.99	15	P	Pn	13 16 00.4	+2.5
WTAZ	Waiatarua	5.06	9	P	Pn	13 16 01.7	+2.8
ETAZ	East Tamaki Re	5.09	13	P	Pn	13 16 01.6	+2.2
MLZ	Mavora Lakes	5.21	227	P	Pn	13 16 00.5	-0.5
RVAZ	Riverhead Bore	5.22	9	P	Pn	13 16 03.2	+2.0
MBAZ	Motutapu North	5.27	12	P	Pn	13 16 04.1	+2.4
KUZ	Kuaotunu	5.46	19	P	Pn	13 16 06.1	+1.8
SYZ	Scrubby Hill	5.58	213	P	Pn	13 16 06.3	+0.3
WHZ	Wether Hill Ro	5.65	224	P	Pn	13 16 06.3	-0.7
WCZ	Waipu Caves	6.03	6	P	Pn	13 16 14.2	+2.0
ASAR	Alice Springs	37.57	286	P	P	13 21 57.0	-0.5
	0.2nm,0.4s,baz=124,slow=7.0,SNR=17						
	0.2nm,0.4s						
WRA	Warramunga Arr	39.67	291	P	P	13 22 14.8	-0.4
	0.3nm,0.4s,baz=128,slow=8.3,SNR=5.9						
	0.3nm,0.4s						
TORD	Torodi Ar. Bea	150.45	196	PKPbc	PKPbc	13 34 34.6	-0.3
	0.3nm,0.4s,baz=153,slow=1.9,SNR=8.9						

RSNC 05 13:26:39.4±0.8**, 4°.21N×76°.79W, h50**^{km}±9^{km}**, ML1.4, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOTC	Yotoco, Valle	0.50	117	eP	Pn	13 26 48.4	-2.4
YOTC				eS	Sn	13 26 59.0	+0.1
YOTC				i		13 26 59.9	
	comp=Z,9.2nm,0.1s						
MALC	Bahia Malaga	0.58	250	eP	Pn	13 26 48.2	-3.4
MALC				eS	Sn	13 26 59.8	-0.6
PIZC	Pizarro, Choco	0.94	323	eS	Sn	13 27 08.6	-0.1
ANIL	Santa Ana	1.41	79	eP	Pn	13 26 59.7	-3.3
ANIL				eS	Sn	13 27 20.9	+0.3
ANIL				i		13 27 24.6	
	comp=Z,12nm,0.3s						
POPC	Popayan, Colom	1.66	176	eP	Pn	13 27 05.8	-0.6
POPC				eS	Sn	13 27 27.3	+0.5
POPC				i		13 27 29.5	
	comp=Z,2.7nm,0.5s						

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*NEIC **05** 13:29:01.2±1.2, 17°.4S±0°.3×175°.0W±0°.1, h289^{km}±17^{km}, mb4.2/19, Error ellipse: s-maj=40.9km s-min=18.8km az=190.0*

*IDC **05** 13:29:34.2±4.5, 17°.92S×178°.53W, h378^{km}±25^{km}, mb3.9/3, mbtmp4.5/4, Error ellipse: s-maj=106.7km s-min=31.8km az=137.0*

ISC 05 13:29:28.4±2.0**, 18°.2S**±0°.3×**177°.8W**±0°.3**, h350**^{km}**, n27,** σ**2**^{s}.**29**/25**, mb4.0**/13**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.94	276	P	Pn	13 30 38.0	+1.0
	19nm,0.8s,baz=107,slow=13,SNR=11						
MSVF	Nonsavu	3.94	276		Pn	13 30 38.2	+1.3
PINNC	Pines Island,	14.48	250	P	Pn	13 32 43.2	+3.9
OUENC	Ouen Island, N	14.98	251	P	Pn	13 32 48.6	+3.5
DZM	Mont Dzumac	15.26	253	P	Pn	13 32 50.6	+2.2
DZM				IAmb	IAmb	13 33 09.3	
	comp=Z,13nm,1.1s						
ARMA	Armidale	30.28	241	P	P	13 35 09.8	+1.2
ARMA				IAmb	IAmb	13 35 17.1	
	comp=Z,28nm,1.5s						
CTAO	Charters Tower	33.94	261	P	P	13 35 39.9	-0.3
CTAO				IAmb	IAmb	13 35 40.9	
	comp=Z,5.0nm,0.9s						
COEN	Coen	37.65	271	P	P	13 36 10.4	-1.1
COEN				IAmb	IAmb	13 36 11.7	
	comp=Z,5.0nm,1.0s						
STKA	Stephens Creek	38.98	242	P	P	13 36 22.4	+0.1
	comp=Z,3.7nm,0.4s,baz=87,slow=9.6,SNR=10						
	comp=Z,3.7nm,0.4s						
STKA	Stephens Creek	38.98	242	P	P	13 36 22.3	0.0
BBOO	Buckleboo	43.75	241	P	P	13 36 59.5	-1.2
BBOO				IAmb	IAmb	13 37 17.6	
	comp=Z,9.5nm,1.1s						
WB0	Warramunga Arr	45.09	260	P	P	13 37 09.2	-2.1
WB0				IAmb	IAmb	13 37 10.0	
	comp=Z,4.9nm,1.0s						
WB2	Warramunga Arr	45.11	260	P	P	13 37 09.4	-2.1
WB2				IAmb	IAmb	13 37 13.3	
	comp=Z,10nm,1.2s						
WRA	Warramunga Arr	45.12	260	P	P	13 37 09.5	-2.1
	comp=Z,3.2nm,0.7s,baz=97,slow=6.9,SNR=42						
	comp=Z,3.2nm,0.7s						
WRA	Warramunga Arr	45.12	260	P	P	13 37 09.3	-2.3
AS31	Alice Springs	45.24	254	P	P	13 37 11.2	-1.3
AS31				IAmb	IAmb	13 37 12.3	
	comp=Z,4.8nm,0.7s						
ASAR	Alice Springs	45.24	254	P	P	13 37 11.3	-1.2
	comp=Z,18nm,0.7s,baz=88,slow=8.7,SNR=321						
	comp=Z,18nm,0.7s						
ASAR	Alice Springs	45.24	254	P	P	13 37 11.0	-1.5
FORT	Forrest	50.38	245	P	P	13 37 48.8	-2.7
FORT				IAmb	IAmb	13 37 49.2	
	comp=Z,13nm,0.8s						
KNRA	Kununurra	51.00	264	P	P	13 37 53.7	-2.5
FAKI	Fak Fak	51.16	281	P	P	13 37 52.8	-4.6
FAKI				IAmb	IAmb	13 38 04.3	
	comp=Z,26nm,1.2s						
FITZ	Fitzroy Crossi	53.52	261	P	P	13 38 12.1	-2.5
SOEI	Soe	56.62	270	P	P	13 38 34.7	-1.9
SOEI				IAmb	IAmb	13 38 44.5	
	comp=Z,15nm,0.8s						
PSA00	Pilbara Seismi	58.37	255	P	P	13 38 45.6	-3.0
UGM	Wanagama	70.18	268	P	P	13 39 59.6	-5.1
MKAR	Makanchi Array	109.71	314	PKiKP	PKiKP	13 47 18.7	+0.6
	comp=Z,0.1nm,0.4s,baz=108,slow=4.7,SNR=2.0						
GERES	GERESS Array B	148.01	346	PKPbc	PKPdf	13 48 34.0	+4.5
	comp=Z,0.5nm,0.5s,baz=43,slow=4.4,SNR=6.4						

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*IDC **05** 13:42:17.6±0.8, 21°.80S×68°.25W, h103^{km}±9^{km}, mb4.0/11, mbtmp4.3/14, Error ellipse: s-maj=17.8km s-min=15.5km az=176.0*

*SJA **05** 13:42:18.1±1.2, 21°.80S×68°.36W, h100^{km}, ML4.0, MW4.0, Hypocentre not reviewed by the ISC*

*NEIC **05** 13:42:18.1±1.9, 21°.86S±0°.05×68°.28W±0°.08, h108^{km}±7^{km}, mb4.7/80, ML4.3(GUC), Error ellipse: s-maj=10.4km s-min=7.4km az=78.0*

*GUC **05** 13:42:19.3±0.6, 21°.86S×68°.43W, h118^{km}±4^{km}, ML4.3*

*VAO **05** 13:42:20.0±0.3, 21°.86S×68°.23W, h111^{km}, mb4.6*

ISC 05 13:42:17.8±0.6**, 21°.84S**±0°.03×**68°.32W**±0°.05**, h113**^{km}±5^{km}**, n227,** σ**1**^{s}.**26**/246**, mb4.6**/45**, 13C-3D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	0.86	272		Pn	13 42 39.1	+1.1
PB09				Sn	Sn	13 42 53.1	-0.2
PB09	IPOC Station P	0.86	272⇑	eP	Pn	13 42 39.3	+1.2
PB09				eS	Sn	13 42 54.2	+0.9
PB09				IAML		13 42 56.9	
	comp=N,5µm,0.5s						
PB09	IPOC Station P	0.86	272	i P		13 42 39.3	
PB09				eS		13 42 54.8	
PB09				IAML		13 42 55.7	
	comp=Z,6µm,0.6s						
LVC	Limon Verde	0.95	215	P	Pn	13 42 39.9	+0.8
	comp=Z,629nm,0.3s,baz=30,slow=8.7,SNR=875						
LVC				S	Sn	13 42 54.9	-0.2
	comp=Z,2µm,0.3s,baz=240,slow=20,SNR=33						
LVC	Limon Verde	0.95	215		Pn	13 42 39.7	+0.6
LVC				Sn	Sn	13 42 54.3	-0.8
LVC	Limon Verde	0.95	215⇓	eP	Pn	13 42 39.8	+0.8
LVC				eS	Sn	13 42 56.0	+0.9
LVC	Limon Verde	0.95	215	eP	Pn	13 42 39.8	+0.6
LVC	Limon Verde	0.95	215	i P		13 42 39.9	
LVC				eS		13 42 56.1	
LVC				IAML		13 42 56.5	
	comp=Z,2µm,0.8s						
PB01	IPOC Station P	1.35	306		Pn	13 42 43.7	+0.6
PB01	IPOC Station P	1.35	306⇑	eP	Pn	13 42 43.9	+0.8
PB01				eS	Sn	13 43 02.4	+0.1
PB01	IPOC Station P	1.35	306	i P		13 42 44.0	
PB01				IAML		13 43 04.2	
	comp=Z,2µm,0.4s						
PB03	IPOC Station P	1.35	261		Pn	13 42 43.2	+0.1
PB03	IPOC Station P	1.35	261⇑	eP	Pn	13 42 43.3	+0.1
PB03				eS	Sn	13 43 01.8	-0.7
PB03				IAML		13 43 03.8	
	comp=E,4µm,0.5s						
PB03	IPOC Station P	1.35	261	i P		13 42 43.4	
PB03				eS		13 43 02.2	
PB03				IAML		13 43 02.6	
	comp=Z,3µm,0.5s						
PB06	IPOC Station P	1.45	233		Pn	13 42 44.8	+0.4
PB06	IPOC Station P	1.45	233⇑	eP	Pn	13 42 44.8	+0.4
PB06				eS	Sn	13 43 04.2	-0.3
PB06				IAML		13 43 05.5	
	comp=N,5µm,0.5s						
PB06	IPOC Station P	1.45	233	i P		13 42 44.9	
PB06				eS		13 43 04.7	
PB06				IAML		13 43 06.0	
	comp=Z,3µm,0.8s						
PB07	IPOC Station P	1.46	274		Pn	13 42 44.7	+0.1
PB07	IPOC Station P	1.46	274⇑	eP	Pn	13 42 44.8	+0.3
PB07				eS	Sn	13 43 03.8	-1.0
PB07				IAML		13 43 08.5	
	comp=E,4µm,0.4s						
PB07	IPOC Station P	1.46	274	i P		13 42 44.8	
PB07				IAML		13 43 06.9	
	comp=Z,2µm,1.0s						
PB02	IPOC Station P	1.56	289		Pn	13 42 45.7	+0.1
PB02	IPOC Station P	1.56	289⇑	eP	Pn	13 42 45.7	+0.1
PB02				eS	Sn	13 43 05.7	-1.0
PB02				IAML		13 43 08.8	
	comp=E,3µm,0.5s						
PB02	IPOC Station P	1.56	289	i P		13 42 45.9	
PB02				IAML		13 43 10.0	
	comp=Z,2µm,0.4s						
PB15	IPOC Station P	1.73	218		Pn	13 42 48.2	+0.4
PB15	IPOC Station P	1.73	218⇑	eP	Pn	13 42 48.4	+0.6
PB15				eS	Sn	13 43 11.4	+0.7
PB15	IPOC Station P	1.73	218	i P		13 42 48.4	
PB15				eS		13 43 11.2	
PB15				IAML		13 43 14.2	
	comp=Z,14µm,0.2s						
PB04	IPOC Station P	1.77	253		Pn	13 42 47.8	-0.5
PB04	IPOC Station P	1.77	253⇑	eP	Pn	13 42 48.0	-0.3
PB04				eS	Sn	13 43 10.3	-1.1
PB04				IAML		13 43 12.8	
	comp=N,3µm,0.2s						
PB04	IPOC Station P	1.77	253	i P		13 42 48.0	
PB04				IAML		13 43 17.2	
	comp=Z,2µm,0.7s						
TA01	Diego Aracena	2.15	306		Pn	13 42 52.7	-0.2
TA01	Diego Aracena	2.15	306⇑	eP	Pn	13 42 52.8	0.0
TA01				eS	Sn	13 43 18.7	-1.0
TA01				IAML		13 43 20.6	
	comp=E,3µm,0.3s						
TA01	Diego Aracena	2.15	306	i P		13 42 52.7	
TA01				eS		13 43 18.7	
TA01				IAML		13 43 25.1	
	comp=Z,786nm,0.5s						
TA02	Huaiquique	2.30	312		Pn	13 42 54.4	-0.4
TA02	Huaiquique	2.30	312⇑	eP	Pn	13 42 54.8	0.0
TA02				eS	Sn	13 43 21.9	-1.3
TA02				IAML		13 43 31.4	
	comp=N,2µm,0.3s						
TA02	Huaiquique	2.30	312	i P		13 42 54.7	
TA02				eS		13 43 22.5	
TA02				IAML		13 43 29.1	
	comp=Z,1µm,0.6s						
GO01	Chusmiza	2.31	339		Pn	13 42 56.8	+1.5
PB11	IPOC Station P	2.42	329		Pn	13 42 57.2	+0.7
PB11	IPOC Station P	2.42	329⇑	eP	Pn	13 42 56.9	+0.5
PB11				eS	Sn	13 43 26.2	+0.2
PB11	IPOC Station P	2.42	329	i P		13 42 57.2	
PB11				IAML		13 43 28.1	
	comp=Z,2µm,0.3s						
YJA	Yavi	2.62	98	i P		13 43 03.3	
YJA				IAML		13 43 39.1	
	comp=Z,31nm,0.7s						
PB10	IPOC Station P	2.66	231		Pn	13 42 59.4	0.0
PB10	IPOC Station P	2.66	231⇑	eP	Pn	13 42 58.3	-1.1
PB10				eS	Sn	13 43 26.5	-4.9
PB10				IAML		13 43 40.7	
	comp=N,1µm,0.5s						
PB10	IPOC Station P	2.66	231	i P		13 42 59.6	
PB10				IAML		13 43 41.5	
	comp=Z,838nm,0.4s						
PSGCX	Pisagua	2.80	322	Pn	Pn	13 43 00.8	-0.6
PSGCX	Pisagua	2.80	322	i P		13 43 00.9	
PSGCX				IAML		13 43 40.9	
	comp=Z,815nm,0.5s						
PSGC	Pisagua	2.80	322⇓	eP	Pn	13 43 00.7	-0.6
PSGC				eS	Sn	13 43 33.4	-1.4
PSGC				IAML		13 43 41.4	
	comp=N,1µm,0.6s						
MNMC	Minye Minye	2.95	336		Pn	13 43 04.0	+0.5
MNMC	Minye Minye	2.95	336⇓	eP	Pn	13 43 04.4	+0.9
MNMC				eS	Sn	13 43 39.7	+1.1
MNMCX	Minye Minye	2.95	336	i P		13 43 04.6	
MNMCX				IAML		13 43 42.8	
	comp=Z,907nm,0.3s						
PB14	IPOC Station P	3.38	214	Pn	Pn	13 43 08.7	-0.5
PB14	IPOC Station P	3.38	214	i P		13 43 09.1	
PB14				IAML		13 43 57.5	
	comp=Z,1µm,0.8s						
PB16	IPOC Station P	3.66	342	Pn	Pn	13 43 14.4	+1.2
PB16	IPOC Station P	3.66	342	i P		13 43 15.1	
PB16				IAML		13 44 09.6	
	comp=Z,209nm,0.5s						
PB12	IPOC Station P	3.72	329		Pn	13 43 12.5	-1.2
PB12	IPOC Station P	3.72	329⇑	eP	Pn	13 43 12.4	-1.2
PB12				eS	Sn	13 43 53.8	-3.0
PB12	IPOC Station P	3.72	329	i P		13 43 12.6	
PB12				IAML		13 44 09.7	
	comp=Z,680nm,0.4s						
SLA	San Lorenzo	3.86	139	i P		13 43 18.0	
AP01	Chacalluta	3.94	331		Pn	13 43 15.8	-0.6
AP01	Chacalluta	3.94	331	eP	Pn	13 43 16.8	+0.4
AP01				eS	Sn	13 44 00.9	-0.9
ASTB	Santa Barbara	4.14	121	i P		13 43 21.4	
ASTB				IAML		13 44 19.6	
	comp=Z,1.4nm,1.5s						
ALOL	LOMAS DE OLMED	4.46	117	i P		13 43 24.6	
AC01	Pan de Azucar	4.77	205		Pn	13 43 25.3	-2.3
LPAZ	La Paz	5.52	2	P	Pn	13 43 41.5	+3.1
	comp=Z,19nm,0.4s,baz=177,slow=8.4,SNR=50						
LPAZ				S	Sn	13 44 43.4	+2.4
	comp=Z,11nm,0.6s,baz=84,slow=11,SNR=1.7						
LPAZ	La Paz	5.52	2	eP	Pn	13 43 40.6	+2.3
GO03	Copiap	5.99	197		Pn	13 43 41.2	-3.0
AC05	El Transito	7.19	194		Pn	13 43 56.9	-3.5
LCO	Las Campanas	7.46	196	Pn	Pn	13 44 00.0	-4.2
TICA	Tres Isletas	8.54	124	eP	Pn	13 44 19.2	+0.5
GO04	Tololo Observa	8.60	195	Pn	Pn	13 44 14.2	-5.4
BBSD	Serra de San D	8.61	59	eP	Pn	13 44 19.2	-0.5
SIV	San Ignacio	8.99	51	P	Pn	13 44 23.2	-1.6
	comp=Z,22nm,0.4s,baz=237,slow=10,SNR=135						
SIV				S	Sn	13 45 56.3	-8.0
	baz=303,slow=21,SNR=10						
VACA	Villa Angela C	9.01	131	eP	Pn	13 44 25.6	+0.6
ESFA	Espinillo Form	9.54	111	eP	Pn	13 44 32.3	+0.1
CFA	Coronel Fontan	9.73	180	P	Pn	13 44 31.4	-3.4
	comp=Z,3.3nm,0.3s,baz=309,slow=10,SNR=15						
CFA				S	Sn	13 46 13.1	-9.0
	comp=Z,1.6nm,0.3s,baz=332,slow=15,SNR=1.3						
PTLB	Pontes e Lacer	10.77	55	eP	Pn	13 44 48.7	-0.2
BDQN	Bodoquena, MS	10.88	85	eP	Pn	13 44 49.3	-1.1
CPUP	Villa Florida	10.99	116	P	Pn	13 44 50.6	-1.1
	comp=Z,3.8nm,0.8s,baz=295,slow=10,SNR=8.0						
CPUP	Villa Florida	10.99	116	eP	Pn	13 44 50.8	-1.0
VILB	Vilhena	11.74	43	Pn	Pn	13 45 00.0	-2.0
VILB	Vilhena	11.74	43	eP	Pn	13 45 03.0	+1.0
MECA	Mercedes	11.78	131	eP	Pn	13 45 02.6	+0.2
AQDB	Aquidauana	11.85	86	Pn	Pn	13 45 01.6	-1.7
AQDB	Aquidauana	11.85	86	eP	Pn	13 45 02.5	-0.8
ETMB	Extrema	12.12	10		Pn	13 45 04.8	-2.1
MT09	Talagante	12.13	191	Pn	Pn	13 45 04.4	-2.5
AMBA	Amambai (Brazi	12.38	98	eP	Pn	13 45 10.3	0.0
AZCA	Azaras, Argent	12.79	122	eP	Pn	13 45 15.6	0.0
ITQB	Itaqui	13.10	129	eP	Pn	13 45 20.6	+0.9
SALV	Santo Antonio	13.32	66	eP	Pn	13 45 22.0	-0.6
PP1B	Ponte de Pedra	13.33	74	eP	Pn	13 45 22.8	0.0
MCR1	Marechal Candi	13.39	104	eP	Pn	13 45 23.7	+0.2
SAML	Samuel	13.73	22	P	P	13 45 33.5	+0.8
SAML	Samuel	13.73	22	eP	P	13 45 30.0	-2.7
CRSM	Crissiumal (Br	14.14	116	eP	Pn	13 45 33.2	+0.1
RODS	Rosario do Sul	14.51	128	eP	Pn	13 45 37.4	-0.3
FRBT	Francisco Belt	14.54	109	eP	Pn	13 45 39.5	+1.2
CZSB	Cruzeiro do Su	14.65	343	P	P	13 45 42.8	-0.1
CZSB	Cruzeiro do Su	14.65	343	eP	P	13 45 41.8	-1.1
ALGR	Alto Alegre (B	15.46	120	eP	P	13 45 51.0	-0.8
ITAB	Concordia	15.67	113		P	13 45 54.5	+0.3
ITAB				IAmb	IAmb	13 45 56.4	
	comp=Z,34nm,0.5s						
ITAB	Concordia	15.67	113	eP	P	13 45 53.8	-0.4
CPSB	Cacapava Do Su	15.84	126	eP	Pn	13 45 54.0	-0.5
PCMB	Pacaembu	15.85	92	eP	P	13 45 55.3	-0.9
PLTB	Pedras Altas	16.42	130	P	P	13 46 02.2	-0.2
PLTB	Pedras Altas	16.42	130	eP	Pn	13 46 01.4	-0.3
ITRB	Iturama	16.93	86	eP	P	13 46 09.2	+1.1
TRQA	Tornquist	17.06	163		Pn	13 46 07.5	-1.9
FRTB	Fartura	17.38	99	eP	Pn	13 46 14.0	+0.4
CNLB	Canela	17.41	119	eP	Pn	13 46 14.4	+0.6
TBTG	Tabatinga, AM	17.61	355		Pn	13 46 17.1	+0.8
TBTG	Tabatinga, AM	17.61	355	eP	Pn	13 46 17.5	+1.2
BB19B	Bebedouro	18.44	91	eP	Pn	13 46 25.1	-1.0
LR04	Corral	18.51	192	P	P	13 46 24.3	-1.0
LR04				IAmb	IAmb	13 46 25.5	
	comp=Z,66nm,1.4s						
TEFE	Tefe	18.57	12	eP	Pn	13 46 27.5	-0.2
PLCA	Paso Flores	18.93	185	P	P	13 46 30.9	+0.9
	comp=Z,1.1nm,0.8s,baz=355,slow=9.7,SNR=4.7						
PLCA	Paso Flores	18.93	185	P	P	13 46 30.1	+0.1
PLCA	Paso Flores	18.93	185	eP	P	13 46 30.8	+0.8
SNDB	Serra Nova Dou	18.99	62	eP	Pn	13 46 31.0	-1.7
RCLB	Rio Claro- Sao	19.27	96	eP	P	13 46 34.0	+0.2
IPMB	Ipameri, GO	19.29	82	eP	P	13 46 34.1	+0.1
SPB	Sao Paulo	19.34	99	eP	Pn	13 46 35.3	-1.4
PET01	Itanhaem-SP	19.51	101	eP	P	13 46 36.5	+0.1
VAO	Valinhos	19.77	97	eP	P	13 46 39.2	-0.1
LL05	Los Muermos	19.99	191	P	P	13 46 40.5	-0.9
MACA	Manacapuru-AM	19.99	23	P	P	13 46 40.7	-0.8
BDFB	Brasilia	20.18	76	P	P	13 46 43.5	-0.3
	comp=Z,1.8nm,0.4s,baz=218,slow=9.8,SNR=5.6						
	comp=Z,1.8nm,0.4s						
BDFB	Brasilia	20.18	76	P	P	13 46 43.3	-0.5
BDFB	Brasilia	20.18	76	eP	P	13 46 44.3	+0.6
MCRA	Macar, Loja	20.71	325	P	P	13 46 50.0	+0.6
PMNB	Patos De Minas	20.79	85	eP	P	13 46 49.8	-0.5
PARB	Paraibuna	21.01	98	eP	P	13 46 51.9	-0.6
BSCB	Bom Sucesso	21.93	92	eP	P	13 47 02.8	+0.4
PIAT	Ana Tenorio	22.87	334	eP	P	13 47 22.5	+10
VAS01	Vassouras-RJ	23.05	96	eP	P	13 47 13.6	-0.1
JANB	Januaria	23.73	78	eP	P	13 47 19.8	-0.2
SMTB	Santa Maria do	23.75	60	eP	P	13 47 19.9	-0.1
OTAV	Otavalo	24.07	334	eP	P	13 47 25.9	+2.6
MALB	Monte Alegre	24.12	36	eP	P	13 47 23.9	+0.6
FLF1	Flavio Alfaro-	24.13	331	eP	P	13 47 25.9	+2.5
SDBA	SAO DESIDERIO	24.23	71	eP	P	13 47 24.5	+0.1
FLOC	Florencia	24.36	342	eP	P	13 47 26.6	+1.1
GARC	Garzon, Huila	24.89	343	eP	P	13 47 31.9	+1.3
BOAV	Boa Vista	25.26	19	P	P	13 47 34.1	+0.4
BOAV				IAmb	IAmb	13 47 35.6	
	comp=Z,10nm,0.7s						
BOAV	Boa Vista	25.26	19	eP	P	13 47 34.9	+1.2
BBAC	Balboa, Cauca	25.27	339	eP	P	13 47 36.2	+2.2
BETC	Betania	25.34	343	eP	P	13 47 36.9	+2.4
POPC	Popayan, Colom	25.57	340	eP	P	13 47 38.3	+1.5
PRAC	Prado	26.20	345	eP	P	13 47 42.2	0.0
JAMC	Jamundi, Valle	26.21	341	eP	P	13 47 44.0	+1.5
VILC	Villavicencio,	26.32	348	eP	P	13 47 45.2	+1.8
ORTC	Ortega, Tolima	26.47	344	eP	P	13 47 45.8	+1.2
CHIC	Chingaza	26.83	348	eP	P	13 47 47.8	-0.5
YOTC	Yotoco, Valle	26.84	342	eP	P	13 47 47.5	-0.5
GUA01	Guaratinga, BA	27.40	84	eP	P	13 47 53.3	+0.3
RUSC	La Rusia	27.95	350	P	P	13 47 58.3	-0.1
RUSC				IAmb	IAmb	13 48 00.0	
	comp=Z,15nm,0.9s						
RUSC	La Rusia	27.95	350	eP	P	13 47 58.9	+0.5
ABR01	Abrolhos, BA	28.09	87	eP	P	13 48 01.4	+2.2
CBOC	Ciudad Bolivar	28.54	344	eP	P	13 48 03.0	-0.3
BARC	Barichara	28.65	350	eP	P	13 48 04.5	+0.1
PTBC	PUERTO BERRIO,	28.84	347	eP	P	13 48 04.0	-1.7
BAUV	El Baul	30.59	1	P	P	13 48 20.5	-0.7
SDV	Santo Domingo	30.62	356	eP	P	13 48 23.3	+1.7
BIRV	Birongo	32.17	4	P	P	13 48 34.2	-0.9
BIRV				IAmb	IAmb	13 49 04.7	
	comp=Z,19nm,1.0s						
TOSP	Speyside	33.80	14	P	P	13 48 49.7	+0.5
MCLT	Moule a Chique	36.06	12	P	P	13 49 08.6	-0.1
ORTG	Ortega, Santa	36.15	331	P	P	13 49 08.1	-1.5
ORTG				IAmb	IAmb	13 49 12.7	
	comp=Z,17nm,1.0s						
CRPR	Cabo Rojo, PR	39.62	2	P	P	13 49 36.4	-2.1
CELP	Cerrillos	39.70	3	P	P	13 49 36.0	-3.3
PMSA	Palmer Station	43.01	177	P	P	13 50 06.8	+1.1
	comp=Z,9.8nm,1.0s,baz=346,slow=12,SNR=1.3						
	comp=Z,9.8nm,1.0s						
JSC	Jenkinsville	57.15	347	P	P	13 51 53.3	+0.5
JSC				IAmb	IAmb	13 51 54.1	
	comp=Z,5.8nm,0.7s						
BG3	Lake Jocassee	58.20	346	P	P	13 52 00.6	+0.4
BG3				IAmb	IAmb	13 52 01.4	
	comp=Z,9.9nm,1.0s						
CPCT	Cooper Cave	59.01	345	P	P	13 52 05.2	-0.5
CPCT				IAmb	IAmb	13 52 07.3	
	comp=Z,8.2nm,1.0s						
TKL	Tuckaleechee C	59.03	345	P	P	13 52 05.1	-0.8
TKL				IAmb	IAmb	13 52 07.1	
	comp=Z,10nm,0.9s						
SWET	Sewanee	59.15	343	P	P	13 52 06.1	-0.7
TZTN	Tazewell	59.82	346	P	P	13 52 11.1	-0.3
BLA	Blacksburg	59.83	349	P	P	13 52 11.2	-0.2
CLTN	Cedars of Leba	60.08	343	P	P	13 52 12.9	-0.2
CLTN				IAmb	IAmb	13 52 14.4	
	comp=Z,11nm,1.0s						
WVT	Waverly	60.54	342	P	P	13 52 15.7	-0.5
WVT				IAmb	IAmb	13 52 16.5	
	comp=Z,11nm,0.9s						
TX32	Lajitas Array	61.22	325	P	P	13 52 21.1	0.0
TXAR	Lajitas Array	61.22	325	P	P	13 52 21.8	+0.7
	comp=Z,0.4nm,0.6s,baz=155,slow=9.2,SNR=7.2						
	comp=Z,0.4nm,0.6s						
TXAR	Lajitas Array	61.22	325	P	P	13 52 21.4	+0.3
TX31	Lajitas Ar. Si	61.22	325	P	P	13 52 21.2	+0.1
SNAA	Sanae	61.78	161	P	P	13 52 25.0	+0.7
WCI	Wyandotte Cave	62.09	344	P	P	13 52 26.3	-0.3

P52A	**Corning**	**62.50**	**348**	P	**P**	**13 52 28.7**	**-0.6**
SSPA	**Standing Stone**	**62.79**	**352**	P	**P**	**13 52 31.5**	**+0.3**
FVM	**French Village**	**63.03**	**341**	P	**P**	**13 52 32.4**	**-0.5**
FVM				IAmb	IAmb	13 52 34.3	
	comp=Z,12nm,1.1s						
KSPA	**Keystone Colle**	**63.45**	**354**	P	**P**	**13 52 36.4**	**+0.8**
WVNY	**West Valley, N**	**64.62**	**352**	P	**P**	**13 52 43.3**	**+0.1**
WVNY				IAmb	IAmb	13 53 23.1	
	comp=Z,15nm,1.1s						
319A	**Douglas**	**65.89**	**322**	P	**P**	**13 52 53.1**	**+1.3**
319A				IAmb	IAmb	13 52 54.5	
	comp=Z,7.6nm,0.8s						
121A	**Cookes Peak, D**	**65.92**	**324**	P	**P**	**13 52 53.4**	**+1.3**
121A				IAmb	IAmb	13 52 55.1	
	comp=Z,7.4nm,1.1s						
ANMO	**Albuquerque**	**67.08**	**327**	P	**P**	**13 53 00.5**	**+1.1**
TUC	**Tucson**	**67.44**	**322**	P	**P**	**13 53 02.8**	**+1.2**
TUC				IAmb	IAmb	13 53 05.1	
	comp=Z,8.5nm,1.4s						
TRQ	**Mont Tremblant**	**67.97**	**355**	P	**P**	**13 53 04.9**	**+0.3**
DBIC	**Dimbokro**	**68.30**	**73**	P	**P**	**13 53 08.0**	**+0.6**
	comp=Z,3.9nm,0.6s,baz=249,slow=8.3,SNR=5.6						
	comp=Z,3.9nm,0.6s						
DBIC	**Dimbokro**	**68.30**	**73**	P	**P**	**13 53 07.5**	**+0.2**
DBIC				IAmb	IAmb	13 53 10.3	
	comp=Z,18nm,1.5s						
SDCO	**Great Sand Dun**	**68.82**	**329**	P	**P**	**13 53 10.6**	**+0.2**
LATQ	**La Tuque**	**69.01**	**357**	P	**P**	**13 53 11.4**	**+0.5**
LATQ				IAmb	IAmb	13 53 54.0	
	comp=Z,14nm,1.2s						
LMQ	**La Malbaie**	**69.08**	**359**	P	**P**	**13 53 11.8**	**+0.4**
LMQ				IAmb	IAmb	13 53 38.4	
	comp=Z,26nm,1.4s						
MVCO	**Mesa Verde**	**69.88**	**327**	P	**P**	**13 53 18.0**	**+1.2**
BAR	**Barrett**	**71.22**	**318**	P	**P**	**13 53 26.4**	**+1.5**
BAR				IAmb	IAmb	13 53 27.6	
	comp=Z,7.3nm,0.9s						
U15A	**North Rim**	**71.30**	**324**	P	**P**	**13 53 27.2**	**+1.7**
U15A				IAmb	IAmb	13 53 28.9	
	comp=Z,10nm,1.1s						
O20A	**White River Ci**	**72.01**	**329**	P	**P**	**13 53 30.8**	**+1.2**
O20A				IAmb	IAmb	13 53 32.2	
	comp=Z,7.8nm,0.9s						
KNB	**Kanab**	**72.02**	**324**	P	**P**	**13 53 31.4**	**+1.6**
KNB				IAmb	IAmb	13 53 33.3	
	comp=Z,12nm,0.9s						
V12A	**Nelson**	**72.24**	**322**	P	**P**	**13 53 32.0**	**+1.0**
SRU	**San Rafael Swe**	**72.36**	**327**	P	**P**	**13 53 32.7**	**+1.0**
SRU				IAmb	IAmb	13 53 34.1	
	comp=Z,8.0nm,0.7s						
P17A	**Butcher Ranch,**	**72.74**	**327**	P	**P**	**13 53 34.7**	**+0.7**
P17A				IAmb	IAmb	13 53 36.5	
	comp=Z,7.3nm,0.9s						
RDMU	**Red Mountain**	**72.99**	**328**	P	**P**	**13 53 36.8**	**+1.3**
RDMU				IAmb	IAmb	13 53 37.7	
	comp=Z,6.5nm,0.9s						
BSUT	**Blindstream Ca**	**73.55**	**328**	P	**P**	**13 53 40.7**	**+1.7**
BSUT				IAmb	IAmb	13 53 41.6	
	comp=Z,5.5nm,0.8s						
GWY	**Greenwater Val**	**73.61**	**321**	P	**P**	**13 53 38.6**	**-0.5**
PDAR	**Pinedale Array**	**74.68**	**330**	P	**P**	**13 53 46.2**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=127,slow=6.0,SNR=8.4						
	comp=Z,0.7nm,0.6s						
PDAR	**Pinedale Array**	**74.68**	**330**	P	**P**	**13 53 45.9**	**+0.6**
HWUT	**Hardware Ranch**	**74.76**	**328**	P	**P**	**13 53 46.7**	**+1.0**
AHID	**Auburn Hatcher**	**75.41**	**329**	P	**P**	**13 53 49.8**	**+0.4**
AHID				IAmb	IAmb	13 53 51.6	
	comp=Z,7.8nm,0.9s						
REDW	**Red Top Meadow**	**75.74**	**329**	P	**P**	**13 53 52.6**	**+1.2**
ULM	**Lac du Bonnet**	**75.80**	**342**	P	**P**	**13 53 51.3**	**+0.1**
	comp=Z,2.4nm,0.6s,baz=170,slow=5.5,SNR=4.5						
	comp=Z,2.4nm,0.6s						
ULM	**Lac du Bonnet**	**75.80**	**342**	P	**P**	**13 53 51.0**	**-0.3**
NVAR	**Mina Array Bea**	**76.10**	**322**	P	**P**	**13 53 55.4**	**+1.9**
	comp=Z,1.4nm,0.8s,baz=150,slow=7.3,SNR=7.7						
	comp=Z,1.4nm,0.8s						
FLWY	**Flagg Ranch**	**76.22**	**330**	P	**P**	**13 53 55.3**	**+1.2**
FLWY				IAmb	IAmb	13 53 56.9	
	comp=Z,6.1nm,0.9s						
SCHQ	**Schefferville**	**76.36**	**1**	P	**P**	**13 53 54.8**	**+0.4**
	comp=Z,4.0nm,1.0s,baz=192,slow=9.3,SNR=1.8						
	comp=Z,4.0nm,1.0s						
KVN	**Kaiserville**	**76.40**	**322**	P	**P**	**13 53 56.1**	**+1.0**
TORD	**Torodi Ar. Bea**	**76.95**	**70**	P	**P**	**13 53 58.7**	**+0.2**
	comp=Z,6.2nm,0.7s,baz=256,slow=5.4,SNR=38						
	comp=Z,6.2nm,0.7s						
GCMT	**Greycliff**	**77.07**	**332**	P	**P**	**13 53 59.5**	**+0.8**
PAHR	**Pah Rah Range**	**77.58**	**322**	P	**P**	**13 54 03.3**	**+1.6**
PAHR				IAmb	IAmb	13 54 04.7	
	comp=Z,11nm,1.0s						
HLID	**Hailey**	**77.62**	**328**	P	**P**	**13 54 03.5**	**+1.6**
MCMT	**McKenzie Canyo**	**77.79**	**329**	P	**P**	**13 54 04.5**	**+1.6**
LRM	**Limekiln Ridge**	**78.35**	**330**	P	**P**	**13 54 06.8**	**+0.9**
ORV	**Oroville**	**78.70**	**321**	P	**P**	**13 54 09.2**	**+1.5**
ORV				IAmb	IAmb	13 54 10.6	
	comp=Z,8.6nm,1.1s						
HRY	**Holter Researc**	**78.74**	**331**	P	**P**	**13 54 09.0**	**+1.1**
PLID	**Pearl Lake**	**79.51**	**328**	P	**P**	**13 54 13.3**	**+1.1**
PLID				IAmb	IAmb	13 54 14.7	
	comp=Z,5.6nm,0.8s						
BMO	**Blue Mountains**	**80.00**	**327**	P	**P**	**13 54 15.8**	**+1.1**
K05A	**Summer Lake**	**80.44**	**324**	P	**P**	**13 54 18.6**	**+1.4**
K05A				IAmb	IAmb	13 54 20.1	
	comp=Z,9.3nm,0.9s						
YBH	**Yreka Blue Hor**	**80.81**	**322**	P	**P**	**13 54 19.4**	**+0.2**
YBH				IAmb	IAmb	13 54 26.1	
	comp=Z,15nm,1.4s						
J05D	**Fort Rock, OR**	**81.00**	**324**	P	**P**	**13 54 21.0**	**+0.8**
G08A	**Pilot Rock**	**81.14**	**326**	P	**P**	**13 54 22.6**	**+1.7**
PINE	**Pine Mountain**	**81.18**	**324**	P	**P**	**13 54 23.0**	**+1.8**
PINE				IAmb	IAmb	13 54 24.2	
	comp=Z,23nm,1.4s						
DBO	**Dodson Butte**	**82.01**	**323**	P	**P**	**13 54 26.6**	**+1.2**
DBO				IAmb	IAmb	13 54 26.9	
	comp=Z,29nm,1.4s						
C09A	**Chrisman Ranch**	**82.54**	**329**	P	**P**	**13 54 28.9**	**+0.9**
C09A				IAmb	IAmb	13 54 30.2	
	comp=Z,8.7nm,0.7s						
BUCK	**Buck Mountain**	**82.56**	**324**	P	**P**	**13 54 28.4**	**+0.2**
BOSA	**Boshof**	**82.80**	**118**	P	**P**	**13 54 31.4**	**+1.3**
	comp=Z,2.5nm,0.8s,baz=270,slow=3.0,SNR=3.5						
	comp=Z,2.5nm,0.8s						
YKA	**Yellowknife Ar**	**91.69**	**340**	P	**P**	**13 55 12.6**	**+0.6**
	comp=Z,3.9nm,0.7s,baz=134,slow=4.6,SNR=74						
	comp=Z,3.9nm,0.7s						
ASAR	**Alice Springs**	**129.87**	**207**	PKP	**PKPdf**	**14 01 15.3**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=129,slow=1.9,SNR=19						
WRA	**Warramunga Arr**	**132.94**	**210**	PKP	**PKPdf**	**14 01 21.4**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=161,slow=1.7,SNR=14						
ZALV	**Zalesovo Beam**	**142.02**	**26**	PKhKP	PKPpre	14 01 32.8	
	comp=Z,2.2nm,0.6s,baz=311,slow=5.3,SNR=4.0						
ZALV				PKP	**PKPdf**	**14 01 37.7**	**+1.4**
	comp=Z,2.6nm,0.6s,baz=287,slow=2.7,SNR=10						
KSH	**Kashi**	**144.88**	**52**	PKP	PKPbc	14 01 42.2	+0.8
MKAR	**Makanchi Array**	**145.58**	**37**	PKPbc	**PKPbc**	**14 01 43.9**	**+0.6**
	comp=Z,1.4nm,0.5s,baz=337,slow=3.2,SNR=22						
MJAR	**Matsushiro Arr**	**152.71**	**308**	PKPbc	**PKPbc**	**14 02 01.6**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=85,slow=0.7,SNR=5.2						
SONM	**Songino Array**	**153.71**	**8**	PKP	**PKPdf**	**14 01 56.6**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=341,slow=3.1,SNR=4.0						
SONM				PKPbc	**PKPbc**	**14 02 03.8**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=116,slow=3.4,SNR=3.3						
SONM				PKPab	**PKPab**	**14 02 17.6**	**+0.8**
	comp=Z,0.9nm,1.0s,baz=333,slow=1.6,SNR=3.6						
PZH	**PanZhiHua**	**169.81**	**61**	PKP	**PKPdf**	**14 02 10.7**	**-2.1**

IDC 05 13:57:14.6±2.5**, 6°.13S**×**153°.78E, h0**^{km}**, mb3.3**/3**, mbtmp3.4**/4**, ML3.0**/1**, Error ellipse: s-maj=55.6km s-min=28.1km az=84.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.52**	**316**	Pn	Pn	13 57 56.8	0.0
	3.2nm,0.3s,baz=287,slow=2.3,SNR=7.8						
KRVT				Sn	Sn	13 58 29.8	+1.7
	5.8nm,0.3s,baz=180,slow=6.6,SNR=3.8						
	15nm,0.3s						
WRA	**Warramunga Arr**	**23.36**	**232**	P	P	14 02 24.5	-0.4
	0.2nm,0.4s,baz=55,slow=9.8,SNR=2.4						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**25.88**	**226**	P	P	14 02 48.5	+0.1
	0.8nm,0.9s,baz=58,slow=9.4,SNR=14						
	0.8nm,0.9s						
MKAR	**Makanchi Array**	**81.96**	**319**	P	P	14 09 36.5	+0.1
	0.3nm,0.7s,baz=100,slow=6.7,SNR=3.9						
	0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**151.63**	**286**	PKPbc	PKPbc	14 17 11.8	-0.2
	0.6nm,0.8s,baz=70,slow=2.1,SNR=3.3						

NEIC ***05*** *14:20:56.5±1.4, 20°.7S±0°.2×178°.9W±0°.1, h622*^{km}*±11*^{km}*, mb4.2/32, Error ellipse: s-maj=24.0km s-min=15.5km az=157.0*

IDC ***05*** *14:20:58.8±2.3, 20°.51S×179°.08W, h643*^{km}*±21*^{km}*, mb3.0/8, mbtmp4.0/10, Error ellipse: s-maj=54.0km s-min=16.6km az=148.0*

ISC 05 14:20:57.7±0.6**, 20°.7S**±0°.1×**178°.89W**±0°.08**, h645**^{km}**, n57,** σ**0**^{s}**.94**/57**, mb4.1**/23**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.14**	**315**	P	**P**	**14 22 26.7**	**-1.0**
	15nm,0.4s,baz=141,slow=4.9,SNR=11						
MSVF	**Nonsavu**	**4.14**	**315**	P	**P**	**14 22 24.8**	**-2.9**
NIUE	**Niue**	**8.59**	**81**	P	**P**	**14 23 01.6**	**-2.5**
PINNC	**Pines Island,**	**12.85**	**259**	P	**P**	**14 23 44.2**	**-0.1**
DZM	**Mont Dzumac**	**13.73**	**262**	P	**P**	**14 23 53.3**	**+0.7**
	7.5nm,0.7s,baz=114,slow=22,SNR=9.0						
DZM	**Mont Dzumac**	**13.73**	**262**	P	**P**	**14 23 52.6**	**0.0**
RAR	**Rarotonga**	**17.86**	**95**	P	**P**	**14 24 29.7**	**-0.6**
RTZ	**Ruatahuna**	**18.19**	**190**	P	**P**	**14 24 32.3**	**-0.8**
RTZ				IAmb	IAmb	14 24 33.2	
	comp=Z,14nm,1.4s						
THZ	**Tophouse**	**22.10**	**196**	P	**P**	**14 25 08.3**	**+0.2**
CTAO	**Charters Tower**	**32.64**	**265**	P	**P**	**14 26 40.2**	**+0.5**
CTAO				IAmb	IAmb	14 26 41.0	
	comp=Z,4.4nm,0.6s						
COEN	**Coen**	**36.77**	**274**	P	**P**	**14 27 13.2**	**-0.6**
COEN				IAmb	IAmb	14 27 19.4	
	comp=Z,12nm,1.5s						
STKA	**Stephens Creek**	**36.95**	**244**	P	**P**	**14 27 15.7**	**+0.7**
	comp=Z,0.8nm,0.4s,baz=78,slow=9.8,SNR=4.1						
	comp=Z,0.8nm,0.4s						
STKA	**Stephens Creek**	**36.95**	**244**	P	**P**	**14 27 14.3**	**-0.7**
TAOE	**Nuku Hiva Isla**	**39.16**	**78**	P	**P**	**14 27 33.7**	**+0.5**
BBOO	**Buckleboo**	**41.71**	**244**	P	**P**	**14 27 53.0**	**+0.1**
BBOO				IAmb	IAmb	14 28 01.7	
	comp=Z,17nm,1.2s						
WR0	**Warramunga Arr**	**43.56**	**262**	P	**P**	**14 28 07.6**	**+0.1**
WR0				IAmb	IAmb	14 28 21.4	
	comp=Z,9.1nm,1.4s						
AS31	**Alice Springs**	**43.66**	**257**	P	**P**	**14 28 07.8**	**-0.4**
ASAR	**Alice Springs**	**43.66**	**257**	P	**P**	**14 28 08.6**	**+0.3**
	comp=Z,2.3nm,0.5s,baz=87,slow=8.4,SNR=99						
ASAR				PcP	**PcP**	**14 29 41.0**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=102,slow=4.0,SNR=6.3						
	comp=Z,2.3nm,0.5s						
ASAR	**Alice Springs**	**43.66**	**257**	P	**P**	**14 28 07.9**	**-0.3**
WB0	**Warramunga Arr**	**43.73**	**263**	P	**P**	**14 28 08.4**	**-0.4**
WB0				IAmb	IAmb	14 28 30.8	
	comp=Z,11nm,1.4s						
WB2	**Warramunga Arr**	**43.74**	**262**	P	**P**	**14 28 08.4**	**-0.4**
WB2				IAmb	IAmb	14 28 09.8	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**43.75**	**262**	P	**P**	**14 28 08.9**	**-0.1**
	comp=Z,1.6nm,0.4s,baz=97,slow=7.7,SNR=50						
	comp=Z,1.6nm,0.4s						
BYL	**Byron's Ledge**	**46.11**	**32**	P	**P**	**14 28 25.7**	**-1.1**
MJAR	**Matsushiro Arr**	**69.89**	**324**	P	**P**	**14 31 06.1**	**0.0**
	comp=Z,0.6nm,0.6s,baz=147,slow=5.9,SNR=2.2						
	comp=Z,0.6nm,0.6s						
SDPT	**Sand Point**	**77.37**	**11**	P	**P**	**14 31 47.9**	**+0.2**
NVAR	**Mina Array Bea**	**81.75**	**44**	P	**P**	**14 32 13.2**	**+1.8**
	comp=Z,0.5nm,0.5s,baz=224,slow=5.8,SNR=2.0						
	comp=Z,0.5nm,0.5s						
K05A	**Summer Lake**	**82.65**	**39**	P	**P**	**14 32 17.4**	**+1.7**
J05D	**Fort Rock, OR**	**82.79**	**38**	P	**P**	**14 32 18.3**	**+2.0**
SCM	**Sheep Creek Mo**	**86.05**	**14**	P	**P**	**14 32 32.0**	**+0.4**
CAST	**Castle Rocks**	**86.46**	**12**	P	**P**	**14 32 32.5**	**-1.0**
VRDI	**Verde Repeater**	**86.49**	**16**	P	**P**	**14 32 34.6**	**+0.8**
N25K	**Chitina, Valde**	**86.51**	**16**	P	**P**	**14 32 34.6**	**+0.9**
N25K				IAmb	IAmb	14 32 53.4	
	comp=Z,8.9nm,1.2s						
GLB	**Gilahina Butte**	**86.58**	**16**	P	**P**	**14 32 34.9**	**+0.8**
GLB				IAmb	IAmb	14 33 19.4	
	comp=Z,12nm,1.4s						
KTH	**Kantishna Hill**	**86.80**	**12**	P	**P**	**14 32 35.1**	**0.0**
B08A	**Colville Reser**	**86.88**	**35**	P	**P**	**14 32 36.6**	**+0.8**
M27K	**Edge Creek, AK**	**87.85**	**16**	P	**P**	**14 32 41.7**	**+1.6**
M27K				IAmb	IAmb	14 33 15.2	
	comp=Z,6.6nm,1.3s						
TXAR	**Lajitas Array**	**87.87**	**58**	P	**P**	**14 32 42.7**	**+1.8**
	comp=Z,0.4nm,0.7s,baz=213,slow=6.4,SNR=6.6						
	comp=Z,0.4nm,0.7s						
I21K	**Tanana**	**88.08**	**11**	P	**P**	**14 32 41.0**	**+0.1**
I21K				IAmb	IAmb	14 32 45.2	
	comp=Z,4.3nm,1.3s						
MLY	**Manley**	**88.17**	**12**	P	**P**	**14 32 41.2**	**-0.2**
MLY				IAmb	IAmb	14 33 10.9	
	comp=Z,5.2nm,1.5s						
WRH	**Wood River Hil**	**88.19**	**13**	P	**P**	**14 32 41.6**	**+0.1**
H21K	**Melozitna Rive**	**88.37**	**11**	P	**P**	**14 32 43.1**	**+0.8**
HDA	**Harding Lake**	**88.38**	**13**	P	**P**	**14 32 42.3**	**-0.1**
HDA				IAmb	IAmb	14 33 01.7	
	comp=Z,4.9nm,1.5s						
CCB	**Clear Creek Bu**	**88.41**	**13**	P	**P**	**14 32 42.3**	**-0.1**
CCB				IAmb	IAmb	14 32 43.0	
	comp=Z,2.0nm,0.8s						
L27K	**Beaver Creek,**	**88.44**	**16**		**P**	**14 32 43.9**	**+1.2**
BCAR	**Beaver Creek A**	**88.46**	**16**		**P**	**14 32 43.6**	**+0.8**
IMAR	**Indian Mountai**	**88.51**	**10**	P	**P**	**14 32 43.1**	**+0.2**
I23K	**Minto, Yukon-K**	**88.54**	**12**	P	**P**	**14 32 42.7**	**-0.3**
I23K				IAmb	IAmb	14 33 02.8	
	comp=Z,6.0nm,1.4s						
ILAR	**Eielson Array**	**88.71**	**13**	P	**P**	**14 32 43.8**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=217,slow=5.0,SNR=10						
	comp=Z,0.5nm,0.5s						
ILAR	**Eielson Array**	**88.71**	**13**	P	**P**	**14 32 44.0**	**+0.2**
M30M	**Minto, Yukon**	**89.43**	**18**	P	**P**	**14 32 48.1**	**+0.8**
M30M				IAmb	IAmb	14 32 49.3	
	comp=Z,2.3nm,0.9s						
PDAR	**Pinedale Array**	**89.69**	**44**	P	**P**	**14 32 49.9**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=177,slow=4.5,SNR=4.7						
	comp=Z,0.4nm,0.6s						
PDAR	**Pinedale Array**	**89.69**	**44**	P	**P**	**14 32 50.3**	**+1.1**
DAWY	**Dawson**	**89.90**	**16**	P	**P**	**14 32 50.4**	**+0.9**
ARCES	**ARCESS Array B**	**128.98**	**349**	PKP	**PKPdf**	**14 38 53.5**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=79,slow=1.9,SNR=4.8						
AKASG	**Malin Array Be**	**142.79**	**330**	PKhKP	PKPpre	14 39 16.9	
	comp=Z,2.5nm,0.4s,baz=43,slow=4.2,SNR=33						
BRTR	**Keskin Array B**	**146.37**	**312**	PKPbc	**PKPbc**	**14 39 28.9**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=148,slow=5.0,SNR=5.4						
GERES	**GERESS Array B**	**150.18**	**343**	PKPbc	**PKPbc**	**14 39 37.9**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=31,slow=3.1,SNR=4.7						

IDC ***05*** *14:32:36.7±1.8, 10°.66S×161°.68E, h0*^{km}*, mb3.8/4, mbtmp3.9/5, ML5.3/1, MS3.5/3, Error ellipse: s-maj=35.6km s-min=30.5km az=114.0*

NEIC ***05*** *14:32:38.5±0.7, 10°.6S±0°.2×161°.8E±0°.1, h13*^{km}*±10*^{km}*, mb4.2/11, Error ellipse: s-maj=31.2km s-min=7.4km az=208.0*

ISC 05 14:32:38.0±1.0**, 10°.6S**±0°.1×**161°.7E**±0°.1**, h10**^{km}**, n18,** σ**0**^{s}**.89**/18**, mb3.9**/8**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.11**	**303**	Pn	**Pn**	**14 33 13.8**	**+0.3**
	988nm,0.3s,baz=175,slow=9.2,SNR=40						
HNR				Sn	**Sn**	**14 33 39.3**	**-0.5**
	7µm,0.3s,baz=336,slow=21,SNR=16						
HNR				LR	LR	14 34 11.3	
	comp=Z,3µm,20.4s,baz=197,slow=45						
	2µm,0.3s						
PMG	**Port Moresby**	**14.41**	**273**	LR	LR	14 40 56.1	
	comp=Z,106nm,20.5s,baz=28,slow=35						
FUNA	**Funafuti**	**17.34**	**85**	Pn	**Pn**	**14 36 39.3**	**-1.1**
FUNA				IAmb	IAmb	14 36 57.1	
	comp=Z,55nm,1.0s						
CTAO	**Charters Tower**	**17.64**	**236**	P	**Pn**	**14 36 44.4**	**+0.3**
CTAO				IAmb	IAmb	14 36 50.6	
	comp=Z,6.6nm,1.0s						
COEN	**Coen**	**18.44**	**258**	P	**P**	**14 36 52.7**	**-1.2**
COEN				IAmb	IAmb	14 37 36.7	
	comp=Z,7.4nm,1.1s						
WR0	**Warramunga Arr**	**27.80**	**247**	P	**P**	**14 38 27.1**	**-0.5**
WR0				IAmb	IAmb	14 39 10.2	
	comp=Z,6.5nm,1.2s						
WB0	**Warramunga Arr**	**27.88**	**248**	P	**P**	**14 38 27.8**	**-0.5**
WB0				IAmb	IAmb	14 38 50.9	
	comp=Z,13nm,1.4s						
WB2	**Warramunga Arr**	**27.96**	**247**	P	**P**	**14 38 28.5**	**-0.6**
WB2				IAmb	IAmb	14 38 53.6	
	comp=Z,23nm,1.5s						
WRA	**Warramunga Arr**	**27.97**	**247**	P	**P**	**14 38 28.9**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=77,slow=8.9,SNR=9.8						
	comp=Z,0.9nm,0.5s						
WRA	**Warramunga Arr**	**27.97**	**247**	P	**P**	**14 38 28.4**	**-0.8**
AS31	**Alice Springs**	**29.52**	**240**	P	**P**	**14 38 42.1**	**-0.9**
AS31				IAmb	IAmb	14 38 53.0	
	comp=Z,0.8nm,1.1s						
ASAR	**Alice Springs**	**29.53**	**240**	P	**P**	**14 38 42.1**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=63,slow=10.0,SNR=15						
ASAR				LR	LR	14 49 27.1	
	comp=Z,61nm,18.2s,baz=352,slow=34						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**29.53**	**240**	P	**P**	**14 38 41.8**	**-1.2**
BBOO	**Buckleboo**	**32.35**	**223**	P	**P**	**14 39 09.2**	**+1.4**
KNRA	**Kununurra**	**32.48**	**258**	P	**P**	**14 39 08.6**	**-0.5**
FITZ	**Fitzroy Crossi**	**35.70**	**254**	P	**P**	**14 39 35.8**	**-1.3**
SONM	**Songino Array**	**76.02**	**325**	P	**P**	**14 44 26.3**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=139,slow=4.9,SNR=4.4						
	comp=Z,0.6nm,0.6s						
ILAR	**Eielson Array**	**84.39**	**20**	P	**P**	**14 45 10.9**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=242,slow=5.0,SNR=3.1						
	comp=Z,0.3nm,0.5s						

IDC ***05*** *14:41:22.8±3.3, 36°.10N×71°.14E, h59*^{km}*±27*^{km}*, mb3.7/15, mbtmp4.0/19, ML3.8/4, Error ellipse: s-maj=22.2km s-min=16.1km az=1.0*

MOS ***05*** *14:41:25.9±1.1, 36°.46N×71°.17E, h87*^{km}*, mb4.6/9, Error ellipse: s-maj=11.9km s-min=5.5km az=86.9*

NEIC ***05*** *14:41:27.1±1.6, 36°.45N±0°.04×71°.03E±0°.09, h86*^{km}*±3*^{km}*, mb4.4/32, Error ellipse: s-maj=9.9km s-min=6.5km az=91.0*

NNC ***05*** *14:41:30.3±2.5, 36°.72N×71°.06E, h115*^{km}*±34*^{km}*, mb3.6, mpv4.1, Error ellipse: s-maj=22.0km s-min=18.2km az=147.0*

ISC 05 14:41:27.1±0.4**, 36°.35N**±0°.04×**71°.22E**±0°.05**, h100**^{km}**, n135,** σ**2**^{s}**.43**/161**, mb4.2**/37**, 11C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.54**	**225**	Pn	**Pn**	**14 42 07.0**	**+0.1**
KBL	**Kabul**	**2.54**	**225**	PN	**Pn**	**14 42 07.0**	**+0.1**
CEP	**Cherat**	**2.58**	**167**	P	**Pn**	**14 42 09.9**	**+2.4**
GAR	**Garm**	**2.74**	**345**		**Pn**	**14 42 07.6**	**-1.9**
CHGR	**Chuyangaron**	**2.83**	**325**		**Pn**	**14 42 07.8**	**-2.8**
CHGR	**Chuyangaron**	**2.83**	**325**	PN	**Pn**	**14 42 07.8**	**-2.8**
CHCP	**Chirah Chowk**	**3.17**	**147**	P	**Pn**	**14 42 16.8**	**+1.6**
NIL	**Nilore**	**3.17**	**148**		**Pn**	**14 42 16.8**	**+1.6**
NIL	**Nilore**	**3.17**	**148**	PN	**Pn**	**14 42 16.8**	**+1.6**
THW	**Thamme Wali**	**3.58**	**173**	P	**Pn**	**14 42 21.2**	**+0.6**
SARP	**Sargodha**	**4.58**	**164**	P	**Pn**	**14 42 33.8**	**-0.4**
JMU	**Jammu**	**4.73**	**139**	*e*P	**Pn**	**14 42 36.4**	**+0.2**
JMU				*e*S	**Sn**	**14 43 29.2**	**-0.6**
KSH	**Kashi**	**4.91**	**49**	Pn	**Pn**	**14 42 34.7**	**-4.0**
KSH				Sn	Sn	14 43 24.7	-10
KSH				pmax	pmax		
	comp=Z,50nm,0.5s						
KSH				smax	smax		
	comp=N,920nm,0.6s						
KSH				smax	smax		
	comp=E,330nm,0.8s						
THN	**Thein Dam**	**5.39**	**135**	*e*P	**Pn**	**14 42 45.8**	**+0.6**
THN				*e*S	**Sn**	**14 43 44.8**	**-1.1**
THN				IAML		14 43 48.8	
	comp=E,193nm,0.2s						
THN				IAML		14 43 49.5	
	comp=N,192nm,0.4s						
AML	**Almayashu**	**6.08**	**18**	P	**Pn**	**14 42 54.2**	**-0.6**
	SNR=74						
AML	**Almayashu**	**6.08**	**18**	⇓P	**Pn**	**14 42 54.2**	**-0.6**
	comp=N,2.6nm,0.5s						
AML				S	**Sn**	**14 43 59.0**	**-4.2**
	comp=N,7.1nm,0.6s						
AML	**Almayashu**	**6.08**	**18**	PN	**Pn**	**14 42 54.2**	**-0.6**
UCH	**Uchtor**	**6.40**	**23**	P	**Pn**	**14 42 59.0**	**-0.2**
	SNR=13						
BHK	**Bhakra**	**6.55**	**137**	*e*P	**Pn**	**14 43 01.1**	**+0.2**
BHK				*e*S	**Sn**	**14 44 12.1**	**-2.1**
BHK				IAML		14 44 17.3	
	comp=N,120nm,0.2s						
EKS2	**Erkin-Say**	**6.60**	**17**	P	**Pn**	**14 43 01.3**	**-0.4**
	SNR=25						
KK31	**Karatay Array**	**6.76**	**356**	Pn	**Pn**	**14 43 01.7**	**-2.1**
KK31	**Karatay Array**	**6.76**	**356**	P	**Pn**	**14 43 02.0**	**-1.7**
	comp=N,10nm,0.4s,baz=176,slow=12,SNR=324						
KK31				⇑S	**Sn**	**14 44 15.0**	**-4.2**
	comp=N,19nm,0.5s,baz=188,slow=22,SNR=8.1						
KK31	**Karatay Array**	**6.76**	**356**	PN	**Pn**	**14 43 02.5**	**-1.3**
KKAR	**Karatay Array**	**6.76**	**356**	Pn	**Pn**	**14 43 01.3**	**-2.5**
KKAR	**Karatay Array**	**6.76**	**356**		**Pn**	**14 43 01.6**	**-2.2**
KKAR	**Karatay Array**	**6.76**	**356**	PN	**Pn**	**14 43 01.6**	**-2.2**
AAK	**Ala-Archa**	**6.77**	**21**	P	**Pn**	**14 43 03.7**	**-0.2**
	SNR=38						
AAK	**Ala-Archa**	**6.77**	**21**	P	**Pn**	**14 43 03.7**	**-0.2**
	comp=N,5.9nm,0.3s,baz=217,slow=8.1,SNR=108						
AAK				S	**Sn**	**14 44 19.9**	**+0.3**
	comp=N,14nm,0.7s,baz=316,slow=13,SNR=6.0						
	comp=N,18nm,0.5s						
AAK	**Ala-Archa**	**6.77**	**21**	Pn	**Pn**	**14 43 03.1**	**-0.8**
KBK	**Karagaybulak**	**6.92**	**23**	P	**Pn**	**14 43 07.0**	**+0.9**
	SNR=8.8						
CHMS	**Chumysh**	**7.17**	**21**	P	**Pn**	**14 43 08.8**	**-0.5**
	SNR=23						
SMLA	**Simla**	**7.19**	**135**	*e*P	**Pn**	**14 43 09.0**	**-0.5**
SMLA				*e*S	**Sn**	**14 44 26.2**	**-3.4**
SMLA				IAML		14 44 29.3	
	comp=N,241nm,0.3s						
SMLA				IAML		14 44 29.8	
	comp=E,169nm,0.3s						
SMLA	**Simla**	**7.19**	**135**	*e*P	**Pn**	**14 43 08.6**	**-0.9**
SMLA				*e*S	**Sn**	**14 44 26.0**	**-3.6**
SMLA				IAML		14 44 29.3	
	comp=N,246nm,0.3s						
SMLA				IAML		14 44 29.8	
	comp=E,169nm,0.3s						
USP	**Ospenovka**	**7.35**	**19**	P	**Pn**	**14 43 11.3**	**-0.5**
	SNR=16						
TKM2	**Tokmak 2**	**7.38**	**26**	P	**Pn**	**14 43 12.2**	**-0.1**
	SNR=8.0						
TKM2	**Tokmak 2**	**7.38**	**26**	⇓P	**Pn**	**14 43 11.5**	**-0.7**
	comp=E,15nm,0.5s						
TKM2				⇑S	**Sn**	**14 44 32.3**	**-2.1**
	comp=E,9.4nm,0.8s						
TKM2	**Tokmak 2**	**7.38**	**26**	PN	**Pn**	**14 43 11.5**	**-0.7**
KUDL	**Kundal**	**9.32**	**150**	*e*P	**Pn**	**14 43 35.9**	**-2.6**
KUDL				*e*S	**Sn**	**14 45 13.3**	**-8.2**
PTH	**Pithoragarh**	**10.15**	**129**	*e*P	**Pn**	**14 43 49.8**	**-0.2**
PTH				*e*S	**Sn**	**14 45 34.5**	**-7.6**
LGTI	**Lohaghat**	**10.24**	**130**	*e*P	**Pn**	**14 43 48.3**	**-2.7**
LGTI				*e*S	**Sn**	**14 45 35.0**	**-8.9**
GEYT	**Alibeck**	**10.58**	**282**	P	Pn	14 43 51.2	-4.5
	comp=E,1.4nm,0.3s,baz=115,slow=11,SNR=8.2						
GEYT				S	Sn	14 45 38.2	-14
	comp=E,5.2nm,0.4s,baz=119,slow=17,SNR=5.1						
	comp=E,3.5nm,0.4s						
MK31	**Makanchi Array**	**13.31**	**35**	P	**P**	**14 44 37.4**	**-0.6**
MK31	**Makanchi Array**	**13.31**	**35**	⇑P	**Pn**	**14 44 32.4**	**+0.5**
	comp=E,1.9nm,0.5s,baz=208,slow=13,SNR=33						
MK31	**Makanchi Array**	**13.31**	**35**	*i* P	**Pn**	**14 44 32.5**	**+0.6**
MKAR	**Makanchi Array**	**13.31**	**35**	P	**Pn**	**14 44 31.0**	**-0.9**
	comp=E,0.1nm,0.3s,baz=223,slow=13,SNR=8.6						
	comp=E,0.7nm,0.7s						
MKAR	**Makanchi Array**	**13.31**	**35**	P	**P**	**14 44 37.9**	**0.0**
BHPL	**Bhopal**	**14.13**	**156**	*e*S	Sn	14 47 08.3	-10
WMQ	**Urumqi**	**14.64**	**54**	*e*P	**Pn**	**14 44 48.4**	**-0.8**
WMQ				sP	P	14 45 15.6	+23
WMQ				pmax	pmax		
	comp=Z,13nm,1.3s						
KURBB	**Kurchatov Arra**	**15.21**	**18**	P	**Pn**	**14 44 56.9**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=204,slow=11,SNR=14						
	comp=Z,3.2nm,0.2s						
AB31	**Akbulak array**	**15.30**	**331**	⇑P	**Pn**	**14 44 53.1**	**-4.3**
	comp=Z,0.9nm,0.3s,baz=139,slow=13,SNR=134						
AB31	**Akbulak array**	**15.30**	**331**	P	**Pn**	**14 44 53.1**	**-4.3**
ABKAR	**Akbulak array**	**15.30**	**331**		**Pn**	**14 44 53.0**	**-4.4**
KURK	**Kurchatov**	**15.31**	**18**	P	**P**	**14 44 59.0**	**-1.1**
KURK	**Kurchatov**	**15.31**	**18**	*ce*P	**P**	**14 44 58.7**	**-1.4**
KURK				pmax	pmax		

```
         comp=Z,5.0nm,1.1s
BVA0  Borovoye Array   16.68 358    P       Pn        14 45 12.1  -2.5
         comp=Z,3.5nm,0.7s,baz=151,slow=8.6,SNR=32
BVA0  Borovoye Array   16.68 358    P       Pn        14 45 12.7  -1.9
BVAR  Borovoye Array   16.68 358    P       Pn        14 45 12.5  -2.1
         comp=Z,1.1nm,0.4s,baz=166,slow=10,SNR=12
BVAR                                S       Sn        14 48 11.7  -7.9
         comp=Z,1.3nm,0.8s,baz=168,slow=22,SNR=3.4
BRVK  Borovoye         16.72 358    Pn      Pn        14 45 12.3  -2.7
BRVK  Borovoye         16.72 358ceP         Pn        14 45 12.7  -2.3
BRVK                                pmax    pmax
         comp=Z,3.0nm,0.8s
AKTO  Aktyubinsk       17.00 330    P       Pn        14 45 15.7  -2.8
         comp=Z,8.5nm,0.7s,baz=135,slow=12,SNR=13
AKTO  Aktyubinsk       17.00 330 ⇑P         Pn        14 45 17.2  -1.3
         comp=Z,5.4nm,0.7s
AKTO  Aktyubinsk       17.00 330    P       Pn        14 45 17.2  -1.3
DGZ   Jazzator, Alta   17.79  36 i  P       Pn        14 45 27.5  -0.8
DGZ                                 pmax    pmax
         comp=Z,6.0nm,0.6s
ZAA0  Zalesovo Array   19.98  24    P       P         14 45 51.2  -0.1
ZAA0                                IAmb    IAmb      14 45 52.9
         comp=Z,7.8nm,0.6s
ZALV  Zalesovo Beam    19.98  24    P       P         14 45 50.7  -0.6
         comp=Z,7.2nm,0.5s,baz=226,slow=11,SNR=31
ZALV  Zalesovo Beam    19.98  24    P       P         14 45 49.2  -2.1
ARU   Arti             21.83 341    P       P         14 46 09.6  -1.5
ARU   Arti             21.83 341c iP        P         14 46 13.3  +2.2
ARU                                                   14 46 38.5
ARU                                 S       S         14 50 10.8  +4.5
ARU                                 SS      SnSn      14 50 48.5  +7.8
ARU                                 pmax    pmax
         comp=Z,14nm,1.1s
GTA   Gaotai           22.73  74 eP         P         14 46 23.6  +2.7
GTA                                 pmax    pmax
         comp=Z,5.0nm,1.1s
KBZ   Khabaz           22.83 298 i  P       P         14 46 22.8  +1.3
KBZ                                 pmax    pmax
         comp=Z,2.0nm,1.0s
TNCH  TengChong        25.96 108    P       P         14 46 51.5  +0.9
TNCH                                pmax    pmax
         comp=Z,9.0nm,0.5s
TNCH                                pmax    pmax
         comp=Z,72nm,4.5s
LZH   Lanzhou          26.26  81 ⇑P         P         14 46 58.2  +5.1
LZH                                 pmax    pmax
         comp=Z,12nm,1.5s
ANN   Anapa            26.86 299 eP         P         14 46 55.8  -2.4
ANN                              e*PP       pP        14 47 15.9  -5.4
ANN                              e                    14 47 44.5
ANN                              eS         S         14 51 25.1  -2.2
ANN                                 pmax    pmax
         comp=Z,26nm,0.7s
PZH   PanZhiHua        27.73 102    P       P         14 47 08.8  +2.4
PZH                                 pmax    pmax
         comp=Z,10.0nm,0.5s
PZH                                 pmax    pmax
         comp=Z,100nm,6.3s
SONM  Songino Array    28.27  55    P       P         14 47 14.0  +3.0
         comp=Z,0.5nm,0.7s,baz=252,slow=8.7,SNR=2.7
         comp=Z,0.5nm,0.7s
HHC   Hu-ho-hao-te     31.65  69 eP         P         14 47 41.6  +0.7
HHC                                 pmax    pmax
         comp=Z,16nm,0.8s
HHC                                 AMB     AMB
         comp=Z,160nm,6.0s
AKASG Malin Array Be   33.18 309    P       P         14 47 54.8  +0.9
         comp=Z,0.3nm,0.4s,baz=82,slow=7.3,SNR=5.6
         comp=Z,0.3nm,0.4s
AKASG Malin Array Be   33.18 309ceP         P         14 47 55.5  +1.6
AKASG                               pmax    pmax
         comp=Z,1.0nm,0.4s
AKBB  Malin Array Si   33.18 309    P       P         14 47 55.0  +1.1
AKBB                                IAmb    IAmb      14 48 09.4
         comp=Z,11nm,1.4s
AKBB  Malin Array Si   33.18 309    P       P         14 47 55.0  +1.1
AKBB                                pmax    pmax
         comp=Z,11nm,1.5s
NRIK  Noril'sk         34.24  10    P       P         14 48 05.8  +2.9
         comp=Z,4.8nm,0.7s,baz=201,slow=4.9,SNR=6.8
         comp=Z,4.8nm,0.7s
NRIK  Noril'sk         34.24  10    P       P         14 48 04.9  +1.9
NRIK                                IAmb    IAmb      14 48 06.7
         comp=Z,4.8nm,0.7s
NRIK  Noril'sk         34.24  10ceP         P         14 48 05.7  +2.8
NRIK                                pmax    pmax
         comp=Z,5.0nm,0.8s
MNK   Minsk            34.73 315 i  P       P         14 48 08.8  +1.5
         comp=E,3.0nm,1.0s
MNK                              i  P       P         14 48 08.8  +1.5
         comp=N,45nm,0.9s
MNK                              i  P       P         14 48 08.8  +1.5
         comp=Z,13nm,0.7s,baz=283
MNK                              i  pP      pP        14 48 27.7  -3.4
MNK                              i  PP      PP        14 49 27.2  -0.6
MNK                              i  S       S         14 53 33.4  +3.5
MNK                              i  sS      sS        14 54 06.4  -4.9
MNK                              i  SS      SnSn      14 55 54.8  +1.4
MNK                              i  LR      LR        15 02 02.0
MNK                              i  LRM     MLR       15 03 54.2
         comp=N,194nm,17.4s
MNK                              i  LRM     MLR       15 03 58.7
         comp=E,7.0nm,11.6s
MNK                              i  LRM     MLR       15 04 22.6
         comp=Z,51nm,14.2s
MNK   Minsk            34.73 315 i  P       P         14 48 08.8  +1.5
MNK                              i  *PP     pP        14 48 27.6  -3.4
MNK                              i                    14 49 27.2
MNK                              i                    14 50 41.0
MNK                              i  S       S         14 53 33.4  +3.5
MNK                              i  *SS     sS        14 54 06.4  -4.9
MNK                              i  SS      SnSn      14 55 54.8  +1.4
MNK                              i                    14 58 22.3
MNK                                 pmax    pmax
         comp=Z,13nm,0.7s
MNK                                 pmax    pmax
         comp=E,3.0nm,1.0s
MNK                                 pmax    pmax
         comp=N,45nm,0.9s
MNK                                 MLR     MLR
         comp=N,194nm,17.0s
MNK                                 MLR     MLR
         comp=E,7.0nm,12.0s
MNK                                 MLR     MLR
         comp=Z,51nm,14.0s
FIA1  FINESS Array S   37.70 326    P       P         14 48 34.0  +1.5
FINES FINESS Array B   37.70 326    P       P         14 48 34.6  +2.0
         comp=Z,2.3nm,0.6s,baz=125,slow=9.2,SNR=6.7
         comp=Z,2.3nm,0.6s
ARCES ARCESS Array B   41.35 338    P       P         14 49 04.7  +1.9
         comp=Z,3.4nm,0.7s,baz=108,slow=8.0,SNR=8.6
         comp=Z,3.4nm,0.7s
ARCES ARCESS Array B   41.35 338    P       P         14 49 04.5  +1.8
ARCES                               IAmb    IAmb      14 49 21.1
         comp=Z,14nm,1.3s
ARCES ARCESS Array B   41.35 338    P       P         14 49 04.5  +1.8
ARCES                               pmax    pmax
         comp=Z,14nm,1.3s
HFS   Hagfors          43.29 322    P       P         14 49 20.0  +1.4
         comp=Z,2.2nm,0.5s,baz=97,slow=12,SNR=8.0
         comp=Z,2.2nm,0.5s
HFS   Hagfors          43.29 322    P       P         14 49 20.0  +1.4
NC303 NORSAR Array S   44.55 323    P       P         14 49 30.3  +1.7
NB201 NORSAR Array S   44.57 323    P       P         14 49 30.1  +1.3
NB2   NORSAR Subarra   44.60 323    P       P         14 49 30.1  +1.0
         comp=Z,2.0nm,0.6s,baz=95,slow=7.9
NOA   NORSAR Array B   44.60 323    P       P         14 49 30.2  +1.1
         comp=Z,1.8nm,0.6s,baz=96,slow=7.7,SNR=8.6
         comp=Z,1.8nm,0.6s
KSRS  Korea Array      44.76  71    P       P         14 49 32.6  +2.0
         comp=Z,0.9nm,0.7s,baz=273,slow=6.7,SNR=4.6
         comp=Z,0.9nm,0.7s
NBO00 NORSAR Array S   44.82 323    P       P         14 49 31.8  +1.0
NC204 NORSAR Array S   44.84 323    P       P         14 49 32.2  +1.2
TIXI  Tiksi            45.84  22    P       P         14 49 39.5  +0.8
         comp=Z,1.4nm,0.3s,baz=90,slow=23,SNR=6.1
         comp=Z,1.4nm,0.3s
TIXI  Tiksi            45.84  22    P       P         14 49 39.9  +1.2
TIXI                                IAmb    IAmb      14 50 11.6
         comp=Z,5.9nm,1.5s
TIXI  Tiksi            45.84  22    P       P         14 49 39.9  +1.2
TIXI                                pmax    pmax
         comp=Z,6.0nm,1.5s
TORD  Torodi Ar. Bea   65.89 269    P       P         14 52 01.3  -1.2
         comp=Z,0.7nm,0.6s,baz=42,slow=4.8,SNR=5.4
         comp=Z,0.7nm,0.6s
A36M  Sachs Harbour    71.34   5    P       P         14 52 37.4  +2.0
A36M                                IAmb    IAmb      14 53 09.6
         comp=Z,4.9nm,1.1s
IMAR  Indian Mountai   72.26  18    P       P         14 52 41.7  +0.6
BMAR  Burnt Mountain   73.04  14    P       P         14 52 47.5  +1.7
MLY   Manley           73.77  17    P       P         14 52 51.5  +1.4
C36M  Paulatuk         74.01   6    P       P         14 52 51.9  +0.6
INK   Inuvik           74.02   9    P       P         14 52 52.9  +1.5
         comp=Z,0.8nm,0.5s,baz=347,slow=8.0,SNR=7.6
         comp=Z,0.8nm,0.5s
INK   Inuvik           74.02   9    P       P         14 52 52.6  +1.2
INK   Inuvik           74.02   9    P       P         14 52 52.6  +1.2
INK                                 pmax    pmax
         comp=Z,3.0nm,1.5s
K20K  Telida           74.29  19    P       P         14 52 54.4  +1.2
K20K                                IAmb    IAmb      14 53 00.8
         comp=Z,9.3nm,1.5s
BPAW  Bear Paw Mtn.    74.48  18    P       P         14 52 54.8  +0.6
BPAW                                IAmb    IAmb      14 53 33.5
         comp=Z,5.4nm,1.3s
NEA2  Nenana           74.53  17    P       P         14 52 55.1  +0.6
NEA2                                IAmb    IAmb      14 52 56.7
         comp=Z,3.4nm,0.9s
LBTB  Lobatse          74.69 222    P       P         14 52 56.9  +0.9
LBTB                                IAmb    IAmb      14 53 12.3
         comp=Z,7.4nm,1.1s
LBTB  Lobatse          74.69 222    P       P         14 52 56.9  +0.9
LBTB                                pmax    pmax
         comp=Z,7.0nm,1.1s
CAST  Castle Rocks     74.77  19    P       P         14 52 57.0  +1.2
CAST                                IAmb    IAmb      14 53 34.1
         comp=Z,5.4nm,1.4s
ILAR  Eielson Array    74.87  16    P       P         14 52 56.8  +0.4
         comp=Z,0.3nm,0.7s,baz=327,slow=6.5,SNR=4.6
         comp=Z,0.3nm,0.7s
KTH   Kantishna Hill   74.95  18    P       P         14 52 57.9  +0.9
KTH                                 IAmb    IAmb      14 53 28.3
         comp=Z,6.0nm,1.4s
PPLA  Purkeypile       75.17  19    P       P         14 52 59.3  +0.9
PPLA                                IAmb    IAmb      14 53 32.6
         comp=Z,9.6nm,1.4s
MCK   McKinley         75.29  17    P       P         14 52 58.6  -0.2
MCK                                 IAmb    IAmb      14 52 59.9
         comp=Z,7.1nm,1.4s
MCK   McKinley         75.29  17    P       P         14 52 58.6  -0.2
MCK                                 pmax    pmax
         comp=Z,7.0nm,1.4s
DAWY  Dawson           77.02  13    P       P         14 53 09.1  +0.3
SML   Sawmill          77.07  18    P       P         14 53 09.8  +0.8
SML   Sawmill          77.07  18    P       P         14 53 09.8  +0.8
SML                                 pmax    pmax
         comp=Z,18nm,1.4s
SCM   Sheep Creek Mo   77.30  18    P       P         14 53 10.9  +0.6
SCM   Sheep Creek Mo   77.30  18    P       P         14 53 10.9  +0.6
SCM                                 pmax    pmax
         comp=Z,18nm,1.3s
M24K  Tolsona, Glenn   77.34  17    P       P         14 53 11.9  +1.4
L27K  Beaver Creek,    77.45  15    P       P         14 53 12.6  +1.4
BCAR  Beaver Creek A   77.46  15    P       P         14 53 12.5  +1.3
YKA   Yellowknife Ar   81.38   3    P       P         14 53 33.5  +1.2
         comp=Z,1.3nm,0.6s,baz=350,slow=5.1,SNR=29
         comp=Z,1.3nm,0.6s
WRA   Warramunga Arr   81.76 122    P       P         14 53 34.7  -0.3
         comp=Z,0.4nm,0.7s,baz=323,slow=5.1,SNR=4.7
         comp=Z,0.4nm,0.7s
WRA   Warramunga Arr   81.76 122 i  P       P         14 53 37.9  +2.9
P33M  Teslin, Yukon    81.77  12    P       P         14 53 35.9  +1.3
P33M                                IAmb    IAmb      14 53 53.4
         comp=Z,6.8nm,1.5s
ASAR  Alice Springs    84.02 125    P       P         14 53 46.4  -0.2
         comp=Z,0.2nm,0.6s,baz=311,slow=4.9,SNR=6.5
         comp=Z,0.2nm,0.6s
```

NNC 05 14:48:19.7±3.1, 36°.87N×70°.30E, h0^{km}, mb3.6, mpv3.2, 1C-4D, Error ellipse: s-maj=37.4km s-min=22.3km az=130.0, Hindu Kush region

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Code  Station Name       Δ°   AZ°    Phase ID          Time     Res
                                    Op      ISC       h  m  s   ISC
AML   Almayashu         5.87  25 ⇓P         Pn        14 49 48.7  +0.3
         0.3nm,0.3s
AML                              ⇓S         Sn        14 50 57.7  +1.1
         0.7nm,0.4s
KK31  Karatay Array     6.23   1    P       Pn        14 49 53.5  +0.5
         0.4nm,0.2s,baz=178,slow=10,SNR=22
KK31                             ⇑S         Sn        14 51 04.9  +0.1
         0.3nm,0.2s,baz=193,slow=21,SNR=3.9
TKM2  Tokmak 2          7.29  32 ⇓P         Pn        14 50 06.6  -1.0
         3.4nm,0.5s
TKM2                             ⇓S         Sn        14 51 32.9  +1.8
         1.0nm,0.6s
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*IDC **05** 14:58:19.8±1.9, 6°.90S×128°.92E, h0^{km}, mb4.0/1, mbtmp3.9/3, ML3.9/2, Error ellipse: s-maj=113.3km s-min=30.6km az=67.0*

*NEIC **05** 14:58:34.2±1.5, 6°.84S±0°.10×129°.8E±0°.1, h160^{km}±13^{km}, mb4.4/3, Error ellipse: s-maj=21.8km s-min=11.5km az=116.0*

ISC 05 14:58:34.0±0.9**, 6°.97S**±0°.09×**129°.83E**±0°.09**, h150^{km}, n28,** σ1^{s}.**50**/29**, mb4.5**/3**, Banda Sea**

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Code  Station Name       Δ°   AZ°    Phase ID          Time     Res
                                    Op      ISC       h  m  s   ISC
SAUI  Saumlaki          1.77 125            Pn        14 59 08.3  +1.8
SAUI  Saumlaki          1.77 125    P       Pn        14 59 09.0  +2.5
FAKI  Fak Fak           4.69  31            Pn        14 59 42.0  -1.4
MTN   Manton Dam        5.98 168            Pn        15 00 00.5  +0.1
MTN   Manton Dam        5.98 168    P       Pn        15 00 00.7  +0.3
SOEI  Soe               6.16 243            Pn        15 00 03.1  +0.1
SOEI  Soe               6.16 243    P       Pn        15 00 04.4  +1.4
KDU   Kakadu            6.25 156    P       Pn        15 00 03.9  -0.2
KNRA  Kununurra         8.72 187    Pn      Pn        15 00 35.9  -1.1
KNRA  Kununurra         8.72 187    P       Pn        15 00 35.7  -1.3
FITZ  Fitzroy Crossi   11.79 200    Pn      Pn        15 01 15.7  -1.9
FITZ  Fitzroy Crossi   11.79 200    P       Pn        15 01 17.7  +0.1
PLAI  Plampang         12.08 260    P       Pn        15 01 22.2  +0.7
WB0   Warramunga Arr   13.47 161    Pn      Pn        15 01 37.0  -2.3
WRA   Warramunga Arr   13.62 162    Pn      Pn        15 01 38.2  -3.0
         0.6nm,0.3s,baz=337,slow=13,SNR=13
WRA                                 Sn      Sn        15 04 02.5  -10
         0.7nm,0.3s,baz=334,slow=22,SNR=9.1
         0.7nm,0.3s
WB2   Warramunga Arr   13.62 162    Pn      Pn        15 01 38.8  -2.4
WR0   Warramunga Arr   13.70 161    Pn      Pn        15 01 40.2  -2.0
COEN  Coen             14.84 119            P         15 01 60.0  +1.4
QIS   Mount Isa        16.50 146    P       Pn        15 02 17.7  +0.8
AS31  Alice Springs    17.06 167    P       Pn        15 02 24.2  +0.5
AS31                                IAmb    IAmb      15 02 24.9
         comp=Z,1.1nm,0.6s
ASAR  Alice Springs    17.06 167    P       Pn        15 02 24.4  +0.7
         comp=Z,0.4nm,0.3s,baz=341,slow=11,SNR=63
ASAR                                S       S         15 05 30.8  -2.5
         comp=Z,0.2nm,0.5s,baz=261,slow=30,SNR=3.7
         comp=Z,1.6nm,0.5s
ASAR  Alice Springs    17.06 167            P         15 02 24.0  +1.0
AS01  Alice Springs    17.07 167    P       Pn        15 02 24.6  +0.8
WRKA  Warakurna        18.03 185    P       P         15 02 35.2  +1.5
OOD   Oodnadatta       21.44 166    P       P         15 03 10.8  +0.4
WHZ   Wether Hill Ro   50.82 146    P       P         15 07 18.5  -0.7
WHZ                                 IAmb    IAmb      15 07 29.1
         comp=Z,54nm,1.5s
RTZ   Ruatahuna        52.86 134    P       P         15 07 34.0  -0.4
RTZ                                 IAmb    IAmb      15 07 51.8
         comp=Z,13nm,1.4s
MKAR  Makanchi Array   68.11 327    P       P         15 09 18.1  +0.4
         comp=Z,0.8nm,0.5s,baz=122,slow=7.5,SNR=12
         comp=Z,0.8nm,0.5s
```

MAN 05 15:11:55.9, 4°.46N×126°.02E, h4^{km}, mb4.1, ML2.9, MS2.6, Talaud Islands

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IDC 05 15:16:01.8±2.0**, 6°.03S×147°.29E, h0^{km}, mb3.1**/1**, mbtmp3.4**/4**, ML3.4**/2**, MS2.7**/1**, Error ellipse: s-maj=45.5km s-min=27.8km az=124.0, Eastern New Guinea region**

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Code  Station Name       Δ°   AZ°    Phase ID          Time     Res
                                    Op      ISC       h  m  s   ISC
PMG   Port Moresby      3.35 182    Pn      Pn        15 16 56.5  +1.0
         10nm,0.4s,baz=339,slow=5.9,SNR=13
PMG                                 Sn      Sn        15 17 35.6  -0.4
         4.3nm,0.3s,baz=175,slow=20,SNR=9.2
PMG                                 LR      LR        15 18 23.1
         comp=Z,108nm,18.4s,baz=326,slow=42
KRVT  Keravat (AS076    5.02  70    Pn      Pn        15 17 18.7  +0.2
         1.5nm,0.3s,baz=123,slow=16,SNR=1.8
         9.0nm,0.5s
WRA   Warramunga Arr   18.70 221    P       P         15 20 21.8  -0.1
         0.1nm,0.3s,baz=46,slow=12,SNR=5.7
         0.5nm,0.6s
ASAR  Alice Springs    21.75 215    P       P         15 20 55.5  +0.3
         0.4nm,0.4s,baz=56,slow=7.9,SNR=26
         0.4nm,0.4s
TORD  Torodi Ar. Bea  145.38 284    PKPbc   PKPbc     15 35 41.3  -1.4
         0.4nm,0.4s,baz=76,slow=3.3,SNR=3.2
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*IDC **05** 15:19:14.9±1.0, 55°.17N×164°.90E, h0^{km}, mb3.5/7, mbtmp3.4/8, ML2.8/1, MS2.8/2, Error ellipse: s-maj=49.3km s-min=19.0km az=154.0*

*KRSC **05** 15:19:15.4±1.6, 55°.12N×164°.82E, h52^{km}±24^{km}, Ml4.1*

ISC 05 15:19:16.4±1.6**, 55°.21N**±0°.04×**164°.72E**±0°.05**, h12^{km}**±12^{km}**, n44,** σ1^{s}.**54**/62**, mb3.4**/7**, Komandorsky Islands region**

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Code  Station Name       Δ°   AZ°    Phase ID          Time     Res
                                    Op      ISC       h  m  s   ISC
BKI   Bering            0.72  90 eP         Pg        15 19 30.1  -0.2
BKI                              eS         Sg        15 19 39.7   0.0
KBTR  Krutoberegovo     1.47 314 eP         Pn        15 19 41.7  -1.0
KBTR                             eS         Sn        15 20 00.2  -1.7
KBG   Krutoberegovo     1.55 313 eP         Pn        15 19 42.8  -0.9
KBG                              eS         Sn        15 20 02.5  -1.2
SMKR  Semkarok          2.29 308 eP         Pn        15 19 55.2  +1.2
SMKR                             eS         Sb        15 20 24.5  -1.5
BZGR  Bezymyannyi-Gr    2.40 289 eP         Pn        15 19 57.3  +1.8
BZGR                             eS         Sb        15 20 27.8  -1.3
SRKR  Sorokina          2.47 307 eP         Pn        15 19 58.2  +1.7
SRKR                             eS         Sb        15 20 29.5  -1.6
TUMD  Tumrok D          2.48 272 eP         Pn        15 19 57.4  +0.8
TUMD                             eS         Sn        15 20 27.4  +0.8
KLY   Klyuchi           2.55 297 eP         Pn        15 19 57.8  +0.2
KLY                              eS         Sn        15 20 28.1  -0.4
KIRR  Kirishev          2.59 289 eP         Pn        15 19 59.9  +1.7
KIRR                             eS         Sb        15 20 32.9  -1.9
KMNR  Kamenistaya       2.61 284 eP         Pn        15 20 00.5  +2.0
KMNR                             eS         Sb        15 20 33.3  -1.9
KPT   Kopyto            2.66 288 eP         Pn        15 20 01.1  +1.9
KOZ   Kozyrevsk         2.88 289 eP         Pn        15 20 04.6  +2.5
SRDR  Sredinnyy         3.04 294 eP         Pn        15 20 06.8  +2.5
SRDR                             eS         Sb        15 20 44.5  -2.9
SPN   Mys Shipunski     3.48 234 eP         Pn        15 20 09.9  -0.4
ESO   Esso              3.49 284 eP         Pn        15 20 13.5  +3.0
ESO                              eS         Sn        15 20 54.3  +2.5
SDLR  Sedlovina         3.93 243 eP         Pn        15 20 17.7  +1.0
SDLR                             eS         Sn        15 21 01.6  -1.1
SMAR  Somma             3.98 243 eP         Pn        15 20 18.4  +1.0
SMAR                             eS         Sn        15 21 02.6  -1.4
KRER  Koryakskii        3.99 244 eP         Pn        15 20 18.7  +1.3
KRER                             eS         Sn        15 21 03.0  -1.2
UGLR  Uglovaya          4.00 242 eP         Pn        15 20 18.8  +1.3
UGLR                             eS         Sn        15 21 03.0  -1.3
KRX   Arik              4.01 245 eP         Pn        15 20 19.1  +1.3
KRX                              eS         Sn        15 21 03.4  -1.3
AVH   Avacha            4.01 243 eP         Pn        15 20 19.0  +1.3
AVH                              eS         Sn        15 21 03.8  -0.9
KOK   Koryaka           4.05 244 eP         Pn        15 20 19.5  +1.3
KOK                              eS         Sn        15 21 04.7  -1.0
DALK  Dalny             4.13 241 eP         Pn        15 20 19.7  +0.4
DALK                             eS         Sn        15 21 04.7  -2.8
OSSR  Ossora            4.15 348 eP         Pn        15 20 20.4  +0.9
OSSR                             eS         Sn        15 21 06.2  -1.7
PET   Petropavlovsk     4.19 241 eP         Pn        15 20 20.8  +0.8
PET                              eS         Sn        15 21 06.3  -2.5
GNL   Ganaly            4.24 252 eP         Pn        15 20 22.4  +1.6
KRMR  Karymshinskiy     4.56 241 eP         Pn        15 20 26.2  +1.1
KRMR                             eS         Sn        15 21 15.5  -2.4
PETK  Petropavlovsk-    4.63 246    Pn      Pn        15 20 27.2  +1.0
         1.9nm,0.3s,baz=77,slow=17,SNR=45
PETK                                Sn      Sn        15 21 18.8  -1.0
         1.1nm,0.3s,baz=296,slow=30,SNR=1.8
PETK                                LR      LR        15 22 32.7
         comp=Z,117nm,19.1s,baz=36,slow=42
         1.7nm,0.3s
GRL   Gorelyy           4.75 239 eP         Pn        15 20 28.8  +1.0
GRL                              eS         Sn        15 21 21.0  -1.8
APC   Apacha            5.01 246 eP         Pn        15 20 33.0  +1.8
MA2   Magadan           8.71 306    LR      LR        15 24 44.2
         comp=Z,50nm,18.3s,baz=4.0,slow=37
ILAR  Eielson Array    25.38  48    P       P         15 24 42.7  -0.4
         0.6nm,0.7s,baz=259,slow=9.0,SNR=9.1
         0.6nm,0.7s
H11N2 WAKE ISLAND Hy   35.46 176    T       T         16 04 04.9
         baz=359,slow=76,SNR=23
H11N3 WAKE ISLAND Hy   35.47 176    T       T         16 04 08.7
         baz=359,slow=76,SNR=13
H11N1 WAKE ISLAND Hy   35.48 176    T       T         16 04 03.2
         baz=359,slow=76,SNR=14
H11S1 WAKE ISLAND Hy   36.67 177    T       T         16 05 37.8
         baz=359
H11S3 WAKE ISLAND Hy   36.68 177    T       T         16 05 37.1
         baz=359
H11S2 WAKE ISLAND Hy   36.68 177    T       T         16 05 35.4
         baz=359
YKA   Yellowknife Ar   39.75  46    P       P         15 26 48.5  +0.1
         0.2nm,0.6s,baz=297,slow=7.6,SNR=3.4
         0.2nm,0.6s
MKAR  Makanchi Array   49.66 297    P       P         15 28 08.2  +0.6
         0.2nm,0.6s,baz=58,slow=6.7,SNR=2.7
         0.2nm,0.6s
PDAR  Pinedale Array   54.14  65    P       P         15 28 40.9  -0.4
         0.3nm,0.7s,baz=337,slow=5.9,SNR=2.9
         0.3nm,0.7s
CMAR  Chiang Mai Arr   61.24 261    P       P         15 29 33.1  +1.8
         0.2nm,0.3s,baz=40,slow=7.1,SNR=1.5
         0.2nm,0.3s
TXAR  Lajitas Array    67.34  71    P       P         15 30 11.4  +0.1
         0.4nm,0.7s,baz=319,slow=5.5,SNR=6.7
         0.4nm,0.7s
ASAR  Alice Springs    82.86 208    P       P         15 31 40.8  +0.3
         1.0nm,0.9s,baz=15,slow=5.8,SNR=8.5
         1.0nm,0.9s
```

WEL 05 15:22:18.4±0.4**, 43°S**±3°×**17°3E**±°**, h8^{km}**±2^{km}**, M3.4**/18**, ML3.6**/18**, MLv3.4**/18**, Error ellipse: s-maj=0.0km s-min=0.0km az=131.3, confirmed, South Island**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time     Res
                                    Op      ISC       h  m  s   ISC
GVZ   Greta Valley S    0.06 275    P       Pg        15 22 20.6  +0.3
GVZ                                 S       Sg        15 22 22.2  +0.6
AMCZ  Amberley          0.39 239    P       Pb        15 22 27.7  +0.1
KHZ   Kahutara          0.64  30    P       Pb        15 22 31.4  -0.3
KHZ                                 S       Sb        15 22 40.5  -0.2
LTZ   Lake Taylor       0.65 287    P       Pb        15 22 31.5  -0.4
LTZ                                 S       Sb        15 22 40.6  -0.5
MQZ   McQueen's Vall    0.81 204    P       Pg        15 22 33.9   0.0
MQZ                                 S       Sb        15 22 46.3  +0.7
OXZ   Oxford            0.86 245    P       Pb        15 22 35.4  -0.2
OXZ                                 S       Sb        15 22 47.8  +0.6
AKCZ  Akaroa Harbour    0.91 189    P       Pg        15 22 35.9   0.0
RACZ  Rakaia            1.04 223    P       Pg        15 22 37.6  -0.7
THZ   Tophouse          1.22 353    P       Pb        15 22 41.0  -0.7
THZ                                 S       Sb        15 22 57.2  -0.3
INZ   Inchbonnie        1.25 281    P       Pn        15 22 41.6  -0.5
WACZ  Wakanui South     1.34 223    P       Pn        15 22 41.9  -1.4
BSWZ  Blackbirch Sta    1.38  24    P       Pn        15 22 43.6  -0.2
CMWZ  Cape Campbell     1.47  34    P       Pn        15 22 45.2  +0.1
DSZ   Denniston Nort    1.56 321    P       Pn        15 22 46.1  -0.3
MRNZ  Matariki Terra    1.59 350    P       Pn        15 22 47.1  +0.3
TUWZ  Tuamarina         1.66  22    P       Pn        15 22 47.2  -0.5
RPZ   Rata Peaks        1.68 243    P       Pn        15 22 46.8  -1.2
ARCZ  Arundel           1.71 235    P       Pn        15 22 47.2  -1.3
WVZ   Waitaha Valley    1.75 266    P       Pn        15 22 49.0  +0.1
NNZ   Nelson            1.77   7    P       Pn        15 22 49.2   0.0
TKNZ  Takaka Hill       1.94 357    P       Pn        15 22 52.2  +0.6
TCW   Tory Channel      1.96  27    P       Pn        15 22 50.9  -1.0
GCSZ  Gaunt Creek Bo    2.07 259    P       Pn        15 22 53.2  -0.1
TMZ   Timaru            2.08 227    P       Pn        15 22 52.3  -1.2
PLWZ  Palliser          2.12  49    P       Pn        15 22 52.5  -1.6
QRZ   Quartz Range      2.19 348    P       Pn        15 22 55.3  +0.3
DUWZ  D'Urville Isla    2.25  16    P       Pn        15 22 55.6  -0.3
CAW   Cannon Point      2.37  39    P       Pn        15 22 56.1  -1.3
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FOZ	Fox Glacier	2.47	256	P	Pn	15 22 59.1	+0.3
TRWZ	Traveller	2.48	51	P	Pn	15 22 57.2	-1.7
MTW	Mount Morrison	2.54	45	P	Pn	15 22 57.9	-1.9
LBZ	Lake Benmore	2.55	235	P	Pn	15 22 59.1	-0.9
OGWZ	Otaki Gorge	2.65	36	P	Pn	15 22 59.9	-1.4
ODZ	Otahua Downs	2.73	220	P	Pn	15 23 01.1	-1.3
HOWZ	Holdsworth Sta	2.74	42	P	Pn	15 23 01.7	-0.9
TMWZ	Te Maipa	2.79	49	P	Pg	15 23 20.8	+9.1
MRZ	Mangatainoka R	2.96	39	P	Pn	15 23 03.6	-1.9
BFZ	Birch Farm	3.27	47	P	Pn	15 23 09.8	-0.1
JCZ	Jackson Bay	3.33	249	P	Pn	15 23 10.3	-0.5
HHSZ	Highcliff Hill	3.42	211	P	Pn	15 23 09.9	-2.0
WKZ	Wanaka	3.49	237	P	Pn	15 23 11.9	-1.0
WAZ	Wanganui	3.51	24	P	Pn	15 23 10.5	-2.7
EAZ	Earnscleugh	3.55	229	P	Pn	15 23 12.3	-1.4
TSZ	Takapari Road	3.61	37	P	Pn	15 23 12.6	-2.0
PREZ	Palmer Road	3.71	13	P	Pn	15 23 15.9	-0.1
KHEZ	Kahui Hut	3.74	11	P	Pn	15 23 17.5	+1.1
NBEZ	Newall Road No	3.75	9	P	Pn	15 23 17.7	+1.3
NEZ	North Egmont	3.77	12	P	Pn	15 23 16.7	-0.2
WPHZ	Waipukurau	3.83	42	P	Pn	15 23 18.8	+1.2
PKE	Pukeiti	3.83	10	P	Pn	15 23 17.9	+0.3
PNHZ	Pukenui	3.84	38	P	Pn	15 23 15.3	-2.4
DREZ	Durham Road	3.87	13	P	Pn	15 23 18.4	+0.3
TRVZ	Turoa	4.11	27	P	Pn	15 23 18.7	-2.9
TRVZ	Turoa	4.11	27	S	Pn	15 23 18.7	-2.9
WHVZ	Whangaehu Hut	4.13	28	P	Pn	15 23 19.1	-2.9
NGZ	Ngauruhoe	4.23	27	P	Pn	15 23 20.2	-3.1
NGZ	Ngauruhoe	4.23	27	S	Pn	15 23 20.1	-3.1
WTVZ	West Tongariro	4.29	27	P	Pn	15 23 20.5	-3.4
MLZ	Mavora Lakes	4.32	235	P	Pn	15 23 22.5	-1.7
SYZ	Scrubby Hill	4.55	217	P	Pn	15 23 26.7	-0.7
TOZ	Tahuroa Road	5.54	20	P	Pn	15 23 40.7	-0.4
AWAZ	Awhitu Peninsu	6.02	12	P	Pn	15 23 48.0	+0.4
MKAZ	Moumakai	6.07	16	P	Pn	15 23 48.0	-0.3
ETAZ	East Tamaki Re	6.17	14	P	Pn	15 23 49.8	+0.1
MBAZ	Motutapu North	6.35	13	P	Pn	15 23 52.4	+0.3

WEL 05 15:22:58.3±0.8**,39°S**±5°×**17°5E**±°**,h59**km±5km**,M1.7**/13**,**
ML2.0/17**,MLv1.7**/13**,Error ellipse: s-maj=0.0km**
s-min=0.0km az=164.9,confirmed,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PKVZ	Pokaka	0.19	26	P	Pn	15 23 09.2	+1.6
MTVZ	Mangateitei	0.20	67	P	Pn	15 23 09.2	+1.6
MTVZ				S	Sn	15 23 18.2	+3.8
TRVZ	Turoa	0.29	56	P	Pn	15 23 08.2	-0.2
WNVZ	Wahianoa	0.31	64	P	Pn	15 23 09.8	+1.3
WNVZ				S	Sn	15 23 19.0	+3.1
WAZ	Wanganui	0.35	214	S	Sn	15 23 20.3	+4.1
TUVZ	Tukino	0.38	59	P	Pn	15 23 10.4	+1.3
TUVZ				S	Sn	15 23 20.1	+3.2
MOVZ	Moawhango	0.40	82	P	Pn	15 23 10.0	+0.7
MOVZ				S	Sn	15 23 19.1	+2.0
NGZ	Ngauruhoe	0.40	45	P	Pn	15 23 10.7	+1.4
SNVZ	South Ngauruho	0.42	49	P	Pn	15 23 11.0	+1.5
SNVZ				S	Sn	15 23 20.6	+3.0
TWVZ	Taurewa	0.42	22	P	Pn	15 23 10.4	+1.0
TWVZ				S	Sn	15 23 20.0	+2.5
NNVZ	North Ngauruho	0.44	42	P	Pn	15 23 11.6	+1.9
NNVZ				S	Sn	15 23 20.9	+2.9
ETVZ	East Tongariro	0.49	48	P	Pn	15 23 11.3	+1.1
ETVZ				S	Sn	15 23 21.9	+3.1
NTVZ	North Tongarir	0.50	43	P	Pn	15 23 11.5	+1.2
TMVZ	Te Maari	0.50	46	P	Pn	15 23 11.5	+1.2
TMVZ				S	Sn	15 23 21.6	+2.6
VRZ	Vera Road	0.50	312	P	Pn	15 23 11.4	+1.3
VRZ				S	Sn	15 23 21.1	+2.4
BHHZ	Black Hill Sta	0.64	93	P	Pn	15 23 11.7	-0.1
BHHZ				S	Sn	15 23 22.3	+0.7
HIZ	Hauiti	0.99	342	P	Pn	15 23 16.7	+0.5
BKZ	Black Stump Fm	1.02	73	P	Pn	15 23 16.2	-0.4
TLZ	Tolley Road	1.16	12	P	Pn	15 23 18.3	0.0
TLZ				S	Sn	15 23 33.3	0.0
NMHZ	Naumai	1.27	74	P	Pn	15 23 21.8	+1.9
MTHZ	Maungataniwha	1.39	64	P	Pn	15 23 21.0	-0.5
MUGZ	Murupara	1.55	51	P	Pn	15 23 25.1	+1.6

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*IDC **05** 15:24:33.9±1.0,5°.73N×94°.80E,h0km,mb3.9/10,*
mbtmp3.9/11,ML3.7/1,Error ellipse: s-maj=47.6km
s-min=16.5km az=52.0
*NEIC **05** 15:24:43.8±1.3,5°.42N±0°.07×94°.75E±0°.08,h61km±8km,*
mb4.4/23,Error ellipse: s-maj=12.5km s-min=9.4km
az=67.0
ISC 05 15:24:37.9±0.6**,5°.45N**±0°.07×**94°.28E**±0°.07**,h35**km**,n57,**
σ1§79/50**,mb4.2**/22**,1C,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.66	95		Pn	15 25 17.2	-1.1
LHMI	Lhok Sumawe	2.66	95	P	Pn	15 25 20.7	+2.4
GSI	Gunungsitoli	5.27	141	Pn	Pn	15 25 55.9	+1.7
RPSI	Rantau Prapat	5.38	120	Pn	Pn	15 25 58.2	+2.6
SRIT	Nakonsritamara	6.13	59	Pn	Pn	15 26 06.8	+0.7
KULM	Kulim	6.34	91		Pn	15 26 10.1	+1.2
PBA	Port Blair	6.35	346	Pn	Pn	15 26 17.2	+8.1
SURA	Surathani	6.46	55	P	Pn	15 26 11.6	+1.0
SKLT	Songkhla	6.53	74	P	Pn	15 26 12.6	+1.2
IPM	Ipoh	6.79	98	Pn	Pn	15 26 15.8	+0.8
IPM	Ipoh	6.79	98	P	Pn	15 26 16.0	+1.0
MYKOM	Kota Tinggi	10.21	110	Pn	Pn	15 27 02.3	+0.2
MNAI	Manna	13.04	138	Pn	Pn	15 27 41.5	+0.8
PALK	Pallekele	13.62	278	Pn	P	15 27 55.1	-2.0
	0.3nm,0.3s,baz=244,slow=12,SNR=1.4						
PALK				Sn	Sn	15 30 16.7	-2.3
	0.9nm,0.3s,baz=234,slow=13,SNR=10						
	4.0nm,1.1s						
PALK	Pallekele	13.62	278	Pn	P	15 27 58.4	+1.3
CM31	Chiang Mai Arr	13.71	19	Pn	P	15 27 54.3	-3.7
CHTO	Chiang Mai	14.04	18	Pn	Pn	15 27 58.0	+3.6
PHRA	Phrae	14.21	24		P	15 28 03.7	+0.1
CRAI	Chiangrai	15.84	21		P	15 28 22.4	+0.6
TNCH	TengChong	19.89	11	⇑P	P	15 29 02.6	-4.0
TNCH				S	S	15 32 35.8	-13
TNCH				sS	Sn	15 32 49.3	-1.8
TNCH				pmax	pmax		
	comp=Z,15nm,0.4s						
TNCH				pmax	pmax		
	comp=Z,110nm,5.5s						
TNCH				LR	LR		
	comp=N,140nm,5.1s						
TNCH				LR	LR		
	comp=E,120nm,3.7s						
PZH	PanZhiHua	22.11	18	P	P	15 29 26.3	-4.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,90nm,6.1s						
MYLDM	Lahad Datu	24.11	89	P	P	15 29 50.2	-0.4
MYLDM				IAmb	IAmb	15 30 16.7	
	comp=Z,27nm,1.2s						
H08S3	Diego Garcia H	25.33	239	T	T	15 55 34.0	
	baz=59,slow=76,SNR=124						
H08S2	Diego Garcia H	25.34	239	T	T	15 55 34.8	
	baz=59,slow=76,SNR=99						
H08S1	Diego Carcia H	25.35	239	T	T	15 55 36.1	
	baz=59,slow=76,SNR=58						
LUWI	Luwuk	29.17	102	P	P	15 30 37.1	+0.9
LUWI				IAmb	IAmb	15 31 02.1	
	comp=Z,31nm,1.4s						
FITZ	Fitzroy Crossi	38.79	128	P	P	15 31 58.4	-1.1
FAKI	Fak Fak	38.82	101	P	P	15 31 57.8	-2.1
FAKI				IAmb	IAmb	15 32 25.3	
	comp=Z,20nm,1.1s						
GAR	Garm	39.83	330	P	P	15 32 12.6	+4.5
GAR				IAmb	IAmb	15 32 40.3	
	comp=Z,7.5nm,1.4s						
KNRA	Kununurra	40.08	122	P	P	15 32 11.5	+1.3
MTN	Manton Dam	40.87	117	P	P	15 32 14.6	-2.3
AAK	Ala-Archa	40.98	338	P	P	15 32 19.9	+2.2
	comp=Z,1.4nm,0.8s,baz=103,slow=6.1,SNR=5.6						
	comp=Z,1.4nm,0.8s						
AAK	Ala-Archa	40.98	338	P	P	15 32 20.9	+3.3
MK31	Makanchi Array	42.47	348	P	P	15 32 29.5	-0.1
MKAR	Makanchi Array	42.47	348	P	P	15 32 29.4	-0.2
	comp=Z,0.8nm,0.7s,baz=166,slow=7.8,SNR=12						
	comp=Z,0.8nm,0.7s						
MKAR	Makanchi Array	42.47	348	P	P	15 32 29.2	-0.4
KKAR	Karatay Array	42.99	334	P	P	15 32 38.2	+4.3
KKAR				IAmb	IAmb	15 32 58.1	
	comp=Z,2.8nm,1.5s						
TJN	Taejon	43.20	40	P	P	15 32 33.7	-1.9
INCN	Inchon	43.43	38	P	P	15 32 37.8	+0.3
INCN				IAmb	IAmb	15 32 38.4	
	comp=Z,45nm,1.2s						
SONM	Songino Array	43.49	12	P	P	15 32 35.8	-2.1
	comp=Z,0.9nm,0.8s,baz=197,slow=8.6,SNR=3.2						
	comp=Z,0.9nm,0.8s						
WB0	Warramunga Arr	46.73	124	P	P	15 33 03.0	-1.0
WB0				IAmb	IAmb	15 33 37.5	
	comp=Z,4.5nm,1.4s						
WRA	Warramunga Arr	46.77	124	P	P	15 33 03.6	-0.7
	comp=Z,1.1nm,0.5s,baz=303,slow=8.9,SNR=25						
	comp=Z,1.1nm,0.5s						
WRA	Warramunga Arr	46.77	124	P	P	15 33 02.6	-1.7
WB2	Warramunga Arr	46.78	124	P	P	15 33 03.5	-0.9
WB2				IAmb	IAmb	15 33 29.0	
	comp=Z,13nm,1.4s						
WR0	Warramunga Arr	46.95	124	P	P	15 33 04.8	-0.9
WR0				IAmb	IAmb	15 33 16.9	
	comp=Z,12nm,1.4s						
AS31	Alice Springs	48.28	128	P	P	15 33 15.3	-0.7
AS31				IAmb	IAmb	15 33 16.1	
	comp=Z,1.9nm,0.5s						
ASAR	Alice Springs	48.28	128	P	P	15 33 15.6	-0.5
	comp=Z,2.9nm,0.5s,baz=299,slow=8.0,SNR=156						
	comp=Z,2.9nm,0.5s						
ASAR	Alice Springs	48.28	128	P	P	15 33 15.2	-0.8
ZALV	Zalesovo Beam	48.96	353	P	P	15 33 20.1	-0.6
	comp=Z,0.7nm,0.3s,baz=174,slow=7.4,SNR=5.5						
	comp=Z,0.7nm,0.3s						
FURI	Furi	55.24	277	P	P	15 34 13.6	+5.1
KMBO	Kilima Mbogo	57.33	265	P	P	15 34 29.3	+6.0
KMBO				IAmb	IAmb	15 34 56.5	
	comp=Z,1.3nm,1.1s						
STKA	Stephens Creek	58.35	133	P	P	15 34 29.6	-0.2
	comp=Z,0.7nm,0.4s,baz=312,slow=9.8,SNR=3.1						
	comp=Z,0.7nm,0.4s						
STKA	Stephens Creek	58.35	133	P	P	15 34 29.6	-0.2
STKA				IAmb	IAmb	15 34 51.5	
	comp=Z,0.9nm,1.1s						
BRTR	Keskin Array B	64.12	312	P	P	15 35 12.2	+3.1
	comp=Z,0.4nm,0.8s,baz=109,slow=8.1,SNR=2.2						
	comp=Z,0.4nm,0.8s						
CAN	Canberra	65.42	133	P	P	15 35 17.8	+0.4
FINES	FINESS Array B	74.91	332	P	P	15 36 15.5	+0.5
	comp=Z,0.6nm,0.7s,baz=123,slow=5.1,SNR=4.9						
	comp=Z,0.6nm,0.7s						
ARCES	ARCESS Array B	77.58	340	P	P	15 36 29.8	-0.3
	comp=Z,2.9nm,0.9s,baz=98,slow=6.5,SNR=1.9						
	comp=Z,2.9nm,0.9s						

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*IDC **05** 15:48:32.6±1.3,6°.22S×149°.19E,h70km±13km,mb3.7/10,*
mbtmp4.1/13,MS3.4/11,Error ellipse: s-maj=24.0km
s-min=7.9km az=125.0
*NEIC **05** 15:48:32.4±1.1,6°.14S±0°.09×149°.0E±0°.1,h49km±7km,*
mb4.6/23,Error ellipse: s-maj=17.5km s-min=9.6km
az=128.0
ISC 05 15:48:32.3±0.5**,6°.16S**±0°.06×**149°.07E**±0°.08**,h60**km**,n57,**
σ1§67/58**,mb4.5**/24**,MS3.2**/8**,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.48	58	P	Pn	15 49 23.9	-0.1
	119nm,0.5s,baz=170,slow=1.0,SNR=35						
KRVT				S	Sn	15 50 02.6	-1.3
	131nm,0.8s,baz=230,slow=9.8,SNR=1.9						
RABL	Rabaul	3.65	58		Pn	15 49 27.8	+1.4
PMG	Port Moresby	3.74	210	P	Pn	15 49 29.5	+1.9
	116nm,0.5s,baz=29,slow=5.9,SNR=77						
PMG				S	Sn	15 50 11.2	+0.9
	582nm,0.6s,baz=319,slow=22,SNR=12						
PMG	Port Moresby	3.74	210	Pn	Pn	15 49 28.3	+0.7
COEN	Coen	9.68	216	Pn	Pn	15 50 48.4	-0.5
HNR	Honiara	11.26	107	LR	LR	15 54 49.0	
	comp=Z,1μm,20.1s,baz=235,slow=34						
CTA	Charters Tower	14.11	191	LR	LR	15 57 17.9	
	comp=Z,132nm,18.1s,baz=8.5,slow=37						
EIDS	Eidsvold	19.20	174	P	P	15 52 51.6	+0.2
WB0	Warramunga Arr	19.66	225		P	15 52 56.7	+0.2
WB0				IAmb	IAmb	15 52 57.8	
	comp=Z,28nm,0.7s						
WR0	Warramunga Arr	19.68	224	P	P	15 52 56.7	0.0
WR0				IAmb	IAmb	15 52 58.0	
	comp=Z,23nm,0.8s						
WRAB	Tennant Creek	19.80	225	P	P	15 52 58.1	+0.1
WRAB				IAmb	IAmb	15 52 59.2	
	comp=Z,41nm,0.7s						
WB2	Warramunga Arr	19.80	225		P	15 52 58.2	+0.2
WB2				IAmb	IAmb	15 52 59.3	
	comp=Z,40nm,0.6s						
WRA	Warramunga Arr	19.81	225	P	P	15 52 58.6	+0.5
	comp=Z,29nm,0.7s,baz=51,slow=11,SNR=138						
WRA				S	S	15 56 31.2	-7.1
	comp=Z,1.0nm,0.8s,baz=51,slow=22,SNR=4.1						
WRA				PcP	PcP	15 57 13.4	-0.8
	comp=Z,1.0nm,0.8s,baz=43,slow=1.8,SNR=3.4						
WRA				LR	LR	16 00 47.0	
	comp=Z,90nm,20.7s,baz=358,slow=37						
GUMO	Guam	20.06	348	LR	LR	15 59 46.9	
	comp=Z,54nm,19.4s,baz=160,slow=34						
KNRA	Kununurra	22.04	243	P	P	15 53 22.0	-0.2
AS31	Alice Springs	22.71	218	P	P	15 53 28.9	-0.4
AS31				IAmb	IAmb	15 53 49.5	
	comp=Z,4.4nm,0.6s						
ASAR	Alice Springs	22.71	218	P	P	15 53 29.4	+0.1
	comp=Z,5.8nm,0.6s,baz=51,slow=9.6,SNR=129						
ASAR				PcP	PcP	15 57 19.8	-0.1
	comp=Z,0.8nm,0.8s,baz=48,slow=1.9,SNR=4.8						
ASAR				S	S	15 57 33.5	-0.1
	comp=Z,3.3nm,1.0s,baz=30,slow=22,SNR=11						
ASAR				LR	LR	16 02 56.3	
	comp=Z,86nm,19.0s,baz=58,slow=38						
	comp=Z,5.8nm,0.6s						
ASAR	Alice Springs	22.71	218	P	P	15 53 29.0	-0.3
DZM	Mont Dzumac	23.07	135	P	P	15 53 32.9	-0.2
DZM				IAmb	IAmb	15 54 09.4	
	comp=Z,24nm,1.2s						
ARMA	Armidale	24.25	175	P	P	15 53 44.6	+0.6
ARMA				IAmb	IAmb	15 53 47.2	
	comp=Z,32nm,1.4s						
SOEI	Soe	24.81	260	P	P	15 53 48.4	-0.8
SOEI				IAmb	IAmb	15 54 28.3	
	comp=Z,23nm,1.0s						
FITZ	Fitzroy Crossi	25.75	240	P	P	15 53 57.6	0.0
STKA	Stephens Creek	26.52	194	P	P	15 54 03.0	-1.4
	comp=Z,5.8nm,1.1s,baz=12,slow=9.3,SNR=3.3						
STKA				LR	LR	16 05 01.3	
	comp=Z,138nm,18.5s,baz=27,slow=37						
	comp=Z,5.8nm,1.1s						
STKA	Stephens Creek	26.52	194	P	P	15 54 05.1	+0.7
LUWI	Luwuk	26.72	280	P	P	15 54 05.7	-0.7
LUWI				IAmb	IAmb	15 54 50.1	
	comp=Z,24nm,1.3s						
TOO	Toolangi	31.44	185	P	P	15 54 48.4	+0.4
TOO				IAmb	IAmb	15 54 50.8	
	comp=Z,18nm,1.2s						
FORT	Forrest	31.45	216	P	P	15 54 48.0	-0.2
FORT				IAmb	IAmb	15 54 54.7	
	comp=Z,26nm,1.2s						
MBWA	Marble Bar	32.08	239	P	P	15 54 53.3	-0.6
MBWA				IAmb	IAmb	15 54 54.0	
	comp=Z,5.8nm,0.8s						
PSA00	Pilbara Seismi	32.15	239	P	P	15 54 54.0	-0.4
PSA00				IAmb	IAmb	15 54 55.1	
	comp=Z,6.5nm,0.9s						
GIRL	Giralia	37.36	240	P	P	15 55 39.5	+0.1
MORW	Morawa	38.62	230	P	P	15 55 48.4	-1.6
URZ	Urewera	40.84	146	LR	LR	16 10 01.7	
	comp=Z,38nm,21.7s,baz=7.0,slow=32						
MJAR	Matsushiro Arr	43.68	347	P	P	15 56 30.1	-1.2
	comp=Z,1.4nm,1.0s,baz=162,slow=6.4,SNR=3.5						
MJAR				LR	LR	16 14 17.6	
	comp=Z,48nm,19.0s,baz=158,slow=35						
	comp=Z,1.4nm,1.0s						
KSRS	Korea Array	47.66	337	P	P	15 57 02.9	+0.1
	comp=Z,1.0nm,0.7s,baz=154,slow=8.8,SNR=2.9						
KSRS				LR	LR	16 15 27.1	
	comp=Z,25nm,20.9s,baz=105,slow=34						
	comp=Z,1.0nm,0.7s						
NJ2	Nanjing	47.67	325	*e*P	P	15 57 04.9	+2.0
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
USRK	Ussuriysk Ar.	52.44	345	P	P	15 57 40.6	+1.8
MDJ	Mudanjiang	53.49	343	P	P	15 57 50.0	+3.4
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,120nm,4.4s						
CMAR	Chiang Mai Arr	55.14	297	P	P	15 57 57.3	-1.8
	comp=Z,0.4nm,0.7s,baz=115,slow=6.1,SNR=1.9						
	comp=Z,0.4nm,0.7s						
HHC	Hu-ho-hao-te	58.06	327	*e*P	P	15 58 23.6	+4.0
HHC				pmax	pmax		
	comp=Z,25nm,0.9s						
HHC				pmax	pmax		
	comp=Z,230nm,5.2s						
PEA0B	Petropavlovsk-	59.49	6	P	P	15 58 30.8	+1.7
PETK	Petropavlovsk-	59.49	6	P	P	15 58 29.4	+0.3
	comp=Z,1.7nm,0.5s,baz=172,slow=7.5,SNR=18						
	comp=Z,1.7nm,0.5s						
PETK	Petropavlovsk-	59.49	6	P	P	15 58 30.7	+1.6
LZH	Lanzhou	59.68	318	*e*P	P	15 58 28.4	-2.6
LZH				sP	pP	15 58 37.7	-9.3
LZH				pmax	pmax		
	comp=Z,13nm,1.5s						
SONM	Songino Array	65.56	330	P	P	15 59 11.5	+1.7
	comp=Z,0.8nm,0.6s,baz=146,slow=5.8,SNR=4.8						
	comp=Z,0.8nm,0.6s						
SONM	Songino Array	65.56	330	P	P	15 59 12.4	+2.5
YAK	Yakutsk	69.62	350	LR	LR	16 27 29.4	
	comp=Z,6.0nm,21.8s,baz=250,slow=34						
VNDA	Vanda	71.64	177	P	P	15 59 50.0	+2.9
WMQ	Urumqi	74.26	319	*e*P	P	16 00 05.5	+2.2
WMQ				PcP	PcP	16 00 19.1	+1.2
WMQ				sP	sP	16 00 26.1	-0.4
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
MKAR	Makanchi Array	78.93	320	P	P	16 00 29.6	+0.1
	comp=Z,0.4nm,0.6s,baz=102,slow=7.3,SNR=7.3						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	78.93	320	P	P	16 00 28.9	-0.6
KDAK	Kodiak Island	79.08	28	LR	LR	16 28 09.7	
	comp=Z,43nm,20.6s,baz=130,slow=30						
ZALV	Zalesovo Beam	80.25	327	P	P	16 00 35.5	-1.0
	comp=Z,1.4nm,0.6s,baz=108,slow=5.4,SNR=6.1						
	comp=Z,1.4nm,0.6s						
ZALV	Zalesovo Beam	80.25	327	P	P	16 00 36.2	-0.2
KURK	Kurchatov	82.57	323	P	P	16 00 48.3	-0.5
ILAR	Eielson Array	84.83	23	P	P	16 00 57.8	-2.2
	comp=Z,1.3nm,0.7s,baz=250,slow=4.6,SNR=32						
	comp=Z,1.3nm,0.7s						
TORD	Torodi Ar. Bea	147.12	285	PKPbc	PKPdf	16 08 08.5	+1.0
	comp=Z,0.7nm,0.4s,baz=58,slow=4.1,SNR=9.4						
BDFB	Brasilia	152.52	142	PKPbc	PKPbc	16 08 21.9	-1.2
	comp=Z,3.2nm,0.6s,baz=252,slow=5.6,SNR=5.2						

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*HVO **05** 16:06:15.5±0.5,19°.38N±0°.01×155°.24W±0°.01,h3km±2km,*
ML2.6/16,ML1.8/42(NEIC),Error ellipse: s-maj=2.2km
s-min=1.0km az=143.0
NEIC 05 16:06:16.4±0.6**,19°.39N**±0°.01×**155°.264W**±0°.007**,**
h2km±3km**,Error ellipse: s-maj=2.1km s-min=0.9km**
az=171.0,Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKO	Keanakako`i	0.01	349		Pg	16 06 16.6	-0.4
KKO				IAML		16 06 17.3	
	comp=E,1μm,0.2s						
RIM	Rim	0.01	309		Pg	16 06 16.9	-0.2
RIM				IAML		16 06 17.6	
	comp=E,1μm,0.1s						
BYL	Byron's Ledge	0.03	9		Pg	16 06 17.0	-0.2
BYL				IAML		16 06 17.2	
	comp=E,1μm,0.5s						
BYL				IAML		16 06 17.5	
	comp=N,1μm,0.2s						
SDHHI	Sand Hill	0.03	274		Pg	16 06 17.3	+0.2
SDHHI				IAML		16 06 18.3	
	comp=E,1μm,0.2s						
NPH	North Pit	0.03	326		Pg	16 06 17.1	-0.1
NPH				IAML		16 06 18.3	
	comp=E,1μm,0.1s						
HATHI	Halema‘uma‘u T	0.04	4		Pg	16 06 17.2	-0.1
HATHI				IAML		16 06 17.7	
	comp=E,1μm,0.2s						
OBL	Observatory Le	0.04	328	Pg	Pg	16 06 17.3	+0.1
OBL				IAML		16 06 18.3	
	comp=N,829nm,0.3s						
OBL				IAML		16 06 18.4	
	comp=E,890nm,0.2s						
SBLHI	Steaming Bluff	0.04	354		Pg	16 06 17.2	-0.2
SBLHI				IAML		16 06 17.7	
	comp=E,727nm,0.2s						
SBLHI				IAML		16 06 18.2	
	comp=N,1μm,0.3s						
UWB	Uwekahuna B	0.04	340	Pg	Pg	16 06 17.2	-0.1
UWE	Uwekahuna	0.04	321	IAML		16 06 17.1	
	comp=N,608nm,1.9s						
UWE				Pg	Pg	16 06 17.5	+0.1
PUH	Pauahi	0.05	107		Pg	16 06 16.7	-0.7
PUH	Pauahi	0.05	107	IAML		16 06 17.5	
	comp=N,2μm,0.1s						
PUH				IAML		16 06 17.6	
	comp=E,4μm,0.2s						
RSD	Rainshed	0.08	350		Pg	16 06 17.8	-0.2
KNHH	Kane Nui o Ham	0.09	95		Pg	16 06 17.6	-0.6
HLP	Hilina Pali	0.10	205		Pg	16 06 18.4	0.0
HLP				IAML		16 06 20.9	
	comp=E,523nm,0.1s						
HLP				IAML		16 06 21.2	
	comp=N,622nm,0.2s						
HLP	Hilina Pali	0.10	205		Sg	16 06 20.7	+0.9
STCH	Steam Cracks	0.13	91		Pg	16 06 18.6	-0.5
STCH					Sg	16 06 21.4	+0.6
STCH	Steam Cracks	0.13	91	IAML		16 06 21.5	
	comp=E,694nm,0.1s						
STCH				IAML		16 06 21.6	
	comp=N,444nm,0.1s						
NPOC	North of Pu‘u	0.15	88		Pg	16 06 19.1	-0.2
NPOC				IAML		16 06 21.9	
	comp=N,435nm,0.6s						
NPOC				IAML		16 06 22.2	
	comp=E,338nm,0.4s						
JCUZ	Jacuzzi	0.15	91		Pg	16 06 19.1	-0.3
JCUZ				IAML		16 06 19.6	
	comp=N,254nm,1.5s						
JCUZ				IAML		16 06 21.6	
	comp=E,447nm,1.0s						
MLH	Mauna Loa	0.16	313	Pg	Pg	16 06 19.8	+0.2
AIN	Ainahou	0.18	265	Pg	Pg	16 06 20.2	+0.2
AIN				IAML		16 06 24.4	
	comp=E,252nm,2.0s						
HTC	Hot Caves	0.20	220		Pg	16 06 21.7	+1.5
HMH	Humu‘ula Sheep	0.30	316		Sg	16 06 27.1	+1.0
HMH	Humu‘ula Sheep	0.30	316	Pg	Pg	16 06 22.2	-0.1
HMH				IAML		16 06 23.4	
	comp=N,227nm,3.9s						
HMH	Humu‘ula Sheep	0.30	316	IAML		16 06 28.4	
	comp=E,122nm,2.4s						
MWH	Moku‘aweowe	0.33	287		Pg	16 06 23.0	+0.2
KHU	Kahuku	0.36	247		Pg	16 06 23.7	+0.3
KHU	Kahuku	0.36	247		Sg	16 06 29.8	+1.7
ALEP	Alea Permanent	0.39	293		Pg	16 06 23.7	-0.3
MHA	Mahukona	1.00	323	Pg	Pg	16 06 35.3	-0.3

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*HVO **05** 16:06:32.3±0.7,19°.382N±0°.005×155°.24W±0°.01,*
h2km±3km,ML3.5/20,ML3.0/46(NEIC),Error ellipse:
s-maj=1.6km s-min=0.8km az=97.0
NEIC 05 16:06:32.8±0.9**,19°.388N**±0°.009×**155°.25W**±0°.01**,**
h5km±2km**,Error ellipse: s-maj=1.8km s-min=1.1km**
az=125.0,Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKO	Keanakako`i	0.02	303	Pg	Pg	16 06 33.7	-0.3
RIM	Rim	0.02	288	Pg	Pg	16 06 33.7	-0.3
BYL	Byron's Ledge	0.03	338	Pg	Pg	16 06 33.8	-0.2
PUH	Pauahi	0.04	113	Pg	Pg	16 06 33.5	-0.6
PUH				IAML		16 06 34.0	
	comp=E,19μm,0.5s						
HATHI	Halema‘uma‘u T	0.04	343	Pg	Pg	16 06 34.0	-0.1
HATHI				IAML		16 06 34.7	
	comp=E,17μm,0.3s						
HATHI				IAML		16 06 34.7	
	comp=N,18μm,0.4s						
NPH	North Pit	0.04	309	Pg	Pg	16 06 34.0	-0.1

SDHHI	**Sand Hill**	**0.04**	**272**	Pg	Pg	16 06 34.1	0.0
SBLHI	**Steaming Bluff**	**0.04**	**336**	Pg	Pg	16 06 34.2	0.0
SBLHI				IAML		16 06 34.8	
	comp=N,21µm,0.4s						
SBLHI				IAML		16 06 35.0	
	comp=E,12µm,0.2s						
OBL	**Observatory Le**	**0.04**	**312**	Pg	Pg	16 06 34.3	+0.1
UWB	**Uwekahuna B**	**0.04**	**324**	Pg	Pg	16 06 34.2	0.0
UWB				IAML		16 06 35.1	
	comp=E,12µm,0.7s						
WRMHI	**West Rim**	**0.05**	**291**		Pg	16 06 35.7	+1.4
UWE	**Uwekahuna**	**0.05**	**309**	Pg	Pg	16 06 34.6	+0.3
UWE				IAML		16 06 35.4	
	comp=E,9µm,0.6s						
KNHH	**Kane Nui o Ham**	**0.08**	**96**		Pg	16 06 34.5	-0.1
RSD	**Rainshed**	**0.08**	**340**	Pg	Pg	16 06 34.8	+0.1
RSD				IAML		16 06 36.5	
	comp=N,8µm,0.5s						
RSD				IAML		16 06 36.6	
	comp=E,8µm,0.6s						
HLP	**Hilina Pali**	**0.11**	**211**	Pg	Pg	16 06 35.3	+0.2
HLP				IAML		16 06 37.8	
	comp=N,10µm,0.4s						
STCH	**Steam Cracks**	**0.12**	**91**	Pg	Pg	16 06 35.2	-0.1
STCH				IAML		16 06 37.5	
	comp=E,7µm,0.7s						
STCH				IAML		16 06 37.9	
	comp=N,6µm,0.4s						
NPOC	**North of Pu‘u**	**0.13**	**88**	Pg	Pg	16 06 35.3	-0.2
NPOC				IAML		16 06 38.2	
	comp=N,6µm,0.5s						
JCUZ	**Jacuzzi**	**0.14**	**91**	Pg	Pg	16 06 35.7	0.0
JCUZ				IAML		16 06 38.7	
	comp=E,7µm,1.0s						
JCUZ				IAML		16 06 39.0	
	comp=N,5µm,0.6s						
MLH	**Mauna Loa**	**0.17**	**309**	Pg	Pg	16 06 36.6	+0.4
MLH				IAML		16 06 41.1	
	comp=N,5µm,0.8s						
MLH				IAML		16 06 41.6	
	comp=E,3µm,0.8s						
AIN	**Ainahou**	**0.20**	**265**	Pg	Pg	16 06 37.1	+0.3
AIN				IAML		16 06 41.4	
	comp=N,4µm,0.5s						
HTC	**Hot Caves**	**0.20**	**223**		Pg	16 06 37.2	+0.3
JOKA	**Jonika Flow**	**0.24**	**79**		Pg	16 06 37.2	-0.2
JOKA					Sg	16 06 40.3	-0.3
HMH	**Humu‘ula Sheep**	**0.31**	**314**	Pg	Pg	16 06 39.2	+0.3
HMH				IAML		16 06 48.0	
	comp=E,2µm,0.7s						
HMH				IAML		16 06 48.8	
	comp=N,1µm,1.2s						
MLOA	**Mauna Loa Obse**	**0.34**	**296**		Sg	16 06 44.9	+0.7
MLOA	**Mauna Loa Obse**	**0.34**	**296**	Pg	Pg	16 06 39.5	-0.1
MLOA				IAML		16 06 47.5	
	comp=E,2µm,0.4s						
MLOA				IAML		16 06 50.9	
	comp=N,2µm,0.9s						
MWH	**Moku‘aweowe**	**0.34**	**286**	Pg	Pg	16 06 39.6	0.0
KHU	**Kahuku**	**0.37**	**248**		Sb	16 06 46.9	-1.4
KHU	**Kahuku**	**0.37**	**248**	Pg	Pg	16 06 39.9	-0.2
KHU				IAML		16 06 47.2	
	comp=N,3µm,0.5s						
KHU				IAML		16 06 49.5	
	comp=E,1µm,0.5s						
ALEP	**Alea Permanent**	**0.40**	**292**		Pg	16 06 40.6	-0.1
ALEP					Sg	16 06 46.7	+0.6
POHA	**Pohakuloa**	**0.45**	**324**	Pg	Pg	16 06 41.4	-0.2
POHA				IAML		16 06 57.0	
	comp=E,1µm,0.5s						
HUH	**Hualalai**	**0.63**	**298**	Pg	Pg	16 06 44.5	-0.4
KHLU	**Kahalu`u**	**0.64**	**289**	Pg	Pg	16 06 44.6	-0.6
HPAH	**Hawaii Prepara**	**0.77**	**327**	Pg	Pg	16 06 46.0	-1.5
MHA	**Mahukona**	**1.01**	**322**	Pg	Pg	16 06 51.0	-1.1
HLK	**Haleakala**	**1.66**	**326**	Pn	Pn	16 07 01.6	-1.2
HON	**Honolulu**	**3.22**	**307**	Pn	Pn	16 07 23.7	-0.4

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*HVO **05** 16:13:18.9±0.8, 19°.379N±0°.010×155°.237W±0°.009, h2^{km}±3^{km}, ML3.9/19, ML3.4/45(NEIC), Error ellipse: s-maj=1.5km s-min=1.1km az=145.0*

NEIC 05 16:13:19.3±0.9**, 19°.390N**±0°.005×**155°.246W**±0°.009**, h6**^{km}±2^{km}**, Error ellipse: s-maj=1.3km s-min=0.8km az=92.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKO	**Keanakako`i**	**0.02**	**292**		Pg	16 13 20.2	-0.5
BYL	**Byron's Ledge**	**0.03**	**329**		Pg	16 13 20.5	-0.1
RIM	**Rim**	**0.03**	**281**		Pg	16 13 20.4	-0.3
RIM				IAML		16 13 21.0	
	comp=E,42µm,0.4s						
PUH	**Pauahi**	**0.03**	**120**		Pg	16 13 20.9	+0.2
HATHI	**Halema‘uma‘u T**	**0.04**	**337**		Pg	16 13 20.6	-0.1
HATHI	**Halema‘uma‘u T**	**0.04**	**337**	IAML		16 13 21.7	
	comp=E,60µm,0.4s						
HATHI				IAML		16 13 22.2	
	comp=N,216µm,0.2s						
NPH	**North Pit**	**0.04**	**303**	Pg	Pg	16 13 20.5	-0.3
NPH				IAML		16 13 21.3	
	comp=E,27µm,0.2s						
NPH				IAML		16 13 21.8	
	comp=N,43µm,0.6s						
SBLHI	**Steaming Bluff**	**0.04**	**330**		Pg	16 13 20.8	0.0
SBLHI				IAML		16 13 21.5	
	comp=N,46µm,0.5s						
SBLHI				IAML		16 13 21.7	
	comp=E,30µm,0.6s						
OBL	**Observatory Le**	**0.04**	**307**		Pg	16 13 21.1	+0.3
SDHHI	**Sand Hill**	**0.04**	**269**		Pg	16 13 20.9	0.0
SDHHI	**Sand Hill**	**0.04**	**269**	IAML		16 13 22.2	
	comp=E,168µm,0.3s						
SDHHI				IAML		16 13 22.4	
	comp=N,197µm,0.4s						
UWB	**Uwekahuna B**	**0.05**	**319**		Pg	16 13 20.7	-0.1
UWB				IAML		16 13 21.8	
	comp=E,25µm,0.9s						
WRMHI	**West Rim**	**0.05**	**288**		Pg	16 13 21.0	0.0
WRMHI					Sg	16 13 23.1	+0.9
UWE	**Uwekahuna**	**0.05**	**305**	Pg	Pg	16 13 21.0	0.0
KNHH	**Kane Nui o Ham**	**0.07**	**98**		Pg	16 13 21.0	-0.1
RSD	**Rainshed**	**0.08**	**337**		Sg	16 13 21.4	-1.3
RSD	**Rainshed**	**0.08**	**337**	Pg	Pg	16 13 21.3	0.0
RSD				IAML		16 13 23.3	
	comp=E,22µm,0.6s						
RSD				IAML		16 13 23.5	
	comp=N,22µm,0.6s						
HLP	**Hilina Pali**	**0.11**	**212**		Pg	16 13 21.9	+0.2
HLP	**Hilina Pali**	**0.11**	**212**	IAML		16 13 24.2	
	comp=E,16µm,0.8s						
HLP				IAML		16 13 24.9	
	comp=N,12µm,0.3s						
STCH	**Steam Cracks**	**0.11**	**92**		Pg	16 13 21.7	-0.1
STCH				IAML		16 13 24.8	
	comp=N,15µm,0.3s						
STCH	**Steam Cracks**	**0.11**	**92**		Sg	16 13 24.7	+1.2
STCH	**Steam Cracks**	**0.11**	**92**	IAML		16 13 23.9	
	comp=E,30µm,0.7s						
NPOC	**North of Pu‘u**	**0.13**	**89**		Pg	16 13 22.0	-0.1
NPOC	**North of Pu‘u**	**0.13**	**89**	IAML		16 13 24.9	
	comp=N,19µm,0.8s						
NPOC				IAML		16 13 25.6	
	comp=E,25µm,0.7s						
JCUZ	**Jacuzzi**	**0.14**	**93**		Pg	16 13 22.2	0.0
JCUZ	**Jacuzzi**	**0.14**	**93**	IAML		16 13 25.3	
	comp=E,18µm,1.1s						
JCUZ				IAML		16 13 25.7	
	comp=N,14µm,0.8s						
MLH	**Mauna Loa**	**0.17**	**308**		Pg	16 13 23.3	+0.5
MLH				IAML		16 13 27.8	
	comp=N,12µm,0.9s						
MLH	**Mauna Loa**	**0.17**	**308**		Sg	16 13 27.4	+2.2
MLH	**Mauna Loa**	**0.17**	**308**	IAML		16 13 27.0	
	comp=E,5µm,1.0s						
AIN	**Ainahou**	**0.20**	**265**		Pg	16 13 23.9	+0.5
AIN	**Ainahou**	**0.20**	**265**	IAML		16 13 29.2	
	comp=N,6µm,0.4s						
AIN				IAML		16 13 29.4	
	comp=E,8µm,0.7s						
HTC	**Hot Caves**	**0.21**	**223**		Pg	16 13 23.7	+0.2
HTC					Sg	16 13 27.1	+0.9
JOKA	**Jonika Flow**	**0.23**	**79**		Pg	16 13 23.6	-0.2
JOKA					Sg	16 13 26.8	-0.2
HMH	**Humu‘ula Sheep**	**0.31**	**313**		Pg	16 13 25.8	+0.4
HMH					Sg	16 13 30.2	+0.7
HMH	**Humu‘ula Sheep**	**0.31**	**313**	IAML		16 13 34.8	
	comp=E,4µm,1.1s						
HMH				IAML		16 13 35.7	
	comp=N,3µm,1.4s						
MLOA	**Mauna Loa Obse**	**0.34**	**295**		Pg	16 13 25.9	-0.3
MLOA				IAML		16 13 34.6	
	comp=E,4µm,1.3s						
MLOA				IAML		16 13 37.6	
	comp=N,5µm,0.9s						
MWH	**Moku‘aweowe**	**0.34**	**286**		Pg	16 13 26.3	+0.1
PHO	**Puu Honuaula**	**0.35**	**75**		Sg	16 13 30.4	-0.2
KHU	**Kahuku**	**0.38**	**248**		Pg	16 13 26.4	-0.3
KHU					Sb	16 13 33.5	-1.2
KHU	**Kahuku**	**0.38**	**248**	IAML		16 13 34.5	
	comp=E,3µm,0.7s						
KHU				IAML		16 13 39.2	
	comp=N,3µm,1.1s						
ALEP	**Alea Permanent**	**0.40**	**292**		Pg	16 13 27.1	-0.2
ALEP					Sg	16 13 33.8	+1.2
HPO	**Honuapo**	**0.42**	**224**		Pg	16 13 27.6	+0.2
POHA	**Pohakuloa**	**0.45**	**324**		Pg	16 13 28.5	+0.3
POHA					Sg	16 13 35.0	+0.9
POHA	**Pohakuloa**	**0.45**	**324**	IAML		16 13 39.7	
	comp=N,4µm,0.7s						
HUH	**Hualalai**	**0.63**	**298**		Pg	16 13 31.4	-0.1
CPH	**Captain Cook**	**0.64**	**279**		Pg	16 13 31.1	-0.6
KHLU	**Kahalu`u**	**0.64**	**288**		Pg	16 13 31.2	-0.5
HPAH	**Hawaii Prepara**	**0.77**	**326**		Pg	16 13 32.4	-1.6
MHA	**Mahukona**	**1.01**	**322**	Pg	Pg	16 13 37.4	-1.2
HLK	**Haleakala**	**1.66**	**325**	Pn	Pn	16 13 47.8	-1.3
KHLH	**Kahului Airpor**	**1.86**	**324**		Pn	16 13 50.2	-1.6
KIP	**Kipapa**	**3.29**	**308**	Pn	Pn	16 14 09.4	-1.9

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*NNC **05** 16:13:19.7±0.8, 42°.69N×71°.04E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=6.2km s-min=4.9km az=47.0*

*SOME **05** 16:13:20.9, 42°.80N×71°.08E, h15^{km}*

*KRNET **05** 16:13:21.2±0.1, 42°.80N×71°.08E, h25^{km}, mb2.4*

ISC 05 16:13:21.0±1.0**, 42°.80N**±0°.03×**71°.09E**±0°.02**, h12**^{km}±9^{km}**, n31,** σ0^{s}.**96**/58**, 32C-4D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZA	**Taraz**	**0.20**	**64**	P	**Pb**	**16 13 26.8**	**+0.2**
	8.9nm,0.0s						
DZA				S	**Sb**	**16 13 31.0**	**+2.4**
	194nm,0.2s						
DZA	**Taraz**	**0.20**	**64**	*e*P	**Pb**	**16 13 26.6**	**0.0**
	baz=64						
DZA				*e*S	**Sb**	**16 13 30.8**	**+2.3**
	baz=64						
DZA	**Taraz**	**0.20**	**64**	*e*P	**Pb**	**16 13 26.6**	**0.0**
	31nm,0.2s						
DZA				*e*S	**Sb**	**16 13 30.8**	**+2.3**
	194nm,0.2s						
KK06	**Karatay Array**	**0.50**	**305**	⇓P	**Pg**	**16 13 31.1**	**+0.3**
KK06				⇓S	**Sb**	**16 13 38.3**	**-0.8**
KK07	**Karatay Array**	**0.52**	**304**	⇑P	**Pg**	**16 13 31.1**	**0.0**
KK07				⇑S	**Sb**	**16 13 38.6**	**-0.7**
KK02	**Karatay Array**	**0.52**	**306**	⇑P	**Pg**	**16 13 31.3**	**+0.1**
KK02				⇑S	**Sb**	**16 13 38.6**	**-0.8**
KK31	**Karatay Array**	**0.52**	**306**	⇓P	**Pg**	**16 13 31.2**	**+0.1**
	0.9nm,0.2s,baz=139,slow=4.3,SNR=385						
KK31				⇑S	**Sb**	**16 13 38.8**	**-0.7**
	8.4nm,0.2s,baz=116,slow=18,SNR=126						
KKAR	**Karatay Array**	**0.52**	**306**	⇑*i*P	**Pb**	**16 13 31.6**	**-0.4**
	baz=6.0						
KKAR				⇑*i*S	**Sb**	**16 13 39.2**	**-0.2**
	baz=6.0						
KK05	**Karatay Array**	**0.52**	**307**	⇑P	**Pg**	**16 13 31.3**	**+0.1**
KK05				⇓S	**Sb**	**16 13 38.8**	**-0.7**
KK01	**Karatay Array**	**0.52**	**306**	⇑P	**Pg**	**16 13 31.4**	**+0.2**
KK01				⇑S	**Sg**	**16 13 38.6**	**+0.4**
KK03	**Karatay Array**	**0.52**	**305**	⇑P	**Pg**	**16 13 31.5**	**+0.2**
KK03				⇑S	**Sb**	**16 13 38.8**	**-0.8**
KK04	**Karatay Array**	**0.52**	**306**	⇑P	**Pg**	**16 13 31.4**	**+0.1**
KK04				⇑S	**Sb**	**16 13 38.9**	**-0.7**
KK08	**Karatay Array**	**0.53**	**305**	⇑P	**Pg**	**16 13 31.5**	**+0.1**
KK08				⇑S	**Sb**	**16 13 39.1**	**-0.7**
KK09	**Karatay Array**	**0.54**	**307**	⇑P	**Pg**	**16 13 31.6**	**+0.1**
KK09				⇑S	**Sb**	**16 13 39.4**	**-0.5**
IUG	**Iuzhnay**	**1.02**	**230**	P	**Pb**	**16 13 40.1**	**-0.4**
	3.2nm,0.1s						
IUG				S	**Sn**	**16 13 54.3**	**-1.1**
	35nm,0.2s						
IUG	**Iuzhnay**	**1.02**	**230**	*e*P	**Pb**	**16 13 39.9**	**-0.7**
	baz=30						
IUG				*e*S	**Sg**	**16 13 54.0**	**+0.1**
	baz=30						
IUG	**Iuzhnay**	**1.02**	**230**	*e*P	**Pb**	**16 13 39.9**	**-0.7**
	3.2nm,0.1s						
IUG				*e*S	**Sg**	**16 13 54.0**	**+0.1**
	35nm,0.2s						
MNAS	**Manas**	**1.09**	**106**	⇑*i*P	**Pb**	**16 13 41.4**	**-0.5**
	baz=6.0						
MNAS				⇑*i*S	**Sg**	**16 13 56.5**	**+0.2**
	baz=6.0						
ARK	**Arkit**	**1.20**	**147**	⇑*i*P	**Pb**	**16 13 43.4**	**-0.2**
	baz=46						
ARK				⇑*i*S	**Sn**	**16 13 59.3**	**-0.5**
	baz=46						
TRKS	**Terek-Say**	**1.27**	**178**	⇑*i*P	**Pg**	**16 13 45.6**	**+0.1**
	baz=77						
TRKS				⇑*i*S	**Sg**	**16 14 03.8**	**+1.8**
	baz=77						
MRKS	**Merke**	**1.58**	**91**	P	**Pb**	**16 13 50.0**	**-0.1**
	3.7nm,0.1s						
MRKS				S	**Sg**	**16 14 10.9**	**-0.9**
	10nm,0.2s						
MRKS	**Merke**	**1.58**	**91**	*e*P	**Pb**	**16 13 50.0**	**-0.1**
	baz=91						
MRKS				*e*S	**Sg**	**16 14 10.9**	**-0.9**
	baz=91						
MRKS	**Merke**	**1.58**	**91**	*e*P	**Pb**	**16 13 50.0**	**-0.1**
	3.7nm,0.1s						
MRKS				*e*S	**Sg**	**16 14 10.9**	**-0.9**
	10nm,0.2s						
EKS2	**Erkin-Say**	**1.99**	**93**	⇑*i*P	**Pb**	**16 13 55.9**	**-1.2**
	baz=93						
EKS2				⇑*i*S	**Sb**	**16 14 20.7**	**-1.2**
	baz=93						
AML	**Almayashu**	**2.04**	**108**	⇑*e*P	**Pb**	**16 13 56.6**	**-1.6**
	baz=8.0						
AML				⇑*i*S	**Sn**	**16 14 21.9**	**+0.8**
	baz=8.0						
ARLS	**Aral**	**2.58**	**110**	⇑*e*P	**Pn**	**16 14 04.1**	**+1.5**
	baz=10.0						
ARLS				⇑*i*S	**Sn**	**16 14 35.1**	**+1.1**
	baz=10.0						
UCH	**Uchtor**	**2.60**	**102**	⇑*e*P	**Pn**	**16 14 04.3**	**+1.1**
	baz=2.0						
UCH				⇑*i*S	**Sn**	**16 14 35.4**	**+0.5**
	baz=2.0						
SGDS	**Sogindy**	**2.67**	**75**	Pg	**Pb**	**16 14 08.8**	**0.0**
	0.4nm,0.1s						
SGDS				Lg	Lg	16 14 43.1	
	4.4nm,0.2s						
KRBS	**Karabastau**	**3.47**	**74**	Pg	**Pg**	**16 14 24.9**	**-2.5**
	0.3nm,0.2s						
KRBS				Lg	Lg	16 15 09.9	
	2.0nm,0.3s						
KST	**Kastek**	**3.59**	**85**	Pg	**Pb**	**16 14 25.0**	**+0.6**
	0.7nm,0.2s						
KST				Lg	Lg	16 15 10.8	
	2.5nm,0.4s						
KST	**Kastek**	**3.59**	**85**	*e*Pg	**Pb**	**16 14 25.5**	**+1.0**
	0.7nm,0.2s						
KST				*e*Lg	Lg	16 15 11.7	
	2.5nm,0.4s						

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*HVO **05** 16:13:43.4±0.6, 19°.39N±0°.03×155°.25W±0°.02, h3^{km}±5^{km}, Md3.1/8, ML3.4/38(NEIC), Error ellipse: s-maj=5.6km s-min=0.6km az=154.0*

NEIC 05 16:13:44.0±0.5**, 19°.41N**±0°.04×**155°.252W**±0°.006**, h3**^{km}±6^{km}**, Error ellipse: s-maj=6.2km s-min=0.8km az=176.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BYL	**Byron's Ledge**	**0.01**	**311**		Pg	16 13 44.6	-0.2
BYL				IAML		16 13 44.9	
	comp=E,47µm,0.3s						
BYL				IAML		16 13 45.2	
	comp=N,50µm,0.2s						
KKO	**Keanakako`i**	**0.01**	**240**		Pg	16 13 44.3	-0.6
KKO				IAML		16 13 45.0	
	comp=E,78µm,0.2s						
HATHI	**Halema‘uma‘u T**	**0.02**	**334**		Pg	16 13 44.8	0.0
HATHI				IAML		16 13 45.2	
	comp=E,60µm,0.3s						
RIM	**Rim**	**0.02**	**244**	Pg	Pg	16 13 44.4	-0.5
RIM				IAML		16 13 44.7	
	comp=N,53µm,0.8s						
SBLHI	**Steaming Bluff**	**0.03**	**325**		Pg	16 13 44.9	0.0
SBLHI				IAML		16 13 45.5	
	comp=N,69µm,0.3s						
SBLHI				IAML		16 13 45.6	
	comp=E,61µm,0.5s						
NPH	**North Pit**	**0.03**	**283**		Pg	16 13 44.7	-0.2
UWB	**Uwekahuna B**	**0.03**	**308**		Pg	16 13 44.9	-0.1
OBL	**Observatory Le**	**0.03**	**292**		Pg	16 13 45.0	0.0
OBL				IAML		16 13 45.5	
	comp=E,42µm,0.7s						
OBL				IAML		16 13 45.6	
	comp=N,68µm,0.7s						
UWE	**Uwekahuna**	**0.04**	**292**	Pg	Pg	16 13 45.1	0.0
UWE				IAML		16 13 46.0	
	comp=N,33µm,0.7s						
SDHHI	**Sand Hill**	**0.04**	**248**		Pg	16 13 44.9	-0.2
WRMHI	**West Rim**	**0.04**	**271**		Pg	16 13 46.6	+1.5
PUH	**Pauahi**	**0.05**	**133**		Pg	16 13 44.8	-0.4
PUH				IAML		16 13 44.8	
	comp=N,39µm,1.1s						
RSD	**Rainshed**	**0.06**	**337**	Pg	Pg	16 13 45.1	-0.4
RSD				IAML		16 13 46.9	
	comp=E,19µm,0.9s						
KNHH	**Kane Nui o Ham**	**0.08**	**108**		Pg	16 13 45.8	0.0
HLP	**Hilina Pali**	**0.12**	**206**		Pg	16 13 46.5	0.0
STCH	**Steam Cracks**	**0.12**	**99**		Pg	16 13 46.4	0.0
STCH	**Steam Cracks**	**0.12**	**99**	IAML		16 13 48.5	
	comp=E,26µm,0.6s						
STCH				IAML		16 13 49.4	
	comp=N,27µm,0.8s						
NPOC	**North of Pu‘u**	**0.14**	**95**		Pg	16 13 46.8	+0.1
NPOC	**North of Pu‘u**	**0.14**	**95**	IAML		16 13 49.5	
	comp=N,16µm,0.6s						
NPOC				IAML		16 13 50.2	
	comp=E,17µm,0.7s						
JCUZ	**Jacuzzi**	**0.14**	**98**		Pg	16 13 46.9	0.0
JCUZ	**Jacuzzi**	**0.14**	**98**	IAML		16 13 48.9	
	comp=E,22µm,0.9s						
JCUZ				IAML		16 13 49.9	
	comp=N,14µm,0.6s						
MLH	**Mauna Loa**	**0.15**	**305**	Pg	Pg	16 13 47.5	+0.3
MLH				IAML		16 13 49.9	
	comp=N,14µm,0.9s						
MLH				IAML		16 13 51.4	
	comp=E,10µm,0.8s						
AIN	**Ainahou**	**0.20**	**260**	Pg	Pg	16 13 47.9	0.0
HTC	**Hot Caves**	**0.22**	**219**		Pg	16 13 48.0	-0.3
KHU	**Kahuku**	**0.38**	**245**	Pg	Pg	16 13 50.7	-0.6
KHU				IAML		16 13 52.0	
	comp=N,6µm,0.8s						

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*HVO **05** 16:17:19.1±0.8, 19°.382N±0°.009×155°.236W±0°.007, h2^{km}±3^{km}, ML3.5/19, ML2.7/46(NEIC), Error ellipse: s-maj=1.3km s-min=1.0km az=174.0*

NEIC 05 16:17:19.8±0.8**, 19°.376N**±0°.006×**155°.245W**±0°.007**, h4**^{km}±2^{km}**, Error ellipse: s-maj=1.2km s-min=0.7km az=135.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUH	**Pauahi**	**0.03**	**95**		Pg	16 17 20.2	-0.5
PUH				IAML		16 17 20.9	
	comp=E,18µm,0.2s						
KKO	**Keanakako`i**	**0.03**	**317**		Pg	16 17 20.3	-0.4
KKO				IAML		16 17 20.9	
	comp=E,11µm,0.2s						
KKO				IAML		16 17 21.1	
	comp=N,9µm,0.4s						
RIM	**Rim**	**0.03**	**304**		Pg	16 17 20.5	-0.3
RIM				IAML		16 17 21.3	
	comp=E,13µm,0.1s						
BYL	**Byron's Ledge**	**0.04**	**338**		Pg	16 17 20.7	-0.2
SDHHI	**Sand Hill**	**0.05**	**286**		Pg	16 17 21.0	0.0
HATHI	**Halema‘uma‘u T**	**0.05**	**342**		Pg	16 17 20.9	-0.1
NPH	**North Pit**	**0.05**	**316**		Pg	16 17 20.8	-0.2
NPH				IAML		16 17 21.7	
	comp=N,10µm,0.4s						
NPH				IAML		16 17 22.0	
	comp=E,10µm,0.3s						
OBL	**Observatory Le**	**0.06**	**318**		Pg	16 17 21.1	0.0
SBLHI	**Steaming Bluff**	**0.06**	**336**		Pg	16 17 20.9	-0.2
SBLHI				IAML		16 17 22.1	
	comp=N,8µm,0.2s						
UWB	**Uwekahuna B**	**0.06**	**327**		Pg	16 17 20.9	-0.2
WRMHI	**West Rim**	**0.06**	**300**		Pg	16 17 23.0	+1.8
UWE	**Uwekahuna**	**0.06**	**314**		Pg	16 17 21.4	+0.2
KNHH	**Kane Nui o Ham**	**0.07**	**88**		Pg	16 17 21.2	-0.1
RSD	**Rainshed**	**0.09**	**340**		Pg	16 17 21.8	+0.1
RSD				IAML		16 17 23.4	
	comp=E,4µm,0.4s						
RSD				IAML		16 17 23.7	
	comp=N,3µm,0.3s						
HLP	**Hilina Pali**	**0.10**	**217**		Sg	16 17 23.8	+0.6
HLP	**Hilina Pali**	**0.10**	**217**	Pg	Pg	16 17 22.1	+0.3
HLP	**Hilina Pali**	**0.10**	**217**	IAML		16 17 24.6	
	comp=N,3µm,0.3s						
HLP				IAML		16 17 24.9	
	comp=E,3µm,0.2s						
STCH	**Steam Cracks**	**0.11**	**85**		Sg	16 17 23.7	+0.1
STCH	**Steam Cracks**	**0.11**	**85**	Pg	Pg	16 17 21.9	-0.2
STCH	**Steam Cracks**	**0.11**	**85**	IAML		16 17 24.8	
	comp=N,4µm,0.2s						
STCH				IAML		16 17 24.9	
	comp=E,4µm,0.2s						
NPOC	**North of Pu‘u**	**0.13**	**83**		Pg	16 17 22.2	-0.2
NPOC					Sg	16 17 24.3	+0.2
NPOC	**North of Pu‘u**	**0.13**	**83**	IAML		16 17 25.3	
	comp=N,3µm,0.3s						
NPOC				IAML		16 17 25.5	
	comp=E,3µm,0.5s						
JCUZ	**Jacuzzi**	**0.14**	**87**		Pg	16 17 22.2	-0.2
JCUZ					Sg	16 17 24.4	+0.1
JCUZ	**Jacuzzi**	**0.14**	**87**	IAML		16 17 25.3	
	comp=E,3µm,0.3s						
JCUZ				IAML		16 17 25.6	
	comp=N,4µm,0.7s						
MLH	**Mauna Loa**	**0.18**	**311**		Pg	16 17 23.5	+0.2
MLH					Sg	16 17 26.9	+1.2
MLH	**Mauna Loa**	**0.18**	**311**	IAML		16 17 27.5	
	comp=E,962nm,0.7s						
MLH				IAML		16 17 28.2	
	comp=N,874nm,0.6s						
HTC	**Hot Caves**	**0.20**	**226**		Pg	16 17 23.7	+0.1
HTC					Sg	16 17 26.2	-0.1
AIN	**Ainahou**	**0.20**	**269**		Pg	16 17 24.0	+0.3
AIN					Sg	16 17 27.8	+1.4
AIN	**Ainahou**	**0.20**	**269**	IAML		16 17 28.2	
	comp=E,2µm,0.4s						
AIN				IAML		16 17 28.4	
	comp=N,1µm,0.5s						
JOKA	**Jonika Flow**	**0.23**	**76**		Pg	16 17 23.8	-0.5
JOKA					Sg	16 17 26.9	-0.5
HMH	**Humu‘ula Sheep**	**0.32**	**315**		Pg	16 17 25.9	-0.1
HMH	**Humu‘ula Sheep**	**0.32**	**315**	IAML		16 17 31.5	
	comp=E,491nm,1.7s						
HMH				IAML		16 17 35.1	
	comp=N,333nm,0.5s						
MWH	**Moku‘aweowe**	**0.35**	**288**	Pg	Pg	16 17 26.6	-0.1
MWH				IAML		16 17 38.1	
	comp=N,970nm,1.1s						
MLOA	**Mauna Loa Obse**	**0.35**	**297**		Pg	16 17 26.2	-0.5
MLOA	**Mauna Loa Obse**	**0.35**	**297**		Sg	16 17 31.9	+0.5
MLOA	**Mauna Loa Obse**	**0.35**	**297**	IAML		16 17 34.0	
	comp=N,466nm,0.7s						
MLOA				IAML		16 17 35.4	
	comp=E,580nm,0.7s						
KHU	**Kahuku**	**0.37**	**250**		Pg	16 17 26.6	-0.4
KHU				IAML		16 17 34.1	
	comp=N,488nm,0.7s						
KHU	**Kahuku**	**0.37**	**250**		Sg	16 17 33.6	+1.7
ALEP	**Alea Permanent**	**0.41**	**294**		Pg	16 17 27.4	-0.4
ALEP					Sg	16 17 33.8	+0.6
POHA	**Pohakuloa**	**0.47**	**324**		Pg	16 17 28.5	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
POHA					Sg	16 17 35.5	+0.6
POHA	Pohakuloa	0.47	324	IAML		16 17 36.0	
	comp=N,609nm,0.3s						
POHA				IAML		16 17 36.0	
	comp=N,643nm,0.6s						
HUH	Hualalai	0.64	299	Pg	Pg	16 17 31.7	-0.3
KHLU	Kahalu`u	0.65	289		Pg	16 17 31.7	-0.5
HPAH	Hawaii Prepara	0.78	327	Pg	Pg	16 17 33.7	-1.0

*HVO **05** 16:37:16.3±0.8, 19°.382N±0°.010×155°.238W±0°.007, h3^{km}±1^{km}, ML2.2/12, ML1.8/43(NEIC), Error ellipse: s-maj=1.6km s-min=0.8km az=155.0*

NEIC 05 16:37:17.3±0.7, 19°.401N±0°.005×155°.262W±0°.009, h1^{km}±2^{km}, Error ellipse: s-maj=1.2km s-min=0.8km az=107.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKO	Keanakako`i	0.01	230	Pg	Pg	16 37 17.7	0.0
BYL	Byron's Ledge	0.01	10	Pg	Pg	16 37 17.6	-0.2
BYL					Sg	16 37 17.7	-0.4
RIM	Rim	0.01	244		Pg	16 37 17.8	0.0
NPH	North Pit	0.02	302		Pg	16 37 17.8	0.0
NPH				IAML		16 37 19.1	
	comp=N,919nm,0.4s						
HATHI	Halema‘uma‘u T	0.02	3		Pg	16 37 17.9	0.0
HATHI				IAML		16 37 19.5	
	comp=N,1µm,0.2s						
OBL	Observatory Le	0.03	309	Pg	Pg	16 37 18.0	+0.1
OBL				IAML		16 37 18.9	
	comp=N,1µm,0.6s						
OBL				IAML		16 37 19.3	
	comp=E,736nm,0.4s						
SBLHI	Steaming Bluff	0.03	348		Pg	16 37 17.7	-0.2
SBLHI				IAML		16 37 19.3	
	comp=E,1µm,0.9s						
UWB	Uwekahuna B	0.03	328		Pg	16 37 17.9	0.0
UWB				IAML		16 37 19.2	
	comp=N,718nm,2.2s						
UWB				IAML		16 37 19.6	
	comp=E,529nm,0.7s						
SDHHI	Sand Hill	0.03	249		Pg	16 37 18.1	+0.1
UWE	Uwekahuna	0.04	305		Pg	16 37 17.9	-0.2
WRMHI	West Rim	0.04	279		Pg	16 37 18.3	+0.2
PUH	Pauahi	0.05	122	Pg	Pg	16 37 17.5	-0.9
RSD	Rainshed	0.06	346		Pg	16 37 18.3	-0.3
RSD				IAML		16 37 18.6	
	comp=E,287nm,3.5s						
KNHH	Kane Nui o Ham	0.09	104		Pg	16 37 18.4	-0.7
HLP	Hilina Pali	0.11	203		Pg	16 37 18.8	-0.7
HLP				IAML		16 37 19.8	
	comp=E,440nm,3.5s						
HLP				IAML		16 37 21.6	
	comp=N,400nm,0.6s						
HLP	Hilina Pali	0.11	203		Sg	16 37 21.2	+0.3
STCH	Steam Cracks	0.13	97		Pg	16 37 19.6	-0.3
STCH				IAML		16 37 21.7	
	comp=N,272nm,0.1s						
STCH				IAML		16 37 22.0	
	comp=E,272nm,0.4s						
NPOC	North of Pu‘u	0.14	93		Pg	16 37 19.5	-0.6
NPOC				IAML		16 37 21.6	
	comp=E,468nm,1.2s						
NPOC				IAML		16 37 22.6	
	comp=N,436nm,0.8s						
MLH	Mauna Loa	0.15	308		Pg	16 37 20.6	+0.3
MLH	Mauna Loa	0.15	308	IAML		16 37 24.0	
	comp=N,221nm,3.3s						
JCUZ	Jacuzzi	0.15	96		Pg	16 37 19.6	-0.6
JCUZ				IAML		16 37 23.0	
	comp=N,341nm,1.1s						
JCUZ				IAML		16 37 23.0	
	comp=E,456nm,0.8s						
AIN	Ainahou	0.19	261		Sg	16 37 24.4	+0.9
AIN	Ainahou	0.19	261		Pg	16 37 21.1	+0.2
AIN				IAML		16 37 25.1	
	comp=N,211nm,1.8s						
AIN	Ainahou	0.19	261	IAML		16 37 23.9	
	comp=E,296nm,4.6s						
HTC	Hot Caves	0.21	218		Pg	16 37 20.9	-0.4
JOKA	Jonika Flow	0.24	82		Pg	16 37 20.9	-1.1
HMH	Humu‘ula Sheep	0.29	314		Pg	16 37 23.0	+0.1
HMH					Sg	16 37 27.9	+1.2
HMH	Humu‘ula Sheep	0.29	314	IAML		16 37 30.7	
	comp=N,144nm,4.2s						
HMH				IAML		16 37 31.1	
	comp=E,228nm,4.9s						
MWH	Moku‘aweowe	0.33	285		Pg	16 37 23.7	+0.1
MWH	Moku‘aweowe	0.33	285	IAML		16 37 25.0	
	comp=N,149nm,4.4s						
MWH				IAML		16 37 27.5	
	comp=E,165nm,1.8s						
KHU	Kahuku	0.37	245		Pg	16 37 23.7	-0.7
KHU					Sg	16 37 30.6	+1.4
ALEP	Alea Permanent	0.39	291		Pg	16 37 24.5	-0.3
POHA	Pohakuloa	0.44	324		Pg	16 37 25.5	-0.2
POHA	Pohakuloa	0.44	324	IAML		16 37 30.8	
	comp=E,74nm,1.8s						
POHA				IAML		16 37 37.8	
	comp=E,138nm,5.0s						
KHLU	Kahalu`u	0.62	288	Pg	Pg	16 37 28.6	-0.7

IDC 05 16:42:25.9±1.2, 2°.85N×128°.44E, h0^{km}, mb3.4/5, mbtmp3.4/5, Error ellipse: s-maj=52.0km s-min=20.7km az=71.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.38	166	P	P	16 47 36.5	0.0
	0.2nm,0.3s,baz=339,slow=11,SNR=7.3						
	0.2nm,0.3s						
ASAR	Alice Springs	26.89	169	P	P	16 48 08.8	0.0
	0.3nm,0.4s,baz=350,slow=7.3,SNR=24						
	0.3nm,0.4s						
CMAR	Chiang Mai Arr	32.79	300	P	P	16 49 02.6	+1.4
	0.3nm,0.5s,baz=126,slow=9.0,SNR=4.1						
	0.3nm,0.5s						
MJAR	Matsushiro Arr	34.71	14	P	P	16 49 17.1	-0.5
	0.8nm,0.9s,baz=195,slow=8.7,SNR=2.4						
	0.8nm,0.9s						
MKAR	Makanchi Array	59.25	325	P	P	16 52 28.4	-0.8
	0.2nm,0.4s,baz=120,slow=8.5,SNR=4.8						
	0.2nm,0.4s						

*SNET **05** 17:48:17.5±1.0, 13°.20N×89°.72W, h43^{km}, ML3.9*

*GCG **05** 17:48:20.4±0.3, 13°.26N×89°.86W, h44^{km}±132^{km}, MD3.8*

ISC 05 17:48:15.6±1.8, 13°.09N±0°.08×89°.72W±0°.05, h28^{km}±14^{km}, n43, σ0^{s}.53/58, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAYA	Jayaque - finc	0.62	25	eP	Pn	17 48 29.0	+0.2
JAYA				eS	Sn	17 48 37.4	-0.6
ITCA	Escuela Especi	0.73	37	eP	Pn	17 48 30.5	+0.3
ITCA				eS	Sb	17 48 39.8	+0.2
PMON	Piamonte	0.74	33	eP	Pn	17 48 30.7	+0.3
PMON				eS	Sb	17 48 40.1	+0.3
CEVE	Cerro Verde	0.74	8	eP	Pn	17 48 30.6	+0.1
CEVE				eS	Sn	17 48 40.8	-0.3
SBLS	San Blas	0.76	7	eP	Pn	17 48 30.8	+0.1
SNET	Serv Nac Est T	0.77	39	eP	Pn	17 48 30.8	+0.1
SNET				eS	Sb	17 48 40.6	0.0
BOQS	Boqueron	0.78	34	eP	Pn	17 48 31.4	+0.4
BOQS				eS	Sb	17 48 41.3	+0.2
CEDA	San Andres	0.78	24	eP	Pn	17 48 31.1	+0.2
CEDA				eS	Sb	17 48 41.2	+0.2
SEMO	Seminario San	0.78	38	eP	Pn	17 48 31.1	+0.1
UEES	Universidad Ev	0.78	37	eP	Pn	17 48 31.3	+0.3
UTEC	Universidad Te	0.80	40	eP	Pn	17 48 31.2	+0.2
RTR	El Retiro	0.81	5	eP	Pn	17 48 31.6	+0.2
UESS	Universidad de	0.81	39	eP	Pn	17 48 31.8	+0.5
UESS				eS	Sb	17 48 42.2	+0.3
NUBE	Las Nubes	0.81	356	eP	Pn	17 48 31.4	0.0
LFRS	El Faro	0.84	50	eP	Pn	17 48 32.2	+0.5
LFU	La Fuente	0.89	42	eP	Pn	17 48 33.0	+0.7
LFU				eS	Sb	17 48 43.9	-0.1
UNIC	Universidad Ca	0.91	11	eP	Pn	17 48 32.8	+0.1
LOAL	Lomas de Alarc	0.91	357	eP	Pn	17 48 33.0	+0.3
LBRS	Las Brisas	0.93	46	eP	Pn	17 48 33.8	+0.9
SLOZ	Alcaldia de Sa	0.94	356	eP	Pn	17 48 33.3	+0.3
PAVA	Las Pavas	0.99	51	eP	Pb	17 48 34.7	+0.4
SNVI	San Vicente	1.01	59	eP	Pb	17 48 35.0	+0.3
SNVI				eS	Sb	17 48 47.4	-0.2
TECO	Alcaldia de Te	1.02	64	eP	Pb	17 48 34.8	0.0
TECO				eS	Sb	17 48 47.6	-0.3
UESV	Universidad de	1.06	59	eP	Pb	17 48 35.7	+0.2
SCLA	Alcaldia de Sa	1.15	58	eP	Pb	17 48 36.9	0.0
COEB	Comit de Eme	1.23	70	eP	Pb	17 48 38.1	-0.3
PQSS	Presa 15 de Se	1.25	65	eP	Pb	17 48 38.3	-0.4
TECA	Tecapa	1.26	71	eP	Pb	17 48 38.4	-0.4
P5NO	Presa 5 de nov	1.30	46	eP	Pn	17 48 38.4	+0.5
LLGN	La Laguna	1.31	35	eP	Pn	17 48 38.6	+0.4
MTO3	Montecristo	1.35	15	eP	Pn	17 48 39.1	+0.2
PACA	Pacayal	1.42	74	eP	Pb	17 48 41.4	-0.1
LCY	Lacayo	1.43	76	eP	Pb	17 48 41.5	-0.2
LCY				eS	Sb	17 48 59.6	-0.1
RANC	El Ranchito	1.44	76	eP	Pb	17 48 41.5	-0.4
VSM	San Miguel	1.45	76	eP	Pb	17 48 41.9	-0.3
VSM				eS	Sb	17 49 00.9	+0.5
ESQI	Esquipulas	1.51	14	eP	Pn	17 48 41.3	+0.4
NBG	Las Nubes	1.61	338	eP	Pb	17 48 44.4	-0.5
FAGO	Alcalda de S	1.69	69	eP	Pn	17 48 44.0	+0.7
FUG	Fuego 3	1.74	321	eP	Pb	17 48 45.7	-1.3
FUG				eS	Sn	17 49 05.4	-0.1
LCND	La Caada	1.80	83	eP	Pb	17 48 46.6	-1.4
CNCH	Conchagua	1.85	84	eP	Pb	17 48 47.4	-1.5
STG3	Santiaguito 3,	2.41	312	eP	Pn	17 48 55.2	+1.7
STG3				eS	Sn	17 49 22.4	+0.2
TGUH	Tegucigalpa,Un	2.57	68	eP	Pn	17 48 56.1	+0.5

*IDC **05** 17:50:50.1±2.9, 21°.83N×143°.90E, h0^{km}, mb3.6/6, mbtmp3.8/7, ML4.0/1, Error ellipse: s-maj=128.3km s-min=18.8km az=80.0*

ISC 05 17:50:55.0±2.6, 21°.8N±0°.2×144°.0E±0°.8, h35^{km}, n7, σ1^{s}.21/8, mb3.9/5, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	5.48	343	Pn	Pn	17 52 13.4	-0.7
	4.8nm,0.3s,baz=124,slow=21,SNR=1.5						
JCJ				Sn	Sn	17 53 16.3	+0.4
	4.6nm,0.3s,baz=303,slow=22,SNR=1.7						
	322nm,1.4s						
KSRS	Korea Array	20.84	322	P	P	17 55 34.1	+0.4
	1.3nm,0.8s,baz=127,slow=13,SNR=2.8						
	1.3nm,0.8s						
WRA	Warramunga Arr	42.58	193	P	P	17 58 48.1	+0.4
	0.4nm,0.3s,baz=14,slow=8.4,SNR=14						
	0.4nm,0.3s						
ASAR	Alice Springs	46.28	193	P	P	17 59 16.8	-0.5
	0.2nm,0.4s,baz=10,slow=8.0,SNR=15						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	57.92	317	P	P	18 00 42.0	-1.6
	0.3nm,0.2s,baz=90,slow=7.6,SNR=1.9						
	0.3nm,0.2s						
BVAR	Borovoye Array	63.04	319	P	P	18 01 20.4	+1.9
	0.4nm,0.4s,baz=91,slow=7.8,SNR=1.9						
	0.4nm,0.4s						
FINES	FINESS Array B	83.36	335	P	P	18 03 18.4	+0.2
	1.5nm,1.0s,baz=83,slow=6.0,SNR=4.6						
	1.5nm,1.0s						

*TEH **05** 18:06:30.8, 26°.81N×55°.96E, h6^{km}±65^{km}, ML2.8*

*OMAN **05** 18:06:34.9±0.1, 26°.86N×56°.07E, h4^{km}, ml2.7/13, Error ellipse: s-maj=1.5km s-min=1.3km az=226.0*

ISC 05 18:06:33.7±1.4, 26°.91N±0°.03×56°.01E±0°.08, h5^{km}±11^{km}, n21, σ0^{s}.77/32, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENO	Geno	0.51	16	Pg	Pg	18 06 42.8	-0.7
IBND	Bandar-abas	0.71	41	Pg	Pb	18 06 47.8	-0.8
IBND				Sg	Sb	18 06 59.0	+0.3
SHME	Shamm	0.87	172	P	Pg	18 06 50.3	0.0
SHME				S	Sg	18 07 02.9	+1.3
BANOM	Banah	1.02	165	P	Pg	18 06 52.6	-0.6
BANOM				S	Sg	18 07 06.9	+0.5
UMQ	Umm Al-Quwin	1.42	193	P	Pg	18 07 01.0	+0.1
UMQ				S	Sg	18 07 20.5	+1.3
MASF	Masafi	1.54	175	P	Pn	18 07 01.1	-0.8
	SNR=17						
MASF				S	Sb	18 07 22.9	+0.3
MDH	Madha	1.63	171	P	Pn	18 07 02.1	-0.9
	SNR=15						
MDH				S	Sn	18 07 23.7	-0.7
JASK	Jask - Hormozg	1.96	122	P	Pn	18 07 08.0	+0.4
JASK	Jask - Hormozg	1.96	122	Pn	Pn	18 07 06.2	-1.4
UOSS	Minazif	1.97	175	P	Pn	18 07 08.3	+0.6
UOSS				S	Sn	18 07 32.8	0.0
HATD	Hatta, Dubai	2.08	177	P	Pb	18 07 11.0	-0.9
HATD				S	Sb	18 07 37.1	-1.0
FAQ	Al Faqa, Dubai	2.19	190	P	Pn	18 07 10.0	-0.8
FAQ				S	Sb	18 07 41.4	+0.1
ASHO	Ashiyiah	2.22	179	P	Pn	18 07 10.7	-0.6
	SNR=8.2						
ASUD	Al Ashush, Dub	2.36	195	P	Pn	18 07 13.1	0.0
NGRK	Negar Kerman	2.79	13	Pn	Pn	18 07 19.8	+0.4
SOHO	SOHO	2.81	170	P	Pn	18 07 19.7	+0.4
ALNE	Al Ain	2.85	185	P	Pn	18 07 20.4	+0.5
KBAM	BAM	3.09	44	Pn	Pn	18 07 24.3	+1.0
ARQ	Araqi	3.59	172	P	Pn	18 07 30.7	+0.6
	SNR=7.1						
BSY	Bisya	4.29	165	P	Pn	18 07 40.5	+0.8
BSY				S	Sn	18 08 30.9	+0.7
WSAR	Wadi Sarin	4.36	146	P	Pn	18 07 40.9	+0.2
	SNR=10						
WSAR				S	Sn	18 08 32.9	+1.0

*JMA **05** 18:19:51.0±0.2, 37°.3N±0°.6×14°2E±°, h36^{km}, MV3.1/27, E OFF FUKUSHIMA PREF*

*IDC **05** 18:19:51.9±3.7, 36°.62N×142°.14E, h0^{km}, mb3.3/2, mbtmp3.2/3, ML2.3/1, Error ellipse: s-maj=70.9km s-min=33.7km az=30.0*

ISC 05 18:19:51.1±1.5, 37°.32N±0°.06×142°.12E±0°.08, h24^{km}, n20, σ1^{s}.24/20, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	0.99	273	P	Pb	18 20 09.5	-0.1
JFK				eS	Sn	18 20 22.5	-0.3
JMST	Minamisoumatoc	1.06	293	P	Pb	18 20 10.3	-0.3
JMST				eS	Sn	18 20 24.6	+0.3
ONAJ	Iwakimizuishiy	1.07	259	P	Pb	18 20 10.5	-0.5
ONAJ				eS	Sb	18 20 24.3	-0.3
JIKH	Ishinomakikobu	1.11	333	P	Pb	18 20 11.4	-0.3
JMM	Marumori	1.18	298	P	Pb	18 20 12.5	-0.3
JMM				eS	Sb	18 20 27.9	+0.2
JIO	Ouri	1.28	332	P	Pb	18 20 13.7	-0.8
JOTO	OTAMA OYAMA	1.44	280	P	Pb	18 20 17.1	-0.2
JOTO				S	Sb	18 20 34.8	-0.3
JOU	Okura	1.55	313	P	Pb	18 20 18.5	-0.6
JMK	Ichinoseki	1.77	337	P	Pb	18 20 21.3	-1.6
JYK	Kaneyama	2.11	320	eP	Pn	18 20 26.4	+1.5
JOM	Ohasama	2.24	343	eP	Pn	18 20 28.2	+1.5
MJAR	Matsushiro Arr	3.23	257	Pn	Pn	18 20 42.2	+2.0
	0.3nm,0.3s,baz=90,slow=15,SNR=19						
MJAR				Sn	Sb	18 21 22.9	-3.6
	0.2nm,0.3s,baz=86,slow=29,SNR=4.6						
	1.8nm,0.3s						
H11N2	WAKE ISLAND Hy	27.82	122	T	T	18 54 46.8	
	baz=315,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	27.83	122	T	T	18 54 51.2	
	baz=315,slow=75,SNR=7.7						
H11N3	WAKE ISLAND Hy	27.84	122	T	T	18 54 49.0	
	baz=315,slow=75,SNR=5.0						
H11S1	WAKE ISLAND Hy	28.55	124	T	T	18 55 47.7	
	baz=317,slow=75,SNR=6.4						
H11S3	WAKE ISLAND Hy	28.55	124	T	T	18 55 25.8	
	baz=317,slow=75,SNR=5.8						
H11S2	WAKE ISLAND Hy	28.57	124	T	T	18 55 27.8	
	baz=317,slow=75,SNR=5.9						
WRA	Warramunga Arr	57.43	189	P	P	18 29 37.3	-0.5
	0.4nm,0.9s,baz=3.5,slow=7.2,SNR=1.5						
	0.4nm,0.9s						
ASAR	Alice Springs	61.15	189	P	P	18 30 03.5	0.0
	0.2nm,0.9s,baz=0.2,slow=6.5,SNR=2.0						
	0.2nm,0.9s						

WEL 05 18:24:15.2±0.5, 42°S±3°×17°3E±°, h5^{km}, M2.1/4, ML2.5/9, MLv2.1/4, Error ellipse: s-maj=0.0km s-min=0.0km az=145.6, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHZ	Kahutara	0.12	61	P	Pg	18 24 17.7	0.0
KHZ				S	Sg	18 24 19.9	+0.6
GVZ	Greta Valley S	0.56	208	P	Pg	18 24 26.1	+0.1
GVZ				S	Sb	18 24 34.7	-1.2
THZ	Tophouse	0.80	333	P	Pg	18 24 30.5	-0.1
THZ				S	Sg	18 24 41.2	+0.3
BSWZ	Blackbirch Sta	0.84	25	P	Pg	18 24 31.6	+0.3
LTZ	Lake Taylor	0.89	249	P	Pg	18 24 31.7	-0.5
TUWZ	Tuamarina	1.12	22	P	Pg	18 24 36.6	-0.1
MRNZ	Matariki Terra	1.18	336	P	Pg	18 24 37.5	-0.2
NNZ	Nelson	1.26	359	P	Pg	18 24 38.7	-0.6
MQZ	McQueen’s Vall	1.35	204	P	Pn	18 24 37.2	-3.5
DSZ	Denniston Nort	1.39	301	P	Pn	18 24 40.8	-0.5
TCW	Tory Channel	1.42	28	P	Pn	18 24 40.8	-0.9
TKNZ	Takaka Hill	1.48	347	P	Pn	18 24 42.4	0.0
QRZ	Quartz Range	1.77	338	P	Pn	18 24 46.9	+0.4
TUVZ	Tukino	3.63	29	P	Pn	18 25 13.8	+1.6
WHZ	Wether Hill Ro	5.20	227	P	Pn	18 25 32.5	-1.1

IDC 05 18:34:55.8±2.1, 2°.06N×124°.87E, h0^{km}, mb3.3/3, mbtmp3.4/3, Error ellipse: s-maj=205.1km s-min=28.1km az=64.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.76	157	P	P	18 40 10.6	+0.4
	0.7nm,0.6s,baz=335,slow=10,SNR=6.0						
	0.7nm,0.6s						
ASAR	Alice Springs	27.04	162	P	P	18 40 39.9	-0.2
	0.1nm,0.3s,baz=345,slow=7.9,SNR=7.0						
	0.1nm,0.3s						
MKAR	Makanchi Array	57.89	327	P	P	18 44 49.4	-0.2
	0.2nm,0.4s,baz=137,slow=7.6,SNR=2.6						
	0.2nm,0.4s						

IDC 05 18:49:17.9±15.0, 55°.57S×128°.39W, h0^{km}, mb3.7/3, mbtmp3.7/3, MS3.5/10, Error ellipse: s-maj=1016.0km s-min=47.6km az=138.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	31.60	34	LR	LR	19 03 48.8	
	comp=Z,28nm,21.2s,baz=222,slow=28						
PMSA	Palmer Station	31.89	133	LR	LR	19 05 21.5	
	comp=Z,64nm,18.6s,baz=292,slow=30						
VNDA	Vanda	32.21	203	LR	LR	19 07 23.2	
	comp=Z,108nm,18.2s,baz=125,slow=34						
TBI	Tubuai	35.76	326	eLR	LR	19 05 28.2	
	comp=Z,664nm,28.0s						
TBI				eLR	LR	19 05 28.3	
	comp=Z,3µm,23.5s						
TBI	Tubuai	35.76	326	eT	T	19 33 27.0	
	17nm,0.3s						
RPZ	Rata Peaks	39.72	261	LR	LR	19 08 48.3	
	comp=Z,141nm,19.8s,baz=121,slow=30						
PLCA	Paso Flores	40.12	93	LR	LR	19 09 18.3	
	comp=Z,67nm,20.1s,baz=199,slow=30						
H03S2	Juan Fernandez	40.23	78	T	T	19 39 41.1	
	baz=221,slow=74,SNR=25						
H03S1	Juan Fernandez	40.24	78	T	T	19 39 42.2	
	baz=221,slow=74,SNR=22						
H03S3	Juan Fernandez	40.25	78	T	T	19 39 41.8	
	baz=221,slow=74,SNR=31						
H03N3	Juan Fernandez	40.52	78	T	T	19 40 03.1	
	baz=224,slow=72,SNR=116						
H03N2	Juan Fernandez	40.52	78	T	T	19 40 14.1	
	baz=224,slow=72,SNR=100						
H03N1	Juan Fernandez	40.53	78	T	T	19 39 58.2	
	baz=224,slow=72,SNR=180						
PPT2	Papeete2	41.20	328	eLR	LR	19 08 00.4	
	comp=Z,104nm,26.2s						
PPT2				eLR	LR	19 08 00.5	
	comp=Z,169nm,26.8s						
RAR	Rarotonga	41.54	313	LR	LR	19 09 14.3	
	comp=Z,39nm,20.6s,baz=156,slow=29						
VAH	Vaihoa	42.89	332	eT	T	19 42 22.9	
	25nm,0.3s						
ATAH	Atahualpa	62.36	59	LR	LR	19 19 18.8	
	comp=Z,31nm,21.1s,baz=218,slow=29						
STKA	Stephens Creek	64.38	251	LR	LR	19 22 18.2	
	comp=Z,58nm,18.2s,baz=205,slow=31						
ASAR	Alice Springs	75.01	250	P	P	19 01 01.2	+0.1
	1.1nm,0.9s,baz=133,slow=6.7,SNR=6.7						
ASAR				LR	LR	19 29 54.5	
	comp=Z,57nm,19.4s,baz=112,slow=32						
	1.1nm,0.9s						
H01W1	Cape Leeuwin H	75.32	229	T	T	20 24 40.6	
	baz=148,slow=76,SNR=11						
H01W2	Cape Leeuwin H	75.33	229	T	T	20 24 41.7	
	baz=148,slow=76,SNR=11						
H01W3	Cape Leeuwin H	75.34	229	T	T	20 24 41.8	
	baz=148,slow=76,SNR=10						
WRA	Warramunga Arr	77.79	253	P	P	19 01 16.4	-0.5
	0.9nm,1.0s,baz=143,slow=5.3,SNR=2.2						
	0.9nm,1.0s						
TXAR	Lajitas Array	87.17	21	P	P	19 02 05.2	-0.3
	0.1nm,0.5s,baz=193,slow=3.7,SNR=1.8						
	0.1nm,0.5s						
H11S2	WAKE ISLAND Hy	91.77	301	T	T	20 43 59.1	
	baz=148,slow=75,SNR=7.0						
H11S3	WAKE ISLAND Hy	91.78	301	T	T	20 43 53.8	
	baz=148,slow=75,SNR=6.8						
H11S1	WAKE ISLAND Hy	91.78	301	T	T	20 43 57.8	
	baz=148,slow=75,SNR=7.2						
H11N3	WAKE ISLAND Hy	92.71	301	T	T	20 44 59.0	
	baz=149,slow=77,SNR=3.7						
H11N1	WAKE ISLAND Hy	92.72	301	T	T	20 45 00.7	
	baz=149,slow=77,SNR=3.9						
H11N2	WAKE ISLAND Hy	92.73	301	T	T	20 45 01.8	
	baz=149,slow=77,SNR=4.0						
BOSA	Boshof	93.17	157	LR	LR	19 41 02.5	
	comp=Z,29nm,18.1s,baz=192,slow=33						
H02S1	DAWSON INLET T	108.46	357	T	T	21 04 48.4	
	SNR=3.1						
SONM	Songino Array	145.98	280	PKPbc	PKPbc	19 08 58.5	-0.1
	0.8nm,0.7s,baz=134,slow=2.9,SNR=4.8						

*NEIC **05** 18:50:08.5±0.9, 19°.20N±0°.05×66°.73W±0°.04, h32^{km}±10^{km}, ML2.8/30, Md3.3/31(RSPR), Error ellipse: s-maj=8.0km s-min=3.9km az=148.0*

*RSPR **05** 18:50:10.1, 19°.20N×66°.68W, h37^{km}±7^{km}, MD3.3/13*

ISC 05 18:50:07.6±1.6, 19°.18N±0°.08×66°.65W±0°.03, h28^{km}, n60, σ0^{s}.80/64, 12C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMPR	Esperanza - Ma	0.71	171	⇓eP	Pn	18 50 22.6	+0.8
EMPR	Esperanza - Ma	0.71	171	eS	Sn	18 50 32.6	+0.8
EMPR	Esperanza - Ma	0.71	171		Pn	18 50 22.6	+0.8
EMPR					Sn	18 50 32.6	+0.8
EMPR	Esperanza - Ma	0.71	171	IAML		18 50 38.3	
	comp=N,550nm,0.6s						
EMPR				IAML		18 50 38.6	
	comp=E,672nm,0.4s						
AGPR	Aguadilla, PR	0.84	212	⇑eP	Pb	18 50 23.2	-0.4
AGPR	Aguadilla, PR	0.84	212	eS	Sn	18 50 33.6	-1.3
AGPR	Aguadilla, PR	0.84	212		Pb	18 50 23.2	-0.4
AGPR					Sn	18 50 33.6	-1.3
AGPR	Aguadilla, PR	0.84	212	IAML		18 50 41.5	
	comp=N,206nm,0.3s						
AOPR	Arecibo Observ	0.84	187	⇓eP	Pb	18 50 24.1	+0.5
AOPR	Arecibo Observ	0.84	187	eS	Sn	18 50 35.4	+0.4
AOPR	Arecibo Observ	0.84	187		Pb	18 50 24.1	+0.5
AOPR					Sn	18 50 35.4	+0.4
AOPR	Arecibo Observ	0.84	187	IAML		18 50 43.4	
	comp=N,496nm,0.6s						
UUPR	Utuado, UPR, P	0.93	184		Pb	18 50 25.5	+0.4
GCPR	Guaynabo City	1.02	148	⇑eP	Pb	18 50 27.4	+0.7
GCPR	Guaynabo City	1.02	148	eS	Sb	18 50 40.0	+0.3
GCPR	Guaynabo City	1.02	148		Pb	18 50 27.4	+0.7
GCPR					Sb	18 50 40.0	+0.3
GCPR	Guaynabo City	1.02	148	IAML		18 50 42.5	
	comp=N,137nm,0.3s						
PRSN	Puerto Rico Se	1.07	206		Pb	18 50 26.3	-1.2
LSP	Las Mesas	1.08	203	⇓eP	Pb	18 50 27.5	-0.3
LSP	Las Mesas	1.08	203		Pb	18 50 27.5	-0.3
CELP	Cerrillos	1.10	177	⇑eP	Pb	18 50 27.9	-0.2
CELP	Cerrillos	1.10	177	eS	Sb	18 50 41.9	-0.2
CELP	Cerrillos	1.10	177		Pb	18 50 27.9	-0.2
CELP					Sb	18 50 41.9	-0.2

IDE	Isla Desecheo	1.11	225	⇑*e*P	Pb	18 50 27.6	-0.6
IDE	Isla Desecheo	1.11	225	*e*S	Sb	18 50 42.1	-0.2
IDE	Isla Desecheo	1.11	225		Pb	18 50 27.6	-0.6
IDE					Sb	18 50 42.1	-0.2
OBIP	Obispado Ponce	1.14	178	⇑*e*P	Pb	18 50 27.7	-0.9
OBIP	Obispado Ponce	1.14	178	*e*S	Sn	18 50 41.3	-1.0
OBIP	Obispado Ponce	1.14	178		Pb	18 50 27.7	-0.9
OBIP					Sn	18 50 41.3	-1.0
OBIP	Obispado Ponce	1.14	178	IAML		18 50 46.2	
	comp=N,133nm,0.6s						
SJG	San Juan	1.17	156		Pb	18 50 30.1	+1.0
SJG				IAML		18 50 48.0	
	comp=N,151nm,0.4s						
SJG				IAML		18 50 49.9	
	comp=N,112nm,0.2s						
CBYP	Canovanas	1.18	140	⇑*e*P	Pb	18 50 29.4	+0.1
CBYP	Canovanas	1.18	140	*e*S	Sb	18 50 44.8	+0.5
CBYP	Canovanas	1.18	140		Pb	18 50 29.4	+0.1
CBYP					Sb	18 50 44.8	+0.5
GBPR	Guanica, Bosqu	1.22	190	⇓*e*P	Pb	18 50 30.0	-0.1
GBPR	Guanica, Bosqu	1.22	190	*e*S	Sb	18 50 45.5	0.0
GBPR	Guanica, Bosqu	1.22	190		Pb	18 50 30.0	-0.1
GBPR					Sb	18 50 45.5	0.0
CRPR	Cabo Rojo, PR	1.25	201	⇑*e*P	Pb	18 50 29.8	-0.7
CRPR	Cabo Rojo, PR	1.25	201	*e*S	Sb	18 50 45.2	-1.0
CRPR	Cabo Rojo, PR	1.25	201		Pb	18 50 29.8	-0.7
CRPR					Sb	18 50 45.2	-1.0
CRPR	Cabo Rojo, PR	1.25	201	IAML		18 50 52.0	
	comp=E,126nm,0.5s						
CRPR				IAML		18 50 53.9	
	comp=N,131nm,0.5s						
MLPR	Magueyes Islan	1.27	197	⇑*e*P	Pb	18 50 30.2	-0.6
MLPR	Magueyes Islan	1.27	197	*e*S	Sb	18 50 45.4	-1.3
MLPR	Magueyes Islan	1.27	197		Pb	18 50 30.2	-0.6
MLPR					Sb	18 50 45.4	-1.3
MLPR	Magueyes Islan	1.27	197	IAML		18 50 46.9	
	comp=E,102nm,0.3s						
MLPR				IAML		18 50 51.2	
	comp=N,99nm,1.2s						
HUMP	Col San Antoni	1.28	144	⇑*e*P	Pb	18 50 31.0	-0.1
HUMP	Col San Antoni	1.28	144	*e*S	Sb	18 50 46.9	-0.3
HUMP	Col San Antoni	1.28	144		Pb	18 50 31.0	-0.1
HUMP					Sb	18 50 46.9	-0.3
HUMP	Col San Antoni	1.28	144	IAML		18 50 48.6	
	comp=E,247nm,0.2s						
HUMP				IAML		18 50 48.9	
	comp=N,427nm,0.3s						
IGPR	InterUniversit	1.32	157	⇑*e*P	Pb	18 50 31.4	-0.3
IGPR	InterUniversit	1.32	157	*e*S	Sb	18 50 47.6	-0.6
MTP	Monte Pirata	1.50	136	⇑*e*P	Pb	18 50 33.9	-0.9
MTP	Monte Pirata	1.50	136	*e*S	Sb	18 50 52.3	-1.1
MTP	Monte Pirata	1.50	136		Pb	18 50 33.9	-0.9
MTP					Sb	18 50 52.3	-1.1
MTP	Monte Pirata	1.50	136	IAML		18 50 53.4	
	comp=E,83nm,0.2s						
CUPR	Culebra, Puert	1.56	124	⇑*e*P	Pb	18 50 34.7	-1.1
CUPR	Culebra, Puert	1.56	124	*e*S	Sb	18 50 53.5	-1.6
CUPR	Culebra, Puert	1.56	124		Pb	18 50 34.7	-1.1
CUPR					Sb	18 50 53.5	-1.6
CUPR	Culebra, Puert	1.56	124	IAML		18 50 54.3	
	comp=E,65nm,0.3s						
SDDR	Presa de Saban	4.39	268	Pn	Pn	18 51 14.4	+1.9

*NOU **05** 19:14:05.7, 41°.94S×174°.15E, h0^{km}, MLv3.8/7, Cook Strait, New Zealand*
*WEL **05** 19:14:06.8±0.4, 42°S±2°×17°4E±°, h10^{km}±3^{km}, M3.2/15, ML3.5/15, MLv3.2/15, Error ellipse: s-maj=0.0km s-min=0.0km az=81.5, confirmed*
ISC 05 19:14:06.3±1.0, **41°.84S**±0°.04×**174°.19E**±0°.03, **h16**^{km}±6^{km}, **n55**, σ1^{s}35/60, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.09	11	P	Pg	19 14 09.8	+0.1
CMWZ				S	Sg	19 14 12.7	+0.7
BSWZ	Blackbirch Sta	0.27	298	P	Pg	19 14 11.6	-0.5
BSWZ				S	Sg	19 14 15.5	-0.6
TUWZ	Tuamarina	0.45	336	P	Pg	19 14 14.4	-1.0
TUWZ				S	Sg	19 14 20.2	-1.3
TCW	Tory Channel	0.63	6	P	Pg	19 14 17.6	-1.1
TCW				S	Sg	19 14 25.4	-1.8
SNZO	South Karori	0.66	36	P	Pg	19 14 19.3	+0.1
KHZ	Kahutara	0.75	220	P	Pn	19 14 23.5	+1.3
KHZ				S	Sn	19 14 35.5	+2.2
PLWZ	Palliser	0.84	72	P	Pb	19 14 23.6	+1.0
NNZ	Nelson	0.87	315	P	Pg	19 14 21.9	-1.3
MSWZ	Moikau Station	0.90	62	P	Pb	19 14 25.0	+1.5
CAW	Cannon Point	0.98	42	P	Pg	19 14 25.1	-0.3
DUWZ	D’Urville Isla	1.06	349	P	Pg	19 14 24.8	-1.9
KIW	Kapiti Island	1.12	29	P	Pg	19 14 26.7	-1.2
MTW	Mount Morrison	1.20	56	P	Pg	19 14 28.2	-1.2
TRWZ	Traveller	1.21	69	P	Pg	19 14 28.2	-1.4
TKNZ	Takaka Hill	1.23	311	P	Pg	19 14 28.5	-1.5
OGWZ	Otaki Gorge	1.26	36	P	Pg	19 14 29.4	-1.2
HOWZ	Holdsworth Sta	1.37	47	P	Pn	19 14 30.5	-0.3
TMWZ	Te Maipa	1.47	61	P	Pn	19 14 31.7	-0.5
MRZ	Mangatainoka R	1.58	42	P	Pn	19 14 33.4	-0.1
QRZ	Quartz Range	1.61	308	P	Pn	19 14 34.9	+0.9
TIWZ	Tintock	1.66	51	P	Pn	19 14 34.6	-0.2
DSZ	Denniston Nort	1.79	272	P	Pb	19 14 38.3	-0.3
PRWZ	Pori Road	1.86	47	P	Pn	19 14 37.0	-0.5
POWZ	Post Office Ro	1.88	40	P	Pn	19 14 37.5	-0.1
BFZ	Birch Farm	1.93	54	P	Pn	19 14 36.4	-2.1
DVHZ	Dannevirke	2.15	45	P	Pn	19 14 40.4	-1.0
WAZ	Wanganui	2.17	16	P	Pn	19 14 44.1	+2.4
MQZ	McQueen’s Vall	2.18	211	P	Pn	19 14 41.3	-0.5
TSZ	Takapari Road	2.23	38	P	Pn	19 14 42.1	-0.5
PNHZ	Pukenui	2.46	39	P	Pn	19 14 44.9	-0.8
PREZ	Palmer Road	2.50	359	P	Pb	19 14 50.2	-0.5
KHEZ	Kahui Hut	2.55	357	P	Pn	19 14 50.0	+3.0
KHEZ	Kahui Hut	2.55	357	P	Pb	19 14 50.6	-1.1
NEZ	North Egmont	2.57	358	P	Pb	19 14 51.9	-0.1
MTVZ	Mangateitei	2.64	22	P	Pn	19 14 49.9	+1.6
PKVZ	Pokaka	2.70	19	P	Pn	19 14 50.6	+1.5
MOVZ	Moawhango	2.71	27	P	Pn	19 14 49.2	0.0
WNVZ	Wahianoa	2.73	24	P	Pn	19 14 50.4	+0.8
TRVZ	Turoa	2.74	23	P	Pn	19 14 50.8	+1.0
BHHZ	Black Hill Sta	2.75	32	P	Pn	19 14 49.9	+0.2
VRZ	Vera Road	2.75	9	P	Pn	19 14 51.5	+1.8
WHVZ	Whangaehu Hut	2.77	23	P	Pn	19 14 51.1	+0.9
FWVZ	Far West T-bar	2.78	22	P	Pn	19 14 51.5	+1.1
TUVZ	Tukino	2.80	24	P	Pn	19 14 51.4	+0.8
NGZ	Ngauruhoe	2.87	22	P	Pn	19 14 52.5	+1.0
NNVZ	North Ngauruho	2.92	22	P	Pn	19 14 53.2	+1.1
ETVZ	East Tongariro	2.94	24	P	Pn	19 14 53.2	+0.7
TMVZ	Te Maari	2.96	23	P	Pn	19 14 53.4	+0.7
KRVZ	Karewarewa	2.96	22	P	Pn	19 14 54.1	+1.4
NTVZ	North Tongarir	2.96	23	P	Pn	19 14 53.6	+0.8
RPZ	Rata Peaks	2.97	230	P	Pn	19 14 52.8	0.0
BKZ	Black Stump Fm	3.20	34	P	Pn	19 14 58.8	+2.9
HIZ	Hauiti	3.36	9	P	Pn	19 15 01.6	+3.5
HIZ	Hauiti	3.36	9	P	Pn	19 15 00.7	+2.6
ODZ	Otahua Downs	4.11	218	P	Pn	19 15 08.3	-0.1

*NEIC **05** 19:14:49.5±1.7, 37°.75N±0°.01×113°.14W±0°.02, h5^{km}±10^{km}, Error ellipse: s-maj=2.7km s-min=1.4km az=114.0*
*UUSS **05** 19:14:49.5±1.6, 37°.76N±0°.01×113°.15W±0°.02, h4^{km}±7^{km}, ML3.3/16, ML3.4/92(NEIC), Error ellipse: s-maj=2.6km s-min=2.1km az=97.0*
*IDC **05** 19:14:50.9±0.9, 37°.93N×113°.05W, h0^{km}, mb3.0/1, mbtmp2.9/6, ML3.1/5, Error ellipse: s-maj=12.1km s-min=7.8km az=32.0*
ISC 05 19:14:49.8±0.8, **37°.75N**±0°.02×**113°.13W**±0°.02, **h10**^{km}, **n63**, σ**1^{s}00**/67, **Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARUT	Antelope Range	0.25	278		Pg	19 14 54.4	-0.6
BHU	Blowhard Mount	0.27	126		Pg	19 14 55.0	-0.5
BHU					Sg	19 14 59.8	+0.6
DWU	Dry Willow Pea	0.37	16		Pg	19 14 56.6	-0.7
ZNPU	Zion National	0.40	179		Pg	19 14 57.7	0.0
ZNPU					Sg	19 15 03.2	+0.2
PKCU	Pink Cliffs	0.72	115	Pg	Pg	19 15 02.8	-1.0
PKCU				IAML		19 15 24.3	
	comp=E,2µm,0.4s						
PKCU				IAML		19 15 24.7	
	comp=N,1µm,0.5s						
LCMT	Little Creek M	0.74	187		Pg	19 15 03.2	-1.1
LCMT				Sg	Sg	19 15 12.7	-1.2
LCMT				IAML		19 15 22.7	
	comp=E,900nm,0.2s						
LCMT				IAML		19 15 23.2	
	comp=N,939nm,0.1s						
KNB	Kanab	0.77	161		Pg	19 15 03.9	-0.9
NMUT	North Mineral	0.80	16		Pg	19 15 04.5	-0.7
MTPU	Mount Pierson	0.80	69		Pg	19 15 05.1	-0.3
MTPU				Sg	Sg	19 15 16.3	+0.4
MTPU				IAML		19 15 16.7	
	comp=N,1µm,0.5s						
EKU	East Kanab	0.84	143		Pg	19 15 05.5	-0.6
IMU	Iron Mountain	0.88	359		Pg	19 15 06.3	-0.6
BTU	Barney Top	1.00	89		Pg	19 15 08.8	-0.2
TCRU	Three Creeks R	1.01	32		Pg	19 15 08.8	-0.6
TCRU				IAML		19 15 27.0	
	comp=E,868nm,0.6s						
TCRU				IAML		19 15 31.3	
	comp=N,780nm,0.7s						
MVU	Marysvale	1.04	44		Pg	19 15 09.5	-0.5
MSU	Marysvale	1.07	44	Pg	Pb	19 15 10.3	-0.3
WCU	Willow Creek	1.46	34		Pb	19 15 16.8	-0.5
U15A	North Rim	1.48	153		Pn	19 15 16.8	-0.1
U15A				IAML		19 15 41.5	
	comp=E,397nm,0.8s						
U15A				IAML		19 15 45.5	
	comp=N,338nm,0.7s						
MMU	Miners Mountai	1.52	72		Pb	19 15 17.8	-0.4
SPR3	Spring Creek 3	1.56	323		Pn	19 15 16.9	-1.1
SPR3				IAML		19 15 40.1	
	comp=E,847nm,0.5s						
PRN	Pahroc Range	1.56	258		Pb	19 15 18.5	-0.4
PRN				IAML		19 15 44.9	
	comp=N,1µm,0.5s						
PGAZ	Page	1.57	122		Pb	19 15 18.6	-0.5
OWUT	Old Woman Plat	1.69	52		Pb	19 15 20.7	-0.5
Q12A	Willow Creek R	1.85	314		Pb	19 15 22.6	-1.4
HMU	Henry Mountain	1.90	84		Pn	19 15 21.6	-1.0
Q16A	Castle Valley	1.93	52		Pn	19 15 23.5	+0.6
FSU	Fish Springs	1.98	354		Pn	19 15 22.9	-0.7
R11A	Troy Canyon, C	2.03	288		Pn	19 15 24.0	-0.3
R11A				IAML		19 15 55.5	
	comp=E,223nm,0.4s						
R11A				IAML		19 15 58.2	
	comp=N,198nm,0.4s						
SHPR	Sheep Range	2.04	233		Pn	19 15 25.2	+0.7
S11A	Rachel	2.08	268		Pn	19 15 25.2	+0.3
TMUT	Trail Mountain	2.16	44		Pn	19 15 27.1	+0.9
TMUT				IAML		19 16 05.4	
	comp=N,213nm,0.5s						
TMUT				IAML		19 16 07.9	
	comp=E,195nm,0.7s						
NLU	North Lily Min	2.35	20		Pn	19 15 29.7	+0.9
V12A	Nelson	2.45	215		Pn	19 15 30.6	+0.6
DUG	Dugway, Tooele	2.45	6	Pn	Pn	19 15 29.5	-0.5
DUG				IAML		19 16 15.9	
	comp=E,147nm,1.0s						
DUG				IAML		19 16 16.1	
	comp=E,153nm,1.0s						
SRU	San Rafael Swe	2.46	56		Pn	19 15 29.8	-0.4
SRU				IAML		19 16 11.1	
	comp=E,145nm,0.8s						
SRU				IAML		19 16 11.1	
	comp=N,118nm,0.7s						
MPU	Maple Canyon	2.54	27	Pn	Pn	19 15 31.4	0.0
TPNV	Topopah Spring	2.61	253		Pn	19 15 32.1	-0.1
TPNV				IAML		19 16 16.4	
	comp=N,206nm,0.5s						
TPNV				IAML		19 16 23.3	
	comp=N,169nm,0.6s						
WUAZ	Wupatki	2.64	147		Pn	19 15 31.7	-1.0
GWY	Greenwater Val	3.24	242	Pn	Pn	19 15 41.7	+0.8
GWY				IAML		19 16 35.4	
	comp=E,60nm,0.5s						
GWY				IAML		19 16 39.9	
	comp=N,80nm,0.6s						
TPH	Tonopah	3.25	277	Pn	Pn	19 15 40.7	-0.4
PV23	Carpenter Ridg	3.32	77	Pn	Pn	19 15 43.9	+1.8
BSUT	Blindstream Ca	3.33	33		Pn	19 15 43.5	+1.1
Q09A	Carvers	3.37	290	Pn	Pn	19 15 42.4	-0.3
ELK	Elko	3.41	332	Pn	Pn	19 15 43.5	+0.2
	comp=N,1.6nm,0.3s,baz=151,slow=15,SNR=21						
ELK				Pg	Pb	19 15 51.0	+0.5
	comp=N,1.7nm,0.3s,baz=51,slow=19,SNR=8.7						
ELK				Lg	Lg	19 16 33.1	
	comp=N,21nm,0.3s,baz=243,slow=21,SNR=22						
	comp=N,2.6nm,0.3s						
ELK	Elko	3.41	332		Pn	19 15 43.6	+0.4
ELK				IAML		19 16 42.1	
	comp=N,60nm,0.4s						
ELK				IAML		19 16 42.5	
	comp=N,41nm,0.8s						
QSM	Queen of Sheba	3.49	240		Pn	19 15 45.0	+0.8
SPUT	South Promonto	3.59	8		Pn	19 15 46.2	+0.5
SPUT				IAML		19 16 46.7	
	comp=N,59nm,0.7s						
SPUT				IAML		19 16 48.8	
	comp=E,42nm,0.9s						
PV07	Paradox Valley	3.60	78	Pn	Pn	19 15 47.7	+1.8
PV07				IAML		19 16 46.8	
	comp=E,152nm,0.8s						
MVCO	Mesa Verde	3.72	97	Pn	Pn	19 15 48.8	+1.1
GSC	Goldstone, Bar	3.84	232	Pn	Pn	19 15 51.0	+1.9
DSP	Deep Springs	3.86	266		Pn	19 15 49.8	+0.5
DSP				IAML		19 16 56.4	
	comp=E,33nm,0.7s						
DSP				IAML		19 16 56.6	
	comp=N,40nm,0.7s						
RDMU	Red Mountain	3.95	43		Pn	19 15 52.2	+1.5
NV11	Mina Array Sit	4.02	281	Pn	Pn	19 15 51.8	+0.1
NV11				IAML		19 16 59.8	
	comp=E,58nm,0.6s						
NV11				IAML		19 17 01.4	
	comp=N,44nm,0.7s						
HVU	Hansel Valley	4.03	4		Pn	19 15 51.9	+0.1
HVU				IAML		19 17 04.1	
	comp=E,56nm,0.8s						
HVU				IAML		19 17 14.1	
	comp=N,62nm,0.7s						
HWUT	Hardware Ranch	4.04	17		Pn	19 15 53.2	+1.3
HWUT				IAML		19 17 03.7	
	comp=N,29nm,0.8s						
HWUT				IAML		19 17 06.3	
	comp=N,25nm,0.9s						
KVN	Kaiserville	4.11	290		Pn	19 15 54.2	+1.3
KVN				IAML		19 17 02.3	
	comp=N,94nm,0.5s						
NVAR	Mina Array Bea	4.14	281	Pn	Pn	19 15 56.3	+3.0
	comp=N,0.4nm,0.3s,baz=112,slow=15,SNR=2.6						
NVAR				Pg	Pb	19 16 05.2	+2.3
	comp=N,7.0nm,0.3s,baz=97,slow=17,SNR=51						
NVAR				Lg	Lg	19 16 59.4	
	comp=N,12nm,0.3s,baz=107,slow=35,SNR=13						
	comp=N,0.5nm,0.3s						
O20A	White River Ci	4.49	57		Pn	19 15 59.1	+0.9
O20A				IAML		19 17 18.6	
	comp=E,67nm,0.9s						
O20A				IAML		19 17 20.2	
	comp=N,74nm,0.9s						
PFO	Pinyon Flats O	4.94	214	Lg	Lg	19 17 27.3	
	comp=N,0.7nm,0.3s,baz=140,slow=11,SNR=1.8						
PDAR	Pinedale Array	5.71	27	Pn	Pn	19 16 16.7	+1.8
	comp=N,0.3nm,0.3s,baz=200,slow=12,SNR=6.9						
	comp=N,1.0nm,0.6s						
ANMO	Albuquerque	6.07	115	Pn	Pn	19 16 22.0	+2.2
	comp=N,0.3nm,0.3s,baz=30,slow=15,SNR=6.8						
ANMO				Pg	Pb	19 16 40.5	+4.7
	comp=N,1.0nm,0.3s,baz=32,slow=8.3,SNR=11						
ANMO				Lg	Lg	19 18 01.8	
	baz=291,slow=18						
	comp=N,1.0nm,0.3s						
ANMO	Albuquerque	6.07	115	Pn	Pn	19 16 21.3	+1.4
TXAR	Lajitas Array	11.52	134	Pn	Pn	19 17 41.6	+7.2
	baz=321,slow=13,SNR=1.6						
TXAR				Pg		19 18 23.7	
	baz=329,slow=15,SNR=2.9						
TXAR				Lg	Lg	19 20 54.8	
	baz=324,slow=32,SNR=3.2						
	comp=N,0.2nm,0.8s						
YKA	Yellowknife Ar	24.79	358	P	P	19 20 11.0	-0.6
	comp=N,0.2nm,0.6s,baz=178,slow=8.9,SNR=5.4						
	comp=N,0.2nm,0.6s						

IDC 05 19:17:54.6±4.0, **61°.27S**×**150°.90W**, **h0**^{km}, **mb3.2**/1, **mbtmp3.2**/1, **Error ellipse: s-maj=876.9km s-min=114.7km az=178.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	52.43	93	T	T	20 24 09.5	
	baz=219,slow=74,SNR=4.6						
H03S1	Juan Fernandez	52.44	93	T	T	20 24 10.3	
	baz=219,slow=74,SNR=4.6						
H03S3	Juan Fernandez	52.45	93	T	T	20 24 09.4	
	baz=219,slow=74,SNR=6.2						
H03N3	Juan Fernandez	52.74	93	T	T	20 24 21.4	
	baz=222,slow=72,SNR=21						
H03N2	Juan Fernandez	52.75	93	T	T	20 24 25.5	
	baz=222,slow=72,SNR=20						
H03N1	Juan Fernandez	52.76	93	T	T	20 24 22.7	
	baz=222,slow=72,SNR=30						
ASAR	Alice Springs	62.44	271	P	P	19 28 19.4	0.0
	0.2nm,0.6s,baz=141,slow=6.2,SNR=1.7						
	0.2nm,0.6s						
MKAR	Makanchi Array	146.62	269	PKPbc	PKPdf	19 37 35.8	+0.4
	0.6nm,0.8s,baz=108,slow=4.0,SNR=7.3						
ZALV	Zalesovo Beam	150.12	281	PKPbc	PKPbc	19 37 45.9	0.0
	0.3nm,0.4s,baz=251,slow=4.4,SNR=1.7						

*INET **05** 19:32:10.4±0.5, 12°.00N×87°.99W, h0^{km}±1^{km}, MW3.1*
*SNET **05** 19:32:11.7±0.9, 11°.99N×88°.06W, h18^{km}±7^{km}, ML3.1*
ISC 05 19:32:05.7±4.3, **11°.8N**±0°.2×**88°.16W**±0°.10, **h10**^{km}, **n11**, σ**0^{s}35**/14, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	San Cristobal	1.41	50	*e*P	Pg	19 32 32.9	-0.1
CNCH	Conchagua	1.51	12	*e*P	Pg	19 32 34.8	0.0
CNCH				*e*S	Sn	19 32 52.8	-0.1
LCND	La Caada	1.53	10	*e*P	Pg	19 32 35.1	-0.1
LCND				IAML		19 32 59.3	
	comp=Z,384nm,0.3s						
RANC	El Ranchito	1.64	356	*e*P	Pg	19 32 37.1	-0.1
RANC				IAML		19 33 05.2	
	comp=Z,226nm,0.6s						
PACA	Pacayal	1.68	355	*e*P	Pg	19 32 38.1	+0.2
TECA	Tecapa	1.73	349	*e*P	Pg	19 32 38.9	0.0
FAGO	Alcalda de S	1.90	2	*e*P	Pb	19 32 40.6	+0.1
FAGO				*e*S	Sn	19 33 02.8	+0.6
SCLA	Alcaldia de Sa	1.98	344	*e*P	Pb	19 32 42.6	+0.7
SCLA				*e*S	Sb	19 33 06.3	-0.4
LFRS	El Faro	2.02	334	*e*P	Pb	19 32 42.6	-0.1
SOMN	Somoto	2.22	43	*e*P	Pb	19 32 46.0	0.0
P5NO	Presa 5 de nov	2.26	345	*e*P	Pb	19 32 46.2	-0.5

IDC 05 19:32:21.6±2.2, **3°.94N**×**123°.27E**, **h0**^{km}, **mb3.5**/3, **mbtmp3.5**/3, **Error ellipse: s-maj=299.7km s-min=26.9km az=63.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.11	156	P	P	19 37 57.5	+0.1
	0.7nm,0.4s,baz=335,slow=9.7,SNR=10						
	0.7nm,0.4s						
ASAR	Alice Springs	29.34	160	P	P	19 38 26.2	-0.1
	0.3nm,0.6s,baz=335,slow=7.5,SNR=9.3						
	0.3nm,0.6s						
MKAR	Makanchi Array	55.45	327	P	P	19 41 58.0	-0.1
	0.3nm,0.6s,baz=124,slow=8.7,SNR=4.4						
	0.3nm,0.6s						

*DDA **05** 19:36:14.5±0.0, 37°.59N×38°.49E, h7^{km}±2^{km}, ML1.5*
*ISK **05** 19:36:15.4, 37°.61N×38°.50E, h5^{km}, ML1.5/3*
ISC 05 19:36:14.9±1.1, **37°.59N**±0°.04×**38°.51E**±0°.03, **h5**^{km}±10^{km}, **n16**, σ**0^{s}98**/24, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	Bozova	0.21	235	P	Pg	19 36 18.8	-0.2
ATAB				*i* AML	AML	19 36 22.0	
	comp=Z,144nm,0.2s						
ATAB				*i* AML	AML	19 36 22.0	
	comp=E,218nm,0.2s						
ATAB				S	Sg	19 36 22.6	+0.8
URFA	Urfa	0.29	121	Pg	Pb	19 36 21.9	-0.7
URFA				Sg	Sb	19 36 26.6	-1.2
HANM	anlurfa/Hi	0.30	92	P	Pg	19 36 20.9	+0.2
HANM				*i* AML	AML	19 36 25.0	
	comp=N,39nm,0.2s						
HANM				S	Sg	19 36 25.2	+0.6
AZEY	Adyaman-Merk	0.30	317	P	Pg	19 36 21.1	+0.3
AZEY				S	Sg	19 36 24.7	-0.1
NARI	Adyaman-Kaht	0.35	34	P	Pg	19 36 22.0	+0.2
NARI				S	Sg	19 36 26.9	+0.4
AKCA	Adyaman/G¶l	0.68	288	P	Pg	19 36 27.6	-0.4
AKCA				S	Sg	19 36 37.0	+0.1
MAYA	Malatya/Merkez	0.74	355	P	Pg	19 36 28.6	-0.5
GZT	Gaziantep	0.79	253	P	Pn	19 36 31.7	-1.1
GZT				S	Sb	19 36 42.7	+0.5
GAZ	Gaziantep	1.11	248	Pn	Pn	19 36 36.6	-0.6
GAZ				Sn	Sn	19 36 53.4	+0.4
DARE	Darende-Malaty	1.27	321	Pn	Pg	19 36 40.3	+1.1
DARE				Sn	Sn	19 36 57.5	+0.6
MSBI	Mazada	6.78	203	Sn	Sb	19 39 42.7	+8.2
MSBI	Mazada	6.78	203	Pn	Pb	19 38 11.9	-1.3
KZIT	Kziot	7.49	208	Sn	Sn	19 39 28.9	-1.1
KZIT	Kziot	7.49	208	Pn	Pn	19 38 04.9	+0.2
KRMI	Paran Flat	8.09	204	Sn	Sn	19 39 47.2	+2.3
KRMI	Paran Flat	8.09	204	Pn	Pn	19 38 15.0	+2.0

*ISK **05** 19:36:11.7, 35°.82N×26°.51E, h12^{km}, ML2.8/7*
*THE **05** 19:36:14.9, 35°.69N×26°.61E, h53^{km}±3^{km}, ML2.7/7, Error ellipse: s-maj=3.4km s-min=0.4km az=148.0*
*ATH **05** 19:36:15.4, 35°.73N×26°.58E, h28^{km}±2^{km}, ML2.8/11, Error ellipse: s-maj=2.7km s-min=0.9km az=118.0*
*GII **05** 19:36:17.2±0.6, 34°.80N×26°.68E, h50^{km}*
*DDA **05** 19:36:34.4±0.0, 37°.02N×27°.77E, h8^{km}±29^{km}, ML2.3*
ISC 05 19:36:15.0±1.3, **35°.70N**±0°.04×**26°.59E**±0°.03, **h45**^{km}±18^{km}, **n63**, σ**0^{s}87**/96, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.49	107	P	Pn	19 36 25.6	-0.3
KARP				S	Sn	19 36 33.5	-0.1
	1µm,0.2s						
KARP	Karpathos	0.49	107	P	Pn	19 36 25.6	-0.3
KARP				S	Sn	19 36 33.7	0.0
KARP				AML	AML	19 36 33.9	
	comp=E,2389µm,0.2s						
KARP				AML	AML	19 36 33.9	
	comp=N,3198µm,0.2s						
STIA	Sitia Lasithi	0.64	220	P	Pn	19 36 27.5	-0.2
STIA				S	Sn	19 36 37.7	+0.8
STIA	Sitia Lasithi	0.64	220	P	Pn	19 36 27.9	+0.1
STIA				S	Sn	19 36 37.9	+1.1
STIA				AML	AML	19 36 41.9	
	comp=E,2959µm,0.3s						
STIA				AML	AML	19 36 42.1	
	comp=N,2709µm,0.2s						
ZKR	Zakros	0.65	208	P	Pn	19 36 27.9	-0.1
ZKR				S	Sn	19 36 38.3	+1.0
	comp=N,355nm,0.4s						
ZKR	Zakros	0.65	208	P	Pn	19 36 28.1	+0.2
ZKR				S	Sn	19 36 37.5	+0.2
ZKR				AML	AML	19 36 43.1	
	comp=E,1265µm,0.3s						
ZKR				AML	AML	19 36 46.1	
	comp=N,320µm,0.3s						
FRMA	Ierapetra Chan	0.97	226	P	Pn	19 36 31.4	-0.9
FRMA				S	Sn	19 36 43.5	-1.4
FRMA	Ierapetra Chan	0.97	226	P	Pn	19 36 31.4	-0.9
FRMA				S	Sn	19 36 44.6	-0.3
FRMA				AML	AML	19 36 48.5	
	comp=N,957µm,0.4s						
FRMA				AML	AML	19 36 48.7	
	comp=E,842µm,0.3s						
NISR	Nisiros	1.01	25	P	Pn	19 36 32.2	-0.6
NISR				S	Sn	19 36 46.1	+0.2
	comp=E,225nm,0.2s						
NISR	Nisiros	1.01	25	P	Pn	19 36 32.3	-0.5
NISR				S	Sn	19 36 45.6	-0.3
NISR				AML	AML	19 36 47.5	
	comp=E,598µm,0.2s						

NISR				AML	AML	19 36 47.6	
	comp=N,269µm,0.2s						
KOSK	Kos Island	1.10	17	Pg	Pn	19 36 31.4	-2.6
KOSK	Kos Island	1.10	17	P	Pn	19 36 33.0	-1.0
KOSK				S	Sn	19 36 47.7	-0.3
KOSK				AML	AML	19 36 50.9	
	comp=E,736µm,0.3s						
KOSK				AML	AML	19 36 56.8	
	comp=N,588µm,0.4s						
THR8	Santorini-Mono	1.14	309	P	Pn	19 36 34.4	-0.2
THR8	Santorini-Mono	1.14	309	P	Pn	19 36 34.6	+0.1
THR6	Thira Island,	1.17	305	P	Pn	19 36 34.9	0.0
THR6	Thira Island,	1.17	305	P	Pn	19 36 35.1	+0.2
THR3	Thira Island,	1.20	307	P	Pn	19 36 35.4	+0.1
THR3	Thira Island,	1.20	307	P	Pn	19 36 35.3	+0.1
THR9	Santorini-Faro	1.20	304	P	Pn	19 36 35.2	-0.1
THR9	Santorini-Faro	1.20	304	P	Pn	19 36 35.9	+0.6
CMBO	Columbo, Santo	1.23	309	P	Pn	19 36 35.8	+0.1
CMBO				S	Sn	19 36 51.4	+0.2
	comp=N,488nm,0.5s						
CMBO	Columbo, Santo	1.23	309	P	Pn	19 36 36.0	+0.2
CMBO				S	Sn	19 36 50.8	-0.4
CMBO				AML	AML	19 36 54.3	
	comp=E,1251µm,0.5s						
CMBO				AML	AML	19 36 58.8	
	comp=N,1129µm,0.4s						
THR5	Thira Island,	1.23	306	P	Pn	19 36 35.9	+0.1
THR5	Thira Island,	1.23	306	P	Pn	19 36 36.0	+0.2
HRKL	Herakleio	1.27	253	P	Pn	19 36 35.9	-0.4
HRKL				S	Sn	19 36 52.2	+0.1
HRKL	Herakleio	1.27	253	Pn	Pn	19 36 35.9	-0.4
HRKL				Sn	Sn	19 36 52.3	+0.1
HRKL	Herakleio	1.27	253	P	Pn	19 36 36.3	0.0
HRKL				S	Sn	19 36 52.6	+0.5
HRKL				AML	AML	19 37 00.3	
	comp=N,2030µm,0.4s						
HRKL				AML	AML	19 37 02.0	
	comp=E,2219µm,0.3s						
KSTL	Kastelli Herak	1.30	253	P	Pn	19 36 34.8	-1.9
KSTL				S	Sn	19 36 49.6	-3.2
DAT	Datca	1.31	38	P	Pn	19 36 36.0	-0.9
DAT				S	Sn	19 36 52.8	-0.4
DAT	Datca	1.31	38	Pn	Pn	19 36 35.8	-1.1
DAT				Sn	Sn	19 36 53.1	-0.1
DAT	Datca	1.31	38	P	Pn	19 36 36.3	-0.7
DAT				S	Sn	19 36 52.5	-0.8
ARG	Arkhangelos	1.35	67	P	Pn	19 36 36.8	-0.6
ARG				S	Sn	19 36 53.3	-0.9
	comp=E,235nm,0.3s						
ARG	Arkhangelos	1.35	67	Pn	Pn	19 36 37.1	-0.4
ARG	Arkhangelos	1.35	67	P	Pn	19 36 37.0	-0.4
ARG				S	Sn	19 36 53.5	-0.7
ARG				AML	AML	19 36 56.5	
	comp=N,377µm,0.3s						
ARG				AML	AML	19 36 58.6	
	comp=E,554µm,0.2s						
IDI	Anoyia	1.44	254	P	Pn	19 36 37.9	-0.8
IDI				S	Sn	19 36 56.2	-0.3
	comp=E,142nm,0.4s						
IDI	Anoyia	1.44	254	Pn	Pn	19 36 38.3	-0.5
IDI	Anoyia	1.44	254	P	Pn	19 36 38.2	-0.5
IDI				S	Sn	19 36 56.3	-0.2
IDI				AML	AML	19 37 00.8	
	comp=N,370µm,0.4s						
IDI				AML	AML	19 37 02.3	
	comp=E,359µm,0.2s						
BDRM	Kayabasi	1.53	27	P	Pn	19 36 39.3	-0.6
TURN	Turunc	1.72	51	P	Pn	19 36 41.7	-0.8
TURN				S	Sn	19 37 02.3	-0.9
TURN				*i* AML	AML	19 37 11.0	
	comp=E,56nm,0.3s						
DDIM	Aydin, Didim	1.83	17	P	Pn	19 36 43.8	-0.2
DDIM				*i* AML	AML	19 37 14.0	
	comp=E,27nm,1.1s						
YER	Yerkesik	1.98	43	P	Pn	19 36 45.8	-0.3
YER				S	Sn	19 37 09.7	-0.1
MHLO	Agia Marina, M	2.03	300	P	Pn	19 36 47.3	+0.6
MULA	Mugla, Merkez-	2.09	41	P	Pn	19 36 47.6	-0.1
MULA				S	Sn	19 37 12.7	+0.1
MULA				*i* AML	AML	19 38 03.0	
	comp=E,20nm,2.6s						
IMMV	Iera Moni Meta	2.14	264	P	Pn	19 36 47.7	-0.5
IMMV				S	Sn	19 37 13.0	-0.5
	comp=E,112nm,0.4s						
IMMV	Iera Moni Meta	2.14	264	Pn	Pn	19 36 47.5	-0.7
IMMV	Iera Moni Meta	2.14	264	P	Pn	19 36 48.0	-0.2
IMMV				S	Sn	19 37 13.1	-0.3
IMMV				AML	AML	19 37 19.6	
	comp=N,246µm,0.3s						
IMMV				AML	AML	19 37 23.0	
	comp=E,197µm,0.5s						
GVD	Gavdhos	2.22	248	Pn	Pn	19 36 49.6	+0.3
GVD	Gavdhos	2.22	248	P	Pn	19 36 50.3	+1.1
AYDN	Tasoluk	2.22	28	P	Pn	19 36 49.6	+0.2
FETY	Fethiye	2.23	64	P	Pn	19 36 49.8	+0.3
IZZE	Mula-Seydike	2.26	70	P	Pn	19 36 49.1	-0.8
IZZE				S	Sn	19 37 15.9	-0.7
IZZE				*i* AML	AML	19 37 28.0	
	comp=E,59nm,0.4s						
IZZE				*i* AML	AML	19 37 29.0	
	comp=E,40nm,0.3s						
RODP	Rodopos	2.31	267	P	Pn	19 36 50.4	-0.2
RODP	Rodopos	2.31	267	Pn	Pn	19 36 50.2	-0.4
KNDR	Palaiochora Ch	2.41	260	Pn	Pn	19 36 52.5	+0.6
KNDR	Palaiochora Ch	2.41	260	P	Pn	19 36 52.8	+0.8
TAVA	DENIZLI_Tavas	2.57	46	P	Pn	19 36 55.1	+0.8
TAVA				S	Sn	19 37 27.1	+2.7
TAVA				*i* AML	AML	19 37 34.0	
	comp=E,13nm,0.4s						
CAEL	Denizli, Camel	2.62	56	P	Pn	19 36 55.5	+0.5
CAEL				S	Sn	19 37 28.9	+3.2
CAEL				*i* AML	AML	19 37 39.0	
	comp=E,44nm,0.5s						
CAEL				*i* AML	AML	19 37 39.0	
	comp=E,43nm,1.1s						
ANKY	Antikythira Is	2.68	275	P	Pn	19 36 55.7	+0.1
KTHA	Kythira Island	2.91	282	P	Pn	19 36 58.9	+0.1
VLY	Voula,Athens	3.11	315	P	Pn	19 37 02.5	+1.0
VLI	Veliai	3.12	290	P	Pn	19 37 02.2	+0.5
VLI				S	Sn	19 37 36.0	-1.8
DION	Dionisos Attik	3.19	319	P	Pn	19 37 04.1	+1.4
KRND	KRANIDI	3.24	302	P	Pn	19 37 04.5	+1.2

IDC ***05*** *19:40:38.3±0.7, 27°.37N×140°.64E, h485^{km}±19^{km}, mb2.8/4, mbtmp3.7/6, Error ellipse: s-maj=71.4km s-min=19.9km az=76.0*

ISC 05 19:40:38.5±1.0**, 27°.5N**±0°.2×**140°.9E**±0°.3**, h500**^{km}**, n7,** σ**1**^{s}**.14**/8**, mb3.2**/4**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.18	107	P	P	19 41 41.3	+1.0
	31nm,0.4s,baz=279,slow=19,SNR=18						
JCJ				S	S	19 42 28.9	-1.5
	52nm,0.4s,baz=293,slow=21,SNR=8.3						
JHJ	Hachijo jima 2	5.73	350	P	P	19 42 12.5	+0.5
	128nm,1.0s,baz=114,slow=4.7,SNR=2.3						
JHJ				S	S	19 43 21.8	-6.8
	44nm,0.6s,baz=17,slow=13,SNR=1.3						
MJAR	Matsushiro Arr	9.35	346	P	P	19 42 48.0	-0.8
	0.4nm,0.4s,baz=161,slow=9.7,SNR=1.7						
WRA	Warramunga Arr	47.55	188	P	P	19 48 28.0	-0.2
	0.2nm,0.3s,baz=19,slow=7.8,SNR=4.8						
	0.2nm,0.3s						
ZALV	Zalesovo Beam	48.48	319	P	P	19 48 34.2	-0.5
	0.3nm,0.3s,baz=98,slow=7.7,SNR=2.2						
	0.3nm,0.3s						
MKAR	Makanchi Array	49.38	309	P	P	19 48 41.0	-0.5
	0.3nm,0.3s,baz=87,slow=7.4,SNR=9.2						
	0.3nm,0.3s						
FINES	FINESS Array B	77.12	333	P	P	19 51 41.0	+1.4
	0.6nm,0.4s,baz=75,slow=5.3,SNR=11						
	0.6nm,0.4s						

HVO ***05*** *20:22:52.8±0.6, 19°.38N±0°.01×155°.245W±0°.007, h1^{km}±9^{km}, ML2.6/17, ML1.7/40(NEIC), Error ellipse: s-maj=2.1km s-min=0.9km az=177.0*

NEIC 05 20:22:53.7±0.5**, 19°.39N**±0°.01×**155°.247W**±0°.005**, h1**^{km}±9^{km}**, Error ellipse: s-maj=1.7km s-min=0.6km az=180.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKO	Keanakako`i	0.02	302	Pg	Pg	20 22 54.0	-0.3
RIM	Rim	0.03	289		Pg	20 22 54.2	-0.2
BYL	Byron's Ledge	0.03	333		Pg	20 22 54.3	-0.1
PUH	Pauahi	0.03	113		Pg	20 22 54.0	-0.3
PUH				IAML		20 22 54.3	
	comp=E,1µm,1.5s						
PUH				IAML		20 22 54.4	
	comp=N,2µm,0.3s						
HATHI	Halemaʻumaʻu T	0.04	339		Pg	20 22 54.6	+0.1
HATHI				IAML		20 22 54.6	
	comp=E,669nm,1.0s						
HATHI				IAML		20 22 54.9	
	comp=N,591nm,0.2s						
NPH	North Pit	0.04	308		Pg	20 22 54.4	-0.2
SBLHI	Steaming Bluff	0.04	333		Pg	20 22 54.6	-0.1
SBLHI				IAML		20 22 55.1	
	comp=E,720nm,0.2s						
SBLHI				IAML		20 22 55.2	
	comp=N,788nm,0.3s						
SDHHI	Sand Hill	0.04	274		Pg	20 22 54.5	-0.1
SDHHI				IAML		20 22 55.1	
	comp=N,1µm,0.1s						
SDHHI				IAML		20 22 55.5	
	comp=E,920nm,0.1s						
OBL	Observatory Le	0.05	311	IAML		20 22 54.1	
	comp=N,678nm,1.2s						
OBL					Pg	20 22 55.0	+0.3
OBL				IAML		20 22 55.0	
	comp=E,1µm,1.0s						
UWB	Uwekahuna B	0.05	322		Pg	20 22 54.7	0.0
WRMHI	West Rim	0.05	292		Pg	20 22 56.4	+1.6
UWE	Uwekahuna	0.06	308	IAML		20 22 54.6	
	comp=N,1µm,1.9s						
UWE					Pg	20 22 55.3	+0.5
KNHH	Kane Nui o Ham	0.07	95		Pg	20 22 55.1	-0.1
RSD	Rainshed	0.08	339		Sg	20 22 55.7	-0.9
RSD	Rainshed	0.08	339		Pg	20 22 55.4	0.0
HLP	Hilina Pali	0.11	213		Pg	20 22 56.0	+0.2
HLP					Sg	20 22 58.2	+1.0
HLP	Hilina Pali	0.11	213	IAML		20 22 58.4	
	comp=N,605nm,0.2s						
HLP				IAML		20 22 58.4	
	comp=E,559nm,0.8s						
STCH	Steam Cracks	0.12	91		Pg	20 22 55.9	0.0
STCH				IAML		20 22 58.2	
	comp=E,251nm,0.1s						
STCH				IAML		20 22 58.7	
	comp=N,203nm,0.2s						
NPOC	North of Puʻu	0.13	87		Pg	20 22 56.4	+0.1
NPOC				IAML		20 22 56.6	
	comp=E,269nm,0.6s						
NPOC				IAML		20 22 58.4	
	comp=N,376nm,0.8s						
JCUZ	Jacuzzi	0.14	91		Pg	20 22 56.2	-0.2
JCUZ				IAML		20 22 59.1	
	comp=N,366nm,0.8s						
MLH	Mauna Loa	0.17	309		Pg	20 22 57.1	+0.1
MLH				IAML		20 22 59.0	
	comp=E,174nm,3.9s						
MLH				IAML		20 23 01.5	
	comp=N,120nm,0.6s						
AIN	Ainahou	0.20	266		Pg	20 22 57.8	+0.2
AIN				IAML		20 23 03.7	
	comp=E,179nm,0.9s						
HTC	Hot Caves	0.21	224		Pg	20 22 57.8	+0.1
JOKA	Jonika Flow	0.23	78		Pg	20 22 57.9	-0.3
HMH	Humuʻula Sheep	0.31	314	Pg	Pg	20 22 59.1	-0.6
HMH				IAML		20 23 06.6	
	comp=N,133nm,3.4s						
MLOA	Mauna Loa Obse	0.34	296	Pg	Pg	20 23 00.2	-0.1
MWH	Mokuʻaweowe	0.34	287		Pg	20 23 00.4	0.0
KHU	Kahuku	0.38	248		Pg	20 23 01.1	+0.1
ALEP	Alea Permanent	0.41	292		Pg	20 23 01.5	-0.1

JMA ***05*** *20:26:09.2±0.1, 32°.6N±0°.1×130°.7E±0°.2, h10^{km}, MD3.9/20, MV4.1/20, SOUTHERN KUMAMOTO PREF*

JMA Felt III J1 at SOUTHERN KUMAMOTO PREF .

NIED ***05*** *20:26:09.2, 32°.57N×130°.70E, h10^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.27; $M_{\theta\theta}$2.02; $M_{\phi\phi}$-3.29; $M_{r\theta}$-1.33; $M_{\theta\phi}$7.35; $M_{\phi r}$-0.14; Fault plane solution: $M_0$7.95000×10^{14} NP1: ϕ_s280.00000°, δ85.00000°, λ10.00000°. NP2: ϕ_s190.00000°, δ80.00000°, λ175.00000°.*

IDC ***05*** *20:26:10.3±1.2, 32°.66N×130°.59E, h0^{km}, mb3.5/5, mbtmp3.5/8, ML3.1/3, MS3.0/4 Error ellipse: s-maj=20.8km s-min=9.0km az=124.0*

ISC 05 20:26:10.7±0.7**, 32°.55N**±0°.03×**130°.69E**±0°.05**, h10**^{km}**, n37,** σ**1**^{s}**.45**/25**, mb3.3**/5**, 4D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIU3	Izumi3	0.10	91	⇓P	Pg	20 26 11.7	-1.6
JIU3				⇓*e*S	Sg	20 26 13.7	-1.6
JIU3	Izumi3	0.10	91	A	A	20 26 11.7	
	comp=E,102nm,0.8s,comp=E,80nm,0.4s						
JZO	Okuchi	0.42	191	⇓P	Pg	20 26 17.6	-1.3
JZO				⇓*e*S	Sg	20 26 23.5	-1.0
JZO	Okuchi	0.42	191	A	A	20 26 17.6	
	comp=E,36nm,0.7s,comp=E,46nm,0.3s						
JTA	Tamana	0.43	342	P	Pg	20 26 17.6	-1.6
JTA				*e*S	Sg	20 26 23.4	-1.5
JHD	Hondo	0.48	260	A	A	20 26 18.8	
	comp=E,19nm,0.4s,comp=E,13nm,1.4s						
JNU	Nakatsue	0.59	15	Pg	Pg	20 26 20.3	-1.9
	231nm,0.3s,baz=186,slow=9.2,SNR=3076						
JNU				Lg	Lg	20 26 27.7	
	1µm,0.3s,baz=286,slow=20,SNR=49						
JNU	Nakatsue	0.59	15	P	Pg	20 26 20.6	-1.6
JNU	Nakatsue	0.59	15	A	A	20 26 20.4	
	comp=E,13nm,1.2s,comp=E,9.0nm,1.1s						
JKIT	Kitakata	0.65	83	A	A	20 26 21.5	
	comp=E,6.0nm,0.4s,comp=E,10.0nm,0.3s						
JTZ	Takazaki	0.73	152	*i* P	Pb	20 26 23.8	-1.7
JTZ	Takazaki	0.73	152	A	A	20 26 23.8	
	comp=E,5.0nm,5.7s,comp=E,7.0nm,1.1s						
JTSN	Tsuno	0.75	114	A	A	20 26 23.5	
	comp=E,6.0nm,0.4s,comp=E,16nm,1.4s						
JHHC	Hyugahichiya	0.81	97	A	A	20 26 24.5	
	comp=E,11nm,0.5s,comp=E,14nm,1.6s						
JFI	Itaya	0.91	344	A	A	20 26 26.3	
	comp=E,4.0nm,0.5s,comp=E,5.0nm,0.3s						
JUS	Usuki	1.03	60	A	A	20 26 28.3	
	comp=E,3.0nm,0.7s,comp=E,6.0nm,0.4s						
JNKG	Nichinankitago	1.06	147	A	A	20 26 29.2	
	comp=E,3.0nm,3.1s,comp=E,3.0nm,1.0s						
JSU	Suzuyama	1.06	191	P	Pg	20 26 29.8	-1.3
JSU	Suzuyama	1.06	191	A	A	20 26 29.3	
	comp=E,6.0nm,1.8s,comp=E,6.0nm,0.6s						
JNAR	Kushima--Naru	1.14	154	A	A	20 26 30.5	
	comp=E,4.0nm,0.9s,comp=E,4.0nm,1.0s						
JTU	Tsushima	2.24	332	P	Pn	20 26 45.9	-2.0
JMN	Monobe	2.92	65	P	Pn	20 26 57.9	+0.6
JHS	Saijyo	3.17	39	P	Pn	20 27 00.0	-0.7
KSRS	Korea Array	5.39	336	Pn	Pn	20 27 30.0	-1.2
	0.3nm,0.3s,baz=154,slow=14,SNR=2.0						
KSRS				Pg	Pb	20 27 46.8	+1.8
	1.9nm,0.3s,baz=152,slow=17,SNR=14						
KSRS				Lg	Lg	20 28 56.5	
	1.6nm,0.3s,baz=151,slow=30,SNR=7.4						
	0.5nm,0.3s						
INU	Inuyama	5.95	60	P	Pn	20 27 39.6	+0.7
JOW	Kunigami	6.08	201	Pn	Pn	20 27 43.0	+2.4
	2.3nm,0.3s,baz=97,slow=18,SNR=9.1						
	9.9nm,0.5s						
JGF	Kuroka	6.31	59	P	Pn	20 27 43.9	0.0
MJAR	Matsushiro Arr	7.37	55	Pn	Pn	20 27 59.2	+0.8
	0.2nm,0.3s,baz=242,slow=14,SNR=9.8						
MJAR				Lg	Lg	20 30 03.9	
	baz=246,slow=33,SNR=2.1						
MJAR				LR	LR	20 30 45.5	
	comp=Z,71nm,21.0s,baz=201,slow=37						
	1.7nm,0.5s						
JHJ	Hachijo jima 2	7.67	83	LR	LR	20 30 42.8	
	comp=Z,46nm,20.9s,baz=74,slow=35						
ASAJ	Asahikawa	14.83	35	LR	LR	20 35 03.3	
	comp=Z,53nm,18.7s,baz=168,slow=36						
KLR	Kul'dur	16.68	2	Pn	P	20 30 07.7	+0.9
	0.1nm,0.3s,baz=171,slow=14,SNR=3.6						
SONM	Songino Array	23.89	317	P	P	20 31 23.8	-0.8
	0.6nm,0.7s,baz=121,slow=11,SNR=3.9						
	0.6nm,0.7s						
MKAR	Makanchi Array	39.26	306	P	P	20 33 39.0	-0.4
	0.5nm,0.9s,baz=88,slow=7.4,SNR=4.6						
	0.5nm,0.9s						
AAK	Ala-Archa	44.92	300	LR	LR	20 54 30.4	
	comp=Z,43nm,18.3s,baz=346,slow=38						
ASAR	Alice Springs	55.99	176	P	P	20 35 51.0	+1.5
	0.2nm,0.7s,baz=1.1,slow=5.4,SNR=1.6						
	0.2nm,0.7s						
FINES	FINESS Array B	68.45	330	P	P	20 37 13.7	+1.1
	1.1nm,0.7s,baz=96,slow=5.6,SNR=1.8						
	1.1nm,0.7s						
AKASG	Malin Array Be	72.15	319	P	P	20 37 36.4	+0.9
	0.2nm,0.4s,baz=55,slow=6.5,SNR=2.1						
	0.2nm,0.4s						

IDC ***05*** *20:26:10.8±1.2, 18°.84S×177°.86W, h502^{km}±11^{km}, mb3.4/14, mbtmp4.3/17, Error ellipse: s-maj=18.6km s-min=12.3km az=144.0*

NEIC ***05*** *20:26:11.7±2.9, 19°.1S±0°.1×178°.0W±0°.1, h490^{km}±6^{km}, mb4.2/22, Error ellipse: s-maj=21.1km s-min=19.4km az=180.0*

ISC 05 20:26:10.5±0.4**, 18°.77S**±0°.08×**177°.87W**±0°.07**, h500**^{km}**, n105,** σ**1**^{s}**.00**/108**, mb4.1**/25**, 2C-10D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.01	284	P	P	20 27 29.4	+0.2
	76nm,0.7s,baz=127,slow=8.6,SNR=39						
MSVF				S	S	20 28 34.6	+1.5
	26nm,0.8s,baz=145,slow=23,SNR=9.5						
MSVF	Nonsavu	4.01	284	P	P	20 27 28.9	-0.3
NIUE	Niue	7.52	94	P	P	20 27 59.8	-2.2
AFI	Afiamalu	7.59	51	P	P	20 27 56.6	-6.2
	11nm,0.4s,baz=151,slow=19,SNR=2.4						
AFI				S	S	20 29 22.9	-12
	23nm,0.6s,baz=41,slow=22,SNR=2.2						
RAO	Raoul Island	10.43	180	P	P	20 28 35.1	+2.8
DZM	Mont Dzumac	15.07	255	P	P	20 29 20.5	-1.0
	5.5nm,0.7s,baz=76,slow=19,SNR=2.5						
KOUNC	Koumac, New Ca	16.90	261	P	P	20 29 38.7	-1.9
URZ	Urewera	19.90	192	P	P	20 30 06.2	-1.9
	3.1nm,0.4s,baz=76,slow=8.3,SNR=2.6						
RTZ	Ruatahuna	20.27	192	P	P	20 30 08.4	-3.1
RTZ				IAmb	IAmb	20 30 23.9	
	comp=Z,6.3nm,1.2s						
TCW	Tory Channel	23.35	195	P	P	20 30 38.1	-1.0
EIDS	Eidsvold	29.47	252	P	P	20 31 33.7	+0.4
EIDS				IAmb	IAmb	20 31 35.3	
	comp=Z,6.5nm,0.9s						
ARMA	Armidale	29.96	241	P	P	20 31 37.9	+0.2
ARMA				IAmb	IAmb	20 31 48.8	
	comp=Z,7.4nm,0.9s						
CTA	Charters Tower	33.82	262	P	P	20 32 10.5	-0.2
	comp=Z,6.2nm,0.4s,baz=90,slow=9.9,SNR=33						
	comp=Z,6.2nm,0.4s						
CTAO	Charters Tower	33.82	262	P	P	20 32 10.4	-0.2
PMG	Port Moresby	35.11	280	P	P	20 32 22.4	+0.8
	comp=Z,14nm,0.8s,baz=101,slow=6.3,SNR=4.3						
	comp=Z,14nm,0.8s						
TOO	Toolangi	37.03	232	P	P	20 32 37.1	-0.2
TOO				IAmb	IAmb	20 32 55.8	
	comp=Z,6.7nm,1.1s						
COEN	Coen	37.63	271	P	P	20 32 41.6	-0.9
COEN				IAmb	IAmb	20 32 43.8	
	comp=Z,8.1nm,0.9s						
STKA	Stephens Creek	38.67	242	P	P	20 32 51.5	+0.8
	comp=Z,4.4nm,0.5s,baz=89,slow=9.7,SNR=17						
	comp=Z,4.4nm,0.5s						
STKA	Stephens Creek	38.67	242	P	P	20 32 51.8	+1.1
BBOO	Buckleboo	43.45	242	P	P	20 33 29.0	+0.2
BBOO				IAmb	IAmb	20 33 29.9	
	comp=Z,7.3nm,0.6s						
WR0	Warramunga Arr	44.80	260	P	P	20 33 37.5	-1.9
WB0	Warramunga Arr	44.96	261	P	P	20 33 39.9	-0.8
WB0				IAmb	IAmb	20 33 40.5	
	comp=Z,5.7nm,0.9s						
WB2	Warramunga Arr	44.98	260	P	P	20 33 39.5	-1.3
WB2				IAmb	IAmb	20 33 40.9	
	comp=Z,4.2nm,0.8s						
WRA	Warramunga Arr	44.99	260	P	P	20 33 40.2	-0.7
	comp=Z,2.9nm,0.7s,baz=97,slow=6.9,SNR=25						
WRA				PcP	PcP	20 35 12.2	+0.6
	comp=Z,0.5nm,0.5s,baz=92,slow=3.2,SNR=2.7						
	comp=Z,2.9nm,0.7s						
WRA	Warramunga Arr	44.99	260	P	P	20 33 39.3	-1.6
AS31	Alice Springs	45.06	255	P	P	20 33 41.5	0.0
AS31				IAmb	IAmb	20 33 42.6	
	comp=Z,5.7nm,0.8s						
ASAR	Alice Springs	45.06	255	P	P	20 33 41.5	+0.1
	comp=Z,18nm,0.6s,baz=90,slow=8.3,SNR=382						
ASAR				PcP	PcP	20 35 12.5	+0.6
	comp=Z,1.1nm,0.7s,baz=92,slow=4.3,SNR=4.1						
ASAR				S	S	20 39 43.0	-0.6
	comp=Z,1.6nm,0.9s,baz=85,slow=16,SNR=11						
	comp=Z,18nm,0.6s						
ASAR	Alice Springs	45.06	255	P	P	20 33 41.0	-0.4
FORT	Forrest	50.11	245	P	P	20 34 19.1	-0.1
FORT				IAmb	IAmb	20 34 22.1	
	comp=Z,14nm,0.8s						
KNRA	Kununurra	50.92	265	P	P	20 34 23.7	-1.6
FITZ	Fitzroy Crossi	53.40	261	P	P	20 34 43.2	0.0
PSA00	Pilbara Seismi	58.19	256	P	P	20 35 15.1	-1.4
PSA00				IAmb	IAmb	20 35 17.5	
	comp=Z,8.5nm,1.0s						
MBWA	Marble Bar	58.37	256	P	P	20 35 16.1	-1.6
VNDA	Vanda	59.63	185	P	P	20 35 25.4	+0.2
	comp=Z,2.2nm,0.8s,baz=9.6,slow=7.0,SNR=2.4						
	comp=Z,2.2nm,0.8s						
VNDA	Vanda	59.63	185	P	P	20 35 25.0	-0.2
GIRL	Giralia	63.14	254	P	P	20 35 50.2	+1.0
MJAR	Matsushiro Arr	68.90	323	P	P	20 36 24.5	-0.4
	comp=Z,0.9nm,0.6s,baz=154,slow=5.5,SNR=4.4						
	comp=Z,0.9nm,0.6s						
QSPA	South Pole Qui	71.28	180	P	P	20 36 39.6	+0.8
QSPA				IAmb	IAmb	20 36 41.1	
	comp=Z,8.8nm,0.8s						
PETK	Petropavlovsk-	74.64	345	P	P	20 36 58.4	+0.5
	comp=Z,2.3nm,0.7s,baz=160,slow=4.6,SNR=2.5						
	comp=Z,2.3nm,0.7s						
SEY	Seymchan	84.73	347	P	P	20 37 50.5	-0.3
	comp=Z,3.6nm,1.0s,baz=205,slow=12,SNR=4.7						
	comp=Z,3.6nm,1.0s						
TXAR	Lajitas Array	86.03	57	P	P	20 37 59.1	+1.0
	comp=Z,0.7nm,0.7s,baz=223,slow=7.1,SNR=8.6						
	comp=Z,0.7nm,0.7s						
ILAR	Eielson Array	86.61	13	P	P	20 37 58.9	-0.9
	comp=Z,0.4nm,0.8s,baz=224,slow=6.3,SNR=3.2						
	comp=Z,0.4nm,0.8s						
P33M	Teslin, Yukon	86.73	21	P	P	20 38 05.1	+4.5
PDAR	Pinedale Array	87.63	43	P	P	20 38 05.0	-0.5
	comp=Z,0.3nm,0.5s,baz=188,slow=5.5,SNR=2.4						
	comp=Z,0.3nm,0.5s						
TROLL	Troll, Antarti	89.45	180	P	P	20 38 14.1	+0.7
CMAR	Chiang Mai Arr	89.66	290	P	P	20 38 16.6	+1.5
	comp=Z,1.1nm,0.9s,baz=114,slow=2.7,SNR=8.1						
	comp=Z,1.1nm,0.9s						
VNA3	Neumayer Olymp	89.85	176	P	P	20 38 15.8	+0.7
VNA2	Neumayer--Watz	90.29	177	P	P	20 38 18.3	+1.2
	baz=179,slow=3.0						
YKA	Yellowknife Ar	94.90	25	P	P	20 38 38.2	+0.1
	comp=Z,0.2nm,0.8s,baz=250,slow=5.2,SNR=3.2						
	comp=Z,0.2nm,0.8s						
MKAR	Makanchi Array	110.10	314	PKiKP	PKiKP	20 43 44.4	-0.5
	comp=Z,0.5nm,0.5s,baz=177,slow=0.5,SNR=9.1						
KURBB	Kurchatov Arra	112.86	318	PKiKP	PKiKP	20 43 49.6	-0.4
	comp=Z,0.3nm,0.4s,baz=82,slow=1.3,SNR=2.5						
BVAR	Borovoye Array	117.84	321	PKP	PKPdf	20 43 59.4	-0.1
	comp=Z,1.2nm,0.5s,baz=131,slow=1.7,SNR=7.2						
ARCES	ARCESS Array B	127.25	350	PKP	PKPdf	20 44 16.8	-0.3
	comp=Z,6.0nm,1.0s,baz=8.5,slow=1.8,SNR=5.7						
AKASG	Malin Array Be	141.56	332	PKhKP	PKPpre	20 44 39.1	
	comp=Z,0.7nm,0.3s,baz=38,slow=4.0,SNR=9.5						
AKASG				PKP	PKiKP	20 44 46.0	-1.3
	comp=Z,0.6nm,0.5s,baz=42,slow=3.0,SNR=4.5						
SORM	Soroca	143.79	330	⇓P	PKPbc	20 44 47.0	-0.2
OJC	Ojcow	145.60	340	PKPdf	PKPab	20 44 53.2	-0.8
BUR08	Bucovina Ar. S	145.60	332	PKPdf	PKPab	20 44 54.4	+0.1
BURAR	Bucovina Array	145.62	332	⇓P	PKPab	20 44 54.1	-0.2
BURAR	Bucovina Array	145.62	332	PKPdf	PKPab	20 44 53.8	-0.5
BRTR	Keskin Array B	145.75	314	PKPbc	PKPbc	20 44 53.6	0.0
	comp=Z,1.7nm,0.7s,baz=137,slow=1.9,SNR=11						
PLOR	Plostina	146.23	329	⇓P	PKiKP	20 44 58.5	+1.4
TRPA	Tarpa	146.34	335	⇓P	PKPab	20 44 55.7	-1.3
OSTC	Ostas	146.36	344	*e*PKP	PKPbc	20 44 54.5	-0.3
CLL	Collm	146.41	348	PKPdf	PKPbc	20 44 54.5	-0.4

CLL	Collm	146.41	348	*i* PKPbc	PKPbc	20 44 55.7	+0.8
	comp=Z,12nm,0.8s						
UPC	Upice	146.46	344	*e*PKP	PKPbc	20 44 55.7	+0.6
DPC	Dobruska-Polom	146.52	343	*e*PKP	PKPbc	20 44 56.0	+0.7
KRLC	Kraliky	146.64	343	*e*PKP	PKPbc	20 44 56.1	+0.5
MORC	Moravsky Berou	146.69	342	*e*PKP	PKPbc	20 44 56.5	+0.7
DOPR	Dopca	146.76	330	⇓P	PKPbc	20 44 56.8	+0.7
PVCC	Panska Ves	146.80	345	*e*PKP	PKiKP	20 44 57.0	-1.0
MLR	Muntele Rosu	146.83	329	⇓P	PKPbc	20 44 56.6	+0.2
VOIR		147.31	329	⇑P	PKPbc	20 44 57.5	-0.1
PRU	Pruhonice	147.31	345	*e*PKP	PKiKP	20 44 58.1	-1.0
DRGR		147.34	333	⇑P	PKPbc	20 44 57.9	+0.3
VRAC	Vranov	147.39	342	*e*PKP	PKiKP	20 44 58.4	-0.9
JAVC	Velka Javorina	147.46	341	*e*PKP	PKiKP	20 44 59.5	0.0
ARR	Arges	147.56	330	⇓P	PKiKP	20 44 59.3	-0.6
KRUC	Moravsky	147.67	342	*e*PKP	PKPbc	20 44 58.9	+0.6
KHC	Kasperske Hory	148.34	346	*e*PKP	PKPdf	20 44 55.5	-0.4
CKRC	Cesky Krumlov	148.45	345	*e*PKP	PKPbc	20 45 00.6	+0.3
GERES	GERESS Array B	148.58	345	PKPbc	PKPbc	20 45 00.7	-0.1
	comp=Z,1.7nm,0.7s,baz=29,slow=3.0,SNR=14						
CONA	Conrad Observa	148.84	342	*e*PKP	PKiKP	20 45 01.9	-0.5
	comp=Z,12nm,1.2s						
RONA	Rosalia, Austr	148.92	341	*e*PKP	PKiKP	20 45 02.1	-0.5
	comp=Z,8.2nm,1.0s,SNR=6.8						
MOA	Molln	149.36	344	*i* PKP	PKiKP	20 45 03.3	-0.1
	comp=Z,0.6nm,0.4s						
MORH	Mrgy, Hungar	149.43	337	⇓P	PKPbc	20 45 01.3	-1.5
BIOA	Bad Ischl, Aus	149.66	345	*e*PKP	PKiKP	20 45 04.0	-0.1
	comp=Z,0.4nm,0.2s						
FRGS	Fruska Gora	149.86	335	⇓P	PKiKP	20 45 04.5	0.0
ALN	Alexandroupoli	149.91	322	PKPbc	PKPbc	20 45 04.1	+0.1
RDO	Rodhopi	150.04	323	PKPbc	PKiKP	20 45 04.7	-0.3
SOKA	Soboth	150.21	342	*e*PKP	PKiKP	20 45 05.0	-0.3
	comp=Z,2.2nm,0.7s,SNR=4.0						
BOVS	Bovan	150.24	331	⇓P	PKPbc	20 45 04.6	-0.1
VTS	Vitosha	150.26	328	PKPbc	PKiKP	20 45 06.5	+0.9
KBA	Koelnbreinsper	150.31	344	*e*PKP	PKiKP	20 45 05.2	-0.4
	comp=Z,4.1nm,1.0s						
WATA	Walderalm	150.48	347	*i* PKP	PKiKP	20 45 06.1	+0.2
	comp=Z,2.1nm,0.6s						
RETA	Reutte	150.50	348	*i* PKP	PKiKP	20 45 05.7	-0.1
	comp=Z,7.2nm,1.1s						
OBKA	Obir	150.51	342	*e*PKP	PKPbc	20 45 05.3	-0.1
	comp=Z,2.1nm,0.8s						
WTTA	Wattenberg	150.54	347	*i* PKP	PKiKP	20 45 06.1	+0.1
	comp=Z,3.6nm,0.5s						
MOTA	Moosalm	150.57	348	*i* PKP	PKiKP	20 45 06.3	+0.2
	comp=Z,9.3nm,1.0s						
MYKA	Terra Mystica	150.65	344	*i* PKP	PKPbc	20 45 05.6	-0.1
	comp=Z,1.2nm,0.3s						
SQTA	Sankt Quirin	150.67	347	*e*PKP	PKiKP	20 45 06.2	-0.1
	comp=Z,2.6nm,0.6s						
ABTA	Abfaltersbach	150.82	345	*e*PKP	PKPbc	20 45 06.2	+0.1
	comp=Z,2.6nm,0.5s						
FETA	Feichten	150.96	348	*e*PKP	PKiKP	20 45 07.1	+0.2
	comp=Z,2.0nm,0.6s						
CIMO	Cimolais	151.25	345	PKPbc	PKPbc	20 45 06.8	-0.3
TORD	Torodi Ar. Bea	174.39	176	PKP	PKPdf	20 45 22.1	-1.1
	comp=Z,1.2nm,1.1s,baz=256,slow=0.6,SNR=4.3						
TORD				PKPab	PKPab	20 46 58.1	-0.9
	comp=Z,0.4nm,0.6s,baz=177,slow=4.0,SNR=2.2						

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*NEIC **05** 20:35:33.5±2.4, 3°.72S±0°.09×138°.38E±0°.08, h85^{km}±8^{km}, mb4.3/19, Error ellipse: s-maj=16.4km s-min=5.1km az=223.0*

*IDC **05** 20:35:35.2±5.0, 3°.61S×138°.38E, h94^{km}±51^{km}, mb3.6/7, mbtmp4.1/9, Error ellipse: s-maj=34.8km s-min=24.4km az=74.0*

ISC 05 20:35:35.5±0.5**, 3°.82S**±0°.06×**138°.20E**±0°.06**, h100**^{km}**, n50,** σ**1^{s}.77**/52**, mb4.0**/11**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	2.31	58	P	Pn	20 36 14.7	+2.5
FAKI	Fak Fak	6.01	278	Pn	Pn	20 37 03.0	+1.0
KDU	Kakadu	10.48	212	P	Pn	20 38 02.3	-0.5
PMG	Port Moresby	10.49	122	P	Pn	20 38 01.8	-1.2
	15nm,0.7s,baz=304,slow=11,SNR=6.6						
PMG				S	Sn	20 39 53.2	-5.4
	3.0nm,0.3s,baz=270,slow=16,SNR=1.7						
PMG	Port Moresby	10.49	122		Pn	20 37 59.8	-3.2
PMG	Port Moresby	10.49	122	P	Pn	20 38 04.4	+1.4
PMG	Port Moresby	10.49	122	P	Pn	20 38 04.7	+1.7
COEN	Coen	11.21	154		Pn	20 38 10.9	-1.8
MTN	Manton Dam	11.37	217	Pn	Pn	20 38 14.7	-0.2
KNRA	Kununurra	15.00	218	Pn	Pn	20 39 03.0	+0.5
SOEI	Soe	15.04	246		P	20 39 06.5	+0.6
SOEI				IAmb	IAmb	20 39 40.6	
	comp=Z,37nm,1.1s						
MTSU	Mount Surprise	15.44	158	P	P	20 39 10.6	+0.3
WB0	Warramunga Arr	16.28	193		Pn	20 39 17.4	-1.0
WB0				IAmb	IAmb	20 39 22.4	
	comp=Z,13nm,0.9s						
WR0	Warramunga Arr	16.44	192		Pn	20 39 19.5	-0.9
WR0				IAmb	IAmb	20 40 03.9	
	comp=Z,31nm,1.5s						
WRAB	Tennant Creek	16.45	193	Pn	Pn	20 39 19.9	-0.7
WRAB				IAmb	IAmb	20 39 30.7	
	comp=Z,18nm,0.9s						
WRAB	Tennant Creek	16.45	193	P	P	20 39 22.4	+0.9
WB2	Warramunga Arr	16.46	193		Pn	20 39 19.8	-0.9
WB2				IAmb	IAmb	20 39 30.8	
	comp=Z,20nm,0.9s						
WRA	Warramunga Arr	16.47	193	P	Pn	20 39 19.1	-1.6
	comp=Z,2.3nm,0.3s,baz=18,slow=13,SNR=50						
WRA				S	Sn	20 42 11.9	-12
	comp=Z,2.2nm,0.6s,baz=15,slow=22,SNR=6.0						
WRA	Warramunga Arr	16.47	193	Pn	Pn	20 39 18.0	-2.7
TV1H	Townsville Har	17.50	152	P	Pn	20 39 36.4	+3.1
CTA	Charters Tower	17.98	155	P	Pn	20 39 41.3	+2.2
	comp=Z,12nm,1.0s,baz=331,slow=11,SNR=16						
CTA	Charters Tower	17.98	155	P	Pn	20 39 41.8	+2.7
CTAO	Charters Tower	17.98	155	Pn	P	20 39 38.9	+0.5
CTAO				IAmb	IAmb	20 39 43.0	
	comp=Z,21nm,1.2s						
CTAO	Charters Tower	17.98	155	P	Pn	20 39 42.0	+2.9
FITZ	Fitzroy Crossi	18.78	220	P	Pn	20 39 49.8	+1.2
AS01	Alice Springs	20.16	191	P	Pn	20 40 05.3	+0.5
AS31	Alice Springs	20.16	191	P	P	20 40 04.1	+1.9
ASAR	Alice Springs	20.17	191	P	P	20 40 04.3	+2.1
	comp=Z,11nm,0.6s,baz=20,slow=10,SNR=130						
ASAR				S	S	20 43 41.8	-1.5
	comp=Z,2.2nm,0.8s,baz=10.0,slow=25,SNR=6.1						
	comp=Z,11nm,0.6s						
ASAR	Alice Springs	20.17	191	P	P	20 40 04.0	+1.8
KKM	Kota Kinabalu	24.04	294	P	P	20 40 40.7	-0.9
KKM				IAmb	IAmb	20 41 06.2	
	comp=Z,19nm,1.1s						
EIDS	Eidsvold	24.75	151	P	P	20 40 47.2	-0.7
EIDS				IAmb	IAmb	20 40 52.0	
	comp=Z,6.5nm,0.9s						
STKA	Stephens Creek	28.10	174	P	P	20 41 19.4	+1.5
	comp=Z,0.4nm,0.3s,baz=326,slow=7.3,SNR=3.2						
	comp=Z,0.4nm,0.3s						
KULM	Kulim	38.58	283	P	P	20 42 51.1	+2.0
KULM				IAmb	IAmb	20 42 54.9	
	comp=Z,6.4nm,1.2s						
PHRA	Phrae	43.48	302	P	P	20 43 28.9	-0.3
CMAR	Chiang Mai Arr	44.55	301	P	P	20 43 38.5	+0.6
	comp=Z,2.0nm,0.7s,baz=116,slow=5.9,SNR=15						
	comp=Z,2.0nm,0.7s						
ULN	Ulaanbaatar	58.25	336	P	P	20 45 18.4	-1.4
ULN				IAmb	IAmb	20 45 19.6	
	comp=Z,4.2nm,1.5s						
SONM	Songino Array	58.50	335	P	P	20 45 21.7	+0.2
	comp=Z,0.4nm,0.5s,baz=136,slow=7.4,SNR=2.1						
SONM				PcP	PcP	20 46 11.4	+0.4
	comp=Z,0.6nm,0.6s,baz=147,slow=3.4,SNR=3.4						
	comp=Z,0.4nm,0.5s						
PEA0B	Petropavlovsk-	59.05	14	P	P	20 45 22.9	-2.0
PETK	Petropavlovsk-	59.05	14	P	P	20 45 23.8	-1.1
MKAR	Makanchi Array	70.35	323	P	P	20 46 38.9	+0.2
	comp=Z,0.5nm,0.6s,baz=107,slow=7.6,SNR=10.0						
	comp=Z,0.5nm,0.6s						
MKAR	Makanchi Array	70.35	323	P	P	20 46 37.1	-1.5
MAKZ	Makanchi	70.55	323	P	P	20 46 37.4	-2.4
ZALV	Zalesovo Beam	72.63	330	P	P	20 46 50.8	-1.3
	comp=Z,1.0nm,0.6s,baz=91,slow=5.8,SNR=5.3						
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	72.63	330	P	P	20 46 49.9	-2.2
VNDA	Vanda	74.73	175	P	P	20 47 02.3	-1.7
IMAR	Indian Mountai	84.70	22	P	P	20 47 57.9	-0.2
ABKAR	Akbulak array	85.23	320	P	P	20 47 59.7	-1.3
MLY	Manley	85.55	24	P	P	20 48 02.5	+0.2
MLY				IAmb	IAmb	20 48 24.1	
	comp=Z,5.1nm,1.4s						
ILAR	Eielson Array	87.04	24	P	P	20 48 08.3	-1.3
	comp=Z,0.8nm,0.8s,baz=263,slow=4.8,SNR=7.3						
	comp=Z,0.8nm,0.8s						
BMAR	Burnt Mountain	88.61	22	P	P	20 48 17.9	+0.8

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*IDC **05** 20:38:03.7±1.0, 34°.81N×73°.57E, h0^{km}, mb3.7/12, mbtmp3.7/15, ML3.3/4, Error ellipse: s-maj=24.4km s-min=19.5km az=71.0*

ISC 05 20:38:08.7±1.0**, 34°.8N**±0°.1×**73°.6E**±0°.2**, h35**^{km}**, n17,** σ**0^{s}.88**/18**, mb3.6**/11**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	7.91	5	Pn	Pn	20 40 02.8	+1.6
	0.3nm,0.3s,baz=182,slow=11,SNR=6.6						
AAK				Sn	Sn	20 41 30.6	+1.1
	0.3nm,0.3s,baz=75,slow=17,SNR=1.9						
	0.7nm,0.3s						
MKAR	Makanchi Array	13.71	26	Pn	Pn	20 41 19.8	-0.6
	baz=192,slow=13,SNR=2.9						
KURBB	Kurchatov Arra	16.27	11	Pn	Pn	20 41 54.4	+0.2
	0.1nm,0.3s,baz=203,slow=10,SNR=3.8						
BVAR	Borovoye Array	18.41	354	P	P	20 42 20.2	-0.5
	0.1nm,0.3s,baz=154,slow=9.3,SNR=15						
	0.7nm,0.3s						
AKTO	Aktyubinsk	19.35	329	P	P	20 42 30.2	-0.8
	0.4nm,0.3s,baz=138,slow=6.0,SNR=6.7						
	2.1nm,0.5s						
ZALV	Zalesovo Beam	20.76	19	P	P	20 42 44.6	-1.6
	1.3nm,0.5s,baz=212,slow=9.5,SNR=8.6						
	1.3nm,0.5s						
ARU	Arti	23.99	339	P	P	20 43 19.6	-0.1
	1.3nm,0.5s,baz=168,slow=5.3,SNR=4.6						
	1.3nm,0.5s						
SONM	Songino Array	27.67	52	P	P	20 43 52.6	-0.8
	0.3nm,0.5s,baz=262,slow=7.0,SNR=2.2						
	0.3nm,0.5s						
FINES	FINESS Array B	40.10	327	P	P	20 45 40.2	-0.3
	9.1nm,1.1s,baz=149,slow=4.4,SNR=4.3						
	9.1nm,1.1s						
ARCES	ARCESS Array B	43.56	338	P	P	20 46 08.8	+0.1
	1.1nm,0.6s,baz=114,slow=8.1,SNR=15						
	1.1nm,0.6s						
NOA	NORSAR Array B	47.04	324	P	P	20 46 35.6	-0.8
	0.4nm,0.6s,baz=104,slow=8.2,SNR=2.3						
	0.4nm,0.6s						
TORD	Torodi Ar. Bea	67.82	271	P	P	20 49 03.4	-0.2
	0.4nm,0.4s,baz=46,slow=6.1,SNR=7.3						
	0.4nm,0.4s						
INK	Inuvik	75.27	10	P	P	20 49 47.7	+0.2
	0.6nm,0.5s,baz=267,slow=2.7,SNR=5.7						
	0.6nm,0.5s						
ILAR	Eielson Array	75.86	17	P	P	20 49 51.0	-0.1
	0.3nm,0.6s,baz=316,slow=6.3,SNR=4.9						
	0.3nm,0.6s						
WRA	Warramunga Arr	79.28	123	P	P	20 50 11.7	+1.1
	0.4nm,0.6s,baz=299,slow=7.2,SNR=1.8						
	0.4nm,0.6s						
ASAR	Alice Springs	81.53	126	P	P	20 50 23.9	+1.2
	0.4nm,0.6s,baz=312,slow=5.4,SNR=4.7						
	0.4nm,0.6s						
YKA	Yellowknife Ar	82.87	4	P	P	20 50 29.2	0.0
	0.2nm,0.5s,baz=346,slow=5.1,SNR=6.8						
	0.2nm,0.5s						

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*NEIC **05** 20:38:34.8±2.0, 18°.0S±0°.2×178°.1W±0°.2, h627^{km}±9^{km}, mb4.2/46, Error ellipse: s-maj=25.2km s-min=18.8km az=135.0*

*IDC **05** 20:38:36.1±1.2, 17°.86S×178°.49W, h613^{km}±15^{km}, mb3.5/16, mbtmp4.5/19, Error ellipse: s-maj=22.4km s-min=11.4km az=148.0*

*NOU **05** 20:39:00.4, 18°.42S×178°.85E, h678^{km}, mb4.5/10, Fiji Islands*

ISC 05 20:38:33.9±0.5**, 18°.0S**±0°.1×**178°.33W**±0°.09**, h600**^{km}**, n109,** σ**1^{s}.35**/111**, mb4.2**/40**, 1C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.46	274	P	P	20 39 59.1	+3.1
	69nm,0.7s,baz=121,slow=5.5,SNR=23						
MSVF				S	S	20 41 08.2	+5.4
	3.3nm,0.4s,baz=127,slow=20,SNR=1.2						
MSVF	Nonsavu	3.46	274	P	P	20 39 58.9	+2.9
AFI	Afiamalu	7.51	58	P	P	20 40 30.3	+1.5
	48nm,0.7s,baz=334,slow=1.8,SNR=9.2						
PINNC	Pines Island,	14.11	249	P	P	20 41 33.6	-0.2
OUENC	Ouen Island, N	14.59	250	P	P	20 41 38.0	-0.4
DZM	Mont Dzumac	14.87	252	P	P	20 41 41.4	+0.3
	8.4nm,0.6s,baz=85,slow=15,SNR=3.9						
DZM	Mont Dzumac	14.87	252	P	P	20 41 40.8	-0.2
DZM				IAmb	IAmb	20 41 45.0	
	comp=Z,9.8nm,0.8s						
ONTNC	Ouen Toro	14.91	251	P	P	20 41 42.2	+0.9
KOUNC	Koumac, New Ca	16.61	258	P	P	20 41 56.6	-0.3
ODZ	Otahua Downs	28.48	197	P	P	20 43 56.8	+14
	comp=Z,39nm,2.7s						
EIDS	Eidsvold	29.30	250	P	P	20 43 49.9	+0.1
EIDS				IAmb	IAmb	20 43 50.8	
	comp=Z,7.8nm,0.8s						
MLZ	Mavora Lakes	29.52	200	P	P	20 43 51.2	-0.2
ARMA	Armidale	29.95	240	P	P	20 43 56.1	+0.7
ARMA				IAmb	IAmb	20 43 58.0	
	comp=Z,8.4nm,0.9s						
RMQ	Roma	31.54	249	P	P	20 44 10.3	+1.4
CTA	Charters Tower	33.51	261	P	P	20 44 25.9	+0.2
	comp=Z,8.2nm,0.6s,baz=86,slow=9.0,SNR=12						
	comp=Z,8.2nm,0.6s						
CTA	Charters Tower	33.51	261	P	P	20 44 25.8	+0.2
CTAO	Charters Tower	33.51	261	P	P	20 44 25.6	0.0
CTAO	Charters Tower	33.51	261	P	P	20 44 26.0	+0.4
PMG	Port Moresby	34.56	280	P	P	20 44 35.3	+0.9
	comp=Z,11nm,0.6s,baz=47,slow=7.7,SNR=5.6						
	comp=Z,11nm,0.6s						
QLP	Quilpie	35.57	249	P	P	20 44 43.0	+0.4
TOO	Toolangi	37.16	231	P	P	20 44 56.6	+1.1
COEN	Coen	37.19	271	P	P	20 44 57.0	+1.0
COEN	Coen	37.19	271	P	P	20 44 57.2	+1.2
STKA	Stephens Creek	38.65	241	P	P	20 45 08.8	+1.2
	comp=Z,6.8nm,0.5s,baz=95,slow=11,SNR=17						
	comp=Z,6.8nm,0.5s						
STKA	Stephens Creek	38.65	241	P	P	20 45 08.8	+1.2
INKA	Innaminka	38.78	248	P	P	20 45 10.3	+1.6
BBOO	Buckleboo	43.42	241	P	P	20 45 45.9	+0.6
BBOO				IAmb	IAmb	20 45 46.7	
	comp=Z,13nm,0.9s						
WR0	Warramunga Arr	44.50	260	P	P	20 45 53.7	-0.1
WR0				IAmb	IAmb	20 45 58.5	
	comp=Z,8.7nm,1.1s						
WB0	Warramunga Arr	44.66	260	P	P	20 45 54.4	-0.6
WB0				IAmb	IAmb	20 45 55.0	
	comp=Z,6.6nm,0.9s						
WB2	Warramunga Arr	44.68	260	P	P	20 45 54.9	-0.3
WRAB	Tennant Creek	44.68	260	P	P	20 45 55.0	-0.2
WRAB				IAmb	IAmb	20 45 55.8	
	comp=Z,15nm,1.1s						
WRA	Warramunga Arr	44.69	260	P	P	20 45 54.7	-0.5
	comp=Z,3.2nm,0.3s,baz=95,slow=7.4,SNR=21						
	comp=Z,3.2nm,0.3s						
WRA	Warramunga Arr	44.69	260	P	P	20 45 55.2	-0.1
AS31	Alice Springs	44.84	254	P	P	20 45 56.4	+0.1
AS31				IAmb	IAmb	20 45 57.6	
	comp=Z,7.0nm,0.5s						
ASAR	Alice Springs	44.84	254	P	P	20 45 56.6	+0.2
	comp=Z,21nm,0.5s,baz=86,slow=8.7,SNR=70						
ASAR				S	S	20 51 48.3	-3.2
	comp=Z,0.8nm,0.8s,baz=88,slow=14,SNR=7.4						
	comp=Z,21nm,0.5s						
ASAR	Alice Springs	44.84	254	P	P	20 45 56.2	-0.2
SAUI	Saumlaki	49.95	275	P	P	20 46 33.3	-1.3
FORT	Forrest	50.03	245	P	P	20 46 34.8	-0.1
KNRA	Kununurra	50.56	264	P	P	20 46 39.5	+0.5
SOEI	Soe	56.15	270	P	P	20 47 19.0	+0.4
SOEI				IAmb	IAmb	20 47 28.5	
	comp=Z,12nm,1.1s						
PSA00	Pilbara Seismi	57.96	255	P	P	20 47 29.5	-1.2
PSA00				IAmb	IAmb	20 47 45.1	
	comp=Z,8.9nm,1.0s						
MBWA	Marble Bar	58.12	256	P	P	20 47 29.8	-2.0
MJAR	Matsushiro Arr	68.05	323	P	P	20 48 34.4	-0.5
	comp=Z,1.9nm,0.5s,baz=157,slow=6.3,SNR=7.8						
	comp=Z,1.9nm,0.5s						
UGM	Wanagama	69.72	268	P	P	20 48 42.8	-2.6
QSPA	South Pole Qui	72.03	180	P	P	20 48 59.7	+1.6
	comp=Z,2.3nm,0.8s,baz=359,slow=4.5,SNR=5.0						
	comp=Z,2.3nm,0.8s						
PEA0B	Petropavlovsk-	73.81	345	P	P	20 49 06.4	-1.8
PEA0B				IAmb	IAmb	20 49 11.6	
	comp=Z,11nm,0.9s						
PETK	Petropavlovsk-	73.81	345	P	P	20 49 08.0	-0.2
	comp=Z,3.7nm,0.7s,baz=110,slow=7.4,SNR=9.7						
	comp=Z,3.7nm,0.7s						
PETK	Petropavlovsk-	73.81	345	P	P	20 49 07.3	-0.8
YBH	Yreka Blue Hor	78.56	39	P	P	20 49 36.6	+2.0
	comp=Z,1.1nm,0.4s,baz=166,slow=4.2,SNR=1.7						
	comp=Z,1.1nm,0.4s						
GWY	Greenwater Val	79.36	46	P	P	20 49 34.9	-4.1
P18K	Big Mountain,	79.42	12	P	P	20 49 36.8	-1.8
P18K				IAmb	IAmb	20 49 39.1	
	comp=Z,7.2nm,0.8s						
NVAR	Mina Array Bea	79.45	44	P	P	20 49 40.6	+1.0
	comp=Z,0.5nm,0.3s,baz=218,slow=6.8,SNR=4.1						
	comp=Z,0.5nm,0.3s						
ILSW	Iliamna Southw	80.38	13	P	P	20 49 41.9	-1.8
ILSW				IAmb	IAmb	20 49 44.2	
	comp=Z,6.4nm,0.7s						
N19K	Bonanza Creek	80.88	12	P	P	20 49 44.4	-1.8
RSO	Redoubt South	80.90	13	P	P	20 49 44.1	-2.4
M19K	Big River Lodg	81.90	11	P	P	20 49 50.2	-1.2
BELA	Belgrano 2	82.04	173	P	P	20 49 49.8	-2.2
L19K	White Mountain	82.07	11	P	P	20 49 50.3	-1.9
SUA	Susitna One	82.22	13	P	P	20 49 50.1	-3.0
SUA				IAmb	IAmb	20 49 53.7	
	comp=Z,7.2nm,0.8s						
SKT	Skwentna	82.53	12	P	P	20 49 53.3	-1.2
TTA	Tatalina	82.57	10	P	P	20 49 54.1	-0.7
SML	Sawmill	83.06	14	P	P	20 49 55.6	-1.6
SML				IAmb	IAmb	20 50 02.2	
	comp=Z,4.5nm,1.0s						
K20K	Telida	83.30	11	P	P	20 49 57.6	-0.7
K20K				IAmb	IAmb	20 49 59.4	
	comp=Z,4.8nm,0.8s						
SCM	Sheep Creek Mo	83.32	14	P	P	20 49 58.0	-0.6
SCM				IAmb	IAmb	20 49 59.9	
	comp=Z,7.6nm,0.8s						
CAST	Castle Rocks	83.72	12	P	P	20 49 59.3	-1.1
CAST				IAmb	IAmb	20 50 00.6	
	comp=Z,7.1nm,0.8s						
GLB	Gilahina Butte	83.85	16	P	P	20 50 00.5	-0.6
GLB				IAmb	IAmb	20 50 02.1	
	comp=Z,3.8nm,0.6s						
SEY	Seymchan	83.90	347	P	P	20 50 01.1	-0.2
	comp=Z,2.4nm,0.5s,baz=142,slow=5.4,SNR=14						
	comp=Z,2.4nm,0.5s						
I21K	Tanana	85.34	11	P	P	20 50 07.5	-0.8
WRH	Wood River Hil	85.46	13	P	P	20 50 07.7	-1.1
WRH				IAmb	IAmb	20 50 09.9	
	comp=Z,3.2nm,0.9s						
H21K	Melozitna Rive	85.64	10	P	P	20 50 07.3	-2.4
CCB	Clear Creek Bu	85.68	13	P	P	20 50 08.8	-1.0
CCB				IAmb	IAmb	20 50 09.7	
	comp=Z,2.7nm,0.6s						
IMAR	Indian Mountai	85.78	10	P	P	20 50 09.8	-0.5
I23K	Minto, Yukon-K	85.81	12	P	P	20 50 09.1	-1.3
MDM	Murphy Dome	85.86	12	P	P	20 50 09.2	-1.6
MDM				IAmb	IAmb	20 50 11.0	
	comp=Z,2.7nm,0.9s						
IL31		85.98	13	P	P	20 50 10.4	-0.8
IL31				IAmb	IAmb	20 50 11.2	
	comp=Z,3.3nm,1.1s						
ILAR	Eielson Array	85.98	13	P	P	20 50 10.8	-0.5
	comp=Z,1.1nm,0.4s,baz=222,slow=4.9,SNR=32						
	comp=Z,1.1nm,0.4s						
ILAR	Eielson Array	85.98	13	P	P	20 50 09.8	-1.5
TXAR	Lajitas Array	85.99	58	P	P	20 50 14.9	+2.7
	comp=Z,1.3nm,0.8s,baz=216,slow=5.6,SNR=14						
	comp=Z,1.3nm,0.8s						
J26L	Joseph Creek	86.49	14	P	P	20 50 13.6	-0.3
J26L				IAmb	IAmb	20 50 15.4	
	comp=Z,2.9nm,0.6s						
PDAR	Pinedale Array	87.38	43	P	P	20 50 19.9	+1.1
	comp=Z,0.8nm,0.6s,baz=206,slow=2.7,SNR=8.9						
	comp=Z,0.8nm,0.6s						
COLD	Coldfoot	87.51	11	P	P	20 50 17.6	-0.9
BMAR	Burnt Mountain	88.75	12		P	20 50 25.0	+0.7
INK	Inuvik	91.97	15	P	P	20 50 38.8	-0.2
	comp=Z,2.3nm,1.0s,baz=261,slow=7.4,SNR=4.6						
	comp=Z,2.3nm,1.0s						
YKA	Yellowknife Ar	94.40	25	P	P	20 50 50.3	+0.1
	comp=Z,0.3nm,0.6s,baz=237,slow=4.5,SNR=5.8						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	109.27	314	PKiKP	PKiKP	20 55 56.0	-0.8
	comp=Z,0.2nm,0.5s,baz=132,slow=2.0,SNR=4.1						
BURAR	Bucovina Array	144.75	332	⇓P	PKPab	20 57 05.4	+0.4
BRTR	Keskin Array B	144.92	315	PKP	PKPab	20 57 05.0	-1.0
	comp=Z,0.8nm,0.4s,baz=106,slow=2.0,SNR=7.1						
OSTC	Ostas	145.52	344	*e*PKP	PKPbc	20 57 06.2	+0.1
CLL	Collm	145.59	347	*i* PKPbc	PKPbc	20 57 06.4	+0.1
	comp=Z,7.0nm,0.8s						
CLL				*i* PKPab	PKPab	20 57 07.8	-0.1
UPC	Upice	145.62	344	*e*PKP	PKPab	20 57 06.8	-1.3
DPC	Dobruska-Polom	145.68	343	*e*PKP	PKPab	20 57 07.3	-1.1
KRLC	Kraliky	145.80	343	*e*PKP	PKPbc	20 57 07.0	0.0
PRU	Pruhonice	146.47	345	*e*PKP	PKPbc	20 57 09.1	+0.3
DRGR		146.48	333	⇑P	PKPbc	20 57 09.0	0.0
KHC	Kasperske Hory	147.50	345		PKiKP	20 57 12.2	-0.9
KHC	Kasperske Hory	147.50	345	*e*PKP	PKPbc	20 57 11.8	+0.2
CKRC	Cesky Krumlov	147.61	344	*e*PKP	PKiKP	20 57 12.2	-1.1
GEC2	GERESS Array S	147.74	345		PKiKP	20 57 12.8	-0.9
GERES	GERESS Array B	147.74	345	PKPbc	PKPbc	20 57 12.5	+0.2
	comp=Z,1.7nm,0.6s,baz=27,slow=3.1,SNR=15						
GERES	GERESS Array B	147.74	345		PKiKP	20 57 13.0	-0.7
CONA	Conrad Observa	148.00	342	*e*PKP	PKiKP	20 57 13.7	-0.5
	comp=Z,2.5nm,0.8s						
RONA	Rosalia, Austr	148.07	341	*e*PKP	PKiKP	20 57 13.6	-0.7
	comp=Z,7.8nm,1.4s						
BIOA	Bad Ischl, Aus	148.83	344	*e*PKP	PKPab	20 57 22.1	+0.9
	comp=Z,3.9nm,0.8s						
KBA	Koelnbreinsper	149.47	344	*e*PKP	PKiKP	20 57 16.9	-0.5
	comp=Z,6.7nm,1.1s						
WTTA	Wattenberg	149.71	346	*e*PKP	PKiKP	20 57 17.4	-0.5
	comp=Z,6.1nm,0.7s						
MOTA	Moosalm	149.75	347	*e*PKP	PKiKP	20 57 17.3	-0.7
	comp=Z,4.8nm,1.0s						
SQTA	Sankt Quirin	149.84	347	*e*PKP	PKiKP	20 57 17.6	-0.5
	comp=Z,5.3nm,0.7s						
ABTA	Abfaltersbach	149.99	345	*e*PKP	PKiKP	20 57 17.8	-0.6
	comp=Z,2.5nm,0.6s						
FETA	Feichten	150.13	348	*e*PKP	PKiKP	20 57 18.8	+0.1
	comp=Z,4.2nm,0.9s						

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*NEIC **05** 20:55:08.9±3.0, 43°.80N±0°.06×105°.16W±0°.03, h0^{km}±2^{km}, ML3.3/33, Error ellipse: s-maj=10.8km s-min=3.1km az=346.0*

*IDC **05** 20:55:11.0±1.9, 43°.80N×105°.69W, h0^{km}, mb3.6/1, mbtmp3.4/3, ML3.0/2, Error ellipse: s-maj=54.1km s-min=10.3km az=149.0*

ISC 05 20:55:10.1±1.1**, 43°.77N**±0°.06×**105°.27W**±0°.06**, h0**^{km}**, n22,** σ**1^{s}.35**/21**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.96	68		Pg	20 55 26.9	-1.6
K22A	Casper	1.45	220		Pn	20 55 35.5	-2.2
K22A				IAML		20 55 58.4	
	comp=E,385nm,1.1s						
K22A				IAML		20 56 00.8	
	comp=N,240nm,0.7s						
PHWY	Pilot Hill	2.47	183	Pn	Pn	20 55 50.6	-1.3
RWWY	Rawlins	2.52	215	Pn	Pn	20 55 51.5	-1.1
RWWY				IAML		20 56 28.7	
	comp=N,192nm,0.8s						
N23A	Red Feather La	2.92	190		Pn	20 55 58.7	+0.7
N23A				IAML		20 56 39.7	
	comp=N,80nm,0.8s						
N23A				IAML		20 56 40.0	
	comp=E,83nm,0.8s						
LAO	LASA Array	3.00	347		Pn	20 55 59.3	+0.3
RLMT	Red Lodge	3.17	297	Pn	Pn	20 55 58.7	-2.8
BRIGG	Briggsdale	3.26	167	Pn	Pn	20 56 00.8	-1.8
BRIGG				IAML		20 56 57.1	
	comp=E,61nm,1.7s						
BRIGG				IAML		20 58 02.2	
	comp=N,72nm,2.1s						
PD31	Pinedale Array	3.29	254		Pn	20 56 02.8	-0.3
PDAR	Pinedale Array	3.29	254	Pn	Pn	20 56 03.2	+0.1

	comp=N,1.7nm,0.3s,baz=74,slow=16,SNR=19						
PDAR				Lg	Lg	20 56 45.0	
	comp=N,2.9nm,0.3s,baz=73,slow=30,SNR=3.6						
	comp=N,1.4nm,0.2s						
PDAR	Pinedale Array	3.29	254		Pn	20 56 02.1	-1.1
BW06	Boulder Array	3.29	254	Pn	Pn	20 56 02.0	-1.1
BW06				IAML		20 56 54.6	
	comp=N,34nm,0.9s						
BW06				IAML		20 57 02.4	
	comp=N,35nm,1.0s						
OGNE	Ogallala	3.70	139	Pn	Pn	20 56 08.8	+0.2
GCMT	Greycliff	3.73	304		Pn	20 56 08.2	-0.9
H17A	Grant Village	3.88	281		Pn	20 56 11.9	+0.7
H17A				IAML		20 57 15.2	
	comp=E,24nm,2.4s						
H17A				IAML		20 57 17.3	
	comp=N,40nm,1.4s						
FLWY	Flagg Ranch	3.94	276		Pn	20 56 12.9	+0.9
FLWY				IAML		20 57 23.9	
	comp=N,45nm,2.0s						
FLWY				IAML		20 57 29.9	
	comp=N,64nm,1.4s						
ISCO	Idaho Springs	3.97	184		Pn	20 56 13.6	+1.0
REDW	Red Top Meadow	4.08	266		Pn	20 56 14.9	+0.9
REDW				IAML		20 57 58.7	
	comp=N,52nm,2.4s						
O20A	White River Ci	4.25	212		Pn	20 56 16.9	+0.5
I10CA	LAC DU BONNET	9.01	41	I	I	21 46 00.0	
	baz=224,slow=322,SNR=1.2						
ULM	Lac du Bonnet	9.12	41	Pn	Pn	20 57 24.9	+2.0
	comp=N,0.3nm,0.3s,baz=233,slow=10,SNR=2.0						
ULM				Lg	Lg	20 59 55.4	
	comp=N,0.3nm,0.3s,baz=323,slow=20,SNR=3.8						
	comp=N,1.0nm,0.3s						
MKAR	Makanchi Array	89.58	355	P	P	21 08 09.8	+0.5
	comp=N,0.3nm,0.7s,baz=356,slow=4.3,SNR=2.7						
	comp=N,0.3nm,0.7s						

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*SOME **05** 20:56:43.8, 39°.17N×71°.83E, h0^{km}*
*NNC **05** 20:56:52.0±10.0, 39°.58N×72°.00E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=83.9km s-min=56.3km az=174.0*
ISC 05 20:57:00.7±5.6, **40°.0N**±0°.4×**71°.93E**±0°.09, **h19^{km}, n5,** σ**0^s.98**/6, **2C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	2.50	32	⇑Pg	Pb	20 57 45.9	+0.7
	0.4nm,0.4s						
AML				⇑Lg	Lg	20 58 27.1	
	3.5nm,0.8s						
IUG	Iuzhnay	2.57	327	*e*Pg	Pb	20 57 47.2	+1.0
	18nm,0.3s						
IUG				*e*Lg	Lg	20 58 34.5	
	22nm,0.3s						
MRKS	Merke	2.90	19	*e*Pg	Pb	20 57 52.4	+0.6
	2.8nm,0.3s						
MRKS				*e*Lg	Lg	20 58 42.9	
	3.4nm,0.7s						
KK31	Karatay Array	3.26	341	⇓Pg	Pb	20 57 57.3	-0.7
	1.6nm,0.3s,baz=160,slow=13,SNR=34						
KK31				⇓Lg	Lg	20 58 51.1	
	0.9nm,0.3s,baz=166,slow=26,SNR=4.0						
TKM2	Tokmak 2	4.00	42	⇓Pn	Pn	20 58 00.5	-0.7
	0.7nm,0.5s						
TKM2				⇓Sn	Sn	20 58 47.8	+0.1
	1.1nm,0.7s						

IDC 05 21:05:24.4±1.7, **0°.63N×127°.12E, h0^{km}, mb3.4**/3, **mbtmp3.4**/3, **MS3.1**/1, **Error ellipse: s-maj=179.8km s-min=23.5km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.63	161	P	P	21 10 16.9	+0.5
	0.2nm,0.2s,baz=338,slow=10,SNR=5.6						
	0.2nm,0.2s						
ASAR	Alice Springs	25.03	165	P	P	21 10 50.2	-0.2
	0.6nm,0.9s,baz=345,slow=12,SNR=5.3						
	0.6nm,0.9s						
JCJ	Chichijima	30.04	28	LR	LR	21 24 57.5	
	comp=Z,28nm,18.0s,baz=118,slow=39						
MKAR	Makanchi Array	60.32	326	P	P	21 15 35.7	+0.6
	0.4nm,0.3s,baz=115,slow=7.8,SNR=19						
	0.4nm,0.3s						
ARCES	ARCESS Array B	93.48	340	P	P	21 18 40.1	-1.5
	3.3nm,0.9s,baz=64,slow=6.3,SNR=3.9						

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*GII **05** 21:12:46.4±0.0, 27°.83N×34°.02E, h8^{km}, MD2.9/3, Mm2.9/4*
*HLW **05** 21:12:47.4, 27°.96N×34°.50E, h10^{km}±31^{km}, Ml2.8*
ISC 05 21:12:49.1±1.6, **28°.07N**±0°.06×**34°.31E**±0°.07, **h7^{km}**±13^{km}, **n18,** σ**1^s.12**/25, **Egypt**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TR1	Tor 1	0.32	259	P	Pb	21 12 56.8	-0.4
	baz=276						
HKAT	Jabal Katrina	0.54	328	P	Pb	21 13 00.7	-0.2
	baz=322						
TR2	Tor 2	0.61	302	P	Pb	21 13 02.4	+0.3
	baz=302						
HHRG	Al Ghardaqah	1.07	218	P	Pg	21 13 09.0	-0.6
	baz=222						
HHRG				S	Sn	21 13 25.6	0.0
	baz=222						
HRDS	Abu Rudays	1.10	306	P	Pn	21 13 11.3	+0.4
	baz=306						
GRB	Gharib	1.36	279	P	Pg	21 13 14.7	-0.5
	baz=282						
EIL	Elat	1.69	19	Pn	Pb	21 13 20.3	-0.2
EIL				Sn	Sg	21 13 45.1	+1.6
EIL	Elat	1.69	19	P	Pg	21 13 20.9	-0.6
EIL				S	Sg	21 13 45.1	+1.6
EIL				IAML		21 13 52.6	
MBRI	Mt Berech	1.80	17	Pn	Pb	21 13 22.4	0.0
MBRI				Sn	Sg	21 13 48.7	+1.7
MBRI	Mt Berech	1.80	17	P	Pg	21 13 22.8	-0.8
HRFI	Mount Harif	2.06	18	Pn	Pn	21 13 25.2	+1.0
HRFI				Sn	Sg	21 13 55.3	-0.1
KRMI	Paran Flat	2.08	10	Pn	Pn	21 13 24.3	-0.1
PRNI	Paran	2.36	15	Pn	Pb	21 13 29.9	-2.0
PRNI				Sn	Sb	21 14 02.0	+0.8
PRNI	Paran	2.36	15	P	Pg	21 13 33.2	-1.1
PRNI				IAML		21 14 14.7	
ZFRI	Zfri	2.59	17	Pn	Pn	21 13 31.9	+0.5
KZIT	Kziot	2.83	1	Pn	Pn	21 13 35.3	+0.6
KZIT				Sn	Sb	21 14 12.6	-2.2
MSBI	Mazada	3.36	15	Pn	Pn	21 13 43.1	+1.2
GHAJ	Ghor Haditha	3.41	18	Pn	Pn	21 13 44.2	+1.6

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*IDC **05** 21:17:34.1±0.8, 9°.90N×125°.58E, h0^{km}, mb3.8/11, mbtmp3.8/11, MS3.1/5, Error ellipse: s-maj=34.2km s-min=13.0km az=76.0*
*MAN **05** 21:17:37.0, 9°.75N×125°.32E, h3^{km}, mb4.9, ML3.8, MS3.8 MAN INTENSITY II - SURIGAO CITY SURIGAO DEL NORTE.*
ISC 05 21:17:37.3±0.9, **9°.82N**±0°.04×**125°.44E**±0°.05, **h19^{km}**±3^{km}, **n43,** σ**1^s.27**/46, **mb3.7**/11, **MS3.1**/4, **15C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.07	125	⇑*e*P	Pg	21 17 40.4	-0.5
SCPH				*e*S	Sg	21 17 42.9	-0.4
MSLP	Maasin	0.65	299	⇑*e*P	Pb	21 17 49.4	-0.5
MSLP				*i* S	Sg	21 17 59.4	+0.6
GHBP	Garcia Hernand	1.11	260	⇑*e*P	Pn	21 17 57.3	-0.6
TABP	Talibon, Bohol	1.12	284	⇑*i*P	Pn	21 17 56.5	-1.5
TASP	Talacogon, Agu	1.41	165	⇑*e*P	Pb	21 18 02.9	0.0
LLP	Lapu-Lapu	1.53	289	⇑*i*P	Pn	21 18 03.0	-0.5
LLP				*i* S	Sg	21 18 28.3	+1.6
CGP	Cagayan de Oro	1.54	208	⇑*i*P	Pn	21 18 01.9	-1.9
CGP				*i* S	Sb	21 18 24.6	+0.2
BIPH	Bislig	1.86	151	⇓*e*P	Pn	21 18 08.2	0.0
BIPH				*i* S	Sn	21 18 32.5	+1.2
LSIP	Lazi, Siquijor	1.91	249	⇑*i*P	Pn	21 18 08.1	-0.7
LSIP				*i* S	Sb	21 18 36.3	+1.4
BUKP	Musuan	1.96	191	⇑*e*P	Pn	21 18 10.9	+1.3
BUKP				*i* S	Sg	21 18 40.7	+0.1
SNPH	Sibulan	2.22	258	⇓*i*P	Pn	21 18 13.8	+0.6
SNPH				*e*S	Sb	21 18 43.4	-0.6
CDOP	Cateel, Davao	2.25	154	⇑*e*P	Pb	21 18 16.6	-0.7
DCPH	Dipolog City	2.40	239	⇑*e*P	Pn	21 18 14.3	-1.2
DAV	Davao City (W)	2.74	177	Pg	Pb	21 18 25.1	-0.5
	37nm,0.3s,baz=31,slow=5.9,SNR=10						
DAV				Lg	Lg	21 19 02.8	
	68nm,0.3s,baz=66,slow=20,SNR=5.5						
DAV				LR	LR	21 19 12.3	
	comp=Z,122nm,19.1s,baz=54,slow=35						
CNOP	Candoni, Negro	2.75	270	⇑*e*P	Pb	21 18 25.2	-0.7
KCP	Kidapawan	2.81	187	⇑*e*P	Pn	21 18 23.5	+2.1
KCP				*i* S	Sn	21 18 51.1	-3.7
PAGZ	Pagadian	2.82	226	⇑*e*P	Pn	21 18 23.9	+2.6
CTBH	Cotabato--PC H	2.84	205	⇓*i*P	Pn	21 18 23.9	+2.3
RCP	Roxas	3.16	303	⇑*e*P	Pn	21 18 27.9	+1.9
CMAR	Chiang Mai Arr	27.06	291	P	P	21 23 20.1	+1.3
	0.4nm,0.8s,baz=112,slow=6.7,SNR=4.5						
CMAR				LR	LR	21 34 25.3	
	comp=Z,29nm,18.3s,baz=195,slow=37						
	0.4nm,0.8s						
WRA	Warramunga Arr	30.85	164	P	P	21 23 52.1	-0.4
	0.2nm,0.3s,baz=352,slow=9.3,SNR=2.1						
	0.2nm,0.3s						
ASAR	Alice Springs	34.30	166	P	P	21 24 22.4	-0.2
	0.3nm,0.4s,baz=344,slow=7.0,SNR=7.5						
	0.3nm,0.4s						
CTA	Charters Tower	36.10	145	P	P	21 24 38.8	+0.5
	1.7nm,0.5s,baz=317,slow=12,SNR=4.9						
	1.7nm,0.5s						
ASAJ	Asahikawa	37.27	21	LR	LR	21 37 48.1	
	comp=Z,26nm,21.5s,baz=1.0,slow=33						
RAMN	Ramite	40.39	300	*e*P	P	21 25 16.8	+2.1
JIRN	Jiri	40.95	301	*e*P	P	21 25 20.8	+1.4
	6.6nm,0.5s						
H11N1	WAKE ISLAND Hy	41.18	71	T	T	22 08 44.6	
	baz=265,slow=74,SNR=27						
H11N2	WAKE ISLAND Hy	41.19	71	T	T	22 08 41.5	
	baz=265,slow=74,SNR=19						
H11N3	WAKE ISLAND Hy	41.20	71	T	T	22 08 42.3	
	baz=265,slow=74,SNR=30						
GUN	Gumba	41.29	301	*e*P	P	21 25 23.7	+1.5
PKI	Pulchoki	41.59	301	*e*P	P	21 25 24.9	+0.3
DANN	Dangsing	43.21	301	*e*P	P	21 25 38.5	+0.7
	8.9nm,0.8s						
PYUN	Piuthan	43.79	301	*e*P	P	21 25 43.1	+0.7
STKA	Stephens Creek	44.25	160	P	P	21 25 45.6	-0.1
	1.5nm,0.7s,baz=328,slow=11,SNR=3.4						
	1.5nm,0.7s						
PALK	Pallekele	44.28	270	LR	LR	21 45 25.5	
	comp=Z,24nm,19.7s,baz=224,slow=38						
MKAR	Makanchi Array	51.89	323	P	P	21 26 45.2	+0.5
	0.5nm,0.7s,baz=121,slow=8.3,SNR=5.5						
	0.5nm,0.7s						
AAK	Ala-Archa	55.07	316	LR	LR	21 52 03.7	
	comp=Z,42nm,19.4s,baz=34,slow=38						
ILAR	Eielson Array	80.20	26	P	P	21 29 44.7	-1.6
	0.4nm,0.7s,baz=265,slow=3.9,SNR=4.3						
	0.4nm,0.7s						
ARCES	ARCESS Array B	84.33	340	P	P	21 30 07.3	-0.5
	4.8nm,1.1s,baz=80,slow=5.6,SNR=1.5						
	4.8nm,1.1s						
BRTR	Keskin Array B	85.18	309	P	P	21 30 12.3	-0.6
	0.2nm,0.3s,baz=108,slow=5.0,SNR=4.1						
	0.2nm,0.3s						
FINES	FINESS Array B	85.89	332	P	P	21 30 15.6	-0.1
	3.7nm,1.1s,baz=77,slow=6.3,SNR=6.6						
	3.7nm,1.1s						
YKA	Yellowknife Ar	94.50	24	P	P	21 30 55.9	-0.3
	0.2nm,0.6s,baz=297,slow=4.8,SNR=2.7						
	0.2nm,0.6s						
PLCA	Paso Flores	146.11	158	PKPbc	PKPab	21 37 17.2	+0.1
	2.5nm,1.2s,baz=207,slow=5.1,SNR=4.0						

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*IDC **05** 21:23:15.7±2.2, 40°.29S×174°.60E, h0^{km}, mb3.2/2, mbtmp3.2/2, Error ellipse: s-maj=117.8km s-min=51.8km az=22.0*
*NOU **05** 21:23:22.4, 40°.92S×174°.64E, h68^{km}, MLv4.1/15, Cook Strait, New Zealand*
*WEL **05** 21:23:23.9±0.4, 41°S±6°×17°5E±°, h39^{km}±6^{km}, M3.7/17, ML4.0/17, MLv3.7/17, Error ellipse: s-maj=0.0km s-min=0.0km az=155.0, confirmed*
ISC 05 21:23:23.3±0.9, **40°.92S**±0°.03×**174°.60E**±0°.03, **h68^{km}**±6^{km}, **n138,** σ**1^s.14**/147, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIW	Kapiti Island	0.24	77	P	Pn	21 23 33.3	-0.6
KIW				S	Sn	21 23 40.1	-1.5
TCW	Tory Channel	0.38	220	P	Pn	21 23 34.5	-0.3
TCW				S	Sn	21 23 42.2	-1.0
WEL	Wellington	0.39	161	P	Pn	21 23 35.0	+0.2
WEL				S	Sn	21 23 44.0	+0.7
CAW	Cannon Point	0.40	118	P	Pn	21 23 35.1	+0.1
CAW				S	Sn	21 23 43.6	0.0
SNZO	South Karori	0.40	169	P	Pn	21 23 35.0	+0.1
OGWZ	Otaki Gorge	0.45	77	P	Pn	21 23 35.4	0.0
OGWZ				S	Sn	21 23 44.3	+0.1
DUWZ	D’Urville Isla	0.53	282	P	Pn	21 23 34.7	-1.5
HOWZ	Holdsworth Sta	0.69	89	P	Pn	21 23 38.1	+0.1
HOWZ				S	Sn	21 23 49.1	+0.3
TUWZ	Tuamarina	0.71	224	P	Pn	21 23 38.2	+0.1
TUWZ				S	Sn	21 23 48.9	-0.1
MTW	Mount Morrison	0.72	110	P	Pn	21 23 38.4	+0.2
MTW				S	Sn	21 23 49.8	+0.5
MRZ	Mangatainoka R	0.79	71	P	Pn	21 23 38.8	-0.2
MRZ				S	Sn	21 23 50.6	0.0
PLWZ	Palliser	0.82	143	P	Pn	21 23 39.7	+0.3
CMWZ	Cape Campbell	0.88	199	P	Pn	21 23 41.6	+1.5
OHWZ	Ohakea	0.90	38	P	Pn	21 23 40.5	+0.2
TRWZ	Traveller	0.95	121	P	Pn	21 23 41.3	+0.2
BSWZ	Blackbirch Sta	0.97	214	P	Pn	21 23 41.8	+0.6
NNZ	Nelson	0.97	252	P	Pn	21 23 41.0	-0.2
NNZ				S	Sn	21 23 54.4	-0.1
TIWZ	Tintock	0.99	82	P	Pn	21 23 41.5	0.0
TMWZ	Te Maipa	1.00	101	P	Pn	21 23 41.8	+0.2
POWZ	Post Office Ro	1.03	60	P	Pn	21 23 41.7	-0.3
PRWZ	Pori Road	1.10	71	P	Pn	21 23 42.9	0.0
WAZ	Wanganui	1.20	14	P	Pn	21 23 44.2	0.0
CPWZ	Castlepoint	1.22	90	P	Pn	21 23 45.0	+0.6
TKNZ	Takaka Hill	1.25	264	P	Pn	21 23 44.7	-0.1
BFZ	Birch Farm	1.27	80	P	Pn	21 23 44.9	-0.2
BFZ	Birch Farm	1.27	80	P	Pn	21 23 44.6	-0.5
DVHZ	Dannevirke	1.34	63	P	Pn	21 23 45.3	-0.8
TSZ	Takapari Road	1.35	51	P	Pn	21 23 45.5	-0.6
LREZ	Lake Rotokare	1.46	354	P	Pn	21 23 47.5	-0.1
MRNZ	Matariki Terra	1.47	250	P	Pn	21 23 48.4	+0.7
ANWZ	Angora Road	1.50	73	P	Pn	21 23 47.7	-0.4
THZ	Tophouse	1.53	236	P	Pn	21 23 48.9	+0.3
QRZ	Quartz Range	1.57	273	P	Pn	21 23 48.4	-0.6
QRZ	Quartz Range	1.57	273	P	Pn	21 23 48.5	-0.6
PNHZ	Pukenui	1.58	51	P	Pn	21 23 48.3	-0.9
NMEZ	Namu Road	1.60	340	P	Pn	21 23 48.9	-0.6
WPHZ	Waipukurau	1.64	59	P	Pn	21 23 49.3	-0.7
MTVZ	Mangateitei	1.67	24	P	Pn	21 23 50.8	+0.3
KHEZ	Kahui Hut	1.68	344	P	Pn	21 23 50.5	-0.2
KHEZ	Kahui Hut	1.68	344	P	Pn	21 23 50.5	-0.2
PRHZ	Porangahau	1.68	68	P	Pn	21 23 50.1	-0.5
NEZ	North Egmont	1.69	347	P	Pn	21 23 50.7	-0.1
KHZ	Kahutara	1.70	208	P	Pn	21 23 51.3	+0.6
KHZ	Kahutara	1.70	208	P	Pn	21 23 51.3	+0.6
PKVZ	Pokaka	1.72	20	P	Pn	21 23 51.1	-0.1
NBEZ	Newall Road No	1.74	341	P	Pn	21 23 51.1	-0.3
MOVZ	Moawhango	1.75	31	P	Pn	21 23 50.9	-0.7
DREZ	Durham Road	1.75	350	P	Pn	21 23 51.7	+0.2
WNVZ	Wahianoa	1.76	26	P	Pn	21 23 51.8	0.0
TRVZ	Turoa	1.77	25	P	Pn	21 23 52.0	0.0
PKE	Pukeiti	1.78	345	P	Pn	21 23 51.7	-0.3
VRZ	Vera Road	1.79	4	P	Pn	21 23 52.2	+0.2
DRZ	Dome Shelter	1.80	25	P	Pn	21 23 53.0	+0.5
WHVZ	Whangaehu Hut	1.80	25	P	Pn	21 23 52.5	+0.1
BHHZ	Black Hill Sta	1.81	39	P	Pn	21 23 51.9	-0.5
FWVZ	Far West T-bar	1.81	24	P	Pn	21 23 52.6	+0.1
TUVZ	Tukino	1.83	27	P	Pn	21 23 52.8	+0.1
NGZ	Ngauruhoe	1.90	24	P	Pn	21 23 53.9	+0.2
SNVZ	South Ngauruho	1.90	25	P	Pn	21 23 53.9	+0.2
OTVZ	Oturere	1.93	25	P	Pn	21 23 54.7	+0.6
PXZ	Pawanui	1.94	64	P	Pn	21 23 52.9	-1.1
NNVZ	North Ngauruho	1.95	24	P	Pn	21 23 54.5	+0.2
TWVZ	Taurewa	1.95	20	P	Pn	21 23 53.8	-0.5
WTVZ	West Tongariro	1.95	23	P	Pn	21 23 54.5	+0.2
ETVZ	East Tongariro	1.97	26	P	Pn	21 23 54.6	0.0
KRVZ	Karewarewa	1.99	24	P	Pn	21 23 54.8	0.0
TMVZ	Te Maari	1.99	26	P	Pn	21 23 54.8	0.0
NTVZ	North Tongarir	2.00	25	P	Pn	21 23 55.0	+0.1
KWHZ	Kaweka Forest	2.04	44	P	Pn	21 23 54.4	-1.1
KAHZ	Kahuranaki	2.07	58	P	Pn	21 23 54.8	-1.0
KATZ	Kakaramea	2.11	24	P	Pn	21 23 58.1	+1.6
RITZ	Rihia Road	2.17	27	P	Pn	21 23 58.7	+1.6
MCHZ	McNeill Hill	2.18	48	P	Pn	21 23 56.6	-0.7
RATZ	Rangitukua	2.24	24	P	Pn	21 23 59.3	+1.2
DSZ	Denniston Nort	2.26	248	P	Pn	21 23 58.3	-0.1
BKZ	Black Stump Fm	2.27	40	P	Pn	21 23 57.3	-1.3
BKZ	Black Stump Fm	2.27	40	P	Pn	21 23 57.4	-1.3
CKHZ	Cape Kidnapper	2.27	57	P	Pn	21 23 57.1	-1.4
GVZ	Greta Valley S	2.36	209	P	Pn	21 23 59.7	0.0
WATZ	Wairara	2.37	22	P	Pn	21 24 00.8	+0.9
HIZ	Hauiti	2.41	5	P	Pn	21 24 00.6	+0.2
HIZ	Hauiti	2.41	5	P	Pn	21 24 00.5	+0.2
ARHZ	Aropaoanui	2.47	49	P	Pn	21 24 00.1	-1.1
NMHZ	Naumai	2.48	44	P	Pn	21 24 00.2	-1.3
LTZ	Lake Taylor	2.55	222	P	Pn	21 24 02.0	-0.3
KUTZ	Kaahu Road	2.60	22	P	Pn	21 24 06.9	+3.9
AMCZ	Amberley	2.68	212	P	Pn	21 24 03.5	-0.6
TLZ	Tolley Road	2.68	16	P	Pn	21 24 04.2	0.0
MTHZ	Maungataniwha	2.69	41	P	Pn	21 24 02.6	-1.6
RAHZ	Arahi	2.77	45	P	Pn	21 24 03.7	-1.5
RTZ	Ruatahuna	2.94	39	P	Pn	21 24 05.9	-1.8
INZ	Inchbonnie	2.97	232	P	Pn	21 24 07.5	-0.5
KNZ	Kokohu	3.03	52	P	Pn	21 24 06.2	-2.5
OXZ	Oxford	3.07	218	P	Pn	21 24 08.0	-1.4
MHGZ	Mahia Peninsul	3.09	56	P	Pn	21 24 07.5	-2.1
MQZ	McQueen’s Vall	3.14	207	P	Pn	21 24 08.6	-1.7
AKCZ	Akaroa Harbour	3.21	202	P	Pn	21 24 10.1	-1.1
RAGZ	Rawiri	3.25	43	P	Pn	21 24 09.0	-2.9
TOZ	Tahuroa Road	3.26	13	P	Pn	21 24 11.8	-0.1
RIGZ	Rimuhau	3.29	49	P	Pn	21 24 09.7	-2.7
URZ	Urewera	3.29	37	P	Pn	21 24 09.6	-2.7
URZ	Urewera	3.29	37	P	Pn	21 24 09.6	-2.7
RACZ	Rakaia	3.35	212	P	Pn	21 24 11.5	-1.6
MWZ	Matawai	3.43	42	P	Pn	21 24 11.4	-3.0
WVZ	Waitaha Valley	3.60	232	P	Pn	21 24 15.8	-0.7
WACZ	Wakanui South	3.65	213	P	Pn	21 24 15.5	-1.7
TWGZ	Tauwhareparae	3.78	45	P	Pn	21 24 16.9	-2.2
RUGZ	Raukumara Rang	3.79	40	P	Pn	21 24 16.6	-2.8
MKAZ	Moumakai	3.83	7	P	Pn	21 24 19.6	-0.1
RPZ	Rata Peaks	3.84	222	P	Pn	21 24 19.1	-0.7
RPZ	Rata Peaks	3.84	222	P	Pn	21 24 18.5	-1.4
AWAZ	Awhitu Peninsu	3.85	1	P	Pn	21 24 20.0	0.0
ARCZ	Arundel	3.95	219	P	Pn	21 24 19.8	-1.5
ETAZ	East Tamaki Re	3.97	4	P	Pn	21 24 21.9	+0.3
WTAZ	Waiatarua	3.98	360	P	Pn	21 24 22.5	+0.7
GCSZ	Gaunt Creek Bo	3.98	232	P	Pn	21 24 21.3	-0.5
HAZ	Te Kaha	4.01	39	P	Pn	21 24 19.8	-2.4
MBAZ	Motutapu North	4.15	3	P	Pn	21 24 24.2	+0.2
KUZ	Kuaotunu	4.26	12	P	Pn	21 24 25.2	-0.4
TMZ	Timaru	4.36	216	P	Pn	21 24 25.2	-1.8
FOZ	Fox Glacier	4.41	232	P	Pn	21 24 26.0	-1.6
MXZ	Matakaoa Point	4.42	42	P	Pn	21 24 25.8	-1.9
MXZ	Matakaoa Point	4.42	42	P	Pn	21 24 24.8	-2.9
LBZ	Lake Benmore	4.75	222	P	Pn	21 24 30.7	-1.7
ODZ	Otahua Downs	5.04	214	P	Pn	21 24 34.7	-1.6
ODZ	Otahua Downs	5.04	214	P	Pn	21 24 34.3	-1.9
JCZ	Jackson Bay	5.33	232	P	Pn	21 24 39.3	-1.0
JCZ	Jackson Bay	5.33	232	P	Pn	21 24 38.6	-1.7
WKZ	Wanaka	5.66	225	P	Pn	21 24 42.7	-2.1
EAZ	Earnscleugh	5.80	220	P	Pn	21 24 44.6	-2.0
SYZ	Scrubby Hill	6.87	213	P	Pn	21 25 01.1	-0.1
SYZ	Scrubby Hill	6.87	213	P	Pn	21 25 00.2	-1.0
CTZ	Chatham Island	7.09	116	P	Pn	21 25 03.6	-0.7
CTZ	Chatham Island	7.09	116	P	Pn	21 25 04.3	0.0
ASAR	Alice Springs	38.07	284	P	P	21 30 34.5	-0.9
	0.2nm,0.6s,baz=129,slow=6.9,SNR=2.1						
	0.2nm,0.6s						
WRA	Warramunga Arr	40.07	289	P	P	21 30 51.4	-0.6
	0.3nm,0.4s,baz=126,slow=8.5,SNR=2.4						
	0.3nm,0.4s						
ARCES	ARCESS Array B	147.08	341	PKPbc	PKPdf	21 42 56.8	+1.8
	2.2nm,0.8s,baz=32,slow=3.6,SNR=1.7						
TORD	Torodi Ar. Bea	151.65	195	PKPbc	PKiKP	21 43 13.7	+3.1
	0.3nm,0.7s,baz=169,slow=3.7,SNR=1.7						

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*NOU **05** 21:32:49.2, 24°.33S×179°.94W, h542^{km}, mb4.4/20, South of Fiji Islands*
*IDC **05** 21:32:49.6±1.3, 24°.37S×179°.78E, h519^{km}±12^{km}, mb3.5/14, mbtmp4.4/16, Error ellipse: s-maj=15.6km s-min=13.6km az=88.0*
*NEIC **05** 21:32:51.1±1.1, 24°.5S±0°.1×179°.7E±0°.1, h532^{km}±9^{km}, mb4.3/47, Error ellipse: s-maj=21.6km s-min=17.0km az=215.0*
ISC 05 21:32:50.4±0.4, **24°.44S**±0°.06×**179°.78E**±0°.07, **h532^{km}, n115,** σ**1^s.13**/128, **mb4.2**/34, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	5.22	157	P	P	21 34 20.5	-0.5
GLKZ				S	S	21 35 32.8	-2.2
LKBA	Tubou, Lakemba	6.32	12	P	P	21 34 29.5	-1.7
MSVF	Nonsavu	6.87	346	P	P	21 34 35.7	-0.9
	4.5nm,0.3s,baz=168,slow=20,SNR=2.7						
NIUE	Niue	10.95	63	P	P	21 35 14.1	-3.9
YATNC	Mamie plateau,	12.09	279	P	P	21 35 31.6	+1.8
DZM	Mont Dzumac	12.48	278	P	P	21 35 35.1	+1.0
	27nm,0.7s,baz=84,slow=16,SNR=25						
DZM	Mont Dzumac	12.48	278		P	21 35 35.5	+1.4
DZM	Mont Dzumac	12.48	278	P	P	21 35 35.5	+1.4
NOUC	Port Laguerre	12.61	278	P	P	21 35 36.5	+1.2
DVP	Devils Point	12.71	300	P	P	21 35 36.8	+0.4
MXZ	Matakaoa Point	13.14	185	P	P	21 35 41.7	+1.1
AFI	Afiamalu	13.16	39	S	S	21 37 51.0	-11
	13nm,0.4s,baz=106,slow=23,SNR=1.9						
HAZ	Te Kaha	13.38	187	P	P	21 35 43.4	+0.4
HAZ				S	S	21 38 06.1	+0.7
PKGZ	Pakihiroa	13.48	186	P	P	21 35 47.8	+3.6
PKGZ				S	S	21 38 07.5	+0.1
URZ	Urewera	13.96	189	P	P	21 35 45.4	-3.6
	5.3nm,0.5s,baz=342,slow=9.6,SNR=3.4						
URZ				S	S	21 38 13.0	-3.4
	11nm,0.9s,baz=132,slow=23,SNR=2.8						
URZ	Urewera	13.96	189	P	P	21 35 48.6	-0.5
URZ	Urewera	13.96	189	P	P	21 35 48.4	-0.7
URZ				S	S	21 38 16.3	-0.1
RTZ	Ruatahuna	14.33	189	P	P	21 35 52.7	-0.4
MTHZ	Maungataniwha	14.58	189	P	P	21 35 57.4	+1.8
MTHZ				S	S	21 38 29.0	+0.6
NMHZ	Naumai	14.83	189	P	P	21 35 59.0	+0.8
NMHZ				S	S	21 38 30.6	-2.5
BKZ	Black Stump Fm	14.94	190	P	P	21 35 58.5	-0.9
BKZ	Black Stump Fm	14.94	190	P	P	21 35 59.2	-0.2
TMVZ	Te Maari	15.03	192	P	P	21 36 01.3	+0.9
NNVZ	North Ngauruho	15.06	193	P	P	21 36 03.0	+2.2
SNVZ	South Ngauruho	15.11	192	P	P	21 36 02.6	+1.3
TUVZ	Tukino	15.19	192	P	P	21 36 02.7	+0.6
TUVZ				S	S	21 38 37.5	-2.5
KWHZ	Kaweka Forest	15.20	190	P	P	21 36 02.9	+0.7
KWHZ				S	S	21 38 36.1	-4.0
TRVZ	Turoa	15.24	193	P	P	21 36 03.0	+0.3
MRZ	Mangatainoka R	16.55	191	P	P	21 36 13.9	-1.6
MRZ				IAmb	IAmb	21 36 24.1	
	comp=Z,20nm,1.0s						
TCW	Tory Channel	17.34	194	P	P	21 36 22.0	-0.9
QRZ	Quartz Range	17.43	199	P	P	21 36 23.5	-0.2
QRZ	Quartz Range	17.43	199	P	P	21 36 23.8	+0.1
TKNZ	Takaka Hill	17.50	197	P	P	21 36 24.1	-0.2
BSWZ	Blackbirch Sta	17.91	195	P	P	21 36 28.1	0.0
DSZ	Denniston Nort	18.49	199	P	P	21 36 32.9	-0.5
LTZ	Lake Taylor	19.31	197	P	P	21 36 39.5	-1.5
LTZ				IAmb	IAmb	21 36 43.2	
	comp=Z,10nm,0.6s						
INZ	Inchbonnie	19.49	199	P	P	21 36 41.9	-0.6
OXZ	Oxford	19.88	197	P	P	21 36 45.1	-0.9
RPZ	Rata Peaks	20.51	198	P	P	21 36 52.2	+0.3
	comp=Z,8.5nm,0.7s,baz=342,slow=7.0,SNR=7.1						
	comp=Z,8.5nm,0.7s						
RPZ	Rata Peaks	20.51	198	P	P	21 36 51.7	-0.1
RPZ				IAmb	IAmb	21 37 09.8	
	comp=Z,11nm,1.0s						
RPZ	Rata Peaks	20.51	198	P	P	21 36 52.1	+0.3
JCZ	Jackson Bay	21.55	202	P	P	21 37 00.8	-0.5
WHZ	Wether Hill Ro	23.43	201	P	P	21 37 18.4	+0.4
WHZ				IAmb	IAmb	21 37 19.8	
	comp=Z,5.6nm,0.7s						
ARMA	Armidale	25.65	250	P	P	21 37 38.9	+1.0
ARMA				IAmb	IAmb	21 37 53.7	
	comp=Z,7.5nm,1.1s						
EIDS	Eidsvold	26.03	262	P	P	21 37 40.8	-0.4
EIDS				IAmb	IAmb	21 37 42.3	

	comp=Z,6.4nm,0.7s						
CMSA	**Cobar Meteorol**	**30.83**	**249**	P	**P**	**21 38 23.7**	**+0.7**
CTA	**Charters Tower**	**31.28**	**271**	P	**P**	**21 38 27.5**	**+0.5**
CTAO	**Charters Tower**	**31.28**	**271**	P	**P**	**21 38 27.7**	**+0.7**
CTAO	**Charters Tower**	**31.28**	**271**	P	**P**	**21 38 27.5**	**+0.5**
TOO	**Toolangi**	**31.99**	**238**	P	**P**	**21 38 33.9**	**+1.1**
TOO				IAmb	IAmb	21 38 42.6	
	comp=Z,6.9nm,1.0s						
QLP	**Quilpie**	**32.09**	**259**	P	**P**	**21 38 34.5**	**+0.6**
MTSU	**Mount Surprise**	**33.57**	**274**	P	**P**	**21 38 46.9**	**+0.4**
STKA	**Stephens Creek**	**34.34**	**249**	P	**P**	**21 38 53.2**	**+0.5**
	comp=Z,4.9nm,0.5s,baz=96,slow=10,SNR=22						
	comp=Z,4.9nm,0.5s						
STKA	**Stephens Creek**	**34.34**	**249**	P	**P**	**21 38 53.4**	**+0.6**
STKA	**Stephens Creek**	**34.34**	**249**	P	**P**	**21 38 53.3**	**+0.6**
PMG	**Port Moresby**	**34.49**	**290**	P	**P**	**21 38 53.8**	**-0.4**
COEN	**Coen**	**36.01**	**280**	P	**P**	**21 39 06.9**	**+0.1**
COEN				IAmb	IAmb	21 39 08.2	
	comp=Z,14nm,1.1s						
HTT	**Hallett**	**36.67**	**246**	P	**P**	**21 39 12.3**	**+0.1**
BBOO	**Buckleboo**	**39.05**	**248**	P	**P**	**21 39 31.2**	**-0.4**
BBOO				IAmb	IAmb	21 39 32.2	
	comp=Z,17nm,1.1s						
AS31	**Alice Springs**	**41.75**	**261**	P	**P**	**21 39 53.4**	**+0.1**
AS31				IAmb	IAmb	21 39 55.3	
	comp=Z,2.7nm,0.4s						
ASAR	**Alice Springs**	**41.75**	**261**	P	**P**	**21 39 53.0**	**-0.3**
	comp=Z,4.1nm,0.5s,baz=95,slow=7.2,SNR=80						
ASAR				ScP	**ScP**	**21 44 38.8**	**+1.9**
	comp=Z,1.2nm,0.8s,baz=107,slow=3.9,SNR=5.3						
ASAR				S	**S**	**21 45 31.3**	**-1.0**
	comp=Z,1.0nm,0.9s,baz=104,slow=16,SNR=6.1						
	comp=Z,4.1nm,0.5s						
ASAR	**Alice Springs**	**41.75**	**261**	P	**P**	**21 39 53.0**	**-0.3**
WR0	**Warramunga Arr**	**41.98**	**267**	P	**P**	**21 39 54.5**	**-0.6**
WR0				IAmb	IAmb	21 39 55.6	
	comp=Z,3.9nm,0.3s						
WB2	**Warramunga Arr**	**42.16**	**267**	P	**P**	**21 39 56.1**	**-0.4**
WRAB	**Tennant Creek**	**42.16**	**267**	P	**P**	**21 39 55.9**	**-0.7**
WB0	**Warramunga Arr**	**42.17**	**267**	P	**P**	**21 39 56.0**	**-0.6**
WRA	**Warramunga Arr**	**42.17**	**267**	P	**P**	**21 39 55.9**	**-0.8**
	comp=Z,11nm,0.5s,baz=101,slow=7.9,SNR=198						
WRA				ScP	**ScP**	**21 44 42.1**	**+3.5**
	comp=Z,3.8nm,0.9s,baz=99,slow=4.1,SNR=14						
	comp=Z,11nm,0.5s						
WRA	**Warramunga Arr**	**42.17**	**267**	P	**P**	**21 39 55.8**	**-0.8**
FORT	**Forrest**	**45.94**	**250**	P	**P**	**21 40 24.5**	**-1.1**
MTN	**Manton Dam**	**47.30**	**275**	P	**P**	**21 40 35.0**	**-1.1**
MTN				IAmb	IAmb	21 40 40.1	
	comp=Z,12nm,0.9s						
KNRA	**Kununurra**	**48.49**	**270**	P	**P**	**21 40 44.8**	**-0.1**
FAKI	**Fak Fak**	**50.55**	**287**	P	**P**	**21 40 59.4**	**-0.8**
FAKI				IAmb	IAmb	21 41 16.0	
	comp=Z,26nm,1.1s						
FITZ	**Fitzroy Crossi**	**50.59**	**266**	P	**P**	**21 41 00.1**	**-0.3**
VNDA	**Vanda**	**53.82**	**185**	P	**P**	**21 41 23.7**	**+1.0**
	comp=Z,1.8nm,0.8s,baz=0.6,slow=7.8,SNR=2.3						
	comp=Z,1.8nm,0.8s						
VNDA	**Vanda**	**53.82**	**185**	P	**P**	**21 41 24.4**	**+1.7**
PSA00	**Pilbara Seismi**	**54.87**	**260**	P	**P**	**21 41 30.5**	**-0.5**
PSA00	**Pilbara Seismi**	**54.87**	**260**	P	**P**	**21 41 30.0**	**-1.0**
PSA00				IAmb	IAmb	21 41 44.7	
	comp=Z,1.1nm,1.1s						
MBWA	**Marble Bar**	**55.08**	**261**	P	**P**	**21 41 31.9**	**-0.6**
MBWA				IAmb	IAmb	21 41 33.1	
	comp=Z,9.3nm,0.9s						
MORW	**Morawa**	**56.50**	**250**	P	**P**	**21 41 41.8**	**-0.4**
TOLI2	**Tolitoli**	**62.52**	**285**	P	**P**	**21 42 21.8**	**-0.8**
TOLI2				IAmb	IAmb	21 42 32.4	
	comp=Z,9.9nm,1.1s						
QSPA	**South Pole Qui**	**65.64**	**180**	P	**P**	**21 42 42.8**	**+1.1**
	comp=Z,8.3nm,0.7s,baz=44,slow=1.9,SNR=18						
	comp=Z,8.3nm,0.7s						
QSPA	**South Pole Qui**	**65.64**	**180**	P	**P**	**21 42 43.0**	**+1.3**
QSPA				IAmb	IAmb	21 42 45.1	
	comp=Z,10nm,0.9s						
KKM	**Kota Kinabalu**	**68.87**	**287**	P	**P**	**21 43 02.3**	**-0.1**
KKM				IAmb	IAmb	21 43 02.4	
	comp=Z,8.4nm,0.8s						
MJAR	**Matsushiro Arr**	**72.23**	**326**	P	**P**	**21 43 21.0**	**-0.6**
	comp=Z,2.6nm,0.8s,baz=159,slow=5.1,SNR=9.0						
	comp=Z,2.6nm,0.8s						
BELA	**Belgrano 2**	**75.92**	**173**	P	**P**	**21 43 41.9**	**0.0**
BELA				IAmb	IAmb	21 43 43.3	
	comp=Z,12nm,1.1s						
KSRS	**Korea Array**	**78.53**	**320**	P	**P**	**21 43 57.0**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=129,slow=5.2,SNR=4.1						
	comp=Z,1.6nm,0.7s						
USRK	**Ussuriysk Ar.**	**81.11**	**327**	P	**P**	**21 44 10.4**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=119,slow=6.5,SNR=4.2						
	comp=Z,1.6nm,0.6s						
MG05	**Puerto Natales**	**81.41**	**143**	P	**P**	**21 44 12.1**	**+0.5**
MG05				IAmb	IAmb	21 44 13.1	
	comp=Z,10nm,0.9s						
MG03	**Isla Dawson**	**81.44**	**146**	P	**P**	**21 44 11.9**	**+0.2**
MG03				IAmb	IAmb	21 44 22.6	
	comp=Z,8.0nm,1.1s						
KULM	**Kulim**	**82.33**	**279**	P	**P**	**21 44 16.4**	**-0.6**
SLBS	**Sierra La Lagu**	**83.25**	**60**	P	**P**	**21 44 22.1**	**+0.7**
SLBS				IAmb	IAmb	21 44 22.7	
	comp=Z,6.4nm,0.7s						
GSI	**Gunungsitoli**	**83.44**	**274**	P	**P**	**21 44 23.2**	**+0.6**
GSI				IAmb	IAmb	21 44 41.2	
	comp=Z,10nm,1.0s						
TROLL	**Troll, Antarti**	**83.79**	**181**	P	**P**	**21 44 23.6**	**+0.2**
SNAA	**Sanae**	**84.13**	**179**	P	**P**	**21 44 24.6**	**-0.4**
SNAA	**Sanae**	**84.13**	**179**	P	**P**	**21 44 25.0**	**0.0**
VNA3	**Neumayer Olymp**	**84.35**	**177**	P	**P**	**21 44 26.2**	**+0.2**
VNA2	**Neumayer--Watz**	**84.76**	**178**	P	**P**	**21 44 28.3**	**+0.3**
	baz=320,slow=8.0						
NVAR	**Mina Array Bea**	**85.28**	**44**	P	**P**	**21 44 31.7**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=216,slow=7.4,SNR=2.4						
	comp=Z,0.4nm,0.4s						
LL02	**Futaleuf**	**85.95**	**136**	P	**P**	**21 44 35.5**	**+1.1**
LL02				IAmb	IAmb	21 44 36.3	
	comp=Z,4.8nm,0.7s						
TUC	**Tucson**	**87.01**	**53**	P	**P**	**21 44 40.4**	**+0.9**
TUC				IAmb	IAmb	21 44 41.9	
	comp=Z,4.1nm,0.9s						
PLCA	**Paso Flores**	**88.03**	**134**	P	**P**	**21 44 44.6**	**+0.4**
	comp=Z,1.9nm,1.0s,baz=243,slow=8.6,SNR=4.6						
	comp=Z,1.9nm,1.0s						
CMAR	**Chiang Mai Arr**	**89.53**	**290**	P	**P**	**21 44 52.8**	**+1.4**
	comp=Z,1.1nm,0.8s,baz=151,slow=3.5,SNR=10						
	comp=Z,1.1nm,0.8s						
CHTO	**Chiang Mai**	**89.68**	**291**	P	**P**	**21 44 52.3**	**+0.2**
TX31	**Lajitas Ar. Si**	**90.89**	**58**	P	**P**	**21 44 58.2**	**+0.6**
TX31				IAmb	IAmb	21 44 59.3	
	comp=Z,4.8nm,0.8s						
TX32	**Lajitas Array**	**90.89**	**58**	P	**P**	**21 44 57.9**	**+0.2**
TXAR	**Lajitas Array**	**90.89**	**58**	P	**P**	**21 44 58.4**	**+0.8**
	comp=Z,1.8nm,0.7s,baz=212,slow=6.5,SNR=24						
	comp=Z,1.8nm,0.7s						
PDAR	**Pinedale Array**	**93.22**	**44**	P	**P**	**21 45 08.0**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=264,slow=2.7,SNR=4.8						
	comp=Z,0.5nm,0.8s						
MKAR	**Makanchi Array**	**112.37**	**313**	PKiKP	**PKiKP**	**21 50 24.6**	**-1.1**
	comp=Z,0.1nm,0.5s,baz=149,slow=0.8,SNR=2.4						
MKAR				SKP		21 53 11.6	
	comp=Z,0.5nm,0.8s,baz=108,slow=3.6,SNR=3.9						
MKAR				PKKPbc	**PKKPbc**	**22 01 17.0**	**-1.1**
	comp=Z,0.3nm,0.7s,baz=276,slow=4.2,SNR=4.0						
MKAR				PKKPab	**PKKPab**	**22 01 26.9**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=282,slow=4.3,SNR=4.3						
ARCES	**ARCESS Array B**	**132.38**	**348**	PKP	**PKPdf**	**21 51 02.6**	**-0.7**
	comp=Z,5.0nm,1.0s,baz=75,slow=1.0,SNR=5.9						
FINES	**FINESS Array B**	**138.89**	**341**	PKhKP	PKPpre	21 51 06.3	
	comp=Z,1.7nm,0.8s,baz=39,slow=1.2,SNR=4.2						
FINES				SKPbc	**SKPbc**	**21 54 01.4**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=52,slow=2.3,SNR=11						
AKASG	**Malin Array Be**	**145.31**	**327**	PKPbc	**PKPdf**	**21 51 27.4**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=44,slow=4.4,SNR=8.0						
AKASG				SKPbc	**SKiKP**	**21 54 18.0**	**+0.8**
	comp=Z,1.3nm,0.6s,baz=46,slow=3.1,SNR=5.6						
BR131	**Keskin Array S**	**147.74**	**306**		**PKPab**	**21 51 40.0**	**+0.1**
BRTR	**Keskin Array B**	**147.74**	**306**	pPKPbc	pPKPbc	21 53 40.0	+2.2
	comp=Z,0.8nm,0.8s,baz=64,slow=6.0,SNR=3.0						
CLL	**Collm**	**151.31**	**343**	*i* PKPbc	**PKPbc**	**21 51 43.5**	**0.0**
	comp=Z,5.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**168.62**	**189**	PKP	**PKPdf**	**21 51 55.6**	**-1.3**
	comp=Z,0.9nm,1.0s,baz=268,slow=0.9,SNR=3.4						
TORD				PKPab	**PKPab**	**21 53 10.2**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=181,slow=3.6,SNR=8.0						

*IDC **05** 21:53:07.4±1.0, 57°.07N×152°.50W, h0^{km}, mb3.8/10, mbtmp3.9/12, ML4.5/2, MS3.2/6, Error ellipse: s-maj=19.4km s-min=12.3km az=72.0*

*NEIC **05** 21:53:12.4±1.5, 57°.23N±0°.07×152°.4W±0°.1, h46^{km}±6^{km}, Error ellipse: s-maj=9.6km s-min=7.8km az=193.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.31; $M_{\theta\theta}$1.18; $M_{\phi\phi}$-0.86; $M_{r\theta}$-0.22; $M_{\theta\phi}$1.11; $M_{\phi r}$-0.49; Fault plane solution: $M_0$1.62000×10^{15} NP1: ϕ_s290.87000°, δ69.27000°, λ-4.94000°. NP2: ϕ_s22.62000°, δ85.38000°, λ-159.20000°. Principal axes: T 1.7431, Plg11.0000°, Azm155.0000°; N -0.2782, Plg69.0000°, Azm35.0000°; P -1.4649, Plg18.0000°, Azm249.0000°;*

*ANF **05** 21:53:12.1±0.5, 57°.27N×152°.36W, h26^{km}±4^{km}, ML4.5/44 Error ellipse: s-maj=2.3km s-min=1.5km az=9.0*

*NEIC **05** 21:53:12.3, 57°.18N×152°.28W, h26^{km}*

*AEIC **05** 21:53:13.4±1.5, 57°.24N±0°.06×152°.36W±0°.09, h38^{km}±6^{km}, ML4.1, mb4.7/22(NEIC), ML4.3/70(NEIC), Mwr4.1/25(NEIC), Error ellipse: s-maj=9.4km s-min=5.7km az=212.0*

ISC 05 21:53:11.9±1.1**, 57°.23N**±0°.05×**152°.29W**±0°.04**, h29**^{km}±8^{km}**, n347, σ0^{s}.91**/355**, mb4.3**/21**, MS3.4**/3**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**0.54**	**269**		**Pb**	**21 53 23.2**	**+0.3**
OHAK					**Sb**	**21 53 30.8**	**+0.4**
OHAK				IAML		21 53 31.3	
	comp=N,22µm,0.5s						
OHAK	**Old Harbor**	**0.54**	**269**	P	**Pb**	**21 53 23.1**	**+0.3**
OHAK	**Old Harbor**	**0.54**	**269**	P	**Pb**	**21 53 23.3**	**+0.3**
	baz=95,SNR=623						
OHAK				S	**Sb**	**21 53 30.9**	**+0.4**
	baz=95						
KDAK	**Kodiak Island**	**0.57**	**344**	Pg	**Pb**	**21 53 23.8**	**+0.3**
	comp=N,2µm,0.3s,baz=210,slow=7.2						
KDAK				Lg	Lg	21 53 31.6	
	comp=N,2µm,0.3s,baz=11,slow=21,SNR=27						
KDAK	**Kodiak Island**	**0.57**	**344**		**Pn**	**21 53 24.0**	**0.0**
KDAK					**Sb**	**21 53 31.9**	**+0.5**
KDAK				IAML		21 53 32.4	
	comp=N,10µm,0.2s						
KDAK				IAML		21 53 32.5	
	comp=N,20µm,0.4s						
Q20K	**Shuyak Island**	**1.38**	**358**	P	**Pn**	**21 53 35.6**	**+0.4**
	baz=178,SNR=38						
Q20K				S	**Sn**	**21 53 52.3**	**-0.1**
	baz=178						
Q19K	**Cape Douglas,**	**1.84**	**338**	Pn	**Pn**	**21 53 42.2**	**+0.7**
Q19K				IAML		21 54 11.9	
	comp=N,3µm,0.7s						
Q19K				IAML		21 54 27.4	
	comp=E,3µm,1.0s						
Q19K	**Cape Douglas,**	**1.84**	**338**	P	**Pn**	**21 53 42.3**	**+0.7**
	baz=157,SNR=110						
Q19K				S	**Sn**	**21 54 04.2**	**+0.3**
	baz=157						
Q18K	**Katmai Hardscr**	**2.03**	**316**	P	**Pn**	**21 53 44.6**	**+0.4**
	baz=134,SNR=264						
Q18K				S	**Sn**	**21 54 08.1**	**-0.4**
	baz=134						
Q17K	**Contact Creek**	**2.19**	**300**	P	**Pn**	**21 53 46.2**	**-0.1**
	baz=118,SNR=50						
Q17K				S	**Sn**	**21 54 11.1**	**-1.3**
	baz=118						
R17K	**Ugashik Creek**	**2.25**	**282**	P	**Pn**	**21 53 46.9**	**-0.3**
	baz=100						
R17K				S	**Sn**	**21 54 13.5**	**-0.4**
	baz=100						
CNPM	**China Poot**	**2.37**	**13**	Pn	**Pn**	**21 53 49.2**	**+0.4**
CNPM				IAML		21 54 15.9	
	comp=E,2µm,0.5s						
CNPM				IAML		21 54 16.0	
	comp=N,1µm,0.3s						
HOM	**Homer**	**2.46**	**8**		**Pn**	**21 53 50.6**	**+0.7**
HOM	**Homer**	**2.46**	**8**	P	**Pn**	**21 53 50.7**	**+0.7**
	baz=188,SNR=6.1						
HOM				S	**Sn**	**21 54 18.2**	**-0.7**
	baz=188						
P19K	**Oil Pt**	**2.48**	**349**		**Pn**	**21 53 51.2**	**+1.0**
P19K				IAML		21 54 22.7	
	comp=E,2µm,0.5s						
P19K				IAML		21 54 23.0	
	comp=N,2µm,0.5s						
P19K	**Oil Pt**	**2.48**	**349**	P	**Pn**	**21 53 51.2**	**+1.0**
	baz=168,SNR=141						
P19K				S	**Sn**	**21 54 20.0**	**+0.5**
	baz=168						
BRLK	**Bradley Lake**	**2.64**	**16**	Pn	**Pn**	**21 53 52.2**	**-0.3**
BRLK				IAML		21 54 21.2	
	comp=E,2µm,0.6s						
BRSE	**Bradley Lake S**	**2.64**	**17**		**Pn**	**21 53 52.5**	**0.0**
BRSE	**Bradley Lake S**	**2.64**	**17**	P	**Pn**	**21 53 52.5**	**0.0**
	baz=198,SNR=33						
BRSE				S	**Sn**	**21 54 20.9**	**-2.7**
	baz=198						
P18K	**Big Mountain,**	**2.66**	**326**		**Pn**	**21 53 52.5**	**-0.3**
P18K	**Big Mountain,**	**2.66**	**326**	P	**Pn**	**21 53 52.8**	**0.0**
	baz=144						
P18K				S	**Sn**	**21 54 21.3**	**-2.7**
	baz=144						
Q16K	**King Salmon**	**2.74**	**304**	P	**Pn**	**21 53 54.0**	**+0.2**
	baz=121,SNR=59						
Q16K				S	**Sn**	**21 54 24.3**	**-1.5**
	baz=121						
ILSW	**Iliamna Southw**	**2.79**	**351**		**Pn**	**21 53 55.0**	**+0.3**
O20K	**Slope Mountain**	**2.86**	**357**	P	**Pn**	**21 53 56.3**	**+0.8**
	baz=176,SNR=136						
O20K				S	**Sn**	**21 54 29.0**	**-0.1**
	baz=176						
R16K	**Pilot Point**	**2.88**	**279**	P	**Pn**	**21 53 55.1**	**-0.6**
	baz=96,SNR=7.6						
R16K				S	**Sn**	**21 54 27.5**	**-1.8**
	baz=96						
P17K	**Kvichak River**	**2.95**	**314**	P	**Pn**	**21 53 57.2**	**+0.6**
	baz=131,SNR=128						
P17K				S	**Sn**	**21 54 29.3**	**-1.6**
	baz=131						
O18K	**Koktuh Hills**	**3.04**	**331**		**Pn**	**21 53 58.2**	**+0.2**
O18K				IAML		21 54 33.6	
	comp=N,647nm,0.9s						
O18K	**Koktuh Hills**	**3.04**	**331**	P	**Pn**	**21 53 58.2**	**+0.2**
	baz=149,SNR=49						
O19K	**Port Alsworth**	**3.15**	**341**		**Pn**	**21 53 59.6**	**+0.1**
O19K				IAML		21 54 55.9	
	comp=N,951nm,0.4s						
O19K	**Port Alsworth**	**3.15**	**341**	P	**Pn**	**21 53 59.6**	**+0.1**
	baz=160,SNR=139						
SEW	**Seward**	**3.24**	**26**	Pn	**Pn**	**21 53 59.7**	**-0.9**
SEW	**Seward**	**3.24**	**26**	P	**Pn**	**21 53 59.8**	**-0.9**
	baz=208,SNR=13						
SEW				S	**Sn**	**21 54 33.7**	**-4.5**
	baz=208						
RSO	**Redoubt South**	**3.25**	**356**		**Pn**	**21 54 00.7**	**-0.3**
RDJH	**Redoubt Jeurge**	**3.38**	**356**		**Pn**	**21 54 03.0**	**+0.3**
SLKM	**Skilak Lake**	**3.46**	**17**		**Pn**	**21 54 03.2**	**-0.4**
CHGN	**Chignik**	**3.50**	**257**		**Pn**	**21 54 02.9**	**-1.2**
CHGN				IAML		21 54 45.0	
	comp=E,336nm,0.3s						
CHGN	**Chignik**	**3.50**	**257**	P	**Pn**	**21 54 03.0**	**-1.2**
	baz=73,SNR=6.4						
P16K	**Nushagak River**	**3.52**	**303**	P	**Pn**	**21 54 04.7**	**+0.2**
	baz=119,SNR=18						
O22K	**Cooper Landing**	**3.52**	**21**		**Pn**	**21 54 04.0**	**-0.5**
O22K	**Cooper Landing**	**3.52**	**21**	P	**Pn**	**21 54 04.0**	**-0.5**
	baz=203,SNR=25						
O17K	**Koliganek Bris**	**3.58**	**317**	P	**Pn**	**21 54 05.6**	**+0.2**
	baz=134,SNR=54						
CAPN	**Captain Cook N**	**3.59**	**9**		**Pn**	**21 54 06.7**	**+1.2**
CAPN	**Captain Cook N**	**3.59**	**9**	P	**Pn**	**21 54 06.4**	**+0.9**
	baz=190,SNR=7.9						
N19K	**Bonanza Creek**	**3.76**	**343**		**Pn**	**21 54 08.2**	**+0.2**
N19K	**Bonanza Creek**	**3.76**	**343**	P	**Pn**	**21 54 08.4**	**+0.4**
	baz=162						
P23K	**Montague Islan**	**3.77**	**41**	P	**Pn**	**21 54 07.1**	**-0.8**
	baz=224,SNR=9.7						
Q23K	**Middleton Isla**	**3.83**	**52**	Pn	**Pn**	**21 54 07.9**	**-0.8**
Q23K				IAML		21 54 55.6	
	comp=E,346nm,1.8s						
Q23K				IAML		21 54 57.4	
	comp=N,338nm,2.4s						
Q23K	**Middleton Isla**	**3.83**	**52**	P	**Pn**	**21 54 07.8**	**-1.0**
	baz=237						
MID	**Middleton Isla**	**3.83**	**52**	Pn	**Pn**	**21 54 08.1**	**-0.7**
MID				IAML		21 54 57.4	
	comp=N,310nm,2.4s						
MID				IAML		21 56 25.4	
	comp=E,337nm,2.7s						
MID	**Middleton Isla**	**3.83**	**52**	P	**Pn**	**21 54 07.9**	**-0.9**
O16K	**Kokwok River B**	**3.86**	**310**	P	**Pn**	**21 54 09.4**	**+0.2**
	baz=126						
SPU	**Mount Spurr**	**3.96**	**2**		**Pn**	**21 54 10.9**	**+0.3**
SPCR	**Spurr Chakacha**	**3.98**	**1**	P	**Pn**	**21 54 10.6**	**-0.3**
	baz=181,SNR=17						
FIS	**Fire Island**	**4.06**	**14**	Pn	**Pn**	**21 54 12.1**	**+0.1**
FIS				IAML		21 55 01.8	
	comp=E,636nm,0.6s						
RC01	**Rabbit Creek A**	**4.08**	**18**		**Pn**	**21 54 11.9**	**-0.4**
RC01				IAML		21 54 58.0	
	comp=E,446nm,0.4s						
RC01				IAML		21 55 01.2	
	comp=N,424nm,0.6s						
RC01	**Rabbit Creek A**	**4.08**	**18**	P	**Pn**	**21 54 11.9**	**-0.4**
	baz=200,SNR=9.8						
PWL	**Port Wells**	**4.17**	**28**	Pn	**Pn**	**21 54 12.9**	**-0.6**
PWL	**Port Wells**	**4.17**	**28**	P	**Pn**	**21 54 13.0**	**-0.6**
	baz=211,SNR=25						
SVW2	**Sparrevohn**	**4.23**	**338**		**Pn**	**21 54 14.0**	**-0.3**
SVW2	**Sparrevohn**	**4.23**	**338**	P	**Pn**	**21 54 14.3**	**0.0**
SUA	**Susitna One**	**4.32**	**10**		**Pn**	**21 54 15.1**	**-0.5**
SUA				IAML		21 55 04.6	
	comp=N,190nm,0.7s						
SUA				IAML		21 55 08.0	
	comp=E,317nm,0.8s						
SUA	**Susitna One**	**4.32**	**10**	P	**Pn**	**21 54 15.2**	**-0.4**
	baz=191,SNR=22						
KNK	**Knik Glacier**	**4.63**	**23**		**Pn**	**21 54 19.0**	**-0.8**
KNK				IAML		21 55 09.0	
	comp=E,275nm,0.6s						
KNK				IAML		21 55 09.2	
	comp=N,278nm,0.7s						
KNK	**Knik Glacier**	**4.63**	**23**	P	**Pn**	**21 54 19.0**	**-0.8**
	baz=206,SNR=9.9						
PMR	**Palmer**	**4.66**	**19**	Pn	**Pn**	**21 54 19.4**	**-0.7**
PMR				IAML		21 55 10.1	
	comp=N,204nm,0.5s						
PMR				IAML		21 55 10.9	
	comp=E,183nm,0.4s						
PMR	**Palmer**	**4.66**	**19**	P	**Pn**	**21 54 19.5**	**-0.7**
PMR	**Palmer**	**4.66**	**19**	P	**Pn**	**21 54 19.3**	**-0.7**
	baz=201						
M22K	**Willow**	**4.67**	**13**		**Pn**	**21 54 19.6**	**-0.6**
N16K	**Nishlik Lake**	**4.67**	**317**	P	**Pn**	**21 54 21.1**	**+0.7**
	baz=132,SNR=182						
M20K	**Styx River**	**4.68**	**355**		**Pn**	**21 54 20.3**	**-0.3**
M20K	**Styx River**	**4.68**	**355**	P	**Pn**	**21 54 20.5**	**-0.1**
	baz=174						
EYAK	**Cordova Ski Ar**	**4.75**	**43**		**Pn**	**21 54 20.1**	**-1.3**
EYAK	**Cordova Ski Ar**	**4.75**	**43**	P	**Pn**	**21 54 21.0**	**-0.4**
EYAK	**Cordova Ski Ar**	**4.75**	**43**	P	**Pn**	**21 54 20.8**	**-0.5**
	baz=228,SNR=20						
SKT	**Skwentna**	**4.78**	**4**		**Pn**	**21 54 21.8**	**0.0**
SKT				IAML		21 55 17.0	
	comp=E,298nm,0.4s						
SKT				IAML		21 55 18.2	
	comp=N,194nm,0.4s						
SKT	**Skwentna**	**4.78**	**4**	P	**Pn**	**21 54 21.5**	**-0.3**
	baz=185,SNR=16						
M19K	**Big River Lodg**	**4.80**	**348**		**Pn**	**21 54 22.1**	**0.0**
M19K	**Big River Lodg**	**4.80**	**348**	P	**Pn**	**21 54 22.2**	**0.0**
	baz=166						
GHO	**Glory Hole Cre**	**4.86**	**19**		**Pn**	**21 54 22.5**	**-0.6**
GHO				IAML		21 55 17.7	
	comp=E,374nm,0.7s						
SDPT	**Sand Point**	**4.94**	**251**		**Pn**	**21 54 22.4**	**-1.5**
SDPT				IAML		21 55 22.6	
	comp=E,121nm,2.2s						
SDPT	**Sand Point**	**4.94**	**251**	P	**Pn**	**21 54 22.8**	**-1.2**
SDPT	**Sand Point**	**4.94**	**251**	P	**Pn**	**21 54 22.5**	**-1.4**
	baz=65						
SML	**Sawmill**	**5.01**	**22**		**Pn**	**21 54 24.4**	**-0.6**
SML	**Sawmill**	**5.01**	**22**	IAML		21 55 21.9	
	comp=E,162nm,0.6s						
SML				IAML		21 55 24.7	
	comp=N,212nm,0.7s						
SML	**Sawmill**	**5.01**	**22**	P	**Pn**	**21 54 24.5**	**-0.6**
	baz=205,SNR=11						
M23K	**Glacier View**	**5.13**	**25**	P	**Pn**	**21 54 26.6**	**-0.1**
	baz=209,SNR=19						
L19K	**White Mountain**	**5.13**	**346**	Pn	**Pn**	**21 54 26.6**	**0.0**
L19K	**White Mountain**	**5.13**	**346**	P	**Pn**	**21 54 26.6**	**0.0**
	baz=164						
DIV	**Divide**	**5.15**	**38**		**Pn**	**21 54 26.7**	**-0.3**
SCM	**Sheep Creek Mo**	**5.26**	**27**		**Pn**	**21 54 28.7**	**+0.2**
SCM				IAML		21 55 26.4	
	comp=E,284nm,0.4s						
SCM	**Sheep Creek Mo**	**5.26**	**27**	P	**Pn**	**21 54 28.5**	**0.0**
	baz=210,SNR=30						
CUT	**Chulitna**	**5.29**	**10**		**Pn**	**21 54 29.9**	**+1.1**
CUT				IAML		21 55 34.1	
	comp=N,250nm,0.3s						
CUT	**Chulitna**	**5.29**	**10**	P	**Pn**	**21 54 28.3**	**-0.4**
	baz=192						
L20K	**Farewell, AK**	**5.32**	**352**	P	**Pn**	**21 54 29.6**	**+0.3**
	baz=171						
KLU	**Klutina**	**5.37**	**35**		**Pn**	**21 54 29.8**	**-0.2**
KLU				IAML		21 55 33.1	
	comp=N,224nm,0.4s						
KLU				IAML		21 55 33.6	
	comp=E,177nm,0.4s						
KLU	**Klutina**	**5.37**	**35**	P	**Pn**	**21 54 29.6**	**-0.4**
	baz=220,SNR=29						
S12K	**Black Hills**	**5.63**	**258**	P	**Pn**	**21 54 32.0**	**-1.6**
	baz=71						
M24K	**Tolsona, Glenn**	**5.79**	**30**		**Pn**	**21 54 36.1**	**+0.5**
M24K	**Tolsona, Glenn**	**5.79**	**30**	P	**Pn**	**21 54 35.7**	**0.0**
	baz=215,SNR=21						
N25K	**Chitina, Valde**	**5.88**	**39**		**Pn**	**21 54 36.8**	**-0.3**
N25K	**Chitina, Valde**	**5.88**	**39**	P	**Pn**	**21 54 37.5**	**+0.4**
	baz=225,SNR=25						
TTA	**Tatalina**	**6.01**	**344**	Pn	**Pn**	**21 54 38.3**	**-0.4**
TTA	**Tatalina**	**6.01**	**344**	P	**Pn**	**21 54 38.4**	**-0.4**
TTA	**Tatalina**	**6.01**	**344**	P	**Pn**	**21 54 38.3**	**-0.4**
	baz=160,SNR=42						
VRDI	**Verde Repeater**	**6.05**	**45**		**Pn**	**21 54 39.4**	**-0.1**
GLB	**Gilahina Butte**	**6.05**	**42**	Pn	**Pn**	**21 54 39.2**	**-0.1**
CAST	**Castle Rocks**	**6.21**	**1**		**Pn**	**21 54 40.5**	**-0.9**
CAST	**Castle Rocks**	**6.21**	**1**	P	**Pn**	**21 54 41.1**	**-0.4**
	baz=181						
K20K	**Telida**	**6.21**	**353**		**Pn**	**21 54 41.4**	**0.0**
K20K	**Telida**	**6.21**	**353**	P	**Pn**	**21 54 41.1**	**-0.3**
	baz=171,SNR=31						
HARP	**HAARP**	**6.30**	**32**	P	**Pn**	**21 54 43.6**	**+0.9**
	baz=218,SNR=16						
MCARA	**McCarthy VSAT**	**6.31**	**45**	Pn	**Pn**	**21 54 43.1**	**+0.2**
MCARA	**McCarthy VSAT**	**6.31**	**45**	P	**Pn**	**21 54 42.6**	**-0.3**
	baz=232,SNR=30						
KIAG	**Kiagna River**	**6.32**	**50**		**Pn**	**21 54 42.8**	**-0.3**
BALM	**Baldy**	**6.38**	**49**		**Pn**	**21 54 43.9**	**-0.1**
RND	**Reindeer**	**6.42**	**14**		**Pn**	**21 54 45.0**	**+0.6**
SAMH	**Samovar Hills**	**6.67**	**59**		**Pn**	**21 54 48.5**	**+0.7**
CHUM	**Lake Minchumin**	**6.67**	**360**	P	**Pn**	**21 54 47.9**	**+0.1**
	baz=180						
FALS	**False Pass**	**6.67**	**254**		**Pn**	**21 54 47.5**	**-0.3**
FALS	**False Pass**	**6.67**	**254**	P	**Pn**	**21 54 47.0**	**-0.8**
	baz=65						
BARN	**Barnard Glacie**	**6.68**	**51**		**Pn**	**21 54 48.5**	**+0.4**
PAX	**Paxson**	**6.69**	**28**		**Pn**	**21 54 47.9**	**-0.2**
PAX	**Paxson**	**6.69**	**28**	P	**Pn**	**21 54 47.8**	**-0.3**
	baz=213,SNR=14						
MCK	**McKinley**	**6.73**	**13**		**Pn**	**21 54 48.9**	**+0.3**
MCK	**McKinley**	**6.73**	**13**	P	**Pn**	**21 54 48.5**	**-0.1**
	baz=196						
PCA	**Pinnacle**	**6.90**	**60**		**Pn**	**21 54 50.9**	**-0.1**
PINM	**Pinnacle**	**6.90**	**60**	P	**Pn**	**21 54 51.7**	**+0.6**
	baz=250,SNR=21						
BPAW	**Bear Paw Mtn.**	**6.92**	**5**	Pn	**Pn**	**21 54 50.4**	**-0.8**
BPAW	**Bear Paw Mtn.**	**6.92**	**5**	P	**Pn**	**21 54 51.0**	**-0.2**
	baz=186						
M26K	**Nabesna, AK**	**6.98**	**38**		**Pn**	**21 54 52.6**	**+0.5**
M26K	**Nabesna, AK**	**6.98**	**38**	P	**Pn**	**21 54 52.4**	**+0.3**
	baz=226						
YKU2	**Yakutat**	**7.02**	**66**	Pn	**Pn**	**21 54 53.4**	**+0.9**
YKU2	**Yakutat**	**7.02**	**66**	P	**Pn**	**21 54 53.8**	**+1.3**
BWN	**Browne**	**7.10**	**10**	Pn	**Pn**	**21 54 54.0**	**+0.4**
MENT	**Mentasta**	**7.14**	**33**		**Pn**	**21 54 53.9**	**-0.5**
BCPM	**Bancas Point**	**7.15**	**62**	Pn	**Pn**	**21 54 54.9**	**+0.5**
O28M	**Mount Upton**	**7.18**	**55**	P	**Pn**	**21 54 55.3**	**+0.3**
	baz=245						
PNL	**Peninsula**	**7.19**	**65**		**Pn**	**21 54 55.3**	**+0.4**
PNL	**Peninsula**	**7.19**	**65**	P	**Pn**	**21 54 55.2**	**+0.2**

PNL	Peninsula	7.19	65	P	Pn	21 54 55.4	+0.4
	baz=255,SNR=18						
L26K	Log Cabin Wild	7.32	34		Pn	21 54 57.7	+1.0
L26K	Log Cabin Wild	7.32	34	P	Pn	21 54 58.0	+1.3
	baz=221,SNR=12						
K24K	Donnelly Dome	7.33	23	P	Pn	21 54 57.3	+0.5
	baz=209,SNR=7.5						
M27K	Edge Creek, AK	7.34	41		Pn	21 54 57.5	+0.3
M27K	Edge Creek, AK	7.34	41	P	Pn	21 54 57.5	+0.3
	baz=230						
RIDG	Independent Ri	7.49	26		Pn	21 54 59.0	0.0
RIDG	Independent Ri	7.49	26	P	Pn	21 54 59.3	+0.3
	baz=212,SNR=10						
YUK3	Moose Creek	7.54	48	P	Pn	21 55 00.8	+0.8
	baz=238,SNR=37						
WRH	Wood River Hil	7.54	14		Pn	21 54 59.2	-0.6
NEA2	Nenana	7.55	11		Pn	21 54 59.2	-0.7
NEA2	Nenana	7.55	11	P	Pn	21 54 59.1	-0.7
	baz=193						
YUK8	Steele Glacier	7.59	52	P	Pn	21 55 02.0	+1.3
	baz=243,SNR=42						
DOT	Dot Lake	7.61	29		Pn	21 55 02.3	+1.6
HDA	Harding Lake	7.66	18		Pn	21 55 01.6	+0.3
HDA	Harding Lake	7.66	18	P	Pn	21 55 02.7	+1.4
	baz=202,SNR=8.8						
BVCY	Beaver Creek	7.75	43	P	Pn	21 55 03.4	+0.8
	baz=233						
CCB	Clear Creek Bu	7.75	14		Pn	21 55 01.5	-1.0
O29M	Mount Kennedy	7.76	61	P	Pn	21 55 03.6	+0.7
	baz=252						
L27K	Beaver Creek,	7.83	37		Pn	21 55 03.5	-0.2
L27K	Beaver Creek,	7.83	37	P	Pn	21 55 04.0	+0.3
	baz=226						
BCAR	Beaver Creek A	7.85	37	Pn	Pn	21 55 04.0	0.0
GCSA	Galena City Sc	7.86	345	P	Pn	21 55 03.6	-0.4
	baz=162						
MLY	Manley	7.86	5		Pn	21 55 03.5	-0.6
MLY	Manley	7.86	5	P	Pn	21 55 03.5	-0.6
	baz=186						
SCRK	Sand Creek	7.90	28	Pn	Pn	21 55 04.4	-0.3
SCRK	Sand Creek	7.90	28	P	Pn	21 55 04.3	-0.3
	baz=215						
TCOL	CIGO, UAF Yank	7.96	14		Pn	21 55 05.4	0.0
TCOL	CIGO, UAF Yank	7.96	14	P	Pn	21 55 05.4	0.0
	baz=198						
COLA	College	7.96	14		Pn	21 55 05.3	-0.1
COLA	College	7.96	14	P	Pn	21 55 05.5	+0.1
	baz=198						
I21K	Tanana	7.97	1		Pn	21 55 05.2	-0.5
I21K	Tanana	7.97	1	P	Pn	21 55 05.4	-0.2
	baz=181						
MDM	Murphy Dome	8.00	13		Pn	21 55 04.7	-1.2
IL31		8.00	17		Pn	21 55 05.4	-0.6
ILAR	Eielson Array	8.00	17	Pn	Pn	21 55 04.7	-1.3
	comp=E,2.3nm,0.3s,baz=205,slow=14,SNR=65						
ILAR				Sn	Sn	21 56 26.4	-9.0
	comp=E,3.0nm,0.3s,baz=207,slow=23,SNR=6.4						
ILAR				LR	LR	21 57 35.2	
	comp=E,73nm,18.1s,baz=246,slow=33						
ILAR	Eielson Array	8.00	17		Pn	21 55 05.7	-0.4
IL03	Eielson Array	8.01	17	Pn	Pn	21 55 06.1	0.0
I23K	Minto, Yukon-K	8.07	9		Pn	21 55 06.3	-0.5
I23K	Minto, Yukon-K	8.07	9	P	Pn	21 55 06.3	-0.5
	baz=191,SNR=8.4						
YUK6	Outpost Mounta	8.07	57	P	Pn	21 55 07.6	+0.3
	baz=248,SNR=8.7						
YUK4	Talbot Arm	8.11	54	P	Pn	21 55 09.6	+1.9
	baz=245,SNR=36						
AKUT	Akutan	8.22	254	Pn	Pn	21 55 08.5	-0.5
POKR	Poker Plat Res	8.25	14		Pn	21 55 09.1	-0.3
POKR	Poker Plat Res	8.25	14	P	Pn	21 55 08.0	-1.4
	baz=199						
HYT	Haines Junctio	8.43	59		Pn	21 55 12.2	+0.2
HYT	Haines Junctio	8.43	59	P	Pn	21 55 11.3	-0.7
	baz=251,SNR=7.4						
J26L	Joseph Creek	8.43	27		Pn	21 55 11.6	-0.5
J26L	Joseph Creek	8.43	27	P	Pn	21 55 11.3	-0.7
	baz=214						
K27K	Chicken	8.46	32		Pn	21 55 12.4	+0.2
K27K	Chicken	8.46	32	P	Pn	21 55 12.0	-0.2
	baz=221						
H21K	Melozitna Rive	8.46	359		Pn	21 55 11.5	-0.8
H21K	Melozitna Rive	8.46	359	P	Pn	21 55 11.0	-1.3
	baz=178						
P30M	Million Dollar	8.49	64	P	Pn	21 55 13.2	+0.4
	baz=256						
S31K	Pelican	8.66	78	P	Pn	21 55 14.7	-0.3
	baz=272,SNR=28						
PLBC	Pleasant Camp	8.67	68	P	Pn	21 55 16.1	+1.0
	baz=262,SNR=64						
M29M	Somme Creek	8.69	47	P	Pn	21 55 16.0	+0.4
	baz=239						
H22K	Ishtalitna Cre	8.70	2	P	Pn	21 55 15.2	-0.4
	baz=183						
H23K	Yukon River	8.72	7		Pn	21 55 15.1	-0.7
H23K	Yukon River	8.72	7	P	Pn	21 55 14.9	-1.0
	baz=190						
UNV	Unalaska Valle	8.74	253	Pn	Pn	21 55 13.9	-2.3
UNV	Unalaska Valle	8.74	253	P	Pn	21 55 14.8	-1.4
	baz=62						
IMAR	Indian Mountai	8.81	356		Pn	21 55 16.6	-0.4
N30M	Aishikik Lake	8.84	55	P	Pn	21 55 17.4	-0.2
	baz=248						
H24K	Noodor Dome	8.88	12		Pn	21 55 18.4	+0.3
H24K	Noodor Dome	8.88	12	P	Pn	21 55 17.6	-0.6
	baz=196						
PRP	Porcupine Dome	8.92	18		Pn	21 55 18.8	+0.1
PRP	Porcupine Dome	8.92	18	P	Pn	21 55 18.3	-0.4
	baz=204						
O30N	Mendenhall	9.07	60	P	Pn	21 55 20.8	0.0
	baz=254,SNR=5.8						
L29M	L29M	9.18	44	P	Pn	21 55 22.8	+0.6
	baz=236						
SKAG	Skagway	9.19	69		Pn	21 55 23.5	+1.2
SKAG	Skagway	9.19	69	P	Pn	21 55 23.6	+1.3
	baz=263,SNR=15						
I26K	Coal Creek Min	9.21	25		Pn	21 55 22.7	+0.2
I26K	Coal Creek Min	9.21	25	P	Pn	21 55 22.5	0.0
	baz=212						
SIT	Sitka	9.23	84		Pn	21 55 21.6	-1.2
SIT	Sitka	9.23	84	P	Pn	21 55 21.4	-1.4
	baz=278,SNR=5.7						
EGAK	Eagle	9.28	31		Pn	21 55 24.1	+0.5
EGAK	Eagle	9.28	31	P	Pn	21 55 23.9	+0.3
	baz=220,SNR=5.9						
DAWY	Dawson	9.31	37		Pn	21 55 24.8	+0.7
DAWY	Dawson	9.31	37	P	Pn	21 55 24.5	+0.5
	baz=228,SNR=6.9						
G21K	Allakaket	9.33	357	P	Pn	21 55 23.9	-0.3
	baz=176						
BESE	Bessie Mountai	9.38	74		Pn	21 55 26.1	+1.2
M30M	Minto, Yukon	9.44	49		Pn	21 55 25.7	0.0
M30M	Minto, Yukon	9.44	49	P	Pn	21 55 25.8	0.0
	baz=242,SNR=7.1						
N31M	Braeburn, Yuko	9.44	56		Pn	21 55 26.6	+0.8
N31M	Braeburn, Yuko	9.44	56	P	Pn	21 55 26.5	+0.8
	baz=250,SNR=12						
G23K	Bananza Creek	9.57	5	P	Pn	21 55 26.7	-0.9
	baz=187						
S32K	Killisnoo	9.58	81	P	Pn	21 55 28.1	+0.5
	baz=276,SNR=11						
JIS	Juneau Island	9.63	76		Pn	21 55 28.3	0.0
ANM	Nome	9.71	325		Pn	21 55 30.1	+0.7
ANM	Nome	9.71	325	P	Pn	21 55 30.3	+0.9
	baz=133,SNR=16						
SPIA	Saint Paul Isl	9.74	277	Pn	Pn	21 55 29.6	-0.2
G24K	Hadweenzic Riv	9.76	11	P	Pn	21 55 29.6	-0.5
	baz=196						
I27K	Kandik River	9.81	27	P	Pn	21 55 31.0	+0.1
	baz=216						
K29M	Barlow Dome	9.82	41	P	Pn	21 55 31.5	+0.5
	baz=234,SNR=7.6						
FYU	Fort Yukon	9.93	17		Pn	21 55 32.9	+0.5
G25K	Bearman Lake	9.99	14	P	Pn	21 55 33.0	-0.2
	baz=200						
P32M	Atlin	10.02	69	P	Pn	21 55 34.2	+0.4
	baz=264,SNR=20						
F21K	Alatna River	10.04	357	P	Pn	21 55 33.1	-0.9
	baz=176						
COLD	Coldfoot	10.08	5	Pn	Pn	21 55 34.1	-0.3
MAYO	Mayo, Yukon	10.29	45		Pn	21 55 38.4	+1.0
MAYO	Mayo, Yukon	10.29	45	P	Pn	21 55 38.6	+1.2
	baz=239,SNR=7.5						
M31M	Drury Creek, Y	10.30	54		Pn	21 55 38.1	+0.5
M31M	Drury Creek, Y	10.30	54	P	Pn	21 55 37.6	0.0
	baz=249,SNR=14						
F22K	John River	10.31	0	P	Pn	21 55 38.3	+0.7
	baz=180						
H27K	Steamboat Moun	10.35	25	P	Pn	21 55 38.5	+0.3
	baz=214						
F24K	Squaw Lake	10.52	9	P	Pn	21 55 39.7	-0.8
	baz=193						
G26K	Porcupine Rive	10.52	19	P	Pn	21 55 39.4	-1.1
	baz=206						
P33M	Teslin, Yukon	10.55	65		Pn	21 55 40.6	-0.4
P33M	Teslin, Yukon	10.55	65	P	Pn	21 55 40.4	-0.6
	baz=262						
T33K	Petersburg	10.55	84	P	Pn	21 55 41.1	+0.2
	baz=280						
U33K	Whale Pass	10.61	88	P	Pn	21 55 40.7	-0.9
	baz=284,SNR=6.2						
Q32M	Nakina River	10.73	72	P	Pn	21 55 44.2	+0.6
	baz=269						
FARO	Faro, Yukon	10.77	54		Pn	21 55 44.5	+0.5
FARO	Faro, Yukon	10.77	54	P	Pn	21 55 44.4	+0.5
	baz=250,SNR=13						
CRAG	Craig	10.78	91		Pn	21 55 42.5	-1.5
CRAG	Craig	10.78	91	P	Pn	21 55 42.3	-1.7
	baz=287						
G27K	Doyon Strip	10.81	23	P	Pn	21 55 43.3	-1.1
	baz=212						
BMAR	Burnt Mountain	10.83	16	Pn	Pn	21 55 44.4	-0.3
F25K	Christian Rive	10.84	14	P	Pn	21 55 44.0	-0.8
	baz=200						
WRAK	Wrangell Islan	10.96	86		Pn	21 55 46.2	-0.2
WRAK	Wrangell Islan	10.96	86	P	Pn	21 55 46.0	-0.5
	baz=282						
E24K	Your Creek	11.02	7	P	Pn	21 55 46.5	-0.8
	baz=191						
F26K	Sheenjek River	11.14	16	P	Pn	21 55 48.7	-0.3
	baz=203						
TNA	Tin City	11.18	325		Pn	21 55 50.8	+1.3
TNA	Tin City	11.18	325	P	Pn	21 55 49.9	+0.4
	baz=131,SNR=11						
E25K	Arctic Village	11.34	13	P	Pn	21 55 51.2	-0.6
	baz=199						
S34M	Telegraph Cree	11.38	78	P	Pn	21 55 52.9	+0.7
	baz=275,SNR=7.8						
TOLK	Toolik Lake Re	11.52	5	P	Pn	21 55 53.6	-0.5
	baz=187						
V35K	Ketchikan	11.64	91	P	Pn	21 55 55.2	-0.7
	baz=288						
EPYK	Eagle Plains	11.71	32	P	Pn	21 55 57.9	+1.0
	baz=226						
D23K	Nanushuk River	11.80	3	P	Pn	21 55 57.5	-0.5
	baz=184						
MMPY	Sheldon Lake,	11.82	54	P	Pn	21 55 58.6	+0.4
	baz=252,SNR=6.6						
RDOG	Red Dog Mine	11.88	340		Pn	21 55 59.4	+0.3
RDOG	Red Dog Mine	11.88	340	P	Pn	21 55 59.3	+0.3
	baz=151,SNR=5.3						
DLBC	Dease Lake	11.92	75	Pn	Pn	21 56 00.8	+1.1
	comp=E,2.3nm,0.3s,baz=258,slow=9.5,SNR=50						
DLBC				Sn	Sn	21 58 09.2	-2.2
	comp=E,0.4nm,0.3s,baz=218,slow=19,SNR=1.8						
DLBC				LR	LR	22 00 26.0	
	comp=E,65nm,18.4s,baz=219,slow=36						
	comp=E,6.5nm,0.4s						
DLBC	Dease Lake	11.92	75		Pn	21 56 01.1	+1.4
DLBC	Dease Lake	11.92	75	P	Pn	21 56 00.3	+0.6
	baz=273,SNR=5.7						
T35M	Bob Quinn	11.98	82	P	Pn	21 56 00.8	+0.3
	baz=280,SNR=6.1						
DIB	Dawson Inlet,	12.00	101	Pn	Pn	21 56 00.9	+0.1
E27K	Coleen River	12.01	19	P	Pn	21 56 00.7	-0.2
	baz=209						
G30M	tAoh Zraii Nji	12.29	31	P	Pn	21 56 05.4	+0.8
	baz=225						
MOBC	Moresby Island	12.30	101	Pn	Pn	21 56 04.9	0.0
D25K	Kavik River	12.41	10	P	Pn	21 56 07.7	+1.4
	baz=195						
C24K	Franklin Bluff	12.63	6	P	Pn	21 56 08.3	-1.0
	baz=189						
RUBB	Prince Rupert	12.73	94	Pn	Pn	21 56 10.6	-0.1
C27K	Jago River	13.00	13	P	Pn	21 56 14.2	-0.1
	baz=201						
GRNB	Grenville Isla	13.08	96	Pn	Pn	21 56 14.3	-1.2
HG4B	Hotspring	13.12	103	Pn	Pn	21 56 17.3	+1.2
C26K	Camden Bay	13.13	11	P	Pn	21 56 15.3	-0.8
	baz=198						
F31M	Tsiigehtchic	13.31	32	P	Pn	21 56 18.4	-0.1
	baz=229						
INK	Inuvik	13.95	30	Pn	Pn	21 56 27.4	+0.1
	comp=E,0.1nm,0.3s,baz=265,slow=12,SNR=8.0						
INK	Inuvik	13.95	30		Pn	21 56 26.6	-0.6
INK	Inuvik	13.95	30	P	Pn	21 56 27.1	-0.2
	baz=226						
BBB	Bella Bella	14.82	100	LR	LR	22 01 07.5	
	comp=E,56nm,19.1s,baz=32,slow=32						
ADK	Adak	15.09	260	Pn	Pn	21 56 41.1	-1.6
ADK				IAmb	IAmb	21 57 08.3	
	comp=Z,58nm,1.1s						
KIWB	Kanaga Island	15.35	260	Pn	Pn	21 56 44.9	-1.3
C36M	Paulatuk	17.33	34		Pn	21 57 09.6	-1.6
C36M	Paulatuk	17.33	34	P	Pn	21 57 09.5	-1.6
	baz=240,SNR=14						
A36M	Sachs Harbour	18.51	26	P	P	21 57 25.3	-0.1
A36M				IAmb	IAmb	21 57 44.6	
	comp=Z,22nm,0.8s						
A36M	Sachs Harbour	18.51	26	P	P	21 57 25.1	-0.2
	baz=231,SNR=17						
YKA	Yellowknife Ar	19.42	59	P	P	21 57 36.1	+0.7
	comp=Z,0.8nm,0.3s,baz=270,slow=11,SNR=97						
	comp=Z,5.1nm,0.6s						
YKA	Yellowknife Ar	19.42	59	P	P	21 57 36.4	+0.9
BILL	Bilibino	21.42	317	P	P	21 57 56.0	-1.0
DBO	Dodson Butte	23.12	115	P	P	21 58 16.4	+1.0
DBO				IAmb	IAmb	21 58 36.7	
	comp=Z,14nm,1.3s						
PETK	Petropavlovsk-	28.33	283	P	P	21 59 01.7	-1.0
	comp=Z,0.9nm,0.5s,baz=66,slow=14,SNR=1.5						
	comp=Z,0.9nm,0.5s						
PDAR	Pinedale Array	30.47	100	P	P	21 59 23.9	+1.7
	comp=Z,0.3nm,0.5s,baz=317,slow=4.5,SNR=5.0						
	comp=Z,0.3nm,0.5s						
PDAR	Pinedale Array	30.47	100	P	P	21 59 24.0	+1.9
LRMC	Laurel Mtn Rad	31.77	118	P	P	21 59 35.0	+1.5
	baz=324						
RSSD	Black Hills	32.55	93	P	P	21 59 41.2	+0.9
RSSD				IAmb	IAmb	21 59 47.4	
	comp=Z,2.2nm,0.6s						
RSSD	Black Hills	32.55	93	P	P	21 59 41.6	+1.3
	baz=311						
MDND	Maddock	32.62	84	P	P	21 59 40.1	-0.6
	baz=307						
PV13	Radium Mtn., P	34.16	105	P	P	21 59 54.0	-0.5
PV13				IAmb	IAmb	21 59 55.0	
	comp=Z,8.8nm,0.8s						
EYMN	Ely	36.91	78	P	P	22 00 18.4	+0.8
EYMN				IAmb	IAmb	22 00 24.9	
	comp=Z,22nm,1.4s						
ASAJ	Asahikawa	41.67	281	LR	LR	22 18 58.4	
	comp=Z,44nm,18.2s,baz=257,slow=37						
ILULI	Ilulissat	41.73	32	P	P	22 00 56.1	-1.5
ILULI				IAmb	IAmb	22 00 59.7	
	comp=Z,33nm,1.5s						
TXAR	Lajitas Array	43.71	109	P	P	22 01 15.5	+1.2
	comp=Z,0.1nm,0.6s,baz=318,slow=7.7,SNR=2.4						
	comp=Z,0.1nm,0.6s						
SCHQ	Schefferville	44.81	55	P	P	22 01 22.8	+0.1
	comp=Z,4.8nm,1.0s,baz=301,slow=11,SNR=4.2						
	comp=Z,4.8nm,1.0s						
SCHQ	Schefferville	44.81	55	P	P	22 01 22.8	+0.1
SCHQ				IAmb	IAmb	22 01 42.5	
	comp=Z,9.2nm,1.1s						
DBG	Daneborg	44.90	17	*i* P	P	22 01 26.8	+3.8
H11N2	WAKE ISLAND Hy	47.98	236	T	T	22 53 37.4	
	baz=31						
H11N3	WAKE ISLAND Hy	47.99	236	T	T	22 53 57.6	
	baz=31						
H11N1	WAKE ISLAND Hy	48.00	236	T	T	22 54 04.8	
	baz=31						
FRNY	Flat Rock	48.28	69	P	P	22 01 49.9	-0.1
SSPA	Standing Stone	49.03	76	P	P	22 01 55.7	-0.1
SSPA				IAmb	IAmb	22 01 56.9	
	comp=Z,11nm,1.1s						
H11S1	WAKE ISLAND Hy	49.14	235	T	T	22 54 36.1	
	baz=29						
H11S2	WAKE ISLAND Hy	49.16	235	T	T	22 54 38.8	
	baz=29						
H11S3	WAKE ISLAND Hy	49.16	235	T	T	22 54 40.0	
	baz=29						
R55A	Marlinton	49.55	80	P	P	22 02 00.5	+0.6
R55A				IAmb	IAmb	22 02 43.2	
	comp=Z,21nm,1.5s						
KSCT	Kent School, K	50.55	72	P	P	22 02 07.5	+0.3
KMSC	Kings Mountain	51.22	84	P	P	22 02 11.0	-1.4
KMSC				IAmb	IAmb	22 02 43.0	
	comp=Z,16nm,1.3s						
ARCES	ARCESS Array B	53.52	1	P	P	22 02 30.9	+1.8
	comp=Z,1.9nm,0.7s,baz=2.5,slow=6.3,SNR=5.7						
	comp=Z,1.9nm,0.7s						
JNU	Nakatsue	55.92	279	LR	LR	22 27 06.3	
	comp=Z,20nm,19.5s,baz=210,slow=36						
SONM	Songino Array	56.75	308	P	P	22 02 54.5	+1.7
	comp=Z,0.5nm,0.7s,baz=44,slow=5.7,SNR=1.6						
	comp=Z,0.5nm,0.7s						
HHC	Hu-ho-hao-te	59.82	299	*e*P	P	22 03 15.9	+1.6
HHC				pmax	pmax		
	comp=Z,19nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,5.0s						
ZALV	Zalesovo Beam	59.84	325	P	P	22 03 13.6	-0.5
	comp=Z,0.6nm,0.5s,baz=28,slow=6.5,SNR=2.2						
	comp=Z,0.6nm,0.5s						
NC303	NORSAR Array S	61.19	9	P	P	22 03 23.4	+0.2
FINES	FINESS Array B	61.65	1	P	P	22 03 25.6	-0.7
	comp=Z,2.8nm,1.0s,baz=3.6,slow=6.1,SNR=5.2						
	comp=Z,2.8nm,1.0s						
KURK	Kurchatov	64.54	327	P	P	22 03 46.2	+0.6
MK31	Makanchi Array	66.84	322	P	P	22 03 59.4	-1.2
MKAR	Makanchi Array	66.84	322	P	P	22 03 59.9	-0.7
	comp=Z,0.3nm,0.4s,baz=34,slow=6.0,SNR=6.8						
	comp=Z,0.3nm,0.4s						
WMQ	Urumqi	67.53	317	*e*P	P	22 04 08.5	+3.4
ABKAR	Akbulak array	70.57	338	P	P	22 04 20.1	-3.6
ABKAR	Akbulak array	70.57	338	P	P	22 04 20.7	-3.0
ABKAR				IAmb	IAmb	22 04 33.1	
	comp=Z,1.5nm,0.8s						
BRU2	Volcan	71.65	103	P	P	22 04 30.4	-0.5
AKASG	Malin Array Be	72.42	359	P	P	22 04 37.0	+2.1
	comp=Z,0.3nm,0.3s,baz=7.0,slow=6.2,SNR=4.5						
AKASG				LR	LR	22 36 37.8	
	comp=Z,30nm,18.8s,baz=317,slow=36						
	comp=Z,0.3nm,0.3s						
PZH	PanZhiHua	76.20	297	P	P	22 04 59.1	+1.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,4.5s						
LSA	Lhasa	78.34	307	P	P	22 05 07.9	-1.8
LSA				IAmb	IAmb	22 05 10.7	
	comp=Z,4.3nm,0.4s						

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*IDC **05** 22:09:02.4±1.8, 0°.56N×126°.27E, h0km, mb3.8/3, mbtmp3.8/3, MS2.6/1, Error ellipse: s-maj=168.4km s-min=23.2km az=65.0*

*DJA **05** 22:09:08.5±1.7, 0°N±3°×12°6E±°, h20km±16km, M3.8/7, MLv3.8/7*

ISC 05 22:09:07.1±1.4**, 0°.46N**±0°.09×**126°.09E**±0°.10**, h35**km**, n10,** σ**1s.33**/10**, mb3.9**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.31	76	P	Pn	22 09 28.8	-0.2
TNTI				S	Sn	22 09 43.4	-1.8
LBMI	Labuha	1.78	128	P	Pn	22 09 36.5	+1.1
LBMI				S	Sn	22 09 56.5	-0.3
SANI	Sanana	2.49	182	P	Pn	22 09 43.5	-1.7
NLAI	Namlea	3.81	165	P	Pn	22 10 04.8	+1.5
MRSI	Marisa	4.15	270	P	Pn	22 10 13.6	+5.5
AAI	Ambon	4.62	153	P	Pn	22 10 13.6	-0.9
WRA	Warramunga Arr	21.82	159	P	P	22 13 56.3	-0.3
	2.1nm,0.5s,baz=338,slow=11,SNR=28						
	2.1nm,0.5s						
ASAR	Alice Springs	25.15	163	P	P	22 14 30.4	+1.1
	0.6nm,0.4s,baz=345,slow=11,SNR=16						
	0.6nm,0.4s						
KSRS	Korea Array	36.85	2	LR	LR	22 30 47.5	
	comp=Z,9.1nm,20.2s,baz=335,slow=36						
MKAR	Makanchi Array	59.89	327	P	P	22 19 10.2	+0.6
	0.6nm,0.4s,baz=119,slow=7.7,SNR=18						
	0.6nm,0.4s						

WEL 05 22:15:37.4±0.5**, 42°S**±3°×**17°4E**±°**, h15**km±4km**, M2.2**/3**, ML2.3**/7**, MLv2.2**/3**, Error ellipse: s-maj=0.0km s-min=0.0km az=108.0, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.27	208	P	Pb	22 15 44.8	+0.8
KHZ				S	Sb	22 15 49.2	+0.7
BSWZ	Blackbirch Sta	0.48	15	P	Pb	22 15 48.1	+0.6
BSWZ				S	Sb	22 15 54.9	+0.5
THZ	Tophouse	0.73	304	P	Pb	22 15 52.1	+0.2
THZ				S	Sg	22 16 01.2	-0.1
TUWZ	Tuamarina	0.77	13	P	Pn	22 15 53.3	-0.4
GVZ	Greta Valley S	0.94	212	P	Pn	22 15 57.0	+0.9
NNZ	Nelson	0.99	345	P	Pb	22 15 54.8	-1.5
MRNZ	Matariki Terra	1.05	317	P	Pg	22 15 58.4	+0.6
MRNZ				S	Sn	22 16 12.9	+0.8
LTZ	Lake Taylor	1.23	240	P	Pn	22 15 59.2	-0.9
LTZ				S	Sg	22 16 17.1	0.0
MQZ	McQueen's Vall	1.71	207	P	Pn	22 16 06.2	-0.5
MQZ				S	Sn	22 16 27.5	-0.9
BFZ	Birch Farm	2.42	53	P	Pn	22 16 18.5	+2.0

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*IDC **05** 22:16:20.3±1.1, 15°.53N×147°.76E, h0km, mb3.9/8, mbtmp3.8/8, Error ellipse: s-maj=55.4km s-min=23.2km az=103.0*

ISC 05 22:16:24.8±1.1**, 15°.5N**±0°.2×**147°.8E**±0°.4**, h29**km**, n11,** σ**0s.47**/8**, mb3.7**/8**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	18.34	78	T	T	22 39 21.1	
	baz=263						
H11S1	WAKE ISLAND Hy	18.36	78	T	T	22 39 18.5	
	baz=263						
H11S2	WAKE ISLAND Hy	18.36	78	T	T	22 39 17.9	
	baz=263						
WRA	Warramunga Arr	37.60	201	P	P	22 23 37.1	0.0
	1.2nm,1.0s,baz=29,slow=9.4,SNR=5.3						
	1.2nm,1.0s						
ASAR	Alice Springs	41.20	199	P	P	22 24 07.1	-0.1
	0.4nm,0.6s,baz=22,slow=7.7,SNR=4.1						
	0.4nm,0.6s						
MKAR	Makanchi Array	62.11	315	P	P	22 26 43.3	+0.1
	0.4nm,0.7s,baz=90,slow=8.5,SNR=5.3						
	0.4nm,0.7s						
ILAR	Eielson Array	65.67	25	P	P	22 27 05.7	-0.4
	0.3nm,1.0s,baz=246,slow=6.5,SNR=1.5						
	0.3nm,1.0s						
YKA	Yellowknife Ar	79.89	28	P	P	22 28 31.0	+0.4
	0.3nm,0.8s,baz=282,slow=5.2,SNR=4.2						
	0.3nm,0.8s						
ARCES	ARCESS Array B	86.14	343	P	P	22 29 02.7	-0.1
	4.7nm,1.1s,baz=46,slow=7.8,SNR=1.6						
	4.7nm,1.1s						
FINES	FINESS Array B	90.61	336	P	P	22 29 23.4	-0.8
	1.2nm,0.6s,baz=70,slow=2.2,SNR=6.7						
	1.2nm,0.6s						
NOA	NORSAR Array B	96.25	340	P	P	22 29 50.5	+0.2
	0.8nm,0.8s,baz=18,slow=2.8,SNR=2.5						
	0.8nm,0.8s						

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*IDC **05** 22:28:08.9±0.4, 58°.42S×139°.78W, h0km, mb4.6/10, mbtmp4.6/10, MS3.8/3, Error ellipse: s-maj=25.7km s-min=14.7km az=178.0*

*NEIC **05** 22:28:10.7±1.9, 58°.3S±0°.1×139°.6W±0°.2, h10km±1km, mb5.1/49, Error ellipse: s-maj=23.1km s-min=16.9km az=3.0*

*BJI **05** 22:28:11.0±0.0, 58°.30S×139°.70W, h10km, mB5.6/2, Ms7 5.4/1*

ISC 05 22:28:10.3±0.3**, 58°.35S**±0°.09×**139°.66W**±0°.07**, h10**km**, n306,** σ**0s.83**/307**, mb5.1**/32**, MS4.3**/7**, 7C-6D, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	27.21	204	LR	LR	22 41 50.1	
	comp=Z,67nm,18.7s,baz=107,slow=30						
VNDA	Vanda	27.21	204	P	P	22 33 54.7	+1.0
QSPA	South Pole Qui	31.80	180	P	P	22 34 35.6	+0.9

	14nm,1.1s,baz=69,slow=3.6,SNR=13						
QSPA				PcP	PcP	22 37 26.1	+0.8
	2.8nm,0.7s,baz=122,slow=1.1,SNR=6.1						
QSPA				LR	LR	22 46 06.6	
	comp=Z,196nm,18.1s,baz=56,slow=34						
	14nm,1.1s						
QSPA	South Pole Qui	31.80	180	P	P	22 34 35.8	+1.1
QSPA				IAmb	IAmb	22 34 37.8	
	comp=Z,42nm,1.4s						
SMAI	San Martin Ant	32.11	138	P	P	22 34 38.3	+1.2
SMAI				IAmb	IAmb	22 35 05.1	
	comp=Z,20nm,1.1s						
BFZ	Birch Farm	32.89	283	P	P	22 34 45.0	+0.7
BFZ				IAmb	IAmb	22 34 47.1	
	comp=Z,46nm,1.2s						
AMCZ	Amberley	32.97	276	P	P	22 34 44.9	0.0
PMSA	Palmer Station	34.52	133	LR	LR	22 44 46.3	
	comp=Z,409nm,21.8s,baz=270,slow=29						
TBI	Tubuai	35.67	344	*e*LR	LR	22 44 42.5	
	comp=Z,2µm,26.2s						
TBI				*e*LR	LR	22 44 42.6	
	comp=Z,7µm,23.0s						
TBI	Tubuai	35.67	344	*e*T	T	23 12 35.7	
	comp=Z,6.2nm,0.3s						
BELA	Belgrano 2	36.72	160	P	P	22 35 17.5	+0.6
PPT2	Papeete2	41.36	346	*e*S	S	22 42 13.2	+2.4
	comp=Z,137nm,39.5s						
PPT2				*e*LR	LR	22 47 20.2	
	comp=Z,280nm,24.8s						
PPT2				*e*LR	LR	22 47 20.9	
	comp=Z,514nm,25.8s						
VAH	Vaihoa	43.45	349	*e*T	T	23 22 19.0	
	comp=Z,4.9nm,0.3s						
PLCA	Paso Flores	45.96	99	P	P	22 36 34.4	+1.2
	comp=Z,6.3nm,1.1s,baz=212,slow=11,SNR=5.4						
PLCA				PcP	PcP	22 38 09.8	-0.1
	comp=Z,2.0nm,0.8s,baz=221,slow=6.0,SNR=4.1						
	comp=Z,6.3nm,1.1s						
PLCA	Paso Flores	45.96	99	P	P	22 36 34.0	+0.8
PLCA	Paso Flores	45.96	99	*e*P	P	22 36 34.7	+1.5
GO06	Curarrehue	46.31	97	P	P	22 36 36.9	+0.8
VNA2	Neumayer--Watz	46.70	160	P	P	22 36 38.1	-0.5
	baz=223,slow=8.0						
H03S2	Juan Fernandez	46.72	86	T	T	23 26 53.1	
	baz=217,slow=74,SNR=12						
H03S1	Juan Fernandez	46.73	86	T	T	23 26 51.9	
	baz=217,slow=74,SNR=13						
H03S3	Juan Fernandez	46.74	86	T	T	23 26 52.2	
	baz=217,slow=74,SNR=15						
SNAA	Sanae	46.81	163	P	P	22 36 39.5	0.0
SNAA	Sanae	46.81	163	P	P	22 36 38.6	-0.9
SNAA				IAmb	IAmb	22 36 39.9	
	comp=Z,10nm,0.8s						
H03N3	Juan Fernandez	47.02	85	T	T	23 27 12.6	
	baz=220,slow=72,SNR=52						
H03N2	Juan Fernandez	47.03	85	T	T	23 27 11.0	
	baz=220,slow=72,SNR=45						
H03N1	Juan Fernandez	47.04	85	T	T	23 27 10.9	
	baz=220,slow=72,SNR=49						
TROLL	Troll, Antarti	47.30	165	P	P	22 36 44.1	+0.7
ELIB	Princess Elisa	49.45	173	*d*P	P	22 37 00.3	+0.3
	comp=Z,17nm,0.9s						
LMEL	Las Melosas	51.31	93	P	P	22 37 15.3	+0.7
LMEL				IAmb	IAmb	22 37 16.7	
	comp=Z,21nm,1.0s						
MT05	Renca	51.38	92	P	P	22 37 15.7	+0.7
PEL	Peldehue	51.60	92	P	P	22 37 17.6	+0.9
PEL				IAmb	IAmb	22 37 18.4	
	comp=Z,35nm,1.1s						
VA03	San Esteban	51.97	92	P	P	22 37 20.0	+0.6
VA03				IAmb	IAmb	22 37 20.9	
	comp=Z,21nm,0.9s						
TRQA	Tornquist	52.38	103	P	P	22 37 23.4	+1.0
GO04	Tololo Observa	53.87	90	P	P	22 37 34.4	+0.7
CO01	Juntas del Tor	54.40	90	P	P	22 37 36.9	-0.6
LCO	Las Campanas	54.84	89	P	P	22 37 40.7	-0.1
LCO				IAmb	IAmb	22 37 42.3	
	comp=Z,27nm,1.2s						
AC01	Pan de Azucar	57.19	87	P	P	22 37 57.5	+0.1
AC02	Maricunga	57.41	89	P	P	22 38 00.6	+1.1
STKA	Stephens Creek	57.72	261	P	P	22 38 02.4	+1.5
	comp=Z,10nm,0.8s,baz=151,slow=6.8,SNR=14						
	comp=Z,10nm,0.8s						
STKA	Stephens Creek	57.72	261	P	P	22 38 01.6	+0.7
EIDS	Eidsvold	57.93	273	P	P	22 38 02.5	-0.1
PB14	IPOC Station P	58.53	86	P	P	22 38 07.3	+0.2
PB14				IAmb	IAmb	22 38 07.6	
	comp=Z,21nm,1.1s						
BBOO	Buckleboo	59.84	256	P	P	22 38 16.2	+0.5
LVC	Limon Verde	60.96	86	P	P	22 38 24.6	+0.7
LVC				IAmb	IAmb	22 38 25.5	
	comp=Z,12nm,0.8s						
LVC	Limon Verde	60.96	86	*e*P	P	22 38 24.8	+0.9
PB07	IPOC Station P	61.17	85	P	P	22 38 25.5	+0.4
MECA	Mercedes	61.19	100	*e*P	P	22 38 24.8	-0.1
PLTB	Pedras Altas	61.57	105	*e*P	P	22 38 26.0	-1.6
ITQB	Itaqui	61.70	101	P	P	22 38 28.2	-0.1
ITQB	Itaqui	61.70	101	*e*P	P	22 38 28.5	+0.2
PB01	IPOC Station P	61.94	85	P	P	22 38 30.7	+0.4
PB01				IAmb	IAmb	22 38 38.1	
	comp=Z,17nm,1.2s						
MNMC	Minye Minye	63.46	83	P	P	22 38 40.9	+0.3
CPUP	Villa Florida	64.02	98	P	P	22 38 44.0	+0.1
	comp=Z,6.1nm,1.1s,baz=226,slow=8.3,SNR=5.3						
	comp=Z,6.1nm,1.1s						
CPUP	Villa Florida	64.02	98	P	P	22 38 43.8	-0.1
CPUP				IAmb	IAmb	22 38 45.3	
	comp=Z,16nm,1.4s						
PB16	IPOC Station P	64.17	83	P	P	22 38 45.5	-0.1
PB16				IAmb	IAmb	22 38 47.4	
	comp=Z,9.1nm,0.9s						
CTAO	Charters Tower	64.79	272	P	P	22 38 49.3	+0.3
CTAO				IAmb	IAmb	22 38 51.0	
	comp=Z,18nm,0.9s						
FORT	Forrest	65.51	251	P	P	22 38 54.2	+0.7
LPAZ	La Paz	66.59	83	P	P	22 39 02.5	+1.1
	comp=Z,11nm,1.1s,baz=193,slow=6.0,SNR=18						
	comp=Z,11nm,1.1s						
LPAZ	La Paz	66.59	83	P	P	22 39 01.3	-0.1
LPAZ				IAmb	IAmb	22 39 04.5	
	comp=Z,19nm,1.1s						
LPAZ	La Paz	66.59	83	*e*P	P	22 39 02.4	+1.0
ASAR	Alice Springs	68.33	260	P	P	22 39 11.3	-0.4
	comp=Z,17nm,0.9s,baz=144,slow=6.6,SNR=104						
	comp=Z,17nm,0.9s						
ASAR	Alice Springs	68.33	260	P	P	22 39 10.7	-1.0
AS31	Alice Springs	68.33	260	P	P	22 39 11.1	-0.6
MCRA	Macar, Loja	70.76	66	P	P	22 39 26.7	0.0
MCRA				IAmb	IAmb	22 39 27.2	
	comp=Z,11nm,0.7s						
MCRA	Macar, Loja	70.76	66	*e*P	P	22 39 26.8	0.0
PCMB	Pacaembu	71.05	100	*e*P	P	22 39 28.6	+0.2
WRA	Warramunga Arr	71.18	263	P	P	22 39 28.8	-0.4
	comp=Z,11nm,1.0s,baz=146,slow=5.6,SNR=34						
	comp=Z,11nm,1.0s						
WRA	Warramunga Arr	71.18	263	P	P	22 39 29.0	-0.2
WB0	Warramunga Arr	71.29	263	P	P	22 39 29.4	-0.5
WB0				IAmb	IAmb	22 39 30.7	
	comp=Z,20nm,1.1s						
CZSB	Cruzeiro do Su	71.45	74	P	P	22 39 31.6	+0.7
CZSB	Cruzeiro do Su	71.45	74	*e*P	P	22 39 32.2	+1.4
MORW	Morawa	72.74	243	P	P	22 39 38.7	+0.3
MORW				IAmb	IAmb	22 39 40.8	
	comp=Z,23nm,1.1s						
ETMB	Extrema	73.02	81	P	P	22 39 40.8	+0.6
ETMB				IAmb	IAmb	22 39 42.1	
	comp=Z,18nm,1.4s						
ETMB	Extrema	73.02	81	*e*P	P	22 39 40.4	+0.2
SALV	Santo Antonio	73.46	93	*e*P	P	22 39 44.0	+1.1
CHSH	Refugio Sur-Vo	73.78	65	P	P	22 39 44.7	-0.7
CHSH				IAmb	IAmb	22 39 48.8	
	comp=Z,19nm,1.1s						
PIAT	Ana Tenorio	74.51	66	*e*P	P	22 39 49.3	-0.1
KRVT	Keravat (AS076	75.07	286	LR	LR	23 09 01.7	
	comp=Z,7µm,18.9s,baz=132,slow=33						
SAML	Samuel	75.34	83	P	P	22 39 53.0	-0.8
SAML	Samuel	75.34	83	*e*P	P	22 39 53.7	0.0
OTAV	Otavalo	75.50	65	P	P	22 39 55.1	-0.1
OTAV				IAmb	IAmb	22 39 57.7	
	comp=Z,19nm,1.1s						
OTAV	Otavalo	75.50	65	*e*P	P	22 39 56.3	+1.1
OTAV	Otavalo	75.50	65	*e*P	P	22 39 56.5	+1.3
BDFB	Brasilia	77.70	100	P	P	22 40 06.4	-0.9
	comp=Z,2.0nm,0.7s,baz=182,slow=4.1,SNR=3.1						
	comp=Z,2.0nm,0.7s						
FLOC	Florencia	78.01	67	*e*P	P	22 40 06.8	-2.1
POPC	Popayan, Colom	78.35	65	*e*P	P	22 40 10.2	-0.8
JAMC	Jamundi, Valle	78.94	65	*e*P	P	22 40 15.3	+1.1
BETC	Betania	79.07	66	*e*P	P	22 40 16.6	+1.8
YOTC	Yotoco, Valle	79.77	65	*e*P	P	22 40 18.4	-0.2
JANB	Januaria	80.10	102	*e*P	P	22 40 19.8	-0.7
ORTC	Ortega, Tolima	80.23	66	*e*P	P	22 40 21.1	+0.1
NPGB	Novo Progresso	81.05	89	*e*P	P	22 40 25.3	-0.1
VILC	Villavicencio,	81.16	67	*e*P	P	22 40 24.8	-1.3
SRBA	San Rafael, Bu	81.18	56	P	P	22 40 26.6	+0.5
SRBA				IAmb	IAmb	22 40 29.2	
	comp=Z,29nm,1.3s						
ROSC	El Rosal	81.49	66	P	P	22 40 30.1	+2.0
	comp=Z,12nm,0.6s,baz=172,slow=6.9,SNR=8.4						
	comp=Z,12nm,0.6s						
ROSC	El Rosal	81.49	66	P	P	22 40 28.5	+0.3
ROSC				IAmb	IAmb	22 40 30.4	
	comp=Z,17nm,0.8s						
ROSC	El Rosal	81.49	66	*e*P	P	22 40 28.1	-0.1
MACA	Manacapuru-AM	81.53	82	*e*P	P	22 40 28.1	+0.1
CBOC	Ciudad Bolivar	81.57	64	*e*P	P	22 40 27.2	-1.1
CHIC	Chingaza	81.59	67	*e*P	P	22 40 29.4	+0.7
NORC	Norcasia	81.85	65	*e*P	P	22 40 30.0	+0.3
SDBA	SAO DESIDERIO	82.03	101	*e*P	P	22 40 30.3	-0.3
DBBC	Dabeiba	82.48	64	*e*P	P	22 40 34.2	+1.2
PTBC	PUERTO BERRIO,	82.90	65	*e*P	P	22 40 34.5	-0.6
RUSC	La Rusia	83.00	67	P	P	22 40 35.5	-0.6
RUSC	La Rusia	83.00	67	*e*P	P	22 40 32.4	-3.8
ZARC	Zaragoza, Cauc	83.54	65	*e*P	P	22 40 36.3	-2.1
SMTB	Santa Maria do	83.61	96	*e*P	P	22 40 38.5	-0.3
PAMC	Pamplona, Colo	84.44	67	*e*P	P	22 40 40.5	-3.1
SJCC	San Jacinto, C	85.48	63	*e*P	P	22 40 47.4	-0.9
BOAV	Boa Vista	86.33	79	P	P	22 40 52.9	+0.4
BOAV				IAmb	IAmb	22 40 53.8	
	comp=Z,16nm,1.0s						
BOAV	Boa Vista	86.33	79	*e*P	P	22 40 52.9	+0.4
SDV	Santo Domingo	86.78	68	P	P	22 40 53.8	-1.1
SDV				IAmb	IAmb	22 40 54.6	
	comp=Z,9.9nm,0.8s						
SDV	Santo Domingo	86.78	68	*e*P	P	22 40 53.9	-1.0
BAUV	El Baul	88.11	70	P	P	22 41 00.6	-0.3
TXAR	Lajitas Array	92.39	31	P	P	22 41 21.9	+1.2
	comp=Z,0.4nm,0.7s,baz=194,slow=6.9,SNR=5.4						
	comp=Z,0.4nm,0.7s						
656A	Willston	99.48	48	P	Pdif	22 41 49.9	-2.9
H10N3	ASCENSION HYDR	100.70	124	T	T	00 34 45.0	
	baz=206,slow=74,SNR=6.6						
H10N1	ASCENSION HYDR	100.70	124	T	T	00 34 45.7	
	baz=206,slow=74,SNR=6.6						
H10N2	ASCENSION HYDR	100.72	124	T	T	00 34 48.4	
	baz=206,slow=74,SNR=8.8						
SKT	Skwentna	120.35	354		PKPdf	22 46 59.5	-0.7
PAX	Paxson	121.08	357	P	PKPdf	22 47 01.7	0.0
	baz=176						
L26K	Log Cabin Wild	121.08	358	P	PKiKP	22 47 01.8	+0.1
	baz=178						
L27K	Beaver Creek,	121.10	359	P	PKPdf	22 47 01.5	-0.1
	baz=179						
BCAR	Beaver Creek A	121.10	359		PKiKP	22 47 01.8	0.0
L29M	L29M	121.14	1	P	PKiKP	22 47 01.8	0.0
	baz=181						
TTA	Tatalina	121.61	351	PKPdf	PKiKP	22 47 03.2	+0.4
TTA	Tatalina	121.61	351	P	PKiKP	22 47 02.9	+0.1
	baz=170						
MAYO	Mayo, Yukon	121.66	2	P	PKiKP	22 47 03.0	+0.2
	baz=182						
DOT	Dot Lake	121.72	358		PKiKP	22 47 03.6	+0.6
CAST	Castle Rocks	121.82	353		PKPdf	22 47 02.4	-0.5
CAST	Castle Rocks	121.82	353	P	PKPdf	22 47 02.6	-0.3
	baz=172						
RIDG	Independent Ri	121.83	357	P	PKPdf	22 47 02.9	-0.1
	baz=177						
CMAR	Chiang Mai Arr	121.88	253	PKP	PKiKP	22 47 04.7	+0.1
	comp=Z,1.4nm,0.3s,baz=223,slow=1.6,SNR=7.9						
K29M	Barlow Dome	121.88	1	P	PKiKP	22 47 03.7	+0.3
	baz=181						
K20K	Telida	121.89	352	P	PKPdf	22 47 03.0	-0.1
	baz=171						
K24K	Donnelly Dome	121.92	357	P	PKiKP	22 47 03.4	+0.1
	baz=176						
MCK	McKinley	121.97	355		PKPdf	22 47 03.1	-0.1
MCK	McKinley	121.97	355	P	PKPdf	22 47 03.2	-0.1
	baz=174,SNR=5.3						
SCRK	Sand Creek	122.05	358	PKPdf	PKiKP	22 47 03.9	+0.3
SCRK	Sand Creek	122.05	358	P	PKiKP	22 47 04.0	+0.3
	baz=177,SNR=6.2						
YKA	Yellowknife Ar	122.06	13	PKP	PKPdf	22 47 02.9	-0.5
	comp=Z,1.1nm,0.8s,baz=179,slow=2.7,SNR=16						
YKA				PKKPbc	PKKPbc	22 57 00.3	+0.2
	comp=Z,0.4nm,0.7s,baz=9.3,slow=4.4,SNR=8.2						
YKA	Yellowknife Ar	122.06	13	PKPdf	PKPdf	22 47 03.1	-0.2
K27K	Chicken	122.07	359		PKiKP	22 47 04.1	+0.6
K27K	Chicken	122.07	359	P	PKPdf	22 47 03.1	-0.3
	baz=178						
DAWY	Dawson	122.09	0	PKPdf	PKiKP	22 47 03.6	0.0
DAWY	Dawson	122.09	0	P	PKPdf	22 47 03.0	-0.6
	baz=180						
CHUM	Lake Minchumin	122.29	353	P	PKPdf	22 47 03.6	-0.1
	baz=172						
BPAW	Bear Paw Mtn.	122.43	354	PKPdf	PKPdf	22 47 03.6	-0.5
BPAW	Bear Paw Mtn.	122.43	354	P	PKPdf	22 47 03.6	-0.5
	baz=173,SNR=9.1						
NJ2	Nanjing	122.54	279	*e*PKP	PKiKP	22 47 06.6	+1.1
HDA	Harding Lake	122.56	356	P	PKPdf	22 47 04.2	-0.2
	baz=176,SNR=5.9						
J26L	Joseph Creek	122.57	358		PKiKP	22 47 05.0	+0.4
J26L	Joseph Creek	122.57	358	P	PKPdf	22 47 04.5	0.0
	baz=178						
WRH	Wood River Hil	122.67	356	PKPpre	PKPpre	22 46 58.9	
EGAK	Eagle	122.81	359	P	PKPdf	22 47 04.6	-0.2
	baz=179,SNR=6.1						
NEA2	Nenana	122.83	355		PKPdf	22 47 03.0	-1.9
NEA2	Nenana	122.83	355	P	PKPdf	22 47 04.9	+0.1
	baz=174,SNR=13						
ILAR	Eielson Array	122.92	356	PKP	PKiKP	22 47 05.3	+0.1
	comp=Z,19nm,1.1s,baz=218,slow=1.3,SNR=38						
MLY	Manley	123.35	354		PKPdf	22 47 04.9	-1.0
MLY	Manley	123.35	354	P	PKPdf	22 47 05.2	-0.7
	baz=173,SNR=5.3						
I26K	Coal Creek Min	123.37	358		PKPdf	22 47 05.4	-0.4
I26K	Coal Creek Min	123.37	358	P	PKPdf	22 47 05.8	0.0
	baz=178						
I23K	Minto, Yukon-K	123.40	355		PKPdf	22 47 04.3	-1.6
I23K	Minto, Yukon-K	123.40	355	P	PKPdf	22 47 05.3	-0.6
	baz=174						
I29M	Ogilvie Camp,	123.40	1		PKPdf	22 47 04.6	-1.3
I29M	Ogilvie Camp,	123.40	1	P	PKPdf	22 47 05.5	-0.4
	baz=181,SNR=6.3						
GCSA	Galena City Sc	123.47	351	P	PKiKP	22 47 06.2	0.0
	baz=169						
I21K	Tanana	123.56	354		PKiKP	22 47 06.7	+0.2
I21K	Tanana	123.56	354	P	PKPdf	22 47 06.2	0.0
	baz=172						
PRP	Porcupine Dome	123.63	357	PKPdf	PKPdf	22 47 06.4	-0.2
PRP	Porcupine Dome	123.63	357	P	PKPdf	22 47 06.6	+0.1
	baz=176						
I27K	Kandik River	123.65	359	P	PKiKP	22 47 06.7	0.0
	baz=179						
H24K	Noodor Dome	124.03	356	P	PKPdf	22 47 06.4	-0.8
	baz=175						
H23K	Yukon River	124.08	355	P	PKPdf	22 47 06.7	-0.5
	baz=174						
H21K	Melozitna Rive	124.09	353		PKiKP	22 47 07.5	-0.1
H21K	Melozitna Rive	124.09	353	P	PKiKP	22 47 07.7	+0.2
	baz=172						
ANM	Nome	124.14	347	PKPdf	PKPdf	22 47 07.4	0.0
ANM	Nome	124.14	347	P	PKiKP	22 47 07.6	0.0
	baz=164						
H22K	Ishtalitna Cre	124.24	354	P	PKiKP	22 47 07.9	+0.1
	baz=173						
H27K	Steamboat Moun	124.28	359	P	PKPdf	22 47 07.7	0.0
	baz=179						
EPYK	Eagle Plains	124.43	1		PKPdf	22 47 07.5	-0.3
EPYK	Eagle Plains	124.43	1	P	PKPdf	22 47 07.6	-0.3
	baz=182,SNR=8.3						
IMAR	Indian Mountai	124.47	353	PKPdf	PKiKP	22 47 08.3	0.0
FYU	Fort Yukon	124.67	357	PKPdf	PKPdf	22 47 08.2	0.0
G27K	Doyon Strip	124.86	359	P	PKiKP	22 47 09.1	0.0
	baz=179						
G24K	Hadweenzic Riv	124.88	356	P	PKiKP	22 47 09.3	+0.3
	baz=175						
G25K	Bearman Lake	124.90	357	P	PKiKP	22 47 09.6	+0.6
	baz=176						
G21K	Allakaket	124.98	353	P	PKiKP	22 47 09.1	-0.2
	baz=171						
G23K	Bananza Creek	124.99	355	P	PKPdf	22 47 09.0	0.0
	baz=173						
G26K	Porcupine Rive	125.03	358	P	PKiKP	22 47 09.4	+0.1
	baz=177						
G30M	tAoh Zraii Nji	125.05	2	P	PKiKP	22 47 09.3	-0.1
	baz=182						
TNA	Tin City	125.41	346	PKPdf	PKiKP	22 47 10.8	+0.7
TNA	Tin City	125.41	346	P	PKiKP	22 47 10.3	+0.3
	baz=162						
COLD	Coldfoot	125.51	355	P	PKiKP	22 47 10.5	+0.2
	baz=173						
BMAR	Burnt Mountain	125.53	358	PKPdf	PKiKP	22 47 10.6	+0.2
F31M	Tsiigehtchic	125.56	3	P	PKPdf	22 47 09.9	0.0
	baz=184,SNR=12						
F21K	Alatna River	125.68	353	P	PKiKP	22 47 11.3	+0.7
	baz=171						
F24K	Squaw Lake	125.71	356	P	PKiKP	22 47 11.5	+0.8
	baz=175						
F25K	Christian Rive	125.72	357	P	PKiKP	22 47 10.6	-0.2
	baz=176						
F26K	Sheenjek River	125.78	358	P	PKiKP	22 47 11.9	+1.0
	baz=177						
F22K	John River	125.89	354	P	PKiKP	22 47 11.7	+0.7
	baz=172						
E25K	Arctic Village	126.24	357	P	PKiKP	22 47 12.5	+0.7
	baz=176						
E27K	Coleen River	126.24	359	P	PKiKP	22 47 12.1	+0.3
	baz=179						
E24K	Your Creek	126.29	356	P	PKiKP	22 47 12.5	+0.6
	baz=174						
E23K	Chandalar	126.32	355	P	PKiKP	22 47 12.2	+0.2
	baz=174						
TORD	Torodi Ar. Bea	126.38	131	PKP	PKPdf	22 47 12.6	-0.6
	comp=Z,3.5nm,0.7s,baz=225,slow=0.8,SNR=19						
INK	Inuvik	126.43	3	PKP	PKPdf	22 47 11.3	-0.3
	comp=Z,6.6nm,1.2s,baz=260,slow=1.3,SNR=8.7						
INK	Inuvik	126.43	3	PKPdf	PKPdf	22 47 11.5	-0.1
INK	Inuvik	126.43	3	P	PKiKP	22 47 12.1	+0.1
	baz=184,SNR=8.1						
TOLK	Toolik Lake Re	126.90	355		PKPdf	22 47 12.3	-0.3
TOLK	Toolik Lake Re	126.90	355	P	PKiKP	22 47 13.7	+0.6
	baz=174						
SCHQ	Schefferville	127.08	44	PKP	PKPdf	22 47 12.7	-0.6
	comp=Z,6.1nm,0.9s,baz=261,slow=7.5,SNR=5.9						
PZH	PanZhiHua	127.11	261	PKP	PKiKP	22 47 15.3	+0.4
D23K	Nanushuk River	127.27	355	P	PKiKP	22 47 14.4	+0.7
	baz=173						
D25K	Kavik River	127.47	357	P	PKiKP	22 47 14.7	+0.5
	baz=176						
C27K	Jago River	127.71	358	P	PKiKP	22 47 14.8	+0.2
	baz=177						
C36M	Paulatuk	127.90	7	P	PKiKP	22 47 15.0	+0.1
	baz=190						
C24K	Franklin Bluff	127.94	356	P	PKiKP	22 47 15.2	+0.2
	baz=174						
C26K	Camden Bay	128.03	358	P	PKiKP	22 47 15.1	-0.1
	baz=176						
CN2	Changchun	128.22	293	*e*PKP	PKPdf	22 47 14.8	-1.0
A36M	Sachs Harbour	130.44	6	P	PKPdf	22 47 19.5	+0.3
	baz=190						
HEH	HeiHe	131.98	300	PKP	PKiKP	22 47 23.3	-0.4
HHC	Hu-ho-hao-te	133.03	281	*e*PKP	PKPdf	22 47 23.6	-1.6
FRB	Frobisher Bay	133.25	35	PKP	PKiKP	22 47 25.3	-0.5
	comp=Z,3.0nm,0.7s,baz=161,slow=2.6,SNR=9.8						
RES	Resolute Bay	136.03	16	PKP	PKiKP	22 47 30.6	-0.6
	comp=Z,1.3nm,0.6s,baz=274,slow=2.4,SNR=5.9						
TAM	Tamanrasset	136.61	130	PKPdf	PKPdf	22 47 31.4	-1.1
GTA	Gaotai	138.14	270	*e*PKP	PKiKP	22 47 36.2	-0.6
GTA				PP	PP	22 50 24.5	+0.3
SONM	Songino Array	140.54	284	PKhKP	PKPpre	22 47 30.4	
	comp=Z,0.5nm,0.7s,baz=154,slow=3.1,SNR=3.6						
SONM				PKP	PKPdf	22 47 39.1	+0.2
	comp=Z,0.7nm,0.7s,baz=157,slow=4.1,SNR=4.0						
MDT	Midelt	140.58	110	PKP	PKPdf	22 47 40.3	+0.9
	comp=Z,2.1nm,1.1s,baz=282,slow=12,SNR=3.6						
MTE	Manteigas	144.94	99	PKPdf	PKPbc	22 47 46.2	+0.1
RAYN	Ar Rayn	145.01	188		PKPbc	22 47 46.4	-0.4
NEEM	North Greenlan	145.72	23	*i* P	PKPdf	22 47 47.5	+0.1
PAB	San Pablo	145.96	104		PKPdf	22 47 48.6	-0.1
ESDC	Sonseca Array	146.25	104	PKPbc	PKPbc	22 47 50.5	+0.2
	comp=Z,3.5nm,1.0s,baz=232,slow=3.5,SNR=12						
ESDC	Sonseca Array	146.25	104		PKPbc	22 47 50.0	-0.3
ESBB	Sonseca Array	146.26	104		PKPbc	22 47 50.5	+0.2
NIL	Nilore	146.92	236		PKPdf	22 47 51.0	+0.6
WMQ	Urumqi	147.66	264	*e*PKPbc	PKPbc	22 47 53.8	-0.3
WMQ				PKPab	sPKPab	22 48 00.3	+1.1
WMQ				PP	PP	22 51 22.8	+1.3
WMQ				LR	LR		
	comp=Z,710nm,23.1s						
KBL	Kabul	149.47	231	PKPdf	PKPdf	22 47 55.5	+0.7
KEST	Kesra	149.51	124	PKPbc	PKPbc	22 47 59.5	+0.3
	comp=Z,4.3nm,0.8s,baz=191,slow=3.4,SNR=4.4						
KEST				PKPab	PKPab	22 48 03.8	-0.3
	comp=Z,4.8nm,0.8s,baz=191,slow=5.9,SNR=5.8						
KSH	Kashi	150.46	246	PKPbc	PKPdf	22 47 57.4	+1.3
TARG	Taragay, Kyrgy	151.25	251		PKPdf	22 47 58.0	+0.4
NOR	Nord	151.97	15	*i* P	PKPbc	22 48 02.6	-1.0
ULHL	Ulahol	152.41	250	P	PKiKP	22 48 06.9	+0.7
	SNR=7.9						
MK31	Makanchi Array	152.48	264	PKPdf	PKPdf	22 48 00.9	+2.2
MKAR	Makanchi Array	152.48	264	PKPbc	PKPbc	22 48 05.3	-0.4
	comp=Z,3.3nm,0.8s,baz=113,slow=2.8,SNR=31						
MKAR				PKPab	PKPab	22 48 13.9	-2.2
	comp=Z,3.3nm,0.8s,baz=138,slow=4.9,SNR=9.1						
MKAR				PP	PP	22 51 47.9	-1.3
	comp=Z,0.3nm,0.8s,baz=134,slow=6.9,SNR=3.7						
MKAR	Makanchi Array	152.48	264		PKPbc	22 48 05.1	-0.6
DBG	Daneborg	152.64	31	*i* P	PKPbc	22 48 05.2	0.0
MAKZ	Makanchi	152.65	263		PKPdf	22 47 57.8	-1.2
GAR	Garm	152.68	238	PKPdf	PKPdf	22 47 59.6	+0.1
DAG	Danmarks Havn	152.80	26	*i* P	PKPbc	22 48 03.6	-1.9
CHGR	Chuyangaron	152.91	236		PKPdf	22 48 00.0	+0.3
TKM2	Tokmak 2	153.23	250	P	PKPbc	22 48 06.9	-0.9
	SNR=10.0						
UCH	Uchtor	153.25	248	P	PKiKP	22 48 08.6	+0.3
	SNR=8.2						
KBK	Karagaybulak	153.36	249	P	PKiKP	22 48 08.6	+0.5
	SNR=6.9						
AAK	Ala-Archa	153.56	249	P	PKPab	22 48 21.8	+0.8
	SNR=9.3						
AAK	Ala-Archa	153.56	249		PKiKP	22 48 08.8	+0.3
AML	Almayashu	153.57	247	P	PKiKP	22 48 09.1	+0.3
	SNR=12						
CHMS	Chumysh	153.71	249	P	PKPab	22 48 21.6	+0.2
	SNR=5.0						
EKS2	Erkin-Say	153.93	248	P	PKiKP	22 48 09.9	+0.7
	SNR=8.1						
USP	Ospenovka	154.03	249	P	PKPbc	22 48 09.2	0.0
	SNR=6.0						
IDI	Anoyia	154.75	149	⇓P	PKPdf	22 48 02.8	+0.4
IDI	Anoyia	154.75	149	PKPdf	PKPdf	22 48 03.1	+0.6
ZALV	Zalesovo Beam	155.20	279	PKPbc	PKPdf	22 48 10.6	+8.2
	comp=Z,0.7nm,0.6s,baz=94,slow=7.6,SNR=4.0						
ZALV				PKPab	PKPab	22 48 26.2	-1.2
	comp=Z,8.1nm,0.8s,baz=108,slow=4.8,SNR=21						
KK31	Karatay Array	155.84	244	PKPab	PKPab	22 48 30.1	-0.4
KKAR	Karatay Array	155.84	244		PKPab	22 48 29.7	-0.8
KKAR	Karatay Array	155.84	244	PKPab	PKPab	22 48 29.7	-0.8
GEYT	Alibeck	156.51	217	PKPab	PKPab	22 48 31.3	-2.2
	comp=Z,1.3nm,0.6s,baz=169,slow=2.3,SNR=5.1						
NRIK	Noril'sk	157.15	318	PKPab	PKPab	22 48 35.6	+0.3
	comp=Z,6.1nm,0.8s,baz=102,slow=3.9,SNR=9.9						
AGG	Agios Georgios	157.43	141		PKPab	22 48 37.1	-0.4
DAVOX	Davos/Dischmat	158.37	109	PKP	PKPdf	22 48 07.1	+0.2
	comp=Z,2.3nm,0.8s,baz=201,slow=7.8,SNR=3.1						
FETA	Feichten	158.96	110	*e*PKP	PKPab	22 48 43.9	-0.2
	comp=Z,9.0nm,1.4s						
RETA	Reutte	159.29	109	PKP	PKPab	22 48 46.0	+0.6
	comp=Z,15nm,1.5s						
SQTA	Sankt Quirin	159.33	110	*e*PKP	PKPdf	22 48 08.7	+0.8
	comp=Z,7.6nm,1.6s						
MOTA	Moosalm	159.37	110	PKP	PKPdf	22 48 08.8	+0.8
	comp=Z,14nm,1.7s						
MOTA				*e*PKP	PKPab	22 48 45.1	-0.7
	comp=Z,15nm,2.1s						
WTTA	Wattenberg	159.57	110	PKP	PKPdf	22 48 09.6	+1.3
	comp=Z,14nm,1.4s						
WTTA				*e*PKP	PKPab	22 48 46.7	-0.1
	comp=Z,8.7nm,1.0s						
WATA	Walderalm	159.59	110	*e*PKP	PKPdf	22 48 09.3	+1.0
	comp=Z,9.4nm,1.3s						
BALB	Balikesir	159.63	151	Pg	PKPab	22 48 46.1	-0.8
BALB	Balikesir	159.63	151	PKPab	PKPab	22 48 45.9	-0.9
ABTA	Abfaltersbach	159.64	113	PKP	PKPdf	22 48 08.7	+0.4
	comp=Z,13nm,1.9s						
ABTA				*e*PKP	PKPab	22 48 46.9	0.0

	comp=Z,9.4nm,1.1s						
MYKA	Terra Mystica	160.11	114	*i* PKP	PKPab	22 48 48.5	-0.5
	comp=Z,11nm,1.2s						
GURO	Guroymak-BITLI	160.15	184		PKPab	22 48 48.4	-1.0
BNN	Bunyan	160.27	170	PKPab	PKPab	22 48 49.0	-0.8
RDO	Rodhopi	160.38	145		PKPab	22 48 50.1	0.0
SOKA	Soboth	160.80	116	*e*PKP	PKPdf	22 48 10.4	+0.8
	comp=Z,10nm,1.5s						
SOKA				*e*PKP	PKPab	22 48 52.5	+0.5
	comp=Z,6.1nm,1.2s						
BIOA	Bad Ischl, Aus	160.85	112	*e*PKP	PKPdf	22 48 10.8	+1.2
	comp=Z,4.4nm,1.1s						
BIOA				*e*PKP	PKPab	22 48 51.6	-0.5
	comp=Z,7.3nm,1.2s						
BRTR	Keskin Array B	160.86	164	PKP	PKPdf	22 48 09.9	-0.1
	comp=Z,1.2nm,0.9s,baz=188,slow=8.5,SNR=7.0						
BRTR				PKPab	PKPab	22 48 51.6	-0.8
	comp=Z,1.3nm,0.7s,baz=163,slow=7.2,SNR=7.3						
BRTR	Keskin Array B	160.86	164	PKPdf	PKPdf	22 48 09.7	-0.3
VTS	Vitosha	160.95	138	⇓P	PKPab	22 48 52.5	-0.3
MOA	Molln	161.27	113	*e*PKP	PKPab	22 48 53.7	-0.2
	comp=Z,14nm,1.8s						
ARSA	Arzberg	161.45	116	*e*PKP	PKPdf	22 48 10.9	+0.8
	comp=Z,6.3nm,1.6s						
ARSA				*e*PKP	PKPab	22 48 54.6	-0.2
	comp=Z,5.7nm,1.1s						
GERES	GERESS Array B	161.66	110	PKP	PKPdf	22 48 09.7	-0.7
	comp=Z,0.7nm,0.7s,baz=29,slow=3.0,SNR=5.6						
GERES				PKPab	PKPab	22 48 54.8	-0.9
	comp=Z,0.6nm,0.7s,baz=197,slow=4.2,SNR=4.7						
MORH	Mrgy, Hungar	162.11	123	⇑P	PKPab	22 48 57.4	-0.2
RONA	Rosalia, Austr	162.14	116	*e*PKP	PKPab	22 48 58.4	+0.7
	comp=Z,9.8nm,1.7s						
ARR	Arges	163.84	137	⇓P	PKPab	22 49 04.8	-0.4
VOIR		164.04	137	⇑P	PKPab	22 49 06.0	-0.2
MARR	Marisel-Cluj	164.36	131	⇓P	PKPab	22 49 06.8	-0.8
MLR	Muntele Rosu	164.41	139	⇑P	PKPab	22 49 05.2	-2.6
DOPR	Dopca	164.62	137	⇑P	PKPab	22 49 08.1	-0.5
OZUR		164.87	138	⇑P	PKPab	22 49 09.9	+0.1
PLOR	Plostina	164.96	140	⇓P	PKPab	22 49 08.7	-1.4
VRI	Vrincioaia	165.00	141	⇑P	PKPab	22 49 08.1	-2.1
SORM	Soroca	167.52	140	⇑P	PKPab	22 49 19.9	-1.4
AKASG	Malin Array Be	169.99	135	PKPab	PKPab	22 49 30.9	-1.3
	comp=Z,2.9nm,0.7s,baz=218,slow=4.5,SNR=17						
AKASG	Malin Array Be	169.99	135	PKPdf	PKPdf	22 48 14.5	-2.4
AKASG				PKPab	PKPab	22 49 30.8	-1.3

WEL 05 22:36:17.8±0.4**,42°S**±3°×**17°3E**±°**,h5**^{km}**,ML2.5**/9**,Error ellipse: s-maj=0.0km s-min=0.0km az=111.1,confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.25	71	P	Pg	22 36 22.6	-0.1
KHZ				S	Sg	22 36 26.6	+0.6
GVZ	Greta Valley S	0.49	196	P	Pg	22 36 27.4	+0.2
GVZ				S	Sb	22 36 35.1	-1.2
LTZ	Lake Taylor	0.75	248	P	Pg	22 36 31.9	-0.3
LTZ				S	Sg	22 36 41.9	0.0
THZ	Tophouse	0.77	343	P	Pg	22 36 32.5	0.0
THZ				S	Sg	22 36 43.2	+0.6
AMCZ	Amberley	0.79	211	P	Pg	22 36 33.4	+0.4
BSWZ	Blackbirch Sta	0.93	32	P	Pg	22 36 35.6	+0.1
TUWZ	Tuamarina	1.20	27	P	Pg	22 36 40.1	-0.6
NNZ	Nelson	1.29	6	P	Pn	22 36 42.0	-0.4
DSZ	Denniston Nort	1.29	305	P	Pn	22 36 42.0	-0.5
TKNZ	Takaka Hill	1.48	353	P	Pn	22 36 45.3	+0.3
QRZ	Quartz Range	1.75	343	P	Pn	22 36 49.4	+0.6

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*NOU **05** 22:45:44.0, 37°.55S×176°.21E, h333^{km}, MLv4.1/9, North Island, New Zealand*

*WEL **05** 22:45:50.7±0.8, 38°S±9°×17°6E±°, h270^{km}±8^{km}, M2.9/26, MLv2.9/26, Error ellipse: s-maj=0.0km s-min=0.0km az=141.7, confirmed*

ISC 05 22:45:44.6±2.4**,37°.7S**±0°.1×**176°.11E**±0°.08**,h317**^{km}±13^{km}**, n110,**σ1^{s}**82**/119**,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLZ	Tolley Road	0.79	215	P	Pn	22 46 27.8	+1.8
MUGZ	Murupara	0.95	147	P	Pn	22 46 27.7	+1.1
MKAZ	Moumakai	0.95	307	P	Pn	22 46 28.3	+1.6
URZ	Urewera	0.98	126	P	Pn	22 46 27.5	+0.8
URZ	Urewera	0.98	126	P	Pn	22 46 27.5	+0.8
URZ				S	S	22 46 57.5	-2.7
RTZ	Ruatahuna	1.16	144	P	Pn	22 46 29.1	+1.4
RTZ				S	S	22 47 00.2	-1.8
MRHZ	Matea Rd	1.18	168	P	Pn	22 46 29.3	+1.7
MRHZ				S	S	22 46 59.8	-2.2
RATZ	Rangitukua	1.21	193	P	Pn	22 46 29.2	+1.4
RUGZ	Raukumara Rang	1.27	103	P	Pn	22 46 28.5	+0.2
MWZ	Matawai	1.29	121	P	Pn	22 46 29.8	+1.5
MWZ				S	S	22 47 01.7	-1.5
MTHZ	Maungataniwha	1.30	154	P	Pn	22 46 30.2	+1.9
MTHZ				S	S	22 47 01.3	-1.9
RITZ	Rihia Road	1.31	189	P	Pn	22 46 30.6	+2.3
RAGZ	Rawiri	1.31	129	P	Pn	22 46 30.4	+1.9
RAGZ				S	S	22 47 01.9	-1.5
HAZ	Te Kaha	1.33	94	P	Pn	22 46 29.1	+0.7
HAZ				S	S	22 47 00.7	-2.7
RAHZ	Arahi	1.45	148	P	Pn	22 46 31.6	+2.5
RAHZ				S	S	22 47 03.8	-0.9
NTVZ	North Tongarir	1.46	193	P	Pn	22 46 31.3	+2.0
TMVZ	Te Maari	1.47	193	P	Pn	22 46 31.3	+2.0
TWVZ	Taurewa	1.48	201	P	Pn	22 46 31.4	+2.0
ETVZ	East Tongariro	1.48	192	P	Pn	22 46 31.5	+2.0
WTVZ	West Tongariro	1.49	196	P	Pn	22 46 31.4	+1.9
NNVZ	North Ngauruho	1.50	195	P	Pn	22 46 31.6	+2.0
BKZ	Black Stump Fm	1.51	169	P	Pn	22 46 31.4	+1.9
BKZ	Black Stump Fm	1.51	169	P	Pn	22 46 31.4	+1.9
BKZ				S	S	22 47 03.4	-2.1
NMHZ	Naumai	1.51	159	P	Pn	22 46 32.4	+2.8
GRZ	Great Barrier	1.52	340	P	Pn	22 46 30.8	+1.1
NGZ	Ngauruhoe	1.54	195	P	Pn	22 46 31.9	+2.0
SNVZ	South Ngauruho	1.55	194	P	Pn	22 46 32.1	+2.2
TWGZ	Tauwhareparae	1.56	109	P	Pn	22 46 32.0	+2.1
TKGZ	Te Karaka	1.56	119	P	Pn	22 46 31.9	+2.1
PKGZ	Pakihiroa	1.57	98	P	Pn	22 46 31.5	+1.6
FWVZ	Far West T-bar	1.63	195	P	Pn	22 46 32.4	+1.9
DRZ	Dome Shelter	1.65	195	P	Pn	22 46 33.5	+2.8
WHVZ	Whangaehu Hut	1.65	194	P	Pn	22 46 32.6	+2.0
RIGZ	Rimuhau	1.65	129	P	Pn	22 46 32.6	+2.2
TRVZ	Turoa	1.67	195	P	Pn	22 46 32.7	+1.9
WNVZ	Wahianoa	1.69	194	P	Pn	22 46 32.7	+1.9
PKVZ	Pokaka	1.71	200	P	Pn	22 46 32.8	+1.9
ARHZ	Aropaoanui	1.72	157	P	Pn	22 46 33.3	+2.4
MOVZ	Moawhango	1.75	189	P	Pn	22 46 32.7	+1.6
MXZ	Matakaoa Point	1.75	87	P	Pn	22 46 32.3	+1.3
KWHZ	Kaweka Forest	1.76	172	P	Pn	22 46 33.4	+2.3
MTVZ	Mangateitei	1.77	196	P	Pn	22 46 33.3	+2.0
VRZ	Vera Road	1.79	216	P	Pn	22 46 34.1	+2.8
BHHZ	Black Hill Sta	1.81	181	P	Pn	22 46 33.4	+2.0
MCHZ	McNeill Hill	1.82	166	P	Pn	22 46 34.1	+2.5
WMGZ	Waiomatatini S	1.83	95	P	Pn	22 46 33.3	+1.6
CNGZ	Carnagh Statio	1.84	116	P	Pn	22 46 34.2	+2.5
MHGZ	Mahia Peninsul	2.04	137	P	Pn	22 46 35.4	+2.3
CKHZ	Cape Kidnapper	2.11	159	P	Pn	22 46 34.2	+0.5
KAHZ	Kahuranaki	2.19	164	P	Pn	22 46 36.9	+2.5
PNHZ	Pukenui	2.23	178	P	Pn	22 46 36.6	+1.9
NEZ	North Egmont	2.24	224	P	Pn	22 46 38.3	+3.4
WCZ	Waipu Caves	2.25	320	P	Pn	22 46 36.5	+1.6
WAZ	Wanganui	2.25	203	P	Pn	22 46 37.1	+2.3
KHEZ	Kahui Hut	2.30	225	P	Pn	22 46 38.5	+3.2
KHEZ	Kahui Hut	2.30	225	P	Pn	22 46 38.5	+3.2
TSZ	Takapari Road	2.38	183	P	Pn	22 46 37.7	+1.8
WPHZ	Waipukurau	2.39	174	P	Pn	22 46 38.7	+2.7
PXZ	Pawanui	2.42	166	P	Pn	22 46 38.5	+2.3
OHWZ	Ohakea	2.59	194	P	Pn	22 46 40.4	+2.6
DVHZ	Dannevirke	2.61	179	P	Pn	22 46 39.7	+1.7
ANWZ	Angora Road	2.79	174	P	Pn	22 46 38.5	-1.0
PRWZ	Pori Road	2.87	182	P	Pn	22 46 42.4	+2.1
BFZ	Birch Farm	3.00	178	P	Pn	22 46 43.5	+2.1
BFZ	Birch Farm	3.00	178	P	Pn	22 46 43.5	+2.1
MRZ	Mangatainoka R	3.00	188	P	Pn	22 46 43.0	+1.5
OGWZ	Otaki Gorge	3.21	193	P	Pn	22 46 45.2	+1.7
CPWZ	Castlepoint	3.22	179	P	Pn	22 46 45.8	+2.2
HOWZ	Holdsworth Sta	3.24	188	P	Pn	22 46 45.2	+1.4
KIW	Kapiti Island	3.31	196	P	Pn	22 46 46.0	+1.5
TMWZ	Te Maipa	3.42	183	P	Pn	22 46 47.4	+1.7
MTW	Mount Morrison	3.50	188	P	Pn	22 46 47.9	+1.5
CAW	Cannon Point	3.52	193	P	Pn	22 46 48.1	+1.6
DUWZ	D'Urville Isla	3.55	208	P	Pn	22 46 48.3	+1.3
TRWZ	Traveller	3.73	185	P	Pn	22 46 50.5	+1.7
WEL	Wellington	3.75	196	P	Pn	22 46 48.3	-0.6
SNZO	South Karori	3.78	196	P	Pn	22 46 51.1	+1.8
TCW	Tory Channel	3.80	201	P	Pn	22 46 50.9	+1.5
PLWZ	Palliser	3.94	189	P	Pn	22 46 52.2	+1.2
TUWZ	Tuamarina	4.10	203	P	Pn	22 46 54.1	+1.4
NNZ	Nelson	4.12	210	P	Pn	22 46 53.8	+0.9
TKNZ	Takaka Hill	4.14	215	P	Pn	22 46 53.8	+0.6
QRZ	Quartz Range	4.19	220	P	Pn	22 46 54.3	+0.6
QRZ	Quartz Range	4.19	220	P	Pn	22 46 54.1	+0.4
BSWZ	Blackbirch Sta	4.38	202	P	Pn	22 46 57.5	+1.8
MRNZ	Matariki Terra	4.53	214	P	Pn	22 46 57.9	+0.5
THZ	Tophouse	4.77	210	P	Pn	22 47 01.0	+0.9
KHZ	Kahutara	5.12	202	P	Pn	22 47 05.8	+1.7
KHZ	Kahutara	5.12	202	P	Pn	22 47 05.6	+1.6
DSZ	Denniston Nort	5.24	218	P	Pn	22 47 05.9	+0.4
GVZ	Greta Valley S	5.78	203	P	Pn	22 47 12.8	+1.1
LTZ	Lake Taylor	5.88	209	P	Pn	22 47 13.8	+0.9
AMCZ	Amberley	6.09	205	P	Pn	22 47 16.3	+1.0
INZ	Inchbonnie	6.17	214	P	Pn	22 47 17.6	+1.3
OXZ	Oxford	6.43	208	P	Pn	22 47 19.8	+0.4
MQZ	McQueen's Vall	6.57	202	P	Pn	22 47 21.4	+0.5
AKCZ	Akaroa Harbour	6.64	200	P	Pn	22 47 23.3	+1.4
RACZ	Rakaia	6.75	205	P	Pn	22 47 23.9	+0.8
WACZ	Wakanui South	7.04	206	P	Pn	22 47 27.8	+1.2
RPZ	Rata Peaks	7.15	211	P	Pn	22 47 28.9	+1.0
RPZ	Rata Peaks	7.15	211	P	Pn	22 47 28.7	+0.8
GCSZ	Gaunt Creek Bo	7.15	216	P	Pn	22 47 28.7	+0.8
ARCZ	Arundel	7.29	209	P	Pn	22 47 30.6	+1.0
FOZ	Fox Glacier	7.55	217	P	Pn	22 47 32.9	+0.1
TMZ	Timaru	7.72	208	P	Pn	22 47 36.3	+1.4
LBZ	Lake Benmore	8.05	212	P	Pn	22 47 40.1	+1.2
ODZ	Otahua Downs	8.42	207	P	Pn	22 47 45.8	+2.5
ODZ	Otahua Downs	8.42	207	P	Pn	22 47 45.7	+2.4
JCZ	Jackson Bay	8.46	219	P	Pn	22 47 43.8	0.0
WKZ	Wanaka	8.91	215	P	Pn	22 47 50.1	+0.8

ROM 05 22:46:17.4±0.0**,42°.682N**±0°.002×**13°.192E**±0°.002**, h11**^{km}**,ML2.0**/24**,14C-6D,Error ellipse: s-maj=0.2km s-min=0.0km az=60.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1218	Civita (PG)	0.06	258	⇓P	Pg	22 46 20.0	+0.2
T1218				S	Sg	22 46 21.6	+0.1
T1218				AML	AML		
	comp=E,4355µm,0.8s						
T1218				AML	AML		
	comp=N,9190µm,0.2s						
T1218				AML	AML		
	comp=E,4350µm,0.8s						
T1218				AML	AML		
	comp=E,4680µm,0.8s						
T1218				AML	AML		
	comp=N,9120µm,0.2s						
T1218				AML	AML		
	comp=E,4680µm,1.2s						
T1218				AML	AML		
	comp=E,4355µm,1.2s						
T1214	Arquata del Tr	0.08	9	P	Pg	22 46 20.3	+0.2
T1214				S	Sg	22 46 22.1	+0.1
T1214				AML	AML		
	comp=E,2540µm,0.3s						
T1214				AML	AML		
	comp=N,1430µm,0.6s						
T1214				AML	AML		
	comp=N,1365µm,0.6s						
T1214				AML	AML		
	comp=E,2445µm,0.3s						
SMA1	SAN MARTINO	0.12	116	P	Pg	22 46 21.0	+0.6
SMA1				S	Sg	22 46 23.7	+1.0
T1212	Cascia, Frazio	0.13	303	⇓P	Pg	22 46 20.9	+0.3
T1212				S	Sg	22 46 23.2	+0.3
T1212				AML	AML		
	comp=N,2090µm,0.4s						
T1212				AML	AML		
	comp=E,1365µm,0.8s						
T1212				AML	AML		
	comp=N,2145µm,0.4s						
T1212				AML	AML		
	comp=E,1340µm,0.8s						
T1212				AML	AML		
	comp=E,1365µm,0.8s						
T1212				AML	AML		
	comp=N,2090µm,0.4s						
T1212				AML	AML		
	comp=N,2145µm,0.4s						
LNSS	Leonessa	0.14	235	P	Pg	22 46 21.1	+0.4
LNSS				S	Sg	22 46 23.8	+0.6
LNSS				AML	AML		
	comp=N,3660µm,0.3s						
LNSS				AML	AML		
	comp=N,3660µm,1.7s						
LNSS				AML	AML		
	comp=E,3850µm,0.2s						
RM33	Pellescritta (	0.17	174	P	Pg	22 46 21.8	+0.5
RM33				S	Sg	22 46 25.0	+1.0
RM33				AML	AML		
	comp=E,621µm,0.2s						
RM33				AML	AML		
	comp=E,621µm,0.2s						
RM33				AML	AML		
	comp=N,407µm,1.5s						
RM33				AML	AML		
	comp=E,610µm,0.2s						
RM33				AML	AML		
	comp=N,408µm,1.5s						
T1217	Poggiodomo (PG	0.19	279	⇑P	Pg	22 46 21.9	+0.3
T1217				S	Sg	22 46 25.2	+0.6
T1217				AML	AML		
	comp=E,743µm,0.5s						
T1217				AML	AML		
	comp=N,1211µm,0.2s						
T1217				AML	AML		
	comp=N,1211µm,0.2s						
T1217				AML	AML		
	comp=E,770µm,0.5s						
T1217				AML	AML		
	comp=N,1210µm,0.2s						
T1217				AML	AML		
	comp=N,1132µm,0.2s						
T1217				AML	AML		
	comp=E,742µm,0.5s						
CAMP	Campotosto	0.22	132	P	Pg	22 46 22.4	+0.4
CAMP				S	Sg	22 46 26.0	+0.8
CAMP				AML	AML		
	comp=E,237µm,0.8s						
CAMP				AML	AML		
	comp=N,186µm,1.1s						
MC2	Monte Cornacci	0.23	360	⇓P	Pg	22 46 22.7	+0.4
MC2				S	Sg	22 46 26.9	+1.2
MMO1	Montemonaco	0.24	25	⇓P	Pg	22 46 22.7	+0.3
MMO1				S	Sg	22 46 26.8	+1.0
T1246	Crognaleto (TE	0.24	114	P	Pg	22 46 22.7	+0.2
T1246				S	Sg	22 46 26.7	+0.8
T1216	Preci, Frazion	0.24	329	⇑P	Pg	22 46 22.8	+0.3
T1216				S	Sg	22 46 27.0	+1.1
T1216				AML	AML		
	comp=E,414µm,1.0s						
T1216				AML	AML		
	comp=N,533µm,0.1s						
T1216				AML	AML		
	comp=N,532µm,0.1s						
T1216				AML	AML		
	comp=E,414µm,1.0s						
T1241	Roccafluvione,	0.25	45	⇑P	Pg	22 46 22.9	+0.4
T1241				S	Sg	22 46 26.9	+0.8
T1241				AML	AML		
	comp=E,398µm,0.2s						
T1241				AML	AML		
	comp=N,220µm,0.3s						
T1241				AML	AML		
	comp=E,398µm,0.2s						
T1241				AML	AML		
	comp=E,481µm,1.1s						
T1241				AML	AML		
	comp=N,220µm,1.7s						
T1247	Pizzolo (AQ)	0.25	162	⇑P	Pg	22 46 23.2	+0.6
T1247				S	Sb	22 46 28.0	-0.3
T1247				AML	AML		
	comp=E,411µm,0.9s						
T1247				AML	AML		
	comp=N,514µm,0.6s						
T1215	Vallo di Nera,	0.27	297	⇑P	Pg	22 46 23.1	+0.2
T1215				S	Sg	22 46 27.3	+0.7
T1215				AML	AML		
	comp=E,277µm,0.9s						
T1215				AML	AML		
	comp=N,282µm,0.6s						
T1215				AML	AML		
	comp=E,278µm,0.9s						
T1215				AML	AML		
	comp=N,282µm,0.6s						
T1215				AML	AML		
	comp=E,278µm,1.1s						
T1215				AML	AML		
	comp=N,273µm,2.0s						
T1215				AML	AML		
	comp=E,255µm,0.1s						
T1211	Morro Reatino	0.29	239	⇑P	Pg	22 46 23.6	+0.3
T1211				S	Sb	22 46 28.4	-1.1
T1211				AML	AML		
	comp=E,609µm,0.1s						
T1211				AML	AML		
	comp=E,610µm,0.1s						
T1211				AML	AML		
	comp=N,814µm,1.3s						
T1211				AML	AML		
	comp=N,772µm,0.3s						
T1211				AML	AML		
	comp=E,609µm,0.1s						
T1211				AML	AML		
	comp=N,814µm,0.7s						
T1211				AML	AML		
	comp=E,610µm,0.1s						
FEMA	Monte Fema	0.30	340	P	Pb	22 46 24.3	-0.5
FEMA				S	Sb	22 46 28.8	-1.0
T1222	Castel Sant'An	0.30	202	⇑P	Pg	22 46 23.8	+0.3
T1222				S	Sg	22 46 28.6	+1.0
T1222				AML	AML		
	comp=E,516µm,1.4s						
T1222				AML	AML		
	comp=N,326µm,0.3s						
T1222				AML	AML		
	comp=N,336µm,0.5s						
T1222				AML	AML		
	comp=N,326µm,0.3s						
T1222				AML	AML		
	comp=E,489µm,1.4s						
T1222				AML	AML		
	comp=N,336µm,0.5s						
T1222				AML	AML		
	comp=E,489µm,0.6s						
T1222				AML	AML		
	comp=E,516µm,0.6s						
TERO	Teramo	0.31	101	P	Pg	22 46 23.8	+0.2
TERO				S	Sg	22 46 28.7	+0.9
TERO				AML	AML		
	comp=E,364µm,0.3s						
T1256	Bolognola (MC)	0.33	4	P	Pb	22 46 25.5	+0.3
ARRO	Arrone	0.33	252	⇑P	Pg	22 46 24.2	+0.2
ARRO				S	Sg	22 46 29.5	+1.0
ARRO				AML	AML		
	comp=N,214µm,1.2s						
ARRO				AML	AML		
	comp=E,168µm,0.6s						
ARRO				AML	AML		
	comp=E,168µm,1.4s						
GIGS	Gran Sasso	0.36	130	P	Pg	22 46 24.8	+0.2
GIGS				S	Sg	22 46 30.4	+0.9
GIGS				AML	AML		
	comp=N,75µm,0.1s						
GIGS				AML	AML		
	comp=E,89µm,0.3s						
AQU	L'Aquila	0.36	155	⇑P	Pg	22 46 25.1	+0.5
AQU				S	Sb	22 46 30.9	-0.5
AQU				AML	AML		
	comp=E,111µm,1.6s						
AQU				AML	AML		
	comp=N,97µm,1.1s						
AQU				AML	AML		
	comp=E,111µm,0.4s						
AQU				AML	AML		
	comp=N,97µm,0.9s						
AQU				AML	AML		
	comp=N,101µm,2.2s						
AQU				AML	AML		
	comp=E,133µm,1.4s						
CESI	CESI - Serrava	0.39	327	P	Pg	22 46 25.5	+0.4
CESI				S	Sb	22 46 31.3	-0.9
GUMA	Gualdo di Mace	0.40	15	⇓P	Pb	22 46 25.9	-0.5
GUMA				AML	AML		
	comp=N,1110µm,0.5s						
GUMA				AML	AML		
	comp=E,938µm,0.2s						
GUMA				AML	AML		
	comp=N,1110µm,1.5s						
GUMA				AML	AML		
	comp=N,742µm,0.3s						
GUMA				AML	AML		
	comp=E,1200µm,0.3s						
T1219	Muccia, Frazio	0.40	340	P	Pg	22 46 23.5	-1.7
T1219				S	Sb	22 46 31.6	-0.9
T1219				AML	AML		
	comp=N,157µm,1.2s						
T1219				AML	AML		
	comp=N,190µm,1.7s						
T1219				AML	AML		
	comp=E,138µm,1.6s						
CSP1	Cessapalombo	0.41	1	P	Pg	22 46 25.7	+0.2
CSP1				S	Sb	22 46 32.4	-0.6
FIAM	Fiamignano	0.42	188	⇑P	Pg	22 46 25.8	+0.2
FIAM				S	Sb	22 46 32.4	-0.7
FIAM				AML	AML		
	comp=E,161µm,0.6s						
FIAM				AML	AML		
	comp=N,75µm,0.1s						
T1220	Camerino, Fraz	0.43	350	P	Pg	22 46 26.2	+0.2
T1220				AML	AML		
	comp=E,27030µm,1.6s						
T1220				AML	AML		
	comp=N,550µm,0.2s						
T1220				AML	AML		
	comp=E,426µm,0.6s						
T1220				AML	AML		
	comp=N,549µm,0.3s						
T1220				AML	AML		
	comp=E,27030µm,1.6s						
T1220				AML	AML		
	comp=E,425µm,0.6s						
T1220				AML	AML		
	comp=N,548µm,0.2s						
T1220				AML	AML		
	comp=N,550µm,0.3s						
CESX	Cesi	0.46	261	⇑P	Pg	22 46 26.3	-0.1
CESX				S	Sb	22 46 33.6	-0.6
CESX				AML	AML		
	comp=N,92µm,1.1s						
CESX				AML	AML		
	comp=E,90µm,0.6s						
MOMA	Monte Martano	0.47	285	⇑P	Pg	22 46 27.2	+0.5
MOMA				S	Sb	22 46 34.4	-0.4
MOMA				AML	AML		
	comp=E,202µm,0.7s						
MOMA				AML	AML		
	comp=E,266µm,3.6s						
MOMA				AML	AML		
	comp=N,246µm,0.2s						
MOMA				AML	AML		
	comp=N,361µm,1.1s						
FAGN	Fagnano	0.51	145	⇑P	Pg	22 46 27.6	+0.3
FAGN				S	Sb	22 46 35.1	-0.6
FAGN				AML	AML		
	comp=N,124µm,1.2s						
FAGN				AML	AML		
	comp=E,145µm,1.3s						
FAGN				AML	AML		
	comp=E,145µm,0.7s						
FAGN				AML	AML		
	comp=N,124µm,1.2s						
ASSB	Assisi San Ben	0.53	313	P	Pg	22 46 27.7	0.0
ASSB				S	Sb	22 46 35.9	-0.5
ASSB				AML	AML		
	comp=E,168µm,0.9s						
ASSB				AML	AML		
	comp=N,194µm,0.2s						
SNTG	Esanatoglia	0.60	342	P	Pg	22 46 29.0	-0.1

T0110	Collepietro	0.63	136	⇓P	Pg	22 46 29.7	+0.1
CING	Cingoli	0.69	0	P	Pg	22 46 30.9	+0.1
CING				AML	AML		
	comp=E,59µm,1.2s						
CING				AML	AML		
	comp=N,56µm,0.4s						
ARVD	Arcevia	0.84	347	⇑P	Pb	22 46 33.8	-0.1

BJI ***05*** *22:47:52.0±0.0, 6°.02S×149°.41E, h30^{km}, mb5.3/74, mB5.9/69, Ms6.0/97, Ms7 6.1/91*

MOS ***05*** *22:47:52.1±1.2, 6°.01S×149°.32E, h37^{km}, mb5.8/29, MS6.2/37, Error ellipse: s-maj=7.9km s-min=4.8km az=105.5*

NEIC ***05*** *22:47:53.3, 6°.00S×149°.35E, h31^{km}*

NEIC ***05*** *22:47:54.0±1.9, 6°.00S±0°.07×149°.36E±0°.07, h37^{km}±1^{km}, mb5.6/156, Ms_20 6.2/397, Mwb6.2/49, Mwc6.4/84, Mww6.3, Error ellipse: s-maj=13.1km s-min=9.6km az=132.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$2.30; M$_{\theta\theta}$-1.99; M$_{\phi\phi}$-0.31; M$_{r\theta}$0.71; M$_{\theta\phi}$-0.03; M$_{\phi r}$-0.15; Fault plane solution: M$_0$2.28000×10^{18} NP1:ϕ_s92.60000°, δ54.27000°, λ94.05000°. NP2:ϕ_s265.69000°, δ35.93000°, λ84.39000°. Principal axes: T 2.4220, Plg80.0000°, Azm20.0000°; N -0.3159, Plg3.0000°, Azm270.0000°; P -2.1062, Plg9.0000°, Azm180.0000°;*

NEIC ***05*** *22:47:54.1, 6°.00S×149°.32E, h30^{km}*

IDC ***05*** *22:47:54.1±1.1, 6°.07S×149°.34E, h42^{km}±9^{km}, mb5.1/40, mbtmp5.4/42, ML5.5/3, MS5.8/58, Error ellipse: s-maj=11.6km s-min=8.0km az=65.0*

NEIC ***05*** *22:47:54, 6°.01S×149°.34E, h29^{km}*

KLM ***05*** *22:47:57, 6°.11S×149°.38E, h50^{km}, mb5.6*

DJA ***05*** *22:47:58.1±0.4, 6°S±2°×14°9E±°, h73^{km}±4^{km}, M5.9/69, mB6.0/59, mb5.7/69, MLv6.7/2, Mw(mB)5.7/59, MwMwp6.0/56, Mwp6.0/56*

GCMT ***05*** *22:48:00.0±0.0, 6°.30S×149°.54E, h48^{km}, MW6.3/171, Moment Tensor Solution. s171,c408; s153,c611; Duration: 3^{s}5 Moment tensor: Scale 10^{18}Nm; M$_{rr}$3.39±.02; M$_{\theta\theta}$-3.91±.01; M$_{\phi\phi}$0.52±.01; M$_{r\theta}$0.65±.02; M$_{\theta\phi}$-0.08±.01; M$_{\phi r}$-0.17±.02; Best double couple: M$_0$3.71300×10^{18} NP1:ϕ_s92.00000°, δ50.00000°, λ95.00000°. NP2:ϕ_s265.00000°, δ40.00000°, λ85.00000°. Principal axes: T 3.4580, Plg84.0000°, Azm34.0000°; N 0.5150, Plg3.0000°, Azm269.0000°; P -3.9680, Plg5.0000°, Azm179.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***05*** *22:48:01, 6°.11S×149°.44E, h50^{km}, Moment Tensor Solution. Duration: 15^{s}2 Moment tensor: Scale 10^{18}Nm; M$_{rr}$3.72; M$_{\theta\theta}$-3.62; M$_{\phi\phi}$-0.10; M$_{r\theta}$1.74; M$_{\theta\phi}$-0.08; M$_{\phi r}$-0.49; Fault plane solution: M$_0$4.09000×10^{18} NP1: ϕ_s262.00000°, δ33.00000°, λ78.00000°. NP2:ϕ_s96.00000°, δ58.00000°, λ98.00000°. Principal axes: T 4.1689, Plg76.0000°, Azm28.0000°; N -0.1568, Plg6.0000°, Azm272.0000°; P -4.0121, Plg13.0000°, Azm180.0000°;*

NEIC ***05*** *22:48:13.6, 5°.71S×149°.26E, h47^{km}, Moment Tensor Solution. Duration: 8^{s}3 Moment tensor: Scale 10^{18}Nm; M$_{rr}$4.20; M$_{\theta\theta}$-4.20; M$_{\phi\phi}$0.00; M$_{r\theta}$-0.29; M$_{\theta\phi}$-0.24; M$_{\phi r}$-0.30; Fault plane solution: M$_0$4.22000×10^{18} NP1: ϕ_s262.91000°, δ47.24000°, λ84.81000°. NP2:ϕ_s90.53000°, δ43.01000°, λ95.58000°. Principal axes: T 4.2256, Plg86.0000°, Azm116.0000°; N -0.0033, Plg4.0000°, Azm266.0000°; P -4.2222, Plg2.0000°, Azm357.0000°;*

ISC 05 22:47:53.5±0.2**, 6°.06S**±0°.02×**149°.39E**±0°.03**, h43^{km}**±1^{km}**, h43^{km}:pP-P, n1466, σ2^{s}12**/1432**, mb5.5**/206**, MS6.2**/327**, 69C-59D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.15	57	P	Pn	22 48 42.5	+1.8
	3µm,0.3s,baz=188,slow=2.3,SNR=451						
KRVT				S	Sn	22 49 17.6	+0.4
	41µm,0.4s,baz=311,slow=2.6,SNR=20						
KRVT				LR	LR	22 49 45.3	
	comp=Z,207µm,18.5s,baz=288,slow=35						
RABL	Rabaul	3.33	56	Pn	Pn	22 48 43.8	+0.6
RABL	Rabaul	3.33	56	P	Pn	22 48 47.3	+4.1
RABL	Rabaul	3.33	56	⇑P	Pn	22 48 45.8	+2.6
PMG	Port Moresby	3.99	213	P	Pn	22 48 54.9	+2.7
	6µm,0.7s,baz=28,slow=6.3,SNR=833						
PMG				S	Sn	22 49 38.7	+0.9
	16µm,0.7s,baz=268,slow=23,SNR=20						
PMG				LR	LR	22 49 55.6	
	comp=Z,29µm,21.9s,baz=353,slow=31						
PMG	Port Moresby	3.99	213	Pn	Pn	22 48 53.7	+1.5
PMG				Sn	Sn	22 49 39.2	+1.4
PMG	Port Moresby	3.99	213	P	Pn	22 48 55.9	+3.6
PMG	Port Moresby	3.99	213	P	Pn	22 48 55.7	+3.4
PMG	Port Moresby	3.99	213	P	Pn	22 48 53.7	+1.5
PMG						22 49 39.3	
GENI	Genyem	9.81	290	P	Pn	22 50 18.9	+6.7
GENI	Genyem	9.81	290	P	Pn	22 50 19.9	+7.7
	529nm,1.3s,7µm81µm						
COEN	Coen	9.95	217	P	Pn	22 50 15.3	+1.3
	baz=10.0,SNR=93						
COEN	Coen	9.95	217	Pn	Pn	22 50 15.4	+1.4
COEN	Coen	9.95	217	P	Pn	22 50 16.8	+2.8
COEN	Coen	9.95	217	⇓P	Pn	22 50 14.9	+0.9
HNR	Honiara	10.99	108	P	Pn	22 50 31.1	+2.9
	116nm,0.3s,baz=284,slow=15,SNR=15						
HNR				S	Sn	22 52 28.0	-1.9
	3µm,0.6s,baz=177,slow=8.9,SNR=1.5						
	792nm,0.4s						
HNR	Honiara	10.99	108	Pn	Pn	22 50 30.1	+1.8
HNR	Honiara	10.99	108	P	Pn	22 50 33.3	+5.0
HNR	Honiara	10.99	108	P	Pn	22 50 30.1	+1.8
MTSU	Mount Surprise	12.98	202	P	Pn	22 50 57.5	+2.0
	baz=13,SNR=627						
MTSU	Mount Surprise	12.98	202	P	Pn	22 50 58.2	+2.6
TV1H	Townsville Har	13.37	191	P	Pn	22 51 02.1	+1.4
	248nm,1.0s						
CTA	Charters Tower	14.28	192	P	Pn	22 51 14.3	+1.1
	1.8nm,0.3s,baz=14,slow=13,SNR=103						
CTA				S	Sn	22 53 57.2	+7.0
	28nm,0.9s,baz=187,slow=14,SNR=1.7						
CTA				LR	LR	22 56 22.7	
	comp=Z,45µm,22.0s,baz=8.0,slow=36						
	133nm,0.9s						
CTA	Charters Tower	14.28	192	P	Pn	22 51 15.0	+1.9
CTAO	Charters Tower	14.28	192	Pn	Pn	22 51 13.8	+0.7
CTAO	Charters Tower	14.28	192	P	Pn	22 51 14.5	+1.4
CTAO	Charters Tower	14.28	192	P	Pn	22 51 13.8	+0.7
PATS	Pohnpei	15.60	35	P	Pn	22 51 31.6	+1.0
	baz=16,SNR=6.6						
PATS	Pohnpei	15.60	35	Pn	Pn	22 51 31.0	+0.4
PATS				IAmb	IAmb	22 51 37.6	
	comp=Z,390nm,1.3s						
PATS	Pohnpei	15.60	35	P	P	22 51 37.0	+2.8
RKPI	Ransiki, Papua	15.83	286	P	P	22 51 39.2	+2.4
	comp=Z,128nm,0.9s,comp=Z,7µmcomp=Z,35µm						
QIS	Mount Isa	17.26	212	P	Pn	22 51 52.0	+0.4
	baz=17,SNR=101						
QIS	Mount Isa	17.26	212	P	P	22 51 52.5	-0.1
FAKI	Fak Fak	17.36	280		P	22 51 54.7	+0.8
FAKI	Fak Fak	17.36	280	P	P	22 51 58.5	+4.7
FAKI	Fak Fak	17.36	280	P	P	22 51 58.1	+4.3
	comp=Z,131nm,0.9s,comp=Z,3µmcomp=Z,46µm						
GD1S	Gladstone Soft	17.77	175	P	P	22 51 59.9	+1.8
	comp=Z,257nm,1.3s						
KDU	Kakadu	17.93	247	P	P	22 52 00.9	+0.8
	baz=18,SNR=22						
KDU	Kakadu	17.93	247	P	P	22 52 01.0	+0.9
KDU	Kakadu	17.93	247	⇓P	P	22 52 00.6	+0.5
SAUI	Saumlaki	18.05	263		P	22 52 02.0	+0.6
SAUI				IAmb	IAmb	22 52 06.0	
	comp=Z,241nm,0.7s						
SAUI	Saumlaki	18.05	263	P	P	22 52 05.2	+3.8
	comp=Z,813nm,1.3s						
SAUI	Saumlaki	18.05	263	P	P	22 52 07.7	+6.3
	comp=Z,608nm,1.0s,comp=Z,14µmcomp=Z,41µm						
MTN	Manton Dam	19.22	248	P	Pn	22 52 15.8	+0.4
	baz=19,SNR=17						
MTN	Manton Dam	19.22	248	P	Pn	22 52 15.6	+0.1
MTN				IAmb	IAmb	22 52 29.1	
	comp=Z,400nm,1.1s						
MTN	Manton Dam	19.22	248	P	Pn	22 52 15.9	+0.5
MTN	Manton Dam	19.22	248	⇑P	Pn	22 52 15.9	+0.5
EIDS	Eidsvold	19.27	175	P	Pn	22 52 15.9	-0.1
	baz=19,SNR=57						
EIDS	Eidsvold	19.27	175	P	Pn	22 52 15.6	-0.4
EIDS				IAmb	IAmb	22 52 20.4	
	comp=Z,340nm,1.1s						
EIDS	Eidsvold	19.27	175	P	Pn	22 52 16.4	+0.4
EIDS	Eidsvold	19.27	175	⇓P	Pn	22 52 15.9	-0.1
BNDI	Bandanaira	19.46	274	P	Pn	22 52 19.9	+1.6
	comp=Z,443nm,1.1s,comp=Z,11µmcomp=Z,46µm						
WB0	Warramunga Arr	19.95	226	P	P	22 52 23.1	+0.8
WR0	Warramunga Arr	19.98	225	P	Pn	22 52 23.6	-0.8
GUMO	Guam	20.03	347	P	Pn	22 52 24.9	-0.1
	comp=Z,356nm,0.8s,baz=185,slow=5.4,SNR=11						
GUMO				LR	LR	23 00 15.7	
	comp=Z,29µm,18.1s,baz=165,slow=37						
	comp=Z,356nm,0.8s						
GUMO	Guam	20.03	347	P	P	22 52 22.9	-0.1
GUMO	Guam	20.03	347	P	Pn	22 52 27.4	+2.4
GUMO	Guam	20.03	347	P	P	22 52 22.9	-0.1
GUMO				pmax	pmax		
	comp=Z,2µm,1.6s						
WRAB	Tennant Creek	20.09	225	P	P	22 52 24.6	+0.8
WRAB	Tennant Creek	20.09	225	P	Pn	22 52 25.7	-0.1
WRAB	Tennant Creek	20.09	225	⇓P	P	22 52 24.9	+1.1
WRAB	Tennant Creek	20.09	225	*ce*P	P	22 52 24.7	+1.0
WRAB				pmax	pmax		
	comp=Z,507nm,1.7s						
WRAB				MLR	MLR		
	comp=Z,39µm,18.0s						
WB2	Warramunga Arr	20.10	225	P	Pn	22 52 25.1	-0.7
WRA	Warramunga Arr	20.11	225	P	P	22 52 24.6	+0.7
	comp=Z,86nm,0.8s,baz=51,slow=11,SNR=195						
WRA				S	S	22 56 01.9	-5.7
	comp=Z,134nm,1.0s,baz=42,slow=24,SNR=7.3						
WRA				PcP	PcP	22 56 38.9	+0.8
	comp=Z,36nm,0.7s,baz=53,slow=1.8,SNR=5.3						
WRA				ScP	ScP	23 00 11.9	+0.7
	comp=Z,4.6nm,0.6s,baz=47,slow=2.6,SNR=2.7						
WRA				LR	LR	23 01 26.9	
	comp=Z,43µm,18.6s,baz=38,slow=40						
WRA				P3KP		23 27 16.6	
	comp=Z,1.0nm,0.8s,baz=171,slow=2.6,SNR=4.8						
	comp=Z,86nm,0.8s						
WRA	Warramunga Arr	20.11	225	P	P	22 52 24.0	+0.1
WRA	Warramunga Arr	20.11	225	P	P	22 52 24.0	+0.1
WRA				pmax	pmax		
	comp=Z,71nm,0.9s						
WB1	Warramunga Ar.	20.11	225	P	Pn	22 52 25.4	-0.7
	comp=Z,845nm,1.1s						
RMQ	Roma	20.32	182	P	Pn	22 52 28.0	-0.4
	baz=20,SNR=305						
RMQ	Roma	20.32	182	P	Pn	22 52 28.5	0.0
KOUNC	Koumac, New Ca	20.41	136	P	Pn	22 52 29.1	-0.5
KOUNC				IAmb	IAmb	22 52 47.1	
	comp=Z,322nm,1.3s						
KOUNC	Koumac, New Ca	20.41	136	P	Pn	22 52 29.0	-0.5
KOUNC	Koumac, New Ca	20.41	136	⇑P	Pn	22 52 28.9	-0.6
MSAI	Masohi	20.56	277	P	Pn	22 52 45.2	+14
QLP	Quilpie	21.00	193	P	P	22 52 35.1	+1.7
	baz=21,SNR=121						
QLP	Quilpie	21.00	193	P	P	22 52 35.8	+2.4
QLP	Quilpie	21.00	193	⇓P	P	22 52 34.5	+1.1
AAI	Ambon	21.24	275	P	P	22 52 40.8	+4.6
	comp=Z,172nm,0.9s,comp=Z,5µmcomp=Z,45µm						
DVP	Devils Point	21.72	124	P	P	22 52 46.4	+5.1
GC1S	Gold Coast 1 S	22.33	170	P	P	22 52 49.9	+2.2
KNRA	Kununurra	22.37	243	P	P	22 52 49.0	+0.7
	baz=22,SNR=99						
KNRA	Kununurra	22.37	243	P	P	22 52 48.3	0.0
KNRA	Kununurra	22.37	243	P	P	22 52 50.7	+2.4
NLAI	Namlea	22.39	276	P	P	22 53 04.1	+16
LBMI	Labuha	22.49	283	P	P	22 52 56.7	+7.1
NOUC	Port Laguerre	22.84	136	P	P	22 52 54.0	+0.8
DZM	Mont Dzumac	22.92	136	*e*Pn	P	22 52 54.7	+0.6
	comp=Z,1µm,1.2s						
DZM				*e*LR	LR	22 58 31.9	
	comp=Z,192µm,24.4s						
DZM	Mont Dzumac	22.92	136	P	P	22 52 54.4	+0.2
	comp=Z,70nm,0.7s,baz=220,slow=16,SNR=45						
DZM				S	S	22 56 58.7	-2.6
	comp=Z,11nm,0.7s,baz=99,slow=23,SNR=2.2						
	comp=Z,70nm,0.7s						
DZM	Mont Dzumac	22.92	136	P	P	22 52 54.3	+0.2
DZM	Mont Dzumac	22.92	136	P	P	22 52 54.8	+0.6
DZM	Mont Dzumac	22.92	136	⇑P	P	22 52 54.0	-0.1
AS01	Alice Springs	22.96	219	P	P	22 52 56.0	+1.5
	comp=Z,265nm,0.7s						
AS31	Alice Springs	22.99	219	P	P	22 52 55.5	+0.7
ASAR	Alice Springs	22.99	219	P	P	22 52 55.8	+1.0
	comp=Z,88nm,0.8s,baz=50,slow=9.7,SNR=299						
ASAR				PcP	PcP	22 56 45.1	+1.3
	comp=Z,42nm,1.0s,baz=60,slow=3.1,SNR=5.3						
ASAR				S	S	22 57 01.7	-0.6
	comp=Z,93nm,0.9s,baz=35,slow=23,SNR=12						
ASAR				ScP	ScP	23 00 18.5	+0.1
	comp=Z,8.1nm,0.8s,baz=49,slow=3.3,SNR=3.2						
ASAR				LR	LR	23 02 05.8	
	comp=Z,31µm,20.9s,baz=32,slow=37						
ASAR				P3KPbc		23 26 26.2	
	comp=Z,0.7nm,0.8s,baz=210,slow=4.7,SNR=5.6						
ASAR				P3KP		23 27 12.6	
	comp=Z,1.5nm,0.8s,baz=150,slow=3.6,SNR=5.5						
	comp=Z,88nm,0.8s						
ASAR	Alice Springs	22.99	219	P	P	22 52 55.5	+0.7
TNTI	Ternate	23.00	286	P	P	22 52 54.9	-0.1
INKA	Innaminka	23.07	200	P	P	22 52 57.1	+1.6
ONTNC	Ouen Toro	23.08	136	P	P	22 52 54.6	-1.0
ONTNC				IAmb	IAmb	22 53 11.0	
	comp=Z,174nm,1.0s						
ONTNC	Ouen Toro	23.08	136	P	P	22 52 56.1	+0.5
ONTNC	Ouen Toro	23.08	136	⇓P	P	22 52 56.2	+0.5
YATNC	Mamie plateau,	23.22	135	P	P	22 52 58.4	+1.3
AULRC	Lightning Ridg	23.29	183	P	P	22 52 59.6	+2.0
OUENC	Ouen Island, N	23.42	136	P	P	22 52 59.1	0.0
OUENC				IAmb	IAmb	22 53 12.3	
	comp=Z,515nm,1.7s						
OUENC	Ouen Island, N	23.42	136	P	P	22 53 00.4	+1.4
SANI	Sanana	23.67	279	P	P	22 53 05.6	+4.1
SANI	Sanana	23.67	279	P	P	22 53 07.9	+6.4
	comp=Z,137nm,1.1s,comp=Z,4µmcomp=Z,30µm						
PINNC	Pines Island,	23.97	135	P	P	22 53 03.4	-0.7
PINNC	Pines Island,	23.97	135	P	P	22 53 08.7	+4.5
ARMA	Armidale	24.33	175	P	P	22 53 08.6	+1.1
	baz=24,SNR=16						
ARMA	Armidale	24.33	175	P	P	22 53 07.5	+0.1
ARMA				IAmb	IAmb	22 53 29.9	
	comp=Z,434nm,1.4s						
ARMA	Armidale	24.33	175	P	P	22 53 09.1	+1.6
ARMA	Armidale	24.33	175	⇑P	P	22 53 08.6	+1.1
SOEI	Soe	25.14	260	P	P	22 53 15.5	+0.4
SOEI	Soe	25.14	260	P	P	22 53 17.8	+2.7
SOEI	Soe	25.14	260	P	P	22 53 18.7	+3.6
	comp=Z,442nm,1.0s,comp=Z,10µmcomp=Z,37µm						
OOD	Oodnadatta	25.23	209	P	P	22 53 17.2	+1.6
CMSA	Cobar Meteorol	25.59	187	P	P	22 53 19.5	+0.8
	baz=26,SNR=29						
CMSA	Cobar Meteorol	25.59	187	P	P	22 53 20.5	+1.8
AUDCS	Dubbo College	26.05	181	P	P	22 53 25.0	+2.0
FITZ	Fitzroy Crossi	26.08	241	P	P	22 53 22.7	-0.7
LCRK	Leigh Creek	26.44	202	P	P	22 53 28.2	+1.7
BBSI	Bau Bau	26.68	270	P	P	22 53 32.6	+3.7
STKA	Stephens Creek	26.70	195	P	P	22 53 30.4	+1.5
	comp=Z,96nm,0.9s,baz=359,slow=9.5,SNR=46						
STKA				S	S	22 57 59.6	-1.9
	comp=Z,15nm,0.9s,baz=219,slow=20,SNR=1.4						
STKA				ScP	ScP	23 00 29.2	+0.6
	comp=Z,23nm,1.1s,baz=325,slow=3.2,SNR=3.7						
STKA				LR	LR	23 04 15.4	
	comp=Z,39µm,20.9s,baz=39,slow=37						
	comp=Z,96nm,0.9s						
STKA	Stephens Creek	26.70	195	P	P	22 53 30.3	+1.5
	baz=27,SNR=66						
STKA	Stephens Creek	26.70	195	P	P	22 53 28.7	-0.1
STKA	Stephens Creek	26.70	195	P	P	22 53 31.7	+2.8
STKA	Stephens Creek	26.70	195	P	P	22 53 28.7	-0.1
STKA				pmax	pmax		
	comp=Z,39nm,1.0s						
LUWI	Luwuk	27.02	280	P	P	22 53 32.3	+0.4
LUWI				IAmb	IAmb	22 54 04.8	
	comp=Z,304nm,1.1s						
LUWI	Luwuk	27.02	280	P	P	22 53 37.9	+6.0
LUWI	Luwuk	27.02	280	P	P	22 53 37.0	+5.1
	comp=Z,258nm,1.1s,comp=Z,3µmcomp=Z,23µm						
MMRI	Maumere	27.04	263	P	P	22 53 31.7	-0.4
MMRI	Maumere	27.04	263	P	P	22 53 33.2	+1.1
MMRI	Maumere	27.04	263	P	P	22 53 31.9	-0.2
	comp=Z,709nm,0.9s,comp=Z,20µm						
MGCD	Mangrove Creek	27.06	177	P	P	22 53 33.9	+1.8
DAV	Davao City (W)	27.10	298	LR	LR	23 04 11.3	
	comp=Z,6µm,19.6s,baz=123,slow=36						
SYDH	Sydney Hard Ro	27.60	178	P	P	22 53 39.6	+2.8
WRKA	Warakurna	27.65	225	P	P	22 53 38.1	+0.6
	baz=28,SNR=48						
WRKA	Warakurna	27.65	225	P	P	22 53 38.4	+0.9
WRKA	Warakurna	27.65	225	⇑P	P	22 53 37.6	+0.1
MULG	Mulgathing	28.08	209	P	P	22 53 42.2	+0.9
YNG	Young	28.12	182	P	P	22 53 43.9	+2.4
BSSI	Bau Bau, Buton	28.73	268	P	P	22 53 49.2	+2.0
	comp=Z,296nm,1.0s,comp=Z,4µmcomp=Z,18µm						
BASI	Baing, Sumba	28.81	260	P	P	22 53 49.9	+2.0
	comp=Z,1µm,1.2s,comp=Z,13µmcomp=Z,20µm						
HTT	Hallett	28.92	198	P	P	22 53 49.2	+0.5
	baz=29,SNR=18						
HTT	Hallett	28.92	198	P	P	22 53 52.9	+4.2
HTT	Hallett	28.92	198	⇓P	P	22 53 50.4	+1.7
WHYH	Whyalla	29.00	201	P	P	22 53 54.1	+4.7
	comp=Z,80nm,0.9s						
CNB	Canberra Magne	29.12	180	P	P	22 53 52.5	+2.0
CAN	Canberra	29.12	181	P	P	22 53 52.4	+1.9
CAN				IAmb	IAmb	22 54 04.1	
	comp=Z,111nm,1.2s						
CAN				IAMs_20	IAMs_20	23 05 40.1	
	comp=Z,42µm,20.0s						
CAN	Canberra	29.12	181	P	P	22 53 53.8	+3.3
CAN	Canberra	29.12	181	P	P	22 53 52.4	+1.9
CAN				pmax	pmax		
	comp=Z,111nm,1.2s						
CAN				MLR	MLR		
	comp=Z,42µm,20.0s						
BKSI	Bulukumba	29.13	270	P	P	22 53 53.1	+2.4
	comp=Z,50nm,0.8s,comp=Z,1µmcomp=Z,19µm						
BBOO	Buckleboo	29.37	203	P	P	22 53 53.2	+0.5
	baz=30,SNR=11						
BBOO	Buckleboo	29.37	203	P	P	22 53 53.3	+0.5
BBOO				IAmb	IAmb	22 54 06.6	
	comp=Z,135nm,1.2s						
BBOO	Buckleboo	29.37	203	P	P	22 53 54.5	+1.8
TOLI2	Tolitoli	29.43	283	P	P	22 53 51.6	-1.9
KAPI	Kappang	29.51	271	P	P	22 53 54.5	+0.4
	comp=Z,9.8nm,0.6s,baz=72,slow=6.6,SNR=4.8						
KAPI				LR	LR	23 08 51.3	
	comp=Z,8µm,20.9s,baz=86,slow=43						
	comp=Z,9.8nm,0.6s						
KAPI	Kappang	29.51	271	P	P	22 53 53.5	-0.7
KAPI	Kappang	29.51	271	P	P	22 53 57.2	+3.0
KAPI	Kappang	29.51	271	P	P	22 53 53.5	-0.7
KAPI				pmax	pmax		
	comp=Z,56nm,0.9s						
KAPI				MLR	MLR		
	comp=Z,8µm,20.0s						
YSA	Yasawairara	29.55	113	P	P	22 53 55.8	+1.4
FUNA	Funafuti	29.67	97	P	P	22 53 55.5	0.0
FUNA	Funafuti	29.67	97	P	P	22 53 56.6	+1.1
MPSI	Mapaga	30.11	281	P	P	22 54 02.0	+2.5
	comp=Z,32nm,0.8s,comp=Z,1µmcomp=Z,18µm						
MSVF	Nonsavu	30.30	115	P	P	22 54 01.9	+0.7
	comp=Z,32nm,0.7s,baz=253,slow=7.1,SNR=9.6						
MSVF				PcP	PcP	22 57 02.2	+1.2
	comp=Z,26nm,0.6s,baz=111,slow=20,SNR=14						
MSVF				S	S	22 58 58.1	-0.5
	comp=Z,2.6nm,0.4s,baz=192,slow=22,SNR=1.3						
MSVF				LR	LR	23 04 22.2	
	comp=Z,16µm,21.5s,baz=280,slow=33						
	comp=Z,32nm,0.7s						
MSVF	Nonsavu	30.30	115	P	P	22 54 01.8	+0.6
MSVF	Nonsavu	30.30	115	P	P	22 54 03.7	+2.5
MSVF	Nonsavu	30.30	115	⇑P	P	22 54 02.2	+1.0
MSVF	Nonsavu	30.30	115	*i* P	P	22 54 02.3	+1.1
MSVF				pmax	pmax		
	comp=Z,191nm,1.1s						
MSVF	Nonsavu	30.30	115	P	P	22 54 01.8	+0.6
MSVF				pP	pP	22 54 12.2	-0.6
MSVF				sP	sP	22 54 17.6	-0.4
MSVF				PcP	PcP	22 57 02.8	+1.8
ARPS	Mount Arapiles	31.34	192	P	P	22 54 11.1	+1.1
	baz=31,SNR=15						
ARPS	Mount Arapiles	31.34	192	P	P	22 54 12.0	+2.0
PLAI	Plampang	31.46	263	P	P	22 54 12.3	+0.9
PLAI	Plampang	31.46	263	P	P	22 54 11.3	-0.1
	comp=Z,140nm,0.7s,comp=Z,3µmcomp=Z,15µm						
TOO	Toolangi	31.57	186	P	P	22 54 14.4	+2.4
	baz=32,SNR=7.2						
TOO	Toolangi	31.57	186	P	P	22 54 12.7	+0.6
TOO				IAmb	IAmb	22 54 26.6	
	comp=Z,112nm,1.1s						
TOO	Toolangi	31.57	186	P	P	22 54 15.6	+3.5
TOO	Toolangi	31.57	186	⇓P	P	22 54 14.1	+2.0
TOO	Toolangi	31.57	186	P	P	22 54 12.7	+0.6
TOO				pmax	pmax		
	comp=Z,112nm,1.1s						
FORT	Forrest	31.71	217	P	P	22 54 14.6	+1.2
	baz=32,SNR=25						
FORT	Forrest	31.71	217	P	P	22 54 13.7	+0.3
FORT	Forrest	31.71	217	P	P	22 54 15.5	+2.1
FORT	Forrest	31.71	217	⇑P	P	22 54 14.3	+0.9
BRAT	Ballarat	31.74	188	P	P	22 54 16.8	+3.3
	comp=Z,70nm,1.0s						
TAVE	Taveuni	31.86	112	P	P	22 54 18.3	+3.4
GEXS	Deakin Univers	32.33	188	P	P	22 54 23.1	+4.4
TWSI	Taliwang, Sumb	32.34	263	P	P	22 54 20.4	+1.3
	comp=Z,58nm,1.1s,comp=Z,1µmcomp=Z,14µm						
MBWA	Marble Bar	32.40	240	P	P	22 54 20.1	+0.6
MBWA	Marble Bar	32.40	240	P	P	22 54 20.4	+0.8
MBWA	Marble Bar	32.40	240	P	P	22 54 20.2	+0.6
MBWA				pP	pP	22 54 30.9	+0.3
PSA00	Pilbara Seismi	32.47	239	P	P	22 54 18.8	-1.3
PSA00	Pilbara Seismi	32.47	239	P	P	22 54 19.1	-1.1
PSA00				IAmb	IAmb	22 54 36.2	
	comp=Z,161nm,1.1s						
PSA00	Pilbara Seismi	32.47	239	P	P	22 54 21.4	+1.2
FUTU	Fugatoga	32.98	107	P	P	22 54 27.6	+2.9
LKBA	Tubou, Lakemba	33.29	114	P	P	22 54 29.4	+2.0
JCJ	Chichijima	33.69	348	P	P	22 54 32.5	+1.8
	comp=Z,154nm,0.7s,baz=92,slow=13,SNR=6.4						
JCJ				LR	LR	23 07 56.7	
	comp=Z,10µm,19.3s,baz=166,slow=36						
	comp=Z,154nm,0.7s						
JCJ	Chichijima	33.69	348	P	P	22 54 29.6	-1.0
IGBI	Denpasar	34.05	263	P	P	22 54 34.8	+0.7
	comp=Z,121nm,0.5s,comp=Z,2µmcomp=Z,8µm						
BBKI	Banjar Baru	34.52	273	P	P	22 54 54.3	+16
ABJI	Asem Bagus	34.93	265	P	P	22 54 55.5	+14
JAGI	Jajag, Banyuwa	35.02	264	P	P	22 54 40.8	-1.7
JAGI	Jajag, Banyuwa	35.02	264	P	P	22 54 42.1	-0.4
	comp=Z,169nm,0.9s,comp=Z,2µmcomp=Z,13µm						
AULHS	Lilydale High	35.10	183	P	P	22 54 45.1	+2.4
CORO	Coronation Par	35.30	183	P	P	22 54 46.3	+1.9
MEEK	Meekatharra	35.75	232	P	P	22 54 49.5	+0.9
	baz=36,SNR=156						
MEEK	Meekatharra	35.75	232	P	P	22 54 49.3	+0.7
KMBL	Kambalda	36.02	222	P	P	22 54 51.8	+1.0
	baz=36,SNR=17						
KMBL	Kambalda	36.02	222	P	P	22 54 51.5	+0.7
MOO	Moorlands	36.29	183	P	P	22 54 53.7	+0.8
	baz=36,SNR=6.0						
MOO	Moorlands	36.29	183	P	P	22 54 56.4	+3.5
TAU	Tasmania Unive	36.75	183	P	P	22 54 58.3	+1.5
TAU	Tasmania Unive	36.75	183	IAMs_20	IAMs_20	23 09 19.9	
	comp=Z,55µm,21.0s						
TAU	Tasmania Unive	36.75	183	P	P	22 54 59.0	+2.2
TAU	Tasmania Unive	36.75	183	⇑P	P	22 54 58.8	+2.0
TAU	Tasmania Unive	36.75	183	P	P	22 54 58.3	+1.5
TAU				pmax	pmax		
	comp=Z,201nm,1.1s						
TAU				MLR	MLR		
	comp=Z,55µm,21.0s						
TAU	Tasmania Unive	36.75	183	P	P	22 54 58.6	+1.8
TAU				pP	pwP	22 55 09.7	-0.7
TAU				sP	sP	22 55 15.5	+2.7
PWJI	Pagerwojo	37.34	265	P	P	22 55 01.3	-1.0
	comp=Z,87nm,0.8s,comp=Z,2µm						
NGJI	Ngawi	37.68	266	P	P	22 55 20.2	+15
GIRL	Giralia	37.69	240	P	P	22 55 07.2	+2.0
	baz=38,SNR=12						
GIRL	Giralia	37.69	240	P	P	22 55 06.4	+1.3
GIRL	Giralia	37.69	240	P	P	22 55 06.8	+1.7
GIRL	Giralia	37.69	240	⇑P	P	22 55 06.6	+1.5
SBUM	Sibu	38.06	282	P	P	22 55 08.6	+0.2
SBUM	Sibu	38.06	282	P	P	22 55 09.0	+0.6
RAO	Raoul Island	38.53	131	P	P	22 55 12.7	+0.6
	comp=Z,140nm,0.3s,baz=308,slow=18,SNR=1.8						

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      comp=Z,140nm,0.3s
JOW   Kunigami         38.56 329   LR       LR       23 07 55.5
      comp=Z,33µm,21.9s,baz=142,slow=31
JOW   Kunigami         38.56 329   P        P        22 55 11.2  -1.1
JOW   Kunigami         38.56 329   P        P        22 55 14.9  +2.5
JOW   Kunigami         38.56 329  ⇓P        P        22 55 14.6  +2.2
UGM   Wanagama         38.61 265   P        P        22 55 12.6  -0.5
UGM   Wanagama         38.61 265   P        P        22 55 15.4  +2.4
      comp=Z,222nm,1.1s,comp=Z,5µmcomp=Z,13µm
SMRI  Semarang         38.70 266   P        P        22 55 12.3  -1.4
SMRI  Semarang         38.70 266   P        P        22 55 16.6  +2.9
      comp=Z,163nm,0.9s,comp=Z,4µmcomp=Z,15µm
YOGI  Yogyakarta       38.83 265   P        P        22 55 18.1  +3.2
      comp=Z,184nm,1.0s,comp=Z,3µmcomp=Z,11µm
KUZ   Kuaotunu         38.89 145   P        P        22 55 19.3  +4.3
      comp=Z,65nm,1.1s
MORW  Morawa           38.93 230   P        P        22 55 16.1  +0.6
      baz=39,SNR=23
MORW  Morawa           38.93 230   P        P        22 55 15.2  -0.3
MORW  Morawa           38.93 230   P        P        22 55 16.4  +0.9
MORW  Morawa           38.93 230  ⇑P        P        22 55 15.7  +0.2
AFI   Afiamalu         38.99 105   P        P        22 55 16.5  +0.2
      comp=Z,188nm,0.9s,baz=265,slow=4.4,SNR=23
AFI                                LR       LR       23 08 58.2
      comp=Z,19µm,20.9s,baz=273,slow=32
      comp=Z,188nm,0.9s
AFI   Afiamalu         38.99 105   P        P        22 55 16.4  +0.2
AFI                                pP       pP       22 55 27.8  -0.3
KLBR  Kellerberrin     38.99 225   P        P        22 55 16.3  +0.3
      baz=39,SNR=7.7
KLBR  Kellerberrin     38.99 225   P        P        22 55 16.5  +0.5
BLDU  Ballidu          39.22 227   P        P        22 55 18.2  +0.3
      baz=39,SNR=14
BLDU  Ballidu          39.22 227   P        P        22 55 19.0  +1.1
HIZ   Hauiti           39.70 148   P        P        22 55 23.5  +1.7
HIZ                                IAmb     IAmb     22 55 37.2
      comp=Z,135nm,1.0s
HIZ                                IAMs_20  IAMs_20  23 09 27.1
      comp=Z,27µm,20.0s
TWGBT Beinan           39.87 317   P        P        22 55 29.1  +5.7
JHJ   Hachijo jima 2   40.01 347   LR       LR       23 11 02.7
      comp=Z,9µm,20.5s,baz=138,slow=35
YULB  Yu-li            40.12 318   P        P        22 55 25.5  +0.1
YULB                               IAmb     IAmb     22 55 52.4
      comp=Z,81nm,1.0s
YULB                               IAMs_20  IAMs_20  23 08 34.9
      comp=Z,31µm,21.0s
YULB  Yu-li            40.12 318   P        P        22 55 29.2  +3.8
KPJI  Karang Pucung    40.19 266   P        P        22 55 27.4  +1.2
      comp=Z,202nm,0.7s,comp=Z,3µmcomp=Z,19µm
MUN   Mundaring        40.30 226   P        P        22 55 27.7  +0.9
      baz=40,SNR=14
MUN   Mundaring        40.30 226   P        P        22 55 27.9  +1.0
QRZ   Quartz Range     40.34 153   P        P        22 55 29.2  +2.1
NACB  Ninganchiao      40.46 319   P        P        22 55 29.7  +1.4
NACB                               IAmb     IAmb     22 55 55.0
      comp=Z,100nm,0.9s
NACB                               IAMs_20  IAMs_20  23 08 25.0
      comp=Z,35µm,22.0s
NACB  Ninganchiao      40.46 319   P        P        22 55 33.1  +4.9
TPUB  Ta-pu            40.50 317   P        P        22 55 28.3  -0.4
TPUB                               IAmb     IAmb     22 55 47.6
      comp=Z,98nm,0.8s
TPUB                               IAMs_20  IAMs_20  23 08 39.2
      comp=Z,30µm,22.0s
TPUB  Ta-pu            40.50 317   P        P        22 55 32.1  +3.5
SSLB  Suanglung        40.62 318   P        P        22 55 29.9  +0.3
SSLB                               IAMs_20  IAMs_20  23 08 51.2
      comp=Z,30µm,20.0s
SSLB  Suanglung        40.62 318   P        P        22 55 32.9  +3.3
CMJI  Cimerak          40.66 265   P        P        22 55 29.6  -0.5
      comp=Z,353nm,0.7s,comp=Z,3µmcomp=Z,12µm
URZ   Urewera          40.74 146   P        P        22 55 31.4  +1.0
      comp=Z,14nm,0.7s,baz=336,slow=4.9,SNR=7.3
URZ                                PcP      PcP      22 57 29.7  -1.5
      comp=Z,46nm,0.8s,baz=5.7,slow=2.5,SNR=5.0
URZ                                S        S        23 01 28.8  -9.3
      comp=Z,3.6nm,0.7s,baz=224,slow=21,SNR=1.2
URZ                                LR       LR       23 10 22.6
      comp=Z,37µm,20.5s,baz=36,slow=33
      comp=Z,14nm,0.7s
URZ   Urewera          40.74 146  ⇓P        P        22 55 32.3  +1.9
DSZ   Denniston Nort   40.76 154   P        P        22 55 30.5  -0.1
DSZ                                IAmb     IAmb     22 56 23.0
      comp=Z,145nm,1.4s
DSZ                                IAMs_20  IAMs_20  23 11 15.8
      comp=Z,35µm,19.0s
DSZ   Denniston Nort   40.76 154   P        P        22 55 33.1  +2.6
JCJI  Jatiwangi        40.86 267   P        P        22 55 34.6  +2.9
      comp=Z,315nm,0.9s,comp=Z,14µm
AUALB St Joseph's Co   40.88 221   P        P        22 55 37.1  +5.5
MRNZ  Matariki Terra   40.90 153   P        P        22 55 34.0  +2.3
MRNZ  Matariki Terra   40.90 153   P        P        22 55 35.7  +4.1
RTZ   Ruatahuna        40.92 146   P        P        22 55 32.6  +0.7
RTZ                                IAmb     IAmb     22 55 48.0
      comp=Z,90nm,0.9s
MXZ   Matakaoa Point   40.94 144   IAMs_20  IAMs_20  23 09 18.9
      comp=Z,48µm,22.0s
YHNB  Yeheng           40.95 319   P        P        22 55 34.1  +1.7
YHNB                               IAMs_20  IAMs_20  23 09 05.0
      comp=Z,32µm,21.0s
YHNB  Yeheng           40.95 319   P        P        22 55 36.8  +4.4
DUWZ  D'Urville Isla   40.97 151   P        P        22 55 34.2  +1.9
BKZ   Black Stump Fm   41.05 147   P        P        22 55 34.3  +1.3
BKZ                                IAMs_20  IAMs_20  23 10 02.7
      comp=Z,34µm,22.0s
BKZ   Black Stump Fm   41.05 147   P        P        22 55 34.6  +1.6
TATO  Taipei           41.09 320   IAMs_20  IAMs_20  23 08 58.5
      comp=Z,43µm,22.0s
TATO  Taipei           41.09 320   P        P        22 55 34.9  +1.5
RKGY  Rocky Gully      41.26 222   P        P        22 55 36.4  +1.7
      baz=41,SNR=10
RKGY  Rocky Gully      41.26 222   P        P        22 55 36.2  +1.5
THZ   Tophouse         41.26 153   P        P        22 55 36.0  +1.3
THZ                                IAmb     IAmb     22 55 48.7
      comp=Z,72nm,0.8s
THZ   Tophouse         41.26 153   P        P        22 55 37.5  +2.8
INZ   Inchbonnie       41.41 155   P        P        22 55 36.3  +0.5
TSZ   Takapari Road    41.42 149   P        P        22 55 36.6  +0.6
BBJI  Bungbulang       41.46 266   P        P        22 55 36.4  -0.3
TCW   Tory Channel     41.46 151   P        P        22 55 37.0  +0.8
TCW   Tory Channel     41.46 151   P        P        22 55 36.9  +0.6
TUWZ  Tuamarina        41.47 152   P        P        22 55 36.9  +0.6
TUWZ  Tuamarina        41.47 152   P        P        22 55 37.9  +1.6
JSU   Suzuyama         41.50 335   P        P        22 55 36.0  -0.7
JSU                                IAmb     IAmb     22 56 01.0
      comp=Z,221nm,1.3s
JSU   Suzuyama         41.50 335   P        P        22 55 39.6  +2.9
JSU   Suzuyama         41.50 335  ⇑P        P        22 55 37.6  +1.0
JCZ   Jackson Bay      41.52 159   P        P        22 55 39.3  +2.5
OGWZ  Otaki Gorge      41.59 150   P        P        22 55 38.9  +1.6
NIUE  Niue             41.65 112   P        P        22 55 40.1  +1.9
      baz=42,SNR=4.7
NIUE  Niue             41.65 112   P        P        22 55 40.0  +1.9
NIUE                               IAmb     IAmb     22 55 53.1
      comp=Z,242nm,1.0s
NIUE  Niue             41.65 112   P        P        22 55 40.8  +2.7
      comp=Z,290nm,1.5s
BSWZ  Blackbirch Sta   41.66 152   P        P        22 55 37.6  -0.3
BSWZ  Blackbirch Sta   41.66 152   P        P        22 55 38.1  +0.2
MRZ   Mangatainoka R   41.68 150   P        P        22 55 39.0  +0.9
MRZ                                IAmb     IAmb     22 55 57.7
      comp=Z,81nm,1.0s
MRZ                                IAMs_20  IAMs_20  23 10 53.3
      comp=Z,45µm,20.0s
MRZ   Mangatainoka R   41.68 150   P        P        22 55 39.0  +0.9
TPI   Tanjungpandan    41.73 273   P        P        22 55 42.1  +3.2
      comp=Z,69nm,1.0s,comp=Z,1µm
LTZ   Lake Taylor      41.80 155   P        P        22 55 39.6  +0.6
LTZ                                IAmb     IAmb     22 56 33.9
      comp=Z,153nm,1.4s
LTZ                                IAMs_20  IAMs_20  23 11 18.4
      comp=Z,31µm,20.0s
LTZ   Lake Taylor      41.80 155   P        P        22 55 40.8  +1.7
HOWZ  Holdsworth Sta   41.83 150   P        P        22 55 39.7  +0.4
JSG   Sagara           41.87 346   P        P        22 55 38.2  -1.4
JSG   Sagara           41.87 346   P        P        22 55 43.4  +3.8
JSG   Sagara           41.87 346   P        P        22 55 42.0  +2.4
JIE   Ise              41.98 344   P        P        22 55 41.4  +0.8
MTW   Mount Morrison   42.02 150   P        P        22 55 40.7  -0.1
BFZ   Birch Farm       42.03 149   P        P        22 55 41.3  +0.3
BFZ                                IAmb     IAmb     22 56 18.3
      comp=Z,117nm,1.3s
BFZ                                IAMs_20  IAMs_20  23 12 04.6
      comp=Z,51µm,20.0s
BFZ   Birch Farm       42.03 149   P        P        22 55 44.7  +3.7
BFZ   Birch Farm       42.03 149   P        P        22 55 41.8  +0.9
KHZ   Kahutara         42.06 153   P        P        22 55 40.8  -0.3
KHZ                                IAmb     IAmb     22 55 53.9
      comp=Z,143nm,1.4s
KHZ   Kahutara         42.06 153  ⇓P        P        22 55 42.5  +1.4
RPZ   Rata Peaks       42.07 156   P        P        22 55 42.1  +0.9
      comp=Z,27nm,1.0s,baz=265,slow=4.5,SNR=8.3
RPZ                                S        S        23 01 49.1  -8.6
      comp=Z,4.2nm,0.7s,baz=50,slow=4.7,SNR=3.0
RPZ                                LR       LR       23 11 03.7
      comp=Z,26µm,21.5s,baz=332,slow=33
      comp=Z,27nm,1.0s
RPZ   Rata Peaks       42.07 156   P        P        22 55 41.8  +0.6
RPZ                                IAMs_20  IAMs_20  23 10 52.4
      comp=Z,28µm,20.0s
OXZ   Oxford           42.15 155   P        P        22 55 42.4  +0.6
OXZ                                IAmb     IAmb     22 55 56.7
      comp=Z,260nm,1.7s
DCZ   Deep Cove        42.19 161   P        P        22 55 42.6  +0.5
DCZ                                IAmb     IAmb     22 56 12.2
      comp=Z,162nm,1.6s
PLWZ  Palliser         42.21 151   P        P        22 55 43.2  +0.8
PLWZ  Palliser         42.21 151   P        P        22 55 41.9  -0.5
JMN   Monobe           42.21 341   P        P        22 55 41.2  -1.3
JMN                                IAmb     IAmb     22 55 55.0
      comp=Z,132nm,1.0s
JMN   Monobe           42.21 341   P        P        22 55 46.1  +3.6
JMN   Monobe           42.21 341  ⇑P        P        22 55 43.8  +1.3
CBJI  Citeko           42.28 267   P        P        22 55 46.2  +2.9
      comp=Z,202nm,1.0s,comp=Z,16µm
GVZ   Greta Valley S   42.28 154   P        P        22 55 43.8  +0.8
GVZ                                IAmb     IAmb     22 55 57.5
      comp=Z,115nm,0.8s
GVZ                                IAMs_20  IAMs_20  23 12 42.1
      comp=Z,36µm,19.0s
GVZ   Greta Valley S   42.28 154   P        P        22 55 43.4  +0.4
LBZ   Lake Benmore     42.30 158   P        P        22 55 43.9  +0.8
MLZ   Mavora Lakes     42.42 160   P        P        22 55 44.9  +0.8
MLZ                                IAmb     IAmb     22 56 40.5
      comp=Z,153nm,1.4s
SKJI  Sukabumi         42.55 266   P        P        22 55 47.0  +1.4
      comp=Z,245nm,0.8s,comp=Z,2µm
MQZ   McQueen's Vall   42.72 155   P        P        22 55 47.3  +0.9
MQZ                                IAmb     IAmb     22 56 12.4
      comp=Z,312nm,1.8s
MQZ   McQueen's Vall   42.72 155   P        P        22 55 47.3  +0.9
JNU   Nakatsue         42.74 337   LR       LR       23 10 46.1
      comp=Z,11µm,21.2s,baz=146,slow=32
JNU   Nakatsue         42.74 337   P        P        22 55 47.2  +0.4
JNU   Nakatsue         42.74 337   P        P        22 55 50.1  +3.3
JNU   Nakatsue         42.74 337   P        P        22 55 47.8  +0.9
INU   Inuyama          42.80 345   P        P        22 55 46.8  -0.4
INU                                IAmb     IAmb     22 55 51.1
      comp=Z,110nm,0.9s
INU   Inuyama          42.80 345   P        P        22 55 50.6  +3.4
INU   Inuyama          42.80 345  ⇑P        P        22 55 47.9  +0.7
INU   Inuyama          42.80 345   P        P        22 55 48.4  +1.2
INU                                pP       pP       22 56 00.4  +1.3
INU                                sP       sP       22 56 05.0  +0.9
JGF   Kuroka           42.95 346   P        P        22 55 49.0  +0.6
JGF                                IAmb     IAmb     22 56 09.1
      comp=Z,76nm,0.9s
JGF   Kuroka           42.95 346   P        P        22 55 51.7  +3.2
JGF   Kuroka           42.95 346   P        P        22 55 50.9  +2.4
JGF   Kuroka           42.95 346  ⇑P        P        22 55 49.1  +0.6
JRY   Ryogami san      42.99 348   P        P        22 55 48.8   0.0
JWT   Wachi            43.18 343   P        P        22 55 52.0  +1.8
JAD   Aida             43.23 342   P        P        22 55 52.6  +1.9
PPBI  Pangkal Pinang   43.30 273   P        P        22 56 01.7  +10
CGJI  Cibinong         43.42 267   P        P        22 55 52.2  -0.4
      comp=Z,137nm,1.2s,comp=Z,3µmcomp=Z,11µm
XMI   Christmas Isla   43.44 261   P        P        22 55 57.6  +4.9
XMI   Christmas Isla   43.44 261  ⇑P        P        22 55 54.0  +1.3
JGN   Niukaw           43.55 346   P        P        22 55 53.9  +0.5
JHS   Saijyo           43.62 341   IAmb     IAmb     22 56 17.4
      comp=Z,98nm,1.0s
JHS   Saijyo           43.62 341   P        P        22 55 57.6  +3.7
JHS   Saijyo           43.62 341  ⇑P        P        22 55 55.2  +1.4
MJAR  Matsushiro Arr   43.65 347   P        P        22 55 54.6  +0.5
      comp=Z,46nm,0.8s,baz=162,slow=7.9,SNR=72
MJAR                               ScP      ScP      23 01 28.0  -1.2
      comp=Z,5.6nm,0.9s,baz=170,slow=4.8,SNR=6.0
MJAR                               LR       LR       23 14 04.9
      comp=Z,14µm,18.0s,baz=167,slow=36
      comp=Z,46nm,0.8s
MAJO  Matsushiro       43.65 347   P        P        22 55 54.3  +0.2
MAJO                               IAmb     IAmb     22 56 11.8
      comp=Z,147nm,1.0s
MAJO  Matsushiro       43.65 347   P        P        22 55 55.8  +1.7
MAJO  Matsushiro       43.65 347   P        P        22 55 54.3  +0.2
MAJO                               pmax     pmax
      comp=Z,147nm,1.0s
MAJO                               MLR      MLR
      comp=Z,15µm,18.0s
MAJO  Matsushiro       43.65 347   P        P        22 55 54.2  +0.2
MAJO                               pP       pP       22 56 05.7  -0.3
MAJO                               sP       sP       22 56 10.6  -0.5
MAT   Matsushiro       43.65 347   P        P        22 55 54.9  +0.8
MJB9  Matsu-Tunnel     43.66 347   IAmb     IAmb     22 56 13.2
      comp=Z,151nm,1.0s
JMM   Marumori         44.42 350   IAmb     IAmb     22 56 07.6
      comp=Z,121nm,0.9s
JMM   Marumori         44.42 350   P        P        22 56 03.2  +3.0
JMM   Marumori         44.42 350   P        P        22 56 01.6  +1.3
JMM   Marumori         44.42 350  ⇑P        P        22 56 00.7  +0.5
DLV   T  Lat           44.43 294   P        P        22 56 04.9  +4.0
KASI  Kota Agung       44.65 268   P        P        22 56 09.2  +6.7
MDSI  Maura Dua        45.03 270   P        P        22 56 05.5   0.0
      comp=Z,63nm,1.1s,comp=Z,690nmcomp=Z,8µm
JSD   Sado             45.07 348   IAmb     IAmb     22 56 14.0
      comp=Z,153nm,0.9s
JSD   Sado             45.07 348   P        P        22 56 09.3  +3.9
JSD   Sado             45.07 348   P        P        22 56 07.4  +2.0
JSD   Sado             45.07 348  ⇑P        P        22 56 06.3  +0.9
LWLI  Liwa             45.12 269   P        P        22 56 14.8  +8.5
JYA   Atsumi           45.32 349   P        P        22 56 09.6  +2.2
SSE   Sheshan          45.73 326   P        P        22 56 13.6  +2.9
SSE                                S        S        23 02 54.4  +3.1
SSE                                pmax     pmax
      comp=Z,33nm,1.4s
SSE                                pmax     pmax
      comp=Z,900nm,12.0s
SSE                                LR       LR
      comp=Z,7µm,21.8s
SSE                                LR       LR
      comp=Z,8µm,21.8s
JOM   Ohasama          45.91 351   P        P        22 56 13.8  +1.8
QIZ   Qiongzhong       46.25 304⇑iP        P        22 56 15.4  +0.4
QIZ                                S        S        23 03 02.9  +3.8
QIZ                                LR       LR
      comp=Z,4µm,22.3s
QIZ                                LR       LR
      comp=Z,5µm,26.5s
QIZ                                LR       LR
      comp=Z,10µm,30.3s
MIDW  Midway           46.79  42   IAMs_20  IAMs_20  23 12 06.9
      comp=Z,22µm,21.0s
JTM   Tenmabayashi     47.24 351   P        P        22 56 25.4  +3.0
JTM   Tenmabayashi     47.24 351   P        P        22 56 23.3  +1.0
JTM   Tenmabayashi     47.24 351  ⇑P        P        22 56 23.3  +1.0
KSRS  Korea Array      47.70 337   P        P        22 56 27.1  +1.1
      comp=Z,40nm,0.8s,baz=154,slow=8.1,SNR=49
KSRS                               PcP      PcP      22 57 56.3  +1.4
      comp=Z,6.8nm,0.9s,baz=152,slow=5.5,SNR=0.9
KSRS                               ScP      ScP      23 01 45.7  -0.1
      comp=Z,1.7nm,0.7s,baz=130,slow=4.9,SNR=2.7
KSRS                               LR       LR       23 13 26.1
      comp=Z,7µm,21.5s,baz=140,slow=32
      comp=Z,40nm,0.8s
KS19  Wonju Array Si   47.76 337   IAmb     IAmb     22 56 31.8
      comp=Z,56nm,0.8s
NJ2   Nanjing          47.77 324  eP        P        22 56 28.1  +1.4
NJ2                                pP       pP       22 56 35.3  -3.5
NJ2                                sP       sP       22 56 38.8  -5.0
NJ2                                PP       PP       22 58 16.0  -2.9
NJ2                                S        S        23 03 21.1  +0.7
NJ2                                sS       sS       23 03 38.2  -2.2
NJ2                                pmax     pmax
      comp=Z,39nm,1.1s
NJ2                                pmax     pmax
      comp=Z,3µm,10.3s
NJ2                                LR       LR
      comp=Z,16µm,20.8s
NJ2                                LR       LR
      comp=Z,14µm,21.8s
NJ2                                LR       LR
      comp=Z,25µm,20.8s
JOT   Ohata            47.82 352   P        P        22 56 27.0  +0.1
CTZ   Chatham Island   47.95 147   P        P        22 56 30.5  +2.6
SDSI  Sungai Dareh     48.12 274   P        P        22 56 29.9  +0.2
      comp=Z,40nm,1.0s,comp=Z,1µmcomp=Z,9µm
ERM   Erimo            48.18 354   P        P        22 56 31.5  +1.9
ERM   Erimo            48.18 354   IAMs_20  IAMs_20  23 15 07.7
      comp=Z,21µm,21.0s
ERM   Erimo            48.18 354   P        P        22 56 33.7  +4.1
ERM   Erimo            48.18 354  ⇑P        P        22 56 31.0  +1.4
ERM   Erimo            48.18 354   P        P        22 56 31.5  +1.9
ERM                                pmax     pmax
      comp=Z,135nm,0.8s
ERM                                MLR      MLR
      comp=Z,21µm,21.0s
ERM   Erimo            48.18 354   P        P        22 56 31.2  +1.6
JEM   Erimo            48.18 354   P        P        22 56 33.6  +4.0
JEM   Erimo            48.18 354   P        P        22 56 32.1  +2.5
INCN  Inchon           48.24 336   P        P        22 56 30.5  +0.3
INCN                               IAmb     IAmb     22 56 36.1
      comp=Z,104nm,0.9s
INCN  Inchon           48.24 336   P        P        22 56 35.1  +4.9
INCN  Inchon           48.24 336   P        P        22 56 30.5  +0.3
INCN                               pmax     pmax
      comp=Z,104nm,0.9s
INCN                               MLR      MLR
      comp=Z,15µm,22.0s
MCQ   Macquarie Isla   48.92 173   P        P        22 56 36.3  +1.2
      baz=49,SNR=3.5
CNSH  ChangSha         48.94 316  ⇑P        P        22 56 35.3  -0.5
CNSH                               S        S        23 03 35.7  -1.3
CNSH                               pmax     pmax
      comp=Z,2µm,13.4s
CNSH                               LR       LR
      comp=Z,7µm,23.5s
CNSH                               LR       LR
      comp=Z,13µm,22.2s
CNSH                               LR       LR
      comp=Z,21µm,24.9s
PDSI  Padang           49.08 274   P        P        22 56 39.0  +1.9
      comp=Z,23nm,0.6s,comp=Z,1µmcomp=Z,8µm
GULI  GuiLin           49.09 311   P        P        22 56 46.7  +10
GULI                               S        S        23 03 42.9  +3.7
GULI                               pmax     pmax
      comp=Z,10.0nm,0.8s
GULI                               LR       LR
      comp=N,7µm,21.7s
GULI                               LR       LR
      comp=E,6µm,22.8s
GULI                               LR       LR
      comp=Z,10µm,20.6s
HJU   Haeju            49.09 335   P        P        22 56 37.6  +0.9
HJU                                S        S        23 03 43.9  +5.1
HJU                                AmB
      comp=Z,3µm,4.2s
HJU                                AMS      AMS
      comp=Z,18µm,19.7s
JSH   Shimam           49.21 351   P        P        22 56 40.8  +3.3
IPM   Ipoh             49.41 281   IAmb     IAmb     22 57 06.4
      comp=Z,28nm,0.7s
IPM   Ipoh             49.41 281   P        P        22 56 42.5  +2.8
IPM   Ipoh             49.41 281   P        P        22 56 42.0  +2.3
WHN   Wuhan            49.49 319  ⇑P        P        22 56 40.5  +0.5
WHN                                S        S        23 03 45.6  +0.9
WHN                                pmax     pmax
      comp=Z,220nm,1.6s
WHN                                pmax     pmax
      comp=Z,3µm,6.2s
WHN                                LR       LR
      comp=Z,25µm,19.4s
WHN                                LR       LR
      comp=Z,39µm,19.2s
WHN                                LR       LR
      comp=Z,58µm,20.0s
PYAG  Pyongyang        49.93 336   P        P        22 56 44.1  +0.9
PYAG                               AMS      AMS
      comp=Z,15µm,20.6s
KULM  Kulim            49.94 282  ⇑P        P        22 56 41.5  -2.2
KULM  Kulim            49.94 282   P        P        22 56 48.0  +4.3
YUK   Yuzh-Kuril'sk    49.96 357  eP        P        22 56 44.2  +1.0
YUK                               e                  22 58 03.7
YUK                               e                  22 58 39.8
YUK                               ePPP      PPP      22 59 35.0
YUK                               eS        S        23 03 50.4  -0.4
YUK                               e                  23 06 30.3
YUK                               eSS       SS       23 07 26.3  +2.0
YUK                               eSSS      SSS      23 08 53.3
YUK                                pmax     pmax
      comp=N,156nm,0.9s
YUK                                pmax     pmax
      comp=Z,265nm,0.9s
YUK                                pmax     pmax
      comp=E,170nm,0.8s
YUK                                pmax     pmax
      comp=Z,364nm,1.8s
YUK                                MLR      MLR
      comp=N,5µm,18.0s
YUK                                MLR      MLR
      comp=Z,8µm,18.0s
YUK                                MLR      MLR
      comp=E,4µm,17.0s
HHU   Hamhung          50.00 338   P        P        22 56 44.5  +0.8
HHU                                S        S        23 03 56.3  +4.8
HHU                                AmB
      comp=Z,1µm,3.7s
HHU                                AMS      AMS
      comp=Z,10µm,22.8s
JMP   Maruseppu        50.13 354   P        P        22 56 46.8  +2.2
JKA   Kamikawa-asahi   50.31 354  ⇑sP       P        22 56 47.4  +1.4
ASAJ  Asahikawa        50.32 354   P        P        22 56 48.4  +2.5
      comp=Z,140nm,0.9s,baz=210,slow=13,SNR=25
ASAJ                               LR       LR       23 18 25.9
      comp=Z,7µm,19.7s,baz=192,slow=36
      comp=Z,140nm,0.9s
ASAJ  Asahikawa        50.32 354   P        P        22 56 48.5  +2.5
SUJ   Sinuiju          51.34 336   P        P        22 56 54.5  +0.8
SUJ                                S        S        23 04 14.2  +4.1
SUJ                                AmB
      comp=Z,1µm,3.5s
SUJ                                AMS      AMS
      comp=Z,13µm,17.8s
RAR   Rarotonga        51.42 112   P        P        22 56 55.3  +0.6
      comp=Z,45nm,0.9s,baz=252,slow=7.5,SNR=9.6
RAR                                LR       LR       23 14 26.6
      comp=Z,3µm,21.7s,baz=278,slow=31
      comp=Z,45nm,0.9s
RAR   Rarotonga        51.42 112   P        P        22 56 54.2  -0.5
RAR                                IAmb     IAmb     22 57 01.2
      comp=Z,97nm,1.1s
RAR   Rarotonga        51.42 112   P        P        22 56 56.7  +2.0
RAR   Rarotonga        51.42 112   P        P        22 56 54.2  -0.5
RAR                                pmax     pmax
      comp=Z,97nm,1.1s
RAR                                MLR      MLR
      comp=Z,4µm,21.0s
RAR   Rarotonga        51.42 112   P        P        22 56 55.1  +0.4
RAR                                pP       pP       22 57 06.9   0.0
VLA   Vladivostok      51.46 344  iP        P        22 56 56.9  +2.4
VLA                                pmax     pmax
      comp=Z,123nm,1.2s
DL2   Dalian           51.60 332   P        P        22 56 59.0  +3.3
DL2                                S        S        23 04 18.2  +4.5
DL2                                SS       SS       23 07 52.7  +2.1
DL2                                pmax     pmax
      comp=Z,97nm,0.9s
DL2                                pmax     pmax
      comp=Z,1µm,6.9s
DL2                                LR       LR
      comp=Z,14µm,21.8s
DL2                                LR       LR
      comp=Z,9µm,21.8s
DL2                                LR       LR
      comp=Z,23µm,21.6s
COCO  West Island      52.17 259   P        P        22 57 00.1  -0.3
COCO  West Island      52.17 259   P        P        22 57 00.1  -0.3
COCO                               pmax     pmax
      comp=Z,1µm,1.6s
COCO                               MLR      MLR
      comp=Z,6µm,22.0s
GSI   Gunungsitoli     52.24 276   P        P        22 57 00.5  -0.5
GSI                                IAmb     IAmb     22 57 51.1
      comp=Z,148nm,1.3s
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GSI	**Gunungsitoli**	**52.24**	**276**	P	**P**	**22 57 03.4**	**+2.4**
GSI	**Gunungsitoli**	**52.24**	**276**	P	**P**	**22 57 03.4**	**+2.4**
	comp=Z,88nm,0.6s,comp=Z,15µm						
KCSI	**Kotacane, Aceh**	**52.41**	**279**	P	**P**	**22 57 03.4**	**+1.1**
	comp=Z,40nm,0.7s,comp=Z,992nm						
USA0B	**Ussuriysk Arra**	**52.43**	**344**	IAmb	IAmb	22 57 06.3	
	comp=Z,73nm,0.9s						
USA0B	**Ussuriysk Arra**	**52.43**	**344**	*c* *i*P	**P**	**22 57 02.9**	**+1.1**
USRK	**Ussuriysk Ar.**	**52.43**	**344**	P	**P**	**22 57 03.4**	**+1.6**
	comp=Z,64nm,0.8s,baz=170,slow=8.4,SNR=66						
USRK				ScP	**ScP**	**23 02 06.9**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=199,slow=4.0,SNR=1.9						
USRK				S	**S**	**23 04 23.6**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=170,slow=29,SNR=1.0						
USRK				LR	LR	23 17 14.8	
	comp=Z,19µm,21.1s,baz=143,slow=34						
	comp=Z,64nm,0.8s						
GYA	**Guiyang**	**52.52**	**310**	⇑P	**P**	**22 57 02.7**	**-0.2**
GYA				pP	pP	22 57 16.2	+1.1
GYA				PcP	**PcP**	**22 58 13.2**	**+0.2**
GYA				SS	**SS**	**23 08 07.2**	**+1.4**
GYA				pmax	pmax		
	comp=Z,11nm,1.6s						
GYA				pmax	pmax		
	comp=Z,2µm,14.7s						
GYA				LR	LR		
	comp=Z,5µm,24.1s						
GYA				LR	LR		
	comp=Z,6µm,25.6s						
GYA				LR	LR		
	comp=Z,12µm,26.1s						
ENH	**Enshi**	**52.59**	**316**	IAMs_20	IAMs_20	23 16 37.4	
	comp=Z,18µm,21.0s						
ENH	**Enshi**	**52.59**	**316**	P	**P**	**22 57 07.0**	**+3.7**
YSS	**Yuzh-Sakhalins**	**53.11**	**354**	P	**P**	**22 57 07.0**	**+0.3**
YSS				IAMs_20	IAMs_20	23 17 19.2	
	comp=Z,20µm,22.0s						
YSS	**Yuzh-Sakhalins**	**53.11**	**354**	P	**P**	**22 57 10.1**	**+3.4**
YSS	**Yuzh-Sakhalins**	**53.11**	**354**	*ce*P	**P**	**22 57 07.4**	**+0.7**
YSS				*e**PP	**pP**	**22 57 20.7**	**+1.8**
YSS				*e*		22 58 18.9	
YSS				*e*S	**S**	**23 04 32.7**	**-1.3**
YSS				*e*PS	**PKiKP**	**23 04 51.4**	**-1.0**
YSS				*e*SS	**SS**	**23 08 14.7**	**+0.6**
YSS				pmax	pmax		
	comp=Z,150nm,1.0s						
YSS				pmax	pmax		
	comp=Z,1µm,9.1s						
YSS	**Yuzh-Sakhalins**	**53.11**	**354**	P	**P**	**22 57 07.6**	**+0.9**
SNY	**Shenyang**	**53.17**	**336**	⇓P	**P**	**22 57 06.1**	**-1.2**
SNY				S	**S**	**23 04 31.8**	**-3.2**
SNY				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SNY				pmax	pmax		
	comp=Z,3µm,8.6s						
SNY				LR	LR		
	comp=Z,5µm,17.1s						
SNY				LR	LR		
	comp=Z,6µm,17.6s						
SNY				LR	LR		
	comp=Z,25µm,29.4s						
LYN	**LuoYang**	**53.34**	**322**	⇑P	**P**	**22 57 07.5**	**-1.2**
LYN				pP	pP	22 57 22.7	+1.8
LYN				PP	**PP**	**22 59 09.1**	**-0.3**
LYN				S	**S**	**23 04 35.2**	**-2.4**
LYN				pmax	pmax		
	comp=Z,17nm,0.6s						
LYN				pmax	pmax		
	comp=Z,2µm,14.1s						
LYN				LR	LR		
	comp=Z,21µm,21.5s						
LYN				LR	LR		
	comp=Z,12µm,22.2s						
LYN				LR	LR		
	comp=Z,28µm,22.1s						
MDJ	**Mudanjiang**	**53.49**	**342**	P	**P**	**22 57 09.9**	**+0.3**
MDJ				pP	pP	22 57 19.3	-2.6
MDJ				sP	sP	22 57 22.8	-4.0
MDJ				PcS	**PcS**	**23 02 16.9**	**+1.8**
MDJ				S	**S**	**23 04 45.4**	**+6.0**
MDJ				pmax	pmax		
	comp=Z,26nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,3µm,11.2s						
MDJ				LR	LR		
	comp=Z,6µm,21.3s						
MDJ				LR	LR		
	comp=Z,6µm,23.5s						
MDJ				LR	LR		
	comp=Z,12µm,22.0s						
MDJ	**Mudanjiang**	**53.49**	**342**	P	**P**	**22 57 12.2**	**+2.6**
MDJ	**Mudanjiang**	**53.49**	**342**	P	**P**	**22 57 10.6**	**+1.0**
XMAS	**Kiritimati**	**53.70**	**83**	P	**P**	**22 57 12.1**	**+0.4**
XMAS	**Kiritimati**	**53.70**	**83**	IAMs_20	IAMs_20	23 18 15.2	
	comp=Z,16µm,19.0s						
XMAS	**Kiritimati**	**53.70**	**83**	P	**P**	**22 57 14.2**	**+2.5**
XMAS	**Kiritimati**	**53.70**	**83**	P	**P**	**22 57 11.9**	**+0.2**
XMAS				pP	**pP**	**22 57 23.8**	**-0.1**
MLSI	**Meulaboh, Aceh**	**53.89**	**280**	P	**P**	**22 57 16.8**	**+3.7**
	comp=Z,75nm,0.7s						
HNS	**HongShan**	**53.99**	**326**	⇓P	**P**	**22 57 13.8**	**+0.4**
HNS				S	**S**	**23 04 45.2**	**-1.1**
HNS				SS	**SKiKP**	**23 08 24.9**	**+2.0**
HNS				pmax	pmax		
	comp=Z,66nm,0.9s						
HNS				pmax	pmax		
	comp=Z,2µm,10.8s						
HNS				LR	LR		
	comp=Z,13µm,19.6s						
HNS				LR	LR		
	comp=Z,15µm,19.6s						
HNS				LR	LR		
	comp=Z,24µm,20.1s						
CN2	**Changchun**	**54.14**	**339**	*e*P	**P**	**22 57 16.4**	**+2.0**
CN2				*e*S	**S**	**23 04 47.9**	**-0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,3µm,6.0s						
CN2				LR	LR		
	comp=Z,7µm,20.0s						
CN2				LR	LR		
	comp=Z,8µm,20.0s						
CN2				LR	LR		
	comp=Z,10µm,21.0s						
KMI	**Kunming**	**54.93**	**306**	⇑P	**P**	**22 57 19.1**	**-1.6**
KMI				pP	pP	22 57 30.1	-2.9
KMI				PP	**PP**	**22 59 22.9**	**-1.2**
KMI				S	**S**	**23 04 59.4**	**-0.5**
KMI				pmax	pmax		
	comp=Z,46nm,1.1s						
KMI				LR	LR		
	comp=Z,2µm,33.3s						
KMI				LR	LR		
	comp=Z,5µm,22.7s						
KMI				LR	LR		
	comp=Z,9µm,34.9s						
BJT	**Baijiatuau**	**55.12**	**329**	P	**P**	**22 57 25.2**	**+3.6**
BJT	**Baijiatuau**	**55.12**	**329**	P	**P**	**22 57 23.9**	**+2.4**
BJI	**Beijing**	**55.14**	**329**	P	**P**	**22 57 21.3**	**-0.4**
BJI				S	**S**	**23 05 02.1**	**+0.4**
BJI				pmax	pmax		
	comp=Z,15nm,0.8s						
BJI				pmax	pmax		
	comp=Z,770nm,11.2s						
BJI				LR	LR		
	comp=Z,6µm,23.1s						
BJI				LR	LR		
	comp=Z,3µm,22.3s						
BJI				LR	LR		
	comp=Z,10µm,25.2s						
BNX	**BinXian**	**55.18**	**341**	⇓P	**P**	**22 57 22.7**	**+0.8**
BNX				pP	**sP**	**22 57 38.7**	**-0.4**
BNX				sP	pP	22 57 43.4	+9.3
BNX				PP	**PP**	**22 59 26.4**	**+0.7**
BNX				S	**S**	**23 05 03.6**	**+1.5**
BNX				pmax	pmax		
	comp=Z,88nm,1.2s						
BNX				pmax	pmax		
	comp=Z,2µm,9.5s						
BNX				LR	LR		
	comp=Z,6µm,26.6s						
BNX				LR	LR		
	comp=Z,5µm,27.0s						
BNX				LR	LR		
	comp=Z,16µm,28.8s						
XAN	**Xi'an**	**55.26**	**319**	⇓P	**P**	**22 57 23.9**	**+1.2**
XAN				pP	sP	22 57 40.1	+0.1
XAN				S	**S**	**23 04 59.3**	**-4.4**
XAN				pmax	pmax		
	comp=Z,16nm,1.3s						
XAN				pmax	pmax		
	comp=Z,2µm,10.5s						
XAN				LR	LR		
	comp=Z,6µm,21.9s						
XAN				LR	LR		
	comp=Z,5µm,22.5s						
XAN				LR	LR		
	comp=Z,11µm,21.3s						
XAN	**Xi'an**	**55.26**	**319**	P	**P**	**22 57 21.1**	**-1.6**
UGL	**Uglegorsk**	**55.28**	**354**	*c* *i*P	**P**	**22 57 23.1**	**+0.6**
UGL				*e*S	**S**	**23 05 04.4**	**+1.2**
UGL				*e*SS	**SS**	**23 08 48.0**	**-0.2**
UGL				pmax	pmax		
	comp=Z,2µm,5.1s						
UGL				pmax	pmax		
	comp=Z,260nm,1.0s						
UGL				smax	smax		
	comp=E,1µm,9.0s						
UGL				smax	smax		
	comp=N,6µm,15.0s						
UGL				MLR	MLR		
	comp=Z,4µm,18.0s						
CMAR	**Chiang Mai Arr**	**55.38**	**297**	P	**P**	**22 57 22.9**	**-0.9**
	comp=Z,4.7nm,1.0s,baz=119,slow=5.6,SNR=16						
CMAR				LR	LR	23 21 52.8	
	comp=Z,2µm,20.5s,baz=110,slow=37						
CMAR				PKPPKP	P'P'df	23 27 19.6	-10
	comp=Z,0.9nm,0.3s,baz=262,slow=3.2,SNR=6.4						
CMAR				PKP2bc	**P'P'bc**	**23 27 43.1**	**-0.2**
	comp=Z,6.1nm,0.8s,baz=286,slow=3.4,SNR=9.9						
	comp=Z,4.7nm,1.0s						
CMAR	**Chiang Mai Arr**	**55.38**	**297**	*i* P	**P**	**22 57 23.1**	**-0.7**
TIY	**Taiyuan**	**55.50**	**325**	⇑P	**P**	**22 57 25.1**	**+0.7**
TIY				S	**S**	**23 05 03.0**	**-3.8**
TIY				SS	**SS**	**23 08 51.0**	**-1.4**
TIY				pmax	pmax		
	comp=Z,2µm,10.8s						
TIY				LR	LR		
	comp=Z,10µm,23.5s						
TIY				LR	LR		
	comp=Z,9µm,24.5s						
TIY				LR	LR		
	comp=Z,20µm,24.5s						
CHTO	**Chiang Mai**	**55.51**	**298**	P	**P**	**22 57 23.7**	**-1.0**
CHTO	**Chiang Mai**	**55.51**	**298**	P	**P**	**22 57 23.7**	**-1.0**
PZH	**PanZhiHua**	**56.37**	**307**	P	**P**	**22 57 29.6**	**-1.3**
PZH				sP	**sP**	**22 57 48.3**	**+0.2**
PZH				PP	**PP**	**22 59 34.6**	**-2.3**
PZH				PcS	**PcS**	**23 02 26.8**	**-1.9**
PZH				S	**S**	**23 05 16.3**	**-2.5**
PZH				sS	**pS**	**23 05 32.5**	**-0.8**
PZH				pmax	pmax		
	comp=Z,20nm,0.9s						
PZH				pmax	pmax		
	comp=Z,1µm,12.0s						
PZH				LR	LR		
	comp=Z,4µm,22.5s						
PZH				LR	LR		
	comp=Z,4µm,24.3s						
PZH				LR	LR		
	comp=Z,9µm,26.5s						
SKR	**Severo-Kuril's**	**56.81**	**5**	*e*P	**P**	**22 57 35.4**	**+2.0**
SKR				*e*S	**S**	**23 05 24.0**	**+0.5**
SKR				pmax	pmax		
	comp=Z,141nm,0.9s						
SKR				pmax	pmax		
	comp=Z,700nm,8.1s						
SKR				MLR	MLR		
	comp=Z,5µm,20.0s						
TYV	**Tymovskoe**	**56.99**	**355**	*e*P	**P**	**22 57 36.6**	**+1.9**
TYV				*e*S	**S**	**23 05 30.5**	**+4.6**
TYV				pmax	pmax		
	comp=Z,2µm,4.6s						
TYV				pmax	pmax		
	comp=Z,174nm,1.0s						
TYV				smax	smax		
	comp=N,2µm,8.1s						
TYV				smax	smax		
	comp=E,1µm,8.1s						
CD2	**Chengdu**	**57.03**	**313**	P	**P**	**22 57 37.4**	**+1.9**
CD2				PcP	**PcP**	**22 58 30.5**	**+0.3**
CD2				PP	**PP**	**22 59 46.1**	**+3.5**
CD2				S	**S**	**23 05 26.8**	**-0.5**
CD2				SS	**SS**	**23 09 20.1**	**+3.4**
CD2				pmax	pmax		
	comp=E,50nm,0.9s						
CD2				pmax	pmax		
	comp=E,2µm,10.2s						
CD2				LR	LR		
	comp=E,1µm,16.5s						
CD2				LR	LR		
	comp=E,1µm,22.6s						
CD2				LR	LR		
	comp=E,8µm,23.3s						
KLR	**Kul'dur**	**57.17**	**346**	LR	LR	23 20 29.5	
	comp=E,9µm,20.4s,baz=154,slow=34						
KLR	**Kul'dur**	**57.17**	**346**	*ce*P	**P**	**22 57 36.1**	**+0.1**
KLR				pmax	pmax		
	comp=Z,73nm,0.9s						
GRNR	**Gornyy**	**57.70**	**350**	⇓*i*P	**P**	**22 57 42.4**	**+2.7**
GRNR				*e*S	**S**	**23 05 43.3**	**+8.0**
GRNR				pmax	pmax		
	comp=E,7.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,50nm,1.0s						
GRNR				pmax	pmax		
	comp=N,20nm,1.1s						
GRNR				smax	smax		
	comp=N,3.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,5µm,18.0s						
XLT	**XiLinHaoTe**	**58.10**	**332**	⇑*i*P	**P**	**22 57 42.4**	**-0.4**
XLT				pP	pP	22 57 51.9	-3.3
XLT				sP	sP	22 57 56.4	-3.7
XLT				PP	**PP**	**22 59 55.3**	**+3.3**
XLT				S	**S**	**23 05 40.7**	**-0.3**
XLT				sS	pS	23 05 58.0	+2.4
XLT				SS	**SS**	**23 09 34.6**	**+1.4**
XLT				pmax	pmax		
	comp=E,20nm,1.5s						
XLT				pmax	pmax		
	comp=E,2µm,8.7s						
XLT				LR	LR		
	comp=E,14µm,21.1s						
XLT				LR	LR		
	comp=E,21µm,21.7s						
HHC	**Hu-ho-hao-te**	**58.15**	**327**	*e*P	**P**	**22 57 45.9**	**+2.6**
HHC				PP	**PP**	**22 59 55.1**	**+2.6**
HHC				S	**S**	**23 05 42.3**	**+0.5**
HHC				SS	**SS**	**23 09 38.3**	**+4.1**
HHC				pmax	pmax		
	comp=E,40nm,1.0s						
HHC				pmax	pmax		
	comp=E,4µm,9.6s						
HHC				LR	LR		
	comp=E,18µm,19.0s						
HHC				LR	LR		
	comp=E,25µm,19.7s						
HHC				LR	LR		
	comp=E,45µm,19.0s						
TNCH	**TengChong**	**58.31**	**304**	⇑P	**P**	**22 57 49.4**	**+4.7**
TNCH				pP	pP	22 57 57.5	+0.4
TNCH				sP	sP	22 58 01.8	-0.2
TNCH				S	**S**	**23 05 45.6**	**+1.0**
TNCH				sS	pS	23 06 00.2	+0.8
TNCH				pmax	pmax		
	comp=E,11nm,0.4s						
TNCH				pmax	pmax		
	comp=E,550nm,13.1s						
TNCH				LR	LR		
	comp=E,1µm,19.2s						
TNCH				LR	LR		
	comp=E,2µm,16.4s						
TNCH				LR	LR		
	comp=E,3µm,17.2s						
KIP	**Kipapa**	**58.35**	**60**	IAMs_20	IAMs_20	23 18 14.6	
	comp=Z,22µm,20.0s						
BTO	**Baotou**	**58.84**	**326**	*e*P	**P**	**22 57 48.3**	**+0.3**
BTO				S	**S**	**23 05 49.5**	**-1.3**
BTO				LR	LR		
	comp=Z,63µm,22.1s						
BTO				LR	LR		
	comp=Z,48µm,21.2s						
HEH	**HeiHe**	**59.23**	**344**	*e*P	**P**	**22 57 51.9**	**+1.5**
HEH				sP	**pP**	**22 58 01.8**	**-1.0**
HEH				PP	**PP**	**23 00 03.2**	**+1.5**
HEH				S	**S**	**23 05 58.5**	**+3.3**
HEH				sS	**pS**	**23 06 10.1**	**+0.3**
HEH				SS	**SS**	**23 09 52.0**	**+1.6**
HEH				pmax	pmax		
	comp=Z,92nm,0.8s						
HEH				pmax	pmax		
	comp=Z,3µm,9.8s						
HEH				LR	LR		
	comp=Z,4µm,23.4s						
HEH				LR	LR		
	comp=Z,5µm,24.2s						
HEH				LR	LR		
	comp=Z,12µm,24.8s						
DGPR	**DIGLIPUR**	**59.23**	**289**	*e*P	**P**	**22 57 52.9**	**+1.8**
PEA0B	**Petropavlovsk-**	**59.36**	**6**	P	**P**	**22 57 50.8**	**-0.4**
PEA0B	**Petropavlovsk-**	**59.36**	**6**	P	**P**	**22 57 50.8**	**-0.4**
PEA0B				pmax	pmax		
	comp=Z,217nm,0.9s						
PETK	**Petropavlovsk-**	**59.36**	**6**	P	**P**	**22 57 51.8**	**+0.5**
	comp=Z,148nm,0.8s,baz=186,slow=10,SNR=73						
PETK				LR	LR	23 20 39.6	
	comp=Z,10µm,20.6s,baz=197,slow=33						
	comp=Z,148nm,0.8s						
PETK	**Petropavlovsk-**	**59.36**	**6**	P	**P**	**22 57 51.5**	**+0.3**
PET	**Petropavlovsk**	**59.38**	**6**	P	**P**	**22 57 50.7**	**-0.6**
PET	**Petropavlovsk**	**59.38**	**6**	P	**P**	**22 57 53.4**	**+2.1**
	comp=Z,776nm,0.8s						
PET	**Petropavlovsk**	**59.38**	**6**	*e*P	**P**	**22 57 53.0**	**+1.7**
PET				*e*		22 58 39.2	
PET				*e*S	**S**	**23 06 00.4**	**+3.4**
PET				*e*SS	**SS**	**23 09 55.5**	**+2.8**
PET				pmax	pmax		
	comp=Z,248nm,0.9s						
PET				pmax	pmax		
	comp=Z,2µm,7.7s						
PET				pmax	pmax		
	comp=Z,3µm,15.3s						
PET				MLR	MLR		
	comp=Z,7µm,18.0s						
PET				MLR	MLR		
	comp=Z,8µm,17.0s						
PET	**Petropavlovsk**	**59.38**	**6**	P	**P**	**22 57 52.4**	**+1.1**
NKL	**Nikolayevsk**	**59.44**	**354**	*e*P	**P**	**22 57 50.5**	**-1.3**
NKL				*e*S	**S**	**23 05 58.1**	**+0.3**
NKL				pmax	pmax		
	comp=E,37nm,0.6s						
NKL				pmax	pmax		
	comp=N,153nm,0.8s						
NKL				pmax	pmax		
	comp=Z,468nm,0.9s						
NKL				smax	smax		
	comp=E,192nm,3.0s						
NKL				smax	smax		
	comp=N,718nm,6.0s						
NKL				MLR	MLR		
	comp=N,13µm,18.0s						
NKL				MLR	MLR		
	comp=E,8µm,19.0s						
NKL				MLR	MLR		
	comp=Z,13µm,19.0s						
LZH	**Lanzhou**	**59.82**	**318**	⇑P	**P**	**22 57 54.6**	**-0.4**
LZH				pP	pP	22 58 08.4	+1.1
LZH				sP	sP	22 58 13.3	+1.0
LZH				PP	PP	23 00 15.4	+8.0
LZH				S	**S**	**23 06 01.4**	**-2.3**
LZH				sS	pS	23 06 20.8	+2.3
LZH				SS	**SS**	**23 09 56.6**	**-4.0**
LZH				pmax	pmax		
	comp=Z,33nm,1.4s						
LZH				pmax	pmax		
	comp=Z,920nm,8.8s						
LZH				LR	LR		
	comp=Z,8µm,21.4s						
LZH				LR	LR		
	comp=Z,11µm,18.5s						
LZH				LR	LR		
	comp=Z,16µm,19.3s						
HPAH	**Hawaii Prepara**	**59.88**	**63**	P	**P**	**22 57 56.5**	**+0.9**
POHA	**Pohakuloa**	**59.94**	**63**	P	**P**	**22 57 56.5**	**+0.3**
POHA				IAmb	IAmb	22 58 01.2	
	comp=Z,81nm,0.8s						
POHA	**Pohakuloa**	**59.94**	**63**	IAMs_20	IAMs_20	23 19 02.8	
	comp=Z,30µm,22.0s						
PPT	**Papeete**	**60.61**	**107**	P	**P**	**22 58 01.4**	**+0.9**
	comp=Z,35nm,0.7s,baz=86,slow=6.6,SNR=6.1						
	comp=Z,35nm,0.7s						
PPT2	**Papeete2**	**60.61**	**107**	*e*P	**P**	**22 58 02.3**	**+1.7**
	comp=Z,128nm,1.4s						
PPT2				*e*S	**S**	**23 06 16.5**	**+2.2**
	comp=Z,5µm,25.5s						
PPT2				*e*LQ	LQ	23 13 26.0	
	comp=Z,36µm,34.2s						
PPT2				*e*LR	LR	23 15 59.3	
	comp=Z,10µm,24.8s						
PPT2				*e*LR	LR	23 15 59.7	
	comp=Z,8µm,26.8s						
PPTF	**Pamatai, Papee**	**60.62**	**107**	P	**P**	**22 58 01.7**	**+1.1**
PPTF	**Pamatai, Papee**	**60.62**	**107**	P	**P**	**22 58 03.2**	**+2.5**
PPTF	**Pamatai, Papee**	**60.62**	**107**	⇑P	**P**	**22 58 03.4**	**+2.7**
PPTF	**Pamatai, Papee**	**60.62**	**107**	P	**P**	**22 58 02.7**	**+2.1**
TIAR	**Tiarei**	**60.83**	**107**	*e*P	**P**	**22 58 03.9**	**+1.9**
	comp=Z,25nm,1.1s						
DRV	**Dumont d'Urvil**	**60.86**	**184**	P	**P**	**22 58 02.2**	**+0.9**
DRV				pP	**pP**	**22 58 14.3**	**+0.9**
HIA	**Hailar**	**60.86**	**338**	P	**P**	**22 58 04.6**	**+3.0**
HIA	**Hailar**	**60.86**	**338**	P	**P**	**22 58 03.2**	**+1.6**
HIA				pP	**pP**	**22 58 15.2**	**+1.1**
TVO	**Taravao**	**60.93**	**107**	*e*P	**P**	**22 58 05.0**	**+2.2**
	comp=Z,66nm,1.3s						
TBI	**Tubuai**	**61.17**	**113**	*e*P	**P**	**22 58 05.9**	**+1.7**
	comp=Z,175nm,1.0s						
TBI				*e*S	**S**	**23 06 23.1**	**+2.0**
	comp=Z,17µm,28.0s						
TBI				*e*SS	**SS**	**23 10 25.1**	**+3.4**
	comp=Z,21µm,34.0s						
TBI				*e*LQ	LQ	23 13 40.2	
	comp=Z,125µm,39.2s						
TBI				*e*LR	LR	23 16 14.3	
	comp=Z,127µm,35.8s						
TBI				*e*LR	LR	23 16 14.8	
	comp=Z,179µm,32.8s						
SAIH	**SAIHA**	**62.02**	**299**	*e*P	**P**	**22 58 08.6**	**-1.6**
SAIH				IAmb	IAmb	22 58 34.9	
	comp=Z,52nm,0.6s						
MEH	**Mehetia**	**62.06**	**107**	*e*P	**P**	**22 58 10.7**	**+0.3**
	comp=Z,31nm,1.0s						
PMOR	**Pomariorio Ree**	**62.13**	**104**	*e*P	**P**	**22 58 11.6**	**+0.8**
	comp=Z,411nm,1.2s						
MOKO	**MOKOCHONG**	**62.13**	**304**	*e*P	**P**	**22 58 09.1**	**-1.8**
MOKO				IAmb	IAmb	22 58 44.8	
	comp=Z,44nm,1.0s						
SHEM	**Shemya Is, Ala**	**62.21**	**17**	P	**P**	**22 58 12.5**	**+1.9**
	comp=Z,67nm,0.6s,baz=22,slow=8.1,SNR=5.2						
SHEM				LR	LR	23 22 29.6	
	comp=Z,12µm,19.8s,baz=207,slow=33						
	comp=Z,67nm,0.6s						
KOHI	**KOHIMA**	**62.24**	**303**	*e*P	**P**	**22 58 08.8**	**-2.8**
KOHI				IAmb	IAmb	22 58 18.1	
	comp=Z,33nm,0.7s						
VAH	**Vaihoa**	**62.40**	**104**	*e*P	**P**	**22 58 14.3**	**+1.7**
	comp=Z,96nm,1.1s						
ZEA	**Zeya**	**62.42**	**345**	*e*P	**P**	**22 58 13.2**	**+1.2**
ZEA				*e*		23 00 29.8	
ZEA				*e*S	**S**	**23 06 38.0**	**+2.2**
ZEA				*e*SS	**SS**	**23 10 46.1**	**+5.7**
ZEA				pmax	pmax		
	comp=N,60nm,0.7s						
ZEA				pmax	pmax		
	comp=E,20nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,100nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,1µm,16.4s						
ZEA				pmax	pmax		
	comp=Z,500nm,9.8s						
ZEA				smax	smax		
	comp=E,2µm,12.0s						
ZEA				smax	smax		
	comp=N,2µm,10.6s						
ZIRO	**ZIRO**	**63.15**	**305**	*e*P	**P**	**22 58 18.7**	**+1.0**
BRDH	**Bariadhala**	**63.25**	**299**	LR	LR	23 22 50.6	

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      comp=N,2µm,21.7s,baz=104,slow=33
TEZP  TEZPUR            63.67 304 eP        P         22 58 19.0 -1.9
TEZP                              IAmb      IAmb      22 58 49.8
      comp=Z,94nm,1.6s
SHL   Shillong          64.05 302 IAmb      IAmb      22 58 53.1
      comp=Z,72nm,1.2s
SHL   Shillong          64.05 302 eP        P         22 58 22.3 -1.3
SHL                               IAML                22 58 52.8
      comp=Z,22nm,1.3s
SHL   Shillong          64.05 302 P         P         22 58 21.6 -2.0
GTA   Gaotai            64.32 319 eP        P         22 58 24.6 -0.5
GTA                               sP        sP        22 58 41.8 -0.7
GTA                               PP        PP        23 00 46.0 -1.0
GTA                               S         S         23 06 59.3 -1.0
GTA                               sS        pS        23 07 17.2 +1.8
GTA                               SS        SS        23 11 14.5 +3.6
GTA                               pmax      pmax
      comp=Z,7.0nm,1.5s
GTA                               pmax      pmax
      comp=Z,1µm,9.2s
GTA                               LR        LR
      comp=Z,5µm,22.7s
GTA                               LR        LR
      comp=Z,4µm,23.9s
GTA                               LR        LR
      comp=Z,7µm,24.5s
KIWB  Kanaga Island     64.38  22 P         P         22 58 25.0  0.0
ADK   Adak              64.58  23 P         P         22 58 27.1 +0.8
ADK                               IAmb      IAmb      22 58 30.6
      comp=Z,79nm,0.8s
ADK   Adak              64.58  23 IAMs_20   IAMs_20   23 22 16.8
      comp=Z,14µm,20.0s
ADK   Adak              64.58  23 P         P         22 58 30.3 +4.0
      comp=Z,126nm,0.8s
ADK   Adak              64.58  23 P         P         22 58 27.1 +0.8
ADK                               pmax      pmax
      comp=Z,79nm,0.8s
ADK                               MLR       MLR
      comp=Z,14µm,20.0s
ADK   Adak              64.58  23 P         P         22 58 28.0 +1.7
ADK                               sP        sP        22 58 44.4 +0.6
ULN   Ulaanbaatar       65.32 330 P         P         22 58 32.2 +0.8
ULN                               IAmb      IAmb      22 58 59.0
      comp=Z,71nm,1.4s
ULN   Ulaanbaatar       65.32 330 IAMs_20   IAMs_20   23 25 13.1
      comp=Z,13µm,22.0s
ULN   Ulaanbaatar       65.32 330 P         P         22 58 32.2 +0.8
ULN                               pmax      pmax
      comp=Z,71nm,1.4s
ULN                               MLR       MLR
      comp=Z,13µm,22.0s
ULN   Ulaanbaatar       65.32 330 P         P         22 58 31.8 +0.4
CIT   Chita             65.43 337 eP        P         22 58 35.2 +3.3
CIT                               e                   22 58 47.0
CIT                               e                   22 59 01.8
CIT                               e                   23 00 57.8
MA2   Magadan           65.43   1 P         P         22 58 32.9 +1.2
      comp=Z,50nm,0.8s,baz=142,slow=5.7,SNR=15
MA2                               LR        LR        23 27 04.0
      comp=Z,8µm,19.4s,baz=189,slow=36
      comp=Z,50nm,0.8s
MA2   Magadan           65.43   1 P         P         22 58 31.3 -0.4
MA2                               IAmb      IAmb      22 58 37.2
      comp=Z,50nm,0.8s
MA2   Magadan           65.43   1 P         P         22 58 34.2 +2.5
      comp=Z,77nm,0.8s
MA2   Magadan           65.43   1ceP        P         22 58 32.7 +1.0
MA2                               pmax      pmax
      comp=Z,56nm,0.8s
MA2   Magadan           65.43   1 P         P         22 58 32.6 +1.0
SONM  Songino Array     65.63 330 P         P         22 58 34.6 +1.2
      comp=Z,14nm,0.7s,baz=146,slow=6.5,SNR=45
SONM                              S         S         23 07 15.5 -0.6
      comp=Z,0.3nm,0.6s,baz=176,slow=5.8,SNR=1.5
SONM                              LR        LR        23 24 39.9
      comp=Z,10µm,21.9s,baz=127,slow=34
SONM                              PKPPKP    P'P'df    23 27 10.5 -0.7
      comp=Z,2.2nm,0.9s,baz=298,slow=3.1,SNR=6.1
      comp=Z,14nm,0.7s
SONM  Songino Array     65.63 330 IAmb      IAmb      22 59 01.4
      comp=Z,90nm,1.4s
CASY  Casey             65.85 196 IAMs_20   IAMs_20   23 25 00.0
      comp=Z,14µm,20.0s
CASY  Casey             65.85 196 P         P         22 58 36.2 +1.9
CASY                              pP        pP        22 58 47.7 +1.2
CASY                              sP        sP        22 58 52.5 +1.1
GOMU  GeErMu            66.13 314 P         P         22 58 40.5 +3.3
GOMU                              S         S         23 07 19.3 -3.8
GOMU                              SS        SS        23 11 37.5 -2.1
GOMU                              LR        LR
      comp=Z,5µm,20.6s
GOMU                              LR        LR
      comp=Z,8µm,19.8s
GOMU                              LR        LR
      comp=Z,17µm,22.6s
LSA   Lhasa             66.18 306 P         P         22 58 38.3 +0.5
LSA                               pP        pP        22 58 44.6 -5.7
LSA                               sP        sP        22 58 48.8 -6.4
LSA                               S         S         23 07 23.6 -0.6
LSA                               pmax      pmax
      comp=Z,12nm,1.0s
LSA                               LR        LR
      comp=Z,4µm,25.6s
LSA                               LR        LR
      comp=Z,2µm,31.3s
LSA                               LR        LR
      comp=Z,5µm,27.1s
LSA   Lhasa             66.18 306 P         P         22 58 36.8 -1.0
GTK   Tadong            67.42 303 eP        P         22 58 45.5 +0.2
GTK                               IAmb      IAmb      22 59 14.9
      comp=Z,41nm,0.9s
NIKH  Nikolski High     68.58  26 P         P         22 58 51.2 -0.7
      baz=225
SEY   Seymchan          68.83   1 P         P         22 58 53.2 +0.1
      comp=Z,45nm,0.8s,baz=177,slow=5.1,SNR=44
SEY                               LR        LR        23 29 12.7
      comp=Z,3µm,19.4s,baz=175,slow=36
      comp=Z,45nm,0.8s
SEY   Seymchan          68.83   1ceP        P         22 58 53.1 -0.1
SEY                               pmax      pmax
      comp=Z,52nm,0.8s
SEY                               MLR       MLR
      comp=Z,8µm,20.0s
ZAK   Zakamensk         68.84 330 eP        P         22 58 53.9 +0.2
ZAK                               pmax      pmax
      comp=Z,50nm,1.0s
RAMN  Ramite            68.98 302 eP        P         22 58 55.2  0.0
      comp=Z,10nm,0.6s
JIRN  Jiri              69.55 302 eP        P         22 58 58.8 -0.1
      comp=Z,9.0nm,0.5s
YAK   Yakutsk           69.58 350 LR        LR        23 28 45.1
      comp=Z,4µm,21.8s,baz=150,slow=35
YAK   Yakutsk           69.58 350 P         P         22 58 57.2 -0.6
YAK                               IAmb      IAmb      22 59 08.9
      comp=Z,54nm,0.8s
YAK   Yakutsk           69.58 350 eP        P         22 58 58.2 +0.4
YAK                               e*PP      sP        22 59 14.6 -0.8
YAK                               e                   23 01 28.4
YAK                               eS        S         23 08 02.6 +0.1
YAK                               e*SS      SKKSac    23 08 55.1 +0.5
YAK                               pmax      pmax
      comp=Z,47nm,0.9s
YAK                               pmax      pmax
      comp=N,13nm,0.9s
YAK                               pmax      pmax
      comp=E,5.0nm,1.0s
YAK                               pmax      pmax
      comp=Z,440nm,3.9s
YAK                               pmax      pmax
      comp=N,233nm,3.8s
YAK                               pmax      pmax
      comp=E,193nm,3.3s
YAK                               smax      smax
      comp=N,639nm,3.9s
YAK                               smax      smax
      comp=E,344nm,4.2s
IRK   Irkutsk           69.58 332 eP        P         22 59 00.0 +1.9
IRK                               pmax      pmax
      comp=Z,94nm,2.4s
PALK  Pallekele         69.79 280 LR        LR        23 32 38.1
      comp=Z,1µm,21.7s,baz=217,slow=38
BOD   Bodaibo           69.80 341 eP        P         22 59 00.8 +1.5
BOD                               pmax      pmax
      comp=Z,10.0nm,1.9s
TAOE  Nuku Hiva Isla    69.84  97 eP        P         22 59 00.3 -0.3
      comp=Z,705nm,1.2s
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TAOE                              eS        S         23 08 09.4 +1.7
      comp=Z,2µm,25.8s
TAOE                              eSS       SS        23 12 39.6 +2.4
      comp=Z,2µm,48.3s
TAOE                              eLR       LR        23 20 15.7
      comp=Z,7µm,23.1s
TAOE  Nuku Hiva Isla    69.84  97 P         P         22 59 00.5 -0.1
TAOE  Nuku Hiva Isla    69.84  97 P         P         22 59 02.8 +2.2
      comp=Z,330nm,1.0s
TAOE  Nuku Hiva Isla    69.84  97 P         P         22 59 02.0 +1.4
GUN   Gumba             69.89 302 eP        P         22 59 00.3 -0.7
      comp=Z,48nm,0.9s
PKI   Pulchoki          70.18 302 eP        P         22 59 02.0 -0.7
PKIN  Phulchoki         70.19 302 eP        P         22 59 02.0 -0.7
      comp=Z,20nm,0.5s
UNV   Unalaska Valle    70.20  26 P         P         22 59 01.9 +0.1
      baz=227
DMN   Daman             70.45 302 eP        P         22 59 04.0 -0.3
      comp=Z,26nm,0.5s
CCD   Concordia, Ant    70.59 187 P         P         22 59 05.1 +0.7
CCD                               pP        pP        22 59 17.0 +0.3
MOY   Mondy             70.78 330 eP        P         22 59 06.6 +1.0
MOY                               pmax      pmax
      comp=Z,34nm,1.8s
GKN   Gorkha            70.96 302 eP        P         22 59 05.9 -1.4
      comp=Z,47nm,0.5s
SPIA  Saint Paul Isl    71.05  22 P         P         22 59 07.3 +0.4
      baz=223
VNDA  Vanda             71.73 177 P         P         22 59 11.6 +0.8
      comp=Z,27nm,0.9s,baz=331,slow=6.4,SNR=51
VNDA                              S         S         23 08 24.2 -3.1
      comp=Z,3.0nm,1.1s,baz=63,slow=9.0,SNR=2.0
VNDA                              LR        LR        23 27 15.3
      comp=Z,7µm,19.5s,baz=19,slow=33
      comp=Z,27nm,0.9s
VNDA  Vanda             71.73 177 P         P         22 59 11.8 +1.1
VNDA                              IAmb      IAmb      22 59 26.0
      comp=Z,55nm,0.8s
VNDA  Vanda             71.73 177 P         P         22 59 11.9 +1.1
VNDA                              pmax      pmax
      comp=Z,55nm,0.8s
VNDA  Vanda             71.73 177 P         P         22 59 11.6 +0.8
VNDA                              pP        pP        22 59 23.4 +0.4
DANN  Dangsing          71.81 302 eP        P         22 59 10.9 -1.6
      comp=Z,52nm,0.6s
FALS  False Pass        72.23  26 P         P         22 59 14.3 +0.3
      baz=230
PYUN  Piuthan           72.38 302 eP        P         22 59 14.1 -1.8
      comp=Z,90nm,0.8s
S12K  Black Hills       73.37  26 P         P         22 59 21.1 +0.2
      baz=231
JBP   Jabalpur          73.68 296 eP        P         22 59 21.1 -2.2
HYB   Hyderabad         73.71 290 eP        P         22 59 25.4 +1.7
HYB   Hyderabad         73.71 290 eP        P         22 59 25.7 +2.0
SDPT  Sand Point        73.86  27 P         P         22 59 23.9 +0.2
      baz=233
WMQ   Urumqi            74.39 319 ⇑P        P         22 59 30.0 +2.8
WMQ                               pP        pP        22 59 38.0 -1.9
WMQ                               PcP       sP        22 59 45.2 +0.4
WMQ                               S         S         23 08 56.0 -2.8
WMQ                               SKS       SKSac     23 09 28.5 -3.4
WMQ                               SS        SS        23 13 52.5 +6.6
WMQ                               pmax      pmax
      comp=Z,52nm,1.3s
WMQ                               pmax      pmax
      comp=Z,1µm,11.9s
WMQ                               LR        LR
      comp=Z,4µm,22.5s
WMQ                               LR        LR
      comp=Z,5µm,18.9s
WMQ                               LR        LR
      comp=Z,5µm,25.9s
PCHI  Peechi            74.56 283⇑eP        P         22 59 26.0 -2.7
BILL  Bilibino          74.88   6 P         P         22 59 29.6 +0.2
BILL  Bilibino          74.88   6d iP       P         22 59 28.8 -0.6
BILL                              i                   23 02 17.5
BILL                              i PPP     PPP       23 04 11.2
BILL                              i S       SKiKP     23 08 53.5 +2.9
BILL                              i SSS     SSS       23 17 02.0
BILL                              pmax      pmax
      comp=Z,40nm,0.9s
CHGN  Chignik           75.36  27 P         P         22 59 32.4  0.0
      baz=234
BHPL  Bhopal            75.99 296 eP        P         22 59 35.7 -1.0
BHPL                              IAmb      IAmb      23 00 06.5
      comp=Z,19nm,0.8s
R16K  Pilot Point       76.47  26 P         P         22 59 39.5 +0.8
      baz=235,SNR=5.6
R17K  Ugashik Creek     77.04  27 P         P         22 59 42.3 +0.4
      baz=236
DGZ   Jazzator, Alta    77.06 324c iP       P         22 59 42.5 +0.1
DGZ                               pmax      pmax
      comp=Z,23nm,1.2s
DGZ                               MLR       MLR
      comp=Z,19µm,20.0s
P16K  Nushagak River    77.15  25 P         P         22 59 42.7 +0.2
      baz=234
O16K  Kokwok River B    77.44  24 P         P         22 59 43.8 -0.3
      baz=234
Q16K  King Salmon       77.51  26 P         P         22 59 44.7 +0.2
      baz=236
Q17K  Contact Creek     77.61  26 P         P         22 59 45.0 -0.2
      baz=236
ZSN   Zaisan            77.68 321 eP        P         22 59 46.3 +0.5
      baz=321
ZSN                               eS        S         23 09 36.5 +1.7
      baz=321
ZSN   Zaisan            77.68 321 eP        P         22 59 46.2 +0.5
ZSN                               eS        S         23 09 36.4 +1.7
N16K  Nishlik Lake      77.69  23 P         P         22 59 45.2 -0.3
      baz=233
P17K  Kvichak River     77.89  25 P         P         22 59 46.4 -0.3
      baz=236
TNA   Tin City          77.95  17 ⇑P        P         22 59 46.8 -0.1
TNA   Tin City          77.95  17 P         P         22 59 46.4 -0.4
      baz=224,SNR=9.7
O17K  Koliganek Bris    77.95  25 P         P         22 59 46.2 -0.8
      baz=235,SNR=19
ANM   Nome              78.00  18 IAMs_20   IAMs_20   23 28 51.4
      comp=Z,17µm,22.0s
ANM   Nome              78.00  18 P         P         22 59 46.5 -0.7
      baz=226,SNR=34
SMLA  Simla             78.08 303 eP        P         22 59 48.2 -0.1
SMLA                              IAML                23 00 18.3
      comp=Z,33nm,1.2s
Q18K  Katmai Hardscr    78.21  26 P         P         22 59 47.8 -0.7
      baz=237,SNR=27
OHAK  Old Harbor        78.22  28 IAmb      IAmb      22 59 51.5
      comp=Z,35nm,0.8s
OHAK  Old Harbor        78.22  28 P         P         22 59 51.5 +3.0
      comp=Z,63nm,1.4s
OHAK  Old Harbor        78.22  28 P         P         22 59 48.4 -0.1
      baz=239
P18K  Big Mountain,     78.52  25 IAMs_20   IAMs_20   23 28 11.8
      comp=Z,14µm,22.0s
P18K  Big Mountain,     78.52  25 P         P         22 59 51.3 +1.1
      baz=237
TIXI  Tiksi             78.72 354 LR        LR        23 32 54.9
      comp=Z,4µm,21.7s,baz=90,slow=34
TIXI  Tiksi             78.72 354 P         P         22 59 51.5 +0.6
TIXI  Tiksi             78.72 354ceP        P         22 59 51.6 +0.6
TIXI                              pmax      pmax
      comp=Z,21nm,1.7s
O18K  Koktuh Hills      78.78  25 P         P         22 59 52.0 +0.4
      baz=237
KDAK  Kodiak Island     78.84  28 P         P         22 59 51.4 -0.5
      comp=Z,16nm,0.7s,baz=265,slow=5.8,SNR=7.5
KDAK                              LR        LR        23 31 54.6
      comp=Z,8µm,19.7s,baz=268,slow=34
      comp=Z,16nm,0.7s
Q19K  Cape Douglas,     78.96  26 IAMs_20   IAMs_20   23 29 33.2
      comp=Z,10µm,22.0s
Q19K  Cape Douglas,     78.96  26 P         P         22 59 52.9 +0.3
      baz=238,SNR=6.3
MK31  Makanchi Array    79.06 320d iP       P         22 59 53.5 +0.1
MKAR  Makanchi Array    79.06 320 P         P         22 59 53.3 -0.1
      comp=Z,6.6nm,0.7s,baz=98,slow=8.5,SNR=40
MKAR                              S         S         23 09 48.0 -1.6
      comp=Z,0.4nm,0.8s,baz=81,slow=4.5,SNR=1.6
MKAR                              PKKPbc    PKKPbc    23 18 45.4 -2.2
      comp=Z,4.9nm,0.8s,baz=299,slow=1.8,SNR=30
MKAR                              PKP2ab              23 26 32.8
      comp=Z,0.3nm,0.5s,baz=129,slow=9.2,SNR=5.4
MKAR                              PKPPKP    P'P'df    23 26 47.2 -1.3
      comp=Z,2.6nm,1.0s,baz=2.9,slow=2.4,SNR=8.2
MKAR                              LR        LR        23 35 16.4
      comp=Z,6µm,19.2s,baz=95,slow=36
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      comp=Z,6.6nm,0.7s
MKAR  Makanchi Array    79.06 320 i P       P         22 59 54.0 +0.6
MKAR                              pmax      pmax
      comp=Z,6.0nm,0.6s
MAKZ  Makanchi          79.27 320 P         P         22 59 53.5 -1.1
MAKZ  Makanchi          79.27 320 P         P         22 59 53.5 -1.1
MAKZ                              pmax      pmax
      comp=Z,25nm,1.1s
O19K  Port Alsworth     79.34  25 IAMs_20   IAMs_20   23 29 22.4
      comp=Z,19µm,22.0s
O19K  Port Alsworth     79.34  25 P         P         22 59 54.8 +0.2
      baz=237
Q20K  Shuyak Island     79.35  27 P         P         22 59 55.3 +0.6
      baz=239
P19K  Oil Pt            79.52  26 P         P         22 59 56.0 +0.3
      baz=238
N19K  Bonanza Creek     79.61  24 P         P         22 59 56.0 -0.2
      baz=237
SHLS  Shalkode          79.72 316 eP        P         22 59 56.1 -1.1
      baz=316
SHLS  Shalkode          79.72 316 eP        P         22 59 56.1 -1.1
O20K  Slope Mountain    80.01  26 P         P         22 59 57.6 -0.7
      baz=239
UZB   Uzynbulak         80.03 316 eP        P         22 59 59.4 +0.5
      baz=316
UZB   Uzynbulak         80.03 316 eP        P         22 59 59.4 +0.5
TTA   Tatalina          80.19  22 P         P         23 00 02.3 +3.0
TTA   Tatalina          80.19  22 ⇑P        P         22 59 58.9 -0.4
TTA   Tatalina          80.19  22 P         P         22 59 58.6 -0.7
      baz=235,SNR=11
HOM   Homer             80.22  26 P         P         22 59 58.5 -0.9
      baz=240
L19K  White Mountain    80.22  23 IAMs_20   IAMs_20   23 31 38.5
      comp=Z,14µm,21.0s
L19K  White Mountain    80.22  23 P         P         22 59 59.2 -0.1
      baz=237
M19K  Big River Lodg    80.25  24 IAMs_20   IAMs_20   23 29 43.0
      comp=Z,16µm,22.0s
M19K  Big River Lodg    80.25  24 P         P         22 59 59.6 +0.1
      baz=237
CNPM  China Poot        80.33  26 IAMs_20   IAMs_20   23 28 56.5
      comp=Z,10µm,22.0s
ZALV  Zalesovo Beam     80.33 327 P         P         22 59 59.3 -0.8
      comp=Z,11nm,0.5s,baz=110,slow=5.4,SNR=24
ZALV                              PKKPbc    PKKPbc    23 18 42.4 -2.6
      comp=Z,2.6nm,0.4s,baz=302,slow=2.8,SNR=16
ZALV                              PKP2ab              23 26 27.3
      comp=Z,0.9nm,0.8s,baz=328,slow=5.3,SNR=3.7
ZALV                              PKP2bc    P'P'df    23 26 44.1 -1.5
      comp=Z,3.2nm,0.8s,baz=290,slow=4.4,SNR=8.0
ZALV                              LR        LR        23 35 59.1
      comp=Z,8µm,19.7s,baz=116,slow=36
      comp=Z,11nm,0.5s
ZALV  Zalesovo Beam     80.33 327 i P       P         22 59 59.2 -0.9
ZALV                              pmax      pmax
      comp=Z,11nm,0.5s
KPKS  Kokpek            80.36 316 eP        P         23 00 01.3 +0.7
      baz=316
KPKS  Kokpek            80.36 316 eP        P         23 00 01.3 +0.7
SATY  Saty              80.43 315 eP        P         23 00 01.9 +0.8
      baz=315
SATY  Saty              80.43 315 eP        P         23 00 01.8 +0.8
ZHN   Zhinishke         80.44 315 eP        P         23 00 02.2 +1.1
      baz=316
ZHN   Zhinishke         80.44 315 eP        P         23 00 02.2 +1.1
BRLK  Bradley Lake      80.60  26 IAmb      IAmb      23 00 05.0
      comp=Z,36nm,0.7s
BRSE  Bradley Lake S    80.65  26 P         P         23 00 01.1 -0.7
      baz=241
M20K  Styx River        80.74  24 P         P         23 00 01.8 -0.5
      baz=238
SPCR  Spurr Chakacha    80.76  25 P         P         23 00 01.4 -1.0
      baz=239
L20K  Farewell, AK      80.76  23 P         P         23 00 01.4 -0.9
      baz=237
GCSA  Galena City Sc    80.93  21 P         P         23 00 02.5 -0.5
      baz=234
CAPN  Captain Cook N    80.98  25 IAMs_20   IAMs_20   23 29 27.7
      comp=Z,13µm,22.0s
CAPN  Captain Cook N    80.98  25 P         P         23 00 02.6 -0.8
      baz=240
TDK   Taldyqorghan      81.02 317 eP        P         23 00 04.8 +0.8
      baz=317
TDK                               LR        LR        23 33 26.0
      comp=Z,5µm,20.5s,baz=317
TDK   Taldyqorghan      81.02 317 eP        P         23 00 04.8 +0.8
RDOG  Red Dog Mine      81.12  16 IAmb      IAmb      23 00 08.4
      comp=Z,31nm,0.7s
RDOG                              IAMs_20   IAMs_20   23 33 42.6
      comp=Z,16µm,20.0s
RDOG  Red Dog Mine      81.12  16 P         P         23 00 03.5 -0.5
      baz=228,SNR=12
K20K  Telida            81.16  22 P         P         23 00 03.3 -1.1
      baz=237,SNR=18
KSH   Kashi             81.19 311 P         P         23 00 07.0 +1.8
KSH                               S         S         23 10 10.9 -1.6
KSH                               sS        sS        23 10 32.5 -1.4
KSH                               SS        SS        23 15 32.8 +4.2
KSH                               pmax      pmax
      comp=Z,10.0nm,0.9s
KSH                               pmax      pmax
      comp=Z,2µm,14.0s
KSH                               LR        LR
      comp=Z,4µm,22.1s
KSH                               LR        LR
      comp=Z,6µm,22.6s
KSH                               LR        LR
      comp=Z,7µm,21.8s
SEW   Seward            81.40  26 IAmb      IAmb      23 00 09.1
      comp=Z,50nm,0.8s
SEW   Seward            81.40  26 P         P         23 00 04.0 -1.6
      baz=242,SNR=5.3
MDOK  Medeo             81.41 315 eP        P         23 00 07.1 +0.7
      baz=315
MDOK                              eS        S         23 10 16.4 +1.7
      baz=315
MDOK                              LR        LR        23 33 11.6
      comp=Z,3µm,24.7s,baz=315
MDOK  Medeo             81.41 315 eP        P         23 00 07.0 +0.7
MDOK                              eS        S         23 10 16.4 +1.7
SKT   Skwentna          81.44  24 P         P         23 00 05.2 -0.7
      baz=240
TNSS  Tian-Shan         81.45 315 eP        P         23 00 06.7 -0.2
      baz=315
TNSS  Tian-Shan         81.45 315 eP        P         23 00 06.6 -0.2
O22K  Cooper Landing    81.46  26 P         P         23 00 05.3 -0.6
      baz=242
SUA   Susitna One       81.50  25 IAMs_20   IAMs_20   23 29 58.4
      comp=Z,14µm,22.0s
SUA   Susitna One       81.50  25 P         P         23 00 04.8 -1.5
      baz=240
FIS   Fire Island       81.57  25 IAMs_20   IAMs_20   23 29 47.1
      comp=Z,11µm,22.0s
SEM   Semipalatinsk     81.60 323 eP        P         23 00 07.9 +0.7
      baz=323
SEM                               LR        LR        23 33 07.2
      comp=Z,3µm,18.9s,baz=323
SEM   Semipalatinsk     81.60 323 eP        P         23 00 07.9 +0.7
SEM                               MLR       MLR
      comp=Z,3µm,19.0s
RC01  Rabbit Creek A    81.75  25 P         P         23 00 07.8 +0.3
      baz=241
NIL   Nilore            81.89 305 P         P         23 00 07.0 -2.0
NIL                               IAmb      IAmb      23 00 42.5
      comp=Z,67nm,0.8s
NIL   Nilore            81.89 305 P         P         23 00 07.0 -2.0
NIL                               pmax      pmax
      comp=Z,67nm,0.8s
NIL                               MLR       MLR
      comp=Z,3µm,21.0s
M22K  Willow            81.91  25 IAMs_20   IAMs_20   23 30 55.0
      comp=Z,16µm,22.0s
CAST  Castle Rocks      81.95  23 IAMs_20   IAMs_20   23 35 17.5
      comp=Z,12µm,20.0s
CAST  Castle Rocks      81.95  23 P         P         23 00 06.7 -1.9
      baz=239
CHUM  Lake Minchumin    82.11  22 P         P         23 00 08.5 -0.8
      baz=239
KUU   Kurty             82.11 316 eP        P         23 00 09.8 -0.1
      comp=Z,18nm,0.9s,baz=316
KUU                               LR        LR        23 34 12.1
      comp=Z,5µm,23.9s,baz=316
KUU   Kurty             82.11 316 eP        P         23 00 09.7 -0.1
KUU                               pmax      pmax
      comp=Z,19nm,0.9s
KUU                               MLR       MLR
      comp=Z,5µm,24.0s
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CUT	Chulitna	82.16	24	P	P	23 00 08.1	-1.6
	baz=241						
PWL	Port Wells	82.24	26	IAmb	IAmb	23 00 13.5	
	comp=Z,66nm,0.7s						
PWL				IAMs_20	IAMs_20	23 30 53.0	
	comp=Z,10µm,22.0s						
PWL	Port Wells	82.24	26	P	P	23 00 09.2	-1.0
	baz=243,SNR=6.7						
PMR	Palmer	82.24	25	IAmb	IAmb	23 00 35.7	
	comp=Z,119nm,1.9s						
PMR	Palmer	82.24	25	P	P	23 00 11.4	+1.4
PMR	Palmer	82.24	25	P	P	23 00 08.5	-1.6
	baz=242						
P23K	Montague Islan	82.26	27	P	P	23 00 09.5	-0.7
	baz=244						
TKM2	Tokmak 2	82.37	315	P	P	23 00 12.2	+0.7
	SNR=22						
GHO	Glory Hole Cre	82.41	25	IAMs_20	IAMs_20	23 31 22.5	
	comp=Z,10µm,22.0s						
KNK	Knik Glacier	82.44	25	IAMs_20	IAMs_20	23 31 03.3	
	comp=Z,13µm,22.0s						
KNK	Knik Glacier	82.44	25	P	P	23 00 10.2	-1.0
	baz=242						
SML	Sawmill	82.68	25	IAmb	IAmb	23 00 15.8	
	comp=Z,46nm,0.6s						
SML				IAMs_20	IAMs_20	23 30 36.5	
	comp=Z,9µm,22.0s						
SML	Sawmill	82.68	25	P	P	23 00 10.5	-2.0
	baz=243,SNR=15						
KURK	Kurchatov	82.68	323	P	P	23 00 11.0	-1.6
KURK				IAmb	IAmb	23 00 44.2	
	comp=Z,51nm,1.1s						
KURK	Kurchatov	82.68	323	IAMs_20	IAMs_20	23 35 16.6	
	comp=Z,9µm,22.0s						
KURK	Kurchatov	82.68	323	⇑P	P	23 00 11.3	-1.3
KURK	Kurchatov	82.68	323	P	P	23 00 11.0	-1.6
KURK				pmax	pmax		
	comp=Z,51nm,1.2s						
KURK				MLR	MLR		
	comp=Z,9µm,22.0s						
KURBB	Kurchatov Arra	82.71	323	P	P	23 00 12.5	-0.2
	comp=Z,6.7nm,0.9s,baz=116,slow=4.2,SNR=42						
KURBB				LR	LR	23 35 30.8	
	comp=Z,7µm,21.8s,baz=100,slow=34						
	comp=Z,6.7nm,0.9s						
BPAW	Bear Paw Mtn.	82.72	22	IAMs_20	IAMs_20	23 35 40.5	
	comp=Z,10µm,20.0s						
BPAW	Bear Paw Mtn.	82.72	22	P	P	23 00 11.4	-1.2
	baz=240,SNR=13						
KBK	Karagaybulak	82.76	314	P	P	23 00 13.9	+0.4
	SNR=8.2						
H21K	Melozitna Rive	82.86	21	IAMs_20	IAMs_20	23 32 22.1	
	comp=Z,17µm,22.0s						
H21K	Melozitna Rive	82.86	21	P	P	23 00 12.2	-1.1
	baz=238						
I21K	Tanana	82.91	21	IAMs_20	IAMs_20	23 30 42.5	
	comp=Z,8µm,21.0s						
I21K	Tanana	82.91	21	P	P	23 00 11.7	-1.8
	baz=239						
M23K	Glacier View	82.93	25	P	P	23 00 12.2	-1.5
	baz=243						
UCH	Uchtor	82.96	314	P	P	23 00 16.2	+1.4
	SNR=25						
CHMS	Chumysh	82.99	315	P	P	23 00 13.7	-0.8
	SNR=7.1						
AAK	Ala-Archa	83.08	314	P	P	23 00 15.5	+0.5
	SNR=10						
AAK	Ala-Archa	83.08	314	LR	LR	23 36 58.2	
	comp=Z,9µm,21.6s,baz=92,slow=35						
AAK	Ala-Archa	83.08	314	P	P	23 00 15.1	0.0
AAK	Ala-Archa	83.08	314	IAMs_20	IAMs_20	23 36 45.4	
	comp=Z,9µm,21.0s						
AAK	Ala-Archa	83.08	314	⇑P	P	23 00 14.0	-1.1
AAK	Ala-Archa	83.08	314	P	P	23 00 15.1	0.0
AAK				pmax	pmax		
	comp=Z,13nm,0.8s						
AAK				MLR	MLR		
	comp=Z,9µm,21.0s						
G21K	Allakaket	83.08	20	P	P	23 00 12.8	-1.6
	baz=237						
MAW	Mawson	83.11	203	LR	LR	23 34 47.9	
	comp=Z,11µm,21.7s,baz=88,slow=34						
SCM	Sheep Creek Mo	83.12	25	IAMs_20	IAMs_20	23 31 12.1	
	comp=Z,16µm,22.0s						
SCM	Sheep Creek Mo	83.12	25	P	P	23 00 13.4	-1.3
	baz=244						
SGDS	Sogindy	83.19	315	*e*P	P	23 00 15.3	-0.2
	baz=315						
SGDS	Sogindy	83.19	315	*e*P	P	23 00 15.3	-0.2
USP	Ospenovka	83.23	315	P	P	23 00 16.1	+0.3
	SNR=18						
MLY	Manley	83.28	22	P	P	23 00 14.1	-1.4
	baz=240,SNR=47						
MCK	McKinley	83.34	23	P	P	23 00 13.6	-2.2
	baz=242,SNR=28						
BWN	Browne	83.34	23	IAMs_20	IAMs_20	23 36 00.5	
	comp=Z,12µm,20.0s						
F21K	Alatna River	83.48	19	P	P	23 00 14.6	-1.9
	baz=237						
H22K	Ishtalitna Cre	83.49	21	P	P	23 00 15.6	-0.9
	baz=239,SNR=11						
AML	Almayashu	83.52	313	P	P	23 00 18.1	+0.4
	SNR=44						
KLU	Klutina	83.57	26	P	P	23 00 16.0	-1.1
	baz=245,SNR=13						
EKS2	Erkin-Say	83.59	314	P	P	23 00 18.0	+0.3
	SNR=28						
NEA2	Nenana	83.69	22	IAMs_20	IAMs_20	23 34 14.1	
	comp=Z,11µm,20.0s						
NEA2	Nenana	83.69	22	P	P	23 00 16.2	-1.4
	baz=242,SNR=24						
M24K	Tolsona, Glenn	83.73	25	IAMs_20	IAMs_20	23 31 20.2	
	comp=Z,15µm,22.0s						
M24K	Tolsona, Glenn	83.73	25	P	P	23 00 17.0	-0.8
	baz=244,SNR=7.8						
I23K	Minto, Yukon-K	83.85	22	IAMs_20	IAMs_20	23 31 56.2	
	comp=Z,9µm,22.0s						
I23K	Minto, Yukon-K	83.85	22	P	P	23 00 17.0	-1.4
	baz=241,SNR=11						
QSPA	South Pole Qui	83.91	180	P	P	23 00 18.7	-0.2
	comp=Z,43nm,0.6s,baz=327,slow=1.1,SNR=258						
QSPA				S	SKSac	23 10 29.2	-9.2
	comp=Z,1.5nm,1.0s,baz=339,slow=8.2,SNR=1.6						
QSPA				LR	LR	23 35 42.3	
	comp=Z,7µm,20.9s,baz=10.0,slow=34						
	comp=Z,43nm,0.6s						
BTLS	Baital	84.00	316	*e*P	P	23 00 19.5	0.0
	baz=316						
BTLS	Baital	84.00	316	*e*P	P	23 00 19.5	0.0
WRH	Wood River Hil	84.01	23	IAMs_20	IAMs_20	23 36 27.5	
	comp=Z,9µm,20.0s						
F22K	John River	84.06	19	P	P	23 00 18.0	-1.4
	baz=238,SNR=23						
H23K	Yukon River	84.11	21	IAMs_20	IAMs_20	23 32 36.3	
	comp=Z,9µm,22.0s						
H23K	Yukon River	84.11	21	P	P	23 00 18.8	-0.9
	baz=241						
MDM	Murphy Dome	84.18	22	IAMs_20	IAMs_20	23 34 08.1	
	comp=Z,13µm,21.0s						
N25K	Chitina, Valde	84.19	26	P	P	23 00 18.4	-1.8
	baz=246						
CCB	Clear Creek Bu	84.20	23	IAMs_20	IAMs_20	23 36 33.5	
	comp=Z,8µm,20.0s						
HARP	HAARP	84.28	25	P	P	23 00 19.9	-0.8
	baz=245						
TCOL	CIGO, UAF Yank	84.28	22	IAMs_20	IAMs_20	23 34 30.7	
	comp=Z,10µm,20.0s						
TCOL	CIGO, UAF Yank	84.28	22	P	P	23 00 16.5	-4.0
	baz=243						
COLA	College	84.29	22	IAMs_20	IAMs_20	23 34 30.7	
	comp=Z,9µm,20.0s						
COLA	College	84.29	22	P	P	23 00 21.4	+0.9
COLA	College	84.29	22	P	P	23 00 18.4	-2.1
	baz=243						
G23K	Bananza Creek	84.38	20	P	P	23 00 18.6	-2.4
	baz=240						
PAX	Paxson	84.39	25	P	P	23 00 18.9	-2.3
	baz=245,SNR=6.4						
HDA	Harding Lake	84.42	23	IAMs_20	IAMs_20	23 34 00.5	
	comp=Z,9µm,20.0s						
HDA	Harding Lake	84.42	23	P	P	23 00 18.9	-2.4
	baz=244,SNR=16						
GLB	Gilahina Butte	84.47	26	IAmb	IAmb	23 00 25.2	
	comp=Z,25nm,0.7s						
VRDI	Verde Repeater	84.55	27	IAMs_20	IAMs_20	23 33 15.0	
	comp=Z,10µm,22.0s						
POKR	Poker Plat Res	84.56	22	IAMs_20	IAMs_20	23 34 38.9	
	comp=Z,13µm,20.0s						
POKR	Poker Plat Res	84.56	22	P	P	23 00 19.5	-2.4
	baz=243,SNR=7.2						
COLD	Coldfoot	84.57	20	P	P	23 00 19.8	-2.1
	baz=240,SNR=7.4						
ILAR	Eielson Array	84.61	23	P	P	23 00 19.7	-2.5
	comp=Z,20nm,0.6s,baz=250,slow=3.5,SNR=78						
ILAR				PKKP	PKKPdf	23 18 19.9	-7.5
	comp=Z,0.8nm,1.0s,baz=220,slow=2.3,SNR=4.5						
ILAR				PKPPKP	P'P'df	23 26 35.4	-1.8
	comp=Z,0.8nm,1.0s,baz=32,slow=2.9,SNR=5.2						
ILAR				LR	LR	23 37 53.7	
	comp=Z,5µm,18.9s,baz=242,slow=35						
K24K	Donnelly Dome	84.62	24	P	P	23 00 20.3	-2.0
	baz=245						
H24K	Noodor Dome	84.72	22	IAMs_20	IAMs_20	23 31 37.2	
	comp=Z,9µm,22.0s						
H24K	Noodor Dome	84.72	22	P	P	23 00 21.3	-1.5
	baz=243						
MCARA	McCarthy VSAT	84.80	27	IAmb	IAmb	23 01 05.9	
	comp=Z,31nm,0.9s						
MCARA				IAMs_20	IAMs_20	23 33 22.7	
	comp=Z,9µm,22.0s						
MCARA	McCarthy VSAT	84.80	27	P	P	23 00 22.2	-1.0
	baz=247						
A21K	Barrow	84.89	15	IAMs_20	IAMs_20	23 35 45.2	
	comp=Z,8µm,20.0s						
A21K	Barrow	84.89	15	P	P	23 00 22.6	-0.8
	baz=234						
RIDG	Independent Ri	84.97	24	IAmb	IAmb	23 00 49.7	
	comp=Z,29nm,1.0s						
RIDG	Independent Ri	84.97	24	P	P	23 00 21.8	-2.3
	baz=246,SNR=9.4						
MENT	Mentasta	85.11	25	P	P	23 00 28.6	+3.8
E23K	Chandalar	85.18	19	P	P	23 00 23.8	-1.3
	baz=241						
M26K	Nabesna, AK	85.20	26	P	P	23 00 23.3	-2.1
	baz=247						
G24K	Hadweenzic Riv	85.26	21	P	P	23 00 23.3	-2.2
	baz=243						
D23K	Nanushuk River	85.29	18	P	P	23 00 24.4	-1.1
	baz=240						
BARN	Barnard Glacie	85.29	27	IAMs_20	IAMs_20	23 35 47.7	
	comp=Z,9µm,22.0s						
L26K	Log Cabin Wild	85.30	25	P	P	23 00 24.2	-1.5
	baz=247,SNR=8.7						
GAR	Garm	85.34	310	IAmb	IAmb	23 01 18.3	
	comp=Z,41nm,0.9s						
DZA	Taraz	85.40	314	*e*P	P	23 00 26.8	+0.1
	baz=314						
DZA	Taraz	85.40	314	*e*P	P	23 00 26.8	+0.1
SCRK	Sand Creek	85.41	24	P	P	23 00 24.3	-2.1
	baz=246,SNR=14						
PRP	Porcupine Dome	85.45	22	P	P	23 00 23.8	-2.8
	baz=245						
TOLK	Toolik Lake Re	85.48	19	P	P	23 00 24.8	-1.7
	baz=241						
KBL	Kabul	85.49	305	P	P	23 00 26.2	-1.4
KBL	Kabul	85.49	305	P	P	23 00 26.2	-1.4
KBL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
F24K	Squaw Lake	85.50	20	P	P	23 00 25.7	-1.0
	baz=242,SNR=76						
E24K	Your Creek	85.56	19	P	P	23 00 25.2	-1.7
	baz=242						
PINM	Pinnacle	85.60	28	P	P	23 00 25.4	-1.9
	baz=250						
M27K	Edge Creek, AK	85.67	26	IAMs_20	IAMs_20	23 32 22.7	
	comp=Z,12µm,22.0s						
M27K	Edge Creek, AK	85.67	26	P	P	23 00 26.0	-1.7
	baz=248						
G25K	Bearman Lake	85.78	21	P	P	23 00 26.1	-1.9
	baz=244						
J26L	Joseph Creek	85.79	24	P	P	23 00 26.2	-2.1
	baz=247,SNR=14						
BCPM	Bancas Point	85.84	28	IAMs_20	IAMs_20	23 36 38.4	
	comp=Z,8µm,21.0s						
O28M	Mount Upton	85.86	28	P	P	23 00 27.5	-1.4
	baz=250						
PNL	Peninsula	85.86	29	P	P	23 00 27.7	-0.9
	baz=251						
L27K	Beaver Creek,	85.95	25	IAMs_20	IAMs_20	23 32 50.1	
	comp=Z,12µm,21.0s						
L27K	Beaver Creek,	85.95	25	P	P	23 00 26.9	-2.1
	baz=248						
FYU	Fort Yukon	86.01	21	IAmb	IAmb	23 01 58.3	
	comp=Z,53nm,1.2s						
FYU				IAMs_20	IAMs_20	23 34 18.2	
	comp=Z,8µm,22.0s						
KK31	Karatay Array	86.03	314	IAmb	IAmb	23 01 02.0	
	comp=Z,31nm,1.1s						
KKAR	Karatay Array	86.03	314	⇑P	P	23 00 27.9	-1.9
NRIK	Noril'sk	86.06	342	P	P	23 00 29.6	+0.2
	comp=Z,48nm,0.7s,baz=112,slow=4.2,SNR=40						
NRIK				S	S	23 10 53.8	-6.4
	comp=Z,0.8nm,0.4s,baz=26,slow=22,SNR=5.7						
NRIK				LR	LR	23 38 06.9	
	comp=Z,5µm,21.9s,baz=114,slow=35						
	comp=Z,48nm,0.7s						
NRIK	Noril'sk	86.06	342	IAmb	IAmb	23 00 34.2	
	comp=Z,49nm,0.8s						
NRIK	Noril'sk	86.06	342	*ce*P	P	23 00 28.8	-0.6
NRIK				pmax	pmax		
	comp=Z,44nm,0.7s						
NRIK				MLR	MLR		
	comp=Z,7µm,22.0s						
YUK3	Moose Creek	86.08	27	P	P	23 00 28.3	-1.6
	baz=250,SNR=7.0						
BRZS	Berezniki	86.13	321	⇓*i*P	P	23 00 31.1	+0.9
	baz=321						
BRZS	Berezniki	86.13	321	*di*P	P	23 00 31.0	+0.9
BVCY	Beaver Creek	86.13	26	P	P	23 00 28.6	-1.3
	baz=249						
CHGR	Chuyangaron	86.16	309	IAmb	IAmb	23 01 02.6	
	comp=Z,74nm,1.0s						
IUG	Iuzhnay	86.18	313	*e*P	P	23 00 30.8	0.0
	comp=Z,13nm,0.9s,baz=313						
IUG				*e*S	SKSac	23 10 53.3	-0.4
	baz=313						
IUG	Iuzhnay	86.18	313	*e*P	P	23 00 30.7	0.0
IUG				*e*S	SKSac	23 10 53.3	-0.4
IUG				pmax	pmax		
	comp=Z,13nm,0.9s						
K27K	Chicken	86.21	24	P	P	23 00 28.7	-1.5
	baz=248						
YUK8	Steele Glacier	86.23	27	P	P	23 00 28.3	-2.4
	baz=250,SNR=11						
I26K	Coal Creek Min	86.27	23	IAMs_20	IAMs_20	23 33 35.6	
	comp=Z,15µm,22.0s						
I26K	Coal Creek Min	86.27	23	P	P	23 00 28.8	-1.7
	baz=247						
C24K	Franklin Bluff	86.27	18	P	P	23 00 28.3	-2.1
	baz=242						
F25K	Christian Rive	86.30	20	P	P	23 00 29.6	-1.0
	baz=245,SNR=9.5						
O29M	Mount Kennedy	86.46	28	P	P	23 00 30.6	-1.0
	baz=251						
CHM	Chimkent	86.53	313	*e*P	P	23 00 33.4	+1.0
	comp=Z,12nm,0.7s,baz=313						
CHM				LR	LR	23 37 12.3	
	comp=Z,2µm,21.9s,baz=313						
CHM	Chimkent	86.53	313	*e*P	P	23 00 33.3	+1.0
CHM				pmax	pmax		
	comp=Z,12nm,0.7s						
CHM				MLR	MLR		
	comp=Z,2µm,22.0s						
E25K	Arctic Village	86.56	20	P	P	23 00 30.1	-1.7
	baz=245,SNR=5.4						
G26K	Porcupine Rive	86.69	21	P	P	23 00 31.5	-1.0
	baz=246						
YUK4	Talbot Arm	86.76	27	P	P	23 00 32.2	-1.0
	baz=251,SNR=15						
YUK6	Outpost Mounta	86.76	28	P	P	23 00 32.1	-1.2
	baz=252						
D25K	Kavik River	86.82	19	P	P	23 00 31.6	-1.5
	baz=244						
EGAK	Eagle	86.86	24	IAMs_20	IAMs_20	23 35 13.8	
	comp=Z,15µm,21.0s						
EGAK	Eagle	86.86	24	P	P	23 00 31.4	-2.0
	baz=249,SNR=18						
F26K	Sheenjek River	86.86	21	P	P	23 00 33.1	-0.3
	baz=246,SNR=17						
S31K	Pelican	86.90	31	P	P	23 00 32.3	-1.4
	baz=254						
I27K	Kandik River	86.98	23	P	P	23 00 33.6	-0.4
	baz=248						
HYT	Haines Junctio	87.12	28	P	P	23 00 33.1	-1.8
	baz=252,SNR=23						
SIT	Sitka	87.12	32	P	P	23 00 33.6	-1.1
	baz=254						
P30M	Million Dollar	87.17	29	P	P	23 00 33.3	-1.7
	baz=253						
M29M	Somme Creek	87.19	26	P	P	23 00 33.7	-1.5
	baz=251						
H27K	Steamboat Moun	87.25	22	P	P	23 00 34.4	-0.8
	baz=248						
PLBC	Pleasant Camp	87.26	29	P	P	23 00 33.3	-2.1
	baz=253						
DAWY	Dawson	87.33	25	IAmb	IAmb	23 00 42.3	
	comp=Z,29nm,0.8s						
DAWY	Dawson	87.33	25	⇑P	P	23 00 35.1	-0.6
DAWY				⇑P	P	23 00 35.4	-0.4
DAWY	Dawson	87.33	25	P	P	23 00 35.3	-0.4
	baz=250,SNR=35						
G27K	Doyon Strip	87.41	22	P	P	23 00 33.5	-2.5
	baz=248						
N30M	Aishikik Lake	87.51	27	P	P	23 00 34.5	-2.2
	baz=253						
C26K	Camden Bay	87.54	18	P	P	23 00 35.3	-1.2
	baz=245						
L29M	L29M	87.55	26	P	P	23 00 34.9	-1.9
	baz=252						
S32K	Killisnoo	87.62	32	P	P	23 00 35.3	-1.9
	baz=255						
O30N	Mendenhall	87.77	28	P	P	23 00 35.7	-2.2
	baz=254,SNR=5.7						
SKAG	Skagway	87.77	30	⇑P	P	23 00 42.8	+5.0
SKAG				⇓sP	sP	23 01 01.1	+5.5
SKAG	Skagway	87.77	30	P	P	23 00 36.5	-1.4
	baz=254						
C27K	Jago River	87.80	19	P	P	23 00 36.6	-1.2
	baz=246						
JIS	Juneau Island	87.93	31	IAMs_20	IAMs_20	23 31 33.9	
	comp=Z,10µm,22.0s						
J29M	Klondike Camp	87.94	24	P	P	23 00 37.5	-1.2
	baz=252						
E27K	Coleen River	87.94	20	P	P	23 00 36.5	-2.0
	baz=248						
M30M	Minto, Yukon	87.97	26	P	P	23 00 36.7	-2.2
	baz=253,SNR=7.5						
K29M	Barlow Dome	88.04	25	P	P	23 00 37.5	-1.8
	baz=252,SNR=43						
U33K	Whale Pass	88.06	33	P	P	23 00 38.3	-1.0
	baz=256						
N31M	Braeburn, Yuko	88.12	28	IAMs_20	IAMs_20	23 43 49.5	
	comp=Z,7µm,18.0s						
N31M	Braeburn, Yuko	88.12	28	P	P	23 00 38.1	-1.5
	baz=254,SNR=11						
I29M	Ogilvie Camp,	88.19	24	IAMs_20	IAMs_20	23 36 58.1	
	comp=Z,11µm,21.0s						
I29M	Ogilvie Camp,	88.19	24	P	P	23 00 38.2	-1.6
	baz=252,SNR=9.7						
BVAR	Borovoye Array	88.22	324	P	P	23 00 39.5	-0.7
	comp=Z,16nm,0.8s,baz=102,slow=5.1,SNR=27						
BVAR				LR	LR	23 42 09.6	
	comp=Z,4µm,19.0s,baz=87,slow=37						
	comp=Z,16nm,0.8s						
BRVK	Borovoye	88.29	324	P	P	23 00 40.5	0.0
BRVK				IAmb	IAmb	23 01 51.1	
	comp=Z,26nm,1.2s						
BRVK	Borovoye	88.29	324	⇑P	P	23 00 38.5	-1.9
BRVK	Borovoye	88.29	324	P	P	23 00 40.5	0.0
BRVK				pmax	pmax		
	comp=Z,26nm,1.2s						
WRAK	Wrangell Islan	88.56	33	P	P	23 00 40.1	-1.5
	baz=257						
P32M	Atlin	88.60	30	P	P	23 00 40.6	-1.3
	baz=256						
V35K	Ketchikan	88.72	34	P	P	23 00 40.6	-1.7
	baz=258						
M31M	Drury Creek, Y	88.94	27	IAMs_20	IAMs_20	23 35 53.3	
	comp=Z,12µm,22.0s						
M31M	Drury Creek, Y	88.94	27	P	P	23 00 42.0	-1.4
	baz=255						
EPYK	Eagle Plains	89.12	23	IAMs_20	IAMs_20	23 38 06.7	
	comp=Z,8µm,20.0s						
EPYK	Eagle Plains	89.12	23	P	P	23 00 42.5	-1.6
	baz=253,SNR=9.8						
Q32M	Nakina River	89.17	31	P	P	23 00 42.3	-2.5
	baz=257						
P33M	Teslin, Yukon	89.19	29	IAMs_20	IAMs_20	23 35 03.0	
	comp=Z,8µm,21.0s						
P33M	Teslin, Yukon	89.19	29	P	P	23 00 43.3	-1.3
	baz=256						
N32M	Quiet Lake	89.29	28	P	P	23 00 43.1	-2.0
	baz=256						
FARO	Faro, Yukon	89.42	27	P	P	23 00 46.2	+0.6
	baz=256,SNR=13						
G30M	tAoh Zraii Nji	89.49	22	P	P	23 00 44.7	-1.2
	baz=253						
S34M	Telegraph Cree	89.53	32	P	P	23 00 45.2	-1.0
	baz=258						
BBB	Bella Bella	90.16	38	LR	LR	23 34 53.2	
	comp=Z,12µm,19.9s,baz=266,slow=31						
DLBC	Dease Lake	90.21	31	LR	LR	23 35 30.1	
	comp=Z,10µm,20.1s,baz=264,slow=32						
DLBC	Dease Lake	90.21	31	P	P	23 00 48.1	-1.4
	baz=259						
MMPY	Sheldon Lake,	90.46	27	P	P	23 00 49.2	-1.3
	baz=258						
F31M	Tsiigehtchic	90.55	22	P	P	23 00 49.1	-1.6
	baz=256,SNR=5.8						
INK	Inuvik	90.84	21	P	P	23 00 52.0	0.0
	comp=Z,5.8nm,0.7s,baz=281,slow=2.9,SNR=12						
INK				LR	LR	23 38 45.6	
	comp=Z,8µm,20.4s,baz=242,slow=34						
	comp=Z,5.8nm,0.7s						
INK	Inuvik	90.84	21	⇑P	P	23 00 52.4	+0.4
INK	Inuvik	90.84	21	P	P	23 00 50.0	-2.0
	baz=256						
JCC	Jacoby Creek,	91.33	49	IAMs_20	IAMs_20	23 39 32.7	
	comp=Z,10µm,18.0s						
MCCM	Marconi Confer	91.92	52	IAMs_20	IAMs_20	23 34 32.5	
	comp=Z,13µm,22.0s						
LIRD	Liard River Hi	92.38	31	P	P	23 00 58.1	-1.3
	baz=262						
YBH	Yreka Blue Hor	92.42	48	P	P	23 01 01.5	+1.4
	comp=Z,9.6nm,0.9s,baz=221,slow=1.0,SNR=11						
YBH				LR	LR	23 35 11.9	
	comp=Z,15µm,21.7s,baz=266,slow=31						
	comp=Z,9.6nm,0.9s						
YBH	Yreka Blue Hor	92.42	48	P	P	23 01 02.3	+2.1
YBH				IAmb	IAmb	23 01 12.0	
	comp=Z,60nm,1.8s						
YBH				IAMs_20	IAMs_20	23 35 11.5	
	comp=Z,14µm,21.0s						
YBH	Yreka Blue Hor	92.42	48	P	P	23 01 02.3	+2.1
YBH				pmax	pmax		
	comp=Z,60nm,1.8s						
YBH				MLR	MLR		
	comp=Z,14µm,21.0s						
WSAR	Wadi Sarin	93.05	293	LR	LR	23 47 24.9	
	comp=Z,626nm,19.8s,baz=116,slow=38						
ORV	Oroville	93.13	51	IAMs_20	IAMs_20	23 36 24.4	
	comp=Z,10µm,21.0s						
CMB	Columbia Colle	93.87	52	IAMs_20	IAMs_20	23 35 54.1	
	comp=Z,10µm,21.0s						
WRGLY	Wrigley	94.08	27	P	P	23 01 08.0	+0.9
	baz=265						
MOD	Modoc Plateau	94.23	48	IAMs_20	IAMs_20	23 36 20.3	
	comp=Z,13µm,21.0s						
A36M	Sachs Harbour	94.28	18	IAmb	IAmb	23 01 11.5	
	comp=Z,23nm,0.7s						
A36M				IAMs_20	IAMs_20	23 39 33.6	
	comp=Z,12µm,22.0s						
A36M	Sachs Harbour	94.28	18	P	P	23 01 07.7	-0.2
	baz=264,SNR=14						
SVE	Sverdlovsk	94.34	327	*e*P	P	23 01 09.4	+0.9
SVE				*e*		23 04 58.8	
SVE				*e*		23 07 01.7	
SVE				*e*S	SKSac	23 11 39.8	-0.3
SVE				*e*		23 18 49.0	
SVE				pmax	pmax		
	comp=Z,20nm,1.4s						
SVE				MLR	MLR		
	comp=Z,21µm,22.0s						
SVE				MLR	MLR		
	comp=E,17µm,22.0s						
C36M	Paulatuk	94.40	21	P	P	23 01 05.6	-2.9
	baz=265						
GEYT	Alibeck	94.68	308	P	P	23 01 11.0	+0.4
	comp=E,4.3nm,0.9s,baz=101,slow=1.5,SNR=12						
GEYT				LR	LR	23 45 45.1	
	comp=E,8µm,21.7s,baz=86,slow=37						
	comp=E,4.3nm,0.9s						
GEYT	Alibeck	94.68	308	P	P	23 01 11.0	+0.4
ELIB	Princess Elisa	94.75	195	*d*P	P	23 01 10.1	-0.3

	comp=Z,54nm,1.1s						
ELIB				*d*PP	PP	23 05 08.9	+10
HAWA	Hanford	95.09	44	IAMs_20	IAMs_20	23 36 35.5	
	comp=Z,13µm,21.0s						
ISA	Isabella, Lake	95.23	55	P	P	23 01 11.8	-1.3
	baz=266						
ARU	Arti	95.46	326	P	P	23 01 13.8	+0.2
	comp=Z,3.7nm,0.6s,baz=17,slow=1.3,SNR=5.8						
ARU				LR	LR	23 44 10.3	
	comp=Z,14µm,21.7s,baz=84,slow=35						
	comp=Z,3.7nm,0.6s						
ARU	Arti	95.46	326	P	P	23 01 12.8	-0.8
ARU						23 05 04.4	
ARU				PPP	PPP	23 07 07.3	
ARU				S	SKSac	23 11 39.5	-6.6
ARU				SP	SP	23 13 40.2	-3.8
ARU				PS	PS	23 14 32.7	+43
ARU				SS	SS	23 18 50.3	-4.8
ARU				SSS	SSS	23 22 37.6	
ARU				MLR	MLR		
	comp=Z,18µm,22.0s						
AKTO	Aktyubinsk	95.50	320	P	P	23 01 14.1	+0.2
	comp=Z,1.3nm,0.6s,baz=162,slow=3.2,SNR=3.3						
AKTO				LR	LR	23 44 43.7	
	comp=Z,8µm,20.7s,baz=76,slow=36						
	comp=Z,1.3nm,0.6s						
NVAR	Mina Array Bea	95.53	52	P	P	23 01 14.8	+0.1
	comp=Z,2.6nm,0.6s,baz=257,slow=5.9,SNR=11						
NVAR				PKKPbc	PKKPdf	23 18 08.4	+0.6
	comp=Z,0.5nm,0.3s,baz=62,slow=3.5,SNR=4.2						
NVAR				LR	LR	23 37 14.3	
	comp=Z,10µm,21.2s,baz=272,slow=31						
	comp=Z,2.6nm,0.6s						
EDW2	Edwards Air Fo	95.57	56	P	P	23 01 13.9	-0.9
	baz=267						
CWC	Cottonwood Cre	95.59	54	P	P	23 01 13.3	-1.7
	baz=267						
DSP	Deep Springs	95.73	53	P	P	23 01 16.2	+0.9
MPMC	Manual Prospec	96.05	54	P	P	23 01 14.8	-2.2
	baz=267						
MURC	Murrieta	96.16	57	P	P	23 01 15.8	-1.6
	baz=267						
109C	Camp Elliot, M	96.19	58	P	P	23 01 15.0	-2.5
	baz=267						
BMO	Blue Mountains	96.58	46	IAMs_20	IAMs_20	23 37 50.0	
	comp=Z,10µm,20.0s						
PFO	Pinyon Flats O	96.77	57	LR	LR	23 36 30.2	
	comp=Z,18µm,22.0s,baz=274,slow=30						
TPFO	Pinon Flats	96.78	57	P	P	23 01 17.1	-3.2
	baz=267						
NEW	Newport	96.80	42	P	P	23 01 20.3	+0.3
	comp=Z,5.0nm,0.8s,baz=201,slow=6.0,SNR=6.3						
NEW				LR	LR	23 38 06.9	
	comp=Z,5µm,21.8s,baz=276,slow=31						
	comp=Z,5.0nm,0.8s						
NEW	Newport	96.80	42	IAMs_20	IAMs_20	23 42 56.7	
	comp=Z,6µm,20.0s						
NEW	Newport	96.80	42	P	P	23 01 18.4	-1.6
	baz=269						
IKP	In-Ko-Pah, Jac	97.02	58	P	Pdif	23 01 21.6	+0.1
	baz=267						
TPNV	Topopah Spring	97.09	54	IAMs_20	IAMs_20	23 39 36.5	
	comp=Z,8µm,20.0s						
RPN	Rapa Nui	97.23	118	LR	LR	23 37 48.8	
	comp=Z,3µm,21.8s,baz=266,slow=31						
SWSC	Sam W. Stewart	97.29	58	P	P	23 01 19.5	-3.1
	baz=268						
GMRC	Granite Mounta	97.48	56	P	P	23 01 22.7	-0.8
	baz=268						
PLID	Pearl Lake	97.51	45	P	Pdif	23 01 23.8	+0.2
PLID				IAMs_20	IAMs_20	23 39 28.7	
	comp=Z,12µm,20.0s						
BC3	Big Chuckawall	97.61	57	P	P	23 01 21.6	-2.5
	baz=268						
R11A	Troy Canyon, C	97.66	52	P	P	23 01 22.0	-2.3
	baz=268						
ELK	Elko	97.99	50	LR	LR	23 39 31.5	
	comp=Z,12µm,20.4s,baz=282,slow=32						
ELK	Elko	97.99	50	IAMs_20	IAMs_20	23 39 19.9	
	comp=Z,11µm,20.0s						
YKA	Yellowknife Ar	98.12	28	P	P	23 01 24.9	-0.6
	comp=Z,2.3nm,0.7s,baz=270,slow=4.8,SNR=9.5						
YKA				PKiKP	PKiKP	23 05 58.2	0.0
	comp=Z,0.6nm,0.7s,baz=268,slow=1.4,SNR=3.2						
YKA				PKKPbc	PKKPbc	23 17 56.8	-4.0
	comp=Z,1.5nm,0.8s,baz=91,slow=2.8,SNR=12						
YKA				PKPPKP	P'P'df	23 26 16.2	+3.8
	comp=Z,0.4nm,0.8s,baz=99,slow=2.2,SNR=3.7						
YKA				LR	LR	23 42 15.9	
	comp=Z,8µm,20.9s,baz=288,slow=33						
	comp=Z,2.3nm,0.7s						
YKA	Yellowknife Ar	98.12	28	*i* P	Pdif	23 01 29.2	+3.7
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NVL	N'lazarevskaya	98.30	193	*e*P	Pdif	23 01 29.3	+3.1
NVL				*e*		23 05 31.4	
NVL				*e*PPP	PPP	23 07 44.9	
NVL				*e*S	SKSac	23 12 00.9	+0.5
NVL				pmax	pmax		
	comp=Z,9.0nm,1.3s						
NVL				MLR	MLR		
	comp=Z,10µm,18.0s						
HLID	Hailey	98.63	47	P	P	23 01 26.6	-2.0
	baz=270						
SPR3	Spring Creek 3	98.66	52	IAmb	IAmb	23 02 05.9	
	comp=Z,21nm,1.5s						
PDMCI	Parker Dam,Lak	98.72	56	P	P	23 01 25.6	-3.3
	baz=269						
MSO	Missoula	98.95	44	IAMs_20	IAMs_20	23 37 59.6	
	comp=Z,12µm,22.0s						
MSO	Missoula	98.95	44	P	P	23 01 26.5	-3.3
	baz=271						
TROLL	Troll, Antarti	99.16	190	Pdiff	Pdif	23 01 29.7	-0.6
214A	Organ Pipe Nat	99.79	59	P	Pdif	23 01 30.3	-3.5
	baz=269						
DUG	Dugway, Tooele	99.83	50	IAMs_20	IAMs_20	23 40 37.8	
	comp=Z,8µm,20.0s						
DLMT	Dillon	99.91	45	IAMs_20	IAMs_20	23 40 38.3	
	comp=Z,12µm,20.0s						
SNAA	Sanae	100.31	189	Pdiff	Pdif	23 01 34.9	-0.3
SNAA	Sanae	100.31	189	P	Pdif	23 01 35.0	-0.3
	comp=Z,8.4nm,1.0s,baz=225,slow=16,SNR=3.7						
SNAA				PP	PP	23 05 41.2	+0.1
	comp=Z,12nm,1.2s,baz=177,slow=8.6,SNR=3.2						
SNAA				PKKPbc	PKKPbc	23 17 53.3	-1.4
	comp=Z,3.2nm,0.9s,baz=154,slow=9.6,SNR=2.1						
SNAA	Sanae	100.31	189	IAMs_20	IAMs_20	23 48 44.7	
	comp=Z,8µm,18.0s						
SNAA	Sanae	100.31	189	P	Pdif	23 01 35.0	-0.3
BOZ	Bozeman (W)	100.58	45	IAMs_20	IAMs_20	23 40 57.0	
	comp=Z,10µm,20.0s						
BOZ	Bozeman (W)	100.58	45	P	Pdif	23 01 35.9	-1.2
	baz=272						
HWUT	Hardware Ranch	100.76	49	IAMs_20	IAMs_20	23 40 52.1	
	comp=Z,9µm,21.0s						
IMW	Indian Meadow	101.14	47	IAMs_20	IAMs_20	23 39 31.9	
	comp=Z,11µm,22.0s						
FLWY	Flagg Ranch	101.31	46	IAMs_20	IAMs_20	23 39 37.4	
	comp=Z,9µm,22.0s						
TUC	Tucson	101.51	58	P	Pdif	23 01 38.4	-3.1
	baz=270						
VNA3	Neumayer Olymp	101.61	187	Pdiff	Pdif	23 01 40.0	-1.1
VNA2	Neumayer--Watz	101.62	188	Pdiff	Pdif	23 01 40.5	-0.5
	baz=161,slow=5.0						
EGMT	Eagleton	101.74	42	IAMs_20	IAMs_20	23 40 13.3	
	comp=Z,9µm,22.0s						
EGMT	Eagleton	101.74	42	P	Pdif	23 01 37.9	-4.3
	baz=274						
BELG	Belogornoye	101.95	322	P	Pdif	23 01 42.2	-0.5
	comp=Z,6.1nm,0.8s,baz=132,slow=8.4,SNR=4.9						
PDAR	Pinedale Array	102.20	48	P	Pdif	23 01 44.0	-0.6
	comp=Z,1.6nm,0.7s,baz=243,slow=6.5,SNR=9.8						
PDAR				PKiKP	PKiKP	23 06 06.7	+0.1
	comp=Z,0.6nm,0.8s,baz=255,slow=7.0,SNR=2.2						
PDAR				PKKPbc	PKKPbc	23 17 45.5	-3.2
	comp=Z,0.4nm,0.4s,baz=106,slow=5.9,SNR=6.5						
PDAR				PKPPKP	P'P'df	23 26 05.8	-0.6
	comp=Z,0.6nm,0.9s,baz=96,slow=6.4,SNR=2.5						
RLMT	Red Lodge	102.27	45	P	Pdif	23 01 40.7	-4.0
	baz=274						
RES	Resolute Bay	102.46	14	Pdif	Pdif	23 01 46.2	+1.6
RES	Resolute Bay	102.46	14	P	Pdif	23 01 46.2	+1.6
MAK	Makhachkala	102.80	313	*i* P	Pdif	23 01 41.6	-5.2
MAK				*i*		23 06 07.0	
MAK				*e*PPP	PPP	23 08 11.6	
MAK				*e*		23 12 24.4	
MAK				*e*PS	PS	23 15 07.5	-2.0
MAK				*e*SS	SS	23 20 36.5	-2.0
MAK				pmax	pmax		
	comp=Z,70nm,1.4s						
MVCO	Mesa Verde	103.28	53	IAMs_20	IAMs_20	23 43 15.6	
	comp=Z,6µm,20.0s						
MVCO	Mesa Verde	103.28	53	P	Pdif	23 01 46.3	-3.2
	baz=273						
O20A	White River Ci	103.34	50	P	Pdif	23 01 46.0	-3.6
	baz=273						
RWWY	Rawlins	104.01	49	IAMs_20	IAMs_20	23 42 47.2	
	comp=Z,10µm,21.0s						
SPITS	Spitsbergen Ar	104.03	351	Pdiff	Pdif	23 01 48.1	-3.5
	comp=Z,5.5nm,0.9s,baz=139,slow=11,SNR=1.6						
KBS	Kingsbay	104.15	352	IAMs_20	IAMs_20	23 48 56.4	
	comp=Z,5µm,20.0s						
LAO	LASA Array	104.25	43	IAMs_20	IAMs_20	23 41 42.9	
	comp=Z,12µm,22.0s						
K22A	Casper	104.44	48	P	Pdif	23 01 51.3	-3.1
	baz=275						
S22A	4UR Ranch, Cre	104.58	53	P	Pdif	23 01 52.9	-2.4
	baz=274						
LVZ	Lovozero	104.74	339	IAMs_20	IAMs_20	23 51 59.1	
	comp=Z,8µm,21.0s						
KLMR	Klimovskoe	104.88	332	Pdif	Pdif	23 01 45.8	-10
KLMR				AMP		23 02 02.1	
	comp=Z,24nm,1.9s						
KLMR				*e*PP	PKiKP	23 06 03.2	-7.4
KLMR				S	SKSac	23 12 29.0	-3.1
KLMR				S	SKSac	23 12 29.0	-3.1
KLMR				SP	SP	23 15 11.0	-14
KLMR				PS	PS	23 15 25.6	-5.1
KLMR				PS	PS	23 15 25.6	-5.1
KLMR				*e*PKKPbc	PKKPbc	23 17 38.0	-2.9
KLMR				*e*PKKSbc	PKKPbc	23 17 38.0	-2.9
KLMR				*e*PKKP	PKKPdf	23 17 49.7	-1.1
KLMR						23 21 40.9	
KLMR						23 21 40.9	
KLMR				SKKS	SKKSdf	23 25 09.0	+9.2
KLMR				SKKS	SKKSdf	23 25 09.0	+9.2
KLMR				LQ	LQ	23 38 47.2	
KLMR				LQ	LQ	23 38 47.2	
KLMR				LR	LR	23 40 25.9	
KLMR				AMP		23 52 04.7	
	comp=Z,10µm,19.4s						
KLMR	Klimovskoe	104.88	332	P	Pdif	23 01 45.7	-10
KLMR				S	SKSac	23 12 29.0	-3.1
KLMR				PS	PS	23 15 25.5	-5.1
KLMR						23 25 09.0	
KLMR				pmax	pmax		
	comp=Z,24nm,1.9s						
KLMR				MLR	MLR		
	comp=Z,10µm,19.0s						
ANMO	Albuquerque	105.05	56	Pdiff	Pdif	23 01 59.4	+2.1
	comp=Z,0.8nm,0.6s,baz=346,slow=12,SNR=2.0						
ANMO	Albuquerque	105.05	56	IAMs_20	IAMs_20	23 42 50.4	
	comp=Z,9µm,21.0s						
ANMO	Albuquerque	105.05	56	P	PKiKP	23 06 09.0	-3.0
	baz=273						
GNI	Garni	105.07	310	Pdiff	Pdif	23 02 00.2	+3.0
	comp=Z,1.2nm,0.4s,baz=152,slow=4.4,SNR=1.9						
APA	Apatity	105.31	339	⇓*i*P	Pdif	23 01 57.3	-0.1
APA				*i*		23 06 22.0	
APA				*i* PS	PS	23 15 35.0	+0.2
APA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ISCO	Idaho Springs	105.38	51	IAMs_20	IAMs_20	23 43 00.5	
	comp=Z,7µm,21.0s						
DGMT	Dagmar	105.39	41	IAMs_20	IAMs_20	23 50 37.6	
	comp=Z,5µm,20.0s						
SDCO	Great Sand Dun	105.63	53	IAMs_20	IAMs_20	23 44 00.5	
	comp=Z,9µm,20.0s						
FFC	Flin Flon	105.65	35	IAMs_20	IAMs_20	23 44 26.8	
	comp=Z,10µm,21.0s						
Q24A	Divide	105.81	51	P	PKiKP	23 06 10.4	-3.0
	baz=275						
KBZ	Khabaz	106.07	314	PP	PP	23 06 29.9	+4.6
	comp=Z,2.3nm,0.8s,baz=191,slow=2.7,SNR=4.0						
KBZ				PKKPbc	PKKPbc	23 17 36.8	0.0
	comp=Z,2.1nm,0.8s,baz=312,slow=5.5,SNR=5.6						
RSSD	Black Hills	106.09	46	IAMs_20	IAMs_20	23 44 33.7	
	comp=Z,12µm,21.0s						
MNTX	Cornudas Mount	106.11	59	P	PKiKP	23 06 11.0	-2.8
	baz=273						
KIV	Kislovodsk	106.19	314	*i* P	Pdif	23 01 59.2	-2.9
KIV				*e*		23 06 25.2	
KIV				*e*PPP	PPP	23 08 40.5	
KIV				*e*		23 12 37.2	
KIV				*e*PS	PS	23 15 42.9	-2.3
KIV				*e*SS	SS	23 21 24.6	-0.6
KIV				*e*SSS	SSS	23 25 25.4	
KIV				MLR	MLR		
	comp=Z,4µm,21.0s						
BRIGG	Briggsdale	106.29	50	IAMs_20	IAMs_20	23 43 18.5	
	comp=Z,7µm,21.0s						
KEV	Kevo	106.48	342	IAMs_20	IAMs_20	23 53 49.8	
	comp=Z,6µm,21.0s						
T25A	Trinidad	106.55	53	P	PKiKP	23 06 10.8	-3.9
	baz=275						
TULEG	Thule	106.56	9	IAMs_20	IAMs_20	23 46 50.3	
	comp=Z,8µm,22.0s						
ARCES	ARCESS Array B	107.04	342	Pdiff	Pdif	23 02 03.7	-1.4
	comp=Z,6.8nm,0.9s,baz=65,slow=5.8,SNR=9.9						
ARCES				PKiKP	PKiKP	23 06 15.4	+1.0
	comp=Z,3.5nm,0.8s,baz=338,slow=12,SNR=2.1						
ARCES				PKKPbc	PKKPbc	23 17 33.8	-0.7
	comp=Z,5.3nm,1.0s,baz=266,slow=2.2,SNR=8.9						
TXAR	Lajitas Array	107.71	61	PKiKP	PKiKP	23 06 17.8	+0.9
	comp=Z,1.3nm,0.8s,baz=237,slow=2.1,SNR=7.7						
TXAR				PKKPbc	PKKPbc	23 17 30.9	-0.5
	comp=Z,1.4nm,0.8s,baz=115,slow=5.2,SNR=8.3						
TXAR				PKPPKP	P'P'df	23 25 56.0	-0.7
	comp=Z,0.5nm,0.9s,baz=82,slow=2.8,SNR=4.7						
OBN	Obninsk	107.90	326	IAMs_20	IAMs_20	23 50 41.3	
	comp=Z,11µm,22.0s						
OGNE	Ogallala	107.97	49	IAMs_20	IAMs_20	23 45 13.9	
	comp=Z,9µm,22.0s						
AMTX	Amarillo	108.96	55	IAMs_20	IAMs_20	23 43 53.1	
	comp=Z,11µm,21.0s						
CBKS	Cedar Bluff	110.02	51	IAMs_20	IAMs_20	23 47 15.4	
	comp=Z,10µm,20.0s						
ULM	Lac du Bonnet	110.34	38	PKiKP	PKiKP	23 06 21.8	+0.7
	comp=Z,2.2nm,0.7s,baz=229,slow=3.9,SNR=4.7						
FINES	FINESS Array B	110.75	335	Pdiff	Pdif	23 02 21.1	-0.7
	comp=Z,2.5nm,0.5s,baz=95,slow=3.0,SNR=13						
FINES				PKiKP	PKiKP	23 06 23.3	+1.8
	comp=Z,2.5nm,0.9s,baz=42,slow=2.3,SNR=1.9						
FINES				PKKPbc	PKKPbc	23 17 19.7	-2.7
	comp=Z,3.7nm,0.9s,baz=196,slow=3.4,SNR=5.7						
BGNE	Belgrade	110.79	48	P	PKiKP	23 06 19.2	-3.1
	baz=281						
AGMN	Agassiz Nation	110.86	40	IAMs_20	IAMs_20	23 49 42.3	
	comp=Z,6µm,20.0s						
JCT	Junction City	110.97	60	P	PKiKP	23 06 20.5	-2.4
	baz=276						
WMOK	Wichita Mounta	111.35	55	P	PKiKP	23 06 22.2	-1.3
	baz=278						
ECSD	EROS Data Cent	111.43	45	P	PKiKP	23 06 21.3	-2.1
	baz=283						
833A	Chaparral WMA,	111.52	62	P	PKiKP	23 06 21.6	-2.4
	baz=275						
UNM	Universidad Na	112.19	72	IAMs_20	IAMs_20	23 45 00.8	
	comp=Z,7µm,22.0s						
KSU1	Kansas State U	112.37	50	P	PKiKP	23 06 22.9	-2.4
	baz=281						
OK033	Mehan	112.65	54	IAMs_20	IAMs_20	23 47 59.4	
	comp=Z,10µm,20.0s						
WHTX	Lake Whitney,	112.81	58	P	PKiKP	23 06 23.5	-2.8
	baz=277						
MNK	Minsk	112.84	327	*i* P	Pdif	23 02 28.2	-3.0
	comp=E,2.0nm,1.1s						
MNK				*i* P	Pdif	23 02 28.2	-3.0
	comp=N,58nm,0.9s						
MNK				*i* P	Pdif	23 02 28.2	-3.0
	comp=Z,4.0nm,1.1s,baz=247						
MNK				*i* PP	PP	23 07 10.9	-3.0
MNK				*i* PPP	PPP	23 09 33.8	
MNK				*i* SKS	SKSdf	23 13 32.5	-1.8
MNK				*i* PS	PS	23 16 46.1	-3.3
MNK				*i* SS	SS	23 22 52.4	-1.0
MNK				*i* SSS	SSS	23 27 04.6	
MNK				*i* LR	LR	23 47 39.0	
MNK				*i* LRM	MLR	23 53 06.1	
	comp=N,7µm,29.4s						
MNK				*i* LRM	MLR	23 54 16.5	
	comp=E,2µm,21.7s						
MNK				*i* LRM	MLR	23 54 16.5	
	comp=Z,14µm,21.7s						
MNK	Minsk	112.84	327	*i* P	Pdif	23 02 28.2	-3.0
MNK				*i*		23 07 10.9	
MNK				*i* PPP	PPP	23 09 33.7	
MNK				*i*		23 13 32.5	
MNK				*i* PS	PS	23 16 46.1	-3.3
MNK				*i* SS	SS	23 22 52.4	-1.0
MNK				*i* SSS	SSS	23 27 04.5	
MNK				pmax	pmax		
	comp=E,2.0nm,1.1s						
MNK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,58nm,0.9s						
MNK				MLR	MLR		
	comp=N,7µm,29.0s						
MNK				MLR	MLR		
	comp=E,2µm,22.0s						
MNK				MLR	MLR		
	comp=Z,14µm,22.0s						
NACGM	Naroch	113.27	328	PP	PP	23 07 20.4	+3.5
	baz=66						
AKASG	Malin Array Be	113.49	323	PKiKP	PKiKP	23 06 27.6	+0.6
	comp=Z,0.6nm,0.4s,baz=59,slow=2.4,SNR=5.5						
AKASG				PP	PP	23 07 21.2	+2.6
	comp=Z,0.9nm,0.6s,baz=57,slow=6.5,SNR=4.9						
AKASG				PKKPbc	PKKPbc	23 17 10.7	-2.3
	comp=Z,1.8nm,0.5s,baz=262,slow=3.9,SNR=18						
BRTR	Keskin Array B	113.57	311	PKiKP	PKiKP	23 06 28.5	+0.7
	comp=Z,0.6nm,0.8s,baz=117,slow=4.3,SNR=3.7						
BRTR				PKKPbc	PKKPbc	23 17 10.3	-2.3
	comp=Z,3.4nm,0.8s,baz=231,slow=2.6,SNR=15						
BRTR				PKKP	PKKPdf	23 17 36.5	+2.2
	comp=Z,1.7nm,0.9s,baz=174,slow=3.7,SNR=4.6						
SPMN	Marine on St.	113.71	43	P	PKiKP	23 06 25.6	-2.0
	baz=286						
EYMN	Ely	113.76	40	IAMs_20	IAMs_20	23 47 38.1	
	comp=Z,8µm,21.0s						
EYMN	Ely	113.76	40	P	PKiKP	23 06 25.3	-2.4
	baz=288						
SCIA	State Center	114.29	47	IAMs_20	IAMs_20	23 50 48.0	
	comp=Z,8µm,21.0s						
KIS	Kishinev	115.00	319	*e*PP	PP	23 07 37.0	+7.6
KIS	Kishinev	115.00	319	*e*PS	PS	23 17 10.0	+0.5
NATX	Nacogdoches	115.19	58	IAMs_20	IAMs_20	23 52 45.7	
	comp=Z,6µm,20.0s						
SCO	Scoresbysund	115.41	357	IAMs_20	IAMs_20	23 52 36.8	
	comp=Z,6µm,21.0s						
ILULI	Ilulissat	115.50	8	IAMs_20	IAMs_20	23 52 22.5	
	comp=Z,10µm,22.0s						
MIAR	Mount Ida	115.62	55	P	PKPdf	23 06 29.6	-2.0
	baz=281						
COWI	Conover	115.89	41	IAMs_20	IAMs_20	23 53 41.5	
	comp=Z,7µm,19.0s						
JFWS	Jewell Farm	116.13	45	IAMs_20	IAMs_20	23 49 43.5	
	comp=Z,10µm,22.0s						
JFWS	Jewell Farm	116.13	45	P	PKPdf	23 06 29.8	-2.6
	baz=287						
BOSA	Boshof	116.14	234	PKP	PKPdf	23 06 31.7	-1.4
	comp=Z,6.6nm,0.6s,baz=135,slow=1.2,SNR=26						
BOSA				PKKPbc	PKKPbc	23 17 04.1	+0.7
	comp=Z,2.0nm,0.8s,baz=109,slow=7.4,SNR=2.0						
ODBI	Odobesti	116.56	319	⇓P	PKKPab	23 17 07.3	+2.1
UALR	University of	116.57	54	PKPdf	PKiKP	23 06 33.7	+0.3
CCM	Cathedral Cave	116.70	50	P	PKPdf	23 06 31.7	-2.0
	baz=284						
VRI	Vrincioaia	116.74	319	⇓P	PKKPab	23 17 01.8	-2.7
PLOR	Plostina	116.80	319	⇓P	PKKPab	23 17 05.9	+1.6
NB2	NORSAR Subarra	116.89	339	PKPdf	PKiKP	23 06 35.2	+1.8
	comp=Z,14nm,1.7s,baz=44,slow=1.9						
NB2				PKKP	PKKPbc	23 16 59.6	-2.1
	comp=Z,1.0nm,0.7s,baz=215,slow=3.4						
NB2	NORSAR Subarra	116.89	339	PKPdf	PKiKP	23 06 35.2	+1.8
	baz=44,slow=1.9						
NOA	NORSAR Array B	116.89	339	PKP	PKiKP	23 06 34.2	+0.8
	comp=Z,1.3nm,1.0s,baz=54,slow=5.3,SNR=2.4						
NOA				PP	PP	23 07 44.5	+2.4
	comp=Z,1.7nm,0.8s,baz=43,slow=6.7,SNR=3.6						
NOA				PKKPbc	PKKPbc	23 16 59.5	-2.1
	comp=Z,2.2nm,0.9s,baz=41,slow=3.6,SNR=5.9						
LVV	L'vov	116.91	324	*e*P	Pdif	23 02 52.8	+3.4
LVV				*e*		23 07 42.8	
LVV				*e*		23 13 33.1	
LVV				MLR	MLR		
	comp=N,3µm,24.0s						
LVV				MLR	MLR		
	comp=E,3µm,24.0s						
LVV				MLR	MLR		
	comp=Z,3µm,26.0s						
BURAR	Bucovina Array	117.07	321	⇑P	PKiKP	23 06 34.5	+0.3
BURAR	Bucovina Array	117.07	321	⇓P	PKKPab	23 17 01.8	-1.3
BURAR	Bucovina Array	117.07	321	⇑PKIKP	PKiKP	23 06 34.5	+0.3
COVR	Voineasa-Covas	117.09	319	⇓P	PKKPab	23 17 03.9	+1.0
LBTB	Lobatse	117.24	238	PKPdf	PKPdf	23 06 34.8	-0.4
LBTB	Lobatse	117.24	238	PKIKP	PKPdf	23 06 34.8	-0.4
MLR	Muntele Rosu	117.39	319	⇓P	PKiKP	23 06 35.2	+0.2
MLR	Muntele Rosu	117.39	319	⇓P	PKKPab	23 16 56.0	-5.8
MLR	Muntele Rosu	117.39	319	PKP	PKiKP	23 06 35.1	+0.2
	baz=88,slow=6.2						
MLR				PKKPbc	PKKPbc	23 16 58.6	-0.9
	comp=Z,3.0nm,0.6s,baz=109,slow=13,SNR=3.9						
HDIL	Hopedale	117.50	47	IAMs_20	IAMs_20	23 54 03.0	
	comp=Z,8µm,20.0s						
HDIL	Hopedale	117.50	47	P	PKPdf	23 06 33.4	-1.7
	baz=287						
SFJD	Kangerlussuaq	117.62	9	IAMs_20	IAMs_20	23 55 35.7	
	comp=Z,7µm,22.0s						
SUR	Sutherland	117.96	228	PKPdf	PKPdf	23 06 35.0	-1.6
SUR	Sutherland	117.96	228	IAMs_20	IAMs_20	23 53 44.1	
	comp=Z,7µm,22.0s						
VOIR		117.99	319	⇑P	PKPdf	23 06 36.1	+0.1
VOIR		117.99	319	⇓P	PKKPab	23 16 56.6	-2.4
VOIR		117.99	319	⇑PKIKP	PKPdf	23 06 36.1	+0.1
L44A	Lake County Fo	118.00	45	IAMs_20	IAMs_20	23 51 51.9	
	comp=Z,8µm,22.0s						
L44A	Lake County Fo	118.00	45	P	PKPdf	23 06 33.6	-2.4
	baz=289						
ARR	Arges	118.29	319	⇓P	PKiKP	23 06 38.0	+1.4
ARR	Arges	118.29	319	⇑P	PKKPab	23 16 56.5	-1.2
COPA	Copaceanca	118.35	317	⇓P	PKKPab	23 16 56.7	-0.6
HUMR	Humele	118.37	318	⇓P	PKKPab	23 16 56.5	-0.7
MBAR	Mbarara	118.40	266	PKPdf	PKPdf	23 06 36.2	-1.6
MBAR	Mbarara	118.40	266	PKIKP	PKPdf	23 06 36.2	-1.6
MBAR				MLR	MLR		
	comp=Z,2µm,22.0s						
KONO	Kongsberg	118.42	338	IAMs_20	IAMs_20	23 58 15.7	
	comp=Z,8µm,22.0s						
CJR	Cluj-Napoca	118.44	321	⇓P	PKKPab	23 16 56.4	-0.6
TRPA	Tarpa	118.51	322	⇓P	PKiKP	23 06 37.4	+0.6
TRPA	Tarpa	118.51	322	⇑P	PKKPab	23 16 54.8	-1.7
VBMS	Vicksburg	118.58	57	IAMs_20	IAMs_20	23 57 01.2	
	comp=Z,7µm,20.0s						
STHS	Stebnicka Huta	118.72	324	*e*PKIKP	PKiKP	23 06 40.4	+3.2
STHS	Stebnicka Huta	118.72	324	*e*PKP	PKiKP	23 06 40.4	+3.2
MARR	Marisel-Cluj	118.75	321	⇓P	PKKPab	23 16 53.9	-1.8
LOT	Lotru	118.82	319	⇓P	PKPdf	23 06 37.4	-0.2
DRGR		118.96	321	⇓P	PKKPab	23 16 53.1	-1.6
OXF	Oxford	118.99	54	P	PKPdf	23 06 35.8	-2.3
	baz=284						
SFIN	Lafayette	119.15	47	P	PKPdf	23 06 35.8	-2.4
	baz=288						
GLMI	Grayling	119.31	41	P	PKPdf	23 06 36.8	-1.6
	baz=293						
GZR	Gura Zlata	119.49	319	⇓P	PKiKP	23 06 39.3	+0.4
GZR	Gura Zlata	119.49	319	⇓P	PKKPab	23 16 51.7	-0.8
GZR	Gura Zlata	119.49	319	⇓PKIKP	PKiKP	23 06 39.3	+0.4
HOPE	Hope Point	119.68	176	IAMs_20	IAMs_20	23 55 59.1	
	comp=Z,8µm,21.0s						
SURR	Surduc	119.76	320	⇑P	PKPdf	23 06 39.1	-0.1
WVT	Waverly	119.83	52	PKPdf	PKPdf	23 06 38.3	-1.4
WVT	Waverly	119.83	52	PKIKP	PKPdf	23 06 38.3	-1.4
WVT				MLR	MLR		
	comp=Z,14µm,20.0s						
WVT	Waverly	119.83	52	P	PKPdf	23 06 38.4	-1.3
	baz=286						
LANS	Liptovska Anna	119.87	324	*e*PKIKP	PKiKP	23 06 41.3	+1.8
LANS	Liptovska Anna	119.87	324	*e*PKP	PKiKP	23 06 41.3	+1.8
HERR	Herculane	119.93	319	⇓P	PKPdf	23 06 38.9	-0.7
HERR	Herculane	119.93	319	⇓P	PKKPab	23 16 50.9	+0.4
BZS	Buzias	120.14	320	⇑P	PKiKP	23 06 40.2	+0.1
BZS	Buzias	120.14	320	⇓P	PKKPab	23 16 49.7	+0.2
BZS	Buzias	120.14	320	⇑PKIKP	PKiKP	23 06 40.2	+0.1
PSZ	Piszkesteto	120.20	323	IAMs_20	IAMs_20	00 04 33.8	
	comp=Z,4µm,21.0s						
VTS	Vitosha	120.25	316	⇓P	PKiKP	23 06 41.2	+0.6

VTS	Vitosha	120.25	316	PKPdf	PKPdf	23 06 39.3	-1.2
VTS	Vitosha	120.25	316	⇓PKIKP	PKiKP	23 06 41.2	+0.6
OKC	Ostrava-Krasne	120.29	326	ePP	PP	23 08 03.5	-2.5
OKC				eSP	SP	23 17 49.0	-2.1
OKC				AMS	AMS	23 58 10.0	
	comp=Z,11µm,22.2s						
ANGG	Ammassalik, Gr	120.34	3	IAMs_20	IAMs_20	00 01 02.2	
	comp=Z,6µm,20.0s						
WCI	Wyandotte Cave	120.41	49	PKPdf	PKPdf	23 06 39.1	-1.7
WCI	Wyandotte Cave	120.41	49	PKIKP	PKPdf	23 06 39.1	-1.7
WCI				MLR	MLR		
	comp=Z,9µm,20.0s						
WCI	Wyandotte Cave	120.41	49	P	PKPdf	23 06 38.0	-2.8
	baz=288						
MDVR	Moldovita	120.42	319	⇓P	PKiKP	23 06 41.0	+0.3
MDVR	Moldovita	120.42	319	⇓P	PKKPab	23 16 48.9	+0.5
VYHS	Vyhne	120.55	324	ePKIKP	PKiKP	23 06 41.6	+0.8
VYHS	Vyhne	120.55	324	ePKP	PKiKP	23 06 41.6	+0.8
O48B	Farmland	120.60	46	P	PKPdf	23 06 38.3	-2.7
	baz=290						
MORC	Moravsky Berou	120.66	326	⇑P	PKiKP	23 06 41.7	+0.6
MORC	Moravsky Berou	120.66	326	ePKIKP	PKiKP	23 06 41.5	+0.5
MORC	Moravsky Berou	120.66	326	⇑PKIKP	PKiKP	23 06 41.7	+0.6
PLCA	Paso Flores	120.75	145	PKP	PKPdf	23 06 41.5	0.0
	comp=Z,19nm,0.8s,baz=252,slow=2.2,SNR=26						
PLCA				PKKPbc	PKKPbc	23 16 47.5	+0.3
	comp=Z,3.7nm,0.9s,baz=148,slow=2.1,SNR=5.4						
PLCA	Paso Flores	120.75	145	eP	PKiKP	23 06 41.9	+0.3
AAM	Ann Arbor	120.92	44	P	PKPdf	23 06 39.4	-2.2
	baz=292						
KRLC	Kraliky	120.92	326	ePKP	PKPdf	23 06 41.1	-0.4
KRLC				ePP	PP	23 08 12.6	+2.2
KRLC				ex	x	23 16 46.4	
KRLC				eSP	SP	23 17 48.5	-8.3
KRLC				AMS	AMS	23 58 30.0	
	comp=Z,10µm,22.4s						
KRLC	Kraliky	120.92	326	ePKIKP	PKPdf	23 06 41.1	-0.4
KRLC				e		23 08 12.6	
KRLC				MLR	MLR		
	comp=Z,10µm,22.4s						
OSTC	Ostas	120.98	327	ePKP	PKiKP	23 06 42.1	+0.5
OSTC				ePP	PP	23 08 11.1	+0.4
OSTC				ex	x	23 16 46.1	
OSTC				eSP	SP	23 17 54.1	-3.1
OSTC				AMS	AMS	23 59 30.0	
	comp=Z,11µm,22.0s						
OSTC	Ostas	120.98	327	ePKIKP	PKiKP	23 06 42.1	+0.5
OSTC				e		23 08 11.1	
OSTC				eSP	SP	23 17 54.1	-3.1
OSTC				MLR	MLR		
	comp=Z,11µm,22.0s						
DPC	Dobruska-Polom	121.03	327	ePKP	PKiKP	23 06 42.3	+0.5
DPC				ex	x	23 06 57.3	
DPC				ePP	PP	23 08 14.1	+3.0
DPC				ex	x	23 16 44.8	
DPC				eSP	SP	23 17 49.0	-8.7
DPC				AMS	AMS	23 59 20.0	
	comp=Z,12µm,22.3s						
DPC	Dobruska-Polom	121.03	327	ePKIKP	PKiKP	23 06 42.3	+0.5
DPC				e		23 06 57.3	
DPC				e		23 08 14.1	
DPC				MLR	MLR		
	comp=Z,12µm,22.3s						
JAVC	Velka Javorina	121.05	325	ePKIKP	PKiKP	23 06 43.4	+1.5
CHVC	Chvalec	121.05	327	ePP	PP	23 08 15.6	+4.4
CHVC				eSP	SP	23 17 51.1	-6.7
CHVC				AMS	AMS	23 59 30.0	
	comp=Z,9µm,23.3s						
UPC	Upice	121.11	327	ePP	PP	23 08 12.6	+1.0
UPC				eSP	SP	23 17 55.1	-3.3
UPC				AMS	AMS	23 59 30.0	
	comp=Z,10µm,21.5s						
P49A	Miami Univ. Ec	121.16	47	IAMs_20	IAMs_20	23 56 29.8	
	comp=Z,5µm,20.0s						
P49A	Miami Univ. Ec	121.16	47	P	PKPdf	23 06 39.9	-2.3
	baz=290						
SRO	Srobarova	121.19	324	ePKIKP	PKiKP	23 06 44.0	+1.9
SRO	Srobarova	121.19	324	ePKP	PKiKP	23 06 44.0	+1.9
LRAL	Lakeview Retre	121.29	55	IAMs_20	IAMs_20	00 00 16.4	
	comp=Z,9µm,21.0s						
LRAL	Lakeview Retre	121.29	55	P	PKPdf	23 06 40.4	-2.2
	baz=284						
IDI	Anoyia	121.40	308	⇓P	PKiKP	23 06 43.9	+0.9
IDI	Anoyia	121.40	308	PKPdf	PKiKP	23 06 43.1	+0.2
VRAC	Vranov	121.43	326	PKP	PKiKP	23 06 43.3	+0.8
	comp=Z,2.7nm,0.8s,baz=166,slow=3.2,SNR=3.1						
VRAC	Vranov	121.43	326	ePKIKP	PKiKP	23 06 42.8	+0.3
FRGS	Fruska Gora	121.49	320	⇓P	PKiKP	23 06 43.4	+0.6
MODS	Modra-Piesok	121.52	325	ePKIKP	PKiKP	23 06 44.6	+1.9
MODS	Modra-Piesok	121.52	325	ePKP	PKiKP	23 06 44.6	+1.9
KRUC	Moravsky	121.67	326	ePKIKP	PKiKP	23 06 43.3	+0.3
BRAL	Brewton	121.69	57	IAMs_20	IAMs_20	00 01 53.6	
	comp=Z,7µm,19.0s						
MORH	Mrgy, Hungar	121.74	322	⇓P	PKPdf	23 06 42.5	-0.5
MORH	Mrgy, Hungar	121.74	322	⇓P	PKKPab	23 16 43.6	+1.1
DIVS	Divibare	121.83	319	PKPdf	PKiKP	23 06 43.8	+0.2
SNET	Serv Nac Est T	121.87	78	IAMs_20	IAMs_20	23 48 11.7	
	comp=Z,9µm,22.0s						
PVCC	Panska Ves	121.88	328	ePKP	PKiKP	23 06 45.1	+1.8
PVCC				ePP	PP	23 08 18.7	+2.0
PVCC				eSP	SP	23 18 14.4	+9.3
PVCC				AMS	AMS	23 58 30.0	
	comp=Z,8µm,23.6s						
PVCC	Panska Ves	121.88	328	ePKIKP	PKiKP	23 06 45.1	+1.8
PVCC				e		23 08 18.7	
PVCC				eSP	SP	23 18 14.4	+9.3
PVCC				MLR	MLR		
	comp=Z,8µm,23.6s						
BRG	Berggiesshubel	122.01	328	ePKP	PKiKP	23 06 45.1	+1.4
BRG				Amp		23 06 45.9	
	comp=Z,12nm,1.2s						
BRG	Berggiesshubel	122.01	328	PP	PP	23 08 23.0	+5.4
BRG				SKP		23 10 16.2	
BRG				Amp		23 10 17.5	
	comp=Z,52nm,1.9s						
BRG	Berggiesshubel	122.01	328	ePKIKP	PKiKP	23 06 45.0	+1.4
BRG						23 08 23.0	
BRG				SP	SP	23 18 12.0	+5.8
BRG				pmax	pmax		
	comp=Z,12nm,1.2s						
BRG				MLR	MLR		
	comp=N,3µm,19.7s						
BRG				MLR	MLR		
	comp=E,5µm,19.4s						
TREC	Trest	122.05	326	ePKP	PKiKP	23 06 43.9	+0.1
TREC				ex	x	23 06 58.9	
TREC				ePP	PP	23 08 14.1	-3.9
TREC				eSP	SP	23 18 07.8	+1.0
TREC				AMS	AMS	23 59 10.0	
	comp=E,14µm,23.1s						
TREC	Trest	122.05	326	ePKIKP	PKiKP	23 06 43.9	+0.1
TREC				e		23 06 58.9	
TREC				e		23 08 14.1	
TREC				eSP	SP	23 18 07.8	+1.0
TREC				MLR	MLR		
	comp=Z,14µm,23.1s						
GOPC	GO Pecny, Ondr	122.10	327	ePP	PP	23 08 21.7	+3.4
GOPC				eSP	SP	23 18 07.3	+0.2
GOPC				AMS	AMS	23 53 00.0	
	comp=Z,9µm,27.8s						
ACSO	Alum Creek Sta	122.16	46	P	PKPdf	23 06 41.6	-2.5
	baz=292						
PRU	Pruhonice	122.19	327	ePKP	PKiKP	23 06 44.9	+0.9
PRU				ex	x	23 06 59.3	
PRU				ePP	PP	23 08 18.7	-0.2
PRU				ex	x	23 16 42.0	
PRU				eSP	SP	23 18 07.8	-0.1
PRU				AMS	AMS	23 53 00.0	
	comp=Z,9µm,28.4s						
PRU	Pruhonice	122.19	327	ePKIKP	PKiKP	23 06 44.9	+0.9
PRU				e		23 06 59.3	
PRU				e		23 08 18.7	
PRU				eSP	SP	23 18 07.8	-0.1
PRU				MLR	MLR		
	comp=Z,9µm,28.4s						
CLL	Collm	122.24	329	ePdif	Pdif	23 03 16.0	+2.9
CLL				ePKPdf	PKPdf	23 06 44.0	+0.1
CLL				e(sPKPdf)		23 07 04.0	
CLL				ex	x	23 07 21.0	
CLL				ePP	PP	23 08 22.0	+2.9
	comp=Z,1µm,27.9s						
CLL				ex	x	23 09 48.0	
CLL				eSKPdf	SKiKP	23 10 19.0	+2.4
CLL				ePPP	PPP	23 10 50.0	
CLL				ePKKPbc	PKKPab	23 16 41.0	+0.7
	comp=Z,10.0nm,1.4s						
CLL				epPKKPbc		23 16 53.0	
	comp=Z,18nm,1.5s						
CLL				ex	x	23 17 18.0	
CLL				ePS	PS	23 18 11.0	-3.4
CLL				ePPS	PPS	23 19 38.0	
CLL				ex	x	23 20 42.0	
CLL				eSKKPdf	SKKPdf	23 20 46.0	-3.9
CLL				ePKKSdf	PKKSdf	23 20 51.0	-4.2
	comp=Z,33nm,1.7s						
CLL				ePPPrev		23 24 24.0	
CLL				eSS	SS	23 24 54.0	-1.4
CLL				ex	x	23 26 00.0	
CLL				eSSS	SSS	23 29 30.0	
CLL				ex	x	23 30 48.0	
CLL				ex	x	23 37 36.0	
CLL				ex	x	23 39 00.0	
CLL				AMS	AMS	00 00 00.0	
	comp=N,9µm,21.1s						
CLL				AMS	AMS	00 00 00.0	
	comp=E,6µm,20.8s						
CLL				AMS	AMS	00 00 00.0	
	comp=Z,13µm,21.8s						
CLL				AMS	AMS	00 00 00.0	
CLL	Collm	122.24	329	ePKIKP	PKPdf	23 06 44.0	+0.1
CLL				e		23 08 22.0	
CLL				MLR	MLR		
	comp=Z,13µm,21.8s						
RONA	Rosalia, Austr	122.42	324	ePKiKP	PKiKP	23 06 45.4	+0.8
	comp=Z,8.9nm,1.1s						
CONA	Conrad Observa	122.56	325	ePKP	PKiKP	23 06 45.2	+0.3
	comp=Z,6.0nm,1.0s						
CKRC	Cesky Krumlov	122.96	326	ePKP	PKPdf	23 06 45.0	-0.4
CKRC				ex	x	23 07 00.8	
CKRC				ePP	PP	23 08 24.8	+0.6
CKRC				ex	x	23 16 38.3	
CKRC				eSP	SP	23 18 11.4	-3.4
CKRC	Cesky Krumlov	122.96	326	ePKIKP	PKPdf	23 06 45.0	-0.4
CKRC				e		23 07 00.8	
CKRC				e		23 08 24.8	
CKRC				eSP	SP	23 18 11.4	-3.4
P52A	Corning	122.99	46	IAMs_20	IAMs_20	23 59 23.1	
	comp=Z,8µm,20.0s						
P52A	Corning	122.99	46	P	PKPdf	23 06 44.1	-1.6
	baz=292						
TZTN	Tazewell	123.02	50	P	PKPdf	23 06 44.2	-1.7
	baz=289						
PDG	Podgorica	123.03	318	IAMs_20	IAMs_20	00 02 53.1	
	comp=Z,4µm,20.0s						
TIR	Tirane	123.06	316	IAMs_20	IAMs_20	00 07 35.2	
	comp=Z,4µm,20.0s						
ARSA	Arzberg	123.11	324	ePKP	PKiKP	23 06 46.1	+0.1
	comp=Z,4.0nm,1.1s						
TKL	Tuckaleechee C	123.12	51	PKP	PKPdf	23 06 46.1	0.0
	comp=Z,15nm,0.9s,baz=224,slow=2.1,SNR=12						
NKC	Novy Kostel	123.16	328	ePKP	PKiKP	23 06 46.1	+0.2
NKC				ePP	PP	23 08 27.9	+2.5
NKC				eSP	SP	23 18 20.5	+4.1
NKC				AMS	AMS	23 59 10.0	
	comp=Z,9µm,20.5s						
NKC	Novy Kostel	123.16	328	ePKIKP	PKiKP	23 06 46.1	+0.2
NKC				e		23 08 27.9	
NKC				eSP	SP	23 18 20.5	+4.1
NKC				MLR	MLR		
	comp=Z,9µm,20.5s						
KHC	Kasperske Hory	123.19	327	PKPdf	PKiKP	23 06 46.1	+0.1
KHC	Kasperske Hory	123.19	327	ePKP	PKPdf	23 06 45.9	+0.1
KHC				ex	x	23 07 01.5	
KHC				ePP	PP	23 08 24.8	-0.9
KHC				ex	x	23 16 37.4	
KHC				eSP	SP	23 18 21.0	+4.2
KHC				ex	x	23 19 35.5	
KHC				AMS	AMS	23 55 30.0	
	comp=Z,12µm,29.4s						
KHC	Kasperske Hory	123.19	327	ePKIKP	PKPdf	23 06 45.9	+0.1
KHC				e		23 07 01.5	
KHC				e		23 08 24.8	
KHC				eSP	SP	23 18 21.0	+4.2
GERES	GERESS Array B	123.28	326	PKP	PKPdf	23 06 46.1	0.0
	comp=Z,3.6nm,0.8s,baz=77,slow=3.0,SNR=21						
GERES				PKKPbc	PKKPab	23 16 36.8	+0.8
	comp=Z,1.3nm,0.8s,baz=83,slow=4.2,SNR=9.3						
GERES				PKKP	PKKPdf	23 17 14.6	-1.4
	comp=Z,1.2nm,0.8s,baz=204,slow=2.9,SNR=4.5						
M53A	WI Miller and	123.31	44	P	PKPdf	23 06 44.4	-1.8
	baz=294						
SCHQ	Schefferville	123.35	24	PKP	PKiKP	23 06 46.9	+0.7
	comp=Z,5.5nm,0.8s,baz=321,slow=3.2,SNR=9.0						
SCHQ				PKKPbc	PKKPab	23 16 36.0	+0.5
	comp=Z,4.5nm,0.8s,baz=177,slow=3.7,SNR=6.1						
O53A	New Philadelph	123.41	45	P	PKPdf	23 06 45.1	-1.3
	baz=293						
ERPA	Erie	123.49	43	P	PKPdf	23 06 44.3	-2.3
	baz=295						
SOKA	Soboth	123.69	324	ePKiKP	PKiKP	23 06 48.2	+1.0
	comp=Z,9.0nm,1.1s						
TGUH	Tegucigalpa,Un	123.76	77	IAMs_20	IAMs_20	23 51 59.8	
	comp=Z,5µm,21.0s						
BIOA	Bad Ischl, Aus	123.95	325	ePKiKP	PKiKP	23 06 48.4	+0.8
	comp=Z,8.4nm,1.3s						
OBKA	Obir	124.06	324	ePKiKP	PKiKP	23 06 48.8	+0.8
	comp=Z,4.0nm,0.9s						
GRA1	Grafenberg Arr	124.12	328	IAMs_20	IAMs_20	00 02 05.2	
	comp=Z,7µm,20.0s						
GRFO	Grafenberg	124.12	328	IAMs_20	IAMs_20	00 02 26.0	
	comp=Z,7µm,20.0s						
LJU	Ljubljana	124.32	323	i PKPdf	PKiKP	23 06 48.5	+0.2
KBA	Koelnbreinsper	124.46	325	ePKiKP	PKiKP	23 06 49.1	+0.3
	comp=Z,9.5nm,1.4s						
GORS	Gorjuse	124.49	324	i PKPdf	PKPdf	23 06 48.2	-0.3
TIGA	Tifton	124.49	56	P	PKPdf	23 06 46.5	-2.2
	baz=286						
MCWV	Mont Chateau	124.61	45	P	PKPdf	23 06 46.7	-2.1
	baz=294						
ABTA	Abfaltersbach	125.11	325	i PKiKP	PKiKP	23 06 50.5	+0.5
	comp=Z,6.4nm,0.7s						
BLA	Blacksburg	125.14	48	IAMs_20	IAMs_20	23 59 40.3	
	comp=Z,8µm,20.0s						
BLA	Blacksburg	125.14	48	P	PKPdf	23 06 47.5	-2.5
	baz=292						
KMSC	Kings Mountain	125.18	51	P	PKPdf	23 06 47.3	-2.7
	baz=290						
WATA	Walderalm	125.31	326	ePKP	PKPdf	23 06 49.9	-0.2
	comp=Z,2.6nm,0.5s						
WTTA	Wattenberg	125.32	326	ePKP	PKiKP	23 06 50.5	0.0
	comp=Z,13nm,1.2s						
WIN	Windhoek	125.34	237	IAMs_20	IAMs_20	23 59 21.6	
	comp=Z,8µm,19.0s						
CIMO	Cimolais	125.40	325	PKPdf	PKPdf	23 06 50.0	-0.2
SSPA	Standing Stone	125.56	43	P	PKPdf	23 06 48.5	-2.1
	baz=296						
MOTA	Moosalm	125.57	326	ePKP	PKPdf	23 06 50.5	-0.1
	comp=Z,9.6nm,0.7s,SNR=4.8						
STU	Stuttgart	125.73	329	IAMs_20	IAMs_20	00 02 11.7	
	comp=Z,7µm,21.0s						
LONY	Lake Ozonia	125.77	38	P	PKPdf	23 06 48.4	-2.5
	baz=302						
FETA	Feichten	125.96	326	ePKiKP	PKiKP	23 06 52.5	+0.7
	comp=Z,6.4nm,1.1s,SNR=7.3						
JTS	Las Juntas de	126.10	82	PKP	PKPdf	23 06 51.9	-0.5
	comp=Z,10nm,0.5s,baz=293,slow=21,SNR=5.6						
JTS	Las Juntas de	126.10	82	IAMs_20	IAMs_20	23 51 44.3	
	comp=Z,6µm,21.0s						
BINY	Binghamton	126.11	41	P	PKPdf	23 06 49.3	-2.3
	baz=299						
MEM	Membach	126.11	332	dPKP	PKiKP	23 06 53.2	+1.5
TIP	Timpagrande	126.12	315	IAMs_20	IAMs_20	00 05 27.2	
	comp=Z,6µm,22.0s						
EKA	Eskdalemuir Ar	126.17	341	PKP	PKiKP	23 06 51.9	+0.1
	comp=Z,2.6nm,0.6s,baz=18,slow=3.6,SNR=17						
DAVA	Damuels	126.27	327	ePKP	PKiKP	23 06 52.4	0.0
	comp=Z,1.8nm,0.3s						
BFO	Black Forest	126.46	329	IAMs_20	IAMs_20	00 03 15.1	
	comp=Z,6µm,20.0s						
FUORN	Ofenpass-Fuorn	126.46	326	PKPdf	PKiKP	23 06 53.2	+0.3
FUORN				IAMs_20	IAMs_20	00 04 26.1	
	comp=Z,8µm,21.0s						
BCLA	Clavier	126.57	332	dPKP	PKPdf	23 06 51.5	-0.7
DAVOX	Davos/Dischmat	126.58	326	PKP	PKPdf	23 06 52.7	+0.1
	comp=Z,6.4nm,0.7s,baz=153,slow=2.2,SNR=12						
NHSC	New Hope	126.75	53	IAMs_20	IAMs_20	23 58 26.8	
	comp=Z,7µm,21.0s						
NHSC	New Hope	126.75	53	P	PKPdf	23 06 51.3	-1.8
	baz=289						
RCHB	Rochefort	126.78	332	dPKP	PKPdf	23 06 51.0	-1.6
BMRD	Maredsous	126.90	332	dPKP	PKPdf	23 06 51.3	-1.5
AQU	L'Aquila	126.90	320	IAMs_20	IAMs_20	00 07 08.5	
	comp=Z,4µm,21.0s						
HDC	Heredia	126.92	82	IAMs_20	IAMs_20	23 52 14.0	
	comp=Z,8µm,22.0s						
HDC	Heredia	126.92	82	eP	PKPdf	23 06 54.3	+0.3
CBN	Corbin Frederi	126.96	46	P	PKPdf	23 06 50.7	-2.6
	baz=295						
VT1	Waterbury	127.03	37	IAMs_20	IAMs_20	23 56 38.1	
	comp=Z,9µm,22.0s						
CEL	Celeste	127.12	314	IAMs_20	IAMs_20	00 06 17.8	
	comp=Z,5µm,22.0s						
DWPF	Disney Wildern	127.17	59	IAMs_20	IAMs_20	00 01 41.0	
	comp=Z,5µm,20.0s						
DWPF	Disney Wildern	127.17	59	P	PKPdf	23 06 52.4	-1.6
	baz=285						
TRQA	Tornquist	127.30	149	PKPdf	PKPdf	23 06 54.4	+0.3
TRQA				IAMs_20	IAMs_20	23 55 06.0	
	comp=Z,4µm,20.0s						
TRQA	Tornquist	127.30	149	PKIKP	PKPdf	23 06 54.4	+0.3
TRQA				MLR	MLR		
	comp=Z,4µm,20.0s						
LBNH	Lisbon	127.57	37	P	PKPdf	23 06 52.5	-1.8
	baz=304						
CNNC	Cliffs of the	127.77	50	P	PKPdf	23 06 53.4	-1.5
	baz=293						
LCO	Las Campanas	128.01	134	PKPdf	PKPdf	23 06 56.4	+0.4
LCO	Las Campanas	128.01	134	PKIKP	PKPdf	23 06 56.4	+0.4
PAL	Palisades	128.05	41	P	PKPdf	23 06 54.4	-0.9
	baz=300						
L61B	Northampton	128.09	39	P	PKPdf	23 06 53.5	-1.9
	baz=302						
CFA	Coronel Fontan	128.13	139	PKP	PKPdf	23 06 55.6	-0.2
	comp=Z,96nm,0.8s,baz=253,slow=3.7,SNR=83						
HRV	Adam Dziewonsk	128.76	38	IAMs_20	IAMs_20	23 58 50.6	
	comp=Z,5µm,21.0s						
HRV	Adam Dziewonsk	128.76	38	P	PKPdf	23 06 55.5	-1.1
	baz=304						
WES	Weston	128.97	38	IAMs_20	IAMs_20	00 05 05.5	
	comp=Z,8µm,21.0s						
BCX	Boston College	129.09	38	IAMs_20	IAMs_20	00 03 01.7	
	comp=Z,6µm,21.0s						
MCRA	Macar, Loja	129.66	101	eP	PKPdf	23 06 58.1	-1.1
AC01	Pan de Azucar	129.72	131	PKPdf	PKiKP	23 06 59.6	-0.2
EMMW	East Machias	129.87	34	IAMs_20	IAMs_20	23 57 53.5	
	comp=Z,8µm,21.0s						
SSB	Saint Sauveur	130.41	328	IAMs_20	IAMs_20	00 04 52.6	
	comp=Z,7µm,22.0s						
FLF1	Flavio Alfaro-	130.45	96	eP	PKiKP	23 07 01.3	-0.2
ATAH	Atahualpa	130.56	105	PKP	PKiKP	23 07 03.1	+0.9
	comp=Z,60nm,0.9s,baz=187,slow=2.9,SNR=34						
ATAH				SKPbc	SKPab	23 10 22.9	+1.1
	comp=Z,19nm,1.0s,baz=264,slow=5.0,SNR=5.8						
NNA	Nana	130.66	111	PKP	PKiKP	23 07 02.6	+0.7
	comp=Z,54nm,1.0s,baz=268,slow=4.6,SNR=15						
NNA	Nana	130.66	111	c iPKIKP	PKiKP	23 07 02.9	+1.0
NNA				pmax	pmax		
	comp=Z,152nm,1.3s						
NNA	Nana	130.66	111	eP	PKPdf	23 07 01.0	-0.1
AZU	Azuero	130.69	85	⇑eP	PKiKP	23 07 01.7	-0.3
BCIP	Isla Barro Col	131.14	83	IAMs_20	IAMs_20	23 59 34.0	
	comp=Z,5µm,20.0s						
BCIP	Isla Barro Col	131.14	83	eP	PKiKP	23 07 05.7	+2.8
LPA	La Plata	131.80	150	PKIKP	PKPdf	23 06 55.0	-7.6
LPA				PP	PP	23 09 16.7	-5.5
LPA				pPP		23 09 35.8	
LPA				SKP	SKPbc	23 10 25.3	+0.1
LPA				PKS	PKSdf	23 10 32.0	-7.1
LPA				SKIKP		23 10 47.9	
LPA				PKIKS		23 10 55.1	
LPA				PPP	PPP	23 12 11.1	
LPA				SKIKS		23 14 11.0	
LPA				SDIFF	Sdif	23 17 31.3	-0.4
LPA				PS	PS	23 19 42.6	+4.7
LPA				PPS	PPS	23 21 26.6	
LPA				PSP	PSP	23 21 36.0	
LPA				SS	SS	23 27 02.4	+8.2
LPA				SSS	SSS	23 32 10.1	
OTAV	Otavalo	131.91	95	⇓PKIKP	PKPdf	23 07 04.5	+0.5
OTAV	Otavalo	131.91	95	eP	PKPdf	23 07 03.1	-0.9
OTAV	Otavalo	131.91	95	eP	PKPdf	23 07 04.5	+0.5
PIAT	Ana Tenorio	131.92	97	eP	PKiKP	23 07 04.9	0.0
MTDJ	Mount Denham	132.70	71	IAMs_20	IAMs_20	23 57 14.1	
	comp=Z,3µm,20.0s						
BONI	La Bonita	132.85	95	eP	PKPdf	23 07 05.3	-0.2
KEST	Kesra	132.93	314	PKP	PKiKP	23 07 05.6	-0.4
	comp=Z,3.4nm,0.8s,baz=76,slow=4.2,SNR=8.2						
LVC	Limon Verde	132.94	129	PKP	PKiKP	23 07 06.9	+0.1
	comp=Z,17nm,0.6s,baz=262,slow=7.3,SNR=13						
LVC				SKPbc	SKPbc	23 10 29.8	-0.2
	comp=Z,14nm,1.1s,baz=266,slow=1.7,SNR=4.2						
LVC	Limon Verde	132.94	129	IAMs_20	IAMs_20	23 54 01.1	
	comp=Z,5µm,22.0s						
LVC	Limon Verde	132.94	129	eP	PKiKP	23 07 06.5	-0.3
BBAC	Balboa, Cauca	133.33	93	eP	PKPdf	23 07 05.3	-1.1
POPC	Popayan, Colom	133.95	92	eP	PKPdf	23 07 06.8	-0.8
JAMC	Jamundi, Valle	134.02	91	eP	PKPdf	23 07 06.0	-1.7
YOTC	Yotoco, Valle	134.41	90	eP	PKPdf	23 07 07.0	-1.3
GTBY	Guantanamo Bay	134.66	68	IAMs_20	IAMs_20	23 58 50.8	
	comp=Z,7µm,22.0s						
DBBC	Dabeiba	134.71	86	eP	PKPpre	23 07 00.6	
CBOC	Ciudad Bolivar	134.86	88	eP	PKPdf	23 07 08.2	-1.0
FLOC	Florencia	134.86	94	eP	PKPdf	23 07 08.2	-0.8
HELC	Santa Helena	135.35	87	eP	PKPpre	23 07 01.0	
ANIL	Santa Ana	135.38	90	eP	PKPdf	23 07 09.3	-1.0
UREC	San Jos de Ur	135.39	85	eP	PKPpre	23 07 01.8	
ORTC	Ortega, Tolima	135.50	91	eP	PKPdf	23 07 08.9	-1.3
VACA	Villa Angela C	135.65	140	eP	PKiKP	23 07 12.0	+0.4
SJCC	San Jacinto, C	135.73	82	eP	PKPdf	23 07 04.6	-6.0
PRAC	Prado	135.84	91	PKPpre	PKPpre	23 07 01.4	
PRAC	Prado	135.84	91	eP	PKPpre	23 07 01.8	
CZSB	Cruzeiro do Su	135.84	108	eP	PKPdf	23 07 11.1	+0.3
CZSB	Cruzeiro do Su	135.84	108	eP	PKPdf	23 07 09.9	-0.9
MECA	Mercedes	135.98	144	eP	PKPdf	23 07 10.8	+0.2
ZARC	Zaragoza, Cauc	136.06	86	eP	PKPdf	23 07 03.7	-7.5
PLTB	Pedras Altas	136.46	151	eP	PKPdf	23 07 12.0	+0.5
PLTB	Pedras Altas	136.46	151	eP	PKiKP	23 07 15.3	+2.1
ROSC	El Rosal	136.48	89	PKhKP	PKPpre	23 07 03.2	
	comp=Z,26nm,0.5s,baz=150,slow=7.5,SNR=17						
ROSC				SKPbc	SKiKP	23 10 45.6	-1.5
	comp=Z,13nm,0.6s,baz=253,slow=23,SNR=4.2						
ITQB	Itaqui	136.57	146	eP	PKPdf	23 07 09.2	-2.5
ITQB	Itaqui	136.57	146	eP	PKiKP	23 07 14.3	+0.9
MACC	Macarena, Meta	136.72	93	eP	PKPdf	23 07 10.0	-2.5
TICA	Tres Isletas	136.72	139	eP	PKiKP	23 07 14.4	+0.5
LPAZ	La Paz	136.75	121	PKhKP	PKPpre	23 07 01.7	
	comp=Z,7.3nm,0.7s,baz=246,slow=2.4,SNR=21						
LPAZ				PKP	PKPdf	23 07 13.0	-0.2
	comp=Z,47nm,0.8s,baz=334,slow=5.6,SNR=25						
LPAZ				SKPbc	SKPbc	23 10 43.6	+1.0
	comp=Z,3.6nm,0.9s,baz=286,slow=6.8,SNR=1.9						
SPBC	San Pablo de B	136.78	88	eP	PKPdf	23 07 05.1	-7.5
RODS	Rosario do Sul	136.81	148	eP	PKPdf	23 07 11.9	-0.3
CHIC	Chingaza	137.06	90	eP	PKPdf	23 07 06.4	-7.2
CPSB	Cacapava Do Su	137.66	150	eP	PKPdf	23 07 14.6	+0.9
BARC	Barichara	137.70	87	eP	PKPdf	23 07 09.6	-4.9
RUSC	La Rusia	137.77	88	eP	PKPpre	23 07 03.2	
GRTK	Grand Turk	137.92	65	IAMs_20	IAMs_20	00 00 26.6	
	comp=Z,7µm,21.0s						
AZCA	Azaras, Argent	138.15	145	eP	PKPdf	23 07 14.4	-0.3
PAMC	Pamplona, Colo	138.19	86	eP	PKPdf	23 07 11.4	-4.3
SDDR	Presa de Saban	138.39	68	IAMs_20	IAMs_20	00 01 26.5	
	comp=Z,5µm,21.0s						
CART	Cartagena	138.63	324	IAMs_20	IAMs_20	00 10 24.8	
	comp=Z,5µm,22.0s						
CPUP	Villa Florida	138.68	142	PKhKP	PKPpre	23 07 07.5	
	comp=Z,5.9nm,0.8s,baz=278,slow=1.5,SNR=8.7						
CPUP				SKPbc	SKPbc	23 10 48.4	+1.1
	comp=Z,11nm,1.1s,baz=165,slow=1.3,SNR=2.9						
CPUP	Villa Florida	138.68	142	eP	PKPdf	23 07 14.9	-0.8
ESDC	Sonseca Array	138.82	328	PKhKP	PKPpre	23 07 07.0	
	comp=Z,1.1nm,0.9s,baz=27,slow=1.4,SNR=6.6						
ESDC				PP	PP	23 10 05.7	-1.1
	comp=Z,1.3nm,0.8s,baz=34,slow=5.6,SNR=2.2						
BBSR	BB Station	138.84	46	IAMs_20	IAMs_20	00 00 45.2	
	comp=Z,8µm,22.0s						
PGAV	Gavieira, Arco	139.10	334	ePP	PP	23 10 16.9	+8.7
PGAV	Gavieira, Arco	139.10	334	eLR	LR	23 57 33.2	
PGAV				A	A	00 10 58.8	
	comp=Z,8µm,22.0s						
PAB	San Pablo	139.12	328	IAMs_20	IAMs_20	00 10 47.1	
	comp=Z,6µm,22.0s						
MVO	Moncorvo	139.19	332	ePKPdf	PKPpre	23 07 07.5	

MVO	Moncorvo	139.19	332	*e*PP	PP	23 10 11.9	+3.1
MVO	Moncorvo	139.19	332	*e*LR	LR	23 58 10.9	
MVO				A	A	00 13 55.0	
	comp=Z,5µm,20.0s						
POLO	Lamas de Olo	139.37	333	*e*PP	PP	23 10 16.4	+6.5
POLO	Lamas de Olo	139.37	333	*e*LR	LR	23 57 54.1	
POLO				A	A	00 14 01.5	
	comp=Z,2µm,18.0s						
TBTG	Tabatinga, AM	139.47	104	*e*P	PKPdf	23 07 16.1	-1.4
TBTG	Tabatinga, AM	139.47	104	*e*P	PKiKP	23 07 18.9	-0.9
CRSM	Crissiumal (Br	139.68	147	*e*P	PKPdf	23 07 15.7	-1.9
CNLB	Canela	139.81	152	*e*P	PKPdf	23 07 19.1	+1.3
CNLB	Canela	139.81	152	*e*P	PKiKP	23 07 21.1	+0.9
MTE	Manteigas	140.03	332	IAMs_20	IAMs_20	00 13 40.0	
	comp=Z,6µm,20.0s						
MTE	Manteigas	140.03	332	*e*PP	PP	23 10 20.9	+6.9
MTE	Manteigas	140.03	332	*e*LR	LR	23 58 45.6	
MTE				A	A	00 14 02.4	
	comp=Z,6µm,20.0s						
SDV	Santo Domingo	140.24	83	IAMs_20	IAMs_20	00 00 40.0	
	comp=Z,4µm,22.0s						
PCBR	Castelo Branco	140.44	332	*e*PKPdf	PKPdf	23 07 14.7	-3.8
COI	Coimbra	140.58	333	IAMs_20	IAMs_20	00 14 23.5	
	comp=Z,4µm,20.0s						
PMRV	Marv??o	140.73	331	*e*PKPdf	PKPdf	23 07 20.0	+0.9
PMRV	Marv??o	140.73	331	*e*PP	PP	23 10 16.4	-1.9
PMRV	Marv??o	140.73	331	*e*LR	LR	23 56 50.4	
PMRV				A	A	00 13 07.5	
	comp=Z,4µm,20.0s						
PCAS	Casmilo, Conde	140.75	333	*e*LR	LR	23 59 45.9	
PCAS				A	A	00 12 17.2	
	comp=Z,4µm,22.0s						
ITAB	Concordia	140.90	149	*e*P	PKPdf	23 07 18.0	-1.7
ITAB	Concordia	140.90	149	*e*P	PKiKP	23 07 22.7	+0.3
ETMB	Extrema	141.19	114	*e*P	PKPdf	23 07 21.2	+0.6
ETMB	Extrema	141.19	114	*e*P	PKPdf	23 07 19.3	-1.2
PESTR	Estremoz	141.26	331	*e*PKPdf	PKPdf	23 07 17.9	-2.2
PESTR	Estremoz	141.26	331	*e*LR	LR	23 57 10.7	
PESTR				A	A	00 13 25.4	
	comp=Z,4µm,20.0s						
PSBE	So Bento	141.32	333	*e*LR	LR	23 59 06.2	
PSBE				A	A	00 15 00.8	
	comp=Z,9µm,20.0s						
TAM	Tamanrasset	141.40	299	PKPdf	PKPdf	23 07 18.0	-3.0
TAM	Tamanrasset	141.40	299	PKIKP	PKPdf	23 07 18.0	-3.0
PMTG	Montargil	141.41	332	*e*PKPdf	PKPdf	23 07 18.7	-1.6
PMTG	Montargil	141.41	332	*e*LR	LR	23 57 33.6	
PMTG				A	A	00 15 01.7	
	comp=Z,4µm,22.0s						
PBAR	Barrancos	141.53	330	*e*LR	LR	00 01 23.5	
PBAR				A	A	00 12 42.0	
	comp=Z,5µm,22.0s						
HATO	Hato, Curacao	141.69	78	IAMs_20	IAMs_20	00 24 03.9	
	comp=Z,3µm,21.0s						
EVO	Evora	141.73	331	*e*PKPdf	PKPdf	23 07 16.2	-4.7
PMAFR	Mafra	141.99	333	*e*LR	LR	00 00 18.2	
PMAFR				A	A	00 15 21.7	
	comp=Z,7µm,20.0s						
LIS	Lisbon	142.12	332	*e*PKIKP	PKPdf	23 07 19.2	-2.3
LIS	Lisbon	142.12	332	*e*PKPdf	PKPdf	23 07 19.2	-2.3
LIS				IAMs_20	IAMs_20	00 14 53.2	
	comp=Z,7µm,24.5s						
PNCL	Nicolau / Gran	142.31	331	*e*PKPdf	PKPdf	23 07 21.8	-0.1
PNCL	Nicolau / Gran	142.31	331	*e*LR	LR	00 00 55.3	
PNCL				A	A	00 15 23.5	
	comp=Z,3µm,20.0s						
MESJ	Messejana	142.37	330	*e*PKIKP	PKPdf	23 07 19.5	-2.5
MESJ	Messejana	142.37	330	*e*PKPdf	PKPdf	23 07 19.5	-2.5
MESJ				IAMs_20	IAMs_20	00 07 24.1	
	comp=Z,6µm,23.1s						
PCVE	Castro Verde	142.45	330	*e*PKPdf	PKPdf	23 07 20.6	-1.6
PVAQ	Vaqueiros	142.46	329	*e*PP	PP	23 10 33.7	+4.8
PVAQ	Vaqueiros	142.46	329	*e*LR	LR	23 57 23.8	
PVAQ				A	A	00 13 43.6	
	comp=Z,7µm,22.0s						
PBDV	Barranco-do-Ve	142.69	329	*e*PKPdf	PKPdf	23 07 19.5	-3.2
PBDV	Barranco-do-Ve	142.69	329	*e*LR	LR	00 01 52.8	
PBDV				A	A	00 13 52.8	
	comp=Z,8µm,22.0s						
SIV	San Ignacio	142.73	126	PKhKP	PKPpre	23 07 18.4	
	comp=Z,52nm,0.7s,baz=228,slow=2.9,SNR=56						
MORF	Marmelete	143.01	330	*e*PKIKP	PKPdf	23 07 20.8	-2.5
MORF	Marmelete	143.01	330	*e*LR	LR	00 04 07.7	
MORF				A	A	00 17 42.8	
	comp=Z,3µm,20.0s						
MORF	Marmelete	143.01	330	*e*PKPdf	PKPdf	23 07 20.8	-2.5
MORF				IAMs_20	IAMs_20	00 06 46.0	
	comp=N,9µm,34.6s						
SGCB	S£o Gabriel d	143.14	98	*e*P	PKPab	23 07 20.1	+0.4
SJG	San Juan	143.33	68	IAMs_20	IAMs_20	00 21 03.3	
	comp=Z,4µm,20.0s						
AQDB	Aquidauana	143.90	138	*e*P	PKPbc	23 07 23.4	+0.4
AQDB	Aquidauana	143.90	138	*e*P	PKPbc	23 07 24.0	+1.0
SAML	Samuel	144.28	114	PKPdf	PKPab	23 07 23.5	-0.5
SAML	Samuel	144.28	114	PKIKP	PKPab	23 07 23.5	-0.5
PTLB	Pontes e Lacer	144.57	127	*e*P	PKPab	23 07 24.6	-0.4
TEFE	Tefe	144.72	105	*e*P	PKPbc	23 07 26.4	+0.6
TEFE	Tefe	144.72	105	*e*P	PKPab	23 07 24.4	-1.3
VILB	Vilhena	145.06	123	*e*P	PKPdf	23 07 27.4	0.0
VILB	Vilhena	145.06	123	*e*P	PKPbc	23 07 26.7	-0.2
AVE	Averroes	145.37	325	PKPab	PKPbc	23 07 27.3	0.0
AVE				IAMs_20	IAMs_20	00 15 45.0	
	comp=Z,3µm,22.0s						
FRTB	Fartura	145.41	148	*e*P	PKPbc	23 07 27.4	-0.3
FRTB	Fartura	145.41	148	*e*P	PKPdf	23 07 27.9	+0.1
PET01	Itanhaem-SP	145.74	152	*e*P	PKPab	23 07 29.3	+0.2
PCMB	Pacaembu	145.86	144	*e*P	PKPbc	23 07 29.1	0.0
PCMB	Pacaembu	145.86	144	*e*P	PKPdf	23 07 29.0	+0.4
SABA	Saba	146.13	67	IAMs_20	IAMs_20	00 05 11.4	
	comp=Z,5µm,22.0s						
SABA	Saba	146.13	67	*e*P	PKPdf	23 07 27.9	-1.2
SMRT	St. Maarten	146.16	66	IAMs_20	IAMs_20	00 08 22.3	
	comp=Z,5µm,20.0s						
SPB	Sao Paulo	146.26	151	IAMs_20	IAMs_20	00 11 59.0	
	comp=Z,3µm,21.0s						
SPB	Sao Paulo	146.26	151	*e*P	PKPbc	23 07 30.7	+0.3
SEUS	St. Eustatius	146.40	67	*e*P	PKPdf	23 07 27.6	-2.0
PP1B	Ponte de Pedra	146.43	135	*e*P	PKPdf	23 07 30.3	+0.6
PP1B	Ponte de Pedra	146.43	135	*e*P	PKPdf	23 07 30.3	+0.6
SALV	Santo Antonio	146.95	132	*e*P	PKPdf	23 07 31.4	+0.9
SALV	Santo Antonio	146.95	132	*e*P	PKPdf	23 07 31.4	+0.9
VAO	Valinhos	146.99	152	*e*P	PKPdf	23 07 31.7	+1.1
VAO	Valinhos	146.99	152	*e*P	PKPbc	23 07 32.4	-0.2
C2SB	Chapadao do Su	147.01	139	*e*P	PKPbc	23 07 32.2	-0.4
C2SB	Chapadao do Su	147.01	139	*e*P	PKPbc	23 07 32.0	-0.6
SHEL	Horse Pasture	147.07	228	PKPab	PKPab	23 07 34.7	+0.2
SHEL	Horse Pasture	147.07	228	PKP2	PKPab	23 07 34.7	+0.2
RCLB	Rio Claro- Sao	147.21	150	*e*P	PKPbc	23 07 32.2	-0.9
RCLB	Rio Claro- Sao	147.21	150	*e*P	PKPbc	23 07 32.4	-0.8
MBFL	Flemmings, Mon	147.31	68	*e*P	PKPdf	23 07 31.0	-0.2
PARB	Paraibuna	147.31	154	*e*P	PKPdf	23 07 32.2	+1.0
PARB	Paraibuna	147.31	154	*e*P	PKPdf	23 07 31.5	+0.4
TORD	Torodi Ar. Bea	147.40	285	PKPbc	PKPdf	23 07 32.5	+1.1
	comp=Z,24nm,0.9s,baz=69,slow=2.4,SNR=48						
TORD				SKKPbc	PKKSbc	23 18 50.2	-7.0
	comp=Z,2.4nm,0.8s,baz=267,slow=4.5,SNR=4.2						
ANWB	Willy Bob	147.45	67	PKPab	PKPbc	23 07 33.4	-0.5
ANWB				IAMs_20	IAMs_20	00 11 25.3	
	comp=Z,5µm,22.0s						
ANWB	Willy Bob	147.45	67	*e*P	PKPdf	23 07 27.3	-4.0
ANBD	Bethesda, Anti	147.64	68	*e*P	PKPdf	23 07 27.3	-4.3
BB19B	Bebedouro	147.82	147	*e*P	PKPdf	23 07 33.2	+1.3
BB19B	Bebedouro	147.82	147	*e*P	PKPdf	23 07 33.3	+1.3
GDHS	Morne Mazeau,	147.85	69	IAMs_20	IAMs_20	00 15 23.2	
	comp=Z,5µm,20.0s						
ITRB	Iturama	147.86	143	*e*P	PKPdf	23 07 32.4	+0.4
ITRB	Iturama	147.86	143	*e*P	PKPdf	23 07 32.5	+0.4
CBE	Ff, Capester	148.04	69	IAMs_20	IAMs_20	00 11 01.4	
	comp=Z,5µm,22.0s						
CBE	Ff, Capester	148.04	69	*e*P	PKPdf	23 07 29.1	-3.2
ABD	La Joyeuse, An	148.05	68	IAMs_20	IAMs_20	00 06 36.5	
	comp=Z,5µm,22.0s						
ABD	La Joyeuse, An	148.05	68	*e*P	PKPdf	23 07 27.0	-5.3
MAGL	Barre de l'ile	148.38	69	IAMs_20	IAMs_20	00 10 02.3	
	comp=Z,4µm,22.0s						
MAGL	Barre de l'ile	148.38	69	*e*P	PKPdf	23 07 23.7	-9.2
DLPL	La Plaine	148.56	70	*e*P	PKPdf	23 07 30.9	-2.4
MACA	Manacapuru-AM	148.61	106	*e*P	PKPdf	23 07 33.2	-0.2
MACA	Manacapuru-AM	148.61	106	*e*P	PKPdf	23 07 30.1	-3.3
PDRB	Porto dos Gac	148.65	124	*e*P	PKPdf	23 07 33.3	-0.1
SVN	Savane Anatole	148.75	71	IAMs_20	IAMs_20	00 14 18.3	
	comp=Z,4µm,22.0s						
GRGR	Grenville	148.78	77	IAMs_20	IAMs_20	00 18 16.8	
	comp=Z,5µm,20.0s						
GRGR	Grenville	148.78	77	*e*P	PKPdf	23 07 22.9	-11
FDF	Fort de France	148.79	72	IAMs_20	IAMs_20	00 10 48.5	
	comp=Z,4µm,22.0s						
FDF	Fort de France	148.79	72	*e*P	PKPdf	23 07 32.1	-1.6
BIM	Bigot	148.91	72	IAMs_20	IAMs_20	00 11 37.8	
	comp=Z,5µm,22.0s						
BIM	Bigot	148.91	72	*e*P	PKPdf	23 07 32.1	-1.8
GCMP	Grenada, Carri	148.95	76	*e*P	PKPdf	23 07 28.2	-5.7
SVB	Belmont	148.98	74	*e*P	PKPdf	23 07 35.9	+1.9
SVV	Soufriere Volc	149.01	74	*e*P	PKiKP	23 07 39.1	-0.3
SSV	Crater Summit	149.03	74	*e*P	PKPbc	23 07 37.4	-0.9
ILAM	Ilet Lapin Mar	149.04	71	IAMs_20	IAMs_20	00 12 07.0	
	comp=Z,5µm,21.0s						
ILAM	Ilet Lapin Mar	149.04	71	*e*P	PKPdf	23 07 30.1	-3.9
SLB	Belfond	149.08	73	*e*P	PKiKP	23 07 39.1	-0.5
SLBI	Saint Lucia, B	149.11	73	*e*P	PKPdf	23 07 36.2	+2.1
MPOM	Morne Pois Mar	149.13	72	IAMs_20	IAMs_20	00 12 03.4	
	comp=Z,4µm,21.0s						
MPOM	Morne Pois Mar	149.13	72	*e*P	PKPdf	23 07 28.9	-5.3
TPP	Pointe-a-Pierr	149.20	80	*e*P	PKPbc	23 07 38.8	+0.2
MCLT	Moule a Chique	149.20	73	*e*P	PKPdf	23 07 35.1	+0.9
TRN	Trinidad (W)	149.21	79	*e*P	PKPdf	23 07 34.5	+0.2
BSCB	Bom Sucesso	149.73	153	*e*P	PKPdf	23 07 36.0	+0.9
DUB01	Friburgo-RJ	149.76	158	*e*P	PKPdf	23 07 36.0	+0.9
TPR	Prospect	149.76	78	*e*P	PKPbc	23 07 40.1	+0.2
CLDB	Colider	149.81	124	*e*P	PKPdf	23 07 36.4	+1.1
BOT	Bacolet	149.82	78	*e*P	PKPdf	23 07 31.2	-4.0
ARAG	Araguaiana, MT	149.86	136	*e*P	PKPdf	23 07 36.0	+0.7
BOAV	Boa Vista	149.96	96	*e*P	PKPdf	23 07 35.1	-0.5
TOSP	Speyside	149.98	78	*e*P	PKPdf	23 07 31.8	-3.7
PMPST	Porto Santo, M	150.01	336	*e*PKPdf	PKPdf	23 07 33.6	-1.5
IPMB	Ipameri, GO	150.47	144	*e*P	PKPdf	23 07 35.8	-0.5
PMAR	Madeira	150.56	336	*e*PKP	PKiKP	23 07 44.9	+2.6
PMOZ	Porto Moniz, M	150.58	337	*e*LR	LR	00 04 47.0	
PMOZ				A	A	00 11 50.9	
	comp=Z,3µm,24.0s						
BBGH	Gun Hill	150.63	74	*e*P	PKPdf	23 07 26.5	-10
PMNB	Patos De Minas	151.00	148	*e*P	PKPdf	23 07 38.0	+0.8
NPGB	Novo Progresso	152.09	117	*e*P	PKPdf	23 07 38.8	0.0
BDFB	Brasilia	152.40	142	PKP	PKPdf	23 07 39.9	+0.5
	comp=Z,47nm,0.9s,baz=187,slow=2.3,SNR=60						
BDFB				PKPbc	PKiKP	23 07 46.6	+0.1
	comp=Z,191nm,0.8s,baz=220,slow=1.2,SNR=51						
BDFB	Brasilia	152.40	142	PKPdf	PKPdf	23 07 39.8	+0.4
DIAM	Diamantina, MG	152.59	152	*e*P	PKPdf	23 07 40.4	+0.8
SNDB	Serra Nova Dou	152.73	131	*e*P	PKPdf	23 07 39.9	+0.2
ITTB	Itaituba	152.87	112	*e*P	PKPdf	23 07 39.7	-0.3
SJMB	Sao Joao De Ma	153.28	157	*e*P	PKPdf	23 07 40.1	-0.3
DBIC	Dimbokro	154.39	273	PKP	PKPdf	23 07 42.6	+0.5
	comp=Z,8.8nm,0.9s,baz=122,slow=1.9,SNR=7.4						
DBIC				PKPbc	PKPbc	23 07 50.6	+0.1
	comp=Z,12nm,0.8s,baz=105,slow=2.0,SNR=8.9						
DBIC				PKPab	PKPab	23 08 05.8	+1.1
	comp=Z,17nm,0.6s,baz=96,slow=3.0,SNR=13						
DBIC	Dimbokro	154.39	273	PKPdf	PKPdf	23 07 41.5	-0.7
JANB	Januaria	155.01	147	*e*P	PKPdf	23 07 43.1	+0.1
MALB	Monte Alegre	155.11	108	*e*P	PKPdf	23 07 43.5	+0.4
SDBA	SAO DESIDERIO	156.80	142	*e*P	PKPdf	23 07 45.8	+0.4
PRPB	Parauapebas	157.31	122	*e*P	PKPdf	23 07 46.7	+0.6
SMTB	Santa Maria do	157.51	131	*e*P	PKPdf	23 07 46.7	+0.4
MCPB	Macapa, AP	157.67	106	*e*P	PKPdf	23 07 46.6	+0.1
MDP	Montagnes des	158.06	91	PKP	PKPdf	23 07 47.7	+0.7
	comp=Z,24nm,0.8s,baz=348,slow=4.2,SNR=4.9						
MDP				PKPab	PKPab	23 08 20.7	+0.1
	comp=Z,37nm,0.8s,baz=241,slow=5.4,SNR=7.6						
ASCN	Ascension	158.65	230	IAMs_20	IAMs_20	00 31 26.6	
	comp=Z,3µm,22.0s						
TMAB	Tom-Au,PA,Br	160.64	115	*e*P	PKPdf	23 07 49.7	-0.2
BBTS	Babate	163.73	303	PKP	PKPdf	23 07 54.5	+1.5
	comp=Z,36nm,0.9s,baz=327,slow=12,SNR=4.2						

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*ISK **05** 22:48:27.1, 40°.39N×27°.04E, h10^{km}, ML2.3/26*
*DDA **05** 22:48:27.2±0.0, 40°.36N×27°.02E, h7^{km}±3^{km}, ML2.4*
ISC 05 22:48:27.5±0.8**, 40°.39N**±0°.02×**27°.04E**±0°.02**, h17**^{km}±7^{km}**,**
n40, σ0^{s}.53/61**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBG	Karabiga-Canak	0.20	89	Pg	Pg	22 48 32.1	-0.2
KRBG				Sg	Sg	22 48 35.3	-0.3
LPK	Lapseki	0.21	265	Pg	Pg	22 48 32.6	+0.1
LPK				Sg	Sg	22 48 35.7	-0.2
RKY	Sarkoy-Tekirda	0.32	20	Pg	Pg	22 48 34.2	-0.1
RKY				Sg	Sg	22 48 38.8	-0.1
KNL	Balıkesir	0.39	107	P	Pg	22 48 35.6	0.0
KNL				S	Sb	22 48 41.8	+0.1
GELI	Tayfur-Gelibol	0.43	271	Pg	Pb	22 48 36.2	-0.4
GELI				Sg	Sb	22 48 42.5	-0.3
ERIK	Erikli-Kesan	0.49	305	Pg	Pg	22 48 37.1	-0.2
ERIK				Sg	Sg	22 48 44.2	+0.4
KESN	Edirne-Kesan	0.51	328	P	Pg	22 48 37.6	-0.3
KESN				S	Sg	22 48 44.6	-0.3
GONE	Gonen-Balikesi	0.60	124	Pg	Pb	22 48 39.4	-0.2
GONE				Sg	Sb	22 48 47.7	-0.1
EDC	Edincik	0.64	94	Pg	Pg	22 48 39.9	-0.1
EDC				Sg	Sb	22 48 48.8	+0.1
TKR	Tekirdag	0.71	32	Pg	Pg	22 48 41.2	-0.2
CAVK	Edirne/Enez-Ca	0.73	295	P	Pg	22 48 41.4	-0.3
CAVK				S	Sg	22 48 51.4	0.0
ECEA	Canakkale, Ece	0.74	243	P	Pg	22 48 41.4	-0.6
ECEA				S	Sb	22 48 52.6	+0.8
BAYC	CANAKKALE_Bayr	0.75	210	P	Pg	22 48 41.6	-0.6
BAYC				S	Sb	22 48 51.7	-0.3
ENEZ	Enez	0.76	298	Pg	Pg	22 48 42.1	-0.2
EZN	Ezine	0.78	224	Pg	Pg	22 48 42.3	-0.5
BALY	Balya	0.79	145	P	Pg	22 48 41.8	-1.1
BALY				S	Sb	22 48 53.1	-0.1
UKOP	Uzunkopru-Edir	0.80	338	Pg	Pg	22 48 42.9	-0.2
BAND	Balkesir-Ban	0.81	92	P	Pg	22 48 42.6	-0.8
BAND				S	Sg	22 48 54.1	0.0
BAND				*i* AML	AML	22 48 56.0	
	comp=N,207nm,0.2s						
BAND				*i* AML	AML	22 48 57.0	
	comp=Z,136nm,0.1s						
BAND				*i* AML	AML	22 48 57.0	
	comp=E,250nm,0.2s						
GOKA	anakkale-Gk	0.89	257	P	Pg	22 48 44.2	-0.5
GOKA				S	Sb	22 48 56.6	+0.7
GOKA				*i* AML	AML	22 49 00.0	
	comp=E,148nm,0.2s						
GOKA				*i* AML	AML	22 49 01.0	
	comp=N,115nm,0.2s						
BUHA	Balikesir, Bur	0.89	178	P	Pn	22 48 45.6	+0.4
BUHA				S	Sb	22 48 56.5	+0.5
BUHA				*i* AML	AML	22 48 59.0	
	comp=E,133nm,0.4s						
GADA	Gvkgeada	0.89	257	Pg	Pb	22 48 44.4	-0.1
ALN	Alexandroupoli	0.91	304	Pg	Pg	22 48 44.6	-0.5
CRLT	Corlu	0.91	36	Pg	Pg	22 48 44.9	-0.3
BOZC	Bozcaada	0.93	234	Pg	Pg	22 48 44.9	-0.7
BOZC	Bozcaada	0.93	234	P	Pg	22 48 44.4	-1.1
BOZC				S	Sb	22 48 57.6	+0.4
BOZC				*i* AML	AML	22 49 01.0	
	comp=E,94nm,0.2s						
BKES	Balkesir-Mer	0.95	133	P	Pb	22 48 45.5	0.0
BKES				S	Sb	22 48 58.6	+0.8
BKES				*i* AML	AML	22 49 01.0	
	comp=E,92nm,0.2s						
KCTX	Karacabey (Bur	1.02	97	Pg	Pg	22 48 46.8	-0.4
KOCA	Canakkale, Ayv	1.12	218	P	Pg	22 48 48.3	-0.9
KOCA				S	Sb	22 49 03.7	+0.9
SLVT	Silivri	1.23	46	Pn	Pn	22 48 50.2	+0.4
DKL	Dikili	1.32	184	Pn	Pb	22 48 52.0	+0.2
VIZE	Kirklareli, Vi	1.33	27	P	Pn	22 48 50.8	-0.6
VIZE				S	Sb	22 49 08.2	-0.7
RDO	Rodhopi	1.36	304	Pn	Pn	22 48 52.5	+0.8
KIRK	Kırklareli	1.39	2	P	Pn	22 48 52.3	+0.2
KIRK				S	Sb	22 49 09.9	-0.6
ARMT	Armutlu	1.40	82	Pn	Pn	22 48 53.2	+0.9
MDNY	Mudanya-Bursa	1.41	90	Pn	Pn	22 48 53.1	+0.7
EDRB	Edirne	1.47	352	Pn	Pn	22 48 53.9	+0.7
SIGR	SIGRI	1.49	218	Pn	Pb	22 48 54.3	-0.3
ISK	Istanbul-Kandi	1.68	66	Pn	Pn	22 48 56.8	+0.7
KAVV	Kandilli-Istan	1.68	66	Pn	Pn	22 48 56.9	+0.8
YLV	Yalova	1.79	84	Pn	Pn	22 48 58.5	+0.8

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*INET **05** 22:50:14.2±1.1, 12°.15N×87°.77W, h15^{km}±10^{km}, MW4.0*
*NEIC **05** 22:50:15.8±1.7, 12°.17N±0°.06×87°.76W±0°.05, h44^{km}±8^{km},*
mb4.7/141, Error ellipse: s-maj=9.6km s-min=6.7km
az=206.0
*IDC **05** 22:50:16.0±2.0, 12°.30N×87°.50W, h51^{km}±18^{km}, mb4.1/17,*
mbtmp4.4/21, ML3.1/4, MS4.0/3, Error ellipse:
s-maj=25.4km s-min=9.5km az=56.0
*SNET **05** 22:50:16.0±1.6, 12°.21N×87°.79W, h43^{km}±7^{km}, ML4.5*
ISC 05 22:50:15.7±0.9**, 12°.20N**±0°.04×**87°.76W**±0°.04**, h52**^{km}±9^{km}**,**
n299, σ1^{s}.19/313**, mb4.7**/77**, 2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.85	54		Pn	22 50 31.2	-0.4
CRIN	San Cristobal	0.85	54	*e*P	Pn	22 50 31.2	-0.4
CRIN				*e*S	Sn	22 50 42.4	-0.9
CRIN	San Cristobal	0.85	54	⇓*i*P	Pn	22 50 31.2	-0.4
TELN	Telica	0.99	66	*e*P	Pn	22 50 32.9	-0.6
CNCH	Conchagua	1.07	356	*e*P	Pn	22 50 33.7	-0.9
CNCH				*e*S	Sn	22 50 51.2	+2.7
CNGN	Cerro Negro	1.08	74		Pn	22 50 33.8	-0.8
CNGN				Sn	Sn	22 50 48.9	+0.3
CNGN	Cerro Negro	1.08	74	*e*P	Pn	22 50 34.0	-0.6
CNGN	Cerro Negro	1.08	74	*e*P	Pn	22 50 33.0	-1.7
LCND	La Caada	1.11	353	*e*P	Pn	22 50 34.1	-0.9
LCND				*e*S	Sn	22 50 51.1	+1.8
COPN	Copaltepe	1.14	91	*e*P	Pn	22 50 33.3	-2.1
MOMN	Momotombo	1.21	80	*e*P	Pn	22 50 35.0	-1.4
ALJI	Alcalda de J	1.37	325	*e*P	Pn	22 50 36.9	-1.7
ALJI				*e*S	Sn	22 50 55.0	-0.6
ALJI				IAML		22 50 59.8	
	comp=Z,3µm,0.5s						
BRAN	Las Pilas	1.47	69	*e*P	Pn	22 50 37.7	-2.1
BRAN				*e*S	Sn	22 50 56.9	-1.1
MGAN	Managua	1.48	92	*e*P	Pn	22 50 38.9	-1.2
MGAN				*e*P	Pn	22 50 38.9	-1.2
COEB	Comit de Eme	1.49	330	*e*P	Pn	22 50 39.4	-0.9
COEB				*e*S	Sn	22 51 00.5	+1.8
COEB				IAML		22 51 02.4	
	comp=Z,3µm,0.4s						
FAGO	Alcalda de S	1.52	347	*e*P	Pn	22 50 40.2	-0.4
FAGO				*e*S	Sn	22 51 01.7	+2.4
WILN	Americas 2	1.54	91	*e*P	Pn	22 50 39.6	-1.2
HUEN		1.56	85	*e*P	Pn	22 50 40.3	-0.7
HUEN				*e*S	Sn	22 51 03.3	+3.2
SOMN	Somoto	1.65	43	*e*P	Pn	22 50 44.5	+2.1
TECO	Alcaldia de Te	1.66	323	*e*P	Pn	22 50 41.0	-1.5
TECO				*e*S	Sn	22 51 01.9	-0.7
SCLA	Alcaldia de Sa	1.76	328	*e*P	Pn	22 50 43.1	-0.8
SCLA				*e*S	Sn	22 51 07.9	+2.6
LFRS	El Faro	1.90	318	*e*P	Pn	22 50 44.5	-1.4
TGUH	Tegucigalpa,Un	1.90	14		Pn	22 50 46.3	+0.3
TGUH	Tegucigalpa,Un	1.90	14	*e*P	Pn	22 50 46.2	+0.3
TGUH	Tegucigalpa,Un	1.90	14	⇓*i*P	Pn	22 50 46.1	+0.3
MATN	Matagalpa	1.93	68		Pn	22 50 46.3	0.0
MATN	Matagalpa	1.93	68	*e*P	Pn	22 50 45.6	-0.7
SNET	Serv Nac Est T	2.06	316		Pn	22 50 47.0	-1.0
BOAB	BOACO BROADBAN	2.06	83		Pn	22 50 46.5	-1.4
BOQS	Boqueron	2.12	316	*e*P	Pn	22 50 48.2	-0.9
CONN	Concepcion	2.18	107	*e*P	Pn	22 50 48.5	-1.2
SBLS	San Blas	2.44	312	*e*P	Pn	22 50 53.8	+0.5
HZTE	Horizontes, Gu	2.59	125		Pn	22 50 54.1	-1.0
HZTE	Horizontes, Gu	2.59	125	*e*P	Pn	22 50 54.2	-1.0
REF1	Hacienda Santa	2.79	121	*i* P	Pn	22 51 00.4	+2.5
ESQI	Esquipulas	2.80	327		Pn	22 50 59.2	+0.9
ORTG	Ortega, Santa	2.91	129		Pn	22 50 58.5	-1.1
ORTG	Ortega, Santa	2.91	129	*e*P	Pn	22 50 58.5	-1.1
ORTG	Ortega, Santa	2.91	129	*e*P	Pn	22 51 02.1	+2.5
DUNO	Dulce Nombre,	3.07	133		Pn	22 50 59.9	-1.8
DUNO	Dulce Nombre,	3.07	133	*e*P	Pn	22 51 00.2	-1.5
ACAL	Aguas Claras	3.09	120	*i* P	Pn	22 51 02.4	+0.2
CNAS	Canas	3.15	124	*e*P	Pn	22 51 06.2	+3.3
COTE	Lago Cote	3.22	120	*i* P	Pn	22 51 04.1	+0.1
JTS	Las Juntas de	3.35	124	P	Pn	22 51 04.9	-0.7
	comp=Z,6.0nm,0.3s,baz=113,slow=22,SNR=19						
JTS				S	Sn	22 51 40.8	-3.4
	comp=Z,199nm,0.8s,baz=309,slow=8.5,SNR=6.3						
JTS				LR	LR	22 52 37.0	
	comp=Z,757nm,19.0s,baz=320,slow=44						
	comp=Z,53nm,0.5s						
JTS	Las Juntas de	3.35	124		Pn	22 51 04.5	-1.1
JTS	Las Juntas de	3.35	124	*e*P	Pn	22 51 05.0	-0.6
JTS	Las Juntas de	3.35	124	*e*P	Pn	22 51 04.9	-0.7
JTS	Las Juntas de	3.35	124	*e*P	Pn	22 51 05.2	-0.4
ESPN	Las Esperanzas	3.38	90		Pn	22 51 06.8	+0.7
SOCE	Pocosol	3.57	120	*e*P	Pn	22 51 08.6	-0.1
LAFE	Finca La Fe, P	3.67	130	*e*P	Pn	22 51 08.4	-1.7
LAFE	Finca La Fe, P	3.67	130	*e*P	Pn	22 51 08.3	-1.8
SRA1	San Ramn	3.85	123	*e*P	Pn	22 51 14.6	+2.0
JACO	JACO, Garabito	3.96	129		Pn	22 51 14.6	+0.6
JACO	JACO, Garabito	3.96	129	*e*P	Pn	22 51 14.6	+0.6
JACO	JACO, Garabito	3.96	129	*e*P	Pn	22 51 14.6	+0.6
TCS1	Tacares	4.02	122	*e*P	Pn	22 51 16.3	+1.4
VPTE	Poasito	4.04	120	*e*P	Pn	22 51 18.7	+3.4
HDC	Heredia	4.19	121		Pn	22 51 16.1	-1.2
HDC	Heredia	4.19	121	*e*P	Pn	22 51 19.7	+2.3
HDC3	Heredia 3	4.20	121	*e*P	Pn	22 51 16.8	-0.6
ACOS	Acosta	4.26	124	*e*P	Pn	22 51 19.7	+1.3
OCM	Ochomogo	4.38	121	*e*P	Pn	22 51 21.6	+1.6
VIRE	VIRE	4.39	120	*e*P	Pn	22 51 23.1	+2.8
ABE2	San Pablo	4.41	124	*e*P	Pn	22 51 21.5	+1.2
LCR2	La Lucha 2	4.42	123	*e*P	Pn	22 51 21.9	+1.3
HAYA	Volcan Irazu	4.43	120	*e*P	Pn	22 51 23.5	+2.6
ICR3	Volcano Irazu	4.44	119	*e*P	Pn	22 51 24.3	+3.3
REPA	Paraso	4.49	121	*e*P	Pn	22 51 23.4	+2.0
VTLO	VTLO	4.50	118	*e*P	Pn	22 51 24.8	+3.0
RIMA	Rio Macho	4.53	122		Pn	22 51 22.6	+0.6
CDM	Cerro de Muert	4.73	123	*e*P	Pn	22 51 26.2	+1.2
CDM	Cerro de Muert	4.73	123	*e*P	Pn	22 51 25.7	+0.7
BUS1	Rivas	4.74	123	*e*P	Pn	22 51 26.1	+1.0
EDDO	Dominical	4.82	127	*e*P	Pn	22 51 25.4	-0.5
MRVA	Moravia de Chi	4.85	119	*e*P	Pn	22 51 28.4	+1.9
PEZE	Perez Zeledon,	4.89	125		Pn	22 51 27.1	+0.2
PEZE	Perez Zeledon,	4.89	125	*e*P	Pn	22 51 27.4	+0.5
PETF	Flores	5.11	337		Pn	22 51 30.8	+1.1
SRBA	San Rafael, Bu	5.24	124		Pn	22 51 32.0	+0.3
EDPN	Palmar Norte	5.32	127	*e*P	Pn	22 51 33.2	+0.5
PLAN	Los Planes de	5.33	131	*e*P	Pn	22 51 33.2	+0.4
EDBA	Buenos Aires	5.34	124	*e*P	Pn	22 51 33.9	+0.9
EDP2	Potrero Grande	5.51	125	*e*P	Pn	22 51 36.6	+1.3
POTG	Potrero Grande	5.53	124	*e*P	Pn	22 51 36.7	+1.0
EDAD	Golfito	5.73	128	*e*P	Pn	22 51 38.8	+0.4
EDSV	San Vito	5.79	125	*e*P	Pn	22 51 40.8	+1.7
CCIG	Comitan	5.87	314		Pn	22 51 41.9	+1.6
CTCR	Cotoan	5.91	123	*e*P	Pn	22 51 41.8	+0.8
BRU2	Volcan	6.03	124		Pn	22 51 43.1	+0.6
BRU2	Volcan	6.03	124	*e*P	Pn	22 51 44.0	+1.4
BCIP	Isla Barro Col	8.35	110	Pn	Pn	22 52 14.2	0.0
CMIG	Matias Romero	8.43	306	P	Pn	22 52 15.9	+0.6
	comp=Z,1.1nm,0.3s,baz=136,slow=12,SNR=9.0						
CMIG				S	Sn	22 53 45.6	-3.6
	comp=Z,5.6nm,0.9s,baz=106,slow=19,SNR=1.3						
CMIG				LR	LR	22 55 57.4	
	comp=Z,642nm,21.4s,baz=132,slow=40						
	comp=Z,3.8nm,0.5s						
TLIG	Tlapa	11.72	298		Pn	22 53 01.7	+1.2
SJCC	San Jacinto, C	12.56	99	*e*P	Pn	22 53 12.0	+0.1
ZARC	Zaragoza, Cauc	13.54	109	*e*P	Pn	22 53 24.8	-0.5
YOTC	Yotoco, Valle	13.94	125	*e*P	Pn	22 53 30.0	-0.8
BBAC	Balboa, Cauca	14.52	133	*e*P	P	22 53 47.3	+3.3
POPC	Popayan, Colom	14.59	130	*e*P	Pn	22 53 40.6	+1.2
ORTC	Ortega, Tolima	14.87	123	*e*P	P	22 53 46.1	-1.6
GCUF	Volcan Galeras	15.02	136	*e*P	P	22 53 54.1	+4.2
OTAV	Otavalo	15.05	141	P	Pn	22 53 47.3	+1.5
TULM	Tulcn-Chalpat	15.10	138	Pn	Pn	22 53 46.0	-0.5
TULM				IAmb	IAmb	22 53 57.1	
	comp=Z,27nm,0.9s						
ROSC	El Rosal	15.16	118	P	Pn	22 53 45.4	-1.8
	comp=Z,0.4nm,0.3s,baz=324,slow=19,SNR=2.5						
	comp=Z,12nm,1.0s						
ROSC	El Rosal	15.16	118	P	Pn	22 53 45.4	-1.8
IMBA	Imbabura, San	15.18	141	Pn	Pn	22 53 47.9	+0.5
IMBA				IAmb	IAmb	22 54 08.4	
	comp=Z,50nm,0.8s						
PULU	Pululahua	15.20	142	Pn	Pn	22 53 48.3	+0.7
BETC	Betania	15.44	127	*e*P	P	22 53 53.5	-0.6
PAMC	Pamplona, Colo	15.61	107	*e*P	P	22 53 56.3	0.0
RUSC	La Rusia	15.79	112	P	Pn	22 53 56.9	+1.6
RUSC	La Rusia	15.79	112	*e*P	P	22 53 58.8	+0.4
SLOR	San Lorenzo -	15.80	144	Pn	Pn	22 53 55.6	+0.1
FLOC	Florencia	15.98	130	*e*P	Pn	22 53 59.1	+1.8
CHSH	Refugio Sur-Vo	16.22	146	Pn	Pn	22 54 00.0	-0.9
PORT	Chimborazo Vol	16.25	146	Pn	Pn	22 54 00.5	-0.8

PORT				IAmb	IAmb	22 54 08.5	
	comp=Z,45nm,0.9s						
MACC	Macarena, Meta	17.03	125	*e*P	Pn	22 54 10.1	-0.3
SDV	Santo Domingo	17.16	99	P	Pn	22 54 09.7	-2.5
	comp=Z,0.3nm,0.3s,baz=321,slow=5.9,SNR=4.0						
	comp=Z,5.1nm,0.6s						
SDV	Santo Domingo	17.16	99	Pn	Pn	22 54 10.9	-1.3
SDV	Santo Domingo	17.16	99	*e*P	Pn	22 54 12.7	+0.5
ZAIG	Zacatecas	17.59	309	P	Pn	22 54 17.3	-0.2
MCRA	Macar, Loja	18.20	154	P	P	22 54 22.2	-2.4
344A	Westbrook Farm	19.35	352	P	Pn	22 54 37.5	-1.1
344A				IAmb	IAmb	22 54 41.9	
	comp=Z,46nm,0.9s						
833A	Chaparral WMA,	19.38	328	P	P	22 54 36.6	-0.7
BAUV	El Baul	19.65	98	P	P	22 54 37.4	-3.0
BAUV				IAmb	IAmb	22 54 41.4	
	comp=Z,38nm,1.3s						
152A	Waverly Hall	20.56	7	P	P	22 54 49.7	-0.4
152A				IAmb	IAmb	22 54 56.0	
	comp=Z,34nm,0.6s						
435B	Jarrell	20.60	335		P	22 54 51.6	+0.9
435B				IAmb	IAmb	22 55 05.8	
	comp=Z,22nm,0.8s						
LRAL	Lakeview Retre	20.75	2		P	22 54 52.4	+0.2
154A	Montrose	20.76	11	P	P	22 54 52.1	-0.2
BIRV	Birongo	21.14	92	P	P	22 54 55.8	-0.8
BIRV				IAmb	IAmb	22 55 25.6	
	comp=Z,39nm,1.2s						
JCT	Junction City	21.34	330	P	P	22 54 59.2	+0.6
JCT				IAmb	IAmb	22 55 03.1	
	comp=Z,23nm,0.7s						
ATAH	Atahualpa	21.35	154	P	P	22 54 59.7	+0.5
	comp=Z,14nm,1.0s,baz=306,slow=16,SNR=5.5						
	comp=Z,14nm,1.0s						
Y49A	Blount Mountai	21.59	3	P	P	22 55 02.6	+1.4
WHTX	Lake Whitney,	21.62	337	P	P	22 55 02.1	+0.6
Y52A	Lilburn	21.82	8	P	P	22 55 04.1	+0.4
Y52A				IAmb	IAmb	22 55 08.3	
	comp=Z,30nm,0.9s						
FW13	Cleburne	21.93	338	P	P	22 55 05.2	+0.3
FW13				IAmb	IAmb	22 55 09.1	
	comp=Z,36nm,1.2s						
X48A	Hartselle	22.16	2	P	P	22 55 08.1	+0.8
OXF	Oxford	22.26	356	P	P	22 55 08.6	+0.3
OXF				IAmb	IAmb	22 55 10.5	
	comp=Z,59nm,1.4s						
FPAL	Fort Paine	22.32	5	P	P	22 55 10.8	+1.7
FW07	Weatherford	22.38	337	P	P	22 55 11.3	+1.6
FW07				IAmb	IAmb	22 55 12.5	
	comp=Z,27nm,1.0s						
X51A	Calhoun	22.42	6	P	P	22 55 11.3	+1.3
X51A				IAmb	IAmb	22 55 45.5	
	comp=Z,50nm,1.4s						
HODGE	Hodges	22.49	12	P	P	22 55 12.1	+1.2
HODGE				IAmb	IAmb	22 55 13.9	
	comp=Z,21nm,0.9s						
FW06	Azle	22.54	338	P	P	22 55 12.0	+0.6
FW06				IAmb	IAmb	22 55 14.9	
	comp=Z,67nm,1.4s						
TXAR	Lajitas Array	22.57	321	P	P	22 55 13.0	+1.1
	comp=Z,23nm,0.8s,baz=137,slow=9.8,SNR=161						
TXAR				PcP	PcP	22 59 05.2	+1.3
	comp=Z,2.3nm,1.1s,baz=141,slow=4.2,SNR=4.9						
	comp=Z,23nm,0.8s						
TXAR	Lajitas Array	22.57	321	P	P	22 55 12.1	+0.2
TX31	Lajitas Ar. Si	22.57	321	P	P	22 55 12.4	+0.4
TX32	Lajitas Array	22.57	321	P	P	22 55 11.6	-0.4
TX32				IAmb	IAmb	22 55 14.4	
	comp=Z,19nm,0.8s						
Z35A	Perchaven, San	22.75	339	P	P	22 55 14.3	+0.6
JSC	Jenkinsville	22.76	14	P	P	22 55 15.1	+1.4
JSC				IAmb	IAmb	22 55 16.6	
	comp=Z,14nm,0.8s						
FW03	Perrin-Whitt E	22.79	337	P	P	22 55 16.0	+1.9
FW03				IAmb	IAmb	22 55 17.2	
	comp=Z,50nm,1.2s						
MIAR	Mount Ida	22.86	348	P	P	22 55 15.0	+0.3
W45A	Hickory Valley	22.89	357	P	P	22 55 15.3	+0.3
W45A				IAmb	IAmb	22 55 16.9	
	comp=Z,43nm,1.1s						
W50A	Signal Mountai	23.00	5	P	P	22 55 16.9	+0.6
W50A				IAmb	IAmb	22 55 18.7	
	comp=Z,14nm,0.6s						
W52A	Murphy	23.05	8	P	P	22 55 17.9	+1.2
ABTX	Abilene, Hawle	23.07	334	P	P	22 55 17.6	+0.7
ABTX				IAmb	IAmb	22 55 19.4	
	comp=Z,30nm,1.0s						
BG3	Lake Jocassee	23.11	10	P	P	22 55 18.2	+1.0
BG3				IAmb	IAmb	22 55 19.9	
	comp=Z,19nm,0.7s						
H06E1	SOCORRO T-PHAS	23.25	289	T	T	23 19 19.9	
	SNR=2.6						
BIRD	Birdtown, Kers	23.31	15	P	P	22 55 20.6	+1.4
BIRD				IAmb	IAmb	22 55 21.2	
	comp=Z,15nm,0.6s						
CPCT	Cooper Cave	23.33	7	P	P	22 55 20.3	+0.9
LOOK	Love County	23.33	340	P	P	22 55 20.8	+1.4
LOOK				IAmb	IAmb	22 55 23.5	
	comp=Z,39nm,0.9s						
X37A	Clayton	23.34	344		P	22 55 21.7	+2.2
X37A				IAmb	IAmb	22 55 26.0	
	comp=Z,37nm,1.3s						
X58A	Rowland	23.53	18	P	P	22 55 21.7	+0.4
X58A				IAmb	IAmb	22 55 23.3	
	comp=Z,28nm,1.0s						
KMSC	Kings Mountain	23.57	13	P	P	22 55 22.6	+1.0
TKL	Tuckaleechee C	23.63	8	P	P	22 55 23.0	+0.8
	comp=Z,13nm,0.5s,baz=173,slow=5.8,SNR=29						
	comp=Z,13nm,0.5s						
TKL	Tuckaleechee C	23.63	8	P	P	22 55 23.8	+1.5
V51A	Loudon	23.70	7	P	P	22 55 23.4	+0.5
V51A				IAmb	IAmb	22 55 26.9	
	comp=Z,14nm,0.7s						
V53A	Saluda	23.79	10	P	P	22 55 24.6	+0.9
V53A				IAmb	IAmb	22 55 27.2	
	comp=Z,18nm,0.8s						
V52A	Sevierville	23.83	8	P	P	22 55 23.8	-0.3
V52A				IAmb	IAmb	22 55 27.2	
	comp=Z,19nm,1.1s						
FCAR	Ozark Folk Cen	23.91	351	P	P	22 55 24.6	-0.2
ODSA	Odessa	24.04	328	P	P	22 55 27.0	+0.9
ODSA				IAmb	IAmb	22 55 28.3	
	comp=Z,54nm,1.0s						
X34A	Smith Ranch, M	24.11	339		P	22 55 27.9	+1.3
U49A	Red Boiling Sp	24.27	4	P	P	22 55 28.6	+0.5
V55A	Taylorsville	24.28	13	P	P	22 55 29.1	+1.0
V55A				IAmb	IAmb	22 55 30.2	
	comp=Z,19nm,1.1s						
POST	Post	24.28	331	P	P	22 55 28.6	+0.3
POST				IAmb	IAmb	22 55 30.7	
	comp=Z,45nm,0.8s						
W35A	Tecumseh	24.30	342		P	22 55 29.8	+1.4
W35A				IAmb	IAmb	22 55 31.0	
	comp=Z,38nm,1.3s						
TZTN	Tazewell	24.53	8	P	P	22 55 31.1	+0.6
TZTN				IAmb	IAmb	22 55 34.6	
	comp=Z,17nm,0.8s						
FNO	Franklin	24.56	341		P	22 55 31.6	+0.9
WMOK	Wichita Mounta	24.57	338		P	22 55 31.5	+0.7
HHAR	Hobbs	24.61	348	P	P	22 55 31.6	+0.4
T47A	Sharon Grove	24.69	1	P	P	22 55 31.7	-0.2
T47A				IAmb	IAmb	22 55 33.0	
	comp=Z,14nm,0.6s						
TUL1	Leonard	24.69	344		P	22 55 31.6	-0.3
TUL1				IAmb	IAmb	22 55 35.9	
	comp=Z,27nm,1.1s						
V58A	Windy Hill, Pi	24.75	17	P	P	22 55 32.0	-0.4
V58A				IAmb	IAmb	22 55 34.8	
	comp=Z,23nm,0.8s						
U54A	Nelsons Funny	24.80	11	P	P	22 55 32.8	-0.2
CZSB	Cruzeiro do Su	24.82	142	P	P	22 55 33.9	+0.5
CZSB				IAmb	IAmb	22 55 37.4	
	comp=Z,24nm,0.7s						
CZSB	Cruzeiro do Su	24.82	142	*e*P	P	22 55 34.8	+1.4
U38A	Gravette	24.86	347	P	P	22 55 33.9	+0.4
CLNB	Carlsbad	24.86	326	P	P	22 55 34.3	+0.6
HTMS	Hat Mesa	24.89	327	P	P	22 55 34.2	+0.3
T42A	Van Buren	24.90	354	P	P	22 55 33.7	-0.1
U56A	King	24.94	14	P	P	22 55 35.4	+1.1
U56A				IAmb	IAmb	22 55 39.0	
	comp=Z,17nm,1.0s						
OK034	N. Norfolk Rd.	25.04	343		P	22 55 35.1	0.0
OK034				IAmb	IAmb	22 55 47.8	
	comp=Z,19nm,0.9s						
OK052	Battle Ridge R	25.05	342	P	P	22 55 34.6	-0.6
OK052				IAmb	IAmb	22 55 36.2	
	comp=Z,30nm,0.9s						
OK053	SW of W Deep R	25.07	343		PcP	22 59 10.3	+1.4
OK029	Liberty Lake	25.07	341		P	22 55 35.3	-0.1
OK029				IAmb	IAmb	22 55 36.1	
	comp=Z,20nm,0.7s						
GDL2	Guadalupe Moun	25.08	325	P	P	22 55 36.6	+0.9
QUOK	Quay	25.19	343		P	22 55 35.9	-0.6
QUOK				IAmb	IAmb	22 55 48.3	
	comp=Z,24nm,0.8s						
OK046	Pawnee Station	25.46	343		P	22 55 39.0	+0.1
OK046				IAmb	IAmb	22 55 46.5	
	comp=Z,36nm,1.1s						
MSTX	Muleshoe	25.63	330	P	P	22 55 40.7	+0.1
S39A	Bolivar	25.86	350	P	P	22 55 42.4	-0.1
S39A				IAmb	IAmb	22 55 44.2	
	comp=Z,14nm,0.6s						
AMTX	Amarillo	25.88	333	P	P	22 55 43.3	+0.5
CCM	Cathedral Cave	25.93	354	P	P	22 55 42.1	-1.0
OK038	West end E0370	26.12	340	P	P	22 55 44.4	-0.5
OK032	Salt Plains WL	26.24	341	P	P	22 55 45.8	-0.1
NOKA	Waynoka	26.32	339		P	22 55 47.1	+0.3
KAN08	Anthony NE Sta	26.55	342	P	P	22 55 49.3	+0.6
Q51A	Peebles	27.00	8	P	P	22 55 53.5	+0.7
Q51A				IAmb	IAmb	22 55 54.3	
	comp=Z,14nm,0.5s						
121A	Cookes Peak, D	27.33	321	P	P	22 55 58.1	+2.0
Q54A	Coxs Mills	27.37	12	P	P	22 55 56.4	+0.3
Q54A				IAmb	IAmb	22 55 57.7	
	comp=Z,13nm,0.5s						
CRNM	Carthage	27.71	324	P	P	22 55 59.6	+0.2
P53A	Whipple	27.75	11	P	P	22 56 00.4	+0.9
P53A				IAmb	IAmb	22 56 01.4	
	comp=Z,12nm,0.7s						
P38A	Dawn	27.79	350	P	P	22 55 59.8	0.0
P38A				IAmb	IAmb	22 56 00.3	
	comp=Z,16nm,1.1s						
BNM	Barren Site	27.80	325	P	P	22 56 00.7	+0.4
SBM	South Baldy	27.98	324	P	P	22 56 01.6	-0.6
ANMO	Albuquerque	28.29	326	P	P	22 56 06.4	+1.8
	comp=Z,1.6nm,0.8s,baz=228,slow=10.0,SNR=4.6						
	comp=Z,1.6nm,0.8s						
ANMO	Albuquerque	28.29	326	P	P	22 56 03.8	-0.8
ETMB	Extrema	30.61	135	P	P	22 56 24.5	-0.6
ETMB	Extrema	30.61	135	*e*P	P	22 56 26.1	+1.0
S22A	4UR Ranch, Cre	30.62	329	P	P	22 56 25.0	-0.4
ISCO	Idaho Springs	31.70	333	P	P	22 56 34.9	+0.1
K31A	O'Neill	31.78	344	P	P	22 56 35.8	+0.6
SMCO	Snowmass	31.82	331	P	P	22 56 35.8	-0.2
SMCO				IAmb	IAmb	22 57 03.3	
	comp=Z,12nm,0.7s						
SAML	Samuel	32.22	130	P	P	22 56 38.2	-1.1
SAML	Samuel	32.22	130	*e*P	P	22 56 38.5	-0.8
ECSD	EROS Data Cent	32.33	348	P	P	22 56 39.1	-0.9
ECSD				IAmb	IAmb	22 56 40.8	
	comp=Z,15nm,0.9s						
J56A	Wolcott	32.37	15	P	P	22 56 41.0	+0.7
J56A				IAmb	IAmb	22 56 41.3	
	comp=Z,11nm,0.7s						
O20A	White River Ci	33.17	331	P	P	22 56 48.9	+1.3
O20A				IAmb	IAmb	22 57 02.6	
	comp=Z,18nm,1.0s						
SADO	Sadowa	33.28	11	P	P	22 56 47.6	-0.7
	comp=Z,3.8nm,0.4s,baz=208,slow=8.8,SNR=7.6						
	comp=Z,3.8nm,0.4s						
SUSD	Miller	33.53	345	P	P	22 56 50.2	-0.3
F36A	Milaca	33.90	353	P	P	22 56 52.3	-1.4
F36A				IAmb	IAmb	22 56 53.6	
	comp=Z,9.9nm,1.2s						
F33A	5 Mile Ranch,	34.30	349	P	P	22 56 56.5	-0.6
LPAZ	La Paz	34.33	145	P	P	22 56 59.2	+0.9
	comp=Z,5.5nm,1.3s,baz=300,slow=9.0,SNR=2.6						
LPAZ				LR	LR	23 11 36.9	
	comp=Z,919nm,20.2s,baz=259,slow=37						
	comp=Z,5.5nm,1.3s						
RSSD	Black Hills	34.75	339	P	P	22 57 02.7	+1.4
RSSD				IAmb	IAmb	22 57 04.2	
	comp=Z,5.2nm,0.8s						
PD31	Pinedale Array	35.85	332	P	P	22 57 11.3	+0.5
PDAR	Pinedale Array	35.85	332	P	P	22 57 12.0	+1.2
	comp=Z,1.7nm,0.5s,baz=131,slow=9.8,SNR=15						
PDAR				PcP	PcP	22 59 37.4	+0.1
	comp=Z,0.6nm,0.7s,baz=130,slow=3.2,SNR=3.7						
	comp=Z,1.7nm,0.5s						
PDAR	Pinedale Array	35.85	332	P	P	22 57 10.5	-0.2
HWUT	Hardware Ranch	35.93	329	P	P	22 57 12.0	+0.6
AHID	Auburn Hatcher	36.57	331	P	P	22 57 18.2	+1.3
AGMN	Agassiz Nation	36.61	351	P	P	22 57 17.2	+0.2
MDND	Maddock	36.89	347	P	P	22 57 19.6	+0.2
REDW	Red Top Meadow	36.91	332	P	P	22 57 20.6	+0.9
SNOW	Snow King Moun	36.94	332	P	P	22 57 21.3	+1.2
VILB	Vilhena	37.04	132	P	P	22 57 20.9	-0.1
VILB	Vilhena	37.04	132	*e*P	P	22 57 21.1	+0.2
MOOW	Moose Ponds	37.16	332	P	P	22 57 22.4	+0.6
MOOW				IAmb	IAmb	22 57 29.9	
	comp=Z,7.0nm,0.8s						
FXWY	Fox Creek	37.20	332	P	P	22 57 23.0	+0.7
IMW	Indian Meadow	37.36	332	P	P	22 57 24.4	+0.7
IMW				IAmb	IAmb	22 57 30.5	
	comp=Z,7.9nm,0.6s						
FLWY	Flagg Ranch	37.39	332	P	P	22 57 23.9	0.0
FLWY				IAmb	IAmb	22 57 26.8	
	comp=Z,18nm,1.1s						
H17A	Grant Village	37.58	333	P	P	22 57 26.4	+0.9
H17A				IAmb	IAmb	22 57 31.4	
	comp=Z,11nm,1.3s						
LKWY	Lake	37.64	333	P	P	22 57 26.4	+0.4
LKWY				IAmb	IAmb	22 57 41.1	
	comp=Z,9.5nm,1.1s						
NVAR	Mina Array Bea	37.69	319	P	P	22 57 27.9	+1.4
	comp=Z,0.3nm,0.3s,baz=117,slow=7.6,SNR=3.7						
NVAR				PcP	PcP	22 59 43.4	+0.5
	comp=Z,0.4nm,0.4s,baz=136,slow=4.1,SNR=4.7						
	comp=Z,0.3nm,0.3s						
YNR	Norris Junctio	37.88	333	P	P	22 57 28.8	+0.8
YNR				IAmb	IAmb	22 57 34.5	
	comp=Z,13nm,1.2s						
YMR	Madison River	37.97	333	P	P	22 57 29.1	+0.3
GCMT	Greycliff	38.30	335	P	P	22 57 31.4	-0.1
ULM	Lac du Bonnet	38.52	352	P	P	22 57 31.3	-1.7
	comp=Z,10nm,0.7s,baz=174,slow=7.9,SNR=15						
	comp=Z,10nm,0.7s						
ULM	Lac du Bonnet	38.52	352	P	P	22 57 32.0	-1.0
ULM				IAmb	IAmb	22 57 32.6	
	comp=Z,15nm,0.9s						
DGMT	Dagmar	38.66	342		P	22 57 34.9	+0.6
HLID	Hailey	38.79	329	P	P	22 57 36.5	+0.9
MCMT	McKenzie Canyo	38.95	331	P	P	22 57 37.9	+0.8
BOZ	Bozeman (W)	38.99	333	P	P	22 57 37.7	+0.5
BOZ				IAmb	IAmb	22 57 39.5	
	comp=Z,6.9nm,0.8s						
PTLB	Pontes e Lacer	39.47	133	P	P	22 57 41.3	-0.1
PTLB				IAmb	IAmb	22 57 41.9	
	comp=Z,14nm,1.4s						
PTLB	Pontes e Lacer	39.47	133	*e*P	P	22 57 41.2	-0.1
LRM	Limekiln Ridge	39.53	333	P	P	22 57 42.7	+0.8
EGMT	Eagleton	40.16	337		P	22 57 47.4	+0.5
EGMT				IAmb	IAmb	22 58 15.7	
	comp=Z,19nm,1.2s						
PLID	Pearl Lake	40.68	329		P	22 57 51.3	-0.1
MSO	Missoula	40.96	332		P	22 57 54.0	+0.4
MSO				IAmb	IAmb	22 57 55.9	
	comp=Z,20nm,1.2s						
SALV	Santo Antonio	42.27	131	*e*P	P	22 58 04.8	+0.4
SNDB	Serra Nova Dou	43.44	122	*e*P	P	22 58 13.9	-0.1
NEW	Newport	43.48	332	P	P	22 58 14.0	+0.1
	comp=Z,1.1nm,0.3s,baz=182,slow=3.8,SNR=3.7						
	comp=Z,1.1nm,0.3s						
D08A	Wollman Farm,	43.51	329	P	P	22 58 15.4	+1.3
FFC	Flin Flon	43.88	348	P	P	22 58 16.7	-0.2
FFC				IAmb	IAmb	22 58 18.6	
	comp=Z,16nm,1.4s						
B08A	Colville Reser	44.60	330	P	P	22 58 23.4	+0.5
SMTB	Santa Maria do	45.08	116	*e*P	P	22 58 29.3	+2.2
SCHQ	Schefferville	45.60	17	P	P	22 58 29.4	-1.3
	comp=Z,5.5nm,0.4s,baz=220,slow=6.6,SNR=44						
	comp=Z,5.5nm,0.4s						
H03N2	Juan Fernandez	46.16	170	T	T	23 47 52.0	
	baz=348						
H03N1	Juan Fernandez	46.17	170	T	T	23 47 53.1	
	baz=348						
H03N3	Juan Fernandez	46.18	170	T	T	23 47 51.3	
	baz=348						
FCC	Fort Churchill	46.71	355	P	P	22 58 38.8	-0.5
FCC				IAmb	IAmb	22 58 39.5	
	comp=Z,7.2nm,0.8s						
LLLB	Lillooet	47.34	331	P	P	22 58 44.9	+0.4
AMBA	Amambai (Brazi	47.42	137	*e*P	P	22 58 45.0	-0.4
BRLDA	Berland Lookou	47.91	337	P	P	22 58 49.1	+0.2
BDFB	Brasilia	48.09	124	P	P	22 58 49.4	-1.3
	comp=Z,5.1nm,0.8s,baz=281,slow=9.3,SNR=7.9						
	comp=Z,5.1nm,0.8s						
BDFB	Brasilia	48.09	124	P	P	22 58 50.1	-0.7
BDFB				IAmb	IAmb	22 58 51.0	
	comp=Z,4.5nm,0.7s						
CPUP	Villa Florida	48.40	143	P	P	22 58 52.1	-0.7
	comp=Z,4.0nm,1.1s,baz=331,slow=12,SNR=3.4						
	comp=Z,4.0nm,1.1s						
IPMB	Ipameri, GO	49.23	127	*e*P	P	22 58 58.7	-0.7
ITQB	Itaqui	51.33	145	*e*P	P	22 59 15.3	+0.3
YKA	Yellowknife Ar	53.77	345	P	P	22 59 32.0	-0.6
	comp=Z,2.8nm,0.8s,baz=138,slow=7.9,SNR=40						
YKA				PcP	PcP	23 00 37.9	-0.1
	comp=Z,0.5nm,0.4s,baz=146,slow=4.0,SNR=6.3						
	comp=Z,2.8nm,0.8s						
PLCA	Paso Flores	55.03	164	P	P	22 59 42.1	0.0
	comp=Z,4.5nm,1.0s,baz=330,slow=8.6,SNR=5.5						
	comp=Z,4.5nm,1.0s						
PLCA	Paso Flores	55.03	164	P	P	22 59 41.9	-0.3
PLCA				IAmb	IAmb	22 59 43.5	
	comp=Z,9.6nm,1.1s						
DLBC	Dease Lake	56.00	335	P	P	22 59 49.8	+0.9
DLBC				IAmb	IAmb	22 59 51.5	
	comp=Z,11nm,1.1s						
RES	Resolute Bay	62.59	358	P	P	23 00 33.2	-0.9
	comp=Z,2.9nm,0.6s,baz=192,slow=11,SNR=6.8						
	comp=Z,2.9nm,0.6s						
RES	Resolute Bay	62.59	358	P	P	23 00 33.4	-0.7
RES				IAmb	IAmb	23 00 34.7	
	comp=Z,7.5nm,1.4s						
I29M	Ogilvie Camp,	63.18	339	P	P	23 00 39.8	+1.6
INK	Inuvik	63.35	343	P	P	23 00 39.1	0.0
	comp=Z,3.6nm,1.0s,baz=127,slow=8.7,SNR=7.3						
	comp=Z,3.6nm,1.0s						
INK	Inuvik	63.35	343	P	P	23 00 39.8	+0.7
SONM	Songino Array	118.92	349	PKP	PKPdf	23 08 58.8	0.0
	comp=Z,0.5nm,0.4s,baz=29,slow=3.3,SNR=6.4						
MKAR	Makanchi Array	120.60	8	PKP	PKPdf	23 08 60.0	-2.0
	comp=Z,0.1nm,0.3s,baz=344,slow=1.9,SNR=1.2						
ASAR	Alice Springs	138.90	248	PKP	PKPdf	23 09 37.2	0.0
	comp=Z,0.9nm,0.9s,baz=89,slow=2.2,SNR=4.6						
WRA	Warramunga Arr	138.91	254	PKP	PKPdf	23 09 36.9	-0.4
	comp=Z,1.7nm,0.9s,baz=92,slow=2.4,SNR=6.3						
CMAR	Chiang Mai Arr	148.82	348	PKPbc	PKPbc	23 09 58.5	0.0
	comp=Z,2.6nm,0.7s,baz=336,slow=3.1,SNR=12						

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*IDC **05** 23:31:51.4±3.3, 18.°18S×174.°73W, h70^{km}±31^{km}, mb3.9/10, mbtmp4.2/11, ML4.3/1, Error ellipse: s-maj=32.7km s-min=16.0km az=130.0*

*NEIC **05** 23:31:52.2±1.9, 18.°3S±0.°2×174.°6W±0.°1, h71^{km}±14^{km}, mb4.5/24, Error ellipse: s-maj=36.1km s-min=11.1km az=205.0*

ISC 05 23:31:49.3±0.5**, 18.°18S**±0.°08×**174.°70W**±0.°07**, h50^{km}, n41,** σ1^{s}**25**/44**, mb4.5**/21**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.61	102		Pn	23 32 58.7	+2.3
NIUE				Sn	Sn	23 33 46.3	-2.3
AFI	Afiamalu	5.09	34	P	Pn	23 33 05.7	+2.6
	10nm,0.3s,baz=132,slow=19,SNR=7.1						
AFI				S	Sn	23 33 58.1	-2.6
	119nm,0.3s,baz=225,slow=19,SNR=8.7						
	36nm,0.4s						
DZM	Mont Dzumac	18.13	255	P	P	23 35 56.8	-0.7
URZ	Urewera	21.25	198	P	P	23 36 30.9	-0.2
	7.2nm,0.3s,baz=347,slow=3.2,SNR=12						
	7.2nm,0.3s						
RTZ	Ruatahuna	21.62	198	P	P	23 36 35.1	-0.1
BKZ	Black Stump Fm	22.27	198	P	P	23 36 40.7	-1.5
MRZ	Mangatainoka R	23.92	198	P	P	23 36 57.3	-1.3
MRZ				IAmb	IAmb	23 37 12.2	
	comp=Z,16nm,1.1s						
QRZ	Quartz Range	25.10	203	P	P	23 37 10.9	+1.6
QRZ				IAmb	IAmb	23 37 19.3	
	comp=Z,24nm,1.0s						
TKNZ	Takaka Hill	25.12	202	P	P	23 37 12.8	+3.2
DSZ	Denniston Nort	26.17	203	P	P	23 37 20.3	+1.2
DSZ				IAmb	IAmb	23 37 22.5	
	comp=Z,16nm,0.9s						
INZ	Inchbonnie	27.15	203	P	P	23 37 27.8	0.0
INZ				IAmb	IAmb	23 37 28.2	
	comp=Z,17nm,0.8s						
RPZ	Rata Peaks	28.15	202	P	P	23 37 36.5	-0.3
	comp=Z,3.5nm,0.3s,baz=47,slow=9.5,SNR=1.8						
	comp=Z,3.5nm,0.3s						
FOZ	Fox Glacier	28.46	204	P	P	23 37 40.2	+0.8
FOZ				IAmb	IAmb	23 37 50.5	
	comp=Z,14nm,0.9s						
EIDS	Eidsvold	32.51	251	P	P	23 38 15.7	+0.2
ARMA	Armidale	32.90	242	P	P	23 38 18.8	-0.2
ARMA				IAmb	IAmb	23 38 28.2	
	comp=Z,8.3nm,0.9s						
CTAO	Charters Tower	36.89	261	P	P	23 38 54.9	+1.6
CTAO				IAmb	IAmb	23 38 55.8	
	comp=Z,5.9nm,0.7s						
COEN	Coen	40.64	270	P	P	23 39 26.1	+1.3
STKA	Stephens Creek	41.61	242	P	P	23 39 31.9	-0.8
	comp=Z,1.2nm,0.4s,baz=90,slow=11,SNR=3.5						
	comp=Z,1.2nm,0.4s						
BBOO	Buckleboo	46.38	242	P	P	23 40 10.0	-0.9
BBOO				IAmb	IAmb	23 40 15.0	
	comp=Z,5.1nm,1.1s						
WR0	Warramunga Arr	47.87	259	P	P	23 40 22.8	+0.2
WB0	Warramunga Arr	48.03	260	P	P	23 40 24.2	+0.3
WB2	Warramunga Arr	48.04	259	P	P	23 40 24.3	+0.3
WRA	Warramunga Arr	48.05	259	P	P	23 40 24.1	0.0
	comp=Z,4.8nm,0.6s,baz=98,slow=6.5,SNR=106						
	comp=Z,4.8nm,0.6s						
WRA	Warramunga Arr	48.05	259	P	P	23 40 24.3	+0.2
AS31	Alice Springs	48.12	254	P	P	23 40 24.6	0.0
AS31				IAmb	IAmb	23 40 25.5	
	comp=Z,3.5nm,0.8s						
ASAR	Alice Springs	48.12	254	P	P	23 40 24.6	+0.1
	comp=Z,17nm,0.8s,baz=87,slow=8.7,SNR=141						
ASAR				PcP	PcP	23 41 49.8	-1.8
	comp=Z,0.2nm,0.5s,baz=98,slow=4.1,SNR=1.6						
	comp=Z,17nm,0.8s						
ASAR	Alice Springs	48.12	254	P	P	23 40 24.3	-0.2
KNRA	Kununurra	53.97	264	P	P	23 41 07.7	-0.9
FITZ	Fitzroy Crossi	56.47	260	P	P	23 41 25.9	-0.7
VNDA	Vanda	60.50	186	P	P	23 41 54.3	+0.6
	comp=Z,1.8nm,0.7s,baz=22,slow=5.2,SNR=2.1						
	comp=Z,1.8nm,0.7s						
VNDA	Vanda	60.50	186	P	P	23 41 54.4	+0.6
VNDA				IAmb	IAmb	23 41 54.5	
	comp=Z,4.3nm,1.1s						
PSA00	Pilbara Seismi	61.26	255	P	P	23 41 59.1	-0.7
PSA00				IAmb	IAmb	23 41 59.4	
	comp=Z,2.4nm,0.9s						
MBWA	Marble Bar	61.43	255	P	P	23 42 00.1	-0.9
MORW	Morawa	63.60	246	P	P	23 42 14.2	-1.1
QSPA	South Pole Qui	71.88	180	P	P	23 43 06.9	0.0
QSPA				IAmb	IAmb	23 43 07.6	
	comp=Z,4.5nm,0.8s						
UGM	Wanagama	73.17	267	P	P	23 43 15.5	+0.1
TXAR	Lajitas Array	83.18	56	P	P	23 44 11.1	+0.6
	comp=Z,0.7nm,0.9s,baz=224,slow=7.0,SNR=4.9						
	comp=Z,0.7nm,0.9s						
PDAR	Pinedale Array	85.15	42	P	P	23 44 20.5	+0.1
	comp=Z,0.6nm,0.8s,baz=197,slow=4.6,SNR=3.5						
	comp=Z,0.6nm,0.8s						
ILAR	Eielson Array	85.40	12	P	P	23 44 20.1	-0.7
	comp=Z,0.5nm,0.6s,baz=229,slow=5.5,SNR=9.9						
	comp=Z,0.5nm,0.6s						
YKA	Yellowknife Ar	93.13	24	P	P	23 44 56.1	-1.3
	comp=Z,0.2nm,0.6s,baz=237,slow=4.4,SNR=2.7						
	comp=Z,0.2nm,0.6s						
BRTR	Keskin Array B	147.43	317	PKPbc	PKPdf	23 51 27.5	+2.0
	comp=Z,0.9nm,0.7s,baz=100,slow=1.5,SNR=4.4						

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*VAO **05** 23:39:47.2±0.8, 21.°68S×69.°28W, h184^{km}, mb3.9*

*IDC **05** 23:39:47.9±9.3, 21.°76S×68.°20W, h121^{km}±63^{km}, mb3.3/3, mbtmp3.7/4, Error ellipse: s-maj=85.8km s-min=36.7km az=34.0*

*SJA **05** 23:39:48.3±1.3, 21.°55S×68.°31W, h100^{km}, ML3.8, MW3.6, Hypocentre not reviewed by the ISC*

*GUC **05** 23:39:50.3±0.7, 21.°56S×68.°44W, h135^{km}±5^{km}, ML3.9*

ISC 05 23:39:49.4±0.7, 21°.56S±0°.04×68°.53W±0°.08, h142^{km}±8^{km}, n42, σ1^{s}01/56, 13C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.71	250	⇑iP	Pn	23 40 11.9	+0.6
PB09				i S	Sn	23 40 28.5	+0.6
PB09	IPOC Station P	0.71	250	eP		23 40 11.8	
PB01	IPOC Station P	1.03	300	⇑iP	Pn	23 40 14.0	+0.2
PB01				i S	Sn	23 40 32.0	-0.4
PB01				IAML		23 40 33.2	
	comp=N,2µm,0.5s						
PB01	IPOC Station P	1.03	300	eP		23 40 13.9	
PB01				IAML		23 40 33.9	
	comp=Z,2µm,0.2s						
LVC	Limon Verde	1.10	199	eP	Pn	23 40 14.6	-0.2
LVC				i S	Sn	23 40 33.6	-0.6
LVC	Limon Verde	1.10	199	eP	Pn	23 40 14.8	0.0
LVC	Limon Verde	1.10	199	eP		23 40 14.7	
LVC				eS		23 40 34.7	
PB03	IPOC Station P	1.24	247	⇑iP	Pn	23 40 16.4	+0.6
PB03				i S	Sn	23 40 36.2	+0.2
PB03				IAML		23 40 37.4	
	comp=E,1µm,0.1s						
PB03	IPOC Station P	1.24	247	eP		23 40 16.3	
PB03				eS		23 40 36.4	
PB03				IAML		23 40 39.4	
	comp=Z,960nm,0.2s						
PB07	IPOC Station P	1.28	262	⇑iP	Pn	23 40 16.9	+0.7
PB07				i S	Sn	23 40 36.9	+0.3
PB07				IAML		23 40 38.4	
	comp=E,2µm,0.4s						
PB07	IPOC Station P	1.28	262	eP		23 40 16.0	
PB07				IAML		23 40 38.7	
	comp=Z,727nm,0.2s						
PB02	IPOC Station P	1.30	280	⇑iP	Pn	23 40 16.9	+0.5
PB02				i S	Sn	23 40 37.0	+0.1
PB02				IAML		23 40 38.4	
	comp=E,3µm,0.1s						
PB02	IPOC Station P	1.30	280	eP		23 40 16.9	
PB02				eS		23 40 37.5	
PB02				IAML		23 40 38.3	
	comp=Z,2µm,0.4s						
PB06	IPOC Station P	1.50	220	⇑iP	Pn	23 40 19.2	+0.7
PB06				i S	Sn	23 40 41.5	+0.7
PB06				IAML		23 40 42.6	
	comp=E,1µm,0.1s						
PB06	IPOC Station P	1.50	220	eP		23 40 19.2	
PB06				eS		23 40 41.4	
PB06				IAML		23 40 42.7	
	comp=Z,702nm,0.2s						
PB08	IPOC Station P	1.53	337	⇑iP	Pn	23 40 19.7	+0.6
PB08				i S	Sn	23 40 42.1	+0.4
PB08	IPOC Station P	1.53	337	eP		23 40 19.8	
PB08				eS		23 40 42.4	
PB04	IPOC Station P	1.69	243	⇑iP	Pn	23 40 21.2	+0.6
PB04				i S	Sn	23 40 44.6	0.0
PB04				IAML		23 40 47.4	
	comp=N,746nm,0.1s						
PB04	IPOC Station P	1.69	243	eP		23 40 21.2	
PB04				eS		23 40 45.2	
PB04				IAML		23 40 47.5	
	comp=Z,605nm,0.1s						
TA01	Diego Aracena	1.83	302	⇑iP	Pn	23 40 22.2	+0.1
TA01				i S	Sn	23 40 46.9	-0.2
TA01	Diego Aracena	1.83	302	eP		23 40 22.2	
TA01				eS		23 40 47.4	
TA01				IAML		23 40 48.7	
	comp=Z,285nm,0.2s						
PB15	IPOC Station P	1.86	208	⇑iP	Pn	23 40 23.2	+0.6
PB15				i S	Sn	23 40 49.2	+1.1
PB15	IPOC Station P	1.86	208	eP		23 40 23.4	
PB15				eS		23 40 49.6	
PB15				IAML		23 40 51.6	
	comp=Z,3µm,0.2s						
TA02	Huaiquique	1.97	310	eP		23 40 23.7	
TA02				eS		23 40 50.5	
TA02				IAML		23 40 51.3	
	comp=Z,875nm,0.1s						
GO01	Chusmiza	1.98	341	⇑iP	Pn	23 40 24.6	+0.3
GO01				i S	Sn	23 40 51.1	0.0
GO01				IAML		23 40 54.1	
	comp=N,1µm,0.1s						
GO01	Chusmiza	1.98	341	eP		23 40 24.5	
GO01				eS		23 40 53.0	
PB11	IPOC Station P	2.08	329	⇑iP	Pn	23 40 25.0	-0.2
PB11				i S	Sn	23 40 52.3	-0.3
PB11				IAML		23 40 53.1	
	comp=E,1µm,0.3s						
PB11	IPOC Station P	2.08	329	eP		23 40 24.0	
PB11				eP		23 40 25.0	
PB11				eS		23 40 52.5	
PB11				IAML		23 40 56.8	
	comp=Z,355nm,0.4s						
PSGC	Pisagua	2.46	322	⇑iP	Pn	23 40 29.1	-0.7
PSGC				i S	Sn	23 41 00.1	-0.7
PSGC				IAML		23 41 01.9	
	comp=E,383nm,0.6s						
PSGCX	Pisagua	2.46	322	eP		23 40 29.1	
PSGCX				eS		23 41 00.6	
PSGCX				IAML		23 41 02.2	
	comp=Z,175nm,0.4s						
MNMCX	Minye Minye	2.62	337	eP		23 40 31.0	
MNMCX				IAML		23 41 07.4	
	comp=Z,272nm,0.2s						
PB10	IPOC Station P	2.70	224	⇓iP	Pn	23 40 32.8	+0.2
PB10				IAML		23 41 07.1	
	comp=E,116nm,0.2s						
PB10	IPOC Station P	2.70	224	eP		23 40 32.0	
PB10				eS		23 41 05.4	
YJA	Yavi	2.86	103	eP		23 40 35.2	
PB16	IPOC Station P	3.34	344	eP		23 40 41.0	
PB12	IPOC Station P	3.38	330	eP		23 40 40.6	
PB12				eS		23 41 20.4	
PB12				IAML		23 41 26.7	
	comp=Z,98nm,0.4s						
PB14	IPOC Station P	3.51	209	eP		23 40 43.0	
PB14				IAML		23 41 32.6	
	comp=Z,68nm,0.3s						
ASTB	Santa Barbara	4.45	123	eP		23 40 54.0	
ASTB				eS		23 41 42.0	
AC01	Pan de Azucar	4.95	202	eP		23 41 00.5	
AC01				eS		23 41 55.4	
AC01				IAML		23 42 11.4	
	comp=Z,43nm,1.2s						
LPAZ	La Paz	5.26	4	P	Pn	23 41 07.6	+0.9
	comp=Z,1.2nm,0.3s,baz=190,slow=6.1,SNR=8.1						
LPAZ				S	Sn	23 42 09.9	+3.0
	comp=Z,1.9nm,0.7s,baz=274,slow=19,SNR=1.3						
AC02	Maricunga	5.28	186	eP		23 41 08.3	
AC02				eS		23 42 14.2	
SALV	Santo Antonio	13.39	67	eP	P	23 42 58.8	+0.5
CRSM	Crissiumal (Br	14.44	117	eP	P	23 43 09.0	-1.0
FRBT	Francisco Belt	14.82	110	eP	P	23 43 13.8	-0.5
RODS	Rosario do Sul	14.83	129	eP	P	23 43 13.5	-0.7
PDRB	Porto dos Gac	15.01	51	eP	P	23 43 16.5	+0.1
PTGB	Pitanga	15.46	105	eP	P	23 43 22.1	+0.7
ITAB	Concordia	15.96	114	eP	P	23 43 26.8	0.0
PCMB	Pacaembu	16.06	93	eP	P	23 43 28.1	+0.2
CPSB	Cacapava Do Su	16.16	126	eP	P	23 43 28.9	0.0
FRTB	Fartura	17.62	99	eP	Pn	23 43 47.8	+1.5
PET01	Itanhaem-SP	19.76	102	eP	Pn	23 44 10.8	-0.6
MACA	Manacapuru-AM	19.81	24	eP	P	23 44 07.6	-1.4
BDFB	Brasilia	20.30	77	P	P	23 44 11.4	-3.1
	comp=Z,0.9nm,0.4s,baz=248,slow=11,SNR=2.0						
	comp=Z,0.9nm,0.4s						
BDFB	Brasilia	20.30	77	eP	Pn	23 44 16.5	-1.4
ITTB	Itaituba	21.12	38	eP	P	23 44 21.7	-1.4
PRPB	Parauapebas	23.70	53	eP	P	23 44 47.4	-1.1
SMTB	Santa Maria do	23.78	61	eP	P	23 44 49.2	0.0
JANB	Januaria	23.86	78	eP	P	23 44 49.2	-0.8
MALB	Monte Alegre	24.01	37	eP	P	23 44 50.5	-0.7
SDBA	SAO DESIDERIO	24.33	72	eP	P	23 44 53.5	-0.7
BOAV	Boa Vista	25.06	19	eP	P	23 44 57.4	-3.4
GUA01	Guaratinga, BA	27.57	85	eP	P	23 45 23.3	0.0
TORD	Torodi Ar. Bea	77.04	70	P	P	23 51 27.2	0.0
	comp=Z,0.9nm,0.6s,baz=256,slow=5.1,SNR=9.6						
	comp=Z,0.9nm,0.6s						
YKA	Yellowknife Ar	91.36	340	P	P	23 52 40.5	+2.0
	comp=Z,0.2nm,0.6s,baz=131,slow=4.4,SNR=2.7						
	comp=Z,0.2nm,0.6s						
MKAR	Makanchi Array	145.47	36	PKPbc	PKPdf	23 59 10.8	+0.2
	comp=Z,0.1nm,0.5s,baz=319,slow=4.2,SNR=2.0						

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*GUC **06** 00:16:07.3±0.6, 20°.26S×69°.10W, h109^{km}±2^{km}, ML3.6*

*IDC **06** 00:16:08.6±1.2, 20°.29S×68°.56W, h100^{km}±17^{km}, mb3.2/2, mbtmp3.5/5, Error ellipse: s-maj=52.3km s-min=8.9km az=99.0*

ISC 06 00:16:07.2±1.0, 20°.26S±0°.03×69°.16W±0°.07, h108^{km}±7^{km}, n21, σ1^{s}14/39, 6C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.12	1	⇓iP	Pn	00 16 22.8	+0.1
PB08				eS	Sn	00 16 34.3	+0.1
PB08				IAML		00 16 36.1	
	comp=E,3µm,0.2s						
GO01	Chusmiza	0.59	357	⇓iP	Pn	00 16 25.0	0.0
GO01				i S	Sn	00 16 39.0	+0.5
GO01				IAML		00 16 41.9	
	comp=E,5µm,0.1s						
PB11	IPOC Station P	0.69	317	eP	Pn	00 16 25.4	0.0
PB11				eS	Sn	00 16 39.5	+0.4
PB11				IAML		00 16 40.9	
	comp=N,5µm,0.2s						
PB01	IPOC Station P	0.84	202	⇑iP	Pn	00 16 26.7	0.0
PB01				eS	Sn	00 16 41.8	+0.4
PB01				IAML		00 16 42.8	
	comp=N,3µm,0.3s						
TA02	Huaiquique	0.92	269	⇑eP	Pn	00 16 27.3	0.0
TA02				eS	Sn	00 16 42.6	+0.1
TA02				IAML		00 16 45.7	
	comp=N,2µm,0.1s						
TA01	Diego Aracena	1.01	252	⇑iP	Pn	00 16 28.0	-0.3
TA01				eS	Sn	00 16 44.3	+0.1
PSGC	Pisagua	1.12	306	⇑eP	Pn	00 16 29.3	-0.4
PSGC				eS	Sn	00 16 46.7	+0.1
MNMC	Minye Minye	1.20	340	⇓eP	Pn	00 16 31.0	+0.3
MNMC				eS	Sn	00 16 49.6	+1.2
MNMC				IAML		00 16 50.9	
	comp=N,3µm,0.3s						
PB02	IPOC Station P	1.26	213	⇑eP	Pn	00 16 31.2	0.0
PB02				eS	Sn	00 16 49.4	+0.1
PB02				IAML		00 16 50.6	
	comp=E,1µm,0.2s						
PB09	IPOC Station P	1.53	183	⇑eP	Pn	00 16 34.7	+0.2
PB09				eS	Sn	00 16 55.6	+0.6
PB09				IAML		00 16 56.5	
	comp=N,310nm,0.2s						
PB07	IPOC Station P	1.61	205	eP	Pn	00 16 35.1	-0.3
PB07				eS	Sn	00 16 56.5	-0.3
PB07				IAML		00 16 57.2	
	comp=N,405nm,0.2s						
PB03	IPOC Station P	1.86	197	eP	Pn	00 16 38.3	-0.3
PB03				eS	Sn	00 17 01.5	-0.9
PB03				IAML		00 17 04.3	
	comp=E,352nm,0.2s						
PB16	IPOC Station P	1.94	350	eP	Pn	00 16 40.6	+0.6
PB16				eS	Sn	00 17 05.7	+0.8
PB12	IPOC Station P	1.98	326	eP	Pn	00 16 39.1	-0.8
PB12				eS	Sn	00 17 03.4	-1.5
PB04	IPOC Station P	2.26	204	eP	Pn	00 16 43.5	-0.1
PB04				eS	Sn	00 17 09.4	-2.0
LVC	Limon Verde	2.35	174	P	Pn	00 16 45.5	+0.6
	comp=E,9.1nm,0.2s,baz=21,slow=9.2,SNR=44						
LVC				S	Sn	00 17 14.8	+1.0
	comp=E,43nm,0.3s,baz=91,slow=21,SNR=32						
PB06	IPOC Station P	2.46	189	eP	Pn	00 16 46.0	-0.3
PB06				eS	Sn	00 17 14.4	-1.8
PB06				IAML		00 17 19.1	
	comp=E,170nm,0.1s						
LPAZ	La Paz	4.07	14	P	Pn	00 17 09.3	+1.2
	comp=E,2.7nm,0.3s,baz=195,slow=11,SNR=14						
LPAZ				S	Sn	00 17 54.8	-0.3
	comp=E,2.6nm,0.8s,baz=339,slow=11,SNR=3.7						
SIV	San Ignacio	8.78	62	P	Pn	00 18 06.8	-4.5
	comp=E,1.2nm,0.6s,baz=240,slow=13,SNR=8.0						
PLCA	Paso Flores	20.44	183	P	P	00 20 38.6	+2.6
	comp=E,1.6nm,1.0s,baz=8.5,slow=13,SNR=2.8						
	comp=E,1.6nm,1.0s						
TORD	Torodi Ar. Bea	77.16	71	P	P	00 27 48.9	-0.7
	comp=E,0.2nm,0.3s,baz=253,slow=5.5,SNR=9.6						
	comp=E,0.2nm,0.3s						

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*NEIC **06** 00:26:36.4±2.1, 18°.12S±0°.05×70°.04W±0°.07, h102^{km}±6^{km}, mb4.1/10, ML4.3(GUC), Error ellipse: s-maj=11.2km s-min=5.7km az=119.0*

*GUC **06** 00:26:37.8±0.8, 18°.18S×69°.87W, h96^{km}±3^{km}, ML4.3*

*IDC **06** 00:26:38.7±1.5, 18°.13S×69°.77W, h126^{km}±12^{km}, mb3.5/7, mbtmp4.0/10, Error ellipse: s-maj=23.0km s-min=11.0km az=101.0*

*VAO **06** 00:26:38.3±0.5, 17°.96S×69°.80W, h101^{km}, mb4.2*

ISC 06 00:26:35.7±0.6, 18°.12S±0°.04×69°.99W±0°.06, h103^{km}±5^{km}, n97, σ1^{s}31/117, mb3.9/9, 3C-5D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01	Chacalluta	0.41	234		Pn	00 26 52.0	+0.7
AP01					Sn	00 27 04.2	+1.2
AP01	Chacalluta	0.41	234	⇑iP	Pn	00 26 52.1	+0.7
AP01				i S	Sn	00 27 04.4	+1.4
AP01				IAML		00 27 05.6	
	comp=E,30µm,0.6s						
PB16	IPOC Station P	0.50	115	Pn	Pn	00 26 51.9	-0.7
PB16					Sn	00 27 04.8	-0.4
PB16	IPOC Station P	0.50	115	⇓iP	Pn	00 26 53.0	+0.4
PB16				i S	Sn	00 27 05.0	-0.2
PB12	IPOC Station P	0.58	213		Pn	00 26 52.9	+0.3
PB12				Sn	Sn	00 27 06.0	+0.7
PB12	IPOC Station P	0.58	213	⇑iP	Pn	00 26 53.3	+0.7
PB12				i S	Sn	00 27 06.0	+0.7
PB12				IAML		00 27 07.7	
	comp=N,14µm,0.2s						
PB18	Visviri	0.72	42	Pn	Pn	00 26 55.3	+1.1
PB18				Sn	Sn	00 27 10.0	+1.9
PB18	Visviri	0.72	42	⇓iP	Pn	00 26 55.5	+1.2
PB18				⇑iP	Pn	00 26 55.5	+1.2
PB18				i S	Sn	00 27 10.0	+1.9
MNMC	Minye Minye	1.07	160		Pn	00 26 58.6	+1.2
MNMC				Sn	Sn	00 27 15.8	+1.9
MNMC	Minye Minye	1.07	160	⇓iP	Pn	00 26 58.8	+1.4
MNMC				i S	Sn	00 27 13.4	-0.5
MNMC				IAML		00 27 20.0	
	comp=E,12µm,0.2s						
PSGC	Pisagua	1.47	185	eP	Pn	00 27 03.0	+1.0
PSGC				i S	Sn	00 27 22.4	+0.7
PSGC				IAML		00 27 29.6	
	comp=E,3µm,0.4s						
PSGCX	Pisagua	1.47	185	Pn	Pn	00 27 02.5	+0.5
PB11	IPOC Station P	1.66	169	Pn	Pn	00 27 05.7	+1.4
PB11	IPOC Station P	1.66	169	eP	Pn	00 27 05.7	+1.4
PB11				i S	Sn	00 27 27.1	+1.1
PB11				IAML		00 27 31.9	
	comp=E,3µm,0.2s						
GO01	Chusmiza	1.71	154		Pn	00 27 07.1	+1.8
GO01	Chusmiza	1.71	154	⇓iP	Pn	00 27 07.3	+2.0
TA02	Huaiquique	2.14	184		Pn	00 27 10.7	+0.5
TA02	Huaiquique	2.14	184	eP	Pn	00 27 10.7	+0.5
PB08	IPOC Station P	2.16	159		Pn	00 27 12.6	+1.7
PB08	IPOC Station P	2.16	159	⇓iP	Pn	00 27 12.8	+1.9
PB08				i S	Sn	00 27 40.0	+2.4
PB08				IAML		00 27 45.3	
	comp=N,2µm,0.1s						
TA01	Diego Aracena	2.44	184	Pn	Pn	00 27 14.5	+0.4
TA01	Diego Aracena	2.44	184	eP	Pn	00 27 14.4	+0.4
TA01				i S	Sn	00 27 42.9	-0.7
TA01				IAML		00 27 54.8	
	comp=E,2µm,0.2s						
LPAZ	La Paz	2.55	44	P	Pn	00 27 17.2	+1.0
	comp=E,46nm,0.3s,baz=241,slow=7.0,SNR=242						
LPAZ				S	Sn	00 27 50.0	+2.9
	comp=E,26nm,0.6s,baz=241,slow=19,SNR=2.0						
LPAZ	La Paz	2.55	44	Pn	Pn	00 27 17.7	+1.5
PB01	IPOC Station P	2.94	171		Pn	00 27 21.6	+0.7
PB01	IPOC Station P	2.94	171	eP	Pn	00 27 21.4	+0.5
PB01				i S	Sn	00 27 55.3	-0.3
PB01				IAML		00 28 09.2	
	comp=N,1µm,0.2s						
PB02	IPOC Station P	3.18	178		Pn	00 27 24.9	+0.8
PB02	IPOC Station P	3.18	178	eP	Pn	00 27 25.1	+1.0
PB02				i S	Sn	00 28 01.0	-0.3
PB07	IPOC Station P	3.58	178		Pn	00 27 30.3	+0.7
PB07	IPOC Station P	3.58	178	eP	Pn	00 27 30.2	+0.7
PB07				i S	Sn	00 28 10.6	-0.6
PB09	IPOC Station P	3.72	169		Pn	00 27 32.6	+1.2
PB03	IPOC Station P	3.91	177		Pn	00 27 34.6	+0.6
PB03	IPOC Station P	3.91	177	eP	Pn	00 27 34.5	+0.6
PB03				i S	Sn	00 28 17.4	-1.6
PB04	IPOC Station P	4.19	182		Pn	00 27 38.0	+0.2
PB04	IPOC Station P	4.19	182	eP	Pn	00 27 37.9	+0.2
PB06	IPOC Station P	4.58	175		Pn	00 27 43.0	+0.1
PB06	IPOC Station P	4.58	175	eP	Pn	00 27 42.8	-0.1
LVC	Limon Verde	4.58	167	P	Pn	00 27 44.9	+1.8
	comp=N,14nm,0.3s,baz=357,slow=8.6,SNR=36						
LVC				S	Sn	00 28 38.4	+3.1
	comp=N,78nm,0.4s,baz=259,slow=20,SNR=3.6						
LVC	Limon Verde	4.58	167	Pn	Pn	00 27 44.5	+1.4
LVC	Limon Verde	4.58	167	eP	Pn	00 27 45.1	+2.0
PB15	IPOC Station P	5.08	175		Pn	00 27 49.9	+0.1
PB10	IPOC Station P	5.39	186	Pn	Pn	00 27 52.7	-1.1
PB14	IPOC Station P	6.48	183	Pn	Pn	00 28 07.7	-1.1
AC01	Pan de Azucar	8.01	184	Pn	Pn	00 28 27.0	-2.3
AC02	Maricunga	8.71	175	Pn	Pn	00 28 39.0	-0.3
SIV	San Ignacio	8.79	77	P	Pn	00 28 38.3	-1.7
	comp=N,38nm,0.3s,baz=273,slow=11,SNR=182						
BBSD	Serra de San D	8.99	85	eP	Pn	00 28 40.4	-2.4
ETMB	Extrema	9.03	24	Pn	Pn	00 28 41.6	-1.7
ETMB	Extrema	9.03	24	eP	Pn	00 28 41.3	-2.0
PTLB	Pontes e Lacer	10.73	77	Pn	Pn	00 29 04.7	-1.7
PTLB	Pontes e Lacer	10.73	77	eP	Pn	00 29 04.6	-1.7
VILB	Vilhena	10.74	63	Pn	Pn	00 29 05.2	-1.4
VILB	Vilhena	10.74	63	eP	Pn	00 29 05.4	-1.2
SAML	Samuel	11.27	37	Pn	Pn	00 29 10.4	-3.3
CFA	Coronel Fontan	13.52	174	P	Pn	00 29 40.0	-3.3
	comp=N,1.2nm,0.3s,baz=0.0,slow=13,SNR=12						
SALV	Santo Antonio	13.85	83	eP	Pn	00 29 47.2	-0.5
AMBA	Amambai (Brazi	14.84	111	eP	Pn	00 30 01.0	+0.7
MT01	Popeta	15.72	184		Pn	00 30 12.3	+1.1
MT01				IAmb	IAmb	00 30 16.0	
	comp=Z,20nm,1.2s						
BO02	Sierra Bellavi	16.62	182		P	00 30 24.9	+1.7
BO02				IAmb	IAmb	00 30 30.7	
	comp=Z,15nm,1.1s						
CRSM	Crissiumal (Br	17.39	125	eP	Pn	00 30 33.7	+1.7
MACA	Manacapuru-AM	17.44	33		P	00 30 31.5	-0.8
MACA				IAmb	IAmb	00 30 32.1	
	comp=Z,10nm,0.8s						
MACA	Manacapuru-AM	17.44	33	eP	P	00 30 31.6	-0.8
FRBT	Francisco Belt	17.52	119	eP	Pn	00 30 34.8	+1.3
PTGB	Pitanga	17.92	115	eP	Pn	00 30 38.6	+0.2
PCMB	Pacaembu	17.95	104	eP	Pn	00 30 38.8	0.0
NPGB	Novo Progresso	18.02	54	eP	P	00 30 37.2	-1.5
SGCB	S£o Gabriel d	18.12	10	eP	P	00 30 39.1	-0.7
RODS	Rosario do Sul	18.14	135	eP	Pn	00 30 41.0	0.0
ITRB	Iturama	18.64	98	eP	Pn	00 30 46.6	-0.4
ITAB	Concordia	18.79	122	P	Pn	00 30 47.9	-0.8
ITAB	Concordia	18.79	122	eP	Pn	00 30 47.9	-0.8
ALGR	Alto Alegre (B	18.82	127	eP	Pn	00 30 48.9	-0.2
SNDB	Serra Nova Dou	19.05	74	eP	P	00 30 49.2	-0.8
ITTB	Itaituba	19.53	47	eP	P	00 30 53.6	-1.6
FRTB	Fartura	19.79	109	eP	P	00 30 58.5	+0.4
OTAV	Otavalo	20.05	335	eP	Pn	00 31 03.9	-0.1
PLTB	Pedras Altas	20.09	136	P	P	00 31 00.6	-0.6
PLTB				IAmb	IAmb	00 31 43.3	
	comp=Z,19nm,1.3s						
BDFB	Brasilia	21.17	87	P	P	00 31 13.7	+0.7
	comp=Z,2.2nm,0.4s,baz=267,slow=7.7,SNR=3.1						
	comp=Z,2.2nm,0.4s						
BDFB	Brasilia	21.17	87	P	P	00 31 14.7	+1.7
BDFB	Brasilia	21.17	87	eP	P	00 31 13.3	+0.3
BOAV	Boa Vista	22.42	26	P	P	00 31 25.8	-0.3
BOAV				IAmb	IAmb	00 31 26.7	
	comp=Z,7.5nm,1.1s						
BOAV	Boa Vista	22.42	26	eP	P	00 31 26.5	+0.5
PLCA	Paso Flores	22.54	181	P	P	00 31 29.4	+2.3
	comp=Z,1.6nm,0.8s,baz=351,slow=13,SNR=4.9						
	comp=Z,1.6nm,0.8s						
PLCA	Paso Flores	22.54	181	P	P	00 31 29.6	+2.5
SMTB	Santa Maria do	23.62	70	eP	P	00 31 36.9	-0.8
RUSC	La Rusia	24.06	352	P	P	00 31 42.0	0.0
RUSC				IAmb	IAmb	00 31 49.5	
	comp=Z,10.0nm,1.3s						
JANB	Januaria	24.79	87	eP	P	00 31 47.7	-0.6
SDBA	SAO DESIDERIO	24.85	80	eP	P	00 31 48.3	-0.5
MCPB	Macapa, AP	24.95	47	eP	P	00 31 48.5	-1.1
CELP	Cerrillos	36.13	6	P	P	00 33 28.5	+0.5
TXAR	Lajitas Array	57.29	325	P	P	00 36 12.8	-0.2
	comp=Z,0.1nm,0.5s,baz=131,slow=9.7,SNR=1.6						
	comp=Z,0.1nm,0.5s						
DBIC	Dimbokro	68.80	75	P	P	00 37 27.7	-1.7
	comp=Z,3.5nm,0.7s,baz=254,slow=8.3,SNR=6.8						
	comp=Z,3.5nm,0.7s						
PDAR	Pinedale Array	70.69	330	P	P	00 37 42.5	+1.8
	comp=Z,0.2nm,0.5s,baz=127,slow=8.2,SNR=2.3						
	comp=Z,0.2nm,0.5s						
TORD	Torodi Ar. Bea	77.22	71	P	P	00 38 17.9	-1.1
	comp=Z,1.9nm,0.5s,baz=248,slow=5.1,SNR=22						
	comp=Z,1.9nm,0.5s						
YKA	Yellowknife Ar	87.68	341	P	P	00 39 12.9	+0.7
	comp=Z,1.3nm,0.6s,baz=135,slow=4.9,SNR=28						
	comp=Z,1.3nm,0.6s						
ZALV	Zalesovo Beam	139.29	23	PKP	PKPdf	00 45 51.8	+1.3
	comp=Z,0.8nm,0.6s,baz=329,slow=1.7,SNR=4.9						
SONM	Songino Array	150.22	5	PKPbc	PKiKP	00 46 16.2	+0.6
	comp=Z,0.8nm,0.7s,baz=326,slow=2.7,SNR=5.7						

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*SOME **06** 00:38:31.4, 42°.45N×81°.07E, h10^{km}*

*KRNET **06** 00:38:33.8±0.1, 39°.31N×79°.33E, mb2.2*

*NNC **06** 00:38:35.8±1.6, 42°.50N×80°.87E, h0^{km}, mb2.2, mpv2.4, Error ellipse: s-maj=20.6km s-min=9.5km az=41.0*

ISC 06 00:38:36.1±3.2, 42°.46N±0°.07×80°.8E±0°.1, h6^{km}±13^{km}, n15, σ1^{s}36/21, 10C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	1.27	314	P	Pb	00 38 59.6	-0.9
	0.4nm,0.6s						
PDGK				S	Sn	00 39 17.5	-0.4
	1.6nm,0.3s						
PDGK	Podgornoye	1.27	314	⇑P	Pg	00 39 00.7	+0.2
	0.4nm,0.4s						
PDGK				⇑S	Sn	00 39 19.0	+1.0
	2.3nm,1.1s						
UZB	Uzynbulak	1.44	299	P	Pg	00 39 03.3	-0.5
	2.2nm,0.2s						
UZB				S	Sg	00 39 23.9	+1.4
	1.6nm,0.5s						
UZB	Uzynbulak	1.44	299	eP	Pn	00 39 01.9	-1.0
	3.4nm,0.1s						
UZB				eS	Sg	00 39 23.9	+1.4
	1.6nm,0.1s						
PRZ	Przheval'sk	1.74	271	⇑iP	Pg	00 39 25.1	+16
	baz=48						
PRZ				⇑iS	Sg	00 40 02.1	+30
	baz=48						
KPKS	Kokpek	1.82	304	P	Pb	00 39 08.8	-1.1
	2.9nm,0.5s						
KPKS				S	Sb	00 39 33.2	+0.2
	3.7nm,0.5s						
KPKS	Kokpek	1.82	304	ePg	Pb	00 39 08.8	-1.1
	2.6nm,0.1s						
KPKS				eLg	Lg	00 39 35.7	
	4.1nm,0.1s						
SATY	Saty	1.83	290	P	Pg	00 39 10.2	-0.9
	1.4nm,0.3s						
SATY				S	Sg	00 39 35.5	+0.7
	3.1nm,0.5s						
SATY	Saty	1.83	290	ePg	Pb	00 39 09.4	-0.6
	0.6nm,0.1s						
SATY				eLg	Lg	00 39 36.9	
	5.6nm,0.1s						
ANVS	Anan'yevo	2.30	279	⇓eP	Pg	00 39 30.9	+11
	baz=41						
ANVS				⇓iS	Sg	00 40 12.8	+23
	baz=41						
TARG	Taragay, Kyrgy	2.31	252	⇓eP	Pb	00 39 17.0	-1.5
	baz=35						
TARG				⇓eS	Sb	00 39 48.6	+1.2
	baz=35						
BLB	Baldybastay	2.33	315	Pg	Pb	00 39 18.5	-0.1
	1.8nm,0.4s						
BLB				Lg	Lg	00 39 49.9	
	2.7nm,0.4s						
KDJ	Kajisay	2.67	264	⇑iP	Pb	00 39 24.9	+0.5
	baz=31						
KDJ				⇑eS	Sg	00 40 01.8	-0.1
	baz=31						
ULHL	Ulahol	3.35	268	⇑eP	Pn	00 39 31.8	+2.6

	baz=22						
ULHL				⇑eS	Sb	00 40 14.0	-3.1
	baz=22						
NRN	Naryn	3.69	255	⇑eP	Pn	00 39 25.8	-8.2
	baz=11						
NRN				⇑iS	Sn	00 40 03.7	-14
	baz=11						

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*IDC **06** 00:41:55.7±3.1, 36°.23N×71°.01E, h166^{km}±25^{km}, mb3.2/7, mbtmp3.7/12, Error ellipse: s-maj=27.6km s-min=16.9km az=158.0*

*NNC **06** 00:42:04.5±5.1, 37°.13N×70°.87E, h0^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=44.3km s-min=35.5km az=141.0*

ISC 06 00:41:59.9±0.7**, 36°.55N**±0°.07×**70°.86E**±0°.07**, h188^{km}, n33, σ1^{s}.72**/38**, mb3.5**/6**, 5C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	5.99	21	P	Pn	00 43 28.2	+1.2
	SNR=26						
AML	Almayashu	5.99	21	⇓P	Pn	00 43 28.4	+1.3
	0.7nm,0.5s						
AML				⇑S	Sn	00 44 32.7	-3.2
	14nm,0.8s						
UCH	Uchtor	6.33	25	P	Pn	00 43 32.4	+0.8
	SNR=19						
EKS2	Erkin-Say	6.50	19	P	Pn	00 43 35.5	+2.0
	SNR=9.6						
KK31	Karatay Array	6.55	358	⇑Pn	Pn	00 43 35.7	+1.7
	0.8nm,0.3s,baz=182,slow=12,SNR=13						
KK31				⇓Sn	Sn	00 44 44.5	-4.0
	2.6nm,0.4s,baz=180,slow=24,SNR=4.5						
AAK	Ala-Archa	6.69	24	P	Pn	00 43 37.6	+1.6
	SNR=9.6						
AAK	Ala-Archa	6.69	24	P	Pn	00 43 37.0	+1.0
	4.9nm,0.4s,baz=166,slow=6.9,SNR=27						
AAK				S	Sn	00 44 51.0	-1.1
	1.7nm,0.4s,baz=198,slow=22,SNR=3.7						
KBK	Karagaybulak	6.86	26	P	Pn	00 43 40.7	+2.5
	SNR=7.3						
TKM2	Tokmak 2	7.33	28	P	Pn	00 43 45.5	+1.0
	SNR=16						
TKM2	Tokmak 2	7.33	28	⇑P	Pn	00 43 45.1	+0.6
	5.1nm,0.6s						
TKM2				⇑S	Sn	00 45 04.5	-2.8
	4.1nm,0.8s						
GEYT	Alibeck	10.26	282	P	Pn	00 44 21.1	-1.5
	0.7nm,0.3s,baz=81,slow=9.2,SNR=8.5						
GEYT				S	S	00 46 16.9	-0.6
	0.5nm,0.3s,baz=67,slow=11,SNR=1.5						
PYUN	Piuthan	13.27	126	eP	Pn	00 45 00.5	-0.8
	8.2nm,0.4s						
MKAR	Makanchi Array	13.31	36	P	Pn	00 45 01.2	-0.3
	0.2nm,0.3s,baz=228,slow=19,SNR=1.9						
DANN	Dangsing	13.61	123	eP	Pn	00 45 07.0	+1.3
	5.8nm,0.3s						
GKN	Gorkha	14.43	122	eP	P	00 45 18.0	+0.7
	12nm,0.3s						
AB31	Akbulak array	14.98	331	⇑P	P	00 45 27.2	+4.1
	0.1nm,0.3s,baz=138,slow=12,SNR=14						
DMN	Daman	15.00	122	eP	P	00 45 24.8	+1.0
	11nm,0.3s						
PKIN	Phulchoki	15.21	122	eP	P	00 45 27.2	+1.0
	8.9nm,0.3s						
PKI	Pulchoki	15.23	122	eP	Pn	00 45 26.6	+0.9
	4.6nm,0.2s						
GUN	Gumba	15.34	120	eP	P	00 45 29.2	+1.5
	13nm,0.4s						
JIRN	Jiri	15.71	120	ePg	P	00 45 34.0	+2.2
RAMN	Ramite	16.44	121	eP	P	00 45 39.7	0.0
	4.2nm,0.3s						
BVAR	Borovoye Array	16.47	359	P	Pn	00 45 40.6	+0.3
	0.7nm,0.3s,baz=164,slow=11,SNR=14						
AKTO	Aktyubinsk	16.68	330	P	Pn	00 45 43.5	+0.8
	1.2nm,0.3s,baz=142,slow=8.4,SNR=7.9						
TAPN	Taplejung	16.97	118	eP	Pn	00 45 47.3	+0.6
	6.2nm,0.4s						
ZALV	Zalesovo Beam	19.91	25	P	P	00 46 16.3	-0.5
	0.5nm,0.3s,baz=214,slow=9.0,SNR=4.6						
	0.5nm,0.3s						
FINES	FINESS Array B	37.38	326	P	P	00 48 55.0	+0.9
	1.0nm,0.4s,baz=120,slow=10.0,SNR=14						
	1.0nm,0.4s						
ARCES	ARCESS Array B	41.05	338	P	P	00 49 25.3	+0.9
	1.3nm,0.5s,baz=108,slow=8.0,SNR=9.4						
	1.3nm,0.5s						
NB2	NORSAR Subarra	44.27	323	P	P	00 49 50.7	+0.3
	comp=Z,1.1nm,0.7s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.27	323	P	P	00 49 50.8	+0.3
	comp=Z,1.1nm,0.9s,baz=99,slow=7.8,SNR=2.5						
	comp=Z,1.1nm,0.9s						
TORD	Torodi Ar. Bea	65.61	269	P	P	00 52 22.5	-1.5
	comp=Z,0.4nm,0.4s,baz=52,slow=5.9,SNR=14						
	comp=Z,0.4nm,0.4s						
YKA	Yellowknife Ar	81.20	3	P	P	00 53 54.0	-0.1
	comp=Z,0.2nm,0.5s,baz=351,slow=5.3,SNR=6.2						
	comp=Z,0.2nm,0.5s						
WRA	Warramunga Arr	82.11	122	P	P	00 53 56.5	-3.1
	comp=Z,0.1nm,0.4s,baz=325,slow=4.7,SNR=1.5						
	comp=Z,0.1nm,0.4s						

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*IDC **06** 00:55:34.6±4.5, 24°.69N×122°.63E, h71^{km}±41^{km}, mb3.5/9, mbtmp3.8/11, ML3.6/1, Error ellipse: s-maj=31.0km s-min=21.7km az=58.0*

*JMA **06** 00:55:39.6±0.2, 25°N±2°×122°.7E±0°.5, h109^{km}±1^{km}, MV3.5/15, NW OFF ISHIGAKIJIMA IS*

*TAP **06** 00:55:40.1, 24°.66N×122°.76E, h106^{km}, ML4.4, B*

ISC 06 00:55:38.4±0.7**, 24°.64N**±0°.03×**122°.78E**±0°.02**, h111**^{km}±5^{km}**, n158, σ1^{s}.90**/228**, mb3.5**/8**, 27C-2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.24	140	i P	Pn	00 55 55.3	+1.3
JYNG				S	Sn	00 56 06.9	+1.2
YOJ	Yonaguni jima	0.27	129	P	Pn	00 55 55.3	+1.1
YOJ	Yonaguni jima	0.27	129	i P	Pn	00 55 55.5	+1.3
YOJ				S	Sn	00 56 07.3	+1.3
YOJ	Yonaguni jima	0.27	129	⇑iP	Pn	00 55 55.5	+1.3
	baz=139						
YOJ				S	Sn	00 56 06.9	+0.9
	baz=139						
EOS2	EOS2	0.54	247	eP	Pn	00 55 57.1	+1.7
	baz=252						
EOS4	EOS4	0.66	219	eP	Pn	00 55 57.6	+1.5
	baz=226						
EGS		0.80	285	eP	Pn	00 55 59.9	+2.3
	baz=281						
TWB1	Santiao Chiao	0.81	298	P	Pn	00 55 58.6	+0.9
	baz=292						
TWB1				S	Sn	00 56 12.5	+0.1
	baz=292						
TWC	Suao	0.84	268	⇑iP	Pn	00 55 59.3	+1.2
	baz=263						
TWC				i S	Sn	00 56 12.9	-0.1
	baz=263						
IRIF	Iriomote-Funau	0.92	109	i P	Pn	00 56 00.4	+1.6
IRIF				S	Sn	00 56 15.5	+1.3
TIPB	Shuangxi	0.93	291	⇑iP	Pn	00 56 00.6	+1.6
	baz=286						
TIPB				S	Sn	00 56 14.8	+0.2
	baz=286						
EWUT	Wuta	0.93	258	eP	Pn	00 56 00.4	+1.4
	baz=253						
EWUT				eS	Sn	00 56 15.7	+1.3
	baz=253						
SXI1	Grass Mountain	0.94	299	⇓P	Pn	00 56 00.5	+1.4
	baz=298						
ILA	Ilan	0.94	278	eP	Pn	00 56 02.2	+3.1
	baz=271						
ILA				S	Sn	00 56 15.3	+0.6
	baz=271						
ENA	Nanau	0.96	258	eP	Pn	00 56 00.6	+1.3
	baz=252						
ENA				eS	Sn	00 56 15.7	+0.6
	baz=252						
NDS	Dongshan	0.96	270	eP	Pn	00 56 00.8	+1.5
	baz=264						
EHP	Heping Village	1.00	251	eP	Pn	00 56 01.2	+1.5
	baz=243						
NWF	Wu-fen Shan	1.00	296	eP	Pn	00 56 01.4	+1.6
	baz=288						
NWF				eS	Sn	00 56 15.2	-0.8
	baz=288						
WFSB	Wu-fen Shan	1.00	296	⇓P	Pn	00 56 01.5	+1.9
	baz=289						
WFSB				eS	Sn	00 56 15.7	-0.1
	baz=289						
TWE	Neicheng	1.01	275	⇑iP	Pn	00 56 01.4	+1.6
	baz=270						
TWE				eS	Sn	00 56 16.2	+0.3
	baz=270						
TNOU	National Taiwa	1.05	300	eP	Pn	00 56 01.5	+1.3
	baz=298						
FUSB	Fushanzhiwuyua	1.09	277	⇑iP	Pn	00 56 02.2	+1.6
	baz=275						
FUSB				eS	Sn	00 56 16.9	-0.6
	baz=275						
HATJ	Hateruma jima	1.10	121	P	Pn	00 56 02.7	+2.0
HATJ				S	Sn	00 56 19.9	+2.3
ENTT	Nioudou	1.10	271	eP	Pn	00 56 02.7	+2.0
	baz=265						
ENTT				eS	Sn	00 56 18.2	+0.6
	baz=265						
TWA	Mucha	1.14	288	eP	Pn	00 56 05.0	+3.9
	baz=279						
TWA				S	Sn	00 56 18.6	+0.2
	baz=279						
LATG	Datong	1.14	265	⇑P	Pn	00 56 02.9	+1.6
	baz=256						
ETL	Fush Village	1.15	246	eP	Pn	00 56 02.3	+0.9
	baz=237						
ETL				eS	Sn	00 56 18.8	+0.1
	baz=237						
NWRT	Kuosheng	1.16	299	eP	Pn	00 56 05.1	+3.8
	baz=291						
NWRT				eS	Sn	00 56 20.0	+1.3
	baz=291						
NWLT	Wulai	1.17	277	eP	Pn	00 56 03.0	+1.5
	baz=281						
NHY	Taipei	1.17	290	eP	Pn	00 56 05.5	+4.1
	baz=281						
NACB	Ninganchiao	1.17	247	P	Pn	00 56 02.5	+1.0
NACB	Ninganchiao	1.17	247	⇑iP	Pn	00 56 02.3	+0.8
	baz=239						
NACB				eS	Sn	00 56 19.0	+0.1
	baz=239						
PCYT	Pengchaiyu	1.18	327	eP	Pn	00 56 03.5	+1.9
	baz=323						
JKRS	Kuro-shima	1.19	109	P	Pn	00 56 03.8	+2.1
JKRS				S	Sn	00 56 21.5	+2.1
YM01	YM01	1.21	295	eP	Pn	00 56 03.8	+1.8
	baz=288						
TWD	Chiawan	1.21	243	⇑iP	Pn	00 56 02.8	+0.9
	baz=235						
TWD				S	Sn	00 56 19.8	+0.1
	baz=235						
YM08	YM08	1.21	297	eP	Pn	00 56 03.3	+1.4
	baz=291						
TATO	Taipei	1.22	286	eP	Pn	00 56 03.8	+1.8
	baz=276						
TAP	Taipei	1.22	290	eP	Pn	00 56 05.4	+3.4
	baz=279						
TWY	Chenhua	1.24	301	eP	Pn	00 56 04.2	+2.0
	baz=300						
HWA	Hwalien	1.25	239	eP	Pn	00 56 03.8	+1.4
	baz=236						
HWA				eS	Sn	00 56 21.9	+1.4
	baz=236						
ETLH	Xiulin Townshi	1.25	250	⇑P	Pn	00 56 03.6	+1.1
	baz=248						
ETLH				eS	Sn	00 56 21.0	+0.2
	baz=248						
ANP	Anpu	1.27	296	eP	Pn	00 56 06.2	+3.6
	baz=285						
JIJ	Ishigaki jima	1.27	102	i P	Pn	00 56 04.2	+1.6
JIJ				S	Sn	00 56 21.6	+0.6
YHNB	Yeheng	1.27	272	P	Pn	00 56 04.6	+1.9
YHNB	Yeheng	1.27	272	⇑iP	Pn	00 56 04.6	+1.9
	baz=275						
YHNB				S	Sn	00 56 21.5	+0.4
	baz=275						
NNSB	Datong	1.29	261	⇑iP	Pn	00 56 04.2	+1.3
	baz=253						
NNSH	Datong	1.29	261	eP	Pn	00 56 04.4	+1.5
	baz=254						
NSK	Sanguang	1.29	272	⇑iP	Pn	00 56 04.7	+1.8
	baz=276						
NSK				S	Sn	00 56 21.9	+0.4
	baz=276						
NNS	Nan Shan	1.29	262	eP	Pn	00 56 04.3	+1.4
	baz=253						
NNS				S	Sn	00 56 22.3	+0.7
	baz=253						
NTST	Danshui	1.32	294	eP	Pn	00 56 07.5	+4.5
	baz=286						
NTST				eS	Sn	00 56 22.8	+1.0
	baz=286						
TEYL	Yanliau Villag	1.32	235	eP	Pn	00 56 04.2	+1.0
	baz=234						
TEYL				eS	Sn	00 56 22.2	+0.3
	baz=234						
TWS1	Kuangyinshan	1.32	291	eP	Pn	00 56 07.2	+4.1
	baz=284						
TWS1				eS	Sn	00 56 22.5	+0.6
	baz=284						
ETM	Tongmen	1.35	241	⇑iP	Pn	00 56 04.5	+1.0
	baz=234						
JISG	Ishigakijimahi	1.40	92	i P	Pn	00 56 05.7	+1.7
JISG				S	Sn	00 56 24.4	+0.9
TEGC	Jichi Village	1.46	231	eS	Sn	00 56 25.7	+0.9
	baz=236						
WHF	Hehuan Shan	1.46	251	⇑iP	Pn	00 56 06.7	+1.5
	baz=248						
WHF				eS	Sn	00 56 25.2	-0.4
	baz=248						
ESL	Shilin	1.47	237	eP	Pn	00 56 05.9	+1.0
	baz=234						
NCUH	Zhongli	1.48	283	eP	Pn	00 56 07.5	+2.5
	baz=281						
TWT	Tachien	1.51	256	eP	Pn	00 56 07.8	+2.3
	baz=250						
TWT				S	Sn	00 56 27.5	+1.3
	baz=250						
NFF	Wufeng Townshi	1.51	270	eP	Pn	00 56 07.5	+2.1
	baz=268						
NFF				eS	Sn	00 56 26.4	+0.4
	baz=268						
TDCB	Techi	1.52	256	⇑iP	Pn	00 56 07.7	+2.0
	baz=251						
TDCB				S	Sn	00 56 26.9	+0.5
	baz=251						
NJD	Zhudong	1.54	274	eP	Pn	00 56 10.1	+4.4
	baz=272						
EGFH	Guangfu	1.56	232	eS	Sn	00 56 27.9	+0.9
	baz=230						
CHGB	Renai	1.57	249	⇑iP	Pn	00 56 08.1	+1.8
	baz=240						
CHGB				S	Sn	00 56 27.9	+0.4
	baz=240						
LIOB	Emei	1.60	271	eP	Pn	00 56 08.3	+1.8
	baz=269						
LIOB				eS	Sn	00 56 28.9	+1.0
	baz=269						
NHW	Xinwu Township	1.61	284	eP	Pn	00 56 09.9	+3.3
	baz=287						
NHW				eS	Sn	00 56 29.6	+1.5
	baz=287						
NSTT	Nanjuang	1.62	270	eP	Pn	00 56 08.4	+1.8
	baz=268						
NSTT				S	Sn	00 56 28.7	+0.5
	baz=268						
WUSB	Renai	1.64	247	⇑iP	Pn	00 56 08.9	+1.8
	baz=241						
WUSB				eS	Sn	00 56 29.2	+0.3
	baz=241						
HGSD	Ruisui	1.68	228	⇑iP	Pn	00 56 08.6	+1.1
	baz=224						
HGSD				eS	Sn	00 56 30.2	+0.7
	baz=224						
WHP	Taichung City	1.71	258	⇑P	Pn	00 56 10.4	+2.6
	baz=253						
WHP				S	Sn	00 56 31.4	+1.1
	baz=253						
VWDT	VWDT	1.73	240	⇑iP	Pn	00 56 09.8	+1.8
	baz=233						
VWDT				S	Sn	00 56 30.8	+0.2
	baz=233						
EHY	Hungye	1.74	230	eP	Pn	00 56 09.2	+0.9
	baz=235						
JTJ	Tarama	1.75	89	P	Pn	00 56 10.3	+2.0
JTJ				eS	Sn	00 56 31.9	+0.8
WPL	Puli Township	1.77	250	eP	Pn	00 56 10.7	+2.1
	baz=246						
WPL				eS	Sn	00 56 33.2	+1.6
	baz=246						
ECBN	Changbin	1.79	223	eP	Pn	00 56 10.0	+1.2
	baz=215						
ECBN				eS	Sn	00 56 32.4	+0.6
	baz=215						
WCS	Beigang Elemen	1.80	252	eP	Pn	00 56 11.4	+2.5
	baz=254						
WCS				eS	Sn	00 56 34.6	+2.5
	baz=254						
NMLH	Miaoli	1.81	267	eP	Pn	00 56 11.1	+2.1
	baz=273						
NMLH				eS	Sn	00 56 33.9	+1.5
	baz=273						
YULB	Yu-li	1.83	228	P	Pn	00 56 10.5	+1.1
YULB	Yu-li	1.83	228	⇑iP	Pn	00 56 10.3	+1.0
	baz=233						
YULB				eS	Sn	00 56 32.7	-0.2
	baz=233						
TWQ1	Liyutan	1.85	262	eP	Pn	00 56 11.3	+1.8
	baz=259						
TWQ1				eS	Sn	00 56 33.9	+0.6
	baz=259						
EYUL	Yuli	1.85	226	eP	Pn	00 56 11.3	+1.8
	baz=232						
NSY	Sanyi	1.85	264	eP	Pn	00 56 11.7	+2.2
	baz=262						
NSY				eS	Sn	00 56 34.8	+1.5
	baz=262						
TWF1	Yuli	1.86	227	⇑iP	Pn	00 56 10.8	+1.1
	baz=233						
SSLB	Suanglung	1.87	243	P	Pn	00 56 11.8	+2.0
SSLB	Suanglung	1.87	243	⇑P	Pn	00 56 11.4	+1.7
	baz=238						
SSLB				S	Sn	00 56 34.5	+0.8
	baz=238						
SMLT	Sun Moon Lake	1.87	247	eP	Pn	00 56 12.3	+2.4
	baz=239						
SMLT				eS	Sn	00 56 35.2	+1.3
	baz=239						
TYC	Yuchr	1.90	248	eP	Pn	00 56 12.4	+2.3
	baz=240						
TYC				eS	Sn	00 56 36.0	+1.7
	baz=240						
FULB	Fuli	1.97	224	eP	Pn	00 56 12.3	+1.2
	baz=217						
TCU	Taichung	1.98	256	eP	Pn	00 56 14.9	+3.8
	baz=254						
CHKT	Chengkung	2.00	220	eP	Pn	00 56 13.2	+1.8
	baz=213						
CHKT				eS	Sn	00 56 36.3	-0.4
	baz=213						
WJS	Zhushan	2.04	247	eP	Pn	00 56 14.7	+2.8
	baz=238						
WJS				eS	Sn	00 56 40.5	+2.9
	baz=238						
WNT	Mingjian	2.05	249	eP	Pn	00 56 14.8	+2.7
	baz=246						
WNT				eS	Sn	00 56 40.8	+2.9
	baz=246						
EHD	Haiduan	2.06	224	eP	Pn	00 56 12.9	+0.7
	baz=230						
ECS	Chishang	2.09	223	eP	Pn	00 56 14.2	+1.5
	baz=230						
WCHH	Zhanghua	2.10	255	eP	Pn	00 56 14.9	+2.3
	baz=253						
ALS	Alishan	2.12	239	⇑iP	Pn	00 56 15.8	+2.5
	baz=236						
ALS				eS	Sn	00 56 42.3	+2.4
	baz=236						
EDH	Donghe	2.13	219	eP	Pn	00 56 14.1	+0.9
	baz=212						
EDH				eS	Sn	00 56 39.0	-0.7
	baz=212						
ELDTW	Lidau	2.16	229	eP	Pn	00 56 14.7	+1.1
	baz=222						
ELDTW				eS	Sn	00 56 40.4	-0.1
	baz=222						
JIRB	Irabujima	2.19	84	S	Sn	00 56 42.8	+1.9
WGK	Gukeng	2.23	245	eP	Pn	00 56 17.5	+3.2
	baz=254						
WDLH	Douliu	2.25	246	eP	Pn	00 56 19.9	+5.2
	baz=254						
JIKM	Ikemajima	2.27	82	eS	Sn	00 56 45.1	+2.4
LONT	Longtian	2.29	222	eP	Pn	00 56 16.4	+1.2
	baz=219						
LONT				eS	Sn	00 56 44.2	+0.9
	baz=219						
LDUT	Ludao	2.29	212	eP	Pn	00 56 15.9	+0.7
	baz=213						
JMJ	Miyako jima 2	2.30	85	eP	Pn	00 56 18.3	+3.2
	baz=88						
JMJ				eS	Sn	00 56 45.2	+1.8
	baz=88						
WRL	Guolierlin Hig	2.31	252	eP	Pn	00 56 16.9	+1.5
	baz=257						
WCKO	Fanlu	2.31	239	eP	Pn	00 56 18.5	+3.0
	baz=237						
JMJ2	Miyako jima3	2.32	87	P	Pn	00 56 17.9	+2.4
JMJ2				eS	Sn	00 56 46.6	+2.6
STYH	Taoyuan	2.34	232	eP	Pn	00 56 18.4	+2.6
	baz=224						
STYT	Tauyuan	2.36	232	eP	Pn	00 56 18.6	+2.6
	baz=224						
CHN4	Tsaushan	2.37	238	eP	Pn	00 56 18.9	+2.8
	baz=235						
CHN4				eS	Sn	00 56 47.4	+2.2
	baz=235						
TPUB	Ta-pu	2.37	236	P	Pn	00 56 19.1	+2.9
TPUB	Ta-pu	2.37	236	eP	Pn	00 56 18.8	+2.6
	baz=228						
TPUB				eS	Sn	00 56 47.9	+2.7
	baz=228						
TWGBT	Beinan	2.38	221	P	Pn	00 56 17.4	+1.0
TWGBT	Beinan	2.38	221	eS	Sn	00 56 45.2	-0.3
	baz=224						
TWG	Pinlang	2.39	221	eS	Sn	00 56 45.2	-0.3
	baz=224						
JOGS	Gusukube	2.40	86	eS	Sn	00 56 47.3	+1.6
TTN	Taitung	2.40	219	eS	Sn	00 56 47.9	+2.2
	baz=212						
WTP	Ta-pu	2.41	235	eP	Pn	00 56 19.6	+2.8
	baz=232						
WTP				eS	Sn	00 56 48.9	+2.7
	baz=232						
CHY	Chiayi	2.43	243	eP	Pn	00 56 19.4	+2.5
	baz=251						
TWK	Hsinying	2.50	237	eP	Pn	00 56 21.0	+3.1
	baz=235						
CHN1	Nanshi	2.51	235	eP	Pn	00 56 21.3	+3.2
	baz=233						
SGST	Jiashian	2.53	233	eP	Pn	00 56 20.5	+2.2
	baz=239						
SLGT	Liugui	2.54	230	eP	Pn	00 56 22.1	+3.7
	baz=228						
WSL	Shuilin Townsh	2.58	245	eP	Pn	00 56 20.9	+2.1
	baz=252						
ECL	Taimali	2.63	220	eP	Pn	00 56 20.3	+0.8
	baz=218						
SSD	Sandimen	2.72	227	eP	Pn	00 56 23.4	+2.7
	baz=224						
MASBT	Mashibuluo	2.81	225	eP	Pn	00 56 24.4	+2.4
	baz=223						
LAY	Lan-yu	2.82	204	eP	Pn	00 56 22.9	+0.8
	baz=202						
LYUB	Lan-yu	2.84	203	eP	Pn	00 56 22.6	+0.3
	baz=205						
EAST	Anshuo	2.86	219	eP	Pn	00 56 24.0	+1.5
	baz=216						
SCZT	Fangliau	3.00	222	eP	Pn	00 56 28.3	+3.9
	baz=215						
VWUC	VWUC	3.04	277	eP	Pn	00 56 26.1	+1.1
	baz=276						
PNG	Penghu	3.13	251	eP	Pn	00 56 28.6	+2.5
	baz=249						
PHUB	P'eng-hu	3.13	250	eP	Pn	00 56 28.4	+2.2
	baz=248						
SMST	Manzhou Townsh	3.15	215	eP	Pn	00 56 28.2	+1.7
	baz=213						
TWKBT	Hengchun	3.23	214	eP	Pn	00 56 29.0	+1.5
	baz=212						
TWK1	Hengchun	3.23	214	eP	Pn	00 56 30.7	+3.1
	baz=212						
XPSS	Dashiqiu	3.27	315	eP	Pn	00 56 28.4	+0.5
	baz=314						
LYJJ	Jianjiangzhen	3.33	306	eP	Pn	00 56 31.1	+2.4
	baz=295						
VCHM	Qimei	3.38	246	eP	Pn	00 56 31.8	+2.4

	baz=236						
KNMB	**Chin-men Tao**	4.00	268	eP	Pn	00 56 39.3	+1.6
	baz=267						
BBP	**Basco**	4.24	190	⇑eP	Pn	00 56 42.6	+1.6
BBP				eS	Sn	00 57 27.2	-2.4
AXDP	**Jialang**	4.38	274	eP	Pn	00 56 44.9	+2.1
	baz=265						
JOW	**Kunigami**	5.42	65	P	Pn	00 56 54.5	-2.4
	4.1nm,0.3s,baz=246,slow=20,SNR=7.5						
JOW				S	Sn	00 57 56.2	-1.8
	9.6nm,0.3s,baz=218,slow=18,SNR=1.8						
	10nm,0.4s						
SGCP	**Gonzaga**	6.40	186	⇑eP	Pn	00 57 19.9	+10
SGCP				eS	Sn	00 58 20.4	-1.5
APYP	**Conner**	6.89	192	⇑eP	Pn	00 57 20.3	+3.5
APYP				eS	Sn	00 58 34.8	+1.0
KSRS	**Korea Array**	13.52	18	P	Pn	00 58 40.9	-4.6
	1.0nm,0.7s,baz=137,slow=11,SNR=1.6						
USRK	**Ussuriysk Ar.**	20.92	19	P	P	01 00 12.1	+0.2
	3.8nm,0.7s,baz=198,slow=13,SNR=4.4						
	3.8nm,0.7s						
KLR	**Kul'dur**	25.54	14	P	P	01 00 56.9	+0.3
	0.9nm,0.6s,baz=197,slow=11,SNR=3.9						
	0.9nm,0.6s						
SONM	**Songino Array**	26.55	335	P	P	01 01 05.9	0.0
	1.4nm,0.7s,baz=152,slow=9.6,SNR=8.8						
	1.4nm,0.7s						
MKAR	**Makanchi Array**	39.04	315	P	P	01 02 53.6	-0.6
	0.5nm,0.6s,baz=99,slow=10,SNR=3.1						
MKAR				PcP	PcP	01 05 02.0	-0.1
	0.5nm,0.7s,baz=94,slow=3.6,SNR=5.5						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	40.67	326	P	P	01 03 06.2	-1.4
	0.5nm,0.5s,baz=124,slow=6.7,SNR=3.9						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	45.72	165	P	P	01 03 49.9	+1.4
	1.1nm,0.8s,baz=348,slow=8.6,SNR=5.0						
	1.1nm,0.8s						
FINES	**FINESS Array B**	71.79	330	P	P	01 06 48.3	-0.2
	2.3nm,0.9s,baz=82,slow=2.9,SNR=10						
	2.3nm,0.9s						
BRTR	**Keskin Array B**	74.07	307	P	P	01 07 01.0	-1.6
	0.4nm,0.8s,baz=90,slow=7.2,SNR=2.3						
	0.4nm,0.8s						
YKA	**Yellowknife Ar**	81.99	23	P	P	01 07 46.5	+0.9
	0.3nm,0.6s,baz=310,slow=4.8,SNR=9.5						
	0.3nm,0.6s						

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*TIF **06** 01:18:33.9, 43°.32N×45°.70E, h9^{km}±2^{km}*

*AZER **06** 01:18:33.2±0.2, 43°.25N×45°.34E, h10^{km}±6^{km}, Error ellipse: s-maj=23.2km s-min=3.1km az=329.0*

*NORS **06** 01:18:34.4±0.0, 43°.28N×45°.80E, h15^{km}, MPVA4.2*

*MOS **06** 01:18:34.6±0.0, 43°.22N×45°.70E, h11^{km}, MPVA3.7*

*DRS **06** 01:18:38.2±0.0, 43°.24N×45°.71E, h19^{km}*

*NNC **06** 01:18:42.8±2.5, 43°.55N×46°.71E, h0^{km}, mb3.8, Error ellipse: s-maj=92.5km s-min=22.1km az=137.0*

ISC 06 01:18:35.6±0.8**, 43°.30N**±0°.02×**45°.71E**±0°.01**, h14**^{km}±5^{km}**, n139, σ1°.67**/260**, 4C-1D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GROC	**Groznyy**	0.12	147	i Pg	Pg	01 18 38.1	-0.8
GROC				i Sg	Sg	01 18 41.3	+0.1
GROC	**Groznyy**	0.12	147	i PG	Pg	01 18 38.2	-0.8
DVE	**Vedeno**	0.46	138	i Pg	Pg	01 18 44.7	-0.1
DVE				eSg	Sg	01 18 51.5	+0.4
DVE	**Vedeno**	0.46	138	i PG	Pg	01 18 44.7	-0.1
DVE				eS	Sg	01 18 51.5	+0.4
KMGR	**Komgaron**	0.66	249	i Pg	Pb	01 18 49.4	+0.5
KMGR				eSg	Sb	01 18 58.8	+0.8
KMGR	**Komgaron**	0.66	249	ePG	Pb	01 18 49.5	+0.5
KMGR				eS	Sn	01 19 01.6	+0.7
DLMR	**Dylym**	0.71	109	ePg	Pg	01 18 49.7	+0.2
DLMR				i Sg	Sb	01 19 00.3	+0.8
DLMR	**Dylym**	0.71	109	ePG	Pb	01 18 50.7	+0.8
DLMR				eS	Sn	01 19 01.2	-0.9
DLMR				pmax	pmax		
	comp=Z,82nm,0.3s						
DLMR				smax	smax		
	comp=E,558nm,0.3s						
BTLR	**Botlikh**	0.74	149	ePg	Pb	01 18 50.8	+0.3
	comp=E,46nm,0.2s						
BTLR				eSg	Sg	01 18 60.0	+0.2
	comp=E,374nm,0.3s						
BTLR	**Botlikh**	0.74	149	ePG	Pb	01 18 50.7	+0.3
BTLR				eS	Sb	01 19 00.6	+0.2
BTLR				pmax	pmax		
	comp=Z,46nm,0.2s						
BTLR				smax	smax		
	comp=N,341nm,0.3s						
SHTL	**Shatili**	0.76	212	ePG	Pg	01 18 49.5	-0.9
SHTL	**Shatili**	0.76	212	P	Pg	01 18 49.5	-0.9
VLKR	**Vladikavkaz**	0.80	252	ePg	Pn	01 18 52.2	-0.3
VLKR				eSg	Sn	01 19 04.0	-0.2
VLKR	**Vladikavkaz**	0.80	252	ePG	Pn	01 18 52.4	-0.1
VLKR				eS	Sn	01 19 05.8	+1.6
TRKR	**Terskaya**	0.82	301	ePg	Pn	01 18 52.6	-0.2
TRKR				eSg	Sn	01 19 06.2	+1.4
TRKR	**Terskaya**	0.82	301	ePG	Pn	01 18 52.8	0.0
TRKR				eS	Sn	01 19 06.4	+1.6
BTKR	**Batakoyurt**	0.85	275	i Pg	Pn	01 18 53.1	-0.1
BTKR				eSg	Sn	01 19 07.3	+1.8
BTKR	**Batakoyurt**	0.85	275	ePG	Pn	01 18 53.3	0.0
BTKR				eS	Sn	01 19 08.0	+2.4
DBC	**Dubki**	0.87	109	ePg	Pg	01 18 52.3	-0.1
DBC				eSg	Sb	01 19 05.1	+1.0
DBC	**Dubki**	0.87	109	ePG	Pb	01 18 52.6	0.0
DBC				eS	Sb	01 19 05.1	+1.0
DBC				pmax	pmax		
	comp=Z,55nm,0.2s						
DBC				smax	smax		
	comp=E,122nm,0.3s						
UNCR	**Uncukul**	0.99	126	ePg	Pb	01 18 54.5	-0.2
	comp=E,75nm,0.2s						
UNCR				eSg	Sg	01 19 07.9	+0.2
	comp=E,100nm,0.2s						
UNCR	**Uncukul**	0.99	126	i PG	Pb	01 18 54.4	-0.2
UNCR				eS	Sn	01 19 09.7	+0.7
KRNR	**Karanay**	1.00	118	ePG	Pn	01 18 55.8	+0.4
KRNR				eS	Sn	01 19 10.0	+0.7
KRNR				pmax	pmax		
	comp=Z,41nm,0.3s						
KRNR				smax	smax		
	comp=E,114nm,0.3s						
PNSH	**Pansheti**	1.04	231	ePG	Pb	01 18 54.6	-1.0
PNSH				eS	Sb	01 19 09.1	0.0
PNSH	**Pansheti**	1.04	231	P	Pb	01 18 54.6	-1.0
PNSH				S	Sb	01 19 09.2	0.0
HNZR	**Khunzah**	1.05	135	ePG	Pg	01 18 55.9	0.0
HNZR				eS	Sn	01 19 10.7	0.0
HNZR				pmax	pmax		
	comp=Z,55nm,0.3s						
HNZR				smax	smax		
	comp=E,96nm,0.3s						
XNZR	**Khunzakh**	1.06	136	ePg	Pb	01 18 55.9	+0.1
	comp=E,54nm,0.3s						
XNZR				eSg	Sg	01 19 10.1	+0.2
	comp=E,546nm,0.3s						
PRTR	**Priterechnaya**	1.13	294	i Pg	Pg	01 18 58.2	+0.8
PRTR				eSg	Sn	01 19 16.0	+3.7
PRTR	**Priterechnaya**	1.13	294	i PG	Pg	01 18 58.2	+0.8
PRTR				eS	Sn	01 19 16.0	+3.7
BUJR	**Buynaksk**	1.13	114	ePg	Pg	01 18 58.5	+1.0
	comp=E,164nm,0.3s						
BUJR				eSg	Sn	01 19 14.0	+1.5
	comp=E,136nm,0.5s						
BUJR	**Buynaksk**	1.13	114	ePG	Pg	01 18 58.5	+1.0
BUJR				eS	Sn	01 19 15.0	+2.5
BUJR				pmax	pmax		
	comp=Z,164nm,0.3s						
BUJR				smax	smax		
	comp=N,457nm,0.3s						
LACR	**Lac**	1.14	246	ePg	Pb	01 18 56.5	-0.7
LACR				eSg	Sg	01 19 12.3	-0.1
LACR	**Lac**	1.14	246	ePG	Pb	01 18 57.0	-0.1
LACR				eS	Sn	01 19 13.6	+0.9
ARKR	**Arakani**	1.18	126	ePg	Pg	01 18 58.5	+0.2
	comp=N,1.0nm,0.6s						
ARKR				eSg	Sn	01 19 14.5	+0.9
	comp=N,37nm,0.5s						
ARKR	**Arakani**	1.18	126	ePG	Pg	01 18 58.5	+0.2
ARKR				eS	Sn	01 19 15.5	+1.9
ARKR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARKR				smax	smax		
	comp=N,118nm,0.6s						
STDR	**Stavd-Durt**	1.20	274	ePg	Pg	01 18 59.2	+0.5
STDR				eSg	Sg	01 19 16.8	+2.4
STDR	**Stavd-Durt**	1.20	274	ePG	Pg	01 18 59.3	+0.5
STDR				eS	Sg	01 19 18.0	+3.6
KORR	**Kora**	1.22	260	ePg	Pb	01 18 58.8	+0.3
KORR				eSg	Sg	01 19 17.9	+3.0
KORR	**Kora**	1.22	260	ePG	Pb	01 18 58.8	+0.3
KORR				eS	Sg	01 19 17.9	+3.0
GUDG	**Gudauri**	1.23	228	ePG	Pn	01 18 57.9	-0.7
GUDG				eS	Sn	01 19 15.3	+0.1
GUDG	**Gudauri**	1.23	228	P	Pn	01 18 57.9	-0.7
GUDG				S	Sn	01 19 15.4	+0.1
GNBR	**Gunib**	1.30	134	ePg	Pg	01 19 00.7	+0.1
	comp=N,71nm,0.5s						
GNBR				eSg	Sg	01 19 18.3	+0.7
	comp=N,1.0nm,0.4s						
GNBR	**Gunib**	1.30	134	ePG	Pg	01 19 00.7	+0.1
GNBR				eS	Sg	01 19 17.8	+0.2
KANR	**Karaman**	1.31	94	ePg	Pb	01 19 00.1	+0.1
	comp=N,374nm,0.3s						
KANR				eSg	Sg	01 19 17.4	-0.3
	comp=N,18nm,0.2s						
KANR	**Karaman**	1.31	94	ePG	Pg	01 19 01.2	+0.4
KANR				eS	Sg	01 19 20.8	+3.0
MAK	**Makhachkala**	1.36	104	ePg	Pn	01 19 00.2	0.0
MAK				eSg	Sg	01 19 20.5	+1.1
MAK	**Makhachkala**	1.36	104	ePG	Pg	01 19 02.3	+0.5
MAK				e		01 19 20.5	
MAK				pmax	pmax		
	comp=Z,74nm,0.6s						
MAK				smax	smax		
	comp=N,505nm,0.4s						
MAK				smax	smax		
	comp=N,618nm,0.5s						
LSNR	**Lesken**	1.37	270	i Pg	Pg	01 19 01.8	-0.2
LSNR				eSg	Sg	01 19 21.9	+2.0
LSNR	**Lesken**	1.37	270	ePG	Pg	01 19 01.9	-0.2
LSNR				eS	Sg	01 19 22.7	+2.8
ZEI	**Tsey**	1.42	249	ePg	Pn	01 19 00.7	-0.5
ZEI				eSg	Sb	01 19 20.5	+0.4
ZEI	**Tsey**	1.42	249	ePG	Pn	01 19 00.7	-0.5
ZEI				eS	Sb	01 19 20.5	+0.4
LGD	**Lagodekhi**	1.52	165	ePG	Pn	01 19 02.8	+0.4
LGD	**Lagodekhi**	1.52	165	P	Pn	01 19 02.9	+0.4
NCK	**Nalchik**	1.55	278	i Pg	Pg	01 19 05.4	0.0
NCK				eSg	Sg	01 19 25.0	-0.5
NCK	**Nalchik**	1.55	278	ePG	Pg	01 19 05.0	-0.4
NCK				eS	Sg	01 19 27.8	+2.2
KMKR	**Kumukh**	1.56	138	ePg	Pb	01 19 04.7	+0.3
	comp=N,3.0nm,0.2s						
KMKR				eSg	Sg	01 19 25.1	-0.7
	comp=N,86nm,0.5s						
KMKR	**Kumukh**	1.56	138	ePG	Pb	01 19 04.6	+0.3
KMKR				eS	Sg	01 19 25.7	-0.1
KMKR				pmax	pmax		
	comp=Z,3.0nm,0.2s						
KMKR				smax	smax		
	comp=N,268nm,0.3s						
DIGR	**Digorskoe uzhe**	1.61	256	ePg	Pn	01 19 03.9	+0.1
DIGR				eSg	Sb	01 19 25.6	+0.2
DIGR	**Digorskoe uzhe**	1.61	256	ePN	Pn	01 19 04.0	+0.1
DIGR				eS	Sb	01 19 26.1	+0.6
SEAG	**Tbilisi Sea**	1.68	204	ePN	Pb	01 19 06.1	-0.2
SEAG	**Tbilisi Sea**	1.68	204	P	Pb	01 19 06.1	-0.2
BTNK	**Botanikuri**	1.75	203	ePN	Pn	01 19 01.4	-4.2
ZKTA	**Zakatala**	1.80	158	P	Pb	01 19 08.4	+0.1
	SNR=29						
ZKTA				S	Sg	01 19 35.2	+1.8
ONI	**Oni**	1.80	247	ePN	Pn	01 19 06.9	+0.6
ONI	**Oni**	1.80	247	P	Pn	01 19 06.9	+0.6
ONI				S	Sb	01 19 32.3	+1.4
URKR	**Urkarakh**	1.82	128	ePg	Pb	01 19 09.3	+0.5
	comp=N,37nm,0.4s						
URKR				eSg	Sg	01 19 33.3	-0.9
	comp=N,149nm,0.3s						
URKR	**Urkarakh**	1.82	128	ePN	Pb	01 19 09.3	+0.5
URKR				eS	Sg	01 19 33.7	-0.4
URKR				pmax	pmax		
	comp=Z,37nm,0.4s						
URKR				smax	smax		
	comp=E,65nm,0.4s						
DDFL	**Dedoflistskaro**	1.88	171	ePN	Pg	01 19 11.8	+0.1
DDFL				eS	Sg	01 19 41.8	+5.7
DDFL	**Dedoflistskaro**	1.88	171	P	Pg	01 19 11.8	+0.1
DDFL				S	Sg	01 19 41.8	+5.7
PYA1	**Pyatigorsk**	2.04	293	ePg	Pn	01 19 10.9	+1.3
PYA1				eSg	Sb	01 19 37.9	+0.1
PYA1	**Pyatigorsk**	2.04	293	ePN	Pn	01 19 10.9	+1.3
KBZ	**Khabaz**	2.09	283	ePg	Pn	01 19 10.7	+0.5
KBZ				eSg	Sb	01 19 38.3	-0.7
KBZ	**Khabaz**	2.09	283	ePN	Pn	01 19 10.7	+0.5
KBZ				eS	Sb	01 19 38.3	-0.7
TRLG	**Trialeti**	2.12	215	ePN	Pn	01 19 12.3	+1.4
TRLG				eS	Sg	01 19 42.9	-1.1
TRLG	**Trialeti**	2.12	215	P	Pn	01 19 12.3	+1.4
TRLG				S	Sg	01 19 42.9	-1.1
BRNG	**Burnasheti**	2.18	220	ePN	Pb	01 19 13.5	-1.4
BRNG				eS	Sg	01 19 43.9	-1.8
BRNG	**Burnasheti**	2.18	220	P	Pb	01 19 13.6	-1.4
BRNG				S	Sg	01 19 44.0	-1.8
NEY	**Neytrino**	2.18	270	i Pg	Pn	01 19 13.3	+1.6
NEY				eSg	Sb	01 19 40.7	-1.2
NEY	**Neytrino**	2.18	270	i PN	Pn	01 19 13.3	+1.6
NEY				eS	Sb	01 19 40.7	-1.2
TKB	**Tkibuli**	2.21	245	ePN	Pn	01 19 13.1	+1.2
TKB	**Tkibuli**	2.21	245	P	Pn	01 19 13.1	+1.2
BEYR	**Belyy Ugol+**	2.21	290	ePg	Pn	01 19 12.5	+0.5
BEYR				eSg	Sn	01 19 40.7	+1.5
BEYR	**Belyy Ugol+**	2.21	290	ePN	Pn	01 19 12.5	+0.5
BEYR				eS	Sn	01 19 40.7	+1.5
QZX	**Qazax, Azerbai**	2.26	186	P	Pb	01 19 15.1	-1.1
	SNR=10						
QZX				S	Sb	01 19 45.3	+1.3
SHA1	**Shidzhatmaz**	2.26	282	i Pn	Pn	01 19 13.0	+0.2
SHA1				eSn	Sb	01 19 43.9	-0.4
SHA1	**Shidzhatmaz**	2.26	282	ePN	Pn	01 19 13.2	+0.4
SHA1				eS	Sb	01 19 43.8	-0.5
DMNI	**Dmanisi**	2.27	210	ePN	Pn	01 19 14.1	+1.3
DMNI	**Dmanisi**	2.27	210	P	Pn	01 19 14.1	+1.3
KIV0	**Kislovodsk Arr**	2.28	288	ePn	Pn	01 19 13.4	+0.5
KIV0				eSn	Sb	01 19 43.2	-1.6
KIV	**Kislovodsk**	2.29	288	ePN	Pn	01 19 13.4	+0.3
KIV				eS	Sn	01 19 43.2	+2.1
DRN	**Derbent**	2.32	122	ePn	Pn	01 19 14.3	+1.0
DRN				ePn	Pb	01 19 16.6	-0.6
	comp=E,37nm,0.5s						
DRN				eSn	Sb	01 19 46.3	+0.7
DRN				eSn	Sb	01 19 46.7	+1.1
	comp=E,71nm,0.4s						
DRN	**Derbent**	2.32	122	ePN	Pb	01 19 16.5	-0.6
DRN				S	Sb	01 19 46.7	+1.1
DRN				eS	Sg	01 19 47.2	-2.8
DRN				pmax	pmax		
	comp=Z,37nm,0.5s						
DRN				smax	smax		
	comp=N,149nm,0.3s						
DRN				smax	smax		
	comp=E,175nm,0.4s						
DRN				smax	smax		
	comp=E,153nm,0.3s						
AKT	**Akhty**	2.36	140	ePn	Pb	01 19 16.4	-1.6
AKT				ePn	Pn	01 19 17.4	+3.4
	comp=E,18nm,0.2s						
AKT				eSn	Sn	01 19 44.0	+1.1
AKT				eSn	Sb	01 19 48.0	+1.0
	comp=E,204nm,0.4s						
AKT	**Akhty**	2.36	140	ePN	Pb	01 19 17.3	-0.7
AKT				e		01 19 21.9	
AKT				e		01 19 23.3	
AKT				eS	Sg	01 19 49.6	-1.8
AKT				eS	Sg	01 19 55.8	+4.4
AKT				pmax	pmax		
	comp=Z,18nm,0.2s						
AKT				smax	smax		
	comp=N,69nm,0.4s						
AKT				smax	smax		
	comp=N,59nm,0.4s						
SEKA	**Sheki**	2.37	152	P	Pb	01 19 16.5	-1.6
	SNR=14						
SEKA				S	Sb	01 19 48.1	+0.9
SEKA	**Sheki**	2.37	152	PN	Pb	01 19 16.5	-1.6
KSMR	**Kasumkent**	2.47	133	ePn	Pb	01 19 18.9	-0.9
	comp=N,1.0nm,0.4s						
KSMR				eSn	Sb	01 19 50.9	+0.7
KSMR	**Kasumkent**	2.47	133	ePN	Pb	01 19 18.9	-0.9
KSMR				S	Sb	01 19 50.8	+0.7
KSMR				eS	Sg	01 19 51.5	-3.5
KSMR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KSMR				smax	smax		
	comp=E,247nm,0.4s						
KSMR				smax	smax		
	comp=N,205nm,0.4s						
KSMR				smax	smax		
	comp=E,198nm,0.4s						
ALER	**Alexandrovskoy**	2.49	307	i Pn	Pn	01 19 17.9	+2.1
ALER				eSn	Sb	01 19 48.9	-1.7
ALER	**Alexandrovskoy**	2.49	307	i PN	Pn	01 19 17.9	+2.1
ALER				eS	Sb	01 19 48.9	-1.7
AKH	**Akhalkalaki**	2.50	222	ePN	Pb	01 19 19.3	-1.1
AKH				eS	Sb	01 19 52.4	+1.2
AKH	**Akhalkalaki**	2.50	222	P	Pb	01 19 19.4	-1.1
AKH				S	Sb	01 19 52.4	+1.2
GDB	**GEDABAY**	2.58	179	P	Pn	01 19 18.8	+1.7
	SNR=19						
GDB				S	Sb	01 19 52.0	-1.5
QSAR	**Qusar**	2.60	132	P	Pb	01 19 21.9	-0.2
	SNR=7.8						
QSAR				S	Sg	01 19 57.2	-2.1
ABS	**Abastumani**	2.64	235	ePN	Pn	01 19 19.8	+1.9
ABS				eS	Sg	01 19 58.0	-2.4
ABS	**Abastumani**	2.64	235	P	Pn	01 19 19.9	+1.9
ABS				S	Sg	01 19 58.1	-2.4
GANJ	**Ganja**	2.69	170	P	Pn	01 19 20.6	+2.0
	SNR=12						
GANJ				S	Sb	01 19 54.1	-2.5
GANJ	**Ganja**	2.69	170	PN	Pn	01 19 20.6	+2.0
XNQ	**Khinaliq**	2.79	139	P	Pb	01 19 23.7	-1.7
XNQ				S	Sb	01 20 01.8	+2.2
QUBA	**Quba, Azerbaij**	2.84	132	P	Pb	01 19 24.1	-2.0
QUBA				S	Sb	01 20 01.9	+1.2
QBL	**Gabala**	2.84	145	P	Pb	01 19 23.8	-2.3
QBL				S	Sb	01 20 02.4	+1.7
DOMR	**Dombai**	2.98	271	ePn	Pn	01 19 24.6	+2.0
DOMR				eSn	Sn	01 20 00.2	+1.9
DOMR	**Dombai**	2.98	271	ePN	Pn	01 19 24.6	+2.0
DOMR				eS	Sn	01 20 00.2	+1.9
IML	**Ismayilli**	3.11	143	P	Pn	01 19 27.5	+3.1
IML				S	Sb	01 20 08.2	-0.4
GNI	**Garni**	3.23	193	i PN	Pn	01 19 28.2	+2.1
ARXR	**Arkhyz**	3.24	276	ePn	Pn	01 19 28.3	+2.1
ARXR				eSn	Sn	01 20 06.5	+1.9
ARXR	**Arkhyz**	3.24	276	ePN	Pn	01 19 28.3	+2.1
ARXR				eS	Sn	01 20 06.5	+1.9
SIZA	**Siyzn**	3.25	132	P	Pb	01 19 30.9	-2.3
SIZA				S	Sb	01 20 12.6	-0.1
PQL	**Pirkuli**	3.31	138	P	Pb	01 19 30.9	-3.3
PQL				S	Sb	01 20 15.0	+0.7
AGDM	**Agdam**	3.36	161	P	Pn	01 19 30.6	+2.9
AGDM				S	Sb	01 20 14.1	-1.6
ATGJ	**Altiaghaj**	3.43	134	P	Pb	01 19 33.6	-2.6
ATGJ				S	Sn	01 20 13.3	+4.2
AHMR	**Akhmetovskaya**	3.49	286	i Pn	Pn	01 19 29.6	+0.1
AHMR				eSn	Sn	01 20 11.6	+1.0
AHMR	**Akhmetovskaya**	3.49	286	i PN	Pn	01 19 29.6	+0.1
AHMR				eS	Sn	01 20 11.6	+1.0
SBZ	**Shahbuz**	3.90	182	S	Sn	01 20 25.9	+4.9
GUZR	**Guzeripl'**	4.11	282	ePn	Pn	01 19 38.0	-0.2
GUZR				eSn	Sn	01 20 27.1	+1.0
GUZR	**Guzeripl'**	4.11	282	ePN	Pn	01 19 38.0	-0.2
GUZR				eS	Sn	01 20 27.1	+1.0
ERBR	**Yeremizino-Bor**	4.45	305	ePn	Pn	01 19 44.0	+1.4
ERBR				eSn	Sn	01 20 34.4	+0.2
ERBR	**Yeremizino-Bor**	4.45	305	ePN	Pn	01 19 44.0	+1.4
ERBR				eS	Sn	01 20 34.4	+0.2
YRD	**Yardimli**	4.78	156	P	Pn	01 19 49.3	+1.9
YRD				S	Sn	01 20 45.9	+3.1
LRK	**Lerik**	5.06	156	P	Pn	01 19 53.0	+1.8
LRK				S	Sn	01 20 52.6	+2.9
AKTO	**Aktyubinsk**	11.03	45	⇑P	Pn	01 21 13.0	0.0
	comp=E,3.6nm,1.8s						
AKTO				⇑S	Sn	01 23 10.1	-6.0
	comp=E,0.3nm,0.2s						
AKTO	**Aktyubinsk**	11.03	45	P	Pn	01 21 12.9	0.0
AKTO				S	Sn	01 23 10.7	-5.3
AB31	**Akbulak array**	11.50	54	⇓P	Pn	01 21 19.1	-0.3
	comp=E,0.4nm,0.4s,baz=245,slow=12,SNR=17						
AB31				⇑S	Sn	01 23 20.5	-7.1
	comp=E,0.7nm,0.6s,baz=248,slow=24						
AB31	**Akbulak array**	11.50	54	P	Pn	01 21 19.6	+0.2
BRVK	**Borovoye**	18.99	50	⇑P	P	01 22 56.5	-0.1
	comp=E,7.6nm,2.0s						
BRVK	**Borovoye**	18.99	50	P	P	01 22 56.5	-0.1
BVA0	**Borovoye Array**	19.03	51	P	Pn	01 22 57.7	-0.2
	comp=E,20nm,3.4s,baz=238,slow=8.3,SNR=6.7						
BVA0	**Borovoye Array**	19.03	51	P	Pn	01 22 57.7	-0.2
BFO	**Black Forest**	26.35	294	i P	P	01 24 12.8	+1.7

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*NEIC **06** 01:26:21.8±1.7, 43°.36N±0°.05×45°.81E±0°.08, h10^{km}±1^{km}, mb4.5/55, Error ellipse: s-maj=9.9km s-min=8.7km az=116.0*

*IDC **06** 01:26:21.6±0.5, 43°.28N×45°.64E, h0^{km}, mb4.2/22, mbtmp4.3/37, ML3.9/14, MS3.5/2, Error ellipse: s-maj=7.6km s-min=5.9km az=160.0*

*TIF **06** 01:26:21.4, 43°.42N×45°.73E, h13^{km}±1^{km}*

*MOS **06** 01:26:22.6±0.0, 43°.26N×45°.74E, h14^{km}, MPVA4.8*

*MCSM **06** 01:26:22.8±1.3, 44°N±3°×4°6E±1°3, h11^{km}±2^{km}, mb4.3*

*NORS **06** 01:26:22.6±0.0, 43°.29N×45°.82E, h15^{km}, MPVA5.3*

*AZER **06** 01:26:24.3±0.9, 43°.36N×45°.37E, h10^{km}, Error ellipse: s-maj=8.7km s-min=7.6km az=37.0*

*DRS **06** 01:26:26.6±0.0, 43°.35N×45°.66E, h20^{km}, FELT I=VI MSK at Berkat-Yurt, Sadovoe, Tolstoy-Yurt; I=V-VI MSK at Grozny, Argun, Petropavlovskaya, Prigorodnoye; FELT I=V MSK at Gudermes, Pervomaiskaya, Raduzhnoe, Djalka, Atagi, Urus-Martan*

*NNC **06** 01:26:30.9±2.9, 43°.53N×46°.83E, h0^{km}, mb4.5, Error ellipse: s-maj=32.5km s-min=15.7km az=85.0*

ISC 06 01:26:22.9±0.9**, 43°.42N**±0°.02×**45°.75E**±0°.01**, h10**^{km}±5^{km}**, n509, σ1°.96**/674**, mb4.4**/79**, MS3.8**/6**, 23C-18D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GROC	**Groznyy**	0.22	171	i Pg	Pg	01 26 26.6	-0.9
GROC				eSg	Sg	01 26 29.8	-0.9
GROC	**Groznyy**	0.22	171	ePG	Pg	01 26 26.7	-0.9
DVE	**Vedeno**	0.54	149	ePg	Pg	01 26 32.4	-1.1
DVE				eSg	Sg	01 26 39.5	-1.1
DVE	**Vedeno**	0.54	149	ePG	Pg	01 26 33.4	-0.1
DVE				eS	Sg	01 26 39.4	-1.2
DLMR	**Dylym**	0.74	118	ePg	Pb	01 26 38.8	+0.9
	730nm,0.8s						
DLMR				eSg	Sg	01 26 47.5	+0.7
DLMR	**Dylym**	0.74	118	ePG	Pb	01 26 38.7	+0.9
DLMR				S	Sb	01 26 48.8	+0.8
DLMR				pmax	pmax		
	comp=Z,730nm,0.8s						
DLMR				smax	smax		
	comp=E,6μm,0.5s						
DLMR				smax	smax		
	comp=E,6μm,0.5s						
DLMR				smax	smax		
	comp=N,5μm,0.5s						
KMGR	**Komgaron**	0.74	241	ePg	Pg	01 26 36.8	-0.5
KMGR				eSg	Sg	01 26 48.5	+1.5
KMGR	**Komgaron**	0.74	241	⇑i PG	Pg	01 26 38.2	+1.0
KMGR				eS	Sb	01 26 50.0	+1.8
TRKR	**Terskaya**	0.80	292	i Pg	Pn	01 26 41.2	+0.9
TRKR				eSg	Sn	01 26 54.6	+2.5
TRKR	**Terskaya**	0.80	292	i PG	Pn	01 26 41.2	+0.9
TRKR				eS	Sn	01 26 54.7	+2.5
BTLR	**Botlikh**	0.84	155	ePg	Pg	01 26 40.3	+1.2
	comp=N,819nm,0.8s						
BTLR				eSg	Sg	01 26 46.6	-3.3
BTLR	**Botlikh**	0.84	155	ePG	Pg	01 26 40.2	+1.2
BTLR				eS	Sg	01 26 51.2	+1.3
BTLR				pmax	pmax		
	comp=Z,819nm,0.8s						
BTLR				smax	smax		

	comp=E,2µm,0.4s						
VLKR	Vladikavkaz	0.87	245	*e*Pg	Pg	01 26 40.3	+0.6
VLKR				*e*Sg	Sg	01 26 52.9	+1.9
VLKR	Vladikavkaz	0.87	245	⇑*i*PG	Pb	01 26 41.0	+0.9
VLKR				*e*S	Sb	01 26 54.4	+2.6
BTKR	Batakoyurt	0.88	267	*i* Pg	Pb	01 26 41.5	+1.1
BTKR				*e*Sg	Sn	01 26 56.1	+1.8
BTKR	Batakoyurt	0.88	267	*i* PG	Pb	01 26 41.5	+1.1
BTKR				*e*S	Sn	01 26 56.1	+1.8
SHTL	Shatili	0.88	210	*e*PG	Pg	01 26 38.0	-1.9
SHTL				*e*S	Sg	01 26 51.8	+0.4
SHTL	Shatili	0.88	210	P	Pg	01 26 38.0	-1.9
SHTL				S	Sg	01 26 51.8	+0.4
DBC	Dubki	0.89	117	*e*Pg	Pb	01 26 41.3	+0.7
	comp=E,228nm,0.2s						
DBC				*e*Sg	Sb	01 26 53.2	+0.8
	comp=E,1µm,0.6s						
DBC	Dubki	0.89	117	*e*PG	Pb	01 26 41.2	+0.7
DBC				*e*S	Sb	01 26 53.5	+1.0
DBC				pmax	pmax		
	comp=Z,228nm,0.3s						
DBC				smax	smax		
	comp=E,752nm,0.3s						
KRNR	Karanay	1.04	125	*e*Pg	Pb	01 26 43.6	+0.5
	comp=E,389nm,0.6s						
KRNR				*e*Sg	Sg	01 26 56.5	+0.1
KRNR	Karanay	1.04	125	*e*PG	Pb	01 26 43.6	+0.5
KRNR				*e*S	Sb	01 26 57.5	+0.7
KRNR				pmax	pmax		
	comp=Z,390nm,0.6s						
KRNR				smax	smax		
	comp=E,891nm,0.3s						
UNCR	Uncukul	1.04	132	*e*Pg	Pb	01 26 44.2	+1.0
	comp=E,689nm,0.4s						
UNCR				*e*Sg	Sg	01 26 57.2	+0.6
UNCR	Uncukul	1.04	132	*e*PG	Pb	01 26 44.1	+1.0
UNCR				*e*S	Sb	01 26 59.0	+2.1
UNCR				pmax	pmax		
	comp=Z,689nm,0.4s						
UNCR				smax	smax		
	comp=E,4µm,0.6s						
PRTR	Priterechnaya	1.11	288	*i* Pg	Pn	01 26 46.2	+1.6
PRTR				*e*Sg	Sn	01 27 03.7	+3.7
PRTR	Priterechnaya	1.11	288	*i* PG	Pn	01 26 46.2	+1.6
PRTR				*e*S	Sn	01 27 03.7	+3.7
HNZR	Khunzah	1.12	140	*e*PG	Pg	01 26 44.3	-0.2
HNZR				*e*S	Sg	01 26 59.3	+0.3
HNZR				pmax	pmax		
	comp=Z,678nm,0.4s						
HNZR				smax	smax		
	comp=N,1µm,0.6s						
XNZR	Khunzakh	1.13	141	*e*Pg	Pg	01 26 44.4	-0.2
	comp=N,677nm,0.4s						
XNZR				*e*Sg	Sg	01 26 58.4	-0.9
PNSH	Pansheti	1.14	227	*e*PG	Pg	01 26 43.1	-1.8
PNSH	Pansheti	1.14	227	P	Pg	01 26 43.1	-1.8
PNSH				S	Sg	01 26 57.2	-2.6
BUJR	Buynaksk	1.16	121	*e*Pg	Pn	01 26 46.6	+1.3
	comp=N,1µm,0.4s						
BUJR				*e*Sg	Sn	01 27 02.4	+1.1
	comp=N,1µm,0.5s						
BUJR	Buynaksk	1.16	121	*e*PG	Pn	01 26 46.6	+1.3
BUJR				*e*S	Sn	01 27 02.7	+1.4
BUJR				pmax	pmax		
	comp=Z,1µm,0.4s						
BUJR				smax	smax		
	comp=E,6µm,0.8s						
LACR	Lac	1.22	241	*i* Pg	Pg	01 26 44.9	-1.4
LACR				*e*Sg	Sg	01 27 01.0	-1.2
LACR	Lac	1.22	241	*e*PG	Pg	01 26 45.2	-1.1
LACR				*e*S	Sg	01 27 01.0	-1.2
ARKR	Arakani	1.23	131	*e*Pg	Pg	01 26 46.7	+0.2
	comp=E,2.0nm,0.5s						
ARKR				*e*Sg	Sg	01 27 03.2	+0.7
	comp=E,356nm,0.7s						
ARKR	Arakani	1.23	131	*e*PG	Pg	01 26 46.7	+0.2
ARKR				*e*S	Sb	01 27 03.5	+1.3
ARKR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ARKR				smax	smax		
	comp=N,1µm,0.5s						
STDR	Stavd-Durt	1.23	268	*e*Pg	Pn	01 26 47.4	+1.2
STDR				*e*Sg	Sn	01 27 05.5	+2.6
STDR	Stavd-Durt	1.23	268	*e*PG	Pn	01 26 47.4	+1.2
STDR				*e*S	Sn	01 27 05.5	+2.6
KORR	Kora	1.27	255	*i* Pg	Pn	01 26 47.0	+0.2
KORR				*e*Sg	Sn	01 27 05.7	+1.7
KORR	Kora	1.27	255	*e*PG	Pn	01 26 47.2	+0.3
KORR				*e*S	Sn	01 27 06.2	+2.2
KANR	Karaman	1.29	100	*e*Pg	Pb	01 26 49.3	+2.0
	comp=N,2µm,0.5s						
KANR				*e*Sg	Sb	01 27 04.6	+0.6
KANR	Karaman	1.29	100	*e*PG	Pb	01 26 50.0	+2.7
KANR				*e*S	Sb	01 27 04.6	+0.6
GUDG	Gudauri	1.34	225	*e*PG	Pn	01 26 46.4	-1.5
GUDG	Gudauri	1.34	225	P	Pn	01 26 46.5	-1.5
GUDG				S	Sg	01 27 03.8	-2.2
MAK	Makhachkala	1.37	109	*e*Pg	Pg	01 26 49.6	+0.5
MAK				*e*Sg	Sn	01 27 07.3	+1.1
MAK	Makhachkala	1.37	109	⇑*i*PG	Pg	01 26 49.9	+0.7
MAK				*e*		01 27 09.7	
MAK				pmax	pmax		
	comp=Z,384nm,0.5s						
MAK				smax	smax		
	comp=E,4µm,0.4s						
MAK				smax	smax		
	comp=E,4µm,0.7s						
GNBR	Gunib	1.37	139	*e*Pg	Pn	01 26 49.4	+1.2
	comp=E,815nm,0.5s						
GNBR				*e*Sg	Sb	01 27 07.2	+1.0
	comp=E,4µm,0.7s						
GNBR	Gunib	1.37	139	*e*PG	Pn	01 26 49.3	+1.2
GNBR				*e*S	Sb	01 27 07.4	+1.2
GNBR				pmax	pmax		
	comp=Z,816nm,0.4s						
GNBR				smax	smax		
	comp=E,6µm,0.8s						
LSNR	Lesken	1.41	265	*e*Pg	Pn	01 26 49.4	+0.7
LSNR				*e*Sg	Sg	01 27 09.9	+1.6
LSNR	Lesken	1.41	265	*e*PG	Pg	01 26 50.5	+0.5
LSNR				*e*S	Sg	01 27 09.8	+1.6
ZEI	Tsey	1.49	245	*e*Pg	Pn	01 26 49.0	-1.1
ZEI				*e*Sg	Sn	01 27 08.7	-1.0
ZEI	Tsey	1.49	245	*e*PG	Pn	01 26 49.4	-0.6
NCK	Nalchik	1.57	273	*i* Pg	Pn	01 26 51.8	+0.9
NCK				*e*Sg	Sb	01 27 13.5	+1.5
NCK	Nalchik	1.57	273	*e*PG	Pb	01 26 52.7	+0.6
NCK				*e*S	Sg	01 27 14.2	+0.8
LGD	Lagodekhi	1.63	167	*e*PN	Pn	01 26 51.3	-0.4
LGD				*e*S	Sg	01 27 17.4	+2.1
LGD	Lagodekhi	1.63	167	P	Pn	01 26 51.3	-0.4
LGD				S	Sg	01 27 17.4	+2.1
KMKR	Kumukh	1.63	142	*e*Pg	Pn	01 26 52.8	+0.9
	comp=E,17nm,0.2s						
KMKR	Kumukh	1.63	142	*e*PN	Pn	01 26 52.8	+0.9
KMKR				*e*S	Sn	01 27 14.7	+1.6
KMKR				pmax	pmax		
	comp=Z,17nm,0.2s						
KMKR				smax	smax		
	comp=N,4µm,0.6s						
DIGR	Digorskoe uzhe	1.67	252	*e*Pg	Pn	01 26 51.6	-0.8
DIGR				*e*Sg	Sn	01 27 13.9	-0.2
DIGR	Digorskoe uzhe	1.67	252	*e*PN	Pn	01 26 52.5	0.0
SEAG	Tbilisi Sea	1.80	203	*e*PN	Pn	01 26 54.6	+0.6
SEAG	Tbilisi Sea	1.80	203	P	Pn	01 26 54.7	+0.6
SEAG				S	Sn	01 27 18.6	+1.6
URKR	Urkarakh	1.87	132	*e*Pg	Pb	01 26 57.5	+0.2
	comp=N,500nm,0.3s						
URKR				*e*Sg	Sb	01 27 21.5	+0.6
URKR	Urkarakh	1.87	132	*e*PN	Pb	01 26 57.5	+0.2
URKR				*e*S	Sb	01 27 22.2	+1.3
URKR				pmax	pmax		
	comp=Z,501nm,0.3s						
URKR				smax	smax		
	comp=E,1µm,0.6s						
BTNK	Botanikuri	1.88	202	*e*PN	Pn	01 26 49.6	-5.5
ONI	Oni	1.88	244	Pn	Pn	01 26 54.2	-1.0
ONI				Sn	Sn	01 27 17.9	-1.1
ONI	Oni	1.88	244	*e*PN	Pn	01 26 55.3	+0.1
ONI	Oni	1.88	244	P	Pn	01 26 55.3	+0.1
ONI				S	Sn	01 27 20.4	+1.4
ZKTA	Zakatala	1.90	160	P	Pn	01 26 56.8	+1.4
	SNR=229						
ZKTA				S	Sb	01 27 23.8	+2.3
ZKTA	Zakatala	1.90	160	PN	Pn	01 26 56.8	+1.4
DDFL	Dedoflistskaro	2.00	172	*e*PN	Pb	01 27 00.3	+0.9
DDFL				*e*S	Sg	01 27 30.5	+3.5
DDFL	Dedoflistskaro	2.00	172	P	Pb	01 27 00.3	+0.9
DDFL				S	Sg	01 27 30.6	+3.5
PYA1	Pyatigorsk	2.02	289	*e*Pg	Pn	01 26 58.2	+1.0
PYA1				*e*Sg	Sn	01 27 23.9	+1.3
PYA1	Pyatigorsk	2.02	289	*e*PN	Pn	01 26 58.2	+1.0
KBZ	Khabaz	2.09	279	Pn	Pn	01 26 58.2	+0.2
	comp=E,48nm,0.3s,baz=122,slow=7.9,SNR=162						
KBZ				Lg	Lg	01 27 25.9	
	comp=E,70nm,0.3s,baz=27,slow=11,SNR=8.2						
	comp=E,160nm,0.3s						
BEYR	Belyy Ugol+	2.20	286	*e*Pn	Pn	01 27 00.5	+0.8
BEYR				*e*Sn	Sn	01 27 28.2	+1.2
BEYR	Belyy Ugol+	2.20	286	*e*PN	Pn	01 27 00.5	+0.8
BEYR				*e*S	Sn	01 27 28.2	+1.2
NEY	Neytrino	2.21	267	*e*Pg	Pn	01 27 01.5	+1.5
NEY				*e*Sg	Sn	01 27 29.6	+2.2
NEY	Neytrino	2.21	267	*e*PN	Pn	01 27 01.9	+2.0
NEY				*e*S	Sb	01 27 31.5	+0.8
TRLG	Trialeti	2.24	213	*e*PN	Pn	01 27 00.5	+0.2
TRLG				*e*S	Sn	01 27 29.2	+1.1
TRLG	Trialeti	2.24	213	P	Pn	01 27 00.6	+0.2
TRLG				S	Sn	01 27 29.2	+1.1
SHA1	Shidzhatmaz	2.27	279	*e*Pn	Pn	01 27 00.6	-0.2
SHA1				*e*Sn	Sn	01 27 30.8	+1.9
SHA1	Shidzhatmaz	2.27	279	*e*PN	Pn	01 27 01.6	+0.9
SHA1				*e*S	Sb	01 27 33.2	+0.9
KIV0	Kislovodsk Arr	2.28	285	*i* Pn	Pn	01 27 01.3	+0.6
KIV0				*e*Sn	Sn	01 27 30.0	+1.1
KVAR	Kislovodsk Arr	2.28	285	Pn	Pn	01 27 02.1	+1.3
	baz=108,slow=20						
KVAR				Lg	Lg	01 27 30.8	
	baz=72,slow=20						
	comp=E,32nm,0.3s						
KIV	Kislovodsk	2.28	285	P	Pn	01 27 01.0	+0.2
KIV	Kislovodsk	2.28	285	Pn	Pn	01 27 01.4	+0.6
KIV				Sn	Sn	01 27 29.8	+0.8
KIV	Kislovodsk	2.28	285	*i* Pn	Pn	01 27 01.4	+0.6
KIV				*e*Sn	Sn	01 27 30.4	+1.4
KIV	Kislovodsk	2.28	285	Pn	Pn	01 27 01.3	+0.6
KIV	Kislovodsk	2.28	285	*i* PN	Pn	01 27 01.4	+0.6
KIV				*e*S	Sn	01 27 30.4	+1.4
TKB	Tkibuli	2.29	243	*e*PN	Pn	01 27 01.4	+0.6
TKB				*e*S	Sn	01 27 31.0	+1.9
TKB	Tkibuli	2.29	243	P	Pn	01 27 01.4	+0.6
TKB				S	Sn	01 27 31.0	+1.9
BRNG	Burnasheti	2.29	219	*e*PN	Pn	01 27 01.6	+0.7
BRNG				*e*S	Sn	01 27 31.6	+2.3
BRNG	Burnasheti	2.29	219	P	Pn	01 27 01.7	+0.7
BRNG				S	Sn	01 27 31.7	+2.3
DRN	Derbent	2.36	125	*e*Pn	Pb	01 27 05.0	-0.5
	comp=E,356nm,0.7s						
DRN				*e*Sn	Sb	01 27 36.2	+1.5
	comp=E,656nm,0.4s						
DRN	Derbent	2.36	125	*e*PN	Pb	01 27 05.0	-0.5
DRN				*e*S	Sb	01 27 36.1	+1.4
DRN				*e*S	Sg	01 27 36.8	-1.9
DRN				pmax	pmax		
	comp=Z,357nm,0.7s						
DRN				smax	smax		
	comp=E,2µm,0.7s						
DRN				smax	smax		
	comp=N,1µm,0.4s						
DRN				smax	smax		
	comp=E,2µm,0.7s						
QZX	Qazax, Azerbai	2.38	187	P	Pn	01 27 03.9	+1.8
	SNR=280						
QZX				S	Sn	01 27 34.7	+3.3
DMNI	Dmanisi	2.39	209	*e*PN	Pn	01 27 02.1	-0.2
DMNI				*e*S	Sn	01 27 31.9	+0.2
DMNI	Dmanisi	2.39	209	P	Pn	01 27 02.1	-0.2
DMNI				S	Sn	01 27 32.0	+0.2
AKT	Akhty	2.43	142	*e*Pn	Pn	01 27 05.2	+2.3
	comp=E,243nm,0.5s						
AKT				*e*Sn	Sn	01 27 33.4	+0.6
AKT	Akhty	2.43	142	*e*PN	Pn	01 27 05.4	+2.5
AKT				*e*		01 27 10.1	
AKT				*e*		01 27 12.7	
AKT				*e*S	Sb	01 27 38.2	+1.2
AKT				*e*S	Sg	01 27 44.5	+3.4
AKT				pmax	pmax		
	comp=Z,225nm,0.5s						
AKT				smax	smax		
	comp=N,642nm,0.4s						
AKT				smax	smax		
	comp=N,518nm,0.4s						
AKT				MLR	MLR		
	comp=Z,667nm,2.0s						
ALER	Alexandrovskoy	2.44	304	*e*Pn	Pb	01 27 05.6	-1.4
ALER				*e*Sn	Sb	01 27 38.0	+0.9
ALER	Alexandrovskoy	2.44	304	*e*PN	Pb	01 27 05.6	-1.4
ALER				*e*S	Sb	01 27 38.0	+0.9
SEKA	Sheki	2.46	154	P	Pn	01 27 04.8	+1.5
	SNR=141						
SEKA				S	Sb	01 27 39.8	+2.1
SEKA	Sheki	2.46	154	PN	Pn	01 27 04.7	+1.5
KSMR	Kasumkent	2.53	135	*e*PN	Pn	01 27 06.3	+2.1
KSMR				*e*S	Sn	01 27 38.9	+3.8
KSMR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KSMR				smax	smax		
	comp=N,2µm,0.6s						
AKH	Akhalkalaki	2.61	220	P	Pn	01 27 06.5	+1.0
AKH				S	Sn	01 27 37.8	+0.5
AKH	Akhalkalaki	2.61	220	Pn	Pn	01 27 03.2	-2.2
AKH				Sn	Sn	01 27 35.7	-1.6
AKH	Akhalkalaki	2.61	220	*e*Pn	Pn	01 27 05.8	+0.4
AKH				*e*Sn	Sn	01 27 35.8	-1.6
AKH	Akhalkalaki	2.61	220	*e*PN	Pn	01 27 06.4	+1.0
AKH				*e*S	Sn	01 27 41.2	+3.9
AKH	Akhalkalaki	2.61	220	P	Pn	01 27 06.5	+1.0
AKH				S	Sn	01 27 41.2	+3.9
QSAR	Qusar	2.67	135	P	Pb	01 27 09.8	-0.9
	SNR=23						
QSAR				S	Sb	01 27 45.9	+2.3
GDB	GEDABAY	2.70	180	P	Pn	01 27 06.8	+0.2
	SNR=77						
GDB				S	Sn	01 27 40.5	+1.0
ABS	Abastumani	2.73	233	*e*PN	Pn	01 27 08.0	+1.0
ABS				*e*S	Sb	01 27 46.3	+0.6
ABS	Abastumani	2.73	233	P	Pn	01 27 08.1	+1.0
ABS				S	Sb	01 27 46.3	+0.6
GANJ	Ganja	2.81	171	P	Pn	01 27 08.7	+0.7
	SNR=314						
GANJ				S	Sn	01 27 43.3	+1.4
GANJ	Ganja	2.81	171	PN	Pn	01 27 08.6	+0.7
MNGR	Mingechevir, A	2.83	159	P	Pn	01 27 11.5	+3.2
	SNR=24						
MNGR	Mingechevir, A	2.83	159	PN	Pn	01 27 11.4	+3.2
XNQ	Khinaliq	2.87	141	P	Pn	01 27 11.8	+2.8
	SNR=14						
XNQ				S	Sb	01 27 49.4	-0.1
QUBA	Quba, Azerbaij	2.90	135	P	Pn	01 27 12.8	+3.6
	SNR=38						
QUBA				S	Sb	01 27 50.6	+0.3
QBL	Gabala	2.92	147	P	Pn	01 27 11.9	+2.3
	SNR=58						
QBL				S	Sb	01 27 50.4	-0.6
NVNR	Nevinnomyssk	2.98	295	*e*Pn	Pn	01 27 12.2	+2.0
NVNR				*e*Sn	Sb	01 27 51.5	-1.0
NVNR	Nevinnomyssk	2.98	295	*e*PN	Pn	01 27 12.2	+2.0
NVNR				*e*S	Sb	01 27 51.5	-1.0
DOMR	Dombai	3.01	269	*e*Pn	Pn	01 27 11.6	+0.7
DOMR				*e*Sn	Sn	01 27 45.9	-1.2
DOMR	Dombai	3.01	269	*e*PN	Pn	01 27 11.6	+0.7
DOMR				*e*S	Sn	01 27 45.9	-1.2
IML	Ismayilli	3.19	145	P	Pn	01 27 16.3	+3.0
	SNR=6.9						
ARXR	Arkhyz	3.26	274	*e*Pn	Pn	01 27 16.0	+1.8
ARXR				*e*Sn	Sn	01 27 55.8	+2.6
ARXR	Arkhyz	3.26	274	*e*PN	Pn	01 27 16.0	+1.8
ARXR				*e*S	Sn	01 27 55.8	+2.6
SIZA	Siyzn	3.31	134	P	Pn	01 27 18.6	+3.6
	SNR=20						
SIZA				S	Sb	01 28 02.8	+0.6
BRDA	Brd	3.33	161	P	Pn	01 27 17.2	+2.0
	SNR=5.8						
BRDA				S	Sn	01 27 59.2	+4.4
GNI	Garni	3.36	193	Pn	Pn	01 27 16.5	+0.9
	comp=N,7.2nm,0.3s,baz=8.7,slow=8.8,SNR=47						
GNI				Lg	Lg	01 28 02.5	
	comp=N,29nm,0.3s,baz=72,slow=20,SNR=5.6						
GNI				LR	LR	01 28 55.4	
	comp=N,497nm,18.6s,baz=334,slow=48						
	comp=N,195nm,0.8s						
GNI	Garni	3.36	193	P	Pn	01 27 18.9	+3.3
GNI	Garni	3.36	193	S	Sn	01 27 59.4	+3.8
GNI	Garni	3.36	193	Pn	Pn	01 27 15.5	-0.1
GNI	Garni	3.36	193	*e*Pn	Pn	01 27 15.9	+0.3
GNI				*e*Sn	Sn	01 27 54.2	-1.4
GNI	Garni	3.36	193	*e*PN	Pn	01 27 15.9	+0.3
PQL	Pirkuli	3.38	140	P	Pn	01 27 19.0	+3.0
	SNR=11						
PQL				S	Sb	01 28 03.0	-1.2
KARS	Kars	3.43	216	P	Pn	01 27 18.8	+2.2
KARS	Kars	3.43	216	Pn	Pn	01 27 15.2	-1.4
KARS	Kars	3.43	216	Pn	Pn	01 27 17.8	+1.2
KARS				Sn	Sn	01 28 01.7	+4.3
KARS	Kars	3.43	216	PN	Pn	01 27 15.2	-1.4
ZRD	Zardab	3.46	155	P	Pn	01 27 19.0	+2.2
	SNR=18						
ZRD				S	Sn	01 28 03.7	+5.9
AGDM	Agdam	3.47	162	P	Pn	01 27 18.8	+1.8
	SNR=36						
AGDM				S	Sn	01 28 03.3	+5.1
AHMR	Akhmetovskaya	3.48	284	*e*Pn	Pn	01 27 20.2	+2.9
AHMR				*e*Sn	Sn	01 28 00.2	+1.6
AHMR	Akhmetovskaya	3.48	284	*e*PN	Pn	01 27 20.2	+2.9
AHMR				*e*S	Sn	01 28 00.2	+1.6
ATGJ	Altiaghaj	3.49	136	P	Pn	01 27 20.6	+3.2
	SNR=18						
ATGJ				S	Sb	01 28 06.1	-1.3
METS	Metsamor	3.50	201	P	Pb	01 27 22.9	-2.1
BATM	Batumi	3.50	240	*e*PN	Pn	01 27 17.9	+0.4
BATM	Batumi	3.50	240	P	Pn	01 27 18.0	+0.4
KDMR	Kurdemir	3.55	148	P	Pn	01 27 20.1	+2.1
	SNR=6.2						
KDMR				S	Sn	01 28 03.8	+3.8
TASB	TASBURUN-IGDIR	3.62	199	P	Pn	01 27 21.4	+2.3
TASB	TASBURUN-IGDIR	3.62	199	S	Sn	01 28 03.9	+2.0
GBS	Qobustan	3.74	139	P	Pn	01 27 24.8	+3.9
	SNR=9.1						
HYR	Heyderabad	3.76	191	P	Pn	01 27 23.7	+2.6
	SNR=53						
HYR				S	Sn	01 28 08.6	+3.1
HOPA	Hopa-Artvin	3.78	239	*e*P	Pn	01 27 21.8	+0.5
HOPA	Hopa-Artvin	3.78	239	*e*S	Sn	01 28 05.2	-0.6
SENK	Senkaya-Erzuru	3.82	223	P	Pn	01 27 23.3	+1.3
LABN	Labinsk	3.82	290	*e*Pn	Pn	01 27 24.7	+2.8
LABN				*e*Sn	Sn	01 28 06.7	-0.2
LABN	Labinsk	3.82	290	*e*PN	Pn	01 27 24.7	+2.8
LABN				*e*S	Sn	01 28 06.7	-0.2
BLQ	Beylaqan	3.94	159	P	Pn	01 27 24.3	+0.8
	SNR=15						
BLQ				S	Sn	01 28 11.6	+1.7
RPOR	Krasnaya Polya	3.99	276	*e*Pn	Pn	01 27 27.0	+2.8
RPOR				*e*Sn	Sn	01 28 12.7	+1.6
RPOR	Krasnaya Polya	3.99	276	*e*PN	Pn	01 27 27.0	+2.8
RPOR				*e*S	Sn	01 28 12.7	+1.6
SBZ	Shahbuz	4.03	182	P	Pn	01 27 26.2	+1.4
	SNR=61						
SBZ				S	Sn	01 28 14.8	+2.7
SAAT	Saatly	4.08	150	P	Pn	01 27 26.9	+1.5
GUZR	Guzeripl'	4.12	280	*e*Pn	Pn	01 27 27.8	+1.8
GUZR				*e*Sn	Sn	01 28 16.6	+2.3
GUZR	Guzeripl'	4.12	280	*e*PN	Pn	01 27 27.8	+1.8
GUZR				*e*S	Sn	01 28 16.6	+2.3
QRD	Qoradiz	4.13	163	P	Pn	01 27 27.6	+1.4
	SNR=37						
QRD				S	Sn	01 28 15.8	+1.3
VSLR	Vesyoloye	4.16	272	*e*Pn	Pn	01 27 29.2	+2.7
VSLR				*e*Sn	Sn	01 28 15.7	+0.5
VSLR	Vesyoloye	4.16	272	*e*PN	Pn	01 27 29.2	+2.7
VSLR				*e*S	Sn	01 28 15.7	+0.5
ALIB	Äli-Bayra	4.24	144	P	Pn	01 27 31.0	+3.4
ALIB				S	Sn	01 28 21.2	+4.1
NAX	Nakhchivan	4.25	183	P	Pn	01 27 33.1	+5.3
NAX				S	Sn	01 28 18.2	+0.6
NAX	Nakhchivan	4.25	183	PN	Pn	01 27 33.1	+5.3
AGRB	Hanur-Agry	4.37	209	P	Pn	01 27 32.3	+2.8
CHOM	Cayeli-Rize	4.37	240	P	Pn	01 27 29.9	+0.5
SOC	Sochi	4.39	274	*e*PN	Pn	01 27 28.3	-1.4
SOC				*e*		01 28 20.7	
SOC				*e*SS	Sb	01 28 34.1	+1.0
SOC						01 28 45.2	
SOC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SOC				MLR	MLR		
	comp=Z,147nm,11.0s						
ERBR	Yeremizino-Bor	4.40	303	*e*Pn	Pn	01 27 31.3	+1.5
ERBR				*e*Sn	Sn	01 28 21.2	0.0
ERBR	Yeremizino-Bor	4.40	303	*e*PN	Pn	01 27 31.3	+1.5
ERBR				*e*S	Sn	01 28 21.2	0.0
ORD	Ordubad	4.50	178	P	Pn	01 27 34.2	+3.0
	SNR=12						
KOPR	Koprukoy-ERZUR	4.50	222	P	Pn	01 27 33.1	+1.7
GLBA	Clilabad	4.63	154	P	Pn	01 27 34.5	+1.6
	SNR=15						
GLBA				S	Sn	01 28 28.0	+1.3
GOYR	Goytkh	4.68	282	*e*Pn	Pn	01 27 34.7	+1.1
GOYR				*e*Sn	Sn	01 28 29.2	+1.1
GOYR	Goytkh	4.68	282	*e*PN	Pn	01 27 34.7	+1.1
GOYR				*e*S	Sn	01 28 29.2	+1.1
YRD	Yardimli	4.88	156	P	Pn	01 27 37.6	+1.0
	SNR=17						
YRD				S	Sn	01 28 34.7	+1.4
MLAZ	Malazgirt-MUS	4.91	210	*e*P	Pn	01 27 40.3	+3.3
KTUT	Trabzon	5.07	243	*e*P	Pn	01 27 39.9	+1.0
KGUR	Krasnodar	5.08	291	*e*PN	Pn	01 27 36.7	-2.5
VANB	Van	5.14	201	*e*P	Pn	01 27 44.9	+4.8
BAYT	Aydıntepe-Bayb	5.16	236	*e*P	Pn	01 27 41.9	+1.4
LRK	Lerik	5.16	157	P	Pn	01 27 41.4	+0.9
	SNR=22						
LRK				S	Sn	01 28 41.1	+0.9
KOPT	Kop Dagi	5.20	231	Pn	Pn	01 27 39.4	-1.7
VRTB	Varto-Mus	5.35	219	*e*P	Pn	01 27 45.2	+2.2
ASTR	Astara	5.38	154	P	Pn	01 27 44.4	+1.2
	SNR=6.8						
ASTR				S	Sn	01 28 46.8	+1.6
GEVA	Gevas	5.50	203	Pn	Pn	01 27 43.7	-1.3
YEDI	Yedisu-Bingol	5.58	226	*e*P	Pn	01 27 48.2	+2.0
GURO	Guroymak-BITLI	5.62	211	*e*P	Pn	01 27 50.3	+3.6
GURO	Guroymak-BITLI	5.62	211	Pn	Pn	01 27 45.0	-1.7
GURO	Guroymak-BITLI	5.62	211	Pn	Pn	01 27 48.9	+2.2
GL1R	Gelendzhik	5.65	284	*i* P	Pn	01 27 50.1	+3.1
SPGR	Shapsug	5.68	286	*e*Pn	Pn	01 27 48.7	+1.3
SPGR				*e*Sn	Sn	01 28 53.2	+0.5
SPGR	Shapsug	5.68	286	*e*P	Pn	01 27 48.7	+1.3
SPGR				*e*S	Sn	01 28 53.2	+0.5
ANN	Anapa	6.14	286	*e*P	Pn	01 27 55.9	+2.2
ANN				*e*S	Sn	01 29 08.8	+4.8
ANN				pmax	pmax		
	comp=Z,46nm,1.1s						
ANN				MLR	MLR		
	comp=Z,190nm,13.0s						
SVAN	Silvan-Diyarba	6.30	215	*e*P	Pn	01 27 59.4	+3.5
TOKA	Tokat	7.58	249	Pn	Pn	01 28 11.8	-1.7
VRH	Novokhopyorsk	8.25	342	*e*P	Pn	01 28 23.7	+1.1
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
BZK	Bozkurt	8.77	264	Pn	Pn	01 28 28.0	-1.8
VSR	Storozhevoye	8.98	333	*e*P	Pn	01 28 33.4	+0.8
VSR				pmax	pmax		
	comp=Z,20nm,0.6s						
BELG	Belogornoye	9.06	7	Pn	Pn	01 28 35.4	+1.7
	comp=Z,5.3nm,0.3s,baz=168,slow=15,SNR=21						
BELG				Sn	Sn	01 30 16.6	+0.9
	comp=Z,5.2nm,0.3s,baz=331,slow=7.3,SNR=4.3						
	comp=Z,68nm,0.8s						
BELG	Belogornoye	9.06	7	*i* P	Pn	01 28 35.2	+1.5
VORR	Voronezh	9.36	334	*e*P	Pn	01 28 38.7	+0.9
VORR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
BR131	Keskin Array S	9.80	252	Pn	Pn	01 28 43.3	-0.7
BR131	Keskin Array S	9.80	252	*i* P	Pn	01 28 45.7	+1.7
BRTR	Keskin Array B	9.80	252	Pn	Pn	01 28 47.0	+3.0
	comp=Z,1.3nm,0.8s,baz=54,slow=12,SNR=9.6						
BRTR				Sn	Sn	01 30 34.1	0.0
	baz=54,slow=42,SNR=1.0						
BRTR	Keskin Array B	9.80	252	Pn	Pn	01 28 43.0	-1.0
LPSR	Galich'ya Gora	10.25	336	*e*P	Pn	01 28 51.1	+1.1
LPSR				pmax	pmax		
	comp=Z,30nm,0.8s						

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GEYT   Alibeck          10.88 116   Pn     Pn      01 28 58.0  -0.7
       comp=Z,1.4nm,0.3s,baz=291,slow=14,SNR=9.0
GEYT                                Sn     Sn      01 31 00.2  -0.2
       comp=Z,0.7nm,0.3s,baz=306,slow=32,SNR=5.2
       comp=Z,5.9nm,0.6s
GYA0   ALIBECK ARRAY    10.88 116   P      Pn      01 28 57.8  -0.9
GYA0                                S      Sn      01 30 55.6  -4.8
GYA0B  ALIBECK ARRAY    10.88 116  ⇑P      Pn      01 28 57.8  -0.9
GYA0B                              ⇑S      Sn      01 30 55.6  -4.8
AKTO   Aktyubinsk       10.93  46   Pn     Pn      01 28 59.7  +0.4
       comp=Z,3.7nm,0.3s,baz=236,slow=9.5,SNR=39
AKTO                                Sn     Sn      01 30 57.5  -4.1
       comp=Z,2.5nm,0.3s,baz=211,slow=18,SNR=2.4
AKTO                                LR     LR      01 34 29.3
       comp=Z,251nm,18.4s,baz=298,slow=44
       comp=Z,14nm,0.4s
AKTO   Aktyubinsk       10.93  46  ⇑P      Pn      01 28 59.9  +0.6
       comp=Z,8.7nm,0.6s
AKTO                               ⇓S      Sn      01 30 54.9  -6.6
       comp=Z,20nm,0.8s
AB31   Akbulak array    11.41  54  ⇑P      Pn      01 29 06.6  +0.7
       comp=Z,7.0nm,0.5s,baz=243,slow=10,SNR=277
AB31                               ⇓S      Sn      01 31 09.5  -3.8
       comp=Z,10nm,0.6s,baz=247,slow=19,SNR=5.8
AB31   Akbulak array    11.41  54   P      Pn      01 29 06.6  +0.7
AB31                                S      Sn      01 31 09.5  -3.8
ABKAR  Akbulak array    11.41  54   Pn     Pn      01 29 05.5  -0.3
OBN    Obninsk          13.13 336   Pn     Pn      01 29 28.2  -1.2
       comp=Z,1.5nm,0.3s,baz=153,slow=14,SNR=6.7
OBN                                 Sn     Sn      01 31 48.5  -6.8
       comp=Z,0.5nm,0.3s,baz=165,slow=22,SNR=1.6
       comp=Z,4.5nm,0.4s
OBN    Obninsk          13.13 336   Pn     Pn      01 29 26.3  -3.0
OBN    Obninsk          13.13 336   Pn     Pn      01 29 27.6  -1.7
OBN    Obninsk          13.13 336⇓eP     Pn      01 29 27.8  -1.5
OBN                                eS      Sn      01 31 59.3  +4.0
OBN                                 pmax   pmax
       comp=Z,34nm,1.0s
OBN                                 MLR    MLR
       comp=Z,111nm,17.0s
AK09   Malin Array Si   13.32 308   Pn     Pn      01 29 30.2  -1.8
AK10   Malin Array Si   13.33 308   Pn     Pn      01 29 30.4  -1.7
AK07   Malin Array Si   13.34 308   Pn     Pn      01 29 30.6  -1.6
AK08   Malin Array Si   13.35 308   Pn     Pn      01 29 30.5  -1.8
AK06   Malin Array Si   13.36 308   Pn     Pn      01 29 30.3  -2.2
AK05   Malin Array Si   13.37 308   Pn     Pn      01 29 30.9  -1.7
AK02   Malin Array Si   13.38 308   Pn     Pn      01 29 31.1  -1.7
MOS    Moscow           13.39 340  eP      Pn      01 29 23.1   -10
MOS                                eS      Sn      01 31 56.2  -5.5
AKASG  Malin Array Be   13.39 309   Pn     Pn      01 29 30.3  -2.7
       comp=Z,1.4nm,0.3s,baz=113,slow=10,SNR=15
AKASG                               Sn     Sn      01 31 51.4   -10
       baz=126,slow=24
       comp=Z,5.6nm,0.9s
AKASG  Malin Array Be   13.39 309   Pn     Pn      01 29 31.7  -1.2
AKBB   Malin Array Si   13.39 309   Pn     Pn      01 29 30.9  -2.1
AKBB   Malin Array Si   13.39 309   pP     Pn      01 29 34.6  +1.6
       comp=Z,10.0nm,0.9s
AKBB                                sP     P       01 29 35.7  -6.8
       comp=Z,10.0nm,0.9s
AKBB   Malin Array Si   13.39 309ceP     Pn      01 29 31.6  -1.4
AKBB                                MLR    MLR
       comp=Z,182nm,11.0s
AK01   Malin Array Si   13.39 309   Pn     Pn      01 29 31.3  -1.7
AK03   Malin Array Si   13.41 309   Pn     Pn      01 29 32.0  -1.1
AK11   Malin Array Si   13.41 309   Pn     Pn      01 29 31.0  -2.3
AK14   Malin Array Si   13.43 308   Pn     Pn      01 29 31.7  -1.7
AK13   Malin Array Si   13.45 308   Pn     Pn      01 29 32.1  -1.6
AK17   Malin Array Si   13.48 308   Pn     Pn      01 29 32.5  -1.7
AK21   Malin Array Si   13.53 309   Pn     Pn      01 29 33.5  -1.3
AK20   Malin Array Si   13.53 309   Pn     Pn      01 29 33.0  -1.9
VRI    Vrincioaia       13.76 287  ⇑P      P       01 29 49.7  +3.0
VRI    Vrincioaia       13.76 287  ⇑P      P       01 29 49.7  +3.0
PLOR   Plostina         13.81 287  ⇓P      P       01 29 50.4  +3.1
PLOR   Plostina         13.81 287  ⇓P      P       01 29 50.4  +3.1
ELL    Elmali           13.83 247   Pn     Pn      01 29 38.2  -0.9
ELL    Elmali           13.83 247   P      Pn      01 29 38.2  -0.9
LUBAR  Lubar, Ukraine   13.94 304   Pn     Pn      01 29 38.6  -1.8
       comp=Z,7.1nm,0.9s
MI30   MI30,Zelenitsa   14.01 308   Pn     Pn      01 29 39.8  -1.5
       comp=Z,5.1nm,0.8s
MLR    Muntele Rosu     14.29 285  ⇑P      P       01 29 57.1  +4.4
MLR    Muntele Rosu     14.29 285   Pn     Pn      01 29 44.2  -1.3
       comp=Z,0.1nm,0.3s,baz=127,slow=20,SNR=4.0
       comp=Z,1.8nm,0.8s
MLR    Muntele Rosu     14.29 285   Pn     Pn      01 29 42.9  -2.5
AKAS   Kas              14.32 245   Pn     Pn      01 29 44.2  -1.7
KMPD   K-Podol'skiy     14.35 298   Pn     Pn      01 29 45.6  -0.4
       comp=Z,11nm,1.0s
MI28   Mi28,Pidlybu     14.38 308   Pn     Pn      01 29 45.7  -0.8
DOPR   Dopca            14.70 287  ⇑P      P       01 29 56.2  -0.9
VOIR                    14.92 285  ⇓P      Pn      01 29 54.8  +0.9
VOIR                    14.92 285  ⇓P      Pn      01 29 54.8  +0.9
BURAR  Bucovina Array   14.98 293  ⇓P      Pn      01 29 54.5  -0.2
BURAR  Bucovina Array   14.98 293   Pn     Pn      01 29 52.7  -2.0
BURAR  Bucovina Array   14.98 293  ⇓P      Pn      01 29 54.5  -0.2
BUR08  Bucovina Ar. S   14.99 293   Pn     Pn      01 29 53.4  -1.5
RDO    Rodhopi          15.13 268   Pn     Pn      01 29 56.2  -0.5
RDO                                 IAmb   IAmb    01 30 20.9
       comp=Z,12nm,1.1s
ARR    Arges            15.22 285  ⇑P      Pn      01 29 59.6  +1.7
KIRV   Kirov            15.35   7   Pn     Pn      01 29 57.2  -2.2
       comp=Z,1.2nm,0.3s,baz=170,slow=16,SNR=3.1
KIRV                                Sn     Sn      01 32 39.6   -10
       comp=Z,0.9nm,0.3s,baz=232,slow=19,SNR=1.2
       comp=Z,11nm,0.7s
ARU    Arti             15.38  28   Pn     Pn      01 29 57.7  -2.1
       baz=230,slow=7.7,SNR=32
ARU                                 Sn     Sn      01 32 42.8  -7.2
       baz=162,slow=20,SNR=2.1
       comp=Z,13nm,0.3s
ARU    Arti             15.38  28   Pn     Pn      01 29 57.4  -2.4
ARU                                 IAmb   IAmb    01 30 08.4
       comp=Z,19nm,0.8s
ARU    Arti             15.38  28d iP      Pn      01 29 58.0  -1.8
ARU                                 S      Sn      01 32 49.4  -0.6
ARU                                 pmax   pmax
       comp=Z,18nm,0.8s
CJR    Cluj-Napoca      15.98 290  ⇓P      P       01 30 14.4  +3.0
CJR    Cluj-Napoca      15.98 290  ⇓P      P       01 30 14.4  +3.0
MNK    Minsk            16.09 320  i P     Pn      01 30 10.0  +1.0
       comp=E,2.0nm,1.1s
MNK                                i P     Pn      01 30 10.0  +1.0
       comp=N,22nm,0.9s
MNK                                i P     Pn      01 30 10.0  +1.0
       comp=Z,28nm,1.1s,baz=126
MNK                                i PP    PnPn    01 30 19.1  +1.4
MNK                                i PPP   PPP     01 30 26.7
MNK                                i S     Sn      01 33 10.8  +3.5
MNK                                i SS    S       01 33 25.2  +4.3
MNK                                i SSS   SSS     01 33 37.2
MNK                                i LQ    LQ      01 34 52.3
MNK                                i LR    LR      01 36 12.1
MNK                                i LRM   MLR     01 37 00.0
       comp=E,27nm,13.1s
MNK                                i LRM   MLR     01 37 03.9
       comp=N,242nm,17.0s
MNK                                i LRM   MLR     01 37 16.2
       comp=Z,123nm,12.9s
MNK    Minsk            16.09 320  i P     Pn      01 30 10.0  +1.0
MNK                                i S     Sn      01 33 10.8  +3.5
MNK                                 pmax   pmax
       comp=E,2.0nm,1.1s
MNK                                 pmax   pmax
       comp=N,22nm,0.9s
MNK                                 pmax   pmax
       comp=Z,28nm,1.1s
MNK                                 MLR    MLR
       comp=E,27nm,13.0s
MNK                                 MLR    MLR
       comp=N,242nm,17.0s
MNK                                 MLR    MLR
       comp=Z,123nm,13.0s
LVV    L'vov            16.20 301  eP      Pn      01 30 12.2  +1.6
LVV                                eS      Sn      01 33 09.9  -0.3
LVV                                 MLR    MLR
       comp=E,300nm,10.0s
LVV                                 MLR    MLR
       comp=Z,300nm,9.0s
EIL    Elat             16.22 216   Pn     Pn      01 30 08.8  -2.1
       comp=Z,0.1nm,0.3s,baz=28,slow=16,SNR=2.1
       comp=Z,2.3nm,0.7s
MARR   Marisel-Cluj     16.31 289  ⇓P      Pn      01 30 09.5  -2.5
KARP   Karpathos        16.34 247   Pn     Pn      01 30 09.7  -2.8
SVE    Sverdlovsk       16.41  30⇑eP     Pn      01 30 11.2  -2.0
SVE                                eS      Sn      01 33 12.4  -2.8
SVE                                 pmax   pmax
       comp=Z,45nm,0.8s
VTS    Vitosha          16.48 275  ⇓P      P       01 30 19.8  +2.8
VTS    Vitosha          16.48 275  ⇓P      P       01 30 19.8  +2.8
DRGR                    16.59 290  ⇓P      Pn      01 30 10.8  -4.9
DRGR                    16.59 290   P      P       01 30 20.6  +2.4
NACGM  Naroch           16.84 320  eP      P       01 30 22.3  +1.5
       comp=Z,16nm,0.8s,baz=124
SURR   Surduc           16.98 286  ⇑P      Pn      01 30 21.8  +1.4
IDID   Didziasalis      17.10 321  eP      Pn      01 30 13.7  -8.2
IIGN   Ignalina         17.36 320  eP      Pn      01 30 19.2  -5.9
TAS    Tashkent         17.52  89          Pn      01 30 25.6  -1.6
TAS                                 IAmb   IAmb    01 30 32.0
       comp=Z,60nm,1.1s
TAS    Tashkent         17.52  89   P      Pn      01 30 25.6  -1.6
TAS                                 pmax   pmax
       comp=Z,60nm,1.1s
ISAL   Salakas          17.54 321  eP      Pn      01 30 26.7  -0.6
KLMR   Klimovskoe       17.86 350  ePn     Pn      01 30 29.0  -2.3
KLMR                               ePn     Pn      01 30 29.0  -2.3
KLMR                               ePn     Pn      01 30 29.0  -2.3
KLMR                                AMP            01 30 34.4
       comp=Z,32nm,1.2s
KLMR                               eSn     Sn      01 33 31.8   -18
KLMR                               eSn     Sn      01 33 31.8   -18
KLMR   Klimovskoe       17.86 350  eP      Pn      01 30 28.9  -2.3
KLMR                                pmax   pmax
       comp=Z,32nm,1.2s
KK31   Karatay Array    18.03  82          Pn      01 30 31.4  -2.1
KK31   Karatay Array    18.03  82   P      Pn      01 30 31.4  -2.1
KK31                                pmax   pmax
       comp=Z,11nm,1.0s
KKAR   Karatay Array    18.03  82          Pn      01 30 31.7  -1.9
KKAR   Karatay Array    18.03  82   P      Pn      01 30 31.7  -1.9
KKAR                                pmax   pmax
       comp=Z,11nm,1.0s
IDI    Anoyia           18.03 250   P      Pn      01 30 32.9  -0.8
       comp=Z,0.2nm,0.3s,baz=41,slow=13,SNR=6.1
       comp=Z,1.0nm,0.5s
CHGR   Chuyangaron      18.27  97          Pn      01 30 35.6  -1.0
CHGR   Chuyangaron      18.27  97   P      Pn      01 30 35.6  -1.0
CHGR                                pmax   pmax
       comp=Z,69nm,0.8s
PABE   Paberze          18.52 318          P       01 30 37.5  -1.8
PABE                                IAmb   IAmb    01 30 41.5
       comp=Z,24nm,0.7s
PABE   Paberze          18.52 318  eP      Pn      01 30 40.4  +1.0
PABE                                IAmb   IAmb    01 30 57.0
       comp=Z,21nm,1.0s
VSVD   Vaisvydziai      18.79 320  eP      Pn      01 30 43.6  +1.0
BRVK   Borovoye         18.89  51   P      P       01 30 42.1  -1.2
BRVK                                IAmb   IAmb    01 30 46.9
       comp=Z,37nm,0.8s
BRVK   Borovoye         18.89  51  ⇑P      Pn      01 30 44.8  +0.9
       comp=Z,34nm,0.8s
BRVK   Borovoye         18.89  51ceP     P       01 30 42.2  -1.1
BRVK                                pmax   pmax
       comp=Z,39nm,0.8s
BRVK                                MLR    MLR
       comp=Z,97nm,13.0s
BVA0   Borovoye Array   18.93  51  ⇓P      Pn      01 30 45.6  +1.1
       comp=Z,27nm,1.1s,baz=252,slow=10,SNR=127
BVA0   Borovoye Array   18.93  51   P      Pn      01 30 45.6  +1.1
BVAR   Borovoye Array   18.93  51   P      P       01 30 44.0  +0.1
       comp=Z,0.4nm,0.3s,baz=244,slow=9.0,SNR=65
BVAR                                S      Sn      01 34 10.2  -6.2
       comp=Z,5.6nm,0.7s,baz=243,slow=23,SNR=3.6
       comp=Z,26nm,0.8s
BVAR   Borovoye Array   18.93  51   P      P       01 30 44.0  +0.1
GAR    Garm             18.98  95   P      P       01 30 42.5  -2.2
LANS   Liptovska Anna   18.99 297  eP      Pn      01 30 47.8  +2.5
LANS   Liptovska Anna   18.99 297  eP      Pn      01 30 47.8  +2.5
OTUK   Ortayu           19.10  66  ⇑P      P       01 30 44.8  -0.9
       comp=Z,10nm,0.9s
OTUK   Ortayu           19.10  66   P      P       01 30 44.8  -0.9
VSU    Vasula           19.13 329  i P     Pn      01 30 47.0  +0.2
VSU                                 pmax   pmax
       comp=Z,82nm,1.0s
VSU    Vasula           19.13 329  eP      Pn      01 30 47.3  +0.6
ITM    Ithomi           19.18 259   P      P       01 30 45.9  -0.8
VYHS   Vyhne            19.33 295  eP      Pn      01 30 50.6  +1.2
VYHS   Vyhne            19.33 295  eP      Pn      01 30 50.6  +1.2
MORH   Mrgy, Hungar     19.39 288  ⇓P      Pn      01 30 51.2  +1.2
PDG    Podgorica        19.40 276   P      P       01 30 47.2  -1.8
PDG                                 IAmb   IAmb    01 30 57.3
       comp=Z,81nm,1.5s
RAYN   Ar Rayn          19.85 181   P      P       01 30 51.4  -2.7
RAYN   Ar Rayn          19.85 181   P      P       01 30 51.4  -2.7
RAYN                                pmax   pmax
       comp=Z,3.0nm,0.9s
VALR   Valaam           20.03 339  i P     Pn      01 30 57.1  -0.4
VALR                                pmax   pmax
       comp=Z,49nm,0.9s
VALR                                MLR    MLR
       comp=Z,172nm,15.0s
KBL    Kabul            20.11 108   P      P       01 30 54.7  -2.4
KBL    Kabul            20.11 108   P      P       01 30 54.7  -2.4
KBL                                 pmax   pmax
       comp=Z,16nm,1.4s
JAVC   Velka Javorina   20.14 295  eP      P       01 30 58.7  +1.6
MORC   Moravsky Berou   20.32 298   P      P       01 30 57.8  -1.3
MORC   Moravsky Berou   20.32 298  eP      Pn      01 31 01.3  +0.2
MORC   Moravsky Berou   20.32 298   P      P       01 30 57.8  -1.3
MORC                                pmax   pmax
       comp=Z,12nm,1.3s
UOSS   Minazif          20.33 152   P      P       01 30 56.9  -2.4
UOSS                                IAmb   IAmb    01 31 09.3
       comp=Z,19nm,0.9s
MODS   Modra-Piesok     20.36 294  eP      Pn      01 31 04.4  +2.9
MODS   Modra-Piesok     20.36 294  eP      Pn      01 31 04.4  +2.9
EKS2   Erkin-Say        20.47  82   P      Pn      01 31 02.8  -0.1
       SNR=9.2
AML    Almayashu        20.52  84   P      Pn      01 31 03.4  -0.5
       SNR=13
AML    Almayashu        20.52  84  ⇑P      P       01 31 03.3  +1.6
       comp=Z,3.4nm,1.2s
AML    Almayashu        20.52  84   P      P       01 31 03.3  +1.6
KRLC   Kraliky          20.85 299  eP      P       01 31 06.4  +1.6
KRLC   Kraliky          20.85 299  eP      P       01 31 06.4  +1.6
USP    Ospenovka        20.87  80   P      P       01 31 05.9  +0.7
       SNR=5.7
VRAC   Vranov           20.88 297   P      P       01 31 06.2  +1.1
       comp=Z,1.0nm,0.3s,baz=79,slow=12,SNR=3.9
       comp=Z,1.0nm,0.3s
VRAC   Vranov           20.88 297  eP      P       01 31 05.9  +0.8
ADZR   Andozero         20.99 351  eP      P       01 31 05.8  -0.3
ADZR                               e               01 35 03.6
ADZR                                pmax   pmax
       comp=Z,21nm,0.6s
AAK    Ala-Archa        20.99  82   P      P       01 31 08.1  +1.5
       SNR=15
AAK    Ala-Archa        20.99  82   P      P       01 31 07.7  +1.2
       comp=Z,11nm,0.9s,baz=263,slow=9.5,SNR=32
       comp=Z,11nm,0.9s
AAK    Ala-Archa        20.99  82   P      P       01 31 05.4  -1.2
AAK                                 IAmb   IAmb    01 31 09.5
       comp=Z,14nm,1.1s
AAK    Ala-Archa        20.99  82ceP     P       01 31 08.2  +1.7
AAK                                 pmax   pmax
       comp=Z,14nm,1.0s
AAK                                 MLR    MLR
       comp=Z,194nm,18.0s
KRUC   Moravsky         20.99 296  eP      P       01 31 07.3  +1.0
RONA   Rosalia, Austr   20.99 292  i P     Pn      01 31 08.9  -0.1
       comp=Z,7.7nm,1.1s
UCH    Uchtor           21.09  83   P      P       01 31 09.5  +1.6
       SNR=9.1
DPC    Dobruska-Polom   21.18 299  eP      P       01 31 09.8  +1.5
DPC    Dobruska-Polom   21.18 299  eP      P       01 31 09.8  +1.5
MEF    Metsahovi        21.21 330  eP      P       01 31 09.6  +1.1
MEF                                 IAmb   IAmb    01 31 18.7
       comp=Z,37nm,1.0s
OSTC   Ostas            21.27 300  eP      P       01 31 14.5  +5.2
OSTC   Ostas            21.27 300  eP      P       01 31 14.5  +5.2
CONA   Conrad Observa   21.29 293  eP      P       01 31 11.9  +2.3
       comp=Z,7.7nm,1.1s,SNR=5.6
KBK    Karagaybulak     21.31  82   P      P       01 31 11.7  +1.7
       SNR=14
UPC    Upice            21.39 300  eP      P       01 31 15.9  +5.3
UPC    Upice            21.39 300  eP      P       01 31 15.9  +5.3
FIA1   FINESS Array S   21.51 334   P      P       01 31 10.3  -1.5
FIA1                                IAmb   IAmb    01 31 18.4
       comp=Z,16nm,0.8s
FINES  FINESS Array B   21.51 334   P      P       01 31 12.6  +0.9
       comp=Z,8.2nm,0.5s,baz=150,slow=14,SNR=34
       comp=Z,8.2nm,0.5s
FINES  FINESS Array B   21.51 334   P      P       01 31 09.9  -1.9
ARSA   Arzberg          21.52 291  i P     P       01 31 14.7  +2.7
       comp=Z,5.9nm,1.3s
TKM2   Tokmak 2         21.73  81   P      P       01 31 15.8  +1.2
       SNR=16
SOKA   Soboth           21.87 289  eP      P       01 31 18.3  +2.4
       comp=Z,10.0nm,1.1s
OBKA   Obir             22.21 289  eP      P       01 31 21.9  +2.3
       comp=Z,11nm,1.4s
PRU    Pruhonice        22.27 298  eP      P       01 31 21.8  +1.8
PRU    Pruhonice        22.27 298  eP      P       01 31 21.8  +1.8
PVCC   Panska Ves       22.31 299  eP      P       01 31 22.3  +1.9
PVCC   Panska Ves       22.31 299  eP      P       01 31 22.3  +1.9
CKRC   Cesky Krumlov    22.35 295  eP      P       01 31 23.0  +2.1
CKRC   Cesky Krumlov    22.35 295  eP      P       01 31 23.0  +2.1
MOA    Molln            22.36 292  i P     P       01 31 23.8  +2.7
       comp=Z,4.8nm,1.0s
BRG    Berggiesshubel   22.74 300  eP      P       01 31 28.6  +3.6
BRG                                 Amp            01 31 31.9
       comp=Z,6.9nm,1.3s
BRG    Berggiesshubel   22.74 300  eP      P       01 31 28.6  +3.6
BRG                                 pmax   pmax
       comp=Z,7.0nm,1.3s
GEC2   GERESS Array S   22.75 295   P      P       01 31 23.1  -2.2
GERES  GERESS Array B   22.75 295   P      P       01 31 26.6  +1.3
       comp=Z,2.7nm,0.8s,baz=91,slow=8.5,SNR=17
       comp=Z,2.7nm,0.8s
GERES  GERESS Array B   22.75 295   P      P       01 31 24.4  -0.9
WSAR   Wadi Sarin       22.77 148   P      P       01 31 24.7  -0.9
       comp=Z,2.0nm,0.7s,baz=336,slow=12,SNR=1.9
       comp=Z,2.0nm,0.7s
BIOA   Bad Ischl, Aus   22.79 292  eP      P       01 31 27.7  +2.1
       comp=Z,5.1nm,1.4s
MYKA   Terra Mystica    22.83 289  i P     P       01 31 28.0  +1.9
       comp=Z,3.5nm,0.9s
KHC    Kasperske Hory   22.84 296   x      x       01 31 11.0
KHC                                eP      P       01 31 27.6  +1.4
AAL    Aland            22.89 326  eP      P       01 31 27.8  +1.3
KSH    Kashi            22.92  89   P      P       01 31 26.0  -1.1
KSH                                 sP     sP      01 31 33.6  +2.4
KSH                                 PP     PnPn    01 31 57.1  +5.6
KSH                                 S      S       01 35 34.8  -2.4
KSH                                 pmax   pmax
       comp=Z,18nm,0.8s
KBA    Koelnbreinsper   23.01 290  eP      P       01 31 29.6  +1.6
       comp=Z,2.4nm,0.7s
BSD    Bornholm Skovb   23.07 311  eP      P       01 31 29.6  +1.3
BSD    Bornholm Skovb   23.07 311  i P     P       01 31 27.6  -0.8
BSD                                 IAmb   IAmb    01 31 31.4
       comp=Z,13nm,0.9s
RUE    Ruedersdorf      23.08 304  eP      P       01 31 30.0  +1.5
KURBB  Kurchatov Arra   23.34  61   P      P       01 31 33.0  +1.8
       comp=Z,3.8nm,0.7s,baz=271,slow=12,SNR=33
       comp=Z,3.8nm,0.7s
CLL    Collm            23.38 301   P      P       01 31 30.7  -0.9
CLL                                 IAmb   IAmb    01 31 45.4
       comp=Z,7.8nm,0.9s
CLL    Collm            23.38 301  eP      P       01 31 33.0  +1.4
       comp=Z,10.0nm,1.2s
CLL                                ex      x       01 31 39.0
CLL                                ex      x       01 31 44.0
CLL                                ePP     PnPn    01 31 59.0  +1.4
CLL    Collm            23.38 301  eP      P       01 31 33.0  +1.4
CLL                                e               01 31 39.0
CLL                                 pmax   pmax
       comp=Z,10.0nm,1.2s
KURK   Kurchatov        23.40  60   P      P       01 31 29.9  -1.9
KURK                                IAmb   IAmb    01 31 41.0
       comp=Z,18nm,0.9s
KURK   Kurchatov        23.40  60ceP     P       01 31 33.2  +1.4
KURK                                pmax   pmax
       comp=Z,21nm,0.9s
KURK                                MLR    MLR
       comp=Z,130nm,18.0s
VIKU   Vikbolandet      23.46 320  eP      P       01 31 33.6  +1.4
NIL    Nilore           23.53 105   P      P       01 31 31.6  -1.7
NIL                                 IAmb   IAmb    01 31 36.7
       comp=Z,21nm,1.2s
NIL    Nilore           23.53 105   P      P       01 31 31.6  -1.7
NIL                                 pmax   pmax
       comp=Z,21nm,1.2s
TARG   Taragay, Kyrgy   23.59  83   P      P       01 31 31.8  -2.5
TARG                                IAmb   IAmb    01 32 08.2
       comp=Z,11nm,1.4s
TARG   Taragay, Kyrgy   23.59  83   P      P       01 31 31.8  -2.5
TARG                                pmax   pmax
       comp=Z,11nm,1.4s
ABTA   Abfaltersbach    23.60 290  eP      P       01 31 35.1  +1.2
       comp=Z,8.6nm,1.4s
NKC    Novy Kostel      23.64 298  eP      P       01 31 35.9  +1.7
NKC    Novy Kostel      23.64 298  eP      P       01 31 35.9  +1.7
CIMO   Cimolais         23.68 289   P      P       01 31 34.0  -0.7
CIMO                                IAmb   IAmb    01 32 00.8
       comp=Z,13nm,1.5s
LUNU   Lund             24.02 312  i P     P       01 31 39.1  +1.4
DEL    Delary           24.06 314  eP      P       01 31 39.2  +1.2
DEL    Delary           24.06 314  i P     P       01 31 38.1  +0.1
WTTA   Wattenberg       24.16 291  eP      P       01 31 40.0  +0.6
       comp=Z,5.3nm,0.7s
WATA   Walderalm        24.20 291  i P     P       01 31 41.9  +2.1
       comp=Z,6.8nm,0.9s
TEOL   Teolo            24.32 286   P      P       01 31 39.4  -1.3
TEOL                                IAmb   IAmb    01 32 05.2
       comp=Z,13nm,0.9s
MSF    Maaselka         24.35 343   P      P       01 31 38.9  -1.9
MSF                                 pmax   pmax
       comp=Z,31nm,0.8s
BJUU   Bjuv             24.38 313  i P     P       01 31 42.2  +1.2
SQTA   Sankt Quirin     24.46 291  eP      P       01 31 42.4  +0.3
       comp=Z,10nm,1.1s,SNR=6.2
VAE    Valguarnera      24.48 267   P      P       01 31 43.0  +0.7
       comp=Z,15nm,1.0s,baz=72,slow=9.6,SNR=2.8
       comp=Z,15nm,1.0s
MOTA   Moosalm          24.52 291  eP      P       01 31 44.6  +1.9
       comp=Z,13nm,0.9s,SNR=6.9
RETA   Reutte           24.74 292  eP      P       01 31 45.8  +1.3
       comp=Z,6.4nm,1.0s
FETA   Feichten         24.80 291  eP      P       01 31 46.5  +1.3
       comp=Z,6.1nm,1.0s,SNR=4.3
BORU   Boraas           25.02 316  i P     P       01 31 47.3  +0.5
FUORN  Ofenpass-Fuorn   25.15 290   P      P       01 31 47.5  -0.9
FUORN                               IAmb   IAmb    01 32 10.0
       comp=Z,6.0nm,0.9s
LVZ    Lovozero         25.23 350   P      P       01 31 48.3  -0.4
LVZ    Lovozero         25.23 350   P      P       01 31 48.3  -0.4
LVZ                                 pmax   pmax
       comp=Z,53nm,1.2s
DAVA   Damuels          25.36 291  i P     P       01 31 52.3  +2.1
       comp=Z,16nm,1.2s
ONAU   Onsala           25.37 315  i P     P       01 31 49.8  -0.2
DAVOX  Davos/Dischmat   25.40 290   P      P       01 31 51.0  +0.4
       comp=Z,2.2nm,0.5s,baz=80,slow=12,SNR=6.9
       comp=Z,2.2nm,0.5s
HFS    Hagfors          25.57 322   P      P       01 31 52.9  +1.1
       comp=Z,9.6nm,0.4s,baz=116,slow=10,SNR=53
       comp=Z,9.6nm,0.4s
MAKZ   Makanchi         25.64  70   P      P       01 31 51.2  -1.5
MAKZ   Makanchi         25.64  70   P      P       01 31 51.2  -1.5
MAKZ                                pmax   pmax
       comp=Z,2.0nm,0.7s
MK31   Makanchi Array   25.86  70   P      P       01 31 53.0  -1.7
MK31   Makanchi Array   25.86  70   P      P       01 31 53.0  -1.7
MK31                                pmax   pmax
       comp=Z,3.0nm,0.9s
MKAR   Makanchi Array   25.86  70   P      P       01 31 55.7  +1.0
       comp=Z,2.6nm,0.8s,baz=283,slow=7.2,SNR=30
       comp=Z,2.6nm,0.8s
MKAR   Makanchi Array   25.86  70   P      P       01 31 53.8  -0.9
MKAR   Makanchi Array   25.86  70  i P     P       01 31 56.0  +1.4
MKAR                                pmax   pmax
       comp=Z,3.0nm,0.8s
NC602  NORSAR Array S   26.79 322   P      P       01 32 01.8  -1.1
NC602  NORSAR Array S   26.79 322  eP      P       01 32 03.6  +0.7
NC405  NORSAR Array S   26.88 323   P      P       01 32 01.7  -2.0
NB201  NORSAR Array S   27.04 323   P      P       01 32 03.1  -2.0
NB2    NORSAR Subarra   27.07 323   P      P       01 32 05.8  +0.4
       comp=Z,4.3nm,0.9s,baz=115,slow=8.6
NB2    NORSAR Subarra   27.07 323   P      P       01 32 05.8  +0.4
       baz=115,slow=8.6
NOA    NORSAR Array B   27.07 323   P      P       01 32 05.8  +0.4
       comp=Z,1.8nm,0.8s,baz=119,slow=8.4,SNR=22
       comp=Z,1.8nm,0.8s
NC204  NORSAR Array S   27.36 323   P      P       01 32 07.6  -0.5
ZALV   Zalesovo Beam    27.52  54   P      P       01 32 10.6  +1.1
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             comp=Z,0.8nm,0.7s,baz=262,slow=9.9,SNR=2.5
             comp=Z,0.8nm,0.7s
ARA0  ARCESS Array S   28.16 345 eP      P         01 32 16.4 +1.3
ARCES ARCESS Array B   28.16 345  P      P         01 32 16.7 +1.6
             comp=Z,10nm,1.0s,baz=154,slow=8.9,SNR=25
             comp=Z,10nm,1.0s
ARCES ARCESS Array B   28.16 345  P      P         01 32 15.3 +0.2
ARCES ARCESS Array B   28.16 345  P      P         01 32 15.3 +0.2
ARCES                             pmax   pmax
             comp=Z,30nm,1.4s
KTK1  Kautokeino       28.18 343 eP      P         01 32 15.4 +0.2
SKAR  Skarslia         28.24 321 eP      P         01 32 17.9 +2.0
KEST  Kesra            28.91 267  P      P         01 32 23.5 +1.3
             comp=Z,7.4nm,0.9s,baz=39,slow=6.5,SNR=5.1
             comp=Z,7.4nm,0.9s
FAUS  Fauske           29.01 336 eP      P         01 32 24.2 +1.6
STOK  Stokkvaagen      29.06 333 eP      P         01 32 24.7 +1.7
JETT  Jettan, Norway   29.23 342 eP      P         01 32 28.2 +3.6
STEI  Steigen          29.38 337 eP      P         01 32 27.6 +1.8
TRO   Tromso           29.63 341 eP      P         01 32 29.8 +1.8
WMQ   Urumqi           30.14  75 eP      P         01 32 32.6 -0.3
WMQ                               sP     sP        01 32 39.3 +2.1
WMQ                               pmax   pmax
             comp=Z,11nm,0.9s
WMQ                               LR     LR
             comp=N,360nm,14.5s
ESK   Eskdalemuir      33.33 308  P      P         01 33 00.2 -0.6
ESK   Eskdalemuir      33.33 308  P      P         01 33 00.2 -0.6
ESK                               pmax   pmax
             comp=Z,27nm,1.4s
NRIK  Noril'sk         33.58  25  P      P         01 33 05.0 +2.3
             comp=Z,9.1nm,0.5s,baz=228,slow=5.9,SNR=14
             comp=Z,9.1nm,0.5s
NRIK  Noril'sk         33.58  25  P      P         01 33 00.3 -2.5
NRIK  Noril'sk         33.58  25  P      P         01 33 00.3 -2.5
NRIK                              pmax   pmax
             comp=Z,17nm,1.1s
SPB2  Spitsbergen Ar   36.76 350  P      P         01 33 29.1 -0.9
SPA0  Spitsbergen Ar   36.76 350 eP      P         01 33 32.6 +2.5
SPITS Spitsbergen Ar   36.76 350  P      P         01 33 32.2 +2.1
             comp=Z,17nm,0.6s,baz=135,slow=12,SNR=63
             comp=Z,17nm,0.6s
SPITS Spitsbergen Ar   36.76 350  P      P         01 33 29.2 -0.9
SPITS                             pmax   pmax
             comp=Z,72nm,1.2s
ESDC  Sonseca Array    36.95 282  P      P         01 33 31.6 -0.6
             comp=Z,1.2nm,0.9s,baz=61,slow=8.8,SNR=5.9
             comp=Z,1.2nm,0.9s
KBS   Kingsbay         37.90 350ceP      P         01 33 39.2 -0.5
KBS                               pmax   pmax
             comp=Z,51nm,1.7s
GOMU  GeErMu           37.92  84  P      P         01 33 43.2 +2.3
GOMU                              pP     sP        01 33 46.6 +1.5
GOMU                              sP     pP        01 33 47.8 +3.9
GOMU                              pmax   pmax
             comp=Z,3.0nm,0.5s
GOMU                              pmax   pmax
             comp=Z,89nm,6.6s
TAM   Tamanrasset      38.99 251  P      P         01 33 47.9 -1.8
TAM   Tamanrasset      38.99 251  P      P         01 33 47.9 -1.8
TAM                               pmax   pmax
             comp=Z,3.0nm,1.0s
MTE   Manteigas        39.21 284  P      P         01 33 50.2 -1.1
MTE                               IAmb   IAmb      01 34 15.6
             comp=Z,10nm,1.0s
PESTR Estremoz         39.85 282  P      P         01 33 56.3 -0.3
PESTR                             IAmb   IAmb      01 33 57.7
             comp=Z,6.2nm,1.1s
GTA   Gaotai           40.15  77 eP      P         01 34 00.6 +1.4
GTA                               sP     sP        01 34 07.4 +3.9
GTA                               pmax   pmax
             comp=Z,3.0nm,0.8s
SONM  Songino Array    41.69  62  P      P         01 34 12.1 +0.3
             comp=Z,0.7nm,0.9s,baz=298,slow=3.1,SNR=3.2
SONM                              PcP    PcP       01 36 07.9 -0.4
             comp=Z,0.7nm,0.8s,baz=275,slow=2.6,SNR=3.9
             comp=Z,0.7nm,0.9s
DBG   Daneborg         42.28 338 i P     P         01 34 18.0 +1.9
DBG                               IAmb   IAmb      01 34 19.5
             comp=Z,6.9nm,0.9s
DAG   Danmarks Havn    42.35 342 i P     P         01 34 17.4 +0.7
DAG                               IAmb   IAmb      01 34 19.3
             comp=Z,12nm,0.8s
SCO   Scoresbysund     42.44 333  P      P         01 34 18.1 +0.7
SCO                               IAmb   IAmb      01 34 26.3
             comp=Z,6.1nm,0.9s
SCO   Scoresbysund     42.44 333  P      P         01 34 18.1 +0.7
SCO                               pmax   pmax
             comp=Z,6.0nm,0.9s
SCO   Scoresbysund     42.44 333 i P     P         01 34 18.8 +1.4
SCO                               IAmb   IAmb      01 34 21.4
             comp=Z,5.5nm,0.8s
LZH   Lanzhou          44.48  79 eP      P         01 34 35.9 +1.4
LZH                               pP     sP        01 34 40.7 +1.9
LZH                               pmax   pmax
             comp=Z,16nm,1.1s
TNCH  TengChong        46.52  95  P      P         01 34 51.7 +0.8
TNCH                              pmax   pmax
             comp=Z,220nm,0.4s
TIXI  Tiksi            47.37  25 i P     P         01 34 58.5 +1.9
TIXI                              pmax   pmax
             comp=Z,11nm,2.2s
TIXI                              MLR    MLR
             comp=Z,162nm,18.0s
HHC   Hu-ho-hao-te     47.72  69 eP      P         01 34 58.1 -1.9
HHC                               pmax   pmax
             comp=Z,13nm,0.8s
HHC                               pmax   pmax
             comp=Z,420nm,6.2s
PZH   PanZhiHua        48.00  92  P      P         01 35 04.8 +2.5
PZH                               pmax   pmax
             comp=Z,10.0nm,0.5s
PZH                               pmax   pmax
             comp=Z,130nm,5.5s
TORD  Torodi Ar. Bea   48.33 245  P      P         01 35 03.4 -1.3
             comp=Z,3.1nm,0.9s,baz=39,slow=8.1,SNR=16
TORD                              PcP    PcP       01 36 30.0 -1.4
             comp=Z,0.8nm,0.7s,baz=43,slow=2.8,SNR=2.3
             comp=Z,3.1nm,0.9s
ICESG Greenland Ices   48.68 332 i P     P         01 35 07.8 +0.6
ICESG                             IAmb   IAmb      01 35 09.5
             comp=Z,13nm,0.7s
NEEM  North Greenlan   49.50 343 i P     P         01 35 14.2 +0.9
NEEM                              IAmb   IAmb      01 35 15.9
             comp=Z,8.3nm,0.6s
CMAR  Chiang Mai Arr   50.96 102  P      P         01 35 24.6 -0.3
             comp=Z,1.5nm,0.3s,baz=307,slow=8.9,SNR=6.0
             comp=Z,1.5nm,0.3s
CMAR  Chiang Mai Arr   50.96 102 i P     P         01 35 24.1 -0.7
CMAR                              pmax   pmax
             comp=Z,1.0nm,0.3s
PHRA  Phrae            51.85 101  P      P         01 35 29.0 -2.5
ZEA   Zeya             52.05  48 eP      P         01 35 24.8 -7.8
ZEA                               pmax   pmax
             comp=Z,10.0nm,0.6s
SFJD  Kangerlussuaq    53.27 331  P      P         01 35 40.1 -1.2
SFJD                              IAmb   IAmb      01 36 07.5
             comp=Z,16nm,1.3s
SFJD  Kangerlussuaq    53.27 331  P      P         01 35 40.1 -1.2
SFJD                              pmax   pmax
             comp=Z,16nm,1.3s
SFJD  Kangerlussuaq    53.27 331 i P     P         01 35 38.0 -3.3
HEH   HeiHe            53.63  52 eP      P         01 35 45.8 +1.5
HEH                               pmax   pmax
             comp=Z,5.0nm,0.9s
KLR   Kul'dur          56.60  52ceP      P         01 36 07.5 +1.8
KLR                               pmax   pmax
             comp=Z,7.0nm,2.5s
KLR                               MLR    MLR
             comp=Z,181nm,19.0s
NJ2   Nanjing          57.21  75 eP      P         01 36 08.0 -2.3
NJ2                               pmax   pmax
             comp=Z,6.0nm,0.5s
DBIC  Dimbokro         57.43 246  P      P         01 36 10.9 -1.1
             comp=Z,2.7nm,0.4s,baz=50,slow=8.6,SNR=11
             comp=Z,2.7nm,0.4s
DBIC  Dimbokro         57.43 246  P      P         01 36 10.9 -1.1
DBIC                              IAmb   IAmb      01 36 14.9
             comp=Z,6.5nm,0.9s
DBIC  Dimbokro         57.43 246  P      P         01 36 10.9 -1.1
DBIC                              pmax   pmax
             comp=Z,7.0nm,1.0s
SEY   Seymchan         59.09  31 i P     P         01 36 25.5 +2.5
SEY                               pmax   pmax
             comp=Z,9.0nm,0.9s
IMAR  Indian Mountai   69.89   8  P      P         01 37 32.9 -0.6
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CAST  Castle Rocks     72.56   8  P      P         01 37 49.6 -0.2
CAST                              IAmb   IAmb      01 37 52.9
             comp=Z,6.9nm,1.2s
YKA   Yellowknife Ar   73.26 351  P      P         01 37 54.8 +0.9
             comp=Z,1.3nm,0.8s,baz=16,slow=6.0,SNR=22
             comp=Z,1.3nm,0.8s
SKT   Skwentna         74.03   8  P      P         01 37 57.4 -1.0
SKT                               IAmb   IAmb      01 38 36.5
             comp=Z,12nm,1.4s
FFC   Flin Flon        78.43 342  P      P         01 38 22.5 -1.1
FFC                               IAmb   IAmb      01 38 27.3
             comp=Z,6.7nm,1.5s
FFC   Flin Flon        78.43 342  P      P         01 38 22.5 -1.1
FFC                               pmax   pmax
             comp=Z,7.0nm,1.5s
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BJI ***06*** *01:38:57.7±0.0, 5°13N×124°32E, h529km, mb4.9/58, mB4.8/24*

MAN ***06*** *01:39:01.5, 5°54N×124°16E, h534km, mb5.2, ML4.1, MS4.2*

IDC ***06*** *01:39:03.6±0.6, 5°61N×124°02E, h537km±7km, mb3.8/33, mbtmp4.7/35, Error ellipse: s-maj=13.3km s-min=6.2km az=64.0*

NEIC ***06*** *01:39:03.1±1.3, 5°64N±0°09×124°0E±0°1, h529km±8km, mb4.6/118, Error ellipse: s-maj=15.3km s-min=12.2km az=61.0*

DJA ***06*** *01:39:03.3±0.2, 6°N±3°×12°4E±°, h518km±3km, M4.7/43, mb4.7/43, mB5.1/17, MLv5.1/13, Mw(mB)4.5/17, MwMwp5.7/2, Mwp5.8/2*

ISC 06 01:39:02.9±0.3, **5°62N**±0°04×**124°01E**±0°05, **h529km, n321,** σ1s**08**/338, **mb4.7**/113, **17C-30D, Mindanao**

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Code  Station Name      Δ°   AZ°    Phase ID             Time     Res
                                   Op     ISC         h  m  s    ISC
SKMP  Bagumbayan, Su    1.04  31⇓eP      P         01 40 07.2  0.0
GSPH  General Santos    1.04  64⇓eP      P         01 40 14.8 +7.4
GSPH                             eS      S         01 41 00.7 +1.0
CTBH  Cotabato--PC H    1.61   8⇓iP      P         01 40 09.7 +0.6
DAV   Davao City (W)    2.12  47  P      P         01 40 14.2 +2.9
             251nm,0.4s,baz=248,slow=5.4,SNR=3.8
DAV                               S      S         01 41 07.1 +0.3
             230nm,0.4s,baz=238,slow=19,SNR=1.6
DAV   Davao City (W)    2.12  47  P      P         01 40 10.7 -0.7
PAGZ  Pagadian          2.30 344⇑iP      P         01 40 12.7 +0.5
SGSI  Sangihe           2.45 142  P      P         01 40 11.0 -2.0
BUKP  Musuan            2.48  25⇓eP      P         01 40 13.7 +0.5
MATI  Mati              2.59  59⇑eP      P         01 40 12.4 -1.4
CGP   Cagayan de Oro    2.90  14 eP      P         01 40 10.9 -4.8
BIPH  Bislig            3.46  42⇓iP      P         01 40 18.3 -1.1
BIPH                             i S     S         01 41 19.3 -2.2
LSIP  Lazi, Siquijor    3.51 354⇑eP      P         01 40 19.6 -0.1
BUTP  Butuan            3.69  26⇑eP      P         01 40 21.6 +0.5
CNOP  Candoni, Negro    4.40 342⇓eP      P         01 40 25.6 -0.9
TABP  Talibon, Bohol    4.46   4⇑iP      P         01 40 27.3 +0.3
MSLP  Maasin            4.56  11⇑eP      P         01 40 27.4 -0.5
GLSP  General Luna,     4.64  27⇑eP      P         01 40 28.2 -0.3
GTOI  Gorontalo         5.05 191  P      P         01 40 30.9 -1.2
             109nm,0.6s,1μm0.4nm
GTOI                              S      S         01 41 42.5 -2.2
             109nm,0.6s,1μm0.4nm
GUIM  Jordan            5.17 344⇑eP      P         01 40 32.1 -0.9
OCLP  Ormoc             5.43   6⇑eP      P         01 40 35.4  0.0
MYLDM Lahad Datu        5.50 266  P      P         01 40 37.0 +0.9
MRSI  Marisa            5.51 202  P      P         01 40 37.7 +1.6
             186nm,0.5s,2μm0.8nm
TOLI2 Tolitoli          5.51 216  P      P         01 40 35.7 -0.5
TOLI2 Tolitoli          5.51 216  P      P         01 40 36.5 +0.3
TNTI  Ternate           5.87 145  P      P         01 40 38.5 -0.9
TNTI  Ternate           5.87 145  P      P         01 40 39.6 +0.2
TNTI  Ternate           5.87 145  P      P         01 40 38.9 -0.5
             334nm,0.6s,5μm1.7nm
CUYO  Cuyo Island       5.98 331⇓eP      P         01 40 41.1 +0.7
RCP   Roxas             6.03 348⇓eP      P         01 40 39.7 -1.2
MPSI  Mapaga            6.66 218  P      P         01 40 47.7 +0.8
             37nm,0.6s,0.2nm
MPSI                              S      S         01 42 11.1 -0.8
             37nm,0.6s,0.2nm
LUWI  Luwuk             6.73 191  P      P         01 40 45.4 -2.2
LUWI  Luwuk             6.73 191  P      P         01 40 46.8 -0.8
LUWI  Luwuk             6.73 191  P      P         01 40 46.6 -1.0
             260nm,0.6s,10μm2.2nm
BATP  Bataraza          6.92 298⇑eP      P         01 40 50.6 +1.2
OTRP  Odiongan          6.98 344⇓eP      P         01 40 50.5 +0.5
LBMI  Labuha            7.13 151  P      P         01 40 51.6 +0.1
             636nm,0.5s,7μm2.9nm
ENPP  El Nido           7.17 321⇓eP      P         01 40 52.8 +1.0
SJMP  San Jose          7.37 337⇑eP      P         01 40 55.2 +1.4
KKM   Kota Kinabalu     7.76 274  P      P         01 40 56.8 -1.1
KKM   Kota Kinabalu     7.76 274  P      P         01 40 57.9  0.0
SANI  Sanana            7.87 165  P      P         01 40 56.5 -2.3
             678nm,0.7s,6μm2.3nm
PVCP  Virac             7.93   1⇓eP      P         01 40 59.9 +0.5
BOAC  Boac              8.08 345⇑eP      P         01 41 01.9 +1.0
JCNP  Jose Panganiba    8.71 352⇓eP      P         01 41 07.3  0.0
LQP   Lukban            8.78 344⇓eP      P         01 41 09.0 +0.7
LUBP  Lubang            8.88 336⇓eP      P         01 41 09.9 +0.9
MACP  Maragondon, Ca    9.18 340⇓eP      P         01 41 12.6 +0.5
NLAI  Namlea            9.32 161  P      P         01 41 15.7 +2.0
             144nm,0.7s
QVP   Quezon City--P    9.42 342⇓eP      P         01 41 15.9 +1.3
AAI   Ambon            10.14 156  P      P         01 41 23.6 +1.4
             306nm,0.5s,4μm
MSAI  Masohi           10.17 151  P      P         01 41 25.2 +2.7
             50nm,0.7s,852nm
BALP  Baler            10.34 347⇓eP      P         01 41 23.3 -0.8
SPSI  Sidrap Palu      10.42 204  P      P         01 41 27.2 +2.2
             133nm,0.8s,1μm
SCZP  Santa Cruz       10.86 339⇓eP      P         01 41 28.3 -1.3
KAPI  Kappang          11.38 202  P      P         01 41 37.7 +2.6
             64nm,0.9s,baz=18,slow=9.7,SNR=19
KAPI  Kappang          11.38 202  P      P         01 41 35.3 +0.2
KAPI  Kappang          11.38 202  P      P         01 41 36.3 +1.2
BOLP  Bolinao          11.42 340⇑eP      P         01 41 35.0 -0.4
BKSI  Bulukumba        11.54 200  P      P         01 41 38.5 +1.8
             41nm,0.8s
SAMP  Sagada Mountai   11.79 345⇓eP      P         01 41 39.7 +0.4
FAKI  Fak Fak          11.82 136  P      P         01 41 40.3 +0.7
FAKI  Fak Fak          11.82 136  P      P         01 41 41.0 +1.3
FAKI  Fak Fak          11.82 136  P      P         01 41 40.9 +1.3
             58nm,0.7s,706nm
SBUM  Sibu             12.17 255  P      P         01 41 44.1 +0.7
CVP   Callao Caves     12.20 350⇑eP      P         01 41 44.0 +0.4
ABRA  Dolores          12.38 345⇑eP      P         01 41 44.3 -1.2
APYP  Conner           12.46 348⇓eP      P         01 41 46.1 -0.2
SGCP  Gonzaga          12.69 351⇑eP      P         01 41 48.7  0.0
PLAI  Plampang         15.64 203  P      P         01 42 18.9 -0.6
             15nm,0.9s
TWSI  Taliwang, Sumb   15.93 207  P      P         01 42 21.9 -0.6
             20nm,1.0s
DLV   T  Lat           16.57 293  P      P         01 42 29.3 +0.3
             44nm,0.8s
JAGI  Jajag, Banyuwa   17.10 215  P      P         01 42 33.1 -0.7
JAGI  Jajag, Banyuwa   17.10 215  P      P         01 42 35.7 +1.9
JAGI  Jajag, Banyuwa   17.10 215  P      P         01 42 33.6 -0.2
             44nm,0.8s
TWG   Pinlang          17.34 351  P      P         01 42 33.4 -2.4
GMJI  Gumukmas         17.36 217  P      P         01 42 41.7 +5.6
YULB  Yu-li            17.86 352  P      P         01 42 39.0 -1.7
YULB  Yu-li            17.86 352  P      P         01 42 40.1 -0.5
TPUB  Ta-pu            17.88 350  P      P         01 42 40.1 -0.7
TPUB  Ta-pu            17.88 350  P      P         01 42 41.3 +0.5
GENI  Genyem           18.08 116  P      P         01 42 44.4 +1.6
GENI  Genyem           18.08 116  P      P         01 42 44.7 +1.9
             191nm,1.3s
SSLB  Suanglung        18.30 351  P      P         01 42 44.1 -0.6
SSLB  Suanglung        18.30 351  P      P         01 42 45.4 +0.7
NACB  Ninganchiao      18.59 353  P      P         01 42 45.9 -1.4
YHNB  Yeheng           19.11 353  P      P         01 42 51.3 -0.8
YHNB  Yeheng           19.11 353  P      P         01 42 52.7 +0.6
QIZ   Qiongzhong       19.19 315⇓iP      P         01 42 52.9 +0.1
QIZ                               pmax   pmax
             comp=Z,29nm,1.0s
QIZ   Qiongzhong       19.19 315  P      P         01 42 52.1 -0.7
QIZ   Qiongzhong       19.19 315  P      P         01 42 53.9 +1.1
KNMB  Chin-men Tao     19.50 344  P      P         01 42 54.9 -0.6
MTN   Manton Dam       19.66 159  P      P         01 42 57.0  0.0
SBJI  Serang           21.32 237  P      P         01 43 15.2 +3.0
             463nm,1.1s,9μm293μm
KNRA  Kununurra        21.68 168  P      P         01 43 15.2 -0.2
MDSI  Maura Dua        22.20 244  P      P         01 43 20.1  0.0
             16nm,0.9s,1μm
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KULM  Kulim            23.25 270  P      P         01 43 29.0 -0.5
KULM                              IAmb   IAmb      01 43 30.7
             comp=Z,11nm,0.9s
SDSI  Sungai Dareh     23.47 255  P      P         01 43 31.6 +0.1
             comp=Z,24nm,0.7s
NONG  Nongkai          23.84 303  P      P         01 43 35.3 +0.7
             comp=Z,27nm,0.9s
SRIT  Nakonsritamara   24.40 278  P      P         01 43 39.7  0.0
SRIT  Nakonsritamara   24.40 278  P      P         01 43 41.3 +1.6
RPSI  Rantau Prapat    25.18 264  P      P         01 43 45.6 -1.1
RPSI                              IAmb   IAmb      01 43 47.7
             comp=Z,12nm,0.8s
KCSI  Kotacane, Aceh   26.23 267  P      P         01 43 55.7 -0.3
             comp=Z,34nm,0.9s
WHN   Wuhan            26.41 341  P      P         01 43 59.4 +2.2
WHN                               pmax   pmax
             comp=Z,110nm,0.7s
PHRA  Phrae            26.50 301  P      P         01 43 58.3 +0.1
NJ2   Nanjing          26.74 350 eP      P         01 44 01.4 +1.3
NJ2                               pmax   pmax
             comp=Z,11nm,0.5s
CRAI  Chiangrai        27.17 304  P      P         01 44 04.5 +0.4
CRAI                              IAmb   IAmb      01 44 06.1
             comp=Z,16nm,0.9s
COEN  Coen             27.20 136  P      P         01 44 03.5 -1.0
COEN                              IAmb   IAmb      01 44 04.9
             comp=Z,8.7nm,0.7s
WB0   Warramunga Arr   27.22 158  P      P         01 44 04.1 -0.4
WRAB  Tennant Creek    27.35 158  P      P         01 44 05.3 -0.4
WRAB                              IAmb   IAmb      01 44 06.2
             comp=Z,21nm,0.6s
WRAB  Tennant Creek    27.35 158  P      P         01 44 05.6 -0.1
WRA   Warramunga Arr   27.36 158  P      P         01 44 05.1 -0.6
             comp=Z,16nm,0.5s,baz=332,slow=11,SNR=178
WRA                               PcP    PcP       01 47 07.5 -0.3
             comp=Z,1.3nm,0.6s,baz=323,slow=2.7,SNR=3.3
WRA                               S      S         01 48 06.9 -1.7
             comp=Z,1.0nm,0.7s,baz=330,slow=12,SNR=2.4
WRA                               ScP    ScP       01 49 57.7 -0.6
             comp=Z,2.8nm,0.5s,baz=343,slow=3.1,SNR=14
             comp=Z,16nm,0.5s
WRA   Warramunga Arr   27.36 158  P      P         01 44 04.3 -1.4
WB2   Warramunga Arr   27.36 158  P      P         01 44 05.3 -0.5
WB1   Warramunga Ar.   27.38 158  P      P         01 44 05.6 -0.3
WR0   Warramunga Arr   27.45 158  P      P         01 44 06.1 -0.4
WR0                               IAmb   IAmb      01 44 07.1
             comp=Z,21nm,1.2s
PMG   Port Moresby     27.48 123  P      P         01 44 06.5 -0.3
             comp=Z,7.0nm,0.4s,baz=302,slow=6.8,SNR=6.8
             comp=Z,7.0nm,0.4s
PMG   Port Moresby     27.48 123  P      P         01 44 05.5 -1.3
PMG                               IAmb   IAmb      01 44 07.6
             comp=Z,25nm,1.0s
PMG   Port Moresby     27.48 123  P      P         01 44 07.4 +0.5
             comp=Z,28nm,0.9s
CM31  Chiang Mai Arr   27.58 300  P      P         01 44 08.8 +1.0
CM31                              IAmb   IAmb      01 44 10.0
             comp=Z,21nm,0.7s
CMAR  Chiang Mai Arr   27.58 300  P      P         01 44 09.3 +1.5
             comp=Z,15nm,0.7s,baz=113,slow=6.8,SNR=63
CMAR                              PcP    PcP       01 47 08.6 +0.2
             comp=Z,1.0nm,0.4s,baz=126,slow=1.2,SNR=1.4
CMAR                              ScP    ScP       01 49 58.2 -0.8
             comp=Z,2.7nm,0.4s,baz=137,slow=1.7,SNR=24
             comp=Z,15nm,0.7s
CMAR  Chiang Mai Arr   27.58 300  P      P         01 44 08.0 +0.2
CHTO  Chiang Mai       27.73 300  P      P         01 44 09.1 +0.1
ENH   Enshi            28.08 333  P      P         01 44 11.8 -0.1
ENH   Enshi            28.08 333  P      P         01 44 13.1 +1.1
KMI   Kunming          28.14 316 ⇓P      P         01 44 14.7 +1.9
KMI                               pmax   pmax
             comp=Z,20nm,0.7s
JMN   Monobe           29.43  17  P      P         01 44 24.4 +0.7
JMN                               IAmb   IAmb      01 44 27.5
             comp=Z,14nm,0.8s
KRVT  Keravat (AS076   29.67 109  P      P         01 44 27.6 +1.6
             comp=Z,69nm,0.6s,baz=225,slow=1.4,SNR=3.8
             comp=Z,69nm,0.6s
PZH   PanZhiHua        29.71 317  P      P         01 44 27.0 +0.7
PZH                               pmax   pmax
             comp=Z,20nm,0.7s
PZH                               pmax   pmax
             comp=Z,150nm,5.9s
QIS   Mount Isa        30.19 150  P      P         01 44 31.1 +0.7
JHS   Saijyo           30.42  15  P      P         01 44 31.4 -0.8
JHS                               IAmb   IAmb      01 44 55.9
             comp=Z,47nm,1.4s
AS31  Alice Springs    30.67 162  P      P         01 44 34.2 -0.3
AS31                              IAmb   IAmb      01 44 36.0
             comp=Z,7.3nm,0.7s
AS31                                     S         01 48 58.4 -1.5
ASAR  Alice Springs    30.67 162  P      P         01 44 35.1 +0.6
             comp=Z,18nm,0.5s,baz=343,slow=7.1,SNR=338
ASAR                              PcP    PcP       01 47 16.0 -0.3
             comp=Z,1.7nm,0.4s,baz=352,slow=3.2,SNR=5.9
ASAR                              S      S         01 48 58.4 -1.4
             comp=Z,3.6nm,0.7s,baz=337,slow=13,SNR=15
ASAR                              ScP    ScP       01 50 07.0 -2.0
             comp=Z,2.1nm,0.4s,baz=336,slow=3.2,SNR=9.5
             comp=Z,18nm,0.5s
ASAR  Alice Springs    30.67 162  P      P         01 44 34.9 +0.4
AS01  Alice Springs    30.68 162  P      P         01 44 35.1 +0.5
             comp=Z,33nm,0.6s
LYN   LuoYang          30.71 341⇓iP      P         01 44 35.8 +1.2
LYN                               pmax   pmax
             comp=Z,45nm,0.8s
WRKA  Warakurna        30.76 172  P      P         01 44 36.1 +0.9
MTSU  Mount Surprise   30.96 140  P      P         01 44 37.8 +0.7
TIA   Tai'an           31.10 349  P      P         01 44 38.6 +0.6
TIA                               pmax   pmax
             comp=Z,18nm,0.8s
CD2   Chengdu          31.54 325  P      P         01 44 42.6 +0.7
CD2                               pmax   pmax
             comp=Z,40nm,0.6s
XAN   Xi'an            31.55 336 ⇓P      P         01 44 42.3 +0.3
XAN                               pmax   pmax
             comp=Z,53nm,0.6s
XAN                               pmax   pmax
             comp=Z,75nm,4.0s
KSRS  Korea Array      31.89   6  P      P         01 44 46.1 +1.4
             comp=Z,2.4nm,0.6s,baz=181,slow=9.6,SNR=5.7
             comp=Z,2.4nm,0.6s
JGF   Kuroka           32.27  21  P      P         01 44 48.0 -0.1
JGF                               IAmb   IAmb      01 45 09.2
             comp=Z,14nm,1.3s
HNS   HongShan         32.75 346 ⇑P      P         01 44 52.6 +0.6
HNS                               pmax   pmax
             comp=Z,32nm,0.9s
TV1H  Townsville Har   33.39 138  P      P         01 44 58.5 +0.8
MJAR  Matsushiro Arr   33.42  21  P      P         01 44 56.9 -0.8
             comp=Z,3.0nm,0.6s,baz=190,slow=9.1,SNR=7.9
             comp=Z,3.0nm,0.6s
CTA   Charters Tower   33.63 140  P      P         01 45 00.5 +0.7
             comp=Z,10nm,0.6s,baz=323,slow=10.0,SNR=31
CTA                               ScP    ScP       01 50 18.0 -1.2
             comp=Z,0.9nm,0.3s,baz=344,slow=7.4,SNR=2.4
             comp=Z,10nm,0.6s
CTA   Charters Tower   33.63 140  P      P         01 45 00.9 +1.2
             comp=Z,23nm,1.4s
CTAO  Charters Tower   33.63 140  P      P         01 45 00.1 +0.3
CTAO                              IAmb   IAmb      01 45 01.8
             comp=Z,11nm,0.7s
CTAO  Charters Tower   33.63 140  P      P         01 45 00.9 +1.2
TIY   Taiyuan          33.64 343 eP      P         01 45 00.9 +1.2
TIY                               pmax   pmax
             comp=Z,59nm,0.5s
BJT   Baijiatuau       34.97 349  P      P         01 45 09.8 -0.8
BJT                               IAmb   IAmb      01 45 12.2
             comp=Z,18nm,0.9s
BJT   Baijiatuau       34.97 349  P      P         01 45 11.6 +1.0
             comp=Z,25nm,0.9s
BJI   Beijing          34.99 349  P      P         01 45 11.2 +0.4
BJI                               pmax   pmax
             comp=Z,15nm,0.8s
OOD   Oodnadatta       35.08 162  P      P         01 45 12.7 +1.0
MORW  Morawa           35.33 192  P      P         01 45 13.2 -0.6
MORW                              IAmb   IAmb      01 45 27.8
             comp=Z,20nm,1.4s
LZH   Lanzhou          35.53 331 eP      P         01 45 17.3 +1.7
LZH                               pP     pP        01 46 48.3 +1.7
LZH                               sP     sP        01 47 47.2  0.0
LZH                               pmax   pmax
             comp=Z,51nm,1.1s
BRDH  Bariadhala       35.54 302  P      P         01 45 16.4 +0.8
             comp=Z,109nm,0.5s,baz=90,slow=7.1,SNR=1.9
FORT  Forrest          36.40 174  P      P         01 45 23.0 +0.4
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SHL	Shillong	36.58	306	P	P	01 45 24.3	-0.2
HHC	Hu-ho-hao-te	36.81	344	eP	P	01 45 27.4	+1.4
HHC				pmax	pmax		
	comp=Z,35nm,0.8s						
HHC				pmax	pmax		
	comp=Z,370nm,7.1s						
INKA	Innaminka	36.90	155	P	P	01 45 28.7	+1.9
QLP	Quilpie	37.53	149	P	P	01 45 33.3	+1.3
	comp=Z,29nm,1.1s						
XLT	XiLinHaoTe	38.76	351	⇓iP	P	01 45 42.0	+0.1
XLT				pmax	pmax		
	comp=Z,21nm,0.7s						
XLT				pmax	pmax		
	comp=Z,69nm,4.0s						
USRK	Ussuriysk Ar.	39.06	9	P	P	01 45 45.7	+1.5
	comp=Z,2.8nm,0.5s,baz=182,slow=8.0,SNR=4.4						
	comp=Z,2.8nm,0.5s						
LSA	Lhasa	39.16	312	P	P	01 45 45.0	-0.8
LSA				IAmb	IAmb	01 45 48.6	
	comp=Z,14nm,0.6s						
BBOO	Buckleboo	39.90	164	P	P	01 45 51.1	+0.1
BBOO				IAmb	IAmb	01 45 53.2	
	comp=Z,34nm,1.2s						
RMQ	Roma	39.92	144	P	P	01 45 52.5	+1.1
GTA	Gaotai	40.11	330	⇓P	P	01 45 54.2	+1.3
GTA				pmax	pmax		
	comp=Z,37nm,0.8s						
EIDS	Eidsvold	40.51	141	P	P	01 45 55.8	-0.3
EIDS				IAmb	IAmb	01 45 57.4	
	comp=Z,24nm,0.8s						
EIDS	Eidsvold	40.51	141	P	P	01 45 56.5	+0.4
GOMU	GeErMu	40.54	323	P	P	01 45 57.7	+1.0
GOMU				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GOMU				pmax	pmax		
	comp=Z,100nm,6.8s						
TAPN	Taplejung	40.72	306	eP	P	01 45 59.1	+0.9
STKA	Stephens Creek	40.88	157	P	P	01 46 00.1	+1.0
	comp=Z,16nm,0.7s,baz=333,slow=8.5,SNR=36						
	comp=Z,16nm,0.7s						
STKA	Stephens Creek	40.88	157	P	P	01 45 58.7	-0.3
STKA	Stephens Creek	40.88	157	P	P	01 46 00.0	+1.0
RAMN	Ramite	41.45	305	eP	P	01 46 04.9	+1.0
ASAJ	Asahikawa	41.68	20	P	P	01 46 05.5	+0.4
	comp=Z,8.2nm,0.7s,baz=212,slow=10.0,SNR=3.9						
	comp=Z,8.2nm,0.7s						
JIRN	Jiri	42.07	306	eP	P	01 46 09.8	+0.8
	comp=Z,23nm,0.3s						
CMSA	Cobar Meteorol	42.35	152	P	P	01 46 12.5	+1.9
GUN	Gumba	42.43	306	eP	P	01 46 12.5	+0.8
	comp=Z,19nm,0.4s						
PKI	Pulchoki	42.67	305	eP	P	01 46 13.8	+0.2
PKIN	Phulchoki	42.68	305	eP	P	01 46 13.9	+0.2
DMN	Daman	42.93	305	eP	P	01 46 16.1	+0.5
GKN	Gorkha	43.47	305	eP	P	01 46 19.9	+0.2
	comp=Z,26nm,0.4s						
HIA	Hailar	43.65	356	P	P	01 46 20.4	-0.1
HIA				IAmb	IAmb	01 46 22.9	
	comp=Z,11nm,0.9s						
HIA	Hailar	43.65	356	P	P	01 46 21.3	+0.8
DANN	Dangsing	44.32	305	eP	P	01 46 27.0	+0.6
	comp=Z,221nm,0.6s						
ULN	Ulaanbaatar	44.53	344	P	P	01 46 27.1	-0.4
ULN				IAmb	IAmb	01 46 29.4	
	comp=Z,11nm,0.8s						
ARMA	Armidale	44.54	145	P	P	01 46 29.4	+1.5
ARMA				IAmb	IAmb	01 46 30.9	
	comp=Z,33nm,1.1s						
HEH	HeiHe	44.58	3	eP	P	01 46 28.0	+0.4
HEH				pmax	pmax		
	comp=Z,17nm,0.8s						
HEH				pmax	pmax		
	comp=Z,220nm,6.4s						
SONM	Songino Array	44.69	343	P	P	01 46 29.4	+0.7
	comp=Z,8.2nm,0.8s,baz=157,slow=9.2,SNR=45						
SONM				PcP	PcP	01 47 59.6	-0.3
	comp=Z,1.4nm,0.8s,baz=126,slow=2.5,SNR=3.6						
SONM				ScP	ScP	01 51 00.7	-1.0
	comp=Z,0.6nm,0.8s,baz=172,slow=4.5,SNR=5.1						
	comp=Z,8.2nm,0.8s						
SONM	Songino Array	44.69	343	P	P	01 46 28.3	-0.3
SONM				IAmb	IAmb	01 46 30.4	
	comp=Z,11nm,1.0s						
PYUN	Piuthan	44.85	305	eP	P	01 46 31.4	+1.0
ARPS	Mount Arapiles	45.35	160	P	P	01 46 34.6	+0.9
CAN	Canberra	47.02	152	P	P	01 46 48.1	+1.5
CAN				IAmb	IAmb	01 46 49.3	
	comp=Z,20nm,0.7s						
TOO	Toolangi	47.41	157	P	P	01 46 50.9	+1.5
TOO				IAmb	IAmb	01 46 52.0	
	comp=Z,16nm,0.9s						
WMQ	Urumqi	49.64	326	eP	P	01 47 06.8	+0.8
WMQ				pmax	pmax		
	comp=Z,40nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,210nm,5.7s						
DZM	Mont Dzumac	49.83	125	P	P	01 47 08.4	+0.6
DZM				IAmb	IAmb	01 47 09.6	
	comp=Z,44nm,1.5s						
ONTNC	Ouen Toro	49.95	125	P	P	01 47 08.6	+0.1
ONTNC				IAmb	IAmb	01 47 38.9	
	comp=Z,49nm,1.1s						
OUENC	Ouen Island, N	50.32	125	P	P	01 47 12.0	+0.8
OUENC				IAmb	IAmb	01 47 13.5	
	comp=Z,54nm,1.5s						
ZSN	Zaisan	53.47	328	eP	P	01 47 34.1	+0.6
	baz=328						
SHLS	Shalkode	54.17	321	eP	P	01 47 38.0	-0.8
	baz=321						
UZB	Uzynbulak	54.45	321	i P	P	01 47 41.6	+0.9
	baz=320						
MK31	Makanchi Array	54.47	326	P	P	01 47 40.8	+0.2
MK31				IAmb	IAmb	01 47 41.8	
	comp=Z,20nm,0.5s						
MKAR	Makanchi Array	54.47	326	P	P	01 47 41.5	+0.8
	comp=Z,24nm,0.4s,baz=120,slow=8.0,SNR=545						
MKAR				PcP	PcP	01 48 35.8	-0.2
	comp=Z,4.0nm,0.6s,baz=118,slow=4.7,SNR=6.3						
MKAR				ScP	ScP	01 51 42.2	-1.4
	comp=Z,3.8nm,0.6s,baz=115,slow=5.1,SNR=16						
	comp=Z,24nm,0.4s						
MKAR	Makanchi Array	54.47	326	P	P	01 47 40.7	0.0
TARG	Taragay, Kyrgy	54.54	318	P	P	01 47 41.0	-0.7
NIL	Nilore	54.63	308	P	P	01 47 42.0	-0.1
NIL				IAmb	IAmb	01 47 44.3	
	comp=Z,36nm,1.3s						
MAKZ	Makanchi	54.66	326	P	P	01 47 41.9	0.0
MAKZ				IAmb	IAmb	01 47 43.4	
	comp=Z,52nm,1.2s						
PETK	Petropavlovsk-	54.77	24	P	P	01 47 43.4	+0.8
	comp=Z,2.1nm,0.8s,baz=204,slow=3.2,SNR=1.9						
PETK				PcP	PcP	01 48 36.8	-0.2
	comp=Z,1.7nm,0.6s,baz=174,slow=5.4,SNR=4.3						
	comp=Z,2.1nm,0.8s						
SATY	Saty	54.79	320	⇓iP	P	01 47 44.2	+1.1
	comp=Z,15nm,0.6s,baz=320						
KSH	Kashi	54.80	315	P	P	01 47 45.1	+1.9
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KPKS	Kokpek	54.82	321	⇓iP	P	01 47 44.2	+1.0
	comp=Z,14nm,0.6s,baz=321						
MDOK	Medeo	55.72	320	i P	P	01 47 50.7	+1.2
	baz=320						
TNSS	Tian-Shan	55.72	319	eP	P	01 47 51.2	+1.3
	baz=319						
TDK	Taldyqorghan	55.77	322	eP	P	01 47 50.7	+1.0
	baz=322						
ULHL	Ulahol	55.81	318	P	P	01 47 51.5	+1.2
	SNR=6.9						
CHKK	Chushkaly	56.08	320	eP	P	01 47 52.5	+0.6
	baz=320						
YAK	Yakutsk	56.45	3	P	P	01 47 53.3	-0.7
YAK				IAmb	IAmb	01 47 55.2	
	comp=Z,36nm,0.9s						
KUU	Kurty	56.51	320	⇓iP	P	01 47 55.7	+0.8
	comp=Z,28nm,0.5s,baz=320						
TKM2	Tokmak 2	56.55	319	P	P	01 47 56.4	+1.1
	SNR=23						
KBK	Karagaybulak	56.85	318	P	P	01 47 58.7	+1.2
	SNR=12						
UCH	Uchtor	56.96	318	P	P	01 48 00.0	+1.5
	SNR=28						
CHMS	Chumysh	57.14	319	P	P	01 47 59.9	+0.7
	SNR=5.3						
AAK	Ala-Archa	57.15	318	P	P	01 48 00.6	+1.2
	SNR=7.5						
AAK	Ala-Archa	57.15	318	P	P	01 47 59.0	-0.5
SGDS	Sogindy	57.41	319	eP	P	01 48 01.6	+0.5
	baz=319						
USP	Ospenovka	57.42	319	P	P	01 48 02.0	+0.9
	SNR=20						
AML	Almayashu	57.47	317	P	P	01 48 03.3	+1.4
	SNR=30						
EKS2	Erkin-Say	57.64	318	P	P	01 48 04.1	+1.3
	SNR=14						
ZAA0	Zalesovo Array	57.70	334	P	P	01 48 02.4	-0.3
ZALV	Zalesovo Beam	57.70	334	P	P	01 48 02.3	-0.4
	comp=Z,6.2nm,0.5s,baz=123,slow=6.1,SNR=28						
	comp=Z,6.2nm,0.5s						
ZALV	Zalesovo Beam	57.70	334	P	P	01 48 02.2	-0.5
KBL	Kabul	58.23	307	P	P	01 48 07.1	+0.1
KBL				IAmb	IAmb	01 48 07.7	
	comp=Z,12nm,0.5s						
BTLS	Baital	58.50	320	eP	P	01 48 08.7	+0.3
	baz=320						
GAR	Garm	58.66	313	P	P	01 48 10.2	+0.4
KURK	Kurchatov	58.71	328	P	P	01 48 09.8	+0.1
CHGR	Chuyangaron	59.40	312	P	P	01 48 13.5	-1.1
CHGR				IAmb	IAmb	01 48 16.1	
	comp=Z,20nm,0.7s						
IUG	Iuzhnay	59.98	316	eP	P	01 48 19.3	+0.8
	comp=Z,17nm,0.6s,baz=316						
KK31	Karatay Array	60.01	317	P	P	01 48 18.1	-0.4
KK31				IAmb	IAmb	01 48 19.9	
	comp=Z,14nm,0.8s						
KKAR	Karatay Array	60.01	317	P	P	01 48 17.9	-0.6
TAS	Tashkent	60.20	315	P	P	01 48 19.3	-0.6
BRZS	Berezniki	61.59	325	⇓iP	P	01 48 29.3	+0.4
	baz=325						
QRZ	Quartz Range	64.09	141	P	P	01 48 46.2	+1.2
BRVK	Borovoye	64.34	327	P	P	01 48 46.4	0.0
BRVK				IAmb	IAmb	01 48 47.6	
	comp=Z,23nm,0.9s						
TKNZ	Takaka Hill	64.48	141	P	P	01 48 47.3	-0.2
MRNZ	Matariki Terra	64.56	141	P	P	01 48 46.8	-1.2
LBZ	Lake Benmore	64.77	145	P	P	01 48 49.5	+0.3
LBZ				IAmb	IAmb	01 48 50.9	
	comp=Z,28nm,1.2s						
THZ	Tophouse	64.85	141	P	P	01 48 49.8	-0.1
THZ				IAmb	IAmb	01 48 50.9	
	comp=Z,14nm,0.8s						
RPZ	Rata Peaks	64.86	144	P	P	01 48 50.9	+0.9
RPZ				IAmb	IAmb	01 49 05.6	
	comp=Z,36nm,1.4s						
WSAR	Wadi Sarin	65.19	293	P	P	01 48 51.9	-0.5
	comp=Z,3.1nm,0.5s,baz=138,slow=7.0,SNR=12						
	comp=Z,3.1nm,0.5s						
TCW	Tory Channel	65.41	140	P	P	01 48 52.9	-0.5
KHZ	Kahutara	65.61	142	P	P	01 48 54.1	-0.4
KHZ				IAmb	IAmb	01 49 13.7	
	comp=Z,37nm,1.5s						
SNZO	South Karori	65.73	140	P	P	01 48 54.4	-1.0
BKZ	Black Stump Fm	65.80	137	P	P	01 48 55.9	0.0
RTZ	Ruatahuna	65.85	137	P	P	01 48 56.1	-0.2
RTZ				IAmb	IAmb	01 48 57.6	
	comp=Z,22nm,0.8s						
TIXI	Tiksi	66.02	2	P	P	01 48 55.4	-1.3
PLWZ	Palliser	66.22	140	P	P	01 48 58.1	-0.4
UOSS	Minazif	67.54	295	P	P	01 49 06.2	-0.8
GEYT	Alibeck	67.60	309	P	P	01 49 08.0	+0.8
	comp=Z,9.3nm,0.7s,baz=144,slow=5.3,SNR=25						
	comp=Z,9.3nm,0.7s						
NRIK	Noril'sk	67.97	347	P	P	01 49 09.0	+0.3
	comp=Z,9.4nm,0.6s,baz=127,slow=5.7,SNR=24						
	comp=Z,9.4nm,0.6s						
NRIK	Noril'sk	67.97	347	P	P	01 49 08.7	0.0
NRIK				IAmb	IAmb	01 49 09.8	
	comp=Z,9.7nm,0.6s						
ABKAR	Akbulak array	68.98	321	P	P	01 49 15.0	-0.2
ARU	Arti	71.90	328	P	P	01 49 31.7	-0.6
ARU				IAmb	IAmb	01 49 32.6	
	comp=Z,22nm,0.6s						
UNV	Unalaska Valle	73.44	35	P	P	01 49 40.9	-0.3
KIRV	Kirov	77.21	329	P	P	01 50 01.2	-0.9
	comp=Z,13nm,0.5s,baz=104,slow=1.5,SNR=5.8						
	comp=Z,13nm,0.5s						
RAYN	Ar Rayn	77.25	293	P	P	01 50 03.0	-0.2
RAYN				IAmb	IAmb	01 50 03.8	
	comp=Z,18nm,0.8s						
BELG	Belogornoye	77.27	322	P	P	01 50 02.2	-0.4
	comp=Z,32nm,0.9s,baz=119,slow=19,SNR=12						
	comp=Z,32nm,0.9s						
GNI	Garni	78.20	310	P	P	01 50 09.1	+0.9
	comp=Z,1.7nm,0.4s,baz=72,slow=6.4,SNR=3.8						
	comp=Z,1.7nm,0.4s						
GNI	Garni	78.20	310	P	P	01 50 06.8	-1.3
AKH	Akhalkalaki	79.20	311	P	P	01 50 12.7	-0.8
AKH				IAmb	IAmb	01 50 15.5	
	comp=Z,34nm,1.0s						
ONI	Oni	79.27	312	P	P	01 50 12.7	-1.0
GEVA	Gevas	79.44	308	P	P	01 50 13.9	-0.9
GEVA				IAmb	IAmb	01 50 16.4	
	comp=Z,17nm,0.8s						
KARS	Kars	79.48	310	P	P	01 50 14.6	-0.4
KARS				IAmb	IAmb	01 50 17.5	
	comp=Z,38nm,0.9s						
KBZ	Khabaz	79.72	313	P	P	01 50 15.0	-0.8
	comp=Z,3.3nm,1.0s,baz=128,slow=6.4,SNR=6.0						
	comp=Z,3.3nm,1.0s						
KVAR	Kislovodsk Arr	79.87	314	P	P	01 50 16.5	-0.4
	comp=Z,1.7nm,1.0s,baz=68,slow=14,SNR=1.7						
	comp=Z,1.7nm,1.0s						
GURO	Guroymak-BITLI	80.25	308	P	P	01 50 19.8	+0.8
GURO				IAmb	IAmb	01 50 21.0	
	comp=Z,15nm,0.8s						
TTA	Tatalina	80.46	27	P	P	01 50 20.7	+1.2
L19K	White Mountain	80.92	28	P	P	01 50 22.2	+0.4
N19K	Bonanza Creek	80.98	29	P	P	01 50 22.5	+0.3
A21K	Barrow	81.30	19	P	P	01 50 23.5	0.0
A21K				IAmb	IAmb	01 50 38.3	
	comp=Z,18nm,0.5s						
K20K	Telida	81.38	27	P	P	01 50 25.2	+1.0
IMAR	Indian Mountai	81.74	24	P	P	01 50 25.9	0.0
H21K	Melozitna Rive	82.10	25	P	P	01 50 28.3	+0.5
PPLA	Purkeypile	82.20	27	P	P	01 50 28.2	-0.3
PPLA				IAmb	IAmb	01 51 01.4	
	comp=Z,15nm,1.4s						
CAST	Castle Rocks	82.28	27	P	P	01 50 27.4	-1.3
KLMR	Klimovskoe	82.44	331	eP	P	01 50 27.9	-1.6
KLMR				AMP		01 50 30.2	
	comp=Z,50nm,1.7s						
SKT	Skwentna	82.47	28	P	P	01 50 29.5	-0.2
SKT				IAmb	IAmb	01 51 01.1	
	comp=Z,15nm,1.4s						
CNPM	China Poot	82.53	31	P	P	01 50 30.1	0.0
CNPM				IAmb	IAmb	01 50 51.3	
	comp=Z,52nm,1.4s						
BRLK	Bradley Lake	82.71	31	P	P	01 50 31.4	+0.4
BRLK				IAmb	IAmb	01 50 34.9	
	comp=Z,30nm,1.4s						
BPAW	Bear Paw Mtn.	82.79	26	P	P	01 50 32.0	+0.6
KTH	Kantishna Hill	82.80	27	P	P	01 50 32.0	+0.6
MLY	Manley	82.93	25	P	P	01 50 31.2	-0.8
RC01	Rabbit Creek A	83.30	29	P	P	01 50 33.2	-0.7
RC01				IAmb	IAmb	01 50 44.8	
	comp=Z,15nm,1.4s						
H23K	Yukon River	83.45	24	P	P	01 50 34.5	-0.1
I23K	Minto, Yukon-K	83.52	25	P	P	01 50 34.9	0.0
MCK	McKinley	83.69	27	P	P	01 50 35.5	-0.3
OBN	Obninsk	83.96	325	P	P	01 50 36.7	-0.5
	comp=Z,3.3nm,0.5s,baz=108,slow=5.6,SNR=5.2						
	comp=Z,3.3nm,0.5s						
SML	Sawmill	83.98	28	P	P	01 50 36.8	-0.5
SML				IAmb	IAmb	01 50 51.0	
	comp=Z,22nm,1.5s						
PWL	Port Wells	83.99	29	P	P	01 50 37.3	0.0
WRH	Wood River Hil	84.06	26	P	P	01 50 37.3	-0.3
H24K	Noodor Dome	84.14	24	P	P	01 50 38.5	+0.5
CCB	Clear Creek Bu	84.18	26	P	P	01 50 37.0	-1.2
TOKA	Tokat	84.52	310	P	P	01 50 38.2	-2.3
TOKA				IAmb	IAmb	01 50 41.7	
	comp=Z,13nm,1.2s						
HDA	Harding Lake	84.56	26	P	P	01 50 38.8	-1.2
IL31		84.58	25	P	P	01 50 39.3	-0.7
ILAR	Eielson Array	84.58	25	P	P	01 50 39.3	-0.8
	comp=Z,0.5nm,0.6s,baz=282,slow=4.2,SNR=20						
	comp=Z,0.5nm,0.6s						
VNDA	Vanda	85.64	172	P	P	01 50 45.0	+0.1
	comp=Z,1.1nm,0.7s,baz=316,slow=2.9,SNR=1.7						
	comp=Z,1.1nm,0.7s						
KIBK	Kibwezi	86.21	267	P	P	01 50 47.3	-1.9
BR131	Keskin Array S	86.73	309	P	P	01 50 48.8	-2.4
BR131				IAmb	IAmb	01 50 51.9	
	comp=Z,7.0nm,0.9s						
BRTR	Keskin Array B	86.73	309	P	P	01 50 49.9	-1.4
	comp=Z,3.6nm,0.9s,baz=80,slow=4.9,SNR=20						
	comp=Z,3.6nm,0.9s						
BRTR	Keskin Array B	86.73	309	P	P	01 50 49.1	-2.1
KMBO	Kilima Mbogo	86.88	269	P	P	01 50 50.8	-1.7
ARCES	ARCESS Array B	87.75	340	P	P	01 50 53.1	-2.0
	comp=Z,1.9nm,0.7s,baz=85,slow=5.8,SNR=8.1						
	comp=Z,1.9nm,0.7s						
AKASG	Malin Array Be	88.72	321	P	P	01 50 58.7	-1.3
	comp=Z,0.7nm,0.5s,baz=67,slow=5.2,SNR=5.7						
	comp=Z,0.7nm,0.5s						
FINES	FINESS Array B	88.89	332	P	P	01 50 59.9	-0.7
	comp=Z,2.4nm,0.6s,baz=66,slow=4.7,SNR=18						
	comp=Z,2.4nm,0.6s						
NOA	NORSAR Array B	95.89	333	P	P	01 51 31.1	-1.7
	comp=Z,1.9nm,1.0s,baz=69,slow=4.4,SNR=2.5						
	comp=Z,1.9nm,1.0s						
YKA	Yellowknife Ar	98.89	24	P	Pdif	01 51 45.8	-0.2
	comp=Z,0.1nm,0.5s,baz=297,slow=4.1,SNR=2.1						
	comp=Z,0.1nm,0.5s						
GERES	GERESS Array B	98.93	321	P	Pdif	01 51 45.8	-0.9
	comp=Z,0.2nm,0.5s,baz=80,slow=5.5,SNR=1.8						
	comp=Z,0.2nm,0.5s						
TORD	Torodi Ar. Bea	119.75	289	PKP	PKPdf	01 56 53.5	-0.5
	comp=Z,1.2nm,0.5s,baz=72,slow=2.0,SNR=24						
TXAR	Lajitas Array	122.53	50	PKP	PKPdf	01 56 59.3	+0.2
	comp=Z,0.1nm,0.4s,baz=350,slow=2.7,SNR=1.4						

IDC 06 02:00:39.7±1.2, 26°.55N×99°.54E, h0^{km}, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=211.7km s-min=24.0km az=53.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	24.39	330	P	P	02 05 59.9	+0.2
	0.3nm,0.5s,baz=129,slow=9.3,SNR=5.2						
	0.3nm,0.5s						
WRA	Warramunga Arr	57.23	140	P	P	02 10 28.7	-0.4
	0.8nm,0.6s,baz=329,slow=8.0,SNR=9.6						
	0.8nm,0.6s						
ASAR	Alice Springs	59.97	143	P	P	02 10 48.6	+0.5
	0.4nm,0.6s,baz=327,slow=6.4,SNR=5.0						
	0.4nm,0.6s						
GERES	GERESS Array B	67.87	315	P	P	02 11 39.7	-0.3
	0.3nm,0.5s,baz=80,slow=7.4,SNR=1.7						
	0.3nm,0.5s						

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*IDC **06** 02:01:43.5±1.8, 8°.73S×74°.43W, h132^{km}±20^{km}, mb3.5/9, mbtmp3.9/13, Error ellipse: s-maj=33.4km s-min=10.7km az=39.0*

*NEIC **06** 02:01:45.3±1.5, 8°.85S±0°.07×74°.53W±0°.07, h148^{km}±7^{km}, mb4.4/33, Error ellipse: s-maj=12.7km s-min=5.4km az=133.0*

*VAO **06** 02:01:50.0±0.5, 8°.67S×74°.05W, h139^{km}±4^{km}, mbR4.0*

ISC 06 02:01:44.5±0.4, 8°.84S±0°.05×74°.50W±0°.05, h145^{km}, n109, σ1^{s}49/118, mb4.3/24, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	2.09	58		Pn	02 02 21.6	+1.1
CZSB	Cruzeiro do Su	2.09	58	eP	Pn	02 02 21.8	+1.4
NNA	Nana	3.88	216	P	Pn	02 02 42.9	-0.3
	63nm,0.3s,baz=19,slow=6.1,SNR=41						
NNA				S	Sn	02 03 25.5	-3.3
	160nm,0.3s,baz=173,slow=19,SNR=7.9						
NNA	Nana	3.88	216	Pn	Pn	02 02 42.6	-0.6
ATAH	Atahualpa	4.21	293	P	Pn	02 02 47.9	+0.1
	31nm,0.3s,baz=83,slow=4.3,SNR=142						
ATAH				S	Sn	02 03 35.6	-1.3
	102nm,0.6s,baz=328,slow=8.2,SNR=9.0						
TBTG	Tabatinga, AM	6.49	45	Pn	Pn	02 03 17.5	-0.3
TBTG	Tabatinga, AM	6.49	45	eP	Pn	02 03 18.1	+0.3
MCRA	Macar, Loja	7.00	309	Pn	Pn	02 03 21.3	-3.3
ETMB	Extrema	8.24	97	Pn	Pn	02 03 38.7	-2.4
ETMB	Extrema	8.24	97	eP	Pn	02 03 39.0	-2.1
PORT	Chimborazo Vol	8.47	330	Pn	Pn	02 03 44.5	-0.3
CHSH	Refugio Sur-Vo	8.49	329	Pn	Pn	02 03 44.6	-0.5
LPAZ	La Paz	9.67	141	P	Pn	02 04 01.5	+0.7
	0.4nm,0.3s,baz=338,slow=7.6,SNR=2.4						
LPAZ				S	Sn	02 05 46.5	-1.7
	2.0nm,0.4s,baz=286,slow=10,SNR=1.5						
LPAZ	La Paz	9.67	141	Pn	Pn	02 04 00.1	-0.7
LPAZ	La Paz	9.67	141	eP	Pn	02 04 02.8	+2.0
OTAV	Otavalo	9.84	336	Pn	Pn	02 04 01.9	-1.1
OTAV	Otavalo	9.84	336	eP	Pn	02 04 06.4	+3.4
GCUF	Volcan Galeras	10.39	344	eP	Pn	02 04 12.4	+2.1
FLOC	Florencia	10.41	354	eP	Pn	02 04 08.3	-1.9
GARC	Garzon, Huila	11.00	355	eP	Pn	02 04 17.9	-0.2
BBAC	Balboa, Cauca	11.13	346	eP	Pn	02 04 19.9	+0.1
TEFE	Tefe	11.14	62	eP	Pn	02 04 18.7	-1.1
SAML	Samuel	11.19	91	Pn	Pn	02 04 17.8	-2.6
SAML	Samuel	11.19	91	eP	Pn	02 04 17.6	-2.7
SGCB	S£o Gabriel d	11.42	41	eP	Pn	02 04 20.8	-2.6
POPC	Popayan, Colom	11.51	349	eP	Pn	02 04 23.0	-1.8
PB11	IPOC Station P	11.83	157	Pn	Pn	02 04 24.5	-4.4
PRAC	Prado	12.47	358	eP	P	02 04 42.7	-0.5
ORTC	Ortega, Tolima	12.68	357	eP	Pn	02 04 40.6	+0.7
CHIC	Chingaza	13.40	3	eP	P	02 04 52.0	-1.8
PB07	IPOC Station P	13.56	161	P	P	02 04 55.6	+0.2
PB09	IPOC Station P	13.84	159	P	P	02 04 58.8	+0.3
PB03	IPOC Station P	13.91	161	P	P	02 05 00.2	+1.0
VILB	Vilhena	14.63	108	Pn	Pn	02 05 05.0	+0.3
VILB	Vilhena	14.63	108	eP	Pn	02 05 05.4	+0.8
RUSC	La Rusia	14.70	6	Pn	Pn	02 05 05.8	-0.2
LVC	Limon Verde	14.71	159	eP	P	02 05 09.7	+1.4
MACA	Manacapuru-AM	14.85	69	Pn	Pn	02 05 05.5	-1.9
MACA	Manacapuru-AM	14.85	69	eP	Pn	02 05 05.5	-1.9
SIV	San Ignacio	14.91	120	P	Pn	02 05 08.2	0.0
	2.6nm,0.6s,baz=300,slow=11,SNR=18						
SIV				S	Sn	02 07 47.8	-6.0
	2.4nm,0.6s,baz=220,slow=22,SNR=5.7						
PTLB	Pontes e Lacer	16.39	115		Pn	02 05 25.9	-0.5
PTLB				IAmb	IAmb	02 05 29.1	
	comp=Z,12nm,1.4s						
PTLB	Pontes e Lacer	16.39	115	eP	P	02 05 28.2	+1.7
BOAV	Boa Vista	17.85	52	P	P	02 05 42.1	-0.6
BOAV	Boa Vista	17.85	52	eP	Pn	02 05 43.6	-0.4
SDV	Santo Domingo	18.02	12	eP	Pn	02 05 46.2	0.0
BAUV	El Baul	18.80	20	P	Pn	02 05 54.5	-0.6
BAUV				IAmb	IAmb	02 05 56.8	
	comp=Z,13nm,0.6s						
NPGB	Novo Progresso	19.04	86	eP	P	02 05 55.5	-0.2
ITTB	Itaituba	19.16	78	eP	P	02 05 57.6	+0.7
SALV	Santo Antonio	19.66	113	eP	P	02 06 03.6	+1.3
URIC	Uribia, Colomb	20.56	7	P	P	02 06 12.0	+0.1
BIRV	Birongo	20.86	23	P	P	02 06 15.4	+0.2
PP1B	Ponte de Pedra	20.98	117	eP	P	02 06 18.4	+2.0
MALB	Monte Alegre	21.30	72	eP	P	02 06 20.8	+0.8
AQDB	Aquidauana	21.53	125	eP	P	02 06 24.8	+2.5
SNDB	Serra Nova Dou	23.04	100	eP	P	02 06 36.8	-0.4
ARAG	Araguaiana, MT	23.18	109	eP	P	02 06 39.0	+0.4
CFA	Coronel Fontan	23.39	166	P	P	02 06 41.9	+1.5
	comp=Z,1.4nm,0.6s,baz=315,slow=13,SNR=2.3						
	comp=Z,1.4nm,0.6s						
CPUP	Villa Florida	23.84	139	eP	P	02 06 48.7	+4.3
MCPB	Macapa, AP	23.89	71	eP	P	02 06 46.6	+1.6
PRPB	Parauapebas	24.62	86	eP	P	02 06 52.8	+1.1
PCMB	Pacaembu	25.72	122	eP	P	02 07 03.9	+2.3
SMTB	Santa Maria do	26.59	92	eP	P	02 07 11.1	+1.6
BDFB	Brasilia	26.74	107	P	P	02 07 12.2	+1.4
	comp=Z,1.7nm,0.5s,baz=280,slow=11,SNR=5.1						
	comp=Z,1.7nm,0.5s						
BDFB	Brasilia	26.74	107	P	P	02 07 12.6	+1.7
BDFB	Brasilia	26.74	107	eP	P	02 07 13.0	+2.1
IPMB	Ipameri, GO	27.11	112	eP	P	02 07 16.5	+2.4
ROSB	Rosrio	30.77	81	eP	P	02 07 47.8	+1.2
SJMB	Sao Joao De Ma	33.76	110	eP	P	02 08 15.1	+2.5
Z47A	Carrollton	43.75	343	P	P	02 09 35.5	-0.1
Z47A				IAmb	IAmb	02 09 49.3	
	comp=Z,14nm,1.2s						
W57A	Gilead	44.06	354	P	P	02 09 38.4	+0.4
W57A				IAmb	IAmb	02 09 56.6	
	comp=Z,13nm,1.2s						
V58A	Windy Hill, Pi	44.60	355	P	P	02 09 41.1	-1.2
V58A				IAmb	IAmb	02 09 52.4	
	comp=Z,17nm,1.4s						
W50A	Signal Mountai	44.98	347	P	P	02 09 45.3	-0.1
W50A				IAmb	IAmb	02 09 52.1	
	comp=Z,17nm,1.4s						

CPCT	Cooper Cave	45.05	348	P	P	02 09 45.7	-0.2
CPCT				IAmb	IAmb	02 09 50.4	
	comp=Z,17nm,1.5s						
T59A	Double "B" Far	45.66	357	P	P	02 09 50.9	+0.3
T57A	Hurt	45.81	355	P	P	02 09 52.4	+0.5
V48A	Smith Brothers	45.84	346	P	P	02 09 51.3	-0.8
V48A				IAmb	IAmb	02 10 09.6	
	comp=Z,14nm,1.5s						
TZTN	Tazewell	45.93	350	P	P	02 09 52.8	0.0
S57A	Dark Hollow, R	46.54	355	P	P	02 09 56.9	-0.7
S57A				IAmb	IAmb	02 09 58.6	
	comp=Z,8.0nm,1.1s						
TXAR	Lajitas Array	47.22	325	P	P	02 10 04.0	+0.9
	comp=Z,1.3nm,0.5s,baz=151,slow=8.8,SNR=36						
TXAR				PcP	PcP	02 11 32.1	-0.1
	comp=Z,0.3nm,0.7s,baz=144,slow=7.8,SNR=2.2						
	comp=Z,1.3nm,0.5s						
TXAR	Lajitas Array	47.22	325	P	P	02 10 02.7	-0.4
TX31	Lajitas Ar. Si	47.22	325	P	P	02 10 03.1	-0.1
TX31				IAmb	IAmb	02 10 04.9	
	comp=Z,8.3nm,0.9s						
TX32	Lajitas Array	47.22	325	P	P	02 10 03.1	-0.1
X37A	Clayton	47.50	337	P	P	02 10 06.0	+0.9
X37A				IAmb	IAmb	02 10 07.2	
	comp=Z,4.3nm,0.8s						
ABTX	Abilene, Hawle	47.69	331	P	P	02 10 07.3	+0.7
ABTX				IAmb	IAmb	02 10 08.4	
	comp=Z,5.7nm,0.6s						
BINY	Binghamton	50.80	359	P	P	02 10 31.0	+1.0
BINY				IAmb	IAmb	02 10 31.6	
	comp=Z,6.9nm,0.7s						
K57A	Scipio Center	51.35	358	P	P	02 10 34.5	+0.3
J57A	Williamstown	52.02	359	P	P	02 10 39.1	+0.1
J57A				IAmb	IAmb	02 10 40.4	
	comp=Z,11nm,1.2s						
FRNY	Flat Rock	53.43	1	P	P	02 10 48.1	-1.2
F36A	Milaca	57.06	344	P	P	02 11 15.2	-0.2
F36A				IAmb	IAmb	02 11 35.0	
	comp=Z,6.9nm,1.4s						
RSSD	Black Hills	59.11	336	P	P	02 11 30.1	+0.2
PDAR	Pinedale Array	60.50	331	P	P	02 11 39.4	-0.1
	comp=Z,0.2nm,0.6s,baz=119,slow=8.4,SNR=2.3						
	comp=Z,0.2nm,0.6s						
R11A	Troy Canyon, C	60.57	324	P	P	02 11 39.8	-0.2
HWUT	Hardware Ranch	60.63	329	P	P	02 11 40.3	0.0
HWUT				IAmb	IAmb	02 11 41.1	
	comp=Z,2.8nm,0.7s						
NVAR	Mina Array Bea	62.24	322	P	P	02 11 52.1	+0.8
	comp=Z,0.2nm,0.3s,baz=116,slow=6.1,SNR=2.2						
	comp=Z,0.2nm,0.3s						
BOZ	Bozeman (W)	63.61	332	P	P	02 11 59.6	-0.5
HRY	Holter Researc	64.53	332	P	P	02 12 07.2	+1.1
EGMT	Eagleton	64.62	335	P	P	02 12 06.5	-0.1
EGMT				IAmb	IAmb	02 12 32.5	
	comp=Z,9.8nm,1.4s						
WALA	Waterton Lakes	67.21	333	P	P	02 12 23.8	+0.6
DBIC	Dimbokro	71.11	80	P	P	02 12 47.0	-0.8
	comp=Z,2.0nm,0.5s,baz=271,slow=4.6,SNR=5.8						
	comp=Z,2.0nm,0.5s						
DBIC	Dimbokro	71.11	80	P	P	02 12 46.7	-1.0
YKA	Yellowknife Ar	77.54	342	P	P	02 13 23.7	-0.2
	comp=Z,0.7nm,0.5s,baz=143,slow=6.1,SNR=17						
YKA				pP	pP	02 14 01.1	+1.2
	comp=Z,0.5nm,0.5s,baz=142,slow=6.2,SNR=5.1						
	comp=Z,0.7nm,0.5s						
YKA	Yellowknife Ar	77.54	342	P	P	02 13 23.2	-0.7
TORD	Torodi Ar. Bea	78.74	75	P	P	02 13 30.7	-0.9
	comp=Z,0.9nm,0.4s,baz=259,slow=1.7,SNR=9.0						
TORD				pP	pP	02 14 08.5	+0.8
	comp=Z,0.4nm,0.6s,baz=279,slow=6.8,SNR=1.5						
	comp=Z,0.9nm,0.4s						
QSPA	South Pole Qui	81.28	180	P	P	02 13 45.2	+0.8
ILAR	Eielson Array	90.56	336	P	P	02 14 29.8	-0.1
	comp=Z,0.2nm,0.3s,baz=121,slow=3.5,SNR=6.3						
	comp=Z,0.2nm,0.3s						
ZALV	Zalesovo Beam	132.04	16	PKP	PKPdf	02 20 40.5	-0.3
	comp=Z,1.0nm,0.7s,baz=338,slow=3.4,SNR=4.2						
ZALV				pP	pPKPdf	02 21 20.8	+1.3
	comp=Z,1.2nm,0.7s,baz=298,slow=3.2,SNR=4.2						
MKAR	Makanchi Array	137.31	24	PKP	PKPdf	02 20 50.7	-0.3
	comp=Z,0.2nm,0.7s,baz=338,slow=1.6,SNR=3.7						
MKAR				pP	pPKPdf	02 21 30.7	+1.1
	comp=Z,0.6nm,0.8s,baz=360,slow=1.2,SNR=4.2						
ASAR	Alice Springs	137.40	220	PKP	PKPdf	02 20 51.4	-0.4
	comp=Z,0.4nm,0.7s,baz=120,slow=2.4,SNR=5.2						
WRA	Warramunga Arr	139.70	225	PKP	PKPdf	02 20 56.0	-0.1
	comp=Z,0.7nm,0.4s,baz=119,slow=2.1,SNR=15						

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*NIC **06** 02:20:28.4±0.0, 36°.77N×31°.78E, h107^{km}±12^{km}, Ml2.7/3*
*DDA **06** 02:20:33.2±0.0, 36°.50N×31°.56E, h68^{km}±1^{km}, ML2.2*
*ISK **06** 02:20:33.1, 36°.45N×31°.62E, h80^{km}±2^{km}, ML2.2/22*
*GII **06** 02:20:40.1±0.6, 36°.05N×32°.12E, h100^{km}, Mm2.2/3*
ISC 06 02:20:32.0±1.3, **36°.45N**±0°.03×**31°.65E**±0°.03, **h96**^{km}±8^{km}, **n60**, σ**2**^{s}**.07**/91, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEPZ	Antalya-Kepez	0.45	355	P	Pn	02 20 46.5	-0.6
KEPZ				S	Sn	02 20 54.7	-3.7
GAZI	Gazipasa	0.58	112	Pg	Pn	02 20 48.5	+0.5
GAZI				Sg	Sn	02 20 59.4	-0.7
GAZI	Gazipasa	0.58	112	P	Pn	02 20 48.5	+0.5
GAZI				S	Sn	02 20 59.3	-0.7
GAZI				*i* AML	AML	02 21 00.0	
	comp=E,117nm,0.5s						
HDMB	Hadim	0.84	52	Pg	Pn	02 20 51.7	+1.0
HDMB				Sg	Sn	02 21 05.0	+0.3
ANTB	Antalya	0.92	299	Pg	Pn	02 20 51.6	+0.4
SEYD	Seydisehir-KON	0.96	9	Pg	Pn	02 20 52.4	+0.5
SEYD				Sg	Sn	02 21 06.5	-0.3
SEDI	Konya, Seydise	1.00	5	P	Pn	02 20 52.1	-0.2
SEDI				S	Sn	02 21 06.0	-1.5
AKUM	Antalya-Kumluc	1.06	263	P	Pn	02 20 52.8	-0.1
AKUM				S	Sn	02 21 11.8	+3.3
SUTC	Sutluce-Ispart	1.15	333	Pn	Pn	02 20 54.7	+0.7
KORT	Korkueli	1.18	298	Pn	Pn	02 20 54.4	0.0
KORT	Korkueli	1.18	298	P	Pn	02 20 52.8	-1.5
KORT				S	Sn	02 21 08.8	-2.4
BERE	Bereket-Mersin	1.27	94	Pn	Pn	02 20 56.6	+1.2
KKBE	Karaman, Kazim	1.28	53	P	Pn	02 20 56.8	+1.2
KKBE				S	Sn	02 21 13.4	+0.1
KKBE				*i* AML	AML	02 21 14.0	
	comp=E,36nm,0.3s						
BCK	Bucak	1.32	320	Pn	Pn	02 20 56.7	+0.8
KMER	Konya-Meram	1.43	23	P	Pn	02 20 57.7	+0.4
KMER				S	Sn	02 21 15.8	-0.7
KMER				*i* AML	AML	02 21 17.0	
	comp=E,23nm,0.4s						
ELL	Elmali	1.44	282	Pn	Pn	02 20 58.7	+1.3
ELL	Elmali	1.44	282	S	Sn	02 21 16.9	+0.3
TEVE	Tevekalti-Mers	1.44	90	Pn	Pn	02 20 58.9	+1.5
KRMN	Karaman	1.48	60	Pn	Pn	02 20 59.1	+1.2
KRMN				Sn	Sn	02 21 18.3	+0.8
ALFC	Alefka	1.51	149	P	Pn	02 20 58.0	-0.2
ALFC				AML	AML	02 21 19.8	
	0.2nm,0.2s						
ALFC				AML	AML	02 21 20.0	
	0.2nm,0.2s						
AKMS	Akamas	1.54	159	P	Pn	02 20 58.6	0.0
AKMS				AML	AML	02 21 25.1	
	0.2nm,0.2s						
AKMS				AML	AML	02 21 25.4	
	0.2nm,0.3s						
GULN	MERSIN_Gulnar	1.55	99	P	Pn	02 20 59.8	+1.1
GULN				S	Sn	02 21 19.2	+0.3
KONT	Konya--Tatoy	1.59	21	Pn	Pn	02 21 00.4	+1.1
KONT	Konya--Tatoy	1.59	21	P	Pn	02 20 59.9	+0.6
KONT				S	Sn	02 21 20.1	+0.2
DOGA	KONYA_Doganhis	1.65	0	P	Pn	02 21 00.7	+0.6
IKL	Isikli	1.65	97	Pn	Pn	02 21 01.8	+1.8
IKL				Sn	Sn	02 21 22.4	+1.2
AKAS	Kas	1.67	263	Pn	Pn	02 21 01.2	+0.9
LEF	Lefka	1.67	143	P	Pn	02 20 59.6	-0.5
LEF				S	Sn	02 21 22.0	+0.4
KSL	Kastellorizon	1.70	260	P	Pn	02 21 00.9	+0.4
KSL				S	Sn	02 21 24.5	+2.3
BRDR	BURDUR-Merkez	1.78	315	P	Pn	02 21 03.3	+1.7
BRDR				S	Sn	02 21 22.1	-2.1
TROD	Troodos	1.80	146	P	Pn	02 21 01.5	-0.6
TROD				S	Sn	02 21 27.8	+2.9
TROD				AML	AML	02 21 28.6	
	0.1nm,0.5s						
TROD				AML	AML	02 21 28.6	
	0.1nm,0.5s						
NATA	Nata	1.83	156	P	Pn	02 21 03.0	+0.7
NATA				S	Sn	02 21 30.8	+5.5
LADK	Ladik-KONYA	1.83	18	Pn	Pn	02 21 03.4	+1.0
SILI	Silifke-Mersin	1.83	92	Pn	Pn	02 21 04.2	+1.9
YVAC	Isparta, Yalva	1.84	350	P	Pn	02 21 02.8	+0.3
YVAC				S	Sn	02 21 23.4	-2.4
LFK	Lefkose	1.92	127	Pn	Pn	02 21 05.1	+1.6
CAME	Cameli-Denizli	1.95	285	Pn	Pn	02 21 06.1	+2.2
SZAC	Souni	1.97	149	S	Sn	02 21 33.2	+4.7
KIZK	Mersin	2.01	88	Pn	Pn	02 21 07.3	+2.8
CSS	Mathiatis	2.02	137	P	Pn	02 21 04.9	+0.2
CSS	Mathiatis	2.02	137	Pn	Pn	02 21 04.9	+0.2
CSS				Sn	Sn	02 21 26.3	-3.4
FETY	Fethiye	2.08	276	Pn	Pn	02 21 07.0	+1.5
ALIN	Konya, Altinte	2.08	28	P	Pn	02 21 05.9	+0.2
ALIN				S	Sn	02 21 28.5	-2.8
KDHN	Kadinhani	2.10	10	P	Pn	02 21 05.3	-0.5
KDHN				S	Sn	02 21 31.1	-0.5
ASGA	Asgata	2.11	142	S	Sn	02 21 35.1	+3.3
MVOU	Mavrovouni	2.16	131	P	Pn	02 21 06.3	-0.1
KERG	Konya-Eregli	2.20	63	P	Pn	02 21 08.4	+1.2
KERG				S	Sn	02 21 33.6	-0.4
EREN	Erenkoy	2.24	114	Pn	Pn	02 21 10.9	+3.4
CHBY	Cihanbeyli	2.34	24	Pn	Pn	02 21 11.9	+2.9
KIZT	Kizilcal	2.43	4	Pn	Pn	02 21 12.9	+2.7
DED	Mersin	2.58	78	P	Pn	02 21 12.5	+0.4
DED				S	Sn	02 21 42.0	-0.8
KARA	Karaisali	2.84	73	Pn	Pn	02 21 18.3	+2.7
MMA0B	Mount Meron ar	4.61	137	Pn	Pn	02 21 40.7	+1.2
MMA0B				Sn	Sn	02 22 27.6	-4.4
MMA3	Mount Meron ar	4.62	137	Pn	Pn	02 21 40.8	+1.3
MMA2	Mount Meron ar	4.62	137	Pn	Pn	02 21 40.8	+1.2
GEM	Giv'at Ha'Em	4.62	133	Pn	Pn	02 21 41.1	+1.6
GEM				Sn	Sn	02 22 27.1	-4.9
OFRI	`Ofer	4.71	143	Pn	Pn	02 21 40.6	-0.2
OFRI				Sn	Sn	02 22 29.6	-4.6
MMLI	Mount Malkishu	5.07	141	Pn	Pn	02 21 46.8	+1.1
MMLI				Sn	Sn	02 22 37.7	-5.4
DSI	Dead Sea	5.77	147	Pn	Pn	02 21 56.2	+1.0
DSI				Sn	Sn	02 22 54.6	-5.4
KZIT	Kziot	5.99	157	Pn	Pn	02 21 59.2	+1.1
KZIT				Sn	Sn	02 23 01.6	-3.7

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*MOS **06** 02:43:58.4±1.1, 37°.00N×73°.51E, h81^{km}, mb4.4/24, Error ellipse: s-maj=6.2km s-min=4.4km az=97.8*
*IDC **06** 02:43:59.2±2.6, 36°.91N×73°.44E, h75^{km}±23^{km}, mb3.9/23, mbtmp4.2/29, MS3.5/7, Error ellipse: s-maj=14.5km s-min=11.4km az=180.0*
*BJI **06** 02:44:00.3±0.0, 37°.30N×73°.40E, h100^{km}, mb4.7/36, mB4.8/21*
*NNC **06** 02:44:00.9±3.5, 37°.36N×72°.63E, h0^{km}, mb4.5, mpv4.1, Error ellipse: s-maj=32.0km s-min=17.6km az=138.0*
*NEIC **06** 02:44:00.3±1.4, 37°.05N±0°.06×73°.50E±0°.07, h90^{km}±2^{km}, mb4.4/65, Error ellipse: s-maj=9.0km s-min=7.6km az=194.0*
ISC 06 02:44:00.4±0.3, **36°.97N**±0°.03×**73°.65E**±0°.03, **h100**^{km}, **n350**, σ**1**^{s}**.68**/338, **mb4.3**/78, **27C-10D**, **Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	3.13	35	P	Pn	02 44 43.9	-4.1
KSH				S	Sn	02 45 18.1	-6.7
KSH				smax	smax		
	comp=N,3µm,0.8s						
KSH				smax	smax		
	comp=E,3µm,0.8s						
CHCP	Chirah Chowk	3.32	186	P	Pn	02 44 52.1	+1.6
CHCP				S	Sn	02 45 30.0	+0.9
GAR	Garm	3.32	309	Pn	Pn	02 44 48.5	-2.1
NIL	Nilore	3.33	186	Pn	Pn	02 44 51.6	+1.0
NIL	Nilore	3.33	186	PN	Pn	02 44 51.6	+1.0
NIL	Nilore	3.33	186	P	Pn	02 44 52.4	+1.8
CEP	Cherat	3.44	205	P	Pn	02 44 53.3	+1.0
CEP				S	Sn	02 45 32.0	-0.3
CHGR	Chuyangaron	3.94	297	Pn	Pn	02 44 55.4	-3.4
CHGR	Chuyangaron	3.94	297	PN	Pn	02 44 55.4	-3.4
JMU	Jammu	4.36	166	*e*P	Pn	02 45 10.1	+5.6
JMU				*e*S	Sn	02 45 52.4	-1.9
THW	Thamme Wali	4.45	201	P	Pn	02 45 05.4	-0.3
KBL	Kabul	4.46	238	Pn	Pn	02 45 03.6	-2.4
KBL	Kabul	4.46	238	PN	Pn	02 45 03.6	-2.4
KBL	Kabul	4.46	238	P	Pn	02 45 04.0	-2.0
	SNR=20						
THN	Thein Dam	4.83	159	*e*P	Pn	02 45 12.3	+1.5
THN				*e*S	Sn	02 46 04.8	-0.9
THN				IAML		02 46 09.2	
	comp=N,2µm,0.3s						
SARP	Sargodha	5.10	189	P	Pn	02 45 13.5	-1.0
AML	Almayashu	5.16	0	P	Pn	02 45 15.5	-0.1
	SNR=32						
AML	Almayashu	5.16	0	⇓P	Pn	02 45 15.3	-0.3
	comp=N,2.2nm,0.6s						
AML				⇑S	Sn	02 46 11.9	-2.1
	comp=N,7.8nm,0.4s						
AML	Almayashu	5.16	0	PN	Pn	02 45 15.3	-0.3
AML				S	Sn	02 46 11.9	-2.1
UCH	Uchtor	5.29	7	P	Pn	02 45 18.0	+0.5
	SNR=78						
EKS2	Erkin-Say	5.69	1	P	Pn	02 45 22.9	+0.4
	SNR=34						
AAK	Ala-Archa	5.70	6	P	Pn	02 45 23.7	+0.9
	SNR=32						
AAK	Ala-Archa	5.70	6	P	Pn	02 45 23.3	+0.6
	comp=N,22nm,0.5s,baz=179,slow=4.8,SNR=39						
AAK				S	Sn	02 46 27.6	+0.8
	comp=N,55nm,0.6s,baz=119,slow=19,SNR=4.5						
AAK	Ala-Archa	5.70	6	Pn	Pn	02 45 22.6	-0.1
AAK	Ala-Archa	5.70	6	*i* P	Pn	02 45 23.6	+0.9
	SNR=42						
AAK	Ala-Archa	5.70	6	P	Pn	02 45 20.5	-2.2
TARG	Taragay, Kyrgy	5.74	33	Pn	Pn	02 45 24.4	+0.9
TARG	Taragay, Kyrgy	5.74	33	PN	Pn	02 45 24.4	+0.9
KBK	Karagaybulak	5.77	10	P	Pn	02 45 24.7	+1.1
	SNR=14						
MRKS	Merke	5.78	357	Pg	Pn	02 45 23.7	0.0
	comp=N,16nm,0.2s						
MRKS				Lg	Lg	02 46 26.4	
	comp=N,75nm,0.7s						
IUG	Iuzhnay	5.88	333	Pg	Pn	02 45 23.2	-1.9
	comp=N,14nm,0.4s						
IUG				Lg	Lg	02 46 25.7	
	comp=N,150nm,0.7s						
IUG	Iuzhnay	5.88	333	*e*PN	Pn	02 45 23.2	-1.9
CHMS	Chumysh	6.08	8	P	Pn	02 45 28.2	+0.4
	SNR=8.0						
TKM2	Tokmak 2	6.13	14	P	Pn	02 45 29.7	+1.1
	SNR=15						
SMLA	Simla	6.51	152	*e*P	Pn	02 45 33.5	-0.1
SMLA				*e*S	Sn	02 46 41.3	-5.2
SMLA				IAML		02 46 46.3	
	comp=N,1µm,0.3s						
SMLA				IAML		02 46 46.8	
	comp=E,2µm,0.4s						
SGDS	Sogindy	6.52	6	Pg	Pn	02 45 59.5	+26
	comp=E,11nm,0.4s						
TNSS	Tian-Shan	6.57	22	Pg	Pn	02 45 42.7	+8.0
	comp=E,16nm,0.8s						
TNSS				Lg	Lg	02 46 58.7	
	comp=E,12nm,1.4s						
KK31	Karatay Array	6.58	340	Pn	Pn	02 45 32.8	-1.8
KK31	Karatay Array	6.58	340	P	Pn	02 45 32.8	-1.8
	comp=E,3.7nm,0.3s,baz=147,slow=11,SNR=232						
KK31				⇑S	Sn	02 46 42.0	-6.1
	comp=E,113nm,0.8s,baz=162,slow=20,SNR=8.1						
KK31	Karatay Array	6.58	340	PN	Pn	02 45 32.8	-1.8
KKAR	Karatay Array	6.58	340	Pn	Pn	02 45 32.7	-1.9
KKAR	Karatay Array	6.58	340		Pn	02 45 32.6	-1.9
KKAR	Karatay Array	6.58	340	PN	Pn	02 45 32.7	-1.9
KTBS	Karatobe	7.12	18	Pg	Pn	02 46 11.0	+29
	comp=E,7.5nm,0.6s						
KTBS				Lg	Lg	02 47 47.3	
	comp=E,95nm,1.2s						
SHLS	Shalkode	7.62	34	*e*PN	Pn	02 45 52.3	+3.5
BTLS	Baital	8.07	2	*e*PN	Pn	02 45 54.3	-0.5
NDI	New Delhi	8.79	159	*e*P	Pn	02 46 04.5	-0.1
NDI				*e*P	Pn	02 46 04.6	0.0
NDI				*e*S	Sn	02 47 30.2	-12
NDI				*e*S	Sn	02 47 36.0	-5.9
NDI				IAML		02 47 39.1	
	comp=N,205nm,0.3s						
NDI				IAML		02 47 39.8	
	comp=E,284nm,0.6s						
KUDL	Kundal	9.12	164	*e*P	Pn	02 46 07.3	-1.8
KUDL				*e*S	Sn	02 47 40.5	-9.5
SONA	Sohna	9.16	161	*e*P	Pn	02 46 08.9	-0.8
SONA				*e*S	Sn	02 47 42.6	-8.4
PTH	Pithoragarh	9.21	142	*e*P	Pn	02 46 08.7	-1.9
PTH				*e*S	Sn	02 47 44.4	-8.2
LGTI	Lohaghat	9.31	142	*e*P	Pn	02 46 09.2	-2.5
LGTI				*e*S	Sn	02 47 44.2	-10
LGTI				IAML		02 47 54.6	
	comp=E,137nm,0.4s						
AJM	Ajmer	10.49	175	*e*P	Pn	02 46 25.7	-2.2
AJM				*e*S	Sn	02 48 14.9	-8.5
MAKZ	Makanchi	11.62	30	Pn	Pn	02 46 42.1	-0.8
MAKZ	Makanchi	11.62	30	P	Pn	02 46 42.1	-0.8
MK31	Makanchi Array	11.73	31	Pn	Pn	02 46 44.4	0.0
MK31	Makanchi Array	11.73	31	P	Pn	02 46 44.4	0.0
MKAR	Makanchi Array	11.73	31	P	Pn	02 46 45.2	+0.8
	comp=E,0.8nm,0.6s,baz=210,slow=14,SNR=15						
MKAR	Makanchi Array	11.73	31	Pn	Pn	02 46 42.3	-2.1
MKAR	Makanchi Array	11.73	31	P	Pn	02 46 42.3	-2.1
PYUN	Piuthan	11.84	136	*e*P	Pn	02 46 42.9	-3.2
	comp=E,112nm,0.5s						
PYUN				*e*S	Sn	02 48 44.4	-12
DANN	Dangsing	12.09	132	*e*P	Pn	02 46 45.7	-3.9
	comp=E,81nm,0.4s						
JHNI	Jhansi	12.20	159	*e*P	Pn	02 46 47.6	-3.2
JHNI				*e*S	Sn	02 48 52.5	-12
JHNI				IAML		02 48 58.3	
	comp=N,75nm,0.6s						
JHNI				IAML		02 48 58.3	
	comp=E,104nm,0.6s						
GEYT	Alibeck	12.38	279	P	Pn	02 46 46.5	-6.7
	comp=E,7.5nm,0.7s,baz=102,slow=12,SNR=10						
GEYT				S	Sn	02 48 56.9	-12
	comp=E,17nm,0.9s,baz=40,slow=25,SNR=8.6						
GEYT				LR	LR	02 52 07.9	
	comp=E,138nm,20.1s,baz=86,slow=40						
GYA0	ALIBECK ARRAY	12.38	279	P	Pn	02 46 46.6	-6.6
GYA0B	ALIBECK ARRAY	12.38	279	⇑P	Pn	02 46 46.6	-6.6
GYA0B				⇑S	Sn	02 48 55.5	-14
WMQ	Urumqi	12.70	53	*e*P	Pn	02 46 56.7	-0.6
WMQ				S	Sn	02 49 14.0	-2.9
WMQ				pmax	pmax		
	comp=E,14nm,0.7s						
GKN	Gorkha	12.87	131	*e*P	Pn	02 46 56.2	-3.6
	comp=E,114nm,0.3s						
DMN	Daman	13.44	131	*e*P	Pn	02 47 03.4	-3.9
	comp=E,72nm,0.5s						
PKIN	Phulchoki	13.64	130	*e*P	Pn	02 47 05.7	-4.3
	comp=E,85nm,0.6s						
PKI	Pulchoki	13.65	130	*e*P	Pn	02 47 05.8	-4.4
	comp=E,91nm,0.6s						
GUN	Gumba	13.71	128	*e*P	Pn	02 47 06.4	-4.5
	comp=E,85nm,0.6s						
BHPL	Bhopal	14.06	166	*e*P	Pn	02 47 10.6	-4.6
BHPL				*e*S	Sn	02 49 37.1	-13
JIRN	Jiri	14.08	128	*e*P	Pn	02 47 11.6	-4.1
	comp=E,176nm,0.5s						
KURBB	Kurchatov Arra	14.09	13	P	Pn	02 47 13.2	-2.1
	comp=E,1.1nm,0.7s,baz=204,slow=10,SNR=7.9						
KURBB	Kurchatov Arra	14.09	13	⇑P	P	02 47 17.4	-2.5
	comp=E,10nm,0.7s						
KURBB	Kurchatov Arra	14.09	13	P	P	02 47 17.4	-2.5
KURK	Kurchatov	14.20	13	Pn	Pn	02 47 16.7	0.0
KURK	Kurchatov	14.20	13	⇓P	Pn	02 47 17.8	+1.2
	comp=E,31nm,1.1s						
KURK	Kurchatov	14.20	13	P	Pn	02 47 16.7	0.0
KURK	Kurchatov	14.20	13	P	Pn	02 47 16.5	-0.2
JBP	Jabalpur	14.80	157	*e*S	Sn	02 49 54.1	-14
RAMN	Ramite	14.84	129	*e*P	Pn	02 47 21.5	-3.8
	comp=E,52nm,0.5s						
TAPN	Taplejung	15.27	125	*e*P	Pn	02 47 26.6	-4.3
	comp=E,59nm,0.6s						
NGCH	Negor - Chabah	15.75	226	P	Pn	02 47 37.0	+0.4
AB31	Akbulak array	15.81	325	⇑P	Pn	02 47 34.3	-2.8
	comp=E,2.9nm,0.5s,baz=131,slow=14,SNR=74						
AB31				S	Sn	02 50 18.7	-13
	comp=E,5.3nm,0.4s,baz=133,slow=24,SNR=5.1						
AB31	Akbulak array	15.81	325	P	Pn	02 47 34.3	-2.8
AB31				S	Sn	02 50 18.7	-13
ABKAR	Akbulak array	15.81	325	Pn	Pn	02 47 33.5	-3.6
ABKAR	Akbulak array	15.81	325	Pn	Pn	02 47 33.3	-3.8
ABKAR				IAmb	IAmb	02 47 58.3	
	comp=Z,9.2nm,0.8s						
DGZ	Jazzator, Alta	16.17	34	*i* P	P	02 47 42.9	-0.2
DGZ				pmax	pmax		
	comp=Z,16nm,0.9s						
BVAR	Borovoye Array	16.22	353	P	Pn	02 47 41.0	-1.2
	comp=Z,1.0nm,0.4s,baz=164,slow=7.9,SNR=7.5						
BVAR	Borovoye Array	16.22	353	P	Pn	02 47 41.0	-1.2
BRVK	Borovoye	16.26	353	Pn	Pn	02 47 41.0	-1.6
BRVK	Borovoye	16.26	353	P	Pn	02 47 41.1	-1.6
BRVK				pmax	pmax		
	comp=Z,12nm,0.8s						
BRVK	Borovoye	16.26	353	P	Pn	02 47 41.4	-1.3
LSA	Lhasa	16.31	111	Pn	Pn	02 47 42.9	-1.1
LSA				IAmb	IAmb	02 47 50.4	
	comp=Z,12nm,0.6s						
LSA	Lhasa	16.31	111	P	Pn	02 47 42.9	-1.1
LSA				pmax	pmax		
	comp=Z,12nm,0.6s						
LSA	Lhasa	16.31	111	P	P	02 47 48.1	+3.0
GOMU	GeErMu	17.02	86	P	P	02 47 54.0	+1.2
GOMU				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GOMU				pmax	pmax		
	comp=Z,59nm,4.6s						
JASK	Jask - Hormozg	17.41	235	P	Pn	02 47 57.1	+0.1
AKTO	Aktyubinsk	17.53	325	P	Pn	02 47 57.3	-0.9
	comp=Z,3.1nm,0.6s,baz=139,slow=7.0,SNR=7.8						
AKTO				S	Sn	02 51 00.6	-13
	comp=Z,3.0nm,0.8s,baz=167,slow=19,SNR=1.7						
BANOM	Banah	18.42	238	*i* P	P	02 48 06.6	-1.3
	SNR=25						
BANOM	Banah	18.42	238	P	Pn	02 48 08.1	-1.0
	SNR=8.0						
SHME	Shamm	18.44	239	*i* P	P	02 48 06.7	-1.4
	SNR=11						
SHME	Shamm	18.44	239	P	Pn	02 48 08.5	-0.9
	SNR=5.1						
ZAA0	Zalesovo Array	18.66	21	P	P	02 48 10.3	+0.1
ZAA0				IAmb	IAmb	02 48 39.7	
	comp=Z,20nm,0.8s						
ZALV	Zalesovo Beam	18.66	21	P	Pn	02 48 11.4	-0.3
	comp=Z,8.8nm,0.6s,baz=218,slow=10,SNR=40						
ZALV				S	S	02 51 37.6	+0.2
	comp=Z,1.4nm,0.8s,baz=207,slow=16,SNR=1.4						
ZALV				LR	LR	02 55 49.8	
	comp=Z,59nm,20.8s,baz=78,slow=38						
ZALV	Zalesovo Beam	18.66	21	P	Pn	02 48 10.8	-1.0
ZALV	Zalesovo Beam	18.66	21	P	Pn	02 48 10.8	-1.0
MDH	Madha	18.83	237	*i* P	P	02 48 11.6	-0.8
	SNR=5.5						
MDH	Madha	18.83	237	P	Pn	02 48 12.7	-1.3
WSAR	Wadi Sarin	18.84	228	P	P	02 48 11.8	-0.6
	comp=Z,23nm,0.6s,baz=55,slow=13,SNR=32						
WSAR				LR	LR	02 56 10.9	
	comp=Z,64nm,21.2s,baz=108,slow=39						
WSAR	Wadi Sarin	18.84	228	P	Pn	02 48 13.7	-0.4
	SNR=7.2						
MASF	Masafi	18.88	237	P	Pn	02 48 13.4	-1.2
MSFE	Esma-Masafi	18.89	237	P	Pn	02 48 13.4	-1.3
BIDO	Bidbid	18.92	229	P	Pn	02 48 14.8	-0.3
WBK	Wadi Bani Khal	19.12	226	P	Pn	02 48 17.3	-0.2
UOSS	Minazif	19.13	236	P	P	02 48 14.7	-1.0
UOSS				IAmb	IAmb	02 48 16.8	
	comp=Z,27nm,0.9s						
UOSS	Minazif	19.13	236	*i* P	P	02 48 15.2	-0.5
	SNR=9.9						
UOSS	Minazif	19.13	236	P	Pn	02 48 16.0	-1.6
JLN	Jalan Bani Buh	19.24	224	P	Pn	02 48 18.7	-0.1
SHL	Shillong	19.25	121	P	P	02 48 15.7	-1.5
SHL				IAmb	IAmb	02 48 24.7	
	comp=Z,20nm,0.6s						
SHL	Shillong	19.25	121	P	P	02 48 15.7	-1.5
SHL				pmax	pmax		
	comp=Z,20nm,0.6s						
SHL	Shillong	19.25	121	P	Pn	02 48 22.0	+2.8
	SNR=5.4						
HATD	Hatta, Dubai	19.26	236	P	P	02 48 17.3	+0.2
HATD	Hatta, Dubai	19.26	236	P	Pn	02 48 17.8	-1.4
SMDO	Samad	19.32	228	P	Pn	02 48 19.6	-0.3
HOQ	Hoqain	19.38	231	P	Pn	02 48 19.8	-0.7

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ASHO  Ashiyiah          19.41 236 i P    Pn      02 48 19.2 -1.6
        SNR=26
ASHO  Ashiyiah          19.41 236   P    Pn      02 48 19.9 -1.0
        SNR=9.1
NAZ   Nazwa, Dubai      19.47 237   P    Pn      02 48 19.9 -1.6
SOHO  SOHO              19.48 234   P    Pn      02 48 20.4 -1.2
FAQ   Al Faqa, Dubai    19.68 237   P    P       02 48 21.6  0.0
LKRN  Lenkeran, Azer    19.71 283   P    Pn      02 48 21.7 -2.5
JMDO  Jabal Madar       19.81 227   P    Pn      02 48 24.0 -1.5
ASUD  Al Ashush, Dub    19.93 237   P    P       02 48 24.7 +0.3
ALNE  Al Ain            20.04 235 i P    Pn      02 48 26.7 -1.5
        SNR=9.0
ALNE  Al Ain            20.04 235   P    P       02 48 26.0 +0.5
        SNR=8.0
ARQ   Araqi             20.05 232   P    P       02 48 26.5 +0.8
BSY   Bisya             20.07 230   P    Pn      02 48 26.9 -1.6
AJN   Ajban             20.21 238 i P    P       02 48 27.3  0.0
        SNR=5.6
AJN                               i P    Pn      02 48 27.4 -2.7
        SNR=8.4
AJN   Ajban             20.21 238   P    P       02 48 27.2  0.0
        SNR=10
AKT   Akhty             20.55 291 eP     Pn      02 48 31.5 -2.6
AKT                               e*PP   pP      02 48 49.6 -1.7
AKT                               e*SP   sP      02 49 05.4 +1.0
AKT                               e              02 52 40.1
AKT                                 pmax pmax
        comp=Z,10.0nm,0.8s
GTA   Gaotai            20.69  75 eP     Pn      02 48 35.9 +0.1
GTA                                 pmax pmax
        comp=Z,13nm,1.0s
SEKA  Sheki             20.93 290   P    Pn      02 48 35.2 -3.3
MHTO  MHTO              20.97 225   P    Pn      02 48 37.0 -2.0
        SNR=5.4
MNGR  Mingechevir, A    21.00 289   P    Pn      02 48 36.4 -2.8
UMZA  Um Al Zommool     21.37 233   P    P       02 48 40.1 +0.3
ZKTA  Zakatala          21.39 291   P    P       02 48 40.7 +0.8
JRN   Qarnain Island    21.44 242   P    P       02 48 40.5  0.0
MZWR  Madinat Zayed     21.49 238   P    P       02 48 43.3 +2.2
GANJ  Ganja             21.58 288   P    P       02 48 42.5 +0.6
ARU   Arti              21.95 337   P    P       02 48 45.9 +0.2
        comp=Z,2.5nm,0.5s,baz=158,slow=9.1,SNR=3.5
        comp=Z,2.5nm,0.5s
ARU   Arti              21.95 337   P    P       02 48 43.6 -2.1
ARU   Arti              21.95 337c iP    P       02 48 45.7  0.0
ARU                                              02 49 15.2
ARU                                 S    S       02 52 40.2 -1.6
ARU                                 SS   SnSn    02 53 22.4 +5.5
ARU                                 pmax pmax
        comp=Z,30nm,4.3s
GROC  Groznyy           22.14 295 eP     P       02 48 48.0 +0.2
GROC                              e*PP   pP      02 49 11.6 +3.2
GROC                                S    S       02 52 41.5 -3.9
GROC                                pmax pmax
        comp=Z,73nm,1.2s
NAX   Nakhchivan        22.24 284   P    P       02 48 49.1 +0.1
SHMA  Al-Shehemyia      22.25 247   P    P       02 48 48.9 -0.2
MZR   Muzera            22.27 237 i P    P       02 48 50.5 +1.1
        SNR=6.8
MZR   Muzera            22.27 237   P    P       02 48 49.9 +0.5
SAKB  Bahrain           22.50 247   P    P       02 48 51.2 -0.4
GNI   Garni             22.78 287   P    P       02 48 54.1 -0.5
        comp=Z,6.4nm,0.8s,baz=47,slow=14,SNR=9.1
        comp=Z,6.4nm,0.8s
GNI   Garni             22.78 287   P    P       02 48 54.3 -0.3
GNI   Garni             22.78 287 i P    P       02 48 56.0 +1.3
GNI                                 pmax pmax
        comp=Z,23nm,1.6s
GNI   Garni             22.78 287   P    P       02 48 52.7 -2.0
SLWR  Sila              22.81 242   P    P       02 48 55.3 +0.5
SMRA  Abu-Samra         23.01 244   P    P       02 48 57.2 +0.4
ZEI   Tsey              23.49 294 i P    P       02 49 05.0 +3.7
ZEI                                 pmax pmax
        comp=Z,2.0nm,0.6s
AKH   Akhalkalaki       23.73 290   P    P       02 49 03.2 -0.3
AKH   Akhalkalaki       23.73 290   P    P       02 49 03.2 -0.3
AKH                                 pmax pmax
        comp=Z,42nm,0.9s
ONI   Oni               23.80 293   P    P       02 49 03.8 -0.2
ONI                                 IAmb IAmb    02 49 36.9
        comp=Z,12nm,0.9s
ONI   Oni               23.80 293   P    P       02 49 03.8 -0.2
ONI                                 pmax pmax
        comp=Z,12nm,0.9s
BELG  Belogornoye       23.91 318 i P    P       02 49 04.4 -0.3
BELG                                pmax pmax
        comp=Z,1.0nm,0.8s
MOY   Mondy             24.28  44 eP     P       02 49 11.6 +3.3
MOY                               e              02 49 30.6
MOY                                 pmax pmax
        comp=Z,15nm,2.8s
KBZ   Khabaz            24.30 296   P    P       02 49 08.8 +0.4
        comp=Z,1.6nm,0.7s,baz=79,slow=9.5,SNR=7.9
        comp=Z,1.6nm,0.7s
KBZ   Khabaz            24.30 296ceP     P       02 49 08.7 +0.4
KBZ                                 pmax pmax
        comp=Z,6.0nm,1.5s
KIV   Kislovodsk        24.47 296   P    P       02 49 08.9 -1.1
KIV   Kislovodsk        24.47 296 eP     P       02 49 11.1 +1.0
KIV                                 pmax pmax
        comp=Z,8.0nm,1.1s
KIV   Kislovodsk        24.47 296   P    P       02 49 09.1 -1.0
DOK   Doka              25.06 228   P    P       02 49 17.2 +1.7
ZAK   Zakamensk         25.08  48 eP     P       02 49 18.8 +3.2
ZAK                                 pmax pmax
        comp=Z,8.0nm,0.9s
DMTO  DMTO              25.29 226   P    P       02 49 18.9 +1.4
        SNR=6.7
CD2   Chengdu           25.64  95   P    P       02 49 24.5 +3.8
CD2                                 pmax pmax
        comp=Z,20nm,0.8s
WHFO  Wadi Hawf         25.81 228   P    P       02 49 23.7 +1.3
        SNR=18
RBK   Rabkut            25.88 227   P    P       02 49 24.4 +1.3
        SNR=5.4
PZH   PanZhiHua         25.98 106   P    P       02 49 26.0 +2.0
PZH                                 pmax pmax
        comp=Z,20nm,0.7s
PZH                                 pmax pmax
        comp=Z,110nm,5.0s
SONM  Songino Array     26.32  55   P    P       02 49 29.9 +3.1
        comp=Z,4.8nm,0.8s,baz=252,slow=10,SNR=34
        comp=Z,4.8nm,0.8s
SONM  Songino Array     26.32  55   P    P       02 49 27.6 +0.8
SONM                                IAmb IAmb    02 49 53.2
        comp=Z,14nm,1.0s
SONM  Songino Array     26.32  55   P    P       02 49 27.6 +0.8
SONM                                pmax pmax
        comp=Z,14nm,1.0s
ABTO  Aybut             26.54 228   P    P       02 49 30.3 +1.4
        SNR=24
ULN   Ulaanbaatar       26.76  55   P    P       02 49 31.8 +1.0
ULN   Ulaanbaatar       26.76  55   P    P       02 49 31.8 +1.0
ULN                                 pmax pmax
        comp=Z,4.0nm,0.8s
KIRV  Kirov             26.80 332 i P    P       02 49 32.7 +1.9
KMI   Kunming           27.47 107 ⇑P     P       02 49 38.6 +1.2
KMI                                 pmax pmax
        comp=Z,16nm,0.8s
RAYN  Ar Rayn           27.64 249   P    P       02 49 37.7 -1.1
RAYN  Ar Rayn           27.64 249   P    P       02 49 37.7 -1.1
RAYN                                pmax pmax
        comp=Z,4.0nm,0.7s
RAYN  Ar Rayn           27.64 249   P    P       02 49 39.5 +0.7
CRAI  Chiangrai         28.65 118   P    P       02 49 49.6 +1.9
CRAI                                IAmb IAmb    02 49 55.7
        comp=Z,7.1nm,1.0s
CMAR  Chiang Mai Arr    28.86 123   P    P       02 49 51.7 +2.0
        comp=Z,1.3nm,0.4s,baz=311,slow=9.8,SNR=1.4
        comp=Z,1.3nm,0.4s
CMAR  Chiang Mai Arr    28.86 123ceP     P       02 49 56.9 +7.3
CMAR                                pmax pmax
        comp=Z,2.0nm,0.4s
HHC   Hu-ho-hao-te      29.60  71 eP     P       02 49 58.9 +2.8
HHC                                 pmax pmax
        comp=Z,33nm,0.9s
HHC                                 pmax pmax
        comp=Z,180nm,5.2s
PHRA  Phrae             29.71 121   P    P       02 49 59.0 +1.9
ENH   Enshi             30.45  92   P    P       02 50 05.0 +1.4
ENH                                 IAmb IAmb    02 50 14.1
        comp=Z,9.5nm,0.7s
MOS   Moscow            30.66 319 eP     P       02 50 05.3 +0.2
BR131 Keskin Array S    31.32 287   P    P       02 50 10.2 -1.1
BR131 Keskin Array S    31.32 287   P    P       02 50 10.2 -1.1
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BR131                               pmax pmax
        comp=Z,4.0nm,0.7s
BRTR  Keskin Array B    31.32 287   P    P       02 50 12.3 +1.0
        comp=Z,1.8nm,0.6s,baz=72,slow=4.7,SNR=19
        comp=Z,1.8nm,0.6s
BRTR  Keskin Array B    31.32 287   P    P       02 50 11.3  0.0
BRTR  Keskin Array B    31.32 287ceP     P       02 50 12.5 +1.2
BRTR                                pmax pmax
        comp=Z,2.0nm,0.6s
NRIK  Noril'sk          33.31   9   P    P       02 50 30.5 +2.4
        comp=Z,3.7nm,0.8s,baz=192,slow=5.9,SNR=4.8
        comp=Z,3.7nm,0.8s
NRIK  Noril'sk          33.31   9   P    P       02 50 28.2 +0.1
NRIK                                IAmb IAmb    02 50 51.0
        comp=Z,7.0nm,1.1s
NRIK  Noril'sk          33.31   9ceP     P       02 50 30.1 +2.0
NRIK                                pmax pmax
        comp=Z,3.0nm,0.7s
AKASG Malin Array Be    34.33 308   P    P       02 50 37.9 +0.7
        comp=Z,0.9nm,0.5s,baz=108,slow=8.9,SNR=7.6
AKASG                               LR   LR      03 08 06.6
        comp=Z,93nm,20.4s,baz=32,slow=42
        comp=Z,0.9nm,0.5s
ELL   Elmali            34.77 283   P    P       02 50 41.4 +0.1
ELL   Elmali            34.77 283   P    P       02 50 41.4 +0.1
ELL                                 pmax pmax
        comp=Z,31nm,0.6s
PLOR  Plostina          35.90 299 ⇑P     P       02 50 52.5 +1.7
PLOR  Plostina          35.90 299 ⇑P     P       02 50 52.5 +1.7
MLR   Muntele Rosu      36.42 299 ⇑P     P       02 50 57.1 +1.8
MLR   Muntele Rosu      36.42 299   P    P       02 50 54.7 -0.6
MLR   Muntele Rosu      36.42 299   P    P       02 50 54.7 -0.6
MLR                                 pmax pmax
        comp=Z,7.0nm,0.8s
BURAR Bucovina Array    36.83 302 ⇑P     P       02 50 58.1 -0.6
BURAR Bucovina Array    36.83 302   P    P       02 50 58.6 -0.1
BURAR Bucovina Array    36.83 302 ⇑P     P       02 50 58.1 -0.6
BUR08 Bucovina Ar. S    36.84 302   P    P       02 50 57.4 -1.5
BUR08                               IAmb IAmb    02 51 26.4
        comp=Z,6.8nm,1.3s
VOIR                    37.05 299 ⇓P     P       02 51 02.1 +1.5
VOIR                    37.05 299 ⇓P     P       02 51 02.1 +1.5
KARP  Karpathos         37.23 282   P    P       02 51 01.7 -0.5
ARR   Arges             37.35 299 ⇑P     P       02 51 04.7 +1.6
ARCR  ARCALIA           37.43 302 ⇑P     P       02 51 06.8 +3.0
ATD   Arta Tunnel       37.52 235   P    P       02 51 04.7 -0.1
MARR  Marisel-Cluj      38.30 301 ⇓P     P       02 51 13.3 +2.2
FINES FINESS Array B    38.30 325   P    P       02 51 11.9 +1.1
        comp=Z,4.0nm,0.7s,baz=110,slow=9.5,SNR=19
        comp=Z,4.0nm,0.7s
DRGR                    38.57 301 ⇑P     P       02 51 15.1 +1.7
DRGR                    38.57 301 ⇑P     P       02 51 15.1 +1.7
TRPA  Tarpa             38.61 303 ⇓P     P       02 51 16.1 +2.5
VTS   Vitosha           38.68 294 ⇓P     P       02 51 16.7 +2.3
VTS   Vitosha           38.68 294 ⇓P     P       02 51 16.7 +2.3
SURR  Surduc            39.07 300 ⇓P     P       02 51 19.6 +2.2
IDI   Anoyia            39.08 283 ⇓P     P       02 51 17.7  0.0
BZS   Buzias            39.44 299 ⇑P     P       02 51 21.9 +1.4
BZS   Buzias            39.44 299 ⇑P     P       02 51 21.9 +1.4
ZEA   Zeya              40.18  48 eP     P       02 51 30.6 +4.0
ZEA                                 pmax pmax
        comp=Z,10.0nm,1.4s
HEH   HeiHe             40.27  53 eP     P       02 51 30.7 +3.4
HEH                                 pmax pmax
        comp=Z,37nm,0.7s
HEH                                 pmax pmax
        comp=Z,200nm,5.2s
ARA0  ARCESS Array S    41.54 337 eP     P       02 51 39.7 +2.2
ARCES ARCESS Array B    41.54 337   P    P       02 51 39.1 +1.6
        comp=Z,2.1nm,0.5s,baz=110,slow=8.6,SNR=29
        comp=Z,2.1nm,0.5s
KTK1  Kautokeino        42.06 336 eP     P       02 51 42.8 +1.0
HAMF  Hammerfest        42.58 338 eP     P       02 51 46.9 +0.9
KSRS  Korea Array       42.71  72   LR   LR      03 12 06.4
        comp=Z,50nm,21.6s,baz=325,slow=39
CONA  Conrad Observa    43.09 304 i P    P       02 51 52.1 +1.6
        comp=Z,6.5nm,0.9s
KLR   Kul'dur           43.15  54ceP     P       02 51 53.8 +3.0
KLR                                 pmax pmax
        comp=Z,11nm,1.4s
JETT  Jettan, Norway    43.20 336 eP     P       02 51 52.1 +1.1
TRO   Tromso            43.71 336 eP     P       02 51 56.4 +1.4
MOA   Molln             44.17 304 eP     P       02 52 00.2 +1.2
        comp=Z,7.8nm,1.6s
OBKA  Obir              44.19 302 eP     P       02 52 00.3 +1.0
        comp=Z,0.9nm,0.5s
FAUS  Fauske            44.38 332 eP     P       02 52 01.4 +1.0
GERES GERESS Array B    44.40 305   LR   LR      03 15 25.5
        comp=Z,164nm,18.0s,baz=349,slow=43
KHC   Kasperske Hory    44.44 306 eP     P       02 52 02.0 +0.7
KHC   Kasperske Hory    44.44 306 eP     P       02 52 02.0 +0.7
MOR8  Moi Rana          44.46 330 eP     P       02 52 01.1 -0.1
STEI  Steigen           44.52 333 eP     P       02 52 02.8 +1.3
TIXI  Tiksi             44.55  22   P    P       02 52 00.9 -0.8
TIXI                                IAmb IAmb    02 52 24.0
        comp=Z,4.4nm,0.9s
TIXI  Tiksi             44.55  22ceP     P       02 52 03.4 +1.7
TIXI                                pmax pmax
        comp=Z,1.0nm,0.3s
CLL   Collm             44.56 309 eP     P       02 52 02.0 -0.1
CLL   Collm             44.56 309 eP     P       02 52 02.0 -0.1
KBA   Koelnbreinsper    44.91 303 eP     P       02 52 06.2 +1.1
        comp=Z,1.3nm,0.6s
NC602 NORSAR Array S    45.12 322 eP     P       02 52 07.6 +1.2
NB2   NORSAR Subarra    45.29 323   P    P       02 52 08.6 +0.8
        comp=Z,3.2nm,0.6s,baz=93,slow=7.9
NB2   NORSAR Subarra    45.29 323   P    P       02 52 08.6 +0.8
        slow=7.9
NOA   NORSAR Array B    45.29 323   P    P       02 52 08.7 +0.8
        comp=Z,3.0nm,0.6s,baz=93,slow=7.7,SNR=13
        comp=Z,3.0nm,0.6s
NC204 NORSAR Array S    45.52 323   P    P       02 52 09.1 -0.6
ABTA  Abfaltersbach     45.52 302 eP     P       02 52 11.1 +1.2
        comp=Z,1.2nm,0.5s
WATA  Walderalm         46.05 303 eP     P       02 52 15.1 +1.0
        comp=Z,2.1nm,0.6s
SQTA  Sankt Quirin      46.31 303 eP     P       02 52 16.8 +0.6
        comp=Z,0.7nm,0.2s
MOTA  Moosalm           46.36 304 eP     P       02 52 16.2 -0.4
        comp=Z,1.3nm,0.5s
FETA  Feichten          46.67 303 eP     P       02 52 19.6 +0.5
        comp=Z,1.5nm,0.8s
DAVA  Damuels           47.19 304 eP     P       02 52 23.8 +0.8
        comp=Z,7.1nm,0.6s
LODK  Lodwar            48.47 236   P    P       02 52 32.5 -0.6
LODK                                IAmb IAmb    02 52 35.9
        comp=Z,3.2nm,0.8s
LODK  Lodwar            48.47 236   P    P       02 52 35.6 +2.5
        SNR=6.2
KMBO  Kilima Mbogo      50.74 230   P    P       02 52 50.9 +0.4
KMBO                                IAmb IAmb    02 52 53.8
        comp=Z,5.7nm,0.8s
KMBO  Kilima Mbogo      50.74 230   P    P       02 52 50.9 +0.4
KMBO                                pmax pmax
        comp=Z,6.0nm,0.9s
KMBO  Kilima Mbogo      50.74 230 i P    P       02 52 52.8 +2.3
        SNR=7.8
KMBO  Kilima Mbogo      50.74 230   P    P       02 52 52.9 +2.3
MAJO  Matsushiro        50.80  70   P    P       02 52 52.5 +1.9
MAJO  Matsushiro        50.80  70   P    P       02 52 52.5 +1.9
MAJO                                pmax pmax
        comp=Z,12nm,1.3s
MJAR  Matsushiro Arr    50.80  70   P    P       02 52 53.0 +2.5
        comp=Z,3.2nm,0.7s,baz=292,slow=8.9,SNR=6.6
        comp=Z,3.2nm,0.7s
KEST  Kesra             50.90 289   P    P       02 52 51.8 +0.4
        comp=Z,2.2nm,0.5s,baz=90,slow=20,SNR=6.7
        comp=Z,2.2nm,0.5s
KEST  Kesra             50.90 289   P    P       02 52 51.5 +0.1
KIBK  Kibwezi           51.22 228   P    P       02 52 53.1 -0.9
KIBK  Kibwezi           51.22 228   P    P       02 52 56.3 +2.4
        SNR=10
JMIC  Jan Mayen         53.02 336   LR   LR      03 14 59.0
        comp=Z,106nm,18.0s,baz=71,slow=35
EKA   Eskdalemuir Ar    53.43 316   P    P       02 53 10.8 +1.1
MBAR  Mbarara           54.53 237   P    P       02 53 17.1 -1.3
MBAR  Mbarara           54.53 237ceP     P       02 53 20.0 +1.6
MBAR                                pmax pmax
        comp=Z,12nm,2.5s
MBAR  Mbarara           54.53 237   P    P       02 53 20.0 +1.6
DAG   Danmarks Havn     54.88 344 i P    P       02 53 20.8 +0.9
ESDC  Sonseca Array     59.11 299   P    P       02 53 51.1 +0.6
        comp=Z,1.7nm,0.9s,baz=53,slow=7.7,SNR=9.7
        comp=Z,1.7nm,0.9s
TORD  Torodi Ar. Bea    67.85 270   P    P       02 54 47.1 -1.1
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        comp=Z,1.8nm,0.6s,baz=49,slow=5.7,SNR=29
        comp=Z,1.8nm,0.6s
RES   Resolute Bay      68.37 357   P    P       02 54 52.3 +1.8
        comp=Z,0.5nm,0.4s,baz=22,slow=8.5,SNR=5.4
        comp=Z,0.5nm,0.4s
RES   Resolute Bay      68.37 357   P    P       02 54 51.1 +0.6
RES   Resolute Bay      68.37 357   P    P       02 54 51.1 +0.6
RES                                 pmax pmax
        comp=Z,2.0nm,1.2s
ANM   Nome              68.77  23   P    P       02 54 53.8 +0.6
ANM                                 IAmb IAmb    02 55 17.7
        comp=Z,4.3nm,1.0s
ANM   Nome              68.77  23   P    P       02 54 53.8 +0.6
ANM                                 pmax pmax
        comp=Z,4.0nm,1.0s
TOLK  Toolik Lake Re    69.92  15   P    P       02 55 02.8 +2.5
TOLK                                IAmb IAmb    02 55 24.2
        comp=Z,3.3nm,0.7s
A36M  Sachs Harbour     70.53   6   P    P       02 55 04.9 +1.0
A36M                                IAmb IAmb    02 55 27.9
        comp=Z,5.3nm,0.7s
IMAR  Indian Mountai    71.07  19   P    P       02 55 08.0 +0.8
H21K  Melozitna Rive    71.56  18   P    P       02 55 11.0 +0.7
BMAR  Burnt Mountain    71.97  15   P    P       02 55 13.9 +1.2
MLY   Manley            72.59  18   P    P       02 55 17.6 +1.2
H24K  Noodor Dome       72.61  17   P    P       02 55 17.0 +0.4
K20K  Telida            73.05  20   P    P       02 55 18.8 -0.4
K20K                                IAmb IAmb    02 55 54.6
        comp=Z,6.0nm,1.3s
INK   Inuvik            73.08  10   P    P       02 55 21.4 +2.2
        comp=Z,2.2nm,0.6s,baz=325,slow=6.3,SNR=11
        comp=Z,2.2nm,0.6s
INK   Inuvik            73.08  10   P    P       02 55 19.1  0.0
INK                                 IAmb IAmb    02 55 43.2
        comp=Z,7.3nm,1.5s
INK   Inuvik            73.08  10   P    P       02 55 19.2  0.0
INK                                 pmax pmax
        comp=Z,7.0nm,1.5s
C36M  Paulatuk          73.19   6   P    P       02 55 20.0 +0.2
C36M                                IAmb IAmb    02 55 22.2
        comp=Z,6.4nm,0.7s
MDM   Murphy Dome       73.26  17   P    P       02 55 20.5 +0.2
MDM                                 IAmb IAmb    02 55 44.6
        comp=Z,5.0nm,1.3s
BPAW  Bear Paw Mtn.     73.28  19   P    P       02 55 21.9 +1.4
BPAW                                IAmb IAmb    02 55 55.5
        comp=Z,9.8nm,1.4s
NEA2  Nenana            73.36  18   P    P       02 55 21.8 +0.9
CAST  Castle Rocks      73.54  20   P    P       02 55 22.9 +0.9
CAST                                IAmb IAmb    02 55 25.3
        comp=Z,5.5nm,1.2s
ILAR  Eielson Array     73.73  17   P    P       02 55 24.5 +1.4
        comp=Z,0.9nm,0.8s,baz=306,slow=4.8,SNR=10
        comp=Z,0.9nm,0.8s
ILAR  Eielson Array     73.73  17   P    P       02 55 23.7 +0.6
KTH   Kantishna Hill    73.74  19   P    P       02 55 23.9 +0.7
KTH                                 IAmb IAmb    02 56 01.2
        comp=Z,8.5nm,1.4s
PPLA  Purkeypile        73.94  20   P    P       02 55 25.2 +0.8
PPLA                                IAmb IAmb    02 56 02.7
        comp=Z,11nm,1.4s
MCK   McKinley          74.11  18   P    P       02 55 27.0 +1.7
MCK                                 IAmb IAmb    02 55 56.2
        comp=Z,12nm,1.5s
MCK   McKinley          74.11  18   P    P       02 55 27.0 +1.7
MCK                                 pmax pmax
        comp=Z,12nm,1.5s
J26L  Joseph Creek      74.71  16   P    P       02 55 29.5 +0.6
SCRK  Sand Creek        75.07  16   P    P       02 55 31.5 +0.5
RIDG  Independent Ri    75.08  17   P    P       02 55 31.9 +0.9
RIDG                                IAmb IAmb    02 55 42.2
        comp=Z,15nm,1.5s
SML   Sawmill           75.86  19   P    P       02 55 35.8 +0.3
SML                                 IAmb IAmb    02 56 02.8
        comp=Z,9.3nm,1.0s
DAWY  Dawson            75.96  14   P    P       02 55 36.1 +0.1
DAWY                                IAmb IAmb    02 56 12.5
        comp=Z,4.9nm,1.2s
SCM   Sheep Creek Mo    76.10  19   P    P       02 55 37.1 +0.2
SCM   Sheep Creek Mo    76.10  19   P    P       02 55 37.1 +0.2
SCM                                 pmax pmax
        comp=Z,23nm,1.4s
M24K  Tolsona, Glenn    76.16  18   P    P       02 55 37.6 +0.4
BCAR  Beaver Creek A    76.35  16   P    P       02 55 39.2 +0.9
LBTB  Lobatse           76.47 224   P    P       02 55 39.3 -0.1
LBTB                                IAmb IAmb    02 55 41.7
        comp=Z,4.9nm,0.8s
LBTB  Lobatse           76.47 224   P    P       02 55 39.3 -0.1
LBTB                                pmax pmax
        comp=Z,5.0nm,0.8s
M31M  Drury Creek, Y    78.61  13   P    P       02 55 52.0 +1.2
HYT   Haines Junctio    79.27  15   P    P       02 55 55.7 +1.1
HYT                                 IAmb IAmb    02 56 38.2
        comp=Z,12nm,1.3s
BOSA  Boshof            79.50 222   P    P       02 55 56.3 +0.2
        comp=Z,1.3nm,0.7s,baz=5.7,slow=5.3,SNR=5.3
        comp=Z,1.3nm,0.7s
BOSA  Boshof            79.50 222   P    P       02 55 56.3 +0.2
BOSA                                IAmb IAmb    02 56 27.7
        comp=Z,12nm,1.5s
WB0   Warramunga Arr    80.37 124   P    P       02 56 02.5 +1.7
WB0                                 IAmb IAmb    02 56 40.8
        comp=Z,14nm,1.4s
WRA   Warramunga Arr    80.45 124   P    P       02 56 04.0 +2.6
        comp=Z,2.8nm,0.8s,baz=324,slow=4.9,SNR=21
        comp=Z,2.8nm,0.8s
WRA   Warramunga Arr    80.45 124   P    P       02 56 03.4 +2.1
WRA   Warramunga Arr    80.45 124 i P    P       02 56 04.3 +3.0
WRA                                 pmax pmax
        comp=Z,3.0nm,0.7s
WB2   Warramunga Arr    80.46 124   P    P       02 56 02.8 +1.4
WB2                                 IAmb IAmb    02 56 05.0
        comp=Z,9.7nm,1.0s
YKA   Yellowknife Ar    80.66   4   P    P       02 56 03.9 +2.1
        comp=Z,3.6nm,0.6s,baz=349,slow=5.3,SNR=91
        comp=Z,3.6nm,0.6s
YKA   Yellowknife Ar    80.66   4   P    P       02 56 02.2 +0.4
PMG   Port Moresby      82.70 107ceP     P       02 56 17.9 +4.6
PMG                                 pmax pmax
        comp=Z,10.0nm,1.3s
ASAR  Alice Springs     82.80 127   P    P       02 56 16.2 +2.6
        comp=Z,1.9nm,0.7s,baz=311,slow=5.1,SNR=29
        comp=Z,1.9nm,0.7s
ASAR  Alice Springs     82.80 127   P    P       02 56 14.6 +1.0
DLBC  Dease Lake        82.91  12   P    P       02 56 16.3 +2.5
        comp=Z,1.4nm,0.6s,baz=333,slow=6.8,SNR=5.2
        comp=Z,1.4nm,0.6s
FFC   Flin Flon         88.60 357 i P    P       02 56 41.6 -0.2
```

ROM 06 02:49:29.7±0.1**,42°.502N**±0°.008×**13°.276E**±0°.007**,**
h11km**,ML1.3/**1**,1C-3D,Error ellipse: s-maj=1.0km**
s-min=0.4km az=207.0,Central Italy

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Code  Station Name       Δ°   AZ°    Phase ID       Time        Res
                                   Op     ISC      h  m  s      ISC
RM33  Pellescritta (    0.05 279   P      Pg       02 49 32.1 +0.2
RM33                               S      Sg       02 49 33.8 +0.3
T1247 Pizzolo (AQ)      0.06 164   P      Pg       02 49 32.6 +0.6
T1247                              S      Sg       02 49 33.9 +0.3
T1247                              AML    AML
        comp=N,348μm,0.1s
T1247                              AML    AML
        comp=E,230μm,0.5s
LNSS  Leonessa          0.20 300  ⇓P      Pg       02 49 34.5 +0.5
LNSS                               S      Sg       02 49 38.3 +1.3
T1218 Civita (PG)       0.21 325  ⇓P      Pg       02 49 34.6 +0.5
T1218                              S      Sg       02 49 38.3 +1.2
T1214 Arquata del Tr    0.26 349  ⇑P      Pg       02 49 35.6 +0.5
TERO  Teramo            0.27  63   P      Pg       02 49 35.8 +0.6
T1212 Cascia, Frazio    0.30 326  ⇓P      Pg       02 49 36.1 +0.3
T1212                              S      Sb       02 49 41.1 -1.1
SAMA  S.Maria delle     0.88 215   P      Pn       02 49 48.8 +0.7
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*VAO **06** 02:55:59.8±0.7, 41°.54S×72°.64W, h10km, mb4.7*
*NEIC **06** 02:56:22.9±2.4, 40°.41S±0°.04×71°.91W±0°.07, h144km±4km,*
mb4.6/24, ML4.2(GUC), Error ellipse: s-maj=8.1km
s-min=5.3km az=92.0
*GUC **06** 02:56:22.4±0.8, 40°.37S×71°.96W, h149km±4km, ML4.2*
*IDC **06** 02:56:25.6±0.9, 40°.25S×71°.35W, h145km±5km, mb3.8/12,*
mbtmp4.3/15, Error ellipse: s-maj=24.7km s-min=12.0km
az=88.0
ISC 06 02:56:23.2±0.6**,40°.38S**±0°.04×**71°.86W**±0°.05**,h142**km±5km**,**

n161,σ1^{s}53/182,mb4.4/18,1C-9D,Southern Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LL04	Puerto Octay	0.68	218		Pn	02 56 44.8	+0.1
LL04				Sn	Sn	02 57 00.6	-0.5
LL04	Puerto Octay	0.68	218	⇓*i*P	Pn	02 56 44.9	+0.2
LL04				*e*S	Sn	02 57 01.1	0.0
LL04				IAML		02 57 02.3	
	comp=N,2μm,0.7s						
LR03	Panguipulli	0.83	333	Pn	Pn	02 56 46.6	+0.7
LR03				Sn	Sn	02 57 02.5	-0.6
LR03	Panguipulli	0.83	333	⇓*e*P	Pn	02 56 47.1	+1.2
LR03				*e*S	Sn	02 57 03.6	+0.5
LR03				IAML		02 57 10.4	
	comp=E,3μm,0.4s						
GO06	Curarrehue	0.85	21	Pn	Pn	02 56 46.8	+0.6
GO06				Sn	Sn	02 57 04.7	+1.1
GO06	Curarrehue	0.85	21	⇑*i*P	Pn	02 56 47.1	+1.0
GO06				*e*S	Sn	02 57 04.6	+1.1
LL03	Petrohue	0.87	208	Pn	Pn	02 56 46.2	+0.1
LL03				Sn	Sn	02 57 02.9	-0.7
LL03	Petrohue	0.87	208	⇓*i*P	Pn	02 56 46.3	+0.2
LL03				*e*S	Sn	02 57 04.3	+0.7
LL03				IAML		02 57 06.8	
	comp=E,4μm,0.7s						
PLCA	Paso Flores	1.06	110	P	Pn	02 56 48.4	+0.5
	comp=E,2μm,0.5s,baz=292,slow=8.9						
PLCA				S	Sn	02 57 06.4	-0.2
	comp=E,300nm,0.8s,baz=39,slow=22,SNR=6.7						
LR02	Universidad Au	1.21	298	*e*P	Pn	02 56 50.2	+1.1
LR02				*e*S	Sn	02 57 08.8	-0.1
LR04	Corral	1.30	292	Pn	Pn	02 56 50.8	+0.7
LR04				Sn	Sn	02 57 10.1	-0.4
LR04	Corral	1.30	292	⇓*i*P	Pn	02 56 51.2	+1.1
LR04				*e*S	Sn	02 57 10.2	-0.4
LL05	Los Muermos	1.60	230		Pn	02 56 52.0	-1.2
LL05	Los Muermos	1.60	230	⇓*e*P	Pn	02 56 52.6	-0.6
LL05				*e*S	Sn	02 57 14.5	-1.7
LL05				IAML		02 57 17.8	
	comp=E,2μm,0.1s						
LC02	Puerto Saavedr	1.97	323		Pn	02 56 56.7	-0.8
LC02	Puerto Saavedr	1.97	323	*e*P	Pn	02 56 59.5	+2.0
LC02				*e*S	Sn	02 57 23.5	-0.3
LL06	Loncomilla	2.27	215	Pn	Pn	02 56 59.4	-1.6
LL06	Loncomilla	2.27	215	⇓*i*P	Pn	02 57 00.2	-0.9
LL06				*e*S	Sn	02 57 27.3	-2.9
LL06				IAML		02 57 29.6	
	comp=N,4μm,0.2s						
BI04	Isla Mocha	2.51	321	*i* P	Pn	02 57 05.4	+1.3
BI04				*i* S	Sn	02 57 34.6	-0.9
LL07	Hotel Espejo d	2.74	206	Pn	Pn	02 57 05.6	-1.3
LL07	Hotel Espejo d	2.74	206	⇓*i*P	Pn	02 57 06.2	-0.7
LL07				*e*S	Sn	02 57 38.4	-2.2
LL07				IAML		02 57 41.5	
	comp=N,2μm,0.4s						
LL02	Futaleuf	2.81	180	Pn	Pn	02 57 07.2	-0.6
LL02	Futaleuf	2.81	180	⇓*i*P	Pn	02 57 08.1	+0.3
LL02				*i* S	Sn	02 57 38.6	-3.7
GO07	Milladeo Hill,	3.05	206	Pn	Pn	02 57 09.5	-1.3
GO07	Milladeo Hill,	3.05	206	⇓*i*P	Pn	02 57 10.2	-0.7
GO07				*i* S	Sn	02 57 44.1	-3.6
BI05	Punta Hualpn	3.77	344	Pn	Pn	02 57 19.9	-0.3
BI05	Punta Hualpn	3.77	344	*i* P	Pn	02 57 20.7	+0.5
BI05				*i* S	Sn	02 58 01.1	-3.3
AY01	Puyuhuapi	4.08	188	Pn	Pn	02 57 24.2	0.0
AY01	Puyuhuapi	4.08	188	*i* P	Pn	02 57 24.6	+0.3
COYC	Coyhaique	5.20	182	Pn	Pn	02 57 39.6	+0.6
GO05	Huala	5.36	359	Pn	Pn	02 57 40.5	-0.7
BO02	Sierra Bellavi	5.64	9	Pn	Pn	02 57 44.3	-0.8
BO01	Tunca	6.01	6	Pn	Pn	02 57 48.2	-1.7
AY02	Valle Explorad	6.18	189	Pn	Pn	02 57 51.5	-0.6
BO04	La Punta	6.45	9	Pn	Pn	02 57 54.2	-1.7
MT01	Popeta	6.52	4	Pn	Pn	02 57 54.9	-1.9
MT09	Talagante	6.62	6	Pn	Pn	02 57 55.9	-2.4
LMEL	Las Melosas	6.65	12	Pn	Pn	02 57 57.4	-1.3
VA05	Santo Domingo	6.71	2	Pn	Pn	02 57 56.6	-2.7
MT03	Universidad Ad	6.96	9	Pn	Pn	02 58 00.1	-2.6
MT05	Renca	7.03	8	Pn	Pn	02 58 01.1	-2.6
MT02	Curacav	7.13	5	Pn	Pn	02 58 02.1	-2.9
PEL	Peldehue	7.28	8	Pn	Pn	02 58 03.8	-3.3
ROC1	El Roble	7.42	5	Pn	Pn	02 58 06.9	-2.1
VA03	San Esteban	7.67	8	Pn	Pn	02 58 09.2	-3.1
VA06	Catapilco	7.81	3	Pn	Pn	02 58 10.7	-3.4
TRQA	Tornquist	8.01	76	Pn	Pn	02 58 16.6	-0.1
GO08	Villa O'Higgin	8.10	183	Pn	Pn	02 58 18.6	+0.8
VA04	Juan Fernndez	8.73	318	Pn	Pn	02 58 25.9	-0.4
CO02	Combarbal	9.18	5	Pn	Pn	02 58 29.9	-2.6
CFA	Coronel Fontan	9.23	20	P	Pn	02 58 30.2	-2.9
	comp=N,50nm,0.3s,baz=191,slow=13,SNR=131						
CFA				S	Sn	03 00 10.2	-5.2
	comp=N,16nm,0.3s,baz=198,slow=19,SNR=13						
CO06	Fray Jorge	9.68	1	Pn	Pn	02 58 36.4	-2.8
GO04	Tololo Observa	10.22	5	Pn	Pn	02 58 43.5	-2.9
CO01	Juntas del Tor	10.48	8	Pn	Pn	02 58 47.4	-2.5
GO09	Cerro Castillo	10.90	182		Pn	02 58 54.0	-1.1
MG05	Puerto Natales	11.31	182	Pn	Pn	02 58 59.6	-0.8
LCO	Las Campanas	11.38	5	Pn	Pn	02 58 57.5	-4.3
AC05	El Transito	11.59	7	Pn	Pn	02 59 00.4	-4.0
AC04	Llanos de Chal	12.16	3	Pn	Pn	02 59 09.1	-2.7
AC02	Maricunga	13.70	10	Pn	Pn	02 59 29.5	-2.5
AC01	Pan de Azucar	14.23	5	Pn	Pn	02 59 36.1	-2.3
MECA	Mercedes	15.74	50	*e*P	Pn	02 59 55.4	-1.6
PB14	IPOC Station P	15.75	5		Pn	02 59 57.0	-0.5
PB14				IAmb	IAmb	03 00 01.8	
	comp=Z,23nm,0.7s						
ITQB	Itaqui	16.40	54	Pn	Pn	03 00 03.3	-1.9
ITQB	Itaqui	16.40	54	*e*P	Pn	03 00 03.8	-1.4
RODS	Rosario do Sul	16.85	59	*e*P	P	03 00 09.2	-1.1
PLTB	Pedras Altas	17.06	65		P	03 00 11.5	-1.1
LVC	Limon Verde	17.89	9	P	Pn	03 00 24.1	+0.6
	comp=Z,16nm,0.6s,baz=190,slow=7.6,SNR=24						
LVC	Limon Verde	17.89	9	Pn	Pn	03 00 24.1	+0.6
LVC	Limon Verde	17.89	9	*e*P	Pn	03 00 22.9	-0.5
AZCA	Azaras, Argent	17.93	52	*e*P	P	03 00 21.4	-0.9
CPSB	Cacapava Do Su	17.98	62	*e*P	P	03 00 21.4	-1.3
PB04	IPOC Station P	18.05	5	P	Pn	03 00 24.7	-0.4
PB03	IPOC Station P	18.36	6		Pn	03 00 28.1	-0.7
PB03				IAmb	IAmb	03 00 29.6	
	comp=Z,27nm,0.6s						
CPUP	Villa Florida	18.50	45	P	P	03 00 25.4	-3.0
	comp=Z,2.3nm,0.4s,baz=224,slow=9.0,SNR=9.7						
CPUP	Villa Florida	18.50	45	P	P	03 00 25.6	-2.8
CPUP				IAmb	IAmb	03 00 34.3	
	comp=Z,16nm,0.5s						
CPUP	Villa Florida	18.50	45	*e*P	P	03 00 27.9	-0.5
ESFA	Espinillo Form	19.02	40	*e*P	Pn	03 00 35.2	-1.1
ALGR	Alto Alegre (B	19.29	59	*e*P	P	03 00 35.2	-1.8
PB01	IPOC Station P	19.38	7	P	P	03 00 38.5	+0.5
PB01				IAmb	IAmb	03 00 40.7	
	comp=Z,17nm,0.8s						
CNLB	Canela	20.42	64	*e*P	P	03 00 47.4	-1.8
PB11	IPOC Station P	20.64	6	P	P	03 00 51.2	-0.4
PB11				IAmb	IAmb	03 00 59.0	
	comp=Z,30nm,0.9s						
ITAB	Concordia	20.93	57	*e*P	P	03 00 52.9	-1.7
FRBT	Francisco Belt	21.24	53	*e*P	P	03 00 59.0	+1.0
MNMC	Minye Minye	21.26	6	P	P	03 00 56.0	-2.6
MNMC				IAmb	IAmb	03 01 07.3	
	comp=Z,38nm,1.2s						
MCR1	Marechal Candi	21.80	49	*e*P	P	03 01 04.1	+0.1
MURT	Porto Murtinho	22.25	37	*e*P	P	03 01 07.4	-1.0
AMBA	Amambai (Brazi	22.49	44	*e*P	P	03 01 10.4	-0.4
PTGB	Pitanga	22.77	53	*e*P	P	03 01 14.2	+0.6
BDQN	Bodoquena, MS	23.69	37	*e*P	P	03 01 21.1	-0.8
AQDB	Aquidauana	24.17	40	P	P	03 01 24.5	-1.7
AQDB	Aquidauana	24.17	40	*e*P	P	03 01 26.2	-0.1
LPAZ	La Paz	24.22	9	P	P	03 01 28.7	+1.3
	comp=Z,2.8nm,0.4s,baz=194,slow=8.3,SNR=13						
	comp=Z,2.8nm,0.4s						
LPAZ	La Paz	24.22	9	*e*P	P	03 01 29.3	+1.9
BBRB	Robore, Bolivi	24.35	29	*e*P	P	03 01 28.0	+0.1
BBSD	Serra de San D	25.08	26	*e*P	P	03 01 34.5	0.0
FRTB	Fartura	25.32	55	*e*P	P	03 01 37.4	+0.6
PCMB	Pacaembu	25.62	49	*e*P	P	03 01 38.4	-1.0
SIV	San Ignacio	26.05	24	P	P	03 01 43.5	+0.2
	comp=Z,7.9nm,0.8s,baz=204,slow=8.3,SNR=37						
	comp=Z,7.9nm,0.8s						
PET01	Itanhaem-SP	26.12	60	*e*P	P	03 01 44.1	+0.2
PP1B	Ponte de Pedra	27.03	38	*e*P	P	03 01 53.5	+1.4
PTLB	Pontes e Lacer	27.20	28	P	P	03 01 52.8	-0.7
PTLB				IAmb	IAmb	03 01 54.9	
	comp=Z,13nm,0.6s						
PTLB	Pontes e Lacer	27.20	28	*e*P	P	03 01 54.3	+0.7
VAO	Valinhos	27.22	58	*e*P	P	03 01 54.1	+0.2
RCLB	Rio Claro- Sao	27.28	56	*e*P	P	03 01 54.7	+0.4
ITRB	Iturama	27.63	48	*e*P	P	03 01 56.4	-1.1
BB19B	Bebedouro	27.66	53	*e*P	P	03 01 56.9	-0.8
SALV	Santo Antonio	28.15	35	*e*P	P	03 02 03.8	+1.8
VILB	Vilhena	29.18	24	P	P	03 02 10.8	-0.5
VILB				IAmb	IAmb	03 02 12.1	
	comp=Z,12nm,0.5s						
VILB	Vilhena	29.18	24	*e*P	P	03 02 11.8	+0.6
BSCB	Bom Sucesso	30.07	58	*e*P	P	03 02 17.7	-1.5
ETMB	Extrema	30.84	11	P	P	03 02 25.7	-0.1
ETMB	Extrema	30.84	11	*e*P	P	03 02 27.1	+1.3
PMNB	Patos De Minas	30.85	53	*e*P	P	03 02 25.0	-1.0
DUB01	Friburgo-RJ	30.91	63	*e*P	P	03 02 27.2	+0.8
PDRB	Porto dos Gac	31.61	29	*e*P	P	03 02 33.0	+0.4
BDFB	Brasilia	32.21	47	P	P	03 02 37.0	-1.0
	comp=Z,30nm,0.6s,baz=210,slow=6.6,SNR=75						
BDFB	Brasilia	32.21	47	P	P	03 02 36.4	-1.6
BDFB	Brasilia	32.21	47	*e*P	P	03 02 37.2	-0.8
SAML	Samuel	32.24	16	P	P	03 02 37.3	-0.8
SAML				IAmb	IAmb	03 02 39.7	
	comp=Z,11nm,1.3s						
SAML	Samuel	32.24	16	*e*P	P	03 02 38.8	+0.7
CZSB	Cruzeiro do Su	32.52	358	*e*P	P	03 02 42.1	+1.5
SNDB	Serra Nova Dou	33.60	38	*e*P	P	03 02 50.1	+0.1
JANB	Januaria	34.82	51	*e*P	P	03 02 59.8	-0.7
ABR01	Abrolhos, BA	36.24	62	*e*P	P	03 03 13.0	+0.4
NPGB	Novo Progresso	36.33	28	*e*P	P	03 03 13.1	-0.3
GUA01	Guaratinga, BA	36.49	59	*e*P	P	03 03 13.6	-1.1
SDBA	SAO DESIDERIO	36.58	48	*e*P	P	03 03 14.9	-0.6
TEFE	Tefe	37.28	12	*e*P	P	03 03 22.3	+1.0
SMTB	Santa Maria do	38.10	41	*e*P	P	03 03 28.4	+0.1
MACA	Manacapuru-AM	38.40	18	P	P	03 03 30.5	-0.2
MACA	Manacapuru-AM	38.40	18	*e*P	P	03 03 30.9	+0.2
ITTB	Itaituba	38.69	26	*e*P	P	03 03 33.2	+0.1
PRPB	Parauapebas	39.38	36	*e*P	P	03 03 39.6	+0.6
SGCB	S£o Gabriel d	40.31	7	*e*P	P	03 03 46.1	-0.5
MALB	Monte Alegre	41.53	27	*e*P	P	03 03 57.0	+0.4
TMAB	Tom-Au,PA,Br	43.52	36	*e*P	P	03 04 14.1	+1.5
MCPB	Macapa, AP	43.72	29	*e*P	P	03 04 14.9	+0.7
BOAV	Boa Vista	43.81	16	P	P	03 04 15.4	+0.4
BOAV	Boa Vista	43.81	16	*e*P	P	03 04 15.5	+0.6
ROSB	Rosrio	44.95	41	*e*P	P	03 04 25.9	+1.8
SNAA	Sanae	45.68	156	P	P	03 04 30.1	+0.9
	comp=Z,2.9nm,0.9s,baz=259,slow=16,SNR=1.8						
	comp=Z,2.9nm,0.9s						
NBCL	Cascavel-CE	47.00	49	*e*P	P	03 04 41.2	+1.1
RCBR	Riachuelo	47.13	53	*e*P	P	03 04 41.8	+0.6
MDP	Montagnes des	48.58	26	P	P	03 04 52.3	+0.1
	comp=Z,23nm,1.1s,baz=203,slow=9.5,SNR=5.1						
	comp=Z,23nm,1.1s						
BAUV	El Baul	49.20	5	P	P	03 04 57.0	0.0
QSPA	South Pole Qui	49.87	180	P	P	03 05 04.7	+3.1
	comp=Z,1.3nm,0.7s,baz=143,slow=20,SNR=6.5						
	comp=Z,1.3nm,0.7s						
CELP	Cerrillos	58.36	6	P	P	03 06 03.2	-0.2
SUR	Sutherland	71.71	117	P	P	03 07 31.4	+1.5
	comp=Z,1.5nm,0.4s,baz=225,slow=13,SNR=2.2						
	comp=Z,1.5nm,0.4s						
WIN	Windhoek	74.99	107	P	P	03 07 49.3	0.0
WIN				IAmb	IAmb	03 08 10.6	
	comp=Z,18nm,1.5s						
TXAR	Lajitas Array	75.38	332	P	P	03 07 53.5	+2.4
	comp=Z,0.4nm,0.8s,baz=153,slow=11,SNR=3.8						
	comp=Z,0.4nm,0.8s						
BOSA	Boshof	77.04	116	P	P	03 08 00.9	+0.2
	comp=Z,1.9nm,0.4s,baz=219,slow=4.2,SNR=12						
	comp=Z,1.9nm,0.4s						
BOSA	Boshof	77.04	116	P	P	03 07 59.8	-0.9
BOSA				IAmb	IAmb	03 08 05.1	
	comp=Z,12nm,1.2s						
DBIC	Dimbokro	77.17	70	P	P	03 08 01.8	+0.3
	comp=Z,3.7nm,0.5s,baz=225,slow=4.3,SNR=10.0						
	comp=Z,3.7nm,0.5s						
DBIC	Dimbokro	77.17	70	P	P	03 08 01.1	-0.3
DBIC				IAmb	IAmb	03 08 02.7	
	comp=Z,6.7nm,0.7s						
LBTB	Lobatse	79.55	114	P	P	03 08 13.0	-1.5
ANMO	Albuquerque	81.45	332	P	P	03 08 27.2	+2.8
	comp=Z,0.7nm,0.7s,baz=130,slow=7.9,SNR=3.9						
	comp=Z,0.7nm,0.7s						
TORD	Torodi Ar. Bea	86.28	69	P	P	03 08 49.3	+0.2
	comp=Z,1.2nm,0.9s,baz=221,slow=4.7,SNR=6.7						
	comp=Z,1.2nm,0.9s						
PDAR	Pinedale Array	89.51	333	P	P	03 09 06.1	+2.0
	comp=Z,0.2nm,0.6s,baz=138,slow=8.4,SNR=2.4						
	comp=Z,0.2nm,0.6s						
BRTR	Keskin Array B	124.62	65	PKP	PKiKP	03 15 05.5	-0.4
	comp=Z,0.5nm,0.8s,baz=222,slow=3.9,SNR=2.2						
MKAR	Makanchi Array	160.26	62	PKPab	PKPab	03 16 46.4	0.0
	comp=Z,0.3nm,0.6s,baz=279,slow=4.8,SNR=4.0						

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*MOS **06** 03:06:19.5±1.2,19°.62S×178°.36E,h34^{km},mb5.4/37,Error ellipse: s-maj=9.0km s-min=8.5km az=53.6*

*NOU **06** 03:06:19.6,19°.74S×178°.68E,h32^{km},mb5.4/81,South of Fiji Islands*

*IDC **06** 03:06:21.5±2.0,19°.59S×178°.35E,h40^{km}±16^{km},mb4.9/21,mbtmp5.1/24,ML4.0/3,MS4.3/53,Error ellipse: s-maj=15.1km s-min=9.9km az=109.0*

*NEIC **06** 03:06:21.4±1.4,19°.61S±0°.06×178°.4E±0°.1,h36^{km}±5^{km},mb5.3/210,Error ellipse: s-maj=14.0km s-min=9.4km az=88.0*

*GCMT **06** 03:06:23.4±0.2,19°.64S±0°.01×178°.45E±0°.02,h21^{km},MW5.2/100,Moment Tensor Solution. s62,c89; s100,c155; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M$_{rr}$6.66±.29; M$_{\theta\theta}$-5.06±.20; M$_{\phi\phi}$-1.60±.19; M$_{r\theta}$-1.28±.33; M$_{\theta\phi}$4.06±.11; M$_{\phi r}$1.91±.34; Best double couple: M$_0$7.57300×10^{16} NP1:ϕ_s311.00000°,δ54.00000°,λ100.00000°. NP2:ϕ_s115.00000°,δ37.00000°,λ77.00000°. Principal axes: T 7.0940, Plg78.0000°, Azm259.0000°; N 0.9570, Plg8.0000°, Azm125.0000°; P -8.0510, Plg8.0000°, Azm34.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **06** 03:06:25.8±0.0,19°.08S×177°.75E,h53^{km},mb5.4/57,mB5.3/39,Ms4.9/12,Ms7 4.6/15*

ISC 06 03:06:19.0±0.4**,19°.65S**±0°.05×**178°.43E**±0°.05**,h25**^{km}±2^{km}**,h25**^{km}**:pP-P,n832,**σ1^{s}19/787**,mb5.3**/188**,MS4.4**/62**,59C-29D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	1.94	349	P	Pn	03 06 50.3	-0.1
	3μm,0.4s,baz=161,slow=11,SNR=589						
MSVF				S	Sn	03 07 13.4	-0.6
	10μm,0.5s,baz=300,slow=19,SNR=22						
MSVF	Nonsavu	1.94	349	Pn	Pn	03 06 50.4	0.0
MSVF				Sn	Sn	03 07 13.0	-1.0
MSVF	Nonsavu	1.94	349	P	Pn	03 06 51.2	+0.8
MSVF	Nonsavu	1.94	349	P	Pn	03 06 50.4	0.0
MSVF						03 07 13.0	
LKBA	Tubou, Lakemba	2.97	62	P	Pn	03 07 01.7	-2.8
YSA	Yasawairara	3.05	344	P	Pn	03 07 07.2	+1.6
TAVE	Taveuni	3.33	29	P	Pn	03 07 08.1	-1.4
FUTU	Fugatoga	6.26	32	P	Pn	03 07 49.1	-0.6
RAO	Raoul Island	10.12	162	LR	LR	03 11 51.0	
	comp=Z,2μm,18.4s,baz=66,slow=32						
PINNC	Pines Island,	10.66	252	Pn	Pn	03 08 51.1	+0.9
AFI	Afiamalu	10.98	60	P	Pn	03 08 55.6	+1.0
	3.9nm,0.3s,baz=310,slow=1.3,SNR=34						
AFI				LR	LR	03 12 23.7	
	comp=Z,2μm,19.4s,baz=228,slow=33						
	228nm,0.9s						
NIUE	Niue	11.01	89	P	Pn	03 08 53.4	-1.5
	baz=11,SNR=6.1						
NIUE	Niue	11.01	89	Pn	Pn	03 08 53.2	-1.7
OUENC	Ouen Island, N	11.16	254	Pn	Pn	03 08 57.4	+0.3
DZM	Mont Dzumac	11.46	256	*e*Pn	Pn	03 09 04.3	+3.1
	292nm,1.6s						
DZM				*e*LR	LR	03 11 43.0	
	comp=Z,5μm,22.9s						
DZM	Mont Dzumac	11.46	256	P	Pn	03 09 01.8	+0.6
	0.2nm,0.3s,baz=102,slow=18,SNR=2.4						
DZM				LR	LR	03 12 53.7	
	comp=Z,5μm,18.2s,baz=85,slow=34						
	5.2nm,0.9s						
DZM	Mont Dzumac	11.46	256	Pn	Pn	03 09 02.3	+1.2
ONTNC	Ouen Toro	11.49	255	Pn	Pn	03 09 01.0	-0.6
NOUC	Port Laguerre	11.59	256	P	Pn	03 09 06.1	+3.2
KOUNC	Koumac, New Ca	13.32	264	Pn	Pn	03 09 26.5	0.0
NFK	Norfolk Island	13.36	224	P	Pn	03 09 30.8	+3.7
	baz=14,SNR=14						
MXZ	Matakaoa Point	17.85	180	Pn	Pn	03 10 25.4	-0.1
URZ	Urewera	18.58	183	P	Pn	03 10 36.3	+1.8
	1.0nm,0.3s,baz=112,slow=2.3,SNR=12						
URZ				LR	LR	03 15 43.7	
	comp=Z,1μm,22.0s,baz=90,slow=30						
	21nm,0.7s						
RTZ	Ruatahuna	18.94	183	P	Pn	03 10 39.1	+0.1
HIZ	Hauiti	19.05	189	P	Pn	03 10 40.1	-0.1
BKZ	Black Stump Fm	19.52	185	P	P	03 10 45.1	+0.6
BKZ	Black Stump Fm	19.52	185	P	P	03 10 44.4	-0.1
RAR	Rarotonga	20.49	98	LR	LR	03 17 03.6	
	comp=Z,596nm,21.2s,baz=262,slow=31						
HNR	Honiara	20.55	297	LR	LR	03 17 51.5	
	comp=Z,14μm,18.0s,baz=135,slow=34						
HNR	Honiara	20.55	297	P	P	03 10 55.9	+0.1
HNR				IAmb	IAmb	03 11 16.1	
	comp=Z,165nm,0.8s						
HNR	Honiara	20.55	297	P	P	03 10 55.9	+0.1
HNR				pmax	pmax		
	comp=Z,165nm,0.8s						
BFZ	Birch Farm	21.05	185	P	P	03 11 02.5	+1.5
MRZ	Mangatainoka R	21.08	186	P	P	03 11 02.5	+1.1
QRZ	Quartz Range	21.70	192	P	P	03 11 08.5	+0.5
TCW	Tory Channel	21.78	188	P	P	03 11 09.4	+0.5
TKNZ	Takaka Hill	21.82	191	P	P	03 11 09.2	-0.1
NNZ	Nelson	21.92	190	P	P	03 11 11.5	+1.0
NNZ				IAmb	IAmb	03 11 20.1	
	comp=Z,106nm,1.0s						
PLWZ	Palliser	22.02	186	P	P	03 11 12.6	+1.2
MRNZ	Matariki Terra	22.21	191	P	P	03 11 14.1	+0.6
BSWZ	Blackbirch Sta	22.33	189	P	P	03 11 15.3	+0.5
THZ	Tophouse	22.54	191	IAmb	IAmb	03 11 34.3	
	comp=Z,111nm,1.1s						
DSZ	Denniston Nort	22.73	193	P	P	03 11 21.2	+2.1
DSZ				IAmb	IAmb	03 11 23.6	
	comp=Z,81nm,1.0s						
KHZ	Kahutara	23.07	189	IAmb	IAmb	03 11 39.9	
	comp=Z,83nm,1.2s						
GVZ	Greta Valley S	23.69	190	IAmb	IAmb	03 11 48.0	
	comp=Z,70nm,0.8s						
INZ	Inchbonnie	23.75	193	P	P	03 11 29.0	-0.2
INZ				IAmb	IAmb	03 11 57.4	
	comp=Z,131nm,0.9s						
OXZ	Oxford	24.21	191	P	P	03 11 32.3	-1.3
OXZ				IAmb	IAmb	03 11 53.4	
	comp=Z,163nm,1.4s						
MQZ	McQueen's Vall	24.47	190	P	P	03 11 36.6	+0.7
RPZ	Rata Peaks	24.78	193	P	P	03 11 40.3	+1.6
	comp=Z,21nm,0.9s,baz=31,slow=2.1,SNR=8.2						
RPZ				LR	LR	03 19 36.1	
	comp=Z,846nm,19.9s,baz=316,slow=32						
	comp=Z,21nm,0.9s						
RPZ	Rata Peaks	24.78	193	P	P	03 11 40.1	+1.3
RPZ				IAmb	IAmb	03 11 47.5	
	comp=Z,111nm,1.4s						
FOZ	Fox Glacier	24.89	195	P	P	03 11 39.6	0.0
GD1S	Gladstone Soft	25.64	256	P	P	03 11 49.2	+2.5
JCZ	Jackson Bay	25.65	196	P	P	03 11 46.8	0.0
EIDS	Eidsvold	25.87	252	P	P	03 11 50.1	+1.3
	baz=26,SNR=11						
EIDS	Eidsvold	25.87	252	P	P	03 11 49.3	+0.5
EIDS	Eidsvold	25.87	252	P	P	03 11 50.2	+1.4
ODZ	Otahua Downs	26.13	193	P	P	03 11 51.7	+0.7
ARMA	Armidale	26.48	241	P	P	03 11 56.7	+2.2
	baz=27,SNR=18						
ARMA	Armidale	26.48	241	P	P	03 11 53.7	-0.7
ARMA				IAmb	IAmb	03 11 57.6	
	comp=Z,37nm,0.8s						
ARMA	Armidale	26.48	241	P	P	03 11 56.4	+2.0
MLZ	Mavora Lakes	27.03	196	P	P	03 11 59.1	0.0
MLZ				IAmb	IAmb	03 12 13.4	
	comp=Z,59nm,1.1s						
DCZ	Deep Cove	27.38	197	P	P	03 12 03.1	+0.9
WHZ	Wether Hill Ro	27.56	196	IAmb	IAmb	03 12 15.8	
	comp=Z,126nm,1.3s						
RMQ	Roma	28.09	250	P	P	03 12 11.0	+2.2
	baz=28,SNR=6.5						
RMQ	Roma	28.09	250	P	P	03 12 10.8	+2.0
AULRC	Lightning Ridg	29.28	245	P	P	03 12 21.3	+1.9
TV1H	Townsville Har	29.81	265	P	P	03 12 25.7	+1.6
RABL	Rabaul	29.86	298	P	P	03 12 24.5	-0.1
KRVT	Keravat (AS076	29.92	297	P	P	03 12 25.6	+0.5
	comp=Z,35nm,0.6s,baz=92,slow=3.1,SNR=4.7						
KRVT				LR	LR	03 23 45.3	
	comp=Z,637nm,19.5s,baz=261,slow=35						
	comp=Z,35nm,0.6s						
TBI	Tubuai	30.07	103	*e*S	S	03 17 23.8	+0.3
	comp=Z,747nm,24.8s						
TBI				*e*LQ	LQ	03 19 05.2	
	comp=Z,6μm,25.0s						
TBI				*e*LR	LR	03 20 21.0	
	comp=Z,5μm,26.8s						
TBI				*e*LR	LR	03 20 21.8	
	comp=Z,17μm,24.8s						
CTA	Charters Tower	30.24	264	P	P	03 12 29.4	+1.4
	comp=Z,38nm,0.8s,baz=89,slow=10.0,SNR=90						
CTA				PcP	PcP	03 15 28.7	+0.2
	comp=Z,5.9nm,0.5s,baz=118,slow=3.5,SNR=5.8						
CTA				LR	LR	03 23 55.4	
	comp=Z,993nm,18.9s,baz=88,slow=35						
	comp=Z,38nm,0.8s						
CTA	Charters Tower	30.24	264	P	P	03 12 29.3	+1.4
CTAO	Charters Tower	30.24	264	P	P	03 12 28.2	+0.2
CTAO				IAmb	IAmb	03 12 30.6	
	comp=Z,43nm,0.8s						
CTAO	Charters Tower	30.24	264	P	P	03 12 29.3	+1.4
CTAO	Charters Tower	30.24	264	P	P	03 12 28.2	+0.2
CTAO				pmax	pmax		
	comp=Z,43nm,0.9s						
CTAO	Charters Tower	30.24	264	P	P	03 12 29.4	+1.4
CTAO				pP	pP	03 12 33.6	-0.8
CTAO				sP	sP	03 12 36.9	-0.2
CTAO				PcP	PcP	03 15 28.4	-0.1
CAN	Canberra	30.27	233	P	P	03 12 28.3	+0.2
CAN	Canberra	30.27	233	P	P	03 12 28.3	+0.2
CAN				pmax	pmax		
	comp=Z,44nm,1.4s						
CAN	Canberra	30.27	233	P	P	03 12 29.6	+1.5
CAN				pP	pP	03 12 34.2	-0.3
PPT2	Papeete2	30.37	91	*e*S	S	03 17 28.5	0.0
	comp=Z,254nm,24.0s						
PPT2				*e*LQ	LQ	03 19 12.7	
	comp=Z,2μm,28.0s						
PPT2				*e*LR	LR	03 20 29.2	
	comp=Z,1μm,25.0s						
PPT2				*e*LR	LR	03 20 29.2	
	comp=Z,927nm,24.5s						
PPT	Papeete	30.37	91	LR	LR	03 21 37.0	
	comp=Z,454nm,21.1s,baz=259,slow=30						
CMSA	Cobar Meteorol	31.69	242	P	P	03 12 42.0	+1.4
	baz=32,SNR=68						
PMG	Port Moresby	31.88	284	P	P	03 12 41.7	-0.7
	comp=Z,18nm,0.8s,baz=101,slow=3.8,SNR=7.1						
PMG				LR	LR	03 24 05.5	
	comp=Z,743nm,18.3s,baz=106,slow=34						
	comp=Z,18nm,0.8s						
PMG	Port Moresby	31.88	284	P	P	03 12 41.9	-0.6
PMG				IAmb	IAmb	03 12 44.6	
	comp=Z,49nm,1.2s						
PMG	Port Moresby	31.88	284	P	P	03 12 43.7	+1.3
PMG	Port Moresby	31.88	284	P	P	03 12 43.8	+1.3
PMG	Port Moresby	31.88	284	*ce*P	P	03 12 43.5	+1.0
PMG				pmax	pmax		
	comp=Z,29nm,0.8s						
PMG	Port Moresby	31.88	284	P	P	03 12 43.5	+1.0
PMG				pP	pP	03 12 48.4	-0.6
QLP	Quilpie	32.13	251	P	P	03 12 45.5	+1.0
	baz=32,SNR=18						
QLP	Quilpie	32.13	251	P	P	03 12 45.8	+1.3
MTSU	Mount Surprise	32.28	267	P	P	03 12 47.3	+1.3
	baz=32,SNR=28						
MTSU	Mount Surprise	32.28	267	P	P	03 12 47.5	+1.5
TOO	Toolangi	33.75	231	P	P	03 13 00.0	+1.4
	baz=34,SNR=7.8						
TOO	Toolangi	33.75	231	P	P	03 12 59.1	+0.4
TOO				IAmb	IAmb	03 13 01.4	
	comp=Z,49nm,1.2s						
TOO	Toolangi	33.75	231	P	P	03 13 00.0	+1.4
TOO	Toolangi	33.75	231	P	P	03 12 59.1	+0.4
TOO				pmax	pmax		

	comp=Z,49nm,1.3s						
COEN	Coen	34.17	274	P	P	03 13 03.3	+0.7
	baz=34,SNR=7.2						
COEN	Coen	34.17	274	P	P	03 13 01.6	-0.9
COEN				IAmb	IAmb	03 13 19.0	
	comp=Z,33nm,1.4s						
COEN	Coen	34.17	274	P	P	03 13 03.9	+1.4
MOO	Moorlands	34.79	222	P	P	03 13 09.4	+1.9
	baz=35						
BRAT	Ballarat	34.89	232	P	P	03 13 10.6	+2.1
STKA	Stephens Creek	35.17	242	P	P	03 13 11.4	+0.5
	comp=Z,30nm,0.7s,baz=90,slow=10,SNR=83						
STKA				LR	LR	03 26 43.1	
	comp=Z,1µm,18.1s,baz=85,slow=35						
	comp=Z,30nm,0.7s						
STKA	Stephens Creek	35.17	242	P	P	03 13 12.5	+1.6
	baz=35,SNR=32						
STKA	Stephens Creek	35.17	242	P	P	03 13 11.8	+0.8
STKA	Stephens Creek	35.17	242	P	P	03 13 12.2	+1.2
STKA	Stephens Creek	35.17	242	P	P	03 13 11.8	+0.8
STKA				pmax	pmax		
	comp=Z,21nm,1.4s						
INKA	Innaminka	35.32	250	P	P	03 13 13.8	+1.5
ARPS	Mount Arapiles	36.21	234	P	P	03 13 21.2	+1.4
	baz=36,SNR=10						
ARPS	Mount Arapiles	36.21	234	P	P	03 13 21.0	+1.2
QIS	Mount Isa	36.41	262	P	P	03 13 22.2	+0.4
	baz=37,SNR=12						
QIS	Mount Isa	36.41	262	P	P	03 13 22.5	+0.7
HTT	Hallett	37.68	240	P	P	03 13 33.7	+1.3
	baz=38,SNR=6.7						
HTT	Hallett	37.68	240	P	P	03 13 33.8	+1.3
LCRK	Leigh Creek	37.80	245	P	P	03 13 34.6	+1.1
WHYH	Whyalla	38.72	241	P	P	03 13 42.8	+1.7
OOD	Oodnadatta	39.80	250	P	P	03 13 51.8	+1.6
BBOO	Buckleboo	39.94	242	P	P	03 13 52.2	+0.8
	baz=40,SNR=13						
BBOO	Buckleboo	39.94	242	P	P	03 13 51.9	+0.5
BBOO				IAmb	IAmb	03 13 53.3	
	comp=Z,46nm,1.0s						
BBOO	Buckleboo	39.94	242	P	P	03 13 52.2	+0.8
GENI	Genyem	41.03	290	P	P	03 14 01.8	+1.2
	comp=Z,86nm,1.2s						
WR0	Warramunga Arr	41.20	262	P	P	03 14 01.1	-0.8
WR0				IAmb	IAmb	03 14 02.7	
	comp=Z,50nm,1.3s						
WC3	Warramunga Arr	41.36	262	P	P	03 14 02.8	-0.5
	baz=42						
MULG	Mulgathing	41.37	246	P	P	03 14 03.9	+0.8
WB0	Warramunga Arr	41.37	262	P	P	03 14 02.5	-0.8
WB0				IAmb	IAmb	03 14 03.9	
	comp=Z,47nm,0.8s						
WB2	Warramunga Arr	41.38	262	P	P	03 14 02.5	-0.9
WB2				IAmb	IAmb	03 14 04.7	
	comp=Z,39nm,0.8s						
WB1	Warramunga Ar.	41.38	262	P	P	03 14 02.5	-1.0
WRAB	Tennant Creek	41.38	262	P	P	03 14 02.4	-1.0
WRAB				IAmb	IAmb	03 14 04.7	
	comp=Z,39nm,0.8s						
WRAB	Tennant Creek	41.38	262	P	P	03 14 03.0	-0.5
WRAB	Tennant Creek	41.38	262	*ce*P	P	03 14 02.9	-0.5
WRAB				pmax	pmax		
	comp=Z,45nm,0.9s						
WRAB	Tennant Creek	41.38	262	P	P	03 14 02.7	-0.7
WRAB				sP	pP	03 14 10.8	+0.7
WRA	Warramunga Arr	41.39	262	P	P	03 14 02.7	-0.8
	comp=Z,45nm,1.1s,baz=99,slow=8.2,SNR=90						
WRA				PcP	PcP	03 16 01.2	-0.3
	comp=Z,3.4nm,0.9s,baz=99,slow=6.3,SNR=2.5						
WRA				LR	LR	03 30 16.5	
	comp=Z,656nm,19.6s,baz=97,slow=35						
	comp=Z,45nm,1.1s						
WRA	Warramunga Arr	41.39	262	P	P	03 14 02.3	-1.2
WRA	Warramunga Arr	41.39	262	P	P	03 14 02.3	-1.2
WRA				pmax	pmax		
	comp=Z,7.0nm,1.4s						
AS01	Alice Springs	41.41	256	P	P	03 14 03.8	+0.2
AS31	Alice Springs	41.45	256	P	P	03 14 03.4	-0.6
ASAR	Alice Springs	41.45	256	P	P	03 14 03.7	-0.3
	comp=Z,31nm,0.9s,baz=80,slow=8.5,SNR=205						
ASAR				PcP	PcP	03 16 01.4	-0.2
	comp=Z,12nm,0.9s,baz=96,slow=4.0,SNR=10						
ASAR				PKiKP	PKiKP	03 23 09.0	-0.2
	comp=Z,0.1nm,0.3s,baz=96,slow=1.9,SNR=4.2						
ASAR				LR	LR	03 30 01.9	
	comp=Z,775nm,21.7s,baz=100,slow=34						
	comp=Z,31nm,0.9s						
ASAR	Alice Springs	41.45	256	P	P	03 14 03.8	-0.2
TAOE	Nuku Hiva Isla	41.45	81	*e*S	S	03 20 17.6	-0.7
	comp=Z,214nm,27.5s						
TAOE				*e*SS	SS	03 23 24.2	+1.1
	comp=Z,329nm,26.4s						
TAOE				*e*LR	LR	03 25 36.7	
	comp=Z,650nm,24.6s						
KDU	Kakadu	44.57	272	P	P	03 14 29.1	-0.1
	baz=45,SNR=4.3						
MTN	Manton Dam	45.79	271	P	P	03 14 38.4	-0.6
MTN				IAmb	IAmb	03 14 44.0	
	comp=Z,50nm,1.0s						
WRKA	Warakurna	46.47	254	P	P	03 14 44.7	+0.4
	baz=47,SNR=75						
WRKA	Warakurna	46.47	254	P	P	03 14 44.7	+0.4
FORT	Forrest	46.56	246	P	P	03 14 45.2	+0.3
	baz=47,SNR=91						
FORT	Forrest	46.56	246	P	P	03 14 44.6	-0.3
FORT	Forrest	46.56	246	P	P	03 14 45.0	+0.1
GUMO	Guam	46.72	312	LR	LR	03 32 37.3	
	comp=Z,207nm,22.0s,baz=140,slow=34						
KNRA	Kununurra	47.36	267	P	P	03 14 51.6	+0.3
	baz=48,SNR=9.5						
KNRA	Kununurra	47.36	267	P	P	03 14 50.7	-0.6
FAKI	Fak Fak	48.04	284	P	P	03 14 56.0	-0.6
FAKI				IAmb	IAmb	03 15 12.2	
	comp=Z,42nm,1.4s						
FAKI	Fak Fak	48.04	284	P	P	03 14 56.4	-0.2
	comp=Z,23nm,1.6s						
BNDI	Bandanaira	49.57	281	P	P	03 15 08.5	+0.1
	comp=Z,227nm,1.1s,comp=Z,8µm						
SWI	Sorong	49.78	286	P	P	03 15 10.2	+0.2
	comp=Z,68nm,1.0s						
KMBL	Kambalda	51.86	245	P	P	03 15 25.2	-0.2
	baz=52,SNR=11						
KMBL	Kambalda	51.86	245	P	P	03 15 25.3	-0.2
NLAI	Namlea	52.64	281	P	P	03 15 32.0	+0.6
	comp=Z,47nm,1.3s,comp=Z,10µm						
DRV	Dumont d'Urvil	53.08	198	P	P	03 15 32.7	-1.1
DRV				pP	pP	03 15 37.9	-2.8
DRV				sP	sP	03 15 40.8	-2.5
SOEI	Soe	53.11	272	P	P	03 15 35.2	+0.1
SOEI	Soe	53.11	272	P	P	03 15 37.3	+2.2
SOEI	Soe	53.11	272	P	P	03 15 36.2	+1.1
	comp=Z,92nm,1.2s						
SANI	Sanana	54.12	282	P	P	03 15 42.7	+0.4
SANI	Sanana	54.12	282	P	P	03 15 42.1	-0.2
	comp=Z,55nm,1.0s,comp=Z,893nm						
PSA00	Pilbara Seismi	54.59	257	P	P	03 15 44.6	-1.0
PSA00	Pilbara Seismi	54.59	257	P	P	03 15 45.4	-0.2
MBWA	Marble Bar	54.76	258	P	P	03 15 46.0	-0.8
MBWA	Marble Bar	54.76	258	P	P	03 15 46.7	-0.2
MBWA	Marble Bar	54.76	258	⇑P	P	03 15 46.7	-0.2
MEEK	Meekatharra	55.02	251	P	P	03 15 48.1	-0.6
	baz=55,SNR=21						
MEEK	Meekatharra	55.02	251	P	P	03 15 48.0	-0.8
MMRI	Maumere	55.36	273	P	P	03 15 50.3	-1.0
MMRI	Maumere	55.36	273	P	P	03 15 51.4	+0.1
	comp=Z,87nm,1.0s						
KLBR	Kellerberrin	55.38	245	P	P	03 15 50.8	-0.4
	baz=56,SNR=26						
KLBR	Kellerberrin	55.38	245	P	P	03 15 50.4	-0.8
RKGY	Rocky Gully	55.91	241	P	P	03 15 55.5	+0.5
	baz=56,SNR=4.7						
RKGY	Rocky Gully	55.91	241	P	P	03 15 55.9	+0.9
BLDU	Ballidu	56.33	246	P	P	03 15 57.4	-0.7
	baz=56,SNR=23						
BLDU	Ballidu	56.33	246	P	P	03 15 56.9	-1.2
MUN	Mundaring	56.67	244	P	P	03 16 00.6	+0.2
	baz=57,SNR=9.3						
MUN	Mundaring	56.67	244	P	P	03 16 00.6	+0.2
AUHAR	St Anne's Scho	56.87	243	P	P	03 16 03.8	+2.0
	comp=Z,115nm,1.3s						
MORW	Morawa	57.04	248	P	P	03 16 02.5	-0.7
	baz=57,SNR=14						
MORW	Morawa	57.04	248	P	P	03 16 02.3	-0.8
MORW				IAmb	IAmb	03 16 03.7	
	comp=Z,46nm,0.9s						
MORW	Morawa	57.04	248	P	P	03 16 02.9	-0.3
LUWI	Luwuk	57.48	282	P	P	03 16 05.9	-0.5
LUWI	Luwuk	57.48	282	P	P	03 16 09.1	+2.7
	comp=Z,72nm,0.7s						
LUWI	Luwuk	57.48	282	P	P	03 16 06.5	+0.1
	comp=Z,71nm,0.9s						
GTOI	Gorontalo	57.91	284	P	P	03 16 09.9	+0.5
	comp=Z,18nm,1.0s,comp=Z,218nm						
DAV	Davao City (W)	58.40	292	LR	LR	03 38 06.0	
	comp=Z,140nm,22.0s,baz=112,slow=33						
VNDA	Vanda	58.48	184	LR	LR	03 37 29.3	
	comp=Z,116nm,19.4s,baz=22,slow=32						
KAPI	Kappang	58.86	276	LR	LR	03 43 32.9	
	comp=Z,92nm,18.1s,baz=106,slow=38						
PLAI	Plampang	59.50	271	P	P	03 16 20.4	-0.1
PLAI	Plampang	59.50	271	P	P	03 16 19.4	-1.1
	comp=Z,68nm,1.0s,comp=Z,793nm						
GIRL	Giralia	59.53	255	P	P	03 16 20.7	0.0
	baz=60,SNR=7.0						
GIRL	Giralia	59.53	255	P	P	03 16 19.6	-1.1
GIRL	Giralia	59.53	255	P	P	03 16 22.4	+1.8
TOLI2	Tolitoli	60.14	283	P	P	03 16 23.5	-1.4
TOLI2				IAmb	IAmb	03 16 25.4	
	comp=Z,20nm,0.9s						
TOLI2	Tolitoli	60.14	283	P	P	03 16 24.4	-0.5
TWSI	Taliwang, Sumb	60.37	271	P	P	03 16 26.0	-0.5
	comp=Z,99nm,0.9s						
IGBI	Denpasar	61.98	270	P	P	03 16 37.3	-0.1
	comp=Z,105nm,1.1s						
CCD	Concordia, Ant	62.46	194	⇑P	P	03 16 39.5	-0.7
JAGI	Jajag, Banyuwa	63.02	270	P	P	03 16 42.2	-2.2
JAGI	Jajag, Banyuwa	63.02	270	P	P	03 16 43.2	-1.2
JAGI	Jajag, Banyuwa	63.02	270	P	P	03 16 42.8	-1.6
	comp=Z,67nm,1.3s						
ABJI	Asem Bagus	63.15	271	P	P	03 16 45.0	-0.2
	comp=Z,60nm,1.0s						
GMJI	Gumukmas	63.75	270	P	P	03 16 47.9	-1.3
	comp=Z,53nm,0.8s						
BBKI	Banjar Baru	63.99	276	P	P	03 16 50.9	+0.1
	comp=Z,84nm,1.0s						
PWJI	Pagerwojo	65.37	270	P	P	03 16 59.4	-0.4
	comp=Z,50nm,0.8s						
KKM	Kota Kinabalu	66.30	286	P	P	03 17 04.8	-1.1
KKM				IAmb	IAmb	03 17 06.7	
	comp=Z,29nm,0.7s						
UGM	Wanagama	66.61	270	P	P	03 17 06.8	-1.1
UGM	Wanagama	66.61	270	P	P	03 17 07.7	-0.2
	comp=Z,94nm,0.8s						
JOW	Kunigami	67.08	312	LR	LR	03 46 11.3	
	comp=Z,158nm,18.2s,baz=108,slow=36						
JGF	Kuroka	67.34	325	P	P	03 17 12.1	+0.1
JGF				IAmb	IAmb	03 17 19.2	
	comp=Z,22nm,1.1s						
JGF	Kuroka	67.34	325	P	P	03 17 13.1	+1.1
MJAR	Matsushiro Arr	67.58	326	P	P	03 17 13.3	-0.1
	comp=Z,24nm,1.0s,baz=156,slow=5.7,SNR=34						
MJAR				LR	LR	03 42 18.7	
	comp=Z,274nm,21.7s,baz=147,slow=32						
	comp=Z,24nm,1.0s						
MAJO	Matsushiro	67.58	326	P	P	03 17 12.8	-0.7
MAJO	Matsushiro	67.58	326	P	P	03 17 14.8	+1.3
MAJO	Matsushiro	67.58	326	P	P	03 17 12.8	-0.7
MAJO				pmax	pmax		
	comp=Z,57nm,1.2s						
MAJO	Matsushiro	67.58	326	P	P	03 17 14.4	+0.9
MAJO				pP	pP	03 17 20.5	-0.1
MJB9	Matsu-Tunnel	67.59	326	P	P	03 17 13.9	+0.4
MJB9				IAmb	IAmb	03 17 16.9	
	comp=Z,53nm,1.2s						
JMN	Monobe	67.97	321	P	P	03 17 16.7	+0.6
JMN	Monobe	67.97	321	P	P	03 17 18.8	+2.8
KPJI	Karang Pucung	68.29	270	P	P	03 17 17.8	-0.6
	comp=Z,57nm,1.3s						
SBUM	Sibu	68.55	281	P	P	03 17 19.2	-0.8
SBUM				IAmb	IAmb	03 17 21.7	
	comp=Z,39nm,1.5s						
CMJI	Cimerak	68.61	269	P	P	03 17 19.1	-1.3
	comp=Z,70nm,1.2s						
JHS	Saijyo	69.31	321	P	P	03 17 26.8	+2.5
JNU	Nakatsue	69.39	319	LR	LR	03 42 57.4	
	comp=Z,148nm,21.5s,baz=118,slow=32						
KSM	Kuching	69.97	279	P	P	03 17 27.7	-1.1
KSM				IAmb	IAmb	03 17 29.9	
	comp=Z,50nm,1.0s						
KSM	Kuching	69.97	279	P	P	03 17 29.4	+0.6
QSPA	South Pole Qui	70.41	180	P	P	03 17 30.9	+0.1
QSPA	South Pole Qui	70.41	180	⇑P	P	03 17 31.5	+0.7
TPUB	Ta-pu	70.71	304	P	P	03 17 32.1	-1.1
TPUB	Ta-pu	70.71	304	P	P	03 17 33.5	+0.3
TPI	Tanjungpandan	70.97	274	P	P	03 17 34.8	-0.2
	comp=Z,26nm,1.2s						
SBJI	Serang	71.31	270	P	P	03 17 36.7	-0.3
	comp=Z,134nm,1.0s						
ASAJ	Asahikawa	71.43	334	LR	LR	03 43 22.7	
	comp=Z,483nm,21.8s,baz=164,slow=31						
CGJI	Cibinong	71.57	269	P	P	03 17 36.9	-1.7
	comp=Z,69nm,0.9s,comp=Z,4µm						
SHEM	Shemya Is, Ala	72.17	357	LR	LR	03 43 31.6	
	comp=Z,386nm,20.9s,baz=152,slow=31						
PPBI	Pangkal Pinang	72.60	274	P	P	03 17 44.9	+0.1
	comp=Z,46nm,1.1s,comp=Z,25µm						
KASI	Kota Agung	73.04	270	P	P	03 17 45.6	-1.8
	comp=Z,94nm,1.0s						
LWLI	Liwa	73.62	270	P	P	03 17 49.8	-1.1
	comp=Z,119nm,0.7s						
MDSI	Maura Dua	73.68	271	P	P	03 17 49.0	-2.1
	comp=Z,29nm,1.0s						
YSS	Yuzh-Sakhalins	73.68	335	P	P	03 17 51.6	+1.3
YSS	Yuzh-Sakhalins	73.68	335	P	P	03 17 53.2	+2.8
YSS	Yuzh-Sakhalins	73.68	335	*ce*P	P	03 17 52.6	+2.2
YSS				*e*		03 18 08.4	
YSS				*e*S	S	03 27 22.8	+3.4
YSS				pmax	pmax		
	comp=Z,110nm,1.0s						
YSS				pmax	pmax		
	comp=Z,300nm,3.4s						
YSS				MLR	MLR		
	comp=Z,300nm,17.0s						
KSRS	Korea Array	74.06	320	P	P	03 17 53.6	+0.9
	comp=Z,7.9nm,0.9s,baz=137,slow=6.4,SNR=13						
KSRS				LR	LR	03 48 49.5	
	comp=Z,134nm,19.1s,baz=135,slow=34						
	comp=Z,7.9nm,0.9s						
KSAR	Wonju Array Be	74.08	320	P	P	03 17 52.7	-0.2
KSAR	Wonju Array Be	74.08	320	P	P	03 17 52.7	-0.2
PEA0B	Petropavlovsk-	74.65	347	P	P	03 17 56.2	+0.3
PEA0B	Petropavlovsk-	74.65	347	P	P	03 17 56.2	+0.3
PEA0B				pmax	pmax		
	comp=Z,88nm,1.3s						
PETK	Petropavlovsk-	74.65	347	P	P	03 17 56.5	+0.6
	comp=Z,19nm,0.9s,baz=163,slow=11,SNR=14						
PETK				LR	LR	03 44 18.8	
	comp=Z,193nm,20.5s,baz=159,slow=30						
	comp=Z,19nm,0.9s						
PETK	Petropavlovsk-	74.65	347	P	P	03 17 56.3	+0.4
DLV	T Lat	75.66	288	P	P	03 18 03.8	+1.0
USA0B	Ussuriysk Arra	76.41	328	P	P	03 18 06.0	-0.2
USA0B	Ussuriysk Arra	76.41	328	P	P	03 18 06.0	-0.2
USA0B				pmax	pmax		
	comp=Z,64nm,1.1s						
USRK	Ussuriysk Ar.	76.41	328	P	P	03 18 06.8	+0.5
	comp=Z,44nm,1.0s,baz=151,slow=4.4,SNR=44						
USRK				LR	LR	03 45 40.1	
	comp=Z,195nm,22.0s,baz=140,slow=31						
	comp=Z,44nm,1.0s						
USRK	Ussuriysk Ar.	76.41	328	P	P	03 18 06.0	-0.2
NJ2	Nanjing	76.78	311	*e*P	P	03 18 09.6	+1.1
NJ2				pP	pwP	03 18 19.5	0.0
NJ2				pmax	pmax		
	comp=Z,26nm,0.5s						
SDSI	Sungai Dareh	77.44	274	P	P	03 18 10.8	-1.9
	comp=Z,19nm,1.4s						
QIZ	Qiongzhong	77.45	296	P	P	03 18 10.7	-1.9
QIZ				pmax	pmax		
	comp=Z,160nm,6.0s						
QIZ				LR	LR		
	comp=Z,130nm,17.9s						
QIZ				LR	LR		
	comp=Z,170nm,20.3s						
QIZ				LR	LR		
	comp=Z,210nm,20.7s						
MDJ	Mudanjiang	77.93	327	P	P	03 18 16.4	+1.7
MDJ				pP	pwP	03 18 27.6	+1.8
MDJ				pmax	pmax		
	comp=Z,48nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,250nm,5.1s						
MDJ				LR	LR		
	comp=Z,300nm,22.8s						
MDJ	Mudanjiang	77.93	327	P	P	03 18 15.5	+0.8
MDJ				IAmb	IAmb	03 18 17.8	
	comp=Z,60nm,1.2s						
MDJ	Mudanjiang	77.93	327	P	P	03 18 16.6	+1.9
BKNI	Bangkinang	78.23	275	P	P	03 18 16.8	-0.3
BKNI	Bangkinang	78.23	275	P	P	03 18 18.0	+0.9
	comp=Z,76nm,1.2s,comp=Z,2µm						
GRNR	Gornyy	79.25	334	⇓*i*P	P	03 18 23.0	+1.1
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WHN	Wuhan	79.26	308	P	P	03 18 23.7	+1.4
WHN				pmax	pmax		
	comp=Z,88nm,1.1s						
CN2	Changchun	79.61	324	⇑P	P	03 18 25.5	+1.5
CN2				pP	pwP	03 18 37.5	+2.4
CN2				S	S	03 28 23.0	-1.5
CN2				pmax	pmax		
	comp=Z,50nm,1.2s						
CN2				pmax	pmax		
	comp=Z,300nm,4.0s						
CN2				LR	LR		
	comp=Z,100nm,15.0s						
CN2				LR	LR		
	comp=Z,200nm,15.0s						
CN2				LR	LR		
	comp=Z,200nm,14.0s						
IPM	Ipoh	79.69	279	P	P	03 18 23.7	-1.5
IPM				IAmb	IAmb	03 18 26.0	
	comp=Z,52nm,0.9s						
IPM	Ipoh	79.69	279	P	P	03 18 25.4	+0.3
SAO	San Andreas Ge	79.76	45	P	P	03 18 25.3	+0.3
SAO				IAmb	IAmb	03 18 29.2	
	comp=Z,39nm,1.1s						
SAO	San Andreas Ge	79.76	45	P	P	03 18 25.3	+0.3
SAO				pmax	pmax		
	comp=Z,39nm,1.1s						
BNX	BinXian	79.83	326	⇑P	P	03 18 25.9	+0.8
BNX				pmax	pmax		
	comp=Z,37nm,1.0s						
BNX				pmax	pmax		
	comp=Z,150nm,5.4s						
KLR	Kul'dur	80.13	331	LR	LR	03 50 09.4	
	comp=Z,185nm,19.8s,baz=150,slow=33						
KLR	Kul'dur	80.13	331	*ce*P	P	03 18 28.4	+1.7
KLR				pmax	pmax		
	comp=Z,30nm,1.0s						
TIA	Tai'an	80.25	314	P	P	03 18 28.7	+1.1
TIA				pmax	pmax		
	comp=Z,45nm,1.1s						
KULM	Kulim	80.32	279	P	P	03 18 27.9	-0.6
KULM				IAmb	IAmb	03 18 29.6	
	comp=Z,40nm,1.1s						
Q17K	Contact Creek	80.49	13	P	P	03 18 29.3	+0.8
	baz=204						
BELA	Belgrano 2	80.81	173	P	P	03 18 29.1	-0.9
KDAK	Kodiak Island	80.83	15	LR	LR	03 45 30.2	
	comp=Z,202nm,20.9s,baz=211,slow=29						
VTX	Valle De La Tr	80.95	52	P	P	03 18 33.3	+1.7
VTX				IAmb	IAmb	03 18 34.9	
	comp=Z,41nm,1.4s						
SKLT	Songkhla	81.02	281	P	P	03 18 32.8	+0.5
MURC	Murrieta	81.02	50	P	P	03 18 33.8	+1.9
	baz=239						
RPSI	Rantau Prapat	81.03	276	P	P	03 18 30.8	-1.6
RPSI				IAmb	IAmb	03 18 32.3	
	comp=Z,32nm,1.0s						
PSI	Prapat	81.07	276	P	P	03 18 31.5	-1.2
PSI	Prapat	81.07	276	P	P	03 18 30.8	-1.9
PSI				pmax	pmax		
	comp=Z,32nm,1.0s						
EDW2	Edwards Air Fo	81.11	48	P	P	03 18 34.3	+1.9
	baz=239						
ESJX	Sierra Juarez	81.13	52	P	P	03 18 31.1	-1.6
CMB	Columbia Colle	81.17	44	P	P	03 18 33.1	+0.5
CMB	Columbia Colle	81.17	44	P	P	03 18 33.1	+0.5
CMB				pmax	pmax		
	comp=Z,17nm,1.0s						
ISA	Isabella, Lake	81.19	47	P	P	03 18 33.6	+0.8
ISA				IAmb	IAmb	03 18 48.4	
	comp=Z,27nm,1.1s						
ISA	Isabella, Lake	81.19	47	P	P	03 18 33.6	+0.8
ISA				pmax	pmax		
	comp=Z,27nm,1.1s						
ISA	Isabella, Lake	81.19	47	P	P	03 18 34.7	+2.0
	baz=238						
MAW	Mawson	81.20	200	LR	LR	03 51 18.9	
	comp=Z,135nm,19.5s,baz=95,slow=33						
ORV	Oroville	81.29	43	P	P	03 18 33.3	+0.2
ORV	Oroville	81.29	43	P	P	03 18 33.3	+0.2
ORV				pmax	pmax		
	comp=Z,19nm,1.1s						
PFO	Pinyon Flats O	81.56	50	LR	LR	03 47 45.6	
	comp=Z,284nm,19.7s,baz=230,slow=30						
SRIG	Santa Rosalia	81.76	57	P	P	03 18 36.6	+0.8
SRIG				IAmb	IAmb	03 18 39.8	
	comp=Z,48nm,1.1s						
YBH	Yreka Blue Hor	81.77	40	LR	LR	03 47 19.7	
	comp=Z,296nm,20.1s,baz=264,slow=30						
YBH	Yreka Blue Hor	81.77	40	P	P	03 18 35.0	-0.7
YBH				IAmb	IAmb	03 18 40.3	
	comp=Z,31nm,1.4s						
YBH	Yreka Blue Hor	81.77	40	P	P	03 18 35.0	-0.7
YBH				pmax	pmax		
	comp=Z,31nm,1.4s						
MDPB	Devils Postpil	81.82	45	P	P	03 18 36.7	+0.4
MDPB				IAmb	IAmb	03 18 52.4	
	comp=Z,26nm,1.0s						
GSI	Gunungsitoli	81.82	274	P	P	03 18 35.7	-0.9
GSI				IAmb	IAmb	03 18 37.7	
	comp=Z,49nm,0.9s						
GSI	Gunungsitoli	81.82	274	P	P	03 18 36.8	+0.3
	comp=Z,61nm,1.0s,comp=Z,4µm						
OMMB	Old Mammoth Mi	81.86	45	P	P	03 18 36.6	0.0
LPIG	La Paz	81.90	61	LR	LR	03 47 42.7	
	comp=Z,221nm,18.6s,baz=203,slow=30						
SLBS	Sierra La Lagu	82.02	61	P	P	03 18 39.0	+1.5
MPMC	Manual Prospec	82.08	47	P	P	03 18 39.6	+2.0
	baz=239						
MA2	Magadan	82.12	346	*ce*P	P	03 18 36.2	-0.8
MA2				pmax	pmax		
	comp=Z,21nm,1.0s						
GSC	Goldstone, Bar	82.17	48	P	P	03 18 38.0	0.0
GSC	Goldstone, Bar	82.17	48	P	P	03 18 38.0	0.0
GSC				pmax	pmax		
	comp=Z,11nm,0.9s						
GSC	Goldstone, Bar	82.17	48	P	P	03 18 40.7	+2.7
	baz=239						
DSP	Deep Springs	82.43	46	P	P	03 18 39.0	-0.1
DSP				IAmb	IAmb	03 18 55.1	
	comp=Z,18nm,0.9s						
GLA	Glamis	82.47	51	P	P	03 18 40.3	+0.7
GLA				IAmb	IAmb	03 18 43.1	
	comp=Z,37nm,1.2s						
GLA	Glamis	82.47	51	P	P	03 18 40.3	+0.7
GLA				pmax	pmax		
	comp=Z,37nm,1.3s						
GLA	Glamis	82.47	51	P	P	03 18 42.7	+3.2
	baz=241						
SRIT	Nakonsritamara	82.47	282	P	P	03 18 40.1	+0.2
SRIT	Nakonsritamara	82.47	282	P	P	03 18 41.5	+1.6
HNS	HongShan	82.52	314	⇑P	P	03 18 41.0	+1.4
HNS				pmax	pmax		
	comp=Z,27nm,1.4s						
LCH	Last Change Ra	82.58	46	P	P	03 18 40.9	+0.8
O19K	Port Alsworth	82.59	13	P	P	03 18 39.5	+0.1
O19K	Port Alsworth	82.59	13	P	P	03 18 39.6	+0.1
	baz=206						
LYN	LuoYang	82.64	311	⇑*i*P	P	03 18 41.8	+1.5
LYN				pmax	pmax		
	comp=Z,48nm,1.0s						
GRAC	Grapevine Rang	82.64	47	P	P	03 18 40.6	+0.2
SURA	Surathani	82.65	282	P	P	03 18 42.3	+1.5
GMRC	Granite Mounta	82.72	49	P	P	03 18 42.8	+1.8
	baz=240						
PAHR	Pah Rah Range	82.73	43	IAmb	IAmb	03 18 44.4	
	comp=Z,19nm,1.0s						
NVAR	Mina Array Bea	82.76	45	P	P	03 18 42.4	+1.3
	comp=Z,11nm,0.9s,baz=225,slow=8.1,SNR=43						
NVAR				LR	LR	03 49 47.8	
	comp=Z,147nm,18.3s,baz=241,slow=32						
	comp=Z,11nm,0.9s						
NVAR	Mina Array Bea	82.76	45	P	P	03 18 41.8	+0.6
IRM	Iron Mountain	82.78	50	P	P	03 18 44.2	+3.1

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      baz=240
ENH   Enshi              82.80 306  P      P      03 18 42.6 +1.3
NONG  Nongkai            82.83 292  P      P      03 18 42.7 +1.0
HEH   HeiHe              82.86 330 eP      P      03 18 42.0 +0.9
HEH                                 pmax   pmax
      comp=Z,19nm,1.2s
HEH                                 pmax   pmax
      comp=Z,200nm,6.0s
BJT   Baijiatuau         82.95 317  P      P      03 18 41.9 +0.1
BJT   Baijiatuau         82.95 317  P      P      03 18 44.0 +2.2
      comp=Z,18nm,1.3s
BJT   Baijiatuau         82.95 317  P      P      03 18 41.9 +0.1
BJT                                 pmax   pmax
      comp=Z,10.0nm,0.7s
BJI   Beijing            82.95 317  P      P      03 18 42.5 +0.7
BJI                                 PcP    pP     03 18 48.2  -0.8
BJI                                 sP     pwP    03 18 58.0 +5.1
BJI                                 pmax   pmax
      comp=Z,10.0nm,1.1s
BJI                                 pmax   pmax
      comp=Z,180nm,5.0s
BJI                                 LR     LR
      comp=Z,120nm,17.7s
BJI                                 LR     LR
      comp=Z,79nm,19.2s
BJI                                 LR     LR
      comp=Z,110nm,18.8s
NAYO  Nakonayok          83.01 288  P      P      03 18 44.2 +1.6
113A  Mohawk Valley,     83.12  52  P      P      03 18 43.9 +1.1
113A                                IAmb   IAmb   03 18 46.9
      comp=Z,45nm,1.4s
KVN   Kaiserville        83.22  45  P      P      03 18 44.1 +0.6
KVN                                 IAmb   IAmb   03 18 46.8
      comp=Z,16nm,0.9s
KVN   Kaiserville        83.22  45  P      P      03 18 44.1 +0.6
KVN                                 pmax   pmax
      comp=Z,16nm,0.9s
GYA   Guiyang            83.32 301⇓iP      P      03 18 45.2 +1.0
GYA                                 pmax   pmax
      comp=Z,30nm,1.3s
MOD   Modoc Plateau      83.35  41  IAmb   IAmb   03 18 47.6
      comp=Z,21nm,0.9s
PMSA  Palmer Station     83.37 158  LR     LR     03 48 14.8
      comp=Z,132nm,20.5s,baz=248,slow=30
PMSA  Palmer Station     83.37 158  P      P      03 18 44.1 +0.5
TPNV  Topopah Spring     83.39  47  IAmb   IAmb   03 18 48.3
      comp=Z,22nm,1.1s
TPNV  Topopah Spring     83.39  47  P      P      03 18 46.5 +2.2
      baz=240
214A  Organ Pipe Nat     83.45  53  P      P      03 18 45.9 +1.3
214A                                IAmb   IAmb   03 18 48.2
      comp=Z,46nm,1.2s
214A  Organ Pipe Nat     83.45  53  P      P      03 18 47.1 +2.4
      baz=242
K05A  Summer Lake        83.45  40  IAmb   IAmb   03 18 48.6
      comp=Z,41nm,1.1s
HSIG                     83.54  56  IAmb   IAmb   03 18 48.1
      comp=Z,46nm,1.3s
PDMCI Parker Dam,Lak     83.58  50  P      P      03 18 47.3 +2.2
      baz=241
LHMI  Lhok Sumawe        83.75 278  P      P      03 18 46.7 +0.1
MLSI  Meulaboh, Aceh     83.93 277  P      P      03 18 47.2  -0.3
      comp=Z,58nm,1.0s
PINE  Pine Mountain      84.02  39  IAmb   IAmb   03 18 54.7
      comp=Z,35nm,1.1s
S11A  Rachel             84.08  47  IAmb   IAmb   03 18 53.9
      comp=Z,33nm,1.0s
W13A  Hualapai Mount     84.14  50  P      P      03 18 48.6 +0.3
Y14A  Wickenburg         84.23  51  P      P      03 18 49.5 +0.9
TIY   Taiyuan            84.23 313 eP      P      03 18 50.1 +1.5
TIY                                 pmax   pmax
      comp=Z,30nm,0.6s
L19K  White Mountain     84.28  12  IAmb   IAmb   03 18 50.1
      comp=Z,19nm,1.1s
PRN   Pahroc Range       84.45  47         P      03 18 50.8 +1.1
PRN                                 IAmb   IAmb   03 18 53.4
      comp=Z,24nm,0.9s
R11A  Troy Canyon, C     84.55  46  P      P      03 18 51.2 +0.9
      baz=240
WVOR  Wild Horse Val     84.68  41  P      P      03 18 51.0 +0.2
WVOR                                IAmb   IAmb   03 18 54.4
      comp=Z,26nm,1.0s
WVOR  Wild Horse Val     84.68  41  P      P      03 18 51.0 +0.2
WVOR                                pmax   pmax
      comp=Z,26nm,1.0s
SEY   Seymchan           84.83 348  P      P      03 18 50.6  -0.2
      comp=Z,22nm,1.0s,baz=141,slow=5.7,SNR=20
SEY                                 LR     LR     03 52 54.2
      comp=Z,233nm,20.2s,baz=332,slow=33
      comp=Z,22nm,1.0s
SEY   Seymchan           84.83 348ceP      P      03 18 51.8 +0.9
SEY                                 pmax   pmax
      comp=Z,52nm,1.4s
XAN   Xi'an              84.97 309  P      P      03 18 53.3 +1.0
XAN                                 sP     pwP    03 19 14.4  +11
XAN                                 pmax   pmax
      comp=Z,37nm,1.1s
XAN                                 pmax   pmax
      comp=Z,200nm,5.7s
I07A  Izee               85.04  40  P      P      03 18 53.6 +1.1
I07A                                IAmb   IAmb   03 18 56.2
      comp=Z,20nm,1.0s
XLT   XiLinHaoTe         85.11 320 eP      P      03 18 53.5 +0.6
XLT                                 pP     pwP    03 19 10.4 +6.3
XLT                                 pmax   pmax
      comp=Z,30nm,1.1s
XLT                                 pmax   pmax
      comp=Z,170nm,5.3s
TUC   Tucson             85.14  53  P      P      03 18 55.0 +1.8
TUC   Tucson             85.14  53  P      P      03 18 55.0 +1.8
TUC                                 pmax   pmax
      comp=Z,44nm,1.2s
TUC   Tucson             85.14  53  P      P      03 18 55.5 +2.3
      baz=243
J08A  Circle Bar Ran     85.28  41  IAmb   IAmb   03 18 57.8
      comp=Z,27nm,1.0s
ZEA   Zeya               85.29 332 eP      P      03 18 48.7  -4.7
ZEA                                e              03 18 55.2
ZEA                                e              03 19 03.0
ZEA                                e              03 29 24.1
BBB   Bella Bella        85.29  30  LR     LR     03 55 33.8
      comp=Z,252nm,18.1s,baz=214,slow=35
D05A  Enumclaw           85.36  36  P      P      03 18 55.3 +1.4
Q12A  Willow Creek R     85.41  46  IAmb   IAmb   03 18 57.8
      comp=Z,19nm,0.9s
TNA   Tin City           85.58   6  P      P      03 18 55.3 +0.8
      baz=193
U15A  North Rim          85.91  49  P      P      03 18 58.6 +1.3
ELK   Elko               85.98  44  LR     LR     03 51 56.1
      comp=Z,134nm,18.1s,baz=256,slow=32
KMI   Kunming            85.98 298 ⇑P      P      03 18 59.1 +1.3
KMI                                 pP     pwP    03 19 13.0 +3.9
KMI                                 S      S      03 29 24.3  -6.4
KMI                                 pmax   pmax
      comp=Z,38nm,0.8s
G08A  Pilot Rock         86.03  39  P      P      03 18 57.6 +0.1
G08A                                IAmb   IAmb   03 19 07.7
      comp=Z,20nm,1.2s
HAWA  Hanford            86.30  38  IAmb   IAmb   03 19 02.8
      comp=Z,28nm,1.1s
HHC   Hu-ho-hao-te       86.38 316 eP      P      03 19 00.9 +1.6
HHC                                 pmax   pmax
      comp=Z,55nm,0.9s
HHC                                 pmax   pmax
      comp=Z,270nm,5.7s
RND   Reindeer           86.66  14  IAmb   IAmb   03 19 02.5
      comp=Z,14nm,1.1s
CMAR  Chiang Mai Arr     86.67 291  P      P      03 19 01.6 +0.5
      comp=Z,26nm,1.0s,baz=135,slow=3.9,SNR=10
CMAR                                LR     LR     03 54 00.9
      comp=Z,88nm,21.9s,baz=120,slow=33
      comp=Z,26nm,1.0s
CMAR  Chiang Mai Arr     86.67 291  P      P      03 19 01.4 +0.4
X18A  Snowflake          86.75  52  P      P      03 19 02.2 +0.8
X18A                                IAmb   IAmb   03 19 05.3
      comp=Z,14nm,1.2s
CHTO  Chiang Mai         86.80 291  P      P      03 19 01.6   0.0
CHTO  Chiang Mai         86.80 291  P      P      03 19 01.7   0.0
HPIG                     86.89  60  P      P      03 19 02.7 +0.4
HPIG                                IAmb   IAmb   03 19 05.2
      comp=Z,43nm,1.4s
MFID  Camas Ranch        86.95  42  IAmb   IAmb   03 19 05.4
      comp=Z,15nm,1.1s
D08A  Wollman Farm,      87.02  37  IAmb   IAmb   03 19 08.8
      comp=Z,27nm,1.3s
BTO   Baotou             87.29 315 eP      P      03 19 05.5 +1.8
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M26K  Nabesna, AK        87.29  17  IAmb   IAmb   03 19 18.1
      comp=Z,15nm,1.1s
DUG   Dugway, Tooele     87.33  46  P      P      03 19 03.4  -0.5
DUG   Dugway, Tooele     87.33  46  P      P      03 19 03.4  -0.5
DUG                                 pmax   pmax
      comp=Z,5.0nm,1.1s
PZH   PanZhiHua          87.36 299  P      P      03 19 05.0 +0.6
PZH                                 pmax   pmax
      comp=Z,20nm,1.3s
PZH                                 pmax   pmax
      comp=Z,120nm,4.3s
LLLB  Lillooet           87.40  33  IAmb   IAmb   03 19 14.0
      comp=Z,29nm,1.4s
121A  Cookes Peak, D     87.52  54  P      P      03 19 06.2 +1.1
121A                                IAmb   IAmb   03 19 08.5
      comp=Z,19nm,0.9s
121A  Cookes Peak, D     87.52  54  P      P      03 19 08.1 +3.0
      baz=245
121A  Cookes Peak, D     87.52  54  P      P      03 19 07.8 +2.7
      baz=245
CD2   Chengdu            87.52 304 ⇑P      P      03 19 06.4 +1.4
CD2                                 PcP    pP     03 19 11.2  -1.0
CD2                                 pmax   pmax
      comp=Z,60nm,1.1s
CD2                                 pmax   pmax
      comp=Z,190nm,7.1s
CD2                                 LR     LR
      comp=Z,190nm,13.6s
I21K  Tanana             87.54  12  P      P      03 19 04.3 +0.1
      baz=208
WRH   Wood River Hil     87.75  14  IAmb   IAmb   03 19 21.8
      comp=Z,16nm,1.3s
C09A  Chrisman Ranch     87.79  37  IAmb   IAmb   03 19 12.1
      comp=Z,28nm,1.4s
S34M  Telegraph Cree     87.84  24  P      P      03 19 07.6 +1.8
      baz=227
ZAIG  Zacatecas          87.86  65  P      P      03 19 08.2 +1.1
ZAIG                                IAmb   IAmb   03 19 10.7
      comp=Z,28nm,1.2s
BILL  Bilibino           87.89 355  P      P      03 19 05.7  -0.1
BILL                                IAmb   IAmb   03 19 07.5
      comp=Z,36nm,1.4s
BILL  Bilibino           87.89 355⇑iP      P      03 19 06.5 +0.7
BILL                               e              03 22 30.2
BILL                                pmax   pmax
      comp=Z,24nm,1.3s
BILL                                MLR    MLR
      comp=Z,91nm,18.0s
RIDG  Independent Ri     87.90  15  P      P      03 19 06.7 +0.6
      baz=214
HLID  Hailey             87.92  42  IAmb   IAmb   03 19 10.2
      comp=Z,11nm,0.8s
HLID  Hailey             87.92  42  P      P      03 19 08.8 +2.1
      baz=240
HDA   Harding Lake       87.95  14  IAmb   IAmb   03 19 15.2
      comp=Z,18nm,1.3s
HDA   Harding Lake       87.95  14  P      P      03 19 06.5 +0.4
      baz=212
TMUT  Trail Mountain     88.00  47  P      P      03 19 07.5 +0.1
TMUT                                IAmb   IAmb   03 19 11.0
      comp=Z,34nm,1.4s
HVU   Hansel Valley      88.11  44  IAmb   IAmb   03 19 13.7
      comp=Z,15nm,1.1s
MDM   Murphy Dome        88.13  14  IAmb   IAmb   03 19 16.0
      comp=Z,11nm,1.0s
COLA  College            88.14  14  P      P      03 19 06.2  -0.8
COLA  College            88.14  14 i P     P      03 19 06.5  -0.5
ILAR  Eielson Array      88.28  14  P      P      03 19 07.0  -0.7
      comp=Z,3.7nm,0.9s,baz=235,slow=5.8,SNR=17
ILAR                                LR     LR     03 57 33.2
      comp=Z,224nm,18.0s,baz=240,slow=35
      comp=Z,3.7nm,0.9s
ILAR  Eielson Array      88.28  14  P      P      03 19 07.0  -0.7
CTU   Camp Tracy         88.28  46  P      P      03 19 07.7  -0.8
TROLL Troll, Antarti     88.53 181  P      P      03 19 08.6  -0.6
M29M  Somme Creek        88.62  19  P      P      03 19 10.8 +1.2
      baz=220
DLBC  Dease Lake         88.63  24  LR     LR     03 57 45.1
      comp=Z,293nm,18.1s,baz=280,slow=35
NEW   Newport            88.69  37  LR     LR     03 53 21.1
      comp=Z,183nm,18.4s,baz=216,slow=32
NEW   Newport            88.69  37  P      P      03 19 11.1 +1.0
      baz=238
TCUT  Toone Canyon       88.70  45  P      P      03 19 10.6   0.0
Y22A  Socorro            88.73  53  P      P      03 19 12.6 +1.8
      baz=245
Y22D  IRIS PASSCAL I     88.82  53  P      P      03 19 13.6 +2.4
      baz=245
J26L  Joseph Creek       88.85  15  P      P      03 19 11.1 +0.5
      baz=216
BSUT  Blindstream Ca     88.87  46  P      P      03 19 11.6   0.0
BSUT                                IAmb   IAmb   03 19 14.8
      comp=Z,17nm,0.9s
CRNM  Carthage           88.91  53  P      P      03 19 12.4 +0.7
SNAA  Sanae              88.91 180  P      P      03 19 10.0  -1.0
SNAA  Sanae              88.91 180ceP      P      03 19 09.2  -1.7
SNAA                                pmax   pmax
      comp=Z,17nm,1.3s
COYC  Coyhaique          89.02 139  P      P      03 19 12.7 +0.8
COYC                                IAmb   IAmb   03 19 14.9
      comp=Z,24nm,0.9s
MNTX  Cornudas Mount     89.03  56  P      P      03 19 13.9 +1.8
      baz=246
MNTX  Cornudas Mount     89.03  56  P      P      03 19 14.0 +1.9
      baz=246
VNA3  Neumayer Olymp     89.17 177  P      P      03 19 10.8  -1.3
M30M  Minto, Yukon       89.23  19  P      P      03 19 13.4 +1.1
      baz=222
L29M  L29M               89.23  18  P      P      03 19 13.6 +1.3
      baz=220
NVL   N'lazarevskaya     89.34 184 eP      P      03 19 11.2  -1.6
NVL                                 pmax   pmax
      comp=Z,35nm,0.8s
TX31  Lajitas Ar. Si     89.46  59  P      P      03 19 16.3 +2.1
TX31  Lajitas Ar. Si     89.46  59  P      P      03 19 16.7 +2.5
      baz=247
TX32  Lajitas Array      89.46  59  P      P      03 19 16.2 +1.9
TXAR  Lajitas Array      89.46  59  P      P      03 19 16.6 +2.3
      comp=Z,42nm,0.9s,baz=222,slow=5.2,SNR=324
TXAR                                LR     LR     03 51 46.6
      comp=Z,206nm,20.2s,baz=231,slow=30
      comp=Z,42nm,0.9s
TXAR  Lajitas Array      89.46  59  P      P      03 19 16.3 +2.1
TNCH  TengChong          89.47 297  P      P      03 19 15.6 +1.1
TNCH                                pmax   pmax
      comp=Z,180nm,0.9s
MCMT  McKenzie Canyo     89.51  42  P      P      03 19 15.0 +0.6
ANMO  Albuquerque        89.53  53  LR     LR     03 52 08.2
      comp=Z,232nm,18.7s,baz=355,slow=31
ANMO  Albuquerque        89.53  53  P      P      03 19 14.7 +0.1
ANMO                                IAmb   IAmb   03 19 17.2
      comp=Z,16nm,1.1s
ANMO  Albuquerque        89.53  53ceP      P      03 19 14.5  -0.1
ANMO                                pmax   pmax
      comp=Z,29nm,1.7s
ANMO  Albuquerque        89.53  53  P      P      03 19 16.0 +1.4
      baz=246
ANMO  Albuquerque        89.53  53  P      P      03 19 16.0 +1.4
      baz=246
VNA2  Neumayer--Watz     89.57 178  P      P      03 19 13.4  -0.5
      baz=180,slow=5.0
LZH   Lanzhou            89.60 309 ⇑P      P      03 19 17.0 +2.1
LZH                                 pP     pwP    03 19 28.4 +2.3
LZH                                 sP     sP     03 19 33.9 +9.3
LZH                                 pmax   pmax
      comp=Z,86nm,1.1s
LZH                                 pmax   pmax
      comp=Z,250nm,4.5s
LZH                                 LR     LR
      comp=Z,190nm,14.1s
LZH                                 LR     LR
      comp=Z,220nm,15.8s
I26K  Coal Creek Min     89.61  15  P      P      03 19 14.6 +0.6
      baz=216
AHID  Auburn Hatcher     89.67  44  IAmb   IAmb   03 19 31.4
      comp=Z,20nm,1.1s
EGAK  Eagle              89.69  16  P      P      03 19 14.5 +0.1
      baz=218
COLD  Coldfoot           89.69  12  P      P      03 19 15.2 +0.9
MSO   Missoula           89.81  39  P      P      03 19 16.0 +0.5
      baz=241
REDW  Red Top Meadow     90.10  44  IAmb   IAmb   03 19 33.4
      comp=Z,32nm,1.2s
YAK   Yakutsk            90.10 339  LR     LR     03 53 36.5
      comp=Z,182nm,21.5s,baz=94,slow=32
YAK   Yakutsk            90.10 339ceP      P      03 19 17.0 +0.7
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YAK                                 pmax   pmax
      comp=Z,67nm,1.4s
LRM   Limekiln Ridge     90.23  41  P      P      03 19 17.8 +0.1
LL02  Futaleuf           90.27 136  P      P      03 19 18.5 +0.7
IMW   Indian Meadow      90.29  43  IAmb   IAmb   03 19 24.3
      comp=Z,17nm,1.0s
F24K  Squaw Lake         90.40  12  P      P      03 19 18.4 +0.7
      baz=212
QLMT  Earthquake Lak     90.41  42  P      P      03 19 19.0 +0.5
S22A  4UR Ranch, Cre     90.41  50  P      P      03 19 19.5 +0.7
S22A  4UR Ranch, Cre     90.41  50  P      P      03 19 21.0 +2.3
      baz=245
CLNB  Carlsbad           90.42  56  P      P      03 19 18.9 +0.2
FLWY  Flagg Ranch        90.53  43  IAmb   IAmb   03 19 36.5
      comp=Z,18nm,1.1s
YMR   Madison River      90.63  42  P      P      03 19 21.0 +1.5
YMR                                 IAmb   IAmb   03 19 35.7
      comp=Z,27nm,1.3s
BOZ   Bozeman (W)        90.64  41  IAmb   IAmb   03 19 35.1
      comp=Z,11nm,1.1s
BOZ   Bozeman (W)        90.64  41  P      P      03 19 21.0 +1.6
      baz=242
BW06  Boulder Array      90.68  44  IAmb   IAmb   03 19 25.1
      comp=Z,10nm,1.0s
BW06  Boulder Array      90.68  44  P      P      03 19 20.7 +0.8
      baz=244
PD31  Pinedale Array     90.68  44  IAmb   IAmb   03 19 25.1
      comp=Z,9.2nm,1.0s
PDAR  Pinedale Array     90.68  44  P      P      03 19 20.4 +0.6
      comp=Z,4.6nm,0.8s,baz=216,slow=2.7,SNR=33
PDAR                                LR     LR     03 54 11.9
      comp=Z,96nm,18.5s,baz=264,slow=32
      comp=Z,4.6nm,0.8s
HTMS  Hat Mesa           90.70  56  P      P      03 19 20.6 +0.6
H17A  Grant Village      90.75  43  P      P      03 19 22.0 +1.8
H17A                                IAmb   IAmb   03 19 24.6
      comp=Z,9.9nm,0.9s
H17A  Grant Village      90.75  43  P      P      03 19 23.2 +3.1
      baz=243
H27K  Steamboat Moun     90.75  15  P      P      03 19 20.4 +1.1
      baz=217
G26K  Porcupine Rive     90.80  14  P      P      03 19 20.4 +0.9
      baz=215
I29M  Ogilvie Camp,      90.91  17  IAmb   IAmb   03 19 23.0
      comp=Z,14nm,1.4s
LKWY  Lake               90.94  43  P      P      03 19 20.7  -0.3
LKWY                                IAmb   IAmb   03 19 37.8
      comp=Z,11nm,1.1s
LKWY  Lake               90.94  43  P      P      03 19 20.7  -0.3
LKWY                                pmax   pmax
      comp=Z,11nm,1.1s
LL04  Puerto Octay       90.94 134  P      P      03 19 20.5  -0.4
MMPY  Sheldon Lake,      91.04  21  P      P      03 19 21.9 +1.1
      baz=226
WAPA  Wapiti River       91.30  31  IAmb   IAmb   03 19 24.0
      comp=Z,13nm,0.9s
SDCO  Great Sand Dun     91.37  50  P      P      03 19 24.6 +1.4
      baz=246
ODSA  Odessa             91.41  56  P      P      03 19 22.7  -0.6
ODSA                                IAmb   IAmb   03 19 26.3
      comp=Z,75nm,1.2s
BRLDA Berland Lookou     91.62  32  P      P      03 19 24.4 +0.7
BRLDA                               IAmb   IAmb   03 19 42.6
      comp=Z,12nm,0.8s
RWWY  Rawlins            91.79  46  P      P      03 19 25.4 +0.4
RWWY                                IAmb   IAmb   03 19 29.6
      comp=Z,15nm,0.8s
MSTX  Muleshoe           91.94  55  P      P      03 19 25.9 +0.2
MSTX  Muleshoe           91.94  55  P      P      03 19 26.8 +1.1
      baz=248
MSTX  Muleshoe           91.94  55  P      P      03 19 26.9 +1.2
      baz=248
EPYK  Eagle Plains       92.10  17  P      P      03 19 25.8 +0.2
      baz=222
Q24A  Divide             92.11  49  P      P      03 19 26.8 +0.2
Q24A                                IAmb   IAmb   03 19 30.2
      comp=Z,24nm,1.2s
Q24A  Divide             92.11  49  P      P      03 19 28.5 +1.8
      baz=246
ISCO  Idaho Springs      92.12  48  P      P      03 19 27.3 +0.6
ISCO  Idaho Springs      92.12  48  P      P      03 19 27.3 +0.6
ISCO                                pmax   pmax
      comp=Z,5.0nm,0.9s
ISCO  Idaho Springs      92.12  48  P      P      03 19 28.7 +2.0
      baz=246
ISCO  Idaho Springs      92.12  48  P      P      03 19 28.4 +1.7
      baz=246
GO06  Curarrehue         92.19 133  P      P      03 19 27.6 +0.6
GO06                                IAmb   IAmb   03 19 29.4
      comp=Z,14nm,0.9s
PLCA  Paso Flores        92.27 135  P      P      03 19 28.4 +1.1
      comp=Z,10nm,1.1s,baz=218,slow=4.5,SNR=12
PLCA                                LR     LR     03 52 46.0
      comp=Z,54nm,19.4s,baz=230,slow=30
      comp=Z,10nm,1.1s
N23A  Red Feather La     92.33  47  P      P      03 19 27.7 +0.1
N23A  Red Feather La     92.33  47  P      P      03 19 29.2 +1.6
      baz=246
ULN   Ulaanbaatar        92.55 320  P      P      03 19 28.5 +0.3
ULN                                 IAmb   IAmb   03 19 29.9
      comp=Z,13nm,0.8s
ULN   Ulaanbaatar        92.55 320  P      P      03 19 28.5 +0.3
ULN                                 pmax   pmax
      comp=Z,13nm,0.8s
833A  Chaparral WMA,     92.56  61  P      P      03 19 29.6 +1.0
833A  Chaparral WMA,     92.56  61  P      P      03 19 30.1 +1.6
      baz=249
833A  Chaparral WMA,     92.56  61  P      P      03 19 30.3 +1.7
      baz=249
POST  Post               92.58  56  P      P      03 19 28.9 +0.2
POST                                IAmb   IAmb   03 19 30.4
      comp=Z,32nm,1.1s
CMIG  Matias Romero      92.61  73  LR     LR     03 54 20.1
      comp=Z,98nm,18.2s,baz=250,slow=31
G30M  tAoh Zraii Nji     92.69  16  P      P      03 19 28.0  -0.3
      baz=222
PHWY  Pilot Hill         92.83  47  P      P      03 19 28.9  -1.0
PHWY                                IAmb   IAmb   03 19 38.5
      comp=Z,16nm,1.4s
SONM  Songino Array      92.93 320  P      P      03 19 29.3  -0.7
      comp=Z,5.3nm,0.9s,baz=125,slow=5.1,SNR=27
SONM                                LR     LR     04 02 20.8
      comp=Z,116nm,18.3s,baz=62,slow=36
      comp=Z,5.3nm,0.9s
SONM  Songino Array      92.93 320  P      P      03 19 29.3  -0.7
SONM                                IAmb   IAmb   03 19 31.6
      comp=Z,10nm,1.1s
JCT   Junction City      93.00  59  IAmb   IAmb   03 19 32.5
      comp=Z,12nm,0.8s
JCT   Junction City      93.00  59  P      P      03 19 31.6 +1.0
      baz=249
JCT   Junction City      93.00  59  P      P      03 19 31.7 +1.0
      baz=249
C27K  Jago River         93.01  12  P      P      03 19 30.2 +0.5
      baz=215
AMTX  Amarillo           93.11  54  P      P      03 19 32.0 +0.9
      baz=248
AMTX  Amarillo           93.11  54  P      P      03 19 32.4 +1.3
      baz=248
KVTX  Kingsville         93.53  62  P      P      03 19 35.4 +2.4
      baz=250
F31M  Tsiigehtchic       93.69  17  P      P      03 19 32.9 +0.1
      baz=224
GTA   Gaotai             93.85 310 ⇑P      P      03 19 35.4 +1.0
GTA                                 pmax   pmax
      comp=Z,38nm,1.0s
ABTX  Abilene, Hawle     93.88  57  P      P      03 19 35.6 +1.0
      baz=249
ABTX  Abilene, Hawle     93.88  57  P      P      03 19 35.9 +1.3
      baz=249
KSCO  Kaye Shedlock'     93.94  50  P      P      03 19 36.8 +1.9
      baz=248
735A  Kenedy             94.06  61  P      P      03 19 37.6 +2.2
      baz=250
LAO   LASA Array         94.50  42  P      P      03 19 39.2 +2.1
      baz=246
RSSD  Black Hills        94.90  45  P      P      03 19 38.3  -1.0
RSSD                                IAmb   IAmb   03 19 43.0
      comp=Z,17nm,1.4s
RSSD  Black Hills        94.90  45  P      P      03 19 38.3  -1.0
RSSD                                pmax   pmax
      comp=Z,17nm,1.4s
RSSD  Black Hills        94.90  45  P      P      03 19 42.0 +2.8
      baz=248
SHL   Shillong           95.29 295  IAmb   IAmb   03 19 42.0
      comp=Z,15nm,0.7s
CBKS  Cedar Bluff        95.98  51  P      P      03 19 46.2 +2.1
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	baz=250						
GOMU	GeErMu	96.42	306	P	P	03 19 47.4	+0.9
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,150nm,5.5s						
DGMT	Dagmar	96.46	41	P	P	03 19 47.9	+1.9
	baz=248						
DGMT	Dagmar	96.46	41	P	P	03 19 47.5	+1.5
	baz=248						
R32A	Long Quarter,	96.60	52	P	P	03 19 48.4	+1.5
	baz=250						
TIXI	Tiksi	97.09	346	P	P	03 19 47.5	-0.8
	comp=Z,2.1nm,0.8s,baz=90,slow=23,SNR=6.9						
TIXI				LR	LR	03 57 36.6	
	comp=Z,111nm,20.0s,baz=178,slow=32						
	comp=Z,2.1nm,0.8s						
TIXI	Tiksi	97.09	346	ceP	P	03 19 47.4	-0.8
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YKA	Yellowknife Ar	97.17	26	P	P	03 19 47.7	-1.1
	comp=Z,1.4nm,0.9s,baz=246,slow=4.5,SNR=14						
YKA				LR	LR	04 00 06.5	
	comp=Z,356nm,18.1s,baz=259,slow=33						
	comp=Z,1.4nm,0.9s						
CFA	Coronel Fontan	98.29	128	LR	LR	03 58 11.3	
	comp=Z,64nm,18.0s,baz=226,slow=32						
NNA	Nana	99.53	106	LR	LR	03 54 18.9	
	comp=Z,120nm,21.7s,baz=234,slow=29						
PALK	Pallekele	99.66	274	LR	LR	04 07 44.9	
	comp=Z,203nm,18.2s,baz=226,slow=37						
ECSD	EROS Data Cent	99.80	47	P	Pdif	03 20 02.4	+1.3
	baz=252						
ATAH	Atahualpa	99.90	101	LR	LR	03 55 10.7	
	comp=Z,131nm,21.9s,baz=252,slow=29						
MKAR	Makanchi Array	108.19	314	Pdiff	Pdif	03 20 39.1	+0.7
	comp=Z,0.9nm,0.9s,baz=102,slow=4.9,SNR=5.5						
MKAR				PKiKP	PKiKP	03 24 43.4	-1.5
	comp=Z,2.2nm,0.9s,baz=66,slow=1.4,SNR=11						
MKAR				PKKPbc	PKKPbc	03 35 56.5	-1.1
	comp=Z,0.9nm,1.0s,baz=281,slow=4.0,SNR=5.1						
MKAR				PKKPab	PKKPab	03 36 09.8	+1.1
	comp=Z,0.9nm,0.9s,baz=291,slow=3.8,SNR=5.1						
GAR	Garm	115.96	305	PKPdf	PKPdf	03 24 58.6	-1.4
KKAR	Karatay Array	116.10	309	PKPdf	PKPdf	03 24 58.1	-1.9
KKAR	Karatay Array	116.10	309	PKIKP	PKPdf	03 24 58.1	-1.9
BRVK	Borovoye	116.34	320	PKPdf	PKPdf	03 24 59.0	-1.1
BRVK	Borovoye	116.34	320	PKIKP	PKPdf	03 24 59.0	-1.1
ARU	Arti	122.59	325	PKPdf	PKPdf	03 25 10.3	-1.7
ARU	Arti	122.59	325	i PKIKP	PKPdf	03 25 10.8	-1.2
ARU						03 26 48.6	
ARU				SP	SP	03 36 39.9	-0.9
ARU				SS	SS	03 43 24.2	-5.2
ABKAR	Akbulak array	123.16	317	PKPdf	PKPdf	03 25 11.8	-1.5
GEYT	Alibeck	125.50	303	PKP	PKPdf	03 25 17.9	-0.3
	comp=Z,6.1nm,0.8s,baz=113,slow=10,SNR=13						
ARCES	ARCESS Array B	127.45	348	PKP	PKPdf	03 25 19.6	-1.3
	comp=Z,2.6nm,0.7s,baz=18,slow=1.5,SNR=8.5						
KLMR	Klimovskoe	129.73	335	ePKPdf	PKPdf	03 25 24.6	-1.0
KLMR				AMP		03 25 28.4	
	comp=Z,21nm,1.7s						
KLMR	Klimovskoe	129.73	335	ePKIKP	PKPdf	03 25 24.5	-1.0
KLMR				pmax	pmax		
	comp=Z,21nm,1.7s						
AKT	Akhty	133.03	309	ePKIKP	PKPdf	03 25 32.8	+0.2
AKT				e		03 27 57.5	
AKT				pmax	pmax		
	comp=Z,8.0nm,1.2s						
FINES	FINESS Array B	133.97	342	PKP	PKPdf	03 25 33.7	+0.2
	comp=Z,3.7nm,0.8s,baz=48,slow=4.1,SNR=6.0						
ZEI	Tsey	135.46	312	ePKIKP	PKiKP	03 25 39.6	+0.9
ZEI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GNI	Garni	135.53	308	PKPdf	PKPdf	03 25 36.8	-0.5
GNI	Garni	135.53	308	PKIKP	PKPdf	03 25 36.8	-0.5
KBZ	Khabaz	135.88	313	PKP	PKiKP	03 25 40.8	+1.6
	comp=Z,2.1nm,0.9s,baz=351,slow=2.5,SNR=4.2						
KIV	Kislovodsk	135.95	314	i PKHKP	PKPpre	03 25 29.1	
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
RAYN	Ar Rayn	136.20	284	PKPdf	PKPdf	03 25 36.1	-2.9
RAYN	Ar Rayn	136.20	284	PKIKP	PKPdf	03 25 36.1	-2.9
NB2	NORSAR Subarra	137.68	351	PKP	PKPdf	03 25 40.0	-0.5
	comp=Z,0.8nm,0.6s,baz=30,slow=3.0						
NOA	NORSAR Array B	137.68	351	PKP	PKPdf	03 25 40.0	-0.5
	comp=Z,0.6nm,0.7s,baz=16,slow=4.3,SNR=3.7						
GURO	Guroymak-BITLI	137.95	306		PKPdf	03 25 41.5	-0.4
MNK	Minsk	138.61	334	i PKP	PKPdf	03 25 41.0	-1.3
	comp=E,3.0nm,1.4s						
MNK				i PKP	PKPdf	03 25 41.0	-1.3
	comp=N,39nm,0.9s						
MNK				i PKP	PKPdf	03 25 41.0	-1.3
	comp=Z,9.0nm,1.1s,baz=44						
MNK				i PP	PP	03 28 32.0	-0.8
MNK				i SKP		03 29 13.9	
MNK				i PKS	PKSdf	03 29 15.6	-2.6
MNK				i PPP	PPP	03 31 36.0	
MNK				i SKS	SKSdf	03 32 48.9	-2.2
MNK				i SKKS	SKKSdf	03 42 21.1	-4.2
MNK				i SS	SS	03 46 45.6	+0.6
MNK				i SSS	SSS	03 51 56.0	
MNK				i LQ	LQ	04 19 45.2	
MNK				i LR	LR	04 22 46.2	
MNK				i LRM	MLR	04 29 04.8	
	comp=N,343nm,17.0s						
MNK				i LRM	MLR	04 29 08.2	
	comp=Z,166nm,16.1s						
MNK				i LRM	MLR	04 29 53.2	
	comp=E,18nm,13.6s						
MNK	Minsk	138.61	334	i PKIKP	PKPdf	03 25 41.0	-1.3
MNK				i		03 28 32.0	
MNK				i PPP	PPP	03 31 35.9	
MNK				i		03 32 48.9	
MNK				i SS	SS	03 46 45.6	+0.6
MNK				i SSS	SSS	03 51 56.0	
MNK				pmax	pmax		
	comp=E,3.0nm,1.4s						
MNK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MNK				pmax	pmax		
	comp=N,39nm,0.9s						
MNK				MLR	MLR		
	comp=N,343nm,17.0s						
MNK				MLR	MLR		
	comp=Z,166nm,16.0s						
NACGM	Naroch	138.76	335	ePKP	PKiKP	03 25 48.6	+3.8
	comp=Z,9.0nm,0.9s,baz=42						
AKASG	Malin Array Be	140.61	329	PKhKP	PKPpre	03 25 38.1	
	comp=Z,0.4nm,0.4s,baz=45,slow=3.3,SNR=6.2						
AKASG				PKP	PKPdf	03 25 45.8	-0.3
	comp=Z,2.9nm,0.7s,baz=49,slow=3.5,SNR=11						
AKASG	Malin Array Be	140.61	329	PKPpre	PKPpre	03 25 37.3	
BNN	Bunyan	142.50	309	PKPpre	PKPpre	03 25 45.2	
ILGA	Ilgaz	143.18	313	PKPpre	PKPpre	03 25 47.5	
BEL	Belsk	143.41	337	ePKP	PKPdf	03 25 49.7	-1.4
GKP	Gorka Klasztor	143.43	341	ePKP	PKPdf	03 25 50.7	-0.3
BRTR	Keskin Array B	143.77	311	PKP	PKPbc	03 25 49.6	-0.3
	comp=Z,5.3nm,0.6s,baz=101,slow=0.6,SNR=47						
BRTR	Keskin Array B	143.77	311	PKPpre	PKPpre	03 25 48.5	
TLCR		144.22	322	⇑P	PKPbc	03 25 51.4	+0.5
TLCR		144.22	322	⇑PKIKP	PKPbc	03 25 51.4	+0.5
ANTO	Ankara	144.31	312	⇓P	PKPbc	03 25 51.8	+0.3
ANTO	Ankara	144.31	312	PKPdf	PKPbc	03 25 51.5	0.0
ANTO	Ankara	144.31	312	⇓PKIKP	PKPbc	03 25 51.8	+0.3
SHEL	Horse Pasture	144.38	173	PKPdf	PKPbc	03 25 52.6	+0.4
SHEL	Horse Pasture	144.38	173	PKIKP	PKPbc	03 25 52.6	+0.4
SCTR	Scanteiesti	144.40	324	⇓P	PKPdf	03 25 52.5	-0.5
GHRR		144.49	324	⇓P	PKPdf	03 25 52.7	-0.4
IZVR	Izvoarele	144.61	324	⇑P	PKPdf	03 25 53.2	-0.1
TESR	Tescani	144.62	326	⇓P	PKPbc	03 25 52.2	0.0
CFR	Carcaliu	144.62	323	⇑P	PKPbc	03 25 52.7	+0.6
CFR	Carcaliu	144.62	323	⇑PKIKP	PKPbc	03 25 52.7	+0.6
BURAR	Bucovina Array	144.62	328	⇑P	PKPdf	03 25 53.0	-0.5
BURAR	Bucovina Array	144.62	328	⇑PKIKP	PKPdf	03 25 53.0	-0.5
TPGR	Topolog	144.64	322	⇓P	PKPdf	03 25 53.2	-0.3
GHAJ	Ghor Haditha	144.68	297	PKPdf	PKPbc	03 25 53.0	+0.2
PANC	Panciu	144.75	324	⇓P	PKPdf	03 25 54.4	+0.8
ODBI	Odobesti	144.87	324	⇑P	PKPdf	03 25 55.2	+1.4
VRI	Vrincioaia	144.98	325	⇑P	PKPdf	03 25 53.7	-0.3
VRI	Vrincioaia	144.98	325	⇑PKIKP	PKPbc	03 25 53.7	+0.3
HARR	Harsova	145.02	322	⇓P	PKPdf	03 25 54.6	+0.5
HARR	Harsova	145.02	322	⇓PKIKP	PKPdf	03 25 54.6	+0.5
PLOR	Plostina	145.03	325	⇓	PKPdf	03 25 54.4	+0.2
TLBR	Topalu	145.04	322	⇑P	PKPdf	03 25 54.8	+0.6
OJC	Ojcow	145.08	336	ePKP	PKPbc	03 25 53.3	-0.2
STHS	Stebnicka Huta	145.13	334	ePKIKP	PKPdf	03 25 54.6	+0.4
STHS	Stebnicka Huta	145.13	334	ePKP	PKPdf	03 25 54.6	+0.4
BISRR	Bisoca	145.19	324	⇑P	PKPab	03 25 54.2	0.0
COVR	Voineasa-Covas	145.28	325	⇓P	PKPbc	03 25 53.7	-0.6
OZUR		145.34	326	⇑P	PKPdf	03 25 55.0	+0.3
AMRR	Amara	145.41	323	⇑P	PKPab	03 25 56.8	+1.9
AMRR	Amara	145.41	323	⇑PKIKP	PKPab	03 25 56.8	+1.9
ARCR	ARCALIA	145.41	328	⇑P	PKPab	03 25 55.8	+1.0
BMR	Baia Mare	145.42	330	⇑P	PKPab	03 25 56.2	+1.3
BMR	Baia Mare	145.42	330	⇑PKIKP	PKPab	03 25 56.2	+1.3
NEHR	Nehoiu	145.49	324	⇑P	PKPab	03 25 55.6	+0.3
NIE	Niedzica	145.52	335	ePKP	PKPbc	03 25 55.0	0.0
TRPA	Tarpa	145.54	331	⇑P	PKPab	03 25 55.3	+0.1
ISR	Istrita	145.55	324	⇓P	PKPab	03 25 56.2	+0.7
ISR	Istrita	145.55	324	⇓PKIKP	PKPab	03 25 56.2	+0.7
DOPR	Dopca	145.63	326	⇑P	PKPab	03 25 56.1	+0.3
CSS	Mathiatis	145.64	304	PKPdf	PKPdf	03 25 54.8	-0.8
MLR	Muntele Rosu	145.64	325	⇑P	PKPbc	03 25 55.7	+0.1
MLR	Muntele Rosu	145.64	325	PKPdf	PKPdf	03 25 55.2	-0.2
MLR	Muntele Rosu	145.64	325	⇑PKP2	PKPbc	03 25 55.7	+0.1
KSP	Ksiaz	145.81	340	ePKP	PKPdf	03 25 55.4	+0.1
SECR		145.87	324	⇓P	PKPab	03 25 56.8	+0.2
OKC	Ostrava-Krasne	146.02	337	ePKP	PKPab	03 25 57.1	+0.1
OKC	Ostrava-Krasne	146.02	337	ePKP2	PKPab	03 25 57.1	+0.1
CJR	Cluj-Napoca	146.05	328	⇓P	PKPab	03 25 57.6	+0.3
CJR	Cluj-Napoca	146.05	328	⇓PKP2	PKPab	03 25 57.6	+0.3
LANS	Liptovska Anna	146.07	335	ePKP2	PKPab	03 25 58.4	+1.1
LANS	Liptovska Anna	146.07	335	ePKP	PKPab	03 25 58.4	+1.1
OSTC	Ostas	146.09	340	ePKP	PKPbc	03 25 56.7	0.0
OSTC	Ostas	146.09	340	ePKP2	PKPbc	03 25 56.7	0.0
VOIR		146.16	325	⇑P	PKPbc	03 25 57.0	-0.2
VOIR		146.16	325	⇑PKP2	PKPbc	03 25 57.0	-0.2
PRD	Provadia	146.20	320	P	PKiKP	03 25 59.7	-0.7
DPC	Dobruska-Polom	146.23	339	ePKP	PKPbc	03 25 56.8	-0.4
DPC	Dobruska-Polom	146.23	339	ePKP2	PKPbc	03 25 56.8	-0.4
MORC	Moravsky Berou	146.29	338	⇓P	PKPab	03 25 58.3	+0.2
MORC	Moravsky Berou	146.29	338	ePKP	PKPbc	03 25 57.2	-0.2
MORC	Moravsky Berou	146.29	338	⇓PKP2	PKPab	03 25 58.3	+0.2
KRLC	Kraliky	146.31	339	ePKP	PKPdf	03 25 56.8	+0.6
KRLC	Kraliky	146.31	339	ePKP2	PKPdf	03 25 56.8	+0.6
MARR	Marisel-Cluj	146.31	329	⇑P	PKPbc	03 25 57.9	+0.3
CLL	Collm	146.38	343	ePKPdf	PKPdf	03 25 56.0	-0.2
CLL				i PKPbc	PKPbc	03 25 57.9	+0.4
	comp=Z,20nm,0.9s						
CLL				i PKPmax		03 25 59.2	
	comp=Z,64nm,1.4s						
CLL				ePKiKP	pPKPdf	03 26 04.0	+0.2
CLL				epPKPdf	sPKPab	03 26 09.0	+0.9
CLL				i x	x	03 26 24.3	
CLL				eSKPdf	SKPdf	03 29 27.0	-1.8
CLL				i PKSdf	PKSdf	03 29 31.4	0.0
CLL	Collm	146.38	343	i PKP2	PKPbc	03 25 57.9	+0.4
CLL				pmax	pmax		
	comp=Z,20nm,0.9s						
DRGR		146.42	329	⇑P	PKPbc	03 25 57.4	-0.5
DRGR		146.42	329	⇑PKP2	PKPbc	03 25 57.4	-0.5
ARR	Arges	146.43	326	⇓P	PKPdf	03 25 57.2	+0.6
BRG	Berggiesshubel	146.51	342	ePKP	PKPdf	03 25 56.9	+0.4
BRG				Amp		03 26 00.3	
	comp=Z,32nm,1.3s						
BRG	Berggiesshubel	146.51	342	P	PKiKP	03 26 11.7	+11
BRG				Amp		03 26 13.5	
	comp=Z,7.5nm,0.9s						
BRG	Berggiesshubel	146.51	342	ePKP2	PKPdf	03 25 56.9	+0.4
BRG				pmax	pmax		
	comp=Z,32nm,1.3s						
PVCC	Panska Ves	146.63	341	ePKP	PKPab	03 25 59.0	-0.3
PVCC	Panska Ves	146.63	341	ePKP2	PKPab	03 25 59.0	-0.3
LOT	Lotru	146.83	327	⇑P	PKPbc	03 25 59.2	0.0
VYHS	Vyhne	146.84	335	ePKP2	PKPbc	03 25 59.6	+0.6
VYHS	Vyhne	146.84	335	ePKP	PKPbc	03 25 59.6	+0.6
COPA	Copaceanca	146.90	324	⇓P	PKPab	03 26 01.2	+0.6
JAVC	Velka Javorina	147.00	336	ePKP	PKPab	03 26 00.7	-0.2
VRAC	Vranov	147.02	338	⇓P	PKPab	03 26 00.3	-0.6
VRAC	Vranov	147.02	338	ePKP	PKPbc	03 25 59.4	0.0
VRAC	Vranov	147.02	338	⇓PKP2	PKPab	03 26 00.3	-0.6
SZH	Strazhica	147.03	322	P	PKPbc	03 25 59.6	0.0
PRU	Pruhonice	147.12	341	ePKP	PKPbc	03 25 59.9	+0.2
PRU	Pruhonice	147.12	341	ePKP2	PKPbc	03 25 59.9	+0.2
KRUC	Moravsky	147.30	338	ePKP	PKPbc	03 26 00.2	0.0
MOX	Moxa	147.35	344	eL	L	04 18 45.7	
	comp=Z,213nm,18.2s						
GZR	Gura Zlata	147.38	327	⇓P	PKPbc	03 26 00.7	+0.1
GZR	Gura Zlata	147.38	327	⇓PKIKP	PKPbc	03 26 00.7	+0.1
TREC	Trest	147.41	339	ePKP	PKPbc	03 26 00.6	+0.1
TREC	Trest	147.41	339	ePKP2	PKPbc	03 26 00.6	+0.1
NKC	Novy Kostel	147.51	343	ePKP	PKPbc	03 26 01.6	+0.8
NKC	Novy Kostel	147.51	343	ePKP2	PKPbc	03 26 01.6	+0.8
MODS	Modra-Piesok	147.55	336	ePKP2	PKPbc	03 26 01.9	+1.0
MODS	Modra-Piesok	147.55	336	ePKP	PKPbc	03 26 01.9	+1.0
PLVB	Pleven	147.71	323	⇑	PKPbc	03 26 01.4	-0.1
KULA	Kula-Manisa	147.79	312	P	PKPbc	03 26 02.0	0.0
BZS	Buzias	147.80	329	⇑P	PKPdf	03 25 58.5	-0.3
BZS	Buzias	147.80	329	⇑PKIKP	PKPdf	03 25 58.5	-0.3
MANT	Manisa	147.87	312		PKPdf	03 25 59.1	-0.4
HERR	Herculane	147.91	327	⇓P	PKPbc	03 26 02.2	+0.1
DJES	Djerdap	148.01	327	PKPbc	PKPbc	03 26 01.9	-0.4
KSL	Kastellorizon	148.11	308	P	PKPbc	03 26 01.9	-0.9
KHC	Kasperske Hory	148.17	341	PKPdf	PKPdf	03 25 58.0	-1.3
KHC	Kasperske Hory	148.17	341	ePKP	PKPbc	03 26 03.1	+0.5
KHC				epPKP	sPKPab	03 26 15.0	-0.3
KHC	Kasperske Hory	148.17	341	ePKP2	PKPbc	03 26 03.1	+0.5
BANR	Banloc	148.20	329	⇑P	PKiKP	03 26 03.9	-0.5
MPEP	Malo Peshtene	148.22	324	P	PKPab	03 26 06.9	+1.0
KDZ	Kurdzhali	148.29	320	P	PKPbc	03 26 03.7	+0.6
GRF	Grafenberg Arr	148.33	344	eL	L	04 34 12.2	
	comp=Z,129nm,20.8s						
MDVR	Moldovita	148.34	328	⇑P	PKPdf	03 25 59.1	-0.7
GERES	GERESS Array B	148.38	341	PKPbc	PKPbc	03 26 03.2	-0.1
	comp=Z,4.9nm,0.7s,baz=26,slow=2.8,SNR=25						
GERES	GERESS Array B	148.38	341	PKPdf	PKPdf	03 25 59.0	-0.8
GERES				PKPbc	PKPbc	03 26 03.0	-0.2
GERES	GERESS Array B	148.38	341	PKP2	PKPbc	03 26 03.1	-0.2
GERES						04 25 59.0	
CONA	Conrad Observa	148.44	337	i PKP	PKPbc	03 26 04.0	+0.6
	comp=Z,14nm,0.9s						
RONA	Rosalia, Austr	148.47	337	i PKiKP	PKiKP	03 26 04.3	-0.8
	comp=Z,12nm,0.9s,SNR=4.6						
GRB1	Grafenberg Arr	148.49	343	ePKPab	PKPbc	03 26 03.3	-0.1
	baz=24,slow=2.6						
RDO	Rodhopi	148.50	319	P	PKPbc	03 26 03.2	-0.5
RDO	Rodhopi	148.50	319	PKPdf	PKPdf	03 25 57.5	-2.5
YER	Yerkesik	148.67	310	P	PKPbc	03 26 04.2	-0.1
MORH	Mrgy, Hungar	148.72	332	⇓P	PKPdf	03 25 60.0	-0.3
EZN	Ezine	148.73	316	P	PKPbc	03 26 02.6	-1.7
BLCB	Balcova	148.97	313	P	PKPab	03 26 08.8	-0.3
VTS	Vitosha	148.98	323	⇑P	PKPdf	03 26 02.0	+0.9
VTS	Vitosha	148.98	323	PKPdf	PKPdf	03 25 59.6	-1.4
VTS	Vitosha	148.98	323	⇑PKIKP	PKPdf	03 26 02.0	+0.9
VTS	Vitosha	148.98	323	P	PKPbc	03 26 05.3	+0.2
FRGS	Fruska Gora	149.00	330	⇑P	PKPbc	03 26 05.0	+0.1
FRGS	Fruska Gora	149.00	330	eP	PKPbc	03 26 04.8	-0.1
PRK	Paraskevi	149.06	315	P	PKiKP	03 26 05.9	-0.5
MOA	Molln	149.07	339	i PKP	PKPbc	03 26 04.9	0.0
	comp=Z,14nm,1.4s						
ARSA	Arzberg	149.14	337	ePKP	PKPbc	03 26 05.2	+0.1
	comp=Z,8.1nm,1.6s						
BOVS	Bovan	149.14	326	⇓P	PKPdf	03 26 00.2	-0.9
ARG	Arkhangelos	149.17	309	P	PKPbc	03 26 05.3	-0.2
ARG	Arkhangelos	149.17	309		PKPdf	03 25 59.4	-1.9
ARG	Arkhangelos	149.17	309	PKHKP	PKPpre	03 25 59.4	
KAVA	Kavala	149.22	319	P	PKPbc	03 26 04.8	-0.7
MMB	Musomiste	149.34	321	P	PKPbc	03 26 05.1	-0.8
DAT	Datca	149.35	310	P	PKPbc	03 26 05.3	-0.8
NVR	Nevrokopi	149.41	321	P	PKPbc	03 26 06.0	0.0
BIOA	Bad Ischl, Aus	149.42	340	ePKP	PKPbc	03 26 06.1	+0.2
	comp=Z,8.6nm,1.0s						
WLF	Walferdange	149.42	350	PKPbc	PKPbc	03 26 05.4	-0.3
WLF	Walferdange	149.42	350	PKP2	PKPbc	03 26 05.4	-0.3
DIVS	Divibare	149.69	328	eP	PKPbc	03 26 05.9	-0.8
SRS	Serrai	149.71	320	P	PKPbc	03 26 05.5	-1.3
SOKA	Soboth	149.80	337	i PKP	PKPbc	03 26 06.9	0.0
	comp=Z,11nm,1.1s						
PERS	Pernice	149.81	337	ePKPbc	PKPbc	03 26 05.9	-0.9
OUR	Ouranopolis	149.94	319	P	PKPdf	03 26 04.1	+1.7
SOH	Sokhos	150.03	320	P	PKPbc	03 26 06.8	-0.8
KBA	Koelnbreinsper	150.05	339	i PKP	PKPbc	03 26 06.9	-0.7
	comp=Z,13nm,1.0s						
A052A	Srbac	150.09	332	eP	PKPbc	03 26 07.2	-0.3
KNT	Kendrikon	150.10	321	P	PKPbc	03 26 06.2	-1.5
DOB	Doboj	150.11	331	eP	PKPdf	03 26 04.5	+2.0
OBKA	Obir	150.12	337	i PKP	PKPdf	03 26 03.1	+0.4
	comp=Z,11nm,1.7s						
OBKA	Obir	150.12	337	eP	PKPbc	03 26 06.0	-1.7
KARP	Karpathos	150.16	308	P	PKPbc	03 26 07.6	-0.5
VAY	Valandovo	150.19	322	i P	PKPbc	03 26 07.4	-0.5
HAPS	Han Pijesak,Bl	150.21	329	eP	PKPbc	03 26 07.9	-0.1
BFO	Black Forest	150.29	347	PKPbc	PKPbc	03 26 07.1	-0.9
BFO	Black Forest	150.29	347	PKIKP	PKPbc	03 26 07.1	-0.9
SJES	Sjenica	150.30	327	eP	PKPbc	03 26 08.6	+0.3
MYKA	Terra Mystica	150.34	339	i PKP	PKPbc	03 26 07.8	-0.4
	comp=Z,8.3nm,0.6s,SNR=4.2						
RUDO	Rudo	150.35	328	eP	PKPbc	03 26 07.7	-0.5
WATA	Walderalm	150.38	342	i PKP	PKPbc	03 26 08.4	+0.1
	comp=Z,11nm,0.7s,SNR=6.0						
SKO	Skopje	150.41	324	i P	PKPab	03 26 15.3	+0.4
A051A	Mrakovica	150.42	333	eP	PKPbc	03 26 08.2	-0.2
WTTA	Wattenberg	150.42	342	i PKP	PKPbc	03 26 08.8	+0.3
	comp=Z,16nm,0.7s,SNR=6.0						
RETA	Reutte	150.47	343	i PKP	PKPbc	03 26 08.7	+0.2
	comp=Z,8.5nm,0.8s,SNR=5.3						
MOTA	Moosalm	150.50	342	i PKP	PKPbc	03 26 08.4	-0.2
	comp=Z,16nm,0.8s,SNR=8.1						
BLY	Banja Luka	150.51	332	eP	PKPbc	03 26 08.5	0.0
PRIJ	Prijedor	150.53	333	eP	PKPbc	03 26 06.1	-2.5
SQTA	Sankt Quirin	150.59	342	i PKP	PKPbc	03 26 08.6	-0.3
	comp=Z,17nm,0.7s,SNR=11						
CRNS	Crni Vrh	150.59	337	i PKPbc	PKPbc	03 26 08.3	-0.5
ABTA	Abfaltersbach	150.61	340	i PKP	PKPbc	03 26 08.5	-0.3
	comp=Z,14nm,0.8s,SNR=5.0						
BOJS	Bojanci	150.70	335	ePKPbc	PKPbc	03 26 09.2	+0.2
BOJS	Bojanci	150.70	335	eP	PKPbc	03 26 09.0	0.0
MGRS	Mrkonjic Grad	150.81	332	eP	PKPab	03 26 17.6	+1.2
CEY	Cerknica	150.82	337	eP	PKPbc	03 26 08.6	-0.7
UPM	Unac-Piva	150.88	328	eP	PKPab	03 26 16.0	-1.0
DAVA	Damuels	150.89	344	ePKP	PKPbc	03 26 09.6	0.0
	comp=Z,17nm,1.2s						
FETA	Feichten	150.91	343	i PKP	PKPbc	03 26 09.2	-0.4
	comp=Z,14nm,0.8s,SNR=4.4						
LIT	Litokhoron	150.99	320	P	PKPbc	03 26 08.6	-1.3
LIT	Litokhoron	150.99	320		PKPbc	03 26 08.1	-1.8
LIT	Litokhoron	150.99	320	PKIKP	PKPbc	03 26 08.1	-1.8
XOR	Xorichti	151.00	318	P	PKPbc	03 26 07.9	-2.0
A050A	Klekovaca	151.01	333	eP	PKPbc	03 26 09.1	-0.7
THR8	Santorini-Mono	151.01	311	P	PKPbc	03 26 08.5	-1.5
THT2	Imerovigli	151.03	311	P	PKPbc	03 26 08.8	-1.3
ZKR	Zakros	151.04	308	P	PKiKP	03 26 10.4	-0.3
THR5	Thira Island,	151.09	311	P	PKPbc	03 26 08.7	-1.5
STIA	Sitia Lasithi	151.10	308	P	PKPbc	03 26 10.2	0.0
THR9	Santorini-Faro	151.12	311	P	PKPbc	03 26 08.9	-1.3
SKDS	Skadanscina	151.14	337	eP	PKPbc	03 26 09.0	-1.0
PHP	Peshkopia	151.16	324	P	PKPbc	03 26 08.7	-1.5
FNA	Florina	151.23	322	P	PKPbc	03 26 09.3	-1.1
DION	Dionisos Attik	151.23	315	P	PKPbc	03 26 10.5	0.0
BRY	Bratogost	151.29	328	eP	PKPbc	03 26 09.8	-0.8
PTL	Penteli	151.30	315	P	PKPbc	03 26 10.5	-0.2
OHR	Ohrid	151.34	323	i P	PKPbc	03 26 10.7	0.0
TYRN	Tyrnavos	151.39	319	P	PKPbc	03 26 08.7	-2.0
FUORN	Ofenpass-Fuorn	151.40	343	PKPdf	PKPdf	03 26 03.6	-1.3
FUORN					PKPbc	03 26 11.1	+0.2
VLY	Voula,Athens	151.45	315	P	PKPdf	03 26 06.6	+1.7
ATAL	Atalanti	151.49	317	P	PKPbc	03 26 09.7	-1.3
TREB	Trebinje	151.52	328	eP	PKPdf	03 26 05.9	+1.1
VILL	Villia	151.60	316	P	PKPbc	03 26 10.2	-1.2
THL	Klokotos Trika	151.61	319	P	PKPbc	03 26 09.6	-1.7
KBN	Korca	151.67	322	P	PKPbc	03 26 11.2	-0.3
AXAR	Agios Charalam	151.68	317	P	PKPbc	03 26 08.9	-2.6
STON	Ston	151.72	329	eP	PKPbc	03 26 10.2	-1.2
MAKR	Makrakomi, Fth	151.87	318	P	PKPbc	03 26 11.4	-0.5
IDI	Anoyia	151.94	309	P	PKPbc	03 26 11.5	-0.8
IDI	Anoyia	151.94	309	PKPdf	PKPdf	03 26 02.6	-3.1
LSK	Leskovik	152.09	322	P	PKPbc	03 26 11.7	-0.8
TEOL	Teolo	152.11	340	PKPbc	PKPbc	03 26 11.9	-0.3
EVR	Evrytania	152.13	319	P	PKiKP	03 26 13.4	+0.5
KRND	KRANIDI	152.13	315	P	PKPbc	03 26 11.1	-1.4
TMBK	Timbaki Herakl	152.13	309	P	PKPbc	03 26 11.0	-1.6
ANX	Ano Chora	152.25	318	P	PKiKP	03 26 13.1	-0.1
SERG	Sergoula	152.27	317	P	PKPbc	03 26 12.3	-0.6
EFP	Efpalio	152.36	318	P	PKPbc	03 26 13.1	+0.1
LAKA	Lakka	152.42	317	P	PKPbc	03 26 13.1	-0.1
KLV	Kalavryta, Ach	152.42	317	P	PKPbc	03 26 12.5	-0.8
PVO	Paravola	152.49	318	P	PKPbc	03 26 12.2	-1.1
IMMV	Iera Moni Meta	152.52	310	P	PKPbc	03 26 12.7	-0.8
VLI	Veliai	152.63	314	P	PKPbc	03 26 12.0	-1.7
RODP	Rodopos	152.63	311	P	PKiKP	03 26 14.6	+0.6
GVDS	Gavdos	152.73	309	P	PKPbc	03 26 13.4	-0.5
GVD	Gavdhos	152.73	309	P	PKPbc	03 26 13.1	-0.9
DRO	Drossia	152.76	317	P	PKiKP	03 26 15.6	+1.4
KTHA	Kythira Island	152.78	313	P	PKPbc	03 26 13.8	-0.3
KNDR	Palaiochora Ch	152.84	310	P	PKPbc	03 26 13.9	-0.3
RLS	Riolos of Patr	152.85	317	P	PKPbc	03 26 13.4	-0.7
LKD2	Lefkada island	152.92	319	P	PKPbc	03 26 13.9	-0.4
NYDR	Nydri-Lefkada	152.94	319	P	PKPbc	03 26 13.4	-0.9
EVGI	Lefkada island	153.02	319	P	PKPbc	03 26 14.0	-0.5
ITM	Ithomi	153.06	315	P	PKPbc	03 26 14.2	-0.5
ITM	Ithomi	153.06	315	PKPbc	PKPbc	03 26 14.1	-0.5
ESDC	Sonseca Array	159.94	5	PKP	PKPdf	03 26 15.4	-0.8
	comp=Z,1.1nm,0.9s,baz=341,slow=3.1,SNR=5.6						
ESDC				PKPab	PKPab	03 26 54.2	-1.2
	comp=Z,1.2nm,0.8s,baz=347,slow=4.2,SNR=5.4						
DBIC	Dimbokro	166.71	166	PKPab	PKPab	03 27 25.0	-0.7
	comp=Z,8.4nm,0.9s,baz=209,slow=4.6,SNR=6.4						
DBIC	Dimbokro	166.71	166	PKPab	PKPab	03 27 25.2	-0.4
DBIC	Dimbokro	166.71	166	PKP2	PKPab	03 27 25.2	-0.4
TAM	Tamanrasset	172.68	297	PKPab	PKPab	03 27 51.4	-1.1
TAM	Tamanrasset	172.68	297	PKP2	PKPab	03 27 51.4	-1.1
TORD	Torodi Ar. Bea	172.81	206	PKP	PKPdf	03 26 26.4	-0.4
	comp=Z,2.7nm,1.2s,baz=264,slow=1.1,SNR=5.7						
TORD				PKPab	PKPab	03 27 51.7	-1.0
	comp=Z,6.7nm,0.9s,baz=152,slow=4.0,SNR=21						
TORD				PP	PP	03 31 44.6	+1.6
	comp=Z,3.5nm,1.0s,baz=184,slow=4.0,SNR=8.0						

ROM 06 03:24:33.2±0.1, 43°.011N±0°.006×13°.152E±0°.009, h10^{km}, ML1.0/6, 2C, Error ellipse: s-maj=0.7km s-min=0.5km az=90.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSP1	Cessapalombo	0.09	25	P	Pg	03 24 37.0	+1.0
CSP1				S	Sg	03 24 38.1	+0.3
CSP1				AML	AML		
	comp=E,86µm,0.5s						
CSP1				AML	AML		
	comp=N,84µm,1.4s						
MC2	Monte Cornacci	0.10	164	⇑P	Pg	03 24 36.3	+0.2
MC2				S	Sg	03 24 38.6	+0.4
T1220	Camerino, Fraz	0.11	335	P	Pg	03 24 36.5	+0.4
T1220				S	Sg	03 24 38.9	+0.8
T1220				AML	AML		
	comp=N,89µm,2.3s						
T1220				AML	AML		
	comp=N,137µm,2.6s						
T1220				AML	AML		
	comp=E,107µm,2.6s						
T1219	Muccia, Frazio	0.12	293	P	Pg	03 24 35.7	-0.5
T1219				S	Sg	03 24 39.3	+1.0
T1219				AML	AML		
	comp=N,71µm,1.6s						
GUMA	Gualdo di Mace	0.14	69	P	Pg	03 24 36.7	+0.2
GUMA				S	Sg	03 24 39.9	+0.9
T1216	Preci, Frazion	0.15	219	P	Pg	03 24 37.3	+0.5
T1216				S	Sg	03 24 40.5	+1.3
T1216				AML	AML		
	comp=N,78µm,4.3s						
T1216				AML	AML		
	comp=E,37µm,2.7s						
T1245	Castelsantange	0.16	170	P	Pg	03 24 37.2	+0.3
T1245				S	Sg	03 24 40.3	+0.9
T1245				AML	AML		
	comp=E,77µm,1.5s						
T1245				AML	AML		
	comp=N,77µm,0.3s						
T1245				AML	AML		
	comp=N,201µm,1.4s						
T1245				AML	AML		
	comp=E,77µm,0.5s						
T1245				AML	AML		
	comp=E,143µm,3.5s						
T1214	Arquata del Tr	0.25	171	P	Pb	03 24 39.7	-0.3
T1214				S	Sg	03 24 43.2	+1.1
T1212	Cascia, Frazio	0.27	197	⇑P	Pg	03 24 39.1	+0.3

T1212				S	Sb	03 24 43.7	-1.2
T1212				AML	AML		
	comp=E,69µm,1.6s						
T1212				AML	AML		
	comp=N,46µm,1.6s						
T1212				AML	AML		
	comp=N,70µm,4.4s						

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*DDA **06** 03:50:30.5±0.0, 37°.60N×38°.50E, h11^{km}±1^{km}, ML3.1*
*ISK **06** 03:50:30.8, 37°.59N×38°.52E, h5^{km}, ML3.1/14*
ISC 06 03:50:30.7±1.1**, 37°.58N**±0°.03×**38°.49E**±0°.02**, h3**^{km}±10^{km}**, n32,** σ1^{s}.**18**/50**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URFA	Urfa	0.29	117	Pg	Pb	03 50 37.8	-0.8
URFA				Sg	Sb	03 50 42.5	-1.4
AZEY	Adyaman-Merk	0.30	321	P	Pg	03 50 36.9	+0.4
AZEY				S	Sg	03 50 41.4	+0.8
HANM	anlurfa/Hi	0.31	89	P	Pg	03 50 36.8	+0.1
HANM				S	Sg	03 50 41.0	+0.3
NARI	Adyaman-Kaht	0.38	35	P	Pg	03 50 37.5	-0.5
NARI				S	Sg	03 50 43.0	+0.2
AKCA	Adyaman/G¶l	0.67	289	P	Pg	03 50 43.9	+0.3
AKCA				S	Sg	03 50 53.4	+1.1
SURC	SANLIURFA_SURC	0.70	172	P	Pg	03 50 45.0	+0.8
SURC				S	Sg	03 50 54.5	+1.3
MAYA	Malatya/Merkez	0.75	356	P	Pg	03 50 44.3	-0.8
MAYA				S	Sg	03 50 54.6	-0.3
GZT	Gaziantep	0.77	254	P	Pg	03 50 46.1	+0.6
GZT				S	Sb	03 50 56.9	-0.7
GZT				*i* AML	AML	03 51 01.0	
	comp=E,472nm,0.2s						
GAZ	Gaziantep	1.10	249	Pn	Pn	03 50 52.9	0.0
GAZ				Sn	Sn	03 51 09.6	+1.0
KAHM	Kahramanmaras,	1.20	268	P	Pg	03 50 53.5	-0.1
KAHM				S	Sg	03 51 09.1	0.0
DARE	Darende-Malaty	1.27	322	Pn	Pn	03 50 56.2	+0.8
DARE				Sn	Sn	03 51 14.5	+1.4
DYBB	Diyarbakir	1.36	73	Pn	Pg	03 50 57.1	+0.4
DYBB				Sn	Sn	03 51 16.6	+1.5
KAMA	Osmaniye	1.50	256	P	Pn	03 50 58.8	+0.2
KAMA				S	Sn	03 51 18.2	-0.5
ARPR	Arapgir-MALATY	1.52	355	Pn	Pg	03 50 59.9	+0.1
KOVA	Elazig, Kovanc	1.54	42	P	Pg	03 51 01.2	+1.1
KOVA				S	Sg	03 51 19.8	-0.2
HANI	Diyarbakir_Han	1.73	60	P	Pn	03 51 01.6	0.0
HANI				S	Sn	03 51 23.2	-1.0
SARI	SarD1z-Kayseri	1.84	298	Pn	Pb	03 51 04.9	-0.1
SARI				Sn	Sg	03 51 29.9	+0.2
SAIM	ADANA	1.95	283	P	Pn	03 51 04.9	+0.2
KOZT	Kozan	2.12	268	Pn	Pb	03 51 09.8	+0.1
SVAN	Silvan-Diyarba	2.22	74	Pn	Pb	03 51 09.9	-1.5
BNGB	Bingl	2.23	50	Pn	Pb	03 51 09.9	-1.7
CEYT	Ceyhan	2.26	256	Pn	Pb	03 51 11.7	-0.4
AKO	Adana	2.42	268	P	Pn	03 51 09.1	-2.1
AKO				S	Pg	03 51 16.7	-0.5
BNN	Bunyan	2.44	302	Pn	Pb	03 51 13.5	-1.8
SVSK	Karacayir	2.61	334	Pn	Pn	03 51 15.6	+1.9
MUSM	Mu-Merkez	2.64	63	P	Pn	03 51 13.8	-0.5
MUSM				S	Sb	03 51 50.4	-1.2
KARA	Karaisali	2.75	265	Pn	Pb	03 51 18.2	-2.3
GURO	Guroymak-BITLI	2.96	70	Pn	Pn	03 51 20.7	+2.1
RSDY	Resadiye-TOKAT	2.96	343	Pn	Pn	03 51 20.7	+2.1
BAYT	Aydıntepe-Bayb	3.09	24	Pn	Pn	03 51 22.5	+2.0
YOZ	Yozgat	3.23	311	Pn	Pn	03 51 24.8	+2.5
AKDM	Akdamar-Van	3.63	77	Pn	Pn	03 51 29.9	+2.1

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*IDC **06** 03:58:02.0±1.6, 0°.39S×129°.36E, h0^{km}, mb3.8/5, mbtmp3.9/5, Error ellipse: s-maj=158.5km s-min=19.1km az=68.0*
*DJA **06** 03:58:05.6±0.5, 0°S±4°×13°0E±°, h73^{km}±27^{km}, M3.9/13, mb4.0/1, MLv3.9/13*
ISC 06 03:58:06.3±0.9**, 0°.35S**±0°.08×**129°.53E**±0°.06**, h35**^{km}**, n16,** σ**2**^{s}.**77**/18**, mb4.0**/4**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWI	Sorong	1.80	107	P	Pn	03 58 35.6	+0.7
LBMI	Labuha	2.05	262	P	Pn	03 58 38.1	-0.3
TNTI	Ternate	2.43	297	P	Pn	03 58 42.9	-0.7
MSAI	Masohi	3.04	191	P	Pn	03 58 54.5	+2.5
AAI	Ambon	3.58	202	P	Pn	03 59 00.7	+1.3
FAKI	Fak Fak	3.73	133	P	Pn	03 59 01.5	0.0
NLAI	Namlea	3.76	220	P	Pn	03 59 03.0	+1.1
SANI	Sanana	3.92	244	P	Pn	03 59 04.3	+0.1
RKPI	Ransiki, Papua	4.79	104	P	Pn	03 59 15.9	-0.1
GTOI	Gorontalo	6.59	279	P	Pn	03 59 41.9	+1.1
WRA	Warramunga Arr	20.04	167	P	P	04 02 35.9	-0.7
	1.9nm,0.6s,baz=349,slow=12,SNR=13						
WRA				S	S	04 06 10.1	-10
	0.6nm,0.9s,baz=358,slow=22,SNR=2.1						
	1.9nm,0.6s						
ASAR	Alice Springs	23.57	170	P	P	04 03 14.2	+0.4
	4.4nm,0.9s,baz=349,slow=9.9,SNR=24						
ASAR				PcP	PcP	04 06 59.0	+0.3
	0.2nm,0.4s,baz=3.8,slow=2.8,SNR=2.3						
	4.4nm,0.9s						
STKA	Stephens Creek	33.37	161	P	P	04 04 43.1	+1.7
	0.9nm,0.4s,baz=342,slow=3.3,SNR=5.3						
	0.9nm,0.4s						
MKAR	Makanchi Array	62.48	325	P	P	04 08 27.1	+0.8
	0.6nm,0.8s,baz=112,slow=8.1,SNR=7.3						
	0.6nm,0.8s						
KURBB	Kurchatov Arra	66.66	327	P	P	04 08 54.1	+0.6
	1.2nm,0.8s,baz=125,slow=6.0,SNR=12						
	1.2nm,0.8s						
TORD	Torodi Ar. Bea	126.79	286	PKP	PKiKP	04 17 08.5	+0.6
	0.2nm,0.6s,baz=67,slow=1.8,SNR=1.5						

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*IDC **06** 04:17:00.0±1.8, 0°.94N×125°.28E, h0^{km}, mb3.7/3, mbtmp3.8/3, MS3.0/2, Error ellipse: s-maj=192.3km s-min=23.4km az=64.0*
*DJA **06** 04:17:03.4±0.4, 1°N±5°×12°6E±°, h10^{km}, M3.4/6, MLv3.4/6*
ISC 06 04:17:04.8±1.1**, 1°.46N**±0°.08×**126°.46E**±0°.09**, h35**^{km}**, n10,** σ1^{s}.**49**/9**, mb3.8**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.14	127	P	Pn	04 17 25.8	+1.6
TNTI				S	Sn	04 17 38.9	+0.3
LBMI	Labuha	2.33	153	P	Pn	04 17 42.0	+1.3
SGSI	Sangihe	2.40	337	P	Pn	04 17 42.6	+1.0
SANI	Sanana	3.52	188	P	Pn	04 17 57.2	+0.2
GTOI	Gorontalo	3.54	257	P	Pn	04 17 59.2	+1.8
DAV	Davao City (W)	5.64	351	LR	LR	04 21 27.7	
	comp=Z,61nm,18.1s,baz=290,slow=44						
WRA	Warramunga Arr	22.63	160	P	P	04 22 01.1	-1.9
	1.0nm,0.3s,baz=335,slow=11,SNR=19						
	1.0nm,0.3s						
ASAR	Alice Springs	26.00	164	P	P	04 22 34.5	-0.2
	0.4nm,0.3s,baz=342,slow=11,SNR=8.2						
	0.4nm,0.3s						
MKAR	Makanchi Array	59.27	326	P	P	04 27 01.9	-1.1
	0.6nm,0.4s,baz=120,slow=7.9,SNR=14						
	0.6nm,0.4s						
GNI	Garni	82.72	310	LR	LR	05 11 38.7	
	comp=Z,19nm,19.0s,baz=270,slow=40						

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*JMA **06** 04:54:35.4±0.1, 37°.7N±0°.2×141°.6E±0°.5, h48^{km}±1^{km}, MD3.7/40, MV4.0/40, E OFF FUKUSHIMA PREF*
JMA Felt I J1 at E OFF FUKUSHIMA PREF .
*IDC **06** 04:54:38.1±4.6, 37°.57N×141°.49E, h78^{km}±40^{km}, mb3.4/6, mbtmp3.8/8, ML3.1/2, MS2.6/1, Error ellipse: s-maj=38.2km s-min=17.7km az=59.0*
ISC 06 04:54:35.0±1.3**, 37°.67N**±0°.04×**141°.61E**±0°.07**, h45**^{km}±11^{km}**, n37,** σ1^{s}.**13**/40**, mb3.7**/6**, 10D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMST	Minamisoumatoc	0.57	276	⇓P	Pn	04 54 47.2	+0.3
JMST				⇓S	Sn	04 54 55.2	-0.2
JMST	Minamisoumatoc	0.57	276	A	A	04 54 47.2	
	comp=E,11nm,0.3s,comp=E,4.0nm,0.5s						
JIKH	Ishinomakikobu	0.65	350	*i* P	Pn	04 54 48.3	+0.3
JIKH				*i* S	Sn	04 54 57.1	-0.1
JFK	Kawauchi	0.66	243	⇓P	Pn	04 54 48.3	+0.2
JFK				⇓S	Sn	04 54 56.8	-0.7
JFK	Kawauchi	0.66	243	A	A	04 54 48.3	
	comp=E,9.0nm,0.5s,comp=E,4.0nm,0.2s						
JMM	Marumori	0.68	287	P	Pn	04 54 48.4	+0.1
JMM	Marumori	0.68	287	⇓P	Pn	04 54 48.5	+0.3
JMM				⇓S	Sn	04 54 57.6	-0.2
JIO	Ouri	0.81	345	*i* P	Pn	04 54 50.4	+0.4
JIO				S	Sn	04 55 00.8	-0.2
ONAJ	Iwakimizuishiy	0.86	229	*i* P	Pn	04 54 50.9	+0.1
ONAJ				S	Sn	04 55 01.8	-0.6
ONAJ	Iwakimizuishiy	0.86	229	A	A	04 54 50.9	
	comp=E,9.0nm,0.3s,comp=E,5.0nm,0.4s						
JOU	Okura	1.02	313	⇓*i*P	Pn	04 54 53.1	+0.2
JOU				⇓S	Sn	04 55 06.3	+0.2
JOU	Okura	1.02	313	A	A	04 54 53.1	
	comp=E,3.0nm,0.6s,comp=E,3.0nm,0.4s						
JOTO	OTAMA OYAMA	1.02	264	P	Pn	04 54 53.1	+0.2
JOTO				S	Sn	04 55 05.8	-0.3
JMK	Ichinoseki	1.31	347	*i* P	Pn	04 54 57.6	+0.6
JMK				S	Sn	04 55 13.8	+0.5
JYS	Shirataka	1.34	295	*i* P	Pn	04 54 58.0	+0.7
JYS				*e*S	Sn	04 55 15.2	+1.3
JFY	Yanaizu	1.54	261	*i* P	Pn	04 55 00.6	+0.6
JFY				*e*S	Sn	04 55 19.3	+0.5
JYK	Kaneyama	1.59	322	⇓P	Pn	04 55 01.3	+0.7
JYK				⇓*e*S	Sn	04 55 20.4	+0.5
MJAR	Matsushiro Arr	2.94	248	P	Pn	04 55 20.7	+1.4
	0.7nm,0.3s,baz=77,slow=14,SNR=13						
MJAR				S	Sn	04 55 54.6	+1.2
	7.9nm,0.3s,baz=76,slow=19,SNR=5.2						
MJAR				LR	LR	04 56 43.7	
	comp=Z,92nm,18.8s,baz=22,slow=44						
	4.4nm,0.4s						
MAJO	Matsushiro	2.94	249	P	Pn	04 55 21.3	+2.0
JTM	Tenmabayashi	3.14	352	P	Pn	04 55 23.8	+1.8
JGF	Kuroka	4.00	240	P	Pn	04 55 37.6	+3.8
INU	Inuyama	4.37	239	P	Pn	04 55 44.0	+5.2
ERM	Erimo	4.50	15	P	Pn	04 55 41.3	+0.7
JEM	Erimo	4.50	15	P	Pn	04 55 43.2	+2.6
JHJ	Hachijo jima 2	4.78	199	P	Pn	04 55 46.5	+2.0
	13nm,0.3s,baz=18,slow=13,SNR=1.7						
JHJ				S	Sn	04 56 37.8	-0.9
	101nm,0.6s,baz=90,slow=20,SNR=1.7						
	60nm,0.5s						
H11N2	WAKE ISLAND Hy	28.35	122	T	T	05 30 44.4	
	baz=315,slow=75						
H11N1	WAKE ISLAND Hy	28.36	122	T	T	05 30 48.5	
	baz=315,slow=75						
H11N3	WAKE ISLAND Hy	28.36	122	T	T	05 30 45.5	
	baz=315,slow=75						
H11S1	WAKE ISLAND Hy	29.08	124	T	T	05 31 38.9	
	baz=317,slow=76						
H11S3	WAKE ISLAND Hy	29.08	124	T	T	05 31 35.5	
	baz=317,slow=76						
H11S2	WAKE ISLAND Hy	29.10	124	T	T	05 31 39.0	
	baz=317,slow=76						
ZALV	Zalesovo Beam	41.60	312	P	P	05 02 18.1	-0.3
	0.4nm,0.4s,baz=90,slow=7.2,SNR=3.6						
	0.4nm,0.4s						
MKAR	Makanchi Array	43.91	302	P	P	05 02 36.5	-0.7
	0.3nm,0.6s,baz=84,slow=10.0,SNR=5.5						
	0.3nm,0.6s						
WRA	Warramunga Arr	57.71	188	P	P	05 04 20.4	-0.7
	0.5nm,0.4s,baz=4.9,slow=7.1,SNR=7.6						
	0.5nm,0.4s						
FINES	FINESS Array B	68.32	332	P	P	05 05 30.3	-0.8
	2.9nm,0.9s,baz=83,slow=5.7,SNR=4.3						
	2.9nm,0.9s						
AKASG	Malin Array Be	73.89	322	P	P	05 06 04.0	-1.0
	0.4nm,0.4s,baz=45,slow=6.5,SNR=5.3						
	0.4nm,0.4s						
TXAR	Lajitas Array	89.61	52	P	P	05 07 28.9	+0.6
	0.3nm,0.8s,baz=316,slow=6.3,SNR=2.3						
	0.3nm,0.8s						

DJA 06 05:23:14.6±2.6**, 11°S**±23°×**11°8E**±1°0**, h10**^{km}**, M3.9**/6**, mb4.1**/3**, MLv3.8**/6**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	2.23	0	P	Pn	05 23 51.5	-0.1
TWSI	Taliwang, Sumb	2.48	339	P	Pn	05 23 55.1	+0.1
SRBI	Singaraja	3.89	319	P	Pn	05 24 14.7	+0.2
JAGI	Jajag, Banyuwa	4.40	306	P	Pn	05 24 19.9	-1.7
GMJI	Gumukmas	5.09	303	P	Pn	05 24 30.9	-0.1
	9.6nm,0.8s,0.1nm						
BSSI	Bau Bau, Buton	5.59	29	P	Pn	05 24 37.8	0.0
	56nm,0.9s,0.3nm						
PWJI	Pagerwojo	6.62	297	P	Pn	05 24 53.0	+1.0

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*NEIC **06** 05:26:12.2±2.5, 52°.69S±0°.05×74°.4W±0°.2, h12^{km}±6^{km}, mb4.4/13, ML3.8(GUC), Error ellipse: s-maj=14.3km s-min=7.2km az=74.0*
*GUC **06** 05:26:16.9±0.6, 52°.69S×74°.08W, h23^{km}±6^{km}, ML3.8*
ISC 06 05:26:11.9±2.3**, 52°.64S**±0°.07×**74°.24W**±0°.07**, h8**^{km}±14^{km}**, n33,** σ1^{s}.**15**/42**, mb4.5**/4**, 2C, Southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MG05	Puerto Natales	1.44	49		Pg	05 26 41.1	+1.6
MG05				Sn	Sg	05 26 56.9	-1.3
MG05	Puerto Natales	1.44	49	*e*P	Pg	05 26 41.0	+1.6
MG05				*i* S	Sg	05 26 58.1	0.0
MG05				IAML		05 27 01.0	
	comp=N,3µm,0.6s						
MG04	Isla Riesco	1.64	99	Pn	Pb	05 26 42.6	+0.3
MG04				Sn	Sb	05 27 02.3	-0.8
MG04	Isla Riesco	1.64	99	*e*P	Pb	05 26 42.5	+0.1
MG04				*i* S	Sn	05 27 01.8	-0.4
MG04				IAML		05 27 06.1	
	comp=N,4µm,0.4s						
GO09	Cerro Castillo	1.81	41		Pg	05 26 46.5	0.0
GO09	Cerro Castillo	1.81	41	⇑*i*P	Pg	05 26 46.4	-0.2
GO09				*i* S	Sg	05 27 08.4	-1.6
GO09				IAML		05 27 11.4	
	comp=E,781nm,0.5s						
GO10	Punta Arenas	2.00	106		Pn	05 26 47.6	+1.6
GO10				Sn	Sb	05 27 12.3	-1.3
GO10	Punta Arenas	2.00	106	*e*P	Pb	05 26 47.8	-0.8
GO10				*i* S	Sb	05 27 12.1	-1.5
GO10				IAML		05 27 22.4	
	comp=E,2µm,0.8s						
MG03	Isla Dawson	2.57	120		Pn	05 26 55.0	+1.2
MG03	Isla Dawson	2.57	120	⇑*i*P	Pn	05 26 54.7	+0.9
MG03				*i* S	Sn	05 27 26.1	+0.9
MG03				IAML		05 27 31.4	
	comp=E,453nm,0.2s						
MG02	Cerro Sombrero	3.06	95	Pn	Pn	05 27 03.0	+2.5
MG02	Cerro Sombrero	3.06	95	*e*P	Pn	05 27 02.8	+2.3
MG02				*i* S	Sn	05 27 38.1	+1.0
MG02				IAML		05 27 47.3	
	comp=N,363nm,0.5s						
GO08	Villa O'Higgin	4.32	15	Pn	Pn	05 27 19.2	+1.5
GO08	Villa O'Higgin	4.32	15	*e*P	Pn	05 27 22.6	+4.9
MG01	Puerto William	4.54	123	Pn	Pn	05 27 21.0	+0.2
MG01	Puerto William	4.54	123	*e*P	Pn	05 27 21.2	+0.4
MG01				*e*S	Sn	05 28 14.6	+0.9
EFI	East Falkland	9.99	91	Pn	Pn	05 28 35.5	-0.1
LL05	Los Muermos	11.25	3	Pn	Pn	05 28 53.6	+0.8
PLCA	Paso Flores	12.18	13	Pn	Pn	05 29 05.6	0.0
BO01	Tunca	18.38	8	P	Pn	05 30 25.1	-1.8
BO04	La Punta	18.83	9	P	P	05 30 31.1	-0.8
BO04				IAmb	IAmb	05 30 41.4	
	comp=Z,26nm,1.4s						
VA05	Santo Domingo	19.07	7	P	P	05 30 34.2	-0.3
VA05				IAmb	IAmb	05 30 49.4	
	comp=Z,38nm,1.1s						
ROC1	El Roble	19.79	8	P	P	05 30 42.6	-0.1
ROC1				IAmb	IAmb	05 30 59.6	
	comp=Z,15nm,0.9s						
VA03	San Esteban	20.05	9	P	P	05 30 44.7	-0.7
GO04	Tololo Observa	22.59	8	P	P	05 31 11.4	-1.5
GO04				IAmb	IAmb	05 31 34.2	
	comp=Z,30nm,1.4s						
CO05	La Serena	22.81	7	P	P	05 31 13.8	-1.2
AC05	El Transito	23.96	9	P	P	05 31 24.8	-1.9
AC05				IAmb	IAmb	05 31 43.2	
	comp=Z,12nm,1.2s						
PB10	IPOC Station P	29.22	7	P	P	05 32 13.1	-0.8
PB12	IPOC Station P	34.09	7	P	P	05 32 57.5	+0.6
PB16	IPOC Station P	34.44	8	P	P	05 33 00.6	+0.2
PB16				IAmb	IAmb	05 33 28.7	
	comp=Z,10.0nm,1.4s						
SNAA	Sanae	35.55	149	P	P	05 33 09.1	+0.1
SNAA				IAmb	IAmb	05 33 24.6	
	comp=Z,5.9nm,1.0s						
QSPA	South Pole Qui	37.60	180	P	P	05 33 26.2	-0.5
MAW	Mawson	55.86	162	P	P	05 35 49.9	+0.7

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*HVO **06** 05:46:59.2±0.8, 19°.18N±0°.03×155°.47W±0°.02, h36^{km}±3^{km}, ML2.8/35, ML2.9/52(NEIC), Error ellipse: s-maj=4.1km s-min=3.2km az=194.0*
NEIC 06 05:46:57.5±0.7**, 19°.19N**±0°.02×**155°.48W**±0°.01**, h44**^{km}±2^{km}**, Error ellipse: s-maj=3.3km s-min=1.7km az=188.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTC	Hot Caves	0.09	57		Pn	05 47 04.9	+0.3
HPO	Honuapo	0.12	217		Pn	05 47 04.8	+0.2
KHU	Kahuku	0.14	293		Pn	05 47 05.2	+0.1
KHU					Sn	05 47 09.4	-1.0
AIN	Ainahou	0.18	5		Pn	05 47 05.6	+0.4
AIN					Sn	05 47 10.3	-0.4
HLP	Hilina Pali	0.19	56		Pn	05 47 05.5	+0.4
HLP					Sn	05 47 10.2	-0.4
HLP				IAML		05 47 10.3	
	comp=N,1µm,0.1s						
HLP				IAML		05 47 11.5	
	comp=E,1µm,0.4s						
SDHHI	Sand Hill	0.26	41		Pn	05 47 06.0	+0.1
SDHHI					Sn	05 47 11.1	-0.6
WRMHI	West Rim	0.27	37		Pn	05 47 06.0	+0.1
WRMHI					Sn	05 47 11.1	-0.8
RIM	Rim	0.28	43		Pn	05 47 06.1	+0.1
RIM				IAML		05 47 12.7	
	comp=N,1µm,1.1s						
RIM				IAML		05 47 13.3	
	comp=E,1µm,0.3s						
KKO	Keanakako`i	0.29	44		Pn	05 47 06.1	+0.1
KKO				IAML		05 47 14.5	
	comp=E,1µm,0.5s						
KKO				IAML		05 47 17.9	
	comp=N,1µm,1.4s						
NPH	North Pit	0.29	40		Pn	05 47 06.1	0.0
NPH					Sn	05 47 11.0	-1.1
UWE	Uwekahuna	0.29	37		Pn	05 47 06.2	+0.1
UWE					Sn	05 47 11.7	-0.5
UWE				IAML		05 47 18.6	
	comp=N,1µm,1.8s						
OBL	Observatory Le	0.29	38		Pn	05 47 06.1	+0.1
OBL				IAML		05 47 11.9	
	comp=E,2µm,0.5s						
UWB	Uwekahuna B	0.30	38		Pn	05 47 06.1	-0.1
UWB					Sn	05 47 11.1	-1.2
BYL	Byron's Ledge	0.30	42		Pn	05 47 06.2	0.0
BYL					Sn	05 47 11.7	-0.6
BYL				IAML		05 47 15.8	
	comp=N,739nm,0.7s						
PUH	Pauahi	0.30	53		Pn	05 47 06.2	0.0
PUH					Sn	05 47 11.3	-1.1
SBLHI	Steaming Bluff	0.31	40		Pn	05 47 06.2	0.0
SBLHI					Sn	05 47 11.4	-1.0
SBLHI				IAML		05 47 11.6	
	comp=N,1µm,0.3s						
SBLHI				IAML		05 47 11.6	
	comp=E,983nm,0.2s						
HATHI	Halema'uma'u T	0.31	41		Pn	05 47 06.3	0.0
HATHI					Sn	05 47 11.6	-0.9
HATHI				IAML		05 47 11.8	
	comp=E,846nm,0.3s						
HATHI				IAML		05 47 11.8	
	comp=N,920nm,0.6s						
MLH	Mauna Loa	0.31	15		Pn	05 47 06.7	+0.3
MLH					Sn	05 47 12.2	-0.5
MLH				IAML		05 47 12.4	
	comp=E,1µm,0.2s						
MWH	Moku'aweowe	0.32	339		Pn	05 47 06.7	-0.1
MWH					Sn	05 47 12.6	-0.7
RSD	Rainshed	0.33	34		Pn	05 47 06.5	0.0
RSD					Sn	05 47 11.6	-1.2
KNHH	Kane Nui o Ham	0.34	57		Pn	05 47 06.7	+0.1
MLOA	Mauna Loa Obse	0.36	344		Pn	05 47 07.2	+0.1
MLOA					Sn	05 47 12.7	-1.1
MLOA				IAML		05 47 12.9	
	comp=E,710nm,0.2s						
STCH	Steam Cracks	0.38	59		Pn	05 47 07.1	+0.1
STCH					Sn	05 47 13.0	-0.8
STCH				IAML		05 47 13.0	
	comp=E,752nm,0.2s						
STCH				IAML		05 47 14.8	
	comp=N,646nm,0.6s						
ALEP	Alea Permanent	0.39	335		Pn	05 47 07.2	-0.1
ALEP					Sn	05 47 13.0	-1.3
NPOC	North of Pu'u	0.40	60		Pn	05 47 07.3	+0.1
NPOC					Sn	05 47 13.1	-1.0
NPOC				IAML		05 47 13.4	
	comp=E,670nm,0.1s						
NPOC				IAML		05 47 13.4	
	comp=N,680nm,0.2s						
JCUZ	Jacuzzi	0.40	61		Pn	05 47 07.4	+0.2
JCUZ					Sn	05 47 13.4	-0.8
JCUZ				IAML		05 47 15.4	
	comp=N,686nm,1.0s						
HMH	Humu'ula Sheep	0.41	359		Pn	05 47 08.1	+0.5
HMH					Sn	05 47 14.8	0.0
HMH				IAML		05 47 15.6	
	comp=E,1µm,0.1s						
JOKA	Jonika Flow	0.51	61		Pn	05 47 08.4	0.0
JOKA					Sn	05 47 15.2	-1.1
CPH	Captain Cook	0.51	305		Pn	05 47 08.5	-0.1
KHLU	Kahalu`u	0.56	315		Pn	05 47 09.3	0.0
KHLU					Sn	05 47 16.6	-1.1
KHLU				IAML		05 47 16.7	
	comp=E,665nm,0.3s						
POHA	Pohakuloa	0.57	354		Pn	05 47 09.6	+0.1
POHA				IAML		05 47 19.6	
	comp=E,568nm,0.2s						
POHA				IAML		05 47 23.5	
	comp=E,609nm,0.3s						
HUH	Hualalai	0.60	325		Pn	05 47 10.3	+0.4
HUH					Sn	05 47 18.9	+0.1
HUH				IAML		05 47 21.8	
	comp=N,807nm,0.1s						
HUH				IAML		05 47 22.4	
	comp=E,688nm,0.1s						
HPAH	Hawaii Prepara	0.86	346		Pn	05 47 13.2	-0.1
HLK	Haleakala	1.72	335	Pn	Pn	05 47 24.9	-0.3

WEL 06 05:48:08.9±0.6**, 42°S**±3°×**17°4E**±°**, h5**^{km}±3^{km}**, M2.3**/6**, ML2.5**/6**, MLv2.3**/6**, Error ellipse: s-maj=0.0km s-min=0.0km az=114.5, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.28	226	P	Pg	05 48 14.2	-0.1
KHZ				S	Sg	05 48 18.9	+1.0
BSWZ	Blackbirch Sta	0.51	6	P	Pg	05 48 19.0	+0.3
TUWZ	Tuamarina	0.80	7	P	Pg	05 48 17.7	-6.5
THZ	Tophouse	0.81	304	P	Pg	05 48 24.5	0.0
THZ				S	Sb	05 48 36.4	-0.5
GVZ	Greta Valley S	0.94	217	P	Pg	05 48 26.9	0.0
GVZ				S	Sb	05 48 41.1	+0.7
NNZ	Nelson	1.05	342	P	Pg	05 48 28.6	-0.5
TCW	Tory Channel	1.07	19	P	Pg	05 48 28.8	-0.7
MRNZ	Matariki Terra	1.14	316	P	Pg	05 48 30.8	+0.1
WEL	Wellington	1.18	38	P	Pg	05 48 31.0	-0.6
LTZ	Lake Taylor	1.26	243	P	Pg	05 48 30.1	-3.1
PLWZ	Palliser	1.27	59	P	Pg	05 48 30.6	-2.6
TKNZ	Takaka Hill	1.35	332	P	Pn	05 48 34.4	0.0
DUWZ	D'Urville Isla	1.42	4	P	Pn	05 48 34.8	-0.7
CAW	Cannon Point	1.46	41	P	Pn	05 48 33.9	-2.0
DSZ	Denniston Nort	1.56	287	P	Pb	05 48 38.2	-0.2
QRZ	Quartz Range	1.69	325	P	Pn	05 48 39.7	+0.6
MQZ	McQueen's Vall	1.71	209	P	Pn	05 48 36.6	-2.8
OGWZ	Otaki Gorge	1.74	37	P	Pn	05 48 37.7	-2.1
INZ	Inchbonnie	1.82	253	P	Pn	05 48 39.9	-0.9
RPZ	Rata Peaks	2.51	233	P	Pn	05 48 48.5	-1.9

IDC 06 05:59:00.6±6.9**, 19°.21S**×**176°.48W, h0**^{km}**, mb4.1**/2**, mbtmp4.1**/2**, Error ellipse: s-maj=296.1km**

s-min=109.0km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	46.21	260	P	P	06 07 27.7	0.0
	0.9nm,0.3s,baz=97,slow=7.7,SNR=39						
	0.9nm,0.3s						
ASAR	**Alice Springs**	46.21	255	P	P	06 07 27.6	-0.2
	1.5nm,0.6s,baz=94,slow=7.6,SNR=27						
	1.5nm,0.6s						
AKASG	**Malin Array Be**	142.55	333	PKP	PKPdf	06 18 34.6	-0.8
	0.6nm,0.3s,baz=44,slow=3.7,SNR=8.3						

IDC 06 06:04:07.0±2.6, 54°.09N×86°.46E, h0^{km}, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=21.2km s-min=12.7km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	0.98	262	I	I	06 09 40.5	
	baz=80,slow=334,SNR=28						
ZALV	**Zalesovo Beam**	0.98	262	Pg	Pg	06 04 25.2	-0.6
	1.2nm,0.3s,baz=82,slow=17,SNR=10						
ZALV				Lg	Lg	06 04 39.6	
	1.0nm,0.3s,baz=84,slow=30,SNR=3.6						
KURBB	**Kurchatov Arra**	5.97	238	Pn	Pn	06 05 37.4	+0.8
	0.1nm,0.3s,baz=55,slow=14,SNR=7.8						
KURBB				Lg	Lg	06 07 16.4	
	0.1nm,0.3s,baz=57,slow=35,SNR=1.7						
	2.1nm,0.9s						
MKAR	**Makanchi Array**	7.77	202	Pn	Pn	06 06 02.3	+1.0
	0.2nm,0.3s,baz=25,slow=8.4,SNR=10						
MKAR				Sn	Sn	06 07 30.1	+0.1
	baz=23,slow=27,SNR=4.9						
MKAR				Lg	Lg	06 08 13.1	
	baz=26,slow=30,SNR=6.9						
	0.2nm,0.3s						

IDC 06 06:07:35.6±18.0, 22°.85S×177°.95W, h179^{km}±123^{km}, mb3.4/4, mbtmp3.9/5, Error ellipse: s-maj=214.0km s-min=34.5km az=138.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	6.33	323	P	Pn	06 09 06.7	-0.3
	7.7nm,0.5s,baz=148,slow=12,SNR=4.3						
ASAR	**Alice Springs**	44.08	259	P	P	06 15 25.6	-0.5
	0.7nm,0.8s,baz=87,slow=8.2,SNR=7.7						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	44.37	264	P	P	06 15 28.9	+0.4
	1.2nm,0.7s,baz=103,slow=8.5,SNR=12						
	1.2nm,0.7s						
ILAR	**Eielson Array**	90.58	13	P	P	06 20 17.1	+0.2
	0.2nm,0.6s,baz=218,slow=5.7,SNR=2.0						
	0.2nm,0.6s						
CMAR	**Chiang Mai Arr**	90.94	290	P	P	06 20 19.1	-0.5
	1.1nm,0.3s,baz=150,slow=4.2,SNR=7.1						
	1.1nm,0.3s						

*NNC **06** 06:23:15.4±4.0, 53°.22N×91°.43E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=30.6km s-min=18.9km az=78.0, Suspected Mining explosion.*
*IDC **06** 06:23:17.2±3.0, 53°.51N×90°.84E, h0^{km}, mbtmp3.6/4, ML3.0/4, Error ellipse: s-maj=28.9km s-min=22.6km az=45.0*
ISC 06 06:23:13.2±3.5, 53°.7N±0°.1×91°.1E±0°.2, h0^{km}, n11, σ1^{s}85/14, 5C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	3.76	277	I	I	06 48 55.0	
	0.1nm,1.6s,baz=90,slow=331,SNR=11						
ZAA0	**Zalesovo Array**	3.76	277	⇑Pn	Pb	06 24 17.9	-2.6
	6.2nm,0.8s,baz=97,slow=15						
ZAA0				⇓Sn	Sb	06 25 08.1	+1.6
	34nm,0.9s,baz=95,slow=21						
ZALV	**Zalesovo Beam**	3.76	277	Pn	Pn	06 24 13.6	+1.2
	4.9nm,0.3s,baz=94,slow=12,SNR=32						
ZALV				Lg	Lg	06 25 09.0	
	1.8nm,0.3s,baz=93,slow=25,SNR=5.8						
	8.4nm,0.3s						
KURK	**Kurchatov**	8.24	254	⇑Pn	Pn	06 25 13.4	-0.5
	9.2nm,0.9s						
KURK				⇓Sn	Sn	06 26 49.7	+2.1
	27nm,0.8s						
KURK				⇑Lg	Lg	06 27 36.3	
	84nm,0.9s						
KURBB	**Kurchatov Arra**	8.33	254	Pn	Pn	06 25 15.6	+0.5
	0.4nm,0.3s,baz=64,slow=14,SNR=27						
KURBB				Sn	Sn	06 26 47.7	-2.1
	0.2nm,0.3s,baz=67,slow=25,SNR=9.1						
KURBB				Lg	Lg	06 27 36.7	
	0.2nm,0.3s,baz=72,slow=32,SNR=4.6						
	10nm,0.8s						
MK31	**Makanchi Array**	8.90	223	⇓Pn	Pn	06 25 25.1	+2.0
	1.3nm,0.6s,baz=40,slow=13,SNR=15						
MK31				⇓Sn	Sn	06 27 03.5	-0.5
	7.1nm,0.9s,baz=31,slow=26,SNR=3.6						
MK31				⇓Lg	Lg	06 27 51.0	
	29nm,0.9s						
MKAR	**Makanchi Array**	8.90	223	Pn	Pn	06 25 24.5	+1.4
	0.5nm,0.3s,baz=41,slow=13,SNR=23						
MKAR				Sn	Sn	06 27 05.9	+1.9
	0.2nm,0.3s,baz=49,slow=21,SNR=5.6						
MKAR				Lg	Lg	06 27 50.0	
	0.2nm,0.3s,baz=29,slow=27,SNR=4.3						
	1.7nm,0.4s						
MAKZ	**Makanchi**	9.02	224	⇑Pn	Pn	06 25 25.4	+0.8
	1.0nm,0.5s						
MAKZ				⇑Sn	Sn	06 27 04.8	-2.0
	5.4nm,0.9s						
MAKZ				⇓Lg	Lg	06 27 53.9	
	34nm,1.1s						
SONM	**Songino Array**	11.27	115	Lg	Lg	06 29 10.2	
	0.1nm,0.3s,baz=298,slow=28,SNR=7.9						
BVAR	**Borovoye Array**	12.42	275	Pn	Pn	06 26 12.7	+1.6
	baz=66,slow=15,SNR=1.9						
	0.4nm,0.5s						
AAK	**Ala-Archa**	15.61	232	Lg	Lg	06 31 21.7	
	0.2nm,0.3s,baz=57,slow=22,SNR=2.0						

*IDC **06** 06:23:59.8±1.6, 39°.87N×46°.36E, h0^{km}, mb3.7/4, mbtmp3.6/7, ML3.0/3, MS3.2/1, Error ellipse: s-maj=24.7km s-min=12.8km az=5.0*
*AZER **06** 06:24:00.7±0.0, 40°.24N×46°.28E, h10^{km}, Error ellipse: s-maj=0.5km s-min=0.5km az=322.0*
*TIF **06** 06:24:00.7, 40°.01N×46°.49E, h25^{km}±4^{km}*
*TEH **06** 06:24:02.3, 40°.23N×46°.32E, h15^{km}±33^{km}, ML3.8*
*MOS **06** 06:24:02.5±1.5, 40°.15N×46°.44E, h11^{km}, mb4.0/1, Error ellipse: s-maj=8.9km s-min=4.3km az=89.2*
*NSSP **06** 06:24:02.5, 40°.17N×46°.23E, h10^{km}, Ms3.4*
*DRS **06** 06:24:03.8±0.0, 40°.10N×46°.12E, h22^{km}*
ISC 06 06:24:02.0±1.0, 40°.26N±0°.01×46°.35E±0°.01, h7^{km}±8^{km}, n136, σ1^{s}23/221, mb3.7/3, 12C-10D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GANJ	**Ganja**	0.39	357	P	Pb	06 24 10.5	-0.8
	SNR=900						
GANJ				S	Sg	06 24 16.1	+1.3
GANJ	**Ganja**	0.39	357	PG	Pb	06 24 10.5	-0.8
GANJ	**Ganja**	0.39	357	Pg	Pb	06 24 10.5	-0.8
STKZ		0.54	145	⇓*i*P	Pg	06 24 12.1	-0.3
STKZ				⇓*i*S	Sg	06 24 19.0	-0.4
AGDM	**Agdam**	0.60	104	P	Pb	06 24 14.8	-0.1
	SNR=117						
AGDM				S	Sb	06 24 24.0	+0.4
BRDA	**Brd**	0.64	89	P	Pb	06 24 15.9	+0.4
	SNR=12						
BRDA				S	Sn	06 24 27.2	-0.7
BRDA	**Brd**	0.64	89	Pg	Pb	06 24 16.3	+0.8
GDB	**GEDABAY**	0.65	316	P	Pg	06 24 14.6	0.0
	SNR=2282						
GDB				S	Sg	06 24 23.4	+0.4
GDB	**GEDABAY**	0.65	316	Pg	Pg	06 24 14.5	0.0
GRS	**Goris**	0.75	181	⇓*i*P	Pg	06 24 16.4	0.0
GRS				⇓*i*S	Sg	06 24 26.3	0.0
MNGR	**Mingechevir, A**	0.77	47	P	Pn	06 24 18.6	-0.7
	SNR=19						
MNGR				S	Sn	06 24 31.0	-0.1
MNGR	**Mingechevir, A**	0.77	47	PG	Pn	06 24 18.6	-0.7
MNGR	**Mingechevir, A**	0.77	47	Pg	Pn	06 24 18.6	-0.7
ZRD	**Zardab**	1.02	88	P	Pn	06 24 23.1	+0.3
	SNR=15						
ZRD				S	Sn	06 24 39.6	+2.2
ZRD	**Zardab**	1.02	88	Pg	Pn	06 24 23.1	+0.3
SBZ	**Shahbuz**	1.05	216	P	Pg	06 24 22.1	-0.2
	SNR=44						
SBZ				S	Sb	06 24 36.5	-0.2
SBZ	**Shahbuz**	1.05	216	Pg	Pg	06 24 22.0	-0.2
BLQ	**Beylaqan**	1.07	119	P	Pg	06 24 22.3	-0.4
	SNR=64						
BLQ				S	Sb	06 24 37.1	-0.1
BLQ	**Beylaqan**	1.07	119	Pg	Pg	06 24 22.2	-0.4
QRD	**Qoradiz**	1.09	136	P	Pb	06 24 22.1	-1.1
	SNR=64						
QRD				S	Sg	06 24 36.8	-0.3
QRD	**Qoradiz**	1.09	136	Pg	Pb	06 24 22.1	-1.1
QZX	**Qazax, Azerbai**	1.09	318	P	Pg	06 24 22.6	-0.4
	SNR=220						
QZX				S	Sb	06 24 37.7	-0.1
QZX	**Qazax, Azerbai**	1.09	318	Pg	Pg	06 24 22.6	-0.4
SEKA	**Sheki**	1.15	34	P	Pb	06 24 24.1	-0.2
	SNR=72						
SEKA				S	Sn	06 24 40.7	-0.1
SEKA	**Sheki**	1.15	34	PG	Pb	06 24 24.1	-0.2
SEKA	**Sheki**	1.15	34	Pg	Pb	06 24 24.1	-0.2
GNI	**Garni**	1.23	266	Pg	Pg	06 24 25.9	+0.2
	29nm,0.3s,baz=320,slow=2.8,SNR=43						
GNI				Lg	Lg	06 24 42.9	
	76nm,0.3s,baz=150,slow=20,SNR=5.3						
GNI				LR	LR	06 24 50.3	
	comp=Z,51nm,21.7s,baz=66,slow=40						
GNI	**Garni**	1.23	266	⇓*i*P	Pg	06 24 25.9	+0.2
GNI				⇓*i*S	Sn	06 24 43.1	+0.2
KAPZ	**Kaputan**	1.26	274	⇑*i*P	Pg	06 24 26.4	+0.2
KAPZ				⇑*i*S	Sn	06 24 43.1	-0.6
NAX	**Nakhchivan**	1.26	212	P	Pg	06 24 26.4	+0.2
	SNR=20						
NAX				S	Sn	06 24 43.7	+0.2
NAX	**Nakhchivan**	1.26	212	PG	Pg	06 24 26.4	+0.2
NAX	**Nakhchivan**	1.26	212	Pg	Pg	06 24 26.4	+0.2
HYR	**Heyderabad**	1.27	245	P	Pg	06 24 26.2	0.0
	SNR=21						
HYR				S	Sb	06 24 42.1	-0.8
HYR	**Heyderabad**	1.27	245	Pg	Pg	06 24 26.3	0.0
NRKZ	**NAREK**	1.32	259	⇑*i*P	Pg	06 24 27.2	0.0
NRKZ				⇑*i*S	Sg	06 24 44.9	+0.5
QBL	**Gabala**	1.33	58	Pn	Pg	06 24 27.5	0.0
	SNR=64						
QBL				Sn	Sg	06 24 46.7	+2.0
ORD	**Ordubad**	1.35	192	Pn	Pn	06 24 26.7	-0.8
	SNR=108						
ORD				Sn	Sb	06 24 44.2	-1.1
ORD	**Ordubad**	1.35	192	Pg	Pn	06 24 26.6	-0.8
ZKTA	**Zakatala**	1.40	9	Pn	Pb	06 24 28.5	-0.1
	SNR=25						
ZKTA				Sn	Sg	06 24 48.3	+1.3
ZKTA	**Zakatala**	1.40	9	PG	Pb	06 24 28.4	-0.1
KDMR	**Kurdemir**	1.41	84	Pn	Pb	06 24 28.7	+0.1
	SNR=9.7						
KDMR				Sn	Sg	06 24 49.8	+2.4
IML	**Ismayilli**	1.50	68	Pn	Pb	06 24 29.8	-0.4
	SNR=29						
IML				Sn	Sg	06 24 51.2	+1.0
IML	**Ismayilli**	1.50	68	Pg	Pb	06 24 29.9	-0.3
MAKU	**Maku**	1.56	235	Pg	Pb	06 24 31.2	-0.2
AMBZ	**Amberd**	1.60	275	⇓*i*P	Pb	06 24 32.2	+0.1
AMBZ				⇓*i*S	Sg	06 24 54.1	+0.6
AKT	**Akhty**	1.61	40	*i* Pg	Pb	06 24 32.0	-0.3
	270nm,0.2s						
AKT				*e*Sg	Sg	06 24 54.1	+0.3
	871nm,0.4s						
AKT	**Akhty**	1.61	40	⇑*i*PN	Pb	06 24 31.9	-0.3
AKT				*e*S	Sg	06 24 54.3	+0.5
AKT				pmax	pmax		
	comp=Z,271nm,0.2s						
AKT				smax	smax		
	comp=E,1µm,0.5s						
IMRD	**Marand**	1.62	198	Pg	Pb	06 24 31.9	-0.5
SAAT	**Saatly**	1.64	103	Pn	Pn	06 24 30.6	-0.8
	SNR=8.9						
SAAT				Sn	Sb	06 24 52.9	-0.6
SAAT	**Saatly**	1.64	103	Pg	Pn	06 24 30.5	-0.8
XNQ	**Khinaliq**	1.64	56	Pn	Pn	06 24 31.7	+0.2
	SNR=82						
XNQ				Sn	Sg	06 24 54.5	-0.3
XNQ	**Khinaliq**	1.64	56	Pg	Pn	06 24 31.7	+0.2
STE	**Stepanavan**	1.68	297	⇑*i*P	Pb	06 24 32.7	-0.6
STE				⇑*i*S	Sn	06 24 53.3	-0.6
ARUZ	**Aruch**	1.73	272	⇑*i*P	Pg	06 24 36.5	+1.4
ARUZ				⇑*i*S	Sg	06 25 00.1	+2.6
METS	**Metsamor**	1.74	267	⇓*i*P	Pb	06 24 33.9	-0.4
METS				⇓*i*S	Sg	06 24 57.0	-0.8
METS	**Metsamor**	1.74	267	P	Pb	06 24 34.5	+0.2
TVRZ	**Varzaqan**	1.77	172	Pg	Pb	06 24 33.9	-1.0
PQL	**Pirkuli**	1.79	72	Pn	Pb	06 24 34.9	-0.3
	SNR=15						
PQL				Sn	Sg	06 24 59.9	+0.2
PQL	**Pirkuli**	1.79	72	Pn	Pb	06 24 35.0	-0.3
GLBA	**Clilabad**	1.87	122	Pn	Pn	06 24 35.4	+0.8
	SNR=41						
GLBA				Sn	Sb	06 24 60.0	-0.3
GLBA	**Clilabad**	1.87	122	Pn	Pn	06 24 35.3	+0.8
KSMR	**Kasumkent**	1.91	44	*e*Pg	Pb	06 24 36.8	-0.5
	comp=E,2.0nm,0.2s						
KSMR	**Kasumkent**	1.91	44	*e*PN	Pb	06 24 36.7	-0.5
KSMR				*e*S	Sg	06 25 03.1	-0.2
KSMR				pmax	pmax		
	comp=Z,1.0nm,0.2s						
KSMR				smax	smax		
	comp=E,1µm,0.4s						
SEAG	**Tbilisi Sea**	1.91	323	*e*PN	Pb	06 24 36.2	-0.9
SEAG	**Tbilisi Sea**	1.91	323	P	Pb	06 24 36.3	-0.9
SEAG				S	Sb	06 25 01.3	0.0
QSAR	**Qusar**	1.92	48	Pn	Pb	06 24 37.3	-0.1
	SNR=21						
QSAR				Sn	Sg	06 25 02.9	-0.9
VNNZ	**Vanand**	1.94	266	⇑*i*P	Pg	06 24 39.5	+0.4
VNNZ				⇑*i*S	Sg	06 25 05.2	+0.9
KMKR	**Kumukh**	1.96	17	*e*Pg	Pb	06 24 38.0	-0.2
	comp=E,4.0nm,0.1s						
KMKR				*e*Sg	Sg	06 25 05.0	+0.1
	comp=E,294nm,0.6s						
KMKR	**Kumukh**	1.96	17	*e*PN	Pb	06 24 37.9	-0.2
KMKR				pmax	pmax		
	comp=Z,5.0nm,0.1s						
QUBA	**Quba, Azerbaij**	1.96	55	Pn	Pb	06 24 38.6	+0.4
	SNR=6.0						
QUBA				Sn	Sg	06 25 04.4	-0.7
YRD	**Yardimli**	1.98	132	Pn	Pn	06 24 36.6	+0.3
	SNR=29						
YRD				Sn	Sb	06 25 03.0	-0.6
YRD	**Yardimli**	1.98	132	Pn	Pn	06 24 36.5	+0.3
GBS	**Qobustan**	2.00	81	Pn	Pb	06 24 38.5	-0.3
	SNR=13						
GBS				Sn	Sb	06 25 03.6	-0.4
IHRS	**Heris**	2.01	164	Pn	Pn	06 24 37.2	+0.7
ITBZ	**Tabriz**	2.02	184	Pn	Pn	06 24 37.7	+0.9
ISHB	**Shabestar**	2.05	196	Pn	Pn	06 24 37.9	+0.7
ALIB	**Äli-Bayra**	2.06	97	Pn	Pb	06 24 38.5	-1.3
	SNR=8.8						
ALIB				Sn	Sb	06 25 06.5	+0.9
ATGJ	**Altiaghaj**	2.06	72	Pn	Pb	06 24 39.9	0.0
	SNR=16						
ATGJ				Sn	Sb	06 25 06.3	+0.5
SIZA	**Siyzn**	2.11	66	Pn	Pb	06 24 40.2	-0.4
	SNR=32						
SIZA				Sn	Sg	06 25 08.9	-0.9
SIZA	**Siyzn**	2.11	66	Pn	Pb	06 24 40.2	-0.4
TRLG	**Trialeti**	2.13	308	*e*PN	Pn	06 24 39.3	+1.1
TRLG				*e*S	Sb	06 25 06.9	-0.9
TRLG	**Trialeti**	2.13	308	P	Pn	06 24 39.4	+1.1
TRLG				S	Sb	06 25 07.0	-0.9
URKR	**Urkarakh**	2.14	27	*e*Pn	Pb	06 24 40.5	-0.7
	comp=Z,128nm,0.8s						
URKR	**Urkarakh**	2.14	27	*e*PN	Pb	06 24 40.5	-0.7
URKR				S	Sg	06 25 09.7	-1.1
URKR				*e*S	Sb	06 25 10.6	+2.5
URKR				pmax	pmax		
	comp=Z,128nm,0.8s						
URKR				smax	smax		
	comp=E,295nm,0.6s						
URKR				smax	smax		
	comp=N,290nm,0.5s						
URKR				smax	smax		
	comp=E,271nm,0.6s						
GNBR	**Gunib**	2.18	12	*e*Pn	Pb	06 24 41.4	-0.5
	comp=E,89nm,0.6s						
GNBR				*e*Sn	Sg	06 25 11.1	-1.1
	comp=E,432nm,0.6s						
GNBR	**Gunib**	2.18	12	*e*PN	Pb	06 24 41.3	-0.6
GNBR				*e*S	Sg	06 25 11.0	-1.1
GNBR				*e*S	Sb	06 25 11.6	+2.4
GNBR				pmax	pmax		
	comp=Z,89nm,0.6s						
GNBR				smax	smax		
	comp=N,276nm,0.6s						
GNBR				smax	smax		
	comp=E,516nm,0.6s						
GNBR				smax	smax		
	comp=E,517nm,0.8s						
LRK	**Lerik**	2.23	136	Pg	Pn	06 24 40.9	+1.3
	SNR=28						
LRK				Sn	Sb	06 25 09.8	-0.8
XNZR	**Khunzakh**	2.30	7	*e*Pn	Pb	06 24 43.5	-0.5
	comp=E,54nm,0.5s						
HNZR	**Khunzah**	2.32	7	*e*PN	Pb	06 24 43.4	-0.9
HNZR				S	Sg	06 25 14.8	-1.7
HNZR				*e*S	Sb	06 25 15.6	+2.4
HNZR				pmax	pmax		
	comp=Z,54nm,0.5s						
HNZR				smax	smax		
	comp=E,170nm,0.6s						
HNZR				smax	smax		
	comp=N,120nm,0.5s						
HNZR				smax	smax		
	comp=E,157nm,0.6s						
DRN	**Derbent**	2.32	40	*e*Pn	Pb	06 24 42.6	-1.7
	comp=E,101nm,0.1s						
DRN	**Derbent**	2.32	40	*e*PN	Pb	06 24 42.5	-1.7
DRN				S	Sb	06 25 12.8	-0.3
DRN				*e*S	Sg	06 25 13.9	-2.7
DRN				pmax	pmax		
	comp=Z,102nm,0.1s						
DRN				smax	smax		
	comp=N,324nm,0.6s						
DRN				smax	smax		
	comp=E,432nm,0.6s						
DRN				smax	smax		
	comp=E,429nm,0.5s						
ARKR	**Arakani**	2.40	12	*e*Pn	Pb	06 24 44.6	-0.9
	comp=E,1.0nm,0.8s						
ARKR				*e*Sn	Sg	06 25 17.6	-1.4
	comp=E,261nm,0.6s						
ARKR	**Arakani**	2.40	12	*e*PN	Pb	06 24 44.6	-0.9
ARKR				*e*S	Sg	06 25 17.5	-1.4
ARKR				*e*S	Sb	06 25 18.0	+2.7
ARKR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARKR				smax	smax		
	comp=N,284nm,0.6s						
ARKR				smax	smax		
	comp=E,233nm,0.5s						
ARKR				smax	smax		
	comp=N,248nm,0.6s						
BTLR	**Botlikh**	2.41	358	*e*Pn	Pb	06 24 45.1	-0.6
	comp=N,90nm,0.6s						
BTLR	**Botlikh**	2.41	358	*e*PN	Pb	06 24 45.1	-0.6
BTLR				S	Sg	06 25 18.4	-1.0
BTLR				*e*S	Sb	06 25 19.1	+3.4
BTLR				pmax	pmax		
	comp=Z,90nm,0.6s						
BTLR				smax	smax		
	comp=E,261nm,0.6s						
BTLR				smax	smax		
	comp=N,206nm,0.6s						
BTLR				smax	smax		
	comp=E,238nm,0.6s						
LKRN	**Lenkeran, Azer**	2.43	129	Pn	Pn	06 24 43.0	+0.8
LKRN				Sn	Sb	06 25 15.2	-1.1
LKRN	**Lenkeran, Azer**	2.43	129	PN	Pn	06 24 42.8	+0.6
UNCR	**Uncukul**	2.48	8	*e*Pn	Pb	06 24 45.5	-1.4
	comp=E,54nm,0.4s						
UNCR				*e*Sn	Sb	06 25 19.0	+1.2
	comp=E,71nm,0.5s						
UNCR	**Uncukul**	2.48	8	*e*PN	Pb	06 24 45.5	-1.4
UNCR				*e*S	Sb	06 25 18.9	+1.2
UNCR				*e*S	Sg	06 25 20.0	-1.7
UNCR				pmax	pmax		
	comp=Z,54nm,0.4s						
UNCR				smax	smax		
	comp=N,421nm,0.6s						
UNCR				smax	smax		
	comp=E,271nm,0.6s						
UNCR				smax	smax		
	comp=N,377nm,0.6s						
ASTR	**Astara**	2.54	131	Pn	Pb	06 24 45.8	-2.1
	SNR=34						
ASTR				Sn	Sb	06 25 18.0	-1.4
ASTR	**Astara**	2.54	131	Pn	Pn	06 24 45.0	+1.3
SHTL	**Shatili**	2.56	340	*e*PN	Pn	06 24 45.9	+1.8
SHTL				*e*S	Sb	06 25 19.9	-0.2
SHTL	**Shatili**	2.56	340	P	Pn	06 24 46.0	+1.8
SHTL				S	Sb	06 25 20.0	-0.2
IAZR	**Azarshahr**	2.59	186	Pn	Pn	06 24 46.0	+1.4
KRNR	**Karanay**	2.60	9	*e*Pn	Pb	06 24 48.2	-1.0
	comp=N,23nm,0.8s						
KRNR				*e*Sn	Sb	06 25 23.1	+1.8
	comp=N,558nm,0.7s						
KRNR	**Karanay**	2.60	9	*e*PN	Pb	06 24 48.1	-1.0
KRNR				*e*S	Sb	06 25 23.1	+1.8
KRNR				*e*S	Sg	06 25 23.9	-1.8
KRNR				pmax	pmax		
	comp=Z,23nm,0.8s						
KRNR				smax	smax		
	comp=E,102nm,0.5s						
KRNR				smax	smax		
	comp=N,72nm,0.5s						
KRNR				smax	smax		
	comp=E,94nm,0.6s						
GUDG	**Gudauri**	2.62	328	*e*PN	Pb	06 24 47.8	-1.6
GUDG				*e*S	Sb	06 25 22.1	+0.2
GUDG	**Gudauri**	2.62	328	P	Pb	06 24 47.9	-1.6
GUDG				S	Sb	06 25 22.1	+0.2
BUJR	**Buynaksk**	2.63	12	*e*Pn	Pb	06 24 48.6	-1.0
	comp=E,75nm,0.5s						
BUJR	**Buynaksk**	2.63	12	*e*PN	Pb	06 24 48.5	-1.0
BUJR				S	Sb	06 25 23.6	+1.6
BUJR				*e*S	Sg	06 25 24.1	-2.4
BUJR				pmax	pmax		
	comp=Z,74nm,0.5s						
BUJR				pmax	pmax		
	comp=N,558nm,0.7s						
BUJR				smax	smax		
	comp=E,401nm,0.5s						
BUJR				smax	smax		
	comp=N,558nm,0.7s						
BUJR				smax	smax		
	comp=N,495nm,0.6s						
ISRB	**Sarab**	2.63	157	Pn	Pn	06 24 46.7	+1.5
GAS1	**Astara - Iran**	2.69	133	Pn	Pn	06 24 46.6	+0.9
PNSH	**Pansheti**	2.71	332	*e*PN	Pn	06 24 48.2	+2.0
PNSH				*e*S	Sb	06 25 23.3	-1.2
PNSH	**Pansheti**	2.71	332	P	Pn	06 24 48.2	+2.0
PNSH				S	Sb	06 25 23.4	-1.2
DBC	**Dubki**	2.79	7	*e*Pn	Pb	06 24 50.2	-2.1
	comp=N,23nm,0.4s						
DBC	**Dubki**	2.79	7	*e*PN	Pb	06 24 50.1	-2.1
DBC				*e*S	Sb	06 25 27.1	+0.5
DBC				pmax	pmax		
	comp=Z,23nm,0.4s						
DBC				smax	smax		
	comp=E,142nm,0.6s						
MAK	**Makhachkala**	2.84	17	⇑*i*PN	Pg	06 24 54.7	-1.7
MAK				*e*		06 24 59.5	
MAK				*e*		06 25 00.8	
MAK				*e*S	Sg	06 25 34.0	+0.8
MAK				*e*		06 25 43.8	
MAK				pmax	pmax		
	comp=Z,109nm,0.3s						
MAK				smax	smax		
	comp=E,300nm,0.4s						
MAK				smax	smax		
	comp=E,261nm,0.6s						
MAK				MLR	MLR		
	comp=Z,144nm,10.0s						
GROC	**Groznyy**	2.97	352	*e*PN	Pb	06 24 53.9	-1.4
GROC				*e*		06 25 38.1	
GROC				pmax	pmax		
	comp=Z,75nm,1.2s						

GROC				smax	smax		
	comp=N,112nm,0.6s						
GROC				smax	smax		
	comp=E,46nm,0.6s						
GROC				smax	smax		
	comp=E,153nm,1.2s						
GROC				MLR	MLR		
	comp=Z,456nm,2.0s						
IHSH	**Hashtrud**	**3.03**	**166**	Pn	**Pn**	**06 24 52.5**	**+1.8**
ZEI	**Tsey**	**3.13**	**325**	*e*PN	**Pn**	**06 24 54.6**	**+2.7**
ZEI				*e*S	**Sb**	**06 25 38.4**	**+1.9**
ZEI				pmax	pmax		
	comp=Z,40nm,0.6s						
ZEI				smax	smax		
	comp=N,178nm,0.5s						
ZEI				smax	smax		
	comp=E,252nm,0.8s						
ONI	**Oni**	**3.19**	**318**	*e*PN	**Pb**	**06 24 57.1**	**-2.0**
ONI				*e*S	**Sb**	**06 25 38.4**	**+0.2**
ONI	**Oni**	**3.19**	**318**	P	**Pb**	**06 24 57.1**	**-2.0**
ONI				S	**Sb**	**06 25 38.4**	**+0.2**
TKB	**Tkibuli**	**3.28**	**311**	*e*PN	**Pb**	**06 24 59.3**	**-1.3**
TKB				*e*S	**Sb**	**06 25 38.3**	**-2.4**
TKB	**Tkibuli**	**3.28**	**311**	P	**Pb**	**06 24 59.3**	**-1.3**
TKB				S	**Sb**	**06 25 38.4**	**-2.4**
KBZ	**Khabaz**	**4.32**	**325**	Pn	**Pb**	**06 25 13.8**	**-4.4**
	comp=E,0.2nm,0.3s,baz=154,slow=14,SNR=7.3						
KBZ				Sn	**Sb**	**06 26 13.7**	**+3.2**
	comp=E,0.4nm,0.3s,baz=315,slow=17,SNR=2.0						
	comp=E,1.5nm,0.6s						
KVAR	**Kislovodsk Arr**	**4.59**	**325**	Pn	Pb	06 25 17.5	-5.4
	baz=90,slow=20						
KVAR				Sn	**Sb**	**06 26 16.1**	**-2.3**
	baz=257,slow=15						
	comp=E,3.0nm,0.5s						
QALM	**Alamut, Qazvin**	**5.10**	**137**	Pn	**Pn**	**06 25 19.3**	**+0.3**
KLST	**Kelardasht - M**	**5.26**	**134**	Pn	**Pn**	**06 25 22.1**	**+0.8**
MZPU	**Pul - Mazandar**	**5.60**	**131**	Pn	**Pn**	**06 25 27.9**	**+1.9**
ISHM	**Shahmirzad**	**7.05**	**127**	Pn	**Pn**	**06 25 47.8**	**+1.9**
GEYT	**Alibeck**	**9.44**	**100**	Pn	**Pn**	**06 26 17.1**	**-1.4**
	comp=E,0.5nm,0.3s,baz=278,slow=14,SNR=2.5						
GEYT				Sn	**Sn**	**06 27 59.8**	**-5.2**
	comp=E,0.5nm,0.3s,baz=315,slow=49,SNR=2.1						
	comp=E,1.6nm,0.4s						
AKASG	**Malin Array Be**	**15.88**	**317**	LR	LR	06 35 27.1	
	comp=E,76nm,19.8s,baz=252,slow=42						
BVAR	**Borovoye Array**	**20.75**	**44**	P	**P**	**06 28 43.8**	**+0.6**
	comp=E,1.4nm,0.5s,baz=254,slow=10,SNR=8.1						
	comp=E,1.4nm,0.5s						
FINES	**FINESS Array B**	**24.57**	**336**	P	**P**	**06 29 24.5**	**+2.2**
	comp=E,2.0nm,0.8s,baz=144,slow=12,SNR=4.0						
	comp=E,2.0nm,0.8s						
GERES	**GERESS Array B**	**24.64**	**301**	P	**P**	**06 29 24.3**	**+1.1**
	comp=E,1.3nm,0.8s,baz=88,slow=9.4,SNR=4.9						
	comp=E,1.3nm,0.8s						
MKAR	**Makanchi Array**	**26.70**	**64**	P	**P**	**06 29 43.2**	**+1.4**
	comp=E,0.8nm,0.7s,baz=262,slow=8.9,SNR=1.1						
	comp=E,0.8nm,0.7s						

AUST ***06*** *06:31:34.6±0.9, 31°.50S×138°.63E, h10^{km}, Error ellipse: s-maj=16.5km s-min=9.1km az=74.0*

IDC ***06*** *06:31:38.0±4.9, 31°.05S×138°.91E, h0^{km}, mbtmp2.7/3, ML2.8/2, Error ellipse: s-maj=116.9km s-min=24.8km az=39.0*

ISC 06 06:31:34.7±0.9**, 31°.48S**±0°.05×**138°.60E**±0°.06**, h14^{km}, n12,** σ**1^s.71**/16**, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCRK	**Leigh Creek**	**1.08**	**342**	P	**Pg**	**06 31 55.6**	**0.0**
	baz=1.1						
LCRK				S	**Sn**	**06 32 10.8**	**+0.6**
	baz=1.1						
AUJCS	**Jamestown Cent**	**1.72**	**180**	P	**Pn**	**06 32 05.5**	**+1.3**
	baz=1.7						
HTT	**Hallett**	**1.96**	**172**	P	**Pn**	**06 32 07.7**	**0.0**
	baz=1.9						
HTT				S	**Sn**	**06 32 32.1**	**-0.1**
	baz=1.9						
BBOO	**Buckleboo**	**2.53**	**238**	P	**Pn**	**06 32 15.9**	**+0.5**
	baz=2.5						
STKA	**Stephens Creek**	**2.59**	**100**	Pn	**Pn**	**06 32 19.1**	**+3.0**
	1.7nm,0.3s,baz=287,slow=11,SNR=9.8						
STKA				Sn	**Sb**	**06 32 50.9**	**-1.7**
	0.9nm,0.3s,baz=311,slow=12,SNR=2.9						
	3.4nm,0.4s						
STKA	**Stephens Creek**	**2.59**	**100**	P	**Pn**	**06 32 16.1**	**-0.1**
	baz=2.6						
MULG	**Mulgathing**	**4.08**	**286**	P	**Pn**	**06 32 38.1**	**+1.4**
	baz=4.1						
INKA	**Innaminka**	**4.17**	**27**	P	**Pn**	**06 32 39.3**	**+1.4**
	baz=4.2						
ARPS	**Mount Arapiles**	**5.92**	**154**	P	**Pn**	**06 33 02.1**	**+0.1**
	baz=5.9						
CMSA	**Cobar Meteorol**	**6.06**	**92**	P	**Pn**	**06 33 03.5**	**-0.4**
	baz=6.0						
ASAR	**Alice Springs**	**8.82**	**331**	Pn	**Pn**	**06 33 43.1**	**+1.2**
	0.2nm,0.7s,baz=148,slow=13,SNR=1.6						
ASAR				Sn	**Sn**	**06 35 17.2**	**-4.0**
	0.1nm,0.3s,baz=155,slow=22,SNR=1.6						
WRA	**Warramunga Arr**	**12.11**	**341**	Pn	**Pn**	**06 34 28.4**	**+1.4**
	baz=158,slow=12,SNR=1.8						
	0.2nm,0.6s						

IDC ***06*** *06:38:08.8±2.4, 39°.35N×52°.00E, h0^{km}, mb3.4/3, mbtmp3.4/8, ML3.4/5, Error ellipse: s-maj=38.2km s-min=17.3km az=6.0*

TEH ***06*** *06:38:10.3, 39°.39N×52°.13E, h10^{km}, ML3.8*

AZER ***06*** *06:38:15.7±0.1, 39°.25N×51°.84E, h40^{km}±5^{km}, Error ellipse: s-maj=6.4km s-min=1.8km az=284.0*

NNC ***06*** *06:38:26.9±6.7, 40°.16N×54°.44E, h0^{km}, mb3.9, Error ellipse: s-maj=95.8km s-min=22.7km az=72.0*

ISC 06 06:38:10.0±0.7**, 39°.44N**±0°.05×**52°.11E**±0°.04**, h10^{km}, n63,** σ**2^s.42**/85**, mb3.2**/3**, 5C-1D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALIB	**Äli-Bayra**	**2.45**	**283**	Pn	**Pb**	**06 38 55.0**	**+0.9**
ASTR	**Astara**	**2.73**	**252**	Pn	**Pn**	**06 38 54.6**	**+0.8**
ASTR				Sn	**Sn**	**06 39 24.8**	**-2.1**
ATGJ	**Altiaghaj**	**2.81**	**301**	Pn	**Pb**	**06 39 00.8**	**+0.3**
ATGJ				Sn	**Sn**	**06 39 30.4**	**+1.2**
GLBA	**Clilabad**	**2.88**	**267**	Pn	**Pn**	**06 38 58.4**	**+2.4**
GLBA				Sn	**Sn**	**06 39 30.2**	**-0.6**
GLBA	**Clilabad**	**2.88**	**267**	Pn	**Pn**	**06 38 58.4**	**+2.4**
SIZA	**Siyzn**	**2.95**	**305**	Pg	**Pg**	**06 39 06.3**	**-0.3**
SIZA				Sn	**Sb**	**06 39 36.7**	**-2.2**
PQL	**Pirkuli**	**3.01**	**298**	Pn	**Pn**	**06 39 01.8**	**+3.8**
PQL				Sn	**Sn**	**06 39 36.8**	**+2.6**
PQL	**Pirkuli**	**3.01**	**298**	Pn	**Pn**	**06 39 01.7**	**+3.8**
LRK	**Lerik**	**3.04**	**256**	Pn	**Pn**	**06 39 00.3**	**+2.0**
	SNR=5.7						
LRK				Sn	**Sn**	**06 39 33.1**	**-1.7**
LRK	**Lerik**	**3.04**	**256**	Pn	**Pn**	**06 39 00.3**	**+2.0**
YRD	**Yardimli**	**3.05**	**261**	Pn	**Pn**	**06 38 59.8**	**+1.4**
	SNR=29						
YRD				Sn	**Sn**	**06 39 33.0**	**-2.1**
YRD	**Yardimli**	**3.05**	**261**	Pn	**Pn**	**06 38 59.9**	**+1.4**
IPRN	**Peran**	**3.19**	**177**	Pn	**Pn**	**06 39 00.9**	**+0.5**
IGLO	**Ghaloghah**	**3.23**	**154**	Pn	**Pn**	**06 39 01.7**	**+0.7**
IML	**Ismayilli**	**3.30**	**296**	Pn	**Pb**	**06 39 07.1**	**-1.6**
IML				Sn	**Sn**	**06 39 43.4**	**+2.3**
QUBA	**Quba, Azerbaij**	**3.36**	**306**	Pn	**Pn**	**06 39 06.9**	**+4.3**
QUBA				Sn	**Sn**	**06 39 44.1**	**+1.5**
IGZV	**Ghazvin**	**3.39**	**207**	Pn	**Pn**	**06 39 04.1**	**+0.9**
QUB	**Quba**	**3.46**	**305**	Pn	**Pb**	**06 39 10.1**	**-1.3**
XNQ	**Khinaliq**	**3.49**	**301**	Pn	**Pn**	**06 39 07.6**	**+3.0**
	SNR=17						
XNQ				Sn	**Sn**	**06 39 48.3**	**+2.2**
XNQ	**Khinaliq**	**3.49**	**301**	Pn	**Pn**	**06 39 07.7**	**+3.1**
ZRD	**Zardab**	**3.51**	**285**	Sn	**Sn**	**06 39 47.3**	**+1.3**
BLQ	**Beylaqan**	**3.52**	**276**	Pn	**Pn**	**06 39 08.4**	**+3.5**
BLQ				Sn	**Sn**	**06 39 46.9**	**+0.3**
MRVT	**Maraveh tapeh**	**3.59**	**118**	Pn	**Pn**	**06 39 07.4**	**+1.6**
QSAR	**Qusar**	**3.59**	**307**	Pn	**Pn**	**06 39 09.6**	**+3.8**
	SNR=5.4						
QSAR				Sn	**Sn**	**06 39 50.7**	**+2.4**
QBL	**Gabala**	**3.60**	**296**	Pn	**Pb**	**06 39 12.0**	**-1.8**
QBL				Sn	**Sn**	**06 39 49.3**	**+0.8**
ISHM	**Shahmirzad**	**3.74**	**165**	Pn	**Pn**	**06 39 09.8**	**+1.7**
IFIR	**Firoozkooh**	**3.82**	**172**	Pn	**Pn**	**06 39 11.0**	**+1.8**
ISRB	**Sarab**	**3.83**	**247**	Pn	**Pn**	**06 39 11.4**	**+2.1**
IDMV	**Damavand**	**3.85**	**181**	Pn	**Pn**	**06 39 12.3**	**+2.7**
IMHD	**Mahdasht**	**3.91**	**197**	Pn	**Pn**	**06 39 12.8**	**+2.5**
IHSB	**Hasanabad**	**4.04**	**190**	Pn	**Pn**	**06 39 14.6**	**+2.5**
ILAS	**Lasjerd**	**4.10**	**170**	Pn	**Pn**	**06 39 14.9**	**+1.8**
IHRS	**Heris**	**4.11**	**256**	Pn	**Pn**	**06 39 15.3**	**+2.2**
SEKA	**Sheki**	**4.15**	**297**	Pn	**Pb**	**06 39 20.8**	**-2.4**
SEKA				Sn	**Sn**	**06 40 03.6**	**+1.5**
IANJ	**Anjilo**	**4.21**	**159**	Pn	**Pn**	**06 39 16.9**	**+2.4**
IHSH	**Hashtrud**	**4.36**	**242**	Pn	**Pn**	**06 39 19.2**	**+2.6**
IRAZ	**Razeghan**	**4.38**	**204**	Pn	**Pn**	**06 39 18.1**	**+1.3**
IVRN	**Varamin**	**4.44**	**184**	Pn	**Pn**	**06 39 19.2**	**+1.7**
GANJ	**Ganja**	**4.60**	**287**	Pn	**Pn**	**06 39 23.6**	**+4.0**
GANJ				Sn	**Sn**	**06 40 13.6**	**+0.4**
GANJ	**Ganja**	**4.60**	**287**	Pn	**Pn**	**06 39 23.9**	**+4.2**
IQOM	**Qom**	**4.66**	**191**	Pn	**Pn**	**06 39 22.6**	**+2.0**
ZKTA	**Zakatala**	**4.72**	**300**	Sn	**Sn**	**06 40 17.6**	**+1.5**
ORD	**Ordubad**	**4.78**	**266**	Pn	**Pn**	**06 39 24.2**	**+2.0**
ORD				Sn	**Sn**	**06 40 15.8**	**-1.7**
GEYT	**Alibeck**	**4.94**	**106**	Pn	**Pn**	**06 39 25.4**	**+1.1**
	2.9nm,0.3s,baz=286,slow=16,SNR=14						
GEYT				Sn	**Sn**	**06 40 18.8**	**-2.7**
	0.7nm,0.3s,baz=295,slow=17,SNR=1.3						
	4.6nm,0.3s						
GYA0B	**ALIBECK ARRAY**	**4.94**	**106**	⇑Pn	**Pn**	**06 39 25.2**	**+0.9**
GYA0B				⇑Lg	Lg	06 40 19.4	
GDB	**GEDABAY**	**5.04**	**287**	Pn	**Pn**	**06 39 28.3**	**+2.5**
	SNR=5.8						
GDB				Sn	**Sn**	**06 40 22.4**	**-1.7**
GDB	**GEDABAY**	**5.04**	**287**	Pn	**Pn**	**06 39 28.1**	**+2.3**
ISFB	**Sefidab**	**5.08**	**179**	Pn	**Pn**	**06 39 28.0**	**+1.8**
SBZ	**Shahbuz**	**5.08**	**272**	Pn	**Pn**	**06 39 28.7**	**+2.5**
SBZ				Sn	**Sn**	**06 40 23.5**	**-1.4**
QZX	**Qazax, Azerbai**	**5.40**	**290**	Pn	**Pn**	**06 39 35.1**	**+4.4**
QZX				Sn	**Sn**	**06 40 33.4**	**+0.5**
QZX	**Qazax, Azerbai**	**5.40**	**290**	Pn	**Pn**	**06 39 31.3**	**+0.7**
IAKL	**Akhelmad**	**5.96**	**116**	Pn	**Pn**	**06 39 40.5**	**+1.8**
IPAY	**Payeh**	**6.21**	**117**	Pn	**Pn**	**06 39 44.0**	**+2.1**
KBZ	**Khabaz**	**8.12**	**305**	Pn	**Pn**	**06 40 09.4**	**+1.5**
	0.1nm,0.3s,baz=166,slow=4.3,SNR=6.4						
KBZ				Sn	**Sn**	**06 41 33.1**	**-6.6**
	0.1nm,0.3s,baz=134,slow=18,SNR=1.8						
	0.3nm,0.3s						
AFRZ	**Afriz**	**8.18**	**135**	Pn	**Pn**	**06 40 11.7**	**+2.8**
AB31	**Akbulak array**	**11.30**	**27**	⇓P	**Pn**	**06 40 50.4**	**-1.1**
	3.8nm,1.4s,baz=212,slow=13,SNR=6.7						
AB31				⇑S	Sn	06 42 45.6	-12
	2.9nm,0.6s,baz=253,slow=21						
AKTO	**Aktyubinsk**	**11.76**	**19**	Pn	**Pn**	**06 40 56.5**	**-1.3**
	0.7nm,0.3s,baz=219,slow=9.2,SNR=10.0						
AKTO				Sn	**Sn**	**06 43 00.8**	**-8.2**
	1.2nm,0.3s,baz=33,slow=17,SNR=9.4						
	1.6nm,0.3s						
AKTO	**Aktyubinsk**	**11.76**	**19**	⇑P	**Pn**	**06 40 57.0**	**-0.8**
	0.7nm,0.3s						
AKTO				⇑S	Sn	06 42 59.4	-10
	2.7nm,0.6s						
BVAR	**Borovoye Array**	**18.49**	**37**	P	**P**	**06 42 27.0**	**+0.9**
	baz=240,slow=14,SNR=2.6						
	0.3nm,0.4s						
AKASG	**Malin Array Be**	**19.61**	**313**	P	**P**	**06 42 39.4**	**+1.0**
	0.5nm,0.3s,baz=114,slow=12,SNR=1.6						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**21.65**	**50**	P	**P**	**06 43 01.0**	**+0.5**
	0.3nm,0.6s,baz=251,slow=11,SNR=1.9						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**23.13**	**62**	P	**P**	**06 43 18.1**	**+1.9**
	0.7nm,0.9s,baz=253,slow=12,SNR=5.1						
	0.7nm,0.9s						
FINES	**FINESS Array B**	**27.23**	**333**	P	**P**	**06 43 54.6**	**+0.8**
	2.2nm,0.9s,baz=128,slow=11,SNR=2.0						
	2.2nm,0.9s						

WEL 06 06:42:11.8±0.5**, 42°S**±3°×**17°4E**±°**, h5^{km}, M2.8**/10**, ML2.9**/17**, MLv2.8**/10**, Error ellipse: s-maj=0.0km s-min=0.0km az=123.6, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.25**	**263**	P	Pg	06 42 17.1	+0.5
KHZ				S	Sg	06 42 20.9	+1.0
BSWZ	**Blackbirch Sta**	**0.67**	**0**	P	Pg	06 42 24.8	+0.1
BSWZ				S	Sg	06 42 34.3	+0.9
CMWZ	**Cape Campbell**	**0.69**	**22**	P	Pb	06 42 26.7	+0.4
CMWZ				S	Sn	06 42 39.9	+0.7
GVZ	**Greta Valley S**	**0.85**	**227**	P	Pb	06 42 29.6	+0.5
GVZ				S	Sn	06 42 42.9	-0.4
THZ	**Tophouse**	**0.95**	**311**	P	Pg	06 42 29.5	-0.6
TUWZ	**Tuamarina**	**0.96**	**3**	P	Pg	06 42 29.9	-0.3
TUWZ				S	Sb	06 42 43.7	-0.1
AMCZ	**Amberley**	**1.20**	**228**	P	Pn	06 42 35.5	+0.2
TCW	**Tory Channel**	**1.21**	**15**	P	Pg	06 42 34.0	-1.0
TCW				S	Sb	06 42 51.4	+0.2
NNZ	**Nelson**	**1.23**	**342**	P	Pg	06 42 34.4	-0.9
LTZ	**Lake Taylor**	**1.25**	**251**	P	Pg	06 42 35.2	-0.5
LTZ				S	Sn	06 42 53.0	-0.2
MRNZ	**Matariki Terra**	**1.29**	**319**	P	Pn	06 42 36.0	-0.6
MRNZ				S	Sn	06 42 54.2	+0.1
TKNZ	**Takaka Hill**	**1.52**	**333**	P	Pn	06 42 39.3	-0.3
CAW	**Cannon Point**	**1.56**	**35**	P	Pn	06 42 38.8	-1.4
DUWZ	**D'Urville Isla**	**1.58**	**1**	P	Pn	06 42 40.0	-0.5
MQZ	**McQueen's Vall**	**1.59**	**214**	P	Pn	06 42 38.9	-1.8
AKCZ	**Akaroa Harbour**	**1.64**	**205**	P	Pn	06 42 40.1	-1.3
OXZ	**Oxford**	**1.64**	**235**	P	Pn	06 42 40.1	-1.3
DSZ	**Denniston Nort**	**1.67**	**292**	P	Pn	06 42 42.1	+0.3
INZ	**Inchbonnie**	**1.83**	**259**	P	Pn	06 42 43.8	0.0
OGWZ	**Otaki Gorge**	**1.85**	**32**	P	Pn	06 42 42.6	-1.5
QRZ	**Quartz Range**	**1.86**	**327**	P	Pn	06 42 44.6	+0.4
PKVZ	**Pokaka**	**3.29**	**20**	P	Pb	06 43 08.2	-2.5
WNVZ	**Wahianoa**	**3.33**	**24**	P	Pn	06 43 04.0	-0.6
OTVZ	**Oturere**	**3.50**	**23**	P	Pn	06 43 06.5	-0.5
MTHZ	**Maungataniwha**	**4.19**	**34**	P	Pn	06 43 20.9	+4.5
WCZ	**Waipu Caves**	**6.45**	**3**	P	Pn	06 43 52.6	+5.2

IDC 06 06:46:41.6±2.9**, 54°.37N**×**85°.99E, h0^{km}, mbtmp2.7**/2**, ML2.3**/2**, Error ellipse: s-maj=20.0km s-min=11.6km az=51.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.81**	**239**	I	I	06 51 20.0	
	0.1nm,0.6s,baz=61,slow=334,SNR=22						
ZALV	**Zalesovo Beam**	**0.81**	**239**	Pg	Pg	06 46 55.9	-1.2
	0.5nm,0.3s,baz=58,slow=17,SNR=5.8						
ZALV				Lg	Lg	06 47 08.3	
	1.8nm,0.3s,baz=54,slow=28,SNR=15						
KURBB	**Kurchatov Arra**	**5.90**	**234**	Pn	Pn	06 48 11.0	+0.8
	baz=51,slow=14,SNR=2.7						
KURBB				Lg	Lg	06 49 50.6	
	0.1nm,0.3s,baz=50,slow=32,SNR=2.6						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**7.94**	**199**	Pn	Pn	06 48 38.9	+0.6
	0.1nm,0.3s,baz=21,slow=14,SNR=3.3						
MKAR				Sn	Sn	06 50 10.0	+1.1
	0.1nm,0.3s,baz=19,slow=25,SNR=1.9						
MKAR				Lg	Lg	06 50 53.4	
	baz=19,slow=28,SNR=2.5						
	0.2nm,0.4s						

HVO ***06*** *06:47:14.1±1.0, 19°.382N±0°.008×155°.25W±0°.02, h1^{km}±3^{km}, ML2.5/18, ML1.5/42(NEIC), Error ellipse: s-maj=2.2km s-min=1.2km az=97.0*

NEIC 06 06:47:15.1±1.0**, 19°.40N**±0°.02×**155°.24W**±0°.02**, h1^{km}**±7^{km}**, Error ellipse: s-maj=3.6km s-min=1.5km az=58.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BYL	**Byron's Ledge**	**0.03**	**299**	Pg	Pg	06 47 15.5	-0.2
BYL				Sg	Sg	06 47 16.6	+0.5
KKO	**Keanakako`i**	**0.03**	**268**	Pg	Pg	06 47 15.3	-0.4
KKO				Sg	Sg	06 47 16.1	0.0
PUH	**Pauahi**	**0.03**	**144**	Pg	Pg	06 47 15.4	-0.3
PUH				IAML		06 47 15.8	
	comp=N,793nm,0.3s						
PUH				Sg	Sg	06 47 16.2	+0.1
HATHI	**Halema'uma'u T**	**0.03**	**315**	IAML		06 47 15.4	
	comp=E,330nm,1.6s						
HATHI				Pg	Pg	06 47 15.8	0.0
HATHI				Sg	Sg	06 47 17.2	+0.9
RIM	**Rim**	**0.04**	**265**	Pg	Pg	06 47 15.5	-0.3
RIM				Sg	Sg	06 47 16.3	-0.1
SBLHI	**Steaming Bluff**	**0.04**	**312**	Pg	Pg	06 47 16.0	0.0
SBLHI				IAML		06 47 16.5	
	comp=N,506nm,0.6s						
SBLHI				IAML		06 47 16.5	
	comp=E,316nm,1.0s						
SBLHI				Sg	Sg	06 47 17.3	+0.8
NPH	**North Pit**	**0.04**	**287**	IAML		06 47 15.8	
	comp=E,421nm,1.9s						
NPH				Pg	Pg	06 47 15.8	-0.2
NPH				IAML		06 47 15.9	
	comp=N,374nm,1.7s						
NPH				Sg	Sg	06 47 16.9	+0.2
UWB	**Uwekahuna B**	**0.05**	**303**	Pg	Pg	06 47 16.0	-0.1
UWB				Sg	Sg	06 47 17.3	+0.6
OBL	**Observatory Le**	**0.05**	**292**	IAML		06 47 15.4	
	comp=E,393nm,0.7s						
OBL				Pg	Pg	06 47 16.1	0.0
SDHHI	**Sand Hill**	**0.06**	**261**	Pg	Pg	06 47 15.9	-0.4
SDHHI				IAML		06 47 16.4	
	comp=E,556nm,0.3s						
SDHHI				IAML		06 47 16.6	
	comp=N,730nm,0.1s						
SDHHI				Sg	Sg	06 47 17.3	+0.3
UWE	**Uwekahuna**	**0.06**	**292**	IAML		06 47 16.0	
	comp=N,660nm,2.2s						
UWE				IAML		06 47 16.0	
	comp=E,883nm,2.0s						
UWE				Pg	Pg	06 47 16.6	+0.3
UWE				Sg	Sg	06 47 17.8	+0.6
WRMHI	**West Rim**	**0.06**	**277**		Pg	06 47 17.8	+1.4
KNHH	**Kane Nui o Ham**	**0.07**	**107**		Pg	06 47 16.5	+0.1
RSD	**Rainshed**	**0.08**	**328**	Pg	Pg	06 47 16.8	+0.2
RSD				IAML		06 47 17.9	
	comp=N,167nm,1.6s						
RSD				Sg	Sg	06 47 18.7	+1.0
STCH	**Steam Cracks**	**0.10**	**97**		Pg	06 47 16.7	-0.5
STCH				IAML		06 47 18.3	
	comp=E,243nm,0.9s						
STCH				IAML		06 47 20.1	
	comp=N,200nm,0.4s						
NPOC	**North of Pu'u**	**0.12**	**93**	Pg	Pg	06 47 16.0	-1.4
NPOC				IAML		06 47 18.9	
	comp=E,348nm,0.8s						
HLP	**Hilina Pali**	**0.12**	**214**		Pg	06 47 17.3	-0.2
HLP				IAML		06 47 17.9	
	comp=E,169nm,1.6s						
HLP				Sg	Sg	06 47 19.6	+0.5
HLP				IAML		06 47 19.8	
	comp=N,297nm,0.2s						
JCUZ	**Jacuzzi**	**0.13**	**97**	Pg	Pg	06 47 16.2	-1.4
JCUZ				IAML		06 47 20.8	
	comp=N,314nm,1.0s						
MLH	**Mauna Loa**	**0.17**	**304**	IAML		06 47 18.2	
	comp=N,229nm,3.3s						
MLH					Pg	06 47 18.8	+0.4
MLH				IAML		06 47 20.6	
	comp=E,150nm,3.2s						
AIN	**Ainahou**	**0.21**	**263**	Pg	Pg	06 47 19.2	-0.1
AIN				IAML		06 47 23.4	
	comp=E,179nm,0.3s						
HTC	**Hot Caves**	**0.22**	**224**		Pg	06 47 19.1	-0.3
HMH	**Humu'ula Sheep**	**0.31**	**311**		Pg	06 47 21.4	+0.3
PHO	**Puu Honuaula**	**0.34**	**76**		Pg	06 47 22.1	+0.5
MLOA	**Mauna Loa Obse**	**0.35**	**293**	Pg	Pg	06 47 21.3	-0.5
MLOA				IAML		06 47 23.9	
	comp=N,90nm,3.3s						
MWH	**Moku'aweowe**	**0.35**	**284**	Pg	Pg	06 47 21.9	0.0
KHU	**Kahuku**	**0.39**	**247**		Pg	06 47 22.0	-0.6
KHU					Sg	06 47 29.1	+1.5
ALEP	**Alea Permanent**	**0.41**	**290**		Pg	06 47 22.7	-0.4
ALEP					Sg	06 47 29.9	+1.6
POHA	**Pohakuloa**	**0.45**	**322**	Pg	Pg	06 47 23.1	-0.7

IDC ***06*** *06:48:20.4±1.3, 7°.60S×155°.80E, h170^{km}±13^{km}, mb3.3/5, mbtmp3.8/6, MS3.2/1, Error ellipse: s-maj=24.3km s-min=12.5km az=32.0*

ISC 06 06:48:19.4±0.8**, 7°.7S**±0°.2×**155°.7E**±0°.1**, h150^{km}, n8,** σ**1^s.83**/10**, mb3.3**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.53**	**113**	P	**Pn**	**06 49 28.1**	**+1.6**
	542nm,0.3s,baz=259,slow=11,SNR=3.7						
HNR				S	**Sn**	**06 50 20.0**	**+1.2**
	865nm,0.5s,baz=162,slow=9.6,SNR=1.6						
KRVT	**Keravat (AS076**	**4.97**	**312**	P	**Pn**	**06 49 34.0**	**+1.6**
	31nm,0.5s,baz=113,slow=15,SNR=1.6						
KRVT				S	**Sn**	**06 50 32.0**	**+2.6**
	42nm,0.5s,baz=75,slow=12,SNR=2.3						
WRA	**Warramunga Arr**	**24.06**	**237**	P	**P**	**06 53 20.6**	**-0.4**
	1.0nm,0.9s,baz=64,slow=9.5,SNR=4.3						
	1.0nm,0.9s						
ASAR	**Alice Springs**	**26.30**	**230**	P	**P**	**06 53 41.2**	**0.0**
	0.5nm,0.9s,baz=67,slow=9.5,SNR=2.9						
ASAR				LR	LR	07 03 07.1	
	comp=Z,52nm,18.6s,baz=98,slow=34						
	0.5nm,0.9s						
SONM	**Songino Array**	**70.29**	**327**	P	**P**	**06 59 14.4**	**-2.2**
	0.8nm,0.7s,baz=132,slow=8.0,SNR=4.3						
	0.8nm,0.7s						
ILAR	**Eielson Array**	**83.72**	**21**	P	**P**	**07 00 29.0**	**-2.1**
	0.5nm,1.0s,baz=247,slow=5.2,SNR=4.2						
	0.5nm,1.0s						
MKAR	**Makanchi Array**	**84.38**	**319**	P	**P**	**07 00 34.5**	**-0.4**
	1.7nm,0.7s,baz=103,slow=5.8,SNR=20						
	1.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**153.90**	**284**	PKPbc	**PKPbc**	**07 08 01.6**	**-0.5**
	0.5nm,0.9s,baz=48,slow=2.1,SNR=2.3						

IDC 06 06:52:23.4±3.5**, 54°.26N**×**87°.20E, h0^{km}, mbtmp2.5**/2**, ML2.3**/2**, Error ellipse: s-maj=32.5km s-min=20.6km az=54.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.44**	**258**	I	I	06 59 40.0	
	baz=77,slow=335,SNR=2.9						
ZALV	**Zalesovo Beam**	**1.44**	**258**	Pg	Pn	06 52 48.6	-2.0
	0.6nm,0.3s,baz=76,slow=16,SNR=13						
ZALV				Lg	Lg	06 53 09.2	
	2.0nm,0.3s,baz=74,slow=23,SNR=3.2						
KURBB	**Kurchatov Arra**	**6.43**	**239**	Pn	Pn	06 54 00.8	+1.6
	0.1nm,0.3s,baz=53,slow=13,SNR=3.4						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**8.10**	**205**	Pn	Pn	06 54 23.0	+0.7
	baz=24,slow=14,SNR=1.8						
	0.1nm,0.5s						

NEIC ***06*** *06:53:20.5±1.8, 19°.01N±0°.04×65°.13W±0°.02, h10^{km}±1^{km}, ML3.5/40, Md3.6/26(RSPR), Error ellipse: s-maj=7.1km s-min=3.3km az=181.0*

RSPR ***06*** *06:53:23.5, 18°.95N×65°.14W, h5^{km}±2^{km}, MD3.5/12*

ISC 06 06:53:19.7±2.3**, 19°.0N**±0°.1×**65°.10W**±0°.03**, h15^{km}**±11^{km}**, n62,** σ**1^s.26**/70**, 11C-4D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUPR	**Culebra, Puert**	**0.74**	**193**	⇓*e*P	**Pg**	**06 53 35.4**	**+1.2**
CUPR	**Culebra, Puert**	**0.74**	**193**	*e*S	**Sg**	**06 53 45.3**	**+1.2**
CUPR	**Culebra, Puert**	**0.74**	**193**	Pg	**Pg**	**06 53 35.5**	**+1.3**
CUPR					**Sg**	**06 53 45.2**	**+1.2**
CUPR				IAML		06 53 46.0	
	comp=N,2μm,0.3s						
CUPR				IAML		06 53 46.1	
	comp=E,2μm,0.7s						
MTP	**Monte Pirata**	**1.03**	**205**	⇑*e*P	**Pg**	**06 53 39.7**	**+0.1**
MTP	**Monte Pirata**	**1.03**	**205**	*e*S	**Sg**	**06 53 53.2**	**+0.2**
MTP	**Monte Pirata**	**1.03**	**205**	Pg	**Pg**	**06 53 39.6**	**0.0**
MTP					**Sg**	**06 53 53.2**	**+0.2**
MTP				IAML		06 53 54.8	
	comp=N,1μm,0.3s						
MTP				IAML		06 53 54.8	
	comp=E,1μm,0.2s						
CBYP	**Canovanas**	**1.04**	**223**	⇑*e*P	**Pg**	**06 53 39.9**	**0.0**
CBYP	**Canovanas**	**1.04**	**223**	Pg	**Pg**	**06 53 39.9**	**0.0**
CBYP				IAML		06 53 55.3	
	comp=E,2μm,0.2s						
HUMP	**Col San Antoni**	**1.14**	**219**	⇑*e*P	**Pg**	**06 53 41.3**	**-0.4**
HUMP	**Col San Antoni**	**1.14**	**219**	*e*S	**Sg**	**06 53 55.8**	**-0.7**
HUMP	**Col San Antoni**	**1.14**	**219**		**Pg**	**06 53 41.2**	**-0.4**
HUMP					**Sg**	**06 53 55.8**	**-0.7**
HUMP				IAML		06 53 56.3	

	comp=N,824nm,0.3s						
HUMP				IAML		06 53 58.1	
	comp=E,1µm,0.2s						
GCPR	Guaynabo City	1.18	232	eS	Sg	06 53 56.9	-0.9
GCPR	Guaynabo City	1.18	232		Pg	06 53 41.6	-0.9
GCPR					Sg	06 53 56.9	-0.9
CDVI	St. Croix	1.32	166	⇓eP	Pg	06 53 44.4	-0.7
CDVI	St. Croix	1.32	166	eS	Sg	06 54 00.4	-1.8
CDVI	St. Croix	1.32	166		Pg	06 53 44.2	-0.9
CDVI				Sg	Sg	06 54 00.5	-1.8
SJG	San Juan	1.35	227		Pg	06 53 44.4	-1.5
SJG				IAML		06 54 02.4	
	comp=E,466nm,0.2s						
SJG	San Juan	1.35	227	eP	Pg	06 53 44.0	-1.8
EMPR	Esperanza - Ma	1.46	248	⇑eP	Pn	06 53 46.7	+1.2
EMPR	Esperanza - Ma	1.46	248	eS	Sb	06 54 04.5	-0.6
EMPR	Esperanza - Ma	1.46	248		Pn	06 53 46.8	+1.2
EMPR				IAML		06 54 10.9	
	comp=E,605nm,0.6s						
EMPR				IAML		06 54 15.6	
	comp=N,448nm,0.5s						
CELP	Cerrillos	1.70	236	⇑eP	Pn	06 53 49.6	+0.8
CELP	Cerrillos	1.70	236	eS	Sn	06 54 09.9	-0.3
CELP	Cerrillos	1.70	236	Pn	Pn	06 53 49.6	+0.8
CELP					Sn	06 54 10.0	-0.3
AOPR	Arecibo Observ	1.71	247	⇓eP	Pn	06 53 49.7	+0.7
AOPR	Arecibo Observ	1.71	247	Pn	Pn	06 53 49.8	+0.9
AOPR				IAML		06 54 21.5	
	comp=E,1µm,0.4s						
AOPR				IAML		06 54 21.9	
	comp=N,763nm,0.4s						
AOPR	Arecibo Observ	1.71	247	eP	Pn	06 53 49.5	+0.5
AOPR				eS	Sn	06 54 09.3	-1.3
UUPR	Utuado, UPR, P	1.72	243	⇑eP	Pn	06 53 49.8	+0.7
UUPR	Utuado, UPR, P	1.72	243	eS	Sn	06 54 10.1	-0.8
UUPR	Utuado, UPR, P	1.72	243	Pn	Pn	06 53 49.8	+0.7
UUPR					Sn	06 54 10.1	-0.8
OBIP	Obispado Ponce	1.74	236	⇓eP	Pn	06 53 49.1	-0.2
OBIP	Obispado Ponce	1.74	236	eS	Sn	06 54 10.0	-1.2
OBIP	Obispado Ponce	1.74	236	Pn	Pn	06 53 49.1	-0.2
OBIP					Sn	06 54 10.0	-1.2
OBIP				IAML		06 54 12.2	
	comp=E,274nm,0.7s						
AGPR	Aguadilla, PR	1.99	254	⇑eP	Pn	06 53 53.6	+0.8
AGPR	Aguadilla, PR	1.99	254	eS	Sn	06 54 17.8	+0.4
AGPR	Aguadilla, PR	1.99	254		Pn	06 53 53.7	+0.9
AGPR					Sn	06 54 17.8	+0.4
AGPR				IAML		06 54 23.7	
	comp=N,290nm,1.4s						
AGPR				IAML		06 54 30.4	
	comp=E,286nm,0.8s						
GBPR	Guanica, Bosqu	1.99	238	⇑eP	Pn	06 53 54.5	+1.7
GBPR	Guanica, Bosqu	1.99	238		Pn	06 53 54.5	+1.7
LSP	Las Mesas	2.07	246	⇑eP	Pn	06 53 55.6	+1.7
LSP	Las Mesas	2.07	246		Pn	06 53 55.6	+1.7
PRSN	Puerto Rico Se	2.10	248		Pn	06 53 55.6	+1.2
MLPR	Magueyes Islan	2.13	240	⇑eP	Pn	06 53 56.0	+1.4
MLPR	Magueyes Islan	2.13	240	Pn	Pn	06 53 56.1	+1.4
SMRT	St. Maarten	2.16	117		Pn	06 53 56.1	+1.0
SMRT				IAML		06 54 28.2	
	comp=N,367nm,0.2s						
SMRT				IAML		06 54 28.2	
	comp=E,376nm,0.2s						
SMRT	St. Maarten	2.16	117	eS	Sn	06 54 18.7	-2.9
CRPR	Cabo Rojo, PR	2.16	242	⇑eP	Pn	06 53 56.4	+1.3
CRPR	Cabo Rojo, PR	2.16	242	eS	Sn	06 54 22.0	+0.3
CRPR	Cabo Rojo, PR	2.16	242	Pn	Pn	06 53 56.5	+1.3
CRPR					Sn	06 54 21.8	+0.1
SABA	Saba	2.26	128	eP	Pn	06 53 57.8	+1.3
SEUS	St. Eustatius	2.53	127	Pn	Pn	06 54 02.1	+1.8
SEUS				IAML		06 54 51.4	
	comp=N,118nm,0.8s						
ANWB	Willy Bob	3.43	113	eP	Pn	06 54 12.5	-0.1
MBFL	Flemmings, Mon	3.57	129	eP	Pn	06 54 14.8	+0.3
ANBD	Bethesda, Anti	3.74	121	eP	Pn	06 54 15.9	-1.0
ANBD				eS	Sn	06 54 56.4	-4.3
GDHS	Morne Mazeau,	4.20	130	Pn	Pn	06 54 24.4	+1.1
GDHS				IAML		06 55 32.8	
	comp=N,97nm,0.6s						
GDHS				IAML		06 55 35.4	
	comp=E,114nm,0.6s						
CBE	Ff, Capester	4.45	131	Pn	Pn	06 54 29.7	+3.0
CBE	Ff, Capester	4.45	131	eP	Pn	06 54 27.1	+0.4
SC01	Santiago de lo	5.33	275	Pn	Pn	06 54 41.4	+2.7
BIM	Bigot	5.92	139	Pn	Pn	06 54 50.0	+3.0
MCLT	Moule a Chique	6.63	142	Pn	Pn	06 55 01.7	+5.1
SVB	Belmont	6.82	147	Pn	Pn	06 55 01.5	+2.3
GRGR	Grenville	7.62	154	Pn	Pn	06 55 10.8	+0.5
BAUV	El Baul	10.43	196	Pn	Pn	06 55 48.2	-0.6

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*LDG **06** 07:00:58.3±0.3, 37°.49N×16°.27W, h30^{km}, Ml3.8/3, Error ellipse: s-maj=9.2km s-min=4.7km az=111.0*
*MDD **06** 07:01:01.4±0.7, 37°.37N×16°.21W, h30^{km}, Mb4.8/14, M_mb4.3/11, Error ellipse: s-maj=7.2km s-min=3.7km az=124.0*
*IGIL **06** 07:01:01.7, 37°.38N×16°.26W, h14^{km}, ML3.5*
*INMG **06** 07:01:05.1±2.5, 37°.37N×16°.25W, h45^{km}±11^{km}, ML3.5, Error ellipse: s-maj=8.5km s-min=3.0km az=120.0*
*CNRM **06** 07:01:10.0, 37°.45N×15°.42W, h128^{km}, ml3.7*
ISC 06 07:00:58.7±1.5**, 37°.38N**±0°.06×**16°.01W**±0°.09**, h10^{km}, n96, σ2^{s}.94**/139**, 14C, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMPST	Porto Santo, M	4.29	184	eP	Pn	07 02 04.8	+0.7
PMPST				eS	Sn	07 02 48.1	-6.1
PMPST				A	A	07 02 49.7	
	123nm,0.3s						
PMPS	Porto Santo	4.32	184	eP	Pn	07 02 05.1	+0.8
PMPS				eS	Sn	07 02 49.2	-5.5
PMPS				A	A	07 02 50.8	
	81nm,0.3s						
PMOZ	Porto Moniz, M	4.64	192	P	Pn	07 02 09.9	+0.9
PMOZ	Porto Moniz, M	4.64	192	eP	Pn	07 02 09.6	+0.6
PMOZ				eS	Sn	07 02 56.4	-6.6
PMOZ				A	A	07 02 58.4	
	278nm,0.5s						
PMAR	Madeira	4.70	189	eP	Pn	07 02 10.3	+0.5
PMAR				eS	Sn	07 02 57.0	-7.5
PMAR				A	A	07 03 02.5	
	220nm,0.2s						
FUL	Funchal	4.77	189	i S	Sn	07 02 58.3	-7.6
FUL				A	A	07 03 01.7	
	135nm,0.2s						
PMAFR	Mafra	5.53	71	S	Sn	07 03 22.9	-1.8
PMAFR				P	Pn	07 02 24.2	+3.1
PMAFR	Mafra	5.53	71	eP	Pn	07 02 24.6	+3.5
PMAFR				eS	Sn	07 03 23.9	-0.8
PMAFR				A	A	07 03 32.6	
	87nm,0.2s						
LIS	Lisbon	5.58	74	eS	Sn	07 03 25.3	-0.5
LIS				IAML		07 03 31.7	
	comp=N,137nm,0.1s						
PFVI	Vila Bisbo	5.74	90	P	Pn	07 02 27.2	+3.4
PFVI	Vila Bisbo	5.74	90	P	Pn	07 02 27.2	+3.4
PFVI				S	Sn	07 03 27.9	-1.8
PFVI	Vila Bisbo	5.74	90	S	Sn	07 03 28.4	-1.4
PFVI				P	Pn	07 02 26.8	+2.9
PFVI	Vila Bisbo	5.74	90	eP	Pn	07 02 27.1	+3.2
PFVI				eS	Sn	07 03 28.5	-1.2
PFVI				A	A	07 03 35.5	
	comp=N,18nm,0.5s						
PTEO	Sao Teotonio	5.80	86	eP	Pn	07 02 27.6	+2.9
PTEO				eS	Sn	07 03 29.9	-1.4
PTEO				A	A	07 03 37.5	
	comp=N,29nm,0.6s						
MORF	Marmelete	5.86	88	eP	Pn	07 02 28.7	+3.0
MORF				eS	Sn	07 03 32.7	-0.2
MORF				A	A	07 03 38.8	
	comp=N,26nm,0.1s						
MORF	Marmelete	5.86	88	eP	Pn	07 02 28.7	+3.0
MORF				eS	Sn	07 03 32.3	-0.6
MORF				IAML		07 03 35.9	
	comp=N,40nm,0.4s						
PNCL	Nicolau / Gran	5.97	81	S	Sn	07 03 32.2	-3.5
PNCL				P	Pn	07 02 29.8	+2.7
PNCL	Nicolau / Gran	5.97	81	eP	Pn	07 02 30.1	+3.0
PNCL				eS	Sn	07 03 33.4	-2.2
PNCL				A	A	07 03 40.0	
	comp=N,49nm,0.9s						
PSBE	So Bento	6.05	67	eP	Pn	07 02 31.8	+3.6
PSBE				eS	Sn	07 03 35.9	-1.7
PSBE				A	A	07 03 47.9	
	comp=N,17nm,0.3s						
MESJ	Messejana	6.20	83	eP	Pn	07 02 33.5	+3.2
MESJ				eS	Sn	07 03 40.1	-1.1
MESJ				A	A	07 03 46.6	
	comp=N,31nm,0.6s						
MESJ	Messejana	6.20	83	eP	Pn	07 02 33.2	+2.9
MESJ				eS	Sn	07 03 40.0	-1.3
MESJ				IAML		07 03 43.8	
	comp=E,28nm,0.3s						
PCVE	Castro Verde	6.34	85	P	Pn	07 02 34.7	+2.5
PCVE				S	Sn	07 03 42.8	-1.9
PCVE	Castro Verde	6.34	85	eP	Pn	07 02 34.9	+2.7
PCVE				eS	Sn	07 03 42.0	-2.7
PCVE				A	A	07 03 47.6	
	comp=E,18nm,0.2s						
PMTG	Montargil	6.36	72	eP	Pn	07 02 34.8	+2.4
PMTG				eS	Sn	07 03 43.2	-1.9
PMTG				A	A	07 03 49.9	
	comp=E,17nm,0.4s						
EVO	Evora	6.42	77	S	Sn	07 03 42.9	-3.8
EVO				P	Pn	07 02 36.3	+2.9
EVO	Evora	6.42	77	eP	Pn	07 02 33.6	+0.3
EVO				eS	Sn	07 03 44.9	-1.8
EVO				A	A	07 03 49.5	
	comp=E,31nm,0.3s						
PBDV	Barranco-do-Ve	6.44	89	eP	Pn	07 02 27.9	-5.7
PBDV				eS	Sn	07 03 36.6	-11
PBDV				A	A	07 03 47.1	
	comp=E,21nm,0.5s						
PCAS	Casmilo, Conde	6.45	63	eP	Pn	07 02 36.3	+2.6
PCAS				eS	Sn	07 03 45.2	-2.2
PCAS				A	A	07 03 57.4	
	comp=E,13nm,0.5s						
PBEJ	Beja	6.49	82	eP	Pn	07 02 37.3	+3.1
PBEJ				eS	Sn	07 03 47.3	-1.0
PBEJ				A	A	07 03 49.7	
	comp=E,18nm,0.6s						
COI	Coimbra	6.58	62	eP	Pn	07 02 38.0	+2.6
COI				eS	Sn	07 03 48.7	-1.7
COI				A	A	07 04 00.4	
	comp=E,29nm,0.6s						
PVAQ	Vaqueiros	6.60	87	P	Pn	07 02 38.8	+3.0
PVAQ	Vaqueiros	6.60	87	P	Pn	07 02 38.8	+3.0
PVAQ				S	Sn	07 03 47.5	-3.6
PVAQ	Vaqueiros	6.60	87	P	Pn	07 02 38.7	+2.9
PVAQ				S	Sn	07 03 48.1	-3.0
PVAQ	Vaqueiros	6.60	87	eP	Pn	07 02 38.7	+2.9
PVAQ				eS	Sn	07 03 48.5	-2.6
PVAQ				A	A	07 03 57.7	
	comp=E,25nm,0.3s						
EGRO	El Granado	6.79	86	P	Pn	07 02 40.8	+2.5
EGRO				S	Sn	07 03 53.1	-2.5
EGRO	El Granado	6.79	86	P	Pn	07 02 40.8	+2.5
EGRO				⇑iVmb_V		07 02 44.6	
	comp=E,418nm,SNR=4.4						
EGRO				S	Sn	07 03 52.3	-3.3
PESTR	Estremoz	6.80	75	P	Pn	07 02 41.2	+2.7
PESTR	Estremoz	6.80	75	P	Pn	07 02 41.2	+2.7
PESTR				S	Sn	07 03 50.0	-6.1
PESTR	Estremoz	6.80	75	P	Pn	07 02 40.6	+2.1
PESTR				S	Sn	07 03 52.9	-3.2
PESTR	Estremoz	6.80	75	eP	Pn	07 02 41.3	+2.8
PESTR				eS	Sn	07 03 53.6	-2.5
PESTR				A	A	07 04 02.1	
	comp=E,15nm,0.2s						
PTO	Porto	6.87	55	eS	Sn	07 03 54.6	-3.0
PTO				A	A	07 03 54.8	
	comp=E,58nm,0.1s						
PMRV	Marv??o	7.07	71	eP	Pn	07 02 44.8	+2.6
PMRV				eS	Sn	07 03 59.7	-3.0
PMRV				A	A	07 04 05.2	
	comp=E,24nm,0.7s						
PCBR	Castelo Branco	7.12	67	eP	Pn	07 02 45.6	+2.7
PCBR				eS	Sn	07 04 00.4	-3.4
PCBR				A	A	07 04 14.8	
	comp=E,11nm,0.4s						
PVIS	Viseu	7.14	60	eP	Pn	07 02 44.9	+1.7
PVIS				eS	Sn	07 04 01.2	-3.2
PVIS				A	A	07 04 06.7	
	comp=E,14nm,0.2s						
PBAR	Barrancos	7.15	81	P	Pn	07 02 45.3	+2.0
PBAR				S	Sn	07 04 00.1	-4.5
PBAR	Barrancos	7.15	81	eP	Pn	07 02 47.1	+3.8
PBAR				eS	Sn	07 04 02.5	-2.1
PBAR				A	A	07 04 13.9	
	comp=E,16nm,0.5s						
EBAD	Badajoz	7.23	76	P	Pn	07 02 47.1	+2.8
EBAD				S	Sn	07 04 02.2	-4.4
EBAD	Badajoz	7.23	76	P	Pn	07 02 47.0	+2.6
EBAD				⇑iVmb_V		07 02 49.2	
	comp=E,422nm,SNR=4.0						
EBAD				S	Sn	07 04 03.0	-3.5
MTE	Manteigas	7.26	63	eP	Pn	07 02 47.7	+2.8
MTE				eS	Sn	07 04 05.2	-2.2
MTE				A	A	07 04 13.0	
	comp=E,17nm,0.4s						
POLO	Lamas de Olo	7.51	55	eP	Pn	07 02 50.3	+2.0
POLO				eS	Sn	07 04 09.8	-3.8
POLO				A	A	07 04 23.4	
	comp=E,3.8nm,0.7s						
PVRL	Vila Real	7.52	56	eP	Pn	07 02 50.9	+2.6
PVRL				eS	Sn	07 04 10.3	-3.3
PVRL				A	A	07 04 17.3	
	comp=E,16nm,0.1s						
PGAV	Gavieira, Arco	7.53	50	eP	Pn	07 02 49.2	+0.7
PGAV				eS	Sn	07 04 09.8	-4.1
PGAV				A	A	07 04 14.3	
	comp=E,28nm,0.5s						
PCAB	Cabril	7.54	52	eP	Pn	07 02 50.3	+1.7
PCAB				eS	Sn	07 04 09.2	-4.9
PCAB				A	A	07 04 14.9	
	comp=E,26nm,0.5s						
ELOB	Lobios	7.60	51	P	Pn	07 02 49.8	+0.3
ELOB				⇑iVmb_V		07 02 53.9	
	comp=E,453nm,SNR=2.0						
ELOB				S	Sn	07 04 09.8	-6.0
EMAZ	Mazaricos	7.74	42	P	Pn	07 02 52.0	+0.5
EMAZ				⇑iVmb_V		07 02 53.0	
	comp=E,948nm,SNR=1.9						
EMAZ				S	Sn	07 04 09.7	-10
MVO	Moncorvo	7.93	59	eP	Pn	07 02 56.2	+2.2
MVO				eS	Sn	07 04 20.0	-3.8
MVO				A	A	07 04 26.1	
	comp=E,18nm,0.5s						
AVE	Averroes	8.12	118	P	Pn	07 03 00.4	+3.8
AVE				S	Sn	07 04 25.5	-2.9
EAGO	Agolada(Pontev	8.14	46	P	Pn	07 02 57.0	+0.2
EAGO				⇑iVmb_V		07 02 60.0	
	comp=E,518nm,SNR=1.6						
EAGO				S	Sn	07 04 19.3	-10
EPLA	Plasencia	8.21	68	P	Pn	07 02 59.9	+2.0
EPLA				⇑iVmb_V		07 03 02.7	
	comp=E,202nm,SNR=1.6						
EPLA				S	Sn	07 04 25.9	-4.9
PBRG	Braganca	8.41	55	eP	Pn	07 03 02.8	+2.2
PBRG				eS	Sn	07 04 31.8	-3.9
PBRG				A	A	07 04 38.5	
	comp=E,8.1nm,0.2s						
ECAB	El Cabril	8.42	82	P	Pn	07 03 03.6	+2.8
ECAB				S	Sn	07 04 31.5	-4.4
ECAB	El Cabril	8.42	82	P	Pn	07 03 03.7	+2.9
ECAB				⇑iVmb_V		07 03 05.0	
	comp=E,186nm,SNR=1.8						
ECAB				S	Sn	07 04 30.8	-5.2
ECAL	Calabor	8.48	55	P	Pn	07 03 02.7	+1.1
ECAL				⇑iVmb_V		07 03 06.6	
	comp=E,582nm,SNR=2.6						
ECAL				S	Sn	07 04 31.0	-6.4
EJUZ	Juzbado, Salam	8.68	62	S	Sn	07 04 36.6	-5.7
TBT	Taburiente	8.82	191	S	Sn	07 04 30.9	-15
CFUE	Fuerteventura	8.88	168	P	Pn	07 03 09.3	+2.3
CFUE				⇑iVmb_V		07 03 11.2	
	comp=E,423nm,SNR=1.8						
CFUE				S	Sn	07 04 37.7	-9.4
EPON	Pontenova	9.00	46	P	Pn	07 03 07.3	-1.4
EPON				S	Sn	07 04 40.5	-10
CNOR	Icod de los Vi	9.05	184	S	Sn	07 04 41.3	-10
EADA	Adamuz	9.09	82	P	Pn	07 03 12.2	+2.2
EADA				S	Sn	07 04 48.1	-4.2
EADA	Adamuz	9.09	82	P	Pn	07 03 12.4	+2.5
EADA				⇑iVmb_V		07 03 15.4	
	comp=E,223nm,SNR=2.9						
EADA				S	Sn	07 04 48.1	-4.2
MACI	Morro de la Ar	9.11	183	S	Sn	07 04 43.4	-10
OUK	Oukaimeden	9.12	130	P	Pn	07 03 16.0	+5.3
OUK	Oukaimeden	9.12	130	P	Pn	07 03 15.3	+4.6
OUK				S	Sn	07 04 53.4	-0.2
EGOM	La Gomera	9.24	187	S	Sn	07 04 41.5	-15
TTIG	Tnine Tigouga,	9.27	135	P	Pn	07 03 13.2	+0.8
PAB	San Pablo	9.40	73	P	Pn	07 03 16.2	+1.9
PAB	San Pablo	9.40	73	P	Pn	07 03 15.7	+1.5
PAB				⇑iVmb_V		07 03 20.1	
	comp=E,147nm,SNR=1.9						
PAB				S	Sn	07 04 53.9	-6.2
IFR	Ifrane	9.68	110	P	Pn	07 03 20.5	+2.4
IFR				S	Sn	07 05 00.2	-6.8
PSIM	Granatula de C	9.77	78	P	Pn	07 03 22.5	+3.2
PSIM				S	Sn	07 05 05.0	-4.0
CJUL	El Julan, El H	9.78	191	S	Sn	07 04 55.3	-14
OUZM	OUZ	10.01	127	P	Pn	07 03 27.2	+4.5
OUZM				S	Sn	07 05 13.4	-1.8
EARI	Arriondas	10.15	51	P	Pn	07 03 25.7	+1.3
EARI				⇑iVmb_V		07 03 28.1	
	comp=E,457nm,SNR=1.0						
EARI				S	Sn	07 05 11.5	-6.7
MD31	MD31	10.25	113	P	Pn	07 03 29.7	+3.8
MD31				S	Sn	07 05 19.0	-2.0
EQES	Quesada	10.28	84	P	Pn	07 03 28.5	+2.2
EQES				⇑iVmb_V		07 03 31.6	
	comp=E,132nm,SNR=1.1						
EQES				S	Sn	07 05 19.0	-2.7
MDT	Midelt	10.39	113	P	Pn	07 03 32.3	+4.5
MDT	Midelt	10.39	113	P	Pn	07 03 31.1	+3.3
MDT				S	Sn	07 05 19.0	-5.4
ETOR	Torete	11.38	68	P	Pn	07 03 38.9	-2.4
ETOR				S	Sn	07 05 42.1	-6.4
ETOB	Tobarra	11.48	79	P	Pn	07 03 45.6	+2.8
ETOB				⇑iVmb_V		07 03 50.5	
	comp=E,184nm,SNR=1.2						
SJPF	Ste Jean	12.66	58	eP	Pn	07 04 01.1	+2.3
SJPF				eSn	Sn	07 06 08.9	-11
	comp=E,1.5nm,0.3s						
ETSF	Etsaut	13.04	60	eP	Pn	07 04 06.0	+2.0
ETSF				eSn	Sn	07 06 17.3	-12
	comp=E,1.7nm,0.3s						
EPF	Esparros	13.71	61	eP	Pn	07 04 14.7	+1.6
EPF				eSn	Sn	07 06 33.6	-12
	comp=E,1.5nm,0.3s						
QUIF	Quistinic	14.13	38	ePn	Pn	07 04 14.6	-4.2
QUIF	Quistinic	14.13	38	eP	Pn	07 04 19.9	+1.1
ROSF	Rostrenen	14.38	36	ePn	Pn	07 04 17.9	-4.2
ROSF	Rostrenen	14.38	36	eP	Pn	07 04 23.1	+1.0
SGMF	Saint Gilles	14.66	38	eP	Pn	07 04 27.0	+1.0

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*NNC **06** 07:15:52.7±1.1, 50°.12N×78°.07E, h0^{km}, mb3.4, mpv3.2, Error ellipse: s-maj=15.2km s-min=4.9km az=106.0, Suspected Mining explosion.*
*IDC **06** 07:15:52.6±0.8, 50°.06N×78°.86E, h0^{km}, mbtmp3.0/3, ML2.5/3, Error ellipse: s-maj=10.9km s-min=5.8km az=56.0*
ISC 06 07:15:46.9±0.8**, 50°.15N**±0°.05×**79°.35E**±0°.07**, h0^{km}, n18, σ1^{s}.34**/32**, 13C-12D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR14	Kurchatov Arra	0.67	314	⇑P	Pn	07 16 03.7	+0.1
KUR14				⇑S	Sb	07 16 12.8	+1.5
KUR07	Kurchatov Arra	0.68	309	⇓P	Pn	07 16 03.4	-0.4
KUR07				⇑S	Sb	07 16 13.3	+1.6
KUR15	Kurchatov Arra	0.69	313	⇓P	Pn	07 16 04.0	+0.1
KUR15				⇑S	Sb	07 16 13.2	+1.5
KUR06	Kurchatov Arra	0.69	311	⇓P	Pn	07 16 03.8	-0.2
KUR06				⇑S	Sb	07 16 13.5	+1.6
KURBB	Kurchatov Arra	0.70	312	Pg	Pn	07 16 03.8	-0.3
	2.2nm,0.3s,baz=163,slow=19,SNR=148						
KURBB				Lg	Lg	07 16 13.8	
	1.9nm,0.3s,baz=158,slow=34,SNR=8.3						
KURBB	Kurchatov Arra	0.70	312	⇑P	Pn	07 16 03.9	-0.2
	23nm,0.3s						
KURBB				⇑S	Sb	07 16 12.8	+0.5
	62nm,0.8s						
KUR05	Kurchatov Arra	0.71	314	⇓P	Pn	07 16 04.4	+0.1
KUR05				⇓S	Sb	07 16 13.1	+0.6
KUR16	Kurchatov Arra	0.72	311	⇑P	Pn	07 16 04.3	0.0
KUR16				⇑S	Sb	07 16 13.0	+0.2
KUR04	Kurchatov Arra	0.72	315	⇑P	Pn	07 16 04.7	+0.4
KUR04				⇓S	Sb	07 16 13.4	+0.5
KURK	Kurchatov	0.73	321	⇓P	Pn	07 16 05.4	+0.9
	6.4nm,0.3s						
KURK				⇑S	Sn	07 16 15.3	-1.0
	43nm,1.0s						
KUR17	Kurchatov Arra	0.74	311	⇓P	Pn	07 16 04.4	-0.2
KUR17				⇓S	Sb	07 16 12.5	-0.8
MAKZ	Makanchi	3.78	151	⇑Pn	Pg	07 16 58.0	-1.3
	0.7nm,0.2s						
MAKZ				⇓Sn	Sg	07 17 51.3	+3.1
	9.0nm,0.8s						
MK31	Makanchi Array	3.89	149	⇓Pn	Pb	07 16 57.1	+0.7
	1.9nm,0.1s,baz=321,slow=10.0,SNR=63						
MK31				⇓Sn	Sg	07 17 53.0	+1.2
	5.8nm,0.5s,baz=330,slow=29,SNR=13						
MKAR	Makanchi Array	3.89	149	Pn	Pb	07 16 56.2	-0.2
	0.6nm,0.3s,baz=322,slow=10,SNR=50						
MKAR				Pg	Pg	07 17 01.9	+0.5
	0.6nm,0.3s,baz=330,slow=16,SNR=15						
MKAR				Sn	Sb	07 17 42.3	-1.7
	0.2nm,0.3s,baz=327,slow=18,SNR=1.8						
MKAR				Lg	Lg	07 17 56.7	
	1.8nm,0.3s,baz=324,slow=31,SNR=16						
	0.6nm,0.3s						
OTUK	Ortayu	4.98	250	⇑Pn	Pn	07 17 02.2	-0.7
	0.6nm,0.1s						
I46RU	ZALESOVO INFRA	5.08	40	I	I	07 46 50.0	
	baz=226,slow=324,SNR=0.7						
ZALV	Zalesovo Beam	5.08	40	Pn	Pb	07 17 15.8	-0.8
	1.0nm,0.3s,baz=230,slow=14,SNR=14						
ZALV				Lg	Lg	07 18 39.7	
	baz=222,slow=25						
	1.9nm,0.3s						
BVAR	Borovoye Array	6.28	301	Pn	Pn	07 17 23.0	+2.3
	baz=116,slow=14,SNR=2.1						
BVAR				Sn	Sn	07 18 29.1	-4.1
	baz=110,slow=20,SNR=2.4						
BVAR				Lg	Lg	07 19 06.0	
	0.1nm,0.3s,baz=120,slow=29,SNR=2.4						
	0.4nm,0.4s						

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*IDC **06** 07:15:51.8±1.6, 21°.35N×121°.73E, h0^{km}, mb3.5/3, mbtmp3.6/4, ML3.3/1, MS2.9/2, Error ellipse: s-maj=77.5km s-min=26.9km az=68.0*
*TAP **06** 07:15:53.1, 21°.59N×121°.89E, h44^{km}±1^{km}, ML3.4, D*
ISC 06 07:15:52.4±1.4**, 21°.53N**±0°.03×**121°.91E**±0°.07**, h17^{km}**±9^{km}**, n37, σ1^{s}.78**/42**, mb3.4**/3**, 3C-2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LYUB	Lan-yu	0.56	328	i P	Pg	07 16 04.3	+0.7
	baz=325						
LYUB				eS	Sb	07 16 12.6	+1.0
	baz=325						
LAY	Lan-yu	0.61	327	i P	Pg	07 16 04.1	-0.4
	baz=325						
LAY				S	Sg	07 16 13.1	+0.4
	baz=325						
TSEB	Hengchuen, Pin	1.01	292	eP	Pb	07 16 10.9	-0.6
	baz=288						
TSEB				eS	Sb	07 16 24.1	-0.3
	baz=288						
BBP	Basco	1.08	177	⇓eP	Pb	07 16 10.2	-2.4
BBP				eS	Sb	07 16 24.7	-1.8
TWKBT	Hengchun	1.10	292	P	Pb	07 16 12.4	-0.6
	baz=289						
TWK1	Hengchun	1.11	292	eP	Pb	07 16 12.0	-1.1
	baz=289						
SMST	Manzhou Townsh	1.11	296	i P	Pb	07 16 12.2	-1.0
	baz=303						
SMST				eS	Sb	07 16 26.5	-0.9
	baz=303						
LDUT	Ludao	1.21	340	eP	Pn	07 16 13.0	-1.6
	baz=347						
LDUT				eS	Sb	07 16 27.4	-2.9
	baz=347						
TAWH	Dawu Township	1.25	311	i P	Pn	07 16 13.7	-1.4

	baz=319						
TAWH				eS	Sb	07 16 30.7	-0.6
	baz=319						
EAST	Anshuo	1.30	311	eP	Pn	07 16 14.7	-1.2
	baz=319						
EAST				eS	Sb	07 16 31.2	-1.8
	baz=319						
SCZT	Fangliau	1.46	305	eP	Pn	07 16 17.0	-1.0
	baz=313						
TWGBT	Beinan	1.50	329	eP	Pn	07 16 16.4	-2.2
	baz=317						
TWG	Pinlang	1.50	329	eP	Pn	07 16 17.8	-0.9
	baz=317						
MASBT	Mashibuluo	1.60	313	eP	Pn	07 16 18.7	-1.3
	baz=311						
CHKT	Chengkung	1.64	342	eS	Sn	07 16 38.0	-3.3
	baz=350						
YULB	Yu-li	1.94	343	eP	Pn	07 16 24.0	-0.6
	baz=352						
HGSD	Ruisui	2.01	347	eP	Pn	07 16 26.4	+0.8
	baz=347						
EHY	Hungye	2.04	345	eP	Pn	07 16 25.1	-0.9
	baz=352						
CHN1	Nanshi	2.09	323	eP	Pn	07 16 28.7	+2.0
	baz=322						
WTP	Ta-pu	2.09	325	eP	Pn	07 16 27.6	+0.9
	baz=325						
ALS	Alishan	2.22	333	eP	Pn	07 16 30.2	+1.4
	baz=333						
WUSB	Renai	2.56	344	eP	Pn	07 16 34.0	+0.8
	baz=343						
SGCP	Gonzaga	3.27	178	⇓eP	Pn	07 16 42.0	-0.9
SGCP				eS	Sn	07 17 19.8	-1.7
APYP	Conner	3.70	190	⇑eP	Pn	07 16 49.4	+0.5
APYP				eS	Sn	07 17 29.1	-2.9
SAMP	Sagada Mountai	4.52	192	⇑eP	Pn	07 17 02.1	+1.9
SAMP				eS	Sn	07 17 54.5	+2.1
BALP	Baler	5.76	183	⇑eP	Pn	07 17 19.3	+2.1
BALP				eS	Sn	07 18 18.8	-4.2
JNU	Nakatsue	14.02	33	LR	LR	07 24 03.4	
	comp=Z,65nm,18.8s,baz=204,slow=34						
KSRS	Korea Array	16.71	17	Pn	P	07 19 49.4	+1.5
	0.1nm,0.3s,baz=201,slow=13,SNR=1.8						
KSRS				LR	LR	07 26 46.3	
	comp=Z,30nm,18.2s,baz=205,slow=39						
	0.8nm,0.5s						
MKAR	Makanchi Array	40.73	318	P	P	07 23 33.8	+1.5
	0.4nm,0.7s,baz=122,slow=8.5,SNR=3.8						
	0.4nm,0.7s						
H11N1	WAKE ISLAND Hy	42.03	84	T	T	08 08 48.8	
	baz=282,slow=75,SNR=5.1						
H11N2	WAKE ISLAND Hy	42.03	84	T	T	08 08 41.9	
	baz=282,slow=75,SNR=6.4						
H11N3	WAKE ISLAND Hy	42.05	84	T	T	08 08 49.5	
	baz=282,slow=75,SNR=6.6						
H11S3	WAKE ISLAND Hy	42.08	86	T	T	08 08 50.7	
	baz=282,slow=75,SNR=9.2						
H11S1	WAKE ISLAND Hy	42.09	86	T	T	08 08 46.0	
	baz=282,slow=75,SNR=11						
H11S2	WAKE ISLAND Hy	42.10	86	T	T	08 08 45.0	
	baz=282,slow=75,SNR=8.5						
ZALV	Zalesovo Beam	42.84	328	P	P	07 23 52.7	+3.3
	0.5nm,0.6s,baz=116,slow=7.2,SNR=2.0						
	0.5nm,0.6s						
WRA	Warramunga Arr	42.97	163	P	P	07 23 51.8	+0.9
	0.5nm,0.6s,baz=344,slow=8.7,SNR=6.2						
	0.5nm,0.6s						

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*NEIC **06** 07:17:20.0±1.4, 18°.99N±0°.02×65°.15W±0°.03, h10km±1km, ML3.7/43, Md3.6/35(RSPR), Error ellipse: s-maj=5.8km s-min=2.9km az=299.0*

*RSPR **06** 07:17:23.3, 18°.91N×65°.17W, h7km±1km, MD3.6/15*

ISC 06 07:17:18.3±1.6**, 19°.01N**±0°.06×**65°.06W**±0°.02**, h14**km±10km**, n74,** σ**1s.07**/91**, 10C-4D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUPR	Culebra, Puert	0.73	197	⇓iP	Pn	07 17 34.7	+0.5
CUPR	Culebra, Puert	0.73	197	eS	Sn	07 17 44.2	-0.9
CUPR	Culebra, Puert	0.73	197		Pn	07 17 34.7	+0.5
CUPR					Sn	07 17 44.2	-0.9
CUPR				IAML		07 17 45.1	
	comp=N,3μm,0.3s						
CUPR				IAML		07 17 45.3	
	comp=E,3μm,0.4s						
MTP	Monte Pirata	1.02	207	⇑eP	Pn	07 17 38.9	+0.7
MTP	Monte Pirata	1.02	207	eS	Sb	07 17 51.2	+0.1
MTP	Monte Pirata	1.02	207		Pn	07 17 38.8	+0.6
MTP					Sb	07 17 51.1	0.0
MTP				IAML		07 17 53.9	
	comp=N,3μm,0.2s						
MTP				IAML		07 17 53.9	
	comp=E,2μm,0.2s						
CBYP	Canovanas	1.05	226	⇑eP	Pn	07 17 39.0	+0.4
CBYP	Canovanas	1.05	226	eS	Sb	07 17 51.7	-0.3
CBYP	Canovanas	1.05	226		Pn	07 17 39.1	+0.4
CBYP					Sb	07 17 51.7	-0.3
CBYP				IAML		07 17 54.6	
	comp=N,5μm,0.2s						
CBYP				IAML		07 17 55.4	
	comp=E,4μm,0.2s						
HUMP	Col San Antoni	1.14	221	⇓eP	Pn	07 17 40.4	+0.5
HUMP	Col San Antoni	1.14	221	eS	Sg	07 17 54.5	-0.8
HUMP	Col San Antoni	1.14	221		Pn	07 17 40.6	+0.8
HUMP					Sg	07 17 54.5	-0.8
HUMP				IAML		07 17 56.5	
	comp=N,3μm,0.2s						
HUMP				IAML		07 17 57.3	
	comp=E,2μm,0.2s						
GCPR	Guaynabo City	1.20	234	⇓iP	Pb	07 17 40.8	+0.1
GCPR	Guaynabo City	1.20	234	eS	Sb	07 17 55.0	-1.1
GCPR	Guaynabo City	1.20	234		Pg	07 17 41.0	-0.3
GCPR					Sb	07 17 55.4	-0.6
CDVI	St. Croix	1.29	167	⇑eP	Pg	07 17 43.3	+0.2
CDVI	St. Croix	1.29	167	eS	Sn	07 17 59.5	+0.7
CDVI	St. Croix	1.29	167		Pg	07 17 43.5	+0.4
CDVI					Sg	07 18 00.4	+0.5
SJG	San Juan	1.37	229		Pn	07 17 43.6	+0.7
SJG				IAML		07 18 01.9	
	comp=E,535nm,0.2s						
SJG	San Juan	1.37	229	eP	Pn	07 17 43.1	+0.2
EMPR	Esperanza - Ma	1.49	249	⇑iP	Pb	07 17 45.8	+0.2
EMPR	Esperanza - Ma	1.49	249	eS	Sn	07 18 04.2	+0.4
EMPR	Esperanza - Ma	1.49	249		Pb	07 17 45.9	+0.2
EMPR				IAML		07 18 06.4	
	comp=E,839nm,0.5s						
EMPR				IAML		07 18 16.5	
	comp=N,723nm,0.3s						
CELP	Cerrillos	1.71	237	⇑iP	Pn	07 17 48.8	+1.1
CELP	Cerrillos	1.71	237	eS	Sn	07 18 08.4	-1.0
CELP	Cerrillos	1.71	237		Pn	07 17 48.9	+1.1
CELP					Sn	07 18 07.9	-1.6
CELP				IAML		07 18 13.9	
	comp=N,466nm,0.3s						
AOPR	Arecibo Observ	1.73	248	⇑eP	Pn	07 17 48.9	+0.9
AOPR	Arecibo Observ	1.73	248	eS	Sn	07 18 10.1	+0.2
AOPR	Arecibo Observ	1.73	248		Pn	07 17 49.1	+1.1
AOPR					Sn	07 18 09.4	-0.6
AOPR				IAML		07 18 20.4	
	comp=E,2μm,0.4s						
AOPR				IAML		07 18 21.2	
	comp=N,1μm,0.4s						
AOPR	Arecibo Observ	1.73	248	eP	Pn	07 17 48.5	+0.5
AOPR				eS	Sn	07 18 09.8	-0.2
UUPR	Utuado, UPR, P	1.74	245	⇑eP	Pn	07 17 48.9	+0.8
UUPR	Utuado, UPR, P	1.74	245		Pn	07 17 49.1	+0.9
OBIP	Obispado Ponce	1.75	237	⇓eP	Pn	07 17 48.3	0.0
OBIP	Obispado Ponce	1.75	237	eS	Sn	07 18 08.8	-1.6
OBIP	Obispado Ponce	1.75	237		Pn	07 17 48.5	+0.2
OBIP					Sn	07 18 09.3	-1.1
GBPR	Guanica, Bosqu	2.01	239	⇑eP	Pn	07 17 53.6	+1.8
GBPR	Guanica, Bosqu	2.01	239	eS	Sn	07 18 17.6	+0.9
GBPR	Guanica, Bosqu	2.01	239		Pn	07 17 53.6	+1.8
GBPR					Sn	07 18 17.6	+0.9
AGPR	Aguadilla, PR	2.02	255	⇑eP	Pn	07 17 52.8	+1.0
AGPR	Aguadilla, PR	2.02	255	eS	Sn	07 18 15.9	-0.9
AGPR	Aguadilla, PR	2.02	255		Pn	07 17 52.8	+1.0
AGPR					Sn	07 18 16.9	0.0
AGPR				IAML		07 18 22.6	
	comp=N,387nm,0.5s						
AGPR				IAML		07 18 29.5	
	comp=E,379nm,0.5s						
LSP	Las Mesas	2.09	247	⇑eP	Pn	07 17 54.1	+1.2
LSP	Las Mesas	2.09	247	eS	Sn	07 18 18.0	-0.8
LSP	Las Mesas	2.09	247		Pn	07 17 54.1	+1.2
LSP					Sn	07 18 18.0	-0.8
SMRT	St. Maarten	2.12	117		Pb	07 17 56.6	+0.1
SMRT				IAML		07 18 25.0	
	comp=N,464nm,0.2s						
SMRT				IAML		07 18 25.1	
	comp=E,454nm,0.2s						
SMRT	St. Maarten	2.12	117	eP	Pn	07 17 52.2	-1.0
SMRT				eS	Sn	07 18 20.5	+1.2
PRSN	Puerto Rico Se	2.13	248		Pn	07 17 54.6	+1.2
MLPR	Magueyes Islan	2.15	241	⇑iP	Pn	07 17 55.2	+1.6
MLPR	Magueyes Islan	2.15	241	eS	Sn	07 18 20.5	+0.4
MLPR	Magueyes Islan	2.15	241		Pn	07 17 55.2	+1.6
MLPR	Magueyes Islan	2.15	241		Sn	07 18 20.5	+0.4
CRPR	Cabo Rojo, PR	2.19	243	⇑eP	Pn	07 17 55.6	+1.4
CRPR	Cabo Rojo, PR	2.19	243	eS	Sn	07 18 21.2	+0.2
CRPR	Cabo Rojo, PR	2.19	243		Pn	07 17 55.7	+1.5
SABA	Saba	2.22	128	Pn	Pb	07 17 57.9	-0.2
SABA				IAML		07 18 30.0	
	comp=N,384nm,0.6s						
SABA				IAML		07 18 32.9	
	comp=E,556nm,0.7s						
SABA	Saba	2.22	128	eP	Pb	07 17 57.9	-0.2
IDE	Isla Desecheo	2.37	255	⇑eP	Pn	07 17 57.8	+1.1
IDE	Isla Desecheo	2.37	255	eS	Sn	07 18 25.6	0.0
IDE	Isla Desecheo	2.37	255		Pn	07 17 57.8	+1.1
IDE					Sn	07 18 25.6	0.0
ANWB	Willy Bob	3.39	113	eP	Pn	07 18 11.7	+1.0
ANWB				eS	Sn	07 18 50.9	+0.2
MBFL	Flemmings, Mon	3.53	129	eP	Pn	07 18 13.9	+1.2
MLYT	Lee's Yard	3.56	129	eP	Pn	07 18 14.2	+1.0
ANBD	Bethesda, Anti	3.70	121	eP	Pn	07 18 15.7	+0.7
ANBD				eS	Sn	07 18 55.3	-3.1
DR12	Loma Pena Alta	4.09	268	Pn	Pn	07 18 19.7	-0.9
GDHS	Morne Mazeau,	4.16	130	Pn	Pn	07 18 23.7	+2.2
GDHS				IAML		07 19 28.4	
	comp=N,124nm,0.6s						
ABD	La Joyeuse, An	4.24	126	eP	Pn	07 18 22.1	-0.3
ABD	La Joyeuse, An	4.24	126	eS	Sn	07 19 12.2	+0.4
CBE	Ff, Capester	4.41	131	Pn	Pn	07 18 27.4	+2.6
CBE				IAML		07 19 49.0	
	comp=E,166nm,1.6s						
CBE	Ff, Capester	4.41	131	eP	Pn	07 18 27.2	+2.4
MAGL	Barre de l'ile	4.72	130	Pn	Pn	07 18 31.1	+2.0
MAGL	Barre de l'ile	4.72	130	eP	Pn	07 18 26.7	-2.4
SC01	Santiago de lo	5.37	275	Pn	Pn	07 18 38.5	+0.5
SDDR	Presa de Saban	5.89	271	Pn	Pn	07 18 43.2	-2.0
GRGR	Grenville	7.59	154	Pn	Pn	07 19 09.1	+0.6

IDC 06 07:22:05.7±1.9**, 8°.18S**×**125°.14E, h0**km**, mb3.4**/1**, mbtmp3.5**/3**, ML3.5**/2**, Error ellipse: s-maj=188.4km s-min=31.8km az=59.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.71	144	Pn	Pn	07 25 34.2	-1.0
	0.2nm,0.3s,baz=317,slow=13,SNR=11						
WRA				Sn	Sn	07 28 13.4	-5.7
	0.2nm,0.3s,baz=322,slow=25,SNR=1.5						
	0.8nm,0.5s						
ASAR	Alice Springs	17.55	152	P	Pn	07 26 12.5	+0.5
	0.2nm,0.3s,baz=324,slow=11,SNR=15						
ASAR				S	Sn	07 29 16.5	-12
	0.2nm,0.5s,baz=319,slow=24,SNR=2.1						
	0.4nm,0.5s						
MKAR	Makanchi Array	66.67	329	P	P	07 32 58.4	0.0
	0.2nm,0.5s,baz=127,slow=8.3,SNR=4.7						
	0.2nm,0.5s						

IDC 06 07:26:56.9±2.3**, 3°.15S**×**135°.76E, h0**km**, mb3.3**/2**, mbtmp3.4**/3**, ML3.0**/1**, Error ellipse: s-maj=157.8km s-min=34.1km az=101.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.75	185	Pn	Pn	07 30 54.0	+1.0
	0.1nm,0.3s,baz=3.9,slow=12,SNR=4.6						
	0.6nm,0.6s						
ASAR	Alice Springs	20.47	185	P	P	07 31 35.9	-0.5
	0.5nm,0.7s,baz=7.7,slow=10,SNR=5.7						
	0.5nm,0.7s						
ILAR	Eielson Array	87.46	25	P	P	07 39 46.1	0.0
	0.4nm,0.8s,baz=243,slow=4.8,SNR=4.8						
	0.4nm,0.8s						

IDC 06 07:47:22.5±2.5**, 53°.91N**×**86°.60E, h0**km**, mbtmp2.7**/2**, ML2.4**/2**, Error ellipse: s-maj=20.7km s-min=12.8km az=65.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.06	273	I	I	07 53 20.0	
	baz=89,slow=333,SNR=8.9						
ZALV	Zalesovo Beam	1.06	273	Pg	Pg	07 47 41.6	-1.1
	0.4nm,0.3s,baz=96,slow=13,SNR=5.0						
ZALV				Lg	Lg	07 47 57.0	
	2.1nm,0.3s,baz=96,slow=30,SNR=21						
ZALV				Rg	Rg	07 48 02.7	
	2.4nm,0.4s,baz=93,slow=28,SNR=5.0						
KURBB	Kurchatov Arra	5.95	240	Pn	Pn	07 48 53.2	+1.5
	0.1nm,0.3s,baz=55,slow=14,SNR=6.3						
KURBB				Lg	Lg	07 50 32.4	
	baz=58,slow=28,SNR=2.7						
	0.3nm,0.3s						
MKAR	Makanchi Array	7.63	203	Pn	Pn	07 49 15.6	+0.7
	0.1nm,0.3s,baz=26,slow=13,SNR=7.0						
MKAR				Lg	Lg	07 51 25.3	
	baz=26,slow=31						
	0.2nm,0.3s						

IDC 06 07:48:43.1±2.8**, 54°.34N**×**87°.08E, h0**km**, mbtmp2.8**/2**, ML2.5**/2**, Error ellipse: s-maj=23.3km s-min=16.5km az=62.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.39	254	I	I	07 55 20.0	
	baz=74,slow=331,SNR=9.7						
ZALV	Zalesovo Beam	1.39	254	Pg	Pg	07 49 07.1	-2.5
	1.9nm,0.3s,baz=74,slow=17,SNR=15						
ZALV				Lg	Lg	07 49 29.2	
	1.5nm,0.3s,baz=70,slow=27,SNR=5.3						
KURBB	Kurchatov Arra	6.42	238	Pn	Pn	07 50 19.9	+1.2
	0.1nm,0.3s,baz=54,slow=14,SNR=6.5						
KURBB				Sn	Sn	07 51 30.0	-2.6
	baz=51,slow=22,SNR=1.4						
KURBB				Lg	Lg	07 52 06.5	
	baz=54,slow=27,SNR=1.9						
	0.6nm,0.5s						
MKAR	Makanchi Array	8.15	204	Pn	Pn	07 50 43.7	+1.1
	0.1nm,0.3s,baz=27,slow=14,SNR=5.6						
MKAR				Sn	Sn	07 52 16.0	+0.6
	baz=16,slow=27,SNR=1.5						
MKAR				Lg	Lg	07 52 59.6	
	baz=19,slow=35,SNR=2.1						
	0.1nm,0.3s						

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*INET **06** 07:55:09.2±0.4, 12°.46N×88°.06W, h21km±8km, MW2.7*

*SNET **06** 07:55:10.3±0.5, 12°.48N×87°.95W, h55km±15km, ML2.4*

ISC 06 07:55:10.4±2.3**, 12°.4N**±0°.1×**87°.96W**±0°.09**, h50**km**, n8,** σ**0s.96**/13**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.86	8	eP	Pn	07 55 26.1	-0.4
CNCH				eS	Sn	07 55 38.1	0.0
LCND	La Caada	0.89	4	eP	Pn	07 55 26.3	-0.4
LCND				eS	Sn	07 55 38.3	-0.3
LCND				eS	Sn	07 55 38.6	+0.1
LCND				IAML		07 55 40.8	
	comp=Z,203nm,0.3s						
CRIN	San Cristobal	0.93	72	eP	Pn	07 55 27.4	+0.1
CRIN				eS	Sn	07 55 41.6	+1.9
COEB	Comit de Eme	1.21	333	eP	Pn	07 55 30.6	-0.4
CNGN	Cerro Negro	1.24	86	eP	Pn	07 55 29.4	-2.0
MOMN	Momotombo	1.39	90	eP	Pn	07 55 32.8	-0.6
SCLA	Alcaldia de Sa	1.48	330	eP	Pn	07 55 34.6	-0.1
SCLA				eS	Sn	07 55 53.8	+0.9
SCLA				IAML		07 55 55.0	
	comp=Z,28nm,0.3s						
TISN	Laguna Tiscapa	1.68	99	eP	Pn	07 55 37.5	+0.1

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*NNC **06** 07:56:50.5±2.7, 54°.01N×81°.38E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=32.3km s-min=10.2km az=145.0*

*IDC **06** 07:56:51.2±1.6, 53°.96N×81°.56E, h0km, mbtmp2.7/2, ML1.9/2, Error ellipse: s-maj=15.5km s-min=10.4km az=154.0*

ISC 06 07:56:51.2±1.5**, 54°.0N**±0°.1×**81°.57E**±0°.07**, h10**km**, n8,** σ**1s.43**/12**, 3C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.92	90	⇓Pn	Pb	07 57 25.7	-0.6
	1.0nm,0.8s,baz=277,slow=16						
ZAA0				⇑Sn	Sg	07 57 52.9	0.0
	3.3nm,1.5s,baz=274,slow=26						
ZALV	Zalesovo Beam	1.92	90	Pg	Pb	07 57 26.4	0.0
	0.5nm,0.3s,baz=272,slow=17,SNR=22						
ZALV				Lg	Lg	07 57 52.5	
	0.8nm,0.3s,baz=273,slow=26,SNR=13						
I46RU	ZALESOVO INFRA	1.92	90	I	I	08 08 50.0	
	0.1nm,0.8s,baz=276,slow=329,SNR=4.0						
KURK	Kurchatov	3.76	210	⇓Pn	Pn	07 57 51.4	+2.2
	5.8nm,1.3s						
KURK				⇓Sn	Sn	07 58 31.9	-1.5
	3.6nm,1.4s						
KURK				⇑Lg	Lg	07 58 49.7	
	5.8nm,1.0s						
KURBB	Kurchatov Arra	3.87	210	Pg	Pb	07 57 58.9	-0.6
	0.1nm,0.3s,baz=28,slow=16,SNR=6.7						
KURBB				Sn	Sn	07 58 35.0	-1.1
	0.1nm,0.3s,baz=314,slow=18,SNR=6.7						
KURBB				Lg	Lg	07 58 53.1	
	0.1nm,0.3s,baz=32,slow=30,SNR=7.7						
KURBB	Kurchatov Arra	3.87	210	⇑Pn	Pn	07 57 52.6	+1.9
	5.5nm,1.9s						
KURBB				⇓Sn	Sn	07 58 36.7	+0.6
	2.1nm,0.6s						
KURBB				⇓Lg	Lg	07 58 50.8	
	14nm,0.7s						
BVAR	Borovoye Array	6.74	266	Pn	Pn	07 58 30.4	+0.2
	baz=78,slow=13,SNR=2.2						
	0.3nm,0.4s						
MKAR	Makanchi Array	7.23	176	Pn	Pn	07 58 38.3	+1.3
	baz=2.6,slow=12,SNR=4.9						
MKAR				Sn	Sn	07 59 57.3	-1.9
	baz=350,slow=21,SNR=1.3						
MKAR				Lg	Lg	08 00 40.1	
	0.1nm,0.3s,baz=1.0,slow=27,SNR=5.3						
	0.4nm,0.7s						

IDC 06 07:58:18.2±2.9**, 10°.56S**×**161°.48E, h68**km±21km**, mb3.2**/3**, mbtmp3.7**/4**, Error ellipse: s-maj=46.4km s-min=16.5km az=54.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.88	307	P	Pn	07 58 47.2	-1.0
	1μm,0.2s,baz=120,slow=5.3,SNR=9.1						
HNR				S	Sn	07 59 11.4	+0.4
	7μm,0.3s,baz=29,slow=24,SNR=18						
HNR				LR	LR	07 59 36.1	
	comp=Z,3μm,18.1s,baz=170,slow=42						
DZM	Mont Dzumac	12.40	158	P	Pn	08 01 13.7	+1.8
	3.5nm,0.6s,baz=288,slow=22,SNR=11						
DZM				S	Sn	08 03 26.3	-2.1
	3.9nm,0.9s,baz=135,slow=21,SNR=1.6						
WRA	Warramunga Arr	27.75	247	P	P	08 04 00.0	-0.7
	0.6nm,0.8s,baz=78,slow=9.5,SNR=2.9						
	0.6nm,0.8s						
ASAR	Alice Springs	29.32	240	P	P	08 04 15.3	+0.6
	0.1nm,0.4s,baz=62,slow=10,SNR=4.2						
	0.1nm,0.4s						
SONM	Songino Array	75.84	325	P	P	08 09 57.3	+0.1
	0.5nm,0.5s,baz=141,slow=7.4,SNR=2.4						
	0.5nm,0.5s						

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*NEIC **06** 08:21:32.7±2.4, 16°.58N±0°.06×94°.28W±0°.04, h116km±6km, mb4.2/7, Md4.2/50(MEX), Error ellipse: s-maj=9.6km s-min=5.3km az=195.0*

*MEX **06** 08:21:33.7±0.9, 16°.55N×94°.33W, h116km±9km, MD4.2*

ISC 06 08:21:32.1±0.8**, 16°.60N**±0°.04×**94°.30W**±0°.03**, h121**km±6km**, n61,** σ**1s.61**/104**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NILT	Santiago Nilte	0.30	263	eP	Pn	08 21 49.3	+0.1
NILT				eS	Sn	08 22 01.0	-1.0
CMIG	Matias Romero	0.74	311		Pn	08 21 52.3	+0.5
CMIG					Sn	08 22 06.3	-0.5
CMIG	Matias Romero	0.74	311	iP	Pn	08 21 52.3	+0.5
CMIG				eS	Sn	08 22 06.3	-0.5
TGIG		1.15	81		Pn	08 21 56.0	+0.3
TGIG					Sn	08 22 12.2	-1.4
TGIG		1.15	81	iP	Pn	08 21 56.0	+0.3
TGIG				eS	Sn	08 22 12.2	-1.4
TGBT	Tuxtla Gutierr	1.18	81		Pn	08 21 55.6	-0.4
TGBT					Sn	08 22 12.1	-2.0
TGBT	Tuxtla Gutierr	1.18	81	eP	Pn	08 21 55.6	-0.4
TGBT				eS	Sn	08 22 12.1	-2.0
PCIG		1.37	130		Pn	08 21 58.5	+0.4
PCIG					Sn	08 22 17.4	-0.5
PCIG		1.37	130	eP	Pn	08 21 58.5	+0.4
PCIG				eS	Sn	08 22 17.4	-0.5
TUIG	Tuzandepetl	1.43	355	eP	Pn	08 21 58.9	+0.1
TUIG				eS	Sn	08 22 18.9	-0.1
NEUV	Arroyo Zacate	1.81	308	eP	Pn	08 22 03.7	+0.5
NEUV				eS	Sn	08 22 25.9	-1.2
HUIG	Huatulco	1.92	245		Pn	08 22 03.3	-1.3
HUIG					Sn	08 22 27.9	-1.5
HUIG	Huatulco	1.92	245	iP	Pn	08 22 03.3	-1.3
HUIG				eS	Sn	08 22 27.9	-1.5
PMUV	Sontecomapan	2.08	338	iP	Pn	08 22 06.2	-0.5
PMUV				eS	Sn	08 22 30.3	-2.9
CCIG	Comitan	2.10	98		Pn	08 22 07.8	+0.8
CCIG	Comitan	2.10	98	eP	Pn	08 22 07.8	+0.8
CCIG				eS	Sn	08 22 31.6	-2.1
OXBJ	Oaxaca	2.36	282	eS	Sn	08 22 40.3	+0.6
OXIG	Oaxaca	2.37	282		Pn	08 22 12.5	+2.0
OXIG					Sn	08 22 40.7	+0.8
VHO	Vista Hermosa	2.37	282	eP	Pn	08 22 12.5	+2.0
VHO				eS	Sn	08 22 40.7	+0.8
PATR	El Naranjo	2.48	126	eP	Pn	08 22 12.6	+0.8
PATR				eS	Sn	08 22 42.7	+0.3
PAVE	Pavencul	2.48	124	eP	Pn	08 22 12.9	+1.0
PAVE				eS	Sn	08 22 42.4	0.0
THIG		2.59	130	eS	Sn	08 22 44.0	-0.5
CHUJ	Union Juarez	2.59	125	eP	Pn	08 22 13.9	+0.6
CHUJ				eS	Sn	08 22 44.0	-1.0
PEIG	Puerto Escondi	2.80	258		Pn	08 22 14.7	-1.0
PEIG					Sn	08 22 45.9	-3.5
PEIG	Puerto Escondi	2.80	258	eP	Pn	08 22 14.7	-1.0
PEIG				eS	Sn	08 22 45.9	-3.5
HUEH	Huehuetenango	2.98	115		Pn	08 22 19.0	+0.7
TOIG	Toxpalan	3.03	300		Pn	08 22 20.4	+1.6
TOIG					Sn	08 22 54.0	-1.0
TOIG	Toxpalan	3.03	300	eP	Pn	08 22 20.4	+1.6
TOIG				eS	Sn	08 22 54.0	-1.0
YOIG	Yosondua	3.12	275		Pn	08 22 21.6	+1.4
YOIG					Sn	08 22 56.2	-1.1
YOIG	Yosondua	3.12	275	eP	Pn	08 22 21.6	+1.4
YOIG				eS	Sn	08 22 56.2	-1.1
TXIG	Tlaxiaco	3.38	282		Pn	08 22 25.6	+1.9
TXIG					Sn	08 23 01.6	-1.8
TXIG	Tlaxiaco	3.38	282	eP	Pn	08 22 25.6	+1.9
TXIG				eS	Sn	08 23 01.6	-1.8
TPIG	Tehuac#an	3.43	302		Pn	08 22 26.0	+1.7
TPIG					Sn	08 23 04.8	+0.2
TPIG	Tehuac#an	3.43	302	eP	Pn	08 22 26.0	+1.7
TPIG				eS	Sn	08 23 04.8	+0.2
OZST	Orizaba	3.48	311	eS	Sn	08 23 05.1	-0.6
HLIG	Huajuapan de L	3.56	291		Pn	08 22 28.2	+2.2
HLIG					Sn	08 23 06.3	-1.4
HLIG	Huajuapan de L	3.56	291	eP	Pn	08 22 28.2	+2.2
HLIG				eS	Sn	08 23 06.3	-1.4
JAUV	Jalcomulco	3.63	319	eP	Pn	08 22 26.5	-0.4
JAUV				eS	Sn	08 23 06.0	-3.3
PNIG	Pinotepa	3.67	267		Pn	08 22 27.3	0.0
PNIG					Sn	08 23 07.3	-2.8
PNIG	Pinotepa	3.67	267	eP	Pn	08 22 27.3	0.0
PNIG				eS	Sn	08 23 07.3	-2.8
LVIG	Laguna Verde	3.70	327	eP	Pn	08 22 27.1	-0.5

LVIG				eS	Sn	08 23 06.7	-3.9
SCIG	Sabancuy	3.79	51	eP	Pn	08 22 28.2	-0.6
SCIG				eS	Sn	08 23 10.1	-2.7
FTIG	Fresnillo de T	3.88	290		Pn	08 22 32.8	+2.6
FTIG					Sn	08 23 12.6	-2.6
FTIG	Fresnillo de T	3.88	290	eP	Pn	08 22 32.8	+2.6
FTIG				eS	Sn	08 23 12.6	-2.6
TLIG	Tlapa	4.19	284		Pn	08 22 36.4	+2.1
TLIG	Tlapa	4.19	284	eP	Pn	08 22 36.3	+2.1
TLIG				eS	Sn	08 23 19.3	-3.3
MGIG	Malinaltepec	4.19	279		Pn	08 22 35.8	+1.4
MGIG					Sn	08 23 20.6	-2.1
MGIG	Malinaltepec	4.19	279	eP	Pn	08 22 35.8	+1.4
MGIG				eS	Sn	08 23 20.6	-2.1
PETF	Flores	4.26	85		Pn	08 22 35.7	+0.6
CXUV	Coxquihui	4.73	319	eP	Pn	08 22 42.2	+0.8
CXUV				eS	Sn	08 23 32.2	-3.1
TEIG	Tepich	6.76	57	Pn	Pn	08 23 08.0	-0.8
ORTG	Ortega, Santa	10.60	125	Pn	Pn	08 24 00.1	-0.7
DUNO	Dulce Nombre,	10.75	126	Pn	Pn	08 24 01.9	-0.8
833A	Chaparral WMA,	12.57	339	Pn	Pn	08 24 26.8	+0.1
FW06	Azle	16.56	350		Pn	08 25 18.2	+1.0
FW06				IAmb	IAmb	08 25 27.2	
	comp=Z,3.6nm,0.5s						
OK031	S. Brethren Rd	19.40	354	P	P	08 25 49.3	+0.6
OK031				IAmb	IAmb	08 25 54.5	
	comp=Z,32nm,0.5s						
HHAR	Hobbs	19.60	1	P	P	08 25 52.3	+1.5
HHAR				IAmb	IAmb	08 26 05.5	
	comp=Z,2.9nm,0.5s						
L34A	Svendsen Farm,	25.34	356	P	P	08 26 49.8	+2.1
P18A	Preston Nutter	26.82	332	P	P	08 27 01.9	+0.5
GCPR	Guaynabo City	26.96	82	P	P	08 27 02.5	-0.1
GCPR				IAmb	IAmb	08 27 32.1	
	comp=Z,3.7nm,0.5s						
TMUT	Trail Mountain	27.00	330	P	P	08 27 01.6	-1.4
TMUT				IAmb	IAmb	08 27 28.9	
	comp=Z,8.0nm,0.5s						

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*IDC **06** 08:27:47.2±2.6, 15.°61S×173.°89W, h84km±24km, mb3.6/9, mbtmp4.0/11, MS3.3/3, Error ellipse: s-maj=36.3km s-min=14.5km az=144.0*

*NEIC **06** 08:27:49.7±1.2, 15.°4S±0.°1×173.°74W±0.°10, h113km±11km, mb4.4/11, Error ellipse: s-maj=17.4km s-min=13.0km az=191.0*

*NOU **06** 08:28:10.0, 14.°31S×172.°55W, h86km, MLv3.5/4, Samoa Islands*

ISC 06 08:27:48.7±0.6**, 15.°46S**±0.°10×**173.°80W**±0.°09**, h100**km**, n33, σ1^{s}30**/29**, mb4.1**/16**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.49	52	P	Pn	08 28 28.1	+0.3
	338nm,0.3s,baz=198,slow=2.5,SNR=247						
AFI				S	Sn	08 28 54.9	-2.8
	467nm,0.4s,baz=225,slow=20,SNR=12						
NIUE	Niue	5.16	135	Pn	Pn	08 29 04.0	+0.4
MSVF	Nonsavu	8.13	253	Pn	Pn	08 29 46.3	+2.2
DZM	Mont Dzumac	19.82	248	P	P	08 32 10.4	-1.2
	7.7nm,0.9s,baz=109,slow=9.9,SNR=3.5						
DZM				LR	LR	08 38 28.7	
	comp=Z,118nm,19.4s,baz=192,slow=33						
URZ	Urewera	24.09	198	P	P	08 32 52.8	-2.0
	7.0nm,0.8s,baz=5.5,slow=2.8,SNR=6.6						
	7.0nm,0.8s						
BKZ	Black Stump Fm	25.11	198	P	P	08 33 04.2	0.0
BKZ				IAmb	IAmb	08 33 07.3	
	comp=Z,15nm,1.4s						
TKNZ	Takaka Hill	27.95	202	P	P	08 33 30.3	+0.6
PMG	Port Moresby	38.55	274	LR	LR	08 50 09.5	
	comp=Z,51nm,18.4s,baz=104,slow=35						
H11N3	WAKE ISLAND Hy	39.77	331	T	T	09 17 39.8	
	baz=148						
H11N1	WAKE ISLAND Hy	39.78	331	T	T	09 17 42.9	
	baz=148						
H11N2	WAKE ISLAND Hy	39.79	331	T	T	09 17 40.7	
	baz=148						
STKA	Stephens Creek	43.67	240	P	P	08 35 42.5	-1.2
	comp=Z,1.7nm,0.8s,baz=73,slow=7.9,SNR=4.7						
	comp=Z,1.7nm,0.8s						
STKA	Stephens Creek	43.67	240	P	P	08 35 42.9	-0.8
BBOO	Buckleboo	48.45	240	P	P	08 36 20.2	-1.0
BBOO				IAmb	IAmb	08 36 34.0	
	comp=Z,15nm,1.3s						
WR0	Warramunga Arr	49.26	257	P	P	08 36 26.9	-0.7
WB0	Warramunga Arr	49.41	257	P	P	08 36 28.3	-0.5
WB2	Warramunga Arr	49.44	257	P	P	08 36 28.8	-0.2
WB2				IAmb	IAmb	08 36 55.0	
	comp=Z,13nm,1.4s						
WRAB	Tennant Creek	49.44	257	P	P	08 36 27.4	-1.6
WRAB				IAmb	IAmb	08 36 47.0	
	comp=Z,2.9nm,1.2s						
WRA	Warramunga Arr	49.45	257	P	P	08 36 28.2	-0.9
	comp=Z,2.3nm,0.7s,baz=97,slow=6.0,SNR=28						
	comp=Z,2.3nm,0.7s						
WRA	Warramunga Arr	49.45	257	P	P	08 36 28.0	-1.1
AS31	Alice Springs	49.72	252	P	P	08 36 29.8	-1.3
AS31				IAmb	IAmb	08 36 31.8	
	comp=Z,1.6nm,1.1s						
ASAR	Alice Springs	49.72	252	P	P	08 36 30.2	-0.9
	comp=Z,1.8nm,0.3s,baz=89,slow=7.6,SNR=35						
	comp=Z,1.8nm,0.3s						
ASAR	Alice Springs	49.72	252	P	P	08 36 28.5	-2.6
FORT	Forrest	55.04	243	P	P	08 37 09.6	-0.6
PSA00	Pilbara Seismi	62.81	253	P	P	08 38 03.5	-0.7
PSA00				IAmb	IAmb	08 38 22.6	
	comp=Z,5.6nm,1.1s						
MJAR	Matsushiro Arr	68.73	320	LR	LR	09 06 16.3	
	comp=Z,11nm,19.9s,baz=139,slow=34						
QSPA	South Pole Qui	74.59	180	P	P	08 39 16.7	0.0
QSPA				IAmb	IAmb	08 39 22.5	
	comp=Z,8.5nm,1.4s						
NVAR	Mina Array Bea	74.63	42	P	P	08 39 18.9	+1.5
	comp=Z,1.2nm,0.8s,baz=227,slow=9.5,SNR=9.1						
	comp=Z,1.2nm,0.8s						
TXAR	Lajitas Array	80.97	56	P	P	08 39 54.3	+1.7
	comp=Z,0.1nm,0.6s,baz=226,slow=7.6,SNR=4.7						
	comp=Z,0.1nm,0.6s						
PDAR	Pinedale Array	82.57	42	P	P	08 40 01.8	+0.8
	comp=Z,0.2nm,0.6s,baz=203,slow=1.9,SNR=2.7						
	comp=Z,0.2nm,0.6s						
ILAR	Eielson Array	82.58	11	P	P	08 40 00.6	+0.4
	comp=Z,0.3nm,0.8s,baz=238,slow=6.6,SNR=8.0						
	comp=Z,0.3nm,0.8s						
PLCA	Paso Flores	89.76	132	P	P	08 40 36.6	+0.4
	comp=Z,1.6nm,0.9s,baz=81,slow=9.3,SNR=2.1						
	comp=Z,1.6nm,0.9s						
BRTR	Keskin Array B	145.96	321	PKPbc	PKPbc	08 47 17.4	+0.2
	comp=Z,1.5nm,0.6s,baz=58,slow=4.8,SNR=3.8						

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*NEIC **06** 08:32:13.0±2.3, 18.°1S±0.°1×178.°19W±0.°10, h516km±6km, mb4.6/179, Error ellipse: s-maj=16.0km s-min=13.2km az=156.0*

*IDC **06** 08:32:14.3±1.1, 18.°08S×178.°21W, h536km±13km, mb4.1/25, mbtmp4.9/28, Error ellipse: s-maj=11.3km s-min=9.6km az=165.0*

*NOU **06** 08:32:15.2, 18.°10S×178.°18W, h541km, mb4.8/52, Fiji Islands Region*

ISC 06 08:32:15.2±0.3**, 18.°14S**±0.°05×**178.°21W**±0.°05**, h550**km**, n705, σ0^{s}92**/712**, mb4.7**/170**, 60C-13D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	0.58	261	P	P	08 33 19.9	-0.8
TAVE	Taveuni	2.15	311	P	P	08 33 25.0	-0.7
MSVF	Nonsavu	3.58	276	P	P	08 33 34.2	+0.1
	686nm,0.7s,baz=123,slow=6.6,SNR=200						
MSVF				S	S	08 34 40.7	+2.3
	52nm,0.8s,baz=133,slow=22,SNR=7.7						
MSVF	Nonsavu	3.58	276	P	P	08 33 34.9	+0.7
MSVF	Nonsavu	3.58	276	P	P	08 33 34.5	+0.3
FUTU	Fugatoga	3.81	1	P	P	08 33 34.2	-1.6
YSA	Yasawairara	4.27	289	P	P	08 33 38.7	-0.4
AFI	Afiamalu	7.48	57	P	P	08 34 03.6	-4.4
	37nm,0.5s,baz=36,slow=1.9,SNR=6.3						
AFI				S	S	08 35 30.5	-10
	36nm,0.5s,baz=15,slow=21,SNR=2.3						
AFI	Afiamalu	7.48	57	P	P	08 34 04.2	-3.8
NIUE	Niue	7.91	98	P	P	08 34 08.8	-3.2
FUNA	Funafuti	9.88	345	P	P	08 34 30.9	-1.2
FUNA	Funafuti	9.88	345	P	P	08 34 30.9	-1.2
	349nm,0.7s						
RAO	Raoul Island	11.06	179	S	S	08 36 47.1	+0.8
	170nm,0.3s,baz=73,slow=23,SNR=2.1						
PINNC	Pines Island,	14.16	249	P	P	08 35 15.0	-1.0
OUENC	Ouen Island, N	14.65	251	P	P	08 35 19.0	-2.1
DZM	Mont Dzumac	14.93	252	eS	S	08 37 56.2	-3.5
	156nm,26.2s						
DZM	Mont Dzumac	14.93	252	P	P	08 35 23.1	-1.0
	4.9nm,0.6s,baz=271,slow=23,SNR=10						
DZM	Mont Dzumac	14.93	252	P	P	08 35 21.8	-2.3
KOUNC	Koumac, New Ca	16.69	259	P	P	08 35 41.5	+0.4
RAR	Rarotonga	17.63	103	P	P	08 35 49.3	-0.5
	41nm,0.8s,baz=262,slow=6.7,SNR=15						
RAR	Rarotonga	17.63	103	P	P	08 35 49.8	+0.1
RAR	Rarotonga	17.63	103	P	P	08 35 50.8	+1.1
	62nm,0.9s						
WMGZ	Waiomatatini S	19.83	188	P	P	08 36 09.1	-0.5
PKGZ	Pakihiroa	19.94	189	P	P	08 36 11.1	+0.5
RUGZ	Raukumara Rang	20.08	189	P	P	08 36 10.1	-1.8
PUZ	Puketiti	20.10	188	P	P	08 36 12.4	+0.3
TGRZ	Tauranga	20.11	193	P	P	08 36 12.7	+0.6
TWGZ	Tauwhareparae	20.24	189	P	P	08 36 13.1	-0.2
TOZ	Tahuroa Road	20.28	195	P	P	08 36 15.1	+1.4
URZ	Urewera	20.46	191	P	P	08 36 13.6	-1.7
	20nm,0.4s,baz=355,slow=2.9,SNR=44						
URZ				S	S	08 39 25.4	-4.2
	3.9nm,0.7s,baz=77,slow=22,SNR=1.7						
	20nm,0.4s						
URZ	Urewera	20.46	191	P	P	08 36 14.3	-0.9
	43nm,0.7s						
URZ	Urewera	20.46	191	P	P	08 36 13.1	-2.1
MWZ	Matawai	20.46	190	P	P	08 36 13.7	-1.7
CNGZ	Carnagh Statio	20.51	188	P	P	08 36 15.5	-0.2
TKGZ	Te Karaka	20.52	189	P	P	08 36 15.5	-0.3
RIGZ	Rimuhau	20.79	189	P	P	08 36 16.3	-2.0
TARA	Tarawa	21.25	335	P	P	08 36 22.0	-0.6
TARA	Tarawa	21.25	335	P	P	08 36 22.8	+0.1
	289nm,1.1s						
QRZ	Quartz Range	23.97	197	P	P	08 36 48.8	+2.1
	27nm,2.5s						
RPZ	Rata Peaks	27.06	197	P	P	08 37 14.2	+0.3
	5.8nm,0.6s,baz=271,slow=22,SNR=1.8						
	5.8nm,0.6s						
PPT2	Papeete2	27.25	93	eP	P	08 37 16.6	+0.6
	62nm,1.2s						
PPT2				esS	sS	08 44 04.4	+0.5
	80nm,26.8s						
PPT	Papeete	27.25	93	P	P	08 37 15.6	-0.4
	25nm,0.5s,baz=70,slow=6.1,SNR=11						
	25nm,0.5s						
PPTF	Pamatai, Papee	27.26	93	P	P	08 37 16.5	+0.4
TBI	Tubuai	27.36	106	eP	P	08 37 17.6	+0.8
	103nm,0.9s						
TVO	Taravao	27.54	94	eP	P	08 37 19.8	+1.3
	14nm,0.8s						
JCZ	Jackson Bay	28.07	200	P	P	08 37 24.2	+1.3
	39nm,0.5s						
EIDS	Eidsvold	29.36	250	P	P	08 37 34.1	-0.2
EIDS				IAmb	IAmb	08 37 35.3	
	comp=Z,10nm,0.8s						
ARMA	Armidale	29.99	240	P	P	08 37 40.1	+0.4
RMQ	Roma	31.59	249	P	P	08 37 54.7	+1.3
	comp=Z,14nm,0.6s						
KRVT	Keravat (AS076	32.19	292	P	P	08 37 57.0	-1.6
	comp=Z,40nm,0.6s,baz=306,slow=4.1,SNR=4.0						
	comp=Z,40nm,0.6s						
TV1H	Townsville Har	33.13	262	P	P	08 38 06.7	+0.2
	comp=Z,14nm,1.0s						
CTA	Charters Tower	33.59	261	P	P	08 38 10.3	-0.2
	comp=Z,31nm,1.1s						
CTAO	Charters Tower	33.59	261	P	P	08 38 10.2	-0.2
CTAO				IAmb	IAmb	08 38 11.4	
	comp=Z,20nm,0.8s						
CTAO	Charters Tower	33.59	261	P	P	08 38 10.4	0.0
	comp=Z,27nm,1.1s						
CAN	Canberra	33.71	233	P	P	08 38 11.1	-0.1
PMG	Port Moresby	34.68	280	P	P	08 38 19.7	+0.1
	comp=Z,35nm,0.8s,baz=99,slow=5.3,SNR=16						
	comp=Z,35nm,0.8s						
PMG	Port Moresby	34.68	280	P	P	08 38 20.0	+0.4
PMG	Port Moresby	34.68	280	P	P	08 38 20.6	+1.0
	comp=Z,48nm,1.0s						
CMSA	Cobar Meteorol	35.20	241	P	P	08 38 24.7	+1.0
	comp=Z,27nm,0.7s						
MTSU	Mount Surprise	35.57	264	P	P	08 38 26.8	-0.2
	comp=Z,13nm,0.6s						
TOO	Toolangi	37.17	231	P	P	08 38 40.4	+0.5
TOO				IAmb	IAmb	08 39 01.4	
	comp=Z,14nm,1.2s						
COEN	Coen	37.29	271	P	P	08 38 41.9	+0.7
COEN				IAmb	IAmb	08 38 42.6	
	comp=Z,31nm,0.8s						
COEN	Coen	37.29	271	P	P	08 38 41.6	+0.4
	comp=Z,50nm,0.8s						
STKA	Stephens Creek	38.68	241	P	P	08 38 53.2	+0.9
	comp=Z,11nm,0.5s,baz=89,slow=9.4,SNR=80						
	comp=Z,11nm,0.5s						
STKA	Stephens Creek	38.68	241	P	P	08 38 53.3	+1.0
STKA	Stephens Creek	38.68	241	P	P	08 38 53.6	+1.3
	comp=Z,5.8nm,0.6s						
INKA	Innaminka	38.83	248	P	P	08 38 55.1	+1.6
	comp=Z,35nm,1.1s						
WAKE	Wake Island	40.05	337	P	P	08 39 02.4	-0.9
HTT	Hallett	41.19	240	P	P	08 39 13.9	+1.5
	comp=Z,21nm,0.8s						
LCRK	Leigh Creek	41.32	244	P	P	08 39 14.2	+0.8
	comp=Z,48nm,1.0s						
OOD	Oodnadatta	43.31	249	P	P	08 39 30.1	+1.1
	comp=Z,31nm,1.6s						
BBOO	Buckleboo	43.46	241	P	P	08 39 31.0	+0.9
BBOO				IAmb	IAmb	08 39 31.6	
	comp=Z,26nm,0.9s						
BBOO	Buckleboo	43.46	241	P	P	08 39 31.3	+1.2
	comp=Z,32nm,0.8s						
GENI	Genyem	43.61	286	P	P	08 39 33.1	+1.6
	comp=Z,86nm,0.7s						
GENI	Genyem	43.61	286	P	P	08 39 32.2	+0.7
	comp=Z,87nm,0.7s						
KEKH	Kekaha	43.80	25	P	P	08 39 32.8	0.0
KIP	Kipapa	44.02	28	P	P	08 39 34.6	+0.1
HLK	Haleakala	44.25	30	P	P	08 39 36.8	+0.2
WR0	Warramunga Arr	44.58	260	P	P	08 39 38.6	-0.4
WB0	Warramunga Arr	44.74	260	P	P	08 39 39.8	-0.5
WB0				IAmb	IAmb	08 39 40.6	
	comp=Z,18nm,0.7s						
WB2	Warramunga Arr	44.76	260	P	P	08 39 40.1	-0.3
WB2				IAmb	IAmb	08 39 40.8	
	comp=Z,19nm,0.6s						
WRAB	Tennant Creek	44.77	260	P	P	08 39 40.0	-0.5
WRAB				IAmb	IAmb	08 39 40.8	
	comp=Z,15nm,0.6s						
WRAB	Tennant Creek	44.77	260	P	P	08 39 40.2	-0.2
	comp=Z,22nm,0.9s						
WRA	Warramunga Arr	44.77	260	P	P	08 39 40.0	-0.5
	comp=Z,14nm,0.7s,baz=98,slow=6.8,SNR=210						
WRA				PcP	PcP	08 41 11.3	+0.6
	comp=Z,1.9nm,0.4s,baz=88,slow=3.8,SNR=4.9						
WRA				S	S	08 45 33.8	-4.2
	comp=Z,0.5nm,0.6s,baz=92,slow=14,SNR=5.2						
	comp=Z,14nm,0.7s						
WRA	Warramunga Arr	44.77	260	P	P	08 39 39.8	-0.7
AS01	Alice Springs	44.87	254	P	P	08 39 41.2	0.0
	comp=Z,169nm,0.7s						
MULG	Mulgathing	44.88	245	P	P	08 39 41.4	+0.3
	comp=Z,116nm,0.5s						
AS31	Alice Springs	44.91	254	P	P	08 39 42.0	+0.5
AS31				IAmb	IAmb	08 39 42.5	
	comp=Z,25nm,0.7s						
ASAR	Alice Springs	44.91	254	P	P	08 39 41.9	+0.4
	comp=Z,102nm,0.6s,baz=89,slow=8.3,SNR=825						
ASAR				PcP	PcP	08 41 11.1	-0.1
	comp=Z,4.5nm,0.6s,baz=90,slow=5.3,SNR=5.1						
ASAR				S	S	08 45 39.1	-0.7
	comp=Z,8.5nm,1.2s,baz=88,slow=16,SNR=22						
	comp=Z,102nm,0.6s						
ASAR	Alice Springs	44.91	254	P	P	08 39 42.0	+0.5
SMPI	Sarmi	45.18	286	P	P	08 39 43.9	+0.3
	comp=Z,42nm,0.8s						
MTN	Manton Dam	48.98	269	P	P	08 40 12.2	0.0
MTN				IAmb	IAmb	08 40 12.5	
	comp=Z,31nm,0.8s						
WRKA	Warakurna	49.95	252	P	P	08 40 19.4	+0.1
	comp=Z,73nm,0.9s						
FORT	Forrest	50.08	245	P	P	08 40 20.4	+0.4
FORT	Forrest	50.08	245	P	P	08 40 20.1	0.0
	comp=Z,53nm,0.7s						
KNRA	Kununurra	50.65	264	P	P	08 40 24.6	+0.1
FAKI	Fak Fak	50.81	281	P	P	08 40 25.1	-0.5
FAKI	Fak Fak	50.81	281	P	P	08 40 25.4	-0.2
	comp=Z,15nm,1.3s						
SWI	Sorong	52.48	283	P	P	08 40 37.8	+0.1
	comp=Z,123nm,0.8s						
FITZ	Fitzroy Crossi	53.17	261	P	P	08 40 41.4	-1.2
AAI	Ambon	54.34	279	P	P	08 40 50.9	0.0
	comp=Z,88nm,0.4s						
NLAI	Namlea	55.52	279	P	P	08 40 59.3	+0.2
	comp=Z,36nm,0.5s,comp=Z,9μm						
SOEI	Soe	56.26	270	P	P	08 41 03.3	-1.1
SOEI	Soe	56.26	270	P	P	08 41 06.2	+1.8
	comp=Z,93nm,1.0s						
SOEI	Soe	56.26	270	P	P	08 41 06.1	+1.7
	comp=Z,94nm,0.7s						
SANI	Sanana	56.97	280	P	P	08 41 09.0	-0.1
	comp=Z,54nm,0.8s						
SANI	Sanana	56.97	280	P	P	08 41 08.5	-0.6
	comp=Z,55nm,0.8s						
PSA00	Pilbara Seismi	58.03	256	P	P	08 41 15.7	-0.5
PSA00				IAmb	IAmb	08 41 17.0	
	comp=Z,23nm,0.8s						
PSA00	Pilbara Seismi	58.03	256	P	P	08 41 16.3	+0.1
	comp=Z,34nm,0.8s						
MBWA	Marble Bar	58.20	256	P	P	08 41 17.2	-0.2
MBWA	Marble Bar	58.20	256	P	P	08 41 17.5	+0.1
	comp=Z,12nm,0.9s						
MEEK	Meekatharra	58.53	249	P	P	08 41 20.3	+0.8
	comp=Z,22nm,0.7s						
KLBR	Kellerberrin	58.89	244	P	P	08 41 22.2	+0.3
	comp=Z,83nm,0.7s						
NWAO	Narrogin (SRO)	59.27	242	P	P	08 41 24.0	-0.4
NWAO				IAmb	IAmb	08 41 32.1	
	comp=Z,28nm,1.3s						
VNDA	Vanda	60.23	185	P	P	08 41 31.4	+1.5
	comp=Z,1.1nm,0.6s,baz=332,slow=7.1,SNR=5.7						
	comp=Z,1.1nm,0.6s						
LUWI	Luwuk	60.33	279	P	P	08 41 33.0	+1.3
LUWI				IAmb	IAmb	08 41 56.6	
	comp=Z,45nm,1.1s						
LUWI	Luwuk	60.33	279	P	P	08 41 32.6	+0.9
	comp=Z,33nm,0.7s,comp=Z,7μm						
MORW	Morawa	60.56	246	P	P	08 41 33.0	0.0
MORW				IAmb	IAmb	08 41 33.4	
	comp=Z,11nm,0.7s						
GTOI	Gorontalo	60.69	281	P	P	08 41 35.0	+0.9
	comp=Z,12nm,0.6s						
MRSI	Marisa	61.64	281	P	P	08 41 39.6	-0.7
	comp=Z,30nm,1.0s,comp=Z,844nm						
KAPI	Kappang	61.90	274	P	P	08 41 41.8	-0.2
	comp=Z,14nm,0.2s,baz=144,slow=17,SNR=6.8						
	comp=Z,14nm,0.2s						
PLAI	Plampang	62.68	269	P	P	08 41 46.9	-0.1
	comp=Z,47nm,0.7s						
MPSI	Mapaga	63.50	280	P	P	08 41 52.5	+0.2
	comp=Z,33nm,0.7s,comp=Z,840nm						
TWSI	Taliwang, Sumb	63.55	269	P	P	08 41 52.6	0.0
	comp=Z,63nm,1.0s						
JAGI	Jajag, Banyuwa	66.22	269	P	P	08 42 08.4	-1.1
JAGI	Jajag, Banyuwa	66.22	269	P	P	08 42 08.6	-0.9
	comp=Z,58nm,0.7s						
JAGI	Jajag, Banyuwa	66.22	269	P	P	08 42 08.2	-1.3
	comp=Z,58nm,0.7s						
JSG	Sagara	66.90	322	P	P	08 42 14.2	+1.0
GMJI	Gumukmas	66.95	269	P	P	08 42 13.5	-0.4
	comp=Z,37nm,0.6s						
JMM	Marumori	67.74	326	P	P	08 42 18.4	+0.2
JMM				IAmb	IAmb	08 42 19.3	
	comp=Z,26nm,1.1s						
JGF	Kuroka	68.03	322	P	P	08 42 20.3	+0.1
JGF				IAmb	IAmb	08 42 25.0	
	comp=Z,17nm,0.9s						
INU	Inuyama	68.06	322	P	P	08 42 18.5	-1.8
MJAR	Matsushiro Arr	68.20	323	P	P	08 42 20.8	-0.3
	comp=Z,18nm,0.6s,baz=154,slow=5.7,SNR=39						
	comp=Z,18nm,0.6s						
MAJO	Matsushiro	68.20	323	P	P	08 42 20.9	-0.2
MAJO	Matsushiro	68.20	323	P	P	08 42 21.1	0.0
	comp=Z,36nm,0.7s						
MJB9	Matsu-Tunnel	68.21	323	P	P	08 42 21.3	+0.2
PWJI	Pagerwojo	68.58	268	P	P	08 42 24.1	+0.2
	comp=Z,25nm,0.8s						
JMN	Monobe	68.89	318	P	P	08 42 25.9	+0.5
KKM	Kota Kinabalu	68.98	284	P	P	08 42 26.5	+0.1
KIWB	Kanaga Island	69.70	1	P	P	08 42 29.3	-0.4
ADK	Adak	69.74	1	P	P	08 42 29.5	-0.4
UGM	Wanagama	69.83	268	P	P	08 42 31.5	+0.2
UGM	Wanagama	69.83	268	P	P	08 42 31.6	+0.2
	comp=Z,117nm,0.5s						
GSTR	Great Sitkin T	69.96	1	P	P	08 42 31.0	-0.3
JHS	Saijyo	70.19	319	P	P	08 42 33.8	+0.7
SHEM	Shemya Is, Ala	70.89	355	P	P	08 42 35.9	-0.8
	comp=Z,62nm,0.9s,baz=286,slow=23,SNR=2.2						
	comp=Z,62nm,0.9s						
SMY	Shemya	70.89	355	P	P	08 42 36.5	-0.2
NIKH	Nikolski High	71.28	6	P	P	08 42 38.3	-0.7
NIKH	Nikolski High	71.28	6	P	P	08 42 38.4	-0.7
	baz=189						
SBUM	Sibu	71.43	279	P	P	08 42 41.4	+0.6
JKA	Kamikawa-asahi	71.57	331	P	P	08 42 42.3	+1.3
JKA				IAmb	IAmb	08 42 43.4	
	comp=Z,32nm,0.8s						
QSPA	South Pole Qui	71.92	180	P	P	08 42 43.7	+0.9
QSPA				IAmb	IAmb	08 42 45.0	
	comp=Z,8.4nm,0.8s						
UNV	Unalaska Valle	72.39	7	P	P	08 42 44.2	-1.2
	baz=192						
TPUB	Ta-pu	72.54	302	P	P	08 42 46.4	-0.7
TPUB				IAmb	IAmb	08 42 47.0	
	comp=Z,30nm,0.7s						
BBJI	Bungbulang	72.68	268	P	P	08 42 48.4	+0.2
	comp=Z,47nm,0.8s						
KSM	Kuching	72.90	277	P	P	08 42 50.1	+0.7
PET	Petropavlovsk	73.64	346	P	P	08 42 52.4	-0.2
PET				IAmb	IAmb	08 43 25.7	
	comp=Z,40nm,1.3s						
YSS	Yuzh-Sakhalins	73.71	333	P	P	08 42 54.1	+1.0
YSS				IAmb	IAmb	08 42 55.2	
	comp=Z,48nm,1.2s						
YSS	Yuzh-Sakhalins	73.71	333	P	P	08 42 54.5	+1.4
	comp=Z,37nm,0.9s						
FALS	False Pass	73.79	9	P	P	08 42 52.4	-1.0
	baz=195						
PEA0B	Petropavlovsk-	73.95	345	P	P	08 42 54.8	+0.4
PEA0B				IAmb	IAmb	08 42 55.3	
	comp=Z,30nm,0.8s						
PETK	Petropavlovsk-	73.95	345	P	P	08 42 53.5	-0.9
	comp=Z,21nm,0.7s,baz=134,slow=8.5,SNR=23						
	comp=Z,21nm,0.7s						
PETK	Petropavlovsk-	73.95	345	P	P	08 42 54.4	0.0
SDPT	Sand Point	74.73	10	P	P	08 42 58.1	-0.6
SDPT				IAmb	IAmb	08 43 24.9	
	comp=Z,48nm,1.1s						
SDPT	Sand Point	74.73	10	P	P	08 42 57.7	-1.0
	baz=197						
CGJI	Cibinong	74.79	268	P	P	08 42 58.9	-1.1
	comp=Z,90nm,0.5s						
S12K	Black Hills	74.82	9	P	P	08 42 57.9	-1.3
	baz=196						
KSRS	Korea Array	75.00	318	P	P	08 43 00.7	+0.1
	comp=Z,3.9nm,0.7s,baz=129,slow=6.1,SNR=10						
	comp=Z,3.9nm,0.7s						
KSAR	Wonju Array Be	75.02	318	P	P	08 43 01.1	+0.4
SNCC	San Nicolas Is	75.80	48	P	P	08 43 04.8	-0.4
	baz=237						
CHGN	Chignik	76.01	11	P	P	08 43 04.8	-1.0
	baz=199						
SBC	Santa Barbara	76.33	46	P	P	08 43 07.8	-0.2
	baz=236						
PKM	Mcpherson Peak	76.50	46	P	P	08 43 09.6	+0.3
	baz=236						
SMMC	Simmler	76.61	46	P	P	08 43 10.7	+1.0
	baz=236						
CIS	Catalina Islan	76.67	48	P	P	08 43 11.2	+1.2
	baz=238						
USA0B	Ussuriysk Arra	76.91	326	P	P	08 43 11.7	+0.7
USRK	Ussuriysk Ar.	76.91	326	P	P	08 43 12.0	+1.0
	comp=Z,5.1nm,0.6s,baz=110,slow=5.2,SNR=13						
	comp=Z,5.1nm,0.6s						
USRK	Ussuriysk Ar.	76.91	326	P	P	08 43 11.7	+0.7
ARVC	Arvin	77.31	46	P	P	08 43 13.6	+0.2
	baz=237						
109C	Camp Elliot, M	77.33	49	P	P	08 43 12.5	-1.2
	baz=238						
R16K	Pilot Point	77.36	11	P	P	08 43 12.7	-0.4
	baz=200						
VES	Vestal, Richgr	77.52	46	P	P	08 43 14.7	+0.1

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       baz=237
VOG    Valley Oaks Go   77.58  45   P      P      08 43 15.6 +0.7
       baz=236
R17K   Ugashik Creek    77.65  12   P      P      08 43 14.7  0.0
       baz=201
EDW2   Edwards Air Fo   77.75  47   P      P      08 43 16.5 +0.5
       baz=238
MONP2  Monument Peak    77.82  49   P      P      08 43 16.9 +0.4
       baz=239
ISA    Isabella, Lake   77.84  46   P      P      08 43 17.1 +0.7
       baz=237
CMB    Columbia Colle   77.88  43   P      P      08 43 17.3 +0.7
OHAK   Old Harbor       77.91  14   P      P      08 43 16.3 +0.2
       baz=204
IKP    In-Ko-Pah, Jac   77.93  50   P      P      08 43 17.0  0.0
       baz=239
TPFO   Pinon Flats      78.17  49   P      P      08 43 18.1 -0.2
       baz=239
NJ2    Nanjing          78.23 309  eP      P      08 43 20.4 +1.9
NJ2                                 pmax   pmax
       comp=Z,6.0nm,0.5s
Q17K   Contact Creek    78.33  12   P      P      08 43 18.1 -0.4
       baz=202
MDJ    Mudanjiang       78.48 325   P      P      08 43 20.9 +1.4
MDJ                                 pmax   pmax
       comp=Z,48nm,0.8s
MDJ                                 pmax   pmax
       comp=Z,250nm,5.3s
MDJ    Mudanjiang       78.48 325   P      P      08 43 21.1 +1.6
       comp=Z,43nm,0.9s
CWC    Cottonwood Cre   78.53  46   P      P      08 43 20.3 +0.1
       baz=237
Q16K   King Salmon      78.57  11   P      P      08 43 19.3 -0.3
       baz=201
KDAK   Kodiak Island    78.58  14   P      P      08 43 19.7  0.0
       comp=Z,21nm,0.8s,baz=198,slow=4.4,SNR=11
       comp=Z,21nm,0.8s
P16K   Nushagak River   78.67  11   P      P      08 43 19.7 -0.4
       baz=200
BELC   Belle Mtn. Jos   78.70  49   P      P      08 43 21.4 +0.2
       baz=239
MPMC   Manual Prospec   78.73  46   P      P      08 43 21.9 +0.6
       baz=238
Q18K   Katmai Hardscr   78.86  12   P      P      08 43 21.3 -0.1
       baz=202
DSP    Deep Springs     79.11  45   P      P      08 43 24.6 +1.6
O16K   Kokwok River B   79.18  10   P      P      08 43 21.9 -0.9
       baz=199
LCH    Last Change Ra   79.25  45   P      P      08 43 25.2 +1.3
GRAC   Grapevine Rang   79.31  45   P      P      08 43 26.1 +1.9
GRAC   Grapevine Rang   79.31  45   P      P      08 43 25.5 +1.3
       baz=238
GMRC   Granite Mounta   79.34  48   P      P      08 43 25.3 +0.8
       baz=239
IRM    Iron Mountain    79.39  49   P      P      08 43 24.9 +0.3
       baz=240
Q19K   Cape Douglas,    79.40  13   P      P      08 43 23.7 -0.4
       baz=204
NVAR   Mina Array Bea   79.46  44   P      P      08 43 25.8 +0.6
       comp=Z,3.8nm,0.7s,baz=226,slow=8.4,SNR=33
       comp=Z,3.8nm,0.7s
NVAR   Mina Array Bea   79.46  44   P      P      08 43 24.7 -0.5
PAHR   Pah Rah Range    79.47  42   P      P      08 43 26.1 +1.0
P18K   Big Mountain,    79.51  12   P      P      08 43 24.6 -0.1
       baz=202
O17K   Koliganek Bris   79.52  11   P      P      08 43 24.1 -0.6
       baz=200
NV11   Mina Array Sit   79.56  44   P      P      08 43 25.8 +0.1
WCT    Wildcat Mounta   79.71  46   P      P      08 43 26.7 +0.4
N16K   Nishlik Lake     79.90  10   P      P      08 43 27.2 +0.5
       baz=199
KVN    Kaiserville      79.93  43   P      P      08 43 28.6 +1.0
O18K   Koktuh Hills     79.94  12   P      P      08 43 27.2 +0.3
O18K   Koktuh Hills     79.94  12   P      P      08 43 26.7 -0.2
       baz=202
TPH    Tonopah          79.98  44   P      P      08 43 28.4 +0.5
TPH                                 IAmb   IAmb   08 43 29.5
       comp=Z,11nm,0.7s
TPNV   Topopah Spring   80.05  46   P      P      08 43 29.3 +1.1
       baz=238
MOD    Modoc Plateau    80.14  40   P      P      08 43 29.4 +0.8
MOD                                 IAmb   IAmb   08 43 30.4
       comp=Z,9.6nm,0.6s
P19K   Oil Pt           80.15  13   P      P      08 43 27.6 -0.5
       baz=204
PDMCI  Parker Dam,Lak   80.18  49   P      P      08 43 29.6 +0.9
       baz=240
CN2    Changchun        80.32 322  eP      P      08 43 30.1 +0.9
CN2                                 pmax   pmax
       comp=Z,20nm,1.2s
J05D   Fort Rock, OR    80.39  38   P      P      08 43 31.1 +1.3
BNX    BinXian          80.39 325 ⇑P      P      08 43 30.5 +0.9
BNX                                 pmax   pmax
       comp=Z,42nm,0.8s
BNX                                 pmax   pmax
       comp=Z,150nm,4.9s
O19K   Port Alsworth    80.43  12   P      P      08 43 29.2 -0.2
O19K   Port Alsworth    80.43  12   P      P      08 43 29.3 -0.1
       baz=203
ILSW   Iliamna Southw   80.47  12   P      P      08 43 29.5 -0.3
ILSW                                IAmb   IAmb   08 43 30.0
       comp=Z,40nm,0.8s
O20K   Slope Mountain   80.67  13   P      P      08 43 30.4 -0.4
       baz=204
BRSE   Bradley Lake S   80.77  14   P      P      08 43 31.1 -0.2
       baz=206
PINE   Pine Mountain    80.86  38   P      P      08 43 32.7 +0.4
PINE                                IAmb   IAmb   08 43 34.2
       comp=Z,9.8nm,0.8s
N19K   Bonanza Creek    80.97  12   P      P      08 43 31.4 -0.9
N19K                                IAmb   IAmb   08 43 32.2
       comp=Z,13nm,0.9s
N19K   Bonanza Creek    80.97  12   P      P      08 43 31.9 -0.5
       baz=203
PRN    Pahroc Range     81.10  46   P      P      08 43 34.6 +1.0
R11A   Troy Canyon, C   81.22  45   P      P      08 43 35.1 +0.8
       baz=239
SEW    Seward           81.39  14   P      P      08 43 34.5 +0.2
       baz=208
WVOR   Wild Horse Val   81.46  40   P      P      08 43 35.3 -0.1
WVOR                                IAmb   IAmb   08 43 37.5
       comp=Z,19nm,1.3s
MA2    Magadan          81.47 345   P      P      08 43 34.2 -0.6
MA2                                 IAmb   IAmb   08 43 35.1
       comp=Z,36nm,1.3s
CAPN   Captain Cook N   81.60  13   P      P      08 43 35.5 +0.1
       baz=206
O22K   Cooper Landing   81.66  14   P      P      08 43 35.3 -0.5
O22K   Cooper Landing   81.66  14   P      P      08 43 35.6 -0.1
       baz=207
TUC    Tucson           81.69  52   P      P      08 43 34.2 -2.5
TUC    Tucson           81.69  52   P      P      08 43 38.4 +1.6
       baz=242
SPCR   Spurr Chakacha   81.77  12   P      P      08 43 35.9 -0.5
       baz=205
I07A   Izee             81.87  38   P      P      08 43 37.9 +0.5
I07A                                IAmb   IAmb   08 43 39.5
       comp=Z,11nm,0.8s
BELA   Belgrano 2       81.91 173   P      P      08 43 37.8 +0.9
M19K   Big River Lodg   82.00  11   P      P      08 43 37.4 -0.1
M19K                                IAmb   IAmb   08 43 38.0
       comp=Z,10nm,0.8s
M19K   Big River Lodg   82.00  11   P      P      08 43 37.4 -0.1
       baz=203
J08A   Circle Bar Ran   82.08  39   P      P      08 43 39.4 +0.9
Q12A   Willow Creek R   82.09  45   P      P      08 43 39.8 +1.1
Q12A                                IAmb   IAmb   08 43 40.6
       comp=Z,17nm,1.4s
LON    Longmire         82.12  35   P      P      08 43 39.2 +0.7
LON                                 IAmb   IAmb   08 44 16.5
       comp=Z,18nm,1.5s
LCMT   Little Creek M   82.15  47   P      P      08 43 40.1 +1.1
L19K   White Mountain   82.17  11   P      P      08 43 38.8 +0.5
L19K                                IAmb   IAmb   08 43 41.9
       comp=Z,11nm,0.9s
L19K   White Mountain   82.17  11   P      P      08 43 38.5 +0.2
       baz=202
RC01   Rabbit Creek A   82.20  14   P      P      08 43 38.5 +0.1
RC01                                IAmb   IAmb   08 43 39.9
       comp=Z,29nm,1.3s
RC01   Rabbit Creek A   82.20  14   P      P      08 43 37.7 -0.8
       baz=207
M20K   Styx River       82.21  12   P      P      08 43 38.0 -0.6
       baz=204
PWL    Port Wells       82.32  14   P      P      08 43 38.7 -0.5
       baz=208
SKT    Skwentna         82.62  12   P      P      08 43 39.5 -1.1
       baz=205
L20K   Farewell, AK     82.62  11   P      P      08 43 40.3 -0.3
       baz=203
IPM    Ipoh             82.64 277   IAmb   IAmb   08 43 43.6
       comp=Z,20nm,0.7s
IPM    Ipoh             82.64 277   P      P      08 43 42.9 +1.1
       comp=Z,35nm,0.8s
TTA    Tatalina         82.67  10   P      P      08 43 41.2 +0.3
TTA                                 IAmb   IAmb   08 43 42.3
       comp=Z,18nm,1.0s
TTA    Tatalina         82.67  10   P      P      08 43 41.2 +0.3
       comp=Z,19nm,1.1s
TTA    Tatalina         82.67  10   P      P      08 43 41.2 +0.3
       baz=201,SNR=12
M22K   Willow           82.71  13   P      P      08 43 40.9 -0.1
M22K   Willow           82.71  13   P      P      08 43 40.9 -0.1
       baz=207
KNK    Knik Glacier     82.78  14   P      P      08 43 41.3 -0.1
       baz=208
PMR    Palmer           82.78  14   P      P      08 43 40.1 -1.3
PMR                                 IAmb   IAmb   08 43 41.4
       comp=Z,12nm,0.6s
PMR    Palmer           82.78  14   P      P      08 43 41.2 -0.2
       baz=208
G08A   Pilot Rock       82.88  38   P      P      08 43 42.9 +0.4
G08A                                IAmb   IAmb   08 43 44.6
       comp=Z,23nm,1.3s
ANM    Nome             83.03   6   P      P      08 43 43.0 +0.4
       baz=192
SML    Sawmill          83.15  14   P      P      08 43 42.8 -0.5
       baz=208
DIV    Divide           83.17  15   IAmb   IAmb   08 43 44.1
       comp=Z,20nm,0.8s
HAWA   Hanford          83.18  37   IAmb   IAmb   08 43 45.8
       comp=Z,22nm,1.2s
HEH    HeiHe            83.21 328  eP      P      08 43 44.3 +0.5
HEH                                 pmax   pmax
       comp=Z,13nm,0.8s
HEH                                 pmax   pmax
       comp=Z,270nm,4.3s
CUT    Chulitna         83.26  13   P      P      08 43 43.0 -0.8
CUT    Chulitna         83.26  13   P      P      08 43 43.3 -0.5
       baz=207
M23K   Glacier View     83.28  14   P      P      08 43 43.6 -0.4
       baz=209
PPLA   Purkeypile       83.32  12   P      P      08 43 43.4 -0.8
       baz=205
S31K   Pelican          83.40  21   P      P      08 43 45.2 +0.7
       baz=220
SCM    Sheep Creek Mo   83.41  14   P      P      08 43 44.2 -0.5
SCM    Sheep Creek Mo   83.41  14   P      P      08 43 44.8 +0.1
       baz=209
KLU    Klutina          83.45  15   P      P      08 43 45.0 +0.1
       baz=211
S32K   Killisnoo        83.60  22   P      P      08 43 46.5 +1.0
       baz=221
WRAK   Wrangell Islan   83.65  24   P      P      08 43 46.5 +0.7
       baz=223
PNL    Peninsula        83.72  19   P      P      08 43 46.3 +0.2
       baz=217
MFID   Camas Ranch      83.73  41   P      P      08 43 47.1 +0.4
PINM   Pinnacle         83.81  18   P      P      08 43 46.7  0.0
       baz=216
TNA    Tin City         83.81   4   P      P      08 43 46.6 +0.2
TNA                                 IAmb   IAmb   08 43 47.8
       comp=Z,16nm,0.9s
TNA    Tin City         83.81   4   P      P      08 43 46.9 +0.5
       baz=190,SNR=11
CAST   Castle Rocks     83.82  11   P      P      08 43 45.1 -1.4
CAST   Castle Rocks     83.82  11   P      P      08 43 45.9 -0.7
       baz=205
VRDI   Verde Repeater   83.85  16   IAmb   IAmb   08 43 47.9
       comp=Z,22nm,1.1s
N25K   Chitina, Valde   83.87  15   P      P      08 43 47.2 +0.2
N25K                                IAmb   IAmb   08 43 47.9
       comp=Z,24nm,0.8s
N25K   Chitina, Valde   83.87  15   P      P      08 43 47.2 +0.2
       baz=212,SNR=6.5
SKLT   Songkhla         83.89 280   P      P      08 43 50.5 +2.5
       comp=Z,26nm,0.8s
D08A   Wollman Farm,    83.90  36   IAmb   IAmb   08 43 48.8
       comp=Z,7.0nm,0.6s
M24K   Tolsona, Glenn   83.92  15   P      P      08 43 47.9 +0.8
M24K   Tolsona, Glenn   83.92  15   P      P      08 43 47.4 +0.3
       baz=210
GLB    Gilahina Butte   83.94  16   P      P      08 43 47.5 +0.3
GLB                                 IAmb   IAmb   08 43 47.7
       comp=Z,14nm,0.7s
DUG    Dugway, Tooele   84.01  44   P      P      08 43 48.7 +0.4
       baz=240
RPSI   Rantau Prapat    84.06 275   IAmb   IAmb   08 43 49.9
       comp=Z,12nm,0.7s
BJI    Beijing          84.08 315   P      P      08 43 49.6 +1.2
BJI                                 pmax   pmax
       comp=Z,9.0nm,1.0s
PSI    Prapat           84.09 275   P      P      08 43 49.5 +0.3
       comp=Z,20nm,0.9s
MCARA  McCarthy VSAT    84.09  16   P      P      08 43 48.0 +0.1
       baz=213
LYN    LuoYang          84.12 309⇑iP      P      08 43 50.4 +1.7
LYN                                 pmax   pmax
       comp=Z,25nm,1.1s
BARN   Barnard Glacie   84.19  17   IAmb   IAmb   08 43 49.9
       comp=Z,22nm,0.9s
CHUM   Lake Minchumin   84.20  11   P      P      08 43 47.7 -0.7
       baz=205,SNR=12
GCSA   Galena City Sc   84.24   9   P      P      08 43 49.3 +0.8
       baz=200,SNR=7.1
O28M   Mount Upton      84.37  18   P      P      08 43 49.7  0.0
       baz=216
HARP   HAARP            84.41  15   P      P      08 43 49.6 +0.1
       baz=211
B08A   Colville Reser   84.42  35   P      P      08 43 49.9  0.0
RND    Reindeer         84.45  13   P      P      08 43 49.8 +0.1
RND                                 IAmb   IAmb   08 43 50.5
       comp=Z,24nm,0.7s
O29M   Mount Kennedy    84.48  19   P      P      08 43 50.4 +0.4
       baz=218
PLBC   Pleasant Camp    84.51  20   P      P      08 43 50.9 +0.9
       baz=220
PLID   Pearl Lake       84.51  39   P      P      08 43 50.4 -0.3
ENH    Enshi            84.56 304   P      P      08 43 52.4 +1.4
       comp=Z,38nm,1.0s
BPAW   Bear Paw Mtn.    84.64  12   P      P      08 43 49.2 -1.4
       baz=206
HLID   Hailey           84.68  41   P      P      08 43 52.0 +0.6
HLID   Hailey           84.68  41   P      P      08 43 52.6 +1.1
       baz=239
C09A   Chrisman Ranch   84.69  36   P      P      08 43 51.0 -0.2
C09A                                IAmb   IAmb   08 43 52.2
       comp=Z,6.4nm,0.6s
MCK    McKinley         84.72  13   P      P      08 43 51.0 -0.1
MCK                                 IAmb   IAmb   08 43 51.6
       comp=Z,31nm,1.1s
MCK    McKinley         84.72  13   P      P      08 43 50.9 -0.1
       baz=208,SNR=9.5
PAX    Paxson           84.83  14   IAmb   IAmb   08 43 52.0
       comp=Z,12nm,0.9s
PAX    Paxson           84.83  14   P      P      08 43 51.5 -0.2
       baz=211
P30M   Million Dollar   84.83  19   P      P      08 43 52.6 +0.9
       baz=219
SKAG   Skagway          84.85  20   P      P      08 43 51.0 -0.6
       baz=220
T35M   Bob Quinn        84.86  24   P      P      08 43 52.6 +0.8
       baz=225
YUK8   Steele Glacier   84.91  18   P      P      08 43 52.9 +0.6
       baz=216,SNR=5.1
M26K   Nabesna, AK      84.95  16   IAmb   IAmb   08 43 54.0
       comp=Z,22nm,1.0s
M26K   Nabesna, AK      84.95  16   P      P      08 43 52.5 +0.2
       baz=213,SNR=9.4
YUK3   Moose Creek      85.11  17   P      P      08 43 53.7 +0.5
       baz=216,SNR=8.8
S34M   Telegraph Cree   85.18  23   P      P      08 43 54.6 +1.3
       baz=224,SNR=6.9
M27K   Edge Creek, AK   85.21  16   P      P      08 43 55.4 +1.9
       baz=214
HYT    Haines Junctio   85.22  19   P      P      08 43 54.5 +0.9
       baz=218
MENT   Mentasta         85.22  15   P      P      08 43 53.6 +0.2
MENT                                IAmb   IAmb   08 43 54.6
       comp=Z,15nm,1.0s
MENT   Mentasta         85.22  15   P      P      08 43 54.4 +0.9
       comp=Z,14nm,0.7s
YUK4   Talbot Arm       85.28  18   P      P      08 43 54.4 +0.4
       baz=217
L26K   Log Cabin Wild   85.39  15   P      P      08 43 54.8 +0.5
       baz=213
I21K   Tanana           85.44  11   P      P      08 43 54.4  0.0
       baz=205
SURA   Surathani        85.46 281   P      P      08 43 58.3 +2.6
NEA2   Nenana           85.46  12   P      P      08 43 53.4 -1.2
       baz=208
K24K   Donnelly Dome    85.47  14   P      P      08 43 54.9 +0.2
       baz=211,SNR=9.2
BVCY   Beaver Creek     85.53  16   P      P      08 43 55.6 +0.6
       baz=215,SNR=7.2
Q32M   Nakina River     85.53  22   P      P      08 43 56.1 +0.8
       baz=223
MLY    Manley           85.53  11   P      P      08 43 54.0 -1.0
MLY                                 IAmb   IAmb   08 43 55.6
       comp=Z,12nm,1.2s
MLY    Manley           85.53  11   P      P      08 43 54.1 -0.9
       baz=206,SNR=8.9
WRH    Wood River Hil   85.56  13   P      P      08 43 54.4 -0.5
WRH                                 IAmb   IAmb   08 43 56.1
       comp=Z,20nm,0.9s
MNTX   Cornudas Mount   85.56  55   P      P      08 43 56.8 +1.0
       baz=246
NEW    Newport          85.59  36   P      P      08 43 55.7 +0.1
NEW    Newport          85.59  36   P      P      08 43 55.5 -0.1
       baz=236
O30N   Mendenhall       85.61  19   P      P      08 43 56.4 +1.0
       baz=220,SNR=5.2
RIDG   Independent Ri   85.63  14   P      P      08 43 55.5 +0.1
RIDG                                IAmb   IAmb   08 43 55.9
       comp=Z,13nm,1.0s
RIDG   Independent Ri   85.63  14   P      P      08 43 55.7 +0.2
       baz=212,SNR=6.1
H21K   Melozitna Rive   85.73  10   P      P      08 43 56.0 +0.2
       baz=204
HDA    Harding Lake     85.74  13   P      P      08 43 55.4 -0.5
HDA                                 IAmb   IAmb   08 43 56.3
       comp=Z,13nm,0.8s
HDA    Harding Lake     85.74  13   P      P      08 43 55.5 -0.5
       baz=210,SNR=12
DOT    Dot Lake         85.74  15   IAmb   IAmb   08 43 56.8
       comp=Z,11nm,0.8s
CCB    Clear Creek Bu   85.77  13   P      P      08 43 55.3 -0.7
CCB                                 IAmb   IAmb   08 43 56.2
       comp=Z,25nm,1.1s
L27K   Beaver Creek,    85.80  16   P      P      08 43 56.4 +0.2
       baz=214
N30M   Aishikik Lake    85.84  18   P      P      08 43 56.3 -0.1
       baz=219
IMAR   Indian Mountai   85.88  10   P      P      08 43 56.4 -0.1
I23K   Minto, Yukon-K   85.90  12   P      P      08 43 55.9 -0.7
I23K                                IAmb   IAmb   08 43 58.1
       comp=Z,4.8nm,0.6s
I23K   Minto, Yukon-K   85.90  12   P      P      08 43 56.2 -0.3
       baz=207
MDM    Murphy Dome      85.96  12   P      P      08 43 56.3 -0.6
MDM                                 IAmb   IAmb   08 43 57.1
       comp=Z,14nm,1.0s
TCOL   CIGO, UAF Yank   85.96  12   P      P      08 43 56.5 -0.4
TCOL                                IAmb   IAmb   08 43 57.0
       comp=Z,37nm,1.3s
TCOL   CIGO, UAF Yank   85.96  12   P      P      08 43 56.3 -0.6
       baz=209,SNR=5.9
COLA   College          85.96  12   P      P      08 43 56.4 -0.5
COLA                                IAmb   IAmb   08 43 57.0
       comp=Z,37nm,1.3s
COLA   College          85.96  12   P      P      08 43 56.3 -0.5
       comp=Z,30nm,1.1s
COLA   College          85.96  12   P      P      08 43 56.6 -0.3
       baz=209
TX31   Lajitas Ar. Si   85.96  58   P      P      08 43 58.6 +0.7
TX31                                IAmb   IAmb   08 44 00.7
       comp=Z,14nm,0.9s
TX32   Lajitas Array    85.96  58   P      P      08 43 58.7 +0.9
TXAR   Lajitas Array    85.96  58   P      P      08 43 59.3 +1.4
       comp=Z,2.6nm,0.8s,baz=221,slow=6.0,SNR=35
       comp=Z,2.6nm,0.8s
DLBC   Dease Lake       85.97  23   P      P      08 43 58.0 +0.8
DLBC   Dease Lake       85.97  23   P      P      08 43 57.7 +0.5
       baz=225
SCRK   Sand Creek       86.04  14   P      P      08 43 56.9 -0.5
SCRK                                IAmb   IAmb   08 43 58.5
       comp=Z,7.2nm,0.9s
SCRK   Sand Creek       86.04  14   P      P      08 43 57.4  0.0
       baz=212,SNR=7.3
XLT    XiLinHaoTe       86.05 319⇑iP      P      08 43 59.0 +1.1
XLT                                 pmax   pmax
       comp=Z,14nm,1.2s
XLT                                 pmax   pmax
       comp=Z,9µm,5.4s
IL31                    86.07  13   P      P      08 43 56.7 -0.6
IL31                                IAmb   IAmb   08 43 57.7
       comp=Z,9.9nm,0.7s
ILAR   Eielson Array    86.07  13   P      P      08 43 56.5 -0.9
       comp=Z,4.4nm,0.5s,baz=221,slow=5.0,SNR=91
       comp=Z,4.4nm,0.5s
ILAR   Eielson Array    86.07  13   P      P      08 43 56.8 -0.7
ANMO   Albuquerque      86.09  51   P      P      08 43 59.5 +0.9
       baz=245
H22K   Ishtalitna Cre   86.20  11   P      P      08 43 58.1  0.0
       baz=205
M29M   Somme Creek      86.21  17   P      P      08 43 58.7 +0.4
       baz=218
P33M   Teslin, Yukon    86.26  21   P      P      08 43 59.1 +0.5
       baz=223
N31M   Braeburn, Yuko   86.26  19   P      P      08 43 59.2 +0.8
N31M                                IAmb   IAmb   08 43 60.0
       comp=Z,18nm,1.0s
N31M   Braeburn, Yuko   86.26  19   P      P      08 43 59.0 +0.5
       baz=220
POKR   Poker Plat Res   86.26  13   P      P      08 43 57.4 -1.0
POKR                                IAmb   IAmb   08 43 58.3
       comp=Z,11nm,0.6s
POKR   Poker Plat Res   86.26  13   P      P      08 43 57.7 -0.6
       baz=209,SNR=5.8
G21K   Allakaket        86.41  10   P      P      08 43 59.1 +0.1
       baz=203
H23K   Yukon River      86.47  11   P      P      08 43 59.3  0.0
       baz=207
XAN    Xi'an            86.55 307  ⇑P      P      08 44 02.1 +1.6
XAN                                 pmax   pmax
       comp=Z,26nm,1.1s
J26L   Joseph Creek     86.58  14   P      P      08 44 00.6 +0.6
J26L                                IAmb   IAmb   08 44 00.9
       comp=Z,9.5nm,0.8s
J26L   Joseph Creek     86.58  14   P      P      08 44 00.7 +0.7
       baz=213,SNR=13
MSO    Missoula         86.65  38   P      P      08 44 01.2 +0.5
MSO    Missoula         86.65  38   P      P      08 44 01.3 +0.5
       baz=239
RDOG   Red Dog Mine     86.67   6   P      P      08 43 59.5 -0.8
       baz=194
BILL   Bilibino         86.68 354   P      P      08 44 00.5 +0.3
BILL                                IAmb   IAmb   08 44 02.0
       comp=Z,12nm,1.0s
DLMT   Dillon           86.72  40   P      P      08 44 01.9 +0.7
DLMT                                IAmb   IAmb   08 44 03.3
       comp=Z,12nm,1.1s
M30M   Minto, Yukon     86.80  18   P      P      08 44 01.5 +0.5
M30M                                IAmb   IAmb   08 44 02.2
       comp=Z,17nm,1.0s
M30M   Minto, Yukon     86.80  18   P      P      08 44 01.4 +0.5
       baz=219,SNR=8.8
REDW   Red Top Meadow   86.83  42   IAmb   IAmb   08 44 04.1
       comp=Z,7.3nm,1.0s
L29M   L29M             86.83  17   P      P      08 44 01.8 +0.7
       baz=218
N32M   Quiet Lake       86.86  20   P      P      08 44 02.4 +1.1
       baz=222
PRP    Porcupine Dome   87.01  13   P      P      08 44 01.7 -0.3
PRP                                 IAmb   IAmb   08 44 08.5
       comp=Z,5.8nm,0.6s
PRP    Porcupine Dome   87.01  13   P      P      08 44 01.7 -0.3
       baz=211
IMW    Indian Meadow    87.03  42   IAmb   IAmb   08 44 05.2
       comp=Z,8.9nm,1.0s
F21K   Alatna River     87.06   9   P      P      08 44 02.4 +0.3
       baz=203
G23K   Bananza Creek    87.17  11   P      P      08 44 03.1 +0.4
       baz=207
M31M   Drury Creek, Y   87.23  19   P      P      08 44 02.6 -0.4
       baz=221
DAWY   Dawson           87.26  16   P      P      08 44 03.4 +0.3
DAWY                                IAmb   IAmb   08 44 04.5
       comp=Z,13nm,1.2s
DAWY   Dawson           87.26  16   P      P      08 44 03.7 +0.6
       baz=217,SNR=7.8
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FLWY	Flagg Ranch	87.27	42	IAmb	IAmb	08 44 06.3	
	comp=Z,10nm,1.1s						
I26K	Coal Creek Min	87.35	14	P	P	08 44 03.9	+0.5
	baz=213						
EGAK	Eagle	87.39	15	P	P	08 44 03.6	0.0
EGAK				IAmb	IAmb	08 44 04.7	
	comp=Z,13nm,1.1s						
EGAK	Eagle	87.39	15	P	P	08 44 04.0	+0.3
	baz=215,SNR=7.3						
BW06	Boulder Array	87.39	43	P	P	08 44 05.1	+0.6
	baz=242						
PD31	Pinedale Array	87.39	43	P	P	08 44 04.0	-0.5
PDAR	Pinedale Array	87.39	43	P	P	08 44 05.0	+0.5
	comp=Z,2.4nm,0.6s,baz=216,slow=3.3,SNR=25						
	comp=Z,2.4nm,0.6s						
PDAR	Pinedale Array	87.39	43	P	P	08 44 04.8	+0.3
BOZ	Bozeman (W)	87.42	40	P	P	08 44 04.3	-0.2
BOZ	Bozeman (W)	87.42	40	P	P	08 44 05.2	+0.7
	baz=241						
H17A	Grant Village	87.50	42	P	P	08 44 06.9	+1.9
	baz=242						
HHC	Hu-ho-hao-te	87.57	314	eP	P	08 44 06.9	+1.7
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC				pmax	pmax		
	comp=Z,310nm,5.4s						
FARO	Faro, Yukon	87.58	19	P	P	08 44 04.6	-0.1
	baz=222						
K29M	Barlow Dome	87.58	17	P	P	08 44 05.4	+0.7
	baz=218						
WTLY	Watson Lake, Y	87.60	22	P	P	08 44 05.2	+0.4
	baz=226						
COLD	Coldfoot	87.61	11	P	P	08 44 05.2	+0.6
COLD				IAmb	IAmb	08 44 06.0	
	comp=Z,13nm,0.9s						
COLD	Coldfoot	87.61	11	P	P	08 44 05.2	+0.6
	baz=206,SNR=10						
G24K	Hadweenzic Riv	87.64	12	P	P	08 44 04.8	0.0
	baz=209						
LKWY	Lake	87.69	41	P	P	08 44 05.8	-0.1
LKWY				IAmb	IAmb	08 44 09.2	
	comp=Z,5.3nm,0.8s						
MAYO	Mayo, Yukon	87.85	18	P	P	08 44 06.9	+1.1
MAYO	Mayo, Yukon	87.85	18	P	P	08 44 06.9	+1.1
	baz=220,SNR=7.4						
I27K	Kandik River	87.96	14	P	P	08 44 06.3	-0.1
	baz=214						
G25K	Bearman Lake	87.97	12	P	P	08 44 06.4	+0.2
	baz=210						
FYU	Fort Yukon	87.97	13	P	P	08 44 06.1	-0.2
FYU				IAmb	IAmb	08 44 07.4	
	comp=Z,6.2nm,0.8s						
F24K	Squaw Lake	88.28	11	P	P	08 44 08.5	+0.6
	baz=209						
WAPA	Wapiti River	88.41	29	P	P	08 44 09.3	+0.6
E23K	Chandalar	88.45	10	P	P	08 44 09.4	+0.7
	baz=207						
MSTX	Muleshoe	88.48	54	P	P	08 44 10.3	+0.7
	baz=247						
H27K	Steamboat Moun	88.50	14	P	P	08 44 09.2	+0.3
	baz=215						
T25A	Trinidad	88.51	50	P	P	08 44 09.7	-0.2
	baz=246						
I29M	Ogilvie Camp,	88.58	16	P	P	08 44 09.5	+0.2
I29M				IAmb	IAmb	08 44 09.9	
	comp=Z,8.8nm,0.9s						
I29M	Ogilvie Camp,	88.58	16	P	P	08 44 09.4	+0.2
	baz=218,SNR=6.0						
G26K	Porcupine Rive	88.60	13	P	P	08 44 09.8	+0.6
	baz=212						
E24K	Your Creek	88.66	11	P	P	08 44 10.5	+0.8
	baz=208						
BRLDA	Berland Lookou	88.67	31	P	P	08 44 11.5	+1.5
GCMT	Greycliff	88.72	41	P	P	08 44 12.2	+1.6
F25K	Christian Rive	88.77	12	P	P	08 44 11.0	+0.8
	baz=211						
BMAR	Burnt Mountain	88.84	12	P	P	08 44 10.9	+0.4
G27K	Doyon Strip	88.95	14	P	P	08 44 11.5	+0.6
	baz=214						
TOLK	Toolik Lake Re	88.98	10	P	P	08 44 11.5	+0.4
TOLK				IAmb	IAmb	08 44 12.1	
	comp=Z,4.9nm,0.7s						
TOLK	Toolik Lake Re	88.98	10	P	P	08 44 11.3	+0.3
	baz=207						
D23K	Nanushuk River	89.09	10	P	P	08 44 11.9	+0.4
	baz=206						
CMAR	Chiang Mai Arr	89.14	290	P	P	08 44 14.3	+1.4
	comp=Z,2.3nm,0.4s,baz=113,slow=2.6,SNR=22						
	comp=Z,2.3nm,0.4s						
CMAR	Chiang Mai Arr	89.14	290	P	P	08 44 14.1	+1.2
F26K	Sheenjek River	89.16	12	P	P	08 44 12.5	+0.6
	baz=212						
E25K	Arctic Village	89.24	12	P	P	08 44 12.8	+0.5
	baz=211						
K22A	Casper	89.34	44	P	P	08 44 14.0	+0.5
	baz=244						
CD2	Chengdu	89.35	303	P	P	08 44 14.5	+0.8
PZH	PanZhiHua	89.43	298	P	P	08 44 15.7	+1.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,4.3s						
JCT	Junction City	89.50	58	P	P	08 44 14.9	+0.5
	baz=249						
EPYK	Eagle Plains	89.78	15	IAmb	IAmb	08 44 15.8	
	comp=Z,18nm,1.0s						
EPYK	Eagle Plains	89.78	15	P	P	08 44 14.7	-0.1
	baz=219						
TROLL	Troll, Antarti	90.08	180	P	P	08 44 17.1	+0.7
C24K	Franklin Bluff	90.09	10	P	P	08 44 16.4	+0.4
	baz=208						
E27K	Coleen River	90.10	13	P	P	08 44 16.4	+0.1
	baz=214						
D25K	Kavik River	90.13	11	P	P	08 44 15.8	-0.5
	baz=210						
SNAA	Sanae	90.36	179	P	P	08 44 16.7	-0.9
G30M	tAoh Zraii Nji	90.38	15	P	P	08 44 17.6	0.0
	baz=219						
ABTX	Abilene, Hawle	90.40	56	P	P	08 44 19.2	+0.7
	baz=249						
VNA3	Neumayer Olymp	90.50	176	P	P	08 44 17.6	-0.6
C27K	Jago River	90.88	11	P	P	08 44 19.8	0.0
	baz=213						
C26K	Camden Bay	90.91	11	P	P	08 44 20.5	+0.7
	baz=211						
PLCA	Paso Flores	91.04	134	P	P	08 44 22.1	+0.7
	comp=Z,1.2nm,0.6s,baz=242,slow=3.2,SNR=5.3						
	comp=Z,1.2nm,0.6s						
LZH	Lanzhou	91.18	308	eP	P	08 44 19.5	-2.7
LZH				pP	pP	08 46 23.9	+0.8
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
F31M	Tsiigehtchic	91.36	16	P	P	08 44 22.3	+0.4
	baz=222						
WRGLY	Wrigley	91.57	22	P	P	08 44 23.1	0.0
	baz=231						
RSSD	Black Hills	91.60	44	P	P	08 44 24.3	+0.3
	baz=246						
INK	Inuvik	92.06	15	P	P	08 44 24.9	-0.3
	comp=Z,8.2nm,0.7s,baz=242,slow=2.8,SNR=28						
	comp=Z,8.2nm,0.7s						
INK	Inuvik	92.06	15	P	P	08 44 24.8	-0.3
INK				IAmb	IAmb	08 44 25.7	
	comp=Z,9.7nm,0.8s						
INK	Inuvik	92.06	15	P	P	08 44 24.9	-0.3
	baz=222						
DGMT	Dagmar	93.25	40	P	P	08 44 32.1	+1.0
DGMT	Dagmar	93.25	40	P	P	08 44 32.4	+1.2
	baz=246						
KAN08	Anthony NE Sta	93.31	52	P	P	08 44 31.2	-0.5
ULN	Ulaanbaatar	93.45	319	P	P	08 44 32.4	+0.1
ULN				IAmb	IAmb	08 44 33.5	
	comp=Z,3.7nm,0.8s						
SONM	Songino Array	93.85	319	P	P	08 44 33.1	-0.9
	comp=Z,2.0nm,1.0s,baz=133,slow=5.2,SNR=6.3						
	comp=Z,2.0nm,1.0s						
NATX	Nacogdoches	94.08	58	P	P	08 44 36.0	+0.6
	baz=251						
YKA	Yellowknife Ar	94.46	25	P	P	08 44 36.2	-0.1
	comp=Z,3.1nm,0.8s,baz=243,slow=4.5,SNR=41						
	comp=Z,3.1nm,0.8s						
KSU1	Kansas State U	94.95	51	P	P	08 44 39.8	+0.6
	baz=251						
C36M	Paulatuk	95.26	17	P	P	08 44 39.9	+0.2
	baz=231						
GTA	Gaotai	95.33	310	eP	P	08 44 41.8	+0.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TIXI	Tiksi	96.43	345	P	P	08 44 44.2	-0.7
TIXI				IAmb	IAmb	08 44 45.0	
	comp=Z,3.9nm,0.8s						
ECSD	EROS Data Cent	96.46	46	P	P	08 44 46.3	+0.5
ECSD				IAmb	IAmb	08 44 54.1	
	comp=Z,6.9nm,1.4s						
ECSD	EROS Data Cent	96.46	46	P	P	08 44 46.0	+0.2
	baz=251						
A36M	Sachs Harbour	96.66	14	P	P	08 44 46.1	+0.2
A36M	Sachs Harbour	96.66	14	P	P	08 44 45.7	-0.3
	baz=230						
ZALV	Zalesovo Beam	108.53	322	PKiKP	PKiKP	08 49 41.0	-0.3
	comp=Z,0.4nm,0.4s,baz=112,slow=3.9,SNR=2.5						
MKAR	Makanchi Array	109.43	314	PKiKP	PKiKP	08 49 42.7	-0.6
	comp=Z,1.1nm,0.5s,baz=182,slow=0.4,SNR=23						
BVAR	Borovoye Array	117.14	321	PKP	PKPdf	08 49 57.6	-0.2
	comp=Z,3.2nm,0.4s,baz=48,slow=0.5,SNR=20						
ARU	Arti	123.15	326	PKP	PKPdf	08 50 09.0	-0.2
	comp=Z,4.3nm,0.2s,baz=23,slow=2.6,SNR=7.7						
AKTO	Aktyubinsk	125.17	319	PKP	PKPdf	08 50 13.0	-0.3
	comp=Z,2.5nm,0.7s,baz=69,slow=1.8,SNR=7.8						
ARCES	ARCESS Array B	126.58	350	PKP	PKPdf	08 50 15.5	+0.1
	comp=Z,4.6nm,0.7s,baz=329,slow=1.4,SNR=9.7						
GEYT	Alibeck	127.32	304	PKP	PKPdf	08 50 17.9	0.0
	comp=Z,2.9nm,0.9s,baz=274,slow=4.3,SNR=4.3						
KLMR	Klimovskoe	129.64	337	ePKPdf	PKPdf	08 50 21.4	-0.1
KLMR				AMP		08 50 23.0	
	comp=Z,19nm,1.5s						
KLMR				ePP	PP	08 52 51.9	+11
FINES	FINESS Array B	133.46	344	PKhKP	PKPpre	08 50 17.6	
	comp=Z,1.0nm,0.4s,baz=292,slow=1.0,SNR=6.5						
FINES				PKP	PKPdf	08 50 28.0	-0.7
	comp=Z,3.3nm,0.7s,baz=116,slow=2.2,SNR=8.4						
FINES				SKPbc	SKPbc	08 53 06.5	+0.6
	comp=Z,3.1nm,0.9s,baz=54,slow=2.6,SNR=2.5						
NB2	NORSAR Subarra	136.63	353	PKP	PKPpre	08 50 24.7	
	comp=Z,0.7nm,0.6s,baz=17,slow=2.6						
NOA	NORSAR Array B	136.63	353	PKhKP	PKPpre	08 50 23.9	
	comp=Z,0.4nm,0.5s,baz=20,slow=3.9,SNR=4.1						
NOA				PKP	PKPdf	08 50 34.9	+0.2
	comp=Z,1.2nm,0.6s,baz=13,slow=4.0,SNR=5.8						
NACGM	Naroch	138.62	338	ePKP	PKiKP	08 50 53.7	+13
	comp=Z,14nm,0.8s,baz=39						
AKASG	Malin Array Be	140.85	332	PKhKP	PKPpre	08 50 35.4	
	comp=Z,1.0nm,0.3s,baz=45,slow=3.9,SNR=8.4						
INVG	Invergeldie, C	141.52	5	eP	PKPdf	08 50 38.4	-5.2
LAWE	Loch Awe, Argy	141.56	6	eP	PKPdf	08 50 38.8	-4.9
NEWG	New Galloway	142.80	6	eP	PKPdf	08 50 43.0	-3.0
GAL1	Galloway	143.00	6	eP	PKPdf	08 50 43.0	-3.3
SORM	Soroca	143.08	330	⇑P	PKPab	08 50 44.9	+0.6
EDMD	Edmundbyers	143.26	4	eP	PKPab	08 50 44.4	-0.5
IOMK	Kirk Michael	143.62	6	eP	PKPab	08 50 45.3	-0.9
WIM	Isle of Man	143.72	6	eP	PKPab	08 50 46.1	-0.4
BZK	Bozkurt	143.72	318	⇑P	PKPbc	08 50 45.0	-2.0
BZK	Bozkurt	143.72	318		PKPbc	08 50 44.8	-2.2
BNN	Bunyan	143.95	312		PKPab	08 50 48.7	+0.5
LODK	Lodwar	144.02	250		PKPdf	08 50 50.0	+0.6
HPK	Haverah Park	144.15	3	eP	PKPbc	08 50 47.7	-0.2
VASR	Vaslui	144.40	329	⇑P	PKPab	08 50 50.4	+1.0
WPS	Cemaes, Angles	144.47	6	eP	PKPab	08 50 49.5	+0.1
WME	Myndd Eilian	144.50	6	eP	PKPdf	08 50 48.6	-0.3
WLF1	Llynfaes	144.59	6	eP	PKPab	08 50 50.1	+0.2
LBWR	Ladybower, Pea	144.70	4	eP	PKPdf	08 50 49.6	+0.3
YLL	Llanberis	144.76	6	eP	PKPdf	08 50 49.8	+0.4
VLDR	Vladesti	144.81	328	⇓P	PKPab	08 50 51.6	+0.6
TLCR		144.87	326	⇑P	PKPab	08 50 51.4	+0.2
BUR08	Bucovina Ar. S	144.89	332	PKPbc	PKPab	08 50 51.8	+0.3
OJC	Ojcow	144.89	340		PKPbc	08 50 50.5	+0.2
BURAR	Bucovina Array	144.91	332	⇑P	PKPab	08 50 51.6	+0.1
BURAR	Bucovina Array	144.91	332	PKPbc	PKPab	08 50 51.5	+0.1
RETH	Rethem/Aller,	144.97	352	ePKPbc	PKPbc	08 50 51.2	+0.7
	baz=17,slow=2.7						
SCTR	Scanteiesti	144.97	327	⇑P	PKPab	08 50 52.3	+0.7
GHRR		145.00	328	⇑P	PKPab	08 50 52.8	+1.1
TESR	Tescani	145.05	330	⇑P	PKPab	08 50 52.0	0.0
STHS	Stebnicka Huta	145.07	338	ePKP	PKPbc	08 50 51.2	+0.2
BR131	Keskin Array S	145.08	315	PKPbc	PKPbc	08 50 51.5	+0.1
BRTR	Keskin Array B	145.08	315	PKPbc	PKPbc	08 50 51.4	-0.1
	comp=Z,12nm,0.9s,baz=116,slow=2.9,SNR=20						
BRTR	Keskin Array B	145.08	315	PKPbc	PKPbc	08 50 52.0	+0.5
FLTG	Flechtingen	145.08	350	ePKPbc	PKPbc	08 50 51.2	+0.3
	baz=17,slow=2.7						
GISR	Galati	145.10	327	⇑P	PKiKP	08 50 55.4	+1.0
LLW	Llanuwychllyn	145.10	6	eP	PKPdf	08 50 50.5	+0.5
NRDL	Niedersach Rie	145.10	351	ePKPbc	PKPbc	08 50 51.3	+0.5
	baz=17,slow=2.7						
FOEL	Foel Wylfa	145.10	5	eP	PKPbc	08 50 51.0	+0.1
SLCR	Slobozia Conac	145.14	327	⇑P	PKPab	08 50 53.5	+1.3
IZVR	Izvoarele	145.18	327	⇓P	PKPab	08 50 53.3	+0.9
CFR	Carcaliu	145.23	327	⇑P	PKPab	08 50 52.6	-0.1
TPGR	Topolog	145.30	326	⇑P	PKPab	08 50 53.1	+0.1
ASSE	Asse, Remlinge	145.37	350	ePKPbc	PKPbc	08 50 52.3	+0.7
	baz=17,slow=2.7						
ODBI	Odobesti	145.38	328	⇑P	PKPab	08 50 53.9	+0.7
VRI	Vrincioaia	145.47	329	⇑P	PKPbc	08 50 53.2	+1.0
HLM1	Long Mynd	145.50	5	eP	PKPbc	08 50 51.7	-0.3
PLOR	Plostina	145.52	329	⇑P	PKPbc	08 50 53.3	+0.9
ANTO	Ankara	145.57	315	⇑P	PKPbc	08 50 53.2	+0.3
ANTO	Ankara	145.57	315		PKPbc	08 50 53.5	+0.7
IBBN	Ibbenburen	145.58	354	ePKPbc	PKPbc	08 50 53.0	+0.7
	baz=17,slow=2.7						
BMR	Baia Mare	145.60	334	⇑P	PKPab	08 50 53.7	-0.3
TRPA	Tarpa	145.63	335	⇑P	PKPbc	08 50 53.6	+1.0
OSTC	Ostas	145.66	344	⇑ePKP	PKPab	08 50 53.8	-0.4
HARR	Harsova	145.67	326	⇑P	PKPab	08 50 54.0	-0.4
ARCR	ARCALIA	145.69	332	⇑P	PKPbc	08 50 53.7	+0.9
CLZ	Clausthal	145.69	351	ePKPbc	PKPbc	08 50 53.6	+0.9
	baz=17,slow=2.7						
CLL	Collm	145.73	347	PKPbc	PKPbc	08 50 53.4	+0.6
CLL	Collm	145.73	347	⇓iPKPbc	PKPbc	08 50 53.3	+0.6
	comp=Z,62nm,0.9s						
CLL	Collm	145.73	347	ePKPbc	PKPbc	08 50 53.5	+0.6
	baz=17,slow=2.7						
COVR	Voineasa-Covas	145.75	329	⇑P	PKPdf	08 50 52.6	+1.2
OKC	Ostrava-Krasne	145.75	341	⇑ePKP	PKPbc	08 50 53.8	+0.9
OKC				ePKPAB	PKiKP	08 50 55.5	-0.1
UPC	Upice	145.76	344	⇑ePKP	PKPab	08 50 54.1	-0.5
LPW	Lampeter	145.79	6	eP	PKPdf	08 50 52.3	+1.1
DPC	Dobruska-Polom	145.82	343	⇑ePKP	PKPbc	08 50 54.3	+1.2
DPC				ePKPAB	PKiKP	08 50 56.2	+0.4
RSBS	Rosebush, Pemb	145.87	7	eP	PKPdf	08 50 52.1	+0.8
LANS	Liptovska Anna	145.92	339	ePKP	PKPab	08 50 55.2	-0.1
BRG	Berggiesshubel	145.94	346	i PKP	PKPbc	08 50 54.2	+0.8
BRG				Amp		08 50 55.1	
	comp=Z,26nm,0.9s						
BRG	Berggiesshubel	145.94	346	Amp		08 51 01.2	
	comp=Z,6.9nm,0.8s						
BRG	Berggiesshubel	145.94	346	ePKPbc	PKPbc	08 50 54.1	+0.8
	baz=17,slow=2.7						
BRG	Berggiesshubel	145.94	346	P	PKiKP	08 50 59.6	+3.7
KRLC	Kraliky	145.94	343	⇑ePKP	PKPbc	08 50 54.5	+1.0
KRLC				ePKPAB	PKiKP	08 50 56.4	+0.4
MORC	Moravsky Berou	145.99	342	⇑P	PKPbc	08 50 54.9	+1.3
MORC	Moravsky Berou	145.99	342		PKPbc	08 50 54.5	+0.8
MORC	Moravsky Berou	145.99	342	ePKP	PKPbc	08 50 54.3	+0.7
NEHR	Nehoiu	146.00	329	⇑P	PKPbc	08 50 54.5	+0.8
MCH1	Michaelchurch	146.00	5	eP	PKPbc	08 50 53.3	-0.2
FBE	Freiberg	146.02	347	ePKPbc	PKPbc	08 50 54.8	+1.2
	baz=17,slow=2.7						
GTTG	Gottingen	146.04	351	ePKPbc	PKPbc	08 50 54.4	+0.8
	baz=17,slow=2.7						
DOPR	Dopca	146.05	330	⇑P	PKPbc	08 50 54.5	+0.7
NEUB	Neuenburg	146.06	349	ePKPbc	PKPbc	08 50 54.5	+0.8
	baz=17,slow=2.7						
ISR	Istrita	146.09	328	⇑P	PKPbc	08 50 55.2	+1.2
PVCC	Panska Ves	146.11	345	⇑ePKP	PKPbc	08 50 55.1	+1.2
ICOR	Ion Corvin	146.12	325	⇓P	PKPab	08 50 56.1	-0.1
MLR	Muntele Rosu	146.13	329	⇑P	PKPbc	08 50 54.7	+0.5
MLR	Muntele Rosu	146.13	329	PKPbc	PKPbc	08 50 54.1	-0.1
	comp=Z,10nm,0.5s,baz=152,slow=1.9,SNR=14						
MLR	Muntele Rosu	146.13	329		PKPbc	08 50 55.0	+0.7
KECS	Kecovo	146.13	337	ePKP	PKiKP	08 50 56.7	+0.3
MONM	Monmouth	146.18	5	eP	PKPbc	08 50 53.8	-0.2
CJR	Cluj-Napoca	146.31	333	⇑P	PKPbc	08 50 55.9	+1.3
MDUB	Mudurnu	146.31	318		PKPbc	08 50 55.4	+0.5
SECR		146.39	328	⇑P	PKPbc	08 50 55.9	+1.0
MARR	Marisel-Cluj	146.54	333	⇑P	PKPbc	08 50 56.3	+1.0
KASTN	Kahler Asten	146.59	352	ePKPbc	PKPbc	08 50 55.9	+0.6
	baz=17,slow=2.7						
VOIR		146.60	330	⇑P	PKPbc	08 50 56.4	+0.9
PRU	Pruhonice	146.62	345	⇑ePKP	PKPbc	08 50 56.3	+1.0
PRU				ePKPAB	PKPab	08 50 58.7	+0.7
GOPC	GO Pecny, Ondr	146.62	345	⇑ePKP	PKPbc	08 50 56.4	+1.1
GOPC				ePKPAB	PKPab	08 50 58.9	+0.9
DRGR		146.63	334	⇑P	PKPbc	08 50 56.5	+1.0
MOX	Moxa	146.63	349	ePKPbc	PKPbc	08 50 55.9	+0.6
	baz=17,slow=2.7						
PLN	Plauen	146.68	348	ePKPbc	PKPbc	08 50 56.2	+0.8
	baz=17,slow=2.7						
TANN	Tannenbergstha	146.69	348	ePKPbc	PKPbc	08 50 56.4	+0.8
	baz=17,slow=2.7						
VRAC	Vranov	146.69	342	⇑P	PKiKP	08 50 57.6	+0.1
VRAC	Vranov	146.69	342	e	PKPab	08 50 59.2	+0.9
VRAC	Vranov	146.69	342	ePKP	PKPbc	08 50 56.3	+0.8
WERD	Werda	146.69	348	ePKPbc	PKPbc	08 50 56.4	+0.9
	baz=17,slow=2.7						
VYHS	Vyhne	146.70	339	e	PKPab	08 50 59.2	+0.8
VYHS	Vyhne	146.70	339	ePKP	PKPbc	08 50 56.3	+0.7
GUNZ	Gunzen	146.76	348	ePKPbc	PKPbc	08 50 56.7	+1.0
	baz=17,slow=2.7						
JAVC	Velka Javorina	146.76	341	ePKP	PKiKP	08 50 57.6	-0.2
PSZ	Piszkesteto	146.82	338	⇑P	PKPbc	08 50 57.1	+1.1
WERN	Wernitzgruen	146.82	348	ePKPbc	PKPbc	08 50 56.9	+1.0
	baz=17,slow=2.7						
ARR	Arges	146.85	330	⇑P	PKiKP	08 50 57.6	-0.5
NKC	Novy Kostel	146.86	347	⇑ePKP	PKPbc	08 50 57.0	+1.0
NKC				ePKPAB	PKPab	08 50 59.4	+0.4
KRUC	Moravsky	146.97	342	e	PKPab	08 51 00.1	+0.7
KRUC	Moravsky	146.97	342	ePKP	PKPbc	08 50 56.9	+0.7
MANZ	Manzenberg	147.16	348	ePKPbc	PKPbc	08 50 57.6	+0.8
	baz=17,slow=2.7						
MODS	Modra-Piesok	147.31	341	ePKP	PKiKP	08 50 58.4	-0.5
ROTZ	Rotzenmuhle	147.35	347	ePKPbc	PKPbc	08 50 58.1	+0.8
	baz=17,slow=2.7						
AHRW	Bad Neuenahr-A	147.40	354	ePKPbc	PKiKP	08 50 58.8	-0.2
	baz=17,slow=2.7						
MEM	Membach	147.43	355	dPKP	PKPbc	08 50 57.6	+0.2
BTNL	Ternell	147.44	355	dPKP	PKPbc	08 50 57.0	-0.4
BSTI	Sart Tilman	147.49	356	dPKP	PKPbc	08 50 58.0	+0.5
TNS	Taunus Mts	147.55	352	ePKPbc	PKPbc	08 50 58.6	+0.8
	baz=17,slow=2.7						
SNF	Seneffe	147.65	357	dPKP	PKPbc	08 50 58.6	+0.6
KHC	Kasperske Hory	147.65	345	⇑ePKP	PKiKP	08 50 59.2	-0.4
KHC				ePKPAB	PKPab	08 51 03.0	+0.8
BCLA	Clavier	147.67	356	dPKP	PKPab	08 51 01.9	-0.3
GZR	Gura Zlata	147.69	332	⇑P	PKPbc	08 50 58.2	-0.1
SURR	Surduc	147.70	333	⇑P	PKPbc	08 50 59.0	+0.8
CKRC	Cesky Krumlov	147.75	344	⇑ePKP	PKiKP	08 50 59.6	-0.2
BMRD	Maredsous	147.82	356	dPKP	PKPbc	08 50 58.9	+0.5
GEC2	GERESS Array S	147.88	345	ePKPbc	PKPbc	08 50 59.5	+0.7
	baz=17,slow=2.7						
GERES	GERESS Array B	147.88	345	PKPbc	PKPbc	08 50 59.3	+0.5
	comp=Z,9.0nm,0.6s,baz=80,slow=15,SNR=9.1						
GERES	GERESS Array B	147.88	345		PKPbc	08 50 59.4	+0.7
RCHB	Rochefort	147.94	356	dPKP	PKPbc	08 50 59.4	+0.7
BZS	Buzias	148.02	333	⇑P	PKPbc	08 50 59.9	+0.8
DOU	Dourbes	148.04	357	dPKiKP	PKPbc	08 50 59.5	+0.5
CONA	Conrad Observa	148.14	342	ePKiKP	PKPbc	08 51 00.4	+1.0
	comp=Z,20nm,0.6s						
RONA	Rosalia, Austr	148.22	341	i PKiKP	PKPbc	08 51 00.4	+0.9
	comp=Z,17nm,0.6s,SNR=6.1						
HERR	Herculane	148.25	332	⇑P	PKPbc	08 51 00.4	+0.8
PLVB	Pleven	148.29	327	⇑P	PKPbc	08 50 58.4	-1.4
WLF	Walferdange	148.36	355	PKPbc	PKiKP	08 51 01.0	0.0
WLF	Walferdange	148.36	355	dPKP	PKiKP	08 51 00.9	0.0
WLF	Walferdange	148.36	355	ePKPbc	PKiKP	08 51 01.1	+0.2
	baz=17,slow=2.7						
DJES	Djerdap	148.37	331	⇑P	PKPbc	08 50 59.6	-0.4
MDVR	Moldovita	148.64	332	⇑P	PKPbc	08 50 59.9	-0.8
MOA	Molln	148.66	344	i PKiKP	PKiKP	08 51 02.3	+0.6
	comp=Z,5.1nm,0.6s						
MORH	Mrgy, Hungar	148.72	337	⇑P	PKPbc	08 51 01.6	+0.8
ARSA	Arzberg	148.85	342	i PKiKP	PKiKP	08 51 02.3	+0.2
	comp=Z,7.8nm,0.8s						
JSA	Saint Aubin	148.86	5	eP	PKPbc	08 51 01.2	+0.2
BIOA	Bad Ischl, Aus	148.97	344	i PKiKP	PKiKP	08 51 02.7	+0.3
	comp=Z,18nm,0.5s						
FUR	Furstenfeldbru	149.07	348	ePKPbc	PKiKP	08 51 02.5	-0.1
	baz=17,slow=2.7						
MANT	Manisa	149.10	317	PKPbc	PKPbc	08 51 02.8	+0.6
RJOB	Jochberg	149.13	345	ePKPbc	PKPbc	08 51 02.2	+0.4
	baz=17,slow=2.7						
FRGS	Fruska Gora	149.15	335	⇑P	PKPbc	08 51 01.2	-0.7
BFO	Black Forest	149.42	351	PKPdf	PKPdf	08 50 57.0	-0.3
BFO					PKPbc	08 51 03.1	+0.7
BFO				PKPab	PKPab	08 51 09.3	-0.3
BFO	Black Forest	149.42	351	ePKPbc	PKPbc	08 51 03.0	+0.5
	baz=17,slow=2.7						
SOKA	Soboth	149.51	342	i PKP	PKPbc	08 51 02.7	-0.1
	comp=Z,11nm,0.8s						
BOVS	Bovan	149.53	331	⇑P	PKPbc	08 51 01.8	-1.0
VTS	Vitosha	149.55	328	⇑P	PKiKP	08 51 04.0	+0.1
VTS	Vitosha	149.55	328		PKiKP	08 51 04.5	+0.6
AKAS	Kas	149.55	312	PKPdf	PKPdf	08 50 55.8	-2.3
AKAS					PKPbc	08 51 03.1	-0.2
AKAS				PKPab	PKPab	08 51 09.6	-1.1
KBA	Koelnbreinsper	149.61	344	i PKiKP	PKPbc	08 51 03.8	+0.7
	comp=Z,17nm,0.6s						
UBR	Ueberruh	149.76	349	ePKPbc	PKPbc	08 51 04.0	+0.7
	baz=17,slow=2.7						
WATA	Walderalm	149.79	347	i PKiKP	PKPbc	08 51 03.8	+0.3
	comp=Z,19nm,0.6s						
OBKA	Obir	149.81	342	ePKP	PKPab	08 51 11.4	+0.1
	comp=Z,12nm,0.7s						
RETA	Reutte	149.82	348	i PKiKP	PKPbc	08 51 04.1	+0.6
	comp=Z,9.4nm,0.5s						
WTTA	Wattenberg	149.85	347	i PKiKP	PKPbc	08 51 04.3	+0.6
	comp=Z,42nm,0.6s,SNR=11						
MOTA	Moosalm	149.88	347	ePKiKP	PKPbc	08 51 04.3	+0.5
	comp=Z,21nm,0.7s						
MYKA	Terra Mystica	149.95	344	i PKP	PKPbc	08 51 03.3	-0.5
	comp=Z,16nm,0.5s						
SQTA	Sankt Quirin	149.98	347	i PKiKP	PKiKP	08 51 04.7	+0.1
	comp=Z,24nm,0.5s,SNR=6.9						
ABTA	Abfaltersbach	150.13	345	i PKP	PKPbc	08 51 04.3	+0.1
	comp=Z,31nm,0.6s,SNR=7.5						
VNDS	Vrh nad Dolski	150.13	342	i PKPbc	PKPbc	08 51 04.4	+0.2
PRED	Cave del Predi	150.14	344	PKPbc	PKPbc	08 51 04.3	0.0
PRED				PKPab	PKPab	08 51 11.3	-1.4
DAVA	Damuels	150.18	349	i PKiKP	PKiKP	08 51 05.1	+0.1
	comp=Z,20nm,0.7s						
LJU	Ljubljana	150.24	342	i PKPbc	PKPbc	08 51 04.8	+0.3
LJU				i PKPab	PKPab	08 51 13.1	+0.1
FETA	Feichten	150.27	348	i PKiKP	PKiKP	08 51 05.4	+0.1
	comp=Z,20nm,0.7s,SNR=6.0						
CLUD	Cludinico	150.31	344	PKPbc	PKPbc	08 51 03.9	-0.7
CLUD				PKPab	PKPab	08 51 12.9	-0.4
VOJS	Vojsko	150.43	343	i PKPbc	PKPbc	08 51 04.8	-0.2
STAL	STALIGIAL	150.53	344	PKPdf	PKPdf	08 50 57.4	-1.7
STAL					PKPbc	08 51 04.2	-0.9
STAL				PKPab	PKPab	08 51 12.7	-1.6
DAVOX	Davos/Dischmat	150.67	349	PKPbc	PKiKP	08 51 06.4	+0.4
	comp=Z,44nm,0.6s,baz=336,slow=1.5,SNR=57						
FUORN	Ofenpass-Fuorn	150.75	348		PKiKP	08 51 06.6	+0.2
TUE	Stuetta	151.06	349	PKPdf	PKPdf	08 50 59.9	-0.3
TUE				PKPbc	PKiKP	08 51 07.9	+1.0
TUE				PKPab	PKPab	08 51 16.5	-0.2
SENIN	Lac Senin/Sane	151.49	352	PKPdf	PKPdf	08 51 01.0	+0.2
SENIN					PKiKP	08 51 08.4	+0.6
SENIN				PKPab	PKPab	08 51 18.5	0.0
FNA	Florina	151.84	327	PKPdf	PKPdf	08 50 59.3	-2.0
FNA					PKPbc	08 51 07.1	-1.2
FNA				PKPab	PKPab	08 51 19.9	-0.1
IDI	Anoyia	153.32	314	PKPbc	PKiKP	08 51 12.6	+0.9
	comp=Z,3.2nm,0.4s,baz=297,slow=11,SNR=6.8						
ESDC	Sonseca Array	157.97	12	PKPab	PKPab	08 51 45.6	-0.7
	comp=Z,2.9nm,0.9s,baz=341,slow=4.4,SNR=9.7						
ESDC	Sonseca Array	157.97	12	PKPdf	PKPdf	08 51 08.5	-1.1
ESDC				PKPab	PKPab	08 51 46.5	+0.1
PAB	San Pablo	158.02	13	PKPdf	PKPdf	08 51 09.4	-0.2
PAB				PKPab	PKPab	08 51 46.4	-0.1
KEST	Kesra	161.24	341	PKPdf	PKPdf	08 51 10.9	-2.5
KEST				PKPab	PKPab	08 52 00.0	-0.7
AVE	Averroes	162.79	27	PKPdf	PKPdf	08 51 12.6	-2.4
AVE				PKPab	PKPab	08 52 06.2	-1.4
TORD	Torodi Ar. Bea	175.03	179	PKP	PKPdf	08 51 22.4	-0.6
	comp=Z,0.3nm,0.8s,baz=15,slow=1.8,SNR=3.7						
TORD				PKPab	PKPab	08 53 03.3	+1.4
	comp=Z,0.6nm,0.8s,baz=177,slow=4.5,SNR=2.3						

IDC 06 08:43:27.8±487.0, 65.°71N×39.°63E, h0km, Error ellipse: s-maj=297.8km s-min=160.1km az=40.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	AKTYUBINSK INF	18.05	139	I	I	10 38 20.0	
	baz=336,slow=330,SNR=0.7						
I46RU	ZALESOVO INFRA	24.95	96	I	I	11 15 21.2	
	baz=318,slow=322,SNR=3.8						
I18DK	QAANAAQ INFRAS	30.77	336	I	I	11 52 10.0	
	baz=54,slow=341,SNR=1.6						

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*KNET **06** 08:47:53.8±0.5, $42\overset{\circ}{.}62$N×$75\overset{\circ}{.}17$E, h17^{km}±3^{km}, ml1.3, Error ellipse: s-maj=3.2km s-min=2.3km az=128.0*
*NNC **06** 08:47:55.0±0.3, $42\overset{\circ}{.}64$N×$75\overset{\circ}{.}16$E, h0^{km}, mb2.6, mpv2.6, Error ellipse: s-maj=5.1km s-min=1.6km az=150.0*
*SOME **06** 08:47:55.4, $42\overset{\circ}{.}63$N×$75\overset{\circ}{.}12$E, h10^{km}*
ISC 06 08:47:55.1±1.1**, $42\overset{\circ}{.}62$N**±$0\overset{\circ}{.}03$×**$75\overset{\circ}{.}18$E**±$0\overset{\circ}{.}02$**, h5^{km}**±10^{km}**, n34, $\sigma 0\overset{s}{.}34$**/66**, 12C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBK	Karagaybulak	0.17	284	⇑P	Pg	08 47 58.8	+0.2
	14nm,0.1s,SNR=15						
KBK				⇑S	Sg	08 48 01.5	+0.6
	49nm,0.2s						
TKM2	Tokmak 2	0.43	45	⇓P	Pg	08 48 03.4	-0.2
	6.2nm,0.1s,SNR=6.3						
TKM2				⇑S	Sg	08 48 09.1	-0.2
	43nm,0.1s						
TKM2	Tokmak 2	0.43	45	⇓P	Pg	08 48 03.3	-0.2
	2.3nm,0.3s						
TKM2				⇑S	Sg	08 48 09.2	-0.1
	7.3nm,0.2s						
CHMS	Chumysh	0.49	321	⇑P	Pg	08 48 04.4	-0.2
	3.0nm,0.1s						
CHMS				⇑S	Sg	08 48 11.2	+0.1
	18nm,0.1s						
AAK	Ala-Archa	0.50	273	⇑P	Pg	08 48 04.6	-0.2
	2.8nm,0.2s,SNR=6.8						
AAK				⇑S	Sg	08 48 11.8	+0.4
	9.1nm,0.1s						
UCH	Uchtor	0.62	232	⇑P	Pg	08 48 06.7	-0.4
	1.9nm,0.1s,SNR=6.4						
UCH				⇓S	Sg	08 48 15.0	-0.3
	7.5nm,0.1s						
KST	Kastek	0.72	53	P	Pg	08 48 09.2	+0.3
	1.8nm,0.1s						
KST				S	Sg	08 48 18.8	+0.5
	5.7nm,0.1s						
KST	Kastek	0.72	53	*e*P	Pg	08 48 09.2	+0.3
	1.8nm,0.1s						
KST				*e*S	Sg	08 48 18.8	+0.5
	5.7nm,0.1s						
DGS	Degeres	0.76	35	P	Pg	08 48 09.8	0.0
	1.2nm,0.1s						
DGS				S	Sg	08 48 20.0	+0.2
	4.6nm,0.3s						
DGS	Degeres	0.76	35	*e*P	Pg	08 48 09.8	0.0
	1.2nm,0.3s						
DGS				*e*S	Sg	08 48 19.9	+0.2
	4.4nm,0.1s						
USP	Ospenovka	0.82	323	⇓P	Pg	08 48 09.9	-1.0
	1.8nm,0.2s,SNR=7.9						
USP				⇑S	Sg	08 48 21.4	-0.1
	6.0nm,0.1s						
SGDS	Sogindy	0.93	335	P	Pg	08 48 12.9	0.0
	1.4nm,0.1s						
SGDS				S	Sg	08 48 25.0	+0.1
	7.1nm,0.1s						
MTBS	Maitube	1.06	60	P	Pg	08 48 15.1	-0.2
	2.8nm,0.2s						
MTBS				S	Sg	08 48 29.0	0.0
	7.4nm,0.2s						
MTBS	Maitube	1.06	60	*e*P	Pg	08 48 15.2	-0.2
	2.8nm,0.2s						
MTBS				*e*S	Sg	08 48 29.0	0.0
	7.9nm,0.1s						
IZV	Izvestkoviy	1.14	68	P	Pg	08 48 16.6	-0.4
	1.4nm,0.1s						
IZV				S	Sg	08 48 31.4	-0.3
	4.4nm,0.2s						
IZV	Izvestkoviy	1.14	68	*e*P	Pg	08 48 16.6	-0.4
	1.4nm,0.1s						
IZV				*e*S	Sg	08 48 31.4	-0.3
	4.4nm,0.2s						
KRBS	Karabastau	1.14	19	P	Pg	08 48 16.5	-0.5
	1.1nm,0.2s						
KRBS				S	Sg	08 48 31.5	-0.3
	3.3nm,0.1s						
KRBS	Karabastau	1.14	19	*e*P	Pg	08 48 16.5	-0.5
	1.1nm,0.2s						
KRBS				*e*S	Sg	08 48 31.5	-0.3
	3.3nm,0.1s						
AML	Almayashu	1.20	247	⇑P	Pn	08 48 19.1	+0.2
	0.1nm,0.5s						
AML				⇑S	Sg	08 48 33.7	+0.1
	0.2nm,0.5s						
TNSS	Tian-Shan	1.37	71	P	Pg	08 48 21.3	-0.1
	4.0nm,0.1s						
TNSS				S	Sb	08 48 39.7	+0.3
TNSS	Tian-Shan	1.37	71	*e*P	Pg	08 48 21.3	-0.1
	3.0nm,0.0s						
TNSS				*e*S	Sb	08 48 39.7	+0.3
	1.6nm,0.1s						
MRKS	Merke	1.44	276	P	Pn	08 48 22.2	+0.2
	1.5nm,0.1s						
MRKS				S	Sg	08 48 41.0	-0.5
	5.4nm,0.2s						
MRKS	Merke	1.44	276	*e*P	Pn	08 48 22.2	+0.2
	1.5nm,0.1s						
MRKS				*e*S	Sg	08 48 41.0	-0.5
	5.4nm,0.2s						
MDOK	Medeo	1.48	68	Pg	Pb	08 48 23.3	+0.1
	2.2nm,0.3s						
MDOK				Lg	Lg	08 48 42.9	
	3.2nm,0.3s						
MDOK	Medeo	1.48	68	*e*P	Pb	08 48 23.3	+0.1
	2.3nm,0.2s						
MDOK				*e*S	Sn	08 48 42.9	+0.5
	3.2nm,0.1s						
KUU	Kurty	1.53	33	P	Pb	08 48 23.7	-0.3
	5.0nm,0.2s						
KUU				S	Sn	08 48 43.5	0.0
	6.2nm,0.2s						
KUU	Kurty	1.53	33	*e*P	Pb	08 48 23.7	-0.3
	5.0nm,0.2s						
KUU				*e*S	Sn	08 48 43.5	0.0
	6.9nm,0.1s						
KOTS	Kotyrbulak	1.55	66	P	Pb	08 48 24.3	-0.1
	1.6nm,0.2s						
KOTS				S	Sb	08 48 44.6	+0.2
	6.5nm,0.2s						
KOTS	Kotyrbulak	1.55	66	*e*P	Pb	08 48 24.3	-0.1
	1.6nm,0.2s						
KOTS				*e*S	Sb	08 48 44.6	+0.2
	6.5nm,0.2s						
KTBS	Karatobe	1.56	45	P	Pn	08 48 23.8	+0.3
	2.9nm,0.3s						
KTBS				S	Sn	08 48 43.8	-0.3
	7.1nm,0.3s						
KTBS	Karatobe	1.56	45	*e*P	Pn	08 48 23.8	+0.3
	1.5nm,0.1s						
KTBS				*e*S	Sn	08 48 43.8	-0.3
	7.1nm,0.3s						
CHKK	Chushkaly	1.81	46	P	Pb	08 48 29.0	+0.2
	3.5nm,0.2s						
CHKK				S	Sg	08 48 52.8	-0.6
	8.5nm,0.1s						
CHKK	Chushkaly	1.81	46	*e*P	Pb	08 48 29.0	+0.2
	3.7nm,0.1s						
CHKK				*e*S	Sg	08 48 52.8	-0.6
	8.5nm,0.1s						
SATY	Saty	2.42	78	*e*Pg	Pg	08 48 40.5	-0.9
	5.7nm,0.1s						
SATY				*e*Lg	Lg	08 49 12.6	
	7.2nm,0.1s						

VIE 06 08:50:13.7, $47\overset{\circ}{.}54$N×$14\overset{\circ}{.}89$E, h0^{km}, mb2.1/1**, ml1.5**/5 **0 km SE of Eisenerz Mining explosion., Austria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARSA	Arzberg	0.52	124	*i* Pg	Pg	08 50 23.3	-0.3
	0.8nm,0.1s						
ARSA				*i* Sg	Sg	08 50 30.0	-0.3
	0.8nm,0.1s						
MOA	Molln	0.53	307	*e*Pg	Pg	08 50 24.8	+1.0
	1.9nm,0.1s						
MOA				*e*Sg	Sg	08 50 31.5	+1.0
	1.8nm,0.1s						
CONA	Conrad Observa	0.76	59	*i* Pg	Pg	08 50 28.8	+0.5
	0.3nm,0.1s						
CONA				*e*Sg	Sg	08 50 39.2	+1.0
	1.1nm,0.2s						
RONA	Rosalia, Austr	0.96	80	*e*Pg	Pb	08 50 32.9	-0.5
	1.2nm,0.2s						
RONA				*e*Sg	Sb	08 50 46.5	-0.2
	1.3nm,0.2s						
KBA	Koelnbreinsper	1.15	247	*e*Sg	Sb	08 50 52.0	0.0
	6.0nm,0.4s						

IDC 06 09:00:05.3±3.4**, $54\overset{\circ}{.}63$N×$86\overset{\circ}{.}43$E, h0^{km}, mbtmp2.9**/2**, ML2.5**/2**, Error ellipse: s-maj=25.6km s-min=14.9km az=52.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.16	235	I	I	09 06 20.0	
	baz=55,slow=332,SNR=12						
ZALV	Zalesovo Beam	1.16	235	Pg	Pg	09 00 26.1	-1.3
	0.6nm,0.3s,baz=52,slow=17,SNR=10						
ZALV				Lg	Lg	09 00 42.9	
	3.0nm,0.3s,baz=54,slow=27,SNR=18						
KURBB	Kurchatov Arra	6.26	233	Pn	Pn	09 01 39.6	+0.8
	0.1nm,0.3s,baz=52,slow=14,SNR=5.4						
KURBB				Lg	Lg	09 03 24.2	
	0.1nm,0.3s,baz=51,slow=30,SNR=4.2						
	0.6nm,0.2s						
MKAR	Makanchi Array	8.27	200	Pn	Pn	09 02 06.9	+0.5
	0.1nm,0.3s,baz=20,slow=11,SNR=2.7						
MKAR				Sn	Sn	09 03 41.4	+1.0
	0.1nm,0.3s,baz=23,slow=30,SNR=6.7						
MKAR				Lg	Lg	09 04 27.6	
	0.1nm,0.3s,baz=22,slow=27,SNR=5.2						
	0.2nm,0.4s						

IDC 06 09:12:01.2±473.0**, $65\overset{\circ}{.}66$N×$41\overset{\circ}{.}01$E, h0^{km}, Error ellipse: s-maj=287.1km s-min=158.4km az=41.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	AKTYUBINSK INF	17.64	142	I	I	11 04 20.0	
	baz=337,slow=333,SNR=1.3						
I46RU	ZALESOVO INFRA	24.38	97	I	I	11 40 20.0	
	baz=318,slow=322,SNR=3.9						
I18DK	QAANAAQ INFRAS	31.05	337	I	I	12 22 30.0	
	baz=52,slow=341,SNR=1.0						

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*IDC **06** 09:12:23.2±3.0, $22\overset{\circ}{.}06$S×$171\overset{\circ}{.}01$E, h0^{km}, mb3.8/4, mbtmp3.9/5, ML4.3/1, MS3.2/5, Error ellipse: s-maj=144.9km s-min=35.1km az=162.0*
*NEIC **06** 09:12:33.3±1.1, $22\overset{\circ}{.}3$S±$0\overset{\circ}{.}2$×$170\overset{\circ}{.}62$E±$0\overset{\circ}{.}08$, h49^{km}±14^{km}, mb4.4/10, Error ellipse: s-maj=33.1km s-min=2.0km az=197.0*
*NOU **06** 09:12:56.3, $22\overset{\circ}{.}05$S×$168\overset{\circ}{.}53$E, h0^{km}, MLv3.6/6, New Caledonia*
ISC 06 09:12:32.4±0.8**, $22\overset{\circ}{.}2$S**±$0\overset{\circ}{.}1$×**$170\overset{\circ}{.}63$E**±$0\overset{\circ}{.}08$**, h51^{km}, n39, $\sigma 0\overset{s}{.}96$**/37**, mb4.2**/9**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINNC	Pines Island,	2.97	262		Pn	09 13 17.6	+0.5
PINNC	Pines Island,	2.97	262	P	Pn	09 13 17.9	+0.8
YATNC	Mamie plateau,	3.47	272	P	Pn	09 13 23.7	-0.3
OUENC	Ouen Island, N	3.52	266		Pn	09 13 25.4	+0.8
OUENC	Ouen Island, N	3.52	266	P	Pn	09 13 25.3	+0.8
ONTNC	Ouen Toro	3.87	268		Pn	09 13 30.0	+0.6
ONTNC	Ouen Toro	3.87	268	P	Pn	09 13 30.6	+1.1
DZM	Mont Dzumac	3.89	272	Pn	Pn	09 13 30.4	+0.6
	16nm,0.3s,baz=139,slow=8.4,SNR=794						
DZM				LR	LR	09 14 08.9	
	comp=Z,62nm,20.4s,baz=34,slow=25						
DZM				Sn	Sn	09 14 11.4	-2.8
	35nm,0.3s,baz=333,slow=23,SNR=26						
	57nm,0.5s						
DZM	Mont Dzumac	3.89	272	P	Pn	09 13 30.5	+0.7
NOUC	Port Laguerre	4.01	271	P	Pn	09 13 31.9	+0.5
KOUNC	Koumac, New Ca	6.14	285		Pn	09 14 01.8	+1.2
KOUNC					Sn	09 15 09.9	+0.2
RAO	Raoul Island	12.46	126	LR	LR	09 19 09.9	
	comp=Z,146nm,19.4s,baz=140,slow=33						
RAO	Raoul Island	12.46	126	Pn	Pn	09 15 27.0	-0.1
URZ	Urewera	16.92	162	LR	LR	09 21 27.9	
	comp=Z,126nm,21.5s,baz=64,slow=32						
ARMA	Armidale	18.87	240	P	P	09 16 49.4	+0.8
ARMA				IAmb	IAmb	09 17 17.5	
	comp=Z,18nm,1.1s						
TUWZ	Tuamarina	19.35	172	P	P	09 16 54.8	+1.2
CTA	Charters Tower	22.83	271	P	P	09 17 32.8	+1.4
	comp=Z,1.1nm,0.6s,baz=81,slow=10,SNR=3.9						
	comp=Z,1.1nm,0.6s						
CTAO	Charters Tower	22.83	271	P	P	09 17 32.8	+1.4
PMG	Port Moresby	25.88	296	LR	LR	09 25 35.2	
	comp=Z,68nm,19.2s,baz=94,slow=30						
COEN	Coen	27.33	283	P	P	09 18 12.5	-0.2
COEN				IAmb	IAmb	09 18 16.1	
	comp=Z,5.7nm,1.0s						
WR0	Warramunga Arr	33.70	267	P	P	09 19 08.2	-0.8
WR0				IAmb	IAmb	09 19 33.8	
	comp=Z,4.0nm,1.2s						
ASAR	Alice Springs	33.80	260	P	P	09 19 09.8	-0.1
	comp=Z,0.5nm,0.7s,baz=83,slow=9.0,SNR=7.8						
	comp=Z,0.5nm,0.7s						
ASAR	Alice Springs	33.80	260	P	P	09 19 09.4	-0.4
WB0	Warramunga Arr	33.87	267	P	P	09 19 10.3	-0.2
WB0				IAmb	IAmb	09 19 41.0	
	comp=Z,6.3nm,1.2s						
WRA	Warramunga Arr	33.89	267	P	P	09 19 09.7	-1.0
	comp=Z,0.9nm,0.7s,baz=95,slow=8.4,SNR=5.7						
	comp=Z,0.9nm,0.7s						
WRA	Warramunga Arr	33.89	267	P	P	09 19 09.6	-1.0
MTN	Manton Dam	38.70	277	P	P	09 19 51.6	-0.2
KNRA	Kununurra	40.04	272	P	P	09 20 02.6	-0.2
MBWA	Marble Bar	47.13	261	P	P	09 21 00.2	+0.4
MBWA				IAmb	IAmb	09 21 42.0	
	comp=Z,14nm,1.4s						
QSPA	South Pole Qui	67.84	180	P	P	09 23 23.8	-1.4
QSPA				IAmb	IAmb	09 23 28.0	
	comp=Z,10nm,1.5s						
ASAJ	Asahikawa	70.84	339	LR	LR	09 54 26.3	
	comp=Z,16nm,18.0s,baz=182,slow=36						
CMAR	Chiang Mai Arr	80.91	294	P	P	09 24 41.9	+0.1
	comp=Z,1.6nm,0.6s,baz=147,slow=4.0,SNR=8.6						
	comp=Z,1.6nm,0.6s						
ARCES	ARCESS Array B	128.28	345	PKP	PKPdf	09 31 30.4	-2.1
	comp=Z,11nm,1.2s,baz=38,slow=1.6,SNR=4.7						
MORC	Moravsky Berou	145.29	329	*e*PKP	PKPbc	09 32 03.8	-0.5
JAVC	Velka Javorina	145.84	328	*e*PKP	PKPab	09 32 07.2	+0.7
VRAC	Vranov	146.06	329	*e*PKP	PKPab	09 32 07.5	+0.2
CLL	Collm	146.16	335	*i* PKPbc	PKPdf	09 32 06.2	+0.4
	comp=Z,4.0nm,0.6s						
KRUC	Moravsky	146.32	329	*e*PKP	PKPbc	09 32 07.6	+0.2
GERES	GERESS Array B	147.73	331	PKPbc	PKPdf	09 32 09.4	+0.7
	comp=Z,0.8nm,0.6s,baz=42,slow=3.1,SNR=4.4						

IDC 06 09:14:13.6±3.1**, $19\overset{\circ}{.}88$S×$168\overset{\circ}{.}74$E, h0^{km}, mb3.6**/2**, mbtmp3.5**/3**, ML3.2**/1**, Error ellipse: s-maj=97.5km s-min=36.2km az=134.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	3.06	224	Pn	Pn	09 15 03.3	-0.1
	2.8nm,0.3s,baz=87,slow=20,SNR=0.5						
DZM				Sn	Sn	09 15 42.7	+1.9
	1.3nm,0.3s,baz=75,slow=16,SNR=1.1						
	12nm,0.3s						
WRA	Warramunga Arr	32.31	264	P	P	09 20 45.5	+0.8
	0.4nm,0.8s,baz=102,slow=8.1,SNR=2.2						
	0.4nm,0.8s						
ASAR	Alice Springs	32.52	257	P	P	09 20 45.7	-0.8
	0.9nm,0.7s,baz=77,slow=8.7,SNR=7.7						
	0.9nm,0.7s						
ARCES	ARCESS Array B	125.56	345	PKP	PKPdf	09 33 16.2	-0.1
	1.7nm,0.9s,baz=56,slow=3.4,SNR=4.1						

IDC 06 09:20:48.8±2.5**, $54\overset{\circ}{.}30$N×$86\overset{\circ}{.}28$E, h0^{km}, mbtmp3.2**/3**, ML2.4**/3**, Error ellipse: s-maj=19.8km s-min=13.4km az=57.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.93	248	I	I	09 25 30.0	
	baz=68,slow=332,SNR=27						
ZALV	Zalesovo Beam	0.93	248	Pg	Pg	09 21 05.1	-1.5
	1.1nm,0.3s,baz=67,slow=16,SNR=11						
ZALV				Lg	Lg	09 21 19.8	
	4.6nm,0.3s,baz=62,slow=28,SNR=15						
KURBB	Kurchatov Arra	6.00	235	Pn	Pn	09 22 18.9	+0.2
	0.2nm,0.3s,baz=50,slow=13,SNR=2.2						
KURBB				Lg	Lg	09 24 03.6	
	baz=52,slow=28,SNR=1.4						
	1.9nm,0.2s						
MKAR	Makanchi Array	7.93	200	Pn	Pn	09 22 46.6	+1.2
	0.1nm,0.3s,baz=23,slow=16,SNR=5.1						
MKAR				Lg	Lg	09 25 00.2	
	0.2nm,0.3s,baz=24,slow=29,SNR=1.6						
	0.2nm,0.3s						
BVAR	Borovoye Array	9.52	269	Pn	Pn	09 23 06.9	-0.1
	baz=68,slow=13,SNR=1.5						
	0.2nm,0.3s						

IDC 06 09:31:32.2±684.0**, $52\overset{\circ}{.}92$N×$3\overset{\circ}{.}83$E, h0^{km}, Error ellipse: s-maj=277.6km s-min=156.5km az=110.0, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I26DE	FREYUNG INFRAS	7.46	119	I	I	10 19 00.9	
	baz=307,slow=318,SNR=1.2						
I37NO	I37NO	17.63	18	I	I	11 21 40.0	
	baz=210,slow=327,SNR=0.8						
I31KZ	AKTYUBINSK INF	33.05	72	I	I	12 53 24.0	
	baz=295,slow=322						

IDC 06 09:32:51.6±2.5**, $53\overset{\circ}{.}69$N×$86\overset{\circ}{.}79$E, h0^{km}, mbtmp3.1**/2**, ML2.7**/2**, Error ellipse: s-maj=21.9km s-min=12.1km az=73.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.20	283	I	I	09 39 40.0	
	0.1nm,0.8s,baz=101,slow=333,SNR=37						
ZALV	Zalesovo Beam	1.20	283	Pg	Pg	09 33 13.8	-0.7
	2.1nm,0.3s,baz=101,slow=17,SNR=28						
ZALV				Lg	Lg	09 33 31.2	
	2.3nm,0.3s,baz=103,slow=27,SNR=17						
ZALV				Rg	Rg	09 33 38.6	
	3.8nm,0.4s,baz=90,slow=22,SNR=16						
KURBB	Kurchatov Arra	5.94	242	Pn	Pn	09 34 21.2	+0.5
	0.2nm,0.3s,baz=58,slow=14,SNR=3.4						
KURBB				Lg	Lg	09 36 00.0	
	0.2nm,0.3s,baz=63,slow=29,SNR=5.2						
	1.4nm,0.5s						
MKAR	Makanchi Array	7.48	204	Pn	Pn	09 34 43.5	+1.6
	0.2nm,0.3s,baz=26,slow=12,SNR=7.1						
MKAR				Sn	Sn	09 36 06.9	-0.6
	0.1nm,0.3s,baz=20,slow=26,SNR=3.2						
MKAR				Lg	Lg	09 36 48.5	
	0.1nm,0.3s,baz=18,slow=28,SNR=6.8						
	0.8nm,0.7s						

IDC 06 09:35:22.6±3.0**, $53\overset{\circ}{.}60$N×$87\overset{\circ}{.}85$E, h0^{km}, mbtmp3.1**/2**, ML2.9**/2**, Error ellipse: s-maj=26.1km s-min=15.1km az=61.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.83	282	I	I	09 50 20.0	
	0.1nm,0.8s,baz=95,slow=298,SNR=9.3						
ZALV	Zalesovo Beam	1.83	282	Pg	Pn	09 35 55.8	+0.5
	2.3nm,0.3s,baz=101,slow=15,SNR=13						
ZALV				Lg	Lg	09 36 20.1	
	4.3nm,0.3s,baz=99,slow=26,SNR=11						
KURBB	Kurchatov Arra	6.47	246	Pn	Pn	09 36 60.0	+1.0
	0.2nm,0.3s,baz=64,slow=14,SNR=3.1						
KURBB				Lg	Lg	09 38 48.7	
	0.1nm,0.3s,baz=57,slow=39,SNR=4.9						
	1.1nm,0.4s						
MKAR	Makanchi Array	7.69	210	Pn	Pn	09 37 17.2	+1.5
	0.2nm,0.3s,baz=30,slow=14,SNR=7.6						
MKAR				Sn	Sn	09 38 42.3	-1.2
	0.1nm,0.3s,baz=29,slow=27,SNR=4.1						
MKAR				Lg	Lg	09 39 22.9	
	0.1nm,0.3s,baz=25,slow=27,SNR=1.7						
	0.3nm,0.3s						

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*NNC **06** 10:22:22.9±3.0, $50\overset{\circ}{.}98$N×$74\overset{\circ}{.}79$E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=53.8km s-min=15.1km az=20.0, Suspected Mining explosion.*
*IDC **06** 10:22:25.5±1.1, $51\overset{\circ}{.}70$N×$75\overset{\circ}{.}29$E, h0^{km}, mbtmp2.8/2, ML2.0/2, Error ellipse: s-maj=24.3km s-min=7.9km az=29.0*
ISC 06 10:22:25.2±1.0**, $51\overset{\circ}{.}7$N**±$0\overset{\circ}{.}1$×**$75\overset{\circ}{.}14$E**±$0\overset{\circ}{.}09$**, h0^{km}, n9, $\sigma 0\overset{s}{.}95$**/9**, 5C-2D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	Kurchatov Arra	2.38	115	Pg	Pn	10 23 06.5	+1.2
	0.1nm,0.3s,baz=303,slow=18,SNR=26						
KURBB				Lg	Lg	10 23 37.5	
	0.2nm,0.3s,baz=299,slow=32,SNR=5.4						
KURK	Kurchatov	2.38	112	⇑Pn	Pn	10 23 06.5	+1.1
	2.7nm,0.7s						
KURK				⇓Sn	Sn	10 23 34.4	-1.0
	6.5nm,0.7s						
BVA0	Borovoye Array	3.22	297	⇓Pg	Pb	10 23 23.1	-0.1
	6.9nm,1.8s,baz=126,slow=17						
BVA0				⇑Lg	Lg	10 24 10.9	
	5.6nm,0.7s,baz=127,slow=29						
BVAR	Borovoye Array	3.22	297	Pg	Pb	10 23 23.2	0.0
	baz=115,slow=16,SNR=7.9						
BVAR				Lg	Lg	10 24 09.6	
	0.1nm,0.3s,baz=112,slow=27,SNR=9.6						
BRVK	Borovoye	3.29	297	⇑Pg	Pg	10 23 28.0	-0.2
	15nm,2.9s						
BRVK				⇑Lg	Lg	10 24 10.1	
	4.0nm,0.7s						
I46RU	ZALESOVO INFRA	6.30	65	I	I	10 58 30.0	
	baz=253,slow=316,SNR=5.2						
ZALV	Zalesovo Beam	6.30	65	Pn	Pn	10 23 59.5	+0.3
	0.2nm,0.3s,baz=251,slow=14,SNR=3.7						
ZALV				Lg	Lg	10 25 43.1	
	0.3nm,0.3s,baz=255,slow=22,SNR=1.2						
	0.5nm,0.3s						
MK31	Makanchi Array	6.75	133	⇑Lg	Lg	10 25 49.1	
	2.1nm,0.6s						
MKAR	Makanchi Array	6.75	133	Pn	Pn	10 24 06.0	+0.5
	baz=320,slow=11,SNR=5.3						
MKAR				Sn	Sn	10 25 21.9	-1.2
	0.1nm,0.3s,baz=315,slow=12,SNR=2.0						
MKAR				Lg	Lg	10 25 54.7	
	0.2nm,0.3s,baz=314,slow=27,SNR=10						
	0.4nm,0.7s						

WEL 06 10:34:02.3±0.4**, 42°S**±3°×**17°4E**±°**, h5^{km}, M2.1**/7**, ML2.4**/11**, MLv2.1**/7**, Error ellipse: s-maj=0.0km s-min=0.0km az=131.2, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSWZ	Blackbirch Sta	0.31	21	P	Pg	10 34 08.7	+0.3
BSWZ				S	Sg	10 34 13.9	+1.4
KHZ	Kahutara	0.43	199	P	Pg	10 34 10.9	+0.3
KHZ				S	Sg	10 34 17.5	+1.2
TUWZ	Tuamarina	0.60	16	P	Pg	10 34 14.1	+0.3
TUWZ				S	Sb	10 34 23.2	-0.9
THZ	Tophouse	0.66	291	P	Pg	10 34 15.1	+0.1
THZ				S	Sg	10 34 24.4	+0.8
NNZ	Nelson	0.83	342	P	Pg	10 34 18.1	-0.2
NNZ				S	Sb	10 34 29.9	-0.8
TCW	Tory Channel	0.90	28	P	Pg	10 34 19.2	-0.3
MRNZ	Matariki Terra	0.95	310	P	Pg	10 34 20.7	+0.2
GVZ	Greta Valley S	1.09	208	P	Pg	10 34 23.3	+0.1
TKNZ	Takaka Hill	1.13	329	P	Pg	10 34 23.6	-0.3
DUWZ	D’Urville Isla	1.21	7	P	Pg	10 34 25.0	-0.6
LTZ	Lake Taylor	1.33	234	P	Pn	10 34 26.9	-0.7
CAW	Cannon Point	1.35	49	P	Pn	10 34 27.5	-0.3
DSZ	Denniston Nort	1.46	280	P	Pg	10 34 30.2	-0.1
QRZ	Quartz Range	1.48	322	P	Pn	10 34 29.7	0.0
OGWZ	Otaki Gorge	1.61	43	P	Pn	10 34 30.6	-0.8
OXZ	Oxford	1.81	223	P	Pn	10 34 32.5	-1.7

INZ	**Inchbonnie**	**1.84**	**246**	P	Pn	10 34 35.0	+0.5
MQZ	**McQueen's Vall**	**1.87**	**205**	P	Pn	10 34 32.5	-2.5
RACZ	**Rakaia**	**2.08**	**214**	P	Pn	10 34 35.8	-2.0
WNVZ	**Wahianoa**	**3.03**	**29**	P	Pb	10 34 55.7	-1.1
SNVZ	**South Ngauruho**	**3.17**	**28**	P	Pb	10 34 56.4	-2.9
HHSZ	**Highcliff Hill**	**4.49**	**209**	P	Pn	10 35 07.7	-3.2

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*IDC **06** 10:39:38.2±1.1, 18°.04S×65°.12E, h0^{km}, mb3.9/8, mbtmp3.9/9, ML4.2/1, MS3.6/23, Error ellipse: s-maj=32.3km s-min=25.3km az=62.0*

ISC 06 10:39:40.1±0.9**, 18°.0S**±0°.2×**65°.1E**±0°.2**, h10^{km}, n34,** σ**0^{s}.88**/9**, mb4.1**/8**, MS3.7**/23**, Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**12.55**	**36**	T	T	10 55 17.1	
	baz=214,slow=76,SNR=121						
H08S2	**Diego Garcia H**	**12.56**	**36**	T	T	10 55 18.5	
	baz=214,slow=76,SNR=133						
H08S3	**Diego Garcia H**	**12.57**	**36**	T	T	10 55 18.8	
	baz=214,slow=76,SNR=105						
OPO	**Ambohidratompo**	**17.05**	**265**	P	**Pn**	**10 43 39.3**	**+0.4**
	0.1nm,0.3s,baz=90,slow=14,SNR=2.7						
OPO				S	Sn	10 46 38.2	-11
	2.9nm,0.8s,baz=33,slow=11,SNR=1.7 3.5nm,0.5s						
PALK	**Pallekele**	**29.46**	**33**	LR	LR	10 54 56.1	
	comp=Z,32nm,18.3s,baz=312,slow=31						
LBTB	**Lobatse**	**37.33**	**252**	LR	LR	10 59 40.3	
	comp=Z,116nm,20.3s,baz=90,slow=32						
BOSA	**Boshof**	**37.95**	**246**	LR	LR	10 58 15.1	
	comp=Z,62nm,20.5s,baz=130,slow=29						
MBAR	**Mbarara**	**37.97**	**293**	LR	LR	11 00 06.2	
	comp=Z,133nm,20.8s,baz=124,slow=32						
WSAR	**Wadi Sarin**	**41.50**	**351**	LR	LR	11 01 03.4	
	comp=Z,53nm,18.2s,baz=194,slow=31						
SUR	**Sutherland**	**42.28**	**242**	LR	LR	11 01 55.9	
	comp=Z,82nm,19.2s,baz=117,slow=32						
H01W2	**Cape Leeuwin H**	**46.51**	**121**	T	T	11 37 47.6	
	baz=278,slow=75,SNR=31						
H01W3	**Cape Leeuwin H**	**46.51**	**121**	T	T	11 37 51.7	
	baz=278,slow=75,SNR=32						
H01W1	**Cape Leeuwin H**	**46.52**	**121**	T	T	11 37 49.0	
	baz=278,slow=75,SNR=33						
BRDH	**Bariadhala**	**48.04**	**34**	LR	LR	11 09 50.3	
	comp=Z,55nm,18.4s,baz=78,slow=38						
NWAO	**Narrogin (SRO)**	**48.85**	**118**	LR	LR	11 04 11.2	
	comp=Z,79nm,19.2s,slow=30						
CMAR	**Chiang Mai Arr**	**49.18**	**44**	P	**P**	**10 48 30.0**	**+1.4**
	0.7nm,0.3s,baz=231,slow=8.3,SNR=8.6						
CMAR				LR	LR	11 06 10.9	
	comp=Z,50nm,20.3s,baz=225,slow=32 0.7nm,0.3s						
MAW	**Mawson**	**49.58**	**181**	LR	LR	11 04 42.3	
	comp=Z,52nm,19.5s,baz=328,slow=30						
KAPI	**Kappang**	**54.86**	**83**	LR	LR	11 11 36.7	
	comp=Z,29nm,18.3s,baz=248,slow=35						
EIL	**Elat**	**55.64**	**328**	LR	LR	11 09 21.0	
	comp=Z,39nm,20.3s,baz=249,slow=32						
GNI	**Garni**	**60.91**	**342**	LR	LR	11 14 16.9	
	comp=Z,31nm,19.7s,baz=160,slow=34						
AAK	**Ala-Archa**	**60.97**	**8**	LR	LR	11 13 50.1	
	comp=Z,65nm,19.4s,baz=200,slow=34						
ASAR	**Alice Springs**	**63.98**	**108**	P	**P**	**10 50 13.5**	**-0.7**
	1.0nm,0.6s,baz=270,slow=5.7,SNR=21						
ASAR				LR	LR	11 13 45.4	
	comp=Z,214nm,21.7s,baz=267,slow=32 1.0nm,0.6s						
WRA	**Warramunga Arr**	**65.03**	**104**	P	**P**	**10 50 20.9**	**-0.2**
	2.4nm,0.9s,baz=263,slow=6.2,SNR=13 2.4nm,0.9s						
MKAR	**Makanchi Array**	**66.34**	**13**	P	**P**	**10 50 28.1**	**-0.8**
	0.3nm,0.7s,baz=198,slow=7.6,SNR=4.2						
MKAR				LR	LR	11 15 57.9	
	comp=Z,64nm,18.6s,baz=316,slow=33 0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**69.82**	**292**	LR	LR	11 21 36.9	
	comp=Z,41nm,18.5s,baz=138,slow=36						
QSPA	**South Pole Qui**	**72.08**	**180**	P	**P**	**10 51 04.6**	**+0.2**
	3.1nm,1.1s,baz=68,slow=19,SNR=3.2 3.1nm,1.1s						
DBIC	**Dimbokro**	**73.27**	**283**	LR	LR	11 20 26.9	
	comp=Z,47nm,20.7s,baz=114,slow=33						
ZALV	**Zalesovo Beam**	**73.65**	**12**	P	**P**	**10 51 12.3**	**-1.2**
	0.6nm,0.4s,baz=201,slow=8.3,SNR=2.9						
ZALV				LR	LR	11 20 39.1	
	comp=Z,56nm,19.4s,baz=350,slow=33 0.6nm,0.4s						
SONM	**Songino Array**	**75.25**	**27**	P	**P**	**10 51 23.5**	**+0.3**
	0.4nm,0.5s,baz=222,slow=5.5,SNR=2.1 0.4nm,0.5s						
AKASG	**Malin Array Be**	**75.36**	**337**	P	**P**	**10 51 23.4**	**-0.2**
	0.2nm,0.3s,baz=141,slow=5.4,SNR=1.5 0.2nm,0.3s						
CTA	**Charters Tower**	**75.93**	**107**	LR	LR	11 21 23.8	
	comp=Z,51nm,20.4s,baz=260,slow=33						
PMG	**Port Moresby**	**79.62**	**97**	LR	LR	11 24 30.4	
	comp=Z,46nm,20.4s,baz=342,slow=34						
KSRS	**Korea Array**	**80.79**	**46**	LR	LR	11 24 50.6	
	comp=Z,19nm,21.1s,baz=145,slow=34						
MDT	**Midelt**	**83.59**	**307**	LR	LR	11 31 03.6	
	comp=Z,87nm,18.0s,baz=139,slow=37						

DJA 06 10:41:28.0±1.8**, 1°N**±18°×**12°0E**±°**, h19^{km}**±5^{km}**, M3.9**/7**, mb3.9**/1**, MLv3.8**/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPSI	**Mapaga**	**1.06**	**213**	P	Pb	10 41 47.0	-0.8
GTOI	**Gorontalo**	**2.61**	**103**	P	Pn	10 42 07.5	-1.7
LUWI	**Luwuk**	**3.23**	**135**	P	Pn	10 42 18.4	+0.7
SANI	**Sanana**	**6.41**	**121**	P	Pn	10 43 02.6	+1.1

IDC 06 10:57:17.3±516.0**, 57°.58N**×**30°.38E, h0^{km}, Error ellipse: s-maj=197.7km s-min=86.0km az=98.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**3.82**	**100**	I	I	11 23 10.0	
	baz=284,slow=305,SNR=0.7						
I37NO	**I37NO**	**12.65**	**340**	I	I	12 08 00.0	
	baz=143,slow=325,SNR=0.8						
I31KZ	**AKTYUBINSK INF**	**17.68**	**102**	I	I	12 43 46.8	
	baz=302,slow=320,SNR=3.7						
I46RU	**ZALESOVO INFRA**	**30.14**	**73**	I	I	14 04 00.0	
	baz=300,slow=329,SNR=1.2						

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*IDC **06** 11:00:30.5±3.5, 35°.95N×69°.19E, h99^{km}±31^{km}, mb3.5/7, mbtmp3.9/13, MS3.7/1, Error ellipse: s-maj=27.5km s-min=18.2km az=173.0*

*NEIC **06** 11:00:35.6±1.5, 36°.25N±0°.05×69°.15E±0°.09, h143^{km}±11^{km}, mb4.0/2, Error ellipse: s-maj=10.1km s-min=7.6km az=74.0*

*NNC **06** 11:00:36.2±4.2, 36°.87N×68°.79E, h0^{km}, mb4.0, mpv3.2, Error ellipse: s-maj=34.4km s-min=25.8km az=177.0*

ISC 06 11:00:35.8±0.6**, 36°.34N**±0°.05×**69°.11E**±0°.06**, h150^{km}, n55,** σ**1^{s}.91**/62**, mb3.7**/7**, 5C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**1.80**	**182**		**Pn**	**11 01 07.6**	**-1.2**
KBL				Sn	**Sn**	**11 01 31.2**	**-3.0**
CHGR	**Chuyangaron**	**2.31**	**1**	Pn	**Pn**	**11 01 15.4**	**+0.8**
GAR	**Garm**	**2.82**	**20**	Pn	**Pn**	**11 01 21.7**	**+0.8**
CEP	**Cherat**	**3.41**	**137**	P	**Pn**	**11 01 28.0**	**-0.5**
CEP				S	**Sn**	**11 02 07.0**	**-2.3**
THW	**Thamme Wali**	**4.16**	**148**	P	**Pn**	**11 01 36.4**	**-1.7**
NIL	**Nilore**	**4.33**	**127**	Pn	**Pn**	**11 01 38.8**	**-1.7**
CHCP	**Chirah Chowk**	**4.34**	**127**	⇓P	**Pn**	**11 01 39.2**	**-1.3**
KSH	**Kashi**	**6.28**	**58**	Pn	**Pn**	**11 02 02.2**	**-4.1**
KSH				Sn	Sn	11 03 07.6	-10
KSH				pmax	pmax		
	comp=Z,17nm,0.5s						
KSH				smax	smax		
	comp=N,170nm,0.9s						
KSH				smax	smax		
	comp=E,140nm,0.7s						
AML	**Almayashu**	**6.79**	**30**	P	**Pn**	**11 02 13.2**	**-0.1**
	SNR=15						
AML	**Almayashu**	**6.79**	**30**	⇑P	**Pn**	**11 02 13.0**	**-0.3**
	comp=E,0.4nm,0.5s						
AML				⇑S	**Sn**	**11 03 27.3**	**-2.3**
	comp=E,8.4nm,0.6s						
KK31	**Karatay Array**	**6.84**	**9**	Pn	**Pn**	**11 02 14.1**	**+0.5**
KK31	**Karatay Array**	**6.84**	**9**	P	**Pn**	**11 02 13.6**	**+0.1**
	comp=E,2.5nm,0.4s,baz=197,slow=15,SNR=34						
KK31				⇑S	**Sn**	**11 03 27.7**	**-2.6**
	comp=E,11nm,0.4s,baz=235,slow=36,SNR=4.9						
KKAR	**Karatay Array**	**6.84**	**9**		**Pn**	**11 02 14.1**	**+0.5**
KKAR	**Karatay Array**	**6.84**	**9**	Pn	**Pn**	**11 02 14.0**	**+0.4**
UCH	**Uchtor**	**7.22**	**34**	P	**Pn**	**11 02 19.2**	**+0.2**
	SNR=27						
AAK	**Ala-Archa**	**7.54**	**32**	P	**Pn**	**11 02 19.8**	**-3.2**
	SNR=7.5						
AAK	**Ala-Archa**	**7.54**	**32**	P	**Pn**	**11 02 23.1**	**+0.1**
	comp=E,3.0nm,0.3s,baz=208,slow=8.1,SNR=17						
AAK				S	**Sn**	**11 03 44.8**	**-2.5**
	comp=E,25nm,0.6s,baz=350,slow=22,SNR=14						
AAK	**Ala-Archa**	**7.54**	**32**	Pn	**Pn**	**11 02 23.5**	**+0.4**
KBK	**Karagaybulak**	**7.75**	**34**	P	**Pn**	**11 02 26.9**	**+0.9**
	SNR=7.6						
USP	**Ospenovka**	**8.06**	**29**	P	**Pn**	**11 02 29.1**	**-0.8**
	SNR=8.3						
TKM2	**Tokmak 2**	**8.26**	**35**	P	**Pn**	**11 02 32.7**	**0.0**
	SNR=14						
GEYT	**Alibeck**	**8.92**	**283**	P	**Pn**	**11 02 38.3**	**-3.1**
	comp=E,3.1nm,0.5s,baz=102,slow=12,SNR=2.3						
GEYT				S	**Sn**	**11 04 18.3**	**-2.1**
	comp=E,2.3nm,0.5s,baz=106,slow=31,SNR=2.5						
MAKZ	**Makanchi**	**14.20**	**39**		**P**	**11 03 53.8**	**+0.9**
MAKZ	**Makanchi**	**14.20**	**39**	⇓P	**P**	**11 03 55.0**	**+2.1**
	comp=E,4.9nm,0.7s						
PYUN	**Piuthan**	**14.33**	**121**	*e*P	**Pn**	**11 03 51.3**	**-0.7**
	comp=E,17nm,0.4s						
MK31	**Makanchi Array**	**14.34**	**39**	P	**P**	**11 03 53.8**	**-0.8**
MK31	**Makanchi Array**	**14.34**	**39**	P	**P**	**11 03 57.0**	**+2.4**
	comp=E,2.8nm,0.7s,baz=222,slow=9.4,SNR=29						
MKAR	**Makanchi Array**	**14.34**	**39**	P	**Pn**	**11 03 53.0**	**+1.2**
	comp=E,2.9nm,0.7s,baz=229,slow=16,SNR=8.5						
MKAR	**Makanchi Array**	**14.34**	**39**		**P**	**11 03 56.1**	**+1.5**
AB31	**Akbulak array**	**14.54**	**335**	⇓P	**Pn**	**11 03 55.2**	**+1.0**
	comp=E,0.9nm,0.5s,baz=176,slow=4.6,SNR=33						
AB31				⇑S	**Sn**	**11 06 30.0**	**-5.4**
	comp=E,5.6nm,0.7s						
ABKAR	**Akbulak array**	**14.54**	**335**	P	**Pn**	**11 03 55.9**	**+1.7**
ABKAR	**Akbulak array**	**14.54**	**335**	P	**Pn**	**11 03 55.5**	**+1.2**
DANN	**Dangsing**	**14.72**	**119**	*e*P	**Pn**	**11 03 55.4**	**-1.6**
	comp=E,10nm,0.4s						
GKN	**Gorkha**	**15.54**	**118**	*e*P	**Pn**	**11 04 07.0**	**-0.1**
	comp=E,22nm,0.4s						
KURBB	**Kurchatov Arra**	**15.80**	**23**	P	**Pn**	**11 04 09.5**	**-0.4**
	comp=E,2.4nm,0.7s,baz=209,slow=9.8,SNR=24						
KURK	**Kurchatov**	**15.91**	**23**	P	**Pn**	**11 04 11.6**	**+0.4**
KURK				IAmb	IAmb	11 04 15.6	
	comp=Z,3.5nm,0.9s						
DMN	**Daman**	**16.11**	**118**	*e*P	**P**	**11 04 14.8**	**+0.2**
	comp=Z,17nm,0.3s						
AKTO	**Aktyubinsk**	**16.20**	**334**	P	**P**	**11 04 16.9**	**+1.8**
	comp=Z,3.9nm,0.6s,baz=142,slow=11,SNR=13						
AKTO	**Aktyubinsk**	**16.20**	**334**	⇓P	**Pn**	**11 04 14.9**	**+0.2**
	comp=Z,4.4nm,1.1s						
AKTO				⇑S	**S**	**11 07 09.5**	**-5.1**
	comp=Z,6.3nm,1.6s						
PKIN	**Phulchoki**	**16.34**	**118**	*e*P	**Pn**	**11 04 16.7**	**-0.2**
	comp=Z,16nm,0.4s						
PKI	**Pulchoki**	**16.35**	**118**	*e*P	**P**	**11 04 17.7**	**+0.4**
	comp=Z,8.0nm,0.4s						
GUN	**Gumba**	**16.49**	**116**	*e*P	**P**	**11 04 18.7**	**-0.2**
	comp=Z,8.5nm,0.4s						
BVAR	**Borovoye Array**	**16.70**	**3**	P	**Pn**	**11 04 22.3**	**+1.5**
	comp=Z,2.2nm,0.5s,baz=172,slow=12,SNR=12						
JIRN	**Jiri**	**16.86**	**116**	*e*P	**Pn**	**11 04 23.9**	**+0.5**
	comp=Z,24nm,0.4s						
ZAA0	**Zalesovo Array**	**20.72**	**27**	P	**P**	**11 05 06.6**	**+2.5**
ZAA0				IAmb	IAmb	11 05 07.4	
	comp=Z,6.9nm,0.6s						
ZALV	**Zalesovo Beam**	**20.72**	**27**	P	**P**	**11 05 06.5**	**+2.4**
	comp=Z,6.8nm,0.4s,baz=218,slow=10,SNR=30 comp=Z,6.8nm,0.4s						
ZALV	**Zalesovo Beam**	**20.72**	**27**	P	**P**	**11 05 06.0**	**+1.9**
ARU	**Arti**	**21.32**	**344**	P	**P**	**11 05 12.9**	**+2.4**
	comp=Z,2.3nm,0.3s,baz=170,slow=4.6,SNR=4.5 comp=Z,2.3nm,0.3s						
PZH	**PanZhiHua**	**29.41**	**100**	P	**P**	**11 06 27.3**	**+2.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,80nm,4.9s						
ARCES	**ARCESS Array B**	**40.71**	**338**	P	**P**	**11 08 04.3**	**+3.1**
	comp=Z,1.6nm,0.9s,baz=96,slow=8.3,SNR=1.1 comp=Z,1.6nm,0.9s						
GERES	**GERESS Array B**	**41.77**	**305**	LR	LR	11 30 21.9	
	comp=Z,109nm,20.6s,baz=278,slow=43						
NOA	**NORSAR Array B**	**43.59**	**323**	P	**P**	**11 08 26.4**	**+1.8**
	comp=Z,0.4nm,0.6s,baz=99,slow=8.6,SNR=1.8 comp=Z,0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**64.19**	**268**	P	**P**	**11 10 56.3**	**+1.5**
	comp=Z,0.7nm,0.7s,baz=46,slow=5.6,SNR=5.8 comp=Z,0.7nm,0.7s						
WRA	**Warramunga Arr**	**83.21**	**121**	P	**P**	**11 12 44.4**	**-1.1**
	comp=Z,0.1nm,0.5s,baz=332,slow=3.8,SNR=1.3 comp=Z,0.1nm,0.5s						
ASAR	**Alice Springs**	**85.43**	**124**	P	**P**	**11 12 55.3**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=308,slow=5.1,SNR=10.0 comp=Z,0.4nm,0.5s						

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*IDC **06** 11:14:15.9±2.1, 39°.72S×176°.74E, h0^{km}, mb3.5/2, mbtmp3.5/3, ML3.3/1, Error ellipse: s-maj=47.8km s-min=20.8km az=116.0*

*NOU **06** 11:14:19.7, 39°.84S×176°.92E, h34^{km}, MLv3.8/12, North Island, New Zealand*

*WEL **06** 11:14:20.2±0.6, 40°S±3°×17°7E±°, h32^{km}±6^{km}, M3.8/12, ML4.2/12, MLv3.8/12, Error ellipse: s-maj=0.0km s-min=0.0km az=103.3, confirmed*

ISC 06 11:14:19.7±1.0**, 39°.87S**±0°.03×**176°.98E**±0°.04**, h50^{km}**±6^{km}**, n166,** σ**1^{s}.10**/178**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAHZ	**Kahuranaki**	**0.11**	**315**	P	**Pn**	**11 14 26.9**	**-0.7**
KAHZ				S	**Sn**	**11 14 32.0**	**-1.3**
PXZ	**Pawanui**	**0.18**	**210**	P	**Pn**	**11 14 28.4**	**+0.4**
PXZ				S	**Sn**	**11 14 34.7**	**+0.9**
CKHZ	**Cape Kidnapper**	**0.23**	**20**	P	**Pn**	**11 14 27.8**	**-0.4**
CKHZ				S	**Sn**	**11 14 33.5**	**-0.7**
WPHZ	**Waipukurau**	**0.46**	**245**	P	**Pn**	**11 14 30.9**	**+0.5**
WPHZ				S	**Sn**	**11 14 39.2**	**+1.0**
PRHZ	**Porangahau**	**0.47**	**214**	P	**Pn**	**11 14 31.7**	**+1.0**
MCHZ	**McNeill Hill**	**0.48**	**333**	P	**Pn**	**11 14 30.0**	**-0.7**
MCHZ				S	**Sn**	**11 14 37.4**	**-1.2**
PNHZ	**Pukenui**	**0.60**	**266**	P	**Pn**	**11 14 32.0**	**-0.2**
PNHZ				S	**Sn**	**11 14 40.6**	**-0.7**
ARHZ	**Aropaoanui**	**0.61**	**1**	P	**Pn**	**11 14 32.1**	**-0.2**
ARHZ				S	**Sn**	**11 14 41.4**	**+0.1**
KWHZ	**Kaweka Forest**	**0.62**	**316**	P	**Pn**	**11 14 31.5**	**-1.0**
KWHZ				S	**Sn**	**11 14 40.0**	**-1.8**
ANWZ	**Angora Road**	**0.70**	**213**	P	**Pn**	**11 14 34.5**	**+1.1**
DVHZ	**Dannevirke**	**0.76**	**235**	P	**Pn**	**11 14 34.8**	**+0.6**
NMHZ	**Naumai**	**0.79**	**350**	P	**Pn**	**11 14 34.5**	**-0.2**
NMHZ				S	**Sn**	**11 14 44.6**	**-0.9**
BKZ	**Black Stump Fm**	**0.80**	**332**	P	**Pn**	**11 14 34.2**	**-0.6**
BKZ	**Black Stump Fm**	**0.80**	**332**	P	**Pn**	**11 14 34.0**	**-0.8**
BKZ				S	**Sn**	**11 14 44.0**	**-1.8**
BHHZ	**Black Hill Sta**	**0.80**	**298**	P	**Pn**	**11 14 34.1**	**-0.8**
BHHZ				S	**Sn**	**11 14 44.0**	**-1.9**
TSZ	**Takapari Road**	**0.80**	**256**	P	**Pn**	**11 14 34.9**	**0.0**
WHHZ	**Waihua**	**0.82**	**14**	P	**Pn**	**11 14 35.2**	**+0.2**
RAHZ	**Arahi**	**0.96**	**5**	P	**Pn**	**11 14 36.7**	**-0.2**
BFZ	**Birch Farm**	**0.98**	**215**	P	**Pn**	**11 14 38.1**	**+0.9**
BFZ	**Birch Farm**	**0.98**	**215**	P	**Pn**	**11 14 37.9**	**+0.7**
KNZ	**Kokohu**	**1.01**	**33**	P	**Pn**	**11 14 37.4**	**-0.1**
MHGZ	**Mahia Peninsul**	**1.02**	**45**	P	**Pn**	**11 14 38.2**	**+0.5**
MTHZ	**Maungataniwha**	**1.02**	**354**	P	**Pn**	**11 14 37.3**	**-0.5**
PRWZ	**Pori Road**	**1.03**	**228**	P	**Pn**	**11 14 38.8**	**+1.0**
MOVZ	**Moawhango**	**1.05**	**296**	P	**Pn**	**11 14 38.1**	**-0.1**
POWZ	**Post Office Ro**	**1.06**	**240**	P	**Pn**	**11 14 39.0**	**+0.7**
MRHZ	**Matea Rd**	**1.12**	**337**	P	**Pn**	**11 14 38.8**	**-0.3**
SNGZ	**Shannon Statio**	**1.12**	**15**	P	**Pn**	**11 14 39.1**	**0.0**
TUVZ	**Tukino**	**1.19**	**300**	P	**Pn**	**11 14 40.6**	**+0.5**
CPWZ	**Castlepoint**	**1.19**	**210**	P	**Pn**	**11 14 41.1**	**+1.0**
WNVZ	**Wahianoa**	**1.20**	**297**	P	**Pn**	**11 14 40.6**	**+0.3**
WHVZ	**Whangaehu Hut**	**1.23**	**298**	P	**Pn**	**11 14 41.3**	**+0.6**
ETVZ	**East Tongariro**	**1.23**	**306**	P	**Pn**	**11 14 40.7**	**+0.1**
TIWZ	**Tintock**	**1.23**	**222**	P	**Pn**	**11 14 41.2**	**+0.7**
OTVZ	**Oturere**	**1.24**	**304**	P	**Pn**	**11 14 40.9**	**+0.1**
SNVZ	**South Ngauruho**	**1.24**	**303**	P	**Pn**	**11 14 41.2**	**+0.4**
DRZ	**Dome Shelter**	**1.25**	**298**	P	**Pn**	**11 14 41.7**	**+0.7**
RITZ	**Rihia Road**	**1.25**	**316**	P	**Pn**	**11 14 41.1**	**+0.3**
TRVZ	**Turoa**	**1.25**	**297**	P	**Pn**	**11 14 41.2**	**+0.2**
RTZ	**Ruatahuna**	**1.25**	**0**	P	**Pn**	**11 14 40.6**	**-0.3**
FWVZ	**Far West T-bar**	**1.26**	**299**	P	**Pn**	**11 14 41.5**	**+0.4**
MTVZ	**Mangateitei**	**1.26**	**292**	P	**Pn**	**11 14 41.8**	**+0.8**
NTVZ	**North Tongarir**	**1.27**	**307**	P	**Pn**	**11 14 41.4**	**+0.2**
NGZ	**Ngauruhoe**	**1.27**	**303**	P	**Pn**	**11 14 41.4**	**+0.1**
NNVZ	**North Ngauruho**	**1.29**	**305**	P	**Pn**	**11 14 41.9**	**+0.4**
KRVZ	**Karewarewa**	**1.29**	**306**	P	**Pn**	**11 14 41.7**	**+0.1**
RIGZ	**Rimuhau**	**1.31**	**28**	P	**Pn**	**11 14 41.6**	**-0.1**
WTVZ	**West Tongariro**	**1.31**	**305**	P	**Pn**	**11 14 42.3**	**+0.5**
MRZ	**Mangatainoka R**	**1.33**	**233**	P	**Pn**	**11 14 42.2**	**+0.3**
KATZ	**Kakaramea**	**1.34**	**312**	P	**Pn**	**11 14 42.5**	**+0.4**
RATZ	**Rangitukua**	**1.37**	**317**	P	**Pn**	**11 14 42.6**	**0.0**
PKVZ	**Pokaka**	**1.39**	**294**	P	**Pn**	**11 14 43.6**	**+0.8**
ALRZ	**Allen Road**	**1.40**	**339**	P	**Pn**	**11 14 42.6**	**-0.2**
MUGZ	**Murupara**	**1.40**	**353**	P	**Pn**	**11 14 42.5**	**-0.4**
RAGZ	**Rawiri**	**1.42**	**14**	P	**Pn**	**11 14 42.8**	**-0.4**
TWVZ	**Taurewa**	**1.44**	**303**	P	**Pn**	**11 14 43.4**	**-0.1**
WHTZ	**Whakaora**	**1.44**	**326**	P	**Pn**	**11 14 43.6**	**+0.1**
PRRZ	**Plateau Road**	**1.45**	**341**	P	**Pn**	**11 14 43.2**	**-0.3**
TMWZ	**Te Maipa**	**1.49**	**214**	P	**Pn**	**11 14 44.2**	**+0.1**
WPRZ	**Whakapapatarin**	**1.49**	**335**	P	**Pn**	**11 14 43.6**	**-0.5**
WATZ	**Wairara**	**1.51**	**320**	P	**Pn**	**11 14 44.0**	**-0.4**
HOWZ	**Holdsworth Sta**	**1.52**	**227**	P	**Pn**	**11 14 44.4**	**0.0**
WAZ	**Wanganui**	**1.54**	**274**	P	**Pn**	**11 14 46.5**	**+1.7**
RRRZ	**Republican Roa**	**1.57**	**347**	P	**Pn**	**11 14 44.9**	**-0.4**
HRRZ	**Handcock Road**	**1.58**	**340**	P	**Pn**	**11 14 45.4**	**+0.1**
TKGZ	**Te Karaka**	**1.58**	**26**	P	**Pn**	**11 14 44.8**	**-0.5**
MWZ	**Matawai**	**1.59**	**16**	P	**Pn**	**11 14 44.8**	**-0.7**
URZ	**Urewera**	**1.61**	**4**	Pn	**Pn**	**11 14 44.7**	**-1.1**
	31nm,0.3s,baz=194,slow=12,SNR=175						
URZ				Sn	**Sn**	**11 15 03.5**	**-1.8**
	37nm,0.3s,baz=9.6,slow=19,SNR=6.2						
URZ	**Urewera**	**1.61**	**4**	P	**Pn**	**11 14 45.2**	**-0.6**
URZ	**Urewera**	**1.61**	**4**	P	**Pn**	**11 14 45.0**	**-0.7**
KUTZ	**Kaahu Road**	**1.65**	**327**	P	**Pn**	**11 14 46.0**	**-0.3**
HSRZ	**Hossack Road**	**1.66**	**340**	P	**Pn**	**11 14 46.1**	**-0.3**
GRRZ	**Galatos Road**	**1.66**	**336**	P	**Pn**	**11 14 46.3**	**-0.1**
OGWZ	**Otaki Gorge**	**1.67**	**235**	P	**Pn**	**11 14 46.7**	**+0.2**
TARZ	**Mount Tarawera**	**1.68**	**347**	P	**Pn**	**11 14 46.6**	**-0.1**
CNGZ	**Carnagh Statio**	**1.68**	**35**	P	**Pn**	**11 14 46.5**	**-0.2**
HLRZ	**Highlands Stat**	**1.69**	**343**	P	**Pn**	**11 14 47.7**	**+0.9**
MTW	**Mount Morrison**	**1.71**	**221**	P	**Pn**	**11 14 46.6**	**-0.4**
MKRZ	**Makatiti**	**1.78**	**347**	P	Pn	11 14 54.0	+5.9
UTU	**Utuhina**	**1.80**	**340**	P	**Pn**	**11 14 48.9**	**+0.6**
TRWZ	**Traveller**	**1.81**	**212**	P	**Pn**	**11 14 47.9**	**-0.6**
OMRZ	**Omania**	**1.83**	**345**	P	**Pn**	**11 14 48.1**	**-0.6**
KIW	**Kapiti Island**	**1.86**	**237**	P	**Pn**	**11 14 49.4**	**+0.2**
TWGZ	**Tauwhareparae**	**1.86**	**25**	P	**Pn**	**11 14 49.2**	**-0.1**
NGRZ	**Ngongotaha**	**1.87**	**341**	P	**Pn**	**11 14 49.8**	**+0.4**
VRZ	**Vera Road**	**1.87**	**293**	P	**Pn**	**11 14 49.7**	**+0.4**
MARZ	**Manawahe**	**1.90**	**353**	P	**Pn**	**11 14 51.1**	**+1.4**
TLZ	**Tolley Road**	**1.91**	**324**	P	**Pn**	**11 14 49.1**	**-0.7**
CAW	**Cannon Point**	**1.91**	**229**	P	**Pn**	**11 14 49.6**	**-0.2**
KARZ	**Kaharoa**	**1.94**	**343**	P	**Pn**	**11 14 49.6**	**-0.5**
RUGZ	**Raukumara Rang**	**1.98**	**16**	P	**Pn**	**11 14 50.4**	**-0.5**
WHRZ	**Whale Island**	**2.01**	**360**	P	**Pn**	**11 14 50.7**	**-0.5**
LREZ	**Lake Rotokare**	**2.03**	**281**	P	**Pn**	**11 14 53.5**	**+2.0**
OPRZ	**Ohinepanea**	**2.05**	**351**	P	**Pn**	**11 14 51.8**	**0.0**
PUZ	**Puketiti**	**2.06**	**29**	P	**Pn**	**11 14 50.9**	**-0.9**
HIZ	**Hauiti**	**2.14**	**309**	P	**Pn**	**11 14 52.9**	**0.0**
HIZ	**Hauiti**	**2.14**	**309**	P	**Pn**	**11 14 52.7**	**-0.2**
PLWZ	**Palliser**	**2.14**	**217**	P	**Pn**	**11 14 52.0**	**-1.0**
PKGZ	**Pakihiroa**	**2.16**	**24**	P	**Pn**	**11 14 52.8**	**-0.5**
KMRZ	**Kaimai**	**2.18**	**338**	P	**Pn**	**11 14 52.9**	**-0.6**
MHEZ	**Mangahewa**	**2.20**	**290**	P	**Pn**	**11 14 55.5**	**+1.7**
HAZ	**Te Kaha**	**2.21**	**17**	P	**Pn**	**11 14 53.1**	**-0.7**
TGRZ	**Tauranga**	**2.21**	**345**	P	**Pn**	**11 14 53.1**	**-0.8**
PREZ	**Palmer Road**	**2.24**	**283**	P	**Pn**	**11 14 56.1**	**+1.7**
SNZO	**South Karori**	**2.25**	**230**	P	**Pn**	**11 14 54.9**	**+0.5**
DREZ	**Durham Road**	**2.25**	**287**	P	**Pn**	**11 14 56.0**	**+1.5**
NEZ	**North Egmont**	**2.31**	**284**	P	**Pn**	**11 14 57.2**	**+1.8**
WMGZ	**Waiomatatini S**	**2.34**	**29**	P	**Pn**	**11 14 54.7**	**-0.9**
KHEZ	**Kahui Hut**	**2.36**	**283**	P	**Pn**	**11 14 58.5**	**+2.4**
PKE	**Pukeiti**	**2.41**	**285**	P	**Pn**	**11 14 58.5**	**+1.8**
TOZ	**Tahuroa Road**	**2.43**	**331**	P	**Pn**	**11 14 56.3**	**-0.6**
NMEZ	**Namu Road**	**2.44**	**280**	P	**Pn**	**11 14 59.5**	**+2.5**
TCW	**Tory Channel**	**2.46**	**236**	P	**Pn**	**11 14 56.9**	**-0.4**
NBEZ	**Newall Road No**	**2.48**	**283**	P	**Pn**	**11 14 59.6**	**+2.0**
DUWZ	**D'Urville Isla**	**2.51**	**247**	P	**Pn**	**11 14 57.8**	**-0.3**
MXZ	**Matakaoa Point**	**2.53**	**25**	P	**Pn**	**11 14 58.0**	**-0.3**
MXZ	**Matakaoa Point**	**2.53**	**25**	P	**Pn**	**11 14 57.7**	**-0.6**
TUWZ	**Tuamarina**	**2.79**	**235**	P	**Pn**	**11 15 00.8**	**-0.9**
BSWZ	**Blackbirch Sta**	**2.99**	**231**	P	**Pn**	**11 15 03.8**	**-0.7**
NNZ	**Nelson**	**3.05**	**243**	P	**Pn**	**11 15 05.2**	**-0.3**
KUZ	**Kuaotunu**	**3.27**	**342**	P	**Pn**	**11 15 08.4**	**-0.1**
KUZ	**Kuaotunu**	**3.27**	**342**	P	**Pn**	**11 15 07.9**	**-0.6**
TKNZ	**Takaka Hill**	**3.28**	**248**	P	**Pn**	**11 15 08.2**	**-0.3**
ETAZ	**East Tamaki Re**	**3.33**	**330**	P	**Pn**	**11 15 09.4**	**+0.2**
AWAZ	**Awhitu Peninsu**	**3.35**	**326**	P	**Pn**	**11 15 09.7**	**+0.2**
WIAZ	**Waiheke Island**	**3.40**	**334**	P	**Pn**	**11 15 08.5**	**-1.8**
WTAZ	**Waiatarua**	**3.49**	**326**	P	**Pn**	**11 15 12.2**	**+0.7**
MBAZ	**Motutapu North**	**3.50**	**332**	P	**Pn**	**11 15 12.0**	**+0.3**
QRZ	**Quartz Range**	**3.53**	**253**	P	**Pn**	**11 15 11.3**	**-0.7**
QRZ	**Quartz Range**	**3.53**	**253**	P	**Pn**	**11 15 11.0**	**-1.0**
MRNZ	**Matariki Terra**	**3.56**	**243**	P	**Pn**	**11 15 11.9**	**-0.5**
THZ	**Tophouse**	**3.62**	**237**	P	**Pn**	**11 15 12.3**	**-1.0**
RVAZ	**Riverhead Bore**	**3.63**	**328**	P	**Pn**	**11 15 13.7**	**+0.3**
KHZ	**Kahutara**	**3.63**	**225**	P	**Pn**	**11 15 12.2**	**-1.1**
GRZ	**Great Barrier**	**3.81**	**341**	P	**Pn**	**11 15 15.9**	**0.0**
GVZ	**Greta Valley S**	**4.28**	**223**	P	**Pn**	**11 15 21.6**	**-0.7**
DSZ	**Denniston Nort**	**4.35**	**243**	P	**Pn**	**11 15 22.0**	**-1.3**
WCZ	**Waipu Caves**	**4.45**	**331**	P	**Pn**	**11 15 25.0**	**+0.5**
LTZ	**Lake Taylor**	**4.58**	**229**	P	**Pn**	**11 15 24.6**	**-1.9**
AMCZ	**Amberley**	**4.63**	**223**	P	**Pn**	**11 15 26.5**	**-0.5**
MQZ	**McQueen's Vall**	**5.01**	**219**	P	**Pn**	**11 15 30.4**	**-1.9**
AKCZ	**Akaroa Harbour**	**5.02**	**216**	P	**Pn**	**11 15 31.0**	**-1.4**
INZ	**Inchbonnie**	**5.05**	**234**	P	**Pn**	**11 15 30.6**	**-2.2**
OXZ	**Oxford**	**5.06**	**225**	P	**Pn**	**11 15 31.1**	**-1.9**
RACZ	**Rakaia**	**5.28**	**222**	P	**Pn**	**11 15 34.6**	**-1.4**
WACZ	**Wakanui South**	**5.59**	**222**	P	**Pn**	**11 15 38.5**	**-1.6**
WVZ	**Waitaha Valley**	**5.67**	**234**	P	**Pn**	**11 15 40.4**	**-1.0**
RPZ	**Rata Peaks**	**5.86**	**227**	Pn	**Pn**	**11 15 43.3**	**-0.6**
	0.8nm,0.3s,baz=52,slow=17,SNR=11						
RPZ				Sn	**Sn**	**11 16 43.7**	**-6.1**
	6.8nm,0.3s,baz=317,slow=23,SNR=28 4.4nm,0.6s						
RPZ	**Rata Peaks**	**5.86**	**227**	P	**Pn**	**11 15 43.5**	**-0.5**
RPZ	**Rata Peaks**	**5.86**	**227**	P	**Pn**	**11 15 43.3**	**-0.6**
ARCZ	**Arundel**	**5.94**	**225**	P	**Pn**	**11 15 44.1**	**-0.9**
GCSZ	**Gaunt Creek Bo**	**6.06**	**233**	P	**Pn**	**11 15 45.4**	**-1.2**
CTZ	**Chatham Island**	**6.15**	**131**	P	**Pn**	**11 15 50.1**	**+2.3**
TMZ	**Timaru**	**6.33**	**223**	P	**Pn**	**11 15 48.8**	**-1.6**
FOZ	**Fox Glacier**	**6.49**	**233**	P	**Pn**	**11 15 50.1**	**-2.4**
LBZ	**Lake Benmore**	**6.77**	**226**	P	**Pn**	**11 15 54.8**	**-1.6**
ODZ	**Otahua Downs**	**6.97**	**220**	P	**Pn**	**11 15 58.9**	**-0.3**
ODZ	**Otahua Downs**	**6.97**	**220**	P	**Pn**	**11 15 57.8**	**-1.3**
JCZ	**Jackson Bay**	**7.41**	**233**	P	**Pn**	**11 16 03.5**	**-1.7**
JCZ	**Jackson Bay**	**7.41**	**233**	P	**Pn**	**11 16 02.8**	**-2.4**
WKZ	**Wanaka**	**7.70**	**227**	P	**Pn**	**11 16 07.0**	**-2.2**
EAZ	**Earnscleugh**	**7.79**	**224**	P	**Pn**	**11 16 09.0**	**-1.4**
SYZ	**Scrubby Hill**	**8.78**	**218**	P	**Pn**	**11 16 25.2**	**+1.3**
ASAR	**Alice Springs**	**39.62**	**281**	P	**P**	**11 21 47.6**	**+1.1**
	0.6nm,0.7s,baz=117,slow=6.2,SNR=15 0.6nm,0.7s						
WRA	**Warramunga Arr**	**41.49**	**286**	P	**P**	**11 22 02.6**	**+0.6**
	0.4nm,0.6s,baz=126,slow=7.9,SNR=5.2 0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**153.06**	**190**	PKPab	**PKPab**	**11 34 26.8**	**+3.3**
	0.4nm,0.4s,baz=170,slow=4.7,SNR=4.8						

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*IDC **06** 11:26:30.9±2.6, 1°.16N×127°.34E, h0^{km}, mb3.1/3, mbtmp3.2/3, Error ellipse: s-maj=214.6km s-min=29.9km az=66.0*

*DJA **06** 11:26:35.4±0.8, 1°N±5°×12°7E±°, h18^{km}±10^{km}, M3.8/8, mb3.9/1, MLv3.7/8*

ISC 06 11:26:33.4±1.6**, 1°.3N**±0°.1×**127°.2E**±0°.1**, h10^{km}, n9,** σ**2^{s}.14**/9**, mb3.1**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.53**	**166**	P	**Pn**	**11 26 48.6**	**+1.5**
LBMI	**Labuha**	**1.94**	**172**	P	**Pb**	**11 27 09.4**	**+0.6**
SANI	**Sanana**	**3.55**	**201**	P	**Pn**	**11 27 28.2**	**-0.4**
GTOI	**Gorontalo**	**4.27**	**261**	P	**Pn**	**11 27 40.3**	**+1.7**

NLAI	Namlea	4.50	182	P	Pn	11 27 44.2	+2.5
LUWI	Luwuk	5.03	243	P	Pn	11 27 49.3	+0.3
WRA	Warramunga Arr	22.22	162	P	P	11 31 26.9	-3.5
	0.6nm,0.9s,baz=341,slow=11,SNR=2.5 0.6nm,0.9s						
ASAR	Alice Springs	25.64	166	P	P	11 32 01.7	-1.7
	0.5nm,1.1s,baz=343,slow=9.1,SNR=2.0 0.5nm,1.1s						
MKAR	Makanchi Array	59.84	326	P	P	11 36 39.4	+0.2
	0.1nm,0.4s,baz=124,slow=8.0,SNR=1.6 0.1nm,0.4s						

IDC 06 11:42:03.4±5.5**, 10°.37S**×**161°.57E, h0^{km}, mb3.5**/3**, mbtmp3.5**/4**, ML3.3**/1**, Error ellipse: s-maj=317.3km s-min=32.4km az=137.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	17.65	235	P	Pn	11 46 09.7	-1.2
	0.1nm,0.3s,baz=48,slow=15,SNR=2.9 1.1nm,0.6s						
WRA	Warramunga Arr	27.92	247	P	P	11 47 57.5	+1.9
	0.3nm,0.5s,baz=73,slow=9.3,SNR=1.7 0.3nm,0.5s						
ASAR	Alice Springs	29.50	240	P	P	11 48 08.6	-1.1
	0.1nm,0.4s,baz=67,slow=9.8,SNR=4.4 0.1nm,0.4s						
ILAR	Eielson Array	84.22	20	P	P	11 54 36.4	-0.1
	0.7nm,1.1s,baz=246,slow=5.3,SNR=4.2 0.7nm,1.1s						

MAN 06 12:02:28.0, 8°.91N×126°.66E, h1^{km}, mb4.3, ML3.1, MS2.8, 3C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.78	202	⇓eP	Pg	12 02 42.9	0.0
BIPH				eS	Sg	12 02 53.1	+0.2
GLSP	General Luna,	1.02	329	⇓eP	Pb	12 02 48.4	0.0
GLSP				eS	Sb	12 03 02.4	0.0
BUTP	Butuan	1.03	274	⇑eP	Pb	12 02 48.2	-0.4
BUTP				eS	Sg	12 03 01.8	+0.7
CDOP	Cateel, Davao	1.14	191	⇑eP	Pg	12 02 49.2	-0.6
CDOP				i S	Sb	12 03 05.2	-0.6
BUKP	Musuan	1.88	237	⇓eP	Pn	12 03 02.2	+0.8
BUKP				eS	Sb	12 03 27.2	-0.1
CGP	Cagayan de Oro	2.00	257	⇓eP	Pn	12 03 03.7	+0.9
CGP				eS	Sn	12 03 28.6	+0.1
MSLP	Maasin	2.16	305	⇑eP	Pn	12 03 06.0	+0.9
MSLP				eS	Sn	12 03 33.3	+0.9

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*NNC **06** 12:07:02.7±2.0, 50°.16N×77°.77E, h0^{km}, mb3.2, mpv2.6, Error ellipse: s-maj=20.9km s-min=7.2km az=112.0, Suspected Mining explosion.*

*IDC **06** 12:07:05.2±0.9, 50°.09N×78°.75E, h0^{km}, mbtmp2.7/3, ML2.4/2, Error ellipse: s-maj=10.1km s-min=6.2km az=56.0*

ISC 06 12:07:04.9±0.9**, 50°.11N**±0°.04×**78°.72E**±0°.08**, h0^{km}, n16, σ1^{s}.08**/28**, 16C-6D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.49	345	⇑P	Pb	12 07 15.9	-0.5
KUR07				⇑S	Sb	12 07 24.5	+0.2
KUR06	Kurchatov Arra	0.51	346	⇓P	Pb	12 07 16.1	-0.7
KUR06				⇑S	Sb	12 07 25.6	+0.8
KUR14	Kurchatov Arra	0.51	351	⇓P	Pb	12 07 16.1	-0.8
KUR14				⇓S	Sb	12 07 25.0	+0.2
KUR15	Kurchatov Arra	0.52	349	⇑P	Pb	12 07 16.1	-0.9
KUR15				⇓S	Sb	12 07 26.0	+1.0
KURBB	Kurchatov Arra	0.53	347	Pg	Pg	12 07 15.7	+0.6
	1.1nm,0.3s,baz=165,slow=18,SNR=73						
KURBB				Lg	Lg	12 07 23.9	
	1.0nm,0.3s,baz=166,slow=34,SNR=6.8						
KUR16	Kurchatov Arra	0.54	345	⇑P	Pb	12 07 16.8	-0.5
KUR16				⇑S	Sn	12 07 27.5	-2.1
KUR05	Kurchatov Arra	0.55	348	⇑P	Pb	12 07 16.6	-0.8
KUR05				⇑S	Sb	12 07 25.7	-0.1
KUR17	Kurchatov Arra	0.55	343	⇓P	Pb	12 07 16.9	-0.5
KUR17				⇑S	Sb	12 07 27.0	+1.2
KUR04	Kurchatov Arra	0.57	349	⇓P	Pb	12 07 17.1	-0.7
KUR04				⇑S	Sb	12 07 26.1	-0.2
KURK	Kurchatov	0.61	354	⇑P	Pb	12 07 17.4	-1.1
	5.0nm,0.4s						
KURK				⇑S	Sb	12 07 27.9	+0.2
	34µm,0.1s						
MAKZ	Makanchi	3.95	145	⇑Pn	Pn	12 08 08.7	+1.9
	2.4nm,1.1s						
MAKZ				⇑Sn	Sb	12 09 02.3	-1.5
	6.1nm,0.7s						
MK31	Makanchi Array	4.08	143	⇑Pn	Pn	12 08 08.4	-0.2
	0.1nm,0.1s,baz=324,slow=11,SNR=25						
MK31				⇑Sn	Sb	12 09 09.4	+1.9
	1.8nm,0.5s,baz=326,slow=28,SNR=13						
MKAR	Makanchi Array	4.08	143	Pn	Pn	12 08 08.3	-0.3
	0.3nm,0.3s,baz=322,slow=10,SNR=28						
MKAR				Pg	Pb	12 08 16.7	-1.0
	0.6nm,0.3s,baz=321,slow=15,SNR=14						
MKAR				Lg	Lg	12 09 10.1	
	0.9nm,0.3s,baz=330,slow=28,SNR=14 0.3nm,0.2s						
I46RU	ZALESOVO INFRA	5.38	42	I	I	12 38 20.0	
	baz=226,slow=330,SNR=3.1						
ZALV	Zalesovo Beam	5.38	42	Pn	Pn	12 08 27.4	+1.0
	0.6nm,0.3s,baz=229,slow=14,SNR=6.8						
ZALV				Lg	Lg	12 09 58.2	
	0.1nm,0.3s,baz=228,slow=17,SNR=3.8 0.9nm,0.3s						
BVAR	Borovoye Array	5.96	303	Pn	Pn	12 08 35.5	+1.2
	0.2nm,0.3s,baz=119,slow=15,SNR=1.1						
BVAR				Sn	Sn	12 09 41.3	-1.9
	baz=116,slow=23,SNR=1.9						
BVAR				Lg	Lg	12 10 15.3	
	baz=102,slow=27,SNR=2.7						

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*IDC **06** 12:36:39.6±1.1, 22°.19N×45°.17W, h0^{km}, mb3.6/7, mbtmp3.7/8, ML3.7/1, MS3.6/37, Error ellipse: s-maj=28.3km s-min=26.3km az=140.0*

ISC 06 12:36:41.0±0.9**, 22°.2N**±0°.2×**45°.2W**±0°.2**, h10^{km}, n44, σ0^{s}.83**/8**, mb3.6**/7**, MS3.7**/36**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDP	Montagnes des	18.44	204	P	P	12 40 56.4	-0.5
	0.2nm,0.3s,baz=228,slow=20,SNR=2.4						
MDP				LR	LR	12 46 00.5	
	comp=Z,68nm,20.8s,baz=322,slow=30 19nm,1.0s						
SJG	San Juan	20.12	262	LR	LR	12 46 57.0	
	comp=Z,57nm,20.6s,baz=80,slow=31						
BBTS	Babate	28.12	100	LR	LR	12 51 11.3	
	comp=Z,173nm,18.2s,baz=267,slow=31						
SADO	Sadowa	35.84	317	LR	LR	12 56 00.8	
	comp=Z,117nm,18.3s,baz=114,slow=32						
TKL	Tuckaleechee C	36.15	300	LR	LR	12 56 31.7	
	comp=Z,78nm,19.6s,baz=124,slow=33						
SCHQ	Schefferville	36.46	339	LR	LR	12 56 31.1	
	comp=Z,79nm,21.2s,baz=155,slow=33						
MDT	Midelt	37.30	65	LR	LR	12 56 54.9	
	comp=Z,48nm,18.9s,baz=263,slow=33						
DBIC	Dimbokro	41.79	105	LR	LR	12 58 38.1	
	comp=Z,65nm,20.3s,baz=280,slow=32						
H10N2	ASCENSION HYDR	42.33	131	T	T	13 29 41.4	
	baz=314,slow=75,SNR=95						
H10N3	ASCENSION HYDR	42.33	131	T	T	13 29 22.9	
	baz=314,slow=75,SNR=101						
H10N1	ASCENSION HYDR	42.34	131	T	T	13 29 43.0	
	baz=314,slow=75,SNR=150						
H10S3	ASCENSION HYDR	43.01	133	T	T	13 30 40.4	
	baz=314,slow=74,SNR=97						
H10S2	ASCENSION HYDR	43.02	133	T	T	13 30 41.7	
	baz=266,slow=74,SNR=43						
LPAZ	La Paz	44.35	212	P	P	12 44 53.0	+0.7
	0.8nm,0.5s,baz=32,slow=9.5,SNR=3.6						
LPAZ				LR	LR	13 02 13.9	
	comp=Z,45nm,20.0s,baz=28,slow=35 0.8nm,0.5s						
FRB	Frobisher Bay	44.42	345	LR	LR	13 02 06.9	
	comp=Z,135nm,18.6s,baz=184,slow=34						
SFJD	Kangerlussuaq	44.97	357	LR	LR	13 00 44.4	
	comp=Z,122nm,18.6s,baz=172,slow=32						
TORD	Torodi Ar. Bea	45.38	93	P	P	12 44 59.2	-0.8
	0.2nm,0.3s,baz=300,slow=9.1,SNR=2.6 0.2nm,0.3s						
NNA	Nana	46.02	226	LR	LR	13 03 09.1	
	comp=Z,31nm,21.1s,baz=160,slow=34						
CMIG	Matias Romero	46.95	273	LR	LR	13 04 45.6	
	comp=Z,26nm,18.1s,baz=74,slow=36						
ULM	Lac du Bonnet	48.37	318	LR	LR	13 03 26.0	
	comp=Z,96nm,20.1s,baz=95,slow=33						
CPUP	Villa Florida	49.63	194	LR	LR	13 07 36.1	
	comp=Z,41nm,18.1s,baz=111,slow=37						
LVC	Limon Verde	50.16	209	LR	LR	13 05 36.9	
	comp=Z,25nm,21.6s,baz=22,slow=35						
TXAR	Lajitas Array	52.73	291	P	P	12 45 56.7	+0.3
	0.5nm,0.9s,baz=113,slow=6.9,SNR=4.7						
TXAR				LR	LR	13 07 40.1	
	comp=Z,25nm,20.9s,baz=72,slow=35 0.5nm,0.9s						
ANMO	Albuquerque	54.59	298	LR	LR	13 07 11.0	
	comp=Z,56nm,20.3s,baz=192,slow=34						
NOA	NORSAR Array B	54.73	30	LR	LR	13 05 53.6	
	comp=Z,88nm,18.1s,baz=285,slow=32						
PDAR	Pinedale Array	56.73	307	P	P	12 46 25.1	-0.3
	0.3nm,0.7s,baz=119,slow=7.3,SNR=1.8						
PDAR				LR	LR	13 10 23.2	
	comp=Z,49nm,18.1s,baz=92,slow=36 0.3nm,0.7s						
RES	Resolute Bay	58.62	346	LR	LR	13 08 26.6	
	comp=Z,60nm,21.7s,baz=179,slow=32						
LPIG	La Paz	59.45	286	LR	LR	13 14 43.3	
	comp=Z,31nm,18.4s,baz=170,slow=38						
ELK	Elko	61.07	305	LR	LR	13 11 09.5	
	comp=Z,118nm,20.4s,baz=75,slow=34						
YKA	Yellowknife Ar	61.10	330	P	P	12 46 54.5	-0.6
	0.4nm,0.7s,baz=97,slow=6.8,SNR=6.5						
YKA				LR	LR	13 11 40.2	
	comp=Z,47nm,19.5s,baz=294,slow=34 0.4nm,0.7s						
NEW	Newport	61.92	314	LR	LR	13 11 12.0	
	comp=Z,93nm,21.9s,baz=68,slow=34						
PFO	Pinyon Flats O	62.96	297	LR	LR	13 13 47.1	
	comp=Z,37nm,19.8s,baz=83,slow=35						
AKASG	Malin Array Be	63.37	43	P	P	12 47 11.7	+1.2
	0.8nm,0.7s,baz=276,slow=5.3,SNR=5.0 0.8nm,0.7s						
NVAR	Mina Array Bea	63.70	303	LR	LR	13 13 03.8	
	comp=Z,63nm,19.9s,baz=38,slow=34						
YBH	Yreka Blue Hor	66.54	307	LR	LR	13 14 37.9	
	comp=Z,68nm,21.4s,baz=80,slow=34						
PLCA	Paso Flores	66.88	201	LR	LR	13 19 03.1	
	comp=Z,26nm,18.3s,baz=164,slow=38						
BBB	Bella Bella	68.56	319	LR	LR	13 16 17.5	
	comp=Z,83nm,19.4s,baz=50,slow=35						
DLBC	Dease Lake	68.75	326	LR	LR	13 15 48.6	
	comp=Z,51nm,19.6s,baz=356,slow=34						
INK	Inuvik	69.03	337	LR	LR	13 16 41.5	
	comp=Z,143nm,19.7s,baz=316,slow=35						
ILAR	Eielson Array	75.05	334	P	P	12 48 22.5	-0.2
	0.5nm,0.8s,baz=85,slow=4.8,SNR=4.6						
ILAR				LR	LR	13 21 03.8	
	comp=Z,59nm,19.5s,baz=80,slow=36 0.5nm,0.8s						
MBAR	Mbarara	77.17	96	LR	LR	13 20 36.2	
	comp=Z,84nm,20.4s,baz=126,slow=34						
KDAK	Kodiak Island	80.33	329	LR	LR	13 22 14.5	
	comp=Z,34nm,21.7s,baz=80,slow=34						
LBTB	Lobatse	83.13	120	LR	LR	13 20 11.1	
	comp=Z,52nm,18.4s,baz=228,slow=31						
SUR	Sutherland	83.13	129	LR	LR	13 17 24.8	
	comp=Z,64nm,21.7s,baz=222,slow=29						

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*HVO **06** 12:40:30.1±1.0, 19°.380N±0°.009×155°.24W±0°.01, h3^{km}±3^{km}, ML2.8/23, ML2.2/42(NEIC), Error ellipse: s-maj=1.9km s-min=0.8km az=128.0*

NEIC 06 12:40:30.2±1.3**, 19°.38N**±0°.02×**155°.22W**±0°.01**, h9^{km}**±1^{km}**, Error ellipse: s-maj=2.6km s-min=1.1km az=148.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUH	Pauahi	0.01	120		Pg	12 40 31.3	-0.7
PUH				IAML		12 40 32.0	
	comp=N,6µm,0.3s						
KKO	Keanakako`i	0.05	296		Pg	12 40 31.5	-0.8
BYL	Byron's Ledge	0.05	314		Pg	12 40 31.5	-0.8
BYL				IAML		12 40 32.8	
	comp=E,4µm,0.4s						
KNHH	Kane Nui o Ham	0.05	87		Pg	12 40 32.1	-0.2
RIM	Rim	0.05	290		Pg	12 40 31.6	-0.7
HATHI	Halema‘uma‘u T	0.06	321		Pg	12 40 31.9	-0.5
NPH	North Pit	0.07	302		Pg	12 40 31.8	-0.7
NPH				IAML		12 40 33.1	
	comp=N,3µm,0.5s						
NPH				IAML		12 40 33.3	
	comp=E,2µm,0.3s						
SBLHI	Steaming Bluff	0.07	319		Pg	12 40 32.0	-0.4
SBLHI				IAML		12 40 33.2	
	comp=E,3µm,0.8s						
SDHHI	Sand Hill	0.07	280		Pg	12 40 32.1	-0.4
OBL	Observatory Le	0.07	304		Pg	12 40 32.5	0.0
UWB	Uwekahuna B	0.07	312		Pg	12 40 32.2	-0.3
UWB				IAML		12 40 33.4	
	comp=N,2µm,0.8s						
WRMHI	West Rim	0.08	292		Pg	12 40 33.7	+1.1
UWE	Uwekahuna	0.08	303		Pg	12 40 33.2	+0.6
UWE				IAML		12 40 34.3	
	comp=E,2µm,0.4s						
UWE				IAML		12 40 34.4	
	comp=N,3µm,0.5s						
STCH	Steam Cracks	0.09	85		Pg	12 40 32.8	0.0
STCH	Steam Cracks	0.09	85	IAML		12 40 35.5	
	comp=N,1µm,0.4s						
STCH				IAML		12 40 35.9	
	comp=E,1µm,0.2s						
RSD	Rainshed	0.10	328		Pg	12 40 32.6	-0.3
RSD					Sg	12 40 34.3	-0.5
RSD	Rainshed	0.10	328	IAML		12 40 34.7	
	comp=E,908nm,0.6s						
RSD				IAML		12 40 34.9	
	comp=N,534nm,0.4s						
NPOC	North of Pu‘u	0.11	82		Pg	12 40 33.4	+0.5
NPOC	North of Pu‘u	0.11	82	IAML		12 40 36.1	
	comp=E,946nm,0.7s						
NPOC				IAML		12 40 36.3	
	comp=N,878nm,0.4s						
JCUZ	Jacuzzi	0.11	87		Pg	12 40 33.2	+0.2
JCUZ	Jacuzzi	0.11	87	IAML		12 40 36.1	
	comp=N,727nm,0.5s						
JCUZ				IAML		12 40 36.8	
	comp=E,704nm,0.7s						
HLP	Hilina Pali	0.12	225		Pg	12 40 33.0	0.0
HLP					Sg	12 40 35.3	+0.3
HLP	Hilina Pali	0.12	225	IAML		12 40 35.5	
	comp=N,1µm,0.3s						
HLP				IAML		12 40 35.7	
	comp=E,2µm,0.6s						
MLH	Mauna Loa	0.19	307		Pg	12 40 34.5	+0.1
MLH	Mauna Loa	0.19	307		Sg	12 40 37.8	+0.5
MLH	Mauna Loa	0.19	307	IAML		12 40 37.4	
	comp=E,322nm,3.4s						
JOKA	Jonika Flow	0.21	75		Pg	12 40 34.7	0.0
JOKA					Sg	12 40 37.4	-0.2
HTC	Hot Caves	0.22	230		Pg	12 40 34.8	+0.1
AIN	Ainahou	0.22	269		Pg	12 40 35.0	+0.1
AIN					Sg	12 40 38.8	+0.7
AIN	Ainahou	0.22	269	IAML		12 40 39.3	
	comp=N,558nm,0.4s						
AIN				IAML		12 40 39.8	
	comp=E,585nm,0.3s						
HMH	Humu‘ula Sheep	0.33	312		Sg	12 40 41.8	+0.4
MLOA	Mauna Loa Obse	0.37	295		Pg	12 40 38.1	+0.4
MLOA				IAML		12 40 45.0	
	comp=E,256nm,0.3s						
MWH	Moku‘aweowe	0.37	287		Pg	12 40 37.6	-0.1
MWH	Moku‘aweowe	0.37	287	IAML		12 40 38.3	
	comp=N,173nm,2.3s						
MWH				IAML		12 40 47.1	
	comp=E,426nm,1.4s						
KHU	Kahuku	0.39	251		Pg	12 40 38.3	+0.2
KHU					Sb	12 40 44.6	-1.1
ALEP	Alea Permanent	0.43	292		Pg	12 40 38.4	-0.4
ALEP					Sg	12 40 45.2	+0.7
POHA	Pohakuloa	0.48	322		Pg	12 40 39.5	-0.2
POHA					Sg	12 40 46.5	+0.6
POHA	Pohakuloa	0.48	322	IAML		12 40 48.4	
	comp=E,170nm,2.0s						
POHA				IAML		12 40 49.3	
	comp=E,149nm,0.4s						
KHLU	Kahalu`u	0.67	289		Pg	12 40 42.6	-0.6
KHLU					Sg	12 40 52.5	+0.5
HPAH	Hawaii Prepara	0.79	325	Pg	Pg	12 40 44.1	-1.4

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*EST **06** 12:44:14.8±0.1, 59°.23N×27°.76E, h0^{km}, ML1.6(HEL), Explosion*

*LVSN **06** 12:44:15.0±3.3, 59°.22N×27°.94E, h0^{km}±48^{km}, ML1.9*

*IDC **06** 12:45:04.2±519.0, 57°.73N×29°.77E, h0^{km}, Error ellipse: s-maj=199.5km s-min=112.2km az=97.0*

ISC 06 12:44:13.7±0.9**, 59°.22N**±0°.03×**27°.77E**±0°.04**, h0^{km}, n29, σ0^{s}.86**/46**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EE04	Vaivara Sinima	0.16	20	eP	Pg	12 44 17.3	+0.6
EE04				eS	Sg	12 44 19.1	+0.3
EE03	Tooma soojaam,	0.85	246	eP	Pg	12 44 29.9	0.0
EE03				ePB	Pb	12 44 30.4	-0.9
EE03				eS	Sg	12 44 41.1	+0.2
VSU	Vasula	0.94	216	eP	Pg	12 44 31.8	+0.3
VSU				AML	AML	12 44 49.2	
	comp=Z,42nm,0.1s						
VSU				AML	AML	12 44 49.3	
	comp=N,74nm,0.1s						
VSU				AML	AML	12 44 52.3	
	comp=E,57nm,0.1s						
VSU	Vasula	0.94	216	eP	Pg	12 44 32.0	+0.5
ARBE	Arbavere	0.94	284	eP	Pg	12 44 31.2	-0.5
ARBE				AML	AML	12 44 45.3	
	comp=N,172nm,0.7s						
ARBE				AML	AML	12 44 49.4	
	comp=Z,89nm,0.6s						
ARBE				AML	AML	12 44 49.6	
	comp=E,127nm,0.6s						
ARBE	Arbavere	0.94	284	eS	Sg	12 44 43.6	-0.2
VJF	Virojoki	1.32	355	eP	Pg	12 44 38.1	-0.9
VJF				MSG		12 44 51.0	
	comp=Z,5.9nm,0.2s						
VJF				eSB	Sg	12 44 55.6	-0.6
EE07	Piusa Caves, O	1.40	187	eP	Pn	12 44 39.7	-0.6
EE07				ePN	Pg	12 44 41.2	+0.8
EE07				eS	Sg	12 44 58.1	-0.3
PVF	Pernaja	1.64	325	ePG	Pb	12 44 44.2	-0.5
PVF				MSG		12 45 02.4	
	comp=Z,3.8nm,0.2s						
PVF				eS	Sn	12 45 04.6	-0.8
HEL1	Helsinki	1.75	304	ePN	Pb	12 44 46.3	-0.2
HEL1				eSG	Sb	12 45 08.2	-0.8
MEF	Metsahovi	1.98	302	eP	Pb	12 44 50.4	-0.1
MEF				AML	AML	12 44 50.9	
	comp=E,7.2nm,0.2s						
MEF				eS	Sb	12 45 15.3	-0.3
MEF				AML	AML	12 45 16.4	
	comp=N,17nm,0.4s						
MEF				AML	AML	12 45 16.7	
	comp=Z,8.2nm,0.6s						
MEF	Metsahovi	1.98	302	ePG	Pb	12 44 50.2	-0.3
MEF				eSG	Sb	12 45 15.4	-0.3
MEF				MSG		12 45 16.6	
	comp=Z,2.2nm,0.1s						
NUR	Nurmijrvi	2.04	311	ePG	Pb	12 44 51.2	-0.3
NUR				MSG		12 45 14.8	
	comp=Z,3.4nm,0.2s						
NUR				eSG	Sb	12 45 17.0	-0.3
MTSE	Matsula	2.11	258	eP	Pb	12 44 52.5	-0.3
MTSE				eS	Sb	12 45 19.2	-0.2
MTSE	Matsula	2.11	258	ePG	Pb	12 44 52.4	-0.3
MTSE				eSG	Sb	12 45 19.2	-0.2
EE01	Perakula, Nova	2.13	271	ePG	Pb	12 44 52.6	-0.5
EE01				eSG	Sb	12 45 19.8	-0.2
RUF	Ruokolahti	2.29	14	eP	Pn	12 44 53.7	+1.1
RUF				ePB	Pb	12 44 54.7	-1.1
RUF				eSB	Sb	12 45 23.9	-0.6
RUF				MSG		12 45 26.3	
	comp=Z,1.4nm,0.1s						
FIA0	FINESS Array S	2.38	340	eP	Pn	12 44 54.7	+0.8
FIA0				ePB	Pb	12 44 56.1	-1.2
FIA0				MSG		12 45 22.6	
	comp=Z,2.2nm,0.2s						
FIA0				eS	Sn	12 45 24.2	+0.5
FIA0				eSG	Sb	12 45 27.1	-0.1
FIA1	FINESS Array S	2.38	340	eP	Pn	12 44 54.7	+0.8
FIA1				ePB	Pb	12 44 56.1	-1.2
FIA1				MSG		12 45 30.1	
	comp=Z,2.3nm,0.1s						
EE06	Soera, Palade,	2.55	266	eSB	Sb	12 45 30.7	-1.5
KAF	Kangasniemi	2.99	347	ePB	Pb	12 45 06.4	-1.3
KAF				eSG	Sb	12 45 45.8	+1.1
KAF				MSG		12 45 47.3	
	comp=Z,1.0nm,0.1s						
RAF	Rauma	3.51	304	eP	Pn	12 45 11.0	+1.7
RAF				AML	AML	12 45 47.1	
	comp=E,2.9nm,0.7s						
RAF				AML	AML	12 46 10.3	
	comp=N,2.9nm,0.7s						
RAF				AML	AML	12 46 11.3	
	comp=Z,3.5nm,0.8s						
RAF	Rauma	3.51	304	eP	Pn	12 45 11.3	+1.9
KPF	Kankaanpaa	3.84	315	eP	Pn	12 45 16.0	+2.1
JOF	Joensuu	4.09	23	eP	Pn	12 45 18.7	+1.4
I43RU	DUBNA INFRASON	5.62	112	I	I	13 12 40.0	
	comp=Z,0.1nm,0.7s,baz=286,slow=301,SNR=0.6						
I37NO	I37NO	10.65	342	I	I	13 59 40.0	
	baz=149,slow=329,SNR=1.5						
I31KZ	AKTYUBINSK INF	19.39	104	I	I	14 33 38.6	
	baz=304,slow=323,SNR=4.1						
I46RU	ZALESOVO INFRA	31.01	74	I	I	15 52 10.0	
	baz=298,slow=332,SNR=1.7						

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*IDC **06** 12:56:45.4±3.6, 10°.59N×125°.47E, h0^{km}, mb3.3/4, mbtmp3.3/4, MS3.6/1, Error ellipse: s-maj=334.8km s-min=23.1km az=66.0*

*MAN **06** 12:56:46.1, 11°.31N×126°.76E, h28^{km}, mb4.3, ML3.1, MS2.8*

ISC 06 12:56:47.8±1.3**, 11°.23N**±0°.06×**126°.8E**±0°.1**, h35^{km}, n10, σ1^{s}.35**/14**, mb3.4**/4**, 2C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	1.56	203	⇓eP	Pn	12 57 12.4	-0.7
GLSP				eS	Sn	12 57 32.2	-0.1
SCPH	Surigao	1.90	221	eP	Pn	12 57 18.5	+0.7
SCPH				eS	Sn	12 57 37.2	-3.4
MSLP	Maasin	2.16	240	⇓eP	Pn	12 57 22.1	+0.8
MSLP				eS	Sn	12 57 48.2	+1.3
CNP	Catarman	2.41	302	⇑eP	Pn	12 57 23.9	-0.9
CNP				eS	Sn	12 57 51.8	-1.2
PVCP	Virac	3.46	313	⇑eP	Pn	12 57 38.7	-0.5
PVCP				eS	Sn	12 58 19.1	+0.1
JCJ	Chichijima	21.44	40	LR	LR	13 11 44.6	
	comp=Z,152nm,19.2s,baz=114,slow=40						
WRA	Warramunga Arr	31.86	166	P	P	13 03 09.3	-0.5
	0.4nm,1.1s,baz=344,slow=9.7,SNR=1.5 0.4nm,1.1s						
ASAR	Alice Springs	35.38	169	P	P	13 03 40.4	0.0
	0.2nm,0.4s,baz=350,slow=7.5,SNR=9.3 0.2nm,0.4s						
MKAR	Makanchi Array	51.56	322	P	P	13 05 51.7	+1.2
	0.4nm,0.7s,baz=118,slow=8.3,SNR=5.0 0.4nm,0.7s						
KURBB	Kurchatov Arra	55.56	325	P	P	13 06 20.8	+1.1
	0.4nm,0.6s,baz=127,slow=6.8,SNR=5.0 0.4nm,0.6s						

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*IDC **06** 13:26:50.2±0.8, 12°.01N×88°.72W, h0^{km}, mb3.9/12, mbtmp3.9/13, ML3.7/1, MS3.2/6, Error ellipse: s-maj=34.9km s-min=16.8km az=56.0*

*SNET **06** 13:26:52.7±1.0, 11°.84N×89°.06W, h11^{km}±28^{km}, ML3.9*

*NEIC **06** 13:26:54.3±2.0, 12°.06N±0°.07×88°.97W±0°.07, h10^{km}±1^{km}, mb4.6/31, Error ellipse: s-maj=14.1km s-min=8.9km az=222.0*

*INET **06** 13:26:54.8±1.7, 11°.93N×89°.07W, h15^{km}±18^{km}, ML4.2*

*GCG **06** 13:26:58.2±0.3, 12°.23N×89°.71W, h190^{km}±84^{km}, MD4.0*

ISC 06 13:26:51.7±0.6**, 11°.85N**±0°.06×**89°.08W**±0°.05**, h10^{km}, n107, σ1^{s}.42**/113**, mb4.5**/27**, MS3.1**/6**, Off coast of central**

America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALJI	**Alcalda de J**	1.55	19	*i* P	Pn	13 27 20.0	+0.6
ALJI				*e*S	Sb	13 27 40.9	+0.7
TECO	**Alcaldia de Te**	1.70	10	*e*P	Pn	13 27 21.7	+0.2
COEB	**Comit de Eme**	1.72	18	*e*P	Pn	13 27 22.4	+0.5
COEB				IAML		13 27 23.9	
	comp=Z,1µm,0.5s						
TECA	**Tecapa**	1.73	19	*e*P	Pn	13 27 22.6	+0.5
LCY	**Lacayo**	1.74	26	*i* P	Pn	13 27 22.8	+0.7
LFRS	**El Faro**	1.76	1	*i* P	Pn	13 27 22.9	+0.4
JAYA	**Jayaque - finc**	1.83	349	*e*P	Pn	13 27 23.9	+0.5
JAYA				IAML		13 27 49.7	
	comp=Z,2µm,0.2s						
SNET	**Serv Nac Est T**	1.83	355	Pn	Pn	13 27 22.0	-1.3
SNET	**Serv Nac Est T**	1.83	355	*e*P	Pn	13 27 24.1	+0.7
PQSS	**Presa 15 de Se**	1.83	16	*e*P	Pn	13 27 24.2	+0.9
PAVA	**Las Pavas**	1.86	4	*e*P	Pn	13 27 24.2	+0.4
LCND	**La Caada**	1.86	39	*e*P	Pn	13 27 23.7	+0.1
LCND				IAML		13 27 52.1	
	comp=Z,635nm,0.4s						
UEES	**Universidad Ev**	1.86	355	*i* P	Pn	13 27 24.6	+0.8
UEES				IAML		13 27 53.2	
	comp=Z,1µm,0.5s						
CNCH	**Conchagua**	1.87	41	*e*P	Pn	13 27 24.5	+0.5
SCLA	**Alcaldia de Sa**	1.87	11	*e*P	Pn	13 27 24.3	+0.4
BOQS	**Boqueron**	1.88	354	*e*P	Pn	13 27 25.1	+0.9
LFU	**La Fuente**	1.89	359	*i* P	Pn	13 27 25.0	+0.9
SBLS	**San Blas**	2.05	345	*i* P	Pn	13 27 27.4	+0.9
RTR	**El Retiro**	2.11	345	*e*P	Pn	13 27 28.2	+1.0
P5NO	**Presa 5 de nov**	2.15	8	*e*P	Pn	13 27 28.6	+1.0
NUBE	**Las Nubes**	2.15	342	*i* P	Pn	13 27 28.2	+0.4
CRIN	**San Cristobal**	2.16	67	Pn	Pn	13 27 27.6	-0.2
CRIN	**San Cristobal**	2.16	67	*e*P	Pn	13 27 28.4	+0.5
CRIN				IAML		13 27 57.9	
	comp=N,2µm,0.5s						
SLOZ	**Alcaldia de Sa**	2.27	343	*e*P	Pn	13 27 30.8	+1.5
CNGN	**Cerro Negro**	2.42	74	Pn	Pn	13 27 31.7	+0.2
MOMN	**Momotombo**	2.55	77	*e*P	Pn	13 27 33.3	+0.1
MOMN				*e*S	Sn	13 28 05.1	+0.7
MTO3	**Montecristo**	2.55	354	*i* P	Pn	13 27 34.7	+1.3
ESQI	**Esquipulas**	2.71	355	Pn	Pn	13 27 35.4	0.0
ESQI	**Esquipulas**	2.71	355	*e*P	Pn	13 27 37.3	+1.9
TGUH	**Tegucigalpa,Un**	2.81	39		Pn	13 27 37.4	+0.4
TGUH	**Tegucigalpa,Un**	2.81	39	*i* P	Pn	13 27 38.0	+1.0
TGUH	**Tegucigalpa,Un**	2.81	39	*e*P	Pn	13 27 37.8	+0.8
WILN	**Americas 2**	2.85	83	*e*P	Pn	13 27 37.7	+0.4
SOMN	**Somoto**	2.87	57	*e*P	Pn	13 27 40.3	+2.6
NBG	**Las Nubes**	2.99	336	*e*P	Pn	13 27 42.4	+3.0
NBG				*e*S	Sn	13 28 16.9	+1.5
FUG	**Fuego 3**	3.10	327	*e*P	Pn	13 27 42.5	+1.7
MATN	**Matagalpa**	3.27	70	Pn	Pn	13 27 43.7	+0.6
MATN	**Matagalpa**	3.27	70	*e*P	Pn	13 27 43.1	0.0
BOAB	**BOACO BROADBAN**	3.39	80	Pn	Pn	13 27 44.4	-0.3
BOAB	**BOACO BROADBAN**	3.39	80	*e*P	Pn	13 27 44.5	-0.3
HZTE	**Horizontes, Gu**	3.60	108	Pn	Pn	13 27 49.5	+1.8
STG3	**Santiaguito 3,**	3.73	320	*e*P	Pn	13 27 51.5	+1.9
STG3				*e*S	Sn	13 28 30.0	-3.8
ORTG	**Ortega, Santa**	3.85	112	Pn	Pn	13 27 52.4	+1.2
ORTG	**Ortega, Santa**	3.85	112	*e*P	Pn	13 27 52.7	+1.5
DUNO	**Dulce Nombre,**	3.94	116	Pn	Pn	13 27 53.5	+1.2
JTS	**Las Juntas de**	4.34	111	Pn	Pn	13 27 59.7	+1.9
	comp=N,8.3nm,0.3s,baz=106,slow=21,SNR=23						
JTS				Sn	Sn	13 28 46.7	-1.8
	comp=N,4.1nm,0.3s,baz=226,slow=18,SNR=5.5						
JTS	**Las Juntas de**	4.34	111	Pn	Pn	13 28 00.1	+2.2
JACO	**JACO, Garabito**	4.86	116	Pn	Pn	13 28 07.9	+2.9
PETF	**Flores**	5.09	352	Pn	Pn	13 28 08.6	+0.4
RIMA	**Rio Macho**	5.53	111	Pn	Pn	13 28 16.9	+2.6
SRBA	**San Rafael, Bu**	6.20	114	Pn	Pn	13 28 25.6	+2.1
CMIG	**Matias Romero**	7.66	314	Pn	Pn	13 28 45.1	+1.7
	comp=N,1.1nm,0.3s,baz=156,slow=8.1,SNR=12						
CMIG				Sn	Sn	13 30 05.4	-4.9
	comp=N,1.2nm,0.3s,baz=282,slow=4.3,SNR=2.8						
	comp=N,2.5nm,0.3s						
TEIG	**Tepich**	8.37	5	Pn	Pn	13 28 56.0	+2.9
TLIG	**Tlapa**	10.79	303		Pn	13 29 29.7	+3.2
SDV	**Santo Domingo**	18.39	97	P	Pn	13 31 07.4	+0.2
	comp=N,2.5nm,0.5s,baz=288,slow=6.4,SNR=2.1						
TIGA	**Tifton**	20.14	14	Pn	P	13 31 27.6	+1.5
BAUV	**El Baul**	20.89	96	P	P	13 31 35.0	+0.6
BAUV				IAmb	IAmb	13 31 43.1	
	comp=Z,17nm,0.7s						
ATAH	**Atahualpa**	21.65	150	LR	LR	13 39 06.4	
	comp=Z,53nm,18.3s,baz=355,slow=34						
TXAR	**Lajitas Array**	22.07	324	P	P	13 31 49.1	+2.0
	comp=Z,1.2nm,0.5s,baz=147,slow=11,SNR=16						
TXAR				LR	LR	13 42 52.0	
	comp=Z,34nm,18.5s,baz=102,slow=43						
	comp=Z,1.2nm,0.5s						
TXAR	**Lajitas Array**	22.07	324	P	P	13 31 48.6	+1.6
TX31	**Lajitas Ar. Si**	22.07	324	P	P	13 31 48.6	+1.5
TX32	**Lajitas Array**	22.07	324	P	P	13 31 48.5	+1.5
BIRV	**Birongo**	22.42	91	P	P	13 31 52.5	+1.6
BIRV				IAmb	IAmb	13 31 57.0	
	comp=Z,33nm,1.1s						
MIAR	**Mount Ida**	22.96	350	P	P	13 31 56.5	+0.1
MIAR				IAmb	IAmb	13 32 01.2	
	comp=Z,32nm,1.5s						
JSC	**Jenkinsville**	23.44	16	P	P	13 32 01.5	+0.3
WHAR	**Wooly Hollow**	23.52	353	P	P	13 32 02.8	+0.8
WHAR				IAmb	IAmb	13 32 07.2	
	comp=Z,17nm,1.1s						
LCAR	**Lake Charles**	24.19	356	P	P	13 32 08.7	+0.3
TKL	**Tuckaleechee C**	24.19	11	P	P	13 32 05.8	-2.6
	comp=Z,3.4nm,0.7s,baz=187,slow=14,SNR=2.7						
TKL				LR	LR	13 40 48.0	
	comp=Z,71nm,20.0s,baz=148,slow=35						
	comp=Z,3.4nm,0.7s						
WMOK	**Wichita Mounta**	24.43	340	P	P	13 32 10.3	-0.4
T42A	**Van Buren**	25.14	356	P	P	13 32 16.8	-0.2
V58A	**Windy Hill, Pi**	25.49	19	P	P	13 32 21.2	+1.0
V58A				IAmb	IAmb	13 32 29.8	
	comp=Z,9.1nm,0.7s						
S39A	**Bolivar**	26.01	352	P	P	13 32 26.1	+1.2
S39A				IAmb	IAmb	13 32 30.9	
	comp=Z,8.6nm,0.8s						
CCM	**Cathedral Cave**	26.17	356	P	P	13 32 25.6	-0.8
CCM				IAmb	IAmb	13 32 38.3	
	comp=Z,8.5nm,0.8s						
KAN08	**Anthony NE Sta**	26.50	344	P	P	13 32 28.5	-0.9
P40A	**Paris**	27.69	355	P	P	13 32 39.8	-0.3
P40A				IAmb	IAmb	13 32 51.8	
	comp=Z,6.4nm,0.7s						
PDAR	**Pinedale Array**	35.57	334	P	P	13 33 49.6	0.0
	comp=Z,0.1nm,0.5s,baz=134,slow=14,SNR=1.6						
PDAR				PcP	PcP	13 36 16.9	-1.7
	comp=Z,0.2nm,0.5s,baz=140,slow=4.7,SNR=3.8						
PDAR				LR	LR	13 49 28.2	
	comp=Z,23nm,20.4s,baz=94,slow=38						
	comp=Z,0.1nm,0.5s						
AGMN	**Agassiz Nation**	36.77	352	P	P	13 33 59.8	+0.3
AGMN				IAmb	IAmb	13 34 08.1	
	comp=Z,14nm,1.4s						
ELK	**Elko**	36.84	326	LR	LR	13 52 38.6	
	comp=Z,52nm,19.3s,baz=73,slow=42						
NVAR	**Mina Array Bea**	37.12	321	P	P	13 34 04.5	+1.6
	comp=Z,2.1nm,0.8s,baz=146,slow=8.4,SNR=13						
NVAR				PcP	PcP	13 36 24.2	+0.9
	comp=Z,1.2nm,1.0s,baz=134,slow=2.6,SNR=4.6						
	comp=Z,2.1nm,0.8s						
NVAR	**Mina Array Bea**	37.12	321	P	P	13 34 04.8	+1.9
ULM	**Lac du Bonnet**	38.69	353	P	P	13 34 14.3	-1.4
	comp=Z,2.2nm,0.4s,baz=170,slow=11,SNR=3.7						
	comp=Z,2.2nm,0.4s						
SIV	**San Ignacio**	39.16	134	P	P	13 34 20.1	0.0
	comp=Z,2.3nm,0.9s,baz=307,slow=9.9,SNR=6.3						
	comp=Z,2.3nm,0.9s						
YBH	**Yreka Blue Hor**	41.80	322	LR	LR	13 55 24.2	
	comp=Z,62nm,18.1s,baz=212,slow=41						
SCHQ	**Schefferville**	46.32	18	P	P	13 35 14.4	-3.3
	comp=Z,1.9nm,0.6s,baz=240,slow=5.3,SNR=4.8						
	comp=Z,1.9nm,0.6s						
SCHQ	**Schefferville**	46.32	18	P	P	13 35 15.7	-2.0
YKA	**Yellowknife Ar**	53.78	346	P	P	13 36 13.1	-1.0
	comp=Z,1.0nm,0.8s,baz=144,slow=7.3,SNR=10						
YKA				PcP	PcP	13 37 19.6	-0.4
	comp=Z,0.4nm,0.9s,baz=147,slow=3.9,SNR=2.6						
	comp=Z,1.0nm,0.8s						
PLCA	**Paso Flores**	55.06	163	P	P	13 36 22.4	-1.5
	comp=Z,1.0nm,0.7s,baz=4.4,slow=13,SNR=3.8						
	comp=Z,1.0nm,0.7s						
RES	**Resolute Bay**	62.90	358	P	P	13 37 17.0	-0.7
RES				IAmb	IAmb	13 37 25.9	
	comp=Z,2.4nm,0.7s						
BCAR	**Beaver Creek A**	63.14	336	P	P	13 37 20.9	+1.3
I26K	**Coal Creek Min**	64.76	338	P	P	13 37 31.0	+0.9
ILAR	**Eielson Array**	65.93	337	P	P	13 37 37.6	-0.1
	comp=Z,1.6nm,0.9s,baz=138,slow=4.3,SNR=16						
	comp=Z,1.6nm,0.9s						
ILAR	**Eielson Array**	65.93	337	P	P	13 37 39.4	+1.7
WRH	**Wood River Hil**	66.28	336	P	P	13 37 40.3	+0.3
WRH				IAmb	IAmb	13 38 08.7	
	comp=Z,8.7nm,1.4s						
BMAR	**Burnt Mountain**	66.28	340	P	P	13 37 41.6	+1.6
I23K	**Minto, Yukon-K**	67.04	337	P	P	13 37 44.6	-0.2
I23K				IAmb	IAmb	13 37 54.7	
	comp=Z,3.0nm,0.9s						
KTH	**Kantishna Hill**	67.09	335	P	P	13 37 45.2	-0.1
KTH				IAmb	IAmb	13 38 22.3	
	comp=Z,7.5nm,1.3s						
PPLA	**Purkeypile**	67.41	334	P	P	13 37 47.7	+0.3
PPLA				IAmb	IAmb	13 37 48.8	
	comp=Z,7.8nm,1.4s						
CAST	**Castle Rocks**	67.53	334	P	P	13 37 48.5	+0.5
MLY	**Manley**	67.54	336	P	P	13 37 49.1	+1.1
MLY				IAmb	IAmb	13 37 54.9	
	comp=Z,3.9nm,1.2s						
COLD	**Coldfoot**	68.16	338	P	P	13 37 53.3	+1.4
K20K	**Telida**	68.36	334	P	P	13 37 53.2	0.0
K20K				IAmb	IAmb	13 37 56.0	
	comp=Z,6.9nm,1.4s						
ESDC	**Sonseca Array**	78.81	52	P	P	13 38 54.0	-1.3
	comp=Z,1.4nm,1.0s,baz=268,slow=6.5,SNR=4.1						
	comp=Z,1.4nm,1.0s						
KOWA	**Kowa**	82.40	77		P	13 39 16.2	+1.4
MSSA	**Maissana**	87.88	45	P	P	13 39 41.3	-0.6
TORD	**Torodi Ar. Bea**	88.10	77	P	P	13 39 42.9	-0.5
	comp=Z,1.6nm,1.3s,baz=289,slow=4.4,SNR=3.1						
	comp=Z,1.6nm,1.3s						
WRA	**Warramunga Arr**	137.57	253	PKP	PKPdf	13 46 17.4	+0.5
	comp=Z,0.8nm,0.9s,baz=72,slow=2.7,SNR=3.5						
CMAR	**Chiang Mai Arr**	148.86	345	PKPbc	PKPbc	13 46 40.5	-0.2
	comp=Z,1.4nm,0.4s,baz=26,slow=4.4,SNR=8.8						

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*NEIC **06** 13:35:15.5±0.9, 31°.25S±0°.08×68°.6W±0°.2, h186^{km}±22^{km},*
Error ellipse: s-maj=23.8km s-min=11.3km az=91.0
*SJA **06** 13:35:16.7±0.7, 31°.24S×68°.37W, h106^{km}±2^{km}, ML4.0,*
MW3.9, Hypocentre not reviewed by the ISC
*IDC **06** 13:35:16.2±0.7, 31°.28S×68°.50W, h100^{km}±4^{km}, mb3.4/2,*
mbtmp3.8/7, Error ellipse: s-maj=23.1km s-min=13.6km
az=81.0
*GUC **06** 13:35:17.4±0.7, 31°.20S×68°.58W, h130^{km}±22^{km}, ML4.2*
ISC 06 13:35:16.4±0.6**, 31°.20S**±0°.05×**68°.44W**±0°.05**, h107**^{km}±6^{km}**,**
n67, σ1^{s}.**87**/85**, 10C, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLL	**Cerro Villicun**	0.14	191	*e*P		13 35 31.8	
RTLL				*e*S		13 35 43.1	
SJA	**San Juan**	0.35	197	*e*P		13 35 32.9	
SJA				*e*S		13 35 45.0	
SJA				IAML		13 35 45.7	
	comp=Z,4µm,0.2s						
CFA	**Coronel Fontan**	0.45	157	LR	LR	13 35 30.2	
	comp=Z,22nm,20.5s,baz=21,slow=36						
CFA				P	Pn	13 35 33.0	+0.3
	comp=Z,2µm,0.2s,baz=314,slow=9.0						
CFA				S	Sn	13 35 44.4	-0.5
	comp=Z,5µm,0.3s,baz=137,slow=20,SNR=66						
CFA	**Coronel Fontan**	0.45	157	*e*P		13 35 33.0	
CFA				IAML		13 35 45.0	
	comp=Z,4µm,0.2s						
CFA				*e*S		13 35 45.0	
RTLS	**Leoncito**	0.95	230	*e*P		13 35 38.5	
RTLS				*e*S		13 35 55.1	
RTLS				IAML		13 35 57.0	
	comp=Z,3µm,0.3s						
ASAL	**Salagasta**	1.43	193	*e*P		13 35 43.2	
ASAL				*e*S		13 36 03.2	
ARCO	**CERRO ARCO**	1.69	194	*e*P		13 35 46.5	
ARCO				*e*S		13 36 08.6	
APLL	**PUNTA DE LOS L**	1.83	65	*e*P		13 35 48.6	
APLL				*e*S		13 36 11.6	
CO01	**Juntas del Tor**	1.87	310		Pn	13 35 50.6	+2.7
CO01	**Juntas del Tor**	1.87	310⇑	*e*P	Pn	13 35 50.6	+2.7
CO01				*e*S	Sn	13 36 14.9	+3.0
CO01				IAML		13 36 15.7	
	comp=N,2µm,0.2s						
CO01	**Juntas del Tor**	1.87	310	*e*P		13 35 50.8	
CO01				*e*S		13 36 15.2	
CO01				IAML		13 36 15.9	
	comp=Z,829nm,0.3s						
AAGR	**Agrelo**	1.91	190	*e*P		13 35 49.2	
AAGR				*e*S		13 36 13.8	
ACLC	**CERRO LA CRUZ**	2.19	37	*e*P		13 35 53.0	
ACLC				*e*S		13 36 20.3	
ACLC				IAML		13 36 24.5	
	comp=Z,533nm,0.2s						
CO02	**Combarbal**	2.19	269		Pn	13 35 53.4	+1.6
CO02	**Combarbal**	2.19	269⇑	*e*P	Pn	13 35 53.5	+1.6
CO02				*e*S	Sn	13 36 21.0	+2.1
CO02	**Combarbal**	2.19	269	*e*P		13 35 53.6	
CO02				*e*S		13 36 22.1	
CO02				IAML		13 36 22.9	
	comp=Z,2µm,0.7s						
GO04	**Tololo Observa**	2.27	296	Pn	Pn	13 35 54.5	+1.5
GO04	**Tololo Observa**	2.27	296⇑	*e*P	Pn	13 35 54.5	+1.5
GO04				*e*S	Sn	13 36 23.6	+2.6
GO04	**Tololo Observa**	2.27	296	*e*P		13 35 54.8	
GO04				*e*S		13 36 24.0	
VA03	**San Esteban**	2.38	228		Pn	13 35 55.8	+1.6
VA03				IAML		13 36 26.6	
	comp=N,1µm,0.6s						
VA03				IAML		13 36 28.6	
	comp=E,1µm,0.4s						
VA03	**San Esteban**	2.38	228⇑	*e*P	Pn	13 35 56.0	+1.8
VA03				*e*S	Sn	13 36 25.6	+2.3
VA03				IAML		13 36 28.9	
	comp=E,1µm,0.4s						
VA03	**San Esteban**	2.38	228	*e*P		13 35 56.1	
VA03				*e*S		13 36 20.4	
VA03				IAML		13 36 30.2	
	comp=Z,503nm,0.7s						
MT08	**Bocatoma Ro**	2.61	210⇑	*e*P	Pn	13 35 58.8	+1.4
MT08				*e*S	Sn	13 36 29.2	+0.3
MRA	**San Martin**	2.62	118	*e*P		13 35 57.9	
MRA				*e*S		13 36 18.4	
MRA				IAML		13 36 25.7	
	comp=Z,2µm,0.6s						
PEL	**Peldehue**	2.72	224	Pn	Pn	13 35 59.6	+0.9
PEL				IAML		13 36 33.7	
	comp=E,315nm,0.5s						
PEL	**Peldehue**	2.72	224⇑	*e*P	Pn	13 35 59.8	+1.1
PEL				*e*S	Sn	13 36 32.5	+1.4
PEL	**Peldehue**	2.72	224	*e*P		13 35 59.9	
PEL				*e*S		13 36 30.9	
CO05	**La Serena**	2.73	297		Pn	13 35 59.5	+0.8
MT10	**Hacienda Santa**	2.73	220	*e*P	Pn	13 36 00.6	+1.7
MT10				*e*S	Sn	13 36 34.1	+2.6
VA06	**Catapilco**	2.78	240	Pn	Pn	13 35 59.1	-0.4
VA06				IAML		13 36 39.6	
	comp=E,533nm,0.3s						
VA06				IAML		13 36 42.3	
	comp=N,462nm,0.5s						
VA06	**Catapilco**	2.78	240⇑	*e*P	Pn	13 36 00.1	+0.6
VA06				*e*S	Sn	13 36 32.0	-0.5
VA06				IAML		13 36 39.9	
	comp=E,487nm,0.5s						
CO06	**Fray Jorge**	2.79	280		Pn	13 35 59.3	-0.2
CO06				IAML		13 36 34.1	
	comp=E,442nm,0.3s						
CO06				IAML		13 36 41.0	
	comp=N,330nm,0.5s						
ROCH	**El Roble**	2.81	230⇑	*e*P	Pn	13 36 00.3	+0.3
ROCH				*e*S	Sn	13 36 33.9	+0.4
ROCH				IAML		13 36 36.6	
	comp=N,620nm,0.4s						
ROC1	**El Roble**	2.81	230		Pn	13 36 00.4	+0.3
ROC1				IAML		13 36 35.5	
	comp=E,492nm,0.5s						
ROC1				IAML		13 36 39.4	
	comp=N,653nm,0.7s						
ROC1	**El Roble**	2.81	230	*e*P		13 36 00.5	
ROC1				*e*S		13 36 34.3	
AC05	**El Transito**	2.84	326		Pn	13 36 02.6	+2.3
AC05				IAML		13 36 41.7	
	comp=N,683nm,0.4s						
AC05	**El Transito**	2.84	326	*e*P		13 36 02.9	
AC05				*e*S		13 36 37.8	
AC05				IAML		13 36 44.6	
	comp=Z,327nm,0.7s						
MT03	**Universidad Ad**	2.88	217		Pn	13 36 02.2	+1.3
MT03				IAML		13 36 41.9	
	comp=N,605nm,0.3s						
MT03				IAML		13 36 42.2	
	comp=E,437nm,0.3s						
MT03	**Universidad Ad**	2.88	217	*e*P		13 36 02.7	
MT03				*e*S		13 36 33.9	
MT03				IAML		13 36 42.0	
	comp=Z,280nm,0.3s						
LCO	**Las Campanas**	2.93	317	Pn	Pn	13 36 03.1	+1.4
LCO				IAML		13 36 44.8	
	comp=Z,681nm,0.3s						
LCO				IAML		13 36 46.2	
	comp=Z,657nm,0.4s						
LCO	**Las Campanas**	2.93	317	*e*P		13 36 03.4	
LCO				IAML		13 36 41.7	
	comp=Z,308nm,0.6s						
MT05	**Renca**	2.93	221		Pn	13 36 02.8	+1.3
MT05	**Renca**	2.93	221	*e*P		13 36 02.9	
MT05				*e*S		13 36 37.7	
MT05				IAML		13 36 42.1	
	comp=Z,210nm,0.6s						
LMEL	**Las Melosas**	3.03	209	Pn	Pn	13 36 04.0	+1.0
MT02	**Curacav**	3.07	227		Pn	13 36 03.4	+0.1
MT02	**Curacav**	3.07	227	*e*S		13 36 40.3	
MT12	**Pirque**	3.09	215⇑	*e*P	Pn	13 36 05.2	+1.6
MT12				*e*S	Sn	13 36 41.7	+1.6
MT12				IAML		13 36 49.8	
	comp=N,460nm,0.3s						
TINO	**Tinogasta**	3.21	14	*e*P		13 36 07.8	
TINO				*e*S		13 36 32.4	
VA01	**Torpederas**	3.27	235	*e*P		13 35 59.9	
BO04	**La Punta**	3.33	213		Pn	13 36 07.9	+1.1
BO04				IAML		13 36 53.0	
	comp=N,228nm,0.9s						
MT09	**Talagante**	3.35	219		Pn	13 36 07.0	-0.2
MT09				IAML		13 36 48.8	
	comp=N,392nm,0.5s						
MT09				IAML		13 36 51.1	
	comp=E,450nm,0.4s						
MT09	**Talagante**	3.35	219⇑	*e*P	Pn	13 36 07.4	+0.2
MT09				*e*S	Sn	13 36 47.3	+0.9
MT09				IAML		13 36 51.2	
	comp=E,416nm,0.4s						
MT01	**Popeta**	3.56	221		Pn	13 36 09.0	-0.8
MT01	**Popeta**	3.56	221	*e*P		13 36 09.3	
MT01				*e*S		13 36 37.9	
CYA	**Choya**	3.58	41	*e*P		13 36 10.2	
CYA				*e*S		13 36 50.6	
CYA				IAML		13 36 51.8	
	comp=Z,135nm,0.2s						
VA05	**Santo Domingo**	3.63	227		Pn	13 36 09.7	-1.1
VA05				IAML		13 37 00.1	
	comp=E,315nm,0.4s						
AC04	**Llanos de Chal**	3.76	322	Pn	Pn	13 36 13.1	+0.6
AC04				IAML		13 37 01.5	
	comp=E,235nm,0.5s						
AC04				IAML		13 37 03.6	
	comp=N,228nm,0.6s						
AC04	**Llanos de Chal**	3.76	322	*e*P		13 36 13.5	
AC04				IAML		13 37 24.4	
	comp=Z,191nm,0.5s						
BO01	**Tunca**	3.89	214	Pn	Pn	13 36 13.3	-0.9
BO01	**Tunca**	3.89	214	*e*P		13 36 13.7	
BO01				*e*S		13 37 00.7	
GO03	**Copiap**	3.91	336		Pn	13 36 15.6	+1.0
GO03				IAML		13 37 05.3	
	comp=N,223nm,0.6s						
GO03				IAML		13 37 06.0	
	comp=E,197nm,0.8s						
GO03	**Copiap**	3.91	336	*e*P		13 36 16.4	
GO03				*e*S		13 37 01.4	
BO02	**Sierra Bellavi**	4.09	208		Pn	13 36 17.3	+0.3
BO02				IAML		13 37 11.3	
	comp=E,139nm,0.4s						
BO02				IAML		13 37 14.0	
	comp=N,146nm,0.3s						
BO02	**Sierra Bellavi**	4.09	208	*e*P		13 36 17.6	
BO02				*e*S		13 37 09.4	
AC01	**Pan de Azucar**	5.37	339	Pn	Pn	13 36 34.5	+0.2
PB14	**IPOC Station P**	6.77	345	Pn	Pn	13 36 52.7	-0.9
PB15	**IPOC Station P**	8.01	353	Pn	Pn	13 37 09.5	-0.8
PB06	**IPOC Station P**	8.52	353		Pn	13 37 15.6	-1.6
LVC	**Limon Verde**	8.56	357	P	Pn	13 37 17.1	-0.8
	comp=N,14nm,0.3s,baz=159,slow=11,SNR=32						
LVC				S	Sn	13 38 50.8	-2.2
	comp=N,5.2nm,0.4s,baz=51,slow=24,SNR=1.6						
LVC	**Limon Verde**	8.56	357		Pn	13 37 16.4	-1.5
TRQA	**Tornquist**	8.67	144		Pn	13 37 17.6	-1.4
GO06	**Curarrehue**	8.73	196	Pn	Pn	13 37 17.2	-2.6
PB04	**IPOC Station P**	8.96	350	Pn	Pn	13 37 20.7	-2.4
PB03	**IPOC Station P**	9.18	352		Pn	13 37 23.3	-2.9
PB09	**IPOC Station P**	9.39	355		Pn	13 37 27.5	-1.5
PB07	**IPOC Station P**	9.52	352		Pn	13 37 27.6	-3.1
PLCA	**Paso Flores**	9.67	190	P	Pn	13 37 30.8	-1.8
	comp=N,0.7nm,0.5s,baz=352,slow=14,SNR=1.7						
PB02	**IPOC Station P**	9.92	352		Pn	13 37 32.6	-3.6
PB01	**IPOC Station P**	10.15	354		Pn	13 37 36.0	-3.3
CPUP	**Villa Florida**	10.89	66	P	Pn	13 37 51.4	+2.3
	comp=N,0.6nm,0.4s,baz=230,slow=16,SNR=1.9						
CPUP				S	Sn	13 39 51.6	+2.7
	comp=N,1.1nm,0.3s,baz=100,slow=16,SNR=1.8						
PB08	**IPOC Station P**	11.03	357	Pn	Pn	13 37 48.0	-3.4
PB11	**IPOC Station P**	11.44	354	Pn	Pn	13 37 52.4	-4.3
GO01	**Chusmiza**	11.50	356	Pn	Pn	13 37 54.5	-3.3
PSGCX	**Pisagua**	11.65	352	Pn	Pn	13 37 55.3	-4.1
MNMC	**Minye Minye**	12.06	355	Pn	Pn	13 38 01.8	-3.3
PB12	**IPOC Station P**	12.64	352	Pn	Pn	13 38 08.9	-3.7
PB16	**IPOC Station P**	12.84	355	Pn	Pn	13 38 12.6	-3.0
LPAZ	**La Paz**	14.84	1	P	P	13 38 42.8	-1.8
	comp=N,3.9nm,0.7s,baz=180,slow=6.9,SNR=15						
SIV	**San Ignacio**	16.56	26	P	P	13 39 03.2	+0.1
	comp=N,1.0nm,0.7s,baz=223,slow=14,SNR=4.1						
TXAR	**Lajitas Array**	68.90	327	P	P	13 46 11.6	+1.7
	comp=N,0.3nm,0.9s,baz=129,slow=7.1,SNR=2.2						
TXAR				pP	pP	13 46 36.6	-0.4
	comp=N,0.3nm,0.7s,baz=142,slow=4.6,SNR=3.1						
	comp=N,0.3nm,0.9s						
TORD	**Torodi Ar. Bea**	80.38	68	P	P	13 47 16.9	+0.6
	comp=N,1.7nm,0.7s,baz=266,slow=6.0,SNR=11						
TORD				pP	pP	13 47 44.3	+0.2
	comp=N,0.4nm,0.7s,baz=251,slow=4.1,SNR=1.5						
	comp=N,1.7nm,0.7s						
ASAR	**Alice Springs**	121.40	204	PKP	PKiKP	13 53 57.0	-0.8
	comp=N,0.2nm,0.6s,baz=136,slow=2.0,SNR=6.7						
WRA	**Warramunga Arr**	124.65	206	PKP	PKiKP	13 54 03.5	-0.8
	comp=N,0.4nm,0.5s,baz=156,slow=1.7,SNR=6.2						
KSH	**Kashi**	149.97	64	PKPbc	PKPbc	13 54 55.4	+0.9
ZALV	**Zalesovo Beam**	150.24	32	PKPbc	PKiKP	13 54 55.1	-0.1
	comp=N,1.9nm,0.6s,baz=325,slow=3.5,SNR=9.7						
MKAR	**Makanchi Array**	152.64	47	PKPbc	PKPbc	13 55 00.8	+0.5
	comp=N,0.6nm,0.6s,baz=309,slow=2.0,SNR=9.2						
MKAR				PKPab	PKPab	13 55 12.3	+1.0
	comp=N,0.7nm,0.5s,baz=299,slow=2.6,SNR=9.5						
MKAR				pPKPbc	pPKPbc	13 55 28.7	-0.9
	comp=N,0.3nm,0.5s,baz=267,slow=1.8,SNR=2.4						

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*DDA **06** 13:43:56.0±0.0, 38°.71N×42°.61E, h16^{km}, ML2.6*
*ISK **06** 13:43:56.1, 38°.69N×42°.63E, h12^{km}, ML2.4/7*
ISC 06 13:43:56.3±0.9**, 38°.70N**±0°.03×**42°.62E**±0°.03**, h14**^{km}±7^{km}**,**
n17, σ0^{s}.**78**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADCV	**BITLIS_Adilcev**	0.14	36	P	Pg	13 44 00.0	-0.1
ADCV				S	Sg	13 44 02.8	0.0
ADCV				*i* AML	AML	13 44 03.0	
	comp=E,3µm,0.3s						
MLAZ	**Malazgirt-MUS**	0.45	353	Pg	Pb	13 44 05.5	-0.6
MLAZ				Sg	Sb	13 44 12.3	-0.5
AKDM	**Akdamar-Van**	0.46	142	Pg	Pg	13 44 05.5	0.0
AKDM				Sg	Sb	13 44 12.3	-0.8
GURO	**Guroymak-BITLI**	0.48	253	Pg	Pb	13 44 06.2	-0.4
GURO				Sg	Sb	13 44 13.7	+0.1
BLIS	**Bitlis-Merkez**	0.48	235	P	Pb	13 44 06.2	-0.5
BLIS				S	Sb	13 44 13.7	-0.1

BLIS				*i* AML	AML	13 44 14.0	
	comp=N,480nm,0.4s						
GEVA	**Gevas**	**0.52**	**138**	P	**Pg**	**13 44 06.6**	**0.0**
GEVA				S	**Sb**	**13 44 14.9**	**+0.3**
VANB	**Van**	**0.61**	**99**	Pg	**Pn**	**13 44 09.5**	**-1.2**
VANB				Sg	**Sb**	**13 44 18.2**	**+0.8**
PERV	**Siirt/Pervari-**	**0.75**	**185**	P	**Pb**	**13 44 11.1**	**-0.1**
PERV				S	**Sn**	**13 44 24.4**	**+0.6**
PERV				*i* AML	AML	13 44 28.0	
	comp=E,180nm,0.6s						
VMUR	**Van-Muradiye**	**0.80**	**68**	P	**Pg**	**13 44 11.6**	**-0.2**
VMUR				S	**Sb**	**13 44 22.8**	**-0.1**
MUSM	**Mu-Merkez**	**0.87**	**272**	P	**Pg**	**13 44 12.6**	**-0.5**
MUSM				S	**Sn**	**13 44 25.7**	**-1.0**
AGRB	**Hanur-Agry**	**0.93**	**18**	Pg	**Pb**	**13 44 14.3**	**0.0**
AGRB				Sg	**Sn**	**13 44 27.7**	**-0.6**
VRTB	**Varto-Mus**	**1.02**	**298**	P	**Pb**	**13 44 15.2**	**-0.6**
VRTB				S	**Sn**	**13 44 32.2**	**+1.7**
EATA	**Eleskirt**	**1.17**	**355**	P	**Pb**	**13 44 17.8**	**-0.7**
EATA				S	**Sn**	**13 44 35.5**	**+1.0**
SVAN	**Silvan-Diyarba**	**1.24**	**244**	Pn	**Pg**	**13 44 20.1**	**-0.1**
HOMI	**Horasan**	**1.46**	**338**	P	**Pb**	**13 44 23.4**	**+0.1**
HOMI				S	**Sg**	**13 44 45.6**	**+2.3**
BNGB	**Bingl**	**1.54**	**282**	Pn	**Pb**	**13 44 24.2**	**-0.5**
CUKT	**Cukurca**	**1.64**	**151**	Pn	**Pn**	**13 44 25.4**	**+0.5**

*NEIC **06** 13:48:29.4±1.4, 56°.7S±0°.1×27°.3W±0°.4, h121^{km}±10^{km}, mb4.2/5, Error ellipse: s-maj=31.3km s-min=10.9km az=67.0*

*IDC **06** 13:48:29.9±7.0, 56°.54S×27°.15W, h122^{km}±62^{km}, mb3.9/4, mbtmp4.2/5, Error ellipse: s-maj=34.2km s-min=21.8km az=71.0*

ISC 06 13:48:27.1±0.7**, 56°.5S**±0°.1×**27°.0W**±0°.2**, h101**^{km}**, n22, σ0**^{s}**74**/20**, mb4.1**/5**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.87**	**289**	Pn	**Pn**	**13 49 52.2**	**+0.8**
SNAA	**Sanae**	**18.25**	**156**	P	**P**	**13 52 32.6**	**+0.4**
	2.9nm,0.7s,baz=300,slow=12,SNR=6.4						
SNAA	**Sanae**	**18.25**	**156**	P	**P**	**13 52 32.6**	**+0.4**
BELA	**Belgrano 2**	**21.60**	**184**	P	**P**	**13 53 06.8**	**-1.5**
BELA				IAmb	IAmb	13 53 35.0	
	comp=Z,13nm,1.5s						
PLTB	**Pedras Altas**	**30.91**	**312**	P	**P**	**13 54 33.5**	**-0.4**
QSPA	**South Pole Qui**	**33.72**	**180**	P	**P**	**13 54 59.8**	**+1.4**
	comp=Z,0.6nm,0.4s,baz=180,slow=2.0,SNR=15						
QSPA				PcP	**PcP**	**13 57 35.4**	**0.0**
	comp=Z,1.2nm,1.0s,baz=149,slow=1.1,SNR=6.4						
	comp=Z,0.6nm,0.4s						
QSPA	**South Pole Qui**	**33.72**	**180**	P	**P**	**13 54 59.2**	**+0.8**
QSPA				IAmb	IAmb	13 55 30.4	
	comp=Z,10nm,1.5s						
H10N1	**ASCENSION HYDR**	**49.55**	**16**	T	T	14 51 06.9	
	baz=189						
H10N3	**ASCENSION HYDR**	**49.55**	**16**	T	T	14 51 06.9	
	baz=189						
H10N2	**ASCENSION HYDR**	**49.57**	**16**	T	T	14 51 07.0	
	baz=189						
LPAZ	**La Paz**	**50.75**	**305**	P	**P**	**13 57 17.2**	**-0.2**
	comp=Z,2.3nm,0.4s,baz=118,slow=5.9,SNR=12						
	comp=Z,2.3nm,0.4s						
LPAZ	**La Paz**	**50.75**	**305**	P	**P**	**13 57 17.3**	**0.0**
LPAZ				IAmb	IAmb	13 57 18.4	
	comp=Z,2.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.42**	**29**	P	**P**	**13 59 49.2**	**+1.2**
	comp=Z,2.9nm,0.6s,baz=201,slow=6.4,SNR=24						
	comp=Z,2.9nm,0.6s						
ASAR	**Alice Springs**	**98.49**	**162**	P	**P**	**14 01 54.0**	**-0.1**
	comp=Z,0.4nm,0.9s,baz=170,slow=3.9,SNR=4.1						
	comp=Z,0.4nm,0.9s						
FINES	**FINESS Array B**	**124.76**	**28**	PKP	**PKPdf**	**14 07 13.1**	**-0.2**
	comp=Z,1.9nm,0.9s,baz=183,slow=2.8,SNR=6.3						
ARCES	**ARCESS Array B**	**131.35**	**22**	PKP	**PKiKP**	**14 07 26.0**	**-0.7**
	comp=Z,4.2nm,1.1s,baz=242,slow=1.9,SNR=2.2						
YKA	**Yellowknife Ar**	**136.61**	**318**	PKP	**PKPdf**	**14 07 35.0**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=131,slow=2.1,SNR=6.5						
A36M	**Sachs Harbour**	**144.68**	**328**		**PKPdf**	**14 07 49.4**	**-0.6**
EPYK	**Eagle Plains**	**146.85**	**316**		**PKPbc**	**14 07 55.6**	**-0.4**
ILAR	**Eielson Array**	**150.52**	**311**	PKPbc	**PKPbc**	**14 08 05.2**	**-0.2**
	comp=Z,2.6nm,0.9s,baz=140,slow=1.6,SNR=21						
SONM	**Songino Array**	**150.64**	**87**	PKPbc	**PKPbc**	**14 08 06.1**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=223,slow=4.2,SNR=5.0						
BPAW	**Bear Paw Mtn.**	**152.13**	**309**		**PKPbc**	**14 08 08.9**	**-0.2**

IDC 06 14:04:16.0±511.0**, 57°.82N**×**29°.75E, h0**^{km}**, Error ellipse: s-maj=196.6km s-min=105.4km az=99.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**4.20**	**102**	I	I	14 31 10.0	
	0.1nm,0.6s,baz=288,slow=310,SNR=0.4						
I37NO	**I37NO**	**12.31**	**341**	I	I	15 17 50.0	
	baz=148,slow=330,SNR=1.6						
I31KZ	**AKTYUBINSK INF**	**18.06**	**102**	I	I	15 51 41.9	
	baz=305,slow=324,SNR=4.5						
I46RU	**ZALESOVO INFRA**	**30.40**	**73**	I	I	17 12 50.0	
	baz=299,slow=334,SNR=1.5						

*IDC **06** 14:28:54.4±7.9, 18°.53S×178°.50W, h605^{km}±31^{km}, mb3.0/3, mbtmp3.9/4, Error ellipse: s-maj=263.1km s-min=27.3km az=143.0*

*NEIC **06** 14:28:54.5±0.9, 18°.6S±0°.2×178°.4W±0°.2, h605^{km}±5^{km}, mb4.0/17, Error ellipse: s-maj=32.6km s-min=23.1km az=140.0*

ISC 06 14:28:54.0±0.9**, 18°.6S**±0°.2×**178°.5W**±0°.2**, h600**^{km}**, n25, σ0**^{s}**86**/25**, mb4.0**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.41**	**284**	P	**P**	**14 30 16.4**	**+0.7**
	13nm,0.4s,baz=112,slow=4.6,SNR=7.2						
OUENC	**Ouen Island, N**	**14.28**	**252**	P	**P**	**14 31 55.8**	**+0.3**
CTAO	**Charters Tower**	**33.28**	**262**	P	**P**	**14 34 45.4**	**+1.7**
CTAO				IAmb	IAmb	14 34 46.0	
	comp=Z,2.6nm,0.8s						
STKA	**Stephens Creek**	**38.26**	**242**	P	**P**	**14 35 23.2**	**-1.4**
BBOO	**Buckleboo**	**43.03**	**242**	P	**P**	**14 36 00.1**	**-2.3**
WB0	**Warramunga Arr**	**44.42**	**260**	P	**P**	**14 36 13.2**	**-0.1**
WB0				IAmb	IAmb	14 36 55.0	
	comp=Z,4.7nm,0.8s						
WB2	**Warramunga Arr**	**44.44**	**260**	P	**P**	**14 36 13.8**	**+0.4**
WB2				IAmb	IAmb	14 36 37.6	
	comp=Z,5.8nm,1.2s						
WRAB	**Tennant Creek**	**44.45**	**260**	P	**P**	**14 36 13.3**	**-0.1**
WRAB				IAmb	IAmb	14 36 57.1	
	comp=Z,10.0nm,1.5s						
WRA	**Warramunga Arr**	**44.45**	**260**	P	**P**	**14 36 13.4**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=97,slow=8.3,SNR=10						
	comp=Z,0.8nm,0.3s						
AS31	**Alice Springs**	**44.55**	**255**	P	**P**	**14 36 14.3**	**0.0**
ASAR	**Alice Springs**	**44.55**	**255**	P	**P**	**14 36 14.2**	**-0.1**
	comp=Z,2.2nm,0.6s,baz=87,slow=8.1,SNR=19						
	comp=Z,2.2nm,0.6s						
MBWA	**Marble Bar**	**57.85**	**256**	P	**P**	**14 37 49.0**	**-1.0**
MBWA				IAmb	IAmb	14 38 12.6	
	comp=Z,7.4nm,1.1s						
VNDA	**Vanda**	**59.78**	**185**	P	**P**	**14 38 02.7**	**+0.8**
CASY	**Casey**	**65.51**	**205**	P	**P**	**14 38 39.4**	**+0.6**
MLY	**Manley**	**86.00**	**11**	P	**P**	**14 40 31.3**	**-0.2**
WRH	**Wood River Hil**	**86.03**	**13**	P	**P**	**14 40 31.3**	**-0.3**
NEW	**Newport**	**86.08**	**36**	P	**P**	**14 40 31.8**	**-0.5**
NEW				IAmb	IAmb	14 40 52.4	
	comp=Z,2.5nm,1.1s						
H21K	**Melozitna Rive**	**86.20**	**10**		**P**	**14 40 33.9**	**+1.5**
H21K				IAmb	IAmb	14 40 41.4	
	comp=Z,5.3nm,1.5s						
HDA	**Harding Lake**	**86.22**	**13**	P	**P**	**14 40 32.7**	**+0.2**
CCB	**Clear Creek Bu**	**86.24**	**13**	P	**P**	**14 40 32.2**	**-0.3**
CCB				IAmb	IAmb	14 41 14.9	
	comp=Z,4.1nm,1.4s						
IMAR	**Indian Mountai**	**86.34**	**10**	P	**P**	**14 40 33.5**	**+0.5**
I23K	**Minto, Yukon-K**	**86.37**	**12**	P	**P**	**14 40 33.0**	**-0.2**
I23K				IAmb	IAmb	14 40 51.7	
	comp=Z,3.9nm,1.4s						
ILAR	**Eielson Array**	**86.55**	**13**	P	**P**	**14 40 33.5**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=229,slow=5.2,SNR=5.1						
	comp=Z,0.3nm,0.6s						
CLL	**Collm**	**146.09**	**347**	*i* PKPbc	**PKPbc**	**14 47 27.9**	**+0.2**
GERES	**GERESS Array B**	**148.23**	**345**	PKPbc	**PKPbc**	**14 47 33.1**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=20,slow=3.1,SNR=5.8						

IDC 06 14:31:05.9±2.2**, 6°.61S**×**128°.79E, h0**^{km}**, mb3.2**/1**, mbtmp3.5**/3**, ML3.8**/2**, Error ellipse: s-maj=111.3km s-min=32.8km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.31**	**158**	Pn	Pn	14 34 30.4	+0.5
	0.4nm,0.3s,baz=337,slow=13,SNR=14						
WRA				Sn	Sn	14 36 54.8	-15
	1.1nm,0.3s,baz=332,slow=22,SNR=9.0						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**17.66**	**164**	P	Pn	14 35 13.3	-0.2
	0.5nm,0.3s,baz=345,slow=13,SNR=44						
ASAR				S	Sn	14 38 12.7	-18
	0.8nm,0.7s,baz=340,slow=24,SNR=6.0						
	2.8nm,0.7s						
MKAR	**Makanchi Array**	**67.25**	**327**	P	P	14 42 02.3	0.0
	0.1nm,0.5s,baz=131,slow=7.3,SNR=2.2						
	0.1nm,0.5s						

*NEIC **06** 14:38:19.5±1.3, 51°N±1°×178°.9E±0°.8, h29^{km}±23^{km}, Error ellipse: s-maj=167.2km s-min=22.3km az=155.0*

*IDC **06** 14:38:39.7±1.4, 51°.16N×178°.31W, h0^{km}, mb3.2/5, mbtmp3.5/7, ML3.9/2, Error ellipse: s-maj=42.6km s-min=20.8km az=176.0*

*AEIC **06** 14:38:46.2±1.6, 51°.4N±0°.4×178°.2W±0°.5, h18^{km}±9^{km}, ML3.5, Error ellipse: s-maj=77.6km s-min=10.4km az=141.0*

ISC 06 14:38:44.8±1.1**, 51°.2N**±0°.2×**178°.30W**±0°.08**, h35**^{km}**, n22, σ1**^{s}**28**/14**, mb3.4**/5**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIWB	**Kanaga Island**	**0.95**	**48**		**Pn**	**14 39 01.3**	**-0.4**
ADK	**Adak**	**1.20**	**56**		**Pn**	**14 39 04.9**	**-0.2**
GSTR	**Great Sitkin T**	**1.64**	**57**		**Pn**	**14 39 12.0**	**+0.8**
SHEM	**Shemya Is, Ala**	**4.94**	**291**	Pn	**Pn**	**14 39 55.7**	**-0.6**
	3.1nm,0.3s,baz=307,slow=14,SNR=2.1						
SHEM				Sn	**Sn**	**14 40 54.4**	**+2.2**
	2.4nm,0.3s,baz=89,slow=17,SNR=1.1						
	54nm,1.0s						
CLES	**Cleveland East**	**5.43**	**70**	Pn	**Pn**	**14 40 03.7**	**+0.6**
UNV	**Unalaska Valle**	**7.65**	**65**	Pn	**Pn**	**14 40 35.8**	**+2.2**
KDAK	**Kodiak Island**	**16.24**	**56**	Pn	**Pn**	**14 42 28.9**	**-1.1**
	0.7nm,0.3s,baz=300,slow=14,SNR=24						
	4.1nm,0.6s						
KDAK	**Kodiak Island**	**16.24**	**56**	Pn	**Pn**	**14 42 27.8**	**-2.2**
ILAR	**Eielson Array**	**21.17**	**38**	P	**P**	**14 43 27.1**	**+0.5**
	0.2nm,0.6s,baz=242,slow=9.3,SNR=5.0						
	0.2nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**33.53**	**206**	T	T	15 21 13.5	
	baz=17,slow=76,SNR=124						
H11N3	**WAKE ISLAND Hy**	**33.54**	**206**	T	T	15 21 14.6	
	baz=17,slow=76,SNR=134						
H11N1	**WAKE ISLAND Hy**	**33.55**	**206**	T	T	15 21 13.4	
	baz=17,slow=76,SNR=92						
H11S1	**WAKE ISLAND Hy**	**34.75**	**206**	T	T	15 22 45.5	
	baz=17,slow=76,SNR=324						
H11S2	**WAKE ISLAND Hy**	**34.76**	**206**	T	T	15 22 43.5	
	baz=17,slow=76,SNR=195						
H11S3	**WAKE ISLAND Hy**	**34.76**	**206**	T	T	15 22 46.8	
	baz=17,slow=76,SNR=127						
PDAR	**Pinedale Array**	**46.05**	**72**	P	**P**	**14 47 05.2**	**0.0**
	0.5nm,0.6s,baz=337,slow=2.9,SNR=6.6						
	0.5nm,0.6s						
TXAR	**Lajitas Array**	**58.36**	**81**	P	**P**	**14 48 36.6**	**+0.1**
	0.1nm,0.4s,baz=297,slow=5.9,SNR=3.8						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**60.38**	**309**	P	**P**	**14 48 50.1**	**0.0**
	0.1nm,0.3s,baz=38,slow=7.5,SNR=4.0						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**85.59**	**223**	P	**P**	**14 51 19.9**	**+0.6**
	0.2nm,0.8s,baz=26,slow=5.3,SNR=1.5						
	0.2nm,0.8s						
H03N2	**Juan Fernandez**	**120.80**	**106**	T	T	17 10 04.2	
	baz=317,slow=77,SNR=18						
H03N1	**Juan Fernandez**	**120.81**	**106**	T	T	17 10 09.1	
	baz=317,slow=77,SNR=23						
H03N3	**Juan Fernandez**	**120.81**	**106**	T	T	17 10 03.2	
	baz=317,slow=77,SNR=31						

IDC 06 14:40:34.8±523.0**, 57°.52N**×**30°.07E, h0**^{km}**, Error ellipse: s-maj=199.4km s-min=96.9km az=96.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**3.98**	**99**	I	I	15 06 30.0	
	0.1nm,0.7s,baz=284,slow=303,SNR=1.2						
I37NO	**I37NO**	**12.65**	**341**	I	I	15 57 30.0	
	baz=149,slow=329,SNR=1.2						
I31KZ	**AKTYUBINSK INF**	**17.83**	**102**	I	I	16 26 14.9	
	baz=305,slow=324,SNR=4.8						
I46RU	**ZALESOVO INFRA**	**30.32**	**73**	I	I	17 47 40.0	
	baz=299,slow=333,SNR=1.3						

*KRNET **06** 14:47:01.4±0.1, 41°.71N×77°.34E, h21^{km}, mb2.6*

*SOME **06** 14:47:02.5, 41°.73N×77°.28E, h15^{km}*

*KNET **06** 14:47:03.7±0.3, 41°.78N×77°.17E, h5^{km}±1^{km}, ml2.2, Error ellipse: s-maj=3.0km s-min=1.6km az=29.0*

*NNC **06** 14:47:03.7±0.6, 41°.79N×77°.30E, h0^{km}, mb3.4, mpv3.2, Error ellipse: s-maj=3.9km s-min=2.3km az=178.0*

ISC 06 14:47:02.4±1.2**, 41°.74N**±0°.03×**77°.30E**±0°.02**, h2**^{km}±10^{km}**, n60, σ0**^{s}**67**/100**, 21C-17D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.38**	**91**	⇑*i*P	**Pg**	**14 47 08.8**	**-0.9**
	baz=86						
TARG				⇑*e*S	**Sg**	**14 47 13.8**	**-0.9**
	baz=86						
KDJ	**Kajisay**	**0.40**	**347**	⇑*e*P	**Pg**	**14 47 10.2**	**0.0**
	baz=46						
KDJ				⇑*e*S	**Sg**	**14 47 16.6**	**+1.2**
	baz=46						
ULHL	**Ulahol**	**0.94**	**303**	⇓P	**Pg**	**14 47 20.3**	**-0.1**
	8.0nm,0.1s,SNR=5.4						
ULHL				⇑S	**Sg**	**14 47 32.5**	**-0.1**
	27nm,0.1s						
ULHL	**Ulahol**	**0.94**	**303**	⇑*e*P	**Pg**	**14 47 19.8**	**-0.6**
	baz=4.0						
ULHL				⇑*e*S	**Sg**	**14 47 33.1**	**+0.6**
	baz=4.0						
NRN	**Naryn**	**1.02**	**253**	⇑*e*P	**Pg**	**14 47 21.3**	**-0.6**
	baz=55						
NRN				⇑*e*S	**Sg**	**14 47 35.5**	**+0.3**
	baz=55						
ANVS	**Anan'yevo**	**1.08**	**15**	⇓*i*P	**Pg**	**14 47 22.1**	**-1.0**
	baz=13						
ANVS				⇓*i*S	**Sg**	**14 47 36.9**	**-0.2**
	baz=13						
TNSS	**Tian-Shan**	**1.32**	**349**	P	**Pg**	**14 47 27.3**	**-0.5**
	9.1nm,0.2s						
TNSS				S	**Sb**	**14 47 45.0**	**-0.9**
	15nm,0.2s						
TNSS	**Tian-Shan**	**1.32**	**349**	*e*P	**Pg**	**14 47 27.3**	**-0.5**
	9.1nm,0.2s						
TNSS				*e*S	**Sb**	**14 47 45.0**	**-0.9**
	21nm,0.1s						
MDOK	**Medeo**	**1.44**	**353**	⇑P	**Pn**	**14 47 29.1**	**-0.5**
	5.2nm,0.3s						
MDOK				Pg	**Pn**	**14 47 29.1**	**-0.5**
	18nm,0.3s						
MDOK				Lg	Lg	14 47 48.2	
	28nm,0.5s						
MDOK				⇑S	**Sb**	**14 47 48.6**	**-0.3**
	15nm,0.4s						
MDOK	**Medeo**	**1.44**	**353**	*e*P	**Pn**	**14 47 29.1**	**-0.5**
	18nm,0.3s						
MDOK				*e*S	**Sb**	**14 47 48.2**	**-0.6**
	28nm,0.2s						
KOTS	**Kotyrbulak**	**1.50**	**355**	P	**Pn**	**14 47 30.7**	**+0.2**
	24nm,0.3s						
KOTS				S	**Sn**	**14 47 50.7**	**-0.1**
	64nm,0.2s						
KOTS	**Kotyrbulak**	**1.50**	**355**	*e*P	**Pn**	**14 47 30.7**	**+0.2**
	24nm,0.3s						
KOTS				*e*S	**Sn**	**14 47 50.7**	**-0.1**
	64nm,0.2s						
MTBS	**Maitube**	**1.53**	**335**	P	**Pn**	**14 47 31.1**	**+0.2**
	5.6nm,0.2s						
MTBS				S	**Sg**	**14 47 51.4**	**-0.2**
	33nm,0.2s						
MTBS	**Maitube**	**1.53**	**335**	*e*P	**Pn**	**14 47 31.1**	**+0.2**
	5.6nm,0.2s						
MTBS				*e*S	**Sg**	**14 47 51.5**	**-0.2**
	33nm,0.2s						
SATY	**Saty**	**1.56**	**31**	P	**Pn**	**14 47 31.2**	**0.0**
	13nm,0.2s						
SATY				S	**Sb**	**14 47 51.7**	**-0.5**
	63nm,0.1s						
SATY	**Saty**	**1.56**	**31**	*e*P	**Pn**	**14 47 31.2**	**0.0**
	13nm,0.1s						
SATY				*e*S	**Sb**	**14 47 51.7**	**-0.5**
	63nm,0.1s						
KST	**Kastek**	**1.64**	**323**	P	**Pb**	**14 47 33.5**	**+0.1**
	4.8nm,0.3s						
KST				S	**Sg**	**14 47 55.5**	**+0.5**
	28nm,0.3s						
KST	**Kastek**	**1.64**	**323**	*e*P	**Pb**	**14 47 33.5**	**+0.1**
	3.1nm,0.1s						
KST				*e*S	**Sg**	**14 47 55.5**	**+0.5**
	28nm,0.1s						
ZHN	**Zhinishke**	**1.66**	**30**	P	**Pn**	**14 47 33.0**	**+0.4**
	12nm,0.2s						
ZHN				S	**Sg**	**14 47 55.0**	**-0.7**
	80nm,0.2s						
ZHN	**Zhinishke**	**1.66**	**30**	*e*P	**Pn**	**14 47 33.0**	**+0.4**
	7.4nm,0.0s						
ZHN				*e*S	**Sg**	**14 47 55.0**	**-0.7**
	80nm,0.2s						
TKM2	**Tokmak 2**	**1.73**	**314**	⇑P	**Pn**	**14 47 34.6**	**+0.9**
	2.3nm,0.1s,SNR=16						
TKM2				⇑S	**Sg**	**14 47 58.3**	**+0.3**
	24nm,0.1s						
TKM2	**Tokmak 2**	**1.73**	**314**	⇑Pn	**Pn**	**14 47 34.5**	**+0.8**
	1.3nm,0.3s						
TKM2				⇑Sn	**Sg**	**14 47 58.0**	**+0.1**
	19nm,0.5s						
TKM2	**Tokmak 2**	**1.73**	**314**	⇓*e*P	**Pn**	**14 47 33.6**	**-0.1**
	baz=14						
TKM2				⇓*e*S	**Sn**	**14 47 56.7**	**+0.2**
	baz=14						
KURS	**Kuram**	**1.86**	**20**	P	**Pb**	**14 47 37.0**	**-0.2**
	3.8nm,0.5s						
KURS				S	**Sg**	**14 48 02.0**	**-0.3**
	4.3nm,0.4s						
KURS	**Kuram**	**1.86**	**20**	*e*P	**Pb**	**14 47 37.0**	**-0.2**
	1.9nm,0.1s						
KURS				*e*S	**Sg**	**14 48 02.0**	**-0.3**
	5.2nm,0.2s						
DGS	**Degeres**	**1.88**	**324**	P	**Pb**	**14 47 37.4**	**-0.1**
	3.3nm,0.2s						
DGS				S	**Sg**	**14 48 02.2**	**-0.6**
	31nm,0.3s						
DGS	**Degeres**	**1.88**	**324**	*e*P	**Pb**	**14 47 37.4**	**-0.1**
	1.4nm,0.1s						
DGS				*e*S	**Sg**	**14 48 02.2**	**-0.6**
	38nm,0.2s						
UZB	**Uzynbulak**	**1.90**	**42**	P	**Pn**	**14 47 37.1**	**+1.1**
	5.8nm,0.4s						
UZB				S	**Sb**	**14 48 02.0**	**-0.1**
	18nm,0.3s						
UZB	**Uzynbulak**	**1.90**	**42**	*e*P	**Pn**	**14 47 37.1**	**+1.1**
	5.8nm,0.2s						
UZB				*e*S	**Sb**	**14 48 02.0**	**-0.1**
	18nm,0.3s						
KBK	**Karagaybulak**	**1.97**	**299**	⇓P	**Pn**	**14 47 38.5**	**+1.5**
	5.2nm,0.1s,SNR=12						
KBK				⇑S	**Sg**	**14 48 06.1**	**+0.3**
	14nm,0.2s						
KBK	**Karagaybulak**	**1.97**	**299**	⇓*e*P	**Pn**	**14 47 36.9**	**-0.1**
	baz=99						
KBK				⇓*e*S	**Sn**	**14 48 02.5**	**+0.1**
	baz=99						
KPKS	**Kokpek**	**2.01**	**30**	Pg	**Pb**	**14 47 39.1**	**-0.6**
	16nm,0.2s						
KPKS				Lg	Lg	14 48 05.5	
	47nm,0.3s						
KPKS	**Kokpek**	**2.01**	**30**	*e*Pg	**Pb**	**14 47 39.1**	**-0.6**
	16nm,0.2s						
KPKS				*e*Lg	Lg	14 48 05.5	
	68nm,0.1s						
KTBS	**Karatobe**	**2.03**	**347**	Pg	**Pb**	**14 47 39.9**	**0.0**
	5.6nm,0.3s						
KTBS				Lg	Lg	14 48 06.8	
	120nm,0.4s						
KTBS	**Karatobe**	**2.03**	**347**	*e*Pg	**Pb**	**14 47 39.9**	**0.0**
	3.8nm,0.1s						
KTBS				*e*Lg	Lg	14 48 06.8	
	120nm,0.4s						
CHKK	**Chushkaly**	**2.13**	**354**	Pg	**Pb**	**14 47 41.7**	**0.0**
	18nm,0.3s						
CHKK				Lg	Lg	14 48 10.0	
	70nm,0.2s						
CHKK	**Chushkaly**	**2.13**	**354**	*e*Pg	**Pb**	**14 47 41.6**	**0.0**
	18nm,0.3s						
CHKK				*e*Lg	Lg	14 48 10.0	
	70nm,0.2s						
UCH	**Uchtor**	**2.13**	**284**	⇑P	**Pb**	**14 47 41.7**	**-0.4**
	6.3nm,0.2s,SNR=16						
UCH				⇓S	**Sg**	**14 48 11.0**	**+0.1**
	1.9nm,0.1s						
UCH	**Uchtor**	**2.13**	**284**	⇑*e*P	**Pn**	**14 47 39.2**	**-0.3**
	baz=85						
UCH				⇑*e*S	**Sn**	**14 48 06.4**	**-0.4**
	baz=85						
SHLS	**Shalkode**	**2.14**	**48**	Pg	**Pg**	**14 47 46.2**	**+2.8**
	10nm,0.1s						
SHLS				Lg	Lg	14 48 17.3	
	52nm,0.5s						
SHLS	**Shalkode**	**2.14**	**48**	*e*Pg	**Pg**	**14 47 46.2**	**+2.8**
	10nm,0.1s						
SHLS				*e*Lg	Lg	14 48 17.3	
	52nm,0.5s						
ARLS	**Aral**	**2.23**	**274**	⇓*e*P	**Pn**	**14 47 40.1**	**-0.4**
	baz=75						
ARLS				⇓*e*S	**Sn**	**14 48 08.2**	**-0.5**
	baz=75						
KUU	**Kurty**	**2.27**	**342**	Pg	**Pb**	**14 47 43.7**	**-0.4**
	3.5nm,0.3s						
KUU				Lg	Lg	14 48 13.6	
	37nm,0.3s						
KUU	**Kurty**	**2.27**	**342**	*e*Pg	**Pb**	**14 47 43.6**	**-0.4**
	3.5nm,0.3s						
KUU				*e*Lg	Lg	14 48 13.0	
	37nm,0.3s						
AAK	**Ala-Archa**	**2.27**	**294**	⇓P	**Pb**	**14 47 43.8**	**-0.4**
	4.2nm,0.2s,SNR=12						
AAK				⇓S	**Sb**	**14 48 13.8**	**+1.0**
	9.3nm,0.4s						
AAK	**Ala-Archa**	**2.27**	**294**	⇓*i*P	**Pn**	**14 47 40.8**	**-0.3**
	baz=95						
AAK				⇓*e*S	**Sn**	**14 48 09.8**	**+0.1**
	baz=95						
PDGK	**Podgornoye**	**2.27**	**45**	Pg	**Pb**	**14 47 43.8**	**-0.4**
	1.5nm,0.4s						
PDGK				Lg	Lg	14 48 13.2	
	11nm,0.4s						
PDGK	**Podgornoye**	**2.27**	**45**	Pn	**Pb**	**14 47 43.5**	**-0.6**
PDGK				Sn	**Sb**	**14 48 13.0**	**+0.2**
KRBS	**Karabastau**	**2.29**	**329**	Pg	**Pb**	**14 47 44.4**	**-0.1**
	4.7nm,0.3s						
KRBS				Lg	Lg	14 48 14.9	
	40nm,0.4s						
KRBS	**Karabastau**	**2.29**	**329**	*e*Pg	**Pb**	**14 47 44.5**	**-0.1**
	3.0nm,0.1s						
KRBS				*e*Lg	Lg	14 48 14.5	
	40nm,0.4s						
ARXS	**Arharly**	**2.50**	**9**	Pg	**Pb**	**14 47 48.4**	**+0.2**
	4.1nm,0.4s						
ARXS				Lg	Lg	14 48 20.9	
	17nm,0.5s						
ARXS	**Arharly**	**2.50**	**9**	*e*Pg	**Pb**	**14 47 48.4**	**+0.2**
	4.1nm,0.4s						
ARXS				*e*Lg	Lg	14 48 20.9	
	3.1nm,0.1s						
BLB	**Baldybastay**	**2.51**	**20**	Pg	**Pb**	**14 47 48.2**	**-0.2**
	23nm,0.3s						
BLB				Lg	Lg	14 48 21.2	
	33nm,0.2s						
USP	**Ospenovka**	**2.57**	**307**	⇑*e*P	**Pn**	**14 47 45.1**	**0.0**
	baz=8.0						
USP				⇑*e*S	**Sn**	**14 48 16.8**	**-0.2**
	baz=8.0						
SGDS	**Sogindy**	**2.61**	**312**	Pg	**Pb**	**14 47 50.1**	**+0.1**
	1.8nm,0.4s						

SGDS				Lg	Lg	14 48 24.0	
	11nm,0.4s						
EKS2	Erkin-Say	2.77	291	⇓eP	Pn	14 47 47.8	-0.2
	baz=91						
EKS2				⇓eS	Sn	14 48 21.7	-0.4
	baz=91						
DJR	Jarkent	3.17	34	Pg	Pb	14 47 59.2	-0.3
	0.9nm,0.2s						
DJR				Lg	Lg	14 48 39.8	
	9.2nm,0.3s						
DJR	Jarkent	3.17	34	ePg	Pb	14 47 59.2	-0.3
	0.9nm,0.2s						
DJR				eLg	Lg	14 48 39.8	
	9.8nm,0.2s						
MRKS	Merke	3.19	290	Pg	Pb	14 48 01.2	+1.4
	1.4nm,0.2s						
MRKS				Lg	Lg	14 48 43.2	
	6.6nm,0.3s						
MRKS	Merke	3.19	290	ePg	Pb	14 48 01.2	+1.4
	1.4nm,0.2s						
MRKS				eLg	Lg	14 48 43.2	
	6.6nm,0.3s						

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*IDC **06** 15:03:08.7±1.0, 7°.50N×124°.31E, h0km, mb3.6/7, mbtmp3.6/7, MS3.0/1, Error ellipse: s-maj=26.9km s-min=13.2km az=40.0*

*MAN **06** 15:03:10.2, 7°.49N×124°.47E, h6km, mb5.0, ML3.9, MS4.0*

ISC 06 15:03:09.3±1.2**, 7°.50N**±0°.02×**124°.42E**±0°.02**, h2**km±9km**,**
n35, σ1s.40/54**, mb3.5**/7**, 12C-11D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.33	212	⇑iP	Pb	15 03 18.4	+0.5
CTBH				i S	Sb	15 03 24.9	+1.3
BUKP	Musuan	0.74	59	⇓eP	Pg	15 03 23.5	0.0
BUKP				eS	Sg	15 03 34.0	+0.8
KCP	Kidapawan	0.82	126	⇓iP	Pg	15 03 25.6	+0.5
KCP				i S	Sg	15 03 31.9	-3.9
SKMP	Bagumbayan, Su	0.98	173	⇑eP	Pg	15 03 28.1	-0.1
SKMP				eS	Sn	15 03 46.6	+2.0
CGP	Cagayan de Oro	0.99	16	⇑iP	Pg	15 03 27.9	-0.4
CGP				i S	Sg	15 03 41.7	+0.6
PAGZ	Pagadian	1.09	289	⇓eP	Pg	15 03 30.0	-0.1
PAGZ				eS	Sb	15 03 45.5	+0.1
DAV	Davao City (W)	1.23	110	Pg	Pg	15 03 33.5	+0.6
	193nm,0.3s,baz=282,slow=12,SNR=16						
DAV				Lg	Lg	15 03 51.3	
	162nm,0.3s,baz=240,slow=20,SNR=7.4						
GSPH	General Santos	1.50	159	⇓eP	Pn	15 03 35.6	-1.7
DCPH	Dipolog City	1.51	316	⇓eP	Pn	15 03 36.7	-0.7
DCPH				i S	Sg	15 03 59.9	+2.0
TASP	Talacogon, Agu	1.67	55	⇑iP	Pg	15 03 42.4	+1.1
LSIP	Lazi, Siquijor	1.80	334	⇑eP	Pn	15 03 41.9	+0.5
BUTP	Butuan	1.88	39	⇑eP	Pb	15 03 44.8	+0.4
BUTP				eS	Sg	15 04 11.7	+1.8
CDOP	Cateel, Davao	2.02	82	⇑eP	Pn	15 03 44.6	+0.3
BIPH	Bislig	2.04	70	⇑eP	Pn	15 03 45.2	+0.5
BIPH				eS	Sg	15 04 15.3	+0.4
GHBP	Garcia Hernand	2.12	357	⇑iP	Pn	15 03 46.2	+0.4
SNPH	Sibulan	2.17	327	⇑iP	Pb	15 03 48.1	-1.3
SNPH				i S	Sb	15 04 15.3	-1.5
TBP	Tagbilaran	2.25	346	eP	Pn	15 03 46.1	-1.4
TBP				eS	Sn	15 04 14.4	-1.4
ZCP	Zamboanga City	2.40	257	⇓eP	Pn	15 03 50.7	+1.1
ZCP				eS	Sb	15 04 23.5	+0.3
SCPH	Surigao	2.50	25	eP	Pn	15 03 51.1	+0.1
SCPH				eS	Sn	15 04 20.8	-1.3
TABP	Talibon, Bohol	2.58	358	⇑eP	Pn	15 03 53.2	+1.1
TABP				i S	Sg	15 04 31.1	-1.0
MSLP	Maasin	2.65	9	⇓eP	Pn	15 03 53.7	+0.6
MSLP				eS	Sb	15 04 31.6	+1.0
GLSP	General Luna,	2.83	37	⇓eP	Pn	15 03 57.6	+2.1
GLSP				eS	Sb	15 04 33.9	-1.7
LLP	Lapu-Lapu	2.83	351	eP	Pn	15 03 57.1	+1.5
LLP				eS	Sb	15 04 35.4	-0.4
CNOP	Candoni, Negro	2.91	323	⇓eP	Pn	15 03 58.6	+2.0
CNOP				eS	Sg	15 04 40.0	-2.8
CNOP	Candoni, Negro	2.91	323	⇓eP	Pb	15 04 01.2	-0.7
CNOP				i S	Sg	15 04 42.2	-0.6
GUIM	Jordan	3.59	330	⇑eP	Pn	15 04 09.5	+3.4
GUIM				eS	Sn	15 04 50.3	+1.2
RCP	Roxas	4.36	338	⇓eP	Pn	15 04 18.3	+1.7
CMAR	Chiang Mai Arr	27.07	296	LR	LR	15 19 41.9	
	comp=Z,27nm,18.3s,baz=110,slow=37						
WRA	Warramunga Arr	28.96	160	P	P	15 09 08.9	-1.5
	0.6nm,0.7s,baz=334,slow=10,SNR=3.4						
	0.6nm,0.7s						
KSRS	Korea Array	29.99	6	P	P	15 09 19.7	+0.4
	1.4nm,0.8s,baz=236,slow=12,SNR=3.3						
	1.4nm,0.8s						
ASAR	Alice Springs	32.33	164	P	P	15 09 41.1	+1.0
	0.3nm,0.6s,baz=345,slow=7.2,SNR=9.7						
	0.3nm,0.6s						
STKA	Stephens Creek	42.45	158	P	P	15 11 06.6	+0.8
	1.9nm,0.7s,baz=336,slow=9.2,SNR=2.5						
	1.9nm,0.7s						
SONM	Songino Array	43.02	342	P	P	15 11 10.5	+0.1
	0.6nm,0.8s,baz=180,slow=6.6,SNR=4.3						
	0.6nm,0.8s						
MKAR	Makanchi Array	53.17	325	P	P	15 12 27.3	-1.5
	0.3nm,0.8s,baz=134,slow=10,SNR=3.7						
	0.3nm,0.8s						
ZALV	Zalesovo Beam	56.21	333	P	P	15 12 49.3	-1.4
	0.4nm,0.6s,baz=74,slow=5.1,SNR=1.5						
	0.4nm,0.6s						

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*ISK **06** 15:07:53.2, 37°.25N×28°.60E, h10km, ML2.5/11*

*DDA **06** 15:07:54.0±0.0, 37°.23N×28°.61E, h7km±3km, ML2.2*

ISC 06 15:07:53.8±1.0**, 37°.23N**±0°.03×**28°.62E**±0°.02**, h10**km±9km**,**
n21, σ0s.72/29**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MULA	Mugla, Merkez-	0.24	276	P	Pg	15 07 59.0	+0.2
MULA				S	Sg	15 08 03.1	+1.0
MULA				i AML	AML	15 08 05.0	
	comp=E,745nm,0.3s						
MULA				i AML	AML	15 08 06.0	
	comp=N,333nm,0.2s						
YER	Yerkesik	0.28	250	Pg	Pg	15 07 59.6	0.0
TAVA	DENIZLI_Tavas	0.33	45	P	Pg	15 08 00.3	-0.1
TAVA				S	Sg	15 08 04.8	-0.2
TAVA				i AML	AML	15 08 06.0	
	comp=E,297nm,0.1s						
TAVA				i AML	AML	15 08 07.0	
	comp=N,273nm,0.3s						
DALY	Dalyan (Mula)	0.41	176	Pg	Pg	15 08 01.9	0.0
DNIZ	Denizli-Tavas-	0.52	40	P	Pg	15 08 03.9	0.0
DNIZ				S	Sb	15 08 12.4	-0.3
TURN	Turunc	0.54	214	Pg	Pg	15 08 03.7	-0.6
TURN				Sg	Sb	15 08 12.9	-0.4
TURN	Turunc	0.54	214	P	Pg	15 08 03.8	-0.6
TURN				S	Sb	15 08 13.1	-0.2
TURN				i AML	AML	15 08 15.0	
	comp=E,222nm,0.5s						
TURN				i AML	AML	15 08 16.0	
	comp=N,216nm,0.3s						
CAEL	Denizli, Camel	0.57	101	P	Pb	15 08 05.9	-0.1
CAEL				i AML	AML	15 08 24.0	
	comp=N,228nm,0.7s						
APMY	Acipayam-Deniz	0.59	66	Pg	Pg	15 08 05.6	+0.2
CAME	Cameli-Denizli	0.62	117	Pg	Pb	15 08 06.6	-0.2
MLSB	Milas	0.68	276	Pg	Pg	15 08 06.2	-0.7
FETY	Fethiye	0.70	148	Pg	Pg	15 08 07.1	-0.3
AYDN	Tasoluk	0.73	306	P	Pb	15 08 08.3	-0.4
AYDN				i AML	AML	15 08 19.0	
	comp=E,190nm,0.3s						
AYDN				i AML	AML	15 08 20.0	
	comp=N,130nm,0.3s						
GOLH	Golhisar	0.75	89	P	Pg	15 08 08.8	+0.4
GOLH				S	Sn	15 08 21.8	-0.3
GOLH				i AML	AML	15 08 22.0	
	comp=N,75nm,0.4s						
GOLH				i AML	AML	15 08 28.0	
	comp=E,125nm,0.5s						
BDRM	Kayabasi	0.95	260	P	Pb	15 08 11.9	-0.5
BDRM				S	Sn	15 08 28.6	+1.6
BDRM				i AML	AML	15 08 32.0	
	comp=E,87nm,0.8s						
DAT	Datca	0.97	239	Pg	Pb	15 08 12.4	-0.4
DAT	Datca	0.97	239	P	Pb	15 08 12.5	-0.3
DAT				S	Sn	15 08 29.9	+2.4
DAT				i AML	AML	15 08 33.0	
	comp=N,98nm,0.4s						
DAT				i AML	AML	15 08 33.0	
	comp=E,67nm,0.3s						
ARG	Arkhangelos	1.09	202	Pn	Pg	15 08 14.2	-0.5
ELL	Elmali	1.14	115	Pn	Pg	15 08 15.6	-0.1
AKAS	Kas	1.27	141	Pn	Pb	15 08 18.2	+0.2
KULA	Kula-Manisa	1.28	1	Pn	Pn	15 08 17.2	-0.7

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*IDC **06** 15:18:43.3±0.9, 28°.81N×143°.35E, h0km, mb3.5/9, mbtmp3.6/11, ML3.2/2, Error ellipse: s-maj=31.3km s-min=17.7km az=97.0*

*JMA **06** 15:18:47.5±0.2, 28°.9N±0°.6×14°3E±°, h49km, MV3.6/14, NEAR CHICHIJIMA ISLAND*

ISC 06 15:18:48.9±0.8**, 28°.82N**±0°.06×**143°.1E**±0°.1**, h41**km**, n16,**
σ1s.60/20**, mb3.5**/9**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.88	204	P	Pn	15 19 17.2	-1.4
CBIJ				eS	Sn	15 19 39.4	-1.7
JCJ	Chichijima	1.88	204	Pn	Pn	15 19 18.9	+0.3
	13nm,0.3s,baz=83,slow=20,SNR=6.7						
JCJ				Sn	Sn	15 19 39.9	-1.2
	27nm,0.3s,baz=90,slow=20,SNR=5.1						
JOD2	Odawara 2	7.25	333	eP	Pn	15 20 32.9	+0.6
JRY	Ryogami san	7.99	335	P	Pn	15 20 41.9	-0.5
JAG	Ashikaga	8.17	339	eP	Pn	15 20 44.4	-0.5
JAG				eS	Sn	15 22 11.7	-4.2
MJAR	Matsushiro Arr	8.72	333	Pn	Pn	15 20 51.7	-0.7
	0.2nm,0.3s,baz=129,slow=16,SNR=8.1						
MJAR				Sn	Sn	15 22 28.9	-0.4
	baz=97,slow=11,SNR=1.8						
	0.8nm,0.4s						
ASAJ	Asahikawa	15.27	359	Pn	Pn	15 22 19.0	-2.5
	0.2nm,0.3s,baz=196,slow=18,SNR=5.0						
	8.4nm,1.1s						
KLR	Kul'dur	22.15	340	P	P	15 23 40.6	-0.4
	0.4nm,0.5s,baz=140,slow=19,SNR=1.8						
	0.4nm,0.5s						
SONM	Songino Array	34.04	314	P	P	15 25 31.5	+2.4
	0.2nm,0.3s,baz=101,slow=7.5,SNR=1.6						
	0.2nm,0.3s						
WRA	Warramunga Arr	49.20	191	P	P	15 27 33.2	+0.1
	1.2nm,0.8s,baz=12,slow=8.3,SNR=5.8						
	1.2nm,0.8s						
MKAR	Makanchi Array	49.99	308	P	P	15 27 41.1	+2.1
	0.3nm,0.7s,baz=86,slow=10.0,SNR=4.3						
	0.3nm,0.7s						
ASAR	Alice Springs	52.92	191	P	P	15 28 00.9	-0.2
	0.1nm,0.5s,baz=8.0,slow=6.0,SNR=1.5						
	0.1nm,0.5s						
ILAR	Eielson Array	55.84	29	P	P	15 28 21.3	-0.5
	0.6nm,0.7s,baz=262,slow=5.9,SNR=9.8						
	0.6nm,0.7s						
YKA	Yellowknife Ar	70.26	29	P	P	15 29 57.7	+0.2
	0.3nm,0.8s,baz=302,slow=5.1,SNR=3.5						
	0.3nm,0.8s						
FINES	FINESS Array B	76.75	334	P	P	15 30 36.7	+1.1
	1.4nm,0.7s,baz=71,slow=10,SNR=1.8						
	1.4nm,0.7s						
TXAR	Lajitas Array	93.96	54	P	P	15 32 03.2	+0.3
	0.1nm,0.6s,baz=341,slow=7.8,SNR=2.1						
	0.1nm,0.6s						

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*IDC **06** 15:19:44.8±10.0, 25°.76S×179°.96W, h424km±104km, mb3.4/4, mbtmp4.3/6, Error ellipse: s-maj=84.0km s-min=32.5km az=37.0*

*NEIC **06** 15:19:51.5±1.1, 26°.3S±0°.1×179°.9E±0°.3, h487km±19km, mb4.3/15, Error ellipse: s-maj=35.5km s-min=9.0km az=109.0*

ISC 06 15:19:51.2±1.3**, 26°.0S**±0°.1×**179°.9E**±0°.1**, h500**km**, n44,**
σ1s.60/48**, mb4.1**/10**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.74	150	P	P	15 21 04.4	-3.1
GLKZ	Green Lake	3.75	150	P	P	15 21 10.6	+3.1
GLKZ				S	S	15 22 10.3	+0.4
URZ	Urewera	12.43	190	P	P	15 22 32.3	-1.8
	7.2nm,0.6s,baz=18,slow=19,SNR=15						
MWZ	Matawai	12.44	189	P	P	15 22 34.7	+0.4
MWZ				S	S	15 24 51.3	+2.6
TKGZ	Te Karaka	12.50	188	P	P	15 22 33.6	-1.2
CNGZ	Carnagh Statio	12.51	186	P	P	15 22 33.6	-1.4
MUGZ	Murupara	12.70	191	P	P	15 22 38.0	+1.0
RTZ	Ruatahuna	12.80	190	P	P	15 22 37.0	-1.1
RTZ	Ruatahuna	12.80	190	P	P	15 22 38.7	+0.5
SNGZ	Shannon Statio	12.91	189	P	P	15 22 40.3	+1.1
HIZ	Hauiti	13.17	198	P	P	15 22 44.0	+2.1
BKZ	Black Stump Fm	13.42	192	P	P	15 22 41.4	-3.3
BKZ	Black Stump Fm	13.42	192	P	P	15 22 44.0	-0.7
BKZ				S	S	15 25 10.3	+2.7
OTVZ	Oturere	13.58	194	P	P	15 22 45.5	-0.9
SNVZ	South Ngauruho	13.61	194	P	P	15 22 46.8	0.0
WNVZ	Wahianoa	13.75	194	P	P	15 22 47.2	-1.1
VRZ	Vera Road	13.77	197	P	P	15 22 49.9	+1.7
BHHZ	Black Hill Sta	13.81	193	P	P	15 22 47.3	-1.5
BHHZ				S	S	15 25 19.0	+3.8
TSZ	Takapari Road	14.38	192	P	P	15 22 53.5	-1.2
TSZ				S	S	15 25 25.6	-0.5
MRZ	Mangatainoka R	15.04	193	P	P	15 22 57.2	-4.4
MRZ	Mangatainoka R	15.04	193	P	P	15 22 58.8	-2.8
MRZ				S	S	15 25 37.3	-1.3
HOWZ	Holdsworth Sta	15.28	193	P	P	15 23 02.3	-1.8
NNZ	Nelson	16.09	198	P	P	15 23 09.8	-2.8
NNZ				IAmb	IAmb	15 23 43.4	
	comp=Z,65nm,1.4s						
GVZ	Greta Valley S	17.82	197	P	P	15 23 27.5	-2.2
INZ	Inchbonnie	18.05	201	P	P	15 23 30.4	-1.4
INZ				IAmb	IAmb	15 23 50.0	
	comp=Z,15nm,1.3s						
MQZ	McQueen's Vall	18.61	197	P	P	15 23 35.8	-1.1
RPZ	Rata Peaks	19.07	200	P	P	15 23 41.0	-0.1
	comp=Z,4.1nm,0.5s,baz=30,slow=20,SNR=1.8						
EIDS	Eidsvold	25.98	265	P	P	15 24 43.8	+0.4
EIDS				IAmb	IAmb	15 24 53.9	
	comp=Z,13nm,1.4s						
CTA	Charters Tower	31.48	274	P	P	15 25 31.7	+0.3
	comp=Z,1.7nm,0.3s,baz=97,slow=11,SNR=11						
	comp=Z,1.7nm,0.3s						
CTAO	Charters Tower	31.48	274	P	P	15 25 32.0	+0.5
CTAO				IAmb	IAmb	15 25 32.5	
	comp=Z,3.0nm,0.5s						
STKA	Stephens Creek	33.92	251	P	P	15 25 51.8	-0.2
	comp=Z,0.6nm,0.3s,baz=88,slow=11,SNR=4.5						
	comp=Z,0.6nm,0.3s						
STKA	Stephens Creek	33.92	251	P	P	15 25 52.3	+0.3
COEN	Coen	36.43	282	P	P	15 26 13.8	+0.6
COEN				IAmb	IAmb	15 26 14.7	
	comp=Z,4.1nm,0.8s						
BBOO	Buckleboo	38.59	249	P	P	15 26 30.3	-0.4
BBOO				IAmb	IAmb	15 27 00.1	
	comp=Z,25nm,1.4s						
AS31	Alice Springs	41.66	263	P	P	15 26 55.2	-0.3
ASAR	Alice Springs	41.66	263	P	P	15 26 55.5	0.0
	comp=Z,2.3nm,0.5s,baz=91,slow=8.0,SNR=59						
	comp=Z,2.3nm,0.5s						
ASAR	Alice Springs	41.66	263	P	P	15 26 55.0	-0.5
WR0	Warramunga Arr	42.05	269	P	P	15 26 58.3	-0.3
WR0				IAmb	IAmb	15 27 35.4	
	comp=Z,16nm,1.5s						
WB2	Warramunga Arr	42.23	268	P	P	15 26 59.6	-0.4
WB2				IAmb	IAmb	15 27 00.0	
	comp=Z,3.6nm,0.6s						
WRA	Warramunga Arr	42.24	268	P	P	15 26 59.4	-0.8
	comp=Z,2.6nm,0.5s,baz=100,slow=7.6,SNR=41						
	comp=Z,2.6nm,0.5s						
WB0	Warramunga Arr	42.24	269	P	P	15 26 59.5	-0.6
WB0				IAmb	IAmb	15 27 00.3	
	comp=Z,5.5nm,1.1s						
KNRA	Kununurra	48.64	272	P	P	15 27 49.8	+0.5
FITZ	Fitzroy Crossi	50.63	267	P	P	15 28 04.2	+0.4
HFS	Hagfors	144.60	348	PKP	PKPdf	15 38 30.7	+0.9
	comp=Z,2.5nm,0.8s,baz=47,slow=2.6,SNR=7.2						

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*IDC **06** 15:25:24.3±1.0, 28°.85N×143°.23E, h0km, mb3.6/8, mbtmp3.7/11, ML3.2/3, Error ellipse: s-maj=29.0km s-min=16.9km az=95.0*

*JMA **06** 15:25:27.6±0.2, 28°.8N±0°.6×14°3E±°, h53km, MV3.7/16, NEAR CHICHIJIMA ISLAND*

ISC 06 15:25:30.0±0.9**, 28°.81N**±0°.05×**143°.1E**±0°.1**, h41**km**, n18,**
σ1s.32/22**, mb3.5**/9**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.89	205	P	Pn	15 25 58.6	-1.2
CBIJ				eS	Sn	15 26 21.5	-0.9
JCJ	Chichijima	1.89	205	Pn	Pn	15 26 00.3	+0.5
	20nm,0.3s,baz=82,slow=20,SNR=12						
JCJ				Sn	Sn	15 26 22.0	-0.3
	46nm,0.3s,baz=73,slow=19,SNR=11						
JHH2	Haha-jima-NKT2	2.31	201	S	Sn	15 26 31.9	-1.0
JHJ	Hachijo jima 2	5.15	327	Pn	Pn	15 26 42.5	-2.1
	4.0nm,0.3s,baz=61,slow=19,SNR=1.8						
JHJ				Sn	Sn	15 27 41.1	-1.6
	9.5nm,0.3s,baz=240,slow=23,SNR=1.3						
	160nm,0.9s						
JOD2	Odawara 2	7.28	333	eP	Pn	15 27 13.1	-0.6
JRY	Ryogami san	8.01	335	eP	Pn	15 27 23.3	-0.6
JAG	Ashikaga	8.19	339	P	Pn	15 27 26.4	+0.1
MJAR	Matsushiro Arr	8.74	333	Pn	Pn	15 27 32.6	-1.3
	0.2nm,0.3s,baz=129,slow=16,SNR=6.9						
MJAR				Sn	Sn	15 29 11.3	+0.2
	baz=204,slow=24,SNR=1.9						
	1.2nm,0.4s						
ASAJ	Asahikawa	15.28	359	Pn	Pn	15 29 00.1	-2.7
	0.2nm,0.3s,baz=115,slow=10,SNR=1.2						
	1.2nm,0.5s						
KLR	Kul'dur	22.16	340	P	P	15 30 24.6	+2.2
	0.5nm,0.5s,baz=213,slow=4.3,SNR=3.6						
SONM	Songino Array	34.07	314	P	P	15 32 09.6	-1.0
	0.2nm,0.4s,baz=76,slow=6.1,SNR=3.0						
	0.2nm,0.4s						
CMAR	Chiang Mai Arr	41.53	266	P	P	15 33 15.9	+2.2
	0.4nm,0.4s,baz=99,slow=5.6,SNR=2.1						
	0.4nm,0.4s						
WRA	Warramunga Arr	49.20	191	P	P	15 34 14.3	0.0
	1.3nm,0.8s,baz=13,slow=8.5,SNR=7.6						
	1.3nm,0.8s						
MKAR	Makanchi Array	50.02	308	P	P	15 34 21.6	+1.2
	0.3nm,0.8s,baz=87,slow=11,SNR=2.8						
	0.3nm,0.8s						
ASAR	Alice Springs	52.92	191	P	P	15 34 41.5	-0.7
	0.1nm,0.6s,baz=9.4,slow=5.5,SNR=1.5						
	0.1nm,0.6s						
ILAR	Eielson Array	55.83	29	P	P	15 35 03.0	0.0
	0.4nm,0.6s,baz=259,slow=6.0,SNR=9.3						
	0.4nm,0.6s						
YKA	Yellowknife Ar	70.26	29	P	P	15 36 39.0	+0.3
	0.4nm,0.8s,baz=290,slow=5.9,SNR=4.1						
	0.4nm,0.8s						
FINES	FINESS Array B	76.77	334	P	P	15 37 16.6	-0.3
	2.1nm,1.0s,baz=20,slow=4.4,SNR=1.4						
	2.1nm,1.0s						

IDC 06 15:31:27.2±21.0**, 26°.32N**×**44°.74W, h0**km**, mb3.5**/3**,**
mbtmp3.5/3**, MS3.3**/4**, Error ellipse: s-maj=472.5km**
s-min=137.2km az=155.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TKL	Tuckaleechee C	34.55	295	LR	LR	15 50 13.9	
	comp=Z,38nm,18.6s,baz=104,slow=33						
DBIC	Dimbokro	42.69	110	LR	LR	15 53 46.9	
	comp=Z,38nm,19.4s,baz=340,slow=31						
H10N2	ASCENSION HYDR	44.88	135	T	T	16 27 08.3	
	baz=320,slow=75,SNR=18						
H10N3	ASCENSION HYDR	44.88	135	T	T	16 27 13.0	
	baz=320,slow=75,SNR=20						
H10N1	ASCENSION HYDR	44.90	135	T	T	16 27 14.3	
	baz=320,slow=75,SNR=26						
H10S3	ASCENSION HYDR	45.64	136	T	T	16 28 14.5	
	baz=261,slow=74,SNR=12						
H10S2	ASCENSION HYDR	45.65	136	T	T	16 28 07.8	
	baz=319,slow=74,SNR=5.4						
PDAR	Pinedale Array	54.58	305	P	P	15 40 58.0	+0.4
	1.1nm,1.1s,baz=96,slow=9.2,SNR=1.9						
	1.1nm,1.1s						
YKA	Yellowknife Ar	57.73	329	P	P	15 41 18.8	-0.6
	0.1nm,0.5s,baz=99,slow=7.4,SNR=2.1						
	0.1nm,0.5s						
LPIG	La Paz	58.78	283	LR	LR	16 09 39.3	
	comp=Z,18nm,18.4s,baz=208,slow=39						
NEW	Newport	59.37	312	LR	LR	16 05 07.9	
	comp=Z,27nm,20.0s,baz=76,slow=34						
ILAR	Eielson Array	71.49	334	P	P	15 42 49.5	+0.1
	0.4nm,0.7s,baz=67,slow=4.8,SNR=4.6						
	0.4nm,0.7s						

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*JMA **06** 15:39:55.7±0.1, 38°.9N±0°.3×141°.9E±0°.6, h51km, MV3.6/39, KINKAZAN REGION*

JMA Felt I J1 at KINKAZAN REGION .

*NIED **06** 15:39:55.7, 38°.93N×141°.93E, h51km, MW3.7, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}4.10; $M_{\theta\theta}$-0.47; $M_{\phi\phi}$-3.63; $M_{r\theta}$0.83; $M_{\theta\phi}$-0.11; $M_{\phi r}$1.60; Fault plane solution: $M_0$4.26000×10^{14} NP1:ϕ_s11.00000°, δ57.00000°, λ99.00000°. NP2:ϕ_s174.00000°, δ34.00000°, λ76.00000°.*

*IDC **06** 15:39:57.4±2.1, 38°.94N×142°.07E, h75km±18km, mb3.3/7, mbtmp3.6/12 Error ellipse: s-maj=24.9km s-min=11.1km az=114.0*

ISC 06 15:39:55.5±1.1**, 38°.91N**±0°.05×**141°.99E**±0°.09**, h49**km±8km**,**
n27, σ1s.50/30**, mb3.8**/7**, 13D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.31	305	⇓P	Pn	15 40 04.6	+0.1
OFUJ				⇓S	Sn	15 40 10.7	-0.2
JKMT	Kesennumamotoy	0.41	257	⇓iP	Pn	15 40 05.6	0.0
JKMT				⇓S	Sn	15 40 12.3	-0.5
JMK	Ichinoseki	0.60	275	⇓P	Pn	15 40 07.6	-0.2
JMK				⇓S	Sn	15 40 16.1	-0.7
JIO	Ouri	0.67	228	⇓iP	Pn	15 40 08.6	-0.2
JIO				⇓S	Sn	15 40 17.4	-1.0
JOM	Ohasama	0.79	316	⇓iP	Pn	15 40 10.1	-0.2
JOM				⇓S	Sn	15 40 20.4	-0.7
JRG	Rokugo	1.16	295	⇓iP	Pn	15 40 14.9	-0.4
JRG				⇓eS	Sn	15 40 29.1	-1.0
JYK	Kaneyama	1.27	271	⇓iP	Pn	15 40 16.5	-0.3
JMM	Marumori	1.40	223	P	Pn	15 40 17.9	-0.7
JMM				S	Sn	15 40 34.8	-1.1
JANG	Nango	1.51	346	P	Pn	15 40 19.8	-0.4
MJAR	Matsushiro Arr	3.81	233	P	Pn	15 40 53.3	+1.6
	3.0nm,0.4s,baz=37,slow=12,SNR=21						
MJAR				S	Sn	15 41 40.5	+5.2
	2.0nm,0.5s,baz=321,slow=28,SNR=1.4						
ASAJ	Asahikawa	5.23	5	P	Pn	15 41 11.8	+0.8
	1.6nm,0.3s,baz=227,slow=11,SNR=11						
ASAJ				S	Sn	15 42 11.3	+1.4
	4.1nm,0.7s,baz=176,slow=19,SNR=1.7						
USRK	Ussuriysk Ar.	9.17	308	P	Pn	15 42 08.2	+3.1
	3.3nm,0.7s,baz=137,slow=15,SNR=4.0						
KSRS	Korea Array	11.17	267	P	Pn	15 42 33.7	+1.3
	0.8nm,0.7s,baz=28,slow=26,SNR=1.1						
PETK	Petropavlovsk-	17.85	32	P	P	15 44 01.3	+1.0
	1.5nm,0.8s,baz=297,slow=6.5,SNR=2.6						
H11N2	WAKE ISLAND Hy	28.77	124	T	T	16 16 15.3	
	baz=317,slow=76,SNR=238						
H11N1	WAKE ISLAND Hy	28.78	125	T	T	16 16 14.7	
	baz=317,slow=76,SNR=174						
H11N3	WAKE ISLAND Hy	28.79	124	T	T	16 16 14.4	
	baz=317,slow=76,SNR=155						
H11S1	WAKE ISLAND Hy	29.55	126	T	T	16 17 11.4	
	baz=318,slow=76,SNR=93						
H11S3	WAKE ISLAND Hy	29.55	126	T	T	16 17 11.6	
	baz=318,slow=76,SNR=100						
H11S2	WAKE ISLAND Hy	29.56	126	T	T	16 17 13.0	
	baz=318,slow=76,SNR=59						
ZALV	Zalesovo Beam	41.02	311	P	P	15 47 32.0	-1.6
	1.3nm,0.7s,baz=80,slow=11,SNR=5.5						
	1.3nm,0.7s						
CMAR	Chiang Mai Arr	42.43	254	P	P	15 47 47.0	+1.3
	0.2nm,0.3s,baz=49,slow=9.7,SNR=1.5						
	0.2nm,0.3s						
MKAR	Makanchi Array	43.54	301	P	P	15 47 53.7	-0.6
	1.6nm,0.7s,baz=86,slow=9.4,SNR=20						
	1.6nm,0.7s						
ILAR	Eielson Array	47.68	33	P	P	15 48 26.2	-0.5
	0.2nm,0.8s,baz=291,slow=7.6,SNR=2.0						
	0.2nm,0.8s						
WRA	Warramunga Arr	58.97	188	P	P	15 49 48.8	-1.2
	0.5nm,0.6s,baz=4.7,slow=6.8,SNR=8.2						
	0.5nm,0.6s						

ASAR	Alice Springs	62.70	188	P	P	15 50 14.3	-0.9
	0.1nm,0.4s,baz=358,slow=5.1,SNR=5.6						
	0.1nm,0.4s						
FINES	FINESS Array B	67.38	332	P	P	15 50 43.9	-1.3
	1.0nm,0.6s,baz=356,slow=8.0,SNR=4.2						
	1.0nm,0.6s						

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*IDC **06** 15:48:28.1±1.2, 5°.83S×153°.68E, h0km, mb3.9/7, mbtmp4.0/9, ML2.8/2, MS2.6/1, Error ellipse: s-maj=32.1km s-min=20.5km az=106.0*

*NEIC **06** 15:48:33.4±0.7, 5°.79S±0°.10×153°.7E±0°.1, h35km±2km, mb4.1/7, Error ellipse: s-maj=24.3km s-min=16.2km az=89.0*

ISC 06 15:48:33.7±0.8, **5°.79S**±0°.07×**153°.6E**±0°.1, **h35km, n26,** σ**1^s.14**/28, **mb4.0**/11, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	2.15	317	Pn	Pn	15 49 07.0	-0.1
KRVT	Keravat (AS076	2.17	313	Pn	Pn	15 49 07.6	+0.3
	15nm,0.3s,baz=82,slow=19,SNR=29						
KRVT				Sn	Sn	15 49 34.9	+1.9
	36nm,0.3s,baz=127,slow=20,SNR=6.6						
	97nm,0.6s						
PMG	Port Moresby	7.35	240	Pn	Pn	15 50 18.6	0.0
	2.9nm,0.3s,baz=72,slow=6.7,SNR=6.3						
PMG				Sn	Sn	15 51 43.1	+2.3
	0.8nm,0.3s,baz=120,slow=19,SNR=1.9						
PMG				LR	LR	15 52 23.1	
	comp=Z,52nm,21.9s,baz=1.0,slow=32						
	12nm,0.5s						
PMG	Port Moresby	7.35	240		Pn	15 50 18.3	-0.2
CTA	Charters Tower	15.92	206	Pn	P	15 52 16.9	-1.5
	baz=41,slow=12						
DZM	Mont Dzumac	20.39	144	P	P	15 53 10.7	+3.0
	6.1nm,0.8s,baz=303,slow=23,SNR=1.8						
WB0	Warramunga Arr	23.30	232	P	P	15 53 38.8	+0.1
WB0				IAmb	IAmb	15 54 17.0	
	comp=Z,5.7nm,1.1s						
WB2	Warramunga Arr	23.43	231	P	P	15 53 40.0	0.0
WB2				IAmb	IAmb	15 54 13.2	
	comp=Z,10.0nm,1.4s						
WRA	Warramunga Arr	23.44	231	P	P	15 53 38.2	-1.9
	comp=Z,2.1nm,0.8s,baz=67,slow=8.2,SNR=14						
WRA				PcP	PcP	15 57 26.4	+0.6
	comp=Z,0.4nm,0.8s,baz=61,slow=2.2,SNR=1.3						
	comp=Z,2.1nm,0.8s						
AS31	Alice Springs	26.00	225	P	P	15 54 02.9	-0.7
AS31				IAmb	IAmb	15 54 04.4	
	comp=Z,1.0nm,0.7s						
ASAR	Alice Springs	26.00	225	P	P	15 54 03.1	-0.5
	comp=Z,3.2nm,0.8s,baz=58,slow=9.2,SNR=45						
ASAR				PcP	PcP	15 57 31.7	+0.2
	comp=Z,0.2nm,0.5s,baz=54,slow=2.2,SNR=4.8						
	comp=Z,3.2nm,0.8s						
ASAR	Alice Springs	26.00	225	P	P	15 54 02.9	-0.7
H11S3	WAKE ISLAND Hy	27.35	28	T	T	16 22 34.5	
	baz=208,slow=74						
H11S2	WAKE ISLAND Hy	27.36	28	T	T	16 22 34.7	
	baz=208,slow=74						
H11S1	WAKE ISLAND Hy	27.37	28	T	T	16 22 35.0	
	baz=208						
FITZ	Fitzroy Crossi	29.93	243	P	P	15 54 37.6	-1.1
FORT	Forrest	34.56	221	P	P	15 55 18.6	-0.5
PETK	Petropavlovsk-	58.77	3	P	P	15 58 28.5	+0.4
	comp=Z,3.5nm,1.0s,baz=153,slow=9.7,SNR=2.1						
	comp=Z,3.5nm,1.0s						
CMAR	Chiang Mai Arr	59.04	295	P	P	15 58 30.6	-0.1
	comp=Z,0.4nm,0.4s,baz=103,slow=5.6,SNR=5.1						
	comp=Z,0.4nm,0.4s						
SONM	Songino Array	67.59	328	P	P	15 59 27.6	+0.6
	comp=Z,0.3nm,0.5s,baz=146,slow=4.0,SNR=3.5						
	comp=Z,0.3nm,0.5s						
SONM	Songino Array	67.59	328	P	P	15 59 25.7	-1.2
SONM				IAmb	IAmb	15 59 28.2	
	comp=Z,2.7nm,1.4s						
MKAR	Makanchi Array	81.60	319	P	P	16 00 47.7	-0.4
	comp=Z,1.1nm,0.8s,baz=106,slow=6.1,SNR=7.9						
	comp=Z,1.1nm,0.8s						
MKAR	Makanchi Array	81.60	319	P	P	16 00 47.3	-0.9
ZALV	Zalesovo Beam	82.42	326	P	P	16 00 51.3	-0.9
	comp=Z,1.2nm,0.6s,baz=104,slow=6.3,SNR=6.0						
	comp=Z,1.2nm,0.6s						
KURK	Kurchatov	85.05	322	P	P	16 01 04.8	-0.9
KURK				IAmb	IAmb	16 01 18.9	
	comp=Z,4.7nm,1.1s						
TORD	Torodi Ar. Bea	151.38	287	PKPbc	PKPbc	16 08 24.3	-0.6
	comp=Z,1.3nm,0.7s,baz=59,slow=2.5,SNR=7.5						
TORD				PKPab	pPKPbc	16 08 35.3	+0.9
	comp=Z,1.4nm,0.8s,baz=45,slow=2.4,SNR=5.7						

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*ISK **06** 15:57:48.1, 39°.52N×26°.12E, h14km, ML2.9/10*

*THE **06** 15:57:49.0, 39°.53N×26°.14E, h6km±1km, ML2.8/6, Error ellipse: s-maj=1.8km s-min=0.6km az=163.0*

*DDA **06** 15:57:49.0±0.0, 39°.54N×26°.18E, h10km, ML2.5*

*ATH **06** 15:57:49.3, 39°.48N×26°.13E, h17km±2km, ML2.8/6, Error ellipse: s-maj=3.0km s-min=0.9km az=91.0*

ISC 06 15:57:48.6±0.8, **39°.51N**±0°.02×**26°.14E**±0°.02, **h14km**±5km, **n41,** σ**0^s.49**/65, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.01	194	P	Pg	15 57 51.2	+0.1
KOCA				S	Sg	15 57 53.0	+0.2
GPNR	Gulpinar-Canak	0.06	187	Pg	Pg	15 57 51.2	-0.2
GPNR				Sg	Sg	15 57 53.1	-0.1
PRK	Paraskevi	0.28	159	P	Pg	15 57 54.9	+0.3
PRK				S	Sg	15 57 59.2	+0.5
	5µm,0.5s						
PRK	Paraskevi	0.28	159	P	Pg	15 57 54.7	+0.1
PRK				S	Sg	15 57 58.9	+0.2
PRK				AML	AML	15 57 59.4	
	comp=N,12114µm,0.5s						
PRK				AML	AML	15 58 01.1	
	comp=E,9193µm,0.4s						
BOZC	Bozcaada	0.34	348	Pg	Pg	15 57 55.5	0.0
BOZC				Sg	Sg	15 58 00.6	+0.4
BOZC	Bozcaada	0.34	348	P	Pg	15 57 55.6	0.0
BOZC				*i* AML	AML	15 58 00.0	
	comp=E,618nm,0.3s						
BOZC				S	Sg	15 58 00.5	+0.2
BOZC				*i* AML	AML	15 58 01.0	
	comp=E,647nm,0.3s						
EZN	Ezine	0.34	24	P	Pg	15 57 55.5	-0.2
EZN				S	Sg	15 58 00.5	+0.1
	comp=E,1µm,0.3s						
EZN	Ezine	0.34	24	Pg	Pg	15 57 55.5	-0.2
EZN				Sg	Sb	15 58 01.2	-0.6
BAYC	CANAKKALE_Bayr	0.39	54	P	Pg	15 57 55.8	-0.6
BAYC				*i* AML	AML	15 58 01.0	
	comp=E,451nm,0.3s						
BAYC				*i* AML	AML	15 58 01.0	
	comp=E,431nm,0.4s						
BAYC				S	Sg	15 58 01.1	-0.7
AYVA	Ayvalik	0.47	116	P	Pg	15 57 58.0	0.0
AYVA				S	Sg	15 58 04.1	-0.2
AYVA				*i* AML	AML	15 58 09.0	
	comp=E,353nm,0.4s						
COMU	Canakkale	0.64	23	Pg	Pg	15 58 00.9	-0.3
GOKA	anakkale-Gk	0.70	345	P	Pg	15 58 02.2	-0.1
GOKA				*i* AML	AML	15 58 12.0	
	comp=E,619nm,0.4s						
GOKA				*i* AML	AML	15 58 12.0	
	comp=E,729nm,0.2s						
GOKA				S	Sb	15 58 12.3	+0.2
GADA	Gvkgeada	0.70	345	Pg	Pg	15 58 02.2	-0.1
GADA				Sg	Sb	15 58 11.9	-0.2
BUHA	Balikesir, Bur	0.72	91	P	Pg	15 58 02.6	-0.1
BUHA				S	Sg	15 58 12.4	+0.1
BUHA				*i* AML	AML	15 58 18.0	
	comp=E,214nm,0.4s						
BUHA				*i* AML	AML	15 58 19.0	
	comp=E,163nm,0.4s						
DKL	Dikili	0.74	126	Pg	Pb	15 58 04.0	+0.8
LIA	Limnos Island	0.83	298	P	Pb	15 58 05.0	+0.1
LIA				S	Sb	15 58 16.6	+0.7
	comp=E,992nm,0.4s						
LIA	Limnos Island	0.83	298	P	Pb	15 58 05.0	+0.1
LIA				S	Sb	15 58 16.5	+0.6
LIA				AML	AML	15 58 18.6	
	comp=E,2376µm,0.4s						
LIA				AML	AML	15 58 19.9	
	comp=N,1693µm,0.4s						
CANM	Can-anakkale	0.86	54	Pg	Pg	15 58 04.9	-0.4
ZEDA	zmir-Bergama	0.91	127	P	Pb	15 58 06.5	+0.3
ZEDA				S	Sb	15 58 18.3	+0.3
ZEDA				*i* AML	AML	15 58 20.0	
	comp=N,311nm,0.4s						
ZEDA				*i* AML	AML	15 58 20.0	
	comp=N,157nm,0.6s						
GELI	Tayfur-Gelibol	0.92	16	Pg	Pb	15 58 06.0	-0.3
LPK	Lapseki	0.98	29	Pg	Pg	15 58 07.8	+0.2
SMTH	Samothraki Isl	1.07	334	P	Pb	15 58 08.7	-0.2
SMTH				S	Sg	15 58 23.1	0.0
	comp=N,248nm,0.3s						
SMTH	Samothraki Isl	1.07	334	P	Pb	15 58 08.6	-0.2
SMTH				AML	AML	15 58 26.0	
	comp=N,454µm,0.3s						
SMTH				AML	AML	15 58 26.1	
	comp=E,561µm,0.5s						
PSRA	Psara	1.07	205	P	Pb	15 58 09.0	+0.1
PSRA				S	Sb	15 58 21.0	-1.7
PSRA				AML	AML	15 58 27.0	
	comp=E,1977µm,0.4s						
PSRA				AML	AML	15 58 27.9	
	comp=N,1283µm,0.3s						
CHOS	Chios island	1.13	183	P	Pb	15 58 09.2	-0.7
BALY	Balya	1.16	78	P	Pn	15 58 09.8	-0.6
BALY				S	Sb	15 58 25.7	+0.2
BALY				*i* AML	AML	15 58 26.0	
	comp=N,341nm,0.4s						
BALY				*i* AML	AML	15 58 26.0	
	comp=N,150nm,0.5s						
ERIK	Erikli-Kesan	1.19	14	Pn	Pn	15 58 10.5	-0.3
URLA	Izmir	1.20	163	Pn	Pn	15 58 10.6	-0.4
ENEZ	Enez	1.22	0	P	Pn	15 58 11.5	+0.2
ENEZ				S	Sg	15 58 28.9	+0.8
	comp=N,1µm,0.6s						
ENEZ	Enez	1.22	0	Pn	Pn	15 58 11.4	+0.2
STEP	BALIKESIR_Sava	1.23	96	P	Pg	15 58 13.1	+0.8
STEP				S	Sg	15 58 29.7	+1.4
KRBG	Karabiga-Canak	1.25	45	Pn	Pn	15 58 11.5	-0.1
GONE	Gonen-Balikesi	1.30	65	Pn	Pn	15 58 12.6	+0.2
KNL	Balıkesir	1.31	54	P	Pn	15 58 12.5	+0.1
BALB	Balikesir	1.35	84	Pn	Pn	15 58 13.1	+0.1
ALN	Alexandroupoli	1.38	357	P	Pn	15 58 13.6	+0.1
ALN				S	Sb	15 58 32.2	+0.4
	comp=N,278nm,0.4s						
ALN	Alexandroupoli	1.38	357	P	Pn	15 58 13.8	+0.3
ALN				S	Sn	15 58 31.2	-0.3
ALN				AML	AML	15 58 34.0	
	comp=E,544µm,0.3s						
ALN				AML	AML	15 58 34.1	
	comp=N,564µm,0.5s						
THAS	Thassos island	1.54	315	P	Pn	15 58 15.5	-0.2
THAS				S	Sn	15 58 34.6	-0.8
THAS				AML	AML	15 58 39.5	
	comp=E,159µm,0.6s						
THAS				AML	AML	15 58 40.2	
	comp=N,176µm,0.3s						
KAVA	Kavala	1.94	320	P	Pn	15 58 21.1	0.0
SRS	Serrai	2.52	310	P	Pn	15 58 29.8	+0.7
NVR	Nevrokopi	2.53	317	P	Pn	15 58 30.4	+1.1

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*IDC **06** 16:01:10.7±2.0, 52°.83N×169°.60W, h0km, mb3.5/3, mbtmp3.7/5, ML2.8/2, Error ellipse: s-maj=65.9km s-min=29.0km az=176.0*

*AEIC **06** 16:01:15.7±2.8, 52°.41N±0°.07×169°.53W±0°.06, h33km±6km, Error ellipse: s-maj=10.5km s-min=5.0km az=178.0*

*NEIC **06** 16:01:17.2±1.9, 52°.43N±0°.08×169°.54W±0°.09, h27km±13km, ML3.2(AEIC), Error ellipse: s-maj=12.3km s-min=6.8km az=156.0*

ISC 06 16:01:15.5±1.1, **52°.3N**±0°.1×**169°.55W**±0°.06, **h35km, n30,** σ**1^s.74**/25, **mb3.6**/3, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLES	Cleveland East	0.55	337	Pg	Pn	16 01 25.6	-1.2
CLES				Sg	Sn	16 01 33.6	-1.2
NIKH	Nikolski High	0.78	33		Pn	16 01 28.8	-1.2
NIKH	Nikolski High	0.78	33		Sn	16 01 39.5	-0.9
UNV	Unalaska Valle	2.39	49		Pn	16 01 52.4	+0.4
UNV	Unalaska Valle	2.39	49		Sn	16 02 21.3	+1.2
AKUT	Akutan	2.91	50	Pn	Pn	16 02 00.3	+1.1
ADK	Adak	4.42	267	Pn	Pn	16 02 23.8	+3.8
FALS	False Pass	4.45	53	Pn	Pn	16 02 21.9	+1.5
KIWB	Kanaga Island	4.71	267	Pn	Pn	16 02 25.2	+1.2
SPIA	Saint Paul Isl	4.89	356	Pn	Pn	16 02 27.5	+1.2
SDPT	Sand Point	6.17	57	Pn	Pn	16 02 45.9	+2.0
CHGN	Chignik	7.64	54	Pn	Pn	16 03 06.1	+2.1
P18K	Big Mountain,	10.71	43	Pn	Pn	16 03 48.6	+2.4
O18K	Koktuh Hills	10.99	41	Pn	Pn	16 03 52.3	+2.3
Q19K	Cape Douglas,	11.15	47	Pn	Pn	16 03 53.2	+1.0
KDAK	Kodiak Island	11.15	54	Pn	Pn	16 03 49.0	-3.2
	0.1nm,0.3s,baz=238,slow=9.5,SNR=8.1						
	12nm,1.1s						
KDAK	Kodiak Island	11.15	54	Pn	Pn	16 03 51.9	-0.3
CAPN	Captain Cook N	13.17	43	Pn	Pn	16 04 20.9	+1.2
SEW	Seward	13.59	47	Pn	Pn	16 04 25.4	-0.1
CAST	Castle Rocks	14.43	33	Pn	Pn	16 04 37.7	+0.8
PETK	Petropavlovsk-	19.77	285	P	P	16 05 39.9	-2.4
	0.1nm,0.3s,baz=94,slow=13,SNR=4.4						
	1.0nm,0.6s						
YKA	Yellowknife Ar	30.36	49	P	P	16 07 22.4	-1.1
	0.1nm,0.6s,baz=274,slow=8.2,SNR=1.9						
	0.1nm,0.6s						
H11N2	WAKE ISLAND Hy	37.34	218	T	T	16 48 17.1	
	baz=24,slow=75,SNR=5.0						
H11N3	WAKE ISLAND Hy	37.35	218	T	T	16 48 17.0	
	baz=24,slow=75,SNR=4.9						
H11N1	WAKE ISLAND Hy	37.36	218	T	T	16 48 20.0	
	baz=24,slow=75,SNR=4.2						
H11S1	WAKE ISLAND Hy	38.53	218	T	T	16 49 45.1	
	baz=23,slow=76,SNR=44						
H11S2	WAKE ISLAND Hy	38.55	218	T	T	16 49 49.0	
	baz=23,slow=76,SNR=34						
H11S3	WAKE ISLAND Hy	38.55	218	T	T	16 49 49.2	
	baz=23,slow=76,SNR=27						
PDAR	Pinedale Array	40.52	79	P	P	16 08 51.3	+0.1
	1.1nm,0.7s,baz=316,slow=3.8,SNR=11						
	1.1nm,0.7s						
TXAR	Lajitas Array	52.86	89	P	P	16 10 27.8	+0.1
	0.6nm,0.8s,baz=305,slow=4.4,SNR=7.3						
	0.6nm,0.8s						

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*IDC **06** 16:17:20.6±0.6, 39°.87N×143°.31E, h0km, mb4.1/24, mbtmp4.1/32, ML3.5/8, MS3.8/31, Error ellipse: s-maj=15.7km s-min=11.9km az=106.0*

*NIED **06** 16:17:22.8, 39°.97N×143°.21E, h13km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.53; $M_{\theta\theta}$0.41; $M_{\phi\phi}$-2.93; $M_{r\theta}$1.81; $M_{\theta\phi}$-1.10; $M_{\phi r}$3.13; Fault plane solution: $M_0$4.65000×10^{15} NP1:ϕ_s28.00000°, δ71.00000°, λ100.00000°. NP2:ϕ_s181.00000°, δ21.00000°, λ64.00000°.*

*JMA **06** 16:17:22.8±0.3, 40°.0N±0°.6×14°3E±°, h13km±2km, MD4.4/37, MV4.6/37, FAR E OFF SANRIKU*

JMA Felt I J1 at FAR E OFF SANRIKU .

*MOS **06** 16:17:23.3±0.8, 39°.92N×143°.22E, h27km, mb4.7/27, Error ellipse: s-maj=8.0km s-min=4.9km az=98.7*

*BJI **06** 16:17:23.2±0.0, 39°.82N×143°.21E, h32km, mb4.5/54, mB4.8/28, Ms4.2/31, Ms7 4.0/31*

*NEIC **06** 16:17:25.8±0.9, 39°.87N±0°.06×143°.2E±0°.1, h32km±6km, mb4.6/37, Error ellipse: s-maj=12.1km s-min=7.8km az=109.0*

ISC 06 16:17:21.9±0.4, **39°.89N**±0°.04×**143°.29E**±0°.04, **h10km, n231,** σ**1^s.66**/225, **mb4.6**/69, **MS4.0**/36, **12C-3D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.10	273	P	Pg	16 17 42.2	-0.8
JTH	Tanohata	1.10	273	A	A	16 17 42.2	
	comp=E,5.0nm,2.1s,comp=E,4.0nm,1.5s						
MIYJ	Miyakonagasawa	1.18	255	*i* P	Pb	16 17 44.0	-0.4
MIYJ				*e*S	Sb	16 17 59.0	-0.6
JKEN	Kujiedanarisaw	1.26	285	P	Pb	16 17 44.2	-1.5
JKEN	Kujiedanarisaw	1.26	285	A	A	16 17 44.2	
	comp=E,6.0nm,1.0s,comp=E,5.0nm,3.1s						
JANG	Nango	1.45	290	P	Pn	16 17 47.2	-1.0
JANG				*e*S	Sb	16 18 04.7	-2.7
JOM	Ohasama	1.60	256	*i* P	Pn	16 17 51.0	+0.8
JOM				*e*S	Sn	16 18 11.2	+0.3
JOM	Ohasama	1.60	256	A	A	16 17 51.0	
	comp=E,8.0nm,0.3s,comp=E,9.0nm,1.5s						
JSZI	Iwateshizukuis	1.81	266	A	A	16 17 53.9	
	comp=E,11nm,1.3s,comp=E,13nm,2.8s						
JMK	Ichinoseki	1.86	241	*i* P	Pn	16 17 54.7	+0.9
JMK				*e*S	Sn	16 18 17.6	+0.3
JTM	Tenmabayashi	1.93	299	Pn	Pn	16 17 55.2	+0.5
JTM	Tenmabayashi	1.93	299	*i* P	Pn	16 17 55.3	+0.5
JAH	Hinai	2.06	279	*i* P	Pn	16 17 57.4	+0.8
JAH	Hinai	2.06	279	A	A	16 17 57.4	
	comp=E,5.0nm,1.8s,comp=E,5.0nm,2.0s						
JIO	Ouri	2.08	227	P	Pn	16 17 57.2	+0.4
JRG	Rokugo	2.11	257	P	Pn	16 17 58.4	+1.1
JRG	Rokugo	2.11	257	A	A	16 17 58.4	
	comp=E,10.0nm,0.9s,comp=E,11nm,2.6s						
ERM	Erimo	2.13	357		Pb	16 17 58.8	-1.7
ERM	Erimo	2.13	357	*d i*P	Pb	16 17 59.2	-1.4
JEM	Erimo	2.13	357	P	Pb	16 17 59.2	-1.4
JOT	Ohata	2.27	312	P	Pn	16 18 00.4	+0.9
JOT	Ohata	2.27	312	A	A	16 18 00.4	
	comp=E,3.0nm,2.8s,comp=E,4.0nm,2.5s						
JYW	Yuwa	2.40	263	A	A	16 18 02.2	
	comp=E,9.0nm,1.6s,comp=E,11nm,1.4s						
JNBK	Urakawa-nobuka	2.43	350	P	Pn	16 18 02.9	+1.3
JNBK	Urakawa-nobuka	2.43	350	A	A	16 18 02.9	
	comp=E,3.0nm,2.0s,comp=E,4.0nm,0.7s						
JNTW	Noshirotokiwa	2.43	280	A	A	16 18 02.2	
	comp=E,14nm,2.6s,comp=E,15nm,2.2s						
JYK	Kaneyama	2.47	248	A	A	16 18 03.5	
	comp=E,4.0nm,1.4s,comp=E,5.0nm,2.0s						
JSI2	Shiura 2	2.49	299	A	A	16 18 02.8	
	comp=E,6.0nm,2.8s,comp=E,5.0nm,3.2s						
JMM	Marumori	2.81	225		Pn	16 18 06.7	-0.1
JYS	Shirataka	3.01	238	A	A	16 18 11.5	
	comp=E,5.0nm,0.8s,comp=E,6.0nm,1.7s						
JYA	Atsumi	3.06	246	A	A	16 18 12.0	
	comp=E,9.0nm,1.3s,comp=E,7.0nm,1.9s						
JAR	Ashorobuto	3.43	6	A	A	16 18 16.5	
	comp=E,2.0nm,0.4s,comp=E,3.0nm,8.5s						
NMR	Nemuro--Hokkai	3.93	27	*e*P	Pn	16 18 22.6	+0.3
NMR				*e*S	Sn	16 19 05.9	-2.5
JKA	Kamikawa-asahi	4.26	353	Pn	Pn	16 18 28.3	+1.5
ASAJ	Asahikawa	4.26	353	Pn	Pn	16 18 28.4	+1.6
	3.5nm,0.3s,baz=203,slow=17,SNR=44						
ASAJ				Sn	Sn	16 19 18.1	+1.6
	4.6nm,0.3s,baz=188,slow=32,SNR=6.3						
ASAJ				LR	LR	16 19 48.6	
	comp=Z,124nm,19.9s,baz=194,slow=34						
	7.8nm,0.3s						
JSD	Sado	4.33	246		Pn	16 18 29.2	+1.4
RUSJ	Misakicho	4.46	18	*e*P	Pn	16 18 30.9	+1.4
RUSJ				*e*S	Sn	16 19 20.1	-1.4
YUK	Yuzh-Kuril'sk	4.57	24	*e*P	Pn	16 18 32.4	+1.4
YUK				*e*S	Sn	16 19 21.1	-3.0
YUK				pmax	pmax		
	comp=Z,215nm,0.2s						
YUK				smax	smax		
	comp=N,2µm,0.4s						
YUK				smax	smax		
	comp=E,1µm,0.4s						
SHO	Shikotan	4.78	32	*e*P	Pn	16 18 34.6	+0.7
SHO				*e*S	Sn	16 19 25.3	-4.0
SHO				pmax	pmax		
	comp=Z,40nm,0.3s						
SHO				smax	smax		
	comp=N,404nm,0.4s						
SHO				smax	smax		
	comp=E,369nm,0.5s						
MJAR	Matsushiro Arr	5.21	232	Pn	Pn	16 18 41.6	+1.6
	comp=E,0.7nm,0.3s,baz=41,slow=11,SNR=45						
	comp=E,24nm,0.7s						
MAJO	Matsushiro	5.21	232	Pn	Pn	16 18 41.1	+1.1
MAJO	Matsushiro	5.21	232	*i* P	Pn	16 18 42.5	+2.6
KUR	Kuril'sk	6.32	31	*e*P	Pn	16 18 55.9	+0.8
KUR				*e*S	Sn	16 20 03.2	-4.1
KUR				pmax	pmax		
	comp=Z,73nm,0.4s						
KUR				pmax	pmax		
	comp=E,28nm,0.3s						
KUR				pmax	pmax		
	comp=N,25nm,0.5s						
KUR				smax	smax		
	comp=E,261nm,0.4s						
KUR				smax	smax		
	comp=N,92nm,0.3s						
JGF	Kuroka	6.36	230	Pn	Pn	16 18 56.3	+0.6
INU	Inuyama	6.73	230	Pn	Pn	16 19 02.5	+1.7
YSS	Yuzh-Sakhalins	7.08	357	Pn	Pn	16 19 07.2	+1.7
YSS	Yuzh-Sakhalins	7.08	357	*e*P	Pn	16 19 06.9	+1.4
YSS				*e*S	Sn	16 20 24.0	-1.9
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
YSS				MLR	MLR		
	comp=N,500nm,18.0s						
YSS				MLR	MLR		
	comp=E,300nm,17.0s						
JHJ2	Mitsune	7.32	204	Pn	Pn	16 19 08.4	-0.4
JHJ	Hachijo jima 2	7.32	204	Pn	Pn	16 19 08.2	-0.6
	comp=E,12nm,0.3s,baz=58,slow=23,SNR=1.7						
JHJ				Sn	Sn	16 20 25.3	-6.7
	comp=E,17nm,0.3s,baz=66,slow=20,SNR=1.1						
JHJ				LR	LR	16 22 27.1	
	comp=E,345nm,18.8s,baz=262,slow=42						
	comp=E,57nm,0.3s						
JHS	Saijyo	9.45	242	Pn	Pn	16 19 40.1	+2.1
USA0B	Ussuriysk Arra	9.45	301		Pn	16 19 39.4	+1.4
USA0B	Ussuriysk Arra	9.45	301	P	Pn	16 19 39.4	+1.4
USRK	Ussuriysk Ar.	9.45	301	Pn	Pn	16 19 40.1	+2.1
	comp=E,1.3nm,0.3s,baz=86,slow=14,SNR=39						
USRK				LR	LR	16 23 08.4	
	comp=E,565nm,19.5s,baz=92,slow=37						
	comp=E,9.8nm,0.6s						
USRK	Ussuriysk Ar.	9.45	301	Pn	Pn	16 19 39.5	+1.5
MDJ	Mudanjiang	11.20	299	P	Pn	16 20 05.2	+3.2
MDJ				pP		16 20 12.6	
MDJ				sP		16 20 15.8	
MDJ				S	Sn	16 22 06.1	-1.1
MDJ				SS	SnSn	16 22 21.2	+2.3
MDJ				pmax	pmax		
	comp=E,11nm,1.3s						
MDJ				pmax	pmax		
	comp=E,240nm,4.8s						
MDJ				LR	LR		
	comp=E,530nm,15.2s						
MDJ				LR	LR		
	comp=E,640nm,16.8s						
MDJ				LR	LR		
	comp=E,900nm,16.3s						
GRNR	Gornyy	11.90	338	⇑*i*P	Pn	16 20 12.8	+1.2
GRNR				pmax	pmax		
	comp=N,4.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,180nm,16.0s						
GRNR				MLR	MLR		
	comp=N,150nm,13.0s						
GRNR				MLR	MLR		
	comp=Z,230nm,18.0s						
JNU	Nakatsue	12.05	240	Pn	Pn	16 20 14.5	+0.8
	comp=Z,0.2nm,0.3s,baz=56,slow=22,SNR=1.7						
JNU				LR	LR	16 25 10.9	
	comp=Z,464nm,18.2s,baz=48,slow=39						
	comp=Z,5.4nm,0.8s						
KSRS	Korea Array	12.26	263	Pn	Pn	16 20 18.7	+2.2
	comp=Z,0.5nm,0.3s,baz=75,slow=13,SNR=5.8						
KSRS				LR	LR	16 24 42.7	
	comp=Z,484nm,18.8s,baz=65,slow=36						
	comp=Z,3.1nm,0.8s						
KLR	Kul'dur	12.44	322	Pn	Pn	16 20 19.3	+0.4
	comp=Z,0.2nm,0.3s,baz=132,slow=12,SNR=5.5						
KLR				LR	LR	16 25 18.2	
	comp=Z,366nm,19.8s,baz=134,slow=38						
	comp=Z,1.6nm,0.7s						
KLR	Kul'dur	12.44	322	*ce*P	Pn	16 20 19.0	+0.1
KLR				pmax	pmax		
	comp=Z,10.0nm,2.5s						
BNX	BinXian	13.04	302	⇓P	Pn	16 20 28.4	+1.2
BNX				pmax	pmax		
	comp=Z,11nm,0.9s						
BNX				pmax	pmax		
	comp=Z,120nm,4.3s						
PETK	Petropavlovsk-	16.49	32	Pn	Pn	16 21 14.6	+1.4
	comp=Z,0.1nm,0.3s,baz=234,slow=20,SNR=2.5						

PETK				LR	LR	16 27 20.7	
	comp=Z,101nm,21.1s,baz=213,slow=36						
	comp=Z,1.4nm,0.8s						
ZEA	**Zeya**	**17.62**	**327**	*e*P	**P**	**16 21 27.9**	**-0.4**
ZEA				pmax	pmax		
	comp=E,20nm,1.2s						
ZEA				pmax	pmax		
	comp=N,10.0nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
ZEA				MLR	MLR		
	comp=E,200nm,18.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,15.0s						
HIA	**Hailar**	**19.15**	**307**	P	**P**	**16 21 45.0**	**-0.3**
HIA	**Hailar**	**19.15**	**307**	P	**P**	**16 21 45.0**	**-0.3**
HIA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BJI	**Beijing**	**20.76**	**279**	P	**P**	**16 22 02.8**	**0.0**
BJI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BJI				LR	LR		
	comp=Z,150nm,15.9s						
BJI				LR	LR		
	comp=Z,130nm,16.4s						
BJI				LR	LR		
	comp=Z,170nm,18.3s						
TIA	**Tai'an**	**20.91**	**268**	P	**P**	**16 22 04.0**	**-0.4**
TIA				pmax	pmax		
	comp=Z,13nm,0.9s						
NJ2	**Nanjing**	**21.23**	**256**	*e*P	**P**	**16 22 07.2**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HNS	**HongShan**	**22.43**	**273**	⇑P	**P**	**16 22 24.6**	**+3.9**
HNS				S	**S**	**16 26 27.0**	**0.0**
HNS				pmax	pmax		
	comp=Z,6.0nm,1.2s						
HNS				LR	LR		
	comp=Z,520nm,16.3s						
HNS				LR	LR		
	comp=Z,340nm,18.8s						
YAK	**Yakutsk**	**23.67**	**344**	P	**P**	**16 22 32.1**	**-1.2**
	comp=Z,9.6nm,0.4s,baz=91,slow=2.6,SNR=12						
YAK				S	**S**	**16 26 42.7**	**-5.2**
	comp=Z,2.0nm,0.4s,baz=160,slow=18,SNR=1.2						
YAK				LR	LR	16 31 47.2	
	comp=Z,113nm,21.0s,baz=265,slow=37						
	comp=Z,9.6nm,0.4s						
YAK	**Yakutsk**	**23.67**	**344**	P	**P**	**16 22 32.5**	**-0.7**
YAK	**Yakutsk**	**23.67**	**344**	*e*P	**P**	**16 22 32.6**	**-0.7**
YAK				*e**PP	**sP**	**16 22 40.6**	**+3.7**
YAK				*e*		16 26 16.3	
YAK				*e*S	**S**	**16 26 46.0**	**-1.9**
YAK				*e*SS	**SnSn**	**16 27 29.6**	**+4.5**
YAK				pmax	pmax		
	comp=Z,44nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
YAK				smax	smax		
	comp=E,142nm,4.8s						
YAK				smax	smax		
	comp=N,94nm,4.3s						
SEY	**Seymchan**	**23.72**	**10**	P	**P**	**16 22 34.0**	**+0.3**
	comp=N,15nm,0.9s,baz=191,slow=6.8,SNR=16						
	comp=N,15nm,0.9s						
SEY	**Seymchan**	**23.72**	**10**	*ce*P	**P**	**16 22 34.9**	**+1.2**
SEY				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC	**Hu-ho-hao-te**	**24.13**	**283**	*e*P	**P**	**16 22 35.4**	**-2.6**
HHC				pmax	pmax		
	comp=Z,22nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,4.3s						
HHC				LR	LR		
	comp=Z,290nm,15.9s						
HHC				LR	LR		
	comp=Z,700nm,16.0s						
HHC				LR	LR		
	comp=Z,880nm,18.6s						
SSLB	**Suanglung**	**24.75**	**236**	P	**P**	**16 22 42.5**	**-1.2**
SSLB				IAmb	IAmb	16 23 14.4	
	comp=Z,42nm,1.3s						
YULB	**Yu-li**	**24.82**	**235**	P	**P**	**16 22 42.0**	**-2.3**
YULB				IAmb	IAmb	16 22 54.9	
	comp=Z,26nm,1.1s						
BTO	**Baotou**	**25.33**	**282**	*e*P	**P**	**16 22 50.1**	**+1.2**
BTO				LR	LR		
	comp=Z,600nm,14.4s						
BTO				LR	LR		
	comp=Z,2µm,15.7s						
BOD	**Bodaibo**	**26.01**	**323**	*e*P	**P**	**16 22 54.4**	**-0.4**
BOD				pmax	pmax		
	comp=Z,15nm,1.1s						
GUMO	**Guam**	**26.23**	**177**	LR	LR	16 32 31.0	
	comp=Z,60nm,19.6s,baz=300,slow=35						
ULN	**Ulaanbaatar**	**27.11**	**299**	P	**P**	**16 23 03.3**	**-1.7**
ULN	**Ulaanbaatar**	**27.11**	**299**	*ce*P	**P**	**16 23 05.7**	**+0.6**
ULN				pmax	pmax		
	comp=Z,14nm,2.5s						
SONM	**Songino Array**	**27.56**	**299**	P	**P**	**16 23 09.3**	**+0.3**
	comp=Z,4.3nm,0.8s,baz=91,slow=8.1,SNR=25						
SONM				LR	LR	16 34 43.4	
	comp=Z,376nm,18.6s,baz=63,slow=38						
	comp=Z,4.3nm,0.8s						
SONM	**Songino Array**	**27.56**	**299**	P	**P**	**16 23 08.6**	**-0.4**
SONM	**Songino Array**	**27.56**	**299**	P	**P**	**16 23 08.6**	**-0.4**
SONM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**28.53**	**128**	T	T	16 53 20.1	
	baz=319,slow=74						
H11N1	**WAKE ISLAND Hy**	**28.54**	**128**	T	T	16 53 23.3	
	baz=319,slow=74						
H11N3	**WAKE ISLAND Hy**	**28.55**	**128**	T	T	16 53 20.7	
	baz=319						
ENH	**Enshi**	**29.14**	**261**	P	**P**	**16 23 22.4**	**-0.7**
ENH				IAmb	IAmb	16 23 23.7	
	comp=Z,20nm,0.8s						
H11S1	**WAKE ISLAND Hy**	**29.36**	**130**	T	T	16 54 22.6	
	baz=322,slow=76,SNR=48						
H11S3	**WAKE ISLAND Hy**	**29.36**	**130**	T	T	16 54 23.3	
	baz=322,slow=76,SNR=35						
H11S2	**WAKE ISLAND Hy**	**29.37**	**130**	T	T	16 54 23.8	
	baz=322,slow=76,SNR=43						
ZAK	**Zakamensk**	**29.78**	**304**	*e*P	**P**	**16 23 25.4**	**-3.3**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
BILL	**Bilibino**	**30.88**	**17**	*e*P	**P**	**16 23 39.4**	**+1.3**
BILL				*e*		16 24 38.6	
BILL				*e*S	**S**	**16 28 43.3**	**+1.6**
BILL				*e*SS	**SnSn**	**16 30 23.4**	**+2.7**
BILL				pmax	pmax		
	comp=Z,42nm,4.8s						
LZH	**Lanzhou**	**31.15**	**276**	*e*P	P	16 23 46.3	+5.3
LZH				pP	sP	16 23 56.3	+12
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
TIXI	**Tiksi**	**32.66**	**352**	P	**P**	**16 23 55.1**	**+1.4**
	comp=Z,1.4nm,0.3s,baz=91,slow=1.4,SNR=4.6						
TIXI				LR	LR	16 39 31.3	
	comp=Z,66nm,18.8s,baz=9.5,slow=41						
	comp=Z,1.4nm,0.3s						
TIXI	**Tiksi**	**32.66**	**352**	*ce*P	**P**	**16 23 54.5**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,5.0nm,2.5s						
CD2	**Chengdu**	**33.23**	**267**	P	**P**	**16 23 58.7**	**-0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CD2				LR	LR		
	comp=Z,160nm,12.2s						
CD2				LR	LR		
	comp=Z,160nm,8.2s						
CD2				LR	LR		
	comp=Z,300nm,13.7s						
GTA	**Gaotai**	**33.24**	**283**	*e*P	**P**	**16 24 00.0**	**+0.7**
GTA				pP	sP	16 24 08.2	+5.3
GTA				sP	pP	16 24 13.2	+11
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GTA				LR	LR		
	comp=Z,130nm,9.6s						
GTA				LR	LR		
	comp=Z,350nm,16.7s						
GTA				LR	LR		
	comp=Z,410nm,15.1s						
QIZ	**Qiongzhong**	**35.48**	**244**	P	**P**	**16 24 16.0**	**-2.7**
QIZ				S	**S**	**16 29 47.1**	**-6.8**
QIZ				LR	LR		
	comp=Z,210nm,16.7s						
QIZ				LR	LR		
	comp=Z,220nm,17.5s						
QIZ				LR	LR		
	comp=Z,200nm,19.1s						
KMI	**Kunming**	**36.90**	**259**	⇓P	**P**	**16 24 31.8**	**+0.7**
KMI				pP	sP	16 24 40.5	+5.7
KMI				pmax	pmax		
	comp=Z,15nm,1.1s						
KMI				LR	LR		
	comp=Z,290nm,13.2s						
KMI				LR	LR		
	comp=Z,310nm,15.0s						
KMI				LR	LR		
	comp=Z,280nm,17.9s						
PZH	**PanZhiHua**	**36.92**	**262**	P	**P**	**16 24 31.2**	**+0.1**
PZH				pP	**sP**	**16 24 40.5**	**+5.7**
PZH				S	**S**	**16 30 11.8**	**-4.4**
PZH				pmax	pmax		
	comp=Z,20nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,4.6s						
PZH				LR	LR		
	comp=Z,340nm,15.5s						
PZH				LR	LR		
	comp=Z,350nm,16.2s						
PZH				LR	LR		
	comp=Z,360nm,13.7s						
GOMU	**GeErMu**	**37.99**	**280**	P	**P**	**16 24 41.3**	**+0.9**
GOMU				pP	sP	16 24 44.9	+0.9
GOMU				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,64nm,8.4s						
DGZ	**Jazzator, Alta**	**39.99**	**303**	*i* P	**P**	**16 24 57.4**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,13nm,0.8s						
WMQ	**Urumqi**	**40.94**	**294**	*e*P	**P**	**16 25 05.5**	**+0.9**
WMQ				pP	sP	16 25 15.0	+6.8
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
WMQ				LR	LR		
	comp=Z,94nm,21.1s						
ZAA0	**Zalesovo Array**	**41.15**	**310**	P	**P**	**16 25 05.3**	**-0.8**
ZAA0				IAmb	IAmb	16 25 07.3	
	comp=Z,5.7nm,0.7s						
ZALV	**Zalesovo Beam**	**41.15**	**310**	P	**P**	**16 25 06.5**	**+0.4**
	comp=Z,4.3nm,0.5s,baz=88,slow=7.9,SNR=23						
ZALV				PcP	**PcP**	**16 27 05.8**	**+0.6**
	comp=Z,1.9nm,0.7s,baz=118,slow=2.3,SNR=3.5						
ZALV				LR	LR	16 42 56.2	
	comp=Z,137nm,18.8s,baz=73,slow=37						
	comp=Z,4.3nm,0.5s						
ZALV	**Zalesovo Beam**	**41.15**	**310**	P	**P**	**16 25 05.4**	**-0.7**
ZALV	**Zalesovo Beam**	**41.15**	**310**	*i* P	**P**	**16 25 06.6**	**+0.5**
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.6s						
NRIK	**Noril'sk**	**41.33**	**334**	P	**P**	**16 25 07.7**	**+0.3**
	comp=Z,1.1nm,0.4s,baz=98,slow=16,SNR=5.9						
NRIK				LR	LR	16 43 45.1	
	comp=Z,179nm,18.7s,baz=152,slow=38						
	comp=Z,1.1nm,0.4s						
NRIK	**Noril'sk**	**41.33**	**334**	*ce*P	**P**	**16 25 07.9**	**+0.5**
NRIK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CRAI	**Chiangrai**	**41.52**	**255**	P	**P**	**16 25 09.1**	**-0.4**
CRAI				IAmb	IAmb	16 25 24.5	
	comp=Z,6.5nm,1.0s						
PHRA	**Phrae**	**42.70**	**253**	P	**P**	**16 25 19.1**	**-0.1**
CHTO	**Chiang Mai**	**43.45**	**254**	P	**P**	**16 25 25.0**	**-0.3**
CHTO	**Chiang Mai**	**43.45**	**254**	P	**P**	**16 25 25.0**	**-0.3**
CMAR	**Chiang Mai Arr**	**43.68**	**254**	P	**P**	**16 25 27.3**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=45,slow=6.8,SNR=12						
CMAR				LR	LR	16 44 42.6	
	comp=Z,36nm,18.6s,baz=75,slow=38						
	comp=Z,1.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**43.68**	**254**	*i* P	**P**	**16 25 27.7**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
H21K	**Melozitna Rive**	**43.82**	**33**	P	**P**	**16 25 28.4**	**+0.8**
H21K				IAmb	IAmb	16 25 42.2	
	comp=Z,12nm,1.5s						
MK31	**Makanchi Array**	**43.92**	**300**	P	**P**	**16 25 28.7**	**0.0**
MK31	**Makanchi Array**	**43.92**	**300**	P	**P**	**16 25 28.7**	**0.0**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MKAR	**Makanchi Array**	**43.92**	**300**	P	**P**	**16 25 28.9**	**+0.2**
	comp=Z,3.9nm,0.9s,baz=83,slow=9.2,SNR=29						
MKAR				LR	LR	16 44 41.5	
	comp=Z,216nm,18.3s,baz=344,slow=37						
	comp=Z,3.9nm,0.9s						
MKAR	**Makanchi Array**	**43.92**	**300**	P	**P**	**16 25 28.5**	**-0.2**
MKAR	**Makanchi Array**	**43.92**	**300**	*i* P	**P**	**16 25 28.8**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAKZ	**Makanchi**	**44.12**	**300**	P	**P**	**16 25 30.3**	**-0.1**
MAKZ				IAmb	IAmb	16 25 41.5	
	comp=Z,5.1nm,0.8s						
MAKZ	**Makanchi**	**44.12**	**300**	P	**P**	**16 25 30.3**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KURK	**Kurchatov**	**45.39**	**306**	*ce*P	**P**	**16 25 40.7**	**+0.4**
KURK				pmax	pmax		
	comp=Z,15nm,1.3s						
KURBB	**Kurchatov Arra**	**45.47**	**306**	LR	LR	16 46 16.3	
	comp=Z,67nm,19.4s,baz=160,slow=38						
ILAR	**Eielson Array**	**46.30**	**34**	P	**P**	**16 25 49.0**	**+1.7**
	comp=Z,0.5nm,0.7s,baz=273,slow=6.3,SNR=7.2						
	comp=Z,0.5nm,0.7s						
TAPN	**Taplejung**	**47.26**	**272**	*e*P	**P**	**16 25 56.4**	**+0.7**
SCRK	**Sand Creek**	**47.62**	**35**	P	**P**	**16 25 59.3**	**+1.5**
SCRK				IAmb	IAmb	16 26 10.2	
	comp=Z,6.0nm,0.9s						
DOT	**Dot Lake**	**47.62**	**35**	P	**P**	**16 25 59.0**	**+1.2**
JIRN	**Jiri**	**48.27**	**274**	*e*P	**P**	**16 26 04.1**	**+0.4**
	comp=Z,9.0nm,0.6s						
RAMN	**Ramite**	**48.31**	**273**	*e*P	**P**	**16 26 04.2**	**+0.4**
	comp=Z,34nm,0.8s						
GUN	**Gumba**	**48.38**	**274**	*e*P	**P**	**16 26 05.0**	**+0.5**
	comp=Z,9.7nm,0.3s						
BCAR	**Beaver Creek A**	**48.72**	**36**	P	**P**	**16 26 08.2**	**+2.0**
KKN	**Kakani**	**48.90**	**274**	*e*P	**P**	**16 26 08.8**	**+0.4**
	comp=Z,35nm,0.9s						
PKI	**Pulchoki**	**48.91**	**274**	*e*P	**P**	**16 26 08.6**	**0.0**
	comp=Z,2.1nm,0.4s						
GKN	**Gorkha**	**49.29**	**275**	*e*P	**P**	**16 26 11.4**	**+0.2**
DANN	**Dangsing**	**49.79**	**276**	*e*P	**P**	**16 26 15.6**	**+0.4**
	comp=Z,8.1nm,0.3s						
BRVK	**Borovoye**	**49.84**	**311**	P	**P**	**16 26 15.4**	**+0.5**
BRVK				IAmb	IAmb	16 26 26.5	
	comp=Z,6.1nm,0.8s						
BRVK	**Borovoye**	**49.84**	**311**	P	**P**	**16 26 15.4**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KOLN	**Koldanda**	**50.20**	**275**	*e*P	**P**	**16 26 18.7**	**+0.5**
	comp=Z,31nm,1.2s						
AAK	**Ala-Archa**	**50.48**	**297**	LR	LR	16 48 47.1	
	comp=Z,150nm,19.6s,baz=68,slow=37						
AAK	**Ala-Archa**	**50.48**	**297**	P	**P**	**16 26 19.8**	**-0.3**
AAK				IAmb	IAmb	16 26 20.9	
	comp=Z,4.4nm,1.0s						
AAK	**Ala-Archa**	**50.48**	**297**	P	**P**	**16 26 19.8**	**-0.3**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PYUN	**Piuthan**	**50.50**	**276**	*e*P	**P**	**16 26 21.0**	**+0.5**
KSH	**Kashi**	**50.63**	**293**	P	**P**	**16 26 26.0**	**+4.7**
KSH				pP	pwP	16 26 35.4	+9.3
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
INK	**Inuvik**	**51.18**	**28**	P	**P**	**16 26 25.9**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=225,slow=10.0,SNR=1.6						
	comp=Z,0.6nm,0.6s						
HNR	**Honiara**	**51.44**	**159**	LR	LR	16 45 02.6	
	comp=Z,1µm,20.9s,baz=358,slow=32						
KK31	**Karatay Array**	**53.01**	**299**	P	**P**	**16 26 38.4**	**-0.4**
KK31				IAmb	IAmb	16 26 49.8	
	comp=Z,4.0nm,0.7s						
KK31	**Karatay Array**	**53.01**	**299**	P	**P**	**16 26 38.4**	**-0.4**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KKAR	**Karatay Array**	**53.01**	**299**	P	**P**	**16 26 38.3**	**-0.5**
KKAR	**Karatay Array**	**53.01**	**299**	P	**P**	**16 26 38.3**	**-0.5**
SVE	**Sverdlovsk**	**54.01**	**318**	*e*P	**P**	**16 26 47.4**	**+1.5**
GAR	**Garm**	**54.84**	**294**	P	**P**	**16 26 52.4**	**-0.1**
GAR				IAmb	IAmb	16 27 08.3	
	comp=Z,7.4nm,0.8s						
NIL	**Nilore**	**55.16**	**287**	P	**P**	**16 26 55.1**	**+0.5**
NIL				IAmb	IAmb	16 27 07.6	
	comp=Z,8.4nm,0.7s						
NIL	**Nilore**	**55.16**	**287**	P	**P**	**16 26 55.2**	**+0.5**
NIL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ARU	**Arti**	**55.23**	**318**	LR	LR	16 53 06.8	
	comp=Z,200nm,19.4s,baz=122,slow=39						
ARU	**Arti**	**55.23**	**318**	P	**P**	**16 26 55.1**	**+0.3**
ARU				IAmb	IAmb	16 27 07.6	
	comp=Z,12nm,1.2s						
ARU	**Arti**	**55.23**	**318**	*c i*P	**P**	**16 26 55.2**	**+0.5**
ARU				S	**S**	**16 34 38.9**	**+0.9**
ARU				SS	**SS**	**16 38 14.3**	**-7.2**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ARU				MLR	MLR		
	comp=Z,242nm,16.0s						
CHGR	**Chuyangaron**	**55.80**	**294**	P	**P**	**16 26 58.8**	**-0.5**
CHGR	**Chuyangaron**	**55.80**	**294**	P	**P**	**16 26 58.8**	**-0.5**
CHGR				pmax	pmax		
	comp=Z,21nm,0.6s						
ABKAR	**Akbulak array**	**57.26**	**309**	P	**P**	**16 27 09.6**	**+0.2**
AKTO	**Aktyubinsk**	**57.89**	**311**	LR	LR	16 53 09.8	
	comp=Z,104nm,19.1s,baz=256,slow=37						
KIRV	**Kirov**	**58.88**	**322**	LR	LR	16 57 05.0	
	comp=Z,83nm,19.8s,baz=290,slow=40						
KIRV	**Kirov**	**58.88**	**322**	*ce*P	**P**	**16 27 20.7**	**+0.2**
RES	**Resolute Bay**	**59.47**	**15**	P	**P**	**16 27 24.8**	**+0.4**
RES				IAmb	IAmb	16 28 06.8	
	comp=Z,2.4nm,0.9s						
RES	**Resolute Bay**	**59.47**	**15**	P	**P**	**16 27 24.8**	**+0.4**
RES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WB0	**Warramunga Arr**	**59.92**	**190**	P	**P**	**16 27 27.9**	**-0.3**
WB0				IAmb	IAmb	16 27 39.3	
	comp=Z,5.7nm,0.9s						
FITZ	**Fitzroy Crossi**	**59.99**	**199**	P	**P**	**16 27 29.2**	**+0.7**
WRAB	**Tennant Creek**	**60.09**	**190**	*ce*P	**P**	**16 27 31.9**	**+2.6**
WRAB				pmax	pmax		
	comp=Z,13nm,1.7s						
WR0	**Warramunga Arr**	**60.09**	**190**	P	**P**	**16 27 29.3**	**0.0**
WR0				IAmb	IAmb	16 27 36.1	
	comp=Z,5.1nm,0.9s						
WB2	**Warramunga Arr**	**60.10**	**190**	P	**P**	**16 27 29.5**	**+0.2**
WRA	**Warramunga Arr**	**60.10**	**190**	P	**P**	**16 27 29.3**	**0.0**
	comp=Z,2.5nm,0.8s,baz=5.7,slow=6.9,SNR=25						
	comp=Z,2.5nm,0.8s						
WRA	**Warramunga Arr**	**60.10**	**190**	*i* P	**P**	**16 27 29.7**	**+0.3**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YKA	**Yellowknife Ar**	**60.61**	**31**	P	**P**	**16 27 33.5**	**+1.1**
	comp=Z,0.1nm,0.6s,baz=303,slow=6.8,SNR=1.9						
	comp=Z,0.1nm,0.6s						
KLMR	**Klimovskoe**	**62.14**	**327**	*e*P	**P**	**16 27 40.0**	**-2.8**
KLMR				AMP		16 27 44.9	
	comp=Z,12nm,1.4s						
KLMR	**Klimovskoe**	**62.14**	**327**	*e*P	**P**	**16 27 39.9**	**-2.8**
KLMR				pmax	pmax		
	comp=Z,12nm,1.4s						
BELG	**Belogornoye**	**62.73**	**317**	LR	LR	16 57 28.5	
	comp=Z,161nm,18.1s,baz=326,slow=38						
GEYT	**Alibeck**	**63.76**	**299**	P	**P**	**16 27 54.0**	**0.0**
	comp=Z,3.9nm,0.8s,baz=79,slow=3.2,SNR=8.2						
GEYT				LR	LR	16 57 34.5	
	comp=Z,80nm,18.5s,baz=41,slow=38						
	comp=Z,3.9nm,0.8s						
GEYT	**Alibeck**	**63.76**	**299**	P	**P**	**16 27 54.0**	**0.0**
AS31	**Alice Springs**	**63.83**	**190**	P	**P**	**16 27 54.2**	**-0.2**
ASAR	**Alice Springs**	**63.83**	**190**	P	**P**	**16 27 55.0**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=6.7,slow=5.6,SNR=32						
	comp=Z,1.5nm,0.8s						
ASAR	**Alice Springs**	**63.83**	**190**	P	**P**	**16 27 54.5**	**+0.1**
ASAR	**Alice Springs**	**63.83**	**190**	P	**P**	**16 27 55.0**	**+0.6**
OBN	**Obninsk**	**66.70**	**323**	*e*P	**P**	**16 28 13.1**	**+0.4**
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FIA1	**FINESS Array S**	**66.98**	**332**	P	**P**	**16 28 14.5**	**+0.1**
FINES	**FINESS Array B**	**66.98**	**332**	P	**P**	**16 28 14.6**	**+0.2**
	comp=Z,4.4nm,0.9s,baz=58,slow=7.5,SNR=9.1						
FINES				LR	LR	16 59 55.6	
	comp=Z,162nm,18.1s,baz=24,slow=38						
	comp=Z,4.4nm,0.9s						
FINES	**FINESS Array B**	**66.98**	**332**	*i* P	**P**	**16 28 15.8**	**+1.4**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AFI	**Afiamalu**	**67.89**	**132**	LR	LR	16 56 11.8	
	comp=Z,13nm,19.1s,baz=175,slow=34						
AKT	**Akhty**	**68.57**	**307**	*e*P	**P**	**16 28 25.1**	**+0.2**
AKT				*e*		16 28 49.2	
AKT				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEI	**Tsey**	**70.13**	**309**	*e*P	**P**	**16 28 34.2**	**-0.5**
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV	**Kislovodsk**	**70.15**	**311**	*e*P	**P**	**16 28 34.9**	**+0.2**
KIV				pmax	pmax		
	comp=Z,20nm,1.1s						
KIV				MLR	MLR		
	comp=Z,98nm,18.0s						
KBZ	**Khabaz**	**70.17**	**311**	P	**P**	**16 28 35.6**	**+1.0**
	comp=Z,6.7nm,0.9s,baz=84,slow=3.0,SNR=20						
	comp=Z,6.7nm,0.9s						
KBZ	**Khabaz**	**70.17**	**311**	*ce*P	**P**	**16 28 35.8**	**+1.2**
KBZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SHA1	**Shidzhatmaz**	**70.30**	**311**	*i* P	**P**	**16 28 36.2**	**+0.5**
NACGM	**Naroch**	**71.15**	**327**	*e*P	**P**	**16 28 38.9**	**-1.5**
	comp=Z,11nm,0.8s,baz=47						
STKA	**Stephens Creek**	**71.42**	**182**	P	**P**	**16 28 41.7**	**-0.4**
	comp=Z,0.5nm,0.2s,baz=77,slow=9.6,SNR=1.9						
	comp=Z,0.5nm,0.2s						
NC204	**NORSAR Array S**	**72.06**	**338**	P	**P**	**16 28 46.7**	**+0.8**
SOC	**Sochi**	**72.09**	**312**	*e*P	**P**	**16 28 46.0**	**-0.3**
SOC				*e*		16 31 22.7	
SOC				*e*PPP	PPP	16 33 06.1	
SOC				*e*S	**S**	**16 38 07.2**	**-1.0**
SOC				*e*SS	**SS**	**16 42 44.0**	**-0.4**
SOC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HFS	**Hagfors**	**72.09**	**336**	LR	LR	17 06 16.2	
	comp=Z,124nm,18.4s,baz=328,slow=41						
NVAR	**Mina Array Bea**	**72.12**	**55**	P	**P**	**16 28 47.7**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=282,slow=7.4,SNR=3.7						
	comp=Z,0.6nm,0.8s						
NB2	**NORSAR Subarra**	**72.12**	**338**	P	**P**	**16 28 46.4**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=37,slow=6.2						
NOA	**NORSAR Array B**	**72.12**	**338**	P	**P**	**16 28 46.8**	**+0.6**
	comp=Z,2.2nm,0.8s,baz=38,slow=5.9,SNR=6.7						
NOA				LR	LR	17 04 20.4	
	comp=Z,47nm,18.9s,baz=285,slow=39						
	comp=Z,2.2nm,0.8s						
AKASG	**Malin Array Be**	**72.94**	**323**	P	**P**	**16 28 50.8**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=44,slow=5.8,SNR=8.7						
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**72.94**	**323**	*i* P	**P**	**16 28 51.2**	**0.0**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
PDAR	**Pinedale Array**	**74.63**	**47**	P	**P**	**16 29 00.1**	**-1.5**
	comp=Z,0.3nm,0.7s,baz=317,slow=13,SNR=2.0						
	comp=Z,0.3nm,0.7s						
BURAR	**Bucovina Array**	**76.98**	**322**	P	**P**	**16 29 15.3**	**+0.5**
BRTR	**Keskin Array B**	**78.05**	**312**	P	**P**	**16 29 20.4**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=64,slow=5.0,SNR=2.5						
	comp=Z,0.9nm,0.5s						
MLR	**Muntele Rosu**	**78.15**	**320**	LR	LR	17 07 42.4	
	comp=Z,138nm,18.8s,baz=20,slow=39						
MORC	**Moravsky Berou**	**78.76**	**328**	*e*P	**P**	**16 29 21.2**	**-3.4**
KRLC	**Kraliky**	**78.84**	**328**	*e*P	**P**	**16 29 27.2**	**+2.2**
KRLC	**Kraliky**	**78.84**	**328**	*e*P	**P**	**16 29 27.2**	**+2.2**
VYHS	**Vyhne**	**79.20**	**326**	*e*P	**P**	**16 29 28.3**	**+1.3**
VYHS	**Vyhne**	**79.20**	**326**	*e*P	**P**	**16 29 28.2**	**+1.3**
CLL	**Collm**	**79.34**	**331**	*e*P	**P**	**16 29 28.0**	**+0.3**
CLL				*e*pP	**PcP**	**16 29 39.0**	**+3.2**
VRAC	**Vranov**	**79.52**	**328**	LR	LR	17 09 58.6	
	comp=Z,104nm,20.9s,baz=359,slow=40						
VRAC	**Vranov**	**79.52**	**328**	*e*P	**P**	**16 29 27.7**	**-1.0**
KRUC	**Moravsky**	**79.79**	**328**	*e*P	**P**	**16 29 28.8**	**-1.3**
KHC	**Kasperske Hory**	**80.87**	**329**	*e*P	**P**	**16 29 37.2**	**+1.2**
KHC	**Kasperske Hory**	**80.87**	**329**	*e*P	**P**	**16 29 37.2**	**+1.2**
GERES	**GERESS Array B**	**81.05**	**329**	P	**P**	**16 29 37.5**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=41,slow=8.8,SNR=4.6						
GERES				LR	LR	17 07 57.9	
	comp=Z,112nm,18.6s,baz=334,slow=38						

	comp=Z,0.4nm,0.5s						
GRA1	Grafenberg Arr	81.32	331	P	P	16 29 38.4	0.0
GRA1				IAmb	IAmb	16 30 04.8	
	comp=Z,9.6nm,1.1s						
GRF	Grafenberg Arr	81.32	331	P	P	16 29 38.4	0.0
GRF				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GRFO	Grafenberg	81.32	331	P	P	16 29 38.4	0.0
GRFO	Grafenberg	81.32	331	P	P	16 29 38.4	0.0
GRFO				pmax	pmax		
	comp=Z,22nm,1.4s						
PPT	Papeete	84.63	118	LR	LR	16 57 47.4	
	comp=Z,45nm,21.9s,baz=274,slow=29						
TXAR	Lajitas Array	87.23	54	P	P	16 30 09.0	+0.1
	comp=Z,0.1nm,0.4s,baz=300,slow=4.1,SNR=2.6						
	comp=Z,0.1nm,0.4s						
TXAR	Lajitas Array	87.23	54	P	P	16 30 09.0	+0.1
FCAR	Ozark Folk Cen	88.96	42	P	P	16 30 16.9	+0.1
ESDC	Sonseca Array	95.36	335	LR	LR	17 21 30.6	
	comp=Z,89nm,20.3s,baz=351,slow=40						

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*IDC **06** 16:25:33.9±0.5, 1°.15N×126°.49E, h0^{km}, mb4.3/23, mbtmp4.3/24, ML4.2/1, Error ellipse: s-maj=22.7km s-min=11.3km az=76.0*

*DJA **06** 16:25:39.4±1.0, 1°N±2°×12°7E±°, h26^{km}±9^{km}, M4.3/16, mb4.6/6, mB4.5/3, MLv4.2/16, Mw(mB)3.7/3*

*NEIC **06** 16:25:39.8±1.8, 1°.20N±0°.08×126°.54E±0°.06, h40^{km}±7^{km}, mb4.6/45, Error ellipse: s-maj=11.9km s-min=7.0km az=206.0*

ISC 06 16:25:39.7±0.3**, 1°.21N**±0°.04×**126°.54E**±0°.04**, h39^{km}, n134, σ1^{s}.35**/148**, mb4.5**/47**, 5C-1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.93	118		Pn	16 25 56.3	+0.1
TNTI				Sn	Sn	16 26 08.9	+0.5
TNTI	Ternate	0.93	118	P	Pn	16 25 56.5	+0.2
TNTI				S	Sn	16 26 10.0	+1.6
LBMI	Labuha	2.06	152	P	Pn	16 26 11.9	0.0
LBMI				S	Sn	16 26 36.9	+0.4
SGSI	Sangihe	2.67	338	P	Pn	16 26 19.2	-1.0
SGSI				S	Sn	16 26 52.0	+0.7
SANI	Sanana	3.28	190	P	Pn	16 26 27.7	-0.9
SANI	Sanana	3.28	190	P	Pn	16 26 27.8	-0.9
GTOI	Gorontalo	3.58	261	P	Pn	16 26 33.0	+0.3
GTOI				S	Sn	16 27 19.1	+5.3
LUWI	Luwuk	4.38	239	Pn	Pn	16 26 44.6	+0.8
LUWI	Luwuk	4.38	239	P	Pn	16 26 45.3	+1.5
NLAI	Namlea	4.45	173	P	Pn	16 26 45.5	+0.8
MRSI	Marisa	4.66	261	P	Pn	16 26 47.9	+0.3
GSPH	General Santos	5.11	342	⇑eP	Pn	16 26 53.3	-0.5
MSAI	Masohi	5.11	152	P	Pn	16 26 54.8	+1.0
	8.8nm,0.5s,172nm0.0nm						
AAI	Ambon	5.13	161	P	Pn	16 26 55.1	+1.0
	46nm,0.4s,809nm0.2nm						
SKMP	Bagumbayan, Su	5.64	339	⇑eP	Pn	16 27 01.2	0.0
SKMP				eS	Sn	16 28 01.8	-2.9
TOLI2	Tolitoli	5.76	269	Pn	Pn	16 27 01.0	-1.8
TOLI2	Tolitoli	5.76	269	P	Pn	16 27 01.6	-1.2
CTBH	Cotabato--PC H	6.40	339	⇑eP	Pn	16 27 12.7	+1.1
MPSI	Mapaga	6.70	263	P	Pn	16 27 16.9	+1.2
	31nm,1.1s,0.1nm						
BUKP	Musuan	6.79	347	⇑eP	Pn	16 27 19.1	+2.1
BUKP				eS	Sn	16 28 33.8	+0.7
BIPH	Bislig	6.94	358	⇓iP	Pn	16 27 21.8	+2.9
BIPH				i S	Sn	16 28 39.0	+2.4
FAKI	Fak Fak	7.02	126	Pn	Pn	16 27 20.8	+0.7
FAKI	Fak Fak	7.02	126	P	Pn	16 27 21.8	+1.7
FAKI	Fak Fak	7.02	126	P	Pn	16 27 22.0	+1.9
	34nm,0.8s,0.1nm						
PAGZ	Pagadian	7.31	335	⇑eP	Pn	16 27 23.9	-0.2
PAGZ				eS	Sn	16 28 31.3	-15
SPSI	Sidrap Palu	8.50	233	P	Pn	16 27 41.5	+1.2
MYLDM	Lahad Datu	8.95	296	Pn	Pn	16 27 46.4	-0.1
KAPI	Kappang	9.18	228	Pn	Pn	16 27 48.4	-1.3
	2.5nm,0.3s,baz=73,slow=17,SNR=2.5						
KAPI				Sn	Sn	16 29 30.8	-0.9
	1.0nm,0.3s,baz=41,slow=20,SNR=1.6						
	4.9nm,0.3s						
KAPI	Kappang	9.18	228	Pn	Pn	16 27 50.4	+0.7
KKM	Kota Kinabalu	11.37	295	Pn	Pn	16 28 20.6	+0.7
TWSI	Taliwang, Sumb	13.79	224	P	P	16 29 03.5	+2.9
SBUM	Sibu	14.37	275	Pn	Pn	16 29 01.6	+0.9
SBUM				P	P	16 29 07.4	+0.4
MTN	Manton Dam	14.68	162	Pn	Pn	16 29 03.5	-1.4
MTN	Manton Dam	14.68	162	P	Pn	16 29 05.5	+0.6
JAGI	Jajag, Banyuwa	15.65	232		P	16 29 19.1	-2.1
JAGI				IAmb	IAmb	16 29 25.8	
	comp=Z,49nm,1.1s						
KSM	Kuching	16.23	271		P	16 29 26.2	-1.6
KNRA	Kununurra	16.92	173	Pn	Pn	16 29 33.1	-0.5
KNRA				IAmb	IAmb	16 29 42.4	
	comp=Z,40nm,1.1s						
KNRA	Kununurra	16.92	173	P	P	16 29 35.0	-0.3
PWJI	Pagerwojo	17.32	238	P	P	16 29 42.0	+2.2
FITZ	Fitzroy Crossi	19.20	183	P	P	16 29 59.3	-1.1
FITZ	Fitzroy Crossi	19.20	183	P	P	16 30 00.3	-0.1
TWG	Pinlang	22.14	346	P	P	16 30 30.9	-1.3
TWG				IAmb	IAmb	16 30 59.7	
	comp=Z,43nm,1.1s						
WB0	Warramunga Arr	22.22	160	P	P	16 30 32.1	-1.0
WB0				IAmb	IAmb	16 30 37.1	
	comp=Z,22nm,0.6s						
COEN	Coen	22.33	133	P	P	16 30 32.7	-1.6
WRAB	Tennant Creek	22.36	160	P	P	16 30 33.2	-1.4
WRA	Warramunga Arr	22.36	160	P	P	16 30 33.7	-1.0
	comp=Z,14nm,0.6s,baz=336,slow=11,SNR=99						
WRA				PcP	PcP	16 34 29.8	+0.7
	comp=Z,0.4nm,0.7s,baz=322,slow=2.3,SNR=1.6						
WRA				S	S	16 34 36.8	-1.4
	comp=Z,0.8nm,0.7s,baz=335,slow=15,SNR=1.6						
	comp=Z,14nm,0.6s						
WB2	Warramunga Arr	22.37	160	P	P	16 30 33.6	-1.1
WB2				IAmb	IAmb	16 30 42.7	
	comp=Z,24nm,0.7s						
WR0	Warramunga Arr	22.45	160	P	P	16 30 34.4	-1.2
WR0				IAmb	IAmb	16 30 39.5	
	comp=Z,20nm,1.1s						
MYKOM	Kota Tinggi	22.69	272	P	P	16 30 38.5	+0.2
MYKOM				IAmb	IAmb	16 30 39.4	
	comp=Z,17nm,1.1s						
TPUB	Ta-pu	22.70	346	P	P	16 30 37.1	-1.1
TPUB	Ta-pu	22.70	346	P	P	16 30 42.1	+3.9
SSLB	Suanglung	23.09	347	P	P	16 30 40.8	-1.5
SSLB				IAmb	IAmb	16 31 24.3	
	comp=Z,42nm,1.4s						
MBWA	Marble Bar	23.20	196	P	P	16 30 42.0	-1.3
PSA00	Pilbara Seismi	23.57	196	P	P	16 30 45.5	-1.4
PSA00				IAmb	IAmb	16 31 25.7	
	comp=Z,19nm,1.4s						
QIS	Mount Isa	25.13	150	P	P	16 31 02.4	+1.1
AS31	Alice Springs	25.74	164	P	P	16 31 06.0	-0.8
ASAR	Alice Springs	25.74	164	P	P	16 31 06.4	-0.4
	comp=Z,3.9nm,0.5s,baz=348,slow=13,SNR=57						
ASAR				PcP	PcP	16 34 36.5	+0.2
	comp=Z,0.6nm,0.5s,baz=0.1,slow=1.8,SNR=4.9						
ASAR				S	S	16 35 31.8	-1.5
	comp=Z,0.5nm,0.8s,baz=348,slow=22,SNR=3.3						
	comp=Z,3.9nm,0.5s						
ASAR	Alice Springs	25.74	164	P	P	16 31 06.2	-0.5
MTSU	Mount Surprise	25.99	139	P	P	16 31 12.6	+3.5
WRKA	Warakurna	26.14	176	P	P	16 31 11.5	+1.1
RPSI	Rantau Prapat	27.64	273	P	P	16 31 22.3	-1.7
RPSI				IAmb	IAmb	16 31 23.5	
	comp=Z,8.4nm,0.7s						
CTA	Charters Tower	28.66	139	P	P	16 31 33.8	+0.7
	comp=Z,1.6nm,0.7s,baz=356,slow=7.5,SNR=1.9						
	comp=Z,1.6nm,0.7s						
GSI	Gunungsitoli	28.96	271	P	P	16 31 33.4	-2.5
GSI				IAmb	IAmb	16 31 34.1	
	comp=Z,25nm,1.1s						
PHRA	Phrae	31.02	305	P	P	16 31 53.7	-0.2
NJ2	Nanjing	31.53	347	eP	P	16 31 59.5	+1.2
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
FORT	Forrest	31.84	178	P	P	16 32 00.8	-0.2
CMAR	Chiang Mai Arr	32.05	304	P	P	16 32 02.5	-0.6
	comp=Z,0.5nm,0.3s,baz=133,slow=7.5,SNR=5.3						
	comp=Z,0.5nm,0.3s						
CHTO	Chiang Mai	32.23	305	P	P	16 32 03.6	-1.0
PZH	PanZhiHua	34.66	319	P	P	16 32 27.1	+1.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,120nm,4.9s						
BBOO	Buckleboo	35.01	166	P	P	16 32 27.9	-0.7
STKA	Stephens Creek	35.86	158	P	P	16 32 35.6	-0.4
	comp=Z,2.4nm,0.4s,baz=331,slow=8.0,SNR=10						
	comp=Z,2.4nm,0.4s						
STKA	Stephens Creek	35.86	158	P	P	16 32 35.8	-0.2
KSRS	Korea Array	36.09	2	P	P	16 32 38.7	+0.8
	comp=Z,1.3nm,0.7s,baz=180,slow=11,SNR=4.9						
	comp=Z,1.3nm,0.7s						
MJAR	Matsushiro Arr	36.78	16	P	P	16 32 43.7	-0.1
	comp=Z,3.8nm,0.9s,baz=185,slow=9.3,SNR=7.1						
	comp=Z,3.8nm,0.9s						
HHC	Hu-ho-hao-te	41.73	343	eP	P	16 33 26.1	+0.9
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,220nm,5.6s						
USRK	Ussuriysk Ar.	43.08	6	P	P	16 33 37.1	+1.2
	comp=Z,3.7nm,0.8s,baz=180,slow=7.2,SNR=9.6						
	comp=Z,3.7nm,0.8s						
MDJ	Mudanjiang	43.31	3	P	P	16 33 39.1	+1.3
MDJ				sP	sP	16 33 55.4	+2.5
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,110nm,7.6s						
TAPN	Taplejung	45.39	308	eP	P	16 33 53.7	-1.4
	comp=Z,3.8nm,0.4s						
RAMN	Ramite	46.08	307	eP	P	16 33 59.3	-1.2
JIRN	Jiri	46.73	308	eP	P	16 34 04.1	-1.6
	comp=Z,8.1nm,0.7s						
GUN	Gumba	47.09	308	eP	P	16 34 06.9	-1.6
	comp=Z,19nm,0.7s						
PKI	Pulchoki	47.31	307	eP	P	16 34 08.1	-2.1
	comp=Z,1.4nm,0.3s						
HEH	HeiHe	48.87	1	eP	P	16 34 22.3	+0.8
HEH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
DANN	Dangsing	48.96	307	eP	P	16 34 21.2	-1.7
	comp=Z,11nm,0.6s						
PYUN	Piuthan	49.47	307	eP	P	16 34 25.3	-1.4
	comp=Z,13nm,0.5s						
SONM	Songino Array	49.62	342	P	P	16 34 27.4	0.0
	comp=Z,0.7nm,0.6s,baz=156,slow=8.0,SNR=5.7						
	comp=Z,0.7nm,0.6s						
WMQ	Urumqi	54.69	326	eP	P	16 35 07.9	+2.8
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,27nm,3.7s						
PETK	Petropavlovsk-	57.83	22	P	P	16 35 28.5	+1.3
	comp=Z,1.9nm,0.8s,baz=294,slow=6.4,SNR=8.1						
	comp=Z,1.9nm,0.8s						
PETK	Petropavlovsk-	57.83	22	P	P	16 35 26.2	-1.0
MK31	Makanchi Array	59.52	326	P	P	16 35 38.1	-1.1
MKAR	Makanchi Array	59.52	326	P	P	16 35 38.4	-0.8
	comp=Z,2.0nm,0.5s,baz=120,slow=7.4,SNR=38						
	comp=Z,2.0nm,0.5s						
MKAR	Makanchi Array	59.52	326	P	P	16 35 38.1	-1.1
MAKZ	Makanchi	59.71	326	P	P	16 35 39.6	-0.9
MAKZ				IAmb	IAmb	16 35 44.6	
	comp=Z,2.5nm,0.8s						
KSH	Kashi	59.71	316	P	P	16 35 43.1	+2.4
RPZ	Rata Peaks	59.83	144	P	P	16 35 39.7	-1.6
	comp=Z,5.3nm,0.8s,baz=279,slow=19,SNR=1.4						
	comp=Z,5.3nm,0.8s						
TUWZ	Tuamarina	60.32	140	P	P	16 35 44.0	-0.7
YAK	Yakutsk	60.72	2	P	P	16 35 45.5	-1.6
	comp=Z,2.5nm,0.4s,baz=131,slow=1.5,SNR=5.4						
	comp=Z,2.5nm,0.4s						
BKZ	Black Stump Fm	60.86	137	P	P	16 35 47.4	-1.1
ZALV	Zalesovo Beam	62.75	334	P	P	16 35 60.0	-0.9
	comp=Z,0.7nm,0.3s,baz=123,slow=5.5,SNR=6.7						
	comp=Z,0.7nm,0.3s						
ZALV	Zalesovo Beam	62.75	334	P	P	16 35 59.8	-1.1
GAR	Garm	63.50	314	P	P	16 36 04.6	-1.7
KURK	Kurchatov	63.77	328	P	P	16 36 07.0	-0.7
SEY	Seymchan	64.52	13	P	P	16 36 14.4	+2.1
	comp=Z,3.2nm,0.8s,baz=229,slow=7.4,SNR=6.1						
	comp=Z,3.2nm,0.8s						
KKAR	Karatay Array	64.95	318	P	P	16 36 15.7	0.0
BRVK	Borovoye	69.40	328	P	P	16 36 43.0	-0.6
BRVK				IAmb	IAmb	16 36 46.2	
	comp=Z,3.8nm,0.8s						
TIXI	Tiksi	70.35	1	P	P	16 36 48.0	-1.1
BILL	Bilibino	72.03	15	P	P	16 36 59.8	+0.5
GEYT	Alibeck	72.33	309	P	P	16 37 03.3	+1.5
	comp=Z,1.9nm,0.6s,baz=146,slow=2.8,SNR=4.4						
	comp=Z,1.9nm,0.6s						
NRIK	Noril'sk	72.82	346	P	P	16 37 04.6	+0.6
	comp=Z,2.8nm,0.6s,baz=143,slow=8.1,SNR=7.5						
	comp=Z,2.8nm,0.6s						
NRIK	Noril'sk	72.82	346	P	P	16 37 04.2	+0.2
NRIK				IAmb	IAmb	16 37 05.3	
	comp=Z,3.6nm,0.7s						
ABKAR	Akbulak array	73.98	321	P	P	16 37 10.1	-1.2
ARU	Arti	76.96	328	P	P	16 37 27.5	-0.6
ARU				IAmb	IAmb	16 37 28.5	
	comp=Z,4.3nm,0.6s						
VNDA	Vanda	80.96	173	P	P	16 37 49.1	-0.6
	comp=Z,1.5nm,0.6s,baz=323,slow=6.3,SNR=11						
	comp=Z,1.5nm,0.6s						
VNDA	Vanda	80.96	173	P	P	16 37 49.7	0.0
VNDA				IAmb	IAmb	16 38 32.3	
	comp=Z,7.3nm,1.5s						
TTA	Tatalina	83.22	27	P	P	16 38 03.6	+1.7
TTA				IAmb	IAmb	16 38 04.7	
	comp=Z,8.1nm,1.2s						
GEVA	Gevas	84.14	308	P	P	16 38 07.3	0.0
KBZ	Khabaz	84.57	314	P	P	16 38 08.9	-0.2
	comp=Z,2.7nm,1.0s,baz=151,slow=5.8,SNR=7.2						
	comp=Z,2.7nm,1.0s						
IMAR	Indian Mountai	84.71	24	P	P	16 38 10.0	+0.6
SKT	Skwentna	85.14	28	P	P	16 38 12.0	+0.4
SKT				IAmb	IAmb	16 38 38.2	
	comp=Z,8.2nm,1.3s						
RC01	Rabbit Creek A	85.91	29		P	16 38 16.4	+1.0
COLD	Coldfoot	86.28	23		P	16 38 18.6	+1.5
COLD				IAmb	IAmb	16 38 19.1	
	comp=Z,1.8nm,0.7s						
H24K	Noodor Dome	87.09	24		P	16 38 22.2	+1.0
ILAR	Eielson Array	87.45	25	P	P	16 38 21.6	-1.3
	comp=Z,0.4nm,0.4s,baz=260,slow=4.2,SNR=13						
	comp=Z,0.4nm,0.4s						
RIDG	Independent Ri	88.31	26		P	16 38 27.5	+0.4
BMAR	Burnt Mountain	88.46	23		P	16 38 29.0	+1.3
DOT	Dot Lake	88.66	27	P	P	16 38 28.5	-0.2
DOT				IAmb	IAmb	16 38 44.5	
	comp=Z,4.3nm,1.2s						
J26L	Joseph Creek	88.88	26	P	P	16 38 29.8	0.0
J26L				IAmb	IAmb	16 38 32.0	
	comp=Z,4.6nm,1.2s						
L27K	Beaver Creek,	89.68	27	P	P	16 38 34.1	+0.6
L27K				IAmb	IAmb	16 38 37.8	
	comp=Z,6.5nm,1.5s						
BCAR	Beaver Creek A	89.69	27	P	P	16 38 33.9	+0.2
ARCES	ARCESS Array B	92.74	340	P	P	16 38 47.1	-0.5
	comp=Z,2.6nm,1.0s,baz=17,slow=13,SNR=1.7						
	comp=Z,2.6nm,1.0s						
AKASG	Malin Array Be	93.72	321	P	P	16 38 53.8	+1.3
	comp=Z,0.2nm,0.4s,baz=70,slow=5.7,SNR=1.9						
	comp=Z,0.2nm,0.4s						
FINES	FINESS Array B	93.95	332	P	P	16 38 54.2	+0.9
	comp=Z,2.8nm,0.9s,baz=64,slow=6.6,SNR=6.7						
	comp=Z,2.8nm,0.9s						
TXAR	Lajitas Array	123.26	53	PKP	PKPdf	16 44 33.2	-0.1
	comp=Z,0.3nm,0.7s,baz=188,slow=2.5,SNR=3.7						
TORD	Torodi Ar. Bea	123.49	287	PKP	PKPdf	16 44 33.5	-0.4
	comp=Z,0.2nm,0.3s,baz=97,slow=2.3,SNR=2.1						

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*NEIC **06** 16:30:59.7±0.5, 17°.8S±0°.1×176°.40W±0°.09, h10^{km}±2^{km}, mb4.6/10, Error ellipse: s-maj=22.6km s-min=9.4km az=34.0*

*IDC **06** 16:30:59.8±1.0, 17°.94S×176°.75W, h0^{km}, mb4.0/10, mbtmp4.0/11, ML5.0/1, MS4.0/30, Error ellipse: s-maj=40.3km s-min=20.2km az=142.0*

*GCMT **06** 16:31:03.7±0.3, 17°.98S±0°.02×176°.29W±0°.02, h12^{km}, MW4.8/70, Moment Tensor Solution. s9,c10; s70,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.24±.08; $M_{\theta\theta}$-1.54±.08; $M_{\phi\phi}$1.78±.06; $M_{r\theta}$0.15±.24; $M_{\theta\phi}$-0.03±.07; $M_{\phi r}$0.51±.20; Best double couple: $M_0$1.73100×10^{16} NP1:ϕ_s45.00000°, δ86.00000°, λ15.00000°. NP2: ϕ_s314.00000°, δ75.00000°, λ175.00000°. Principal axes: T 1.9020, Plg13.0000°, Azm270.0000°; N -0.3420, Plg75.0000°, Azm61.0000°; P -1.5590, Plg7.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 16:31:00.3±0.6**, 18°.0S**±0°.1×**176°.48W**±0°.08**, h10^{km}, n53, σ1^{s}.29**/29**, mb4.2**/12**, MS4.0**/25**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.21	272	Pn	Pn	16 32 16.8	-1.6
	1.9nm,0.3s,baz=206,slow=22,SNR=1.6						
MSVF				LR	LR	16 34 13.4	
	comp=Z,5μm,18.4s,baz=56,slow=39						
	9.4nm,0.5s						
MSVF	Nonsavu	5.21	272		Pn	16 32 17.1	-1.3
AFI	Afiamalu	6.09	49	Pn	Pn	16 32 28.5	-2.0
	1.2nm,0.3s,baz=284,slow=7.2,SNR=3.3						
AFI				LR	LR	16 34 44.7	
	comp=Z,345nm,18.0s,baz=207,slow=36						
NIUE	Niue	6.31	101	Pn	Pn	16 32 30.9	-2.5
RAO	Raoul Island	11.27	186	LR	LR	16 37 27.3	
	comp=Z,1μm,20.6s,baz=30,slow=34						
RAR	Rarotonga	16.07	104	LR	LR	16 39 27.3	
	comp=Z,333nm,18.4s,baz=293,slow=31						
DZM	Mont Dzumac	16.54	253	Pn	Pn	16 34 53.3	+0.7
	0.1nm,0.3s,baz=114,slow=20,SNR=2.3						
DZM				LR	LR	16 40 14.2	
	comp=Z,1μm,20.1s,baz=71,slow=34						
KOUNC	Koumac, New Ca	18.33	259		P	16 35 14.9	0.0
KOUNC				IAmb	IAmb	16 35 57.8	
	comp=Z,61nm,1.4s						
URZ	Urewera	20.94	194	P	P	16 35 44.0	+0.8
	comp=Z,17nm,1.0s,baz=338,slow=5.4,SNR=4.0						
	comp=Z,17nm,1.0s						
RTZ	Ruatahuna	21.31	194	P	P	16 35 48.4	+1.0
QRZ	Quartz Range	24.63	200	P	P	16 36 21.7	+0.7
PPT	Papeete	25.62	93	LR	LR	16 43 50.7	
	comp=Z,287nm,20.3s,baz=249,slow=30						
KRVT	Keravat (AS076	33.68	290	LR	LR	16 50 29.2	
	comp=Z,322nm,18.6s,baz=271,slow=35						
CTAO	Charters Tower	35.24	261	P	P	16 37 55.9	+0.6
CTAO				IAmb	IAmb	16 38 05.6	
	comp=Z,12nm,1.0s						
PMG	Port Moresby	36.28	279	LR	LR	16 51 20.7	
	comp=Z,293nm,18.6s,baz=104,slow=34						
STKA	Stephens Creek	40.19	242	P	P	16 38 37.2	+0.2
	comp=Z,3.1nm,0.8s,baz=30,slow=18,SNR=3.2						
	comp=Z,3.1nm,0.8s						
WR0	Warramunga Arr	46.23	259	P	P	16 39 26.2	+0.2
WR0				IAmb	IAmb	16 39 59.2	
	comp=Z,10.0nm,1.3s						
WB2	Warramunga Arr	46.40	259	P	P	16 39 26.6	-0.8
WRA	Warramunga Arr	46.41	259	P	P	16 39 26.0	-1.5
	comp=Z,3.3nm,1.0s,baz=95,slow=6.7,SNR=18						
WRA				LR	LR	16 58 26.2	
	comp=Z,318nm,18.2s,baz=108,slow=36						
	comp=Z,3.3nm,1.0s						
WRA	Warramunga Arr	46.41	259	P	P	16 39 26.6	-0.9
AS31	Alice Springs	46.53	254	P	P	16 39 26.6	-1.7
AS31				IAmb	IAmb	16 39 33.2	
	comp=Z,3.3nm,0.7s						
ASAR	Alice Springs	46.53	254	P	P	16 39 27.6	-0.8
	comp=Z,4.9nm,0.6s,baz=89,slow=8.4,SNR=75						
ASAR				LR	LR	16 57 29.0	
	comp=Z,166nm,19.6s,baz=97,slow=34						
	comp=Z,4.9nm,0.6s						
ASAR	Alice Springs	46.53	254	P	P	16 39 27.8	-0.5
JCJ	Chichijima	60.14	317	LR	LR	17 01 53.9	
	comp=Z,115nm,20.6s,baz=159,slow=31						
VNDA	Vanda	60.51	185	LR	LR	17 04 21.7	
	comp=Z,59nm,19.1s,baz=199,slow=33						
RPN	Rapa Nui	62.05	112	LR	LR	17 01 48.5	
	comp=Z,82nm,21.1s,baz=250,slow=30						
DAV	Davao City (W)	62.37	288	LR	LR	17 07 22.0	
	comp=Z,52nm,18.1s,baz=332,slow=35						
KAPI	Kappang	63.53	273	LR	LR	17 07 47.8	
	comp=Z,39nm,18.2s,baz=108,slow=35						
MJAR	Matsushiro Arr	69.09	322	P	P	16 42 06.8	+0.2
	comp=Z,2.0nm,0.8s,baz=154,slow=6.4,SNR=1.9						
	comp=Z,2.0nm,0.8s						
QSPA	South Pole Qui	72.05	180	P	P	16 42 24.5	+0.1
ASAJ	Asahikawa	72.25	330	LR	LR	17 07 41.4	
	comp=Z,109nm,21.9s,baz=166,slow=30						
KSRS	Korea Array	76.00	317	LR	LR	17 09 12.1	
	comp=Z,22nm,21.8s,baz=135,slow=30						
PFO	Pinyon Flats O	76.85	48	LR	LR	17 09 45.5	
	comp=Z,77nm,20.0s,baz=222,slow=30						
LPIG	La Paz	76.91	59	LR	LR	17 08 18.1	
	comp=Z,77nm,20.4s,baz=228,slow=29						
YBH	Yreka Blue Hor	77.45	38	LR	LR	17 07 41.2	
	comp=Z,72nm,21.1s,baz=236,slow=28						
USA0B	Ussuriysk Arra	77.74	325	P	P	16 42 55.8	-1.5
NVAR	Mina Array Bea	78.23	43	P	P	16 43 03.6	+3.1
	comp=Z,0.5nm,0.7s,baz=258,slow=7.4,SNR=3.5						
NVAR				LR	LR	17 11 21.4	
	comp=Z,99nm,19.6s,baz=322,slow=31						
	comp=Z,0.5nm,0.7s						
ELK	Elko	81.48	42	LR	LR	17 12 22.3	
	comp=Z,83nm,20.8s,baz=256,slow=30						
MAW	Mawson	84.38	199	LR	LR	17 18 43.3	
	comp=Z,78nm,21.1s,baz=222,slow=34						
TXAR	Lajitas Array	84.51	57	LR	LR	17 13 51.1	
	comp=Z,74nm,19.1s,baz=282,slow=30						
ANMO	Albuquerque	84.73	51	LR	LR	17 12 50.5	
	comp=Z,46nm,18.9s,baz=0.5,slow=30						
ILAR	Eielson Array	85.58	12	P	P	16 43 39.0	+0.6
	comp=Z,0.5nm,0.7s,baz=206,slow=4.3,SNR=4.4						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	86.17	43	P	P	16 43 44.1	+1.9
	comp=Z,0.3nm,0.7s,baz=294,slow=4.5,SNR=2.8						
	comp=Z,0.3nm,0.7s						
CMIG	Matias Romero	87.52	71	LR	LR	17 13 37.9	
	comp=Z,90nm,21.4s,baz=198,slow=29						
CMAR	Chiang Mai Arr	90.64	289	P	P	16 44 03.8	+0.1
	comp=Z,0.1nm,0.4s,baz=103,slow=2.9,SNR=1.0						
	comp=Z,0.1nm,0.4s						
APG	El Apazote	90.87	75	LR	LR	17 14 43.9	
	comp=Z,226nm,20.8s,baz=259,slow=29						
YKA	Yellowknife Ar	93.66	24	P	P	16 44 17.8	+1.2
	comp=Z,0.2nm,0.5s,baz=267,slow=8.6,SNR=2.7						
	comp=Z,0.2nm,0.5s						
NNA	Nana	95.31	104	LR	LR	17 17 54.3	
	comp=Z,43nm,20.7s,baz=211,slow=29						
ATAH	Atahualpa	95.45	99	LR	LR	17 20 12.0	
	comp=Z,47nm,18.4s,baz=247,slow=31						
LVC	Limon Verde	98.52	117	LR	LR	17 19 19.2	
	comp=Z,46nm,21.4s,baz=222,slow=29						
CLL	Collm	145.93	349	ePKPbc	PKPab	16 50 41.0	+0.6
	comp=Z,23nm,1.5s						
BRTR	Keskin Array B	146.14	316	PKPbc	PKPdf	16 50 39.5	-0.8
	comp=Z,1.8nm,0.8s,baz=116,slow=2.9,SNR=4.8						
GERES	GERESS Array B	148.15	347	PKPbc	PKPbc	16 50 46.2	-0.3
	comp=Z,0.6nm,0.7s,baz=15,slow=5.5,SNR=4.5						

IDC 06 16:42:41.2±2.6**, 2°.85N**×**128°.19E, h0^{km}, mb3.1**/3**, mbtmp3.1**/3**, Error ellipse: s-maj=182.4km s-min=29.2km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.44	165	P	P	16 47 52.7	+0.4
	0.2nm,0.3s,baz=345,slow=10,SNR=2.3						
	0.2nm,0.3s						
ASAR	Alice Springs	26.94	168	P	P	16 48 23.9	-0.6
	0.1nm,0.5s,baz=354,slow=7.7,SNR=4.9						
	0.1nm,0.5s						
MKAR	Makanchi Array	59.11	325	P	P	16 52 43.8	+0.3
	0.2nm,0.6s,baz=137,slow=7.2,SNR=2.0						
	0.2nm,0.6s						

WEL 06 16:48:50.3±1.2**, 35°S**±9°×**17°8W**±°**, h33^{km}, M3.8**/3**, ML3.8**/9**, MLv3.8**/3**, Error ellipse: s-maj=0.0km s-min=0.0km az=165.8, confirmed, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.64	231	P	Pn	16 49 45.5	+1.2
MXZ				S	Sn	16 50 26.0	-0.1
WMGZ	Waiomatatini S	3.73	227	P	Pn	16 49 43.6	-2.0
WMGZ				S	Sn	16 50 31.3	+2.8
PKGZ	Pakihiroa	3.98	228	P	Pn	16 49 48.2	-0.8
PKGZ				S	Sn	16 50 35.1	+0.4
PUZ	Puketiti	4.00	225	P	Pn	16 49 48.1	-1.1
PUZ				S	Sn	16 50 35.8	+0.9

HAZ	Te Kaha	4.09	232	P	Pn	16 49 50.6	+0.2
HAZ				S	Sn	16 50 39.5	+2.3
TWGZ	Tauwhareparae	4.23	226	S	Sn	16 50 42.3	+1.6
RUGZ	Raukumara Rang	4.28	230	P	Pn	16 49 53.3	+0.1
RUGZ				S	Sn	16 50 42.5	+0.4
CNGZ	Carnagh Statio	4.31	221	P	Pn	16 49 54.0	+0.4
TKGZ	Te Karaka	4.48	224	S	Sn	16 50 48.1	+1.3
MWZ	Matawai	4.60	228	P	Pn	16 49 57.7	+0.1
MWZ				S	Sn	16 50 48.8	-1.1
URZ	Urewera	4.81	231	P	Pn	16 49 59.4	-1.0
URZ				S	Sn	16 50 54.2	-0.8
SNGZ	Shannon Statio	5.01	225	P	Pn	16 50 03.2	+0.1
SNGZ				S	Sn	16 51 01.3	+1.4
RTZ	Ruatahuna	5.11	228	P	Pn	16 50 04.8	+0.2
CTZ	Chatham Island	8.51	172	P	Pn	16 50 54.0	+2.9
CTZ				S	Sn	16 52 25.1	-0.8

IDC 06 17:19:44.4±10.0, 19°.02S×176°.16W, h0^{km}, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=463.4km s-min=39.5km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.54	260	P	P	17 28 13.6	-0.5
	0.3nm,0.7s,baz=97,slow=6.0,SNR=1.5						
	0.3nm,0.7s						
ASAR	Alice Springs	46.56	255	P	P	17 28 14.4	+0.1
	0.3nm,0.7s,baz=88,slow=8.9,SNR=5.1						
	0.3nm,0.7s						
ILAR	Eielson Array	86.51	12	P	P	17 32 28.8	+0.1
	0.2nm,0.4s,baz=213,slow=5.2,SNR=6.5						
	0.2nm,0.4s						

*BJI **06** 17:30:44.5±0.0, 60°.76N×168°.04E, h21^{km}, mb4.7/64, mB5.2/41, Ms5.1/54, Ms7 4.8/51*

*KRSC **06** 17:30:45.6±2.3, 60°.84N×167°.58E, h18^{km}±21^{km}, Mc5.4, Ml5.3*

*IDC **06** 17:30:47.4±0.4, 60°.87N×167°.19E, h0^{km}, mb4.8/43, mbtmp4.8/48, ML4.8/4, MS4.3/83, Error ellipse: s-maj=11.8km s-min=8.9km az=169.0*

*MOS **06** 17:30:47.5±1.0, 60°.91N×167°.23E, h14^{km}, mb5.3/129, MS4.7/33, Error ellipse: s-maj=6.3km s-min=3.6km az=84.8*

*NEIC **06** 17:30:49.9±2.0, 60°.88N±0°.06×167°.2E±0°.1, h17^{km}±3^{km}, mb5.2/458, Error ellipse: s-maj=9.8km s-min=7.9km az=146.0*

*GCMT **06** 17:30:49.9±0.3, 60°.91N±0°.03×167°.38E±0°.05, h16^{km}±1^{km}, MW5.0/82, Moment Tensor Solution. s35,c40; s82,c120; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.23±.18; M$_{\theta\theta}$-0.64±.12; M$_{\phi\phi}$-1.59±.12; M$_{r\theta}$-3.44±.57; M$_{\theta\phi}$-1.35±.07; M$_{\phi r}$-2.04±.38; Best double couple: M$_0$4.66600×10^{16} NP1:φ$_s$236.00000°, δ75.00000°, λ102.00000°. NP2: φ$_s$15.00000°, δ19.00000°, λ51.00000°. Principal axes: T 4.6830, Plg58.0000°, Azm162.0000°; N -0.0330, Plg12.0000°, Azm53.0000°; P -4.6490, Plg29.0000°, Azm316.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **06** 17:30:57.2, 60°.73N×165°.63E, h33^{km}, mb5.4, Ms4.4*

ISC 06 17:30:50.1±0.4, **60°.87N**±0°.03×**167°.26E**±0°.03, **h19^{km}**±1^{km}, **h19^{km}:pP-P, n1390, σ1^{s}54**/1430, **mb5.2**/380, **MS4.5**/120, **46C-28D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TILK	Tilichiki	0.70	233	PN	Pb	17 31 01.5	-2.1
TILK				S	Sb	17 31 11.9	-0.8
TILK	Tilichiki	0.70	233	eP	Pb	17 31 01.5	-2.1
TILK				eS	Sb	17 31 11.9	-0.8
KMSK	Kamenskaya	1.68	343	PN	Pn	17 31 17.3	-1.1
KMSK				S	Sb	17 31 40.8	-0.3
KMSK	Kamenskaya	1.68	343	eP	Pn	17 31 17.3	-1.1
KMSK				eS	Sb	17 31 40.8	-0.3
OSSR	Ossora	2.66	234	PN	Pn	17 31 30.6	-1.3
OSSR	Ossora	2.66	234	eP	Pn	17 31 30.6	-1.3
PALN	Palana	4.08	247	PN	Pn	17 31 51.2	-0.2
PALN	Palana	4.08	247	eP	Pn	17 31 51.2	-0.2
KBG	Krutoberegovo	5.21	209	PN	Pn	17 32 07.4	+0.5
KBG	Krutoberegovo	5.21	209	eP	Pn	17 32 07.4	+0.5
KBTR	Krutoberegovo	5.22	208	PN	Pn	17 32 07.1	0.0
KBTR	Krutoberegovo	5.22	208	eP	Pn	17 32 07.1	0.0
SMKR	Semkarok	5.25	218	PN	Pn	17 32 08.6	+1.0
SMKR	Semkarok	5.25	218	eP	Pn	17 32 08.6	+1.0
SRKR	Sorokina	5.29	220	PN	Pn	17 32 09.3	+1.3
SRKR	Sorokina	5.29	220	eP	Pn	17 32 09.3	+1.3
BKI	Bering	5.72	187	PN	Pn	17 32 13.5	-0.5
BKI	Bering	5.72	187	eP	Pn	17 32 13.5	-0.5
KLY	Klyuchi	5.73	220	PN	Pn	17 32 14.7	+0.7
KLY	Klyuchi	5.73	220	eP	Pn	17 32 14.7	+0.7
KMNR	Kamenistaya	6.32	219	PN	Pn	17 32 24.8	+2.5
KMNR	Kamenistaya	6.32	219	eP	Pn	17 32 24.8	+2.5
TUMD	Tumrok D	6.75	216	eP	Pn	17 32 31.4	+3.4
TUMR	Tumrok	6.75	217	PN	Pn	17 32 31.5	+3.3
TUMR	Tumrok	6.75	217	eP	Pn	17 32 31.5	+3.3
BILL	Bilibino	7.21	357	Pn	Pn	17 32 33.8	-0.5
BILL	Bilibino	7.21	357	cePN	Pn	17 32 34.2	-0.1
BILL				pmax	pmax		
	comp=Z,309nm,1.3s						
BILL				MLR	MLR		
	comp=Z,15μm,10.0s						
SEY	Seymchan	7.32	293	Pn	Pn	17 32 35.6	-0.2
	comp=Z,3.9nm,0.3s,baz=91,slow=13,SNR=100						
SEY				Lg	Lg	17 34 34.2	
	comp=Z,2.6nm,0.3s,baz=108,slow=8.3,SNR=6.5						
SEY				LR	LR	17 35 56.9	
	comp=Z,4μm,19.3s,baz=114,slow=42						
	comp=Z,20nm,0.6s						
SEY	Seymchan	7.32	293	cePN	Pn	17 32 35.7	-0.2
SEY				pmax	pmax		
	comp=Z,17nm,0.6s						
SEY				MLR	MLR		
	comp=Z,7μm,10.0s						
MA2	Magadan	8.31	268	Pn	Pn	17 32 49.1	-0.4
MA2	Magadan	8.31	268	PN	Pn	17 32 49.1	-0.4
GNL	Ganaly	8.78	219	PN	Pn	17 32 57.3	+1.3
GNL	Ganaly	8.78	219	eP	Pn	17 32 57.3	+1.3
SHEM	Shemya Is, Ala	8.98	152	Pn	Pn	17 32 56.6	-1.9
	comp=Z,9.8nm,0.3s,baz=16,slow=6.0,SNR=8.9						
SHEM				LR	LR	17 36 11.6	
	comp=Z,3μm,18.6s,baz=318,slow=36						
	comp=Z,107nm,0.7s						
SMY	Shemya	8.98	152	Pn	Pn	17 32 57.4	-1.2
SMY	Shemya	8.98	152	PN	Pn	17 32 57.4	-1.2
PET	Petropavlovsk	9.16	215	Pn	Pn	17 33 01.6	+0.5
PET	Petropavlovsk	9.16	215	ePN	Pn	17 33 02.4	+1.4
PET				pmax	pmax		
	comp=Z,103nm,0.8s						
PET				MLR	MLR		
	comp=Z,6μm,12.0s						
PET				MLR	MLR		
	comp=Z,6μm,11.0s						
PEA0B	Petropavlovsk-	9.36	218	Pn	Pn	17 33 03.5	-0.3
PEA0B	Petropavlovsk-	9.36	218	i PN	Pn	17 33 05.3	+1.5
PETK	Petropavlovsk-	9.36	218	Pn	Pn	17 33 03.9	+0.1
	comp=Z,10nm,1.2s,baz=92,slow=16,SNR=2.6						
PETK				LR	LR	17 36 55.2	
	comp=Z,4μm,19.5s,baz=38,slow=39						
PETK	Petropavlovsk-	9.36	218	Pn	Pn	17 33 05.0	+1.2
PETK	Petropavlovsk-	9.36	218	PN	Pn	17 33 05.0	+1.2
TNA	Tin City	12.09	56	Pn	Pn	17 33 42.5	+1.5
TNA	Tin City	12.09	56	P	Pn	17 33 40.5	-0.5
	baz=259,SNR=10						
ADK	Adak	12.62	128	Pn	Pn	17 33 48.5	+0.1
ADK	Adak	12.62	128	PN	Pn	17 33 48.5	+0.1
ANM	Nome	13.03	62		Pn	17 33 53.3	-0.6
ANM	Nome	13.03	62	PN	Pn	17 33 53.3	-0.6
ANM	Nome	13.03	62	P	Pn	17 33 53.7	-0.2
	baz=266,SNR=25						
RDOG	Red Dog Mine	14.60	48		Pn	17 34 17.3	+2.0
RDOG	Red Dog Mine	14.60	48	P	Pn	17 34 14.2	-1.1
	baz=255,SNR=15						
OKH	Okha	15.01	252	deP	P	17 34 28.8	+2.6
OKH				eS	Sn	17 37 10.2	+3.8
OKH				smax	smax		
	comp=E,500nm,10.3s						
OKH				smax	smax		
	comp=N,600nm,9.8s						
OKH				MLR	MLR		
	comp=E,1μm,14.0s						
OKH				MLR	MLR		
	comp=Z,2μm,13.0s						
NIKH	Nikolski High	15.18	111	Pn	Pn	17 34 24.0	+0.8
NIKH				IAmb	IAmb	17 34 27.5	
	comp=Z,269nm,1.4s						
NIKH	Nikolski High	15.18	111	P	Pn	17 34 22.4	-0.7
	baz=311						
UNV	Unalaska Valle	15.72	105		Pn	17 34 29.0	-1.2
UNV	Unalaska Valle	15.72	105	P	Pn	17 34 27.8	-2.4
	baz=307						
AKUT	Akutan	15.90	103		Pn	17 34 31.9	-0.6
NKL	Nikolayevsk	16.32	254	eP	P	17 34 39.4	-1.3
NKL				pmax	pmax		
	comp=N,63nm,1.4s						
NKL				pmax	pmax		
	comp=E,80nm,1.4s						
NKL				pmax	pmax		
	comp=Z,139nm,1.7s						
NKL				MLR	MLR		
	comp=E,5μm,14.0s						
NKL				MLR	MLR		
	comp=N,4μm,13.0s						
NKL				MLR	MLR		
	comp=Z,5μm,13.0s						
N16K	Nishlik Lake	16.54	76	P	Pn	17 34 39.0	-1.8
	baz=286						
FALS	False Pass	16.62	98		Pn	17 34 41.2	-0.4
FALS				IAmb	IAmb	17 34 46.8	
	comp=Z,154nm,1.2s						
FALS	False Pass	16.62	98	P	Pn	17 34 39.7	-2.0
	baz=303						
GCSA	Galena City Sc	16.68	61	P	Pn	17 34 40.5	-1.9
	baz=273						
S12K	Black Hills	16.83	94	P	Pn	17 34 43.0	-1.4
	baz=300						
TYV	Tymovskoe	16.95	245	eP	P	17 34 47.2	-0.6
TYV				eS	S	17 37 59.5	-4.0
TYV				pmax	pmax		
	comp=Z,400nm,4.4s						
TYV				pmax	pmax		
	comp=Z,19nm,1.1s						
TYV				smax	smax		
	comp=N,5.0nm,1.2s						
TYV				smax	smax		
	comp=N,400nm,6.1s						
TYV				smax	smax		
	comp=E,400nm,6.1s						
TYV				MLR	MLR		
	comp=N,2μm,14.0s						
TYV				MLR	MLR		
	comp=Z,2μm,14.0s						
O16K	Kokwok River B	17.13	79	P	Pn	17 34 46.4	-1.7
	baz=289						
TTA	Tatalina	17.27	67		P	17 34 50.7	-0.6
TTA	Tatalina	17.27	67	P	P	17 34 50.7	-0.6
TTA				pmax	pmax		
	comp=Z,166nm,1.7s						
TTA	Tatalina	17.27	67	P	Pn	17 34 47.6	-2.3
	baz=280,SNR=25						
P16K	Nushagak River	17.38	81	P	Pn	17 34 48.7	-2.5
	baz=291						
O17K	Koliganek Bris	17.55	78	P	Pn	17 34 51.3	-2.0
	baz=289,SNR=7.1						
A21K	Barrow	17.64	39	P	Pn	17 34 51.6	-2.7
	baz=252,SNR=16						
SDPT	Sand Point	17.79	94	P	Pn	17 34 54.4	-1.8
	baz=301						
YAK	Yakutsk	17.84	290	P	Pn	17 34 57.1	+0.2
	comp=Z,0.1nm,0.3s,baz=65,slow=4.5,SNR=27						
YAK				S	S	17 38 21.8	+0.4
	comp=Z,3.1nm,0.3s,baz=68,slow=1.7,SNR=1.8						
YAK				Lg	Lg	17 40 18.2	
	baz=105,slow=3.8						
YAK				LR	LR	17 43 07.9	
	comp=Z,442nm,18.3s,baz=86,slow=42						
	comp=Z,19nm,0.6s						
YAK	Yakutsk	17.84	290		Pn	17 34 55.8	-1.1
YAK	Yakutsk	17.84	290	eP	Pn	17 34 56.5	-0.3
YAK				eS	Sn	17 38 15.3	+0.4
YAK				pmax	pmax		
	comp=Z,91nm,1.6s						
YAK				pmax	pmax		
	comp=N,22nm,1.3s						
YAK				pmax	pmax		
	comp=E,62nm,1.2s						
YAK				smax	smax		
	comp=E,417nm,3.0s						
YAK				smax	smax		
	comp=N,166nm,2.8s						
YAK				MLR	MLR		
	comp=Z,4μm,12.0s						
YAK				MLR	MLR		
	comp=N,943nm,6.0s						
YAK				MLR	MLR		
	comp=E,4μm,9.0s						
SVW2	Sparrevohn	17.87	73	P	Pn	17 34 55.1	-2.3
IMAR	Indian Mountai	17.94	57		P	17 34 58.6	+0.1
L19K	White Mountain	17.94	69	P	Pn	17 34 57.5	-0.7
L19K				IAmb	IAmb	17 35 07.0	
	comp=Z,139nm,1.1s						
L19K	White Mountain	17.94	69	P	Pn	17 34 55.5	-2.7
	baz=283						
G21K	Allakaket	18.03	55	P	Pn	17 34 56.5	-2.7
	baz=270,SNR=51						
F21K	Alatna River	18.04	53	P	Pn	17 34 57.7	-1.7
	baz=268,SNR=84						
P17K	Kvichak River	18.07	79	P	Pn	17 34 57.6	-2.1
	baz=291						
K20K	Telida	18.07	65	P	Pn	17 34 57.1	-2.6
	baz=280						
R16K	Pilot Point	18.16	85	P	Pn	17 34 59.2	-1.6
	baz=295						
M19K	Big River Lodg	18.22	70		Pn	17 34 58.4	-3.2
M19K	Big River Lodg	18.22	70	P	Pn	17 34 59.0	-2.5
	baz=284,SNR=16						
CHGN	Chignik	18.32	89	P	P	17 35 03.0	+0.2
CHGN	Chignik	18.32	89	P	Pn	17 35 02.2	-0.6
	baz=299,SNR=22						
L20K	Farewell, AK	18.32	68	P	Pn	17 35 02.2	-0.7
	baz=282						
H21K	Melozitna Rive	18.34	58	P	Pn	17 35 03.9	+0.8
H21K	Melozitna Rive	18.34	58	P	P	17 35 01.4	-1.6
	baz=274						
O18K	Koktuh Hills	18.43	77	P	Pn	17 35 04.7	+0.6
O18K	Koktuh Hills	18.43	77	P	P	17 35 02.9	-1.1
	baz=290,SNR=20						
TIXI	Tiksi	18.43	322	P	Pn	17 35 04.6	+0.5
	comp=Z,37nm,0.3s,baz=90,slow=24,SNR=23						
TIXI				Lg	Lg	17 40 32.3	
	baz=90,slow=24						
TIXI				LR	LR	17 42 26.2	
	comp=Z,955nm,21.7s,baz=100,slow=38						
	comp=Z,7.0nm,0.7s						
TIXI	Tiksi	18.43	322		P	17 35 03.4	-0.6
TIXI	Tiksi	18.43	322	P	P	17 35 03.4	-0.6
TIXI				pmax	pmax		
	comp=Z,97nm,1.7s						
N19K	Bonanza Creek	18.47	73	P	P	17 35 02.9	-1.7
N19K	Bonanza Creek	18.47	73	P	P	17 35 04.3	-0.2
	baz=287,SNR=6.9						
UGL	Uglegorsk	18.52	242	⇓eP	Pn	17 35 07.2	+1.9
UGL				eS	Sn	17 38 29.4	-2.2
UGL				pmax	pmax		
	comp=Z,56nm,1.3s						
UGL				smax	smax		
	comp=E,1μm,7.3s						
UGL				smax	smax		
	comp=N,2μm,9.5s						
UGL				MLR	MLR		
	comp=Z,2μm,14.0s						
UGL				MLR	MLR		
	comp=N,2μm,12.0s						
UGL				MLR	MLR		
	comp=E,2μm,10.0s						
F22K	John River	18.56	52	P	P	17 35 04.3	-1.0
	baz=269						
P18K	Big Mountain,	18.57	78		P	17 35 05.5	-0.1
P18K				IAmb	IAmb	17 35 11.9	
	comp=Z,132nm,1.2s						
P18K	Big Mountain,	18.57	78	P	P	17 35 04.6	-1.1
	baz=291						
Q17K	Contact Creek	18.69	82	P	P	17 35 06.7	-0.2
	baz=294,SNR=15						
R17K	Ugashik Creek	18.70	84	P	Pn	17 35 07.3	-0.2
	baz=295,SNR=7.0						
I21K	Tanana	18.73	59	P	P	17 35 07.3	+0.1
I21K	Tanana	18.73	59	P	P	17 35 06.2	-1.0
	baz=276,SNR=7.2						
O19K	Port Alsworth	18.73	75	P	P	17 35 07.4	+0.1
O19K	Port Alsworth	18.73	75	P	P	17 35 07.0	-0.3
	baz=289						
CHUM	Lake Minchumin	18.75	63	P	P	17 35 07.7	+0.2
	baz=279,SNR=24						
M20K	Styx River	18.80	70	P	Pn	17 35 08.9	+0.1
M20K	Styx River	18.80	70	P	P	17 35 08.1	-0.1
	baz=285						
G22K	Bettles	18.82	54	P	P	17 35 08.4	+0.2
	baz=271						
H22K	Ishtalitna Cre	18.91	57	P	P	17 35 08.7	-0.6
	baz=274						
CAST	Castle Rocks	18.93	65	P	Pn	17 35 10.4	+0.1
CAST				IAmb	IAmb	17 35 16.8	
	comp=Z,202nm,2.0s						
CAST	Castle Rocks	18.93	65	P	P	17 35 09.9	+0.3
	baz=281,SNR=20						
Q18K	Katmai Hardscr	18.96	80	P	P	17 35 09.3	-0.6
	baz=293,SNR=35						
PPLA	Purkeypile	18.99	66	P	Pn	17 35 11.3	+0.2
PPLA				IAmb	IAmb	17 35 18.4	
	comp=Z,265nm,1.6s						
PPLA	Purkeypile	18.99	66	P	P	17 35 10.2	-0.1
	baz=282,SNR=22						
D23K	Nanushuk River	19.18	47	P	Pn	17 35 13.2	0.0
	baz=266						
MLY	Manley	19.27	59	P	Pn	17 35 14.0	-0.2
MLY	Manley	19.27	59	P	Pn	17 35 13.8	-0.5
	baz=277,SNR=26						
BPAW	Bear Paw Mtn.	19.29	62	P	Pn	17 35 14.5	-0.1
BPAW	Bear Paw Mtn.	19.29	62	P	Pn	17 35 15.1	+0.5
	baz=280,SNR=19						
COLD	Coldfoot	19.32	53	P	Pn	17 35 14.4	-0.5
COLD	Coldfoot	19.32	53	P	Pn	17 35 15.3	+0.4
	baz=271,SNR=19						
ILSW	Iliamna Southw	19.36	75	P	Pn	17 35 15.2	-0.3
ILSW				IAmb	IAmb	17 35 25.8	
	comp=Z,87nm,0.8s						
RSO	Redoubt South	19.39	74	P	Pn	17 35 16.1	+0.3
G23K	Bananza Creek	19.41	54	P	Pn	17 35 16.1	+0.1
	baz=273,SNR=66						
SPCR	Spurr Chakacha	19.41	71	P	Pn	17 35 15.9	-0.2
	baz=287,SNR=8.9						
KTH	Kantishna Hill	19.42	64	P	Pn	17 35 15.9	-0.2
P19K	Oil Pt	19.43	76	P	P	17 35 15.1	0.0
P19K				IAmb	IAmb	17 35 27.6	
	comp=Z,142nm,1.1s						
P19K	Oil Pt	19.43	76	P	P	17 35 14.8	-0.2
	baz=291						
SPU	Mount Spurr	19.49	71	P	Pn	17 35 17.2	+0.2
Q19K	Cape Douglas,	19.50	78	P	Pn	17 35 16.8	-0.4
Q19K	Cape Douglas,	19.50	78	P	Pn	17 35 17.7	+0.6
	baz=293,SNR=8.4						
SKT	Skwentna	19.51	69	P	Pn	17 35 17.5	+0.4
SKT	Skwentna	19.51	69	P	Pn	17 35 16.6	-0.6
	baz=285,SNR=42						
E23K	Chandalar	19.54	50	P	Pn	17 35 17.4	-0.2
	baz=270						
TOLK	Toolik Lake Re	19.57	48	P	P	17 35 16.9	+0.4
TOLK				IAmb	IAmb	17 35 23.6	
	comp=Z,168nm,0.9s						
TOLK	Toolik Lake Re	19.57	48	P	Pn	17 35 17.8	0.0
	baz=268						
O20K	Slope Mountain	19.57	75	P	P	17 35 16.9	+0.3
	baz=290,SNR=8.1						
H23K	Yukon River	19.67	57	P	Pn	17 35 18.6	-0.5
H23K	Yukon River	19.67	57	P	P	17 35 17.1	-0.5
	baz=276,SNR=53						
TRF	Thorofare Moun	19.72	64	P	Pn	17 35 19.9	+0.1
TRF				IAmb	IAmb	17 35 26.0	
	comp=Z,80nm,0.8s						
TRF	Thorofare Moun	19.72	64	P	P	17 35 17.8	-0.5
	baz=282						
I23K	Minto, Yukon-K	19.83	59	P	P	17 35 19.9	+0.6
I23K				IAmb	IAmb	17 35 31.6	
	comp=Z,174nm,1.9s						
I23K	Minto, Yukon-K	19.83	59	P	P	17 35 19.6	+0.3
	baz=278,SNR=18						
GRNR	Gornyy	19.87	253	⇑iP	Pn	17 35 21.2	-0.3
GRNR				pmax	pmax		
	comp=N,20nm,1.0s						
GRNR				pmax	pmax		
	comp=E,20nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,40nm,1.1s						
GRNR				MLR	MLR		
	comp=E,420nm,15.0s						
GRNR				MLR	MLR		
	comp=N,870nm,13.0s						
GRNR				MLR	MLR		
	comp=Z,1μm,14.0s						
YSS	Yuzh-Sakhalins	19.89	237	P	Pn	17 35 21.9	+0.2
YSS	Yuzh-Sakhalins	19.89	237	eP	Pn	17 35 22.8	+1.0
YSS				eS	S	17 39 03.4	+0.4
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				pmax	pmax		
	comp=Z,400nm,4.6s						
YSS				smax	smax		
	comp=E,600nm,9.6s						
YSS				smax	smax		
	comp=N,900nm,9.2s						
YSS				MLR	MLR		
	comp=Z,2μm,14.0s						
YSS				MLR	MLR		
	comp=N,1μm,15.0s						
YSS				MLR	MLR		
	comp=E,800nm,13.0s						
BWN	Browne	19.94	62	P	Pn	17 35 22.5	+0.3
C24K	Franklin Bluff	19.94	45	P	P	17 35 20.2	-0.2
	baz=266						
E24K	Your Creek	19.96	50	P	P	17 35 20.9	+0.1
	baz=270						
CUT	Chulitna	19.97	67	P	Pn	17 35 21.8	-0.7
CUT	Chulitna	19.97	67	P	P	17 35 20.2	-0.6
	baz=285,SNR=9.4						
SUA	Susitna One	20.01	70	P	Pn	17 35 22.8	-0.4
SUA				IAmb	IAmb	17 35 31.3	
	comp=Z,188nm,1.1s						
SUA	Susitna One	20.01	70	P	P	17 35 20.7	-0.8
	baz=287,SNR=36						
NEA2	Nenana	20.04	60	P	Pn	17 35 22.5	-0.9
NEA2	Nenana	20.04	60	P	P	17 35 20.5	-1.1
	baz=280,SNR=15						
CAPN	Captain Cook N	20.04	72	P	Pn	17 35 23.2	-0.2
CAPN	Captain Cook N	20.04	72	P	P	17 35 21.9	+0.4
	baz=289						
HOM	Homer	20.19	75	P	P	17 35 22.6	-0.6
	baz=291						
F24K	Squaw Lake	20.21	52	P	P	17 35 23.9	+0.5
	baz=273						
M22K	Willow	20.21	69	P	P	17 35 22.6	-0.9
M22K				IAmb	IAmb	17 35 34.5	
	comp=Z,177nm,1.2s						
M22K	Willow	20.21	69	P	P	17 35 22.1	-1.4
	baz=287						
Q20K	Shuyak Island	20.23	78	P	P	17 35 23.2	-0.5
	baz=294,SNR=12						
MCK	McKinley	20.25	63	P	Pn	17 35 25.2	-0.8
MCK				IAmb	IAmb	17 35 31.8	
	comp=Z,252nm,1.4s						
MCK	McKinley	20.25	63	P	Pn	17 35 25.2	-0.8
MCK				pmax	pmax		
	comp=Z,252nm,1.4s						
MCK	McKinley	20.25	63	P	P	17 35 23.2	-0.7
	baz=282,SNR=47						
MDM	Murphy Dome	20.33	59	P	Pn	17 35 25.9	-1.0
H24K	Noodor Dome	20.35	57	P	P	17 35 24.6	-0.4
H24K				IAmb	IAmb	17 35 40.0	
	comp=Z,145nm,1.4s						
H24K	Noodor Dome	20.35	57	P	P	17 35 24.5	-0.6
	baz=277						
RND	Reindeer	20.36	64	P	P	17 35 25.9	+0.7
RND				IAmb	IAmb	17 35 35.5	
	comp=Z,223nm,1.6s						
RND	Reindeer	20.36	64	P	P	17 35 25.9	+0.7
RND				pmax	pmax		
	comp=Z,223nm,1.6s						
OHAK	Old Harbor	20.39	83	P	P	17 35 24.0	-1.5
OHAK				IAmb	IAmb	17 35 30.0	
	comp=Z,56nm,0.8s						
OHAK	Old Harbor	20.39	83	P	P	17 35 24.7	-0.8
	baz=297,SNR=5.4						
G24K	Hadweenzic Riv	20.42	54	P	P	17 35 24.7	-1.1

	baz=275						
CNPM	China Poot	20.43	75	P	P	17 35 26.4	+0.5
WRH	Wood River Hil	20.47	61	P	P	17 35 27.0	+0.7
WRH				IAmb	IAmb	17 35 33.7	
	comp=Z,88nm,1.0s						
KDAK	Kodiak Island	20.48	81	P	P	17 35 26.5	+0.1
	comp=Z,39nm,0.6s,baz=316,slow=10,SNR=22						
KDAK				LR	LR	17 44 15.7	
	comp=Z,1µm,18.4s,baz=311,slow=39						
	comp=Z,39nm,0.6s						
KDAK	Kodiak Island	20.48	81	P	P	17 35 26.3	-0.1
KDAK				IAmb	IAmb	17 35 32.9	
	comp=Z,99nm,1.0s						
KDAK	Kodiak Island	20.48	81	*i* P	P	17 35 27.0	+0.6
KDAK				pmax	pmax		
	comp=Z,146nm,1.0s						
KDAK				MLR	MLR		
	comp=Z,2µm,16.0s						
TCOL	CIGO, UAF Yank	20.50	59	P	P	17 35 26.7	+0.1
TCOL	CIGO, UAF Yank	20.50	59	P	P	17 35 26.4	-0.2
	baz=280						
COLA	College	20.50	59	P	P	17 35 27.3	+0.7
COLA	College	20.50	59	P	P	17 35 27.3	+0.7
COLA				pmax	pmax		
	comp=Z,55nm,0.9s						
COLA	College	20.50	59	P	P	17 35 26.4	-0.2
	baz=280						
BRLK	Bradley Lake	20.50	75	P	Pn	17 35 27.9	-1.1
BRLK				IAmb	IAmb	17 35 32.6	
	comp=Z,72nm,0.7s						
CCB	Clear Creek Bu	20.56	60	P	P	17 35 28.0	+0.7
CCB				IAmb	IAmb	17 35 34.6	
	comp=Z,61nm,0.8s						
BRSE	Bradley Lake S	20.58	75	P	P	17 35 27.3	-0.3
	baz=291						
RC01	Rabbit Creek A	20.59	70	P	Pn	17 35 29.1	-0.8
RC01	Rabbit Creek A	20.59	70	P	P	17 35 27.1	-0.5
	baz=288						
POKR	Poker Plat Res	20.64	59	P	P	17 35 28.2	+0.1
POKR				IAmb	IAmb	17 35 37.4	
	comp=Z,66nm,0.8s						
POKR	Poker Plat Res	20.64	59	P	P	17 35 27.3	-0.8
	baz=279,SNR=24						
PMR	Palmer	20.71	69		P	17 35 28.3	-0.6
PMR	Palmer	20.71	69	P	P	17 35 28.3	-0.6
PMR				pmax	pmax		
	comp=Z,25nm,0.9s						
PMR	Palmer	20.71	69	P	P	17 35 28.2	-0.7
	baz=288						
D25K	Kavik River	20.74	47	P	P	17 35 27.9	-1.3
	baz=269						
GHO	Glory Hole Cre	20.75	68	P	Pn	17 35 31.1	-0.8
GHO				IAmb	IAmb	17 35 43.1	
	comp=Z,64nm,1.0s						
O22K	Cooper Landing	20.80	72	P	P	17 35 30.1	+0.3
O22K	Cooper Landing	20.80	72	P	P	17 35 29.0	-0.8
	baz=290						
IL31		20.93	59	P	P	17 35 31.1	0.0
ILAR	Eielson Array	20.93	59	P	P	17 35 32.3	+1.1
	comp=Z,26nm,0.7s,baz=272,slow=11,SNR=160						
ILAR				LR	LR	17 44 30.4	
	comp=Z,917nm,19.0s,baz=272,slow=39						
	comp=Z,26nm,0.7s						
ILAR	Eielson Array	20.93	59	P	P	17 35 31.4	+0.2
G25K	Bearman Lake	20.96	54	P	P	17 35 30.2	-1.3
	baz=276						
HDA	Harding Lake	20.97	60	P	P	17 35 32.4	+0.7
HDA				IAmb	IAmb	17 35 40.9	
	comp=Z,110nm,0.9s						
HDA	Harding Lake	20.97	60	P	P	17 35 30.9	-0.8
	baz=282,SNR=63						
SML	Sawmill	21.01	68	P	P	17 35 31.5	-0.7
SML				IAmb	IAmb	17 35 37.2	
	comp=Z,101nm,0.9s						
SML	Sawmill	21.01	68	P	P	17 35 31.5	-0.7
SML				pmax	pmax		
	comp=Z,101nm,0.9s						
SML	Sawmill	21.01	68	P	P	17 35 30.8	-1.4
	baz=287,SNR=22						
SEW	Seward	21.05	73	P	P	17 35 31.9	-0.6
SEW	Seward	21.05	73	P	P	17 35 30.6	-2.0
	baz=291,SNR=20						
E25K	Arctic Village	21.06	50	P	P	17 35 31.4	-1.2
	baz=273,SNR=60						
F25K	Christian Rive	21.06	51	P	P	17 35 31.8	-0.9
	baz=274						
KNK	Knik Glacier	21.07	69	P	P	17 35 31.5	-1.3
KNK				IAmb	IAmb	17 35 39.6	
	comp=Z,118nm,0.9s						
KNK	Knik Glacier	21.07	69	P	P	17 35 32.8	0.0
	baz=288,SNR=29						
C26K	Camden Bay	21.26	45	P	P	17 35 34.6	-0.2
	baz=269,SNR=147						
M23K	Glacier View	21.29	68	P	P	17 35 34.8	-0.4
	baz=288,SNR=11						
PWL	Port Wells	21.31	70	P	P	17 35 35.3	-0.1
PWL				IAmb	IAmb	17 35 38.8	
	comp=Z,92nm,0.9s						
PWL	Port Wells	21.31	70	P	P	17 35 34.7	-0.7
	baz=290,SNR=11						
FYU	Fort Yukon	21.33	54	P	P	17 35 35.1	-0.4
FYU				IAmb	IAmb	17 35 54.1	
	comp=Z,147nm,1.3s						
PRP	Porcupine Dome	21.36	57	P	P	17 35 36.0	0.0
PRP				IAmb	IAmb	17 35 42.7	
	comp=Z,121nm,0.8s						
PRP	Porcupine Dome	21.36	57	P	P	17 35 35.4	-0.6
	baz=280,SNR=144						
SCM	Sheep Creek Mo	21.46	67	P	P	17 35 37.0	0.0
SCM	Sheep Creek Mo	21.46	67	P	P	17 35 37.0	0.0
SCM				pmax	pmax		
	comp=Z,200nm,0.8s						
SCM	Sheep Creek Mo	21.46	67	P	P	17 35 35.9	-1.1
	baz=288,SNR=35						
BMAR	Burnt Mountain	21.48	52	P	P	17 35 37.6	+0.4
K24K	Donnelly Dome	21.61	62	P	P	17 35 36.7	-1.8
	baz=284,SNR=31						
F26K	Sheenjek River	21.62	51	P	P	17 35 38.0	-0.7
	baz=275,SNR=80						
C27K	Jago River	21.68	46	P	P	17 35 37.7	-1.6
	baz=271						
G26K	Porcupine Rive	21.85	53	P	P	17 35 40.8	-0.2
	baz=278						
M24K	Tolsona, Glenn	21.89	66	P	P	17 35 40.7	-1.0
M24K	Tolsona, Glenn	21.89	66	P	P	17 35 41.2	-0.4
	baz=288,SNR=30						
PAX	Paxson	21.96	64	P	P	17 35 41.0	-1.3
PAX				IAmb	IAmb	17 35 51.0	
	comp=Z,114nm,1.4s						
PAX	Paxson	21.96	64	P	P	17 35 41.0	-1.3
PAX				pmax	pmax		
	comp=Z,114nm,1.4s						
PAX	Paxson	21.96	64	P	P	17 35 40.8	-1.5
	baz=286,SNR=19						
RIDG	Independent Ri	22.02	62	P	P	17 35 41.4	-1.6
RIDG				IAmb	IAmb	17 35 50.2	
	comp=Z,73nm,1.0s						
RIDG	Independent Ri	22.02	62	P	P	17 35 41.4	-1.6
	baz=285,SNR=29						
P23K	Montague Islan	22.05	72	P	P	17 35 42.6	-0.7
	baz=292						
KLU	Klutina	22.20	68	P	P	17 35 44.5	-0.5
KLU	Klutina	22.20	68	P	P	17 35 44.0	-1.0
	baz=289,SNR=41						
HARP	HAARP	22.26	65	P	P	17 35 44.7	-0.9
	baz=288						
ASAJ	Asahikawa	22.29	232	LR	LR	17 44 32.7	
	comp=Z,1µm,18.7s,baz=44,slow=37						
SCRK	Sand Creek	22.33	61	P	P	17 35 44.2	-2.2
SCRK	Sand Creek	22.33	61	P	P	17 35 44.7	-1.7
	baz=285,SNR=47						
I26K	Coal Creek Min	22.38	57	P	P	17 35 46.9	+0.1
I26K	Coal Creek Min	22.38	57	P	P	17 35 45.5	-1.3
	baz=282						
J26L	Joseph Creek	22.38	59	P	P	17 35 45.6	-1.3
J26L	Joseph Creek	22.38	59	P	P	17 35 44.6	-2.3
	baz=284,SNR=26						
DOT	Dot Lake	22.39	62	P	P	17 35 45.3	-1.6
DOT				IAmb	IAmb	17 35 56.7	
	comp=Z,60nm,0.9s						
DIV	Divide	22.39	69	P	P	17 35 46.6	-0.5
DIV				IAmb	IAmb	17 35 54.6	
	comp=Z,100nm,0.9s						
ZEA	Zeya	22.46	270	*e*P	P	17 35 48.5	+0.8
ZEA				*e*		17 35 51.0	
ZEA				*e*S	S	17 39 53.0	0.0
ZEA				smax	smax		
	comp=N,600nm,9.9s						
ZEA				MLR	MLR		
	comp=N,700nm,8.0s						
ZEA				MLR	MLR		
	comp=E,700nm,8.0s						
ZEA				MLR	MLR		
	comp=Z,900nm,11.0s						
E27K	Coleen River	22.53	49	P	P	17 35 46.8	-1.6
	baz=276						
EYAK	Cordova Ski Ar	22.61	70	P	P	17 35 48.7	-0.5
EYAK				IAmb	IAmb	17 36 00.3	
	comp=Z,77nm,1.0s						
EYAK	Cordova Ski Ar	22.61	70	P	P	17 35 47.5	-1.7
	baz=292						
G27K	Doyon Strip	22.70	53	P	P	17 35 48.6	-1.6
	baz=280,SNR=82						
MENT	Mentasta	22.73	63	P	P	17 35 49.7	-0.8
MENT				IAmb	IAmb	17 36 08.9	
	comp=Z,121nm,1.4s						
N25K	Chitina, Valde	22.76	67	P	P	17 35 50.2	-0.8
N25K	Chitina, Valde	22.76	67	P	P	17 35 49.4	-1.6
	baz=290						
H27K	Steamboat Moun	22.85	54	P	P	17 35 50.9	-0.9
	baz=281,SNR=49						
L26K	Log Cabin Wild	22.87	63	P	P	17 35 51.0	-1.0
L26K	Log Cabin Wild	22.87	63	P	P	17 35 50.5	-1.5
	baz=287						
I27K	Kandik River	22.94	56	P	P	17 35 51.0	-1.8
	baz=282,SNR=20						
KLR	Kul'dur	23.12	256	P	P	17 35 54.3	-0.4
	comp=Z,9.5nm,0.7s,baz=49,slow=11,SNR=24						
KLR				S	S	17 40 03.4	-1.4
	comp=Z,0.5nm,0.6s,baz=144,slow=8.2,SNR=1.1						
KLR				LR	LR	17 45 46.1	
	comp=Z,488nm,18.2s,baz=44,slow=39						
	comp=Z,9.5nm,0.7s						
KLR	Kul'dur	23.12	256	*i* P	P	17 35 54.7	0.0
KLR				pmax	pmax		
	comp=Z,47nm,1.2s						
KLR				MLR	MLR		
	comp=Z,1µm,13.0s						
GLB	Gilahina Butte	23.17	67	P	P	17 35 55.6	+0.4
GLB				IAmb	IAmb	17 36 04.8	
	comp=Z,72nm,1.4s						
M26K	Nabesna, AK	23.21	64	P	P	17 35 55.6	0.0
M26K	Nabesna, AK	23.21	64	P	P	17 35 54.3	-1.3
	baz=289						
EGAK	Eagle	23.32	58	P	P	17 35 55.3	-1.3
EGAK				IAmb	IAmb	17 36 06.2	
	comp=Z,54nm,0.8s						
EGAK	Eagle	23.32	58	P	P	17 35 54.9	-1.7
	baz=284,SNR=37						
VRDI	Verde Repeater	23.41	67	P	P	17 35 56.6	-1.1
VRDI				IAmb	IAmb	17 36 18.6	
	comp=Z,65nm,1.3s						
L27K	Beaver Creek,	23.52	62	P	P	17 35 57.9	-0.7
L27K	Beaver Creek,	23.52	62	P	P	17 35 57.7	-0.8
	baz=288						
BCAR	Beaver Creek A	23.54	62	P	P	17 35 58.0	-0.8
MCARA	McCarthy VSAT	23.55	67	P	P	17 35 58.9	+0.1
MCARA				IAmb	IAmb	17 36 14.8	
	comp=Z,104nm,1.2s						
MCARA	McCarthy VSAT	23.55	67	P	P	17 35 58.7	-0.1
	baz=291,SNR=11						
M27K	Edge Creek, AK	23.72	64	P	P	17 36 01.4	+0.7
M27K				IAmb	IAmb	17 36 05.5	
	comp=Z,73nm,1.1s						
M27K	Edge Creek, AK	23.72	64	P	P	17 36 00.7	0.0
	baz=290						
TEY	Ternei	24.02	243	⇑*e*P	P	17 36 02.9	-0.5
TEY				pmax	pmax		
	comp=N,100nm,1.7s						
TEY				pmax	pmax		
	comp=Z,200nm,1.7s						
TEY				pmax	pmax		
	comp=E,30nm,1.1s						
TEY				pmax	pmax		
	comp=Z,60nm,1.1s						
TEY				pmax	pmax		
	comp=N,20nm,1.3s						
BVCY	Beaver Creek	24.15	64	P	P	17 36 04.7	+0.1
	baz=290,SNR=14						
DAWY	Dawson	24.25	59	P	P	17 36 05.2	-0.4
DAWY				IAmb	IAmb	17 36 16.3	
	comp=Z,122nm,1.2s						
DAWY	Dawson	24.25	59	P	P	17 36 04.2	-1.4
	baz=287,SNR=64						
BARN	Barnard Glacie	24.28	67	P	P	17 36 05.9	-0.1
I29M	Ogilvie Camp,	24.34	56	P	P	17 36 05.8	-0.5
I29M	Ogilvie Camp,	24.34	56	P	P	17 36 04.6	-1.7
	baz=285,SNR=32						
HEH	HeiHe	24.52	262	*e*P	P	17 36 06.8	-1.2
HEH				pP	pP	17 36 13.6	-0.2
HEH				S	S	17 40 27.4	+0.2
HEH				sS	sS	17 40 38.4	+1.6
HEH				pmax	pmax		
	comp=Z,91nm,1.1s						
HEH				pmax	pmax		
	comp=Z,570nm,4.6s						
HEH				LR	LR		
	comp=Z,1µm,12.9s						
HEH				LR	LR		
	comp=Z,1µm,13.4s						
HEH				LR	LR		
	comp=Z,2µm,12.4s						
YUK3	Moose Creek	24.55	65	P	P	17 36 08.3	-0.2
	baz=291,SNR=12						
EPYK	Eagle Plains	24.72	53	P	P	17 36 09.0	-0.7
EPYK				IAmb	IAmb	17 36 15.5	
	comp=Z,64nm,1.0s						
EPYK	Eagle Plains	24.72	53	P	P	17 36 09.4	-0.3
	baz=284,SNR=31						
G30M	tAoh Zraii Nji	24.77	52	P	P	17 36 09.1	-1.1
	baz=283,SNR=36						
YUK8	Steele Glacier	25.05	66	P	P	17 36 12.8	-0.2
	baz=293,SNR=23						
O28M	Mount Upton	25.06	67	P	P	17 36 12.2	-0.9
	baz=294,SNR=31						
L29M	L29M	25.09	61	P	P	17 36 12.5	-0.7
	baz=290,SNR=49						
K29M	Barlow Dome	25.11	59	P	P	17 36 11.9	-1.4
	baz=289,SNR=24						
M29M	Somme Creek	25.18	63	P	P	17 36 13.3	-0.7
	baz=291,SNR=25						
PCA	Pinnacle	25.30	68	P	P	17 36 13.8	-1.3
PCA				IAmb	IAmb	17 36 25.8	
	comp=Z,73nm,1.0s						
PINM	Pinnacle	25.30	68	P	P	17 36 13.8	-1.3
	baz=295						
INK	Inuvik	25.48	48	P	P	17 36 16.8	+0.3
	comp=Z,31nm,1.0s,baz=285,slow=13,SNR=26						
INK				LR	LR	17 47 34.7	
	comp=Z,572nm,19.1s,baz=286,slow=40						
	comp=Z,31nm,1.0s						
INK	Inuvik	25.48	48	P	P	17 36 16.2	-0.3
INK				IAmb	IAmb	17 36 30.3	
	comp=Z,104nm,1.1s						
INK	Inuvik	25.48	48	P	P	17 36 16.2	-0.3
INK				pmax	pmax		
	comp=Z,104nm,1.2s						
INK	Inuvik	25.48	48	P	P	17 36 15.9	-0.6
	baz=282,SNR=57						
YUK4	Talbot Arm	25.52	65	P	P	17 36 15.8	-1.4
	baz=293						
F31M	Tsiigehtchic	25.60	50	P	P	17 36 16.9	-0.6
	baz=284,SNR=21						
YUK6	Outpost Mounta	25.81	66	P	P	17 36 18.8	-1.0
	baz=294						
M30M	Minto, Yukon	25.86	62	P	P	17 36 20.8	+0.7
M30M	Minto, Yukon	25.86	62	P	P	17 36 19.1	-1.0
	baz=292						
MAYO	Mayo, Yukon	25.88	59	P	P	17 36 19.7	-0.5
MAYO				IAmb	IAmb	17 36 29.6	
	comp=Z,50nm,0.9s						
MAYO	Mayo, Yukon	25.88	59	P	P	17 36 20.2	0.0
	baz=290						
PNL	Peninsula	25.88	69	P	P	17 36 19.2	-1.1
	baz=296						
O29M	Mount Kennedy	25.98	67	P	P	17 36 20.6	-0.7
	baz=295						
N30M	Aishikik Lake	26.16	64	P	P	17 36 22.2	-0.7
	baz=294						
HYT	Haines Junctio	26.24	66	P	P	17 36 24.3	+0.7
HYT				IAmb	IAmb	17 36 33.6	
	comp=Z,74nm,1.1s						
HYT	Haines Junctio	26.24	66	P	P	17 36 22.7	-0.9
	baz=295,SNR=12						
BOD	Bodaibo	26.70	287	*e*P	P	17 36 26.7	-1.0
BOD				pmax	pmax		
	comp=Z,38nm,1.6s						
USRK	Ussuriysk Ar.	26.72	247	LR	LR	17 48 47.8	
	comp=Z,496nm,18.5s,baz=28,slow=40						
N31M	Braeburn, Yuko	26.73	63	P	P	17 36 28.7	+0.8
N31M				IAmb	IAmb	17 36 38.1	
	comp=Z,40nm,0.8s						
N31M	Braeburn, Yuko	26.73	63	P	P	17 36 27.3	-0.6
	baz=294,SNR=6.3						
P30M	Million Dollar	26.78	67	P	P	17 36 28.0	-0.5
	baz=296						
O30N	Mendenhall	26.89	65	P	P	17 36 29.6	+0.2
	baz=295,SNR=6.5						
M31M	Drury Creek, Y	27.04	61	P	P	17 36 31.7	+1.0
M31M	Drury Creek, Y	27.04	61	P	P	17 36 30.7	0.0
	baz=294						
PLBC	Pleasant Camp	27.35	68	P	P	17 36 33.2	-0.3
	baz=298						
FARO	Faro, Yukon	27.47	61	P	P	17 36 35.0	+0.4
FARO	Faro, Yukon	27.47	61	P	P	17 36 34.8	+0.2
	baz=294						
A36M	Sachs Harbour	27.49	39	P	P	17 36 33.5	-1.1
A36M				IAmb	IAmb	17 36 41.5	
	comp=Z,38nm,0.9s						
A36M	Sachs Harbour	27.49	39	P	P	17 36 34.4	-0.2
	baz=282,SNR=13						
MDJ	Mudanjiang	27.50	251	P	P	17 36 35.5	+0.6
MDJ				S	S	17 41 16.7	+2.2
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,130nm,3.7s						
MDJ				LR	LR		
	comp=Z,1µm,21.7s						
MDJ				LR	LR		
	comp=Z,1µm,19.0s						
MDJ				LR	LR		
	comp=Z,2µm,15.2s						
BNX	BinXian	27.68	255	⇑P	P	17 36 36.7	+0.2
BNX				pP	pP	17 36 40.6	-1.8
BNX				S	S	17 41 19.2	+1.8
BNX				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BNX				pmax	pmax		
	comp=Z,130nm,4.9s						
BNX				LR	LR		
	comp=Z,1µm,16.8s						
BNX				LR	LR		
	comp=Z,1µm,16.3s						
BNX				LR	LR		
	comp=Z,920nm,16.3s						
SKAG	Skagway	27.82	67	P	P	17 36 37.7	0.0
	baz=298						
N32M	Quiet Lake	28.05	63	P	P	17 36 40.1	+0.3
	baz=296						
MMPY	Sheldon Lake,	28.20	59	P	P	17 36 41.7	+0.6
	baz=295						
C36M	Paulatuk	28.53	44	P	P	17 36 43.1	-0.8
C36M				IAmb	IAmb	17 36 49.6	
	comp=Z,28nm,0.6s						
C36M	Paulatuk	28.53	44	P	P	17 36 43.9	0.0
	baz=288,SNR=48						
P33M	Teslin, Yukon	28.59	65	P	P	17 36 43.7	-1.0
	baz=298						
R32K	Eaglecrest	28.77	69	P	P	17 36 46.1	0.0
	baz=300						
SIT	Sitka	29.02	72	P	P	17 36 48.0	-0.4
	baz=302						
Q32M	Nakina River	29.44	67	P	P	17 36 52.6	+0.3
	baz=300						
CN2	Changchun	30.05	255	*e*P	P	17 36 56.9	-0.7
CN2				S	S	17 41 52.0	-2.7
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,800nm,13.0s						
CN2				LR	LR		
	comp=Z,900nm,13.0s						
CN2				LR	LR		
	comp=Z,1µm,15.0s						
CIT	Chita	30.16	278	*e*P	P	17 36 56.6	-2.0
CIT				*e*		17 38 14.2	
CIT				pmax	pmax		
	comp=Z,36nm,2.5s						
S34M	Telegraph Cree	30.49	68	P	P	17 37 02.5	+1.1
	baz=302						
MJB9	Matsu-Tunnel	30.52	230	P	P	17 37 00.8	-1.1
MJB9				IAmb	IAmb	17 37 03.9	
	comp=Z,38nm,1.1s						
MAJO	Matsushiro	30.52	230	P	P	17 37 00.6	-1.3
MAJO				IAmb	IAmb	17 37 02.9	
	comp=Z,39nm,1.1s						
MAJO	Matsushiro	30.52	230	*i* P	P	17 37 01.6	-0.2
MAJO				pmax	pmax		
	comp=Z,40nm,1.2s						
MJAR	Matsushiro Arr	30.52	230	P	P	17 37 02.1	+0.3
	comp=Z,23nm,0.9s,baz=14,slow=8.4,SNR=25						
MJAR				LR	LR	17 50 47.0	
	comp=Z,476nm,19.5s,baz=36,slow=39						
	comp=Z,23nm,0.9s						
U33K	Whale Pass	30.56	72	P	P	17 37 02.1	+0.2
	baz=304						
DLBC	Dease Lake	30.71	66	P	P	17 37 05.2	+1.7
	comp=Z,17nm,1.0s,baz=291,slow=10,SNR=14						
	comp=Z,17nm,1.0s						
DLBC	Dease Lake	30.71	66	P	P	17 37 05.1	+1.7
DLBC				IAmb	IAmb	17 37 06.6	
	comp=Z,25nm,1.0s						
DLBC	Dease Lake	30.71	66	P	P	17 37 04.7	+1.3
	baz=302,SNR=9.4						
CRAG	Craig	30.92	73	P	P	17 37 06.6	+1.4
	baz=305						
WRGLY	Wrigley	31.13	55	P	P	17 37 06.9	-0.1
	baz=298						
T35M	Bob Quinn	31.40	69	P	P	17 37 09.1	-0.3
	baz=304,SNR=11						
JGF	Kuroka	31.67	231	P	P	17 37 11.4	-0.6
JGF				IAmb	IAmb	17 37 13.5	
	comp=Z,38nm,1.2s						
V35K	Ketchikan	31.71	72	P	P	17 37 12.2	+0.1
	baz=306						
LIRD	Liard River Hi	31.93	63	P	P	17 37 14.3	+0.2
	baz=302						
NRIK	Noril'sk	32.18	319	P	P	17 37 16.3	+0.2
	comp=Z,3.4nm,0.5s,baz=78,slow=9.4,SNR=7.6						
NRIK				LR	LR	17 51 17.4	
	comp=Z,954nm,19.8s,baz=75,slow=38						
	comp=Z,3.4nm,0.5s						
NRIK	Noril'sk	32.18	319	P	P	17 37 15.9	-0.2
NRIK				IAmb	IAmb	17 37 27.1	
	comp=Z,31nm,1.5s						
NRIK	Noril'sk	32.18	319	*ce*P	P	17 37 15.7	-0.4
NRIK				pmax	pmax		
	comp=Z,11nm,1.0s						
NRIK				MLR	MLR		
	comp=Z,2µm,11.0s						
KOTAN	Kotaneelee Air	32.43	60	P	P	17 37 18.6	+0.2
	baz=302,SNR=6.2						
SNY	Shenyang	32.45	254	⇓P	P	17 37 12.2	-6.5
SNY				S	S	17 42 33.3	+1.1
SNY				pmax	pmax		
	comp=Z,180nm,6.6s						
SNY				LR	LR		
	comp=N,880nm,13.7s						
SNY				LR	LR		
	comp=E,1µm,17.1s						
SNY				LR	LR		
	comp=Z,950nm,18.5s						
GRNB	Grenville Isla	33.37	73	P	P	17 37 25.7	-1.0
GRNB				IAmb	IAmb	17 37 34.0	
	comp=Z,23nm,1.0s						
KSRS	Korea Array	33.98	245	P	P	17 37 32.1	0.0
	comp=Z,2.8nm,0.7s,baz=29,slow=7.7,SNR=7.3						
KSRS				LR	LR	17 51 03.1	
	comp=Z,268nm,19.9s,baz=50,slow=36						
	comp=Z,2.8nm,0.7s						
KSAR	Wonju Array Be	34.01	245	P	P	17 37 31.0	-1.3
KSAR	Wonju Array Be	34.01	245	P	P	17 37 31.0	-1.3
IRK	Irkutsk	34.47	285	*e*P	P	17 37 37.2	+0.9
IRK				pmax	pmax		
	comp=Z,30nm,2.8s						
XLT	XiLinHaoTe	34.48	264	*e*P	P	17 37 37.1	+0.6
XLT				pP	pP	17 37 42.8	+0.3

XLT				sP	sP	17 37 45.8	+0.9
XLT				S	S	17 43 03.1	-0.7
XLT				pmax	pmax		
	comp=Z,38nm,1.2s						
XLT				pmax	pmax		
	comp=Z,150nm,3.9s						
XLT				LR	LR		
	comp=Z,910nm,12.7s						
XLT				LR	LR		
	comp=Z,930nm,9.4s						
RES	Resolute Bay	34.61	28	LR	LR	17 54 26.1	
	comp=Z,217nm,18.4s,baz=322,slow=41						
RES	Resolute Bay	34.61	28	P	P	17 37 39.7	+2.5
RES	Resolute Bay	34.61	28	P	P	17 37 39.7	+2.5
RES				pmax	pmax		
	comp=Z,25nm,1.9s						
YKA	Yellowknife Ar	35.00	52	P	P	17 37 41.2	+0.5
	comp=Z,13nm,0.9s,baz=301,slow=8.1,SNR=78						
YKA				PcP	PcP	17 40 12.6	+0.3
	comp=Z,2.0nm,0.8s,baz=309,slow=3.5,SNR=6.6						
YKA				LR	LR	17 52 42.0	
	comp=Z,136nm,20.7s,baz=278,slow=38						
	comp=Z,13nm,0.9s						
YKA	Yellowknife Ar	35.00	52	P	P	17 37 40.2	-0.5
BBB	Bella Bella	35.28	74	LR	LR	17 52 29.7	
	comp=Z,450nm,19.2s,baz=328,slow=37						
ULN	Ulaanbaatar	36.05	277	P	P	17 37 49.4	-0.8
ULN	Ulaanbaatar	36.05	277	P	P	17 37 49.4	-0.8
ULN				pmax	pmax		
	comp=Z,11nm,1.0s						
ZAK	Zakamensk	36.16	283	*e*P	P	17 37 50.6	-0.4
ZAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HILA	High Level	36.30	59	P	P	17 37 51.6	-0.3
MOY	Mondy	36.39	286	*e*P	P	17 37 54.1	+1.2
MOY				pmax	pmax		
	comp=Z,40nm,2.0s						
SONM	Songino Array	36.40	277	P	P	17 37 53.6	+0.6
	comp=Z,6.0nm,1.0s,baz=52,slow=6.3,SNR=15						
SONM				PcP	PcP	17 40 17.8	+0.9
	comp=Z,2.7nm,0.6s,baz=111,slow=1.2,SNR=7.4						
SONM				LR	LR	17 53 34.2	
	comp=Z,1µm,19.6s,baz=46,slow=38						
	comp=Z,6.0nm,1.0s						
SONM	Songino Array	36.40	277	P	P	17 37 52.9	-0.1
SONM	Songino Array	36.40	277	P	P	17 37 52.9	-0.1
SONM				pmax	pmax		
	comp=Z,7.0nm,1.1s						
JNU	Nakatsue	36.40	237	LR	LR	17 53 23.5	
	comp=Z,326nm,18.5s,baz=32,slow=37						
BJI	Beijing	37.36	260	P	P	17 38 01.3	+0.2
BJI				pP	pP	17 38 04.2	-2.9
BJI				S	S	17 43 52.0	+4.2
BJI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJI				LR	LR		
	comp=Z,750nm,14.9s						
BJI				LR	LR		
	comp=Z,330nm,15.4s						
BJI				LR	LR		
	comp=Z,450nm,12.2s						
BJT	Baijiatuau	37.38	260	P	P	17 38 00.8	-0.6
BJT	Baijiatuau	37.38	260	P	P	17 38 00.8	-0.6
BJT				pmax	pmax		
	comp=Z,26nm,1.2s						
WAPA	Wapiti River	37.42	65	P	P	17 38 01.7	+0.1
WAPA				IAmb	IAmb	17 38 10.9	
	comp=Z,94nm,1.8s						
NOR	Nord	37.73	1	*i* P	P	17 38 05.7	+1.8
NOR				IAmb	IAmb	17 38 07.5	
	comp=Z,2.9nm,0.9s						
CBB	Campbell River	38.01	75	P	P	17 38 05.8	-0.7
TULEG	Thule	38.38	18	P	P	17 38 09.0	-0.3
OZB	Mount Ozzard	38.68	77	P	P	17 38 11.2	-1.0
OZB				IAmb	IAmb	17 38 52.8	
	comp=Z,79nm,1.4s						
BRLDA	Berland Lookou	38.95	65	P	P	17 38 15.2	+0.8
BRLDA				IAmb	IAmb	17 38 21.2	
	comp=Z,43nm,1.0s						
HHC	Hu-ho-hao-te	38.98	265	*e*P	P	17 38 13.3	-1.6
HHC				S	S	17 44 11.3	-1.2
HHC				sS	sS	17 44 22.7	+0.3
HHC				pmax	pmax		
	comp=Z,29nm,0.8s						
HHC				pmax	pmax		
	comp=Z,210nm,5.5s						
HHC				LR	LR		
	comp=Z,2µm,9.0s						
HHC				LR	LR		
	comp=Z,1µm,9.4s						
HHC				LR	LR		
	comp=Z,2µm,11.8s						
LLLB	Lillooet	39.25	72	P	P	17 38 18.1	+1.1
LLLB				IAmb	IAmb	17 38 24.1	
	comp=Z,30nm,0.9s						
PGC	Sidney	39.87	75	P	P	17 38 22.8	+0.7
NEEM	North Greenlan	39.91	12	*i* P	P	17 38 21.8	-0.7
NEEM				IAmb	IAmb	17 38 25.8	
	comp=Z,40nm,0.8s						
BTO	Baotou	39.92	266	*e*P	P	17 38 22.9	+0.2
BTO				S	S	17 44 28.3	+1.7
BTO				LR	LR		
	comp=Z,3µm,13.3s						
BTO				LR	LR		
	comp=Z,4µm,14.3s						
TIA	Tai'an	39.95	255	P	P	17 38 29.5	+6.6
TIA				pmax	pmax		
	comp=Z,14nm,1.4s						
SPA0	Spitsbergen Ar	40.07	351	*e*P	P	17 38 24.1	+0.6
SPA0				IAmb	IAmb	17 38 27.6	
	comp=Z,56nm,1.0s						
SPITS	Spitsbergen Ar	40.07	351	LR	LR	17 55 21.5	
	comp=Z,423nm,18.2s,baz=358,slow=37						
SPITS	Spitsbergen Ar	40.07	351	P	P	17 38 24.3	+0.8
SPITS				pmax	pmax		
	comp=Z,78nm,1.2s						
SPB2	Spitsbergen Ar	40.07	351	P	P	17 38 23.6	+0.1
SPB2				IAmb	IAmb	17 38 27.8	
	comp=Z,47nm,0.9s						
HNS	HongShan	40.15	259	⇓P	P	17 38 24.6	+0.1
HNS				S	S	17 44 33.5	+3.6
HNS				pmax	pmax		
	comp=Z,5.0nm,1.2s						
HNS				LR	LR		
	comp=Z,580nm,17.7s						
HNS				LR	LR		
	comp=Z,880nm,19.2s						
HNS				LR	LR		
	comp=Z,690nm,15.1s						
HOPEN	Hopen	40.81	347	*e*P	P	17 38 29.5	0.0
B06A	Marblemount	40.89	74	P	P	17 38 31.0	+0.5
B06A				IAmb	IAmb	17 38 41.3	
	comp=Z,29nm,0.9s						
D05A	Enumclaw	41.60	76	P	P	17 38 37.5	+1.2
D05A				IAmb	IAmb	17 38 48.1	
	comp=Z,64nm,1.1s						
KULLO	Kullorsuaq	41.67	16	*i* P	P	17 38 37.9	+1.2
KULLO				IAmb	IAmb	17 38 41.6	
	comp=Z,28nm,0.8s						
LON	Longmire	42.00	76	P	P	17 38 40.8	+1.1
LON				IAmb	IAmb	17 39 03.1	
	comp=Z,66nm,1.8s						
LON	Longmire	42.00	76	P	P	17 38 40.8	+1.1
LON				pmax	pmax		
	comp=Z,66nm,1.8s						
B08A	Colville Reser	42.01	73	P	P	17 38 40.6	+0.9
B08A				IAmb	IAmb	17 38 46.2	
	comp=Z,30nm,0.9s						
ZAA0	Zalesovo Array	42.14	299	P	P	17 38 40.3	-0.4
ZALV	Zalesovo Beam	42.14	299	P	P	17 38 42.0	+1.3
	comp=Z,1.4nm,0.6s,baz=44,slow=8.6,SNR=7.0						
ZALV				PP	PP	17 40 22.4	+4.3
	comp=Z,5.8nm,1.0s,baz=46,slow=11,SNR=4.3						
ZALV				LR	LR	17 57 44.6	
	comp=Z,1µm,18.9s,baz=44,slow=38						
	comp=Z,1.4nm,0.6s						
ZALV	Zalesovo Beam	42.14	299	P	P	17 38 39.6	-1.1
ZALV	Zalesovo Beam	42.14	299	*i* P	P	17 38 41.7	+1.0
LTY	Liberty	42.17	75	P	P	17 38 42.0	+0.9
LTY				IAmb	IAmb	17 38 52.0	
	comp=Z,44nm,1.2s						
DAG	Danmarks Havn	42.56	2	*i* P	P	17 38 43.2	-0.7
DAG				IAmb	IAmb	17 38 49.0	
	comp=Z,17nm,0.8s						
NJ2	Nanjing	42.58	250	*e*P	P	17 38 45.1	+0.6
NJ2				sP	sP	17 38 59.8	+6.9
NJ2				SS	SS	17 48 18.6	+2.9
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,280nm,5.9s						
NJ2				LR	LR		
	comp=Z,1µm,14.2s						
NJ2				LR	LR		
	comp=Z,730nm,15.2s						
NJ2				LR	LR		
	comp=Z,1µm,15.6s						
C09A	Chrisman Ranch	42.91	73	P	P	17 38 47.5	+0.4
JOW	Kunigami	43.00	236	LR	LR	17 57 50.1	
	comp=Z,238nm,20.5s,baz=343,slow=38						
NEW	Newport	43.11	71	LR	LR	17 56 29.9	
	comp=Z,452nm,19.7s,baz=312,slow=36						
NEW	Newport	43.11	71	P	P	17 38 49.5	+0.9
NEW	Newport	43.11	71	P	P	17 38 49.6	+0.9
NEW				pmax	pmax		
	comp=Z,16nm,0.8s						
NEW	Newport	43.11	71	P	P	17 38 48.1	-0.6
	baz=316,SNR=13						
HOOD	Mount Hood Mea	43.12	78	P	P	17 38 49.2	+0.3
HOOD				IAmb	IAmb	17 39 00.4	
	comp=Z,65nm,0.9s						
D08A	Wollman Farm,	43.14	74	P	P	17 38 48.9	0.0
D08A				IAmb	IAmb	17 38 55.1	
	comp=Z,29nm,0.9s						
BJO1	Bjornoya	43.27	348	*e*P	P	17 38 50.5	+0.9
HAWA	Hanford	43.34	75	P	P	17 38 51.2	+0.7
E08A	Dider Farm, El	43.49	74	P	P	17 38 52.0	+0.2
F07A	Phinny Hill Vi	43.52	76	P	P	17 38 52.0	0.0
F07A				IAmb	IAmb	17 38 58.7	
	comp=Z,29nm,0.8s						
LYN	LuoYang	43.52	258	*e*P	P	17 38 52.5	+0.4
LYN				S	S	17 45 24.4	+4.7
LYN				pmax	pmax		
	comp=Z,15nm,0.8s						
LYN				LR	LR		
	comp=Z,750nm,19.6s						
LYN				LR	LR		
	comp=Z,430nm,15.9s						
LYN				LR	LR		
	comp=Z,690nm,14.3s						
I04A	Tendick Farm,	43.88	80	P	P	17 38 53.8	-1.2
E09A	Wood Farm, Sta	43.90	74	P	P	17 38 55.1	0.0
E09A				IAmb	IAmb	17 39 01.3	
	comp=Z,29nm,0.9s						
DGZ	Jazzator, Alta	44.00	293	*i* P	P	17 38 56.0	0.0
DGZ				pmax	pmax		
	comp=Z,16nm,1.0s						
DGZ				MLR	MLR		
	comp=Z,1µm,11.0s						
G08A	Pilot Rock	44.42	76	P	P	17 38 59.5	+0.1
J04A	Umpqua Nationa	44.44	80	P	P	17 39 03.9	+4.1
PINE	Pine Mountain	44.59	78	P	P	17 38 59.9	-1.0
PINE				IAmb	IAmb	17 39 07.8	
	comp=Z,43nm,1.0s						
J05D	Fort Rock, OR	44.83	79	P	P	17 39 04.4	+1.7
DBG	Daneborg	44.99	3	*i* P	P	17 39 02.3	-1.1
DBG				IAmb	IAmb	17 39 06.3	
	comp=Z,8.2nm,0.8s						
FFC	Flin Flon	45.04	55	P	P	17 39 03.8	-0.3
FFC				IAmb	IAmb	17 39 09.4	
	comp=Z,32nm,1.1s						
FFC	Flin Flon	45.04	55	P	P	17 39 03.8	-0.3
FFC				pmax	pmax		
	comp=Z,32nm,1.1s						
L04D	Klamath Falls	45.12	81	P	P	17 39 06.0	+1.0
YBH	Yreka Blue Hor	45.30	82	LR	LR	17 56 48.0	
	comp=Z,386nm,18.6s,baz=316,slow=34						
YBH	Yreka Blue Hor	45.30	82	P	P	17 39 07.4	+1.0
YBH				IAmb	IAmb	17 39 08.8	
	comp=Z,30nm,1.2s						
YBH	Yreka Blue Hor	45.30	82	P	P	17 39 07.4	+1.0
YBH				pmax	pmax		
	comp=Z,30nm,1.2s						
BMO	Blue Mountains	45.53	75	P	P	17 39 08.5	+0.3
BMO				IAmb	IAmb	17 39 19.0	
	comp=Z,28nm,1.1s						
BMO	Blue Mountains	45.53	75	P	P	17 39 08.5	+0.3
BMO				pmax	pmax		
	comp=Z,28nm,1.1s						
MSO	Missoula	45.63	70	P	P	17 39 08.8	-0.2
MSO				IAmb	IAmb	17 39 11.0	
	comp=Z,47nm,1.4s						
MSO	Missoula	45.63	70	P	P	17 39 07.4	-1.6
	baz=318,SNR=12						
XAN	Xi'an	45.64	261	P	P	17 39 09.7	+0.6
XAN				pP	pP	17 39 13.4	-1.7
XAN				S	S	17 45 53.9	+3.2
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,77nm,4.8s						
XAN				LR	LR		
	comp=Z,510nm,15.5s						
XAN				LR	LR		
	comp=Z,630nm,14.9s						
XAN				LR	LR		
	comp=Z,740nm,14.6s						
GTA	Gaotai	45.83	274	*e*P	P	17 39 10.2	-0.4
GTA				pP	pP	17 39 16.5	-0.2
GTA				sP	sP	17 39 18.8	-0.3
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				LR	LR		
	comp=Z,980nm,10.0s						
GTA				LR	LR		
	comp=Z,450nm,14.3s						
GTA				LR	LR		
	comp=Z,1µm,11.2s						
VADS	Vadso	45.95	341	*e*P	P	17 39 10.7	-0.3
PLID	Pearl Lake	45.97	74	P	P	17 39 11.5	-0.3
PLID				IAmb	IAmb	17 39 22.2	
	comp=Z,34nm,1.2s						
J08A	Circle Bar Ran	46.10	77	P	P	17 39 13.5	+0.8
J08A				IAmb	IAmb	17 39 14.9	
	comp=Z,26nm,1.3s						
HAMF	Hammerfest	46.30	344	*e*P	P	17 39 14.8	+1.1
HAMF				IAmb	IAmb	17 39 22.4	
	comp=Z,80nm,1.4s						
MOD	Modoc Plateau	46.33	80	P	P	17 39 15.3	+0.7
MOD				IAmb	IAmb	17 39 21.1	
	comp=Z,22nm,0.8s						
LZH	Lanzhou	46.47	268	*e*P	P	17 39 16.4	+0.7
LZH				pP	pP	17 39 21.5	-0.3
LZH				S	S	17 46 01.7	-1.1
LZH				sS	sS	17 46 12.8	0.0
LZH				pmax	pmax		
	comp=Z,24nm,1.1s						
LZH				LR	LR		
	comp=Z,750nm,15.8s						
LZH				LR	LR		
	comp=Z,1µm,14.3s						
LZH				LR	LR		
	comp=Z,760nm,13.7s						
EGMT	Eagleton	46.64	66	P	P	17 39 17.0	+0.1
EGMT	Eagleton	46.64	66	P	P	17 39 16.1	-0.8
	baz=318						
HRY	Holter Researc	46.68	69	P	P	17 39 17.3	0.0
WVOR	Wild Horse Val	46.72	78	P	P	17 39 18.4	+0.8
WVOR				IAmb	IAmb	17 39 24.8	
	comp=Z,36nm,1.4s						
WVOR	Wild Horse Val	46.72	78	P	P	17 39 18.4	+0.8
WVOR				pmax	pmax		
	comp=Z,36nm,1.4s						
ZSN	Zaisan	46.81	293	*e*P	P	17 39 17.1	-1.0
	comp=Z,12nm,1.0s,baz=293						
ZSN	Zaisan	46.81	293	*e*P	P	17 39 17.1	-1.0
ZSN				pmax	pmax		
	comp=Z,12nm,1.0s						
LVZ	Lovozero	47.01	338	P	P	17 39 18.6	-0.8
LVZ	Lovozero	47.01	338	P	P	17 39 18.6	-0.8
LVZ				pmax	pmax		
	comp=Z,54nm,1.2s						
ARA0	ARCESS Array S	47.06	343	*e*P	P	17 39 19.1	-0.6
ARCES	ARCESS Array B	47.06	343	P	P	17 39 19.6	-0.2
	comp=Z,16nm,0.8s,baz=32,slow=8.6,SNR=22						
ARCES				LR	LR	18 01 54.7	
	comp=Z,407nm,18.3s,baz=26,slow=40						
	comp=Z,16nm,0.8s						
ARCES	ARCESS Array B	47.06	343	P	P	17 39 18.5	-1.3
ARCES				IAmb	IAmb	17 39 23.6	
	comp=Z,33nm,1.1s						
ARCES	ARCESS Array B	47.06	343	P	P	17 39 18.5	-1.3
ARCES				pmax	pmax		
	comp=Z,33nm,1.1s						
LRM	Limekiln Ridge	47.07	70	P	P	17 39 19.9	-0.6
KURK	Kurchatov	47.11	300	P	P	17 39 19.1	-1.3
KURK				IAmb	IAmb	17 39 32.2	
	comp=Z,24nm,1.0s						
KURK	Kurchatov	47.11	300	*ce*P	P	17 39 19.4	-1.0
KURK				pmax	pmax		
	comp=Z,39nm,1.7s						
KURK				MLR	MLR		
	comp=Z,1µm,11.0s						
KURBB	Kurchatov Arra	47.22	300	P	P	17 39 20.8	-0.4
	comp=Z,8.0nm,0.6s,baz=41,slow=7.8,SNR=54						
KURBB				PP	PP	17 41 09.5	-2.4
	comp=Z,5.6nm,1.1s,baz=48,slow=10.0,SNR=2.8						
KURBB				LR	LR	18 01 06.9	
	comp=Z,1µm,18.0s,baz=69,slow=39						
	comp=Z,8.0nm,0.6s						
MFID	Camas Ranch	47.31	75	P	P	17 39 22.0	-0.2
MFID				IAmb	IAmb	17 39 28.4	
	comp=Z,25nm,0.9s						
ILULI	Ilulissat	47.34	18	P	P	17 39 22.8	+0.9
ILULI	Ilulissat	47.34	18	P	P	17 39 22.8	+0.9
ILULI				pmax	pmax		
	comp=Z,93nm,1.8s						
DLMT	Dillon	47.34	71	P	P	17 39 23.2	+0.7
DLMT				IAmb	IAmb	17 39 33.4	
	comp=Z,37nm,1.1s						
APA	Apatity	47.53	338	⇓*i*P	P	17 39 21.7	-1.7
APA				*i*		17 40 51.0	
APA				*i*		17 41 17.6	
APA				*i* S	S	17 46 12.0	-4.8
APA				*i* SS	ScS	17 49 17.0	+1.8
APA				pmax	pmax		
	comp=Z,13nm,1.0s						
APA				MLR	MLR		
	comp=Z,1µm,11.0s						
ORV	Oroville	47.56	83	P	P	17 39 23.3	-0.7
ORV	Oroville	47.56	83	P	P	17 39 23.3	-0.7
ORV				pmax	pmax		
	comp=Z,15nm,1.1s						
BOZ	Bozeman (W)	47.61	70	P	P	17 39 24.8	+0.2
BOZ				IAmb	IAmb	17 39 26.7	
	comp=Z,61nm,1.7s						
BOZ	Bozeman (W)	47.61	70	P	P	17 39 24.8	+0.2
BOZ				pmax	pmax		
	comp=Z,61nm,1.7s						
BOZ	Bozeman (W)	47.61	70	P	P	17 39 24.5	-0.1
	baz=319,SNR=18						
MCMT	McKenzie Canyo	47.63	71	P	P	17 39 25.0	+0.1
PLTX	Planet X, Gerl	47.65	80	P	P	17 39 23.6	-1.3
PLTX				IAmb	IAmb	17 39 39.3	
	comp=Z,23nm,0.7s						
JETT	Jettan, Norway	47.73	345	*e*P	P	17 39 25.3	+0.2
TRO	Tromso	47.84	346	*e*P	P	17 39 26.6	+0.8
KTK1	Kautokeino	47.86	343	*e*P	P	17 39 26.3	+0.3
KTK1				IAmb	IAmb	17 39 29.7	
	comp=Z,61nm,0.8s						
HLID	Hailey	47.87	74	P	P	17 39 26.6	0.0
HLID	Hailey	47.87	74	P	P	17 39 26.7	0.0
	baz=320,SNR=13						
WMQ	Urumqi	48.25	287	*e*P	P	17 39 31.0	+1.6
WMQ				pP	pP	17 39 36.6	+1.1
WMQ				sP	sP	17 39 40.1	+2.2
WMQ				pmax	pmax		
	comp=Z,19nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,240nm,4.9s						
WMQ				LR	LR		
	comp=Z,970nm,11.3s						
WMQ				LR	LR		
	comp=Z,800nm,11.7s						
WMQ				LR	LR		
	comp=Z,440nm,15.7s						
QLMT	Earthquake Lak	48.29	70	P	P	17 39 30.4	+0.5
JMIC	Jan Mayen	48.39	358	LR	LR	18 00 06.8	
	comp=Z,202nm,18.3s,baz=337,slow=36						
JMIC	Jan Mayen	48.39	358	*e*P	P	17 39 30.7	+0.7
ENH	Enshi	48.46	258	P	P	17 39 30.0	-1.1
ENH				IAmb	IAmb	17 39 36.8	
	comp=Z,43nm,1.7s						
MK31	Makanchi Array	48.46	294	P	P	17 39 28.9	-2.0
MK31	Makanchi Array	48.46	294	P	P	17 39 29.0	-2.0
MK31				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MKAR	Makanchi Array	48.46	294	P	P	17 39 29.9	-1.0
	comp=Z,3.4nm,0.7s,baz=38,slow=6.2,SNR=27						
MKAR				LR	LR	18 01 17.0	
	comp=Z,836nm,19.4s,baz=42,slow=38						
	comp=Z,3.4nm,0.7s						
MKAR	Makanchi Array	48.46	294	P	P	17 39 29.2	-1.7
MKAR	Makanchi Array	48.46	294	*i* P	P	17 39 32.4	+1.4
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PAHR	Pah Rah Range	48.47	81	P	P	17 39 31.1	-0.1
PAHR				IAmb	IAmb	17 39 37.4	
	comp=Z,16nm,1.0s						
MAKZ	Makanchi	48.59	294	P	P	17 39 30.6	-1.3
MAKZ	Makanchi	48.59	294	P	P	17 39 30.7	-1.3
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
YMR	Madison River	48.62	70	P	P	17 39 33.7	+1.2
YMR				IAmb	IAmb	17 39 44.2	
	comp=Z,43nm,1.4s						
YNR	Norris Junctio	48.72	70	P	P	17 39 33.8	+0.5
YNR				IAmb	IAmb	17 39 48.8	
	comp=Z,36nm,1.4s						
BVAR	Borovoye Array	48.73	307	P	P	17 39 32.7	-0.2
	comp=Z,14nm,0.7s,baz=52,slow=7.6,SNR=39						
BVAR				LR	LR	18 02 48.8	
	comp=Z,1µm,18.2s,baz=43,slow=40						
	comp=Z,14nm,0.7s						
BRVK	Borovoye	48.74	307	P	P	17 39 32.3	-0.7
BRVK				IAmb	IAmb	17 39 43.4	
	comp=Z,20nm,1.0s						
BRVK	Borovoye	48.74	307	*ce*P	P	17 39 32.8	-0.2
BRVK				pmax	pmax		
	comp=Z,33nm,1.7s						
BRVK				MLR	MLR		
	comp=Z,3µm,13.0s						
DGMT	Dagmar	48.76	62	P	P	17 39 33.3	+0.1
DGMT	Dagmar	48.76	62	P	P	17 39 31.7	-1.5
	baz=320						
DGMT	Dagmar	48.76	62	P	P	17 39 34.2	+0.9
	baz=320						
SCO	Scoresbysund	48.77	4	P	P	17 39 34.8	+1.8
SCO				IAmb	IAmb	17 39 39.7	
	comp=Z,23nm,1.0s						
SCO	Scoresbysund	48.77	4	P	P	17 39 34.8	+1.8
SCO				pmax	pmax		
	comp=Z,23nm,1.0s						
SCO	Scoresbysund	48.77	4	*i* P	P	17 39 35.4	+2.4
FRB	Frobisher Bay	48.79	29	LR	LR	18 02 29.3	
	comp=Z,314nm,19.7s,baz=338,slow=39						
YUF	Upper Falls	48.80	70	P	P	17 39 33.9	+0.1
ICESG	Greenland Ices	48.90	12	*i* P	P	17 39 35.9	+1.5
ICESG				IAmb	IAmb	17 39 39.0	
	comp=Z,36nm,0.7s						
YMP	Mirror Lake Pl	48.94	70	P	P	17 39 36.0	+1.0
LKWY	Lake	48.96	70	P	P	17 39 36.7	+1.6
LKWY				IAmb	IAmb	17 39 55.0	
	comp=Z,27nm,1.1s						
LKWY	Lake	48.96	70	P	P	17 39 36.7	+1.6
LKWY				pmax	pmax		
	comp=Z,27nm,1.1s						
H17A	Grant Village	49.01	70	P	P	17 39 37.1	+1.6
H17A				IAmb	IAmb	17 39 48.6	
	comp=Z,41nm,1.2s						
H17A	Grant Village	49.01	70	P	P	17 39 35.3	-0.2
	baz=320,SNR=13						
RLMT	Red Lodge	49.06	69	P	P	17 39 37.0	+1.2
RLMT				IAmb	IAmb	17 39 47.6	
	comp=Z,37nm,1.1s						
RLMT	Red Lodge	49.06	69	P	P	17 39 35.1	-0.7
	baz=320,SNR=10						
YERR	Yerington	49.10	81	P	P	17 39 36.2	0.0
FLWY	Flagg Ranch	49.20	71	P	P	17 39 38.4	+1.5
FLWY				IAmb	IAmb	17 39 49.2	
	comp=Z,47nm,1.2s						
LAO	LASA Array	49.23	65	P	P	17 39 37.7	+0.9
LAO	LASA Array	49.23	65	P	P	17 39 36.4	-0.4
	baz=320						
IMW	Indian Meadow	49.23	71	P	P	17 39 38.1	+0.9
CMB	Columbia Colle	49.29	83	P	P	17 39 38.2	+0.8

CMB	**Columbia Colle**	**49.29**	**83**	P	**P**	**17 39 38.2**	**+0.8**
CMB				pmax	pmax		
	comp=Z,12nm,1.2s						
SVE	**Sverdlovsk**	**49.34**	**316**	*e*P	**P**	**17 39 38.3**	**+0.8**
SVE				pmax	pmax		
	comp=Z,31nm,1.2s						
SVE				MLR	MLR		
	comp=Z,2µm,14.0s						
FXWY	**Fox Creek**	**49.39**	**71**	P	**P**	**17 39 39.0**	**+0.6**
FXWY				IAmb	IAmb	17 39 50.2	
	comp=Z,23nm,1.1s						
MOOW	**Moose Ponds**	**49.43**	**71**	P	**P**	**17 39 39.8**	**+1.1**
MOOW				IAmb	IAmb	17 39 41.2	
	comp=Z,31nm,1.6s						
SFJD	**Kangerlussuaq**	**49.45**	**19**	LR	LR	18 03 09.6	
	comp=Z,323nm,19.1s,baz=340,slow=39						
SFJD	**Kangerlussuaq**	**49.45**	**19**	P	**P**	**17 39 39.6**	**+1.4**
SFJD				IAmb	IAmb	17 39 59.3	
	comp=Z,44nm,1.5s						
SFJD	**Kangerlussuaq**	**49.45**	**19**	P	**P**	**17 39 39.6**	**+1.4**
SFJD				pmax	pmax		
	comp=Z,44nm,1.5s						
KVN	**Kaiserville**	**49.60**	**80**	P	**P**	**17 39 41.0**	**+1.0**
KVN	**Kaiserville**	**49.60**	**80**	P	**P**	**17 39 41.0**	**+1.0**
KVN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ELK	**Elko**	**49.65**	**77**	LR	LR	18 01 16.2	
	comp=Z,323nm,18.6s,baz=326,slow=37						
ELK	**Elko**	**49.65**	**77**	P	**P**	**17 39 41.3**	**+0.9**
ELK	**Elko**	**49.65**	**77**	P	**P**	**17 39 41.3**	**+0.9**
SNOW	**Snow King Moun**	**49.65**	**71**	P	**P**	**17 39 40.9**	**+0.5**
SNOW				IAmb	IAmb	17 39 43.2	
	comp=Z,61nm,1.7s						
REDW	**Red Top Meadow**	**49.68**	**71**	P	**P**	**17 39 41.5**	**+0.9**
REDW				IAmb	IAmb	17 39 52.5	
	comp=Z,37nm,1.3s						
ADZR	**Andozero**	**49.73**	**333**	*e*P	**P**	**17 39 39.1**	**-1.3**
ADZR				pmax	pmax		
	comp=Z,32nm,0.9s						
MSF	**Maaselka**	**49.80**	**339**	P	**P**	**17 39 41.0**	**+0.1**
MSF				pmax	pmax		
	comp=Z,45nm,1.1s						
STEI	**Steigen**	**49.90**	**347**	*e*P	**P**	**17 39 43.1**	**+1.5**
STEI				IAmb	IAmb	17 39 45.0	
	comp=Z,34nm,1.1s						
GUMO	**Guam**	**49.95**	**209**	LR	LR	17 59 01.1	
	comp=Z,86nm,20.3s,baz=44,slow=34						
NVAR	**Mina Array Bea**	**49.99**	**81**	P	**P**	**17 39 44.1**	**+1.1**
	comp=Z,12nm,1.0s,baz=306,slow=7.0,SNR=23						
NVAR				LR	LR	18 00 47.0	
	comp=Z,369nm,18.3s,baz=310,slow=36						
	comp=Z,12nm,1.0s						
NVAR	**Mina Array Bea**	**49.99**	**81**	P	**P**	**17 39 43.2**	**+0.3**
HVU	**Hansel Valley**	**50.01**	**74**	P	**P**	**17 39 43.3**	**+0.3**
HVU				IAmb	IAmb	17 39 45.3	
	comp=Z,22nm,1.1s						
HVU	**Hansel Valley**	**50.01**	**74**	P	**P**	**17 39 43.3**	**+0.3**
HVU				pmax	pmax		
	comp=Z,22nm,1.1s						
AHID	**Auburn Hatcher**	**50.03**	**72**	P	**P**	**17 39 43.2**	**0.0**
LHV	**Little Huntoon**	**50.03**	**81**	P	**P**	**17 39 42.2**	**-0.8**
LHV				IAmb	IAmb	17 39 50.1	
	comp=Z,26nm,1.1s						
NV11	**Mina Array Sit**	**50.06**	**81**	P	**P**	**17 39 43.3**	**-0.1**
BBGB	**Big Mountain B**	**50.12**	**85**	P	**P**	**17 39 43.9**	**0.0**
BRZS	**Berezniki**	**50.15**	**303**	*e*P	**P**	**17 39 42.4**	**-1.4**
	baz=303						
BRZS	**Berezniki**	**50.15**	**303**	*e*P	**P**	**17 39 42.4**	**-1.4**
Q09A	**Carvers**	**50.21**	**80**	P	**P**	**17 39 44.6**	**0.0**
OMMB	**Old Mammoth Mi**	**50.29**	**82**	P	**P**	**17 39 45.1**	**-0.3**
ARU	**Arti**	**50.36**	**317**	P	**P**	**17 39 44.8**	**-0.4**
	comp=Z,2.4nm,0.5s,baz=34,slow=7.2,SNR=9.9						
ARU				LR	LR	18 02 52.2	
	comp=Z,148nm,18.2s,baz=40,slow=38						
	comp=Z,2.4nm,0.5s						
ARU	**Arti**	**50.36**	**317**	P	**P**	**17 39 43.8**	**-1.4**
ARU				IAmb	IAmb	17 39 55.7	
	comp=Z,30nm,1.2s						
ARU	**Arti**	**50.36**	**317**	*d i*P	**P**	**17 39 45.1**	**-0.1**
ARU						17 41 38.8	
ARU				S	**S**	**17 47 00.4**	**+3.6**
ARU				SS	**SS**	**17 50 22.2**	**-7.6**
ARU				pmax	pmax		
	comp=Z,30nm,1.4s						
ARU				MLR	MLR		
	comp=Z,979nm,14.0s						
FAUS	**Fauske**	**50.42**	**346**	*e*P	**P**	**17 39 46.2**	**+0.7**
BGU	**Big Grassy Mou**	**50.55**	**75**	P	**P**	**17 39 46.5**	**-0.7**
DY2G	**Dye2**	**50.58**	**17**	*i* P	**P**	**17 39 48.1**	**+1.0**
DY2G				IAmb	IAmb	17 39 49.8	
	comp=Z,13nm,0.7s						
HWUT	**Hardware Ranch**	**50.71**	**73**	P	**P**	**17 39 49.0**	**+0.7**
HWUT				IAmb	IAmb	17 39 59.6	
	comp=Z,34nm,1.1s						
BW06	**Boulder Array**	**50.74**	**71**	P	**P**	**17 39 48.9**	**+0.2**
BW06				IAmb	IAmb	17 39 50.5	
	comp=Z,19nm,1.1s						
BW06	**Boulder Array**	**50.74**	**71**	P	**P**	**17 39 47.8**	**-0.9**
	baz=321,SNR=20						
PD31	**Pinedale Array**	**50.74**	**71**	P	**P**	**17 39 48.6**	**-0.1**
PDAR	**Pinedale Array**	**50.74**	**71**	P	**P**	**17 39 49.2**	**+0.6**
	comp=Z,6.8nm,0.8s,baz=323,slow=3.6,SNR=55						
PDAR				LR	LR	18 03 35.2	
	comp=Z,138nm,18.2s,baz=346,slow=39						
	comp=Z,6.8nm,0.8s						
PDAR	**Pinedale Array**	**50.74**	**71**	P	**P**	**17 39 48.4**	**-0.2**
TPH	**Tonopah**	**50.79**	**80**	P	**P**	**17 39 49.2**	**+0.2**
TPH	**Tonopah**	**50.79**	**80**	P	**P**	**17 39 49.2**	**+0.2**
TPH				pmax	pmax		
	comp=Z,84nm,0.9s						
GOMU	**GeErMu**	**50.79**	**276**	P	**P**	**17 39 48.7**	**-0.5**
GOMU				pP	pP	17 39 54.0	-1.3
GOMU				sP	sP	17 39 55.6	-2.1
GOMU				PP	**PP**	**17 41 49.4**	**+4.2**
GOMU				S	**S**	**17 46 57.0**	**-7.1**
GOMU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GOMU				pmax	pmax		
	comp=Z,89nm,4.7s						
GOMU				LR	LR		
	comp=Z,520nm,13.5s						
GOMU				LR	LR		
	comp=Z,580nm,12.0s						
GOMU				LR	LR		
	comp=Z,250nm,11.2s						
ULM	**Lac du Bonnet**	**50.87**	**55**	P	**P**	**17 39 49.9**	**+0.7**
	comp=Z,48nm,1.0s,baz=318,slow=8.0,SNR=23						
ULM				LR	LR	18 02 55.5	
	comp=Z,437nm,18.4s,baz=346,slow=38						
	comp=Z,48nm,1.0s						
ULM	**Lac du Bonnet**	**50.87**	**55**	P	**P**	**17 39 49.1**	**-0.1**
ULM				IAmb	IAmb	17 39 55.4	
	comp=Z,44nm,0.9s						
ULM	**Lac du Bonnet**	**50.87**	**55**	P	**P**	**17 39 49.1**	**-0.1**
ULM				pmax	pmax		
	comp=Z,44nm,1.0s						
DSP	**Deep Springs**	**50.98**	**82**	P	**P**	**17 39 51.4**	**+1.2**
MZP	**Montezuma Peak**	**51.01**	**81**	P	**P**	**17 39 51.3**	**+0.6**
Q12A	**Willow Creek R**	**51.18**	**78**	P	**P**	**17 39 52.4**	**+0.6**
Q12A				IAmb	IAmb	17 40 05.2	
	comp=Z,22nm,1.1s						
MDND	**Maddock**	**51.20**	**60**	P	**P**	**17 39 52.0**	**+0.3**
MDND	**Maddock**	**51.20**	**60**	P	**P**	**17 39 51.6**	**-0.1**
	baz=321,SNR=9.5						
MDND	**Maddock**	**51.20**	**60**	P	**P**	**17 39 53.3**	**+1.6**
	baz=321,SNR=9.5						
DUG	**Dugway, Tooele**	**51.23**	**75**	P	**P**	**17 39 52.5**	**+0.3**
DUG				IAmb	IAmb	17 39 58.8	
	comp=Z,19nm,0.9s						
DUG	**Dugway, Tooele**	**51.23**	**75**	P	**P**	**17 39 52.5**	**+0.3**
DUG				pmax	pmax		
	comp=Z,19nm,1.0s						
DUG	**Dugway, Tooele**	**51.23**	**75**	P	**P**	**17 39 51.2**	**-1.0**
	baz=322,SNR=17						
LCH	**Last Change Ra**	**51.25**	**81**	P	**P**	**17 39 52.6**	**+0.1**
LCH				IAmb	IAmb	17 39 59.3	
	comp=Z,20nm,1.0s						
CTU	**Camp Tracy**	**51.34**	**74**	P	**P**	**17 39 52.9**	**-0.1**
R11A	**Troy Canyon, C**	**51.36**	**79**	P	**P**	**17 39 53.1**	**-0.2**
R11A	**Troy Canyon, C**	**51.36**	**79**	P	**P**	**17 39 52.7**	**-0.6**
	baz=322,SNR=7.6						
SPR3	**Spring Creek 3**	**51.45**	**77**	P	**P**	**17 39 55.7**	**+1.6**
SPR3				IAmb	IAmb	17 40 01.5	
	comp=Z,31nm,1.0s						
KIRV	**Kirov**	**51.45**	**324**	LR	LR	18 03 46.1	
	comp=Z,527nm,20.2s,baz=21,slow=38						
KIRV	**Kirov**	**51.45**	**324**	*ce*P	**P**	**17 39 53.8**	**+0.4**
TDK	**Taldyqorghan**	**51.57**	**295**	*e*P	**P**	**17 39 53.5**	**-1.1**
	baz=295						
TDK				LR	LR	18 01 51.0	
	comp=Z,590nm,11.8s,baz=295						
TDK	**Taldyqorghan**	**51.57**	**295**	*e*P	**P**	**17 39 53.4**	**-1.1**
TDK				MLR	MLR		
	comp=Z,591nm,12.0s						
GRAC	**Grapevine Rang**	**51.57**	**81**		**P**	**17 39 54.3**	**-0.4**
GRAC				IAmb	IAmb	17 40 01.8	
	comp=Z,19nm,0.9s						
GRAC	**Grapevine Rang**	**51.57**	**81**	P	**P**	**17 39 55.0**	**+0.3**
	baz=323						
CWC	**Cottonwood Cre**	**51.67**	**82**	P	**P**	**17 39 56.2**	**+0.5**
	baz=323						
MOR8	**Moi Rana**	**51.68**	**346**	*e*P	**P**	**17 39 55.3**	**+0.3**
E28A	**Huff**	**51.73**	**61**	P	**P**	**17 39 57.5**	**+1.7**
	baz=322						
NLU	**North Lily Min**	**51.77**	**75**	P	**P**	**17 39 56.8**	**+0.5**
NLU				IAmb	IAmb	17 40 03.3	
	comp=Z,23nm,0.9s						
S11A	**Rachel**	**51.84**	**80**	P	**P**	**17 39 57.4**	**+0.6**
S11A				IAmb	IAmb	17 40 04.0	
	comp=Z,48nm,1.1s						
BSUT	**Blindstream Ca**	**51.93**	**73**	P	**P**	**17 39 58.2**	**+0.5**
BSUT				IAmb	IAmb	17 40 05.1	
	comp=Z,31nm,1.0s						
PKM	**Mcpherson Peak**	**52.07**	**85**	P	**P**	**17 39 58.2**	**-0.4**
	baz=324						
WCT	**Wildcat Mounta**	**52.09**	**81**	P	**P**	**17 39 59.4**	**+0.8**
ISA	**Isabella, Lake**	**52.10**	**83**	P	**P**	**17 39 58.5**	**-0.2**
ISA	**Isabella, Lake**	**52.10**	**83**	P	**P**	**17 39 58.5**	**-0.2**
ISA				pmax	pmax		
	comp=Z,22nm,1.5s						
ISA	**Isabella, Lake**	**52.10**	**83**	P	**P**	**17 39 59.1**	**+0.3**
	baz=324						
KLMR	**Klimovskoe**	**52.13**	**331**	*e*P	**P**	**17 39 57.4**	**-1.1**
KLMR				AMP		17 40 02.4	
	comp=Z,44nm,1.1s						
KLMR				LQ	LQ	17 57 33.2	
KLMR				LQ	LQ	17 57 33.2	
KLMR				LR	LR	18 00 32.1	
KLMR				AMP		18 05 34.1	
	comp=Z,726nm,16.4s						
KLMR	**Klimovskoe**	**52.13**	**331**	*e*P	**P**	**17 39 57.4**	**-1.1**
KLMR				pmax	pmax		
	comp=Z,44nm,1.1s						
KLMR				MLR	MLR		
	comp=Z,726nm,16.0s						
TPNV	**Topopah Spring**	**52.15**	**81**	P	**P**	**17 40 00.1**	**+0.9**
TPNV	**Topopah Spring**	**52.15**	**81**	P	**P**	**17 40 00.1**	**+0.9**
TPNV				pmax	pmax		
	comp=Z,11nm,1.1s						
TPNV	**Topopah Spring**	**52.15**	**81**	P	**P**	**17 39 59.3**	**+0.2**
	baz=323						
RSSD	**Black Hills**	**52.19**	**66**	P	**P**	**17 39 59.4**	**0.0**
RSSD				IAmb	IAmb	17 40 01.2	
	comp=Z,32nm,1.1s						
RSSD	**Black Hills**	**52.19**	**66**	P	**P**	**17 39 59.4**	**0.0**
RSSD				pmax	pmax		
	comp=Z,32nm,1.2s						
RSSD	**Black Hills**	**52.19**	**66**	P	**P**	**17 39 58.8**	**-0.6**
	baz=322						
RSSD	**Black Hills**	**52.19**	**66**	P	**P**	**17 39 60.0**	**+0.6**
	baz=322,SNR=14						
K22A	**Casper**	**52.22**	**69**	P	**P**	**17 39 60.0**	**+0.3**
K22A				IAmb	IAmb	17 40 01.4	
	comp=Z,53nm,1.3s						
K22A	**Casper**	**52.22**	**69**	P	**P**	**17 39 59.8**	**+0.2**
	baz=322						
K22A	**Casper**	**52.22**	**69**	P	**P**	**17 40 00.4**	**+0.7**
	baz=322						
FURC	**Furnace Creek,**	**52.24**	**81**	P	**P**	**17 39 59.7**	**+0.1**
	baz=323						
MPMC	**Manual Prospec**	**52.26**	**82**	P	**P**	**17 40 00.2**	**+0.2**
	baz=323,SNR=14						
PRN	**Pahroc Range**	**52.36**	**79**	P	**P**	**17 40 01.0**	**+0.3**
PRN				IAmb	IAmb	17 40 14.8	
	comp=Z,19nm,0.9s						
AGMN	**Agassiz Nation**	**52.40**	**57**	P	**P**	**17 40 00.9**	**+0.2**
AGMN				IAmb	IAmb	17 40 02.4	
	comp=Z,38nm,1.1s						
AGMN	**Agassiz Nation**	**52.40**	**57**	P	**P**	**17 40 00.2**	**-0.5**
	baz=322,SNR=14						
AGMN	**Agassiz Nation**	**52.40**	**57**	P	**P**	**17 40 01.5**	**+0.8**
	baz=322,SNR=14						
RDMU	**Red Mountain**	**52.46**	**73**	P	**P**	**17 40 02.0**	**+0.5**
RDMU				IAmb	IAmb	17 40 03.7	
	comp=Z,38nm,1.5s						
ANGG	**Ammassalik, Gr**	**52.47**	**13**	P	**P**	**17 40 02.6**	**+1.7**
ANGG				IAmb	IAmb	17 40 03.7	
	comp=Z,27nm,0.8s						
SBC	**Santa Barbara**	**52.48**	**85**	P	**P**	**17 40 01.9**	**+0.5**
	baz=324						
SHLS	**Shalkode**	**52.55**	**293**	*e*P	**P**	**17 39 59.5**	**-2.6**
	comp=Z,16nm,1.0s,baz=292						
SHLS	**Shalkode**	**52.55**	**293**	*e*P	**P**	**17 39 59.4**	**-2.6**
SHLS				pmax	pmax		
	comp=Z,16nm,1.0s						
GWY	**Greenwater Val**	**52.56**	**81**	P	**P**	**17 40 02.9**	**+0.7**
LRMC	**Laurel Mtn Rad**	**52.63**	**83**	P	**P**	**17 40 01.6**	**-1.1**
	baz=324,SNR=12						
QSM	**Queen of Sheba**	**52.64**	**82**	P	**P**	**17 40 03.3**	**+0.7**
QSM				IAmb	IAmb	17 40 09.9	
	comp=Z,30nm,1.2s						
KPKS	**Kokpek**	**52.65**	**294**	*e*P	**P**	**17 40 01.6**	**-1.1**
	baz=294						
KPKS	**Kokpek**	**52.65**	**294**	*e*P	**P**	**17 40 01.6**	**-1.1**
TCRU	**Three Creeks R**	**52.65**	**76**	P	**P**	**17 40 03.9**	**+0.9**
TCRU				IAmb	IAmb	17 40 10.1	
	comp=Z,16nm,0.7s						
TMUT	**Trail Mountain**	**52.70**	**75**	P	**P**	**17 40 03.7**	**+0.4**
UZB	**Uzynbulak**	**52.75**	**293**	*e*P	**P**	**17 40 02.1**	**-1.5**
	baz=293						
UZB	**Uzynbulak**	**52.75**	**293**	*e*P	**P**	**17 40 02.0**	**-1.5**
P17A	**Butcher Ranch,**	**52.78**	**74**	P	**P**	**17 40 04.5**	**+0.7**
MVU	**Marysvale**	**52.85**	**76**	P	**P**	**17 40 05.9**	**+1.4**
MSU	**Marysvale**	**52.86**	**76**	P	**P**	**17 40 05.9**	**+1.4**
MSU	**Marysvale**	**52.86**	**76**	P	**P**	**17 40 05.9**	**+1.4**
P18A	**Preston Nutter**	**52.89**	**74**	P	**P**	**17 40 05.3**	**+0.5**
EDW2	**Edwards Air Fo**	**52.96**	**84**	P	**P**	**17 40 05.5**	**+0.4**
	baz=324						
GYA	**Guiyang**	**53.00**	**258**	⇓P	**P**	**17 40 08.5**	**+3.0**
GYA				S	**S**	**17 47 31.6**	**-2.5**
GYA				pmax	pmax		
	comp=Z,19nm,0.8s						
GYA				pmax	pmax		
	comp=Z,170nm,3.5s						
GYA				LR	LR		
	comp=Z,510nm,19.8s						
GYA				LR	LR		
	comp=Z,400nm,25.9s						
GYA				LR	LR		
	comp=Z,260nm,20.8s						
Q16A	**Castle Valley**	**53.01**	**75**	P	**P**	**17 40 06.5**	**+0.9**
Q16A				IAmb	IAmb	17 40 13.1	
	comp=Z,23nm,1.1s						
SHPR	**Sheep Range**	**53.03**	**80**	P	**P**	**17 40 06.2**	**+0.6**
SATY	**Saty**	**53.10**	**294**	*e*P	**P**	**17 40 05.3**	**-0.7**
	baz=294						
SATY	**Saty**	**53.10**	**294**	*e*P	**P**	**17 40 05.3**	**-0.7**
CHKK	**Chushkaly**	**53.10**	**295**	*e*P	**P**	**17 40 04.7**	**-1.2**
	baz=295						
CHKK	**Chushkaly**	**53.10**	**295**	*e*P	**P**	**17 40 04.7**	**-1.2**
SRU	**San Rafael Swe**	**53.16**	**74**	P	**P**	**17 40 07.6**	**+0.9**
SRU				IAmb	IAmb	17 40 14.0	
	comp=Z,48nm,1.1s						
SRU	**San Rafael Swe**	**53.16**	**74**	P	**P**	**17 40 07.6**	**+0.9**
SRU				pmax	pmax		
	comp=Z,49nm,1.1s						
GSC	**Goldstone, Bar**	**53.20**	**82**	P	**P**	**17 40 07.5**	**+0.6**
GSC				IAmb	IAmb	17 40 14.1	
	comp=Z,28nm,1.1s						
GSC	**Goldstone, Bar**	**53.20**	**82**	P	**P**	**17 40 07.5**	**+0.6**
GSC				pmax	pmax		
	comp=Z,28nm,1.1s						
GSC	**Goldstone, Bar**	**53.20**	**82**	P	**P**	**17 40 07.0**	**+0.2**
	baz=324,SNR=13						
B35A	**Bob, Littlefor**	**53.22**	**55**	P	**P**	**17 40 07.4**	**+0.7**
	baz=323,SNR=14						
MTPU	**Mount Pierson**	**53.23**	**76**	P	**P**	**17 40 08.2**	**+0.9**
DECC	**Green Verdugo**	**53.30**	**84**	P	**P**	**17 40 08.0**	**+0.4**
	baz=324						
KUU	**Kurty**	**53.36**	**296**	*e*P	**P**	**17 40 05.9**	**-1.9**
	baz=296						
KUU				LR	LR	18 03 16.1	
	comp=Z,283nm,9.2s,baz=296						
KUU	**Kurty**	**53.36**	**296**	*e*P	**P**	**17 40 05.9**	**-1.9**
KUU				MLR	MLR		
	comp=Z,283nm,9.0s						
O20A	**White River Ci**	**53.42**	**72**	P	**P**	**17 40 08.8**	**+0.2**
O20A				IAmb	IAmb	17 40 19.9	
	comp=Z,40nm,1.1s						
O20A	**White River Ci**	**53.42**	**72**	P	**P**	**17 40 08.5**	**-0.1**
	baz=323,SNR=6.4						
BTLS	**Baital**	**53.45**	**298**	*e*P	**P**	**17 40 06.6**	**-1.9**
	baz=298						
BTLS	**Baital**	**53.45**	**298**	*e*P	**P**	**17 40 06.5**	**-1.9**
TUQ	**Turquoise Moun**	**53.52**	**81**	P	**P**	**17 40 08.6**	**-0.7**
	baz=324,SNR=9.0						
LCMT	**Little Creek M**	**53.55**	**78**	P	**P**	**17 40 10.3**	**+0.8**
NSS	**Namsos**	**53.55**	**347**	*e*P	**P**	**17 40 10.4**	**+1.6**
MDOK	**Medeo**	**53.62**	**295**	*e*P	**P**	**17 40 09.1**	**-0.9**
	baz=295						
MDOK				LR	LR	18 02 57.5	
	comp=Z,531nm,13.0s,baz=295						
MDOK	**Medeo**	**53.62**	**295**	*e*P	**P**	**17 40 09.0**	**-0.9**
MDOK				MLR	MLR		
	comp=Z,531nm,13.0s						
PKCU	**Pink Cliffs**	**53.65**	**77**	P	**P**	**17 40 11.4**	**+1.0**
PKCU				IAmb	IAmb	17 40 17.6	
	comp=Z,26nm,1.2s						
KNB	**Kanab**	**53.74**	**78**	P	**P**	**17 40 11.9**	**+1.0**
KNB				IAmb	IAmb	17 40 18.0	
	comp=Z,18nm,1.0s						
KNB	**Kanab**	**53.74**	**78**	P	**P**	**17 40 11.9**	**+1.0**
KNB				pmax	pmax		
	comp=Z,18nm,1.0s						
V12A	**Nelson**	**53.80**	**80**	P	**P**	**17 40 12.6**	**+1.3**
V12A				IAmb	IAmb	17 40 18.4	
	comp=Z,16nm,1.0s						
HEC	**Hector,Ludlow**	**53.81**	**82**	P	**P**	**17 40 10.6**	**-0.7**
	baz=324						
BBRC	**Big Bear Solar**	**53.98**	**83**	P	**P**	**17 40 12.6**	**-0.2**
	baz=324						
GMRC	**Granite Mounta**	**54.17**	**82**	P	**P**	**17 40 13.6**	**-0.4**
	baz=324,SNR=14						
F33A	**5 Mile Ranch,**	**54.18**	**59**	P	**P**	**17 40 14.6**	**+0.8**
	baz=323,SNR=5.5						
MURC	**Murrieta**	**54.38**	**84**	P	**P**	**17 40 14.9**	**-0.6**
	baz=324						
PV23	**Carpenter Ridg**	**54.40**	**74**	P	**P**	**17 40 16.3**	**+0.4**
PV23				IAmb	IAmb	17 40 22.3	
	comp=Z,35nm,1.1s						
FIA1	**FINESS Array S**	**54.43**	**338**	P	**P**	**17 40 14.9**	**-0.4**
FIA1				IAmb	IAmb	17 40 20.8	
	comp=Z,31nm,1.0s						
FINES	**FINESS Array B**	**54.43**	**338**	P	**P**	**17 40 14.8**	**-0.6**
	comp=Z,23nm,0.9s,baz=32,slow=7.6,SNR=15						
FINES				LR	LR	18 06 52.4	
	comp=Z,259nm,18.6s,baz=38,slow=40						
	comp=Z,23nm,0.9s						
FINES	**FINESS Array B**	**54.43**	**338**	P	**P**	**17 40 14.5**	**-0.9**
FINES	**FINESS Array B**	**54.43**	**338**	*i* P	**P**	**17 40 15.3**	**-0.1**
FINES				pmax	pmax		
	comp=Z,23nm,0.9s						
EYMN	**Ely**	**54.45**	**54**	P	**P**	**17 40 16.0**	**+0.3**
EYMN				IAmb	IAmb	17 40 22.4	
	comp=Z,31nm,1.0s						
EYMN	**Ely**	**54.45**	**54**	P	**P**	**17 40 14.7**	**-1.0**
	baz=324,SNR=7.2						
EYMN	**Ely**	**54.45**	**54**	P	**P**	**17 40 16.7**	**+1.0**
	baz=324,SNR=7.2						
PV10	**Paradox Valley**	**54.45**	**74**	P	**P**	**17 40 17.0**	**+0.8**
PV10				IAmb	IAmb	17 40 23.2	
	comp=Z,37nm,1.2s						
TKM2	**Tokmak 2**	**54.46**	**296**	P	**P**	**17 40 18.9**	**+2.8**
	SNR=5.0						
SGDS	**Sogindy**	**54.46**	**297**	*e*P	**P**	**17 40 15.1**	**-0.9**
	baz=296						
SGDS	**Sogindy**	**54.46**	**297**	*e*P	**P**	**17 40 15.0**	**-0.9**
U15A	**North Rim**	**54.47**	**78**	P	**P**	**17 40 17.7**	**+1.4**
U15A				IAmb	IAmb	17 40 23.9	
	comp=Z,33nm,1.2s						
BORG	**Borgarnes**	**54.53**	**5**	LR	LR	18 03 57.7	
	comp=Z,174nm,18.5s,baz=356,slow=36						
PV07	**Paradox Valley**	**54.58**	**73**	P	**P**	**17 40 17.6**	**+0.5**
PV07				IAmb	IAmb	17 40 19.1	
	comp=Z,24nm,1.1s						
PV11	**David Mesa, Pa**	**54.59**	**74**	P	**P**	**17 40 17.5**	**+0.4**
BELC	**Belle Mtn. Jos**	**54.64**	**83**	P	**P**	**17 40 16.4**	**-1.1**
	baz=324						
USP	**Ospenovka**	**54.66**	**297**	P	**P**	**17 40 20.5**	**+3.1**
	SNR=6.4						
NEE2	**Needles Airpor**	**54.69**	**81**	P	**P**	**17 40 18.0**	**+0.4**
	baz=324						
PV13	**Radium Mtn., P**	**54.73**	**74**	P	**P**	**17 40 18.9**	**+0.7**
PV13				IAmb	IAmb	17 40 20.2	
	comp=Z,32nm,1.0s						
PFO	**Pinyon Flats O**	**54.73**	**83**	LR	LR	18 01 15.3	
	comp=Z,312nm,20.6s,baz=316,slow=33						
PFO	**Pinyon Flats O**	**54.73**	**83**	P	**P**	**17 40 18.7**	**+0.6**
PFO				IAmb	IAmb	17 40 24.3	
	comp=Z,20nm,1.1s						
PFO	**Pinyon Flats O**	**54.73**	**83**	P	**P**	**17 40 18.7**	**+0.6**
PFO				pmax	pmax		
	comp=Z,20nm,1.1s						
PFO	**Pinyon Flats O**	**54.73**	**83**	P	**P**	**17 40 16.8**	**-1.4**
	baz=324						
PV15	**Paradox Valley**	**54.74**	**73**	P	**P**	**17 40 18.9**	**+0.6**
PV15				IAmb	IAmb	17 40 25.2	
	comp=Z,31nm,1.0s						
TPFO	**Pinon Flats**	**54.74**	**83**	P	**P**	**17 40 17.3**	**-0.9**
	baz=324						
CHMS	**Chumysh**	**54.77**	**296**	P	**P**	**17 40 20.9**	**+2.8**
	SNR=5.6						
W13A	**Hualapai Mount**	**54.77**	**80**	P	**P**	**17 40 19.0**	**+0.5**
ISCO	**Idaho Springs**	**54.90**	**70**	P	**P**	**17 40 19.1**	**-0.4**
ISCO	**Idaho Springs**	**54.90**	**70**	P	**P**	**17 40 19.1**	**-0.4**
ISCO				pmax	pmax		
	comp=Z,17nm,1.3s						
ISCO	**Idaho Springs**	**54.90**	**70**	P	**P**	**17 40 18.3**	**-1.2**
	baz=324,SNR=8.4						
ISCO	**Idaho Springs**	**54.90**	**70**	P	**P**	**17 40 21.0**	**+1.5**
	baz=324,SNR=8.4						
IRM	**Iron Mountain**	**54.93**	**82**	P	**P**	**17 40 19.5**	**+0.1**
	baz=324,SNR=36						
TBLU	**Trondheim**	**54.97**	**348**	*e*P	**P**	**17 40 19.1**	**-0.1**
109C	**Camp Elliot, M**	**55.01**	**84**	P	**P**	**17 40 20.8**	**+0.9**
	baz=325						
AAK	**Ala-Archa**	**55.17**	**296**	P	**P**	**17 40 24.3**	**+3.1**
	SNR=8.0						
AAK	**Ala-Archa**	**55.17**	**296**	P	**P**	**17 40 21.1**	**-0.1**
	comp=Z,7.6nm,0.8s,baz=90,slow=4.1,SNR=22						
AAK				LR	LR	18 05 56.4	
	comp=Z,1µm,19.0s,baz=30,slow=38						
	comp=Z,7.6nm,0.8s						
AAK	**Ala-Archa**	**55.17**	**296**	P	**P**	**17 40 21.1**	**-0.1**
AAK	**Ala-Archa**	**55.17**	**296**	*ce*P	**P**	**17 40 21.4**	**+0.2**
AAK				pmax	pmax		
	comp=Z,26nm,1.7s						
AAK				MLR	MLR		
	comp=Z,1µm,16.0s						
BC3	**Big Chuckawall**	**55.19**	**82**	P	**P**	**17 40 22.5**	**+1.1**
	baz=325						
PDMCI	**Parker Dam,Lak**	**55.30**	**81**	P	**P**	**17 40 23.2**	**+1.2**
	baz=324						
F36A	**Milaca**	**55.31**	**57**	P	**P**	**17 40 22.8**	**+0.8**
	baz=324,SNR=12						
PZH	**PanZhiHua**	**55.34**	**263**	P	**P**	**17 40 21.6**	**-0.9**
PZH				pP	**pP**	**17 40 27.0**	**-1.7**
PZH				S	**S**	**17 48 03.8**	**-1.9**
PZH				ScS	**ScS**	**17 50 06.2**	**-4.4**
PZH				pmax	pmax		
	comp=Z,20nm,1.2s						
PZH				pmax	pmax		
	comp=Z,220nm,5.3s						
PZH				LR	LR		
	comp=Z,380nm,14.9s						
PZH				LR	LR		
	comp=Z,540nm,15.3s						
PZH				LR	LR		
	comp=Z,360nm,15.1s						
MONP2	**Monument Peak**	**55.34**	**84**	P	**P**	**17 40 22.8**	**+0.2**
	baz=325						
AKTO	**Aktyubinsk**	**55.44**	**313**	LR	LR	18 07 29.2	
	comp=Z,658nm,18.4s,baz=22,slow=40						
EKS2	**Erkin-Say**	**55.47**	**297**	P	**P**	**17 40 26.5**	**+3.2**
	SNR=6.3						
BLYC	**Blythe**	**55.56**	**81**	P	**P**	**17 40 25.2**	**+1.3**
BLYC				IAmb	IAmb	17 40 30.9	
	comp=Z,36nm,1.1s						

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RAF   Rauma              55.57 340 eP     P      17 40 24.8 +1.2
SWSC  Sam W. Stewart     55.59  83  P     P      17 40 25.4 +1.2
      baz=325
OGNE  Ogallala           55.61  67  P     P      17 40 24.3  0.0
OGNE  Ogallala           55.61  67  P     P      17 40 24.3  0.0
      baz=324
MVCO  Mesa Verde         55.64  74  P     P      17 40 25.6 +0.8
      baz=324
WUAZ  Wupatki            55.64  78  P     P      17 40 25.5 +0.8
WUAZ                                IAmb  IAmb   17 40 32.4
      comp=Z,36nm,1.1s
WUAZ  Wupatki            55.64  78  P     P      17 40 25.2 +0.5
      baz=324,SNR=10.0
IKP   In-Ko-Pah, Jac     55.69  84  P     P      17 40 26.1 +1.2
      baz=325
CBX   Cerro Bola         55.69  84  P     P      17 40 24.6 -0.4
ABKAR Akbulak array      55.71 311  P     P      17 40 23.4 -1.3
ABKAR Akbulak array      55.71 311  P     P      17 40 24.2 -0.6
ABKAR                               IAmb  IAmb   17 40 36.0
      comp=Z,10.0nm,0.8s
ECSD  EROS Data Cent     55.74  61  P     P      17 40 24.9 -0.2
ECSD                                IAmb  IAmb   17 40 27.5
      comp=Z,55nm,1.6s
ECSD  EROS Data Cent     55.74  61  P     P      17 40 24.4 -0.8
      baz=324,SNR=13
ECSD  EROS Data Cent     55.74  61  P     P      17 40 25.8 +0.7
      baz=324,SNR=13
RMX   La Rumorosa        55.74  84  P     P      17 40 26.2 +0.8
RMX                                 IAmb  IAmb   17 40 33.0
      comp=Z,30nm,1.5s
YUH   Yuha Desert        55.78  83  P     P      17 40 25.2 -0.3
Q24A  Divide             55.79  70  P     P      17 40 25.9  0.0
Q24A                                IAmb  IAmb   17 40 36.4
      comp=Z,45nm,1.9s
Q24A  Divide             55.79  70  P     P      17 40 25.2 -0.7
      baz=324
MEF   Metsahovi          55.88 339 eP     P      17 40 27.3 +1.5
MOL   Molde              55.91 349 eP     P      17 40 26.6 +0.6
GLA   Glamis             55.98  82  P     P      17 40 28.0 +1.0
GLA                                 IAmb  IAmb   17 40 33.8
      comp=Z,24nm,1.0s
GLA   Glamis             55.98  82  P     P      17 40 28.0 +1.0
GLA                                 pmax  pmax
      comp=Z,24nm,1.0s
GLA   Glamis             55.98  82  P     P      17 40 28.6 +1.6
      baz=325
S22A  4UR Ranch, Cre     55.99  73  P     P      17 40 28.2 +0.9
S22A  4UR Ranch, Cre     55.99  73  P     P      17 40 27.9 +0.5
      baz=324,SNR=6.3
KMI   Kunming            56.01 261 ⇑P     P      17 40 27.1 -0.4
KMI                                 pP    pP     17 40 32.9 -0.8
KMI                                 S     S      17 48 19.3 +4.4
KMI                                 ScS   ScS    17 50 16.0 +0.3
KMI                                 pmax  pmax
      comp=Z,28nm,0.8s
KMI                                 LR    LR
      comp=Z,400nm,13.1s
KMI                                 LR    LR
      comp=Z,370nm,12.3s
KMI                                 LR    LR
      comp=Z,290nm,24.0s
SPMN  Marine on St.      56.12  57  P     P      17 40 28.3 +0.5
SPMN                                IAmb  IAmb   17 40 29.5
      comp=Z,34nm,0.9s
SPMN  Marine on St.      56.12  57  P     P      17 40 29.0 +1.1
      baz=325,SNR=5.7
SPMN  Marine on St.      56.12  57  P     P      17 40 29.0 +1.1
      baz=325,SNR=5.7
Y14A  Wickenburg         56.14  80  P     P      17 40 29.0 +0.9
DOMB  Dombas             56.28 348 eP     P      17 40 28.0 -0.7
DOMB                                IAmb  IAmb   17 40 31.8
      comp=Z,26nm,0.9s
ESJX  Sierra Juarez      56.29  84  P     P      17 40 29.5 +0.1
ESJX                                IAmb  IAmb   17 40 36.1
      comp=Z,17nm,1.1s
KK31  Karatay Array      56.52 299  P     P      17 40 29.8 -0.9
KK31  Karatay Array      56.52 299  P     P      17 40 29.8 -0.9
KK31                                pmax  pmax
      comp=Z,13nm,1.1s
KKAR  Karatay Array      56.52 299  P     P      17 40 30.2 -0.5
KKAR  Karatay Array      56.52 299  P     P      17 40 30.3 -0.4
KKAR  Karatay Array      56.52 299  P     P      17 40 30.2 -0.5
KKAR                                pmax  pmax
      comp=Z,13nm,1.1s
SDCO  Great Sand Dun     56.61  72  P     P      17 40 31.7 -0.1
SDCO                                IAmb  IAmb   17 40 39.5
      comp=Z,24nm,1.5s
SDCO  Great Sand Dun     56.61  72  P     P      17 40 31.9 +0.1
      baz=324
SDCO  Great Sand Dun     56.61  72  P     P      17 40 33.4 +1.7
      baz=324
113A  Mohawk Valley,     56.73  82  P     P      17 40 33.2 +1.0
113A                                IAmb  IAmb   17 40 38.9
      comp=Z,18nm,1.1s
W18A  Petrified Fore     56.75  77  P     P      17 40 32.8 +0.2
W18A                                IAmb  IAmb   17 40 44.2
      comp=Z,18nm,1.1s
W18A  Petrified Fore     56.75  77  P     P      17 40 32.4 -0.2
      baz=325
NC303 NORSAR Array S     56.83 346  P     P      17 40 32.0 -0.6
NC303                               IAmb  IAmb   17 40 36.5
      comp=Z,30nm,0.9s
NC204 NORSAR Array S     56.85 347  P     P      17 40 32.4 -0.4
I37B  Waseca             56.87  58  P     P      17 40 34.4 +1.3
      baz=325
NC405 NORSAR Array S     56.90 346  P     P      17 40 32.5 -0.6
KSCO  Kaye Shedlock'     56.91  68  P     P      17 40 35.0 +1.3
      baz=324
SCHQ  Schefferville      56.95  34  P     P      17 40 33.3 -0.3
      comp=Z,16nm,0.8s,baz=327,slow=5.9,SNR=18
SCHQ                                LR    LR     18 09 34.2
      comp=Z,247nm,18.1s,baz=306,slow=41
      comp=Z,16nm,0.8s
SCHQ  Schefferville      56.95  34  P     P      17 40 32.6 -0.9
BGNE  Belgrade           56.96  63  P     P      17 40 33.6 -0.3
BGNE  Belgrade           56.96  63  P     P      17 40 34.6 +0.8
      baz=325
NB201 NORSAR Array S     57.01 346  P     P      17 40 33.0 -0.9
NB2   NORSAR Subarra     57.03 346  P     P      17 40 33.4 -0.7
      comp=Z,27nm,0.8s,baz=14,slow=7.4
NB2   NORSAR Subarra     57.03 346  P     P      17 40 33.4 -0.7
      slow=7.4
NOA   NORSAR Array B     57.03 346  P     P      17 40 33.9 -0.1
      comp=Z,23nm,0.9s,baz=14,slow=7.3,SNR=21
NOA                                 LR    LR     18 06 44.8
      comp=Z,134nm,18.5s,baz=0.0,slow=38
      comp=Z,23nm,0.9s
KSH   Kashi              57.03 293  P     P      17 40 38.4 +3.9
KSH                                 pP    sP     17 40 44.8 +1.8
KSH                                 pmax  pmax
      comp=Z,11nm,1.1s
KSH                                 LR    LR
      comp=Z,790nm,17.2s
KSH                                 LR    LR
      comp=Z,1µm,18.1s
KSH                                 LR    LR
      comp=Z,1µm,15.0s
VSU   Vasula             57.08 337 i P    P      17 40 34.6 +0.2
VSU                                 pmax  pmax
      comp=Z,178nm,1.1s
VSU                                 MLR   MLR
      comp=Z,858nm,21.0s
NBO00 NORSAR Array S     57.09 347  P     P      17 40 34.1 -0.3
X18A  Snowflake          57.12  77  P     P      17 40 36.7 +1.4
MOS   Moscow             57.13 329 eP     P      17 40 33.2 -1.6
MOS                                e             17 42 43.5
MOS                                eS     S      17 48 31.4 +2.9
MOS                                 pmax  pmax
      comp=Z,35nm,0.8s
MOS                                 MLR   MLR
      comp=Z,2µm,16.0s
G40A  Rib Lake           57.15  55  P     P      17 40 35.6 +0.5
      baz=326,SNR=7.7
BELG  Belogornoye        57.26 321  LR    LR     18 09 21.0
      comp=Z,221nm,19.7s,baz=343,slow=40
BELG  Belogornoye        57.26 321 i P    P      17 40 35.8 +0.1
BELG                                pmax  pmax
      comp=Z,13nm,1.1s
BELG                                MLR   MLR
      comp=Z,49nm,9.0s
NAO01 NORSAR Array S     57.26 347  P     P      17 40 35.3 -0.3
NC602 NORSAR Array S     57.29 346  P     P      17 40 38.2 +2.3
NC602 NORSAR Array S     57.29 346 eP     P      17 40 35.7 -0.1
NC602                               IAmb  IAmb   17 40 39.1
      comp=Z,24nm,0.9s
UPP   Uppsala            57.33 342 eP     P      17 40 35.0 -1.0
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MTSE  Matsula            57.40 338 eP     P      17 40 35.5 -1.1
IUG   Iuzhnay            57.50 299 eP     P      17 40 36.9 -0.9
      comp=Z,12nm,1.1s,baz=299
IUG   Iuzhnay            57.50 299 eP     P      17 40 36.9 -0.9
IUG                                 pmax  pmax
      comp=Z,12nm,1.1s
HFS   Hagfors            57.61 345  P     P      17 40 37.3 -0.8
      comp=Z,20nm,0.8s,baz=46,slow=4.3,SNR=14
HFS                                 LR    LR     18 06 34.9
      comp=Z,183nm,19.1s,baz=3.5,slow=37
      comp=Z,20nm,0.8s
T25A  Trinidad           57.61  71  P     P      17 40 39.3 +0.6
T25A                                IAmb  IAmb   17 40 41.0
      comp=Z,22nm,1.1s
T25A  Trinidad           57.61  71  P     P      17 40 39.4 +0.7
      baz=325
SKAR  Skarslia           57.70 348 eP     P      17 40 39.3 +0.5
SKAR                                IAmb  IAmb   17 40 42.5
      comp=Z,24nm,1.2s
N33B  J Bar K, Exete     57.81  63  P     P      17 40 41.1 +1.2
      baz=325
214A  Organ Pipe Nat     57.85  81  P     P      17 40 39.3 -0.9
214A  Organ Pipe Nat     57.85  81  P     P      17 40 41.9 +1.6
      baz=326
LSA   Lhasa              57.85 274  P     P      17 40 39.2 -1.6
LSA   Lhasa              57.85 274  P     P      17 40 39.3 -1.6
LSA                                 pmax  pmax
      comp=Z,15nm,1.4s
QIZ   Qiongzhong         57.87 250  P     P      17 40 38.6 -1.8
QIZ                                 sP    pP     17 40 45.9 -0.7
QIZ                                 PP    PP     17 42 50.9 +2.3
QIZ                                 S     S      17 48 42.1 +3.1
QIZ                                 SS    SS     17 52 33.8 +4.2
QIZ                                 pmax  pmax
      comp=Z,250nm,2.3s
QIZ                                 LR    LR
      comp=Z,340nm,20.7s
QIZ                                 LR    LR
      comp=Z,510nm,19.1s
QIZ                                 LR    LR
      comp=Z,360nm,13.5s
OBN   Obninsk            57.96 329  LR    LR     18 09 45.6
      comp=Z,254nm,18.5s,baz=10,slow=40
OBN   Obninsk            57.96 329  P     P      17 40 39.8 -0.8
OBN                                 IAmb  IAmb   17 40 43.8
      comp=Z,29nm,1.0s
OBN   Obninsk            57.96 329ceP     P      17 40 40.8 +0.2
OBN                                i             17 40 42.8
OBN                                e             17 42 46.4
OBN                                 pmax  pmax
      comp=Z,53nm,1.7s
OBN                                 MLR   MLR
      comp=Z,2µm,17.0s
I40A  Norwalk            58.11  56  P     P      17 40 42.7 +0.8
      baz=326
TNCH  TengChong          58.14 265  P     P      17 40 42.9 +0.4
TNCH                                PcP   PcP    17 41 32.0 -2.0
TNCH                                PP    PP     17 42 54.0 +2.9
TNCH                                S     S      17 48 43.0 +0.1
TNCH                                SS    SS     17 52 31.4 -2.6
TNCH                                pmax  pmax
      comp=Z,10.0nm,1.0s
TNCH                                pmax  pmax
      comp=Z,77nm,4.1s
TNCH                                LR    LR
      comp=Z,280nm,10.3s
TNCH                                LR    LR
      comp=Z,310nm,11.4s
TNCH                                LR    LR
      comp=Z,250nm,11.2s
OSL   Oslo               58.16 346 eP     P      17 40 42.4 +0.4
ASK   Askoy              58.19 350 eP     P      17 40 43.0 +0.9
BER   Bergen             58.27 350 eP     P      17 40 44.1 +1.4
CBKS  Cedar Bluff        58.37  66  P     P      17 40 43.9 +0.1
CBKS  Cedar Bluff        58.37  66  P     P      17 40 43.9 +0.1
CBKS                                pmax  pmax
      comp=Z,40nm,0.9s
CBKS  Cedar Bluff        58.37  66  P     P      17 40 43.8 +0.1
      baz=325
ANMO  Albuquerque        58.44  74  LR    LR     18 06 00.4
      comp=Z,168nm,18.2s,baz=65,slow=36
ANMO  Albuquerque        58.44  74  P     P      17 40 44.8 +0.3
ANMO  Albuquerque        58.44  74  P     P      17 40 44.8 +0.3
ANMO                                pmax  pmax
      comp=Z,12nm,1.2s
ANMO  Albuquerque        58.44  74  P     P      17 40 45.0 +0.4
      baz=325
ANMO  Albuquerque        58.44  74  P     P      17 40 45.9 +1.4
      baz=325,SNR=7.2
N35A  Tabor              58.50  62  P     P      17 40 45.7 +1.1
      baz=325
TUC   Tucson             58.54  79  P     P      17 40 45.0 -0.1
TUC   Tucson             58.54  79  P     P      17 40 45.0 -0.1
TUC                                 pmax  pmax
      comp=Z,11nm,1.3s
TUC   Tucson             58.54  79  P     P      17 40 45.1  0.0
      baz=326
KONO  Kongsberg          58.57 347  P     P      17 40 45.4 +0.6
KONO  Kongsberg          58.57 347  P     P      17 40 45.4 +0.6
KONO                                pmax  pmax
      comp=Z,38nm,1.0s
KONO  Kongsberg          58.57 347 eP     P      17 40 45.5 +0.7
KONO                                IAmb  IAmb   17 40 48.7
      comp=Z,37nm,0.9s
ODD1  Odda               58.62 349 eP     P      17 40 46.2 +1.0
SCIA  State Center       58.67  60  P     P      17 40 45.1 -0.7
      baz=326
JFWS  Jewell Farm        59.07  57  P     P      17 40 46.2 -2.4
      baz=326
G45A  Suttons Bay        59.12  52  P     P      17 40 49.6 +0.7
      baz=327
G45A                                P     P      17 40 49.6 +0.7
      baz=327
L40A  Anamosa            59.38  58  P     P      17 40 50.1 -0.6
      baz=326,SNR=6.8
KSU1  Kansas State U     59.52  64  P     P      17 40 50.3 -1.4
      baz=326
LPSR  Galich'ya Gora     59.60 326 eP     P      17 40 50.7 -1.4
LPSR                                pmax  pmax
      comp=Z,50nm,1.0s
121A  Cookes Peak, D     59.79  77  P     P      17 40 52.5 -1.5
      baz=326
ISAL  Salakas            59.91 336 eP     P      17 40 52.6 -1.5
GAR   Garm               59.97 297  P     P      17 40 54.4 -0.5
GAR                                 IAmb  IAmb   17 40 58.8
      comp=Z,25nm,0.9s
319A  Douglas            60.03  79  P     P      17 40 55.9 +0.4
319A                                IAmb  IAmb   17 41 02.6
      comp=Z,32nm,1.1s
L42A  Oliver, Polo       60.07  57  P     P      17 40 55.0 -0.5
      baz=327
VRH   Novokhopyorsk      60.07 324 eP     P      17 40 54.4 -0.9
VRH                                 pmax  pmax
      comp=Z,20nm,0.9s
IIGN  Ignalina           60.09 336 eP     P      17 40 50.9 -4.5
VORR  Voronezh           60.36 326 eP     P      17 40 56.9 -0.4
VORR                                pmax  pmax
      comp=Z,30nm,0.4s
PABE  Paberze            60.39 337  P     P      17 40 58.2 +0.8
PABE  Paberze            60.39 337 eP     P      17 40 58.9 +1.5
NACGM Naroch             60.40 335 eP     P      17 40 56.8 -0.7
      comp=E,840nm,0.9s
P38A  Dawn               60.43  61  P     P      17 40 58.0  0.0
      baz=326,SNR=7.0
NOKA  Waynoka            60.52  67  P     P      17 40 57.3 -1.4
MNK   Minsk              60.54 334 i P    P      17 40 57.9 -0.6
      comp=E,3.0nm,1.1s
MNK                                i P    P      17 40 57.9 -0.6
      comp=N,55nm,1.0s
MNK                                i P    P      17 40 57.9 -0.6
      comp=Z,57nm,0.9s,baz=21
MNK                                i PP   PP     17 43 09.6 -1.8
MNK                                i PPP  PPP    17 44 30.8
MNK                                i S    S      17 49 10.0 -2.7
MNK                                i SS   SS     17 53 05.2 -4.8
MNK                                i SSS  SSS    17 55 37.3
MNK                                i LQ   LQ     18 02 25.6
MNK                                i LR   LR     18 06 50.3
MNK                                i LRM  MLR    18 11 00.1
      comp=Z,227nm,11.4s
MNK                                i LRM  MLR    18 11 06.0
      comp=N,365nm,13.6s
MNK                                i LRM  MLR    18 11 08.1
      comp=E,70nm,16.6s
MNK   Minsk              60.54 334 i P    P      17 40 57.9 -0.6
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MNK                                i             17 43 09.5
MNK                                i S    S      17 49 10.0 -2.7
MNK                                i SS   SS     17 53 05.1 -4.8
MNK                                 pmax  pmax
      comp=E,3.0nm,1.1s
MNK                                 pmax  pmax
      comp=Z,57nm,0.9s
MNK                                 pmax  pmax
      comp=N,55nm,1.0s
MNK                                 MLR   MLR
      comp=Z,227nm,11.0s
MNK                                 MLR   MLR
      comp=N,365nm,14.0s
MNK                                 MLR   MLR
      comp=E,70nm,17.0s
L44A  Lake County Fo     60.64  56  P     P      17 40 59.0 -0.3
L44A  Lake County Fo     60.64  56  P     P      17 40 58.8 -0.5
      baz=327
N41A  Harden Midland     60.66  59  P     P      17 40 59.5  0.0
      baz=327,SNR=6.2
CHGR  Chuyangaron        60.76 297  P     P      17 40 59.7 -0.6
CHGR  Chuyangaron        60.76 297  P     P      17 40 59.7 -0.6
CHGR                                pmax  pmax
      comp=Z,30nm,0.9s
VSR   Storozhevoye       60.78 325 eP     P      17 40 57.8 -2.4
VSR                                 pmax  pmax
      comp=Z,40nm,1.0s
MSTX  Muleshoe           60.97  72  P     P      17 41 00.3 -1.5
      baz=326
MSTX  Muleshoe           60.97  72  P     P      17 41 03.0 +1.1
      baz=326
I49A  Point Hope         61.14  51  P     P      17 41 02.2 -0.5
      baz=328
I49A                                P     P      17 41 02.2 -0.5
      baz=328
P40A  Paris              61.14  60  P     P      17 41 02.8  0.0
      baz=327,SNR=26
M44A  Midewin, Midew     61.25  56  P     P      17 41 03.4 -0.1
      baz=327
CRAI  Chiangrai          61.31 260  P     P      17 41 03.5 -0.7
CRAI                                IAmb  IAmb   17 41 15.0
      comp=Z,13nm,1.0s
HDIL  Hopedale           61.43  58  P     P      17 41 04.3 -0.5
HDIL  Hopedale           61.43  58  P     P      17 41 03.7 -1.0
      baz=327
HDIL  Hopedale           61.43  58  P     P      17 41 04.7 -0.1
      baz=327
TAPN  Taplejung          61.48 275 eP     P      17 41 07.4 +1.8
      comp=Z,26nm,0.9s
MNTX  Cornudas Mount     61.62  75  P     P      17 41 06.3 +0.1
      baz=326
LATQ  La Tuque           61.72  42  P     P      17 41 05.6 -1.0
OK029 Liberty Lake       61.88  67  P     P      17 41 08.0 +0.1
GUN   Gumba              61.90 277 eP     P      17 41 09.7 +1.2
      comp=Z,76nm,0.9s
JIRN  Jiri               61.96 277 eP     P      17 41 09.6 +0.6
DAV   Davao City (W)     62.01 228  LR    LR     18 05 39.2
      comp=Z,93nm,21.9s,baz=348,slow=34
R40A  Maddies Statio     62.08  61  P     P      17 41 08.9 -0.3
      baz=327,SNR=12
S39A  Bolivar            62.13  62  P     P      17 41 08.5 -1.0
      baz=327,SNR=15
TRQ   Mont Tremblant     62.14  44  P     P      17 41 08.9 -0.6
TRQ                                 IAmb  IAmb   17 41 13.9
      comp=Z,13nm,0.8s
WMOK  Wichita Mounta     62.17  68  P     P      17 41 09.9 +0.1
WMOK  Wichita Mounta     62.17  68  P     P      17 41 09.9 +0.1
WMOK                                pmax  pmax
      comp=Z,33nm,1.1s
WMOK  Wichita Mounta     62.17  68  P     P      17 41 09.6 -0.2
      baz=327,SNR=8.9
WMOK  Wichita Mounta     62.17  68  P     P      17 41 10.5 +0.7
      baz=327,SNR=8.9
AAM   Ann Arbor          62.22  52  P     P      17 41 10.2 +0.2
AAM   Ann Arbor          62.22  52  P     P      17 41 10.2 +0.2
AAM                                 pmax  pmax
      comp=Z,57nm,0.4s
L48A  N Adams            62.22  53  P     P      17 41 10.2 +0.1
      baz=328
L48A                                P     P      17 41 10.2 +0.1
      baz=328
DEOK  Depew              62.27  66  P     P      17 41 10.5  0.0
DEOK                                IAmb  IAmb   17 41 11.3
      comp=Z,22nm,1.1s
POST  Post               62.31  71  P     P      17 41 10.9  0.0
POST                                IAmb  IAmb   17 41 12.4
      comp=Z,22nm,1.1s
RAMN  Ramite             62.35 276 eP     P      17 41 11.8 +0.4
      comp=Z,24nm,0.6s
FNO   Franklin           62.36  67  P     P      17 41 11.2 +0.1
LMQ   La Malbaie         62.36  40  P     P      17 41 10.2 -0.7
PKI   Pulchoki           62.41 277 eP     P      17 41 11.4 -0.5
PKIN  Phulchoki          62.41 278 eP     P      17 41 11.3 -0.6
      comp=Z,2.6nm,0.4s
GKN   Gorkha             62.43 278 eP     P      17 41 11.6 -0.2
      comp=Z,31nm,1.0s
SFIN  Lafayette          62.48  56  P     P      17 41 11.0 -0.8
TUL1  Leonard            62.53  65  P     P      17 41 11.0 -1.3
TUL1                                IAmb  IAmb   17 41 13.2
      comp=Z,20nm,1.1s
TUL1  Leonard            62.53  65  P     P      17 41 10.7 -1.5
      baz=327
DELO  Deloro Mine        62.56  47  P     P      17 41 10.7 -1.6
DELO                                IAmb  IAmb   17 41 20.1
      comp=Z,45nm,1.6s
DANN  Dangsing           62.56 279 eP     P      17 41 12.2 -0.7
      comp=Z,48nm,0.9s
ODSA  Odessa             62.61  73  P     P      17 41 11.6 -1.3
ODSA                                IAmb  IAmb   17 43 08.6
      comp=Z,73nm,0.2s
N47A  Urbana             62.62  55  P     P      17 41 12.5 -0.3
      baz=328,SNR=14
N47A                                P     P      17 41 12.5 -0.3
      baz=328,SNR=14
SLM   Saint Louis        62.65  59  P     P      17 41 12.2 -0.8
SLM   Saint Louis        62.65  59  P     P      17 41 12.2 -0.8
SLM                                 pmax  pmax
      comp=Z,23nm,0.7s
W35A  Tecumseh           62.68  67  P     P      17 41 12.0 -1.3
U38A  Gravette           62.71  64  P     P      17 41 13.1 -0.3
      baz=327,SNR=6.7
CCM   Cathedral Cave     62.72  61  P     P      17 41 12.7 -0.7
CCM   Cathedral Cave     62.72  61  P     P      17 41 12.7 -0.7
CCM                                 pmax  pmax
      comp=Z,33nm,1.1s
CCM   Cathedral Cave     62.72  61  P     P      17 41 10.9 -2.5
      baz=328
CCM   Cathedral Cave     62.72  61  P     P      17 41 13.1 -0.3
      baz=328,SNR=11
PHRA  Phrae              62.86 259  P     P      17 41 14.0 -0.6
HHAR  Hobbs              63.04  64  P     P      17 41 14.9 -0.7
P46A  Rosedale           63.08  57  P     P      17 41 15.6 -0.2
      baz=328
NIL   Nilore             63.10 291  P     P      17 41 15.1 -1.0
NIL   Nilore             63.10 291  P     P      17 41 15.1 -1.0
NIL                                 pmax  pmax
      comp=Z,31nm,1.1s
FVM   French Village     63.12  60  P     P      17 41 15.6 -0.5
FVM   French Village     63.12  60  P     P      17 41 15.6 -0.5
FVM                                 pmax  pmax
      comp=Z,38nm,0.8s
FVM   French Village     63.12  60  P     P      17 41 15.7 -0.5
      baz=328,SNR=13
PYUN  Piuthan            63.14 280 eP     P      17 41 15.6 -1.0
      comp=Z,54nm,1.0s
CHTO  Chiang Mai         63.21 260  P     P      17 41 16.3 -0.6
CHTO  Chiang Mai         63.21 260  P     P      17 41 16.3 -0.6
O48B  Farmland           63.37  55  P     P      17 41 15.6 -2.1
      baz=329,SNR=13
O48B  Farmland           63.37  55  P     P      17 41 17.2 -0.5
      baz=329,SNR=13
E62A  Clayton Lake       63.44  40  P     P      17 41 17.7 -0.4
      baz=333,SNR=9.8
E62A                                P     P      17 41 17.7 -0.4
      baz=333,SNR=9.8
CM31  Chiang Mai Arr     63.51 260  P     P      17 41 18.6 -0.3
CM31                                IAmb  IAmb   17 41 23.6
      comp=Z,9.8nm,0.7s
CMAR  Chiang Mai Arr     63.51 260  P     P      17 41 18.7 -0.2
      comp=Z,4.2nm,0.7s,baz=3.3,slow=6.0,SNR=23
CMAR                                LR    LR     18 11 51.1
      comp=Z,140nm,18.9s,baz=35,slow=39
      comp=Z,4.2nm,0.7s
CMAR  Chiang Mai Arr     63.51 260  P     P      17 41 17.8 -1.1
LOOK  Love County        63.51  68  P     P      17 41 17.9 -0.9
ABTX  Abilene, Hawle     63.53  70  P     P      17 41 18.3 -0.6
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ABTX	**Abilene, Hawle**	**63.53**	**70**	P	**P**	**17 41 17.3**	**-1.7**
	baz=327						
LONY	**Lake Ozonia**	**63.54**	**45**	P	**P**	**17 41 16.9**	**-1.9**
	baz=331						
T42A	**Van Buren**	**63.64**	**61**	P	**P**	**17 41 19.1**	**-0.4**
	baz=328						
O49A	**Covington**	**63.75**	**54**	P	**P**	**17 41 19.9**	**-0.3**
	baz=329						
O49A				P	**P**	**17 41 19.9**	**-0.3**
	baz=329						
ERPA	**Erie**	**63.77**	**50**	P	**P**	**17 41 19.0**	**-1.3**
ERPA	**Erie**	**63.77**	**50**	P	**P**	**17 41 18.6**	**-1.8**
	baz=330						
AKASG	**Malin Array Be**	**63.79**	**332**	P	**P**	**17 41 19.9**	**-0.3**
	comp=Z,28nm,0.9s,baz=24,slow=6.4,SNR=26						
AKASG				LR	LR	18 12 38.0	
	comp=Z,363nm,20.2s,baz=18,slow=39						
	comp=Z,28nm,0.9s						
AKASG	**Malin Array Be**	**63.79**	**332**	P	**P**	**17 41 19.2**	**-1.1**
AKASG				IAmb	IAmb	17 41 24.3	
	comp=Z,14nm,1.2s						
AKASG	**Malin Array Be**	**63.79**	**332**	P	**P**	**17 41 19.2**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,14nm,1.2s						
AKBB	**Malin Array Si**	**63.79**	**332**	P	**P**	**17 41 19.6**	**-0.7**
AKBB	**Malin Array Si**	**63.79**	**332**	*ce*P	**P**	**17 41 19.9**	**-0.4**
AKBB				pmax	pmax		
	comp=Z,51nm,1.0s						
X37A	**Clayton**	**63.83**	**66**	P	**P**	**17 41 21.1**	**+0.3**
X37A				IAmb	IAmb	17 41 29.6	
	comp=Z,43nm,1.6s						
PQI	**Presque Isle**	**63.87**	**39**	P	**P**	**17 41 19.9**	**-1.0**
AK05	**Malin Array Si**	**63.87**	**332**	P	**P**	**17 41 19.9**	**-1.0**
EKA	**Eskdalemuir Ar**	**63.89**	**354**	P	**P**	**17 41 21.4**	**+0.5**
	comp=Z,19nm,0.9s,baz=14,slow=6.1,SNR=17						
EKA				LR	LR	18 07 46.5	
	comp=Z,193nm,19.4s,baz=17,slow=35						
	comp=Z,19nm,0.9s						
BATG	**Bathurst New B**	**63.91**	**37**	P	**P**	**17 41 20.7**	**-0.6**
BATG				IAmb	IAmb	17 41 26.3	
	comp=Z,23nm,1.0s						
WVNY	**West Valley, N**	**64.03**	**49**	P	**P**	**17 41 21.7**	**-0.4**
	baz=330						
M53A	**WI Miller and**	**64.10**	**51**	P	**P**	**17 41 22.3**	**-0.2**
M53A	**WI Miller and**	**64.10**	**51**	P	**P**	**17 41 21.2**	**-1.4**
	baz=330						
PBMO	**Poplar Bluff**	**64.14**	**61**	P	**P**	**17 41 22.6**	**-0.2**
PBMO	**Poplar Bluff**	**64.14**	**61**	P	**P**	**17 41 22.6**	**-0.2**
	baz=328						
P49A	**Miami Univ. Ec**	**64.16**	**55**	P	**P**	**17 41 22.3**	**-0.7**
P49A	**Miami Univ. Ec**	**64.16**	**55**	P	**P**	**17 41 21.6**	**-1.4**
	baz=329,SNR=7.9						
P49A	**Miami Univ. Ec**	**64.16**	**55**	P	**P**	**17 41 22.4**	**-0.5**
	baz=329,SNR=7.9						
FCAR	**Ozark Folk Cen**	**64.16**	**62**	P	**P**	**17 41 22.2**	**-0.8**
KBL	**Kabul**	**64.25**	**295**	P	**P**	**17 41 22.2**	**-1.7**
KBL				IAmb	IAmb	17 41 26.4	
	comp=Z,12nm,1.1s						
KBL	**Kabul**	**64.25**	**295**	P	**P**	**17 41 22.2**	**-1.7**
KBL				pmax	pmax		
	comp=Z,12nm,1.1s						
ACSO	**Alum Creek Sta**	**64.25**	**53**	P	**P**	**17 41 22.9**	**-0.6**
ACSO				IAmb	IAmb	17 41 24.0	
	comp=Z,26nm,1.1s						
ACSO	**Alum Creek Sta**	**64.25**	**53**	P	**P**	**17 41 21.2**	**-2.3**
	baz=329						
ACSO	**Alum Creek Sta**	**64.25**	**53**	P	**P**	**17 41 23.2**	**-0.3**
	baz=329						
USIN	**University of**	**64.30**	**58**	P	**P**	**17 41 23.3**	**-0.5**
FW07	**Weatherford**	**64.32**	**69**	P	**P**	**17 41 24.5**	**+0.4**
FW07				IAmb	IAmb	17 43 22.1	
	comp=Z,19nm,0.5s						
TX31	**Lajitas Ar. Si**	**64.40**	**75**	P	**P**	**17 41 24.8**	**-0.1**
TX31	**Lajitas Ar. Si**	**64.40**	**75**	P	**P**	**17 41 26.0**	**+1.2**
	baz=327,SNR=8.7						
TX32	**Lajitas Array**	**64.40**	**75**	P	**P**	**17 41 24.8**	**-0.1**
TX32				IAmb	IAmb	17 41 32.1	
	comp=Z,20nm,1.4s						
TXAR	**Lajitas Array**	**64.41**	**75**	P	**P**	**17 41 25.3**	**+0.5**
	comp=Z,3.8nm,1.0s,baz=305,slow=4.4,SNR=19						
TXAR				LR	LR	18 09 27.8	
	comp=Z,247nm,18.7s,baz=335,slow=36						
	comp=Z,3.8nm,1.0s						
TXAR	**Lajitas Array**	**64.41**	**75**	P	**P**	**17 41 24.9**	**+0.1**
LCAR	**Lake Charles**	**64.43**	**62**	P	**P**	**17 41 23.6**	**-1.1**
PARMO	**Parma**	**64.53**	**60**	P	**P**	**17 41 25.1**	**-0.2**
WHAR	**Wooly Hollow**	**64.60**	**63**	P	**P**	**17 41 25.4**	**-0.4**
WCI	**Wyandotte Cave**	**64.64**	**57**	P	**P**	**17 41 25.7**	**-0.4**
WCI				IAmb	IAmb	17 41 32.3	
	comp=Z,14nm,0.8s						
WCI	**Wyandotte Cave**	**64.64**	**57**	P	**P**	**17 41 25.7**	**-0.4**
WCI				pmax	pmax		
	comp=Z,14nm,0.8s						
WCI	**Wyandotte Cave**	**64.64**	**57**	P	**P**	**17 41 23.8**	**-2.2**
	baz=329						
L56A	**Greenwood**	**64.65**	**48**	P	**P**	**17 41 25.4**	**-0.8**
	baz=331						
L56A				P	**P**	**17 41 25.4**	**-0.8**
	baz=331						
MIAR	**Mount Ida**	**64.66**	**64**	P	**P**	**17 41 26.0**	**-0.3**
MIAR				IAmb	IAmb	17 41 27.7	
	comp=Z,28nm,1.1s						
MIAR	**Mount Ida**	**64.66**	**64**	P	**P**	**17 41 26.0**	**-0.3**
MIAR				pmax	pmax		
	comp=Z,28nm,1.2s						
MIAR	**Mount Ida**	**64.66**	**64**	P	**P**	**17 41 24.1**	**-2.2**
	baz=328,SNR=8.1						
MIAR	**Mount Ida**	**64.66**	**64**	P	**P**	**17 41 26.7**	**+0.4**
	baz=328,SNR=8.1						
PKME	**Peaks-Kenny Pk**	**64.72**	**41**	P	**P**	**17 41 25.0**	**-1.5**
	baz=333						
LBNH	**Lisbon**	**64.77**	**43**	P	**P**	**17 41 23.6**	**-3.3**
	baz=332						
O52A	**Adamsville**	**64.79**	**52**	P	**P**	**17 41 26.7**	**-0.4**
	baz=330						
O52A				P	**P**	**17 41 26.7**	**-0.4**
	baz=330						
O53A	**New Philadelph**	**64.92**	**52**	P	**P**	**17 41 27.5**	**-0.4**
O53A				IAmb	IAmb	17 41 32.6	
	comp=Z,25nm,0.9s						
O53A	**New Philadelph**	**64.92**	**52**	P	**P**	**17 41 24.4**	**-3.5**
	baz=330						
UALR	**University of**	**65.01**	**63**	P	**P**	**17 41 28.4**	**-0.1**
UALR				IAmb	IAmb	17 41 34.0	
	comp=Z,17nm,1.1s						
X40A	**Basin Creek Fa**	**65.03**	**64**	P	**P**	**17 41 28.3**	**-0.4**
X40A	**Basin Creek Fa**	**65.03**	**64**	P	**P**	**17 41 28.1**	**-0.7**
	baz=328,SNR=8.9						
X40A				P	**P**	**17 41 28.1**	**-0.7**
	baz=328,SNR=8.9						
WHTX	**Lake Whitney,**	**65.07**	**69**	P	**P**	**17 41 26.7**	**-2.2**
	baz=328						
Z38A	**Mt. Pleasant**	**65.12**	**66**	P	**P**	**17 41 29.7**	**+0.4**
	baz=328						
Q51A	**Peebles**	**65.14**	**54**	P	**P**	**17 41 29.4**	**0.0**
	baz=330						
Q51A				P	**P**	**17 41 29.4**	**0.0**
	baz=330						
BINY	**Binghamton**	**65.17**	**47**	P	**P**	**17 41 25.6**	**-3.9**
	baz=331						
BINY	**Binghamton**	**65.17**	**47**	P	**P**	**17 41 28.4**	**-1.1**
	baz=331						
UTMT	**University of**	**65.17**	**60**	P	**P**	**17 41 29.6**	**0.0**
JCT	**Junction City**	**65.26**	**72**	P	**P**	**17 41 30.2**	**-0.1**
JCT				IAmb	IAmb	17 41 40.5	
	comp=Z,20nm,1.1s						
JCT	**Junction City**	**65.26**	**72**	P	**P**	**17 41 30.2**	**-0.1**
JCT				pmax	pmax		
	comp=Z,20nm,1.1s						
JCT	**Junction City**	**65.26**	**72**	P	**P**	**17 41 28.2**	**-2.1**
	baz=328						
HALT	**Halls**	**65.34**	**60**	P	**P**	**17 41 30.6**	**-0.1**
RETH	**Rethem/Aller,**	**65.37**	**345**	*e*P	**P**	**17 41 34.1**	**+3.5**
	comp=Z,29nm,1.1s,baz=13,slow=6.3						
R50A	**Paris**	**65.39**	**55**	P	**P**	**17 41 31.0**	**+0.1**
	baz=329,SNR=7.9						
R50A				P	**P**	**17 41 31.0**	**+0.1**
	baz=329,SNR=7.9						
HPIG		**65.46**	**79**	P	**P**	**17 41 31.9**	**+0.1**
HPIG				IAmb	IAmb	17 42 05.6	
	comp=Z,35nm,1.5s						
NRDL	**Niedersach Rie**	**65.52**	**345**	*e*P	**P**	**17 41 34.8**	**+3.4**
	comp=Z,707nm,4.1s,baz=13,slow=6.3						
FLTG	**Flechtingen**	**65.53**	**344**	*e*P	**P**	**17 41 34.4**	**+2.8**
	comp=Z,17nm,1.1s,baz=13,slow=6.3						
WLAR	**White Oak Lake**	**65.59**	**65**	P	**P**	**17 41 31.8**	**-0.6**
LPIG	**La Paz**	**65.60**	**84**	LR	LR	18 09 22.0	
	comp=Z,108nm,18.0s,baz=2.0,slow=35						
LVV	**L'vov**	**65.76**	**335**	*e*P	**P**	**17 41 35.0**	**+1.8**
LVV				*e*S	**S**	**17 50 20.2**	**+2.1**
LVV				*e*		17 54 32.6	
LVV				pmax	pmax		
	comp=Z,80nm,1.4s						
LVV				MLR	MLR		
	comp=E,500nm,16.0s						
LVV				MLR	MLR		
	comp=N,200nm,17.0s						
LVV				MLR	MLR		
	comp=Z,500nm,17.0s						
WVT	**Waverly**	**65.79**	**59**	P	**P**	**17 41 32.9**	**-0.7**
WVT	**Waverly**	**65.79**	**59**	P	**P**	**17 41 32.9**	**-0.7**
WVT				pmax	pmax		
	comp=Z,43nm,0.9s						
WVT	**Waverly**	**65.79**	**59**	P	**P**	**17 41 31.0**	**-2.6**
	baz=329						
WVT	**Waverly**	**65.79**	**59**	P	**P**	**17 41 32.2**	**-1.4**
	baz=329,SNR=18						
ASSE	**Asse, Remlinge**	**65.80**	**344**	*e*P	**P**	**17 41 36.5**	**+3.2**
	comp=Z,20nm,1.1s,baz=13,slow=6.3						
SSPA	**Standing Stone**	**65.84**	**49**	P	**P**	**17 41 33.4**	**-0.5**
SSPA	**Standing Stone**	**65.84**	**49**	P	**P**	**17 41 30.7**	**-3.2**
	baz=331						
SSPA	**Standing Stone**	**65.84**	**49**	P	**P**	**17 41 32.9**	**-0.9**
	baz=331						
GROC	**Groznyy**	**65.91**	**317**	*e*P	**P**	**17 41 31.9**	**-2.4**
GROC				*e*		17 42 03.3	
GROC				pmax	pmax		
	comp=Z,144nm,1.5s						
MCWV	**Mont Chateau**	**65.95**	**51**	P	**P**	**17 41 34.7**	**+0.1**
	baz=330						
CCAR	**Cane Creek**	**65.98**	**63**	P	**P**	**17 41 34.6**	**-0.3**
IBBN	**Ibbenburen**	**65.98**	**346**	*e*P	**P**	**17 41 37.9**	**+3.4**
	comp=Z,61nm,1.1s,baz=13,slow=6.3						
GEYT	**Alibeck**	**65.99**	**305**	P	**P**	**17 41 35.3**	**+0.4**
	comp=Z,13nm,1.0s,baz=350,slow=6.2,SNR=19						
GEYT				LR	LR	18 12 35.3	
	comp=Z,241nm,21.8s,baz=42,slow=38						
	comp=Z,13nm,1.0s						
435B	**Jarrell**	**66.03**	**70**	P	**P**	**17 41 35.0**	**-0.2**
W45A	**Hickory Valley**	**66.05**	**61**	P	**P**	**17 41 35.8**	**+0.6**
	baz=329						
Z41A	**Richland Creek**	**66.09**	**65**	P	**P**	**17 41 35.5**	**0.0**
N58A	**Sunbury**	**66.09**	**48**	P	**P**	**17 41 34.6**	**-0.8**
	baz=331						
N58A				P	**P**	**17 41 34.6**	**-0.8**
	baz=331						
L61B	**Northampton**	**66.10**	**44**	P	**P**	**17 41 31.6**	**-3.9**
	baz=332						
CLZ	**Clausthal**	**66.12**	**345**	*e*P	**P**	**17 41 39.0**	**+3.5**
	comp=Z,66nm,1.1s,baz=13,slow=6.3						
OJC	**Ojcow**	**66.21**	**338**	P	**P**	**17 41 36.2**	**+0.1**
OJC	**Ojcow**	**66.21**	**338**	P	**P**	**17 41 36.2**	**+0.1**
OJC				pmax	pmax		
	comp=Z,55nm,1.0s						
S51A	**Beattyville**	**66.23**	**55**	P	**P**	**17 41 36.3**	**-0.2**
	baz=330,SNR=8.4						
S51A				P	**P**	**17 41 36.3**	**-0.2**
	baz=330,SNR=8.4						
KVAR	**Kislovodsk Arr**	**66.25**	**319**	LR	LR	18 15 47.9	
	comp=Z,229nm,18.4s,baz=227,slow=41						
KIV	**Kislovodsk**	**66.25**	**319**	⇓P	**P**	**17 41 39.8**	**+3.2**
KIV	**Kislovodsk**	**66.25**	**319**	P	**P**	**17 41 36.8**	**+0.2**
KIV				IAmb	IAmb	17 41 43.0	
	comp=Z,26nm,1.2s						
KIV	**Kislovodsk**	**66.25**	**319**	*e*P	**P**	**17 41 37.2**	**+0.6**
KIV				pmax	pmax		
	comp=Z,18nm,1.1s						
CLL	**Collm**	**66.28**	**343**	P	**P**	**17 41 36.1**	**-0.5**
CLL	**Collm**	**66.28**	**343**	*e*P	**P**	**17 41 36.0**	**-0.5**
	comp=Z,8.0nm,1.2s						
CLL				*i* Pmax		17 41 39.0	
	comp=Z,38nm,1.2s						
CLL				*i* pP	**pP**	**17 41 41.1**	**-1.6**
CLL				*i* x	x	17 41 45.0	
CLL	**Collm**	**66.28**	**343**	*e*P	**P**	**17 41 36.0**	**-0.5**
CLL				*i*		17 41 39.0	
CLL				*i*		17 41 45.0	
CLL				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CLL	**Collm**	**66.28**	**343**	*e*P	**P**	**17 41 39.1**	**+2.6**
	comp=Z,38nm,1.2s,baz=13,slow=6.3						
KBZ	**Khabaz**	**66.39**	**319**	P	**P**	**17 41 38.3**	**+1.0**
	comp=Z,18nm,1.0s,baz=327,slow=3.1,SNR=28						
KBZ				LR	LR	18 13 13.2	
	comp=Z,220nm,21.1s,baz=8.5,slow=38						
	comp=Z,18nm,1.0s						
SORM	**Soroca**	**66.39**	**331**	⇑P	**P**	**17 41 40.1**	**+2.9**
SORM	**Soroca**	**66.39**	**331**	P	**P**	**17 41 40.1**	**+2.9**
CLTN	**Cedars of Leba**	**66.45**	**58**	P	**P**	**17 41 37.3**	**-0.5**
SHA1	**Shidzhatmaz**	**66.46**	**319**	*i* P	**P**	**17 41 38.0**	**-0.1**
GTTG	**Gottingen**	**66.47**	**345**	*e*P	**P**	**17 41 41.2**	**+3.5**
	comp=Z,26nm,1.0s,baz=13,slow=6.3						
OXF	**Oxford**	**66.50**	**61**	P	**P**	**17 41 38.2**	**0.0**
OXF	**Oxford**	**66.50**	**61**	P	**P**	**17 41 38.2**	**0.0**
OXF				pmax	pmax		
	comp=Z,89nm,1.0s						
OXF	**Oxford**	**66.50**	**61**	P	**P**	**17 41 35.6**	**-2.5**
	baz=329						
OSTC	**Ostas**	**66.51**	**340**	*e*pP	pP	17 41 41.3	-3.0
NATX	**Nacogdoches**	**66.53**	**67**	P	**P**	**17 41 37.9**	**-0.4**
NEUB	**Neuenburg**	**66.55**	**343**	*e*P	**P**	**17 41 41.2**	**+2.9**
	comp=Z,154nm,2.3s,baz=13,slow=6.3						
BRG	**Berggiesshubel**	**66.56**	**342**	*i* P	**P**	**17 41 41.4**	**+3.0**
BRG				Amp		17 41 42.2	
	comp=Z,13nm,1.0s						
BRG	**Berggiesshubel**	**66.56**	**342**	*i* P	**P**	**17 41 41.3**	**+3.0**
BRG				pmax	pmax		
	comp=Z,13nm,1.0s						
BRG	**Berggiesshubel**	**66.56**	**342**	*e*P	**P**	**17 41 41.0**	**+2.7**
	comp=Z,26nm,1.5s,baz=13,slow=6.3						
UPC	**Upice**	**66.59**	**340**	*e*pP	pP	17 41 42.0	-2.8
PAGS	**Pennsylvania G**	**66.63**	**49**	P	**P**	**17 41 37.4**	**-1.5**
PLAL	**Pickwick Lake**	**66.67**	**60**	P	**P**	**17 41 38.5**	**-0.7**
DPC	**Dobruska-Polom**	**66.69**	**340**	*e*P	**P**	**17 41 39.6**	**+0.4**
DPC				*e*pP	**pP**	**17 41 42.7**	**-2.8**
DPC	**Dobruska-Polom**	**66.69**	**340**	*e*P	**P**	**17 41 39.6**	**+0.4**
DPC				*e**PP	**pP**	**17 41 42.7**	**-2.8**
STHS	**Stebnicka Huta**	**66.70**	**337**	*e*P	**P**	**17 41 42.2**	**+2.9**
STHS				pmax	pmax		
	comp=Z,27nm,1.0s						
STHS	**Stebnicka Huta**	**66.70**	**337**	*e*P	**P**	**17 41 42.2**	**+2.9**
Q56A	**Snyder Ridge,**	**66.74**	**51**	P	**P**	**17 41 39.0**	**-0.7**
	baz=331						
Q56A				P	**P**	**17 41 39.0**	**-0.7**
	baz=331						
AKT	**Akhty**	**66.78**	**315**	*e*P	**P**	**17 41 40.5**	**+0.5**
AKT				*e*		17 42 09.3	
AKT				pmax	pmax		
	comp=Z,34nm,1.1s						
LUPA	**Lehigh Univers**	**66.79**	**47**	P	**P**	**17 41 38.9**	**-1.0**
LUPA				IAmb	IAmb	17 41 44.2	
	comp=Z,12nm,0.8s						
OKC	**Ostrava-Krasne**	**66.88**	**339**	*e*pP	pP	17 41 43.9	-2.7
OKC	**Ostrava-Krasne**	**66.88**	**339**	*e*P	pP	17 41 43.9	-2.7
KRLC	**Kraliky**	**66.88**	**340**	*e*P	**P**	**17 41 40.8**	**+0.4**
KRLC				*e*pP	**pP**	**17 41 43.4**	**-3.3**
KRLC	**Kraliky**	**66.88**	**340**	*e*P	**P**	**17 41 40.8**	**+0.4**
KRLC				*e**PP	**pP**	**17 41 43.4**	**-3.3**
BUG	**Bochum--Univer**	**66.89**	**347**	*e*P	**P**	**17 41 43.5**	**+3.1**
	comp=Z,30nm,1.1s,baz=13,slow=6.3						
ZEI	**Tsey**	**66.91**	**318**	*e*P	**P**	**17 41 40.7**	**-0.2**
ZEI				pmax	pmax		
	comp=Z,16nm,1.0s						
PAL	**Palisades**	**66.95**	**46**	P	**P**	**17 41 38.5**	**-2.5**
	baz=332						
KASTN	**Kahler Asten**	**66.99**	**346**	*e*P	**P**	**17 41 44.3**	**+3.2**
	comp=Z,33nm,1.2s,baz=13,slow=6.3						
ZKTA	**Zakatala**	**67.02**	**316**	P	**P**	**17 41 43.7**	**+2.3**
MORC	**Moravsky Berou**	**67.04**	**339**	⇓P	**P**	**17 41 44.4**	**+2.9**
MORC	**Moravsky Berou**	**67.04**	**339**	P	**P**	**17 41 40.6**	**-0.8**
MORC				IAmb	IAmb	17 41 45.8	
	comp=Z,19nm,0.9s						
MORC	**Moravsky Berou**	**67.04**	**339**	*e*P	**P**	**17 41 44.0**	**+2.6**
MORC	**Moravsky Berou**	**67.04**	**339**	P	**P**	**17 41 44.3**	**+2.9**
ANN	**Anapa**	**67.09**	**324**	*e*P	**P**	**17 41 42.3**	**+0.6**
ANN				*e*S	**S**	**17 50 37.1**	**+2.8**
ANN				pmax	pmax		
	comp=Z,47nm,1.6s						
MOX	**Moxa**	**67.12**	**343**	*e*P	**P**	**17 41 44.8**	**+2.9**
	comp=Z,22nm,1.0s,baz=13,slow=6.3						
MOX				*e*L	L	18 09 34.1	
	comp=Z,222nm,18.9s						
TZTN	**Tazewell**	**67.20**	**56**	P	**P**	**17 41 42.9**	**+0.3**
TZTN	**Tazewell**	**67.20**	**56**	P	**P**	**17 41 39.9**	**-2.7**
	baz=330						
PLN	**Plauen**	**67.20**	**343**	*e*P	**P**	**17 41 45.4**	**+3.0**
	comp=Z,30nm,1.4s,baz=13,slow=6.3						
SEKA	**Sheki**	**67.20**	**315**	P	**P**	**17 41 43.7**	**+1.0**
WERD	**Werda**	**67.22**	**343**	*e*P	**P**	**17 41 45.6**	**+3.0**
	comp=Z,33nm,1.2s,baz=13,slow=6.3						
TANN	**Tannenbergstha**	**67.23**	**343**	*e*P	**P**	**17 41 45.7**	**+3.0**
	comp=Z,26nm,1.4s,baz=13,slow=6.3						
ONI	**Oni**	**67.23**	**318**	P	**P**	**17 41 43.7**	**+0.9**
ONI	**Oni**	**67.23**	**318**	P	**P**	**17 41 43.7**	**+0.9**
ONI				pmax	pmax		
	comp=Z,12nm,1.1s						
833A	**Chaparral WMA,**	**67.27**	**73**	P	**P**	**17 41 40.9**	**-2.2**
	baz=328						
LANS	**Liptovska Anna**	**67.30**	**338**	*e*P	**P**	**17 41 47.1**	**+4.0**
LANS				pmax	pmax		
	comp=Z,28nm,0.9s						
LANS	**Liptovska Anna**	**67.30**	**338**	*e*P	**P**	**17 41 47.1**	**+4.0**
GUNZ	**Gunzen**	**67.30**	**343**	*e*P	**P**	**17 41 46.2**	**+3.1**
	comp=Z,31nm,1.2s,baz=13,slow=6.3						
PRU	**Pruhonice**	**67.33**	**341**	*e*P	**P**	**17 41 43.6**	**+0.4**
PRU				*e*pP	**pP**	**17 41 46.2**	**-3.3**
PRU	**Pruhonice**	**67.33**	**341**	*e*P	**P**	**17 41 43.6**	**+0.4**
PRU				*e**PP	**pP**	**17 41 46.2**	**-3.3**
GOPC	**GO Pecny, Ondr**	**67.36**	**341**	*e*pP	pP	17 41 47.2	-2.5
GOPC	**GO Pecny, Ondr**	**67.36**	**341**	*e*P	pP	17 41 47.2	-2.5
WERN	**Wernitzgruen**	**67.36**	**343**	*e*P	**P**	**17 41 46.8**	**+3.3**
	comp=Z,22nm,1.0s,baz=13,slow=6.3						
SWET	**Sewanee**	**67.37**	**58**	P	**P**	**17 41 42.9**	**-0.9**
NKC	**Novy Kostel**	**67.41**	**343**	*e*P	**P**	**17 41 43.8**	**+0.1**
NKC				*e*pP	**pP**	**17 41 47.2**	**-2.8**
NKC	**Novy Kostel**	**67.41**	**343**	*e*P	**P**	**17 41 43.8**	**+0.1**
NKC				*e**PP	**pP**	**17 41 47.2**	**-2.8**
V51A	**Loudon**	**67.51**	**57**	P	**P**	**17 41 44.3**	**-0.3**
	baz=330,SNR=6.9						
SOC	**Sochi**	**67.51**	**321**	*e*P	**P**	**17 41 46.0**	**+1.5**
SOC				*e*		17 44 11.2	
SOC				*e*PPP	PPP	17 45 49.0	
SOC				*e*S	**S**	**17 50 44.3**	**+4.8**
SOC				*e*SS	**SS**	**17 55 00.0**	**+1.0**
SOC				pmax	pmax		
	comp=Z,11nm,0.8s						
SOC				MLR	MLR		
	comp=Z,536nm,16.0s						
HKT	**Hockley**	**67.53**	**69**	P	**P**	**17 41 44.5**	**-0.2**
HKT				IAmb	IAmb	17 41 46.6	
	comp=Z,32nm,1.6s						
HKT	**Hockley**	**67.53**	**69**	P	**P**	**17 41 44.5**	**-0.2**
HKT				pmax	pmax		
	comp=Z,33nm,1.6s						
X48A	**Hartselle**	**67.56**	**59**	P	**P**	**17 41 44.0**	**-0.9**
	baz=330						
BUR08	**Bucovina Ar. S**	**67.57**	**333**	P	**P**	**17 41 45.0**	**+0.1**
BUR08				IAmb	IAmb	17 41 49.2	
	comp=Z,11nm,0.8s						
BURAR	**Bucovina Array**	**67.59**	**333**	⇓P	**P**	**17 41 47.9**	**+2.8**
BURAR	**Bucovina Array**	**67.59**	**333**	P	**P**	**17 41 45.1**	**+0.1**
BURAR	**Bucovina Array**	**67.59**	**333**	P	**P**	**17 41 47.8**	**+2.8**
MNGR	**Mingechevir, A**	**67.63**	**315**	P	**P**	**17 41 46.5**	**+1.3**
W50A	**Signal Mountai**	**67.64**	**58**	P	**P**	**17 41 44.8**	**-0.6**
	baz=330,SNR=10						
VRAC	**Vranov**	**67.65**	**340**	⇑P	**P**	**17 41 49.0**	**+3.7**
VRAC	**Vranov**	**67.65**	**340**	P	**P**	**17 41 47.8**	**+2.5**
	comp=Z,16nm,0.9s,baz=23,slow=7.5,SNR=13						
VRAC				LR	LR	18 16 10.8	
	comp=Z,439nm,18.3s,baz=12,slow=40						
VRAC	**Vranov**	**67.65**	**340**	*e*P	**P**	**17 41 48.0**	**+2.7**
VRAC	**Vranov**	**67.65**	**340**	P	**P**	**17 41 49.0**	**+3.7**
TRPA	**Tarpa**	**67.67**	**335**	⇓P	**P**	**17 41 48.4**	**+3.1**
MANZ	**Manzenberg**	**67.70**	**343**	*e*P	**P**	**17 41 48.5**	**+3.0**
	comp=Z,4.2nm,1.1s,baz=13,slow=6.3						
CPCT	**Cooper Cave**	**67.75**	**57**	P	**P**	**17 41 45.1**	**-1.0**
CPCT				IAmb	IAmb	17 41 46.4	
	comp=Z,24nm,0.9s						
V52A	**Sevierville**	**67.79**	**56**	P	**P**	**17 41 46.2**	**-0.1**
	baz=330						
AHRW	**Bad Neuenahr-A**	**67.80**	**346**	*e*P	**P**	**17 41 49.5**	**+3.3**
	comp=Z,33nm,1.2s,baz=13,slow=6.3						
MEM	**Membach**	**67.85**	**347**	*d*P	**P**	**17 41 46.6**	**+0.1**
MEM				*d*x	x	17 41 49.8	
BLA	**Blacksburg**	**67.86**	**53**	P	**P**	**17 41 46.5**	**-0.3**
BLA	**Blacksburg**	**67.86**	**53**	P	**P**	**17 41 46.5**	**-0.3**
BLA				pmax	pmax		
	comp=Z,33nm,1.0s						
BLA	**Blacksburg**	**67.86**	**53**	P	**P**	**17 41 44.1**	**-2.8**
	baz=331						
BLA	**Blacksburg**	**67.86**	**53**	P	**P**	**17 41 46.1**	**-0.7**
	baz=331						
TKL	**Tuckaleechee C**	**67.87**	**56**	LR	LR	18 14 20.3	
	comp=Z,119nm,18.4s,baz=340,slow=38						
TKL	**Tuckaleechee C**	**67.87**	**56**	P	**P**	**17 41 46.9**	**0.0**
TKL				IAmb	IAmb	17 41 51.8	
	comp=Z,22nm,1.1s						
TKL	**Tuckaleechee C**	**67.87**	**56**	P	**P**	**17 41 46.9**	**0.0**
TKL				pmax	pmax		
	comp=Z,22nm,1.1s						
TKL	**Tuckaleechee C**	**67.87**	**56**	P	**P**	**17 41 45.8**	**-1.0**
	baz=330,SNR=6.4						
SIM	**Simferopol'**	**67.89**	**326**	*e*P	**P**	**17 41 49.5**	**+2.7**
SIM				pmax	pmax		
	comp=Z,30nm,0.9s						
ROTZ	**Rotzenmuhle**	**67.90**	**343**	*e*P	**P**	**17 41 50.0**	**+3.2**
	comp=Z,7.0nm,1.2s,baz=13,slow=6.3						
JAVC	**Velka Javorina**	**67.90**	**339**	*e*P	**P**	**17 41 51.0**	**+4.1**
U54A	**Nelsons Funny**	**67.91**	**54**	P	**P**	**17 41 46.2**	**-1.0**
	baz=331,SNR=8.3						
U54A				P	**P**	**17 41 46.2**	**-1.0**
	baz=331,SNR=8.3						
BSTI	**Sart Tilman**	**67.93**	**348**	*d*P	**P**	**17 41 50.6**	**+3.7**
KRUC	**Moravsky**	**67.93**	**340**	*e*P	**P**	**17 41 49.9**	**+2.9**
S57A	**Dark Hollow, R**	**67.95**	**51**	P	**P**	**17 41 46.4**	**-1.0**
	baz=331,SNR=6.5						
S57A				P	**P**	**17 41 46.4**	**-1.0**
	baz=331,SNR=6.5						
TNS	**Taunus Mts**	**67.95**	**345**	*e*P	**P**	**17 41 50.1**	**+2.9**
	comp=Z,22nm,1.1s,baz=13,slow=6.3						
VBMS	**Vicksburg**	**67.98**	**63**	P	**P**	**17 41 48.0**	**+0.4**
GANJ	**Ganja**	**68.01**	**315**	P	**P**	**17 41 50.3**	**+2.6**
VYHS	**Vyhne**	**68.04**	**338**	*e*P	**P**	**17 41 51.4**	**+3.6**
VYHS				pmax	pmax		
	comp=Z,30nm,1.1s						
VYHS	**Vyhne**	**68.04**	**338**	*e*P	**P**	**17 41 51.4**	**+3.6**
FPAL	**Fort Paine**	**68.08**	**58**	P	**P**	**17 41 47.5**	**-0.7**
BHOU	**Houvegnez**	**68.11**	**347**	*d*P	**P**	**17 41 49.9**	**+1.8**
GRA1	**Grafenberg Arr**	**68.11**	**343**	P	**P**	**17 41 48.4**	**+0.2**
GRA1				IAmb	IAmb	17 41 52.8	
	comp=Z,27nm,1.0s						
GRF	**Grafenberg Arr**	**68.11**	**343**	P	**P**	**17 41 48.4**	**+0.2**
GRF				pmax	pmax		
	comp=Z,27nm,1.0s						
GRF	**Grafenberg Arr**	**68.11**	**343**	*e*P	**P**	**17 41 51.5**	**+3.3**
	comp=Z,35nm,1.1s,baz=13,slow=6.3						
GRF				*e*L	L	18 09 22.0	
	comp=Z,195nm,20.2s						
GRFO	**Grafenberg**	**68.11**	**343**	P	**P**	**17 41 48.6**	**+0.5**
GRFO				IAmb	IAmb	17 41 52.7	
	comp=Z,28nm,1.0s						
GRFO	**Grafenberg**	**68.11**	**343**	P	**P**	**17 41 48.6**	**+0.5**
GRFO				pmax	pmax		
	comp=Z,28nm,1.0s						
BCLA	**Clavier**	**68.12**	**348**	*d*P	**P**	**17 41 50.0**	**+1.9**
SNF	**Seneffe**	**68.13**	**348**	*d*x	x	17 41 51.2	
R58B	**Mineral**	**68.18**	**51**	P	**P**	**17 41 48.4**	**-0.3**
	baz=332						
R58B				P	**P**	**17 41 48.4**	**-0.3**
	baz=332						
Z47A	**Carrollton**	**68.20**	**61**	P	**P**	**17 41 48.6**	**-0.3**
	baz=330						
SMOL	**Smolenice**	**68.28**	**339**	*e*P	**P**	**17 41 50.2**	**+1.0**
SMOL				pmax	pmax		
	comp=Z,16nm,1.0s						
AKH	**Akhalkalaki**	**68.28**	**318**	P	**P**	**17 41 50.3**	**+0.8**
AKH	**Akhalkalaki**	**68.28**	**318**	P	**P**	**17 41 50.3**	**+0.8**
AKH				pmax	pmax		
	comp=Z,38nm,1.1s						
BMRD	**Maredsous**	**68.29**	**348**	*d*P	**P**	**17 41 52.3**	**+3.1**
TESR	**Tescani**	**68.31**	**332**	⇑P	**P**	**17 41 52.7**	**+3.3**
KHC	**Kasperske Hory**	**68.31**	**342**	P	**P**	**17 41 52.4**	**+3.0**
KHC				IAmb	IAmb	17 41 53.5	
	comp=Z,15nm,1.1s						
KHC	**Kasperske Hory**	**68.31**	**342**	*e*P	**P**	**17 41 49.9**	**+0.4**
KHC				*e*pP	**pP**	**17 41 53.0**	**-2.7**

KHC	**Kasperske Hory**	**68.31**	**342**	*i* P	**P**	**17 41 49.7**	**+0.2**
KHC				pmax	pmax		
	comp=Z,34nm,1.1s						
KHC				MLR	MLR		
	comp=Z,694nm,8.0s						
Y49A	**Blount Mountai**	**68.33**	**59**	P	**P**	**17 41 49.4**	**-0.4**
	baz=330,SNR=6.1						
RCHB	**Rochefort**	**68.38**	**348**	*d*x	x	17 41 52.3	
PSZ	**Piszkesteto**	**68.40**	**337**	⇑P	**P**	**17 41 54.1**	**+4.0**
PSZ	**Piszkesteto**	**68.40**	**337**	P	**P**	**17 41 51.0**	**+0.9**
PSZ				IAmb	IAmb	17 41 55.1	
	comp=Z,22nm,0.9s						
PSZ	**Piszkesteto**	**68.40**	**337**	P	**P**	**17 41 51.0**	**+0.9**
PSZ				pmax	pmax		
	comp=Z,22nm,0.9s						
MODS	**Modra-Piesok**	**68.44**	**339**	*e*P	**P**	**17 41 54.2**	**+3.9**
MODS				pmax	pmax		
	comp=Z,65nm,1.2s						
MODS	**Modra-Piesok**	**68.44**	**339**	*e*P	**P**	**17 41 54.2**	**+3.9**
T57A	**Hurt**	**68.50**	**52**	P	**P**	**17 41 50.4**	**-0.4**
	baz=331						
T57A				P	**P**	**17 41 50.4**	**-0.4**
	baz=331						
CKRC	**Cesky Krumlov**	**68.50**	**341**	*e*pP	**P**	**17 41 53.7**	**+3.1**
CKRC	**Cesky Krumlov**	**68.50**	**341**	*e*P	**P**	**17 41 53.7**	**+3.1**
DOU	**Dourbes**	**68.51**	**348**	*d*P	**P**	**17 41 53.8**	**+3.2**
GHRR		**68.56**	**331**	⇑P	**P**	**17 41 55.0**	**+4.1**
GEC2	**GERESS Array S**	**68.57**	**342**	P	**P**	**17 41 51.1**	**-0.1**
GEC2				IAmb	IAmb	17 41 55.2	
	comp=Z,14nm,0.9s						
GEC2	**GERESS Array S**	**68.57**	**342**	*e*P	**P**	**17 41 54.1**	**+2.9**
	comp=Z,21nm,1.1s,baz=13,slow=6.3						
GERES	**GERESS Array B**	**68.57**	**342**	P	**P**	**17 41 51.0**	**-0.2**
	comp=Z,7.7nm,0.8s,baz=35,slow=4.9,SNR=32						
GERES				LR	LR	18 14 58.6	
	comp=Z,270nm,19.0s,baz=12,slow=39						
	comp=Z,7.7nm,0.8s						
GERES	**GERESS Array B**	**68.57**	**342**	P	**P**	**17 41 50.4**	**-0.8**
VLDR	**Vladesti**	**68.60**	**331**	⇑P	**P**	**17 41 55.2**	**+3.9**
V55A	**Taylorsville**	**68.73**	**54**	P	**P**	**17 41 51.8**	**-0.4**
	baz=331,SNR=6.8						
V55A				P	**P**	**17 41 51.8**	**-0.4**
	baz=331,SNR=6.8						
WLF	**Walferdange**	**68.77**	**347**	*d*x	x	17 41 56.0	
WLF	**Walferdange**	**68.77**	**347**	*e*P	**P**	**17 41 55.6**	**+3.3**
	comp=Z,51nm,1.4s,baz=13,slow=6.3						
BG3	**Lake Jocassee**	**68.79**	**56**	P	**P**	**17 41 52.4**	**-0.3**
CASEE	**Lake Jocassee**	**68.79**	**56**	P	**P**	**17 41 52.7**	**0.0**
	baz=330,SNR=9.2						
SRO	**Srobarova**	**68.79**	**338**	*e*P	**P**	**17 41 55.7**	**+3.3**
SRO				pmax	pmax		
	comp=Z,22nm,0.9s						
SRO	**Srobarova**	**68.79**	**338**	*e*P	**P**	**17 41 55.7**	**+3.3**
LRAL	**Lakeview Retre**	**68.80**	**60**	P	**P**	**17 41 51.4**	**-1.3**
LRAL				IAmb	IAmb	17 41 57.6	
	comp=Z,19nm,0.8s						
LRAL	**Lakeview Retre**	**68.80**	**60**	P	**P**	**17 41 49.8**	**-2.9**
	baz=330,SNR=7.9						
LRAL	**Lakeview Retre**	**68.80**	**60**	P	**P**	**17 41 51.7**	**-0.9**
	baz=330,SNR=7.9						
CJR	**Cluj-Napoca**	**68.80**	**334**	⇑P	**P**	**17 41 56.7**	**+4.1**
CJR	**Cluj-Napoca**	**68.80**	**334**	P	**P**	**17 41 56.6**	**+4.1**
LKRN	**Lenkeran, Azer**	**68.86**	**313**	P	**P**	**17 41 53.2**	**+0.2**
OZUR		**68.90**	**332**	⇑P	**P**	**17 41 56.3**	**+3.1**
VRI	**Vrincioaia**	**68.90**	**332**	⇑P	**P**	**17 41 55.8**	**+2.6**
VRI	**Vrincioaia**	**68.90**	**332**	P	**P**	**17 41 55.7**	**+2.6**
DRGR		**68.91**	**335**	⇑P	**P**	**17 41 56.8**	**+3.4**
DRGR		**68.91**	**335**	P	**P**	**17 41 56.7**	**+3.4**
ODBI	**Odobesti**	**68.92**	**331**	⇑P	**P**	**17 41 56.6**	**+3.3**
PLOR	**Plostina**	**68.94**	**332**	⇓P	**P**	**17 41 57.0**	**+3.6**
PLOR	**Plostina**	**68.94**	**332**	P	**P**	**17 41 57.0**	**+3.6**
MARR	**Marisel-Cluj**	**68.94**	**334**	⇓P	**P**	**17 41 57.3**	**+3.8**
GNI	**Garni**	**68.99**	**316**	LR	LR	18 16 52.9	
	comp=Z,249nm,18.9s,baz=20,slow=40						
GNI	**Garni**	**68.99**	**316**	P	**P**	**17 41 54.8**	**+0.8**
GNI				IAmb	IAmb	17 42 26.2	
	comp=Z,30nm,1.4s						
GNI	**Garni**	**68.99**	**316**	*i* P	**P**	**17 41 54.6**	**+0.6**
GNI				pmax	pmax		
	comp=Z,40nm,2.2s						
GNI				MLR	MLR		
	comp=Z,220nm,21.0s						
TLCR		**69.04**	**330**	⇑P	**P**	**17 41 57.1**	**+3.1**
TLCR		**69.04**	**330**	P	**P**	**17 41 57.0**	**+3.1**
COVR	**Voineasa-Covas**	**69.04**	**332**	⇑P	**P**	**17 41 58.1**	**+4.0**
CONA	**Conrad Observa**	**69.11**	**340**	*e*P	**P**	**17 41 55.1**	**+0.5**
	comp=Z,3.4nm,0.7s						
CONA				*e*pP	**pP**	**17 41 58.5**	**-2.3**
	comp=Z,18nm,0.9s,SNR=6.0						
DOPR	**Dopca**	**69.11**	**333**	⇑P	**P**	**17 41 58.6**	**+4.1**
KARS	**Kars**	**69.12**	**318**	P	**P**	**17 41 54.6**	**-0.2**
KARS	**Kars**	**69.12**	**318**	P	**P**	**17 41 54.6**	**-0.2**
KARS				pmax	pmax		
	comp=Z,89nm,1.3s						
FAKI	**Fak Fak**	**69.14**	**218**	P	**P**	**17 41 54.5**	**-0.5**
FAKI				IAmb	IAmb	17 41 55.7	
	comp=Z,17nm,1.0s						
CFR	**Carcaliu**	**69.22**	**330**	⇑P	**P**	**17 41 57.6**	**+2.5**
CFR	**Carcaliu**	**69.22**	**330**	P	**P**	**17 41 57.5**	**+2.5**
RONA	**Rosalia, Austr**	**69.26**	**339**	*e*P	**P**	**17 41 56.2**	**+0.8**
	comp=Z,6.9nm,1.1s						
RONA				*e*pP	**pP**	**17 41 59.5**	**-2.1**
	comp=Z,20nm,0.9s,SNR=6.6						
TOLI2	**Tolitoli**	**69.29**	**231**	P	**P**	**17 41 54.4**	**-1.4**
TOLI2				IAmb	IAmb	17 42 00.7	
	comp=Z,23nm,1.0s						
KMSC	**Kings Mountain**	**69.30**	**55**	P	**P**	**17 41 55.3**	**-0.5**
KMSC	**Kings Mountain**	**69.30**	**55**	P	**P**	**17 41 52.8**	**-3.0**
	baz=331,SNR=9.7						
KMSC	**Kings Mountain**	**69.30**	**55**	P	**P**	**17 41 55.4**	**-0.4**
	baz=331,SNR=9.7						
Y52A	**Lilburn**	**69.31**	**57**	P	**P**	**17 41 55.8**	**-0.1**
	baz=330						
Y52A				P	**P**	**17 41 55.8**	**-0.1**
	baz=330						
Z51A	**Franklin**	**69.32**	**59**	P	**P**	**17 41 55.5**	**-0.4**
	baz=330						
NEHR	**Nehoiu**	**69.42**	**332**	⇑P	**P**	**17 42 00.4**	**+4.0**
MLR	**Muntele Rosu**	**69.44**	**332**	⇑P	**P**	**17 41 60.0**	**+3.3**
MLR	**Muntele Rosu**	**69.44**	**332**	P	**P**	**17 41 58.4**	**+1.7**
	comp=Z,18nm,1.0s,baz=195,slow=2.4,SNR=14						
MLR				LR	LR	18 15 54.2	
	comp=Z,396nm,18.3s,baz=24,slow=39						
	comp=Z,18nm,1.0s						
MLR	**Muntele Rosu**	**69.44**	**332**	P	**P**	**17 41 57.5**	**+0.9**
MLR				IAmb	IAmb	17 42 02.5	
	comp=Z,28nm,1.1s						
MLR	**Muntele Rosu**	**69.44**	**332**	P	**P**	**17 41 57.5**	**+0.9**
MLR				pmax	pmax		
	comp=Z,29nm,1.1s						
MOA	**Molln**	**69.45**	**341**	*e*P	**P**	**17 41 56.7**	**+0.2**
	comp=Z,13nm,1.7s						
MOA				*e*pP	**pP**	**17 42 00.1**	**-2.7**
	comp=Z,15nm,1.3s						
NAX	**Nakhchivan**	**69.61**	**315**	P	**P**	**17 41 58.7**	**+1.0**
V58A	**Windy Hill, Pi**	**69.61**	**53**	P	**P**	**17 41 57.3**	**-0.4**
	baz=332,SNR=6.5						
V58A				P	**P**	**17 41 57.3**	**-0.4**
	baz=332,SNR=6.5						
U59A	**Littleton**	**69.63**	**51**	P	**P**	**17 41 57.9**	**+0.1**
	baz=332						
U59A				P	**P**	**17 41 57.9**	**+0.1**
	baz=332						
SIRR	**Siria**	**69.63**	**335**	⇓P	**P**	**17 42 01.3**	**+3.7**
VOIR		**69.69**	**333**	⇓P	**P**	**17 42 02.2**	**+4.0**
VOIR		**69.69**	**333**	P	**P**	**17 42 02.7**	**+4.5**
BIOA	**Bad Ischl, Aus**	**69.70**	**341**	*e*P	**P**	**17 41 58.2**	**+0.1**
	comp=Z,3.8nm,0.8s						
BIOA				*e*pP	**pP**	**17 42 01.5**	**-2.9**
	comp=Z,12nm,1.4s						
HODGE	**Hodges**	**69.72**	**56**	P	**P**	**17 41 57.3**	**-1.1**
HODGE				IAmb	IAmb	17 42 03.8	
	comp=Z,19nm,0.9s						
RJOB	**Jochberg**	**69.79**	**342**	*e*P	**P**	**17 42 01.6**	**+2.9**
	comp=Z,21nm,0.9s,baz=13,slow=6.3						
W57A	**Gilead**	**69.83**	**54**	P	**P**	**17 41 58.7**	**-0.3**
	baz=331,SNR=8.2						
W57A				P	**P**	**17 41 58.7**	**-0.3**
	baz=331,SNR=8.2						
ARSA	**Arzberg**	**69.83**	**340**	*e*pP	pP	17 42 02.9	-2.3
	comp=Z,11nm,0.9s,SNR=5.7						
BFO	**Black Forest**	**69.83**	**345**	P	**P**	**17 41 57.6**	**-1.3**
BFO				IAmb	IAmb	17 42 02.8	
	comp=Z,20nm,1.0s						
BFO	**Black Forest**	**69.83**	**345**	P	**P**	**17 41 57.6**	**-1.3**
BFO				pmax	pmax		
	comp=Z,20nm,1.0s						
BFO	**Black Forest**	**69.83**	**345**	*e*P	**P**	**17 42 01.5**	**+2.7**
	comp=Z,23nm,1.0s,baz=13,slow=6.3						
ARR	**Arges**	**69.85**	**333**	⇑P	**P**	**17 42 03.4**	**+4.3**
KTUT	**Trabzon**	**69.86**	**320**	⇑P	**P**	**17 42 02.3**	**+3.2**
LOT	**Lotru**	**69.97**	**334**	⇑P	**P**	**17 42 03.0**	**+3.1**
SURR	**Surduc**	**70.03**	**335**	⇑P	**P**	**17 42 03.4**	**+3.3**
152A	**Waverly Hall**	**70.07**	**59**	P	**P**	**17 41 60.0**	**-0.6**
	baz=330						
JSC	**Jenkinsville**	**70.08**	**55**	P	**P**	**17 41 59.2**	**-1.4**
JSC				IAmb	IAmb	17 42 05.8	
	comp=Z,16nm,1.0s						
JSC	**Jenkinsville**	**70.08**	**55**	P	**P**	**17 41 59.2**	**-1.4**
JSC				pmax	pmax		
	comp=Z,16nm,1.0s						
BIRD	**Birdtown, Kers**	**70.08**	**54**	P	**P**	**17 42 00.4**	**-0.2**
BIRD				IAmb	IAmb	17 42 06.1	
	comp=Z,18nm,0.8s						
GZR	**Gura Zlata**	**70.23**	**334**	⇑P	**P**	**17 42 04.7**	**+3.2**
GZR	**Gura Zlata**	**70.23**	**334**	P	**P**	**17 42 04.6**	**+3.2**
UBR	**Ueberruh**	**70.23**	**344**	*e*P	**P**	**17 42 04.4**	**+3.0**
	comp=Z,37nm,1.2s,baz=13,slow=6.3						
BZS	**Buzias**	**70.26**	**335**	⇑P	**P**	**17 42 05.0**	**+3.4**
BZS	**Buzias**	**70.26**	**335**	P	**P**	**17 42 04.9**	**+3.4**
MORH	**Mrgy, Hungar**	**70.27**	**337**	⇑P	**P**	**17 42 04.9**	**+3.3**
HNR	**Honiara**	**70.32**	**188**	LR	LR	18 09 04.4	
	comp=Z,4µm,19.2s,baz=20,slow=33						
RETA	**Reutte**	**70.33**	**343**	*i* pP	pP	17 42 05.3	-3.0
	comp=Z,14nm,1.0s						
KBA	**Koelnbreinsper**	**70.35**	**341**	*e*P	**P**	**17 42 03.0**	**+0.7**
	comp=Z,3.0nm,0.8s						
KBA				*e*pP	**pP**	**17 42 06.4**	**-2.2**
	comp=Z,31nm,1.1s,SNR=10.0						
WATA	**Walderalm**	**70.36**	**343**	*e*P	**P**	**17 42 02.7**	**+0.3**
	comp=Z,7.5nm,1.2s						
WATA				*e*pP	**pP**	**17 42 05.9**	**-2.7**
	comp=Z,20nm,1.0s,SNR=5.3						
MOTA	**Moosalm**	**70.42**	**343**	*e*P	**P**	**17 42 02.6**	**-0.1**
	comp=Z,5.0nm,1.2s						
MOTA				*e*pP	**pP**	**17 42 06.0**	**-2.9**
	comp=Z,19nm,0.9s,SNR=5.7						
WTTA	**Wattenberg**	**70.42**	**343**	*e*P	**P**	**17 42 02.9**	**+0.2**
	comp=Z,13nm,1.4s						
WTTA				*e*pP	**pP**	**17 42 06.5**	**-2.5**
	comp=Z,26nm,1.0s						
SOKA	**Soboth**	**70.47**	**340**	*e*P	**P**	**17 42 03.0**	**+0.2**
	comp=Z,3.9nm,1.0s						
SOKA				*e*pP	**pP**	**17 42 06.4**	**-2.7**
	comp=Z,8.3nm,1.0s						
ZAIG	**Zacatecas**	**70.47**	**78**	P	**P**	**17 42 02.6**	**-0.9**
KOPT	**Kop Dagi**	**70.51**	**319**	P	**P**	**17 42 04.1**	**+0.6**
KOPT				IAmb	IAmb	17 42 10.9	
	comp=Z,25nm,0.9s						
SQTA	**Sankt Quirin**	**70.53**	**343**	*e*P	**P**	**17 42 03.6**	**+0.3**
	comp=Z,11nm,1.0s						
SQTA				*e*pP	**pP**	**17 42 06.9**	**-2.7**
	comp=Z,27nm,0.9s,SNR=5.1						
CNNC	**Cliffs of the**	**70.57**	**52**	P	**P**	**17 42 02.8**	**-0.8**
X58A	**Rowland**	**70.61**	**53**	P	**P**	**17 42 04.0**	**+0.2**
	baz=332						
X58A				P	**P**	**17 42 04.0**	**+0.2**
	baz=332						
DIKM	**Dikmen**	**70.61**	**324**	⇑P	**P**	**17 42 07.5**	**+3.8**
OBKA	**Obir**	**70.71**	**340**	*e*P	**P**	**17 42 04.9**	**+0.5**
	comp=Z,10nm,0.8s						
OBKA				*e*pP	**pP**	**17 42 08.4**	**-2.3**
	comp=Z,53nm,0.9s,SNR=12						
MYKA	**Terra Mystica**	**70.74**	**341**	*e*pP	pP	17 42 07.9	-2.9
	comp=Z,11nm,1.0s						
FETA	**Feichten**	**70.79**	**343**	*e*pP	pP	17 42 08.7	-2.6
	comp=Z,18nm,0.9s						
HERR	**Herculane**	**70.80**	**334**	⇑P	**P**	**17 42 08.2**	**+3.4**
ABTA	**Abfaltersbach**	**70.80**	**342**	*e*pP	pP	17 42 08.4	-2.8
	comp=Z,25nm,1.1s,SNR=7.5						
COPA	**Copaceanca**	**70.89**	**332**	⇑P	**P**	**17 42 08.9**	**+3.5**
PRED	**Cave del Predi**	**70.93**	**341**	P	**P**	**17 42 05.4**	**-0.3**
PRED				IAmb	IAmb	17 42 14.3	
	comp=Z,22nm,1.1s						
DJES	**Djerdap**	**70.98**	**334**	P	**P**	**17 42 05.4**	**-0.6**
CLUD	**Cludinico**	**71.03**	**342**	P	**P**	**17 42 06.1**	**-0.2**
CLUD				IAmb	IAmb	17 42 18.9	
	comp=Z,16nm,1.0s						
MDVR	**Moldovita**	**71.04**	**335**	⇑P	**P**	**17 42 09.6**	**+3.2**
FRGS	**Fruska Gora**	**71.06**	**336**	⇓P	**P**	**17 42 09.4**	**+2.9**
DAVOX	**Davos/Dischmat**	**71.15**	**344**	P	**P**	**17 42 07.4**	**+0.3**
	comp=Z,14nm,0.8s,baz=358,slow=4.2,SNR=16						
DAVOX				LR	LR	18 16 19.6	
	comp=Z,149nm,18.1s,baz=5.0,slow=38						
	comp=Z,14nm,0.8s						
GEVA	**Gevas**	**71.21**	**317**	P	**P**	**17 42 08.7**	**+1.0**
CIMO	**Cimolais**	**71.24**	**342**	P	**P**	**17 42 08.7**	**+1.2**
CIMO				IAmb	IAmb	17 42 15.5	
	comp=Z,35nm,1.9s						
FUORN	**Ofenpass-Fuorn**	**71.25**	**343**	P	**P**	**17 42 09.2**	**+1.4**
GURO	**Guroymak-BITLI**	**71.34**	**317**	P	**P**	**17 42 08.9**	**+0.5**
GURO				IAmb	IAmb	17 43 05.3	
	comp=Z,8.3nm,0.4s						
TOKA	**Tokat**	**71.47**	**322**	P	**P**	**17 42 10.1**	**+1.0**
SBUM	**Sibu**	**71.51**	**240**	P	**P**	**17 42 09.0**	**-0.5**
SBUM				IAmb	IAmb	17 42 16.1	
	comp=Z,19nm,1.1s						
ILGA	**Ilgaz**	**71.60**	**325**	P	**P**	**17 42 09.3**	**-0.7**
TIGA	**Tifton**	**71.61**	**58**	P	**P**	**17 42 09.5**	**-0.4**
TIGA	**Tifton**	**71.61**	**58**	P	**P**	**17 42 06.4**	**-3.5**
	baz=331						
SSF	**Saint Saulge**	**71.62**	**348**	*e*P	**P**	**17 42 12.5**	**+2.7**
SSF				pmax	pmax		
	comp=Z,39nm,1.2s						
PLVB	**Pleven**	**71.73**	**332**	⇓P	**P**	**17 42 13.8**	**+3.3**
SRIT	**Nakonsritamara**	**71.74**	**254**	P	**P**	**17 42 10.2**	**-0.7**
PMG	**Port Moresby**	**71.83**	**201**	P	**P**	**17 42 13.1**	**+1.8**
	comp=Z,12nm,1.0s,baz=357,slow=2.9,SNR=4.2						
	comp=Z,12nm,1.0s						
PMG	**Port Moresby**	**71.83**	**201**	P	**P**	**17 42 11.9**	**+0.6**
PMG	**Port Moresby**	**71.83**	**201**	*ce*P	**P**	**17 42 12.7**	**+1.4**
PMG				pmax	pmax		
	comp=Z,15nm,1.7s						
DIVS	**Divibare**	**72.05**	**336**	P	**P**	**17 42 14.6**	**+2.1**
BOVS	**Bovan**	**72.14**	**334**	⇑P	**P**	**17 42 15.4**	**+2.5**
TEOL	**Teolo**	**72.28**	**342**	P	**P**	**17 42 13.8**	**0.0**
VTS	**Vitosha**	**72.78**	**333**	⇑P	**P**	**17 42 19.5**	**+2.6**
VTS	**Vitosha**	**72.78**	**333**	P	**P**	**17 42 17.9**	**+0.9**
VTS				IAmb	IAmb	17 42 21.8	
	comp=Z,18nm,1.0s						
VTS	**Vitosha**	**72.78**	**333**	P	**P**	**17 42 17.9**	**+0.9**
VTS				pmax	pmax		
	comp=Z,18nm,1.0s						
BR131	**Keskin Array S**	**72.85**	**324**	P	**P**	**17 42 17.6**	**+0.2**
BR131				IAmb	IAmb	17 42 23.6	
	comp=Z,24nm,1.0s						
BR131	**Keskin Array S**	**72.85**	**324**	P	**P**	**17 42 17.7**	**+0.2**
BR131				pmax	pmax		
	comp=Z,24nm,1.0s						
BRTR	**Keskin Array B**	**72.85**	**324**	P	**P**	**17 42 18.5**	**+1.1**
	comp=Z,9.1nm,0.9s,baz=44,slow=3.8,SNR=16						
BRTR				LR	LR	18 21 01.7	
	comp=Z,197nm,18.0s,baz=354,slow=41						
	comp=Z,9.1nm,0.9s						
BRTR	**Keskin Array B**	**72.85**	**324**	P	**P**	**17 42 17.5**	**+0.1**
ANTO	**Ankara**	**72.96**	**325**	⇓P	**P**	**17 42 22.0**	**+4.0**
ANTO	**Ankara**	**72.96**	**325**	P	**P**	**17 42 19.4**	**+1.4**
ANTO				IAmb	IAmb	17 42 23.2	
	comp=Z,14nm,0.9s						
ANTO	**Ankara**	**72.96**	**325**	P	**P**	**17 42 19.4**	**+1.4**
ANTO				pmax	pmax		
	comp=Z,14nm,0.9s						
BNN	**Bunyan**	**73.02**	**322**	P	**P**	**17 42 18.9**	**+0.5**
SSB	**Saint Sauveur**	**73.28**	**347**	P	**P**	**17 42 19.7**	**0.0**
SSB				IAmb	IAmb	17 42 23.5	
	comp=Z,32nm,1.2s						
SSB	**Saint Sauveur**	**73.28**	**347**	P	**P**	**17 42 19.7**	**0.0**
SSB				pmax	pmax		
	comp=Z,32nm,1.2s						
BORA	**Eskisehir**	**73.59**	**327**	P	**P**	**17 42 22.0**	**+0.3**
BORA				IAmb	IAmb	17 42 26.3	
	comp=Z,23nm,1.1s						
SKO	**Skopje**	**73.79**	**334**	*i* P	**P**	**17 42 26.3**	**+3.6**
PDG	**Podgorica**	**73.80**	**336**	⇑P	**P**	**17 42 26.5**	**+3.8**
CAF	**Calviac**	**73.87**	**349**	*e*P	**P**	**17 42 26.5**	**+3.3**
CAF				pmax	pmax		
	comp=Z,32nm,1.1s						
STIP	**Stip**	**73.89**	**333**	*i* P	**P**	**17 42 24.7**	**+1.4**
LFF	**La Frestale**	**73.98**	**350**	*e*P	**P**	**17 42 24.0**	**+0.2**
LFF				pmax	pmax		
	comp=Z,30nm,0.9s						
GAZ	**Gaziantep**	**74.14**	**321**	P	**P**	**17 42 25.7**	**+0.7**
GAZ				IAmb	IAmb	17 42 30.3	
	comp=Z,29nm,1.0s						
VAY	**Valandovo**	**74.16**	**333**	*i* P	**P**	**17 42 27.9**	**+3.0**
HYB	**Hyderabad**	**74.34**	**278**	*e*P	**P**	**17 42 28.2**	**+1.9**
BALB	**Balikesir**	**74.49**	**329**	P	**P**	**17 42 27.0**	**+0.1**
BALB				IAmb	IAmb	17 42 31.3	
	comp=Z,23nm,1.0s						
CESX	**Cesi**	**74.83**	**341**	P	**P**	**17 42 29.9**	**+1.1**
CESX				IAmb	IAmb	17 42 36.4	
	comp=Z,27nm,1.3s						
FNA	**Florina**	**74.94**	**334**	P	**P**	**17 42 29.6**	**+0.1**
FNA	**Florina**	**74.94**	**334**	P	**P**	**17 42 29.6**	**+0.1**
FNA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
INTR	**Introdacqua**	**75.19**	**340**	P	**P**	**17 42 31.6**	**+0.6**
INTR				IAmb	IAmb	17 42 35.5	
	comp=Z,24nm,1.0s						
KAPI	**Kappang**	**75.31**	**229**	LR	LR	18 19 02.7	
	comp=Z,28nm,18.1s,baz=1.5,slow=38						
LIT	**Litokhoron**	**75.35**	**333**	P	**P**	**17 42 34.7**	**+2.9**
LIT	**Litokhoron**	**75.35**	**333**	P	**P**	**17 42 34.7**	**+2.9**
LIT				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LHMI	**Lhok Sumawe**	**75.93**	**255**	P	**P**	**17 42 35.5**	**0.0**
AFI	**Afiamalu**	**76.39**	**159**	LR	LR	18 09 30.0	
	comp=Z,273nm,19.9s,baz=339,slow=30						
AGG	**Agios Georgios**	**76.41**	**333**	P	**P**	**17 42 38.4**	**+0.5**
AGG	**Agios Georgios**	**76.41**	**333**	P	**P**	**17 42 38.4**	**+0.5**
AGG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TIP	**Timpagrande**	**77.42**	**337**	⇑P	**P**	**17 42 47.3**	**+3.7**
UOSS	**Minazif**	**78.10**	**300**	P	**P**	**17 42 48.4**	**+0.8**
UOSS				IAmb	IAmb	17 42 49.5	
	comp=Z,16nm,1.1s						
PVRL	**Vila Real**	**78.13**	**356**	*e*P	**P**	**17 42 50.5**	**+3.0**
PVRL				A	A	17 42 51.3	
	comp=Z,70nm,1.4s						
MVO	**Moncorvo**	**78.21**	**356**	*e*P	**P**	**17 42 51.8**	**+3.8**
ITM	**Ithomi**	**78.27**	**332**	P	**P**	**17 42 48.6**	**+0.3**
ITM				IAmb	IAmb	17 43 07.3	
	comp=Z,29nm,1.0s						
MMAI	**Mount Meron Ar**	**78.54**	**320**	LR	LR	18 21 09.5	
	comp=Z,118nm,18.4s,baz=297,slow=38						
WSAR	**Wadi Sarin**	**78.56**	**297**	P	**P**	**17 42 50.1**	**0.0**
	comp=Z,8.2nm,1.0s,baz=105,slow=5.0,SNR=4.8						
WSAR				LR	LR	18 23 40.1	
	comp=Z,131nm,18.6s,baz=27,slow=40						
	comp=Z,8.2nm,1.0s						
PVIS	**Viseu**	**78.69**	**356**	*e*P	**P**	**17 42 54.1**	**+3.4**
MTE	**Manteigas**	**78.99**	**356**	*e*P	**P**	**17 42 56.0**	**+3.6**
CMIG	**Matias Romero**	**79.00**	**75**	LR	LR	18 19 32.5	
	comp=Z,80nm,19.1s,baz=358,slow=37						
IDI	**Anoyia**	**79.36**	**329**	P	**P**	**17 42 53.1**	**-1.4**
	comp=Z,3.6nm,0.5s,baz=2.9,slow=10,SNR=11						
IDI				LR	LR	18 22 39.6	
	comp=Z,162nm,20.1s,baz=23,slow=39						
	comp=Z,3.6nm,0.5s						
IDI	**Anoyia**	**79.36**	**329**	P	**P**	**17 42 53.0**	**-1.4**
IDI				IAmb	IAmb	17 43 03.1	
	comp=Z,45nm,1.8s						
PCAS	**Casmilo, Conde**	**79.37**	**357**	*e*P	**P**	**17 42 55.4**	**+1.1**
VAE	**Valguarnera**	**79.51**	**338**	LR	LR	18 22 35.6	
	comp=Z,182nm,18.4s,baz=22,slow=39						
ESBB	**Sonseca Array**	**79.55**	**353**	P	**P**	**17 42 55.2**	**-0.1**
ESBB				IAmb	IAmb	17 42 59.7	
	comp=Z,20nm,0.9s						
PCBR	**Castelo Branco**	**79.55**	**356**	*e*P	**P**	**17 42 55.9**	**+0.6**
ESDC	**Sonseca Array**	**79.55**	**353**	P	**P**	**17 42 55.3**	**-0.1**
	comp=Z,14nm,0.9s,baz=360,slow=5.9,SNR=31						
	comp=Z,14nm,0.9s						
ESDC	**Sonseca Array**	**79.55**	**353**	P	**P**	**17 42 55.5**	**+0.1**
ESDC				IAmb	IAmb	17 42 59.8	
	comp=Z,21nm,1.1s						
PAB	**San Pablo**	**79.70**	**353**	P	**P**	**17 42 56.5**	**+0.2**
PAB				IAmb	IAmb	17 43 00.1	
	comp=Z,22nm,1.1s						
PAB	**San Pablo**	**79.70**	**353**	P	**P**	**17 42 56.5**	**+0.2**
PAB				pmax	pmax		
	comp=Z,22nm,1.1s						
PMTG	**Montargil**	**80.34**	**356**	*e*P	**P**	**17 43 02.3**	**+2.7**
PESTR	**Estremoz**	**80.53**	**356**	P	**P**	**17 43 01.6**	**+1.0**
PESTR	**Estremoz**	**80.53**	**356**	*e*P	**P**	**17 43 03.8**	**+3.2**
PESTR				A	A	17 43 51.5	
	comp=Z,39nm,1.7s						
TAOE	**Nuku Hiva Isla**	**80.77**	**127**	*e*LR	LR	18 08 15.5	
	comp=Z,390nm,22.9s						
EVO	**Evora**	**80.87**	**356**	*e*P	**P**	**17 43 02.7**	**+0.2**
EVO				A	A	17 43 06.4	
	comp=Z,36nm,1.0s						
PBAR	**Barrancos**	**81.19**	**355**	*e*P	**P**	**17 43 04.7**	**+0.5**
PBAR				A	A	17 43 08.1	
	comp=Z,42nm,1.0s						
PNCL	**Nicolau / Gran**	**81.31**	**357**	*e*P	**P**	**17 43 08.5**	**+3.7**
PCHI	**Peechi**	**81.33**	**276**	*e*P	**P**	**17 43 06.5**	**+1.3**
PBEJ	**Beja**	**81.37**	**356**	*e*P	**P**	**17 43 07.8**	**+2.7**
PCVE	**Castro Verde**	**81.77**	**356**	*e*P	**P**	**17 43 10.7**	**+3.5**
EIL	**Elat**	**81.79**	**319**	LR	LR	18 26 24.1	
	comp=Z,179nm,18.3s,baz=48,slow=41						
PALK	**Pallekele**	**82.02**	**271**	LR	LR	18 24 31.6	
	comp=Z,68nm,19.3s,baz=143,slow=39						
KEST	**Kesra**	**82.06**	**342**	P	**P**	**17 43 09.0**	**+0.1**
	comp=Z,9.0nm,0.8s,baz=344,slow=5.4,SNR=7.3						
KEST				LR	LR	18 20 05.7	
	comp=Z,169nm,21.9s,baz=294,slow=36						
	comp=Z,9.0nm,0.8s						
KEST	**Kesra**	**82.06**	**342**	P	**P**	**17 43 09.8**	**+0.9**
KEST				IAmb	IAmb	17 43 18.0	
	comp=Z,15nm,1.0s						
CTA	**Charters Tower**	**82.44**	**200**	P	**P**	**17 43 09.8**	**-0.9**
	comp=Z,6.5nm,1.1s,baz=39,slow=4.5,SNR=6.6						
	comp=Z,6.5nm,1.1s						
CTAO	**Charters Tower**	**82.44**	**200**	P	**P**	**17 43 09.9**	**-0.9**
CTAO				IAmb	IAmb	17 43 11.6	
	comp=Z,20nm,1.4s						
CTAO	**Charters Tower**	**82.44**	**200**	P	**P**	**17 43 09.9**	**-0.9**
CTAO				pmax	pmax		
	comp=Z,20nm,1.4s						
DZM	**Mont Dzumac**	**82.65**	**181**	*e*LR	LR	18 09 07.9	
	comp=Z,275nm,23.1s						
RAYN	**Ar Rayn**	**83.70**	**308**	P	**P**	**17 43 16.7**	**-0.8**
RAYN				IAmb	IAmb	17 43 21.4	
	comp=Z,19nm,1.2s						
RAYN	**Ar Rayn**	**83.70**	**308**	P	**P**	**17 43 16.7**	**-0.8**
RAYN				pmax	pmax		
	comp=Z,19nm,1.2s						
WB0	**Warramunga Arr**	**84.62**	**211**	P	**P**	**17 43 21.0**	**-0.9**
WB0				IAmb	IAmb	17 43 22.6	
	comp=Z,22nm,1.1s						
WR0	**Warramunga Arr**	**84.76**	**211**	P	**P**	**17 43 21.8**	**-0.9**
WR0				IAmb	IAmb	17 43 23.4	
	comp=Z,14nm,1.1s						
WRAB	**Tennant Creek**	**84.79**	**211**	P	**P**	**17 43 21.6**	**-1.1**
WRAB				IAmb	IAmb	17 43 23.5	
	comp=Z,22nm,1.1s						
WRAB	**Tennant Creek**	**84.79**	**211**	P	**P**	**17 43 21.7**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,22nm,1.1s						
WB2	**Warramunga Arr**	**84.80**	**211**	P	**P**	**17 43 21.9**	**-0.9**
WB2				IAmb	IAmb	17 43 28.1	
	comp=Z,23nm,1.1s						
WRA	**Warramunga Arr**	**84.80**	**211**	P	**P**	**17 43 22.8**	**-0.1**
	comp=Z,11nm,1.0s,baz=18,slow=5.1,SNR=26						
	comp=Z,11nm,1.0s						
WRA	**Warramunga Arr**	**84.80**	**211**	P	**P**	**17 43 21.9**	**-0.9**
PPT	**Papeete**	**85.48**	**139**	LR	LR	18 18 16.0	
	comp=Z,100nm,18.3s,baz=344,slow=33						
FITZ	**Fitzroy Crossi**	**85.49**	**219**	P	**P**	**17 43 25.9**	**-0.4**
PPT2	**Papeete2**	**85.50**	**139**	*e*LR	LR	18 10 27.2	
	comp=Z,307nm,24.0s						
PPT2				*e*LR	LR	18 10 27.3	
	comp=Z,265nm,25.8s						
RAR	**Rarotonga**	**86.03**	**149**	LR	LR	18 13 52.5	
	comp=Z,203nm,21.9s,baz=295,slow=30						
MDT	**Midelt**	**86.42**	**353**	P	**P**	**17 43 32.1**	**+1.0**
	comp=Z,7.3nm,0.9s,baz=29,slow=3.6,SNR=10						
MDT				LR	LR	18 20 59.9	
	comp=Z,101nm,20.6s,baz=356,slow=35						
	comp=Z,7.3nm,0.9s						
ASAR	**Alice Springs**	**88.48**	**210**	P	**P**	**17 43 40.1**	**-0.7**
	comp=Z,2.1nm,0.9s,baz=19,slow=4.7,SNR=17						
	comp=Z,2.1nm,0.9s						
ASAR	**Alice Springs**	**88.48**	**210**	P	**P**	**17 43 39.0**	**-1.8**
JTS	**Las Juntas de**	**89.56**	**70**	LR	LR	18 29 20.8	
	comp=Z,68nm,18.9s,baz=46,slow=39						

MBWA	Marble Bar	90.27	224	P	P	17 43 47.6	-1.5
MBWA				IAmb	IAmb	17 46 46.4	
	comp=Z,26nm,1.6s						
SJG	San Juan	90.45	50	LR	LR	18 26 29.3	
	comp=Z,48nm,20.4s,baz=169,slow=37						
PSA00	Pilbara Seismi	90.61	223	P	P	17 43 49.9	-0.8
TBI	Tubuai	90.93	141	*e*LR	LR	18 12 57.4	
	comp=Z,7µm,22.8s						
TBI				*e*LR	LR	18 12 57.7	
	comp=Z,1µm,23.5s						
TAM	Tamanrasset	95.33	343	P	P	17 44 11.5	-1.5
TAM	Tamanrasset	95.33	343	P	P	17 44 11.5	-1.5
TAM				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ATD	Arta Tunnel	95.61	306	LR	LR	18 33 42.5	
	comp=Z,17nm,18.3s,baz=3.0,slow=40						
SDV	Santo Domingo	97.07	58	LR	LR	18 30 47.0	
	comp=Z,155nm,20.9s,baz=338,slow=37						
ROSC	El Rosal	99.14	63	LR	LR	18 34 00.0	
	comp=Z,112nm,18.5s,baz=74,slow=38						
TORD	Torodi Ar. Bea	105.33	345	PKKPab	PKKPab	18 00 56.6	+0.3
	comp=Z,2.3nm,1.0s,baz=204,slow=2.1,SNR=7.5						
AC05	El Transito	130.46	77		PKiKP	17 49 59.7	-0.1
PLCA	Paso Flores	139.90	87	PKP	PKPdf	17 50 16.2	+0.1
	comp=Z,3.5nm,0.8s,baz=22,slow=1.1,SNR=6.0						
GO09	Cerro Castillo	146.52	101		PKPbc	17 50 28.5	-0.3
MG05	Puerto Natales	146.70	102	PKPdf	PKPbc	17 50 28.8	-0.4

SJA ***06*** *17:37:56.9±1.0,23°.95S×66°.80W,h210^{km}±8^{km},ML3.8, MW3.8,Hypocentre not reviewed by the ISC*

IDC ***06*** *17:37:56.7±6.4,24°.06S×66°.66W,h190^{km}±42^{km},mb3.9/2, mbtmp4.5/4,Error ellipse: s-maj=140.6km s-min=31.8km az=3.0*

NEIC ***06*** *17:37:57.5±1.9,24°.02S±0°.07×66°.94W±0°.06,h216^{km}±9^{km}, mb4.7/5,Mwr4.8(GUC),Error ellipse: s-maj=10.1km s-min=6.9km az=203.0*

VAO ***06*** *17:37:59.2±0.4,23°.80S×67°.20W,h253^{km},mb4.0*

GUC ***06*** *17:37:59.7±0.7,23°.91S×66°.99W,h212^{km}±9^{km},ML4.5*

ISC 06 17:37:57.5±0.6,**23°.96S**±0°.04×**67°.02W**±0°.07,**h225**^{km}±9^{km}, **n97**,σ1^{s}**06**/118,**mb4.6**/4,**11C,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	San Lorenzo	1.58	119	*i* P		17 38 31.0	
AZAP	Zapla	1.81	99	*e*P		17 38 33.1	
AZAP				IAML		17 39 03.0	
	comp=Z,151nm,0.7s						
LVC	Limon Verde	2.19	307	P	Pn	17 38 41.2	+0.9
	comp=Z,234nm,0.2s,baz=135,slow=6.3,SNR=1039						
LVC				S	S	17 39 14.9	+1.4
	comp=Z,167nm,0.3s,baz=242,slow=20,SNR=27						
LVC	Limon Verde	2.19	307		Pn	17 38 40.8	+0.6
LVC	Limon Verde	2.19	307	*e*P	Pn	17 38 40.9	+0.6
LVC				*e*S	S	17 39 13.1	-0.4
LVC	Limon Verde	2.19	307	*e*P	Pn	17 38 41.4	+1.1
LVC	Limon Verde	2.19	307	*i* P		17 38 41.3	
LVC				IAML		17 39 16.9	
	comp=Z,128nm,0.5s						
YJA	Yavi	2.25	38	*i* P		17 38 39.3	
YJA				*e*S		17 39 10.2	
YJA				IAML		17 39 12.6	
	comp=Z,17nm,0.5s						
ASTB	Santa Barbara	2.35	90	*i* P		17 38 38.4	
ASTB				IAML		17 39 20.3	
	comp=Z,1.9nm,0.3s						
PB15	IPOC Station P	2.37	288		Pn	17 38 43.1	+1.2
PB15				Sn	S	17 39 16.7	+0.3
PB15	IPOC Station P	2.37	288	⇑*e*P	Pn	17 38 43.1	+1.2
PB15				*e*S	S	17 39 16.5	+0.1
PB15	IPOC Station P	2.37	288	*i* P		17 38 43.2	
PB15				*i* S		17 39 17.5	
PB15				IAML		17 39 19.8	
	comp=Z,3µm,0.2s						
GO02	Mina Guanaco	2.63	242		Pn	17 38 45.7	+1.0
GO02				Sn	S	17 39 21.9	+0.3
GO02	Mina Guanaco	2.63	242	*i* P		17 38 45.6	
GO02				*i* S		17 39 22.1	
PB06	IPOC Station P	2.66	297		Pn	17 38 46.0	+1.2
PB06				Sn	S	17 39 20.5	-1.3
PB06	IPOC Station P	2.66	297	⇑*e*P	Pn	17 38 46.1	+1.2
PB06				*e*S	S	17 39 21.2	-0.6
PB06				IAML		17 39 23.8	
	comp=E,1µm,0.4s						
PB06	IPOC Station P	2.66	297	*i* P		17 38 46.2	
PB06				*i* S		17 39 21.6	
PB06				IAML		17 39 24.3	
	comp=Z,540nm,0.3s						
ALOL	LOMAS DE OLMED	2.78	88	*e*P		17 38 42.9	
PB09	IPOC Station P	2.97	316		Pn	17 38 49.7	+1.3
PB09	IPOC Station P	2.97	316	⇑*e*P	Pn	17 38 49.2	+0.9
PB09				*e*S	S	17 39 27.0	-1.2
PB09				IAML		17 39 32.2	
	comp=N,490nm,0.3s						
PB09	IPOC Station P	2.97	316	*i* P		17 38 49.9	
PB09				*i* S		17 39 28.8	
PB09				IAML		17 39 30.7	
	comp=Z,355nm,0.2s						
PB03	IPOC Station P	3.15	307		Pn	17 38 51.4	+0.9
PB03	IPOC Station P	3.15	307	⇑*e*P	Pn	17 38 51.4	+0.9
PB03				*e*S	S	17 39 30.6	-1.3
PB03	IPOC Station P	3.15	307	*i* P		17 38 51.5	
PB03				*i* S		17 39 30.8	
PB03				IAML		17 39 32.8	
	comp=Z,612nm,0.2s						
PB14	IPOC Station P	3.16	257		Pn	17 38 51.4	+0.8
PB14	IPOC Station P	3.16	257	⇑*i*P	Pn	17 38 51.5	+0.9
PB14				*i* S	S	17 39 31.5	-0.6
PB14	IPOC Station P	3.16	257	*i* P		17 38 51.6	
PB14				IAML		17 39 34.9	
	comp=Z,336nm,0.4s						
PB10	IPOC Station P	3.27	277		Pn	17 38 52.9	+1.3
PB10	IPOC Station P	3.27	277	⇑*e*P	Pn	17 38 53.1	+1.5
PB10				*e*S	S	17 39 33.1	-0.8
PB10	IPOC Station P	3.27	277	*i* P		17 38 53.1	
PB10				IAML		17 39 40.2	
	comp=Z,122nm,0.2s						
PB04	IPOC Station P	3.30	299		Pn	17 38 53.1	+0.9
PB04	IPOC Station P	3.30	299	*e*P	Pn	17 38 52.8	+0.6
PB04				*e*S	S	17 39 33.8	-1.2
PB04	IPOC Station P	3.30	299	*e*P		17 38 53.4	
PB04				IAML		17 39 40.4	
	comp=Z,431nm,0.2s						
AC02	Maricunga	3.44	213		Pn	17 38 54.5	+0.4
AC02	Maricunga	3.44	213	*i* P		17 38 54.8	
AC02				IAML		17 39 43.8	
	comp=Z,46nm,0.4s						
PB07	IPOC Station P	3.45	309		Pn	17 38 54.6	+0.7
PB07	IPOC Station P	3.45	309	⇑*e*P	Pn	17 38 54.8	+0.9
PB07				*e*S	S	17 39 36.5	-1.6
PB07	IPOC Station P	3.45	309	*i* P		17 38 54.8	
PB07				*i* S		17 39 37.6	
PB07				IAML		17 39 39.8	
	comp=Z,629nm,0.4s						
PB01	IPOC Station P	3.69	321		Pn	17 38 57.0	+0.4
PB01	IPOC Station P	3.69	321	⇑*e*P	Pn	17 38 57.3	+0.6
PB01				*e*S	S	17 39 41.4	-1.7
PB01	IPOC Station P	3.69	321	*e*P		17 38 57.4	
PB01				IAML		17 39 46.2	
	comp=Z,293nm,0.2s						
PB02	IPOC Station P	3.73	314		Pn	17 38 57.6	+0.4
PB02	IPOC Station P	3.73	314	⇑*e*P	Pn	17 38 57.7	+0.4
PB02				*e*S	S	17 39 42.4	-1.7
PB02	IPOC Station P	3.73	314	*i* P		17 38 57.9	
PB02				*i* S		17 39 43.1	
PB02				IAML		17 39 44.6	
	comp=Z,850nm,0.3s						
AC01	Pan de Azucar	3.91	235		Pn	17 38 59.0	-0.1
AC01	Pan de Azucar	3.91	235	*i* P		17 38 59.1	
AC01				*i* S		17 39 45.6	
AC01				IAML		17 39 47.7	
	comp=Z,184nm,0.3s						
PB08	IPOC Station P	4.28	332		Pn	17 39 05.0	+0.8
PB08	IPOC Station P	4.28	332	⇑*i*P	Pn	17 39 05.2	+1.0
PB08				*i* S	S	17 39 56.1	-0.4
PB08	IPOC Station P	4.28	332	*i* P		17 39 05.4	
PB08				IAML		17 40 00.3	
	comp=Z,164nm,0.7s						
TA01	Diego Aracena	4.47	318		Pn	17 39 06.3	+0.4
TA01	Diego Aracena	4.47	318	*e*P	Pn	17 39 06.3	+0.4
TA01				*e*S	S	17 39 57.8	-2.1
TA01	Diego Aracena	4.47	318	*i* P		17 39 06.4	
TA01				IAML		17 40 04.2	
	comp=Z,131nm,0.5s						
CYA	Choya	4.60	166	*i* P		17 39 07.3	
CYA				IAML		17 40 04.3	
	comp=Z,3.7nm,0.7s						
GO03	Copiap	4.64	218		Pn	17 39 07.5	-0.6
GO03	Copiap	4.64	218	*i* P		17 39 07.5	
TA02	Huaiquique	4.67	321		Pn	17 39 08.2	-0.3
GO01	Chusmiza	4.72	334		Pn	17 39 09.4	-0.2
GO01	Chusmiza	4.72	334	*i* P	Pn	17 39 10.4	+0.8
GO01				*i* S	S	17 40 06.2	-0.3
GO01	Chusmiza	4.72	334	*i* P		17 39 11.0	
PB11	IPOC Station P	4.84	329		Pn	17 39 10.5	-0.3
PB11	IPOC Station P	4.84	329	⇑*i*P	Pn	17 39 10.5	-0.3
PB11				*i* S	S	17 40 06.0	-2.6
PSGC	Pisagua	5.21	326	*i* P	Pn	17 39 14.1	-1.2
PSGC				*i* S	S	17 40 13.0	-3.9
PSGCX	Pisagua	5.21	326		Pn	17 39 14.3	-1.1
PSGCX	Pisagua	5.21	326	*i* P		17 39 14.3	
PSGCX				IAML		17 40 16.9	
	comp=Z,141nm,0.4s						
MNMC	Minye Minye	5.37	333		Pn	17 39 17.4	-0.1
MNMC	Minye Minye	5.37	333	*e*P	Pn	17 39 17.6	+0.1
MNMC				*i* S	S	17 40 18.3	-2.5
AC04	Llanos de Chal	5.58	220	Pn	Pn	17 39 20.1	+0.3
AC05	El Transito	5.67	210		Pn	17 39 20.8	-0.2
LCO	Las Campanas	6.02	212		Pn	17 39 24.7	-0.9
PB16	IPOC Station P	6.06	337		Pn	17 39 26.7	+0.2
PB12	IPOC Station P	6.15	329		Pn	17 39 26.5	-0.6
CO01	Juntas del Tor	6.59	204	Pn	Pn	17 39 33.4	+0.5
PB18	Visviri	6.74	340	Pn	Pn	17 39 38.0	+2.8
GO04	Tololo Observa	7.05	208	Pn	Pn	17 39 36.7	-2.0
CO06	Fray Jorge	7.85	211	Pn	Pn	17 39 47.7	-1.0
CO02	Combarbal	8.03	205	Pn	Pn	17 39 50.6	-0.6
AZCA	Azaras, Argent	10.74	115	*e*P	P	17 40 29.4	-2.2
PTLB	Pontes e Lacer	11.26	43	Pn	Pn	17 40 32.7	+0.3
CRSM	Crissiumal (Br	12.22	109	*e*P	P	17 40 47.6	-0.3
RODS	Rosario do Sul	12.30	124	*e*P	P	17 40 48.5	-0.3
FRBT	Francisco Belt	12.82	102	*e*P	P	17 40 55.0	+0.3
SALV	Santo Antonio	13.32	55	*e*P	P	17 41 00.4	+0.1
ALGR	Alto Alegre (B	13.43	114	*e*P	P	17 41 01.8	+0.3
PTGB	Pitanga	13.66	96	*e*P	P	17 41 04.9	+0.8
CPSB	Cacapava Do Su	13.68	121	*e*P	P	17 41 03.8	-0.4
ITAB	Concordia	13.82	107	Pn	Pn	17 41 02.8	-1.6
ITAB	Concordia	13.82	107	*e*P	P	17 41 06.1	+0.3
PLTB	Pedras Altas	14.18	126	P	Pn	17 41 09.3	+0.6
TRQA	Tornquist	14.70	164		Pn	17 41 14.0	-0.9
PCMB	Pacaembu	14.72	84	*e*P	P	17 41 16.7	+0.9
PDRB	Porto dos Gac	15.70	40	*e*P	P	17 41 26.0	-0.6
FRTB	Fartura	16.01	91	*e*P	Pn	17 41 30.9	0.0
GO06	Curarrehue	16.03	193		Pn	17 41 31.0	0.0
ITRB	Iturama	16.04	78	*e*P	Pn	17 41 31.4	+0.1
PLCA	Paso Flores	16.99	189	P	P	17 41 40.1	-0.5
CZSB	Cruzeiro do Su	17.03	340		Pn	17 41 43.1	0.0
BB19B	Bebedouro	17.33	84	*e*P	P	17 41 45.6	+1.1
LL04	Puerto Octay	17.50	194	P	P	17 41 45.6	-0.5
SPB	Sao Paulo	17.93	93	*e*P	Pn	17 41 52.8	-0.8
PET01	Itanhaem-SP	18.03	95	*e*P	P	17 41 53.7	+1.6
IPMB	Ipameri, GO	18.54	75	*e*P	P	17 41 57.6	-0.1
SNDB	Serra Nova Dou	19.10	54	*e*P	P	17 42 03.2	-0.5
PARB	Paraibuna	19.61	93	*e*P	P	17 42 08.9	-0.2
BDFB	Brasilia	19.69	69	P	P	17 42 09.6	-0.5
	comp=Z,13nm,0.6s,baz=246,slow=11,SNR=22						
BDFB	Brasilia	19.69	69	*e*P	P	17 42 10.0	-0.1
PMNB	Patos De Minas	19.92	78	*e*P	P	17 42 11.8	-0.7
NPGB	Novo Progresso	20.20	36	*e*P	P	17 42 13.8	-1.7
VAS01	Vassouras-RJ	21.75	90	*e*P	P	17 42 32.0	+0.7
ITTB	Itaituba	22.31	31	*e*P	P	17 42 35.6	-1.0
DUB01	Friburgo-RJ	22.75	90	*e*P	P	17 42 41.3	+0.6
JANB	Januaria	23.14	72	*e*P	P	17 42 43.6	-0.6
SMTB	Santa Maria do	23.88	54	*e*P	P	17 42 51.4	+0.5
SDBA	SAO DESIDERIO	23.91	65	*e*P	P	17 42 50.7	-0.5
GUA01	Guaratinga, BA	26.53	79	*e*P	P	17 43 14.5	-0.2
NATX	Nacogdoches	61.39	333	P	P	17 47 51.8	+2.0
NATX				IAmb	IAmb	17 49 56.0	
	comp=Z,19nm,0.8s						
MIAR	Mount Ida	63.41	336	P	P	17 48 05.3	+2.1
TUL1	Leonard	65.47	335	P	P	17 48 16.5	0.0
TUL1				IAmb	IAmb	17 48 16.7	
	comp=Z,9.8nm,0.6s						
QSPA	South Pole Qui	66.25	180	P	P	17 48 21.1	-0.1
DBIC	Dimbokro	67.81	72	P	P	17 48 32.1	+0.5
	comp=Z,1.5nm,0.3s,baz=237,slow=6.8,SNR=5.0						
	comp=Z,1.5nm,0.3s						
DBIC	Dimbokro	67.81	72	P	P	17 48 32.3	+0.6
DBIC				IAmb	IAmb	17 48 33.7	
	comp=Z,14nm,1.2s						
TORD	Torodi Ar. Bea	76.57	69	P	P	17 49 24.7	+1.2
	comp=Z,2.0nm,0.5s,baz=256,slow=5.5,SNR=21						
	comp=Z,2.0nm,0.5s						
MKAR	Makanchi Array	146.50	39	PKPbc	PKiKP	17 57 15.3	+0.5
	comp=Z,0.5nm,0.4s,baz=307,slow=2.9,SNR=14						

NEIC ***06*** *17:55:07.0±1.5,21°.0S±0°.1×178°.8W±0°.1,h605^{km}±8^{km}, mb4.6/65,Error ellipse: s-maj=21.9km s-min=18.0km az=136.0*

NOU ***06*** *17:55:08.2,21°.04S×178°.87W,h608^{km},mb4.3/27,Fiji Islands Region*

IDC ***06*** *17:55:08.7±1.3,20°.90S×179°.08W,h612^{km}±13^{km}, mb3.4/12,mbtmp4.4/14,Error ellipse: s-maj=18.8km s-min=11.1km az=148.0*

ISC 06 17:55:08.4±0.4,**21°.03S**±0°.08×**178°.93W**±0°.07,**h619**^{km}, **n183,**σ1^{s}**11**/190,**mb4.5**/54,**22C-8D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.34	318	P	P	17 56 37.2	-0.6
	395nm,0.5s,baz=151,slow=15,SNR=150						
MSVF	Nonsavu	4.34	318	P	P	17 56 37.3	-0.5
TAVE	Taveuni	4.39	348	P	P	17 56 37.5	-0.6
YSA	Yasawairara	5.43	322	P	P	17 56 45.0	-0.9
NIUE	Niue	8.68	79	P	P	17 57 14.1	-0.8
NIUE	Niue	8.68	79	P	P	17 57 13.9	-1.0
PINNC	Pines Island,	12.75	260	P	P	17 57 53.9	-0.6
LIFNC	LIFOU	12.93	269	P	P	17 57 52.0	-4.2
DZM	Mont Dzumac	13.65	263	P	P	17 58 02.5	-0.9
	5.8nm,0.6s,baz=96,slow=22,SNR=2.4						
DZM	Mont Dzumac	13.65	263	P	P	17 58 02.4	-1.1
DZM	Mont Dzumac	13.65	263	P	P	17 58 03.6	+0.2
KOUNC	Koumac, New Ca	15.70	269	P	P	17 58 22.8	+0.6
KOUNC				IAmb	IAmb	17 58 26.5	
	comp=Z,49nm,1.3s						
KUZ	Kuaotunu	16.34	195	P	P	17 58 29.7	+1.8
URZ	Urewera	17.51	190	P	P	17 58 36.7	-1.8
	comp=Z,4.4nm,0.3s,baz=355,slow=3.3,SNR=18						
URZ	Urewera	17.51	190	P	P	17 58 37.3	-1.2
RTZ	Ruatahuna	17.88	190	P	P	17 58 39.3	-2.7
RTZ				IAmb	IAmb	17 59 11.9	
	comp=Z,17nm,1.4s						
BKZ	Black Stump Fm	18.50	191	P	P	17 58 44.7	-2.9
BKZ				IAmb	IAmb	17 59 15.9	
	comp=Z,20nm,1.3s						
BKZ	Black Stump Fm	18.50	191	P	P	17 58 47.2	-0.4
BFZ	Birch Farm	20.02	191	P	P	17 58 57.6	-3.7
MRZ	Mangatainoka R	20.12	192	P	P	17 58 59.0	-3.2
TCW	Tory Channel	20.93	194	P	P	17 59 10.4	+1.0
QRZ	Quartz Range	21.03	198	P	P	17 59 10.6	+0.3
QRZ	Quartz Range	21.03	198	P	P	17 59 11.0	+0.7
NNZ	Nelson	21.16	196	P	P	17 59 10.9	-0.6
THZ	Tophouse	21.80	197	P	P	17 59 15.1	-2.1
THZ				IAmb	IAmb	17 59 34.6	
	comp=Z,36nm,1.5s						
DSZ	Denniston Nort	22.09	199	P	P	17 59 19.2	-0.6
DSZ				IAmb	IAmb	17 59 58.2	
	comp=Z,31nm,1.2s						
KHZ	Kahutara	22.25	195	P	P	17 59 19.3	-1.8
GVZ	Greta Valley S	22.89	195	P	P	17 59 24.6	-2.3
LTZ	Lake Taylor	22.91	197	P	P	17 59 25.2	-1.9
LTZ				IAmb	IAmb	17 59 29.2	
	comp=Z,22nm,1.1s						
INZ	Inchbonnie	23.09	198	P	P	17 59 27.5	-1.1
FOZ	Fox Glacier	24.33	200	P	P	17 59 38.7	-0.8
JCZ	Jackson Bay	25.15	201	P	P	17 59 47.5	+0.6
WKZ	Wanaka	25.74	200	P	P	17 59 51.6	-0.4
MLZ	Mavora Lakes	26.52	201	P	P	17 59 59.2	+0.4
DCZ	Deep Cove	26.93	202	P	P	18 00 01.6	-0.7
DCZ				IAmb	IAmb	18 00 03.3	
	comp=Z,39nm,1.4s						
EIDS	Eidsvold	27.87	255	P	P	18 00 11.1	+0.3
EIDS				IAmb	IAmb	18 00 20.8	
	comp=Z,22nm,1.4s						
ARMA	Armidale	28.05	245	P	P	18 00 14.3	+1.8
ARMA				IAmb	IAmb	18 00 36.5	
	comp=Z,34nm,1.3s						
ARMA	Armidale	28.05	245	P	P	18 00 14.7	+2.2
RMQ	Roma	30.02	253	P	P	18 00 30.4	+1.0
TV1H	Townsville Har	32.19	267	P	P	18 00 47.4	-0.5
	comp=Z,10nm,1.0s						
CTA	Charters Tower	32.57	265	P	P	18 00 50.9	-0.2
CTAO	Charters Tower	32.57	265	P	P	18 00 51.4	+0.2
CTAO				IAmb	IAmb	18 00 52.7	
	comp=Z,15nm,0.6s						
CTAO	Charters Tower	32.57	265	P	P	18 00 50.6	-0.5
CMSA	Cobar Meteorol	33.27	244	P	P	18 00 57.9	+1.1
PMG	Port Moresby	34.62	284	P	P	18 01 08.4	+0.2
PMG				IAmb	IAmb	18 01 09.7	
	comp=Z,22nm,0.8s						
PMG	Port Moresby	34.62	284	P	P	18 01 10.0	+1.8
MTSU	Mount Surprise	34.70	268	P	P	18 01 09.3	+0.4
COEN	Coen	36.75	275	P	P	18 01 25.9	+0.1
STKA	Stephens Creek	36.78	245	P	P	18 01 26.4	+0.7
	comp=Z,3.8nm,0.7s,baz=91,slow=11,SNR=11						
	comp=Z,3.8nm,0.7s						
STKA	Stephens Creek	36.78	245	P	P	18 01 26.0	+0.2
INKA	Innaminka	37.21	252	P	P	18 01 31.1	+1.8
QIS	Mount Isa	38.69	263	P	P	18 01 41.8	+0.4
LCRK	Leigh Creek	39.53	247	P	P	18 01 49.0	+1.0
BBOO	Buckleboo	41.53	244	P	P	18 02 04.7	+0.9
BBOO				IAmb	IAmb	18 02 25.1	
	comp=Z,18nm,1.2s						
BBOO	Buckleboo	41.53	244	P	P	18 02 05.0	+1.2
OOD	Oodnadatta	41.69	251	P	P	18 02 06.7	+1.6
MULG	Mulgathing	43.11	248	P	P	18 02 17.1	+0.9
WR0	Warramunga Arr	43.48	263	P	P	18 02 18.4	-0.7
AS31	Alice Springs	43.55	257	P	P	18 02 19.5	-0.2
ASAR	Alice Springs	43.55	257	P	P	18 02 19.4	-0.2
	comp=Z,13nm,0.6s,baz=94,slow=7.7,SNR=242						
ASAR				PcP	PcP	18 03 53.3	+0.2
	comp=Z,1.1nm,0.8s,baz=92,slow=4.6,SNR=3.4						
ASAR				ScP	ScP	18 06 50.0	+3.3
	comp=Z,1.3nm,0.8s,baz=104,slow=4.3,SNR=8.2						
ASAR				S	S	18 08 04.5	-1.2
	comp=Z,2.3nm,0.9s,baz=95,slow=16,SNR=14						
	comp=Z,13nm,0.6s						
ASAR	Alice Springs	43.55	257	P	P	18 02 19.7	0.0
WB0	Warramunga Arr	43.65	263	P	P	18 02 19.7	-0.7
WB0				IAmb	IAmb	18 02 21.2	
	comp=Z,16nm,0.5s						
WB2	Warramunga Arr	43.66	263	P	P	18 02 19.9	-0.6
WB2				IAmb	IAmb	18 02 21.4	
	comp=Z,14nm,0.9s						
WRA	Warramunga Arr	43.67	263	P	P	18 02 20.1	-0.5
	comp=Z,6.5nm,0.5s,baz=98,slow=7.9,SNR=95						
WRA				S	S	18 08 06.9	-0.4
	comp=Z,1.6nm,0.9s,baz=95,slow=13,SNR=6.6						
	comp=Z,6.5nm,0.5s						
WRA	Warramunga Arr	43.67	263	P	P	18 02 19.9	-0.7
GENI	Genyem	43.83	289	P	P	18 02 21.6	-0.3
	comp=Z,41nm,0.9s						
FORT	Forrest	48.29	247	P	P	18 02 55.0	-0.2
FORT				IAmb	IAmb	18 02 56.3	
	comp=Z,14nm,0.6s						
MTN	Manton Dam	48.30	271	P	P	18 02 54.7	-0.9
KNRA	Kununurra	49.76	267	P	P	18 03 06.0	-0.3
KNRA				IAmb	IAmb	18 03 08.7	
	comp=Z,20nm,0.9s						
FAKI	Fak Fak	50.77	284	P	P	18 03 12.9	-0.8
	comp=Z,9.5nm,0.8s						
BNDI	Bandanaira	52.27	281	P	P	18 03 23.1	-1.3
	comp=Z,108nm,1.7s						
SWI	Sorong	52.54	286	P	P	18 03 25.7	-0.6
	comp=Z,68nm,0.8s,comp=Z,775nm						
AAI	Ambon	54.16	281	P	P	18 03 37.2	-0.5
	comp=Z,30nm,0.9s						
SOEI	Soe	55.65	272	P	P	18 03 48.5	+0.3
SOEI				IAmb	IAmb	18 03 51.2	
	comp=Z,41nm,0.7s						
SOEI	Soe	55.65	272	P	P	18 03 48.3	+0.1
PSA00	Pilbara Seismi	56.70	257	P	P	18 03 54.1	-1.1
PSA00	Pilbara Seismi	56.70	257	P	P	18 03 54.8	-0.4
PSA00				IAmb	IAmb	18 03 56.4	
	comp=Z,6.3nm,1.0s						
TNTI	Ternate	56.75	286	P	P	18 03 55.5	-0.1
TNTI				IAmb	IAmb	18 03 56.8	
	comp=Z,20nm,0.9s						
MBWA	Marble Bar	56.89	258	P	P	18 03 55.9	-0.6
VNDA	Vanda	57.31	185	P	P	18 04 00.1	+1.8
	comp=Z,1.9nm,0.8s,baz=24,slow=6.0,SNR=7.0						
	comp=Z,1.9nm,0.8s						
TOLI2	Tolitoli	62.86	283	P	P	18 04 36.5	+0.5
UGM	Wanagama	69.08	269	P	P	18 05 14.0	-0.5
MJAR	Matsushiro Arr	70.12	324	P	P	18 05 19.5	-0.6
	comp=Z,3.7nm,0.7s,baz=159,slow=5.8,SNR=7.8						
	comp=Z,3.7nm,0.7s						
JHS	Saijyo	71.94	320	P	P	18 05 31.4	+0.7
ADK	Adak	72.62	1	P	P	18 05 33.7	-0.5
YULB	Yu-li	73.06	304	P	P	18 05 36.8	-0.6
YULB				IAmb	IAmb	18 05 37.5	
	comp=Z,42nm,1.2s						
TPUB	Ta-pu	73.53	303	P	P	18 05 39.4	-0.8
SSLB	Suanglung	73.54	304	P	P	18 05 39.1	-1.0
SSLB				IAmb	IAmb	18 06 04.2	
	comp=Z,54nm,1.4s						
JKA	Kamikawa-asahi	73.78	332	P	P	18 05 41.2	+0.3
JKA				IAmb	IAmb	18 05 43.5	
	comp=Z,19nm,1.1s						
PEA0B	Petropavlovsk-	76.56	346	P	P	18 05 56.7	+0.4
PETK	Petropavlovsk-	76.56	346	P	P	18 05 55.7	-0.6
	comp=Z,5.1nm,0.7s,baz=152,slow=6.4,SNR=13						
	comp=Z,5.1nm,0.7s						
USRK	Ussuriysk Ar.	78.91	326	P	P	18 06 10.4	+1.4
	comp=Z,4.7nm,0.8s,baz=95,slow=4.3,SNR=6.1						
	comp=Z,4.7nm,0.8s						
BELA	Belgrano 2	79.15	173	P	P	18 06 09.7	-0.1
NJ2	Nanjing	79.55	310	*e*P	P	18 06 13.1	+0.4
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MDJ	Mudanjiang	80.45	325	P	P	18 06 18.1	+1.0
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,130nm,4.6s						
NVAR	Mina Array Bea	82.00	44	P	P	18 06 26.8	+1.3
	comp=Z,0.6nm,0.5s,baz=228,slow=8.4,SNR=5.0						
	comp=Z,0.6nm,0.5s						
BNX	BinXian	82.35	325	⇓P	P	18 06 26.4	-0.3
BNX				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BNX				pmax	pmax		
	comp=Z,120nm,6.0s						
O19K	Port Alsworth	83.38	12	P	P	18 06 31.5	+0.1
O19K				IAmb	IAmb	18 06 31.9	
	comp=Z,24nm,1.2s						
HEH	HeiHe	85.30	329	*e*P	P	18 06 41.4	+0.3
HEH				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HEH				pmax	pmax		
	comp=Z,350nm,5.1s						
ENH	Enshi	85.61	305	P	P	18 06 43.8	+0.7
ENH				IAmb	IAmb	18 06 45.4	
	comp=Z,8.6nm,0.8s						
CAST	Castle Rocks	86.77	12	P	P	18 06 46.4	-1.4
GLB	Gilahina Butte	86.88	16	P	P	18 06 48.0	-0.4
GLB				IAmb	IAmb	18 07 23.4	
	comp=Z,14nm,1.2s						
KTH	Kantishna Hill	87.11	12	P	P	18 06 48.6	-0.9
TROLL	Troll, Antarti	87.20	180	P	P	18 06 49.8	-0.2
RND	Reindeer	87.40	13	P	P	18 06 50.7	-0.1
RND				IAmb	IAmb	18 06 52.4	
	comp=Z,9.2nm,1.0s						
SNAA	Sanae	87.51	179	P	P	18 06 51.0	-0.4
MCK	McKinley	87.67	13	P	P	18 06 51.6	-0.4
MCK				IAmb	IAmb	18 06 53.9	
	comp=Z,7.2nm,0.9s						
VNA3	Neumayer Olymp	87.67	177	P	P	18 06 51.8	-0.3
TXAR	Lajitas Array	88.07	58	P	P	18 06 56.9	+2.1
	comp=Z,0.5nm,0.7s,baz=227,slow=5.0,SNR=5.2						
	comp=Z,0.5nm,0.7s						
I21K	Tanana	88.39	11	P	P	18 06 55.1	-0.2
WRH	Wood River Hil	88.50	13	P	P	18 06 55.5	-0.4
WRH				IAmb	IAmb	18 06 56.6	
	comp=Z,6.9nm,0.9s						
H21K	Melozitna Rive	88.68	11	P	P	18 06 56.7	+0.1
DOT	Dot Lake	88.69	15	P	P	18 06 56.8	+0.1

HDA	**Harding Lake**	**88.69**	**13**	P	**P**	**18 06 56.3**	**-0.4**
HDA				IAmb	IAmb	18 06 57.0	
	comp=Z,3.6nm,0.7s						
CCB	**Clear Creek Bu**	**88.72**	**13**	P	**P**	**18 06 56.0**	**-0.8**
CCB				IAmb	IAmb	18 06 56.8	
	comp=Z,6.4nm,1.0s						
IMAR	**Indian Mountai**	**88.82**	**10**	P	**P**	**18 06 56.9**	**-0.4**
MDM	**Murphy Dome**	**88.90**	**13**	P	**P**	**18 06 56.8**	**-1.0**
MDM				IAmb	IAmb	18 06 58.3	
	comp=Z,8.3nm,1.0s						
TCOL	**CIGO, UAF Yank**	**88.90**	**13**	P	**P**	**18 06 56.9**	**-0.8**
TCOL				IAmb	IAmb	18 06 57.8	
	comp=Z,12nm,1.0s						
COLA	**College**	**88.91**	**13**	P	**P**	**18 06 56.9**	**-0.7**
COLA				IAmb	IAmb	18 06 57.8	
	comp=Z,13nm,1.1s						
ILAR	**Eielson Array**	**89.02**	**13**	P	**P**	**18 06 57.6**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=213,slow=5.1,SNR=17						
	comp=Z,1.1nm,0.5s						
ILAR	**Eielson Array**	**89.02**	**13**	P	**P**	**18 06 57.0**	**-1.2**
HHC	**Hu-ho-hao-te**	**89.10**	**315**	*e*P	**P**	**18 07 02.7**	**+3.4**
HHC				pmax	pmax		
	comp=Z,32nm,0.9s						
HHC				pmax	pmax		
	comp=Z,430nm,5.4s						
CMAR	**Chiang Mai Arr**	**89.47**	**290**	P	**P**	**18 07 03.4**	**+2.0**
	comp=Z,2.8nm,0.9s,baz=130,slow=3.3,SNR=21						
	comp=Z,2.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**89.47**	**290**	P	**P**	**18 07 02.0**	**+0.6**
J26L	**Joseph Creek**	**89.53**	**15**	P	**P**	**18 07 01.3**	**+0.6**
J26L				IAmb	IAmb	18 07 02.7	
	comp=Z,6.3nm,0.9s						
CHTO	**Chiang Mai**	**89.60**	**290**	P	**P**	**18 07 03.5**	**+1.5**
PDAR	**Pinedale Array**	**89.94**	**44**	P	**P**	**18 07 03.9**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=222,slow=2.0,SNR=5.4						
	comp=Z,0.5nm,0.7s						
PZH	**PanZhiHua**	**90.19**	**298**	P	**P**	**18 07 05.3**	**+0.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MKAR	**Makanchi Array**	**110.92**	**313**	PKiKP	**PKiKP**	**18 12 30.4**	**-2.0**
	comp=Z,0.4nm,1.0s,baz=101,slow=1.2,SNR=3.5						
ARCES	**ARCESS Array B**	**129.27**	**349**	PKP	**PKPdf**	**18 13 06.2**	**-0.7**
	comp=Z,3.9nm,1.0s,baz=50,slow=1.4,SNR=5.9						
FINES	**FINESS Array B**	**136.02**	**343**	PKP	**PKPdf**	**18 13 19.3**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=128,slow=3.1,SNR=4.8						
FINES				SKPbc	**SKPbc**	**18 15 55.8**	**+1.3**
	comp=Z,1.1nm,0.6s,baz=46,slow=4.0,SNR=8.0						
AKASG	**Malin Array Be**	**143.04**	**330**	PKP	**PKPdf**	**18 13 30.6**	**-2.2**
	comp=Z,6.5nm,0.4s,baz=43,slow=4.1,SNR=60						
AKASG	**Malin Array Be**	**143.04**	**330**		PKPpre	18 13 29.7	
AKBB	**Malin Array Si**	**143.04**	**330**	PKPdf	**PKPdf**	**18 13 30.2**	**-2.6**
AK05	**Malin Array Si**	**143.10**	**330**	PKPdf	**PKPdf**	**18 13 30.5**	**-2.4**
GAZ	**Gaziantep**	**144.81**	**305**	PKPdf	**PKPdf**	**18 13 34.7**	**-1.7**
SORM	**Soroca**	**145.19**	**327**	⇑P	**PKPbc**	**18 13 37.7**	**0.0**
BNN	**Bunyan**	**145.28**	**309**		**PKPbc**	**18 13 38.7**	**+0.2**
BRTR	**Keskin Array B**	**146.54**	**311**	PKPdf	**PKPdf**	**18 13 38.8**	**-0.6**
GHRR		**147.03**	**325**	⇓P	**PKiKP**	**18 13 44.4**	**-0.2**
BUR08	**Bucovina Ar. S**	**147.06**	**329**		**PKiKP**	**18 13 44.6**	**-0.2**
BURAR	**Bucovina Array**	**147.08**	**329**	⇑P	**PKiKP**	**18 13 44.5**	**-0.3**
BURAR	**Bucovina Array**	**147.08**	**329**	PKPbc	**PKiKP**	**18 13 43.9**	**-1.0**
TESR	**Tescani**	**147.13**	**327**	⇑P	**PKPbc**	**18 13 43.3**	**+0.1**
TPGR	**Topolog**	**147.24**	**323**	⇑P	**PKPbc**	**18 13 43.3**	**-0.2**
OJC	**Ojcow**	**147.32**	**338**	PKPdf	**PKPdf**	**18 13 39.8**	**-0.4**
VRI	**Vrincioaia**	**147.52**	**326**	⇓P	**PKPbc**	**18 13 44.6**	**+0.4**
HARR	**Harsova**	**147.61**	**323**	⇑P	**PKiKP**	**18 13 44.9**	**-1.0**
TRPA	**Tarpa**	**147.91**	**333**	⇓P	**PKiKP**	**18 13 45.5**	**-0.9**
DOPR	**Dopca**	**148.14**	**327**	⇑P	**PKiKP**	**18 13 46.4**	**-0.6**
MLR	**Muntele Rosu**	**148.18**	**326**	⇓P	**PKiKP**	**18 13 47.2**	**0.0**
LANS	**Liptovska Anna**	**148.33**	**337**	*e*PKP	**PKiKP**	**18 13 47.7**	**+0.4**
LANS				*e*		18 13 53.2	
DPC	**Dobruska-Polom**	**148.35**	**341**	⇑*e*PKP	**PKiKP**	**18 13 47.1**	**-0.2**
DPC				*e*PKPAB	**PKPab**	**18 13 52.9**	**+1.0**
CLL	**Collm**	**148.36**	**346**		**PKPbc**	**18 13 46.1**	**0.0**
CLL	**Collm**	**148.36**	**346**	⇑*i*PKPbc	**PKiKP**	**18 13 46.6**	**-0.6**
	comp=Z,9.0nm,1.1s						
CLL				⇓*e*x	x	18 13 49.6	
	comp=Z,5.0nm,0.9s						
CLL				*e*PKPab	**PKPab**	**18 13 51.0**	**-0.8**
VOIR		**148.68**	**327**	⇑P	**PKPbc**	**18 13 47.4**	**+0.1**
MARR	**Marisel-Cluj**	**148.75**	**330**	⇓P	**PKiKP**	**18 13 48.0**	**-0.3**
ARR	**Arges**	**148.94**	**327**	⇑P	**PKiKP**	**18 13 49.3**	**+0.5**
VYHS	**Vyhne**	**149.11**	**337**	*e*PKP	**PKPbc**	**18 13 48.1**	**0.0**
VYHS				*e*		18 13 55.7	
JAVC	**Velka Javorina**	**149.21**	**338**	*e*PKP	**PKiKP**	**18 13 49.7**	**+0.5**
HUMR	**Humele**	**149.33**	**325**	⇓P	**PKPbc**	**18 13 48.7**	**0.0**
KRUC	**Moravsky**	**149.46**	**340**	*e*PKP	**PKiKP**	**18 13 49.1**	**-0.5**
SIRR	**Siria**	**149.72**	**331**	⇑P	**PKiKP**	**18 13 50.3**	**+0.1**
MODS	**Modra-Piesok**	**149.76**	**338**	*e*PKP	**PKPbc**	**18 13 49.5**	**-0.1**
GZR	**Gura Zlata**	**149.85**	**329**	⇑P	**PKiKP**	**18 13 50.1**	**-0.5**
SURR	**Surduc**	**149.89**	**330**	⇑P	**PKiKP**	**18 13 50.1**	**-0.5**
VLAD	**Vladila**	**149.99**	**325**	⇑P	**PKiKP**	**18 13 52.8**	**+2.0**
KHC	**Kasperske Hory**	**150.23**	**343**	⇑*e*PKP	**PKiKP**	**18 13 51.2**	**0.0**
KHC				*e*PKPAB	**PKPab**	**18 14 01.0**	**+1.3**
BZS	**Buzias**	**150.23**	**330**	⇑P	**PKiKP**	**18 13 51.1**	**-0.2**
CKRC	**Cesky Krumlov**	**150.31**	**342**	⇑*e*PKP	**PKiKP**	**18 13 51.4**	**0.0**
HERR	**Herculane**	**150.39**	**328**	⇑P	**PKiKP**	**18 13 51.4**	**-0.2**
GERES	**GERESS Array B**	**150.46**	**343**	PKPbc	**PKiKP**	**18 13 51.5**	**-0.3**
	comp=Z,1.8nm,0.8s,baz=29,slow=3.0,SNR=11						
CONA	**Conrad Observa**	**150.63**	**340**	*i* PKiKP	**PKiKP**	**18 13 52.3**	**+0.2**
	comp=Z,3.4nm,0.6s						
RONA	**Rosalia, Austr**	**150.68**	**339**	*i* PKiKP	**PKiKP**	**18 13 52.4**	**+0.2**
	comp=Z,4.6nm,0.5s						
MDVR	**Moldovita**	**150.81**	**329**	⇑P	**PKiKP**	**18 13 52.2**	**-0.4**
MORH	**Mrgy, Hungar**	**151.06**	**334**	⇑P	**PKiKP**	**18 13 52.6**	**-0.3**
FRGS	**Fruska Gora**	**151.40**	**332**	⇑P	**PKPbc**	**18 13 53.2**	**-0.3**
BOVS	**Bovan**	**151.65**	**327**	⇑P	**PKPbc**	**18 13 52.9**	**-1.1**
SOKA	**Soboth**	**151.99**	**339**	*i* PKP	**PKPbc**	**18 13 54.5**	**-0.4**
	comp=Z,3.0nm,1.2s						
OBKA	**Obir**	**152.30**	**340**	*i* PKP	**PKPbc**	**18 13 54.1**	**-1.4**
	comp=Z,10nm,1.8s						
SQTA	**Sankt Quirin**	**152.60**	**345**	*i* PKP	**PKPbc**	**18 13 55.1**	**-1.1**
	comp=Z,7.0nm,1.2s						
FETA	**Feichten**	**152.90**	**345**	*i* PKP	**PKPbc**	**18 13 55.7**	**-1.3**
	comp=Z,12nm,1.7s						
TORD	**Torodi Ar. Bea**	**172.14**	**184**	PKPab	**PKPab**	**18 15 36.3**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=178,slow=5.2,SNR=2.8						

SJA ***06*** *17:59:08.1±0.9, 32°.11S×68°.36W, h128^{km}±3^{km}, ML3.6, MW3.7, Hypocentre not reviewed by the ISC*
IDC ***06*** *17:59:08.6±0.8, 32°.11S×68°.27W, h118^{km}±4^{km}, mb3.3/3, mbtmp3.6/5, Error ellipse: s-maj=39.5km s-min=19.5km az=97.0*
ISC 06 17:59:07.3±0.8**, 32°.3S**±0°.1×**67°.7W**±0°.2**, h100**^{km}**, n10, σ2^{s}.21**/15**, mb3.4**/3**, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CFA	**Coronel Fontan**	**0.81**	**325**	P	**Pn**	**17 59 27.7**	**+1.9**
	650nm,0.3s,baz=224,slow=5.0,SNR=6045						
CFA				S	**Sn**	**17 59 41.2**	**+1.6**
	1µm,0.2s,baz=320,slow=22,SNR=127						
CFA	**Coronel Fontan**	**0.81**	**325**	*e*P		17 59 27.5	
CFA				*e*S		17 59 41.5	
CFA				IAML		17 59 41.5	
	comp=Z,1µm,0.2s						
ASAL	**Salagasta**	**1.01**	**251**	*e*P		17 59 29.2	
ASAL				*e*S		17 59 43.7	
SJA	**San Juan**	**1.04**	**315**	*e*P		17 59 28.7	
SJA				*e*S		17 59 43.2	
SJA				IAML		17 59 43.9	
	comp=Z,607nm,0.3s						
RTLL	**Cerro Villicun**	**1.15**	**325**	*e*P		17 59 29.8	
RTLL				*e*S		17 59 45.4	
ARCO	**CERRO ARCO**	**1.19**	**241**	*e*P		17 59 31.1	
ARCO				*e*S		17 59 47.3	
AAGR	**Agrelo**	**1.25**	**229**	*e*P		17 59 32.8	
AAGR				*e*S		17 59 50.4	
RTLS	**Leoncito**	**1.43**	**289**	*e*P		17 59 31.3	
RTLS				*e*S		17 59 47.2	
MRA	**San Martin**	**1.69**	**96**	*e*P		17 59 46.1	
MRA				*e*S		18 00 13.9	
MRA				IAML		18 00 17.0	
	comp=Z,831nm,0.5s						
VA03	**San Esteban**	**2.46**	**258**	*e*P		17 59 43.4	
VA03				*e*S		18 00 07.0	
VA03				IAML		18 00 17.0	
	comp=Z,526nm,0.9s						
MT03	**Universidad Ad**	**2.66**	**242**	*e*P		17 59 46.3	
MT03				*e*S		18 00 13.5	
MT03				IAML		18 00 22.5	
	comp=Z,298nm,0.2s						
PEL	**Peldehue**	**2.66**	**250**	*e*P		17 59 45.3	
PEL				*e*S		18 00 13.0	
MT05	**Renca**	**2.79**	**246**	*e*P		17 59 48.4	
MT05				*e*S		18 00 20.2	
MT05				IAML		18 00 25.0	
	comp=Z,239nm,0.3s						
ROC1	**El Roble**	**2.88**	**255**	*e*P		17 59 48.0	
ROC1				*e*P		17 59 48.1	
ROC1				*e*S		18 00 18.2	
ACLC	**CERRO LA CRUZ**	**2.91**	**13**	*e*P		17 59 54.5	
ACLC				*e*S		18 00 30.2	
ACLC				IAML		18 00 32.2	
	comp=Z,133nm,0.3s						
CO02	**Combarbal**	**3.00**	**290**	*e*P		17 59 49.0	
CO02				*e*S		18 00 21.0	
CO02				IAML		18 00 21.9	
	comp=Z,518nm,0.2s						
MT02	**Curacav**	**3.06**	**250**	*e*P		17 59 50.2	
MT02				*e*S		18 00 22.9	
MT02				IAML		18 00 23.4	
	comp=Z,123nm,0.2s						
CO01	**Juntas del Tor**	**3.07**	**317**	*e*P		17 59 52.6	
MT01	**Popeta**	**3.38**	**241**	*e*P		17 59 54.6	
MT01				*e*S		18 00 30.9	
MT01				IAML		18 00 32.4	
	comp=Z,117nm,0.1s						
GO04	**Tololo Observa**	**3.38**	**307**	*e*P		17 59 54.3	
GO04				*e*S		18 00 25.5	
VA01	**Torpederas**	**3.41**	**256**	*e*P		17 59 54.0	
VA01				*e*S		18 00 22.5	
VA01				IAML		18 00 36.7	
	comp=Z,110nm,0.3s						
BO01	**Tunca**	**3.54**	**232**	*e*P		17 59 58.0	
BO01				*e*S		18 00 36.9	
BO02	**Sierra Bellavi**	**3.60**	**225**	*e*P		18 00 00.1	
BO02				IAML		18 00 51.1	
	comp=Z,85nm,0.1s						
AC05	**El Transito**	**4.08**	**326**	*e*P		18 00 05.9	
AC05				*e*S		18 00 48.0	
AC05				IAML		18 00 50.2	
	comp=Z,136nm,0.3s						
LCO	**Las Campanas**	**4.15**	**321**	*e*P		18 00 05.0	
LCO				*e*S		18 00 47.4	
LCO				IAML		18 00 48.5	
	comp=Z,268nm,0.4s						
CYA	**Choya**	**4.15**	**24**	*e*P		18 00 11.1	
CYA				*e*S		18 00 47.5	
CYA				IAML		18 01 00.3	
	comp=Z,70nm,0.6s						
GO05	**Huala**	**4.46**	**231**	*e*P		18 00 08.9	
AC04	**Llanos de Chal**	**4.99**	**323**	*e*P		18 00 15.6	
AC04				IAML		18 01 24.9	
	comp=Z,33nm,0.8s						
GO03	**Copiap**	**5.15**	**334**	*e*P		18 00 19.2	
GO03				*e*S		18 01 12.2	
AC02	**Maricunga**	**5.56**	**347**	*e*P		18 00 27.6	
AC02				IAML		18 01 29.1	
	comp=Z,18nm,0.7s						
PLCA	**Paso Flores**	**8.75**	**194**	P	**Pn**	**18 01 11.8**	**+0.8**
	comp=Z,1.9nm,0.9s,baz=23,slow=7.7,SNR=3.0						
SIV	**San Ignacio**	**17.29**	**22**	P	**P**	**18 03 03.4**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=189,slow=11,SNR=5.5						
TXAR	**Lajitas Array**	**70.14**	**327**	P	**P**	**18 10 06.5**	**-2.6**
	comp=Z,0.2nm,0.5s,baz=161,slow=8.4,SNR=3.8						
	comp=Z,0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**80.19**	**68**	P	**P**	**18 11 08.0**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=276,slow=5.1,SNR=5.6						
	comp=Z,1.0nm,0.7s						
PDAR	**Pinedale Array**	**83.96**	**330**	P	**P**	**18 11 24.0**	**-2.4**
	comp=Z,0.3nm,0.6s,baz=134,slow=7.8,SNR=2.6						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**120.67**	**203**	PKP	**PKPdf**	**18 17 45.4**	**-2.6**
	comp=Z,0.3nm,0.9s,baz=135,slow=1.3,SNR=5.0						
ASAR				pPKP	**pPKPdf**	**18 18 19.6**	**+3.9**
	comp=Z,0.3nm,1.0s,baz=187,slow=9.7,SNR=1.7						
WRA	**Warramunga Arr**	**123.96**	**205**	PKP	**PKPdf**	**18 17 52.5**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=155,slow=1.7,SNR=6.0						
WRA				pPKP	**pPKPdf**	**18 18 25.3**	**+3.3**
	comp=Z,0.3nm,0.4s,baz=153,slow=1.7,SNR=2.9						
ZALV	**Zalesovo Beam**	**150.79**	**34**	PKPbc	**PKPbc**	**18 18 47.3**	**-0.2**
	comp=Z,2.0nm,0.5s,baz=301,slow=3.3,SNR=12						
ZALV				pPKPbc	**sPKPdf**	**18 19 19.5**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=290,slow=2.5,SNR=4.2						
MKAR	**Makanchi Array**	**152.89**	**49**	PKPbc	**PKPbc**	**18 18 51.3**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=321,slow=2.0,SNR=1.9						
MKAR				PKPab	**PKPab**	**18 19 04.5**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=298,slow=3.3,SNR=2.5						

BJI ***06*** *18:18:01.5±0.0, 23°.63S×179°.03E, h551^{km}, mb4.9/59, mB5.0/30*
MOS ***06*** *18:18:01.1±0.8, 23°.99S×179°.00E, h559^{km}, mb5.1/25, Error ellipse: s-maj=10.7km s-min=8.6km az=119.8*
IDC ***06*** *18:18:02.3±0.4, 23°.98S×178°.95E, h557^{km}±4^{km}, mb4.4/25, mbtmp5.3/28, Error ellipse: s-maj=8.4km s-min=7.8km az=74.0*
NOU ***06*** *18:18:02.4, 23°.96S×179°.21E, h577^{km}, ML4.9/92, South of Fiji Islands*
NEIC ***06*** *18:18:02.1±2.2, 24°.02S±0°.09×179°.0E±0°.1, h558^{km}±5^{km}, mb5.0/105, Error ellipse: s-maj=14.9km s-min=13.3km az=76.0*
GCMT ***06*** *18:18:06.2±0.5, 24°.01S±0°.06×178°.85E±0°.05, h563^{km}±3^{km}, MW5.3/50, Moment Tensor Solution. s50,c60; Duration: 1^{s}.1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.01±.04; M$_{\theta\theta}$0.12±.07; M$_{\phi\phi}$-0.13±.07; M$_{r\theta}$-0.91±.06; M$_{\theta\phi}$0.18±.06; M$_{\phi r}$-0.62±.07; Best double couple: M$_{0}$1.11100×10^{17} NP1:φ$_{s}$55.00000°,δ87.00000°,λ-93.00000°. NP2: φ$_{s}$286.00000°,δ4.00000°,λ-39.00000°. Principal axes: T 1.2230, Plg42.0000°, Azm148.0000°; N -0.2230, Plg3.0000°, Azm55.0000°; P -1.0000, Plg47.0000°, Azm322.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
ISC 06 18:18:02.3±0.3**, 23°.97S**±0°.04×**179°.03E**±0°.04**, h565**^{km}±2^{km}**, h566**^{km}**:pP-P, n743, σ1^{s}.30**/832**, mb5.0**/157**, 53C-36D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	**Raoul Island**	**5.92**	**153**	P	**P**	**18 19 42.6**	**+1.8**
RIZ				S	**S**	**18 21 02.6**	**+1.2**
RAO	**Raoul Island**	**5.93**	**153**	P	**P**	**18 19 42.3**	**+1.4**
	464nm,0.3s,baz=285,slow=12,SNR=11						
RAO				S	**S**	**18 21 01.3**	**-0.3**
	371nm,0.5s,baz=95,slow=23,SNR=1.9						
RAO	**Raoul Island**	**5.93**	**153**	P	**P**	**18 19 40.6**	**-0.3**
RAO	**Raoul Island**	**5.93**	**153**	P	**P**	**18 19 41.1**	**+0.2**
RAO	**Raoul Island**	**5.93**	**153**	P	**P**	**18 19 41.8**	**+0.9**
RAO	**Raoul Island**	**5.93**	**153**	P	**P**	**18 19 40.6**	**-0.3**
GLKZ	**Green Lake**	**5.94**	**153**	P	**P**	**18 19 42.3**	**+1.3**
GLKZ				S	**S**	**18 21 01.5**	**-0.3**
LKBA	**Tubou, Lakemba**	**6.05**	**20**	P	**P**	**18 19 43.4**	**+1.2**
MSVF	**Nonsavu**	**6.27**	**351**	P	**P**	**18 19 44.2**	**-0.1**
	87nm,0.4s,baz=148,slow=10,SNR=59						
MSVF				S	**S**	**18 21 05.2**	**-2.4**
	36nm,0.8s,baz=157,slow=19,SNR=0.7						
MSVF	**Nonsavu**	**6.27**	**351**	P	**P**	**18 19 43.9**	**-0.5**
MSVF	**Nonsavu**	**6.27**	**351**	P	**P**	**18 19 44.7**	**+0.4**
TAVE	**Taveuni**	**7.29**	**8**	P	**P**	**18 19 55.4**	**+1.6**
YSA	**Yasawairara**	**7.36**	**349**	P	**P**	**18 19 55.0**	**+0.6**
PINNC	**Pines Island,**	**10.73**	**275**	P	**P**	**18 20 29.4**	**+1.5**
PINNC	**Pines Island,**	**10.73**	**275**	P	**P**	**18 20 30.0**	**+2.2**
OUENC	**Ouen Island, N**	**11.31**	**275**	P	**P**	**18 20 35.6**	**+1.8**
OUENC	**Ouen Island, N**	**11.31**	**275**	P	**P**	**18 20 35.9**	**+2.1**
YATNC	**Mamie plateau,**	**11.34**	**277**	P	**P**	**18 20 36.1**	**+2.0**
LIFNC	**LIFOU**	**11.36**	**284**	P	**P**	**18 20 33.9**	**-0.4**
LIFNC	**LIFOU**	**11.36**	**284**	P	**P**	**18 20 34.4**	**+0.1**
NIUE	**Niue**	**11.38**	**67**	P	**P**	**18 20 33.0**	**-1.5**
	baz=11						
NIUE	**Niue**	**11.38**	**67**	P	**P**	**18 20 33.9**	**-0.6**
NIUE	**Niue**	**11.38**	**67**	P	**P**	**18 20 34.1**	**-0.4**
ONTNC	**Ouen Toro**	**11.69**	**276**	P	**P**	**18 20 39.2**	**+1.5**
ONTNC	**Ouen Toro**	**11.69**	**276**	P	**P**	**18 20 40.2**	**+2.5**
DZM	**Mont Dzumac**	**11.74**	**277**	*e*Pn	**P**	**18 20 38.8**	**+0.5**
	586nm,1.0s						
DZM				*e*S	**S**	**18 22 43.7**	**-3.0**
	1µm,25.6s						
DZM	**Mont Dzumac**	**11.74**	**277**	P	**P**	**18 20 38.9**	**+0.5**
	191nm,0.8s,baz=88,slow=16,SNR=101						
DZM				S	**S**	**18 22 46.8**	**+0.1**
	14nm,0.9s,baz=113,slow=22,SNR=1.4						
DZM	**Mont Dzumac**	**11.74**	**277**	P	**P**	**18 20 39.4**	**+1.1**
DZM	**Mont Dzumac**	**11.74**	**277**	P	**P**	**18 20 40.2**	**+1.9**
NOUC	**Port Laguerre**	**11.86**	**276**	P	**P**	**18 20 41.1**	**+1.6**
KUZ	**Kuaotunu**	**13.05**	**192**	P	**P**	**18 20 51.8**	**+0.4**
AFI	**Afiamalu**	**13.25**	**43**	P	**P**	**18 20 50.7**	**-3.3**
	20nm,0.4s,baz=249,slow=1.2,SNR=5.5						
AFI				S	**S**	**18 23 10.3**	**-4.9**
	11nm,0.3s,baz=195,slow=15,SNR=2.0						
MYRZ	**Mayor Island**	**13.48**	**190**	P	**P**	**18 20 57.9**	**+2.0**
MXZ	**Matakaoa Point**	**13.56**	**182**	P	**P**	**18 20 55.8**	**-0.9**
MXZ	**Matakaoa Point**	**13.56**	**182**	P	**P**	**18 20 54.8**	**-2.0**
HAZ	**Te Kaha**	**13.78**	**184**	P	**P**	**18 20 57.5**	**-1.5**
HAZ				S	**S**	**18 23 19.9**	**-4.4**
WMGZ	**Waiomatatini S**	**13.82**	**182**	P	**P**	**18 20 59.8**	**+0.5**
PKGZ	**Pakihiroa**	**13.90**	**183**	P	**P**	**18 20 58.2**	**-2.1**
WHRZ	**Whale Island**	**13.95**	**187**	P	**P**	**18 21 03.2**	**+2.5**
RUGZ	**Raukumara Rang**	**14.00**	**184**	P	**P**	**18 21 00.9**	**-0.5**
KOUNC	**Koumac, New Ca**	**14.06**	**281**	P	**P**	**18 21 03.6**	**+1.4**
PUZ	**Puketiti**	**14.07**	**182**	P	**P**	**18 21 01.7**	**-0.3**
TWGZ	**Tauwhareparae**	**14.19**	**183**	P	**P**	**18 21 02.2**	**-1.0**
KARZ	**Kaharoa**	**14.21**	**189**	P	**P**	**18 21 05.2**	**+1.9**
OMRZ	**Omania**	**14.27**	**189**	P	**P**	**18 21 06.5**	**+2.5**
URZ	**Urewera**	**14.34**	**186**	P	**P**	**18 21 01.1**	**-3.5**
	42nm,0.3s,baz=84,slow=3.7,SNR=19						
URZ				S	**S**	**18 23 27.3**	**-7.2**
	79nm,0.8s,baz=343,slow=23,SNR=13						
URZ	**Urewera**	**14.34**	**186**	P	**P**	**18 21 03.6**	**-1.0**
URZ	**Urewera**	**14.34**	**186**	P	**P**	**18 21 01.1**	**-3.5**
CNGZ	**Carnagh Statio**	**14.49**	**183**	P	**P**	**18 21 05.2**	**-0.9**
HSRZ	**Hossack Road**	**14.49**	**189**	P	**P**	**18 21 06.2**	**0.0**
RAGZ	**Rawiri**	**14.55**	**185**	P	**P**	**18 21 07.4**	**+0.6**
RTZ	**Ruatahuna**	**14.71**	**186**	P	**P**	**18 21 04.5**	**-3.8**
RTZ	**Ruatahuna**	**14.71**	**186**	P	**P**	**18 21 05.3**	**-3.1**
HIZ	**Hauiti**	**14.93**	**193**	P	**P**	**18 21 06.3**	**-4.2**
HIZ	**Hauiti**	**14.93**	**193**	P	**P**	**18 21 10.9**	**+0.4**
BKZ	**Black Stump Fm**	**15.30**	**187**	P	**P**	**18 21 10.3**	**-4.0**
KHEZ	**Kahui Hut**	**15.86**	**194**	P	**P**	**18 21 20.2**	**+0.4**
BFZ	**Birch Farm**	**16.83**	**187**	P	**P**	**18 21 27.9**	**-0.6**
MRZ	**Mangatainoka R**	**16.89**	**189**	P	**P**	**18 21 25.2**	**-3.9**
TCW	**Tory Channel**	**17.65**	**192**	P	**P**	**18 21 34.7**	**-1.2**
SNZO	**South Karori**	**17.67**	**191**	P	**P**	**18 21 34.1**	**-2.0**
SNZO	**South Karori**	**17.67**	**191**	P	**P**	**18 21 36.3**	**+0.2**
QRZ	**Quartz Range**	**17.67**	**196**	P	**P**	**18 21 36.0**	**-0.2**
QRZ	**Quartz Range**	**17.67**	**196**	P	**P**	**18 21 37.0**	**+0.8**
BHW	**Baring Head**	**17.73**	**190**	P	**P**	**18 21 34.4**	**-2.3**
TKNZ	**Takaka Hill**	**17.76**	**195**	P	**P**	**18 21 36.3**	**-0.7**
PLWZ	**Palliser**	**17.83**	**189**	P	**P**	**18 21 34.9**	**-2.9**
NNZ	**Nelson**	**17.84**	**194**	P	**P**	**18 21 36.7**	**-1.0**
TUWZ	**Tuamarina**	**17.92**	**193**	P	**P**	**18 21 36.6**	**-1.9**
MRNZ	**Matariki Terra**	**18.15**	**195**	P	**P**	**18 21 40.1**	**-0.6**
CMWZ	**Cape Campbell**	**18.18**	**192**	P	**P**	**18 21 40.3**	**-0.5**
BSWZ	**Blackbirch Sta**	**18.21**	**192**	P	**P**	**18 21 40.1**	**-1.0**
THZ	**Tophouse**	**18.46**	**195**	P	**P**	**18 21 42.5**	**-1.0**
DSZ	**Denniston Nort**	**18.72**	**197**	P	**P**	**18 21 45.1**	**-0.8**
KHZ	**Kahutara**	**18.95**	**193**	P	**P**	**18 21 46.9**	**-0.9**
KHZ	**Kahutara**	**18.95**	**193**	P	**P**	**18 21 47.3**	**-0.5**
LTZ	**Lake Taylor**	**19.58**	**195**	P	**P**	**18 21 51.6**	**-2.1**
GVZ	**Greta Valley S**	**19.59**	**193**	P	**P**	**18 21 52.0**	**-1.6**
INZ	**Inchbonnie**	**19.73**	**197**	P	**P**	**18 21 53.1**	**-1.8**
OXZ	**Oxford**	**20.15**	**195**	P	**P**	**18 21 56.6**	**-2.1**
RPZ	**Rata Peaks**	**20.76**	**196**	P	**P**	**18 22 03.9**	**-0.3**
	17nm,0.4s,baz=292,slow=2.3,SNR=17						
	17nm,0.4s						
RPZ	**Rata Peaks**	**20.76**	**196**	P	**P**	**18 22 04.1**	**-0.2**
RPZ	**Rata Peaks**	**20.76**	**196**	P	**P**	**18 22 04.0**	**-0.3**
FOZ	**Fox Glacier**	**20.93**	**199**	P	**P**	**18 22 04.5**	**-1.3**
LBZ	**Lake Benmore**	**21.61**	**197**	P	**P**	**18 22 09.4**	**-2.5**
JCZ	**Jackson Bay**	**21.74**	**200**	P	**P**	**18 22 12.9**	**-0.3**
ODZ	**Otahua Downs**	**22.11**	**196**	P	**P**	**18 22 15.8**	**-0.5**
	31nm,1.8s						
WKZ	**Wanaka**	**22.35**	**199**	P	**P**	**18 22 17.9**	**-0.6**
MLZ	**Mavora Lakes**	**23.11**	**200**	P	**P**	**18 22 24.7**	**-0.6**
HNR	**Honiara**	**23.25**	**305**	P	**P**	**18 22 26.6**	**-0.4**
	6µm,0.8s,baz=166,slow=2.8,SNR=39						
HNR	**Honiara**	**23.25**	**305**	P	**P**	**18 22 26.4**	**-0.5**
HNR	**Honiara**	**23.25**	**305**	P	**P**	**18 22 27.1**	**+0.2**
HNR	**Honiara**	**23.25**	**305**	P	**P**	**18 22 26.4**	**-0.5**
GC1S	**Gold Coast 1 S**	**23.28**	**254**	P	**P**	**18 22 27.6**	**+0.6**
DCZ	**Deep Cove**	**23.51**	**201**	P	**P**	**18 22 28.1**	**-0.6**
WHZ	**Wether Hill Ro**	**23.64**	**200**	P	**P**	**18 22 29.1**	**-0.8**
SYZ	**Scrubby Hill**	**23.88**	**197**	P	**P**	**18 22 31.7**	**-0.3**
ARMA	**Armidale**	**25.16**	**249**	P	**P**	**18 22 45.5**	**+1.7**
	baz=25,SNR=26						
ARMA	**Armidale**	**25.16**	**249**	P	**P**	**18 22 45.1**	**+1.3**
ARMA	**Armidale**	**25.16**	**249**	P	**P**	**18 22 44.7**	**+0.9**
EIDS	**Eidsvold**	**25.42**	**261**	P	**P**	**18 22 46.7**	**+0.8**
	baz=26,SNR=21						
EIDS	**Eidsvold**	**25.42**	**261**	P	**P**	**18 22 46.3**	**+0.3**
EIDS	**Eidsvold**	**25.42**	**261**	P	**P**	**18 22 47.2**	**+1.2**
TARA	**Tarawa**	**25.86**	**346**	P	**P**	**18 22 50.4**	**+0.4**
SYDH	**Sydney Hard Ro**	**26.55**	**242**	P	**P**	**18 22 57.8**	**+2.0**
	42nm,1.2s						
RMQ	**Roma**	**27.47**	**258**	P	**P**	**18 23 05.3**	**+1.3**
	baz=28,SNR=55						
RMQ	**Roma**	**27.47**	**258**	P	**P**	**18 23 05.8**	**+1.8**
CNB	**Canberra Magne**	**28.05**	**239**	P	**P**	**18 23 11.0**	**+2.0**
CAN	**Canberra**	**28.34**	**240**	P	**P**	**18 23 12.4**	**+1.0**
CAN	**Canberra**	**28.34**	**240**	P	**P**	**18 23 12.3**	**+0.8**
CAN	**Canberra**	**28.34**	**240**	P	**P**	**18 23 12.5**	**+1.0**
MILA	**Mila**	**28.72**	**236**	P	**P**	**18 23 15.6**	**+0.8**
	baz=29,SNR=16						
MILA	**Mila**	**28.72**	**236**	P	**P**	**18 23 15.6**	**+0.8**
TBI	**Tubuai**	**28.84**	**95**	*e*sS	sS	18 30 19.6	+2.7
	993nm,40.8s						
PPT2	**Papeete2**	**29.99**	**84**	*e*sS	sS	18 30 38.7	+2.8
	193nm,26.8s						
TV1H	**Townsville Har**	**30.29**	**273**	P	**P**	**18 23 28.8**	**+0.3**
	130nm,1.0s						
CMSA	**Cobar Meteorol**	**30.36**	**248**	P	**P**	**18 23 29.7**	**+0.7**
	baz=30,SNR=104						
CMSA	**Cobar Meteorol**	**30.36**	**248**	P	**P**	**18 23 29.7**	**+0.7**
CTA	**Charters Tower**	**30.58**	**271**	P	**P**	**18 23 32.0**	**+0.9**
	235nm,0.5s,baz=96,slow=9.8,SNR=879						
CTA				S	**S**	**18 27 54.2**	**+0.3**
	5.2nm,0.9s,baz=1.4,slow=23,SNR=11						
CTA				ScP	**ScP**	**18 29 04.3**	**+3.1**
	9.4nm,1.0s,baz=224,slow=3.0,SNR=4.5						
	235nm,0.5s						
CTA	**Charters Tower**	**30.58**	**271**	P	**P**	**18 23 32.0**	**+0.9**
CTAO	**Charters Tower**	**30.58**	**271**	P	**P**	**18 23 31.8**	**+0.8**
CTAO				ScP	**ScP**	**18 29 05.0**	**+3.7**
CTAO	**Charters Tower**	**30.58**	**271**	P	**P**	**18 23 31.9**	**+0.9**
CTAO	**Charters Tower**	**30.58**	**271**	P	**P**	**18 23 31.8**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,281nm,0.7s						
CTAO	**Charters Tower**	**30.58**	**271**	⇓P	**P**	**18 23 32.0**	**+0.9**
CTAO				ScP	**ScP**	**18 29 04.1**	**+2.9**
GLAD	**Gladstone**	**30.97**	**229**	P	**P**	**18 23 35.0**	**+1.0**
	comp=Z,25nm,0.8s						
QLP	**Quilpie**	**31.51**	**258**	P	**P**	**18 23 39.4**	**+0.6**
	baz=32,SNR=55						
QLP	**Quilpie**	**31.51**	**258**	P	**P**	**18 23 39.9**	**+1.0**
TOO	**Toolangi**	**31.66**	**237**	P	**P**	**18 23 40.9**	**+0.8**
	baz=32,SNR=52						
TOO	**Toolangi**	**31.66**	**237**	P	**P**	**18 23 40.3**	**+0.2**
TOO				IAmb	IAmb	18 23 41.9	
	comp=Z,32nm,0.6s						
TOO	**Toolangi**	**31.66**	**237**	P	**P**	**18 23 41.1**	**+1.0**
TOO	**Toolangi**	**31.66**	**237**	P	**P**	**18 23 40.3**	**+0.2**
TOO				pmax	pmax		
	comp=Z,32nm,0.6s						
MOO	**Moorlands**	**32.13**	**227**	P	**P**	**18 23 44.9**	**+1.0**
	baz=32,SNR=4.2						
MOO	**Moorlands**	**32.13**	**227**	P	**P**	**18 23 45.1**	**+1.2**
TAU	**Tasmania Unive**	**32.24**	**226**	P	**P**	**18 23 45.5**	**+0.7**
TAU	**Tasmania Unive**	**32.24**	**226**	P	**P**	**18 23 45.9**	**+1.1**
TAU	**Tasmania Unive**	**32.24**	**226**	P	**P**	**18 23 45.5**	**+0.7**
TAU				pmax	pmax		
	comp=Z,47nm,0.7s						
TAU	**Tasmania Unive**	**32.24**	**226**	⇑P	**P**	**18 23 45.6**	**+0.9**
TAU				pP	**pwP**	**18 25 19.7**	**-2.2**
TAU				sP	**sP**	**18 26 24.0**	**+2.0**
RABL	**Rabaul**	**32.52**	**303**	P	**P**	**18 23 46.6**	**-1.0**
RABL	**Rabaul**	**32.52**	**303**	P	**P**	**18 23 48.0**	**+0.4**
KRVT	**Keravat (AS076**	**32.55**	**303**	P	**P**	**18 23 47.3**	**-0.5**
	comp=Z,152nm,0.8s,baz=230,slow=1.0,SNR=32						
	comp=Z,152nm,0.8s						
MTSU	**Mount Surprise**	**32.85**	**273**	P	**P**	**18 23 51.2**	**+0.8**
	baz=33,SNR=681						
MTSU	**Mount Surprise**	**32.85**	**273**	P	**P**	**18 23 51.4**	**+1.0**
BRAT	**Ballarat**	**32.85**	**237**	P	**P**	**18 23 51.3**	**+1.2**
	comp=Z,38nm,0.7s						
PMG	**Port Moresby**	**33.68**	**290**	P	**P**	**18 23 57.7**	**+0.4**
	comp=Z,316nm,0.8s,baz=109,slow=5.5,SNR=152						
PMG				ScP	**ScP**	**18 29 15.9**	**+4.0**

	comp=Z,19nm,1.1s,baz=1.0,slow=8.9,SNR=6.7						
	comp=Z,316nm,0.8s						
PMG	Port Moresby	33.68	290	P	P	18 23 56.9	-0.4
PMG				ScP	ScP	18 29 14.9	+3.0
PMG	Port Moresby	33.68	290	P	P	18 23 58.1	+0.8
PMG	Port Moresby	33.68	290	P	P	18 23 56.9	-0.4
PMG				pmax	pmax		
	comp=Z,332nm,0.8s						
PMG	Port Moresby	33.68	290	P	P	18 23 57.6	+0.3
PMG				ScP	ScP	18 29 15.2	+3.2
STKA	Stephens Creek	33.87	248	P	P	18 23 59.4	+0.6
	comp=Z,17nm,0.7s,baz=92,slow=10,SNR=38						
STKA				S	S	18 28 43.6	-0.1
	comp=Z,3.3nm,0.7s,baz=202,slow=20,SNR=3.5						
	comp=Z,17nm,0.7s						
STKA	Stephens Creek	33.87	248	P	P	18 23 59.4	+0.6
	baz=34,SNR=29						
STKA	Stephens Creek	33.87	248	P	P	18 23 59.0	+0.3
STKA	Stephens Creek	33.87	248	P	P	18 23 59.8	+1.1
STKA	Stephens Creek	33.87	248	P	P	18 23 59.0	+0.3
STKA				pmax	pmax		
	comp=Z,15nm,1.4s						
ARPS	Mount Arapiles	34.31	239	P	P	18 24 02.9	+0.5
	baz=34,SNR=8.5						
ARPS	Mount Arapiles	34.31	239	P	P	18 24 02.4	0.0
	comp=Z,28nm,0.7s						
INKA	Innaminka	34.56	255	P	P	18 24 06.1	+1.5
COEN	Coen	35.25	280	P	P	18 24 11.3	+0.8
	baz=35,SNR=111						
COEN	Coen	35.25	280	P	P	18 24 10.8	+0.4
COEN	Coen	35.25	280	P	P	18 24 11.1	+0.7
	comp=Z,205nm,1.1s						
HTT	Hallett	36.23	246	P	P	18 24 18.7	+0.3
	baz=36,SNR=9.8						
HTT	Hallett	36.23	246	P	P	18 24 18.7	+0.3
QIS	Mount Isa	36.56	267	P	P	18 24 21.2	-0.1
	baz=37,SNR=35						
QIS	Mount Isa	36.56	267	P	P	18 24 21.5	+0.3
LCRK	Leigh Creek	36.72	251	P	P	18 24 22.7	+0.3
BBOO	Buckleboo	38.60	247	P	P	18 24 37.3	-0.3
	baz=39,SNR=40						
BBOO	Buckleboo	38.60	247	P	P	18 24 36.5	-1.1
BBOO				IAmb	IAmb	18 24 37.7	
	comp=Z,27nm,0.6s						
BBOO	Buckleboo	38.60	247	P	P	18 24 37.3	-0.3
OOD	Oodnadatta	39.03	255	P	P	18 24 42.4	+1.2
MULG	Mulgathing	40.31	251	P	P	18 24 51.3	-0.1
AS01	Alice Springs	41.10	261	P	P	18 24 57.2	-0.7
	comp=Z,96nm,1.0s						
AS31	Alice Springs	41.14	261	P	P	18 24 58.0	-0.2
ASAR	Alice Springs	41.14	261	P	P	18 24 58.1	0.0
	comp=Z,70nm,1.0s,baz=106,slow=6.3,SNR=339						
ASAR				ScP	ScP	18 29 43.0	+2.6
	comp=Z,7.0nm,1.0s,baz=117,slow=3.9,SNR=12						
ASAR				S	S	18 30 29.4	-2.0
	comp=Z,6.4nm,0.9s,baz=94,slow=16,SNR=9.3						
	comp=Z,70nm,1.0s						
ASAR	Alice Springs	41.14	261	P	P	18 24 57.8	-0.4
ASAR				ScP	ScP	18 29 42.5	+2.2
WR0	Warramunga Arr	41.32	267	P	P	18 24 58.9	-0.8
WR0				IAmb	IAmb	18 25 00.2	
	comp=Z,61nm,0.9s						
WC3	Warramunga Arr	41.48	267	P	P	18 25 00.2	-0.7
	baz=42						
WB2	Warramunga Arr	41.50	267	P	P	18 25 00.4	-0.6
WB2				ScP	ScP	18 29 45.4	+3.7
WRAB	Tennant Creek	41.50	267	P	P	18 25 00.5	-0.6
WRAB	Tennant Creek	41.50	267	P	P	18 25 00.8	-0.2
WRAB	Tennant Creek	41.50	267	P	P	18 25 00.5	-0.6
WRAB				pmax	pmax		
	comp=Z,107nm,0.9s						
WRAB	Tennant Creek	41.50	267	⇓P	P	18 25 00.5	-0.6
WRAB				ScP	ScP	18 29 45.0	+3.3
WB0	Warramunga Arr	41.51	267	P	P	18 25 00.1	-0.9
WRA	Warramunga Arr	41.51	267	P	P	18 25 00.4	-0.6
	comp=Z,72nm,0.7s,baz=103,slow=8.2,SNR=314						
WRA				ScP	ScP	18 29 45.2	+3.5
	comp=Z,15nm,0.9s,baz=98,slow=4.3,SNR=17						
WRA				S	S	18 30 33.2	-3.5
	comp=Z,7.5nm,0.8s,baz=104,slow=14,SNR=10						
	comp=Z,72nm,0.7s						
WRA	Warramunga Arr	41.51	267	P	P	18 25 00.5	-0.6
WRA	Warramunga Arr	41.51	267	P	P	18 25 00.5	-0.6
WRA				pmax	pmax		
	comp=Z,12nm,0.9s						
GENI	Genyem	43.13	294	P	P	18 25 13.8	0.0
	comp=Z,235nm,1.0s,comp=Z,2µm						
WAKE	Wake Island	44.65	343	P	P	18 25 26.5	+1.2
WAKE	Wake Island	44.65	343	P	P	18 25 26.3	+1.0
WAKE				ScP	ScP	18 29 53.0	-1.4
SMPI	Sarmi	44.68	293	P	P	18 25 25.3	-0.5
	comp=Z,73nm,1.4s						
KDU	Kakadu	45.41	276	P	P	18 25 30.8	-0.5
	baz=46,SNR=26						
KDU	Kakadu	45.41	276	P	P	18 25 31.0	-0.3
FORT	Forrest	45.45	250	P	P	18 25 30.8	-0.7
	baz=46,SNR=63						
FORT	Forrest	45.45	250	P	P	18 25 30.4	-1.1
FORT	Forrest	45.45	250	P	P	18 25 31.5	0.0
WRKA	Warakurna	45.95	258	P	P	18 25 35.2	-0.2
	baz=46,SNR=121						
WRKA	Warakurna	45.95	258	P	P	18 25 35.4	0.0
MTN	Manton Dam	46.57	275	P	P	18 25 39.6	-0.6
	baz=47,SNR=22						
MTN	Manton Dam	46.57	275	P	P	18 25 39.3	-0.9
MTN				IAmb	IAmb	18 25 40.2	
	comp=Z,36nm,0.8s						
MTN	Manton Dam	46.57	275	P	P	18 25 40.2	0.0
SRPI	Serui, Papua	46.84	291	P	P	18 25 42.0	-0.2
	comp=Z,176nm,0.9s,comp=Z,2µm						
KNRA	Kununurra	47.80	270	P	P	18 25 49.4	+0.1
	baz=48,SNR=28						
KNRA	Kununurra	47.80	270	P	P	18 25 49.1	-0.2
KNRA	Kununurra	47.80	270	P	P	18 25 49.9	+0.6
SAUI	Saumlaki	48.30	281	P	P	18 25 53.6	+0.4
SAUI	Saumlaki	48.30	281	P	P	18 25 53.6	+0.4
	comp=Z,254nm,1.0s						
RKPI	Ransiki, Papua	48.78	290	P	P	18 25 56.3	-0.4
DRV	Dumont d'Urvil	49.18	199	P	P	18 25 58.3	-0.4
DRV				ScP	ScP	18 30 12.7	0.0
FAKI	Fak Fak	49.75	288	P	P	18 26 03.0	-0.9
FAKI				IAmb	IAmb	18 26 04.4	
	comp=Z,70nm,1.0s						
FAKI	Fak Fak	49.75	288	P	P	18 26 04.0	+0.2
FAKI	Fak Fak	49.75	288	P	P	18 26 03.1	-0.7
	comp=Z,94nm,1.2s,comp=Z,998nm						
FITZ	Fitzroy Crossi	49.93	266	P	P	18 26 04.8	-0.3
GUMO	Guam	50.08	315	P	P	18 26 06.0	-0.2
	comp=Z,110nm,0.6s,baz=73,slow=5.8,SNR=4.3						
	comp=Z,110nm,0.6s						
GUMO	Guam	50.08	315	P	P	18 26 06.0	-0.2
GUMO	Guam	50.08	315	P	P	18 26 05.9	-0.2
GUMO				sP	sP	18 28 52.5	+1.1
BNDI	Bandanaira	51.06	284	P	P	18 26 14.8	+1.4
SWI	Sorong	51.62	289	P	P	18 26 16.9	-0.5
	comp=Z,411nm,0.8s,comp=Z,3µm						
MSAI	Masohi	52.46	285	P	P	18 26 22.9	-0.6
	comp=Z,15nm,0.7s,comp=Z,321nm						
AAI	Ambon	52.96	284	P	P	18 26 26.6	-0.4
	comp=Z,135nm,1.1s,comp=Z,2µm						
SOEI	Soe	53.96	275	P	P	18 26 34.6	+0.4
SOEI	Soe	53.96	275	P	P	18 26 35.8	+1.6
SOEI	Soe	53.96	275	P	P	18 26 35.5	+1.3
	comp=Z,250nm,0.9s,comp=Z,2µm						
NLAI	Namlea	54.13	284	P	P	18 26 35.2	-0.1
	comp=Z,63nm,1.1s						
KLBR	Kellerberrin	54.14	247	P	P	18 26 34.6	-0.5
	baz=54,SNR=14						
KLBR	Kellerberrin	54.14	247	P	P	18 26 34.1	-1.0
	comp=Z,82nm,0.8s						
MEEK	Meekatharra	54.24	254	P	P	18 26 34.9	-1.0
	baz=54,SNR=9.5						
MEEK	Meekatharra	54.24	254	P	P	18 26 36.0	+0.1
VNDA	Vanda	54.24	185	P	P	18 26 35.6	+0.6
	comp=Z,15nm,0.9s,baz=1.5,slow=7.7,SNR=32						
	comp=Z,15nm,0.9s						
VNDA	Vanda	54.24	185	P	P	18 26 35.8	+0.8
VNDA	Vanda	54.24	185	P	P	18 26 35.8	+0.8
VNDA				pmax	pmax		
	comp=Z,19nm,1.0s						
VNDA	Vanda	54.24	185	P	P	18 26 35.9	+0.8
VNDA				pP	pP	18 28 22.8	+1.4
VNDA				sP	sP	18 29 23.8	+1.6
SBA	Scott Base	54.26	183	P	P	18 26 36.7	+1.6
SBA				IAmb	IAmb	18 26 38.5	
	comp=Z,97nm,0.9s						
SBA	Scott Base	54.26	183	P	P	18 26 36.7	+1.6
SBA				pmax	pmax		
	comp=Z,97nm,0.9s						
SBA	Scott Base	54.26	183	P	P	18 26 37.4	+2.2
PSA00	Pilbara Seismi	54.27	260	P	P	18 26 35.1	-1.1
PSA00	Pilbara Seismi	54.27	260	P	P	18 26 34.7	-1.5
PSA00				IAmb	IAmb	18 26 36.7	
	comp=Z,26nm,1.2s						
PSA00	Pilbara Seismi	54.27	260	P	P	18 26 35.6	-0.6
NWAO	Narrogin (SRO)	54.39	246	P	P	18 26 35.6	-1.3
	baz=54,SNR=8.1						
NWAO				P	P	18 26 35.6	-1.3
	baz=54,SNR=8.1						
NWAO	Narrogin (SRO)	54.39	246	P	P	18 26 36.6	-0.3
MBWA	Marble Bar	54.48	260	P	P	18 26 36.6	-1.0
MBWA				IAmb	IAmb	18 26 38.1	
	comp=Z,77nm,1.1s						
MBWA	Marble Bar	54.48	260	P	P	18 26 37.7	0.0
MBWA	Marble Bar	54.48	260	P	P	18 26 37.0	-0.7
LBMI	Labuha	55.00	287	P	P	18 26 41.4	0.0
	comp=Z,139nm,1.1s,comp=Z,1µm						
BLDU	Ballidu	55.17	248	P	P	18 26 41.6	-0.7
	baz=55,SNR=28						
BLDU	Ballidu	55.17	248	P	P	18 26 41.8	-0.6
MUN	Mundaring	55.38	247	P	P	18 26 43.5	-0.3
	baz=55,SNR=5.0						
MUN	Mundaring	55.38	247	P	P	18 26 44.7	+0.9
SANI	Sanana	55.66	285	P	P	18 26 46.1	+0.1
SANI	Sanana	55.66	285	P	P	18 26 45.2	-0.8
	comp=Z,91nm,0.9s,comp=Z,997nm						
TNTI	Ternate	55.80	289	P	P	18 26 46.0	-0.9
TNTI	Ternate	55.80	289	P	P	18 26 46.6	-0.3
	comp=Z,135nm,1.0s,comp=Z,1µm						
MORW	Morawa	56.01	250	P	P	18 26 47.7	-0.5
	baz=56,SNR=8.1						
MORW	Morawa	56.01	250	P	P	18 26 46.8	-1.4
MORW	Morawa	56.01	250	P	P	18 26 48.2	0.0
MMRI	Maumere	56.24	276	P	P	18 26 48.9	-1.0
MMRI				IAmb	IAmb	18 26 50.6	
	comp=Z,101nm,0.9s						
MMRI	Maumere	56.24	276	P	P	18 26 50.5	+0.5
	comp=Z,126nm,0.9s						
MMRI	Maumere	56.24	276	P	P	18 26 49.9	-0.1
	comp=Z,125nm,0.9s						
CCD	Concordia, Ant	58.43	195	⇑P	P	18 27 04.2	-0.1
CCD				ScP	ScP	18 30 53.6	-0.1
LUWI	Luwuk	58.98	284	P	P	18 27 07.6	-0.9
LUWI	Luwuk	58.98	284	P	P	18 27 09.5	+1.0
	comp=Z,134nm,1.1s,comp=Z,1µm						
GIRL	Giralia	59.03	257	P	P	18 27 08.3	-0.5
	baz=59,SNR=3.7						
GIRL	Giralia	59.03	257	P	P	18 27 09.3	+0.5
BKSI	Bulukumba	59.49	278	P	P	18 27 11.2	-0.7
	comp=Z,122nm,0.9s,comp=Z,1µm						
GTOI	Gorontalo	59.55	286	P	P	18 27 13.0	+0.7
	comp=Z,59nm,0.9s,comp=Z,518nm						
CASY	Casey	59.66	206	P	P	18 27 11.5	-0.7
CASY				IAmb	IAmb	18 27 12.8	
	comp=Z,59nm,0.8s						
CASY	Casey	59.66	206	P	P	18 27 11.7	-0.4
KAPI	Kappang	59.95	278	P	P	18 27 14.1	-1.0
KAPI				IAmb	IAmb	18 27 16.2	
	comp=Z,119nm,1.6s						
KAPI	Kappang	59.95	278	P	P	18 27 14.1	-1.0
KAPI				pmax	pmax		
	comp=Z,119nm,1.7s						
PLAI	Plampang	60.23	273	P	P	18 27 16.7	-0.2
PLAI	Plampang	60.23	273	P	P	18 27 16.4	-0.5
	comp=Z,264nm,1.1s,comp=Z,2µm						
SPSI	Sidrap Palu	60.38	279	P	P	18 27 16.7	-1.1
	comp=Z,58nm,0.9s,comp=Z,628nm						
MRSI	Marisa	60.41	285	P	P	18 27 17.0	-1.1
	comp=Z,43nm,1.0s,comp=Z,469nm						
TWSI	Taliwang, Sumb	61.09	273	P	P	18 27 22.1	-0.4
	comp=Z,120nm,1.2s,comp=Z,1µm						
TOLI2	Tolitoli	61.73	285	P	P	18 27 25.2	-1.5
TOLI2				IAmb	IAmb	18 27 26.9	
	comp=Z,65nm,0.9s						
TOLI2	Tolitoli	61.73	285	P	P	18 27 26.6	-0.1
MPSI	Mapaga	62.16	284	P	P	18 27 28.7	-0.8
	comp=Z,80nm,1.2s						
IGBI	Denpasar	62.64	272	P	P	18 27 33.2	+0.6
	comp=Z,148nm,1.4s,comp=Z,1µmcomp=Z,3µm						
SRBI	Singaraja	62.86	273	P	P	18 27 33.8	-0.2
	comp=Z,88nm,1.1s,comp=Z,991nm						
JAGI	Jajag, Banyuwa	63.68	272	P	P	18 27 37.4	-1.9
JAGI				IAmb	IAmb	18 27 39.0	
	comp=Z,70nm,1.1s						
JAGI	Jajag, Banyuwa	63.68	272	P	P	18 27 39.1	-0.2
JAGI	Jajag, Banyuwa	63.68	272	P	P	18 27 38.9	-0.4
	comp=Z,71nm,1.1s						
ABJI	Asem Bagus	63.86	273	P	P	18 27 41.2	+0.8
	comp=Z,61nm,1.3s						
GMJI	Gumukmas	64.40	272	P	P	18 27 43.3	-0.5
	comp=Z,51nm,0.9s						
BBKI	Banjar Baru	65.05	278	P	P	18 27 48.7	+0.8
	comp=Z,101nm,1.1s						
GRJI	Gresik	65.81	273	P	P	18 27 53.4	+0.8
	comp=Z,183nm,1.2s						
PWJI	Pagerwojo	66.00	272	P	P	18 27 53.4	-0.4
	comp=Z,59nm,1.0s						
QSPA	South Pole Qui	66.11	180	P	P	18 27 54.8	+1.0
	comp=Z,94nm,0.8s,baz=29,slow=1.1,SNR=238						
	comp=Z,94nm,0.8s						
QSPA	South Pole Qui	66.11	180	⇑P	P	18 27 54.8	+1.0
NGJI	Ngawi	66.56	272	P	P	18 28 10.3	+13
UGM	Wanagama	67.21	271	P	P	18 28 01.3	-0.1
	comp=Z,89nm,1.3s						
KKM	Kota Kinabalu	68.07	288	P	P	18 28 06.2	-0.4
KKM	Kota Kinabalu	68.07	288	P	P	18 28 06.7	0.0
PBKI	Pangkalan Bun	68.24	277	P	P	18 28 08.5	+0.9
	comp=Z,205nm,1.1s						
KPJI	Karang Pucung	68.89	271	P	P	18 28 11.6	+0.1
	comp=Z,42nm,1.1s						
SBUM	Sibu	69.95	282	P	P	18 28 16.9	-1.0
CBJI	Citeko	71.15	271	P	P	18 28 28.7	+3.8
INU	Inuyama	71.16	325	P	P	18 28 24.9	+0.4
INU				IAmb	IAmb	18 28 26.2	
	comp=Z,42nm,1.0s						
INU	Inuyama	71.16	325	P	P	18 28 25.0	+0.6
JGF	Kuroka	71.17	325	P	P	18 28 24.3	-0.3
MJAR	Matsushiro Arr	71.45	326	P	P	18 28 26.1	-0.1
	comp=Z,39nm,0.8s,baz=158,slow=5.5,SNR=65						
MJAR				pP	pwP	18 30 24.0	-2.3
	comp=Z,4.3nm,1.0s,baz=174,slow=6.3,SNR=4.3						
MJAR				sP	PP	18 31 15.1	-0.2
	comp=Z,5.8nm,1.2s,baz=151,slow=7.8,SNR=3.7						
	comp=Z,39nm,0.8s						
MAJO	Matsushiro	71.46	326	P	P	18 28 26.0	-0.2
MAJO	Matsushiro	71.46	326	*i* P	P	18 28 26.6	+0.4
MAJO				pmax	pmax		
	comp=Z,84nm,1.0s						
MAJO	Matsushiro	71.46	326	P	P	18 28 26.4	+0.2
MJB9	Matsu-Tunnel	71.46	326	P	P	18 28 27.1	+0.9
MJB9				IAmb	IAmb	18 28 28.6	
	comp=Z,70nm,0.9s						
JSU	Suzuyama	72.12	318	P	P	18 28 30.8	+0.6
JSU				IAmb	IAmb	18 28 31.7	
	comp=Z,64nm,0.9s						
CGJI	Cibinong	72.13	271	P	P	18 28 30.3	-0.3
	comp=Z,73nm,1.1s,comp=Z,846nm						
JNU	Nakatsue	72.99	319	P	P	18 28 35.5	+0.4
	comp=Z,34nm,0.9s,baz=75,slow=5.7,SNR=8.8						
	comp=Z,34nm,0.9s						
JNU	Nakatsue	72.99	319	P	P	18 28 35.2	+0.1
JNU				IAmb	IAmb	18 28 36.5	
	comp=Z,81nm,1.1s						
JHS	Saijyo	73.03	322	P	P	18 28 36.3	+1.0
NACB	Ninganchiao	73.43	307	P	P	18 28 37.0	-0.8
NACB				IAmb	IAmb	18 28 38.5	
	comp=Z,74nm,1.1s						
PPBI	Pangkal Pinang	73.50	275	P	P	18 28 38.9	+0.4
	comp=Z,45nm,1.3s,comp=Z,713nm						
KASI	Kota Agung	73.65	271	P	P	18 28 38.3	-1.0
	comp=Z,64nm,1.0s						
SSLB	Suanglung	73.67	306	P	P	18 28 37.7	-1.5
SSLB				IAmb	IAmb	18 28 39.3	
	comp=Z,58nm,1.0s						
LWLI	Liwa	74.25	271	P	P	18 28 42.4	-0.5
	comp=Z,76nm,0.9s						
MDSI	Maura Dua	74.35	272	P	P	18 28 41.6	-1.7
	comp=Z,45nm,0.9s						
JKA	Kamikawa-asahi	75.53	334	P	P	18 28 51.5	+2.4
JKA				IAmb	IAmb	18 28 52.7	
	comp=Z,62nm,1.2s						
ASAJ	Asahikawa	75.53	334	P	P	18 28 51.8	+2.7
	comp=Z,27nm,1.0s,baz=164,slow=6.9,SNR=12						
	comp=Z,27nm,1.0s						
ASAJ	Asahikawa	75.53	334	P	P	18 28 51.5	+2.4
ASAJ				pmax	pmax		
	comp=Z,62nm,1.2s						
KSI	Kapahiang	76.13	272	P	P	18 28 54.4	+1.1
	comp=Z,106nm,1.2s						
SMAI	San Martin Ant	76.36	159	P	P	18 28 54.3	+0.9
BELA	Belgrano 2	76.47	173	P	P	18 28 53.5	-0.5
BELA				IAmb	IAmb	18 28 54.9	
	comp=Z,72nm,0.9s						
MYKOM	Kota Tinggi	77.21	278	P	P	18 28 58.4	-0.7
TJN	Taejon	77.33	320	*ce*P	P	18 29 00.8	+1.6
MAW	Mawson	77.37	201	P	P	18 28 59.9	+0.9
	comp=Z,90nm,1.0s,baz=110,slow=14,SNR=7.1						
	comp=Z,90nm,1.0s						
KSRS	Korea Array	77.73	321	P	P	18 29 02.6	+1.3
	comp=Z,15nm,0.8s,baz=137,slow=5.8,SNR=36						
	comp=Z,15nm,0.8s						
KSAR	Wonju Array Be	77.75	321	P	P	18 29 01.9	+0.5
KSAR	Wonju Array Be	77.75	321	P	P	18 29 01.9	+0.5
KS19	Wonju Array Si	77.80	321	P	P	18 29 02.5	+0.8
KS19				IAmb	IAmb	18 29 52.4	
	comp=Z,99nm,1.8s						
YSS	Yuzh-Sakhalins	77.82	336	P	P	18 29 03.0	+1.5
YSS				IAmb	IAmb	18 29 04.6	
	comp=Z,42nm,0.7s						
YSS	Yuzh-Sakhalins	77.82	336	⇓*e*P	P	18 29 03.4	+1.8
YSS				*e*		18 31 01.5	
YSS				pmax	pmax		
	comp=Z,50nm,0.8s						
PET	Petropavlovsk	78.69	348	*i* P	P	18 29 06.0	-0.1
PET				pmax	pmax		
	comp=Z,19nm,1.2s						
PEA0B	Petropavlovsk-	78.96	347	P	P	18 29 08.4	+0.8
PEA0B				IAmb	IAmb	18 29 09.5	
	comp=Z,50nm,1.0s						
PEA0B	Petropavlovsk-	78.96	347	P	P	18 29 08.4	+0.8
PEA0B				pmax	pmax		
	comp=Z,50nm,1.0s						
PETK	Petropavlovsk-	78.96	347	P	P	18 29 08.1	+0.5
	comp=Z,38nm,1.0s,baz=98,slow=6.4,SNR=28						
	comp=Z,38nm,1.0s						
PETK	Petropavlovsk-	78.96	347	P	P	18 29 07.8	+0.3
PETK	Petropavlovsk-	78.96	347	P	P	18 29 07.8	+0.3
PMSA	Palmer Station	79.19	157	P	P	18 29 09.5	+0.8
PMSA				IAmb	IAmb	18 29 10.7	
	comp=Z,39nm,0.8s						
UGL	Uglegorsk	79.85	336	*e*P	P	18 29 13.0	+0.8
UGL				pmax	pmax		
	comp=Z,100nm,1.0s						
NJ2	Nanjing	80.03	312	⇑*i*P	P	18 29 15.0	+1.3
NJ2				pmax	pmax		
	comp=Z,40nm,0.9s						
USA0B	Ussuriysk Arra	80.34	328	P	P	18 29 15.6	+0.6
USA0B				IAmb	IAmb	18 29 17.6	
	comp=Z,57nm,1.1s						
USA0B	Ussuriysk Arra	80.34	328	P	P	18 29 15.6	+0.6
USA0B				pmax	pmax		
	comp=Z,57nm,1.1s						
USRK	Ussuriysk Ar.	80.34	328	P	P	18 29 16.5	+1.5
	comp=Z,34nm,1.0s,baz=126,slow=3.3,SNR=28						
	comp=Z,34nm,1.0s						
USRK	Ussuriysk Ar.	80.34	328	P	P	18 29 15.9	+0.9
USRK	Ussuriysk Ar.	80.34	328	P	P	18 29 15.9	+0.9
IPM	Ipoh	80.89	279	P	P	18 29 18.2	-0.4
IPM				IAmb	IAmb	18 29 19.5	
	comp=Z,29nm,0.8s						
TYV	Tymovskoe	81.12	338	*e*P	P	18 29 20.4	+1.6
TYV				*e*S	S	18 38 38.8	-3.4
TYV				pmax	pmax		
	comp=Z,200nm,3.0s						
TYV				pmax	pmax		
	comp=Z,39nm,1.2s						
TYV				smax	smax		
	comp=N,300nm,6.8s						
TYV				smax	smax		
	comp=E,300nm,6.8s						
KULM	Kulim	81.57	280	P	P	18 29 21.4	-0.6
KULM				IAmb	IAmb	18 29 23.3	
	comp=Z,59nm,1.6s						
MDJ	Mudanjiang	81.83	327	P	P	18 29 23.8	+1.2
MDJ				PP	PP	18 32 40.0	-0.8
MDJ				pmax	pmax		
	comp=Z,50nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,190nm,4.5s						
RPSI	Rantau Prapat	82.06	276	P	P	18 29 23.6	-1.0
PSI	Prapat	82.10	277	P	P	18 29 23.6	-1.3
PSI				pmax	pmax		
	comp=Z,24nm,0.9s						
MG05	Puerto Natales	82.20	143	P	P	18 29 25.4	+0.9
MG05				IAmb	IAmb	18 29 26.7	
	comp=Z,52nm,0.9s						
GO10	Punta Arenas	82.26	145	P	P	18 29 27.1	+2.2
WHN	Wuhan	82.34	308	P	P	18 29 26.6	+1.1
WHN				pmax	pmax		
	comp=Z,130nm,1.1s						
GO09	Cerro Castillo	82.49	143	P	P	18 29 27.2	+1.1
GO09				IAmb	IAmb	18 29 28.6	
	comp=Z,111nm,1.6s						
GSI	Gunungsitoli	82.71	275	P	P	18 29 27.0	-0.8
GSI				IAmb	IAmb	18 29 29.4	
	comp=Z,42nm,1.1s						
GSI	Gunungsitoli	82.71	275	P	P	18 29 28.7	+0.8
	comp=Z,48nm,1.3s						
TKX	Tecate	83.24	50	P	P	18 29 30.1	+0.1
TKX				IAmb	IAmb	18 32 05.3	
	comp=Z,22nm,0.6s						
GRNR	Gornyy	83.37	334	⇓*i*P	P	18 29 32.1	+1.9
GRNR				pmax	pmax		
	comp=E,7.0nm,0.9s						
GRNR				pmax	pmax		
	comp=N,8.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,30nm,1.2s						
CN2	Changchun	83.42	324	⇓P	P	18 29 31.4	+0.8
CN2				pP	pP	18 31 31.0	+0.4
CN2				S	S	18 39 09.2	+3.8
CN2				pmax	pmax		
	comp=Z,90nm,1.2s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
TIA	Tai'an	83.64	314	P	P	18 29 32.8	+0.9
TIA				pmax	pmax		
	comp=Z,77nm,1.0s						
BNX	BinXian	83.72	326	⇓P	P	18 29 32.2	+0.1
BNX				pmax	pmax		
	comp=Z,28nm,1.1s						
BNX				pmax	pmax		
	comp=Z,120nm,5.2s						
KLR	Kul'dur	84.16	331	P	P	18 29 35.9	+1.7
	comp=Z,8.4nm,1.1s,baz=127,slow=4.0,SNR=14						
	comp=Z,8.4nm,1.1s						
TROLL	Troll, Antarti	84.25	181	P	P	18 29 34.6	0.0
Q17K	Contact Creek	84.55	13	P	P	18 29 36.6	+0.6
	baz=203						
SNAA	Sanae	84.61	179	P	P	18 29 35.6	-0.7
SNAA	Sanae	84.61	179	P	P	18 29 35.6	-0.7
SNAA				IAmb	IAmb	18 29 37.1	
	comp=Z,54nm,1.7s						
SNAA	Sanae	84.61	179	P	P	18 29 35.6	-0.7
SNAA				pmax	pmax		
	comp=Z,54nm,1.7s						
VNA3	Neumayer Olymp	84.85	177	P	P	18 29 36.7	-0.6
Q18K	Katmai Hardscr	85.09	13	P	P	18 29 39.2	+0.6
	baz=204						
NVL	N'lazarevskaya	85.09	184	⇓*i*P	P	18 29 38.2	-0.3
NVL				pmax	pmax		
	comp=Z,63nm,0.9s						
VNA2	Neumayer--Watz	85.26	178	P	P	18 29 38.8	-0.5
	baz=183,slow=5.0						
NVAR	Mina Array Bea	85.42	44	P	P	18 29 42.2	+1.3
	comp=Z,1.0nm,0.7s,baz=226,slow=7.9,SNR=7.6						
NVAR				pP	pP	18 31 42.8	+0.5
	comp=Z,0.1nm,0.4s,baz=119,slow=13,SNR=1.7						
NVAR	Mina Array Bea	85.42	44	P	P	18 29 41.9	+1.0
COYC	Coyhaique	85.44	138	P	P	18 29 42.5	+1.8
AY01	Puyuhuapi	85.66	137	P	P	18 29 42.4	+0.7
AY01				IAmb	IAmb	18 29 44.1	
	comp=Z,26nm,1.0s						
LYN	LuoYang	85.85	311	⇓P	P	18 29 44.2	+1.5
LYN				pmax	pmax		
	comp=Z,34nm,1.0s						
HNS	HongShan	85.91	314	⇓P	P	18 29 44.2	+1.3

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HNS                                pmax    pmax
       comp=Z,33nm,1.2s
TPH    Tonopah           85.92  45  P       P        18 29 43.9 +0.7
TPH    Tonopah           85.92  45  P       P        18 29 43.9 +0.7
TPH                                pmax    pmax
       comp=Z,12nm,0.8s
TPNV   Topopah Spring    85.92  47  P       P        18 29 42.4 -0.8
TPNV   Topopah Spring    85.92  47  P       P        18 29 42.4 -0.8
TPNV                               pmax    pmax
       comp=Z,19nm,1.9s
GYA    Guiyang           86.02 301 ⇑P       P        18 29 44.3 +0.5
GYA                                pmax    pmax
       comp=Z,12nm,1.3s
N16K   Nishlik Lake      86.07  11  P       P        18 29 44.7 +1.5
       baz=200
BJI    Beijing           86.47 317  P       P        18 29 46.7 +1.2
BJI                                pmax    pmax
       comp=Z,12nm,1.7s
BJI                                pmax    pmax
       comp=Z,140nm,4.5s
O19K   Port Alsworth     86.65  13  P       P        18 29 46.1 +0.3
O19K                                IAmb    IAmb     18 29 46.9
       comp=Z,31nm,1.0s
ILSW   Iliamna Southw    86.70  14  P       P        18 29 46.2  0.0
ILSW                                IAmb    IAmb     18 29 47.2
       comp=Z,35nm,1.2s
LL02   Futaleuf          86.77 136  P       P        18 29 48.1 +1.0
LL02                                IAmb    IAmb     18 29 49.6
       comp=Z,39nm,0.8s
HEH    HeiHe             86.85 330 eP       P        18 29 46.4 -0.6
HEH                                pmax    pmax
       comp=Z,23nm,1.3s
RSO    Redoubt South     87.22  14  P       P        18 29 49.1 +0.3
WVOR   Wild Horse Val    87.55  41  P       P        18 29 51.7 +1.0
WVOR   Wild Horse Val    87.55  41  P       P        18 29 51.7 +1.0
WVOR                               pmax    pmax
       comp=Z,25nm,1.9s
LL04   Puerto Octay      87.55 134  P       P        18 29 51.3 +0.6
TIY    Taiyuan           87.58 313 eP       P        18 29 52.3 +1.4
TIY                                pmax    pmax
       comp=Z,29nm,0.7s
PHRA   Phrae             87.64 291  P       P        18 29 52.4 +0.9
XAN    Xi'an             88.08 309  P       P        18 29 54.2 +0.9
XAN                                pmax    pmax
       comp=Z,45nm,1.2s
XAN                                pmax    pmax
       comp=Z,86nm,3.7s
CRAI   Chiangrai         88.27 293  P       P        18 29 53.8 -0.6
CRAI                                IAmb    IAmb     18 29 56.8
       comp=Z,20nm,1.1s
U15A   North Rim         88.32  49  P       P        18 29 56.2 +1.6
L19K   White Mountain    88.36  12  P       P        18 29 53.7 -0.2
L19K                                IAmb    IAmb     18 29 55.8
       comp=Z,35nm,1.3s
L19K   White Mountain    88.36  12  P       P        18 29 55.0 +1.1
       baz=204
RC01   Rabbit Creek A    88.45  15  P       P        18 29 54.5 +0.3
RC01                                IAmb    IAmb     18 29 55.7
       comp=Z,43nm,1.3s
RC01   Rabbit Creek A    88.45  15  P       P        18 29 55.1 +0.8
       baz=208
KMI    Kunming           88.51 298 ⇓P       P        18 29 57.0 +1.3
KMI                                 S       S        18 39 51.1 -3.8
KMI                                pmax    pmax
       comp=Z,16nm,1.1s
ELK    Elko              88.68  44  P       P        18 29 56.7 +0.5
ELK    Elko              88.68  44  P       P        18 29 56.7 +0.5
ELK                                pmax    pmax
       comp=Z,9.0nm,1.7s
CM31   Chiang Mai Arr    88.72 291  P       P        18 29 57.5 +1.0
CM31                                IAmb    IAmb     18 29 59.3
       comp=Z,32nm,1.1s
CMAR   Chiang Mai Arr    88.72 291  P       P        18 29 58.0 +1.4
       comp=Z,11nm,1.0s,baz=137,slow=3.2,SNR=70
CMAR                                pP      pP       18 31 58.8 +0.6
       comp=Z,3.3nm,1.0s,baz=125,slow=3.6,SNR=6.8
CMAR                                PP      PP       18 33 37.8 +1.6
       comp=Z,4.3nm,1.0s,baz=134,slow=6.4,SNR=8.1
CMAR                                PKKPbc  PKKPbc   18 47 33.9 +0.9
       comp=Z,0.8nm,0.7s,baz=282,slow=4.3,SNR=6.8
       comp=Z,11nm,1.0s
CMAR   Chiang Mai Arr    88.72 291  P       P        18 29 57.7 +1.1
XLT    XiLinHaoTe        88.76 320 eP       P        18 29 57.1 +0.9
XLT                                pmax    pmax
       comp=Z,22nm,1.3s
XLT                                pmax    pmax
       comp=Z,240nm,4.9s
L20K   Farewell, AK      88.82  12  P       P        18 29 57.3 +1.3
       baz=205
TTA    Tatalina          88.84  11  P       P        18 29 56.9 +0.8
TTA    Tatalina          88.84  11  P       P        18 29 56.9 +0.8
TTA                                pmax    pmax
       comp=Z,11nm,1.2s
TTA    Tatalina          88.84  11  P       P        18 29 56.9 +0.8
       baz=203
SKT    Skwentna          88.85  13  P       P        18 29 56.3 +0.2
       baz=207
PLCA   Paso Flores       88.85 135  P       P        18 29 58.4 +1.5
       comp=Z,8.8nm,1.0s,baz=226,slow=3.7,SNR=13
       comp=Z,8.8nm,1.0s
PLCA   Paso Flores       88.85 135  P       P        18 29 57.7 +0.7
PLCA                                IAmb    IAmb     18 29 59.0
       comp=Z,19nm,1.1s
PLCA   Paso Flores       88.85 135  P       P        18 29 57.7 +0.7
PLCA                               pmax    pmax
       comp=Z,19nm,1.1s
CHTO   Chiang Mai        88.87 291  P       P        18 29 58.2 +1.0
CHTO   Chiang Mai        88.87 291  P       P        18 29 58.2 +1.0
M22K   Willow            88.95  14  P       P        18 29 57.8 +1.2
       baz=208
SEY    Seymchan          89.15 348  P       P        18 29 58.6 +1.2
       comp=Z,18nm,1.1s,baz=159,slow=5.2,SNR=18
SEY                                 pP      pP       18 32 00.4 +1.0
       comp=Z,3.5nm,0.9s,baz=162,slow=7.1,SNR=3.0
       comp=Z,18nm,1.1s
SEY    Seymchan          89.15 348ceP       P        18 29 57.9 +0.4
SEY                                pmax    pmax
       comp=Z,26nm,1.0s
ZEA    Zeya              89.35 332 eP       P        18 29 59.9 +1.3
ZEA                                pmax    pmax
       comp=N,10.0nm,1.0s
ZEA                                pmax    pmax
       comp=Z,20nm,1.0s
K20K   Telida            89.59  12  P       P        18 30 00.2 +0.7
       baz=204
TNA    Tin City          89.81   5  P       P        18 30 01.4 +1.0
TNA                                 IAmb    IAmb     18 30 02.4
       comp=Z,23nm,1.3s
TNA    Tin City          89.81   5  P       P        18 30 01.7 +1.3
       baz=192
HHC    Hu-ho-hao-te      89.84 316 eP       P        18 30 02.9 +1.5
HHC                                pmax    pmax
       comp=Z,90nm,0.9s
HHC                                pmax    pmax
       comp=Z,270nm,4.9s
PZH    PanZhiHua         89.93 299  P       P        18 30 02.5 +0.3
PZH                                pmax    pmax
       comp=Z,10.0nm,1.0s
PZH                                pmax    pmax
       comp=Z,140nm,5.9s
CAST   Castle Rocks      90.03  13  P       P        18 30 00.7 -0.8
CAST                                IAmb    IAmb     18 30 01.8
       comp=Z,20nm,1.3s
CAST   Castle Rocks      90.03  13  P       P        18 30 00.4 -1.1
       baz=206
CD2    Chengdu           90.38 304  P       P        18 30 05.3 +1.3
CD2                                pmax    pmax
       comp=Z,40nm,1.3s
TMUT   Trail Mountain    90.53  47  P       P        18 30 06.2 +1.4
TX31   Lajitas Ar. Si    91.22  58  P       P        18 30 07.4 -0.7
TX32   Lajitas Array     91.22  58  P       P        18 30 07.2 -0.8
TXAR   Lajitas Array     91.23  58  P       P        18 30 09.6 +1.6
       comp=Z,1.6nm,0.8s,baz=214,slow=6.4,SNR=17
TXAR                                pP      pP       18 32 13.9 +2.7
       comp=Z,1.5nm,1.2s,baz=22,slow=7.0,SNR=2.8
TXAR                                PKKPbc  PKKPbc   18 47 28.7 +1.4
       comp=Z,0.7nm,0.6s,baz=74,slow=3.7,SNR=6.8
       comp=Z,1.6nm,0.8s
TXAR   Lajitas Array     91.23  58  P       P        18 30 07.2 -0.8
TXAR   Lajitas Array     91.23  58  P       P        18 30 07.2 -0.8
BSUT   Blindstream Ca    91.46  46  P       P        18 30 10.2 +1.0
BSUT                                IAmb    IAmb     18 30 11.4
       comp=Z,36nm,1.9s
M27K   Edge Creek, AK    91.50  17  P       P        18 30 09.9 +1.3
M27K                                IAmb    IAmb     18 30 37.5
       comp=Z,41nm,1.8s
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I21K   Tanana            91.63  12  P       P        18 30 09.0 +0.1
I21K                                IAmb    IAmb     18 32 18.6
       comp=Z,14nm,1.1s
I21K   Tanana            91.63  12  P       P        18 30 09.1 +0.2
       baz=206
MT01   Popeta            91.88 128  P       P        18 30 11.2 +0.2
MT01                                IAmb    IAmb     18 30 13.0
       comp=Z,15nm,0.8s
TNCH   TengChong         91.90 296 ⇓P       P        18 30 12.1 +0.8
TNCH                                pP      pwP      18 32 17.2 -1.9
TNCH                                sP      sP       18 33 11.9 +2.4
TNCH                                PP      PP       18 34 00.8 -0.3
TNCH                                SKS     SKSac    18 39 46.6 -4.1
TNCH                                S       SKKSac   18 40 17.5 +7.3
TNCH                                sS      sS       18 44 02.2 -2.8
TNCH                               pmax    pmax
       comp=Z,13nm,1.1s
TNCH                               pmax    pmax
       comp=Z,87nm,3.8s
CCB    Clear Creek Bu    92.00  14  P       P        18 30 09.8 -0.8
IMAR   Indian Mountai    92.04  11  P       P        18 30 10.7 -0.1
MDM    Murphy Dome       92.18  13  P       P        18 30 09.9 -1.6
MDM                                 pP      pP       18 32 13.6 -0.4
MDM                                 IAmb    IAmb     18 32 20.8
       comp=Z,12nm,1.1s
BILL   Bilibino          92.22 355  P       P        18 30 11.0 -0.5
BILL                                IAmb    IAmb     18 30 13.5
       comp=Z,14nm,1.2s
BILL   Bilibino          92.22 355ceP       P        18 30 10.6 -0.9
BILL                               e*PP     pP       18 32 15.7 +1.9
BILL                               pmax    pmax
       comp=Z,14nm,1.2s
IL31                     92.31  14          pP       18 32 14.7 +0.3
ILAR   Eielson Array     92.31  14  P       P        18 30 11.3 -0.7
       comp=Z,0.7nm,0.7s,baz=221,slow=5.3,SNR=8.7
ILAR                                pP      pP       18 32 14.9 +0.3
       comp=Z,2.1nm,0.9s,baz=227,slow=5.8,SNR=9.5
       comp=Z,0.7nm,0.7s
ILAR   Eielson Array     92.31  14  P       P        18 30 11.2 -0.8
ILAR                                        pP       18 32 13.7 -0.9
LZH    Lanzhou           92.72 308 eP       P        18 30 16.6 +1.8
LZH                                 sP      sP       18 33 10.2 -2.9
LZH                                pmax    pmax
       comp=Z,27nm,1.2s
RDOG   Red Dog Mine      92.72   7  P       P        18 30 13.4 -0.4
J26L   Joseph Creek      92.85  15  P       P        18 30 14.7  0.0
J26L                                IAmb    IAmb     18 32 26.2
       comp=Z,19nm,1.4s
J26L   Joseph Creek      92.85  15  P       P        18 30 15.6 +1.0
       baz=214
L29M   L29M              93.14  18  P       P        18 30 17.3 +1.3
       baz=218
PDAR   Pinedale Array    93.36  44  P       P        18 30 18.6 +1.0
       comp=Z,0.5nm,0.6s,baz=215,slow=1.8,SNR=5.3
PDAR                                pP      pwP      18 32 24.4 +1.0
       comp=Z,0.4nm,0.7s,baz=180,slow=4.0,SNR=4.1
       comp=Z,0.5nm,0.6s
YAK    Yakutsk           94.32 339  P       P        18 30 21.3 +0.1
YAK    Yakutsk           94.32 339ceP       P        18 30 21.3 +0.1
YAK                                pmax    pmax
       comp=Z,22nm,1.1s
I29M   Ogilvie Camp,     94.86  17  P       P        18 30 23.1 -0.5
I29M                                IAmb    IAmb     18 30 24.2
       comp=Z,15nm,1.6s
ULN    Ulaanbaatar       96.20 320  P       P        18 30 30.5 +0.2
ULN                                 IAmb    IAmb     18 30 31.8
       comp=Z,13nm,1.2s
ULN    Ulaanbaatar       96.20 320ceP       P        18 30 30.9 +0.6
ULN                                pmax    pmax
       comp=Z,13nm,1.3s
SONM   Songino Array     96.58 320  P       P        18 30 32.3 +0.4
       comp=Z,4.1nm,1.1s,baz=132,slow=4.0,SNR=18
SONM                                pP      pP       18 32 34.2 -0.5
       comp=Z,0.4nm,0.3s,baz=24,slow=44,SNR=1.5
SONM                                PP      PP       18 34 29.9 -6.5
       comp=Z,1.3nm,1.0s,baz=121,slow=5.6,SNR=5.3
SONM                                S       SKSac    18 40 14.5 +0.1
       comp=Z,0.2nm,0.3s,baz=39,slow=46,SNR=1.5
SONM                                PKKPbc  PKKPbc   18 47 12.2 -1.9
       comp=Z,0.4nm,0.6s,baz=298,slow=6.6,SNR=3.9
       comp=Z,4.1nm,1.1s
SONM   Songino Array     96.58 320  P       P        18 30 31.7 -0.2
SONM                                IAmb    IAmb     18 30 33.4
       comp=Z,12nm,1.4s
SONM   Songino Array     96.58 320  P       P        18 30 31.7 -0.2
SONM                               pmax    pmax
       comp=Z,12nm,1.4s
GTA    Gaotai            97.05 310 eP       Pdif     18 30 34.9 +0.6
GTA                                 pP      pP       18 32 37.4 +0.4
GTA                                pmax    pmax
       comp=Z,6.0nm,1.4s
YKA    Yellowknife Ar   100.81  26  pP      pP       18 32 56.7 +3.0
       comp=Z,0.1nm,0.3s,baz=60,slow=34,SNR=1.4
YKA                                 PKKPbc  PKKPbc   18 47 00.2 -2.4
       comp=Z,0.6nm,0.6s,baz=49,slow=2.4,SNR=7.4
TIXI   Tiksi            101.39 346 i P      Pdif     18 30 52.8 +0.2
TIXI                               pmax    pmax
       comp=Z,2.0nm,0.9s
ZALV   Zalesovo Beam    111.44 321  PP      PP       18 36 21.6 -3.1
       comp=Z,0.6nm,0.6s,baz=4.6,slow=7.4,SNR=2.6
MKAR   Makanchi Array   111.55 313  Pdiff   Pdif     18 31 41.2 +2.7
       comp=Z,0.5nm,0.8s,baz=92,slow=6.8,SNR=5.5
MKAR                                PKiKP   PKiKP    18 35 31.8 -0.9
       comp=Z,0.4nm,0.5s,baz=159,slow=1.0,SNR=8.7
MKAR                                PKKPab  PKKPab   18 46 40.4 +1.4
       comp=Z,2.1nm,0.7s,baz=284,slow=4.0,SNR=20
RES    Resolute Bay     111.89  17  PKKPab  PKKPab   18 46 37.7 +1.0
       comp=Z,1.0nm,0.8s,baz=60,slow=5.6,SNR=6.0
KURK   Kurchatov        114.64 317c iPKIKP  PKPdf    18 35 38.4 -0.1
KURK                               pmax    pmax
       comp=Z,4.0nm,1.3s
KURBB  Kurchatov Arra   114.68 316  PKP     PKPdf    18 35 38.0 -0.6
       comp=Z,1.6nm,0.2s,baz=95,slow=2.2,SNR=6.6
GAR    Garm             118.81 303  PKPdf   PKPdf    18 35 47.0 -0.1
KK31   Karatay Array    119.20 307          PKPdf    18 35 46.5 -1.1
KK31   Karatay Array    119.20 307  PKIKP   PKPdf    18 35 46.5 -1.1
KKAR   Karatay Array    119.20 307          PKPdf    18 35 47.1 -0.4
KKAR   Karatay Array    119.20 307          PKPdf    18 35 47.2 -0.4
KKAR   Karatay Array    119.20 307  PKIKP   PKPdf    18 35 47.1 -0.4
BVAR   Borovoye Array   119.90 319  PKP     PKPdf    18 35 48.0 -0.6
       comp=Z,1.2nm,0.3s,baz=117,slow=1.4,SNR=24
BRVK   Borovoye         119.97 319          PKPdf    18 35 47.8 -0.9
BRVK   Borovoye         119.97 319c iPKIKP  PKPdf    18 35 48.4 -0.3
BRVK                               pmax    pmax
       comp=Z,5.0nm,1.3s
BOSA   Boshof           121.94 207  PKP     PKPdf    18 35 53.2 -0.3
       comp=Z,3.8nm,0.8s,baz=173,slow=4.9,SNR=8.8
SPA0   Spitsbergen Ar   125.12 356 ePKPdf   PKPdf    18 35 57.4 -0.6
SPITS  Spitsbergen Ar   125.12 356  PKP     PKPdf    18 35 57.6 -0.3
       comp=Z,12nm,0.9s,baz=89,slow=5.3,SNR=16
HOPEN  Hopen            125.85 353 ePKPdf   PKPdf    18 35 59.4 +0.1
ARU    Arti             126.41 323  PKP     PKPdf    18 36 01.1 +0.2
       comp=Z,4.0nm,0.4s,baz=117,slow=2.0,SNR=13
ARU    Arti             126.41 323          PKPdf    18 35 59.4 -1.5
ARU    Arti             126.41 323 i PKIKP  PKiKP    18 36 01.3 -0.1
ARU                                                  18 38 06.2
ARU                                                  18 42 19.0
ABKAR  Akbulak array    126.62 314  PKPdf   PKPdf    18 35 59.6 -1.9
ABKAR  Akbulak array    126.62 314  PKPdf   PKPdf    18 36 00.1 -1.5
AKTO   Aktyubinsk       127.73 316  PKP     PKPdf    18 36 03.6 -0.1
       comp=Z,1.8nm,0.6s,baz=85,slow=2.9,SNR=6.3
GEYT   Alibeck          128.23 300  pPKP    pPKPdf   18 38 16.9 +1.6
       comp=Z,1.8nm,0.7s,baz=26,slow=5.1,SNR=3.2
KIRV   Kirov            130.51 328  SKPab   SKPab    18 38 40.9 +0.5
       comp=Z,40nm,0.8s,baz=132,slow=2.5,SNR=20
HAMF   Hammerfest       131.15 349 ePKPdf   PKPdf    18 36 09.6  0.0
ARA0   ARCESS Array S   131.77 348 ePKPdf   PKPdf    18 36 11.1 +0.3
ARCES  ARCESS Array B   131.77 348  PKP     PKPdf    18 36 10.8  0.0
       comp=Z,1.3nm,0.5s,baz=85,slow=3.5,SNR=17
ARCES                               SKPab   SKPab    18 38 45.5  0.0
       comp=Z,17nm,1.0s,baz=0.0,slow=3.8,SNR=13
KTK1   Kautokeino       132.64 348 ePKPdf   PKPdf    18 36 12.2 -0.2
JMIC   Jan Mayen        132.76   3  SKP     SKPdf    18 38 54.4  0.0
       comp=Z,97nm,0.4s,baz=276,slow=4.8,SNR=6.2
TRO    Tromso           132.81 351 ePKPdf   PKPdf    18 36 13.0 +0.3
BELG   Belogornoye      133.63 321  PKP     PKPdf    18 36 15.2 +0.6
       comp=Z,16nm,1.0s,baz=126,slow=3.0,SNR=6.8
BELG                                SKPbc   SKPbc    18 38 52.4 +1.5
       comp=Z,54nm,1.1s,baz=197,slow=2.2,SNR=11
BELG   Belogornoye      133.63 321 i PKIKP  PKPdf    18 36 14.1 -0.6
BELG                               pmax    pmax
       comp=Z,2.0nm,1.0s
KLMR   Klimovskoe       133.85 334 ePKPdf   PKPdf    18 36 14.1 -0.8
KLMR                                AMP              18 36 22.9
       comp=Z,17nm,1.7s
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KLMR                               ePP      PP       18 38 51.0 -2.0
KLMR   Klimovskoe       133.85 334 ePKIKP   PKPdf    18 36 14.0 -0.8
KLMR                               e                 18 38 51.0
KLMR                               pmax    pmax
       comp=Z,17nm,1.7s
STEI   Steigen          134.91 351 ePKPdf   PKPdf    18 36 16.8 +0.2
AKT    Akhty            136.07 306 ePKIKP   PKPdf    18 36 20.2 +0.4
AKT                                e                 18 38 27.5
AKT                                e                 18 39 06.1
AKT                                pmax    pmax
       comp=Z,15nm,1.7s
MOR8   Moi Rana         136.67 351 ePKPdf   PKPdf    18 36 18.8 -1.2
FINES  FINESS Array B   138.22 341  PKhKP   PKPpre   18 36 14.8
       comp=Z,1.4nm,0.4s,baz=31,slow=5.1,SNR=13
FINES                               PKP     PKPdf    18 36 23.4 +0.5
       comp=Z,1.6nm,0.5s,baz=84,slow=3.1,SNR=10.0
FINES                               SKP     SKPdf    18 39 05.6 +1.0
       comp=Z,18nm,0.9s,baz=90,slow=3.8,SNR=19
FINES  FINESS Array B   138.22 341  SKPbc   SKPbc    18 39 04.9 +0.5
OBN    Obninsk          138.36 328⇑iPKIKP   PKPdf    18 36 22.7 -0.7
OBN                                pmax    pmax
       comp=Z,6.0nm,0.5s
GNI    Garni            138.50 304c iPKIKP  PKPdf    18 36 23.2 -1.2
GNI                                pmax    pmax
       comp=Z,9.0nm,1.7s
NSS    Namsos           138.57 352 ePKPdf   PKPdf    18 36 23.4 -0.1
ZEI    Tsey             138.64 308 i PKIKP  PKPdf    18 36 22.6 -2.0
ZEI                                pmax    pmax
       comp=Z,4.0nm,1.0s
KBZ    Khabaz           139.14 310  SKPab   SKPab    18 39 20.6 +1.7
       comp=Z,2.1nm,0.8s,baz=359,slow=4.2,SNR=3.7
KIV    Kislovodsk       139.23 310 ePKIKP   PKPdf    18 36 22.9 -2.6
KIV                                pmax    pmax
       comp=Z,4.0nm,1.1s
SHA1   Shidzhatmaz      139.31 310 i PKIKP  PKPdf    18 36 24.7 -1.1
GEVA   Gevas            140.06 302  SKPbc   SKiKP    18 39 13.1 +0.4
GURO   Guroymak-BITLI   140.83 302          PKPpre   18 36 22.4
DOMB   Dombas           141.33 352 e        PKPdf    18 36 23.7 -4.9
KOPT   Kop Dagi         141.73 305          PKPdf    18 36 27.1 -3.2
NC303  NORSAR Array S   141.81 350  PKPpre  PKPpre   18 36 23.4
NB2    NORSAR Subarra   142.01 350  PKP     PKPdf    18 36 25.8 -4.1
       comp=Z,14nm,1.1s,baz=16,slow=3.2
NB2                                 SKPa    SKPbc    18 39 15.7 +1.3
       comp=Z,1.8nm,0.8s,baz=15,slow=2.6
NOA    NORSAR Array B   142.01 350  PKhKP   PKPdf    18 36 25.7 -4.1
       comp=Z,8.9nm,1.0s,baz=16,slow=4.8,SNR=11
NOA                                 SKPbc   SKPbc    18 39 13.9 -0.6
       comp=Z,4.8nm,0.9s,baz=15,slow=4.2,SNR=6.8
NAO01  NORSAR Array S   142.24 351          PKPpre   18 36 26.5
NC602  NORSAR Array S   142.25 350 ePKPdf   PKPdf    18 36 26.8 -3.5
ANN    Anapa            142.56 313 ePKIKP   PKPdf    18 36 28.6 -2.7
ANN                                pmax    pmax
       comp=Z,38nm,1.2s
MNK    Minsk            142.70 332 i PKP    PKPdf    18 36 29.2 -2.0
       comp=E,4.0nm,1.3s
MNK                                i PKP    PKPdf    18 36 29.2 -2.0
       comp=N,40nm,1.0s
MNK                                i PKP    PKPdf    18 36 29.2 -2.0
       comp=Z,79nm,1.0s,baz=47
MNK                                i pPKP   pPKPdf   18 38 39.5 -2.4
MNK                                i SKP             18 39 09.6
MNK                                ePP      PP       18 39 45.4 -1.6
MNK                                i PKS    PKSdf    18 40 03.5 -3.1
MNK                                i PPP    PPP      18 43 01.8
MNK                                i SKKS            18 52 03.5
MNK                                i SS     SS       18 57 40.7 +1.8
MNK                                i SSS    SSS      19 03 12.4
MNK                                i LRM    MLR      19 41 21.5
       comp=E,20nm,14.7s
MNK                                i LRM    MLR      19 41 23.4
       comp=N,207nm,14.7s
MNK                                i LRM    MLR      19 41 26.6
       comp=Z,71nm,11.5s
MNK    Minsk            142.70 332 i PKIKP  PKPdf    18 36 29.1 -2.0
MNK                                i                 18 38 39.4
MNK                                e                 18 39 45.4
MNK                                i                 18 42 45.6
MNK                                i PPP    PPP      18 43 01.8
MNK                                i SS     SS       18 57 40.7 +1.7
MNK                                i SSS    SSS      19 03 12.4
MNK                                pmax    pmax
       comp=N,40nm,1.0s
MNK                                pmax    pmax
       comp=Z,79nm,1.0s
MNK                                pmax    pmax
       comp=E,4.0nm,1.3s
MNK                                 MLR     MLR
       comp=E,20nm,15.0s
MNK                                 MLR     MLR
       comp=N,207nm,15.0s
MNK                                 MLR     MLR
       comp=Z,71nm,12.0s
SUE    Sulen            142.72 355 e        PKPpre   18 36 22.8
SKAR   Skarslia         142.75 352 ePKPdf   PKPdf    18 36 29.1 -2.1
NACGM  Naroch           142.87 334 ePKP     PKPdf    18 36 29.6 -1.9
OSL    Oslo             143.13 350 ePKPab   PKPbc    18 36 30.0 -0.1
ASK    Askoy            143.26 355 ePKPab   PKPab    18 36 30.1  0.0
VIKU   Vikbolandet      143.27 345 eP       PKPab    18 36 30.1 -0.1
BER    Bergen           143.34 355 ePKPab   PKPab    18 36 30.4  0.0
PABE   Paberze          143.52 336          PKPab    18 36 31.3  0.0
PABE   Paberze          143.52 336 eP       PKPbc    18 36 31.6 +0.2
KONO   Kongsberg        143.58 351          PKPab    18 36 31.4  0.0
KONO   Kongsberg        143.58 351c iPKHKP  PKPpre   18 36 30.0
KONO                               pmax    pmax
       comp=Z,82nm,1.7s
KONO   Kongsberg        143.58 351 ePKPab   PKPab    18 36 31.3 -0.1
ODD1   Odda             143.69 354 ePKPbc   PKPbc    18 36 31.5 -0.4
PBUR   Paburge          143.84 338 eP       PKPbc    18 36 32.1 -0.3
BLS5   Blasjo           144.19 354 ePKPab   PKPab    18 36 33.7  0.0
AKASG  Malin Array Be   144.54 327  PKP     PKPdf    18 36 34.2 -0.3
       comp=Z,4.7nm,0.4s,baz=45,slow=4.2,SNR=64
AKASG                               SKPbc   SKiKP    18 39 22.2 +0.9
       comp=Z,7.0nm,0.9s,baz=43,slow=2.5,SNR=12
AKASG  Malin Array Be   144.54 327          PKPdf    18 36 34.0 -0.5
AKASG  Malin Array Be   144.54 327  PKIKP   PKPdf    18 36 34.0 -0.5
AKBB   Malin Array Si   144.54 327          PKPdf    18 36 34.0 -0.6
AKBB   Malin Array Si   144.54 327 i PKIKP  PKPdf    18 36 33.1 -1.4
AKBB                               pmax    pmax
       comp=Z,24nm,0.8s
AK05   Malin Array Si   144.60 326  PKPdf   PKPdf    18 36 33.5 -1.1
TOKA   Tokat            144.65 307  PKPdf   PKPdf    18 36 34.6 -0.5
SIM    Simferopol'      144.68 315c iPKIKP  PKPab    18 36 36.2 +0.1
SIM                                pmax    pmax
       comp=Z,47nm,0.8s
GAZ    Gaziantep        144.82 301  PKPbc   PKPab    18 36 36.7 -0.3
SNART  Snartemo         145.16 352 ePKPdf   PKPdf    18 36 35.2 -0.1
BNN    Bunyan           145.50 304  PKPbc   PKPbc    18 36 38.2  0.0
DEL    Delary           145.77 345 eP       PKPbc    18 36 37.7 -0.4
BZK    Bozkurt          145.91 310 ⇑P       PKPdf    18 36 36.1 -1.0
BZK    Bozkurt          145.91 310          PKPdf    18 36 35.8 -1.3
ILGA   Ilgaz            146.42 309          PKPbc    18 36 41.1 +0.3
SORM   Soroca           146.53 323 ⇑P       PKPdf    18 36 37.5 -0.5
SORM   Soroca           146.53 323 ⇑PKIKP   PKPdf    18 36 37.5 -0.5
BR131  Keskin Array S   146.91 307          PKPbc    18 36 41.4 -0.7
BR131  Keskin Array S   146.91 307  PKP2    PKPbc    18 36 41.4 -0.7
BRTR   Keskin Array B   146.91 307  PKPbc   PKPbc    18 36 41.9 -0.2
       comp=Z,7.5nm,0.9s,baz=151,slow=2.8,SNR=16
BRTR                                pPKPbc  pPKPab   18 38 50.5 +0.1
       comp=Z,1.5nm,0.7s,baz=149,slow=3.0,SNR=2.7
BRTR   Keskin Array B   146.91 307          PKPdf    18 36 37.9 -1.2
BRTR   Keskin Array B   146.91 307  PKIKP   PKPdf    18 36 37.9 -1.2
GHAJ   Ghor Haditha     146.93 291  PKPbc   PKiKP    18 36 43.1 -0.8
ANTO   Ankara           147.48 307 ⇓P       PKPbc    18 36 43.7 +0.2
ANTO   Ankara           147.48 307  PKPbc   PKPbc    18 36 43.6 +0.1
ANTO   Ankara           147.48 307 ⇓PKP2    PKPbc    18 36 43.7 +0.2
BR231  Keskin MP Arra   147.50 307          PKPbc    18 36 43.9 +0.3
BEL    Belsk            147.56 335 ePKP     PKiKP    18 36 44.3 -0.3
LVV    L'vov            147.65 329 ePKP2    PKPbc    18 36 43.4  0.0
GKP    Gorka Klasztor   147.66 339 ePKP     PKiKP    18 36 44.1 -0.7
GHRR                    148.25 321 ⇓P       PKiKP    18 36 46.4 +0.2
TPGR   Topolog          148.30 318 ⇑P       PKPbc    18 36 45.5 +0.2
CFR    Carcaliu         148.30 319 ⇓P       PKPbc    18 36 45.5 +0.3
CFR    Carcaliu         148.30 319 ⇓PKP2    PKPbc    18 36 45.5 +0.3
CSS    Mathiatis        148.33 298          PKPbc    18 36 45.2 -0.5
MDUB   Mudurnu          148.42 309          PKPbc    18 36 45.8 -0.1
TESR   Tescani          148.42 322 ⇑P       PKPbc    18 36 46.0 +0.5
BUR08  Bucovina Ar. S   148.51 325          PKPbc    18 36 46.0 +0.2
BURAR  Bucovina Array   148.52 325 ⇑P       PKiKP    18 36 47.8 +0.9
BURAR  Bucovina Array   148.52 325          PKPbc    18 36 46.3 +0.5
BURAR  Bucovina Array   148.52 325 ⇑PKP2    PKiKP    18 36 47.8 +0.9
HARR   Harsova          148.69 318 ⇑P       PKiKP    18 36 46.9 -0.3
HARR   Harsova          148.69 318 ⇑PKP2    PKiKP    18 36 46.9 -0.3
VRI    Vrincioaia       148.75 321 ⇓P       PKPbc    18 36 46.3 -0.1
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VRI	Vrincioaia	148.75	321	⇓PKHKP	PKPpre	18 36 46.3	
OZUR		149.15	322	⇑P	PKiKP	18 36 48.0	-0.2
BORA	Eskisehir	149.16	308		PKPbc	18 36 47.4	-0.2
STHS	Stebnicka Huta	149.20	331	ePKHKP	PKPpre	18 36 47.4	
STHS	Stebnicka Huta	149.20	331	ePKP	PKPbc	18 36 47.4	+0.1
OJC	Ojcow	149.21	334	ePKP	PKPbc	18 36 47.7	+0.4
OJC	Ojcow	149.21	334		PKPbc	18 36 47.0	-0.3
OJC	Ojcow	149.21	334	PKHKP	PKPpre	18 36 47.0	
ARCR	ARCALIA	149.31	325	⇑P	PKiKP	18 36 48.2	-0.3
RUE	Ruedersdorf	149.39	342	ePKPbc	PKiKP	18 36 48.4	0.0
	baz=25,slow=3.8						
MLR	Muntele Rosu	149.41	321	⇑P	PKPbc	18 36 48.2	+0.1
MLR	Muntele Rosu	149.41	321		PKPdf	18 36 42.0	-1.0
MLR	Muntele Rosu	149.41	321	⇑PKHKP	PKPpre	18 36 48.2	
DOPR	Dopca	149.45	322	⇓P	PKiKP	18 36 49.1	+0.3
TRPA	Tarpa	149.53	328	⇓P	PKPbc	18 36 48.3	+0.2
NIE	Niedzica	149.61	332	ePKP	PKiKP	18 36 50.4	+1.4
CJR	Cluj-Napoca	149.95	325	⇑P	PKiKP	18 36 49.9	+0.1
CJR	Cluj-Napoca	149.95	325	⇑PKHKP	PKPpre	18 36 49.9	
VOIR		149.96	322	⇓P	PKPbc	18 36 49.5	+0.1
VOIR		149.96	322	⇓PKHKP	PKPpre	18 36 49.5	
KSP	Ksiaz	150.02	338	ePKP	PKPbc	18 36 49.5	+0.2
LANS	Liptovska Anna	150.17	333	ePKIKP	PKiKP	18 36 50.3	+0.1
LANS	Liptovska Anna	150.17	333	ePKP	PKiKP	18 36 50.3	+0.1
LANS	Liptovska Anna	150.17	333	e		18 39 01.0	
LANS	Liptovska Anna	150.17	333	e		18 39 06.5	
FLTG	Flechtingen	150.18	345	ePKPbc	PKPbc	18 36 49.6	+0.1
	baz=25,slow=3.8						
FLTG				ePKPab	PKPab	18 36 58.3	+0.3
	baz=25,slow=3.8						
RETH	Rethem/Aller,	150.22	347	ePKPbc	PKiKP	18 36 50.3	+0.3
	baz=25,slow=3.8						
MARR	Marisel-Cluj	150.22	326	⇓P	PKPbc	18 36 50.1	+0.2
ARR	Arges	150.23	322	⇑P	PKiKP	18 36 51.0	+0.5
NRDL	Niedersach Rie	150.29	346	ePKPbc	PKiKP	18 36 50.5	+0.3
	baz=25,slow=3.8						
OSTC	Ostas	150.29	338	⇑ePKP	PKiKP	18 36 50.7	+0.3
OSTC	Ostas	150.29	338	ePKIKP	PKiKP	18 36 50.7	+0.3
DRGR		150.35	326	⇓P	PKiKP	18 36 50.5	-0.2
DRGR		150.35	326	⇓PKIKP	PKiKP	18 36 50.5	-0.2
UPC	Upice	150.40	338	⇑ePKP	PKiKP	18 36 50.6	0.0
UPC				ePKPAB	PKPab	18 37 00.9	+1.8
UPC	Upice	150.40	338	ePKIKP	PKiKP	18 36 50.6	0.0
DPC	Dobruska-Polom	150.43	337	⇑ePKP	PKiKP	18 36 50.9	+0.2
DPC				ePKPAB	PKPab	18 37 00.6	+1.3
DPC	Dobruska-Polom	150.43	337	ePKIKP	PKiKP	18 36 50.9	+0.2
MORC	Moravsky Berou	150.45	335	⇑P	PKiKP	18 36 51.2	+0.4
MORC	Moravsky Berou	150.45	335		PKPdf	18 36 42.8	-1.5
MORC	Moravsky Berou	150.45	335	ePKP	PKiKP	18 36 50.9	+0.1
MORC	Moravsky Berou	150.45	335	⇑PKIKP	PKiKP	18 36 51.2	+0.4
KRLC	Kraliky	150.49	336	⇑ePKP	PKiKP	18 36 51.0	+0.2
KRLC				ePKPAB	PKPab	18 37 00.5	+0.9
KRLC				epPKP	pPKPab	18 39 06.0	+2.1
KRLC	Kraliky	150.49	336	ePKIKP	PKiKP	18 36 51.0	+0.2
KRLC				e		18 37 00.5	
ASSE	Asse, Remlinge	150.50	345	ePKPbc	PKPbc	18 36 50.1	-0.1
	baz=25,slow=3.8						
HUMR	Humele	150.53	320	⇑P	PKPbc	18 36 49.9	-0.7
ELL	Elmali	150.60	303		PKPbc	18 36 51.0	-0.2
ELL	Elmali	150.60	303	PKIKP	PKPbc	18 36 51.0	-0.2
BORR	Bors	150.62	327	⇑P	PKiKP	18 36 52.5	+1.4
CLL	Collm	150.65	342		PKPbc	18 36 50.2	-0.4
CLL	Collm	150.65	342	i PKPbc	PKiKP	18 36 51.0	0.0
	comp=Z,63nm,1.5s						
CLL				ex	x	18 36 55.0	
CLL				i PKPab	PKPab	18 37 00.3	+0.2
	comp=Z,29nm,1.1s						
CLL				i x	x	18 37 04.6	
	comp=Z,10.0nm,0.9s						
CLL				i x	x	18 37 09.3	
CLL				epPKiKP	pPKiKP	18 39 02.0	+0.8
CLL				epPKPab	pPKPab	18 39 05.0	+0.5
CLL				eSKPdf	SKPdf	18 39 27.0	+2.2
CLL	Collm	150.65	342	i PKIKP	PKiKP	18 36 51.0	0.0
CLL				i		18 37 00.3	
CLL				pmax	pmax		
	comp=Z,63nm,1.5s						
CLL				pmax	pmax		
	comp=Z,29nm,1.1s						
CLL	Collm	150.65	342	ePKPbc	PKiKP	18 36 51.1	0.0
	baz=25,slow=3.8						
CLL				ePKPab	PKPab	18 37 00.6	+0.5
	baz=25,slow=3.8						
BRG	Berggiesshubel	150.76	340	i PKP	PKiKP	18 36 51.5	+0.1
BRG				Amp		18 36 53.3	
	comp=Z,16nm,0.7s						
BRG	Berggiesshubel	150.76	340	Amp		18 39 08.6	
	comp=Z,25nm,1.2s						
BRG	Berggiesshubel	150.76	340	i PKIKP	PKiKP	18 36 51.4	+0.1
BRG				pmax	pmax		
	comp=Z,16nm,0.7s						
BRG	Berggiesshubel	150.76	340	ePKPbc	PKiKP	18 36 51.4	+0.1
	baz=25,slow=3.8						
BRG				ePKPab	PKPab	18 37 01.5	+0.9
	baz=25,slow=3.8						
BRG				eSKPdf	pPKPab	18 39 06.8	+1.9
BRG	Berggiesshubel	150.76	340	P	PKPab	18 37 02.0	+1.4
BRG	Berggiesshubel	150.76	340	Amp		18 37 02.8	
	comp=Z,19nm,0.9s						
BRG	Berggiesshubel	150.76	340	pPKP	pPKPdf	18 39 07.3	+12
CLZ	Clausthal	150.84	345	ePKPbc	PKiKP	18 36 51.5	0.0
	baz=25,slow=3.8						
CLZ				ePKPab	PKPab	18 37 01.7	+0.8
	baz=25,slow=3.8						
CLZ				eSKPdf	pPKPab	18 39 05.2	0.0
PVCC	Panska Ves	150.87	339	⇑ePKP	PKiKP	18 36 52.1	+0.6
PVCC				ePKPAB	PKPab	18 37 02.2	+1.1
PVCC				epPKP	pPKPab	18 39 08.0	+2.7
PVCC	Panska Ves	150.87	339	ePKIKP	PKiKP	18 36 52.1	+0.6
PVCC				e		18 37 02.2	
FBE	Freiberg	150.90	341	ePKPbc	PKiKP	18 36 52.1	+0.5
	baz=25,slow=3.8						
FBE				ePKPab	PKPab	18 37 01.8	+0.6
	baz=25,slow=3.8						
FBE				eSKPdf	pPKPab	18 39 07.5	+2.1
PSZ	Piszkesteto	150.91	330	⇑P	PKiKP	18 36 51.9	+0.1
PSZ	Piszkesteto	150.91	330	PKPbc	PKPbc	18 36 51.5	0.0
PSZ	Piszkesteto	150.91	330	⇑PKIKP	PKiKP	18 36 51.9	+0.1
VYHS	Vyhne	150.94	332	ePKIKP	PKiKP	18 36 51.6	-0.2
VYHS				e		18 37 02.2	
VYHS				e		18 39 03.1	
VYHS	Vyhne	150.94	332	ePKP	PKiKP	18 36 51.6	-0.2
VYHS				e		18 37 02.2	
VYHS				e		18 39 03.1	
VYHS				e		18 39 07.2	
AKAS	Kas	150.98	302		PKPbc	18 36 51.7	-0.3
NEUB	Neuenburg	151.08	343	ePKPbc	PKiKP	18 36 52.0	0.0
	baz=25,slow=3.8						
NEUB				ePKPab	PKPab	18 37 02.5	+0.6
	baz=25,slow=3.8						
JAVC	Velka Javorina	151.13	334	ePKP	PKiKP	18 36 53.6	+1.4
JAVC				e		18 37 04.0	
VRAC	Vranov	151.19	336	ePKP	PKiKP	18 36 52.3	0.0
VRAC				e		18 37 03.5	
GTTG	Gottingen	151.21	346	ePKPbc	PKiKP	18 36 52.3	+0.1
	baz=25,slow=3.8						
GZR	Gura Zlata	151.24	324	⇓P	PKPbc	18 36 52.0	-0.2
GZR	Gura Zlata	151.24	324	⇓PKIKP	PKPbc	18 36 52.0	-0.2
SIRR	Siria	151.24	326	⇑P	PKiKP	18 36 52.8	+0.3
PRU	Pruhonice	151.34	339	ePKPAB	PKPab	18 37 01.7	-1.4
PRU				epPKP	pPKPbc	18 39 03.3	+1.4
PRU				ex	x	18 39 08.8	
SURR	Surduc	151.35	325	⇑P	PKPbc	18 36 52.5	+0.1
PLVB	Pleven	151.40	319	⇓P	PKiKP	18 36 53.2	+0.3
KRUC	Moravsky	151.47	336	e	PKPab	18 37 04.2	+0.6
KRUC	Moravsky	151.47	336	ePKP	PKiKP	18 36 52.9	+0.1
TANN	Tannenbergstha	151.61	342	ePKPab	PKPab	18 37 05.1	+0.8
	baz=25,slow=3.8						
TANN				eSKPdf	pPKPab	18 39 09.1	+0.7
WERD	Werda	151.62	342	ePKPbc	PKiKP	18 36 53.4	+0.2
	baz=25,slow=3.8						
WERD				ePKPab	PKPab	18 37 05.5	+1.2
	baz=25,slow=3.8						
WERD				eSKPdf	pPKPab	18 39 09.0	+0.6
PLN	Plauen	151.63	342	ePKPbc	PKiKP	18 36 53.3	+0.2
	baz=25,slow=3.8						
PLN				ePKPab	PKPab	18 37 05.1	+0.8
	baz=25,slow=3.8						
PLN				eSKPdf	pPKPab	18 39 08.8	+0.4
MOX	Moxa	151.63	343	ePKPbc	PKiKP	18 36 53.3	+0.2
	baz=25,slow=3.8						
MOX				ePKPab	PKPab	18 37 05.0	+0.7
	baz=25,slow=3.8						
MODS	Modra-Piesok	151.68	334	ePKIKP	PKiKP	18 36 54.2	+0.9
MODS	Modra-Piesok	151.68	334	e		18 39 09.8	
MODS	Modra-Piesok	151.68	334	ePKP	PKiKP	18 36 54.2	+0.9
MODS	Modra-Piesok	151.68	334	e	PKPab	18 37 05.5	+0.9
GUNZ	Gunzen	151.69	342	ePKPbc	PKPbc	18 36 53.2	+0.1
	baz=25,slow=3.8						
GUNZ				ePKPab	PKPab	18 37 05.7	+1.1
	baz=25,slow=3.8						
GUNZ				eSKPdf	pPKPab	18 39 09.7	+1.0
BZS	Buzias	151.71	325	⇑P	PKiKP	18 36 53.5	+0.1
BZS	Buzias	151.71	325	⇑PKIKP	PKiKP	18 36 53.5	+0.1
WERN	Wernitzgruen	151.75	342	ePKPbc	PKPbc	18 36 53.2	0.0
	baz=25,slow=3.8						
WERN				ePKPab	PKPab	18 37 06.1	+1.2
	baz=25,slow=3.8						
WERN				eSKPdf	pPKPab	18 39 09.8	+0.8
HERR	Herculane	151.76	323	⇑P	PKiKP	18 36 53.5	-0.1
NKC	Novy Kostel	151.77	342	⇑ePKP	PKiKP	18 36 54.0	+0.5
NKC				ePKPAB	PKPab	18 37 05.8	+0.9
NKC	Novy Kostel	151.77	342	ePKIKP	PKiKP	18 36 54.0	+0.5
NKC				e		18 37 05.8	
KASTN	Kahler Asten	151.86	347	ePKPbc	PKiKP	18 36 53.5	-0.1
	baz=25,slow=3.8						
MPEP	Malo Peshtene	151.94	320	eP	PKPab	18 37 10.4	+4.5
MANZ	Manzenberg	152.09	342	ePKPbc	PKiKP	18 36 54.3	+0.2
	baz=25,slow=3.8						
MANZ				eSKPdf	pPKPab	18 39 10.4	0.0
MDVR	Moldovita	152.21	324	⇑P	PKiKP	18 36 54.6	0.0
ROTZ	Rotzenmuhle	152.26	341	ePKPab	PKPab	18 37 08.3	+1.3
	baz=25,slow=3.8						
KHC	Kasperske Hory	152.40	339		PKPbc	18 36 54.7	0.0
KHC					PKPab	18 37 08.3	+0.7
KHC	Kasperske Hory	152.40	339	ePKPDF	PKPdf	18 36 46.0	-1.2
KHC				⇑ePKP	PKiKP	18 36 55.1	+0.3
KHC				ePKPAB	PKPab	18 37 08.6	+1.0
KHC				epPKP	pPKPbc	18 39 05.6	+1.1
KHC				ex	x	18 39 11.3	
KHC	Kasperske Hory	152.40	339	ePKIKP	PKPdf	18 36 46.0	-1.2
KHC				e		18 37 08.6	
CKRC	Cesky Krumlov	152.42	338	⇑ePKP	PKiKP	18 36 55.2	+0.4
CKRC				ePKPAB	PKPab	18 37 08.6	+0.9
CKRC				epPKP	pPKPbc	18 39 04.8	+0.3
CKRC				ex	x	18 39 11.2	
CKRC	Cesky Krumlov	152.42	338	ePKIKP	PKiKP	18 36 55.2	+0.4
CKRC				e		18 37 08.6	
CKRC				e		18 39 04.8	
CONA	Conrad Observa	152.60	335	ePKP	PKPbc	18 36 54.9	-0.3
	comp=Z,14nm,1.8s						
CONA				i PKP	PKPab	18 37 09.8	+1.2
	comp=Z,9.2nm,1.0s						
CONA				i pPKP	pPKPab	18 39 11.7	-0.9
	comp=Z,15nm,1.0s						
GEC2	GERESS Array S	152.60	339	PKPbc	PKiKP	18 36 55.4	+0.1
GEC2					PKPab	18 37 09.2	+0.6
GEC2	GERESS Array S	152.60	339	ePKPab	PKPab	18 37 09.4	+0.8
	baz=25,slow=3.8						
GERES	GERESS Array B	152.60	339	PKPbc	PKiKP	18 36 55.5	+0.1
	comp=Z,1.1nm,0.7s,baz=64,slow=3.1,SNR=8.6						
GERES				PKPab	PKPab	18 37 06.7	-1.9
	comp=Z,3.5nm,0.9s,baz=48,slow=2.0,SNR=4.9						
GERES				pPKPbc	pPKPbc	18 39 05.5	+0.4
	comp=Z,2.2nm,0.8s,baz=343,slow=1.4,SNR=6.6						
GERES				pPKPab	pPKPab	18 39 12.1	-0.6
	comp=Z,6.5nm,1.0s,baz=52,slow=2.2,SNR=12						
GERES	GERESS Array B	152.60	339	PKPbc	PKPbc	18 36 55.2	0.0
GERES	GERESS Array B	152.60	339	PKIKP	PKPbc	18 36 55.2	0.0
GRF	Grafenberg Arr	152.60	343	ePKPab	PKPab	18 37 09.3	+0.8
	baz=25,slow=3.8						
GRF				eSKPdf	pPKPab	18 39 11.6	-0.9
RONA	Rosalia, Austr	152.61	334	ePKP	PKPbc	18 36 55.2	0.0
	comp=Z,10nm,1.2s						
RONA				i PKP	PKPab	18 37 10.0	+1.4
	comp=Z,16nm,1.1s						
RONA				i pPKP	pPKPab	18 39 11.6	-1.1
	comp=Z,10nm,0.8s						
VTS	Vitosha	152.67	319	⇓P	PKiKP	18 36 57.8	+2.1
VTS	Vitosha	152.67	319	PKPab	PKPab	18 37 11.3	+2.1
VTS	Vitosha	152.67	319	PKP2	PKPab	18 37 11.3	+2.1
VTS	Vitosha	152.67	319	eP	PKPab	18 37 10.9	+1.7
MORH	Mrgy, Hungar	152.75	329	⇓P	PKiKP	18 36 55.6	+0.1
TNS	Taunus Mts	152.78	347	ePKPab	PKPab	18 37 09.8	+0.6
	baz=25,slow=3.8						
MMB	Musomiste	152.94	316	eP	PKPab	18 37 11.3	+1.0
FRGS	Fruska Gora	152.95	326	⇑P	PKPab	18 37 06.5	-3.6
BOVS	Bovan	152.95	322	⇓P	PKPbc	18 36 55.4	-0.6
BCLA	Clavier	153.15	351	dPKP	PKPab	18 37 10.5	-0.2
MOA	Molln	153.26	337	ePKP	PKiKP	18 36 56.7	+0.1
	comp=Z,1.7nm,0.6s						
MOA				i PKP	PKPab	18 37 12.4	+1.0
	comp=Z,13nm,1.1s						
MOA				i pPKiKP	pPKiKP	18 39 10.2	+3.4
	comp=Z,7.0nm,1.1s						
ARSA	Arzberg	153.29	335	ePKP	PKPab	18 37 11.8	+0.3
	comp=Z,8.4nm,1.3s						
BMRD	Maredsous	153.34	352	dPKP	PKPab	18 37 11.8	+0.3
DOU	Dourbes	153.56	352	dPKP	PKPab	18 37 13.0	+0.6
DOU				dpPKP	pPKPab	18 39 15.1	-1.4
DIVS	Divibare	153.58	325		PKPab	18 37 12.0	-1.0
BIOA	Bad Ischl, Aus	153.62	337	ePKP	PKPbc	18 36 57.2	-0.1
	comp=Z,6.1nm,1.2s						
BIOA				ePKP	PKPab	18 37 14.0	+1.1
	comp=Z,20nm,1.3s						
WLF	Walferdange	153.75	349	dPKP	PKPab	18 37 14.2	+0.9
WLF	Walferdange	153.75	349	ePKPab	PKPab	18 37 14.1	+0.9
	baz=25,slow=3.8						
VAY	Valandovo	153.82	317	i P	PKPab	18 37 14.8	+0.8
STIP	Stip	153.84	318	i P	PKPab	18 37 14.0	-0.1
RJOB	Jochberg	153.87	339	ePKPab	PKPab	18 37 15.2	+1.2
	baz=25,slow=3.8						
SOKA	Soboth	153.95	334	i PKP	PKPab	18 37 14.6	+0.2
	comp=Z,20nm,1.6s,SNR=5.4						
SKO	Skopje	154.13	319	i P	PKPab	18 37 17.0	+1.7
KBA	Koelnbreinsper	154.25	337	i pPKP	pPKPdf	18 39 08.9	+7.6
	comp=Z,5.4nm,1.1s						
OBKA	Obir	154.28	335	epPKP	pPKPdf	18 39 05.2	+3.9
	comp=Z,15nm,1.9s						
MYKA	Terra Mystica	154.52	336	ePKP	PKPab	18 37 16.5	-0.3
	comp=Z,10.0nm,1.1s						
LIT	Litokhoron	154.53	315		PKPab	18 37 16.9	-0.2
LIT	Litokhoron	154.53	315	PKP2	PKPab	18 37 16.9	-0.2
WATA	Walderalm	154.62	340	i PKP	PKPab	18 37 18.1	+0.7
	comp=Z,5.7nm,0.6s						
WTTA	Wattenberg	154.66	340	ePKP	PKPab	18 37 18.3	+0.8
	comp=Z,19nm,1.0s,SNR=5.4						
RETA	Reutte	154.73	341	i PKP	PKPab	18 37 18.6	+0.9
	comp=Z,22nm,1.1s						
MOTA	Moosalm	154.75	341	ePKP	PKPab	18 37 18.7	+0.7
	comp=Z,24nm,1.2s,SNR=4.3						
ABTA	Abfaltersbach	154.82	338	ePKP	PKPab	18 37 18.4	+0.2
	comp=Z,15nm,1.2s,SNR=4.3						
SQTA	Sankt Quirin	154.83	340	i PKP	PKPab	18 37 19.0	+0.8
	comp=Z,13nm,0.9s						
CLUD	Cludinico	154.94	337		PKPab	18 37 18.2	-0.4
OHR	Ohrid	155.03	318	i P	PKPab	18 37 20.5	+1.2
FETA	Feichten	155.16	341	ePKP	PKPab	18 37 20.5	+0.9
	comp=Z,14nm,1.2s,SNR=4.5						
DAVA	Damuels	155.16	342	i PKP	PKPab	18 37 20.6	+0.9
	comp=Z,17nm,1.4s						
AGG	Agios Georgios	155.20	313		PKPab	18 37 18.5	-1.5
AGG	Agios Georgios	155.20	313	PKP2	PKPab	18 37 18.5	-1.5
DBIC	Dimbokro	162.40	167	PKPab	PKPab	18 37 51.9	+0.2
	comp=Z,11nm,1.0s,baz=168,slow=4.1,SNR=6.8						
ESDC	Sonseca Array	164.14	8	PKPab	PKPab	18 37 59.0	+0.1
	comp=Z,4.8nm,1.2s,baz=342,slow=3.5,SNR=8.4						
ESDC	Sonseca Array	164.14	8		PKPab	18 37 59.4	+0.5
TORD	Torodi Ar. Bea	168.94	194	PKP	PKPdf	18 37 04.5	-1.2
	comp=Z,2.8nm,1.1s,baz=321,slow=0.2,SNR=7.6						
TORD				PKPab	PKPab	18 38 20.6	0.0
	comp=Z,25nm,0.9s,baz=164,slow=4.4,SNR=76						
TORD				pPKP	pPKPdf	18 39 16.7	-0.8
	comp=Z,1.2nm,1.0s,baz=222,slow=1.9,SNR=1.1						
TORD				PP	PP	18 42 09.7	-0.1
	comp=Z,6.6nm,1.1s,baz=156,slow=4.5,SNR=11						

ROM 06 18:33:27.7±0.1,**43°.059N**±0°.004×**13°.075E**±0°.005, **h10^{km},ML1.0**/4,**Error ellipse: s-maj=0.6km s-min=0.3km az=33.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	Muccia, Frazio	0.05	266	P	Pg	18 33 30.2	+0.4
T1219				S	Sg	18 33 31.5	+0.2
T1219				AML	AML		
	comp=E,295µm,0.4s						
T1219				AML	AML		
	comp=N,332µm,0.5s						
T1219				AML	AML		
	comp=E,261µm,0.1s						
T1219				AML	AML		
	comp=N,237µm,0.1s						
T1219				AML	AML		
	comp=N,229µm,0.1s						
T1219				AML	AML		
	comp=E,261µm,0.1s						
T1256	Bolognola (MC)	0.12	115	AML	AML		
	comp=E,882µm,0.1s						
T1256				AML	AML		
	comp=N,896µm,1.1s						
MC2	Monte Cornacci	0.17	150	P	Pg	18 33 32.2	+0.7
MC2				S	Sg	18 33 35.3	+1.1
T1216	Preci, Frazion	0.17	194	P	Pg	18 33 32.2	+0.7
T1216				S	Sg	18 33 35.0	+0.9
SNTG	Esanatoglia	0.22	333	AML	AML		
	comp=E,25µm,0.1s						
SNTG				AML	AML		
	comp=N,210µm,0.7s						
T1245	Castelsantange	0.22	158	P	Pg	18 33 32.9	+0.6
T1245				S	Sg	18 33 37.0	+1.5
T1245				AML	AML		
	comp=E,31µm,0.2s						
T1245				AML	AML		
	comp=N,39µm,0.1s						
MMO1	Montemonaco	0.24	131	P	Pg	18 33 33.5	+0.7
MMO1				S	Sg	18 33 37.4	+1.3
T1215	Vallo di Nera,	0.30	211	P	Pg	18 33 34.5	+0.7
ASSB	Assisi San Ben	0.31	267	P	Pg	18 33 34.5	+0.6
ASSB				S	Sb	18 33 39.5	-0.9
ASSB				AML	AML		
	comp=N,42µm,0.3s						
ASSB				AML	AML		
	comp=E,37µm,3.6s						
T1212	Cascia, Frazio	0.31	184	P	Pg	18 33 34.5	+0.6
T1212				S	Sb	18 33 39.5	-1.0
T1218	Civita (PG)	0.39	176	AML	AML		
	comp=E,154µm,1.0s						
T1218				AML	AML		
	comp=N,107µm,1.1s						
LNSS	Leonessa	0.46	183	P	Pg	18 33 37.0	+0.3
LNSS				S	Sb	18 33 44.1	-0.7

PRU 06 18:36:07.5±0.0,**49°.95N**×**19°.15E,h0^{km},Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANS	Liptovska Anna	0.83	165	eSG	Sg	18 36 32.7	-1.3
MORC	Moravsky Berou	1.05	261	ePG	Pn	18 36 29.9	+0.3
MORC				eSG	Sg	18 36 42.0	+0.7
DPC	Dobruska-Polom	1.86	284	eSG	Sn	18 37 04.2	-0.7

MAN 06 18:43:56.7,13°.83N×120°.84E,h29^{km},mb3.9,ML2.7, MS2.3,1C-5D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.29	18	⇓eP	Pn	18 44 05.0	-0.1
TGY				eS	Sn	18 44 13.3	+2.8
MACP	Maragondon, Ca	0.45	344	⇓eP	Pn	18 44 08.3	+1.1
MACP				eS	Sn	18 44 15.6	+1.3
LUBP	Lubang	0.59	261	⇓eP	Pn	18 44 09.2	+0.1
LUBP				eS	Sn	18 44 18.8	+1.0
LQP	Lukban	0.73	67	⇑eP	Pn	18 44 11.4	+0.1
LQP				eS	Sn	18 44 22.6	+0.9
BOAC	Boac	1.04	110	⇓eP	Pn	18 44 15.1	-0.2
BOAC				eS	Sb	18 44 29.4	+0.1
PCPH	Palayan	1.74	8	⇓eP	Pb	18 44 31.6	+3.6

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*TIR **06** 18:47:25.6,39°.92N×20°.60E,h14^{km},Md2.7*

*THE **06** 18:47:25.6,39°.94N×20°.69E,h14^{km}±1^{km},ML1.9/7,Error ellipse: s-maj=1.9km s-min=0.6km az=210.0*

*ATH **06** 18:47:26.1,39°.91N×20°.72E,h10^{km}±31^{km},ML1.9/8,Error ellipse: s-maj=31.6km s-min=1.1km az=0.0*

ISC 06 18:47:25.7±0.9,**39°.93N**±0°.02×**20°.69E**±0°.02,**h11^{km}**±8^{km}, **n26,**σ**0ˢ.64**/43,**Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSK	Leskovik	0.23	343	P	Pg	18 47 30.2	-0.3
LSK				S	Sg	18 47 34.3	+0.5
	655nm,0.6s						
LSK	Leskovik	0.23	343	P	Pg	18 47 30.3	-0.3
	baz=0.0						
LSK				S	Sg	18 47 35.1	+1.3
	baz=0.0						
JAN	Janina	0.30	155	P	Pg	18 47 31.5	-0.3
JAN				S	Sb	18 47 36.9	-1.1
	682nm,0.2s						
JAN	Janina	0.30	155	P	Pg	18 47 31.5	-0.3
JAN				S	Sg	18 47 36.2	+0.4
JAN				AML	AML	18 47 38.0	
	comp=N,1024µm,0.2s						
JAN				AML	AML	18 47 39.5	
	comp=E,1695µm,0.3s						
PENT	Pentalofos	0.44	52	P	Pg	18 47 33.4	-0.9
PENT				S	Sg	18 47 41.0	+0.9
	comp=E,142nm,0.8s						
PENT	Pentalofos	0.44	52	P	Pg	18 47 33.4	-0.9
PENT				S	Sg	18 47 41.0	+0.9
IGT	Igoumenitsa	0.48	215	P	Pg	18 47 34.8	-0.3
IGT				S	Sb	18 47 42.9	-0.3
	comp=E,190nm,0.3s						
IGT	Igoumenitsa	0.48	215	P	Pg	18 47 34.4	-0.6
	baz=209						
IGT				S	Sb	18 47 42.3	-0.9
	baz=209						
IGT	Igoumenitsa	0.48	215	P	Pg	18 47 34.3	-0.8
IGT				S	Sg	18 47 41.6	+0.2
IGT				AML	AML	18 47 45.9	
	comp=E,431µm,0.3s						
IGT				AML	AML	18 47 46.2	
	comp=N,329µm,0.3s						
KPRO	Kipourio	0.52	87	P	Pg	18 47 35.0	-0.8
KPRO				S	Sg	18 47 42.8	0.0
KPRO				AML	AML	18 47 47.1	
	comp=E,370µm,0.3s						
KPRO				AML	AML	18 47 51.1	
	comp=N,278µm,0.6s						
SRN	Sarande	0.53	265	P	Pg	18 47 35.0	-1.0
SRN				S	Sb	18 47 44.1	-0.5
	comp=N,155nm,0.4s						
SRN	Sarande	0.53	265	P	Pg	18 47 34.9	-1.0
	baz=265						
SRN				S	Sg	18 47 43.1	+0.2
	baz=265						
KASA	Kassiopi	0.61	253	P	Pg	18 47 37.6	+0.1
KASA				S	Sb	18 47 47.7	+0.9
KASA				AML	AML	18 47 49.1	
	comp=N,584µm,0.4s						
KASA				AML	AML	18 47 51.3	
	comp=E,357µm,0.3s						
KEK	Kerkira	0.72	253	P	Pb	18 47 39.8	-0.4
KEK				S	Sb	18 47 50.2	+0.2
	comp=E,108nm,0.5s						
KEK	Kerkira	0.72	253	P	Pb	18 47 40.0	-0.2
KEK				S	Sb	18 47 50.4	+0.3
KEK				AML	AML	18 47 54.5	
	comp=E,261µm,0.7s						
KEK				AML	AML	18 47 56.2	
	comp=N,169µm,0.4s						
KZN	Kozani	0.91	65	P	Pb	18 47 42.9	-0.7
FNA	Florina	1.00	31	P	Pb	18 47 44.5	-0.6
FNA				S	Sg	18 47 58.4	+0.3
	comp=N,35nm,0.7s						
FNA	Florina	1.00	31	P	Pn	18 47 46.2	+0.4
	baz=34						
FNA				S	Sn	18 48 01.0	+1.0
	baz=34						
FNA	Florina	1.00	31	P	Pb	18 47 44.6	-0.6
FNA				AML	AML	18 48 06.7	
	comp=E,83µm,0.4s						
FNA				AML	AML	18 48 13.1	
	comp=N,80µm,0.5s						
THL	Klokotos Trika	1.09	109	P	Pb	18 47 46.2	-0.3
THL				AML	AML	18 48 06.1	
	comp=E,49µm,0.4s						
THL				AML	AML	18 48 07.9	
	comp=N,60µm,0.9s						

LKD2	Lefkada island	1.14	181	P	Pg	18 47 47.8	+0.2
TYRN	Tyrnavos	1.21	100	P	Pg	18 47 49.1	+0.2
EVGI	Lefkada island	1.31	181	P	Pb	18 47 50.1	-0.1
MAKR	Makrakomi, Fth	1.45	129	P	Pb	18 47 52.7	+0.1
MAKR				AML	AML	18 48 23.1	
	comp=N,285µm,0.8s						
MAKR				AML	AML	18 48 24.9	
	comp=E,182µm,0.5s						
AGG	Agios Georgios	1.56	125	P	Pb	18 47 54.2	-0.4
SCTE	Santa Cesarea	1.71	276	P	Pb	18 47 56.5	-0.6

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*DNK **06** 18:52:30.0±1.9, 51°.38N×16°.17E, h22^{km}±130^{km}, ML3.0*
*IPEC **06** 18:52:31.5±0.2, 51°.46N×16°.14E, h1^{km}, ML2.6/5, Error ellipse: s-maj=2.0km s-min=1.1km az=36.0*
*IDC **06** 18:52:32.5±0.8, 51°.45N×15°.94E, h0^{km}, mb3.2/1, mbtmp3.4/6, ML2.8/5, Error ellipse: s-maj=14.3km s-min=8.0km az=108.0*
*PRU **06** 18:52:32.7±0.0, 51°.43N×16°.05E, h0^{km}*
*VIE **06** 18:52:34.3, 51°.28N×15°.97E, h0^{km}, mb2.8/8, ml2.7/8 75 km WNW of Wroclaw Suspected Mining induced.*
ISC 06 18:52:30.7±0.7, **51°.52N**±0°.03×**16°.07E**±0°.02, **h0**^{km}, **n49**, σ**1.s22**/92, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.69	168	*e*Pg	Pg	18 52 43.9	0.0
KSP				*e*Sg	Sg	18 52 52.5	-0.3
CHVC	Chvalec	0.93	181	*e*PG	Pg	18 52 48.8	+0.3
CHVC				*e*SG	Sg	18 53 00.6	0.0
	comp=Z,74nm,0.5s						
OSTC	Ostas	0.97	174	*e*PG	Pg	18 52 49.1	-0.1
OSTC				*e*SG	Sg	18 53 01.5	-0.2
	comp=Z,54nm,0.7s						
UPC	Upice	1.01	182	*e*PG	Pg	18 52 50.0	-0.1
UPC				*e*SG	Sg	18 53 02.8	-0.4
	comp=Z,169nm,0.4s						
DPC	Dobruska-Polom	1.18	172	*e*PG	Pg	18 52 52.7	-0.6
DPC				*e*SG	Sg	18 53 07.3	-1.3
	comp=Z,72nm,0.8s						
PVCC	Panska Ves	1.37	224	*e*PG	Pg	18 52 56.9	0.0
PVCC				*e*SG	Sb	18 53 15.6	+0.4
	comp=Z,240nm,0.3s						
BRG	Berggiesshubel	1.49	245	Pg	Pg	18 52 59.4	+0.3
BRG				Sg	Sn	18 53 19.6	+0.9
BRG				Amp		18 53 21.1	
	comp=Z,67nm,0.4s						
KRLC	Kraliky	1.52	162	*e*PG	Pn	18 52 58.3	-0.8
KRLC				*e*SG	Sg	18 53 18.7	-0.6
	comp=Z,110nm,0.9s						
GOPC	GO Pecny, Ondr	1.80	207	*e*PN	Pn	18 53 02.6	-0.4
GOPC				*e*PG	Pb	18 53 04.3	-0.2
GOPC				*e*SG	Sb	18 53 27.4	-0.2
	comp=Z,32nm,0.5s						
PRU	Pruhonice	1.81	213	*e*PN	Pn	18 53 02.6	-0.5
PRU				*e*PG	Pb	18 53 04.8	+0.1
PRU				*e*SG	Sb	18 53 28.6	+0.6
	comp=Z,40nm,0.6s						
CLL	Collm	1.93	265	*i* Pn	Pn	18 53 04.5	-0.2
CLL				*e*Pg	Pb	18 53 07.0	+0.3
CLL				*e*x	x	18 53 11.0	
CLL				*e*x	x	18 53 23.0	
CLL				*e*Sg	Sb	18 53 32.0	+0.7
	comp=Z,34nm,0.9s						
MORC	Moravsky Berou	1.98	151	*e*Pn	Pn	18 53 04.8	-0.7
	baz=333						
MORC				*e*Sg	Sn	18 53 31.0	0.0
	comp=Z,38nm,0.5s,baz=333						
OKC	Ostrava-Krasne	2.14	141	*e*PG	Pb	18 53 10.2	-0.1
OKC				*e*SG	Sb	18 53 36.6	-0.8
	comp=Z,71nm,0.8s						
VRAC	Vranov	2.24	171	Pn	Pn	18 53 09.7	+0.7
	comp=Z,1.9nm,0.3s,baz=348,slow=11,SNR=9.3						
VRAC				Lg	Lg	18 53 40.5	
	comp=Z,4.0nm,0.3s,baz=284,slow=21,SNR=9.7						
	comp=Z,7.5nm,0.5s						
VRAC	Vranov	2.24	171	*e*PN	Pn	18 53 09.0	0.0
VRAC				*e*SG	Sb	18 53 39.5	-0.8
VRAC	Vranov	2.24	171	*e*Pn	Pn	18 53 08.9	0.0
	baz=352						
VRAC				*e*Sg	Sb	18 53 39.4	-0.8
	comp=Z,26nm,0.5s,baz=352						
TREC	Trest	2.26	190	*e*PN	Pn	18 53 10.2	+0.9
TREC				*e*PG	Pb	18 53 12.8	+0.5
TREC				*e*SG	Sb	18 53 41.9	+1.1
	comp=Z,27nm,0.6s						
KRUC	Moravsky	2.47	175	*e*Pn	Pn	18 53 11.9	-0.2
	baz=356						
KRUC	Moravsky	2.47	175	*e*Pg	Pb	18 53 15.4	-0.5
	baz=356						
KRUC				*e*Sg	Sb	18 53 46.6	-0.2
	comp=Z,36nm,0.9s,baz=356						
NKC	Novy Kostel	2.63	242	*e*PN	Pn	18 53 14.9	+0.5
NKC				*e*PG	Pg	18 53 21.3	+0.3
NKC				*e*SG	Sg	18 53 56.1	+1.0
	comp=Z,48nm,0.7s						
OJC	Ojcow	2.70	117	*e*Pg	Pg	18 53 22.1	-0.2
OJC				*e*Sg	Sg	18 53 57.5	+0.2
JAVC	Velka Javorina	2.85	158	*e*PN	Pn	18 53 17.2	-0.3
JAVC	Velka Javorina	2.85	158	*e*Pn	Pn	18 53 17.1	-0.4
	baz=340						
KHC	Kasperske Hory	2.88	215	*e*PN	Pn	18 53 17.7	-0.1
KHC				*e*PG	Pb	18 53 24.0	+1.2
KHC				*e*SN	Sn	18 53 52.4	-0.6
KHC				*e*SG	Sg	18 54 02.6	-0.4
	comp=Z,18nm,0.5s						
CKRC	Cesky Krumlov	2.93	203	*e*PN	Pn	18 53 19.1	+0.6
CKRC				*e*PG	Pb	18 53 24.8	+1.1
CKRC				*e*SG	Sg	18 54 03.5	-1.2
	comp=Z,24nm,0.6s						
GERES	GERESS Array B	3.08	211	Pn	Pn	18 53 20.7	+0.1
	comp=Z,0.9nm,0.3s,baz=30,slow=13,SNR=22						
GERES				Pg	Pb	18 53 27.2	+0.8
	comp=Z,3.3nm,0.3s,baz=30,slow=17,SNR=26						
GERES				Lg	Lg	18 54 06.2	
	comp=Z,5.0nm,0.3s,baz=32,slow=26,SNR=12						
	comp=Z,1.6nm,0.4s						
LANS	Liptovska Anna	3.22	136	*e*PG	Pg	18 53 31.9	-0.4
LANS				*e*SG	Sg	18 54 12.6	-1.4
MODS	Modra-Piesok	3.24	166	*e*PG	Pg	18 53 31.5	-1.3
MODS				*e*SG	Sg	18 54 15.0	+0.2
NIE	Niedzica	3.42	126	*e*Pg	Pg	18 53 34.8	-1.4
NIE				*e*Sg	Sg	18 54 19.9	-0.7
VYHS	Vyhne	3.52	148	*e*PN	Pn	18 53 26.3	-0.2
VYHS				*e*PG	Pg	18 53 38.0	0.0
VYHS				*e*SG	Sg	18 54 27.7	+4.2
CONA	Conrad Observa	3.60	182	*i* Pn	Pn	18 53 28.2	+0.4
	comp=Z,3.0nm,0.4s,SNR=7.2						
CONA				*e*Sg	Sg	18 54 25.2	-1.0
	comp=Z,28nm,0.7s						
BSD	Bornholm Skovb	3.67	350	*i* P	Pn	18 53 28.4	-0.2
BSD				*e*S	Sn	18 54 09.3	-3.2
BSD				IAML		18 54 14.6	
	comp=Z,16nm,0.9s						
RONA	Rosalia, Austr	3.83	178	*i* Pn	Pn	18 53 30.8	-0.1
	comp=Z,1.3nm,0.3s						
RONA				Sg	Sg	18 54 31.2	-2.3
	comp=Z,11nm,0.5s						
MOA	Molln	3.85	198	*i* Pn	Pn	18 53 31.6	+0.4
	comp=Z,1.3nm,0.2s						
MOA				*e*Sg	Sg	18 54 33.3	-1.1
	comp=Z,15nm,0.7s						
STHS	Stebnicka Huta	3.92	120	*e*PG	Pg	18 53 46.7	+1.0
STHS				*e*SG	Sg	18 54 43.7	+7.2
ARSA	Arzberg	4.29	185	*e*Pn	Pn	18 53 38.4	+1.2
	comp=Z,1.3nm,0.4s						
ARSA				Sg	Sg	18 54 48.1	-0.2
	comp=Z,10nm,0.5s						
LUNU	Lund	4.41	340	*i* P	Pn	18 53 38.1	-0.6
LUNU				*e*S	Sn	18 54 29.4	-1.2
BLEU	Blekinge	4.80	358	*i* P	Pn	18 53 44.5	+0.5
BJUU	Bjuv	4.91	340	*i* P	Pn	18 53 44.5	-1.0
DEL	Delary	5.13	346	*i* P	Pn	18 53 47.8	-0.8
WTTA	Wattenberg	5.15	216	*i* Pn	Pn	18 53 50.0	+0.9
	comp=Z,0.9nm,0.2s						
MOTA	Moosalm	5.29	220	*i* Pn	Pn	18 53 51.5	+0.5
	comp=Z,0.7nm,0.2s						
MOTA				Sg	Sg	18 55 20.9	+0.5
	comp=Z,6.1nm,0.4s						
ABTA	Abfaltersbach	5.32	207	Sg	Sg	18 55 19.1	-2.3
	comp=Z,6.3nm,0.5s						
SQTA	Sankt Quirin	5.35	218	*i* Pn	Pn	18 53 53.3	+1.5
	comp=Z,1.1nm,0.2s,SNR=4.2						
AKASG	Malin Array Be	8.32	91	Pn	Pn	18 54 32.3	-0.2
	comp=Z,0.5nm,0.3s,baz=277,slow=12,SNR=4.6						
	comp=Z,0.4nm,0.4s						
HFS	Hagfors	8.74	352	Pn	Pn	18 54 37.8	-0.3
	comp=Z,0.2nm,0.3s,baz=187,slow=22,SNR=4.1						
	comp=Z,6.8nm,1.0s						
FINES	FINESS Array B	11.37	25	Pn	Pn	18 55 12.6	-1.5
	comp=Z,0.2nm,0.3s,baz=218,slow=12,SNR=6.9						
	comp=Z,7.1nm,1.0s						
ARCES	ARCESS Array B	18.62	10	P	Pn	18 56 49.1	-0.4
	comp=Z,1.1nm,0.7s,baz=188,slow=12,SNR=5.4						
YKA	Yellowknife Ar	59.84	336	P	P	19 02 38.6	+1.3
	comp=Z,0.2nm,0.6s,baz=32,slow=6.8,SNR=4.2						
	comp=Z,0.2nm,0.6s						

RSNC 06 18:54:49.5±1.1, **6°.82N**×**73°.16W**, **h146**^{km}±4^{km}, **ML3.3, Mw3.8, 2C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.23	187⇓	*i*P	Pn	18 55 09.1	-0.7
BARC				*e*S	Sn	18 55 23.8	-1.2
BARC				*i*		18 55 26.8	
	comp=Z,574nm,0.3s						
BRRC	Barranca, Sant	0.62	298⇑	*i*P	Pn	18 55 10.9	-0.2
BRRC				*e*S	Sn	18 55 27.9	+0.4
BRRC				*i*		18 55 32.0	
	comp=Z,272nm,0.3s						
PAMC	Pamplona, Colo	0.69	41⇑	*i*P	Pn	18 55 11.9	-0.2
PAMC				*e*S	Sn	18 55 29.0	-0.3
PAMC				*i*		18 55 31.1	
	comp=Z,228nm,0.6s						
PTBC	PUERTO BERRIO,	1.32	258	*e*P	Pn	18 55 15.7	-1.3
PTBC				*e*S	Sn	18 55 37.0	-0.9
PTBC				*i*		18 55 43.1	
	comp=Z,200nm,0.4s						
TAMC	Tame, Arauca	1.41	106⇓	*i*P	Pn	18 55 17.5	-0.4
TAMC				*i*		18 55 38.2	
	comp=Z,126nm,0.4s						
TAMC				*e*S	Sn	18 55 39.0	-0.5
SPBC	San Pablo de B	1.47	218	*e*P	Pn	18 55 17.9	-0.7
SPBC				*e*S	Sn	18 55 40.9	0.0
SPBC				*i*		18 55 44.5	
	comp=Z,337nm,0.2s						
ZARC	Zaragoza, Cauc	1.82	292	*e*P	Pn	18 55 21.6	-0.6
ZARC				*e*S	Sn	18 55 47.0	-0.5
ZARC				*i*		18 55 51.8	
	comp=Z,261nm,0.4s						
NORC	Norcasia	2.11	234	*e*P	Pn	18 55 25.1	-0.7
NORC				*e*S	Sn	18 55 52.5	-1.1
NORC				*i*		18 56 02.2	
	comp=Z,131nm,0.4s						
CHIC	Chingaza	2.25	195	*e*P	Pn	18 55 27.2	-0.6
CHIC				*e*S	Sn	18 55 56.5	-0.7
CHIC				*i*		18 55 59.8	
	comp=Z,144nm,0.6s						
ROSC	El Rosal	2.28	211	*e*P	Pn	18 55 29.1	+0.9
ROSC				*e*S	Sn	18 55 59.3	+1.4
ROSC				*i*		18 56 03.6	
	comp=Z,380nm,0.5s						
UREC	San Jos de Ur	2.53	292	*e*P	Pn	18 55 28.9	-1.9
UREC				*e*S	Sn	18 56 00.3	-2.4
UREC				*i*		18 56 08.0	
	comp=Z,101nm,0.1s						
LL1C	La Loma 1 Cana	2.73	352	*e*P	Pn	18 55 35.2	+1.8
LL1C				*e*S	Sn	18 56 09.7	+2.4
VILC	Villavicencio,	2.74	191	*e*P	Pn	18 55 32.8	-0.8
VILC				*e*S	Sn	18 56 07.0	-0.7
VILC				*i*		18 56 16.6	
	comp=Z,214nm,0.4s						
PTGC	Puerto Gaitan,	2.79	159	*e*P	Pn	18 55 32.2	-2.0
PTGC				*e*S	Sn	18 56 06.0	-2.6
PTGC				*i*		18 56 08.3	
	comp=Z,88nm,0.3s						
CBOC	Ciudad Bolivar	2.99	252	*e*P	Pn	18 55 36.7	-0.1
CBOC				*e*S	Sn	18 56 13.8	+0.5
CBOC				*i*		18 56 23.8	
	comp=Z,25nm,0.2s						
DBBC	Dabeiba	3.04	274	*e*P	Pn	18 55 37.0	-0.3
DBBC				*e*S	Sn	18 56 12.8	-1.4
DBBC				*i*		18 56 13.5	
	comp=Z,50nm,0.2s						
ARGC	Ariguani, Magd	3.21	340	*e*P	Pn	18 55 39.2	-0.2
ARGC				*e*S	Sn	18 56 17.9	-0.1
ARGC				*i*		18 56 24.6	
	comp=Z,33nm,0.3s						
ANIL	Santa Ana	3.22	224	*e*P	Pn	18 55 40.8	+1.0
ANIL				*e*S	Sn	18 56 19.2	+0.6
PRAC	Prado	3.53	209	*e*P	Pn	18 55 40.0	-3.6
PRAC				*e*S	Sn	18 56 22.2	-3.4
PRAC				*i*		18 56 28.7	
	comp=Z,119nm,0.4s						
ORTC	Ortega, Tolima	3.56	216	*e*P	Pn	18 55 43.3	-0.8
ORTC				*e*S	Sn	18 56 26.7	+0.5
ORTC				*i*		18 56 30.3	
	comp=Z,80nm,0.2s						
APAC	Apartado, Choc	3.56	288	*e*P	Pn	18 55 43.0	-1.0
APAC				*e*S	Sn	18 56 24.4	-1.8
APAC				*i*		18 56 27.9	
	comp=Z,30nm,0.3s						
SJCC	San Jacinto, C	3.66	327	*e*P	Pn	18 55 43.3	-2.0
SJCC				*e*S	Sn	18 56 24.3	-4.2
SJCC				*i*		18 56 38.6	
	comp=Z,37nm,0.7s						
CRJC	Cerrejon, Guaj	4.18	4	*e*P	Pn	18 55 49.3	-2.9
CRJC				*e*S	Sn	18 56 37.0	-4.0
CRJC				*i*		18 56 44.1	
	comp=Z,59nm,0.3s						
YOTC	Yotoco, Valle	4.24	229	*e*P	Pn	18 55 51.7	-1.3
YOTC				*e*S	Sn	18 56 48.7	+6.3
SMRC	Santa Marta, M	4.45	346	*e*P	Pn	18 55 54.5	-1.1
SMRC				*e*S	Sn	18 56 42.0	-4.9
SMRC				*i*		18 56 49.6	
	comp=Z,26nm,0.4s						
GARC	Garzon, Huila	5.16	207	*e*P	Pn	18 56 03.2	-2.0
GARC				*e*S	Sn	18 57 00.6	-3.6
GARC				*i*		18 57 07.3	
	comp=Z,30nm,0.2s						
POPC	Popayan, Colom	5.51	220	*e*P	Pn	18 56 08.8	-1.1
FLOC	Florencia	5.77	206	*e*P	Pn	18 56 11.1	-2.1
FLOC				*e*S	Sn	18 57 18.9	+0.5
FLOC				*i*		18 57 23.1	
	comp=Z,4.9nm,0.5s						

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*ISK **06** 19:14:41.5, 39°.52N×26°.18E, h12^{km}, ML2.7/16*
*ATH **06** 19:14:42.3, 39°.51N×26°.15E, h13^{km}±2^{km}, ML2.5/6, Error ellipse: s-maj=2.4km s-min=0.9km az=221.0*
*DDA **06** 19:14:42.1±0.0, 39°.53N×26°.20E, h7^{km}±3^{km}, ML2.4*
*THE **06** 19:14:42.2, 39°.53N×26°.14E, h4^{km}±1^{km}, ML2.4/7, Error ellipse: s-maj=1.0km s-min=0.3km az=164.0*
ISC 06 19:14:42.0±0.8, **39°.52N**±0°.02×**26°.16E**±0°.02, **h13**^{km}±6^{km}, **n42**, σ**0.s50**/68, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GPNR	Gulpinar-Canak	0.07	199	Pg	Pg	19 14 44.4	-0.2
GPNR				Sg	Sg	19 14 46.4	0.0
PRK	Paraskevi	0.29	163	P	Pg	19 14 48.0	+0.1
PRK				S	Sg	19 14 52.5	+0.6
	2µm,0.5s						
PRK	Paraskevi	0.29	163	P	Pg	19 14 48.0	+0.1
PRK				S	Sg	19 14 52.3	+0.4
PRK				AML	AML	19 14 52.6	
	comp=N,4918µm,0.5s						
PRK				AML	AML	19 14 54.3	
	comp=E,4788µm,0.4s						
EZN	Ezine	0.33	22	P	Pg	19 14 48.6	-0.1
EZN				S	Sg	19 14 53.7	+0.5
	comp=E,600nm,0.4s						
EZN	Ezine	0.33	22	Pg	Pg	19 14 48.8	+0.1
EZN				Sg	Sb	19 14 54.3	-0.7
BOZC	Bozcaada	0.33	345	Pg	Pg	19 14 48.8	0.0
BOZC				Sg	Sg	19 14 53.9	+0.6
SIGR	SIGRI	0.39	218	P	Pg	19 14 49.7	-0.1
SIGR				S	Sg	19 14 55.4	+0.4
	comp=E,702nm,0.2s						
SIGR	SIGRI	0.39	218	P	Pg	19 14 49.7	-0.1
SIGR				S	Sg	19 14 55.1	+0.1
SIGR				AML	AML	19 14 56.0	
	comp=E,1447µm,0.3s						
SIGR				AML	AML	19 14 56.5	
	comp=N,1346µm,0.2s						
COMU	Canakkale	0.62	22	Pg	Pg	19 14 54.2	0.0
GADA	Gvkgeada	0.70	343	Pg	Pg	19 14 55.3	-0.3
GADA				Sg	Sg	19 15 04.9	+0.1
DKL	Dikili	0.73	128	Pg	Pg	19 14 56.1	-0.1
CANM	Can-anakkale	0.84	54	Pg	Pg	19 14 57.7	-0.6
CANM				Sg	Sb	19 15 09.5	-0.3
LIA	Limnos Island	0.84	297	P	Pg	19 14 58.4	+0.1
LIA				S	Sg	19 15 10.1	+0.7
	comp=N,515nm,0.4s						
LIA	Limnos Island	0.84	297	P	Pg	19 14 58.4	+0.1
LIA				S	Sg	19 15 09.3	-0.1
LIA				AML	AML	19 15 10.9	
	comp=E,1144µm,0.6s						
LIA				AML	AML	19 15 13.4	
	comp=N,910µm,0.2s						
GELI	Tayfur-Gelibol	0.91	15	Pg	Pg	19 14 59.2	-0.4
GELI				Sg	Sn	19 15 13.3	-0.2
LPK	Lapseki	0.97	28	Pg	Pg	19 15 00.3	-0.4
SMTH	Samothraki Isl	1.07	333	P	Pb	19 15 01.9	-0.5
SMTH				S	Sg	19 15 17.1	+0.6
	comp=N,128nm,0.4s						
SMTH	Samothraki Isl	1.07	333	P	Pb	19 15 01.9	-0.5
SMTH				S	Sb	19 15 16.1	-0.2
SMTH				AML	AML	19 15 18.9	
	comp=E,264µm,0.3s						
SMTH				AML	AML	19 15 19.2	
	comp=N,245µm,0.5s						
PSRA	Psara	1.08	206	P	Pb	19 15 03.0	+0.4
PSRA				S	Sb	19 15 17.2	+0.5
PSRA				AML	AML	19 15 20.3	
	comp=E,786µm,0.2s						
PSRA				AML	AML	19 15 21.8	
	comp=N,732µm,0.1s						
CHOS	Chios island	1.14	184	P	Pb	19 15 02.3	-1.3
BALY	Balya	1.15	79	P	Pn	19 15 03.9	0.0
BALY				S	Sg	19 15 18.7	-0.3
BALY				*i* AML	AML	19 15 19.0	
	comp=N,83nm,0.5s						
BALY				*i* AML	AML	19 15 20.0	
	comp=N,212nm,0.6s						
CAVK	Edirne/Enez-Ca	1.17	0	P	Pb	19 15 03.8	-0.3
CAVK				S	Sn	19 15 20.8	+0.8
CAVK				*i* AML	AML	19 15 21.0	
	comp=N,146nm,0.7s						
CAVK				*i* AML	AML	19 15 21.0	
	comp=N,199nm,0.7s						
ERIK	Erikli-Kesan	1.18	13	Pn	Pb	19 15 03.7	-0.6
URLA	Izmir	1.21	164	Pn	Pn	19 15 03.5	-1.2
ENEZ	Enez	1.21	360	P	Pn	19 15 04.8	+0.1
ENEZ				S	Sn	19 15 21.8	+0.7
	comp=N,480nm,0.6s						
ENEZ	Enez	1.21	360	Pn	Pn	19 15 05.0	+0.3
STEP	BALIKESIR_Sava	1.21	96	P	Pg	19 15 05.3	-0.1
STEP				S	Sn	19 15 22.9	+1.8
STEP				*i* AML	AML	19 15 23.0	
	comp=N,55nm,0.3s						
STEP				*i* AML	AML	19 15 24.0	
	comp=N,51nm,0.3s						
KRBG	Karabiga-Canak	1.23	45	Pn	Pn	19 15 04.6	-0.4
GONE	Gonen-Balikesi	1.29	65	Pn	Pn	19 15 05.4	-0.3
KNL	Balıkesir	1.29	54	P	Pn	19 15 05.9	+0.2
KNL				S	Sg	19 15 23.4	-0.2
KNL				*i* AML	AML	19 15 24.0	
	comp=N,79nm,0.7s						
KNL				*i* AML	AML	19 15 24.0	
	comp=N,79nm,0.7s						
BALB	Balikesir	1.33	84	Pn	Pn	19 15 06.5	+0.1
KESN	Edirne-Kesan	1.36	17	P	Pn	19 15 07.1	0.0
KESN				*i* AML	AML	19 15 26.0	
	comp=N,135nm,0.5s						
KESN				S	Sg	19 15 26.2	+0.2
KESN				*i* AML	AML	19 15 30.0	
	comp=N,82nm,0.2s						
ALN	Alexandroupoli	1.38	356	P	Pn	19 15 07.0	0.0
ALN				S	Sb	19 15 25.8	+0.6
	comp=N,105nm,0.5s						
ALN	Alexandroupoli	1.38	356	Pn	Pn	19 15 07.5	+0.5
ALN	Alexandroupoli	1.38	356	P	Pn	19 15 06.8	-0.2
ALN				S	Sn	19 15 24.5	-0.6
ALN				AML	AML	19 15 27.2	
	comp=E,283µm,0.3s						
ALN				AML	AML	19 15 27.3	
	comp=N,215µm,0.5s						
BKES	Balkesir-Mer	1.38	81	P	Pb	19 15 08.0	+0.3
BKES				S	Sg	19 15 26.7	+0.2
BKES				*i* AML	AML	19 15 27.0	
	comp=N,53nm,0.5s						
RKY	Sarkoy-Tekirda	1.40	33	Pn	Pn	19 15 07.6	+0.2
EDC	Edincik	1.55	57	Pn	Pn	19 15 09.6	+0.3
UKOP	Uzunkopru-Edir	1.65	12	Pn	Pn	19 15 11.4	+0.7
RDO	Rodhopi	1.69	344	P	Pn	19 15 11.6	+0.3
RDO				S	Sb	19 15 34.2	0.0
RDO	Rodhopi	1.69	344	P	Pn	19 15 11.1	-0.2
KAVA	Kavala	1.94	320	P	Pn	19 15 14.0	-0.7

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*NEIC **06** 19:19:19.3, 40°.33N×124°.80W, h30^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.02; $M_{\theta\theta}$-0.27; $M_{\phi\phi}$0.29; $M_{r\theta}$-1.19; $M_{\theta\phi}$0.40; $M_{\phi r}$-0.61; Fault plane solution: $M_0$1.42000×10^{15} NP1:ϕ_s65.02000°, δ88.58000°, λ-70.52000°. NP2:ϕ_s159.04000°, δ19.53000°, λ-175.74000°. Principal axes: T 1.4857, Plg40.0000°, Azm137.0000°; N -0.1381, Plg19.0000°, Azm245.0000°; P -1.3475, Plg43.0000°, Azm354.0000°;*
*NEIC **06** 19:19:19.3, 40°.33N×124°.80W, h10^{km}*
*IDC **06** 19:19:19.7±1.2, 40°.41N×124°.40W, h0^{km}, mb3.7/4, mbtmp3.7/8, ML3.6/4, MS3.4/8, Error ellipse: s-maj=14.3km s-min=10.1km az=86.0*
*NEIC **06** 19:19:20.4±1.7, 40°.32N±0°.03×124°.73W±0°.07, h26^{km}±9^{km}, Error ellipse: s-maj=8.2km s-min=4.0km az=80.0*
*NCEDC **06** 19:19:20.8±2.0, 40°.35N±0°.01×124°.78W±0°.06, h25^{km}±7^{km}, Mwr4.0/3, mb3.9/3(NEIC), ML3.5/68(NEIC), Error ellipse: s-maj=6.7km s-min=1.5km az=76.0*
ISC 06 19:19:21.0±0.7, **40°.30N**±0°.05×**124°.75W**±0°.06, **h25**^{km}, **n236**, σ**1.s20**/222, **mb3.7**/4, **MS3.2**/4, **Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.36	61		Pn	19 19 28.8	-1.8
KCTM					Sn	19 19 35.6	-1.4
KMPM	Mount Pierce	0.49	77	Pg	Pb	19 19 30.6	-0.6
KMPM				Sg	Sn	19 19 38.2	-2.2
KCRM	Chalk Rock	0.72	80		Pb	19 19 34.0	-0.9
JCC	Jacoby Creek,	0.75	47		Pb	19 19 33.4	-2.1
JCC				IAML		19 19 43.5	
	comp=N,3µm,0.6s						
JCC				IAML		19 19 43.6	
	comp=E,2µm,0.3s						
KMRM	Mail Ridge	0.80	96		Pb	19 19 35.5	-0.8
KMRM				Sg	Sn	19 19 46.8	-1.2
KHMM	Horse Mountain	0.96	53		Pb	19 19 36.9	-2.2
KHMM				IAML		19 19 50.0	
	comp=E,2µm,0.3s						
KCPM	Cahto Peak	1.09	124		Pn	19 19 39.4	-1.4
KFPM	Farley Peak	1.21	123		Pn	19 19 41.2	-1.3
KHBM	Hayfork Bally	1.22	73		Pn	19 19 40.8	-1.8
KBNM	Bluenose Ridge	1.26	109		Pn	19 19 42.2	-1.0
KOMM	Orleans Mounta	1.38	45		Pn	19 19 42.9	-2.0
LBPM	Beegum Peak	1.43	89		Pn	19 19 44.1	-1.4
GWRM	Wonder Ranch	1.56	134		Pn	19 19 46.0	-1.3
LGPM	Granite Peak	1.58	67		Pn	19 19 46.0	-1.6
GHMM	Hull Mountain	1.61	119		Pn	19 19 46.8	-1.3
GROM	Round Mountain	1.64	103		Pn	19 19 47.2	-1.2
GVV	Valley View	1.68	108		Pn	19 19 47.7	-1.2
LBKM	Bonanza King	1.76	63		Pn	19 19 48.6	-1.5
GHLM	Highland Sprin	1.84	133		Pn	19 19 49.8	-1.3
HOPS	Hopland Field	1.84	135	Pn	Pn	19 19 49.6	-1.4
HOPS				IAML		19 20 34.6	
	comp=E,438nm,1.2s						
HOPS				IAML		19 20 43.0	
	comp=N,301nm,1.4s						
GHGM	Hogback Ridge	1.89	128		Pn	19 19 50.7	-1.1
GTSM	Trough Springs	1.93	120		Pn	19 19 51.3	-1.0
GCK	Clark Valley	1.93	112		Pn	19 19 51.9	-0.4
LTCM	Tuscan Springs	2.01	92		Pn	19 19 52.7	-0.6
GPMM	Pine Mountain	2.01	136		Pn	19 19 54.0	+0.5
L02F	Cave Junction	2.02	26		Pn	19 19 51.4	-2.1
L02F				IAML		19 20 17.1	
	comp=E,617nm,0.4s						
GACM	Adobe Creek	2.04	134		Pn	19 19 52.7	-1.2
LAMM	Antelope Mount	2.07	50		Pn	19 19 52.8	-1.5

GSSM	Skaggs Springs	2.09	139		Pn	19 19 53.2	-1.2
GBMM	Baldy Mountain	2.09	123		Pn	19 19 53.7	-0.9
YBH	Yreka Blue Hor	2.10	47	Pn	Pn	19 19 53.2	-1.5
	comp=E,35nm,0.3s,baz=244,slow=14,SNR=311						
YBH				Lg	Lg	19 20 16.9	
	comp=E,41nm,0.3s,baz=233,slow=20,SNR=15						
LCSM	College of the	2.10	57		Pn	19 19 53.8	-1.0
GRTM	Round Top Moun	2.10	130		Pn	19 19 53.8	-1.0
LSHM	Sage Hen Hill	2.12	76		Pn	19 19 54.1	-0.8
GDXM	Geysers	2.12	134		Pn	19 19 54.5	-0.5
GFC	Funks Creek	2.13	116		Pn	19 19 55.0	+0.1
GWKM	Walker Ridge	2.14	125		Pn	19 19 54.6	-0.6
GBGM	Boggs Mountain	2.18	132		Pn	19 19 55.9	+0.1
GCRM	Castle Rock Sp	2.19	134		Pn	19 19 55.0	-0.9
GAXM	Alexander Vall	2.21	135		Pn	19 19 55.5	-0.7
M03C	McCloud	2.22	63		Pn	19 19 55.7	-0.6
LDBM	Digger Butte	2.27	86		Pn	19 19 55.8	-1.2
MNRC	McLaughlin Min	2.28	128		Pn	19 19 57.2	+0.1
LMPM	Military Pass	2.29	58		Pn	19 19 57.3	-0.1
NMTM	Middletown	2.33	129		Pn	19 19 56.5	-1.2
LHEM	Herd Peak	2.33	55		Pn	19 19 57.4	-0.6
B040	Montague	2.33	48		Pn	19 19 56.7	-1.1
NHSM	Mount Saint He	2.33	134		Pn	19 19 57.1	-0.8
MAC	Mark West Spri	2.35	138		Pn	19 19 57.9	-0.2
LBFM	Black Fox Moun	2.41	63		Pn	19 19 58.7	-0.3
LMEM	Manzanita Entr	2.44	83		Pn	19 19 59.0	-0.4
OSUM	Sutter Buttes	2.46	114		Pn	19 19 58.2	-1.3
OGOM	Van Goodin Ran	2.50	104		Pn	19 19 58.5	-1.5
NTYM	Taylor	2.50	139		Pn	19 19 59.0	-1.1
SUTB	Sutter Butte	2.52	114		Pn	19 19 58.7	-1.7
K02D	Willamette Mer	2.52	18		Pn	19 19 59.2	-1.3
HATC	Hat Creek Radi	2.56	77		Pn	19 20 00.6	-0.4
LGMM	Garner Mountai	2.56	59		Pn	19 20 00.3	-0.7
NBPM	Berryessa Peak	2.56	129		Pn	19 20 01.1	+0.2
MCCM	Marconi Confer	2.60	145	Pn	Pn	19 20 00.2	-1.3
MCCM				IAML		19 20 30.3	
	comp=E,288nm,0.8s						
MCCM				IAML		19 20 31.3	
	comp=N,193nm,1.1s						
OSTM	Stimpson Lane	2.60	110		Pn	19 19 59.8	-1.6
ORV	Oroville	2.61	106	Pn	Pn	19 20 00.4	-1.2
ORV				IAML		19 20 33.7	
	comp=N,125nm,0.4s						
ORV				IAML		19 20 35.2	
	comp=E,96nm,0.4s						
OBHM	Bloomer Hill	2.61	103		Pn	19 20 01.1	-0.6
LTIM	Timbered Crate	2.62	70		Pn	19 20 01.1	-0.8
CVS	Carmenet Viney	2.64	137		Pn	19 20 01.2	-0.8
LBCM	Butte Creek Ri	2.64	77		Pn	19 20 00.7	-1.5
M04C	Macdoel	2.65	55		Pn	19 20 01.6	-0.7
L04D	Klamath Falls	2.65	43		Pn	19 20 02.1	-0.3
NBRB	Beebe Ranch Br	2.66	139		Pn	19 20 01.3	-0.9
OHCM	Honcut	2.69	110		Pn	19 20 01.8	-1.0
SNT	Sears Point	2.77	139		Pn	19 20 02.6	-1.2
J01E	Myrtle Point	2.92	12	Pn	Pn	19 20 05.0	-0.8
J01E				IAML		19 20 42.4	
	comp=N,349nm,0.3s						
FARB	Farallon Islan	2.94	152		Pn	19 20 05.6	-0.4
CPMM	Point Molate	2.97	142		Pn	19 20 05.3	-1.3
DBO	Dodson Butte	3.03	21	Pn	Pn	19 20 06.5	-1.0
DBO				IAML		19 20 45.7	
	comp=E,74nm,1.3s						
JPRM	Presidio of Sa	3.07	144		Pn	19 20 06.8	-1.0
VAK	Adit at Lawren	3.11	140		Pn	19 20 07.6	-0.8
BKS	Berkeley--Byer	3.11	140		Pn	19 20 07.7	-0.9
CVPM	Vollmer Peak	3.11	140		Pn	19 20 08.0	-0.6
JSBM	San Bruno Moun	3.20	144		Pn	19 20 08.4	-1.3
K04D	Chiloquin, OR	3.23	43	Pn	Pn	19 20 09.4	-0.8
K04D				IAML		19 20 59.8	
	comp=N,208nm,1.1s						
K04D				IAML		19 21 13.1	
	comp=E,219nm,1.1s						
SAC	San Andreas	3.27	145		Pn	19 20 09.5	-1.1
JCPM	Coyote Point	3.31	144		Pn	19 20 10.0	-1.2
JCHM	Cahill Ridge	3.34	146		Pn	19 20 10.2	-1.5
BEKR	Beckworth	3.39	96		Pn	19 20 12.8	+0.3
JSFB	Stanford Teles	3.52	144		Pn	19 20 13.3	-0.8
JFP	Foothills Park	3.55	145		Pn	19 20 13.3	-1.3
JSJM	St Joseph	3.62	144		Pn	19 20 14.7	-0.8
JSGM	Saratoga Golf	3.68	144		Pn	19 20 15.2	-1.0
MOD	Modoc Plateau	3.72	63	Pn	Pn	19 20 15.9	-1.1
MPK	Martis Peak	3.77	104		Pn	19 20 18.8	+1.0
MPK				IAML		19 21 03.7	
	comp=N,99nm,0.9s						
MPK				IAML		19 21 21.1	
	comp=E,109nm,1.0s						
K05A	Summer Lake	3.77	49		Pn	19 20 16.8	-0.9
K05A				IAML		19 21 38.8	
	comp=E,40nm,3.1s						
K05A				IAML		19 22 03.1	
	comp=N,44nm,4.3s						
AMC	Almaden	3.87	143		Pn	19 20 17.4	-1.6
ARN	Arnold Ranch	3.87	139		Pn	19 20 18.6	-0.5
CCOB	Coe Ranch Numb	3.88	141		Pn	19 20 18.7	-0.3
I04A	Tendick Farm,	3.90	26		Pn	19 20 19.5	+0.2
JRGM	Rodeo Gulch Ro	3.92	145		Pn	19 20 18.3	-1.3
MCUB	Copperopolis B	3.96	125		Pn	19 20 20.6	+0.4
J05D	Fort Rock, OR	3.97	40	Pn	Pn	19 20 19.9	-0.5
PLTX	Planet X, Gerl	4.04	83	Pn	Pn	19 20 19.5	-2.0
PLTX				IAML		19 21 33.2	
	comp=E,100nm,1.2s						
PLTX				IAML		19 21 50.8	
	comp=N,98nm,1.3s						
CMB	Columbia Colle	4.08	122	Pn	Pn	19 20 21.3	-0.6
GHS	Gilroy Hot Spr	4.11	140		Pn	19 20 21.4	-0.9
PAHR	Pah Rah Range	4.16	97		Pn	19 20 21.8	-1.3
HTUM	Tustin Road	4.24	144		Pn	19 20 22.8	-1.2
HMOM	Monterey	4.31	148		Pn	19 20 23.5	-1.5
FRP	Fremont Peak	4.37	143		Pn	19 20 23.7	-2.1
SAO	San Andreas Ge	4.38	143		Pn	19 20 24.1	-1.9
SAO					Sn	19 21 13.8	-2.4
YERR	Yerington	4.45	105		Pn	19 20 26.8	-0.3
YERR				IAML		19 21 34.0	
	comp=E,31nm,0.8s						
H04D	Lebanon	4.47	19	Pn	Pn	19 20 27.7	+0.5
PINE	Pine Mountain	4.49	38	Pn	Pn	19 20 27.7	0.0
PINE				IAML		19 21 09.3	
	comp=N,31nm,3.3s						
PINE				IAML		19 22 19.7	
	comp=E,36nm,4.7s						
BJCM	Johnson Can.	4.58	144		Pn	19 20 26.8	-1.9
HAST	Hastings Reser	4.65	146		Pn	19 20 27.8	-1.9
BBGB	Big Mountain B	4.72	141		Pn	19 20 30.0	-0.8
BPIM	Pinnacles	4.73	142		Pn	19 20 29.0	-1.8
I05D	Terrebonne, OR	4.76	31	Pn	Pn	19 20 30.3	-0.9
I05D				IAML		19 22 09.8	
	comp=E,65nm,3.4s						
I05D				IAML		19 23 31.5	
	comp=N,50nm,4.2s						
H04A	Detroit Lake	4.77	23	Pn	Pn	19 20 31.5	+0.2
H04A				IAML		19 21 26.2	
	comp=E,46nm,0.3s						
H04A				IAML		19 21 27.1	
	comp=N,52nm,0.3s						
MHDM	Hidden Dam	4.95	128		Pn	19 20 35.5	+1.7
G03D	McMinnville, O	5.03	12	Pn	Pn	19 20 34.3	-0.4
PCCM	Crazy Canyon	5.07	145		Pn	19 20 34.2	-1.2
WVOR	Wild Horse Val	5.07	63		Pn	19 20 34.0	-1.5
WVOR				IAML		19 22 07.4	
	comp=N,14nm,4.7s						
PMPB	Monarch Peak	5.13	141	Pn	Pn	19 20 35.4	-0.9
MDPB	Devils Postpil	5.16	119	Pn	Pn	19 20 36.4	-0.5
MDPB				IAML		19 24 01.4	
	comp=N,49nm,2.5s						
MDPB				IAML		19 24 01.5	
	comp=E,59nm,2.4s						
OMMB	Old Mammoth Mi	5.22	119	Pn	Pn	19 20 37.8	-0.1
LHV	Little Huntoon	5.26	111		Pn	19 20 38.8	+0.8
LHV				IAML		19 22 10.3	
	comp=E,19nm,4.7s						
LHV				IAML		19 22 50.5	
	comp=N,32nm,4.0s						
KVN	Kaiserville	5.28	102		Pn	19 20 38.2	-0.3
NVAR	Mina Array Bea	5.33	108	Pn	Pn	19 20 39.5	+0.3
	comp=N,4.7nm,0.3s,baz=287,slow=15,SNR=84						
NVAR				Lg	Lg	19 21 57.8	
	comp=N,0.5nm,0.3s,baz=291,slow=32,SNR=2.1						
	comp=N,5.4nm,0.4s						
NVAR	Mina Array Bea	5.33	108		Pn	19 20 39.4	+0.1
I07A	Izee	5.42	44		Pn	19 20 41.4	+1.0
NV11	Mina Array Sit	5.44	108		Pn	19 20 40.3	-0.4
G05A	Wamic	5.54	26	Pn	Pn	19 20 41.9	-0.1
RAMR	Ramage Ranch	5.58	145		Pn	19 20 47.5	+5.1
J08A	Circle Bar Ran	5.59	55		Pn	19 20 41.6	-1.1
F03A	Seaside	5.69	8	Pn	Pn	19 20 41.0	-2.9
VOG	Valley Oaks Go	5.80	132	P	Pn	19 20 46.3	+0.9
	baz=315						
F04A	Amboy	5.88	16	Pn	Pn	19 20 46.2	-0.3
DSP	Deep Springs	6.05	117	Pn	Pn	19 20 49.5	+0.6
RADR	Rader Ridge	6.15	6	Pn	Pn	19 20 49.9	-0.4
MZP	Montezuma Peak	6.30	112	Pn	Pn	19 20 51.9	-0.6
E03A	Lebam	6.30	7	Pn	Pn	19 20 51.8	-0.5
VES	Vestal, Richgr	6.31	133	P	Pn	19 20 53.3	+0.9
	baz=317,SNR=20						
LCH	Last Change Ra	6.34	117	Pn	Pn	19 20 52.4	-0.6
CWC	Cottonwood Cre	6.50	124	P	Pn	19 20 58.1	+2.8
	baz=309						
G08A	Pilot Rock	6.55	39	Pn	Pn	19 20 56.0	+0.1
WASM	Alta Sierra Ca	6.68	131		Pb	19 21 11.1	-5.5
WOFM	Oak Flat	6.74	133		Pn	19 21 01.3	+2.9
ISA	Isabella, Lake	6.78	131		Pn	19 21 00.8	+1.7
ISA	Isabella, Lake	6.78	131	P	Pn	19 21 00.7	+1.7
	baz=315,SNR=22						
LON	Longmire	6.79	17	Pn	Pn	19 20 59.7	+0.7
BCW	Bitter Crk WRg	6.82	140	Pn	Pn	19 21 00.3	+0.7
ARVC	Arvin	6.98	136	P	Pn	19 21 02.8	+1.1
	baz=320						
BMO	Blue Mountains	7.13	48		Pn	19 21 05.4	+1.6
ELK	Elko	7.26	83	Pn	Pn	19 21 05.5	-0.1
	comp=N,0.1nm,0.3s,baz=263,slow=17,SNR=1.8						
R11A	Troy Canyon, C	7.37	102	P	Pn	19 21 07.4	+0.3
	baz=289						
LRMC	Laurel Mtn Rad	7.37	129	P	Pn	19 21 08.5	+1.3
	baz=313						
CCAC	Calif City Air	7.41	132		Pn	19 21 09.2	+1.6
OSI	Osito Audit: C	7.43	138	P	Pn	19 21 09.5	+1.7
	baz=322,SNR=5.6						
LTY	Liberty	7.55	22	Pn	Pn	19 21 11.3	+1.8
GWY	Greenwater Val	7.57	120	Pn	Pn	19 21 09.8	-0.1
QSM	Queen of Sheba	7.57	122	Pn	Pn	19 21 09.7	-0.1
EDW2	Edwards Air Fo	7.62	133	P	Pn	19 21 11.8	+1.4
	baz=318,SNR=7.3						
Q12A	Willow Creek R	7.75	96		Pn	19 21 11.9	-0.5
PLID	Pearl Lake	8.02	51		Pn	19 21 17.6	+1.4
GSC	Goldstone, Bar	8.03	126		Pn	19 21 17.9	+1.8
GSC	Goldstone, Bar	8.03	126	P	Pn	19 21 17.5	+1.3
	baz=311,SNR=9.1						
RRX	Edison Barstow	8.20	129	P	Pn	19 21 19.9	+1.5
	baz=314						
BFSC	Mount Baldy Ra	8.28	135	P	Pn	19 21 21.2	+1.6
	baz=319						
FMP	Fort Macarthur	8.36	140	P	Pn	19 21 21.8	+1.2
	baz=324						
HLID	Hailey	8.36	64	P	Pn	19 21 22.0	+1.2
	baz=251						
TUQ	Turquoise Moun	8.50	122	P	Pn	19 21 24.3	+1.7
	baz=308						
CLRS	Cowichan Lake	8.53	3	Pn	Pn	19 21 22.1	-0.7
HEC	Hector,Ludlow	8.63	127	P	Pn	19 21 25.5	+1.2
	baz=312,SNR=14						
MURC	Murrieta	9.01	136	P	Pn	19 21 30.8	+1.2
	baz=320						
GMRC	Granite Mounta	9.08	125	P	Pn	19 21 31.3	+0.7
	baz=310						
DUG	Dugway, Tooele	9.13	87	P	Pn	19 21 32.2	+0.9
	baz=275						
BELC	Belle Mtn. Jos	9.40	129	P	Pn	19 21 35.7	+0.7
	baz=315,SNR=12						
PFO	Pinyon Flats O	9.41	133	Pn	Pn	19 21 36.1	+1.0
	comp=N,10nm,0.5s,baz=319,slow=9.2,SNR=29						
PFO				LR	LR	19 25 57.8	
	comp=N,156nm,18.9s,baz=217,slow=43						
PFO	Pinyon Flats O	9.41	133		Pn	19 21 36.4	+1.3
PFO	Pinyon Flats O	9.41	133	P	Pn	19 21 36.0	+0.9
	baz=318,SNR=7.3						
TPFO	Pinon Flats	9.42	133	P	Pn	19 21 36.1	+0.9
	baz=318,SNR=6.0						
PMD	Palm Desert	9.43	132	Pn	Pn	19 21 36.4	+1.1
NEW	Newport	9.65	32	LR	LR	19 25 44.9	
	comp=N,124nm,18.4s,baz=215,slow=41						
IRM	Iron Mountain	9.81	126	P	Pn	19 21 41.3	+0.8
	baz=312						
MSU	Marysvale	9.89	96	Pn	Pn	19 21 43.7	+1.8
BC3	Big Chuckawall	9.96	129	P	Pn	19 21 43.3	+0.7
	baz=315,SNR=7.8						
MONP2	Monument Peak	9.97	135	P	Pn	19 21 44.0	+1.1
	baz=320						
MSO	Missoula	10.19	47	P	Pn	19 21 47.6	+1.8
	baz=234,SNR=7.5						
SWSC	Sam W. Stewart	10.27	133	P	Pn	19 21 46.5	-0.3
	baz=318						
GLA	Glamis	10.76	129	P	Pn	19 21 54.2	+0.7
	baz=315						
ESJX	Sierra Juarez	10.91	137	Pn	Pn	19 21 55.3	-0.4
PDAR	Pinedale Array	11.65	73	Pn	Pn	19 22 08.9	+3.1
	baz=262,slow=13,SNR=2.0						
	comp=N,0.1nm,0.4s						
BBB	Bella Bella	12.11	350	LR	LR	19 25 46.6	
	comp=N,56nm,18.5s,baz=166,slow=32						
S22A	4UR Ranch, Cre	14.16	95	P	Pn	19 22 40.4	+0.1
	baz=286						
N23A	Red Feather La	14.30	82	P	Pn	19 22 42.0	-0.1
	baz=274						
ISCO	Idaho Springs	14.67	86	P	Pn	19 22 46.5	-0.6
	baz=278						
ANMO	Albuquerque	15.44	104	LR	LR	19 29 41.8	
	comp=N,85nm,19.1s,baz=9.5,slow=41						
V35K	Ketchikan	15.71	345	P	Pn	19 23 00.4	-0.1
	baz=160						
DLBC	Dease Lake	18.46	351	P	Pn	19 23 37.0	+2.0
	comp=N,0.2nm,0.3s,baz=168,slow=20,SNR=3.0						
	comp=N,2.4nm,0.7s						
LPIG	La Paz	20.21	139	LR	LR	19 31 36.0	
	comp=N,112nm,19.5s,baz=238,slow=37						
TX31	Lajitas Ar. Si	20.43	116		Pn	19 23 58.9	+0.2
TX31				IAmb	IAmb	19 23 59.8	
	comp=Z,8.9nm,0.8s						
TX32	Lajitas Array	20.43	116		Pn	19 23 58.6	-0.1
TX32				IAmb	IAmb	19 23 59.8	
	comp=Z,3.1nm,0.8s						
TXAR	Lajitas Array	20.43	116	P	Pn	19 23 57.9	-0.8
	comp=Z,1.8nm,0.7s,baz=304,slow=9.4,SNR=18						
	comp=Z,1.8nm,0.7s						
TXAR	Lajitas Array	20.43	116	Pn	Pn	19 23 58.1	-0.6
FFC	Flin Flon	20.95	39	P	P	19 24 00.7	-1.2
FFC				IAmb	IAmb	19 24 02.5	
	comp=Z,6.4nm,1.1s						
YKA	Yellowknife Ar	23.05	12	P	P	19 24 24.4	+0.3
	comp=Z,2.5nm,1.1s,baz=199,slow=10,SNR=9.8						
	comp=Z,2.5nm,1.1s						
L27K	Beaver Creek,	24.97	342	P	P	19 24 41.8	-0.4
	baz=148						
KDAK	Kodiak Island	25.00	324	LR	LR	19 31 58.3	
	comp=Z,84nm,19.8s,baz=177,slow=30						
DAWY	Dawson	25.31	345	P	P	19 24 46.0	+0.6
	baz=153						
K24K	Donnelly Dome	26.59	339	P	P	19 24 58.3	+1.3
	baz=142						
EPYK	Eagle Plains	26.97	349	P	P	19 25 02.0	+1.6
	baz=160						
F31M	Tsiigehtchic	27.64	353	P	P	19 25 06.9	+0.6
	baz=165						
ILAR	Eielson Array	27.66	340	P	P	19 25 08.4	+1.9
	comp=Z,0.8nm,0.9s,baz=133,slow=8.7,SNR=4.3						
	comp=Z,0.8nm,0.9s						
O16K	Kokwok River B	28.39	324	P	P	19 25 09.3	-3.7
	baz=118						
INK	Inuvik	28.46	353	P	P	19 25 14.3	+0.7
	comp=Z,0.9nm,0.6s,baz=162,slow=9.6,SNR=3.0						
INK				LR	LR	19 37 55.0	
	comp=Z,61nm,18.1s,baz=270,slow=39						
	comp=Z,0.9nm,0.6s						
S12K	Black Hills	28.90	315	P	P	19 25 17.5	-0.1
	baz=106						
TTA	Tatalina	29.31	331	P	P	19 25 21.2	-0.1
	baz=126						
G24K	Hadweenzic Riv	29.34	342	P	P	19 25 21.2	-0.3
	baz=143						
E27K	Coleen River	29.40	347	P	P	19 25 22.3	+0.2
	baz=153						
I21K	Tanana	29.41	337	P	P	19 25 21.7	-0.4
	baz=135						
F26K	Sheenjek River	29.44	345	P	P	19 25 21.8	-0.6
	baz=149						
G23K	Bananza Creek	29.98	340	P	P	19 25 26.3	-0.9
	baz=139						
H21K	Melozitna Rive	29.99	337	P	P	19 25 25.9	-1.4
	baz=134						
G22K	Bettles	30.53	340	P	P	19 25 31.9	0.0
	baz=137						
E24K	Your Creek	30.68	343	P	P	19 25 33.5	+0.2
	baz=143						
D25K	Kavik River	31.26	345	P	P	19 25 39.3	+0.9
	baz=147						
TOLK	Toolik Lake Re	31.37	343	P	P	19 25 40.7	+1.2
	baz=142						
D23K	Nanushuk River	31.88	343	P	P	19 25 43.4	-0.4
	baz=141						
TZTN	Tazewell	32.29	83	P	P	19 25 50.5	+2.8
	baz=290						
H11N3	WAKE ISLAND Hy	61.19	272	T	T	20 36 17.2	
	baz=53,slow=75,SNR=27						
H11N2	WAKE ISLAND Hy	61.19	272	T	T	20 36 17.4	
	baz=53,slow=75,SNR=28						
H11N1	WAKE ISLAND Hy	61.20	272	T	T	20 36 18.5	
	baz=53,slow=75,SNR=27						
H11S1	WAKE ISLAND Hy	62.05	271	T	T	20 37 22.7	
	baz=54						
H11S2	WAKE ISLAND Hy	62.06	271	T	T	20 37 21.9	
	baz=54						
H11S3	WAKE ISLAND Hy	62.07	271	T	T	20 37 22.6	
	baz=54						
RPN	Rapa Nui	68.60	165	LR	LR	19 52 46.2	
	comp=Z,169nm,21.0s,baz=214,slow=29						
HHC	Hu-ho-hao-te	84.38	321	*e*P	P	19 31 51.7	+0.5
HHC				pmax	pmax		
	comp=Z,27nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,4.3s						
WMQ	Urumqi	91.30	337	*e*P	P	19 32 26.0	+1.6

BJI ***06*** *19:25:58.9±0.0, 31°.11S × 179°.30W, h406^{km}, mb4.8/29, mB5.2/14*

MOS ***06*** *19:25:59.0±0.8, 31°.03S × 179°.99E, h390^{km}, mb5.0/19, Error ellipse: s-maj=10.7km s-min=9.8km az=120.8*

NEIC ***06*** *19:25:59.3±1.4, 31°.18S±0°.09 × 179°.9W±0°.1, h384^{km}±5^{km}, mb4.9/68, Error ellipse: s-maj=16.1km s-min=12.0km az=117.0*

IDC ***06*** *19:26:00.7±1.0, 30°.95S × 179°.95W, h397^{km}±9^{km}, mb4.2/20, mbtmp4.9/23, Error ellipse: s-maj=10.4km s-min=8.3km az=165.0*

NOU ***06*** *19:26:01.5, 31°.15S × 179°.72W, h417^{km}, mb5.0/89, Kermadec Islands Region*

GCMT ***06*** *19:26:03.3±0.2, 31°.08S±0°.02 × 179°.87W±0°.02, h388^{km}±1^{km}, MW5.4/108, Moment Tensor Solution. s108,c174; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.97±.03; $M_{\theta\theta}$-0.49±.05; $M_{\phi\phi}$1.45±.04; $M_{r\theta}$-0.79±.04; $M_{\theta\phi}$-0.39±.04; $M_{\phi r}$-0.74±.04; Best double couple: $M_0$1.71800×10^{17} NP1:ϕ_s21.00000°, δ67.00000°, λ-52.00000°. NP2:ϕ_s138.00000°, δ43.00000°, λ-146.00000°. Principal axes: T 1.6730, Plg14.0000°, Azm85.0000°; N 0.0860, Plg34.0000°, Azm185.0000°; P -1.7620, Plg52.0000°, Azm336.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

WEL ***06*** *19:26:05.5±1.4, 32°S±28° × 17°8W±3°5, h446^{km}±95^{km}, M5.7/18, mB5.8/18, ML6.3/12, MLv6.7/18, Mw(mB)5.3/18 Error ellipse: s-maj=0.0km s-min=0.0km az=95.0, confirmed*

ISC 06 19:26:00.4±0.2**, 31°.16S**±0°.04 × **179°.89W**±0°.04**, h400^{km}, n699, σ1^{s}53**/736**, mb4.9**/105**, 31C-26D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.55	42	P	Pn	19 26 58.2	-1.9
	2µm,0.2s,baz=262,slow=15,SNR=43						
RAO				S	S	19 27 43.4	-5.0
	5µm,0.3s,baz=85,slow=22,SNR=5.0						
RAO	Raoul Island	2.55	42		Pn	19 26 57.7	-2.4
MXZ	Matakaoa Point	6.56	193	Pn	Pn	19 27 37.3	-1.7
MXZ	Matakaoa Point	6.56	193	P	P	19 27 41.4	+1.8
KUZ	Kuaotunu	6.66	212	P	P	19 27 42.8	+2.1
WHRZ	Whale Island	7.17	200	P	P	19 27 48.7	+2.4
WHRZ				S	S	19 29 12.5	+0.5
OPRZ	Ohinepanea	7.29	203	P	P	19 27 48.7	+1.0
MARZ	Manawahe	7.38	202	P	P	19 27 51.0	+2.3
EDRZ	Edgecumbe	7.47	201	P	P	19 27 51.9	+2.1
MWZ	Matawai	7.47	196	P	P	19 27 50.3	+0.5
MWZ				S	S	19 29 15.0	-3.2
LIRZ	Lichensteins R	7.49	203	P	P	19 27 53.4	+3.5
TKGZ	Te Karaka	7.50	194	P	Pn	19 27 48.1	-1.4
TKGZ				S	S	19 29 14.2	-4.7
URZ	Urewera	7.50	198	P	P	19 27 49.0	-1.0
	566nm,0.3s,baz=15,slow=3.1,SNR=126						
URZ				S	S	19 29 14.6	-4.3
	4µm,0.3s,baz=340,slow=24,SNR=34						
URZ	Urewera	7.50	198	P	P	19 27 51.1	+1.0
URZ	Urewera	7.50	198	P	P	19 27 50.6	+0.6
URZ				S	S	19 29 14.6	-4.3
KMRZ	Kaimai	7.51	206	P	P	19 27 53.1	+2.9
KARZ	Kaharoa	7.55	204	P	P	19 27 52.7	+2.1
MKRZ	Makatiti	7.58	202	P	P	19 27 55.0	+3.9
OMRZ	Omania	7.59	203	P	P	19 27 53.0	+2.0
NGRZ	Ngongotaha	7.65	204	P	P	19 27 55.1	+3.4
RAGZ	Rawiri	7.65	196	P	Pn	19 27 50.3	-1.0
RAGZ				S	S	19 29 19.1	-3.0
TARZ	Mount Tarawera	7.66	202	P	P	19 27 54.4	+2.4
HLRZ	Highlands Stat	7.72	203	P	P	19 27 55.0	+2.4
RRRZ	Republican Roa	7.75	201	P	P	19 27 54.3	+1.4
RIGZ	Rimuhau	7.78	194	P	Pn	19 27 51.1	-1.5
RIGZ				S	S	19 29 20.5	-4.1
MUGZ	Murupara	7.80	200	P	P	19 27 54.5	+1.1
HRRZ	Handcock Road	7.87	203	P	P	19 27 55.3	+1.1
RTZ	Ruatahuna	7.87	198	Pn	Pn	19 27 51.7	-2.2
RTZ	Ruatahuna	7.87	198	P	P	19 27 53.4	-0.8
GRRZ	Galatos Road	7.89	204	P	P	19 27 57.0	+2.5
PRRZ	Plateau Road	7.94	202	P	P	19 27 56.4	+1.5
SNGZ	Shannon Statio	7.94	196	P	Pn	19 27 53.3	-1.3
TLZ	Tolley Road	8.08	206	P	P	19 27 58.6	+2.1
KNZ	Kokohu	8.10	194	P	Pn	19 27 55.1	-1.2
KUTZ	Kaahu Road	8.12	205	P	P	19 27 59.1	+2.1
RAHZ	Arahi	8.13	197	P	P	19 27 56.6	-0.5
MTHZ	Maungataniwha	8.13	198	P	Pn	19 27 54.7	-2.0
MRHZ	Matea Rd	8.24	201	P	Pn	19 27 57.2	-0.8
WHHZ	Waihua	8.25	196	P	P	19 27 57.5	-0.8
NMHZ	Naumai	8.37	198	P	P	19 27 59.1	-0.7
RATZ	Rangitukua	8.47	204	P	P	19 28 01.0	+0.1
HIZ	Hauiti	8.52	209		P	19 28 02.4	+1.1
HIZ	Hauiti	8.52	209	P	P	19 28 04.0	+2.7
HIZ	Hauiti	8.52	209	P	P	19 28 03.2	+1.9
BKZ	Black Stump Fm	8.52	199	Pn	Pn	19 27 58.2	-3.0
BKZ	Black Stump Fm	8.52	199	P	P	19 28 02.0	+0.6
BKZ	Black Stump Fm	8.52	199	P	Pn	19 27 58.8	-2.4
RITZ	Rihia Road	8.54	203	P	P	19 28 01.1	-0.6
KATZ	Kakaramea	8.60	204	P	P	19 28 04.1	+1.7
NTVZ	North Tongarir	8.72	203	P	P	19 28 03.0	-0.7
KRVZ	Karewarewa	8.72	204	P	P	19 28 04.2	+0.4
MCHZ	McNeill Hill	8.73	198	P	Pn	19 28 02.2	-1.3
ETVZ	East Tongariro	8.74	203	P	Pn	19 28 02.5	-1.3
WTVZ	West Tongariro	8.76	204	P	Pn	19 28 02.8	-1.2
NNVZ	North Ngauruho	8.77	204	P	Pn	19 28 03.4	-0.8
TWVZ	Taurewa	8.77	205	P	P	19 28 03.7	-0.6
OTVZ	Oturere	8.78	203	P	Pn	19 28 03.2	-1.1
SNVZ	South Ngauruho	8.81	203	P	Pn	19 28 03.5	-1.2
NGZ	Ngauruhoe	8.81	204	P	Pn	19 28 03.6	-1.0
CKHZ	Cape Kidnapper	8.84	195	P	Pn	19 28 03.1	-1.7
TUVZ	Tukino	8.88	203	P	Pn	19 28 04.0	-1.4
FWVZ	Far West T-bar	8.90	204	P	Pn	19 28 04.3	-1.4
WHVZ	Whangaehu Hut	8.91	203	P	Pn	19 28 04.5	-1.4
DRZ	Dome Shelter	8.91	203	P	P	19 28 06.0	-0.1
TRVZ	Turoa	8.94	203	P	P	19 28 06.8	+0.6
BHHZ	Black Hill Sta	8.95	201	P	Pn	19 28 03.2	-2.9
MOVZ	Moawhango	8.97	202	P	Pn	19 28 04.8	-1.6
PKVZ	Pokaka	9.00	204	P	Pn	19 28 05.1	-1.6
MTVZ	Mangateitei	9.04	204	P	Pn	19 28 06.3	-1.0
VRZ	Vera Road	9.08	207	P	Pn	19 28 08.4	+0.9
MHEZ	Mangahewa	9.21	209	P	Pn	19 28 14.4	+5.3
PXZ	Pawanui	9.24	196	P	P	19 28 08.2	-1.1
PNHZ	Pukenui	9.30	199	P	P	19 28 07.0	-3.0
DREZ	Durham Road	9.36	209	P	Pn	19 28 13.9	+3.1
WPHZ	Waipukurau	9.38	198	P	Pn	19 28 10.2	-0.8
PKE	Pukeiti	9.46	210	P	Pn	19 28 13.5	+1.6
NEZ	North Egmont	9.47	210	P	Pn	19 28 14.9	+2.7
TSZ	Takapari Road	9.50	200	P	P	19 28 08.9	-3.4
LREZ	Lake Rotokare	9.51	208	P	Pn	19 28 14.0	+1.5
PRHZ	Porangahau	9.52	196	P	P	19 28 11.5	-1.0
KHEZ	Kahui Hut	9.53	210	P	Pn	19 28 15.3	+2.4
KHEZ	Kahui Hut	9.53	210	P	Pn	19 28 15.2	+2.4

WAZ	**Wanganui**	**9.54**	**205**	P	**Pn**	**19 28 12.1**	**-0.8**
NBEZ	**Newall Road No**	**9.57**	**211**	P	**Pn**	**19 28 16.5**	**+3.3**
DVHZ	**Dannevirke**	**9.67**	**198**	P	**P**	**19 28 11.6**	**-2.5**
NMEZ	**Namu Road**	**9.68**	**210**	P	**Pn**	**19 28 17.0**	**+2.5**
ANWZ	**Angora Road**	**9.74**	**197**	P	**P**	**19 28 13.8**	**-1.1**
POWZ	**Post Office Ro**	**9.87**	**200**	P	**P**	**19 28 14.8**	**-1.5**
PRWZ	**Pori Road**	**9.96**	**199**	P	**P**	**19 28 16.1**	**-1.2**
BFZ	**Birch Farm**	**10.01**	**197**	P	**P**	**19 28 16.2**	**-1.7**
BFZ	**Birch Farm**	**10.01**	**197**	P	**Pn**	**19 28 19.1**	**+0.8**
BFZ	**Birch Farm**	**10.01**	**197**	P	**P**	**19 28 15.3**	**-2.5**
MRZ	**Mangatainoka R**	**10.17**	**200**	P	**P**	**19 28 16.7**	**-2.9**
MRZ	**Mangatainoka R**	**10.17**	**200**	P	**P**	**19 28 16.6**	**-3.1**
TIWZ	**Tintock**	**10.19**	**198**	P	**P**	**19 28 18.4**	**-1.6**
CPWZ	**Castlepoint**	**10.23**	**197**	P	**Pn**	**19 28 20.7**	**-0.2**
HOWZ	**Holdsworth Sta**	**10.41**	**200**	P	**P**	**19 28 19.7**	**-2.6**
OGWZ	**Otaki Gorge**	**10.44**	**201**	P	**P**	**19 28 19.7**	**-2.9**
TMWZ	**Te Maipa**	**10.50**	**198**	P	**P**	**19 28 22.0**	**-1.3**
MTW	**Mount Morrison**	**10.65**	**199**	P	**P**	**19 28 22.9**	**-2.1**
CAW	**Cannon Point**	**10.73**	**201**	P	**P**	**19 28 23.6**	**-2.3**
TRWZ	**Traveller**	**10.82**	**198**	P	**P**	**19 28 25.5**	**-1.4**
DUWZ	**D'Urville Isla**	**10.85**	**206**	P	**P**	**19 28 24.4**	**-2.8**
WEL	**Wellington**	**10.99**	**202**	P	**P**	**19 28 27.8**	**-0.8**
SNZO	**South Karori**	**11.03**	**202**	P	**P**	**19 28 27.6**	**-1.6**
SNZO	**South Karori**	**11.03**	**202**	P	**Pn**	**19 28 29.5**	**-0.6**
BHW	**Baring Head**	**11.07**	**201**	P	**P**	**19 28 27.2**	**-2.3**
TCW	**Tory Channel**	**11.08**	**204**	P	**P**	**19 28 27.2**	**-2.5**
TCW	**Tory Channel**	**11.08**	**204**	P	**P**	**19 28 27.4**	**-2.3**
PLWZ	**Palliser**	**11.10**	**199**	P	**P**	**19 28 28.7**	**-1.3**
PLWZ	**Palliser**	**11.10**	**199**	P	**P**	**19 28 28.1**	**-1.9**
TUWZ	**Tuamarina**	**11.39**	**204**	P	**P**	**19 28 30.5**	**-2.7**
TUWZ	**Tuamarina**	**11.39**	**204**	P	**P**	**19 28 30.6**	**-2.5**
NNZ	**Nelson**	**11.41**	**207**	P	**P**	**19 28 31.1**	**-2.3**
NNZ	**Nelson**	**11.41**	**207**	P	**P**	**19 28 31.1**	**-2.3**
TKNZ	**Takaka Hill**	**11.42**	**208**	P	**P**	**19 28 31.2**	**-2.3**
QRZ	**Quartz Range**	**11.43**	**210**	P	**P**	**19 28 32.0**	**-1.6**
QRZ	**Quartz Range**	**11.43**	**210**	P	**P**	**19 28 33.4**	**-0.2**
QRZ	**Quartz Range**	**11.43**	**210**	P	**P**	**19 28 33.1**	**-0.5**
CMWZ	**Cape Campbell**	**11.59**	**203**	P	**P**	**19 28 34.1**	**-1.1**
CMWZ	**Cape Campbell**	**11.59**	**203**	P	**P**	**19 28 35.1**	**-0.2**
BSWZ	**Blackbirch Sta**	**11.67**	**204**	P	**P**	**19 28 35.0**	**-1.3**
BSWZ	**Blackbirch Sta**	**11.67**	**204**	P	**P**	**19 28 35.2**	**-1.0**
MRNZ	**Matariki Terra**	**11.81**	**208**	P	**P**	**19 28 36.8**	**-1.0**
THZ	**Tophouse**	**12.06**	**207**	P	**P**	**19 28 38.1**	**-2.5**
THZ	**Tophouse**	**12.06**	**207**	P	**P**	**19 28 38.6**	**-2.0**
KHZ	**Kahutara**	**12.41**	**203**	P	**P**	**19 28 42.5**	**-1.8**
KHZ	**Kahutara**	**12.41**	**203**	P	**P**	**19 28 42.1**	**-2.2**
DSZ	**Denniston Nort**	**12.50**	**210**	P	**P**	**19 28 43.7**	**-1.7**
CTZ	**Chatham Island**	**12.82**	**169**	P	**Pn**	**19 28 50.5**	**-0.3**
LKBA	**Tubou, Lakemba**	**12.90**	**5**	P	**P**	**19 28 49.1**	**-1.0**
GVZ	**Greta Valley S**	**13.07**	**204**	P	**P**	**19 28 50.6**	**-1.0**
GVZ	**Greta Valley S**	**13.07**	**204**	P	**P**	**19 28 51.0**	**-0.6**
LTZ	**Lake Taylor**	**13.18**	**206**	P	**P**	**19 28 52.4**	**-0.5**
AMCZ	**Amberley**	**13.38**	**204**	P	**P**	**19 28 54.3**	**-0.8**
INZ	**Inchbonnie**	**13.46**	**209**	P	**P**	**19 28 54.8**	**-1.0**
MSVF	**Nonsavu**	**13.49**	**352**	P	**P**	**19 28 55.5**	**-1.2**
	102nm,0.6s,baz=163,slow=15,SNR=41						
MSVF	**Nonsavu**	**13.49**	**352**	P	**P**	**19 28 55.6**	**-1.0**
MSVF	**Nonsavu**	**13.49**	**352**	P	**P**	**19 28 57.6**	**+0.9**
MSVF	**Nonsavu**	**13.49**	**352**	*i* P	**P**	**19 28 56.5**	**-0.2**
OXZ	**Oxford**	**13.73**	**206**	P	**P**	**19 28 57.7**	**-1.2**
MQZ	**McQueen's Vall**	**13.85**	**203**	P	**P**	**19 28 59.0**	**-1.1**
PINNC	**Pines Island,**	**14.14**	**304**	P	**P**	**19 29 03.9**	**+0.3**
TAVE	**Taveuni**	**14.38**	**360**	P	**P**	**19 29 06.0**	**-0.3**
RPZ	**Rata Peaks**	**14.44**	**207**	P	**P**	**19 29 05.5**	**-1.1**
	20nm,0.3s,baz=32,slow=2.7,SNR=14						
RPZ				S	**S**	**19 31 36.4**	**-4.3**
	351nm,0.5s,baz=240,slow=21,SNR=7.9						
YSA	**Yasawairara**	**14.58**	**350**	P	**P**	**19 29 08.7**	**+0.3**
OUENC	**Ouen Island, N**	**14.69**	**303**	P	**P**	**19 29 10.9**	**+1.3**
OUENC	**Ouen Island, N**	**14.69**	**303**	P	**P**	**19 29 12.5**	**+2.9**
FOZ	**Fox Glacier**	**14.80**	**211**	P	**P**	**19 29 09.3**	**-1.2**
YATNC	**Mamie plateau,**	**14.89**	**304**	P	**P**	**19 29 13.4**	**+1.7**
NIUE	**Niue**	**15.02**	**39**	P	**P**	**19 29 12.1**	**-1.0**
NIUE	**Niue**	**15.02**	**39**	P	**P**	**19 29 12.0**	**-1.2**
ONTNC	**Ouen Toro**	**15.04**	**303**	P	**P**	**19 29 15.1**	**+1.7**
ONTNC	**Ouen Toro**	**15.04**	**303**	P	**P**	**19 29 16.0**	**+2.6**
DZM	**Mont Dzumac**	**15.20**	**303**	*e*Pn	**P**	**19 29 16.3**	**+1.1**
	127nm,0.9s						
DZM				*e*S	**S**	**19 31 55.6**	**-0.8**
	2µm,26.1s						
DZM	**Mont Dzumac**	**15.20**	**303**	P	**P**	**19 29 15.8**	**+0.6**
	26nm,0.8s,baz=131,slow=18,SNR=12						
DZM	**Mont Dzumac**	**15.20**	**303**	P	**P**	**19 29 18.5**	**+3.3**
NOUC	**Port Laguerre**	**15.28**	**303**	P	**P**	**19 29 18.6**	**+2.7**
LBZ	**Lake Benmore**	**15.35**	**208**	P	**P**	**19 29 15.8**	**-0.6**
JCZ	**Jackson Bay**	**15.69**	**212**	P	**P**	**19 29 20.3**	**+0.1**
ODZ	**Otahua Downs**	**15.72**	**205**		**P**	**19 29 19.8**	**-0.6**
ODZ	**Otahua Downs**	**15.72**	**205**	P	**P**	**19 29 21.6**	**+1.2**
WKZ	**Wanaka**	**16.19**	**209**		**P**	**19 29 24.5**	**-0.9**
FUTU	**Fugatoga**	**16.85**	**6**	P	**P**	**19 29 33.1**	**+0.3**
MLZ	**Mavora Lakes**	**17.00**	**210**	P	**P**	**19 29 33.6**	**-0.5**
DCZ	**Deep Cove**	**17.50**	**212**	P	**P**	**19 29 38.1**	**-1.3**
KOUNC	**Koumac, New Ca**	**17.71**	**303**	P	**P**	**19 29 42.5**	**+0.6**
KOUNC	**Koumac, New Ca**	**17.71**	**303**	P	**P**	**19 29 43.0**	**+1.1**
AFI	**Afiamalu**	**18.71**	**25**	P	**P**	**19 29 52.2**	**-0.5**
	131nm,0.7s,baz=229,slow=20,SNR=19						
AFI				S	**S**	**19 33 03.3**	**-0.4**
	45nm,0.4s,baz=150,slow=20,SNR=7.2						
RAR	**Rarotonga**	**20.56**	**66**	P	**P**	**19 30 10.7**	**+0.7**
	28nm,0.9s,baz=242,slow=15,SNR=8.2						
	28nm,0.9s						
RAR	**Rarotonga**	**20.56**	**66**	P	**P**	**19 30 09.9**	**-0.1**
RAR	**Rarotonga**	**20.56**	**66**	P	**P**	**19 30 10.8**	**+0.8**
RAR	**Rarotonga**	**20.56**	**66**	P	**P**	**19 30 09.9**	**-0.1**
ARMA	**Armidale**	**24.46**	**264**	P	**P**	**19 30 45.9**	**+0.6**
EIDS	**Eidsvold**	**26.17**	**275**	P	**P**	**19 31 02.1**	**+1.6**
EIDS	**Eidsvold**	**26.17**	**275**	P	**P**	**19 31 02.2**	**+1.7**
AUDCS	**Dubbo College**	**26.76**	**259**	P	**P**	**19 31 08.0**	**+2.3**
GLAD	**Gladstone**	**27.61**	**240**	P	**P**	**19 31 16.0**	**+3.0**
RMQ	**Roma**	**27.81**	**272**	P	**P**	**19 31 17.8**	**+2.8**
TBI	**Tubuai**	**28.08**	**81**	*e*S	**S**	**19 35 35.0**	**+2.4**
	913nm,26.5s						
TBI				*e*SS	**SS**	**19 37 53.6**	**+1.0**
	4µm,29.0s						
HNR	**Honiara**	**28.62**	**315**	P	**P**	**19 31 21.2**	**-0.9**
	1µm,0.5s,baz=135,slow=5.7,SNR=8.1						
HNR	**Honiara**	**28.62**	**315**	P	**P**	**19 31 22.3**	**+0.1**
HNR	**Honiara**	**28.62**	**315**	P	**P**	**19 31 21.9**	**-0.3**
HNR	**Honiara**	**28.62**	**315**	P	**P**	**19 31 22.3**	**+0.1**
HNR				pmax	pmax		
	comp=Z,146nm,0.9s						
TOO	**Toolangi**	**29.17**	**248**	P	**P**	**19 31 26.8**	**-0.1**
TOO				IAmb	IAmb	19 31 31.5	
	comp=Z,36nm,1.1s						
TOO	**Toolangi**	**29.17**	**248**	P	**P**	**19 31 29.8**	**+2.9**
TOO	**Toolangi**	**29.17**	**248**	P	**P**	**19 31 26.8**	**-0.1**
TOO				pmax	pmax		
	comp=Z,36nm,1.1s						
CMSA	**Cobar Meteorol**	**29.33**	**260**	P	**P**	**19 31 30.4**	**+2.1**
BRAT	**Ballarat**	**30.41**	**248**	P	**P**	**19 31 40.4**	**+2.8**
PPT2	**Papeete2**	**30.62**	**71**	*e*S	**S**	**19 36 15.2**	**+2.8**
	comp=Z,198nm,26.0s						
PPT	**Papeete**	**30.63**	**71**	P	**P**	**19 31 40.5**	**+0.8**
	comp=Z,21nm,0.3s,baz=259,slow=16,SNR=3.6						
	comp=Z,21nm,0.3s						
QLP	**Quilpie**	**31.66**	**269**	P	**P**	**19 31 49.8**	**+1.2**
ARPS	**Mount Arapiles**	**32.09**	**249**	P	**P**	**19 31 52.4**	**+0.3**
TV1H	**Townsville Har**	**32.27**	**284**	P	**P**	**19 31 55.2**	**+1.4**
CTA	**Charters Tower**	**32.34**	**282**	P	**P**	**19 31 55.0**	**+0.5**
	comp=Z,31nm,0.5s,baz=106,slow=10,SNR=68						
CTA				S	**S**	**19 36 38.6**	**-0.2**
	comp=Z,4.6nm,0.9s,baz=326,slow=12,SNR=5.0						
	comp=Z,31nm,0.5s						
CTA	**Charters Tower**	**32.34**	**282**	P	**P**	**19 31 55.4**	**+0.9**
CTAO	**Charters Tower**	**32.34**	**282**	P	**P**	**19 31 55.2**	**+0.7**
CTAO				IAmb	IAmb	19 31 57.9	
	comp=Z,41nm,0.7s						
CTAO	**Charters Tower**	**32.34**	**282**	P	**P**	**19 31 55.5**	**+0.9**
CTAO	**Charters Tower**	**32.34**	**282**	P	**P**	**19 31 55.2**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,41nm,0.7s						
CTAO	**Charters Tower**	**32.34**	**282**	P	**P**	**19 31 56.2**	**+1.7**
CTAO				ScP	**ScP**	**19 37 38.5**	**+2.2**
STKA	**Stephens Creek**	**32.73**	**258**	P	**P**	**19 31 58.9**	**+1.2**
	comp=Z,25nm,0.5s,baz=101,slow=11,SNR=95						
STKA				S	**S**	**19 36 45.2**	**+0.6**
	comp=Z,3.2nm,0.9s,baz=239,slow=17,SNR=1.9						
	comp=Z,25nm,0.5s						
STKA	**Stephens Creek**	**32.73**	**258**	P	**P**	**19 31 58.9**	**+1.2**
STKA	**Stephens Creek**	**32.73**	**258**	P	**P**	**19 31 59.6**	**+1.9**
STKA	**Stephens Creek**	**32.73**	**258**	P	**P**	**19 31 58.9**	**+1.2**
STKA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TARA	**Tarawa**	**33.05**	**347**	P	**P**	**19 32 00.3**	**-0.2**
INKA	**Innaminka**	**34.33**	**266**	P	**P**	**19 32 12.7**	**+1.3**
HTT	**Hallett**	**34.74**	**255**	P	**P**	**19 32 16.2**	**+1.3**
MTSU	**Mount Surprise**	**34.87**	**283**	P	**P**	**19 32 16.9**	**+0.8**
LCRK	**Leigh Creek**	**35.84**	**260**	P	**P**	**19 32 24.9**	**+0.8**
WHYH	**Whyalla**	**35.91**	**256**	P	**P**	**19 32 25.9**	**+1.3**
BBOO	**Buckleboo**	**37.20**	**256**	P	**P**	**19 32 35.9**	**+0.4**
BBOO				IAmb	IAmb	19 32 37.5	
	comp=Z,42nm,0.7s						
BBOO	**Buckleboo**	**37.20**	**256**	P	**P**	**19 32 36.0**	**+0.5**
PMG	**Port Moresby**	**37.50**	**298**	P	**P**	**19 32 38.4**	**+0.4**
	comp=Z,12nm,0.6s,baz=121,slow=12,SNR=6.4						
	comp=Z,12nm,0.6s						
PMG	**Port Moresby**	**37.50**	**298**	P	**P**	**19 32 38.0**	**-0.1**
PMG	**Port Moresby**	**37.50**	**298**	P	**P**	**19 32 38.0**	**-0.1**
PMG				pmax	pmax		
	comp=Z,15nm,0.7s						
PMG	**Port Moresby**	**37.50**	**298**	P	**P**	**19 32 38.2**	**+0.2**
RABL	**Rabaul**	**37.56**	**310**	P	**P**	**19 32 38.1**	**-0.5**
RABL	**Rabaul**	**37.56**	**310**	P	**P**	**19 32 39.4**	**+0.8**
	comp=Z,180nm,0.8s						
KRVT	**Keravat (AS076**	**37.57**	**310**	P	**P**	**19 32 37.3**	**-1.3**
	comp=Z,564nm,0.7s,baz=166,slow=1.3,SNR=63						
QIS	**Mount Isa**	**37.77**	**276**	P	**P**	**19 32 42.0**	**+1.7**
COEN	**Coen**	**37.94**	**288**	P	**P**	**19 32 42.1**	**+0.4**
COEN	**Coen**	**37.94**	**288**	P	**P**	**19 32 42.3**	**+0.6**
OOD	**Oodnadatta**	**38.63**	**263**	P	**P**	**19 32 48.2**	**+0.9**
MULG	**Mulgathing**	**39.38**	**259**	P	**P**	**19 32 53.4**	**0.0**
AS01	**Alice Springs**	**41.42**	**269**	P	**P**	**19 33 09.9**	**-0.1**
AS31	**Alice Springs**	**41.46**	**269**	P	**P**	**19 33 10.2**	**-0.1**
ASAR	**Alice Springs**	**41.46**	**269**	P	**P**	**19 33 10.2**	**-0.2**
	comp=Z,9.9nm,0.7s,baz=106,slow=7.3,SNR=117						
ASAR				ScP	**ScP**	**19 38 11.5**	**+0.9**
	comp=Z,4.0nm,0.8s,baz=116,slow=4.4,SNR=7.0						
ASAR				S	**S**	**19 38 54.0**	**-1.4**
	comp=Z,2.5nm,1.0s,baz=113,slow=15,SNR=5.5						
	comp=Z,9.9nm,0.7s						
ASAR	**Alice Springs**	**41.46**	**269**	P	**P**	**19 33 10.0**	**-0.3**
WR0	**Warramunga Arr**	**42.34**	**274**	P	**P**	**19 33 17.2**	**-0.2**
WB2	**Warramunga Arr**	**42.51**	**274**	P	**P**	**19 33 18.3**	**-0.4**
WB2				IAmb	IAmb	19 33 21.1	
	comp=Z,33nm,0.8s						
WRAB	**Tennant Creek**	**42.51**	**274**	P	**P**	**19 33 18.5**	**-0.2**
WRAB	**Tennant Creek**	**42.51**	**274**	P	**P**	**19 33 18.5**	**-0.2**
WRAB	**Tennant Creek**	**42.51**	**274**	P	**P**	**19 33 18.5**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,32nm,1.0s						
WRAB	**Tennant Creek**	**42.51**	**274**	P	**P**	**19 33 18.2**	**-0.5**
WRA	**Warramunga Arr**	**42.52**	**274**	P	**P**	**19 33 18.4**	**-0.4**
	comp=Z,13nm,0.3s,baz=112,slow=7.7,SNR=170						
WRA				ScP	**ScP**	**19 38 15.2**	**+0.4**
	comp=Z,3.3nm,0.7s,baz=116,slow=4.3,SNR=5.6						
WRA				S	**S**	**19 39 08.3**	**-2.5**
	comp=Z,2.2nm,0.5s,baz=109,slow=15,SNR=7.3						
	comp=Z,13nm,0.3s						
WRA	**Warramunga Arr**	**42.52**	**274**	P	**P**	**19 33 17.5**	**-1.2**
WRA	**Warramunga Arr**	**42.52**	**274**	P	**P**	**19 33 17.5**	**-1.2**
WB0	**Warramunga Arr**	**42.54**	**274**	P	**P**	**19 33 18.5**	**-0.5**
WB0				IAmb	IAmb	19 33 21.3	
	comp=Z,36nm,0.8s						
DRV	**Dumont d'Urvil**	**42.83**	**202**	P	**P**	**19 33 20.6**	**+0.2**
TAOE	**Nuku Hiva Isla**	**43.10**	**68**	*e*S	**S**	**19 39 21.8**	**+2.5**
	comp=Z,339nm,26.0s						
PATS	**Pohnpei**	**43.16**	**327**	P	**P**	**19 33 23.9**	**+0.1**
FORT	**Forrest**	**44.29**	**256**	P	**P**	**19 33 32.1**	**-0.5**
FORT				IAmb	IAmb	19 33 34.5	
	comp=Z,72nm,0.6s						
FORT	**Forrest**	**44.29**	**256**	P	**P**	**19 33 32.0**	**-0.5**
WRKA	**Warakurna**	**45.78**	**264**	P	**P**	**19 33 43.9**	**-0.4**
GENI	**Genyem**	**47.18**	**299**	P	**P**	**19 33 55.1**	**+0.1**
GENI	**Genyem**	**47.18**	**299**	P	**P**	**19 33 54.5**	**-0.5**
	comp=Z,75nm,1.3s						
VNDA	**Vanda**	**47.19**	**185**	P	**P**	**19 33 56.8**	**+2.6**
	comp=Z,1.0nm,0.8s,baz=7.2,slow=6.3,SNR=1.6						
VNDA				ScP	**ScP**	**19 38 35.4**	**+2.3**
	comp=Z,4.7nm,0.7s,baz=359,slow=5.9,SNR=13						
MTN	**Manton Dam**	**48.51**	**281**	P	**P**	**19 34 04.5**	**-0.6**
MTN				IAmb	IAmb	19 34 15.4	
	comp=Z,78nm,1.6s						
KNRA	**Kununurra**	**49.16**	**276**	P	**P**	**19 34 09.8**	**-0.2**
KNRA				IAmb	IAmb	19 35 20.2	
	comp=Z,116nm,1.6s						
KMBL	**Kambalda**	**49.25**	**254**	P	**P**	**19 34 09.9**	**-0.6**
SRPI	**Serui, Papua**	**50.63**	**296**	P	**P**	**19 34 20.0**	**-0.9**
	comp=Z,31nm,0.9s,comp=Z,1µm						
CCD	**Concordia, Ant**	**51.78**	**196**	P	**P**	**19 34 29.6**	**+0.7**
CCD				ScP	**ScP**	**19 38 54.3**	**+1.0**
WAKE	**Wake Island**	**51.79**	**344**	P	**P**	**19 34 29.2**	**+0.1**
H11N3	**WAKE ISLAND Hy**	**52.15**	**344**	P	**P**	**19 34 31.8**	**+0.3**
	SNR=2.9						
H11N1	**WAKE ISLAND Hy**	**52.15**	**344**	P	**P**	**19 34 32.1**	**+0.6**
	SNR=5.1						
H11N2	**WAKE ISLAND Hy**	**52.16**	**344**	P	**P**	**19 34 32.3**	**+0.7**
	SNR=2.8						
KLBR	**Kellerberrin**	**52.57**	**252**	P	**P**	**19 34 34.7**	**-0.2**
FAKI	**Fak Fak**	**53.10**	**292**	P	**P**	**19 34 37.8**	**-1.1**
FAKI				IAmb	IAmb	19 34 39.5	
	comp=Z,41nm,0.8s						
FAKI	**Fak Fak**	**53.10**	**292**	P	**P**	**19 34 38.1**	**-0.8**
FAKI	**Fak Fak**	**53.10**	**292**	P	**P**	**19 34 37.2**	**-1.7**
	comp=Z,64nm,1.0s						
MEEK	**Meekatharra**	**53.44**	**258**	P	**P**	**19 34 41.0**	**-0.2**
CASY	**Casey**	**53.71**	**208**	P	**P**	**19 34 43.3**	**+0.8**
CASY				IAmb	IAmb	19 35 07.0	
	comp=Z,227nm,1.8s						
CASY	**Casey**	**53.71**	**208**	P	**P**	**19 34 43.2**	**+0.8**
BLDU	**Ballidu**	**53.72**	**253**	P	**P**	**19 34 43.5**	**+0.4**
PSA00	**Pilbara Seismi**	**54.27**	**265**	P	**P**	**19 34 46.1**	**-1.1**
PSA00	**Pilbara Seismi**	**54.27**	**265**	P	**P**	**19 34 46.0**	**-1.1**
PSA00				IAmb	IAmb	19 35 47.3	
	comp=Z,20nm,1.1s						
MBWA	**Marble Bar**	**54.53**	**265**	P	**P**	**19 34 47.8**	**-1.3**
MBWA	**Marble Bar**	**54.53**	**265**	P	**P**	**19 34 48.1**	**-1.0**
MBWA				PcP	**PcP**	**19 35 46.3**	**-0.3**
MORW	**Morawa**	**54.76**	**255**	P	**P**	**19 34 49.9**	**-0.7**
MORW				IAmb	IAmb	19 34 51.9	
	comp=Z,32nm,1.0s						
MORW	**Morawa**	**54.76**	**255**	P	**P**	**19 34 50.7**	**+0.1**
SWI	**Sorong**	**55.13**	**293**	P	**P**	**19 34 52.3**	**-1.0**
	comp=Z,54nm,1.0s						
SOEI	**Soe**	**55.87**	**280**	P	**P**	**19 34 57.5**	**-1.2**
SOEI				IAmb	IAmb	19 35 01.9	
	comp=Z,32nm,0.8s						
SOEI	**Soe**	**55.87**	**280**	P	**P**	**19 34 59.9**	**+1.2**
NLAI	**Namlea**	**57.05**	**288**	P	**P**	**19 35 05.0**	**-1.8**
	comp=Z,26nm,1.6s						
MMRI	**Maumere**	**58.16**	**280**	P	**P**	**19 35 14.1**	**-0.3**
MMRI	**Maumere**	**58.16**	**280**	P	**P**	**19 35 12.6**	**-1.8**
	comp=Z,93nm,1.5s,comp=Z,2µm						
LBMI	**Labuha**	**58.25**	**291**	P	**P**	**19 35 14.5**	**-0.5**
	comp=Z,35nm,1.0s						
SANI	**Sanana**	**58.64**	**289**	P	**P**	**19 35 17.2**	**-0.5**
SANI	**Sanana**	**58.64**	**289**	P	**P**	**19 35 16.1**	**-1.6**
	comp=Z,49nm,1.0s						
QSPA	**South Pole Qui**	**58.95**	**180**	P	**P**	**19 35 21.7**	**+2.5**
	comp=Z,83nm,0.8s,baz=38,slow=2.1,SNR=151						
	comp=Z,83nm,0.8s						
QSPA	**South Pole Qui**	**58.95**	**180**	P	**P**	**19 35 21.8**	**+2.6**
QSPA				sP	**PP**	**19 37 31.5**	**-3.1**
BKSI	**Bulukumba**	**61.68**	**282**	P	**P**	**19 35 36.9**	**-1.1**
	comp=Z,38nm,1.1s						
LUWI	**Luwuk**	**61.85**	**287**	P	**P**	**19 35 39.1**	**0.0**
LUWI				IAmb	IAmb	19 35 42.9	
	comp=Z,71nm,1.0s						
LUWI	**Luwuk**	**61.85**	**287**	P	**P**	**19 35 37.8**	**-1.3**
	comp=Z,72nm,1.1s,comp=Z,1µm						
PLAI	**Plampang**	**61.85**	**277**	P	**P**	**19 35 38.9**	**-0.2**
PLAI	**Plampang**	**61.85**	**277**	P	**P**	**19 35 37.7**	**-1.4**
	comp=Z,94nm,1.1s						
KAPI	**Kappang**	**62.16**	**282**	P	**P**	**19 35 41.1**	**-0.1**
KAPI				IAmb	IAmb	19 35 43.4	
	comp=Z,101nm,1.8s						
KAPI	**Kappang**	**62.16**	**282**	P	**P**	**19 35 41.1**	**-0.1**
KAPI				pmax	pmax		
	comp=Z,101nm,1.8s						
KAPI	**Kappang**	**62.16**	**282**	P	**P**	**19 35 41.3**	**+0.1**
TWSI	**Taliwang, Sumb**	**62.65**	**276**	P	**P**	**19 35 43.5**	**-0.9**
	comp=Z,83nm,1.1s,comp=Z,944nm						
SPSI	**Sidrap Palu**	**62.71**	**283**	P	**P**	**19 35 43.2**	**-1.6**
	comp=Z,30nm,1.1s						
IGBI	**Denpasar**	**64.09**	**275**	P	**P**	**19 35 51.9**	**-1.8**
	comp=Z,149nm,0.8s,comp=Z,2µm						
SRBI	**Singaraja**	**64.41**	**276**	P	**P**	**19 35 55.8**	**+0.1**
	comp=Z,88nm,1.1s,comp=Z,1µm						
DAV	**Davao City (W)**	**64.49**	**296**	P	**P**	**19 35 57.4**	**+1.2**
TOLI2	**Tolitoli**	**64.70**	**288**	P	**P**	**19 35 55.5**	**-2.1**
TOLI2				IAmb	IAmb	19 35 58.2	
	comp=Z,87nm,2.0s						
MPSI	**Mapaga**	**64.99**	**287**	P	**P**	**19 35 57.5**	**-1.9**
	comp=Z,50nm,1.1s,comp=Z,523nm						
JAGI	**Jajag, Banyuwa**	**65.11**	**275**	P	**P**	**19 35 59.1**	**-1.2**
JAGI	**Jajag, Banyuwa**	**65.11**	**275**	P	**P**	**19 35 59.8**	**-0.5**
JAGI	**Jajag, Banyuwa**	**65.11**	**275**	P	**P**	**19 35 58.7**	**-1.6**
	comp=Z,94nm,1.2s						
ABJI	**Asem Bagus**	**65.39**	**276**	P	**P**	**19 36 00.2**	**-1.8**
	comp=Z,63nm,1.1s,comp=Z,856nm						
GMJI	**Gumukmas**	**65.82**	**275**	P	**P**	**19 36 02.8**	**-1.9**
	comp=Z,113nm,1.2s,comp=Z,1µm						
BLJI	**Banyuglugur**	**65.96**	**276**	P	**P**	**19 36 05.8**	**+0.2**
	comp=Z,106nm,0.6s,comp=Z,2µm						
BBKI	**Banjar Baru**	**67.12**	**280**	P	**P**	**19 36 12.9**	**0.0**
PWJI	**Pagerwojo**	**67.35**	**274**	P	**P**	**19 36 14.5**	**+0.2**
	comp=Z,136nm,1.1s,comp=Z,2µm						
NGJI	**Ngawi**	**67.97**	**275**	P	**P**	**19 36 18.4**	**+0.3**
	comp=Z,74nm,0.8s						
UGM	**Wanagama**	**68.50**	**274**	P	**P**	**19 36 21.0**	**-0.4**
UGM	**Wanagama**	**68.50**	**274**	P	**P**	**19 36 21.7**	**+0.3**
UGM	**Wanagama**	**68.50**	**274**	P	**P**	**19 36 21.7**	**+0.3**
	comp=Z,117nm,1.3s						
BELA	**Belgrano 2**	**69.25**	**173**	P	**P**	**19 36 26.1**	**+1.2**
BELA				IAmb	IAmb	19 36 27.9	
	comp=Z,18nm,0.9s						
KPJI	**Karang Pucung**	**70.15**	**273**	P	**P**	**19 36 31.7**	**+0.3**
	comp=Z,89nm,1.5s						
PBKI	**Pangkalan Bun**	**70.20**	**279**	P	**P**	**19 36 31.9**	**+0.2**
	comp=Z,144nm,1.1s,comp=Z,3µm						
CMJI	**Cimerak**	**70.34**	**273**	P	**P**	**19 36 32.5**	**0.0**
	comp=Z,132nm,1.1s						
BBJI	**Bungbulang**	**71.18**	**273**	P	**P**	**19 36 36.8**	**-0.8**
KKM	**Kota Kinabalu**	**71.26**	**289**	P	**P**	**19 36 37.9**	**-0.2**
KKM				IAmb	IAmb	19 36 40.0	
	comp=Z,19nm,0.7s						
XMI	**Christmas Isla**	**71.39**	**269**	P	**P**	**19 36 39.2**	**+0.4**
SBUM	**Sibu**	**72.51**	**284**	P	**P**	**19 36 44.1**	**-1.2**
SBUM				IAmb	IAmb	19 36 47.7	
	comp=Z,86nm,1.7s						
CGJI	**Cibinong**	**73.28**	**272**	P	**P**	**19 36 49.3**	**-0.5**
	comp=Z,88nm,0.8s,comp=Z,1µm						
KSM	**Kuching**	**73.58**	**282**	P	**P**	**19 36 50.9**	**-0.6**
KSM				IAmb	IAmb	19 36 53.9	
	comp=Z,36nm,0.8s						
KSM	**Kuching**	**73.58**	**282**	P	**P**	**19 36 51.5**	**0.0**
KASI	**Kota Agung**	**74.86**	**273**	P	**P**	**19 36 58.0**	**-0.8**
	comp=Z,69nm,1.0s						
LWLI	**Liwa**	**75.49**	**273**	P	**P**	**19 37 02.9**	**+0.4**
	comp=Z,113nm,0.7s,comp=Z,2µm						
MDSI	**Maura Dua**	**75.66**	**273**	P	**P**	**19 37 01.7**	**-1.6**
	comp=Z,113nm,0.7s,comp=Z,1µm						
TROLL	**Troll, Antarti**	**77.11**	**181**	P	**P**	**19 37 11.8**	**+1.3**
SNAA	**Sanae**	**77.44**	**179**	P	**P**	**19 37 13.4**	**+1.1**
SNAA				S	**S**	**19 46 31.9**	**+3.0**
SNAA	**Sanae**	**77.44**	**179**	P	**P**	**19 37 13.2**	**+0.9**
SNAA				IAmb	IAmb	19 37 15.3	
	comp=Z,30nm,1.1s						
SNAA	**Sanae**	**77.44**	**179**	P	**P**	**19 37 13.2**	**+0.9**
SNAA				pmax	pmax		
	comp=Z,30nm,1.1s						
VNA3	**Neumayer Olymp**	**77.65**	**177**	P	**P**	**19 37 14.5**	**+1.1**
VNA3				S	**S**	**19 46 33.7**	**+2.6**
MJAR	**Matsushiro Arr**	**77.96**	**327**	P	**P**	**19 37 14.0**	**-1.4**
	comp=Z,7.6nm,1.0s,baz=161,slow=4.8,SNR=7.3						
	comp=Z,7.6nm,1.0s						
NVL	**N'lazarevskaya**	**78.02**	**184**	⇑*i*P	**P**	**19 37 17.3**	**+1.9**
NVL				pmax	pmax		
	comp=Z,43nm,1.0s						
VNA2	**Neumayer--Watz**	**78.07**	**177**	P	**P**	**19 37 16.8**	**+1.2**
	baz=185,slow=5.0						
VNA2				S	**S**	**19 46 38.7**	**+3.3**
YULB	**Yu-li**	**78.19**	**307**	P	**P**	**19 37 16.3**	**-0.8**
VNA1	**Neumayer--Stat**	**78.31**	**177**	P	**P**	**19 37 17.6**	**+0.7**
TPUB	**Ta-pu**	**78.59**	**306**	P	**P**	**19 37 18.2**	**-1.1**
SSLB	**Suanglung**	**78.69**	**307**	P	**P**	**19 37 19.1**	**-0.7**
SSLB				IAmb	IAmb	19 37 25.0	
	comp=Z,38nm,1.2s						
MYKOM	**Kota Tinggi**	**79.19**	**279**	P	**P**	**19 37 23.0**	**+0.3**
ERM	**Erimo**	**80.38**	**333**	*ce*P	**P**	**19 37 27.3**	**-0.9**
ERM				pmax	pmax		
	comp=Z,148nm,2.5s						
PDSI	**Padang**	**80.67**	**275**	P	**P**	**19 37 29.5**	**-1.1**
	comp=Z,49nm,0.8s						
BKNI	**Bangkinang**	**80.82**	**276**	P	**P**	**19 37 31.0**	**-0.2**
BKNI	**Bangkinang**	**80.82**	**276**	P	**P**	**19 37 32.7**	**+1.4**
BKNI	**Bangkinang**	**80.82**	**276**	P	**P**	**19 37 31.1**	**-0.2**
	comp=Z,47nm,1.1s,comp=Z,699nm						
DLV	**T Lat**	**80.88**	**290**	P	**P**	**19 37 32.3**	**+0.6**
ASAJ	**Asahikawa**	**82.38**	**334**	P	**P**	**19 37 37.9**	**-0.7**
	comp=Z,7.3nm,0.7s,baz=204,slow=5.9,SNR=4.9						
	comp=Z,7.3nm,0.7s						
IPM	**Ipoh**	**83.00**	**279**	P	**P**	**19 37 40.3**	**-2.3**
IPM	**Ipoh**	**83.00**	**279**	P	**P**	**19 37 42.3**	**-0.2**
PLCA	**Paso Flores**	**83.17**	**134**	P	**P**	**19 37 45.0**	**+2.0**
	comp=Z,4.3nm,0.9s,baz=231,slow=3.9,SNR=5.8						
	comp=Z,4.3nm,0.9s						
KULM	**Kulim**	**83.75**	**280**	P	**P**	**19 37 45.6**	**-0.6**
RPSI	**Rantau Prapat**	**83.85**	**277**	P	**P**	**19 37 45.0**	**-1.8**
RPSI				IAmb	IAmb	19 37 48.3	
	comp=Z,28nm,1.2s						
KSRS	**Korea Array**	**83.89**	**321**	P	**P**	**19 37 45.8**	**-0.5**
	comp=Z,4.6nm,0.8s,baz=141,slow=5.8,SNR=14						
	comp=Z,4.6nm,0.8s						
KSAR	**Wonju Array Be**	**83.90**	**321**	P	**P**	**19 37 45.9**	**-0.5**
KSAR	**Wonju Array Be**	**83.90**	**321**	P	**P**	**19 37 45.9**	**-0.5**
PSI	**Prapat**	**83.91**	**277**	P	**P**	**19 37 45.8**	**-1.4**
PSI	**Prapat**	**83.91**	**277**	P	**P**	**19 37 45.0**	**-2.2**
PSI				pmax	pmax		
	comp=Z,28nm,1.2s						
GSI	**Gunungsitoli**	**84.28**	**275**	P	**P**	**19 37 48.3**	**-0.6**
GSI	**Gunungsitoli**	**84.28**	**275**	P	**P**	**19 37 49.4**	**+0.5**
GSI	**Gunungsitoli**	**84.28**	**275**	P	**P**	**19 37 49.5**	**+0.5**
	comp=Z,135nm,0.7s,comp=Z,1µm						
YSS	**Yuzh-Sakhalins**	**84.74**	**335**	P	**P**	**19 37 50.5**	**+0.2**
YSS	**Yuzh-Sakhalins**	**84.74**	**335**	⇓*e*P	**P**	**19 37 51.4**	**+1.1**
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
SKLT	**Songkhla**	**84.76**	**282**	P	**P**	**19 37 52.0**	**+0.7**
NJ2	**Nanjing**	**85.52**	**312**	*e*P	**P**	**19 37 56.4**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
PEA0B	**Petropavlovsk-**	**86.16**	**347**	P	**P**	**19 37 56.6**	**-0.5**
PEA0B	**Petropavlovsk-**	**86.16**	**347**	P	**P**	**19 37 56.6**	**-0.5**
PEA0B				pmax	pmax		
	comp=Z,50nm,1.1s						
PETK	**Petropavlovsk-**	**86.16**	**347**	P	**P**	**19 37 56.5**	**-0.6**
	comp=Z,10nm,0.7s,baz=166,slow=4.2,SNR=27						
	comp=Z,10nm,0.7s						
PETK	**Petropavlovsk-**	**86.16**	**347**	P	**P**	**19 37 55.9**	**-1.3**
SRIT	**Nakonsritamara**	**86.37**	**282**	P	**P**	**19 37 58.3**	**-0.8**
SRIT				IAmb	IAmb	19 38 00.8	
	comp=Z,10.0nm,0.7s						
SURA	**Surathani**	**86.65**	**283**	P	**P**	**19 38 01.3**	**+0.9**
MLSI	**Meulaboh, Aceh**	**86.81**	**277**	P	**P**	**19 38 01.3**	**+0.1**
USA0B	**Ussuriysk Arra**	**86.91**	**328**	P	**P**	**19 38 01.5**	**+0.6**
USA0B				IAmb	IAmb	19 38 04.2	
	comp=Z,64nm,1.8s						
USA0B	**Ussuriysk Arra**	**86.91**	**328**	P	**P**	**19 38 01.5**	**+0.6**
USA0B				pmax	pmax		
	comp=Z,65nm,1.8s						
USRK	**Ussuriysk Ar.**	**86.91**	**328**	P	**P**	**19 38 00.4**	**-0.5**
	comp=Z,8.5nm,0.9s,baz=136,slow=3.4,SNR=7.7						
	comp=Z,8.5nm,0.9s						
USRK	**Ussuriysk Ar.**	**86.91**	**328**	P	**P**	**19 38 01.0**	**+0.1**
USRK	**Ussuriysk Ar.**	**86.91**	**328**	P	**P**	**19 38 01.0**	**+0.1**
WHN	**Wuhan**	**87.52**	**308**	⇑P	**P**	**19 38 06.2**	**+2.1**
NAYO	**Nakonayok**	**87.99**	**288**	P	**P**	**19 38 08.2**	**+1.5**
TYV	**Tymovskoe**	**88.11**	**337**	*e*P	**P**	**19 38 07.9**	**+1.5**
TYV				pmax	pmax		
	comp=Z,37nm,1.0s						
TYV				pmax	pmax		
	comp=Z,200nm,4.2s						
MDJ	**Mudanjiang**	**88.34**	**327**	P	**P**	**19 38 08.5**	**+0.8**
MDJ				sP	sP	19 40 18.4	-1.2
MDJ				pmax	pmax		
	comp=Z,13nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,200nm,4.0s						
CMB	**Columbia Colle**	**88.41**	**43**	P	**P**	**19 38 08.7**	**+0.5**
CMB				IAmb	IAmb	19 38 15.8	
	comp=Z,21nm,1.9s						
CMB	**Columbia Colle**	**88.41**	**43**	P	**P**	**19 38 08.7**	**+0.5**

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CMB                                    pmax     pmax
           comp=Z,21nm,1.9s
NONG  Nongkai           88.55 292   P        P          19 38 10.5 +1.2
GLA   Glamis            88.62  50   P        P          19 38 10.5 +1.2
GLA                                 IAmb     IAmb       19 38 13.5
           comp=Z,11nm,0.8s
GLA   Glamis            88.62  50   P        P          19 38 10.5 +1.2
GLA                                 pmax     pmax
           comp=Z,11nm,0.8s
CHGN  Chignik           89.01  12   P        P          19 38 11.6 +1.2
LCH   Last Change Ra    89.51  45            P          19 38 15.3 +1.8
LHV   Little Huntoon    89.66  44   P        P          19 38 16.2 +2.3
LHV                                 IAmb     IAmb       19 41 04.8
           comp=Z,15nm,1.5s
CN2   Changchun         89.78 324  eP        P          19 38 15.6 +1.3
CN2                                 pmax     pmax
           comp=Z,10.0nm,0.6s
NVAR  Mina Array Bea    89.90  44   P        P          19 38 15.8 +0.5
           comp=Z,2.2nm,0.7s,baz=219,slow=7.7,SNR=16
           comp=Z,2.2nm,0.7s
TPNV  Topopah Spring    90.18  46   P        P          19 38 18.5 +1.9
TPNV  Topopah Spring    90.18  46   P        P          19 38 18.5 +1.9
TPNV                                pmax     pmax
           comp=Z,3.0nm,0.7s
BNX   BinXian           90.22 326 ⇑P        P          19 38 16.0 -0.3
BNX                                 pmax     pmax
           comp=Z,12nm,1.0s
BNX                                 pmax     pmax
           comp=Z,150nm,5.4s
TPH   Tonopah           90.31  45   P        P          19 38 18.4 +1.1
TPH                                 IAmb     IAmb       19 38 19.8
           comp=Z,20nm,0.8s
TPH   Tonopah           90.31  45   P        P          19 38 18.4 +1.1
TPH                                 pmax     pmax
           comp=Z,20nm,0.8s
KVN   Kaiserville       90.43  43   P        P          19 38 18.4 +0.6
KVN   Kaiserville       90.43  43   P        P          19 38 18.4 +0.6
KVN                                 pmax     pmax
           comp=Z,12nm,1.8s
GYA   Guiyang           90.53 301 ⇓P        P          19 38 19.8 +1.4
GYA                                 pmax     pmax
           comp=Z,21nm,1.1s
KLR   Kul'dur           90.88 331   P        P          19 38 19.9 +0.6
           comp=Z,3.6nm,0.9s,baz=145,slow=3.7,SNR=9.7
           comp=Z,3.6nm,0.9s
KLR   Kul'dur           90.88 331ceP        P          19 38 19.3  0.0
KLR                                 pmax     pmax
           comp=Z,4.0nm,1.0s
MOD   Modoc Plateau     91.06  40   P        P          19 38 20.9 +0.3
MOD                                 IAmb     IAmb       19 38 23.3
           comp=Z,7.0nm,0.7s
PHRA  Phrae             91.12 291   P        P          19 38 22.2 +1.1
CRAI  Chiangrai         91.92 292   P        P          19 38 25.9 +1.1
PINE  Pine Mountain     91.99  38   P        P          19 38 26.3 +1.5
PINE                                IAmb     IAmb       19 38 27.9
           comp=Z,9.2nm,0.8s
CMAR  Chiang Mai Arr    92.13 290   P        P          19 38 26.2 +0.4
           comp=Z,1.8nm,0.3s,baz=140,slow=3.5,SNR=16
CMAR                                PP       PP         19 42 13.1 +0.5
           comp=Z,1.3nm,0.8s,baz=129,slow=5.5,SNR=5.7
CMAR                                PKKPbc   PKKPbc     19 55 40.2 +1.3
           comp=Z,0.5nm,0.4s,baz=283,slow=4.4,SNR=6.0
           comp=Z,1.8nm,0.3s
CMAR  Chiang Mai Arr    92.13 290   P        P          19 38 24.8 -1.1
CMAR  Chiang Mai Arr    92.13 290 i P        P          19 38 27.0 +1.2
CMAR                                pmax     pmax
           comp=Z,2.0nm,0.4s
CHTO  Chiang Mai        92.31 290   P        P          19 38 27.0 +0.3
CHTO  Chiang Mai        92.31 290   P        P          19 38 27.0 +0.3
BJI   Beijing           92.34 316   P        P          19 38 28.5 +2.2
BJI                                 SKS      SKSac      19 48 21.0 +0.8
BJI                                 S        ScS        19 48 58.4 +2.9
BJI                                 pmax     pmax
           comp=Z,5.0nm,1.0s
U15A  North Rim         92.34  48   P        P          19 38 28.8 +2.0
U15A                                IAmb     IAmb       19 39 35.8
           comp=Z,18nm,2.0s
KNB   Kanab             92.36  48   P        P          19 38 27.6 +0.9
KNB                                 IAmb     IAmb       19 38 30.3
           comp=Z,22nm,1.9s
KNB   Kanab             92.36  48   P        P          19 38 27.6 +0.9
KNB                                 pmax     pmax
           comp=Z,22nm,1.9s
KMI   Kunming           92.72 298 ⇑P        P          19 38 26.7 -2.0
KMI                                 S        S          19 48 57.6 -1.1
KMI                                 pmax     pmax
           comp=Z,10.0nm,1.6s
XAN   Xi'an             93.29 308   P        P          19 38 33.9 +3.0
XAN                                 pmax     pmax
           comp=Z,8.0nm,1.4s
SVW2  Sparrevohn        94.04  12   P        P          19 38 34.5 +0.9
SVW2                                IAmb     IAmb       19 42 05.2
           comp=Z,34nm,1.8s
TXAR  Lajitas Array     94.16  58   P        P          19 38 35.6 +0.5
           comp=Z,0.4nm,0.8s,baz=224,slow=7.5,SNR=2.6
           comp=Z,0.4nm,0.8s
PZH   PanZhiHua         94.22 298   P        P          19 38 36.4 +0.9
PZH                                 pmax     pmax
           comp=Z,10.0nm,1.4s
PZH                                 pmax     pmax
           comp=Z,150nm,5.1s
ANMO  Albuquerque       95.32  52 i P        P          19 38 40.7 +0.4
ANMO                                pmax     pmax
           comp=Z,1.0nm,1.1s
HHC   Hu-ho-hao-te      95.60 315  eP        P          19 38 42.8 +1.5
HHC                                 pmax     pmax
           comp=Z,14nm,0.8s
HHC                                 pmax     pmax
           comp=Z,240nm,4.4s
ZEA   Zeya              96.12 332 i P        P          19 38 44.0 +0.8
PDAR  Pinedale Array    97.81  44   P        Pdif       19 38 51.4  0.0
           comp=Z,0.4nm,0.6s,baz=250,slow=2.7,SNR=5.1
PDAR                                PKKPbc   PKKPbc     19 55 25.3 +0.1
           comp=Z,0.9nm,0.6s,baz=90,slow=5.9,SNR=9.4
           comp=Z,0.4nm,0.6s
LZH   Lanzhou           97.88 307  eP        Pdif       19 38 55.4 +3.6
LZH                                 pP       pwP        19 40 25.6 -2.1
LZH                                 pmax     pmax
           comp=Z,14nm,1.1s
ILAR  Eielson Array     99.03  14   P        Pdif       19 38 55.2 -0.8
           comp=Z,0.3nm,0.5s,baz=235,slow=4.3,SNR=4.5
ILAR                                PKiKP    PKiKP      19 43 23.9  0.0
           comp=Z,0.4nm,0.5s,baz=273,slow=2.9,SNR=6.9
ILAR                                PKKPbc   PKKPbc     19 55 19.7 -2.7
           comp=Z,0.3nm,0.5s,baz=23,slow=3.3,SNR=5.0
           comp=Z,0.3nm,0.5s
BILL  Bilibino          99.44 355  eP        Pdif       19 38 59.0 +1.3
BILL                                pmax     pmax
           comp=Z,2.0nm,0.9s
YAK   Yakutsk          101.34 338 i P        Pdif       19 39 06.1 -0.1
YAK                                 pmax     pmax
           comp=Z,8.0nm,0.5s
INK   Inuvik           104.95  16   PKiKP    PKiKP      19 43 34.9 +0.3
           comp=Z,0.7nm,0.5s,baz=31,slow=2.6,SNR=4.7
YKA   Yellowknife Ar   106.83  26   PKiKP    PKiKP      19 43 37.6 -0.6
           comp=Z,0.3nm,0.5s,baz=252,slow=1.7,SNR=9.1
YKA                                 PKKPbc   PKKPbc     19 54 54.4 -4.7
           comp=Z,0.7nm,0.6s,baz=45,slow=3.2,SNR=12
WMQ   Urumqi           112.42 309  ePKP      PKiKP      19 43 49.6 +0.1
BOSA  Boshof           115.92 205   PKP      PKiKP      19 43 57.5 +0.6
           comp=Z,1.8nm,0.6s,baz=171,slow=3.0,SNR=8.4
BOSA                                PKKPab   PKKPab     19 54 36.4 -1.6
           comp=Z,1.5nm,0.8s,baz=328,slow=4.6,SNR=4.7
MK31  Makanchi Array   117.02 310            PKPdf      19 43 57.5 -0.6
MK31  Makanchi Array   117.02 310 i PKIKP    PKiKP      19 43 58.6 +0.4
MKAR  Makanchi Array   117.02 310   PKP      PKPdf      19 43 57.0 -1.2
           comp=Z,2.3nm,0.6s,baz=110,slow=0.8,SNR=30
MKAR                                PKKPbc   PKKPab     19 54 25.9 -1.8
           comp=Z,0.4nm,0.5s,baz=268,slow=2.8,SNR=10
MKAR  Makanchi Array   117.02 310            PKPdf      19 43 57.1 -1.1
MKAR  Makanchi Array   117.02 310   PKIKP    PKPdf      19 43 57.1 -1.1
MAKZ  Makanchi         117.23 310            PKPdf      19 43 57.5 -1.1
MAKZ  Makanchi         117.23 310   PKIKP    PKPdf      19 43 57.5 -1.1
ZALV  Zalesovo Beam    117.52 318   PKP      PKPdf      19 43 57.7 -1.1
           comp=Z,1.1nm,0.6s,baz=106,slow=3.1,SNR=6.4
SADO  Sadowa           118.37  53   PKPdf    PKiKP      19 44 01.1 +0.3
RES   Resolute Bay     118.45  18            PKiKP      19 44 00.4 +0.3
RES   Resolute Bay     118.45  18   PKIKP    PKiKP      19 44 00.4 +0.3
KSH   Kashi            119.23 301   PKP      PKiKP      19 44 03.7 +0.9
NRIK  Noril'sk         119.66 336   PKP      PKPdf      19 44 01.7 -0.8
           comp=Z,2.2nm,0.6s,baz=100,slow=3.0,SNR=4.4
NRIK  Noril'sk         119.66 336 i PKIKP    PKPdf      19 44 02.0 -0.5
NRIK                                pmax     pmax
           comp=Z,3.0nm,0.6s
KURK  Kurchatov        120.40 314            PKPdf      19 44 03.6 -0.8
KURK  Kurchatov        120.40 314   PKIKP    PKPdf      19 44 03.7 -0.8
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KURBB Kurchatov Arra   120.43 314   PKP      PKPdf      19 44 03.6 -0.9
           comp=Z,5.8nm,0.6s,baz=110,slow=1.8,SNR=45
KURBB                               PP       PP         19 45 35.7 -2.4
           comp=Z,0.9nm,0.8s,baz=103,slow=6.7,SNR=7.2
TKM2  Tokmak 2         120.48 304   P        PKPdf      19 44 04.4 -0.8
           SNR=7.8
KBK   Karagaybulak     120.87 304   P        PKiKP      19 44 05.7 -0.3
           SNR=6.5
UCH   Uchtor           121.06 303   P        PKiKP      19 44 06.7  0.0
           SNR=7.2
CHMS  Chumysh          121.10 304   P        PKiKP      19 44 06.8 +0.5
           SNR=9.3
AAK   Ala-Archa        121.18 304            PKiKP      19 44 06.2 -0.4
AAK   Ala-Archa        121.18 304 i PKIKP    PKiKP      19 44 06.6  0.0
USP   Ospenovka        121.34 305   P        PKiKP      19 44 07.3 +0.6
           SNR=6.0
NCB   Newcomb          121.55  55   PKPdf    PKiKP      19 44 06.8 -0.3
AML   Almayashu        121.62 303   P        PKiKP      19 44 07.6 -0.2
           SNR=7.9
GAR   Garm             123.29 299            PKiKP      19 44 10.6 -0.3
LATQ  La Tuque         123.30  51   PKPdf    PKiKP      19 44 10.4  0.0
CHGR  Chuyangaron      124.08 298            PKPdf      19 44 11.6 -0.5
CHGR  Chuyangaron      124.08 298   PKIKP    PKPdf      19 44 11.6 -0.5
KK31  Karatay Array    124.14 304            PKPdf      19 44 11.5 -0.5
KK31  Karatay Array    124.14 304   PKIKP    PKPdf      19 44 11.5 -0.5
KKAR  Karatay Array    124.14 304            PKPdf      19 44 11.5 -0.5
KKAR  Karatay Array    124.14 304            PKPdf      19 44 11.2 -0.8
KKAR  Karatay Array    124.14 304   PKIKP    PKPdf      19 44 11.5 -0.5
TULEG Thule            124.94  15   PKPdf    PKPdf      19 44 11.8 -0.7
LMQ   La Malbaie       124.97  51   PKPdf    PKPdf      19 44 12.8 -0.6
PKME  Peaks-Kenny Pk   125.27  54            PKiKP      19 44 14.3  0.0
BVAR  Borovoye Array   125.81 315   PKP      PKPdf      19 44 14.5 -0.3
           comp=Z,6.2nm,0.5s,baz=100,slow=1.5,SNR=31
BRVK  Borovoye         125.88 316            PKPdf      19 44 14.2 -0.7
BRVK  Borovoye         125.88 316   PKIKP    PKPdf      19 44 14.2 -0.7
PQI   Presque Isle     126.39  53   PKPdf    PKiKP      19 44 16.5 -0.1
SCHQ  Schefferville    127.89  42   PKP      PKPdf      19 44 18.4 -0.3
           comp=Z,4.2nm,0.8s,baz=278,slow=4.1,SNR=5.3
LMN   Caledonia Moun   128.48  54   PKPdf    PKPdf      19 44 19.2 -0.9
ABKAR Akbulak array    132.16 310            PKPdf      19 44 26.2 -0.8
ABKAR Akbulak array    132.16 310            PKPdf      19 44 26.9 -0.1
SPA0  Spitsbergen Ar   132.34 356  ePKPdf    PKiKP      19 44 27.2 -0.5
GEYT  Alibeck          132.40 295   PKP      PKPdf      19 44 27.5 -0.4
           comp=Z,1.7nm,0.6s,baz=90,slow=0.6,SNR=4.8
GEYT                                SKPbc    SKPab      19 47 17.6 -0.7
           comp=Z,6.4nm,0.8s,baz=112,slow=1.6,SNR=9.0
ARU   Arti             132.63 320            PKiKP      19 44 27.9 -0.9
ARU   Arti             132.63 320 i PKIKP    PKiKP      19 44 28.7 -0.1
ARU                                                     19 46 56.4
ARU                                 SS       SS         20 04 05.8 +0.3
KIRV  Kirov            137.00 324c iPKIKP    PKiKP      19 44 36.5 -1.1
ARA0  ARCESS Array S   138.97 347  e         PKPdf      19 44 32.0 -7.0
ARCES ARCESS Array B   138.97 347   PKhKP    PKPpre     19 44 31.3
           comp=Z,1.0nm,0.3s,baz=57,slow=2.1,SNR=40
ARCES                               PKP      PKPdf      19 44 38.9 -0.2
           comp=Z,2.9nm,0.5s,baz=80,slow=1.1,SNR=4.0
BELG  Belogornoye      139.61 316 i PKIKP    PKPdf      19 44 40.7 +0.1
BELG                                pmax     pmax
           comp=Z,4.0nm,1.0s
KTK1  Kautokeino       139.85 347  e         PKPdf      19 44 34.1 -6.6
KLMR  Klimovskoe       140.64 331  ePKPdf    PKPdf      19 44 41.4 -0.9
KLMR                                AMP                 19 44 45.8
           comp=Z,23nm,1.7s
KLMR                               ePP       PP         19 47 41.7 -5.4
KLMR  Klimovskoe       140.64 331  ePKIKP    PKPdf      19 44 41.4 -0.9
KLMR                               e                    19 47 41.6
KLMR                                pmax     pmax
           comp=Z,23nm,1.7s
AKT   Akhty            140.71 299  ePKIKP    PKPdf      19 44 40.2 -3.0
AKT                                e                    19 46 16.9
AKT                                e                    19 47 46.1
AKT                                 pmax     pmax
           comp=Z,15nm,1.8s
STEI  Steigen          142.13 351  ePKPdf    PKPdf      19 44 41.5 -3.3
FAUS  Fauske           142.64 350  ePKPdf    PKPdf      19 44 42.3 -3.3
GNI   Garni            142.97 297                       19 44 44.4
GNI   Garni            142.97 297c iPKIKP               19 44 45.6
GNI                                 pmax     pmax
           comp=Z,58nm,1.7s
VRH   Novokhopyorsk    143.46 315  ePKIKP    PKPdf      19 44 46.6 -1.0
VRH                                 pmax     pmax
           comp=Z,10.0nm,0.5s
ZEI   Tsey             143.52 301  ePKHKP    PKPpre     19 44 45.1
ZEI                                 pmax     pmax
           comp=Z,23nm,1.3s
KONS  Konsvik          143.76 351  ePKPbc    PKPab      19 44 45.6 -0.5
ONI   Oni              143.86 301            PKPbc      19 44 47.2 -0.2
ONI   Oni              143.86 301   PKIKP    PKPbc      19 44 47.2 -0.2
MOR8  Moi Rana         143.89 350  ePKPbc    PKPab      19 44 45.2 -1.4
AKH   Akhalkalaki      143.90 299            PKPdf      19 44 48.2 -0.8
AKH   Akhalkalaki      143.90 299   PKIKP    PKPdf      19 44 48.2 -0.8
STOK  Stokkvaagen      143.94 351  ePKPbc    PKPab      19 44 46.8 +0.1
MOS   Moscow           144.02 324 i PKIKP    PKPab      19 44 47.3  0.0
MOS                                 pmax     pmax
           comp=Z,62nm,0.7s
KBZ   Khabaz           144.17 303   PKP      PKPdf      19 44 48.3 -0.7
           comp=Z,22nm,0.9s,baz=113,slow=1.6,SNR=42
KBZ   Khabaz           144.17 303c iPKIKP    PKPbc      19 44 47.9 -0.3
KBZ                                 pmax     pmax
           comp=Z,33nm,1.0s
KARS  Kars             144.23 297            PKPdf      19 44 48.8 -0.7
KARS  Kars             144.23 297   PKIKP    PKPdf      19 44 48.8 -0.7
GEVA  Gevas            144.24 293            PKPab      19 44 48.7 -0.4
KIV   Kislovodsk       144.30 303 ⇓P        PKPbc      19 44 48.5 -0.3
KIV   Kislovodsk       144.30 303            PKPab      19 44 48.6 -0.3
KIV   Kislovodsk       144.30 303  ePKIKP    PKPbc      19 44 48.4 -0.3
KIV                                 pmax     pmax
           comp=Z,23nm,1.1s
SHA1  Shidzhatmaz      144.34 303 i PKIKP    PKPdf      19 44 49.7  0.0
NEY   Neytrino         144.34 302 i PKIKP    PKPdf      19 44 49.7 +0.1
LPSR  Galich'ya Gora   144.63 319  ePKIKP    PKPbc      19 44 48.8 -0.6
LPSR                                pmax     pmax
           comp=Z,90nm,0.8s
VORR  Voronezh         144.80 317  ePKIKP    PKPab      19 44 50.1 -0.3
VORR                                pmax     pmax
           comp=Z,110nm,0.6s
OBN   Obninsk          144.84 324 ⇑P        PKPab      19 44 50.1 -0.3
OBN   Obninsk          144.84 324   PKPdf    PKPdf      19 44 47.7 -2.1
OBN   Obninsk          144.84 324c iPKIKP    PKPdf      19 44 48.7 -1.1
OBN                                e                    19 48 09.3
OBN                                 pmax     pmax
           comp=Z,220nm,1.7s
PUL   Pulkovo          144.98 334c iPKIKP    PKPab      19 44 51.0 +0.2
PUL                                 pmax     pmax
           comp=Z,140nm,0.7s
VSR   Storozhevoye     144.98 316  ePKIKP    PKPdf      19 44 49.8 -0.4
VSR                                 pmax     pmax
           comp=Z,80nm,0.6s
VORD  Divnogorie       144.99 316  ePKIKP    PKPbc      19 44 50.1 -0.5
VORD                                pmax     pmax
           comp=Z,80nm,0.8s
GURO  Guroymak-BITLI   145.06 294            PKPdf      19 44 50.4 -0.6
FIA1  FINESS Array S   145.27 338            PKPdf      19 44 49.9 -0.5
FIA0  FINESS Array S   145.27 338   PKPdf    PKPdf      19 44 49.4 -1.0
FIA0  FINESS Array S   145.27 338   PKIKP    PKPdf      19 44 49.4 -1.0
FINES FINESS Array B   145.27 338   PKPbc    PKPbc      19 44 50.4 -0.8
           comp=Z,46nm,0.5s,baz=49,slow=3.9,SNR=266
FINES FINESS Array B   145.27 338            PKPdf      19 44 49.6 -0.8
NSS   Namsos           145.79 351  ePKPdf    PKPdf      19 44 51.3 +0.1
SOC   Sochi            146.48 303 i PKIKP    PKPdf      19 44 52.2 -0.8
SOC                                ePPP      PPP        19 51 40.7
SOC                                eSS       SS         20 06 44.0 -3.3
SOC                                eSSS      SSS        20 12 18.5
KTUT  Trabzon          146.73 298 ⇑P        PKPbc      19 44 56.4 +0.5
MEF   Metsahovi        146.74 338  eP        PKPbc      19 44 55.1 -0.2
RAF   Rauma            146.90 341  eP        PKPbc      19 44 55.4 -0.4
VSU   Vasula           147.23 334 i PKIKP    PKPdf      19 44 54.6 +0.8
VSU                                 pmax     pmax
           comp=Z,98nm,1.0s
VSU   Vasula           147.23 334  eP        PKPbc      19 44 57.2 +0.5
ANN   Anapa            147.88 306 i PKIKP    PKPbc      19 44 57.9 -0.9
ANN                                e                    19 46 32.3
ANN                                 pmax     pmax
           comp=Z,68nm,1.3s
MTSE  Matsula          148.08 337  eP        PKPbc      19 44 57.8 -1.1
AAL   Aland            148.09 341  eP        PKPbc      19 44 57.6 -1.3
AKN   Aaknes           148.65 354  ePKPbc    PKiKP      19 45 00.7 -0.8
GAZ   Gaziantep        148.86 291            PKPdf      19 44 58.1 +0.9
UPP   Uppsala          148.99 343  eP        PKPbc      19 45 01.0 -0.2
NC303 NORSAR Array S   149.02 349            PKPbc      19 45 00.5 -0.7
NC405 NORSAR Array S   149.07 349            PKPbc      19 45 00.8 -0.6
NB201 NORSAR Array S   149.20 349            PKPbc      19 45 00.3 -1.4
NB2   NORSAR Subarra   149.22 349   PKP      PKPbc      19 45 00.9 -0.9
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           comp=Z,28nm,0.9s,baz=15,slow=2.6
NB2   NORSAR Subarra   149.22 349   PKPab    PKPbc      19 45 00.9 -0.9
           slow=2.6
NOA   NORSAR Array B   149.22 349   PKPbc    PKPbc      19 45 01.2 -0.6
           comp=Z,11nm,0.6s,baz=16,slow=4.2,SNR=45
NBO00 NORSAR Array S   149.30 350            PKPbc      19 45 01.2 -0.8
FOO   Floro            149.38 355  ePKPbc    PKiKP      19 45 02.1 -0.9
MNK   Minsk            149.39 328 i PKP      PKPbc      19 45 01.7 -0.6
           comp=E,3.0nm,1.5s
MNK                               i PKP      PKPbc      19 45 01.7 -0.6
           comp=N,15nm,0.8s
MNK                               i PKP      PKPbc      19 45 01.7 -0.6
           comp=Z,34nm,0.9s
MNK                               i pPKP     pPKPdf     19 46 34.7 -0.1
MNK                               i SKP                 19 47 58.6
MNK                               i PKS      PP         19 48 37.0 -1.6
MNK                               i PP       PP         19 48 42.9 +4.3
MNK                               i SKS      SKSdf      19 51 32.4 +5.9
MNK                               i PPP      PPP        19 52 07.9
MNK                               i SKKS     SKKSdf     20 00 27.6 +4.7
MNK                               i SS       SS         20 07 24.3 +5.9
MNK                               i SSS      SSS        20 13 08.4
MNK                               i LRM      MLR        20 52 59.3
           comp=N,360nm,15.7s
MNK                               i LRM      MLR        20 53 10.4
           comp=Z,93nm,13.8s
MNK                               i LRM      MLR        20 53 14.0
           comp=E,20nm,14.8s
MNK   Minsk            149.39 328 i PKHKP    PKPpre     19 45 01.6
MNK                               i                     19 48 42.9
MNK                               i                     19 51 32.3
MNK                               i PPP      PPP        19 52 07.9
MNK                               i SS       SS         20 07 24.2 +5.8
MNK                               i SSS      SSS        20 13 08.3
MNK                                 pmax     pmax
           comp=Z,34nm,0.9s
MNK                                 pmax     pmax
           comp=E,3.0nm,1.5s
MNK                                 pmax     pmax
           comp=N,15nm,0.8s
MNK                                 MLR      MLR
           comp=N,360nm,16.0s
MNK                                 MLR      MLR
           comp=Z,93nm,14.0s
MNK                                 MLR      MLR
           comp=E,20nm,15.0s
NC602 NORSAR Array S   149.46 349            PKPbc      19 45 01.6 -0.7
NC602 NORSAR Array S   149.46 349  ePKPbc    PKPbc      19 45 01.6 -0.7
NAO01 NORSAR Array S   149.46 350            PKPbc      19 45 02.0 -0.3
IIGN  Ignalina         149.57 330  eP        PKPdf      19 44 56.7 -1.0
NACGM Naroch           149.62 329⇓iPKP      PKPbc      19 45 02.7 -0.2
           comp=Z,66nm,0.9s,baz=50
GHAJ  Ghor Haditha     149.76 280            PKiKP      19 45 04.3 -0.4
BNN   Bunyan           149.89 295            PKPbc      19 45 03.2 -1.0
SUE   Sulen            149.94 355  ePKPbc    PKiKP      19 45 03.6 -0.5
SKAR  Skarslia         149.97 352  ePKPbc    PKiKP      19 45 03.8 -0.5
DIKM  Dikmen           150.02 300 ⇑P        PKiKP      19 45 05.8 +0.9
VSVD  Vaisvydziai      150.07 333  eP        PKiKP      19 45 03.9 -0.7
SIM   Simferopol'      150.13 307 i PKP2     PKiKP      19 45 05.6 +0.5
SIM                                 pmax     pmax
           comp=Z,40nm,1.0s
PABE  Paberze          150.40 332  eP        PKPbc      19 45 04.3 -0.3
VIKU  Vikbolandet      150.41 342  eP        PKPbc      19 45 04.1 -0.5
ASK   Askoy            150.47 355  ePKPbc    PKPbc      19 45 04.3 -0.3
KONO  Kongsberg        150.80 350            PKPbc      19 45 04.9 -0.6
KONO  Kongsberg        150.80 350   PKIKP    PKPbc      19 45 04.9 -0.6
KONO  Kongsberg        150.80 350  ePKPbc    PKiKP      19 45 05.6 -0.3
AKASG Malin Array Be   150.88 321   PKPbc    PKPbc      19 45 05.4 -0.5
           comp=Z,13nm,0.6s,baz=58,slow=2.7,SNR=50
AKBB  Malin Array Si   150.88 321            PKPbc      19 45 05.0 -0.9
AKBB  Malin Array Si   150.88 321   PKIKP    PKPbc      19 45 05.0 -0.9
BZK   Bozkurt          150.89 301 ⇓P        PKPbc      19 45 04.3 -2.0
BZK   Bozkurt          150.89 301            PKPdf      19 44 59.6 -0.6
ODD1  Odda             150.91 353  ePKPbc    PKiKP      19 45 05.8 -0.5
STRU  Stroemstad       151.13 348 i P        PKPbc      19 45 05.0 -1.2
ILGA  Ilgaz            151.26 299            PKiKP      19 45 07.5 -0.4
BLS5  Blasjo           151.41 353  ePKPbc    PKiKP      19 45 07.4 +0.1
BR131 Keskin Array S   151.51 297            PKPbc      19 45 07.1 -0.8
BR131 Keskin Array S   151.51 297   PKIKP    PKPbc      19 45 07.1 -0.8
BRTR  Keskin Array B   151.51 297   PKPbc    PKPbc      19 45 07.5 -0.4
           comp=Z,7.3nm,0.5s,baz=133,slow=3.5,SNR=20
BRTR                                PKPab    PKPab      19 45 17.9 -0.4
           comp=Z,6.8nm,0.7s,baz=130,slow=4.2,SNR=9.0
BRTR  Keskin Array B   151.51 297            PKPbc      19 45 07.4 -0.6
CSS   Mathiatis        151.98 287            PKPbc      19 45 08.1 -0.9
TJOU  Tjoern           151.99 347 i P        PKPbc      19 45 07.0 -1.2
BORU  Boraas           152.12 345 i P        PKPbc      19 45 07.2 -1.3
ANTO  Ankara           152.14 297 ⇑P        PKiKP      19 45 10.4 +0.9
ANTO  Ankara           152.14 297            PKPbc      19 45 08.8 -0.5
ANTO  Ankara           152.14 297   PKIKP    PKPbc      19 45 08.8 -0.5
BR231 Keskin MP Arra   152.15 297            PKPbc      19 45 09.0 -0.3
HOMB  Homborsund       152.28 350 i P        PKPbc      19 45 08.2 -0.6
HOMB  Homborsund       152.28 350  ePKPbc    PKiKP      19 45 09.2 +0.1
SNART Snartemo         152.39 352 i P        PKPbc      19 45 08.3 -0.8
SNART Snartemo         152.39 352  ePKPbc    PKiKP      19 45 09.4 +0.1
ONAU  Onsala           152.52 346 i P        PKPbc      19 45 08.5 -0.9
BLEU  Blekinge         152.55 341 i P        PKPbc      19 45 08.7 -0.8
SORM  Soroca           152.65 316 ⇑P        PKPbc      19 45 09.5 -0.5
SORM  Soroca           152.65 316 ⇑PKIKP    PKPbc      19 45 09.5 -0.5
FABU  Falkenberg       152.71 345 i P        PKiKP      19 45 09.5 -0.5
DEL   Delary           152.92 343  eP        PKiKP      19 45 10.9 +0.5
DEL   Delary           152.92 343 i P        PKiKP      19 45 10.5 +0.1
OVD   Ostervraa, Den   152.92 348 i P        PKiKP      19 45 10.1 -0.2
MDUB  Mudurnu          153.25 299            PKPbc      19 45 10.8 -0.9
BSD   Bornholm Skovb   153.84 341 i P        PKPbc      19 45 11.8 -0.5
BORA  Eskisehir        153.91 298            PKPab      19 45 28.3  0.0
TPGR  Topolog          153.99 310 ⇑P        PKPab      19 45 29.7 +1.2
PANC  Panciu           154.40 313 ⇓P        PKPab      19 45 32.6 +2.5
TESR  Tescani          154.43 314 ⇑P        PKPab      19 45 31.2 +1.0
VRI   Vrincioaia       154.67 313 ⇓P        PKPab      19 45 31.1 -0.2
VRI   Vrincioaia       154.67 313 ⇓PKP2     PKPab      19 45 31.1 -0.2
ELL   Elmali           154.72 291            PKPab      19 45 25.0 -7.0
ELL   Elmali           154.72 291   PKP2     PKPab      19 45 25.0 -7.0
PLOR  Plostina         154.72 313 ⇓P        PKPab      19 45 33.1 +1.6
PLOR  Plostina         154.72 313 ⇓PKP2     PKPab      19 45 33.2 +1.6
BUR08 Bucovina Ar. S   154.73 318            PKiKP      19 45 10.1 -4.5
BURAR Bucovina Array   154.74 318 ⇑P        PKPab      19 45 32.9 +1.3
BURAR Bucovina Array   154.74 318            PKPbc      19 45 15.5 +0.8
BURAR Bucovina Array   154.74 318 ⇑PKP2     PKPab      19 45 32.9 +1.3
BISRR Bisoca           154.82 312 ⇑P        PKPab      19 45 34.8 +2.8
COVR  Voineasa-Covas   155.01 313 ⇑P        PKPab      19 45 33.9 +1.2
DBIC  Dimbokro         155.20 168   PKP      PKPdf      19 45 07.1 -0.1
           comp=Z,4.5nm,0.9s,baz=249,slow=8.6,SNR=5.0
DBIC                                PKPab    PKPab      19 45 35.8 +1.7
           comp=Z,3.1nm,0.6s,baz=183,slow=7.4,SNR=3.4
MLR   Muntele Rosu     155.33 313 ⇓P        PKPab      19 45 32.1 -2.2
MLR   Muntele Rosu     155.33 313 ⇓PKP2     PKPab      19 45 32.1 -2.2
SECR                   155.45 312 ⇓P        PKPab      19 45 36.6 +2.0
DOPR  Dopca            155.46 314 ⇓P        PKPab      19 45 36.6 +1.9
VOIR                   155.91 313 ⇑P        PKPab      19 45 39.1 +2.4
VOIR                   155.91 313 ⇑PKP2     PKPab      19 45 39.1 +2.4
TRPA  Tarpa            155.94 321 ⇓P        PKPab      19 45 37.7 +1.1
ARR   Arges            156.21 314 ⇓P        PKPab      19 45 39.7 +1.7
HUMR  Humele           156.37 311 ⇓P        PKPab      19 45 39.7 +1.1
MARR  Marisel-Cluj     156.45 318 ⇑P        PKPab      19 45 40.3 +1.3
DRGR                   156.62 318 ⇑P        PKPab      19 45 40.8 +1.1
DRGR                   156.62 318 ⇑PKP2     PKPab      19 45 40.8 +1.1
LANS  Liptovska Anna   156.84 326  ePKP2     PKPab      19 45 41.7 +1.2
PLVB  Pleven           157.08 309 ⇓P        PKPab      19 45 43.5 +1.7
OSTC  Ostas            157.20 333  ePKPAB    PKPab      19 45 42.3 +0.3
OSTC  Ostas            157.20 333  ePKP2     PKPab      19 45 42.3 +0.3
DPC   Dobruska-Polom   157.32 332  ePKPAB    PKPab      19 45 42.6  0.0
DPC   Dobruska-Polom   157.32 332  ePKP2     PKPab      19 45 42.6  0.0
GZR   Gura Zlata       157.33 315 ⇓P        PKPab      19 45 46.7 +3.9
GZR   Gura Zlata       157.33 315 ⇓PKP2     PKPab      19 45 46.7 +3.9
KRLC  Kraliky          157.35 331  ePKPAB    PKPab      19 45 42.6 -0.1
KRLC  Kraliky          157.35 331  ePKP2     PKPab      19 45 42.6 -0.1
SURR  Surduc           157.53 317 ⇓P        PKPab      19 45 44.9 +1.3
VYHS  Vyhne            157.59 326  ePKP2     PKPab      19 45 43.8  0.0
CLL   Collm            157.72 338            PKPab      19 45 43.8 -0.4
CLL   Collm            157.72 338 i PKPab    PKPab      19 45 43.1 -1.1
           comp=Z,85nm,2.1s
CLL   Collm            157.72 338 i PKP2     PKPab      19 45 43.1 -1.1
CLL                                 pmax     pmax
           comp=Z,85nm,2.1s
CLL   Collm            157.72 338  ePKPab    PKPab      19 45 43.7 -0.4
           baz=28,slow=4.1
BRG   Berggiesshubel   157.78 336 i PKP2     PKPab      19 45 44.9 +0.5
BRG                                 pmax     pmax
           comp=Z,13nm,1.0s
BRG   Berggiesshubel   157.78 336  ePKPab    PKPab      19 45 44.6 +0.1
           baz=28,slow=4.1
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HERR	Herculane	157.81	314	⇑P	PKPab	19 45 46.0	+1.1
PVCC	Panska Ves	157.85	335	ePKPAB	PKPab	19 45 45.6	+0.8
PVCC	Panska Ves	157.85	335	ePKP2	PKPab	19 45 45.6	+0.8
BZS	Buzias	157.90	317	⇓P	PKPab	19 45 46.3	+1.1
BZS	Buzias	157.90	317	⇓PKP2	PKPab	19 45 46.3	+1.1
FBE	Freiberg	157.94	337	ePKPab	PKPab	19 45 45.4	+0.3
	baz=28,slow=4.1						
CLZ	Clausthal	157.99	343	ePKPab	PKPab	19 45 45.5	+0.1
	baz=28,slow=4.1						
IBBN	Ibbenburen	158.13	347	ePKPab	PKPab	19 45 45.7	-0.2
	baz=28,slow=4.1						
NEUB	Neuenburg	158.18	340	ePKPab	PKPab	19 45 46.8	+0.6
	baz=28,slow=4.1						
MDVR	Moldovita	158.29	315	⇑P	PKPab	19 45 47.9	+0.9
PRU	Pruhonice	158.30	334	ePKPAB	PKPab	19 45 47.2	+0.5
PRU	Pruhonice	158.30	334	ePKP2	PKPab	19 45 47.2	+0.5
VTS	Vitosha	158.33	308	⇓P	PKPab	19 45 50.0	+2.6
VTS	Vitosha	158.33	308	PKPab	PKPab	19 45 49.6	+2.2
VTS	Vitosha	158.33	308	PKP2	PKPab	19 45 49.6	+2.2
GTTG	Gottingen	158.37	343	ePKPab	PKPab	19 45 46.9	-0.1
	baz=28,slow=4.1						
MODS	Modra-Piesok	158.41	328	ePKP2	PKPab	19 45 48.4	+1.1
TANN	Tannenbergstha	158.66	338	ePKPab	PKPab	19 45 47.0	-1.4
	baz=28,slow=4.1						
WERD	Werda	158.69	338	ePKPab	PKPab	19 45 48.6	+0.2
	baz=28,slow=4.1						
PLN	Plauen	158.70	338	ePKPab	PKPab	19 45 48.4	0.0
	baz=28,slow=4.1						
MOX	Moxa	158.73	340	ePKPab	PKPab	19 45 48.7	+0.1
	baz=28,slow=4.1						
GUNZ	Gunzen	158.75	338	ePKPab	PKPab	19 45 48.9	+0.2
	baz=28,slow=4.1						
WERN	Wernitzgruen	158.80	338	ePKPab	PKPab	19 45 49.2	+0.2
	baz=28,slow=4.1						
BOVS	Bovan	158.87	312	⇓P	PKPab	19 45 50.2	+0.7
IDI	Anoyia	158.88	288	⇓P	PKPab	19 45 52.0	+2.0
KASTN	Kahler Asten	159.05	345	ePKPab	PKPab	19 45 49.2	-0.8
	baz=28,slow=4.1						
BUG	Bochum--Univer	159.05	347	ePKPab	PKPab	19 45 49.5	-0.4
	baz=28,slow=4.1						
MANZ	Manzenberg	159.15	338	ePKPab	PKPab	19 45 51.7	+1.2
	baz=28,slow=4.1						
FRGS	Fruska Gora	159.21	318	⇑P	PKPab	19 45 52.1	+1.1
ROTZ	Rotzenmuhle	159.31	337	ePKPab	PKPab	19 45 51.5	+0.4
	baz=28,slow=4.1						
CKRC	Cesky Krumlov	159.34	333	ePKPAB	PKPab	19 45 51.3	0.0
CKRC	Cesky Krumlov	159.34	333	ePKP2	PKPab	19 45 51.3	0.0
RONA	Rosalia, Austr	159.35	328	i PKP	PKPab	19 45 51.9	+0.4
	comp=Z,13nm,1.3s						
KHC	Kasperske Hory	159.36	334		PKPab	19 45 50.0	-1.5
KHC	Kasperske Hory	159.36	334	ex	x	19 45 34.0	
KHC				ePKPAB	PKPab	19 45 51.5	0.0
KHC				ePP	PP	19 49 57.3	+23
KHC	Kasperske Hory	159.36	334	PKP2	PKPab	19 45 50.0	-1.5
CONA	Conrad Observa	159.38	329	i PKP	PKPab	19 45 51.8	+0.2
	comp=Z,11nm,1.2s						
GEC2	GERESS Array S	159.55	334	ePKPab	PKPab	19 45 51.7	-0.7
	baz=28,slow=4.1						
GERES	GERESS Array B	159.55	334	PKPab	PKPab	19 45 51.2	-1.1
	comp=Z,1.3nm,0.6s,baz=46,slow=5.8,SNR=12						
GRF	Grafenberg Arr	159.69	339	ePKPab	PKPab	19 45 52.0	-0.8
	baz=28,slow=4.1						
DIVS	Divibare	159.70	315		PKPab	19 45 52.5	-0.8
LIT	Litokhoron	159.78	302		PKPab	19 45 52.1	-1.6
LIT	Litokhoron	159.78	302	PKP2	PKPab	19 45 52.1	-1.6
ARSA	Arzberg	160.04	328	i PKP	PKPab	19 45 54.1	-0.3
	comp=Z,6.8nm,1.2s						
MOA	Molln	160.13	331	ePKP	PKPab	19 45 54.8	-0.1
	comp=Z,5.5nm,1.0s						
BIOA	Bad Ischl, Aus	160.51	332	i PKP	PKPab	19 45 54.9	-1.6
	comp=Z,3.6nm,0.8s						
SOKA	Soboth	160.69	328	i PKP	PKPab	19 45 56.7	-0.7
	comp=Z,7.9nm,1.3s						
RJOB	Jochberg	160.81	333	ePKPab	PKPab	19 45 57.9	0.0
	baz=28,slow=4.1						
WTTA	Wattenberg	161.64	334	i PKP	PKPab	19 46 01.2	-0.4
	comp=Z,11nm,1.1s						
RETA	Reutte	161.76	336	i PKP	PKPab	19 46 02.1	+0.1
	comp=Z,14nm,1.1s						
MOTA	Moosalm	161.76	336	ePKP	PKPab	19 46 01.8	-0.4
	comp=Z,13nm,1.2s						
SQTA	Sankt Quirin	161.83	335	ePKP	PKPab	19 46 02.1	-0.3
	comp=Z,7.9nm,0.7s						
TORD	Torodi Ar. Bea	162.02	185	PKP	PKPdf	19 45 14.8	-0.4
	comp=Z,4.7nm,1.1s,baz=169,slow=1.5,SNR=15						
TORD				PKPab	PKPab	19 46 04.2	+0.5
	comp=Z,12nm,0.9s,baz=167,slow=4.7,SNR=29						
TORD				PP	PP	19 49 48.5	+1.0
	comp=Z,1.3nm,1.0s,baz=166,slow=3.1,SNR=3.8						
DAVA	Damuels	162.23	338	i PKP	PKPab	19 46 03.9	-0.3
	comp=Z,16nm,1.2s						
FUORN	Ofenpass-Fuorn	162.68	336		PKPab	19 46 06.1	-0.3
ESDC	Sonseca Array	170.88	20	PKP	PKPdf	19 45 21.9	+0.6
	comp=Z,2.0nm,1.0s,baz=329,slow=1.9,SNR=7.1						
ESDC				PKPab	PKPab	19 46 42.1	-0.4
	comp=Z,0.4nm,0.6s,baz=327,slow=3.2,SNR=5.2						

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*STR **06** 19:40:44.7±1.2, 47°N±4°×°±°, h12^{km}±5^{km}, MLv2.4/12, Error ellipse: s-maj=0.0km s-min=0.0km az=107.1, preliminary*

*GEN **06** 19:40:44.1, 46°.93N×8°.93E, h18^{km}±3^{km}, Ml2.1*

*VIE **06** 19:40:45.0, 46°.89N×8°.93E, h4^{km}, mb1.9/2, ml2.6/7 21 km E of Altdorf*

*ZUR **06** 19:40:44.9, 46°.91N×8°.92E, h5^{km}±2^{km}, MLh2.2/90, Error ellipse: s-maj=3.7km s-min=0.7km az=310.0*

*PRU **06** 19:40:45.7±0.0, 47°.17N×8°.77E, h12^{km}, Altdorf*

*LDG **06** 19:40:45.7±0.1, 46°.86N×8°.96E, h4^{km}, Ml2.5/9, Error ellipse: s-maj=1.6km s-min=1.4km az=49.0*

ISC 06 19:40:44.7±0.8**, 46°.91N**±0°.02×**8°.93E**±0°.01**, h7**^{km}±5^{km}**, n122, σ1^{s}05**/155**, 17C-17D, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLTM2	Linthal, Matt	0.05	74	⇓Pg	Pg	19 40 46.5	+0.2
SLTM2				Sg	Sg	19 40 47.6	+0.1
LLS	Linth-Limmern	0.08	138	⇓Pg	Pg	19 40 47.0	+0.2
LLS				Sg	Sg	19 40 48.5	+0.1
LLS	Linth-Limmern	0.08	138	⇓Pg	Pg	19 40 47.0	+0.2
LLS				Sg	Sg	19 40 48.5	+0.1
PANIX	Pigniu (Panix)	0.15	123	⇓Pg	Pg	19 40 48.2	+0.4
PANIX				Sg	Sg	19 40 50.6	+0.6
SALTS	Altdorf, Kanto	0.20	262	Pg	Pg	19 40 48.8	+0.2
SALTS	Altdorf, Kanto	0.20	262	Pg	Pg	19 40 48.8	+0.2
MUO	Muotathal	0.21	287	⇓Pg	Pg	19 40 49.2	+0.3
MUO	Muotathal	0.21	287	⇓Pg	Pg	19 40 49.2	+0.3
SIZS	Ilanz Schule G	0.23	125	Pg	Pg	19 40 50.0	+0.7
SIZS	Ilanz Schule G	0.23	125	Pg	Pg	19 40 50.0	+0.7
NALPS	Val Nalps	0.34	201	⇑Pg	Pg	19 40 51.9	+0.5
NALPS	Val Nalps	0.34	201	⇑Pg	Pg	19 40 51.9	+0.5
PLONS	Plons/SG	0.34	65	⇑Pg	Pg	19 40 51.9	+0.5
PLONS	Plons/SG	0.34	65	⇑Pg	Pg	19 40 51.9	+0.5
BNALP	Bannalp	0.35	264	⇑Pg	Pg	19 40 52.0	+0.5
BNALP	Bannalp	0.35	264	⇑Pg	Pg	19 40 52.0	+0.5
BNALP				Sg	Sg	19 40 56.6	+0.6
SBUB	Buchserberg Ma	0.42	55	⇓Pg	Pg	19 40 53.4	+0.5
SBUB	Buchserberg Ma	0.42	55	⇓Pg	Pg	19 40 53.4	+0.5
SBUA2	Buchs, Altendo	0.45	56	⇓Pg	Pg	19 40 53.9	+0.5
SBUA2	Buchs, Altendo	0.45	56	⇓Pg	Pg	19 40 53.9	+0.5
SVAM	Vaz, Muldain	0.46	117	⇓Pg	Pg	19 40 54.4	+0.7
STRW	Triesenberg, W	0.47	64	⇑Pg	Pg	19 40 54.5	+0.7
STRW	Triesenberg, W	0.47	64	⇑Pg	Pg	19 40 54.5	+0.7
FUSIO	Fusio	0.49	202	P	Pg	19 40 54.6	+0.5
FUSIO				S	Sg	19 41 00.8	+0.3
FUSIO	Fusio	0.49	202	⇑Pg	Pg	19 40 54.7	+0.5
FUSIO	Fusio	0.49	202	⇑Pg	Pg	19 40 54.7	+0.5
WILA	Wila	0.51	358	⇓Pg	Pb	19 40 55.6	-0.4
ZUR	Degenried	0.52	333	Pg	Pb	19 40 56.6	+0.4
ZUR	Degenried	0.52	333	Sg	Sb	19 41 03.3	-0.6
EWZT2	Wettswil, ZR	0.52	326	⇓Pg	Pb	19 40 56.7	+0.5
TUE	Stuetta	0.52	146	P	Pb	19 40 55.8	-0.5
TUE				S	Sn	19 41 08.3	+0.3
SGT04	Schlatt-Haslen	0.53	33	Pg	Pb	19 40 55.8	-0.5
GRIMS	Grimsel Gerste	0.53	232	⇑Pg	Pg	19 40 55.3	+0.3
GRIMS	Grimsel Gerste	0.53	232	⇑Pg	Pg	19 40 55.3	+0.3
HASLI	Hasliberg/Brie	0.55	254	Pg	Pg	19 40 55.7	+0.3
HASLI	Hasliberg/Brie	0.55	254	Pg	Pg	19 40 55.7	+0.3
VDL	Val di Lei	0.56	140	P	Pg	19 40 56.0	+0.5
VDL				S	Sg	19 41 03.2	+0.4
HAMIK	Hmikon, Dlik	0.56	307	⇑Pg	Pb	19 40 56.5	-0.4
DAVOX	Davos/Dischmat	0.67	101	P	Pg	19 40 57.9	+0.4
DAVOX				S	Sb	19 41 07.3	-0.9
DAVOX	Davos/Dischmat	0.67	101	⇓Pg	Pg	19 40 57.9	+0.4
DAVOX	Davos/Dischmat	0.67	101	⇓Pg	Pg	19 40 57.9	+0.4
FIESA	Fiescheralp	0.73	230	P	Pg	19 40 59.1	+0.3
FIESA				S	Sg	19 41 08.5	+0.1
FIESA	Fiescheralp	0.73	230	⇑Pg	Pg	19 40 59.1	+0.3
DAVA	Damuels	0.75	60	ePg	Pb	19 40 59.8	-0.4
	3.5nm,0.1s						
DAVA				Sg	Sb	19 41 10.8	0.0
	114nm,0.2s,SNR=48						
SULZ	Cheisacher	0.83	318	Pg	Pb	19 41 01.8	+0.3
SULZ	Cheisacher	0.83	318	Pn	Pn	19 41 03.6	+0.7
SULZ	Cheisacher	0.83	318	Sg	Sn	19 41 16.0	+0.6
BERNI	Berninapass	0.90	123	P	Pg	19 41 02.1	+0.1
BERNI				S	Sg	19 41 14.1	+0.3
SLE	Schleitheim	0.91	341	Sg	Sn	19 41 17.2	0.0
SLE	Schleitheim	0.91	341	Pn	Pn	19 41 04.3	+0.4
SLE	Schleitheim	0.91	341	Pg	Pb	19 41 02.9	+0.2
SIMPL	Simplonpass	0.92	223	P	Pg	19 41 02.2	-0.1
SIMPL	Simplonpass	0.92	223	⇑Pg	Pg	19 41 02.2	-0.1
LAUCH	Lauchernalp	0.94	239	P	Pg	19 41 02.7	0.0
BALST	Balsthal	0.94	297	Pg	Pn	19 41 03.9	-0.5
BALST	Balsthal	0.94	297	Pn	Pn	19 41 05.0	+0.6
BALST	Balsthal	0.94	297	Sg	Sn	19 41 18.9	+0.7
FUORN	Ofenpass-Fuorn	0.96	107	⇓Pg	Pg	19 41 03.3	+0.2
MUGIO	Muggio	0.99	175	P	Pg	19 41 04.0	+0.3
MUGIO				S	Sg	19 41 16.9	+0.4
MUGIO	Muggio	0.99	175	⇑Pg	Pg	19 41 04.0	+0.3
EMBD	Embd, Matterta	1.02	228	P	Pb	19 41 04.2	-0.6
EMBD				S	Sn	19 41 24.3	+4.1
EMBD	Embd, Matterta	1.02	228	Pg	Pb	19 41 04.2	-0.6
VARE	Varese	1.05	186	P	Pg	19 41 05.2	+0.5
BRMO	Bormio	1.08	113	P	Pn	19 41 06.1	-0.4
MMK	Mattmark	1.09	218	P	Pb	19 41 05.3	-0.7
FELD	Feldberg im Sc	1.15	327	Pg	Pg	19 41 08.2	+1.4
FELD	Feldberg im Sc	1.15	327	S	Sn	19 41 23.6	+0.1
VANNI	Vissoie, Val d	1.15	233	P	Pb	19 41 06.6	-0.4
VANNI				S	Sn	19 41 27.2	+3.7
FETA	Feichten	1.24	84	i Pg	Pb	19 41 08.5	0.0
	0.2nm,0.1s,SNR=6.1						
FETA				eSg	Sn	19 41 26.6	+1.0
	3.9nm,0.2s						
SENIN	Lac Senin/Sane	1.25	245	P	Pn	19 41 08.5	-0.2
SENIN				S	Sn	19 41 27.3	+1.4
KIZ	Kirchzarten	1.25	327	Pn	Pg	19 41 09.2	+0.6
KIZ	Kirchzarten	1.25	327	Sn	Sg	19 41 26.0	+1.1
MDI	Monti di Nese	1.25	154	P	Pn	19 41 08.3	-0.4
BOURR	Bourrignon	1.26	293	Sn	Sg	19 41 25.7	+0.6
BOURR	Bourrignon	1.26	293	Pn	Pg	19 41 09.1	+0.3
SATI	Passo dei Sala	1.27	216	P	Pn	19 41 08.9	-0.2
DIX	Grande Dixence	1.34	232	P	Pn	19 41 09.9	-0.1
DIX	Grande Dixence	1.34	232	⇑Pn	Pn	19 41 09.9	-0.1
TORNY	Torny/Romont	1.36	265	Sn	Sg	19 41 29.6	+1.3
TORNY	Torny/Romont	1.36	265	Pn	Pg	19 41 11.4	+0.7
TORNY				Pg	Pb	19 41 12.3	+1.9
RETA	Reutte	1.38	65	i Pg	Pg	19 41 11.9	+0.8
	1.7nm,0.1s						
RETA				eSg	Sg	19 41 31.1	+2.1
	26nm,0.4s,SNR=7.2						
AIGLE	Aigle	1.47	248	Pg	Pg	19 41 14.2	+1.3
AIGLE	Aigle	1.47	248	Sn	Sg	19 41 32.9	+0.9
MOTA	Moosalm	1.55	73	ePg	Pg	19 41 14.6	+0.3
	1.3nm,0.2s						
MOTA				eSg	Sg	19 41 36.8	+2.3
	4.7nm,0.1s,SNR=7.3						
SQTA	Sankt Quirin	1.59	78	ePg	Pg	19 41 15.8	+0.6
	3.0nm,0.1s,SNR=13						
SQTA				eSg	Sg	19 41 38.4	+2.6
	16nm,0.2s						
CHMF	Charmoille	1.59	283	⇓Pn	Pb	19 41 13.9	-0.5
TRAV	Traversella	1.62	211	P	Pb	19 41 15.2	+0.2
HINF	Hinteralfeld	1.68	304	ePg	Pg	19 41 17.8	+1.0
BRANT	Les Verrieres	1.68	272	Pn	Pb	19 41 15.5	-0.5
BRANT	Les Verrieres	1.68	272	Sn	Sb	19 41 37.0	-0.4
OGSI	Sixt	1.72	241	Pg	Pg	19 41 18.4	+0.7
ECH	Echery	1.77	318	Pn	Pn	19 41 16.1	+0.3
ECH				Sn	Sn	19 41 37.4	-1.2
WATA	Walderalm	1.86	76	ePg	Pg	19 41 20.2	0.0
	0.7nm,0.1s						
WATA				eSg	Sg	19 41 47.6	+3.2
	11nm,0.3s						
GIMEL	St. Georges /	1.87	259	Sg	Sg	19 41 45.8	+1.1
GIMEL	St. Georges /	1.87	259	Pg	Pg	19 41 21.5	+1.0
CDF	Champ du Feu	1.87	324	ePn	Pn	19 41 17.5	+0.3
CDF	Champ du Feu	1.87	324	ePg	Pg	19 41 21.8	+1.2
CDF				eSg	Sg	19 41 45.1	+0.3
	5.7nm,0.2s						
WTTA	Wattenberg	1.89	78	ePg	Pg	19 41 20.9	+0.1
	1.3nm,0.2s						
WTTA				eSg	Sg	19 41 48.1	+2.9
	23nm,0.5s						
CABF	La Chapelle	1.98	262	eSg	Sg	19 41 48.0	-0.1
	4.6nm,0.2s						
RSL	Roselend	2.01	233	Pg	Pg	19 41 24.1	+0.9
LPL	La Plagne	2.06	228	ePn	Pn	19 41 18.9	-1.1
LPL	La Plagne	2.06	228	ePg	Pg	19 41 23.7	-0.5
HAU	Haudompre	2.07	303	ePn	Pn	19 41 20.2	+0.4
HAU				eSn	Sn	19 41 45.0	-0.8
MBDF	Montbardon	2.65	215	ePn	Pn	19 41 27.6	-0.4
MBDF	Montbardon	2.65	215	ePg	Pb	19 41 34.1	+1.5
PAGF	Fort de Pagny	2.72	308	ePn	Pn	19 41 29.3	+0.6
PAGF	Fort de Pagny	2.72	308	ePg	Pg	19 41 36.2	-0.5
PAGF				eSg	Sg	19 42 12.2	+0.3
	2.4nm,0.2s						
ORIF	Oris-en-Rattie	2.91	228	ePn	Pn	19 41 30.9	-0.6
ORIF	Oris-en-Rattie	2.91	228	ePg	Pg	19 41 39.3	-1.2
SFTF	Sexfontaines	2.94	298	ePn	Pn	19 41 31.8	+0.1
SFTF	Sexfontaines	2.94	298	ePg	Pg	19 41 40.0	-0.9
	baz=117						
SFTF				eSg	Sg	19 42 18.8	-0.1
	2.5nm,0.2s						
MEZF	Maizieres J'vi	3.06	303	eSg	Sg	19 42 23.3	+0.3
	3.3nm,0.3s						
SAVF	Savonnieres en	3.08	305	ePn	Pn	19 41 34.9	+1.2
LOR	Lormes	3.48	278	ePn	Pn	19 41 39.5	+0.3
	baz=100						
LOR				eSn	Sn	19 42 19.3	-1.4
LOR				eSg	Sg	19 42 35.2	-1.2
	2.1nm,0.2s,baz=122						
SMF	Signal de Mont	3.50	268	ePn	Pn	19 41 38.9	-0.7
SMF	Signal de Mont	3.50	268	ePg	Pg	19 41 51.3	-0.5
SSF	Saint Saulge	3.71	274	eSn	Sn	19 42 24.1	-2.3
KHC	Kasperske Hory	3.83	53	eSN	Sn	19 42 26.6	-2.8
KHC				eSG	Sg	19 42 45.5	-2.2
CKRC	Cesky Krumlov	4.10	60	eSN	Sn	19 42 34.4	-1.5
CKRC				eSG	Sg	19 42 51.9	-4.3
BGF	Bois d'Agland	4.20	267	ePn	Pn	19 41 48.4	-0.7
BGF				eSn	Sn	19 42 35.5	-2.8
	3.1nm,0.3s						
GIVF	Givet	4.20	321	ePn	Pn	19 41 49.3	+0.2
CAF	Calviac	5.18	250	ePn	Pn	19 42 02.6	0.0

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*ZUR **06** 19:40:50.9, 46°.91N×8°.92E, h5^{km}±1^{km}, MLh2.2/19, Error ellipse: s-maj=3.5km s-min=0.9km az=289.0*

*VIE **06** 19:40:51.0, 46°.89N×8°.92E, h4^{km}, mb1.9/1, ml3.1/1 21 km E of Altdorf*

*PRU **06** 19:40:53.6±0.0, 47°.10N×8°.90E, h9^{km}, Altdorf*

ISC 06 19:40:50.9±1.3**, 46°.91N**±0°.07×**8°.94E**±0°.04**, h8**^{km}±7^{km}**, n10, σ0^{s}88**/15**, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLTM2	Linthal, Matt	0.04	75	Pg	Pg	19 40 52.6	0.0
SLTM2				Sg	Sg	19 40 53.7	-0.2
LLS	Linth-Limmern	0.08	145	Pg	Pg	19 40 53.2	0.0
LLS				Sg	Sg	19 40 54.6	-0.2
PANIX	Pigniu (Panix)	0.15	127	Sg	Sg	19 40 56.7	+0.4
SALTS	Altdorf, Kanto	0.21	262	Sg	Sg	19 40 58.1	+0.1
PLONS	Plons/SG	0.33	65	Sg	Sg	19 41 02.6	+0.8
BNALP	Bannalp	0.36	263	Sg	Sg	19 41 02.8	+0.1
SBUB	Buchserberg Ma	0.41	55	Sg	Sg	19 41 05.6	+1.3
DAVA	Damuels	0.74	59	i Pg	Pg	19 41 05.9	+0.7
	3.6nm,0.1s						
DAVA				i Sg	Sb	19 41 17.0	+0.4
	124nm,0.3s						
KHC	Kasperske Hory	3.82	53	eSN	Sn	19 42 34.6	-0.6
KHC				eSG	Sg	19 42 51.5	-2.1
	comp=Z,4.7nm,0.5s						
CKRC	Cesky Krumlov	4.09	60	eSN	Sn	19 42 41.5	-0.2
CKRC				eSG	Sg	19 43 01.2	-0.9
	comp=Z,3.1nm,0.5s						

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*NEIC **06** 19:40:48.8±1.8, 53°.35N±0°.10×163°.43W±0°.10, h14^{km}±7^{km}, mb4.2/12, ML3.6/6, ML3.5(AEIC), Error ellipse: s-maj=15.1km s-min=6.8km az=157.0*

*IDC **06** 19:40:49.2±1.5, 53°.73N×163°.87W, h0^{km}, mb3.7/15, mbtmp3.7/17, ML3.5/2, MS3.3/2, Error ellipse: s-maj=38.1km s-min=16.5km az=166.0*

*AEIC **06** 19:40:51.2±2.2, 53°.42N±0°.08×163°.50W±0°.10, h23^{km}±6^{km}, Error ellipse: s-maj=12.8km s-min=5.6km az=147.0*

ISC 06 19:40:51.1±0.8**, 53°.42N**±0°.08×**163°.34W**±0°.05**, h29**^{km}**, n98, σ1^{s}37**/94**, mb3.9**/17**, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FALS	False Pass	1.45	358		Pn	19 41 15.4	+0.2
FALS	False Pass	1.45	358		Sb	19 41 34.4	-0.9
FALS	False Pass	1.45	358	P	Pn	19 41 15.5	+0.2
	baz=182						
FALS				S	Sb	19 41 34.4	-0.9
	baz=182						
AKUT	Akutan	1.61	298		Pn	19 41 16.5	-1.0
AKUT				IAML		19 41 45.4	
	comp=E,616nm,0.7s						
UNV	Unalaska Valle	1.93	284		Pn	19 41 20.9	-1.0
UNV					Sn	19 41 43.5	-1.7
UNV	Unalaska Valle	1.93	284	P	Pn	19 41 20.9	-1.0
	baz=102						
UNV				S	Sn	19 41 43.5	-1.7
	baz=102						
S12K	Black Hills	2.41	17	P	Pn	19 41 30.3	+1.8
	baz=201						
SDPT	Sand Point	2.56	40		Pn	19 41 32.7	+2.1
SDPT				IAML		19 42 24.1	
	comp=N,285nm,1.4s						
SDPT	Sand Point	2.56	40	P	Pn	19 41 32.7	+2.1
	baz=224						
CHGN	Chignik	4.06	43		Pn	19 41 53.1	+2.0
CHGN				IAML		19 42 59.9	
	comp=N,66nm,0.9s						
CHGN				IAML		19 43 08.4	
	comp=E,82nm,1.1s						
CHGN	Chignik	4.06	43	P	Pn	19 41 53.5	+2.4
	baz=228						
KDAK	Kodiak Island	7.50	50	Pn	Pn	19 42 38.8	+0.5
	comp=E,1.1nm,0.3s,baz=242,slow=7.0,SNR=21						
KDAK				Sn	Sn	19 43 58.4	-3.8
	comp=E,0.5nm,0.3s,baz=360,slow=23,SNR=7.6						
	comp=E,12nm,1.0s						
Q19K	Cape Douglas,	7.73	41	Pn	Pn	19 42 43.6	+2.1
O18K	Koktuh Hills	7.85	31	Pn	Pn	19 42 45.6	+2.4
ADK	Adak	8.26	265	Pn	Pn	19 42 49.4	+0.6
ILSW	Iliamna Southw	8.64	36	Pn	Pn	19 42 52.4	-1.7
SVW2	Sparrevohn	8.77	25	Pn	Pn	19 42 56.3	+0.6
N19K	Bonanza Creek	8.84	29	Pn	Pn	19 42 59.4	+2.6
CNPM	China Poot	9.07	43	Pn	Pn	19 43 01.1	+1.3
RSO	Redoubt South	9.12	35	Pn	Pn	19 43 04.9	+4.2
BRLK	Bradley Lake	9.35	42	Pn	Pn	19 43 03.5	-0.3
M19K	Big River Lodg	9.76	26	Pn	Pn	19 43 10.8	+1.5
L19K	White Mountain	9.88	24	Pn	Pn	19 43 11.2	+0.3
M20K	Styx River	10.09	29	Pn	Pn	19 43 17.5	+3.7
TTA	Tatalina	10.29	19	Pn	Pn	19 43 17.5	+0.9
SUA	Susitna One	10.52	35	Pn	Pn	19 43 20.4	+0.5
RC01	Rabbit Creek A	10.63	38	Pn	Pn	19 43 21.2	0.0
SKT	Skwentna	10.64	32	Pn	Pn	19 43 21.7	+0.3
PWL	Port Wells	11.03	41	Pn	Pn	19 43 26.3	-0.4
K20K	Telida	11.08	22	Pn	Pn	19 43 28.7	+1.4
PPLA	Purkeypile	11.16	27	Pn	Pn	19 43 28.9	+0.3
ANM	Nome	11.23	355	Pn	Pn	19 43 30.0	+0.5
KNK	Knik Glacier	11.31	39	Pn	Pn	19 43 30.3	-0.3
CUT	Chulitna	11.36	32	Pn	Pn	19 43 31.8	+0.7
SML	Sawmill	11.61	38	Pn	Pn	19 43 33.5	-1.1
CAST	Castle Rocks	11.61	26	Pn	Pn	19 43 35.3	+0.6
EYAK	Cordova Ski Ar	11.93	46	Pn	Pn	19 43 39.2	+0.2
SCM	Sheep Creek Mo	12.00	39	Pn	Pn	19 43 39.0	-1.1
KLU	Klutina	12.35	42	Pn	Pn	19 43 44.1	-0.7
BPAW	Bear Paw Mtn.	12.45	26	Pn	Pn	19 43 47.4	+1.3
M24K	Tolsona, Glenn	12.60	40	Pn	Pn	19 43 47.2	-1.0
N25K	Chitina, Valde	12.95	43	Pn	Pn	19 43 52.7	-0.3
I21K	Tanana	13.12	21	Pn	Pn	19 43 54.0	-1.1
GLB	Gilahina Butte	13.20	45	Pn	Pn	19 43 55.1	-1.2
MLY	Manley	13.28	24	Pn	Pn	19 43 57.4	0.0
H21K	Melozitna Rive	13.36	19	Pn	Pn	19 43 59.8	+1.3
WRH	Wood River Hil	13.54	29	Pn	Pn	19 44 00.6	-0.3
HDA	Harding Lake	13.84	31	Pn	Pn	19 44 03.8	-1.3
MDM	Murphy Dome	13.87	28	Pn	Pn	19 44 03.6	-1.9
BARN	Barnard Glacie	13.96	48	Pn	Pn	19 44 06.9	+0.1
M26K	Nabesna, AK	14.01	42	Pn	Pn	19 44 06.8	-0.6
RIDG	Independent Ri	14.08	35	Pn	Pn	19 44 06.7	-1.7
ILAR	Eielson Array	14.12	30	Pn	Pn	19 44 07.6	-1.2
	comp=E,0.1nm,0.3s,baz=220,slow=14,SNR=8.5						
	comp=E,0.3nm,0.5s						
H23K	Yukon River	14.22	24	Pn	Pn	19 44 10.0	-0.2
DOT	Dot Lake	14.30	37	Pn	Pn	19 44 10.2	-1.1
M27K	Edge Creek, AK	14.44	43	Pn	Pn	19 44 13.0	-0.3
SCRK	Sand Creek	14.53	36	Pn	Pn	19 44 13.6	-0.9
H24K	Noodor Dome	14.64	26	Pn	Pn	19 44 13.7	-2.3
BCAR	Beaver Creek A	14.83	41	Pn	Pn	19 44 18.1	-0.4
J26L	Joseph Creek	15.00	34	Pn	Pn	19 44 21.6	+0.8
J26L				IAmb	IAmb	19 44 37.8	
	comp=Z,3.5nm,0.8s						
PRP	Porcupine Dome	15.06	29	Pn	Pn	19 44 21.4	-0.2
COLD	Coldfoot	15.25	20	Pn	Pn	19 44 24.3	+0.3
COLD				IAmb	IAmb	19 44 40.3	
	comp=Z,4.9nm,1.0s						
TOLK	Toolik Lake Re	16.59	18	Pn	Pn	19 44 42.0	+0.7
BMAR	Burnt Mountain	16.71	26	Pn	Pn	19 44 43.8	+0.9
EPYK	Eagle Plains	18.41	35	P	Pn	19 45 04.2	+0.3
EPYK				IAmb	IAmb	19 45 23.5	
	comp=Z,19nm,1.5s						
INK	Inuvik	20.49	32	P	P	19 45 25.9	-0.3
	comp=Z,0.7nm,0.3s,baz=215,slow=8.2,SNR=5.0						
	comp=Z,0.7nm,0.3s						
BBB	Bella Bella	21.21	79	LR	LR	19 52 29.9	
	comp=Z,50nm,19.4s,baz=286,slow=33						
PEA0B	Petropavlovsk-	23.12	285	P	P	19 45 55.0	+0.6
PETK	Petropavlovsk-	23.12	285	P	P	19 45 54.0	-0.4
	comp=Z,1.6nm,0.5s,baz=82,slow=14,SNR=12						
	comp=Z,1.6nm,0.5s						
PETK	Petropavlovsk-	23.12	285	P	P	19 45 54.1	-0.3
SEY	Seymchan	24.72	310	P	P	19 46 08.8	-0.6
	comp=Z,1.4nm,0.9s,baz=115,slow=18,SNR=4.3						
	comp=Z,1.4nm,0.9s						
YKA	Yellowknife Ar	26.77	51	P	P	19 46 31.8	+3.8
	comp=Z,0.6nm,0.6s,baz=270,slow=9.0,SNR=7.3						
	comp=Z,0.6nm,0.6s						
YKA	Yellowknife Ar	26.77	51	P	P	19 46 28.6	+0.6
PLTX	Planet X, Gerl	31.95	95	P	P	19 47 12.2	-2.1
TIXI	Tiksi	33.75	328	P	P	19 47 29.3	-0.2
TIXI				IAmb	IAmb	19 47 31.2	
	comp=Z,7.9nm,1.5s						
H11N2	WAKE ISLAND Hy	40.68	226	T	T	20 32 12.9	
	baz=26,slow=76,SNR=41						
H11N3	WAKE ISLAND Hy	40.69	226	T	T	20 32 13.4	
	baz=26,slow=76,SNR=37						
H11N1	WAKE ISLAND Hy	40.70	226	T	T	20 32 14.3	
	baz=26,slow=76,SNR=37						
H11S1	WAKE ISLAND Hy	41.85	225	T	T	20 33 39.1	
	baz=26,slow=76,SNR=68						
H11S2	WAKE ISLAND Hy	41.87	225	T	T	20 33 38.1	
	baz=26,slow=76,SNR=36						
H11S3	WAKE ISLAND Hy	41.87	225	T	T	20 33 51.8	
	baz=26,slow=76,SNR=43						
TXAR	Lajitas Array	49.13	95	P	P	19 49 41.9	+5.9
	comp=Z,0.2nm,0.4s,baz=302,slow=5.2,SNR=2.5						
TXAR				LR	LR	20 07 31.9	
	comp=Z,52nm,20.6s,baz=32,slow=32						
	comp=Z,0.2nm,0.4s						
DBG	Daneborg	50.17	12	i P	P	19 49 44.1	+0.8
SONM	Songino Array	53.84	303	P	P	19 50 11.2	+0.1
	comp=Z,0.9nm,0.6s,baz=54,slow=5.5,SNR=6.3						
	comp=Z,0.9nm,0.6s						
ARCES	ARCESS Array B	57.19	356	P	P	19 50 34.2	-0.5
	comp=Z,3.2nm,0.9s,baz=9.2,slow=7.3,SNR=2.2						
	comp=Z,3.2nm,0.9s						
ZALV	Zalesovo Beam	59.04	320	P	P	19 50 46.1	-1.7
	comp=Z,0.3nm,0.3s,baz=53,slow=5.6,SNR=2.7						
	comp=Z,0.3nm,0.3s						
FINES	FINESS Array B	65.24	355	P	P	19 51 28.6	-0.7
	comp=Z,1.0nm,0.6s,baz=32,slow=11,SNR=1.4						
	comp=Z,1.0nm,0.6s						
MK31	Makanchi Array	65.65	317	P	P	19 51 32.3	0.0
MKAR	Makanchi Array	65.65	317	P	P	19 51 32.0	-0.2
	comp=Z,0.4nm,0.3s,baz=48,slow=7.7,SNR=13						
	comp=Z,0.4nm,0.3s						

MKAR	**Makanchi Array**	**65.65**	**317**	P	**P**	**19 51 32.4**	**+0.1**
MAKZ	**Makanchi**	**65.77**	**317**	P	**P**	**19 51 33.1**	**+0.2**
MAKZ				IAmb	IAmb	19 51 33.6	
	comp=Z,1.2nm,0.4s						
NOA	**NORSAR Array B**	**65.81**	**3**	P	**P**	**19 51 34.2**	**+1.2**
	comp=Z,1.3nm,0.8s,baz=358,slow=6.2,SNR=2.5						
	comp=Z,1.3nm,0.8s						
ABKAR	**Akbulak array**	**71.36**	**332**	P	**P**	**19 52 08.4**	**+0.6**
ABKAR				IAmb	IAmb	19 52 09.7	
	comp=Z,5.6nm,1.4s						
AKASG	**Malin Array Be**	**75.72**	**352**	P	**P**	**19 52 33.8**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=13,slow=6.0,SNR=9.3						
	comp=Z,0.6nm,0.4s						
AKBB	**Malin Array Si**	**75.72**	**352**	P	**P**	**19 52 34.2**	**+0.8**
GERES	**GERESS Array B**	**78.08**	**2**	P	**P**	**19 52 48.0**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=6.3,slow=9.9,SNR=2.6						
	comp=Z,0.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**79.88**	**287**	P	**P**	**19 52 56.1**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=26,slow=4.4,SNR=5.5						
	comp=Z,0.6nm,0.8s						
ESDC	**Sonseca Array**	**85.58**	**16**	P	**P**	**19 53 28.6**	**+2.1**
	comp=Z,0.5nm,0.9s,baz=336,slow=2.8,SNR=2.8						
	comp=Z,0.5nm,0.9s						

ZUR 06 19:41:43.7, 46°.91N×8°.92E, h6^{km}±1^{km}, MLh1.1/10, 1C-1D, Error ellipse: s-maj=3.1km s-min=0.9km az=351.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLTM2	**Linthal, Matt**	**0.05**	**78**	⇓Pg	Pg	19 41 45.5	+0.3
SLTM2				Sg	Sg	19 41 46.6	+0.2
LLS	**Linth-Limmern**	**0.09**	**139**	Pg	Pg	19 41 46.0	+0.2
LLS				Sg	Sg	19 41 47.5	+0.2
PANIX	**Pigniu (Panix)**	**0.15**	**124**	Pg	Pg	19 41 47.2	+0.3
PANIX				Sg	Sg	19 41 49.5	+0.5
SALTS	**Altdorf, Kanto**	**0.20**	**261**	Sg	Sg	19 41 51.0	+0.7
NALPS	**Val Nalps**	**0.34**	**201**	⇑Pg	Pg	19 41 50.9	+0.5
PLONS	**Plons/SG**	**0.34**	**66**	Sg	Sg	19 41 55.6	+0.7

*DDA **06** 19:42:21.2±0.0, 39°.53N×26°.22E, h7^{km}±1^{km}, ML1.7*

ISK 06 19:42:20.6, 39°.51N×26°.22E, h7^{km}, ML2.0/15, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	**Canakkale, Ayv**	**0.06**	**260**	P	Pg	19 42 23.4	+1.0
KOCA				S	Sg	19 42 24.9	+1.2
GPNR	**Gulpinar-Canak**	**0.09**	**229**	Pg	Pg	19 42 23.2	+0.5
GPNR				Sg	Sg	19 42 25.2	+1.0
EZN	**Ezine**	**0.32**	**15**	Pg	Pb	19 42 27.8	-0.9
EZN				Sg	Sg	19 42 32.6	+1.4
BAYC	**CANAKKALE_Bayr**	**0.34**	**48**	P	Pg	19 42 28.0	+0.8
BAYC				S	Sg	19 42 32.8	+1.1
BAYC				*i* AML	AML	19 42 33.0	
	comp=N,100nm,0.2s						
BAYC				*i* AML	AML	19 42 33.0	
	comp=E,110nm,0.2s						
BOZC	**Bozcaada**	**0.35**	**339**	Pg	Pg	19 42 28.0	+0.5
BOZC				Sg	Sg	19 42 33.0	+0.8
BOZC	**Bozcaada**	**0.35**	**339**	P	Pg	19 42 28.1	+0.6
BOZC				S	Sg	19 42 32.9	+0.8
BOZC				*i* AML	AML	19 42 33.0	
	comp=N,78nm,0.3s						
BOZC				*i* AML	AML	19 42 33.0	
	comp=E,72nm,0.3s						
AYVA	**Ayvalik**	**0.42**	**119**	P	Pb	19 42 29.9	-0.3
AYVA				*i* AML	AML	19 42 36.0	
	comp=N,53nm,0.2s						
AYVA				S	Sb	19 42 36.2	-0.6
COMU	**Canakkale**	**0.62**	**18**	Pg	Pb	19 42 33.2	-0.5
COMU				Sg	Sb	19 42 42.3	-0.3
DKL	**Dikili**	**0.69**	**129**	Pg	Pg	19 42 34.3	+0.4
GOKA	**anakkale-Gk**	**0.72**	**341**	P	Pb	19 42 35.2	-0.2
GOKA				S	Sg	19 42 44.5	+0.7
GOKA				*i* AML	AML	19 42 48.0	
	comp=E,57nm,0.3s						
GOKA				*i* AML	AML	19 42 49.0	
	comp=N,47nm,0.3s						
GADA	**Gvkgeada**	**0.72**	**340**	Pg	Pg	19 42 34.7	+0.2
CANM	**Can-anakkale**	**0.81**	**52**	Pg	Pg	19 42 36.5	+0.3
GELI	**Tayfur-Gelibol**	**0.91**	**12**	Pg	Pb	19 42 38.4	-0.2
LPK	**Lapseki**	**0.95**	**26**	Pg	Pb	19 42 39.2	-0.2
CHOS	**Chios island**	**1.13**	**187**	Pn	Pn	19 42 42.9	0.0
ERIK	**Erikli-Kesan**	**1.18**	**11**	Pn	Pg	19 42 42.9	-0.3
URLA	**Izmir**	**1.19**	**166**	Pn	Pg	19 42 43.3	-0.1
KRBG	**Karabiga-Canak**	**1.21**	**43**	Pn	Pg	19 42 43.8	0.0
ENEZ	**Enez**	**1.22**	**358**	Pn	Pg	19 42 44.4	+0.3
GONE	**Gonen-Balikesi**	**1.25**	**64**	Pn	Pg	19 42 44.8	+0.2
BALB	**Balikesir**	**1.29**	**84**	Pn	Pb	19 42 45.1	0.0
ALN	**Alexandroupoli**	**1.39**	**355**	Pn	Pb	19 42 46.8	0.0
UKOP	**Uzunkopru-Edir**	**1.64**	**11**	Pn	Pn	19 42 50.3	+0.5

*SNET **06** 19:56:42.9±0.8, 13°.27N×90°.28W, h34^{km}±4^{km}, ML3.0*

*GCG **06** 19:56:45.8±0.5, 13°.47N×90°.53W, h26^{km}±4^{km}, MD3.1*

ISC 06 19:56:40.4±4.0**, 13°.2N**±0°.2×**90°.4W**±0°.1**, h16^{km}**±18^{km}**, n9, σ1^{s}53**/8**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUBE	**Las Nubes**	**0.88**	**39**	*e*P	Pg	19 56 57.5	0.0
NUBE				*e*S	**Sg**	**19 57 08.6**	**-0.5**
NUBE				IAML		19 57 10.7	
	comp=Z,229nm,0.3s						
SLOZ	**Alcaldia de Sa**	**0.97**	**34**	*e*P	Pg	19 56 59.0	-0.3
SLOZ				*e*S	**Sg**	**19 57 12.0**	**-0.1**
JAYA	**Jayaque - finc**	**0.98**	**64**	*e*P	Pg	19 56 58.7	-0.7
JAYA				*e*S	**Sg**	**19 57 11.3**	**-0.9**
JAYA				IAML		19 57 13.2	
	comp=Z,868nm,0.2s						
PCG	**Pacaya**	**1.19**	**348**	*e*P	**Pg**	**19 57 03.3**	**-0.2**
PCG				*e*S	Sg	19 57 12.2	-6.9
FUG	**Fuego 3**	**1.31**	**339**	*e*P	Pn	19 57 04.6	+0.3
FUG				*e*S	Sg	19 57 19.7	-3.3
NBG	**Las Nubes**	**1.36**	**0**	*e*P	**Pn**	**19 57 06.7**	**+1.7**
NBG				*e*S	**Sg**	**19 57 25.0**	**+0.5**
PAVA	**Las Pavas**	**1.46**	**70**	*e*P	Pn	19 57 06.7	+0.5
SCLA	**Alcaldia de Sa**	**1.65**	**73**	*e*P	Pn	19 57 08.5	-0.3
STG3	**Santiaguito 3,**	**1.90**	**322**	*e*P	**Pn**	**19 57 13.2**	**+0.8**
STG3				*e*S	**Sn**	**19 57 34.0**	**-2.1**

*KOLA **06** 19:56:57.3, 67°.65N×33°.75E, h0^{km}, ML1.8, Error ellipse: s-maj=6.1km s-min=2.7km az=150.0, Khibiny, mines Kirovsk, Yukspor*

*BER **06** 19:56:58.6±1.4, 67°.55N×33°.65E, h0^{km}, ML1.8, Suspected explosion*

HEL 06 19:56:57.3±0.1**, 67°.64N×33°.76E, h0^{km}, ML1.6, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA	**Apatity**	**0.15**	**244**	P	Pg	19 57 00.0	-0.2
APA0	**Apatity Array**	**0.30**	**265**	P	Pg	19 57 02.5	-0.5
APA0				S	Sg	19 57 06.5	-0.2
LVZ	**Lovozero**	**0.43**	**52**	P	Pg	19 57 04.7	-0.8
LVZ				S	Sg	19 57 10.6	-0.5
LVZ	**Lovozero**	**0.43**	**52**	PG	Pg	19 57 04.5	-1.0
LVZ				SG	Sg	19 57 11.1	0.0
VRF	**Varrio**	**1.59**	**276**	PG	Pn	19 57 25.4	-1.2
VRF				MSG		19 57 45.0	
	comp=Z,5.0nm,0.2s						
VRF				SG	Sn	19 57 45.6	-2.3
TERR	**Teriberka**	**1.65**	**17**	P	Pn	19 57 26.1	-1.4
TERR				S	Sn	19 57 47.5	-1.9
OLKF	**Oulanka, Finla**	**2.16**	**234**	PG	Pn	19 57 35.7	+1.2
	baz=53						
OLKF				MSG		19 58 01.3	
	comp=Z,3.3nm,0.2s						
OLKF				SG	Sb	19 58 04.8	+0.2
KU6	**Riekki**	**2.23**	**225**	PG	Pn	19 57 36.8	+1.4
	baz=46						
KU6				MSG		19 58 03.1	
	comp=Z,2.7nm,0.2s						
KU6				SG	Sb	19 58 06.0	-0.5
MSF	**Maaselka**	**2.55**	**229**	PG	Pb	19 57 42.3	-1.6
MSF				SG	Sb	19 58 16.2	+0.5
SGF	**Sodankyl**	**2.79**	**269**	PG	Pb	19 57 46.0	-1.9
SGF				SG	Sb	19 58 21.7	-0.8
VADS	**Vadso**	**2.96**	**329**	P	Pn	19 57 44.9	-0.6
VADS				S	Sn	19 58 20.2	-1.4
VADS	**Vadso**	**2.96**	**329**	*e*P	Pn	19 57 44.8	-0.7
VADS				*e*S	Sn	19 58 20.4	-1.3
VADS				IAML		19 58 26.2	
	comp=Z,8.2nm,0.4s						
RNF	**Rovaniemi**	**3.20**	**255**	PN	Pn	19 57 48.6	-0.2
	baz=69						
RNF				SN	Sn	19 58 27.8	+0.3
KEV	**Kevo**	**3.26**	**314**	*e*P	Pn	19 57 49.5	0.0
KEV				*e*S	Sn	19 58 28.0	-0.9
KEV	**Kevo**	**3.26**	**314**	PN	Pn	19 57 49.3	-0.3
KEV				SN	Sn	19 58 28.2	-0.8
ARA0	**ARCESS Array S**	**3.58**	**306**	*e*P	Pn	19 57 53.5	-0.5
ARA0				*e*S	Sn	19 58 33.5	-3.4
ARA0				IAML		19 58 56.0	
	comp=Z,5.6nm,0.5s						
ARCES	**ARCESS Array B**	**3.58**	**306**	P	Pn	19 57 53.1	-0.9
ARCES				S	Sn	19 58 34.3	-2.6
RMF	**Romuvaara**	**3.77**	**206**	PN	Pn	19 57 56.4	-0.2
	baz=19						
KLF	**Kolari**	**3.80**	**268**	PG	Pb	19 58 05.0	-0.1
	baz=77						
KLF				SG	Sb	19 58 52.4	+0.8
HEF	**Hetta**	**3.88**	**286**	*e*S	Sn	19 58 40.2	-4.0
HEF	**Hetta**	**3.88**	**286**	PN	Pn	19 57 57.9	-0.1
	baz=100						
HEF				SN	Sn	19 58 44.5	+0.3
TOF	**Tornio**	**4.04**	**252**	PG	Pb	19 58 09.7	+0.5
KTK1	**Kautokeino**	**4.14**	**294**	*e*P	Pn	19 58 01.8	+0.1
KTK1				*e*S	Sn	19 58 46.9	-3.8
KTK1				IAML		19 59 11.1	
	comp=Z,5.4nm,0.5s						
KTK1	**Kautokeino**	**4.14**	**294**	SG	Sb	19 59 03.7	+2.2
PAJU	**Pajala**	**4.17**	**266**	PG	Pb	19 58 11.5	+0.1
	baz=74						
PAJU				SN	Sn	19 58 51.0	-0.5
LANU	**Lannavaara**	**4.48**	**281**	PN	Pn	19 58 05.1	-1.2
LANU				SG	Sb	19 59 14.7	+3.7
KALU	**Kalix**	**4.49**	**251**	SG	Sb	19 59 16.3	+4.7
ERTU	**Ertsjaerv**	**4.65**	**262**	SN	Sn	19 59 01.4	-1.9
HAMF	**Hammerfest**	**4.70**	**315**	*e*S	Sn	19 59 00.8	-3.6
KIF	**Kilpisjarvi**	**5.00**	**292**	*e*S	Sn	19 59 07.9	-3.8
FAUS	**Fauske**	**7.09**	**277**	S	Sn	19 59 57.9	-5.3

*IDC **06** 19:58:39.5±6.7, 29°.66S×175°.38W, h0^{km}, mb3.8/3, mbtmp4.0/6, ML4.1/3, MS2.7/1, Error ellipse: s-maj=111.3km s-min=45.9km az=74.0*

*NEIC **06** 19:58:45.9±2.0, 29°.1S±0°.3×176°.07W±0°.06, h10^{km}±2^{km}, mb4.3/7, Error ellipse: s-maj=48.7km s-min=8.5km az=358.0*

ISC 06 19:58:48.0±1.7**, 29°.9S**±0°.1×**176°.3W**±0°.1**, h10^{km}, n17, σ1^{s}62**/19**, mb4.2**/7**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.53**	**293**	Pn	**Pb**	**19 59 16.6**	**+0.1**
	224nm,0.3s,baz=131,slow=21,SNR=12						
RAO				Sn	**Sb**	**19 59 36.8**	**+0.8**
	272nm,0.3s,baz=126,slow=22,SNR=6.4						
RAO				LR	LR	20 00 04.2	
	comp=Z,196nm,21.9s,baz=110,slow=38						
	446nm,0.2s						
RAO	**Raoul Island**	**1.53**	**293**	Pn	**Pn**	**19 59 15.3**	**-0.2**
URZ	**Urewera**	**10.01**	**211**	Pn	**Pn**	**20 01 10.5**	**-1.3**
	0.4nm,0.3s,baz=17,slow=3.3,SNR=1.7						
URZ				Sn	**Sn**	**20 03 05.5**	**+1.4**
	3.0nm,0.3s,baz=183,slow=22,SNR=13						
	4.2nm,0.7s						
BKZ	**Black Stump Fm**	**11.03**	**211**	Pn	**Pn**	**20 01 25.1**	**-0.7**
HIZ	**Hauiti**	**11.32**	**218**	Pn	**Pn**	**20 01 30.1**	**+0.3**
MRZ	**Mangatainoka R**	**12.65**	**209**	Pn	**Pn**	**20 01 44.9**	**-3.2**
RPZ	**Rata Peaks**	**17.12**	**213**	P	**P**	**20 02 48.0**	**-1.0**
	0.5nm,0.3s,baz=48,slow=5.7,SNR=1.0						
	2.3nm,0.3s						
CTAO	**Charters Tower**	**35.18**	**277**	P	**P**	**20 05 41.9**	**-0.5**
CTAO				IAmb	IAmb	20 05 50.4	
	comp=Z,5.7nm,1.5s						
STKA	**Stephens Creek**	**36.04**	**256**	P	**P**	**20 05 51.4**	**+1.7**
	comp=Z,1.3nm,0.5s,baz=114,slow=10,SNR=4.9						
	comp=Z,1.3nm,0.5s						
STKA	**Stephens Creek**	**36.04**	**256**	P	**P**	**20 05 51.2**	**+1.5**
STKA				IAmb	IAmb	20 06 21.7	
	comp=Z,1.8nm,1.3s						
BBOO	**Buckleboo**	**40.54**	**253**	P	**P**	**20 06 27.5**	**0.0**
ASAR	**Alice Springs**	**44.62**	**266**	P	**P**	**20 07 00.2**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=107,slow=8.3,SNR=11						
	comp=Z,0.3nm,0.4s						
WB2	**Warramunga Arr**	**45.55**	**271**	P	**P**	**20 07 06.1**	**-2.2**
WB2				IAmb	IAmb	20 07 17.3	
	comp=Z,3.7nm,1.1s						
WRA	**Warramunga Arr**	**45.56**	**271**	P	**P**	**20 07 07.0**	**-1.3**
	comp=Z,0.6nm,0.4s,baz=112,slow=6.2,SNR=17						
	comp=Z,0.6nm,0.4s						
WRA	**Warramunga Arr**	**45.56**	**271**	P	**P**	**20 07 06.2**	**-2.2**
WB0	**Warramunga Arr**	**45.58**	**271**	P	**P**	**20 07 07.2**	**-1.3**
WB0				IAmb	IAmb	20 07 34.7	
	comp=Z,8.3nm,1.4s						
QSPA	**South Pole Qui**	**60.26**	**180**	P	**P**	**20 08 59.1**	**+2.7**
QSPA				IAmb	IAmb	20 09 41.5	
	comp=Z,7.0nm,1.4s						

*AEIC **06** 20:08:47.3±3.4, 53°.1N±0°.1×166°.7W±0°.1, h66^{km}±9^{km}, Error ellipse: s-maj=23.1km s-min=6.0km az=157.0*

NEIC 06 20:08:41.7±2.3**, 52°.8N**±0°.2×**166°.2W**±0°.1**, h17^{km}**±12^{km}**, mb3.6**/8**, ML3.1**(AEIC)**, Error ellipse: s-maj=24.2km s-min=7.3km az=156.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UNV	**Unalaska Valle**	**1.08**	**350**		Pg	20 09 02.8	+0.2
AKUT	**Akutan**	**1.38**	**10**	Pn	Pg	20 09 07.6	-0.6
AKUT					Sn	20 09 23.3	-0.6
NIKH	**Nikolski High**	**1.63**	**278**		Pn	20 09 09.4	-0.3
FALS	**False Pass**	**2.64**	**37**		Pb	20 09 28.0	-0.6
FALS	**False Pass**	**2.64**	**37**		Sb	20 09 58.8	-1.9
SDPT	**Sand Point**	**4.23**	**50**	Pn	Pn	20 09 50.4	+5.1
CHGN	**Chignik**	**5.73**	**49**	Pn	Pn	20 10 10.5	+4.7
ADK	**Adak**	**6.50**	**266**	Pn	Pn	20 10 16.8	+0.3
P18K	**Big Mountain,**	**9.01**	**38**	Pn	Pn	20 10 51.2	+0.3
KDAK	**Kodiak Island**	**9.23**	**52**	Pn	Pn	20 10 54.9	+1.1
O18K	**Koktuh Hills**	**9.34**	**36**	Pn	Pn	20 10 58.9	+3.6
Q19K	**Cape Douglas,**	**9.35**	**44**	Pn	Pn	20 10 59.1	+3.6
SVW2	**Sparrevohn**	**10.13**	**31**	Pn	Pn	20 11 07.7	+1.4
ILSW	**Iliamna Southw**	**10.20**	**40**	Pn	Pn	20 11 10.9	+3.6
N19K	**Bonanza Creek**	**10.27**	**34**	Pn	Pn	20 11 11.6	+3.3
HOM	**Homer**	**10.61**	**44**	Pn	Pn	20 11 16.4	+3.7
CNPM	**China Poot**	**10.71**	**45**	Pn	Pn	20 11 15.5	+1.4
BRLK	**Bradley Lake**	**10.99**	**44**	Pn	Pn	20 11 19.0	+1.0
M19K	**Big River Lodg**	**11.12**	**30**	Pn	Pn	20 11 19.6	-0.2
M20K	**Styx River**	**11.50**	**32**	Pn	Pn	20 11 25.2	+0.1
O22K	**Cooper Landing**	**11.87**	**43**	Pn	Pn	20 11 31.6	+1.7
SUA	**Susitna One**	**12.05**	**38**	Pn	Pn	20 11 34.1	+1.5
SKT	**Skwentna**	**12.11**	**35**	Pn	Pn	20 11 33.9	+0.7
RC01	**Rabbit Creek A**	**12.21**	**41**	Pn	Pn	20 11 35.3	+0.7
PWL	**Port Wells**	**12.65**	**43**	Pn	Pn	20 11 40.5	-0.2
KNK	**Knik Glacier**	**12.90**	**41**	Pn	Pn	20 11 43.8	-0.3
CAST	**Castle Rocks**	**12.97**	**29**	Pn	Pn	20 11 43.7	-1.3
SML	**Sawmill**	**13.18**	**40**	Pn	Pn	20 11 47.5	-0.4
SCM	**Sheep Creek Mo**	**13.58**	**41**	Pn	Pn	20 11 53.0	-0.5
KLU	**Klutina**	**13.98**	**43**	Pn	Pn	20 11 58.0	-0.8
M24K	**Tolsona, Glenn**	**14.19**	**41**	Pn	Pn	20 12 01.4	-0.3
H21K	**Melozitna Rive**	**14.56**	**22**	P	P	20 12 13.8	+0.7
N25K	**Chitina, Valde**	**14.59**	**44**	Pn	Pn	20 12 06.3	-1.0
IMAR	**Indian Mountai**	**14.63**	**20**	P	P	20 12 13.3	-0.6
GLB	**Gilahina Butte**	**14.85**	**46**	Pn	Pn	20 12 09.6	-1.2
VRDI	**Verde Repeater**	**14.92**	**47**	Pn	Pn	20 12 10.7	-1.1
HDA	**Harding Lake**	**15.28**	**33**	Pn	Pn	20 12 15.5	-0.8
IL31		**15.54**	**32**	Pn	Pn	20 12 17.1	-2.6
IL31				IAmb	IAmb	20 12 27.5	
	comp=Z,4.7nm,1.5s						
M26K	**Nabesna, AK**	**15.63**	**43**	Pn	Pn	20 12 20.5	-0.5
M26K				IAmb	IAmb	20 12 21.2	
	comp=Z,7.1nm,1.2s						
BARN	**Barnard Glacie**	**15.66**	**48**	Pn	Pn	20 12 22.1	+0.6
SCRK	**Sand Creek**	**16.05**	**37**	Pn	Pn	20 12 27.2	+0.7
M27K	**Edge Creek, AK**	**16.08**	**44**	Pn	Pn	20 12 26.6	-0.2
BCAR	**Beaver Creek A**	**16.43**	**42**	Pn	Pn	20 12 30.2	-1.0
J26L	**Joseph Creek**	**16.50**	**36**	Pn	Pn	20 12 31.1	-1.1
J26L				IAmb	IAmb	20 12 58.9	
	comp=Z,6.0nm,1.4s						
M30M	**Minto, Yukon**	**18.35**	**46**		P	20 12 56.0	+0.9
M30M				IAmb	IAmb	20 13 31.4	
	comp=Z,5.2nm,1.2s						

*IDC **06** 20:11:03.0±2.7, 7°.41S×106°.70E, h0^{km}, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=157.4km s-min=20.6km az=53.0*

*DJA **06** 20:11:10.6±0.9, 8°S±5°×10°7E±°, h16^{km}±6^{km}, M4.3/16, mb4.5/2, MLv4.2/16*

*NEIC **06** 20:11:12±2.0, 7°.1S±0°.1×106°.90E±0°.09, h62^{km}±6^{km}, mb4.3/11, Error ellipse: s-maj=21.0km s-min=10.1km az=204.0*

ISC 06 20:11:12.7±0.8**, 7°.43S**±0°.10×**106°.99E**±0°.06**, h67^{km}**±7^{km}**, n49, σ1^{s}82**/46**, mb4.0**/11**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNJI	**Cibinong**	**0.18**	**51**	P	**Pn**	**20 11 22.6**	**-0.3**
CNJI				S	**Sn**	**20 11 29.5**	**-0.9**
SKJI	**Sukabumi**	**0.60**	**314**	P	**Pn**	**20 11 26.3**	**0.0**
SKJI				S	**Sn**	**20 11 36.9**	**+0.6**
BBJI	**Bungbulang**	**0.66**	**93**	P	**Pn**	**20 11 26.3**	**-0.7**
CMJI	**Cimerak**	**1.49**	**104**	P	**Pn**	**20 11 36.8**	**-0.7**
CGJI	**Cibinong**	**1.52**	**302**	P	**Pn**	**20 11 37.5**	**-0.3**
SBJI	**Serang**	**1.55**	**327**	P	**Pn**	**20 11 40.3**	**+2.0**
JCJI	**Jatiwangi**	**1.58**	**54**	P	**Pn**	**20 11 39.5**	**+0.9**
KPJI	**Karang Pucung**	**1.93**	**87**	P	**Pn**	**20 11 44.9**	**+1.5**
BLSI	**Bandar Lampung**	**2.68**	**320**	P	**Pn**	**20 11 56.9**	**+3.4**
KASI	**Kota Agung**	**3.11**	**307**	P	**Pn**	**20 12 01.3**	**+1.9**
XMI	**Christmas Isla**	**3.27**	**203**	P	Pn	20 11 55.8	-5.8
SMRI	**Semarang**	**3.45**	**84**	Pn	**Pn**	**20 12 03.1**	**-0.9**
SMRI	**Semarang**	**3.45**	**84**	P	**Pn**	**20 12 05.1**	**+1.1**
UGM	**Wanagama**	**3.54**	**98**		**Pn**	**20 12 05.4**	**+0.1**
UGM	**Wanagama**	**3.54**	**98**	P	**Pn**	**20 12 05.7**	**+0.4**
UGM	**Wanagama**	**3.54**	**98**	P	**Pn**	**20 12 05.8**	**+0.4**
LWLI	**Liwa**	**3.77**	**309**	P	**Pn**	**20 12 10.4**	**+1.9**
MDSI	**Maura Dua**	**4.04**	**316**	P	**Pn**	**20 12 14.2**	**+2.1**
PWJI	**Pagerwojo**	**4.81**	**97**	P	**Pn**	**20 12 23.5**	**+0.8**
MNAI	**Manna**	**5.03**	**307**	Pn	Pn	20 12 22.1	-3.6
MNAI	**Manna**	**5.03**	**307**	P	**Pn**	**20 12 26.4**	**+0.7**
PPBI	**Pangkal Pinang**	**5.30**	**351**	P	**Pn**	**20 12 33.3**	**+4.0**
	19nm,1.1s,0.1nm						
JAGI	**Jajag, Banyuwa**	**7.17**	**99**		**Pn**	**20 12 57.4**	**+2.4**
JAGI	**Jajag, Banyuwa**	**7.17**	**99**	P	**Pn**	**20 12 57.4**	**+2.4**
PLAI	**Plampang**	**10.77**	**98**	P	**Pn**	**20 13 46.0**	**+1.8**
GSI	**Gunungsitoli**	**12.78**	**312**	Pn	Pn	20 14 07.3	-4.3
GSI	**Gunungsitoli**	**12.78**	**312**	P	**Pn**	**20 14 12.0**	**+0.4**
SOEI	**Soe**	**17.24**	**99**	Pn	**Pn**	**20 15 07.7**	**-1.7**
SOEI				IAmb	IAmb	20 15 24.3	
	comp=Z,59nm,1.4s						
SOEI	**Soe**	**17.24**	**99**	P	**P**	**20 15 13.6**	**+3.6**
MTN	**Manton Dam**	**24.36**	**105**	P	**P**	**20 16 27.0**	**+2.3**
CMAR	**Chiang Mai Arr**	**26.91**	**343**	P	**P**	**20 16 46.4**	**-1.4**
	comp=Z,1.1nm,0.4s,baz=178,slow=9.8,SNR=4.8						
	comp=Z,1.1nm,0.4s						
WB0	**Warramunga Arr**	**29.27**	**118**	P	**P**	**20 17 08.1**	**-0.7**
WB0				IAmb	IAmb	20 17 25.0	
	comp=Z,4.4nm,1.2s						
WRA	**Warramunga Arr**	**29.29**	**118**	P	**P**	**20 17 08.7**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=289,slow=11,SNR=7.1						
	comp=Z,0.4nm,0.6s						
WR0	**Warramunga Arr**	**29.47**	**118**	P	**P**	**20 17 10.7**	**+0.1**
WR0				IAmb	IAmb	20 17 10.8	
	comp=Z,4.0nm,1.1s						
HKPS	**Hong Kong Po S**	**30.34**	**13**	P	**P**	**20 17 14.8**	**-3.3**
AS31	**Alice Springs**	**30.46**	**125**	P	**P**	**20 17 22.0**	**+2.7**
ASAR	**Alice Springs**	**30.46**	**125**	P	**P**	**20 17 20.9**	**+1.7**
	comp=Z,0.1nm,0.4s,baz=300,slow=8.2,SNR=2.1						
ASAR				PcP	**PcP**	**20 20 17.7**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=318,slow=2.7,SNR=2.9						
	comp=Z,0.1nm,0.4s						
H08S2	**Diego Garcia H**	**34.19**	**267**	T	T	20 53 28.2	
	baz=92,slow=76,SNR=11						
H08S3	**Diego Garcia H**	**34.20**	**267**	T	T	20 53 28.9	
	baz=92,slow=76,SNR=16						
H08S1	**Diego Carcia H**	**34.21**	**267**	T	T	20 53 29.6	
	baz=92,slow=76,SNR=10						
COEN	**Coen**	**36.12**	**103**	P	**P**	**20 18 09.2**	**+0.6**
COEN				IAmb	IAmb	20 18 52.5	
	comp=Z,13nm,1.5s						
STKA	**Stephens Creek**	**40.37**	**132**	P	**P**	**20 18 44.7**	**+0.5**
	comp=Z,2.3nm,0.5s,baz=313,slow=9.8,SNR=10						
	comp=Z,2.3nm,0.5s						
STKA	**Stephens Creek**	**40.37**	**132**	P	**P**	**20 18 44.9**	**+0.7**
MK31	**Makanchi Array**	**58.28**	**340**	P	**P**	**20 20 57.5**	**-2.9**
MK31				IAmb	IAmb	20 20 57.6	
	comp=Z,1.7nm,1.2s						
MKAR	**Makanchi Array**	**58.28**	**340**	P	**P**	**20 20 57.8**	**-2.6**
	comp=Z,0.6nm,0.5s,baz=151,slow=5.5,SNR=8.0						
	comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	**58.28**	**340**	P	**P**	**20 20 57.5**	**-2.9**
ABKAR	**Akbulak array**	**69.77**	**329**	P	**P**	**20 22 14.8**	**-0.9**
ABKAR				IAmb	IAmb	20 22 15.8	
	comp=Z,3.4nm,0.8s						
QSPA	**South Pole Qui**	**82.57**	**180**	P	**P**	**20 23 29.7**	**+1.4**
QSPA				IAmb	IAmb	20 23 59.3	
	comp=Z,7.5nm,1.4s						
TXAR	**Lajitas Array**	**143.85**	**49**	PKP	**PKPdf**	**20 30 40.6**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=298,slow=1.9,SNR=2.8						

ZUR 06 20:12:00.4, 46°.91N×8°.93E, h6^{km}±2^{km}**, MLh0.5**/5**, 1D, Error ellipse: s-maj=4.1km s-min=0.9km az=185.0, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLTM2	**Linthal, Matt**	**0.05**	**79**	Pg	Pg	20 12 02.2	+0.3
SLTM2				Sg	Sg	20 12 03.2	+0.2
LLS	**Linth-Limmern**	**0.09**	**140**	Sg	Sg	20 12 04.2	+0.2
PANIX	**Pigniu (Panix)**	**0.15**	**125**	⇓Pg	Pg	20 12 03.9	+0.3
PANIX				Sg	Sg	20 12 06.2	+0.5
MUO	**Muotathal**	**0.21**	**285**	Sg	Sg	20 12 08.0	+0.7

*GEN **06** 20:12:06.6, 46°.93N×8°.93E, h11^{km}±3^{km}, Ml4.4*

*PRU **06** 20:12:06.1±0.0, 46°.97N×8°.80E, h0^{km}, M4.3*

*ZUR **06** 20:12:07.5, 46°.91N×8°.92E, h5^{km}±1^{km}, MLh4.6/122, Error ellipse: s-maj=3.1km s-min=0.5km az=279.0*

*MOS **06** 20:12:07.0±1.1, 47°.02N×8°.89E, h11^{km}, mb4.3/23, Error ellipse: s-maj=4.5km s-min=3.3km az=52.3*

*VIE **06** 20:12:07.3, 46°.89N×8°.93E, h5^{km}, mb3.9/22, ml4.7/21 21 km E of Altdorf*

*MED_RC **06** 20:12:07.0±0.6, 46°.91N×8°.93E, h10^{km}, MW4.2/8, Moment Tensor Solution.Mantle waves: s8,c9; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}0.08±.24; $M_{\theta\theta}$0.95±.27; $M_{\phi\phi}$-1.03±.31; $M_{r\theta}$-1.21±.65; $M_{\theta\phi}$-1.79±.25; $M_{\phi r}$-0.39±.70; Best double couple: $M_0$2.41000×10^{15} NP1:ϕ_s255.00000°, δ90.00000°, λ148.00000°. NP2: ϕ_s345.00000°, δ58.00000°, λ0.00000°. Principal axes: T 2.3500, Plg22.0000°, Azm206.0000°; N 0.1100, Plg58.0000°, Azm75.0000°; P -2.4700, Plg22.0000°, Azm305.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*ROM **06** 20:12:07.3±0.1, 46°.93N×8°.91E, h11^{km}, ML4.4/224 Error ellipse: s-maj=0.0km s-min=0.0km az=45.0*

*IDC **06** 20:12:08.5±0.7, 47°.09N×9°.03E, h0^{km}, mb3.9/16, mbtmp3.9/27, ML3.8/8, MS3.6/28, Error ellipse: s-maj=10.1km s-min=7.3km az=29.0*

*BGS **06** 20:12:08.7±2.0, 46°.91N×8°.82E, h10^{km}, ML4.8, ML4.8*

*NEIC **06** 20:12:08.6±1.3, 46°.91N±0°.04×8°.82E±0°.04, h10^{km}±1^{km}, mb4.3/22, Mwr4.1/38, ML4.7/21(VIE), Error ellipse: s-maj=7.0km s-min=4.4km az=356.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.18; $M_{\theta\theta}$0.79; $M_{\phi\phi}$-0.60; $M_{r\theta}$-0.12; $M_{\theta\phi}$-1.61; $M_{\phi r}$0.08; Fault plane solution: $M_0$1.77000×10^{15} NP1:ϕ_s258.25000°, δ87.17000°, λ177.15000°. NP2:ϕ_s348.39000°, δ87.15000°, λ2.83000°. Principal axes: T 1.8560, Plg4.0000°, Azm213.0000°; N -0.1921, Plg86.0000°, Azm34.0000°; P -1.6639, Plg0.0000°, Azm303.0000°;*

*NEIC **06** 20:12:08.6, 46°.92N×8°.85E, h10^{km}*

*STR **06** 20:12:08.5±0.5, 47°N±2°×°±°, h9^{km}±2^{km}, MLv4.8/53, Error ellipse: s-maj=0.0km s-min=0.0km az=90.0, preliminary*

*LDG **06** 20:12:09.1±0.1, 46°.96N×8°.94E, h5^{km}, Ml4.7/46, Error ellipse: s-maj=1.9km s-min=1.8km az=175.0*

*BNS **06** 20:12:09.9±0.3, 46°.97N×8°.97E, h5^{km}, ML4.4*

*BGR **06** 20:12:09.1±0.3, 46°.93N×8°.91E, h10^{km}, ML4.6/19, Error ellipse: s-maj=6.7km s-min=3.3km az=20.0*

ISC 06 20:12:06.9±0.9, **46°.909N**±0°.010×**8°.905E**±0°.009, **h1**$^{km}\pm6^{km}$, **n943**, σ**1ˢ70**/1257, **mb4.1**/45, **MS3.7**/22, **135C-125D**,
Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLTM2	Linthal, Matt	0.07	78	⇓Pg	Pg	20 12 09.0	+0.8
SLTM2				Sg	Sg	20 12 10.1	+0.9
LLS	Linth-Limmern	0.10	131	⇓Pg	Pg	20 12 09.5	+0.7
LLS				Sg	Sg	20 12 11.2	+1.1
PANIX	Pigniu (Panix)	0.17	120	⇓Pg	Pg	20 12 10.7	+0.6
PANIX				Sg	Sg	20 12 13.3	+1.0
SALTS	Altdorf, Kanto	0.18	262	Pg	Pg	20 12 11.4	+0.9
SALTS				Sg	Sg	20 12 14.6	+1.7
MUO	Muotathal	0.19	288	⇓Pg	Pg	20 12 11.7	+1.0
MUO				Sg	Sg	20 12 15.1	+1.9
SIZS	Ilanz Schule G	0.25	123	⇓Pg	Pg	20 12 12.5	+0.9
SIZS				Sg	Sg	20 12 16.2	+1.4
BNALP	Bannalp	0.33	263	⇑P	Pb	20 12 14.5	-1.2
BNALP				S	Sg	20 12 18.8	+1.2
BNALP				AML	AML		
	comp=E,86500µm,0.5s						
BNALP				AML	AML		
	comp=E,86500µm,0.5s						
BNALP				AML	AML		
BNALP				AML	AML		
NALPS	Val Nalps	0.33	199	⇑Pg	Pb	20 12 14.4	-1.4
NALPS	Val Nalps	0.33	199	⇑Pg	Pb	20 12 14.4	-1.4
NALPS				Sg	Sb	20 12 19.3	-2.4
SWAS	Walenstadt, Sp	0.35	52	⇑Pg	Pg	20 12 14.5	+0.9
SWAS				Sg	Sg	20 12 19.8	+1.6
PLONS	Plons/SG	0.35	67	⇑P	Pg	20 12 14.3	+0.5
PLONS				S	Sg	20 12 19.1	+0.7
PLONS				AML	AML		
	comp=N,62550µm,0.6s						
PLONS				AML	AML		
	comp=E,48100µm,0.4s						
PLONS	Plons/SG	0.35	67	Pg	Pg	20 12 14.2	+0.5
PLONS	Plons/SG	0.35	67	⇑Pg	Pg	20 12 14.2	+0.5
PLONS				Sg	Sg	20 12 19.0	+0.7
PLONS	Plons/SG	0.35	67	*e*Pg	Pg	20 12 14.5	+0.8
	SNR=3329						
PLONS				*e*Sg	Sg	20 12 19.1	+0.7
	SNR=11						
SSTS	Stans, Spital	0.38	278	Pg	Pb	20 12 15.2	-1.3
SBAS	Baar Spital, Z	0.39	317	⇓Pg	Pb	20 12 15.9	-0.7
SLUW	Luzern Werkhof	0.42	289	Pg	Pb	20 12 16.8	-0.5
SLUW				Sg	Sb	20 12 23.7	-0.5
SCUG	Chur Gewerbesc	0.43	97	⇓Pg	Pb	20 12 15.9	-1.4
SCUG				Sg	Sg	20 12 21.8	+1.1
SCUG	Chur Gewerbesc	0.43	97	⇓Pg	Pg	20 12 15.8	+0.6
SCUG				Sg	Sg	20 12 21.8	+1.1
SLUK	Luzern Kirche,	0.43	289	Pg	Pb	20 12 16.9	-0.5
SLUK	Luzern Kirche,	0.43	289	Pg	Pb	20 12 16.9	-0.5
SBUB	Buchserberg Ma	0.43	57	⇑Pg	Pg	20 12 15.8	+0.5
SBUB	Buchserberg Ma	0.43	57	⇑Pg	Pg	20 12 15.8	+0.5
SLUB	Luzern Bramber	0.44	290	⇓Pg	Pb	20 12 16.8	-0.6
SLUB				Sg	Sb	20 12 23.7	-0.9
SCHK	Churwalden Klo	0.45	105	⇓Pg	Pb	20 12 16.2	-1.5
SCHK				Sg	Sg	20 12 22.4	+1.0
SARK	Sarnen Kantons	0.45	268	⇑Pg	Pb	20 12 16.8	-0.9
SARK	Sarnen Kantons	0.45	268	Pg	Pb	20 12 16.6	-1.1
SBUA2	Buchs, Altendo	0.46	57	⇑Pg	Pg	20 12 16.3	+0.5
SBUA2	Buchs, Altendo	0.46	57	⇑Pg	Pg	20 12 16.3	+0.5
SBUH	Buchs, Hochsch	0.47	56	⇑Pg	Pg	20 12 16.6	+0.6
SBUH	Buchs, Hochsch	0.47	56	⇑Pg	Pg	20 12 16.5	+0.6
SVAM	Vaz, Muldain	0.48	117	⇓Pg	Pb	20 12 16.9	-1.3
SVAM				Sg	Sb	20 12 23.5	-2.3
FUSIO	Fusio	0.48	200	⇑P	Pb	20 12 17.2	-1.1
FUSIO				S	Sb	20 12 23.8	-2.2
FUSIO				AML	AML		
	comp=E,59400µm,0.4s						
FUSIO				AML	AML		
	comp=N,38350µm,0.4s						
FUSIO	Fusio	0.48	200	P	Pb	20 12 17.2	-1.1
FUSIO				S	Sb	20 12 23.8	-2.2
FUSIO	Fusio	0.48	200	⇑Pg	Pb	20 12 17.2	-1.1
FUSIO	Fusio	0.48	200	⇑Pg	Pb	20 12 17.2	-1.1
STRW	Triesenberg, W	0.49	65	⇑Pg	Pg	20 12 16.9	+0.6
STRW	Triesenberg, W	0.49	65	⇑Pg	Pg	20 12 16.8	+0.6
WILA	Wila	0.51	0	⇑Pg	Pb	20 12 18.0	-0.7
WILA				Sg	Sb	20 12 25.8	-0.9
WILA	Wila	0.51	0	*e*Pg	Pb	20 12 18.1	-0.6
	SNR=1399						
WILA				*e*Sg	Sb	20 12 25.7	-0.9
	SNR=13						
ZUR	Degenried	0.51	334	P	Pb	20 12 17.9	-0.8
ZUR				SG	Sb	20 12 25.8	-0.9
ZUR	Degenried	0.51	334	⇓Pg	Pb	20 12 18.1	-0.7
ZUR	Degenried	0.51	334	Sg	Sg	20 12 24.5	+1.1
ZUR	Degenried	0.51	334	⇓Pg	Pb	20 12 18.2	-0.6
ZUR				Sg	Sb	20 12 25.8	-0.9
EWZT2	Wettswil, ZR	0.51	327	⇓Pg	Pb	20 12 18.2	-0.6
EWZT2	Wettswil, ZR	0.51	327	⇓Pg	Pb	20 12 18.2	-0.6
EWZT2				Sg	Sb	20 12 26.1	-0.6
GRIMS	Grimsel Gerste	0.52	231	⇑Pg	Pb	20 12 17.9	-1.2
GRIMS	Grimsel Gerste	0.52	231	⇑Pg	Pb	20 12 17.8	-1.2
SMFL	Mauren, Feuerw	0.53	55	⇑Pg	Pg	20 12 17.7	+0.6
TUE	Stuetta	0.53	145	Pg	Pb	20 12 17.8	-1.4
TUE	Stuetta	0.53	145	⇓P	Pb	20 12 17.9	-1.2
TUE				S	Sb	20 12 24.9	-2.5
TUE				AML	AML		
	comp=E,16200µm,0.8s						
TUE				AML	AML		
	comp=N,9115µm,0.8s						
TUE				AML	AML		
	comp=E,20050µm,0.8s						
TUE				AML	AML		
	comp=N,12050µm,0.8s						
TUE				AML	AML		
	comp=N,9115µm,1.2s						
TUE				AML	AML		
	comp=N,12050µm,1.2s						
TUE	Stuetta	0.53	145	P	Pb	20 12 17.9	-1.2
TUE				S	Sb	20 12 25.0	-2.5
TUE	Stuetta	0.53	145	⇓Pg	Pb	20 12 18.0	-1.2
TUE				Sg	Sb	20 12 25.0	-2.4
SGT04	Schlatt-Haslen	0.53	34	⇑Pg	Pb	20 12 18.3	-1.0
SGT04	Schlatt-Haslen	0.53	34	⇑Pg	Pb	20 12 18.2	-1.0
SZUZ	Zrich, Zeugha	0.53	332	⇓Pg	Pb	20 12 18.7	-0.4
SZUZ				Sg	Sb	20 12 26.7	-0.7
EWZT0	Triemli, ZR	0.54	329	⇓Pg	Pb	20 12 18.7	-0.5
EWZT0				Sg	Sb	20 12 26.8	-0.6
HASLI	Hasliberg/Brie	0.54	254	⇑Pg	Pb	20 12 18.0	-1.3
SAPK	Appenzell, Kan	0.54	39	⇑Pg	Pb	20 12 18.5	-0.8
SAPK	Appenzell, Kan	0.54	39	⇑Pg	Pb	20 12 18.5	-0.8
SAPK				Sg	Sb	20 12 26.7	-0.9
HAMIK	Hmikon, Dlik	0.55	308	⇓Pg	Pb	20 12 18.9	-0.5
LIENZ	Kamor/St.Gall	0.56	46	⇑Pg	Pg	20 12 18.3	+0.7
LIENZ				Sg	Sb	20 12 26.9	-1.2
LIENZ	Kamor/St.Gall	0.56	46	⇑Pg	Pg	20 12 18.3	+0.7
LIENZ	Kamor/St.Gall	0.56	46	⇑Pg	Pg	20 12 18.2	+0.6
SWIK	Wil, Kantonssc	0.56	9	⇑Pg	Pb	20 12 18.9	-0.6
SWIK				Sg	Sb	20 12 27.3	-0.8
VDL	Val di Lei	0.57	138	P	Pb	20 12 18.6	-1.2
VDL	Val di Lei	0.57	138	P	Pb	20 12 18.5	-1.2
VDL				S	Sb	20 12 26.1	-2.4
VDL	Val di Lei	0.57	138	⇓Pg	Pb	20 12 18.6	-1.2
SGT00	Sennhlsen	0.58	28	⇑Pg	Pb	20 12 19.3	-0.7
SGT00	Sennhlsen	0.58	28	⇑Pg	Pb	20 12 19.3	-0.7
SKLW	Kloten, Waffen	0.60	338	Sg	Sb	20 12 28.5	-0.7
STGK	St. Gallen Klo	0.61	32	⇑Pg	Pb	20 12 19.8	-0.6
STGK				Sg	Sb	20 12 28.7	-0.8
SWIS	Winterthur Spi	0.61	349	Sg	Sb	20 12 28.9	-0.7
STIEG	Stiegenhof Hun	0.61	344	Pg	Pb	20 12 20.0	-0.5
WEIN	Weingarten	0.62	5	⇑Pg	Pb	20 12 20.1	-0.5
SBGN	Bergn Schule	0.65	116	⇓Pg	Pb	20 12 19.8	-1.3
SGT05	Eggersriet	0.65	35	⇑Pg	Pb	20 12 20.6	-0.6
EBUEL	Kantonsschule	0.66	338	⇓Pg	Pb	20 12 20.8	-0.4
EBUEL				Sg	Sb	20 12 30.2	-0.7
DAVOX	Davos/Dischmat	0.68	101	Pg	Pb	20 12 20.4	-1.3
	comp=N,174nm,0.3s,baz=277,slow=6.1,SNR=688						
DAVOX				Lg	Lg	20 12 29.7	
DAVOX	Davos/Dischmat	0.68	101	⇓P	Pb	20 12 20.4	-1.3
DAVOX				S	Sb	20 12 29.9	-1.8
DAVOX				AML	AML		
	comp=E,10545µm,0.4s						
DAVOX				AML	AML		
	comp=N,21900µm,0.5s						
DAVOX	Davos/Dischmat	0.68	101	P	Pb	20 12 20.4	-1.3
DAVOX				S	Sb	20 12 29.9	-1.8
DAVOX	Davos/Dischmat	0.68	101	⇓Pg	Pb	20 12 20.4	-1.3
DAVOX				Sg	Sb	20 12 30.0	-1.8
DAGMA	Lutertal, Dagm	0.69	298	⇓Pg	Pb	20 12 21.5	-0.3
DAGMA				Sg	Sb	20 12 31.4	-0.4
FLACH	Flaach	0.70	341	⇓Pg	Pb	20 12 21.7	-0.3
FLACH				PmP		20 12 24.6	
FLACH				Sg	Sb	20 12 31.8	-0.4
SARE	Arbon, Evangel	0.70	30	⇑Pg	Pb	20 12 21.6	-0.4
SHEK	Heerbrugg, Kan	0.71	44	⇑Pg	Pb	20 12 21.6	-0.4
EBELL	Liceo Cantonal	0.72	174	Sg	Sg	20 12 21.1	-8.9
ROMAN	Romanshorn, Fo	0.72	24	⇑Pg	Pb	20 12 21.7	-0.5
ROMAN				Sg	Sb	20 12 32.2	-0.5
FIESA	Fiescheralp	0.72	229	P	Pb	20 12 21.7	-0.9
FIESA				S	Sb	20 12 31.1	-1.9
FIESA	Fiescheralp	0.72	229	⇑Pg	Pb	20 12 21.6	-0.9
BOBI	Bbikon, Wasse	0.74	329	⇓Pg	Pb	20 12 22.4	-0.3
BOBI				PmP		20 12 25.0	
BOBI				Sg	Sb	20 12 33.0	-0.4
BOBI				SmS		20 12 36.8	
SINS	Interlaken, Sc	0.75	253	⇑Pg	Pb	20 12 22.3	-0.5
SINS				Sg	Sn	20 12 33.8	-2.9
TRULL	Truellikon	0.76	348	⇑Pg	Pb	20 12 22.6	-0.3
TRULL				PmP		20 12 25.3	
TRULL				Sg	Sb	20 12 33.2	-0.5
TRULL				SmS		20 12 37.1	
STEIN	Stein am Rhein	0.76	358	⇑Pg	Pb	20 12 22.8	-0.2
STEIN				PmP		20 12 25.4	
STEIN				Sg	Sb	20 12 34.0	+0.1
STEIN				SmS		20 12 37.6	
STEIN	Stein am Rhein	0.76	358	⇑Pg	Pb	20 12 22.8	-0.2
STEIN				Sg	Sb	20 12 33.8	-0.1
SKRK	Kreuzlingen, K	0.76	14	⇑Pg	Pb	20 12 22.7	-0.4
SKRK				PmP		20 12 25.3	
SKRK				Sg	Sb	20 12 33.6	-0.3
SKRK				SmS		20 12 37.8	
DAVA	Damuels	0.77	60	*e*Pg	Pg	20 12 22.0	+0.3
	comp=N,555nm,0.2s,SNR=367						
DAVA				*e*Sg	Sg	20 12 32.4	+0.9
	comp=N,9µm,0.3s						
DAVA	Damuels	0.77	60	⇑Pg	Pg	20 12 21.9	+0.3
DAVA	Damuels	0.77	60	*e*Pg	Pb	20 12 22.2	-1.0
	SNR=1235						
DAVA				*e*Sg	Sg	20 12 32.4	+0.9
	SNR=11						
SCEL	Celerina	0.77	121	⇓Pg	Pb	20 12 22.1	-1.1
SCEL				Sg	Sb	20 12 32.5	-1.7
SFEL	Villigen, Paul	0.78	324	SmS		20 12 37.4	
SCAS2	Camedo, Parato	0.78	195	⇑Pg	Pb	20 12 22.5	-0.8
EMMET	Emmethof	0.81	311	⇓Pg	Pb	20 12 23.4	-0.4
ACHB	Acheberg	0.81	327	⇓Pg	Pb	20 12 23.6	-0.3
ACHB				PmP		20 12 25.8	
ACHB				Sg	Sb	20 12 34.8	-0.5
ACHB				SmS		20 12 38.0	
SULZ	Cheisacher	0.82	319	*e*Pg	Pb	20 12 24.1	+0.1
	SNR=2026						
SULZ				PmP		20 12 26.1	
SULZ				*e*Sg	Sb	20 12 35.6	0.0
	SNR=7.9						
SULZ				SmS		20 12 38.8	
SULZ	Cheisacher	0.82	319	⇓Pg	Pb	20 12 23.8	-0.2
SULZ	Cheisacher	0.82	319	⇓Pg	Pb	20 12 23.9	-0.2
SCHS	Schaffhausen,	0.82	347	⇑Pg	Pb	20 12 23.9	-0.1
SZER	Zernez	0.85	104	⇓Pg	Pb	20 12 23.4	-1.1
WALHA	Wallhausen, DE	0.86	10	*e*Pg	Pb	20 12 24.7	0.0
	SNR=1488						
WALHA				*e*Sg	Sb	20 12 36.7	+0.1
	SNR=16						
WALHA				SmS		20 12 39.9	
WALHA	Wallhausen, DE	0.86	10	⇑Pg	Pb	20 12 24.4	-0.2
WALHA				Sg	Sb	20 12 36.6	0.0
SBRS	Brig, Spital	0.87	227	⇑Pg	Pb	20 12 24.2	-0.6
ROTHE	Rothenfluh	0.88	311	⇓Pg	Pb	20 12 24.9	-0.1
STHK	Thun, Kantonss	0.89	260	⇑Pg	Pn	20 12 25.3	-1.3
TETT	Tettnang	0.89	32	⇑Pg	Pb	20 12 25.1	-0.2
TETT				PmP		20 12 27.3	
TETT				Sg	Sb	20 12 37.4	-0.3
TETT				SmS		20 12 41.0	
SLE	Schleitheim	0.90	342	*e*Pg	Pn	20 12 25.4	-1.4
	SNR=3691						
SLE				PmP		20 12 27.0	
SLE				*e*Sg	Sb	20 12 37.3	-0.6
	SNR=24						
SLE	Schleitheim	0.90	342	⇑Pg	Pb	20 12 25.1	-0.3
SLE	Schleitheim	0.90	342	Pn	Pn	20 12 27.0	+0.2
SLE	Schleitheim	0.90	342	Sn	Sn	20 12 40.1	-0.3
SLE	Schleitheim	0.90	342	Pg	Pb	20 12 25.1	-0.3
SLE				SmS		20 12 40.1	
SARD	Ardez Schule,	0.90	98	⇓Pg	Pg	20 12 24.3	+0.1
BIBA	Brigerbad	0.91	228	⇑Pg	Pb	20 12 24.9	-0.6
SIMPL	Simplonpass	0.91	223	P	Pb	20 12 24.7	-0.9
SIMPL				S	Sb	20 12 36.5	-1.7
SIMPL	Simplonpass	0.91	223	⇑Pg	Pb	20 12 24.7	-0.9
WIMIS	Wimmis	0.91	255	⇑Pg	Pb	20 12 25.3	-0.3
BERNI	Berninapass	0.92	122	⇓P	Pb	20 12 24.7	-1.1
BERNI				AML	AML		
	comp=N,7150µm,0.6s						
BERNI				AML	AML		
	comp=E,6465µm,0.9s						
BERNI				AML	AML		
	comp=N,7150µm,1.4s						
BERNI	Berninapass	0.92	122	P	Pb	20 12 24.7	-1.1
BERNI				S	Sb	20 12 36.8	-1.7
BERNI	Berninapass	0.92	122	⇓Pg	Pb	20 12 24.7	-1.1
METMA	Mettma DE	0.92	331	*e*Pg	Pn	20 12 25.7	-1.3
	SNR=2062						
METMA				*e*Sg	Sb	20 12 38.0	-0.3
	SNR=12						
METMA				SmS		20 12 40.5	
METMA	Mettma DE	0.92	331	⇓Pg	Pb	20 12 25.4	-0.3
METMA				PmP		20 12 27.2	
METMA				Sg	Sb	20 12 37.6	-0.8
LAUCH	Lauchernalp	0.92	238	P	Pb	20 12 25.2	-0.6
LAUCH				S	Sb	20 12 37.3	-1.5
LAUCH	Lauchernalp	0.92	238	⇑Pg	Pb	20 12 25.2	-0.6
BALST	Balsthal	0.93	298	*e*Pg	Pn	20 12 26.0	-1.2
	SNR=2040						
BALST				PmP		20 12 27.8	
BALST				*e*Sg	Sb	20 12 38.7	0.0
	SNR=4.0						
BALST				SmS		20 12 41.4	
BALST	Balsthal	0.93	298	⇓Pg	Pb	20 12 25.8	-0.1
BALST	Balsthal	0.93	298	Pn	Pn	20 12 27.8	+0.6
BALST	Balsthal	0.93	298	Sn	Sn	20 12 41.6	+0.3
BALST	Balsthal	0.93	298	⇓Pg	Pb	20 12 25.7	-0.1
SVISP	Visp, Lonza VS	0.93	230	⇑Pg	Pb	20 12 25.4	-0.5
SVIT	Visp-Terbiners	0.94	229	⇑Pg	Pb	20 12 25.5	-0.5
SVIO	Visp Obere Sta	0.94	229	⇑Pg	Pb	20 12 25.5	-0.5
FUORN	Ofenpass-Fuorn	0.98	107	Pg	Pb	20 12 26.0	-0.8
FUORN	Ofenpass-Fuorn	0.98	107	⇓Pg	Pb	20 12 25.9	-0.9
EMING	Emmingen-Lipti	0.98	358	*e*Pg	Pn	20 12 27.1	-0.9
	SNR=1430						
EMING				PmP		20 12 28.4	
EMING				*e*Sg	Sn	20 12 40.6	-2.0
	SNR=16						
EMING				SmS		20 12 42.6	
EMING	Emmingen-Lipti	0.98	358	⇑Pg	Pb	20 12 26.7	-0.1
EMING				PmP		20 12 28.5	
MUGIO	Muggio	0.99	174	⇑P	Pn	20 12 26.5	-1.5
MUGIO				S	Sb	20 12 39.3	-1.2
MUGIO				AML	AML		
	comp=E,31450µm,0.9s						
MUGIO				AML	AML		
	comp=N,26350µm,0.7s						
MUGIO				AML	AML		
	comp=N,26350µm,1.3s						
MUGIO	Muggio	0.99	174	P	Pn	20 12 26.5	-1.5
MUGIO				S	Sb	20 12 39.3	-1.2
MUGIO	Muggio	0.99	174	⇑Pg	Pn	20 12 26.5	-1.5
SGAK	Gampel Kirche,	1.00	234	⇑Pg	Pn	20 12 26.6	-1.5
SFRA	Frenkendorf	1.01	307	⇓Pg	Pn	20 12 27.3	-0.9
EMBD	Embd, Matterta	1.01	227	P	Pb	20 12 26.7	-0.6
EMBD				S	Sb	20 12 40.1	-1.0
EMBD	Embd, Matterta	1.01	227	⇑Pg	Pb	20 12 26.7	-0.6
EMBD	Embd, Matterta	1.01	227	Sg	Sb	20 12 40.0	-1.2
EMBD	Embd, Matterta	1.01	227	Sn	Sn	20 12 47.0	+3.7
EMBD	Embd, Matterta	1.01	227	⇑Pg	Pb	20 12 26.7	-0.6
EMBD				SmS		20 12 47.2	
LKBD2	Leukerbad 2	1.02	239	⇑Pg	Pb	20 12 27.0	-0.5
STSP	Tschierv	1.02	106	⇓Pg	Pb	20 12 26.6	-0.9
LKBD	Leukerbad	1.02	240	⇑Pg	Pn	20 12 27.1	-1.5
SGRA	Graechen Ausbl	1.03	226	⇑Pg	Pb	20 12 27.0	-0.6
VARE	Varese	1.05	185	⇑P	Pn	20 12 27.6	-1.2
VARE				S	Sn	20 12 41.4	-2.7
VARE				AML	AML		
	comp=E,28550µm,0.7s						
VARE				AML	AML		
	comp=N,19200µm,1.2s						
VARE				AML	AML		
	comp=E,28550µm,1.3s						
VARE	Varese	1.05	185	P	Pn	20 12 27.7	-1.2
VARE				S	Sn	20 12 42.1	-2.0
VARE	Varese	1.05	185	⇑Pg	Pn	20 12 27.7	-1.2
WOLEN	Wohlen bei Ber	1.06	275	⇓Pg	Pn	20 12 28.2	-0.7
WOLEN				Sg	Sn	20 12 42.9	-1.3
OBER	Oberstdorf	1.07	62	*e*Pg	Pn	20 12 28.2	-1.0
	SNR=847						
OBER				PmP		20 12 30.4	
OBER				*e*Sg	Sn	20 12 44.3	-0.5
	SNR=4.9						
OBER				SmS		20 12 46.4	
OBER	Oberstdorf	1.07	62	⇑Pg	Pb	20 12 27.8	-0.5
MMK	Mattmark	1.08	217	⇑P	Pb	20 12 27.6	-0.8
MMK				AML	AML		
	comp=N,27800µm,0.5s						
MMK				AML	AML		
	comp=E,19100µm,0.4s						
MMK				AML	AML		
	comp=N,27800µm,1.5s						
MMK	Mattmark	1.08	217	P	Pb	20 12 27.7	-0.8
MMK	Mattmark	1.08	217	P	Pb	20 12 27.7	-0.8
MMK	Mattmark	1.08	217	⇑Pn	Pb	20 12 27.7	-0.8
BERGE	Lenzkirch (DE)	1.08	333	⇓Pn	Pn	20 12 28.4	-0.9
BERGE	Lenzkirch (DE)	1.08	333	*e*Pg	Pn	20 12 28.6	-0.7
	SNR=950						
BERGE				*e*Sg	Sb	20 12 43.1	-0.1
	SNR=6.6						
LOES	Loerrach-Stett	1.09	310	Pg	Pn	20 12 29.0	-0.4
BRMO	Bormio	1.10	113	⇓P	Pb	20 12 27.9	-1.0
BRMO				AML	AML		
	comp=E,4885µm,0.7s						
BRMO				AML	AML		
	comp=N,7480µm,0.4s						
BRMO	Bormio	1.10	113	P	Pb	20 12 27.8	-1.0
BRMO				S	Sn	20 12 50.4	+4.9
BRMO	Bormio	1.10	113	⇓Pn	Pb	20 12 27.8	-1.0
BORM	Bormio	1.10	113	P	Pg	20 12 27.9	-0.2
UBR	Ueberruh	1.13	46	⇑Pn	Pn	20 12 29.5	-0.3
UBR	Ueberruh	1.13	46	*e*Pg	Pn	20 12 29.6	-0.3
	SNR=2032						
UBR				*e*Sg	Sn	20 12 45.6	-0.5
	SNR=5.6						
ENDD	Endenburg	1.13	316	⇓Pn	Pn	20 12 29.4	-0.6
ENDD				Sn	Sn	20 12 45.3	-0.8
ENDD	Endenburg	1.13	316	⇓Pn	Pn	20 12 29.3	-0.6
VANNI	Vissoie, Val d	1.14	233	P	Pn	20 12 29.2	-1.0
VANNI				S	Sn	20 12 50.2	+3.6
VANNI	Vissoie, Val d	1.14	233	⇑Pn	Pn	20 12 29.1	-1.0
FELD	Feldberg im Sc	1.15	328	⇓*e*Pn	Pn	20 12 29.7	-0.6
FELD				Sn	Sb	20 12 44.9	-0.2
FELD	Feldberg im Sc	1.15	328	⇓Pg	Pn	20 12 29.7	-0.6
FELD	Feldberg im Sc	1.15	328	⇓Pn	Pn	20 12 29.7	-0.6
MOSI	Grossmontoni	1.17	104	⇓P	Pb	20 12 29.2	-0.9
MOSI				AML	AML		
	comp=E,20100µm,0.7s						
MOSI				AML	AML		
	comp=N,42150µm,0.6s						
MOSI				AML	AML		
	comp=E,20100µm,1.3s						
MOSI	Grossmontoni	1.17	104	⇓Pn	Pb	20 12 29.1	-0.9
GUT	Gutenstein	1.17	7	⇑Pn	Pn	20 12 29.8	-0.7
GUT				Sn	Sn	20 12 45.8	-1.4
GUT	Gutenstein	1.17	7	⇑Pn	Pn	20 12 29.7	-0.7
SENIN	Lac Senin/Sane	1.23	244		Pn	20 12 30.8	-0.7
SENIN					Sn	20 12 48.0	-0.9
SENIN	Lac Senin/Sane	1.23	244	P	Pn	20 12 30.9	-0.7
SENIN				S	Sn	20 12 50.0	+1.1
SENIN	Lac Senin/Sane	1.23	244	⇑Pn	Pn	20 12 30.8	-0.7
BOURR	Bourrignon	1.24	294	⇓*e*Pn	Pg	20 12 31.7	+0.9
BOURR				Sn	Sn	20 12 48.3	-0.6
BOURR	Bourrignon	1.24	294	Pg	Pg	20 12 31.6	+0.9
BOURR	Bourrignon	1.24	294	Sg	Sn	20 12 48.1	-0.8
BOURR	Bourrignon	1.24	294	⇓Pn	Pg	20 12 31.6	+0.9
KIZ	Kirchzarten	1.24	328	⇓Pn	Pg	20 12 31.3	+0.5
KIZ				Sn	Sg	20 12 47.4	+0.5
KIZ	Kirchzarten	1.24	328	⇓Pg	Pg	20 12 31.2	+0.5
KIZ	Kirchzarten	1.24	328	Pn	Pg	20 12 32.1	+1.3
KIZ	Kirchzarten	1.24	328	Sg	Sg	20 12 47.4	+0.5
KIZ	Kirchzarten	1.24	328	Sn	Sn	20 12 49.0	+0.1
KIZ	Kirchzarten	1.24	328	⇓Pn	Pg	20 12 31.2	+0.5
STAU	Staufen im Bre	1.25	321	Pn	Pg	20 12 31.4	+0.5
STAU				Sn	Sn	20 12 47.6	-1.4
FETA	Feichten	1.25	84	*i* Pg	Pg	20 12 30.9	-0.1
	comp=E,81nm,0.2s,SNR=252						
FETA				*e*Sg	Sn	20 12 49.3	-0.1
	comp=E,3µm,0.3s						
SATI	Passo dei Sala	1.26	215	⇑P	Pn	20 12 31.0	-0.9
SATI				AML	AML		
	comp=E,17250µm,0.6s						
SATI				AML	AML		
	comp=N,18100µm,0.4s						
SATI				AML	AML		
	comp=E,17250µm,1.4s						
SATI	Passo dei Sala	1.26	215	P	Pn	20 12 31.0	-0.9
SATI	Passo dei Sala	1.26	215	⇑Pn	Pn	20 12 31.0	-0.9
MDI	Monti di Nese	1.26	153	P	Pg	20 12 31.4	+0.3
MDI				AML	AML		
	comp=E,19150µm,0.5s						
MDI				AML	AML		
	comp=N,19100µm,0.9s						
MDI				AML	AML		
	comp=N,20400µm,0.5s						
MDI				AML	AML		
	comp=E,19450µm,0.5s						
MDI	Monti di Nese	1.26	153	P	Pg	20 12 31.5	+0.4
MDI	Monti di Nese	1.26	153	⇓Pn	Pg	20 12 31.4	+0.3
MERA	Merate	1.29	164	P	Pg	20 12 31.6	0.0
SAIRA	Les Sairains D	1.30	288	⇓Pn	Pg	20 12 32.7	+0.8
FBB	Freiburg im Br	1.30	327	Pg	Pg	20 12 37.3	+5.3
CARE	Lago del Cares	1.32	111	*e*Pg	Pg	20 12 32.0	-0.3
CARE	Lago del Cares	1.32	111	P	Pg	20 12 32.1	-0.2
DIX	Grande Dixence	1.32	232	⇑P	Pg	20 12 32.4	+0.1
DIX				AML	AML		
	comp=N,96950µm,0.5s						
DIX				AML	AML		
	comp=E,37600µm,1.2s						
DIX	Grande Dixence	1.32	232	P	Pg	20 12 32.4	+0.1
DIX				S	Sn	20 12 53.6	+2.4
DIX	Grande Dixence	1.32	232	⇑Pn	Pg	20 12 32.5	+0.1
DIX	Grande Dixence	1.32	232	⇑Pn	Pg	20 12 32.4	+0.1
BREM	Bremgarten	1.33	320	⇑Pn	Pg	20 12 32.9	+0.5
BREM				Sg	Sg	20 12 52.1	+2.5
TORNY	Torny/Romont	1.34	265	Pg	Pg	20 12 33.6	+0.9
TORNY	Torny/Romont	1.34	265	Sg	Sg	20 12 51.8	+1.8
BALG	Balingen, Zoll	1.36	359	Pn	Pb	20 12 32.8	-0.5
BALG				Pg	Pg	20 12 34.4	+1.3
BALG				Sn	Sb	20 12 50.4	-0.9
BALG				Sg	Sg	20 12 52.5	+1.6
RETA	Reutte	1.39	65	*e*Pg	Pg	20 12 33.6	0.0
	comp=E,279nm,0.2s,SNR=159						
RETA				*e*Sg	Sg	20 12 53.9	+2.2
	comp=E,4µm,0.4s						
RETA	Reutte	1.39	65	*e*Pn	Pg	20 12 33.6	0.0
RETA	Reutte	1.39	65	⇑Pn	Pg	20 12 33.5	0.0
MABI	Malga Bissina	1.40	127	⇓P	Pg	20 12 33.4	-0.4
MABI				AML	AML		
	comp=E,7620µm,0.6s						
MABI				AML	AML		
	comp=N,5895µm,0.7s						
MABI				AML	AML		
	comp=E,7620µm,1.4s						
MABI	Malga Bissina	1.40	127	P	Pg	20 12 33.4	-0.4
MABI				S	Sg	20 12 55.2	+3.2
MABI	Malga Bissina	1.40	127	⇓Pn	Pg	20 12 33.4	-0.4
ZONE	Zone	1.42	143	⇓P	Pg	20 12 34.3	+0.1
ZONE				AML	AML		
	comp=N,4560µm,0.6s						
ZONE				AML	AML		
	comp=N,4565µm,0.6s						
ZONE				AML	AML		
	comp=N,18750µm,0.6s						
ZONE				AML	AML		
	comp=E,5000µm,0.3s						
ZONE				AML	AML		
	comp=N,18750µm,1.4s						
ZONE				AML	AML		
	comp=N,4565µm,1.4s						

ZONE				AML	AML		
	comp=E,20500µm,0.3s						
JUNG	**Jungingen**	1.42	4	Pn	Pb	20 12 33.5	-0.8
JUNG				Pg	Pg	20 12 35.6	+1.3
JUNG				Sn	Sn	20 12 52.1	-1.3
JUNG				Sg	Sg	20 12 54.3	+1.6
BREI	**Breisach am Rh**	1.44	322	Pn	Pg	20 12 34.4	-0.1
BREI				Sn	Sg	20 12 53.1	0.0
BREI				Sg	Sb	20 12 55.4	+2.1
VOGT	**Vogtsburg - To**	1.44	325	Pn	Pb	20 12 34.2	-0.4
VOGT				Sn	Sn	20 12 52.4	-1.4
VOGT				Sg	Sg	20 12 54.9	+1.6
VOGT	**Vogtsburg - To**	1.44	325	⇓Pn	Pb	20 12 34.1	-0.4
MILN	**Milano**	1.45	171	AML	AML		
	comp=N,59300µm,0.5s						
MILN				AML	AML		
	comp=E,55100µm,0.6s						
MILN				AML	AML		
	comp=E,53400µm,0.6s						
MILN				AML	AML		
	comp=N,44300µm,0.9s						
MILN				AML	AML		
	comp=N,44300µm,1.1s						
ERPF	**Erpfingen**	1.45	7	Pn	Pb	20 12 33.9	-0.9
ERPF				Pg	Pg	20 12 36.1	+1.4
ERPF				Sg	Sg	20 12 55.3	+1.8
AIGLE	**Aigle**	1.46	248	⇑Pn	Pg	20 12 35.3	+0.4
AIGLE	**Aigle**	1.46	248	⇑Pn	Pg	20 12 35.3	+0.4
GAVI	**Passo Gaver BS**	1.46	132	*e*Pg	Pg	20 12 34.8	-0.1
BFO	**Black Forest**	1.47	345		Pb	20 12 34.5	-0.7
BFO	**Black Forest**	1.47	345	*e*Pn	Pb	20 12 34.7	-0.5
	SNR=482						
BFO				Sn	Sn	20 12 52.6	-1.9
BFO				*e*Sg	Sg	20 12 55.5	+1.2
	SNR=12						
BFO	**Black Forest**	1.47	345	P	Pb	20 12 34.3	-0.9
BFO				SG	Sg	20 12 55.4	+1.2
BFO	**Black Forest**	1.47	345	Pn	Pb	20 12 34.4	-0.7
BFO	**Black Forest**	1.47	345	*e*Pg	Pb	20 12 34.7	-0.5
	SNR=482						
BFO				*e*Sg	Sg	20 12 55.5	+1.2
	SNR=12						
RONC	**Roncone**	1.51	127	⇓*e*Pg	Pg	20 12 35.4	-0.5
RONC	**Roncone**	1.51	127	P	Pg	20 12 35.5	-0.4
OZOL	**Ozolo**	1.56	108	⇓*e*Pg	Pg	20 12 36.4	-0.5
MOTA	**Moosalm**	1.56	73		Pg	20 12 36.6	-0.3
MOTA					Sg	20 12 59.0	+1.8
MOTA	**Moosalm**	1.56	73	*e*Pg	Pg	20 12 36.6	-0.3
	comp=N,191nm,0.2s,SNR=212						
MOTA				*i* Sg	Sg	20 12 59.0	+1.8
	comp=N,2µm,0.3s						
MOTA	**Moosalm**	1.56	73	P	Pg	20 12 36.6	-0.3
MOTA						20 12 59.0	
BUCH	**Bad Urach**	1.57	11	Pn	Pn	20 12 35.4	-0.6
BUCH				Sg	Sg	20 12 58.8	+1.4
CHMF	**Charmoille**	1.58	283	⇓Pn	Pb	20 12 36.5	-0.5
CHMF				Pg	Pg	20 12 38.7	+1.5
CHMF				Sn	Sb	20 12 56.4	-1.0
CHMF				Sg	Sg	20 12 59.2	+1.7
CHMF	**Charmoille**	1.58	283	⇓Pn	Pb	20 12 36.4	-0.5
CHMF				Pg	Pg	20 12 38.6	+1.5
CHMF				Sn	Sb	20 12 56.4	-1.0
CHMF				Sg	Sg	20 12 59.3	+1.7
CHMF	**Charmoille**	1.58	283	⇓Pn	Pb	20 12 36.5	-0.5
CNCS	**Concesio**	1.59	145	P	Pg	20 12 37.4	0.0
CIRO	**Champorcher**	1.60	216	P	Pg	20 12 36.9	-0.7
CIRO				AML	AML		
	comp=N,7910µm,0.5s						
CIRO				AML	AML		
	comp=E,8475µm,1.6s						
CIRO				AML	AML		
	comp=N,7910µm,1.5s						
SQTA	**Sankt Quirin**	1.61	78		Pg	20 12 37.6	0.0
SQTA					Sg	20 13 00.3	+1.8
SQTA	**Sankt Quirin**	1.61	78	*e*Pg	Pg	20 12 37.6	0.0
	comp=N,530nm,0.2s,SNR=448						
SQTA				*i* Sg	Sg	20 13 00.3	+1.8
	comp=N,7µm,0.4s						
SQTA	**Sankt Quirin**	1.61	78	P	Pg	20 12 37.7	0.0
TUEB	**Tuebingen, Eug**	1.61	4	Pn	Pn	20 12 35.9	-0.6
TUEB				Pg	Pg	20 12 38.9	+1.1
TUEB				Sn	Sn	20 12 55.9	-2.0
TUEB				Sg	Sg	20 12 59.6	+1.0
TRAV	**Traversella**	1.61	210	P	Pb	20 12 36.3	-1.3
TRAV				AML	AML		
	comp=E,8775µm,1.6s						
TRAV				AML	AML		
	comp=N,11250µm,0.5s						
TRAV				AML	AML		
	comp=E,8775µm,0.4s						
PART	**Garmisch-Parte**	1.62	68	*e*Pn	Pg	20 12 38.1	+0.2
	SNR=231						
PART				*e*Sg	Sg	20 13 01.4	+2.6
	SNR=5.8						
TUBL	**Tuebingen-Lenn**	1.62	4	Sn	Sn	20 12 56.2	-1.9
TUBL				Sg	Sg	20 12 59.8	+0.8
GAGG	**Gaggia**	1.64	119	⇓P	Pg	20 12 37.8	-0.6
GAGG				AML	AML		
	comp=N,7320µm,0.7s						
GAGG				AML	AML		
	comp=E,7675µm,0.7s						
GAGG				AML	AML		
	comp=N,7565µm,1.4s						
GAGG				AML	AML		
	comp=E,7605µm,1.4s						
GAGG				AML	AML		
	comp=N,7565µm,0.6s						
GAGG				AML	AML		
	comp=E,7605µm,0.6s						
MAGA	**Magasa**	1.65	133	⇓P	Pg	20 12 38.0	-0.5
MAGA				AML	AML		
	comp=E,29650µm,0.5s						
MAGA				AML	AML		
	comp=E,29650µm,1.5s						
MAGA				AML	AML		
	comp=N,17150µm,0.5s						
APPI	**Appiano**	1.66	104	P	Pg	20 12 38.1	-0.6
APPI				AML	AML		
	comp=E,24850µm,1.2s						
APPI				AML	AML		
	comp=N,22900µm,0.5s						
OPP	**Oppenau**	1.66	343	Pn	Pn	20 12 37.0	-0.2
OPP				Pg	Pg	20 12 39.7	+0.9
OPP				Sn	Sn	20 12 56.8	-2.4
OPP				Sg	Sg	20 13 01.1	+0.8
HINF	**Hinteralfeld**	1.66	304	*e*Pn	Pb	20 12 37.6	-0.8
HINF	**Hinteralfeld**	1.66	304	*e*Pg	Pg	20 12 40.0	+1.2
HINF				*e*Sg	Sg	20 13 01.2	+0.8
	comp=N,4µm,0.3s						
ORZI	**Orzinuovi**	1.66	154	P	Pg	20 12 38.2	-0.6
ORZI				AML	AML		
	comp=E,45600µm,1.6s						
ORZI				AML	AML		
	comp=N,73450µm,0.9s						
ORZI				AML	AML		
	comp=E,45600µm,0.4s						
BRANT	**Les Verrieres**	1.67	272	⇓Pn	Pb	20 12 38.1	-0.4
BRANT	**Les Verrieres**	1.67	272	Sn	Sb	20 12 59.2	-0.8
BRANT	**Les Verrieres**	1.67	272	Sg	Sg	20 13 02.6	+2.1
BRANT	**Les Verrieres**	1.67	272	⇓Pn	Pb	20 12 38.1	-0.4
LEOD	**Capriano del C**	1.68	149	P	Pg	20 12 40.6	+1.5
VOBA	**Vobarno**	1.68	138	P	Pg	20 12 39.1	-0.1
LUSI	**Trento, Gardas**	1.70	123	⇓P	Pg	20 12 38.7	-0.8
LUSI				AML	AML		
	comp=N,10985µm,0.4s						
LUSI				AML	AML		
	comp=N,10985µm,1.6s						
LUSI				AML	AML		
	comp=E,6355µm,1.1s						
OGSI	**Sixt**	1.71	241	⇑Pn	Pg	20 12 39.2	-0.5
OGSI				Pg	Pb	20 12 40.9	+1.7
OGSI				Sn	Sg	20 13 01.7	-0.1
OGSI	**Sixt**	1.71	241	⇑Pn	Pg	20 12 39.2	-0.5
BOSI	**Bolzano**	1.71	103	P	Pg	20 12 39.5	-0.3
BOSI				AML	AML		
	comp=E,31200µm,0.5s						
BOSI				AML	AML		
	comp=N,30350µm,1.4s						
MRGE	**Morge**	1.71	229	P	Pg	20 12 39.0	-0.7
MRGE				AML	AML		
	comp=N,7730µm,0.8s						
MRGE				AML	AML		
	comp=E,12900µm,0.6s						
MRGE				AML	AML		
	comp=N,7730µm,1.2s						
SALO	**Salr**	1.71	138		Pg	20 12 38.8	-1.0
SALO	**Salr**	1.71	138	P	Pg	20 12 39.4	-0.4
SALO				AML	AML		
	comp=E,15000µm,0.7s						
SALO				AML	AML		
	comp=E,14500µm,0.6s						
SALO				AML	AML		
	comp=N,16600µm,0.5s						
SALO				AML	AML		
	comp=N,15100µm,0.5s						
ROSI	**Rosskopf**	1.72	88	P	Pg	20 12 39.2	-0.7
ROSI				AML	AML		
	comp=E,26550µm,0.8s						
ROSI				AML	AML		
	comp=N,27800µm,0.5s						
ROSI				AML	AML		
	comp=E,26550µm,1.2s						
RONF	**Ronchamp**	1.73	298	Pn	Pb	20 12 38.4	-1.2
RONF				Pg	Pg	20 12 40.9	+0.7
RONF				Sg	Sg	20 13 03.2	+0.6
RONF	**Ronchamp**	1.73	298	⇓Pn	Pb	20 12 38.4	-1.2
VARA	**Varagna**	1.75	127	P	Pb	20 12 39.3	-0.7
ECH	**Echery**	1.76	319		Pn	20 12 38.2	-0.4
ECH	**Echery**	1.76	319	P	Pn	20 12 38.2	-0.4
ECH	**Echery**	1.76	319	Pn	Pn	20 12 38.5	-0.1
ECH				Sn	Sn	20 12 59.9	-1.8
ECH				Sg	Sg	20 13 04.1	+0.5
ECH	**Echery**	1.76	319	⇓Pn	Pn	20 12 38.5	-0.1
ECH	**Echery**	1.76	319	*e*Pn	Pb	20 12 38.9	-1.2
	SNR=305						
DEGG	**Deggingen-Nord**	1.79	17	⇑Pn	Pn	20 12 38.0	-0.9
DEGG				Sg	Sg	20 13 05.7	+1.4
WLS	**Welschbruch**	1.83	326	⇓Pn	Pn	20 12 39.6	0.0
WLS				Sn	Sn	20 13 01.3	-2.2
WLS	**Welschbruch**	1.83	326	P	Pn	20 12 39.6	0.0
WLS				S	Sn	20 13 01.2	-2.2
WLS	**Welschbruch**	1.83	326	⇓Pn	Pn	20 12 39.6	0.0
WLS				Sn	Sn	20 13 01.4	-2.2
WLS				Sg	Sg	20 13 06.8	+0.9
BOUC	**Bouclans**	1.84	282	⇓Pn	Pb	20 12 40.0	-1.4
BOUC				Pg	Pg	20 12 43.3	+1.1
BOUC				Sn	Sn	20 13 02.7	-0.9
BOUC				Sg	Sg	20 13 07.0	+1.0
BOUC	**Bouclans**	1.84	282	⇓Pn	Pb	20 12 40.0	-1.4
STR	**Strasbourg**	1.84	336	Pn	Pb	20 12 40.3	-1.2
STR				Sn	Sn	20 13 02.6	-1.0
GIMEL	**St. Georges /**	1.85	259	⇑Pn	Pb	20 12 40.8	-0.9
GIMEL	**St. Georges /**	1.85	259	Pg	Pg	20 12 44.3	+1.8
GIMEL	**St. Georges /**	1.85	259	Sg	Sg	20 13 07.9	+1.4
CDF	**Champ du Feu**	1.86	324	*e*Pn	Pn	20 12 39.9	-0.2
CDF	**Champ du Feu**	1.86	324	*e*Pg	Pg	20 12 43.3	+0.6
CDF				*e*Sn	Sn	20 13 01.9	-2.4
CDF				*e*Sg	Sg	20 13 06.5	-0.3
	comp=E,3µm,0.6s						
BABA	**Baden-Baden-Ne**	1.87	345	Pn	Pn	20 12 39.8	-0.3
STU	**Stuttgart**	1.87	6		Pn	20 12 39.2	-0.9
STU	**Stuttgart**	1.87	6	*e*Pn	Pn	20 12 39.5	-0.6
	SNR=43						
STU				*e*Sn	Sn	20 13 02.0	-2.4
STU				Sg	Sg	20 13 08.2	+1.1
STU	**Stuttgart**	1.87	6	P	Pn	20 12 39.3	-0.9
STU				S	Sn	20 13 02.2	-2.2
WATA	**Walderalm**	1.87	76		Pg	20 12 42.5	-0.3
WATA					Sg	20 13 08.9	+1.8
WATA	**Walderalm**	1.87	76	*e*Pg	Pg	20 12 42.5	-0.3
	comp=E,84nm,0.1s,SNR=111						
WATA				*e*Sg	Sg	20 13 08.9	+1.8
	comp=E,2µm,0.3s						
GALG	**Neuhausen (Enz**	1.88	358	Pn	Pn	20 12 39.7	-0.5
GALG				Sn	Sn	20 13 01.9	-2.7
DOSS	**Dosso del Somm**	1.89	122	P	Pg	20 12 42.1	-0.9
DOSS				AML	AML		
	comp=E,6945µm,0.6s						
DOSS				AML	AML		
	comp=E,7100µm,0.5s						
DOSS				AML	AML		
	comp=N,6800µm,0.5s						
DOSS				AML	AML		
	comp=N,7035µm,0.6s						
HDH	**Heidenheim-Cha**	1.89	27	⇑Pn	Pn	20 12 39.2	-1.2
HDH				Pg	Pg	20 12 43.5	+0.3
HDH				Sg	Sg	20 13 08.1	+0.3
WTTA	**Wattenberg**	1.90	78	*e*Pg	Pg	20 12 43.1	-0.3
	comp=N,109nm,0.1s,SNR=207						
WTTA				*e*Sg	Sg	20 13 09.8	+1.9
	comp=N,8µm,0.6s						
WTTA	**Wattenberg**	1.90	78	P	Pg	20 12 42.9	-0.4
WTTA				AML	AML		
	comp=E,17350µm,0.7s						
WTTA				AML	AML		
	comp=N,17950µm,0.7s						
WTTA	**Wattenberg**	1.90	78	P	Pb	20 12 42.0	-0.5
WTTA				SG	Sg	20 13 10.0	+2.1
WTTA	**Wattenberg**	1.90	78	*e*Pn	Pg	20 12 43.2	-0.1
	SNR=565						
WTTA				*e*Sg	Sg	20 13 10.1	+2.1
	SNR=9.1						
BRES	**Bressanone**	1.96	95	P	Pb	20 12 43.3	-0.2
BRES				AML	AML		
	comp=E,16005µm,0.6s						
BRES				AML	AML		
	comp=N,29750µm,1.0s						
BRES				AML	AML		
	comp=E,16005µm,1.4s						
MONC	**Moncucco Torin**	1.96	201	P	Pb	20 12 42.9	-0.4
MONC				AML	AML		
	comp=N,6520µm,1.3s						
MONC				AML	AML		
	comp=N,6520µm,0.7s						
MONC				AML	AML		
	comp=E,8295µm,0.7s						
CABF	**La Chapelle**	1.96	262	*e*Pn	Pb	20 12 42.1	-1.4
CABF	**La Chapelle**	1.96	262	*e*Pg	Pg	20 12 46.0	+1.5
CABF				*e*Sn	Sb	20 13 06.4	-2.0
CABF				*e*Sg	Sg	20 13 11.6	+1.7
	comp=E,3µm,0.5s						
ROVR	**Rover Verones**	1.96	129	P	Pb	20 12 43.3	-0.2
ROVR				AML	AML		
	comp=E,5570µm,1.1s						
ROVR				AML	AML		
	comp=N,4910µm,1.0s						
ROVR				AML	AML		
	comp=E,2140µm,1.1s						
ROVR				AML	AML		
	comp=N,1940µm,1.0s						
ROVR				AML	AML		
	comp=N,1940µm,1.0s						
ROVR				AML	AML		
	comp=N,4910µm,1.0s						
ROVR				AML	AML		
	comp=E,2140µm,0.9s						
ROVR				AML	AML		
	comp=E,5570µm,0.9s						
URBA	**Urbach, Forsts**	1.98	13	Pn	Pn	20 12 40.5	-1.2
URBA				Pg	Pg	20 12 45.0	0.0
URBA				Sn	Sn	20 13 05.4	-1.7
RSL	**Roselend**	2.00	233	⇑Pn	Pb	20 12 43.7	-0.4
RSL				Pg	Pg	20 12 46.2	+1.0
RSL				Sn	Sg	20 13 09.5	-1.5
RSL				Sg	Sg	20 13 13.7	+2.7
FUR	**Furstenfeldbru**	2.04	51	P	Pn	20 12 42.5	+0.1
FUR				SG	Sg	20 13 13.0	+0.6
FUR	**Furstenfeldbru**	2.04	51	*e*Pn	Pb	20 12 43.1	-1.7
	SNR=17						
FUR				*e*Sg	Sg	20 13 13.0	+0.6
	SNR=5.7						
SARZ	**Sarezzano**	2.04	180	AML	AML		
	comp=E,17400µm,0.6s						
SARZ				AML	AML		
	comp=E,16900µm,0.6s						
SARZ				AML	AML		
	comp=E,16900µm,1.4s						
SARZ				AML	AML		
	comp=E,17400µm,1.4s						
SARZ				AML	AML		
	comp=N,27750µm,0.7s						
SARZ				AML	AML		
	comp=N,28100µm,0.7s						
HAU	**Haudompre**	2.05	303	*e*Pn	Pn	20 12 42.9	+0.3
HAU	**Haudompre**	2.05	303	*e*Pg	Pg	20 12 47.0	+0.7
HAU				*e*Sg	Sg	20 13 12.7	-0.2
	comp=N,3µm,0.3s						
LPL	**La Plagne**	2.05	228	*e*Pn	Pb	20 12 44.5	-0.6
LPL	**La Plagne**	2.05	228	*e*Pg	Pg	20 12 48.0	+1.7
LPL				*e*Sg	Sg	20 13 15.6	+2.7
	comp=N,2µm,0.5s						
LPL	**La Plagne**	2.05	228	P	Pb	20 12 44.6	-0.6
LPL				SG	Sg	20 13 13.7	+0.8
RIVEL	**MONT RIVEL**	2.05	267	⇑Pn	Pb	20 12 43.4	-1.6
RIVEL				Pg	Pg	20 12 47.2	+0.9
RIVEL				Sn	Sn	20 13 08.2	-0.6
CTI	**Castel Tesino**	2.08	113		Pg	20 12 45.7	-1.1
CTI	**Castel Tesino**	2.08	113	P	Pb	20 12 45.1	-0.5
CTI				AML	AML		
	comp=E,4440µm,0.8s						
CTI				AML	AML		
	comp=N,4030µm,0.5s						
CTI	**Castel Tesino**	2.08	113	P	Pg	20 12 45.7	-1.1
ROTM	**Rocchetta Tana**	2.10	191	P	Pb	20 12 45.2	-0.5
ROTM				AML	AML		
	comp=E,24000µm,0.6s						
ROTM				AML	AML		
	comp=N,23800µm,0.7s						
ROTM				AML	AML		
	comp=N,23800µm,1.3s						
ROTM				AML	AML		
	comp=E,24000µm,1.4s						
RSP	**Reno Superiore**	2.10	214	P	Pn	20 12 43.2	-0.1
RSP				AML	AML		
	comp=E,5565µm,0.7s						
RSP				AML	AML		
	comp=E,5660µm,0.7s						
RSP				AML	AML		
	comp=N,5230µm,0.4s						
RSP				AML	AML		
	comp=E,5660µm,1.3s						
RSP				AML	AML		
	comp=E,5565µm,1.3s						
RSP				AML	AML		
	comp=N,5110µm,0.4s						
BRET	**Bretten**	2.11	356	⇑Pn	Pn	20 12 43.0	-0.4
BRET				Sg	Sg	20 13 15.5	+0.8
SUBF	**Surbourg**	2.13	341	⇓Pn	Pn	20 12 43.9	+0.3
SUBF	**Surbourg**	2.13	341	Sn	Sn	20 13 08.5	-2.2
SUBF	**Surbourg**	2.13	341	Sg	Sg	20 13 16.6	+1.3
SZBH	**soultz borehol**	2.14	341	⇓Pn	Pn	20 12 43.9	+0.1
SZBH				Sn	Sn	20 13 08.4	-2.6
SZBH				Sg	Sg	20 13 16.5	+0.7
NORI	**Noerdlinger Ri**	2.15	32	*e*Pn	Pn	20 12 42.9	-1.0
	SNR=31						
RISI	**Rein**	2.18	88	P	Pb	20 12 47.1	-0.1
RISI				AML	AML		
	comp=E,26750µm,0.5s						
RISI				AML	AML		
	comp=N,28150µm,1.0s						
RISI				AML	AML		
	comp=N,28150µm,1.0s						
CIEL	**Dossenheim-sur**	2.19	332	Pn	Pn	20 12 44.5	+0.1
CIEL				Sn	Sn	20 13 09.9	-2.2
CGRP	**Cima Grappa**	2.25	116	P	Pb	20 12 48.4	-0.1
CGRP				AML	AML		
	comp=N,4065µm,0.7s						
CGRP				AML	AML		
	comp=E,5115µm,0.6s						
CGRP				AML	AML		
	comp=E,5130µm,0.6s						
CGRP				AML	AML		
	comp=N,4060µm,0.7s						
OGMO	**Fort Saint-Gob**	2.30	223	⇑Pn	Pb	20 12 49.0	-0.2
GORR	**Gorreto**	2.32	173	P	Pb	20 12 49.2	-0.4
GORR				AML	AML		
	comp=E,7985µm,0.7s						
GORR				AML	AML		
	comp=N,9880µm,1.1s						
PRMA	**PARMA**	2.36	155		Pb	20 12 50.4	+0.2
BHB	**Bricherasio**	2.36	210	P	Pn	20 12 46.6	-0.3
BHB				AML	AML		
	comp=N,1205µm,0.7s						
BHB				AML	AML		
	comp=E,1210µm,0.5s						
VARN	**Col Varnada, M**	2.39	111	P	Pb	20 12 50.4	-0.5
VARN				AML	AML		
	comp=N,6420µm,0.6s						
VARN				AML	AML		
	comp=E,6855µm,0.6s						
VARN				AML	AML		
	comp=N,6515µm,0.6s						
VARN				AML	AML		
	comp=E,6915µm,0.6s						
BNI	**Bardonecchia**	2.42	221		Pb	20 12 50.6	-0.8
BNI	**Bardonecchia**	2.42	221	P	Pb	20 12 50.6	-0.8
BNI				AML	AML		
	comp=E,1610µm,1.2s						
BNI				AML	AML		
	comp=N,1980µm,1.4s						
BNI				AML	AML		
	comp=E,1950µm,1.2s						
BNI				AML	AML		
	comp=N,2420µm,1.4s						
BNI				AML	AML		
	comp=N,2420µm,0.6s						
BNI				AML	AML		
	comp=N,1980µm,0.6s						
BNI				AML	AML		
	comp=E,1610µm,0.8s						
BNI				AML	AML		
	comp=E,1950µm,0.8s						
BNI	**Bardonecchia**	2.42	221	P	Pb	20 12 50.6	-0.8
RNCA	**Ronca, Sant'Ol**	2.44	179	P	Pb	20 12 49.6	-1.9
RNCA				AML	AML		
	comp=E,1286µm,0.9s						
RNCA				AML	AML		
	comp=E,1286µm,1.1s						
RNCA				AML	AML		
	comp=N,1166µm,0.7s						
NDIM	**Novi di Modena**	2.46	145	AML	AML		
	comp=E,8750µm,1.4s						
NDIM				AML	AML		
	comp=N,8620µm,1.6s						
NDIM				AML	AML		
	comp=E,9360µm,0.6s						
NDIM				AML	AML		
	comp=N,8190µm,1.5s						
OG35	**Corcelles**	2.46	251	⇑Pn	Pn	20 12 48.8	+0.5
OG35				Pg	Pg	20 12 55.0	+1.0
OG35				Sn	Sg	20 13 26.0	+0.1
TEOL	**Teolo**	2.47	128		Pb	20 12 50.4	-1.7
TEOL	**Teolo**	2.47	128	P	Pb	20 12 50.4	-1.7
TEOL				AML	AML		
	comp=N,6405µm,0.9s						
TEOL				AML	AML		
	comp=E,9775µm,0.7s						
TEOL				AML	AML		
	comp=N,6405µm,1.1s						
KTD	**Kalmit**	2.48	347	*e*Pn	Pn	20 12 48.4	-0.1
	SNR=7.0						
KTD				Sn	Sn	20 13 16.2	-3.1
KTD				Sg	Sg	20 13 28.2	+1.8
KTD	**Kalmit**	2.48	347	P	Pn	20 12 48.2	-0.2
KTD				S	Sn	20 13 16.1	-3.1
RRL	**Rocca Remolon**	2.48	217	P	Pb	20 12 51.4	-0.9
RRL				AML	AML		
	comp=N,4910µm,0.9s						
RRL				AML	AML		
	comp=N,4910µm,1.1s						
RRL				AML	AML		
	comp=E,4975µm,0.7s						
ABTA	**Abfaltersbach**	2.48	92	*e*Pn	Pb	20 12 51.7	-0.7
	comp=E,220nm,0.5s,SNR=112						
ABTA				*e*Sg	Sg	20 13 28.1	+1.4
	comp=E,2µm,0.8s						
SIND	**Sindeldorf**	2.49	11	⇑Pn	Pn	20 12 47.0	-1.6
SIND				Pg	Pg	20 12 54.9	+0.3
CIMO	**Cimolais**	2.51	103		Pb	20 12 52.0	-0.8
CIMO	**Cimolais**	2.51	103	P	Pb	20 12 52.3	-0.5
CIMO				AML	AML		
	comp=E,1645µm,0.9s						
CIMO				AML	AML		
	comp=N,2670µm,0.7s						
CIMO				AML	AML		
	comp=E,1600µm,0.9s						
CIMO				AML	AML		
	comp=N,2630µm,0.7s						
CIMO				AML	AML		
	comp=E,1600µm,1.1s						
CIMO				AML	AML		
	comp=E,1645µm,1.1s						
SERM	**Sermide**	2.53	138	AML	AML		
	comp=E,1995µm,0.5s						

SERM				AML	AML		
	comp=E,1295µm,0.6s						
SERM				AML	AML		
	comp=N,1435µm,1.0s						
SERM				AML	AML		
	comp=N,2325µm,0.8s						
SERM				AML	AML		
	comp=E,1295µm,1.4s						
SERM				AML	AML		
	comp=E,1995µm,1.5s						
GRAM	**Graiana**	**2.55**	**161**	P	**Pb**	**20 12 52.8**	**-0.7**
GRAM				AML	AML		
	comp=E,5740µm,0.7s						
GRAM				AML	AML		
	comp=N,4610µm,0.5s						
GRAM				AML	AML		
	comp=E,5740µm,1.3s						
OGSM	**Saint Maurice**	**2.58**	**241**	⇑Pn	**Pn**	**20 12 50.8**	**+1.0**
OGSM				Pg	**Pg**	**20 12 56.4**	**+0.1**
OGSM				Sg	**Sg**	**20 13 30.7**	**+1.0**
GDM	**Grand'Maison**	**2.58**	**230**	⇑Pn	**Pb**	**20 12 51.5**	**-2.6**
GDM				Pg	**Pg**	**20 12 56.1**	**-0.4**
MANN	**Mannheim**	**2.60**	**354**	Sg	**Sg**	**20 13 33.6**	**+3.2**
QLNO	**Quiliano**	**2.62**	**189**	P	**Pb**	**20 12 52.2**	**-2.4**
QLNO				AML	AML		
	comp=E,2240µm,1.4s						
QLNO				AML	AML		
	comp=N,2100µm,0.6s						
QLNO				AML	AML		
	comp=E,2240µm,0.6s						
MSSA	**Maissana**	**2.63**	**170**		**Pb**	**20 12 53.4**	**-1.4**
POLC	**Polcenigo**	**2.64**	**108**	P	**Pb**	**20 12 54.2**	**-0.8**
POLC				AML	AML		
	comp=N,5310µm,0.6s						
POLC				AML	AML		
	comp=E,6525µm,0.6s						
MBDF	**Montbardon**	**2.64**	**215**	*e*Pn	**Pb**	**20 12 52.2**	**-2.9**
MBDF	**Montbardon**	**2.64**	**215**	*e*P	**Pb**	**20 12 54.6**	**-0.5**
MBDF				*e*Sn	**Sn**	**20 13 23.2**	**-0.4**
MBDF				*e*Sg	**Sg**	**20 13 32.2**	**+0.4**
	comp=E,1µm,0.5s						
FVI	**Forni Avoltri**	**2.68**	**95**	P	**Pb**	**20 12 54.6**	**-1.2**
FVI				AML	AML		
	comp=N,3960µm,0.5s						
FVI				AML	AML		
	comp=E,2720µm,0.5s						
FVI				AML	AML		
	comp=N,3960µm,1.5s						
STAL	**STALIGIAL**	**2.70**	**103**		**Pb**	**20 12 54.5**	**-1.6**
STAL	**STALIGIAL**	**2.70**	**103**	P	**Pb**	**20 12 54.6**	**-1.6**
STAL				AML	AML		
	comp=E,2395µm,0.5s						
STAL				AML	AML		
	comp=N,2585µm,0.6s						
STAL				AML	AML		
	comp=E,3510µm,0.9s						
STAL				AML	AML		
	comp=N,2325µm,0.3s						
STAL				AML	AML		
	comp=N,2585µm,1.4s						
PAGF	**Fort de Pagny**	**2.71**	**309**	*e*Pn	**Pn**	**20 12 51.7**	**+0.2**
	baz=130						
PAGF	**Fort de Pagny**	**2.71**	**309**	*e*Pg	**Pg**	**20 12 58.3**	**-0.5**
	baz=128						
PAGF				*e*Sn	**Sn**	**20 13 22.8**	**-2.1**
PAGF				*e*Sg	**Sg**	**20 13 33.8**	**0.0**
	comp=N,4µm,0.8s						
PZZ	**Stroppo**	**2.71**	**208**	P	**Pn**	**20 12 51.4**	**-0.3**
PZZ				AML	AML		
	comp=N,2055µm,0.6s						
PZZ				AML	AML		
	comp=E,2560µm,0.6s						
GRC1	**Grafenberg Arr**	**2.73**	**39**	Pn	**Pn**	**20 12 50.6**	**-1.3**
GRC1				Sg	**Sg**	**20 13 33.6**	**-1.0**
CANO	**Canova, Maglio**	**2.74**	**190**	P	**Pb**	**20 12 53.9**	**-2.8**
CANO				AML	AML		
	comp=N,4260µm,0.3s						
CANO				AML	AML		
	comp=E,10530µm,1.2s						
WBA	**Furth**	**2.75**	**359**	⇑Pn	**Pn**	**20 12 51.2**	**-0.9**
GRN	**Grenoble**	**2.76**	**234**	⇑Pn	**Pb**	**20 12 53.8**	**-3.3**
GRN				Pg	**Pg**	**20 13 00.5**	**+0.7**
IMS	**Imsbach**	**2.77**	**346**	Pn	**Pn**	**20 12 52.2**	**-0.2**
IMS				Sg	**Sg**	**20 13 37.1**	**+1.2**
GBOS	**Grotte di Boss**	**2.77**	**196**	P	**Pn**	**20 12 53.5**	**+1.0**
GBOS				AML	AML		
	comp=N,1280µm,0.7s						
GBOS				AML	AML		
	comp=E,1115µm,0.6s						
RJOB	**Jochberg**	**2.77**	**71**	*e*Pn	**Pb**	**20 12 54.3**	**-3.0**
	SNR=79						
CLUD	**Cludinico**	**2.77**	**98**		**Pb**	**20 12 55.7**	**-1.6**
CLUD	**Cludinico**	**2.77**	**98**	P	**Pb**	**20 12 55.9**	**-1.4**
CLUD				AML	AML		
	comp=E,2235µm,0.8s						
CLUD				AML	AML		
	comp=N,4340µm,1.0s						
CLUD				AML	AML		
	comp=E,2235µm,1.2s						
CLUD				AML	AML		
	comp=N,4315µm,1.0s						
CLUD				AML	AML		
	comp=E,2270µm,1.0s						
ZOU	**Zoufplan**	**2.82**	**96**	P	**Pb**	**20 12 56.5**	**-1.6**
ZOU				AML	AML		
	comp=N,2895µm,0.9s						
ZOU				AML	AML		
	comp=N,2850µm,0.9s						
ZOU				AML	AML		
	comp=E,5240µm,0.6s						
ZOU				AML	AML		
	comp=E,5150µm,0.6s						
ZOU				AML	AML		
	comp=N,2850µm,1.1s						
ZOU				AML	AML		
	comp=N,2895µm,1.1s						
SURF	**Saint Ours**	**2.84**	**212**	Pn	**Pn**	**20 12 54.4**	**+0.9**
CREF	**Crivoux**	**2.85**	**215**	Pn	**Pb**	**20 12 55.5**	**-3.2**
CREF				Pg	**Pg**	**20 12 59.6**	**-1.9**
RORO	**Rocca Rossa**	**2.86**	**192**	P	**Pn**	**20 12 54.9**	**+1.3**
RORO				AML	AML		
	comp=N,1083µm,0.7s						
RORO				AML	AML		
	comp=E,1395µm,0.7s						
ENR	**Entracque**	**2.88**	**202**	P	**Pn**	**20 12 53.8**	**-0.2**
ENR				AML	AML		
	comp=N,1155µm,0.6s						
ENR				AML	AML		
	comp=N,1155µm,1.4s						
ENR				AML	AML		
	comp=E,1098µm,0.7s						
EQUI	**Equi**	**2.88**	**162**	P	**Pb**	**20 12 57.3**	**-1.8**
EQUI				AML	AML		
	comp=E,1445µm,0.7s						
EQUI				AML	AML		
	comp=N,2180µm,0.6s						
EQUI				AML	AML		
	comp=N,2180µm,1.4s						
EQUI				AML	AML		
	comp=E,1445µm,1.3s						
STV	**Sant Anna di V**	**2.88**	**203**	P	**Pn**	**20 12 53.5**	**-0.6**
STV				AML	AML		
	comp=N,530µm,0.4s						
STV				AML	AML		
	comp=E,768µm,0.6s						
ORIF	**Oris-en-Rattie**	**2.90**	**228**	*e*Pn	**Pn**	**20 12 55.3**	**+1.0**
ORIF	**Oris-en-Rattie**	**2.90**	**228**	*e*Pg	**Pg**	**20 13 02.2**	**-0.3**
ORIF				*e*Sn	**Sn**	**20 13 28.4**	**-1.5**
ORIF				*e*Sg	**Sg**	**20 13 40.4**	**+0.3**
	comp=E,2µm,0.6s						
ORIF	**Oris-en-Rattie**	**2.90**	**228**	P	**Pb**	**20 12 56.0**	**-3.5**
ORIF				AML	AML		
	comp=E,2355µm,0.6s						
ORIF				AML	AML		
	comp=N,2095µm,0.6s						
ORIF	**Oris-en-Rattie**	**2.90**	**228**	P	**Pb**	**20 12 56.0**	**-3.5**
ORIF				SN	**Sn**	**20 13 25.3**	**-4.6**
ORIF	**Oris-en-Rattie**	**2.90**	**228**	⇑Pn	**Pb**	**20 12 56.0**	**-3.5**
ORIF	**Oris-en-Rattie**	**2.90**	**228**	Pg	**Pg**	**20 13 02.4**	**-0.1**
SARO	**Sassorosso**	**2.92**	**158**	P	**Pb**	**20 12 57.6**	**-2.3**
SARO				AML	AML		
	comp=E,4160µm,1.5s						
SARO				AML	AML		
	comp=N,5745µm,1.0s						
SARO				AML	AML		
	comp=E,4160µm,0.5s						
SFTF	**Sexfontaines**	**2.92**	**298**	*e*Pn	**Pn**	**20 12 54.6**	**+0.1**
	baz=118						
SFTF	**Sexfontaines**	**2.92**	**298**	*e*Pg	**Pg**	**20 13 02.8**	**-0.1**
	baz=119						
SFTF				*e*Sn	**Sn**	**20 13 28.5**	**-1.7**
SFTF				*e*Sg	**Sg**	**20 13 40.6**	**-0.2**
	comp=E,1µm,0.5s						
MILB	**Miltenberg**	**2.93**	**5**	*e*Pn	**Pn**	**20 12 53.4**	**-1.2**
	SNR=121						
MILB				*e*Sn	**Sn**	**20 13 28.4**	**-2.1**
MILB				*e*Sg	**Sg**	**20 13 41.5**	**+0.4**
	SNR=3.2						
VLC	**Villacollemand**	**2.94**	**159**	P	**Pb**	**20 12 57.7**	**-2.4**
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
WBB	**Darmstadt**	**2.94**	**357**	⇑Pn	**Pn**	**20 12 54.3**	**-0.5**
ZCCA	**Zocca**	**2.94**	**150**		**Pb**	**20 12 58.8**	**-1.4**
OGAG	**Argentiere**	**2.96**	**215**	⇑Pn	**Pn**	**20 12 54.3**	**-0.9**
OGAG				Pg	**Pb**	**20 12 57.2**	**-3.3**
MGRO	**Montegrosso**	**2.97**	**195**	P	**Pn**	**20 12 56.8**	**+1.5**
MGRO				AML	AML		
	comp=E,1310µm,0.9s						
MGRO				AML	AML		
	comp=E,1310µm,1.1s						
MGRO				AML	AML		
	comp=N,1455µm,0.6s						
GEPF	**Gemona**	**2.99**	**101**	P	**Pb**	**20 12 58.2**	**-2.7**
GEPF				AML	AML		
	comp=N,1945µm,0.7s						
GEPF				AML	AML		
	comp=E,1730µm,0.6s						
GRB2	**Grafenberg Arr**	**3.00**	**37**	⇑Pn	**Pn**	**20 12 54.2**	**-1.4**
GRB2				Sg	**Sg**	**20 13 42.9**	**-0.5**
BODE	**Bodenheim**	**3.03**	**353**	⇑Pn	**Pn**	**20 12 55.7**	**-0.3**
BODE				Sg	**Sg**	**20 13 44.7**	**+0.4**
KBA	**Koelnbreinsper**	**3.04**	**85**	*i* Pn	**Pb**	**20 12 59.0**	**-2.9**
	comp=E,39nm,0.3s,SNR=66						
KBA				*e*Sg	**Sg**	**20 13 44.1**	**-0.6**
	comp=E,627nm,0.6s						
KBA	**Koelnbreinsper**	**3.04**	**85**	P	**Pn**	**20 12 58.0**	**+1.6**
KBA	**Koelnbreinsper**	**3.04**	**85**	*e*Pn	**Pb**	**20 12 59.1**	**-2.9**
	SNR=41						
KBA				*e*Sg	**Sg**	**20 13 43.7**	**-1.0**
	SNR=2.8						
MEZF	**Maizieres J'vi**	**3.05**	**303**	*e*Pn	**Pn**	**20 12 57.0**	**+0.7**
	baz=122						
MEZF	**Maizieres J'vi**	**3.05**	**303**	*e*Pg	**Pg**	**20 13 05.5**	**+0.1**
MEZF				*e*Sn	**Sn**	**20 13 31.2**	**-2.2**
MEZF				*e*Sg	**Sg**	**20 13 44.8**	**-0.1**
	comp=E,3µm,0.7s						
SAOF	**Saorge**	**3.07**	**198**	P	**Pn**	**20 12 57.5**	**+0.9**
SAOF	**Saorge**	**3.07**	**198**	AML	AML		
	comp=E,1495µm,0.6s						
SAOF				AML	AML		
	comp=N,1550µm,0.9s						
SAOF				AML	AML		
	comp=N,1550µm,1.1s						
BDI	**Bagni Di Lucca**	**3.09**	**157**	P	**Pb**	**20 13 00.4**	**-2.3**
BDI				AML	AML		
	comp=N,1080µm,0.5s						
BDI				AML	AML		
	comp=E,915µm,0.4s						
BDI				AML	AML		
	comp=E,2320µm,0.5s						
BDI				AML	AML		
	comp=N,2420µm,0.6s						
VINO	**Villanova**	**3.09**	**101**	P	**Pb**	**20 12 59.4**	**-3.3**
VINO				AML	AML		
	comp=E,1060µm,0.8s						
VINO				AML	AML		
	comp=N,1380µm,0.7s						
CARD	**Cardoso**	**3.09**	**158**	P	**Pb**	**20 12 59.8**	**-2.8**
CARD				AML	AML		
	comp=E,2910µm,0.6s						
CARD				AML	AML		
	comp=N,1900µm,0.7s						
PTCC	**Patocco-Chiusa**	**3.10**	**98**	P	**Pb**	**20 12 59.8**	**-3.1**
PTCC				AML	AML		
	comp=N,1105µm,1.2s						
PTCC				AML	AML		
	comp=N,1105µm,0.8s						
PTCC				AML	AML		
	comp=E,1940µm,1.6s						
ABH	**Alteburg**	**3.11**	**344**	*e*Pn	**Pn**	**20 12 57.4**	**+0.3**
	SNR=98						
ABH				Sn	**Sn**	**20 13 31.1**	**-3.9**
ABH				Sg	**Sg**	**20 13 47.2**	**+0.4**
RIVT	**Riveris**	**3.14**	**334**	*e*Pn	**Pn**	**20 12 58.7**	**+1.1**
	SNR=60						
RIVT				Sn	**Sn**	**20 13 32.6**	**-3.1**
ENAUX	**Enaux**	**3.17**	**209**	Pn	**Pn**	**20 12 59.8**	**+1.7**
GRFO	**Grafenberg**	**3.18**	**28**	Pn	**Pn**	**20 12 56.1**	**-2.0**
GRFO	**Grafenberg**	**3.18**	**28**	P	**Pn**	**20 12 56.1**	**-2.0**
GRFO	**Grafenberg**	**3.18**	**28**	*e*Pn	**Pn**	**20 12 56.1**	**-2.0**
	SNR=38						
GRA1	**Grafenberg Arr**	**3.19**	**28**	Pn	**Pn**	**20 12 56.0**	**-2.2**
GRF	**Grafenberg Arr**	**3.19**	**28**	P	**Pn**	**20 12 56.0**	**-2.2**
GRF	**Grafenberg Arr**	**3.19**	**28**	*e*Pn	**Pn**	**20 12 56.1**	**-2.0**
	SNR=46						
MAIM	**Mastiano**	**3.20**	**159**	P	**Pb**	**20 13 01.6**	**-2.9**
MAIM				AML	AML		
	comp=E,2105µm,0.5s						
MAIM				AML	AML		
	comp=N,1820µm,0.8s						
SBF	**Sospel**	**3.22**	**199**	*e*Pn	**Pn**	**20 12 59.5**	**+0.9**
SBF				*e*Sn	**Sn**	**20 13 36.9**	**-0.7**
SBF				*e*Sg	**Sg**	**20 13 51.7**	**+1.4**
	comp=N,2µm,0.5s						
SBF	**Sospel**	**3.22**	**199**	P	**Pn**	**20 12 58.3**	**-0.3**
SBF				SN	**Sn**	**20 13 36.4**	**-1.2**
GWBE	**Wiesbaden**	**3.24**	**352**	Pn	**Pn**	**20 12 58.9**	**0.0**
MTCR	**Monte La Croce**	**3.24**	**152**	P	**Pb**	**20 13 02.4**	**-2.8**
MTCR				AML	AML		
	comp=E,2855µm,0.9s						
MTCR				AML	AML		
	comp=E,2855µm,1.1s						
MTCR				AML	AML		
	comp=N,2185µm,0.7s						
PRED	**Cave del Predi**	**3.24**	**97**		**Pb**	**20 13 01.6**	**-3.7**
MVIF	**Mont Vial**	**3.26**	**203**	Pn	**Pn**	**20 13 00.1**	**+0.8**
ESCA	**l'Escarene**	**3.26**	**200**	Pn	**Pb**	**20 13 01.8**	**-3.9**
MYKA	**Terra Mystica**	**3.27**	**93**	*i* Pn	**Pb**	**20 13 02.4**	**-3.3**
	comp=N,94nm,0.4s,SNR=41						
MYKA				*e*Sg	**Sg**	**20 13 53.2**	**+1.4**
	comp=N,158nm,0.4s						
WBG	**Bieber**	**3.28**	**5**	⇑Pn	**Pn**	**20 12 58.3**	**-1.1**
BRIS	**BRISIGHELLA**	**3.31**	**145**	P	**Pb**	**20 13 03.2**	**-3.2**
BRIS				AML	AML		
	comp=N,1420µm,0.7s						
BRIS				AML	AML		
	comp=E,1380µm,1.5s						
BRIS				AML	AML		
	comp=N,1420µm,1.3s						
WLF	**Walferdange**	**3.31**	**327**	Pn	**Pn**	**20 13 00.5**	**+0.6**
WLF	**Walferdange**	**3.31**	**327**	P	**Pn**	**20 13 00.5**	**+0.6**
WLF	**Walferdange**	**3.31**	**327**	*d*P	**Pn**	**20 13 01.4**	**+1.5**
WLF				*d*S	**Sn**	**20 13 39.5**	**-0.3**
WLF	**Walferdange**	**3.31**	**327**	⇓Pn	**Pn**	**20 13 01.2**	**+1.4**
WLF	**Walferdange**	**3.31**	**327**	*e*Pn	**Pn**	**20 13 01.4**	**+1.5**
	SNR=44						
BIOA	**Bad Ischl, Aus**	**3.31**	**75**		**Pn**	**20 13 01.4**	**+1.4**
BIOA					**Pg**	**20 13 09.8**	**-0.7**
BIOA					**Sg**	**20 13 54.0**	**+0.6**
BIOA	**Bad Ischl, Aus**	**3.31**	**75**	*i* Pn	**Pn**	**20 13 01.4**	**+1.4**
	comp=N,26nm,0.2s,SNR=40						
BIOA				*e*Pg	**Pg**	**20 13 09.8**	**-0.7**
	comp=N,196nm,0.3s						
BIOA				*e*Sg	**Sg**	**20 13 54.0**	**+0.6**
	comp=N,1µm,0.6s						
TNS	**Taunus Mts**	**3.33**	**355**	*e*Pn	**Pn**	**20 12 59.9**	**-0.3**
	SNR=67						
OGDI	**Digne**	**3.34**	**214**	Pn	**Pb**	**20 13 04.6**	**-2.5**
NAST	**IGS Nastaetten**	**3.36**	**348**	*e*Pn	**Pn**	**20 13 01.1**	**+0.6**
SABO	**M.te Sabotino**	**3.38**	**104**		**Pb**	**20 13 03.5**	**-4.1**
SABO	**M.te Sabotino**	**3.38**	**104**	P	**Pb**	**20 13 03.3**	**-4.3**
SABO				AML	AML		
	comp=N,14500µm,0.6s						
SABO				AML	AML		
	comp=N,3610µm,0.6s						
SABO				AML	AML		
	comp=E,2595µm,0.7s						
SABO				AML	AML		
	comp=N,14500µm,1.4s						
SABO				AML	AML		
	comp=N,3610µm,1.4s						
SABO				AML	AML		
	comp=E,10380µm,0.7s						
PII	**Pisa**	**3.39**	**160**	P	**Pb**	**20 13 03.8**	**-3.9**
PII				AML	AML		
	comp=E,2145µm,1.6s						
PII				AML	AML		
	comp=N,1870µm,0.7s						
CADS	**Cadrg**	**3.40**	**100**	*i* Pn	**Pn**	**20 13 03.1**	**+1.9**
SSB	**Saint Sauveur**	**3.44**	**243**	Pn	**Pn**	**20 13 01.4**	**-0.4**
SSB				Pg	**Pg**	**20 13 12.7**	**-0.3**
SSB	**Saint Sauveur**	**3.44**	**243**	P	**Pn**	**20 13 01.4**	**-0.4**
LMD	**Lutirano**	**3.45**	**144**	P	**Pb**	**20 13 04.5**	**-4.3**
LMD				AML	AML		
	comp=E,824µm,0.7s						
LMD				AML	AML		
	comp=N,828µm,1.5s						
LMD				AML	AML		
	comp=E,824µm,1.3s						
CALF	**Calern**	**3.45**	**205**	Pn	**Pn**	**20 13 04.0**	**+2.1**
BGG	**Burgeitz**	**3.46**	**343**	*e*Pn	**Pn**	**20 13 02.4**	**+0.5**
LOR	**Lormes**	**3.47**	**278**	*e*Pn	**Pn**	**20 13 02.3**	**+0.2**
	baz=97						
LOR	**Lormes**	**3.47**	**278**	*e*Pg	**Pg**	**20 13 13.0**	**-0.3**
	baz=98						
LOR				*e*Sn	**Sn**	**20 13 41.4**	**-2.3**
LOR				*e*Sg	**Sg**	**20 13 57.5**	**-0.7**
	comp=E,881nm,0.4s						
LOR	**Lormes**	**3.47**	**278**	P	**Pn**	**20 13 01.8**	**-0.2**
LOR	**Lormes**	**3.47**	**278**	Pg	**Pg**	**20 13 14.3**	**+1.0**
LOR	**Lormes**	**3.47**	**278**	Sg	**Sg**	**20 13 58.6**	**+0.3**
LOR	**Lormes**	**3.47**	**278**	Pn	**Pn**	**20 13 02.2**	**+0.2**
SMF	**Signal de Mont**	**3.49**	**268**	*e*Pn	**Pn**	**20 13 02.8**	**+0.5**
SMF	**Signal de Mont**	**3.49**	**268**	*e*Pg	**Pg**	**20 13 13.8**	**0.0**
SMF				*e*Sn	**Sn**	**20 13 42.2**	**-2.1**
SMF				*e*Sg	**Sg**	**20 13 58.7**	**-0.3**
	comp=E,993nm,0.4s						
SMF	**Signal de Mont**	**3.49**	**268**	P	**Pn**	**20 13 02.6**	**+0.3**
FACH	**Fachingen**	**3.50**	**350**	Pn	**Pn**	**20 13 02.5**	**+0.1**
VOJS	**Vojsko**	**3.55**	**102**	*i* Pn	**Pn**	**20 13 05.3**	**+2.0**
TRI	**Trieste**	**3.58**	**108**	Pn	**Pn**	**20 13 05.4**	**+1.9**
TRI	**Trieste**	**3.58**	**108**	AML	AML		
	comp=E,722µm,0.4s						
TRI				AML	AML		
	comp=N,608µm,0.8s						
TRI	**Trieste**	**3.58**	**108**	P	**Pn**	**20 13 05.4**	**+1.9**
RUFI	**Rufina**	**3.58**	**148**	P	**Pn**	**20 13 06.0**	**+2.5**
RUFI				AML	AML		
	comp=N,882µm,0.7s						
RUFI				AML	AML		
	comp=N,882µm,1.3s						
RUFI				AML	AML		
	comp=E,860µm,0.7s						
VIVF	**Saint-Julien-l**	**3.60**	**237**	*e*Pn	**Pn**	**20 13 04.4**	**+0.6**
VIVF	**Saint-Julien-l**	**3.60**	**237**	*e*Pg	**Pg**	**20 13 16.5**	**+0.6**
VIVF				*e*Sn	**Sn**	**20 13 45.0**	**-2.0**
VIVF				*e*Sg	**Sg**	**20 14 01.9**	**-0.6**
	comp=E,557nm,0.4s						
KOE	**Koeppel**	**3.60**	**348**	*e*Pn	**Pn**	**20 13 04.5**	**+0.6**
ROTZ	**Rotzenmuhle**	**3.61**	**36**	*e*Pn	**Pn**	**20 13 02.0**	**-2.0**
	SNR=156						
TRIGF	**Trigance**	**3.62**	**210**	Pn	Pb	20 13 07.3	-4.5
BHE	**Schloss Buerre**	**3.63**	**342**	Pn	**Pn**	**20 13 04.6**	**+0.3**
LOH	**Wallersheim-Lo**	**3.63**	**335**	Pn	**Pn**	**20 13 05.2**	**+0.9**
LAGB	**Langenfeld Gru**	**3.66**	**342**	Pn	**Pn**	**20 13 04.8**	**+0.2**
HILG	**Hillesheim**	**3.69**	**337**	*e*Pn	**Pn**	**20 13 05.8**	**+0.7**
SSF	**Saint Saulge**	**3.70**	**274**	*e*Pn	**Pn**	**20 13 06.1**	**+0.9**
SSF	**Saint Saulge**	**3.70**	**274**	*e*Pg	**Pg**	**20 13 17.3**	**-0.5**
ASQU	**Asqua**	**3.72**	**146**	P	**Pn**	**20 13 08.2**	**+2.7**
ASQU				AML	AML		
	comp=E,946µm,1.4s						
ASQU				AML	AML		
	comp=E,946µm,0.6s						
ASQU				AML	AML		
	comp=N,1026µm,0.5s						
MANZ	**Manzenberg**	**3.75**	**34**	*e*Pn	**Pn**	**20 13 03.5**	**-2.3**
BLI	**Bleialf**	**3.75**	**333**	Pn	**Pn**	**20 13 06.6**	**+0.7**
SMRF	**Simiane la Rot**	**3.75**	**220**	*e*Pg	**Pg**	**20 13 17.6**	**-1.3**
SMRF				*e*Sn	**Sn**	**20 13 49.4**	**-1.4**
SMRF				*e*Sg	**Sg**	**20 14 08.7**	**+1.2**
	comp=N,870nm,1.0s						
MOA	**Molln**	**3.76**	**74**	*i* Pn	**Pn**	**20 13 07.2**	**+1.1**
	comp=N,6.5nm,0.1s						
MOA				*i* Pg	**Pg**	**20 13 17.4**	**-1.7**
	comp=N,124nm,0.3s						
MOA				*i* Sn	**Sn**	**20 13 51.7**	**+0.7**
	comp=N,106nm,0.3s						
MOA				*e*Sg	**Sg**	**20 14 07.7**	**0.0**
	comp=N,676nm,0.5s						
MOA	**Molln**	**3.76**	**74**	*e*Pn	**Pn**	**20 13 06.9**	**+0.8**
GEC2	**GERESS Array S**	**3.77**	**57**		**Pn**	**20 13 06.1**	**-0.1**
GEC2	**GERESS Array S**	**3.77**	**57**	*e*Pn	**Pn**	**20 13 06.2**	**-0.1**
GERES	**GERESS Array B**	**3.77**	**57**	Pn	**Pn**	**20 13 05.7**	**-0.5**
	comp=N,10.0nm,0.3s,baz=242,slow=12,SNR=222						
GERES				Sn	**Sn**	**20 13 47.2**	**-3.9**
	comp=N,56nm,0.3s,baz=244,slow=17,SNR=6.3						
GERES				Lg	Lg	20 14 03.4	
	comp=N,98nm,0.3s,baz=243,slow=28,SNR=13						
GERES				LR	LR	20 14 50.6	
	comp=N,819nm,20.1s,baz=254,slow=45						
	comp=N,23nm,0.3s						
GERES	**GERESS Array B**	**3.77**	**57**	Pn	**Pn**	**20 13 05.9**	**-0.3**
OSSC	**Osservatorio P**	**3.77**	**153**		**Pn**	**20 13 08.7**	**+2.5**
SKDS	**Skadanscina**	**3.80**	**109**	*e*Pn	**Pn**	**20 13 08.6**	**+2.0**
AVF	**Avril sur Loir**	**3.81**	**270**	*e*Pn	**Pn**	**20 13 07.3**	**+0.6**
AVF	**Avril sur Loir**	**3.81**	**270**	*e*Pg	**Pg**	**20 13 20.0**	**0.0**
AVF				*e*Sn	**Sn**	**20 13 49.3**	**-2.9**
AVF				*e*Sg	**Sg**	**20 14 08.7**	**-0.6**
	comp=N,466nm,0.5s						
RUSF	**Rustrel**	**3.82**	**220**	Pn	**Pn**	**20 13 08.7**	**+1.8**
RUSF				Sn	**Sn**	**20 13 54.6**	**+2.1**
AHRW	**Bad Neuenahr-A**	**3.83**	**342**	*e*Pn	**Pn**	**20 13 07.3**	**+0.4**
KHC	**Kasperske Hory**	**3.84**	**53**	Pn	**Pn**	**20 13 06.9**	**-0.4**
KHC	**Kasperske Hory**	**3.84**	**53**	*e*PN	**Pn**	**20 13 07.2**	**0.0**
KHC				*e*SN	**Sn**	**20 13 50.9**	**-2.1**
KHC				*e*SG	**Sg**	**20 14 08.5**	**-1.9**
	comp=N,742nm,0.5s						
KHC	**Kasperske Hory**	**3.84**	**53**	*e*P	**Pn**	**20 13 07.2**	**0.0**
KHC				*e*		20 13 50.9	
KHC				smax	smax		
	comp=N,742nm,0.5s						
TDN	**Todenfeld**	**3.89**	**341**	Pn	**Pn**	**20 13 08.3**	**+0.5**
OBKA	**Obir**	**3.90**	**94**	*i* Pn	**Pn**	**20 13 10.5**	**+2.4**
	comp=N,40nm,0.4s,SNR=49						
OBKA				*e*Sg	**Sg**	**20 14 14.5**	**+2.2**
	comp=N,289nm,0.5s						
OBKA	**Obir**	**3.90**	**94**	*e*Pn	**Pn**	**20 13 10.3**	**+2.2**
OBKA	**Obir**	**3.90**	**94**	*e*Pn	**Pn**	**20 13 10.4**	**+2.4**
CRE	**Caprese Michel**	**3.93**	**146**	P	**Pn**	**20 13 11.2**	**+2.7**
CRE				AML	AML		
	comp=E,769µm,1.2s						
CRE				AML	AML		
	comp=N,1350µm,0.6s						
CRE				AML	AML		
	comp=E,769µm,0.8s						
BRJN	**Brijuni**	**3.93**	**119**	*e*Pn	**Pn**	**20 13 10.4**	**+2.1**
CPGN	**Carpegna, Ital**	**3.93**	**141**	AML	AML		
	comp=N,747µm,0.9s						
CPGN				AML	AML		
	comp=N,974µm,0.7s						
CPGN				AML	AML		
	comp=E,1078µm,0.7s						
CPGN				AML	AML		
	comp=E,868µm,0.7s						
CPGN				AML	AML		
	comp=N,974µm,1.3s						
CPGN				AML	AML		
	comp=E,1078µm,1.3s						
STB	**Steinbach**	**3.93**	**340**	⇑*e*Pn	**Pn**	**20 13 09.0**	**+0.6**
STB				*e*Sn	**Sn**	**20 13 53.7**	**-1.4**
	comp=E,540nm,0.8s						
BHOU	**Houvegnez**	**3.95**	**332**	*d*P	**Pn**	**20 13 09.2**	**+0.6**
BHOU				*d*S	**Sn**	**20 13 52.0**	**-3.6**
LMR	**La Mourre**	**3.96**	**206**	*e*Pn	**Pn**	**20 13 09.9**	**+1.2**
LMR	**La Mourre**	**3.96**	**206**	*e*P	**Pb**	**20 13 13.8**	**-3.6**
LMR				*e*Sn	**Sn**	**20 13 55.4**	**-0.3**
	comp=E,302nm,0.6s						
LJU	**Ljubljana**	**3.98**	**101**	P	**Pn**	**20 13 11.0**	**+2.0**
LJU				AML	AML		
	comp=N,9525µm,1.4s						
LJU				AML	AML		
	comp=E,7405µm,1.0s						

LJU				AML	AML		
	comp=N,9525µm,0.6s						
SAUF	**chteau de Sau**	4.00	223	⇓Pn	Pn	20 13 11.7	+2.4
SAUF				Pg	Pg	20 13 26.8	+3.3
SAUF				Sn	Sn	20 13 57.7	+0.9
CEY	**Cerknica**	4.00	105	*e*Pn	Pn	20 13 11.2	+1.8
PARC	**Parchiule**	4.02	143	P	Pn	20 13 12.8	+3.1
PARC				AML	AML		
	comp=N,671µm,1.5s						
PARC				AML	AML		
	comp=N,671µm,0.5s						
PARC				AML	AML		
	comp=E,590µm,0.9s						
RCHB	**Rochefort**	4.07	324	*d*P	Pn	20 13 11.2	+1.0
RCHB				*d*S	Sn	20 13 55.0	-3.4
NKC	**Novy Kostel**	4.07	34	*e*PN	Pn	20 13 08.2	-2.2
NKC				*e*SG	Sg	20 14 17.6	-0.2
	comp=E,662nm,0.5s						
NKC	**Novy Kostel**	4.07	34	*e*P	Pn	20 13 08.2	-2.2
WERN	**Wernitzgruen**	4.09	33	*e*Pn	Pn	20 13 08.0	-2.6
CKRC	**Cesky Krumlov**	4.11	60	*e*PN	Pn	20 13 10.9	0.0
CKRC				*e*SN	Sn	20 13 56.5	-3.1
CKRC				*e*SG	Sg	20 14 17.2	-1.7
	comp=E,443nm,0.5s						
CKRC	**Cesky Krumlov**	4.11	60	*e*P	Pn	20 13 10.9	0.0
CKRC				*e*		20 13 56.5	
CKRC				smax	smax		
	comp=N,443nm,0.5s						
BTNL	**Ternell**	4.11	335	*d*P	Pn	20 13 11.6	+0.7
BTNL				*d*S	Sn	20 13 55.9	-3.8
SMRN	**Sveta Marina**	4.11	115	*e*Pn	Pn	20 13 12.9	+2.0
KLL	**Kalltalsperre**	4.12	336	*e*Pn	Pn	20 13 11.4	+0.5
GUNZ	**Gunzen**	4.14	32	*e*Pn	Pn	20 13 08.5	-2.7
BADI	**Badiali**	4.14	144	P	Pn	20 13 14.0	+2.8
MOX	**Moxa**	4.15	25	P	Pn	20 13 08.7	-2.6
MOX	**Moxa**	4.15	25	*e*Pn	Pn	20 13 08.8	-2.6
DREG	**Dreilaegerbach**	4.15	336⇓	*e*Pn	Pn	20 13 12.1	+0.6
MEM	**Membach**	4.17	334	Pn	Pn	20 13 12.6	+0.9
MEM				Sn	Sn	20 13 57.8	-3.2
MEM	**Membach**	4.17	334	P	Pn	20 13 12.5	+0.9
MEM				S	Sn	20 13 57.7	-3.2
MEM	**Membach**	4.17	334	*d*P	Pn	20 13 12.4	+0.8
MEM				*d*S	Sn	20 13 57.8	-3.2
PLN	**Plauen**	4.18	30	*e*Pn	Pn	20 13 08.9	-2.9
BGF	**Bois d'Agland**	4.18	267	*e*Pn	Pn	20 13 12.2	+0.4
BGF	**Bois d'Agland**	4.18	267	*e*Pg	Pg	20 13 26.5	-0.5
BGF				*e*Sn	Sn	20 13 57.9	-3.4
BGF				*e*Sg	Sg	20 14 20.3	-0.9
	comp=N,640nm,0.4s						
CAFI	**Castiglion Fio**	4.18	148	P	Pn	20 13 14.0	+2.1
CAFI				AML	AML		
	comp=N,608µm,1.2s						
CAFI				AML	AML		
	comp=E,850µm,0.9s						
CAFI				AML	AML		
	comp=N,645µm,1.2s						
CAFI				AML	AML		
	comp=N,645µm,0.8s						
CAFI				AML	AML		
	comp=N,608µm,0.8s						
CAFI				AML	AML		
	comp=E,837µm,0.9s						
RIY	**Rijeka**	4.19	110	*e*Pn	Pn	20 13 14.7	+2.8
GIVF	**Givet**	4.19	321	*e*Pn	Pn	20 13 13.0	+1.0
GIVF				*e*Sn	Sn	20 13 58.0	-3.5
GIVF				*e*Sg	Sg	20 14 19.9	-1.6
	comp=E,920nm,0.7s						
WERD	**Werda**	4.20	31	*e*Pn	Pn	20 13 09.1	-2.9
HOBG	**Hohbusch**	4.21	346	*e*Pn	Pn	20 13 12.7	+0.5
BNS	**Bensberg**	4.21	345	*e*Pn	Pn	20 13 12.7	+0.4
SOKA	**Soboth**	4.22	91	*i* Pn	Pn	20 13 14.4	+2.1
	comp=E,52nm,0.3s,SNR=148						
SOKA				*e*Sn	Sn	20 14 04.2	+2.0
	comp=E,55nm,0.5s						
SOKA				*e*Sg	Sg	20 14 23.7	+1.4
	comp=E,263nm,1.0s						
FSSB	**Fossombrone**	4.22	138	AML	AML		
	comp=N,1300µm,0.7s						
FSSB				AML	AML		
	comp=E,849µm,0.7s						
FSSB				AML	AML		
	comp=N,1300µm,1.3s						
FSSB				AML	AML		
	comp=E,849µm,1.3s						
TANN	**Tannenbergstha**	4.23	33	*e*Pn	Pn	20 13 09.7	-2.8
TANN				*e*Sn	Sn	20 13 59.7	-2.8
PIEI	**Pieia**	4.24	141	P	Pn	20 13 15.1	+2.4
PIEI				AML	AML		
	comp=E,193µm,1.2s						
PIEI				AML	AML		
	comp=E,193µm,0.8s						
PIEI				AML	AML		
	comp=N,118µm,0.4s						
BCLA	**Clavier**	4.25	327	*d*P	Pn	20 13 13.4	+0.7
BCLA				*d*S	Sn	20 14 00.6	-2.3
ATPI	**Pietralunga -**	4.25	143	P	Pn	20 13 15.3	+2.5
ATPI				AML	AML		
	comp=N,900µm,1.3s						
ATPI				AML	AML		
	comp=N,900µm,0.7s						
ATPI				AML	AML		
	comp=E,804µm,1.0s						
MPAG	**Monte Paganucc**	4.26	139	P	Pn	20 13 14.7	+1.7
MPAG				AML	AML		
	comp=E,598µm,0.8s						
MPAG				AML	AML		
	comp=N,470µm,1.1s						
MPAG				AML	AML		
	comp=E,598µm,1.2s						
MPAG				AML	AML		
	comp=N,470µm,0.9s						
PERS	**Pernice**	4.28	91	*i* Pn	Pn	20 13 15.0	+1.8
DOU	**Dourbes**	4.29	320	*d*P	Pn	20 13 14.4	+1.1
DOU				*d*S	Sn	20 14 01.6	-2.3
BSTI	**Sart Tilman**	4.29	330	*d*P	Pn	20 13 14.6	+1.3
ATMI	**Monte Miggiano**	4.29	145	AML	AML		
	comp=N,1850µm,0.7s						
ATMI				AML	AML		
	comp=E,1460µm,0.5s						
HYF	**Humbligny**	4.29	277	*e*Pn	Pn	20 13 14.7	+1.3
HYF	**Humbligny**	4.29	277	*e*Pg	Pg	20 13 29.6	+0.4
HYF				*e*Sn	Sn	20 14 01.0	-3.1
HYF				*e*Sg	Sg	20 14 23.7	-1.1
BGES	**Gesves**	4.30	325	*d*P	Pn	20 13 14.4	+1.0
BGES				*d*S	Sn	20 14 01.8	-2.4
ATVO	**AVT- Monte Val**	4.31	144	P	Pn	20 13 16.0	+2.4
ATVO				AML	AML		
	comp=N,1180µm,0.7s						
ATVO				AML	AML		
	comp=E,804µm,0.5s						
ATVO				AML	AML		
	comp=N,1180µm,1.3s						
KASTN	**Kahler Asten**	4.31	356	*e*Pn	Pn	20 13 13.3	-0.3
HGN	**Heimansgroeve**	4.33	334	*e*P	Pn	20 13 14.8	+1.0
HGN				*e*S	Sn	20 14 01.9	-3.0
CASP	**Castiglione de**	4.35	161	Pn	Pn	20 13 16.1	+2.0
CASP	**Castiglione de**	4.35	161	P	Pn	20 13 15.9	+1.8
CASP				AML	AML		
	comp=N,1035µm,0.5s						
CASP				AML	AML		
	comp=N,1035µm,1.5s						
CASP				AML	AML		
	comp=E,528µm,0.6s						
PGF	**Pioggiola**	4.36	179	*e*Pn	Pn	20 13 16.5	+2.1
PGF				*e*Sn	Sn	20 14 04.1	-1.8
	comp=E,238nm,0.7s						
PGF	**Pioggiola**	4.36	179	P	Pn	20 13 16.3	+1.9
PGF	**Pioggiola**	4.36	179	Pn	Pn	20 13 16.5	+2.1
BMRD	**Maredsous**	4.37	323	*d*P	Pn	20 13 15.3	+0.9
BMRD				*d*S	Sn	20 14 03.7	-2.2
BEBN	**Eben Emael**	4.44	332	*d*P	Pn	20 13 16.5	+1.3
BEBN				*d*S	Sn	20 14 06.5	-1.0
BAIF	**Baives**	4.44	317	*e*Pn	Pn	20 13 16.1	+0.8
BAIF	**Baives**	4.44	317	*e*Pg	Pg	20 13 30.5	-1.4
BAIF				*e*Sn	Sn	20 14 04.0	-3.6
BAIF				*e*Sg	Sg	20 14 27.3	-2.1
	comp=E,451nm,0.6s						
ARVD	**Arcevia**	4.45	139	P	Pn	20 13 17.6	+2.1
ARVD				AML	AML		
	comp=E,386µm,0.8s						
ARVD				AML	AML		
	comp=E,386µm,1.2s						
ARVD				AML	AML		
	comp=N,394µm,1.2s						
MURB	**Monte Urbino**	4.46	144		Pn	20 13 17.7	+2.1
ARSA	**Arzberg**	4.54	83	*i* Pn	Pn	20 13 17.9	+1.2
	comp=N,28nm,0.3s,SNR=54						
ARSA				Sg	Sg	20 14 34.8	+2.3
	comp=N,272nm,0.8s						
ARSA	**Arzberg**	4.54	83	*e*Pn	Pn	20 13 18.0	+1.2
LASF	**Ste Croix**	4.54	233	*e*Pn	Pn	20 13 17.6	+0.8
LASF	**Ste Croix**	4.54	233	*e*Pg	Pg	20 13 33.7	-0.2
LASF				*e*Sn	Sn	20 14 08.0	-2.2
LASF				*e*Sg	Sg	20 14 32.7	0.0
	comp=N,433nm,0.5s						
RODG	**Roetgen-Dahlhe**	4.60	338	*e*Pn	Pn	20 13 18.6	+1.0
BOJS	**Bojanci**	4.62	105	P	Pn	20 13 20.0	+2.1
BOJS	**Bojanci**	4.62	105	*e*Pn	Pn	20 13 20.1	+2.2
LAUG	**Laupendahl**	4.63	345	*e*Pn	Pn	20 13 18.5	+0.6
SNTG	**Esanatoglia**	4.64	141	P	Pn	20 13 20.1	+1.9
SNTG				AML	AML		
	comp=E,820µm,0.7s						
SNTG				AML	AML		
	comp=E,830µm,0.7s						
SNTG				AML	AML		
	comp=N,726µm,1.2s						
SNTG				AML	AML		
	comp=N,810µm,1.2s						
SNTG				AML	AML		
	comp=E,830µm,1.3s						
SNTG				AML	AML		
	comp=E,820µm,1.3s						
RABC	**Rab**	4.64	116	*i* Pn	Pn	20 13 21.0	+2.9
CLF	**Chambon-Foret**	4.64	286	Pn	Pn	20 13 19.5	+1.4
TCF	**Toulx Ste Croi**	4.66	265	*e*Pn	Pn	20 13 18.8	+0.4
TCF				*e*Sn	Sn	20 14 09.4	-3.6
TCF				*e*Sg	Sg	20 14 35.2	-1.3
	comp=E,1µm,1.0s						
CING	**Cingoli**	4.66	138	P	Pn	20 13 20.5	+2.1
CING				AML	AML		
	comp=E,304µm,1.0s						
CING				AML	AML		
	comp=N,386µm,0.6s						
BUG	**Bochum--Univer**	4.66	347	*e*Pn	Pn	20 13 19.0	+0.6
BUG				*e*Sn	Sn	20 14 10.2	-2.8
GTTG	**Gottingen**	4.69	8	*e*Pn	Pn	20 13 17.1	-1.8
GTTG				*e*Sn	Sn	20 14 10.7	-3.2
SNF	**Seneffe**	4.73	321	*d*P	Pn	20 13 20.6	+1.3
OZLJ	**Ozalj**	4.73	103	*e*Pn	Pn	20 13 21.6	+2.3
LATE	**Laterza**	4.76	153	Pn	Pn	20 13 22.9	+3.0
NVLJ	**Novalja**	4.79	117	*e*Pn	Pn	20 13 22.6	+2.5
T1220	**Camerino, Fraz**	4.82	141	AML	AML		
T1220				AML	AML		
	comp=E,2555µm,1.6s						
T1220				AML	AML		
	comp=N,2745µm,0.4s						
T1220				AML	AML		
	comp=N,2690µm,0.3s						
T1220				AML	AML		
	comp=E,2555µm,0.4s						
T1220				AML	AML		
CONA	**Conrad Observa**	4.83	75	*i* Pn	Pn	20 13 21.3	+0.5
	comp=E,9.7nm,0.2s,SNR=60						
CONA				*i* Sn	Sn	20 14 15.4	-2.0
	comp=E,67nm,0.2s						
CONA				*e*Sg	Sg	20 14 41.8	-0.3
	comp=E,313nm,0.4s						
PRU	**Pruhonice**	4.85	49	*e*PN	Pn	20 13 20.1	-1.0
PRU				*e*SG	Sg	20 14 40.8	-2.0
	comp=E,563nm,0.7s						
PRU	**Pruhonice**	4.85	49	*e*P	Pn	20 13 20.1	-1.0
CSP1	**Cessapalombo**	4.88	140	AML	AML		
	comp=E,1022µm,1.5s						
CSP1				AML	AML		
	comp=E,1022µm,0.5s						
CSP1				AML	AML		
	comp=N,924µm,0.6s						
T1256	**Bolognola (MC)**	4.96	140	AML	AML		
	comp=N,1098µm,0.6s						
T1256				AML	AML		
	comp=E,1023µm,0.9s						
GUMA	**Gualdo di Mace**	4.97	139		Pn	20 13 25.0	+2.3
FBE	**Freiberg**	4.97	35	*e*Pn	Pn	20 13 20.8	-1.9
PTJ	**Puntijarka**	4.99	99	*e*Pn	Pn	20 13 24.6	+1.7
LOBO	**Lobor**	5.00	96	*e*Pn	Pn	20 13 24.6	+1.5
TREC	**Trest**	5.01	59	*e*PN	Pn	20 13 23.5	+0.2
TREC				*e*PG	Pg	20 13 39.7	-3.3
TREC				*e*SG	Sg	20 14 45.7	-2.2
	comp=E,464nm,0.6s						
TREC	**Trest**	5.01	59	*e*P	Pn	20 13 23.5	+0.2
CLZ	**Clausthal**	5.03	10	*e*Pn	Pn	20 13 21.2	-2.3
CESX	**Cesi**	5.03	147		Pn	20 13 25.5	+2.0
VIRC	**Vir**	5.05	119	*e*Pn	Pn	20 13 25.9	+2.2
RONA	**Rosalia, Austr**	5.09	78		Pn	20 13 25.3	+0.9
RONA					Sn	20 14 21.8	-2.0
RONA					Sg	20 14 49.2	-1.1
RONA	**Rosalia, Austr**	5.09	78	*i* Pn	Pn	20 13 25.3	+0.9
	comp=E,34nm,0.3s,SNR=31						
RONA				*e*Sn	Sn	20 14 21.8	-2.0
	comp=E,117nm,0.3s						
RONA				*e*Sg	Sg	20 14 49.3	-1.1
	comp=E,446nm,0.8s						
PLIT	**Plitvice**	5.11	111	*e*Pn	Pn	20 13 27.1	+2.5
CLL	**Collm**	5.16	30	Pn	Pn	20 13 22.1	-3.1
CLL	**Collm**	5.16	30	*e*Pn	Pn	20 13 22.0	-3.2
CLL				*e*x	x	20 13 38.0	
CLL				*i* Pg	Pg	20 13 45.8	+0.1
CLL				*e*Sn	Sn	20 14 08.0	-17
CLL				*e*x	x	20 14 33.0	
CLL				*e*Sg	Sg	20 14 51.0	-1.6
	comp=Z,446nm,0.8s						
CLL				*e*Sglp		20 14 55.0	
CLL				AMS	AMS	20 15 00.0	
CLL	**Collm**	5.16	30	*e*P	Pn	20 13 22.0	-3.2
CLL	**Collm**	5.16	30	*e*Pn	Pn	20 13 22.3	-2.9
CAF	**Calviac**	5.17	250	*e*Pn	Pn	20 13 25.9	+0.5
CAF	**Calviac**	5.17	250	*e*Pg	Pg	20 13 46.1	+0.2
CAF				*e*Sn	Sn	20 14 23.2	-2.5
CAF				*e*Sg	Sg	20 14 52.5	-0.4
	comp=Z,931nm,0.9s						
CAF	**Calviac**	5.17	250	P	Pn	20 13 24.2	-1.2
BRG	**Berggiesshubel**	5.17	38	Pn	Pn	20 13 23.6	-1.9
BRG				Amp		20 13 24.0	
	comp=Z,35nm,0.5s						
BRG	**Berggiesshubel**	5.17	38	Pg	Pg	20 13 45.4	-0.7
BRG				Amp		20 13 47.4	
	comp=Z,165nm,0.6s						
BRG	**Berggiesshubel**	5.17	38	Sn	Sn	20 14 22.4	-3.4
BRG				Amp		20 14 23.8	
	comp=Z,110nm,0.9s						
BRG	**Berggiesshubel**	5.17	38	Sg	Sg	20 14 52.2	-0.9
BRG				Amp		20 14 57.9	
	comp=Z,337nm,0.8s						
BRG				Amp		20 15 33.0	
	comp=N,0.9nm,6.8s						
BRG				Amp		20 15 33.0	
	comp=E,1.1nm,10.5s						
BRG				Amp		20 15 36.0	
	comp=Z,1.7nm,8.3s						
BRG	**Berggiesshubel**	5.17	38	P	Pn	20 13 23.5	-1.9
BRG				SN	Sn	20 14 22.3	-3.4
BRG				MLR	MLR		
	comp=Z,2µm,8.4s						
BRG	**Berggiesshubel**	5.17	38	*e*Pn	Pn	20 13 23.4	-2.1
PVCC	**Panska Ves**	5.21	44	*e*PN	Pn	20 13 24.8	-1.2
PVCC				*e*PG	Pg	20 13 45.4	-1.4
PVCC				*e*SG	Sg	20 14 52.4	-1.9
	comp=Z,439nm,0.5s						
PVCC	**Panska Ves**	5.21	44	*e*P	Pn	20 13 24.8	-1.2
DUGI	**Dugi Otok**	5.22	122	*e*Pn	Pn	20 13 28.5	+2.4
KALN	**Kalnik**	5.27	96	*e*Pn	Pn	20 13 26.7	-0.1
UDBI	**Udbina**	5.36	114	*e*Pn	Pn	20 13 30.9	+2.8
RJF	**Les Rejaudoux**	5.38	255	*e*Pn	Pn	20 13 28.8	+0.5
RJF	**Les Rejaudoux**	5.38	255	*e*Pg	Pg	20 13 49.5	-0.5
RJF				*e*Sn	Sn	20 14 27.5	-3.4
RJF				*e*Sg	Sg	20 14 59.0	-0.8
	comp=Z,434nm,0.8s						
CAMP	**Campotosto**	5.42	142		Pn	20 13 31.2	+2.2
IBBN	**Ibbenburen**	5.46	353	*e*Pn	Pn	20 13 30.1	+0.8
KRUC	**Moravsky**	5.47	64	*e*PN	Pn	20 13 29.3	-0.2
KRUC				*e*SN	Sn	20 14 28.6	-4.5
KRUC				*e*SG	Sg	20 15 00.8	-1.8
AQU	**L'Aquila**	5.57	143	Pn	Pn	20 13 32.8	+1.9
AQU	**L'Aquila**	5.57	143	P	Pn	20 13 32.8	+1.9
CLAF	**Gruissan**	5.59	230	Pn	Pn	20 13 32.1	+0.9
MOSL	**Moslavina**	5.60	101	*e*Pn	Pn	20 13 32.1	+0.9
MORI	**Morici**	5.67	120	*e*Pn	Pn	20 13 35.2	+2.9
VRAC	**Vranov**	5.68	62	⇓P	Pn	20 13 32.5	+0.1
VRAC	**Vranov**	5.68	62	Pn	Pn	20 13 32.1	-0.3
	comp=Z,3.0nm,0.3s,baz=252,slow=14,SNR=39						
VRAC				Sn	Sn	20 14 34.7	-3.5
	comp=Z,23nm,0.3s,baz=171,slow=19,SNR=9.6						
VRAC				Lg	Lg	20 15 05.0	
	comp=Z,28nm,0.3s,baz=180,slow=20,SNR=6.3						
VRAC				LR	LR	20 15 17.6	
	comp=Z,109nm,21.9s,baz=274,slow=34						
	comp=Z,20nm,0.6s						
VRAC	**Vranov**	5.68	62	*e*PN	Pn	20 13 32.1	-0.3
VRAC				*e*SN	Sn	20 14 34.7	-3.5
VRAC				*e*SG	Sg	20 15 07.5	-1.8
ZIRJ	**Zirje**	5.76	122	*e*Pn	Pn	20 13 35.0	+1.5
MENF	**Mencas**	5.77	312	⇑Pn	Pn	20 13 34.5	+0.9
RETH	**Rethem/Aller,**	5.84	3	*e*Pn	Pn	20 13 34.0	-0.6
MODS	**Modra-Piesok**	5.84	72	*e*P	Pn	20 13 34.7	0.0
MODS				*e*		20 14 40.9	
MODS				smax	smax		
	comp=N,372nm,0.8s						
MODS	**Modra-Piesok**	5.84	72	*e*PN	Pn	20 13 34.7	0.0
MODS				*e*SN	Sn	20 14 40.9	-1.4
MODS				*e*SG	Sg	20 15 12.9	-1.7
MODS				*e*LG	Lg	20 15 22.7	
A050A	**Klekovaca**	5.87	112	*e*Pn	Pn	20 13 37.3	+2.2
A051A	**Mrakovica**	5.89	106	*e*Pn	Pn	20 13 38.4	+3.0
UPC	**Upice**	5.92	50	*e*PN	Pn	20 13 34.9	-0.8
UPC				*e*PG	Pg	20 13 57.3	-3.1
UPC				*e*SG	Sg	20 15 13.4	-3.7
	comp=N,456nm,0.8s						
UPC	**Upice**	5.92	50	*e*P	Pn	20 13 34.9	-0.8
MTLF	**Montolieu**	5.92	235	*e*Pn	Pn	20 13 36.1	+0.3
MTLF	**Montolieu**	5.92	235	*e*Pg	Pg	20 13 59.7	-0.7
MTLF				*e*Sn	Sn	20 14 40.2	-4.1
MTLF				*e*Sg	Sg	20 15 15.7	-1.5
	comp=N,217nm,0.6s						
MONQ	**Montcuq**	5.97	248	Pn	Pn	20 13 36.8	+0.4
SMOL	**Smolenice**	5.97	71	*e*P	Pn	20 13 38.2	+1.8
SMOL				*e*		20 14 44.1	
SMOL				smax	smax		
	comp=N,179nm,0.9s						
DPC	**Dobruska-Polom**	6.00	52	*e*PN	Pn	20 13 35.7	-1.2
DPC				*e*PG	Pg	20 14 00.3	-1.6
DPC				*e*SG	Sg	20 15 17.7	-1.9
	comp=N,257nm,0.5s						
DPC	**Dobruska-Polom**	6.00	52	*e*P	Pn	20 13 35.7	-1.2
KIJV	**Kijevo**	6.02	116	*e*Pn	Pn	20 13 39.6	+2.5
LFF	**La Frestale**	6.03	254	*e*Pn	Pn	20 13 37.8	+0.6
LFF	**La Frestale**	6.03	254	*e*Pg	Pg	20 14 00.9	-1.5
LFF				*e*Sn	Sn	20 14 43.1	-3.7
LFF				*e*Sg	Sg	20 15 18.3	-2.1
	comp=N,434nm,0.6s						
LFF	**La Frestale**	6.03	254	P	Pn	20 13 38.4	+1.2
LFF				SN	Sn	20 14 43.0	-3.7
INTR	**Introdacqua**	6.06	142	Pn	Pn	20 13 40.1	+2.4
KRLC	**Kraliky**	6.12	56	*e*PN	Pn	20 13 38.4	-0.1
KRLC				*e*SG	Sg	20 15 23.4	0.0
	comp=N,544nm,0.8s						
KRLC	**Kraliky**	6.12	56	*e*P	Pn	20 13 38.4	-0.1
BLY	**Banja Luka**	6.17	107	*e*Pn	Pn	20 13 37.5	-1.7
JAVC	**Velka Javorina**	6.21	68	*e*PN	Pn	20 13 40.2	+0.5
MFF	**Saint Martin d**	6.23	270	*e*Pn	Pn	20 13 40.4	+0.5
MFF				*e*Sn	Sn	20 14 46.9	-4.8
MFF				*e*Sg	Sg	20 15 23.7	-3.1
	comp=N,545nm,1.0s						
MGRS	**Mrkonjic Grad**	6.25	111	*e*Pn	Pn	20 13 42.4	+2.1
A052A	**Srbac**	6.26	104	*e*Pn	Pn	20 13 39.1	-1.3
KSP	**Ksiaz**	6.26	48	*e*P	Pn	20 13 40.5	+0.1
FILF	**Fillols**	6.27	228	Pn	Pn	20 13 43.2	+2.7
LDF	**La Druitiere**	6.32	289	*e*Pn	Pn	20 13 41.1	0.0
LDF				*e*Sn	Sn	20 14 49.1	-4.8
LDF				*e*Sg	Sg	20 15 27.0	-2.7
	comp=N,355nm,0.7s						
CARF	**Carcanieres**	6.40	232	Pn	Pn	20 13 44.1	+1.7
MORC	**Moravsky Berou**	6.43	60	⇓P	Pn	20 13 42.7	-0.1
MORC	**Moravsky Berou**	6.43	60	Pn	Pn	20 13 42.2	-0.6
MORC	**Moravsky Berou**	6.43	60	*e*PN	Pn	20 13 42.2	-0.6
MORC				*e*SN	Sn	20 14 52.5	-4.3
MORC				*e*SG	Sg	20 15 34.4	+1.0
MORC	**Moravsky Berou**	6.43	60	⇓P	Pn	20 13 42.7	-0.1
SRO	**Srobarova**	6.46	79	*e*P	Pn	20 13 43.7	+0.7
SRO				*e*		20 14 53.8	
SRO				MLR	MLR		
	comp=Z,100nm,0.8s						
SRO	**Srobarova**	6.46	79	*e*PN	Pn	20 13 43.7	+0.7
SRO				*e*SN	Sn	20 14 53.8	-3.5
SRO				*e*LG	Lg	20 15 44.0	
SRKY	**Kupres RS**	6.46	113	*e*Pn	Pn	20 13 45.5	+2.2
CHIF	**Chize**	6.47	267	Pn	Pn	20 13 43.6	+0.3
HVAR	**Hvar**	6.52	122	*e*Pn	Pn	20 13 45.9	+2.0
FLN	**La Foliniere**	6.58	290	*e*Pn	Pn	20 13 45.1	+0.3
	baz=107						
FLN	**La Foliniere**	6.58	290	*e*Pg	Pg	20 14 11.1	-1.9
	baz=110						
FLN				*e*Sn	Sn	20 14 55.9	-4.6
FLN				*e*Sg	Sg	20 15 34.6	-3.7
	comp=Z,550nm,0.8s						
ELSH	**Elham, Standar**	6.64	313	Pn	Pn	20 13 47.2	+1.7
LRVF	**chteau la Riv**	6.72	256	Pn	Pn	20 13 47.3	+0.6
RICI	**Ricice**	6.74	117	*e*Pn	Pn	20 13 49.2	+2.2
MORH	**Mrgy, Hungar**	6.75	92	⇑P	Pn	20 13 49.4	+2.3
GRR	**Gorron**	6.76	286	*e*Pn	Pn	20 13 47.4	+0.2
GRR				*e*Sn	Sn	20 14 59.9	-4.9
GRR				*e*Sg	Sg	20 15 40.7	-3.2
	comp=Z,328nm,0.8s						
MLS	**Moulis**	6.80	237	Pn	Pn	20 13 48.9	+1.0
OKC	**Ostrava-Krasne**	6.82	61	*e*PN	Pn	20 13 47.8	-0.2
OKC				*e*SG	Sg	20 15 44.5	-1.3
	comp=Z,549nm,0.8s						
OKC	**Ostrava-Krasne**	6.82	61	*e*P	Pn	20 13 47.8	-0.2
VYHS	**Vyhne**	6.89	73	*e*P	Pn	20 13 48.3	-0.7
VYHS				*e*		20 15 03.3	
VYHS	**Vyhne**	6.89	73	*e*PN	Pn	20 13 48.3	-0.7
VYHS				*e*SN	Sn	20 15 03.3	-4.7
HMNX	**Herstmonceux**	6.90	308	*e*P	Pn	20 13 50.7	+1.7
HMNX				IAML		20 16 03.5	
	comp=E,314nm,0.6s						
HMNX				IAML		20 16 06.8	
	comp=N,315nm,0.7s						
LSTV	**Lastovo**	7.03	123	*e*Pn	Pn	20 13 52.8	+2.0
LSTV				Sn	Sn	20 15 11.7	+0.4
SGRT	**San Giovanni R**	7.11	134	Pn	Pn	20 13 52.9	+0.7
EPF	**Esparros**	7.21	241	*e*Pn	Pn	20 13 54.2	+0.8
EPF	**Esparros**	7.21	241	*e*Pg	Pg	20 14 23.2	-1.7
EPF				*e*Sn	Sn	20 15 11.4	-4.5
EPF				*e*Sg	Sg	20 15 55.3	-2.9
	comp=N,188nm,0.9s						
ELMS	**Elmsett, Ipswi**	7.31	318	*e*P	Pn	20 13 56.7	+1.9
ELMS				IAML		20 16 11.9	
	comp=N,100nm,0.5s						
ELMS				IAML		20 16 24.4	
	comp=E,102nm,0.5s						
LANS	**Liptovska Anna**	7.43	69	*e*P	Pn	20 13 57.0	+0.5
LANS				*e*		20 15 18.6	
LANS				MLR	MLR		
	comp=Z,100nm,1.0s						
LANS	**Liptovska Anna**	7.43	69	*e*PN	Pn	20 13 57.0	+0.5
LANS				*e*SN	Sn	20 15 18.6	-2.7
LANS				*e*SG	Sg	20 16 12.0	+6.6
LANS				*e*LG	Lg	20 16 24.0	
STON	**Ston**	7.43	120	*e*Pn	Pn	20 13 58.5	+2.0
STON	**Ston**	7.43	120	*e*Pn	Pn	20 13 56.4	-0.1
PSZ	**Piszkesteto**	7.53	78	⇓P	Pn	20 13 58.6	+0.8
PSZ	**Piszkesteto**	7.53	78		Pn	20 13 57.8	0.0
PSZ	**Piszkesteto**	7.53	78	⇓P	Pn	20 13 58.6	+0.8
HAPS	**Han Pijesak,Bl**	7.60	108	*e*Pn	Pn	20 14 00.8	+1.9
JSA	**Saint Aubin**	7.76	291	*e*P	Pn	20 14 01.3	+0.3
JSA				*e*S	Sn	20 15 23.7	-5.7
JSA				IAML		20 16 24.2	
	comp=N,81nm,0.6s						
JSA				IAML		20 16 29.2	
	comp=E,41nm,0.5s						
JSA	**Saint Aubin**	7.76	291	Pn	Pn	20 14 01.1	+0.2
FRGS	**Fruska Gora**	7.79	99	⇑P	Pn	20 14 03.9	+2.6
FRGS	**Fruska Gora**	7.79	99	*e*Pn	Pn	20 14 01.8	+0.4
TEKS	**Tekeris**	7.80	104	*e*Pn	Pn	20 14 00.3	-1.2
ETSF	**Etsaut**	7.82	243	*e*Pn	Pn	20 14 02.2	+0.3
ETSF	**Etsaut**	7.82	243	*e*P	Pg	20 14 32.9	-3.8
ETSF				*e*Sn	Sn	20 15 26.1	-5.0
ETSF				*e*Sg	Sg	20 16 14.1	-3.9
	comp=E,90nm,0.7s						
SGMF	**Saint Gilles**	7.87	284	*e*Pn	Pn	20 14 02.3	-0.1
SGMF				*e*Sn	Sn	20 15 25.8	-6.2

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SGMF                             eSg    Sg     20 16 14.7  -4.7
      comp=E,254nm,0.8s
WACR  West Acre          7.91 320 eP    Pn     20 14 03.9 +1.0
WACR                              IAML         20 16 32.3
      comp=N,79nm,0.7s
WACR                              IAML         20 16 38.9
      comp=E,84nm,0.8s
TREB  Trebinje           7.92 119 ePn   Pn     20 14 04.9 +1.8
BRY   Bratogost          7.92 117 ePn   Pn     20 14 04.6 +1.2
OJC   Ojcow              7.95  61 eP    Pn     20 14 02.9  -0.7
OJC   Ojcow              7.95  61  Pn   Pn     20 14 03.3  -0.2
OJC   Ojcow              7.95  61  P    Pn     20 14 03.3  -0.2
KECS  Kecovo             7.97  74 eP    Pn     20 14 04.3 +0.4
KECS                              e            20 15 30.3
KECS  Kecovo             7.97  74 ePN   Pn     20 14 04.2 +0.4
KECS                              eSN   Sn     20 15 30.3  -4.3
BBLS  Lazi&#263;i        7.99 109 ePn   Pn     20 14 06.0 +1.8
NIE   Niedzica           8.02  68 eP    Pn     20 14 04.8 +0.2
RUDO  Rudo               8.08 110 ePn   Pn     20 14 06.1 +0.7
SJPF  Ste Jean           8.12 246 ePn   Pn     20 14 07.2 +1.3
SJPF  Ste Jean           8.12 246 ePg   Pg     20 14 41.3  -1.1
SJPF                              eSn   Sn     20 15 33.8  -4.4
SJPF                              eSg   Sg     20 16 25.0  -2.5
      comp=E,292nm,1.2s
AMBH  Ambrzfalva         8.16  90 ⇑P    Pn     20 14 08.5 +2.1
QUIF  Quistinic          8.25 281 ePn   Pn     20 14 07.4  -0.3
QUIF  Quistinic          8.25 281 ePg   Pg     20 14 41.9  -3.0
QUIF                              eSn   Sn     20 15 35.7  -5.7
QUIF                              eSg   Sg     20 16 27.3  -4.4
      comp=E,127nm,0.9s
DIVS  Divibare           8.28 106  Pn   Pn     20 14 09.8 +1.6
DIVS  Divibare           8.28 106 ePn   Pn     20 14 09.7 +1.5
ROSF  Rostrenen          8.35 284 ePn   Pn     20 14 09.0  -0.1
ROSF  Rostrenen          8.35 284 ePg   Pg     20 14 44.2  -2.6
ROSF                              eSn   Sn     20 15 38.0  -5.9
ROSF                              eSg   Sg     20 16 30.8  -4.1
      comp=E,369nm,0.9s
ROSF  Rostrenen          8.35 284 eP    Pn     20 14 08.6  -0.5
ROSF                              eS    Sn     20 15 36.8  -7.1
ROSF                              IAML         20 16 57.4
      comp=N,77nm,0.6s
ROSF                              IAML         20 17 00.7
      comp=E,33nm,0.8s
ROSF  Rostrenen          8.35 284  Pn   Pn     20 14 08.8  -0.2
STHS  Stebnicka Huta     8.62  69 eP    Pn     20 14 14.3 +1.5
STHS                              MLR   MLR
      comp=Z,100nm,0.7s
STHS  Stebnicka Huta     8.62  69 ePN   Pn     20 14 14.3 +1.5
STHS  Stebnicka Huta     8.62  69 eSG   Sg     20 16 47.6 +4.0
STHS                              eLG   Lg     20 17 04.7
PDG   Podgorica          8.63 118  Pn   Pn     20 14 15.0 +2.1
SJES  Sjenica            8.64 111 ePn   Pn     20 14 17.6 +4.5
STRD  Stroud             8.71 308 eP    Pn     20 14 14.7 +0.8
DRME  Dracevica, Mon     8.72 119 ePn   Pn     20 14 16.3 +2.1
SIRR  Siria              8.81  90  P    Pn     20 14 16.8 +1.4
SIRR                              ⇓P    Pn     20 14 17.1 +1.8
LMK   Market Rasen       8.83 321 eP    Pn     20 14 16.5 +1.0
BZS   Buzias             8.90  94 ⇑P    Pn     20 14 19.3 +2.7
BZS   Buzias             8.90  94 ⇑P    Pn     20 14 19.3 +2.7
BSD   Bornholm Skovb     9.04  23 i P   Pn     20 14 20.5 +2.0
BSD                               IAmb  IAmb   20 14 21.1
      comp=Z,22nm,0.8s
MONM  Monmouth           9.09 307 eP    Pn     20 14 19.6 +0.5
MONM                              IAML         20 16 04.9
      comp=E,54nm,0.6s
MONM                              IAML         20 16 07.6
      comp=N,36nm,0.5s
LUNU  Lund               9.19  16 i P   Pn     20 14 27.4 +7.0
MDVR  Moldovita          9.19  99 ⇑P    Pn     20 14 22.9 +2.2
DYA   Yadsworthy         9.20 297  Pn   Pn     20 14 19.9  -0.7
SURR  Surduc             9.22  92 ⇑P    Pn     20 14 23.6 +2.6
MCH1  Michaelchurch      9.27 308 eP    Pn     20 14 21.8 +0.2
MCH1                              IAML         20 16 07.1
      comp=N,79nm,0.8s
MCH1                              IAML         20 16 25.2
      comp=E,55nm,0.5s
MCH1  Michaelchurch      9.27 308  Pn   Pn     20 14 21.9 +0.2
TRPA  Tarpa              9.31  77 ⇓P    Pn     20 14 23.5 +1.3
LBWR  Ladybower, Pea     9.42 318 eP    Pn     20 14 23.4  -0.2
STNC  Stoke              9.45 315 eP    Pn     20 14 24.8 +0.6
DRGR                     9.46  86 ⇑P    Pn     20 14 25.9 +1.5
DRGR                     9.46  86 ⇑P    Pn     20 14 25.9 +1.5
HLM1  Long Mynd          9.47 311 eP    Pn     20 14 24.2  -0.2
HLM1                              eS    Sn     20 16 03.0  -8.4
HLM1                              IAML         20 16 07.4
      comp=E,52nm,0.4s
HLM1                              IAML         20 16 09.8
      comp=N,38nm,0.4s
BJUU  Bjuv               9.53  14 i P   Pn     20 14 27.7 +2.6
MUD   Monsted U'grnd     9.56   1 i P   Pn     20 14 31.0 +5.4
MUD                               IAmb  IAmb   20 14 34.1
      comp=Z,8.5nm,0.5s
MESR  Meseseni           9.60  83 ⇓P    Pn     20 14 27.6 +1.4
BOVS  Bovan              9.60 105 ⇓P    Pn     20 14 28.4 +2.2
HERR  Herculane          9.64  97 ⇓P    Pn     20 14 29.4 +2.7
HPK   Haverah Park       9.73 320 eP    Pn     20 14 28.0   0.0
SCTE  Santa Cesarea      9.74 131  Pn   Pn     20 14 28.9 +0.8
GZR   Gura Zlata         9.75  94 ⇑P    Pn     20 14 30.1 +1.9
MARR  Marisel-Cluj       9.76  86 ⇑P    Pn     20 14 29.9 +1.5
DJES  Djerdap            9.77  98  Pn   Pn     20 14 30.1 +1.5
FOEL  Foel Wylfa         9.83 312 eP    Pn     20 14 29.8 +0.4
LPW   Lampeter           9.91 306 eP    Pn     20 14 31.1 +0.7
LLW   Llanuwychllyn     10.05 311 eP    Pn     20 14 32.1  -0.2
DEL   Delary            10.06  16 i P   Pn     20 14 30.1  -2.3
LVV   L'vov             10.48  68 eP    Pn     20 14 39.6 +1.4
LVV                               eS    Sn     20 16 36.2 +0.1
LVV                               pmax  pmax
      comp=Z,20nm,1.0s
LVV                               MLR   MLR
      comp=E,800nm,7.8s
LVV                               MLR   MLR
      comp=N,300nm,8.2s
LVV                               MLR   MLR
      comp=Z,500nm,8.2s
EDMD  Edmundbyers       10.48 323 eP    Pn     20 14 38.1   0.0
ARCR  ARCALIA           10.56  83 ⇓P    Pn     20 14 40.6 +1.3
WME   Myndd Eilian      10.67 312 eP    Pn     20 14 41.1 +0.4
KEK   Kerkira           10.70 128  Pn   Pn     20 14 43.7 +2.4
KESW  Keswick, Cumbr    10.80 320 eP    Pn     20 14 42.3  -0.3
FNA   Florina           10.88 120  Pn   Pn     20 14 46.2 +2.4
FNA   Florina           10.88 120  P    Pn     20 14 46.3 +2.4
BORU  Boraas            11.00  11 i P   Pn     20 14 42.1  -3.1
ARR   Arges             11.03  92 ⇑P    Pn     20 14 47.9 +2.1
VTS   Vitosha           11.05 108 ⇑P    Pn     20 14 49.2 +3.0
VTS   Vitosha           11.05 108  Pn   Pn     20 14 49.2 +3.0
VTS   Vitosha           11.05 108  P    Pn     20 14 49.2 +3.0
BUR08 Bucovina Ar. S    11.10  80  Pn   Pn     20 14 49.0 +2.2
BURAR Bucovina Array    11.11  80 ⇓P    Pn     20 14 48.1 +1.1
BURAR Bucovina Array    11.11  80  Pn   Pn     20 14 48.5 +1.5
BURAR Bucovina Array    11.11  80 ⇓P    Pn     20 14 48.1 +1.1
KEST  Kesra             11.17 178  Pn   Pn     20 14 53.7 +5.9
      comp=Z,1.6nm,0.3s,baz=260,slow=1.5,SNR=21
KEST                               LR   LR     20 19 40.5
      comp=Z,190nm,18.5s,baz=246,slow=40
      comp=Z,5.7nm,0.5s
KEST  Kesra             11.17 178  Pn   Pn     20 14 53.5 +5.7
IOMK  Kirk Michael      11.28 316 eP    Pn     20 14 48.6  -0.5
VOIR                    11.29  92 ⇑P    Pn     20 14 51.5 +2.1
VOIR                    11.29  92 ⇑P    Pn     20 14 51.5 +2.1
EKA   Eskdalemuir Ar    11.32 323  Pn   Pn     20 14 48.6  -1.1
      comp=Z,6.2nm,0.4s,baz=137,slow=14,SNR=56
EKA                                Sn   Sn     20 16 48.6  -8.2
      baz=130,slow=23
ESK   Eskdalemuir       11.33 322 eP    Pn     20 14 49.7  -0.2
ESK   Eskdalemuir       11.33 322  Pn   Pn     20 14 49.7  -0.2
ESK   Eskdalemuir       11.33 322  P    Pn     20 14 49.7  -0.2
SNART Snartemo          11.49 356 i P   Pn     20 14 51.6  -0.4
NEWG  New Galloway      11.64 320 eP    Pn     20 14 53.4  -0.7
PLVB  Pleven            11.64 102 ⇑P    Pn     20 14 56.3 +2.2
DSB   Dublin            11.68 308  Pn   Pn     20 14 52.8  -1.7
EDI   Edinburgh         11.75 325 eP    Pn     20 14 55.6 +0.2
ESBB  Sonseca Array     11.83 237  Pn   Pn     20 14 56.6  -0.2
ESDC  Sonseca Array     11.83 237  Pn   Pn     20 14 56.9 +0.1
      comp=Z,0.1nm,0.3s,baz=51,slow=14,SNR=16
ESDC                               Lg   Lg     20 18 25.6
      comp=Z,0.1nm,0.3s,baz=31,slow=25,SNR=2.4
ESDC                               LR   LR     20 19 43.6
      comp=Z,216nm,21.0s,baz=118,slow=38
MLR   Muntele Rosu      11.90  91 ⇑P    Pn     20 14 59.9 +2.2
MLR   Muntele Rosu      11.90  91  Pn   Pn     20 14 59.7 +2.0
      comp=Z,0.1nm,0.3s,baz=238,slow=19,SNR=2.7
      comp=Z,2.3nm,0.8s
MLR   Muntele Rosu      11.90  91  Pn   Pn     20 14 59.1 +1.3
MLR   Muntele Rosu      11.90  91 ⇑P    Pn     20 14 59.9 +2.2
LIT   Litokhoron        11.97 120       Pn     20 15 00.4 +1.7
LIT   Litokhoron        11.97 120  P    Pn     20 15 00.4 +1.7
PAB   San Pablo         12.14 237       Pn     20 15 01.7 +0.7
PAB   San Pablo         12.14 237  P    Pn     20 15 01.7 +0.7
PLOR  Plostina          12.30  88 ⇓P    Pn     20 15 04.9 +1.7
PLOR  Plostina          12.30  88 ⇓P    Pn     20 15 04.9 +1.7
INVG  Invergeldie, C    12.45 325 eP    Pn     20 15 04.9  -0.1
AGG   Agios Georgios    12.59 124  Pn   Pn     20 15 08.9 +1.8
AGG   Agios Georgios    12.59 124  P    Pn     20 15 08.9 +1.8
PABE  Paberze           12.75  42  Pn   Pn     20 15 07.8  -1.4
KONO  Kongsberg         12.77   2 i P   Pn     20 15 09.2  -0.2
KONO                               pmax pmax
      comp=Z,17nm,1.1s
CFR   Carcaliu          13.47  90 ⇑P    Pn     20 15 20.7 +1.6
CFR   Carcaliu          13.47  90 ⇑P    Pn     20 15 20.7 +1.6
HFS   Hagfors           13.55  10  Pn   Pn     20 15 17.1  -3.0
      comp=Z,0.9nm,0.5s,baz=196,slow=14,SNR=1.2
HFS                                Sn   Sn     20 17 38.9   -12
      comp=Z,0.1nm,0.3s,baz=195,slow=22,SNR=2.1
HFS                                LR   LR     20 20 02.7
      comp=Z,180nm,22.0s,baz=246,slow=36
NACGM Naroch            13.80  48 eP    Pn     20 15 23.7 +0.2
      comp=Z,11nm,0.8s,baz=243
AKASG Malin Array Be    13.91  67  Pn   Pn     20 15 24.4  -0.6
      comp=Z,0.5nm,0.3s,baz=262,slow=12,SNR=7.3
AKASG                              Lg   Lg     20 19 29.7
      comp=Z,0.4nm,0.3s,baz=273,slow=28,SNR=2.1
AKASG                              LR   LR     20 21 11.6
      comp=Z,126nm,20.2s,baz=208,slow=40
      comp=Z,1.1nm,0.6s
AKASG Malin Array Be    13.91  67 i P   P      20 15 28.2  -5.3
AKBB  Malin Array Si    13.91  67 i P   Pn     20 15 26.1 +1.1
AKBB                               pmax pmax
      comp=Z,28nm,2.2s
MNK   Minsk             14.19  51 i P   Pn     20 15 28.4  -0.6
      comp=E,1.0nm,1.1s
MNK                               i P   Pn     20 15 28.4  -0.6
      comp=N,23nm,1.1s
MNK                               i P   Pn     20 15 28.4  -0.6
      comp=Z,5.0nm,0.8s,baz=246
MNK                               i PP  PnPn   20 15 36.0  -0.7
MNK                               i PPP PPP    20 15 43.2
MNK                               i S   Sn     20 18 02.9  -4.1
MNK                               i SS  SnSn   20 18 18.4  -0.6
MNK                               i SSS SSS    20 18 30.6
MNK                               i LQ  LQ     20 19 36.7
MNK                               i LR  LR     20 20 35.6
MNK                               i LRM MLR    20 21 12.8
      comp=Z,268nm,11.3s
MNK                               i LRM MLR    20 21 14.4
      comp=N,447nm,14.7s
MNK                               i LRM MLR    20 21 16.2
      comp=E,46nm,14.1s
MNK   Minsk             14.19  51 i P   Pn     20 15 28.3  -0.6
MNK                               i S   Sn     20 18 02.8  -4.1
MNK                                pmax pmax
      comp=N,23nm,1.1s
MNK                                pmax pmax
      comp=Z,5.0nm,0.8s
MNK                                pmax pmax
      comp=E,1.0nm,1.1s
MNK                                MLR  MLR
      comp=Z,268nm,11.0s
MNK                                MLR  MLR
      comp=N,447nm,15.0s
MNK                                MLR  MLR
      comp=E,46nm,14.0s
NOA   NORSAR Array B    14.22   5  Pn   Pn     20 15 24.1  -5.2
      comp=E,0.5nm,0.9s,baz=190,slow=12,SNR=2.1
NOA                                LR   LR     20 21 40.4
      comp=E,157nm,18.0s,baz=200,slow=41
VSU   Vasula            15.77  36 i P   Pn     20 15 49.7  -0.3
VSU                                pmax pmax
      comp=Z,27nm,0.7s
IDI   Anoyia            16.69 128  Pn   P      20 16 04.2  -0.3
      comp=Z,0.3nm,0.3s,baz=314,slow=11,SNR=5.2
      comp=Z,6.4nm,0.7s
IDI   Anoyia            16.69 128       P      20 16 03.0  -1.6
FINES FINESS Array B    17.60  28  P    Pn     20 16 11.3  -1.9
      comp=Z,0.4nm,0.3s,baz=224,slow=9.4,SNR=10
FINES                              LR   LR     20 22 25.8
      comp=Z,177nm,19.7s,baz=229,slow=36
      comp=Z,7.6nm,0.8s
FINES FINESS Array B    17.60  28  Pn   Pn     20 16 11.1  -2.1
FIA1  FINESS Array S    17.60  28  Pn   Pn     20 16 10.4  -2.8
FIA1                               IAmb IAmb   20 16 40.3
      comp=Z,26nm,1.2s
KARP  Karpathos         17.77 123       P      20 16 15.8  -0.6
KARP                               IAmb IAmb   20 16 26.9
      comp=Z,27nm,0.9s
PUL   Pulkovo           18.04  37 i P   P      20 16 18.9  -0.2
PUL                                pmax pmax
      comp=Z,28nm,0.9s
OBN   Obninsk           19.14  54  LR   LR     20 24 32.5
      comp=Z,96nm,18.0s,baz=269,slow=39
OBN   Obninsk           19.14  54 eP    P      20 16 29.8  -1.5
OBN                                pmax pmax
      comp=Z,10.0nm,0.9s
OBN                                MLR  MLR
      comp=Z,289nm,15.0s
BRTR  Keskin Array B    19.33 103  P    Pn     20 16 35.2 +0.6
      comp=Z,0.2nm,0.3s,baz=286,slow=9.0,SNR=2.3
      comp=Z,1.2nm,0.5s
ANN   Anapa             19.94  86 eP    Pn     20 16 39.7  -2.0
ANN                                pmax pmax
      comp=Z,30nm,1.6s
ANN                                MLR  MLR
      comp=Z,361nm,15.0s
BNN   Bunyan            21.25 102  P    P      20 16 56.2 +1.8
SOC   Sochi             21.88  87 eP    P      20 17 00.9  -0.1
SOC                               e            20 17 23.9
SOC                               ePPP  PPP    20 17 32.0
SOC                               eS    S      20 21 01.7  -1.6
SOC                               eSS   SnSn   20 21 29.6 +1.7
SOC                               eSSS  SSS    20 21 45.3
SOC                                pmax pmax
      comp=Z,5.0nm,0.6s
SOC                                MLR  MLR
      comp=Z,96nm,17.0s
CSS   Mathiatis         21.88 114  P    P      20 17 01.3 +0.1
CSS                                IAmb IAmb   20 17 38.8
      comp=Z,7.2nm,0.9s
KLMR  Klimovskoe        22.54  41 eP    P      20 17 09.5 +1.5
KLMR                               AMP         20 17 12.6
      comp=Z,29nm,1.5s
KLMR                               LQ   LQ     20 25 47.6
KLMR                               LQ   LQ     20 25 47.6
KLMR                               LR   LR     20 26 08.3
KLMR  Klimovskoe        22.54  41 eP    P      20 17 09.4 +1.5
KLMR                               pmax pmax
      comp=Z,29nm,1.5s
GAZ   Gaziantep         23.05 105  P    P      20 17 14.6 +0.9
GAZ                                IAmb IAmb   20 17 22.2
      comp=Z,10nm,0.8s
KIV   Kislovodsk        23.78  85  P    P      20 17 23.2 +2.2
KIV                                IAmb IAmb   20 17 33.3
      comp=Z,8.5nm,0.8s
KIV   Kislovodsk        23.78  85 eP    P      20 17 23.1 +2.1
KIV                                pmax pmax
      comp=Z,12nm,1.0s
KIV                                MLR  MLR
      comp=Z,57nm,14.0s
KOPT  Kop Dagi          23.83  95  P    P      20 17 22.3 +0.6
KOPT                               IAmb IAmb   20 17 35.1
      comp=Z,5.1nm,0.8s
SHA1  Shidzhatmaz       23.84  85 i P   P      20 17 23.0 +1.3
KBZ   Khabaz            24.00  85  P    P      20 17 24.2 +1.3
      comp=Z,6.1nm,0.9s,baz=292,slow=8.3,SNR=15
      comp=Z,6.1nm,0.9s
KBZ   Khabaz            24.00  85ceP    P      20 17 24.5 +1.5
KBZ                                pmax pmax
      comp=Z,6.0nm,0.9s
ARCES ARCESS Array B    24.14  14  P    P      20 17 23.4  -0.7
      comp=Z,1.4nm,0.7s,baz=199,slow=10,SNR=6.7
      comp=Z,1.4nm,0.7s
ARCES ARCESS Array B    24.14  14  P    P      20 17 22.3  -1.8
ARCES                              IAmb IAmb   20 17 38.1
      comp=Z,12nm,1.2s
ARCES ARCESS Array B    24.14  14  P    P      20 17 22.3  -1.8
ARCES                              pmax pmax
      comp=Z,12nm,1.2s
MMAI  Mount Meron Ar    24.45 115  P    P      20 17 28.7 +1.4
      comp=Z,1.4nm,0.5s,baz=317,slow=15,SNR=3.7
      comp=Z,1.4nm,0.5s
ONI   Oni               24.79  87  P    P      20 17 31.0 +0.8
ONI                                IAmb IAmb   20 17 35.8
      comp=Z,5.9nm,0.8s
ONI   Oni               24.79  87  P    P      20 17 31.0 +0.8
ONI                                pmax pmax
      comp=Z,6.0nm,0.8s
ZEI   Tsey              25.02  87 eP    P      20 17 34.6 +2.1
ZEI                                pmax pmax
      comp=Z,8.0nm,0.8s
AKH   Akhalkalaki       25.28  90  P    P      20 17 33.1  -1.7
AKH   Akhalkalaki       25.28  90  P    P      20 17 33.1  -1.7
AKH                                pmax pmax
      comp=Z,28nm,1.1s
KARS  Kars              25.32  92  P    P      20 17 35.5 +0.3
KARS  Kars              25.32  92  P    P      20 17 35.5 +0.3
KARS                               pmax pmax
      comp=Z,35nm,1.0s
BELG  Belogornoye       25.43  63  LR   LR     20 28 20.8
      comp=Z,174nm,19.9s,baz=295,slow=38
BELG  Belogornoye       25.43  63 i P   P      20 17 38.9 +3.0
BELG                               pmax pmax
      comp=Z,3.0nm,1.0s
GURO  Guroymak-BITLI    25.58  97  P    P      20 17 38.2 +0.7
ASF   Jabal al Asfar    25.95 115  P    P      20 17 42.5 +1.6
      comp=Z,8.0nm,0.8s,baz=14,slow=14,SNR=8.6
      comp=Z,8.0nm,0.8s
EIL   Elat              26.54 121  P    P      20 17 49.8 +3.7
      comp=Z,5.2nm,0.9s,baz=332,slow=3.6,SNR=4.9
      comp=Z,5.2nm,0.9s
GNI   Garni             26.68  92  P    P      20 17 49.0 +1.5
      comp=Z,6.9nm,0.7s,baz=316,slow=9.1,SNR=9.4
      comp=Z,6.9nm,0.7s
GNI   Garni             26.68  92  P    P      20 17 49.0 +1.5
GNI   Garni             26.68  92  P    P      20 17 49.0 +1.5
GNI                                pmax pmax
      comp=Z,13nm,1.0s
KIRV  Kirov             26.73  49  LR   LR     20 28 22.8
      comp=Z,77nm,21.7s,baz=279,slow=37
KIRV  Kirov             26.73  49 i P   P      20 17 48.4 +0.9
ARU   Arti              31.58  54  LR   LR     20 31 59.4
      comp=Z,220nm,18.3s,baz=214,slow=38
ARU   Arti              31.58  54d iP   P      20 18 30.9 +0.2
ARU                                            20 19 32.0
ARU                                S    S      20 23 42.2 +2.1
ARU                                SS   SnSn   20 25 23.9  -0.7
ARU                                pmax pmax
      comp=Z,9.0nm,1.5s
ABKAR Akbulak array     33.65  67  P    P      20 18 49.4 +0.4
TORD  Torodi Ar. Bea    34.20 193  P    P      20 18 53.9   0.0
      comp=Z,1.2nm,0.6s,baz=1.5,slow=9.0,SNR=10
GEYT  Alibeck           36.89  86  P    P      20 19 19.3 +2.3
      comp=Z,1.7nm,0.6s,baz=289,slow=9.0,SNR=3.8
      comp=Z,1.7nm,0.6s
BRVK  Borovoye          38.86  58  P    P      20 19 34.2 +0.8
BRVK                               IAmb IAmb   20 19 41.8
      comp=Z,4.8nm,1.2s
BRVK  Borovoye          38.86  58ceP    P      20 19 34.5 +1.1
BRVK                               pmax pmax
      comp=Z,7.0nm,1.7s
BVAR  Borovoye Array    38.93  58  LR   LR     20 35 38.2
      comp=Z,104nm,19.7s,baz=281,slow=36
KK31  Karatay Array     42.74  72  P    P      20 20 03.2  -2.4
KK31  Karatay Array     42.74  72  P    P      20 20 03.2  -2.4
KK31                               pmax pmax
      comp=Z,2.0nm,0.9s
KKAR  Karatay Array     42.74  72  P    P      20 20 03.7  -1.9
KKAR  Karatay Array     42.74  72  P    P      20 20 03.2  -2.4
KKAR                               IAmb IAmb   20 20 08.5
      comp=Z,2.4nm,0.8s
KKAR  Karatay Array     42.74  72  P    P      20 20 03.2  -2.4
KKAR                               pmax pmax
      comp=Z,2.0nm,0.9s
NRIK  Noril'sk          43.24  31 i P   P      20 20 08.8  -0.5
NRIK                               pmax pmax
      comp=Z,1.0nm,1.0s
KURK  Kurchatov         44.52  58  P    P      20 20 19.1  -0.6
KURK                               IAmb IAmb   20 20 23.8
      comp=Z,3.5nm,1.1s
KURK  Kurchatov         44.52  58  P    P      20 20 19.2  -0.6
KURK                               pmax pmax
      comp=Z,3.0nm,1.1s
GAR   Garm              44.61  77  P    P      20 20 20.7  -0.1
GAR                                IAmb IAmb   20 20 26.0
      comp=Z,7.7nm,1.1s
AAK   Ala-Archa         45.54  70 i P   P      20 20 30.2 +2.0
AAK                                pmax pmax
      comp=Z,2.0nm,1.0s
SCHQ  Schefferville     46.25 309  P    P      20 20 33.5 +0.1
      comp=Z,2.1nm,0.7s,baz=64,slow=13,SNR=5.1
SCHQ                               LR   LR     20 38 52.2
      comp=Z,82nm,18.1s,baz=84,slow=35
      comp=Z,2.1nm,0.7s
SCHQ  Schefferville     46.25 309  P    P      20 20 32.4  -1.1
ZAA0  Zalesovo Array    46.70  52  P    P      20 20 37.1 +0.1
ZAA0                               IAmb IAmb   20 20 47.2
      comp=Z,2.5nm,1.2s
ZALV  Zalesovo Beam     46.70  52  P    P      20 20 37.6 +0.6
      comp=Z,0.7nm,0.5s,baz=298,slow=9.3,SNR=4.3
ZALV                               LR   LR     20 41 50.1
      comp=Z,77nm,18.7s,baz=340,slow=38
      comp=Z,0.7nm,0.5s
ZALV  Zalesovo Beam     46.70  52  P    P      20 20 37.2 +0.2
ZALV  Zalesovo Beam     46.70  52 i P   P      20 20 39.7 +2.7
ZALV                               pmax pmax
      comp=Z,1.0nm,0.5s
KSH   Kashi             48.09  73  P    P      20 20 49.6 +1.5
KSH                                pP   sP     20 20 53.6 +3.9
KSH                                pmax pmax
      comp=Z,3.0nm,0.9s
MK31  Makanchi Array    48.42  62  P    P      20 20 51.6 +1.2
MK31  Makanchi Array    48.42  62  P    P      20 20 51.7 +1.2
MK31                               pmax pmax
      comp=Z,2.0nm,1.2s
MKAR  Makanchi Array    48.42  62  P    P      20 20 50.2  -0.3
      comp=Z,0.2nm,0.4s,baz=290,slow=7.6,SNR=8.2
MKAR                               LR   LR     20 42 11.6
      comp=Z,129nm,20.8s,baz=278,slow=37
      comp=Z,0.2nm,0.4s
MKAR  Makanchi Array    48.42  62  P    P      20 20 51.2 +0.7
MKAR  Makanchi Array    48.42  62ceP    P      20 20 53.0 +2.5
DGZ   Jazzator, Alta    50.05  56 i P   P      20 21 03.5 +0.5
DGZ                                pmax pmax
      comp=Z,1.0nm,1.0s
WMQ   Urumqi            53.22  62 eP    P      20 21 29.3 +2.5
WMQ                                LR   LR
      comp=N,330nm,16.3s
SONM  Songino Array     61.46  49  LR   LR     20 50 52.4
      comp=N,117nm,18.3s,baz=350,slow=38
YAK   Yakutsk           61.54  27ceP    P      20 22 24.5  -0.5
YAK                                pmax pmax
      comp=Z,4.0nm,0.5s
YKA   Yellowknife Ar    62.03 334  P    P      20 22 29.2 +0.9
      comp=Z,0.4nm,0.7s,baz=42,slow=6.7,SNR=8.3
      comp=Z,0.4nm,0.7s
IMAR  Indian Mountai    66.65 352  P    P      20 22 59.3 +0.7
SEY   Seymchan          66.72  17 i P   P      20 22 57.8  -1.3
SEY                                pmax pmax
      comp=Z,10.0nm,1.6s
ILAR  Eielson Array     67.06 349  P    P      20 23 01.9 +0.6
      comp=Z,0.3nm,0.8s,baz=23,slow=7.8,SNR=4.4
      comp=Z,0.3nm,0.8s
HHC   Hu-ho-hao-te      68.88  53 eP    P      20 23 10.9  -2.3
HHC                                pmax pmax
      comp=Z,38nm,0.8s
HHC                                pmax pmax
      comp=Z,190nm,5.5s
HEH   HeiHe             69.63  37 eP    P      20 23 19.7 +2.2
HEH                                pmax pmax
      comp=Z,2.0nm,0.8s
DLBC  Dease Lake        69.68 338  LR   LR     20 55 30.1
      comp=Z,52nm,18.5s,baz=300,slow=37
KLR   Kul'dur           72.18  35 i P   P      20 23 35.3 +2.2
KLR                                pmax pmax
      comp=Z,4.0nm,1.5s
PDAR  Pinedale Array    75.41 318  P    P      20 23 55.5 +3.1
      comp=Z,0.2nm,0.4s,baz=48,slow=7.5,SNR=2.0
PDAR                               LR   LR     20 54 56.8
      comp=Z,31nm,21.4s,baz=14,slow=34
      comp=Z,0.2nm,0.4s
BOSA  Boshof            76.61 165  P    P      20 24 00.7 +1.7
      comp=Z,0.9nm,0.6s,baz=352,slow=14,SNR=1.4
      comp=Z,0.9nm,0.6s
CMAR  Chiang Mai Arr    76.78  77  P    P      20 24 00.6 +0.2
      comp=Z,0.5nm,0.4s,baz=300,slow=7.4,SNR=6.3
      comp=Z,0.5nm,0.4s
CMAR  Chiang Mai Arr    76.78  77 i P   P      20 24 02.7 +2.4
CMAR                               pmax pmax
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	comp=Z,1.0nm,0.8s						
PETK	**Petropavlovsk-**	76.86	19	LR	LR	21 03 16.4	
	comp=Z,24nm,20.9s,baz=46,slow=40						
ELK	**Elko**	79.58	320	LR	LR	21 01 07.1	
	comp=Z,29nm,20.9s,baz=50,slow=37						
KSRS	**Korea Array**	79.85	45	LR	LR	21 03 16.0	
	comp=Z,61nm,18.7s,baz=130,slow=38						
SHEM	**Shemya Is, Ala**	79.94	9	LR	LR	21 02 36.7	
	comp=Z,17nm,18.1s,baz=100,slow=38						
ASAJ	**Asahikawa**	80.57	32	LR	LR	21 02 25.3	
	comp=Z,42nm,18.6s,baz=16,slow=38						
TXAR	**Lajitas Array**	82.82	306	P	P	20 24 35.9	+2.9
	comp=Z,0.3nm,0.6s,baz=56,slow=4.9,SNR=3.1						
TXAR				LR	LR	21 01 14.6	
	comp=Z,38nm,18.3s,baz=358,slow=36						
	comp=Z,0.3nm,0.6s						
JNU	**Nakatsue**	84.77	46	LR	LR	21 06 43.5	
	comp=Z,97nm,18.6s,baz=316,slow=39						
APG	**El Apazote**	85.44	287	LR	LR	21 00 47.5	
	comp=Z,10nm,18.3s,baz=256,slow=34						
CMIG	**Matias Romero**	86.77	292	LR	LR	21 00 39.1	
	comp=Z,17nm,19.2s,baz=36,slow=34						
WRA	**Warramunga Arr**	128.37	78	PKP	PKiKP	20 31 16.3	+0.3
	comp=Z,0.2nm,0.7s,baz=313,slow=2.4,SNR=1.7						
ASAR	**Alice Springs**	130.63	82	PKP	PKiKP	20 31 19.4	-1.1
	comp=Z,0.3nm,0.7s,baz=336,slow=1.1,SNR=5.7						

ROM 06 20:12:44.4±0.0, 43°.019N±0°.002×13°.136E±0°.005, h10^{km}, ML1.5/5, Error ellipse: s-maj=0.4km s-min=0.2km az=75.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSP1	**Cessapalombo**	0.09	35	P	Pg	20 12 47.3	+0.4
CSP1				S	Sg	20 12 49.0	+0.3
CSP1				AML	AML		
	comp=E,332µm,1.1s						
CSP1				AML	AML		
	comp=N,310µm,1.3s						
CSP1				AML	AML		
	comp=E,334µm,1.1s						
CSP1				AML	AML		
	comp=E,334µm,0.9s						
T1220	**Camerino, Fraz**	0.10	339	P	Pg	20 12 47.3	+0.4
T1220				S	Sg	20 12 49.6	+0.8
T1220				AML	AML		
	comp=E,828µm,0.2s						
T1220				AML	AML		
	comp=N,956µm,0.2s						
T1220				AML	AML		
	comp=N,959µm,0.2s						
T1220				AML	AML		
	comp=E,832µm,0.2s						
T1219	**Muccia, Frazio**	0.10	291	P	Pg	20 12 47.5	+0.4
T1219				S	Sg	20 12 49.4	+0.5
T1219				AML	AML		
	comp=E,291µm,0.2s						
T1219				AML	AML		
	comp=N,750µm,0.3s						
T1219				AML	AML		
	comp=E,292µm,0.2s						
MC2	**Monte Cornacci**	0.11	159	P	Pg	20 12 47.6	+0.4
T1245	**Castelsantange**	0.17	167	P	Pg	20 12 48.5	+0.5
T1245				S	Sg	20 12 51.6	+1.0
T1245				AML	AML		
	comp=E,238µm,1.5s						
T1245				AML	AML		
	comp=E,156µm,0.2s						
T1245				AML	AML		
	comp=E,238µm,1.5s						
T1245				AML	AML		
	comp=N,281µm,1.3s						
T1245				AML	AML		
	comp=N,196µm,1.3s						
T1245				AML	AML		
	comp=E,238µm,0.5s						
T1245				AML	AML		
	comp=N,281µm,0.7s						
T1245				AML	AML		
	comp=N,196µm,0.7s						
T1212	**Cascia, Frazio**	0.28	194	P	Pg	20 12 50.6	+0.7
T1212				S	Sb	20 12 55.3	-0.9
T1212				AML	AML		
	comp=E,87µm,1.6s						
T1212				AML	AML		
	comp=N,63µm,0.4s						
T1212				AML	AML		
	comp=E,87µm,1.6s						
T1212				AML	AML		
	comp=N,63µm,0.4s						
T1212				AML	AML		
	comp=E,87µm,0.4s						
SNTG	**Esanatoglia**	0.28	329	P	Pg	20 12 50.5	+0.6
CING	**Cingoli**	0.36	7	P	Pg	20 12 52.1	+0.6
ATTE	**AVT- Monte Tez**	0.60	288	AML	AML		
	comp=N,147µm,0.6s						
ATTE				AML	AML		
	comp=E,148µm,0.4s						
ATTE				AML	AML		
	comp=N,147µm,1.4s						

JMA 06 20:30:02.0±0.2, 27°N±1°×14°1E±°, h143^{km}, MV3.8/18, W OFF OGASAWARA, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	1.25	89	*e*P	Pn	20 30 28.6	+0.2
CBIJ				*e*S	Sn	20 30 48.8	+0.2
JHH2	**Haha-jima-NKT2**	1.32	109	P	Pn	20 30 29.3	+0.2
JHH2				*e*S	Sn	20 30 49.9	0.0
BSO1	**Boso 1**	7.55	1	*e*P	Pn	20 31 48.4	-0.4
BSO3	**Boso 3**	7.70	358	*e*P	Pn	20 31 50.3	-0.9
BSO4	**Boso 4**	7.89	357	*e*P	Pn	20 31 53.5	-0.3
JOD2	**Odawara 2**	8.29	350	*e*P	Pn	20 32 00.3	+1.1
JHO	**Hitachi**	9.51	359	*e*P	Pn	20 32 13.2	-2.3

ZUR 06 20:33:29.0, 46°.91N×8°.93E, h6^{km}±1^{km}, MLh0.5/6, 1C-2D, Error ellipse: s-maj=2.7km s-min=0.9km az=30.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLTM2	**Linthal, Matt**	0.05	79	⇓Pg	Pg	20 33 30.8	+0.2
SLTM2				Sg	Sg	20 33 31.9	+0.2
LLS	**Linth-Limmern**	0.09	139	Sg	Sg	20 33 32.8	+0.1
PANIX	**Pigniu (Panix)**	0.15	124	⇓Pg	Pg	20 33 32.5	+0.3
PANIX				Sg	Sg	20 33 34.8	+0.4
SALTS	**Altdorf, Kanto**	0.20	261	Sg	Sg	20 33 36.3	+0.6
SALTS	**Altdorf, Kanto**	0.20	261	Sg	Sg	20 33 36.3	+0.6
PLONS	**Plons/SG**	0.34	66	Sg	Sg	20 33 40.8	+0.6
NALPS	**Val Nalps**	0.34	201	⇑Pg	Pg	20 33 36.1	+0.4
NALPS				Sg	Sg	20 33 40.8	+0.6
BNALP	**Bannalp**	0.35	263	Sg	Sg	20 33 40.9	+0.5

ZUR 06 20:33:56.3, 46°.91N×8°.92E, h6^{km}±1^{km}, MLh1.0/20, 3C-2D, Error ellipse: s-maj=3.2km s-min=0.7km az=36.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLTM2	**Linthal, Matt**	0.06	78	Pg	Pg	20 33 58.2	+0.3
SLTM2				Sg	Sg	20 33 59.4	+0.2
LLS	**Linth-Limmern**	0.09	137	Sg	Sg	20 34 00.2	+0.2
PANIX	**Pigniu (Panix)**	0.16	123	⇓Pg	Pg	20 33 59.9	+0.4
PANIX				Sg	Sg	20 34 02.3	+0.5
SALTS	**Altdorf, Kanto**	0.20	261	Sg	Sg	20 34 03.5	+0.7
MUO	**Muotathal**	0.20	286	⇓Pg	Pg	20 34 00.7	+0.3
MUO				Sg	Sg	20 34 03.9	+0.8
NALPS	**Val Nalps**	0.34	200	⇑Pg	Pg	20 34 03.5	+0.5
NALPS				Sg	Sg	20 34 08.1	+0.6
BNALP	**Bannalp**	0.34	263	⇑Pg	Pg	20 34 03.5	+0.5
BNALP				Sg	Sg	20 34 08.1	+0.5
FUSIO	**Fusio**	0.49	201	⇑Pg	Pg	20 34 06.3	+0.5

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*IDC **06** 20:35:09.6±2.2, 23°.78S×179°.18W, h423^{km}±24^{km}, mb3.6/11, mbtmp4.4/13, Error ellipse: s-maj=19.7km s-min=15.6km az=53.0*

*NOU **06** 20:35:11.7, 23°.83S×178°.92W, h482^{km}, mb4.3/13, South of Fiji Islands*

*NEIC **06** 20:35:12.7±1.9, 23°.8S±0°.2×179°.0W±0°.1, h475^{km}±15^{km}, mb4.4/23, Error ellipse: s-maj=24.3km s-min=8.2km az=207.0*

ISC 06 20:35:11.4±0.5, 23°.92S±0°.06×179°.11W±0°.07, h450^{km}, n79, $\sigma 1^{s}.40$/86, mb4.2/21, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	5.42	169	P	P	20 36 39.2	-0.6
	142nm,0.3s,baz=113,slow=23,SNR=2.3						
GLKZ	**Green Lake**	5.43	169	P	P	20 36 38.7	-1.2
GLKZ				S	S	20 37 40.9	-11
MSVF	**Nonsavu**	6.70	336	P	P	20 36 53.8	+0.6
	20nm,0.3s,baz=162,slow=16,SNR=22						
MSVF	**Nonsavu**	6.70	336	P	P	20 36 53.6	+0.4
MSVF	**Nonsavu**	6.70	336	P	P	20 36 54.0	+0.8
YSA	**Yasawairara**	7.82	336	P	P	20 37 05.6	+0.5
NIUE	**Niue**	9.81	62	P	P	20 37 27.3	+0.7
NIUE	**Niue**	9.81	62	P	P	20 37 26.7	+0.1
NIUE	**Niue**	9.81	62	P	P	20 37 29.8	+3.2
NIUE				S	S	20 39 17.5	-0.3
AFI	**Afiamalu**	12.13	36	P	P	20 37 48.6	-3.3
	11nm,0.3s,baz=84,slow=22,SNR=3.7						
AFI				S	S	20 39 49.4	-15
	7.1nm,0.3s,baz=214,slow=3.6,SNR=1.6						
PINNC	**Pines Island,**	12.43	273		P	20 37 57.3	+2.3
OUENC	**Ouen Island, N**	13.01	274	P	P	20 38 03.4	+2.1
OUENC	**Ouen Island, N**	13.01	274	P	P	20 38 03.2	+1.9
	32nm,2.6s						
YATNC	**Mamie plateau,**	13.03	275	P	P	20 38 03.4	+1.9
DZM	**Mont Dzumac**	13.43	275	P	P	20 38 07.7	+1.7
	2.9nm,0.5s,baz=106,slow=22,SNR=6.5						
DZM	**Mont Dzumac**	13.43	275	P	P	20 38 07.1	+1.2
DZM	**Mont Dzumac**	13.43	275	P	P	20 38 08.4	+2.5
MXZ	**Matakaoa Point**	13.78	189	P	P	20 38 09.6	+0.2
MXZ	**Matakaoa Point**	13.78	189	P	P	20 38 10.8	+1.4
MXZ	**Matakaoa Point**	13.78	189	P	P	20 38 09.2	-0.2
MXZ				S	S	20 40 33.5	-2.8
WMGZ	**Waiomatatini S**	14.02	188	P	P	20 38 11.5	-0.4
WMGZ				S	S	20 40 40.3	-0.7
HAZ	**Te Kaha**	14.05	190	P	P	20 38 13.5	+1.3
HAZ				S	S	20 40 43.4	+1.8
PKGZ	**Pakihiroa**	14.13	189	P	P	20 38 12.9	-0.3
PKGZ				S	S	20 40 42.3	-1.2
RUGZ	**Raukumara Rang**	14.27	190	P	P	20 38 14.8	0.0
RUGZ				S	S	20 40 45.2	-1.0
PUZ	**Puketiti**	14.29	188	P	P	20 38 14.4	-0.5
URZ	**Urewera**	14.66	192	P	P	20 38 16.2	-2.6
	17nm,0.3s,baz=2.4,slow=2.1,SNR=25						
URZ				S	S	20 40 54.7	+1.2
	12nm,0.6s,baz=141,slow=21,SNR=12						
URZ	**Urewera**	14.66	192	P	P	20 38 18.7	-0.1
URZ	**Urewera**	14.66	192	P	P	20 38 14.2	-4.5
CNGZ	**Carnagh Statio**	14.70	188	P	P	20 38 19.2	-0.1
TKGZ	**Te Karaka**	14.71	189	P	P	20 38 19.0	-0.3
MUGZ	**Murupara**	14.93	193	P	P	20 38 22.4	+0.7
RIGZ	**Rimuhau**	14.98	190	P	P	20 38 23.1	+0.8
RTZ	**Ruatahuna**	15.03	192	P	P	20 38 22.7	-0.1
RTZ				IAmb	IAmb	20 38 42.2	
	comp=Z,4.7nm,0.6s						
RTZ	**Ruatahuna**	15.03	192	P	P	20 38 21.9	-0.9
MTHZ	**Maungataniwha**	15.28	192	P	P	20 38 25.9	+0.4
NMHZ	**Naumai**	15.53	192	P	P	20 38 29.8	+1.6
ETVZ	**East Tongariro**	15.80	195	P	P	20 38 29.9	-1.1
OTVZ	**Oturere**	15.83	195	P	P	20 38 30.3	-1.2
SNZO	**South Karori**	18.10	195	P	P	20 38 54.3	-0.7
QRZ	**Quartz Range**	18.26	201	P	P	20 38 56.2	-0.4
RPZ	**Rata Peaks**	21.34	200	P	P	20 39 24.0	-0.9
	comp=Z,5.0nm,0.4s,baz=36,slow=1.5,SNR=2.3						
	comp=Z,5.0nm,0.4s						
RPZ	**Rata Peaks**	21.34	200	P	P	20 39 25.3	+0.4
JCZ	**Jackson Bay**	22.42	203	P	P	20 39 34.0	-0.8
HNR	**Honiara**	24.64	302	P	P	20 39 58.0	+3.1
EIDS	**Eidsvold**	27.11	261	P	P	20 40 16.9	+0.3
EIDS				IAmb	IAmb	20 40 57.2	
	comp=Z,10nm,1.1s						
CTA	**Charters Tower**	32.29	270	P	P	20 41 02.0	+0.2
	comp=Z,18nm,0.4s,baz=93,slow=10,SNR=48						
	comp=Z,18nm,0.4s						
CTAO	**Charters Tower**	32.29	270	P	P	20 41 01.9	+0.1
TAU	**Tasmania Unive**	33.52	227	P	P	20 41 12.2	+0.2
PMG	**Port Moresby**	35.27	288	P	P	20 41 26.2	-1.0
	comp=Z,12nm,0.6s,baz=171,slow=13,SNR=5.5						
	comp=Z,12nm,0.6s						
PMG	**Port Moresby**	35.27	288	P	P	20 41 26.1	-1.0
PMG				IAmb	IAmb	20 41 28.1	
	comp=Z,14nm,0.9s						
STKA	**Stephens Creek**	35.47	248	P	P	20 41 28.5	-0.1
	comp=Z,1.0nm,0.5s,baz=105,slow=15,SNR=5.4						
	comp=Z,1.0nm,0.5s						
COEN	**Coen**	36.92	279	P	P	20 41 40.9	+0.1
BBOO	**Buckleboo**	40.19	247	P	P	20 42 05.8	-1.6
BBOO				IAmb	IAmb	20 42 48.6	
	comp=Z,30nm,1.5s						
AS31	**Alice Springs**	42.83	260	P	P	20 42 27.8	-0.8
ASAR	**Alice Springs**	42.83	260	P	P	20 42 27.9	-0.7
	comp=Z,1.5nm,0.4s,baz=95,slow=7.1,SNR=50						
	comp=Z,1.5nm,0.4s						
ASAR	**Alice Springs**	42.83	260	P	P	20 42 27.7	-1.0
WR0	**Warramunga Arr**	43.03	266	P	P	20 42 28.9	-1.3
WB2	**Warramunga Arr**	43.20	266	P	P	20 42 30.4	-1.1
WB2				IAmb	IAmb	20 42 31.3	
	comp=Z,6.5nm,0.6s						
WRAB	**Tennant Creek**	43.21	266	P	P	20 42 30.4	-1.2
WRAB				IAmb	IAmb	20 42 31.2	
	comp=Z,4.5nm,0.6s						
WB0	**Warramunga Arr**	43.21	266	P	P	20 42 30.7	-0.9
WB0				IAmb	IAmb	20 42 31.3	
	comp=Z,6.7nm,0.6s						
WRA	**Warramunga Arr**	43.22	266	P	P	20 42 30.7	-1.0
	comp=Z,5.1nm,0.5s,baz=95,slow=8.1,SNR=99						
	comp=Z,5.1nm,0.5s						
WRA	**Warramunga Arr**	43.22	266	P	P	20 42 29.8	-1.8
FORT	**Forrest**	47.07	250	P	P	20 43 00.1	-1.1
FORT				IAmb	IAmb	20 43 28.7	
	comp=Z,18nm,1.1s						
KNRA	**Kununurra**	49.50	269	P	P	20 43 19.4	-0.2
VNDA	**Vanda**	54.43	185	P	P	20 43 55.9	+1.5
	comp=Z,1.7nm,0.8s,baz=26,slow=6.0,SNR=6.4						
	comp=Z,1.7nm,0.8s						
VNDA	**Vanda**	54.43	185	P	P	20 43 55.3	+0.9
SOEI	**Soe**	55.66	274	P	P	20 44 04.7	+0.5
MBWA	**Marble Bar**	56.17	260	P	P	20 44 06.9	-0.6
MBWA				IAmb	IAmb	20 44 11.1	
	comp=Z,20nm,1.2s						
MORW	**Morawa**	57.63	250	P	P	20 44 16.8	-0.8
MORW				IAmb	IAmb	20 44 50.0	
	comp=Z,30nm,1.5s						
TOLI2	**Tolitoli**	63.37	284	P	P	20 44 52.9	-3.0
TOLI2				IAmb	IAmb	20 44 53.2	
	comp=Z,9.3nm,0.9s						
QSPA	**South Pole Qui**	66.17	180	P	P	20 45 14.7	+1.8
	comp=Z,3.3nm,0.8s,baz=87,slow=0.8,SNR=16						
	comp=Z,3.3nm,0.8s						
QSPA	**South Pole Qui**	66.17	180	P	P	20 45 14.4	+1.4
QSPA				IAmb	IAmb	20 45 17.8	
	comp=Z,12nm,1.4s						
BELA	**Belgrano 2**	76.32	173	P	P	20 46 11.5	-0.9
BELA				IAmb	IAmb	20 46 16.6	
	comp=Z,10nm,0.7s						
PETK	**Petropavlovsk-**	79.31	346	P	P	20 46 28.5	-0.4
	comp=Z,2.8nm,1.0s,baz=136,slow=7.0,SNR=1.7						
	comp=Z,2.8nm,1.0s						
CMAR	**Chiang Mai Arr**	90.30	290	P	P	20 47 25.7	+2.0
	comp=Z,0.3nm,0.4s,baz=107,slow=4.8,SNR=1.8						
	comp=Z,0.3nm,0.4s						
ILAR	**Eielson Array**	91.86	13	P	P	20 47 30.2	+0.3
	comp=Z,0.3nm,0.8s,baz=209,slow=5.2,SNR=2.1						
	comp=Z,0.3nm,0.8s						
MKAR	**Makanchi Array**	112.76	313	PKiKP	PKiKP	20 52 54.7	-1.3
	comp=Z,0.1nm,0.5s,baz=167,slow=2.5,SNR=2.3						
AKASG	**Malin Array Be**	145.42	328	PKPbc	PKPbc	20 53 57.6	-0.3
	comp=Z,0.6nm,0.4s,baz=42,slow=3.6,SNR=8.4						
CLL	**Collm**	151.10	344	*e*PKPbc	PKPbc	20 54 12.0	-0.4

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*HVO **06** 21:11:47±0.8, 19°.20N±0°.03×155°.40W±0°.06, h32^{km}±7^{km}, ML2.6/14, ML2.5/48(NEIC), Error ellipse: s-maj=8.1km s-min=4.3km az=112.0*

NEIC 06 21:11:47.5±1.5, 19°.3N±0°.3×155°.42W±0°.06, h27^{km}±13^{km}, Error ellipse: s-maj=49.0km s-min=5.2km az=187.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AIN	**Ainahou**	0.05	317	Pg	Pb	21 11 52.7	+0.4
AIN				Sg	Sb	21 11 57.1	+1.5
HTC	**Hot Caves**	0.10	167		Pb	21 11 52.1	-0.3
HLP	**Hilina Pali**	0.11	109		Pb	21 11 52.4	-0.1
HLP					Sb	21 11 56.6	+0.6
HLP				IAML		21 11 56.8	
	comp=N,671nm,0.2s						
HLP				IAML		21 11 57.2	
	comp=E,512nm,0.1s						
SDHHI	**Sand Hill**	0.13	65	Pg	Pb	21 11 52.9	+0.1
SDHHI				Sg	Sb	21 11 57.3	+1.0
WRMHI	**West Rim**	0.14	57		Pb	21 11 53.0	+0.2
WRMHI					Sb	21 11 57.6	+1.2
UWE	**Uwekahuna**	0.15	54		Pb	21 11 53.2	+0.2
UWE				Sg	Sb	21 11 57.5	+0.9
UWE				IAML		21 12 03.9	
	comp=N,694nm,1.1s						
RIM	**Rim**	0.15	66	Pg	Pb	21 11 52.7	-0.2
RIM				Sg	Sb	21 11 57.1	+0.4
RIM				IAML		21 12 05.3	
	comp=E,554nm,1.0s						
RIM				IAML		21 12 05.9	
	comp=N,737nm,0.9s						
OBL	**Observatory Le**	0.15	57		Pb	21 11 53.0	+0.1
OBL					Sb	21 11 57.6	+1.0
KKO	**Keanakako\`i**	0.16	66	Pg	Pb	21 11 52.7	-0.3
KKO				Sg	Sb	21 11 57.0	+0.2
KKO				IAML		21 11 57.8	
	comp=E,428nm,0.8s						
UWB	**Uwekahuna B**	0.16	56	Pg	Pb	21 11 53.0	-0.1
UWB					Sb	21 11 57.4	+0.6
MLH	**Mauna Loa**	0.16	11	Pg	Pb	21 11 53.8	+0.6
MLH				Sg	Sb	21 11 58.9	+1.9
MLH				IAML		21 12 01.0	
	comp=N,576nm,0.1s						
BYL	**Byron's Ledge**	0.17	63	Pg	Pb	21 11 53.2	+0.1
BYL					Sb	21 11 57.8	+0.9
BYL				IAML		21 12 06.6	
	comp=N,386nm,1.1s						
SBLHI	**Steaming Bluff**	0.17	57	Pg	Pb	21 11 53.1	0.0
SBLHI				Sg	Sb	21 11 57.6	+0.7
SBLHI				IAML		21 11 58.0	
	comp=N,393nm,0.3s						
HATHI	**Halema‘uma‘u T**	0.17	59	Pg	Pb	21 11 53.1	0.0
HATHI				IAML		21 12 01.1	
	comp=E,458nm,0.7s						
HATHI				IAML		21 12 01.8	
	comp=N,403nm,0.9s						
RSD	**Rainshed**	0.19	46	Pg	Pb	21 11 53.5	+0.2
RSD				Sg	Sb	21 11 58.2	+0.9
PUH	**Pauahi**	0.20	78	Pg	Pb	21 11 53.1	-0.3
PUH				Sg	Sb	21 11 57.6	+0.2
KHU	**Kahuku**	0.20	245	Pg	Pb	21 11 52.8	-0.8
KHU				Sg	Sb	21 11 57.1	-0.6
MWH	**Moku‘aweowe**	0.23	312	Pg	Pb	21 11 54.3	+0.1
MWH				Sg	Sb	21 11 59.6	+1.0
MWH				IAML		21 11 59.9	
	comp=N,440nm,0.3s						
MWH				IAML		21 11 60.0	
	comp=E,495nm,2.1s						
KNHH	**Kane Nui o Ham**	0.24	79		Pb	21 11 53.5	-0.4
KNHH					Sb	21 11 58.7	+0.4
MLOA	**Mauna Loa Obse**	0.25	324	Pg	Pb	21 11 54.5	+0.1
MLOA				IAML		21 11 58.7	
	comp=E,382nm,4.3s						
HMH	**Humu‘ula Sheep**	0.27	348	Pg	Pb	21 11 55.3	+0.8
HMH				IAML		21 12 00.2	
	comp=E,513nm,3.5s						
HPO	**Honuapo**	0.27	207		Pb	21 11 52.6	-1.6
STCH	**Steam Cracks**	0.28	79		Pb	21 11 53.9	-0.6
STCH				Sg	Sb	21 11 59.1	-0.2
ALEP	**Alea Permanent**	0.29	314		Pb	21 11 54.8	-0.1
JCUZ	**Jacuzzi**	0.30	80	Pg	Pb	21 11 54.1	-0.7
JCUZ				Sg	Sb	21 11 59.5	-0.3
JCUZ				IAML		21 12 00.2	
	comp=E,352nm,0.9s						
JCUZ				IAML		21 12 08.8	
	comp=N,327nm,0.9s						
JOKA	**Jonika Flow**	0.41	76		Pb	21 11 55.2	-1.0
JOKA					Sb	21 12 01.4	-0.8
POHA	**Pohakuloa**	0.43	346		Pb	21 11 56.8	-0.1
POHA				IAML		21 12 05.2	
	comp=N,310nm,0.1s						
POHA				IAML		21 12 06.4	
	comp=N,290nm,0.1s						
CPH	**Captain Cook**	0.49	288		Sb	21 12 03.6	-1.1
KHLU	**Kahalu\`u**	0.52	300		Pb	21 11 57.1	-1.0
KHLU				Sg	Sb	21 12 04.8	-0.5
KHLU				IAML		21 12 05.1	
	comp=N,318nm,0.1s						
KHLU				IAML		21 12 06.2	
	comp=E,183nm,1.1s						
HUH	**Hualalai**	0.53	312		Pb	21 11 58.0	-0.3
HUH				Sg	Sb	21 12 05.1	-0.7
HUH				IAML		21 12 23.0	
	comp=N,297nm,3.0s						
HPAH	**Hawaii Prepara**	0.74	339		Pb	21 12 00.4	-1.5
HPAH					Sb	21 12 10.3	-1.3
HPAH				IAML		21 12 11.4	
	comp=N,180nm,0.1s						
HPAH				IAML		21 12 11.5	
	comp=E,206nm,0.3s						

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*BJI **06** 21:30:05.7±0.0, 25°.01N×95°.21E, h105^{km}, mb4.0/16, mB4.5/3*

*MOS **06** 21:30:05.9±1.0, 25°.01N×95°.07E, h102^{km}, mb4.2/19, Error ellipse: s-maj=20.1km s-min=6.9km az=124.4*

*NEIC **06** 21:30:07.0±1.4, 25°.12N±0°.09×95°.14E±0°.06, h90^{km}±10^{km}, mb4.3/22, Error ellipse: s-maj=12.5km s-min=7.8km az=172.0*

*NDI **06** 21:30:07.9±3.0, 25°.09N×95°.09E, h94^{km}±16^{km}, ML4.0, mb4.3(NEIC)*

*IDC **06** 21:30:10.2±2.9, 24°.89N×95°.31E, h142^{km}±29^{km}, mb3.5/15, mbtmp3.9/16, MS2.8/2, Error ellipse: s-maj=30.7km s-min=14.3km az=58.0*

ISC 06 21:30:06.9±0.8, 25°.03N±0°.04×95°.07E±0°.05, h100^{km}±7^{km}, n100, $\sigma 1^{s}.35$/111, mb4.1/31, 6C, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	1.04	259	*e*P	Pn	21 30 28.4	+0.5
IMP				*e*S	Sn	21 30 43.7	0.0
KOHI	**KOHIMA**	1.11	308	*e*P	Pn	21 30 28.4	-0.3
KOHI				*e*S	Sn	21 30 44.6	-0.5
MOKO	**MOKOCHONG**	1.38	339	*e*P	Pn	21 30 32.0	+0.1
MOKO				*e*S	Sn	21 30 50.5	-0.2
MOKO				IAML		21 30 56.7	
	comp=E,1µm,0.2s						
MOKO				IAML		21 30 57.6	
	comp=N,1µm,0.3s						
JORH	**JORHAT**	1.86	337	*e*S	Sn	21 31 00.5	-0.6
SILR	**SILCHAR**	2.08	264	*e*S	Sn	21 31 08.1	+2.0
SILR				IAML		21 31 14.2	
	comp=N,759nm,0.2s						
LKP	**Lekhapani**	2.40	17	*e*P	Pn	21 30 44.9	+0.2
LKP				*e*S	Sn	21 31 13.2	-0.3
LKP				IAML		21 31 15.9	
	comp=E,509nm,0.3s						
ITAN	**ITANAGAR**	2.43	330	*e*P	Pn	21 30 44.8	-0.3
ITAN				*e*S	Sn	21 31 12.6	-1.8
ITAN				IAML		21 31 16.1	
	comp=E,2µm,0.1s						
ITAN				IAML		21 31 16.8	
	comp=N,2µm,0.1s						
TEZP	**TEZPUR**	2.59	308	*e*P	Pn	21 30 46.3	-0.9
TEZP				IAML		21 31 17.9	
	comp=N,3µm,0.1s						
ZIRO	**ZIRO**	2.72	336	*e*P	Pn	21 30 48.1	-1.0
ZIRO				*e*S	Sn	21 31 18.8	-2.6
SHL	**Shillong**	2.94	281	Pn	Pn	21 30 50.9	-1.1
SHL	**Shillong**	2.94	281	*e*P	Pn	21 30 51.3	-0.7
SHL				*e*S	Sn	21 31 23.9	-2.8
SHL				IAML		21 31 26.4	
	comp=E,748nm,0.1s						
SHL	**Shillong**	2.94	281	P	Pn	21 30 50.9	-1.1
TNCH	**TengChong**	3.13	89	P	Pn	21 30 48.8	-5.7
TNCH				S	Sn	21 31 21.2	-10
TNCH				smax	smax		
	comp=E,110nm,0.8s						
TNCH				smax	smax		
	comp=E,120nm,0.8s						

TNCH				LR	LR		
	comp=E,93nm,4.3s						
MND	Mandalay	3.15	162	Pn	Pn	21 30 54.5	-0.3
SAIH	SAIHA	3.17	217	eP	Pn	21 30 56.0	+0.9
SAIH				eS	Sn	21 31 32.7	+0.5
SAIH				IAML		21 31 37.6	
	comp=E,721nm,0.5s						
AGT	Agartala	3.67	253	eS	Sn	21 31 44.7	+0.8
LSA	Lhasa	5.81	324	P	Pn	21 31 32.4	+1.3
LSA				S	Sn	21 32 35.4	-1.2
LSA				smax	smax		
	comp=E,32nm,0.8s						
LSA				smax	smax		
	comp=E,38nm,0.9s						
LSA	Lhasa	5.81	324	Pn	Pn	21 31 30.6	-0.5
LSA	Lhasa	5.81	324	P	Pn	21 31 30.6	-0.5
PZH	PanZhiHua	6.19	75	P	Pn	21 31 38.8	+2.9
PZH				pmax	pmax		
	comp=E,20nm,0.9s						
PZH				pmax	pmax		
	comp=E,110nm,5.5s						
GTK	Tadong	6.24	293	eP	Pn	21 31 37.8	+1.1
GTK				eS	Sn	21 32 43.6	-3.1
CRAI	Chiangrai	6.84	133	Pn	Pn	21 31 44.4	-0.3
CHTO	Chiang Mai	7.16	149	Pn	Pn	21 31 49.2	+0.2
CHTO	Chiang Mai	7.16	149	P	Pn	21 31 49.2	+0.2
CM31	Chiang Mai Arr	7.46	150	Pn	Pn	21 31 53.2	0.0
CMAR	Chiang Mai Arr	7.46	150	P	Pn	21 31 54.7	+1.5
	comp=E,8.3nm,0.9s,baz=327,slow=13,SNR=52						
CMAR				LR	LR	21 35 12.6	
	comp=E,24nm,18.4s,baz=285,slow=42						
CMAR	Chiang Mai Arr	7.46	150	Pn	Pn	21 31 54.5	+1.3
CMAR	Chiang Mai Arr	7.46	150	i P	Pn	21 31 54.7	+1.5
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PHRA	Phrae	8.07	143	Pn	Pn	21 32 01.6	+0.1
BOK	Bokaro	8.46	264	eS	Sn	21 33 34.3	-6.3
GOMU	GeErMu	11.13	359	P	Pn	21 32 41.7	-1.6
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,47nm,5.9s						
WMQ	Urumqi	19.69	344	eP	Pn	21 34 30.5	-0.1
NIL	Nilore	20.84	299	P	P	21 34 41.4	+0.7
NIL				IAmb	IAmb	21 34 43.3	
	comp=Z,14nm,1.1s						
NIL	Nilore	20.84	299	P	P	21 34 41.4	+0.7
NIL				pmax	pmax		
	comp=Z,15nm,1.1s						
KSH	Kashi	21.60	317	P	P	21 34 50.9	+2.0
KSH				pP	pP	21 35 13.2	+4.8
KSH				sP	sP	21 35 21.7	+0.5
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MK31	Makanchi Array	24.00	338	P	P	21 35 13.3	+1.0
MK31				IAmb	IAmb	21 35 14.7	
	comp=Z,6.3nm,0.6s						
MK31	Makanchi Array	24.00	338	P	P	21 35 13.3	+1.0
MK31				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MKAR	Makanchi Array	24.00	338	P	P	21 35 13.9	+1.6
	comp=Z,6.3nm,0.5s,baz=149,slow=9.1,SNR=132						
MKAR				PcP	PcP	21 38 51.6	-0.1
	comp=Z,0.4nm,0.9s,baz=193,slow=4.0,SNR=2.6						
	comp=Z,6.3nm,0.5s						
MKAR	Makanchi Array	24.00	338	P	P	21 35 13.2	+0.9
MKAR	Makanchi Array	24.00	338	ceP	P	21 35 13.8	+1.5
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MAKZ	Makanchi	24.12	338	P	P	21 35 14.5	+1.2
MAKZ	Makanchi	24.12	338	P	P	21 35 14.5	+1.2
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AAK	Ala-Archa	24.40	321	P	P	21 35 17.5	+1.4
	comp=Z,3.7nm,0.9s,baz=157,slow=6.1,SNR=16						
	comp=Z,3.7nm,0.9s						
AAK	Ala-Archa	24.40	321	P	P	21 35 17.5	+1.4
AAK	Ala-Archa	24.40	321	ceP	P	21 35 18.0	+1.9
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KBL	Kabul	24.44	299	P	P	21 35 17.5	+0.8
KBL	Kabul	24.44	299	P	P	21 35 17.5	+0.8
KBL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SONM	Songino Array	24.46	19	P	P	21 35 17.5	+0.9
	comp=Z,0.9nm,0.7s,baz=202,slow=9.9,SNR=4.7						
	comp=Z,0.9nm,0.7s						
GAR	Garm	25.09	310	P	P	21 35 23.1	+0.7
DGZ	Jazzator, Alta	25.34	348	i P	P	21 35 24.8	+0.3
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CHGR	Chuyangaron	25.76	308	P	P	21 35 29.6	+1.1
CHGR				IAmb	IAmb	21 35 31.8	
	comp=Z,5.7nm,0.7s						
CHGR	Chuyangaron	25.76	308	P	P	21 35 29.6	+1.1
CHGR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KURBB	Kurchatov Arra	28.56	338	P	P	21 35 53.5	+0.3
	comp=Z,2.6nm,0.5s,baz=147,slow=9.4,SNR=34						
KURBB				PcP	PcP	21 39 02.0	-0.2
	comp=Z,0.5nm,0.6s,baz=154,slow=2.2,SNR=5.5						
	comp=Z,2.6nm,0.5s						
KURK	Kurchatov	28.61	338	P	P	21 35 54.4	+0.8
KURK				IAmb	IAmb	21 35 55.7	
	comp=Z,3.9nm,0.6s						
KURK	Kurchatov	28.61	338	P	P	21 35 54.4	+0.8
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ZAA0	Zalesovo Array	29.88	348	P	P	21 36 04.3	-0.6
ZALV	Zalesovo Beam	29.88	348	P	P	21 36 05.8	+0.9
	comp=Z,1.4nm,0.4s,baz=173,slow=9.3,SNR=11						
	comp=Z,1.4nm,0.4s						
ZALV	Zalesovo Beam	29.88	348	P	P	21 36 04.8	-0.1
ZALV	Zalesovo Beam	29.88	348	i P	P	21 36 06.1	+1.2
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BRVK	Borovoye	33.63	333	P	P	21 36 37.3	-0.5
BRVK				IAmb	IAmb	21 36 40.0	
	comp=Z,3.3nm,0.8s						
BRVK	Borovoye	33.63	333	ceP	P	21 36 38.5	+0.7
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GEYT	Alibeck	33.82	301	P	P	21 36 41.4	+1.8
	comp=Z,0.9nm,0.5s,baz=117,slow=5.2,SNR=4.2						
	comp=Z,0.9nm,0.5s						
ABKAR	Akbulak array	36.49	321	P	P	21 37 02.7	+0.4
KLR	Kul'dur	37.37	40	LR	LR	21 52 57.0	
	comp=Z,39nm,18.4s,baz=358,slow=37						
ARU	Arti	40.98	330	P	P	21 37 40.7	+0.9
ARU				IAmb	IAmb	21 37 41.4	
	comp=Z,2.7nm,0.6s						
ARU	Arti	40.98	330	c iP	P	21 37 40.3	+0.5
ARU						21 39 13.3	
ARU				S	S	21 43 45.9	+1.6
ARU				SS	SS	21 46 50.1	+0.3
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NRIK	Noril'sk	44.55	356	i P	P	21 38 08.6	+0.1
NRIK				pmax	pmax		
	comp=Z,7.0nm,2.0s						
BELG	Belogornoye	44.89	320	i P	P	21 38 11.6	+0.3
BELG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ZEI	Tsey	45.29	306	eP	P	21 38 16.5	+1.5
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KBZ	Khabaz	46.12	307	P	P	21 38 21.3	+0.1
	comp=Z,0.4nm,0.6s,baz=57,slow=9.3,SNR=1.4						
	comp=Z,0.4nm,0.6s						
KBZ	Khabaz	46.12	307	i P	P	21 38 19.4	-1.8
KBZ				pmax	pmax		
	comp=Z,1.0nm,1.1s						
SHA1	Shidzhatmaz	46.30	307	i P	P	21 38 23.4	+0.5
KIV	Kislovodsk	46.30	308	P	P	21 38 23.1	+0.3
KIV				IAmb	IAmb	21 38 25.9	
	comp=Z,4.2nm,0.8s						
KIV	Kislovodsk	46.30	308	eP	P	21 38 23.7	+1.0
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TIXI	Tiksi	50.36	13	P	P	21 38 53.4	0.0
TIXI				IAmb	IAmb	21 38 54.0	
	comp=Z,3.0nm,1.1s						
TIXI	Tiksi	50.36	13	P	P	21 38 53.4	0.0
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
AKASG	Malin Array Be	55.89	316	P	P	21 39 33.8	-0.4
	comp=Z,0.5nm,0.4s,baz=82,slow=6.1,SNR=5.7						
	comp=Z,0.5nm,0.4s						
AKASG	Malin Array Be	55.89	316	ceP	P	21 39 33.7	-0.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ELL	Elmali	56.17	299	P	P	21 39 37.1	+0.4
ELL	Elmali	56.17	299	P	P	21 39 37.1	+0.4
NACGM	Naroch	57.50	320	eP	P	21 39 37.1	-8.4
	comp=Z,14nm,1.0s,baz=92						
FINES	FINESS Array B	58.31	328	P	P	21 39 49.8	-1.4
	comp=Z,7.0nm,1.1s,baz=76,slow=8.0,SNR=4.6						
	comp=Z,7.0nm,1.1s						
FINES	FINESS Array B	58.31	328	ceP	P	21 39 50.9	-0.2
FINES				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KARP	Karpathos	58.55	298	P	P	21 39 53.3	0.0
WRA	Warramunga Arr	58.80	136	P	P	21 39 50.7	-4.4
	comp=Z,0.3nm,0.7s,baz=324,slow=7.3,SNR=2.3						
	comp=Z,0.3nm,0.7s						
PMG	Port Moresby	61.20	117	i P	P	21 40 11.7	+0.1
PMG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ASAR	Alice Springs	61.32	139	P	P	21 40 07.9	-4.4
	comp=Z,0.2nm,0.8s,baz=322,slow=5.9,SNR=1.8						
	comp=Z,0.2nm,0.8s						
NC405	NORSAR Array S	65.24	328	P	P	21 40 37.7	+0.1
NB2	NORSAR Subarra	65.49	328	P	P	21 40 39.4	+0.1
	comp=Z,0.8nm,0.6s,baz=82,slow=6.5						
NOA	NORSAR Array B	65.49	328	P	P	21 40 39.7	+0.4
	comp=Z,1.0nm,0.6s,baz=83,slow=6.4,SNR=4.5						
	comp=Z,1.0nm,0.6s						
GEC2	GERESS Array S	66.06	314	P	P	21 40 44.1	+0.9
GERES	GERESS Array B	66.06	314	P	P	21 40 44.1	+0.9
	comp=Z,0.6nm,0.5s,baz=68,slow=7.4,SNR=7.0						
	comp=Z,0.6nm,0.5s						
GERES	GERESS Array B	66.06	314	P	P	21 40 43.9	+0.7
GERES	GERESS Array B	66.06	314	P	P	21 40 43.9	+0.7
IMAR	Indian Mountai	75.53	23	P	P	21 41 40.1	-0.1
H21K	Melozitna Rive	76.03	23	P	P	21 41 42.4	-0.7
H21K				IAmb	IAmb	21 41 55.7	
	comp=Z,5.5nm,1.4s						
BMAR	Burnt Mountain	77.81	20	P	P	21 41 54.2	+1.2
ESDC	Sonseca Array	80.93	309	P	P	21 42 09.5	-1.0
	comp=Z,0.5nm,0.9s,baz=42,slow=5.0,SNR=2.3						
	comp=Z,0.5nm,0.9s						
BCAR	Beaver Creek A	81.44	23	P	P	21 42 13.4	+0.6
TORD	Torodi Ar. Bea	87.53	283	P	P	21 42 45.0	+0.8
	comp=Z,0.6nm,0.6s,baz=60,slow=3.7,SNR=6.6						
	comp=Z,0.6nm,0.6s						

IDC 06 21:35:10.6±1.6**, 0°.78N×125°.92E, h0^{km}, mb3.4**/4**,**
mbtmp3.4/4**, Error ellipse: s-maj=171.2km**
s-min=21.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.18	159	P	P	21 40 08.0	-0.6
	1.1nm,0.7s,baz=337,slow=12,SNR=7.5						
	1.1nm,0.7s						
ASAR	Alice Springs	25.51	163	P	P	21 40 41.3	+0.4
	0.4nm,0.4s,baz=344,slow=11,SNR=14						
	0.4nm,0.4s						
MKAR	Makanchi Array	59.53	327	P	P	21 45 16.3	+0.4
	0.2nm,0.4s,baz=124,slow=7.1,SNR=5.9						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	63.80	328	P	P	21 45 44.0	-0.5
	0.4nm,0.8s,baz=136,slow=5.4,SNR=5.1						
	0.4nm,0.8s						

IDC 06 21:59:15.0±1.9**, 1°.21S×124°.43E, h0^{km}, mb3.0**/3**,**
mbtmp3.1/3**, MS3.1**/1**, Error ellipse: s-maj=201.2km**
s-min=29.3km az=62.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.99	153	P	P	22 03 59.0	-1.2
	0.3nm,0.3s,baz=331,slow=11,SNR=6.6						
	0.3nm,0.3s						
ASAR	Alice Springs	24.14	158	P	P	22 04 34.1	+1.2
	0.3nm,0.7s,baz=342,slow=11,SNR=2.5						
	0.3nm,0.7s						
MJAR	Matsushiro Arr	39.69	17	LR	LR	22 26 28.9	
	comp=Z,26nm,18.1s,baz=114,slow=41						
MKAR	Makanchi Array	60.39	328	P	P	22 09 25.9	-0.2
	0.1nm,0.7s,baz=139,slow=8.5,SNR=1.5						
	0.1nm,0.7s						

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*WEL **06** 22:09:00, 43°.13S×171°.60E, h7^{km}, ML4.1, Mw3.8, Moment Tensor Solution. s11 Moment tensor: Scale 10^{14}Nm; M_{rr}0.80; $M_{\theta\theta}$4.39; $M_{\phi\phi}$-5.19; $M_{r\theta}$2.50; $M_{\theta\phi}$-4.76; $M_{\phi r}$2.01; Fault plane solution: $M_0$7.42000×10^{14} NP1: ϕ_s156.00000°, δ66.00000°, λ-2.00000°. NP2: ϕ_s247.00000°, δ89.00000°, λ-156.00000°. Principal axes: T -80.5900, Plg16.0000°, Azm19.0000°; N 67.9100, Plg66.0000°, Azm249.0000°; P 12.6800, Plg18.0000°, Azm114.0000°;*

*WEL **06** 22:09:54.4±0.3, 43°S±2°×17°2E±°, h5^{km}, M4.0/14, ML4.2/14, MLv4.0/14 Error ellipse: s-maj=0.0km s-min=0.0km az=46.8, confirmed*

*NOU **06** 22:09:54.8, 43°.25S×171°.77E, h11^{km}, MLv4.2/10, South Island, New Zealand*

ISC 06 22:09:54.8±0.9**, 43°.17S**±0°.02×**171°.65E**±0°.02**, h14**^{km}±6^{km}**,**
n97, σ1^{s}62/102**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSHS	Castle Hill	0.08	140	P	Pg	22 09 57.8	+0.1
CSHS				S	Sg	22 10 00.3	+0.5
OXZ	Oxford	0.32	120	P	Pb	22 10 02.0	-0.4
OXZ				S	Sb	22 10 07.4	0.0
INZ	Inchbonnie	0.47	341	P	Pg	22 10 03.0	-1.0
INZ				S	Sg	22 10 08.6	-1.7
LTZ	Lake Taylor	0.59	50	P	Pg	22 10 06.5	0.0
LTZ				S	Sg	22 10 14.9	+0.6
RACZ	Rakaia	0.66	148	P	Pb	22 10 08.6	+0.5
RACZ				S	Sb	22 10 17.7	+0.5
WVZ	Waitaha Valley	0.68	277	P	Pg	22 10 07.1	-0.9
WVZ				S	Sg	22 10 15.4	-1.5
RPZ	Rata Peaks	0.70	218	P	Pb	22 10 08.6	-0.2
RPZ	Rata Peaks	0.70	218	P	Pg	22 10 08.5	+0.1
AMCZ	Amberley	0.73	91	P	Pn	22 10 10.1	-0.6
AMCZ				S	Sn	22 10 20.8	-0.8
WACZ	Wakanui South	0.79	170	P	Pn	22 10 11.0	-0.5
WACZ				S	Sn	22 10 22.9	-0.2
ARCZ	Arundel	0.85	204	P	Pb	22 10 11.5	+0.1
MQZ	McQueen's Vall	0.91	127	P	Pg	22 10 12.3	0.0
MQZ				S	Sn	22 10 25.5	-0.5
GCSZ	Gaunt Creek Bo	0.98	261	P	Pb	22 10 12.7	-0.8
GVZ	Greta Valley S	1.03	79	P	Pn	22 10 14.7	-0.1
GVZ				S	Sn	22 10 29.5	+0.4
AKCZ	Akaroa Harbour	1.16	128	P	Pb	22 10 15.9	-0.6
TMZ	Timaru	1.30	201	P	Pn	22 10 18.3	-0.3
FOZ	Fox Glacier	1.39	254	P	Pb	22 10 20.5	+0.1
DSZ	Denniston Nort	1.43	5	P	Pn	22 10 20.9	+0.6
DSZ				S	Sn	22 10 39.0	+0.2
KHZ	Kahutara	1.58	62	P	Pn	22 10 22.5	+0.2
KHZ	Kahutara	1.58	62	P	Pn	22 10 22.4	+0.1
LBZ	Lake Benmore	1.62	221	P	Pn	22 10 23.2	+0.3
THZ	Tophouse	1.68	34	P	Pn	22 10 24.3	+0.5
MRNZ	Matariki Terra	1.95	25	P	Pn	22 10 27.9	+0.4
ODZ	Otahua Downs	2.01	201	P	Pn	22 10 28.0	-0.3
ODZ	Otahua Downs	2.01	201	P	Pn	22 10 27.8	-0.5
BSWZ	Blackbirch Sta	2.19	49	P	Pn	22 10 31.6	+0.8
JCZ	Jackson Bay	2.27	245	P	Pn	22 10 33.3	+1.3
JCZ	Jackson Bay	2.27	245	P	Pn	22 10 33.0	+1.0
NNZ	Nelson	2.33	34	P	Pn	22 10 33.7	+1.0
TKNZ	Takaka Hill	2.34	25	P	Pn	22 10 32.9	+0.1
CMWZ	Cape Campbell	2.37	54	P	Pb	22 10 35.4	-1.7
QRZ	Quartz Range	2.43	16	P	Pn	22 10 34.7	+0.7
QRZ	Quartz Range	2.43	16	P	Pn	22 10 34.5	+0.5
TUWZ	Tuamarina	2.43	45	P	Pn	22 10 35.3	+1.3
WKZ	Wanaka	2.52	228	P	Pn	22 10 35.7	+0.3
EAZ	Earnscleugh	2.67	218	P	Pn	22 10 37.1	-0.2
TCW	Tory Channel	2.76	46	P	Pn	22 10 39.6	+1.0
HHSZ	Highcliff Hill	2.82	195	P	Pb	22 10 46.6	+1.6
DUWZ	D'Urville Isla	2.91	36	P	Pn	22 10 41.8	+1.2
SNZO	South Karori	2.93	52	P	Pn	22 10 41.3	+0.4
PLWZ	Palliser	3.11	60	P	Pn	22 10 42.3	-1.1
TUZ	Tuapeka	3.14	207	P	Pn	22 10 43.7	-0.1
CAW	Cannon Point	3.27	52	P	Pn	22 10 44.9	-0.7
KIW	Kapiti Island	3.35	48	P	Pn	22 10 46.3	-0.3
MLZ	Mavora Lakes	3.36	228	P	Pn	22 10 46.9	0.0
TRWZ	Traveller	3.48	61	P	Pn	22 10 48.1	-0.4
MTW	Mount Morrison	3.50	56	P	Pn	22 10 47.4	-1.3
OGWZ	Otaki Gorge	3.52	49	P	Pn	22 10 48.0	-1.0
HOWZ	Holdsworth Sta	3.66	53	P	Pn	22 10 49.8	-1.2
HOWZ				P	Pn	22 10 50.8	-0.2
TMWZ	Te Maipa	3.76	58	P	Pn	22 10 52.0	-0.4
SYZ	Scrubby Hill	3.81	207	P	Pn	22 10 52.7	-0.3
SYZ	Scrubby Hill	3.81	207	P	Pn	22 10 52.7	-0.3
MRZ	Mangatainoka R	3.85	51	P	Pn	22 10 52.0	-1.7
TIWZ	Tintock	3.96	54	P	Pn	22 10 54.4	-0.7
NMEZ	Namu Road	4.11	25	P	Pn	22 10 58.8	+1.7
WAZ	Wanganui	4.23	37	P	Pn	22 11 03.5	+4.7
BFZ	Birch Farm	4.23	56	P	Pn	22 10 58.3	-0.5
BFZ	Birch Farm	4.23	56	P	Pn	22 10 58.1	-0.7
NBEZ	Newall Road No	4.24	24	P	Pn	22 11 00.6	+1.7
LREZ	Lake Rotokare	4.24	30	P	Pn	22 11 02.4	+3.4
KHEZ	Kahui Hut	4.26	26	P	Pn	22 11 00.6	+1.4
KHEZ	Kahui Hut	4.26	26	P	Pn	22 11 00.6	+1.4
PREZ	Palmer Road	4.26	27	P	Pn	22 11 00.9	+1.7
NEZ	North Egmont	4.31	26	P	Pn	22 11 02.1	+2.2
PKE	Pukeiti	4.34	25	P	Pn	22 11 01.6	+1.2
DREZ	Durham Road	4.41	27	P	Pn	22 11 02.7	+1.4
DVHZ	Dannevirke	4.43	51	P	Pn	22 11 00.6	-1.0
APZ	The Paps	4.49	214	P	Pn	22 11 01.9	-0.6
VRZ	Vera Road	4.67	31	P	Pn	22 11 06.2	+1.4
MTVZ	Mangateitei	4.75	39	P	Pn	22 11 10.7	+4.8
WNVZ	Wahianoa	4.85	39	P	Pn	22 11 09.6	+2.1
MOVZ	Moawhango	4.86	41	P	Pn	22 11 08.8	+1.3
DRZ	Dome Shelter	4.88	38	P	Pn	22 11 13.2	+5.2
WHVZ	Whangaehu Hut	4.88	39	P	Pn	22 11 12.2	+4.2
FWVZ	Far West T-bar	4.89	38	P	Pn	22 11 10.1	+2.0
TUVZ	Tukino	4.93	39	P	Pn	22 11 11.6	+3.1
BHHZ	Black Hill Sta	4.95	44	P	Pn	22 11 11.9	+3.1
NGZ	Ngauruhoe	4.98	38	P	Pn	22 11 14.8	+5.5
SNVZ	South Ngauruho	4.99	38	P	Pn	22 11 12.4	+3.0
TWVZ	Taurewa	4.99	36	P	Pn	22 11 12.8	+3.5
OTVZ	Oturere	5.02	38	P	Pn	22 11 11.0	+1.2
NNVZ	North Ngauruho	5.02	38	P	Pn	22 11 13.4	+3.6
WTVZ	West Tongariro	5.02	38	P	Pn	22 11 11.4	+1.6
ETVZ	East Tongariro	5.06	39	P	Pn	22 11 12.5	+2.2
KRVZ	Karewarewa	5.06	38	P	Pn	22 11 15.0	+4.7
NTVZ	North Tongarir	5.07	38	P	Pn	22 11 13.5	+3.0
KATZ	Kakaramea	5.18	37	P	Pn	22 11 17.9	+5.9
HIZ	Hauiti	5.24	29	P	Pn	22 11 13.0	+0.3
HIZ	Hauiti	5.24	29	P	Pn	22 11 13.9	+1.1
RITZ	Rihia Road	5.25	39	P	Pn	22 11 18.6	+5.6
RATZ	Rangitukua	5.31	37	P	Pn	22 11 18.8	+5.2
WATZ	Wairara	5.42	36	P	Pn	22 11 20.8	+5.6
TLZ	Tolley Road	5.66	33	P	Pn	22 11 19.3	+0.8
MTHZ	Maungataniwha	5.83	44	P	Pn	22 11 24.2	+3.4
OMRZ	Omania	6.20	37	P	Pn	22 11 31.0	+5.1
AWAZ	Awhitu Peninsu	6.51	22	P	Pn	22 11 32.7	+2.5
WIAZ	Waiheke Island	6.90	24	P	Pn	22 11 35.9	+0.4

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*MEX **06** 22:11:57.9±0.4, 28°.08N×112°.19W, h12^{km}±9^{km}, MD3.6*

*ECX **06** 22:11:57.4±0.4, 28°.06N×112°.11W, h20^{km}±12^{km}, MD3.0, ML3.2*

ISC 06 22:11:56.3±1.3**, 28°.06N**±0°.05×**112°.15W**±0°.04**,**
h25^{km}±16^{km}**, n10, σ0^{s}61**/17**, 2C-3D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFQB	San Francisqui	0.72	299	eP	Pb	22 12 10.5	+0.3
SFQB				eS	Sn	22 12 20.9	-0.2
SFQB				⇓e		22 12 23.1	
SFQB				IAML		22 12 23.1	
	comp=E,1μm,0.6s						
SRIG	Santa Rosalia	0.74	186	eP	Pb	22 12 10.6	-0.1
SRIG				eS	Sb	22 12 20.5	+0.2
SRIG				IAML		22 12 21.6	
	comp=N,832nm,0.7s						
SRIG				⇑e		22 12 21.6	
SRIG	Santa Rosalia	0.74	186	eP	Pb	22 12 10.5	-0.1
SRIG				eS	Sb	22 12 20.0	-0.4
GUYB	Guaymas	1.14	98	eP	Pn	22 12 16.6	-0.1
GUYB				eS	Sb	22 12 31.0	-0.7
GUYB				IAML		22 12 33.4	
	comp=E,1μm,0.3s						
GUYB				e		22 12 33.4	
GUYB	Guaymas	1.14	98	eP	Pn	22 12 16.5	-0.1
GUYB				eS	Sb	22 12 30.9	-0.7
HSIG		1.42	48	eP	Pn	22 12 20.5	-0.1
HSIG				⇑e		22 12 42.8	
HSIG				IAML		22 12 42.8	
	comp=E,202nm,1.0s						
HSIG		1.42	48	eP	Pn	22 12 19.9	-0.7
HSIG				eS	Sn	22 12 38.4	-0.2
BAHB	Baha de los	1.52	306	eP	Pn	22 12 16.5	-5.5
BAHB				eS	Sn	22 12 40.7	-0.3
NOVRB	El Novillo Son	2.37	68	eP	Pb	22 12 38.4	+0.1
NOVRB				eS	Sb	22 13 08.3	+1.1
NOVRB				IAML		22 13 16.8	
	comp=N,107nm,0.5s						
NOVRB				⇓e		22 13 16.8	
NOVRB				IAML		22 13 24.1	
	comp=E,90nm,0.8s						
NOVRB				⇓e		22 13 24.1	
NE80	Navojoa	2.83	113	eP	Pn	22 12 41.2	+1.3

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*NOU **06** 22:18:34.7, 40°.48S×176°.64E, h31^{km}, MLv3.2/6, North Island, New Zealand*

*WEL **06** 22:18:35.7±0.4, 40°S±3°×17°6E±°, h16^{km}±4^{km}, M3.4/15, ML3.7/15, MLv3.4/15, Error ellipse: s-maj=0.0km s-min=0.0km az=128.5, confirmed*

ISC 06 22:18:35.5±1.0**, 40°.35S**±0°.02×**176°.25E**±0°.03**, h18**^{km}±4^{km}**,**
n95, σ0^{s}84/101**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVHZ	Dannevirke	0.08	307	P	Pg	22 18 39.3	+0.2
DVHZ				S	Sg	22 18 41.9	+0.5
ANWZ	Angora Road	0.21	123	P	Pg	22 18 42.6	+1.9
PRWZ	Pori Road	0.30	225	P	Pb	22 18 43.3	+0.9
PRHZ	Porangahau	0.31	75	P	Pn	22 18 43.8	-1.4
WPHZ	Waipukurau	0.32	28	P	Pb	22 18 43.0	+0.3
BFZ	Birch Farm	0.34	180	P	Pn	22 18 44.5	-1.1
BFZ	Birch Farm	0.34	180	P	Pn	22 18 44.3	-1.3
TSZ	Takapari Road	0.36	323	P	Pg	22 18 42.6	-0.5
TSZ				S	Sg	22 18 47.8	-0.5
POWZ	Post Office Ro	0.37	263	P	Pb	22 18 43.6	0.0
POWZ				S	Sb	22 18 49.6	+0.5
PNHZ	Pukenui	0.43	355	P	Pg	22 18 44.1	-0.3
PNHZ				S	Sg	22 18 50.6	+0.2
TIWZ	Tintock	0.51	212	P	Pn	22 18 47.2	-0.8
PXZ	Pawanui	0.57	57	P	Pn	22 18 48.4	-0.3
PXZ				S	Sn	22 18 59.4	+1.8
MRZ	Mangatainoka R	0.60	238	P	Pg	22 18 47.6	+0.1
KAHZ	Kahuranaki	0.73	42	P	Pn	22 18 51.1	+0.1
HOWZ	Holdsworth Sta	0.78	225	P	Pg	22 18 51.1	+0.2
TMWZ	Te Maipa	0.81	199	P	Pn	22 18 51.8	-0.3
BHHZ	Black Hill Sta	0.87	351	P	Pb	22 18 51.7	-0.4
KWHZ	Kaweka Forest	0.93	8	P	Pb	22 18 53.4	+0.2
CKHZ	Cape Kidnapper	0.94	43	P	Pg	22 18 53.5	-0.2
OGWZ	Otaki Gorge	0.94	240	P	Pb	22 18 53.5	+0.1
MCHZ	McNeill Hill	0.96	21	P	Pg	22 18 54.2	-0.1
MTW	Mount Morrison	0.99	215	P	Pb	22 18 54.0	-0.1
MOVZ	Moawhango	1.01	338	P	Pb	22 18 54.0	-0.5
MTVZ	Mangateitei	1.13	328	P	Pb	22 18 56.7	+0.2
WAZ	Wanganui	1.13	301	P	Pg	22 18 57.3	-0.2
WNVZ	Wahianoa	1.13	334	P	Pn	22 18 56.5	-0.1
TRWZ	Traveller	1.13	202	P	Pn	22 18 55.9	-0.6
KIW	Kapiti Island	1.14	243	P	Pn	22 18 56.6	0.0
TUVZ	Tukino	1.17	337	P	Pn	22 18 57.2	+0.1
TRVZ	Turoa	1.18	333	P	Pb	22 18 57.7	+0.2
CAW	Cannon Point	1.18	229	P	Pn	22 18 56.8	-0.3
WHVZ	Whangaehu Hut	1.18	334	P	Pn	22 18 57.3	0.0
DRZ	Dome Shelter	1.19	334	P	Pb	22 18 57.8	+0.1
BKZ	Black Stump Fm	1.19	9	P	Pn	22 18 57.3	-0.1
BKZ	Black Stump Fm	1.19	9	P	Pn	22 18 57.2	-0.2
FWVZ	Far West T-bar	1.21	334	P	Pn	22 18 57.8	0.0
ARHZ	Aropaoanui	1.23	28	P	Pb	22 18 58.0	-0.2
SNVZ	South Ngauruho	1.25	338	P	Pb	22 18 58.6	-0.1
PKVZ	Pokaka	1.26	326	P	Pn	22 18 58.4	+0.1
OTVZ	Oturere	1.26	339	P	Pb	22 18 58.8	-0.1
NGZ	Ngauruhoe	1.27	337	P	Pb	22 18 58.9	-0.1
ETVZ	East Tongariro	1.28	341	P	Pb	22 18 59.0	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NNVZ	**North Ngauruho**	**1.31**	**338**	P	**Pb**	**22 18 59.6**	**0.0**
NMHZ	**Naumai**	**1.32**	**19**	P	**Pb**	**22 18 59.5**	**-0.3**
NTVZ	**North Tongarir**	**1.32**	**340**	P	**Pb**	**22 18 59.7**	**-0.1**
WTVZ	**West Tongariro**	**1.33**	**337**	P	**Pb**	**22 18 59.9**	**-0.1**
KRVZ	**Karewarewa**	**1.33**	**339**	P	**Pb**	**22 18 60.0**	**-0.1**
RITZ	**Rihia Road**	**1.40**	**348**	P	**Pb**	**22 19 01.2**	**+0.1**
TWVZ	**Taurewa**	**1.42**	**334**	P	**Pb**	**22 19 01.1**	**-0.4**
KATZ	**Kakaramea**	**1.43**	**343**	P	**Pb**	**22 19 01.7**	**0.0**
PLWZ	**Palliser**	**1.44**	**211**	P	**Pn**	**22 18 59.6**	**-1.1**
WEL	**Wellington**	**1.46**	**230**	P	**Pn**	**22 19 00.5**	**-0.5**
MRHZ	**Matea Rd**	**1.52**	**5**	P	**Pb**	**22 19 02.8**	**-0.3**
SNZO	**South Karori**	**1.52**	**230**	P	**Pn**	**22 19 01.4**	**-0.3**
RATZ	**Rangitukua**	**1.52**	**346**	P	**Pb**	**22 19 03.4**	**+0.2**
MTHZ	**Maungataniwha**	**1.56**	**17**	P	**Pn**	**22 19 02.2**	**-0.2**
RAHZ	**Arahi**	**1.57**	**25**	P	**Pg**	**22 19 05.2**	**-0.5**
LREZ	**Lake Rotokare**	**1.67**	**301**	P	**Pb**	**22 19 06.7**	**+0.9**
VRZ	**Vera Road**	**1.67**	**316**	P	**Pb**	**22 19 05.1**	**-0.7**
WATZ	**Wairara**	**1.68**	**346**	P	**Pn**	**22 19 04.7**	**+0.6**
TCW	**Tory Channel**	**1.73**	**239**	P	**Pn**	**22 19 03.9**	**-0.8**
MHGZ	**Mahia Peninsul**	**1.75**	**48**	P	**Pn**	**22 19 04.4**	**-0.5**
SNGZ	**Shannon Statio**	**1.77**	**29**	P	**Pn**	**22 19 05.0**	**-0.4**
RTZ	**Ruatahuna**	**1.82**	**18**	P	**Pn**	**22 19 05.5**	**-0.5**
DUWZ	**D'Urville Isla**	**1.83**	**255**	P	**Pn**	**22 19 05.8**	**-0.3**
PREZ	**Palmer Road**	**1.89**	**301**	P	**Pb**	**22 19 09.2**	**-0.4**
MUGZ	**Murupara**	**1.91**	**12**	P	**Pn**	**22 19 07.6**	**+0.4**
DREZ	**Durham Road**	**1.95**	**306**	P	**Pb**	**22 19 10.8**	**+0.2**
NEZ	**North Egmont**	**1.97**	**302**	P	**Pb**	**22 19 10.7**	**-0.3**
KHEZ	**Kahui Hut**	**2.01**	**301**	P	**Pb**	**22 19 10.9**	**-0.7**
NMEZ	**Namu Road**	**2.05**	**296**	P	**Pb**	**22 19 11.3**	**-0.9**
TUWZ	**Tuamarina**	**2.06**	**237**	P	**Pn**	**22 19 08.0**	**-1.2**
PKE	**Pukeiti**	**2.09**	**303**	P	**Pb**	**22 19 12.0**	**-0.9**
TARZ	**Mount Tarawera**	**2.12**	**6**	P	**Pn**	**22 19 10.1**	**0.0**
HIZ	**Hauiti**	**2.12**	**329**	P	**Pn**	**22 19 11.0**	**+0.9**
HIZ	**Hauiti**	**2.12**	**329**	P	**Pn**	**22 19 11.0**	**+0.9**
URZ	**Urewera**	**2.19**	**18**	P	**Pn**	**22 19 09.8**	**-1.2**
URZ	**Urewera**	**2.19**	**18**	P	**Pn**	**22 19 09.9**	**-1.1**
MWZ	**Matawai**	**2.24**	**27**	P	**Pn**	**22 19 10.3**	**-1.5**
BSWZ	**Blackbirch Sta**	**2.26**	**232**	P	**Pn**	**22 19 10.9**	**-1.0**
NNZ	**Nelson**	**2.34**	**247**	P	**Pn**	**22 19 12.7**	**-0.5**
TKNZ	**Takaka Hill**	**2.59**	**254**	P	**Pn**	**22 19 18.9**	**+2.3**
RUGZ	**Raukumara Rang**	**2.62**	**26**	P	**Pn**	**22 19 16.1**	**-1.0**
TOZ	**Tahuroa Road**	**2.67**	**347**	P	**Pb**	**22 19 22.2**	**-0.7**
PKGZ	**Pakihiroa**	**2.84**	**31**	P	**Pn**	**22 19 19.0**	**-1.0**
MRNZ	**Matariki Terra**	**2.85**	**247**	P	**Pn**	**22 19 19.6**	**-0.5**
HAZ	**Te Kaha**	**2.85**	**25**	P	**Pn**	**22 19 19.5**	**-0.5**
QRZ	**Quartz Range**	**2.87**	**259**	P	**Pn**	**22 19 23.2**	**+2.8**
QRZ	**Quartz Range**	**2.87**	**259**	P	**Pn**	**22 19 19.3**	**-1.1**
THZ	**Tophouse**	**2.90**	**240**	P	**Pn**	**22 19 19.3**	**-1.5**
THZ				P	**Pn**	**22 19 19.5**	**-1.3**
WMGZ	**Waiomatatini S**	**3.04**	**34**	P	**Pn**	**22 19 21.4**	**-1.3**
DSZ	**Denniston Nort**	**3.64**	**246**	P	**Pn**	**22 19 30.9**	**-0.1**
LTZ	**Lake Taylor**	**3.85**	**229**	P	**Pn**	**22 19 31.5**	**-2.4**
TMZ	**Timaru**	**5.60**	**222**	P	**Pn**	**22 19 55.3**	**-2.6**
CTZ	**Chatham Island**	**6.30**	**125**	P	**Pn**	**22 20 07.4**	**0.0**

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*CNRM **06** 23:20:49.6, 33°.77N×5°.90W, h0^{km}, ml2.9*

*MDD **06** 23:20:52.1±0.9, 33°.77N×5°.85W, h35^{km}±4^{km}, Mb3.8/5, M_mb3.1/5, Error ellipse: s-maj=8.6km s-min=4.6km az=50.0*

ISC 06 23:20:51.7±1.3**, 33°.84N**±0°.03×**5°.92W**±0°.04**, h34**^{km}±3^{km}**, n26, σ1^{s}81**/42**, 5C, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHEFC	**Chefchaouen**	**1.35**	**20**	P	**Pb**	**23 21 18.5**	**+2.0**
CHEFC				S	**Sb**	**23 21 33.8**	**+0.2**
AVE	**Averroes**	**1.36**	**247**	P	**Pn**	**23 21 14.7**	**+0.4**
AVE				S	**Sn**	**23 21 32.5**	**+1.3**
MD31	**MD31**	**1.37**	**135**	P	**Pn**	**23 21 14.5**	**+0.1**
MD31				S	**Sn**	**23 21 31.6**	**+0.1**
MDT	**Midelt**	**1.50**	**133**	P	**Pn**	**23 21 16.1**	**-0.1**
MDT				S	**Sn**	**23 21 35.0**	**+0.3**
AKLM	**AKL**	**1.83**	**68**	P	**Pn**	**23 21 21.6**	**+0.8**
AKLM				S	**Sb**	**23 21 48.3**	**+1.2**
SRHM	**Skhour des Reh**	**2.15**	**231**	P	**Pb**	**23 21 29.7**	**-0.3**
GOLM	**Goulmima**	**2.28**	**159**	P	**Pb**	**23 21 30.7**	**-1.5**
ARF	**Arif**	**2.79**	**149**	P	**Pn**	**23 21 36.2**	**+2.1**
JBK	**JBK**	**2.82**	**79**	S	**Sn**	**23 22 10.9**	**+3.4**
OUZM	**OUZ**	**3.01**	**194**	P	**Pb**	**23 21 42.4**	**-2.1**
OUZM				S	**Sb**	**23 22 19.9**	**-1.1**
OUK	**Oukaimeden**	**3.10**	**213**	P	**Pn**	**23 21 39.0**	**+0.5**
OUK				S	**Sn**	**23 22 18.9**	**+4.4**
PBDV	**Barranco-do-Ve**	**3.77**	**335**	*e*Pn	**Pn**	**23 21 49.1**	**+1.6**
PBDV				*e*Sn	**Sn**	**23 22 31.7**	**+0.9**
PVAQ	**Vaqueiros**	**3.85**	**338**	*e*Pn	**Pn**	**23 21 51.4**	**+2.9**
PVAQ				*e*Sn	**Sn**	**23 22 31.2**	**-1.4**
EGRO	**El Granado**	**3.90**	**341**	Pn	**Pn**	**23 21 50.0**	**+0.7**
EGRO				⇑*i*Vmb_V		23 21 52.6	
	109nm,SNR=1.2						
EGRO				Sn	**Sn**	**23 22 32.3**	**-1.6**
EMIN	**Mina Concepcio**	**3.97**	**351**	Pn	**Pn**	**23 21 50.9**	**+0.7**
EMIN				⇑*i*Vmb_V		23 21 54.7	
	65nm,SNR=0.7						
EMIN				Sn	**Sn**	**23 22 33.8**	**-1.8**
PCVE	**Castro Verde**	**4.16**	**336**	*e*Sn	**Sn**	**23 22 42.5**	**+2.2**
ECAB	**El Cabril**	**4.25**	**5**	Pn	**Pn**	**23 21 54.9**	**+0.9**
ECAB				⇑*i*Vmb_V		23 21 59.7	
	63nm,SNR=0.6						
ECAB				Sn	**Sn**	**23 22 41.0**	**-1.5**
MESJ	**Messejana**	**4.41**	**336**	*e*Sn	**Sn**	**23 22 47.3**	**+0.9**
PBAR	**Barrancos**	**4.42**	**348**	*e*Pn	**Pn**	**23 21 57.5**	**+1.1**
PBAR				*e*Sn	**Sn**	**23 22 47.8**	**+1.1**
PBAR				A	A	23 22 49.6	
	1.3nm,0.4s						
EADA	**Adamuz**	**4.46**	**14**	Pn	**Pn**	**23 21 57.9**	**+1.1**
EADA				Sn	**Sn**	**23 22 45.2**	**-2.4**
PNCL	**Nicolau / Gran**	**4.76**	**334**	*e*Sn	**Sn**	**23 22 55.1**	**0.0**
EBAD	**Badajoz**	**4.99**	**350**	Pn	**Pn**	**23 22 05.0**	**+0.9**
EBAD				⇑*i*Vmb_V		23 22 06.7	
	124nm,SNR=1.3						
EBAD				Sn	**Sn**	**23 22 57.7**	**-2.9**
PESTR	**Estremoz**	**5.20**	**345**	*e*Sn	**Sn**	**23 23 04.2**	**-1.6**
PSIM	**Granatula de C**	**5.27**	**19**	Pn	**Pn**	**23 22 08.7**	**+0.7**
PSIM				Sn	**Sn**	**23 23 05.9**	**-1.7**
PMRV	**Marv??o**	**5.71**	**348**	*e*Sn	**Sn**	**23 23 16.6**	**-1.7**
PAB	**San Pablo**	**5.83**	**12**	⇑*i*Vmb_V		23 22 18.7	
	38nm,SNR=0.4						
PAB				Sn	**Sn**	**23 23 17.6**	**-4.0**

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*IDC **06** 23:28:05.4±0.7, 35°.43S×105°.08W, h0^{km}, mb4.3/15, mbtmp4.2/15, MS4.1/29, Error ellipse: s-maj=21.4km s-min=19.3km az=61.0*

*NEIC **06** 23:28:09.8±1.3, 35°.30S±0°.10×104°.7W±0°.1, h10^{km}±1^{km}, mb4.9/47, Error ellipse: s-maj=19.3km s-min=16.1km az=247.0*

*GCMT **06** 23:28:11.8±0.2, 35°.37S±0°.01×104°.94W±0°.01, h22^{km}±1^{km}, MW5.1/126, Moment Tensor Solution. s50,c60; s126,c182; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.95±.18; $M_{\theta\theta}$-0.98±.14; $M_{\phi\phi}$1.94±.14; $M_{r\theta}$-0.29±.22; $M_{\theta\phi}$-4.48±.11; $M_{\phi r}$-1.16±.23; Best double couple: $M_0$4.88200×10^{16} NP1:ϕ_s8.00000°, δ85.00000°, λ-16.00000°. NP2:ϕ_s100.00000°, δ74.00000°, λ-174.00000°. Principal axes: T 5.2860, Plg7.0000°, Azm55.0000°; N -0.8040, Plg73.0000°, Azm170.0000°; P -4.4790, Plg15.0000°, Azm323.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 23:28:08.4±0.5**, 35°.35S**±0°.09×**104°.70W**±0°.09**, h10**^{km}**, n101, σ1^{s}25**/71**, mb4.8**/34**, MS4.2**/31**, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**9.11**	**333**	LR	LR	23 32 52.5	
	comp=Z,2µm,21.5s,baz=117,slow=32						
RPN	**Rapa Nui**	**9.11**	**333**	Pn	**Pn**	**23 30 19.1**	**-0.8**
VA02	**Isla de Pascua**	**9.12**	**332**	Pn	**Pn**	**23 30 19.2**	**-0.8**
H03S2	**Juan Fernandez**	**21.26**	**93**	T	T	23 55 20.0	
	baz=281,slow=75,SNR=14						
H03S1	**Juan Fernandez**	**21.27**	**93**	T	T	23 55 21.6	
	baz=281,slow=75,SNR=19						
H03S3	**Juan Fernandez**	**21.27**	**93**	T	T	23 55 18.6	
	baz=281,slow=75,SNR=19						
H03N2	**Juan Fernandez**	**21.34**	**92**	T	T	23 55 30.3	
	baz=248,slow=72,SNR=14						
H03N3	**Juan Fernandez**	**21.34**	**92**	T	T	23 55 31.2	
	baz=248,slow=72,SNR=12						
H03N1	**Juan Fernandez**	**21.35**	**92**	T	T	23 55 23.8	
	baz=248,slow=72,SNR=19						
LL06	**Loncomilla**	**25.08**	**115**	P	**P**	**23 33 33.6**	**+0.5**
LL06				IAmb	IAmb	23 33 45.6	
	comp=Z,149nm,1.7s						
GO06	**Curarrehue**	**26.62**	**109**	P	**P**	**23 33 48.1**	**+0.9**
PLCA	**Paso Flores**	**27.32**	**112**	P	**P**	**23 33 54.8**	**+1.4**
	comp=Z,3.8nm,0.9s,baz=273,slow=6.9,SNR=5.2						
PLCA				LR	LR	23 41 49.9	
	comp=Z,163nm,19.5s,baz=278,slow=30						
	comp=Z,3.8nm,0.9s						
BO01	**Tunca**	**27.53**	**98**	P	**P**	**23 33 55.6**	**+0.4**
GO04	**Tololo Observa**	**28.89**	**89**	P	**P**	**23 34 05.0**	**-2.8**
GO04				IAmb	IAmb	23 34 18.3	
	comp=Z,29nm,1.2s						
CFA	**Coronel Fontan**	**30.54**	**93**	LR	LR	23 43 46.4	
	comp=Z,257nm,21.1s,baz=259,slow=30						
USHA	**Ushuaia**	**31.66**	**139**	P	**P**	**23 34 32.0**	**+0.4**
	comp=Z,25nm,0.6s,baz=82,slow=0.8,SNR=1.7						
	comp=Z,25nm,0.6s						
LVC	**Limon Verde**	**33.60**	**78**	P	**P**	**23 34 50.4**	**+1.0**
	comp=Z,3.3nm,0.8s,baz=274,slow=8.1,SNR=3.0						
LVC				LR	LR	23 44 50.7	
	comp=Z,551nm,21.8s,baz=250,slow=30						
	comp=Z,3.3nm,0.8s						
LVC	**Limon Verde**	**33.60**	**78**	P	**P**	**23 34 49.2**	**-0.3**
LVC				IAmb	IAmb	23 34 52.4	
	comp=Z,16nm,1.4s						
TA01	**Diego Aracena**	**33.67**	**73**	P	**P**	**23 34 50.1**	**+0.5**
TA01				IAmb	IAmb	23 34 56.1	
	comp=Z,22nm,1.1s						
PB09	**IPOC Station P**	**33.76**	**76**	P	**P**	**23 34 49.5**	**-1.0**
PB09				IAmb	IAmb	23 35 36.6	
	comp=Z,39nm,1.5s						
PSGCX	**Pisagua**	**34.25**	**72**	P	**P**	**23 34 54.2**	**-0.6**
NNA	**Nana**	**34.31**	**54**	LR	LR	23 45 25.0	
	comp=Z,1µm,20.2s,baz=234,slow=30						
MNMC	**Minye Minye**	**34.93**	**72**	P	**P**	**23 35 01.5**	**+0.7**
MNMC				IAmb	IAmb	23 35 10.7	
	comp=Z,50nm,1.8s						
PB16	**IPOC Station P**	**35.45**	**71**	P	**P**	**23 35 04.6**	**-1.1**
ATAH	**Atahualpa**	**37.04**	**47**	P	**P**	**23 35 20.2**	**+1.1**
	comp=Z,7.0nm,0.8s,baz=228,slow=15,SNR=4.8						
ATAH				LR	LR	23 46 45.7	
	comp=Z,475nm,19.1s,baz=233,slow=30						
	comp=Z,7.0nm,0.8s						
LPAZ	**La Paz**	**37.72**	**69**	P	**P**	**23 35 26.3**	**+1.2**
	comp=Z,2.6nm,0.8s,baz=229,slow=3.9,SNR=9.0						
LPAZ				LR	LR	23 47 52.6	
	comp=Z,229nm,19.7s,baz=248,slow=31						
	comp=Z,2.6nm,0.8s						
LPAZ	**La Paz**	**37.72**	**69**	P	**P**	**23 35 25.2**	**0.0**
LPAZ				IAmb	IAmb	23 35 28.1	
	comp=Z,21nm,1.7s						
PMSA	**Palmer Station**	**38.17**	**153**	LR	LR	23 46 44.2	
	comp=Z,439nm,20.6s,baz=312,slow=29						
MCRA	**Macar, Loja**	**38.39**	**42**	P	**P**	**23 35 29.3**	**-0.8**
CZSB	**Cruzeiro do Su**	**40.18**	**54**	P	**P**	**23 35 45.2**	**+0.1**
CZSB				IAmb	IAmb	23 35 49.5	
	comp=Z,43nm,1.5s						
TBI	**Tubuai**	**40.49**	**275**	*e*LR	LR	23 46 26.4	
	comp=Z,5µm,23.2s						
TBI				*e*LR	LR	23 46 26.8	
	comp=Z,1µm,24.8s						
CPUP	**Villa Florida**	**41.33**	**91**	LR	LR	23 50 14.9	
	comp=Z,105nm,21.3s,baz=252,slow=32						
CHSH	**Refugio Sur-Vo**	**41.38**	**41**	P	**P**	**23 35 56.1**	**+0.5**
CHSH				IAmb	IAmb	23 35 58.1	
	comp=Z,18nm,0.8s						
PORT	**Chimborazo Vol**	**41.45**	**41**	P	**P**	**23 35 56.1**	**-0.1**
PORT				IAmb	IAmb	23 35 59.2	
	comp=Z,15nm,0.8s						
TAOE	**Nuku Hiva Isla**	**41.74**	**301**	*e*LR	LR	23 46 57.3	
	comp=Z,446nm,26.4s						
SLOR	**San Lorenzo -**	**42.22**	**41**	P	**P**	**23 36 01.8**	**-0.5**
OTAV	**Otavalo**	**43.05**	**40**	P	**P**	**23 36 09.3**	**+0.2**
SIV	**San Ignacio**	**43.38**	**75**	P	**P**	**23 36 11.5**	**+0.2**
	comp=Z,2.9nm,0.7s,baz=248,slow=9.5,SNR=12						
SIV				LR	LR	23 51 17.1	
	comp=Z,164nm,20.4s,baz=258,slow=32						
	comp=Z,2.9nm,0.7s						
PTLB	**Pontes e Lacer**	**45.22**	**76**	P	**P**	**23 36 25.9**	**-0.1**
AQDB	**Aquidauana**	**45.32**	**84**	P	**P**	**23 36 27.7**	**+0.9**
AQDB				IAmb	IAmb	23 36 27.9	
	comp=Z,9.3nm,1.2s						
JTS	**Las Juntas de**	**49.09**	**26**	LR	LR	23 52 50.8	
	comp=Z,406nm,18.3s,baz=160,slow=30						
ROSC	**El Rosal**	**49.13**	**42**	P	**P**	**23 36 58.7**	**+1.8**
	comp=Z,5.9nm,0.4s,baz=218,slow=8.6,SNR=5.3						
ROSC				LR	LR	23 54 04.0	
	comp=Z,496nm,20.4s,baz=227,slow=32						
	comp=Z,5.9nm,0.4s						
ROSC	**El Rosal**	**49.13**	**42**	P	**P**	**23 36 57.2**	**+0.4**
ROSC				IAmb	IAmb	23 37 10.6	
	comp=Z,20nm,1.1s						
RAR	**Rarotonga**	**49.91**	**271**	LR	LR	23 52 53.1	
	comp=Z,84nm,21.9s,baz=106,slow=30						
RAR	**Rarotonga**	**49.91**	**271**	P	**P**	**23 37 04.5**	**+2.0**
RAR				IAmb	IAmb	23 37 33.9	
	comp=Z,8.1nm,0.8s						
RUSC	**La Rusia**	**50.68**	**42**	P	**P**	**23 37 08.4**	**-0.3**
RUSC				IAmb	IAmb	23 37 11.1	
	comp=Z,35nm,1.4s						
BELA	**Belgrano 2**	**51.54**	**165**	P	**P**	**23 37 15.9**	**+1.9**
BELA				IAmb	IAmb	23 38 54.0	
	comp=Z,14nm,1.5s						
MACA	**Manacapuru-AM**	**51.79**	**62**	P	**P**	**23 37 15.5**	**-1.2**
MACA				IAmb	IAmb	23 37 19.9	
	comp=Z,18nm,0.7s						
CMIG	**Matias Romero**	**52.98**	**12**	LR	LR	23 53 47.6	
	comp=Z,150nm,20.8s,baz=188,slow=29						
BDFB	**Brasilia**	**54.07**	**84**	P	**P**	**23 37 32.9**	**-0.7**
	comp=Z,2.4nm,0.7s,baz=301,slow=9.6,SNR=3.7						
BDFB				LR	LR	23 59 37.7	
	comp=Z,217nm,18.7s,baz=191,slow=35						
	comp=Z,2.4nm,0.7s						
SDV	**Santo Domingo**	**54.50**	**43**	LR	LR	23 58 18.3	
	comp=Z,105nm,18.3s,baz=223,slow=33						
QSPA	**South Pole Qui**	**54.85**	**180**	P	**P**	**23 37 36.4**	**-2.2**
	comp=Z,1.3nm,0.8s,baz=166,slow=1.8,SNR=10						
	comp=Z,1.3nm,0.8s						
VNDA	**Vanda**	**56.52**	**195**	LR	LR	23 57 57.9	
	comp=Z,107nm,18.5s,baz=154,slow=32						
BIRV	**Birongo**	**58.28**	**46**	P	**P**	**23 38 03.9**	**+0.4**
BIRV				IAmb	IAmb	23 39 22.2	
	comp=Z,33nm,1.1s						
MTDJ	**Mount Denham**	**59.20**	**30**	P	**P**	**23 38 09.0**	**-0.9**
MXZ	**Matakaoa Point**	**60.27**	**243**	P	**P**	**23 38 17.1**	**0.0**
URZ	**Urewera**	**60.86**	**242**	LR	LR	23 58 15.1	
	comp=Z,242nm,18.9s,baz=206,slow=30						
PLWZ	**Palliser**	**60.87**	**238**	P	**P**	**23 38 20.7**	**-0.4**
RPZ	**Rata Peaks**	**62.86**	**234**	LR	LR	23 59 20.0	
	comp=Z,262nm,19.7s,baz=53,slow=30						
MDP	**Montagnes des**	**63.27**	**62**	LR	LR	00 03 22.5	
	comp=Z,572nm,19.6s,baz=196,slow=33						
MLPR	**Magueyes Islan**	**63.94**	**40**	P	**P**	**23 38 40.0**	**-1.8**
HSIG		**64.30**	**354**	P	**P**	**23 38 44.9**	**+0.9**
HSIG				IAmb	IAmb	23 38 58.9	
	comp=Z,6.3nm,0.5s						
TX31	**Lajitas Ar. Si**	**64.35**	**1**	P	**P**	**23 38 45.4**	**+1.0**
TX31				IAmb	IAmb	23 39 34.3	
	comp=Z,22nm,1.5s						
TX32	**Lajitas Array**	**64.35**	**1**	P	**P**	**23 38 45.1**	**+0.7**
TX32				IAmb	IAmb	23 39 34.3	
	comp=Z,6.8nm,1.4s						
TXAR	**Lajitas Array**	**64.35**	**1**	P	**P**	**23 38 41.6**	**-2.8**
	comp=Z,0.4nm,0.8s,baz=186,slow=11,SNR=5.3						
TXAR				LR	LR	00 00 54.9	
	comp=Z,69nm,18.2s,baz=163,slow=31						
	comp=Z,0.4nm,0.8s						
TXAR	**Lajitas Array**	**64.35**	**1**	P	**P**	**23 38 45.2**	**+0.8**
SJG	**San Juan**	**64.53**	**41**	LR	LR	00 05 35.1	
	comp=Z,107nm,18.2s,baz=176,slow=35						
SMRT	**St. Maarten**	**66.18**	**44**	P	**P**	**23 38 57.5**	**+1.1**
BNM	**Barren Site**	**69.17**	**358**	P	**P**	**23 39 16.1**	**+0.9**
250A	**Grady**	**69.18**	**17**	P	**P**	**23 39 15.8**	**+0.8**
WHAR	**Wooly Hollow**	**71.23**	**11**	P	**P**	**23 39 28.3**	**+0.7**
WHAR				IAmb	IAmb	23 39 32.9	
	comp=Z,43nm,1.9s						
BCW	**Bitter Crk WRg**	**71.27**	**347**	P	**P**	**23 39 27.9**	**0.0**
OK044	**Pawnee Station**	**71.74**	**7**	P	**P**	**23 39 33.0**	**+2.4**
CROK	**Carrier**	**71.77**	**6**	P	**P**	**23 39 32.1**	**+1.4**
TKL	**Tuckaleechee C**	**73.30**	**18**	LR	LR	00 05 35.1	
	comp=Z,104nm,21.4s,baz=194,slow=31						
NV11	**Mina Array Sit**	**74.47**	**349**	P	**P**	**23 39 48.2**	**+1.4**
NV11				IAmb	IAmb	23 40 01.0	
	comp=Z,8.3nm,1.4s						
NVAR	**Mina Array Bea**	**74.49**	**349**	P	**P**	**23 39 46.4**	**-0.7**
	comp=Z,2.8nm,0.9s,baz=178,slow=8.1,SNR=12						
	comp=Z,2.8nm,0.9s						
NVAR	**Mina Array Bea**	**74.49**	**349**	P	**P**	**23 39 47.9**	**+0.8**
KVN	**Kaiserville**	**75.06**	**349**	P	**P**	**23 39 50.7**	**+0.3**
BSUT	**Blindstream Ca**	**75.72**	**355**	P	**P**	**23 39 54.9**	**+0.5**
DZM	**Mont Dzumac**	**76.68**	**252**	*e*LR	LR	00 03 18.6	
	comp=Z,379nm,32.4s						
PD31	**Pinedale Array**	**77.87**	**356**	P	**P**	**23 40 07.6**	**+1.3**
PDAR	**Pinedale Array**	**77.87**	**356**	P	**P**	**23 40 05.0**	**-1.3**
	comp=Z,2.1nm,0.9s,baz=143,slow=3.7,SNR=11						
	comp=Z,2.1nm,0.9s						
M44A	**Midewin, Midew**	**77.89**	**13**	P	**P**	**23 40 06.4**	**+0.4**
AHID	**Auburn Hatcher**	**77.97**	**355**	P	**P**	**23 40 08.2**	**+1.4**
AHID				IAmb	IAmb	23 40 32.2	
	comp=Z,4.8nm,0.6s						
YBH	**Yreka Blue Hor**	**78.47**	**346**	LR	LR	00 07 41.4	
	comp=Z,66nm,18.3s,baz=191,slow=30						
HLID	**Hailey**	**79.04**	**353**	P	**P**	**23 40 12.9**	**+0.3**
J47A	**Sunmer**	**80.30**	**15**	P	**P**	**23 40 19.4**	**+0.2**
J47A				IAmb	IAmb	23 41 25.3	
	comp=Z,58nm,1.6s						
SADO	**Sadowa**	**83.05**	**18**	LR	LR	00 14 52.0	
	comp=Z,91nm,18.4s,baz=128,slow=34						
ULM	**Lac du Bonnet**	**85.59**	**6**	P	**P**	**23 40 46.4**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=131,slow=2.7,SNR=1.5						
	comp=Z,0.8nm,0.4s						
CTA	**Charters Tower**	**93.09**	**243**	LR	LR	00 17 12.0	
	comp=Z,126nm,19.9s,baz=93,slow=32						
SUR	**Sutherland**	**95.44**	**136**	LR	LR	00 16 11.9	
	comp=Z,80nm,21.9s,baz=193,slow=30						
SCHQ	**Schefferville**	**95.54**	**21**	LR	LR	00 19 53.5	
	comp=Z,128nm,19.2s,baz=210,slow=32						
YKA	**Yellowknife Ar**	**97.83**	**355**	P	**P**	**23 41 43.3**	**0.0**
	comp=Z,0.1nm,0.4s,baz=168,slow=4.2,SNR=2.0						
	comp=Z,0.1nm,0.4s						
ASAR	**Alice Springs**	**99.23**	**232**	P	**Pdif**	**23 41 48.9**	**-1.9**
	comp=Z,0.4nm,0.9s,baz=141,slow=6.0,SNR=2.0						
ASAR				LR	LR	00 20 20.8	
	comp=Z,217nm,19.6s,baz=154,slow=32						
	comp=Z,0.4nm,0.9s						
WRA	**Warramunga Arr**	**101.55**	**235**	P	**Pdif**	**23 41 56.6**	**-4.6**
	comp=Z,0.2nm,0.6s,baz=145,slow=4.2,SNR=2.1						
AKASG	**Malin Array Be**	**143.63**	**51**	PKP	PKPbc	23 47 41.1	+0.6
	comp=Z,0.4nm,0.5s,baz=280,slow=2.7,SNR=1.6						
NRIK	**Noril'sk**	**145.29**	**352**	PKPbc	**PKPbc**	**23 47 44.8**	**-0.3**
	comp=Z,4.5nm,0.7s,baz=21,slow=2.2,SNR=4.3						
BRTR	**Keskin Array B**	**146.90**	**70**	PKPbc	**PKPbc**	**23 47 51.3**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=268,slow=3.8,SNR=1.6						
KBZ	**Khabaz**	**153.78**	**62**	PKPbc	**PKPbc**	**23 48 06.4**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=133,slow=2.9,SNR=4.0						
SONM	**Songino Array**	**153.80**	**308**	PKPbc	**PKPbc**	**23 48 05.1**	**-2.5**
	comp=Z,0.9nm,0.7s,baz=136,slow=2.9,SNR=5.3						

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*NEIC **06** 23:45:19.4±2.4, 5°.76S±0°.05×151°.72E±0°.05, h10^{km}±1^{km}, mb4.6/71, Error ellipse: s-maj=9.1km s-min=7.7km az=145.0*

*IDC **06** 23:45:24.1±1.1, 5°.70S×151°.63E, h54^{km}±9^{km}, mb4.2/14, mbtmp4.4/15, MS3.7/21, Error ellipse: s-maj=15.7km s-min=7.3km az=117.0*

*DJA **06** 23:45:24.0±0.5, 6°S±4°×15°2E±°, h41^{km}±8^{km}, M5.2/10, mB5.1/3, mb4.7/10, MLv5.5/2, Mw(mB)4.5/3*

ISC 06 23:45:24.6±0.4**, 5°.73S**±0°.05×**151°.70E**±0°.06**, h57**^{km}**, n186, σ1^{s}13**/178**, mb4.6**/55**, MS3.6**/17**, 1D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.45**	**13**	P	**Pn**	**23 45 47.2**	**-1.3**
	8µm,0.4s,baz=272,slow=1.4,SNR=990						
KRVT				S	**Sn**	**23 46 06.1**	**-0.4**
	5µm,0.3s,baz=340,slow=17,SNR=7.6						
RABL	**Rabaul**	**1.59**	**17**		**Pn**	**23 45 49.5**	**-1.0**
RABL				Sn	**Sn**	**23 46 11.0**	**+0.9**
PMG	**Port Moresby**	**5.80**	**231**	P	**Pn**	**23 46 48.4**	**+0.3**
	650nm,0.4s,baz=52,slow=6.1,SNR=113						
PMG				S	**Sn**	**23 47 53.0**	**-0.2**
	487nm,0.5s,baz=330,slow=19,SNR=13						
PMG				LR	LR	23 48 29.1	
	comp=Z,299nm,20.1s,baz=44,slow=32						
PMG	**Port Moresby**	**5.80**	**231**	Pn	**Pn**	**23 46 48.4**	**+0.3**
PMG				Sn	**Sn**	**23 47 54.8**	**+1.5**
PMG	**Port Moresby**	**5.80**	**231**	P	**Pn**	**23 46 48.8**	**+0.7**
PMG	**Port Moresby**	**5.80**	**231**	P	**Pn**	**23 46 49.0**	**+0.9**
HNR	**Honiara**	**8.97**	**115**	LR	LR	23 50 12.7	
	comp=Z,3µm,21.1s,baz=306,slow=32						
COEN	**Coen**	**11.72**	**225**	P	**Pn**	**23 48 08.1**	**-1.0**
	baz=12,SNR=74						
MTSU	**Mount Surprise**	**14.29**	**210**	P	**Pn**	**23 48 43.6**	**-0.4**
	baz=14,SNR=16						
CTA	**Charters Tower**	**15.23**	**200**	P	**Pn**	**23 48 55.6**	**-0.6**
	1.5nm,0.4s,baz=26,slow=12,SNR=5.3						
CTA				LR	LR	23 54 25.3	
	comp=Z,259nm,20.1s,baz=40,slow=36						
CTAO	**Charters Tower**	**15.23**	**200**	Pn	**Pn**	**23 48 54.1**	**-2.1**
CTAO					**P**	**23 48 54.6**	**-5.5**
QIS	**Mount Isa**	**18.85**	**217**	P	**Pn**	**23 49 41.1**	**-0.1**
	baz=19,SNR=24						
QIS	**Mount Isa**	**18.85**	**217**	P	**Pn**	**23 49 42.4**	**+1.2**
EIDS	**Eidsvold**	**19.54**	**182**	P	**Pn**	**23 49 48.6**	**-0.7**
	baz=20,SNR=5.3						
EIDS	**Eidsvold**	**19.54**	**182**	P	**P**	**23 49 48.5**	**+0.8**
EIDS				IAmb	IAmb	23 49 49.7	
	comp=Z,15nm,0.7s						
EIDS	**Eidsvold**	**19.54**	**182**	P	**Pn**	**23 49 49.0**	**-0.4**
FAKI	**Fak Fak**	**19.59**	**277**	P	**P**	**23 49 47.8**	**-0.5**
FAKI					**Pn**	**23 49 48.4**	**-1.7**
FAKI					**Pn**	**23 49 49.0**	**-1.1**
FAKI	**Fak Fak**	**19.59**	**277**	P	**P**	**23 49 49.2**	**+0.9**
KDU	**Kakadu**	**20.19**	**249**	P	**P**	**23 49 54.5**	**-0.2**
	baz=20,SNR=22						
KDU	**Kakadu**	**20.19**	**249**	P	**P**	**23 49 55.6**	**+0.8**
GUMO	**Guam**	**20.35**	**341**	LR	LR	23 57 40.8	
	comp=Z,40nm,18.4s,baz=167,slow=36						
MTN	**Manton Dam**	**21.48**	**249**	P	**P**	**23 50 09.2**	**+0.6**
	baz=22,SNR=7.6						
MTN	**Manton Dam**	**21.48**	**249**	P	**P**	**23 50 09.6**	**+0.9**
DZM	**Mont Dzumac**	**21.62**	**140**	P	**P**	**23 50 10.0**	**-0.2**
	comp=Z,17nm,0.6s,baz=324,slow=13,SNR=27						
	comp=Z,17nm,0.6s						
DZM	**Mont Dzumac**	**21.62**	**140**	P	**P**	**23 50 10.2**	**0.0**
DZM				IAmb	IAmb	23 50 12.3	
	comp=Z,24nm,0.8s						
DZM	**Mont Dzumac**	**21.62**	**140**	P	**P**	**23 50 12.2**	**+2.0**
ONTNC	**Ouen Toro**	**21.80**	**141**	P	**P**	**23 50 12.2**	**+0.3**
ONTNC				IAmb	IAmb	23 50 31.7	
	comp=Z,20nm,0.9s						
WB0	**Warramunga Arr**	**21.87**	**229**	P	**P**	**23 50 12.6**	**-0.2**
WB0				IAmb	IAmb	23 50 15.8	
	comp=Z,43nm,0.8s						
WR0	**Warramunga Arr**	**21.88**	**228**	P	**P**	**23 50 12.7**	**-0.1**
WR0				IAmb	IAmb	23 50 15.9	
	comp=Z,43nm,0.9s						
QLP	**Quilpie**	**21.93**	**198**	P	**P**	**23 50 14.8**	**+1.4**
WC3	**Warramunga Arr**	**22.00**	**228**	P	**P**	**23 50 14.1**	**-0.1**
	baz=22						
WRAB	**Tennant Creek**	**22.00**	**228**	P	**P**	**23 50 13.3**	**-0.9**
WRAB	**Tennant Creek**	**22.00**	**228**	P	**P**	**23 50 13.9**	**-0.3**
WB2	**Warramunga Arr**	**22.00**	**228**	P	**P**	**23 50 14.0**	**-0.2**
WRA	**Warramunga Arr**	**22.01**	**228**	P	**P**	**23 50 13.7**	**-0.7**
	comp=Z,38nm,0.7s,baz=53,slow=10.0,SNR=133						
WRA				S	**S**	**23 54 13.8**	**-0.5**
	comp=Z,10nm,1.1s,baz=54,slow=18,SNR=9.6						
WRA				ScP	**ScP**	**23 57 45.6**	**+1.9**
	comp=Z,1.1nm,0.6s,baz=53,slow=3.1,SNR=8.4						
	comp=Z,38nm,0.7s						
WRA	**Warramunga Arr**	**22.01**	**228**	P	**P**	**23 50 13.9**	**-0.4**
OUENC	**Ouen Island, N**	**22.12**	**140**	P	**P**	**23 50 15.2**	**-0.3**
TARA	**Tarawa**	**22.33**	**72**	P	**P**	**23 50 17.1**	**-0.7**
INKA	**Innaminka**	**24.25**	**204**	P	**P**	**23 50 37.7**	**+1.4**
ARMA	**Armidale**	**24.56**	**180**	P	**P**	**23 50 40.3**	**+1.0**
ARMA				IAmb	IAmb	23 50 45.1	
	comp=Z,13nm,1.1s						
ARMA	**Armidale**	**24.56**	**180**	P	**P**	**23 50 41.5**	**+2.2**
KNRA	**Kununurra**	**24.58**	**244**	P	**P**	**23 50 39.6**	**+0.1**
	baz=25,SNR=34						
KNRA	**Kununurra**	**24.58**	**244**	P	**P**	**23 50 39.7**	**+0.1**
KNRA	**Kununurra**	**24.58**	**244**	P	**P**	**23 50 39.8**	**+0.3**
AS01	**Alice Springs**	**24.70**	**222**	P	**P**	**23 50 40.3**	**-0.3**
	comp=Z,62nm,0.8s						
AS31	**Alice Springs**	**24.73**	**222**	P	**P**	**23 50 41.2**	**+0.4**
AS31				IAmb	IAmb	23 50 43.2	
	comp=Z,16nm,0.5s						
ASAR	**Alice Springs**	**24.73**	**222**	P	**P**	**23 50 40.9**	**0.0**
	comp=Z,39nm,0.8s,baz=57,slow=8.9,SNR=195						

ASAR				S	S	23 54 58.2	-1.0
	comp=Z,0.5nm,0.8s,baz=43,slow=18,SNR=2.5						
ASAR				ScP	ScP	23 57 53.3	+2.3
	comp=Z,0.9nm,0.7s,baz=45,slow=3.0,SNR=6.9						
ASAR				LR	LR	00 00 07.6	
	comp=Z,162nm,20.1s,baz=78,slow=36						
	comp=Z,39nm,0.8s						
ASAR	Alice Springs	24.73	222	P	P	23 50 41.1	+0.2
CMSA	Cobar Meteorol	26.29	192	P	P	23 50 54.6	-0.2
	baz=26						
CMSA	Cobar Meteorol	26.29	192	P	P	23 50 57.0	+2.2
SOEI	Soe	27.47	260	P	P	23 51 08.2	+2.4
SOEI	Soe	27.47	260	P	P	23 51 05.7	-0.1
STKA	Stephens Creek	27.68	199	P	P	23 51 07.0	-0.3
	comp=Z,4.2nm,0.7s,baz=24,slow=9.7,SNR=7.1						
	comp=Z,4.2nm,0.7s						
STKA	Stephens Creek	27.68	199	P	P	23 51 07.0	-0.3
	baz=28,SNR=6.2						
STKA	Stephens Creek	27.68	199	P	P	23 51 07.2	-0.2
MSVF	Nonsavu	28.38	117	LR	LR	00 02 02.8	
	comp=Z,156nm,18.9s,baz=323,slow=35						
MMRI	Maumere	29.37	263	P	P	23 51 21.2	-1.4
WRKA	Warakurna	29.53	227	P	P	23 51 23.1	-0.8
	baz=30,SNR=27						
WRKA	Warakurna	29.53	227	P	P	23 51 23.5	-0.4
MULG	Mulgathing	29.54	212	P	P	23 51 23.3	-0.6
HTT	Hallett	30.02	202	P	P	23 51 27.4	-0.7
	baz=30,SNR=6.1						
HTT	Hallett	30.02	202	P	P	23 51 28.1	-0.1
BBOO	Buckleboo	30.64	206	P	P	23 51 33.1	-0.5
	baz=31,SNR=6.2						
BBOO	Buckleboo	30.64	206	P	P	23 51 33.2	-0.5
BBOO				IAmb	IAmb	23 51 33.9	
	comp=Z,11nm,0.8s						
BBOO	Buckleboo	30.64	206	P	P	23 51 33.2	-0.5
TOLI2	Tolitoli	31.61	281	P	P	23 51 41.5	-0.9
TOLI2				IAmb	IAmb	23 51 52.6	
	comp=Z,10.0nm,1.1s						
FORT	Forrest	33.38	219	P	P	23 51 57.2	-0.5
	baz=34,SNR=29						
FORT	Forrest	33.38	219	P	P	23 51 57.2	-0.5
PLAI	Plampang	33.78	263	P	P	23 51 59.6	-1.8
PLAI	Plampang	33.78	263	P	P	23 52 02.8	+1.4
JCJ	Chichijima	33.90	345	LR	LR	00 06 12.9	
	comp=Z,71nm,18.7s,baz=130,slow=37						
MBWA	Marble Bar	34.56	241	P	P	23 52 07.8	-0.3
MBWA	Marble Bar	34.56	241	P	P	23 52 08.1	0.0
PSA00	Pilbara Seismi	34.62	240	IAmb	IAmb	23 52 12.9	
	comp=Z,7.9nm,1.1s						
PSA00	Pilbara Seismi	34.62	240	P	P	23 52 08.2	-0.4
MOO	Moorlands	36.78	186	P	P	23 52 28.6	+1.9
	baz=37						
TAU	Tasmania Unive	37.23	185	P	P	23 52 31.3	+0.7
TAU				IAmb	IAmb	23 52 32.7	
	comp=Z,16nm,0.8s						
MEEK	Meekatharra	37.77	233	P	P	23 52 35.2	-0.2
	baz=38,SNR=28						
MEEK	Meekatharra	37.77	233	P	P	23 52 35.3	-0.2
QRZ	Quartz Range	39.62	155	P	P	23 52 51.7	+1.0
QRZ				IAmb	IAmb	23 52 53.7	
	comp=Z,13nm,0.9s						
QRZ	Quartz Range	39.62	155	P	P	23 52 54.9	+4.2
URZ	Urewera	39.77	148	P	P	23 52 51.9	0.0
	comp=Z,7.2nm,0.6s,baz=4.5,slow=3.9,SNR=6.9						
	comp=Z,7.2nm,0.6s						
GIRL	Giralia	39.86	241	P	P	23 52 53.0	0.0
GIRL				IAmb	IAmb	23 53 00.7	
	comp=Z,38nm,1.1s						
GIRL	Giralia	39.86	241	P	P	23 52 54.6	+1.6
RTZ	Ruatahuna	39.96	149	P	P	23 52 54.0	+0.4
RTZ				IAmb	IAmb	23 52 55.2	
	comp=Z,16nm,0.8s						
TKNZ	Takaka Hill	39.97	155	P	P	23 52 54.7	+1.0
BKZ	Black Stump Fm	40.13	150	P	P	23 52 54.6	-0.4
MRNZ	Matariki Terra	40.19	155	P	P	23 52 56.2	+0.8
NNZ	Nelson	40.30	154	P	P	23 52 56.4	+0.1
NNZ				IAmb	IAmb	23 53 03.4	
	comp=Z,14nm,0.9s						
THZ	Tophouse	40.55	155	P	P	23 52 57.6	-0.9
THZ				IAmb	IAmb	23 52 59.0	
	comp=Z,9.0nm,0.8s						
TCW	Tory Channel	40.69	154	P	P	23 52 59.9	+0.3
TUWZ	Tuamarina	40.72	154	P	P	23 53 00.2	+0.5
MRZ	Mangatainoka R	40.84	152	P	P	23 53 00.3	-0.5
MRZ				IAmb	IAmb	23 53 01.1	
	comp=Z,8.9nm,0.9s						
KLBR	Kellerberrin	40.88	227	P	P	23 53 00.3	-1.0
	baz=41,SNR=7.9						
KLBR	Kellerberrin	40.88	227	P	P	23 53 00.7	-0.6
	comp=Z,42nm,0.7s						
MORW	Morawa	40.91	231	P	P	23 53 00.9	-0.7
	baz=41,SNR=7.2						
MORW	Morawa	40.91	231	P	P	23 53 01.1	-0.5
MORW				IAmb	IAmb	23 53 01.5	
	comp=Z,9.3nm,0.7s						
MORW	Morawa	40.91	231	P	P	23 53 01.4	-0.2
BSWZ	Blackbirch Sta	40.92	154	P	P	23 53 01.1	-0.4
UGM	Wanagama	40.93	265	P	P	23 53 01.0	-1.0
BLDU	Ballidu	41.15	229	P	P	23 53 02.8	-0.7
LTZ	Lake Taylor	41.15	157	P	P	23 53 02.0	-1.4
LTZ				IAmb	IAmb	23 53 11.1	
	comp=Z,14nm,1.2s						
BFZ	Birch Farm	41.17	151	P	P	23 53 03.1	-0.5
PLWZ	Palliser	41.41	153	P	P	23 53 05.0	-0.5
RPZ	Rata Peaks	41.50	159	LR	LR	00 09 00.0	
	comp=Z,137nm,18.2s,baz=344,slow=34						
MLZ	Mavora Lakes	42.00	163	P	P	23 53 10.4	+0.2
MLZ				IAmb	IAmb	23 53 15.1	
	comp=Z,15nm,1.0s						
JNU	Nakatsue	43.40	334	LR	LR	00 08 39.4	
	comp=Z,61nm,20.7s,baz=178,slow=32						
BBJI	Bungbulang	43.78	265	P	P	23 53 23.8	-1.4
MJAR	Matsushiro Arr	43.90	344	LR	LR	00 09 04.9	
	comp=Z,82nm,21.7s,baz=167,slow=32						
KSRS	Korea Array	48.34	335	LR	LR	00 12 55.0	
	comp=Z,33nm,20.5s,baz=160,slow=34						
NJ2	Nanjing	48.89	322	eP	P	23 54 05.5	+0.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ASAJ	Asahikawa	50.29	351	LR	LR	00 13 33.7	
	comp=Z,57nm,21.2s,baz=139,slow=34						
PHRA	Phrae	56.15	297	P	P	23 54 60.0	+1.1
KMI	Kunming	56.60	305	⇓P	P	23 55 03.0	+0.7
KMI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CMAR	Chiang Mai Arr	57.29	296	P	P	23 55 07.2	+0.3
	comp=Z,1.1nm,0.3s,baz=123,slow=5.6,SNR=7.5						
CMAR				LR	LR	00 19 49.7	
	comp=Z,18nm,19.0s,baz=135,slow=36						
	comp=Z,1.1nm,0.3s						
KLR	Kul'dur	57.43	345	LR	LR	00 16 46.6	
	comp=Z,54nm,21.9s,baz=150,slow=33						
PZH	PanZhiHua	58.02	306	P	P	23 55 14.4	+2.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PETK	Petropavlovsk-	58.83	4	P	P	23 55 16.0	-1.1
	comp=Z,0.8nm,0.5s,baz=176,slow=7.3,SNR=4.6						
	comp=Z,0.8nm,0.5s						
HHC	Hu-ho-hao-te	59.17	325	eP	P	23 55 23.7	+3.9
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TNCH	TengChong	60.05	303	P	P	23 55 29.2	+2.9
LZH	Lanzhou	61.14	317	eP	P	23 55 39.0	+5.5
LZH				pP	pP	23 55 43.0	-6.0
LZH				sP	sP	23 55 45.5	-10
LZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SHEM	Shemya Is, Ala	61.26	15	LR	LR	00 17 20.2	
	comp=Z,108nm,19.9s,baz=128,slow=31						
SONM	Songino Array	66.53	329	P	P	23 56 08.0	-0.7
	comp=Z,0.4nm,0.4s,baz=125,slow=5.1,SNR=5.1						
	comp=Z,0.4nm,0.4s						
VNDA	Vanda	71.95	178	P	P	23 56 41.9	+0.4
	comp=Z,6.3nm,0.8s,baz=319,slow=5.8,SNR=14						
	comp=Z,6.3nm,0.8s						
VNDA	Vanda	71.95	178	P	P	23 56 42.2	+0.6
VNDA				IAmb	IAmb	23 56 43.1	
	comp=Z,8.4nm,0.9s						
WMQ	Urumqi	75.68	318	eP	P	23 57 07.4	+3.3
ANM	Nome	76.98	18	P	P	23 57 11.8	+1.0
P18K	Big Mountain,	77.25	25	P	P	23 57 12.3	-0.2
Q19K	Cape Douglas,	77.65	26	P	P	23 57 15.0	+0.1
SVW2	Sparrevohn	78.10	23	P	P	23 57 18.5	+1.3
SVW2				IAmb	IAmb	23 57 20.1	
	comp=Z,2.7nm,0.8s						
P19K	Oil Pt	78.23	25	P	P	23 57 18.2	+0.2
N19K	Bonanza Creek	78.37	24	P	P	23 57 19.3	+0.5
L19K	White Mountain	79.02	23	P	P	23 57 22.8	+0.5
CNPM	China Poot	79.02	26	P	P	23 57 22.8	+0.5
TTA	Tatalina	79.03	22	P	P	23 57 22.6	+0.2
BRLK	Bradley Lake	79.30	26		P	23 57 23.9	+0.1
M20K	Styx River	79.52	23	P	P	23 57 26.1	+1.1
K20K	Telida	79.99	22	P	P	23 57 28.3	+0.8
SUA	Susitna One	80.25	24	P	P	23 57 28.9	-0.2
SUA				IAmb	IAmb	23 57 29.4	
	comp=Z,4.6nm,1.0s						
MK31	Makanchi Array	80.30	319	P	P	23 57 28.7	-0.9
MKAR	Makanchi Array	80.30	319	P	P	23 57 28.5	-1.1
	comp=Z,1.1nm,0.9s,baz=98,slow=7.2,SNR=8.7						
	comp=Z,1.1nm,0.9s						
MKAR	Makanchi Array	80.30	319	P	P	23 57 28.8	-0.8
MAKZ	Makanchi	80.51	319	P	P	23 57 32.5	+1.8
CAST	Castle Rocks	80.77	22	P	P	23 57 31.5	-0.3
KTH	Kantishna Hill	81.28	22	P	P	23 57 33.7	-0.8
KTH				IAmb	IAmb	23 57 40.0	
	comp=Z,5.8nm,1.1s						
ZALV	Zalesovo Beam	81.31	327	P	P	23 57 32.5	-2.2
	comp=Z,1.0nm,0.3s,baz=99,slow=5.2,SNR=7.0						
	comp=Z,1.0nm,0.3s						
ZALV	Zalesovo Beam	81.31	327	P	P	23 57 32.9	-1.9
TRF	Thorofare Moun	81.47	23	P	P	23 57 35.2	-0.4
IMAR	Indian Mountai	81.62	20	P	P	23 57 35.8	-0.4
MLY	Manley	82.14	21	IAmb	IAmb	23 57 39.6	
	comp=Z,3.0nm,0.6s						
M24K	Tolsona, Glenn	82.45	25	P	P	23 57 41.3	+0.7
M24K				IAmb	IAmb	23 57 48.0	
	comp=Z,5.0nm,0.8s						
WRH	Wood River Hil	82.83	22	P	P	23 57 42.0	-0.4
WRH				IAmb	IAmb	23 57 43.7	
	comp=Z,3.1nm,1.0s						
CCB	Clear Creek Bu	83.02	22	P	P	23 57 41.9	-1.5
CCB				IAmb	IAmb	23 57 43.4	
	comp=Z,2.4nm,0.7s						
GLB	Gilahina Butte	83.17	26	P	P	23 57 44.6	+0.2
GLB				IAmb	IAmb	23 57 48.5	
	comp=Z,6.4nm,1.1s						
VRDI	Verde Repeater	83.23	26	P	P	23 57 45.4	+0.5
VRDI				IAmb	IAmb	23 57 59.7	
	comp=Z,11nm,1.2s						
IL31		83.42	22	IAmb	IAmb	23 57 48.5	
	comp=Z,2.2nm,0.8s						
ILAR	Eielson Array	83.42	22	P	P	23 57 43.6	-2.0
	comp=Z,1.9nm,0.7s,baz=254,slow=5.4,SNR=20						
	comp=Z,1.9nm,0.7s						
ILAR	Eielson Array	83.42	22	P	P	23 57 44.8	-0.8
MCARA	McCarthy VSAT	83.48	26	P	P	23 57 47.2	+1.3
MCARA				IAmb	IAmb	23 57 57.4	
	comp=Z,7.6nm,1.0s						
COLD	Coldfoot	83.49	19	P	P	23 57 46.7	+0.9
COLD				IAmb	IAmb	23 57 47.5	
	comp=Z,2.9nm,0.9s						
BARN	Barnard Glacie	83.95	27	P	P	23 57 49.7	+1.1
BARN				IAmb	IAmb	23 58 00.9	
	comp=Z,5.3nm,1.1s						
QSPA	South Pole Qui	84.24	180	LR	LR	00 32 53.1	
	comp=Z,69nm,21.9s,baz=220,slow=34						
QSPA	South Pole Qui	84.24	180	P	P	23 57 49.9	0.0
M27K	Edge Creek, AK	84.38	25	P	P	23 57 51.6	+0.9
M27K				IAmb	IAmb	23 57 52.1	
	comp=Z,4.4nm,0.7s						
AAK	Ala-Archa	84.51	314	P	P	23 57 53.0	+1.2
AAK				IAmb	IAmb	23 57 55.0	
	comp=Z,2.7nm,0.7s						
L27K	Beaver Creek,	84.68	25	P	P	23 57 52.4	+0.3
L27K				IAmb	IAmb	23 57 53.1	
	comp=Z,3.1nm,1.1s						
BCAR	Beaver Creek A	84.70	25	P	P	23 57 53.2	+1.0
K27K	Chicken	84.97	24	P	P	23 57 54.4	+0.9
BBB	Bella Bella	88.49	37	LR	LR	00 30 03.3	
	comp=Z,36nm,21.4s,baz=262,slow=30						
NVAR	Mina Array Bea	93.51	52	P	P	23 58 35.7	+0.9
	comp=Z,1.6nm,0.7s,baz=262,slow=5.3,SNR=8.3						
NVAR				LR	LR	00 36 22.2	
	comp=Z,73nm,18.3s,baz=274,slow=33						
	comp=Z,1.6nm,0.7s						
PFO	Pinyon Flats O	94.66	57	LR	LR	00 35 16.0	
	comp=Z,47nm,19.3s,baz=250,slow=32						
ELK	Elko	96.02	50	LR	LR	00 36 07.2	
	comp=Z,52nm,19.8s,baz=255,slow=32						
YKA	Yellowknife Ar	96.75	28	P	P	23 58 48.5	-0.2
	comp=Z,0.4nm,0.7s,baz=272,slow=4.7,SNR=6.4						
	comp=Z,0.4nm,0.7s						
KRLC	Kraliky	121.90	327	ePKPDF	PKPdf	00 04 12.2	-0.4
IDI	Anoyia	123.01	309	PKP	PKPdf	00 04 13.2	-2.0
	comp=Z,5.0nm,0.9s,baz=352,slow=17,SNR=4.1						
CKRC	Cesky Krumlov	123.95	327	ePKPDF	PKPdf	00 04 16.6	0.0
KHC	Kasperske Hory	124.15	328	ePKPDF	PKPdf	00 04 17.1	+0.1
GERES	GERESS Array B	124.26	328	PKP	PKPdf	00 04 16.9	-0.3
	comp=Z,1.5nm,0.6s,baz=82,slow=2.8,SNR=16						
DAVOX	Davos/Dischmat	127.56	328	PKP	PKPdf	00 04 23.7	0.0
	baz=124,slow=3.6						
KEST	Kesra	134.32	316	PKP	PKPdf	00 04 36.0	-0.7
	comp=Z,3.6nm,0.9s,baz=0.0,slow=1.0,SNR=1.8						
LPAZ	La Paz	134.93	120	PKP	PKPdf	00 04 39.4	+0.4
	comp=Z,2.0nm,0.8s,baz=179,slow=1.8,SNR=7.1						
CPUP	Villa Florida	137.49	140	PKP	PKPdf	00 04 42.9	+0.1
	comp=Z,1.8nm,0.9s,baz=63,slow=4.5,SNR=3.7						
MDT	Midelt	145.16	324	PKPbc	PKPbc	00 04 55.7	-0.4
	comp=Z,1.6nm,0.6s,baz=147,slow=5.5,SNR=3.9						
TORD	Torodi Ar. Bea	149.53	286	PKPbc	PKPbc	00 05 08.2	-0.5
	comp=Z,10.0nm,0.5s,baz=88,slow=2.4,SNR=126						
BDFB	Brasilia	151.16	138	PKPbc	PKPbc	00 05 12.4	-0.3
	comp=Z,5.2nm,0.5s,baz=197,slow=0.9,SNR=9.9						
DBIC	Dimbokro	156.67	274	PKPab	PKPab	00 05 43.6	-0.3
	comp=Z,6.7nm,0.7s,baz=102,slow=5.1,SNR=13						

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*IDC **06** 23:49:14.2±11.0, 43°.30N×138°.14E, h220^{km}±184^{km}, mb3.1/3, mbtmp3.6/4, ML3.3/1, Error ellipse: s-maj=255.3km s-min=24.0km az=53.0*

*JMA **06** 23:49:15.7±0.7, 43°N±1°×13°9E±°, h259^{km}±4^{km}, MV3.0/26, EASTERN SEA OF JAPAN*

ISC 06 23:49:15.8±1.1, **43°.48N**±0°.08×**138°.61E**±0°.08, **h250**^{km}**, n18, σ1§10**/21**, mb3.2**/3**, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSK	Shakotan	1.37	94	eP	Pn	23 49 53.8	+0.7
JOSM	Okushiri--Mats	1.53	155	eP	Pn	23 49 55.2	+0.8
JOMM	Oshimamatsumae	2.21	152	eP	Pn	23 50 01.1	+0.9
JHR	Hokuryu	2.28	82	eP	Pn	23 50 02.1	+1.2
JSS	Shosan	2.52	67	eP	Pn	23 50 04.5	+1.3
JRBN	Rebuntou	2.62	41	eP	Pn	23 50 04.9	+0.7
ASAJ	Asahikawa	2.96	76	P	Pn	23 50 08.7	+0.9
	2.5nm,0.3s,baz=220,slow=7.9,SNR=6.5						
	7.1nm,0.4s						
JKK2	Kamakawa 2	3.03	81	eP	Pn	23 50 09.8	+1.3
JNBK	Urakawa-nobuka	3.27	110	eP	Pn	23 50 12.4	+1.2
JNBK				eS	S	23 50 56.4	+1.2
JCH	Churui	3.59	102	eP	Pn	23 50 14.2	-0.7
JCH				eS	S	23 50 59.0	-2.6
JAR	Ashorobuto	3.77	91	eP	Pn	23 50 17.4	+0.6
JAR				eS	S	23 51 05.5	+0.3
JTKR	Abashiri--Toko	3.87	81	eP	Pn	23 50 18.8	+0.8
JAK	Akkeshi	4.47	94	eP	Pn	23 50 24.6	-0.6
JOM	Ohasama	4.48	152	eP	Pn	23 50 26.4	+1.0
JMK	Ichinoseki	4.93	156	eP	Pn	23 50 31.1	+0.4
ZALV	Zalesovo Beam	36.18	306	P	P	23 55 53.7	-0.6
	1.2nm,0.5s,baz=84,slow=9.5,SNR=6.1						
	1.2nm,0.5s						
MKAR	Makanchi Array	39.15	295	P	P	23 56 18.5	-0.8
	0.4nm,0.5s,baz=83,slow=9.9,SNR=9.7						
	0.4nm,0.5s						
WRA	Warramunga Arr	63.22	184	P	P	23 59 17.8	+0.1
	0.2nm,0.4s,baz=1.0,slow=6.8,SNR=4.6						
	0.2nm,0.4s						

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*IDC **06** 23:55:32.2±4.3, 14°.87S×167°.43E, h136^{km}±37^{km}, mb3.6/9, mbtmp4.0/10, Error ellipse: s-maj=27.9km s-min=25.7km az=50.0*

*NEIC **06** 23:55:36.8±1.6, 15°.1S±0°.1×167°.3E±0°.2, h149^{km}±10^{km}, mb4.2/14, Error ellipse: s-maj=24.7km s-min=16.1km az=122.0*

ISC 06 23:55:32.1±0.7**, 14°.84S**±0°.08×**167°.3E**±0°.1**, h129**^{km}**, n32, σ1§22**/36**, mb4.2**/13**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOUNC	Koumac, New Ca	6.38	207	Pn	Pn	23 57 04.2	+0.4
KOUNC				Sn	Sn	23 58 13.8	-1.6
DZM	Mont Dzumac	7.24	187	P	Pn	23 57 15.2	-0.2
	6.2nm,0.3s,baz=189,slow=19,SNR=21						
DZM				S	Sn	23 58 35.2	-1.1
	4.3nm,0.6s,baz=331,slow=23,SNR=1.4						
DZM	Mont Dzumac	7.24	187	Pn	Pn	23 57 15.6	+0.1
ONTNC	Ouen Toro	7.48	186	Pn	Pn	23 57 19.5	+1.0
OUENC	Ouen Island, N	7.55	184	Pn	Pn	23 57 21.0	+1.5
PINNC	Pines Island,	7.73	179	Pn	Pn	23 57 22.1	+0.2
EIDS	Eidsvold	18.50	233	P	Pn	23 59 40.4	+0.3
EIDS				IAmb	IAmb	23 59 46.2	
	comp=Z,8.6nm,1.0s						
CTA	Charters Tower	20.77	252	P	P	00 00 04.6	+1.6
	comp=Z,5.0nm,0.8s,baz=84,slow=11,SNR=13						
	comp=Z,5.0nm,0.8s						
CTAO	Charters Tower	20.77	252	P	P	00 00 04.6	+1.6
CTAO				IAmb	IAmb	00 00 05.5	
	comp=Z,4.7nm,0.8s						
ARMA	Armidale	21.19	220	P	P	00 00 09.7	+2.2
ARMA				IAmb	IAmb	00 00 29.5	
	comp=Z,9.2nm,1.1s						
BKZ	Black Stump Fm	25.54	163	P	P	00 00 48.8	-0.1
BKZ				IAmb	IAmb	00 00 49.0	
	comp=Z,5.7nm,0.6s						
MRNZ	Matariki Terra	26.88	171	P	P	00 01 01.1	+0.3
LTZ	Lake Taylor	28.17	172	P	P	00 01 12.2	-0.1
OXZ	Oxford	28.68	173	P	P	00 01 16.3	-0.4
RPZ	Rata Peaks	28.95	174	P	P	00 01 19.1	-0.1
RPZ				IAmb	IAmb	00 01 20.4	
	comp=Z,23nm,1.1s						
STKA	Stephens Creek	28.98	230	P	P	00 01 20.6	+1.0
	comp=Z,2.5nm,0.5s,baz=46,slow=8.0,SNR=9.2						
	comp=Z,2.5nm,0.5s						
STKA	Stephens Creek	28.98	230	P	P	00 01 20.7	+1.1
WB0	Warramunga Arr	31.80	256	P	P	00 01 44.2	-0.5
WRA	Warramunga Arr	31.86	256	P	P	00 01 43.8	-1.4
	comp=Z,0.6nm,0.9s,baz=85,slow=8.6,SNR=3.1						
WRA				PcP	PcP	00 04 29.3	-3.8
	comp=Z,0.3nm,0.7s,baz=87,slow=3.1,SNR=1.5						
	comp=Z,0.6nm,0.9s						
ASAR	Alice Springs	32.70	249	P	P	00 01 51.4	-1.1
	comp=Z,0.6nm,0.4s,baz=75,slow=9.7,SNR=7.1						
ASAR				PcP	PcP	00 04 34.7	-0.7
	comp=Z,0.4nm,0.6s,baz=67,slow=2.4,SNR=3.4						
	comp=Z,0.6nm,0.4s						
BBOO	Buckleboo	33.57	232	P	P	00 02 00.5	+0.6
BBOO				IAmb	IAmb	00 02 01.8	
	comp=Z,6.6nm,0.8s						
VNDA	Vanda	62.75	181	P	P	00 05 42.8	-0.3
	comp=Z,1.2nm,0.5s,baz=357,slow=8.6,SNR=10						
	comp=Z,1.2nm,0.5s						
VNDA	Vanda	62.75	181	P	P	00 05 43.0	-0.1
VNDA				IAmb	IAmb	00 05 46.5	
	comp=Z,4.0nm,1.1s						
SBA	Scott Base	63.03	180	P	P	00 05 46.1	+1.2
SBA				IAmb	IAmb	00 05 47.3	
	comp=Z,2.2nm,0.7s						
CASY	Casey	63.45	202	P	P	00 05 47.5	-0.4
QSPA	South Pole Qui	75.19	180	P	P	00 07 00.0	-0.3
SONM	Songino Array	82.62	324	P	P	00 07 42.0	+1.0
	comp=Z,0.4nm,0.6s,baz=132,slow=6.4,SNR=2.7						
	comp=Z,0.4nm,0.6s						
ILAR	Eielson Array	86.61	18	P	P	00 07 59.5	-1.1
	comp=Z,0.5nm,0.7s,baz=231,slow=7.0,SNR=5.8						
	comp=Z,0.5nm,0.7s						
VTX	Valle De La Tr	86.80	57	P	P	00 08 04.3	+1.9
MKAR	Makanchi Array	97.33	316	P	P	00 08 51.3	+0.6
	comp=Z,0.5nm,0.7s,baz=103,slow=6.5,SNR=6.8						
	comp=Z,0.5nm,0.7s						
ZALV	Zalesovo Beam	97.52	324	P	P	00 08 49.8	-1.6
	comp=Z,0.6nm,0.5s,baz=107,slow=2.0,SNR=3.9						
	comp=Z,0.6nm,0.5s						
ARCES	ARCESS Array B	120.37	345	PKP	PKPdf	00 14 06.7	-0.9
	comp=Z,1.9nm,0.9s,baz=33,slow=2.9,SNR=4.2						

MAN 07 00:05:19.8, 12°.84N×123°.55E, h7^{km}**, mb4.5, ML3.4, MS3.2, 7C-5D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPH	Masbate	0.48	171	⇑iP	Pg	00 05 29.0	-0.2
MMPH				i S	Sg	00 05 35.9	+0.3
SCSP	San Jose Seism	0.81	358	⇓eP	Pg	00 05 35.6	+0.2
SCSP				eS	Sb	00 05 47.6	+0.2
PVCP	Virac	0.96	38	⇑eP	Pg	00 05 38.1	-0.2
PVCP				eS	Sn	00 05 53.1	-0.6
CNP	Catarman	1.14	107	⇓eP	Pg	00 05 41.3	-0.4
CNP				eS	Sn	00 05 58.0	0.0
RCP	Roxas	1.49	212	⇓eP	Pn	00 05 45.2	-1.9
RCP				eS	Sb	00 06 07.3	+0.2
GQP	Guinayangan	1.51	315	⇑eP	Pn	00 05 46.2	-1.1
GQP				eS	Sg	00 06 08.7	+0.3
OTRP	Odiongan	1.56	253	⇓eP	Pn	00 05 46.1	-1.9
OTRP				eS	Sn	00 06 06.1	-2.5
JCNP	Jose Panganiba	1.66	330	⇑eP	Pn	00 05 48.7	-0.8
JCNP				eS	Sb	00 06 11.6	-0.3
BOAC	Boac	1.77	291	⇑eP	Pn	00 05 51.3	+0.4
BOAC				eS	Sn	00 06 14.0	+0.3
LQP	Lukban	2.33	303	⇓eP	Pb	00 06 00.7	-1.6
LQP				eS	Sg	00 06 33.4	-1.3
SJMP	San Jose	2.40	261	⇑eP	Pn	00 05 59.3	-0.2
BALP	Baler	3.46	327	⇑eP	Pn	00 06 15.8	+1.6
BALP				eS	Sn	00 06 53.8	-1.6

TRN 07 00:06:55.4, 17°.44N×62°.49W, h116^{km}**, MD4.1, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SEUS	St. Eustatius	0.47	276	eP	Pn	00 07 14.7	+2.0
SEUS				eS	Sn	00 07 27.1	+1.3
ANWB	Willy Bob	0.71	72	eP	Pn	00 07 16.2	+1.8
ANWB				eS	Sn	00 07 31.1	+2.3
SABA	Saba	0.74	284	eP	Pn	00 07 16.2	+1.5
SABA				eS	Sn	00 07 30.7	+1.5
MBFL	Flemmings, Mon	0.74	159	eP	Pn	00 07 15.9	+1.1
MBFL				eS	Sn	00 07 31.1	+1.8
MLYT	Lee's Yard	0.77	158	eP	Pn	00 07 16.6	+1.6
MLYT				eS	Sn	00 07 31.5	+1.6
ANBD	Bethesda, Anti	0.80	119	eP	Pn	00 07 16.4	+1.2
ANBD				eS	Sn	00 07 30.7	+0.5
SMRT	St. Maarten	0.82	318	eP	Pn	00 07 17.0	+1.5
SMRT				eS	Sn	00 07 31.0	+0.4
ABD	La Joyeuse, An	1.36	135	eP	Pn	00 07 22.4	+1.4
ABD				eS	Sn	00 07 41.6	+1.2
CBE	Ff, Capester	1.61	148	eP	Pn	00 07 25.4	+1.5
CBE				eS	Sn	00 07 47.6	+2.0
TBG	Guadaloupe-3	1.78	153	eP	Pn	00 07 27.2	+1.3
TBG				eS	Sn	00 07 50.7	+1.4
TDBA	Terre de Bas,	1.79	152	eP	Pn	00 07 27.3	+1.3
MAGL	Barre de l'ile	1.89	142	eP	Pn	00 07 28.8	+1.5
MAGL				eS	Sn	00 07 52.4	+0.8
CDVI	St. Croix	2.19	278	eP	Pn	00 07 32.3	+1.3
SVN	Savane Anatole	2.88	154	eP	Pn	00 07 41.4	+1.3
PCM	Pelee Case Pet	2.89	155	eP	Pn	00 07 41.1	+0.9
CXM	Morne La Croix	2.91	154	eP	Pn	00 07 42.1	+1.5
BAMF	Morne Balai	2.92	153	eP	Pn	00 07 41.6	+1.0
GBMF	Grand Be	2.92	154	eP	Pn	00 07 41.6	+0.9
PML	Morne Lenard	2.93	154	eP	Pn	00 07 41.9	+1.2
FDF	Fort de France	2.99	154	eP	Pn	00 07 42.2	+0.8
ILAM	Ilet Lapin Mar	3.08	149	eP	Pn	00 07 43.4	+0.7
ZAM	Aeronautique	3.18	154	eP	Pn	00 07 44.9	+0.8
TRMF	Trois Ilets	3.21	154	eP	Pn	00 07 45.1	+0.8
LPMF	Morne Lapointe	3.21	153	eP	Pn	00 07 44.8	+0.5
BIM	Bigot	3.21	155	eP	Pn	00 07 45.7	+1.2
BIM				eS	Sn	00 08 23.1	+0.8
MVM	Montagne Vaucl	3.26	152	eP	Pn	00 07 45.9	+0.9
MPOM	Morne Pois Mar	3.37	152	eP	Pn	00 07 47.3	+0.8
SLBI	Saint Lucia, B	3.70	157	eP	Pn	00 07 52.0	+1.1
SLBI				eS	Sn	00 08 34.4	+0.5
SLW	Petit Monier	3.72	156	eP	Pn	00 07 52.6	+1.5
AOPR	Arecibo Observ	4.16	283	eP	Pn	00 07 59.0	+2.1
SVB	Belmont	4.32	164	eP	Pn	00 08 00.3	+1.2
BBGH	Gun Hill	5.13	146	eP	Pn	00 08 12.4	+2.3
TOSP	Speyside	6.40	162	eP	Pn	00 08 28.2	+1.0

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*IDC **07** 00:54:19.9±0.6, 15°.17S×173°.76W, h0^{km}, mb4.1/8, mbtmp4.1/10, ML3.9/2, MS3.5/13, Error ellipse: s-maj=29.3km s-min=17.0km az=140.0*

*NEIC **07** 00:54:23.5±1.1, 15°.0S±0°.2×173°.67W±0°.06, h32^{km}±10^{km}, mb4.3/14, Error ellipse: s-maj=30.3km s-min=5.5km az=169.0*

*NOU **07** 00:54:42.4, 14°.04S×172°.55W, h81^{km}, MLv3.7/4, Samoa Islands*

ISC 07 00:54:23.6±0.5**, 15°.09S**±0°.09×**173°.66W**±0°.08**, h30^{km}, n76, σ1^{s}.27**/61**, mb4.2**/15**, MS3.7**/13**, 7C-6D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.17**	**58**	Pn	**Pn**	**00 54 58.8**	**+1.0**
	101nm,0.3s,baz=37,slow=1.3,SNR=48						
AFI				Sn	**Sn**	**00 55 19.9**	**-3.8**
	219nm,0.3s,baz=155,slow=23,SNR=22						
	262nm,0.3s						
NIUE	**Niue**	**5.34**	**139**	Pn	**Pn**	**00 55 41.8**	**+0.5**
RAR	**Rarotonga**	**14.53**	**117**	Pn	**Pn**	**00 57 47.3**	**0.0**
	1.3nm,0.3s,baz=168,slow=2.5,SNR=4.2						
	8.4nm,0.6s						
RAR	**Rarotonga**	**14.53**	**117**	Pn	**Pn**	**00 57 47.0**	**-0.4**
OUENC	**Ouen Island, N**	**19.84**	**246**	P	**P**	**00 58 52.1**	**-0.1**
OUENC				IAmb	IAmb	00 59 11.3	
	comp=Z,14nm,1.0s						
PPT	**Papeete**	**23.24**	**99**	LR	LR	01 07 12.0	
	comp=Z,27nm,18.7s,baz=195,slow=33						
PPTF	**Pamatai, Papee**	**23.25**	**99**	P	**P**	**00 59 28.0**	**-0.8**
URZ	**Urewera**	**24.48**	**198**	P	**P**	**00 59 38.1**	**-2.0**
	comp=Z,5.0nm,0.9s,baz=300,slow=21,SNR=1.9						
URZ				LR	LR	01 07 51.3	
	comp=Z,101nm,18.4s,baz=142,slow=33						
	comp=Z,5.0nm,0.9s						
RTZ	**Ruatahuna**	**24.85**	**198**		**P**	**00 59 43.6**	**+0.1**
BKZ	**Black Stump Fm**	**25.50**	**198**	P	**P**	**00 59 50.0**	**+0.6**
BFZ	**Birch Farm**	**26.97**	**197**	P	**P**	**01 00 02.6**	**-0.1**
TCW	**Tory Channel**	**28.05**	**200**	P	**P**	**01 00 11.4**	**-1.0**
QRZ	**Quartz Range**	**28.32**	**202**	P	**P**	**01 00 14.5**	**-0.2**
DSZ	**Denniston Nort**	**29.39**	**202**	P	**P**	**01 00 25.0**	**+0.8**
DSZ				IAmb	IAmb	01 00 25.2	
	comp=Z,9.4nm,1.0s						
RPZ	**Rata Peaks**	**31.37**	**202**	LR	LR	01 11 18.1	
	comp=Z,117nm,18.6s,baz=60,slow=33						
H11S2	**WAKE ISLAND Hy**	**38.57**	**329**	T	T	01 42 16.0	
	baz=149						
H11S3	**WAKE ISLAND Hy**	**38.58**	**329**	T	T	01 42 16.9	
	baz=149,slow=74						
H11S1	**WAKE ISLAND Hy**	**38.59**	**329**	T	T	01 42 16.9	
	baz=149,slow=74						
H11N3	**WAKE ISLAND Hy**	**39.52**	**330**	T	T	01 43 30.1	
	baz=147						
H11N1	**WAKE ISLAND Hy**	**39.52**	**330**	T	T	01 43 29.4	
	baz=147,slow=74						
H11N2	**WAKE ISLAND Hy**	**39.53**	**330**	T	T	01 43 29.9	
	baz=147,slow=74						
BBOO	**Buckleboo**	**48.75**	**239**	P	**P**	**01 03 04.5**	**-1.3**
BBOO				IAmb	IAmb	01 03 13.6	
	comp=Z,4.8nm,0.9s						
WR0	**Warramunga Arr**	**49.48**	**257**	P	**P**	**01 03 09.8**	**-1.8**
WR0				IAmb	IAmb	01 03 25.8	
	comp=Z,2.1nm,0.9s						
WB0	**Warramunga Arr**	**49.63**	**257**	P	**P**	**01 03 11.4**	**-1.3**
WB0				IAmb	IAmb	01 03 16.0	
	comp=Z,2.4nm,1.0s						
WB2	**Warramunga Arr**	**49.66**	**257**	P	**P**	**01 03 12.2**	**-0.8**
WB2				IAmb	IAmb	01 03 13.7	
	comp=Z,3.2nm,0.8s						
WRAB	**Tennant Creek**	**49.66**	**257**	P	**P**	**01 03 12.6**	**-0.4**
WRAB				IAmb	IAmb	01 03 13.6	
	comp=Z,3.6nm,1.1s						
WRA	**Warramunga Arr**	**49.67**	**257**	P	**P**	**01 03 12.6**	**-0.5**
	comp=Z,1.6nm,0.5s,baz=91,slow=7.4,SNR=44						
WRA				PcP	**PcP**	**01 04 34.6**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=86,slow=4.0,SNR=2.9						
	comp=Z,1.6nm,0.5s						
WRA	**Warramunga Arr**	**49.67**	**257**	P	**P**	**01 03 12.0**	**-1.1**
AS31	**Alice Springs**	**49.97**	**252**	P	**P**	**01 03 13.9**	**-1.4**
AS31				IAmb	IAmb	01 03 16.3	
	comp=Z,3.2nm,0.8s						
ASAR	**Alice Springs**	**49.97**	**252**	P	**P**	**01 03 15.0**	**-0.4**
	comp=Z,12nm,0.7s,baz=85,slow=8.4,SNR=112						
	comp=Z,12nm,0.7s						
VNDA	**Vanda**	**63.66**	**186**	P	**P**	**01 04 53.4**	**+1.8**
	comp=Z,1.3nm,0.7s,baz=10,slow=7.9,SNR=7.4						
	comp=Z,1.3nm,0.7s						
KAPI	**Kappang**	**66.12**	**271**	LR	LR	01 33 22.8	
	comp=Z,49nm,18.3s,baz=252,slow=36						
SHEM	**Shemya Is, Ala**	**68.36**	**352**	LR	LR	01 30 20.0	
	comp=Z,56nm,19.9s,baz=176,slow=32						
MJAR	**Matsushiro Arr**	**68.54**	**320**	LR	LR	01 28 51.5	
	comp=Z,27nm,21.0s,baz=182,slow=30						
PFO	**Pinyon Flats O**	**72.90**	**47**	LR	LR	01 31 45.6	
	comp=Z,57nm,20.8s,baz=246,slow=31						
NVAR	**Mina Array Bea**	**74.27**	**42**	P	**P**	**01 06 00.6**	**+2.2**
	comp=Z,0.8nm,0.8s,baz=224,slow=9.8,SNR=6.8						
	comp=Z,0.8nm,0.8s						
KDAK	**Kodiak Island**	**74.67**	**12**	LR	LR	01 32 16.2	
	comp=Z,37nm,19.4s,baz=188,slow=30						
KSRS	**Korea Array**	**75.76**	**316**	LR	LR	01 40 13.9	
	comp=Z,6.8nm,18.1s,baz=230,slow=36						
ELK	**Elko**	**77.52**	**42**	LR	LR	01 33 27.9	
	comp=Z,35nm,20.3s,baz=344,slow=30						
TXAR	**Lajitas Array**	**80.65**	**56**	P	**P**	**01 06 36.2**	**+2.1**
	comp=Z,0.3nm,0.6s,baz=224,slow=5.2,SNR=4.5						
	comp=Z,0.3nm,0.6s						
ILAR	**Eielson Array**	**82.19**	**11**	P	**P**	**01 06 42.4**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=212,slow=6.3,SNR=14						
ILAR				LR	LR	01 37 02.1	
	comp=Z,35nm,19.9s,baz=76,slow=31						
	comp=Z,0.5nm,0.5s						
PDAR	**Pinedale Array**	**82.20**	**42**	P	**P**	**01 06 43.5**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=221,slow=2.4,SNR=7.9						
	comp=Z,0.5nm,0.5s						
MAW	**Mawson**	**88.00**	**199**	LR	LR	01 47 11.9	
	comp=Z,54nm,18.1s,baz=238,slow=36						
BRDH	**Bariadhala**	**99.92**	**291**	LR	LR	01 54 13.1	
	comp=Z,29nm,19.4s,baz=197,slow=36						
ARCES	**ARCESS Array B**	**124.27**	**352**	PKP	**PKiKP**	**01 13 19.5**	**+0.3**
	comp=Z,2.6nm,0.9s,baz=23,slow=4.3,SNR=3.8						
FINES	**FINESS Array B**	**131.59**	**347**	PKP	**PKiKP**	**01 13 34.7**	**+0.7**
	comp=Z,2.3nm,0.9s,baz=48,slow=2.1,SNR=4.3						
ARCR	**ARCALIA**	**144.75**	**339**	⇓P	**PKPdf**	**01 13 58.5**	**+0.9**
DOPR	**Dopca**	**145.31**	**336**	⇑P	**PKiKP**	**01 14 00.7**	**-1.9**
TLBR	**Topalu**	**145.34**	**332**	⇑P	**PKiKP**	**01 14 00.4**	**-2.2**
MLR	**Muntele Rosu**	**145.48**	**335**	⇓P	**PKiKP**	**01 14 00.9**	**-2.2**
MARR	**Marisel-Cluj**	**145.53**	**339**	⇑P	**PKPab**	**01 14 00.7**	**+1.3**
KHC	**Kasperske Hory**	**145.54**	**352**	*e*PKP	**PKPab**	**01 14 00.3**	**+1.0**
DRGR		**145.56**	**340**	⇑P	**PKPab**	**01 14 00.8**	**+1.2**
CKRC	**Cesky Krumlov**	**145.73**	**351**	*e*PKP	**PKPab**	**01 14 00.8**	**+0.8**
BRTR	**Keskin Array B**	**145.76**	**321**	PKPbc	**PKiKP**	**01 14 01.8**	**-2.1**
	comp=Z,1.8nm,0.7s,baz=66,slow=3.1,SNR=4.7						
GERES	**GERESS Array B**	**145.80**	**351**	PKPbc	**PKPab**	**01 14 01.3**	**+0.9**
	comp=Z,1.0nm,0.6s,baz=31,slow=3.6,SNR=10						
VOIR		**145.88**	**336**	⇓P	**PKiKP**	**01 14 02.3**	**-1.5**
ARR	**Arges**	**146.10**	**337**	⇓P	**PKiKP**	**01 14 03.3**	**-1.0**
CONA	**Conrad Observa**	**146.32**	**348**	*e*PKiKP	**PKiKP**	**01 14 03.4**	**-1.3**
	comp=Z,1.4nm,0.6s						
SIRR	**Siria**	**146.37**	**341**	⇑P	**PKPab**	**01 14 02.5**	**0.0**
RONA	**Rosalia, Austr**	**146.45**	**348**	*e*PKiKP	**PKiKP**	**01 14 03.7**	**-1.2**
	comp=Z,4.7nm,0.9s						
SURR	**Surduc**	**146.67**	**340**	⇓P	**PKPab**	**01 14 03.9**	**+0.2**
MOA	**Molln**	**146.68**	**350**	*e*PKiKP	**PKPab**	**01 14 03.5**	**-0.2**
	comp=Z,5.1nm,1.1s						
GZR	**Gura Zlata**	**146.76**	**339**	⇑P	**PKPab**	**01 14 04.1**	**0.0**
BIOA	**Bad Ischl, Aus**	**146.93**	**351**	*e*PKiKP	**PKPab**	**01 14 04.4**	**-0.2**
	comp=Z,9.4nm,1.7s						
BZS	**Buzias**	**146.96**	**340**	⇓P	**PKPab**	**01 14 04.1**	**-0.7**
ARSA	**Arzberg**	**147.03**	**348**	*e*PKiKP	**PKiKP**	**01 14 07.6**	**+1.5**
	comp=Z,3.8nm,1.1s						
HERR	**Herculane**	**147.33**	**339**	⇑P	**PKiKP**	**01 14 06.0**	**-0.8**
WATA	**Walderalm**	**147.55**	**353**	*e*PKiKP	**PKPab**	**01 14 06.2**	**-1.1**
	comp=Z,7.1nm,1.2s						
KBA	**Koelnbreinsper**	**147.57**	**351**	*e*PKiKP	**PKPab**	**01 14 06.4**	**-1.0**
	comp=Z,8.7nm,1.5s						
WTTA	**Wattenberg**	**147.62**	**353**	*e*PKiKP	**PKPbc**	**01 14 05.9**	**+0.5**
	comp=Z,4.4nm,0.5s						
SOKA	**Soboth**	**147.68**	**349**	*e*PKiKP	**PKPbc**	**01 14 05.9**	**+0.4**
	comp=Z,7.4nm,1.3s						
SQTA	**Sankt Quirin**	**147.71**	**354**	*e*PKiKP	**PKPdf**	**01 14 02.3**	**-0.5**
	comp=Z,6.6nm,1.1s						
DAVA	**Damuels**	**147.76**	**355**	*e*PKiKP	**PKPdf**	**01 14 00.5**	**-2.4**
	comp=Z,9.8nm,1.0s						
MYKA	**Terra Mystica**	**147.97**	**350**	*e*PKiKP	**PKiKP**	**01 14 06.7**	**-1.4**
	comp=Z,2.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**175.10**	**113**	PKPab	**PKPab**	**01 16 07.0**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=235,slow=5.1,SNR=1.9						

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*IDC **07** 01:03:21.7±2.4, 5°.04N×123°.47E, h591^{km}±23^{km}, mb3.1/5, mbtmp4.1/5, Error ellipse: s-maj=211.2km s-min=13.6km az=64.0*

ISC 07 01:03:17.0±1.3**, 5°.2N**±0°.5×**12°4E**±°**, h550^{km}, n6, σ2^{s}.50**/13**, mb3.6**/5**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.93**	**158**	P	**P**	**01 08 17.9**	**+3.1**
	1.9nm,0.4s,baz=335,slow=9.7,SNR=33						
WRA				PcP	**PcP**	**01 11 19.5**	**+0.9**
	0.3nm,0.5s,baz=319,slow=3.4,SNR=4.8						
WRA				S	**S**	**01 12 09.2**	**-4.4**
	0.7nm,0.6s,baz=332,slow=16,SNR=6.2						
WRA				ScP	**ScP**	**01 14 04.6**	**-2.5**
	0.4nm,0.9s,baz=342,slow=3.1,SNR=2.3						
	1.9nm,0.4s						
ASAR	**Alice Springs**	**30.23**	**162**	P	**P**	**01 08 46.8**	**+3.3**
	0.6nm,0.3s,baz=338,slow=7.0,SNR=9.8						
ASAR				PcP	**PcP**	**01 11 28.1**	**+1.1**
	0.2nm,0.6s,baz=342,slow=4.1,SNR=1.8						
ASAR				S	**S**	**01 13 03.6**	**-1.1**
	2.2nm,0.9s,baz=350,slow=19,SNR=12						
ASAR				ScP	**ScP**	**01 14 14.5**	**-3.1**
	0.4nm,0.6s,baz=347,slow=2.9,SNR=3.5						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**54.86**	**326**	P	**P**	**01 11 56.4**	**+0.5**
	1.0nm,0.5s,baz=120,slow=7.9,SNR=22						
MKAR				PcP	**PcP**	**01 12 49.2**	**-0.3**
	0.5nm,0.6s,baz=115,slow=4.8,SNR=6.3						
	1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**58.12**	**334**	P	**P**	**01 12 18.6**	**+0.6**
	0.4nm,0.4s,baz=120,slow=5.7,SNR=1.6						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**89.31**	**332**	P	**P**	**01 15 13.9**	**-0.7**
	5.3nm,1.1s,baz=104,slow=3.4,SNR=4.3						
	5.3nm,1.1s						
TORD	**Torodi Ar. Bea**	**119.91**	**288**	PKP	**PKPdf**	**01 21 04.8**	**-1.4**
	0.4nm,1.1s,baz=90,slow=2.0,SNR=4.3						

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*IDC **07** 01:39:42.0±1.2, 24°.31N×122°.20E, h0^{km}, mb3.5/7, mbtmp3.5/7, MS2.2/1, Error ellipse: s-maj=68.4km s-min=21.0km az=64.0*

*TAP **07** 01:39:46.8, 24°.28N×122°.06E, h35^{km}, ML4.3, B*

*NIED **07** 01:39:47.1, 24°.18N×122°.10E, h44^{km}, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}2.27; $M_{\theta\theta}$-6.94; $M_{\phi\phi}$4.67; $M_{r\theta}$-1.45; $M_{\theta\phi}$0.94; $M_{\phi r}$1.45; Fault plane solution: $M_0$6.32000×10^{14} NP1: ϕ_s316.00000°, δ80.00000°, λ155.00000°. NP2: ϕ_s51.00000°, δ66.00000°, λ11.00000°.*

*JMA **07** 01:39:47.1±0.2, 24°N±1°×122°.1E±0°.5, h44^{km}±3^{km}, MV3.7/11, TAIWAN REGION*

ISC 07 01:39:46.8±0.8**, 24°.25N**±0°.02×**122°.13E**±0°.02**, h30^{km}**±6^{km}**, n175, σ1^{s}.00**/292**, mb3.5**/7**, 17C-17D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.19**	**28**	*i* P	**Pb**	**01 39 53.4**	**+0.6**
	baz=49						
EOS2				*i* S	**Sn**	**01 39 58.4**	**+1.6**
	baz=49						
EOS4	**EOS4**	**0.21**	**127**	*i* P	**Pn**	**01 39 54.0**	**+0.3**
	baz=125						
EOS4				S	**Sn**	**01 39 59.6**	**+2.9**
	baz=125						
EHP	**Heping Village**	**0.36**	**280**	*e*P	**Pb**	**01 39 55.1**	**-0.1**
	baz=275						
EHP				*e*S	**Sb**	**01 40 01.7**	**+0.9**
	baz=275						
EWUT	**Wuta**	**0.38**	**301**	⇓*i*P	**Pb**	**01 39 54.7**	**-0.7**
	baz=302						
EWUT				S	**Sb**	**01 39 59.9**	**-1.3**
	baz=302						
ENA	**Nanau**	**0.40**	**297**	⇓*i*P	**Pb**	**01 39 55.1**	**-0.6**
	baz=297						
ENA				*e*S	**Sb**	**01 40 01.1**	**-0.6**
	baz=297						
TWC	**Suao**	**0.44**	**324**	⇓*i*P	**Pb**	**01 39 55.5**	**-0.8**
	baz=330						
TWC				*i* S	**Sb**	**01 40 01.1**	**-1.7**
	baz=330						
ETL	**Fush Village**	**0.47**	**259**	*e*P	**Pb**	**01 39 57.4**	**+0.6**
	baz=253						
ETL				*e*S	**Sn**	**01 40 06.0**	**+1.0**
	baz=253						
NACB	**Ninganchiao**	**0.50**	**262**	P	**Pb**	**01 39 57.8**	**+0.6**
NACB	**Ninganchiao**	**0.50**	**262**	⇑*i*P	**Pb**	**01 39 57.5**	**+0.4**
	baz=256						
NACB				S	**Sn**	**01 40 06.2**	**+0.6**
	baz=256						
TWD	**Chiawan**	**0.52**	**251**	⇓P	**Pb**	**01 39 58.2**	**+0.7**
	baz=244						
TWD				*e*S	**Sn**	**01 40 05.9**	**-0.1**
	baz=244						
HWA	**Hwalien**	**0.55**	**241**	*e*P	**Pn**	**01 39 59.0**	**+0.3**
	baz=233						
HWA				*e*S	**Sn**	**01 40 08.6**	**+1.7**
	baz=233						
ETLH	**Xiulin Townshi**	**0.59**	**266**	⇑*i*P	**Pb**	**01 39 59.0**	**+0.1**
	baz=262						
ETLH				*e*S	**Sn**	**01 40 08.3**	**+0.2**
	baz=262						
TEYL	**Yanliau Villag**	**0.62**	**232**	*e*P	**Pb**	**01 39 59.5**	**+0.3**
	baz=228						
TEYL				*e*S	**Sn**	**01 40 09.7**	**+1.2**
	baz=228						
EGS		**0.62**	**343**	⇓*i*P	**Pb**	**01 39 59.0**	**-0.2**
	baz=349						
EGS				*e*S	**Sb**	**01 40 06.8**	**-0.9**
	baz=349						
LATG	**Datong**	**0.62**	**298**	⇓*i*P	**Pb**	**01 39 59.0**	**-0.3**
	baz=297						
LATG				*e*S	**Sb**	**01 40 08.1**	**+0.2**
	baz=297						
ILA	**Ilan**	**0.62**	**326**	*e*P	**Pb**	**01 39 59.1**	**-0.2**
	baz=330						
ILA				*e*S	**Sb**	**01 40 07.7**	**-0.1**
	baz=330						
TWE	**Neicheng**	**0.63**	**318**	P	**Pb**	**01 39 58.7**	**-0.7**
	baz=321						
TWE				*e*S	**Sb**	**01 40 07.2**	**-0.9**
	baz=321						
ENTT	**Nioudou**	**0.65**	**307**	⇓P	**Pb**	**01 39 59.2**	**-0.5**
	baz=308						
ENTT				*e*S	**Sb**	**01 40 08.2**	**-0.2**
	baz=308						
ETM	**Tongmen**	**0.65**	**244**	⇓*e*P	**Pb**	**01 39 59.8**	**+0.1**
	baz=239						
ETM				*e*S	**Sn**	**01 40 09.7**	**+0.3**
	baz=239						
NTC	**Toucheng**	**0.66**	**336**	⇓P	**Pb**	**01 39 59.5**	**-0.4**
	baz=340						
NTC				*e*S	**Sb**	**01 40 07.8**	**-1.1**
	baz=340						
NNSB	**Datong**	**0.71**	**285**	⇑P	**Pb**	**01 40 00.9**	**+0.2**
	baz=283						
NNSB				*e*S	**Sn**	**01 40 11.6**	**+0.7**
	baz=283						
NNSH	**Datong**	**0.71**	**285**	⇑*e*P	**Pb**	**01 40 00.9**	**+0.1**
	baz=283						
NNSH				*e*S	**Sn**	**01 40 11.5**	**+0.6**
	baz=283						
FUSB	**Fushanzhiwuyua**	**0.71**	**316**	⇓*i*P	**Pb**	**01 40 00.4**	**-0.4**
	baz=318						
FUSB				*e*S	**Sb**	**01 40 09.4**	**-0.9**
	baz=318						
NNS	**Nan Shan**	**0.72**	**286**	⇑*e*P	**Pb**	**01 40 01.1**	**+0.1**
	baz=284						
NNS				*e*S	**Sn**	**01 40 11.4**	**+0.2**
	baz=284						
TEGC	**Jichi Village**	**0.76**	**225**	*e*P	**Pb**	**01 40 02.2**	**+0.6**
	baz=219						
TWB1	**Santiao Chiao**	**0.77**	**350**	P	**Pn**	**01 40 01.4**	**-0.3**
	baz=355						
TWB1				*e*S	**Sb**	**01 40 11.0**	**-0.8**
	baz=355						
JYNG	**Yonagunijimaku**	**0.77**	**75**	P	**Pb**	**01 40 02.3**	**+0.6**
JYNG				S	**Sn**	**01 40 13.1**	**+0.8**
ESL	**Shilin**	**0.77**	**236**	*e*P	**Pn**	**01 40 01.3**	**-0.4**
	baz=230						
ESL				*e*S	**Sn**	**01 40 13.0**	**+0.7**
	baz=230						
TIPB	**Shuangxi**	**0.77**	**339**	⇓*i*P	**Pn**	**01 40 01.5**	**-0.3**
	baz=343						
TIPB				S	**Sb**	**01 40 11.0**	**-1.0**
	baz=343						
NWLT	**Wulai**	**0.78**	**313**	⇑P	**Pn**	**01 40 01.8**	**-0.1**
	baz=314						
NWLT				*e*S	**Sb**	**01 40 11.1**	**-1.1**
	baz=314						
WHF	**Hehuan Shan**	**0.80**	**263**	⇑P	**Pn**	**01 40 02.5**	**+0.1**
	baz=259						
WHF				*e*S	**Sn**	**01 40 14.2**	**+0.6**
	baz=259						
YHNB	**Yeheng**	**0.81**	**302**	P	**Pn**	**01 40 02.5**	**+0.2**
YHNB	**Yeheng**	**0.81**	**302**	*e*P	**Pn**	**01 40 02.3**	**0.0**
	baz=302						
YHNB				*e*S	**Sb**	**01 40 13.1**	**0.0**
	baz=302						
NSK	**Sanguang**	**0.82**	**301**	⇑P	**Pn**	**01 40 02.6**	**+0.1**
	baz=302						
NSK				*e*S	**Sb**	**01 40 12.9**	**-0.6**
	baz=302						
YOJ	**Yonaguni jima**	**0.83**	**75**	P	**Pb**	**01 40 03.5**	**+0.8**
YOJ	**Yonaguni jima**	**0.83**	**75**	P	**Pb**	**01 40 03.2**	**+0.5**
YOJ				S	**Sb**	**01 40 15.0**	**+1.4**
YOJ	**Yonaguni jima**	**0.83**	**75**	⇑*i*P	**Pb**	**01 40 03.2**	**+0.5**
	baz=78						
YOJ				S	**Sb**	**01 40 14.8**	**+1.2**
	baz=78						
EGFH	**Guangfu**	**0.86**	**228**	*e*P	**Pn**	**01 40 02.8**	**-0.2**
	baz=224						
EGFH				*e*S	**Sb**	**01 40 18.1**	**+3.5**
	baz=224						
TWT	**Tachien**	**0.87**	**271**	*e*P	**Pb**	**01 40 04.0**	**+0.4**
	baz=268						
TWT				*e*S	**Sb**	**01 40 16.2**	**+1.2**
	baz=268						
SXI1	**Grass Mountain**	**0.88**	**345**	⇓*i*P	**Pn**	**01 40 03.0**	**-0.2**
	baz=348						
SXI1				*e*S	**Sn**	**01 40 14.9**	**-0.1**
	baz=348						
NWF	**Wu-fen Shan**	**0.88**	**339**	*e*P	**Pb**	**01 40 03.7**	**0.0**
	baz=342						
NWF				*e*S	**Sn**	**01 40 14.7**	**-0.4**
	baz=342						
WFSB	**Wu-fen Shan**	**0.88**	**339**	*e*P	**Pb**	**01 40 03.6**	**0.0**
	baz=342						
WFSB				*e*S	**Sb**	**01 40 15.1**	**0.0**
	baz=342						
TWA	**Mucha**	**0.88**	**326**	*e*P	**Pb**	**01 40 04.0**	**+0.3**
	baz=328						
TWA				*e*S	**Sb**	**01 40 15.2**	**+0.1**
	baz=328						
TDCB	**Techi**	**0.89**	**271**	*e*P	**Pb**	**01 40 04.0**	**+0.2**
	baz=268						
TDCB				*e*S	**Sb**	**01 40 16.1**	**+0.7**
	baz=268						
CHGB	**Renai**	**0.90**	**258**	*e*P	**Pn**	**01 40 04.0**	**+0.4**
	baz=255						
CHGB				*e*S	**Sb**	**01 40 16.5**	**+0.8**
	baz=255						
NHDH	**Xindian Distri**	**0.90**	**322**	*e*P	**Pb**	**01 40 04.2**	**+0.3**
	baz=324						
NHDH				*e*S	**Sn**	**01 40 15.4**	**-0.1**
	baz=324						
OWD	**Renai**	**0.92**	**252**	*e*P	**Pn**	**01 40 04.3**	**+0.4**
	baz=248						
OWD				*e*S	**Sn**	**01 40 16.1**	**-0.2**
	baz=248						
TATO	**Taipei**	**0.93**	**321**	*e*P	**Pb**	**01 40 04.6**	**+0.2**
	baz=323						
TATO				*e*S	**Sn**	**01 40 16.4**	**0.0**
	baz=323						
NHY	**Taipei**	**0.94**	**327**	*e*P	**Pb**	**01 40 05.4**	**+0.8**
	baz=329						
TNOU	**National Taiwa**	**0.96**	**340**	*e*P	**Pn**	**01 40 04.4**	**+0.1**
	baz=343						
TNOU				*e*S	**Sn**	**01 40 16.9**	**0.0**
	baz=343						
WUSB	**Renai**	**0.96**	**255**	*e*P	**Pn**	**01 40 05.1**	**+0.6**
	baz=251						
WUSB				*e*S	**Sb**	**01 40 17.9**	**+0.5**
	baz=251						
TAP1	**Taipei**	**0.96**	**325**	*e*P	**Pb**	**01 40 07.0**	**+2.0**
	baz=326						
TAP	**Taipei**	**0.97**	**324**	*e*P	**Pb**	**01 40 05.8**	**+0.6**
	baz=326						
TAP				*e*S	**Sb**	**01 40 18.2**	**+0.6**
	baz=326						
BACT	**New Taipei Cit**	**0.98**	**320**	*e*P	**Pb**	**01 40 06.0**	**+0.9**
	baz=322						
HGSD	**Ruisui**	**0.99**	**221**	*e*P	**Pn**	**01 40 04.7**	**-0.1**
	baz=217						
HGSD				*e*S	**Sb**	**01 40 20.2**	**+2.0**
	baz=217						
NFF	**Wufeng Townshi**	**1.00**	**293**	⇑*e*P	**Pb**	**01 40 05.7**	**+0.1**
	baz=292						
NFF				*e*S	**Sb**	**01 40 19.5**	**+1.0**
	baz=292						
VWDT	**VWDT**	**1.03**	**242**	⇓*e*P	**Pn**	**01 40 05.9**	**+0.6**
	baz=238						
VWDT				*e*S	**Sb**	**01 40 19.7**	**+0.4**
	baz=238						
YM01	**YM01**	**1.03**	**330**	*e*P	**Pb**	**01 40 05.9**	**-0.2**
	baz=333						
YM01				*e*S	**Sb**	**01 40 19.6**	**+0.2**
	baz=333						
NWRT	**Kuosheng**	**1.04**	**336**	*e*P	**Pb**	**01 40 06.2**	**-0.1**
	baz=338						
EHY	**Hungye**	**1.05**	**225**	*e*P	**Pn**	**01 40 05.2**	**-0.3**
	baz=221						
YM08	**YM08**	**1.06**	**332**	*e*P	**Pn**	**01 40 05.8**	**+0.1**
	baz=335						
YM08				*e*S	**Sb**	**01 40 19.9**	**-0.2**
	baz=335						
NJD	**Zhudong**	**1.07**	**297**	*e*P	**Pb**	**01 40 07.7**	**+0.9**
	baz=297						
NJD				*e*S	**Sb**	**01 40 23.8**	**+3.4**
	baz=297						
TWS1	**Kuangyinshan**	**1.07**	**323**	*e*P	**Pb**	**01 40 07.1**	**+0.4**
	baz=325						
TWS1				*e*S	**Sb**	**01 40 22.3**	**+1.9**
	baz=325						
WHP	**Taichung City**	**1.08**	**272**	⇑*e*P	**Pb**	**01 40 07.4**	**+0.4**
	baz=270						
WHP				*e*S	**Sb**	**01 40 21.9**	**+1.0**
	baz=270						
ANP	**Anpu**	**1.09**	**329**	*e*P	**Pn**	**01 40 06.7**	**+0.5**
	baz=332						
LIOB	**Emei**	**1.09**	**291**	⇑*e*P	**Pb**	**01 40 07.7**	**+0.6**
	baz=291						
LIOB				*e*S	**Sb**	**01 40 22.5**	**+1.4**
	baz=291						
NSTT	**Nanjuang**	**1.10**	**291**	⇑*e*P	**Pb**	**01 40 07.7**	**+0.5**
	baz=290						
NSTT				*e*S	**Sb**	**01 40 23.3**	**+2.1**
	baz=290						
WPL	**Puli Township**	**1.10**	**258**	*e*P	**Pb**	**01 40 07.3**	**0.0**
	baz=255						
NTST	**Danshui**	**1.10**	**326**	*e*P	**Pb**	**01 40 07.6**	**+0.3**
	baz=328						
NTST				*e*S	**Sb**	**01 40 22.9**	**+1.5**
	baz=328						
ECBN	**Changbin**	**1.12**	**214**	*e*P	**Pn**	**01 40 06.5**	**0.0**
	baz=210						
ECBN				*e*S	**Sn**	**01 40 21.2**	**+0.3**
	baz=210						
NCU	**National Centr**	**1.12**	**310**	*e*P	**Pb**	**01 40 07.7**	**0.0**
	baz=311						
NCU				*e*S	**Sb**	**01 40 24.3**	**+2.4**
	baz=311						
NCUH	**Zhongli**	**1.12**	**310**	*e*P	**Pb**	**01 40 07.5**	**-0.1**
	baz=311						
NCUH				*e*S	**Sb**	**01 40 24.3**	**+2.4**
	baz=311						
DPDB	**Guoxing**	**1.12**	**259**	*e*P	**Pb**	**01 40 07.7**	**0.0**
	baz=257						
DPDB				*e*S	**Sb**	**01 40 22.2**	**+0.3**
	baz=257						
WCS	**Beigang Elemen**	**1.13**	**261**	*e*P	**Pb**	**01 40 08.1**	**+0.3**
	baz=258						
WCS				*e*S	**Sb**	**01 40 22.4**	**+0.3**
	baz=258						
TWY	**Chenhua**	**1.13**	**335**	*e*P	**Pb**	**01 40 08.5**	**+0.7**
	baz=337						
TWY				*e*S	**Sb**	**01 40 22.7**	**+0.6**
	baz=337						
HSN1	**Hsinchu**	**1.14**	**298**	*e*P	**Pb**	**01 40 08.5**	**+0.5**
	baz=297						
YULB	**Yu-li**	**1.15**	**222**	P	**Pn**	**01 40 06.8**	**-0.1**
YULB	**Yu-li**	**1.15**	**222**	⇓*e*P	**Pn**	**01 40 06.4**	**-0.4**
	baz=218						
YULB				*e*S	**Sn**	**01 40 22.5**	**+0.9**

	baz=218						
NSM	Shimen	1.15	335	*e*P	Pb	01 40 08.9	+0.8
	baz=337						
EYUL	Yuli	1.17	220	*e*P	Pn	01 40 07.3	+0.1
	baz=216						
EYUL				*e*S	Sb	01 40 23.9	+0.7
	baz=216						
SSLB	Suanglung	1.17	247	P	Pb	01 40 08.7	+0.2
SSLB	Suanglung	1.17	247	⇓*e*P	Pn	01 40 07.8	+0.6
	baz=244						
SSLB				*e*S	Sn	01 40 22.8	+0.5
	baz=244						
TWF1	Yuli	1.18	221	*e*P	Pn	01 40 07.0	-0.3
	baz=217						
TWF1				*e*S	Sn	01 40 22.6	+0.3
	baz=217						
SBCB	Hsinchu	1.18	298	*e*P	Pb	01 40 08.8	+0.2
	baz=297						
SBCB				*e*S	Sb	01 40 25.9	+2.5
	baz=297						
SMLT	Sun Moon Lake	1.18	252	⇓*e*P	Pn	01 40 08.4	+0.9
	baz=249						
SMLT				*e*S	Sb	01 40 23.8	0.0
	baz=249						
HSN	Hsinchu	1.19	298	*e*P	Pb	01 40 08.7	-0.1
	baz=300						
HSN				*e*S	Sb	01 40 25.2	+1.2
	baz=300						
TYC	Yuchr	1.22	254	⇓*e*P	Pn	01 40 08.7	+0.9
	baz=251						
TYC				*e*S	Sb	01 40 24.7	+0.2
	baz=251						
NJN	Zhunan	1.23	291	*e*P	Pb	01 40 09.9	+0.5
	baz=290						
NHW	Xinwu Township	1.24	308	*e*P	Pb	01 40 09.3	-0.4
	baz=308						
NHW				*e*S	Sb	01 40 27.3	+1.9
	baz=308						
TWQ1	Liyutan	1.24	275	*e*P	Pb	01 40 10.2	+0.5
	baz=273						
TWQ1				*e*S	Sb	01 40 26.8	+1.3
	baz=273						
NMLH	Miaoli	1.26	284	⇑*e*P	Pb	01 40 10.2	+0.3
	baz=282						
NMLH				*e*S	Sb	01 40 27.6	+1.9
	baz=282						
NSY	Sanyi	1.26	278	*e*P	Pb	01 40 10.8	+0.7
	baz=276						
NSY				*e*S	Sb	01 40 28.4	+2.5
	baz=276						
FULB	Fuli	1.30	217	*e*P	Pn	01 40 08.9	-0.1
	baz=213						
FULB				*e*S	Sn	01 40 24.8	-0.6
	baz=213						
WWF	Wufeng	1.33	261	*e*P	Pb	01 40 12.1	+1.0
	baz=259						
WWF				*e*S	Sb	01 40 30.2	+2.5
	baz=259						
TCU	Taichung	1.33	266	⇑*e*P	Pb	01 40 11.7	+0.4
	baz=264						
TCU				*e*S	Sb	01 40 30.6	+2.6
	baz=264						
CHKT	Chengkung	1.34	212	*e*P	Pn	01 40 09.1	-0.5
	baz=208						
CHKT				*e*S	Sn	01 40 24.9	-1.5
	baz=208						
WJS	Zhushan	1.35	252	*e*P	Pb	01 40 12.6	+1.0
	baz=249						
WJS				*e*S	Sb	01 40 30.2	+1.7
	baz=249						
WDJ	Dajia District	1.36	274	*e*P	Pb	01 40 11.7	-0.1
	baz=273						
WNT1	Nantou City	1.37	256	*e*P	Pb	01 40 12.6	+0.7
	baz=254						
WNT1				*e*S	Sb	01 40 31.0	+2.0
	baz=254						
WNT	Mingjian	1.37	255	*e*P	Pb	01 40 12.8	+0.9
	baz=252						
PCYT	Pengchaiyu	1.38	358	*e*P	Pn	01 40 10.3	+0.3
	baz=1.0						
EHD	Haiduan	1.39	218	*e*P	Pn	01 40 10.0	-0.2
	baz=215						
ALS	Alishan	1.42	239	*e*P	Pn	01 40 12.1	+1.1
	baz=236						
ECS	Chishang	1.42	216	*e*P	Pn	01 40 11.8	+1.1
	baz=213						
WCHH	Zhanghua	1.45	264	*e*P	Pb	01 40 13.0	-0.2
	baz=262						
WYL	Yuanlin Townsh	1.45	259	*e*P	Pb	01 40 13.8	+0.7
	baz=257						
IRIF	Iriomote-Funau	1.46	86	P	Pn	01 40 12.3	+1.1
IRIF				*e*S	Sb	01 40 31.4	-0.2
ELDTW	Lidau	1.47	224	*e*P	Pn	01 40 11.4	0.0
	baz=221						
CHN5	Tsauling	1.48	244	*e*P	Pb	01 40 13.7	0.0
	baz=242						
CHN5				*e*S	Sb	01 40 32.0	-0.2
	baz=242						
EDH	Donghe	1.48	211	*e*P	Pn	01 40 10.8	-0.6
	baz=208						
EDH				*e*S	Sn	01 40 29.1	-0.7
	baz=208						
HATJ	Hateruma jima	1.54	97	*e*P	Pb	01 40 15.4	+0.7
WGK	Gukeng	1.54	249	*e*P	Pb	01 40 15.8	+1.1
	baz=246						
WDLH	Douliu	1.56	249	*e*P	Pb	01 40 15.3	+0.2
	baz=247						
WDLH				*e*S	Sb	01 40 35.7	+1.3
	baz=247						
WCKO	Fanlu	1.61	240	*e*P	Pb	01 40 15.9	-0.1
	baz=238						
WCKO				*e*S	Sb	01 40 36.6	+0.6
	baz=238						
LONT	Longtian	1.62	215	*e*P	Pn	01 40 12.8	-0.6
	baz=212						
WRL	Guolierlin Hig	1.64	258	*e*P	Pn	01 40 15.4	+1.7
	baz=256						
WRL				*e*S	Sb	01 40 37.1	+0.4
	baz=256						
STYH	Taoyuan	1.64	229	*e*P	Pn	01 40 15.0	+1.3
	baz=227						
STYH				*e*S	Sb	01 40 36.0	-0.7
	baz=227						
STYT	Tauyuan	1.66	230	*e*P	Pn	01 40 15.4	+1.4
	baz=227						
STYT				*e*S	Sb	01 40 36.5	-0.8
	baz=227						
CHN4	Tsaushan	1.67	238	*e*P	Pn	01 40 15.5	+1.4
	baz=235						
CHN4				*e*S	Sb	01 40 38.3	+0.8
	baz=235						
TPUB	Ta-pu	1.67	236	P	Pb	01 40 16.8	-0.1
TPUB	Ta-pu	1.67	236	*e*P	Pb	01 40 16.3	-0.7
	baz=233						
TPUB				*e*S	Sb	01 40 38.1	+0.6
	baz=233						
CHN2	Minshiung	1.68	245	*e*P	Pb	01 40 17.9	+0.9
	baz=243						
LDUT	Ludao	1.68	201	*e*P	Pn	01 40 13.6	-0.6
	baz=199						
LDUT				*e*S	Sn	01 40 33.2	-1.6
	baz=199						
WTK	Tuku	1.69	251	*e*P	Pb	01 40 16.5	-0.7
	baz=249						
WTK				*e*S	Sb	01 40 38.4	+0.3
	baz=249						
WTP	Ta-pu	1.71	235	*e*P	Pn	01 40 16.5	+1.8
	baz=232						
JKRS	Kuro-shima	1.71	90	P	Pb	01 40 16.7	-1.0
JKRS				S	Sb	01 40 38.3	-0.5
TWGBT	Beinan	1.72	214	P	Pn	01 40 16.3	+1.5
TWGBT	Beinan	1.72	214	*e*P	Pn	01 40 14.2	-0.6
	baz=212						
TWGBT				*e*S	Sn	01 40 36.7	+0.9
	baz=212						
TWG	Pinlang	1.72	215	*e*P	Pn	01 40 14.3	-0.6
	baz=212						
CHY	Chiayi	1.73	245	*e*P	Pb	01 40 16.9	-1.1
	baz=242						
CHY				*e*S	Sb	01 40 40.4	+1.0
	baz=242						
TWK	Hsinying	1.80	237	⇑*e*P	Pb	01 40 18.0	-1.1
	baz=235						
TWK				*e*S	Sb	01 40 41.4	+0.1
	baz=235						
CHN1	Nanshi	1.81	235	*e*P	Pn	01 40 18.2	+2.1
	baz=232						
CHN1				*e*S	Sb	01 40 42.2	+0.5
	baz=232						
SGST	Jiashian	1.83	231	*e*P	Pn	01 40 17.8	+1.4
	baz=228						
SGST				*e*S	Sb	01 40 42.3	0.0
	baz=228						
JIJ	Ishigaki jima	1.84	86	P	Pn	01 40 17.9	+1.5
JIJ				S	Sn	01 40 39.6	+1.0
SLGT	Liugui	1.85	228	*e*P	Pb	01 40 19.3	-0.7
	baz=225						
WSL	Shuilin Townsh	1.89	248	*e*P	Pb	01 40 19.3	-1.3
	baz=246						
WSL				*e*S	Sb	01 40 43.5	-0.3
	baz=246						
ICHU	Yijhu	1.91	243	*e*P	Pb	01 40 20.1	-1.0
	baz=241						
ECL	Taimali	1.97	214	*e*P	Pn	01 40 17.6	-0.6
	baz=211						
CHN8	Yiju	1.98	243	*e*P	Pb	01 40 21.6	-0.5
	baz=241						
CHN8				*e*S	Sb	01 40 45.5	-0.8
	baz=241						
JISG	Ishigakijimahi	2.01	80	P	Pn	01 40 19.9	+1.1
JISG				S	Sn	01 40 44.4	+1.3
SCST	Cishan	2.02	228	*e*P	Pb	01 40 22.2	-0.8
	baz=226						
SSD	Sandimen	2.03	223	*e*P	Pn	01 40 20.9	+1.8
	baz=220						
SSD				*e*S	Sb	01 40 47.1	-0.9
	baz=220						
MASBT	Mashibuluo	2.13	221	*e*P	Pn	01 40 21.7	+1.3
	baz=218						
MASBT				*e*S	Sb	01 40 49.7	-1.2
	baz=218						
TSCK	Chigu Township	2.17	240	*e*P	Pn	01 40 23.1	+2.1
	baz=238						
TSCK				*e*S	Sb	01 40 50.3	-1.7
	baz=238						
EAST	Anshuo	2.20	213	*e*P	Pn	01 40 21.6	+0.2
	baz=210						
TAWH	Dawu Township	2.22	211	*e*P	Pn	01 40 21.9	+0.3
	baz=209						
LAY	Lan-yu	2.26	194	*e*P	Pn	01 40 21.8	-0.5
	baz=192						
LAY				*e*S	Sn	01 40 47.8	-1.4
	baz=192						
LYUB	Lan-yu	2.29	193	*e*P	Pn	01 40 21.4	-1.2
	baz=191						
LYUB				*e*S	Sn	01 40 47.3	-2.6
	baz=191						
SCZT	Fangliau	2.33	217	*e*P	Pn	01 40 25.9	+2.7
	baz=215						
SCZT				*e*S	Sb	01 40 54.5	-2.0
	baz=215						
JTJ	Tarama	2.37	80	*e*S	Sn	01 40 54.1	+2.2
PNG	Penghu	2.45	254	*e*P	Pn	01 40 25.6	+0.7
	baz=253						
PNG				*e*S	Sn	01 40 54.4	+0.6
	baz=253						
PHUB	P'eng-hu	2.46	253	*e*P	Pn	01 40 25.6	+0.7
	baz=251						
PHUB				*e*S	Sn	01 40 55.7	+1.8
	baz=251						
WDGT	Dungji	2.47	247	*e*P	Pn	01 40 26.6	+1.5
	baz=245						
WDGT				*e*S	Sn	01 40 55.9	+1.6
	baz=245						
SMST	Manzhou Townsh	2.52	209	*e*P	Pn	01 40 26.1	+0.3
	baz=207						
VWUC	VWUC	2.55	287	⇑*e*P	Pn	01 40 26.3	+0.1
	baz=287						
VWUC				*e*S	Sn	01 40 55.9	-0.4
	baz=287						
TWKBT	Hengchun	2.60	208	*e*P	Pn	01 40 27.4	+0.5
	baz=206						
VCHM	Qimei	2.68	248	*e*P	Pn	01 40 29.2	+1.2
	baz=246						
MATB	Ma-tsu	2.74	314	*e*P	Pn	01 40 28.7	-0.1
	baz=314						
MATB				*e*S	Sn	01 41 00.6	-0.4
	baz=314						
LYJJ	Jianjiangzhen	3.14	317	*e*P	Pn	01 40 34.3	0.0
	baz=317						
XPSS	Dashiqiu	3.19	327	*e*P	Pn	01 40 35.1	0.0
	baz=327						
XPSS				*e*S	Sn	01 41 12.0	-0.2
	baz=327						
MHZQ	Yeshan	3.36	304	*e*P	Pn	01 40 37.4	+0.1
	baz=303						
KNM	Kinmen	3.38	274	*e*P	Pn	01 40 39.5	+1.9
	baz=272						
KNM				*e*S	Sn	01 41 19.0	+2.3
	baz=272						
KNMB	Chin-men Tao	3.42	274	*e*P	Pn	01 40 38.1	-0.1
	baz=273						
KNMB				*e*S	Sn	01 41 17.0	-0.7
	baz=273						
AXDP	Jialang	3.84	281	*e*P	Pn	01 40 44.3	+0.3
	baz=279						
ZPLA	Ao Xicun	4.02	266	*e*P	Pn	01 40 46.6	+0.2
	baz=265						
DSXP	Dongshan	4.34	264	*e*P	Pn	01 40 51.2	+0.4
	baz=262						
SXFK	Yanhouchang	4.59	299	*e*P	Pn	01 40 54.7	+0.4
	baz=298						
KSRS	Korea Array	14.07	19	LR	LR	01 49 22.4	
	comp=Z,9.6nm,20.1s,baz=160,slow=42						
SONM	Songino Array	26.65	336	P	P	01 45 23.0	-0.2
	1.2nm,0.7s,baz=155,slow=9.6,SNR=9.5						
	1.2nm,0.7s						
MKAR	Makanchi Array	38.90	315	P	P	01 47 09.3	-0.4
	0.5nm,0.5s,baz=100,slow=9.6,SNR=13						
	0.5nm,0.5s						
ZALV	Zalesovo Beam	40.66	327	P	P	01 47 23.0	-1.3
	0.7nm,0.3s,baz=114,slow=8.1,SNR=4.6						
	0.7nm,0.3s						
KURBB	Kurchatov Arra	42.62	320	P	P	01 47 39.6	-0.7
	0.1nm,0.3s,baz=110,slow=10,SNR=2.3						
	0.1nm,0.3s						
WRA	Warramunga Arr	45.51	164	P	P	01 48 02.7	-1.1
	0.4nm,0.7s,baz=344,slow=8.8,SNR=1.9						
	0.4nm,0.7s						
ASAR	Alice Springs	48.98	166	P	P	01 48 31.8	+0.9
	0.3nm,0.7s,baz=357,slow=15,SNR=2.1						
	0.3nm,0.7s						
YKA	Yellowknife Ar	82.57	23	P	P	01 52 06.2	-0.6
	0.2nm,0.6s,baz=316,slow=4.3,SNR=1.7						
	0.2nm,0.6s						

IDC 07 01:44:02.3±3.9**, 6°.14S**×**149°.66E, h0^{km}, mb3.5**/2**, mbtmp3.8**/3**, ML2.4**/1**, Error ellipse: s-maj=128.6km s-min=45.5km az=115.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.08	217	Pn	Pn	01 45 07.7	+1.7
	16nm,0.3s,baz=12,slow=4.9,SNR=14						
PMG				Sn	Sn	01 45 50.1	-4.5
	14nm,0.3s,baz=180,slow=22,SNR=8.3						
	40nm,0.3s						
WRA	Warramunga Arr	20.25	226	P	P	01 48 38.3	-1.1
	2.3nm,0.5s,baz=52,slow=11,SNR=25						
	2.3nm,0.5s						
ASAR	Alice Springs	23.10	219	P	P	01 49 09.5	-0.4
	0.4nm,0.5s,baz=56,slow=9.3,SNR=9.5						
	0.4nm,0.5s						
TORD	Torodi Ar. Bea	147.69	285	PKPbc	PKPbc	02 03 49.8	-0.2
	0.1nm,0.4s,baz=79,slow=4.4,SNR=1.4						

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*KRNET **07** 02:13:05.5±0.1, 43°.09N×76°.64E, h21^{km}, mb3.2*

*NNC **07** 02:13:05.9±0.3, 43°.10N×76°.60E, h0^{km}, mb3.3, mpv3.6, Error ellipse: s-maj=3.6km s-min=1.3km az=168.0*

*SOME **07** 02:13:06.4, 43°.10N×76°.62E, h15^{km}*

*KNET **07** 02:13:07.2±0.5, 43°.01N×76°.53E, h18^{km}±3^{km}, ml2.3, Error ellipse: s-maj=3.7km s-min=1.9km az=54.0*

ISC 07 02:13:06.3±0.7**, 43°.09N**±0°.02×**76°.64E**±0°.01**, h15**^{km}±4^{km}**, n96, σ0^s.92**/177**, 48C-17D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZV	Izvestkoviy	0.06	198	P	Pg	02 13 08.7	-0.6
	141nm,0.1s						
IZV				S	Sg	02 13 10.7	-0.6
	722nm,0.1s						
IZV	Izvestkoviy	0.06	198	*e*P	Pg	02 13 08.8	-0.6
	baz=3.0						
IZV				*e*S	Sg	02 13 10.8	-0.6
	baz=3.0						
IZV	Izvestkoviy	0.06	198	*e*P	Pg	02 13 08.8	-0.6
	126nm,0.0s						
IZV				*e*S	Sg	02 13 10.7	-0.6
	722nm,0.1s						
MTBS	Maitube	0.16	285	P	Pg	02 13 09.9	-0.5
	299nm,0.1s						
MTBS				S	Sg	02 13 12.8	-0.3
	1µm,0.2s						
MTBS	Maitube	0.16	285	*e*P	Pg	02 13 10.1	-0.3
	baz=86						
MTBS				*e*S	Sg	02 13 12.8	-0.3
	baz=86						
MTBS	Maitube	0.16	285	*e*P	Pg	02 13 10.1	-0.3
	299nm,0.1s						
MTBS				*e*S	Sg	02 13 12.8	-0.3
	539nm,0.0s						
TNSS	Tian-Shan	0.23	103	P	Pg	02 13 11.1	-0.6
	235nm,0.1s						
TNSS				S	Sg	02 13 14.8	-0.6
	500nm,0.2s						
TNSS	Tian-Shan	0.23	103	*e*P	Pg	02 13 11.1	-0.6
	baz=1.0						
TNSS				*e*S	Sg	02 13 14.8	-0.6
	baz=1.0						
TNSS	Tian-Shan	0.23	103	*e*P	Pg	02 13 11.1	-0.6
	245nm,0.0s						
TNSS				*e*S	Sg	02 13 14.8	-0.6
	490nm,0.1s						
AAA	Alma-Ata	0.24	59	P	Pg	02 13 11.5	-0.1
	329nm,0.1s						
AAA				S	Sg	02 13 15.3	+0.2
	738nm,0.1s						
AAA	Alma-Ata	0.24	59	*e*P	Pg	02 13 11.5	-0.1
	baz=58						
AAA				*e*S	Sg	02 13 15.3	+0.2
	baz=58						
AAA	Alma-Ata	0.24	59	*e*P	Pg	02 13 11.5	-0.1
	183nm,0.0s						
AAA				*e*S	Sg	02 13 15.3	+0.2
	738nm,0.1s						
KNDC	Almaty	0.27	62	⇑P	Pb	02 13 12.1	-0.9
	56nm,0.2s						
KNDC				⇑S	Sb	02 13 16.5	-1.0
	242nm,0.2s						
MDOK	Medeo	0.31	76	⇓P	Pg	02 13 12.2	-0.6
	31nm,0.2s						
MDOK				Pg	Pg	02 13 12.3	-0.5
	140nm,0.2s						
MDOK				Lg	Lg	02 13 16.6	
	257nm,0.2s						
MDOK				⇑S	Sg	02 13 16.8	-0.5
	92nm,0.4s						
MDOK	Medeo	0.31	76	*e*P	Pg	02 13 12.4	-0.5
	baz=75						
MDOK				*e*S	Sg	02 13 16.7	-0.7
	baz=75						
MDOK	Medeo	0.31	76	*e*P	Pg	02 13 12.3	-0.5
	140nm,0.2s						
MDOK				*e*S	Sg	02 13 16.6	-0.7
	257nm,0.2s						
KOTS	Kotyrbulak	0.38	67	P	Pg	02 13 13.8	-0.3
	52nm,0.2s						
KOTS				S	Sg	02 13 19.2	0.0
	278nm,0.2s						
KOTS	Kotyrbulak	0.38	67	*e*P	Pg	02 13 13.8	-0.3
	baz=67						
KOTS				*e*S	Sg	02 13 19.3	0.0
	baz=67						
KOTS	Kotyrbulak	0.38	67	*e*P	Pg	02 13 13.8	-0.3
	52nm,0.2s						
KOTS				*e*S	Sg	02 13 19.2	0.0
	278nm,0.2s						
KST	Kastek	0.50	265	P	Pg	02 13 15.5	-0.7
	41nm,0.1s						
KST				S	Sg	02 13 22.1	-0.8
	94nm,0.2s						
KST	Kastek	0.50	265	*e*P	Pg	02 13 15.5	-0.7
	baz=65						
KST				*e*S	Sg	02 13 22.1	-0.8
	baz=65						
KST	Kastek	0.50	265	*e*P	Pg	02 13 15.5	-0.7
	41nm,0.1s						
KST				*e*S	Sg	02 13 22.1	-0.8
	94nm,0.2s						
KTBS	Karatobe	0.62	3	P	Pg	02 13 17.9	-0.7
	31nm,0.1s						
KTBS				S	Sg	02 13 26.1	-0.8
	201nm,0.3s						
KTBS	Karatobe	0.62	3	*e*P	Pg	02 13 17.9	-0.7
	baz=3.0						
KTBS				*e*S	Sg	02 13 26.1	-0.8
	baz=3.0						
KTBS	Karatobe	0.62	3	*e*P	Pg	02 13 17.9	-0.7
	31nm,0.1s						
KTBS				*e*S	Sg	02 13 26.1	-0.8
	201nm,0.3s						
DGS	Degeres	0.65	284	P	Pg	02 13 18.3	-0.8
	57nm,0.1s						
DGS				S	Sg	02 13 27.0	-0.8
	49nm,0.2s						
DGS	Degeres	0.65	284	*e*P	Pg	02 13 18.3	-0.8
	baz=84						
DGS				*e*S	Sg	02 13 26.9	-0.8
	baz=84						
DGS	Degeres	0.65	284	*e*P	Pg	02 13 18.3	-0.8
	56nm,0.1s						
DGS				*e*S	Sg	02 13 26.9	-0.8
	49nm,0.2s						
TKM2	Tokmak 2	0.78	258	⇑P	Pg	02 13 20.6	-1.0
	46nm,0.1s,SNR=344						
TKM2				⇑S	Sb	02 13 31.7	-0.5
	110nm,0.1s						
TKM2	Tokmak 2	0.78	258	⇓P	Pg	02 13 20.5	-1.0
	9.9nm,0.2s						
TKM2				⇑S	Sg	02 13 31.4	-0.5
	46nm,0.3s						
TKM2	Tokmak 2	0.78	258	⇑*i*P	Pg	02 13 20.4	-1.1
	baz=58						
TKM2				⇑*i*S	Sg	02 13 31.0	-0.9
	baz=58						
CHKK	Chushkaly	0.81	18	P	Pg	02 13 21.1	-0.9
	13nm,0.1s						
CHKK				S	Sg	02 13 31.7	-0.9
	176nm,0.3s						
CHKK	Chushkaly	0.81	18	*e*P	Pg	02 13 21.1	-0.9
	baz=19						
CHKK				*e*S	Sg	02 13 31.7	-0.9
	baz=19						
CHKK	Chushkaly	0.81	18	*e*P	Pg	02 13 21.1	-0.9
	13nm,0.1s						
CHKK				*e*S	Sg	02 13 31.7	-0.9
	176nm,0.3s						
ANVS	Anan'yevo	0.82	112	⇓*i*P	Pg	02 13 20.9	-1.3
	baz=11						
ANVS				⇓*e*S	Sg	02 13 31.8	-1.1
	baz=11						
KUU	Kurty	0.83	345	P	Pg	02 13 21.5	-1.0
	7.7nm,0.1s						
KUU				S	Sg	02 13 32.3	-1.2
	68nm,0.3s						
KUU	Kurty	0.83	345	*e*P	Pg	02 13 21.5	-1.0
	baz=45						
KUU				*e*S	Sg	02 13 32.3	-1.2
	baz=45						
KUU	Kurty	0.83	345	*e*P	Pg	02 13 21.5	-1.0
	7.7nm,0.1s						
KUU				*e*S	Sg	02 13 32.3	-1.2
	68nm,0.3s						
ULHL	Ulahol	0.89	199	⇓P	Pg	02 13 22.5	-1.1
	19nm,0.2s,SNR=12						
ULHL				⇑S	Sg	02 13 34.5	-0.8
	18nm,0.1s						
ULHL	Ulahol	0.89	199	⇑*i*P	Pg	02 13 22.5	-1.1
	baz=99						
ULHL				⇑*i*S	Sg	02 13 34.3	-1.0
	baz=99						
KRBS	Karabastau	0.93	311	P	Pg	02 13 23.2	-1.1
	40nm,0.1s						
KRBS				S	Sg	02 13 35.3	-1.1
	86nm,0.2s						
KRBS	Karabastau	0.93	311	*e*P	Pg	02 13 23.2	-1.1
	baz=11						
KRBS				*e*S	Sg	02 13 35.3	-1.1
	baz=11						
KRBS	Karabastau	0.93	311	*e*P	Pg	02 13 23.2	-1.1
	40nm,0.1s						
KRBS				*e*S	Sg	02 13 35.3	-1.1
	86nm,0.2s						

KDJ	**Kajisay**	**1.04**	**157**	⇑*i*P	**Pg**	**02 13 25.1**	**-1.3**
	baz=57						
KDJ				⇑*i*S	**Sg**	**02 13 38.8**	**-1.2**
	baz=57						
KURS	**Kuram**	**1.19**	**70**	P	**Pg**	**02 13 27.9**	**-1.3**
	14nm,0.3s						
KURS				S	**Sg**	**02 13 43.3**	**-1.4**
	9.9nm,0.3s						
KURS	**Kuram**	**1.19**	**70**	*e*P	**Pg**	**02 13 27.9**	**-1.3**
	baz=70						
KURS				*e*S	**Sg**	**02 13 43.3**	**-1.4**
	baz=70						
KURS	**Kuram**	**1.19**	**70**	*e*P	**Pg**	**02 13 27.9**	**-1.3**
	14nm,0.3s						
KURS				*e*S	**Sg**	**02 13 43.3**	**-1.4**
	9.9nm,0.3s						
SATY	**Saty**	**1.30**	**91**	P	**Pn**	**02 13 29.4**	**-0.6**
	27nm,0.1s						
SATY				S	**Sb**	**02 13 45.9**	**-1.1**
	40nm,0.1s						
SATY	**Saty**	**1.30**	**91**	*e*P	**Pn**	**02 13 29.4**	**-0.6**
	baz=91						
SATY				*e*S	**Sb**	**02 13 45.8**	**-1.1**
	baz=91						
SATY	**Saty**	**1.30**	**91**	*e*P	**Pn**	**02 13 29.4**	**-0.6**
	27nm,0.1s						
SATY				*e*S	**Sb**	**02 13 45.9**	**-1.1**
	40nm,0.1s						
KBK	**Karagaybulak**	**1.31**	**251**	⇑P	**Pn**	**02 13 30.2**	**-0.1**
	33nm,0.2s,SNR=14						
KBK				⇑S	**Sn**	**02 13 48.3**	**+0.7**
	49nm,0.2s						
KBK	**Karagaybulak**	**1.31**	**251**	⇑*i*P	**Pn**	**02 13 30.1**	**-0.2**
	baz=52						
KBK				⇑*i*S	**Sb**	**02 13 47.7**	**+0.2**
	baz=52						
ZHN	**Zhinishke**	**1.32**	**86**	P	**Pn**	**02 13 29.8**	**-0.5**
	16nm,0.1s						
ZHN				S	**Sb**	**02 13 46.5**	**-1.1**
	68nm,0.2s						
ZHN	**Zhinishke**	**1.32**	**86**	*e*P	**Pn**	**02 13 29.8**	**-0.5**
	baz=86						
ZHN				*e*S	**Sb**	**02 13 46.5**	**-1.1**
	baz=86						
ZHN	**Zhinishke**	**1.32**	**86**	*e*P	**Pn**	**02 13 29.8**	**-0.5**
	16nm,0.1s						
ZHN				*e*S	**Sb**	**02 13 46.5**	**-1.1**
	68nm,0.2s						
CHMS	**Chumysh**	**1.39**	**267**	⇑P	**Pn**	**02 13 31.0**	**-0.1**
	37nm,0.1s,SNR=12						
CHMS				⇑S	**Sb**	**02 13 49.4**	**0.0**
	29nm,0.2s						
CHMS	**Chumysh**	**1.39**	**267**	⇓*i*P	**Pn**	**02 13 31.1**	**-0.1**
	baz=67						
CHMS				⇓*i*S	**Sb**	**02 13 49.6**	**+0.2**
	baz=67						
ARXS	**Arharly**	**1.42**	**37**	P	**Pn**	**02 13 31.7**	**+0.1**
	20nm,0.2s						
ARXS				S	**Sb**	**02 13 50.0**	**-0.4**
	144nm,0.2s						
ARXS	**Arharly**	**1.42**	**37**	*e*P	**Pn**	**02 13 31.7**	**+0.1**
	20nm,0.2s						
ARXS				*e*S	**Sb**	**02 13 50.0**	**-0.4**
	144nm,0.2s						
PRZ	**Przheval'sk**	**1.43**	**114**	⇑*i*P	**Pn**	**02 13 31.6**	**-0.3**
	baz=14						
PRZ				⇑*i*S	**Sb**	**02 13 50.8**	**-0.1**
	baz=14						
SGDS	**Sogindy**	**1.51**	**285**	P	**Pn**	**02 13 33.1**	**+0.2**
	21nm,0.2s						
SGDS				S	**Sn**	**02 13 52.4**	**+0.1**
	46nm,0.3s						
KPKS	**Kokpek**	**1.54**	**75**	P	**Pn**	**02 13 33.8**	**+0.5**
	26nm,0.2s						
KPKS				S	**Sn**	**02 13 53.6**	**+0.4**
	83nm,0.2s						
KPKS	**Kokpek**	**1.54**	**75**	*e*P	**Pn**	**02 13 33.8**	**+0.5**
	baz=75						
KPKS				*e*S	**Sn**	**02 13 53.5**	**+0.4**
	baz=75						
KPKS	**Kokpek**	**1.54**	**75**	*e*P	**Pn**	**02 13 33.8**	**+0.5**
	26nm,0.2s						
KPKS				*e*S	**Sn**	**02 13 53.6**	**+0.4**
	83nm,0.2s						
USP	**Ospenovka**	**1.57**	**277**	⇑P	**Pn**	**02 13 34.1**	**+0.4**
	8.3nm,0.1s,SNR=54						
USP				⇑S	**Sg**	**02 13 55.7**	**-1.3**
	29nm,0.1s						
USP	**Ospenovka**	**1.57**	**277**	⇑*i*P	**Pb**	**02 13 34.4**	**-0.7**
	baz=77						
USP				⇑*i*S	**Sb**	**02 13 55.3**	**+0.4**
	baz=77						
TARG	**Taragay, Kyrgy**	**1.61**	**147**	⇑*i*P	**Pn**	**02 13 34.9**	**+0.3**
	baz=47						
TARG				⇑*i*S	**Sn**	**02 13 56.0**	**+0.7**
	baz=47						
AAK	**Ala-Archa**	**1.64**	**255**	⇑P	**Pb**	**02 13 35.8**	**-0.5**
	5.1nm,0.2s,SNR=17						
AAK				⇑S	**Sb**	**02 13 57.5**	**+0.6**
	20nm,0.3s						
AAK	**Ala-Archa**	**1.64**	**255**	⇑*i*P	**Pb**	**02 13 35.6**	**-0.7**
	baz=55						
AAK				⇑*i*S	**Sb**	**02 13 57.3**	**+0.5**
	baz=55						
BLB	**Baldybastay**	**1.68**	**52**	P	**Pb**	**02 13 36.2**	**-0.7**
	25nm,0.1s						
BLB				S	**Sb**	**02 13 57.6**	**-0.2**
	128nm,0.2s						
NRN	**Naryn**	**1.72**	**196**	⇑*i*P	**Pn**	**02 13 37.0**	**+1.0**
	baz=97						
NRN				⇑*i*S	**Sb**	**02 13 59.9**	**+0.6**
	baz=97						
UZB	**Uzynbulak**	**1.75**	**87**	P	**Pn**	**02 13 37.2**	**+1.0**
	14nm,0.2s						
UZB				S	**Sn**	**02 13 59.2**	**+0.9**
	22nm,0.1s						
UZB	**Uzynbulak**	**1.75**	**87**	*e*P	**Pb**	**02 13 37.7**	**-0.5**
	baz=87						
UZB				*e*S	**Sb**	**02 14 00.1**	**+0.1**
	baz=87						
UZB	**Uzynbulak**	**1.75**	**87**	*e*P	**Pb**	**02 13 37.7**	**-0.5**
	9.6nm,0.1s						
UZB				*e*S	**Sb**	**02 14 00.1**	**+0.1**
	22nm,0.1s						
UCH	**Uchtor**	**1.79**	**242**	⇑P	**Pb**	**02 13 38.5**	**-0.6**
	4.9nm,0.3s,SNR=6.7						
UCH				⇑S	**Sb**	**02 14 02.1**	**+0.7**
	9.2nm,0.2s						
UCH	**Uchtor**	**1.79**	**242**	⇑*i*P	**Pn**	**02 13 37.9**	**+0.9**
	baz=42						
UCH				⇑*i*S	**Sb**	**02 14 01.4**	**0.0**
	baz=42						
SHLS	**Shalkode**	**2.07**	**87**	Pg	**Pg**	**02 13 49.5**	**+3.5**
	12nm,0.2s						
SHLS				Lg	Lg	02 14 20.4	
	16nm,0.3s						
SHLS	**Shalkode**	**2.07**	**87**	*e*Pg	**Pg**	**02 13 49.5**	**+3.5**
	12nm,0.2s						
SHLS				*e*Lg	Lg	02 14 20.4	
	16nm,0.3s						
PDGK	**Podgornoye**	**2.10**	**82**	Pg	**Pb**	**02 13 44.2**	**+0.1**
	6.3nm,0.3s						
PDGK				Lg	Lg	02 14 11.2	
	10nm,0.4s						
PDGK	**Podgornoye**	**2.10**	**82**	⇑Pg	**Pb**	**02 13 42.8**	**-1.4**
	5.7nm,0.3s						
PDGK				⇑Lg	Lg	02 14 11.1	
	11nm,0.4s						
ARLS	**Aral**	**2.11**	**235**	⇓*i*P	**Pn**	**02 13 42.2**	**+1.0**
	baz=35						
ARLS				⇓*i*S	**Sn**	**02 14 08.7**	**+1.5**
	baz=35						
EKS2	**Erkin-Say**	**2.15**	**260**	⇓P	**Pb**	**02 13 44.1**	**-0.8**
	12nm,0.2s,SNR=41						
EKS2				⇑S	**Sg**	**02 14 13.1**	**-2.2**
	7.1nm,0.1s						
EKS2	**Erkin-Say**	**2.15**	**260**	⇑*i*P	**Pn**	**02 13 42.8**	**+1.1**
	baz=60						
EKS2				⇑*i*S	**Sn**	**02 14 09.7**	**+1.6**
	baz=60						
AML	**Almayashu**	**2.37**	**247**	⇑Pn	**Pn**	**02 13 45.6**	**+0.5**
	0.3nm,0.3s						
AML				⇓Lg	Lg	02 14 20.5	
	0.9nm,0.5s						
MRKS	**Merke**	**2.53**	**263**	Pg	**Pb**	**02 13 51.6**	**+0.1**
	4.5nm,0.2s						
MRKS				Lg	Lg	02 14 24.0	
	23nm,0.3s						
MRKS	**Merke**	**2.53**	**263**	*e*Pg	**Pb**	**02 13 51.9**	**+0.5**
	4.6nm,0.1s						
MRKS				*e*Lg	Lg	02 14 24.8	
	23nm,0.3s						
DJR	**Jarkent**	**2.60**	**60**	Pg	**Pb**	**02 13 52.4**	**-0.3**
	1.7nm,0.2s						
DJR				Lg	Lg	02 14 25.4	
	20nm,0.6s						
DJR	**Jarkent**	**2.60**	**60**	*e*Pg	**Pb**	**02 13 52.8**	**+0.1**
	1.7nm,0.2s						
DJR				*e*Lg	Lg	02 14 25.9	
	20nm,0.6s						
BTLS	**Baital**	**2.70**	**317**	Pg	**Pb**	**02 13 54.5**	**+0.1**
	1.0nm,0.2s						
BTLS				Lg	Lg	02 14 28.9	
	6.0nm,0.4s						
BTLS	**Baital**	**2.70**	**317**	*e*Pg	**Pb**	**02 13 54.5**	**+0.1**
	1.0nm,0.2s						
BTLS				*e*Lg	Lg	02 14 28.9	
	6.0nm,0.4s						
MNAS	**Manas**	**3.10**	**260**	⇓*i*P	**Pn**	**02 13 55.9**	**+1.1**
	baz=60						
MNAS				⇓*i*S	**Sn**	**02 14 32.7**	**+1.0**
	baz=60						
KK31	**Karatay Array**	**4.49**	**272**	⇑Pg	**Pb**	**02 14 26.7**	**+2.0**
	0.4nm,0.4s,baz=87,slow=18,SNR=14						
KK31				⇓Lg	Lg	02 15 28.4	
	1.5nm,0.4s,baz=88,slow=29,SNR=11						
MAKZ	**Makanchi**	**5.31**	**44**	⇑Pn	**Pn**	**02 14 26.2**	**+1.1**
	2.1nm,1.4s						
MAKZ				⇑Sn	**Sn**	**02 15 28.1**	**+2.1**
	1.5nm,1.4s						
MAKZ				⇓Lg	Lg	02 15 53.9	
	2.8nm,1.1s						
MK31	**Makanchi Array**	**5.46**	**45**	⇑Pn	**Pn**	**02 14 28.3**	**+1.2**
	baz=222,slow=16,SNR=9.3						
MK31				Sn	**Sn**	**02 15 32.4**	**+2.7**
	0.2nm,0.3s,baz=222,slow=25,SNR=4.7						
MK31				⇓Lg	Lg	02 15 59.2	
	0.4nm,0.3s,baz=227,slow=29,SNR=5.7						
KURBB	**Kurchatov Arra**	**7.65**	**9**	⇓Lg	Lg	02 17 12.0	
	2.3nm,0.6s						
KURK	**Kurchatov**	**7.75**	**9**	⇑Lg	Lg	02 17 12.3	
	2.1nm,0.9s						

IPEC ***07*** *02:21:14.8±0.2, 50°.19N×18°.63E, h1^{km}, ML1.5/4, Error ellipse: s-maj=2.1km s-min=1.1km az=163.0*

PRU 07 02:21:15.3±0.0**, 50°.19N×18°.55E, h0^{km}, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.44**	**217**	*e*PG	Pg	02 21 23.9	+0.2
OKC				*e*SG	Sg	02 21 29.6	+0.3
	comp=Z,41nm,1.1s						
MORC	**Moravsky Berou**	**0.77**	**238**	*e*Pg	Pg	02 21 30.2	+0.2
	baz=59						
MORC				*e*Sg	Sg	02 21 40.5	+0.5
	12nm,0.3s,baz=59						
OJC	**Ojcow**	**0.80**	**87**	*e*Pg	Pg	02 21 29.0	-1.7
OJC				*e*Sg	Sg	02 21 40.0	-1.1
KRLC	**Kraliky**	**1.14**	**265**	*e*PG	Pg	02 21 36.3	-0.9
KRLC				*e*SG	Sg	02 21 52.1	+0.1
	comp=Z,8.1nm,0.3s						
LANS	**Liptovska Anna**	**1.20**	**150**	*e*PG	Pg	02 21 37.6	-0.7
LANS				*e*SG	Sb	02 21 54.6	-0.4
LANS				*e*LG	Lg	02 21 57.4	
NIE	**Niedzica**	**1.37**	**124**	*e*Pg	Pg	02 21 40.7	-0.8
NIE				*e*Sg	Sg	02 21 59.2	-0.1
DPC	**Dobruska-Polom**	**1.44**	**277**	*e*PG	Pn	02 21 42.2	-0.5
DPC				*e*SG	Sg	02 22 01.5	0.0
	comp=Z,7.4nm,0.6s						
OSTC	**Ostas**	**1.54**	**285**	*e*PG	Pn	02 21 43.1	-0.9
OSTC				*e*SG	Sb	02 22 05.3	+0.6
VRAC	**Vranov**	**1.55**	**236**	*e*Pg	Pn	02 21 43.9	-0.2
	baz=56						
VRAC				*e*Sg	Sn	02 22 04.7	-0.2
	3.4nm,0.2s,baz=56						
KSP	**Ksiaz**	**1.58**	**295**	*e*Pg	Pb	02 21 45.5	+0.1
KSP				*e*Sg	Sg	02 22 07.1	+1.0
UPC	**Upice**	**1.66**	**282**	*e*SG	Sg	02 22 09.0	+0.5
	comp=Z,2.9nm,0.4s						
VYHS	**Vyhne**	**1.71**	**174**	*e*PN	Pn	02 21 44.8	-1.5
VYHS				*e*SN	Sn	02 22 08.1	-0.8
KRUC	**Moravsky**	**1.80**	**232**	*e*Pn	Pn	02 21 47.6	0.0
	baz=51						
KRUC				*e*Sg	Sb	02 22 12.4	+0.2
	2.3nm,0.2s,baz=51						
STHS	**Stebnicka Huta**	**1.91**	**113**	*e*PN	Pn	02 21 49.2	+0.1
TREC	**Trest**	**2.18**	**247**	*e*SG	Sb	02 22 23.5	+0.3
GOPC	**GO Pecny, Ondr**	**2.44**	**265**	*e*SG	Sb	02 22 31.9	+1.2
	comp=Z,3.4nm,0.8s						
PVCC	**Panska Ves**	**2.57**	**279**	*e*SG	Sg	02 22 37.9	0.0
	comp=Z,3.4nm,0.2s						
PRU	**Pruhonice**	**2.59**	**267**	*e*SG	Sg	02 22 36.7	-1.7
CKRC	**Cesky Krumlov**	**3.08**	**245**	*e*SG	Sg	02 22 52.8	-1.6
KHC	**Kasperske Hory**	**3.40**	**254**	*e*PG	Pb	02 22 16.2	-0.2
KHC				*e*SG	Sg	02 23 02.9	-1.6

IDC ***07*** *02:42:57.6±0.7, 12°.09N×144°.22E, h0^{km}, mb3.9/14, mbtmp3.9/14, Error ellipse: s-maj=27.0km s-min=15.6km az=99.0*

ISC 07 02:43:02.1±0.7**, 12°.08N**±0°.09×**144°.3E**±0°.2**, h29^{km}, n17, σ0^{s}.80**/18**, mb3.9**/15**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.59**	**20**	Pn	**Pn**	**02 43 27.8**	**-0.5**
	61nm,0.3s,baz=187,slow=9.9,SNR=10						
GUMO				Sn	**Sn**	**02 43 47.1**	**-0.9**
	62nm,0.3s,baz=314,slow=22,SNR=13						
KSRS	**Korea Array**	**29.22**	**333**	P	**P**	**02 49 02.0**	**+0.7**
	0.5nm,0.3s,baz=145,slow=43,SNR=1.7						
	0.5nm,0.3s						
CTA	**Charters Tower**	**32.03**	**177**	P	**P**	**02 49 25.8**	**-0.5**
	0.6nm,0.3s,baz=24,slow=11,SNR=3.7						
	0.6nm,0.3s						
WRA	**Warramunga Arr**	**33.30**	**197**	P	**P**	**02 49 36.5**	**-0.9**
	1.9nm,0.9s,baz=19,slow=9.3,SNR=9.4						
	1.9nm,0.9s						
ASAR	**Alice Springs**	**36.96**	**196**	P	**P**	**02 50 08.8**	**-0.2**
	1.7nm,1.0s,baz=18,slow=11,SNR=11						
	1.7nm,1.0s						
MKAR	**Makanchi Array**	**62.19**	**317**	P	**P**	**02 53 20.4**	**-0.6**
	0.5nm,0.5s,baz=91,slow=8.2,SNR=9.4						
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**62.52**	**325**	P	**P**	**02 53 22.7**	**-0.3**
	0.3nm,0.4s,baz=93,slow=6.3,SNR=2.1						
	0.3nm,0.4s						
ILAR	**Eielson Array**	**70.16**	**25**	P	**P**	**02 54 10.4**	**-1.3**
	0.6nm,0.7s,baz=264,slow=4.9,SNR=5.9						
	0.6nm,0.7s						
BVAR	**Borovoye Array**	**70.76**	**322**	P	**P**	**02 54 15.1**	**-0.5**
	2.5nm,0.7s,baz=100,slow=7.7,SNR=11						
	2.5nm,0.7s						
INK	**Inuvik**	**75.96**	**22**	P	**P**	**02 54 45.5**	**-0.4**
	0.7nm,0.7s,baz=256,slow=5.6,SNR=3.7						
	0.7nm,0.7s						
AKTO	**Aktyubinsk**	**78.44**	**319**	P	**P**	**02 55 01.1**	**+0.8**
	0.5nm,0.5s,baz=105,slow=5.5,SNR=2.1						
	0.5nm,0.5s						
BBB	**Bella Bella**	**79.09**	**39**	P	**P**	**02 55 04.6**	**+0.9**
	16nm,1.0s,baz=284,slow=8.3,SNR=2.9						
YKA	**Yellowknife Ar**	**84.44**	**27**	P	**P**	**02 55 31.6**	**-0.2**
	0.2nm,0.6s,baz=289,slow=5.3,SNR=3.0						
	0.2nm,0.6s						
RES	**Resolute Bay**	**86.13**	**13**	P	**P**	**02 55 40.8**	**+0.8**
	0.9nm,0.8s,baz=326,slow=5.3,SNR=4.8						
	0.9nm,0.8s						
NEW	**Newport**	**86.72**	**41**	P	**P**	**02 55 44.4**	**+0.9**
	1.3nm,0.6s,baz=128,slow=8.8,SNR=3.8						
	1.3nm,0.6s						
NVAR	**Mina Array Bea**	**88.29**	**51**	P	**P**	**02 55 52.6**	**+1.2**
	0.4nm,0.6s,baz=270,slow=6.2,SNR=4.3						
	0.4nm,0.6s						
LPAZ	**La Paz**	**148.30**	**101**	PKPbc	**PKiKP**	**03 02 49.0**	**0.0**
	0.7nm,0.7s,baz=41,slow=3.1,SNR=3.6						

BJI ***07*** *02:44:16.9±0.0, 12°.16N×144°.47E, h7^{km}, mb4.7/36, mB4.8/18, Ms4.2/2, Ms7 3.9/3*

IDC ***07*** *02:44:19.0±0.4, 12°.16N×144°.16E, h0^{km}, mb4.7/41, mbtmp4.7/41, MS3.6/10, Error ellipse: s-maj=14.6km s-min=9.2km az=81.0*

MOS ***07*** *02:44:20.9±1.0, 12°.15N×144°.08E, h24^{km}, mb5.1/47, Error ellipse: s-maj=10.4km s-min=5.9km az=102.7*

NEIC ***07*** *02:44:26±1.7, 12°.2N±0°.1×144°.2E±0°.1, h45^{km}±7^{km}, mb4.9/121, Error ellipse: s-maj=19.5km s-min=14.6km az=86.0*

DJA ***07*** *02:44:28.3±0.6, 12°N±3°×14°5E±°, h87^{km}±6^{km}, M4.9/37, mb4.8/37, mB5.6/6, MLv4.8/1, Mw(mB)5.1/6, MwMwp5.5/1, Mwp5.6/1*

ISC 07 02:44:21.4±0.5**, 12°.16N**±0°.04×**144°.29E**±0°.07**, h16^{km}**±2^{km}**, h17^{km}:pP-P, n274, σ1^{s}.05**/280**, mb4.9**/142**, MS3.7**/11**, 8C-5D, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.53**	**22**	Pn	**Pb**	**02 44 50.0**	**+0.7**
	442nm,0.3s,baz=191,slow=2.9,SNR=19						
GUMO				Sn	**Sg**	**02 45 10.1**	**-0.6**
	508nm,0.3s,baz=37,slow=22,SNR=14						
JCJ	**Chichijima**	**14.99**	**353**	LR	LR	02 51 49.4	
	comp=Z,133nm,18.3s,baz=176,slow=30						
GENI	**Genyem**	**15.22**	**196**	P	**P**	**02 47 59.2**	**-1.4**
	63nm,1.2s						
KRVT	**Keravat (AS076**	**18.08**	**154**	LR	LR	02 55 53.3	
	comp=Z,241nm,18.2s,baz=142,slow=38						
DAV	**Davao City (W)**	**19.12**	**256**	LR	LR	02 56 04.6	
	comp=Z,119nm,21.2s,baz=64,slow=37						
FAKI	**Fak Fak**	**19.18**	**219**	P	**Pn**	**02 48 47.0**	**+1.6**
	28nm,1.3s						
JOW	**Kunigami**	**20.96**	**316**	P	**P**	**02 49 03.8**	**-0.1**
	19nm,0.6s,baz=335,slow=18,SNR=2.3						
	19nm,0.6s						
LBMI	**Labuha**	**20.97**	**234**	P	Pn	02 49 06.6	0.0
	71nm,0.9s						
PMG	**Port Moresby**	**21.61**	**172**	P	**P**	**02 49 10.1**	**-0.8**
	8.2nm,0.4s,baz=72,slow=5.1,SNR=3.0						
PMG				LR	LR	02 58 10.1	
	comp=Z,255nm,18.2s,baz=354,slow=38						
	8.2nm,0.4s						
PMG	**Port Moresby**	**21.61**	**172**	P	**P**	**02 49 10.2**	**-0.7**
PMG	**Port Moresby**	**21.61**	**172**	P	**P**	**02 49 10.2**	**-0.7**
PMG				pmax	pmax		
	comp=Z,20nm,0.8s						
H11N1	**WAKE ISLAND Hy**	**22.98**	**68**	T	T	03 13 50.4	
	baz=255,slow=75,SNR=18						
H11N2	**WAKE ISLAND Hy**	**22.98**	**68**	T	T	03 13 52.6	
	baz=255,slow=75,SNR=8.2						
H11N3	**WAKE ISLAND Hy**	**22.99**	**68**	T	T	03 13 53.8	
	baz=255,slow=75,SNR=7.2						
GTOI	**Gorontalo**	**24.02**	**243**	P	**P**	**02 49 38.9**	**+3.2**
	comp=Z,12nm,0.8s						
JNU	**Nakatsue**	**24.21**	**332**	P	**P**	**02 49 36.7**	**-0.7**
	comp=Z,21nm,0.8s,baz=114,slow=2.5,SNR=6.4						
JNU				LR	LR	02 58 04.0	
	comp=Z,76nm,18.4s,baz=172,slow=34						
	comp=Z,21nm,0.8s						
MJAR	**Matsushiro Arr**	**24.89**	**348**	P	**P**	**02 49 42.1**	**-1.4**
	comp=Z,2.3nm,0.4s,baz=348,slow=16,SNR=3.4						
MJAR				LR	LR	02 59 07.6	
	comp=Z,235nm,18.4s,baz=168,slow=36						
	comp=Z,2.3nm,0.4s						
MAJO	**Matsushiro**	**24.89**	**348**	*i* P	**P**	**02 49 41.1**	**-2.4**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MRSI	**Marisa**	**25.03**	**244**	P	**P**	**02 49 46.0**	**+1.0**
	comp=Z,50nm,1.2s,comp=Z,1µm						
LUWI	**Luwuk**	**25.07**	**240**		**P**	**02 49 44.5**	**-0.8**
LUWI	**Luwuk**	**25.07**	**240**	P	**P**	**02 49 45.7**	**+0.4**
	comp=Z,81nm,1.1s,comp=Z,3µm						
COEN	**Coen**	**25.97**	**182**	P	**P**	**02 49 53.5**	**+0.1**
MPSI	**Mapaga**	**26.90**	**246**	P	**P**	**02 50 03.1**	**+1.2**
	comp=Z,13nm,1.5s						
KSRS	**Korea Array**	**29.15**	**333**	P	**P**	**02 50 21.1**	**-0.6**
	comp=Z,2.5nm,0.5s,baz=138,slow=11,SNR=6.7						
	comp=Z,2.5nm,0.5s						
CTA	**Charters Tower**	**32.10**	**177**	P	**P**	**02 50 48.1**	**+0.1**
	comp=Z,7.3nm,0.5s,baz=347,slow=10,SNR=20						
	comp=Z,7.3nm,0.5s						
CTAO	**Charters Tower**	**32.10**	**177**	P	**P**	**02 50 48.5**	**+0.5**
CTAO				IAmb	IAmb	02 50 49.1	
	comp=Z,15nm,1.1s						
CTAO	**Charters Tower**	**32.10**	**177**	P	**P**	**02 50 48.5**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,15nm,1.1s						
WB0	**Warramunga Arr**	**33.19**	**197**	P	**P**	**02 50 57.2**	**-0.4**
WR0	**Warramunga Arr**	**33.33**	**197**	P	**P**	**02 50 58.6**	**-0.2**
WRAB	**Tennant Creek**	**33.36**	**197**	P	**P**	**02 50 58.8**	**-0.2**
WRAB				IAmb	IAmb	02 50 59.5	
	comp=Z,15nm,1.0s						
WRAB	**Tennant Creek**	**33.36**	**197**	P	**P**	**02 50 58.8**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,15nm,1.0s						
WRAB	**Tennant Creek**	**33.36**	**197**	P	**P**	**02 50 58.2**	**-0.8**
WB2	**Warramunga Arr**	**33.37**	**197**	P	**P**	**02 50 58.9**	**-0.2**
WB2				IAmb	IAmb	02 50 59.6	
	comp=Z,14nm,0.9s						
WRA	**Warramunga Arr**	**33.37**	**197**	P	**P**	**02 50 58.6**	**-0.5**
	comp=Z,9.3nm,0.8s,baz=22,slow=9.3,SNR=34						
WRA				PcP	**PcP**	**02 53 41.0**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=19,slow=3.7,SNR=3.2						
	comp=Z,9.3nm,0.8s						
WRA	**Warramunga Arr**	**33.37**	**197**	P	**P**	**02 50 58.2**	**-0.9**
USRK	**Ussuriysk Ar.**	**33.64**	**344**	P	**P**	**02 51 00.7**	**-0.5**
	comp=Z,2.1nm,0.6s,baz=147,slow=10,SNR=4.5						
	comp=Z,2.1nm,0.6s						
TWSI	**Taliwang, Sumb**	**34.25**	**234**	P	**P**	**02 51 07.7**	**+0.8**
	comp=Z,15nm,1.0s,comp=Z,540nm						
YSS	**Yuzh-Sakhalins**	**34.70**	**358**	*e*P	P	02 51 02.2	-8.2
YSS				*e*		02 59 14.5	
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
BNX	**BinXian**	**36.42**	**340**	⇑P	**P**	**02 51 25.1**	**-0.1**
BNX				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BNX				pmax	pmax		
	comp=Z,73nm,5.7s						
LYN	**LuoYang**	**36.49**	**313**	⇓P	**P**	**02 51 25.9**	**-0.1**
LYN				pmax	pmax		
	comp=Z,22nm,0.8s						
LYN				LR	LR		
	comp=Z,260nm,16.7s						
LYN				LR	LR		
	comp=Z,170nm,19.0s						
HNS	**HongShan**	**36.51**	**319**	⇑P	**P**	**02 51 25.8**	**-0.2**
HNS				pmax	pmax		
	comp=Z,17nm,0.9s						
AS31	**Alice Springs**	**37.03**	**196**	P	**P**	**02 51 30.7**	**+0.1**
ASAR	**Alice Springs**	**37.03**	**196**	P	**P**	**02 51 30.5**	**-0.1**
	comp=Z,8.4nm,0.7s,baz=22,slow=10,SNR=94						
ASAR				PcP	**PcP**	**02 53 52.4**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=45,slow=2.4,SNR=3.7						
	comp=Z,8.4nm,0.7s						
ASAR	**Alice Springs**	**37.03**	**196**	P	**P**	**02 51 30.7**	**+0.1**
BJT	**Baijiatuau**	**37.22**	**323**	P	**P**	**02 51 32.8**	**+0.7**
BJT				pP	**pwP**	**02 51 43.6**	**-1.1**
EIDS	**Eidsvold**	**37.88**	**170**	P	**P**	**02 51 37.8**	**0.0**
EIDS				IAmb	IAmb	02 51 39.9	
	comp=Z,15nm,1.0s						
KLR	**Kul'dur**	**38.39**	**347**	P	**P**	**02 51 41.1**	**-0.7**
	comp=Z,2.0nm,0.4s,baz=182,slow=6.0,SNR=8.2						
KLR				PcP	**PcP**	**02 53 56.0**	**+0.8**
	comp=Z,4.6nm,0.9s,baz=189,slow=4.8,SNR=5.7						
	comp=Z,2.0nm,0.4s						
KLR	**Kul'dur**	**38.39**	**347**	*ce*P	**P**	**02 51 40.7**	**-1.1**
KLR				pmax	pmax		
	comp=Z,9.0nm,1.7s						
XAN	**Xi'an**	**38.85**	**310**	P	**P**	**02 51 44.2**	**-1.8**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
DZM	**Mont Dzumac**	**40.37**	**147**	P	**P**	**02 52 00.2**	**+1.4**
	comp=Z,7.4nm,0.7s,baz=307,slow=2.1,SNR=5.5						
DZM				LR	LR	03 08 29.6	
	comp=Z,76nm,18.2s,baz=295,slow=36						
	comp=Z,7.4nm,0.7s						
HEH	**HeiHe**	**40.43**	**343**	*e*P	**P**	**02 51 58.1**	**-0.8**
HEH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HEH				pmax	pmax		
	comp=Z,140nm,4.1s						
PSA00	**Pilbara Seismi**	**41.23**	**216**	P	**P**	**02 52 04.8**	**-1.0**
PSA00				IAmb	IAmb	02 52 08.5	
	comp=Z,21nm,0.9s						
CD2	**Chengdu**	**41.78**	**303**	P	**P**	**02 52 09.9**	**-0.4**
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
PET	**Petropavlovsk**	**42.35**	**13**	*i* P	**P**	**02 52 11.3**	**-3.2**
PET				pmax	pmax		
	comp=Z,12nm,1.0s						

PZH	**PanZhiHua**	**42.40**	**296**	P	**P**	**02 52 18.2**	**+2.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,5.5s						
LZH	**Lanzhou**	**43.49**	**310**	*e*P	**P**	**02 52 24.8**	**+0.5**
LZH				pP	sP	02 52 31.8	+3.5
LZH				pmax	pmax		
	comp=Z,18nm,1.5s						
ZEA	**Zeya**	**43.63**	**345**	*i* P	**P**	**02 52 23.7**	**-1.2**
STKA	**Stephens Creek**	**43.86**	**183**	P	**P**	**02 52 26.1**	**-0.9**
	comp=Z,7.4nm,0.6s,baz=354,slow=8.3,SNR=23						
	comp=Z,7.4nm,0.6s						
STKA	**Stephens Creek**	**43.86**	**183**	P	**P**	**02 52 26.3**	**-0.7**
STKA	**Stephens Creek**	**43.86**	**183**	P	**P**	**02 52 26.3**	**-0.7**
STKA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SRIT	**Nakonsritamara**	**44.06**	**270**	P	**P**	**02 52 28.8**	**-0.2**
SRIT				IAmb	IAmb	02 52 32.0	
	comp=Z,28nm,1.2s						
CMAR	**Chiang Mai Arr**	**44.10**	**284**	P	**P**	**02 52 30.3**	**+1.1**
	comp=Z,2.4nm,0.3s,baz=86,slow=6.0,SNR=9.9						
	comp=Z,2.4nm,0.3s						
TNCH	**TengChong**	**45.02**	**293**	*e*P	**P**	**02 52 34.9**	**-1.9**
TNCH				pmax	pmax		
	comp=Z,330nm,4.2s						
BBOO	**Buckleboo**	**45.40**	**190**	P	**P**	**02 52 39.0**	**-0.3**
FORT	**Forrest**	**45.45**	**200**	P	**P**	**02 52 40.1**	**+0.4**
FORT				IAmb	IAmb	02 52 43.0	
	comp=Z,27nm,1.0s						
KCSI	**Kotacane, Aceh**	**46.81**	**263**	P	**P**	**02 52 49.7**	**-1.1**
	comp=Z,19nm,0.7s,comp=Z,1µm						
SHEM	**Shemya Is, Ala**	**46.99**	**24**	LR	LR	03 09 52.1	
	comp=Z,72nm,20.9s,baz=311,slow=33						
ULN	**Ulaanbaatar**	**47.24**	**326**	P	**P**	**02 52 54.3**	**+0.5**
ULN	**Ulaanbaatar**	**47.24**	**326**	P	**P**	**02 52 54.3**	**+0.5**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ULN	**Ulaanbaatar**	**47.24**	**326**	P	**P**	**02 52 54.1**	**+0.3**
ULN				pP	**pwP**	**02 53 05.8**	**-0.9**
SONM	**Songino Array**	**47.58**	**326**	P	**P**	**02 52 56.6**	**+0.1**
	comp=Z,3.1nm,0.5s,baz=142,slow=8.5,SNR=16						
SONM				PcP	**PcP**	**02 54 26.5**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=152,slow=3.2,SNR=4.0						
	comp=Z,3.1nm,0.5s						
GTA	**Gaotai**	**47.71**	**313**	*e*P	**P**	**02 52 57.6**	**0.0**
GTA				pP	sP	02 53 02.7	+1.1
GTA				sP	pwP	02 53 05.8	-4.4
GTA				PcP	**PcP**	**02 54 28.8**	**+2.0**
GTA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MORW	**Morawa**	**49.24**	**213**	P	**P**	**02 53 09.2**	**-0.1**
TOO	**Toolangi**	**49.48**	**179**	P	**P**	**02 53 12.1**	**+1.1**
TOO	**Toolangi**	**49.48**	**179**	P	**P**	**02 53 12.1**	**+1.1**
TOO				pmax	pmax		
	comp=Z,46nm,1.6s						
GOMU	**GeErMu**	**50.43**	**307**	P	**P**	**02 53 20.5**	**+1.7**
GOMU				pP	sP	02 53 23.6	+0.7
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,82nm,4.9s						
ZAK	**Zakamensk**	**50.72**	**327**	*e*P	**P**	**02 53 19.5**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
YAK	**Yakutsk**	**50.90**	**351**	LR	LR	03 14 36.2	
	comp=Z,70nm,19.5s,baz=256,slow=36						
YAK	**Yakutsk**	**50.90**	**351**	*e*P	**P**	**02 53 22.3**	**+0.9**
YAK				*e**PP	**sP**	**02 53 25.3**	**0.0**
YAK				*e*		02 54 38.0	
YAK				*e*		02 55 18.9	
YAK				*e*S	**S**	**03 00 40.4**	**+3.4**
YAK				*e**SS	**sS**	**03 00 46.5**	**+4.0**
YAK				*e*		03 03 13.3	
YAK				pmax	pmax		
	comp=Z,13nm,0.9s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,235nm,4.8s						
YAK				pmax	pmax		
	comp=N,121nm,5.1s						
YAK				pmax	pmax		
	comp=E,174nm,5.2s						
YAK				smax	smax		
	comp=N,110nm,3.9s						
YAK				smax	smax		
	comp=E,29nm,2.0s						
SEY	**Seymchan**	**51.02**	**5**	P	**P**	**02 53 22.5**	**+0.2**
	comp=E,1.7nm,0.6s,baz=163,slow=6.0,SNR=8.9						
	comp=E,1.7nm,0.6s						
SHL	**Shillong**	**51.05**	**293**	P	**P**	**02 53 22.6**	**-0.8**
SHL	**Shillong**	**51.05**	**293**	P	**P**	**02 53 22.6**	**-0.8**
SHL				pmax	pmax		
	comp=Z,11nm,0.5s						
RAMN	**Ramite**	**55.88**	**294**	*e*P	**P**	**02 54 00.6**	**+1.6**
	comp=Z,15nm,0.6s						
JIRN	**Jiri**	**56.29**	**295**	*e*P	**P**	**02 54 01.9**	**-0.2**
	comp=Z,16nm,0.6s						
GUN	**Gumba**	**56.58**	**295**	*e*P	**P**	**02 54 04.1**	**0.0**
	comp=Z,18nm,0.4s						
BILL	**Bilibino**	**57.66**	**10**	⇓*e*P	**P**	**02 54 08.5**	**-2.1**
BILL				*e**SP	**sP**	**02 54 16.0**	**+1.5**
BILL				*i*		02 55 04.7	
BILL						02 56 21.0	
BILL				SSS	SSS	03 08 18.0	
BILL				pmax	pmax		
	comp=Z,18nm,2.9s						
BILL				MLR	MLR		
	comp=Z,52nm,17.0s						
BILL	**Bilibino**	**57.66**	**10**	P	**P**	**02 54 10.0**	**-0.6**
BILL				pP	**pwP**	**02 54 21.7**	**-1.8**
DANN	**Dangsing**	**58.48**	**296**	*e*P	**P**	**02 54 16.9**	**-0.5**
URZ	**Urewera**	**58.81**	**150**	P	**P**	**02 54 18.3**	**-0.7**
	comp=Z,4.5nm,0.7s,baz=61,slow=11,SNR=3.0						
	comp=Z,4.5nm,0.7s						
PYUN	**Piuthan**	**59.14**	**295**	*e*P	**P**	**02 54 21.3**	**-0.6**
BKZ	**Black Stump Fm**	**59.23**	**151**	P	**P**	**02 54 21.7**	**-0.3**
DGZ	**Jazzator, Alta**	**59.58**	**321**	*i* P	**P**	**02 54 24.2**	**-0.3**
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TIXI	**Tiksi**	**60.19**	**354**	*ce*P	**P**	**02 54 30.2**	**+2.1**
TIXI				pmax	pmax		
	comp=Z,9.0nm,2.5s						
RPZ	**Rata Peaks**	**60.73**	**158**	P	**P**	**02 54 31.7**	**-0.5**
	comp=Z,5.7nm,0.4s,baz=282,slow=3.1,SNR=6.3						
	comp=Z,5.7nm,0.4s						
MK31	**Makanchi Array**	**62.13**	**317**	P	**P**	**02 54 41.6**	**-0.2**
MK31				IAmb	IAmb	02 54 43.8	
	comp=Z,5.2nm,0.8s						
MK31	**Makanchi Array**	**62.13**	**317**	P	**P**	**02 54 41.6**	**-0.2**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MKAR	**Makanchi Array**	**62.13**	**317**	P	**P**	**02 54 41.8**	**0.0**
	comp=Z,6.0nm,0.5s,baz=91,slow=8.3,SNR=50						
	comp=Z,6.0nm,0.5s						
MAKZ	**Makanchi**	**62.34**	**317**	P	**P**	**02 54 43.3**	**+0.1**
MAKZ				IAmb	IAmb	02 54 44.2	
	comp=Z,10nm,0.9s						
MAKZ	**Makanchi**	**62.34**	**317**	P	**P**	**02 54 43.3**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MAKZ	**Makanchi**	**62.34**	**317**	P	**P**	**02 54 43.3**	**+0.1**
MAKZ				pP	**pwP**	**02 54 55.4**	**-0.4**
ZAA0	**Zalesovo Array**	**62.46**	**325**	P	**P**	**02 54 43.3**	**-0.5**
ZAA0				IAmb	IAmb	02 54 46.0	
	comp=Z,4.2nm,0.6s						
ZALV	**Zalesovo Beam**	**62.46**	**325**	P	**P**	**02 54 43.1**	**-0.7**
	comp=Z,5.2nm,0.5s,baz=112,slow=7.7,SNR=23						
ZALV				PcP	**PcP**	**02 55 23.3**	**+0.3**
	comp=Z,2.8nm,0.6s,baz=113,slow=3.5,SNR=5.1						
	comp=Z,5.2nm,0.5s						
ZALV	**Zalesovo Beam**	**62.46**	**325**	P	**P**	**02 54 42.7**	**-1.1**
KURK	**Kurchatov**	**65.31**	**320**	P	**P**	**02 55 01.3**	**-1.3**
KURK	**Kurchatov**	**65.31**	**320**	P	**P**	**02 55 01.3**	**-1.3**
KURK				pmax	pmax		
	comp=Z,23nm,1.0s						
KURK	**Kurchatov**	**65.31**	**320**	P	**P**	**02 55 02.2**	**-0.4**
KURK				pP	**pwP**	**02 55 13.9**	**-1.3**
KDAK	**Kodiak Island**	**65.57**	**32**	P	**P**	**02 55 04.7**	**+0.5**
	comp=Z,5.4nm,0.7s,baz=301,slow=5.9,SNR=1.7						
	comp=Z,5.4nm,0.7s						
KSH	**Kashi**	**65.66**	**308**	P	**P**	**02 55 07.8**	**+2.5**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
M20K	**Styx River**	**66.57**	**27**	P	**P**	**02 55 10.1**	**-0.5**
K20K	**Telida**	**66.66**	**26**	P	**P**	**02 55 11.7**	**+0.6**
K20K				IAmb	IAmb	02 55 26.8	
	comp=Z,35nm,2.0s						
AAK	**Ala-Archa**	**67.02**	**311**	*i* P	**P**	**02 55 13.3**	**-0.7**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NRIK	**Noril'sk**	**67.29**	**341**	*ce*P	**P**	**02 55 15.6**	**+0.6**
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CAST	**Castle Rocks**	**67.52**	**26**	P	**P**	**02 55 16.2**	**-0.4**
CAST				IAmb	IAmb	02 55 29.3	
	comp=Z,33nm,1.7s						
NIL	**Nilore**	**67.64**	**301**	P	**P**	**02 55 17.6**	**-0.3**
NIL	**Nilore**	**67.64**	**301**	P	**P**	**02 55 17.6**	**-0.3**
NIL				pmax	pmax		
	comp=Z,25nm,0.7s						
NIL	**Nilore**	**67.64**	**301**	P	**P**	**02 55 18.1**	**+0.2**
RC01	**Rabbit Creek A**	**67.89**	**29**	P	**P**	**02 55 18.4**	**-0.5**
H21K	**Melozitna Rive**	**67.97**	**23**	P	**P**	**02 55 20.2**	**+0.9**
KTH	**Kantishna Hill**	**68.06**	**26**	P	**P**	**02 55 19.6**	**-0.4**
KTH				IAmb	IAmb	02 55 33.4	
	comp=Z,14nm,1.1s						
I21K	**Tanana**	**68.13**	**24**	P	**P**	**02 55 21.4**	**+1.0**
BPAW	**Bear Paw Mtn.**	**68.20**	**25**	P	**P**	**02 55 20.8**	**0.0**
BPAW				IAmb	IAmb	02 55 34.6	
	comp=Z,9.7nm,1.1s						
MLY	**Manley**	**68.58**	**24**	P	**P**	**02 55 23.3**	**0.0**
A21K	**Barrow**	**68.90**	**17**	P	**P**	**02 55 25.0**	**0.0**
A21K				IAmb	IAmb	02 55 39.6	
	comp=Z,9.4nm,0.9s						
I23K	**Minto, Yukon-K**	**69.18**	**24**	P	**P**	**02 55 27.6**	**+0.8**
I23K				IAmb	IAmb	02 55 34.6	
	comp=Z,17nm,1.4s						
SCM	**Sheep Creek Mo**	**69.19**	**28**	P	**P**	**02 55 27.3**	**+0.1**
SCM				IAmb	IAmb	02 55 34.9	
	comp=Z,22nm,1.0s						
SCM	**Sheep Creek Mo**	**69.19**	**28**	P	**P**	**02 55 27.3**	**+0.1**
SCM				pmax	pmax		
	comp=Z,21nm,1.0s						
H23K	**Yukon River**	**69.30**	**24**	P	**P**	**02 55 28.7**	**+1.0**
COLD	**Coldfoot**	**69.48**	**22**	P	**P**	**02 55 30.2**	**+1.5**
WRH	**Wood River Hil**	**69.52**	**25**	P	**P**	**02 55 28.2**	**-0.8**
WRH				IAmb	IAmb	02 55 42.4	
	comp=Z,13nm,1.2s						
MDM	**Murphy Dome**	**69.59**	**25**	P	**P**	**02 55 30.3**	**+0.8**
CCB	**Clear Creek Bu**	**69.68**	**25**	P	**P**	**02 55 29.1**	**-0.8**
CCB				IAmb	IAmb	02 55 41.6	
	comp=Z,20nm,1.6s						
H24K	**Noodor Dome**	**69.96**	**24**	P	**P**	**02 55 32.7**	**+0.9**
KK31	**Karatay Array**	**69.97**	**312**	P	**P**	**02 55 33.0**	**+0.8**
KK31				IAmb	IAmb	02 55 34.5	
	comp=Z,10nm,0.8s						
KK31	**Karatay Array**	**69.97**	**312**	P	**P**	**02 55 33.0**	**+0.8**
KK31				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KKAR	**Karatay Array**	**69.97**	**312**	P	**P**	**02 55 32.2**	**0.0**
KKAR	**Karatay Array**	**69.97**	**312**	P	**P**	**02 55 32.9**	**+0.7**
KKAR				IAmb	IAmb	02 55 34.5	
	comp=Z,10nm,0.8s						
KKAR	**Karatay Array**	**69.97**	**312**	P	**P**	**02 55 32.2**	**0.0**
KKAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HDA	**Harding Lake**	**69.98**	**26**	P	**P**	**02 55 31.0**	**-0.8**
GAR	**Garm**	**70.03**	**307**	P	**P**	**02 55 32.6**	**-0.2**
GAR				IAmb	IAmb	02 55 43.2	
	comp=Z,18nm,1.0s						
IL31		**70.09**	**25**	P	**P**	**02 55 31.3**	**-1.2**
ILAR	**Eielson Array**	**70.09**	**25**	P	**P**	**02 55 31.2**	**-1.3**
	comp=Z,3.2nm,0.6s,baz=252,slow=5.6,SNR=41						
	comp=Z,3.2nm,0.6s						
TOLK	**Toolik Lake Re**	**70.14**	**21**	P	**P**	**02 55 34.2**	**+1.4**
PAX	**Paxson**	**70.29**	**27**	P	**P**	**02 55 34.4**	**+0.5**
PAX	**Paxson**	**70.29**	**27**	P	**P**	**02 55 34.4**	**+0.5**
PAX				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BVAR	**Borovoye Array**	**70.70**	**322**	P	**P**	**02 55 36.4**	**0.0**
	comp=Z,40nm,0.7s,baz=105,slow=8.0,SNR=56						
	comp=Z,40nm,0.7s						
RIDG	**Independent Ri**	**70.73**	**26**	P	**P**	**02 55 36.6**	**+0.1**
RIDG				IAmb	IAmb	02 55 50.1	
	comp=Z,29nm,1.6s						
GLB	**Gilahina Butte**	**70.76**	**29**	P	**P**	**02 55 37.3**	**+0.5**
GLB				IAmb	IAmb	02 55 50.4	
	comp=Z,30nm,1.5s						
BRVK	**Borovoye**	**70.76**	**322**	P	**P**	**02 55 37.0**	**+0.1**
BRVK	**Borovoye**	**70.76**	**322**	P	**P**	**02 55 37.0**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,22nm,0.6s						
BRVK	**Borovoye**	**70.76**	**322**	P	**P**	**02 55 36.7**	**-0.2**
BRVK				pP	**pwP**	**02 55 48.4**	**-1.1**
CHGR	**Chuyangaron**	**70.94**	**307**	P	**P**	**02 55 37.9**	**-0.4**
CHGR	**Chuyangaron**	**70.94**	**307**	P	**P**	**02 55 37.9**	**-0.4**
CHGR				pmax	pmax		
	comp=Z,19nm,0.7s						
DOT	**Dot Lake**	**71.05**	**27**	P	**P**	**02 55 38.1**	**-0.3**
KBL	**Kabul**	**71.11**	**302**	P	**P**	**02 55 37.7**	**-1.9**
KBL				IAmb	IAmb	02 55 41.2	
	comp=Z,13nm,1.0s						
KBL	**Kabul**	**71.11**	**302**	P	**P**	**02 55 37.7**	**-1.9**
KBL				pmax	pmax		
	comp=Z,13nm,1.0s						
SCRK	**Sand Creek**	**71.15**	**26**	P	**P**	**02 55 39.0**	**-0.1**
SCRK				IAmb	IAmb	02 55 54.0	
	comp=Z,26nm,1.8s						
FYU	**Fort Yukon**	**71.18**	**23**	P	**P**	**02 55 40.1**	**+1.0**
FYU				IAmb	IAmb	02 55 53.8	
	comp=Z,15nm,1.0s						
L26K	**Log Cabin Wild**	**71.25**	**27**	P	**P**	**02 55 40.7**	**+1.0**
J26L	**Joseph Creek**	**71.43**	**26**	P	**P**	**02 55 40.8**	**0.0**
J26L				IAmb	IAmb	02 55 54.7	
	comp=Z,29nm,1.6s						
DAWY	**Dawson**	**73.16**	**27**	P	**P**	**02 55 51.4**	**+0.3**
INK	**Inuvik**	**75.89**	**22**	P	**P**	**02 56 06.3**	**-0.5**
	comp=Z,3.6nm,0.8s,baz=268,slow=6.5,SNR=11						
	comp=Z,3.6nm,0.8s						
INK	**Inuvik**	**75.89**	**22**	P	**P**	**02 56 06.2**	**-0.5**
INK	**Inuvik**	**75.89**	**22**	P	**P**	**02 56 06.3**	**-0.5**
INK				pmax	pmax		
	comp=Z,13nm,1.3s						
SVE	**Sverdlovsk**	**76.45**	**326**	*e*P	**P**	**02 56 10.8**	**+0.6**
SVE				pmax	pmax		
	comp=Z,14nm,0.8s						
ABKAR	**Akbulak array**	**77.22**	**318**	P	**P**	**02 56 14.2**	**-0.4**
ABKAR	**Akbulak array**	**77.22**	**318**	P	**P**	**02 56 14.3**	**-0.4**
ABKAR				IAmb	IAmb	02 56 16.7	
	comp=Z,22nm,0.6s						
DLBC	**Dease Lake**	**77.48**	**32**	P	**P**	**02 56 17.6**	**+1.5**
	comp=Z,2.5nm,0.6s,baz=249,slow=4.9,SNR=8.3						
	comp=Z,2.5nm,0.6s						
ARU	**Arti**	**77.61**	**325**	P	**P**	**02 56 16.1**	**-0.7**
	comp=Z,17nm,0.5s,baz=132,slow=1.2,SNR=28						
	comp=Z,17nm,0.5s						
ARU	**Arti**	**77.61**	**325**	*d i*P	**P**	**02 56 16.3**	**-0.4**
ARU						02 56 28.3	
ARU				S	**S**	**03 06 10.1**	**+2.4**
ARU				pmax	pmax		
	comp=Z,17nm,0.6s						
AKTO	**Aktyubinsk**	**78.37**	**319**	P	**P**	**02 56 20.3**	**-0.8**
	comp=Z,6.0nm,0.5s,baz=90,slow=6.7,SNR=28						
	comp=Z,6.0nm,0.5s						
A36M	**Sachs Harbour**	**78.67**	**18**	P	**P**	**02 56 22.3**	**0.0**
A36M				IAmb	IAmb	02 56 36.2	
	comp=Z,17nm,0.8s						
C36M	**Paulatuk**	**79.30**	**21**	P	**P**	**02 56 26.0**	**+0.2**
C36M				IAmb	IAmb	02 56 27.7	
	comp=Z,14nm,1.3s						
GEYT	**Alibeck**	**79.65**	**307**	P	**P**	**02 56 28.7**	**+0.3**
	comp=Z,8.6nm,0.9s,baz=169,slow=1.5,SNR=14						
	comp=Z,8.6nm,0.9s						
KIRV	**Kirov**	**82.25**	**328**	P	**P**	**02 56 42.2**	**+0.4**
	comp=Z,12nm,0.5s,baz=39,slow=3.9,SNR=5.1						
	comp=Z,12nm,0.5s						
KIRV	**Kirov**	**82.25**	**328**	*ce*P	**P**	**02 56 41.7**	**-0.1**
YBH	**Yreka Blue Hor**	**84.23**	**49**	P	**P**	**02 56 54.4**	**+1.8**
	comp=Z,6.5nm,0.8s,baz=220,slow=0.3,SNR=12						
	comp=Z,6.5nm,0.8s						
YBH	**Yreka Blue Hor**	**84.23**	**49**	P	**P**	**02 56 54.1**	**+1.6**
YBH				IAmb	IAmb	02 56 55.3	
	comp=Z,7.7nm,0.8s						
YBH	**Yreka Blue Hor**	**84.23**	**49**	P	**P**	**02 56 54.1**	**+1.6**
YBH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
YKA	**Yellowknife Ar**	**84.38**	**27**	P	**P**	**02 56 53.1**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=285,slow=5.3,SNR=18						
	comp=Z,1.9nm,0.7s						
YKA	**Yellowknife Ar**	**84.38**	**27**	P	**P**	**02 56 52.5**	**-0.2**
BELG	**Belogornoye**	**84.50**	**322**	P	**P**	**02 56 54.2**	**+0.7**
	comp=Z,52nm,0.9s,baz=120,slow=1.3,SNR=8.7						
	comp=Z,52nm,0.9s						
BELG	**Belogornoye**	**84.50**	**322**	*i* P	**P**	**02 56 53.1**	**-0.4**
BELG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PINE	**Pine Mountain**	**85.10**	**46**	P	**P**	**02 56 58.0**	**+1.0**
B08A	**Colville Reser**	**85.21**	**42**	P	**P**	**02 56 58.3**	**+1.1**
B08A				IAmb	IAmb	02 56 59.2	
	comp=Z,12nm,1.1s						
MOD	**Modoc Plateau**	**85.96**	**48**	P	**P**	**02 57 02.4**	**+1.1**
C09A	**Chrisman Ranch**	**86.03**	**42**	P	**P**	**02 57 02.1**	**+0.8**
C09A				IAmb	IAmb	02 57 03.3	
	comp=Z,6.4nm,0.8s						
RES	**Resolute Bay**	**86.06**	**13**	P	**P**	**02 57 01.6**	**+0.7**
	comp=Z,7.1nm,0.8s,baz=321,slow=5.2,SNR=21						
	comp=Z,7.1nm,0.8s						
RES	**Resolute Bay**	**86.06**	**13**	P	**P**	**02 57 01.5**	**+0.6**
RES	**Resolute Bay**	**86.06**	**13**	P	**P**	**02 57 01.5**	**+0.6**
RES				pmax	pmax		
	comp=Z,13nm,0.9s						
KLMR	**Klimovskoe**	**86.53**	**332**	*e*P	**P**	**02 57 01.2**	**-2.3**
KLMR				AMP		02 57 06.2	
	comp=Z,18nm,1.9s						
KLMR	**Klimovskoe**	**86.53**	**332**	*e*P	**P**	**02 57 01.2**	**-2.3**
KLMR				pmax	pmax		
	comp=Z,18nm,1.9s						
NEW	**Newport**	**86.67**	**41**	P	**P**	**02 57 05.9**	**+1.5**
	comp=Z,11nm,0.8s,baz=263,slow=3.4,SNR=18						
	comp=Z,11nm,0.8s						
NEW	**Newport**	**86.67**	**41**	P	**P**	**02 57 05.5**	**+1.0**
NEW	**Newport**	**86.67**	**41**	P	**P**	**02 57 05.5**	**+1.0**
NEW				pmax	pmax		
	comp=Z,11nm,0.8s						
CMB	**Columbia Colle**	**86.74**	**52**	P	**P**	**02 57 06.2**	**+1.1**
CMB	**Columbia Colle**	**86.74**	**52**	P	**P**	**02 57 06.2**	**+1.1**
CMB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKT	**Akhty**	**86.90**	**312**	*e*P	**P**	**02 57 04.6**	**-1.2**
AKT				*e*		02 57 06.9	
AKT				*e*		03 00 30.7	
AKT				pmax	pmax		
	comp=Z,5.0nm,0.6s						
J08A	**Circle Bar Ran**	**86.94**	**46**	P	**P**	**02 57 07.5**	**+1.5**
J08A				IAmb	IAmb	02 57 09.4	
	comp=Z,11nm,1.1s						
WVOR	**Wild Horse Val**	**87.04**	**47**	P	**P**	**02 57 07.8**	**+1.2**
WVOR				IAmb	IAmb	02 57 08.8	
	comp=Z,5.1nm,0.9s						
WVOR	**Wild Horse Val**	**87.04**	**47**	P	**P**	**02 57 07.8**	**+1.2**
WVOR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BMO	**Blue Mountains**	**87.39**	**45**	P	**P**	**02 57 09.2**	**+1.1**
BMO				IAmb	IAmb	02 57 10.2	
	comp=Z,9.8nm,0.8s						
BMO	**Blue Mountains**	**87.39**	**45**	P	**P**	**02 57 09.3**	**+1.1**
BMO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LHV	**Little Huntoon**	**88.14**	**51**	P	**P**	**02 57 12.0**	**+0.3**
LHV				IAmb	IAmb	02 57 14.9	
	comp=Z,8.0nm,1.3s						
PLID	**Pearl Lake**	**88.23**	**44**	P	**P**	**02 57 12.5**	**+0.2**
PLID				IAmb	IAmb	02 57 13.8	
	comp=Z,5.4nm,0.8s						
NVAR	**Mina Array Bea**	**88.25**	**51**	P	**P**	**02 57 14.4**	**+1.9**
	comp=Z,3.7nm,0.7s,baz=278,slow=5.2,SNR=28						
	comp=Z,3.7nm,0.7s						
NVAR	**Mina Array Bea**	**88.25**	**51**	P	**P**	**02 57 12.7**	**+0.1**
KVN	**Kaiserville**	**88.25**	**51**	P	**P**	**02 57 13.0**	**+0.5**
KVN				IAmb	IAmb	02 57 18.6	
	comp=Z,7.9nm,1.1s						
KVN	**Kaiserville**	**88.25**	**51**	P	**P**	**02 57 13.0**	**+0.5**
KVN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ARCES	**ARCESS Array B**	**88.26**	**342**	P	**P**	**02 57 11.5**	**-0.1**
	comp=Z,5.2nm,1.0s,baz=66,slow=6.8,SNR=9.2						
	comp=Z,5.2nm,1.0s						
NV11	**Mina Array Sit**	**88.36**	**51**	P	**P**	**02 57 13.2**	**+0.2**
NV11				IAmb	IAmb	02 57 16.1	
	comp=Z,8.6nm,1.1s						
DSP	**Deep Springs**	**88.76**	**52**	P	**P**	**02 57 14.9**	**+0.2**
MFID	**Camas Ranch**	**88.79**	**46**	P	**P**	**02 57 15.6**	**+0.8**
LCH	**Last Change Ra**	**89.05**	**52**	P	**P**	**02 57 17.0**	**+0.7**
LCH				IAmb	IAmb	02 57 18.9	
	comp=Z,7.7nm,1.3s						
MZP	**Montezuma Peak**	**89.13**	**52**	P	**P**	**02 57 16.5**	**-0.3**
TPH	**Tonopah**	**89.16**	**51**	P	**P**	**02 57 16.3**	**-0.5**
TPH	**Tonopah**	**89.16**	**51**	P	**P**	**02 57 16.3**	**-0.5**
TPH				pmax	pmax		
	comp=Z,26nm,0.6s						
ZEI	**Tsey**	**89.32**	**314**	*e*P	**P**	**02 57 13.1**	**-4.4**
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HLID	**Hailey**	**89.74**	**45**	P	**P**	**02 57 19.6**	**+0.2**
HLID				IAmb	IAmb	02 57 21.8	
	comp=Z,4.8nm,0.8s						
KBZ	**Khabaz**	**89.76**	**315**	P	**P**	**02 57 21.1**	**+1.9**
	comp=Z,4.3nm,1.0s,baz=36,slow=6.5,SNR=3.9						
	comp=Z,4.3nm,1.0s						
KBZ	**Khabaz**	**89.76**	**315**	*i* P	**P**	**02 57 20.0**	**+0.8**
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV	**Kislovodsk**	**89.84**	**315**	*e*P	**P**	**02 57 18.1**	**-1.7**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ELK	**Elko**	**89.94**	**48**	P	**P**	**02 57 21.9**	**+1.4**
	comp=Z,7.4nm,1.0s,baz=291,slow=5.1,SNR=20						
	comp=Z,7.4nm,1.0s						
ELK	**Elko**	**89.94**	**48**	P	**P**	**02 57 21.3**	**+0.8**
ELK				IAmb	IAmb	02 57 23.0	
	comp=Z,8.4nm,1.1s						
ELK	**Elko**	**89.94**	**48**	P	**P**	**02 57 21.3**	**+0.8**
ELK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WCT	**Wildcat Mounta**	**89.95**	**52**	P	**P**	**02 57 20.8**	**+0.4**
WCT				IAmb	IAmb	02 57 23.1	
	comp=Z,7.9nm,1.0s						
QSM	**Queen of Sheba**	**89.97**	**53**	P	**P**	**02 57 21.2**	**+0.8**
QSM				IAmb	IAmb	02 57 26.1	
	comp=Z,9.2nm,1.1s						
OBN	**Obninsk**	**89.98**	**327**	⇓*e*P	**P**	**02 57 18.9**	**-1.1**
OBN				*i*		02 57 23.2	
OBN				*i*		02 57 31.2	
OBN				pmax	pmax		
	comp=Z,29nm,1.3s						
OBN				MLR	MLR		
	comp=Z,89nm,14.0s						
GWY	**Greenwater Val**	**90.07**	**53**	P	**P**	**02 57 22.2**	**+1.1**
GWY				IAmb	IAmb	02 57 41.0	
	comp=Z,6.8nm,1.2s						
NEEM	**North Greenlan**	**90.12**	**3**	*i* P	**P**	**02 57 20.1**	**-0.6**
NEEM				IAmb	IAmb	02 57 24.3	
	comp=Z,3.3nm,0.4s						
GSC	**Goldstone, Bar**	**90.19**	**54**	P	**P**	**02 57 20.8**	**-0.8**
GSC				IAmb	IAmb	02 57 25.3	
	comp=Z,8.9nm,1.1s						
GSC	**Goldstone, Bar**	**90.19**	**54**	P	**P**	**02 57 20.8**	**-0.8**
GSC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TPNV	**Topopah Spring**	**90.20**	**52**	P	**P**	**02 57 22.2**	**+0.6**
TPNV				IAmb	IAmb	02 57 24.3	
	comp=Z,6.4nm,0.9s						
TPNV	**Topopah Spring**	**90.20**	**52**	P	**P**	**02 57 22.2**	**+0.6**
TPNV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
R11A	**Troy Canyon, C**	**90.33**	**51**	P	**P**	**02 57 23.0**	**+0.7**
HRY	**Holter Researc**	**90.55**	**42**	P	**P**	**02 57 23.9**	**+0.9**
DAG	**Danmarks Havn**	**90.67**	**356**	*i* P	**P**	**02 57 21.0**	**-1.8**
DAG				IAmb	IAmb	02 57 23.1	
	comp=Z,3.0nm,0.8s						
Q12A	**Willow Creek R**	**90.71**	**50**	P	**P**	**02 57 25.0**	**+1.0**
Q12A				IAmb	IAmb	02 57 55.8	
	comp=Z,7.9nm,1.0s						
PRN	**Pahroc Range**	**91.00**	**52**	P	**P**	**02 57 24.6**	**-0.7**
PRN				IAmb	IAmb	02 57 58.3	
	comp=Z,3.7nm,0.9s						
BOZ	**Bozeman (W)**	**91.03**	**43**	P	**P**	**02 57 25.9**	**+0.6**
BOZ				IAmb	IAmb	02 58 35.2	
	comp=Z,16nm,2.0s						
BOZ	**Bozeman (W)**	**91.03**	**43**	P	**P**	**02 57 25.9**	**+0.6**
BOZ				pmax	pmax		
	comp=Z,16nm,2.0s						
SPR3	**Spring Creek 3**	**91.10**	**50**	P	**P**	**02 57 26.8**	**+0.8**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SPR3				IAmb	IAmb	02 57 28.6	
	comp=Z,7.6nm,1.3s						
SHPR	Sheep Range	91.16	52	P	P	02 57 26.6	+0.4
SHPR				IAmb	IAmb	02 57 30.9	
	comp=Z,4.4nm,1.2s						
V12A	Nelson	91.62	53	P	P	02 57 28.4	+0.2
YMR	Madison River	91.77	44	P	P	02 57 29.6	+0.7
DUG	Dugway, Tooele	91.87	48	P	P	02 57 29.9	+0.6
DUG				IAmb	IAmb	02 57 31.2	
	comp=Z,3.6nm,0.9s						
DUG	Dugway, Tooele	91.87	48	P	P	02 57 29.9	+0.6
DUG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FINES	FINESS Array B	92.21	335	P	P	02 57 28.5	-1.7
	comp=Z,4.4nm,0.5s,baz=79,slow=4.5,SNR=16						
	comp=Z,4.4nm,0.5s						
MOOW	Moose Ponds	92.22	44	P	P	02 57 31.7	+0.7
MOOW				IAmb	IAmb	02 58 07.0	
	comp=Z,13nm,1.8s						
LCMT	Little Creek M	92.49	51	P	P	02 57 33.8	+1.5
LCMT				IAmb	IAmb	02 57 37.4	
	comp=Z,5.2nm,1.3s						
W13A	Hualapai Mount	92.55	53	P	P	02 57 32.8	+0.1
KNB	Kanab	92.81	51	P	P	02 57 34.1	+0.3
KNB				IAmb	IAmb	02 57 37.0	
	comp=Z,6.9nm,1.2s						
KNB	Kanab	92.81	51	P	P	02 57 34.1	+0.3
KNB				pmax	pmax		
	comp=Z,7.0nm,1.2s						
RAYN	Ar Rayn	93.10	295	P	P	02 57 34.6	-0.6
RAYN				IAmb	IAmb	02 57 35.6	
	comp=Z,5.0nm,1.3s						
RAYN	Ar Rayn	93.10	295	P	P	02 57 34.6	-0.6
RAYN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
DBG	Daneborg	93.16	356	*i* P	P	02 57 32.8	-1.6
DBG				IAmb	IAmb	02 57 35.3	
	comp=Z,0.9nm,0.8s						
PDAR	Pinedale Array	93.37	45	P	P	02 57 37.0	+0.6
	comp=Z,0.4nm,0.6s,baz=227,slow=2.4,SNR=4.7						
	comp=Z,0.4nm,0.6s						
LAO	LASA Array	94.17	41	P	P	02 57 40.8	+1.1
WUAZ	Wupatki	94.39	52	P	P	02 57 40.8	-0.2
WUAZ				IAmb	IAmb	02 57 45.0	
	comp=Z,4.5nm,0.9s						
PV23	Carpenter Ridg	95.22	49	P	P	02 57 45.7	+0.7
PV11	David Mesa, Pa	95.38	49	P	P	02 57 45.9	+0.3
AKBB	Malin Array Si	95.85	325	*i* P	P	02 57 45.0	-2.2
AKBB				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HFS	Hagfors	97.89	337	P	P	02 57 54.5	-1.7
	comp=Z,3.7nm,0.8s,baz=68,slow=8.2,SNR=4.3						
	comp=Z,3.7nm,0.8s						
NOA	NORSAR Array B	98.17	339	P	P	02 57 55.6	-2.0
	comp=Z,0.7nm,0.8s,baz=56,slow=7.5,SNR=1.6						
	comp=Z,0.7nm,0.8s						
ANMO	Albuquerque	98.37	52	LR	LR	03 44 53.4	
	comp=Z,39nm,18.2s,baz=30,slow=37						
VYHS	Vyhne	102.77	326	*e*P	Pdif	02 58 18.1	-0.1
VYHS	Vyhne	102.77	326	*e*PDIFF	Pdif	02 58 18.1	-0.1
TORD	Torodi Ar. Bea	135.18	303	PKP	PKiKP	03 03 42.7	0.0
	comp=Z,1.0nm,0.5s,baz=36,slow=2.2,SNR=13						
PLCA	Paso Flores	138.24	139	PKP	PKPdf	03 03 47.2	+1.0
	comp=Z,1.3nm,0.7s,baz=312,slow=2.8,SNR=4.6						
DBIC	Dimbokro	144.07	300	PKP	PKPbc	03 03 55.4	+0.1
	comp=Z,5.1nm,0.6s,baz=58,slow=5.0,SNR=9.6						
KIC	Kosan Boka	144.13	299	⇑*e*PKP1	PKPab	03 03 55.1	0.0
	comp=Z,4.5nm,0.5s						
TIC	Toumodi	144.22	300	⇓*e*PKP1	PKPab	03 03 55.6	+0.2
	comp=Z,6.4nm,0.4s						
LIC	Lamto	144.44	299	⇑*i*PKP1	PKPab	03 03 56.1	-0.1
	comp=Z,46nm,0.8s						
LPAZ	La Paz	148.33	101	PKPbc	PKiKP	03 04 10.0	-0.3
	comp=Z,5.9nm,0.8s,baz=0.8,slow=2.2,SNR=16						
CPUP	Villa Florida	155.25	128	PKPab	PKPab	03 04 41.5	+1.9
	comp=Z,2.2nm,0.8s,baz=277,slow=2.5,SNR=5.9						

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*CFUSG **07** 02:51:25.0, 45°.70N×26°.60E, h150^{km}, mb3.6/5, Romania Magtype MSH 3.8 from 4 stations*

*BUC **07** 02:51:26.9±0.2, 45°.70N×26°.61E, h135^{km}±1^{km}, ml4.1/81, Error ellipse: s-maj=1.3km s-min=1.1km az=23.0*

*IDC **07** 02:51:26.2±0.5, 45°.74N×26°.46E, h133^{km}±3^{km}, mb3.4/8, mbtmp3.8/17, Error ellipse: s-maj=15.7km s-min=12.0km az=143.0*

*SIGU **07** 02:51:26.8±0.1, 45°.7N±0°.8×26°.6E±0°.8, h135^{km}, mb3.4/6, MD3.8/19*

*MCSM **07** 02:51:26.4±0.5, 46°N±5°×2°7E±°, h137^{km}±4^{km}, ML4.2*

*SOF **07** 02:51:28.9, 45°.64N×26°.54E, h80^{km}, MD4.0*

*BEO **07** 02:51:28.7±0.7, 45°.60N×26°.35E, h24^{km}±9^{km}, ML3.5/13*

ISC 07 02:51:26.3±0.6, **45°.70N**±0°.02×**26°.58E**±0°.02, **h141**^{km}±4^{km}, **n209, σ1^{s}.15**/293, **mb3.6**/8, **81C-67D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	Plostina	0.15	18	⇑P	Pn	02 51 45.5	+0.1
PLOR				⇓S	Sn	02 51 59.9	-0.2
PLOR	Plostina	0.15	18	P	Pn	02 51 45.5	+0.1
BISRR	Bisoca	0.18	150	⇑P	Pn	02 51 46.2	+0.6
BISRR				⇓S	Sn	02 52 01.2	+1.1
VRI	Vrincioaia	0.19	32	⇑P	Pn	02 51 45.7	+0.2
VRI				⇑S	Sn	02 52 00.0	-0.1
VRI	Vrincioaia	0.19	32	P	Pn	02 51 45.6	+0.1
VRI				S	Sn	02 52 00.6	+0.5
COVR	Voineasa-Covas	0.30	298	⇑P	Pn	02 51 45.8	0.0
COVR				⇑S	Sn	02 52 00.1	-0.6
NEHR	Nehoiu	0.34	216	⇑P	Pn	02 51 46.6	+0.6
NEHR				⇓S	Sn	02 51 59.9	-1.0
GRER		0.42	139	⇑P	Pn	02 51 47.6	+1.3
GRER				⇑S	Sn	02 52 00.8	-0.6
PANC	Panciu	0.43	67	⇑P	Pn	02 51 46.6	+0.4
PANC				⇑S	Sn	02 52 01.6	+0.2
MLR	Muntele Rosu	0.49	245	⇑P	Pn	02 51 47.2	+0.5
MLR				⇑S	Sn	02 52 02.0	-0.3
MLR	Muntele Rosu	0.49	245	P	Pn	02 51 47.1	+0.3
MLR				S	Sn	02 52 01.4	-0.9
	784nm,0.3s,baz=226,slow=23,SNR=30						
MLR	Muntele Rosu	0.49	245	P	Pn	02 51 47.1	+0.3
ISR	Istrita	0.58	183	⇑P	Pn	02 51 47.9	+0.7
ISR				⇑S	Sn	02 52 02.6	-0.5
GHRR		0.68	58	⇑P	Pn	02 51 48.1	+0.5
GHRR				⇓S	Sn	02 52 04.1	+0.1
OZUR		0.68	305	⇑P	Pn	02 51 47.7	-0.1
OZUR				⇓S	Sn	02 52 03.0	-1.1
TUDR		0.77	98	⇑P	Pn	02 51 48.3	0.0
TUDR				⇑S	Sn	02 52 04.6	-0.4
TESR	Tescani	0.81	3	⇑P	Pn	02 51 48.4	-0.2
TESR				⇓S	Sn	02 52 04.3	-1.4
TESR	Tescani	0.81	3	P	Pn	02 51 48.4	-0.2
SLCR	Slobozia Conac	0.84	97	⇑P	Pn	02 51 49.0	+0.2
SLCR				⇑S	Sn	02 52 05.5	-0.4
PGOR	Pogoanele	0.84	160	⇑P	Pn	02 51 49.7	+0.8
PGOR				⇑S	Sn	02 52 05.6	-0.4
IZVR	Izvoarele	0.85	100	⇑P	Pn	02 51 48.7	-0.2
IZVR				⇑S	Sn	02 52 05.2	-0.8
DOPR	Dopca	0.88	288	⇑P	Pn	02 51 49.6	+0.4
DOPR				⇓S	Sn	02 52 06.6	0.0
PLAR	PLOIESTI	0.88	207	⇓P	Pn	02 51 50.1	+0.9
PLAR				⇑S	Sn	02 52 07.5	+0.9
SCHL	Schela	0.90	103	⇑P	Pn	02 51 49.6	+0.3
BIR	Birlad	0.92	52	⇑P	Pn	02 51 49.7	+0.2
BIR				⇑S	Sn	02 52 06.8	-0.4
SCTR	Scanteiesti	0.99	91	⇑P	Pn	02 51 50.5	+0.4
SCTR				⇑S	Sn	02 52 07.9	-0.3
TATR	Tatarca	1.03	95	⇑P	Pn	02 51 50.8	+0.4
TATR				⇓S	Sn	02 52 08.3	-0.6
SULR		1.05	193	⇑P	Pn	02 51 51.5	+0.8
SULR				⇑S	Sn	02 52 09.7	+0.5
VLDR	Vladesti	1.06	82	⇑P	Pn	02 51 51.0	+0.3
VLDR				⇓S	Sn	02 52 08.5	-0.7
GISR	Galati	1.07	104	⇓P	Pn	02 51 51.1	+0.4
GISR				⇓S	Sn	02 52 09.1	-0.3
VOIR		1.11	257	⇑P	Pn	02 51 51.5	+0.2
VOIR				⇓S	Sn	02 52 09.5	-0.8
VOIR		1.11	257	P	Pn	02 51 51.4	+0.1
GIUM	Giurgiulesti	1.16	100	⇑P	Pn	02 51 52.2	+0.6
GIUM				⇓S	Sn	02 52 10.7	-0.4
GIUM	Giurgiulesti	1.16	100	P	Pn	02 51 52.2	+0.6
GIUM				S	Sn	02 52 10.6	-0.4
MTUR	Matau	1.17	246	⇑P	Pn	02 51 52.6	+0.7
CFR	Carcaliu	1.21	115	⇓P	Pn	02 51 52.1	0.0
CFR				⇑S	Sn	02 52 10.9	-1.0
AMRR	Amara	1.22	154	⇓P	Pn	02 51 52.8	+0.5
AMRR				⇓S	Sn	02 52 12.3	+0.3
LEHL	Lehliu	1.24	172	⇓P	Pn	02 51 53.1	+0.6
LEHL				⇓S	Sn	02 52 13.0	+0.6
JOSR	Joseni	1.25	324	⇓P	Pn	02 51 53.0	+0.5
VASR	Vaslui	1.26	41	⇑P	Pn	02 51 52.9	+0.2
VASR				⇑S	Sn	02 52 12.0	-0.7
BIZ	Bicaz	1.28	345	⇑S	Sn	02 52 13.6	+0.4
INCR	INCERC-Sediu C	1.30	193	⇑P	Pn	02 51 53.6	+0.5
INCR				⇑S	Sn	02 52 13.5	+0.1
LEOM	Leova	1.39	56	⇑P	Pn	02 51 54.2	+0.3
LEOM				⇑S	Sn	02 52 13.9	-1.3
LEOM	Leova	1.39	56	P	Pn	02 51 54.2	+0.3
LEOM				S	Sn	02 52 13.8	-1.3
HARR	Harsova	1.39	136	⇓P	Pn	02 51 54.2	+0.2
ARR	Arges	1.41	257	⇑P	Pn	02 51 54.9	+0.7
ARR				⇑S	Sn	02 52 15.3	-0.3
BUC1	Bucharest	1.41	196	⇑P	Pn	02 51 54.8	+0.6
BUC1				⇓S	Sn	02 52 15.8	+0.4
STFAR	Stefanesti-Arg	1.42	234	⇑P	Pn	02 51 55.2	+0.9
STFAR				⇓S	Sn	02 52 16.4	+0.7
SGRR	Singureni	1.54	196	⇑P	Pn	02 51 56.0	+0.4
SGRR				⇓S	Sn	02 52 17.7	-0.3
RASA	Rasa	1.54	165	⇓P	Pn	02 51 55.9	+0.3
RASA				⇓S	Sn	02 52 17.5	-0.5
TPGR	Topolog	1.55	122	⇓P	Pn	02 51 55.5	-0.3
TPGR				⇓S	Sn	02 52 16.6	-1.6
TLBR	Topalu	1.56	138	⇓P	Pn	02 51 56.0	+0.3
TLBR				⇑S	Sn	02 52 16.6	-1.7
MDB	Medias	1.60	287	⇓P	Pn	02 51 57.4	+1.1
MDB				⇓S	Sn	02 52 19.1	-0.1
HUMR	Humele	1.63	225	⇑P	Pn	02 51 56.9	+0.3
HUMR				⇓S	Sn	02 52 19.5	-0.3
IAS	Iasi	1.63	24	⇑P	Pn	02 51 56.6	+0.1
TLCR		1.66	107	⇓P	Pn	02 51 56.9	+0.1
TLCR				⇓S	Sn	02 52 19.6	-0.6
CVDA	Cernavoda	1.71	142	⇓P	Pn	02 51 57.9	+0.4
CVDA				⇑S	Sn	02 52 20.5	-0.9
TIRR	Tirgusor	1.80	133	⇓P	Pn	02 51 58.6	+0.1
TIRR				⇑S	Sn	02 52 21.2	-1.9
ICOR	Ion Corvin	1.81	151	⇓P	Pn	02 51 59.1	+0.5
ICOR				⇑S	Sn	02 52 22.8	-0.6
COPA	Copaceanca	1.84	212	⇑P	Pn	02 51 59.3	+0.3
JURR	Jurilovca	1.87	119	⇓P	Pn	02 51 59.7	+0.4
LOT	Lotru	1.99	264	⇓P	Pn	02 52 01.5	+0.6
LOT				⇑S	Sn	02 52 28.7	+1.3
LOT	Lotru	1.99	264	P	Pn	02 52 01.5	+0.6
MFTR	Murfatlar	2.01	139	⇓P	Pn	02 52 01.1	+0.2
KIS	Kishinev	2.02	49	⇑*i*P	Pn	02 52 01.1	+0.1
	180nm,0.3s						
KIS				*e*S	Sn	02 52 26.0	-1.7
	1μm,0.3s						
KIS	Kishinev	2.02	49	⇑P	Pn	02 52 01.1	+0.1
ARCR	ARCALIA	2.07	313	⇓P	Pn	02 52 02.0	+0.3
ARCR				⇑S	Sn	02 52 29.2	+0.2
BURAR	Bucovina Array	2.13	334	⇓P	Pn	02 52 04.1	+1.6
BURAR				⇑S	Sn	02 52 32.0	+1.6
TSCT	Constanta Port	2.13	136	⇑P	Pn	02 52 02.7	+0.2
RAZG	Razgrad	2.14	181	⇓P	Pn	02 52 02.8	+0.3
RAZG				⇑S	Sn	02 52 30.1	-0.3
EFOR	EFORIE	2.18	137	⇓P	Pn	02 52 03.4	+0.4
EFOR				⇑S	Sn	02 52 30.9	-0.3
ZIMR		2.22	203	⇑P	Pn	02 52 03.8	+0.3
TSSL	Sulina	2.28	103	⇓P	Pn	02 52 04.4	+0.2
TSSL				⇑S	Sn	02 52 32.9	-0.4
VLAD	Vladila	2.30	223	⇑P	Pn	02 52 04.5	0.0
CJR	Cluj-Napoca	2.31	297	⇓P	Pn	02 52 05.0	+0.4
PSN	Preselentsi	2.32	150	*i* P	Pn	02 52 05.5	+0.8
MANR	Mangalia	2.37	142	⇓P	Pn	02 52 05.5	+0.3
MANR				⇑S	Sn	02 52 34.9	-0.3
TSMN	Mangalia Port-	2.38	142	⇑P	Pn	02 52 05.7	+0.3
PURM	Purcari	2.43	69	⇓P	Pn	02 52 06.3	+0.2
SZH	Strazhica	2.48	191	*i* P	Pn	02 52 07.1	+0.4
PRD	Provadia	2.57	167	*i* P	Pn	02 52 09.0	+1.2
MARR	Marisel-Cluj	2.59	293	⇓P	Pn	02 52 08.2	0.0
SRE	Strehaia	2.60	248	⇑P	Pn	02 52 08.3	+0.1
CHRU	Chernivtsi	2.63	350	*e*P	Pn	02 52 09.9	+1.3
PVL	Pavlikeni	2.64	200	*i* P	Pn	02 52 10.6	+1.9
KALB	Balgarevo	2.65	150	⇓P	Pn	02 52 09.5	+0.7
KALB				⇓S	Sn	02 52 41.8	+0.3
ROIA	ROIAK	2.67	167	*i* P	Pn	02 52 09.8	+0.7
GZR	Gura Zlata	2.69	265	⇓P	Pn	02 52 10.2	+0.8
GZR				⇓S	Sn	02 52 44.3	+1.6
PLVB	Pleven	2.71	212	⇑P	Pn	02 52 09.8	+0.3
SORM	Soroca	2.72	26	⇑P	Pn	02 52 09.2	-0.5
SORM	Soroca	2.72	26	P	Pn	02 52 09.1	-0.5
SORM	Soroca	2.72	26	P	Pn	02 52 09.1	-0.5
KSV	Kosov	2.81	339	*e*P	Pn	02 52 11.1	+0.3
KSV				Pm		02 52 12.9	
KSV				*e*S	Sn	02 52 45.4	+0.1
KSV				Sm		02 52 46.5	
BAIL	Bailesti	2.85	235	⇓P	Pn	02 52 11.6	+0.2
RAKU	Rahkiv	2.85	325	*e*P	Pn	02 52 12.2	+0.8
KMPD	K-Podol'skiy	2.86	358	*e*P	Pn	02 52 12.8	+1.4
NSLU	Nyzhne Selyshc	2.89	331	*e*P	Pn	02 52 17.8	+6.0
DRGR		2.90	293	⇓P	Pn	02 52 11.8	-0.2
DRGR		2.90	293	P	Pn	02 52 11.8	-0.2
DRGR		2.90	293	*e*Pn	Pn	02 52 11.9	-0.2
MESR	Meseseni	2.90	301	⇓P	Pn	02 52 12.0	+0.1
RMGR	Halanga-Turnu	2.94	251	⇑P	Pn	02 52 12.5	+0.1
NDNU	Novodnistrovsk	2.94	10	*e*P	Pn	02 52 12.2	-0.3
PUNG	Punghina	2.96	242	⇑P	Pn	02 52 12.7	0.0
HERR	Herculane	3.05	256	⇑P	Pn	02 52 13.9	0.0
SURR	Surduc	3.12	273	⇓P	Pn	02 52 15.4	+0.6
JMB	Yambol	3.24	180	*i* P	Pn	02 52 16.3	0.0
STNU	Starunia	3.33	336	*e*P	Pn	02 52 18.3	+0.9
KORU	Korolevo	3.41	317	*e*P	Pn	02 52 19.2	+0.8
TRSU	Trosnyk	3.45	315	*e*P	Pn	02 52 19.9	+0.9
SIRR	Siria	3.48	281	⇓P	Pn	02 52 19.8	+0.3
BZS	Buzias	3.48	270	⇓P	Pn	02 52 19.7	+0.3
BZS	Buzias	3.48	270	*e*Pn	Pn	02 52 19.7	+0.3
MEZ	Mezhgor'ye	3.51	324	*e*P	Pn	02 52 21.1	+1.3
HORU	Horodok	3.51	358	*e*P	Pn	02 52 20.0	+0.2
HORU				Pm		02 52 20.5	
HORU				*e*S	Sn	02 52 59.8	-1.6
HORU				Sm		02 53 03.4	
MDVR	Moldovita	3.56	257	⇓P	Pn	02 52 21.0	+0.5
MDVR	Moldovita	3.56	257	P	Pn	02 52 20.6	+0.1
BRIU	Brid	3.59	319	*e*P	Pn	02 52 21.8	+1.0
ZAGS	Zajecar	3.63	240	*e*Pn	Pn	02 52 20.2	-1.2
ZAGS				*e*Sn	Sn	02 53 00.2	-3.9
TRPA	Tarpa	3.68	313	⇓P	Pn	02 52 22.4	+0.4
BERU	Beregovo	3.70	315	*e*P	Pn	02 52 22.8	+0.6
KUBS	Kucevo	3.71	251	*e*Pn	Pn	02 52 21.4	-1.1
KUBS				*e*Sn	Sn	02 53 02.4	-3.6
ZAPS	Zavoj	3.73	231	*e*Pn	Pn	02 52 22.7	0.0
ZAPS				*e*Sn	Sn	02 53 02.7	-3.8
MUKU	Mukachevo	3.83	317	*e*P	Pn	02 52 24.9	+1.0
PLD	Plovdiv	3.84	201	*e*Pn	Pn	02 52 24.3	+0.1
MORS	Morshin	3.89	333	*e*P	Pn	02 52 26.4	+1.7
VTS	Vitosha	3.91	219	⇑P	Pn	02 52 26.3	+1.0
VTS				⇑S	Sn	02 53 10.9	-0.2
VTS	Vitosha	3.91	219	*e*Pn	Pn	02 52 26.8	+1.5
VTS				*e*Sn	Sn	02 53 07.0	-4.0
HOLU	Holmets	4.02	316	*e*P	Pn	02 52 27.2	+0.7
BOVS	Bovan	4.05	241	*e*Pn	Pn	02 52 26.2	-0.7
BOVS				*e*Sn	Sn	02 53 10.8	-3.1
UZH	Uzhgorod	4.14	317	*e*P	Pn	02 52 28.7	+0.7
SHIU	Shidnytsya	4.14	329	*e*P	Pn	02 52 30.1	+2.0
BARS	Barje	4.48	232	*e*Pn	Pn	02 52 33.7	+1.1
GRUS	Gruza	4.55	249	*e*Pn	Pn	02 52 33.5	0.0
GRUS				*e*Sn	Sn	02 53 21.1	-4.8
PRVS	Prvonek	4.55	227	*e*Pn	Pn	02 52 33.9	+0.3
PRVS				*e*Sn	Sn	02 53 21.5	-4.5
RDO	Rodhopi	4.62	190	P	Pn	02 52 35.2	+0.8
TRUS	Trudelj	4.63	254	*e*Pn	Pn	02 52 34.5	0.0
TRUS				*e*Sn	Sn	02 53 24.0	-3.6
SELS	Selova	4.63	240	*e*Pn	Pn	02 52 34.5	-0.1
SELS				*e*Sn	Sn	02 53 23.7	-4.1
FRGS	Fruska Gora	4.80	266	*e*Pn	Pn	02 52 37.1	+0.3
DIVS	Divibare	4.95	253	*e*Pn	Pn	02 52 38.5	-0.4
DIVS				*e*Sn	Sn	02 53 33.0	-2.4
KECS	Kecovo	5.01	306	*e*P	Pn	02 52 40.1	+0.6
IVAS	Ivanjica	5.06	247	*e*Pn	Pn	02 52 39.7	-0.6
IVAS				*e*Sn	Sn	02 53 33.9	-4.1
PSZ	Piszkesteto	5.10	298	⇓P	Pn	02 52 40.7	-0.1
SEV	Sevastopol'	5.15	100	⇓*i*P	Pn	02 52 41.5	+0.1
SEV				Pm		02 52 41.7	
	comp=Z,23nm,0.4s						
SEV				*e*S	Sn	02 53 40.4	+0.4
SEV				Sm		02 53 41.0	
	comp=N,10.0nm,0.3s						
SEV				Sm		02 53 41.0	
	comp=E,18nm,0.3s						
SEV	Sevastopol'	5.15	100	P	Pn	02 52 41.5	+0.1
SEV				Pm		02 52 41.7	
SEV				S	Sn	02 53 40.4	+0.4
SEV				Sm		02 53 41.0	
AK07	Malin Array Si	5.16	19	P	Pn	02 52 41.0	-0.5
STHS	Stebnicka Huta	5.18	318	*e*P	Pn	02 52 42.0	+0.1
AK13	Malin Array Si	5.18	18	P	Pn	02 52 41.4	-0.5
AK06	Malin Array Si	5.19	19	P	Pn	02 52 41.3	-0.6
AK14	Malin Array Si	5.21	18	P	Pn	02 52 41.7	-0.5
AK10	Malin Array Si	5.21	19	P	Pn	02 52 41.7	-0.5
AK05	Malin Array Si	5.22	19	P	Pn	02 52 41.8	-0.6
AK09	Malin Array Si	5.24	19	P	Pn	02 52 42.1	-0.5
AK08	Malin Array Si	5.25	19	P	Pn	02 52 42.3	-0.4
AK16	Malin Array Si	5.25	18	P	Pn	02 52 42.2	-0.5
AK17	Malin Array Si	5.25	17	P	Pn	02 52 42.1	-0.7
AK02	Malin Array Si	5.26	19	P	Pn	02 52 42.5	-0.3
VAY	Valandovo	5.26	215	*i* Pn	Pn	02 52 45.9	+2.9
AK11	Malin Array Si	5.27	18	P	Pn	02 52 42.4	-0.6
AK19	Malin Array Si	5.28	17	P	Pn	02 52 42.4	-0.7
AK18	Malin Array Si	5.29	17	P	Pn	02 52 42.8	-0.5
AK20	Malin Array Si	5.30	17	P	Pn	02 52 42.8	-0.6
AKASG	Malin Array Be	5.30	18	P	Pn	02 52 42.6	-0.9
	comp=E,1.5nm,0.3s,baz=204,slow=11,SNR=12						
AKASG				S	Sn	02 53 40.1	-3.5
	comp=E,1.0nm,0.3s,baz=224,slow=25,SNR=5.4						
AKBB	Malin Array Si	5.30	18	P	Pn	02 52 43.0	-0.4
SJES	Sjenica	5.32	245	*e*Pn	Pn	02 52 42.1	-1.8
SJES				*e*Sn	Sn	02 53 41.4	-3.0
AK22	Malin Array Si	5.33	17	P	Pn	02 52 42.9	-0.8
AK21	Malin Array Si	5.33	17	P	Pn	02 52 43.2	-0.7
AK23	Malin Array Si	5.34	18	P	Pn	02 52 43.4	-0.5
SIM	Simferopol'	5.37	95	*e*P	Pn	02 52 41.6	-2.7
SIM				Pm		02 52 47.9	
	comp=Z,45nm,0.3s						
SIM				*e*S	Sn	02 53 42.7	-2.5
SIM				Sm		02 53 47.7	
	comp=N,91nm,1.0s						
SIM				Sm		02 53 47.7	
	comp=E,85nm,1.0s						
SIM	Simferopol'	5.37	95	P	Pn	02 52 41.6	-2.7
SIM				Pm		02 52 47.9	
SIM				S	Sn	02 53 42.7	-2.5
SIM				Sm		02 53 47.7	
BBLS	Lazići	5.43	253	*e*Pn	Pn	02 52 46.4	+1.1
BBLS				*e*Sn	Sn	02 53 43.4	-3.5
YAL	Yalta	5.50	100	⇓*e*P	Pn	02 52 46.0	-0.1
YAL				Pm		02 52 46.2	
	comp=Z,17nm,0.4s						
YAL				*e*S	Sn	02 53 49.7	+1.4
YAL				Sm		02 53 50.8	
	comp=N,6.0nm,0.4s						
YAL				Sm		02 53 50.8	
	comp=E,7.0nm,0.3s						
YAL	Yalta	5.50	100	P	Pn	02 52 46.0	-0.1
YAL				Pm		02 52 46.2	
YAL				S	Sn	02 53 49.7	+1.4
YAL				Sm		02 53 50.8	
MORH	Mrgy, Hungar	5.56	278	⇓P	Pn	02 52 47.7	+0.8
ALU	Alushta	5.62	98	⇓*i*P	Pn	02 52 48.1	+0.4
ALU				Pm		02 52 48.8	
	comp=Z,18nm,0.4s						
ALU				*e*S	Sn	02 53 52.2	+0.9
ALU	Alushta	5.62	98	P	Pn	02 52 48.1	+0.4
ALU				Pm		02 52 48.8	
ALU				S	Sn	02 53 52.2	+0.9
LANS	Liptovska Anna	5.93	308	*e*P	Pn	02 52 52.9	+1.0
VYHS	Vyhne	5.98	301	*e*P	Pn	02 52 53.0	+0.5
SUDU	Sudak	5.99	95	⇓*i*P	Pn	02 52 52.6	-0.1
SUDU				Pm		02 52 53.2	
	comp=Z,40nm,0.6s						
SUDU				*e*S	Sn	02 53 58.7	-1.6
SUDU				Sm		02 54 01.8	
	comp=N,40nm,0.6s						
SUDU				Sm		02 54 01.8	
	comp=E,59nm,0.6s						
SUDU	Sudak	5.99	95	P	Pn	02 52 52.6	-0.1
SUDU				Pm		02 52 53.2	
SUDU				S	Sn	02 53 58.7	-1.6
SUDU				Sm		02 54 01.8	
FEO	Feodosiya	6.24	93	P	Pn	02 52 54.8	-1.2
JAVC	Velka Javorina	6.83	301	*e*PG	Pn	02 53 05.2	+1.2
MODS	Modra-Piesok	6.90	296	*e*P	Pn	02 53 04.7	-0.1
RONA	Rosalia, Austr	7.35	289	*i* Pn	Pn	02 53 10.9	+0.1
	comp=E,6.7nm,1.1s						
VRAC	Vranov	7.66	302	P	Pn	02 53 14.0	-1.1
	comp=E,5.1nm,0.8s,baz=113,slow=9.7,SNR=8.6						
VRAC	Vranov	7.66	302	*e*PN	Pn	02 53 15.2	+0.1
CONA	Conrad Observa	7.68	291	*e*Pn	Pn	02 53 16.3	+0.9
	comp=E,3.5nm,1.0s						
KRUC	Moravsky	7.69	300	*e*PN	Pn	02 53 15.4	0.0
ARSA	Arzberg	7.79	285	*e*Pn	Pn	02 53 16.9	+0.1
	comp=E,4.5nm,0.9s						
KRLC	Kraliky	7.91	307	*e*PN	Pn	02 53 18.7	+0.4
BRTR	Keskin Array B	7.92	137	P	Pn	02 53 18.4	-0.2
	comp=E,3.4nm,0.6s,baz=317,slow=10,SNR=8.2						
DPC	Dobruska-Polom	8.30	308	*e*PN	Pn	02 53 25.9	+2.3
CKRC	Cesky Krumlov	8.91	295	*e*PN	Pn	02 53 32.9	+1.2
NACGM	Naroch	9.21	1	*e*P	Pn	02 53 43.4	+7.7
	comp=Z,9.0nm,1.1s,baz=181						
GERES	GERESS Array B	9.30	294	P	Pn	02 53 37.3	+0.3
	comp=Z,1.7nm,0.8s,baz=103,slow=12,SNR=11						
KHC	Kasperske Hory	9.46	296	*e*PN	Pn	02 53 40.2	+1.1
KBZ	Khabaz	11.78	94	P	Pn	02 54 10.4	+0.6
	comp=Z,0.8nm,0.5s,baz=280,slow=4.0,SNR=2.5						
VAE	Valguarnera	12.26	232	P	Pn	02 54 15.9	-0.2
	comp=Z,18nm,0.9s,baz=205,slow=13,SNR=3.9						
GNI	Garni	14.41	106	P	P	02 54 45.5	-1.1
	comp=Z,1.8nm,0.5s,baz=288,slow=19,SNR=2.2						
FINES	FINESS Array B	15.77	359	P	Pn	02 54 58.5	-1.8
	comp=Z,0.9nm,0.4s,baz=166,slow=12,SNR=12						
NOA	NORSAR Array B	17.81	335	P	P	02 55 23.3	-0.5
	comp=Z,0.6nm,0.9s,baz=155,slow=8.3,SNR=1.8						
ESDC	Sonseca Array	23.16	266	P	P	02 56 19.3	-0.9
	comp=Z,0.3nm,0.5s,baz=64,slow=10,SNR=2.0						
	comp=Z,0.3nm,0.5s						
ARCES	ARCESS Array B	23.90	359	P	P	02 56 26.4	-0.2
	comp=Z,0.5nm,0.5s,baz=175,slow=11,SNR=7.2						
	comp=Z,0.5nm,0.5s						
ZALV	Zalesovo Beam	37.49	56	P	P	02 58 26.9	+1.0
	comp=Z,0.9nm,0.3s,baz=292,slow=7.4,SNR=3.6						
	comp=Z,0.9nm,0.3s						
MKAR	Makanchi Array	37.85	68	P	P	02 58 30.3	+1.2
	comp=Z,0.6nm,0.5s,baz=268,slow=9.1,SNR=7.0						
	comp=Z,0.6nm,0.5s						
TORD	Torodi Ar. Bea	38.70	221	P	P	02 58 37.3	+0.9
	comp=Z,1.8nm,0.5s,baz=29,slow=8.8,SNR=45						
	comp=Z,1.8nm,0.5s						
DBIC	Dimbokro	47.45	225	P	P	02 59 46.5	-0.3
	comp=Z,3.1nm,0.3s,baz=41,slow=7.0,SNR=29						
	comp=Z,3.1nm,0.3s						
SONM	Songino Array	52.36	57	P	P	03 00 25.6	+2.0
	comp=Z,0.6nm,0.5s,baz=292,slow=8.4,SNR=5.0						
	comp=Z,0.6nm,0.5s						
YKA	Yellowknife Ar	67.77	342	P	P	03 02 08.7	+0.5
	comp=Z,0.3nm,0.5s,baz=31,slow=5.8,SNR=5.7						
	comp=Z,0.3nm,0.5s						

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*IDC **07** 03:09:59.8±3.6, 7°.18S×129°.66E, h122^{km}±29^{km}, mb3.5/2, mbtmp4.0/4, Error ellipse: s-maj=158.9km s-min=23.4km az=68.0*

*DJA **07** 03:10:00.7±0.2, 7°S±3°×13°0E±°, h163^{km}±8^{km}, M4.4/8, mb4.4/7, mB5.4/2, MLv4.3/8, Mw(mB)4.8/2*

ISC 07 03:10:00.8±0.8, **7°.24S**±0°.08×**129°.98E**±0°.09, **h150**^{km}**, n17, σ2^{s}.50**/19**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.51	119	P	Pn	03 10 33.1	+2.7
BNDI	Bandanaira	2.70	358	P	Pn	03 10 43.4	-1.0
MSAI	Masohi	4.00	345	P	Pn	03 10 59.9	-1.2
FAKI	Fak Fak	4.85	28	P	Pn	03 11 09.7	-2.6
NLAI	Namlea	4.90	324	P	Pn	03 11 12.1	-0.8
SOEI	Soe	6.17	246	P	Pn	03 11 29.0	-1.0
	120nm,0.9s,0.6nm						
LBMI	Labuha	7.01	339	P	Pn	03 11 39.5	-1.5
	55nm,0.9s,0.2nm						
LUWI	Luwuk	9.46	310	P	Pn	03 12 13.3	-0.4
	59nm,0.4s,6μm						

GENI	Genyem	11.15	66	P	Pn	03 12 35.1	-1.0
PLAI	Plampang	12.18	262	P	Pn	03 12 48.0	-1.5
	22nm,0.9s						
WRA	Warramunga Arr	13.32	162	P	Pn	03 13 04.7	+0.5
	3.2nm,0.5s,baz=337,slow=12,SNR=46						
WRA				S	Sn	03 15 24.1	-7.6
	2.7nm,0.5s,baz=332,slow=22,SNR=10						
SRBI	Singaraja	14.66	266	P	Pn	03 13 21.0	0.0
	19nm,0.5s						
ASAR	Alice Springs	16.77	167	P	Pn	03 13 49.3	+2.4
	1.9nm,0.5s,baz=339,slow=9.0,SNR=30						
ASAR				S	S	03 16 46.8	-6.6
	0.5nm,0.6s,baz=346,slow=24,SNR=2.9						
ASAR				ScP	ScP	03 21 51.2	+3.9
	0.6nm,0.6s,baz=329,slow=1.8,SNR=4.8						
SONM	Songino Array	58.66	342	P	P	03 19 42.7	+0.3
	0.3nm,0.6s,baz=158,slow=5.9,SNR=2.9						
	0.3nm,0.6s						
MKAR	Makanchi Array	68.41	327	P	P	03 20 47.2	+0.8
	0.9nm,0.4s,baz=118,slow=8.2,SNR=25						
	0.9nm,0.4s						
TORD	Torodi Ar. Bea	128.83	281	PKP	PKiKP	03 28 53.3	+1.1
	0.9nm,1.2s,baz=95,slow=0.8,SNR=2.8						
LPAZ	La Paz	150.55	143	PKPbc	PKiKP	03 29 40.4	+3.1
	0.6nm,0.4s,baz=220,slow=2.7,SNR=2.1						

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*AEIC **07** 03:29:19.9±2.2, 51°.3N±0°.2×174°.39W±0°.08, h12^{km}±9^{km}, Error ellipse: s-maj=25.7km s-min=7.5km az=182.0*
*NEIC **07** 03:29:22.1±1.3, 51°.4N±0°.1×174°.38W±0°.06, h57^{km}±20^{km}, mb3.8/32, ML3.3(AEIC), Error ellipse: s-maj=20.0km s-min=4.5km az=172.0*
*IDC **07** 03:29:23.7±2.5, 52°.56N×175°.20W, h0^{km}, mb3.8/3, mbtmp3.7/4, ML3.9/1, Error ellipse: s-maj=67.9km s-min=33.1km az=6.0*
ISC 07 03:29:20.4±1.7**, 51°.3N**±0°.2×**174°.34W**±0°.05**, h38^{km}, n52, σ1^{s}.07**/47**, mb3.9**/6**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	Great Sitkin T	1.35	308		Pn	03 29 42.9	+0.3
GSTR				Sn	Sn	03 29 59.6	+0.4
ADK	Adak	1.58	293		Pn	03 29 46.1	+0.3
ADK				Sn	Sn	03 30 06.1	+1.1
KIWB	Kanaga Island	1.85	289		Pn	03 29 50.0	+0.5
CLES	Cleveland East	3.15	59	Pn	Pn	03 30 09.1	+1.7
NIKH	Nikolski High	3.78	61	Pn	Pn	03 30 16.4	+0.4
UNV	Unalaska Valle	5.43	59	Pn	Pn	03 30 40.6	+2.0
Q19K	Cape Douglas,	14.06	49	Pn	Pn	03 32 38.2	+1.5
TTA	Tatalina	15.27	33	Pn	Pn	03 32 53.1	+0.2
CNPM	China Poot	15.43	49	Pn	Pn	03 32 54.7	-0.3
BRLK	Bradley Lake	15.69	48		P	03 32 60.0	-2.0
SKT	Skwentna	16.40	40		P	03 33 08.0	-1.7
SUA	Susitna One	16.47	43		P	03 33 10.2	-0.5
SUA				IAmb	IAmb	03 33 10.6	
	comp=Z,8.3nm,1.4s						
SEW	Seward	16.49	48	Pn	Pn	03 33 05.7	-2.7
O22K	Cooper Landing	16.50	47	Pn	Pn	03 33 08.7	+0.1
RC01	Rabbit Creek A	16.75	45	Pn	Pn	03 33 11.7	0.0
RC01				IAmb	IAmb	03 33 35.6	
	comp=Z,16nm,1.4s						
CAST	Castle Rocks	16.97	36		Pn	03 33 14.7	+0.2
PETK	Petropavlovsk-	17.20	287	Pn	Pn	03 33 18.4	+1.0
	comp=Z,0.1nm,0.3s,baz=85,slow=16,SNR=1.1						
PMR	Palmer	17.22	43		P	03 33 18.1	-0.7
PMR				IAmb	IAmb	03 33 47.5	
	comp=Z,15nm,1.5s						
GHO	Glory Hole Cre	17.39	43		P	03 33 20.4	-0.5
GHO				IAmb	IAmb	03 33 58.0	
	comp=Z,20nm,1.5s						
KTH	Kantishna Hill	17.47	36	P	P	03 33 21.4	-0.3
KTH				IAmb	IAmb	03 34 00.4	
	comp=Z,8.7nm,1.4s						
TRF	Thorofare Moun	17.66	37		Pn	03 33 22.3	-0.9
TRF				IAmb	IAmb	03 33 30.6	
	comp=Z,8.2nm,1.4s						
I21K	Tanana	18.08	31		Pn	03 33 24.7	-3.5
SCM	Sheep Creek Mo	18.11	44	P	P	03 33 28.2	-0.5
MLY	Manley	18.40	33		Pn	03 33 32.1	-0.1
WRH	Wood River Hil	19.02	36	P	P	03 33 37.8	-0.8
WRH				IAmb	IAmb	03 34 13.9	
	comp=Z,8.0nm,1.5s						
CCB	Clear Creek Bu	19.22	36	P	P	03 33 40.4	-0.4
MDM	Murphy Dome	19.23	35	P	P	03 33 40.7	-0.2
HDA	Harding Lake	19.42	37	P	P	03 33 42.9	-0.1
IL31		19.62	36	P	P	03 33 45.0	-0.1
IL31				IAmb	IAmb	03 34 17.2	
	comp=Z,7.7nm,1.5s						
ILAR	Eielson Array	19.62	36	P	P	03 33 45.3	+0.1
	comp=Z,0.4nm,0.3s,baz=236,slow=9.1,SNR=30						
	comp=Z,0.4nm,0.4s						
IL03	Eielson Array	19.64	36	P	P	03 33 44.5	-0.8
H24K	Noodor Dome	19.84	33	P	P	03 33 47.6	0.0
H24K				IAmb	IAmb	03 34 01.4	
	comp=Z,5.7nm,1.4s						
RIDG	Independent Ri	19.93	40	P	P	03 33 48.2	-0.4
RIDG				IAmb	IAmb	03 34 19.4	
	comp=Z,12nm,1.4s						
DOT	Dot Lake	20.21	41	P	P	03 33 51.5	-0.2
DOT				IAmb	IAmb	03 33 54.2	
	comp=Z,7.5nm,1.5s						
SCRK	Sand Creek	20.38	40	P	P	03 33 52.8	-0.7
SCRK				IAmb	IAmb	03 33 54.0	
	comp=Z,8.9nm,1.4s						
J26L	Joseph Creek	20.76	39	P	P	03 33 57.4	-0.2
J26L				IAmb	IAmb	03 34 04.9	
	comp=Z,5.0nm,0.7s						
I26K	Coal Creek Min	21.27	37	P	P	03 34 01.8	-1.2
I26K				IAmb	IAmb	03 34 13.0	
	comp=Z,7.7nm,1.4s						
EGAK	Eagle	21.82	39	P	P	03 34 08.5	-0.4
BMAR	Burnt Mountain	21.83	31	P	P	03 34 08.0	-1.0
DAWY	Dawson	22.29	42	P	P	03 34 13.7	-0.3
DAWY				IAmb	IAmb	03 34 39.7	
	comp=Z,5.6nm,1.4s						
HYT	Haines Junctio	22.39	50	P	P	03 34 13.6	-1.5
HYT				IAmb	IAmb	03 34 28.3	
	comp=Z,6.7nm,1.2s						
SIT	Sitka	23.31	60	P	P	03 34 25.0	+0.5
HG4B	Hotspring	26.42	71	P	P	03 34 51.8	-1.3
H11N2	WAKE ISLAND Hy	34.78	212	T	T	04 13 48.3	
	baz=20						
H11N3	WAKE ISLAND Hy	34.79	212	T	T	04 13 53.3	
	baz=20						
H11N1	WAKE ISLAND Hy	34.80	212	T	T	04 13 42.1	
	baz=20						
H11S1	WAKE ISLAND Hy	35.98	212	T	T	04 15 20.8	
	baz=22,slow=74						
H11S2	WAKE ISLAND Hy	36.00	212	T	T	04 15 21.5	
	baz=22,slow=74						
H11S3	WAKE ISLAND Hy	36.00	212	T	T	04 15 21.6	
	baz=22						
TXAR	Lajitas Array	55.89	84	P	P	03 39 06.1	+12
	comp=Z,0.2nm,0.7s,baz=311,slow=5.5,SNR=2.6						
	comp=Z,0.2nm,0.7s						
ARCES	ARCESS Array B	58.62	352	P	P	03 39 12.6	-0.3
	comp=Z,4.2nm,1.0s,baz=6.7,slow=8.4,SNR=2.3						
	comp=Z,4.2nm,1.0s						
MKAR	Makanchi Array	62.25	311	P	P	03 39 38.5	+0.6
	comp=Z,0.3nm,0.3s,baz=43,slow=6.6,SNR=17						
	comp=Z,0.3nm,0.3s						

IDC 07 03:48:57.9±1.9**, 5°.08S×133°.07E, h0^{km}, mb3.5**/1**, mbtmp3.7**/4**, ML3.7**/3**, MS3.5**/2**, Error ellipse: s-maj=93.8km s-min=28.0km az=67.0, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.82	175	Pn	Pn	03 52 27.9	-1.1
	0.2nm,0.3s,baz=359,slow=13,SNR=13						
WRA				Sn	Sn	03 55 03.6	-10
	0.2nm,0.3s,baz=4.4,slow=22,SNR=7.1						
WRA				LR	LR	03 59 08.4	
	comp=Z,150nm,18.3s,baz=16,slow=41						
	1.6nm,0.7s						
ASAR	Alice Springs	18.49	178	P	P	03 53 15.8	0.0
	0.2nm,0.3s,baz=357,slow=11,SNR=19						
ASAR				Sn	Sn	03 56 35.4	-7.8
	0.2nm,0.3s,baz=3.0,slow=30,SNR=4.9						
ASAR				LR	LR	04 01 23.9	
	comp=Z,140nm,18.7s,baz=27,slow=40						
	1.5nm,0.7s						
CTA	Charters Tower	19.67	140	P	P	03 53 29.1	+0.3
	0.3nm,0.3s,baz=326,slow=12,SNR=3.9						
	3.8nm,0.9s						
MKAR	Makanchi Array	68.36	325	P	P	04 00 01.3	0.0
	0.4nm,0.7s,baz=108,slow=6.5,SNR=4.5						
	0.4nm,0.7s						

IDC 07 03:53:24.8±2.5**, 7°.75S×131°.21E, h0^{km}, mb3.4**/1**, mbtmp3.5**/3**, ML3.8**/2**, Error ellipse: s-maj=129.9km s-min=34.2km az=71.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	12.50	166	Pn	Pn	03 56 23.7	-0.4
	0.5nm,0.3s,baz=349,slow=13,SNR=5.5						
WRA				Sn	Sn	03 58 35.0	-9.2
	0.1nm,0.3s,baz=348,slow=23,SNR=1.5						
	0.8nm,0.4s						
ASAR	Alice Springs	16.04	171	Pn	Pn	03 57 12.5	+0.5
	0.4nm,0.3s,baz=353,slow=12,SNR=5.5						
ASAR				Sn	Sn	04 00 05.8	-4.8
	0.1nm,0.3s,baz=357,slow=28,SNR=1.8						
	0.4nm,0.3s						
MKAR	Makanchi Array	69.51	326	P	P	04 04 35.4	0.0
	0.2nm,0.5s,baz=124,slow=6.1,SNR=1.3						
	0.2nm,0.5s						

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*IDC **07** 03:59:40.4±1.3, 36°.73N×69°.10E, h0^{km}, mb3.7/10, mbtmp3.7/16, ML3.3/5, MS3.0/1, Error ellipse: s-maj=25.1km s-min=13.9km az=145.0*
*NNC **07** 03:59:47.1±3.5, 37°.25N×68°.79E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=31.1km s-min=25.2km az=108.0*
ISC 07 03:59:46.1±1.3**, 37°.3N**±0°.1×**68°.66E**±0°.08**, h10^{km}, n20, σ1^{s}.98**/23**, mb3.6**/7**, 4C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.01	13	⇑Pn	Pn	04 01 17.9	+2.8
	0.5nm,0.2s,baz=197,slow=14,SNR=7.6						
KK31				⇓Pg	Pg	04 01 38.7	-2.5
	5.5nm,0.6s,baz=199,slow=19,SNR=7.7						
KK31				⇑Sn	Sn	04 02 26.7	+2.7
	3.0nm,0.4s						
KK31				⇓Lg	Lg	04 02 59.2	
	10nm,0.6s,baz=194,slow=28,SNR=5.7						
AML	Almayashu	6.23	37	⇑Pn	Pn	04 01 19.4	+1.0
	0.8nm,0.7s						
AML				⇓Sn	Sn	04 02 32.9	+3.1
	2.4nm,0.6s						
AML				⇑Lg	Lg	04 03 03.0	
	3.4nm,0.6s						
AAK	Ala-Archa	7.00	38	Pn	Pn	04 01 29.8	+1.0
	2.3nm,0.3s,baz=199,slow=5.6,SNR=18						
AAK				Sn	Sn	04 02 50.8	+2.3
	0.4nm,0.3s,baz=67,slow=19,SNR=1.6						
AAK				Lg	Lg	04 03 27.9	
	0.7nm,0.3s,baz=19,slow=22,SNR=1.4						
	5.1nm,0.3s						
TKM2	Tokmak 2	7.76	41	⇓Pn	Pn	04 01 39.5	+0.2
	3.3nm,0.7s						
TKM2				⇓Lg	Lg	04 03 49.3	
	7.0nm,0.8s						
GEYT	Alibeck	8.40	278	Pn	Pn	04 01 48.0	+0.1
	0.6nm,0.3s,baz=99,slow=8.9,SNR=2.5						
GEYT				Sn	Sn	04 03 23.1	+0.4
	0.9nm,0.3s,baz=226,slow=25,SNR=1.7						
GEYT				Lg	Lg	04 04 29.6	
	0.1nm,0.3s,baz=106,slow=22,SNR=1.4						
	1.2nm,0.4s						
MKAR	Makanchi Array	13.89	42	Pn	Pn	04 03 02.1	-0.9
	baz=240,slow=16,SNR=5.4						
MKAR				Lg	Lg	04 07 03.3	
	baz=221,slow=13,SNR=1.8						
	0.5nm,0.8s						
KURBB	Kurchatov Arra	15.12	25	Pn	Pn	04 03 14.6	-5.0
	0.2nm,0.3s,baz=200,slow=14,SNR=1.9						
AKTO	Aktyubinsk	15.23	333	Pn	Pn	04 03 21.6	+0.5
	0.3nm,0.3s,baz=136,slow=13,SNR=6.8						
AKTO				Sn	Sn	04 06 07.6	-2.1
	0.2nm,0.3s,baz=318,slow=4.8,SNR=1.6						
	1.7nm,0.5s						
BVAR	Borovoye Array	15.82	4	Pn	Pn	04 03 27.6	-1.2
	baz=178,slow=12,SNR=4.6						
	1.2nm,0.5s						
ZALV	Zalesovo Beam	20.08	29	P	P	04 04 18.2	-1.3
	0.7nm,0.4s,baz=215,slow=12,SNR=2.5						
	0.7nm,0.4s						
ARU	Arti	20.35	344	P	Pn	04 04 24.9	+0.4
	4.0nm,0.3s,baz=306,slow=23,SNR=2.0						
	4.0nm,0.3s						
KBZ	Khabaz	20.59	296	P	P	04 04 26.0	+0.9
	0.8nm,0.6s,baz=214,slow=4.9,SNR=4.3						
	0.8nm,0.6s						
BELG	Belogornoye	21.14	322	P	P	04 04 32.5	+1.6
	13nm,0.8s,baz=270,slow=3.3,SNR=4.5						
	13nm,0.8s						
EIL	Elat	29.01	265	LR	LR	04 21 04.9	
	comp=Z,27nm,18.4s,baz=241,slow=44						
FINES	FINESS Array B	35.82	326	P	P	04 06 45.8	+0.5
	2.3nm,0.9s,baz=216,slow=26,SNR=1.3						
	2.3nm,0.9s						
NOA	NORSAR Array B	42.65	323	P	P	04 07 41.7	-0.8
	0.8nm,0.7s,baz=97,slow=8.1,SNR=3.6						
	0.8nm,0.7s						
ESDC	Sonseca Array	55.45	297	P	P	04 09 21.7	+0.8
	0.3nm,0.6s,baz=55,slow=7.2,SNR=4.8						
	0.3nm,0.6s						
TORD	Torodi Ar. Bea	63.87	267	P	P	04 10 18.4	-0.8
	0.9nm,0.8s,baz=52,slow=6.3,SNR=8.8						
	0.9nm,0.8s						
YKA	Yellowknife Ar	80.56	2	P	P	04 11 57.8	-0.4
	0.3nm,0.6s,baz=348,slow=5.4,SNR=7.5						
	0.3nm,0.6s						
WRA	Warramunga Arr	83.98	120	P	P	04 12 07.9	-8.9
	0.3nm,0.7s,baz=333,slow=4.8,SNR=2.5						
	0.3nm,0.7s						

IDC 07 04:01:14.8±1.6**, 9°.91N×138°.36E, h0^{km}, mb3.5**/5**, mbtmp3.5**/5**, Error ellipse: s-maj=63.1km s-min=32.7km az=82.0, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	28.72	70	T	T	04 37 41.0	
	baz=243,slow=79,SNR=12						
H11S1	WAKE ISLAND Hy	28.73	70	T	T	04 37 41.9	
	baz=243,slow=79						
H11S2	WAKE ISLAND Hy	28.73	70	T	T	04 37 39.9	
	baz=243,slow=79,SNR=19						
H11N1	WAKE ISLAND Hy	29.20	67	T	T	04 38 15.1	
	baz=254,slow=75,SNR=24						
H11N2	WAKE ISLAND Hy	29.21	67	T	T	04 38 16.6	
	baz=254,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	29.22	67	T	T	04 38 16.1	
	baz=254,slow=75,SNR=12						
ASAR	Alice Springs	33.66	187	P	P	04 07 57.4	-0.1
	0.1nm,0.4s,baz=15,slow=13,SNR=2.0						
	0.1nm,0.4s						
MKAR	Makanchi Array	59.86	319	P	P	04 11 22.2	-0.1
	0.4nm,0.8s,baz=101,slow=8.2,SNR=4.5						
	0.4nm,0.8s						
KURBB	Kurchatov Arra	63.44	322	P	P	04 11 46.2	-0.2
	0.5nm,0.6s,baz=108,slow=7.1,SNR=2.8						
	0.5nm,0.6s						
BVAR	Borovoye Array	68.93	323	P	P	04 12 22.0	+0.4
	0.4nm,0.4s,baz=104,slow=6.1,SNR=4.2						
	0.4nm,0.4s						
ILAR	Eielson Array	74.60	25	P	P	04 12 55.5	0.0
	0.3nm,0.9s,baz=256,slow=6.5,SNR=2.6						
	0.3nm,0.9s						

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*IDC **07** 04:09:50.4±2.3, 37°.68N×73°.00E, h0^{km}, mb3.7/5, mbtmp3.6/10, ML3.1/4, MS2.7/1, Error ellipse: s-maj=45.8km s-min=23.7km az=136.0*
*NNC **07** 04:09:53.7±2.2, 38°.03N×72°.25E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=16.3km s-min=14.2km az=5.0*
ISC 07 04:09:55.6±1.5**, 38°.1N**±0°.1×**72°.2E**±0°.1**, h10^{km}, n14, σ2^{s}.51**/19**, mb3.5**/5**, 5C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	4.21	16	⇓Pn	Pn	04 10 59.9	-0.3
	1.4nm,0.5s						
AML				⇓Sn	Sn	04 11 51.7	+2.1
	4.9nm,0.7s						
AAK	Ala-Archa	4.88	21	Pn	Pn	04 11 08.3	-0.9
	0.6nm,0.3s,baz=60,slow=21,SNR=2.5						
AAK				Sn	Sn	04 12 09.1	+3.3
	baz=48,slow=23						
AAK				LR	LR	04 13 05.5	
	comp=Z,66nm,18.8s,baz=173,slow=38						
KK31	Karatay Array	5.17	346	Pn	Pn	04 11 14.3	+1.3
	3.3nm,0.4s,baz=152,slow=12,SNR=48						
KK31				⇑Pg	Pg	04 11 30.0	-4.5
	7.7nm,0.7s,baz=166,slow=15,SNR=3.8						
KK31				⇑Sn	Sn	04 12 15.0	+2.3
	7.2nm,0.6s						
KK31				⇑Lg	Lg	04 12 38.7	
	19nm,0.9s,baz=166,slow=28						
TKM2	Tokmak 2	5.49	27	⇑Pn	Pn	04 11 15.8	-1.9
	3.2nm,1.2s						
TKM2				⇓Pg	Pb	04 11 34.6	+2.8
	5.9nm,0.8s						
TKM2				⇑Lg	Lg	04 12 48.7	
	14nm,1.2s						
MKAR	Makanchi Array	11.47	37	Pn	Pn	04 12 35.8	-3.6
	0.1nm,0.3s,baz=226,slow=14,SNR=3.6						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	13.33	18	Pn	Pn	04 13 01.9	-2.9
	0.1nm,0.3s,baz=206,slow=10,SNR=2.0						
	0.3nm,0.3s						
BVAR	Borovoye Array	14.99	356	Pn	Pn	04 13 27.3	-0.1
	0.4nm,0.4s,baz=149,slow=10.0,SNR=1.6						
AKTO	Aktyubinsk	15.94	325	Pn	P	04 13 41.9	-1.6
	0.4nm,0.3s,baz=121,slow=11,SNR=7.9						
	2.8nm,0.6s						
ZALV	Zalesovo Beam	18.09	25	P	Pn	04 14 03.9	-2.9
	0.2nm,0.3s,baz=221,slow=11,SNR=3.6						
	0.8nm,0.5s						
FINES	FINESS Array B	36.71	325	P	P	04 17 04.6	+2.1
	5.9nm,1.1s,baz=142,slow=6.9,SNR=3.7						
	5.9nm,1.1s						
ARCES	ARCESS Array B	40.05	337	P	P	04 17 31.8	+1.2
	0.7nm,0.7s,baz=108,slow=8.6,SNR=1.0						
	0.7nm,0.7s						
NOA	NORSAR Array B	43.69	322	P	P	04 18 02.9	+2.4
	0.6nm,0.8s,baz=90,slow=8.6,SNR=1.3						
	0.6nm,0.8s						
TORD	Torodi Ar. Bea	66.68	269	P	P	04 20 47.5	+0.5
	0.2nm,0.4s,baz=54,slow=5.9,SNR=8.5						
	0.2nm,0.4s						
YKA	Yellowknife Ar	79.62	3	P	P	04 22 01.4	-1.3
	0.2nm,0.5s,baz=350,slow=5.2,SNR=4.3						
	0.2nm,0.5s						

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*IDC **07** 04:18:51.4±1.0, 30°.34N×103°.45E, h0^{km}, mb3.8/5, mbtmp3.7/7, ML4.5/1, Error ellipse: s-maj=55.8km s-min=18.9km az=63.0*
ISC 07 04:18:56.5±1.1**, 30°.3N**±0°.1×**103°.4E**±0°.3**, h35^{km}, n7, σ0^{s}.31**/7**, mb3.6**/5**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.51	200	Pn	Pn	04 21 52.2	+0.1
	0.9nm,0.3s,baz=13,slow=13,SNR=2.1						
	1.2nm,0.3s						
SONM	Songino Array	17.62	7	P	P	04 23 00.4	+0.4
	0.2nm,0.4s,baz=185,slow=9.2,SNR=2.0						
MKAR	Makanchi Array	23.18	321	P	P	04 24 00.1	+0.2
	0.7nm,0.7s,baz=121,slow=11,SNR=8.4						
	0.7nm,0.7s						
KURBB	Kurchatov Arra	27.50	325	P	P	04 24 39.4	-0.1
	0.4nm,0.3s,baz=133,slow=9.5,SNR=1.1						
	0.4nm,0.3s						
ARCES	ARCESS Array B	57.71	336	P	P	04 28 42.9	-0.4
	2.3nm,0.9s,baz=94,slow=5.9,SNR=1.2						
	2.3nm,0.9s						
WRA	Warramunga Arr	58.18	145	P	P	04 28 47.0	-0.2
	1.1nm,0.6s,baz=336,slow=7.9,SNR=20						
	1.1nm,0.6s						
ASAR	Alice Springs	61.16	148	P	P	04 29 07.7	0.0
	0.2nm,0.4s,baz=336,slow=6.8,SNR=5.6						
	0.2nm,0.4s						

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*IDC **07** 04:37:45.3±1.4, 33°.32S×69°.19W, h0^{km}, mb4.0/2, mbtmp3.8/6, ML3.3/4, MS2.9/4, Error ellipse: s-maj=61.2km s-min=15.7km az=112.0*
*GUC **07** 04:37:45.5±0.9, 33°.13S×69°.61W, h18^{km}±2^{km}, ML2.9*
ISC 07 04:37:45.4±1.2**, 33°.14S**±0°.03×**69°.63W**±0°.04**, h11^{km}**±9^{km}**, n34, σ0^{s}.92**/54**, 8C-5D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MT08	Bocatoma Ro	0.45	227	⇑*i*P	Pg	04 37 54.1	-0.1
MT08				*i*S	Sg	04 38 00.9	+0.7
MT04	Ro Olivares	0.50	238	⇑*i*P	Pg	04 37 55.2	0.0
MT04				*i*S	Sg	04 38 02.7	+0.8
MT04				IAML		04 38 06.8	
	comp=E,794nm,0.6s						
FCH	Farellones	0.58	251	⇓*i*P	Pb	04 37 56.9	-1.0
FCH				*i*S	Sg	04 38 05.7	+1.0
FCH				IAML		04 38 09.3	
	comp=N,990nm,0.5s						
MT13	San Alfonso	0.81	222	⇑*i*P	Pb	04 38 00.8	-0.9
MT03	Universidad Ad	0.82	244	⇓*i*P	Pb	04 38 01.1	-0.6
MT03				*i*S	Sg	04 38 13.0	+1.1
MT03				IAML		04 38 17.1	
	comp=E,806nm,0.2s						
LMEL	Las Melosas	0.85	214	⇑*i*P	Pb	04 38 01.5	-0.9
LMEL				*i*S	Sb	04 38 13.8	-0.2
LMEL				IAML		04 38 15.4	
	comp=N,381nm,0.3s						
VA03	San Esteban	0.86	296	⇓*i*P	Pb	04 38 01.6	-0.9
VA03				*i*S	Sg	04 38 14.0	+0.8
PEL	Peldehue	0.89	269	*e*P	Pb	04 38 01.7	-1.2
PEL				*i*S	Sb	04 38 14.7	-0.1
MT05	Renca	0.96	254	*e*P	Pb	04 38 03.7	-0.5
MT05				*i*S	Sg	04 38 17.5	+1.0
MT05				IAML		04 38 26.1	
	comp=E,736nm,0.5s						
MT12	Pirque	0.97	232	⇑*i*P	Pb	04 38 03.7	-0.6
MT12				*i*S	Sb	04 38 17.1	-0.1
MT12				IAML		04 38 32.1	
	comp=N,614nm,0.7s						
ROCH	El Roble	1.17	278	*e*P	Pb	04 38 07.3	-0.5
ROCH				⇑*i*P	Pn	04 38 06.9	-1.1
ROCH				*i*S	Sn	04 38 23.3	-0.8
ROCH				*i*S	Sg	04 38 23.7	+0.5
ROCH				IAML		04 38 25.4	
	comp=E,414nm,0.6s						
ROCH				IAML		04 38 25.8	
	comp=N,647nm,0.4s						
BO04	La Punta	1.18	224	*e*P	Pn	04 38 07.2	-0.8
BO04				*i*S	Sg	04 38 24.3	+0.9
BO04				IAML		04 38 27.2	
	comp=N,206nm,0.5s						
MT02	Curacav	1.27	264	⇓*i*P	Pn	04 38 08.7	-0.5
MT02				*i*S	Sb	04 38 26.3	+0.6
MT02				IAML		04 38 31.7	
	comp=N,224nm,0.6s						
MT09	Talagante	1.30	240	*e*P	Pn	04 38 09.2	-0.5
MT09				*i*S	Sg	04 38 27.6	+0.2
VA06	Catapilco	1.52	292	⇓*i*P	Pb	04 38 12.8	-0.8
VA06				*i*S	Sb	04 38 33.3	+0.4
VA06				IAML		04 38 37.7	
	comp=N,692nm,0.4s						
MT01	Popeta	1.54	241	*e*P	Pb	04 38 13.1	-0.9
MT01				*i*S	Sb	04 38 33.9	+0.5
MT01				IAML		04 38 37.6	
	comp=N,158nm,0.2s						
VA05	Santo Domingo	1.74	252	*e*P	Pb	04 38 16.6	-0.8
VA05				*i*S	Sb	04 38 40.4	+1.1
VA05				IAML		04 38 50.0	
	comp=E,517nm,0.6s						
BO02	Sierra Bellavi	1.91	210	⇑*i*P	Pb	04 38 20.3	0.0
BO02				*i*S	Sg	04 38 46.7	0.0
BO02				IAML		04 39 00.8	
	comp=N,203nm,0.5s						
CFA	Coronel Fontan	1.93	38	Pn	Pb	04 38 20.1	-0.6
	comp=N,38nm,0.3s,baz=206,slow=14,SNR=315						
CFA				Lg	Lg	04 38 44.8	
	comp=N,35nm,0.3s,baz=292,slow=15,SNR=18						
CFA				LR	LR	04 39 07.5	
	comp=N,84nm,19.3s,baz=166,slow=43						
CO02	Combarbal	2.25	329	*e*P	Pb	04 38 26.0	-0.2
CO02				*i*S	Sg	04 38 56.3	-1.5
BO03	Pichilemu	2.37	234	*e*P	Pb	04 38 26.8	-1.3
BO03				*i*S	Sb	04 38 57.9	+0.6

BO03				IAML		04 39 03.3	
	comp=E,209nm,0.8s						
GO05	**Huala**	**2.67**	**225**	⇑*i*P	**Pb**	**04 38 31.9**	**-1.4**
GO05				*i* S	**Sb**	**04 39 07.8**	**+1.7**
GO05				IAML		04 39 12.0	
	comp=N,271nm,0.7s						
CO01	**Juntas del Tor**	**3.18**	**353**	*e*P	**Pb**	**04 38 42.9**	**+0.8**
PLCA	**Paso Flores**	**7.62**	**185**	Pn	**Pn**	**04 39 36.2**	**-0.2**
	baz=308,slow=12,SNR=1.5						
PLCA				Lg	Lg	04 41 45.4	
	comp=N,0.1nm,0.3s,baz=178,slow=7.8,SNR=1.5						
PLCA				LR	LR	04 42 34.5	
	comp=N,81nm,21.2s,baz=54,slow=39						
	comp=N,1.5nm,1.1s						
LVC	**Limon Verde**	**10.51**	**4**	Lg	Lg	04 43 14.9	
	comp=N,0.3nm,0.3s,baz=291,slow=21,SNR=4.3						
LVC				LR	LR	04 44 46.6	
	comp=N,56nm,19.9s,baz=206,slow=40						
CPUP	**Villa Florida**	**12.65**	**61**	Pn	**Pn**	**04 40 43.1**	**-2.3**
	comp=N,0.1nm,0.3s,baz=226,slow=12,SNR=4.3						
CPUP				Lg	Lg	04 44 12.6	
	baz=276,slow=18,SNR=1.9						
	comp=N,1.6nm,0.7s						
LPAZ	**La Paz**	**16.83**	**5**	Pn	**P**	**04 41 45.8**	**+1.8**
	comp=N,0.1nm,0.3s,baz=185,slow=7.6,SNR=7.3						
LPAZ				LR	LR	04 48 24.9	
	comp=N,45nm,19.5s,baz=142,slow=38						
	comp=N,2.0nm,0.8s						
SIV	**San Ignacio**	**18.75**	**26**	P	**Pn**	**04 42 05.3**	**+0.3**
	baz=189,slow=10,SNR=13						
	comp=N,2.5nm,0.7s						
NNA	**Nana**	**22.07**	**341**	LR	LR	04 49 49.2	
	comp=N,39nm,19.8s,baz=208,slow=32						
BDFB	**Brasilia**	**26.20**	**54**	P	**P**	**04 43 21.4**	**+0.9**
	comp=N,2.2nm,0.7s,baz=19,slow=27,SNR=2.0						
	comp=N,2.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**82.03**	**69**	P	**P**	**04 50 05.8**	**-0.3**
	comp=N,1.0nm,0.8s,baz=248,slow=5.5,SNR=5.0						
	comp=N,1.0nm,0.8s						
ASAR	**Alice Springs**	**119.22**	**205**	PKP	**PKiKP**	**04 56 36.4**	**+1.1**
	comp=N,0.5nm,0.9s,baz=130,slow=2.9,SNR=2.4						
ZALV	**Zalesovo Beam**	**152.41**	**33**	PKPbc	**PKiKP**	**04 57 42.5**	**+1.1**
	comp=N,1.1nm,0.6s,baz=306,slow=3.8,SNR=6.7						
MKAR	**Makanchi Array**	**154.68**	**49**	PKPab	**PKPab**	**04 58 01.5**	**+0.3**
	comp=N,0.3nm,0.7s,baz=301,slow=3.4,SNR=3.7						

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*IDC **07** 04:54:34.1±0.8, 37°.11N×28°.68E, h0^{km}, mb3.9/7, mbtmp3.9/14, ML3.8/7, Error ellipse: s-maj=16.1km s-min=14.1km az=169.0*

*ISK **07** 04:54:34.8, 37°.12N×28°.60E, h6^{km}, ML3.7/20*

*THE **07** 04:54:34.7, 37°.16N×28°.63E, h1^{km}, ML3.5/6, Error ellipse: s-maj=0.7km s-min=0.5km az=50.0*

*DDA **07** 04:54:35.2±0.0, 37°.13N×28°.64E, h7^{km}±4^{km}, MW3.6*

*ATH **07** 04:54:35.6, 37°.11N×28°.64E, h5^{km}±31^{km}, ML3.6/5, Error ellipse: s-maj=31.6km s-min=1.4km az=0.0*

ISC 07 04:54:35.5±1.0**, 37°.12N**±0°.02×**28°.62E**±0°.02**, h10**^{km}±7^{km}**, n92, σ1s.46**/128**, mb4.0**/7**, 9C-3D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.27**	**274**	P	**Pg**	**04 54 40.4**	**-0.6**
YER				S	**Sb**	**04 54 46.0**	**-1.2**
YER	**Yerkesik**	**0.27**	**274**	Pg	**Pg**	**04 54 40.4**	**-0.6**
YER				Sg	**Sg**	**04 54 44.5**	**-0.1**
MULA	**Mugla, Merkez-**	**0.28**	**300**	SPECP		04 54 40.0	
MULA				P	**Pg**	**04 54 41.0**	**-0.1**
MULA				S	**Sb**	**04 54 46.2**	**-1.2**
DALY	**Dalyan (Mula)**	**0.30**	**175**	Pg	**Pg**	**04 54 40.7**	**-0.8**
DALY				Sg	**Sb**	**04 54 46.6**	**-1.4**
TAVA	**DENIZLI_Tavas**	**0.42**	**34**	SPECP		04 54 43.0	
TAVA				P	**Pg**	**04 54 43.3**	**-0.4**
TAVA				S	**Sb**	**04 54 49.6**	**-2.0**
CAEL	**Denizli, Camel**	**0.56**	**89**	SPECP		04 54 45.0	
CAEL				P	**Pg**	**04 54 45.8**	**-0.6**
DNIZ	**Denizli-Tavas-**	**0.61**	**33**	SPECP		04 54 46.0	
DNIZ				P	**Pg**	**04 54 46.5**	**-0.8**
DNIZ				S	**Sg**	**04 54 54.9**	**-0.5**
FETY	**Fethiye**	**0.61**	**142**	Pg	**Pg**	**04 54 46.2**	**-1.1**
FETY				Sg	**Sb**	**04 54 56.6**	**-0.3**
FETY	**Fethiye**	**0.61**	**142**	P	**Pb**	**04 54 47.8**	**-0.4**
APMY	**Acipayam-Deniz**	**0.65**	**57**	Pg	**Pg**	**04 54 47.2**	**-0.9**
APMY				Sg	**Sb**	**04 54 58.1**	**-0.1**
MLSB	**Milas**	**0.69**	**285**	Pg	**Pg**	**04 54 48.5**	**-0.4**
MLSB				Sg	**Sb**	**04 54 58.8**	**-0.6**
DAT	**Datca**	**0.92**	**245**	P	**Pb**	**04 54 53.2**	**-0.4**
DAT				S	**Sn**	**04 55 07.5**	**-0.5**
DAT	**Datca**	**0.92**	**245**	Pg	**Pg**	**04 54 52.8**	**-0.4**
DAT				Sg	**Sb**	**04 55 06.1**	**+0.2**
DAT	**Datca**	**0.92**	**245**	SPECP		04 54 52.0	
DAT				P	**Pg**	**04 54 52.8**	**-0.4**
DAT				S	**Sn**	**04 55 08.9**	**+0.9**
ARG	**Arkhangelos**	**0.98**	**204**	P	**Pg**	**04 54 53.7**	**-0.7**
ARG				S	**Sn**	**04 55 09.8**	**+0.5**
	2μm,0.4s						
ARG	**Arkhangelos**	**0.98**	**204**	Pg	**Pg**	**04 54 53.7**	**-0.7**
ARG				Sg	**Sb**	**04 55 08.3**	**+0.7**
ARG	**Arkhangelos**	**0.98**	**204**	P	**Pg**	**04 54 53.5**	**-0.9**
ARG				S	**Sg**	**04 55 07.3**	**+0.1**
ARG				AML	AML	04 55 12.4	
	comp=E,4696μm,0.7s						
ARG				AML	AML	04 55 12.7	
	comp=N,3165μm,1.1s						
ELL	**Elmali**	**1.10**	**109**	Pn	**Pn**	**04 54 56.9**	**-0.2**
ELL				Sn	**Sn**	**04 55 13.0**	**+0.6**
DDIM	**Aydin, Didim**	**1.15**	**288**	SPECP		04 54 56.0	
DDIM				P	**Pg**	**04 54 56.7**	**-0.8**
DDIM				S	**Sn**	**04 55 16.2**	**+2.8**
KSL	**Kastellorizon**	**1.24**	**141**	P	**Pg**	**04 54 58.5**	**-0.8**
KSL				S	**Sn**	**04 55 15.8**	**+0.2**
	comp=N,3μm,0.8s						
KSL	**Kastellorizon**	**1.24**	**141**	P	**Pg**	**04 54 58.4**	**-0.9**
KSL				S	**Sn**	**04 55 15.6**	**0.0**
KSL				AML	AML	04 55 22.7	
	comp=N,5308μm,0.5s						
KSL				AML	AML	04 55 24.1	
	comp=E,4951μm,1.0s						
BRDR	**BURDUR-Merkez**	**1.29**	**63**	SPECP		04 55 00.0	
BRDR				P	**Pn**	**04 55 00.3**	**+0.7**
BRDR				S	**Sn**	**04 55 21.0**	**+4.0**
NISR	**Nisiros**	**1.30**	**248**	P	**Pn**	**04 54 59.1**	**-0.6**
NISR				S	**Sn**	**04 55 17.5**	**+0.4**
	comp=E,2μm,0.3s						
NISR	**Nisiros**	**1.30**	**248**	P	**Pn**	**04 54 59.8**	**+0.2**
NISR				AML	AML	04 55 24.2	
	comp=N,3410μm,0.3s						
NISR				AML	AML	04 55 25.6	
	comp=E,4550μm,0.3s						
KOSK	**Kos Island**	**1.36**	**255**	P	**Pn**	**04 54 59.9**	**-0.7**
KOSK				S	**Sg**	**04 55 19.1**	**-0.3**
	comp=E,1μm,0.5s						
KOSK	**Kos Island**	**1.36**	**255**	Pn	**Pn**	**04 55 00.7**	**+0.1**
KOSK	**Kos Island**	**1.36**	**255**	P	**Pn**	**04 55 00.5**	**-0.1**
KOSK				AML	AML	04 55 27.5	
	comp=E,7325μm,0.5s						
KOSK				AML	AML	04 55 29.4	
	comp=N,7961μm,0.4s						
MANT	**Manisa**	**1.37**	**358**	SPECP		04 55 00.0	
MANT				P	**Pn**	**04 55 00.6**	**-0.4**
MANT				S	**Sn**	**04 55 21.5**	**+2.2**
BASM	**Basmaki-Afyon**	**1.39**	**54**	Pn	**Pg**	**04 55 01.4**	**-0.8**
KULA	**Kula-Manisa**	**1.40**	**1**	P	**Pn**	**04 54 59.4**	**-1.7**
KULA				S	**Sb**	**04 55 18.2**	**-1.4**
KULA	**Kula-Manisa**	**1.40**	**1**	Pn	**Pn**	**04 55 01.0**	**-0.1**
SMG	**Samos**	**1.54**	**293**	P	**Pn**	**04 55 02.8**	**-0.2**
SMG				S	**Sn**	**04 55 23.1**	**0.0**
SMG				AML	AML	04 55 31.6	
	comp=N,3097μm,0.5s						
SMG				AML	AML	04 55 34.1	
	comp=E,2358μm,0.5s						
AKUM	**Antalya-Kumluc**	**1.60**	**119**	SPECP		04 55 05.0	
AKUM				P	**Pg**	**04 55 05.7**	**-0.4**
AKUM				S	**Sg**	**04 55 31.9**	**+5.0**
BCK	**Bucak**	**1.61**	**77**	Pn	**Pb**	**04 55 04.8**	**-0.5**
USAK	**Uak-Merkez**	**1.62**	**11**	SPECP		04 55 04.0	
USAK				P	**Pb**	**04 55 04.7**	**-0.9**
USAK				S	**Sg**	**04 55 27.1**	**-0.7**
ANTB	**Antalya**	**1.64**	**97**	Pn	**Pb**	**04 55 05.5**	**-0.4**
KZIL	**AFYON_Kizioren**	**1.66**	**46**	SPECP		04 55 05.0	
KZIL				P	**Pb**	**04 55 05.5**	**-0.7**
ISP	**Isparta**	**1.67**	**64**	Pn	**Pb**	**04 55 05.7**	**-0.7**
GOMA	**Golmarmara-Man**	**1.68**	**341**	Pn	**Pn**	**04 55 05.5**	**+0.5**
AKS	**Akhisar**	**1.87**	**340**	Pn	**Pn**	**04 55 08.1**	**+0.5**
SUTC	**Sutluce-Ispart**	**1.93**	**79**	Pn	**Pb**	**04 55 09.4**	**-1.5**
KARP	**Karpathos**	**1.96**	**217**	Pn	**Pn**	**04 55 09.5**	**+0.7**
KARP	**Karpathos**	**1.96**	**217**	P	**Pn**	**04 55 09.4**	**+0.5**
SIMA	**Simav-Kutahya**	**1.98**	**8**	Pn	**Pn**	**04 55 09.5**	**+0.3**
GEDZ	**Gediz**	**2.02**	**18**	Pn	**Pn**	**04 55 10.5**	**+0.7**
DKL	**Dikili**	**2.37**	**326**	Pn	**Pn**	**04 55 15.2**	**+0.7**
CHOS	**Chios island**	**2.39**	**303**	P	**Pn**	**04 55 15.1**	**+0.2**
APE	**Apeiranthos**	**2.47**	**270**	⇓P	**Pb**	**04 55 19.1**	**-0.9**
THR8	**Santorini-Mono**	**2.62**	**255**	P	**Pn**	**04 55 19.2**	**+1.3**
SANT	**Santorini**	**2.65**	**255**	⇑P	**Pb**	**04 55 22.5**	**-0.5**
THR3	**Thira Island,**	**2.68**	**256**	P	**Pn**	**04 55 18.1**	**-0.6**
THR3	**Thira Island,**	**2.68**	**256**	P	**Pn**	**04 55 19.2**	**+0.5**
THR6	**Thira Island,**	**2.70**	**255**	P	**Pn**	**04 55 18.2**	**-0.7**
ZKR	**Zakros**	**2.79**	**225**	P	**Pn**	**04 55 19.8**	**-0.4**
ZKR				S	**Sn**	**04 55 55.2**	**+1.3**
	comp=E,210nm,0.6s						
ZKR	**Zakros**	**2.79**	**225**	P	**Pn**	**04 55 21.7**	**+1.5**
STIA	**Sitia Lasithi**	**2.80**	**228**	P	**Pn**	**04 55 19.7**	**-0.6**
STIA				S	**Sn**	**04 55 54.9**	**+0.7**
STIA	**Sitia Lasithi**	**2.80**	**228**	P	**Pn**	**04 55 21.7**	**+1.4**
PRK	**Paraskevi**	**2.82**	**320**	P	**Pn**	**04 55 19.2**	**-1.4**
PRK				S	**Sn**	**04 55 53.6**	**-1.0**
	comp=E,568nm,0.8s						
PRK	**Paraskevi**	**2.82**	**320**	P	**Pn**	**04 55 21.1**	**+0.5**
SIGR	**SIGRI**	**3.02**	**315**	P	**Pn**	**04 55 22.5**	**-0.9**
SIGR	**SIGRI**	**3.02**	**315**	P	**Pn**	**04 55 24.1**	**+0.7**
FRMA	**Ierapetra Chan**	**3.14**	**229**	P	**Pn**	**04 55 25.4**	**+0.4**
IDI	**Anoyia**	**3.52**	**240**	⇑P	**Pn**	**04 55 32.9**	**+2.5**
IDI	**Anoyia**	**3.52**	**240**	Pn	**Pn**	**04 55 32.6**	**+2.2**
	comp=E,9.4nm,0.3s,baz=75,slow=20,SNR=69						
IDI				Sn	**Sn**	**04 56 14.2**	**+2.0**
	comp=E,10nm,0.3s,baz=108,slow=20,SNR=5.7						
	comp=E,31nm,0.3s						
IDI	**Anoyia**	**3.52**	**240**	P	**Pn**	**04 55 29.8**	**-0.6**
IDI	**Anoyia**	**3.52**	**240**	P	**Pn**	**04 55 31.7**	**+1.3**
VLY	**Voula,Athens**	**3.91**	**282**	P	**Pn**	**04 55 36.2**	**+0.6**
EREA	**Eretria**	**3.93**	**291**	P	**Pn**	**04 55 37.2**	**+1.2**
ANTO	**Ankara**	**4.28**	**49**	⇑P	**Pn**	**04 55 42.8**	**+2.1**
GVD	**Gavdhos**	**4.32**	**240**	P	**Pn**	**04 55 40.9**	**-0.4**
VIL2	**Platees**	**4.38**	**286**	P	**Pn**	**04 55 43.0**	**+0.8**
BRTR	**Keskin Array B**	**4.72**	**55**	Pn	**Pn**	**04 55 48.7**	**+1.7**
	comp=E,2.8nm,0.3s,baz=227,slow=15,SNR=30						
BRTR				Sn	**Sn**	**04 56 42.5**	**+0.6**
	comp=E,0.5nm,0.3s,baz=221,slow=24,SNR=6.1						
	comp=E,12nm,0.6s						
VTS	**Vitosha**	**6.88**	**325**	⇑P	**Pn**	**04 56 20.2**	**+3.7**
MMAI	**Mount Meron Ar**	**6.91**	**124**	Pn	**Pn**	**04 56 16.2**	**-0.7**
	comp=E,9.0nm,0.3s,baz=309,slow=12,SNR=24						
MMAI				Sn	**Sn**	**04 57 33.9**	**-1.6**
	comp=E,5.5nm,0.3s,baz=303,slow=27,SNR=5.4						
	comp=E,11nm,0.4s						
TIRR	**Tirgusor**	**7.33**	**359**	⇑P	**Pn**	**04 56 24.1**	**+1.5**
CFR	**Carcaliu**	**8.06**	**358**	⇑P	**Pn**	**04 56 35.2**	**+2.7**
BOVS	**Bovan**	**8.38**	**323**	⇑P	**Pn**	**04 56 39.2**	**+2.2**
ASF	**Jabal al Asfar**	**8.42**	**123**	Pn	**Pn**	**04 56 38.4**	**+0.8**
	comp=E,1.1nm,0.3s,baz=9.6,slow=12,SNR=5.2						
ASF				Sn	**Sn**	**04 58 11.2**	**-1.6**
	comp=E,0.2nm,0.3s,baz=18,slow=17,SNR=1.4						
	comp=E,2.4nm,0.3s						
MLR	**Muntele Rosu**	**8.60**	**347**	⇓P	**Pn**	**04 56 42.8**	**+2.6**
MLR	**Muntele Rosu**	**8.60**	**347**	Pn	**Pn**	**04 56 41.3**	**+1.1**
	comp=E,0.3nm,0.3s,baz=115,slow=5.8,SNR=11						
	comp=E,4.8nm,0.7s						
PLOR	**Plostina**	**8.85**	**351**	⇑P	**Pn**	**04 56 46.7**	**+3.3**
VRI	**Vrincioaia**	**8.86**	**351**	⇑P	**Pn**	**04 56 46.9**	**+3.4**
EIL	**Elat**	**9.12**	**143**	Pn	**Pn**	**04 56 46.8**	**-0.4**
	comp=E,2.6nm,0.3s,baz=331,slow=10,SNR=17						
EIL				Sn	**Sn**	**04 58 23.0**	**-6.9**
	comp=E,1.8nm,0.3s,baz=314,slow=19,SNR=6.7						
	comp=E,8.3nm,0.4s						
BURAR	**Bucovina Array**	**10.79**	**348**	⇓P	**Pn**	**04 57 13.7**	**+3.7**
GERES	**GERESS Array B**	**15.98**	**322**	Pn	**Pn**	**04 58 21.6**	**+1.2**
	comp=E,0.1nm,0.3s,baz=129,slow=7.7,SNR=1.3						
	comp=E,0.2nm,0.3s						
FINES	**FINESS Array B**	**24.40**	**357**	P	**P**	**04 59 54.6**	**+0.8**
	comp=E,6.5nm,1.0s,baz=179,slow=13,SNR=7.0						
	comp=E,6.5nm,1.0s						
AKTO	**Aktyubinsk**	**24.86**	**48**	P	**P**	**04 59 56.8**	**-1.4**
	comp=E,2.0nm,0.6s,baz=252,slow=8.4,SNR=6.2						
	comp=E,2.0nm,0.6s						
ESDC	**Sonseca Array**	**25.59**	**286**	P	**P**	**05 00 05.1**	**+0.2**
	comp=E,0.9nm,0.9s,baz=83,slow=9.7,SNR=5.4						
	comp=E,0.9nm,0.9s						
ARCES	**ARCESS Array B**	**32.52**	**358**	P	**P**	**05 01 06.5**	**+0.4**
	comp=E,4.8nm,1.0s,baz=174,slow=9.0,SNR=3.6						
	comp=E,4.8nm,1.0s						
TORD	**Torodi Ar. Bea**	**33.89**	**232**	P	**P**	**05 01 18.3**	**-0.4**
	comp=E,1.7nm,0.5s,baz=35,slow=8.9,SNR=37						
	comp=E,1.7nm,0.5s						
MKAR	**Makanchi Array**	**40.36**	**59**	P	**P**	**05 02 13.2**	**-0.1**
	comp=E,0.6nm,0.7s,baz=274,slow=6.9,SNR=8.3						
MKAR				PcP	**PcP**	**05 04 16.3**	**-0.2**
	comp=E,0.5nm,0.9s,baz=261,slow=4.8,SNR=4.0						
	comp=E,0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**41.62**	**48**	P	**P**	**05 02 23.6**	**0.0**
	comp=E,0.4nm,0.4s,baz=287,slow=9.9,SNR=1.7						
	comp=E,0.4nm,0.4s						

IDC 07 05:04:35.6±10.0**, 2°.37N×128°.23E, h231**^{km}±105^{km}**, mb3.0**/4**, mbtmp3.6**/4**, MS2.6**/1**, Error ellipse: s-maj=150.9km s-min=21.5km az=65.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.97**	**165**	P	P	05 09 20.1	-0.1
	0.5nm,0.4s,baz=345,slow=10,SNR=12						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**26.46**	**168**	P	P	05 09 51.9	+0.1
	0.5nm,0.5s,baz=355,slow=8.1,SNR=13						
ASAR				PcP	PcP	05 13 10.3	-0.4
	0.2nm,0.4s,baz=357,slow=2.2,SNR=4.3						
	0.5nm,0.5s						
KSRS	**Korea Array**	**34.91**	**360**	LR	LR	05 24 19.8	
	comp=Z,9.3nm,21.2s,baz=145,slow=34						
MKAR	**Makanchi Array**	**59.52**	**325**	P	P	05 14 14.7	-0.1
	0.2nm,0.4s,baz=113,slow=8.5,SNR=7.6						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.68**	**327**	P	P	05 14 42.6	+0.1
	0.4nm,0.4s,baz=127,slow=6.1,SNR=2.0						
	0.4nm,0.4s						

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*NNC **07** 05:13:04.9±2.6, 53°.88N×90°.67E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=19.2km s-min=14.2km az=51.0, Suspected Mining explosion.*

*IDC **07** 05:13:06.5±2.9, 53°.61N×90°.77E, h0^{km}, mbtmp3.2/4, ML2.7/4, Error ellipse: s-maj=26.2km s-min=20.7km az=70.0*

ISC 07 05:13:06.5±3.9**, 53°.8N**±0°.1×**90°.6E**±0°.2**, h0**^{km}**, n11, σ1s.25**/15**, 4C-9D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.45**	**276**	I	I	05 39 25.0	
	0.1nm,1.3s,baz=89,slow=334,SNR=5.3						
ZAA0	**Zalesovo Array**	**3.45**	**276**	⇓Pg	**Pb**	**05 14 07.3**	**-1.1**
	2.7nm,0.8s						
ZAA0				⇑Lg	Lg	05 14 56.6	
	11nm,0.9s						
ZALV	**Zalesovo Beam**	**3.45**	**276**	Pn	**Pn**	**05 14 02.4**	**+1.0**
	1.4nm,0.3s,baz=90,slow=14,SNR=24						
ZALV				Lg	Lg	05 14 57.0	
	2.2nm,0.3s,baz=93,slow=27,SNR=9.5						
	1.5nm,0.4s						
KURK	**Kurchatov**	**7.98**	**252**	⇓Pn	**Pn**	**05 15 03.4**	**-0.1**
	4.5nm,1.2s						
KURK				⇓Sn	**Sn**	**05 16 37.2**	**+2.8**
	13nm,1.1s						
KURK				⇓Lg	Lg	05 17 23.0	
	40nm,1.1s						
KURBB	**Kurchatov Arra**	**8.07**	**252**	Pn	**Pn**	**05 15 05.0**	**+0.2**
	0.2nm,0.3s,baz=65,slow=14,SNR=7.5						
KURBB				Sn	**Sn**	**05 16 35.8**	**-0.9**
	baz=64,slow=26,SNR=2.3						
KURBB				Lg	Lg	05 17 24.5	
	0.1nm,0.3s,baz=68,slow=34,SNR=7.3						
	1.6nm,0.5s						
KURBB	**Kurchatov Arra**	**8.07**	**252**	⇓Pn	**Pn**	**05 15 04.8**	**0.0**
	3.7nm,0.6s						
KURBB				⇑Sn	**Sn**	**05 16 35.2**	**-1.5**
	30nm,0.8s						
KURBB				⇓Lg	Lg	05 17 24.7	
	54nm,0.8s						
MK31	**Makanchi Array**	**8.77**	**221**	Pn	**Pn**	**05 15 14.7**	**+0.2**
	3.3nm,0.9s,baz=32,slow=13,SNR=20						
MK31				⇑Sn	**Sn**	**05 16 55.0**	**+1.0**
	3.9nm,0.9s,baz=46,slow=20,SNR=4.0						
MK31				⇓Lg	Lg	05 17 48.6	
	21nm,1.1s,baz=33,slow=30,SNR=6.0						
MKAR	**Makanchi Array**	**8.77**	**221**	Pn	**Pn**	**05 15 14.2**	**-0.3**
	0.3nm,0.3s,baz=29,slow=12,SNR=18						
MKAR				Sn	**Sn**	**05 16 52.9**	**-1.1**
	0.1nm,0.3s,baz=31,slow=29,SNR=3.4						
MKAR				Lg	Lg	05 17 41.2	
	baz=42,slow=31						
	0.4nm,0.3s						
MAKZ	**Makanchi**	**8.88**	**222**	⇑Pn	**Pn**	**05 15 15.9**	**-0.1**
	1.5nm,0.8s						
MAKZ				⇓Sn	**Sn**	**05 16 58.4**	**+1.6**
	2.9nm,0.8s						
MAKZ				⇓Lg	Lg	05 17 54.2	
	12nm,1.2s						
SONM	**Songino Array**	**11.59**	**114**	Lg	Lg	05 18 59.5	
	0.1nm,0.3s,baz=303,slow=28,SNR=12						
BVAR	**Borovoye Array**	**12.11**	**275**	Pn	**Pn**	**05 16 00.8**	**+0.8**
	baz=74,slow=16,SNR=1.9						
	0.3nm,0.4s						

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*IDC **07** 05:13:13.7±5.0, 18°.50N×101°.58W, h0^{km}, mb3.3/3, mbtmp3.3/5, ML3.1/2, MS3.1/1, Error ellipse: s-maj=120.1km s-min=33.6km az=35.0*

*MEX **07** 05:13:21.4±0.8, 18°.28N×101°.35W, h61^{km}±11^{km}, MD4.3*

ISC 07 05:13:19.8±0.8**, 18°.15N**±0°.03×**101°.40W**±0°.02**, h71**^{km}±7^{km}**, n53, σ2s.54**/92**, mb3.1**/3**, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UON	**La Union**	**0.43**	**246**	*i* P	**Pn**	**05 13 31.3**	**-0.8**
UON				*i* S	**Sn**	**05 13 40.3**	**-0.8**
ZIIG	**Zihuatanejo**	**0.54**	**187**	*i* P	**Pn**	**05 13 33.5**	**+0.4**
ZIIG				*i* S	**Sn**	**05 13 44.2**	**+1.3**
ARIG	**Puente Sto Nin**	**1.01**	**82**	*i* P	**Pn**	**05 13 37.2**	**-1.3**
ARIG				*i* S	**Sn**	**05 13 49.6**	**-2.8**
ATYC	**Atoyac**	**1.31**	**135**	*e*P	**Pn**	**05 13 42.7**	**+0.4**
ATYC				*e*S	**Sn**	**05 13 57.9**	**-1.2**
URUA	**Uruapan**	**1.42**	**333**	*e*P	**Pn**	**05 13 41.9**	**-2.1**
URUA				*e*S	**Sn**	**05 13 58.8**	**-3.4**
CAIG	**El Cayaco**	**1.54**	**135**	*e*P	**Pn**	**05 13 45.7**	**+0.5**
CAIG				*e*S	**Sn**	**05 14 03.9**	**-0.6**
MOIG	**Morelia**	**1.54**	**7**	*e*P	**Pn**	**05 13 43.1**	**-2.4**
MOIG				*e*S	**Sn**	**05 14 01.0**	**-3.9**
MEIG	**Mezcala**	**1.71**	**97**	*e*P	**Pn**	**05 13 47.5**	**-0.1**
MEIG				*e*S	**Sn**	**05 14 10.6**	**+1.8**
PLIG	**Platanillo**	**1.82**	**82**	*e*P	**Pn**	**05 13 49.7**	**+0.6**
PLIG				*e*S	**Sn**	**05 14 13.5**	**+2.1**
MMIG	**Aquila**	**1.86**	**275**	*e*P	**Pn**	**05 13 49.0**	**-0.5**
MMIG				*e*S	Sn	05 14 03.8	-8.3
MAVM	**Malinalco, Edo**	**1.98**	**66**	*e*P	Pn	05 13 58.0	+6.6
MAVM				*e*S	**Sn**	**05 14 21.7**	**+6.3**
TOVM	**TOLUCA**	**1.98**	**55**	*e*P	**Pn**	**05 13 50.2**	**-1.4**
TOVM				*e*S	**Sn**	**05 14 16.6**	**+0.9**
DAIG	**Los Arroyos**	**2.01**	**124**	*e*P	**Pn**	**05 13 52.4**	**+0.8**
DAIG				*e*S	**Sn**	**05 14 14.8**	**-1.0**
INVM	**La Marquesa**	**2.22**	**59**	*e*P	**Pn**	**05 13 56.0**	**+1.2**
INVM				*e*S	**Sn**	**05 14 20.8**	**-0.8**
AOVM	**Tlapan**	**2.26**	**60**	*e*P	**Pn**	**05 13 56.3**	**+0.8**
AOVM				*e*S	**Sn**	**05 14 25.9**	**+3.3**
YAIG	**Yautepec**	**2.32**	**72**	*e*P	**Pn**	**05 13 55.6**	**-0.4**
YAIG				*e*S	**Sn**	**05 14 26.7**	**+3.0**
CJVM	**Cuajimalpa**	**2.34**	**59**	*e*P	**Pn**	**05 13 56.6**	**+0.3**
CJVM				*e*S	**Sn**	**05 14 23.8**	**-0.4**
TLVM	**San Miguel Top**	**2.38**	**63**	*e*P	**Pn**	**05 13 57.8**	**+0.9**
TLVM				*e*S	**Sn**	**05 14 29.2**	**+4.0**
COIG	**Colima**	**2.40**	**296**	*e*P	**Pn**	**05 13 57.3**	**+0.2**
COIG				*e*S	**Sn**	**05 14 24.9**	**-0.6**
UNM	**Universidad Na**	**2.41**	**60**	*e*P	**Pn**	**05 13 57.5**	**+0.3**
UNM				*e*S	**Sn**	**05 14 23.1**	**-2.9**
MHVM	**Bosque de Chap**	**2.42**	**58**	*e*P	Pn	05 14 00.9	+3.5
MHVM				*e*S	**Sn**	**05 14 30.7**	**+4.4**
XCVM	**Xochimilco**	**2.43**	**63**	*e*P	Pn	05 14 01.6	+4.1
XCVM				*e*S	**Sn**	**05 14 31.9**	**+5.6**
JUBC	**Volcan de Coli**	**2.47**	**304**	*e*P	**Pn**	**05 13 58.8**	**+0.7**
JUBC				*e*S	**Sn**	**05 14 32.6**	**+5.3**
EZ5V		**2.47**	**303**	*e*P	**Pn**	**05 13 59.0**	**+0.9**
EZ5V				*e*S	**Sn**	**05 14 28.7**	**+1.2**
MNGA	**Volcan de Coli**	**2.48**	**302**	*e*P	**Pn**	**05 13 59.2**	**+1.0**
MNGA				*e*S	**Sn**	**05 14 30.5**	**+2.9**
INCO	**Volcan de Coli**	**2.50**	**304**	*e*P	**Pn**	**05 13 59.5**	**+0.9**
INCO				*e*S	**Sn**	**05 14 31.8**	**+3.5**
SOMAC	**Volcano de Col**	**2.52**	**303**	*e*P	**Pn**	**05 14 00.0**	**+1.2**
SOMAC				*e*S	**Sn**	**05 14 29.3**	**+0.5**
PBVM	**Pinon**	**2.54**	**59**	*e*P	**Pn**	**05 13 58.3**	**-0.5**
PBVM				*e*S	**Sn**	**05 14 27.1**	**-1.6**
GMVM	**Gustavo A Made**	**2.55**	**58**	*e*P	Pn	05 14 04.0	+4.8
GMVM				*e*S	**Sn**	**05 14 27.9**	**-1.4**
THVM	**De Xico**	**2.57**	**63**	*e*P	Pn	05 14 05.8	+6.3
THVM				*e*S	**Sn**	**05 14 32.6**	**+2.7**
PTVM	**Pico Tres Padr**	**2.60**	**56**	*e*P	**Pn**	**05 13 57.0**	**-2.9**
PTVM				*e*S	**Sn**	**05 14 29.5**	**-1.1**
CDAR	**Ciudad de Arme**	**2.60**	**288**	*e*P	**Pn**	**05 13 59.4**	**-0.3**
CDAR				*e*S	**Sn**	**05 14 28.5**	**-1.7**
R15V		**2.65**	**293**	*e*P	**Pn**	**05 14 01.2**	**+0.8**
R15V				*e*S	**Sn**	**05 14 37.6**	**+6.0**
JRQG	**Juriquilla Cam**	**2.70**	**19**	*e*P	**Pn**	**05 13 58.9**	**-2.3**
JRQG				*e*S	**Sn**	**05 14 29.8**	**-3.1**
TLIG	**Tlapa**	**2.76**	**102**	*e*P	**Pn**	**05 14 03.1**	**+1.2**
TLIG				*e*S	**Sn**	**05 14 31.6**	**-2.6**
ZUVM	**ZUMPANGO**	**2.76**	**52**	*e*P	**Pn**	**05 14 05.1**	**+3.1**
ZUVM				*e*S	**Sn**	**05 14 35.8**	**+1.4**
MGIG	**Malinaltepec**	**2.79**	**109**	*e*P	**Pn**	**05 14 03.7**	**+1.4**
MGIG				*e*S	Sn	05 14 43.0	+8.0
DEIG	**Demacu**	**3.10**	**46**	*e*P	**Pn**	**05 14 04.1**	**-2.5**
DEIG				*e*S	**Sn**	**05 14 46.9**	**+4.3**
FTIG	**Fresnillo de T**	**3.12**	**94**	*e*P	**Pn**	**05 14 07.7**	**+0.9**
FTIG				*e*S	**Sn**	**05 14 38.8**	**-4.1**
HLIG	**Huajuapan de L**	**3.44**	**95**	*e*P	**Pn**	**05 14 12.3**	**+1.1**
HLIG				*e*S	**Sn**	**05 14 46.6**	**-4.2**
TXIG	**Tlaxiaco**	**3.57**	**104**	*e*P	**Pn**	**05 14 14.8**	**+1.7**
TXIG				*e*S	**Sn**	**05 14 51.5**	**-2.8**
PNIG	**Pinotepa**	**3.58**	**119**	*e*P	**Pn**	**05 14 14.1**	**+1.2**
PNIG				*e*S	**Sn**	**05 14 50.6**	**-3.5**
TPIG	**Tehuac#an**	**3.84**	**85**	*e*P	**Pn**	**05 14 16.6**	**-0.1**
TPIG				*e*S	**Sn**	**05 14 56.3**	**-4.5**
YOIG	**Yosondua**	**3.89**	**109**	*i* P	**Pn**	**05 14 19.5**	**+2.0**
YOIG				*e*S	**Sn**	**05 15 00.1**	**-2.1**
TOIG	**Toxpalan**	**4.12**	**90**	*e*P	**Pn**	**05 14 21.1**	**+0.6**
TOIG				*e*S	**Sn**	**05 15 03.1**	**-4.4**
VHO	**Vista Hermosa**	**4.58**	**103**	*e*P	**Pn**	**05 14 27.4**	**+0.6**
VHO				*e*S	Sn	05 15 10.9	-7.8
PEIG	**Puerto Escondi**	**4.59**	**117**	*e*P	**Pn**	**05 14 28.5**	**+1.7**
PEIG				*e*S	**Sn**	**05 15 14.7**	**-4.2**
CMIG	**Matias Romero**	**6.30**	**99**	Pn	**Pn**	**05 14 51.8**	**+1.7**
	1.3nm,0.3s,baz=285,slow=16,SNR=9.7						
CMIG				Sn	**Sn**	**05 15 55.0**	**-5.7**
	0.3nm,0.3s,baz=270,slow=10.0,SNR=1.9						
	2.3nm,0.3s						
TXAR	**Lajitas Array**	**11.33**	**350**	Pn	**Pn**	**05 15 54.9**	**-4.0**
	baz=168,slow=14,SNR=1.9						
	0.2nm,0.9s						
ANMO	**Albuquerque**	**17.33**	**346**	LR	LR	05 24 33.6	
	comp=Z,75nm,20.8s,baz=242,slow=40						
NVAR	**Mina Array Bea**	**25.02**	**327**	P	**P**	**05 18 36.8**	**-0.7**
	0.4nm,0.6s,baz=148,slow=9.3,SNR=3.3						
	0.4nm,0.6s						
PDAR	**Pinedale Array**	**25.50**	**346**	P	**P**	**05 18 41.1**	**-0.7**
	1.1nm,0.8s,baz=150,slow=9.6,SNR=8.9						
	1.1nm,0.8s						
YKA	**Yellowknife Ar**	**45.25**	**351**	P	**P**	**05 21 27.9**	**-1.9**
	0.2nm,0.7s,baz=161,slow=7.4,SNR=4.0						
	0.2nm,0.7s						

IDC 07 05:14:42.2±55.0**, 16°.58S×177°.22W, h0**^{km}**, mb3.9**/3**, mbtmp3.9**/3**, Error ellipse: s-maj=1026.0km s-min=186.4km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.26**	**240**	P	P	05 22 21.4	+0.3
	1.7nm,0.7s,baz=103,slow=14,SNR=2.1						
	1.7nm,0.7s						
WRA	**Warramunga Arr**	**46.00**	**258**	P	P	05 23 06.9	-0.9
	0.4nm,0.7s,baz=96,slow=7.9,SNR=4.6						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**46.25**	**253**	P	P	05 23 09.8	+0.1
	2.0nm,0.5s,baz=88,slow=8.2,SNR=36						
	2.0nm,0.5s						

IDC 07 05:18:01.3±3.2,54°.16N×87°.22E,h0^{km},mbtmp2.9/2, ML1.9/1,Error ellipse: s-maj=27.5km s-min=18.8km az=64.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.43	262	I	I	05 25 00.1	
	baz=81,slow=336,SNR=5.0						
ZALV	Zalesovo Beam	1.43	262	Pg	Pg	05 18 28.6	-0.1
	1.5nm,0.3s,baz=79,slow=15,SNR=11						
ZALV				Lg	Lg	05 18 46.8	
	1.8nm,0.3s,baz=81,slow=28,SNR=2.3						
KURBB	Kurchatov Arra	6.39	240	Pn	Pn	05 19 35.7	-0.9
	baz=55,slow=13,SNR=2.1						
KURBB				Lg	Lg	05 21 25.5	
	0.1nm,0.3s,baz=55,slow=29,SNR=2.0						
	1.0nm,0.7s						
MKAR	Makanchi Array	8.02	205	Pn	Pn	05 20 00.6	+1.6
	0.5nm,0.8s,baz=27,slow=14,SNR=1.3						
MKAR				Lg	Lg	05 22 18.0	
	baz=27,slow=29,SNR=2.9						

FUNV 07 05:23:58.1,12°.00N×69°.68W,h25^{km},MW3.3

ISC 07 05:23:58.6±1.5,11°.90N±0°.07×69°.67W±0°.04,h82^{km}±18^{km}, n27,σ1^{s}.79/48,1C,Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JACV	Jacura	1.16	134	eP	Pn	05 24 20.0	+0.3
JACV				eS	Sn	05 24 35.7	+0.2
SIQV	Siquisique	1.25	186	eP	Pn	05 24 20.8	-0.1
SIQV				eS	Sn	05 24 37.8	+0.1
CURV	Curarigua	1.90	189	eP	Pn	05 24 29.1	-0.3
CURV				eS	Sn	05 24 53.2	+0.5
URIC	Uribia, Colomb	2.28	265	eP	Pn	05 24 33.1	-1.2
URIC				eS	Sn	05 25 01.9	+0.3
URIC				i		05 25 07.5	
	comp=Z,52nm,0.6s						
MAPV	Macapo	2.38	150	eP	Pn	05 24 35.7	0.0
MAPV				eS	Sn	05 25 03.7	-0.3
BENV	Beln	2.81	133	eP	Pn	05 24 43.6	+2.2
BENV				eS	Sn	05 25 14.1	-0.3
FUNV	FUNVISIS	3.15	117	eP	Pn	05 24 45.9	-0.2
FUNV				eS	Sn	05 25 20.9	-1.9
CRJC	Cerrejon, Guaj	3.27	255	eP	Pn	05 24 47.0	-0.6
CRJC				eS	Sn	05 25 25.2	-0.3
CRJC				i		05 25 29.4	
	comp=Z,35nm,0.3s						
BAUV	El Baul	3.35	151	eP	Pn	05 24 49.2	+0.5
BAUV				eS	Sn	05 25 26.6	-0.9
MCQV	Machiques	3.36	237	eP	Pn	05 24 48.1	-0.7
MCQV				eS	Sn	05 25 26.2	-1.6
BIRV	Birongo	3.63	113	eP	Pn	05 24 52.0	-0.6
BIRV				eS	Sn	05 25 32.4	-1.9
SOCV	Socops	3.78	198	eP	Pn	05 24 55.5	+0.9
SOCV				eS	Sn	05 25 37.0	-1.0
MERV	Las Mercedes	4.24	128	eP	Pn	05 25 01.5	+0.7
MERV				eS	Sn	05 25 46.9	-2.3
SMRC	Santa Marta, M	4.52	261	eP	Pn	05 25 06.3	+1.7
SMRC				eS	Sn	05 25 58.2	+2.1
CAPV	Capacho	4.78	213	eP	Pn	05 25 08.7	+0.2
CAPV				eS	Sn	05 26 00.5	-2.2
ARGC	Ariguani, Magd	4.93	246	eP	Pn	05 25 10.6	+0.4
ARGC				eS	Sn	05 26 07.1	+1.0
CACV	CAICARA DEL OR	5.30	144	eP	Pn	05 25 20.3	+4.9
CACV				eS	Sn	05 26 20.8	+5.7
PAMC	Pamplona, Colo	5.43	214	⇑iP	Pn	05 25 18.0	+0.5
PAMC				eS	Sn	05 26 17.4	-1.5
PAMC				i		05 26 20.7	
	comp=Z,4.6nm,0.3s						
SJCC	San Jacinto, C	5.76	250	eP	Pn	05 25 22.2	+0.5
SJCC				eS	Sn	05 26 27.4	+0.9
SJCC				i		05 26 37.2	
	comp=Z,3.0nm,0.5s						
BRRC	Barranca, Sant	6.21	220	eP	Pn	05 25 29.4	+1.6
BARC	Barichara	6.31	214	eP	Pn	05 25 30.4	+1.0
ZARC	Zaragoza, Cauc	6.73	230	eP	Pn	05 25 35.2	+0.3
ZARC				eS	Sn	05 26 45.4	-4.8
RUSC	La Rusia	6.86	210	eP	Pn	05 25 37.7	+0.7
RUSC				eS	Sn	05 26 49.0	-4.9
RUSC				i		05 27 07.0	
	comp=Z,2.2nm,0.5s						
PTBC	PUERTO BERRIO,	7.12	222	eP	Pn	05 25 41.7	+1.6
SPBC	San Pablo de B	7.58	215	eP	Pn	05 25 47.1	+0.5
SPBC				eS	Sn	05 27 14.0	+3.0
CHIC	Chingaza	8.27	209	eP	Pn	05 25 56.2	0.0
CBOC	Ciudad Bolivar	8.67	227	eP	Pn	05 26 03.1	+1.6

IDC 07 05:29:17.7±0.8,5°.90S×153°.77E,h0^{km},mb4.0/9, mbtmp4.1/11,ML3.0/2,MS3.4/5,Error ellipse: s-maj=26.5km s-min=19.1km az=94.0

ISC 07 05:29:22.6±0.8,5°.93S±0°.08×153°.6E±0°.1,h32^{km},n19, σ1^{s}.20/18,mb3.9/8,MS3.5/4,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	2.27	315	Pn	Pn	05 29 57.9	0.0
	20nm,0.3s,baz=295,slow=2.8,SNR=7.8						
KRVT				Sn	Sn	05 30 24.4	-0.4
	40nm,0.3s,baz=198,slow=20,SNR=7.6						
	86nm,0.4s						
PMG	Port Moresby	7.29	241	Pn	Pn	05 31 07.5	+0.6
	4.4nm,0.3s,baz=16,slow=5.2,SNR=3.6						
PMG				Sn	Sn	05 32 26.6	-2.0
	2.0nm,0.3s,baz=36,slow=8.2,SNR=3.8						
PMG				LR	LR	05 33 30.6	
	comp=Z,102nm,21.7s,baz=222,slow=34						
	12nm,0.4s						
DZM	Mont Dzumac	20.27	144	P	P	05 33 54.9	-0.9
	3.0nm,0.8s,baz=343,slow=19,SNR=1.4						
	3.0nm,0.8s						
WRA	Warramunga Arr	23.36	232	P	P	05 34 28.0	-0.6
	0.9nm,0.5s,baz=60,slow=9.2,SNR=9.7						
WRA				PcP	PcP	05 38 16.8	+1.8
	0.4nm,0.4s,baz=55,slow=2.5,SNR=6.1						
WRA				LR	LR	05 44 24.4	
	comp=Z,82nm,18.8s,baz=68,slow=39						
	0.9nm,0.5s						
ASAR	Alice Springs	25.91	225	P	P	05 34 52.0	-0.1
	0.9nm,0.6s,baz=57,slow=9.5,SNR=17						
ASAR				PcP	PcP	05 38 22.5	+1.9
	0.4nm,0.5s,baz=63,slow=2.5,SNR=4.5						
	0.9nm,0.6s						
H11S3	WAKE ISLAND Hy	27.47	28	T	T	06 03 29.5	
	baz=208,slow=74,SNR=4.3						
H11S2	WAKE ISLAND Hy	27.48	28	T	T	06 03 28.3	
	baz=208,slow=74,SNR=3.9						
H11S1	WAKE ISLAND Hy	27.49	28	T	T	06 03 25.2	
	baz=208						
STKA	Stephens Creek	28.17	202	P	P	05 35 13.1	+0.9
	1.3nm,0.5s,baz=0.0,slow=15,SNR=2.1						
STKA				LR	LR	05 47 13.3	
	comp=Z,81nm,18.9s,baz=203,slow=38						
	1.3nm,0.5s						
NWAO	Narrogin (SRO)	43.21	227	LR	LR	05 55 46.0	
	comp=Z,123nm,18.2s,slow=37						
SONM	Songino Array	67.71	328	P	P	05 40 18.2	+1.1
	0.6nm,0.4s,baz=142,slow=6.6,SNR=5.0						
	0.6nm,0.4s						
MKAR	Makanchi Array	81.71	319	P	P	05 41 39.2	+1.1
	1.5nm,0.6s,baz=93,slow=7.1,SNR=21						
	1.5nm,0.6s						
ZALV	Zalesovo Beam	82.54	326	P	P	05 41 42.2	0.0
	1.9nm,0.4s,baz=113,slow=5.6,SNR=11						
	1.9nm,0.4s						
ILAR	Eielson Array	82.89	22	P	P	05 41 42.0	-1.8
	0.6nm,0.8s,baz=247,slow=5.7,SNR=4.6						
	0.6nm,0.8s						
NRIK	Noril'sk	87.29	341	P	P	05 42 04.7	-1.1
	1.6nm,0.6s,baz=47,slow=6.7,SNR=3.9						
	1.6nm,0.6s						
ARU	Arti	97.71	326	LR	LR	06 27 59.9	
	comp=Z,26nm,20.5s,baz=300,slow=36						
PLCA	Paso Flores	118.39	143	PKP	PKPdf	05 48 06.8	-0.7
	3.3nm,1.1s,baz=197,slow=11,SNR=3.0						
BDFB	Brasilia	149.69	135	PKPbc	PKPbc	05 49 10.0	-0.3
	1.8nm,0.5s,baz=212,slow=9.5,SNR=4.7						
TORD	Torodi Ar. Bea	151.43	287	PKPbc	PKiKP	05 49 15.8	+0.9
	1.4nm,0.6s,baz=37,slow=2.5,SNR=10						

IDC 07 05:42:47.5±36.0,8°.08N×102°.60W,h0^{km},mb3.2/3, mbtmp3.2/3,MS3.2/1,Error ellipse: s-maj=1258.0km s-min=123.0km az=110.0,Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	11.69	39	LR	LR	05 49 14.5	
	comp=Z,118nm,21.3s,baz=224,slow=33						
TXAR	Lajitas Array	21.16	357	P	P	05 47 34.4	-0.1
	0.4nm,0.9s,baz=172,slow=14,SNR=4.2						
	0.4nm,0.9s						
PDAR	Pinedale Array	35.08	351	P	P	05 49 42.8	+0.2
	0.7nm,1.0s,baz=163,slow=10,SNR=2.7						
	0.7nm,1.0s						
H03N2	Juan Fernandez	47.02	153	T	T	06 42 46.1	
	baz=329,slow=77,SNR=5.0						
H03N1	Juan Fernandez	47.03	153	T	T	06 42 39.8	
	baz=329,slow=77,SNR=8.9						
H03N3	Juan Fernandez	47.04	153	T	T	06 42 35.4	
	baz=329,slow=77,SNR=8.8						
ILAR	Eielson Array	64.53	341	P	P	05 53 25.9	-0.1
	0.3nm,0.9s,baz=148,slow=5.4,SNR=2.5						
	0.3nm,0.9s						

IDC 07 06:10:11.6±2.3,6°.10S×155°.04E,h179^{km}±20^{km},mb3.7/9, mbtmp4.2/13,Error ellipse: s-maj=23.1km s-min=14.6km az=96.0

DJA 07 06:10:14.1±0.9,6°S±5°×15°5E±°,h221^{km}±6^{km},M4.8/28, mB5.1/4,mb4.5/28,MLv5.1/1,Mw(mB)4.5/4

NEIC 07 06:10:19.3±1.6,6°.25S±0°.10×154°.1E±0°.1,h182^{km}±18^{km}, mb4.5/16,Error ellipse: s-maj=21.8km s-min=10.5km az=61.0

ISC 07 06:10:13.8±0.7,6°.01S±0°.07×154°.83E±0°.09,h200^{km},n63, σ1^{s}.40/62,mb4.5/25,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	3.21	304		Pn	06 11 05.5	-0.5
RABL	Rabaul	3.21	304	P	Pn	06 11 07.9	+1.9
KRVT	Keravat (AS076	3.26	301	P	Pn	06 11 05.0	-1.7
	73nm,0.3s,baz=307,slow=1.1,SNR=11						
KRVT				S	Sn	06 11 44.2	-3.7
	171nm,0.4s,baz=44,slow=23,SNR=4.3						
HNR	Honiara	6.11	124	Pn	Pn	06 11 53.5	+11
PMG	Port Moresby	8.31	246	P	Pn	06 12 12.5	+1.3
	34nm,0.7s,baz=40,slow=7.0,SNR=11						
PMG	Port Moresby	8.31	246		Pn	06 12 06.4	-4.8
PMG	Port Moresby	8.31	246	P	Pn	06 12 15.8	+4.6
COEN	Coen	13.92	235	P	P	06 13 24.0	-0.9
COEN	Coen	13.92	235	P	P	06 13 25.6	+0.7
TV1H	Townsville Har	15.31	210	P	P	06 13 41.5	+1.2
MTSU	Mount Surprise	15.82	219	P	Pn	06 13 47.8	+1.6
CTA	Charters Tower	16.28	210	P	Pn	06 13 52.3	+0.6
	8.9nm,0.7s,baz=35,slow=12,SNR=24						
CTA	Charters Tower	16.28	210	P	Pn	06 13 52.6	+0.9
CTAO	Charters Tower	16.28	210	P	Pn	06 13 51.1	-0.5
CTAO				IAmb	IAmb	06 13 53.7	
	comp=Z,17nm,1.1s						
CTAO	Charters Tower	16.28	210	P	Pn	06 13 52.6	+0.9
SMPI	Sarmi	16.56	283	P	Pn	06 13 55.1	0.0
	comp=Z,41nm,1.3s,comp=Z,3µm						
SRPI	Serui, Papua	18.99	282	P	Pn	06 14 22.9	-0.8
DZM	Mont Dzumac	19.52	146	P	P	06 14 23.3	-3.0
	comp=Z,7.5nm,0.4s,baz=260,slow=9.5,SNR=33						
EIDS	Eidsvold	19.58	190	P	Pn	06 14 29.7	-0.9
EIDS				IAmb	IAmb	06 15 09.4	
	comp=Z,12nm,1.3s						
QIS	Mount Isa	20.67	224	P	P	06 14 39.5	+1.0
RMQ	Roma	21.17	195	P	P	06 14 43.7	0.0
	comp=Z,11nm,0.6s						
FAKI	Fak Fak	22.71	277	P	P	06 14 58.0	-0.9
FAKI	Fak Fak	22.71	277	P	P	06 14 59.7	+0.8
	comp=Z,23nm,1.2s						
QLP	Quilpie	22.81	205	P	P	06 15 00.0	+0.4
KDU	Kakadu	23.02	252	P	P	06 15 03.3	+1.8
WR0	Warramunga Arr	24.10	233	P	P	06 15 12.3	+1.0
WB0	Warramunga Arr	24.11	234	P	P	06 15 12.4	+0.9
WRAB	Tennant Creek	24.24	233	P	P	06 15 13.4	+0.8
WRAB				IAmb	IAmb	06 15 15.6	
	comp=Z,13nm,0.7s						
WRAB	Tennant Creek	24.24	233	P	P	06 15 13.6	+1.0
WB2	Warramunga Arr	24.24	233	P	P	06 15 13.3	+0.7
WB2				IAmb	IAmb	06 15 15.7	
	comp=Z,12nm,0.7s						
WRA	Warramunga Arr	24.25	233	P	P	06 15 13.8	+1.1
	comp=Z,10nm,0.5s,baz=57,slow=10,SNR=100						
WRA				S	S	06 19 17.4	+0.6
	comp=Z,0.6nm,0.8s,baz=56,slow=16,SNR=4.0						
	comp=Z,10nm,0.5s						
WRA	Warramunga Arr	24.25	233	P	P	06 15 12.9	+0.1
MTN	Manton Dam	24.32	252	P	P	06 15 12.6	-0.9
INKA	Innaminka	25.41	210	P	P	06 15 23.6	+0.5
AS31	Alice Springs	26.70	227	P	P	06 15 34.7	-0.1
ASAR	Alice Springs	26.71	227	P	P	06 15 34.6	-0.2
	comp=Z,1.1nm,0.3s,baz=59,slow=8.6,SNR=29						
ASAR				S	S	06 19 55.9	+0.3
	comp=Z,0.4nm,0.7s,baz=60,slow=14,SNR=4.3						
	comp=Z,1.1nm,0.3s						
ASAR	Alice Springs	26.71	227	P	P	06 15 35.3	+0.4
H11S3	WAKE ISLAND Hy	27.02	25	T	T	06 44 28.5	
	baz=202,slow=75,SNR=14						
H11S2	WAKE ISLAND Hy	27.02	25	T	T	06 44 29.9	
	baz=202,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	27.03	25	T	T	06 44 31.0	
	baz=202,slow=75,SNR=5.4						
LBMI	Labuha	27.79	280	P	P	06 15 45.4	+0.9
	comp=Z,80nm,0.7s						
STKA	Stephens Creek	28.55	204	P	P	06 15 50.5	-0.7
	comp=Z,0.7nm,0.3s,baz=13,slow=10,SNR=3.3						
	comp=Z,0.7nm,0.3s						
SANI	Sanana	29.03	277	P	P	06 15 55.5	0.0
	comp=Z,11nm,1.3s						
FITZ	Fitzroy Crossi	30.91	245	P	P	06 16 11.9	-0.1
BBOO	Buckleboo	31.88	211	P	P	06 16 20.1	-0.3
BBOO				IAmb	IAmb	06 16 38.4	
	comp=Z,19nm,1.4s						
GTOI	Gorontalo	32.44	281	P	P	06 16 28.1	+2.6
	comp=Z,14nm,0.8s						
BASI	Baing, Sumba	34.15	261	P	P	06 16 40.6	+0.3
	comp=Z,146nm,1.4s						
BKSI	Bulukumba	34.54	269	P	P	06 16 44.8	+1.2
	comp=Z,16nm,0.9s						
TOLI2	Tolitoli	34.72	281	P	P	06 16 46.2	+1.1
FORT	Forrest	35.19	222	P	P	06 16 48.0	-1.0
FORT				IAmb	IAmb	06 16 48.1	
	comp=Z,13nm,0.9s						
MPSI	Mapaga	35.43	279	P	P	06 16 51.4	+0.1
	comp=Z,21nm,1.0s						
PLAI	Plampang	36.83	263	P	P	06 17 02.9	-0.3
	comp=Z,20nm,1.2s						
MBWA	Marble Bar	37.16	243	P	P	06 17 06.0	+0.2
MBWA				IAmb	IAmb	06 17 33.3	
	comp=Z,19nm,1.4s						
PSA00	Pilbara Seismi	37.20	242	P	P	06 17 05.3	-0.8
PSA00				IAmb	IAmb	06 17 46.3	
	comp=Z,6.9nm,1.0s						
TWSI	Taliwang, Sumb	37.72	264	P	P	06 17 10.9	+0.3
	comp=Z,16nm,1.7s						
IGBI	Denpasar	39.43	263	P	P	06 17 24.5	-0.4
PETK	Petropavlovsk-	58.95	2	P	P	06 19 53.2	+1.2
	comp=Z,3.4nm,0.6s,baz=169,slow=11,SNR=5.2						
	comp=Z,3.4nm,0.6s						
SONM	Songino Array	68.42	327	P	P	06 20 56.2	+1.9
	comp=Z,1.0nm,0.4s,baz=137,slow=5.2,SNR=9.1						
	comp=Z,1.0nm,0.4s						
ILAR	Eielson Array	82.53	22	P	P	06 22 13.2	-0.6
	comp=Z,0.2nm,0.5s,baz=255,slow=4.7,SNR=1.9						
	comp=Z,0.2nm,0.5s						
MKAR	Makanchi Array	82.56	319	P	P	06 22 15.6	+1.1
	comp=Z,1.2nm,0.7s,baz=108,slow=4.6,SNR=12						
	comp=Z,1.2nm,0.7s						
ZALV	Zalesovo Beam	83.28	326	P	P	06 22 17.8	-0.2
	comp=Z,0.5nm,0.4s,baz=102,slow=6.1,SNR=2.7						
	comp=Z,0.5nm,0.4s						
YKA	Yellowknife Ar	95.55	28	P	P	06 23 15.9	0.0
	comp=Z,0.3nm,0.7s,baz=270,slow=4.8,SNR=5.2						
	comp=Z,0.3nm,0.7s						
TORD	Torodi Ar. Bea	152.59	287	PKPbc	PKiKP	06 29 47.4	-0.4
	comp=Z,0.4nm,0.7s,baz=80,slow=2.0,SNR=5.7						

TRN 07 06:10:38.8,10°.92N×65°.93W,h3^{km},MD4.5

ISC 07 06:10:36.4±1.0,10°.5N±0°.1×65°.89W±0°.07,h6^{km},n27, σ2^{s}.12/28,Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	Trinidad (W)	4.41	88	eP	Pn	06 11 48.0	+4.1
TRN	Trinidad (W)	4.41	88	eS	Sn	06 12 39.8	+4.0
GRGR	Grenville	4.46	68	eP	Pn	06 11 47.2	+2.5
GRGR	Grenville	4.46	68	eS	Sn	06 12 36.0	-1.0
GCMP	Grenada, Carri	4.80	65	eP	Pn	06 11 51.0	+1.7
GCMP	Grenada, Carri	4.80	65	eS	Sn	06 12 44.0	-1.4
SVB	Belmont	5.32	58	eP	Pn	06 11 58.3	+1.9
SVB	Belmont	5.32	58	eS	Sn	06 12 55.9	-2.1
TOSP	Speyside	5.32	81	e	Pb	06 12 08.1	-1.8
SLBI	Saint Lucia, B	5.95	53	eP	Pn	06 12 06.1	+1.0
SLBI	Saint Lucia, B	5.95	53	eS	Sn	06 13 10.3	-3.3
MPOM	Morne Pois Mar	6.29	51	eP	Pn	06 12 10.2	+0.4
CRJC	Cerrejon, Guaj	6.89	275	eP	Pn	06 12 17.4	-0.7
TAMC	Tame, Arauca	7.09	236	eP	Pn	06 12 19.7	-1.1
PAMC	Pamplona, Colo	7.42	246	eP	Pn	06 12 23.9	-1.8
BARC	Barichara	8.19	242	eP	Pn	06 12 34.7	-1.4
BARC				eP	Pn	06 12 36.8	+0.8
ARGC	Ariguani, Magd	8.25	266	eP	Pn	06 12 40.5	+3.8
BRRC	Barranca, Sant	8.43	247	eP	Pn	06 12 39.6	+0.4
RUSC	La Rusia	8.46	238	eP	Pn	06 12 38.6	-1.4
PTGC	Puerto Gaitan,	8.80	225	eP	Pn	06 12 42.5	-1.7
SJCC	San Jacinto, C	9.16	267	eP	Pn	06 12 51.6	+2.3
ZARC	Zaragoza, Cauc	9.35	252	eP	Pn	06 12 50.8	-1.0
SPBC	San Pablo de B	9.42	240	eP	Pn	06 12 51.7	-1.1
CHIC	Chingaza	9.71	234	eP	Pn	06 12 54.7	-2.4
NORC	Norcasia	10.15	242	eP	Pn	06 13 01.7	-1.1
CBOC	Ciudad Bolivar	11.02	246	eP	Pn	06 13 15.4	+0.5
ORTC	Ortega, Tolima	11.35	236	eP	Pn	06 13 17.7	-1.6

ISU 07 06:23:50.7,40°.47N×72°.31E,h22^{km}

KRNET 07 06:23:51.3±0.1,40°.90N×71°.68E,h15^{km},mb2.7

SOME 07 06:23:57.4,41°.13N×71°.25E,h5^{km}

NNC 07 06:23:58.8±2.2,41°.02N×71°.35E,h0^{km},mb3.1,mpv2.7, Error ellipse: s-maj=17.1km s-min=7.3km az=11.0

ISC 07 06:23:53.4±1.1,40°.97N±0°.02×71°.31E±0°.04,h15^{km}±10^{km}, n30,σ1^{s}.74/40,15C-5D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRKS	Terek-Say	0.57	347	⇑iP	Pg	06 24 04.3	-0.4
	baz=26						
TRKS				⇑iS	Sb	06 24 13.3	+0.1
	baz=26						
FRG	Fergana	0.70	149	P	Pn	06 24 11.0	+2.2
FRG				S	Sb	06 24 17.5	+0.8
CHMI	Chimion	0.72	167	P	Pb	06 24 07.7	0.0
CHMI				S	Sg	06 24 17.0	-0.1
ARK	Arkit	0.96	31	⇑iP	Pg	06 24 09.1	-2.9
	baz=14						
ARK				⇑iS	Sg	06 24 21.6	-3.0
	baz=14						
ARK	Arkit	0.96	31	P	Pn	06 24 17.8	+5.4
ARK				S	Sn	06 24 37.1	+11
BTK	Batken	0.99	202	⇑iP	Pg	06 24 11.7	-0.9
	baz=18						
BTK				⇑iS	Sn	06 24 26.4	-0.1
	baz=18						
YBZ	Yangibazar	1.34	285	P	Sg	06 24 39.4	+2.6
IUG	Iuzhnay	1.51	321	eP	Pg	06 24 23.4	+0.9
	21nm,0.1s						
IUG				eS	Sg	06 24 42.3	0.0
	20nm,0.1s						
DRK	Karamyk	1.54	166	⇓iP	Pn	06 24 17.7	-2.9
	baz=76						
DRK				⇓iS	Sn	06 24 37.1	-3.3
	baz=76						
MNAS	Manas	1.76	30	⇑iP	Pn	06 24 22.3	-1.1
	baz=21						
MNAS				⇑iS	Sn	06 24 45.6	0.0
	baz=21						
GAR	Garm	2.11	201	⇓iP	Pn	06 24 29.7	+1.4
	baz=9.0						
GAR				⇓iS	Sb	06 24 57.4	-0.2
	baz=9.0						
AML	Almayashu	2.13	56	⇑Pg	Pg	06 24 38.2	+3.8
	0.1nm,0.5s						
AML				⇑Lg	Lg	06 25 06.3	
	0.9nm,0.5s						
KK31	Karatay Array	2.21	345	⇑Pn	Pb	06 24 33.9	+0.9
	2.4nm,0.5s,baz=156,slow=15,SNR=29						
KK31				⇓Sn	Sg	06 25 05.7	+1.2
	4.2nm,0.3s,baz=161,slow=27,SNR=17						
KKAR	Karatay Array	2.21	345	⇑eP	Pb	06 24 32.8	-0.2
	baz=39						
KKAR				⇑eS	Sg	06 25 03.2	-1.3
	baz=39						
MRKS	Merke	2.28	38	Pg	Pg	06 24 39.8	+2.7
	4.4nm,0.4s						
MRKS				Lg	Lg	06 25 10.0	
	16nm,0.5s						
MRKS	Merke	2.28	38	ePg	Pg	06 24 39.8	+2.7
	1.6nm,0.1s						
MRKS				eLg	Lg	06 25 10.0	
	12nm,0.2s						
SGDS	Sogindy	3.50	44	Pg	Pg	06 25 01.0	+0.6
	1.1nm,0.4s						
SGDS				Lg	Lg	06 25 46.0	
	3.0nm,0.4s						
TKM2	Tokmak 2	3.74	57	⇑Pg	Pg	06 25 06.1	+1.0
	2.4nm,1.0s						
TKM2				⇑Lg	Lg	06 25 54.6	
	2.0nm,0.7s						
DGS	Degeres	4.02	54	Pg	Pg	06 25 12.0	+1.6
	1.0nm,0.5s						
DGS				Lg	Lg	06 26 05.2	
	2.5nm,0.5s						
DGS	Degeres	4.02	54	ePg	Pg	06 25 12.0	+1.6
	1.0nm,0.2s						
DGS				eLg	Lg	06 26 05.2	
	2.2nm,0.2s						
KST	Kastek	4.04	58	Pg	Pg	06 25 13.7	+3.0
	1.1nm,0.5s						
KST				Lg	Lg	06 26 07.8	
	3.1nm,0.6s						
KST	Kastek	4.04	58	ePg	Pg	06 25 12.8	+2.1
	0.7nm,0.1s						
KST				eLg	Lg	06 26 06.6	
	3.0nm,0.1s						
KRBS	Karabastau	4.23	49	Pg	Pg	06 25 15.1	+0.7
	0.7nm,0.5s						
KRBS				Lg	Lg	06 26 10.1	
	1.6nm,0.7s						
KRBS	Karabastau	4.23	49	ePg	Pg	06 25 15.1	+0.7
	0.7nm,0.2s						
KRBS				eLg	Lg	06 26 10.1	
	1.5nm,0.2s						
BTLS	Baital	4.53	25	Pg	Pg	06 25 20.0	-0.2
	1.8nm,0.5s						
BTLS				Lg	Lg	06 26 18.8	
	0.8nm,0.4s						
BTLS	Baital	4.53	25	ePg	Pg	06 25 20.0	-0.2
	0.2nm,0.0s						
BTLS				eLg	Lg	06 26 18.8	
	1.6nm,0.1s						
KUU	Kurty	4.73	50	Pg	Pg	06 25 23.5	-0.4
	0.9nm,0.5s						
KUU				Lg	Lg	06 26 24.9	
	2.2nm,0.7s						
KUU	Kurty	4.73	50	ePg	Pg	06 25 23.5	-0.4
	0.7nm,0.2s						
KUU				eLg	Lg	06 26 24.9	
	2.2nm,0.3s						
KTBS	Karatobe	4.83	54	Pg	Pg	06 25 26.0	+0.1
	0.6nm,0.4s						
KTBS				Lg	Lg	06 26 30.8	
	2.1nm,0.6s						
KTBS	Karatobe	4.83	54	ePg	Pg	06 25 26.0	+0.1
	0.3nm,0.0s						
KTBS				eLg	Lg	06 26 30.8	
	2.0nm,0.2s						

NOU 07 06:24:45.5,22°.53S×148°.24E,h0^{km},MLv3.7/7, Queensland, Australia,Queensland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RK1H	Rockhampton Ha	2.25	113	P	Pn	06 25 24.1	+0.2
CTA	Charters Tower	3.06	322	P	Pn	06 25 34.8	-0.3
CTAO	Charters Tower	3.06	322	P	Pn	06 25 34.9	-0.2
EIDS	Eidsvold	3.84	138	P	Pn	06 25 45.6	-0.3
RMQ	Roma	3.97	173	P	Pn	06 25 47.7	+0.1

QIS	Mount Isa	8.27	282	P	Pn	06 26 47.1	+0.2
CMSA	Cobar Meteorol	9.26	194	P	Pn	06 26 59.8	-0.5

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*NNC **07** 06:55:29.7±7.7, 51°.41N×82°.22E, h0^{km}, mb2.7, mpv2.3, Error ellipse: s-maj=80.6km s-min=38.7km az=13.0, Suspected Mining explosion.*

*IDC **07** 06:55:30.5±1.5, 51°.46N×81°.72E, h0^{km}, mbtmp2.0/1, ML1.8/1, Error ellipse: s-maj=15.8km s-min=12.4km az=149.0*

ISC 07 06:55:30.1±1.2**, 51°.46N**±0°.08×**81°.91E**±0°.06**, h0^{km}, n8, σ1^{s}19**/9**, 3C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	2.20	252	⇓Pn	Pb	06 56 10.2	-0.6
	1.0nm,0.5s						
KURK				⇑Sn	Sg	06 56 40.0	-0.7
	2.9nm,0.5s						
KURBB	Kurchatov Arra	2.29	250	Pg	Pn	06 56 09.2	+0.1
	0.1nm,0.3s,baz=68,slow=17,SNR=7.1						
KURBB				Lg	Lg	06 56 40.8	
	0.1nm,0.3s,baz=69,slow=30,SNR=8.7						
KURBB	Kurchatov Arra	2.29	250	⇑Pn	Pb	06 56 12.1	-0.2
	1.1nm,0.4s						
KURBB				⇑Sn	Sb	06 56 42.0	+0.9
	7.1nm,0.6s						
ZALV	Zalesovo Beam	3.06	34	Pg	Pg	06 56 28.6	-0.1
	0.2nm,0.3s,baz=216,slow=14,SNR=3.1						
ZALV				Lg	Lg	06 57 08.0	
	0.2nm,0.3s,baz=220,slow=22,SNR=2.3						
I46RU	ZALESOVO INFRA	3.06	34	I	I	07 13 58.9	
	baz=213,slow=320,SNR=1.3						
MAKZ	Makanchi	4.65	179	⇓Lg	Lg	06 57 54.8	
	2.0nm,0.9s						
MK31	Makanchi Array	4.67	177	⇓Pn	Pn	06 56 42.3	+0.4
	0.2nm,0.5s,baz=8.6,slow=12,SNR=5.3						
MK31				Lg	Lg	06 57 57.6	
	0.1nm,0.2s,baz=8.8,slow=29,SNR=10						
MKAR	Makanchi Array	4.67	177	Pn	Pn	06 56 44.0	+2.1
	baz=350,slow=7.7,SNR=5.4						
MKAR				Pg	Pb	06 56 51.4	-1.5
	baz=359,slow=14,SNR=1.2 0.1nm,0.2s						

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*IDC **07** 06:57:39.7±11.0, 19°.30N×145°.02E, h288^{km}±114^{km}, mb3.0/8, mbtmp3.7/8, Error ellipse: s-maj=38.6km s-min=21.2km az=88.0*

ISC 07 06:57:40.8±1.0**, 19°.3N**±0°.2×**145°.0E**±0°.3**, h300^{km}, n8, σ0^{s}75**/8**, mb3.2**/8**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLR	Kul'dur	31.71	343	P	P	07 03 37.3	+0.3
	0.5nm,0.3s,baz=138,slow=18,SNR=2.8 0.5nm,0.3s						
WRA	Warramunga Arr	40.36	196	P	P	07 04 50.0	-0.1
	0.5nm,0.6s,baz=3.2,slow=8.8,SNR=8.6 0.5nm,0.6s						
KURBB	Kurchatov Arra	60.43	318	P	P	07 07 19.6	+0.5
	0.3nm,0.5s,baz=92,slow=7.4,SNR=6.2 0.3nm,0.5s						
ILAR	Eielson Array	63.42	26	P	P	07 07 37.8	-0.9
	0.2nm,0.4s,baz=255,slow=6.0,SNR=4.6 0.2nm,0.4s						
YKA	Yellowknife Ar	77.79	28	P	P	07 09 04.9	0.0
	0.2nm,0.6s,baz=285,slow=5.4,SNR=4.3 0.2nm,0.6s						
NVAR	Mina Array Bea	83.31	52	P	P	07 09 35.7	+0.8
	0.5nm,0.7s,baz=263,slow=5.3,SNR=5.8 0.5nm,0.7s						
FINES	FINESS Array B	86.07	335	P	P	07 09 46.9	-0.8
	3.2nm,0.9s,baz=84,slow=4.3,SNR=1.7 3.2nm,0.9s						
PDAR	Pinedale Array	87.90	45	P	P	07 09 57.8	+0.6
	0.2nm,0.6s,baz=339,slow=2.3,SNR=1.8 0.2nm,0.6s						

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*NEIC **07** 07:08:21.8±1.7, 12°.17N±0°.08×88°.90W±0°.07, h10^{km}±2^{km}, mb4.5/37, Error ellipse: s-maj=15.0km s-min=9.2km az=219.0*

*INET **07** 07:08:23.4±0.7, 12°.23N×88°.93W, h15^{km}, ML4.3*

*IDC **07** 07:08:25.0±2.0, 12°.26N×88°.84W, h48^{km}±17^{km}, mb3.7/9, mbtmp4.1/13, ML3.2/4, MS3.3/14, Error ellipse: s-maj=36.7km s-min=13.1km az=38.0*

*SNET **07** 07:08:26.5±3.4, 12°.35N×88°.95W, h33^{km}, ML4.6*

ISC 07 07:08:25.0±1.0**, 12°.19N**±0°.05×**89°.00W**±0°.05**, h49^{km}**±10^{km}**, n169, σ1^{s}37**/177**, mb4.4**/24**, MS3.4**/12**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALJI	Alcalda de J	1.20	20	eP	Pn	07 08 44.5	-0.9
ALJI				eS	Sn	07 09 00.6	-0.1
TECO	Alcaldia de Te	1.35	9	eP	Pn	07 08 46.4	-1.2
TECO				eS	Sn	07 09 05.3	+0.9
COEB	Comit de Eme	1.38	19	eP	Pn	07 08 47.1	-0.8
COEB				eS	Sn	07 09 06.5	+1.5
TECA	Tecapa	1.38	21	eP	Pn	07 08 47.3	-0.8
LCY	Lacayo	1.40	29	eP	Pn	07 08 47.8	-0.5
VSM	San Miguel	1.42	30	eP	Pn	07 08 48.2	-0.4
LFRS	El Faro	1.42	358	eP	Pn	07 08 47.4	-1.1
PQSS	Presa 15 de Se	1.49	17	eP	Pn	07 08 48.6	-0.7
SNET	Serv Nac Est T	1.50	351		Pn	07 08 48.7	-1.0
SNET	Serv Nac Est T	1.50	351	eP	Pn	07 08 48.6	-1.0
SNET				eS	Sn	07 09 08.2	+0.1
SNET	Serv Nac Est T	1.50	351	eP	Pn	07 08 48.5	-1.2
PAVA	Las Pavas	1.51	2	eP	Pn	07 08 48.9	-0.9
JAYA	Jayaque - finc	1.52	343	eP	Pn	07 08 48.7	-1.2
JAYA				eS	Sn	07 09 08.2	-0.4
SCLA	Alcaldia de Sa	1.52	10	eP	Pn	07 08 49.4	-0.5
UEES	Universidad Ev	1.53	351	eP	Pn	07 08 49.0	-1.0
LCND	La Caada	1.55	44	eP	Pn	07 08 49.3	-0.9
LCND				eS	Sn	07 09 11.7	+2.5
LFU	La Fuente	1.55	356	eP	Pn	07 08 49.6	-0.7
LFU				eS	Sn	07 09 10.6	+1.4
BOQS	Boqueron	1.56	350	eP	Pn	07 08 49.7	-0.8
BOQS				eS	Sn	07 09 10.1	+0.4
CNCH	Conchagua	1.57	46	eP	Pn	07 08 49.3	-1.2
CNCH				eS	Sn	07 09 13.2	+3.4
CEDA	San Andres	1.65	347	eP	Pn	07 08 50.7	-0.8
CEVE	Cerro Verde	1.73	340	eP	Pn	07 08 51.9	-1.0
SBLS	San Blas	1.75	340	eP	Pn	07 08 52.0	-1.1
SBLS				eS	Sn	07 09 14.8	+0.5
P5NO	Presa 5 de nov	1.80	8	eP	Pn	07 08 53.3	-0.3
RTR	El Retiro	1.81	340	eP	Pn	07 08 53.2	-0.7
RTR				eS	Sn	07 09 16.1	+0.4
NUBE	Las Nubes	1.86	336	eP	Pn	07 08 53.2	-1.4
CRIN	San Cristobal	1.97	75		Pn	07 08 54.7	-1.4
CRIN	San Cristobal	1.97	75	eP	Pn	07 08 54.6	-1.4
CRIN				IAML		07 09 29.0	
	comp=E,4µm,0.4s						
SLOZ	Alcaldia de Sa	1.98	337	eP	Pn	07 08 55.1	-0.9
MTO3	Montecristo	2.22	351	eP	Pn	07 08 59.4	-0.2
CNGN	Cerro Negro	2.27	82		Pn	07 08 57.9	-2.2
CNGN	Cerro Negro	2.27	82	eP	Pn	07 08 57.6	-2.5
CNGN				IAML		07 09 37.0	
	comp=E,1µm,0.2s						
COPN	Copaltepe	2.35	90	eP	Pn	07 08 58.7	-2.5
ESQI	Esquipulas	2.38	352		Pn	07 09 02.1	+0.5
MOMN	Momotombo	2.41	85	eP	Pn	07 08 59.9	-2.2
TGUH	Tegucigalpa,Un	2.50	42	Pn	Pn	07 09 03.0	-0.4
TISN	Laguna Tiscapa	2.67	91	eP	Pn	07 09 03.4	-2.1
MGAN	Managua	2.69	91	eP	Pn	07 09 03.6	-2.2
WILN	Americas 2	2.75	90	eP	Pn	07 09 04.6	-2.0
HUEN		2.77	87	eP	Pn	07 09 04.7	-2.2
MATN	Matagalpa	3.09	76		Pn	07 09 09.4	-1.9
MATN	Matagalpa	3.09	76	eP	Pn	07 09 09.3	-2.1
BOAB	BOACO BROADBAN	3.27	85	Pn	Pn	07 09 11.3	-2.4
BOAB	BOACO BROADBAN	3.27	85	eP	Pn	07 09 11.1	-2.6
HZTE	Horizontes, Gu	3.65	113		Pn	07 09 18.0	-1.0
ACON	Acoyapa	3.75	93		Pn	07 09 17.1	-3.2
REF1	Hacienda Santa	3.88	111	i P	Pn	07 09 22.8	+0.6
ORTG	Ortega, Santa	3.92	117	Pn	Pn	07 09 21.1	-1.7
HUEH	Huehuetenango	3.94	322		Pn	07 09 23.5	+0.3
DUNO	Dulce Nombre,	4.03	121		Pn	07 09 22.1	-2.1
ACAL	Aguas Claras	4.18	111	i P	Pn	07 09 25.5	-0.9
JTS	Las Juntas de	4.40	115	P	Pn	07 09 27.8	-1.4
	comp=E,5.8nm,0.3s,baz=121,slow=24,SNR=62						
JTS				S	Sn	07 10 17.4	-1.9
	comp=E,24nm,0.3s,baz=276,slow=21,SNR=5.4						
JTS				LR	LR	07 11 04.5	
	comp=E,126nm,18.2s,baz=147,slow=37 comp=E,26nm,0.2s						
JTS	Las Juntas de	4.40	115	Pn	Pn	07 09 28.0	-1.2
JTS	Las Juntas de	4.40	115	eP	Pn	07 09 28.1	-1.2
ESPN	Las Esperanzas	4.59	89		Pn	07 09 30.1	-1.9
ESPN	Las Esperanzas	4.59	89	eP	Pn	07 09 30.0	-1.9
LAFE	Finca La Fe, P	4.66	120	eP	Pn	07 09 30.4	-2.5
PETF	Flores	4.77	350		Pn	07 09 35.7	+1.3
ARZA	Esparza	4.78	117	eP	Pn	07 09 35.1	+0.5
SRA1	San Ramn	4.91	115	eP	Pn	07 09 35.9	-0.5
JACO	JACO, Garabito	4.95	120	eP	Pn	07 09 36.0	-0.9
SANTA	Santa Ana	5.23	115	eP	Pn	07 09 41.2	+0.3
HDC	Heredia	5.27	114	eP	Pn	07 09 42.1	+0.8
RITA	Parrita	5.30	120	eP	Pn	07 09 41.5	-0.2
AMPA	Desamparados	5.36	115	eP	Pn	07 09 43.4	+0.9
CORON	Coronado	5.38	114	eP	Pn	07 09 45.3	+2.4
ABE2	San Pablo	5.45	116	eP	Pn	07 09 43.9	-0.1
CARI	Cariari	5.47	109	eP	Pn	07 09 45.6	+1.6
LCR2	La Lucha 2	5.48	116	eP	Pn	07 09 44.6	+0.4
VICA	Volcano Irazu	5.52	113	eP	Pn	07 09 45.1	+0.1
HAYA	Volcan Irazu	5.52	113	eP	Pn	07 09 47.1	+2.1
LLNJ	Naranjito	5.52	119	eP	Pn	07 09 44.3	-0.3
REPA	Paraso	5.56	115	eP	Pn	07 09 45.5	+0.2
RIMA	Rio Macho	5.59	115		Pn	07 09 45.3	-0.5
VERB	Verbena	5.67	113	eP	Pn	07 09 47.8	+1.0
RVSTA	Santa Teresita	5.70	112	eP	Pn	07 09 49.7	+2.5
RVLA	Villa Bonita	5.70	111	eP	Pn	07 09 46.5	-0.6
LCOCO	El Coco	5.74	111	eP	Pn	07 09 47.8	+0.2
CDM	Cerro de Muert	5.77	117	eP	Pn	07 09 48.9	+0.4
BUS1	Rivas	5.79	116	eP	Pn	07 09 48.7	-0.1
PEZE	Perez Zeledon,	5.93	118		Pn	07 09 50.2	-0.2
PEZE	Perez Zeledon,	5.93	118	eP	Pn	07 09 50.5	+0.1
SRBA	San Rafael, Bu	6.28	117		Pn	07 09 54.9	-0.3
SRBA	San Rafael, Bu	6.28	117	eP	Pn	07 09 54.8	-0.3
EDPN	Palmar Norte	6.33	120	eP	Pn	07 09 55.8	+0.1
EDBA	Buenos Aires	6.38	118	eP	Pn	07 09 58.1	+1.6
EDP2	Potrero Grande	6.54	118	eP	Pn	07 09 59.8	+1.1
EDAD	Golfito	6.73	121	eP	Pn	07 10 01.4	0.0
CDITO	Canoas	7.02	120		Pn	07 10 02.7	-2.5
BRU2	Volcan	7.06	118	Pn	Pn	07 10 06.1	+0.1
CMIG	Matias Romero	7.49	311	P	Pn	07 10 11.0	-0.7
	comp=E,0.7nm,0.3s,baz=150,slow=9.4,SNR=9.3						
CMIG				S	Sn	07 11 31.3	-4.1
	comp=E,2.7nm,0.5s,baz=126,slow=22,SNR=1.1 comp=E,2.1nm,0.3s						
TLIG	Tlapa	10.68	301		Pn	07 10 55.9	+0.4
PTBC	PUERTO BERRIO,	15.41	110	eP	P	07 12 03.0	-0.1
NORC	Norcasia	15.43	114	eP	P	07 12 05.0	+1.6
ANIL	Santa Ana	15.47	119	eP	P	07 12 08.3	+4.2
POPC	Popayan, Colom	15.53	127	eP	P	07 12 09.1	+4.4
GCUF	Volcan Galeras	15.88	132	eP	Pn	07 12 03.2	-2.7
ORTC	Ortega, Tolima	15.90	120	eP	P	07 12 09.7	+1.1
SPBC	San Pablo de B	16.11	112	eP	P	07 12 11.9	+1.0
ROSC	El Rosal	16.25	115	P	Pn	07 12 09.7	-0.7
	comp=E,0.6nm,0.3s,baz=91,slow=14,SNR=4.2 comp=E,5.9nm,0.6s						
ROSC	El Rosal	16.25	115	P	P	07 12 12.4	-0.3
ROSC	El Rosal	16.25	115	eP	P	07 12 12.2	-0.6
BARC	Barichara	16.56	108	eP	Pn	07 12 14.5	+0.3
PAMC	Pamplona, Colo	16.77	105	eP	Pn	07 12 17.4	+0.4
CHIC	Chingaza	16.86	115	eP	P	07 12 20.0	+0.4
RUSC	La Rusia	16.91	110	P	P	07 12 19.7	-0.6
RUSC	La Rusia	16.91	110	eP	P	07 12 21.2	+0.9
FLOC	Florencia	16.92	128	eP	Pn	07 12 16.1	-2.4
PORT	Chimborazo Vol	16.95	142	P	P	07 12 21.6	+0.8
PORT				IAmb	IAmb	07 12 23.8	
	comp=Z,35nm,1.4s						
TAMC	Tame, Arauca	17.91	107	eP	P	07 12 31.7	+0.8
SDV	Santo Domingo	18.35	99	P	P	07 12 34.1	-1.8
	comp=Z,0.4nm,0.3s,baz=189,slow=5.8,SNR=8.1						
SDV				LR	LR	07 20 34.0	
	comp=Z,53nm,18.3s,baz=306,slow=40 comp=Z,9.1nm,0.7s						
SDV	Santo Domingo	18.35	99		Pn	07 12 36.0	-0.3
PTGC	Puerto Gaitan,	18.48	114	eP	Pn	07 12 37.3	-0.3
352A	Blakely	19.56	10	P	Pn	07 12 51.2	+0.8
435B	Jarrell	20.13	338		P	07 12 55.0	0.0
JCT	Junction City	20.77	333	P	P	07 13 02.0	0.0
Z47A	Carrollton	20.93	2	P	P	07 13 04.3	+0.7
Z47A				IAmb	IAmb	07 13 09.5	
	comp=Z,20nm,0.9s						
HPIG		21.45	316	P	P	07 13 11.8	+2.3
Y49A	Blount Mountai	21.70	6	P	P	07 13 12.7	+0.9
TXAR	Lajitas Array	21.84	324	P	P	07 13 14.5	+0.9
	comp=Z,2.6nm,0.8s,baz=145,slow=9.9,SNR=23 comp=Z,2.6nm,0.8s						
TX31	Lajitas Ar. Si	21.84	324	P	P	07 13 14.6	+1.0
TX32	Lajitas Array	21.84	324	P	P	07 13 14.6	+1.0
Y52A	Lilburn	22.04	11	P	P	07 13 15.9	+0.4
Y52A				IAmb	IAmb	07 13 21.0	
	comp=Z,30nm,1.4s						
X40A	Basin Creek Fa	22.47	352	P	P	07 13 20.9	+0.8
ABTX	Abilene, Hawle	22.56	336	P	P	07 13 22.9	+1.7
ABTX				IAmb	IAmb	07 13 23.9	
	comp=Z,11nm,0.9s						
MIAR	Mount Ida	22.64	350	P	P	07 13 22.8	+0.9
MIAR				IAmb	IAmb	07 13 36.8	
	comp=Z,15nm,0.8s						
UALR	University of	22.69	353	P	P	07 13 23.9	+1.5
UALR				IAmb	IAmb	07 13 35.9	
	comp=Z,8.6nm,0.8s						
SJG	San Juan	22.82	72	LR	LR	07 22 14.1	
	comp=Z,21nm,18.2s,baz=44,slow=37						
JSC	Jenkinsville	23.09	17	P	P	07 13 28.3	+1.7
JSC				IAmb	IAmb	07 13 31.4	
	comp=Z,17nm,1.1s						
WHAR	Wooly Hollow	23.19	353	P	P	07 13 28.4	+0.9
WHAR				IAmb	IAmb	07 13 41.3	
	comp=Z,11nm,0.8s						
BG3	Lake Jocassee	23.36	13	P	P	07 13 30.7	+1.5
BG3				IAmb	IAmb	07 13 40.6	
	comp=Z,17nm,1.2s						
BIRD	Birdtown, Kers	23.66	18	P	P	07 13 33.4	+1.4
BIRD				IAmb	IAmb	07 13 43.3	
	comp=Z,13nm,0.7s						
POST	Post	23.72	333	P	P	07 13 32.5	-0.3
POST				IAmb	IAmb	07 13 47.0	
	comp=Z,10.0nm,0.8s						
FCAR	Ozark Folk Cen	23.76	354	P	P	07 13 34.4	+1.4
TKL	Tuckaleechee C	23.84	11	P	P	07 13 33.7	0.0
	comp=Z,9.4nm,0.7s,baz=192,slow=11,SNR=12						
TKL				LR	LR	07 24 07.7	
	comp=Z,45nm,18.1s,baz=250,slow=40 comp=Z,9.4nm,0.7s						
TKL	Tuckaleechee C	23.84	11	P	P	07 13 33.6	0.0
TKL				IAmb	IAmb	07 13 44.7	
	comp=Z,11nm,0.8s						
LCAR	Lake Charles	23.85	356	P	P	07 13 34.5	+0.7
LCAR				IAmb	IAmb	07 13 37.4	
	comp=Z,9.5nm,0.8s						
W35A	Tecumseh	23.95	344	P	P	07 13 34.1	-0.6
W35A				IAmb	IAmb	07 13 35.4	
	comp=Z,22nm,1.3s						
V53A	Saluda	24.04	12	P	P	07 13 36.4	+0.9
V53A				IAmb	IAmb	07 13 40.2	
	comp=Z,10nm,0.8s						
FNO	Franklin	24.19	343		P	07 13 37.3	+0.4
W57A	Gilead	24.27	18	P	P	07 13 39.2	+1.6
W57A				IAmb	IAmb	07 13 49.7	
	comp=Z,13nm,0.9s						
T47A	Sharon Grove	24.75	4	P	P	07 13 42.6	+0.7
V58A	Windy Hill, Pi	25.14	19	P	P	07 13 45.8	+0.3
CZSB	Cruzeiro do Su	25.58	140	P	P	07 13 49.6	-0.1
T57A	Hurt	26.21	18	P	P	07 13 56.4	+1.2
T57A				IAmb	IAmb	07 13 58.6	
	comp=Z,9.1nm,0.8s						
PFO	Pinyon Flats O	32.90	315	LR	LR	07 28 45.1	
	comp=Z,21nm,19.9s,baz=174,slow=37						
SPMN	Marine on St.	33.08	355	P	P	07 14 56.8	+0.8
SAML	Samuel	33.16	128	P	P	07 14 55.5	-1.6
SAML				IAmb	IAmb	07 14 56.2	
	comp=Z,5.1nm,0.9s						
SADO	Sadowa	33.55	13	LR	LR	07 30 32.5	
	comp=Z,36nm,19.0s,baz=247,slow=40						
RSSD	Black Hills	34.35	341	P	P	07 15 08.5	+1.2
PDAR	Pinedale Array	35.30	333	P	P	07 15 16.2	+0.6
	comp=Z,0.3nm,0.7s,baz=123,slow=9.8,SNR=3.0						
PDAR				PcP	PcP	07 17 45.2	-0.1
	comp=Z,0.4nm,0.8s,baz=131,slow=2.5,SNR=2.9 comp=Z,0.3nm,0.7s						
MDP	Montagnes des	36.60	98	LR	LR	07 32 01.5	
	comp=Z,62nm,19.0s,baz=182,slow=39						
NVAR	Mina Array Bea	36.91	320	P	P	07 15 31.7	+2.3
	comp=Z,1.2nm,0.8s,baz=134,slow=8.7,SNR=8.8						
NVAR				PcP	PcP	07 17 51.2	+1.0
	comp=Z,1.3nm,0.7s,baz=136,slow=4.2,SNR=9.7						
NVAR				ScP	ScP	07 21 33.9	+0.6
	comp=Z,0.1nm,0.4s,baz=117,slow=5.4,SNR=1.7 comp=Z,1.2nm,0.8s						
VILB	Vilhena	37.95	130	P	P	07 15 37.2	-1.0
ULM	Lac du Bonnet	38.37	353	P	P	07 15 41.4	+0.1
	comp=Z,3.6nm,0.6s,baz=170,slow=11,SNR=6.1 comp=Z,3.6nm,0.6s						
MCMT	McKenzie Canyo	38.39	332	P	P	07 15 43.3	+1.4
YBH	Yreka Blue Hor	41.59	321	LR	LR	07 37 15.3	
	comp=Z,34nm,20.1s,baz=193,slow=42						
RPN	Rapa Nui	43.79	207	LR	LR	07 30 38.9	
	comp=Z,36nm,19.0s,baz=64,slow=30						
SCHQ	Schefferville	45.97	18	P	P	07 16 42.2	-0.9
	comp=Z,3.6nm,0.7s,baz=223,slow=9.4,SNR=11						
SCHQ				PcP	PcP	07 18 18.4	-0.8
	comp=Z,2.5nm,0.7s,baz=249,slow=6.0,SNR=3.7						
SCHQ				LR	LR	07 36 44.9	
	comp=Z,61nm,18.7s,baz=148,slow=37 comp=Z,3.6nm,0.7s						
CFA	Coronel Fontan	47.88	156	PcP	PcP	07 18 26.9	+0.5
	comp=Z,1.6nm,0.4s,baz=30,slow=14,SNR=9.9						
FRB	Frobisher Bay	53.46	11	LR	LR	07 41 41.4	
	comp=Z,42nm,18.8s,baz=203,slow=37						
YKA	Yellowknife Ar	53.47	346	P	P	07 17 39.1	-0.9
	comp=Z,2.0nm,0.9s,baz=144,slow=7.7,SNR=29						
YKA				PcP	PcP	07 18 46.5	+0.1
	comp=Z,0.5nm,0.8s,baz=143,slow=4.7,SNR=1.9 comp=Z,2.0nm,0.9s						
SFJD	Kangerlussuaq	60.38	16	LR	LR	07 45 31.5	
	comp=Z,42nm,21.4s,baz=173,slow=37						
ILAR	Eielson Array	65.65	337	P	P	07 19 02.6	-1.3
	comp=Z,1.9nm,1.0s,baz=127,slow=4.3,SNR=12 comp=Z,1.9nm,1.0s						
JMIC	Jan Mayen	75.45	20	LR	LR	07 52 32.0	
	comp=Z,58nm,18.5s,baz=44,slow=35						
NOA	NORSAR Array B	84.32	29	LR	LR	07 58 10.2	
	comp=Z,35nm,18.1s,baz=0.0,slow=36						
TORD	Torodi Ar. Bea	87.94	77	P	P	07 21 08.9	-1.4
	comp=Z,0.3nm,0.7s,baz=309,slow=7.6,SNR=2.5 comp=Z,0.3nm,0.7s						
WRA	Warramunga Arr	137.74	254	PKP	PKPdf	07 27 44.0	-0.8
	comp=Z,0.4nm,0.8s,baz=91,slow=2.2,SNR=2.8						
ASAR	Alice Springs	137.77	248	PKP	PKPdf	07 27 44.2	-0.6
	comp=Z,0.2nm,0.6s,baz=123,slow=4.6,SNR=4.4						
CMAR	Chiang Mai Arr	148.55	345	PKPbc	PKPbc	07 28 06.9	-0.5
	comp=Z,1.3nm,0.4s,baz=348,slow=3.3,SNR=9.8						

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*IDC **07** 07:15:39.0±4.9, 21°.09S×168°.01E, h0^{km}, mb3.5/2, mbtmp3.5/2, MS3.3/2, Error ellipse: s-maj=153.2km s-min=33.1km az=136.0*

*NOU **07** 07:15:40.9, 21°.99S×168°.29E, h0^{km}, MLv3.7/5, Loyalty Islands*

ISC 07 07:15:40.4±2.4**, 21°.9S**±0°.4×**168°.5E**±0°.2**, h35^{km}, n11, σ0^{s}56**/10**, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YATNC	Mamie plateau,	1.54	262	P	Pn	07 16 05.2	-0.2
OUENC	Ouen Island, N	1.67	250	P	Pn	07 16 06.7	-0.5
DZM	Mont Dzumac	1.96	263	Pn	Pn	07 16 11.1	-0.1
	3.8nm,0.3s,baz=92,slow=7.1,SNR=272						
DZM				Sn	Sn	07 16 34.3	-0.3
	19nm,0.3s,baz=143,slow=18,SNR=5.5						
DZM	Mont Dzumac	1.96	263	P	Pn	07 16 11.2	0.0
ONTNC	Ouen Toro	1.98	256	P	Pn	07 16 12.1	+0.6
NOUC	Port Laguerre	2.09	263	P	Pn	07 16 13.7	+0.8
MSVF	Nonsavu	9.85	67	LR	LR	07 21 28.0	
	comp=Z,114nm,18.7s,baz=330,slow=35						
STKA	Stephens Creek	25.96	242	LR	LR	07 31 17.2	
	comp=Z,73nm,18.2s,baz=203,slow=36						
ASAR	Alice Springs	31.94	260	P	P	07 22 03.9	+0.8
	0.7nm,0.7s,baz=87,slow=8.8,SNR=13 0.7nm,0.7s						
WRA	Warramunga Arr	31.97	267	P	P	07 22 02.9	-0.5
	0.3nm,0.8s,baz=100,slow=8.9,SNR=1.6 0.3nm,0.8s						
GERES	GERESS Array B	146.44	329	PKPbc	PKPab	07 35 18.4	-0.3
	0.5nm,0.6s,baz=64,slow=4.5,SNR=3.7						

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*SJA **07** 07:19:17.5±0.8, 20°.35S×68°.97W, h125^{km}±4^{km}, ML4.1, MW3.9, Hypocentre not reviewed by the ISC*

*NEIC **07** 07:19:18.7±1.8, 20°.33S±0°.06×69°.03W±0°.09, h126^{km}±7^{km}, mb4.1/6, ML4.0(GUC), Error ellipse: s-maj=12.3km s-min=9.0km az=85.0*

*IDC **07** 07:19:19.1±0.8, 20°.35S×68°.70W, h123^{km}±6^{km}, mb3.7/5, mbtmp4.1/9, Error ellipse: s-maj=25.3km s-min=8.7km az=99.0*

*GUC **07** 07:19:19.2±0.7, 20°.33S×68°.91W, h116^{km}±3^{km}, ML4.0*

*VAO **07** 07:19:21.1±0.4, 20°.25S×68°.81W, h131^{km}, mb4.2*

ISC 07 07:19:18.0±0.5**, 20°.34S**±0°.03×**68°.98W**±0°.06**, h121^{km}**±4^{km}**, n88, σ0^{s}93**/104**, mb4.1**/5**, 11C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.26	320		Pn	07 19 35.8	+0.3
PB08	IPOC Station P	0.26	320	⇑i P	Pn	07 19 35.7	+0.3
PB08				i S	Sn	07 19 48.7	+0.1
PB08				IAML		07 19 49.5	
	comp=E,8µm,0.3s						
PB08	IPOC Station P	0.26	320	eP		07 19 35.6	
PB08				eS		07 19 49.4	
PB08				IAML		07 19 49.6	
	comp=Z,3µm,0.1s						
GO01	Chusmiza	0.70	343		Pn	07 19 38.5	+0.4
PB01	IPOC Station P	0.85	214	⇑i P	Pn	07 19 39.5	+0.6
PB01				i S	Sn	07 19 55.1	+0.5
PB01				IAML		07 19 57.2	
	comp=E,5µm,0.3s						
PB01	IPOC Station P	0.85	214	eP		07 19 39.2	
PB01				eS		07 19 55.7	
PB01				IAML		07 19 57.0	
	comp=Z,3µm,0.2s						
PB11	IPOC Station P	0.86	312	⇑i P	Pn	07 19 39.4	+0.3
PB11				i S	Sn	07 19 55.3	+0.4
PB11				IAML		07 19 57.0	
	comp=N,5µm,0.6s						
PB11	IPOC Station P	0.86	312	eP		07 19 39.3	
PB11				eS		07 19 56.7	
PB11				IAML		07 19 57.8	
	comp=Z,3µm,0.6s						
TA02	Huaiquique	1.09	273		Pn	07 19 41.5	+0.5
TA02	Huaiquique	1.09	273	eP	Pn	07 19 41.5	+0.5
TA02				i S	Sn	07 19 58.8	+0.4
TA02	Huaiquique	1.09	273	eP		07 19 41.5	
TA02				eS		07 20 00.7	
TA02				IAML		07 20 01.8	
	comp=Z,3µm,0.1s						
TA01	Diego Aracena	1.15	259	Pn	Pn	07 19 42.0	+0.3
TA01	Diego Aracena	1.15	259	⇑i P	Pn	07 19 42.0	+0.3
TA01				i S	Sn	07 19 59.5	-0.1
TA01				IAML		07 20 01.0	
	comp=N,2µm,0.3s						
TA01	Diego Aracena	1.15	259	eP		07 19 42.0	
TA01				IAML		07 20 06.2	
	comp=Z,856nm,0.4s						
PB02	IPOC Station P	1.30	221	⇑i P	Pn	07 19 44.3	+0.9
PB02				i S	Sn	07 20 03.2	+0.6
PB02				IAML		07 20 06.8	
	comp=E,6µm,0.2s						
PB02	IPOC Station P	1.30	221	eP		07 19 44.2	
PB02				eS		07 20 03.9	
PB02				IAML		07 20 04.9	
	comp=Z,6µm,0.4s						
PSGC	Pisagua	1.31	304	⇑i P	Pn	07 19 43.5	+0.1
PSGC				i S	Sn	07 20 03.3	+0.5
PSGC				IAML		07 20 04.7	
	comp=E,2µm,0.4s						
PSGCX	Pisagua	1.31	304		Pn	07 19 43.4	-0.1
PSGCX	Pisagua	1.31	304	eP		07 19 43.5	
PSGCX				eS		07 20 03.9	
PSGCX				IAML		07 20 07.0	
	comp=Z,1µm,0.4s						
MNMC	Minye Minye	1.34	334		Pn	07 19 44.8	+0.9
MNMC	Minye Minye	1.34	334	⇑i P	Pn	07 19 44.9	+0.9
MNMC				i S	Sn	07 20 04.8	+1.2
MNMC				IAML		07 20 06.1	
	comp=N,9µm,0.6s						
MNMCX	Minye Minye	1.34	334	eP		07 19 44.9	

MNMCX				*e*S		07 20 05.4	
MNMCX				IAML		07 20 07.2	
	comp=Z,2µm,0.1s						
PB09	IPOC Station P	1.47	190	*e*P	Pn	07 19 46.5	+1.1
PB09				*i* S	Sn	07 20 07.6	+1.4
PB09				IAML		07 20 09.4	
	comp=E,1µm,0.3s						
PB09	IPOC Station P	1.47	190	*e*P		07 19 46.3	
PB09				*e*S		07 20 07.8	
PB09				IAML		07 20 10.0	
	comp=Z,1µm,0.5s						
PB07	IPOC Station P	1.62	211	⇑*i*P	Pn	07 19 47.8	+0.7
PB07				*i* S	Sn	07 20 09.3	0.0
PB07				IAML		07 20 12.8	
	comp=E,3µm,0.4s						
PB07	IPOC Station P	1.62	211	*e*P		07 19 47.9	
PB07				*e*S		07 20 09.8	
PB07				IAML		07 20 11.1	
	comp=Z,2µm,0.8s						
PB03	IPOC Station P	1.85	203	⇑*i*P	Pn	07 19 50.5	+0.7
PB03				IAML		07 20 17.7	
	comp=E,1µm,0.4s						
PB03	IPOC Station P	1.85	203	*e*P		07 19 45.0	
PB03				*e*S		07 20 14.4	
PB03				IAML		07 20 16.0	
	comp=Z,1µm,0.3s						
PB16	IPOC Station P	2.06	346	⇑*i*P	Pn	07 19 54.1	+1.2
PB16				*i* S	Sn	07 20 20.8	+1.4
PB16	IPOC Station P	2.06	346	*e*P		07 19 54.1	
PB16				*e*S		07 20 16.8	
PB12	IPOC Station P	2.14	323	⇑*i*P	Pn	07 19 53.0	-0.4
PB12				*i* S	Sn	07 20 19.9	-0.5
PB12				IAML		07 20 26.2	
	comp=N,738nm,0.6s						
PB12	IPOC Station P	2.14	323	*e*P		07 19 53.1	
PB12				*e*S		07 20 21.3	
PB12				IAML		07 20 24.0	
	comp=Z,418nm,0.3s						
LVC	Limon Verde	2.26	178	P	Pn	07 19 56.7	+1.6
	comp=Z,38nm,0.4s,baz=13,slow=11,SNR=91						
LVC				S	Sn	07 20 24.9	+1.4
	comp=Z,185nm,0.3s,baz=249,slow=22,SNR=31						
LVC	Limon Verde	2.26	178		Pn	07 19 56.5	+1.4
LVC	Limon Verde	2.26	178	*e*P		07 19 51.6	
LVC				*e*S		07 20 26.2	
PB04	IPOC Station P	2.27	209	⇓*i*P	Pn	07 19 56.0	+1.0
PB04				*i* S	Sn	07 20 22.9	-0.5
PB04				IAML		07 20 26.7	
	comp=E,909nm,0.2s						
PB04	IPOC Station P	2.27	209	*e*P		07 19 50.5	
PB04				*e*S		07 20 22.9	
PB04				IAML		07 20 26.8	
	comp=Z,947nm,0.2s						
AP01	Chacalluta	2.34	326	*e*P		07 19 56.4	
AP01				*e*S		07 20 28.2	
AP01				IAML		07 20 33.1	
	comp=Z,484nm,0.1s						
PB06	IPOC Station P	2.42	193	*e*P		07 19 57.8	
PB06				*e*S		07 20 24.6	
PB06				IAML		07 20 34.2	
	comp=Z,474nm,0.2s						
PB06	IPOC Station P	2.42	193	*e*P	Pn	07 19 57.7	+0.7
PB06				*i* S	Sn	07 20 26.5	-0.4
PB06				IAML		07 20 29.7	
	comp=N,804nm,0.2s						
PB15	IPOC Station P	2.89	189	*e*P		07 20 04.0	
PB15				*e*S		07 20 39.6	
PB15				IAML		07 20 41.6	
	comp=Z,2µm,0.2s						
PB10	IPOC Station P	3.48	205	Pn	Pn	07 20 10.5	-0.2
PB10	IPOC Station P	3.48	205	⇓*i*P	Pn	07 20 10.2	-0.5
PB10				IAML		07 20 51.8	
	comp=N,274nm,0.3s						
PB10	IPOC Station P	3.48	205	*e*P		07 20 10.3	
PB10				*e*S		07 20 49.5	
PB10				IAML		07 20 53.6	
	comp=Z,151nm,0.2s						
YJA	Yavi	3.71	120	*e*P		07 20 16.4	
LPAZ	La Paz	4.11	11	P	Pn	07 20 21.9	+2.2
	comp=Z,8.9nm,0.5s,baz=196,slow=6.9,SNR=53						
LPAZ	La Paz	4.11	11	*e*P	Pn	07 20 21.4	+1.8
LPAZ	La Paz	4.11	11	*e*P		07 20 22.0	
HJA	Humahuaca	4.37	131	*e*P		07 20 24.0	
PB14	IPOC Station P	4.46	197	*e*P		07 20 23.0	
PB14				*e*S		07 21 12.3	
PB14				IAML		07 21 15.8	
	comp=Z,215nm,0.3s						
GO02	Mina Guanaco	4.83	187	Pn	Pn	07 20 28.6	-0.4
GO02	Mina Guanaco	4.83	187	*e*P		07 20 28.7	
GO02				*e*S		07 21 22.4	
AC02	Maricunga	6.47	181	Pn	Pn	07 20 50.8	-0.4
SIV	San Ignacio	8.67	61	P	Pn	07 21 17.8	-2.8
	comp=Z,3.2nm,0.4s,baz=235,slow=12,SNR=27						
ESFA	Espinillo Form	10.72	117	*e*P	Pn	07 21 47.1	-1.0
ETMB	Extrema	10.80	15	*e*P	Pn	07 21 50.2	+0.9
VILB	Vilhena	11.16	50	*e*P	Pn	07 21 54.8	+0.6
CFA	Coronel Fontan	11.24	177	S	Sn	07 23 49.5	-9.4
	comp=Z,2.6nm,0.6s,baz=270,slow=21,SNR=6.7						
CPUP	Villa Florida	12.24	121	P	Pn	07 22 06.8	-1.6
	comp=Z,7.6nm,0.8s,baz=305,slow=11,SNR=19						
CPUP	Villa Florida	12.24	121	Pn	Pn	07 22 07.2	-1.2
AQDB	Aquidauana	12.45	93	*e*P	Pn	07 22 11.0	-0.1
SAML	Samuel	12.63	27	*e*P	Pn	07 22 13.0	-0.5
AMBA	Amambai (Brazi	13.26	104	*e*P	Pn	07 22 21.1	-0.5
MT09	Talagante	13.50	187	Pn	Pn	07 22 25.1	+0.3
MCR1	Marechal Candi	14.41	109	*e*P	Pn	07 22 37.2	+0.8
ITQB	Itaqui	14.54	132	*e*P	P	07 22 40.0	-1.1
PDRB	Porto dos Gac	14.62	55	*e*P	Pn	07 22 39.3	+0.2
CRSM	Crissiumal (Br	15.39	120	*e*P	P	07 22 50.2	-0.3
PCMB	Pacaembu	16.59	97	*e*P	Pn	07 23 03.5	0.0
ALGR	Alto Alegre (B	16.76	123	*e*P	P	07 23 06.9	+1.1
ITAB	Concordia	16.87	117	P	P	07 23 07.5	+0.6
ITAB				IAmb	IAmb	07 23 42.8	
	comp=Z,21nm,1.4s						
ITAB	Concordia	16.87	117	*e*P	P	07 23 07.0	+0.1
CPSB	Cacapava Do Su	17.23	129	*e*P	Pn	07 23 11.6	+0.4
TEFE	Tefe	17.26	15	*e*P	Pn	07 23 11.7	0.0
ITRB	Iturama	17.51	91	*e*P	P	07 23 13.9	-0.1
PLTB	Pedras Altas	17.87	133	*e*P	Pn	07 23 19.3	+0.4
FRTB	Fartura	18.27	103	*e*P	P	07 23 22.6	+0.2
TRQA	Tornquist	18.67	163	P	P	07 23 27.2	+0.6
CNLB	Canela	18.70	122	*e*P	P	07 23 27.4	+0.4
MACA	Manacapuru-AM	18.89	26	*e*P	P	07 23 28.6	-0.6
SNDB	Serra Nova Dou	18.90	67	*e*P	P	07 23 28.9	-0.4
TIJ01	Guaruva-PR	19.06	109	*e*P	P	07 23 31.1	0.0
BB19B	Bebedouro	19.14	96	*e*P	P	07 23 31.6	-0.4
IPMB	Ipameri, GO	19.75	87	*e*P	P	07 23 37.5	-1.1
RCLB	Rio Claro- Sao	20.08	100	*e*P	P	07 23 41.5	-0.6
SGCB	S£o Gabriel d	20.18	6	*e*P	P	07 23 43.1	-0.1
PLCA	Paso Flores	20.37	183	P	P	07 23 47.0	+1.9
	comp=Z,2.5nm,0.7s,baz=9.7,slow=12,SNR=7.3						
	comp=Z,2.5nm,0.7s						
PLCA	Paso Flores	20.37	183	P	Pn	07 23 47.7	-0.6
PLCA	Paso Flores	20.37	183	*e*P	Pn	07 23 47.3	-1.0
ITTB	Itaituba	20.45	41	*e*P	P	07 23 44.7	-1.4
BDFB	Brasilia	20.47	80	P	P	07 23 44.8	-1.6
	comp=Z,3.8nm,0.5s,baz=248,slow=12,SNR=4.6						
	comp=Z,3.8nm,0.5s						
BDFB	Brasilia	20.47	80	P	P	07 23 47.5	+1.1
BDFB				IAmb	IAmb	07 23 49.4	
	comp=Z,7.8nm,1.1s						
BDFB	Brasilia	20.47	80	*e*P	P	07 23 46.5	+0.1
VAO	Valinhos	20.62	101	*e*P	P	07 23 47.1	-0.8
PMNB	Patos De Minas	21.33	89	*e*P	P	07 23 54.5	-1.1
OTAV	Otavalo	22.46	334	*e*P	P	07 24 09.2	+1.5
BSCB	Bom Sucesso	22.65	96	*e*P	P	07 24 08.4	-0.8
PRPB	Parauapebas	23.33	55	*e*P	P	07 24 15.6	+0.1
SMTB	Santa Maria do	23.60	64	*e*P	P	07 24 17.9	-0.1
JANB	Januaria	24.06	81	*e*P	P	07 24 21.3	-1.0
BOAV	Boa Vista	24.07	21	P	P	07 24 22.5	+0.3
BOAV				IAmb	IAmb	07 24 22.7	
	comp=Z,12nm,1.5s						
BOAV	Boa Vista	24.07	21	*e*P	P	07 24 22.8	+0.6
SDBA	SAO DESIDERIO	24.38	75	*e*P	P	07 24 24.5	-0.7
MCPB	Macapa, AP	25.85	42	*e*P	P	07 24 38.9	+0.5
SJMB	Sao Joao De Ma	26.23	91	*e*P	P	07 24 41.8	0.0
ALF01	Guarapari-ES	26.45	96	*e*P	P	07 24 44.4	+0.6
DBIC	Dimbokro	68.47	74	P	P	07 30 07.0	-0.5
	comp=Z,4.5nm,0.8s,baz=242,slow=6.7,SNR=5.4						
	comp=Z,4.5nm,0.8s						
QSPA	South Pole Qui	69.84	180	P	P	07 30 16.9	+1.5
QSPA				IAmb	IAmb	07 30 18.6	
	comp=Z,3.8nm,1.2s						
TORD	Torodi Ar. Bea	77.03	71	P	P	07 30 57.5	-0.7
	comp=Z,1.1nm,0.4s,baz=253,slow=5.5,SNR=16						
TORD				pP	pP	07 31 29.3	-0.8
	comp=Z,0.5nm,0.7s,baz=261,slow=6.4,SNR=1.5						
	comp=Z,1.1nm,0.4s						
VNDA	Vanda	77.97	190	P	P	07 30 58.8	-3.5
YKA	Yellowknife Ar	90.08	341	P	P	07 32 04.7	+1.1
	comp=Z,0.3nm,0.8s,baz=130,slow=4.8,SNR=6.9						
YKA				pP	pP	07 32 36.0	-0.2
	comp=Z,0.6nm,0.6s,baz=134,slow=4.8,SNR=8.4						
YKA				sP	sP	07 32 49.3	0.0
	comp=Z,1.0nm,0.7s,baz=134,slow=4.7,SNR=8.9						
	comp=Z,0.3nm,0.8s						
MKAR	Makanchi Array	144.73	35	PKP	PKPdf	07 38 40.8	+0.4
	comp=Z,0.8nm,1.0s,baz=336,slow=3.2,SNR=4.0						
MKAR				pPKP	pPKPdf	07 39 14.2	-0.4
	comp=Z,0.3nm,0.6s,baz=284,slow=3.0,SNR=2.8						

NNC ***07*** *07:43:46.0±0.4, 50.°02N×78.°75E, h0^{km}, mb3.3, mpv2.9, Error ellipse: s-maj=5.3km s-min=1.9km az=81.0, Suspected Mining explosion.*

IDC ***07*** *07:43:47.0±1.1, 50.°05N×78.°75E, h0^{km}, mbtmp2.9/2, ML2.2/2, Error ellipse: s-maj=17.1km s-min=6.4km az=67.0*

ISC 07 07:43:46.4±1.0**, 50.°16N**±0.°04×**78.°89E**±0.°06**, h0^{km}, n25, σ0.^{s}89**/34**, 20C-12D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.48	330	⇑P	Pb	07 43 57.6	-0.3
KUR07				⇑S	Sb	07 44 06.4	+0.9
KUR14	Kurchatov Arra	0.49	337	⇑P	Pb	07 43 58.0	0.0
KUR14				⇑S	Sb	07 44 06.8	+1.1
KUR06	Kurchatov Arra	0.50	332	⇓P	Pb	07 43 58.1	-0.1
KUR06				⇓S	Sb	07 44 07.0	+1.0
KUR15	Kurchatov Arra	0.50	335	⇑P	Pb	07 43 58.1	0.0
KUR15				⇓S	Sb	07 44 07.2	+1.1
KURBB	Kurchatov Arra	0.52	333	Pg	Pb	07 43 58.1	-0.2
	1.4nm,0.3s,baz=168,slow=18,SNR=48						
KURBB				Lg	Lg	07 44 07.2	
	2.8nm,0.3s,baz=166,slow=32,SNR=15						
KURBB	Kurchatov Arra	0.52	333	⇑P	Pb	07 43 58.2	-0.2
	16nm,0.5s						
KURBB				⇑S	Sb	07 44 06.9	+0.5
	130nm,0.7s						
KUR16	Kurchatov Arra	0.53	332	⇑P	Pb	07 43 58.6	0.0
KUR16				⇓S	Sb	07 44 07.5	+0.7
KUR05	Kurchatov Arra	0.53	335	⇑P	Pb	07 43 58.6	-0.1
KUR05				⇓S	Sb	07 44 07.5	+0.6
KUR17	Kurchatov Arra	0.54	330	⇑P	Pb	07 43 58.7	-0.1
KUR17				⇑S	Sb	07 44 07.6	+0.4
KUR04	Kurchatov Arra	0.55	336	⇓P	Pb	07 43 59.0	+0.1
KUR04				⇑S	Sb	07 44 08.2	+0.8
KURK	Kurchatov	0.58	343	⇑P	Pb	07 43 59.6	+0.1
	14nm,0.9s						
KURK				⇓S	Sb	07 44 09.4	+1.1
	65nm,1.1s						
MAKZ	Makanchi	3.93	147	⇑Pg	Pb	07 44 55.2	-1.4
	1.3nm,0.6s						
MAKZ				⇓Lg	Lg	07 45 45.9	
	7.2nm,0.6s						
BRZS	Berezniki	4.01	270	Pg	Pb	07 44 58.1	+0.2
	2.2nm,0.2s						
BRZS				Lg	Lg	07 45 46.6	
	3.3nm,0.3s						
MK31	Makanchi Array	4.06	145	⇑Pn	Pn	07 44 50.2	+0.5
	0.1nm,0.2s,baz=278,slow=7.3,SNR=40						
MK31				⇑Pg	Pb	07 44 58.0	-0.7
	0.2nm,0.2s,baz=324,slow=14,SNR=20						
MK31				⇓Lg	Lg	07 45 50.8	
	6.0nm,0.6s,baz=333,slow=27,SNR=15						
MKAR	Makanchi Array	4.06	145	Pn	Pn	07 44 50.5	+0.7
	0.2nm,0.3s,baz=321,slow=9.9,SNR=54						
MKAR				Pg	Pb	07 44 57.5	-1.3
	0.5nm,0.3s,baz=323,slow=15,SNR=18						
MKAR				Lg	Lg	07 45 50.5	
	1.3nm,0.3s,baz=330,slow=27,SNR=18						
	0.2nm,0.3s						
OTUK	Ortayu	4.71	248	⇑Pn	Pn	07 44 57.4	-1.3
	0.5nm,0.2s						
OTUK				⇓Pg	Pb	07 45 08.9	-0.9
	1.4nm,0.7s						
OTUK				⇑Lg	Lg	07 46 10.4	
	3.0nm,0.7s						
I46RU	ZALESOVO INFRA	5.27	42	I	I	08 14 40.0	
	baz=226,slow=326,SNR=6.8						
ZALV	Zalesovo Beam	5.27	42	Pn	Pn	07 45 10.8	+4.5
	0.4nm,0.3s,baz=232,slow=14,SNR=6.5						
ZALV				Lg	Lg	07 46 37.3	
	0.2nm,0.3s,baz=229,slow=21,SNR=3.8						
	1.6nm,0.2s						
DJR	Jarkent	5.87	174	Pg	Pb	07 45 30.8	+1.2
	1.3nm,0.3s						
DJR				Lg	Lg	07 46 42.6	
	1.7nm,0.3s						
BVA0	Borovoye Array	6.03	302	⇑Sn	Sn	07 46 25.8	-0.6
	2.1nm,0.7s,baz=116,slow=22,SNR=5.7						
BVA0				⇓Lg	Lg	07 46 57.1	
	1.9nm,0.6s						
BVAR	Borovoye Array	6.03	302	Sn	Sn	07 46 24.3	-2.1
	0.1nm,0.3s,baz=115,slow=22,SNR=7.5						
BVAR				Lg	Lg	07 46 52.3	
	baz=114,slow=24,SNR=2.1						
BTLS	Baital	6.08	214	Pg	Pb	07 45 35.0	+1.7
	1.0nm,0.4s						
BTLS				Lg	Lg	07 46 49.5	
	1.7nm,0.7s						
BRVK	Borovoye	6.10	302	⇓Sn	Sn	07 46 28.3	+0.2
	1.4nm,0.5s						
BRVK				⇑Lg	Lg	07 46 57.8	
	2.0nm,0.7s						
PDGK	Podgornoye	6.85	176	Pg	Pg	07 45 51.6	-6.0
	0.9nm,1.4s						
PDGK				Lg	Lg	07 47 19.2	
	1.6nm,0.5s						
AAK	Ala-Archa	8.12	204	Lg	Lg	07 47 55.2	
	0.1nm,0.3s,baz=66,slow=20,SNR=5.2						

IDC 07 07:56:21.4±2.0**, 18.°72N**×**148.°15E, h0^{km}, mb3.2**/3**, mbtmp3.2**/3**, Error ellipse: s-maj=356.4km s-min=30.4km az=113.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	40.74	200	P	P	08 04 04.1	-0.1
	0.3nm,0.6s,baz=23,slow=9.1,SNR=6.9						
	0.3nm,0.6s						
ASAR	Alice Springs	44.36	199	P	P	08 04 33.6	-0.1
	0.1nm,0.6s,baz=21,slow=8.0,SNR=1.3						
	0.1nm,0.6s						
YKA	Yellowknife Ar	76.88	28	P	P	08 08 15.1	0.0
	0.2nm,0.5s,baz=284,slow=5.4,SNR=4.9						
	0.2nm,0.5s						

KRNET ***07*** *08:04:23.3±0.1, 40.°89N×71.°11E, h28^{km}, mb3.3*

SOME ***07*** *08:04:25.7, 41.°05N×71.°23E, h0^{km}*

ISU ***07*** *08:04:27.2, 40.°87N×71.°14E, h30^{km}*

NNC ***07*** *08:04:28.6±1.2, 41.°10N×71.°27E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=10.7km s-min=5.5km az=4.0*

ISC 07 08:04:22.8±1.0**, 40.°89N**±0.°02×**71.°24E**±0.°02**, h13^{km}**±9^{km}**, n64, σ1.^{s}72**/84**, 15C-19D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NAM	Namangan	0.33	72	P	Pn	08 04 39.3	+6.0
KSNS	Kasansay	0.34	38	P	Pn	08 04 33.0	-0.5
KSNS				S	Sb	08 04 40.0	+3.9
TRKS	Terek-Say	0.64	353	⇑*i*P	Pg	08 04 34.6	-0.8
	baz=5.0						
TRKS				⇑*i*S	Sg	08 04 43.1	-0.8
	baz=5.0						
CHMI	Chimion	0.66	161	P	Pn	08 04 38.1	+0.3
CHMI				S	Sn	08 04 48.0	-0.1
FRG	Fergana	0.66	141	P	Pn	08 04 38.5	+0.6
FRG				S	Sn	08 04 48.6	+0.4
ANR	Andizhan	0.86	99	P	Sg	08 04 56.5	+5.9
BTK	Batken	0.89	201	⇓*i*P	Pg	08 04 39.4	-0.7
	baz=95						
BTK				⇓*i*S	Sg	08 04 51.4	-0.4
	baz=95						
ARK	Arkit	1.05	31	⇑*i*P	Pn	08 04 43.8	+0.4
	baz=35						
ARK				⇑*i*S	Sn	08 04 58.7	+0.7
	baz=35						
CHMG	Chimgan	1.14	306	P	Pn	08 04 45.2	+0.6
CHRV	Charvak	1.23	308	P	Pg	08 04 47.1	+0.7
OHH	Osh	1.23	107	⇑*i*P	Pn	08 04 47.4	+1.7
	baz=5.0						
OHH				⇑*i*S	Sn	08 05 04.9	+2.7
	baz=5.0						
YBZ	Yangibazar	1.32	289	P	Pg	08 04 48.3	+0.2
TAS	Tashkent	1.53	287	⇓*i*P	Pn	08 04 49.6	-0.3
	baz=88						
TAS				⇓*i*S	Sn	08 05 08.3	-1.4
	baz=88						
TAS	Tashkent	1.53	287	P	Sg	08 05 15.8	+3.6
KUMR	Kumaryk	1.54	284	P	Pg	08 04 52.7	+0.4
KUMR				S	Sg	08 05 14.0	+1.7
IUG	Iuzhnay	1.55	324	*e*P	Pg	08 04 53.2	+0.6
	35nm,0.1s						
IUG				*e*S	Sg	08 05 13.6	+0.9
	326nm,0.3s						
YNGY	Yangiyul	1.69	278	P	Sg	08 05 19.1	+2.1
MNAS	Manas	1.85	30	⇓*i*P	Pb	08 04 56.5	-0.1
	baz=33						
MNAS				⇓*i*S	Sg	08 05 20.6	-1.8
	baz=33						
GAR	Garm	2.02	201	⇓*i*P	Pn	08 04 57.6	+0.9
	baz=98						
GAR				⇓*i*S	Sn	08 05 22.4	+0.6
	baz=98						
AML	Almayashu	2.22	55	⇑Pn	Pg	08 05 04.4	-1.0
	0.9nm,0.5s						
AML				⇑Sn	Sg	08 05 34.2	+0.1
	5.4nm,0.6s						
AML	Almayashu	2.22	55	⇓*e*P	Pb	08 05 02.5	-0.5
	baz=57						
AML				⇓*i*S	Sb	08 05 30.3	-0.2
	baz=57						
KK31	Karatay Array	2.28	346	⇓Pn	Pb	08 05 04.5	+0.8
	8.5nm,0.4s,baz=157,slow=14,SNR=132						
KK31				⇓Lg	Lg	08 05 35.1	
	24nm,0.5s,baz=158,slow=28,SNR=4.4						
KKAR	Karatay Array	2.28	346	⇓*i*P	Pn	08 05 01.1	+1.0
	baz=49						
KKAR				⇓*i*S	Sn	08 05 28.7	+0.7
	baz=49						
MRKS	Merke	2.37	38	Pg	Pg	08 05 08.5	+0.2
	27nm,0.5s						
MRKS				Lg	Lg	08 05 39.8	
	78nm,0.6s						
MRKS	Merke	2.37	38	*e*Pg	Pg	08 05 08.5	+0.2
	6.9nm,0.1s						
MRKS				*e*Lg	Lg	08 05 39.8	
	65nm,0.2s						
ARLS	Aral	2.51	66	⇓*e*P	Pb	08 05 06.4	-1.4
	baz=67						
ARLS				⇓*i*S	Sb	08 05 37.3	-1.4
	baz=67						
EKS2	Erkin-Say	2.59	46	⇑*e*P	Pb	08 05 07.2	-2.0
	baz=48						
EKS2				⇑*i*S	Sb	08 05 38.5	-2.5
	baz=48						
DZI	Dzhizak	2.72	255	P	Sb	08 05 46.4	+1.8
BXML	Bakhmal	2.74	245	P	Sg	08 05 49.1	-1.6
CHGR	Chuyangaron	2.75	216	⇑*i*P	Pn	08 05 07.3	+0.6
	baz=15						
CHGR				⇑*i*S	Sn	08 05 39.3	-0.5
	baz=15						
UCH	Uchtor	2.79	60	⇓*i*P	Pb	08 05 10.6	-2.2
	baz=61						
UCH				⇓*i*S	Sb	08 05 44.3	-2.8
	baz=61						
KBK	Karagaybulak	3.28	56	⇑*e*P	Pn	08 05 17.1	+3.0
	baz=57						
KBK				⇑*i*S	Sn	08 05 55.7	+2.6
	baz=57						
SGDS	Sogindy	3.59	43	Pg	Pg	08 05 30.6	-0.9
	1.7nm,0.3s						
SGDS				Lg	Lg	08 06 17.3	
	19nm,0.5s						
AGL	Agalyk	3.61	249	P	Sg	08 06 16.9	-1.9
TKM2	Tokmak 2	3.83	57	⇓Pg	Pg	08 05 38.9	+2.8
	1.6nm,0.5s						
TKM2				⇑Lg	Lg	08 06 25.4	
	9.5nm,0.7s						
DGS	Degeres	4.11	54	Pg	Pg	08 05 40.4	-1.1
	3.1nm,0.4s						
DGS				Lg	Lg	08 06 34.4	
	12nm,0.5s						
DGS	Degeres	4.11	54	*e*Pg	Pg	08 05 40.4	-1.1
	1.6nm,0.2s						
DGS				*e*Lg	Lg	08 06 34.4	
	12nm,0.3s						
KST	Kastek	4.12	57	Pg	Pg	08 05 40.9	-0.9
	1.5nm,0.5s						
KST				Lg	Lg	08 06 34.9	
	8.4nm,0.5s						
KST	Kastek	4.12	57	*e*Pg	Pg	08 05 40.9	-0.9
	1.2nm,0.2s						
KST				*e*Lg	Lg	08 06 34.9	
	8.4nm,0.5s						
NUT	Nurota	4.24	267	P	Sg	08 06 36.6	-2.3
KRBS	Karabastau	4.32	48	Pg	Pg	08 05 43.9	-1.6
	2.8nm,0.4s						
KRBS				Lg	Lg	08 06 40.0	
	9.6nm,0.5s						
KRBS	Karabastau	4.32	48	*e*Pg	Pg	08 05 43.9	-1.6
	1.0nm,0.1s						
KRBS				*e*Lg	Lg	08 06 40.0	
	9.6nm,0.2s						
MTBS	Maitube	4.46	58	Pg	Pg	08 05 47.4	-0.9
	1.7nm,0.3s						
MTBS				Lg	Lg	08 06 46.1	
	6.0nm,0.6s						
MTBS	Maitube	4.46	58	*e*Pg	Pg	08 05 47.4	-0.9
	1.7nm,0.3s						
MTBS				*e*Lg	Lg	08 06 46.1	
	6.0nm,0.6s						
IZV	Izvestkoviy	4.54	60	Pg	Pg	08 05 49.8	+0.1
	0.4nm,0.2s						
IZV				Lg	Lg	08 06 50.4	
	8.3nm,0.8s						
IZV	Izvestkoviy	4.54	60	*e*Pg	Pg	08 05 49.8	+0.1
	0.4nm,0.2s						
IZV				*e*Lg	Lg	08 06 50.4	
	8.3nm,0.8s						
BTLS	Baital	4.63	25	Pg	Pg	08 05 48.9	-2.5
	1.5nm,0.5s						
BTLS				Lg	Lg	08 06 49.0	
	9.5nm,0.6s						
BTLS	Baital	4.63	25	*e*Pg	Pg	08 05 48.9	-2.5
	1.5nm,0.5s						
BTLS				*e*Lg	Lg	08 06 49.0	
	9.5nm,0.6s						
KUU	Kurty	4.82	50	Pg	Pg	08 05 53.0	-2.0
	0.8nm,0.3s						
KUU				Lg	Lg	08 06 55.8	
	16nm,0.5s						
KUU	Kurty	4.82	50	*e*Pg	Pg	08 05 53.0	-2.0
	0.8nm,0.3s						
KUU				*e*Lg	Lg	08 06 55.8	
	16nm,0.5s						
MDOK	Medeo	4.88	60	Pg	Pg	08 05 55.4	-0.9
	3.2nm,0.9s						
MDOK				Lg	Lg	08 06 59.8	
	7.8nm,0.5s						
MDOK	Medeo	4.88	60	*e*Pg	Pg	08 05 55.4	-0.9
	3.2nm,0.9s						
MDOK				*e*Lg	Lg	08 06 59.8	
	7.8nm,0.5s						
KTBS	Karatobe	4.92	53	Pg	Pg	08 05 55.2	-1.8
	2.6nm,0.6s						
KTBS				Lg	Lg	08 06 59.5	
	11nm,0.5s						
KTBS	Karatobe	4.92	53	*e*Pg	Pg	08 05 55.2	-1.8
	2.6nm,0.6s						
KTBS				*e*Lg	Lg	08 06 59.5	
	11nm,0.5s						
KOTS	Kotyrbulak	4.96	60	Pg	Pg	08 05 57.2	-0.5
	2.1nm,0.3s						
KOTS				Lg	Lg	08 07 02.9	
	8.0nm,0.7s						
KOTS	Kotyrbulak	4.96	60	*e*Pg	Pg	08 05 57.2	-0.5
	2.1nm,0.3s						
KOTS				*e*Lg	Lg	08 07 02.9	
	8.0nm,0.7s						
CHKK	Chushkaly	5.18	53	Pg	Pg	08 06 01.6	-0.4
CHKK				Lg	Lg	08 07 10.8	
CHKK	Chushkaly	5.18	53	*e*P	Pg	08 06 01.6	-0.4
CHKK				*e*S	Sg	08 07 10.8	+1.7

DZN	Dzhankel'dy	5.99	272	P	Sg	08 07 32.8	-2.2
KPKS	Kokpek	6.10	63	Pg	Pg	08 06 17.0	-2.4
	1.0nm,0.2s						
KPKS				Lg	Lg	08 07 36.9	
	7.5nm,0.6s						
KPKS	Kokpek	6.10	63	*e*Pg	Pg	08 06 17.0	-2.4
	1.0nm,0.2s						
KPKS				*e*Lg	Lg	08 07 36.9	
	7.5nm,0.6s						
UZB	Uzynbulak	6.22	66	Pg	Pg	08 06 19.9	-1.9
	2.8nm,0.1s						
UZB				Lg	Lg	08 07 41.9	
	3.2nm,0.6s						
UZB	Uzynbulak	6.22	66	*e*Pg	Pg	08 06 19.9	-1.9
	2.8nm,0.1s						
UZB				*e*Lg	Lg	08 07 41.9	
	3.2nm,0.6s						
BLB	Baldybastay	6.23	57	Pg	Pg	08 06 19.3	-2.8
	2.9nm,0.5s						
BLB				Lg	Lg	08 07 42.1	
	5.7nm,0.7s						

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*NOU **07** 08:19:51.8, 42°.57S×173°.10E, h0^{km}, MLv3.7/7, South Island, New Zealand*

*WEL **07** 08:19:53.0±0.5, 42°S±3°×17°3E±°, h3^{km}±3^{km}, M2.9/11, ML3.1/13, MLv2.9/11, Error ellipse: s-maj=0.0km s-min=0.0km az=115.3, confirmed*

ISC 07 08:19:52.5±0.9**, 42°.52S**±0°.03×**173°.20E**±0°.03**, h15^{km}, n54, σ1^{s}.09**/58**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHZ	Kahutara	0.27	68	P	Pg	08 19 58.7	+0.3
KHZ	Kahutara	0.27	68	P	Pg	08 19 58.6	+0.2
KHZ				S	Sg	08 20 03.1	+0.8
GVZ	Greta Valley S	0.47	195	P	Pg	08 20 03.2	+1.4
GVZ				S	Sb	08 20 11.2	+2.0
LTZ	Lake Taylor	0.73	249	P	Pg	08 20 06.3	-0.5
AMCZ	Amberley	0.77	211	P	Pb	08 20 08.6	+1.0
THZ	Tophouse	0.79	344	P	Pg	08 20 06.8	-1.0
THZ				S	Sg	08 20 16.3	-1.9
BSWZ	Blackbirch Sta	0.95	32	P	Pb	08 20 10.3	-0.4
CMWZ	Cape Campbell	1.08	45	P	Pb	08 20 13.6	+0.7
MRNZ	Matariki Terra	1.17	344	P	Pb	08 20 13.6	-0.8
OXZ	Oxford	1.17	226	P	Pb	08 20 13.8	-0.7
TUWZ	Tuamarina	1.22	27	P	Pn	08 20 14.8	-0.2
MQZ	McQueen's Vall	1.25	198	P	Pn	08 20 14.2	-1.2
MQZ				S	Sb	08 20 30.6	-1.2
DSZ	Denniston Nort	1.29	306	P	Pn	08 20 15.9	-0.2
NNZ	Nelson	1.31	6	P	Pn	08 20 16.0	-0.2
INZ	Inchbonnie	1.31	260	P	Pn	08 20 16.5	+0.2
AKCZ	Akaroa Harbour	1.37	189	P	Pn	08 20 16.4	-0.7
RACZ	Rakaia	1.44	212	P	Pn	08 20 17.0	-1.0
TKNZ	Takaka Hill	1.49	353	P	Pn	08 20 19.0	+0.2
TCW	Tory Channel	1.54	32	P	Pn	08 20 19.0	-0.4
MHCZ	Mount Hutt	1.57	229	P	Pn	08 20 19.0	-0.8
WEL	Wellington	1.70	44	P	Pn	08 20 21.1	-0.5
WACZ	Wakanui South	1.73	214	P	Pn	08 20 21.2	-0.9
QRZ	Quartz Range	1.76	343	P	Pn	08 20 23.5	+1.0
QRZ	Quartz Range	1.76	343	P	Pn	08 20 22.9	+0.4
DUWZ	D'Urville Isla	1.80	18	P	Pn	08 20 24.0	+0.9
PLWZ	Palliser	1.80	59	P	Pn	08 20 21.8	-1.3
WVZ	Waitaha Valley	1.89	252	P	Pn	08 20 24.6	+0.3
RPZ	Rata Peaks	1.97	232	P	Pn	08 20 25.1	-0.3
RPZ	Rata Peaks	1.97	232	P	Pn	08 20 24.9	-0.5
CAW	Cannon Point	1.98	45	P	Pn	08 20 24.6	-0.9
ARCZ	Arundel	2.05	225	P	Pn	08 20 25.8	-0.7
KIW	Kapiti Island	2.10	38	P	Pn	08 20 26.6	-0.5
MTW	Mount Morrison	2.19	53	P	Pn	08 20 26.7	-1.8
GCSZ	Gaunt Creek Bo	2.25	248	P	Pn	08 20 29.7	+0.4
HOWZ	Holdsworth Sta	2.37	48	P	Pn	08 20 29.5	-1.5
TMZ	Timaru	2.45	220	P	Pn	08 20 31.3	-0.7
MRZ	Mangatainoka R	2.58	45	P	Pn	08 20 32.2	-1.5
FOZ	Fox Glacier	2.68	247	P	Pn	08 20 36.1	+1.0
ODZ	Otahua Downs	3.13	215	P	Pn	08 20 40.9	-0.4
TSZ	Takapari Road	3.22	41	P	Pn	08 20 40.8	-1.8
KHEZ	Kahui Hut	3.28	11	P	Pn	08 20 45.7	+2.3
KHEZ	Kahui Hut	3.28	11	P	Pn	08 20 45.5	+2.0
PKE	Pukeiti	3.37	10	P	Pn	08 20 46.8	+2.1
MTVZ	Mangateitei	3.57	30	P	Pn	08 20 48.1	+0.6
VRZ	Vera Road	3.59	20	P	Pn	08 20 49.1	+1.5
WNVZ	Wahianoa	3.67	31	P	Pn	08 20 49.1	+0.2
TRVZ	Turoa	3.68	30	P	Pn	08 20 49.0	0.0
TUVZ	Tukino	3.74	31	P	Pn	08 20 49.8	-0.1
NGZ	Ngauruhoe	3.80	29	P	Pn	08 20 50.8	+0.1
OTVZ	Oturere	3.84	30	P	Pn	08 20 51.3	+0.1
NNVZ	North Ngauruho	3.85	29	P	Pn	08 20 51.2	-0.1
BKZ	Black Stump Fm	4.18	38	P	Pn	08 20 58.2	+2.4
HIZ	Hauiti	4.20	18	P	Pn	08 20 57.6	+1.6
HIZ	Hauiti	4.20	18	P	Pn	08 20 56.9	+0.9

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*IDC **07** 08:27:10.7±1.5, 49°.65N×81°.45E, h0^{km}, mbtmp2.3/2, ML1.8/2, Error ellipse: s-maj=24.0km s-min=8.0km az=54.0*

*NNC **07** 08:27:12.0±2.9, 49°.72N×81°.61E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=46.1km s-min=8.1km az=50.0, Suspected Mining explosion.*

ISC 07 08:27:11.5±1.3**, 49°.68N**±0°.07×**81°.51E**±0°.08**, h0^{km}, n8, σ1^{s}.73**/10**, 5C-3D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURK	Kurchatov	2.13	300	⇑Pn	Pn	08 27 47.9	-0.5
	6.4nm,0.9s						
KURK				⇓Sn	Sn	08 28 17.6	+2.2
	15nm,0.8s						
KURBB	Kurchatov Arra	2.14	297	Pg	Pn	08 27 48.5	0.0
	0.1nm,0.3s,baz=112,slow=18,SNR=23						
KURBB				Lg	Lg	08 28 19.0	
	0.3nm,0.3s,baz=116,slow=30,SNR=29						
KURBB	Kurchatov Arra	2.14	297	⇑Pn	Pn	08 27 48.9	+0.5
	8.1nm,0.8s						
KURBB				⇑Sn	Sb	08 28 18.5	+0.3
	28nm,0.8s						
MAKZ	Makanchi	2.89	174	⇑Pn	Pn	08 28 00.7	+1.9
	0.5nm,0.5s						
MAKZ				⇓Lg	Lg	08 28 42.1	
	2.6nm,0.7s						
MK31	Makanchi Array	2.93	169	⇑Pn	Pn	08 28 01.6	+2.2
	0.7nm,0.5s,baz=354,slow=14,SNR=14						
MK31				⇓Lg	Lg	08 28 43.4	
	3.9nm,0.8s,baz=354,slow=26,SNR=15						
MKAR	Makanchi Array	2.93	169	Pn	Pn	08 27 59.8	+0.4
	0.3nm,0.3s,baz=0.7,slow=13,SNR=9.6						
MKAR				Pg	Pb	08 28 02.0	-2.6
	0.3nm,0.3s,baz=352,slow=15,SNR=15						
MKAR				Lg	Lg	08 28 41.7	
	0.8nm,0.3s,baz=358,slow=29,SNR=19						
	0.4nm,0.3s						
I46RU	ZALESOVO INFRA	4.74	24	I	I	08 53 20.0	
	baz=204,slow=323,SNR=3.6						
ZALV	Zalesovo Beam	4.74	24	Pn	Pn	08 28 24.9	+0.7
	0.1nm,0.3s,baz=237,slow=13,SNR=1.6						
ZALV				Lg	Lg	08 29 36.7	
	0.2nm,0.3s,baz=192,slow=26,SNR=6.6						
	0.3nm,0.3s						

IDC 07 08:33:47.7±2.4**, 54°.10N**×**86°.38E, h0^{km}, mbtmp3.1**/2**, ML2.6**/2**, Error ellipse: s-maj=19.0km s-min=11.2km az=63.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.93	261	I	I	08 39 19.5	
	baz=79,slow=337,SNR=9.5						
ZALV	Zalesovo Beam	0.93	261	Pg	Pg	08 34 04.6	-1.0
	0.9nm,0.3s,baz=77,slow=16,SNR=8.2						
ZALV				Lg	Lg	08 34 19.3	
	1.0nm,0.3s,baz=81,slow=29,SNR=12						
KURBB	Kurchatov Arra	5.94	237	Pn	Pn	08 35 17.4	+0.7
	0.1nm,0.3s,baz=54,slow=14,SNR=14						
KURBB				Lg	Lg	08 36 54.3	
	baz=51,slow=34,SNR=2.8						
	1.7nm,0.6s						
MKAR	Makanchi Array	7.77	201	Pn	Pn	08 35 43.1	+1.2
	0.1nm,0.3s,baz=25,slow=15,SNR=9.4						
MKAR				Sn	Sn	08 37 10.4	-0.1
	baz=25,slow=24						
MKAR				Lg	Lg	08 37 51.5	
	baz=26,slow=33,SNR=9.0						
	0.4nm,0.5s						

IDC 07 08:40:10.4±2.5**, 53°.61N**×**86°.86E, h0^{km}, mbtmp2.6**/2**, ML2.3**/2**, Error ellipse: s-maj=24.6km s-min=14.1km az=71.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.26	286	I	I	08 47 00.0	
	baz=103,slow=337,SNR=6.9						
ZALV	Zalesovo Beam	1.26	286	Pg	Pg	08 40 33.0	-1.4
	1.1nm,0.3s,baz=108,slow=15,SNR=12						
ZALV				Lg	Lg	08 40 51.4	
	2.1nm,0.3s,baz=108,slow=29,SNR=12						
KURBB	Kurchatov Arra	5.94	243	Pn	Pn	08 41 40.9	+1.4
	baz=59,slow=14,SNR=2.3						
	0.3nm,0.5s						
MKAR	Makanchi Array	7.43	205	Pn	Pn	08 42 01.2	+1.2
	0.1nm,0.3s,baz=27,slow=14,SNR=8.2						
	0.2nm,0.3s						

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*NNC **07** 08:41:24.4±1.2, 51°.70N×75°.36E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=21.8km s-min=8.0km az=22.0, Suspected Mining explosion.*

*IDC **07** 08:41:25.3±1.0, 51°.58N×75°.38E, h0^{km}, mbtmp2.7/4, ML2.2/4, Error ellipse: s-maj=22.8km s-min=8.4km az=31.0*

ISC 07 08:41:24.8±1.0**, 51°.57N**±0°.07×**75°.39E**±0°.04**, h0^{km}, n12, σ1^{s}.03**/15**, 8C-5D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	Kurchatov Arra	2.20	114	Pn	Pn	08 42 02.0	-0.5
	0.5nm,0.3s,baz=302,slow=18,SNR=66						
KURBB				Lg	Lg	08 42 33.2	
	0.9nm,0.3s,baz=294,slow=36,SNR=9.5						
	2.0nm,0.4s						
KURBB	Kurchatov Arra	2.20	114	⇓Pn	Pb	08 42 04.1	-1.3
	4.3nm,0.4s						
KURBB				⇓Sn	Sg	08 42 34.4	-0.9
	35nm,0.6s						
KURK	Kurchatov	2.21	112	⇑Pn	Pn	08 42 03.3	+0.7
	2.5nm,0.5s						
KURK				⇑Sn	Sn	08 42 31.4	+0.7
	9.8nm,0.4s						
BVA0	Borovoye Array	3.40	297	⇑Pg	Pb	08 42 24.8	-1.0
	2.2nm,0.6s,baz=114,slow=16,SNR=13						
BVA0				⇑Lg	Lg	08 43 10.1	
	6.9nm,0.5s,baz=112,slow=27,SNR=6.5						
BVAR	Borovoye Array	3.40	297	Pn	Pn	08 42 19.3	+0.3
	0.1nm,0.3s,baz=114,slow=16,SNR=13						
BVAR				Lg	Lg	08 43 10.9	
	0.4nm,0.3s,baz=117,slow=29,SNR=15						
	0.8nm,0.3s						
BRVK	Borovoye	3.47	297	⇑Pg	Pb	08 42 25.5	-1.6
	2.3nm,0.7s						
BRVK				⇑Lg	Lg	08 43 10.5	
	11nm,0.6s						
OTUK	Ortayu	3.87	212	⇑Pg	Pg	08 42 38.7	-0.2
	0.8nm,0.6s						
OTUK				⇓Lg	Lg	08 43 30.6	
	5.8nm,0.8s						
ZALV	Zalesovo Beam	6.20	64	Pn	Pn	08 42 58.2	+0.7
	0.5nm,0.3s,baz=258,slow=14,SNR=7.0						
ZALV				Sn	Sn	08 44 10.2	+1.1
	0.3nm,0.3s,baz=252,slow=25,SNR=2.0						
	1.7nm,0.4s						
I46RU	ZALESOVO INFRA	6.20	64	I	I	09 17 40.0	
	baz=252,slow=317,SNR=2.5						
MAKZ	Makanchi	6.43	135	⇑Sn	Sn	08 44 15.3	+0.5
	1.5nm,0.7s						
MAKZ				⇓Lg	Lg	08 44 50.2	
	4.3nm,0.7s						
MK31	Makanchi Array	6.58	134	⇓Sn	Sn	08 44 19.5	+1.0
	1.5nm,0.8s,baz=318,slow=21,SNR=2.9						
MK31				Lg	Lg	08 44 53.9	
	3.4nm,0.7s,baz=315,slow=27,SNR=7.9						
MKAR	Makanchi Array	6.58	134	Pn	Pn	08 43 04.1	+1.3
	0.1nm,0.3s,baz=312,slow=12,SNR=4.3						
MKAR				Sn	Sn	08 44 19.2	+0.7
	0.3nm,0.3s,baz=320,slow=21,SNR=7.5						
MKAR				Lg	Lg	08 44 53.6	
	0.4nm,0.3s,baz=322,slow=28,SNR=11						
	0.3nm,0.6s						

IDC 07 08:45:49.5±2.5**, 53°.65N**×**86°.94E, h0^{km}, mbtmp2.9**/2**, ML2.5**/2**, Error ellipse: s-maj=21.5km s-min=13.5km az=70.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.29	284	I	I	08 52 53.1	
	baz=103,slow=339,SNR=6.1						
ZALV	Zalesovo Beam	1.29	284	Pg	Pg	08 46 12.9	-1.4
	1.8nm,0.3s,baz=101,slow=17,SNR=13						
ZALV				Lg	Lg	08 46 31.6	
	3.7nm,0.3s,baz=110,slow=29,SNR=14						
KURBB	Kurchatov Arra	6.00	243	Pn	Pn	08 47 20.4	+0.9
	0.1nm,0.3s,baz=59,slow=13,SNR=4.3						
KURBB				Sn	Sn	08 48 28.4	-0.3
	baz=56,slow=15,SNR=1.5						
KURBB				Lg	Lg	08 48 58.9	
	baz=60,slow=28,SNR=1.7						
	0.9nm,0.7s						
MKAR	Makanchi Array	7.48	205	Pn	Pn	08 47 41.4	+1.5
	0.2nm,0.3s,baz=28,slow=14,SNR=9.8						
MKAR				Sn	Sn	08 49 04.7	-0.7
	0.1nm,0.3s,baz=25,slow=25,SNR=2.4						
MKAR				Lg	Lg	08 49 46.2	
	0.1nm,0.3s,baz=21,slow=28,SNR=6.2						
	0.3nm,0.3s						

DDA 07 09:02:04.1±0.0**, 37°.67N**×**32°.41E, h7^{km}**±2^{km}**, ML1.5, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMER	Konya-Meram	0.11	340	P	Pg	09 02 06.5	-0.1
KMER				S	Sg	09 02 08.2	-0.1
KMER				*i* AML	AML	09 02 09.0	
	comp=E,359nm,0.3s						
KMER				*i* AML	AML	09 02 09.0	
	comp=N,573nm,0.7s						
KONT	Konya--Tatoy	0.28	351	P	Pg	09 02 10.1	+0.5
KONT				S	Sg	09 02 14.8	+1.4
KONT				*i* AML	AML	09 02 15.0	
	comp=E,67nm,0.3s						
KONT				*i* AML	AML	09 02 16.0	
	comp=N,48nm,0.5s						
KKBE	Karaman, Kazim	0.61	137	P	Pg	09 02 11.1	-4.8
KKBE				S	Sb	09 02 25.2	-0.9

ISK 07 09:03:00.6, 36°.14N×**33°.53E, h0^{km}, ML1.7**/8**, Suspected Mining explosion., Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKK1	Akkuyu-Mersin	0.01	88	Pg	Pg	09 03 01.5	+0.7
AKK2	Akkuyu-Mersin	0.02	107	Pg	Pg	09 03 01.3	+0.3
AKK2				Sg	Sg	09 03 01.8	+0.6
TEPK	Tepekoy-MERSIN	0.08	11	Pg	Pg	09 03 02.7	+0.5
TEPK				Sg	Sg	09 03 04.3	+1.0
OREN	Orenkoy-Mersin	0.09	320	Pg	Pg	09 03 02.8	+0.6
OREN				Sg	Sg	09 03 04.3	+1.0
YESI	Yesilovacik-Me	0.11	61	Pg	Pg	09 03 03.5	+0.8
YESI				Sg	Sg	09 03 05.3	+1.2
TISA	Tisan-Mersin	0.12	81	Pg	Pg	09 03 03.8	+0.8
KARG	Kargicak-Mersi	0.16	68	Pg	Pg	09 03 04.6	+0.9
IKL	Isikli	0.16	53	Pg	Pg	09 03 04.5	+0.8
TEVE	Tevekalti-Mers	0.30	347	Pg	Pg	09 03 07.2	+0.8
BERE	Bereket-Mersin	0.32	310	Pg	Pg	09 03 07.8	+1.1

IDC 07 09:24:32.0±2.7**, 53°.75N**×**86°.91E, h0^{km}, mbtmp2.9**/2**, ML2.4**/2**, Error ellipse: s-maj=24.7km s-min=14.0km az=71.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.26	280	I	I	09 31 20.0	
	baz=99,slow=337,SNR=22						
ZALV	Zalesovo Beam	1.26	280	Pg	Pg	09 24 55.5	-0.6
	1.0nm,0.3s,baz=99,slow=18,SNR=11						
ZALV				Lg	Lg	09 25 11.7	
	0.9nm,0.3s,baz=103,slow=20,SNR=3.6						
KURBB	Kurchatov Arra	6.03	242	Pn	Pn	09 26 03.6	+1.3
	0.1nm,0.3s,baz=58,slow=14,SNR=5.3						
KURBB				Lg	Lg	09 27 44.9	
	0.1nm,0.3s,baz=62,slow=35,SNR=5.1						
	1.0nm,0.6s						
MKAR	Makanchi Array	7.56	205	Pn	Pn	09 26 24.4	+0.9
	0.1nm,0.3s,baz=26,slow=14,SNR=6.4						
MKAR				Sn	Sn	09 27 50.2	+0.2
	0.1nm,0.3s,baz=23,slow=28,SNR=2.0						
MKAR				Lg	Lg	09 28 32.2	
	baz=28,slow=32,SNR=3.1						
	0.3nm,0.5s						

IDC 07 09:29:07.1±836.0**, 52°.63N**×**5°.08E, h0^{km}, Error ellipse: s-maj=368.7km s-min=140.9km az=109.0, The Netherlands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I26DE	FREYUNG INFRAS	6.66	121	I	I	10 14 10.0	
	baz=306,slow=310,SNR=0.7						
I43RU	DUBNA INFRASON	18.92	65	I	I	11 23 50.0	
	baz=272,slow=325,SNR=1.2						
I31KZ	AKTYUBINSK INF	32.41	72	I	I	12 44 20.0	
	baz=296,slow=324,SNR=1.6						
I46RU	ZALESOVO INFRA	45.28	55	I	I	14 08 20.0	
	baz=299,slow=326						

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*NNC **07** 09:32:40.9±2.0, 54°.15N×86°.66E, h0^{km}, mb3.2, mpv3.0, Error ellipse: s-maj=18.9km s-min=9.2km az=10.0, Suspected Mining explosion.*

*IDC **07** 09:32:44.9±2.1, 54°.00N×86°.37E, h0^{km}, mbtmp3.5/2, ML3.2/2, Error ellipse: s-maj=17.2km s-min=10.6km az=64.0*

ISC 07 09:32:46.5±4.5**, 54°.0N**±0°.2×**86°.2E**±0°.2**, h0^{km}, n9, σ0^{s}.87**/12**, 8C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.80	267	I	I	09 38 26.3	
	baz=84,slow=337,SNR=14						
ZAA0	Zalesovo Array	0.80	267	⇑P	Pg	09 33 01.5	-0.4
	0.3nm,0.2s						
ZAA0				⇓S	Sn	09 33 17.3	-0.4
	13nm,1.1s						
ZALV	Zalesovo Beam	0.80	267	Pg	Pg	09 33 01.5	-0.4
	3.4nm,0.3s,baz=86,slow=17,SNR=28						
ZALV				Lg	Lg	09 33 15.5	
	8.3nm,0.3s,baz=89,slow=30,SNR=19						
KURK	Kurchatov	5.67	238	⇓Pn	Pn	09 34 12.6	+0.6
	4.2nm,1.0s						
KURK				⇑Lg	Lg	09 35 54.2	
	6.8nm,0.8s						
KURBB	Kurchatov Arra	5.78	237	Pn	Pn	09 34 14.6	+1.1
	0.4nm,0.3s,baz=56,slow=14,SNR=32						
KURBB				Sn	Sn	09 35 19.6	-0.7
	baz=53,slow=19						
KURBB				Lg	Lg	09 35 53.5	
	baz=65,slow=34,SNR=1.7						
	2.5nm,0.3s						
KURBB	Kurchatov Arra	5.78	237	⇑Pn	Pn	09 34 14.5	+1.1
	6.8nm,0.7s						
KURBB				⇑Lg	Lg	09 35 52.6	
	10nm,0.7s						
MK31	Makanchi Array	7.62	201	⇑Pn	Pn	09 34 38.4	-0.3
	0.2nm,0.2s,baz=27,slow=14,SNR=73						
MK31				⇑Sn	Sn	09 36 05.6	-0.2
	0.5nm,0.5s,baz=27,slow=26,SNR=4.2						
MK31				⇓Lg	Lg	09 36 50.4	
	3.9nm,0.9s,baz=25,slow=30,SNR=2.9						
MKAR	Makanchi Array	7.62	201	Pn	Pn	09 34 38.6	-0.2
	0.4nm,0.3s,baz=22,slow=12,SNR=36						
MKAR				Sn	Sn	09 36 05.0	-0.8
	0.1nm,0.3s,baz=21,slow=22,SNR=5.4						
MKAR				Lg	Lg	09 36 48.7	
	0.1nm,0.3s,baz=26,slow=30,SNR=3.6						
	0.8nm,0.3s						
MAKZ	Makanchi	7.67	202	⇑Sn	Sn	09 36 08.6	+1.5
	3.1nm,0.9s						
MAKZ				⇑Lg	Lg	09 36 54.7	
	3.5nm,0.8s						

KRSC 07 09:37:26.2±1.4**, 50°.18N**×**156°.58E, h105^{km}**±13^{km}**, Ml4.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	0.59	330	*e*P	Pn	09 37 43.8	+0.7
SKR				*e*S	Sn	09 37 56.7	+1.0
PAU	Pauzhetka	1.30	6	*e*P	Pn	09 37 52.0	+1.7
PAU				*e*S	Sn	09 38 10.6	+2.2
KDTR	Khodutka, Kamc	1.89	29	*e*P	Pn	09 37 59.2	+1.8
KDTR				*e*S	Sn	09 38 23.4	+2.1
GRL	Gorelyy	2.55	21	*e*P	Pn	09 38 08.3	+2.1
RUS	Russkaya	2.56	27	*e*P	Pn	09 38 07.4	+1.3
RUS				*e*S	Sn	09 38 38.4	+1.5
KRMR	Karymshinskiy	2.83	19	*e*P	Pn	09 38 11.3	+1.6
DALK	Dalny	3.16	25	*e*P	Pn	09 38 16.0	+1.9
DALK				*e*S	Sn	09 38 53.8	+2.8
UGLR	Uglovaya	3.34	24	*e*P	Pn	09 38 19.1	+2.5
AVH	Avacha	3.37	23	*e*P	Pn	09 38 19.9	+2.9
KOK	Koryaka	3.37	21	*e*P	Pn	09 38 19.5	+2.6
SMAR	Somma	3.38	23	*e*P	Pn	09 38 19.7	+2.4
KRER	Koryakskii	3.41	22	*e*P	Pn	09 38 20.8	+3.2
SDLR	Sedlovina	3.42	24	*e*P	Pn	09 38 19.7	+2.0
KRX	Arik	3.43	21	*e*P	Pn	09 38 20.0	+2.1
GNL	Ganaly	3.62	13	*e*P	Pn	09 38 21.4	+1.0
SPN	Mys Shipunski	3.62	35	*e*P	Pn	09 38 22.8	+2.5
SPN				*e*S	Sn	09 39 02.6	+0.4
TUMD	Tumrok D	5.54	23	*e*P	Pn	09 38 49.0	+2.8
TUMR	Tumrok	5.55	22	*e*P	Pn	09 38 47.2	+0.8

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*MOS **07** 09:45:52.7±1.2, 42°.27N×144°.88E, h51^{km}, mb4.6/1, Error ellipse: s-maj=12.5km s-min=7.0km az=80.5*

*NEIC **07** 09:45:53.5±2.7, 42°.37N±0°.05×145°.1E±0°.2, h50^{km}±9^{km}, mb4.1/5, Error ellipse: s-maj=19.9km s-min=6.2km az=100.0*

*NIED **07** 09:45:54.5, 42°.40N×144°.79E, h44^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.67; $M_{\theta\theta}$0.89; $M_{\phi\phi}$-0.22; $M_{r\theta}$0.93; $M_{\theta\phi}$-0.34; $M_{\phi r}$0.32; Fault plane solution: $M_0$1.31000×10^{15} NP1: ϕ_s259.00000°, δ73.00000°, λ-115.00000°. NP2: ϕ_s135.00000°, δ30.00000°, λ-37.00000°.*

*JMA **07** 09:45:54.5±0.1, 42°.4N±0°.2×144°.8E±0°.4, h44^{km}, MD4.2/39, MV4.3/39, SE OFF TOKACHI*

JMA Felt II J1 at SE OFF TOKACHI .

*IDC **07** 09:45:54.1±2.3, 42°.34N×144°.88E, h42^{km}±19^{km}, mb3.7/17, mbtmp3.9/21, ML2.6/3, MS3.3/11, Error ellipse: s-maj=17.4km s-min=12.6km az=94.0*

*SKHL **07** 09:45:55.0±0.2, 42°.40N×144°.80E, h66^{km}±3^{km}, mb5.2/8*

ISC 07 09:45:54.4±0.9**, 42°.39N**±0°.06×**144°.82E**±0°.04**, h46^{km}**±9^{km}**, n93, σ1^{s}.24**/92**, mb3.9**/20**, MS3.3**/5**, 3C-4D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAK	Akkeshi	0.62	351	*i* P	Pn	09 46 06.5	-0.3
JAK				*e*S	Sn	09 46 15.6	-0.2
JAK	Akkeshi	0.62	351	A	A	09 46 06.5	
	comp=E,19nm,0.8s,comp=E,21nm,0.9s						
AKK	Akkeshi	0.63	1	*i* P	Pn	09 46 07.1	0.0
AKK				AMB	AMB	09 46 07.6	
	5μm,0.4s						
AKK				*i* S	Sn	09 46 16.2	+0.1
AKK				A	A	09 46 16.6	
	24μm,0.5s						
AKK				A	A	09 46 16.6	
	33μm,0.5s						
JKHN	Kushirohamanak	0.74	20	P	Pn	09 46 09.0	+0.6
JKHN				*e*S	Sn	09 46 20.3	+1.6
JKHN	Kushirohamanak	0.74	20	A	A	09 46 09.0	
	comp=E,60nm,0.6s,comp=E,55nm,0.5s						
JOB	Onbets	0.89	306	⇓*i*P	Pn	09 46 10.6	0.0
JOB				⇓*e*S	Sn	09 46 22.9	+0.6
JOB	Onbets	0.89	306	A	A	09 46 10.6	
	comp=E,17nm,0.6s,comp=E,18nm,0.8s						
JCH	Churui	1.10	282	P	Pn	09 46 13.8	+0.3
JCH				*e*S	Sn	09 46 28.0	+0.5

NMR	Nemuro--Hokkai	1.19	34	⇑iPN	Pn	09 46 14.9	+0.4
NMR				eS	Sn	09 46 29.7	+0.2
NMR	Nemuro--Hokkai	1.19	34	i P	Pn	09 46 15.0	+0.4
NMR				i S	Sn	09 46 29.9	+0.4
NEM2	Nemuro 2	1.19	34	eP	Pn	09 46 14.9	+0.4
NEM2				eS	Sn	09 46 29.7	+0.2
NEM2	Nemuro 2	1.19	34	A	A	09 46 14.9	
	comp=E,3.0nm,0.4s,comp=E,6.0nm,0.7s						
JAR	Ashorobuto	1.20	320	⇓P	Pn	09 46 14.5	-0.2
JAR				⇓eS	Sn	09 46 29.5	-0.2
JAR	Ashorobuto	1.20	320	A	A	09 46 14.5	
	comp=E,10.0nm,0.5s,comp=E,14nm,1.0s						
JNK	Nakash	1.20	356	P	Pn	09 46 14.4	-0.3
JNK				eS	Sn	09 46 29.1	-0.8
JNK	Nakash	1.20	356	A	A	09 46 14.4	
	comp=E,10.0nm,0.5s,comp=E,9.0nm,0.5s						
ERM	Erimo	1.29	254		Pn	09 46 18.0	+2.0
ERM	Erimo	1.29	254	PN	Pn	09 46 18.0	+2.0
JNBK	Urakawa-nobuka	1.54	267	eP	Pn	09 46 19.6	+0.2
JRA	Rausu	1.56	8	eP	Pn	09 46 20.0	+0.3
JRA				eS	Sn	09 46 39.2	+0.4
JRA	Rausu	1.56	8	A	A	09 46 20.0	
	comp=E,4.0nm,0.6s,comp=E,3.0nm,0.4s						
JTKR	Abashiri--Toko	1.72	337	A	A	09 46 22.4	
	comp=E,5.0nm,1.4s,comp=E,4.0nm,1.1s						
RUSJ	Misakicho	1.74	10	⇑iPN	Pn	09 46 22.8	+0.6
RUSJ				eS	Sn	09 46 44.4	+1.2
YUK	Yuzh-Kuril'sk	1.81	24	c iPN	Pn	09 46 23.6	+0.5
YUK				eS	Sn	09 46 44.5	-0.4
YUK				pmax	pmax		
	comp=N,127nm,0.3s						
YUK				pmax	pmax		
	comp=Z,2µm,0.3s						
YUK				pmax	pmax		
	comp=E,136nm,0.4s						
YUK				smax	smax		
	comp=N,4µm,0.4s						
YUK				smax	smax		
	comp=E,3µm,0.4s						
YUK	Yuzh-Kuril'sk	1.81	24	i P	Pn	09 46 23.6	+0.5
YUK				AMB	AMB	09 46 24.2	
	comp=E,130nm,0.4s						
YUK				AMB	AMB	09 46 24.2	
	comp=E,2µm,0.4s						
YUK				eS	Sn	09 46 45.0	+0.1
YUK				A	A	09 46 47.3	
	comp=E,4µm,0.5s						
YUK				A	A	09 46 47.3	
	comp=E,3µm,0.5s						
JMP	Maruseppu	1.94	327	A	A	09 46 25.6	
	comp=E,11nm,0.7s,comp=E,4.0nm,0.4s						
SHO	Shikotan	2.09	44	ePN	Pn	09 46 27.6	+0.7
SHO				eS	Sn	09 46 51.0	-0.6
SHO				pmax	pmax		
	comp=N,77nm,0.3s						
SHO				pmax	pmax		
	comp=E,198nm,0.3s						
SHO				pmax	pmax		
	comp=Z,279nm,0.3s						
SHO				smax	smax		
	comp=N,879nm,0.4s						
SHO				smax	smax		
	comp=E,602nm,0.4s						
SHO	Shikotan	2.09	44	eP	Pn	09 46 27.5	+0.7
SHO				AMB	AMB	09 46 28.9	
	comp=E,80nm,0.3s						
SHO				AMB	AMB	09 46 28.9	
	comp=E,200nm,0.3s						
SHO				AMB	AMB	09 46 28.9	
	comp=E,280nm,0.3s						
SHO				eS	Sn	09 46 51.5	-0.1
SHO				A	A	09 46 58.3	
	comp=E,880nm,0.4s						
SHO				A	A	09 46 58.3	
	comp=E,630nm,0.4s						
JKA	Kamikawa-asahi	2.37	318		Pn	09 46 31.9	+1.2
JKA	Kamikawa-asahi	2.37	318	eP	Pn	09 46 32.0	+1.2
JKA				eS	Sn	09 47 00.4	+1.8
ASAJ	Asahikawa	2.37	317	P	Pn	09 46 32.0	+1.2
	comp=E,220nm,0.3s,baz=165,slow=13,SNR=198						
ASAJ				S	Sn	09 47 00.4	+1.7
	comp=E,2µm,0.8s,baz=342,slow=14,SNR=34						
ASAJ				LR	LR	09 47 28.6	
	comp=E,215nm,20.7s,baz=178,slow=39						
JTM	Tenmabayashi	3.24	242	Pn	Pn	09 46 43.9	+1.2
KUR	Kuril'sk	3.60	37	ePN	Pn	09 46 49.8	+2.2
KUR				eS	Sn	09 47 31.8	+3.0
KUR				pmax	pmax		
	comp=Z,242nm,0.7s						
KUR				pmax	pmax		
	comp=E,94nm,0.6s						
KUR				pmax	pmax		
	comp=N,78nm,0.3s						
KUR				smax	smax		
	comp=E,281nm,0.4s						
KUR				smax	smax		
	comp=N,182nm,0.5s						
KUR	Kuril'sk	3.60	37	eP	Pn	09 46 49.5	+1.9
KUR				AMB	AMB	09 46 58.1	
	comp=N,80nm,0.4s						
KUR				AMB	AMB	09 46 58.1	
	comp=N,90nm,0.4s						
KUR				AMB	AMB	09 46 58.1	
	comp=N,240nm,0.4s						
KUR				eS	Sn	09 47 30.0	+1.2
KUR				A	A	09 47 37.4	
	comp=N,180nm,0.4s						
KUR				A	A	09 47 37.4	
	comp=N,280nm,0.4s						
YSS	Yuzh-Sakhalins	4.80	343		Pn	09 47 04.2	+0.1
YSS	Yuzh-Sakhalins	4.80	343	ePN	Pn	09 47 05.7	+1.6
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS				MLR	MLR		
	comp=Z,300nm,13.0s						
YSS				MLR	MLR		
	comp=E,200nm,14.0s						
YSS	Yuzh-Sakhalins	4.80	343	eP	Pn	09 47 05.7	+1.6
YSS				AMB	AMB	09 47 06.4	
	comp=E,50nm,0.3s						
YSS				AMS	AMS	09 49 13.0	
	comp=E,200nm,14.0s						
YSS				AMS	AMS	09 49 13.0	
	comp=E,300nm,14.0s						
JMM	Marumori	5.47	216	Pn	Pn	09 47 12.3	-1.1
JSD	Sado	6.64	231	Pn	Pn	09 47 29.1	-0.3
MJAR	Matsushiro Arr	7.76	223	P	Pn	09 47 45.3	+0.5
	comp=E,0.1nm,0.3s,baz=30,slow=15,SNR=6.4						
MJAR				S	Sn	09 49 10.5	-0.8
	comp=E,1.7nm,0.5s,baz=16,slow=23,SNR=2.2						
MJAR				LR	LR	09 51 23.7	
	comp=E,133nm,19.4s,baz=25,slow=42						
	comp=E,2.5nm,0.6s						
MJB9	Matsu-Tunnel	7.76	223	Pn	Pn	09 47 44.0	-0.8
MAJO	Matsushiro	7.76	223	Pn	Pn	09 47 43.2	-1.6
MAJO	Matsushiro	7.76	223	PN	Pn	09 47 43.2	-1.6
JGF	Kuroka	8.93	223	Pn	Pn	09 48 00.6	-0.1
INU	Inuyama	9.29	223	Pn	Pn	09 48 05.3	-0.5
KLR	Kul'dur	11.40	311	P	Pn	09 48 34.1	-0.3
	baz=140,slow=16,SNR=2.5						
KLR				LR	LR	09 53 23.7	
	comp=E,179nm,18.1s,baz=96,slow=39						
	comp=E,0.2nm,0.3s						
PETK	Petropavlovsk-	13.76	34	P	Pn	09 49 07.9	+1.2
	comp=E,0.2nm,0.3s,baz=215,slow=9.7,SNR=5.8						
PETK				LR	LR	09 53 53.3	
	comp=E,59nm,19.0s,baz=235,slow=35						
	comp=E,1.8nm,0.7s						
KSRS	Korea Array	13.87	255	LR	LR	09 53 59.4	
	comp=E,46nm,18.6s,baz=80,slow=35						
JTU	Tsushima	14.40	242	Pn	Pn	09 49 13.8	-1.6
MA2	Magadan	17.60	10	LR	LR	09 56 57.1	
	comp=E,69nm,19.5s,baz=348,slow=38						
MA2	Magadan	17.60	10	Pn	Pn	09 49 53.2	-2.8
MA2				IAmb	IAmb	09 50 16.6	
	comp=Z,16nm,1.0s						
MA2	Magadan	17.60	10	P	Pn	09 49 53.2	-2.8
MA2				pmax	pmax		
	comp=Z,16nm,1.0s						
MA2	Magadan	17.60	10	eP	Pn	09 49 53.2	-2.8
SEY	Seymchan	21.05	10	P	P	09 50 33.2	-1.1
	comp=Z,1.0nm,0.4s,baz=161,slow=9.0,SNR=7.1						
	comp=Z,1.0nm,0.4s						
YAK	Yakutsk	21.64	340	LR	LR	09 59 59.0	
	comp=Z,67nm,18.2s,baz=62,slow=39						
SONM	Songino Array	27.46	295	P	P	09 51 37.0	+0.9
	comp=Z,1.7nm,0.7s,baz=78,slow=7.7,SNR=9.8						
SONM				LR	LR	10 03 28.9	
	comp=Z,55nm,19.8s,baz=34,slow=38						
	comp=Z,1.7nm,0.7s						
H11N2	WAKE ISLAND Hy	29.29	134	T	T	10 23 10.3	
	baz=327,slow=75,SNR=198						
H11N1	WAKE ISLAND Hy	29.30	134	T	T	10 23 12.4	
	baz=327,slow=75,SNR=167						
H11N3	WAKE ISLAND Hy	29.31	134	T	T	10 23 12.8	
	baz=327,slow=75,SNR=200						
H11S1	WAKE ISLAND Hy	30.20	135	T	T	10 24 18.5	
	baz=328,slow=76,SNR=533						
H11S3	WAKE ISLAND Hy	30.20	135	T	T	10 24 18.8	
	baz=328,slow=76,SNR=198						
H11S2	WAKE ISLAND Hy	30.21	135	T	T	10 24 19.8	
	baz=328,slow=76,SNR=220						
TIXI	Tiksi	30.38	350	LR	LR	10 05 23.6	
	comp=Z,67nm,20.8s,baz=77,slow=38						
GOMU	GeErMu	38.73	278	P	P	09 53 21.3	+6.7
GOMU				pP	pP	09 53 26.2	-0.2
GOMU				sP	sP	09 53 27.6	-3.9
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,69nm,4.2s						
ZALV	Zalesovo Beam	40.48	308	P	P	09 53 28.3	-0.1
	comp=Z,0.5nm,0.4s,baz=83,slow=7.7,SNR=2.8						
	comp=Z,0.5nm,0.4s						
KURK	Kurchatov	44.89	304	P	P	09 54 05.8	+1.7
KURK	Kurchatov	44.89	304	eP	P	09 54 05.8	+1.7
KURBB	Kurchatov Arra	44.97	304	P	P	09 54 05.8	+1.0
	comp=Z,1.2nm,0.5s,baz=72,slow=8.9,SNR=5.5						
	comp=Z,1.2nm,0.5s						
CMAR	Chiang Mai Arr	45.50	253	P	P	09 54 11.3	+1.9
	comp=Z,0.6nm,0.3s,baz=46,slow=5.2,SNR=1.4						
	comp=Z,0.6nm,0.3s						
BVAR	Borovoye Array	49.05	310	P	P	09 54 36.0	-0.7
	comp=Z,1.4nm,0.4s,baz=78,slow=7.8,SNR=4.1						
	comp=Z,1.4nm,0.4s						
BVAR	Borovoye Array	49.05	310	P	P	09 54 36.0	-0.7
SPITS	Spitsbergen Ar	55.79	349	P	P	09 55 26.1	0.0
	comp=Z,3.8nm,0.7s,baz=348,slow=3.6,SNR=4.2						
	comp=Z,3.8nm,0.7s						
ABKAR	Akbulak array	56.58	309	P	P	09 55 29.1	-3.1
YKA	Yellowknife Ar	57.87	33	P	P	09 55 42.3	+1.2
	comp=Z,0.4nm,0.5s,baz=299,slow=6.5,SNR=2.6						
	comp=Z,0.4nm,0.5s						
ARCES	ARCESS Array B	59.92	339	P	P	09 55 55.6	+0.3
	comp=Z,3.0nm,0.9s,baz=27,slow=8.1,SNR=4.9						
	comp=Z,3.0nm,0.9s						
WB0	Warramunga Arr	62.59	191	P	P	09 56 13.0	-0.7
WR0	Warramunga Arr	62.76	191	P	P	09 56 14.7	-0.2
WR0				IAmb	IAmb	09 56 20.6	
	comp=Z,4.5nm,1.1s						
WRA	Warramunga Arr	62.77	191	P	P	09 56 15.0	0.0
	comp=Z,1.1nm,0.8s,baz=7.6,slow=6.8,SNR=6.0						
	comp=Z,1.1nm,0.8s						
WRA	Warramunga Arr	62.77	191	P	P	09 56 14.1	-0.9
WRA	Warramunga Arr	62.77	191	P	P	09 56 14.1	-0.9
GEYT	Alibeck	63.59	298	P	P	09 56 21.2	+0.7
	comp=Z,3.6nm,0.6s,baz=82,slow=10,SNR=1.0						
	comp=Z,3.6nm,0.6s						
FINES	FINESS Array B	65.30	332	P	P	09 56 31.7	+0.6
	comp=Z,1.7nm,0.5s,baz=46,slow=8.2,SNR=20						
	comp=Z,1.7nm,0.5s						
FINES	FINESS Array B	65.30	332	P	P	09 56 31.2	0.0
AS31	Alice Springs	66.49	191	P	P	09 56 37.5	-1.8
AS31				IAmb	IAmb	09 56 41.7	
	comp=Z,0.7nm,1.0s						
ASAR	Alice Springs	66.49	191	P	P	09 56 37.1	-2.1
	comp=Z,0.8nm,0.7s,baz=4.3,slow=6.4,SNR=4.6						
	comp=Z,0.8nm,0.7s						
ASAR	Alice Springs	66.49	191	P	P	09 56 37.2	-2.0
ASAR	Alice Springs	66.49	191	P	P	09 56 37.2	-2.0
KBZ	Khabaz	69.41	311	LR	LR	10 32 04.1	
	comp=Z,53nm,18.9s,baz=58,slow=40						
NVAR	Mina Array Bea	69.75	56	P	P	09 57 00.8	+0.8
	comp=Z,0.7nm,0.8s,baz=299,slow=6.6,SNR=4.5						
	comp=Z,0.7nm,0.8s						
NOA	NORSAR Array B	70.24	338	P	P	09 57 02.9	+0.5
	comp=Z,0.2nm,0.4s,baz=38,slow=5.1,SNR=1.7						
	comp=Z,0.2nm,0.4s						
PDAR	Pinedale Array	72.09	48	P	P	09 57 15.0	+0.9
	comp=Z,0.2nm,0.4s,baz=298,slow=1.9,SNR=2.5						
	comp=Z,0.2nm,0.4s						
TXAR	Lajitas Array	84.83	55	P	P	09 58 22.9	-1.4
	comp=Z,0.5nm,0.8s,baz=248,slow=3.0,SNR=5.9						
	comp=Z,0.5nm,0.8s						
CMIG	Matias Romero	99.28	57	LR	LR	10 44 03.1	
	comp=Z,101nm,19.9s,baz=266,slow=35						

MOS **07** *09:46:01.7±1.1, 5.°92S×153.°71E, h10^{km}, mb5.1/28, Error ellipse: s-maj=9.6km s-min=6.8km az=100.2*

IDC **07** *09:46:02.1±0.6, 5.°91S×153.°71E, h0^{km}, mb4.5/23, mbtmp4.5/26, ML4.0/2, MS4.0/41, Error ellipse: s-maj=22.3km s-min=13.5km az=101.0*

NEIC **07** *09:46:03.2±1.1, 5.°98S±0.°07×153.°75E±0.°07, h10^{km}±1^{km}, mb4.8/75, Error ellipse: s-maj=13.8km s-min=9.2km az=51.0*

BJI **07** *09:46:04.1±0.0, 5.°37S×153.°80E, h10^{km}, mb4.9/44, mB5.1/20, Ms4.8/5, Ms7 4.4/2*

GCMT **07** *09:46:10.2±0.3, 6.°14S±0.°03×153.°49E±0.°04, h23^{km}±1^{km}, MW4.9/59, Moment Tensor Solution. s23,c25; s59,c78; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.54±.20; $M_{\theta\theta}$-1.62±.12; $M_{\phi\phi}$-0.92±.12; $M_{r\theta}$1.11±.15; $M_{\theta\phi}$0.76±.08; $M_{\phi r}$-0.80±.21; Best double couple: $M_0$2.69700×10^{16} NP1:ϕ_s124.00000°, δ60.00000°, λ91.00000°. NP2: ϕ_s302.00000°, δ30.00000°, λ88.00000°. Principal axes: T 2.9120, Plg75.0000°, Azm37.0000°; N -0.4330, Plg1.0000°, Azm304.0000°; P -2.4810, Plg15.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA **07** *09:46:13.2±0.4, 6°S±4°×15°3E±°, h104^{km}±6^{km}, M4.6/19, mB4.7/5, mb4.5/19, MLv4.9/4, Mw(mB)4.0/5*

ISC 07 09:46:03.1±0.3, **6.°00S**±0.°05×**153.°67E**±0.°05, **h10**^{km}**, n215,** $\sigma 1^{s}$**19**/200, **mb4.9**/89, **MS4.1**/43, **11C-4D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	2.34	320		Pn	09 46 41.7	0.0
KRVT	Keravat (AS076	2.34	316	Pn	Pn	09 46 41.9	+0.1
	53nm,0.3s,baz=226,slow=1.2,SNR=51						
KRVT				Sn	Sn	09 47 07.8	-2.9
	95nm,0.3s,baz=352,slow=15,SNR=9.6						
	353nm,0.5s						
HNR	Honiara	7.10	119	Pn	Pn	09 47 53.1	+6.0
	76nm,0.3s,baz=272,slow=6.1,SNR=1.9						
HNR				Sn	Sn	09 49 12.1	+4.2
	138nm,0.3s,baz=292,slow=8.7,SNR=1.5						
HNR	Honiara	7.10	119	Pn	Pn	09 47 45.6	-1.5
HNR	Honiara	7.10	119	P	Pn	09 47 45.6	-1.5
PMG	Port Moresby	7.28	242	Pn	Pn	09 47 51.1	+1.4
	23nm,0.6s,baz=46,slow=7.9,SNR=11						
PMG				Sn	Sn	09 49 11.4	-1.1
	2.2nm,0.3s,baz=168,slow=16,SNR=6.1						
PMG				LR	LR	09 50 24.7	
	comp=Z,723nm,19.5s,baz=20,slow=36						
PMG	Port Moresby	7.28	242		Pn	09 47 49.6	-0.1
COEN	Coen	13.01	232	Pn	Pn	09 49 07.0	-1.2
SMPI	Sarmi	15.44	284	P	Pn	09 49 39.2	-2.0
	35nm,2.0s						
CTA	Charters Tower	15.75	207	Pn	P	09 49 47.6	-1.6
	0.4nm,0.3s,baz=26,slow=10,SNR=13						
CTA				LR	LR	09 55 49.4	
	comp=Z,988nm,18.1s,baz=50,slow=37						
	11nm,1.0s						
CTAO	Charters Tower	15.75	207	Pn	Pn	09 49 45.4	+0.2
CTAO	Charters Tower	15.75	207	P	Pn	09 49 45.4	+0.2
CTAO				pmax	pmax		
	comp=Z,28nm,1.2s						
KOUNC	Koumac, New Ca	17.76	146	Pn	Pn	09 50 08.8	-1.8
EIDS	Eidsvold	19.42	187	P	P	09 50 29.1	-0.6
DZM	Mont Dzumac	20.19	144	ePn	Pn	09 50 41.0	+0.8
	comp=Z,107nm,1.2s						
DZM				eLR	LR	09 55 22.6	
	comp=Z,740nm,21.5s						
DZM	Mont Dzumac	20.19	144	P	Pn	09 50 43.0	+2.8
	comp=Z,7.1nm,0.6s,baz=303,slow=9.1,SNR=11						
DZM	Mont Dzumac	20.19	144	P	P	09 50 36.3	-2.0
DZM				IAmb	IAmb	09 50 55.1	
	comp=Z,50nm,1.1s						
ONTNC	Ouen Toro	20.38	144	P	P	09 50 39.4	-0.8
ONTNC				IAmb	IAmb	09 51 00.8	
	comp=Z,74nm,1.3s						
TARA	Tarawa	20.57	70	P	P	09 50 40.2	-2.1
GUMO	Guam	21.33	336	P	P	09 50 50.3	-0.3
	comp=Z,101nm,0.8s,baz=29,slow=8.9,SNR=2.5						
GUMO				LR	LR	09 59 54.8	
	comp=Z,187nm,18.5s,baz=126,slow=39						
	comp=Z,101nm,0.8s						
GUMO	Guam	21.33	336	P	P	09 50 48.4	-2.1
GUMO	Guam	21.33	336	P	P	09 50 48.4	-2.1
GUMO				pmax	pmax		
	comp=Z,215nm,1.1s						
WR0	Warramunga Arr	23.20	231	P	P	09 51 10.0	-0.4
WR0				IAmb	IAmb	09 51 27.3	
	comp=Z,14nm,0.9s						
WB0	Warramunga Arr	23.20	232	P	P	09 51 10.1	-0.4
WB0				IAmb	IAmb	09 51 22.5	
	comp=Z,24nm,1.2s						
MTN	Manton Dam	23.23	251	P	P	09 51 10.9	+0.1
MTN				IAmb	IAmb	09 51 31.6	
	comp=Z,37nm,1.4s						
WRAB	Tennant Creek	23.33	232	P	P	09 51 11.3	-0.4
WRAB	Tennant Creek	23.33	232	P	P	09 51 11.3	-0.4
WRAB				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WB2	Warramunga Arr	23.33	232	P	P	09 51 11.9	+0.2
WRA	Warramunga Arr	23.34	232	P	P	09 51 11.7	-0.2
	comp=Z,11nm,1.1s,baz=55,slow=9.9,SNR=20						
WRA				PcP	PcP	09 54 59.8	+0.7
	comp=Z,1.2nm,0.6s,baz=57,slow=2.4,SNR=7.3						
WRA				ScP	ScP	09 58 39.7	+2.3
	comp=Z,2.3nm,0.9s,baz=61,slow=3.3,SNR=7.2						
WRA				LR	LR	10 00 41.0	
	comp=Z,743nm,18.5s,baz=48,slow=38						
	comp=Z,11nm,1.1s						
WRA	Warramunga Arr	23.34	232	P	P	09 51 11.9	0.0
WRA	Warramunga Arr	23.34	232	P	P	09 51 11.9	0.0
AS31	Alice Springs	25.88	225	P	P	09 51 36.6	+1.2
ASAR	Alice Springs	25.89	225	P	P	09 51 36.3	+0.8
	comp=Z,10nm,1.1s,baz=55,slow=8.9,SNR=47						
ASAR				PcP	PcP	09 55 06.7	+2.0
	comp=Z,1.4nm,0.7s,baz=65,slow=2.5,SNR=6.8						
ASAR				LR	LR	10 02 00.2	
	comp=Z,679nm,18.5s,baz=89,slow=37						
	comp=Z,10nm,1.1s						
KNRA	Kununurra	26.25	247	P	P	09 51 39.2	+0.5
KNRA				IAmb	IAmb	09 52 00.6	
	comp=Z,44nm,1.3s						
H11S3	WAKE ISLAND Hy	27.52	28	T	T	10 20 10.5	
	baz=208						
H11S2	WAKE ISLAND Hy	27.52	28	T	T	10 20 06.8	
	baz=208						
H11S1	WAKE ISLAND Hy	27.54	28	T	T	10 20 09.7	
	baz=208						
STKA	Stephens Creek	28.11	202	P	P	09 51 55.7	+0.3
	comp=Z,2.7nm,0.8s,baz=40,slow=7.6,SNR=4.4						
STKA				LR	LR	10 03 39.6	
	comp=Z,542nm,18.5s,baz=22,slow=38						
	comp=Z,2.7nm,0.8s						
STKA	Stephens Creek	28.11	202	P	P	09 51 54.8	-0.5
STKA	Stephens Creek	28.11	202	P	P	09 51 54.8	-0.5
STKA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
DAV	Davao City (W)	30.89	294	LR	LR	10 04 17.8	
	comp=Z,222nm,18.4s,baz=114,slow=36						
KAPI	Kappang	33.77	270	LR	LR	10 09 29.8	
	comp=Z,66nm,18.3s,baz=86,slow=42						
KAPI	Kappang	33.77	270	⇓eP	P	09 52 47.1	+1.6
KAPI				pmax	pmax		
	comp=Z,19nm,1.3s						
FORT	Forrest	34.43	221	P	P	09 52 51.3	+0.3
AFI	Afiamalu	34.89	106	LR	LR	10 05 55.5	
	comp=Z,302nm,19.0s,baz=282,slow=34						
URZ	Urewera	38.52	150	LR	LR	10 09 22.9	
	comp=Z,366nm,18.3s,baz=52,slow=36						
RPZ	Rata Peaks	40.56	161	LR	LR	10 10 04.8	
	comp=Z,785nm,18.8s,baz=322,slow=36						
NWAO	Narrogin (SRO)	43.18	227	LR	LR	10 12 39.5	
	comp=Z,839nm,18.2s,slow=37						
YHNB	Yeheng	43.80	315	P	P	09 54 08.2	-1.4
YHNB				IAmb	IAmb	09 54 21.8	
	comp=Z,35nm,1.2s						
KSM	Kuching	43.92	278	P	P	09 54 10.4	-0.3
KSM				IAmb	IAmb	09 54 26.2	
	comp=Z,16nm,0.9s						
JNU	Nakatsue	44.52	332	P	P	09 54 14.3	-0.8
	comp=Z,26nm,0.9s,baz=141,slow=3.4,SNR=9.4						
	comp=Z,26nm,0.9s						
JNU	Nakatsue	44.52	332	P	P	09 54 15.7	+0.6
MJAR	Matsushiro Arr	44.73	342	P	P	09 54 14.4	-2.3
	comp=Z,4.6nm,1.0s,baz=152,slow=8.5,SNR=4.8						
MJAR				LR	LR	10 13 31.6	
	comp=Z,84nm,18.5s,baz=172,slow=37						
	comp=Z,4.6nm,1.0s						
MAJO	Matsushiro	44.73	342	P	P	09 54 15.8	-0.9
MAJO	Matsushiro	44.73	342	P	P	09 54 15.8	-0.9
MAJO				pmax	pmax		
	comp=Z,48nm,1.5s						
MJB9	Matsu-Tunnel	44.73	342	P	P	09 54 16.1	-0.7
JTU	Tsushima	46.37	332	P	P	09 54 30.1	+0.4
RAR	Rarotonga	47.51	113	LR	LR	10 12 47.0	
	comp=Z,215nm,18.7s,baz=278,slow=34						
JTM	Tenmabayashi	47.98	347	P	P	09 54 41.8	-0.3
KSRS	Korea Array	49.45	333	P	P	09 54 53.9	+0.3
	comp=Z,4.7nm,0.9s,baz=148,slow=8.6,SNR=12						
	comp=Z,4.7nm,0.9s						
KSAR	Wonju Array Be	49.46	333	P	P	09 54 52.1	-1.5
KSAR	Wonju Array Be	49.46	333	P	P	09 54 52.1	-1.5
KS19	Wonju Array Si	49.52	333	P	P	09 54 52.7	-1.4
KS19				IAmb	IAmb	09 55 16.4	
	comp=Z,16nm,1.1s						
NJ2	Nanjing	50.31	321	eP	P	09 55 01.1	+0.9
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
JKA	Kamikawa-asahi	50.88	350	P	P	09 55 04.5	+0.3
JKA				IAmb	IAmb	09 55 30.0	
	comp=Z,34nm,1.5s						
ASAJ	Asahikawa	50.88	350	P	P	09 55 04.3	+0.1
	comp=Z,5.3nm,0.8s,baz=183,slow=13,SNR=7.4						
ASAJ				LR	LR	10 14 49.5	
	comp=Z,101nm,20.2s,baz=172,slow=34						
	comp=Z,5.3nm,0.8s						
ASAJ	Asahikawa	50.88	350	P	P	09 55 04.5	+0.3
ASAJ				pmax	pmax		
	comp=Z,34nm,1.5s						
WHN	Wuhan	52.31	316	⇑P	P	09 55 16.6	+1.3
YSS	Yuzh-Sakhalins	53.60	351	eP	P	09 55 25.5	+1.0
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
USA0B	Ussuriysk Arra	53.66	341	P	P	09 55 23.7	-1.2
USA0B				IAmb	IAmb	09 55 40.5	
	comp=Z,10nm,0.9s						
USA0B	Ussuriysk Arra	53.66	341	P	P	09 55 23.7	-1.2
USA0B				pmax	pmax		
	comp=Z,10.0nm,1.0s						
USRK	Ussuriysk Ar.	53.66	341	P	P	09 55 24.4	-0.5
	comp=Z,7.7nm,0.9s,baz=175,slow=8.3,SNR=7.8						
USRK				LR	LR	10 14 23.4	
	comp=Z,40nm,21.9s,baz=155,slow=32						
	comp=Z,7.7nm,0.9s						
USRK	Ussuriysk Ar.	53.66	341	P	P	09 55 25.1	+0.2
USRK	Ussuriysk Ar.	53.66	341	P	P	09 55 25.1	+0.2
KULM	Kulim	54.10	281	P	P	09 55 28.6	-0.2
KULM				IAmb	IAmb	09 55 41.4	
	comp=Z,11nm,1.2s						
TIA	Tai'an	54.19	324	⇓P	P	09 55 29.4	+0.4
TIA				pmax	pmax		
	comp=Z,12nm,0.8s						
MDJ	Mudanjiang	54.84	339	P	P	09 55 33.7	+0.1
MDJ				pP	sP	09 55 37.1	+2.1
MDJ				PcP	PcP	09 56 33.1	-2.7
MDJ				PP	PP	09 57 37.2	+0.6
MDJ				ScS	ScS	10 05 23.6	+0.6
MDJ				pmax	pmax		
	comp=Z,18nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,170nm,4.5s						
MDJ	Mudanjiang	54.84	339	P	P	09 55 32.9	-0.7
MDJ				IAmb	IAmb	09 55 34.8	
	comp=Z,15nm,1.0s						
ENH	Enshi	55.60	313	P	P	09 55 40.4	+1.0
ENH				IAmb	IAmb	09 55 41.1	
	comp=Z,21nm,1.1s						
CN2	Changchun	55.74	336	P	P	09 55 39.5	-0.6
CN2				pmax	pmax		

	comp=Z,20nm,0.9s						
LYN	LuoYang	56.01	319	eP	P	09 55 41.1	-1.1
LYN				pmax	pmax		
	comp=Z,18nm,0.9s						
HNS	HongShan	56.42	323	⇑P	P	09 55 45.8	+0.8
HNS				pmax	pmax		
	comp=Z,18nm,1.0s						
PPT	Papeete	56.55	107	LR	LR	10 16 33.6	
	comp=Z,80nm,19.5s,baz=42,slow=32						
PPT2	Papeete2	56.55	107	eLR	LR	10 12 11.7	
	comp=Z,99nm,22.2s						
BNX	BinXian	56.60	338	⇓P	P	09 55 46.2	+0.1
BNX				pmax	pmax		
	comp=Z,34nm,1.0s						
BNX				pmax	pmax		
	comp=Z,170nm,4.1s						
TYV	Tymovskoe	57.43	352	eP	P	09 55 37.3	-15
TYV				pmax	pmax		
	comp=Z,9.0nm,1.2s						
TYV				pmax	pmax		
	comp=Z,300nm,4.9s						
PHRA	Phrae	58.03	296	P	P	09 55 56.8	+0.1
XAN	Xi'an	58.08	316	P	P	09 55 57.0	+0.1
XAN				pmax	pmax		
	comp=Z,13nm,1.0s						
KLR	Kul'dur	58.23	343	P	P	09 55 58.2	+0.6
	comp=Z,9.4nm,0.7s,baz=167,slow=4.8,SNR=32						
KLR				LR	LR	10 21 46.1	
	comp=Z,33nm,19.1s,baz=172,slow=37						
	comp=Z,9.4nm,0.7s						
KLR	Kul'dur	58.23	343	c iP	P	09 55 57.2	-0.4
KLR				pmax	pmax		
	comp=Z,32nm,1.5s						
PEA0B	Petropavlovsk-	58.98	3	P	P	09 56 02.1	-0.7
PEA0B	Petropavlovsk-	58.98	3	P	P	09 56 02.1	-0.7
PEA0B				pmax	pmax		
	comp=Z,34nm,1.2s						
PETK	Petropavlovsk-	58.98	3	P	P	09 56 03.1	+0.4
	comp=Z,4.6nm,0.9s,baz=171,slow=5.5,SNR=5.3						
PETK				LR	LR	10 17 09.6	
	comp=Z,64nm,21.5s,baz=184,slow=32						
	comp=Z,4.6nm,0.9s						
PETK	Petropavlovsk-	58.98	3	P	P	09 56 02.2	-0.6
CMAR	Chiang Mai Arr	59.17	296	P	P	09 56 06.5	+1.7
	comp=Z,1.9nm,0.3s,baz=114,slow=4.9,SNR=8.5						
CMAR				LR	LR	10 21 47.0	
	comp=Z,32nm,19.1s,baz=165,slow=36						
	comp=Z,1.9nm,0.3s						
CHTO	Chiang Mai	59.28	296	P	P	09 56 05.3	-0.2
CHTO	Chiang Mai	59.28	296	P	P	09 56 05.3	-0.2
XLT	XiLinHaoTe	60.13	329	eP	P	09 56 12.0	+0.9
XLT				pmax	pmax		
	comp=Z,27nm,0.7s						
XLT				pmax	pmax		
	comp=Z,130nm,5.4s						
XLT	XiLinHaoTe	60.13	329	eP	P	09 56 11.9	+0.9
XLT				pP	sP	09 56 16.6	+4.1
XLT				pmax	pmax		
	comp=Z,27nm,0.7s						
XLT				pmax	pmax		
	comp=Z,130nm,5.1s						
CD2	Chengdu	60.17	311	P	P	09 56 12.4	+0.9
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
HEH	HeiHe	60.46	341	eP	P	09 56 12.9	-0.1
HEH				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC	Hu-ho-hao-te	60.52	324	eP	P	09 56 16.8	+3.0
HHC				pmax	pmax		
	comp=Z,22nm,0.7s						
HHC				pmax	pmax		
	comp=Z,170nm,5.1s						
SHEM	Shemya Is, Ala	61.03	14	LR	LR	10 19 45.5	
	comp=Z,124nm,18.9s,baz=150,slow=33						
HIA	Hailar	62.47	336	P	P	09 56 26.3	-0.4
HIA	Hailar	62.47	336	P	P	09 56 26.3	-0.4
HIA				pmax	pmax		
	comp=Z,19nm,1.2s						
LZH	Lanzhou	62.69	316	eP	P	09 56 30.4	+1.8
LZH				pP	pwP	09 56 35.9	-2.6
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
ZEA	Zeya	63.54	343	eP	P	09 56 34.4	+0.8
ZEA				pmax	pmax		
	comp=N,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MA2	Magadan	65.41	358	LR	LR	10 25 35.7	
	comp=Z,46nm,19.0s,baz=110,slow=36						
TAOE	Nuku Hiva Isla	65.62	97	eLR	LR	10 16 24.3	
	comp=Z,69nm,21.3s						
TAOE	Nuku Hiva Isla	65.62	97	P	P	09 56 46.5	-1.7
GTA	Gaotai	67.12	317	eP	P	09 56 59.5	+2.2
GTA				pP	pwP	09 57 03.5	-3.8
GTA				sP	sP	09 57 07.2	+8.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ULN	Ulaanbaatar	67.46	328	P	P	09 56 57.8	-1.6
ULN				IAmb	IAmb	09 57 02.3	
	comp=Z,18nm,1.4s						
ULN	Ulaanbaatar	67.46	328	c eP	P	09 57 00.9	+1.5
ULN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SHL	Shillong	67.66	301	P	P	09 57 01.6	+0.5
SHL	Shillong	67.66	301	P	P	09 57 01.6	+0.5
SHL				pmax	pmax		
	comp=Z,16nm,1.1s						
SONM	Songino Array	67.79	328	P	P	09 57 02.7	+1.2
	comp=Z,4.7nm,0.7s,baz=145,slow=5.4,SNR=18						
SONM				LR	LR	10 25 11.8	
	comp=Z,77nm,19.9s,baz=70,slow=35						
	comp=Z,4.7nm,0.7s						
SONM	Songino Array	67.79	328	P	P	09 57 02.0	+0.5
SONM	Songino Array	67.79	328	P	P	09 57 02.0	+0.5
SONM				pmax	pmax		
	comp=Z,25nm,1.5s						
SEY	Seymchan	68.74	359	P	P	09 57 07.0	+0.1
	comp=Z,1.3nm,0.7s,baz=177,slow=9.1,SNR=4.2						
	comp=Z,1.3nm,0.7s						
SEY	Seymchan	68.74	359	P	P	09 57 07.0	+0.1
YAK	Yakutsk	70.32	348	LR	LR	10 27 26.6	
	comp=Z,29nm,19.1s,baz=237,slow=35						
YAK	Yakutsk	70.32	348	eP	P	09 57 18.2	+1.6
YAK				e*PP	sP	09 57 21.6	+3.5
YAK				e		09 57 40.2	
YAK				e		09 59 54.0	
YAK				eS	S	10 06 31.4	+2.8
YAK				eSS	SS	10 11 02.1	+2.7
YAK				pmax	pmax		
	comp=Z,12nm,1.1s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,134nm,5.3s						
YAK				pmax	pmax		
	comp=N,64nm,4.5s						
YAK				smax	smax		
	comp=E,121nm,3.8s						
YAK				smax	smax		
	comp=N,29nm,3.8s						
ZAK	Zakamensk	70.96	329	eP	P	09 57 21.6	+0.6
ZAK				pmax	pmax		
	comp=Z,19nm,1.1s						
SDPT	Sand Point	71.92	26	P	P	09 57 25.4	-1.0
MOY	Mondy	72.88	329	eP	P	09 57 33.8	+1.3
MOY				pmax	pmax		
	comp=Z,26nm,1.4s						
BILL	Bilibino	74.40	5	P	P	09 57 41.2	+0.3
BILL	Bilibino	74.40	5	⇑eP	P	09 57 41.1	+0.2
BILL				i		09 57 46.8	
BILL				i		09 57 51.7	
BILL						10 00 29.0	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,51nm,17.0s						
ANM	Nome	76.66	17	P	P	09 57 54.6	+0.6
ANM				IAmb	IAmb	09 57 56.0	
	comp=Z,7.5nm,1.3s						
ANM	Nome	76.66	17	P	P	09 57 54.6	+0.6
ANM				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KDAK	Kodiak Island	76.86	26	LR	LR	10 27 42.6	
	comp=Z,102nm,20.4s,baz=247,slow=33						
WMQ	Urumqi	77.20	317	eP	P	09 58 00.6	+3.0
WMQ				pP	pwP	09 58 05.2	-2.3
WMQ				pmax	pmax		
	comp=Z,40nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.9s						
L19K	White Mountain	78.53	22	P	P	09 58 03.8	-0.6
L19K				IAmb	IAmb	09 58 17.4	
	comp=Z,5.4nm,0.9s						
M19K	Big River Lodg	78.53	22	P	P	09 58 03.9	-0.6
M19K				IAmb	IAmb	09 58 28.8	
	comp=Z,7.9nm,1.1s						
SPU	Mount Spurr	79.02	24	P	P	09 58 06.9	-0.3
TIXI	Tiksi	79.19	352	LR	LR	10 28 07.7	
	comp=Z,24nm,21.7s,baz=179,slow=32						
TIXI	Tiksi	79.19	352	⇑eP	P	09 58 05.6	-2.3
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.0s						
K20K	Telida	79.53	21	P	P	09 58 10.2	+0.2
DGZ	Jazzator, Alta	79.56	323	⇑eP	P	09 58 11.3	+0.7
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SUA	Susitna One	79.70	24	P	P	09 58 09.8	-1.2
SUA				IAmb	IAmb	09 58 19.6	
	comp=Z,22nm,1.4s						
RDOG	Red Dog Mine	79.90	15	P	P	09 58 11.9	+0.1
RDOG				IAmb	IAmb	09 58 25.0	
	comp=Z,7.9nm,1.2s						
CAST	Castle Rocks	80.29	22	P	P	09 58 13.9	-0.2
IMAR	Indian Mountai	81.22	19	P	P	09 58 19.2	+0.2
I21K	Tanana	81.34	20	P	P	09 58 20.3	+0.7
I21K				IAmb	IAmb	09 58 20.8	
	comp=Z,8.7nm,1.2s						
MCK	McKinley	81.64	22	P	P	09 58 20.6	-0.6
MCK				IAmb	IAmb	09 58 21.5	
	comp=Z,11nm,1.1s						
MCK	McKinley	81.64	22	P	P	09 58 20.6	-0.6
MCK				pmax	pmax		
	comp=Z,11nm,1.1s						
MLY	Manley	81.69	21	P	P	09 58 21.1	-0.5
KLU	Klutina	81.69	25	P	P	09 58 21.2	-0.5
KLU				IAmb	IAmb	09 58 44.5	
	comp=Z,23nm,1.4s						
MK31	Makanchi Array	81.79	319	P	P	09 58 22.7	+0.3
MK31				IAmb	IAmb	09 58 25.4	
	comp=Z,7.1nm,0.9s						
MK31	Makanchi Array	81.79	319	P	P	09 58 22.7	+0.3
MK31				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MKAR	Makanchi Array	81.79	319	P	P	09 58 23.4	+1.0
	comp=Z,6.9nm,0.8s,baz=91,slow=7.8,SNR=16						
MKAR				LR	LR	10 33 58.2	
	comp=Z,47nm,20.4s,baz=79,slow=35						
	comp=Z,6.9nm,0.8s						
MKAR	Makanchi Array	81.79	319	P	P	09 58 23.0	+0.6
MAKZ	Makanchi	82.00	319	P	P	09 58 24.4	+0.9
MAKZ				IAmb	IAmb	09 58 37.7	
	comp=Z,9.6nm,0.9s						
MAKZ	Makanchi	82.00	319	P	P	09 58 24.4	+0.9
MAKZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
I23K	Minto, Yukon-K	82.24	21	P	P	09 58 23.9	-0.5
N25K	Chitina, Valde	82.30	25	P	P	09 58 24.1	-0.7
N25K				IAmb	IAmb	09 58 41.4	
	comp=Z,18nm,1.4s						
CCB	Clear Creek Bu	82.54	22	P	P	09 58 25.0	-0.9
H23K	Yukon River	82.55	20	P	P	09 58 25.7	-0.3
PAX	Paxson	82.59	24	P	P	09 58 26.0	-0.4
PAX	Paxson	82.59	24	P	P	09 58 26.0	-0.4
PAX				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ZAA0	Zalesovo Array	82.62	326	P	P	09 58 26.3	-0.3
ZALV	Zalesovo Beam	82.62	326	P	P	09 58 26.4	-0.1
	comp=Z,6.0nm,0.5s,baz=119,slow=5.6,SNR=13						
	comp=Z,6.0nm,0.5s						
ZALV	Zalesovo Beam	82.62	326	i P	P	09 58 26.7	+0.1
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.5s						
IL31		82.94	22	P	P	09 58 27.0	-1.0
ILAR	Eielson Array	82.94	22	P	P	09 58 26.6	-1.5
	comp=Z,1.1nm,0.7s,baz=246,slow=5.5,SNR=5.7						
ILAR				LR	LR	10 31 51.5	
	comp=Z,139nm,20.2s,baz=241,slow=33						
	comp=Z,1.1nm,0.7s						
ILAR	Eielson Array	82.94	22	P	P	09 58 27.0	-1.0
ILAR	Eielson Array	82.94	22	P	P	09 58 27.0	-1.0
DOT	Dot Lake	83.48	23	P	P	09 58 30.2	-0.6
DOT				IAmb	IAmb	09 58 59.3	
	comp=Z,7.7nm,1.2s						
M27K	Edge Creek, AK	83.79	25	P	P	09 58 33.2	+0.6
M27K				IAmb	IAmb	09 58 34.0	
	comp=Z,5.1nm,0.9s						
QSPA	South Pole Qui	83.97	180	P	P	09 58 33.4	-0.1
J26L	Joseph Creek	84.07	23	P	P	09 58 33.4	-0.5
J26L				IAmb	IAmb	09 58 51.1	
	comp=Z,7.6nm,1.5s						
L27K	Beaver Creek,	84.11	24	P	P	09 58 34.4	+0.2
L27K				IAmb	IAmb	09 58 36.9	
	comp=Z,5.1nm,1.1s						
BCAR	Beaver Creek A	84.13	24	P	P	09 58 33.9	-0.4
KSH	Kashi	84.37	311	P	P	09 58 40.8	+4.7
KSH				sP	pwP	09 58 50.7	+4.7
KSH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MAW	Mawson	84.80	203	LR	LR	10 32 52.0	
	comp=Z,116nm,21.5s,baz=236,slow=33						
BMAR	Burnt Mountain	85.07	20	P	P	09 58 39.5	+0.6
EGAK	Eagle	85.12	23	P	P	09 58 39.1	0.0
EGAK				IAmb	IAmb	09 58 52.7	
	comp=Z,6.6nm,1.1s						
KURK	Kurchatov	85.24	322	P	P	09 58 39.8	-0.2
KURK	Kurchatov	85.24	322	⇑eP	P	09 58 41.3	+1.3
KURK				pmax	pmax		
	comp=Z,17nm,1.3s						
AAK	Ala-Archa	86.11	313	P	P	09 58 45.5	+0.7
	comp=Z,4.9nm,0.8s,baz=221,slow=5.0,SNR=4.2						
AAK				LR	LR	10 38 04.1	
	comp=Z,40nm,20.6s,baz=108,slow=36						
	comp=Z,4.9nm,0.8s						
AAK	Ala-Archa	86.11	313	P	P	09 58 44.3	-0.5
AAK				IAmb	IAmb	09 58 48.8	
	comp=Z,5.6nm,0.8s						
AAK	Ala-Archa	86.11	313	⇑eP	P	09 58 46.2	+1.4
AAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
I29M	Ogilvie Camp,	86.46	23	P	P	09 58 45.7	-0.2
I29M				IAmb	IAmb	09 59 01.2	
	comp=Z,14nm,1.5s						
NRIK	Noril'sk	87.37	341	P	P	09 58 50.4	+0.3
	comp=Z,4.4nm,0.6s,baz=104,slow=3.3,SNR=7.7						
	comp=Z,4.4nm,0.6s						
NRIK	Noril'sk	87.37	341	P	P	09 58 50.4	+0.3
NRIK				IAmb	IAmb	09 58 51.3	
	comp=Z,7.9nm,1.1s						
NRIK	Noril'sk	87.37	341	c iP	P	09 58 50.2	+0.1
NRIK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
EPYK	Eagle Plains	87.44	22	P	P	09 58 50.3	-0.3
EPYK				IAmb	IAmb	09 58 51.8	
	comp=Z,10nm,1.1s						
FARO	Faro, Yukon	87.44	27	P	P	09 58 51.2	+0.6
FARO				IAmb	IAmb	09 59 17.3	
	comp=Z,7.2nm,1.3s						
KK31	Karatay Array	89.08	313	P	P	09 58 58.7	-0.1
KK31				IAmb	IAmb	09 59 01.3	
	comp=Z,4.2nm,0.9s						
KK31	Karatay Array	89.08	313	P	P	09 58 58.7	-0.1
KK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KKAR	Karatay Array	89.08	313	P	P	09 58 58.2	-0.7
KKAR	Karatay Array	89.08	313	P	P	09 58 58.2	-0.7
YBH	Yreka Blue Hor	89.21	48	LR	LR	10 32 22.2	
	comp=Z,249nm,21.0s,baz=278,slow=31						
INK	Inuvik	89.26	21	P	P	09 58 58.1	-1.0
	comp=Z,2.0nm,1.0s,baz=297,slow=12,SNR=3.5						
INK				LR	LR	10 35 39.6	
	comp=Z,118nm,20.3s,baz=262,slow=33						
	comp=Z,2.0nm,1.0s						
INK	Inuvik	89.26	21	P	P	09 58 58.5	-0.6
INK				IAmb	IAmb	09 58 59.5	
	comp=Z,4.8nm,1.2s						
INK	Inuvik	89.26	21	P	P	09 58 58.5	-0.6
INK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
CHGR	Chuyangaron	89.43	309	P	P	09 59 00.2	-0.5
CHGR				IAmb	IAmb	09 59 04.5	
	comp=Z,12nm,1.0s						
CHGR	Chuyangaron	89.43	309	P	P	09 59 00.2	-0.5
CHGR				pmax	pmax		
	comp=Z,12nm,1.0s						
BVAR	Borovoye Array	90.71	323	P	P	09 59 06.2	0.0
	comp=Z,8.8nm,0.7s,baz=103,slow=5.7,SNR=13						
BVAR				LR	LR	10 38 35.5	
	comp=Z,48nm,21.8s,baz=43,slow=35						
	comp=Z,8.8nm,0.7s						
BRVK	Borovoye	90.78	323	c eP	P	09 59 07.8	+1.3
BRVK				pmax	pmax		
	comp=Z,11nm,1.7s						
NVAR	Mina Array Bea	92.14	52	P	P	09 59 13.7	+0.1
	comp=Z,0.1nm,0.4s,baz=278,slow=3.4,SNR=2.5						
NVAR				LR	LR	10 34 50.4	
	comp=Z,95nm,20.4s,baz=279,slow=32						
	comp=Z,0.1nm,0.4s						
PFO	Pinyon Flats O	93.17	57	LR	LR	10 37 28.9	
	comp=Z,104nm,18.1s,baz=266,slow=33						
NEW	Newport	93.91	42	LR	LR	10 35 33.4	
	comp=Z,144nm,20.8s,baz=256,slow=32						
ELK	Elko	94.70	50	LR	LR	10 35 49.5	
	comp=Z,112nm,20.7s,baz=260,slow=32						
YKA	Yellowknife Ar	96.08	28	P	P	09 59 30.4	-0.3
	comp=Z,0.4nm,0.9s,baz=264,slow=4.9,SNR=4.6						
YKA				LR	LR	10 38 17.8	
	comp=Z,70nm,20.7s,baz=302,slow=33						
	comp=Z,0.4nm,0.9s						
ARU	Arti	97.79	326	LR	LR	10 46 14.6	
	comp=Z,67nm,19.4s,baz=20,slow=37						
ARU	Arti	97.79	326	P	P	09 59 37.1	-1.5
ARU						10 03 34.9	
ARU				S	SKSac	10 10 14.6	-1.6
ARU				SS	SS	10 17 41.2	-3.9
LPIG	La Paz	97.91	67	LR	LR	10 37 59.2	
	comp=Z,70nm,19.6s,baz=336,slow=32						
PDAR	Pinedale Array	99.01	48	LR	LR	10 38 40.5	
	comp=Z,147nm,20.6s,baz=270,slow=32						
OBN	Obninsk	110.20	327	⇓iPKIKP	PKiKP	10 04 34.3	-0.9
OBN				e		10 04 36.6	
OBN				e		10 04 39.0	
OBN				pmax	pmax		
	comp=Z,15nm,0.5s						
AKASG	Malin Array Be	115.97	324	PKP	PKiKP	10 04 45.2	-1.1
	comp=Z,0.7nm,0.3s,baz=67,slow=1.9,SNR=2.8						
BRTR	Keskin Array B	116.74	312	PKP	PKPdf	10 04 48.6	+0.1
	comp=Z,0.3nm,0.5s,baz=48,slow=1.8,SNR=2.2						
PLCA	Paso Flores	118.31	143	PKP	PKiKP	10 04 52.4	+1.0
	comp=Z,1.5nm,1.0s,baz=204,slow=2.8,SNR=5.4						
GERES	GERESS Array B	125.52	329	PKP	PKiKP	10 05 05.8	+0.5
	comp=Z,1.3nm,0.8s,baz=112,slow=2.6,SNR=6.0						
BDFB	Brasilia	149.61	135	PKP	PKPdf	10 05 51.5	+1.9
	comp=Z,4.2nm,0.5s,baz=113,slow=3.8,SNR=3.9						
BDFB				PKPbc	pPKPbc	10 05 55.8	+0.6
	comp=Z,1.7nm,0.4s,baz=67,slow=8.6,SNR=4.0						
TORD	Torodi Ar. Bea	151.49	286	PKP	PKPdf	10 05 53.8	+1.3
	comp=Z,1.1nm,1.0s,baz=45,slow=2.3,SNR=4.3						
TORD				PKPbc	PKPbc	10 05 59.1	+0.6
	comp=Z,7.0nm,0.9s,baz=58,slow=2.3,SNR=22						

IDC 07 09:48:27.8±2.5**, 53°.58N×87°.95E, h0km, mbtmp3.3**/3**, ML2.7**/3**, Error ellipse: s-maj=22.7km s-min=14.8km az=64.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.90	283	I	I	10 02 50.0	
	baz=94,slow=330,SNR=3.5						
ZALV	Zalesovo Beam	1.90	283	Pn	Pn	09 49 01.0	-0.3
	2.8nm,0.3s,baz=97,slow=16,SNR=30						
ZALV				Lg	Lg	09 49 27.2	
	8.2nm,0.3s,baz=102,slow=24,SNR=8.2						
KURBB	Kurchatov Arra	6.51	247	Pn	Pn	09 50 05.0	+0.2
	0.2nm,0.3s,baz=61,slow=14,SNR=17						
KURBB				Sn	Sn	09 51 18.7	-1.0
	0.1nm,0.3s,baz=63,slow=26,SNR=1.8						
KURBB				Lg	Lg	09 51 53.1	
	0.1nm,0.3s,baz=60,slow=29,SNR=5.7						
	1.9nm,0.5s						
MKAR	Makanchi Array	7.70	210	Pn	Pn	09 50 22.2	+1.1
	0.3nm,0.3s,baz=28,slow=14,SNR=16						
MKAR				Sn	Sn	09 51 48.2	-0.7
	0.2nm,0.3s,baz=32,slow=26,SNR=5.9						
	0.3nm,0.3s						
BVAR	Borovoye Array	10.53	274	Pn	Pn	09 50 59.7	-0.1
	baz=83,slow=13,SNR=3.7						
	0.5nm,0.3s						

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*MOS **07** 09:49:42.8±1.2, 38°.34N×73°.25E, h124km, mb4.2/19, Error ellipse: s-maj=8.1km s-min=5.0km az=88.4*

*SOME **07** 09:49:42.6, 39°.30N×73°.17E, h15km*

*IDC **07** 09:49:43.2±2.0, 38°.36N×73°.25E, h116km±16km, mb3.7/21, mbtmp4.2/27, Error ellipse: s-maj=14.9km s-min=11.3km az=178.0*

*NEIC **07** 09:49:44.2±2.2, 38°.32N±0°.07×73°.14E±0°.09, h129km±8km, mb4.3/51, Error ellipse: s-maj=11.2km s-min=9.4km az=132.0*

*BJI **07** 09:49:44.0±0.0, 38°.49N×73°.29E, h136km, mb4.3/13, mB4.4/6*

*NNC **07** 09:49:44.2±2.7, 38°.69N×73°.04E, h0km, mb4.8, mpv4.3, Error ellipse: s-maj=20.2km s-min=13.6km az=178.0*

ISC 07 09:49:40.8±0.4**, 38°.19N**±0°.03×**73°.25E**±0°.04**, h100km, n204, σ2s.03**/230**, mb4.2**/46**, 12C-11D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.43	290		Pn	09 50 21.1	+1.9
KSH	Kashi	2.51	57	P	Pn	09 50 18.6	-1.5
KSH				S	Sn	09 50 42.9	-7.3
KSH				smax	smax		
	comp=N,10µm,0.5s						
KSH				smax	smax		
	comp=E,12µm,0.5s						
CHGR	Chuyangaron	3.24	279		Pn	09 50 31.4	+1.5
CHGR	Chuyangaron	3.24	279	PN	Pn	09 50 31.4	+1.5
AML	Almayashu	3.95	5	P	Pn	09 50 41.3	+1.6
	SNR=640						
AML	Almayashu	3.95	5	⇑P	Pn	09 50 41.2	+1.6
	34nm,0.6s						
AML				⇓S	Sn	09 51 24.0	-1.2
	70nm,0.5s						
AML	Almayashu	3.95	5	PN	Pn	09 50 41.2	+1.6
UCH	Uchtor	4.14	13	P	Pn	09 50 44.2	+1.9
	SNR=111						
EKS2	Erkin-Say	4.48	5	P	Pn	09 50 48.6	+2.0
	SNR=135						
CEP	Cherat	4.49	194	P	Pn	09 50 53.3	+6.5
CHCP	Chirah Chowk	4.53	180	⇓P	Pn	09 50 52.9	+5.7
AAK	Ala-Archa	4.54	12	P	Pn	09 50 49.5	+2.0
	SNR=160						
AAK	Ala-Archa	4.54	12	P	Pn	09 50 48.9	+1.5
	99nm,0.4s,baz=185,slow=5.2,SNR=369						
AAK				S	Sn	09 51 38.6	-0.5
	136nm,0.6s,baz=175,slow=14,SNR=4.5						
AAK	Ala-Archa	4.54	12	Pn	Pn	09 50 49.4	+2.0
MRKS	Merke	4.55	360	ePg	Pn	09 50 49.0	+1.6
	116nm,0.1s						
MRKS				eLg	Lg	09 51 37.1	
	234nm,0.2s						
KBK	Karagaybulak	4.64	16	P	Pn	09 50 50.6	+1.8
	SNR=29						
ULHL	Ulahol	4.65	29	P	Pn	09 50 50.9	+2.0
	SNR=12						
IUG	Iuzhnay	4.65	329	⇓iP	Pn	09 50 50.0	+1.1
	baz=326						
IUG	Iuzhnay	4.65	329	ePg	Pn	09 50 49.9	+1.1
	91nm,0.1s						
IUG				eLg	Lg	09 51 38.5	
	613nm,0.3s						
DZA	Taraz	4.92	343	eP	Pn	09 50 53.1	+0.8
	baz=342						
DZA	Taraz	4.92	343	ePg	Pn	09 50 53.7	+1.4
	110nm,0.1s						
DZA				eLg	Lg	09 51 45.1	
	319nm,0.1s						
CHMS	Chumysh	4.94	13	P	Pn	09 50 54.9	+2.2
	SNR=13						
TARG	Taragay, Kyrgy	4.97	43	Pn	Pn	09 50 55.7	+2.2
TARG	Taragay, Kyrgy	4.97	43	PN	Pn	09 50 55.7	+2.2
CHM	Chimkent	4.97	327	eP	Pn	09 50 53.8	+0.7
	baz=325						

KBL	Kabul	4.98	224		Pn	09 50 57.3	+3.8
KBL	Kabul	4.98	224	PN	Pn	09 50 57.3	+3.8
TKM2	Tokmak 2	5.05	20	P	Pn	09 50 56.2	+1.8
	SNR=35						
TKM2	Tokmak 2	5.05	20	⇑P	Pn	09 50 56.0	+1.6
	16nm,0.5s						
TKM2				⇓S	Sn	09 51 51.5	0.0
	78nm,0.7s						
TKM2	Tokmak 2	5.05	20	PN	Pn	09 50 55.9	+1.6
TKM2				S	Sn	09 51 51.5	0.0
USP	Ospenovka	5.16	10	P	Pn	09 50 58.2	+2.5
	SNR=21						
KST	Kastek	5.27	22	ePg	Pn	09 51 01.1	+3.9
	18nm,0.0s						
KST				eLg	Lg	09 51 57.1	
	155nm,0.2s						
KK31	Karatay Array	5.33	338	Pn	Pn	09 50 58.9	+1.0
KK31	Karatay Array	5.33	338	P	Pn	09 50 58.7	+0.8
	154nm,0.4s,baz=151,slow=12,SNR=2456						
KK31				⇑S	Sn	09 51 54.3	-3.7
	219nm,0.5s,baz=153,slow=24,SNR=4.1						
KK31	Karatay Array	5.33	338	PN	Pn	09 50 58.7	+0.8
KKAR	Karatay Array	5.33	338	Pn	Pn	09 50 58.9	+1.0
KKAR	Karatay Array	5.33	338	PN	Pn	09 50 58.9	+1.0
SGDS	Sogindy	5.36	11	⇓iP	Pn	09 50 59.2	+0.9
	baz=11						
DGS	Degeres	5.40	20	ePg	Pn	09 51 02.5	+3.5
	11nm,0.1s						
DGS				eLg	Lg	09 51 59.5	
	79nm,0.2s						
THW	Thamme Wali	5.53	193	P	Pn	09 51 05.7	+5.0
JMU	Jammu	5.63	166	eP	Pn	09 51 06.0	+4.0
JMU				eS	Sn	09 52 06.0	+0.6
MDOK	Medeo	5.74	29	P	Pn	09 51 07.3	+3.6
	19nm,0.8s						
MDOK				S	Sn	09 52 08.4	+0.1
	123nm,0.8s						
MDOK	Medeo	5.74	29	eP	Pn	09 51 05.2	+1.5
	baz=30						
MDOK	Medeo	5.74	29	ePg	Pn	09 51 11.7	+8.0
	4.8nm,0.2s						
MDOK				eLg	Lg	09 52 16.2	
	35nm,0.2s						
MDOK	Medeo	5.74	29	PN	Pn	09 51 07.3	+3.6
MDOK				S	Sn	09 52 08.4	+0.1
THN	Thein Dam	6.09	160	eP	Pn	09 51 13.1	+4.8
THN				eS	Sn	09 52 17.8	+1.1
THN				IAML		09 52 24.4	
	comp=N,280nm,0.4s						
KTBS	Karatobe	6.09	24	ePg	Pn	09 51 16.3	+8.0
	comp=N,4.2nm,0.2s						
KTBS				eLg	Lg	09 52 24.1	
	comp=N,44nm,0.1s						
KUU	Kurty	6.16	21	eP	Pn	09 51 10.0	+0.8
	baz=22						
SATY	Saty	6.25	37	eP	Pn	09 51 12.0	+1.5
	baz=39						
SARP	Sargodha	6.28	184	P	Pn	09 51 14.6	+3.8
CHKK	Chushkaly	6.32	25	eP	Pn	09 51 12.6	+1.2
	baz=27						
CHKK	Chushkaly	6.32	25	ePg	Pn	09 51 21.9	+11
	comp=N,1.8nm,0.1s						
CHKK				eLg	Lg	09 52 33.1	
	comp=N,15nm,0.2s						
ZHN	Zhinishke	6.34	37	eP	Pn	09 51 13.1	+1.3
	baz=39						
UZB	Uzynbulak	6.61	40	eP	Pn	09 51 17.1	+1.6
	baz=42						
KPKS	Kokpek	6.69	36	eP	Pn	09 51 17.9	+1.5
	baz=38						
SHLS	Shalkode	6.85	42	eP	Pn	09 51 22.9	+4.2
	baz=45						
BTLS	Baital	6.87	5	⇓iP	Pn	09 51 19.4	+0.6
	baz=4.8						
BTLS	Baital	6.87	5	ePg	Pn	09 51 29.7	+11
	comp=N,6.4nm,0.2s						
BTLS				eLg	Lg	09 52 46.3	
	comp=N,30nm,0.3s						
PDGK	Podgornoye	6.98	41	⇑P	Pn	09 51 21.6	+1.1
	comp=N,12nm,0.6s						
PDGK				⇓S	Sn	09 52 43.2	+4.8
	comp=N,99nm,0.8s						
PDGK	Podgornoye	6.98	41	PN	Pn	09 51 21.6	+1.1
PDGK				S	Sn	09 52 43.2	+4.8
BHK	Bhakra	7.25	158	eP	Pn	09 51 28.6	+4.6
BHK				eS	Sn	09 52 42.6	-2.1
SMLA	Simla	7.75	154	eP	Pn	09 51 33.0	+2.2
SMLA				eS	Sn	09 52 52.6	-4.4
SMLA				IAML		09 53 01.9	
	comp=N,170nm,0.3s						
SMLA				IAML		09 53 02.8	
	comp=E,241nm,0.3s						
DDI	Dehra Dun	8.80	152	eS	Sn	09 53 18.6	-4.1
DDI				eS		09 53 18.7	
DDI				IAML		09 53 27.0	
	comp=E,248nm,0.4s						
DDI				IAML		09 53 28.7	
	comp=N,264nm,0.2s						
NDI	New Delhi	10.05	160	eP	Pn	09 52 03.3	+1.2
NDI				eP		09 52 04.5	
NDI				eS	Sn	09 53 47.4	-5.6
NDI				eS		09 53 48.0	
KUDL	Kundal	10.38	164	eP	Pn	09 52 06.4	-0.3
KUDL				eS	Sn	09 53 54.0	-7.0
PTH	Pithoragarh	10.38	144	eP	Pn	09 52 07.3	+0.5
PTH				eS	Sn	09 53 53.2	-8.2
SONA	Sohna	10.42	161	eP	Pn	09 52 08.5	+1.3
SONA				eS	Sn	09 53 57.4	-4.6
LGTI	Lohaghat	10.48	144	eP	Pn	09 52 09.6	+1.5
LGTI				eS	Sn	09 53 53.5	-10
MAKZ	Makanchi	10.75	34	Pn	Pn	09 52 12.8	+1.2
MAKZ	Makanchi	10.75	34	P	Pn	09 52 12.8	+1.2
MK31	Makanchi Array	10.88	35		Pn	09 52 15.0	+1.7
MK31	Makanchi Array	10.88	35	P	Pn	09 52 15.0	+1.7
MKAR	Makanchi Array	10.88	35	P	Pn	09 52 13.9	+0.6
	comp=N,1.7nm,0.8s,baz=209,slow=15,SNR=16						
MKAR	Makanchi Array	10.88	35		Pn	09 52 14.5	+1.2
MKAR	Makanchi Array	10.88	35	P	Pn	09 52 14.5	+1.2
BRZS	Berezniki	11.79	358	eP	Pn	09 52 24.8	-0.8
	baz=358						
GEYT	Alibeck	11.93	273	P	Pn	09 52 26.0	-1.6
	comp=N,3.9nm,0.3s,baz=107,slow=8.4,SNR=11						
GEYT				S	Sn	09 54 29.7	-9.0
	comp=N,18nm,0.7s,baz=141,slow=17,SNR=9.3						
WMQ	Urumqi	12.27	58	eP	P	09 52 36.8	-3.4
KURBB	Kurchatov Arra	12.98	15	P	Pn	09 52 39.0	-2.2
	comp=N,3.0nm,1.0s,baz=209,slow=12,SNR=12						
KURBB				S	Sn	09 55 01.6	-2.3
	comp=N,0.6nm,0.6s,baz=81,slow=7.8,SNR=1.1						
KURK	Kurchatov	13.09	15	Pn	Pn	09 52 41.7	-1.0
KURK	Kurchatov	13.09	15	P	Pn	09 52 41.7	-1.0
AB31	Akbulak array	14.63	323	P	Pn	09 53 03.7	+1.1
	comp=N,9.6nm,0.5s,baz=142,slow=12,SNR=198						
AB31				⇑S	Sn	09 55 41.4	-2.4
	comp=N,11nm,0.6s,baz=152,slow=21,SNR=15						
AB31	Akbulak array	14.63	323	P	Pn	09 53 03.7	+1.1
AB31				S	Sn	09 55 41.4	-2.4
ABKAR	Akbulak array	14.63	323	Pn	Pn	09 52 59.8	-2.8
BVAR	Borovoye Array	14.96	353	P	Pn	09 53 05.5	-1.4
	comp=N,9.7nm,0.6s,baz=164,slow=12,SNR=57						
BVAR				S	Sn	09 55 45.9	-6.0
	comp=N,4.4nm,0.8s,baz=166,slow=23,SNR=3.3						
BRVK	Borovoye	15.01	353		Pn	09 53 06.2	-1.2
BRVK	Borovoye	15.01	353	P	Pn	09 53 06.2	-1.2
BHPL	Bhopal	15.33	165	eP	Pn	09 53 10.7	-1.0
BHPL				eS	Sn	09 55 52.9	-8.2
DGZ	Jazzator, Alta	15.35	37	⇑eP	P	09 53 14.7	+0.2
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AKTO	Aktyubinsk	16.35	323	P	Pn	09 53 23.2	-1.0
	comp=Z,37nm,0.5s,baz=128,slow=9.7,SNR=56						
AKTO				S	Sn	09 56 13.3	-12
	comp=Z,13nm,0.7s,baz=246,slow=20,SNR=4.6						
AKTO	Aktyubinsk	16.35	323	⇑P	P	09 53 26.8	+1.5
	comp=Z,48nm,1.0s						
AKTO				⇓S	Sn	09 56 26.5	+1.3
	comp=Z,6.7nm,0.6s						
AKTO	Aktyubinsk	16.35	323	P	P	09 53 26.8	+1.5
AKTO				S	Sn	09 56 26.5	+1.3
ZAA0	Zalesovo Array	17.65	23	P	P	09 53 39.5	-0.1
ZAA0				IAmb	IAmb	09 53 40.5	
	comp=Z,18nm,0.7s						
ZALV	Zalesovo Beam	17.65	23	P	P	09 53 38.9	-0.6
	comp=Z,22nm,0.6s,baz=212,slow=11,SNR=58						
ZALV				S	Sn	09 56 53.3	-3.1
	comp=Z,2.1nm,0.3s,baz=84,slow=10,SNR=14						
ZALV	Zalesovo Beam	17.65	23	P	P	09 53 39.5	-0.1
SHL	Shillong	20.18	123	P	P	09 54 09.4	+1.8
SHL				IAmb	IAmb	09 54 11.4	
	comp=Z,11nm,0.5s						
SHL	Shillong	20.18	123	P	P	09 54 09.4	+1.8
SHL				pmax	pmax		
	comp=Z,11nm,0.5s						
SVE	Sverdlovsk	20.43	340	eP	P	09 54 09.7	-0.2
SVE				pmax	pmax		
	comp=Z,36nm,1.1s						
ARU	Arti	20.70	337	P	P	09 54 12.6	-0.2
	comp=Z,16nm,0.6s,baz=161,slow=6.4,SNR=14						
	comp=Z,16nm,0.6s						
ARU	Arti	20.70	337	P	P	09 54 12.5	-0.2
ARU	Arti	20.70	337	c iP	P	09 54 13.1	+0.4
ARU						09 54 46.4	
ARU				S	S	09 57 56.7	-1.5
ARU				pmax	pmax		
	comp=Z,39nm,1.0s						
GTA	Gaotai	20.72	78	eP	P	09 54 15.1	+1.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GROC	Groznyy	21.36	292	eP	P	09 54 21.6	+1.7
GROC				e*PP	pP	09 54 45.1	+4.7
GROC				eS	S	09 58 11.2	-0.1
GROC				e*SS	sS	09 58 48.0	+2.6
GROC				pmax	pmax		
	comp=Z,182nm,1.7s						
GNI	Garni	22.15	284	P	P	09 54 31.1	+2.6
	comp=Z,4.8nm,0.6s,baz=92,slow=6.7,SNR=2.0						
	comp=Z,4.8nm,0.6s						
GNI	Garni	22.15	284	ceP	P	09 54 31.4	+2.9
GNI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ZEI	Tsey	22.73	291	eP	P	09 54 38.7	+4.2
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BELG	Belogornoye	22.79	317	P	P	09 54 33.8	-0.9
	comp=Z,26nm,0.7s,baz=319,slow=2.6,SNR=7.0						
BELG				S	S	09 58 35.5	-0.4
	comp=Z,4.4nm,0.6s,baz=359,slow=19,SNR=1.4						
	comp=Z,26nm,0.7s						
BELG	Belogornoye	22.79	317	d iP	P	09 54 34.1	-0.6
BELG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KBZ	Khabaz	23.50	293	P	P	09 54 41.7	+0.2
	comp=Z,1.4nm,0.6s,baz=252,slow=9.4,SNR=3.7						
KBZ				S	S	09 58 47.0	-0.5
	comp=Z,1.7nm,0.9s,baz=330,slow=18,SNR=1.7						
	comp=Z,1.4nm,0.6s						
KBZ	Khabaz	23.50	293	⇑eP	P	09 54 42.6	+1.1
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NEY	Neytrino	23.60	292	⇑eP	P	09 54 45.0	+2.2
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KIV	Kislovodsk	23.66	294	eP	P	09 54 45.5	+2.3
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIRV	Kirov	25.57	331	⇓eP	P	09 55 01.1	+1.0
SONM	Songino Array	25.91	57	P	P	09 55 04.1	+0.6
	comp=Z,0.9nm,0.6s,baz=248,slow=10,SNR=5.4						
	comp=Z,0.9nm,0.6s						
ULN	Ulaanbaatar	26.35	58	P	P	09 55 07.0	-0.5
ULN	Ulaanbaatar	26.35	58	P	P	09 55 07.0	-0.5
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CRAI	Chiangrai	29.52	120	P	P	09 55 36.4	+0.6
HHC	Hu-ho-hao-te	29.52	73	eP	P	09 55 37.3	+1.5
HHC				pmax	pmax		
	comp=Z,36nm,1.0s						
PHRA	Phrae	30.62	122	P	P	09 55 44.7	-0.9
BR131	Keskin Array S	30.67	285	P	P	09 55 44.2	-1.8
BR131				IAmb	IAmb	09 55 48.5	
	comp=Z,5.4nm,0.9s						
BR131	Keskin Array S	30.67	285	c iP	P	09 55 47.6	+1.6
BRTR	Keskin Array B	30.67	285	P	P	09 55 47.5	+1.5
	comp=Z,2.5nm,0.8s,baz=94,slow=7.8,SNR=12						
	comp=Z,2.5nm,0.8s						
BRTR	Keskin Array B	30.67	285	P	P	09 55 43.6	-2.4
KLMR	Klimovskoe	30.94	328	eP	P	09 55 46.3	-1.6
KLMR				AMP		09 55 52.2	
	comp=Z,22nm,2.0s						
KLMR	Klimovskoe	30.94	328	eP	P	09 55 46.2	-1.6
KLMR				pmax	pmax		
	comp=Z,22nm,2.0s						
NRIK	Noril'sk	32.15	9	P	P	09 55 59.2	+0.8
	comp=Z,4.3nm,0.8s,baz=184,slow=5.5,SNR=5.4						
	comp=Z,4.3nm,0.8s						
NRIK	Noril'sk	32.15	9	P	P	09 55 59.0	+0.6
NRIK				IAmb	IAmb	09 56 00.6	
	comp=Z,7.7nm,1.1s						
NRIK	Noril'sk	32.15	9	d iP	P	09 55 58.8	+0.4
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AKASG	Malin Array Be	33.33	306	P	P	09 56 09.2	+0.3
	comp=Z,0.5nm,0.4s,baz=77,slow=7.3,SNR=6.3						
	comp=Z,0.5nm,0.4s						
AKASG	Malin Array Be	33.33	306	i P	P	09 56 09.1	+0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKBB	Malin Array Si	33.33	306	P	P	09 56 08.7	-0.3
AKBB				IAmb	IAmb	09 56 09.9	
	comp=Z,5.0nm,1.0s						
AKBB	Malin Array Si	33.33	306	P	P	09 56 08.7	-0.3
AKBB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MLR	Muntele Rosu	35.56	297	P	P	09 56 25.4	-3.0
MLR				IAmb	IAmb	09 56 31.8	
	comp=Z,6.4nm,1.2s						
MLR	Muntele Rosu	35.56	297	P	P	09 56 25.4	-3.0
MLR				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BURAR	Bucovina Array	35.91	301	P	P	09 56 28.5	-2.9
BUR08	Bucovina Ar. S	35.92	301	P	P	09 56 29.8	-1.6
BUR08				IAmb	IAmb	09 56 31.2	
	comp=Z,4.4nm,1.4s						
FINES	FINESS Array B	37.12	324	P	P	09 56 40.6	-0.7
	comp=Z,1.5nm,0.4s,baz=119,slow=9.5,SNR=8.7						
	comp=Z,1.5nm,0.4s						
ARCES	ARCESS Array B	40.29	336	P	P	09 57 06.6	-1.1
	comp=Z,5.4nm,0.7s,baz=113,slow=10.0,SNR=25						
	comp=Z,5.4nm,0.7s						
ARCES	ARCESS Array B	40.29	336	P	P	09 57 08.2	+0.5
ARCES				IAmb	IAmb	09 57 27.8	
	comp=Z,16nm,1.3s						
ARCES	ARCESS Array B	40.29	336	P	P	09 57 08.2	+0.5
ARCES				pmax	pmax		
	comp=Z,16nm,1.3s						
KSAR	Wonju Array Be	42.63	73	P	P	09 57 26.9	-0.3
KSAR	Wonju Array Be	42.63	73	P	P	09 57 26.9	-0.3
GERES	GERESS Array B	43.44	304	P	P	09 57 34.0	+0.3
	comp=Z,0.6nm,0.6s,baz=97,slow=11,SNR=5.4						
	comp=Z,0.6nm,0.6s						
GERES	GERESS Array B	43.44	304	P	P	09 57 34.0	+0.3
TIXI	Tiksi	43.53	22	P	P	09 57 33.8	-0.2
	comp=Z,2.7nm,0.5s,baz=270,slow=23,SNR=10						
	comp=Z,2.7nm,0.5s						
TIXI	Tiksi	43.53	22	P	P	09 57 34.1	+0.1
TIXI				IAmb	IAmb	09 57 34.7	
	comp=Z,3.3nm,0.8s						
TIXI	Tiksi	43.53	22	P	P	09 57 34.1	+0.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CLL	Collm	43.55	308	eP	P	09 57 35.0	+0.6
CLL				epP	pP	09 58 02.0	+2.8
CLL	Collm	43.55	308	eP	P	09 57 35.0	+0.6
CLL				e*PP	pP	09 58 02.0	+2.8
NC405	NORSAR Array S	43.89	322	P	P	09 57 37.0	0.0
NC303	NORSAR Array S	44.06	322	P	P	09 57 36.5	-1.9
NC303				IAmb	IAmb	09 57 49.5	
	comp=Z,13nm,1.1s						
NB201	NORSAR Array S	44.09	322	P	P	09 57 37.7	-1.0
NB2	NORSAR Subarra	44.13	322	P	P	09 57 38.3	-0.7
	comp=Z,2.4nm,0.7s,baz=92,slow=7.9						
NOA	NORSAR Array B	44.13	322	P	P	09 57 38.8	-0.2
	comp=Z,2.0nm,0.7s,baz=92,slow=7.8,SNR=5.7						
	comp=Z,2.0nm,0.7s						
NC204	NORSAR Array S	44.36	322	P	P	09 57 38.4	-2.4
PETK	Petropavlovsk-	57.51	45	P	P	09 59 18.2	-1.2
	comp=Z,2.3nm,0.9s,baz=324,slow=7.1,SNR=1.4						
	comp=Z,2.3nm,0.9s						
ESDC	Sonseca Array	58.25	298	P	P	09 59 24.6	-0.2
	comp=Z,0.7nm,0.6s,baz=51,slow=6.0,SNR=5.4						
	comp=Z,0.7nm,0.6s						
TORD	Torodi Ar. Bea	67.54	269	P	P	10 00 26.4	-0.3
	comp=Z,3.5nm,0.7s,baz=50,slow=5.8,SNR=21						
	comp=Z,3.5nm,0.7s						
TOLK	Toolik Lake Re	68.83	15	P	P	10 00 34.5	+0.6
TOLK				IAmb	IAmb	10 00 35.0	
	comp=Z,4.5nm,0.8s						
A36M	Sachs Harbour	69.35	6	P	P	10 00 37.6	+0.6
A36M				IAmb	IAmb	10 00 38.7	
	comp=Z,8.5nm,0.8s						
COLD	Coldfoot	69.85	17	P	P	10 00 40.6	+0.4
COLD				IAmb	IAmb	10 00 41.8	
	comp=Z,3.2nm,1.0s						
IMAR	Indian Mountai	70.01	19	P	P	10 00 41.1	-0.1
BMAR	Burnt Mountain	70.87	15	P	P	10 00 47.5	+1.1
H23K	Yukon River	71.16	17	P	P	10 00 49.2	+1.1
H23K				IAmb	IAmb	10 01 14.2	
	comp=Z,5.5nm,1.4s						
H24K	Noodor Dome	71.53	17	P	P	10 00 51.0	+0.6
INK	Inuvik	71.94	10	P	P	10 00 53.0	+0.2
	comp=Z,3.7nm,0.9s,baz=342,slow=7.0,SNR=10						
	comp=Z,3.7nm,0.9s						
INK	Inuvik	71.94	10	P	P	10 00 53.4	+0.6
INK				IAmb	IAmb	10 00 54.2	
	comp=Z,6.2nm,1.1s						
INK	Inuvik	71.94	10	P	P	10 00 53.4	+0.6
INK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
C36M	Paulatuk	72.01	6	P	P	10 00 53.2	+0.1
K20K	Telida	72.01	20	P	P	10 00 54.3	+1.0
MDM	Murphy Dome	72.19	17	P	P	10 00 55.1	+0.7
BPAW	Bear Paw Mtn.	72.23	19	P	P	10 00 55.2	+0.5
PRP	Porcupine Dome	72.32	16	P	P	10 00 56.4	+1.1
CAST	Castle Rocks	72.50	20	P	P	10 00 57.2	+0.9
WRH	Wood River Hil	72.63	17	P	P	10 00 56.9	-0.1
ILAR	Eielson Array	72.65	17	P	P	10 00 56.6	-0.5
	comp=Z,1.1nm,0.8s,baz=320,slow=4.1,SNR=7.5						
	comp=Z,1.1nm,0.8s						
ILAR	Eielson Array	72.65	17	P	P	10 00 57.0	-0.1
ILAR	Eielson Array	72.65	17	P	P	10 00 57.0	-0.1
KTH	Kantishna Hill	72.69	19	P	P	10 00 57.4	-0.1
KTH				IAmb	IAmb	10 00 58.7	
	comp=Z,5.5nm,1.2s						
PPLA	Purkeypile	72.89	20	P	P	10 00 58.1	-0.7
PPLA				IAmb	IAmb	10 01 00.3	
	comp=Z,9.3nm,1.3s						
M19K	Big River Lodg	73.08	21	P	P	10 00 59.2	-0.5
M19K				IAmb	IAmb	10 01 07.9	
	comp=Z,6.1nm,1.5s						
SKT	Skwentna	73.82	20	P	P	10 01 03.8	-0.3
SKT				IAmb	IAmb	10 01 12.8	
	comp=Z,5.0nm,1.2s						
SCRK	Sand Creek	73.99	16	P	P	10 01 05.3	+0.2
SCRK				IAmb	IAmb	10 01 06.1	
	comp=Z,5.7nm,1.3s						
RIDG	Independent Ri	74.00	17	P	P	10 01 05.0	-0.2
RIDG				IAmb	IAmb	10 01 34.4	
	comp=Z,4.3nm,1.2s						
SUA	Susitna One	74.46	20	P	P	10 01 07.2	-0.7
O18K	Koktuh Hills	74.47	23	P	P	10 01 07.8	-0.1
O18K				IAmb	IAmb	10 01 34.8	
	comp=Z,6.5nm,1.2s						
GHO	Glory Hole Cre	74.69	19	P	P	10 01 09.5	+0.3
GHO				IAmb	IAmb	10 01 14.9	
	comp=Z,14nm,1.4s						
SML	Sawmill	74.81	19	P	P	10 01 09.8	0.0
SML				IAmb	IAmb	10 01 32.5	
	comp=Z,13nm,1.4s						
RC01	Rabbit Creek A	75.05	20	P	P	10 01 10.6	-0.5
RC01				IAmb	IAmb	10 01 36.5	
	comp=Z,11nm,1.3s						
SCM	Sheep Creek Mo	75.05	19	P	P	10 01 10.9	-0.3
SCM				IAmb	IAmb	10 01 15.6	
	comp=Z,16nm,1.3s						
SCM	Sheep Creek Mo	75.05	19	P	P	10 01 10.9	-0.3
SCM				pmax	pmax		
	comp=Z,16nm,1.3s						
M24K	Tolsona, Glenn	75.10	18	P	P	10 01 11.4	-0.1
KNK	Knik Glacier	75.11	19	P	P	10 01 11.9	+0.4
L27K	Beaver Creek,	75.26	16	P	P	10 01 13.2	+0.9
BCAR	Beaver Creek A	75.26	16	P	P	10 01 13.2	+0.8
BRLK	Bradley Lake	75.83	21	P	P	10 01 15.2	-0.4
MCARA	McCarthy VSAT	76.47	17	P	P	10 01 18.2	-1.1
YKA	Yellowknife Ar	79.46	4	P	P	10 01 35.7	0.0
	comp=Z,2.4nm,0.8s,baz=347,slow=5.3,SNR=36						
	comp=Z,2.4nm,0.8s						
YKA	Yellowknife Ar	79.46	4	i P	P	10 01 36.0	+0.3
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WRA	Warramunga Arr	81.40	124	P	P	10 01 46.9	+0.2
	comp=Z,0.5nm,0.8s,baz=323,slow=5.1,SNR=4.7						
	comp=Z,0.5nm,0.8s						
WRA	Warramunga Arr	81.40	124	P	P	10 01 46.9	+0.2
WRA	Warramunga Arr	81.40	124	i P	P	10 01 49.0	+2.3
ASAR	Alice Springs	83.79	126	P	P	10 02 00.9	+1.8
	comp=Z,0.2nm,0.8s,baz=326,slow=3.9,SNR=2.0						
	comp=Z,0.2nm,0.8s						
GBN	Guysborough	87.35	330	P	P	10 02 15.6	-0.9

IDC ***07*** *09:50:05.6±1.0, 59°.80N×153°.03W,* $h100^{km}\pm12^{km}$*,*
mb3.6/11, mbtmp4.1/16, Error ellipse: s-maj=15.6km
s-min=9.5km az=114.0

NEIC ***07*** *09:50:07.0±1.5, 59°.78N±0°.04×153°.02W±0°.06,*
$h112^{km}\pm6^{km}$*, Error ellipse: s-maj=5.6km s-min=4.2km*
az=151.0

ANF ***07*** *09:50:07.2±0.2, 59°.81N×152°.96W,* $h108^{km}\pm2^{km}$*, ML4.1/63,*
Error ellipse: s-maj=2.0km s-min=1.5km az=154.0

AEIC ***07*** *09:50:08.2±1.7, 59°.76N±0°.04×152°.98W±0°.06,*
$h109^{km}\pm5^{km}$*, ML4.0, mb4.1/5(NEIC), ML4.2/100(NEIC),*
Error ellipse: s-maj=5.6km s-min=4.0km az=176.0

ISC 07 09:50:06.8±0.6**, 59°.78N**±0°.03×**152°.92W**±0°.03**,**
h114$^{km}\pm5^{km}$**, n325,** $\sigma 0^{s}.88$/363**, mb4.1**/14**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
P19K	Oil Pt	0.20	232		Pn	09 50 23.0	+0.2
P19K				Sn	Sn	09 50 34.8	+0.1
P19K	Oil Pt	0.20	232	P	Pn	09 50 23.0	+0.2
	baz=50,SNR=68						
P19K				S	Sn	09 50 34.8	+0.1
	baz=50						
ILSW	Iliamna Southw	0.24	332		Pn	09 50 23.0	0.0
ILSW				Sn	Sn	09 50 35.0	-0.1
ILSW				IAML		09 50 36.9	
	comp=E,6μm,0.8s						
ILSW				IAML		09 50 36.9	
	comp=N,4μm,0.5s						
O20K	Slope Mountain	0.34	26	P	Pn	09 50 23.8	+0.4
	baz=209,SNR=143						
O20K				S	Sn	09 50 36.3	+0.6
	baz=209						
HOM	Homer	0.66	100		Pn	09 50 26.0	+0.8
HOM					Sn	09 50 40.2	+1.2
HOM	Homer	0.66	100	P	Pn	09 50 25.9	+0.8
	baz=279,SNR=60						
HOM				S	Sn	09 50 40.2	+1.2
	baz=279						
RSO	Redoubt South	0.69	7		Pn	09 50 26.2	+0.5
O19K	Port Alsworth	0.82	301		Pn	09 50 26.7	+0.1
O19K				Sn	Sn	09 50 41.0	-0.5
O19K				IAML		09 50 41.8	
	comp=E,7μm,0.5s						
O19K				IAML		09 50 41.8	
	comp=N,8μm,0.5s						
O19K	Port Alsworth	0.82	301	P	Pn	09 50 26.7	+0.1
	baz=122						
O19K				S	Sn	09 50 41.0	-0.5
	baz=122						
RDJH	Redoubt Jeurge	0.82	4		Pn	09 50 27.1	+0.4
RDJH					Sn	09 50 41.8	0.0
CNPM	China Poot	0.89	106		Pn	09 50 27.8	+0.5
CNPM	China Poot	0.89	106	IAML		09 50 43.1	
	comp=E,6μm,0.3s						
CNPM				IAML		09 50 43.9	
	comp=N,8μm,0.2s						
Q19K	Cape Douglas,	0.93	204	Pn	Pn	09 50 27.5	-0.1
Q19K				Sn	Sn	09 50 43.1	-0.2
Q19K				IAML		09 50 49.3	
	comp=N,5μm,0.9s						
Q19K				IAML		09 50 49.9	
	comp=E,4μm,0.7s						
Q19K	Cape Douglas,	0.93	204	P	Pn	09 50 27.5	-0.1
	baz=22,SNR=134						
Q19K				S	Sn	09 50 43.1	-0.2

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      baz=22
BRLK  Bradley Lake      1.03  90         Pn    09 50 29.1 +0.5
BRLK  Bradley Lake      1.03  90  IAML         09 50 45.6
      comp=N,7µm,0.4s
BRLK                              IAML         09 50 47.3
      comp=E,5µm,0.2s
BRSE  Bradley Lake S    1.10  91         Pn    09 50 29.8 +0.4
BRSE  Bradley Lake S    1.10  91  P      Pn    09 50 29.8 +0.4
      baz=272,SNR=245
BRSE                              S      Sn    09 50 46.5  0.0
      baz=272
O18K  Koktuh Hills      1.16 275         Pn    09 50 29.8 -0.2
O18K  Koktuh Hills      1.16 275  P      Pn    09 50 29.7 -0.2
      baz=94,SNR=143
O18K                              S      Sn    09 50 46.4 -1.1
      baz=94
Q20K  Shuyak Island     1.20 167  P      Pn    09 50 30.7 +0.3
      baz=346,SNR=114
Q20K                              S      Sn    09 50 48.2 -0.1
      baz=346
P18K  Big Mountain,     1.24 253         Pn    09 50 30.4 -0.5
P18K  Big Mountain,     1.24 253  P      Pn    09 50 30.3 -0.5
      baz=71
N19K  Bonanza Creek     1.30 324         Pn    09 50 31.8 +0.2
N19K  Bonanza Creek     1.30 324  P      Pn    09 50 31.8 +0.2
      baz=144,SNR=825
N19K                              S      Sn    09 50 49.6 -0.8
      baz=144
CAPN  Captain Cook N    1.33  41         Pn    09 50 34.3 +2.4
CAPN  Captain Cook N    1.33  41  P      Pn    09 50 34.2 +2.4
      baz=223,SNR=80
SPCR  Spurr Chakacha    1.47  14  P      Pn    09 50 34.1 +0.6
      baz=195,SNR=193
SPCR                              S      Sn    09 50 54.0 +0.1
      baz=195
SPU   Mount Spurr       1.47  17         Pn    09 50 34.1 +0.6
SLKM  Skilak Lake       1.54  60         Pn    09 50 34.4 +0.1
Q18K  Katmai Hardscr    1.56 224  P      Pn    09 50 34.6 -0.1
      baz=42,SNR=132
Q18K                              S      Sn    09 50 54.4 -1.4
      baz=42
O22K  Cooper Landing    1.75  65         Pn    09 50 37.7 +0.9
O22K                              IAML         09 51 14.4
      comp=E,4µm,0.7s
O22K  Cooper Landing    1.75  65  P      Pn    09 50 37.6 +0.9
      baz=247,SNR=109
O22K                              S      Sn    09 50 58.8 -0.8
      baz=247
SEW   Seward            1.78  78  Pn     Pn    09 50 37.3 +0.2
SEW   Seward            1.78  78  P      Pn    09 50 37.3 +0.2
      baz=260,SNR=107
SEW                               S      Sn    09 50 59.7 -0.5
      baz=260
SVW2  Sparrevohn        1.87 316         Pn    09 50 38.2 -0.1
SVW2  Sparrevohn        1.87 316  P      Pn    09 50 38.2 -0.1
FIS   Fire Island       1.92  43         Pn    09 50 40.7 +1.9
FIS                               IAML         09 51 11.3
      comp=E,2µm,0.5s
FIS                               IAML         09 51 12.1
      comp=N,3µm,0.5s
SUA   Susitna One       2.00  31         Pn    09 50 41.1 +1.0
SUA   Susitna One       2.00  31  P      Pn    09 50 40.9 +0.9
      baz=214,SNR=398
SUA                               S      Sn    09 51 06.0 +0.4
      baz=214
KDAK  Kodiak Island     2.01 175  P      Pn    09 50 39.2 -0.8
      comp=N,822nm,0.3s,baz=52,slow=9.1,SNR=1997
KDAK                              S      Sn    09 51 04.1 -1.2
      comp=N,385nm,0.4s,baz=346,slow=22,SNR=12
KDAK  Kodiak Island     2.01 175  Pn     Pn    09 50 39.3 -0.8
KDAK                              IAML         09 51 12.3
      comp=N,1µm,0.4s
KDAK                              IAML         09 51 13.6
      comp=N,1µm,0.5s
RC01  Rabbit Creek A    2.06  49         Pn    09 50 41.1 +0.5
RC01                              IAML         09 51 07.7
      comp=N,3µm,0.5s
RC01  Rabbit Creek A    2.06  49  P      Pn    09 50 41.3 +0.7
      baz=232,SNR=73
RC01                              S      Sn    09 51 06.3 -0.2
      baz=232
O17K  Koliganek Bris    2.11 272  P      Pn    09 50 41.2 -0.1
      baz=89,SNR=31
O17K                              S      Sn    09 51 07.1 -0.6
      baz=89
M20K  Styx River        2.12 357         Pn    09 50 42.3 +0.8
M20K  Styx River        2.12 357  P      Pn    09 50 42.2 +0.8
      baz=178,SNR=174
Q17K  Contact Creek     2.16 227  P      Pn    09 50 42.0 -0.1
      baz=44,SNR=123
Q16K  King Salmon       2.21 242  P      Pn    09 50 42.8 +0.2
      baz=58,SNR=13
M19K  Big River Lodg    2.25 342         Pn    09 50 43.6 +0.4
M19K  Big River Lodg    2.25 342  P      Pn    09 50 43.5 +0.4
      baz=162
SKT   Skwentna          2.31  16         Pn    09 50 44.3 +0.4
SKT                               IAML         09 51 16.2
      comp=N,885nm,0.3s
SKT                               IAML         09 51 18.1
      comp=E,714nm,0.4s
SKT   Skwentna          2.31  16  P      Pn    09 50 44.3 +0.4
      baz=198,SNR=74
M22K  Willow            2.41  33         Pn    09 50 45.9 +0.7
M22K  Willow            2.41  33  P      Pn    09 50 45.8 +0.7
      baz=216,SNR=90
M22K                              S      Sn    09 51 15.0 +0.4
      baz=216
PWL   Port Wells        2.53  63  Pn     Pn    09 50 46.5 -0.2
PWL   Port Wells        2.53  63  P      Pn    09 50 46.5 -0.2
      baz=246,SNR=70
PWL                               S      Sn    09 51 16.0 -1.3
      baz=246
OHAK  Old Harbor        2.57 184  Pn     Pn    09 50 46.0 -1.2
OHAK                              IAML         09 51 17.4
      comp=E,386nm,0.5s
OHAK  Old Harbor        2.57 184  P      Pn    09 50 46.1 -1.1
OHAK  Old Harbor        2.57 184  P      Pn    09 50 45.9 -1.2
      baz=3.5,SNR=88
L19K  White Mountain    2.59 339  Pn     Pn    09 50 47.7 +0.1
L19K  White Mountain    2.59 339  P      Pn    09 50 47.6 +0.1
      baz=159,SNR=404
PMR   Palmer            2.61  44  Pn     Pn    09 50 47.6  0.0
PMR                               IAML         09 51 18.8
      comp=E,768nm,0.5s
PMR                               IAML         09 51 19.7
      comp=N,666nm,0.6s
PMR   Palmer            2.61  44  P      Pn    09 50 47.7  0.0
PMR   Palmer            2.61  44  P      Pn    09 50 47.3 -0.4
      baz=228,SNR=39
PMR                               S      Sn    09 51 17.3 -1.8
      baz=228
O16K  Kokwok River B    2.63 268  P      Pn    09 50 48.1 +0.1
      baz=84
P16K  Nushagak River    2.70 256  P      Pn    09 50 49.4 +0.5
      baz=72,SNR=65
P16K                              S      Sn    09 51 21.2  0.0
      baz=72
KNK   Knik Glacier      2.75  51         Pn    09 50 50.8 +1.2
KNK   Knik Glacier      2.75  51  P      Pn    09 50 49.5 -0.1
      baz=235,SNR=36
KNK                               S      Sn    09 51 21.0 -1.4
      baz=235
L20K  Farewell, AK      2.75 351  P      Pn    09 50 50.2 +0.6
      baz=170
P23K  Montague Islan    2.79  83  P      Pn    09 50 50.6 +0.5
      baz=268,SNR=49
P23K                              S      Sn    09 51 23.2 -0.2
      baz=268
GHO   Glory Hole Cre    2.80  43         Pn    09 50 50.2 -0.2
GHO                               IAML         09 51 25.5
      comp=E,1µm,0.7s
GHO                               IAML         09 51 28.9
      comp=N,917nm,0.3s
R17K  Ugashik Creek     2.80 222  P      Pn    09 50 50.4 +0.1
      baz=38
R17K                              S      Sn    09 51 23.4 -0.4
      baz=38
CUT   Chulitna          2.94  25         Pn    09 50 52.5 +0.5
CUT                               IAML         09 51 28.5
      comp=N,1µm,0.5s
CUT   Chulitna          2.94  25  P      Pn    09 50 52.1 +0.2
      baz=208,SNR=87
CUT                               S      Sn    09 51 26.5 -0.2
      baz=208
N16K  Nishlik Lake      3.01 286  P      Pn    09 50 53.5 +0.4
      baz=101
N16K                              S      Sn    09 51 27.9 -0.7
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      baz=101
SML   Sawmill           3.04  46  Pn     Pn    09 50 53.5 +0.1
SML                               IAML         09 51 30.3
      comp=E,759nm,0.9s
SML                               IAML         09 51 35.2
      comp=N,907nm,0.5s
SML   Sawmill           3.04  46  P      Pn    09 50 53.1 -0.2
      baz=230,SNR=28
SML                               S      Sn    09 51 27.4 -1.8
      baz=230
PPLA  Purkeypile        3.15   6         Pn    09 50 56.0 +1.1
PPLA  Purkeypile        3.15   6  P      Pn    09 50 56.0 +1.1
      baz=187,SNR=60
M23K  Glacier View      3.25  49  P      Pn    09 50 56.1 -0.1
      baz=234,SNR=30
M23K                              S      Sn    09 51 32.7 -1.6
      baz=234
R16K  Pilot Point       3.29 230  P      Pn    09 50 56.8 +0.2
      baz=46,SNR=8.3
R16K                              S      Sn    09 51 35.5 +0.3
      baz=46
Q23K  Middleton Isla    3.36  93  Pn     Pn    09 50 58.5 +1.0
Q23K                              IAML         09 51 38.7
      comp=N,546nm,0.4s
Q23K                              IAML         09 51 38.9
      comp=E,348nm,0.5s
Q23K  Middleton Isla    3.36  93  P      Pn    09 50 57.6 +0.1
      baz=278
Q23K                              S      Sn    09 51 37.5 +0.8
      baz=278
MID   Middleton Isla    3.36  93  Pn     Pn    09 50 58.4 +0.8
MID                               IAML         09 51 38.7
      comp=N,470nm,0.4s
MID                               IAML         09 51 38.8
      comp=E,452nm,0.4s
MID   Middleton Isla    3.36  93  P      Pn    09 50 58.0 +0.4
SCM   Sheep Creek Mo    3.43  51         Pn    09 50 58.8 +0.2
SCM                               IAML         09 51 42.1
      comp=E,850nm,0.5s
SCM   Sheep Creek Mo    3.43  51  P      Pn    09 50 58.6  0.0
      baz=236,SNR=34
TTA   Tatalina          3.50 336  Pn     Pn    09 50 59.3 -0.2
TTA   Tatalina          3.50 336  P      Pn    09 50 59.3 -0.2
TTA   Tatalina          3.50 336  P      Pn    09 50 59.1 -0.4
      baz=154,SNR=185
K20K  Telida            3.64 352         Pn    09 51 01.9 +0.6
K20K  Telida            3.64 352  P      Pn    09 51 01.8 +0.5
      baz=171,SNR=255
EYAK  Cordova Ski Ar    3.67  75         Pn    09 51 01.4 -0.2
EYAK  Cordova Ski Ar    3.67  75  P      Pn    09 51 02.0 +0.3
EYAK  Cordova Ski Ar    3.67  75  P      Pn    09 51 01.2 -0.5
      baz=261,SNR=13
CAST  Castle Rocks      3.68   6         Pn    09 51 02.1 +0.2
CAST  Castle Rocks      3.68   6  P      Pn    09 51 02.0 +0.1
      baz=187,SNR=102
DIV   Divide            3.79  66         Pn    09 51 03.9 +0.5
KLU   Klutina           3.85  60         Pn    09 51 04.2  0.0
KLU   Klutina           3.85  60  P      Pn    09 51 04.1 -0.1
      baz=246,SNR=152
TRF   Thorofare Moun    3.90  18         Pn    09 51 04.8 -0.1
TRF                               IAML         09 51 52.4
      comp=N,267nm,0.6s
TRF                               IAML         09 52 17.2
      comp=E,220nm,1.0s
TRF   Thorofare Moun    3.90  18  P      Pn    09 51 04.3 -0.6
      baz=200
KTH   Kantishna Hill    3.91  13         Pn    09 51 04.7 -0.3
KTH                               IAML         09 52 13.5
      comp=E,184nm,1.0s
KTH                               IAML         09 52 24.4
      comp=N,198nm,0.9s
M24K  Tolsona, Glenn    4.04  52  Pn     Pn    09 51 07.2 +0.6
M24K  Tolsona, Glenn    4.04  52  P      Pn    09 51 07.1 +0.5
      baz=238,SNR=54
RND   Reindeer          4.13  26         Pn    09 51 08.1 +0.2
RND                               IAML         09 51 55.8
      comp=E,332nm,0.3s
RND                               IAML         09 51 56.3
      comp=N,214nm,0.7s
CHUM  Lake Minchumin    4.13   4         Pn    09 51 07.9 +0.1
CHUM  Lake Minchumin    4.13   4  P      Pn    09 51 07.6 -0.2
      baz=185,SNR=72
MCK   McKinley          4.40  24         Pn    09 51 11.7 +0.2
MCK   McKinley          4.40  24  P      Pn    09 51 11.4 -0.1
      baz=208,SNR=167
BPAW  Bear Paw Mtn.     4.43  11         Pn    09 51 11.2 -0.8
BPAW  Bear Paw Mtn.     4.43  11  P      Pn    09 51 10.9 -1.1
      baz=193,SNR=80
N25K  Chitina, Valde    4.48  62  Pn     Pn    09 51 12.7  0.0
N25K                              IAML         09 52 04.3
      comp=E,234nm,0.5s
N25K                              IAML         09 52 05.8
      comp=N,441nm,0.5s
N25K  Chitina, Valde    4.48  62  P      Pn    09 51 12.7  0.0
      baz=250,SNR=128
CHGN  Chignik           4.54 222  Pn     Pn    09 51 13.2 -0.2
CHGN                              IAML         09 52 03.6
      comp=N,124nm,0.1s
CHGN                              IAML         09 52 04.6
      comp=E,128nm,0.6s
CHGN  Chignik           4.54 222  P      Pn    09 51 13.1 -0.3
      baz=38
HARP  HAARP             4.59  52  P      Pn    09 51 14.5 +0.4
      baz=239,SNR=21
BWN   Browne            4.70  19         Pn    09 51 16.1 +0.5
BWN                               IAML         09 52 21.0
      comp=N,182nm,0.9s
BWN                               IAML         09 53 05.0
      comp=E,163nm,0.9s
GLB   Gilahina Butte    4.79  66         Pn    09 51 16.8  0.0
GLB                               IAML         09 52 11.0
      comp=E,219nm,0.5s
GLB                               IAML         09 52 13.3
      comp=N,348nm,0.6s
PAX   Paxson            4.81  45  Pn     Pn    09 51 17.2 +0.1
PAX   Paxson            4.81  45  P      Pn    09 51 17.1 +0.1
      baz=232,SNR=49
VRDI  Verde Repeater    4.90  69         Pn    09 51 18.3 -0.1
VRDI                              IAML         09 52 13.7
      comp=E,234nm,0.4s
MCARA McCarthy VSAT     5.14  67  Pn     Pn    09 51 21.8 +0.3
MCARA McCarthy VSAT     5.14  67  P      Pn    09 51 21.8 +0.3
      baz=256,SNR=21
NEA2  Nenana            5.16  19         Pn    09 51 20.9 -0.9
NEA2                              IAML         09 52 19.9
      comp=N,60nm,1.1s
NEA2                              IAML         09 52 20.1
      comp=E,62nm,0.4s
NEA2  Nenana            5.16  19  P      Pn    09 51 21.0 -0.7
      baz=202,SNR=268
WRH   Wood River Hil    5.23  24  Pn     Pn    09 51 22.0 -0.6
WRH                               IAML         09 52 21.0
      comp=E,130nm,0.4s
WRH                               IAML         09 52 21.3
      comp=N,82nm,0.7s
CYK   Cape Yakataga     5.26  82         Pn    09 51 24.0 +1.0
K24K  Donnelly Dome     5.27  37  P      Pn    09 51 24.6 +1.3
      baz=223,SNR=70
GCSA  Galena City Sc    5.32 341         Pn    09 51 23.8  0.0
GCSA  Galena City Sc    5.32 341  P      Pn    09 51 23.8  0.0
      baz=158,SNR=42
KIAG  Kiagna River      5.37  73         Pn    09 51 25.1 +0.4
MLY   Manley            5.37  10         Pn    09 51 23.8 -0.8
MLY   Manley            5.37  10  P      Pn    09 51 23.8 -0.8
      baz=192,SNR=199
BALM  Baldy             5.39  72         Pn    09 51 25.1 +0.1
HDA   Harding Lake      5.43  29         Pn    09 51 24.9 -0.5
HDA   Harding Lake      5.43  29  P      Pn    09 51 24.9 -0.5
      baz=214,SNR=105
CCB   Clear Creek Bu    5.44  24         Pn    09 51 24.8 -0.7
I21K  Tanana            5.44   4  Pn     Pn    09 51 24.9 -0.5
I21K  Tanana            5.44   4  P      Pn    09 51 25.3 -0.2
      baz=185
MENT  Mentasta          5.44  50         Pn    09 51 26.5 +0.9
M26K  Nabesna, AK       5.49  57         Pn    09 51 27.2 +1.0
M26K  Nabesna, AK       5.49  57  P      Pn    09 51 26.9 +0.7
      baz=246,SNR=108
RIDG  Independent Ri    5.52  40  Pn     Pn    09 51 27.0 +0.3
RIDG  Independent Ri    5.52  40  P      Pn    09 51 26.9 +0.3
      baz=228,SNR=34
TCOL  CIGO, UAF Yank    5.63  23         Pn    09 51 27.9 -0.2
TCOL  CIGO, UAF Yank    5.63  23  P      Pn    09 51 27.8 -0.3
      baz=207,SNR=72
COLA  College           5.63  23         Pn    09 51 27.9 -0.2
COLA  College           5.63  23  P      Pn    09 51 28.0 -0.1
COLA  College           5.63  23  P      Pn    09 51 27.8 -0.2
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      baz=207
L26K  Log Cabin Wild    5.63  51  Pn     Pn    09 51 29.8 +1.7
I23K  Minto, Yukon-K    5.64  15         Pn    09 51 28.0 -0.1
I23K  Minto, Yukon-K    5.64  15  P      Pn    09 51 27.8 -0.3
      baz=199,SNR=191
MDM   Murphy Dome       5.64  21         Pn    09 51 27.6 -0.6
BARN  Barnard Glacie    5.73  72         Pn    09 51 30.5 +0.9
DOT   Dot Lake          5.73  44         Pn    09 51 30.1 +0.7
IL31                    5.75  27         Pn    09 51 28.9 -0.7
ILAR  Eielson Array     5.75  27  P      Pn    09 51 28.9 -0.8
      comp=N,43nm,0.4s,baz=217,slow=14,SNR=883
ILAR                              S      Sn    09 52 31.5 -2.7
      comp=N,19nm,0.3s,baz=216,slow=22,SNR=2.9
H21K  Melozitna Rive    5.90   0         Pn    09 51 31.5 -0.3
H21K  Melozitna Rive    5.90   0  P      Pn    09 51 31.1 -0.7
      baz=181
POKR  Poker Plat Res    5.93  23         Pn    09 51 32.0 -0.1
POKR  Poker Plat Res    5.93  23  P      Pn    09 51 31.8 -0.4
      baz=208,SNR=41
M27K  Edge Creek, AK    5.95  59         Pn    09 51 34.0 +1.5
M27K  Edge Creek, AK    5.95  59  P      Pn    09 51 33.9 +1.3
      baz=249
SCRK  Sand Creek        5.96  41  Pn     Pn    09 51 32.1 -0.6
SCRK  Sand Creek        5.96  41  P      Pn    09 51 31.9 -0.8
      baz=229,SNR=28
SDPT  Sand Point        6.02 226  Pn     Pn    09 51 32.5 -0.8
SDPT  Sand Point        6.02 226  P      Pn    09 51 33.4 +0.1
SDPT  Sand Point        6.02 226  P      Pn    09 51 32.5 -0.8
      baz=39
SAMH  Samovar Hills     6.11  81         Pn    09 51 36.0 +1.3
H22K  Ishtalitna Cre    6.18   6  P      Pn    09 51 35.0 -0.5
      baz=188
IMAR  Indian Mountai    6.24 357  Pn     Pn    09 51 36.2 -0.1
L27K  Beaver Creek,     6.26  53         Pn    09 51 37.8 +1.2
L27K  Beaver Creek,     6.26  53  P      Pn    09 51 37.9 +1.2
      baz=243
H23K  Yukon River       6.27  13         Pn    09 51 36.2 -0.5
H23K  Yukon River       6.27  13  P      Pn    09 51 36.3 -0.4
      baz=196
BCAR  Beaver Creek A    6.28  54  Pn     Pn    09 51 37.5 +0.6
S12K  Black Hills       6.37 234  P      Pn    09 51 39.1 +1.0
      baz=46
PCA   Pinnacle          6.37  82         Pn    09 51 39.1 +0.9
PINM  Pinnacle          6.38  82  P      Pn    09 51 39.2 +0.9
      baz=272,SNR=19
O28M  Mount Upton       6.41  76  P      Pn    09 51 40.2 +1.3
      baz=266,SNR=161
BVCY  Beaver Creek      6.42  60  P      Pn    09 51 39.3 +0.6
      baz=251,SNR=28
YUK3  Moose Creek       6.42  66  P      Pn    09 51 39.8 +0.8
      baz=257,SNR=40
J26L  Joseph Creek      6.45  39         Pn    09 51 39.1 -0.2
J26L  Joseph Creek      6.45  39  P      Pn    09 51 39.1 -0.2
      baz=227,SNR=45
H24K  Noodor Dome       6.51  19         Pn    09 51 39.5 -0.5
H24K  Noodor Dome       6.51  19  P      Pn    09 51 38.9 -1.0
      baz=203
YUK8  Steele Glacier    6.67  71  P      Pn    09 51 43.8 +1.5
      baz=263,SNR=69
PRP   Porcupine Dome    6.69  27  Pn     Pn    09 51 42.2 -0.3
PRP   Porcupine Dome    6.69  27  P      Pn    09 51 41.9 -0.6
      baz=214,SNR=80
BCPM  Bancas Point      6.69  83         Pn    09 51 43.6 +1.2
YKU2  Yakutat           6.72  87  Pn     Pn    09 51 43.5 +0.7
G21K  Allakaket         6.77 358  P      Pn    09 51 43.5  0.0
      baz=178
PNL   Peninsula         6.84  85         Pn    09 51 44.7 +0.2
PNL   Peninsula         6.84  85  P      Pn    09 51 45.0 +0.5
PNL   Peninsula         6.84  85  P      Pn    09 51 44.7 +0.2
      baz=277,SNR=15
G23K  Bananza Creek     7.08   9  P      Pn    09 51 47.3 -0.4
      baz=192,SNR=195
I26K  Coal Creek Min    7.15  35  Pn     Pn    09 51 47.6 -0.9
I26K  Coal Creek Min    7.15  35  P      Pn    09 51 47.5 -1.0
      baz=224
O29M  Mount Kennedy     7.21  80  P      Pn    09 51 49.9 +0.4
      baz=272,SNR=23
YUK4  Talbot Arm        7.21  71  P      Pn    09 51 51.1 +1.4
      baz=263,SNR=20
YUK6  Outpost Mounta    7.31  75  P      Pn    09 51 51.5 +0.5
      baz=267,SNR=20
G24K  Hadweenzic Riv    7.37  17  P      Pn    09 51 50.8 -0.8
      baz=202
EGAK  Eagle             7.43  43         Pn    09 51 51.9 -0.4
EGAK  Eagle             7.43  43  P      Pn    09 51 51.7 -0.7
      baz=233,SNR=17
F21K  Alatna River      7.48 358  P      Pn    09 51 52.8 -0.3
      baz=178
M29M  Somme Creek       7.49  63  P      Pn    09 51 54.2 +0.8
      baz=256,SNR=32
FALS  False Pass        7.52 234         Pn    09 51 53.7 +0.1
FALS  False Pass        7.52 234  P      Pn    09 51 53.5 -0.2
      baz=45
ANM   Nome              7.54 315         Pn    09 51 54.0 +0.1
ANM   Nome              7.54 315  P      Pn    09 51 53.8 -0.2
      baz=124,SNR=10
COLD  Coldfoot          7.58   8  Pn     Pn    09 51 53.9 -0.4
COLD  Coldfoot          7.58   8  P      Pn    09 51 54.0 -0.4
      baz=191,SNR=50
FYU   Fort Yukon        7.64  24         Pn    09 51 54.4 -0.8
G25K  Bearman Lake      7.65  21  P      Pn    09 51 55.0 -0.4
      baz=207,SNR=29
DAWY  Dawson            7.69  50  Pn     Pn    09 51 56.6 +0.6
DAWY  Dawson            7.69  50  P      Pn    09 51 56.4 +0.4
      baz=242,SNR=18
HYT   Haines Junctio    7.73  76  Pn     Pn    09 51 57.8 +1.2
HYT   Haines Junctio    7.73  76  P      Pn    09 51 57.3 +0.7
      baz=269,SNR=14
I27K  Kandik River      7.81  37  P      Pn    09 51 56.7 -1.0
      baz=227
L29M  L29M              7.83  58  P      Pn    09 51 59.3 +1.4
      baz=251
N30M  Aishikik Lake     7.97  71  P      Pn    09 51 59.7  0.0
      baz=265,SNR=46
P30M  Million Dollar    8.02  81  P      Pn    09 52 00.9 +0.4
      baz=274
F24K  Squaw Lake        8.09  14  P      Pn    09 52 01.0 -0.3
      baz=199
G26K  Porcupine Rive    8.28  26  P      Pn    09 52 02.6 -1.2
      baz=214
M30M  Minto, Yukon      8.28  63  Pn     Pn    09 52 05.0 +1.0
M30M  Minto, Yukon      8.28  63  P      Pn    09 52 04.6 +0.7
      baz=257,SNR=7.2
H27K  Steamboat Moun    8.28  34  P      Pn    09 52 03.5 -0.5
      baz=224
J29M  Klondike Camp     8.33  49         Pn    09 52 05.7 +1.1
J29M  Klondike Camp     8.33  49  P      Pn    09 52 05.2 +0.6
      baz=242,SNR=19
K29M  Barlow Dome       8.35  54  P      Pn    09 52 06.0 +1.1
      baz=248
PLBC  Pleasant Camp     8.40  85  P      Pn    09 52 06.1 +0.6
      baz=279,SNR=25
O30N  Mendenhall        8.42  76  P      Pn    09 52 06.5 +0.6
      baz=270,SNR=11
E23K  Chandalar         8.44   8  P      Pn    09 52 05.9 -0.2
      baz=192
F25K  Christian Rive    8.48  19  P      Pn    09 52 05.4 -1.2
      baz=206
BMAR  Burnt Mountain    8.52  22  Pn     Pn    09 52 06.1 -1.1
E24K  Your Creek        8.55  11  P      Pn    09 52 07.3 -0.4
      baz=195
N31M  Braeburn, Yuko    8.60  71  Pn     Pn    09 52 08.9 +0.7
N31M  Braeburn, Yuko    8.60  71  P      Pn    09 52 09.1 +0.9
      baz=266,SNR=14
G27K  Doyon Strip       8.68  31  P      Pn    09 52 08.1 -1.2
      baz=221
I29M  Ogilvie Camp,     8.75  44         Pn    09 52 11.6 +1.3
S31K  Pelican           8.83  95  P      Pn    09 52 11.1 -0.2
      baz=289
F26K  Sheenjek River    8.84  22  P      Pn    09 52 10.1 -1.4
      baz=210
SKAG  Skagway           8.92  84         Pn    09 52 14.1 +1.5
SKAG  Skagway           8.92  84  P      Pn    09 52 14.6 +2.0
SKAG  Skagway           8.92  84  P      Pn    09 52 14.1 +1.5
      baz=280,SNR=7.3
MAYO  Mayo, Yukon       8.94  57         Pn    09 52 12.7 -0.2
R31K  City Hall, Gus    8.95  91  P      Pn    09 52 13.8 +0.9
      baz=286
E25K  Arctic Village    8.97  18  P      Pn    09 52 11.6 -1.6
      baz=205,SNR=12
TNA   Tin City          9.00 316         Pn    09 52 14.1 +0.5
TNA   Tin City          9.00 316  P      Pn    09 52 13.5 -0.1
      baz=123
AKUT  Akutan            9.01 237  P      Pn    09 52 14.0 +0.3
TOLK  Toolik Lake Re    9.02   8  Pn     Pn    09 52 14.8 +0.9
TOLK  Toolik Lake Re    9.02   8  P      Pn    09 52 13.7 -0.2
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	baz=191,SNR=46						
D23K	Nanushuk River	9.28	5	P	Pn	09 52 17.2	-0.2
	baz=187						
M31M	Drury Creek, Y	9.32	67		Pn	09 52 19.1	+1.1
M31M	Drury Creek, Y	9.32	67	P	Pn	09 52 19.1	+1.1
	baz=263,SNR=18						
RDOG	Red Dog Mine	9.39	336	Pn	Pn	09 52 19.2	+0.4
RDOG	Red Dog Mine	9.39	336	P	Pn	09 52 18.6	-0.2
	baz=148						
UNV	Unalaska Valle	9.52	237		Pn	09 52 19.5	-1.1
UNV	Unalaska Valle	9.52	237	P	Pn	09 52 19.2	-1.4
	baz=46						
R32K	Eaglecrest	9.60	91	P	Pn	09 52 22.7	+0.9
	baz=287						
SIT	Sitka	9.62	99	P	Pn	09 52 21.7	-0.3
SIT	Sitka	9.62	99	P	Pn	09 52 21.0	-1.0
	baz=294						
JIS	Juneau Island	9.67	91	Pn	Pn	09 52 24.7	+2.0
JIS	Juneau Island	9.67	91	P	Pn	09 52 24.9	+2.2
P32M	Atlin	9.71	83	P	Pn	09 52 23.9	+0.6
	baz=279						
E27K	Coleen River	9.78	26	P	Pn	09 52 23.0	-1.1
	baz=216,SNR=13						
FARO	Faro, Yukon	9.81	67		Pn	09 52 26.4	+1.8
FARO	Faro, Yukon	9.81	67	P	Pn	09 52 25.0	+0.4
	baz=264,SNR=14						
S32K	Killisnoo	9.84	96	P	Pn	09 52 25.4	+0.5
	baz=291						
EPYK	Eagle Plains	9.86	41		Pn	09 52 26.7	+1.5
EPYK	Eagle Plains	9.86	41	P	Pn	09 52 25.9	+0.6
	baz=236,SNR=9.3						
D25K	Kavik River	9.98	14	P	Pn	09 52 26.1	-0.8
	baz=200						
P33M	Teslin, Yukon	10.07	79		Pn	09 52 30.1	+1.8
P33M	Teslin, Yukon	10.07	79	P	Pn	09 52 28.2	0.0
	baz=276,SNR=9.6						
C24K	Franklin Bluff	10.14	8	P	Pn	09 52 28.0	-1.1
	baz=192,SNR=27						
G30M	tAoh Zraii Nji	10.38	39	P	Pn	09 52 31.1	-1.1
	baz=234,SNR=9.8						
Q32M	Nakina River	10.56	85	P	Pn	09 52 34.9	-0.1
	baz=283						
C27K	Jago River	10.63	18	P	Pn	09 52 34.5	-1.1
	baz=206						
C26K	Camden Bay	10.72	15	P	Pn	09 52 35.8	-1.0
	baz=202						
U33K	Whale Pass	11.13	101	P	Pn	09 52 41.8	-0.5
	baz=297						
WRAK	Wrangell Islan	11.38	98	Pn	Pn	09 52 46.5	+0.8
WRAK	Wrangell Islan	11.38	98	P	Pn	09 52 46.2	+0.5
	baz=296						
S34M	Telegraph Cree	11.43	90	P	Pn	09 52 47.9	+1.5
	baz=289,SNR=6.3						
F31M	Tsiigehtchic	11.43	40	P	Pn	09 52 44.9	-1.4
	baz=237,SNR=16						
CRAG	Craig	11.44	103	P	Pn	09 52 47.5	+1.0
CRAG	Craig	11.44	103	P	Pn	09 52 46.8	+0.3
	baz=300						
A21K	Barrow	11.69	354	Pn	Pn	09 52 47.1	-2.6
A21K	Barrow	11.69	354	P	Pn	09 52 47.2	-2.6
	baz=171						
DLBC	Dease Lake	11.83	87	P	Pn	09 52 52.2	+0.5
	comp=N,5.3nm,0.3s,baz=342,slow=9.7,SNR=54						
DLBC				S	Sn	09 55 01.3	-0.4
	comp=N,1.8nm,0.4s,baz=156,slow=20,SNR=2.0						
DLBC	Dease Lake	11.83	87	Pn	Pn	09 52 53.2	+1.5
DLBC	Dease Lake	11.83	87	P	Pn	09 52 53.9	+2.1
	baz=286						
INK	Inuvik	11.99	36	P	Pn	09 52 53.3	-0.4
	comp=N,3.3nm,0.4s,baz=234,slow=14,SNR=26						
INK				S	Sn	09 55 03.4	-2.0
	comp=N,1.5nm,0.6s,baz=311,slow=32,SNR=1.3						
INK	Inuvik	11.99	36	Pn	Pn	09 52 53.5	-0.2
INK	Inuvik	11.99	36	P	Pn	09 52 52.8	-0.9
	baz=234,SNR=11						
T35M	Bob Quinn	12.20	93	P	Pn	09 52 58.8	+2.2
	baz=293						
V35K	Ketchikan	12.26	102	P	Pn	09 52 58.2	+1.0
	baz=300						
KOTAN	Kotaneelee Air	14.42	76	P	Pn	09 53 27.0	+1.8
	baz=281,SNR=5.5						
ADK	Adak	15.44	250	P	P	09 53 39.8	-0.4
C36M	Paulatuk	15.49	40	Pn	Pn	09 53 36.5	-2.0
C36M				IAmb	IAmb	09 53 38.2	
	comp=Z,11nm,0.7s						
C36M	Paulatuk	15.49	40	P	Pn	09 53 36.0	-2.6
	baz=246,SNR=18						
A36M	Sachs Harbour	16.43	31	Pn	Pn	09 53 48.8	-1.4
A36M	Sachs Harbour	16.43	31	P	Pn	09 53 48.6	-1.6
	baz=236,SNR=43						
YKA	Yellowknife Ar	18.51	65	P	Pn	09 54 15.1	-0.2
	comp=Z,2.3nm,0.6s,baz=276,slow=9.8,SNR=73						
YKA				ScP	ScP	10 02 04.2	+1.3
	comp=Z,0.4nm,0.6s,baz=292,slow=1.7,SNR=5.3						
YKA	Yellowknife Ar	18.51	65	P	Pn	09 54 14.8	-0.6
BILL	Bilibino	19.39	312	P	P	09 54 22.1	-1.3
RES	Resolute Bay	25.48	32	P	P	09 55 24.1	+0.4
	comp=Z,0.8nm,0.3s,baz=269,slow=9.7,SNR=7.1						
	comp=Z,0.8nm,0.3s						
RES	Resolute Bay	25.48	32	P	P	09 55 24.5	+0.8
RES				IAmb	IAmb	09 55 51.2	
	comp=Z,4.8nm,1.1s						
PETK	Petropavlovsk-	27.53	278	P	P	09 55 42.1	-0.3
	comp=Z,3.5nm,0.8s,baz=116,slow=6.6,SNR=4.2						
	comp=Z,3.5nm,0.8s						
PETK	Petropavlovsk-	27.53	278	P	P	09 55 43.5	+1.1
FCC	Fort Churchill	29.23	66	P	P	09 55 59.3	+1.9
FCC				IAmb	IAmb	09 56 33.1	
	comp=Z,6.2nm,1.4s						
NVAR	Mina Array Bea	30.58	119	P	P	09 56 09.2	-0.6
	comp=Z,0.1nm,0.3s,baz=344,slow=9.6,SNR=1.6						
	comp=Z,0.1nm,0.3s						
SPITS	Spitsbergen Ar	42.14	3	P	P	09 57 48.0	+0.8
	comp=Z,7.5nm,0.8s,baz=19,slow=5.3,SNR=16						
	comp=Z,7.5nm,0.8s						
SCHQ	Schefferville	43.65	57	P	P	09 58 00.4	+0.8
	comp=Z,2.1nm,0.5s,baz=302,slow=7.2,SNR=18						
	comp=Z,2.1nm,0.5s						
KSRS	Korea Array	53.27	283	P	P	09 59 13.1	-0.3
	comp=Z,1.3nm,0.5s,baz=38,slow=7.4,SNR=4.4						
	comp=Z,1.3nm,0.5s						
SONM	Songino Array	54.95	306	P	P	09 59 26.0	+0.3
	comp=Z,1.7nm,0.7s,baz=46,slow=6.7,SNR=5.4						
	comp=Z,1.7nm,0.7s						
ZALV	Zalesovo Beam	57.58	324	P	P	09 59 44.2	+0.1
	comp=Z,1.1nm,0.6s,baz=28,slow=6.7,SNR=1.9						
	comp=Z,1.1nm,0.6s						
HHC	Hu-ho-hao-te	58.32	297	*e*P	P	09 59 50.9	+1.3
HHC				pmax	pmax		
	comp=Z,27nm,0.8s						
HHC				pmax	pmax		
	comp=Z,190nm,5.5s						
MKAR	Makanchi Array	64.63	321	P	P	10 00 31.0	-0.8
	comp=Z,0.3nm,0.5s,baz=34,slow=6.6,SNR=1.5						
	comp=Z,0.3nm,0.5s						
WMQ	Urumqi	65.45	316	*e*P	P	10 00 41.0	+3.8
PZH	PanZhiHua	74.75	296	P	P	10 01 34.7	+0.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,6.5s						
ESDC	Sonseca Array	77.64	24	P	P	10 01 50.6	+0.2
	comp=Z,0.2nm,0.3s,baz=331,slow=7.8,SNR=1.7						
	comp=Z,0.2nm,0.3s						
CMAR	Chiang Mai Arr	83.00	295	P	P	10 02 17.9	-1.4
	comp=Z,0.6nm,0.5s,baz=35,slow=3.3,SNR=1.6						
	comp=Z,0.6nm,0.5s						

TAP ***07*** *09:50:46.0,22°.40N×121°.07E,h50km,ML3.9,B*
JMA ***07*** *09:50:46.1±0.4,22°N±1°×12°1E±°,h18km,MV3.9/12,*
TAIWAN REGION
ISC 07 09:50:46.8±1.2**,22°.40N**±0°.03×**121°.10E**±0°.02**,h45km**±7km**,**
n143,σ0s.79/187**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAW	Tawu	0.19	258	P	Pn	09 50 54.3	-0.2
	baz=255						
TAW				*e*S	Sn	09 51 00.3	+0.3
	baz=255						
TAWH	Dawu Township	0.20	254	P	Pn	09 50 54.5	-0.2
	baz=251						
TAWH				*e*S	Sn	09 51 00.5	+0.3
	baz=251						
EAST	Anshuo	0.23	266	P	Pn	09 50 55.0	0.0
	baz=265						
ECL	Taimali	0.24	326	P	Pn	09 50 54.8	-0.2
	baz=332						
ECL				S	Sn	09 51 01.0	+0.3
	baz=332						
TTN	Taitung	0.36	7	*e*P	Pn	09 50 56.8	+0.7
	baz=5.0						
TWGBT	Beinan	0.42	357	*e*P	Pn	09 50 56.3	-0.6
	baz=7.0						
TWGBT				S	Sn	09 51 03.9	0.0
	baz=7.0						
TWG	Pinlang	0.42	356	P	Pn	09 50 56.3	-0.6
	baz=7.0						
TWG				S	Sn	09 51 03.7	-0.2
	baz=7.0						
LDUT	Ludao	0.44	51	*e*P	Pn	09 50 56.5	-0.5
	baz=45						
LDUT				*e*S	Sn	09 51 04.5	+0.3
	baz=45						
SCZT	Fangliau	0.45	267	P	Pn	09 50 56.9	-0.2
	baz=266						
SCZT				S	Sn	09 51 04.6	+0.2
	baz=266						
SMST	Manzhou Townsh	0.45	213	P	Pn	09 50 57.0	-0.1
	baz=207						
SMST				*e*S	Sn	09 51 05.2	+0.8
	baz=207						
MASBT	Mashibuluo	0.48	296	P	Pn	09 50 57.4	-0.2
	baz=294						
MASBT				*e*S	Sn	09 51 05.0	-0.2
	baz=294						
LONT	Longtian	0.51	3	P	Pn	09 50 57.4	-0.5
	baz=6.0						
LONT				S	Sn	09 51 05.8	0.0
	baz=6.0						
HEN	Hengchun	0.52	221	P	Pn	09 50 58.1	+0.1
	baz=215						
HEN				*e*S	Sn	09 51 07.2	+1.3
	baz=215						
TSMG	Majia	0.52	306	*e*P	Pn	09 50 58.2	+0.1
	baz=311						
TSMG				*e*S	Sn	09 51 06.7	+0.6
	baz=311						
TWKBT	Hengchun	0.53	210	P	Pn	09 50 58.1	0.0
	baz=205						
TWKBT				*e*S	Sn	09 51 07.2	+1.0
	baz=205						
TSEB	Hengchuen, Pin	0.53	201	P	Pn	09 50 58.6	+0.4
	baz=199						
TSEB				*e*S	Sn	09 51 08.2	+2.0
	baz=199						
TWK1	Hengchun	0.53	211	*e*P	Pn	09 50 58.5	+0.3
	baz=205						
TWK1				*e*S	Sn	09 51 07.6	+1.4
	baz=205						
SNW	Nanwan	0.54	217	*e*P	Pn	09 50 58.8	+0.4
	baz=211						
LAY	Lan-yu	0.55	130	P	Pn	09 50 57.6	-0.8
	baz=124						
LAY				*e*S	Sn	09 51 06.4	-0.4
	baz=124						
LYUB	Lan-yu	0.60	131	*e*P	Pn	09 50 57.1	-1.9
	baz=125						
EDH	Donghe	0.60	18	*e*P	Pn	09 50 58.8	-0.3
	baz=20						
EDH				*e*S	Sn	09 51 08.1	+0.2
	baz=20						
TSPT	Pingtung City	0.62	297	*e*P	Pn	09 50 59.6	+0.2
	baz=297						
TSPT				*e*S	Sn	09 51 10.2	+1.8
	baz=297						
SGLT	Jiouru	0.65	300	*e*P	Pn	09 50 60.0	+0.2
	baz=301						
TWP	Hsiaoliuchiu	0.69	266	*e*P	Pn	09 51 01.2	+1.0
	baz=265						
ECS	Chishang	0.70	9	*e*P	Pn	09 51 00.5	0.0
	baz=18						
SLGT	Liugui	0.73	325	*e*P	Pn	09 51 01.6	+0.8
	baz=334						
SLGT				*e*S	Sn	09 51 12.4	+1.6
	baz=334						
CHKT	Chengkung	0.74	19	*e*P	Pn	09 51 00.7	-0.2
	baz=21						
CHKT				S	Sn	09 51 11.3	+0.2
	baz=21						
SCST	Cishan	0.74	311	*e*P	Pn	09 51 01.2	+0.3
	baz=312						
SCST				*e*S	Sn	09 51 12.2	+1.0
	baz=312						
EHD	Haiduan	0.75	7	P	Pn	09 51 00.7	-0.5
	baz=20						
TWM1	Shoushan	0.76	304	P	Pn	09 51 01.7	+0.6
	baz=306						
ELDTW	Lidau	0.79	354	*e*P	Pn	09 51 02.1	+0.4
	baz=3.0						
FULB	Fuli	0.82	13	*e*P	Pn	09 51 01.9	-0.1
	baz=14						
FULB				*e*S	Sn	09 51 14.6	+1.5
	baz=14						
STYH	Taoyuan	0.82	339	P	Pn	09 51 02.4	+0.3
	baz=341						
STYT	Tauyuan	0.82	337	*e*P	Pn	09 51 02.3	+0.1
	baz=340						
SGST	Jiashian	0.83	325	*e*P	Pn	09 51 01.2	-1.0
	baz=316						
SHHT	Tainan City	0.93	312	P	Pn	09 51 04.2	+0.7
	baz=313						
CHN1	Nanshi	0.94	326	*e*P	Pn	09 51 03.5	-0.3
	baz=328						
CHN1				*e*S	Sn	09 51 16.9	+0.8
	baz=328						
WTP	Ta-pu	0.96	332	*e*P	Pn	09 51 03.8	-0.1
	baz=335						
CHN3	Shinhua	0.96	315	P	Pn	09 51 04.4	+0.6
	baz=317						
EYUL	Yuli	0.97	12	*e*P	Pn	09 51 04.1	+0.1
	baz=22						
TWF1	Yuli	0.97	11	*e*P	Pn	09 51 04.4	+0.3
	baz=21						
SNST	Tainan City	0.99	326	*e*P	Pn	09 51 05.6	+1.3
	baz=328						
TPUB	Ta-pu	1.00	334	*e*P	Pn	09 51 04.2	-0.3
	baz=324						
YULB	Yu-li	1.01	10	*e*P	Pn	09 51 03.8	-0.8
	baz=21						
TWK	Hsinying	1.03	327	*e*P	Pn	09 51 04.7	-0.2
	baz=330						
CHN4	Tsaushan	1.06	334	*e*P	Pn	09 51 05.2	0.0
	baz=324						
EHY	Hungye	1.12	10	*e*P	Pn	09 51 06.4	+0.3
	baz=21						
HGSD	Ruisui	1.13	15	*e*P	Pn	09 51 06.5	+0.2
	baz=25						
WCKO	Fanlu	1.13	336	*e*P	Pn	09 51 06.3	0.0
	baz=338						
SCLT	Jiali	1.14	313	*e*S	Sn	09 51 21.2	+0.4
	baz=314						
ALS	Alishan	1.14	346	*e*P	Pn	09 51 06.8	+0.2
	baz=350						
TSCK	Chigu Township	1.20	309	*e*P	Pn	09 51 06.7	-0.5
	baz=296						
TSCK				*e*S	Sn	09 51 21.4	-0.8
	baz=296						
ICHU	Yijhu	1.22	322	*e*P	Pn	09 51 07.0	-0.4
	baz=323						
ICHU				*e*S	Sn	09 51 23.1	+0.3
	baz=323						
CHN5	Tsauling	1.25	342	*e*P	Pn	09 51 07.8	-0.2
	baz=344						
CHY	Chiayi	1.26	330	*e*P	Pn	09 51 07.8	-0.2
	baz=333						
CHN2	Minshiung	1.27	333	*e*P	Pn	09 51 08.7	+0.6
	baz=336						
EGFH	Guangfu	1.30	13	*e*P	Pn	09 51 09.0	+0.4
	baz=24						
VWDT	VWDT	1.35	2	*e*P	Pn	09 51 10.6	+1.3
	baz=3.0						
VWDT				*e*S	Sn	09 51 27.4	+1.4
	baz=3.0						
TEGC	Jichi Village	1.37	17	*e*P	Pn	09 51 10.0	+0.6
	baz=24						
WGK	Gukeng	1.38	339	*e*P	Pn	09 51 09.4	-0.1
	baz=330						
WSL	Shuilin Townsh	1.38	324	*e*P	Pn	09 51 08.8	-0.8
	baz=327						
WDLH	Douliu	1.39	338	*e*P	Pn	09 51 09.7	0.0
	baz=340						
WDLH				*e*S	Sn	09 51 27.6	+0.8
	baz=340						
SSLB	Suanglung	1.39	354	*e*P	Pn	09 51 10.2	+0.3
	baz=9.0						
ESL	Shilin	1.44	12	*e*P	Pn	09 51 12.0	+1.5
	baz=23						
WTK	Tuku	1.44	333	*e*P	Pn	09 51 09.7	-0.8
	baz=335						
WTK				*e*S	Sn	09 51 28.7	+0.5
	baz=335						
WJS	Zhushan	1.46	346	*e*P	Pn	09 51 10.9	+0.2
	baz=350						
WSF	Szhu	1.48	327	*e*S	Sn	09 51 29.3	+0.2
	baz=329						
SMLT	Sun Moon Lake	1.49	353	*e*P	Pn	09 51 11.7	+0.5
	baz=356						
WNT	Mingjian	1.52	345	*e*P	Pn	09 51 11.8	+0.2
	baz=348						
WNT				*e*S	Sn	09 51 31.1	+0.8
	baz=348						
TEYL	Yanliau Villag	1.53	17	*e*P	Pn	09 51 12.6	+0.9
	baz=18						
TEYL				*e*S	Sn	09 51 31.9	+1.5
	baz=18						
OWD	Renai	1.55	3	*e*P	Pn	09 51 12.8	+0.6
	baz=4.0						
OWD				*e*S	Sn	09 51 31.4	+0.2
	baz=4.0						
WNT1	Nantou City	1.55	346	*e*P	Pn	09 51 12.4	+0.4
	baz=337						
WDGT	Dungji	1.58	303	*e*P	Pn	09 51 10.9	-1.5
	baz=304						
WUSB	Renai	1.59	1	*e*P	Pn	09 51 13.2	+0.6
	baz=2.0						
WUSB				*e*S	Sn	09 51 32.2	+0.2
	baz=2.0						
ETM	Tongmen	1.60	13	*e*P	Pn	09 51 12.7	0.0
	baz=23						
WPL	Puli Township	1.61	355	*e*P	Pn	09 51 13.3	+0.5
	baz=359						
DPDB	Guoxing	1.64	354	*e*P	Pn	09 51 13.5	+0.3
	baz=358						
WRL	Guolierlin Hig	1.64	336	*e*P	Pn	09 51 12.4	-0.8
	baz=338						
WRL				*e*S	Sn	09 51 33.2	+0.1
	baz=338						
CHGB	Renai	1.66	2	*e*P	Pn	09 51 14.3	+0.6
	baz=6.0						
WCS	Beigang Elemen	1.66	354	*e*P	Pn	09 51 13.7	+0.2
	baz=358						
WWF	Wufeng	1.68	347	*e*P	Pn	09 51 14.1	+0.3
	baz=340						
TWD	Chiawan	1.73	15	*e*P	Pn	09 51 14.9	+0.4
	baz=19						
VCHM	Qimei	1.74	298	*e*P	Pn	09 51 13.0	-1.6
	baz=298						
WHF	Hehuan Shan	1.75	5	*e*P	Pn	09 51 16.0	+0.9
	baz=18						
WCHH	Zhanghua	1.75	344	*e*P	Pn	09 51 14.8	+0.1
	baz=337						
TCU	Taichung	1.79	347	*e*P	Pn	09 51 15.4	+0.2
	baz=352						
PHUB	P'eng-hu	1.79	309	*e*P	Pn	09 51 13.5	-1.8
	baz=309						
ETL	Fush Village	1.82	15	*e*P	Pn	09 51 16.3	+0.6
	baz=23						
NACB	Ninganchiao	1.82	14	*e*P	Pn	09 51 16.2	+0.5
	baz=24						
NACB				*e*S	Sn	09 51 37.7	0.0
	baz=24						
ETLH	Xiulin Townshi	1.83	11	*e*P	Pn	09 51 16.4	+0.4
	baz=23						
PNG	Penghu	1.84	310	*e*P	Pn	09 51 14.2	-1.7
	baz=311						
TWT	Tachien	1.85	2	*e*P	Pn	09 51 16.7	+0.5
	baz=6.0						
WHP	Taichung City	1.88	356	*e*P	Pn	09 51 17.1	+0.5
	baz=360						
TWQ1	Liyutan	1.96	351	*e*P	Pn	09 51 17.9	+0.2
	baz=344						
NSY	Sanyi	2.03	351	*e*P	Pn	09 51 19.3	+0.6
	baz=345						
NNSB	Datong	2.04	7	*e*P	Pn	09 51 19.6	+0.8
	baz=358						
NNSB				*e*S	Sn	09 51 43.1	0.0
	baz=358						
NNSH	Datong	2.04	7	*e*P	Pn	09 51 20.0	+1.2
	baz=358						
EOS4	EOS4	2.05	33	*e*P	Pn	09 51 18.9	+0.4
	baz=24						
EOS4				*e*S	Sn	09 51 43.0	+0.4
	baz=24						
ENA	Nanau	2.10	16	*e*P	Pn	09 51 20.9	+1.4
	baz=20						
EWUT	Wuta	2.13	17	*e*P	Pn	09 51 20.7	+0.7
	baz=21						
NMLH	Miaoli	2.15	352	*e*P	Pn	09 51 21.0	+0.8
	baz=357						
LATG	Datong	2.16	10	*e*P	Pn	09 51 20.9	+0.4
	baz=23						
NFF	Wufeng Townshi	2.22	0	*e*P	Pn	09 51 21.8	+0.5
	baz=6.0						
NSTT	Nanjuang	2.23	358	*e*P	Pn	09 51 21.2	-0.1
	baz=3.0						
LIOB	Emei	2.24	358	*e*P	Pn	09 51 22.1	+0.6
	baz=3.0						
EOS2	EOS2	2.26	27	*e*P	Pn	09 51 22.6	+1.0
	baz=31						
ENTT	Nioudou	2.27	11	*e*P	Pn	09 51 22.6	+0.6
	baz=23						
YHNB	Yeheng	2.27	6	*e*P	Pn	09 51 22.7	+0.7
	baz=358						
NSK	Sanguang	2.28	6	*e*P	Pn	09 51 23.6	+1.5
	baz=358						
NDS	Dongshan	2.30	14	*e*P	Pn	09 51 22.9	+0.7
	baz=23						
TWC	Suao	2.31	17	*e*P	Pn	09 51 23.2	+0.9
	baz=22						
TWE	Neicheng	2.37	13	*e*P	Pn	09 51 24.9	+1.7
	baz=23						
FUSB	Fushanzhiwuyua	2.39	11	*e*P	Pn	09 51 24.3	+0.7
	baz=22						
NWLT	Wulai	2.40	9	*e*P	Pn	09 51 24.9	+1.3
	baz=22						
TWA	Mucha	2.61	10	*e*P	Pn	09 51 27.3	+0.8
	baz=1.0						
TIPB	Shuangxi	2.65	14	*e*P	Pn	09 51 28.2	+1.2
	baz=19						
JYNG	Yonagunijimaku	2.66	39	P	Pn	09 51 28.1	+1.0
JYNG				S	Sn	09 51 58.5	+0.4
YOJ	Yonaguni jima	2.70	40	P	Pn	09 51 28.6	+0.8
YOJ				*e*S	Sn	09 51 59.9	+0.6
YOJ	Yonaguni jima	2.70	40	*e*P	Pn	09 51 28.4	+0.6
	baz=36						
TWB1	Santiao Chiao	2.72	17	*e*P	Pn	09 51 29.2	+1.2
	baz=16						
WFSB	Wu-fen Shan	2.73	13	*e*P	Pn	09 51 28.9	+0.7
	baz=18						
YM01	YM01	2.77	9	*e*P	Pn	09 51 29.3	+0.6
	baz=23						
SXI1	Grass Mountain	2.78	15	*e*P	Pn	09 51 30.1	+1.2
	baz=20						
ANP	Anpu	2.80	8	*e*P	Pn	09 51 30.1	+0.8
	baz=23						
HATJ	Hateruma jima	2.99	56	P	Pn	09 51 32.0	+0.3
HATJ				*e*S	Sn	09 52 05.7	-0.6
VWUC	VWUC	2.99	330	*e*P	Pn	09 51 30.2	-1.5
	baz=332						
KNM	Kinmen	3.17	310	*e*P	Pn	09 51 33.9	-0.2
	baz=308						
KNMB	Chin-men Tao	3.23	310	*e*P	Pn	09 51 33.4	-1.6
	baz=311						
JKRS	Kuro-shima	3.24	55	P	Pn	09 51 36.0	+0.8
JKRS				*e*S	Sn	09 52 12.4	-0.1
JIJ	Ishigaki jima	3.41	54	P	Pn	09 51 37.6	+0.1
JIJ				S	Sn	09 52 16.4	-0.3
ZPLA	Ao Xicun	3.44	297	*e*P	Pn	09 51 36.5	-1.4
	baz=297						
DSXP	Dongshan	3.63	292	*e*P	Pn	09 51 40.7	+0.3
	baz=291						
JISG	Ishigakijimahi	3.67	53	P	Pn	09 51 40.8	-0.2
JISG				S	Sn	09 52 21.9	-1.1
AXDP	Jialang	3.80	312	*e*P	Pn	09 51 41.5	-1.4
	baz=312						
MATB	Ma-tsu	3.88	344	*e*P	Pn	09 51 42.3	-1.7
	baz=349						
JTJ	Tarama	3.99	55	*e*P	Pn	09 51 45.7	+0.2
JTJ				S	Sn	09 52 30.3	-0.6
MHZQ	Yeshan	4.14	333	*e*P	Pn	09 51 46.1	-1.5
	baz=337						

LYJJ	**Jianjiangzhen**	**4.31**	**344**	*e*P	**Pn**	**09 51 48.3**	**-1.6**
	baz=349						
JIRB	**Irabujima**	**4.45**	**56**	P	**Pn**	**09 51 52.4**	**+0.6**
JIRB				S	**Sn**	**09 52 42.4**	**+0.1**
JMJ2	**Miyako jima3**	**4.53**	**58**	P	**Pn**	**09 51 53.5**	**+0.7**
JMJ	**Miyako jima 2**	**4.54**	**57**	*e*P	**Pn**	**09 51 53.5**	**+0.5**
	baz=52						
XPSS	**Dashiqiu**	**4.59**	**350**	*e*P	**Pn**	**09 51 52.5**	**-1.2**
	baz=356						
SXFK	**Yanhouchang**	**5.08**	**322**	*e*P	**Pn**	**09 51 58.7**	**-1.7**
	baz=325						

IDC 07 09:52:46.0±897.0**, 53°.11N**×**3°.90E, h0km, Error ellipse: s-maj=392.1km s-min=153.7km az=107.0, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I26DE	**FREYUNG INFRAS**	**7.51**	**121**	I	I	10 45 40.0	
	baz=306,slow=306,SNR=0.3						
I43RU	**DUBNA INFRASON**	**19.37**	**66**	I	I	11 52 00.0	
	baz=273,slow=327,SNR=1.2						
I31KZ	**AKTYUBINSK INF**	**32.95**	**72**	I	I	13 14 20.0	
	baz=296,slow=325,SNR=0.8						
I46RU	**ZALESOVO INFRA**	**45.59**	**55**	I	I	14 32 40.0	
	baz=299,slow=326,SNR=3.4						

IDC ***07*** *09:58:13.0±1.1, 29°.43S×178°.23W, h74km±11km, mb3.5/3, mbtmp3.7/3, Error ellipse: s-maj=52.7km s-min=27.3km az=164.0*

ISC 07 09:58:09.9±1.4**, 30°.0S**±0°.2×**178°.2W**±0°.2**, h50km, n9, σ1s86**/11**, mb3.8**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.76**	**20**	P	**Pn**	**09 58 25.6**	**+1.2**
	880nm,0.3s,baz=71,slow=9.0,SNR=35						
RAO				S	**Sn**	**09 58 35.7**	**+0.7**
	7μm,0.2s,baz=91,slow=21,SNR=29						
CTA	**Charters Tower**	**33.55**	**279**	P	**P**	**10 04 46.2**	**+1.1**
	0.9nm,0.5s,baz=96,slow=15,SNR=2.0						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**42.95**	**267**	P	**P**	**10 06 04.6**	**+0.4**
	0.3nm,0.5s,baz=104,slow=7.0,SNR=10						
ASAR				PcP	**PcP**	**10 07 52.7**	**-1.4**
	0.3nm,0.8s,baz=126,slow=4.7,SNR=2.4						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**43.89**	**272**	P	**P**	**10 06 12.2**	**+0.3**
	0.7nm,0.4s,baz=113,slow=6.8,SNR=12						
	0.7nm,0.4s						
FINES	**FINESS Array B**	**144.68**	**340**	PKP	**PKPab**	**10 17 38.0**	**-1.0**
	1.3nm,0.5s,baz=43,slow=2.9,SNR=9.9						
AKASG	**Malin Array Be**	**150.85**	**323**	PKPbc	**PKPbc**	**10 17 55.5**	**-0.9**
	0.6nm,0.4s,baz=55,slow=1.9,SNR=4.0						
GERES	**GERESS Array B**	**159.07**	**338**	PKPab	**PKPab**	**10 18 36.2**	**-2.8**
	0.2nm,0.3s,baz=54,slow=5.0,SNR=1.4						
TORD	**Torodi Ar. Bea**	**163.26**	**180**	PKPab	**PKPab**	**10 19 00.9**	**+3.1**
	0.4nm,0.5s,baz=177,slow=3.7,SNR=2.1						
ESDC	**Sonseca Array**	**169.24**	**24**	PKPab	**PKPab**	**10 19 22.0**	**-1.9**
	0.7nm,0.4s,baz=352,slow=2.6,SNR=2.3						

IDC ***07*** *10:00:13.6±2.9, 64°.64N×30°.92E, h0km, mbtmp2.7/2, ML1.6/2, Error ellipse: s-maj=44.0km s-min=10.4km az=102.0*

HEL ***07*** *10:00:14.1±0.3, 64°.76N×30°.24E, h0km, ML1.8, Explosion*

BER ***07*** *10:00:14.5±0.9, 64°.83N×31°.73E, h0km, ML1.7, Suspected explosion*

KOLA ***07*** *10:00:15.6, 64°.80N×30°.90E, h0km, ML2.1, Error ellipse: s-maj=27.3km s-min=20.9km az=150.0, Kostomuksha, Karelia*

ISC 07 10:00:12.6±1.0**, 64°.80N**±0°.03×**30°.93E**±0°.06**, h0km, n31, σ1s77**/38**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RMF	**Romuvaara**	**0.73**	**217**	PG	**Pg**	**10 00 25.1**	**-1.4**
RMF				MSG		10 00 32.3	
	comp=Z,13nm,0.2s						
KU6	**Riekki**	**1.31**	**341**	PG	**Pg**	**10 00 37.7**	**+0.1**
KU6				MSG		10 00 52.7	
	comp=Z,5.9nm,0.2s						
KU6				SN	**Sn**	**10 00 57.0**	**+0.9**
MSF	**Maaselka**	**1.37**	**325**	PN	**Pg**	**10 00 38.2**	**-0.6**
	baz=156						
MSF				SN	**Sb**	**10 00 57.2**	**+0.2**
JOF	**Joensuu**	**1.90**	**175**	PB	**Pn**	**10 00 47.0**	**+0.9**
	baz=348						
JOF				SB	**Sn**	**10 01 13.0**	**+2.3**
RNF	**Rovaniemi**	**2.73**	**314**	PG	**Pn**	**10 00 59.2**	**+1.7**
OBF0	**Syolatti, Pyha**	**2.90**	**267**	PG	**Pn**	**10 01 00.5**	**+0.7**
OBF0				MSG		10 01 30.8	
	comp=Z,5.5nm,0.2s						
APA0	**Apatity Array**	**2.94**	**16**	P	**Pb**	**10 01 03.9**	**-1.9**
APA0				S	**Sn**	**10 01 37.8**	**+1.3**
VRF	**Varrio**	**3.01**	**350**	PN	**Pn**	**10 01 03.9**	**+2.5**
	baz=179						
VRF				MSG		10 01 42.5	
	comp=Z,1.9nm,0.2s						
VRF				SG	**Sg**	**10 01 47.7**	**-1.5**
SGF	**Sodankyl**	**3.20**	**328**	PG	**Pb**	**10 01 09.3**	**-0.9**
SGF				SG	**Sb**	**10 01 48.4**	**-1.3**
OBF8	**Ulkokalla**	**3.27**	**265**	PG	**Pn**	**10 01 05.6**	**+0.7**
OBF8				MSG		10 01 41.4	
	comp=Z,3.0nm,0.2s						
KALU	**Kalix**	**3.35**	**292**	PG	**Pn**	**10 01 09.3**	**+3.3**
KEF	**Keuruu**	**3.79**	**229**	PB	**Pn**	**10 01 14.2**	**+2.0**
PAJU	**Pajala**	**3.91**	**308**	PB	**Pn**	**10 01 16.4**	**+2.7**
ERTU	**Ertsjaerv**	**4.02**	**300**	PB	**Pn**	**10 01 17.9**	**+2.5**
FIA0	**FINESS Array S**	**4.03**	**215**	PB	**Pn**	**10 01 17.9**	**+2.5**
	baz=29						
FINES	**FINESS Array B**	**4.03**	**215**	Pn	**Pn**	**10 01 14.5**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=31,slow=14,SNR=1.5						
FINES				Lg	Lg	10 02 15.6	
	comp=Z,0.4nm,0.3s,baz=37,slow=28,SNR=4.0						
	comp=Z,1.7nm,0.9s						
VAF	**Ylistaro**	**4.05**	**248**	PG	**Pn**	**10 01 18.5**	**+2.8**
BURU	**Burvik**	**4.11**	**271**	PB	**Pn**	**10 01 16.1**	**-0.4**
	baz=87						
HEF	**Hetta**	**4.64**	**325**	*e*S	**Sn**	**10 02 20.0**	**+1.7**
HEF	**Hetta**	**4.64**	**325**	PG	**Pb**	**10 01 36.0**	**+1.3**
LANU	**Lannavaara**	**4.85**	**316**	PB	**Pn**	**10 01 30.3**	**+3.6**
KTK1	**Kautokeino**	**5.20**	**328**	*e*S	**Sn**	**10 02 31.6**	**-0.5**
KTK1				IAML		10 02 55.3	
	comp=Z,2.4nm,0.5s						
ARA0	**ARCESS Array S**	**5.20**	**338**	*e*P	**Pn**	**10 01 32.8**	**+1.2**
ARA0				*e*S	**Sn**	**10 02 30.6**	**-1.5**
ARA0				IAML		10 02 55.6	
	comp=Z,2.2nm,0.5s						
ARCES	**ARCESS Array B**	**5.20**	**338**	Pn	**Pn**	**10 01 32.3**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=155,slow=13,SNR=15						
ARCES				Sn	**Sn**	**10 02 32.0**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=156,slow=25,SNR=6.2						
ARCES				Lg	Lg	10 02 52.4	
	comp=Z,0.6nm,0.3s,baz=155,slow=30,SNR=12						
	comp=Z,0.6nm,0.5s						
ARCES	**ARCESS Array B**	**5.20**	**338**	P	**Pn**	**10 01 32.8**	**+1.3**
ARCES				S	**Sn**	**10 02 31.1**	**-1.1**
KEV	**Kevo**	**5.21**	**345**	*e*S	**Sn**	**10 02 29.7**	**-2.4**
VADS	**Vadso**	**5.38**	**354**	S	**Sn**	**10 02 36.3**	**-0.2**
KIF	**Kilpisjarvi**	**5.80**	**321**	*e*S	**Sn**	**10 02 46.8**	**-0.1**
I37NO	**I37NO**	**6.46**	**317**	I	I	10 40 50.0	
	baz=129,slow=325,SNR=4.5						
FAUS	**Fauske**	**6.86**	**299**	S	**Sn**	**10 03 10.5**	**-2.4**
NOA	**NORSAR Array B**	**9.73**	**256**	Lg	Lg	10 05 13.0	
	baz=38,slow=24,SNR=1.9						

NEIC ***07*** *10:28:56.5±2.1, 26°.92N±0°.05×89°.11E±0°.08, h10km±1km, mb4.0/15, Error ellipse: s-maj=12.6km s-min=7.0km az=299.0*

IDC ***07*** *10:28:58.4±1.3, 27°.09N×89°.44E, h0km, mb3.8/9, mbtmp3.8/10, ML4.1/1, Error ellipse: s-maj=61.5km s-min=16.9km az=61.0*

NDI ***07*** *10:29:06.1±3.5, 26°.63N×89°.17E, h10km, ML4.1, mb4.0(NEIC)*

ISC 07 10:28:58.1±0.6**, 26°.94N**±0°.07×**89°.24E**±0°.06**, h17km, n44, σ1s85**/39**, mb4.0**/13**, India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTK	**Tadong**	**0.68**	**304**	*e*P	Pn	10 29 22.2	+9.2
GTK				*e*S	Sn	10 29 34.5	+11
GTK				IAML		10 29 39.9	
	comp=N,5μm,0.2s						
GTK				IAML		10 29 40.0	
	comp=E,4μm,0.1s						
SHL	**Shillong**	**2.74**	**119**	Pn	**Pn**	**10 29 42.2**	**+0.7**
SHL	**Shillong**	**2.74**	**119**	*e*PN	**Pb**	**10 29 46.0**	**-0.8**
SHL				*e*SN	**Sb**	**10 30 21.0**	**+0.8**
SHL				IAML		10 30 21.7	
	comp=E,997nm,0.4s						
TEZP	**TEZPUR**	**3.20**	**95**	IAML		10 30 34.2	
	comp=E,799nm,0.2s						
LSA	**Lhasa**	**3.22**	**31**		**Pn**	**10 29 49.2**	**+0.8**
SILR	**SILCHAR**	**3.87**	**123**	IAML		10 31 11.4	
	comp=E,1μm,0.7s						
ITAN	**ITANAGAR**	**4.00**	**86**	*e*S	**Sb**	**10 30 56.2**	**-0.2**
ITAN				IAML		10 31 00.6	
	comp=E,886nm,0.3s						
ZIRO	**ZIRO**	**4.15**	**81**	*e*P	**Pb**	**10 30 12.1**	**+1.4**
ZIRO				*e*S	**Sb**	**10 30 58.0**	**-2.7**
ZIRO				IAML		10 31 04.5	
	comp=N,4μm,0.5s						
KOHI	**KOHIMA**	**4.54**	**104**	IAML		10 31 24.1	
	comp=E,469nm,0.7s						
KOHI				IAML		10 31 25.4	
	comp=N,319nm,0.7s						
MOKO	**MOKOCHONG**	**4.76**	**96**	IAML		10 31 31.5	
	comp=N,345nm,0.4s						
SAIH	**SAIHA**	**5.59**	**142**	*e*P	Pb	10 30 27.9	-7.5
SAIH				IAML		10 31 34.8	
	comp=E,112nm,0.4s						
MND	**Mandalay**	**7.96**	**127**	Pn	**Pn**	**10 30 52.2**	**-0.8**
SMLA	**Simla**	**11.36**	**294**	*e*P	Pn	10 31 47.0	+7.5
SMLA				*e*S	**Sn**	**10 33 49.6**	**+3.6**
SMLA				IAML		10 33 55.0	
	comp=E,42nm,0.4s						
CMAR	**Chiang Mai Arr**	**12.30**	**131**	Pn	**Pn**	**10 31 54.9**	**+2.2**
	comp=E,0.4nm,0.3s,baz=300,slow=12,SNR=4.1						
	comp=E,0.8nm,0.3s						
PHRA	**Phrae**	**13.16**	**127**	Pn	**Pn**	**10 32 02.0**	**-2.3**
TARG	**Taragay, Kyrgy**	**17.49**	**330**	Pn	**Pn**	**10 32 59.7**	**-1.8**
ENH	**Enshi**	**18.09**	**75**		**Pn**	**10 33 08.3**	**-0.3**
ENH				IAmb	IAmb	10 33 10.2	
	comp=Z,14nm,1.2s						
GAR	**Garm**	**19.87**	**312**	P	**P**	**10 33 27.3**	**-1.3**
GAR				IAmb	IAmb	10 33 39.6	
	comp=Z,5.7nm,0.8s						
MK31	**Makanchi Array**	**20.56**	**346**	P	**P**	**10 33 35.0**	**-0.9**
MK31				IAmb	IAmb	10 33 42.7	
	comp=Z,2.5nm,0.8s						
MKAR	**Makanchi Array**	**20.56**	**346**	P	Pn	10 33 37.7	-0.5
	comp=Z,2.5nm,0.6s,baz=165,slow=10,SNR=26						
	comp=Z,2.5nm,0.6s						
MKAR	**Makanchi Array**	**20.56**	**346**	P	**P**	**10 33 34.7**	**-1.2**
MAKZ	**Makanchi**	**20.64**	**346**	P	**P**	**10 33 35.7**	**-1.1**
KK31	**Karatay Array**	**22.17**	**321**	P	**P**	**10 33 50.2**	**-3.0**
KK31				IAmb	IAmb	10 34 18.7	
	comp=Z,5.3nm,1.4s						
KKAR	**Karatay Array**	**22.17**	**321**	P	**P**	**10 33 51.3**	**-1.9**
SONM	**Songino Array**	**24.81**	**28**	P	**P**	**10 34 20.8**	**+1.5**
	comp=Z,0.5nm,0.5s,baz=209,slow=11,SNR=4.0						
	comp=Z,0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**25.02**	**344**	P	**P**	**10 34 21.9**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=158,slow=8.1,SNR=4.8						
	comp=Z,0.9nm,0.3s						
KURK	**Kurchatov**	**25.09**	**344**	P	**P**	**10 34 19.6**	**-2.1**
KURK				IAmb	IAmb	10 34 27.0	
	comp=Z,5.4nm,1.4s						
ZAA0	**Zalesovo Array**	**27.17**	**354**	P	**P**	**10 34 40.0**	**-0.5**
ZAA0				IAmb	IAmb	10 34 46.5	
	comp=Z,2.4nm,0.8s						
ZALV	**Zalesovo Beam**	**27.17**	**354**	P	**P**	**10 34 42.5**	**+2.0**
	comp=Z,1.9nm,0.6s,baz=182,slow=8.0,SNR=8.8						
	comp=Z,1.9nm,0.6s						
ZALV	**Zalesovo Beam**	**27.17**	**354**	P	**P**	**10 34 39.3**	**-1.2**
UOSS	**Minazif**	**29.73**	**274**	P	**P**	**10 35 00.4**	**-3.2**
ABKAR	**Akbulak array**	**31.73**	**322**	P	**P**	**10 35 19.1**	**-1.9**
KSAR	**Wonju Array Be**	**34.13**	**62**	P	**P**	**10 35 41.2**	**-0.9**
FINES	**FINESS Array B**	**53.92**	**328**	P	**P**	**10 38 23.6**	**+3.3**
	comp=Z,1.5nm,0.8s,baz=82,slow=10,SNR=1.4						
	comp=Z,1.5nm,0.8s						
ARCES	**ARCESS Array B**	**55.89**	**338**	P	**P**	**10 38 37.5**	**+3.0**
	comp=Z,2.0nm,0.8s,baz=98,slow=6.6,SNR=7.1						
	comp=Z,2.0nm,0.8s						
WB0	**Warramunga Arr**	**63.81**	**132**	P	**P**	**10 39 29.9**	**+0.2**
WRA	**Warramunga Arr**	**63.90**	**132**	P	**P**	**10 39 32.7**	**+2.4**
	comp=Z,0.8nm,0.7s,baz=323,slow=6.9,SNR=8.6						
	comp=Z,0.8nm,0.7s						
WRA	**Warramunga Arr**	**63.90**	**132**	P	**P**	**10 39 30.1**	**-0.1**
WB2	**Warramunga Arr**	**63.91**	**132**	P	**P**	**10 39 30.2**	**-0.1**
ASAR	**Alice Springs**	**66.28**	**135**	P	**P**	**10 39 48.9**	**+3.2**
	comp=Z,0.9nm,0.8s,baz=320,slow=6.9,SNR=9.7						
	comp=Z,0.9nm,0.8s						
TOLK	**Toolik Lake Re**	**75.52**	**19**	P	**P**	**10 40 41.9**	**+0.7**
TOLK				IAmb	IAmb	10 41 05.7	
	comp=Z,4.8nm,1.3s						
BMAR	**Burnt Mountain**	**77.74**	**19**	P	**P**	**10 40 53.0**	**-0.9**
A36M	**Sachs Harbour**	**78.50**	**10**	P	**P**	**10 40 58.0**	**+0.2**
A36M				IAmb	IAmb	10 41 16.3	
	comp=Z,1.9nm,0.8s						
YKA	**Yellowknife Ar**	**88.85**	**11**	P	**P**	**10 41 52.5**	**+1.5**
	comp=Z,0.1nm,0.6s,baz=334,slow=5.0,SNR=2.6						
	comp=Z,0.1nm,0.6s						

DJA ***07*** *10:32:42.0±0.3, 8°S±3°×12°1E±°, h10km, M4.1/9, mb4.4/2, MLv3.9/9*

IDC ***07*** *10:32:45.0±2.5, 7°.90S×121°.22E, h203km±18km, mb3.3/2, mbtmp3.6/5, Error ellipse: s-maj=182.2km s-min=14.9km az=56.0*

ISC 07 10:32:42.3±1.0**, 8°.55S**±0°.08×**120°.58E**±0°.09**, h200km, n14, σ1s42**/15**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**1.64**	**93**	P	Pn	10 33 11.9	-5.4
BASI	**Baing, Sumba**	**1.66**	**180**	P	**Pn**	**10 33 17.0**	**-0.5**
BASI				S	**Sn**	**10 33 43.6**	**-1.4**
BSSI	**Bau Bau, Buton**	**2.39**	**358**	P	Pn	10 33 15.7	-9.4
PLAI	**Plampang**	**2.79**	**264**	P	**Pn**	**10 33 28.4**	**-1.1**
BKSI	**Bulukumba**	**3.24**	**352**	P	Pn	10 33 27.1	-7.7
KAPI	**Kappang**	**3.60**	**347**	P	**Pn**	**10 33 38.1**	**-1.2**
	26nm,0.9s,baz=159,slow=8.6,SNR=5.2						
TWSI	**Taliwang, Sumb**	**3.67**	**267**	P	**Pn**	**10 33 39.9**	**-0.1**
SOEI	**Soe**	**3.83**	**109**	P	**Pn**	**10 33 43.2**	**+1.0**
SRBI	**Singaraja**	**5.33**	**275**	P	**Pn**	**10 34 01.1**	**0.0**
	43nm,0.9s,0.1nm						
IGBI	**Denpasar**	**5.38**	**267**	P	**Pn**	**10 34 02.1**	**+0.4**
WRA	**Warramunga Arr**	**17.48**	**132**	P	**Pn**	**10 36 35.2**	**+0.9**
	0.3nm,0.4s,baz=309,slow=12,SNR=6.7						
WRA				S	**S**	**10 39 41.8**	**-2.2**
	0.9nm,0.5s,baz=302,slow=21,SNR=7.0						
ASAR	**Alice Springs**	**19.72**	**141**	P	**Pn**	**10 37 00.4**	**-0.4**
	0.5nm,0.4s,baz=319,slow=11,SNR=8.7						
ASAR				S	**S**	**10 40 29.0**	**+0.7**
	0.3nm,0.9s,baz=320,slow=21,SNR=3.4						
ASAR				ScP	**ScP**	**10 44 27.5**	**+3.3**
	0.2nm,0.7s,baz=328,slow=2.2,SNR=2.0						
MKAR	**Makanchi Array**	**64.78**	**332**	P	**P**	**10 43 00.1**	**+0.6**
	0.5nm,0.6s,baz=133,slow=7.4,SNR=6.4						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**69.19**	**338**	P	**P**	**10 43 26.7**	**-0.4**
	0.5nm,0.3s,baz=150,slow=4.4,SNR=4.0						
	0.5nm,0.3s						

IDC ***07*** *10:55:34.2±0.4, 22°.83S×171°.51E, h0km, mb5.0/22, mbtmp5.0/24, ML4.8/2, MS4.9/43, Error ellipse: s-maj=14.3km s-min=13.5km az=34.0*

MOS ***07*** *10:55:35.2±1.3, 22°.84S×171°.31E, h10km, mb5.5/51, MS5.0/17, Error ellipse: s-maj=7.9km s-min=7.4km az=122.7*

BJI ***07*** *10:55:37.0±0.0, 22°.90S×171°.40E, h30km, mb5.3/69, mB5.4/57, Ms5.2/59, Ms7 4.9/56*

NEIC ***07*** *10:55:37.3±1.6, 22°.93S±0°.08×171°.38E±0°.07, h14km±3km, mb5.4/230, Ms_20 5.2/212, Error ellipse: s-maj=11.2km s-min=9.5km az=169.0*

GCMT ***07*** *10:55:41.3±0.1, 22°.91S±0°.01×171°.40E±0°.01, h15km±1km, MW5.3/136, Moment Tensor Solution. s80,c129; s136,c229; Duration: 1s1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.03±.01; $M_{\theta\theta}$-0.17±.01; $M_{\phi\phi}$0.14±.01; $M_{r\theta}$0.95±.10; $M_{\theta\phi}$0.51±.01; $M_{\phi r}$0.13±.03; Best double couple: $M_0$1.09700×10^{17} NP1:ϕ_s83.00000°, δ89.00000°, λ61.00000°. NP2:ϕ_s351.00000°, δ29.00000°, λ178.00000°. Principal axes: T 1.0920, Plg39.0000°, Azm326.0000°; N 0.0100, Plg29.0000°, Azm83.0000°; P -1.1010, Plg37.0000°, Azm198.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NOU ***07*** *10:55:43.1, 22°.92S×171°.24E, h40km, ML5.4/108, Southeast of Loyalty Islands*

ISC 07 10:55:37.2±0.5**, 22°.98S**±0°.04×**171°.38E**±0°.04**, h17km**±2km**, h17km:pP-P, n1142, σ1s49**/1031**, mb5.4**/225**, MS5.2**/182**, 51C-46D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINNC	**Pines Island,**	**3.65**	**275**		**Pn**	**10 56 33.3**	**+0.3**
PINNC	**Pines Island,**	**3.65**	**275**	P	**Pn**	**10 56 33.3**	**+0.3**
OUENC	**Ouen Island, N**	**4.23**	**277**	Pn	**Pn**	**10 56 41.2**	**+0.1**
OUENC	**Ouen Island, N**	**4.23**	**277**	P	**Pn**	**10 56 41.4**	**+0.4**
YATNC	**Mamie plateau,**	**4.25**	**282**	P	**Pn**	**10 56 41.9**	**+0.6**
ONTNC	**Ouen Toro**	**4.60**	**277**	Pn	**Pn**	**10 56 46.3**	**+0.2**
ONTNC	**Ouen Toro**	**4.60**	**277**	P	**Pn**	**10 56 46.9**	**+0.8**
DZM	**Mont Dzumac**	**4.66**	**280**	*e*Pn	**Pn**	**10 56 45.4**	**-1.5**
	1μm,0.9s						
DZM				*e*LR	LR	10 57 47.0	
	comp=Z,7μm,25.8s						
DZM	**Mont Dzumac**	**4.66**	**280**	Pn	**Pn**	**10 56 47.3**	**+0.4**
	52nm,0.3s,baz=128,slow=12,SNR=318						
DZM				Sn	**Sn**	**10 57 40.0**	**-0.7**
	50nm,0.3s,baz=86,slow=21,SNR=2.4						
	213nm,0.5s						
DZM	**Mont Dzumac**	**4.66**	**280**	Pn	**Pn**	**10 56 47.2**	**+0.3**
DZM	**Mont Dzumac**	**4.66**	**280**	P	**Pn**	**10 56 47.5**	**+0.6**
NOUC	**Port Laguerre**	**4.78**	**280**	P	**Pn**	**10 56 49.1**	**+0.6**
RTV	**Rentapao**	**5.86**	**331**	P	Pn	10 57 08.0	+4.6
DVP	**Devils Point**	**6.03**	**330**	P	**Pn**	**10 57 09.6**	**+3.9**
NFK	**Norfolk Island**	**6.79**	**206**	P	**Pn**	**10 57 15.2**	**-0.9**
	baz=6.8,SNR=126						
KOUNC	**Koumac, New Ca**	**7.03**	**289**	Pn	**Pn**	**10 57 18.0**	**-1.4**
KOUNC	**Koumac, New Ca**	**7.03**	**289**	P	**Pn**	**10 57 20.7**	**+1.3**
MSVF	**Nonsavu**	**8.14**	**51**	Pn	**Pn**	**10 57 38.1**	**+3.2**
	1.7nm,0.3s,baz=178,slow=20,SNR=22						
MSVF	**Nonsavu**	**8.14**	**51**	P	**Pn**	**10 57 38.9**	**+4.0**
	439nm,1.2s						
MSVF	**Nonsavu**	**8.14**	**51**	P	**Pn**	**10 57 38.0**	**+3.1**
YSA	**Yasawairara**	**8.54**	**44**	P	**Pn**	**10 57 43.2**	**+2.9**
LKBA	**Tubou, Lakemba**	**10.32**	**65**	P	Pn	10 58 09.9	+5.3
RAO	**Raoul Island**	**11.46**	**125**	LR	LR	11 01 44.4	
	comp=Z,9μm,19.9s,baz=314,slow=32						
LHI	**Lord Howe Isla**	**13.86**	**230**	Pn	**Pn**	**10 58 53.9**	**+0.8**
KUZ	**Kuaotunu**	**14.22**	**166**	P	**Pn**	**10 59 02.2**	**+4.3**
HIZ	**Hauiti**	**15.77**	**170**		**Pn**	**10 59 18.6**	**+0.1**
HIZ				IAmb	IAmb	10 59 27.1	
	comp=Z,431nm,1.2s						
URZ	**Urewera**	**16.00**	**163**	Pn	**P**	**10 59 25.2**	**+0.2**
	comp=Z,2.5nm,0.3s,baz=97,slow=3.3,SNR=20						
URZ				LR	LR	11 04 11.3	
	comp=Z,10μm,19.6s,baz=94,slow=32						
RTZ	**Ruatahuna**	**16.30**	**164**	Pn	**Pn**	**10 59 26.6**	**+1.1**
RTZ				IAmb	IAmb	10 59 33.2	
	comp=Z,532nm,1.8s						
BKZ	**Black Stump Fm**	**16.71**	**166**	Pn	**Pn**	**10 59 31.9**	**+1.2**
BKZ				IAmb	IAmb	10 59 37.5	
	comp=Z,247nm,1.1s						
BKZ	**Black Stump Fm**	**16.71**	**166**	P	**P**	**10 59 35.6**	**+2.7**
AUWSH	**Wavell State H**	**17.17**	**251**	P	**P**	**10 59 38.9**	**+0.8**
HNR	**Honiara**	**17.36**	**319**	P	**Pn**	**10 59 39.0**	**0.0**
	comp=Z,4μm,0.7s,baz=161,slow=5.1,SNR=18						
HNR				LR	LR	11 05 17.6	
	comp=Z,29μm,19.5s,baz=152,slow=34						
HNR	**Honiara**	**17.36**	**319**	Pn	**Pn**	**10 59 37.9**	**-1.0**
HNR	**Honiara**	**17.36**	**319**	P	**P**	**10 59 41.4**	**+1.2**
HNR	**Honiara**	**17.36**	**319**	P	**Pn**	**10 59 39.0**	**0.0**
NIUE	**Niue**	**17.87**	**81**		**Pn**	**10 59 44.8**	**-0.4**
MRZ	**Mangatainoka R**	**17.98**	**170**		**P**	**10 59 47.9**	**+1.0**
MRZ				IAmb	IAmb	10 59 50.2	
	comp=Z,197nm,1.0s						
BFZ	**Birch Farm**	**18.12**	**168**		**Pn**	**10 59 49.0**	**+0.9**
NNZ	**Nelson**	**18.26**	**175**	P	**Pn**	**10 59 50.1**	**+0.3**
NNZ				IAmb	IAmb	10 59 54.7	
	comp=Z,427nm,1.4s						
AFI	**Afiamalu**	**18.33**	**63**	P	**Pn**	**10 59 47.5**	**-3.4**
	comp=Z,2.4nm,0.3s,baz=210,slow=18,SNR=3.7						
AFI				LR	LR	11 05 21.4	
	comp=Z,2μm,18.2s,baz=230,slow=32						
	comp=Z,31nm,0.8s						
TCW	**Tory Channel**	**18.34**	**173**	P	**P**	**10 59 51.8**	**+1.0**
SNZO	**South Karori**	**18.49**	**172**	P	**P**	**10 59 52.7**	**+0.2**
SNZO	**South Karori**	**18.49**	**172**	P	**Pn**	**10 59 57.2**	**+4.6**
TUWZ	**Tuamarina**	**18.52**	**174**	P	**Pn**	**10 59 54.9**	**+1.9**
EIDS	**Eidsvold**	**18.68**	**259**	P	**Pn**	**10 59 55.4**	**+0.4**
	baz=19,SNR=8.3						
EIDS	**Eidsvold**	**18.68**	**259**	P	**P**	**10 59 53.5**	**-1.2**
EIDS	**Eidsvold**	**18.68**	**259**	P	**Pn**	**10 59 56.3**	**+1.2**
DSZ	**Denniston Nort**	**18.71**	**179**		**P**	**10 59 55.6**	**+0.6**
THZ	**Tophouse**	**18.77**	**176**	P	**Pn**	**10 59 57.4**	**+1.2**
ARMA	**Armidale**	**19.13**	**243**	P	**P**	**11 00 00.4**	**+0.7**
	baz=19,SNR=6.8						
ARMA	**Armidale**	**19.13**	**243**	P	**P**	**10 59 60.0**	**+0.2**
ARMA	**Armidale**	**19.13**	**243**	P	**Pn**	**11 00 02.6**	**+2.0**
KHZ	**Kahutara**	**19.46**	**175**	P	**P**	**11 00 03.9**	**+0.7**
KHZ				IAmb	IAmb	11 00 07.8	
	comp=Z,346nm,1.4s						
INZ	**Inchbonnie**	**19.69**	**180**	P	**Pn**	**11 00 07.8**	**+0.7**
INZ				IAmb	IAmb	11 00 09.9	
	comp=Z,333nm,1.0s						
LTZ	**Lake Taylor**	**19.76**	**178**	P	**Pn**	**11 00 08.3**	**+0.3**
LTZ				IAmb	IAmb	11 00 10.6	
	comp=Z,233nm,0.9s						
AUPHS	**Peel High Scho**	**19.95**	**242**	P	**Pn**	**11 00 10.4**	**+0.1**
GVZ	**Greta Valley S**	**19.98**	**176**	P	**P**	**11 00 09.7**	**+0.9**
GVZ				IAmb	IAmb	11 00 10.6	
	comp=Z,119nm,0.8s						
AMCZ	**Amberley**	**20.17**	**177**	P	**P**	**11 00 11.8**	**+0.9**
OXZ	**Oxford**	**20.30**	**179**	P	**P**	**11 00 13.3**	**+1.0**
OXZ				IAmb	IAmb	11 00 17.2	
	comp=Z,182nm,0.9s						
FOZ	**Fox Glacier**	**20.54**	**183**	P	**P**	**11 00 16.9**	**+2.1**
MGCD	**Mangrove Creek**	**20.55**	**236**	P	**P**	**11 00 15.1**	**0.0**
	baz=21,SNR=5.7						
MGCD	**Mangrove Creek**	**20.55**	**236**	P	Pn	11 00 17.1	-0.3
RPZ	**Rata Peaks**	**20.68**	**181**	P	**P**	**11 00 17.2**	**+0.8**
	comp=Z,278nm,1.0s,baz=35,slow=6.8,SNR=22						
RPZ				LR	LR	11 07 18.0	
	comp=Z,4μm,19.0s,baz=18,slow=34						
	comp=Z,278nm,1.0s						
RPZ	**Rata Peaks**	**20.68**	**181**	P	**P**	**11 00 17.3**	**+0.8**
RMQ	**Roma**	**20.84**	**256**	P	**P**	**11 00 19.2**	**+0.9**
	baz=21,SNR=32						
RMQ	**Roma**	**20.84**	**256**	P	Pn	11 00 23.0	+2.2
JCZ	**Jackson Bay**	**21.15**	**185**	P	**P**	**11 00 24.8**	**+3.3**
AULRC	**Lightning Ridg**	**21.94**	**248**	P	**P**	**11 00 34.0**	**+3.9**
ODZ	**Otahua Downs**	**22.02**	**181**	P	**P**	**11 00 31.5**	**+0.7**
ODZ				IAmb	IAmb	11 00 33.5	
	comp=Z,164nm,1.1s						
AUDCS	**Dubbo College**	**22.13**	**240**	P	**P**	**11 00 35.8**	**+3.6**
CNB	**Canberra Magne**	**22.77**	**232**	P	**P**	**11 00 42.3**	**+3.3**
WHZ	**Wether Hill Ro**	**23.03**	**186**	P	**P**	**11 00 43.4**	**+1.9**
CAN	**Canberra**	**23.04**	**233**	P	**P**	**11 00 40.7**	**-1.1**
CAN	**Canberra**	**23.04**	**233**	P	**P**	**11 00 44.4**	**+2.7**
CAN	**Canberra**	**23.04**	**233**	P	**P**	**11 00 40.7**	**-1.1**
CAN				pmax	pmax		
	comp=Z,64nm,1.0s						
CAN				MLR	MLR		
	comp=Z,3μm,19.0s						
YNG	**Young**	**23.06**	**236**	P	**P**	**11 00 45.0**	**+3.0**
CTA	**Charters Tower**	**23.55**	**272**	P	**P**	**11 00 48.5**	**+1.6**
	comp=Z,9.7nm,0.4s,baz=92,slow=11,SNR=30						
CTA				LR	LR	11 09 15.5	
	comp=Z,719nm,19.5s,baz=94,slow=35						
	comp=Z,9.7nm,0.4s						
CTAO	**Charters Tower**	**23.55**	**272**	P	**P**	**11 00 47.5**	**+0.6**
CTAO	**Charters Tower**	**23.55**	**272**	P	**P**	**11 00 48.6**	**+1.6**
CTAO	**Charters Tower**	**23.55**	**272**	P	**P**	**11 00 47.5**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,51nm,1.0s						
CTAO				MLR	MLR		
	comp=Z,2μm,18.0s						
SYZ	**Scrubby Hill**	**23.57**	**184**	P	**P**	**11 00 50.2**	**+3.3**
MILA	**Mila**	**23.74**	**229**	P	**P**	**11 00 49.8**	**+1.0**
	baz=24,SNR=6.2						
TARA	**Tarawa**	**24.23**	**4**	P	**P**	**11 00 52.9**	**-0.6**
TARA	**Tarawa**	**24.23**	**4**	P	**P**	**11 00 55.9**	**+2.5**
	comp=Z,202nm,1.1s						
CMSA	**Cobar Meteorol**	**24.33**	**244**	P	**P**	**11 00 55.6**	**+1.3**
	baz=24,SNR=75						

CMSA	Cobar Meteorol	24.33	244	P	P	11 00 55.8	+1.5
QLP	Quilpie	24.89	256	P	P	11 01 00.2	+0.8
	baz=25,SNR=8.0						
QLP	Quilpie	24.89	256	P	P	11 01 01.6	+2.2
MTSU	Mount Surprise	25.78	276	P	P	11 01 09.1	+1.5
	baz=26,SNR=151						
MTSU	Mount Surprise	25.78	276	P	P	11 01 09.1	+1.5
KRVT	Keravat (AS076	26.36	312	P	P	11 01 11.9	-0.9
	comp=Z,92nm,0.8s,baz=152,slow=2.9,SNR=12						
	comp=Z,92nm,0.8s						
TOO	Toolangi	26.56	231	P	P	11 01 16.2	+1.7
	baz=27,SNR=11						
TOO	Toolangi	26.56	231	P	P	11 01 15.0	+0.5
TOO				IAmb	IAmb	11 01 18.7	
	comp=Z,64nm,1.0s						
TOO	Toolangi	26.56	231	P	P	11 01 16.2	+1.7
TOO	Toolangi	26.56	231	P	P	11 01 15.0	+0.5
TOO				pmax	pmax		
	comp=Z,64nm,1.0s						
GLAD	Gladstone	26.61	222	P	P	11 01 18.8	+4.0
	comp=Z,74nm,1.0s						
RAR	Rarotonga	26.77	92	LR	LR	11 11 15.4	
	comp=Z,770nm,18.2s,baz=260,slow=35						
PMG	Port Moresby	26.84	296	P	P	11 01 17.4	+0.3
	comp=Z,66nm,0.6s,baz=110,slow=5.9,SNR=34						
PMG				LR	LR	11 10 45.3	
	comp=Z,2μm,19.9s,baz=126,slow=34						
	comp=Z,66nm,0.6s						
PMG	Port Moresby	26.84	296	P	P	11 01 17.2	+0.1
PMG				IAmb	IAmb	11 01 18.5	
	comp=Z,76nm,0.7s						
PMG	Port Moresby	26.84	296	P	P	11 01 17.6	+0.5
PMG	Port Moresby	26.84	296	P	P	11 01 17.2	+0.1
PMG				pmax	pmax		
	comp=Z,76nm,0.7s						
PMG				MLR	MLR		
	comp=Z,5μm,18.0s						
CORO	Coronation Par	27.41	222	P	P	11 01 26.1	+4.1
	comp=Z,29nm,1.2s						
BRAT	Ballarat	27.68	232	P	P	11 01 28.1	+3.7
	comp=Z,33nm,1.2s						
STKA	Stephens Creek	27.82	245	P	P	11 01 27.1	+1.3
	comp=Z,10nm,0.9s,baz=91,slow=14,SNR=11						
STKA				LR	LR	11 11 38.7	
	comp=Z,1μm,19.6s,baz=74,slow=34						
	comp=Z,10nm,0.9s						
STKA	Stephens Creek	27.82	245	P	P	11 01 27.1	+1.3
	baz=28,SNR=12						
STKA	Stephens Creek	27.82	245	P	P	11 01 26.3	+0.5
STKA	Stephens Creek	27.82	245	P	P	11 01 27.1	+1.3
STKA	Stephens Creek	27.82	245	P	P	11 01 26.3	+0.5
STKA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MOO	Moorlands	27.96	220	P	P	11 01 28.4	+1.5
	baz=28,SNR=8.6						
MOO	Moorlands	27.96	220	P	P	11 01 30.3	+3.4
INKA	Innaminka	28.05	254	P	P	11 01 30.0	+2.1
TAU	Tasmania Unive	28.16	219	P	P	11 01 29.0	+0.3
TAU				IAmb	IAmb	11 01 33.4	
	comp=Z,70nm,1.3s						
TAU	Tasmania Unive	28.16	219	P	P	11 01 29.0	+0.3
TAU				pmax	pmax		
	comp=Z,70nm,1.3s						
TAU				MLR	MLR		
	comp=Z,5μm,20.0s						
COEN	Coen	28.18	284	P	P	11 01 30.9	+1.8
	baz=28,SNR=51						
COEN	Coen	28.18	284	P	P	11 01 30.4	+1.2
COEN				IAmb	IAmb	11 01 33.5	
	comp=Z,79nm,0.9s						
COEN	Coen	28.18	284	P	P	11 01 27.7	-1.4
ARPS	Mount Arapiles	28.94	235	P	P	11 01 37.3	+1.6
	baz=29,SNR=5.2						
ARPS	Mount Arapiles	28.94	235	P	P	11 01 38.7	+3.0
	comp=Z,47nm,1.1s						
QIS	Mount Isa	29.58	269	P	P	11 01 41.9	+0.3
	baz=30,SNR=5.3						
QIS	Mount Isa	29.58	269	P	P	11 01 43.6	+2.0
HTT	Hallett	30.33	243	P	P	11 01 48.8	+0.7
	baz=30,SNR=8.3						
HTT	Hallett	30.33	243	P	P	11 01 50.2	+2.0
LCRK	Leigh Creek	30.47	249	P	P	11 01 49.7	+0.4
WHYH	Whyalla	31.37	244	P	P	11 01 59.7	+2.5
	comp=Z,89nm,1.2s						
OOD	Oodnadatta	32.53	254	P	P	11 02 09.2	+1.7
BBOO	Buckleboo	32.59	245	P	P	11 02 08.8	+0.8
	baz=33,SNR=4.8						
BBOO	Buckleboo	32.59	245	P	P	11 02 06.6	-1.4
BBOO				IAmb	IAmb	11 02 21.5	
	comp=Z,76nm,0.9s						
BBOO	Buckleboo	32.59	245	P	P	11 02 10.3	+2.3
MULG	Mulgathing	34.03	250	P	P	11 02 22.6	+2.0
AS01	Alice Springs	34.32	261	P	P	11 02 23.8	+0.6
	comp=Z,34nm,0.9s						
AS31	Alice Springs	34.36	261	P	P	11 02 23.4	-0.1
ASAR	Alice Springs	34.36	261	P	P	11 02 23.6	0.0
	comp=Z,15nm,0.8s,baz=72,slow=8.2,SNR=215						
ASAR				LR	LR	11 16 17.3	
	comp=Z,1μm,18.9s,baz=102,slow=36						
	comp=Z,15nm,0.8s						
ASAR	Alice Springs	34.36	261	P	P	11 02 23.4	-0.2
WR0	Warramunga Arr	34.36	268	P	P	11 02 22.6	-1.0
WB0	Warramunga Arr	34.54	268	P	P	11 02 23.1	-2.0
WB0				IAmb	IAmb	11 02 46.5	
	comp=Z,53nm,1.6s						
WB2	Warramunga Arr	34.54	268	P	P	11 02 23.3	-1.8
WB2				IAmb	IAmb	11 02 45.7	
	comp=Z,56nm,1.6s						
WRAB	Tennant Creek	34.54	268	P	P	11 02 23.4	-1.8
WRAB				IAmb	IAmb	11 02 36.9	
	comp=Z,37nm,0.7s						
WRAB	Tennant Creek	34.54	268	P	P	11 02 25.1	-0.1
WRAB	Tennant Creek	34.54	268	P	P	11 02 23.4	-1.8
WRAB				pmax	pmax		
	comp=Z,37nm,0.7s						
WRAB				MLR	MLR		
	comp=Z,2μm,18.0s						
WRA	Warramunga Arr	34.55	268	P	P	11 02 24.4	-0.9
	comp=Z,4.4nm,0.4s,baz=99,slow=8.4,SNR=108						
WRA				S	S	11 07 48.8	-5.0
	comp=Z,1.7nm,1.0s,baz=93,slow=15,SNR=3.6						
WRA				LR	LR	11 16 38.4	
	comp=Z,1μm,18.9s,baz=102,slow=36						
	comp=Z,4.4nm,0.4s						
WRA	Warramunga Arr	34.55	268	P	P	11 02 24.4	-0.9
TBI	Tubuai	35.93	98	*e*S	S	11 08 15.8	+1.1
	comp=Z,806nm,27.5s						
TBI				*e*LQ	LQ	11 10 44.9	
	comp=Z,3μm,24.5s						
TBI				*e*LR	LR	11 12 21.5	
	comp=Z,3μm,25.5s						
TBI				*e*LR	LR	11 12 21.8	
	comp=Z,10μm,23.8s						
GENI	Genyem	36.41	299	P	P	11 02 43.3	+2.1
GENI	Genyem	36.41	299	P	P	11 02 42.0	+0.8
	comp=Z,209nm,1.1s						
PPT2	Papeete2	36.93	89	*e*P	P	11 02 48.4	+2.7
	comp=Z,89nm,1.5s						
PPT2				*e*S	S	11 08 31.0	+0.6
	comp=Z,100nm,24.5s						
PPT2				*e*LQ	LQ	11 11 06.4	
	comp=Z,1μm,24.2s						
PPT2				*e*LR	LR	11 12 49.4	
	comp=Z,1μm,24.5s						
PPT2				*e*LR	LR	11 12 49.8	
	comp=Z,812nm,26.0s						
PPT	Papeete	36.94	89	P	P	11 02 44.9	-0.8
	comp=Z,31nm,0.8s,baz=288,slow=6.4,SNR=4.3						
PPT				LR	LR	11 17 18.2	
	comp=Z,963nm,18.2s,baz=270,slow=35						
	comp=Z,31nm,0.8s						
PPTF	Pamatai, Papee	36.94	89	P	P	11 02 45.5	-0.3
PPTF				IAmb	IAmb	11 02 56.2	
	comp=Z,135nm,1.3s						
TIAR	Tiarei	37.15	89	*e*P	P	11 02 49.1	+1.5
	comp=Z,7.5nm,0.8s						
SMPI	Sarmi	37.94	299	P	P	11 02 54.9	+0.7
	comp=Z,89nm,1.6s,comp=Z,2μm						
MEH	Mehetia	38.25	90	*e*P	P	11 02 58.0	+1.1
	comp=Z,34nm,1.1s						
KDU	Kakadu	38.32	279	P	P	11 02 57.6	+0.2
	baz=38,SNR=25						
KDU	Kakadu	38.32	279	P	P	11 02 58.0	+0.6
PMOR	Pomariorio Ree	39.21	86	*e*P	P	11 03 06.3	+1.4
	comp=Z,110nm,1.0s						
FORT	Forrest	39.23	249	P	P	11 03 05.3	+0.4
	baz=39,SNR=17						
FORT	Forrest	39.23	249	P	P	11 03 04.0	-0.9
FORT				IAmb	IAmb	11 03 20.5	
	comp=Z,90nm,0.8s						
FORT	Forrest	39.23	249	P	P	11 03 07.0	+2.1
WRKA	Warakurna	39.29	258	P	P	11 03 05.8	+0.3
	baz=39,SNR=43						
WRKA	Warakurna	39.29	258	P	P	11 03 07.4	+1.8
MTN	Manton Dam	39.49	278	P	P	11 03 07.2	0.0
	baz=40,SNR=15						
MTN	Manton Dam	39.49	278	P	P	11 03 06.7	-0.5
MTN	Manton Dam	39.49	278	P	P	11 03 07.2	0.0
SRPI	Serui, Papua	40.02	297	P	P	11 03 11.4	-0.3
	comp=Z,72nm,0.4s						
KNRA	Kununurra	40.76	272	P	P	11 03 17.7	0.0
	baz=41,SNR=9.2						
KNRA	Kununurra	40.76	272	P	P	11 03 17.4	-0.3
KNRA				IAmb	IAmb	11 03 24.8	
	comp=Z,46nm,0.9s						
KNRA	Kununurra	40.76	272	P	P	11 03 18.5	+0.8
SAUI	Saumlaki	41.24	285	IAMs_20	IAMs_20	11 21 48.7	
	comp=Z,3μm,18.0s						
H11S2	WAKE ISLAND Hy	41.47	353	T	T	11 47 37.9	
	baz=172,slow=76,SNR=5.6						
H11S3	WAKE ISLAND Hy	41.48	353	T	T	11 47 19.3	
	baz=172,slow=76,SNR=4.7						
H11S1	WAKE ISLAND Hy	41.49	353	T	T	11 47 12.3	
	baz=172,slow=76,SNR=4.7						
RKPI	Ransiki, Papua	41.94	295	P	P	11 03 36.4	+9.0
WAKE	Wake Island	42.26	353	IAMs_20	IAMs_20	11 17 39.9	
	comp=Z,3μm,19.0s						
FAKI	Fak Fak	42.81	292	P	P	11 03 33.5	-1.1
FAKI				IAmb	IAmb	11 04 02.7	
	comp=Z,73nm,1.1s						
FAKI	Fak Fak	42.81	292	P	P	11 03 34.0	-0.6
	comp=Z,65nm,1.1s						
BNDI	Bandanaira	44.05	288	P	P	11 03 46.4	+1.8
KMBL	Kambalda	44.52	248	P	P	11 03 48.1	-0.1
	baz=44,SNR=5.9						
KMBL	Kambalda	44.52	248	P	P	11 03 50.0	+1.8
	comp=Z,127nm,1.0s						
GUMO	Guam	44.67	322	LR	LR	11 22 48.5	
	comp=Z,2μm,18.0s,baz=130,slow=37						
AAI	Ambon	45.95	288	P	P	11 03 58.4	-1.3
	comp=Z,100nm,1.2s						
SOEI	Soe	46.88	278	P	P	11 04 05.6	-1.5
SOEI				IAMs_20	IAMs_20	11 25 34.1	
	comp=Z,2μm,18.0s						
SOEI	Soe	46.88	278	P	P	11 04 10.9	+3.7
SOEI	Soe	46.88	278	P	P	11 04 07.3	+0.1
	comp=Z,100nm,1.4s						
NLAI	Namlea	47.12	288	P	P	11 04 09.5	+0.6
	comp=Z,36nm,0.7s,comp=Z,4μm						
PSA00	Pilbara Seismi	47.51	261	P	P	11 04 12.0	+0.1
PSA00				IAmb	IAmb	11 04 25.5	
	comp=Z,43nm,1.5s						
PSA00	Pilbara Seismi	47.51	261	P	P	11 04 12.8	+0.9
MBWA	Marble Bar	47.70	262	P	P	11 04 13.2	-0.2
MBWA				IAmb	IAmb	11 04 30.6	
	comp=Z,50nm,0.9s						
MBWA	Marble Bar	47.70	262	IAMs_20	IAMs_20	11 25 05.0	
	comp=Z,2μm,18.0s						
MBWA	Marble Bar	47.70	262	P	P	11 04 14.0	+0.6
MEEK	Meekatharra	47.77	254	P	P	11 04 13.8	-0.1
	baz=48,SNR=7.0						
MEEK	Meekatharra	47.77	254	P	P	11 04 14.5	+0.6
KLBR	Kellerberrin	48.03	248	P	P	11 04 15.8	0.0
	baz=48,SNR=8.8						
KLBR	Kellerberrin	48.03	248	P	P	11 04 17.8	+2.0
LBMI	Labuha	48.05	291	P	P	11 04 17.5	+1.4
	comp=Z,116nm,1.1s,comp=Z,2μm						
NWAO	Narrogin (SRO)	48.40	246	LR	LR	11 23 54.3	
	comp=Z,2μm,19.6s,slow=35						
NWAO	Narrogin (SRO)	48.40	246	P	P	11 04 20.0	+1.4
	baz=48,SNR=4.8						
NWAO				P	P	11 04 20.0	+1.4
	baz=48,SNR=4.8						
NWAO	Narrogin (SRO)	48.40	246	P	P	11 04 17.0	-1.6
NWAO	Narrogin (SRO)	48.40	246	IAMs_20	IAMs_20	11 22 37.3	
	comp=Z,3μm,21.0s						
NWAO	Narrogin (SRO)	48.40	246	P	P	11 04 19.6	+1.0
NWAO	Narrogin (SRO)	48.40	246	P	P	11 04 17.0	-1.6
NWAO				pmax	pmax		
	comp=Z,121nm,1.0s						
TAOE	Nuku Hiva Isla	48.45	81	*e*P	P	11 04 21.8	+2.4
	comp=Z,62nm,23.6s						
TAOE	Nuku Hiva Isla	48.45	81	*e*LR	LR	11 18 09.0	
	comp=Z,766nm,22.7s						
TAOE	Nuku Hiva Isla	48.45	81	P	P	11 04 18.6	-0.8
SANI	Sanana	48.66	289	P	P	11 04 21.7	+0.9
SANI	Sanana	48.66	289	P	P	11 04 20.8	0.0
	comp=Z,162nm,0.9s,comp=Z,2μmcomp=Z,2μm						
BLDU	Ballidu	49.00	249	P	P	11 04 23.0	-0.3
	baz=49,SNR=9.9						
MMRI	Maumere	49.16	279	P	P	11 04 24.7	0.0
	comp=Z,144nm,0.7s,comp=Z,3μm						
MUN	Mundaring	49.32	247	P	P	11 04 25.4	-0.3
	baz=49,SNR=5.3						
MUN	Mundaring	49.32	247	P	P	11 04 28.3	+2.6
MORW	Morawa	49.73	251	P	P	11 04 28.9	+0.1
	baz=50,SNR=4.4						
MORW	Morawa	49.73	251	P	P	11 04 28.8	-0.1
MORW				IAmb	IAmb	11 04 42.1	
	comp=Z,59nm,1.0s						
MORW	Morawa	49.73	251	P	P	11 04 31.2	+2.3
	comp=Z,69nm,1.4s						
BASI	Baing, Sumba	50.08	276	P	P	11 04 31.7	0.0
	comp=Z,295nm,1.0s						
LUWI	Luwuk	51.96	288	P	P	11 04 50.6	+4.8
LUWI	Luwuk	51.96	288	P	P	11 04 44.1	-1.7
	comp=Z,201nm,1.2s						
GIRL	Giralia	52.38	258	P	P	11 04 49.4	+0.5
	baz=52,SNR=3.3						
BKSI	Bulukumba	52.41	281	P	P	11 04 48.2	-1.0
	comp=Z,62nm,0.9s						
GTOI	Gorontalo	52.56	290	P	P	11 04 50.9	+0.6
	comp=Z,39nm,1.2s,comp=Z,474nm						
KAPI	Kappang	52.87	282	P	P	11 04 51.5	-1.2
KAPI	Kappang	52.87	282	P	P	11 04 56.3	+3.7
	comp=Z,105nm,1.3s						
KAPI	Kappang	52.87	282	P	P	11 04 51.5	-1.2
KAPI				pmax	pmax		
	comp=Z,216nm,1.4s						
PLAI	Plampang	53.16	276	P	P	11 04 54.2	-0.6
	comp=Z,79nm,1.1s						
SPSI	Sidrap Palu	53.30	283	P	P	11 04 55.1	-0.7
	comp=Z,27nm,1.4s,comp=Z,2μm						
MRSI	Marisa	53.42	289	P	P	11 04 55.3	-1.3
	comp=Z,45nm,1.2s						
DAV	Davao City (W)	53.83	298	LR	LR	11 29 27.3	
	comp=Z,340nm,18.0s,baz=128,slow=38						
TWSI	Taliwang, Sumb	54.01	276	P	P	11 04 59.6	-1.4
	comp=Z,78nm,1.2s,comp=Z,846nm						
TOLI2	Tolitoli	54.74	289	P	P	11 05 05.0	-1.2
TOLI2	Tolitoli	54.74	289	P	P	11 05 07.3	+1.0
VNDA	Vanda	54.79	183	P	P	11 05 06.8	+1.1
	comp=Z,15nm,1.3s,baz=349,slow=7.3,SNR=8.5						
	comp=Z,15nm,1.3s						
VNDA	Vanda	54.79	183	P	P	11 05 06.8	+1.1
VNDA				IAmb	IAmb	11 05 11.5	
	comp=Z,49nm,1.7s						
VNDA	Vanda	54.79	183	P	P	11 05 06.8	+1.1
VNDA				pmax	pmax		
	comp=Z,49nm,1.7s						
SBA	Scott Base	54.97	181	P	P	11 05 07.9	+0.9
SBA	Scott Base	54.97	181	P	P	11 05 07.9	+0.9
SBA				pmax	pmax		
	comp=Z,89nm,1.1s						
MPSI	Mapaga	55.14	288	P	P	11 05 08.1	-1.1
	comp=Z,54nm,0.8s						
SRBI	Singaraja	55.79	276	P	P	11 05 13.0	-0.9
	comp=Z,91nm,0.9s,comp=Z,1μm						
JAGI	Jajag, Banyuwa	56.62	275	P	P	11 05 19.1	-0.8
JAGI	Jajag, Banyuwa	56.62	275	P	P	11 05 23.4	+3.6
JAGI	Jajag, Banyuwa	56.62	275	P	P	11 05 18.8	-1.0
	comp=Z,84nm,1.1s						
ABJI	Asem Bagus	56.79	276	P	P	11 05 21.1	+0.1
	comp=Z,48nm,1.1s						
BKB	Balikpapan	57.07	284	P	P	11 05 23.8	+0.8
	comp=Z,61nm,0.5s,comp=Z,4μm						
JCJ	Chichijima	57.23	329	LR	LR	11 28 11.7	
	comp=Z,617nm,20.9s,baz=167,slow=34						
GMJI	Gumukmas	57.34	275	P	P	11 05 26.1	+1.2
	comp=Z,39nm,1.0s						
BLJI	Banyuglugur	57.40	276	P	P	11 05 26.5	+1.2
	comp=Z,40nm,0.7s						
BBKI	Banjar Baru	57.96	281	P	P	11 05 29.8	+0.5
MYLDM	Lahad Datu	58.73	292	P	P	11 05 33.1	-1.5
PWJI	Pagerwojo	58.94	274	P	P	11 05 34.9	-1.2
	comp=Z,30nm,1.1s						
NGJI	Ngawi	59.50	275	P	P	11 05 40.0	0.0
	comp=Z,30nm,2.4s						
KKM	Kota Kinabalu	61.13	291	P	P	11 05 49.6	-1.7
KKM	Kota Kinabalu	61.13	291	P	P	11 05 54.8	+3.6
PBKI	Pangkalan Bun	61.16	280	P	P	11 05 50.7	-0.7
	comp=Z,130nm,1.0s,comp=Z,4μm						
KPJI	Karang Pucung	61.84	274	P	P	11 05 56.2	+0.3
	comp=Z,56nm,0.8s						
CMJI	Cimerak	62.11	273	P	P	11 05 57.7	-0.1
	comp=Z,71nm,1.1s						
SBUM	Sibu	62.91	286	P	P	11 06 02.2	-0.9
BBJI	Bungbulang	62.97	273	P	P	11 06 04.0	+0.4
JHJ	Hachijo jima 2	63.41	331	LR	LR	11 33 38.6	
	comp=Z,581nm,19.0s,baz=108,slow=36						
CNJI	Cibinong	63.50	273	P	P	11 06 05.3	-1.8
	comp=Z,43nm,1.1s						
CBJI	Citeko	64.09	274	P	P	11 06 09.9	-1.1
KSM	Kuching	64.17	284	P	P	11 06 10.4	-1.1
KSM	Kuching	64.17	284	P	P	11 06 12.3	+0.8
	comp=Z,73nm,1.0s						
JOW	Kunigami	64.73	318	LR	LR	11 34 14.5	
	comp=Z,765nm,18.5s,baz=140,slow=36						
CGJI	Cibinong	65.08	273	P	P	11 06 17.1	-0.3
PPBI	Pangkal Pinang	66.41	278	P	P	11 06 27.0	+1.0
	comp=Z,37nm,1.5s,comp=Z,7μm						
INU	Inuyama	66.53	330	P	P	11 06 25.5	-0.8
INU	Inuyama	66.53	330	P	P	11 06 28.0	+1.7
YOJ	Yonaguni jima	66.55	312	P	P	11 06 26.0	-0.6
YOJ	Yonaguni jima	66.55	312	P	P	11 06 26.0	-0.6
YOJ				pmax	pmax		
	comp=Z,115nm,0.9s						
KASI	Kota Agung	66.60	274	P	P	11 06 26.8	-0.4
	comp=Z,95nm,1.0s						
MJAR	Matsushiro Arr	66.98	331	P	P	11 06 27.9	-1.3
	comp=Z,25nm,1.3s,baz=169,slow=7.5,SNR=9.1						
MJAR				LR	LR	11 36 31.0	
	comp=Z,534nm,18.8s,baz=133,slow=37						
	comp=Z,25nm,1.3s						
MAJO	Matsushiro	66.98	331	P	P	11 06 27.7	-1.4
MAJO	Matsushiro	66.98	331	P	P	11 06 32.9	+3.8
	comp=Z,24nm,0.8s						
MAJO	Matsushiro	66.98	331	P	P	11 06 27.7	-1.4
MAJO				pmax	pmax		
	comp=Z,115nm,1.9s						
MAJO				MLR	MLR		
	comp=Z,800nm,19.0s						
QSPA	South Pole Qui	67.09	180	P	P	11 06 29.5	-0.2
	comp=Z,79nm,1.0s,baz=25,slow=1.6,SNR=72						
	comp=Z,79nm,1.0s						
QSPA	South Pole Qui	67.09	180	P	P	11 06 30.1	+0.4
LWLI	Liwa	67.19	274	P	P	11 06 30.3	-0.8
	comp=Z,105nm,0.6s,comp=Z,10μm						
MDSI	Maura Dua	67.29	275	P	P	11 06 30.5	-1.1
	comp=Z,74nm,1.0s,comp=Z,1μm						
NACB	Ninganchiao	67.34	311	P	P	11 06 30.8	-0.9
NACB	Ninganchiao	67.34	311	P	P	11 06 33.1	+1.5
	comp=Z,64nm,0.9s						
TPUB	Ta-pu	67.46	310	P	P	11 06 31.0	-1.5
SSLB	Suanglung	67.54	310	P	P	11 06 31.9	-1.1
SSLB				IAmb	IAmb	11 06 32.1	
	comp=Z,31nm,0.7s						
YHNB	Yeheng	67.81	311	P	P	11 06 34.0	-0.7
JNU	Nakatsue	67.86	324	LR	LR	11 32 16.4	
	comp=Z,540nm,21.9s,baz=142,slow=32						
JNU	Nakatsue	67.86	324	P	P	11 06 32.9	-1.9
JNU				IAmb	IAmb	11 06 40.3	
	comp=Z,44nm,1.0s						
JNU	Nakatsue	67.86	324	P	P	11 06 37.2	+2.4
JHS	Saijyo	68.14	327	P	P	11 06 36.8	+0.3
KSI	Kapahiang	69.07	275	P	P	11 06 43.5	+0.6
	comp=Z,121nm,0.7s						
MYKOM	Kota Tinggi	70.13	281	P	P	11 06 48.2	-1.1
MYKOM				IAmb	IAmb	11 07 03.1	
	comp=Z,24nm,0.9s						
RPN	Rapa Nui	70.80	112	LR	LR	11 29 58.6	
	comp=Z,374nm,21.4s,baz=234,slow=29						
ASAJ	Asahikawa	71.79	339	P	P	11 06 58.4	-0.3
	comp=Z,5.3nm,0.6s,baz=211,slow=8.3,SNR=9.1						
ASAJ				LR	LR	11 33 11.1	
	comp=Z,696nm,21.1s,baz=168,slow=32						
	comp=Z,5.3nm,0.6s						
TJN	Taejon	72.21	324	P	P	11 07 00.8	-0.6
TJN	Taejon	72.21	324	P	P	11 07 01.9	+0.5
	comp=Z,229nm,1.3s						
TJN	Taejon	72.21	324	P	P	11 07 00.8	-0.6
TJN				pmax	pmax		
	comp=Z,258nm,1.1s						
KSRS	Korea Array	72.71	325	P	P	11 07 04.5	+0.2
	comp=Z,18nm,0.9s,baz=144,slow=5.8,SNR=36						
KSRS				LR	LR	11 37 42.8	
	comp=Z,658nm,19.1s,baz=135,slow=35						
	comp=Z,18nm,0.9s						
KSAR	Wonju Array Be	72.72	325	P	P	11 07 04.5	+0.1
KSAR	Wonju Array Be	72.72	325	P	P	11 07 04.5	+0.1
KS19	Wonju Array Si	72.77	325	P	P	11 07 04.9	+0.2
QIZ	Qiongzhong	73.16	300	P	P	11 07 07.9	+0.4
QIZ				PP	PP	11 09 54.8	+4.1
QIZ				S	S	11 16 36.2	+1.2
QIZ				pmax	pmax		
	comp=Z,30nm,1.6s						
QIZ				pmax	pmax		
	comp=Z,280nm,9.1s						
QIZ				LR	LR		
	comp=Z,230nm,14.3s						
QIZ				LR	LR		
	comp=Z,360nm,15.9s						
QIZ				LR	LR		
	comp=Z,380nm,16.7s						
QIZ	Qiongzhong	73.16	300	P	P	11 07 07.6	+0.1
QIZ				IAmb	IAmb	11 07 09.8	
	comp=Z,49nm,1.3s						
QIZ	Qiongzhong	73.16	300	P	P	11 07 11.0	+3.5
	comp=Z,37nm,1.3s						
INCN	Inchon	73.42	324	P	P	11 07 08.4	-0.2
INCN	Inchon	73.42	324	P	P	11 07 09.5	+0.9
	comp=Z,80nm,1.5s						
INCN	Inchon	73.42	324	P	P	11 07 08.4	-0.2
INCN				pmax	pmax		
	comp=Z,68nm,1.1s						
INCN				MLR	MLR		
	comp=Z,600nm,19.0s						
IPM	Ipoh	73.82	282	P	P	11 07 12.2	+0.7
	comp=Z,40nm,1.3s						
YSS	Yuzh-Sakhalins	74.26	340	P	P	11 07 11.9	-1.4
YSS				IAmb	IAmb	11 07 19.4	
	comp=Z,23nm,0.8s						
YSS				IAMs_20	IAMs_20	11 34 38.2	
	comp=Z,2μm,21.0s						
YSS	Yuzh-Sakhalins	74.26	340	P	P	11 07 13.7	+0.5
	comp=Z,26nm,0.8s						
YSS	Yuzh-Sakhalins	74.26	340	*e*P	P	11 07 13.4	+0.2
YSS				*e**SP	pwP	11 07 24.1	+0.2
YSS				*e*S	SKiKP	11 16 42.5	+2.5
YSS				pmax	pmax		
	comp=Z,400nm,4.4s						
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				MLR	MLR		
	comp=Z,1μm,17.0s						
NJ2	Nanjing	74.27	316	⇑P	P	11 07 13.5	-0.2
NJ2				pP	pwP	11 07 22.6	-1.6
NJ2				sP	PcP	11 07 26.5	-2.0
NJ2				pmax	pmax		
	comp=Z,31nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,380nm,5.3s						
NJ2				LR	LR		
	comp=Z,590nm,18.9s						
NJ2				LR	LR		
	comp=Z,660nm,16.1s						
NJ2				LR	LR		
	comp=Z,630nm,17.7s						
KULM	Kulim	74.50	283	P	P	11 07 13.9	-1.5
RPSI	Rantau Prapat	74.97	280	P	P	11 07 17.6	-0.6
RPSI				IAmb	IAmb	11 07 27.9	
	comp=Z,29nm,1.1s						
RPSI				IAMs_20	IAMs_20	11 45 47.6	
	comp=Z,998nm,18.0s						
PSI	Prapat	75.02	280	P	P	11 07 18.6	0.0
	comp=Z,26nm,1.2s						
PSI	Prapat	75.02	280	P	P	11 07 17.6	-1.0
PSI				pmax	pmax		
	comp=Z,29nm,1.1s						

SHEM	**Shemya Is, Ala**	**75.42**	**2**	LR	LR	11 34 20.5	
	comp=Z,1µm,19.4s,baz=138,slow=31						
SMY	**Shemya**	**75.42**	**2**	P	**P**	**11 07 20.1**	**+0.3**
SMY	**Shemya**	**75.42**	**2**	P	**P**	**11 07 20.1**	**+0.3**
SMY				pmax	pmax		
	comp=Z,213nm,1.1s						
GSI	**Gunungsitoli**	**75.63**	**278**	P	**P**	**11 07 19.6**	**-2.4**
GSI				IAmb	IAmb	11 07 41.5	
	comp=Z,43nm,0.9s						
MAW	**Mawson**	**75.73**	**202**	LR	LR	11 38 08.1	
	comp=Z,902nm,18.1s,baz=90,slow=34						
USA0B	**Ussuriysk Arra**	**75.96**	**332**	P	**P**	**11 07 20.4**	**-2.7**
USA0B				IAmb	IAmb	11 07 25.7	
	comp=Z,46nm,1.2s						
USA0B	**Ussuriysk Arra**	**75.96**	**332**	P	**P**	**11 07 20.4**	**-2.7**
USA0B				pmax	pmax		
	comp=Z,46nm,1.2s						
USRK	**Ussuriysk Ar.**	**75.96**	**332**	P	**P**	**11 07 22.1**	**-1.0**
	comp=Z,14nm,0.9s,baz=147,slow=5.7,SNR=19						
	comp=Z,14nm,0.9s						
WHN	**Wuhan**	**76.33**	**312**	⇑P	**P**	**11 07 26.4**	**+0.8**
WHN				pP	**PcP**	**11 07 37.5**	**+0.1**
WHN				S	**S**	**11 17 10.7**	**+0.8**
WHN				pmax	pmax		
	comp=Z,110nm,1.4s						
WHN				LR	LR		
	comp=Z,4µm,21.7s						
WHN				LR	LR		
	comp=Z,2µm,17.9s						
WHN				LR	LR		
	comp=Z,2µm,18.7s						
PEA0B	**Petropavlovsk-**	**76.70**	**352**	P	**P**	**11 07 24.8**	**-2.3**
PEA0B	**Petropavlovsk-**	**76.70**	**352**	P	**P**	**11 07 24.8**	**-2.3**
PEA0B				pmax	pmax		
	comp=Z,104nm,1.6s						
PETK	**Petropavlovsk-**	**76.70**	**352**	P	**P**	**11 07 25.4**	**-1.8**
	comp=Z,8.4nm,0.8s,baz=142,slow=5.6,SNR=11						
	comp=Z,8.4nm,0.8s						
PETK	**Petropavlovsk-**	**76.70**	**352**	P	**P**	**11 07 24.7**	**-2.4**
SRIT	**Nakonsritamara**	**76.86**	**285**	P	**P**	**11 07 32.6**	**+3.6**
	comp=Z,26nm,0.8s						
SURA	**Surathani**	**77.09**	**286**	P	**P**	**11 07 32.5**	**+2.3**
	comp=Z,37nm,0.9s						
DL2	**Dalian**	**77.19**	**322**	P	**P**	**11 07 29.7**	**-0.5**
DL2				S	**S**	**11 17 20.3**	**+1.3**
DL2				pmax	pmax		
	comp=Z,60nm,1.2s						
DL2				pmax	pmax		
	comp=Z,450nm,10.8s						
DL2				LR	LR		
	comp=Z,440nm,15.5s						
DL2				LR	LR		
	comp=Z,470nm,17.1s						
DL2				LR	LR		
	comp=Z,590nm,23.5s						
MDJ	**Mudanjiang**	**77.35**	**331**	P	**P**	**11 07 30.8**	**-0.2**
MDJ				pP	PcP	11 07 41.2	-0.3
MDJ				sP	pwP	11 07 45.7	+4.1
MDJ				PP	**PP**	**11 10 27.4**	**+1.6**
MDJ				S	**S**	**11 17 24.5**	**+4.0**
MDJ				pmax	pmax		
	comp=Z,37nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,340nm,6.4s						
MDJ				LR	LR		
	comp=Z,520nm,18.4s						
MDJ				LR	LR		
	comp=Z,330nm,19.0s						
MDJ				LR	LR		
	comp=Z,810nm,20.2s						
MDJ	**Mudanjiang**	**77.35**	**331**	P	**P**	**11 07 30.4**	**-0.6**
MDJ				IAmb	IAmb	11 07 32.7	
	comp=Z,73nm,1.4s						
MDJ	**Mudanjiang**	**77.35**	**331**	P	**P**	**11 07 31.3**	**+0.3**
	comp=Z,35nm,1.3s						
NIKH	**Nikolski High**	**77.56**	**12**	P	**P**	**11 07 30.3**	**-1.6**
	baz=199						
TYV	**Tymovskoe**	**77.77**	**342**	*e*P	**P**	**11 07 33.3**	**+0.1**
TYV				*e*S	**S**	**11 17 25.5**	**+0.8**
TYV				pmax	pmax		
	comp=Z,12nm,1.3s						
TYV				pmax	pmax		
	comp=Z,200nm,3.0s						
TYV				smax	smax		
	comp=N,200nm,6.4s						
TYV				smax	smax		
	comp=E,500nm,6.4s						
TIA	**Tai'an**	**78.05**	**318**	⇑P	**P**	**11 07 34.9**	**-0.2**
TIA				S	**S**	**11 17 33.2**	**+4.7**
TIA				pmax	pmax		
	comp=E,78nm,0.8s						
TIA				LR	LR		
	comp=E,170nm,18.0s						
TIA				LR	LR		
	comp=E,410nm,16.5s						
TIA				LR	LR		
	comp=E,530nm,19.4s						
NONG	**Nongkai**	**78.15**	**295**	P	**P**	**11 07 37.0**	**+1.0**
	comp=E,93nm,1.0s						
BELA	**Belgrano 2**	**78.21**	**175**	P	**P**	**11 07 34.3**	**-1.1**
BELA				IAmb	IAmb	11 07 37.0	
	comp=Z,92nm,2.0s						
CN2	**Changchun**	**78.68**	**328**	P	**P**	**11 07 37.7**	**-0.7**
CN2				S	**S**	**11 17 37.4**	**+2.6**
CN2				pmax	pmax		
	comp=Z,70nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,500nm,22.0s						
CN2				LR	LR		
	comp=Z,500nm,22.0s						
CN2				LR	LR		
	comp=Z,700nm,24.0s						
UNV	**Unalaska Valle**	**78.86**	**13**	P	**P**	**11 07 37.7**	**-1.4**
	baz=201						
BNX	**BinXian**	**79.20**	**330**	⇓P	**P**	**11 07 40.5**	**-0.7**
BNX				pmax	pmax		
	comp=Z,47nm,1.0s						
BNX				pmax	pmax		
	comp=Z,200nm,3.5s						
ENH	**Enshi**	**79.58**	**309**	P	**P**	**11 07 42.9**	**-0.8**
ENH				IAmb	IAmb	11 07 44.6	
	comp=Z,47nm,1.0s						
ENH	**Enshi**	**79.58**	**309**	P	**P**	**11 07 43.6**	**-0.1**
	comp=Z,45nm,1.0s						
GYA	**Guiyang**	**79.59**	**304**	⇓*i*P	**P**	**11 07 44.6**	**+0.7**
GYA				PP	**PP**	**11 10 41.2**	**-3.8**
GYA				S	**S**	**11 17 46.6**	**+1.1**
GYA				pmax	pmax		
	comp=Z,38nm,1.4s						
GYA				pmax	pmax		
	comp=Z,350nm,9.0s						
GYA				LR	LR		
	comp=Z,120nm,9.3s						
GYA				LR	LR		
	comp=Z,160nm,7.9s						
GRNR	**Gornyy**	**79.65**	**338**	⇑*i*P	**P**	**11 07 43.6**	**0.0**
GRNR				pmax	pmax		
	comp=Z,20nm,0.9s						
SMAI	**San Martin Ant**	**79.66**	**161**	P	**P**	**11 07 43.9**	**+0.3**
SMAI				IAmb	IAmb	11 08 09.8	
	comp=Z,33nm,1.1s						
LYN	**LuoYang**	**80.00**	**314**	⇑P	**P**	**11 07 46.2**	**+0.3**
LYN				S	**S**	**11 17 47.3**	**-2.0**
LYN				SKS	**SKSac**	**11 17 59.6**	**-3.0**
LYN				pmax	pmax		
	comp=Z,41nm,1.0s						
LYN				pmax	pmax		
	comp=Z,270nm,6.3s						
LYN				LR	LR		
	comp=Z,470nm,20.8s						
LYN				LR	LR		
	comp=Z,320nm,21.0s						
LYN				LR	LR		
	comp=Z,400nm,20.0s						
KLR	**Kul'dur**	**80.09**	**335**	*c* *i*P	**P**	**11 07 45.8**	**-0.2**
KLR				pmax	pmax		
	comp=Z,68nm,1.7s						
HNS	**HongShan**	**80.31**	**318**	⇑P	**P**	**11 07 47.7**	**+0.3**
HNS				pP	**pwP**	**11 07 56.9**	**-1.0**
HNS				pmax	pmax		
	comp=Z,35nm,1.4s						
HNS				LR	LR		
	comp=Z,260nm,22.4s						
HNS				LR	LR		
	comp=Z,610nm,23.3s						
HNS				LR	LR		
	comp=Z,570nm,22.2s						
FALS	**False Pass**	**80.48**	**14**	P	**P**	**11 07 47.0**	**-0.9**
	baz=204						
PHRA	**Phrae**	**80.79**	**295**	P	**P**	**11 07 51.4**	**+1.0**
BJT	**Baijiatuau**	**81.08**	**320**	P	**P**	**11 07 51.5**	**0.0**
BJT	**Baijiatuau**	**81.08**	**320**	P	**P**	**11 07 51.7**	**+0.2**
	comp=Z,33nm,1.1s						
BJT	**Baijiatuau**	**81.08**	**320**	P	**P**	**11 07 51.5**	**0.0**
BJT				pmax	pmax		
	comp=Z,19nm,0.8s						
BJI	**Beijing**	**81.09**	**320**	P	**P**	**11 07 51.6**	**+0.1**
BJI				pP	**pwP**	**11 08 01.9**	**-0.2**
BJI				sP	PcP	11 08 05.8	+8.0
BJI				SKS	**S**	**11 18 02.6**	**+2.2**
BJI				pmax	pmax		
	comp=Z,13nm,0.9s						
BJI				pmax	pmax		
	comp=Z,120nm,3.9s						
BJI				LR	LR		
	comp=Z,240nm,21.3s						
BJI				LR	LR		
	comp=Z,240nm,21.8s						
BJI				LR	LR		
	comp=Z,390nm,22.3s						
CRAI	**Chiangrai**	**81.48**	**296**	P	**P**	**11 07 55.1**	**+1.0**
S12K	**Black Hills**	**81.57**	**15**	P	**P**	**11 07 51.9**	**-1.9**
	baz=205						
CMAR	**Chiang Mai Arr**	**81.85**	**294**	P	**P**	**11 07 57.9**	**+1.8**
	comp=Z,18nm,0.8s,baz=138,slow=3.8,SNR=100						
CMAR				PP	**PP**	**11 11 00.9**	**-2.8**
	comp=Z,1.4nm,0.7s,baz=132,slow=6.3,SNR=3.7						
CMAR				PKKPbc	**PKKPbc**	**11 26 27.4**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=282,slow=4.1,SNR=5.3						
CMAR				LR	LR	11 45 55.5	
	comp=Z,176nm,19.5s,baz=125,slow=37						
	comp=Z,18nm,0.8s						
CMAR	**Chiang Mai Arr**	**81.85**	**294**	P	**P**	**11 07 57.3**	**+1.2**
CMAR	**Chiang Mai Arr**	**81.85**	**294**	*ce*P	**P**	**11 07 58.0**	**+1.9**
CMAR				pmax	pmax		
	comp=Z,19nm,0.8s						
TIY	**Taiyuan**	**81.92**	**317**	⇓P	**P**	**11 07 56.8**	**+0.7**
TIY				S	**S**	**11 18 11.0**	**+1.6**
TIY				pmax	pmax		
	comp=Z,25nm,0.5s						
TIY				pmax	pmax		
	comp=Z,260nm,6.7s						
TIY				LR	LR		
	comp=Z,250nm,13.7s						
TIY				LR	LR		
	comp=Z,580nm,13.5s						
TIY				LR	LR		
	comp=Z,680nm,17.5s						
KMI	**Kunming**	**81.94**	**301**	⇑P	**P**	**11 07 58.1**	**+1.4**
KMI				S	**S**	**11 18 14.1**	**+3.8**
KMI				pmax	pmax		
	comp=Z,54nm,1.4s						
KMI				pmax	pmax		
	comp=Z,320nm,8.1s						
KMI				LR	LR		
	comp=Z,120nm,20.9s						
KMI				LR	LR		
	comp=Z,470nm,18.7s						
KMI				LR	LR		
	comp=Z,220nm,19.9s						
CHTO	**Chiang Mai**	**82.01**	**294**	P	**P**	**11 07 58.3**	**+1.4**
CHTO	**Chiang Mai**	**82.01**	**294**	P	**P**	**11 07 58.3**	**+1.4**
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
XAN	**Xi'an**	**82.10**	**312**	⇑P	**P**	**11 07 57.3**	**+0.2**
XAN				pP	sP	11 08 01.7	-0.7
XAN				sP	pwP	11 08 05.2	-2.4
XAN				PP	**PP**	**11 11 09.3**	**+3.8**
XAN				S	**S**	**11 18 13.4**	**+2.1**
XAN				sS	SKKSac	11 18 21.5	+1.1
XAN				pmax	pmax		
	comp=Z,35nm,1.0s						
XAN				pmax	pmax		
	comp=Z,210nm,4.5s						
XAN				LR	LR		
	comp=Z,280nm,17.9s						
XAN				LR	LR		
	comp=Z,350nm,19.2s						
XAN				LR	LR		
	comp=Z,500nm,17.0s						
HEH	**HeiHe**	**82.64**	**333**	*e*P	**P**	**11 07 58.7**	**-0.8**
HEH				pP	**pwP**	**11 08 08.0**	**-2.1**
HEH				S	**S**	**11 18 17.8**	**+1.8**
HEH				sS	**ScS**	**11 18 30.3**	**-0.7**
HEH				pmax	pmax		
	comp=Z,32nm,0.9s						
HEH				pmax	pmax		
	comp=Z,380nm,4.4s						
HEH				LR	LR		
	comp=Z,540nm,19.6s						
HEH				LR	LR		
	comp=Z,470nm,18.3s						
HEH				LR	LR		
	comp=Z,850nm,19.9s						
ELIB	**Princess Elisa**	**82.81**	**190**	*d*P	**P**	**11 07 59.8**	**-0.7**
	comp=Z,24nm,1.1s						
PZH	**PanZhiHua**	**83.40**	**302**	P	**P**	**11 08 04.2**	**+0.1**
PZH				pP	**pwP**	**11 08 15.4**	**+0.8**
PZH				S	**S**	**11 18 26.1**	**+1.1**
PZH				pmax	pmax		
	comp=Z,20nm,1.2s						
PZH				pmax	pmax		
	comp=Z,240nm,9.8s						
PZH				LR	LR		
	comp=Z,550nm,19.2s						
PZH				LR	LR		
	comp=Z,830nm,19.8s						
PZH				LR	LR		
	comp=Z,1µm,20.6s						
XLT	**XiLinHaoTe**	**83.63**	**323**	*e*P	**P**	**11 08 04.3**	**-0.6**
XLT				pP	pwP	11 08 16.1	+0.6
XLT				S	**S**	**11 18 25.0**	**-1.5**
XLT				sS	ScS	11 18 41.1	+1.5
XLT				pmax	pmax		
	comp=Z,37nm,0.9s						
XLT				pmax	pmax		
	comp=Z,220nm,4.9s						
XLT				LR	LR		
	comp=Z,420nm,16.6s						
XLT				LR	LR		
	comp=Z,410nm,16.2s						
CD2	**Chengdu**	**84.08**	**307**	P	**P**	**11 08 07.7**	**+0.2**
CD2				S	**S**	**11 18 31.3**	**-0.3**
CD2				SS	**SS**	**11 23 58.8**	**-2.2**
CD2				pmax	pmax		
	comp=Z,20nm,1.1s						
CD2				pmax	pmax		
	comp=Z,260nm,5.5s						
CD2				LR	LR		
	comp=Z,230nm,16.2s						
CD2				LR	LR		
	comp=Z,240nm,18.7s						
CD2				LR	LR		
	comp=Z,370nm,17.0s						
HHC	**Hu-ho-hao-te**	**84.35**	**319**	*e*P	**P**	**11 08 09.0**	**+0.4**
HHC				S	**S**	**11 18 29.2**	**-4.7**
HHC				SS	**SS**	**11 24 06.6**	**+2.0**
HHC				pmax	pmax		
	comp=Z,46nm,1.1s						
HHC				pmax	pmax		
	comp=Z,540nm,6.2s						
HHC				LR	LR		
	comp=Z,490nm,18.4s						
HHC				LR	LR		
	comp=Z,560nm,19.7s						
HHC				LR	LR		
	comp=Z,1µm,20.9s						
R16K	**Pilot Point**	**84.35**	**16**	P	**P**	**11 08 06.6**	**-1.4**
	baz=209						
R17K	**Ugashik Creek**	**84.72**	**17**	P	**P**	**11 08 08.8**	**-1.2**
	baz=210						
OHAK	**Old Harbor**	**85.23**	**18**	P	**P**	**11 08 11.7**	**-0.8**
	baz=212						
TNCH	**TengChong**	**85.24**	**300**	P	**P**	**11 08 10.4**	**-3.2**
TNCH				sP	pwP	11 08 21.3	-2.7
TNCH				PP	**PP**	**11 11 34.8**	**+3.2**
TNCH				S	**S**	**11 18 43.8**	**+0.2**
TNCH				pmax	pmax		
	comp=Z,120nm,0.6s						
TNCH				pmax	pmax		
	comp=Z,300nm,7.1s						
TNCH				LR	LR		
	comp=Z,430nm,24.4s						
TNCH				LR	LR		
	comp=Z,560nm,23.4s						
TNCH				LR	LR		
	comp=Z,790nm,30.3s						
HIA	**Hailar**	**85.34**	**329**	P	**P**	**11 08 12.7**	**-0.6**
HIA	**Hailar**	**85.34**	**329**	P	**P**	**11 08 14.4**	**+1.1**
	comp=Z,14nm,1.6s						
HIA	**Hailar**	**85.34**	**329**	P	**P**	**11 08 12.7**	**-0.6**
HIA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ZEA	**Zeya**	**85.37**	**335**	*e*P	**P**	**11 08 13.9**	**+0.6**
ZEA				pmax	pmax		
	comp=Z,200nm,6.9s						
ZEA				pmax	pmax		
	comp=N,20nm,1.3s						
ZEA				pmax	pmax		
	comp=E,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.1s						
ZEA				MLR	MLR		
	comp=E,300nm,17.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,15.0s						
Q17K	**Contact Creek**	**85.40**	**17**	P	**P**	**11 08 11.8**	**-1.7**
	baz=210						
NVL	**N'lazarevskaya**	**85.41**	**187**	*e*P	**P**	**11 08 10.3**	**-3.1**
NVL				*e*S	**SKSac**	**11 18 32.7**	**-4.8**
NVL				pmax	pmax		
	comp=Z,15nm,1.0s						
NVL				MLR	MLR		
	comp=Z,881nm,18.0s						
SNAA	**Sanae**	**85.52**	**182**	P	**P**	**11 08 14.4**	**+0.3**
SNAA				IAmb	IAmb	11 08 28.8	
	comp=Z,28nm,1.1s						
SNAA	**Sanae**	**85.52**	**182**	P	**P**	**11 08 14.4**	**+0.3**
SNAA				pmax	pmax		
	comp=Z,28nm,1.1s						
P16K	**Nushagak River**	**85.54**	**15**	P	**P**	**11 08 12.3**	**-1.7**
	baz=208						
MND	**Mandalay**	**85.83**	**296**	P	**P**	**11 08 17.3**	**+1.0**
	comp=Z,49nm,1.2s						
KDAK	**Kodiak Island**	**85.90**	**18**	LR	LR	11 42 53.9	
	comp=Z,1µm,18.4s,baz=231,slow=33						
Q18K	**Katmai Hardscr**	**85.96**	**17**	P	**P**	**11 08 15.0**	**-1.3**
	baz=211						
O16K	**Kokwok River B**	**86.01**	**15**	P	**P**	**11 08 14.9**	**-1.5**
	baz=208						
P18K	**Big Mountain,**	**86.55**	**16**	P	**P**	**11 08 18.0**	**-1.0**
P18K				IAmb	IAmb	11 08 20.6	
	comp=Z,58nm,1.7s						
P18K	**Big Mountain,**	**86.55**	**16**	P	**P**	**11 08 17.2**	**-1.8**
	baz=211						
Q19K	**Cape Douglas,**	**86.57**	**17**	P	**P**	**11 08 19.3**	**+0.1**
Q19K	**Cape Douglas,**	**86.57**	**17**	P	**P**	**11 08 17.7**	**-1.5**
	baz=212						
N16K	**Nishlik Lake**	**86.64**	**14**	P	**P**	**11 08 18.1**	**-1.3**
	baz=207						
SCZ2	**Santa Cruz Isl**	**86.64**	**51**	P	**P**	**11 08 19.5**	**-0.6**
	baz=240						
LZH	**Lanzhou**	**86.70**	**311**	*e*P	**P**	**11 08 21.6**	**+1.0**
LZH				pP	pwP	11 08 30.9	-0.2
LZH				sP	sP	11 08 37.0	+11
LZH				PP	**PP**	**11 11 39.2**	**-4.0**
LZH				S	S	11 18 47.7	-10
LZH				sS	ScS	11 19 07.5	+2.0
LZH				pmax	pmax		
	comp=Z,40nm,1.2s						
LZH				pmax	pmax		
	comp=Z,310nm,5.0s						
LZH				LR	LR		
	comp=Z,220nm,15.6s						
LZH				LR	LR		
	comp=Z,440nm,15.3s						
LZH				LR	LR		
	comp=Z,550nm,17.2s						
SAO	**San Andreas Ge**	**86.80**	**48**	P	**P**	**11 08 21.1**	**+0.3**
SAO				IAmb	IAmb	11 08 36.2	
	comp=Z,25nm,1.1s						
SAO	**San Andreas Ge**	**86.80**	**48**	P	**P**	**11 08 21.1**	**+0.3**
SAO				pmax	pmax		
	comp=Z,25nm,1.1s						
HOPS	**Hopland Field**	**86.90**	**45**	P	**P**	**11 08 21.6**	**+0.3**
SEY	**Seymchan**	**86.94**	**351**	⇑*e*P	**P**	**11 08 19.5**	**-1.3**
SEY				pmax	pmax		
	comp=Z,12nm,1.3s						
KCPM	**Cahto Peak**	**86.95**	**44**	P	**P**	**11 08 22.1**	**+0.5**
O18K	**Koktuh Hills**	**86.95**	**16**	IAMs_20	IAMs_20	11 40 51.9	
	comp=Z,841nm,21.0s						
O18K	**Koktuh Hills**	**86.95**	**16**	P	**P**	**11 08 20.3**	**-0.7**
	baz=211						
GO10	**Punta Arenas**	**86.96**	**148**	P	**P**	**11 08 21.2**	**-0.2**
PMPB	**Monarch Peak**	**86.96**	**49**	P	**P**	**11 08 21.6**	**-0.1**
PKM	**Mcpherson Peak**	**86.97**	**50**	P	**P**	**11 08 21.7**	**-0.2**
	baz=239						
BBGB	**Big Mountain B**	**86.98**	**48**	P	**P**	**11 08 20.9**	**-1.0**
KMPM	**Mount Pierce**	**87.00**	**44**	P	**P**	**11 08 22.2**	**+0.3**
SMMC	**Simmler**	**87.06**	**50**	P	**P**	**11 08 21.9**	**-0.3**
	baz=239						
KMRM	**Mail Ridge**	**87.16**	**44**	P	**P**	**11 08 23.0**	**+0.4**
CIS	**Catalina Islan**	**87.22**	**52**	P	**P**	**11 08 22.3**	**-0.7**
	baz=240						
BCW	**Bitter Crk WRg**	**87.28**	**50**	P	**P**	**11 08 23.6**	**+0.3**
O19K	**Port Alsworth**	**87.47**	**16**	P	**P**	**11 08 21.9**	**-1.6**
O19K				IAmb	IAmb	11 08 54.3	
	comp=Z,56nm,1.8s						
O19K	**Port Alsworth**	**87.47**	**16**	P	**P**	**11 08 21.9**	**-1.6**
	baz=211						
KHMM	**Horse Mountain**	**87.50**	**43**	P	**P**	**11 08 24.9**	**+0.5**
ARVC	**Arvin**	**87.78**	**50**	P	**P**	**11 08 25.1**	**-0.5**
	baz=240						
O20K	**Slope Mountain**	**87.83**	**17**	P	**P**	**11 08 23.2**	**-2.1**
	baz=213						
VES	**Vestal, Richgr**	**87.96**	**50**	P	**P**	**11 08 26.0**	**-0.4**
	baz=240,SNR=6.0						
N19K	**Bonanza Creek**	**87.96**	**16**	IAMs_20	IAMs_20	11 44 57.6	
	comp=Z,864nm,20.0s						
N19K	**Bonanza Creek**	**87.96**	**16**	P	**P**	**11 08 25.2**	**-0.8**
	baz=211						
BRLK	**Bradley Lake**	**88.05**	**18**	IAMs_20	IAMs_20	11 42 58.5	
	comp=Z,1µm,20.0s						
BRSE	**Bradley Lake S**	**88.07**	**18**	P	**P**	**11 08 26.8**	**+0.4**
	baz=215						
CMB	**Columbia Colle**	**88.18**	**47**	P	**P**	**11 08 27.3**	**-0.2**
CMB				IAmb	IAmb	11 08 43.5	
	comp=Z,30nm,1.2s						
CMB				IAMs_20	IAMs_20	11 40 44.8	
	comp=Z,1µm,20.0s						
CMB	**Columbia Colle**	**88.18**	**47**	P	**P**	**11 08 27.3**	**-0.2**
CMB				pmax	pmax		
	comp=Z,30nm,1.3s						
BFSC	**Mount Baldy Ra**	**88.18**	**52**	P	**P**	**11 08 27.2**	**-0.5**
	baz=241						
MURC	**Murrieta**	**88.21**	**52**	P	**P**	**11 08 27.5**	**-0.3**
	baz=241						
ORV	**Oroville**	**88.23**	**45**	P	**P**	**11 08 27.7**	**0.0**
ORV				IAmb	IAmb	11 08 43.7	
	comp=Z,53nm,1.6s						
ORV				IAMs_20	IAMs_20	11 44 19.1	
	comp=Z,919nm,18.0s						
ORV	**Oroville**	**88.23**	**45**	P	**P**	**11 08 27.7**	**0.0**
ORV				pmax	pmax		
	comp=Z,53nm,1.6s						
EDW2	**Edwards Air Fo**	**88.26**	**51**	P	**P**	**11 08 27.8**	**-0.2**
	baz=240,SNR=10						
ISA	**Isabella, Lake**	**88.30**	**50**	P	**P**	**11 08 28.2**	**0.0**
ISA				IAmb	IAmb	11 08 29.2	
	comp=Z,26nm,0.9s						
ISA	**Isabella, Lake**	**88.30**	**50**	P	**P**	**11 08 28.2**	**0.0**
ISA				pmax	pmax		
	comp=Z,26nm,0.9s						
ISA	**Isabella, Lake**	**88.30**	**50**	P	**P**	**11 08 28.1**	**0.0**
	baz=240,SNR=6.9						
CCAC	**Calif City Air**	**88.38**	**51**	P	**P**	**11 08 27.7**	**-0.8**
MONP2	**Monument Peak**	**88.44**	**53**	P	**P**	**11 08 28.8**	**-0.2**
	baz=241,SNR=5.9						
IKP	**In-Ko-Pah, Jac**	**88.55**	**54**	P	**P**	**11 08 29.4**	**0.0**
	baz=242						
RMX	**La Rumorosa**	**88.55**	**54**	P	**P**	**11 08 27.4**	**-2.2**
RMX				IAmb	IAmb	11 08 30.6	
	comp=Z,51nm,1.8s						
YBH	**Yreka Blue Hor**	**88.62**	**43**	LR	LR	11 44 29.4	
	comp=Z,169nm,18.1s,baz=241,slow=33						
YBH	**Yreka Blue Hor**	**88.62**	**43**	P	**P**	**11 08 28.8**	**-0.7**

YBH				IAmb	IAmb	11 08 45.1	
	comp=Z,42nm,1.4s						
YBH	Yreka Blue Hor	88.62	43	P	P	11 08 28.8	-0.7
YBH				pmax	pmax		
	comp=Z,42nm,1.4s						
YUH	Yuha Desert	88.69	54	P	P	11 08 28.3	-1.6
BBRC	Big Bear Solar	88.73	52	P	P	11 08 30.0	-0.4
	baz=241						
PFO	Pinyon Flats O	88.75	53	LR	LR	11 42 58.3	
	comp=Z,742nm,18.0s,baz=250,slow=32						
PFO	Pinyon Flats O	88.75	53	P	P	11 08 30.2	-0.2
PFO				IAmb	IAmb	11 08 46.6	
	comp=Z,42nm,1.8s						
PFO	Pinyon Flats O	88.75	53	P	P	11 08 30.2	-0.2
PFO				pmax	pmax		
	comp=Z,42nm,1.8s						
PFO	Pinyon Flats O	88.75	53	P	P	11 08 30.0	-0.4
	baz=241						
TPFO	Pinon Flats	88.75	53	P	P	11 08 29.9	-0.5
	baz=241						
LRMC	Laurel Mtn Rad	88.78	50	P	P	11 08 30.1	-0.3
	baz=241,SNR=12						
PMD	Palm Desert	88.83	53	P	P	11 08 30.4	-0.2
MDPB	Devils Postpil	88.87	48	P	P	11 08 31.0	-0.1
MDPB				IAmb	IAmb	11 08 47.2	
	comp=Z,40nm,1.2s						
OMMB	Old Mammoth Mi	88.91	48	P	P	11 08 31.6	+0.3
OMMB				IAmb	IAmb	11 08 58.4	
	comp=Z,23nm,1.3s						
SWSC	Sam W. Stewart	88.92	53	P	P	11 08 30.9	-0.1
	baz=242						
M19K	Big River Lodg	88.92	15	IAMs_20	IAMs_20	11 45 47.0	
	comp=Z,1µm,19.0s						
M19K	Big River Lodg	88.92	15	P	P	11 08 30.0	-0.4
	baz=211						
HUMO	Hull Mountain	88.94	42	P	P	11 08 31.4	+0.4
HUMO				IAmb	IAmb	11 08 32.4	
	comp=Z,24nm,0.9s						
HUMO				IAMs_20	IAMs_20	11 47 55.5	
	comp=Z,878nm,18.0s						
CWC	Cottonwood Cre	88.97	50	P	P	11 08 31.2	-0.2
	baz=240						
O22K	Cooper Landing	88.97	18	IAMs_20	IAMs_20	11 51 15.3	
	comp=Z,924nm,19.0s						
L19K	White Mountain	89.05	15	P	P	11 08 30.0	-1.0
L19K				IAMs_20	IAMs_20	11 48 43.3	
	comp=Z,1µm,18.0s						
L19K	White Mountain	89.05	15	P	P	11 08 29.4	-1.5
	baz=211						
MPK	Martis Peak	89.07	46	P	P	11 08 32.0	0.0
L04D	Klamath Falls	89.13	43	P	P	11 08 31.6	-0.4
TIN	Tinemaha, Big	89.17	49	P	P	11 08 32.0	-0.3
	baz=240						
MPMC	Manual Prospec	89.19	50	P	P	11 08 32.3	-0.2
	baz=241,SNR=8.6						
LPIG	La Paz	89.25	64	LR	LR	11 42 34.1	
	comp=Z,539nm,18.2s,baz=228,slow=32						
BELC	Belle Mtn. Jos	89.28	52	P	P	11 08 32.9	0.0
	baz=242,SNR=12						
GSC	Goldstone, Bar	89.31	51	P	P	11 08 32.5	-0.4
GSC	Goldstone, Bar	89.31	51	P	P	11 08 32.6	-0.4
GSC				pmax	pmax		
	comp=Z,16nm,1.3s						
GSC	Goldstone, Bar	89.31	51	P	P	11 08 32.4	-0.5
	baz=241						
HEC	Hector,Ludlow	89.43	52	P	P	11 08 32.9	-0.5
	baz=241						
TTA	Tatalina	89.43	14	P	P	11 08 31.2	-1.6
	baz=210						
YERR	Yerington	89.44	47	P	P	11 08 33.5	-0.1
YERR				IAmb	IAmb	11 08 49.0	
	comp=Z,49nm,1.4s						
RC01	Rabbit Creek A	89.47	18	P	P	11 08 31.5	-1.4
	baz=215						
SUA	Susitna One	89.49	17	IAMs_20	IAMs_20	11 45 08.1	
	comp=Z,1µm,19.0s						
SUA	Susitna One	89.49	17	P	P	11 08 31.7	-1.5
	baz=214						
DSP	Deep Springs	89.50	49	P	P	11 08 33.8	+0.1
DSP				IAmb	IAmb	11 08 50.0	
	comp=Z,34nm,1.2s						
BC3	Big Chuckawall	89.51	53	P	P	11 08 33.9	0.0
	baz=242						
L20K	Farewell, AK	89.54	15	P	P	11 08 31.6	-1.7
	baz=212						
LHV	Little Huntoon	89.57	48	P	P	11 08 34.3	+0.4
LHV				IAmb	IAmb	11 08 35.3	
	comp=Z,25nm,1.0s						
QSM	Queen of Sheba	89.59	50	P	P	11 08 33.8	-0.4
QSM				IAmb	IAmb	11 08 50.0	
	comp=Z,18nm,1.3s						
LCH	Last Change Ra	89.66	49	P	P	11 08 34.3	-0.3
LCH				IAmb	IAmb	11 08 35.4	
	comp=Z,22nm,1.4s						
TNA	Tin City	89.68	8	P	P	11 08 32.5	-1.2
	baz=199						
PWL	Port Wells	89.68	18	IAMs_20	IAMs_20	11 44 29.1	
	comp=Z,875nm,19.0s						
PWL	Port Wells	89.68	18	P	P	11 08 32.6	-1.3
	baz=217						
GLA	Glamis	89.69	54	P	P	11 08 34.9	+0.2
GLA				IAmb	IAmb	11 08 36.1	
	comp=Z,17nm,0.8s						
GLA	Glamis	89.69	54	P	P	11 08 34.9	+0.2
GLA	Glamis	89.69	54	P	P	11 08 35.0	+0.3
	baz=242,SNR=7.6						
PAHR	Pah Rah Range	89.71	46	P	P	11 08 34.6	-0.2
PAHR				IAmb	IAmb	11 08 35.7	
	comp=Z,28nm,0.9s						
SKT	Skwentna	89.71	17	IAMs_20	IAMs_20	11 47 38.9	
	comp=Z,810nm,18.0s						
GRAC	Grapevine Rang	89.74	49	P	P	11 08 34.8	-0.1
GRAC	Grapevine Rang	89.74	49	P	P	11 08 35.0	+0.2
	baz=241,SNR=16						
NVAR	Mina Array Bea	89.80	48	P	P	11 08 35.1	-0.2
	comp=Z,15nm,0.7s,baz=226,slow=8.4,SNR=163						
NVAR				LR	LR	11 40 54.1	
	comp=Z,732nm,20.6s,baz=232,slow=30						
	comp=Z,15nm,0.7s						
NVAR	Mina Array Bea	89.80	48	P	P	11 08 34.8	-0.5
FURC	Furnace Creek,	89.83	50	P	P	11 08 35.1	-0.1
	baz=241,SNR=9.6						
GWY	Greenwater Val	89.84	50	IAmb	IAmb	11 08 50.5	
	comp=Z,22nm,1.1s						
GMRC	Granite Mounta	89.89	52	P	P	11 08 35.5	-0.2
	baz=242,SNR=6.5						
NV11	Mina Array Sit	89.90	48	IAmb	IAmb	11 08 36.6	
	comp=Z,23nm,0.8s						
M22K	Willow	89.90	17	P	P	11 08 33.7	-1.2
	baz=215						
IRM	Iron Mountain	89.97	53	P	P	11 08 35.9	-0.1
	baz=242,SNR=12						
SHOC	Shoshone, Teco	89.98	51	P	P	11 08 35.6	-0.3
	baz=241,SNR=8.2						
TUQ	Turquoise Moun	90.01	51	P	P	11 08 36.0	-0.2
	baz=242,SNR=7.2						
PMR	Palmer	90.05	18	P	P	11 08 36.0	+0.4
	baz=216						
KNK	Knik Glacier	90.09	18	IAMs_20	IAMs_20	11 51 33.9	
	comp=Z,848nm,19.0s						
CIT	Chita	90.12	328	*e*P	P	11 08 36.2	0.0
CIT				*e*		11 08 41.1	
CIT				pmax	pmax		
	comp=Z,132nm,1.4s						
WCT	Wildcat Mounta	90.16	50	P	P	11 08 36.8	0.0
WCT				IAmb	IAmb	11 08 37.8	
	comp=Z,17nm,1.1s						
MOD	Modoc Plateau	90.23	44	IAmb	IAmb	11 08 52.4	
	comp=Z,35nm,1.1s						
MOD				IAMs_20	IAMs_20	11 51 10.9	
	comp=Z,883nm,19.0s						
BLYC	Blythe	90.24	53	IAmb	IAmb	11 08 38.4	
	comp=Z,16nm,1.1s						
KVN	Kaiserville	90.24	47	IAmb	IAmb	11 08 38.1	
	comp=Z,27nm,0.8s						
K20K	Telida	90.25	15	IAMs_20	IAMs_20	11 48 09.9	
	comp=Z,1µm,19.0s						
K20K	Telida	90.25	15	P	P	11 08 34.8	-1.7
	baz=212						
K05A	Summer Lake	90.29	43	P	P	11 08 37.8	+0.3
TPH	Tonopah	90.36	48	P	P	11 08 37.8	-0.1
TPH	Tonopah	90.36	48	P	P	11 08 37.8	-0.1
TPH				pmax	pmax		
	comp=Z,111nm,1.0s						
CUT	Chulitna	90.40	17	IAMs_20	IAMs_20	11 45 58.1	
	comp=Z,1µm,19.0s						
SML	Sawmill	90.44	18	IAMs_20	IAMs_20	11 49 34.3	
	comp=Z,934nm,20.0s						
TPNV	Topopah Spring	90.50	50	IAmb	IAmb	11 08 39.4	
	comp=Z,18nm,0.8s						
TPNV				IAMs_20	IAMs_20	11 51 42.3	
	comp=Z,1µm,19.0s						
TPNV	Topopah Spring	90.50	50	P	P	11 08 38.4	-0.1
	baz=242,SNR=18						
H04A	Detroit Lake	90.53	41	P	P	11 08 37.7	-0.6
H04A				IAmb	IAmb	11 08 38.6	
	comp=Z,25nm,0.9s						
NEE2	Needles Airpor	90.64	52	P	P	11 08 39.0	0.0
	baz=242						
214A	Organ Pipe Nat	90.71	56	P	P	11 08 39.2	-0.3
	baz=243,SNR=5.6						
COYC	Coyhaique	90.74	141	P	P	11 08 40.6	+1.1
COYC				IAmb	IAmb	11 08 42.4	
	comp=Z,24nm,0.9s						
CAST	Castle Rocks	90.78	16	IAMs_20	IAMs_20	11 50 13.0	
	comp=Z,894nm,19.0s						
CAST	Castle Rocks	90.78	16	P	P	11 08 37.2	-1.9
	baz=213						
PDMCI	Parker Dam,Lak	90.78	53	P	P	11 08 39.4	-0.2
	baz=243,SNR=7.1						
PINE	Pine Mountain	90.81	42	P	P	11 08 39.9	0.0
BILL	Bilibino	90.83	358	P	P	11 08 38.1	-1.0
BILL				IAmb	IAmb	11 08 46.1	
	comp=Z,24nm,1.4s						
BILL	Bilibino	90.83	358	*d i*P	P	11 08 37.8	-1.3
BILL				*i*		11 08 42.3	
BILL				*e*S	SKSac	11 19 09.8	+0.1
BILL				SS	SS	11 25 42.0	+4.1
BILL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BILL				MLR	MLR		
	comp=Z,150nm,16.0s						
I05D	Terrebonne, OR	90.86	41	P	P	11 08 39.6	-0.3
I05D				IAmb	IAmb	11 08 52.9	
	comp=Z,28nm,1.0s						
SHL	Shillong	90.86	297	P	P	11 08 40.5	0.0
SHL	Shillong	90.86	297	*e*P	P	11 08 42.0	+1.5
SHL	Shillong	90.86	297	P	P	11 08 40.5	0.0
SHL				pmax	pmax		
	comp=Z,47nm,1.0s						
HSIG		90.86	59	P	P	11 08 39.5	-0.7
HSIG				IAmb	IAmb	11 08 55.7	
	comp=Z,18nm,1.0s						
KLU	Klutina	90.90	19	IAMs_20	IAMs_20	11 40 53.3	
	comp=Z,1µm,22.0s						
V12A	Nelson	90.92	51	P	P	11 08 40.3	-0.2
NLWA	Neilton Lookou	91.02	38	IAMs_20	IAMs_20	11 41 06.3	
	comp=Z,1µm,21.0s						
YAK	Yakutsk	91.03	342	IAMs_20	IAMs_20	11 48 19.7	
	comp=Z,866nm,19.0s						
YAK	Yakutsk	91.03	342	*e*P	P	11 08 40.4	+0.3
YAK				*e**PP	pP	11 08 43.8	-0.2
YAK				*e*PPP	PPP	11 14 13.3	
YAK				*e*S	SKSac	11 19 11.9	+0.9
YAK				*e*		11 19 39.5	
YAK				*e*SS	SS	11 25 42.3	+1.3
YAK				pmax	pmax		
	comp=Z,14nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				smax	smax		
	comp=E,68nm,3.2s						
YAK				smax	smax		
	comp=N,37nm,2.9s						
YAK				MLR	MLR		
	comp=Z,925nm,20.0s						
YAK				MLR	MLR		
	comp=N,319nm,17.0s						
YAK				MLR	MLR		
	comp=E,480nm,19.0s						
ULN	Ulaanbaatar	91.04	323	P	P	11 08 40.8	0.0
ULN	Ulaanbaatar	91.04	323	P	P	11 08 40.8	0.0
ULN				pmax	pmax		
	comp=Z,51nm,1.2s						
ULN				MLR	MLR		
	comp=Z,500nm,20.0s						
CHUM	Lake Minchumin	91.11	15	P	P	11 08 39.0	-1.5
	baz=213						
GTA	Gaotai	91.13	313	*e*P	P	11 08 41.6	+0.2
GTA				pP	sP	11 08 47.1	+0.3
GTA				sP	pwP	11 08 51.0	-0.9
GTA				S	S	11 19 38.4	-0.6
GTA				sS	sS	11 19 48.2	+2.8
GTA				SS	SS	11 25 40.4	-3.4
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,190nm,9.2s						
GTA				LR	LR		
	comp=Z,230nm,17.5s						
GTA				LR	LR		
	comp=Z,290nm,17.1s						
GTA				LR	LR		
	comp=Z,320nm,18.7s						
KTH	Kantishna Hill	91.18	16	IAMs_20	IAMs_20	11 44 16.6	
	comp=Z,902nm,20.0s						
S11A	Rachel	91.18	49	P	P	11 08 41.7	0.0
TRF	Thorofare Moun	91.26	16	IAMs_20	IAMs_20	11 49 27.6	
	comp=Z,740nm,18.0s						
TRF	Thorofare Moun	91.26	16	P	P	11 08 38.7	-2.7
	baz=215						
W13A	Hualapai Mount	91.33	52	IAmb	IAmb	11 08 58.7	
	comp=Z,55nm,1.8s						
N25K	Chitina, Valde	91.39	19	IAmb	IAmb	11 08 42.8	
	comp=Z,16nm,1.2s						
N25K				IAMs_20	IAMs_20	11 44 17.2	
	comp=Z,890nm,20.0s						
N25K	Chitina, Valde	91.39	19	P	P	11 08 40.6	-1.4
	baz=220						
SONM	Songino Array	91.40	322	P	P	11 08 42.1	-0.3
	comp=Z,15nm,1.0s,baz=142,slow=4.8,SNR=76						
SONM				PKKPbc	PKKPbc	11 26 06.9	+1.6
	comp=Z,0.4nm,0.6s,baz=338,slow=1.6,SNR=3.8						
SONM				LR	LR	11 50 22.3	
	comp=Z,294nm,19.0s,baz=115,slow=36						
	comp=Z,15nm,1.0s						
Y14A	Wickenburg	91.45	54	P	P	11 08 42.8	-0.1
VRDI	Verde Repeater	91.45	20	IAMs_20	IAMs_20	11 46 29.0	
	comp=Z,780nm,19.0s						
GLB	Gilahina Butte	91.50	20	P	P	11 08 41.1	-1.3
GLB				IAmb	IAmb	11 08 53.1	
	comp=Z,34nm,1.6s						
GLB				IAMs_20	IAMs_20	11 47 45.3	
	comp=Z,744nm,18.0s						
BBB	Bella Bella	91.52	32	LR	LR	11 45 40.7	
	comp=Z,770nm,18.0s,baz=242,slow=33						
PRN	Pahroc Range	91.56	50	IAmb	IAmb	11 08 44.7	
	comp=Z,18nm,0.8s						
WVOR	Wild Horse Val	91.57	44	IAmb	IAmb	11 08 44.2	
	comp=Z,16nm,0.9s						
WVOR				IAMs_20	IAMs_20	11 51 37.3	
	comp=Z,881nm,18.0s						
RND	Reindeer	91.59	17	IAMs_20	IAMs_20	11 46 35.6	
	comp=Z,1µm,19.0s						
BPAW	Bear Paw Mtn.	91.62	16	IAMs_20	IAMs_20	11 48 16.2	
	comp=Z,1µm,19.0s						
R11A	Troy Canyon, C	91.63	49	P	P	11 08 43.1	-0.7
	baz=242						
PINM	Pinnacle	91.67	22	P	P	11 08 42.1	-1.2
	baz=224						
U33K	Whale Pass	91.67	28	P	P	11 08 42.3	-1.0
	baz=230						
MCARA	McCarthy VSAT	91.71	20	P	P	11 08 43.0	-0.4
MCARA				IAmb	IAmb	11 08 44.1	
	comp=Z,29nm,1.4s						
MCARA				IAMs_20	IAMs_20	11 47 33.7	
	comp=Z,866nm,18.0s						
MCARA	McCarthy VSAT	91.71	20	P	P	11 08 41.9	-1.4
	baz=221						
HARP	HAARP	91.83	19	P	P	11 08 42.9	-1.0
	baz=219						
MCK	McKinley	91.84	17	IAmb	IAmb	11 08 54.5	
	comp=Z,32nm,1.8s						
MCK	McKinley	91.84	17	P	P	11 08 43.4	-0.6
	baz=216						
I07A	Izee	91.85	42	P	P	11 08 44.4	-0.2
I07A				IAmb	IAmb	11 08 45.5	
	comp=Z,15nm,0.9s						
BARN	Barnard Glacie	91.91	21	P	P	11 08 43.3	-1.2
BARN				IAmb	IAmb	11 08 55.0	
	comp=Z,21nm,1.1s						
BARN				IAMs_20	IAMs_20	11 43 25.0	
	comp=Z,1µm,21.0s						
CTGM	Chitina Glacie	91.94	21	IAMs_20	IAMs_20	11 43 35.9	
	comp=Z,1µm,21.0s						
D05A	Enumclaw	91.98	39	P	P	11 08 44.5	-0.5
BWN	Browne	92.06	16	IAMs_20	IAMs_20	11 47 49.0	
	comp=Z,1µm,19.0s						
J08A	Circle Bar Ran	92.13	43	P	P	11 08 45.7	-0.3
J08A				IAmb	IAmb	11 08 46.6	
	comp=Z,13nm,0.8s						
O28M	Mount Upton	92.18	22	P	P	11 08 44.5	-1.5
	baz=224						
LL02	Futaleuf	92.22	139	P	P	11 08 45.8	-0.6
LL02				IAmb	IAmb	11 08 48.8	
	comp=Z,17nm,1.1s						
I21K	Tanana	92.28	15	P	P	11 08 44.6	-1.3
	baz=214						
TUC	Tucson	92.41	56	P	P	11 08 47.1	-0.3
TUC				IAmb	IAmb	11 09 03.2	
	comp=Z,15nm,1.3s						
TUC	Tucson	92.41	56	P	P	11 08 47.1	-0.3
TUC				pmax	pmax		
	comp=Z,15nm,1.3s						
TUC	Tucson	92.41	56	P	P	11 08 46.5	-0.9
	baz=244						
MLY	Manley	92.45	15	P	P	11 08 45.0	-1.8
MLY				IAMs_20	IAMs_20	11 47 32.1	
	comp=Z,758nm,20.0s						
MLY	Manley	92.45	15	P	P	11 08 45.0	-1.8
	baz=215						
Q12A	Willow Creek R	92.47	48	IAmb	IAmb	11 09 04.6	
	comp=Z,27nm,1.2s						
M26K	Nabesna, AK	92.48	19	P	P	11 08 44.9	-2.1
M26K				IAMs_20	IAMs_20	11 45 03.2	
	comp=Z,889nm,21.0s						
H21K	Melozitna Rive	92.49	14	P	P	11 08 44.8	-2.1
H21K	Melozitna Rive	92.49	14	P	P	11 08 45.2	-1.7
	baz=213						
NEA2	Nenana	92.50	16	IAMs_20	IAMs_20	11 51 15.6	
	comp=Z,945nm,19.0s						
NEA2	Nenana	92.50	16	P	P	11 08 45.5	-1.5
	baz=216						
F07A	Phinny Hill Vi	92.52	41	P	P	11 08 47.2	-0.2
F07A				IAmb	IAmb	11 08 47.9	
	comp=Z,11nm,0.7s						
JIS	Juneau Island	92.58	25	IAMs_20	IAMs_20	11 41 29.9	
	comp=Z,1µm,21.0s						
PLBC	Pleasant Camp	92.61	24	P	P	11 08 46.3	-1.3
	baz=227						
WRH	Wood River Hil	92.66	16	P	P	11 08 45.9	-1.7
LCMT	Little Creek M	92.66	51	IAmb	IAmb	11 08 49.5	
	comp=Z,12nm,0.9s						
YUK8	Steele Glacier	92.70	21	P	P	11 08 46.5	-1.7
	baz=224						
RDOG	Red Dog Mine	92.73	9	IAMs_20	IAMs_20	11 44 51.4	
	comp=Z,798nm,20.0s						
K24K	Donnelly Dome	92.75	18	P	P	11 08 46.3	-1.9
	baz=219						
SPR3	Spring Creek 3	92.80	49	IAmb	IAmb	11 08 50.5	
	comp=Z,13nm,1.3s						
G08A	Pilot Rock	92.80	42	IAmb	IAmb	11 08 49.4	
	comp=Z,12nm,0.7s						
M27K	Edge Creek, AK	92.80	20	P	P	11 08 47.8	-0.8
M27K				IAmb	IAmb	11 09 00.4	
	comp=Z,14nm,1.2s						
M27K				IAMs_20	IAMs_20	11 48 56.6	
	comp=Z,769nm,20.0s						
M27K	Edge Creek, AK	92.80	20	P	P	11 08 46.5	-2.1
	baz=222						
YUK3	Moose Creek	92.82	21	P	P	11 08 46.9	-1.9
	baz=224						
L26K	Log Cabin Wild	92.85	19	P	P	11 08 46.7	-2.0
	baz=221						
P30M	Million Dollar	92.85	23	P	P	11 08 46.3	-2.4
	baz=226						
CCB	Clear Creek Bu	92.87	16	P	P	11 08 46.5	-2.1
I23K	Minto, Yukon-K	92.88	16	IAMs_20	IAMs_20	11 45 16.6	
	comp=Z,922nm,19.0s						
HDA	Harding Lake	92.91	17	P	P	11 08 46.9	-2.0
HDA				IAmb	IAmb	11 08 59.2	
	comp=Z,36nm,1.6s						
HDA	Harding Lake	92.91	17	P	P	11 08 46.7	-2.1
	baz=218						
RIDG	Independent Ri	92.96	18	P	P	11 08 47.5	-1.6
RIDG				IAmb	IAmb	11 08 53.3	
	comp=Z,31nm,1.7s						
RIDG				IAMs_20	IAMs_20	11 53 18.8	
	comp=Z,944nm,18.0s						
RIDG	Independent Ri	92.96	18	P	P	11 08 47.0	-2.1
	baz=220						
KNB	Kanab	92.96	51	P	P	11 08 50.2	+0.2
KNB				IAmb	IAmb	11 09 14.6	
	comp=Z,23nm,1.2s						
KNB	Kanab	92.96	51	P	P	11 08 50.2	+0.2
KNB				pmax	pmax		
	comp=Z,23nm,1.2s						
ELK	Elko	92.99	47	LR	LR	11 46 10.7	
	comp=Z,1µm,18.0s,baz=246,slow=33						
ELK	Elko	92.99	47	P	P	11 08 49.7	-0.4
ELK	Elko	92.99	47	P	P	11 08 49.7	-0.4
ELK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HAWA	Hanford	93.01	40	P	P	11 08 49.1	-0.6
HAWA				IAmb	IAmb	11 08 50.3	
	comp=Z,9.3nm,0.8s						
HAWA				IAMs_20	IAMs_20	11 54 52.1	
	comp=Z,781nm,18.0s						
MDM	Murphy Dome	93.01	16	IAmb	IAmb	11 08 48.1	
	comp=Z,33nm,1.7s						
MDM				IAMs_20	IAMs_20	11 48 16.1	
	comp=Z,942nm,19.0s						
H22K	Ishtalitna Cre	93.02	14	P	P	11 08 47.7	-1.6
	baz=214						
TCOL	CIGO, UAF Yank	93.04	16	P	P	11 08 47.1	-2.2
	baz=217						
COLA	College	93.04	16	⇓*e*P	P	11 08 47.2	-2.2
COLA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
COLA	College	93.04	16	P	P	11 08 47.5	-1.9
	baz=217						
G21K	Allakaket	93.07	13	P	P	11 08 47.5	-2.1
	baz=212						
U15A	North Rim	93.08	52	P	P	11 08 50.9	+0.2
GOMU	GeErMu	93.16	308	P	P	11 08 51.1	-0.1
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,150nm,4.2s						
GOMU				LR	LR		
	comp=Z,140nm,19.8s						
GOMU				LR	LR		
	comp=Z,170nm,20.7s						
GOMU				LR	LR		
	comp=Z,170nm,21.0s						
BVCY	Beaver Creek	93.16	20	P	P	11 08 48.3	-1.9
	baz=223						
LL04	Puerto Octay	93.17	137	IAmb	IAmb	11 08 55.6	
	comp=Z,32nm,1.6s						
319A	Douglas	93.17	57	P	P	11 08 50.4	-0.6
319A				IAmb	IAmb	11 09 05.7	
	comp=Z,9.7nm,0.9s						
IL31		93.21	17	P	P	11 08 47.9	-2.3
IL31				IAmb	IAmb	11 08 49.4	
	comp=Z,48nm,2.0s						
ILAR	Eielson Array	93.21	17	P	P	11 08 47.4	-2.8
	comp=Z,2.7nm,0.8s,baz=236,slow=5.6,SNR=29						
ILAR				LR	LR	11 48 12.9	
	comp=Z,1µm,18.4s,baz=228,slow=34						
	comp=Z,2.7nm,0.8s						
ILAR	Eielson Array	93.21	17	P	P	11 08 47.7	-2.5
ILAR	Eielson Array	93.21	17	P	P	11 08 47.7	-2.5
L27K	Beaver Creek,	93.34	19	IAMs_20	IAMs_20	11 45 10.8	
	comp=Z,898nm,19.0s						
E08A	Dider Farm, El	93.34	40	IAmb	IAmb	11 08 51.7	
	comp=Z,14nm,1.0s						
WUAZ	Wupatki	93.35	53	IAmb	IAmb	11 09 07.3	
	comp=Z,11nm,1.0s						
WUAZ	Wupatki	93.35	53	P	P	11 08 51.0	-0.8
	baz=244						
SCRK	Sand Creek	93.39	18	P	P	11 08 49.5	-1.7
SCRK				IAmb	IAmb	11 08 50.4	
	comp=Z,26nm,1.8s						
SCRK				IAMs_20	IAMs_20	11 47 32.0	
	comp=Z,769nm,20.0s						
SCRK	Sand Creek	93.39	18	P	P	11 08 49.1	-2.1
	baz=220						
H23K	Yukon River	93.39	15	P	P	11 08 49.1	-2.0
	baz=216						
PALK	Pallekele	93.42	276	LR	LR	11 53 33.1	
	comp=Z,435nm,18.2s,baz=231,slow=37						

PALK	Pallekele	93.42	276	IAMs_20	IAMs_20	11 52 45.7	
	comp=Z,640nm,18.0s						
PKCU	Pink Cliffs	93.52	51	IAmb	IAmb	11 08 54.5	
	comp=Z,22nm,1.0s						
BOD	Bodaibo	93.56	333	eP	P	11 08 50.2	-1.8
BOD				pmax	pmax		
	comp=Z,13nm,1.5s						
S34M	Telegraph Cree	93.66	27	P	P	11 08 51.2	-1.3
	baz=231						
F21K	Alatna River	93.67	13	P	P	11 08 50.2	-2.1
	baz=212						
D08A	Wollman Farm,	93.71	40	P	P	11 08 52.2	-0.7
D08A				IAmb	IAmb	11 08 53.3	
	comp=Z,11nm,1.0s						
N30M	Aishikik Lake	93.73	22	P	P	11 08 50.0	-2.8
	baz=226						
H24K	Noodor Dome	93.81	16	IAMs_20	IAMs_20	11 47 13.0	
	comp=Z,733nm,20.0s						
H24K	Noodor Dome	93.81	16	P	P	11 08 49.8	-3.2
	baz=217						
DUN6	Lazy B Ranch	93.81	56	IAmb	IAmb	11 09 10.3	
	comp=Z,40nm,1.4s						
MFID	Camas Ranch	93.85	44	IAMs_20	IAMs_20	11 53 47.7	
	comp=Z,854nm,18.0s						
Q32M	Nakina River	93.86	26	P	P	11 08 52.2	-1.4
	baz=230						
J26L	Joseph Creek	93.91	18	P	P	11 08 52.1	-1.4
J26L				IAmb	IAmb	11 09 04.7	
	comp=Z,15nm,1.2s						
J26L				IAMs_20	IAMs_20	11 49 10.8	
	comp=Z,930nm,19.0s						
J26L	Joseph Creek	93.91	18	P	P	11 08 52.0	-1.6
	baz=221						
M29M	Somme Creek	93.96	21	P	P	11 08 52.5	-1.4
	baz=225						
G23K	Bananza Creek	94.00	14	P	P	11 08 52.0	-1.9
	baz=215						
MVU	Marysvale	94.06	50	IAmb	IAmb	11 08 55.8	
	comp=Z,16nm,1.0s						
PRP	Porcupine Dome	94.15	17	P	P	11 08 52.9	-1.8
	baz=219						
N31M	Braeburn, Yuko	94.21	23	P	P	11 08 53.9	-1.0
	baz=228						
DUG	Dugway, Tooele	94.38	48	P	P	11 08 55.9	-0.5
DUG				IAMs_20	IAMs_20	11 54 20.0	
	comp=Z,915nm,18.0s						
DUG	Dugway, Tooele	94.38	48	P	P	11 08 55.9	-0.5
DUG				pmax	pmax		
	comp=Z,12nm,1.7s						
DUG				MLR	MLR		
	comp=Z,900nm,18.0s						
DUG	Dugway, Tooele	94.38	48	P	P	11 08 55.3	-1.1
	baz=244						
COLD	Coldfoot	94.39	14	P	P	11 08 54.5	-1.1
COLD	Coldfoot	94.39	14	P	P	11 08 54.3	-1.3
	baz=215						
W18A	Petrified Fore	94.39	54	P	P	11 08 54.6	-2.0
W18A	Petrified Fore	94.39	54	P	P	11 08 55.9	-0.7
	baz=245						
PLCA	Paso Flores	94.42	138	P	P	11 08 57.0	+0.3
	comp=Z,4.8nm,1.0s,baz=220,slow=7.3,SNR=6.5						
PLCA				PKKPbc	PKKPbc	11 25 56.9	+0.5
	comp=Z,1.5nm,0.9s,baz=102,slow=5.5,SNR=3.1						
	comp=Z,4.8nm,1.0s						
DLBC	Dease Lake	94.45	27	LR	LR	11 47 56.2	
	comp=Z,634nm,18.1s,baz=272,slow=33						
P33M	Teslin, Yukon	94.46	24	IAMs_20	IAMs_20	11 43 49.6	
	comp=Z,941nm,20.0s						
ZAK	Zakamensk	94.48	323	eP	P	11 08 55.3	-1.3
ZAK				pmax	pmax		
	comp=Z,25nm,1.3s						
GO06	Curarrehue	94.50	136	P	P	11 08 58.1	+1.0
GO06				IAmb	IAmb	11 09 12.4	
	comp=Z,21nm,1.4s						
PLID	Pearl Lake	94.53	43	IAMs_20	IAMs_20	11 55 44.5	
	comp=Z,724nm,18.0s						
L29M	L29M	94.54	21	P	P	11 08 54.9	-1.6
	baz=226						
G24K	Hadweenzic Riv	94.59	15	P	P	11 08 54.4	-2.2
	baz=218						
M30M	Minto, Yukon	94.61	21	P	P	11 08 55.4	-1.4
	baz=227						
I26K	Coal Creek Min	94.63	17	IAmb	IAmb	11 09 07.8	
	comp=Z,21nm,1.3s						
I26K				IAMs_20	IAMs_20	11 52 37.9	
	comp=Z,779nm,19.0s						
I26K	Coal Creek Min	94.63	17	P	P	11 08 54.8	-2.0
	baz=221						
NLU	North Lily Min	94.79	49	P	P	11 08 56.8	-1.6
121A	Cookes Peak, D	94.80	57	P	P	11 08 57.6	-0.9
	baz=246						
EGAK	Eagle	94.81	18	P	P	11 08 56.2	-1.3
EGAK				IAmb	IAmb	11 09 08.4	
	comp=Z,24nm,1.6s						
EGAK				IAMs_20	IAMs_20	11 46 49.6	
	comp=Z,852nm,20.0s						
EGAK	Eagle	94.81	18	P	P	11 08 55.8	-1.8
	baz=223						
DAWY	Dawson	94.82	20	P	P	11 08 56.8	-0.9
DAWY				IAmb	IAmb	11 09 08.0	
	comp=Z,15nm,1.4s						
DAWY	Dawson	94.82	20	P	P	11 08 56.0	-1.7
	baz=224						
HLID	Hailey	94.83	45	P	P	11 08 57.9	-0.6
HLID	Hailey	94.83	45	P	P	11 08 57.5	-0.9
	baz=243						
HMU	Henry Mountain	94.85	51	IAmb	IAmb	11 09 02.1	
	comp=Z,17nm,1.6s						
G25K	Bearman Lake	94.98	16	P	P	11 08 56.9	-1.4
	baz=219						
FYU	Fort Yukon	95.05	16	IAMs_20	IAMs_20	11 47 07.8	
	comp=Z,1μm,20.0s						
TMUT	Trail Mountain	95.11	49	P	P	11 08 58.9	-1.1
F24K	Squaw Lake	95.15	15	P	P	11 08 57.7	-1.4
	baz=217						
E23K	Chandalar	95.20	14	P	P	11 08 58.0	-1.4
	baz=216						
K29M	Barlow Dome	95.25	20	P	P	11 08 58.5	-1.3
	baz=226						
I27K	Kandik River	95.28	18	P	P	11 08 58.3	-1.5
	baz=223						
NEW	Newport	95.36	40	LR	LR	11 46 27.2	
	comp=Z,466nm,18.7s,baz=257,slow=32						
NEW	Newport	95.36	40	P	P	11 08 59.1	-1.4
	baz=241						
E24K	Your Creek	95.46	14	P	P	11 08 59.5	-1.0
	baz=217						
FARO	Faro, Yukon	95.57	23	P	P	11 08 60.0	-1.2
	baz=230						
MAYO	Mayo, Yukon	95.61	21	P	P	11 09 00.1	-1.2
	baz=228						
TOLK	Toolik Lake Re	95.68	13	P	P	11 09 00.2	-1.4
	baz=216						
G26K	Porcupine Rive	95.71	16	P	P	11 09 00.3	-1.3
	baz=221						
D23K	Nanushuk River	95.72	13	P	P	11 09 00.5	-1.1
	baz=215						
F25K	Christian Rive	95.74	15	P	P	11 09 00.6	-1.3
	baz=219						
H27K	Steamboat Moun	95.77	17	P	P	11 09 00.6	-1.4
	baz=223						
I29M	Ogilvie Camp,	96.07	19	IAMs_20	IAMs_20	11 50 54.0	
	comp=Z,922nm,18.0s						
I29M	Ogilvie Camp,	96.07	19	P	P	11 09 02.1	-1.2
	baz=226						
G27K	Doyon Strip	96.16	17	P	P	11 09 02.3	-1.5
	baz=223						
E25K	Arctic Village	96.17	15	P	P	11 09 02.2	-1.5
	baz=219						
F26K	Sheenjek River	96.19	16	P	P	11 09 02.7	-1.2
	baz=221						
MNTX	Cornudas Mount	96.34	58	P	P	11 09 04.7	-0.7
	baz=247						
MOY	Mondy	96.38	324	eP	P	11 09 04.6	-0.6
MOY				pmax	pmax		
	comp=Z,24nm,3.2s						
A21K	Barrow	96.64	10	IAMs_20	IAMs_20	11 49 06.9	
	comp=Z,693nm,20.0s						
A21K	Barrow	96.64	10	P	P	11 09 04.2	-1.6
	baz=210						
AHID	Auburn Hatcher	96.66	46	IAMs_20	IAMs_20	11 53 33.1	
	comp=Z,882nm,19.0s						
C24K	Franklin Bluff	96.74	13	P	P	11 09 04.9	-1.4
	baz=217						
ANMO	Albuquerque	96.78	55	LR	LR	11 46 11.4	
	comp=Z,582nm,19.0s,baz=349,slow=31						
ANMO	Albuquerque	96.78	55	P	P	11 09 06.0	-1.6
ANMO	Albuquerque	96.78	55	IAMs_20	IAMs_20	11 48 06.9	
	comp=Z,719nm,20.0s						
ANMO	Albuquerque	96.78	55	P	P	11 09 06.0	-1.6
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ANMO	Albuquerque	96.78	55	P	P	11 09 06.8	-0.7
	baz=247						
DLMT	Dillon	96.80	44	IAMs_20	IAMs_20	11 53 22.6	
	comp=Z,785nm,18.0s						
TXAR	Lajitas Array	96.80	61	P	P	11 09 07.7	+0.1
	comp=Z,0.7nm,0.6s,baz=210,slow=5.0,SNR=9.1						
TXAR				LR	LR	11 45 39.9	
	comp=Z,542nm,19.0s,baz=256,slow=31						
	comp=Z,0.7nm,0.6s						
TXAR	Lajitas Array	96.80	61	P	P	11 09 05.3	-2.4
D25K	Kavik River	96.92	14	P	P	11 09 05.2	-2.0
	baz=219						
E27K	Coleen River	97.20	16	P	P	11 09 06.5	-1.9
	baz=223						
EPYK	Eagle Plains	97.24	19	IAMs_20	IAMs_20	11 45 24.9	
	comp=Z,773nm,22.0s						
EPYK	Eagle Plains	97.24	19	P	P	11 09 07.4	-1.3
	baz=227						
BOZ	Bozeman (W)	97.51	44	P	P	11 09 09.7	-0.9
	baz=245						
S22A	4UR Ranch, Cre	97.60	52	P	P	11 09 10.4	-1.0
	baz=247						
H17A	Grant Village	97.69	45	P	P	11 09 11.0	-0.4
	baz=246						
BW06	Boulder Array	97.69	47	IAMs_20	IAMs_20	11 49 28.5	
	comp=Z,788nm,19.0s						
PDAR	Pinedale Array	97.69	47	P	P	11 09 10.2	-1.3
	comp=Z,0.4nm,0.6s,baz=204,slow=3.3,SNR=5.1						
PDAR				LR	LR	11 49 12.4	
	comp=Z,673nm,18.0s,baz=261,slow=33						
	comp=Z,0.4nm,0.6s						
C26K	Camden Bay	97.71	14	P	P	11 09 09.3	-1.3
	baz=220						
C27K	Jago River	97.76	14	P	P	11 09 09.4	-1.5
	baz=221						
G30M	tAoh Zraii Nji	97.80	18	P	P	11 09 09.2	-2.0
	baz=228						
LKWY	Lake	97.87	45	IAMs_20	IAMs_20	11 53 48.1	
	comp=Z,997nm,20.0s						
SDCO	Great Sand Dun	98.57	53	IAMs_20	IAMs_20	11 50 46.2	
	comp=Z,688nm,20.0s						
INK	Inuvik	99.46	18	LR	LR	11 47 58.2	
	comp=Z,815nm,20.8s,baz=221,slow=32						
CMIG	Matias Romero	99.83	76	LR	LR	11 44 54.3	
	comp=Z,183nm,19.3s,baz=248,slow=30						
PHWY	Pilot Hill	99.94	49	IAMs_20	IAMs_20	11 56 35.0	
	comp=Z,849nm,18.0s						
AMTX	Amarillo	100.40	57	IAMs_20	IAMs_20	11 49 36.8	
	comp=Z,794nm,18.0s						
WMQ	Urumqi	101.22	313	eP	Pdif	11 09 28.2	+1.2
WMQ				LR	LR		
	comp=Z,250nm,18.1s						
WMQ				LR	LR		
	comp=Z,600nm,21.5s						
WMQ				LR	LR		
	comp=Z,460nm,18.1s						
LAO	LASA Array	101.40	44	IAMs_20	IAMs_20	11 50 03.3	
	comp=Z,916nm,19.0s						
RSSD	Black Hills	101.92	47	IAMs_20	IAMs_20	11 53 50.5	
	comp=Z,846nm,18.0s						
C36M	Paulatuk	102.85	19	IAMs_20	IAMs_20	11 48 10.3	
	comp=Z,791nm,21.0s						
C36M	Paulatuk	102.85	19	P	Pdif	11 09 33.8	+0.3
	baz=239						
YKA	Yellowknife Ar	103.06	27	P	Pdif	11 09 32.5	-2.1
	comp=Z,0.2nm,0.6s,baz=240,slow=4.5,SNR=2.9						
YKA				PP	PP	11 13 50.2	+0.5
	comp=Z,0.7nm,1.0s,baz=253,slow=8.2,SNR=3.8						
YKA				PKKPbc	PKKPbc	11 25 29.5	-3.8
	comp=Z,0.2nm,0.7s,baz=69,slow=3.1,SNR=2.6						
OK032	Salt Plains WL	103.70	56	IAMs_20	IAMs_20	11 52 17.1	
	comp=Z,792nm,19.0s						
A36M	Sachs Harbour	103.91	17	IAMs_20	IAMs_20	12 03 55.1	
	comp=Z,560nm,18.0s						
A36M	Sachs Harbour	103.91	17	P	Pdif	11 09 37.9	-0.3
	baz=238						
OK029	Liberty Lake	103.96	57	IAMs_20	IAMs_20	11 56 01.1	
	comp=Z,705nm,18.0s						
OK025	Westminster Rd	103.98	57	IAMs_20	IAMs_20	11 53 48.7	
	comp=Z,736nm,20.0s						
OK033	Mehan	104.44	57	IAMs_20	IAMs_20	11 50 12.7	
	comp=Z,936nm,21.0s						
OK031	S. Brethren Rd	104.48	57	IAMs_20	IAMs_20	11 51 43.9	
	comp=Z,752nm,18.0s						
OK050	Pawnee Station	104.51	56	IAMs_20	IAMs_20	11 52 20.6	
	comp=Z,940nm,21.0s						
OK030	Cody Creek RV	104.52	57	IAMs_20	IAMs_20	11 51 42.9	
	comp=Z,745nm,21.0s						
OK052	Battle Ridge R	104.52	57	IAMs_20	IAMs_20	11 52 21.0	
	comp=Z,858nm,20.0s						
OK053	SW of W Deep R	104.54	57	IAMs_20	IAMs_20	11 56 38.5	
	comp=Z,725nm,19.0s						
OK046	Pawnee Station	104.57	56	IAMs_20	IAMs_20	11 50 35.1	
	comp=Z,956nm,20.0s						
TUL1	Leonard	105.28	57	IAMs_20	IAMs_20	11 50 33.1	
	comp=Z,604nm,20.0s						
MKAR	Makanchi Array	105.79	314	Pdiff	Pdif	11 09 47.5	+0.3
	comp=Z,1.9nm,0.8s,baz=86,slow=6.2,SNR=7.4						
MKAR				PKiKP	PKiKP	11 13 59.0	-0.9
	comp=Z,0.8nm,0.7s,baz=92,slow=3.3,SNR=8.4						
MKAR				PKKP	PKKPdf	11 25 36.6	+0.4
	comp=Z,1.1nm,0.8s,baz=264,slow=2.9,SNR=4.4						
ZALV	Zalesovo Beam	106.29	322	Pdiff	Pdif	11 09 48.6	-0.6
	comp=Z,1.9nm,0.7s,baz=137,slow=5.2,SNR=7.8						
ZALV				PKiKP	PKiKP	11 13 59.9	-0.7
	comp=Z,1.5nm,0.6s,baz=93,slow=3.0,SNR=5.7						
MIAR	Mount Ida	106.62	59	IAMs_20	IAMs_20	11 55 25.5	
	comp=Z,578nm,18.0s						
ECSD	EROS Data Cent	106.90	49	IAMs_20	IAMs_20	11 52 11.4	
	comp=Z,793nm,19.0s						
NRIK	Noril'sk	109.13	338	PKiKP	PKiKP	11 14 04.7	-0.7
	comp=Z,0.9nm,0.4s,baz=100,slow=2.5,SNR=1.7						
KURK	Kurchatov	109.14	318	IAMs_20	IAMs_20	12 02 20.9	
	comp=Z,607nm,18.0s						
CCM	Cathedral Cave	109.37	56	IAMs_20	IAMs_20	11 56 26.2	
	comp=Z,771nm,19.0s						
JFWS	Jewell Farm	111.22	51	IAMs_20	IAMs_20	11 55 51.7	
	comp=Z,835nm,20.0s						
BRVK	Borovoye	114.62	319	IAMs_20	IAMs_20	12 04 25.7	
	comp=Z,686nm,19.0s						
BRVK	Borovoye	114.62	319c	iPKIKP	PKPdf	11 14 15.2	-1.1
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SAML	Samuel	117.90	114	IAMs_20	IAMs_20	11 55 35.6	
	comp=Z,498nm,20.0s						
BOSA	Boshof	119.20	214	PKP	PKPdf	11 14 26.3	+0.1
	comp=Z,1.4nm,0.5s,baz=82,slow=1.8,SNR=4.0						
CBN	Corbin Frederi	120.14	58	IAMs_20	IAMs_20	12 01 35.6	
	comp=Z,726nm,20.0s						
SVE	Sverdlovsk	120.25	323	ePKIKP	PKPdf	11 14 26.4	-0.6
SVE				pmax	pmax		
	comp=Z,17nm,0.9s						
ABKAR	Akbulak array	120.93	315	PKPdf	PKPdf	11 14 27.4	-1.2
ARU	Arti	121.42	323	PKPdf	PKPdf	11 14 28.1	-1.2
ARU	Arti	121.42	323	i PKIKP	PKPdf	11 14 28.4	-0.9
ARU						11 16 02.0	
ARU						11 21 37.3	
ARU				SS	SS	11 32 52.4	+17
BINY	Binghamton	121.55	54	IAMs_20	IAMs_20	12 08 45.5	
	comp=Z,665nm,20.0s						
GEYT	Alibeck	121.70	301	PKP	PKPdf	11 14 29.4	-1.1
	comp=Z,3.2nm,0.5s,baz=48,slow=2.1,SNR=6.0						
SPITS	Spitsbergen Ar	123.51	354	PKP	PKPdf	11 14 31.0	-1.8
	comp=Z,6.0nm,0.6s,baz=91,slow=5.0,SNR=9.8						
SPITS	Spitsbergen Ar	123.51	354	PKIKP	PKPdf	11 14 31.0	-1.8
HRV	Adam Dziewonsk	124.84	53	IAMs_20	IAMs_20	12 02 41.5	
	comp=Z,684nm,21.0s						
BOAV	Boa Vista	125.75	104	PKPdf	PKPdf	11 14 37.8	-1.2
KIRV	Kirov	125.89	327d	iPKIKP	PKPdf	11 14 37.4	-0.4
LSZ	Lusaka	127.63	227	IAMs_20	IAMs_20	12 01 50.6	
	comp=Z,580nm,19.0s						
KIBK	Kibwezi	128.04	247	IAMs_20	IAMs_20	12 08 02.2	
	comp=Z,514nm,18.0s						
BELG	Belogornoye	128.36	319c	iPKIKP	PKPdf	11 14 41.9	-0.8
ARCES	ARCESS Array B	129.18	345	PKP	PKPdf	11 14 42.6	-1.2
	comp=Z,3.9nm,0.6s,baz=71,slow=1.9,SNR=24						
KMBO	Kilima Mbogo	129.35	248	IAMs_20	IAMs_20	12 09 45.0	
	comp=Z,537nm,18.0s						
KLMR	Klimovskoe	129.76	332	ePKPdf	PKPdf	11 14 42.5	-2.7
KLMR				AMP		11 14 45.8	
	comp=Z,31nm,1.5s						
KLMR				LR	LR	12 04 11.2	
KLMR				AMP		12 10 26.2	
	comp=Z,813nm,21.5s						
KLMR	Klimovskoe	129.76	332	ePKIKP	PKPdf	11 14 42.4	-2.7
KLMR				pmax	pmax		
	comp=Z,31nm,1.5s						
KLMR				MLR	MLR		
	comp=Z,813nm,22.0s						
MAK	Makhachkala	129.85	307	i P	Pdif	11 11 35.9	+1.7
MAK				i		11 14 45.2	
MAK				e		11 16 56.0	
MAK				eSS	SS	11 34 23.8	+2.3
MAK				pmax	pmax		
	comp=Z,184nm,1.3s						
SEKA	Sheki	130.20	305	PKIKP	PKPdf	11 14 46.2	-0.5
RAYN	Ar Rayn	130.53	282	IAMs_20	IAMs_20	12 18 33.8	
	comp=Z,404nm,19.0s						
RAYN	Ar Rayn	130.53	282	⇑PKIKP	PKPdf	11 14 47.9	+0.1
GANJ	Ganja	130.90	305	PKIKP	PKPdf	11 14 47.9	-0.1
GROC	Groznyy	131.07	308	i PKIKP	PKPdf	11 14 45.6	-2.6
GROC				e		11 17 04.0	
GROC				pmax	pmax		
	comp=Z,146nm,1.3s						
GNI	Garni	132.14	304c	iPKIKP	PKiKP	11 14 52.5	+0.9
GNI				pmax	pmax		
	comp=Z,23nm,1.7s						
VRH	Novokhopyorsk	132.21	319	ePKIKP	PKPdf	11 14 49.6	-0.5
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
ZEI	Tsey	132.50	308	i PKIKP	PKPdf	11 14 51.7	+0.5
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
FURI	Furi	132.63	261	IAMs_20	IAMs_20	12 11 08.6	
	comp=Z,429nm,20.0s						
KIV	Kislovodsk	133.21	309	i PKIKP	PKPdf	11 14 52.7	+0.4
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LPSR	Galich'ya Gora	133.40	322	ePKIKP	PKPdf	11 14 52.2	-0.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VORR	Voronezh	133.56	320	ePKIKP	PKiKP	11 14 53.8	0.0
VORR				pmax	pmax		
	comp=Z,70nm,0.4s						
OBN	Obninsk	133.70	326	⇑iPKIKP	PKiKP	11 14 55.5	+1.5
OBN						11 21 57.0	
OBN				SS	SS	11 35 02.0	-5.3
OBN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR	Storozhevoye	133.73	320	ePKIKP	PKPdf	11 14 52.5	-0.4
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VORD	Divnogorie	133.74	319	ePKIKP	PKPdf	11 14 52.1	-0.8
VORD				pmax	pmax		
	comp=Z,9.0nm,0.7s						
FINES	FINESS Array B	134.79	337	PKhKP	PKPpre	11 14 48.8	
	comp=Z,4.3nm,0.8s,baz=81,slow=3.3,SNR=8.6						
FINES				PKP	PKPdf	11 14 54.0	-0.6
	comp=Z,5.4nm,0.8s,baz=46,slow=4.0,SNR=6.8						
FINES	FINESS Array B	134.79	337	PKIKP	PKPdf	11 14 54.0	-0.6
MBAR	Mbarara	135.11	244c	iPKIKP	PKPdf	11 14 56.4	-0.5
MBAR				pmax	pmax		
	comp=Z,13nm,2.5s						
MNK	Minsk	138.37	329	i LRM	MLR	12 19 30.2	
	comp=E,60nm,20.1s						
MNK	Minsk	138.37	329	i PKIKP	PKPdf	11 14 59.1	-2.3
MNK				i		11 15 04.8	
MNK				i		11 17 48.6	
MNK				i PPP	PPP	11 20 49.5	
MNK				i SS	SS	11 35 59.5	-3.4
MNK				i SSS	SSS	11 41 08.2	
MNK				pmax	pmax		
	comp=E,3.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,34nm,1.0s						
MNK				pmax	pmax		
	comp=Z,13nm,1.0s						
MNK				MLR	MLR		
	comp=N,677nm,20.0s						
MNK				MLR	MLR		
	comp=Z,583nm,20.0s						
MNK	Minsk	138.37	329	i PKP	PKPdf	11 14 59.1	-2.3
	comp=E,3.0nm,1.0s						
MNK	Minsk	138.37	329	i PKP	PKPdf	11 14 59.1	-2.3
	comp=N,34nm,1.0s						
MNK	Minsk	138.37	329	i PKP	PKPdf	11 14 59.1	-2.3
	comp=Z,13nm,1.0s,baz=56						
MNK	Minsk	138.37	329	i PKiKP	PKiKP	11 15 04.8	+1.3
MNK	Minsk	138.37	329	i PP	PP	11 17 48.6	-2.4
MNK	Minsk	138.37	329	i SKP		11 18 13.0	
MNK	Minsk	138.37	329	i PKS		11 18 35.2	
MNK	Minsk	138.37	329	i PPP	PPP	11 20 49.6	
MNK	Minsk	138.37	329	i SKS	SKSdf	11 22 26.3	+15
MNK	Minsk	138.37	329	i SKKS		11 26 01.9	
MNK	Minsk	138.37	329	i SS	SS	11 35 59.5	-3.4
MNK	Minsk	138.37	329	i SSS	SSS	11 41 08.3	
MNK	Minsk	138.37	329	i LQ	LQ	12 08 08.6	
MNK	Minsk	138.37	329	i LR	LR	12 12 33.2	
MNK	Minsk	138.37	329	i LRM	MLR	12 18 14.8	
	comp=N,677nm,20.0s						
MNK	Minsk	138.37	329	i LRM	MLR	12 18 18.0	
	comp=Z,583nm,20.0s						
NACGM	Naroch	138.66	330	LRM	MLR	12 18 12.2	
	comp=Z,611nm,19.6s						
NACGM	Naroch	138.66	330	ePKP	PKPdf	11 15 00.6	-1.4
	comp=Z,20nm,0.8s,baz=54						
NACGM	Naroch	138.66	330	PP	PP	11 17 53.2	+0.4
NACGM	Naroch	138.66	330	PPP	PPP	11 20 51.9	
NACGM	Naroch	138.66	330	SKS	SKSdf	11 22 09.1	-2.6
NACGM	Naroch	138.66	330	SKKS		11 31 34.8	
NACGM	Naroch	138.66	330	SS	SS	11 35 58.3	-8.0
NACGM	Naroch	138.66	330	SSS	SSS	11 41 03.5	
NACGM	Naroch	138.66	330	LQ	LQ	12 09 12.5	
NACGM	Naroch	138.66	330	LR	LR	12 14 13.5	
NB2	NORSAR Subarra	139.56	345	PKP	PKPpre	11 14 53.3	
	comp=Z,1.5nm,0.9s,baz=17,slow=2.6						
NOA	NORSAR Array B	139.56	345	PKhKP	PKPpre	11 14 54.6	
	comp=Z,1.4nm,0.9s,baz=41,slow=2.4,SNR=3.9						
NOA				PKP	PKPdf	11 15 03.1	-0.4
	comp=Z,3.3nm,1.1s,baz=27,slow=2.0,SNR=4.0						
AKASG	Malin Array Be	139.68	323	PKhKP	PKPpre	11 14 56.0	
	comp=Z,1.3nm,0.6s,baz=46,slow=4.0,SNR=8.8						
AKASG				PKP	PKPdf	11 15 02.9	-1.1
	comp=Z,3.8nm,0.8s,baz=46,slow=1.9,SNR=13						
AKASG				SKPbc	SKPbc	11 18 39.2	+0.2
	comp=Z,0.3nm,0.4s,baz=50,slow=3.0,SNR=4.3						
AKBB	Malin Array Si	139.68	323	⇓ePKIKP	PKPdf	11 15 03.0	-1.0
HFS	Hagfors	139.71	343	PKhKP	PKPpre	11 14 55.9	
	comp=Z,4.8nm,0.8s,baz=81,slow=9.2,SNR=4.3						
MMAI	Mount Meron Ar	140.11	294	PKP	PKPdf	11 15 05.0	-0.4
	comp=Z,1.4nm,0.3s,baz=35,slow=3.5,SNR=5.1						
EIL	Elat	140.56	289	PKP	PKPdf	11 15 06.2	-0.1
	comp=Z,7.3nm,0.9s,baz=41,slow=9.3,SNR=2.4						
BRTR	Keskin Array B	140.64	305	PKhKP	PKPpre	11 14 60.0	
	comp=Z,0.9nm,0.5s,baz=85,slow=2.6,SNR=4.0						
BRTR				PKP	PKPdf	11 15 05.7	-0.6
	comp=Z,2.1nm,0.7s,baz=116,slow=4.3,SNR=14						
BRTR	Keskin Array B	140.64	305	PKPdf	PKPdf	11 15 04.7	-1.6
SORM	Soroca	141.40	320	⇑P	PKPdf	11 15 05.8	-1.4
SORM	Soroca	141.40	320	⇑PKIKP	PKPdf	11 15 05.8	-1.4
MILM	Milestii Mici	141.66	318	i PKP	PKiKP	11 15 12.0	+1.5
	comp=Z,500nm,17.0s						
CSS	Mathiatis	141.67	298	IAMs_20	IAMs_20	12 24 21.6	
	comp=Z,339nm,19.0s						
TPGR	Topolog	142.76	315	⇓P	PKPdf	11 15 10.7	+0.9
CFR	Carcaliu	142.81	316	⇑P	PKPdf	11 15 10.0	+0.2
CFR	Carcaliu	142.81	316	⇑PKIKP	PKPdf	11 15 10.0	+0.2
LVV	L'vov	142.98	325	ePKIKP	PKPdf	11 15 05.9	-4.1
TESR	Tescani	143.17	318	⇓P	PKPbc	11 15 07.8	+0.4
VRI	Vrincioaia	143.41	317	⇑P	PKPbc	11 15 08.8	+0.7
VRI	Vrincioaia	143.41	317	⇑PKIKP	PKPbc	11 15 08.8	+0.7
ISP	Isparta	143.43	303	IAMs_20	IAMs_20	12 28 38.7	
	comp=Z,447nm,19.0s						
PLOR	Plostina	143.47	317	⇓P	PKPbc	11 15 09.2	+0.9
PLOR	Plostina	143.47	317	⇓PKIKP	PKPbc	11 15 09.2	+0.9
BUR08	Bucovina Ar. S	143.49	321	PKPdf	PKPbc	11 15 10.0	+1.6
BURAR	Bucovina Array	143.49	321	⇓P	PKPdf	11 15 11.0	-0.1
BURAR	Bucovina Array	143.49	321	PKPdf	PKPbc	11 15 09.7	+1.3
BURAR	Bucovina Array	143.49	321	⇓PKIKP	PKPdf	11 15 11.0	-0.1
BISRR	Bisoca	143.57	317	⇓P	PKPbc	11 15 09.7	+1.1
COVR	Voineasa-Covas	143.75	318	⇑P	PKPbc	11 15 09.5	+0.4
ISR	Istrita	143.86	316	⇓P	PKPbc	11 15 09.8	+0.4
ISR	Istrita	143.86	316	⇓PKIKP	PKPbc	11 15 09.8	+0.3
MLR	Muntele Rosu	144.07	317	⇑P	PKPbc	11 15 10.8	+0.7
MLR	Muntele Rosu	144.07	317	PKP	PKPab	11 15 09.7	0.0
	comp=Z,29nm,0.9s,baz=44,slow=3.8,SNR=27						
MLR	Muntele Rosu	144.07	317	PKPdf	PKPbc	11 15 10.7	+0.5
MLR	Muntele Rosu	144.07	317	⇑PKIKP	PKPbc	11 15 10.8	+0.6

PRD	**Provadia**	**144.09**	**313**	eP	PKPbc	11 15 10.3	+0.2
DOPR	**Dopca**	**144.20**	**318**	⇑P	PKPbc	11 15 11.2	+0.8
SECR		**144.20**	**316**	⇑P	PKPbc	11 15 11.5	+1.1
ARCR	**ARCALIA**	**144.27**	**320**	⇓P	PKPbc	11 15 11.8	+1.2
BMR	**Baia Mare**	**144.46**	**322**	⇑P	**PKPdf**	**11 15 12.4**	**-0.2**
BMR	**Baia Mare**	**144.46**	**322**	⇑PKIKP	**PKPdf**	**11 15 12.4**	**-0.2**
AKAS	**Kas**	**144.47**	**301**		**PKPab**	**11 15 11.5**	**0.0**
VOIR		**144.66**	**318**	⇑P	PKPbc	11 15 12.5	+0.6
VOIR		**144.66**	**318**	⇑PKIKP	PKPbc	11 15 12.5	+0.5
STHS	**Stebnicka Huta**	**144.68**	**326**	ePKIKP	**PKPab**	**11 15 11.7**	**0.0**
STHS	**Stebnicka Huta**	**144.68**	**326**	ePKP	**PKPab**	**11 15 11.7**	**0.0**
KULA	**Kula-Manisa**	**144.69**	**305**	P	**PKPab**	**11 15 07.2**	**-5.0**
MDB	**Medias**	**144.73**	**319**	⇓P	**PKPdf**	**11 15 14.1**	**+0.9**
MDB	**Medias**	**144.73**	**319**	⇓PKIKP	**PKPdf**	**11 15 14.1**	**+0.9**
TRPA	**Tarpa**	**144.74**	**323**	⇓P	PKPbc	11 15 12.5	+0.5
CJR	**Cluj-Napoca**	**144.91**	**320**	⇑P	PKPbc	11 15 13.4	+0.7
OJC	**Ojcow**	**144.91**	**328**	PKPdf	**PKPab**	**11 15 12.0**	**-0.5**
OJC	**Ojcow**	**144.91**	**328**	PKIKP	**PKPab**	**11 15 12.0**	**-0.5**
ARR	**Arges**	**144.95**	**318**	⇑P	PKPbc	11 15 13.5	+0.6
EDRB	**Edirne**	**145.04**	**311**	P	**PKPbc**	**11 15 10.4**	**-2.8**
SZH	**Strazhica**	**145.04**	**314**	eP	**PKPbc**	**11 15 13.1**	**-0.1**
HUMR	**Humele**	**145.12**	**316**	⇓P	**PKPbc**	**11 15 13.4**	**0.0**
COPA	**Copaceanca**	**145.14**	**315**	⇑P	**PKPbc**	**11 15 13.7**	**+0.3**
MARR	**Marisel-Cluj**	**145.21**	**321**	⇓P	**PKPdf**	**11 15 14.9**	**+0.8**
YER	**Yerkesik**	**145.32**	**303**	P	**PKPbc**	**11 15 12.0**	**-2.3**
DRGR		**145.38**	**321**	⇑P	**PKPdf**	**11 15 15.4**	**+1.1**
DRGR		**145.38**	**321**	⇑PKIKP	**PKPdf**	**11 15 15.4**	**+1.1**
LOT	**Lotru**	**145.44**	**318**	⇓P	**PKPbc**	**11 15 14.6**	**0.0**
KECS	**Kecovo**	**145.65**	**325**	ePKIKP	**PKPab**	**11 15 15.6**	**+0.4**
KECS	**Kecovo**	**145.65**	**325**	ePKP	**PKPab**	**11 15 15.6**	**+0.4**
ARG	**Arkhangelos**	**145.65**	**301**	P	**PKiKP**	**11 15 20.8**	**+1.7**
BORR	**Bors**	**145.75**	**322**	⇓P	**PKPab**	**11 15 17.1**	**+1.5**
LANS	**Liptovska Anna**	**145.76**	**327**	ePKIKP	**PKPab**	**11 15 16.2**	**+0.5**
LANS	**Liptovska Anna**	**145.76**	**327**	ePKP	**PKPab**	**11 15 16.2**	**+0.5**
ENEZ	**Enez**	**145.85**	**309**	P	PKPdf	11 15 06.7	-8.5
PLVB	**Pleven**	**145.86**	**315**	⇑P	**PKPab**	**11 15 17.3**	**+1.1**
RUE	**Ruedersdorf**	**145.92**	**335**	ePKPbc	**PKPdf**	**11 15 15.5**	**+0.5**
	baz=37,slow=2.6						
BSEG	**Bad Segeberg**	**145.94**	**340**	ePKPbc	**PKPdf**	**11 15 15.2**	**+0.3**
	baz=37,slow=2.6						
BSEG				eL	L	12 21 19.3	
	comp=Z,398nm,19.6s						
BLCB	**Balcova**	**145.95**	**305**	P	**PKPdf**	**11 15 10.4**	**-5.1**
OKC	**Ostrava-Krasne**	**145.96**	**329**	ePKP	**PKPdf**	**11 15 15.5**	**+0.4**
OKC	**Ostrava-Krasne**	**145.96**	**329**	ePKP2	**PKPdf**	**11 15 15.5**	**+0.4**
DAT	**Datca**	**145.96**	**302**	P	**PKPdf**	**11 15 09.9**	**-5.8**
EZN	**Ezine**	**146.04**	**308**	P	**PKPdf**	**11 15 14.0**	**-1.6**
GZR	**Gura Zlata**	**146.07**	**319**	⇑P	**PKPdf**	**11 15 15.9**	**+0.3**
GZR	**Gura Zlata**	**146.07**	**319**	⇑PKIKP	**PKPdf**	**11 15 15.9**	**+0.3**
RDO	**Rodhopi**	**146.14**	**310**	P	PKPdf	11 15 08.3	-7.4
PRK	**Paraskevi**	**146.26**	**307**	P	**PKPdf**	**11 15 12.2**	**-3.8**
SIRR	**Siria**	**146.28**	**321**	⇓P	**PKPbc**	**11 15 17.4**	**+0.5**
SURR	**Surduc**	**146.28**	**320**	⇓P	**PKPdf**	**11 15 16.8**	**+1.0**
MORC	**Moravsky Berou**	**146.29**	**329**	⇑P	**PKPbc**	**11 15 17.1**	**+0.2**
MORC	**Moravsky Berou**	**146.29**	**329**		**PKPbc**	**11 15 17.3**	**+0.4**
MORC	**Moravsky Berou**	**146.29**	**329**	ePKP	**PKPdf**	**11 15 16.2**	**+0.4**
MORC	**Moravsky Berou**	**146.29**	**329**	PKP2	**PKPbc**	**11 15 17.3**	**+0.4**
PSZ	**Piszkesteto**	**146.30**	**325**	⇓P	**PKPbc**	**11 15 17.3**	**+0.2**
PSZ	**Piszkesteto**	**146.30**	**325**	PKPbc	**PKPbc**	**11 15 17.0**	**-0.1**
PSZ	**Piszkesteto**	**146.30**	**325**	⇓PKP2	**PKPbc**	**11 15 17.3**	**+0.2**
OSTC	**Ostas**	**146.35**	**331**	ePKP	**PKPdf**	**11 15 16.6**	**+0.8**
OSTC	**Ostas**	**146.35**	**331**	ePKP2	**PKPdf**	**11 15 16.6**	**+0.8**
SMTH	**Samothraki Isl**	**146.39**	**309**	P	**PKPdf**	**11 15 15.2**	**-1.0**
CHVC	**Chvalec**	**146.40**	**331**	ePKP	**PKPdf**	**11 15 16.9**	**+1.0**
CHVC	**Chvalec**	**146.40**	**331**	ePKP2	**PKPdf**	**11 15 16.9**	**+1.0**
KRLC	**Kraliky**	**146.44**	**330**	ePKP	**PKPdf**	**11 15 15.6**	**-0.4**
KRLC	**Kraliky**	**146.44**	**330**	ePKP2	**PKPdf**	**11 15 15.6**	**-0.4**
MPEP	**Malo Peshtene**	**146.45**	**315**	eP	**PKiKP**	**11 15 21.1**	**+0.6**
DPC	**Dobruska-Polom**	**146.45**	**331**	ePKP	**PKPdf**	**11 15 17.0**	**+1.0**
DPC				ex	x	11 15 30.1	
DPC	**Dobruska-Polom**	**146.45**	**331**	ePKP2	**PKPdf**	**11 15 17.0**	**+1.0**
UPC	**Upice**	**146.48**	**331**	ePKP	**PKPdf**	**11 15 17.0**	**+1.0**
UPC	**Upice**	**146.48**	**331**	ePKP2	**PKPdf**	**11 15 17.0**	**+1.0**
VYHS	**Vyhne**	**146.50**	**326**	ePKP2	**PKPbc**	**11 15 17.5**	**0.0**
VYHS	**Vyhne**	**146.50**	**326**	ePKP	**PKPbc**	**11 15 17.5**	**0.0**
KARP	**Karpathos**	**146.55**	**300**	P	**PKPdf**	**11 15 11.4**	**-5.3**
KARP	**Karpathos**	**146.55**	**300**	PKPbc	**PKPbc**	**11 15 18.1**	**0.0**
HERR	**Herculane**	**146.56**	**318**	⇓P	**PKPdf**	**11 15 16.9**	**+0.6**
SIGR	**SIGRI**	**146.58**	**307**	P	**PKPab**	**11 15 20.0**	**+0.9**
DJES	**Djerdap**	**146.60**	**318**	PKPbc	**PKPbc**	**11 15 17.8**	**-0.2**
BZS	**Buzias**	**146.65**	**320**	⇓P	**PKPdf**	**11 15 17.1**	**+0.7**
AMBH	**Ambrzfalva**	**146.77**	**322**	⇑P	**PKPbc**	**11 15 18.8**	**+0.5**
LIA	**Limnos Island**	**146.84**	**309**	P	**PKPdf**	**11 15 17.7**	**+0.8**
JAVC	**Velka Javorina**	**146.84**	**328**	ePKP	**PKPbc**	**11 15 19.5**	**+0.9**
KAVA	**Kavala**	**146.91**	**311**	P	**PKPdf**	**11 15 13.5**	**-3.5**
THAS	**Thassos island**	**146.92**	**310**	P	**PKPdf**	**11 15 17.3**	**+0.3**
FLTG	**Flechtingen**	**146.98**	**338**	ePKPbc	**PKPdf**	**11 15 18.1**	**+1.4**
	baz=37,slow=2.6						
MDVR	**Moldovita**	**147.04**	**319**	⇑P	**PKPbc**	**11 15 20.0**	**+0.7**
VRAC	**Vranov**	**147.06**	**329**	⇓P	**PKPbc**	**11 15 19.6**	**+0.5**
VRAC	**Vranov**	**147.06**	**329**	PKPbc	**PKPbc**	**11 15 19.1**	**0.0**
	comp=Z,30nm,0.8s,baz=53,slow=2.7,SNR=24						
VRAC	**Vranov**	**147.06**	**329**	ePKP	**PKPbc**	**11 15 18.8**	**-0.3**
PVCC	**Panska Ves**	**147.09**	**332**	ePKP	**PKPbc**	**11 15 18.8**	**-0.3**
PVCC	**Panska Ves**	**147.09**	**332**	ePKP2	**PKPbc**	**11 15 18.8**	**-0.3**
BRG	**Berggiesshubel**	**147.09**	**333**	i PKP	**PKPbc**	**11 15 18.8**	**-0.4**
BRG				Amp		11 15 21.5	
	comp=Z,79nm,0.9s						
BRG	**Berggiesshubel**	**147.09**	**333**	P	**PKiKP**	**11 15 29.4**	**+7.8**
BRG				Amp		11 15 31.7	
	comp=Z,69nm,1.3s						
BRG	**Berggiesshubel**	**147.09**	**333**	i PKP2	**PKPbc**	**11 15 18.7**	**-0.4**
BRG				pmax	pmax		
	comp=Z,79nm,0.9s						
BRG				MLR	MLR		
	comp=Z,590nm,18.6s						
BRG	**Berggiesshubel**	**147.09**	**333**	ePKPbc	**PKPbc**	**11 15 18.9**	**-0.2**
	baz=37,slow=2.6						
VTS	**Vitosha**	**147.11**	**314**	⇑P	**PKPab**	**11 15 21.3**	**0.0**
VTS	**Vitosha**	**147.11**	**314**	⇑PKP2	**PKPab**	**11 15 21.3**	**0.0**
VTS	**Vitosha**	**147.11**	**314**	eP	**PKPbc**	**11 15 19.6**	**-0.1**
CLL	**Collm**	**147.14**	**335**	⇑iPKPbc	**PKPbc**	**11 15 18.7**	**-0.5**
	comp=Z,48nm,0.8s						
CLL				⇓iPKPab	**pPKPdf**	**11 15 20.5**	**-0.6**
	comp=Z,70nm,0.7s						
CLL				AMS	AMS	12 23 00.0	
	comp=N,500nm,20.4s						
CLL				AMS	AMS	12 23 00.0	
	comp=E,200nm,19.8s						
CLL				AMS	AMS	12 23 00.0	
	comp=Z,500nm,20.7s						
CLL	**Collm**	**147.14**	**335**	⇑iPKP2	**PKPbc**	**11 15 18.7**	**-0.5**
CLL				pmax	pmax		
	comp=Z,48nm,0.8s						
CLL				MLR	MLR		
	comp=Z,500nm,20.7s						
CLL	**Collm**	**147.14**	**335**	ePKPbc	**PKPbc**	**11 15 18.7**	**-0.5**
	baz=37,slow=2.6						
CLL				eL	L	12 23 17.9	
	comp=Z,540nm,20.7s						
SMOL	**Smolenice**	**147.19**	**327**	ePKP2	**PKPbc**	**11 15 20.4**	**+0.9**
MMB	**Musomiste**	**147.22**	**312**	eP	**PKPbc**	**11 15 19.5**	**-0.4**
NVR	**Nevrokopi**	**147.23**	**312**	P	**PKPdf**	**11 15 15.6**	**-2.0**
NRDL	**Niedersach Rie**	**147.23**	**339**	ePKPbc	**PKPbc**	**11 15 19.0**	**-0.4**
	baz=37,slow=2.6						
RETH	**Rethem/Aller,**	**147.27**	**340**	ePKPbc	**PKPbc**	**11 15 19.0**	**-0.5**
	baz=37,slow=2.6						
FBE	**Freiberg**	**147.30**	**334**	ePKPbc	**PKPbc**	**11 15 19.8**	**+0.1**
	baz=37,slow=2.6						
KRUC	**Moravsky**	**147.32**	**329**	ePKP	**PKPdf**	**11 15 19.0**	**+1.5**
ASSE	**Asse, Remlinge**	**147.34**	**338**	ePKPbc	**PKPbc**	**11 15 19.3**	**-0.4**
	baz=37,slow=2.6						
KOKK	**Kokkinochori,**	**147.34**	**311**	P	**PKPdf**	**11 15 15.1**	**-2.7**
MODS	**Modra-Piesok**	**147.36**	**327**	ePKIKP	**PKPdf**	**11 15 17.7**	**+0.1**
MODS	**Modra-Piesok**	**147.36**	**327**	ePKP	**PKPdf**	**11 15 17.7**	**+0.1**
EKA	**Eskdalemuir Ar**	**147.44**	**354**	PKPbc	**PKPdf**	**11 15 18.2**	**+0.7**
	comp=Z,4.5nm,0.6s,baz=11,slow=2.9,SNR=22						
GOPC	**GO Pecny, Ondr**	**147.45**	**331**	ePKP	**PKPbc**	**11 15 19.8**	**-0.4**
GOPC				ex	x	11 15 29.4	
GOPC	**GO Pecny, Ondr**	**147.45**	**331**	ePKP2	**PKPbc**	**11 15 19.8**	**-0.4**
PRU	**Pruhonice**	**147.50**	**332**	ePKP	**PKPbc**	**11 15 20.0**	**-0.3**
PRU				ex	x	11 15 24.0	
PRU	**Pruhonice**	**147.50**	**332**	ePKP2	**PKPbc**	**11 15 20.0**	**-0.3**
SRS	**Serrai**	**147.51**	**311**	P	**PKPdf**	**11 15 17.7**	**-0.3**
KKB	**Krupnik**	**147.54**	**313**	eP	**PKPbc**	**11 15 20.3**	**-0.4**
OUR	**Ouranopolis**	**147.54**	**310**	P	**PKPdf**	**11 15 18.1**	**0.0**
TREC	**Trest**	**147.58**	**330**	ePKP	**PKPbc**	**11 15 20.3**	**-0.3**
TREC	**Trest**	**147.58**	**330**	ePKP2	**PKPbc**	**11 15 20.3**	**-0.3**
BOVS	**Bovan**	**147.62**	**317**	⇑P	**PKPdf**	**11 15 19.8**	**+1.7**
CLZ	**Clausthal**	**147.68**	**338**	ePKPbc	**PKPbc**	**11 15 20.5**	**-0.3**
	baz=37,slow=2.6						
NEUB	**Neuenburg**	**147.69**	**336**	ePKPbc	**PKPbc**	**11 15 20.6**	**-0.2**
	baz=37,slow=2.6						
SANT	**Santorini**	**147.70**	**302**	⇑P	**PKPdf**	**11 15 19.1**	**+0.6**
CMBO	**Columbo, Santo**	**147.72**	**302**	P	**PKPab**	**11 15 26.0**	**+2.3**
THR3	**Thira Island,**	**147.74**	**302**	P	**PKPdf**	**11 15 19.4**	**+0.9**
KNT	**Kendrikon**	**147.97**	**312**	P	**PKPdf**	**11 15 17.1**	**-1.7**
FRGS	**Fruska Gora**	**147.97**	**321**	⇓P	**PKPdf**	**11 15 18.3**	**-0.4**
FRGS	**Fruska Gora**	**147.97**	**321**	eP	**PKPdf**	**11 15 17.3**	**-1.4**
MORH	**Mrgy, Hungar**	**148.02**	**323**	⇑P	**PKPbc**	**11 15 22.3**	**+0.5**
TANN	**Tannenbergstha**	**148.05**	**334**	ePKPbc	**PKPbc**	**11 15 21.7**	**-0.2**
	baz=37,slow=2.6						
KYMI	**Kymi, Euboea I**	**148.06**	**307**	P	**PKPdf**	**11 15 15.6**	**-3.4**
GTTG	**Gottingen**	**148.07**	**338**	ePKPbc	**PKPbc**	**11 15 21.5**	**-0.2**
	baz=37,slow=2.6						
WERD	**Werda**	**148.09**	**334**	ePKPbc	**PKPbc**	**11 15 21.6**	**-0.3**
	baz=37,slow=2.6						
PLN	**Plauen**	**148.12**	**335**	ePKPbc	**PKPbc**	**11 15 21.7**	**-0.3**
	baz=37,slow=2.6						
VAY	**Valandovo**	**148.12**	**312**	i P	**PKPbc**	**11 15 21.7**	**-0.5**
IBBN	**Ibbenburen**	**148.14**	**341**	ePKPbc	**PKPbc**	**11 15 21.5**	**-0.4**
	baz=37,slow=2.6						
THE	**Thessaloniki**	**148.14**	**311**	P	**PKPbc**	**11 15 22.1**	**-0.2**
GUNZ	**Gunzen**	**148.14**	**334**	ePKPbc	**PKPbc**	**11 15 22.0**	**0.0**
	baz=37,slow=2.6						
WERN	**Wernitzgruen**	**148.18**	**334**	ePKPbc	**PKPbc**	**11 15 22.1**	**-0.1**
	baz=37,slow=2.6						
NKC	**Novy Kostel**	**148.20**	**334**	ePKP	**PKPbc**	**11 15 21.9**	**-0.3**
NKC				ex	x	11 15 39.6	
NKC	**Novy Kostel**	**148.20**	**334**	ePKP2	**PKPbc**	**11 15 21.9**	**-0.3**
MOX	**Moxa**	**148.20**	**335**	ePKPbc	**PKPbc**	**11 15 21.8**	**-0.4**
	baz=37,slow=2.6						
MOX				eL	L	12 25 06.2	
	comp=Z,418nm,20.4s						
RONA	**Rosalia, Austr**	**148.30**	**327**	i PKP	**PKPbc**	**11 15 22.7**	**+0.1**
	comp=Z,30nm,0.5s,SNR=13						
CONA	**Conrad Observa**	**148.36**	**328**	i PKP	**PKPbc**	**11 15 22.8**	**0.0**
	comp=Z,24nm,0.8s,SNR=11						
DION	**Dionisos Attik**	**148.37**	**306**	P	**PKPdf**	**11 15 16.1**	**-3.5**
IDI	**Anoyia**	**148.42**	**300**	⇑P	**PKPbc**	**11 15 23.7**	**+0.4**
IDI	**Anoyia**	**148.42**	**300**	PKPbc	**PKPbc**	**11 15 22.6**	**-0.7**
	comp=Z,39nm,0.7s,baz=6.4,slow=3.5,SNR=28						
IDI	**Anoyia**	**148.42**	**300**	P	**PKPbc**	**11 15 22.9**	**-0.4**
PTL	**Penteli**	**148.43**	**306**	P	**PKPdf**	**11 15 21.3**	**+1.6**
DIVS	**Divibare**	**148.44**	**319**		**PKPbc**	**11 15 23.1**	**-0.1**
DIVS	**Divibare**	**148.44**	**319**	eP	**PKPbc**	**11 15 22.5**	**-0.6**
CKRC	**Cesky Krumlov**	**148.46**	**331**	ePKP	**PKPbc**	**11 15 22.3**	**-0.6**
CKRC	**Cesky Krumlov**	**148.46**	**331**	ePKP2	**PKPbc**	**11 15 22.3**	**-0.6**
TEKS	**Tekeris**	**148.48**	**320**	eP	**PKPdf**	**11 15 17.1**	**-2.4**
ATHU	**Athens Univers**	**148.52**	**306**	P	**PKPdf**	**11 15 18.7**	**-1.1**
MANZ	**Manzenberg**	**148.53**	**334**	ePKPbc	**PKPbc**	**11 15 22.8**	**-0.3**
	baz=37,slow=2.6						
VLY	**Voula,Athens**	**148.55**	**306**	P	**PKPdf**	**11 15 19.8**	**0.0**
KHC	**Kasperske Hory**	**148.56**	**332**	PKPbc	**PKPbc**	**11 15 23.0**	**-0.2**
KHC	**Kasperske Hory**	**148.56**	**332**	ePKP	**PKPbc**	**11 15 22.6**	**-0.6**
KHC				ex	x	11 15 26.7	
KHC	**Kasperske Hory**	**148.56**	**332**	ePKP2	**PKPbc**	**11 15 22.6**	**-0.6**
ATH	**Athens Observa**	**148.57**	**306**	P	**PKPdf**	**11 15 18.2**	**-1.6**
SKO	**Skopje**	**148.59**	**314**	i P	**PKPbc**	**11 15 23.4**	**-0.1**
ROTZ	**Rotzenmuhle**	**148.66**	**334**	ePKPbc	**PKPbc**	**11 15 23.2**	**-0.2**
	baz=37,slow=2.6						
GEC2	**GERESS Array S**	**148.72**	**331**	PKPbc	**PKPbc**	**11 15 22.9**	**-0.7**
GEC2	**GERESS Array S**	**148.72**	**331**	ePKPbc	**PKPbc**	**11 15 23.4**	**-0.3**
	baz=37,slow=2.6						
GEC2				eL	L	12 21 46.3	
	comp=Z,376nm,19.9s						
GERES	**GERESS Array B**	**148.72**	**331**	PKPbc	**PKPbc**	**11 15 23.2**	**-0.5**
	comp=Z,16nm,0.8s,baz=54,slow=2.5,SNR=83						
VILL	**Villia**	**148.81**	**306**	P	**PKPdf**	**11 15 18.7**	**-1.6**
ATAL	**Atalanti**	**148.84**	**308**	P	**PKPdf**	**11 15 18.7**	**-1.6**
KASTN	**Kahler Asten**	**148.88**	**339**	ePKPbc	**PKPbc**	**11 15 23.6**	**-0.4**
	baz=37,slow=2.6						
SJES	**Sjenica**	**148.90**	**317**	eP	**PKPbc**	**11 15 24.5**	**+0.1**
BBLS	**Lazići**	**148.93**	**319**	eP	**PKPbc**	**11 15 23.8**	**-0.6**
ARSA	**Arzberg**	**148.99**	**327**	ePKP	**PKPbc**	**11 15 24.0**	**-0.3**
	comp=Z,4.4nm,0.5s						
AXAR	**Agios Charalam**	**149.07**	**308**	P	**PKPdf**	**11 15 19.2**	**-1.5**
HAPS	**Han Pijesak,BI**	**149.08**	**320**	eP	**PKPbc**	**11 15 24.3**	**-0.5**
RUDO	**Rudo**	**149.08**	**318**	eP	**PKPbc**	**11 15 23.9**	**-0.8**
IMMV	**Iera Moni Meta**	**149.10**	**301**	P	**PKPdf**	**11 15 22.9**	**+2.1**
KZN	**Kozani**	**149.10**	**311**	P	**PKPdf**	**11 15 16.1**	**-4.7**
GRF	**Grafenberg Arr**	**149.11**	**335**	ePKPbc	**PKPbc**	**11 15 24.4**	**-0.1**
	baz=37,slow=2.6						
GRF				eL	L	12 25 45.9	
	comp=Z,638nm,19.3s						
GRFO	**Grafenberg**	**149.11**	**335**		**PKPbc**	**11 15 24.2**	**-0.3**
GRFO	**Grafenberg**	**149.11**	**335**	PKP2	**PKPbc**	**11 15 24.2**	**-0.3**
LOUT	**Loutraki**	**149.12**	**306**	P	**PKiKP**	**11 15 27.6**	**+1.4**
GVD	**Gavdhos**	**149.16**	**300**	P	**PKPab**	**11 15 31.2**	**+1.7**
FNA	**Florina**	**149.17**	**312**	P	**PKPdf**	**11 15 16.6**	**-4.2**
FNA	**Florina**	**149.17**	**312**	PKPbc	**PKPbc**	**11 15 24.2**	**-0.8**
FNA	**Florina**	**149.17**	**312**	PKP2	**PKPbc**	**11 15 24.2**	**-0.8**
KRND	**KRANIDI**	**149.18**	**305**	P	**PKPbc**	**11 15 23.9**	**-1.2**
MOA	**Molln**	**149.18**	**329**	i PKP	**PKPbc**	**11 15 24.4**	**-0.4**
	comp=Z,21nm,0.6s						
AGG	**Agios Georgios**	**149.22**	**308**	P	**PKPdf**	**11 15 21.8**	**+0.9**
AGG	**Agios Georgios**	**149.22**	**308**	PKPbc	**PKPbc**	**11 15 24.4**	**-0.8**
AGG	**Agios Georgios**	**149.22**	**308**	PKP2	**PKPbc**	**11 15 24.4**	**-0.8**
THAL	**Thalero**	**149.33**	**307**	P	**PKPdf**	**11 15 17.3**	**-3.8**
MAKR	**Makrakomi, Fth**	**149.36**	**309**	P	**PKPdf**	**11 15 20.8**	**-0.4**
PHP	**Peshkopia**	**149.38**	**314**	P	**PKPdf**	**11 15 18.7**	**-2.5**
OHR	**Ohrid**	**149.41**	**313**	i P	**PKPbc**	**11 15 26.4**	**+0.7**
ANKY	**Antikythira Is**	**149.52**	**302**	P	**PKPdf**	**11 15 20.8**	**-0.7**
VLI	**Veliai**	**149.55**	**304**	P	**PKPdf**	**11 15 21.7**	**+0.2**
PENT	**Pentalofos**	**149.59**	**311**	P	**PKPdf**	**11 15 19.8**	**-1.8**
BIOA	**Bad Ischl, Aus**	**149.59**	**330**	i PKP	**PKPbc**	**11 15 25.0**	**-0.8**
	comp=Z,16nm,0.7s,SNR=7.4						
KTHA	**Kythira Island**	**149.60**	**303**	P	**PKPdf**	**11 15 23.9**	**+2.3**
PERS	**Pernice**	**149.62**	**327**	i PKPbc	**PKPbc**	**11 15 25.1**	**-0.8**
SOKA	**Soboth**	**149.63**	**327**	i PKP	**PKPbc**	**11 15 25.3**	**-0.7**
	comp=Z,61nm,1.2s,SNR=11						
EVR	**Evrytania**	**149.63**	**309**	P	**PKPdf**	**11 15 21.8**	**+0.1**
KBN	**Korca**	**149.64**	**312**	P	**PKPab**	**11 15 36.9**	**+5.5**
KBN	**Korca**	**149.64**	**312**	PKPbc	**PKPbc**	**11 15 26.3**	**+0.1**
KBN	**Korca**	**149.64**	**312**	PKP2	**PKPbc**	**11 15 26.3**	**+0.1**
SERG	**Sergoula**	**149.64**	**308**	P	**PKPbc**	**11 15 24.6**	**-1.7**
ANX	**Ano Chora**	**149.68**	**308**	P	**PKPbc**	**11 15 25.0**	**-1.4**
TNS	**Taunus Mts**	**149.71**	**338**	ePKPbc	**PKPbc**	**11 15 25.6**	**-0.5**
	baz=37,slow=2.6						
TNS				eL	L	12 20 23.2	
	comp=Z,482nm,21.2s						
KLV	**Kalavryta, Ach**	**149.71**	**307**	P	**PKPdf**	**11 15 23.4**	**+1.6**
A051A	**Mrakovica**	**149.72**	**323**	eP	**PKPbc**	**11 15 26.0**	**-0.3**
BLY	**Banja Luka**	**149.72**	**322**	eP	**PKPbc**	**11 15 25.9**	**-0.3**
EFP	**Efpalio**	**149.75**	**308**	P	**PKPdf**	**11 15 20.8**	**-0.9**
LAKA	**Lakka**	**149.76**	**307**	P	**PKPdf**	**11 15 21.8**	**0.0**
PDG	**Podgorica**	**149.78**	**317**	⇓P	**PKPbc**	**11 15 26.1**	**-0.3**
TIR	**Tirane**	**149.93**	**314**	⇓P	**PKPbc**	**11 15 27.2**	**+0.4**
TIR	**Tirane**	**149.93**	**314**	⇓PKP2	**PKPbc**	**11 15 27.2**	**+0.4**
RJOB	**Jochberg**	**149.95**	**331**	ePKPbc	**PKPbc**	**11 15 26.2**	**-0.6**
	baz=37,slow=2.6						
DRME	**Dracevica, Mon**	**149.95**	**316**	eP	**PKPbc**	**11 15 26.4**	**-0.5**
PVO	**Paravola**	**149.95**	**308**	P	**PKPdf**	**11 15 22.9**	**+0.8**
BRY	**Bratogost**	**149.98**	**318**	eP	**PKPbc**	**11 15 26.6**	**-0.5**
LSK	**Leskovik**	**149.98**	**312**	P	**PKPdf**	**11 15 22.9**	**+0.7**
MGRS	**Mrkonjic Grad**	**149.98**	**322**	eP	**PKPbc**	**11 15 26.6**	**-0.3**
OBKA	**Obir**	**149.99**	**327**	i PKP	**PKPbc**	**11 15 25.1**	**-1.8**
	comp=Z,25nm,0.9s						
OBKA	**Obir**	**149.99**	**327**	eP	**PKPbc**	**11 15 25.3**	**-1.6**
JAN	**Janina**	**150.02**	**311**	P	**PKPdf**	**11 15 23.9**	**+1.7**
BTNL	**Ternell**	**150.14**	**341**	dPKP	**PKPbc**	**11 15 26.3**	**-0.8**
MEM	**Membach**	**150.15**	**341**	dPKP	**PKPbc**	**11 15 26.3**	**-0.8**
KBA	**Koelnbreinsper**	**150.17**	**329**	i PKP	**PKPbc**	**11 15 26.0**	**-1.4**
	comp=Z,25nm,0.8s,SNR=11						
TREB	**Trebinje**	**150.20**	**318**	eP	**PKPbc**	**11 15 26.6**	**-0.8**
HCY	**Herceg Novi**	**150.25**	**317**	eP	**PKPbc**	**11 15 27.1**	**-0.5**
A050A	**Klekovaca**	**150.25**	**322**	eP	**PKPbc**	**11 15 26.5**	**-1.1**
FUR	**Furstenfeldbru**	**150.29**	**333**	eL	L	12 22 14.0	
	comp=Z,403nm,20.5s						
BOJS	**Bojanci**	**150.30**	**325**	eP	**PKPbc**	**11 15 27.1**	**-0.5**
BSTI	**Sart Tilman**	**150.31**	**342**	dPKP	**PKPbc**	**11 15 27.6**	**+0.2**
LJU	**Ljubljana**	**150.32**	**326**	i PKPbc	**PKPbc**	**11 15 27.3**	**-0.3**
MYKA	**Terra Mystica**	**150.35**	**328**	i PKP	**PKPbc**	**11 15 26.5**	**-1.3**
	comp=Z,37nm,0.6s,SNR=12						
BHOU	**Houvegnez**	**150.38**	**341**	dPKP	**PKPbc**	**11 15 27.5**	**-0.1**
IGT	**Igoumenitsa**	**150.43**	**311**	P	**PKPdf**	**11 15 20.3**	**-2.5**
TSLK	**Tsoukalades, L**	**150.50**	**309**	P	**PKPdf**	**11 15 21.9**	**-1.0**
LKD2	**Lefkada island**	**150.51**	**309**	P	**PKiKP**	**11 15 30.2**	**+1.1**
NYDR	**Nydri-Lefkada**	**150.51**	**309**	P	**PKPdf**	**11 15 17.7**	**-5.2**
STON	**Ston**	**150.51**	**319**	eP	**PKPbc**	**11 15 26.7**	**-1.4**
BCLA	**Clavier**	**150.53**	**342**	dPKiKP	**PKPbc**	**11 15 28.6**	**+0.7**
CEY	**Cerknica**	**150.58**	**326**	i PKPbc	**PKPbc**	**11 15 27.8**	**-0.5**
CEY	**Cerknica**	**150.58**	**326**	eP	**PKPbc**	**11 15 27.5**	**-0.8**
EVGI	**Lefkada island**	**150.58**	**309**	P	**PKPbc**	**11 15 27.1**	**-1.4**
STU	**Stuttgart**	**150.64**	**336**	ePKPbc	**PKPbc**	**11 15 28.0**	**-0.3**
	baz=37,slow=2.6						
FSK	**Fiskardo**	**150.71**	**309**	P	**PKPdf**	**11 15 23.4**	**+0.2**
BMRD	**Maredsous**	**150.79**	**342**	dPKP	**PKPbc**	**11 15 28.1**	**-0.4**
RCHB	**Rochefort**	**150.79**	**342**	dPKP	**PKPbc**	**11 15 27.7**	**-0.8**
WATA	**Walderalm**	**150.79**	**331**	i PKP	**PKPbc**	**11 15 28.2**	**-0.7**
	comp=Z,28nm,0.6s,SNR=11						
ABTA	**Abfaltersbach**	**150.81**	**329**	i PKP	**PKPbc**	**11 15 27.0**	**-1.9**
	comp=Z,51nm,0.6s,SNR=9.4						
WTTA	**Wattenberg**	**150.82**	**331**	i PKP	**PKPbc**	**11 15 28.1**	**-0.9**
	comp=Z,48nm,0.6s,SNR=11						
CLUD	**Cludinico**	**150.84**	**329**		**PKPbc**	**11 15 28.0**	**-0.9**
KEF4	**Livadi, Kephal**	**150.89**	**308**	P	**PKPdf**	**11 15 24.4**	**+0.9**
SKDS	**Skadanscina**	**150.92**	**326**	eP	**PKPbc**	**11 15 28.0**	**-1.1**
WLF	**Walferdange**	**150.94**	**340**	dPKP	**PKPbc**	**11 15 28.8**	**-0.1**
WLF	**Walferdange**	**150.94**	**340**	ePKPbc	**PKPbc**	**11 15 28.9**	**-0.1**
	baz=37,slow=2.6						
KEF3	**Kipouria, Keph**	**150.97**	**308**	P	**PKPdf**	**11 15 16.6**	**-7.0**
MOTA	**Moosalm**	**151.00**	**332**	i PKP	**PKPbc**	**11 15 28.3**	**-1.0**
	comp=Z,53nm,0.7s,SNR=11						
DOU	**Dourbes**	**151.02**	**342**	dPKP	**PKPbc**	**11 15 28.4**	**-0.8**
RETA	**Reutte**	**151.03**	**332**	i PKP	**PKPbc**	**11 15 28.7**	**-0.7**
	comp=Z,15nm,0.7s						
SQTA	**Sankt Quirin**	**151.04**	**331**	i PKP	**PKPbc**	**11 15 28.8**	**-0.6**
	comp=Z,58nm,0.7s,SNR=14						
STAL	**STALIGIAL**	**151.07**	**329**		**PKPbc**	**11 15 28.2**	**-1.2**
UBR	**Ueberruh**	**151.16**	**333**	ePKPbc	**PKPbc**	**11 15 28.9**	**-0.7**
	baz=37,slow=2.6						
BFO	**Black Forest**	**151.33**	**336**		**PKPbc**	**11 15 29.7**	**-0.3**
BFO	**Black Forest**	**151.33**	**336**	PKIKP	**PKPbc**	**11 15 29.7**	**-0.3**
BFO	**Black Forest**	**151.33**	**336**	ePKPbc	**PKPbc**	**11 15 29.0**	**-1.0**
	baz=37,slow=2.6						
BFO				eL	L	12 22 00.1	
	comp=Z,425nm,19.8s						
FETA	**Feichten**	**151.41**	**332**	i PKP	**PKPbc**	**11 15 29.9**	**-0.4**
	comp=Z,39nm,0.8s,SNR=9.3						
DAVA	**Damuels**	**151.56**	**333**	i PKP	**PKPbc**	**11 15 30.2**	**-0.5**
	comp=Z,15nm,0.7s						
CTI	**Castel Tesino**	**151.72**	**329**	PKPdf	**PKPdf**	**11 15 23.2**	**-1.5**
CTI					**PKPbc**	**11 15 30.6**	**-0.4**
CTI				PKPab	**PKPab**	**11 15 39.5**	**-0.4**
CTI	**Castel Tesino**	**151.72**	**329**	PKIKP	**PKPdf**	**11 15 23.2**	**-1.5**
CTI				PKP	**PKPbc**	**11 15 30.6**	**-0.4**
CTI				PKP	**PKPab**	**11 15 39.5**	**-0.4**
FUORN	**Ofenpass-Fuorn**	**151.92**	**332**		**PKPbc**	**11 15 31.3**	**-0.3**
FUORN				PKPab	**PKPab**	**11 15 41.1**	**+0.3**
DAVOX	**Davos/Dischmat**	**151.96**	**332**	PKP	**PKPdf**	**11 15 24.8**	**-0.4**
	comp=Z,2.3nm,0.7s,baz=67,slow=2.6,SNR=4.4						
DAVOX				PKPbc	**PKPbc**	**11 15 31.0**	**-0.7**
	comp=Z,32nm,0.6s,baz=49,slow=3.8,SNR=50						
SALO	**Salr**	**152.57**	**330**	PKPdf	**PKPdf**	**11 15 23.1**	**-2.8**
SALO					**PKPbc**	**11 15 31.8**	**-1.1**
SALO				PKPab	**PKPab**	**11 15 43.0**	**-0.3**
ZCCA	**Zocca**	**153.29**	**328**	PKPdf	**PKPdf**	**11 15 26.4**	**-0.6**
ZCCA					**PKPbc**	**11 15 34.9**	**+0.4**
ZCCA				PKPab	**PKPab**	**11 15 47.3**	**+0.9**
SENIN	**Lac Senin/Sane**	**153.35**	**335**	PKPdf	**PKPdf**	**11 15 25.7**	**-1.6**
SENIN					**PKPbc**	**11 15 34.1**	**-0.7**
SENIN				PKPab	**PKPab**	**11 15 47.5**	**+0.7**
ROSA	**Rosais**	**157.05**	**42**	PKPdf	**PKPdf**	**11 15 30.3**	**-1.9**
ROSA				PKPab	**PKPab**	**11 16 02.8**	**+0.2**
ESDC	**Sonseca Array**	**162.90**	**348**	PKPab	**PKPab**	**11 16 26.5**	**-1.4**
	comp=Z,2.1nm,0.8s,baz=8.9,slow=3.5,SNR=9.6						
DBIC	**Dimbokro**	**163.38**	**193**	PKP	**PKPdf**	**11 15 40.0**	**-0.1**
	comp=Z,7.2nm,1.0s,baz=135,slow=1.4,SNR=4.2						
DBIC				PKPab	**PKPab**	**11 16 32.3**	**+1.7**
	comp=Z,4.6nm,0.8s,baz=204,slow=6.2,SNR=1.7						
TORD	**Torodi Ar. Bea**	**166.16**	**227**	PKP	**PKPdf**	**11 15 41.5**	**-0.8**
	comp=Z,8.8nm,1.1s,baz=97,slow=0.7,SNR=22						
TORD				PKPab	**PKPab**	**11 16 43.0**	**0.0**
	comp=Z,4.9nm,0.9s,baz=128,slow=3.8,SNR=5.7						
MDT	**Midelt**	**169.58**	**341**	PKP	**PKPdf**	**11 15 44.0**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=107,slow=4.1,SNR=3.3						
KOWA	**Kowa**	**170.50**	**208**	PKPab	**PKPab**	**11 16 57.9**	**-4.2**
MACI	**Morro de la Ar**	**171.16**	**52**	PKPdf	**PKPdf**	**11 15 43.1**	**-2.5**
MACI				PKPab	**PKPab**	**11 17 00.6**	**-4.5**

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*IDC **07** 10:59:58.0±2.9, 10°.42S×161°.33E, h68^{km}±24^{km}, mb3.5/5, mbtmp3.9/6, Error ellipse: s-maj=31.1km s-min=21.1km az=61.0*

ISC 07 10:59:57.2±0.9**, 10°.4S**±0°.1×**161°.4E**±0°.1**, h61**^{km}**, n7, σ1^{s}.44**/9**, mb3.6**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.71**	**306**	P	**Pn**	**11 00 24.3**	**-0.5**
	2μm,0.3s,baz=120,slow=8.1,SNR=23						
HNR				S	**Sn**	**11 00 46.0**	**+0.3**
	9μm,0.3s,baz=204,slow=8.2,SNR=12						
DZM	**Mont Dzumac**	**12.55**	**158**	P	**Pn**	**11 02 55.3**	**+2.1**
	8.5nm,0.9s,baz=354,slow=18,SNR=1.3						
DZM				S	**Sn**	**11 05 09.3**	**-2.2**
	5.2nm,0.8s,baz=172,slow=16,SNR=1.6						
WRA	**Warramunga Arr**	**27.69**	**247**	P	**P**	**11 05 39.4**	**-0.5**
	0.6nm,0.4s,baz=76,slow=8.8,SNR=1.3						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**29.28**	**240**	P	**P**	**11 05 53.7**	**-0.4**
	1.0nm,0.8s,baz=66,slow=10.0,SNR=1.0						
	1.0nm,0.8s						
SONM	**Songino Array**	**75.67**	**325**	P	**P**	**11 11 37.2**	**+1.0**
	0.5nm,0.5s,baz=116,slow=6.6,SNR=1.8						
	0.5nm,0.5s						
ILAR	**Eielson Array**	**84.36**	**20**	P	**P**	**11 12 21.2**	**-1.2**
	0.4nm,0.6s,baz=219,slow=6.8,SNR=1.9						
	0.4nm,0.6s						
YKA	**Yellowknife Ar**	**96.43**	**28**	P	**P**	**11 13 19.4**	**0.0**
	0.2nm,0.6s,baz=259,slow=4.8,SNR=4.1						
	0.2nm,0.6s						

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*WEL **07** 11:03:00, 37°.07S×179°.06E, h9^{km}, ML5.0, Mw4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16} Nm; M_{rr}-0.25; $M_{\theta\theta}$-0.02; $M_{\phi\phi}$0.27; $M_{r\theta}$0.71; $M_{\theta\phi}$-0.06; $M_{\phi r}$1.81; Fault plane solution: $M_0$1.96000×10^{16} NP1: ϕ_s328.00000°, δ5.00000°, λ-143.00000°. NP2: ϕ_s201.00000°, δ87.00000°, λ-86.00000°. Principal axes: T -1992.7200, Plg42.0000°, Azm287.0000°; N 60.3400, Plg4.0000°, Azm20.0000°; P 1932.3800, Plg48.0000°, Azm115.0000°;*

*NOU **07** 11:03:15.1, 36°.65S×178°.71W, h69^{km}, mb5.2/13, East of North Island, N.Z.*

*NEIC **07** 11:03:36.5±1.4, 37°.52S±0°.08×179°.21E±0°.08, h21^{km}±4^{km}, mb5.1/33, Error ellipse: s-maj=14.2km s-min=3.9km az=143.0*

*WEL **07** 11:03:37.3±1.0, 37°S±5°×17°9E±°, h12^{km}, M4.9/17, ML5.1/17, MLv4.9/17, Error ellipse: s-maj=0.0km s-min=0.0km az=101.0, confirmed*

*MOS **07** 11:03:38.9±1.6, 37°.14S×178°.62E, h25^{km}, mb5.1/13, Error ellipse: s-maj=12.9km s-min=11.9km az=123.5*

*IDC **07** 11:03:44.6±1.5, 37°.15S×178°.66E, h63^{km}±11^{km}, mb4.7/11, mbtmp5.0/13, MS4.5/9, Error ellipse: s-maj=13.9km s-min=11.4km az=136.0*

ISC 07 11:03:36.4±0.5**, 37°.46S**±0°.05×**179°.20E**±0°.07**, h21**^{km}±4^{km}**, n266, σ1^{s}.88**/267**, mb5.3**/41**, MS4.6**/11**, 6C-4D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.72**	**262**	Pn	**Pn**	**11 03 52.0**	**+0.7**
MXZ				Sn	**Sn**	**11 04 01.4**	**-0.4**
MXZ	**Matakaoa Point**	**0.72**	**262**	P	**Pn**	**11 03 52.5**	**+1.2**
MXZ	**Matakaoa Point**	**0.72**	**262**	P	**Pn**	**11 03 52.0**	**+0.7**
MXZ				S	**Sn**	**11 04 01.5**	**-0.2**
WMGZ	**Waiomatatini S**	**0.72**	**240**	P	**Pn**	**11 03 55.5**	**+4.1**
WMGZ				S	**Sn**	**11 04 07.8**	**+6.0**
PUZ	**Puketiti**	**0.97**	**231**	P	**Pn**	**11 03 59.0**	**+4.2**
PUZ				S	**Sn**	**11 04 13.8**	**+5.9**
PKGZ	**Pakihiroa**	**0.99**	**244**	P	**Pn**	**11 03 58.5**	**+3.4**
PKGZ				S	**Sn**	**11 04 12.9**	**+4.3**
HAZ	**Te Kaha**	**1.17**	**255**	P	**Pb**	**11 03 58.9**	**+1.1**
HAZ				S	**Sn**	**11 04 16.0**	**+3.3**
TWGZ	**Tauwhareparae**	**1.21**	**233**	P	**Pb**	**11 04 02.1**	**+3.6**
TWGZ				S	**Sn**	**11 04 21.0**	**+7.2**
CNGZ	**Carnagh Statio**	**1.29**	**217**	P	Pb	11 04 04.4	+4.4
CNGZ				S	Sb	11 04 25.1	+9.0
RUGZ	**Raukumara Rang**	**1.31**	**247**	P	**Pb**	**11 04 03.1**	**+2.7**
TKGZ	**Te Karaka**	**1.45**	**227**	P	**Pb**	**11 04 05.2**	**+2.5**
MWZ	**Matawai**	**1.59**	**236**	P	**Pb**	**11 04 07.2**	**+2.1**
WIZ	**White Island**	**1.60**	**267**	P	**Pn**	**11 04 04.0**	**+0.5**
RIGZ	**Rimuhau**	**1.69**	**222**	P	**Pb**	**11 04 08.8**	**+2.1**
RAGZ	**Rawiri**	**1.75**	**233**	P	**Pb**	**11 04 09.5**	**+1.7**

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URZ    Urewera            1.84 244  P         Pb        11 04 10.1 +0.8
       2µm,0.3s,baz=353,slow=3.7,SNR=2671
URZ                                 S         Sb        11 04 31.8  0.0
       5µm,0.5s,baz=345,slow=21,SNR=12
URZ    Urewera            1.84 244  P         Pb        11 04 10.7 +1.4
URZ    Urewera            1.84 244  P         Pb        11 04 10.3 +1.0
RTZ    Ruatahuna          2.10 236  Pn        Pb        11 04 13.9 +0.1
BKZ    Black Stump Fm     2.73 231  Pn        Pb        11 04 22.2 -2.3
BKZ    Black Stump Fm     2.73 231  P         Pb        11 04 22.5 -2.0
KUZ    Kuaotunu           2.88 283  P         Pn        11 04 20.4 -0.5
KUZ    Kuaotunu           2.88 283  P         Pn        11 04 20.2 -0.7
TOZ    Tahuroa Road       2.95 264  P         Pn        11 04 23.3 +1.3
TLZ    Tolley Road        3.03 252  P         Pn        11 04 25.5 +2.4
PXZ    Pawanui            3.15 215  P         Pn        11 04 26.8 +2.1
PXZ                                 S         Sb        11 05 05.0 -4.7
ETAZ   East Tamaki Re     3.45 277  P         Pn        11 04 29.3 +0.4
MBAZ   Motutapu North     3.51 280  P         Pn        11 04 30.9 +1.2
HIZ    Hauiti             3.59 252  Pn        Pn        11 04 34.1 +3.3
HIZ    Hauiti             3.59 252  P         Pn        11 04 34.4 +3.6
RVAZ   Riverhead Bore     3.76 279  P         Pn        11 04 33.7 +0.6
BFZ    Birch Farm         3.96 215  Pn        Pn        11 04 36.7 +0.9
BFZ    Birch Farm         3.96 215  P         Pn        11 04 37.3 +1.5
WCZ    Waipu Caves        4.19 290  P         Pn        11 04 39.1 +0.1
MRZ    Mangatainoka R     4.26 220            Pn        11 04 40.8 +0.7
KHEZ   Kahui Hut          4.47 244  P         Pn        11 04 46.0 +3.0
PLWZ   Palliser           5.12 215            Pn        11 04 51.1 -0.7
BHW    Baring Head        5.18 219  Pn        Pn        11 04 51.9 -0.7
SNZO   South Karori       5.19 221  Pn        Pn        11 04 52.1 -0.6
SNZO   South Karori       5.19 221  P         Pn        11 04 53.7 +1.0
DUWZ   D'Urville Isla     5.29 229  P         Pn        11 04 54.9 +0.7
DUWZ                                S         Sn        11 05 53.9 -0.6
TCW    Tory Channel       5.35 224  Pn        Pn        11 04 54.2 -0.8
TCW    Tory Channel       5.35 224  P         Pn        11 04 55.2 +0.2
TCW                                 S         Sn        11 05 55.0 -0.9
TUWZ   Tuamarina          5.68 224  Pn        Pn        11 04 58.6 -0.9
TUWZ   Tuamarina          5.68 224  P         Pn        11 04 59.3 -0.2
TUWZ                                S         Sn        11 06 02.7 -1.4
NNZ    Nelson             5.87 228  Pn        Pn        11 05 02.2 +0.1
NNZ    Nelson             5.87 228  P         Pn        11 05 02.0 -0.1
BSWZ   Blackbirch Sta     5.92 222  Pn        Pn        11 05 02.1 -0.6
BSWZ   Blackbirch Sta     5.92 222  P         Pn        11 05 02.5 -0.2
TKNZ   Takaka Hill        6.02 232            Pn        11 05 03.8 -0.3
TKNZ   Takaka Hill        6.02 232  P         Pn        11 05 04.0 -0.2
QRZ    Quartz Range       6.18 235  Pn        Pn        11 05 06.0 -0.4
QRZ    Quartz Range       6.18 235  P         Pn        11 05 07.5 +1.1
QRZ    Quartz Range       6.18 235  P         Pn        11 05 06.0 -0.4
MRNZ   Matariki Terra     6.35 230            Pn        11 05 08.2 -0.6
MRNZ   Matariki Terra     6.35 230  P         Pn        11 05 08.2 -0.6
THZ    Tophouse           6.49 227            Pn        11 05 10.1 -0.6
THZ    Tophouse           6.49 227  P         Pn        11 05 10.9 +0.2
KHZ    Kahutara           6.59 220            Pn        11 05 11.5 -0.5
KHZ    Kahutara           6.59 220  P         Pn        11 05 12.1 +0.2
DSZ    Denniston Nort     7.14 231  Pn        Pn        11 05 18.3 -1.3
DSZ    Denniston Nort     7.14 231  P         Pn        11 05 18.4 -1.2
GVZ    Greta Valley S     7.25 219  Pn        Pn        11 05 20.9 -0.1
GVZ    Greta Valley S     7.25 219  P         Pn        11 05 21.0 -0.1
LTZ    Lake Taylor        7.51 223            Pn        11 05 22.8 -2.0
LTZ    Lake Taylor        7.51 223  P         Pn        11 05 23.5 -1.2
AMCZ   Amberley           7.59 219  Pn        Pn        11 05 24.8 -1.0
INZ    Inchbonnie         7.94 226            Pn        11 05 29.2 -1.2
INZ    Inchbonnie         7.94 226  P         Pn        11 05 29.2 -1.2
MQZ    McQueen's Vall     7.98 217  Pn        Pn        11 05 29.2 -1.9
MQZ    McQueen's Vall     7.98 217  P         Pn        11 05 29.8 -1.2
AKCZ   Akaroa Harbour     7.99 215  P         Pn        11 05 31.4 +0.2
OXZ    Oxford             8.01 221            Pn        11 05 29.9 -1.6
OXZ    Oxford             8.01 221  P         Pn        11 05 30.1 -1.4
RACZ   Rakaia             8.25 218  P         Pn        11 05 34.1 -0.6
RAO    Raoul Island       8.53  17  P         Pn        11 05 42.2 +3.5
       160nm,0.5s,baz=114,slow=19,SNR=1.5
RAO                                 S         Sn        11 07 09.4 -4.9
       138nm,0.3s,baz=182,slow=23,SNR=2.0
RPZ    Rata Peaks         8.80 222  P         Pn        11 05 42.1 -0.2
       19nm,0.3s,baz=97,slow=1.4,SNR=20
RPZ                                 S         Sn        11 07 13.0 -7.8
       88nm,0.4s,baz=149,slow=23,SNR=18
RPZ    Rata Peaks         8.80 222            Pn        11 05 41.2 -1.1
RPZ    Rata Peaks         8.80 222  P         Pn        11 05 42.4 +0.1
FOZ    Fox Glacier        9.37 227  Pn        Pn        11 05 48.9 -1.3
LBZ    Lake Benmore       9.71 222  Pn        Pn        11 05 54.1 -0.8
ODZ    Otahua Downs       9.94 218  Pn        Pn        11 05 57.0 -1.0
ODZ    Otahua Downs       9.94 218  P         Pn        11 05 57.4 -0.6
JCZ    Jackson Bay       10.29 227  P         Pn        11 06 03.3 +0.4
WKZ    Wanaka            10.63 223  Pn        Pn        11 06 06.3 -1.1
MLZ    Mavora Lakes      11.47 223  Pn        Pn        11 06 16.9 -2.0
SYZ    Scrubby Hill      11.75 216  P         Pn        11 06 22.7  0.0
WHZ    Wether Hill Ro    11.90 221  Pn        Pn        11 06 21.7 -3.0
DCZ    Deep Cove         12.06 225  Pn        Pn        11 06 25.9 -1.0
PYZ    Puysegur Point    12.75 223  Pn        Pn        11 06 36.6 +0.2
DZM    Mont Dzumac       18.89 321  P         Pn        11 07 57.2 +1.0
       7.9nm,0.8s,baz=143,slow=18,SNR=4.1
DZM                                 LR        LR        11 14 23.2
       comp=Z,2µm,19.1s,baz=147,slow=35
DZM    Mont Dzumac       18.89 321  P         P         11 07 55.3 -0.3
MSVF   Nonsavu           19.68 357  P         P         11 08 05.2 +1.0
       13nm,0.7s,baz=157,slow=13,SNR=6.1
MSVF   Nonsavu           19.68 357  P         P         11 08 03.7 -0.5
KOUNC  Koumac, New Ca    21.26 318  P         P         11 08 21.4 +0.2
ARMA   Armidale          23.88 279  P         P         11 08 47.8 -0.8
MILA   Mila              23.88 262  P         P         11 08 47.4 -1.1
       baz=23,SNR=3.7
CAN    Canberra          24.36 266  P         P         11 08 51.2 -1.8
CAN                                 IAmb      IAmb      11 08 56.5
       comp=Z,43nm,1.0s
CAN    Canberra          24.36 266  P         P         11 08 51.2 -1.8
CAN                                 pmax      pmax
       comp=Z,43nm,1.0s
AFI    Afiamalu          24.79  21  P         P         11 09 03.7 +6.7
       comp=Z,25nm,0.9s,baz=164,slow=7.4,SNR=3.2
AFI    Afiamalu          24.79  21  P         P         11 08 57.1 +0.1
AFI                                 IAmb      IAmb      11 09 21.3
       comp=Z,42nm,1.1s
AFI    Afiamalu          24.79  21  P         P         11 08 57.1 +0.1
AFI                                 pmax      pmax
       comp=Z,42nm,1.1s
TAU    Tasmania Unive    24.87 247  P         P         11 08 55.8 -1.6
TAU                                 IAmb      IAmb      11 09 06.0
       comp=Z,59nm,1.5s
TAU    Tasmania Unive    24.87 247  P         P         11 08 55.8 -1.6
TAU                                 pmax      pmax
       comp=Z,59nm,1.5s
MOO    Moorlands         24.95 248  P         P         11 08 57.4 -0.8
       baz=24,SNR=4.1
TOO    Toolangi          26.66 259  P         P         11 09 13.7 -0.2
       baz=26,SNR=7.2
TOO    Toolangi          26.66 259  P         P         11 09 13.6 -0.2
TOO                                 IAmb      IAmb      11 09 22.0
       comp=Z,36nm,1.4s
TOO    Toolangi          26.66 259  P         P         11 09 13.6 -0.2
TOO                                 pmax      pmax
       comp=Z,36nm,1.4s
EIDS   Eidsvold          26.75 289  P         P         11 09 13.8 -0.8
RMQ    Roma              27.93 284  P         P         11 09 24.5 -0.7
       baz=27,SNR=5.5
CMSA   Cobar Meteorol    28.15 272  P         P         11 09 24.8 -2.3
       baz=28,SNR=11
STKA   Stephens Creek    31.29 269  P         P         11 09 55.9 +1.0
       comp=Z,35nm,0.8s,baz=98,slow=10,SNR=55
       comp=Z,35nm,0.8s
STKA   Stephens Creek    31.29 269  P         P         11 09 54.4 -0.5
       baz=31,SNR=39
STKA   Stephens Creek    31.29 269            P         11 09 55.8 +1.0
STKA   Stephens Creek    31.29 269  P         P         11 09 55.8 +0.9
STKA                                pmax      pmax
       comp=Z,8.0nm,0.8s
QLP    Quilpie           31.41 280  P         P         11 09 55.6 -0.4
       baz=31,SNR=6.0
HNR    Honiara           32.88 323  P         P         11 10 08.0 -1.0
       comp=Z,905nm,0.8s,baz=200,slow=3.0,SNR=4.3
HNR    Honiara           32.88 323  P         P         11 10 07.9 -1.1
HNR    Honiara           32.88 323  P         P         11 10 07.9 -1.1
HNR                                 pmax      pmax
       comp=Z,77nm,0.9s
HTT    Hallett           32.89 265  P         P         11 10 07.2 -1.8
       baz=32,SNR=24
CTA    Charters Tower    33.45 292  P         P         11 10 14.1 +0.2
       comp=Z,12nm,0.9s,baz=126,slow=9.7,SNR=12
CTA                                 LR        LR        11 23 08.6
       comp=Z,928nm,19.8s,baz=103,slow=35
       comp=Z,12nm,0.9s
CTAO   Charters Tower    33.45 292  P         P         11 10 14.2 +0.3
CTAO                                IAmb      IAmb      11 10 15.4
       comp=Z,25nm,1.1s
CTAO   Charters Tower    33.45 292  P         P         11 10 14.3 +0.3
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CTAO                                pmax      pmax
       comp=Z,25nm,1.2s
BBOO   Buckleboo         35.36 264  P         P         11 10 30.5 +0.1
       baz=35,SNR=30
BBOO   Buckleboo         35.36 264  P         P         11 10 30.3 -0.1
BBOO                                IAmb      IAmb      11 10 31.4
       comp=Z,19nm,0.7s
MTSU   Mount Surprise    36.09 293  P         P         11 10 37.3 +0.5
       baz=36,SNR=7.4
QIS    Mount Isa         38.19 285  P         P         11 10 54.7 +0.1
       baz=38,SNR=37
COEN   Coen              39.65 297  P         P         11 11 07.6 +0.7
       baz=39,SNR=7.0
COEN   Coen              39.65 297  P         P         11 11 06.8 -0.1
COEN                                IAmb      IAmb      11 11 07.8
       comp=Z,68nm,0.8s
PMG    Port Moresby      40.19 306  P         P         11 11 11.2 -0.1
       comp=Z,12nm,0.5s,baz=90,slow=4.0,SNR=7.7
PMG                                 LR        LR        11 26 31.3
       comp=Z,278nm,18.4s,baz=135,slow=34
       comp=Z,12nm,0.5s
PMG    Port Moresby      40.19 306  P         P         11 11 11.3 -0.1
PMG                                 IAmb      IAmb      11 11 12.3
       comp=Z,40nm,1.1s
PMG    Port Moresby      40.19 306  P         P         11 11 11.3 -0.1
PMG                                 pmax      pmax
       comp=Z,40nm,1.2s
AS31   Alice Springs     40.98 276  P         P         11 11 17.6 -0.3
AS31                                IAmb      IAmb      11 11 18.8
       comp=Z,22nm,0.7s
ASAR   Alice Springs     40.98 276  P         P         11 11 17.4 -0.5
       comp=Z,57nm,0.7s,baz=120,slow=8.2,SNR=310
ASAR                                PcP       PcP       11 13 19.3 +1.4
       comp=Z,1.8nm,0.8s,baz=115,slow=4.4,SNR=1.7
ASAR                                ScP       ScP       11 17 02.4 -3.9
       comp=Z,0.4nm,0.8s,baz=126,slow=4.2,SNR=2.4
ASAR                                S         S         11 17 21.9 -7.1
       comp=Z,2.4nm,0.7s,baz=125,slow=15,SNR=14
ASAR                                LR        LR        11 29 32.0
       comp=Z,517nm,19.2s,baz=103,slow=38
       comp=Z,57nm,0.7s
KRVT   Keravat (AS076    41.31 316  P         P         11 11 20.5 -0.1
       comp=Z,94nm,0.8s,baz=166,slow=1.8,SNR=5.8
       comp=Z,94nm,0.8s
RABL   Rabaul            41.34 317  P         P         11 11 20.9 +0.1
FORT   Forrest           42.44 263  P         P         11 11 29.9 +0.2
       baz=42,SNR=50
FORT   Forrest           42.44 263  P         P         11 11 29.7  0.0
WR0    Warramunga Arr    42.45 282  P         P         11 11 29.3 -0.6
WR0                                 IAmb      IAmb      11 11 30.3
       comp=Z,52nm,0.9s
WB2    Warramunga Arr    42.60 281  P         P         11 11 30.7 -0.5
WRAB   Tennant Creek     42.61 281  P         P         11 11 30.6 -0.6
WRAB   Tennant Creek     42.61 281  P         P         11 11 30.6 -0.6
WRAB                                pmax      pmax
       comp=Z,65nm,0.7s
WRA    Warramunga Arr    42.61 281  P         P         11 11 30.6 -0.7
       comp=Z,56nm,0.7s,baz=122,slow=7.6,SNR=248
WRA                                 PcP       PcP       11 13 25.4 +2.1
       comp=Z,4.9nm,0.9s,baz=116,slow=2.9,SNR=5.5
WRA                                 S         S         11 17 42.2  -11
       comp=Z,4.7nm,1.1s,baz=120,slow=13,SNR=4.5
WRA                                 LR        LR        11 28 18.2
       comp=Z,641nm,20.5s,baz=90,slow=35
       comp=Z,56nm,0.7s
WRA    Warramunga Arr    42.61 281  P         P         11 11 30.9 -0.4
WRA    Warramunga Arr    42.61 281  P         P         11 11 30.9 -0.4
WRA                                 pmax      pmax
       comp=Z,8.0nm,0.7s
WB0    Warramunga Arr    42.67 282  P         P         11 11 31.1 -0.6
WRKA   Warakurna         44.76 271  P         P         11 11 47.4 -1.1
       baz=44,SNR=19
KMBL   Kambalda          47.06 260  P         P         11 12 06.6  0.0
       baz=46,SNR=11
KDU    Kakadu            48.36 288  P         P         11 12 15.7 -1.1
       baz=48,SNR=4.2
MTN    Manton Dam        49.28 287  P         P         11 12 22.8 -1.0
MTN                                 IAmb      IAmb      11 12 32.6
       comp=Z,27nm,1.0s
KNRA   Kununurra         49.40 282  P         P         11 12 24.8  0.0
       baz=49,SNR=12
KNRA   Kununurra         49.40 282  P         P         11 12 24.3 -0.5
NWAO   Narrogin (SRO)    50.05 256  P         P         11 12 29.2 -0.3
       baz=49,SNR=5.3
NWAO                                P         P         11 12 29.2 -0.3
       baz=49,SNR=5.3
NWAO   Narrogin (SRO)    50.05 256  P         P         11 12 28.8 -0.8
NWAO                                IAmb      IAmb      11 12 47.4
       comp=Z,22nm,1.2s
NWAO   Narrogin (SRO)    50.05 256  P         P         11 12 28.8 -0.8
NWAO                                pmax      pmax
       comp=Z,22nm,1.2s
KLBR   Kellerberrin      50.19 257  P         P         11 12 30.0 -0.6
       baz=50,SNR=24
FITZ   Fitzroy Crossi    50.47 277  P         P         11 12 32.8  0.0
MUN    Mundaring         51.23 256  P         P         11 12 38.6 +0.1
       baz=51,SNR=12
BLDU   Ballidu           51.41 258  P         P         11 12 39.5 -0.4
       baz=51,SNR=29
MEEK   Meekatharra       51.70 264  P         P         11 12 41.1 -1.0
       baz=51,SNR=25
MORW   Morawa            52.61 259  P         P         11 12 48.4 -0.4
       baz=52,SNR=14
MORW   Morawa            52.61 259  P         P         11 12 48.7 -0.1
MORW                                IAmb      IAmb      11 12 49.6
       comp=Z,35nm,0.7s
QSPA   South Pole Qui    52.67 180  P         P         11 12 55.5 +6.6
       comp=Z,16nm,0.8s,baz=28,slow=1.5,SNR=46
       comp=Z,16nm,0.8s
PSA00  Pilbara Seismi    53.21 270  P         P         11 12 51.9 -1.4
PSA00                               IAmb      IAmb      11 12 53.1
       comp=Z,13nm,1.0s
MBWA   Marble Bar        53.52 270  P         P         11 12 54.6 -1.0
MBWA                                IAmb      IAmb      11 12 55.8
       comp=Z,24nm,0.8s
FAKI   Fak Fak           55.03 297  P         P         11 13 05.4 -1.3
FAKI                                IAmb      IAmb      11 13 15.7
       comp=Z,24nm,0.8s
SOEI   Soe               56.46 285  P         P         11 13 14.9 -2.1
SOEI   Soe               56.46 285  P         P         11 13 15.0 -2.1
       comp=Z,68nm,1.3s
GIRL   Giralia           57.12 265  P         P         11 13 22.3 +0.8
       baz=56,SNR=4.9
SANI   Sanana            60.15 293  P         P         11 13 41.3 -1.4
       comp=Z,27nm,0.9s
GUMO   Guam              60.16 321  LR        LR        11 38 12.2
       comp=Z,218nm,18.0s,baz=132,slow=35
TWSI   Taliwang, Sumb    62.82 280  P         P         11 13 58.6 -2.1
       comp=Z,55nm,1.2s
JAGI   Jajag, Banyuwa    65.12 279  P         P         11 14 13.5 -2.4
       comp=Z,44nm,1.5s
GMJI   Gumukmas          65.80 278  P         P         11 14 18.4 -1.9
PWJI   Pagerwojo         67.24 277  P         P         11 14 27.2 -2.3
       comp=Z,88nm,0.9s
KPJI   Karang Pucung     69.93 276  P         P         11 14 44.7 -1.6
       comp=Z,58nm,0.7s
CMJI   Cimerak           70.04 276  P         P         11 14 44.9 -2.1
       comp=Z,86nm,0.7s
SNAA   Sanae             71.16 179  P         P         11 14 52.5 -0.5
SNAA                                IAmb      IAmb      11 15 08.1
       comp=Z,14nm,1.2s
SNAA   Sanae             71.16 179  P         P         11 14 52.5 -0.5
SNAA                                pmax      pmax
       comp=Z,14nm,1.2s
CNJI   Cibinong          71.37 275  P         P         11 14 54.1 -1.0
NVL    N'lazarevskaya    71.69 184  eP        P         11 15 09.2  +13
NVL                                 eS        SKiKP     11 24 23.6  -10
NVL                                 pmax      pmax
       comp=Z,11nm,0.8s
NVL                                 MLR       MLR
       comp=Z,2µm,18.0s
H03S2  Juan Fernandez    78.50 124  T         T         12 41 50.0
       baz=231,slow=74,SNR=13
H03S1  Juan Fernandez    78.50 124  T         T         12 41 58.2
       baz=231,slow=74,SNR=14
H03S3  Juan Fernandez    78.51 124  T         T         12 41 58.8
       baz=231,slow=74,SNR=12
H03N3  Juan Fernandez    78.73 123  T         T         12 42 19.6
       baz=234,slow=72,SNR=89
H03N2  Juan Fernandez    78.73 123  T         T         12 42 25.2
       baz=234,slow=72,SNR=83
H03N1  Juan Fernandez    78.75 123  T         T         12 42 18.2
       baz=234,slow=72,SNR=105
PLCA   Paso Flores       79.37 133  P         P         11 15 46.8 +5.9
       comp=Z,1.9nm,0.6s,baz=261,slow=4.0,SNR=9.5
       comp=Z,1.9nm,0.6s
CFA    Coronel Fontan    86.83 128  LR        LR        11 45 38.1
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       comp=Z,281nm,21.9s,baz=217,slow=29
KSRS   Korea Array       88.32 322  P         P         11 16 27.1 +0.9
       comp=Z,1.5nm,0.7s,baz=136,slow=4.6,SNR=6.1
       comp=Z,1.5nm,0.7s
NJ2    Nanjing           89.17 312  eP        P         11 16 32.6 +2.3
NJ2                                 pmax      pmax
       comp=Z,8.0nm,0.5s
YSS    Yuzh-Sakhalins    90.16 336  eP        P         11 16 37.6 +3.1
YSS                                 pmax      pmax
       comp=Z,10.0nm,0.8s
PETK   Petropavlovsk-    92.11 347  P         P         11 16 43.6 +0.1
       comp=Z,2.7nm,0.8s,baz=119,slow=7.2,SNR=2.7
       comp=Z,2.7nm,0.8s
LVC    Limon Verde       92.44 121  LR        LR        11 47 38.8
       comp=Z,303nm,21.6s,baz=224,slow=28
CMAR   Chiang Mai Arr    93.60 290  P         P         11 16 51.6 +0.4
       comp=Z,2.4nm,0.9s,baz=150,slow=3.5,SNR=11
CMAR                                PP        PP        11 20 34.6 -1.8
       comp=Z,0.8nm,0.6s,baz=146,slow=6.1,SNR=5.4
       comp=Z,2.4nm,0.9s
CMAR   Chiang Mai Arr    93.60 290  P         P         11 16 50.9 -0.3
CMAR   Chiang Mai Arr    93.60 290 i P        P         11 16 54.2 +3.0
CMAR                                pmax      pmax
       comp=Z,5.0nm,0.8s
CPUP   Villa Florida     97.28 131  LR        LR        11 56 50.9
       comp=Z,326nm,18.0s,baz=216,slow=33
TNCH   TengChong         97.93 295  eP        Pdif      11 17 11.4 +0.3
TNCH                                pP        PcP       11 17 14.6 +3.5
TNCH                                pmax      pmax
       comp=Z,150nm,0.3s
XLT    XiLinHaoTe        99.12 319  eP        Pdif      11 17 18.6 +2.8
XLT                                 pP        pP        11 17 23.1 +0.6
XLT    XiLinHaoTe        99.12 319  sS        sS        11 28 55.8 -0.8
XLT                                 pmax      pmax
       comp=Z,8.0nm,0.9s
XLT                                 pmax      pmax
       comp=Z,110nm,4.0s
XLT                                 LR        LR
       comp=N,33nm,14.5s
XLT                                 LR        LR
       comp=E,420nm,16.2s
XLT                                 LR        LR
       comp=Z,410nm,17.0s
HHC    Hu-ho-hao-te      99.50 315  eP        Pdif      11 17 18.7 +1.1
HHC                                 pmax      pmax
       comp=Z,25nm,1.0s
HHC                                 pmax      pmax
       comp=Z,220nm,5.9s
SEY    Seymchan         102.34 348⇑eP         Pdif      11 17 29.7 +0.2
SEY                                 pmax      pmax
       comp=Z,2.0nm,1.1s
ILAR   Eielson Array    105.32  14  PKiKP     PKiKP     11 21 59.8 +3.4
       comp=Z,0.3nm,0.8s,baz=224,slow=1.7,SNR=2.3
INK    Inuvik           111.19  17  PKKP                11 33 24.7
       comp=Z,1.1nm,1.0s,baz=71,slow=2.5,SNR=5.2
YKA    Yellowknife Ar   112.78  27  PKiKP     PKiKP     11 22 12.3 +1.9
       comp=Z,0.3nm,0.8s,baz=216,slow=2.8,SNR=3.7
YKA                                 PKKPbc    PKKPab    11 33 03.1 -0.7
       comp=Z,0.2nm,0.7s,baz=58,slow=3.6,SNR=3.7
WMQ    Urumqi           115.66 307  eP        PKiKP     11 22 17.0 +0.3
WMQ                                 LR        LR
       comp=N,260nm,23.9s
WMQ                                 LR        LR
       comp=E,150nm,18.3s
WMQ                                 LR        LR
       comp=Z,220nm,20.1s
MK31   Makanchi Array   120.39 308⇑iPKIKP     PKPdf     11 22 24.3 -1.4
KURK   Kurchatov        124.08 311⇓iPKIKP     PKiKP     11 22 33.6 +0.8
RES    Resolute Bay     124.66  19  PKhKP     PKPpre    11 22 30.4
       comp=Z,0.6nm,0.5s,baz=202,slow=13,SNR=5.5
RES    Resolute Bay     124.66  19            PKPdf     11 22 30.9 -2.0
RES    Resolute Bay     124.66  19  PKIKP     PKPdf     11 22 31.0 -2.0
PAL    Palisades        124.81  62  PKPdf     PKPdf     11 22 32.9 -1.4
PAL    Palisades        124.81  62  PKIKP     PKPdf     11 22 32.9 -1.4
NRIK   Noril'sk         125.05 334  PKP       PKPdf     11 22 34.3 +0.4
       comp=Z,4.2nm,0.7s,baz=90,slow=2.4,SNR=9.6
NRIK   Noril'sk         125.05 334  PKPdf     PKiKP     11 22 34.5 +0.2
NRIK   Noril'sk         125.05 334⇓iPKIKP     PKiKP     11 22 34.4 +0.2
KKAR   Karatay Array    126.81 300  PKPdf     PKPdf     11 22 38.1  0.0
KKAR   Karatay Array    126.81 300  PKIKP     PKPdf     11 22 38.1  0.0
BRVK   Borovoye         129.69 312  PKPdf     PKPdf     11 22 42.6 -0.6
BRVK   Borovoye         129.69 312⇑iPKIKP     PKPdf     11 22 42.8 -0.4
FRB    Frobisher Bay    132.57  34  PKP       PKiKP     11 22 51.4 +2.0
       comp=Z,1.9nm,0.7s,baz=330,slow=3.9,SNR=2.0
ARU    Arti             136.79 316 i PKIKP    PKPdf     11 22 57.5 +1.0
ARU                                                     11 25 37.2
ARU                                 SS        SS        11 43 42.4 -0.3
SPA0   Spitsbergen Ar   138.54 355 epPKPdf    PKiKP     11 23 03.1 +1.8
SPITS  Spitsbergen Ar   138.54 355  PKP       PKiKP     11 23 01.8 +0.5
       comp=Z,7.8nm,0.9s,baz=91,slow=3.6,SNR=7.8
GNI    Garni            144.71 289⇓iPKIKP     PKiKP     11 23 14.8 -0.4
ARA0   ARCESS Array S   144.87 344 ePKPdf     PKPab     11 23 09.5 -0.3
ARCES  ARCESS Array B   144.87 344  PKP       PKPab     11 23 10.1 +0.3
       comp=Z,2.1nm,0.5s,baz=44,slow=3.9,SNR=26
ARCES  ARCESS Array B   144.87 344  PKPdf     PKPab     11 23 09.9 +0.2
KLMR   Klimovskoe       145.60 326 ePKPdf     PKPdf     11 23 08.9 -3.2
KLMR                                AMP                 11 23 13.6
       comp=Z,25nm,1.2s
KLMR                                PP        PP        11 26 38.4 +5.1
KLMR   Klimovskoe       145.60 326 ePKHKP     PKPpre    11 23 08.9
KLMR                                                    11 26 38.4
KLMR                                pmax      pmax
       comp=Z,25nm,1.2s
ZEI    Tsey             145.72 293 ePKP2      PKPdf     11 23 12.4 -0.8
ZEI                                 pmax      pmax
       comp=Z,14nm,1.3s
KTK1   Kautokeino       145.77 345 ePKPdf     PKPdf     11 23 10.5 -1.7
GURO   Guroymak-BITLI   146.46 285  PKPdf     PKPdf     11 23 14.0 -0.5
KBZ    Khabaz           146.54 295  PKPbc     PKPbc     11 23 16.3 +0.6
       comp=Z,2.8nm,0.9s,baz=138,slow=4.1,SNR=4.1
KIV    Kislovodsk       146.71 295 ePKP2      PKiKP     11 23 19.2 +0.1
KIV                                 pmax      pmax
       comp=Z,9.0nm,1.0s
VRH    Novokhopyorsk    147.11 308 ePKIKP     PKPbc     11 23 17.1  0.0
VRH                                 pmax      pmax
       comp=Z,10.0nm,0.6s
STEI   Steigen          148.18 349 epPKPdf    PKPbc     11 23 18.7 -0.8
LPSR   Galich'ya Gora   148.56 312 ePKIKP     PKPbc     11 23 20.6 -0.4
LPSR                                pmax      pmax
       comp=Z,10.0nm,1.2s
VORR   Voronezh         148.59 310 ePKP2      PKPbc     11 23 21.9 +0.8
VORR                                pmax      pmax
       comp=Z,10.0nm,0.6s
LIC    Lamto            148.67 172⇑iPKP1      PKPab     11 23 25.8 -0.2
       comp=Z,23nm,0.6s
FAUS   Fauske           148.68 348 epPKPdf    PKPdf     11 23 18.9 +1.9
KIC    Kosan Boka       148.84 172⇑iPKP1      PKPab     11 23 26.2 -0.5
       comp=Z,6.1nm,0.6s
TIC    Toumodi          149.09 172⇑ePKP1      PKPab     11 23 26.9 -0.8
       comp=Z,4.5nm,0.3s
DBIC   Dimbokro         149.13 172  PKPbc     PKPab     11 23 26.9 -0.9
       comp=Z,4.3nm,0.8s,baz=179,slow=7.4,SNR=3.9
OBN    Obninsk          149.21 317⇓iPKIKP     PKPbc     11 23 22.0 -0.5
OBN                                e                    11 23 31.9
OBN                                 pmax      pmax
       comp=Z,6.0nm,0.4s
EIL    Elat             149.36 266  PKPbc     PKPbc     11 23 23.9 +0.2
       comp=Z,4.8nm,0.7s,baz=159,slow=4.8,SNR=4.0
KONS   Konsvik          149.83 349 ePKPbc     PKPbc     11 23 24.3 +0.6
MMAI   Mount Meron Ar   150.22 272  PKPbc     PKiKP     11 23 27.4 +0.7
       comp=Z,5.8nm,0.6s,baz=63,slow=4.1,SNR=8.4
FIA1   FINESS Array S   150.71 334  PKPbc     PKPbc     11 23 26.6 +0.6
FINES  FINESS Array B   150.72 334  PKPbc     PKPbc     11 23 26.4 +0.4
       comp=Z,10nm,0.9s,baz=50,slow=3.2,SNR=20
FINES  FINESS Array B   150.72 334  PKPbc     PKPbc     11 23 26.6 +0.6
FINES  FINESS Array B   150.72 334  PKIKP     PKPbc     11 23 26.6 +0.6
NSS    Namsos           151.84 348 ePKPbc     PKPbc     11 23 27.5 -1.0
BRTR   Keskin Array B   153.09 286  PKPbc     PKiKP     11 23 34.6 +2.2
       comp=Z,3.6nm,0.8s,baz=174,slow=3.7,SNR=7.5
DOMB   Dombas           154.64 349 ePKPbc     PKPbc     11 23 32.7 -2.1
AKN    Aaknes           154.79 351 ePKPbc     PKPbc     11 23 34.1 -1.0
AKASG  Malin Array Be   154.90 311  PKPbc     PKPbc     11 23 36.0 +0.3
       comp=Z,1.8nm,0.7s,baz=58,slow=2.0,SNR=4.7
AKASG  Malin Array Be   154.90 311  PKIKP     PKPbc     11 23 36.0 +0.3
NC303  NORSAR Array S   155.01 346  PKPbc     PKPbc     11 23 36.7
NB2    NORSAR Subarra   155.21 346  PKP       PKPbc     11 23 36.7
       comp=Z,5.5nm,1.0s,baz=20,slow=4.0
NOA    NORSAR Array B   155.21 346  PKPbc     PKPbc     11 23 36.9
       comp=Z,2.0nm,0.8s,baz=38,slow=2.2,SNR=4.8
NC602  NORSAR Array S   155.43 345  PKPbc     PKPbc     11 23 37.5
TORD   Torodi Ar. Bea   155.69 186  PKP       PKPdf     11 23 31.9 +2.7
       comp=Z,1.1nm,0.9s,baz=136,slow=0.7,SNR=2.7
TORD                                PKPab     PKPab     11 23 58.6 +3.4
       comp=Z,2.7nm,0.8s,baz=172,slow=3.6,SNR=8.4
SKAR   Skarslia         156.05 349 epPKPdf    PKPdf     11 23 29.8 +1.5
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GERES	**GERESS Array B** comp=Z,0.5nm,0.6s,baz=55,slow=3.7,SNR=2.4	**164.49**	**322**	PKPab	**PKPab**	**11 24 33.9**	**+0.9**

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*IDC **07** 11:04:24.4±1.5, 6°.06S×153°.94E, h0km, mb4.0/10, mbtmp4.1/12, ML2.3/1, Error ellipse: s-maj=43.3km s-min=20.4km az=118.0*

ISC 07 11:04:30.4±1.1, 5°.96S±0°.09×153°.6E±0°.1, h32km, n12, σ1s.12/14, mb4.1/10, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076** 150nm,0.3s,baz=119,slow=10,SNR=44	**2.29**	**316**	Pn	**Pn**	**11 05 05.8**	**-0.3**
KRVT	57nm,0.3s,baz=90,slow=21,SNR=14			Sn	**Sn**	**11 05 33.0**	**-0.2**
PMG	**Port Moresby** 2.9nm,0.3s,baz=59,slow=12,SNR=5.9	**7.27**	**242**	Pn	**Pn**	**11 06 15.7**	**+1.2**
PMG	1.6nm,0.3s,baz=139,slow=20,SNR=4.5 11nm,0.5s			Sn	**Sn**	**11 07 34.0**	**-2.1**
WRA	**Warramunga Arr** 1.5nm,0.9s,baz=56,slow=9.8,SNR=5.5 1.5nm,0.9s	**23.34**	**232**	P	**P**	**11 09 35.6**	**-0.6**
ASAR	**Alice Springs** 0.6nm,0.6s,baz=58,slow=9.2,SNR=10 0.6nm,0.6s	**25.89**	**225**	P	**P**	**11 09 59.8**	**+0.1**
KSRS	**Korea Array** 1.6nm,0.8s,baz=152,slow=6.4,SNR=3.4 1.6nm,0.8s	**49.40**	**333**	P	**P**	**11 13 17.8**	**+0.6**
USRK	**Ussuriysk Ar.** 1.1nm,0.5s,baz=181,slow=5.8,SNR=4.0 1.1nm,0.5s	**53.61**	**341**	P	**P**	**11 13 48.9**	**+0.3**
PETK	**Petropavlovsk-** 2.1nm,0.9s,baz=175,slow=7.2,SNR=4.4 2.1nm,0.9s	**58.94**	**3**	P	**P**	**11 14 26.0**	**-0.5**
SONM	**Songino Array** 1.4nm,0.6s,baz=145,slow=7.1,SNR=8.5 1.4nm,0.6s	**67.74**	**328**	P	**P**	**11 15 26.3**	**+1.3**
MKAR	**Makanchi Array** 1.5nm,0.6s,baz=114,slow=4.9,SNR=14 1.5nm,0.6s	**81.74**	**319**	P	**P**	**11 16 47.1**	**+1.0**
ZALV	**Zalesovo Beam** 3.2nm,0.5s,baz=118,slow=5.9,SNR=12 3.2nm,0.5s	**82.57**	**326**	P	**P**	**11 16 50.5**	**+0.3**
ILAR	**Eielson Array** 0.3nm,0.5s,baz=237,slow=5.1,SNR=7.0 0.3nm,0.5s	**82.92**	**22**	P	**P**	**11 16 49.8**	**-2.0**
NRIK	**Noril'sk** 1.8nm,0.6s,baz=82,slow=3.9,SNR=2.2 1.8nm,0.6s	**87.32**	**341**	P	**P**	**11 17 14.1**	**+0.3**

MAN 07 11:09:06.9, 7°.17N×124°.60E, h35km, mb3.6, ML2.3, MS1.8, 3C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.35**	**278**	⇑*i*P	Pn	11 09 17.2	+1.7
CTBH				*i* S	Sn	11 09 23.4	+2.1
KCP	**Kidapawan**	**0.52**	**108**	⇑*e*P	Pn	11 09 19.0	+1.1
BUKP	**Musuan**	**0.84**	**33**	⇑*e*P	Pn	11 09 22.9	+0.6
BUKP				*e*S	Sn	11 09 33.3	-0.2

HEL 07 11:13:16.0±0.1, 61°.41N×23°.38E, h0km, ML1.0, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAF	**Rauma**	**0.87**	**245**	PG	Pg	11 13 31.7	-1.0
RAF	comp=Z,1.4nm,0.2s			MSG		11 13 43.0	
RAF				SB	Sg	11 13 44.0	0.0
KEF	**Keuruu**	**1.04**	**42**	PG	Pg	11 13 34.7	-1.2
KEF	comp=Z,1.0nm,0.2s			MSG		11 13 47.6	
FIA0	**FINESS Array S** baz=263	**1.30**	**87**	PG	Pg	11 13 39.3	-1.5
FIA0	comp=Z,1.2nm,0.2s			MSG		11 13 55.1	
FIA0				SG	Sg	11 13 56.4	-1.2
PVF	**Pernaja**	**1.49**	**124**	PN	Pg	11 13 44.9	+0.5
PVF	comp=Z,1.7nm,0.2s			MSG		11 14 00.6	
KAF	**Kangasniemi**	**1.56**	**62**	PG	Pn	11 13 43.9	-1.1
KAF	comp=Z,1.2nm,0.2s			MSG		11 14 02.7	
KAF				SN	Sb	11 14 06.0	0.0
VAF	**Ylistaro** baz=173	**1.68**	**349**	PN	Pn	11 13 46.4	-0.1
VAF	comp=Z,0.7nm,0.2s			MSG		11 14 06.3	
VAF				SN	Sn	11 14 08.5	-0.2
AAL	**Aland**	**2.07**	**235**	SG	Sb	11 14 21.1	+0.5
HEMU	**Hemsoen**	**2.82**	**299**	SB	Sb	11 14 40.1	-2.2

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*IDC **07** 11:21:25.9±1.1, 63°.03N×25°.17W, h0km, mb3.6/7, mbtmp3.6/10, ML3.6/3, MS3.7/15, Error ellipse: s-maj=27.9km s-min=19.7km az=6.0*

ISC 07 11:21:27.3±0.8, 63°.1N±0°.1×25°.11W±0°.09, h10km, n23, σ0s.56/12, mb3.5/7, MS3.5/11, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes** 20nm,0.3s,baz=220,slow=9.9,SNR=109	**2.37**	**43**	Pn	**Pn**	**11 22 06.4**	**+0.2**
BORG	4.7nm,0.3s,baz=55,slow=24,SNR=7.8 131nm,0.7s			Sn	**Sb**	**11 22 38.6**	**-0.7**
JMIC	**Jan Mayen** comp=Z,104nm,20.1s,baz=302,slow=31	**10.21**	**32**	LR	LR	11 26 47.2	
EKA	**Eskdalemuir Ar** baz=316,slow=11	**13.60**	**115**	Pn	**Pn**	**11 24 39.4**	**-0.5**
EKA	comp=Z,256nm,18.5s,baz=332,slow=33 3.6nm,0.9s			LR	LR	11 28 51.7	
NOA	**NORSAR Array B** comp=Z,149nm,19.7s,baz=300,slow=33	**17.00**	**80**	LR	LR	11 30 43.3	
HFS	**Hagfors** comp=Z,132nm,18.2s,baz=328,slow=38	**18.49**	**81**	LR	LR	11 33 05.5	
FRB	**Frobisher Bay** 0.1nm,0.3s,baz=72,slow=13,SNR=3.8	**19.18**	**291**	P	**Pn**	**11 25 51.0**	**-0.6**
FRB	comp=Z,208nm,18.1s,baz=132,slow=35 1.4nm,0.7s			LR	LR	11 32 41.2	
SCHQ	**Schefferville** comp=Z,103nm,18.6s,baz=19,slow=34	**22.66**	**268**	LR	LR	11 34 11.0	
GERES	**GERESS Array B** comp=Z,105nm,20.8s,baz=294,slow=34	**25.47**	**106**	LR	LR	11 35 53.0	
VRAC	**Vranov** comp=Z,102nm,19.6s,baz=330,slow=35	**26.41**	**102**	LR	LR	11 36 54.0	
ESDC	**Sonseca Array** 1.3nm,0.8s,baz=342,slow=8.1,SNR=3.3 1.3nm,0.8s	**26.63**	**142**	P	**P**	**11 27 06.2**	**+0.3**
AKASG	**Malin Array Be** comp=Z,101nm,18.9s,baz=346,slow=36	**31.14**	**88**	LR	LR	11 40 15.2	
MLR	**Muntele Rosu** comp=Z,152nm,19.5s,baz=346,slow=37	**33.47**	**97**	LR	LR	11 42 16.1	
YKA	**Yellowknife Ar** 0.2nm,0.7s,baz=48,slow=9.2,SNR=2.5	**37.78**	**311**	P	**P**	**11 28 43.5**	**+0.5**
YKA	0.6nm,1.1s,baz=47,slow=2.7,SNR=3.7 0.2nm,0.7s			PcP	**PcP**	**11 30 58.8**	**-0.6**
IDI	**Anoyia** comp=Z,61nm,18.1s,baz=301,slow=37	**41.28**	**108**	LR	LR	11 46 45.5	
KBZ	**Khabaz** comp=Z,91nm,21.0s,baz=340,slow=36	**42.53**	**84**	LR	LR	11 46 47.2	
ILAR	**Eielson Array** 0.7nm,1.1s,baz=15,slow=7.5,SNR=5.7 0.7nm,1.1s	**45.44**	**329**	P	**P**	**11 29 45.8**	**+0.1**
PDAR	**Pinedale Array** 0.4nm,0.6s,baz=59,slow=7.5,SNR=3.7 0.4nm,0.6s	**50.60**	**288**	P	**P**	**11 30 25.8**	**-0.4**
MKAR	**Makanchi Array** 0.5nm,0.9s,baz=349,slow=6.6,SNR=3.9	**56.40**	**52**	P	**P**	**11 31 09.2**	**+0.8**
MKAR	comp=Z,265nm,21.2s,baz=96,slow=37 0.5nm,0.9s			LR	LR	11 56 22.3	
SONM	**Songino Array** 0.7nm,0.9s,baz=335,slow=6.4,SNR=4.1 0.7nm,0.9s	**62.96**	**35**	P	**P**	**11 31 54.0**	**+0.3**
SDV	**Santo Domingo** comp=Z,135nm,20.7s,baz=246,slow=34	**63.14**	**232**	LR	LR	11 56 37.9	
ATD	**Arta Tunnel** comp=Z,5.2nm,19.7s,baz=130,slow=38	**69.86**	**105**	LR	LR	12 05 13.6	
MBAR	**Mbarara** comp=Z,342nm,20.1s,baz=135,slow=37	**75.74**	**121**	LR	LR	12 08 02.2	
CMAR	**Chiang Mai Arr** 0.4nm,0.3s,baz=330,slow=5.2,SNR=4.4 0.4nm,0.3s	**87.81**	**52**	P	**P**	**11 34 16.8**	**+0.1**

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*IDC **07** 11:24:06.8±2.4, 28°.89N×142°.28E, h55km±22km, mb3.1/6, mbtmp3.5/7, ML3.1/1, Error ellipse: s-maj=49.2km s-min=13.5km az=83.0*

ISC 07 11:24:04.2±1.1, 28°.87N±0°.08×142°.2E±0°.3, h30km, n11, σ1s.22/10, mb3.5/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima** 35nm,0.3s,baz=281,slow=16,SNR=5.3	**1.77**	**180**	P	**Pb**	**11 24 36.2**	**+0.2**
JCJ	134nm,0.4s,baz=274,slow=22,SNR=5.9			S	**Sb**	**11 24 57.0**	**-0.7**
MJAR	**Matsushiro Arr** 0.3nm,0.3s,baz=158,slow=13,SNR=13	**8.35**	**337**	P	**Pn**	**11 26 03.3**	**+0.2**
MJAR	1.5nm,0.9s,baz=143,slow=20,SNR=1.8 2.4nm,0.3s			S	**Sn**	**11 27 34.2**	**-2.1**
KLR	**Kul'dur** 0.4nm,0.4s,baz=141,slow=6.5,SNR=2.6 0.4nm,0.4s	**21.84**	**341**	P	**P**	**11 28 56.0**	**+1.9**
H11N2	**WAKE ISLAND Hy** baz=297	**24.26**	**107**	T	T	11 54 53.5	
H11N1	**WAKE ISLAND Hy** baz=297	**24.26**	**107**	T	T	11 54 54.8	
H11N3	**WAKE ISLAND Hy** baz=297	**24.27**	**107**	T	T	11 54 37.6	
ZALV	**Zalesovo Beam** 0.7nm,0.5s,baz=93,slow=8.1,SNR=3.9 0.7nm,0.5s	**48.16**	**318**	P	**P**	**11 32 42.2**	**+0.8**
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=8.6,slow=7.8,SNR=9.0 0.3nm,0.3s	**49.12**	**190**	P	**P**	**11 32 48.6**	**-0.5**
MKAR	**Makanchi Array** 0.7nm,0.7s,baz=87,slow=7.4,SNR=7.6 0.7nm,0.7s	**49.35**	**308**	P	**P**	**11 32 50.9**	**+0.1**
ASAR	**Alice Springs** 0.1nm,0.4s,baz=8.9,slow=6.6,SNR=1.4 0.1nm,0.4s	**52.84**	**190**	P	**P**	**11 33 17.5**	**+0.4**
YKA	**Yellowknife Ar** 0.1nm,0.5s,baz=298,slow=6.3,SNR=2.4 0.1nm,0.5s	**70.59**	**29**	P	**P**	**11 35 15.5**	**-0.7**

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*TAP **07** 11:42:25.1, 21°.56N×122°.10E, h41km±1km, ML3.0, D*

*JMA **07** 11:42:28.8±0.5, 22°N±2°×12°2E±°, h131km, MV2.7/9, TAIWAN REGION*

ISC 07 11:42:21.3±1.6, 21°.74N±0°.06×122°.23E±0°.03, h7km±11km, n62, σ1s.05/96, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LYUB	**Lan-yu** baz=313	**0.66**	**293**	P	**Pn**	**11 42 38.1**	**+1.0**
LYUB	baz=313			S	**Sn**	**11 42 47.7**	**+0.1**
LAY	**Lan-yu** baz=313	**0.70**	**295**	*i* P	**Pn**	**11 42 37.4**	**-0.2**
LAY	baz=313			S	**Sn**	**11 42 47.1**	**-1.6**
LDUT	**Ludao** baz=332	**1.16**	**323**	S	**Sn**	**11 43 01.8**	**+1.6**
TSEB	**Hengchuen, Pin** baz=287	**1.25**	**277**	S	**Sn**	**11 43 02.1**	**-0.2**
SMST	**Manzhou Townsh** baz=302	**1.32**	**282**	P	**Pb**	**11 42 45.7**	**-0.8**
TWKBT	**Hengchun** baz=288	**1.33**	**279**	P	**Pb**	**11 42 45.8**	**-0.9**
TWK1	**Hengchun** baz=288	**1.34**	**279**	*i* P	**Pg**	**11 42 47.4**	**+0.4**
TAWH	**Dawu Township** baz=305	**1.38**	**296**	P	**Pg**	**11 42 47.9**	**+0.1**
TAWH	baz=305			S	**Sb**	**11 43 04.9**	**-0.4**
HEN	**Hengchun** baz=299	**1.41**	**281**	P	**Pg**	**11 42 48.9**	**+0.5**
EAST	**Anshuo** baz=316	**1.43**	**297**	*i* P	**Pb**	**11 42 47.6**	**-0.8**
EAST	baz=316			S	**Sb**	**11 43 06.6**	**-0.3**
ECL	**Taimali** baz=305	**1.46**	**306**	P	**Pg**	**11 42 49.5**	**+0.3**
EDH	**Donghe** baz=341	**1.50**	**325**	P	**Pg**	**11 42 50.6**	**+0.6**
EDH	baz=341			*i* S	**Sg**	**11 43 10.1**	**+0.6**
TWGBT	**Beinan** baz=311	**1.51**	**315**	P	**Pg**	**11 42 52.2**	**+2.0**
TWGBT	baz=311			S	**Sg**	**11 43 10.8**	**+0.9**
TWG	**Pinlang** baz=311	**1.52**	**315**	*i* P	**Pg**	**11 42 51.8**	**+1.4**
TWG	baz=311			*i* S	**Sg**	**11 43 11.4**	**+1.2**
LONT	**Longtian** baz=313	**1.54**	**319**	P	**Pg**	**11 42 52.2**	**+1.2**
LONT	baz=313			S	**Sg**	**11 43 12.0**	**+1.1**
CHKT	**Chengkung** baz=344	**1.57**	**329**	*i* S	**Sg**	**11 43 12.2**	**+0.4**
SCZT	**Fangliau** baz=311	**1.62**	**293**	*i* P	**Pb**	**11 42 51.5**	**-0.1**
FULB	**Fuli** baz=345	**1.69**	**329**	P	**Pb**	**11 42 53.0**	**+0.2**
FULB	baz=345			S	**Sg**	**11 43 15.5**	**-0.1**
EHD	**Haiduan** baz=319	**1.69**	**326**	P	**Pg**	**11 42 54.2**	**+0.4**
EHD	baz=319			S	**Sg**	**11 43 16.8**	**+1.1**
MASBT	**Mashibuluo** baz=308	**1.72**	**301**	P	**Pg**	**11 42 54.0**	**-0.3**
EYUL	**Yuli** baz=347	**1.81**	**332**	P	**Pg**	**11 42 56.2**	**+0.3**
ELDTW	**Lidau** baz=318	**1.83**	**322**	*i* P	**Pb**	**11 42 55.2**	**+0.1**
YULB	**Yu-li** baz=324	**1.85**	**332**	P	**Pg**	**11 42 56.4**	**-0.5**
YULB	baz=324			S	**Sg**	**11 43 22.1**	**+1.2**
HGSD	**Ruisui** baz=342	**1.89**	**337**	P	**Pg**	**11 42 57.4**	**-0.3**
EHY	**Hungye** baz=326	**1.94**	**335**	*i* P	**Pb**	**11 42 57.6**	**+0.5**
EHY	baz=326			S	**Sg**	**11 43 25.9**	**+2.0**
STYH	**Taoyuan** baz=323	**1.96**	**317**	P	**Pg**	**11 42 58.6**	**-0.2**
STYH	baz=323			S	**Sg**	**11 43 23.2**	**-1.1**
SGST	**Jiashian** baz=320	**2.03**	**311**	S	**Sg**	**11 43 26.2**	**-0.3**
EGFH	**Guangfu** baz=352	**2.06**	**339**	S	**Sg**	**11 43 27.4**	**0.0**
WTP	**Ta-pu** baz=321	**2.12**	**315**	*i* P	**Pg**	**11 43 02.0**	**+0.1**
WTP	baz=321			*i* S	**Sg**	**11 43 28.5**	**-0.9**
CHN1	**Nanshi** baz=318	**2.13**	**313**	*i* P	**Pg**	**11 43 01.8**	**-0.4**
CHN1	baz=318			S	**Sg**	**11 43 29.0**	**-0.8**
TPUB	**Ta-pu** baz=322	**2.14**	**317**	P	**Pg**	**11 43 02.2**	**-0.3**
TPUB	baz=322			S	**Sg**	**11 43 29.2**	**-1.1**
ESL	**Shilin** baz=331	**2.19**	**340**	S	**Sg**	**11 43 30.6**	**-1.1**
ALS	**Alishan** baz=318	**2.20**	**323**	*i* P	**Pg**	**11 43 03.5**	**0.0**
ALS	baz=318			S	**Sg**	**11 43 32.2**	**+0.2**
CHN4	**Tsaushan** baz=308	**2.20**	**317**	*i* P	**Pg**	**11 43 03.0**	**-0.5**
TWK	**Hsinying** baz=319	**2.21**	**314**	*i* P	**Pg**	**11 43 03.9**	**+0.1**
TWK	baz=319			S	**Sg**	**11 43 30.8**	**-1.6**
VWDT	**VWDT** baz=338	**2.24**	**333**	P	**Pb**	**11 43 02.8**	**+0.6**
CHN5	**Tsauling** baz=313	**2.34**	**322**	*i* P	**Pg**	**11 43 05.8**	**-0.3**
CHN5	baz=313			S	**Sg**	**11 43 36.2**	**-0.3**
SSLB	**Suanglung** baz=345	**2.35**	**330**	P	**Pg**	**11 43 05.3**	**-1.1**
SSLB	baz=345			S	**Sb**	**11 43 34.4**	**+1.0**
OWD	**Renai** baz=349	**2.41**	**336**	P	**Pg**	**11 43 06.5**	**-1.0**
OWD	baz=349			S	**Sb**	**11 43 35.5**	**+0.5**
SMLT	**Sun Moon Lake** baz=346	**2.46**	**330**	P	**Pg**	**11 43 07.2**	**-1.3**
WUSB	**Renai** baz=340	**2.46**	**336**	P	**Pg**	**11 43 07.2**	**-1.4**
WUSB	baz=340			S	**Sb**	**11 43 37.3**	**+0.7**
NACB	**Ninganchiao** baz=357	**2.49**	**346**	S	**Sb**	**11 43 35.4**	**-1.9**
TYC	**Yuchr** baz=334	**2.50**	**330**	P	**Pb**	**11 43 07.0**	**+0.5**
TYC	baz=334			S	**Sb**	**11 43 39.4**	**+1.9**
CHGB	**Renai** baz=350	**2.50**	**337**	P	**Pg**	**11 43 08.0**	**-1.3**
ETLH	**Xiulin Townshi** baz=348	**2.55**	**344**	P	**Pg**	**11 43 09.0**	**-1.2**
WCS	**Beigang Elemen** baz=323	**2.60**	**332**	P	**Pg**	**11 43 10.0**	**-1.3**
HATJ	**Hateruma jima**	**2.72**	**32**	P	**Pg**	**11 43 14.0**	**+0.5**
HATJ				S	**Sg**	**11 43 49.0**	**+0.3**
NNSB	**Datong** baz=347	**2.78**	**344**	P	**Pb**	**11 43 11.8**	**+0.3**
NNSB	baz=347			S	**Sb**	**11 43 44.3**	**-1.6**
WHP	**Taichung City** baz=347	**2.79**	**335**	P	**Pg**	**11 43 13.0**	**-1.7**
WHP	baz=347			S	**Sb**	**11 43 47.2**	**+1.3**
LATG	**Datong** baz=350	**2.85**	**347**	P	**Pb**	**11 43 13.4**	**+0.7**
LATG	baz=350			S	**Sb**	**11 43 47.7**	**-0.2**
IRIF	**Iriomote-Funau**	**2.92**	**28**	*e*P	**Pg**	**11 43 17.2**	**-0.2**
ENTT	**Nioudou** baz=351	**2.95**	**348**	*i* P	**Pb**	**11 43 14.1**	**-0.1**
JKRS	**Kuro-shima**	**2.97**	**33**	P	**Pg**	**11 43 17.6**	**-0.7**
JKRS				S	**Sg**	**11 43 55.3**	**-1.6**
YHNB	**Yeheng** baz=357	**3.02**	**345**	P	**Pb**	**11 43 14.5**	**-0.9**
NSK	**Sanguang** baz=357	**3.03**	**345**	S	**Sb**	**11 43 51.0**	**-1.9**
NFF	**Wufeng Townshi** baz=327	**3.05**	**341**	P	**Pb**	**11 43 17.2**	**+1.2**
NFF	baz=327			S	**Sb**	**11 43 55.7**	**+2.1**
FUSB	**Fushanzhiwuyua** baz=352	**3.06**	**349**	P	**Pb**	**11 43 16.5**	**+0.3**
FUSB	baz=352			S	**Sb**	**11 43 52.8**	**-1.0**
NWLT	**Wulai** baz=350	**3.09**	**348**	P	**Pb**	**11 43 16.0**	**-0.7**
NWLT	baz=350			S	**Sb**	**11 43 52.8**	**-1.9**
JIJ	**Ishigaki jima**	**3.15**	**34**	P	**Pg**	**11 43 19.6**	**-2.1**
JIJ				S	**Sb**	**11 43 58.3**	**+2.2**
TIPB	**Shuangxi** baz=5.0	**3.23**	**353**	P	**Pb**	**11 43 19.2**	**+0.1**
TIPB	baz=5.0			S	**Sb**	**11 43 56.1**	**-2.7**
JISG	**Ishigakijimahi**	**3.42**	**34**	P	**Pb**	**11 43 23.1**	**+0.9**
JISG				*e*S	**Sb**	**11 44 05.0**	**+1.1**
JTJ	**Tarama**	**3.67**	**38**	*e*P	**Pb**	**11 43 27.1**	**+0.5**

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*IDC **07** 11:44:28.5±2.8, 9°.93S×118°.38E, h0km, mb3.4/3, mbtmp3.3/4, Error ellipse: s-maj=112.0km s-min=29.2km az=54.0*

*DJA **07** 11:44:33.3±0.5, 10°S±7°×11°8E±°, h10km, M4.1/9, mb4.3/3, MLv4.0/9*

ISC 07 11:44:34.5±1.1, 9°.9S±0°.1×118°.42E±0°.08, h37km, n13, σ1s.39/13, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.23**	**329**	P	**Pn**	**11 44 55.2**	**+0.1**
BASI	**Baing, Sumba**	**2.15**	**99**	P	**Pn**	**11 45 09.2**	**+1.4**
IGBI	**Denpasar**	**3.40**	**288**	P	**Pn**	**11 45 26.5**	**+1.5**
SRBI	**Singaraja**	**3.64**	**299**	P	**Pn**	**11 45 30.1**	**+1.8**
BSSI	**Bau Bau, Buton**	**4.24**	**29**	P	**Pn**	**11 45 37.3**	**+0.7**
JAGI	**Jajag, Banyuwa**	**4.44**	**288**	P	**Pn**	**11 45 40.6**	**+1.2**
BKSI	**Bulukumba**	**4.84**	**21**	P	**Pn**	**11 45 45.3**	**+0.5**
GMJI	**Gumukmas** 29nm,1.7s,0.1nm	**5.17**	**288**	P	**Pn**	**11 45 50.8**	**+1.4**
SOEI	**Soe** 27nm,1.1s,0.1nm	**5.76**	**89**	P	**Pn**	**11 45 58.5**	**+0.9**
WRA	**Warramunga Arr** 0.2nm,0.5s,baz=299,slow=13,SNR=2.5	**18.33**	**125**	P	**P**	**11 48 43.4**	**-2.4**
ASAR	**Alice Springs** 0.3nm,0.4s,baz=319,slow=9.8,SNR=2.5 0.3nm,0.4s	**20.16**	**135**	P	**P**	**11 49 05.3**	**-0.5**
USRK	**Ussuriysk Ar.** 0.7nm,0.5s,baz=186,slow=5.6,SNR=0.7 0.7nm,0.5s	**55.22**	**12**	P	**P**	**11 54 04.0**	**+0.4**
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=145,slow=7.5,SNR=2.5 0.2nm,0.6s	**64.98**	**333**	P	**P**	**11 55 09.9**	**-0.8**

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*JMA **07** 11:46:02.7±0.4, 42°N±1°×13°7E±°, h355km, MV3.8/38, EASTERN SEA OF JAPAN*

*IDC **07** 11:46:03.7±1.1, 41°.64N×136°.05E, h348km±10km, mb3.3/18, mbtmp3.9/22, Error ellipse: s-maj=11.6km s-min=11.3km az=53.0*

ISC 07 11:46:03.1±0.6, 41°.61N±0°.06×136°.44E±0°.06, h350km, n44, σ2s.15/52, mb3.6/18, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOSM	**Okushiri--Mats**	**2.32**	**77**	P	**Pn**	**11 46 55.8**	**-0.8**
JOG3	**Oga3**	**2.62**	**129**	P	**Pn**	**11 47 03.0**	**+3.8**
JOMM	**Oshimamatsumae**	**2.68**	**91**	P	**Pn**	**11 46 59.1**	**-0.5**
JHST	**Hiyamasetana**	**2.69**	**71**	P	**Pn**	**11 46 59.4**	**-0.2**
JSH	**Shimam**	**2.88**	**68**	*e*P	**Pn**	**11 47 01.3**	**+0.1**
JIW	**Iwasaki**	**2.88**	**109**	P	**Pn**	**11 47 00.9**	**-0.5**
JKB	**Kayabe**	**3.45**	**84**	P	**Pn**	**11 47 06.4**	**-0.1**
JOT	**Ohata**	**3.47**	**92**	P	**Pn**	**11 47 06.4**	**-0.4**
JSD	**Sado**	**3.83**	**158**	*e*P	**Pn**	**11 47 09.9**	**-0.6**
JRG	**Rokugo**	**3.89**	**123**	P	**Pn**	**11 47 10.2**	**-0.8**
JRG				S	**S**	**11 48 03.4**	**-2.3**
USRK	**Ussuriysk Ar.** 6.9nm,0.6s,baz=125,slow=9.0,SNR=17	**4.17**	**310**	P	**Pn**	**11 47 11.2**	**-2.5**
USRK	6.3nm,1.0s,baz=135,slow=22,SNR=1.8			S	**S**	**11 48 07.7**	**-3.0**
JHR	**Hokuryu**	**4.44**	**60**	P	**Pn**	**11 47 17.0**	**+0.4**
JMK	**Ichinoseki**	**4.52**	**124**	P	**Pn**	**11 47 16.4**	**-1.1**
JMK				*e*S	**S**	**11 48 14.6**	**-3.0**
JMM	**Marumori**	**5.03**	**137**	P	**Pn**	**11 47 21.4**	**-1.6**
JMM				*e*S	**S**	**11 48 24.5**	**-3.1**
ASAJ	**Asahikawa** 63nm,0.4s,baz=252,slow=11,SNR=157	**5.17**	**59**	P	**Pn**	**11 47 24.5**	**0.0**
ASAJ	14nm,0.7s,baz=114,slow=19,SNR=2.0			S	**S**	**11 48 28.0**	**-2.4**
MJAR	**Matsushiro Arr** 2.1nm,0.5s,baz=347,slow=11,SNR=5.8	**5.25**	**164**	P	**Pn**	**11 47 28.2**	**+2.7**
JCH	**Churui**	**5.25**	**77**	P	**Pn**	**11 47 24.1**	**-1.2**
JCH				S	**S**	**11 48 27.6**	**-4.3**
JWK2	**Keihoku**	**5.43**	**45**	P	**Pn**	**11 47 28.1**	**+0.7**
JFK	**Kawauchi**	**5.45**	**140**	S	**S**	**11 48 31.2**	**-5.2**
JRY	**Ryogami san**	**5.91**	**160**	P	**Pn**	**11 47 34.2**	**+1.3**
JTKR	**Abashiri--Toko**	**5.98**	**64**	P	**Pn**	**11 47 33.1**	**-0.4**
JOD2	**Odawara 2**	**6.67**	**161**	P	**Pn**	**11 47 40.8**	**-0.9**
NEM2	**Nemuro 2**	**7.10**	**73**	P	**Pn**	**11 47 44.5**	**-2.0**
NEM2				S	**S**	**11 49 03.6**	**-7.0**
KSRS	**Korea Array** 3.0nm,0.8s,baz=48,slow=12,SNR=6.7	**7.78**	**241**	P	**Pn**	**11 47 53.2**	**-1.4**
KLR	**Kul'dur** 1.3nm,0.4s,baz=181,slow=6.3,SNR=11	**8.30**	**338**	P	**Pn**	**11 47 58.9**	**-1.7**
MA2	**Magadan** 4.3nm,0.6s,baz=204,slow=12,SNR=1.8 4.3nm,0.6s	**20.07**	**22**	P	**P**	**11 50 12.0**	**+0.6**
SONM	**Songino Array** 1.1nm,0.6s,baz=103,slow=9.0,SNR=7.6 1.1nm,0.6s	**22.14**	**297**	P	**P**	**11 50 28.8**	**-1.7**
SEY	**Seymchan** 1.4nm,0.7s,baz=197,slow=19,SNR=4.2 1.4nm,0.7s	**23.35**	**18**	P	**P**	**11 50 42.1**	**+1.0**

ZALV	Zalesovo Beam	36.02	308	P	P	11 52 29.6	-2.3
	3.2nm,0.6s,baz=86,slow=8.7,SNR=13						
	3.2nm,0.6s						
MKAR	Makanchi Array	38.51	297	P	P	11 52 51.0	-1.8
	0.5nm,0.5s,baz=86,slow=9.8,SNR=14						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	40.20	303	P	P	11 53 04.9	-1.5
	4.2nm,0.5s,baz=82,slow=8.7,SNR=36						
	4.2nm,0.5s						
BVAR	Borovoye Array	44.67	308	P	P	11 53 41.2	-0.9
	0.8nm,0.4s,baz=86,slow=9.1,SNR=5.6						
	0.8nm,0.4s						
AAK	Ala-Archa	45.03	293	P	P	11 53 44.8	-0.4
	1.2nm,0.3s,baz=101,slow=5.2,SNR=4.7						
	1.2nm,0.3s						
ILAR	Eielson Array	47.80	34	P	P	11 54 07.5	+1.6
	1.1nm,0.6s,baz=266,slow=5.8,SNR=34						
	1.1nm,0.6s						
ARCES	ARCESS Array B	58.33	337	P	P	11 55 24.2	+2.3
	2.4nm,0.9s,baz=50,slow=8.4,SNR=1.5						
WRA	Warramunga Arr	61.27	182	P	P	11 55 42.5	+0.2
	0.6nm,0.4s,baz=350,slow=7.5,SNR=15						
	0.6nm,0.4s						
YKA	Yellowknife Ar	61.78	30	P	P	11 55 46.5	+1.3
	0.4nm,0.6s,baz=305,slow=6.2,SNR=9.3						
YKA				PcP	PcP	11 56 24.5	+1.9
	0.1nm,0.4s,baz=307,slow=3.8,SNR=3.7						
	0.4nm,0.6s						
FINES	FINESS Array B	62.95	330	P	P	11 55 52.8	-0.1
	1.7nm,0.7s,baz=64,slow=6.3,SNR=1.6						
	1.7nm,0.7s						
ASAR	Alice Springs	64.99	183	P	P	11 56 07.4	+0.9
	0.4nm,0.5s,baz=7.0,slow=5.6,SNR=5.2						
	0.4nm,0.5s						
AKASG	Malin Array Be	68.32	319	P	P	11 56 26.5	-0.6
	0.3nm,0.4s,baz=51,slow=5.7,SNR=2.2						
	0.3nm,0.4s						
NVAR	Mina Array Bea	75.26	52	P	P	11 57 11.2	+2.7
	1.2nm,0.7s,baz=304,slow=5.5,SNR=12						
	1.2nm,0.7s						
PDAR	Pinedale Array	77.12	44	P	P	11 57 20.6	+1.7
	1.2nm,0.6s,baz=270,slow=0.9,SNR=14						
	1.2nm,0.6s						
ULM	Lac du Bonnet	77.71	31	P	P	11 57 22.4	+0.8
	2.8nm,0.5s,baz=344,slow=5.3,SNR=4.7						
	2.8nm,0.5s						
TXAR	Lajitas Array	90.23	49	P	P	11 58 27.0	+2.1
	0.6nm,0.6s,baz=273,slow=2.9,SNR=13						
	0.6nm,0.6s						

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*IDC **07** 11:47:53.7±1.1, 52°.43N×62°.85E, h0km, mb3.5/1, mbtmp3.0/3, ML1.9/2, Error ellipse: s-maj=32.4km s-min=8.9km az=160.0*

*NNC **07** 11:47:53.1±1.8, 52°.41N×62°.94E, h0km, mb2.9, mpv2.5, Error ellipse: s-maj=36.1km s-min=5.7km az=153.0, Suspected Mining explosion.*

ISC 07 11:47:53.9±1.1**, 52°.4N**±0°.1×**62°.88E**±0°.07**, h0km, n9, σ1s.04**/11**, 4C-5D, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKTO	Aktyubinsk	3.63	239	Pn	Pn	11 48 50.4	-0.9
	0.2nm,0.3s,baz=27,slow=4.5,SNR=1.9						
AKTO				Pg	Pb	11 49 00.5	+1.5
	0.6nm,0.3s,baz=34,slow=10,SNR=7.5						
AKTO				Lg	Lg	11 49 47.5	
	0.7nm,0.3s,baz=153,slow=8.3,SNR=14						
	0.5nm,0.5s						
AKTO	Aktyubinsk	3.63	239	⇑Pg	Pb	11 48 59.6	+0.7
	2.6nm,1.3s						
AKTO				⇓Lg	Lg	11 49 46.9	
	5.0nm,0.8s						
I31KZ	AKTYUBINSK INF	3.64	238	I	I	12 08 17.5	
	0.1nm,0.7s,baz=53,slow=336,SNR=33						
AB31	Akbulak array	3.67	212	⇑Pn	Pn	11 48 52.0	+0.2
	0.1nm,0.2s,baz=28,slow=14,SNR=21						
AB31				Pg	Pb	11 48 59.8	+0.3
	0.3nm,0.2s,baz=26,slow=12,SNR=23						
AB31				⇑Lg	Lg	11 49 49.6	
	3.0nm,0.5s,baz=30,slow=25,SNR=8.6						
BRVK	Borovoye	4.55	79	⇓Sn	Sn	11 49 56.0	-1.4
	1.4nm,0.8s						
BRVK				⇓Lg	Lg	11 50 17.6	
	3.9nm,0.7s						
BVA0	Borovoye Array	4.61	79	⇓Pn	Pn	11 49 05.1	+0.3
	2.5nm,1.2s,baz=272,slow=11,SNR=19						
BVA0				⇓Sn	Sn	11 49 57.8	-1.1
	1.4nm,0.8s,baz=309,slow=11,SNR=4.7						
BVA0				⇑Lg	Lg	11 50 18.1	
	1.8nm,0.6s,baz=266,slow=30,SNR=7.8						
BVAR	Borovoye Array	4.61	79	Pn	Pn	11 49 05.8	+1.0
	baz=269,slow=12,SNR=8.1						
BVAR				Sn	Sn	11 49 58.3	-0.6
	0.1nm,0.3s,baz=264,slow=27,SNR=3.7						
BVAR				Lg	Lg	11 50 19.4	
	0.1nm,0.3s,baz=264,slow=28,SNR=14						
	0.6nm,0.4s						
I46RU	ZALESOVO INFRA	13.24	75	I	I	13 03 50.0	
	0.1nm,1.2s,baz=274,slow=323,SNR=4.8						
FINES	FINESS Array B	21.74	309	P	P	11 52 46.0	-0.4
	2.5nm,1.0s,baz=111,slow=11,SNR=4.1						
	2.5nm,1.0s						

MAN 07 11:52:53.7, 9°.92N×124°.14E, h30km, mb3.9, ML2.6, MS2.2, 3C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TABP	Talibon, Bohol	0.26	49	⇓iP	Pb	11 52 59.6	-1.0
TABP				i S	Sb	11 53 03.2	-2.0
GHBP	Garcia Hernand	0.34	148	⇓eP	Pn	11 53 02.9	+0.2
GHBP				eS	Sn	11 53 08.5	0.0
TBP	Tagbilaran	0.36	229	⇑iP	Pn	11 53 04.0	+1.1
TBP				i S	Sn	11 53 10.4	+1.6
LLP	Lapu-Lapu	0.42	337	⇑iP	Pn	11 53 03.9	+0.2
LLP				i S	Sn	11 53 10.6	0.0
MSLP	Maasin	0.74	74	⇑eP	Pb	11 53 07.6	-0.5
MSLP				eS	Sn	11 53 19.7	+1.3

WEL 07 12:03:25.3±0.4**, 42°S**±2°×**17°4E**±°**, h8km**±3km**, M3.2**/12**, ML3.4**/12**, MLv3.2**/12**, Error ellipse: s-maj=0.0km s-min=0.0km az=104.1, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.22	178	P	Pg	12 03 30.4	+0.7
KHZ				S	Sg	12 03 34.2	+1.5
BSWZ	Blackbirch Sta	0.55	28	P	Pg	12 03 36.3	+0.4
BSWZ				S	Sb	12 03 44.3	-0.9
THZ	Tophouse	0.64	313	P	Pb	12 03 38.3	-0.4
THZ				S	Sb	12 03 47.4	-0.4
CMWZ	Cape Campbell	0.68	49	P	Pb	12 03 39.2	-0.2
TUWZ	Tuamarina	0.83	22	P	Pg	12 03 41.3	+0.1
TUWZ				S	Sb	12 03 53.1	0.0
GVZ	Greta Valley S	0.85	205	P	Pb	12 03 42.3	-0.1
MRNZ	Matariki Terra	0.98	324	P	Pb	12 03 44.6	0.0
NNZ	Nelson	0.99	353	P	Pg	12 03 44.1	-0.1
NNZ				S	Sg	12 03 57.4	+0.3
LTZ	Lake Taylor	1.10	238	P	Pg	12 03 45.9	-0.6
LTZ				S	Sg	12 04 00.3	-0.4
TCW	Tory Channel	1.13	30	P	Pg	12 03 46.3	-0.8
TCW				S	Sb	12 04 02.3	+0.3
AMCZ	Amberley	1.17	213	P	Pb	12 03 46.6	-1.2
TKNZ	Takaka Hill	1.24	340	P	Pn	12 03 48.9	0.0
WEL	Wellington	1.30	46	P	Pn	12 03 48.5	-1.3
DSZ	Denniston Nort	1.36	289	P	Pg	12 03 51.4	-0.1
DUWZ	D'Urville Isla	1.43	12	P	Pn	12 03 51.6	+0.1
PLWZ	Palliser	1.43	65	P	Pn	12 03 49.3	-2.3
QRZ	Quartz Range	1.56	331	P	Pb	12 03 54.0	-0.4
OXZ	Oxford	1.57	224	P	Pn	12 03 51.5	-2.0
CAW	Cannon Point	1.58	47	P	Pn	12 03 52.0	-1.6
INZ	Inchbonnie	1.63	250	P	Pn	12 03 54.0	-0.3
MQZ	McQueen's Vall	1.64	203	P	Pn	12 03 51.7	-2.7
KIW	Kapiti Island	1.69	38	P	Pn	12 03 54.2	-1.0
AKCZ	Akaroa Harbour	1.73	195	P	Pn	12 03 53.4	-2.4
MTW	Mount Morrison	1.81	56	P	Pn	12 03 54.3	-2.4
RACZ	Rakaia	1.84	213	P	Pn	12 03 54.8	-2.4
OGWZ	Otaki Gorge	1.85	42	P	Pn	12 03 55.9	-1.4
MHCZ	Mount Hutt	1.96	227	P	Pn	12 03 56.8	-2.1
HOWZ	Holdsworth Sta	1.98	50	P	Pn	12 03 57.0	-2.0
TMWZ	Te Maipa	2.08	59	P	Pn	12 03 57.7	-2.8
WACZ	Wakanui South	2.14	215	P	Pn	12 03 58.9	-2.4
MRZ	Mangatainoka R	2.17	46	P	Pn	12 03 59.7	-2.1
WVZ	Waitaha Valley	2.24	246	P	Pn	12 04 02.3	-0.4
RPZ	Rata Peaks	2.37	229	P	Pn	12 04 02.8	-1.7
ARCZ	Arundel	2.46	224	P	Pn	12 04 03.7	-2.0
GCSZ	Gaunt Creek Bo	2.61	244	P	Pn	12 04 07.7	0.0
WAZ	Wanganui	2.68	25	P	Pn	12 04 09.9	+1.2
TMZ	Timaru	2.86	219	P	Pn	12 04 09.2	-2.0
FOZ	Fox Glacier	3.04	243	P	Pn	12 04 13.8	+0.2
VRZ	Vera Road	3.21	17	P	Pn	12 04 18.1	+2.1
WNVZ	Wahianoa	3.27	29	P	Pn	12 04 16.9	-0.1
TRVZ	Turoa	3.28	29	P	Pn	12 04 16.8	-0.4
OTVZ	Oturere	3.44	29	P	Pn	12 04 19.0	-0.3
ODZ	Otahua Downs	3.53	215	P	Pn	12 04 17.8	-2.6
HIZ	Hauiti	3.82	16	P	Pn	12 04 27.0	+2.6
EAZ	Earnscleugh	4.31	224	P	Pn	12 04 29.5	-1.6
PUZ	Puketiti	5.49	43	P	Pn	12 04 51.3	+4.0

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*IDC **07** 12:03:29.5±4.3, 38°.23N×73°.35E, h80km±34km, mb3.4/4, mbtmp3.8/10, MS3.9/1, Error ellipse: s-maj=44.5km s-min=21.9km az=160.0*

*SOME **07** 12:03:32.9, 39°.25N×72°.83E, h0km*

*NNC **07** 12:03:33.9±3.5, 38°.73N×73°.24E, h0km, mb4.2, mpv3.7, Error ellipse: s-maj=26.4km s-min=18.9km az=178.0*

ISC 07 12:03:33.1±0.8**, 38°.41N**±0°.06×**73°.24E**±0°.06**, h103km, n29, σ1s.83**/35**, mb3.7**/4**, 7C-4D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	3.73	5	P	Pn	12 04 30.8	+1.7
	SNR=82						
AML	Almayashu	3.73	5	⇑P	Pn	12 04 30.5	+1.5
	4.4nm,0.6s						
AML				⇑S	Sn	12 05 12.1	-0.2
	59nm,0.6s						
UCH	Uchtor	3.93	14	P	Pn	12 04 33.5	+1.6
	SNR=31						
EKS2	Erkin-Say	4.26	5	P	Pn	12 04 38.1	+2.1
	SNR=42						
AAK	Ala-Archa	4.33	12	P	Pn	12 04 39.8	+2.9
	SNR=10						
AAK	Ala-Archa	4.33	12	P	Pn	12 04 38.6	+1.8
	5.4nm,0.5s,baz=184,slow=4.6,SNR=23						
AAK				S	Sn	12 05 26.2	-0.2
	37nm,0.5s,baz=329,slow=18,SNR=18						
MRKS	Merke	4.33	360	ePg	Pn	12 04 38.8	+1.9
	14nm,0.1s						
MRKS				eLg	Lg	12 05 26.1	
	121nm,0.1s						
IUG	Iuzhnay	4.46	328	ePg	Pn	12 04 41.0	+2.3
	74nm,0.1s						
IUG				eLg	Lg	12 05 30.0	
	80nm,0.1s						
DZA	Taraz	4.70	343	ePg	Pn	12 04 44.3	+2.5
	150nm,0.1s						
DZA				eLg	Lg	12 05 35.5	
	263nm,0.3s						
CEP	Cherat	4.71	194	P	Pn	12 04 45.8	+3.8
CHCP	Chirah Chowk	4.75	180	P	Pn	12 04 44.7	+2.2
TKM2	Tokmak 2	4.85	21	P	Pn	12 04 45.6	+1.6
	SNR=7.2						
TKM2	Tokmak 2	4.85	21	⇓P	Pn	12 04 45.0	+1.1
	3.0nm,0.6s						
TKM2				⇑S	Sn	12 05 39.1	+0.1
	10nm,0.6s						
KK31	Karatay Array	5.12	337	⇓P	Pn	12 04 49.3	+1.8
	48nm,0.7s,baz=148,slow=14,SNR=362						
KK31				⇑S	Sn	12 05 44.3	-1.1
	23nm,0.5s,baz=151,slow=21,SNR=18						
THW	Thamme Wali	5.74	193	P	Pn	12 04 57.7	+1.8
PDGK	Podgornoye	6.82	42	⇓P	Pn	12 05 09.8	-0.8
	5.6nm,0.6s						
PDGK				⇓S	Sn	12 06 27.2	+0.4
	3.1nm,0.5s						
MKAR	Makanchi Array	10.70	36	P	Pn	12 06 02.0	-1.2
	0.8nm,0.8s,baz=212,slow=16,SNR=8.5						
GEYT	Alibeck	11.92	272	P	Pn	12 06 17.4	-2.2
	1.7nm,0.3s,baz=113,slow=9.9,SNR=3.7						
GEYT				S	Sn	12 08 26.5	-4.1
	3.9nm,0.4s,baz=93,slow=20,SNR=6.2						
KURBB	Kurchatov Arra	12.77	15	P	Pn	12 06 29.0	-1.7
	0.1nm,0.3s,baz=208,slow=12,SNR=2.0						
AB31	Akbulak array	14.45	323	⇑P	Pn	12 06 54.1	+1.6
	4.4nm,0.6s,baz=128,slow=13,SNR=139						
AB31				⇑S	Sn	12 09 33.0	+1.2
	0.8nm,0.4s,baz=126,slow=23,SNR=7.9						
BVAR	Borovoye Array	14.75	353	P	Pn	12 06 55.8	-0.5
	2.3nm,0.4s,baz=158,slow=11,SNR=11						
AKTO	Aktyubinsk	16.17	323	P	Pn	12 07 14.5	+0.3
	7.3nm,0.6s,baz=123,slow=11,SNR=16						
AKTO	Aktyubinsk	16.17	323	⇑P	P	12 07 16.9	+1.5
	5.8nm,0.9s						
ZALV	Zalesovo Beam	17.45	23	P	P	12 07 28.0	-1.4
	1.2nm,0.4s,baz=214,slow=11,SNR=7.9						
KVAR	Kislovodsk Arr	23.57	293	LR	LR	12 18 44.9	
	comp=Z,281nm,20.2s,baz=244,slow=39						
SONM	Songino Array	25.80	58	P	P	12 08 53.2	-1.3
	0.4nm,0.6s,baz=246,slow=11,SNR=5.3						
	0.4nm,0.6s						
ARCES	ARCESS Array B	40.09	336	P	P	12 10 58.5	+0.5
	1.6nm,0.6s,baz=102,slow=8.4,SNR=9.2						
	1.6nm,0.6s						
NOA	NORSAR Array B	43.96	322	P	P	12 11 29.5	-0.1
	0.8nm,0.7s,baz=109,slow=7.5,SNR=1.6						
	0.8nm,0.7s						
TORD	Torodi Ar. Bea	67.54	269	P	P	12 14 17.9	-0.7
	0.4nm,0.4s,baz=48,slow=6.0,SNR=9.0						
	0.4nm,0.4s						

HEL 07 12:12:42.9±0.2**, 67°.60N×33°.79E, h0km, ML1.2, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVZ	Lovozero	0.44	47	PG	Pg	12 12 51.1	-0.3
	baz=225						
LVZ				SG	Sg	12 12 56.5	-0.6
VRF	Varrio	1.60	277	PG	Pn	12 13 11.7	-0.7
VRF				MSG		12 13 30.9	
	comp=Z,2.5nm,0.2s						
VRF				SG	Sn	12 13 31.6	-2.2
KU6	Riekki	2.21	226	PG	Pb	12 13 22.5	-1.2
	baz=51						
KU6				MSG		12 13 48.5	
	comp=Z,0.5nm,0.2s						
KU6				SG	Sg	12 13 53.1	-0.7
MSF	Maaselka	2.54	230	SG	Sg	12 14 03.4	-0.8
RNF	Rovaniemi	3.20	255	PN	Pn	12 13 34.4	0.0
	baz=77						
KEV	Kevo	3.29	314	SN	Sn	12 14 13.3	-2.0
ARA0	ARCESS Array S	3.61	306	PN	Pn	12 13 38.8	-1.2
	baz=122						
ARA0				SG	Sb	12 14 34.2	+2.4

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*SJA **07** 12:17:27.1±0.6, 23°.83S×68°.22W, h40km, ML3.1, MW3.5, Hypocentre not reviewed by the ISC*

*IDC **07** 12:17:27.9±1.2, 23°.52S×68°.07W, h120km±14km, mb3.8/4, mbtmp4.1/7, Error ellipse: s-maj=27.2km s-min=20.9km az=85.0*

*NEIC **07** 12:17:28.1±2.4, 23°.49S±0°.06×68°.3W±0°.1, h134km±6km, mb4.0/13, ML4.2(GUC), Error ellipse: s-maj=14.2km s-min=7.8km az=100.0*

*GUC **07** 12:17:29.3±0.7, 23°.41S×68°.36W, h134km±5km, ML4.3*

*VAO **07** 12:17:31.0±0.8, 23°.20S×68°.35W, h132km, mb4.0*

ISC 07 12:17:28.4±0.6**, 23°.47S**±0°.04×**68°.28W**±0°.06**, h135km**±7km**, n85, σ1s.12**/98**, mb4.1**/4**, 5C-5D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.03	326	P	Pn	12 17 53.0	+0.5
	216nm,0.4s,baz=146,slow=7.6,SNR=812						
LVC				S	Sn	12 18 10.5	-0.3
	945nm,0.3s,baz=37,slow=20,SNR=27						
LVC	Limon Verde	1.03	326	Pn	Pn	12 17 53.1	+0.5
LVC				Sn	Sn	12 18 11.0	+0.2
LVC	Limon Verde	1.03	326	⇑iP	Pn	12 17 52.7	+0.2
LVC				i S	Sn	12 18 10.8	0.0
LVC	Limon Verde	1.03	326	eP	Pn	12 17 53.0	+0.5
LVC	Limon Verde	1.03	326	eP		12 17 53.0	
LVC				eS		12 18 11.1	
LVC				IAML		12 18 12.4	
	comp=Z,2μm,0.2s						
PB15	IPOC Station P	1.12	283		Pn	12 17 53.5	+0.3
PB15				Sn	Sn	12 18 12.6	+0.6
PB15	IPOC Station P	1.12	283	⇑iP	Pn	12 17 53.8	+0.6
PB15				i S	Sn	12 18 12.9	+0.9
PB06	IPOC Station P	1.41	302		Pn	12 17 56.7	+0.6
PB06				Sn	Sn	12 18 17.6	+0.5
PB06	IPOC Station P	1.41	302	⇑iP	Pn	12 17 56.9	+0.8
PB06				i S	Sn	12 18 17.6	+0.5
PB06				IAML		12 18 20.3	
	comp=E,4μm,0.1s						
PB09	IPOC Station P	1.89	332		Pn	12 18 02.6	+1.1
PB09	IPOC Station P	1.89	332	⇓iP	Pn	12 18 02.8	+1.2
PB09				i S	Sn	12 18 27.6	+0.8
PB03	IPOC Station P	1.96	316		Pn	12 18 03.1	+0.7
PB03	IPOC Station P	1.96	316	⇓iP	Pn	12 18 03.2	+0.8
PB03				i S	Sn	12 18 28.6	+0.2
PB03				IAML		12 18 29.7	
	comp=E,2μm,0.3s						
PB04	IPOC Station P	2.06	303		Pn	12 18 04.2	+0.6
PB04	IPOC Station P	2.06	303	⇑iP	Pn	12 18 04.1	+0.6
PB04				i S	Sn	12 18 30.6	0.0
PB04				IAML		12 18 33.0	
	comp=N,2μm,0.1s						
GO02	Mina Guanaco	2.06	215		Pn	12 18 04.2	+0.5
PB10	IPOC Station P	2.09	268	Pn	Pn	12 18 04.3	+0.6
PB10	IPOC Station P	2.09	268	⇑iP	Pn	12 18 04.3	+0.6
PB10				i S	Sn	12 18 31.3	+0.5
PB14	IPOC Station P	2.25	239	Pn	Pn	12 18 05.5	-0.5
PB14	IPOC Station P	2.25	239	eP	Pn	12 18 06.4	+0.3
PB14				eS	Sn	12 18 34.9	-0.1
PB07	IPOC Station P	2.28	319		Pn	12 18 06.7	+0.3
PB07	IPOC Station P	2.28	319	⇓iP	Pn	12 18 07.1	+0.8
PB07				i S	Sn	12 18 35.1	-0.3
PB07				IAML		12 18 37.5	
	comp=E,2μm,0.1s						
PB02	IPOC Station P	2.61	325		Pn	12 18 10.7	+0.3
PB02	IPOC Station P	2.61	325	⇓iP	Pn	12 18 10.7	+0.3
PB02				i S	Sn	12 18 41.7	-1.0
PB02				IAML		12 18 48.2	
	comp=E,2μm,0.5s						
HJA	Humahuaca	2.65	85	P		12 18 11.0	
HJA				IAML		12 18 52.8	
	comp=Z,16nm,0.5s						
PB01	IPOC Station P	2.66	335		Pn	12 18 11.2	+0.2
PB01	IPOC Station P	2.66	335	⇓iP	Pn	12 18 11.2	+0.2
PB01				i S	Sn	12 18 44.2	+0.4
PB01				IAML		12 18 47.0	
	comp=E,1μm,0.3s						
YJA	Yavi	2.86	64	i P		12 18 14.7	
YJA				IAML		12 18 58.5	
	comp=Z,2.6nm,0.5s						
AZAP	Zapla	3.04	105	eP		12 18 15.7	
AZAP				IAML		12 18 56.9	
	comp=Z,36nm,1.1s						
TA01	Diego Aracena	3.39	328	Pn	Pn	12 18 19.4	-0.9
TA01	Diego Aracena	3.39	328	eP	Pn	12 18 19.4	-0.9
TA01	Diego Aracena	3.39	328	i P		12 18 20.1	
TA01				IAML		12 19 27.2	
	comp=Z,137nm,0.5s						
AC01	Pan de Azucar	3.40	218	Pn	Pn	12 18 19.6	-0.7
AC01	Pan de Azucar	3.40	218	eP		12 18 19.3	
AC01				eS		12 18 53.4	
AC01				IAML		12 19 03.6	
	comp=Z,165nm,0.4s						
PB08	IPOC Station P	3.41	346		Pn	12 18 21.4	+0.4
AC02	Maricunga	3.44	193	Pn	Pn	12 18 21.6	+0.3
ASTB	Santa Barbara	3.54	98	eP		12 18 21.5	
TA02	Huaiquique	3.62	331		Pn	12 18 23.4	+0.1
GO01	Chusmiza	3.88	347		Pn	12 18 27.3	+0.1
PB11	IPOC Station P	3.91	341		Pn	12 18 26.3	-0.9
PB11	IPOC Station P	3.91	341	i P	Pn	12 18 26.4	-0.9
PB11				eS	Sn	12 19 12.1	-0.8
ALOL	LOMAS DE OLMED	3.96	96	eP		12 18 26.6	
PSGCX	Pisagua	4.22	336	Pn	Pn	12 18 29.4	-1.9
GO03	Copiap	4.47	203		Pn	12 18 32.7	-1.9
MNMC	Minye Minye	4.49	344		Pn	12 18 34.2	-0.9
PB12	IPOC Station P	5.20	338		Pn	12 18 42.5	-1.9
PB12	IPOC Station P	5.20	338	i P	Pn	12 18 42.4	-2.0
PB16	IPOC Station P	5.24	347	Pn	Pn	12 18 45.2	-0.2
AC04	Llanos de Chal	5.34	208	eP		12 18 42.5	
AC04				eS		12 19 42.6	
AC04				IAML		12 19 45.8	
	comp=Z,38nm,0.2s						
AC04	Llanos de Chal	5.34	208	Pn	Pn	12 18 43.5	-2.6
AC05	El Transito	5.63	198		Pn	12 18 48.2	-2.0
LCO	Las Campanas	5.93	201	Pn	Pn	12 18 51.3	-3.0
PB18	Visviri	5.96	349	Pn	Pn	12 18 53.0	-2.0
CO01	Juntas del Tor	6.68	194		Pn	12 19 03.0	-1.4
GO04	Tololo Observa	7.04	198		Pn	12 19 05.8	-3.4
CO06	Fray Jorge	7.77	202	Pn	Pn	12 19 14.4	-4.4
CO02	Combarbal	8.07	197	Pn	Pn	12 19 19.2	-3.7
CFA	Coronel Fontan	8.10	180	P	Pn	12 19 20.6	-2.6
	comp=Z,14nm,0.3s,baz=351,slow=14,SNR=41						
VA03	San Esteban	9.47	192	Pn	Pn	12 19 39.5	-2.1
BBSD	Serra de San D	9.53	50	eP	Pn	12 19 41.5	-0.9
MT02	Curacav	10.07	194	Pn	Pn	12 19 46.9	-2.6
SIV	San Ignacio	10.07	44	P	Pn	12 19 46.4	-3.3
	comp=Z,4.6nm,0.4s,baz=246,slow=12,SNR=23						
PTLB	Pontes e Lacer	11.75	49	eP	Pn	12 20 11.8	-0.1
CRSM	Crissiumal (Br	13.47	110	eP	P	12 20 38.4	-0.2
RODS	Rosario do Sul	13.53	123	eP	P	12 20 38.8	-0.5
ETMB	Extrema	13.72	9	eP	Pn	12 20 35.9	-1.6
FRBT	Francisco Belt	14.05	103	eP	P	12 20 45.4	+0.2
PTGB	Pitanga	14.86	98	eP	P	12 20 55.3	+1.0
ITAB	Concordia	15.07	108		Pn	12 20 54.7	+0.2
ITAB				IAmb	IAmb	12 20 56.6	
	comp=Z,12nm,1.1s						
ITAB	Concordia	15.07	108	eP	P	12 20 56.8	+0.4
SAML	Samuel	15.24	20	Pn	Pn	12 20 54.0	-2.7
PLTB	Pedras Altas	15.40	126		Pn	12 20 59.0	+0.5
PLTB				IAmb	IAmb	12 20 59.2	
	comp=Z,14nm,1.3s						
TRQA	Tornquist	15.51	161		Pn	12 21 00.3	+0.5
TRQA				IAmb	IAmb	12 21 02.8	
	comp=Z,7.2nm,0.9s						
PCMB	Pacaembu	15.83	87	eP	P	12 21 05.8	+0.8
PDRB	Porto dos Gac	16.12	45	eP	P	12 21 08.5	+0.3
CZSB	Cruzeiro do Su	16.22	344		Pn	12 21 07.1	-1.6
CZSB				IAmb	IAmb	12 21 16.1	
	comp=Z,7.6nm,1.0s						
GO06	Curarrehue	16.29	189		Pn	12 21 09.2	-0.3
ITRB	Iturama	17.08	81	eP	Pn	12 21 19.9	+0.6
PLCA	Paso Flores	17.32	186	P	P	12 21 22.8	+1.6
	comp=Z,0.8nm,0.8s,baz=17,slow=11,SNR=1.6						
PLCA	Paso Flores	17.32	186	P	P	12 21 19.9	-1.3
TIJ01	Guaruva-PR	17.66	100	eP	Pn	12 21 27.6	+1.4
LL04	Puerto Octay	17.73	190	P	P	12 21 25.6	-0.1
LL04				IAmb	IAmb	12 21 40.0	
	comp=Z,11nm,1.4s						
BDFB	Brasilia	20.61	71	P	P	12 21 56.7	-0.6
	comp=Z,4.4nm,0.5s,baz=258,slow=12,SNR=7.6						
	comp=Z,4.4nm,0.5s						
BDFB	Brasilia	20.61	71	P	P	12 21 55.8	-1.4
BDFB				IAmb	IAmb	12 21 57.1	
	comp=Z,7.1nm,0.7s						
AY01	Puyuhuapi	21.20	189	P	P	12 22 03.4	+0.2
ITTB	Itaituba	22.53	34	eP	P	12 22 15.8	-1.3
BOAV	Boa Vista	26.80	17	P	P	12 22 56.4	+0.3
BOAV				IAmb	IAmb	12 22 58.9	
	comp=Z,6.4nm,1.3s						
SNAA	Sanae	60.23	161	P	P	12 27 22.7	+0.7
QSPA	South Pole Qui	66.73	180	P	P	12 28 05.5	+0.6
DBIC	Dimbokro	68.75	72	P	P	12 28 18.9	+0.7
	comp=Z,1.3nm,0.4s,baz=254,slow=7.4,SNR=2.3						
	comp=Z,1.3nm,0.4s						
TORD	Torodi Ar. Bea	77.48	70	P	P	12 29 10.0	+0.5
	comp=Z,4.5nm,0.7s,baz=258,slow=5.5,SNR=36						
	comp=Z,4.5nm,0.7s						
YKA	Yellowknife Ar	93.23	340	P	P	12 30 28.4	+1.4
	comp=Z,0.1nm,0.6s,baz=138,slow=4.2,SNR=2.6						
	comp=Z,0.1nm,0.6s						
ZALV	Zalesovo Beam	143.47	27	PKP	PKPdf	12 36 46.7	0.0
	comp=Z,0.6nm,0.5s,baz=305,slow=3.2,SNR=3.9						
MKAR	Makanchi Array	146.85	38	PKPbc	PKPbc	12 36 54.7	-0.1
	comp=Z,1.1nm,0.7s,baz=305,slow=3.3,SNR=16						

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*NEIC **07** 12:31:03.2±1.4, 0°.79N±0°.08×123°.86E±0°.07, h269km±7km, mb4.5/99, Error ellipse: s-maj=11.2km s-min=9.7km az=207.0*

*IDC **07** 12:31:04.0±1.6, 0°.84N×123°.78E, h281km±16km, mb3.9/21, mbtmp4.5/22, Error ellipse: s-maj=15.3km s-min=8.1km*

az=72.0

*DJA **07** 12:31:04.5±0.4, 1°N±4°×12°4E±°, h245km±4km, M4.4/14, mb4.3/8, mB4.7/3, MLv4.5/14, Mw(mB)4.0/3*

ISC 07 12:31:01.0±0.3, **0°81N**±0°04×**123°85E**±0°05, **h250**km, **n213**, σ**1^{s}70**/231, **mb4.4**/78, **3C-2D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	Gorontalo	0.86	259	P	Pn	12 31 40.2	+4.9
GTOI				S	S	12 32 08.0	+5.8
MRSI	Marisa	1.94	260	P	Pn	12 31 46.9	+3.9
MRSI				S	S	12 32 18.6	+2.6
LUWI	Luwuk	2.13	211	Pn	Pn	12 31 47.5	+2.9
LUWI				Sn	S	12 32 20.3	+1.1
LUWI	Luwuk	2.13	211	P	Pn	12 31 47.6	+2.9
LUWI	Luwuk	2.13	211	P	Pn	12 31 47.4	+2.7
LUWI				S	S	12 32 20.0	+0.8
TOLI2	Tolitoli	3.09	276	Pn	Pn	12 31 57.7	+3.3
TOLI2	Tolitoli	3.09	276	P	Pn	12 31 57.5	+3.0
TNTI	Ternate	3.51	91	Pn	Pn	12 32 02.1	+2.8
TNTI	Ternate	3.51	91	P	Pn	12 32 02.3	+3.1
TNTI	Ternate	3.51	91	P	Pn	12 32 02.0	+2.8
SANI	Sanana	3.55	143	P	Pn	12 32 01.0	+1.4
SANI	Sanana	3.55	143	P	Pn	12 32 01.2	+1.6
LBMI	Labuha	3.92	111	P	Pn	12 32 06.4	+2.5
MPSI	Mapaga	3.98	263	P	Pn	12 32 07.6	+3.0
NLAI	Namlea	5.16	141	P	Pn	12 32 22.2	+3.4
	38nm,0.6s,0.5nm						
SKMP	Bagumbayan, Su	5.72	7	⇑eP	Pn	12 32 30.0	+4.3
SKMP				eS	S	12 33 40.1	+6.7
SPSI	Sidrap Palu	6.25	221	P	Pn	12 32 34.8	+2.4
	43nm,0.7s,676nm0.1nm						
MYLDM	Lahad Datu	6.89	309		Pn	12 32 43.0	+2.7
KAPI	Kappang	7.08	215	P	Pn	12 32 46.6	+3.8
	7.9nm,0.4s,baz=51,slow=14,SNR=1.1						
BUKP	Musuan	7.13	10	⇑eP	Pn	12 32 42.9	-0.5
BUKP				eS	S	12 34 05.8	+0.1
BKSI	Bulukumba	7.14	211	P	Pn	12 32 46.4	+2.9
	22nm,1.0s,0.1nm						
BKB	Balikpapan	7.25	254	Pn	Pn	12 32 46.8	+1.8
BIPH	Bislig	7.75	19	⇑iP	Pn	12 32 53.1	+2.0
BIPH				eS	S	12 34 20.0	+0.3
FAKI	Fak Fak	9.17	114	Pn	Pn	12 33 09.7	+0.5
FAKI	Fak Fak	9.17	114	P	Pn	12 33 09.6	+0.4
FAKI	Fak Fak	9.17	114	P	Pn	12 33 11.2	+2.0
	29nm,1.3s						
KKM	Kota Kinabalu	9.23	304	Pn	Pn	12 33 11.6	+1.5
MMRI	Maumere	9.52	190	Pn	Pn	12 33 14.7	+1.1
SOEI	Soe	10.50	178	Pn	Pn	12 33 25.2	-0.8
SOEI	Soe	10.50	178	P	Pn	12 33 28.6	+2.5
SOEI	Soe	10.50	178	P	Pn	12 33 28.6	+2.5
PLAI	Plampang	11.32	212	P	Pn	12 33 37.8	+1.5
PLAI	Plampang	11.32	212	P	Pn	12 33 39.4	+3.1
SAUI	Saumlaki	11.46	140	Pn	Pn	12 33 39.2	+1.3
SBUM	Sibu	11.74	278	Pn	Pn	12 33 43.3	+1.8
MTN	Manton Dam	15.36	152		P	12 34 26.3	+1.4
MTN	Manton Dam	15.36	152	P	P	12 34 26.3	+1.4
UGM	Wanagama	15.86	237	P	P	12 34 31.0	+0.4
KDU	Kakadu	15.90	148	P	P	12 34 31.7	+0.9
KNRA	Kununurra	17.08	164		P	12 34 45.2	+1.4
KNRA	Kununurra	17.08	164	P	P	12 34 45.6	+1.9
FITZ	Fitzroy Crossi	18.87	175	P	P	12 35 03.3	+0.3
TWG	Pinlang	22.05	353	P	P	12 35 34.9	-0.7
TWG				IAmb	IAmb	12 35 37.2	
	comp=Z,29nm,0.8s						
MBWA	Marble Bar	22.20	190	P	P	12 35 36.4	-0.5
MBWA				IAmb	IAmb	12 35 53.2	
	comp=Z,20nm,1.1s						
MBWA	Marble Bar	22.20	190	P	P	12 35 36.7	-0.2
TPUB	Ta-pu	22.58	352	P	P	12 35 41.2	+0.7
TPUB	Ta-pu	22.58	352	P	P	12 35 41.1	+0.7
PSA00	Pilbara Seismi	22.58	190	P	P	12 35 40.8	+0.4
PSA00				IAmb	IAmb	12 35 41.5	
	comp=Z,22nm,0.8s						
PSA00	Pilbara Seismi	22.58	190	P	P	12 35 40.2	-0.2
YULB	Yu-li	22.59	354	P	P	12 35 39.5	-1.0
YULB				IAmb	IAmb	12 35 51.7	
	comp=Z,24nm,1.0s						
YULB	Yu-li	22.59	354	P	P	12 35 41.6	+1.1
WB0	Warramunga Arr	22.91	154	P	P	12 35 43.8	+0.3
SSLB	Suanglung	23.02	353	P	P	12 35 44.4	0.0
WRAB	Tennant Creek	23.04	154	P	P	12 35 45.1	+0.5
WRAB	Tennant Creek	23.04	154	P	P	12 35 44.8	+0.2
WRA	Warramunga Arr	23.04	154	P	P	12 35 45.1	+0.4
	comp=Z,32nm,0.5s,baz=336,slow=10,SNR=171						
WRA				S	S	12 39 32.5	-4.0
	comp=Z,1.1nm,0.7s,baz=327,slow=17,SNR=5.5						
	comp=Z,32nm,0.5s						
WRA	Warramunga Arr	23.04	154	P	P	12 35 44.9	+0.3
WRA				IAmb	IAmb	12 35 47.7	
	comp=Z,6.4nm,0.8s						
WB2	Warramunga Arr	23.04	154	P	P	12 35 44.9	+0.2
IPM	Ipoh	23.09	280	P	P	12 35 45.4	+0.2
IPM				IAmb	IAmb	12 35 48.1	
	comp=Z,8.8nm,0.6s						
WR0	Warramunga Arr	23.14	154	P	P	12 35 45.7	+0.2
YHNB	Yeheng	23.85	354	P	P	12 35 53.1	+1.1
COEN	Coen	24.11	128	P	P	12 35 53.7	-0.8
COEN				IAmb	IAmb	12 35 58.2	
	comp=Z,13nm,0.8s						
PMG	Port Moresby	25.33	114	P	P	12 36 06.6	+1.2
	comp=Z,10nm,0.6s,baz=284,slow=12,SNR=4.0						
	comp=Z,10nm,0.6s						
PMG	Port Moresby	25.33	114	P	P	12 36 06.6	+1.2
PMG				IAmb	IAmb	12 36 11.1	
	comp=Z,14nm,0.7s						
WRKA	Warakurna	26.05	171	P	P	12 36 12.9	+1.1
AS31	Alice Springs	26.21	159	P	P	12 36 14.1	+0.8
ASAR	Alice Springs	26.21	159	P	P	12 36 13.8	+0.6
	comp=Z,2.8nm,0.5s,baz=340,slow=6.8,SNR=128						
ASAR				S	S	12 40 23.4	-3.2
	comp=Z,1.9nm,0.9s,baz=349,slow=19,SNR=8.1						
ASAR				ScP	ScP	12 42 46.2	-2.9
	comp=Z,1.6nm,0.8s,baz=341,slow=2.1,SNR=9.7						
	comp=Z,2.8nm,0.5s						
ASAR	Alice Springs	26.21	159	P	P	12 36 13.4	+0.1
AS01	Alice Springs	26.23	159	P	P	12 36 14.1	+0.7
QIS	Mount Isa	26.24	145	P	P	12 36 14.5	+1.0
GSI	Gunungsitoli	26.28	271	P	P	12 36 13.8	-0.2
GSI				IAmb	IAmb	12 36 30.0	
	comp=Z,13nm,0.9s						
MTSU	Mount Surprise	27.56	134	P	P	12 36 27.1	+1.8
MEEK	Meekatharra	27.75	190	P	P	12 36 26.9	0.0
KRVT	Keravat (AS076	28.60	100	P	P	12 36 36.8	+2.2
	comp=Z,21nm,0.5s,baz=304,slow=3.3,SNR=4.9						
	comp=Z,21nm,0.5s						
PHRA	Phrae	29.10	309	P	P	12 36 39.2	+0.2
CRAI	Chiangrai	30.00	312	P	P	12 36 47.1	+0.2
CM31	Chiang Mai Arr	30.10	307	P	P	12 36 49.1	+1.4
CM31				IAmb	IAmb	12 36 49.9	
	comp=Z,18nm,1.5s						
CMAR	Chiang Mai Arr	30.10	307	P	P	12 36 48.6	+0.9
	comp=Z,2.3nm,0.7s,baz=136,slow=7.2,SNR=20						
CMAR				PcP	PcP	12 39 43.4	+0.5
	comp=Z,0.8nm,0.5s,baz=186,slow=1.0,SNR=6.7						
	comp=Z,2.3nm,0.7s						
CMAR	Chiang Mai Arr	30.10	307	P	P	12 36 48.4	+0.7
CHTO	Chiang Mai	30.29	308	P	P	12 36 50.3	+0.9
OOD	Oodnadatta	30.62	159	P	P	12 36 53.0	+0.8
WHN	Wuhan	30.92	344	⇓P	P	12 36 56.2	+1.4
NJ2	Nanjing	31.44	352	eP	P	12 37 02.1	+2.9
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
FORT	Forrest	31.66	173	P	P	12 37 01.8	+0.6
FORT	Forrest	31.66	173	P	P	12 37 01.8	+0.6
BLDU	Ballidu	31.98	192	P	P	12 37 04.0	0.0
KMBL	Kambalda	32.05	183	P	P	12 37 04.8	+0.2
MULG	Mulgathing	32.41	163	P	P	12 37 08.7	+1.0
INKA	Innaminka	32.69	152	P	P	12 37 11.7	+1.5
KLBR	Kellerberrin	32.73	190	P	P	12 37 10.7	+0.1
PZH	PanZhiHua	33.25	322	P	P	12 37 15.9	+0.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,5.9s						
LCRK	Leigh Creek	33.95	157	P	P	12 37 21.7	+0.6
JMN	Monobe	34.08	15	P	P	12 37 23.2	+1.1
NWAO	Narrogin (SRO)	34.13	190	P	P	12 37 22.9	+0.4
	comp=Z,4.7nm,0.6s,baz=38,slow=6.6,SNR=8.5						
	comp=Z,4.7nm,0.6s						
NWAO	Narrogin (SRO)	34.13	190	P	P	12 37 22.7	+0.1
NWAO	Narrogin (SRO)	34.13	190	P	P	12 37 23.8	+1.3
JHS	Saijyo	35.10	13	P	P	12 37 31.8	+0.9
	comp=Z,52nm,2.9s						
BBOO	Buckleboo	35.36	162	P	P	12 37 32.8	-0.3
BBOO				IAmb	IAmb	12 37 35.7	
	comp=Z,10nm,0.9s						
BBOO	Buckleboo	35.36	162	P	P	12 37 33.6	+0.5
XAN	Xi'an	35.90	339	P	P	12 37 36.6	-1.1
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
JSG	Sagara	36.26	20	P	P	12 37 40.6	0.0
STKA	Stephens Creek	36.59	154	P	P	12 37 44.2	+0.7
	comp=Z,11nm,0.5s,baz=328,slow=9.2,SNR=34						
	comp=Z,11nm,0.5s						
STKA	Stephens Creek	36.59	154	P	P	12 37 44.2	+0.7
STKA	Stephens Creek	36.59	154	P	P	12 37 44.5	+1.0
KSAR	Wonju Array Be	36.65	5	P	P	12 37 43.8	-0.1
KSRS	Korea Array	36.66	5	P	P	12 37 44.5	+0.5
	comp=Z,2.8nm,0.6s,baz=183,slow=9.3,SNR=8.5						
	comp=Z,2.8nm,0.6s						
JGF	Kuroka	36.83	19	P	P	12 37 46.0	+0.5
JGF				IAmb	IAmb	12 37 46.8	
	comp=Z,10nm,0.8s						
JGF	Kuroka	36.83	19	P	P	12 37 46.4	+0.9
HTT	Hallett	36.89	159	P	P	12 37 47.2	+1.1
MJAR	Matsushiro Arr	37.97	19	P	P	12 37 54.2	-0.8
	comp=Z,4.2nm,0.7s,baz=187,slow=8.7,SNR=8.7						
	comp=Z,4.2nm,0.7s						
CMSA	Cobar Meteorol	38.26	149	P	P	12 37 58.9	+1.5
SHL	Shillong	39.46	311	P	P	12 38 07.8	+0.1
SHL				IAmb	IAmb	12 38 08.3	
	comp=Z,6.4nm,0.6s						
BJI	Beijing	39.67	351	P	P	12 38 10.4	+1.4
BJI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LZH	Lanzhou	39.72	334	eP	P	12 38 11.7	+2.0
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
JMM	Marumori	40.04	21	P	P	12 38 10.9	-1.2
JMM				IAmb	IAmb	12 38 51.6	
	comp=Z,44nm,1.3s						
JMM	Marumori	40.04	21	P	P	12 38 13.2	+1.1
ARMA	Armidale	40.78	142	P	P	12 38 17.8	-0.6
ARMA				IAmb	IAmb	12 38 57.7	
	comp=Z,52nm,1.5s						
ARMA	Armidale	40.78	142	P	P	12 38 18.9	+0.5
ARPS	Mount Arapiles	40.94	158	P	P	12 38 20.7	+1.2
HHC	Hu-ho-hao-te	41.39	346	eP	P	12 38 27.9	+4.7
HHC				pmax	pmax		
	comp=Z,30nm,1.1s						
HHC				pmax	pmax		
	comp=Z,310nm,4.9s						
YNG	Young	41.83	149	P	P	12 38 28.0	+1.3
JTM	Tenmabayashi	42.75	19	P	P	12 38 33.0	-0.9
JTM	Tenmabayashi	42.75	19	P	P	12 38 34.7	+0.7
CAN	Canberra	42.93	149	P	P	12 38 34.3	-1.3
CAN				IAmb	IAmb	12 38 38.7	
	comp=Z,22nm,0.6s						
TOO	Toolangi	43.11	155	P	P	12 38 35.7	-1.3
TOO				IAmb	IAmb	12 38 40.6	
	comp=Z,21nm,1.3s						
XLT	XiLinHaoTe	43.47	352	eP	P	12 38 40.0	+0.3
XLT				pP	pP	12 39 29.8	-0.7
XLT				sP	sP	12 40 02.4	+4.3
XLT				PcP	PcP	12 40 24.6	+1.5
XLT				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XLT				pmax	pmax		
	comp=Z,64nm,5.6s						
USA0B	Ussuriysk Arra	43.81	8	P	P	12 38 42.0	-0.3
USA0B				IAmb	IAmb	12 38 43.5	
	comp=Z,7.5nm,0.6s						
USRK	Ussuriysk Ar.	43.81	8	P	P	12 38 42.8	+0.4
	comp=Z,5.1nm,0.4s,baz=194,slow=5.5,SNR=25						
	comp=Z,5.1nm,0.4s						
USRK	Ussuriysk Ar.	43.81	8	P	P	12 38 42.4	+0.1
MDJ	Mudanjiang	43.92	6	P	P	12 38 46.4	+3.2
MDJ				pP	pwP	12 39 40.6	+0.1
MDJ				ScP	ScP	12 43 52.2	-0.1
MDJ				PcS	PcS	12 44 19.3	+1.6
MDJ				S	S	12 44 49.5	-5.9
MDJ				sS	sS	12 46 37.5	+8.8
MDJ				ScS	ScS	12 48 12.7	-1.9
MDJ				SS	SS	12 48 28.3	+8.3
MDJ				pmax	pmax		
	comp=Z,17nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,110nm,3.8s						
GTA	Gaotai	44.25	333	eP	P	12 38 47.2	+1.1
GTA				sP	PcP	12 40 26.3	+0.3
GTA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
JKA	Kamikawa-asahi	46.24	19	P	P	12 39 01.0	-0.4
JKA				IAmb	IAmb	12 39 42.3	
	comp=Z,20nm,1.3s						
YSS	Yuzh-Sakhalins	48.84	17	P	P	12 39 21.2	0.0
TARA	Tarawa	49.06	89	P	P	12 39 21.8	-1.8
ULN	Ulaanbaatar	49.09	345	P	P	12 39 23.0	-0.4
SONM	Songino Array	49.24	345	P	P	12 39 23.8	-0.7
	comp=Z,4.8nm,0.7s,baz=158,slow=9.1,SNR=27						
	comp=Z,4.8nm,0.7s						
SONM	Songino Array	49.24	345	P	P	12 39 23.9	-0.6
HEH	HeiHe	49.36	3	eP	P	12 39 24.4	-0.8
HEH				pmax	pmax		
	comp=Z,7.0nm,0.5s						
WMQ	Urumqi	53.56	328	⇓iP	P	12 39 57.5	+1.0
WMQ				sP	sP	12 41 20.2	+3.8
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						
MSVF	Nonsavu	56.41	112	P	P	12 40 15.8	-1.4
MSVF				IAmb	IAmb	12 40 40.8	
	comp=Z,15nm,1.1s						
NIL	Nilore	57.52	310	P	P	12 40 25.3	+0.6
NIL				IAmb	IAmb	12 40 26.4	
	comp=Z,9.9nm,0.5s						
TARG	Taragay, Kyrgy	58.08	321	P	P	12 40 27.5	-1.4
MK31	Makanchi Array	58.39	328	P	P	12 40 30.1	-0.4
MKAR	Makanchi Array	58.39	328	P	P	12 40 29.8	-0.7
	comp=Z,3.5nm,0.3s,baz=121,slow=8.3,SNR=34						
MKAR				PcP	PcP	12 41 17.4	-1.0
	comp=Z,1.7nm,0.6s,baz=132,slow=4.3,SNR=5.2						
MKAR				ScP	ScP	12 44 50.6	-4.0
	comp=Z,0.3nm,0.6s,baz=134,slow=5.3,SNR=3.3						
	comp=Z,3.5nm,0.3s						
MKAR	Makanchi Array	58.39	328	P	P	12 40 29.9	-0.5
MAKZ	Makanchi	58.56	327	P	P	12 40 31.0	-0.7
PETK	Petropavlovsk-	59.22	23	P	P	12 40 36.2	+0.2
	comp=Z,4.3nm,0.8s,baz=206,slow=3.4,SNR=15						
	comp=Z,4.3nm,0.8s						
KBL	Kabul	61.08	310	P	P	12 40 48.5	-0.8
KBL				IAmb	IAmb	12 40 50.3	
	comp=Z,10nm,0.8s						
YAK	Yakutsk	61.23	3	P	P	12 40 49.6	+0.2
ZAA0	Zalesovo Array	61.94	335	P	P	12 40 54.5	+0.2
ZALV	Zalesovo Beam	61.94	335	P	P	12 40 52.5	-1.9
	comp=Z,1.8nm,0.3s,baz=133,slow=6.4,SNR=13						
	comp=Z,1.8nm,0.3s						
ZALV	Zalesovo Beam	61.94	335	P	P	12 40 52.8	-1.6
CHGR	Chuyangaron	62.54	314	P	P	12 40 57.7	-1.1
CHGR				IAmb	IAmb	12 40 59.7	
	comp=Z,21nm,1.3s						
KK31	Karatay Array	63.47	319	P	P	12 41 04.4	-0.3
KKAR	Karatay Array	63.47	319	P	P	12 41 04.1	-0.5
NIUE	Niue	67.86	111	P	P	12 41 32.2	-0.9
BRVK	Borovoye	68.31	328	P	P	12 41 34.1	-1.1
GEYT	Alibeck	70.52	310	P	P	12 41 48.0	-1.1
	comp=Z,1.2nm,0.4s,baz=182,slow=5.2,SNR=2.1						
	comp=Z,1.2nm,0.4s						
TIXI	Tiksi	70.81	2	P	P	12 41 49.3	-0.7
TIXI				IAmb	IAmb	12 41 50.0	
	comp=Z,8.4nm,0.8s						
NRIK	Noril'sk	72.60	347	P	P	12 42 00.1	-0.6
	comp=Z,6.2nm,0.6s,baz=138,slow=6.4,SNR=14						
	comp=Z,6.2nm,0.6s						
NRIK	Noril'sk	72.60	347	P	P	12 42 00.5	-0.2
NRIK				IAmb	IAmb	12 42 03.6	
	comp=Z,6.4nm,0.7s						
ABKAR	Akbulak array	72.62	322	P	P	12 42 00.1	-1.1
ARU	Arti	75.89	329	P	P	12 42 18.7	-1.2
ARU				IAmb	IAmb	12 42 21.0	
	comp=Z,4.6nm,0.7s						
RAYN	Ar Rayn	79.00	294	P	P	12 42 36.4	-1.5
VNDA	Vanda	80.92	172	P	P	12 42 47.2	+0.2
	comp=Z,0.6nm,0.5s,baz=331,slow=7.0,SNR=1.8						
	comp=Z,0.6nm,0.5s						
VNDA	Vanda	80.92	172	P	P	12 42 47.3	+0.3
GEVA	Gevas	82.27	308	P	P	12 42 54.7	-0.4
GEVA				IAmb	IAmb	12 42 58.0	
	comp=Z,12nm,1.2s						
KBZ	Khabaz	82.90	314	P	P	12 42 56.7	-1.3
	comp=Z,1.8nm,0.8s,baz=115,slow=2.6,SNR=3.9						
	comp=Z,1.8nm,0.8s						
GURO	Guroymak-BITLI	83.10	309	P	P	12 42 59.3	0.0
GURO				IAmb	IAmb	12 43 02.6	
	comp=Z,7.5nm,1.2s						
SVW2	Sparrevohn	84.73	29	P	P	12 43 07.6	+0.7
SVW2				IAmb	IAmb	12 43 16.1	
	comp=Z,8.7nm,1.4s						
O18K	Koktuh Hills	84.75	30	P	P	12 43 07.2	+0.2
O18K				IAmb	IAmb	12 43 41.5	
	comp=Z,13nm,1.3s						
TTA	Tatalina	84.79	27	P	P	12 43 07.4	+0.2
N19K	Bonanza Creek	85.23	29	P	P	12 43 09.3	-0.1
N19K				IAmb	IAmb	12 43 11.0	
	comp=Z,9.6nm,1.4s						
K20K	Telida	85.72	27	P	P	12 43 11.9	+0.2
K20K				IAmb	IAmb	12 43 48.8	
	comp=Z,5.2nm,1.3s						
KDAK	Kodiak Island	85.88	32	P	P	12 43 12.7	+0.2
M20K	Styx River	85.99	28	P	P	12 43 13.6	+0.4
M20K				IAmb	IAmb	12 43 47.4	
	comp=Z,4.7nm,1.2s						
IMAR	Indian Mountai	86.17	24	P	P	12 43 14.2	+0.4
PPLA	Purkeypile	86.53	27	P	P	12 43 16.2	+0.4
PPLA				IAmb	IAmb	12 43 59.7	
	comp=Z,16nm,1.5s						
KLMR	Klimovskoe	86.53	331	eP	P	12 43 13.8	-1.9
KLMR				AMP		12 43 27.8	
	comp=Z,11nm,1.5s						
CAST	Castle Rocks	86.62	27	P	P	12 43 16.7	+0.6
CNPM	China Poot	86.72	31	P	P	12 43 16.6	0.0
SKT	Skwentna	86.75	28	P	P	12 43 16.2	-0.6
SKT				IAmb	IAmb	12 43 19.1	
	comp=Z,6.9nm,1.4s						
I21K	Tanana	86.81	25	P	P	12 43 15.8	-1.2
I21K				IAmb	IAmb	12 43 39.5	
	comp=Z,5.8nm,1.2s						
MLY	Manley	87.33	25	P	P	12 43 19.9	+0.4
COLD	Coldfoot	87.69	23	P	P	12 43 21.0	-0.1
I23K	Minto, Yukon-K	87.92	25	P	P	12 43 22.2	+0.1
I23K				IAmb	IAmb	12 43 34.6	
	comp=Z,5.9nm,1.5s						
TOLK	Toolik Lake Re	88.00	21	P	P	12 43 22.6	0.0
MCK	McKinley	88.04	26	P	P	12 43 22.5	-0.4
MCK				IAmb	IAmb	12 43 56.0	
	comp=Z,6.5nm,1.3s						
WRH	Wood River Hil	88.44	26	P	P	12 43 24.5	-0.2
H24K	Noodor Dome	88.56	24	P	P	12 43 26.1	+0.8
CCB	Clear Creek Bu	88.56	26	P	P	12 43 24.5	-0.7
CCB				IAmb	IAmb	12 43 25.8	
	comp=Z,5.6nm,1.4s						
SCM	Sheep Creek Mo	88.74	28	P	P	12 43 25.4	-0.8
SCM				IAmb	IAmb	12 43 34.6	
	comp=Z,15nm,1.2s						
ILAR	Eielson Array	88.96	25	P	P	12 43 25.5	-1.6
	comp=Z,0.3nm,0.4s,baz=274,slow=3.8,SNR=12						
	comp=Z,0.3nm,0.4s						
ILAR	Eielson Array	88.96	25	P	P	12 43 26.1	-1.0
M24K	Tolsona, Glenn	89.28	28	P	P	12 43 29.0	+0.3
RIDG	Independent Ri	89.86	26	P	P	12 43 31.4	0.0
RIDG				IAmb	IAmb	12 44 02.1	
	comp=Z,3.9nm,1.3s						
BMAR	Burnt Mountain	89.87	23	P	P	12 43 32.2	+0.9
N25K	Chitina, Valde	90.04	29	P	P	12 43 30.9	-1.4
N25K				IAmb	IAmb	12 43 31.3	
	comp=Z,13nm,1.5s						
DOT	Dot Lake	90.22	26	P	P	12 43 33.1	+0.1
DOT				IAmb	IAmb	12 43 49.0	
	comp=Z,7.7nm,1.3s						
SCRK	Sand Creek	90.23	26	P	P	12 43 33.3	+0.1
BR231	Keskin MP Arra	90.32	310	P	P	12 43 32.9	-1.3
MCARA	McCarthy VSAT	90.80	29	P	P	12 43 34.6	-1.1
MCARA				IAmb	IAmb	12 43 40.1	
	comp=Z,7.0nm,1.1s						
BCAR	Beaver Creek A	91.27	27	P	P	12 43 36.6	-1.3
BARN	Barnard Glacie	91.48	29	P	P	12 43 39.4	+0.2
ARCES	ARCESS Array B	92.18	340	P	P	12 43 39.9	-2.0
	comp=Z,1.3nm,0.6s,baz=79,slow=5.8,SNR=7.7						
	comp=Z,1.3nm,0.6s						
SPB2	Spitsbergen Ar	92.77	349	P	P	12 43 42.3	-2.2
FINES	FINESS Array B	93.03	332	P	P	12 43 43.7	-2.2
	comp=Z,1.3nm,0.8s,baz=62,slow=4.5,SNR=3.5						
	comp=Z,1.3nm,0.8s						
EPYK	Eagle Plains	93.05	23	P	P	12 43 46.2	+0.1
EPYK				IAmb	IAmb	12 43 46.6	
	comp=Z,10nm,1.3s						
INK	Inuvik	93.92	21	P	P	12 43 49.6	-0.3
INK				IAmb	IAmb	12 44 24.9	
	comp=Z,3.7nm,1.4s						
FARO	Faro, Yukon	95.25	27	P	P	12 43 56.8	+0.6
FARO				IAmb	IAmb	12 43 57.2	
	comp=Z,4.0nm,0.7s						
BUR08	Bucovina Ar. S	95.25	318	P	P	12 43 54.0	-2.7
BUR08				IAmb	IAmb	12 43 59.4	
	comp=Z,4.4nm,1.1s						
TORD	Torodi Ar. Bea	121.02	286	PKP	PKPdf	12 49 23.7	-1.1
	comp=Z,0.6nm,0.3s,baz=78,slow=2.1,SNR=17						
SCHQ	Schefferville	123.86	7	PKP	PKPdf	12 49 29.0	-0.3
	comp=Z,2.2nm,0.7s,baz=261,slow=4.7,SNR=6.1						

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*NCEDC **07** 12:59:40.4±2.3, 38°78N±0°01×123°16W±0°02, h5km±6km, ML3.1/38, ML2.8/56(NEIC), Error ellipse: s-maj=2.6km s-min=2.1km az=77.0*

NEIC 07 12:59:40.1±2.2, **38°76N**±0°01×**123°20W**±0°02, **h5**km±2km, **Error ellipse: s-maj=3.1km s-min=2.9km az=76.0, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCVM	Cloverdale	0.15	86		Pg	12 59 43.1	0.0
GSSM	Skaggs Springs	0.16	112		Pg	12 59 43.4	+0.1
HOPS	Hopland Field	0.25	23	Pg	Pg	12 59 45.1	+0.1
HOPS				IAML		12 59 49.4	
	comp=E,3µm,0.5s						
HOPS				IAML		12 59 49.6	
	comp=N,2µm,0.7s						
GACM	Adobe Creek	0.29	67		Pg	12 59 45.8	0.0
GHLM	Highland Sprin	0.31	27		Pg	12 59 46.3	0.0
GDXM	Geysers	0.32	81		Pg	12 59 46.3	0.0
GDXM	Geysers	0.32	81	IAML		12 59 51.0	
	comp=N,3µm,0.2s						
GDXM				IAML		12 59 51.5	
	comp=E,2µm,0.2s						
GAXM	Alexander Vall	0.35	98		Pg	12 59 47.0	0.0
GCRM	Castle Rock Sp	0.38	88		Pg	12 59 47.3	-0.2
GSGM	Seigler Mounta	0.40	74		Pg	12 59 48.2	+0.4
MAC	Mark West Spri	0.43	119		Pg	12 59 49.0	+0.6
GRTM	Round Top Moun	0.45	67		Pg	12 59 48.8	0.0
GWRM	Wonder Ranch	0.45	350		Pg	12 59 49.4	+0.6
GHGM	Hogback Ridge	0.47	39		Pg	12 59 49.4	+0.2
NHSM	Mount Saint He	0.47	103		Pg	12 59 49.3	+0.1
NTYM	Taylor	0.56	131		Pb	12 59 51.8	-0.6
NMTM	Middletown	0.59	85		Pg	12 59 51.7	+0.2
MNRC	McLaughlin Min	0.60	79		Pg	12 59 52.2	+0.5
GWKM	Walker Ridge	0.63	62		Pb	12 59 53.4	-0.2
MCCM	Marconi Confer	0.67	158	Pg	Pg	12 59 53.5	+0.6
MCCM					Sg	12 59 53.8	-7.7
MCCM				IAML		13 00 12.2	
	comp=N,905nm,1.1s						
GBMM	Baldy Mountain	0.67	55		Pb	12 59 53.7	-0.6
NBRB	Beebe Ranch Br	0.71	134		Pb	12 59 54.5	-0.5
CVS	Carmenet Viney	0.71	125		Pg	12 59 53.9	0.0
GTSM	Trough Springs	0.72	40		Pb	12 59 54.7	-0.6
GHMM	Hull Mountain	0.76	16		Pb	12 59 55.6	-0.4
NPRM	Point Reyes	0.78	169		Pb	12 59 55.8	-0.3
NOLM	Olema	0.79	156		Pb	12 59 56.1	-0.1
NBPM	Berryessa Peak	0.79	96		Pb	12 59 56.0	-0.4
NAPC	Atlas Peak	0.81	113		Pg	12 59 55.6	-0.1
SNT	Sears Point	0.82	134		Pg	12 59 55.9	0.0
KFPM	Farley Peak	0.89	349		Pg	12 59 57.3	0.0
GFC	Funks Creek	0.91	51		Pb	12 59 58.2	-0.1
NGVM		0.91	121		Pg	12 59 57.0	-0.6
KCPM	Cahto Peak	0.97	342		Pg	12 59 59.1	+0.3
GCK	Clark Valley	0.98	37		Pb	12 59 59.7	+0.1
NDHM	Dunnigan Hills	1.01	89		Pg	12 59 59.5	+0.1
NADM	Allendale	1.01	107		Pg	12 59 59.7	+0.3
CPMM	Point Molate	1.02	142		Pg	12 59 59.8	+0.1
NLHM	Lake Herman	1.05	127		Pg	13 00 00.4	+0.2

KIPM	**Iron Peak**	**1.07**	**348**		Pg	13 00 00.5	-0.1
FARB	**Farallon Islan**	**1.07**	**171**		Pg	13 00 00.8	+0.1
GVV	**Valley View**	**1.09**	**22**		Pg	13 00 00.8	-0.3
CPIM	**Pinole Ridge**	**1.09**	**135**		Pg	13 00 00.4	-0.6
JPRM	**Presidio of Sa**	**1.12**	**149**		Pg	13 00 00.8	-0.8
KBNM	**Bluenose Ridge**	**1.13**	**0**		Pg	13 00 01.5	-0.4
BL67	**Building 67, L**	**1.16**	**140**		Pb	13 00 02.8	+0.2
VAK	**Adit at Lawren**	**1.16**	**139**		Pg	13 00 02.3	+0.1
BKS	**Berkeley--Byer**	**1.17**	**139**		Pg	13 00 01.0	-1.4
CVPM	**Vollmer Peak**	**1.17**	**138**		Pg	13 00 01.6	-0.8
OSUM	**Sutter Buttes**	**1.17**	**64**		Pg	13 00 00.8	-1.7
CTAM	**Taylor**	**1.19**	**128**		Pg	13 00 01.3	-1.5
SUTB	**Sutter Butte**	**1.20**	**67**		Pg	13 00 00.9	-2.2
GROM	**Round Mountain**	**1.23**	**19**		Pg	13 00 02.8	-0.8
JSBM	**San Bruno Moun**	**1.25**	**149**		Pg	13 00 03.3	-0.8
BGC	**Bolinger Road**	**1.30**	**136**		Pn	13 00 03.4	-1.6
SAC	**San Andreas**	**1.33**	**152**		Pn	13 00 03.2	-2.1
CSLM	**San Leandro Hi**	**1.34**	**140**		Pn	13 00 04.0	-1.5
JCPM	**Coyote Point**	**1.36**	**149**		Pn	13 00 04.2	-1.5
JCHM	**Cahill Ridge**	**1.40**	**152**		Pn	13 00 04.4	-2.0
CMOB	**Morgan Territo**	**1.45**	**130**		Pn	13 00 05.8	-1.3
CNIC	**Niles Canyon**	**1.51**	**139**		Pn	13 00 06.4	-1.4
KMRM	**Mail Ridge**	**1.51**	**345**	Pn	Pg	13 00 09.9	+0.8
KMRM				IAML		13 00 40.6	
	comp=N,216nm,1.1s						
KMRM				IAML		13 00 43.6	
	comp=E,232nm,0.9s						
ORV	**Oroville**	**1.54**	**59**		Pn	13 00 06.0	-2.3
JRSC	**Jasper Ridge**	**1.55**	**150**		Pn	13 00 06.0	-2.4
CVLM	**Vallecito**	**1.56**	**136**		Pn	13 00 07.7	-0.8
LBPM	**Beegum Peak**	**1.57**	**9**		Pn	13 00 08.1	-0.8
WENL	**Wente Vineyard**	**1.61**	**135**		Pn	13 00 07.9	-1.3
JBMM	**Black Mountain**	**1.66**	**150**		Pb	13 00 11.2	0.0
KCRM	**Chalk Rock**	**1.73**	**344**		Pn	13 00 10.7	-0.2
KMPM	**Mount Pierce**	**1.80**	**337**		Pn	13 00 09.3	-2.6
KMPM				IAML		13 00 54.5	
	comp=N,143nm,1.0s						
MHC	**Mount Hamilton**	**1.88**	**139**		Pn	13 00 11.6	-1.4
AMC	**Almaden**	**1.93**	**146**		Pn	13 00 11.3	-2.2
ARN	**Arnold Ranch**	**1.93**	**136**		Pn	13 00 11.9	-1.7
KHMM	**Horse Mountain**	**2.15**	**349**	Pn	Pn	13 00 16.5	-0.3
KHMM				IAML		13 01 17.6	
	comp=N,78nm,2.6s						
KHMM				IAML		13 01 23.6	
	comp=E,81nm,2.5s						
GHS	**Gilroy Hot Spr**	**2.17**	**140**		Pn	13 00 15.4	-1.5
MCUB	**Copperopolis B**	**2.17**	**110**		Pn	13 00 15.1	-1.9
CMB	**Columbia Colle**	**2.33**	**107**		Pn	13 00 17.9	-1.2
SAO	**San Andreas Ge**	**2.43**	**145**	Pn	Pn	13 00 19.2	-1.3
BCGM	**Cienega Road**	**2.52**	**144**		Pn	13 00 19.5	-2.3
MPK	**Martis Peak**	**2.53**	**77**	Pn	Pn	13 00 21.8	-0.3
MPK				IAML		13 00 57.9	
	comp=E,85nm,1.2s						
MPK				IAML		13 00 57.0	
	comp=N,70nm,0.8s						
BBGB	**Big Mountain B**	**2.77**	**141**	Pn	Pn	13 00 25.2	-0.1
YBH	**Yreka Blue Hor**	**2.99**	**7**	Pn	Pn	13 00 28.1	-0.2
YERR	**Yerington**	**3.10**	**85**		Pn	13 00 28.7	-1.1
YERR				IAML		13 01 25.1	
	comp=E,37nm,0.8s						
YERR				IAML		13 01 40.3	
	comp=N,24nm,1.8s						
PAHR	**Pah Rah Range**	**3.11**	**71**	Pn	Pn	13 00 29.1	-0.9
PAHR					Pb	13 00 33.0	-3.0
L02F	**Cave Junction**	**3.37**	**355**	Pn	Pn	13 00 33.5	+0.1
L02F				IAML		13 02 28.5	
	comp=N,27nm,2.8s						
MDPB	**Devils Postpil**	**3.44**	**108**		Pn	13 00 34.7	+0.1
MDPB				IAML		13 01 22.3	
	comp=N,13nm,0.7s						
PHPM	**Hope Ranch**	**3.46**	**143**		Pb	13 00 42.9	+1.0
OMMB	**Old Mammoth Mi**	**3.50**	**108**		Pn	13 00 36.1	+0.6
OMMB				IAML		13 01 31.2	
	comp=N,15nm,4.9s						
OMMB				IAML		13 01 32.9	
	comp=E,14nm,1.1s						
L04D	**Klamath Falls**	**3.52**	**11**	Pn	Pn	13 00 35.6	0.0
LHV	**Little Huntoon**	**3.72**	**96**	Pn	Pn	13 00 37.8	-0.4
LHV				IAML		13 01 49.5	
	comp=N,21nm,1.4s						
LHV				IAML		13 01 49.9	
	comp=E,16nm,1.0s						
MOD	**Modoc Plateau**	**3.84**	**34**	Pn	Pn	13 00 39.4	-0.6
MOD				IAML		13 01 58.0	
	comp=N,12nm,4.7s						
MOD				IAML		13 02 12.1	
	comp=E,12nm,3.5s						
HUMO	**Hull Mountain**	**3.85**	**3**	Pn	Pn	13 00 40.1	+0.2
HUMO				IAML		13 01 55.0	
	comp=N,18nm,3.7s						
HUMO				IAML		13 02 11.6	
	comp=E,19nm,3.1s						
NVAR	**Mina Array Bea**	**3.85**	**93**	Pn	Pn	13 00 39.8	-0.5
K02D	**Willamette Mer**	**3.95**	**355**	Pn	Pn	13 00 42.0	+0.6
NV11	**Mina Array Sit**	**3.97**	**93**	Pn	Pn	13 00 41.0	-0.8
NV11				IAML		13 01 52.6	
	comp=E,9.4nm,4.2s						
KVN	**Kaiserville**	**3.99**	**84**	Pn	Pn	13 00 41.6	-0.5
KVN				IAML		13 01 56.5	
	comp=E,8.1nm,3.5s						
J01E	**Myrtle Point**	**4.43**	**353**	Pn	Pn	13 00 46.0	-2.0
LCH	**Last Change Ra**	**4.65**	**107**	Pn	Pn	13 00 50.4	-0.7
LCH				IAML		13 01 38.4	
	comp=E,7.4nm,4.5s						
LCH				IAML		13 02 54.1	
	comp=N,5.4nm,4.5s						
Q09A	**Carvers**	**4.70**	**87**	Pn	Pn	13 00 51.2	-0.6
J05D	**Fort Rock, OR**	**4.76**	**18**	Pn	Pn	13 00 51.0	-1.6
H04D	**Lebanon**	**5.77**	**3**	Pn	Pn	13 01 06.0	-0.3

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*DDA **07** 13:24:41.6±0.0, 39°.54N×26°.10E, h10^{km}±1^{km}, ML2.4*
*ISK **07** 13:24:41.4, 39°.54N×26°.10E, h8^{km}, ML2.6/21*
*THE **07** 13:24:41.9, 39°.55N×26°.09E, h5^{km}±9^{km}, ML2.2/4, Error ellipse: s-maj=9.3km s-min=0.5km az=121.0*
ISC 07 13:24:41.8±0.8**, 39°.55N**±0°.02×**26°.10E**±0°.03**, h11**^{km}±6^{km}**, n36, σ0^{s}.40**/54**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.05**	**147**	P	**Pg**	**13 24 43.8**	**-0.1**
KOCA				S	**Sg**	**13 24 45.3**	**-0.2**
GPNR	**Gulpinar-Canak**	**0.09**	**164**	Pg	**Pg**	**13 24 44.1**	**-0.3**
BOZC	**Bozcaada**	**0.30**	**353**	Pg	**Pg**	**13 24 48.1**	**+0.3**
BOZC				Sg	**Sg**	**13 24 52.6**	**+0.7**
EZN	**Ezine**	**0.33**	**32**	P	**Pg**	**13 24 48.6**	**+0.2**
EZN				S	**Sg**	**13 24 53.2**	**+0.4**
	360nm,0.1s						
EZN	**Ezine**	**0.33**	**32**	Pg	**Pg**	**13 24 48.6**	**+0.2**
EZN				Sg	**Sg**	**13 24 53.6**	**+0.8**
PRK	**Paraskevi**	**0.33**	**156**	P	**Pg**	**13 24 48.6**	**+0.2**
PRK				S	**Sg**	**13 24 53.1**	**+0.3**
	1μm,0.3s						
SIGR	**SIGRI**	**0.39**	**210**	P	**Pg**	**13 24 49.3**	**-0.1**
SIGR				S	**Sg**	**13 24 54.8**	**+0.3**
SIGR	**SIGRI**	**0.39**	**210**	Pg	**Pg**	**13 24 49.4**	**0.0**
SIGR				Sg	**Sg**	**13 24 54.9**	**+0.4**
BAYC	**CANAKKALE_Bayr**	**0.40**	**60**	P	**Pg**	**13 24 49.1**	**-0.6**
BAYC				S	**Sg**	**13 24 54.8**	**-0.1**
ECEA	**Canakkale, Ece**	**0.50**	**7**	P	**Pg**	**13 24 51.7**	**+0.1**
ECEA				S	**Sb**	**13 24 59.8**	**-0.2**
ECEA				*i* AML	AML	13 25 05.0	
	comp=E,146nm,0.5s						
COMU	**Canakkale**	**0.62**	**27**	Pg	**Pg**	**13 24 54.0**	**+0.1**
COMU				Sg	**Sb**	**13 25 03.1**	**-0.4**
GOKA	**anakkale-Gk**	**0.66**	**347**	P	**Pg**	**13 24 54.2**	**-0.4**
GOKA				S	**Sg**	**13 25 03.8**	**+0.5**
GOKA				*i* AML	AML	13 25 04.0	
	comp=N,275nm,0.3s						
GADA	**Gvkgeada**	**0.66**	**347**	Pg	**Pg**	**13 24 54.7**	**+0.1**
BUHA	**Balikesir, Bur**	**0.76**	**93**	P	**Pb**	**13 24 57.0**	**0.0**
BUHA				S	**Sg**	**13 25 06.3**	**0.0**
DKL	**Dikili**	**0.79**	**127**	Pg	**Pg**	**13 24 57.0**	**0.0**
LIA	**Limnos Island**	**0.79**	**297**	P	**Pb**	**13 24 57.3**	**-0.3**
LIA				S	**Sb**	**13 25 08.2**	**-0.1**
	448nm,0.3s						
CANM	**Can-anakkale**	**0.87**	**57**	Pg	**Pb**	**13 24 58.7**	**-0.2**
GELI	**Tayfur-Gelibol**	**0.90**	**19**	Pg	**Pg**	**13 24 58.9**	**-0.2**
KARB	**zmir-Karabur**	**0.92**	**165**	P	**Pb**	**13 24 59.7**	**0.0**
KARB				S	**Sb**	**13 25 11.9**	**0.0**
KARB				*i* AML	AML	13 25 14.0	
	comp=N,152nm,0.5s						
ZEDA	**zmir-Bergama**	**0.95**	**127**	P	**Pb**	**13 25 00.3**	**-0.1**
ZEDA				S	**Sb**	**13 25 14.0**	**+1.0**
ZEDA				*i* AML	AML	13 25 15.0	
	comp=N,117nm,0.4s						
LPK	**Lapseki**	**0.97**	**31**	Pg	**Pg**	**13 25 00.3**	**-0.2**
SMTH	**Samothraki Isl**	**1.02**	**335**	P	**Pg**	**13 25 01.2**	**-0.3**
SMTH				S	**Sb**	**13 25 15.4**	**+0.4**
	88nm,0.3s						
CAVK	**Edirne/Enez-Ca**	**1.15**	**3**	P	**Pg**	**13 25 02.5**	**-1.3**
CAVK				S	**Sn**	**13 25 19.4**	**-0.1**
CAVK				*i* AML	AML	13 25 21.0	
	comp=N,72nm,0.6s						
CHOS	**Chios island**	**1.16**	**182**	Pn	**Pn**	**13 25 04.1**	**0.0**
ERIK	**Erikli-Kesan**	**1.17**	**16**	Pn	**Pb**	**13 25 03.6**	**-0.4**
ENEZ	**Enez**	**1.19**	**2**	Pn	**Pn**	**13 25 04.7**	**+0.3**
URLA	**Izmir**	**1.25**	**162**	Pn	**Pn**	**13 25 04.4**	**-0.8**
KRBG	**Karabiga-Canak**	**1.25**	**47**	Pn	**Pn**	**13 25 05.3**	**0.0**
GONE	**Gonen-Balikesi**	**1.32**	**67**	Pn	**Pb**	**13 25 06.6**	**0.0**
ALN	**Alexandroupoli**	**1.35**	**358**	Pn	**Pn**	**13 25 06.9**	**+0.3**
BLCB	**Balcova**	**1.37**	**147**	Pn	**Pn**	**13 25 07.2**	**+0.3**
BALB	**Balikesir**	**1.38**	**86**	Pn	**Pn**	**13 25 07.1**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.41**	**36**	Pn	**Pn**	**13 25 07.7**	**+0.2**
BKES	**Balkesir-Mer**	**1.43**	**82**	P	**Pb**	**13 25 08.2**	**-0.2**
BKES				S	**Sg**	**13 25 27.3**	**-0.3**
BKES				*i* AML	AML	13 25 31.0	
	comp=E,39nm,0.2s						
EDC	**Edincik**	**1.57**	**59**	Pn	**Pn**	**13 25 10.1**	**+0.4**
UKOP	**Uzunkopru-Edir**	**1.63**	**14**	Pn	**Pn**	**13 25 10.9**	**+0.4**

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*ISK **07** 13:47:29.4, 39°.54N×26°.06E, h11^{km}, ML2.6/19*
*DDA **07** 13:47:30.0±0.0, 39°.53N×26°.12E, h10^{km}, ML2.3*
*THE **07** 13:47:30.1, 39°.53N×26°.09E, h9^{km}±2^{km}, ML2.3/4, Error ellipse: s-maj=2.8km s-min=0.5km az=121.0*
ISC 07 13:47:29.9±0.8**, 39°.53N**±0°.02×**26°.09E**±0°.02**, h12**^{km}±6^{km}**, n38, σ0^{s}.47**/57**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.05**	**132**	P	**Pg**	**13 47 32.2**	**+0.1**
KOCA				S	**Sg**	**13 47 33.6**	**-0.2**
GPNR	**Gulpinar-Canak**	**0.08**	**158**	Pg	**Pg**	**13 47 32.3**	**-0.2**
BOZC	**Bozcaada**	**0.31**	**354**	Pg	**Pg**	**13 47 36.5**	**+0.3**
BOZC				Sg	**Sg**	**13 47 40.6**	**+0.2**
BOZC	**Bozcaada**	**0.31**	**354**	P	**Pg**	**13 47 36.3**	**+0.1**
BOZC				S	**Sg**	**13 47 40.8**	**+0.3**
BOZC				*i* AML	AML	13 47 41.0	
	comp=N,378nm,0.1s						
PRK	**Paraskevi**	**0.32**	**154**	P	**Pg**	**13 47 36.6**	**+0.2**
PRK				S	**Sg**	**13 47 41.0**	**+0.3**
	2μm,0.4s						
EZN	**Ezine**	**0.34**	**32**	P	**Pg**	**13 47 36.9**	**+0.1**
EZN				S	**Sg**	**13 47 42.1**	**+0.7**
	450nm,0.1s						
EZN	**Ezine**	**0.34**	**32**	Pg	**Pg**	**13 47 36.8**	**0.0**
EZN				Sg	**Sg**	**13 47 42.2**	**+0.8**
SIGR	**SIGRI**	**0.37**	**210**	P	**Pg**	**13 47 37.4**	**+0.1**
SIGR				S	**Sg**	**13 47 42.4**	**+0.1**
	410nm,0.2s						
SIGR	**SIGRI**	**0.37**	**210**	Pg	**Pg**	**13 47 37.3**	**0.0**
SIGR				Sg	**Sg**	**13 47 42.9**	**+0.6**
BAYC	**CANAKKALE_Bayr**	**0.41**	**59**	P	**Pg**	**13 47 37.9**	**-0.1**
BAYC				S	**Sg**	**13 47 43.6**	**+0.1**
ECEA	**Canakkale, Ece**	**0.51**	**7**	P	**Pg**	**13 47 40.4**	**+0.4**
ECEA				S	**Sg**	**13 47 47.6**	**+0.8**
ECEA				*i* AML	AML	13 47 49.0	
	comp=N,203nm,0.2s						
AYVA	**Ayvalik**	**0.52**	**116**	P	**Pb**	**13 47 40.7**	**-0.3**
COMU	**Canakkale**	**0.64**	**27**	Pg	**Pg**	**13 47 42.2**	**-0.1**
COMU				Sg	**Sb**	**13 47 51.7**	**-0.2**
GADA	**Gvkgeada**	**0.67**	**347**	Pg	**Pg**	**13 47 42.7**	**-0.3**
GADA				Sg	**Sg**	**13 47 52.2**	**+0.3**
BUHA	**Balikesir, Bur**	**0.76**	**92**	P	**Pg**	**13 47 44.1**	**-0.6**
BUHA				S	**Sg**	**13 47 55.0**	**+0.3**
DKL	**Dikili**	**0.78**	**126**	Pg	**Pg**	**13 47 45.4**	**+0.4**
DKL				Sg	**Sb**	**13 47 56.9**	**+0.9**
LIA	**Limnos Island**	**0.79**	**298**	P	**Pg**	**13 47 45.3**	**+0.1**
LIA				S	**Sb**	**13 47 56.5**	**+0.2**
	348nm,0.2s						
CANM	**Can-anakkale**	**0.88**	**57**	Pg	**Pg**	**13 47 47.2**	**+0.3**
CANM				Sg	**Sb**	**13 47 59.9**	**+1.0**
GELI	**Tayfur-Gelibol**	**0.91**	**19**	Pg	**Pg**	**13 47 47.4**	**-0.1**
ZEDA	**zmir-Bergama**	**0.95**	**126**	P	**Pg**	**13 47 48.0**	**-0.3**
ZEDA				S	**Sb**	**13 48 01.1**	**+0.2**
ZEDA				*i* AML	AML	13 48 03.0	
	comp=N,104nm,0.3s						
LPK	**Lapseki**	**0.98**	**31**	Pg	**Pg**	**13 47 48.8**	**-0.1**
SMTH	**Samothraki Isl**	**1.03**	**335**	P	**Pg**	**13 47 49.6**	**-0.2**
CHOS	**Chios island**	**1.15**	**181**	Pn	**Pb**	**13 47 51.7**	**-0.1**
ERIK	**Erikli-Kesan**	**1.18**	**16**	Pn	**Pb**	**13 47 52.2**	**-0.1**
BALY	**Balya**	**1.20**	**80**	P	**Pb**	**13 47 51.4**	**-1.2**
BALY				S	**Sb**	**13 48 08.0**	**-0.1**
BALY				*i* AML	AML	13 48 12.0	
	comp=N,50nm,0.4s						
ENEZ	**Enez**	**1.20**	**2**	Pn	**Pn**	**13 47 52.5**	**-0.1**
URLA	**Izmir**	**1.24**	**161**	Pn	**Pn**	**13 47 52.9**	**-0.2**
KRBG	**Karabiga-Canak**	**1.26**	**47**	Pn	**Pn**	**13 47 53.4**	**0.0**
STEP	**BALIKESIR_Sava**	**1.27**	**97**	P	**Pn**	**13 47 51.8**	**-1.7**
GONE	**Gonen-Balikesi**	**1.33**	**67**	Pn	**Pn**	**13 47 54.5**	**+0.1**
BLCB	**Balcova**	**1.36**	**147**	Pn	**Pn**	**13 47 55.2**	**+0.4**
BALB	**Balikesir**	**1.39**	**85**	Pn	**Pn**	**13 47 55.3**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.42**	**35**	Pn	**Pn**	**13 47 55.8**	**+0.1**
BKES	**Balkesir-Mer**	**1.43**	**81**	P	**Pn**	**13 47 56.1**	**+0.3**
BKES				S	**Sb**	**13 48 15.6**	**+0.8**
THAS	**Thassos island**	**1.50**	**316**	P	**Pn**	**13 47 55.8**	**-0.9**
EDC	**Edincik**	**1.58**	**59**	Pn	**Pn**	**13 47 57.7**	**-0.2**
UKOP	**Uzunkopru-Edir**	**1.65**	**14**	Pn	**Pn**	**13 47 58.7**	**0.0**
DURS	**Dursunbey**	**1.84**	**87**	P	**Pn**	**13 48 01.3**	**-0.2**

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*IDC **07** 13:51:08.7±0.5, 13°.27N×144°.43E, h147^{km}±20^{km}, mb3.1/7, mbtmp3.5/7, Error ellipse: s-maj=77.7km s-min=17.0km az=79.0*
ISC 07 13:51:08.7±0.8**, 13°.2N**±0°.1×**144°.2E**±0°.1**, h138**^{km}**, n11, σ0^{s}.55**/9**, mb3.4**/7**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.80**	**61**	P	**Pn**	**13 51 31.2**	**+0.6**
	112nm,0.3s,baz=304,slow=10,SNR=34						
GUMO				S	**Sn**	**13 51 47.1**	**-0.2**
	788nm,0.3s,baz=143,slow=20,SNR=28						
H11N1	**WAKE ISLAND Hy**	**22.73**	**70**	T	T	14 19 13.5	
	baz=257,slow=75						
H11N2	**WAKE ISLAND Hy**	**22.74**	**70**	T	T	14 19 15.9	
	baz=257						
H11N3	**WAKE ISLAND Hy**	**22.75**	**70**	T	T	14 19 27.1	
	baz=257,slow=75						
WRA	**Warramunga Arr**	**34.32**	**197**	P	**P**	**13 57 42.5**	**+0.2**
	1.1nm,0.8s,baz=24,slow=10.0,SNR=9.2 1.1nm,0.8s						
ASAR	**Alice Springs**	**37.99**	**195**	P	**P**	**13 58 13.3**	**-0.1**
	0.2nm,0.6s,baz=19,slow=13,SNR=12 0.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**43.73**	**283**	P	**P**	**13 59 01.5**	**+0.9**
	0.4nm,0.4s,baz=79,slow=5.7,SNR=2.2 0.4nm,0.4s						
STKA	**Stephens Creek**	**44.89**	**183**	P	**P**	**13 59 09.2**	**-0.4**
	0.7nm,0.5s,baz=18,slow=7.7,SNR=3.5 0.7nm,0.5s						
SONM	**Songino Array**	**46.65**	**325**	P	**P**	**13 59 23.0**	**-0.4**
	0.1nm,0.3s,baz=140,slow=7.6,SNR=1.7 0.1nm,0.3s						
MKAR	**Makanchi Array**	**61.29**	**316**	P	**P**	**14 01 09.5**	**0.0**
	0.2nm,0.4s,baz=95,slow=8.6,SNR=4.7 0.2nm,0.4s						
BVAR	**Borovoye Array**	**69.80**	**322**	P	**P**	**14 02 03.5**	**-0.6**
	0.3nm,0.4s,baz=104,slow=4.6,SNR=3.7 0.3nm,0.4s						

NNC 07 14:18:00.9±3.1**, 43°.84N**×**88°.59E, h0**^{km}**, mb3.7, mpv3.2, 9C-4D, Error ellipse: s-maj=26.6km s-min=21.3km az=57.0, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**5.33**	**306**	⇑Pn	Pn	14 19 22.6	+0.8
	0.6nm,0.3s,baz=122,slow=14						
MK31				⇑Sn	Sn	14 20 25.0	+1.1
	1.2nm,0.3s						
MK31				⇓Lg	Lg	14 20 51.8	
	8.5nm,0.6s,baz=118,slow=28						
MAKZ	**Makanchi**	**5.53**	**305**	⇓Pn	Pn	14 19 25.2	+0.8
	2.0nm,0.5s						
MAKZ				⇑Sn	Sn	14 20 29.2	+0.5
	1.2nm,0.2s						
MAKZ				⇓Lg	Lg	14 20 58.7	
	12nm,1.1s						
PDGK	**Podgornoye**	**6.63**	**269**	⇑Pn	Pn	14 19 37.5	-2.2
	1.2nm,0.5s						
PDGK				⇑Lg	Lg	14 21 30.2	
	8.1nm,0.9s						
KURBB	**Kurchatov Arra**	**9.63**	**318**	⇑Pn	Pn	14 20 23.3	+2.7
	1.8nm,0.9s						
KURBB				⇑Sn	Sn	14 22 10.5	+1.1
	2.1nm,0.7s						
KURBB				⇓Lg	Lg	14 23 05.8	
	7.0nm,0.8s						
KURK	**Kurchatov**	**9.65**	**319**	⇑Pn	Pn	14 20 19.6	-1.2
	1.3nm,0.7s						
KURK				⇑Lg	Lg	14 23 06.8	
	4.8nm,0.9s						

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*IDC **07** 14:22:24.7±3.1, 6°.37S×10°.97W, h0^{km}, mb4.0/8, mbtmp4.1/8, MS3.7/32, Error ellipse: s-maj=92.1km s-min=31.4km az=71.0*
ISC 07 14:22:26.3±3.0**, 6°.4S**±0°.3×**11°.0W**±0°.6**, h10**^{km}**, n38, σ0^{s}.34**/8**, mb4.2**/8**, MS3.7**/31**, Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N1	**ASCENSION HYDR**	**3.79**	**247**	T	T	14 26 54.1	
	baz=65,slow=74,SNR=326						
H10N2	**ASCENSION HYDR**	**3.79**	**247**	T	T	14 26 52.7	
	baz=65,slow=74,SNR=440						
H10N3	**ASCENSION HYDR**	**3.81**	**247**	T	T	14 26 54.1	
	baz=65,slow=74,SNR=577						
DBIC	**Dimbokro**	**14.32**	**25**	LR	LR	14 30 12.7	
	comp=Z,185nm,19.2s,baz=202,slow=33						
BBTS	**Babate**	**21.62**	**345**	LR	LR	14 34 22.4	
	comp=Z,146nm,19.8s,baz=162,slow=33						
TORD	**Torodi Ar. Bea**	**23.11**	**33**	P	**P**	**14 27 32.7**	**0.0**
	5.3nm,1.0s,baz=217,slow=2.6,SNR=16						
TORD				LR	LR	14 35 30.3	
	comp=Z,213nm,19.8s,baz=192,slow=34 5.3nm,1.0s						
BDFB	**Brasilia**	**37.46**	**253**	LR	LR	14 42 37.2	
	comp=Z,109nm,19.7s,baz=121,slow=32						
SUR	**Sutherland**	**39.31**	**135**	LR	LR	14 42 55.9	
	comp=Z,95nm,21.4s,baz=210,slow=31						
MDT	**Midelt**	**39.44**	**8**	LR	LR	14 45 17.2	
	comp=Z,122nm,19.0s,baz=194,slow=35						
LBTB	**Lobatse**	**39.58**	**122**	LR	LR	14 44 58.1	
	comp=Z,103nm,19.4s,baz=177,slow=34						
BOSA	**Boshof**	**40.75**	**127**	P	**P**	**14 30 07.8**	**-0.1**
	4.0nm,1.0s,baz=328,slow=9.6,SNR=4.3						
BOSA				LR	LR	14 44 33.6	
	comp=Z,70nm,21.3s,baz=197,slow=33 4.0nm,1.0s						
MBAR	**Mbarara**	**41.99**	**84**	LR	LR	14 46 45.8	
	comp=Z,245nm,18.1s,baz=262,slow=35						
MDP	**Montagnes des**	**43.15**	**284**	LR	LR	14 45 53.6	
	comp=Z,27nm,18.2s,baz=144,slow=33						
ESDC	**Sonseca Array**	**46.27**	**7**	P	**P**	**14 30 51.9**	**-0.2**
	0.9nm,1.0s,baz=204,slow=2.8,SNR=4.2 0.9nm,1.0s						
CPUP	**Villa Florida**	**48.39**	**240**	LR	LR	14 49 42.0	
	comp=Z,85nm,18.4s,baz=126,slow=34						
VAE	**Valguarnera**	**49.64**	**27**	LR	LR	14 53 24.0	
	comp=Z,109nm,18.1s,baz=316,slow=38						
SIV	**San Ignacio**	**49.97**	**255**	LR	LR	14 50 07.7	
	comp=Z,82nm,19.1s,baz=142,slow=33						
IDI	**Anoyia**	**53.44**	**37**	LR	LR	14 55 22.9	
	comp=Z,57nm,18.7s,baz=264,slow=37						
DAVOX	**Davos/Dischmat**	**56.07**	**17**	P	**P**	**14 32 05.4**	**-0.3**
	4.2nm,0.9s,baz=171,slow=19,SNR=4.5						
DAVOX				LR	LR	14 56 15.7	
	comp=Z,70nm,18.1s,baz=314,slow=36 4.2nm,0.9s						
LPAZ	**La Paz**	**56.76**	**255**	LR	LR	14 55 49.3	
	comp=Z,46nm,20.0s,baz=105,slow=35						
EIL	**Elat**	**56.80**	**48**	LR	LR	14 57 12.9	
	comp=Z,63nm,18.1s,baz=258,slow=37						
LVC	**Limon Verde**	**58.03**	**247**	LR	LR	14 56 40.3	
	comp=Z,62nm,18.7s,baz=135,slow=35						
MMAI	**Mount Meron Ar**	**58.90**	**45**	LR	LR	14 57 10.6	
	comp=Z,50nm,20.3s,baz=260,slow=35						
GERES	**GERESS Array B**	**59.08**	**19**	P	**P**	**14 32 26.6**	**-0.2**
	1.9nm,0.8s,baz=198,slow=6.6,SNR=14						
GERES				LR	LR	14 58 07.7	
	comp=Z,64nm,18.6s,baz=244,slow=36 1.9nm,0.8s						
SJG	**San Juan**	**59.63**	**295**	LR	LR	14 53 15.0	
	comp=Z,37nm,21.3s,baz=142,slow=31						
BRTR	**Keskin Array B**	**61.60**	**38**	LR	LR	14 59 39.5	
	comp=Z,40nm,20.8s,baz=164,slow=36						
EKA	**Eskdalemuir Ar**	**61.83**	**5**	LR	LR	14 58 00.3	
	comp=Z,27nm,20.1s,baz=183,slow=34						
PLCA	**Paso Flores**	**63.00**	**227**	LR	LR	14 57 51.9	
	comp=Z,52nm,18.4s,baz=140,slow=34						
NNA	**Nana**	**65.16**	**260**	LR	LR	14 59 32.1	
	comp=Z,84nm,21.8s,baz=118,slow=34						
AKASG	**Malin Array Be**	**66.56**	**27**	P	**P**	**14 33 16.7**	**+0.2**
	1.0nm,0.6s,baz=227,slow=7.0,SNR=16 1.0nm,0.6s						
ATAH	**Atahualpa**	**66.92**	**265**	LR	LR	15 01 09.1	
	comp=Z,77nm,20.3s,baz=125,slow=35						
NOA	**NORSAR Array B**	**69.42**	**11**	P	**P**	**14 33 34.5**	**+0.2**
	0.2nm,0.3s,baz=188,slow=9.7,SNR=2.6						
NOA				LR	LR	15 04 31.2	
	comp=Z,34nm,18.0s,baz=340,slow=36 0.2nm,0.3s						
FINES	**FINESS Array B**	**73.47**	**18**	P	**P**	**14 33 59.3**	**+0.6**
	3.3nm,0.8s,baz=231,slow=8.8,SNR=4.6 3.3nm,0.8s						
WSAR	**Wadi Sarin**	**74.00**	**64**	LR	LR	15 05 18.3	
	comp=Z,77nm,20.2s,baz=174,slow=35						
ULM	**Lac du Bonnet**	**91.61**	**320**	LR	LR	15 09 02.3	
	comp=Z,45nm,19.3s,baz=328,slow=30						
PALK	**Pallekele**	**92.43**	**83**	LR	LR	15 13 40.0	
	comp=Z,54nm,19.9s,baz=316,slow=33						
RPN	**Rapa Nui**	**94.53**	**242**	LR	LR	15 12 29.4	
	comp=Z,66nm,18.4s,baz=68,slow=32						
MKAR	**Makanchi Array**	**96.83**	**44**	LR	LR	15 22 53.8	
	comp=Z,22nm,18.0s,baz=270,slow=38						

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*BJI **07** 14:23:50.9±0.0, 52°.00N×178°.03E, h92^{km}, mb4.9/63, mB5.0/31*
*MOS **07** 14:23:51.8±1.0, 51°.90N×178°.52E, h112^{km}, mb4.8/62, Error ellipse: s-maj=6.3km s-min=5.5km az=107.9*
*NEIC **07** 14:23:52.8±1.3, 51°.93N±0°.09×178°.48E±0°.09, h104^{km}±5^{km}, mb4.9/252, ML4.3(AEIC), Error ellipse: s-maj=13.4km s-min=7.9km az=175.0*
*IDC **07** 14:23:52.1±0.4, 51°.90N×178°.52E, h98^{km}±2^{km}, mb4.3/46, mbtmp4.7/50, MS3.4/39, Error ellipse: s-maj=10.0km s-min=6.2km az=178.0*
*AEIC **07** 14:23:52.5±2.0, 51°.71N±0°.10×178°.39E±0°.09, h104^{km}±4^{km}, Error ellipse: s-maj=13.8km s-min=8.1km az=178.0*
*GCMT **07** 14:23:53.8±0.3, 51°.88N±0°.03×178°.60E±0°.03, h84^{km}±4^{km}, MW4.8/86, Moment Tensor Solution. s28,c32; s86,c110; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.06±.11; $M_{\theta\theta}$-1.02±.12; $M_{\phi\phi}$2.08±.10; $M_{r\theta}$1.00±.07; $M_{\theta\phi}$0.17±.12; $M_{\phi r}$-0.96±.06; Best double couple: $M_0$2.27300×10^{16} NP1:ϕ_s329.00000°, δ71.00000°, λ-131.00000°. NP2: ϕ_s219.00000°, δ44.00000°, λ-27.00000°. Principal axes: T 2.3520, Plg16.0000°, Azm88.0000°; N -0.1590, Plg38.0000°, Azm345.0000°; P -2.1930, Plg47.0000°, Azm196.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 07 14:23:52.3±0.3**, 51°.90N**±0°.05×**178°.45E**±0°.03**, h102**^{km}±1^{km}**, h101**^{km}**:pP-P, n911, σ0^{s}.91**/979**, mb4.9**/228**, 19C-24D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIWB	**Kanaga Island**	**2.73**	**89**		**Pn**	**14 24 34.0**	**-0.4**
SHEM	**Shemya Is, Ala**	**2.80**	**289**	P	**Pn**	**14 24 35.0**	**-0.2**
	703nm,0.3s,baz=125,slow=16,SNR=113						
SHEM				S	**Sn**	**14 25 09.2**	**+0.8**
	866nm,0.3s,baz=259,slow=21,SNR=12						
SHEM				LR	LR	14 25 26.6	
	comp=Z,1μm,18.9s,baz=328,slow=33						
SMY	**Shemya**	**2.80**	**289**	Pn	**Pn**	**14 24 34.8**	**-0.5**

SMY	Shemya	2.80	289	P	Pn	14 24 35.2	-0.1
SMY	Shemya	2.80	289	P	Pn	14 24 34.8	-0.5
ADK	Adak	3.02	88	Pn	Pn	14 24 37.4	-0.8
ADK	Adak	3.02	88	P	Pn	14 24 37.4	-0.8
GSTR	Great Sitkin T	3.40	85		Pn	14 24 42.3	-1.1
CLES	Cleveland East	7.20	78	Pn	Pn	14 25 35.0	+0.3
NIKH	Nikolski High	7.83	77	Pn	Pn	14 25 43.7	+0.3
NIKH	Nikolski High	7.83	77	P	Pn	14 25 45.3	+1.9
NIKH	Nikolski High	7.83	77	P	Pn	14 25 42.7	-0.6
	baz=267,SNR=5.9						
SPIA	Saint Paul Isl	8.43	47	P	Pn	14 25 54.7	+3.3
SPIA	Saint Paul Isl	8.43	47	P	Pn	14 25 50.8	-0.6
	baz=236,SNR=5.5						
UNV	Unalaska Valle	9.31	72	Pn	Pn	14 26 04.1	+0.8
UNV	Unalaska Valle	9.31	72	P	Pn	14 26 02.9	-0.5
	baz=264,SNR=6.9						
AKUT	Akutan	9.77	71	Pn	Pn	14 26 10.7	+1.1
AKUT	Akutan	9.77	71	P	Pn	14 26 12.2	+2.6
FALS	False Pass	11.22	68		Pn	14 26 30.3	+0.9
FALS	False Pass	11.22	68	P	Pn	14 26 30.8	+1.5
FALS	False Pass	11.22	68	P	Pn	14 26 29.3	0.0
	baz=262,SNR=10						
S12K	Black Hills	12.12	64	P	Pn	14 26 42.1	+0.8
	baz=260						
PET	Petropavlovsk	12.13	283		Pn	14 26 41.8	+0.4
PET	Petropavlovsk	12.13	283	P	Pn	14 26 42.2	+0.8
PET	Petropavlovsk	12.13	283	eP	Pn	14 26 41.1	-0.3
PET				eS	Sn	14 28 47.2	-7.3
PET				pmax	pmax		
	comp=Z,44nm,0.7s						
PEA0B	Petropavlovsk-	12.70	284	Pn	Pn	14 26 49.5	+0.6
PEA0B	Petropavlovsk-	12.70	284	deP	Pn	14 26 50.6	+1.7
PETK	Petropavlovsk-	12.70	284	P	Pn	14 26 49.2	+0.3
	comp=Z,19nm,0.7s,baz=89,slow=16,SNR=74						
PETK				S	Sn	14 29 07.2	-1.1
	comp=Z,5.9nm,0.5s,baz=93,slow=24,SNR=4.1						
PETK				LR	LR	14 32 43.9	
	comp=Z,39nm,18.3s,baz=93,slow=42						
PETK	Petropavlovsk-	12.70	284		Pn	14 26 49.1	+0.2
SDPT	Sand Point	12.96	66	Pn	Pn	14 26 51.2	-1.2
SDPT	Sand Point	12.96	66	P	Pn	14 26 51.6	-0.8
	baz=263,SNR=16						
SKR	Severo-Kuril's	14.02	274	eP	P	14 27 09.0	-1.8
SKR				eS	Sn	14 29 32.3	-8.1
SKR				pmax	pmax		
	comp=Z,338nm,0.5s						
SKR				smax	smax		
	comp=N,186nm,0.9s						
SKR				smax	smax		
	comp=E,144nm,0.8s						
CHGN	Chignik	14.24	63	P	Pn	14 27 08.6	-0.4
	baz=262						
R16K	Pilot Point	14.92	58	P	Pn	14 27 17.2	-0.4
	baz=258						
P16K	Nushagak River	15.09	53	P	Pn	14 27 19.8	0.0
	baz=252,SNR=34						
ANM	Nome	15.22	27	P	P	14 27 24.1	+0.1
ANM					PcP	14 32 21.2	+1.0
ANM	Nome	15.22	27	P	P	14 27 24.1	+0.1
ANM	Nome	15.22	27	P	Pn	14 27 21.2	-0.1
	baz=221						
O16K	Kokwok River B	15.22	50	P	Pn	14 27 21.0	-0.4
	baz=250						
N16K	Nishlik Lake	15.24	47	P	Pn	14 27 21.6	-0.1
	baz=246,SNR=24						
TNA	Tin City	15.36	22	P	P	14 27 25.5	0.0
TNA					PcP	14 32 21.3	+1.0
TNA	Tin City	15.36	22	P	Pn	14 27 23.2	+0.2
	baz=213,SNR=12						
R17K	Ugashik Creek	15.56	58	P	Pn	14 27 25.5	-0.2
	baz=259						
Q16K	King Salmon	15.65	55	P	Pn	14 27 27.1	+0.2
	baz=255,SNR=12						
O17K	Koliganek Bris	15.76	50	P	Pn	14 27 28.5	+0.3
	baz=251,SNR=12						
Q17K	Contact Creek	15.95	56	P	Pn	14 27 30.7	+0.1
	baz=258,SNR=20						
Q18K	Katmai Hardscr	16.48	55	P	Pn	14 27 37.5	+0.3
	baz=257,SNR=20						
P18K	Big Mountain,	16.55	53	P	Pn	14 27 37.7	-0.3
	baz=255						
O18K	Koktuh Hills	16.69	51	P	P	14 27 40.7	+0.4
O18K	Koktuh Hills	16.69	51	P	Pn	14 27 39.5	-0.2
	baz=253,SNR=18						
SVW2	Sparrevohn	16.93	47	P	P	14 27 43.8	+0.9
SVW2	Sparrevohn	16.93	47	P	P	14 27 45.1	+2.2
O19K	Port Alsworth	17.22	51	P	Pn	14 27 46.8	+0.7
O19K	Port Alsworth	17.22	51	P	P	14 27 45.7	-0.4
	baz=253,SNR=48						
BILL	Bilibino	17.24	344	P	Pn	14 27 46.7	+0.5
BILL	Bilibino	17.24	344	⇑iP	Pn	14 27 48.3	+2.0
BILL				pmax	pmax		
	comp=Z,23nm,0.9s						
BILL				MLR	MLR		
	comp=Z,85nm,16.0s						
Q19K	Cape Douglas,	17.24	55	P	Pn	14 27 46.8	+0.4
Q19K	Cape Douglas,	17.24	55	P	P	14 27 46.4	0.0
	baz=258,SNR=5.9						
N19K	Bonanza Creek	17.33	48	P	P	14 27 47.1	-0.4
	baz=251,SNR=70						
TTA	Tatalina	17.50	41	P	Pn	14 27 50.0	+0.4
TTA	Tatalina	17.50	41	P	Pn	14 27 50.9	+1.3
TTA	Tatalina	17.50	41	P	Pn	14 27 50.0	+0.4
TTA	Tatalina	17.50	41	P	P	14 27 49.4	+0.1
	baz=243,SNR=45						
KDAK	Kodiak Island	17.60	59	P	P	14 27 48.6	-1.7
	comp=Z,54nm,0.6s,baz=263,slow=7.2,SNR=89						
KDAK				S	Sn	14 31 02.6	-3.9
	comp=Z,6.4nm,0.9s,baz=307,slow=20,SNR=1.4						
KDAK				LR	LR	14 35 10.4	
	comp=Z,136nm,18.7s,baz=271,slow=39						
KDAK	Kodiak Island	17.60	59	P	P	14 27 47.9	-2.4
KDAK	Kodiak Island	17.60	59	ceP	P	14 27 49.2	-1.1
KDAK				pmax	pmax		
	comp=Z,88nm,0.7s						
P19K	Oil Pt	17.61	53	P	Pn	14 27 51.8	+1.0
P19K	Oil Pt	17.61	53	P	P	14 27 50.2	-0.2
	baz=256						
L19K	White Mountain	17.66	44	P	Pn	14 27 51.5	0.0
	baz=247,SNR=32						
SEY	Seymchan	17.71	319	P	Pn	14 27 52.0	-0.1
	comp=Z,2.3nm,0.8s,baz=122,slow=15,SNR=7.2						
SEY				PcP	PcP	14 32 24.0	0.0
	comp=Z,1.1nm,0.7s,baz=168,slow=3.1,SNR=3.6						
SEY	Seymchan	17.71	319	⇑eP	P	14 27 51.6	+0.1
SEY				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ILSW	Iliamna Southw	17.73	52	P	Pn	14 27 53.1	+0.6
Q20K	Shuyak Island	17.82	56	P	P	14 27 51.9	-0.8
	baz=261						
O20K	Slope Mountain	18.01	52	P	Pn	14 27 55.5	-0.2
	baz=256,SNR=15						
RSO	Redoubt South	18.04	50	P	Pn	14 27 56.6	+0.4
GCSA	Galena City Sc	18.09	35	P	Pn	14 27 56.3	-0.2
	baz=236,SNR=15						
L20K	Farewell, AK	18.20	44	P	P	14 27 57.1	+0.2
	baz=247						
M20K	Styx River	18.30	46	P	P	14 27 58.2	0.0
	baz=250						
HOM	Homer	18.39	53	P	Pn	14 27 59.8	-0.5
HOM	Homer	18.39	53	P	P	14 27 59.3	+0.3
	baz=258						
K20K	Telida	18.48	41		Pn	14 28 01.3	0.0
K20K	Telida	18.48	41	P	Pn	14 28 00.9	-0.4
	baz=244						
SPCR	Spurr Chakacha	18.50	48	P	Pn	14 28 01.3	-0.4
	baz=253,SNR=26						
RDOG	Red Dog Mine	18.55	22	P	P	14 28 01.3	+0.6
RDOG	Red Dog Mine	18.55	22	P	P	14 28 01.3	+0.6
	baz=218						
CNPM	China Poot	18.57	54	P	P	14 28 00.9	-0.1
SPU	Mount Spurr	18.57	49		Pn	14 28 02.8	+0.3
BRLK	Bradley Lake	18.79	53	P	P	14 28 03.0	-0.4
BRSE	Bradley Lake S	18.86	53	P	P	14 28 04.1	0.0
	baz=259,SNR=7.4						
CAPN	Captain Cook N	18.88	50	Pn	Pn	14 28 06.3	+0.3
CAPN	Captain Cook N	18.88	50	P	P	14 28 03.3	-1.0
	baz=256						
SKT	Skwentna	19.05	46		Pn	14 28 08.1	+0.1
SKT	Skwentna	19.05	46	P	P	14 28 06.2	0.0
	baz=252,SNR=43						
PPLA	Purkeypile	19.08	43	P	P	14 28 05.4	-1.2
	baz=248,SNR=28						
SUA	Susitna One	19.25	48	P	P	14 28 09.4	+0.9
SUA	Susitna One	19.25	48	P	P	14 28 07.8	-0.7
	baz=254,SNR=12						
CAST	Castle Rocks	19.32	42	P	Pn	14 28 10.5	-0.7
CAST	Castle Rocks	19.32	42	P	P	14 28 08.9	-0.2
	baz=247,SNR=36						
CHUM	Lake Minchumin	19.41	41	P	P	14 28 09.0	-1.1
	baz=246,SNR=89						
O22K	Cooper Landing	19.50	51	P	P	14 28 11.0	0.0
O22K	Cooper Landing	19.50	51	P	P	14 28 10.6	-0.5
	baz=258,SNR=14						
SEW	Seward	19.56	53	P	P	14 28 11.4	-0.3
SEW	Seward	19.56	53	P	P	14 28 11.3	-0.5
	baz=260,SNR=12						
M22K	Willow	19.62	48	P	P	14 28 12.5	+0.1
M22K	Willow	19.62	48	P	P	14 28 12.4	0.0
	baz=254,SNR=19						
RC01	Rabbit Creek A	19.63	50	P	P	14 28 12.9	+0.4
RC01	Rabbit Creek A	19.63	50	P	P	14 28 12.6	+0.1
	baz=256,SNR=24						
CUT	Chulitna	19.75	46	P	P	14 28 14.5	+0.8
CUT	Chulitna	19.75	46	P	P	14 28 14.1	+0.4
	baz=252,SNR=7.3						
KTH	Kantishna Hill	19.85	42	P	P	14 28 16.0	+1.0
IMAR	Indian Mountai	19.87	34	P	P	14 28 16.1	+1.1
H21K	Melozitna Rive	20.03	36	P	P	14 28 18.0	+1.2
H21K	Melozitna Rive	20.03	36	P	P	14 28 17.2	+0.4
	baz=240,SNR=75						
BPAW	Bear Paw Mtn.	20.04	41	P	Pn	14 28 18.2	-1.3
BPAW	Bear Paw Mtn.	20.04	41	P	P	14 28 17.2	+0.3
	baz=247,SNR=40						
PMR	Palmer	20.04	48	P	P	14 28 16.4	-0.4
PMR	Palmer	20.04	48	P	P	14 28 18.1	+1.3
PMR	Palmer	20.04	48	P	P	14 28 16.4	-0.4
PMR	Palmer	20.04	48	P	P	14 28 16.8	0.0
	baz=256						
TRF	Thorofare Moun	20.08	43	P	P	14 28 17.3	-0.2
	baz=250						
I21K	Tanana	20.11	37	P	Pn	14 28 19.2	-1.2
I21K	Tanana	20.11	37	P	P	14 28 17.3	-0.3
	baz=243						
GHO	Glory Hole Cre	20.18	48	P	P	14 28 19.8	+1.3
G21K	Allakaket	20.23	33	P	P	14 28 19.3	+0.4
	baz=237						
PWL	Port Wells	20.25	51	P	P	14 28 18.5	-0.6
PWL	Port Wells	20.25	51	P	P	14 28 19.2	0.0
	baz=259,SNR=12						
KNK	Knik Glacier	20.31	49	P	P	14 28 19.7	-0.1
KNK	Knik Glacier	20.31	49	P	P	14 28 20.0	+0.1
	baz=257,SNR=29						
SML	Sawmill	20.46	48	P	P	14 28 21.1	-0.4
SML	Sawmill	20.46	48	P	P	14 28 21.3	-0.1
	baz=256,SNR=31						
MLY	Manley	20.52	38	P	P	14 28 23.3	+1.3
MLY	Manley	20.52	38	P	P	14 28 21.8	-0.2
	baz=245,SNR=32						
P23K	Montague Islan	20.56	53	P	P	14 28 21.6	-0.9
	baz=262,SNR=13						
F21K	Alatna River	20.63	31	P	P	14 28 23.4	+0.1
	baz=236						
H22K	Ishtalitna Cre	20.66	36	P	P	14 28 22.8	-0.8
	baz=242						
RND	Reindeer	20.67	44	P	P	14 28 24.5	+0.7
RND	Reindeer	20.67	44	P	P	14 28 24.5	+0.7
BWN	Browne	20.68	41	P	Pn	14 28 25.6	-1.4
M23K	Glacier View	20.73	48	P	P	14 28 23.8	-0.5
	baz=257,SNR=20						
MCK	McKinley	20.75	43	P	P	14 28 25.1	+0.6
MCK	McKinley	20.75	43	P	P	14 28 25.1	+0.6
MCK	McKinley	20.75	43	P	P	14 28 24.5	0.0
	baz=250,SNR=29						
SCM	Sheep Creek Mo	20.93	48	P	P	14 28 26.4	-0.1
SCM	Sheep Creek Mo	20.93	48	P	P	14 28 26.4	-0.1
SCM	Sheep Creek Mo	20.93	48	P	P	14 28 26.2	-0.3
	baz=257,SNR=27						
NEA2	Nenana	21.00	40	P	P	14 28 27.6	+0.5
NEA2	Nenana	21.00	40	P	P	14 28 27.3	+0.2
	baz=248,SNR=35						
Q23K	Middleton Isla	21.02	55	P	P	14 28 28.6	+1.1
Q23K	Middleton Isla	21.02	55	P	P	14 28 27.1	-0.3
	baz=265						
MID	Middleton Isla	21.03	55	P	P	14 28 28.4	+0.9
MID	Middleton Isla	21.03	55	P	P	14 28 28.4	+0.9
I23K	Minto, Yukon-K	21.10	39	P	P	14 28 28.9	+0.8
I23K	Minto, Yukon-K	21.10	39	P	P	14 28 28.6	+0.5
	baz=246,SNR=21						
H23K	Yukon River	21.31	37	P	P	14 28 31.5	+1.0
H23K	Yukon River	21.31	37	P	P	14 28 30.9	+0.4
	baz=245						
EYAK	Cordova Ski Ar	21.45	52	P	P	14 28 31.6	-0.5
EYAK	Cordova Ski Ar	21.45	52	P	P	14 28 33.2	+1.2
EYAK	Cordova Ski Ar	21.45	52	P	P	14 28 32.4	+0.4
	baz=262,SNR=17						
MDM	Murphy Dome	21.47	40	P	P	14 28 32.1	-0.1
KLU	Klutina	21.52	50	P	P	14 28 32.6	-0.2
KLU	Klutina	21.52	50	P	P	14 28 33.5	+0.7
	baz=260,SNR=27						
M24K	Tolsona, Glenn	21.52	48	P	P	14 28 32.8	-0.1
M24K	Tolsona, Glenn	21.52	48	P	P	14 28 33.1	+0.3
	baz=258,SNR=13						
CCB	Clear Creek Bu	21.52	41	P	P	14 28 32.5	-0.2
DIV	Divide	21.53	51	P	P	14 28 32.3	-0.6
G23K	Bananza Creek	21.53	35	P	P	14 28 33.2	+0.3
	baz=242,SNR=56						
TCOL	CIGO, UAF Yank	21.58	40	P	P	14 28 33.6	+0.3
TCOL	CIGO, UAF Yank	21.58	40	P	P	14 28 33.7	+0.3
	baz=249						
COLA	College	21.59	40	P	P	14 28 33.6	+0.2
COLA	College	21.59	40	P	P	14 28 34.8	+1.4
COLA	College	21.59	40	deP	P	14 28 34.7	+1.4
COLA				pmax	pmax		
	comp=Z,25nm,1.0s						
COLA	College	21.59	40	P	P	14 28 33.5	+0.2
	baz=249						
COLD	Coldfoot	21.72	33	P	P	14 28 34.5	-0.3
COLD	Coldfoot	21.72	33	P	P	14 28 35.0	+0.2
	baz=241						
HDA	Harding Lake	21.79	42	P	P	14 28 35.4	-0.2
	baz=251,SNR=10						
POKR	Poker Plat Res	21.84	40	P	P	14 28 35.9	-0.2
POKR	Poker Plat Res	21.84	40	P	P	14 28 36.5	+0.4
	baz=249,SNR=14						
H24K	Noodor Dome	21.94	38	P	P	14 28 37.3	+0.1
H24K	Noodor Dome	21.94	38	P	P	14 28 36.9	-0.3
	baz=247						
IL31		21.94	41	P	P	14 28 35.6	-1.5
ILAR	Eielson Array	21.94	41	P	P	14 28 36.1	-1.1
	comp=Z,7.2nm,0.7s,baz=241,slow=8.3,SNR=48						
ILAR				PcP	PcP	14 32 31.1	-0.7
	comp=Z,0.7nm,0.6s,baz=287,slow=3.4,SNR=4.1						
ILAR				ScP	ScP	14 35 58.2	-1.2
	comp=Z,2.3nm,0.7s,baz=275,slow=3.4,SNR=17						
ILAR				LR	LR	14 36 34.7	
	comp=Z,106nm,21.1s,baz=194,slow=35						
	comp=Z,7.2nm,0.7s						
ILAR	Eielson Array	21.94	41	P	P	14 28 35.6	-1.6
PAX	Paxson	22.03	46	P	P	14 28 37.9	-0.4
PAX	Paxson	22.03	46	P	P	14 28 37.9	-0.4
PAX	Paxson	22.03	46	P	P	14 28 38.4	+0.1
	baz=257,SNR=34						
HARP	HAARP	22.05	47	P	P	14 28 37.7	-0.6
	baz=258,SNR=10						
K24K	Donnelly Dome	22.11	44	P	P	14 28 38.0	-0.9
	baz=254,SNR=14						
N25K	Chitina, Valde	22.16	50	P	P	14 28 39.5	-0.2
N25K	Chitina, Valde	22.16	50	P	P	14 28 39.0	-0.7
	baz=261,SNR=15						
TYV	Tymovskoe	22.23	282	eP	P	14 28 42.0	+1.7
TYV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TYV				pmax	pmax		
	comp=Z,300nm,4.2s						
E23K	Chandalar	22.33	32	P	P	14 28 40.5	-0.9
	baz=240						
G24K	Hadweenzic Riv	22.44	36	P	P	14 28 42.2	-0.1
	baz=245						
A21K	Barrow	22.47	21	P	P	14 28 42.1	-0.4
	baz=223						
D23K	Nanushuk River	22.48	29	P	P	14 28 42.3	-0.5
	baz=236						
RIDG	Independent Ri	22.49	44	P	P	14 28 41.9	-1.1
RIDG	Independent Ri	22.49	44	P	P	14 28 42.7	-0.3
	baz=256,SNR=15						
GLB	Gilahina Butte	22.51	50	P	P	14 28 42.7	-0.5
TOLK	Toolik Lake Re	22.65	30	P	P	14 28 44.9	+0.4
TOLK	Toolik Lake Re	22.65	30	P	P	14 28 44.0	-0.6
	baz=238,SNR=54						
F24K	Squaw Lake	22.65	34	P	P	14 28 43.6	-0.9
	baz=243						
VRDI	Verde Repeater	22.65	51	P	P	14 28 44.4	-0.4
E24K	Your Creek	22.71	32	P	P	14 28 44.3	-0.9
	baz=241						
PRP	Porcupine Dome	22.73	39	P	P	14 28 45.3	-0.2
PRP	Porcupine Dome	22.73	39	P	P	14 28 44.2	-1.3
	baz=251,SNR=24						
MENT	Mentasta	22.80	46	P	P	14 28 46.0	-0.1
MENT	Mentasta	22.80	46	P	P	14 28 47.2	+1.1
DOT	Dot Lake	22.80	44	P	P	14 28 45.2	-1.0
MCARA	McCarthy VSAT	22.88	50	P	P	14 28 46.7	-0.1
MCARA	McCarthy VSAT	22.88	50	P	P	14 28 46.1	-0.8
	baz=263,SNR=48						
SCRK	Sand Creek	22.92	44	P	P	14 28 46.1	-1.3
SCRK	Sand Creek	22.92	44	P	P	14 28 46.3	-1.0
	baz=256,SNR=21						
G25K	Bearman Lake	22.96	36	P	P	14 28 47.1	-0.5
	baz=247						
L26K	Log Cabin Wild	22.99	46	P	P	14 28 48.1	+0.1
L26K	Log Cabin Wild	22.99	46	P	P	14 28 47.5	-0.4
	baz=259,SNR=10.0						
M26K	Nabesna, AK	23.04	48	P	P	14 28 48.1	-0.4
M26K	Nabesna, AK	23.04	48	P	P	14 28 47.6	-0.8
	baz=261						
FYU	Fort Yukon	23.21	37	P	P	14 28 50.4	+0.5
J26L	Joseph Creek	23.23	42	P	P	14 28 49.3	-0.9
J26L	Joseph Creek	23.23	42	P	P	14 28 49.6	-0.6
	baz=255,SNR=37						
F25K	Christian Rive	23.46	34	P	P	14 28 52.5	+0.2
	baz=246,SNR=29						
C24K	Franklin Bluff	23.49	28	P	P	14 28 51.5	-0.9
	baz=238,SNR=23						
BARN	Barnard Glacie	23.50	51	P	P	14 28 52.9	0.0
M27K	Edge Creek, AK	23.54	48	P	P	14 28 53.4	+0.2
M27K	Edge Creek, AK	23.54	48	P	P	14 28 52.9	-0.3
	baz=262						
YSS	Yuzh-Sakhalins	23.58	272	eP	P	14 28 55.1	+1.6
YSS				e*PP	pP	14 29 18.1	+3.8
YSS				e		14 29 29.9	
YSS				e		14 32 36.0	
YSS				eS	S	14 33 02.1	+2.3
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				smax	smax		
	comp=N,200nm,5.3s						
YSS				smax	smax		
	comp=E,200nm,4.1s						
YSS				MLR	MLR		
	comp=Z,100nm,15.0s						
I26K	Coal Creek Min	23.61	41	P	P	14 28 53.1	-0.5
	baz=254						
CTG	Chitna Glacier	23.65	52	P	P	14 28 53.2	-1.0
	baz=266						
L27K	Beaver Creek,	23.68	46	P	P	14 28 54.0	-0.2
L27K	Beaver Creek,	23.68	46	P	P	14 28 53.3	-1.0
	baz=260,SNR=75						
BCAR	Beaver Creek A	23.70	46	P	P	14 28 54.3	-0.1
E25K	Arctic Village	23.71	33	P	P	14 28 53.8	-0.6
	baz=245,SNR=10						
BMAR	Burnt Mountain	23.77	35	P	P	14 28 55.7	+0.6
G26K	Porcupine Rive	23.88	37	P	P	14 28 55.4	-0.6
	baz=250,SNR=75						
D25K	Kavik River	23.99	30	P	P	14 28 57.2	+0.2
	baz=241						
BVCY	Beaver Creek	24.02	48	P	P	14 28 57.5	+0.1
	baz=263,SNR=27						
F26K	Sheenjek River	24.03	35	P	P	14 28 57.2	-0.2
	baz=248						
YUK3	Moose Creek	24.14	50	P	P	14 28 58.3	-0.3
	baz=265,SNR=67						
PCA	Pinnacle	24.14	54	P	P	14 28 58.0	-0.5
PINM	Pinnacle	24.14	54	P	P	14 28 58.0	-0.5
	baz=269,SNR=13						
O28M	Mount Upton	24.20	52	P	P	14 28 58.6	-0.6
	baz=267,SNR=76						
EGAK	Eagle	24.30	42	P	P	14 28 59.6	-0.2
EGAK	Eagle	24.30	42	P	P	14 28 59.5	-0.2
	baz=257,SNR=59						
I27K	Kandik River	24.31	40	P	P	14 28 59.9	-0.1
	baz=255						
YUK8	Steele Glacier	24.43	51	P	P	14 29 01.1	-0.3
	baz=266,SNR=61						
BCPM	Bancas Point	24.45	54	P	P	14 29 01.2	0.0
H27K	Steamboat Moun	24.51	39	P	P	14 29 01.3	-0.5
	baz=254						
PNL	Peninsula	24.57	55	P	P	14 29 01.6	-0.7
	baz=270						
G27K	Doyon Strip	24.63	38	P	P	14 29 03.2	+0.4
	baz=252,SNR=12						
C26K	Camden Bay	24.72	30	P	P	14 29 03.5	-0.1
	baz=242						
DAWY	Dawson	24.92	44	P	P	14 29 05.5	0.0
DAWY	Dawson	24.92	44	P	P	14 29 05.7	+0.2
	baz=261,SNR=42						
C27K	Jago River	24.96	31	P	P	14 29 05.9	+0.1
	baz=244						
YUK4	Talbot Arm	24.98	51	P	P	14 29 07.2	+0.9
	baz=267,SNR=77						
O29M	Mount Kennedy	24.98	53	P	P	14 29 06.0	-0.3
	baz=270,SNR=10						
JKA	Kamikawa-asahi	25.01	266	P	P	14 29 06.6	+0.2
ASAJ	Asahikawa	25.01	266	P	P	14 29 07.5	+1.0
	comp=Z,25nm,0.9s,baz=65,slow=3.9,SNR=16						
	comp=Z,25nm,0.9s						
YUK6	Outpost Mounta	25.10	52	P	P	14 29 07.6	+0.2
	baz=268,SNR=14						
E27K	Coleen River	25.10	34	P	P	14 29 07.5	+0.4
	baz=250,SNR=34						
M29M	Somme Creek	25.14	48	P	P	14 29 07.7	+0.1
	baz=265						
L29M	L29M	25.35	47	P	P	14 29 09.7	+0.3
	baz=264						
HYT	Haines Junctio	25.52	52	P	P	14 29 11.0	-0.1
HYT	Haines Junctio	25.52	52	P	P	14 29 11.2	+0.2
	baz=270,SNR=30						
I29M	Ogilvie Camp,	25.60	42	P	P	14 29 10.9	-0.7
I29M				IAmb	IAmb	14 29 37.5	
	comp=Z,34nm,0.9s						
I29M	Ogilvie Camp,	25.60	42	P	P	14 29 11.5	-0.1
	baz=259						
K29M	Barlow Dome	25.70	45	P	P	14 29 13.1	+0.4
	baz=263						
N30M	Aishikik Lake	25.73	51	P	P	14 29 13.0	+0.1
	baz=269						
P30M	Million Dollar	25.79	54	P	P	14 29 13.2	-0.2
	baz=272						
ERM	Erimo	25.80	262	⇑eP	P	14 29 10.5	-3.2
ERM				pmax	pmax		
	comp=Z,90nm,1.7s						
M30M	Minto, Yukon	25.92	48	P	P	14 29 14.7	+0.1
	baz=266,SNR=21						
GRNR	Gornyy	26.02	284	⇑iP	P	14 29 16.2	+0.6
GRNR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,190nm,18.0s						
GRNR				MLR	MLR		
	comp=N,120nm,16.0s						
PLBC	Pleasant Camp	26.12	55	P	P	14 29 16.1	-0.3
	baz=273						
O30N	Mendenhall	26.21	52	P	P	14 29 16.9	-0.3
	baz=271						
S31K	Pelican	26.32	59	P	P	14 29 18.7	+0.5
	baz=276						
N31M	Braeburn, Yuko	26.36	51	P	P	14 29 18.0	-0.6
	baz=270,SNR=10						
EPYK	Eagle Plains	26.43	40	P	P	14 29 18.8	-0.4
EPYK				IAmb	IAmb	14 29 20.5	
	comp=Z,31nm,0.8s						
EPYK	Eagle Plains	26.43	40	P	P	14 29 19.3	+0.1
	baz=259,SNR=21						
SKAG	Skagway	26.65	55	P	P	14 29 21.1	0.0
SKAG	Skagway	26.65	55	P	P	14 29 20.4	-0.7
	baz=274						
G30M	tAoh Zraii Nji	26.75	38	P	P	14 29 21.3	-0.7
	baz=258,SNR=6.4						
SIT	Sitka	26.92	61	P	P	14 29 22.9	-0.6
	baz=279						
M31M	Drury Creek, Y	27.02	49	P	P	14 29 24.5	+0.1
M31M	Drury Creek, Y	27.02	49	P	P	14 29 24.6	+0.1
	baz=270,SNR=8.4						
R32K	Eaglecrest	27.18	58	P	P	14 29 25.6	-0.3
	baz=277						
S32K	Killisnoo	27.26	60	P	P	14 29 26.5	-0.1
	baz=279						
P32M	Atlin	27.46	55	P	P	14 29 28.6	+0.2

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       baz=275,SNR=7.1
FARO  Faro, Yukon      27.51  49  P     P     14 29 29.6 +0.8
FARO  Faro, Yukon      27.51  49  P     P     14 29 28.8  0.0
       baz=270
YAK   Yakutsk          27.78 310  LR    LR    14 39 31.0
       comp=Z,61nm,20.8s,baz=120,slow=34
F31M  Tsiigehtchic     27.79  38  P     P     14 29 31.0 -0.1
       baz=260,SNR=16
P33M  Teslin, Yukon    27.86  53  P     P     14 29 32.1 +0.1
P33M  Teslin, Yukon    27.86  53  P     P     14 29 32.0  0.0
       baz=275,SNR=11
INK   Inuvik           28.03  36  P     P     14 29 33.2 -0.1
       comp=Z,5.6nm,0.9s,baz=251,slow=12,SNR=21
INK                               LR    LR    14 40 59.1
       comp=Z,70nm,19.8s,baz=278,slow=37
       comp=Z,5.6nm,0.9s
INK   Inuvik           28.03  36  P     P     14 29 33.8 +0.5
INK   Inuvik           28.03  36  P     P     14 29 33.8 +0.5
INK                               pmax  pmax
       comp=Z,14nm,1.0s
INK   Inuvik           28.03  36  P     P     14 29 33.6 +0.4
       baz=259,SNR=8.4
Q32M  Nakina River     28.27  56  P     P     14 29 35.7  0.0
       baz=277,SNR=6.5
S34M  Telegraph Cree   29.02  58  P     P     14 29 41.9 -0.3
       baz=280
V35K  Ketchikan        29.30  63  P     P     14 29 45.2 +0.4
       baz=284
TIXI  Tiksi            29.34 331  P     P     14 29 44.8 -0.1
       comp=Z,1.2nm,0.4s,baz=90,slow=20,SNR=8.7
TIXI                              PcP   PcP   14 32 47.9 -0.6
       comp=Z,3.8nm,0.8s,baz=90,slow=6.5,SNR=5.0
TIXI                              ScP   ScP   14 36 20.4 -0.2
       comp=Z,5.9nm,0.7s,baz=90,slow=24,SNR=23
       comp=Z,1.2nm,0.4s
TIXI  Tiksi            29.34 331        PcP   14 32 47.5 -0.9
TIXI  Tiksi            29.34 331⇓eP     P     14 29 45.4 +0.5
TIXI                              pmax  pmax
       comp=Z,3.0nm,1.0s
KLR   Kul'dur          29.39 284  P     P     14 29 46.1 +0.5
       comp=Z,13nm,0.7s,baz=64,slow=8.3,SNR=43
KLR                               LR    LR    14 41 41.1
       comp=Z,50nm,21.3s,baz=62,slow=36
       comp=Z,13nm,0.7s
KLR   Kul'dur          29.39 284d iP    P     14 29 45.9 +0.3
KLR                               pmax  pmax
       comp=Z,24nm,1.3s
DLBC  Dease Lake       29.50  57  P     P     14 29 47.7 +1.1
       comp=Z,11nm,0.8s,baz=291,slow=11,SNR=15
DLBC                              LR    LR    14 42 10.0
       comp=Z,136nm,18.6s,baz=278,slow=37
       comp=Z,11nm,0.8s
DLBC  Dease Lake       29.50  57  P     P     14 29 47.6 +1.0
DLBC  Dease Lake       29.50  57  P     P     14 29 47.2 +0.6
       baz=280,SNR=6.1
T35M  Bob Quinn        29.67  60  P     P     14 29 48.9 +0.9
       baz=282
ZEA   Zeya             30.45 294 eP     P     14 29 54.7 -0.2
ZEA                               pmax  pmax
       comp=Z,10.0nm,1.0s
LIRD  Liard River Hi   31.33  54  P     P     14 30 03.3 +0.8
       baz=281
A36M  Sachs Harbour    31.47  30  P     P     14 30 05.2 +1.5
A36M                              IAmb  IAmb  14 30 06.8
       comp=Z,33nm,0.9s
A36M  Sachs Harbour    31.47  30  P     P     14 30 04.9 +1.3
       baz=261,SNR=40
USRK  Ussuriysk Ar.    31.54 275  P     P     14 30 04.6 +0.1
       comp=Z,4.1nm,0.7s,baz=42,slow=8.2,SNR=4.6
USRK                              PcP   PcP   14 32 55.0 +0.3
       comp=Z,5.9nm,0.7s,baz=70,slow=7.6,SNR=8.8
USRK                              LR    LR    14 41 41.8
       comp=Z,37nm,21.1s,baz=46,slow=34
       comp=Z,4.1nm,0.7s
C36M  Paulatuk         31.57  35  P     P     14 30 05.0 +0.5
C36M                              IAmb  IAmb  14 30 06.3
       comp=Z,15nm,0.8s
C36M  Paulatuk         31.57  35  P     P     14 30 05.1 +0.5
       baz=266,SNR=17
HEH   HeiHe            31.57 288 eP     P     14 30 03.6 -1.2
HEH                               pmax  pmax
       comp=Z,14nm,0.7s
WRGLY Wrigley          31.99  47  P     P     14 30 09.1 +0.8
       baz=277,SNR=6.6
MJAR  Matsushiro Arr   32.20 258  P     P     14 30 11.0 +0.5
       comp=Z,6.4nm,0.7s,baz=50,slow=7.7,SNR=12
       comp=Z,6.4nm,0.7s
MAJO  Matsushiro       32.20 258  P     P     14 30 10.9 +0.5
MAJO                              IAmb  IAmb  14 30 12.7
       comp=Z,21nm,0.9s
MAJO  Matsushiro       32.20 258  P     P     14 30 11.7 +1.2
MAJO  Matsushiro       32.20 258deP     P     14 30 11.3 +0.8
MAJO                              pmax  pmax
       comp=Z,24nm,1.0s
MAJO  Matsushiro       32.20 258  P     P     14 30 11.4 +0.9
MAJO                              sP    sP    14 30 44.7 +0.3
MJB9  Matsu-Tunnel     32.20 258  P     P     14 30 11.9 +1.5
MJB9                              IAmb  IAmb  14 30 13.7
       comp=Z,21nm,0.9s
KOTAN Kotaneelee Air   32.20  52  P     P     14 30 10.7 +0.5
       baz=281,SNR=22
BBB   Bella Bella      32.25  68  LR    LR    14 41 32.4
       comp=Z,48nm,19.1s,baz=277,slow=33
MDJ   Mudanjiang       32.80 277  P     P     14 30 15.0 -0.6
MDJ                               pP    pP    14 30 38.0 -0.4
MDJ                               sP    sP    14 30 48.9 -1.2
MDJ                               PcP   PcP   14 32 59.6 +1.4
MDJ                               S     S     14 35 22.0 -3.1
MDJ                               sS    sS    14 36 02.6 -1.8
MDJ                               ScP   ScP   14 36 33.5 +0.8
MDJ                               PcS   PcS   14 36 45.2 +1.7
MDJ                               SS    SnSn  14 37 26.6 -5.3
MDJ                               ScS   ScS   14 40 33.5 +0.8
MDJ                               pmax  pmax
       comp=Z,5.0nm,0.7s
MDJ                               pmax  pmax
       comp=Z,200nm,4.8s
JGF   Kuroka           33.34 257  P     P     14 30 21.5 +1.0
JGF                               IAmb  IAmb  14 30 22.9
       comp=Z,22nm,0.9s
H11N2 WAKE ISLAND Hy   33.36 200  T     T     15 05 59.4
       baz=11,slow=76,SNR=157
H11N3 WAKE ISLAND Hy   33.37 200  T     T     15 06 03.2
       baz=11,slow=76,SNR=130
H11N1 WAKE ISLAND Hy   33.38 200  T     T     15 06 00.7
       baz=11,slow=76,SNR=197
BNX   BinXian          33.58 280 ⇓P     P     14 30 21.9 -0.5
BNX                               pmax  pmax
       comp=Z,19nm,0.7s
BNX                               pmax  pmax
       comp=Z,62nm,4.6s
H11S1 WAKE ISLAND Hy   34.59 200  T     T     15 07 28.8
       baz=11,slow=76,SNR=86
H11S3 WAKE ISLAND Hy   34.60 200  T     T     15 07 39.5
       baz=11,slow=76,SNR=68
H11S2 WAKE ISLAND Hy   34.60 200  T     T     15 07 28.3
       baz=11,slow=76,SNR=46
CLRS  Cowichan Lake    35.95  72  P     P     14 30 42.7 +0.1
WAPA  Wapiti River     36.08  60  P     P     14 30 43.4 -0.4
HILA  High Level       36.09  53  P     P     14 30 43.6 -0.1
YKA   Yellowknife Ar   36.11  46  P     P     14 30 44.4 +0.4
       comp=Z,6.4nm,0.7s,baz=282,slow=8.4,SNR=98
YKA                               pP    pP    14 31 06.4 -0.1
       comp=Z,4.5nm,0.9s,baz=284,slow=8.1,SNR=5.3
YKA                               PcP   PcP   14 33 07.0 -0.4
       comp=Z,0.9nm,0.9s,baz=288,slow=3.8,SNR=2.6
YKA                               ScP   ScP   14 36 43.6 -0.6
       comp=Z,2.1nm,0.9s,baz=289,slow=3.1,SNR=14
YKA                               LR    LR    14 46 18.7
       comp=Z,95nm,19.9s,baz=326,slow=37
       comp=Z,6.4nm,0.7s
YKA   Yellowknife Ar   36.11  46  P     P     14 30 44.1 +0.1
BOD   Bodaibo          36.28 305 eP     P     14 30 45.1 -0.3
BOD                               pmax  pmax
       comp=Z,11nm,1.7s
JHS   Saijyo           36.32 260  P     P     14 30 45.9 -0.2
LLLB  Lillooet         36.45  68  P     P     14 30 46.8 -0.2
LLLB                              IAmb  IAmb  14 30 48.8
       comp=Z,10.0nm,0.8s
HIA   Hailar           36.50 290  P     P     14 30 46.7 -0.7
HIA                               IAmb  IAmb  14 30 47.8
       comp=Z,8.8nm,0.6s
HIA   Hailar           36.50 290  P     P     14 30 47.3 -0.1
HIA   Hailar           36.50 290  P     P     14 30 46.7 -0.7
HIA                               pmax  pmax
       comp=Z,9.0nm,0.6s
B04A  Port Angeles     36.67  72  P     P     14 30 49.6 +0.7
JCJ   Chichijima       36.78 242  LR    LR    14 47 30.2
       comp=Z,18nm,18.6s,baz=126,slow=38
BRLDA Berland Lookou   37.49  61  P     P     14 30 55.4 -0.4
KSRS  Korea Array      37.93 268  P     P     14 31 01.2 +1.6
       comp=Z,5.5nm,0.9s,baz=60,slow=8.4,SNR=9.3
KSRS                              PcP   PcP   14 33 14.2 +0.8
       comp=Z,3.3nm,0.8s,baz=77,slow=2.6,SNR=7.3
       comp=Z,5.5nm,0.9s
KSAR  Wonju Array Be   37.96 268  P     P     14 30 58.8 -1.0
KSAR  Wonju Array Be   37.96 268  P     P     14 30 58.8 -1.0
LTY   Liberty          38.73  72  P     P     14 31 05.7 -0.7
LTY                               IAmb  IAmb  14 31 07.0
       comp=Z,23nm,1.4s
H04D  Lebanon          38.92  77  P     P     14 31 08.8 +1.0
JNU   Nakatsue         38.95 260  P     P     14 31 09.4 +1.1
       comp=Z,16nm,0.9s,baz=51,slow=9.0,SNR=4.5
JNU                               LR    LR    14 45 57.1
       comp=Z,31nm,21.3s,baz=56,slow=34
       comp=Z,16nm,0.9s
B08A  Colville Reser   38.97  70  P     P     14 31 07.8 -0.5
H04A  Detroit Lake     39.17  76  P     P     14 31 10.1 +0.2
H04A                              IAmb  IAmb  14 32 04.0
       comp=Z,32nm,1.4s
DBO   Dodson Butte     39.38  79  P     P     14 31 12.7 +0.9
G05A  Wamic            39.39  75  P     P     14 31 11.9 +0.2
G05A                              IAmb  IAmb  14 31 36.3
       comp=Z,40nm,1.3s
I04A  Tendick Farm,    39.51  78  P     P     14 31 13.0 +0.1
L02F  Cave Junction    39.74  81  P     P     14 31 14.8  0.0
L02F                              IAmb  IAmb  14 31 16.9
       comp=Z,21nm,0.9s
HAWA  Hanford          39.85  73  P     P     14 31 15.1 -0.4
HAWA                              IAmb  IAmb  14 31 16.3
       comp=Z,33nm,1.4s
C09A  Chrisman Ranch   39.87  70  P     P     14 31 14.7 -0.9
C09A                              IAmb  IAmb  14 31 15.8
       comp=Z,36nm,1.6s
D08A  Wollman Farm,    39.87  71  P     P     14 31 14.5 -1.1
F07A  Phinny Hill Vi   39.88  73  P     P     14 31 15.4 -0.4
F07A                              IAmb  IAmb  14 31 16.7
       comp=Z,12nm,0.7s
RES   Resolute Bay     39.98  24  LR    LR    14 49 21.2
       comp=Z,31nm,21.8s,baz=296,slow=38
RES   Resolute Bay     39.98  24  P     P     14 31 16.4 +0.2
RES   Resolute Bay     39.98  24  P     P     14 31 16.4 +0.2
RES                               pmax  pmax
       comp=Z,11nm,1.2s
E08A  Dider Farm, El   40.08  72  P     P     14 31 16.6 -0.8
E08A                              IAmb  IAmb  14 31 17.9
       comp=Z,40nm,1.7s
NEW   Newport          40.30  69  LR    LR    14 47 52.8
       comp=Z,30nm,18.1s,baz=308,slow=36
NEW   Newport          40.30  69  P     P     14 31 18.4 -0.9
NEW                               IAmb  IAmb  14 31 19.4
       comp=Z,9.3nm,0.7s
NEW   Newport          40.30  69  P     P     14 31 18.4 -0.9
NEW                               pmax  pmax
       comp=Z,9.0nm,0.7s
NEW   Newport          40.30  69  P     P     14 31 18.1 -1.2
       baz=300,SNR=7.8
KHMM  Horse Mountain   40.37  82  P     P     14 31 21.0 +1.0
L04D  Klamath Falls    40.46  80  P     P     14 31 21.0 +0.2
YBH   Yreka Blue Hor   40.49  81  LR    LR    14 46 51.0
       comp=Z,38nm,19.1s,baz=312,slow=34
YBH   Yreka Blue Hor   40.49  81  P     P     14 31 21.9 +0.9
YBH                               IAmb  IAmb  14 31 23.5
       comp=Z,20nm,0.8s
YBH   Yreka Blue Hor   40.49  81  P     P     14 31 21.9 +0.9
YBH                               pmax  pmax
       comp=Z,20nm,0.8s
J05D  Fort Rock, OR    40.51  78  P     P     14 31 21.9 +0.7
E09A  Wood Farm, Sta   40.60  72  P     P     14 31 21.7  0.0
E09A                              IAmb  IAmb  14 31 22.8
       comp=Z,20nm,1.1s
KMRM  Mail Ridge       40.77  83  P     P     14 31 24.5 +1.3
G08A  Pilot Rock       40.77  74  P     P     14 31 22.5 -0.8
K05A  Summer Lake      41.03  78  P     P     14 31 26.3 +0.8
I07A  Izee             41.11  76  P     P     14 31 25.9 -0.2
I07A                              IAmb  IAmb  14 31 27.0
       comp=Z,10.0nm,0.7s
XLT   XiLinHaoTe       41.40 284 eP     P     14 31 28.5 +0.1
XLT                               pP    pP    14 31 51.8 -0.1
XLT                               ScP   ScP   14 37 08.0 +3.0
XLT                               pmax  pmax
       comp=Z,23nm,0.8s
XLT                               pmax  pmax
       comp=Z,100nm,3.7s
WALA  Waterton Lakes   41.73  66  P     P     14 31 30.4 -0.7
WALA                              IAmb  IAmb  14 31 31.5
       comp=Z,19nm,0.9s
MOD   Modoc Plateau    41.86  79  P     P     14 31 32.1 -0.2
MOD                               IAmb  IAmb  14 31 33.9
       comp=Z,12nm,0.8s
BMO   Blue Mountains   41.99  73  P     P     14 31 32.4 -0.9
BMO   Blue Mountains   41.99  73  P     P     14 31 32.4 -0.9
BMO                               pmax  pmax
       comp=Z,8.0nm,0.7s
J08A  Circle Bar Ran   42.13  76  P     P     14 31 33.9 -0.5
GDXM  Geysers          42.18  84  P     P     14 31 35.5 +0.7
GDXM                              IAmb  IAmb  14 31 37.4
       comp=Z,21nm,1.0s
ALE   Alert            42.40  10  P     P     14 31 35.7 -0.3
ALE                               sP    sP    14 32 10.0 +0.1
ORV   Oroville         42.52  82  P     P     14 31 37.4 -0.1
ORV                               IAmb  IAmb  14 31 38.6
       comp=Z,17nm,0.8s
ORV   Oroville         42.52  82  P     P     14 31 37.4 -0.1
ORV                               pmax  pmax
       comp=Z,17nm,0.8s
WVOR  Wild Horse Val   42.56  77  P     P     14 31 37.9  0.0
WVOR  Wild Horse Val   42.56  77  P     P     14 31 37.9  0.0
WVOR                              pmax  pmax
       comp=Z,7.0nm,0.6s
PLID  Pearl Lake       42.64  72  P     P     14 31 37.8 -0.8
MSO   Missoula         42.89  69  P     P     14 31 39.2 -1.3
MSO                               IAmb  IAmb  14 31 40.3
       comp=Z,7.9nm,0.6s
MSO   Missoula         42.89  69  P     P     14 31 39.5 -0.9
       baz=303,SNR=6.7
NRIK  Noril'sk         43.08 329  P     P     14 31 41.9 +0.4
       comp=Z,5.1nm,0.7s,baz=78,slow=6.8,SNR=8.6
       comp=Z,5.1nm,0.7s
NRIK  Noril'sk         43.08 329  P     P     14 31 41.4 -0.2
NRIK  Noril'sk         43.08 329deP     P     14 31 42.0 +0.4
NRIK                              pmax  pmax
       comp=Z,6.0nm,0.9s
MPK   Martis Peak      43.58  82  P     P     14 31 46.5 +0.1
BJI   Beijing          43.59 280  P     P     14 31 47.7 +1.7
BJI                               PcP   PcP   14 33 35.2 +3.5
BJI                               pmax  pmax
       comp=Z,5.0nm,0.8s
BJT   Baijiatuau       43.61 280  P     P     14 31 46.0 -0.2
BJT   Baijiatuau       43.61 280  P     P     14 31 46.0 -0.2
BJT                               pmax  pmax
       comp=Z,7.0nm,0.8s
MFID  Camas Ranch      43.68  74  P     P     14 31 46.1 -0.8
PAHR  Pah Rah Range    43.73  81  P     P     14 31 47.2 -0.1
PAHR                              IAmb  IAmb  14 31 48.9
       comp=Z,18nm,0.8s
CMB   Columbia Colle   44.15  83  P     P     14 31 50.5 -0.1
CMB   Columbia Colle   44.15  83  P     P     14 31 50.5 -0.1
CMB                               pmax  pmax
       comp=Z,12nm,1.0s
HRY   Holter Researc   44.17  68  P     P     14 31 49.7 -1.1
YERR  Yerington        44.26  81  P     P     14 31 52.0 +0.4
YERR                              IAmb  IAmb  14 31 53.3
       comp=Z,20nm,0.8s
SAO   San Andreas Ge   44.29  85  P     P     14 31 52.0 +0.3
SAO                               IAmb  IAmb  14 31 56.1
       comp=Z,14nm,0.9s
SAO   San Andreas Ge   44.29  85  P     P     14 31 52.0 +0.3
SAO                               pmax  pmax
       comp=Z,14nm,1.0s
LRM   Limekiln Ridge   44.30  69  P     P     14 31 50.5 -1.5
HLID  Hailey           44.44  73  P     P     14 31 52.5 -0.6
HLID  Hailey           44.44  73  P     P     14 31 51.4 -1.6
       baz=306,SNR=14
ULN   Ulaanbaatar      44.49 294  P     P     14 31 53.7 +0.4
ULN   Ulaanbaatar      44.49 294d iP    P     14 31 54.0 +0.7
ULN                               pmax  pmax
       comp=Z,11nm,1.0s
ULN   Ulaanbaatar      44.49 294  P     P     14 31 54.0 +0.7
ULN                               pP    pP    14 32 18.2 +1.2
ULN                               sP    sP    14 32 29.1 +0.7
EGMT  Eagleton         44.62  65  P     P     14 31 53.5 -0.9
       baz=303
MCMT  McKenzie Canyo   44.63  71  P     P     14 31 53.3 -1.4
SONM  Songino Array    44.88 295  P     P     14 31 57.4 +1.0
       comp=Z,6.4nm,0.7s,baz=62,slow=7.9,SNR=60
SONM                              pP    pP    14 32 19.7 -0.4
       comp=Z,3.1nm,0.5s,baz=62,slow=7.4,SNR=6.7
SONM                              PcP   PcP   14 33 36.7 +0.5
       comp=Z,3.5nm,0.7s,baz=73,slow=2.4,SNR=7.5
SONM                              ScP   ScP   14 37 19.2 +0.2
       comp=Z,1.9nm,0.8s,baz=20,slow=2.5,SNR=10
SONM                              LR    LR    14 50 36.2
       comp=Z,60nm,21.5s,baz=47,slow=36
       comp=Z,6.4nm,0.7s
SONM  Songino Array    44.88 295  P     P     14 31 56.8 +0.4
SONM  Songino Array    44.88 295  P     P     14 31 56.8 +0.4
SONM                              pmax  pmax
       comp=Z,7.0nm,0.7s
BOZ   Bozeman (W)      44.91  69  P     P     14 31 55.5 -1.2
BOZ                               IAmb  IAmb  14 31 56.6
       comp=Z,15nm,0.7s
BOZ   Bozeman (W)      44.91  69  P     P     14 31 55.5 -1.2
BOZ                               pmax  pmax
       comp=Z,15nm,0.7s
BOZ   Bozeman (W)      44.91  69  P     P     14 31 55.3 -1.4
       baz=305,SNR=21
KVN   Kaiserville      44.92  81  P     P     14 31 57.2 +0.3
KVN   Kaiserville      44.92  81  P     P     14 31 57.2 +0.3
KVN                               pmax  pmax
       comp=Z,9.0nm,0.7s
JOW   Kunigami         45.01 256  LR    LR    14 50 06.9
       comp=Z,30nm,19.5s,baz=134,slow=35
PMPB  Monarch Peak     45.04  86  P     P     14 31 58.1 +0.3
PMPB                              IAmb  IAmb  14 32 07.1
       comp=Z,32nm,1.1s
LHV   Little Huntoon   45.17  82  P     P     14 31 59.1 +0.5
LHV                               IAmb  IAmb  14 32 00.9
       comp=Z,26nm,1.2s
NVAR  Mina Array Bea   45.18  81  P     P     14 31 59.6 +0.6
       comp=Z,16nm,0.7s,baz=295,slow=7.5,SNR=162
NVAR                              pP    pP    14 32 21.8 -0.9
       comp=Z,2.9nm,0.6s,baz=294,slow=6.9,SNR=4.3
NVAR                              PcP   PcP   14 33 38.3 +0.8
       comp=Z,1.7nm,0.8s,baz=329,slow=3.4,SNR=2.0
NVAR                              ScP   ScP   14 37 19.6 -0.9
       comp=Z,1.6nm,0.8s,baz=281,slow=4.7,SNR=8.4
NVAR                              LR    LR    14 48 54.7
       comp=Z,38nm,19.4s,baz=172,slow=33
       comp=Z,16nm,0.7s
NVAR  Mina Array Bea   45.18  81  P     P     14 31 59.1 +0.2
MDPB  Devils Postpil   45.20  83  P     P     14 31 59.8 +0.6
MDPB                              IAmb  IAmb  14 32 01.2
       comp=Z,26nm,0.8s
ZAK   Zakamensk        45.21 299 eP     P     14 31 59.1 +0.1
ZAK                               pmax  pmax
       comp=Z,5.0nm,1.1s
FFC   Flin Flon        45.22  53  P     P     14 31 57.9 -0.9
FFC   Flin Flon        45.22  53  P     P     14 31 57.9 -0.9
FFC                               pmax  pmax
       comp=Z,7.0nm,1.0s
FFC   Flin Flon        45.22  53  P     P     14 31 58.0 -0.8
NV11  Mina Array Sit   45.27  81  P     P     14 31 59.3 -0.4
NV11                              IAmb  IAmb  14 32 01.2
       comp=Z,12nm,0.8s
TIA   Tai'an           45.40 275 ⇓P     P     14 32 01.3 +0.8
TIA                               pmax  pmax
       comp=Z,23nm,0.7s
QLMT  Earthquake Lak   45.46  70  P     P     14 31 59.9 -1.3
Q09A  Carvers          45.61  80  P     P     14 32 02.8 +0.4
ELK   Elko             45.62  77  LR    LR    14 48 41.6
       comp=Z,42nm,19.3s,baz=278,slow=33
ELK   Elko             45.62  77  P     P     14 32 02.1 -0.3
ELK   Elko             45.62  77  P     P     14 32 02.1 -0.3
ELK                               pmax  pmax
       comp=Z,8.0nm,0.6s
MOY   Mondy            45.74 302 eP     P     14 32 04.1 +1.0
YMR   Madison River    45.82  70  P     P     14 32 02.5 -1.5
YMR                               IAmb  IAmb  14 32 04.3
       comp=Z,12nm,0.8s
HHC   Hu-ho-hao-te     45.90 284 eP     P     14 32 05.7 +1.2
HHC                               pmax  pmax
       comp=Z,38nm,1.0s
HHC                               pmax  pmax
       comp=Z,230nm,4.8s
YNR   Norris Junctio   45.96  70  P     P     14 32 04.4 -0.7
DSP   Deep Springs     46.05  82  P     P     14 32 06.2 +0.6
DSP                               IAmb  IAmb  14 32 07.8
       comp=Z,15nm,0.9s
TPH   Tonopah          46.06  81  P     P     14 32 05.2 -0.7
TPH                                     pP    14 32 30.0 +0.3
SMMC  Simmler          46.13  86  P     P     14 32 06.9 +0.6
       baz=311
HNS   HongShan         46.13 278 ⇓P     P     14 32 07.5 +1.3
HNS                               pmax  pmax
       comp=Z,22nm,0.8s
MZP   Montezuma Peak   46.20  82  P     P     14 32 06.8 -0.3
H17A  Grant Village    46.21  70  P     P     14 32 07.2 +0.1
H17A                              IAmb  IAmb  14 32 09.3
       comp=Z,38nm,1.6s
H17A  Grant Village    46.21  70  P     P     14 32 06.8 -0.3
       baz=306,SNR=12
FLWY  Flagg Ranch      46.32  70  P     P     14 32 07.5 -0.4
FLWY                              IAmb  IAmb  14 32 08.7
       comp=Z,11nm,0.8s
LCH   Last Change Ra   46.34  82  P     P     14 32 08.3 +0.2
LCH                               IAmb  IAmb  14 32 09.7
       comp=Z,12nm,0.8s
VES   Vestal, Richgr   46.35  85  P     P     14 32 08.1 +0.2
       baz=311,SNR=6.9
HVU   Hansel Valley    46.47  74  P     P     14 32 08.2 -0.8
HVU                               IAmb  IAmb  14 32 09.7
       comp=Z,13nm,0.7s
HVU   Hansel Valley    46.47  74  P     P     14 32 08.2 -0.8
HVU                               pmax  pmax
       comp=Z,13nm,0.7s
MOOW  Moose Ponds      46.49  71  P     P     14 32 08.5 -0.7
PKM   Mcpherson Peak   46.52  86  P     P     14 32 10.1 +0.6
       baz=311
RLMT  Red Lodge        46.54  68  P     P     14 32 08.9 -0.7
RLMT                              IAmb  IAmb  14 32 10.7
       comp=Z,14nm,0.8s
RLMT  Red Lodge        46.54  68  P     P     14 32 09.3 -0.4
       baz=306,SNR=7.5
CWC   Cottonwood Cre   46.58  83  P     P     14 32 10.6 +0.6
       baz=310
GRAC  Grapevine Rang   46.66  82  P     P     14 32 11.2 +0.8
       baz=310
BCW   Bitter Crk WRg   46.73  86  P     P     14 32 11.9 +0.8
BCW                               IAmb  IAmb  14 32 13.8
       comp=Z,32nm,1.0s
GUMO  Guam             46.75 228  LR    LR    14 49 26.5
       comp=Z,37nm,19.1s,baz=50,slow=33
FCC   Fort Churchill   46.83  46  P     P     14 32 10.8 -0.5
FCC   Fort Churchill   46.83  46  P     P     14 32 10.8 -0.5
FCC                               pmax  pmax
       comp=Z,13nm,1.2s
BGU   Big Grassy Mou   46.83  75  P     P     14 32 11.3 -0.6
ISA   Isabella, Lake   46.84  84  P     P     14 32 11.7 -0.1
       baz=311
AHID  Auburn Hatcher   46.87  72  P     P     14 32 11.5 -0.7
R11A  Troy Canyon, C   46.89  80  P     P     14 32 11.9 -0.4
R11A  Troy Canyon, C   46.89  80  P     P     14 32 12.0 -0.4
       baz=309,SNR=21
Q12A  Willow Creek R   46.91  78  P     P     14 32 12.5 -0.1
Q12A                              IAmb  IAmb  14 32 14.4
       comp=Z,9.7nm,0.6s
ARVC  Arvin            46.97  85  P     P     14 32 12.6 -0.3
       baz=311
NJ2   Nanjing          47.09 269 eP     P     14 32 13.1 -0.7
NJ2                               pmax  pmax
       comp=Z,15nm,0.5s
MPMC  Manual Prospec   47.19  83  P     P     14 32 15.2 +0.5
       baz=311,SNR=11
SCZ2  Santa Cruz Isl   47.22  87  P     P     14 32 15.6 +0.8
       baz=312
S11A  Rachel           47.24  80  P     P     14 32 15.3 +0.2
S11A                              IAmb  IAmb  14 32 19.1
       comp=Z,12nm,0.7s
SPR3  Spring Creek 3   47.24  78  P     P     14 32 15.6 +0.3
SPR3                              IAmb  IAmb  14 32 17.6
       comp=Z,12nm,0.6s
WCT   Wildcat Mounta   47.24  82  P     P     14 32 15.2 +0.1
HWUT  Hardware Ranch   47.29  74  P     P     14 32 14.9 -0.6
FURC  Furnace Creek,   47.31  82  P     P     14 32 15.6 +0.2
       baz=310,SNR=9.4
LAO   LASA Array       47.36  65  P     P     14 32 15.3 -0.5
       baz=306
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OSI	Osito Audit: C	47.37	86	P	P	14 32 16.2	+0.1
	baz=312						
TPNV	Topopah Spring	47.38	82	P	P	14 32 16.3	+0.2
TPNV	Topopah Spring	47.38	82	P	P	14 32 16.3	+0.2
TPNV				pmax	pmax		
	comp=Z,31nm,0.8s						
TPNV	Topopah Spring	47.38	82	P	P	14 32 16.7	+0.6
	baz=310,SNR=39						
DUG	Dugway, Tooele	47.41	76	P	P	14 32 16.1	-0.3
DUG				IAmb	IAmb	14 32 17.3	
	comp=Z,13nm,0.7s						
DUG	Dugway, Tooele	47.41	76	P	P	14 32 16.1	-0.3
DUG				pmax	pmax		
	comp=Z,13nm,0.7s						
DUG	Dugway, Tooele	47.41	76	P	P	14 32 16.6	+0.2
	baz=308,SNR=19						
LRMC	Laurel Mtn Rad	47.45	84	P	P	14 32 16.9	+0.2
	baz=311,SNR=7.8						
GWY	Greenwater Val	47.61	83	P	P	14 32 17.4	-0.6
GWY				IAmb	IAmb	14 32 19.2	
	comp=Z,17nm,0.8s						
QSM	Queen of Sheba	47.63	83	P	P	14 32 17.7	-0.2
EDW2	Edwards Air Fo	47.65	85	P	P	14 32 18.0	-0.1
	baz=312						
CTU	Camp Tracy	47.74	75	P	P	14 32 18.2	-0.8
BW06	Boulder Array	47.77	71	P	P	14 32 18.0	-1.2
BW06				IAmb	IAmb	14 32 19.3	
	comp=Z,11nm,0.8s						
BW06	Boulder Array	47.77	71	P	P	14 32 18.2	-1.0
	baz=307,SNR=15						
PD31	Pinedale Array	47.77	71	P	P	14 32 17.9	-1.3
PDAR	Pinedale Array	47.77	71	P	P	14 32 18.4	-0.9
	comp=Z,8.0nm,0.7s,baz=300,slow=3.7,SNR=88						
PDAR				pP	pP	14 32 42.9	-0.2
	comp=Z,2.8nm,0.7s,baz=312,slow=3.4,SNR=3.8						
PDAR				ScP	ScP	14 37 30.4	-1.0
	comp=Z,1.1nm,0.9s,baz=90,slow=1.5,SNR=4.8						
PDAR				LR	LR	14 50 55.4	
	comp=Z,31nm,19.8s,baz=321,slow=34						
	comp=Z,8.0nm,0.7s						
PDAR	Pinedale Array	47.77	71	P	P	14 32 18.1	-1.1
PRN	Pahroc Range	47.81	80	P	P	14 32 19.4	-0.2
PRN				IAmb	IAmb	14 32 21.0	
	comp=Z,18nm,0.9s						
NLU	North Lily Min	48.01	76	P	P	14 32 20.1	-1.0
SHOC	Shoshone, Teco	48.04	83	P	P	14 32 21.2	+0.1
	baz=311,SNR=6.5						
GSC	Goldstone, Bar	48.10	84	P	P	14 32 21.6	-0.1
GSC	Goldstone, Bar	48.10	84	P	P	14 32 21.6	-0.1
GSC				pmax	pmax		
	comp=Z,29nm,0.8s						
GSC	Goldstone, Bar	48.10	84	P	P	14 32 21.8	+0.1
	baz=311,SNR=22						
MPU	Maple Canyon	48.23	75	P	P	14 32 21.8	-1.0
BFSC	Mount Baldy Ra	48.28	85	P	P	14 32 22.4	-0.8
	baz=312						
SHPR	Sheep Range	48.33	81	P	P	14 32 23.1	-0.4
CIS	Catalina Islan	48.37	87	P	P	14 32 24.1	+0.4
	baz=312						
BSUT	Blindstream Ca	48.43	74	P	P	14 32 23.7	-0.8
TUQ	Turquoise Moun	48.56	83	P	P	14 32 25.3	+0.1
	baz=311						
TCRU	Three Creeks R	48.63	77	P	P	14 32 25.7	-0.2
HEC	Hector,Ludlow	48.70	84	P	P	14 32 26.1	-0.2
	baz=312,SNR=7.8						
ELS	Elsinore Mount	48.82	86	P	P	14 32 27.0	-0.2
ELS				IAmb	IAmb	14 32 28.4	
	comp=Z,15nm,0.9s						
MVU	Marysvale	48.84	77	P	P	14 32 27.5	0.0
MSU	Marysvale	48.85	77	P	P	14 32 27.3	-0.3
MSU	Marysvale	48.85	77	P	P	14 32 27.3	-0.3
TMUT	Trail Mountain	48.94	76	P	P	14 32 27.6	-0.7
TMUT				IAmb	IAmb	14 32 29.6	
	comp=Z,14nm,0.7s						
MURC	Murrieta	48.99	86	P	P	14 32 28.7	+0.3
	baz=312						
V12A	Nelson	49.03	82	P	P	14 32 28.6	-0.2
V12A				IAmb	IAmb	14 32 30.1	
	comp=Z,35nm,1.8s						
P17A	Butcher Ranch,	49.11	75	P	P	14 32 29.1	-0.4
RDMU	Red Mountain	49.12	73	P	P	14 32 29.1	-0.4
RDMU				IAmb	IAmb	14 32 30.2	
	comp=Z,20nm,0.8s						
GMRC	Granite Mounta	49.15	83	P	P	14 32 30.2	+0.4
	baz=312,SNR=19						
Q16A	Castle Valley	49.20	76	P	P	14 32 30.1	-0.1
Q16A				IAmb	IAmb	14 32 31.8	
	comp=Z,8.6nm,0.7s						
P18A	Preston Nutter	49.31	75	P	P	14 32 30.8	-0.3
LYN	LuoYang	49.36	277	⇓P	P	14 32 32.4	+1.2
LYN				pmax	pmax		
	comp=Z,18nm,0.8s						
KNB	Kanab	49.42	79	P	P	14 32 31.9	0.0
KNB				IAmb	IAmb	14 32 34.2	
	comp=Z,7.8nm,0.7s						
KNB	Kanab	49.42	79	P	P	14 32 31.9	0.0
KNB				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PFO	Pinyon Flats O	49.44	85	LR	LR	14 50 26.9	
	comp=Z,12nm,19.2s,baz=262,slow=32						
PFO	Pinyon Flats O	49.44	85	P	P	14 32 31.6	-0.3
PFO	Pinyon Flats O	49.44	85	P	P	14 32 31.6	-0.3
PFO				pmax	pmax		
	comp=Z,48nm,1.9s						
PFO	Pinyon Flats O	49.44	85	P	P	14 32 31.7	-0.3
	baz=312						
TPFO	Pinon Flats	49.45	85	P	P	14 32 32.0	-0.1
	baz=312						
BELC	Belle Mtn. Jos	49.46	84	P	P	14 32 32.1	-0.1
	baz=312,SNR=11						
PMD	Palm Desert	49.47	85	P	P	14 32 31.6	-0.4
PMD				IAmb	IAmb	14 32 32.9	
	comp=Z,9.7nm,0.9s						
SRU	San Rafael Swe	49.47	75	P	P	14 32 31.7	-0.5
SRU				IAmb	IAmb	14 32 33.6	
	comp=Z,9.6nm,0.7s						
SRU	San Rafael Swe	49.47	75	P	P	14 32 31.7	-0.5
SRU				pmax	pmax		
	comp=Z,10.0nm,0.7s						
109C	Camp Elliot, M	49.53	86	P	P	14 32 33.1	+0.6
	baz=313						
K22A	Casper	49.61	69	P	P	14 32 32.3	-1.0
	baz=308						
SPITS	Spitsbergen Ar	49.72	355	P	P	14 32 33.2	-0.2
	comp=Z,4.0nm,0.5s,baz=34,slow=6.4,SNR=33						
SPITS				pP	pP	14 32 57.4	+0.5
	comp=Z,5.4nm,0.5s,baz=8.8,slow=13,SNR=2.2						
	comp=Z,4.0nm,0.5s						
SPITS	Spitsbergen Ar	49.72	355	P	P	14 32 33.2	-0.2
SPITS				pmax	pmax		
	comp=Z,82nm,1.5s						
SPB2	Spitsbergen Ar	49.73	355	P	P	14 32 33.4	0.0
IRM	Iron Mountain	49.88	84	P	P	14 32 35.4	+0.2
	baz=312,SNR=15						
BAR	Barrett	49.94	86	P	P	14 32 35.6	-0.1
BAR				IAmb	IAmb	14 32 37.0	
	comp=Z,21nm,0.9s						
MONP2	Monument Peak	49.95	86	P	P	14 32 35.7	-0.3
	baz=313						
BC3	Big Chuckawall	50.03	84	P	P	14 32 36.3	-0.2
	baz=312,SNR=6.3						
W13A	Hualapai Mount	50.03	82	P	P	14 32 36.0	-0.6
W13A				IAmb	IAmb	14 32 37.5	
	comp=Z,9.1nm,0.8s						
U15A	North Rim	50.13	79	P	P	14 32 37.6	+0.2
U15A				IAmb	IAmb	14 32 38.8	
	comp=Z,10nm,0.7s						
RSSD	Black Hills	50.13	66	P	P	14 32 35.5	-1.7
RSSD	Black Hills	50.13	66	P	P	14 32 35.5	-1.7
RSSD	Black Hills	50.13	66	P	P	14 32 36.0	-1.2
	baz=308						
O20A	White River Ci	50.18	73	P	P	14 32 36.4	-1.2
O20A				IAmb	IAmb	14 32 37.7	
	comp=Z,13nm,0.7s						
O20A	White River Ci	50.18	73	P	P	14 32 36.9	-0.7
	baz=310,SNR=9.2						
CBX	Cerro Bola	50.19	86	P	P	14 32 37.9	+0.2
SWSC	Sam W. Stewart	50.30	85	P	P	14 32 38.2	-0.1
	baz=313						
IKP	In-Ko-Pah, Jac	50.30	86	P	P	14 32 38.7	+0.2
	baz=313						
MDND	Maddock	50.31	60	P	P	14 32 37.6	-0.6
	baz=307						
PDMCI	Parker Dam,Lak	50.40	83	P	P	14 32 39.6	+0.5
	baz=312,SNR=5.9						
YUH	Yuha Desert	50.42	86	P	P	14 32 38.9	-0.4
YUH				IAmb	IAmb	14 32 40.4	
	comp=Z,8.7nm,0.9s						
BLYC	Blythe	50.54	84	P	P	14 32 40.0	-0.2
BLYC				IAmb	IAmb	14 32 41.3	
	comp=Z,17nm,0.8s						
BLYC					pP	14 33 05.0	+0.8
PV23	Carpenter Ridg	50.80	75	P	P	14 32 41.5	-0.9
PV23				IAmb	IAmb	14 32 48.0	
	comp=Z,12nm,0.7s						
ULM	Lac du Bonnet	50.82	56	P	P	14 32 41.0	-0.9
	comp=Z,6.9nm,0.7s,baz=302,slow=7.7,SNR=7.7						
ULM				LR	LR	14 55 30.5	
	comp=Z,93nm,18.3s,baz=310,slow=37						
	comp=Z,6.9nm,0.7s						
ULM	Lac du Bonnet	50.82	56	P	P	14 32 40.8	-1.2
ULM				IAmb	IAmb	14 32 42.0	
	comp=Z,9.5nm,0.9s						
ULM	Lac du Bonnet	50.82	56	P	P	14 32 40.8	-1.2
ULM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GLA	Glamis	50.82	84	P	P	14 32 42.0	-0.3
GLA					pP	14 33 07.1	+0.6
GLA	Glamis	50.82	84	P	P	14 32 42.0	-0.3
GLA				*PP	pP	14 33 07.1	+0.6
GLA				pmax	pmax		
	comp=Z,23nm,0.8s						
GLA	Glamis	50.82	84	P	P	14 32 43.0	+0.7
	baz=313,SNR=6.2						
PV10	Paradox Valley	50.83	75	P	P	14 32 42.1	-0.4
ESJX	Sierra Juarez	50.84	86	P	P	14 32 42.5	-0.2
ESJX				IAmb	IAmb	14 32 44.2	
	comp=Z,12nm,1.0s						
WHN	Wuhan	50.92	271	⇑P	P	14 32 43.7	+0.7
PV11	David Mesa, Pa	50.98	75	P	P	14 32 42.8	-0.8
PV07	Paradox Valley	51.02	75	P	P	14 32 43.0	-1.0
PV07				IAmb	IAmb	14 32 44.3	
	comp=Z,7.6nm,0.9s						
N23A	Red Feather La	51.05	71	P	P	14 32 44.4	+0.2
	baz=310						
PV13	Radium Mtn., P	51.10	75	P	P	14 32 43.9	-0.7
PV15	Paradox Valley	51.19	75	P	P	14 32 44.3	-0.9
PV15				IAmb	IAmb	14 32 48.8	
	comp=Z,6.9nm,0.7s						
WUAZ	Wupatki	51.29	80	P	P	14 32 45.6	-0.3
WUAZ					pP	14 33 10.2	+0.2
WUAZ				IAmb	IAmb	14 33 13.2	
	comp=Z,16nm,1.2s						
WUAZ	Wupatki	51.29	80	P	P	14 32 46.8	+0.8
	baz=312,SNR=7.9						
113A	Mohawk Valley,	51.67	84	P	P	14 32 47.8	-0.7
SSLB	Suanglung	51.70	260	P	P	14 32 48.4	-0.5
SSLB	Suanglung	51.70	260	P	P	14 32 49.8	+0.9
XAN	Xi'an	51.88	279	⇓P	P	14 32 50.4	+0.2
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
MVCO	Mesa Verde	51.91	76	P	P	14 32 49.6	-1.1
MVCO				IAmb	IAmb	14 33 27.0	
	comp=Z,36nm,1.9s						
MVCO	Mesa Verde	51.91	76	P	P	14 32 50.1	-0.5
	baz=311						
ISCO	Idaho Springs	51.94	72	P	P	14 32 50.4	-0.5
	baz=310						
AGMN	Agassiz Nation	52.02	58	P	P	14 32 50.1	-0.9
	baz=308						
TPUB	Ta-pu	52.26	260	P	P	14 32 53.4	+0.3
ZAA0	Zalesovo Array	52.42	312	P	P	14 32 53.2	-0.6
ZAA0				IAmb	IAmb	14 34 04.8	
	comp=Z,8.2nm,0.9s						
ZALV	Zalesovo Beam	52.42	312	P	P	14 32 53.1	-0.7
	comp=Z,0.7nm,0.5s,baz=55,slow=6.0,SNR=5.0						
ZALV				PcP	PcP	14 34 04.1	+0.9
	comp=Z,7.6nm,0.8s,baz=32,slow=4.3,SNR=13						
ZALV				ScP	ScP	14 37 52.0	+1.2
	comp=Z,1.3nm,0.7s,baz=50,slow=4.6,SNR=6.7						
	comp=Z,0.7nm,0.5s						
W18A	Petrified Fore	52.55	79	P	P	14 32 55.2	-0.1
W18A				IAmb	IAmb	14 32 56.7	
	comp=Z,6.6nm,0.8s						
W18A	Petrified Fore	52.55	79	P	P	14 32 55.3	-0.1
	baz=312						
S22A	4UR Ranch, Cre	52.56	74	P	P	14 32 55.5	0.0
S22A	4UR Ranch, Cre	52.56	74	P	P	14 32 56.1	+0.6
	baz=311,SNR=9.1						
Q24A	Divide	52.76	72	P	P	14 32 56.7	-0.3
	baz=311						
214A	Organ Pipe Nat	52.81	84	P	P	14 32 56.9	-0.2
214A				IAmb	IAmb	14 32 58.3	
	comp=Z,12nm,1.0s						
214A	Organ Pipe Nat	52.81	84	P	P	14 32 57.7	+0.6
	baz=314,SNR=5.6						
X18A	Snowflake	52.82	80	P	P	14 32 57.4	+0.1
X18A				IAmb	IAmb	14 32 58.7	
	comp=Z,7.4nm,0.7s						
SDCO	Great Sand Dun	53.35	74	P	P	14 33 01.0	-0.3
SDCO	Great Sand Dun	53.35	74	P	P	14 33 01.4	+0.1
	baz=312,SNR=5.5						
FRB	Frobisher Bay	53.46	31	LR	LR	14 57 07.8	
	comp=Z,50nm,18.2s,baz=17,slow=37						
LZH	Lanzhou	53.59	284	*e*P	P	14 33 04.2	+1.3
LZH				pP	pP	14 33 25.5	-1.9
LZH				sP	sP	14 33 38.4	-0.3
LZH				pmax	pmax		
	comp=Z,36nm,1.0s						
GTA	Gaotai	53.78	290	⇓P	P	14 33 05.0	+0.8
GTA				pP	pP	14 33 27.4	-1.3
GTA				sP	sP	14 33 40.8	+0.8
GTA				S	S	14 40 32.5	+1.6
GTA				pmax	pmax		
	comp=Z,18nm,1.0s						
TUC	Tucson	53.82	82	P	P	14 33 04.5	0.0
TUC				IAmb	IAmb	14 33 05.9	
	comp=Z,8.8nm,0.8s						
TUC	Tucson	53.82	82	P	P	14 33 04.5	0.0
TUC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TUC	Tucson	53.82	82	P	P	14 33 04.6	0.0
	baz=314						
TUC	Tucson	53.82	82	P	P	14 33 04.8	+0.3
TUC				pP	pP	14 33 29.6	+0.7
TUC				sP	sP	14 33 39.5	-0.6
DGZ	Jazzator, Alta	53.86	306	*d i*P	P	14 33 05.1	+0.5
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ENH	Enshi	54.12	275	P	P	14 33 06.2	-0.4
ENH	Enshi	54.12	275	P	P	14 33 06.7	0.0
ENH	Enshi	54.12	275	P	P	14 33 06.6	-0.1
ENH				pP	pP	14 33 30.2	-1.0
ENH				sP	sP	14 33 41.0	-1.4
T25A	Trinidad	54.40	73	P	P	14 33 08.4	-0.4
T25A				IAmb	IAmb	14 33 09.9	
	comp=Z,15nm,1.1s						
T25A	Trinidad	54.40	73	P	P	14 33 08.5	-0.4
	baz=312						
EYMN	Ely	54.50	56	P	P	14 33 08.7	-0.5
ECSD	EROS Data Cent	54.52	62	P	P	14 33 08.1	-1.3
	baz=311						
ANMO	Albuquerque	54.65	77	LR	LR	14 54 48.0	
	comp=Z,38nm,20.8s,baz=30,slow=34						
ANMO	Albuquerque	54.65	77	P	P	14 33 10.4	-0.3
ANMO	Albuquerque	54.65	77	⇓*e*P	P	14 33 11.0	+0.3
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ANMO	Albuquerque	54.65	77	P	P	14 33 10.4	-0.3
	baz=313						
BNM	Barren Site	55.09	78	P	P	14 33 13.9	0.0
CRNM	Carthage	55.16	78	P	P	14 33 14.5	+0.1
319A	Douglas	55.38	82	P	P	14 33 15.9	0.0
319A				IAmb	IAmb	14 33 17.3	
	comp=Z,15nm,1.0s						
121A	Cookes Peak, D	55.50	80	P	P	14 33 16.9	+0.1
121A	Cookes Peak, D	55.50	80	P	P	14 33 16.9	+0.1
	baz=314						
SPMN	Marine on St.	55.60	59	P	P	14 33 16.6	-0.5
	baz=312						
SFJD	Kangerlussuaq	55.79	21	LR	LR	15 00 20.8	
	comp=Z,27nm,18.4s,baz=350,slow=39						
HSIG		56.01	85	P	P	14 33 20.2	-0.1
HSIG				IAmb	IAmb	14 33 21.3	
	comp=Z,16nm,1.0s						
CBKS	Cedar Bluff	56.02	69	P	P	14 33 19.4	-0.8
	baz=312						
ZSN	Zaisan	56.62	306	*e*P	P	14 33 24.8	+0.4
	baz=306						
ZSN	Zaisan	56.62	306	*e*P	P	14 33 24.7	+0.4
CD2	Chengdu	57.19	279	P	P	14 33 29.2	+0.5
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
ARCES	ARCESS Array B	57.27	349	P	P	14 33 28.0	-0.6
	comp=Z,4.4nm,0.8s,baz=24,slow=7.6,SNR=9.4						
ARCES				pP	pP	14 33 53.1	+0.2
	comp=Z,4.4nm,0.8s,baz=19,slow=7.7,SNR=3.2						
	comp=Z,4.4nm,0.8s						
KURK	Kurchatov	57.41	312	P	P	14 33 29.9	+0.1
KURK				IAmb	IAmb	14 33 32.3	
	comp=Z,17nm,0.9s						
KURK	Kurchatov	57.41	312	P	P	14 33 29.9	+0.1
KURK				pmax	pmax		
	comp=Z,17nm,0.9s						
KURK	Kurchatov	57.41	312	P	P	14 33 30.1	+0.3
KURK				pP	pP	14 33 54.1	-0.1
KURK				sP	sP	14 34 04.3	-1.1
LVZ	Lovozero	57.50	345	P	P	14 33 30.9	+0.6
LVZ				pP	pP	14 33 55.5	+0.9
LVZ				sP	sP	14 34 05.9	+0.3
KURBB	Kurchatov Arra	57.51	312	P	P	14 33 30.8	+0.3
	comp=Z,9.5nm,0.6s,baz=42,slow=6.7,SNR=90						
KURBB				pP	pP	14 33 54.9	-0.1
	comp=Z,11nm,1.0s,baz=42,slow=6.6,SNR=5.2						
KURBB				ScP	ScP	14 38 13.1	-0.1
	comp=Z,0.4nm,0.8s,baz=47,slow=4.0,SNR=5.2						
	comp=Z,9.5nm,0.6s						
MSTX	Muleshoe	57.54	75	P	P	14 33 30.7	-0.4
	baz=314						
MNTX	Cornudas Mount	57.54	79	P	P	14 33 31.3	+0.2
	baz=315,SNR=16						
AMTX	Amarillo	57.56	74	P	P	14 33 30.8	-0.4
AMTX				IAmb	IAmb	14 33 31.8	
	comp=Z,9.2nm,0.7s						
AMTX	Amarillo	57.56	74	P	P	14 33 31.0	-0.2
	baz=314						
WMQ	Urumqi	57.61	301	*e*P	P	14 33 34.4	+3.0
WMQ				pmax	pmax		
	comp=Z,11nm,1.3s						
KSU1	Kansas State U	57.62	67	P	P	14 33 30.5	-0.9
KSU1	Kansas State U	57.62	67	P	P	14 33 30.3	-1.2
	baz=313						
GDL2	Guadalupe Moun	57.81	78	P	P	14 33 32.8	-0.3
MK31	Makanchi Array	58.36	307	P	P	14 33 35.9	-0.6
MK31				IAmb	IAmb	14 33 37.1	
	comp=Z,5.7nm,0.7s						
MK31	Makanchi Array	58.36	307	P	P	14 33 35.9	-0.6
MK31				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MKAR	Makanchi Array	58.36	307	P	P	14 33 36.2	-0.3
	comp=Z,6.0nm,0.6s,baz=52,slow=7.1,SNR=90						
MKAR				pP	pP	14 34 01.1	+0.2
	comp=Z,3.2nm,0.8s,baz=47,slow=6.9,SNR=3.9						
MKAR				LR	LR	14 58 32.8	
	comp=Z,69nm,18.8s,baz=54,slow=36						
	comp=Z,6.0nm,0.6s						
MKAR	Makanchi Array	58.36	307	P	P	14 33 35.8	-0.7
MAKZ	Makanchi	58.50	307	P	P	14 33 36.6	-0.9
MAKZ				IAmb	IAmb	14 33 38.2	
	comp=Z,9.7nm,0.7s						
MAKZ	Makanchi	58.50	307	P	P	14 33 36.7	-0.9
MAKZ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MAKZ	Makanchi	58.50	307	P	P	14 33 37.4	-0.2
MAKZ				pP	pP	14 34 02.5	+0.6
MAKZ				sP	sP	14 34 12.7	-0.3
JFWS	Jewell Farm	58.52	59	P	P	14 33 36.5	-1.2
	baz=314						
KAN13	South Haven SW	58.55	69	P	P	14 33 36.6	-1.5
GYA	Guiyang	58.57	274	⇓P	P	14 33 39.3	+0.9
GYA				pmax	pmax		
	comp=Z,12nm,0.9s						
GOMU	GeErMu	58.86	290	P	P	14 33 41.3	+0.7
GOMU				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,110nm,5.0s						
POST	Post	58.93	75	P	P	14 33 40.0	-0.7
POST				IAmb	IAmb	14 33 41.6	
	comp=Z,16nm,0.7s						
OK050	Pawnee Station	59.27	69	P	P	14 33 42.0	-0.9
OK050				IAmb	IAmb	14 33 42.7	
	comp=Z,12nm,0.9s						
OK046	Pawnee Station	59.31	69	P	P	14 33 41.8	-1.5
OK046				IAmb	IAmb	14 33 43.0	
	comp=Z,9.9nm,0.8s						
BVAR	Borovoye Array	59.37	318	P	P	14 33 44.0	+0.6
	comp=Z,11nm,0.5s,baz=48,slow=7.9,SNR=44						
BVAR				pP	pP	14 34 08.7	+0.8
	comp=Z,6.1nm,0.5s,baz=53,slow=7.6,SNR=4.6						
BVAR				PcP	PcP	14 34 30.7	+0.4
	comp=Z,7.8nm,0.6s,baz=48,slow=2.2,SNR=6.6						
BVAR				ScP	ScP	14 38 22.2	+0.8
	comp=Z,2.2nm,0.8s,baz=62,slow=4.2,SNR=5.7						
BVAR				LR	LR	15 01 24.7	
	comp=Z,67nm,18.6s,baz=31,slow=38						
	comp=Z,11nm,0.5s						
WMOK	Wichita Mounta	59.37	72	P	P	14 33 43.2	-0.5
WMOK				IAmb	IAmb	14 33 44.3	
	comp=Z,5.9nm,0.8s						
WMOK	Wichita Mounta	59.37	72	P	P	14 33 43.2	-0.5
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WMOK	Wichita Mounta	59.37	72	P	P	14 33 43.5	-0.2
	baz=315,SNR=6.4						
BRVK	Borovoye	59.39	318	P	P	14 33 43.1	-0.4
BRVK				IAmb	IAmb	14 33 45.1	
	comp=Z,9.8nm,0.6s						
BRVK					pP	14 34 07.4	-0.6
BRVK	Borovoye	59.39	318	*de*P	P	14 33 44.1	+0.6
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BRVK	Borovoye	59.39	318	P	P	14 33 44.2	+0.7
BRVK				pP	pP	14 34 08.4	+0.4
BRVK				sP	sP	14 34 19.1	0.0
OK031	S. Brethren Rd	59.66	69	P	P	14 33 44.7	-0.9
OK031				IAmb	IAmb	14 33 45.6	
	comp=Z,12nm,0.7s						
DEOK	Depew	59.93	69	P	P	14 33 46.8	-0.7
DEOK				IAmb	IAmb	14 33 47.6	
	comp=Z,13nm,0.9s						
LPIG	La Paz	59.95	89	LR	LR	14 53 14.8	
	comp=Z,34nm,21.1s,baz=30,slow=29						
W35A	Tecumseh	60.20	70	P	P	14 33 48.8	-0.6
SVE	Sverdlovsk	60.22	326	*e*P	P	14 33 50.9	+1.8
SVE				pmax	pmax		
	comp=Z,26nm,1.1s						
TX31	Lajitas Ar. Si	60.26	80	P	P	14 33 49.4	-0.6
TX32	Lajitas Array	60.26	80	P	P	14 33 49.6	-0.3
TX32				IAmb	IAmb	14 33 50.9	
	comp=Z,9.3nm,0.8s						
TXAR	Lajitas Array	60.26	80	P	P	14 33 49.9	-0.1
	comp=Z,7.4nm,0.7s,baz=296,slow=4.6,SNR=71						
TXAR				pP	pP	14 34 13.7	-1.0
	comp=Z,2.4nm,0.7s,baz=322,slow=6.4,SNR=4.0						
TXAR				ScP	ScP	14 38 24.8	-1.1
	comp=Z,0.9nm,0.8s,baz=247,slow=2.6,SNR=3.8						
	comp=Z,7.4nm,0.7s						
TXAR	Lajitas Array	60.26	80	P	P	14 33 49.6	-0.4
TUL1	Leonard	60.29	69	P	P	14 33 49.5	-0.5
	baz=315						
ABTX	Abilene, Hawle	60.35	74	P	P	14 33 49.7	-0.7
	baz=315						
SLBS	Sierra La Lagu	60.48	89	P	P	14 33 52.6	+1.1
SLBS				pP	pP	14 34 17.4	+1.3
BRZS	Berezniki	60.61	315	*e*P	P	14 33 52.0	0.0
	baz=315						
BRZS	Berezniki	60.61	315	*e*P	P	14 33 51.9	0.0
SCHQ	Schefferville	60.64	37	P	P	14 33 52.0	0.0
	comp=Z,3.4nm,0.7s,baz=310,slow=11,SNR=6.4						
SCHQ				pP	pP	14 34 16.5	-0.1
	comp=Z,19nm,1.0s,baz=336,slow=8.1,SNR=13						
SCHQ				LR	LR	15 01 13.5	
	comp=Z,51nm,18.2s,baz=42,slow=37						
	comp=Z,3.4nm,0.7s						
SCHQ	Schefferville	60.64	37	P	P	14 33 51.9	-0.2
SCHQ					pP	14 34 17.1	+0.5
HDIL	Hopedale	60.67	61	P	P	14 33 51.6	-0.9
	baz=315						
LOOK	Love County	60.84	71	P	P	14 33 53.4	-0.3
HHAR	Hobbs	61.10	67	P	P	14 33 54.0	-1.4
HHAR				IAmb	IAmb	14 33 54.5	
	comp=Z,7.5nm,0.7s						
ARU	Arti	61.24	327	P	P	14 33 57.0	+0.8
	comp=Z,18nm,0.6s,baz=27,slow=4.3,SNR=34						
ARU				LR	LR	15 02 06.6	
	comp=Z,34nm,18.3s,baz=355,slow=38						

	comp=Z,18nm,0.6s						
ARU	Arti	61.24	327	P	P	14 33 56.7	+0.6
ARU	Arti	61.24	327	c iP	P	14 33 56.9	+0.8
ARU						14 34 32.3	
ARU						14 36 13.5	
ARU				S	S	14 42 11.4	+3.7
ARU				SS	SS	14 46 05.5	-3.0
ARU				pmax	pmax		
	comp=Z,29nm,0.8s						
ARU	Arti	61.24	327	P	P	14 33 56.9	+0.8
ARU				pP	pP	14 34 21.4	+0.7
X37A	Clayton	61.47	70	P	P	14 33 57.3	-0.7
X37A				IAmb	IAmb	14 33 58.4	
	comp=Z,14nm,0.9s						
TDK	Taldyqorghan	61.54	307	eP	P	14 33 58.1	-0.3
	baz=307						
TDK	Taldyqorghan	61.54	307	eP	P	14 33 58.0	-0.3
PZH	PanZhiHua	61.57	277	P	P	14 33 59.4	+0.5
PZH				pP	pP	14 34 24.0	+0.1
PZH				pmax	pmax		
	comp=Z,20nm,1.2s						
PZH				pmax	pmax		
	comp=Z,80nm,5.1s						
JCT	Junction City	61.78	76	P	P	14 33 59.1	-1.0
JCT	Junction City	61.78	76	P	P	14 33 59.1	-1.0
JCT				pmax	pmax		
	comp=Z,8.0nm,1.1s						
JCT	Junction City	61.78	76	P	P	14 33 59.8	-0.4
	baz=316						
KMI	Kunming	61.96	276	⇑P	P	14 34 01.2	-0.5
KMI				pmax	pmax		
	comp=Z,12nm,0.6s						
SFIN	Lafayette	61.98	60	P	P	14 34 00.7	-0.6
	baz=316						
WHTX	Lake Whitney,	62.09	73	P	P	14 34 01.3	-0.9
WHTX	Lake Whitney,	62.09	73	P	P	14 34 01.8	-0.3
	baz=316						
DAV	Davao City (W)	62.15	244	LR	LR	14 54 43.8	
	comp=Z,44nm,22.0s,baz=344,slow=30						
KIRV	Kirov	62.34	333	P	P	14 34 04.3	+0.9
	comp=Z,7.9nm,0.7s,baz=35,slow=5.2,SNR=4.4						
	comp=Z,7.9nm,0.7s						
KIRV	Kirov	62.34	333	ceP	P	14 34 04.8	+1.5
SHLS	Shalkode	62.35	305	eP	P	14 34 03.8	-0.1
	comp=Z,9.0nm,0.6s,baz=305						
SHLS	Shalkode	62.35	305	eP	P	14 34 03.8	-0.1
SHLS				pmax	pmax		
	comp=Z,9.0nm,0.6s						
FCAR	Ozark Folk Cen	62.41	66	P	P	14 34 02.4	-1.8
KPKS	Kokpek	62.51	306	eP	P	14 34 05.7	+0.7
	comp=Z,9.0nm,0.8s,baz=306						
KPKS	Kokpek	62.51	306	eP	P	14 34 05.6	+0.7
KPKS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MIAR	Mount Ida	62.54	68	P	P	14 34 04.1	-1.0
MIAR				IAmb	IAmb	14 34 05.5	
	comp=Z,12nm,0.8s						
MIAR	Mount Ida	62.54	68	P	P	14 34 04.1	-1.0
MIAR				pmax	pmax		
	comp=Z,12nm,0.8s						
MIAR	Mount Ida	62.54	68	P	P	14 34 04.8	-0.3
	baz=316,SNR=7.0						
UZB	Uzynbulak	62.58	306	eP	P	14 34 05.7	+0.3
	baz=306						
UZB	Uzynbulak	62.58	306	eP	P	14 34 05.7	+0.3
BORG	Borgarnes	62.68	9	LR	LR	15 01 19.2	
	comp=Z,44nm,18.3s,baz=256,slow=36						
BORG	Borgarnes	62.68	9	P	P	14 34 05.0	-0.6
BORG	Borgarnes	62.68	9	P	P	14 34 05.0	-0.6
BORG				pmax	pmax		
	comp=Z,97nm,1.3s						
WHAR	Wooly Hollow	62.74	67	P	P	14 34 04.9	-1.6
WHAR				IAmb	IAmb	14 36 10.5	
	comp=Z,30nm,1.7s						
SADO	Sadowa	62.87	51	LR	LR	15 02 58.9	
	comp=Z,85nm,18.6s,baz=72,slow=37						
KLMR	Klimovskoe	62.89	339	eP	P	14 34 06.3	-0.7
KLMR				AMP		14 34 16.1	
	comp=Z,16nm,1.5s						
KLMR				ePcP	PcP	14 34 44.0	-0.3
KLMR	Klimovskoe	62.89	339	eP	P	14 34 06.2	-0.7
KLMR				e		14 34 44.0	
KLMR				pmax	pmax		
	comp=Z,16nm,1.5s						
SATY	Saty	62.95	306	i P	P	14 34 08.6	+0.7
	baz=306						
SATY	Saty	62.95	306	i P	P	14 34 08.6	+0.7
CHKK	Chushkaly	63.07	307	eP	P	14 34 08.1	-0.5
	baz=307						
CHKK	Chushkaly	63.07	307	eP	P	14 34 08.0	-0.5
KUU	Kurty	63.36	308	eP	P	14 34 09.8	-0.7
	baz=308						
KUU	Kurty	63.36	308	eP	P	14 34 09.7	-0.7
MDOK	Medeo	63.55	307	i P	P	14 34 12.4	+0.4
	baz=307						
MDOK	Medeo	63.55	307	i P	P	14 34 12.3	+0.4
BTLS	Baital	63.62	310	eP	P	14 34 12.4	+0.2
	baz=310						
BTLS	Baital	63.62	310	eP	P	14 34 12.3	+0.2
P49A	Miami Univ. Ec	63.86	59	P	P	14 34 12.6	-1.1
	baz=317						
TKM2	Tokmak 2	64.45	307	P	P	14 34 18.6	+0.7
	SNR=8.1						
SGDS	Sogindy	64.52	308	eP	P	14 34 18.9	+0.8
	baz=308						
SGDS	Sogindy	64.52	308	eP	P	14 34 18.9	+0.8
HKT	Hockley	64.53	73	P	P	14 34 19.0	+0.8
HKT				IAmb	IAmb	14 36 20.9	
	comp=Z,47nm,2.0s						
HKT	Hockley	64.53	73	P	P	14 34 19.0	+0.8
HKT				pmax	pmax		
	comp=Z,47nm,2.0s						
TNCH	TengChong	64.63	279	eP	P	14 34 19.5	+0.3
TNCH				pP	pP	14 34 44.3	-0.1
TNCH				pmax	pmax		
	comp=Z,13nm,0.5s						
WVT	Waverly	64.64	63	P	P	14 34 18.3	-0.6
WVT				IAmb	IAmb	14 35 09.4	
	comp=Z,24nm,1.8s						
WVT	Waverly	64.64	63	P	P	14 34 18.3	-0.6
WVT				pmax	pmax		
	comp=Z,24nm,1.8s						
USP	Ospenovka	64.72	308	P	P	14 34 20.5	+1.1
	SNR=22						
LMQ	La Malbaie	64.82	44	P	P	14 34 19.5	-0.5
LMQ				IAmb	IAmb	14 34 47.1	
	comp=Z,18nm,1.3s						
FINES	FINESS Array B	64.88	346	P	P	14 34 19.2	-0.8
	comp=Z,1.7nm,0.7s,baz=19,slow=8.2,SNR=9.1						
FINES				pP	pP	14 34 44.3	-0.3
	comp=Z,5.5nm,0.9s,baz=28,slow=6.3,SNR=3.8						
FINES				LR	LR	15 07 13.0	
	comp=Z,64nm,18.1s,baz=4.0,slow=40						
	comp=Z,1.7nm,0.7s						
WVNY	West Valley, N	64.88	53	P	P	14 34 19.8	-0.6
KBK	Karagaybulak	64.96	308	P	P	14 34 22.0	+0.9
	SNR=6.6						
AAK	Ala-Archa	65.20	308	P	P	14 34 23.6	+1.0
	SNR=10						
AAK	Ala-Archa	65.20	308	P	P	14 34 23.6	+1.0
	comp=Z,8.0nm,0.7s,baz=112,slow=3.4,SNR=34						
AAK				PcP	PcP	14 34 51.6	-2.8
	comp=Z,3.3nm,0.6s,baz=142,slow=3.8,SNR=5.2						
	comp=Z,8.0nm,0.7s						
AAK	Ala-Archa	65.20	308	P	P	14 34 23.2	+0.6
AAK				IAmb	IAmb	14 34 24.5	
	comp=Z,9.4nm,0.7s						
AAK	Ala-Archa	65.20	308	d iP	P	14 34 23.4	+0.8
AAK				pmax	pmax		
	comp=Z,22nm,1.7s						
AAK	Ala-Archa	65.20	308	P	P	14 34 23.4	+0.8
AAK				pP	pP	14 34 48.7	+1.2
PLAL	Pickwick Lake	65.34	64	P	P	14 34 22.5	-1.0
PLAL				IAmb	IAmb	14 35 39.3	
	comp=Z,24nm,1.6s						
EKS2	Erkin-Say	65.53	308	P	P	14 34 25.8	+1.0
	SNR=16						
LSA	Lhasa	65.65	287	P	P	14 34 27.6	+1.5
LSA				IAmb	IAmb	14 34 28.8	
	comp=Z,16nm,0.9s						
LSA	Lhasa	65.65	287	P	P	14 34 27.6	+1.5
LSA				pmax	pmax		
	comp=Z,17nm,0.9s						
LSA	Lhasa	65.65	287	P	P	14 34 27.8	+1.7
LSA				pP	pP	14 34 52.7	+1.4
ZAIG	Zacatecas	65.71	84	P	P	14 34 27.2	+0.8
ZAIG				IAmb	IAmb	14 34 28.0	
	comp=Z,11nm,0.9s						
AML	Almayashu	65.97	308	P	P	14 34 29.3	+1.4
	SNR=12						
AFI	Afiamalu	66.08	170	LR	LR	14 58 15.8	
	comp=Z,39nm,20.4s,baz=240,slow=31						
AKTO	Aktyubinsk	66.25	323	P	P	14 34 30.1	+1.0
	comp=Z,29nm,0.8s,baz=50,slow=5.4,SNR=89						
	comp=Z,29nm,0.8s						
ABKAR	Akbulak array	66.47	321	P	P	14 34 30.8	+0.3
PQI	Presque Isle	66.50	44	P	P	14 34 30.7	0.0
SSPA	Standing Stone	66.56	54	P	P	14 34 30.2	-0.9
SSPA				IAmb	IAmb	14 35 55.8	
	comp=Z,29nm,1.6s						
SSPA	Standing Stone	66.56	54	P	P	14 34 30.7	-0.5
	baz=319						
SSPA	Standing Stone	66.56	54	P	P	14 34 30.4	-0.8
SSPA				pP	pP	14 34 56.0	-0.5
SSPA				sP	sP	14 35 06.9	-0.7
PMG	Port Moresby	66.73	214	⇑eP	P	14 34 32.9	+0.4
PMG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KK31	Karatay Array	66.75	311	P	P	14 34 32.5	+0.1
KK31				IAmb	IAmb	14 34 33.9	
	comp=Z,9.4nm,0.7s						
KK31	Karatay Array	66.75	311	P	P	14 34 32.5	+0.1
KK31				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KKAR	Karatay Array	66.75	311	P	P	14 34 32.5	+0.1
KKAR	Karatay Array	66.75	311	P	P	14 34 32.6	+0.1
KSH	Kashi	66.80	305	P	P	14 34 37.0	+4.1
KSH				pP	PcP	14 35 03.8	+2.8
KSH				pmax	pmax		
	comp=Z,16nm,0.8s						
BATG	Bathurst New B	66.84	42	P	P	14 34 32.4	-0.5
BATG				IAmb	IAmb	14 34 59.2	
	comp=Z,26nm,1.6s						
NB2	NORSAR Subarra	66.95	353	P	P	14 34 32.9	-0.4
	comp=Z,18nm,1.4s,baz=7.9,slow=6.2						
NOA	NORSAR Array B	66.95	353	P	P	14 34 33.0	-0.4
	comp=Z,1.9nm,0.8s,baz=8.5,slow=6.3,SNR=4.9						
NOA				pP	pP	14 34 58.6	+0.5
	comp=Z,7.3nm,1.1s,baz=8.3,slow=6.4,SNR=7.8						
	comp=Z,1.9nm,0.8s						
NONG	Nongkai	66.96	270	P	P	14 34 34.7	+0.7
CPCT	Cooper Cave	66.96	62	P	P	14 34 32.9	-1.0
CPCT				IAmb	IAmb	14 35 29.4	
	comp=Z,40nm,1.9s						
CRAI	Chiangrai	67.05	274	P	P	14 34 34.8	+0.2
CRAI				IAmb	IAmb	14 34 36.3	
	comp=Z,36nm,1.5s						
HFS	Hagfors	67.64	352	P	P	14 34 38.5	+0.7
	comp=Z,3.3nm,0.8s,baz=22,slow=5.3,SNR=2.0						
HFS				pP	pP	14 35 02.4	-0.4
	comp=Z,3.0nm,0.7s,baz=3.8,slow=4.3,SNR=2.5						
	comp=Z,3.3nm,0.8s						
L61B	Northampton	67.70	49	P	P	14 34 37.4	-0.9
	baz=321						
MYLDM	Lahad Datu	67.70	249	P	P	14 34 40.2	+1.5
IUG	Iuzhnay	67.72	310	eP	P	14 34 39.8	+1.2
	comp=Z,8.4nm,0.7s,baz=310						
IUG	Iuzhnay	67.72	310	eP	P	14 34 39.8	+1.2
IUG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CHM	Chimkent	67.79	311	eP	P	14 34 40.0	+1.0
	baz=311						
CHM	Chimkent	67.79	311	eP	P	14 34 39.9	+1.0
BELG	Belogornoye	68.16	330	P	P	14 34 42.0	+1.0
	comp=Z,25nm,0.9s,baz=33,slow=1.8,SNR=11						
	comp=Z,25nm,0.9s						
BELG	Belogornoye	68.16	330	ceP	P	14 34 42.1	+1.0
BELG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MND	Mandalay	68.33	278	P	P	14 34 42.9	+0.3
WES	Weston	68.38	48	P	P	14 34 42.5	-0.1
WES	Weston	68.38	48	P	P	14 34 42.5	-0.1
WES				pmax	pmax		
	comp=Z,88nm,1.9s						
PHRA	Phrae	68.43	273	P	P	14 34 43.3	+0.1
CHTO	Chiang Mai	68.99	274	P	P	14 34 46.6	-0.2
CHTO	Chiang Mai	68.99	274	P	P	14 34 46.6	-0.2
HODGE	Hodges	69.11	61	P	P	14 34 46.8	-0.5
CMAR	Chiang Mai Arr	69.26	274	P	P	14 34 48.9	+0.4
	comp=Z,6.0nm,0.8s,baz=25,slow=7.0,SNR=41						
CMAR				pP	PcP	14 35 12.3	+0.9
	comp=Z,2.7nm,0.8s,baz=17,slow=4.4,SNR=2.6						
CMAR				LR	LR	15 06 42.3	
	comp=Z,7.3nm,20.9s,baz=245,slow=37						
	comp=Z,6.0nm,0.8s						
CMAR	Chiang Mai Arr	69.26	274	P	P	14 34 48.5	+0.1
MSVF	Nonsavu	69.34	180	P	P	14 34 49.6	+0.9
	comp=Z,7.6nm,0.7s,baz=3.9,slow=14,SNR=3.7						
	comp=Z,7.6nm,0.7s						
MSVF	Nonsavu	69.34	180	P	P	14 34 51.1	+2.4
MSVF	Nonsavu	69.34	180	⇓eP	P	14 34 46.6	-2.1
MSVF				pmax	pmax		
	comp=Z,11nm,1.2s						
SANI	Sanana	69.55	238	P	P	14 34 49.3	-0.8
SANI	Sanana	69.55	238	P	P	14 34 49.0	-1.1
	comp=Z,27nm,1.0s						
MRSI	Marisa	69.61	243	P	P	14 34 50.4	-0.1
	comp=Z,45nm,0.8s						
TOLI2	Tolitoli	69.73	244	P	P	14 34 50.8	-0.5
TOLI2				IAmb	IAmb	14 34 51.9	
	comp=Z,19nm,0.9s						
GAR	Garm	70.02	308	P	P	14 34 53.5	+0.5
LUWI	Luwuk	70.42	241	P	P	14 34 55.2	-0.3
	comp=Z,101nm,1.1s,comp=Z,9µm						
CHGR	Chuyangaron	70.85	309	P	P	14 34 58.6	+0.6
CHGR	Chuyangaron	70.85	309	P	P	14 34 58.6	+0.6
CHGR				pmax	pmax		
	comp=Z,46nm,0.9s						
MPSI	Mapaga	70.86	245	P	P	14 34 57.9	-0.3
	comp=Z,35nm,1.3s						
NACGM	Naroch	70.98	343	eP	P	14 34 58.0	-0.4
	comp=Z,10.0nm,1.1s,baz=18						
SAUI	Saumlaki	72.00	230	P	P	14 35 05.5	+0.6
SAUI	Saumlaki	72.00	230	P	P	14 35 06.2	+1.3
SAUI	Saumlaki	72.00	230	P	P	14 35 05.7	+0.8
	comp=Z,152nm,1.0s						
COEN	Coen	72.36	216	P	P	14 35 06.7	-0.4
EKA	Eskdalemuir Ar	73.12	1	P	P	14 35 09.5	-1.6
	comp=Z,0.9nm,0.6s,baz=355,slow=4.3,SNR=2.6						
	comp=Z,0.9nm,0.6s						
SBUM	Sibu	73.57	252	P	P	14 35 14.3	0.0
KBL	Kabul	74.15	306	P	P	14 35 17.5	-0.3
KBL				IAmb	IAmb	14 35 18.5	
	comp=Z,22nm,0.8s						
KBL	Kabul	74.15	306	P	P	14 35 17.5	-0.3
KBL				pmax	pmax		
	comp=Z,23nm,0.9s						
DZM	Mont Dzumac	74.40	192	P	P	14 35 17.8	-1.1
	comp=Z,16nm,1.1s,baz=15,slow=19,SNR=3.8						
DZM				LR	LR	15 03 20.6	
	comp=Z,50nm,21.9s,baz=208,slow=32						
	comp=Z,16nm,1.1s						
SPSI	Sidrap Palu	74.49	242	P	P	14 35 19.4	-0.2
	comp=Z,19nm,0.8s						
AKASG	Malin Array Be	74.50	340	P	P	14 35 18.1	-1.1
	comp=Z,1.6nm,0.4s,baz=22,slow=6.1,SNR=8.3						
AKASG				pP	pP	14 35 44.3	-0.3
	comp=Z,2.6nm,0.5s,baz=22,slow=6.2,SNR=6.5						
	comp=Z,1.6nm,0.4s						
AKBB	Malin Array Si	74.50	340	P	P	14 35 18.2	-1.0
AKBB				IAmb	IAmb	14 35 51.3	
	comp=Z,9.3nm,0.6s						
AKBB	Malin Array Si	74.50	340	P	P	14 35 18.2	-1.0
AKBB				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BKSI	Bulukumba	75.43	241	P	P	14 35 25.0	0.0
	comp=Z,28nm,0.9s						
KSM	Kuching	75.48	253	P	P	14 35 25.5	+0.2
KSM				IAmb	IAmb	14 35 26.7	
	comp=Z,12nm,0.7s						
KDU	Kakadu	75.59	226	P	P	14 35 25.9	+0.1
MTSU	Mount Surprise	75.83	213	P	P	14 35 27.8	+0.7
TV1H	Townsville Har	76.06	211	P	P	14 35 29.4	+1.0
MTN	Manton Dam	76.33	228	P	P	14 35 30.0	-0.1
MTN	Manton Dam	76.33	228	P	P	14 35 30.5	+0.4
GEYT	Alibeck	76.52	315	P	P	14 35 32.0	+0.9
	comp=Z,8.2nm,1.0s,baz=6.6,slow=15,SNR=13						
	comp=Z,8.2nm,1.0s						
CTA	Charters Tower	77.01	211	P	P	14 35 34.5	+0.7
CTAO	Charters Tower	77.01	211	P	P	14 35 34.0	+0.2
CTAO				IAmb	IAmb	14 35 35.2	
	comp=Z,19nm,0.9s						
CTAO	Charters Tower	77.01	211	P	P	14 35 34.7	+0.9
CTAO	Charters Tower	77.01	211	P	P	14 35 34.0	+0.2
CTAO				pmax	pmax		
	comp=Z,19nm,1.0s						
KVAR	Kislovodsk Arr	77.15	329	P	P	14 35 36.1	+1.5
	comp=Z,1.8nm,0.3s,baz=32,slow=19,SNR=1.9						
	comp=Z,1.8nm,0.3s						
KIV	Kislovodsk	77.16	329	eP	P	14 35 36.2	+1.6
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KBZ	Khabaz	77.29	329	P	P	14 35 36.2	+1.1
	comp=Z,6.3nm,0.8s,baz=50,slow=4.1,SNR=16						
	comp=Z,6.3nm,0.8s						
KBZ	Khabaz	77.29	329	deP	P	14 35 36.6	+1.4
AKT	Akhty	77.63	324	eP	P	14 35 38.8	+1.5
AKT				e		14 35 47.9	
AKT				e*PP	pP	14 36 03.7	+0.7
AKT				pmax	pmax		
	comp=Z,17nm,0.9s						
ZEI	Tsey	77.80	328	eP	P	14 35 39.2	+0.8
ZEI				pmax	pmax		
	comp=Z,13nm,0.6s						
BUR08	Bucovina Ar. S	78.22	342	P	P	14 35 40.5	0.0
TRPA	Tarpa	78.24	344	⇑P	P	14 35 41.4	+1.0
BURAR	Bucovina Array	78.25	342	⇑P	P	14 35 41.1	+0.5
BURAR	Bucovina Array	78.25	342	P	P	14 35 40.6	0.0
BURAR				IAmb	IAmb	14 35 43.4	
	comp=Z,8.6nm,0.7s						
BURAR					pP	14 36 07.3	+1.1
KULM	Kulim	78.33	264	P	P	14 35 40.8	-0.6
IPM	Ipoh	78.73	263	P	P	14 35 43.0	-0.7
IPM				IAmb	IAmb	14 35 44.0	
	comp=Z,11nm,0.8s						
IPM	Ipoh	78.73	263	P	P	14 35 43.5	-0.1
MYKOM	Kota Tinggi	79.12	259	P	P	14 35 45.5	-0.1
MARR	Marisel-Cluj	79.54	343	⇓P	P	14 35 37.0	-11
PLAI	Plampang	79.61	241	P	P	14 35 46.6	-1.7
	comp=Z,48nm,1.0s						
VRI	Vrincioaia	79.62	340	⇑P	P	14 35 49.2	+1.2
QIS	Mount Isa	79.73	217	P	P	14 35 48.6	-0.2
COVR	Voineasa-Covas	79.74	341	⇑P	P	14 35 49.8	+1.1
GNI	Garni	79.87	326	P	P	14 35 51.4	+1.8
	comp=Z,3.8nm,0.6s,baz=7.1,slow=8.8,SNR=3.8						
	comp=Z,3.8nm,0.6s						
GNI	Garni	79.87	326	⇑eP	P	14 35 50.1	+0.5
GNI				pmax	pmax		
	comp=Z,15nm,1.8s						
KNRA	Kununurra	79.90	228	P	P	14 35 49.6	-0.1
KNRA	Kununurra	79.90	228	P	P	14 35 50.0	+0.3
MLR	Muntele Rosu	80.14	341	⇑P	P	14 35 52.6	+1.6
MLR	Muntele Rosu	80.14	341	P	P	14 35 52.4	+1.4
	comp=Z,3.4nm,0.5s,baz=20,slow=15,SNR=4.4						
	comp=Z,3.4nm,0.5s						
MLR	Muntele Rosu	80.14	341	P	P	14 35 50.3	-0.7
MLR	Muntele Rosu	80.14	341	P	P	14 35 50.3	-0.7
MLR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VOIR		80.37	341	⇑P	P	14 35 52.1	0.0
VOIR				⇓S	sP	14 36 28.1	-0.7
ARR	Arges	80.52	342	⇑P	P	14 35 56.9	+4.0
EIDS	Eidsvold	80.60	205	P	P	14 35 53.6	+0.3
EIDS				IAmb	IAmb	14 36 21.4	
	comp=Z,20nm,1.3s						
SURR	Surduc	80.61	343	P	P	14 35 54.3	+1.0
WB0	Warramunga Arr	81.06	222	P	P	14 35 55.4	-0.5
WB0				IAmb	IAmb	14 35 56.6	
	comp=Z,15nm,0.8s						
WR0	Warramunga Arr	81.17	221	P	P	14 35 55.6	-0.9
WR0				IAmb	IAmb	14 35 57.0	
	comp=Z,15nm,0.7s						
WRAB	Tennant Creek	81.22	221	P	P	14 35 56.1	-0.7
WRAB				IAmb	IAmb	14 35 57.5	
	comp=Z,18nm,0.9s						
WRAB	Tennant Creek	81.22	221	P	P	14 35 56.7	-0.1
WRAB	Tennant Creek	81.22	221	deP	P	14 35 56.2	-0.6
WRAB				pmax	pmax		
	comp=Z,33nm,1.7s						
WB2	Warramunga Arr	81.23	221	P	P	14 35 56.1	-0.7
WB2				IAmb	IAmb	14 35 57.6	
	comp=Z,21nm,0.9s						
WRA	Warramunga Arr	81.23	221	P	P	14 35 56.6	-0.3
	comp=Z,12nm,0.7s,baz=32,slow=6.3,SNR=105						
WRA				pP	pP	14 36 22.2	-0.6
	comp=Z,2.9nm,0.9s,baz=35,slow=6.3,SNR=3.3						
	comp=Z,12nm,0.7s						
WRA	Warramunga Arr	81.23	221	P	P	14 35 56.0	-0.8
PSI	Prapat	81.34	263	P	P	14 35 57.9	+0.1
PSI	Prapat	81.34	263	P	P	14 35 57.2	-0.6
PSI				pmax	pmax		
	comp=Z,16nm,0.8s						
RPSI	Rantau Prapat	81.42	263	P	P	14 35 57.2	-0.8
RPSI				IAmb	IAmb	14 35 58.6	
	comp=Z,16nm,0.8s						
RMQ	Roma	82.29	207	P	P	14 36 03.8	+1.6
GSI	Gunungsitoli	83.34	264	P	P	14 36 08.1	+0.1
GSI	Gunungsitoli	83.34	264	P	P	14 36 07.8	-0.2
	comp=Z,21nm,0.7s,comp=Z,3µm						
FITZ	Fitzroy Crossi	83.46	230	P	P	14 36 08.9	+0.5
FITZ	Fitzroy Crossi	83.46	230	P	P	14 36 09.3	+0.9
QLP	Quilpie	83.72	210	P	P	14 36 10.6	+1.1
BRTR	Keskin Array B	83.73	333	P	P	14 36 09.8	-0.1
	comp=Z,1.5nm,0.6s,baz=0.0,slow=1.4,SNR=4.9						
	comp=Z,1.5nm,0.6s						
BRTR	Keskin Array B	83.73	333	P	P	14 36 09.7	-0.3
BNN	Bunyan	83.91	332	P	P	14 36 10.8	-0.1
BNN				IAmb	IAmb	14 36 13.5	
	comp=Z,22nm,1.0s						
MNAI	Manna	84.52	256	P	P	14 36 13.3	-0.7
AS31	Alice Springs	84.74	220	P	P	14 36 15.1	+0.2
ASAR	Alice Springs	84.75	220	P	P	14 36 15.2	+0.3
	comp=Z,8.9nm,0.7s,baz=22,slow=5.6,SNR=143						
ASAR				pP	pP	14 36 41.0	-0.1
	comp=Z,2.5nm,0.8s,baz=33,slow=6.5,SNR=3.9						
	comp=Z,8.9nm,0.7s						
ASAR	Alice Springs	84.75	220	P	P	14 36 14.9	0.0
ARMA	Armidale	85.28	203	P	P	14 36 19.1	+1.6
INKA	Innaminka	85.93	213	P	P	14 36 21.7	+1.1
OOD	Oodnadatta	87.77	217	P	P	14 36 30.3	+0.8
CMSA	Cobar Meteorol	87.92	208	P	P	14 36 31.5	+1.4
WRKA	Warakurna	88.29	224	P	P	14 36 33.1	+0.9
MBWA	Marble Bar	88.93	233	P	P	14 36 34.7	-0.5
PSA00	Pilbara Seismi	89.23	233	P	P	14 36 36.0	-0.5
LCRK	Leigh Creek	89.27	214	P	P	14 36 37.6	+1.1
STKA	Stephens Creek	89.47	211	P	P	14 36 38.3	+0.9
	comp=Z,16nm,0.7s,baz=32,slow=11,SNR=41						
	comp=Z,16nm,0.7s						
STKA	Stephens Creek	89.47	211	P	P	14 36 38.0	+0.5
STKA	Stephens Creek	89.47	211	P	P	14 36 38.6	+1.2
STKA	Stephens Creek	89.47	211	P	P	14 36 38.0	+0.5
STKA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MULG	Mulgathing	90.62	217	P	P	14 36 43.3	+0.5
MEEK	Meekatharra	94.09	231	P	P	14 36 58.9	-0.1
RAYN	Ar Rayn	94.36	318	P	P	14 37 00.2	-0.4
RAYN				IAmb	IAmb	14 37 01.4	
	comp=Z,7.8nm,1.0s						
RAYN	Ar Rayn	94.36	318	P	P	14 37 00.2	-0.4
RAYN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TORD	Torodi Ar. Bea	115.16	357	PKP	PKiKP	14 42 20.8	-1.0
	comp=Z,1.5nm,0.6s,baz=358,slow=1.9,SNR=15						
TORD				PKKPab	PKKPab	14 53 02.8	-2.9
	comp=Z,0.9nm,0.8s,baz=230,slow=1.2,SNR=4.1						
SIV	San Ignacio	121.14	76	PKP	PKPdf	14 42 31.8	-1.3
	comp=Z,1.6nm,0.6s,baz=234,slow=1.1,SNR=7.9						
DBIC	Dimbokro	121.59	4	PKP	PKPdf	14 42 33.4	-0.7
	comp=Z,3.2nm,0.6s,baz=7.5,slow=2.9,SNR=6.8						
CPUP	Villa Florida	131.22	81	PKP	PKPdf	14 42 51.6	-0.5
	comp=Z,1.6nm,0.6s,baz=293,slow=5.9,SNR=5.0						
CPUP				SKPab	SKPbc	14 46 05.9	-1.6
	comp=Z,4.3nm,0.8s,baz=298,slow=4.2,SNR=7.9						
PLCA	Paso Flores	132.76	105	PKP	PKPdf	14 42 54.8	+0.1
	comp=Z,0.9nm,0.6s,baz=200,slow=1.7,SNR=4.8						
PLCA				SKPab	SKPab	14 46 13.7	-0.6
	comp=Z,7.0nm,1.1s,baz=310,slow=5.6,SNR=7.2						
ELIB	Princess Elisa	157.08	200	dPKP	PKPab	14 44 03.9	-1.7

*ATH **07** 14:39:24.4, 36°.23N×29°.57E, h37km±2km, ML3.1/6, Error ellipse: s-maj=3.6km s-min=1.4km az=159.0*
*DDA **07** 14:39:24.0±0.0, 36°.13N×29°.36E, h38km, ML3.2*
*THE **07** 14:39:25.6, 36°.15N×29°.29E, h0km, ML3.0/3, Error ellipse: s-maj=1.7km s-min=0.5km az=187.0*
*ISK **07** 14:39:25.3, 36°.18N×29°.33E, h17km, ML3.3/6*

ISC 07 14:39:25.0±1.2, 36°.17N±0°.03×29°.35E±0°.02, h15km±10km, n33, σ0s.91/58, Turkey

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Code  Station Name       Δ°   AZ°    Phase ID        Time      Res
                                    Op     ISC      h  m  s    ISC
KSL   Kastellorizon     0.19   96   P      Pb       14 39 31.1 +0.9
KSL                                 S      Sb       14 39 35.6 +1.9
      6µm,0.3s
KSL   Kastellorizon     0.19   96   P      Pb       14 39 31.1 +0.9
KSL                                 S      Sb       14 39 34.4 +0.7
KSL                                 AML    AML      14 39 36.2
      comp=N,8496µm,0.3s
KSL                                 AML    AML      14 39 36.6
      comp=E,14015µm,0.3s
AKAS  Kas               0.21   73   Pg     Pb       14 39 31.2 +0.5
AKAS                                Sg     Sb       14 39 35.3 +0.7
FETY  Fethiye           0.51  335   Pg     Pb       14 39 35.9 +0.1
FETY                                Sg     Sb       14 39 43.4 +0.4
FETY  Fethiye           0.51  335   P      Pb       14 39 36.4 +0.6
FETY                                S      Sn       14 39 44.8 -1.6
ELL   Elmali            0.73   38   Pg     Pb       14 39 39.7 +0.1
ELL                                 Sg     Sn       14 39 51.1 -0.8
CAME  Cameli-Denizli    0.77  357   Pg     Pb       14 39 40.2 -0.1
CAME                                Sg     Sn       14 39 51.9 -1.1
AKUM  Antalya-Kumluc    0.82   79   P      Pb       14 39 38.7 -2.2
AKUM                                S      Sb       14 39 52.2 +0.5
DALY  Dalyan (Mula)     0.86  319   Pg     Pg       14 39 41.7 +0.1
DALY                                Sg     Sn       14 39 54.3 -0.5
CAEL  Denizli, Camel    0.95  359   P      Pb       14 39 42.6 -0.7
CAEL                                S      Sn       14 39 57.6 +0.2
CAEL                              i AML    AML      14 40 01.0
      comp=E,462nm,1.1s
ARG   Arkhangelos       0.99  273   P      Pn       14 39 44.0 -0.4
ARG                                 S      Sn       14 39 59.5 +1.4
      comp=E,778nm,0.4s
ARG   Arkhangelos       0.99  273   Pg     Pg       14 39 44.7 +0.5
ARG   Arkhangelos       0.99  273   P      Pn       14 39 43.9 -0.4
ARG                                 S      Sn       14 39 58.1 -0.1
ARG                                 AML    AML      14 40 03.8
      comp=N,1339µm,0.3s
ARG                                 AML    AML      14 40 05.3
      comp=E,1817µm,0.3s
TURN  Turunc            1.08  304   Pg     Pg       14 39 45.8  0.0
YER   Yerkesik          1.29  319   P      Pb       14 39 49.0  0.0
YER                                 S      Sg       14 40 07.3 +0.6
YER   Yerkesik          1.29  319   Pn     Pb       14 39 48.8 -0.2
APMY  Acipayam-Deniz    1.30  358   Pn     Pb       14 39 49.3 +0.1
TAVA  DENIZLI_Tavas     1.34  345   P      Pn       14 39 49.5 +0.2
TAVA                                S      Sg       14 40 07.8 -0.5
TAVA                              i AML    AML      14 40 09.0
      comp=E,456nm,0.5s
MULA  Mugla, Merkez-    1.36  323   P      Pb       14 39 50.1 -0.2
MULA                                S      Sb       14 40 07.8 +0.2
DNIZ  Denizli-Tavas-    1.47  350   P      Pn       14 39 51.3 +0.2
DNIZ                                S      Sg       14 40 11.8 -0.8
DNIZ                              i AML    AML      14 40 13.0
      comp=E,1µm,0.7s
DAT   Datca             1.54  292   P      Pn       14 39 51.7 -0.3
DAT                                 S      Sb       14 40 12.9 +0.4
DAT   Datca             1.54  292   P      Pn       14 39 51.3 -0.7
DAT                                 S      Sb       14 40 12.7 +0.2
BRDR  BURDUR-Merkez     1.63   20   P      Pb       14 39 54.6 -0.1
BRDR                                S      Sb       14 40 16.2 +1.0
KARP  Karpathos         1.88  251   P      Pn       14 39 56.8 +0.1
KARP  Karpathos         1.88  251   P      Pn       14 39 56.7 +0.1
KARP                                S      Sn       14 40 19.8 -0.5
KARP                                AML    AML      14 40 21.8
      comp=E,526µm,0.3s
KARP                                AML    AML      14 40 22.3
      comp=N,382µm,0.2s
ISP   Isparta           1.90   29   P      Pn       14 39 51.6 -5.3
ISP                                 AML    AML      14 40 25.1
      comp=E,1042µm,0.6s
ISP                                 AML    AML      14 40 27.6
      comp=N,814µm,0.6s
KZIL  AFYON_Kizioren    2.18   17   P      Pn       14 40 01.9 +1.1
KZIL                                S      Sn       14 40 28.9 +1.3
SEDI  Konya, Seydise    2.31   56   P      Pn       14 40 03.3 +0.6
SEDI                                S      Sn       14 40 32.2 +1.3
SMG   Samos             2.53  308   P      Pn       14 40 05.1 -0.5
SMG                                 S      Sn       14 40 34.4 -1.8
ZKR   Zakros            2.76  248   P      Pn       14 40 09.1 +0.4
ZKR                                 S      Sn       14 40 42.1 +0.3
      comp=N,122nm,0.7s
ZKR   Zakros            2.76  248   P      Pn       14 40 08.7 -0.1
ZKR                                 S      Sn       14 40 41.5 -0.3
ZKR                                 AML    AML      14 40 42.8
      comp=N,165µm,0.6s
ZKR                                 AML    AML      14 40 42.9
      comp=E,319µm,0.9s
STIA  Sitia Lasithi     2.82  251   P      Pn       14 40 10.7 +1.1
STIA                                S      Sn       14 40 43.2 -0.1
CSS   Mathiatis         3.46  109   P      Pn       14 40 15.0 -3.4
CSS                                 S      Sn       14 40 50.1 -9.0
CSS                                 AML    AML      14 40 59.7
      comp=E,69µm,0.9s
CSS                                 AML    AML      14 40 59.8
      comp=N,52µm,0.4s
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*PRE **07** 14:41:26.1±1.3, 26°.49S×27°.54E, h2km, ML3.0*
*IDC **07** 14:41:27.2±1.3, 26°.45S×27°.52E, h0km, mb4.0/3, mbtmp4.0/6, ML3.8/2, Error ellipse: s-maj=20.4km s-min=14.8km az=108.0*
*BUL **07** 14:41:28.6±0.9, 26°.49S×27°.67E, h3km±9km, MD3.7*
ISC 07 14:41:26.9±1.4, 26°.47S±0°.04×27°.54E±0°.05, h7km±9km, n27, σ2s.21/48, mb4.1/3, 2D, South Africa

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Code  Station Name       Δ°   AZ°    Phase ID        Time      Res
                                    Op     ISC      h  m  s    ISC
HRAO  HartRAO           0.60   13 ⇓iP      Pg       14 41 37.9 -0.5
HRAO                               eS      Sg       14 41 44.8 -1.5
HRAO                                IAML            14 41 51.9
      comp=Z,275nm,0.3s
KSR   Koster            0.85  317 ⇓iP      Pg       14 41 43.7 +0.5
KSR                                eS      Sg       14 41 54.0 -0.2
KSR                                 IAML            14 42 01.5
      comp=Z,869nm,0.2s
LBTB  Lobatse           2.28  309   Pn     Pn       14 42 07.1 +2.1
      comp=Z,148nm,0.3s,baz=180,slow=9.7
LBTB                                Lg     Lg       14 42 38.1
      comp=Z,72nm,0.3s,baz=180,slow=24,SNR=37
LBTB  Lobatse           2.28  309  i P     Pb       14 42 07.9 -0.5
LBTB                               i S     Sb       14 42 36.9 +0.2
LBTB  Lobatse           2.28  309  eP      Pn       14 42 06.6 +1.6
LBTB                               eS      Sn       14 42 35.0 +1.6
LBTB                                IAML            14 42 38.8
      comp=Z,246nm,0.3s
CRLN  Carolina, Mapu    2.28   78  eP      Pn       14 42 05.7 +0.5
CRLN                               eS      Sn       14 42 34.9 +1.3
CRLN                                IAML            14 42 40.8
      comp=Z,44nm,0.7s
BOSA  Boshof            2.94  223   Pn     Pn       14 42 16.1 +1.9
      comp=Z,6.2nm,0.3s,baz=46,slow=13,SNR=90
BOSA                                Pg     Pg       14 42 22.5 -0.8
      comp=Z,9.2nm,0.3s,baz=49,slow=17,SNR=23
BOSA                                Sn     Sn       14 42 51.3 +1.5
      comp=Z,8.4nm,0.3s,baz=12,slow=20,SNR=7.7
BOSA                                Lg     Lg       14 42 59.1
      comp=Z,13nm,0.3s,baz=17,slow=6.0,SNR=9.4
      comp=Z,18nm,0.3s
BOSA  Boshof            2.94  223  i P     Pn       14 42 16.3 +2.2
BOSA                               i S     Sn       14 42 52.6 +2.8
BOSA  Boshof            2.94  223  eP      Pn       14 42 14.7 +0.6
BOSA                               eS      Sn       14 42 50.6 +0.8
BOSA                                IAML            14 43 04.5
      comp=Z,57nm,0.2s
MOPA  Mopani            4.57   51  i P     Pn       14 42 36.9 +0.4
MOPA                               i S     Sn       14 43 26.0 -4.0
MUSN  Musina, Limpop    4.67   27  i P     Pn       14 42 39.4 +1.5
MUSN                               i S     Sn       14 43 29.9 -2.5
KEIM  Keimoes           6.24  248  eP      Pn       14 43 01.1 +1.7
KEIM                               eS      Sn       14 44 09.1 -2.0
KEIM                                IAML            14 44 49.7
      comp=Z,21nm,0.4s
BFON  Badsfontein, M    6.28  211  eP      Pn       14 43 01.1 +1.0
BFON                               eS      Sn       14 44 09.5 -2.7
BFON                                IAML            14 44 50.8
      comp=Z,29nm,0.5s
GRAF  Camdeboo Natio    6.37  204  eP      Pn       14 43 01.8 +0.6
GRAF                               eS      Sn       14 44 11.0 -3.2
GRAF                                IAML            14 45 04.7
      comp=Z,19nm,0.5s
BRAK  Brakfontein       6.67  216  eP      Pn       14 43 06.0 +0.7
BRAK                               eS      Sn       14 44 18.4 -3.2
BRAK                                IAML            14 44 35.5
      comp=Z,7.4nm,0.3s
ARMS  Ukamas            7.11  256  eP      Pn       14 43 12.6 +1.1
ARMS                               eS      Sn       14 44 29.5 -3.1
ARMS                                IAML            14 45 16.9
      comp=Z,44nm,0.4s
GRAN  Grantham          7.46  218  eP      Pn       14 43 17.2 +1.0
GRAN                               eS      Sn       14 44 37.1 -4.0
GRAN                                IAML            14 45 34.4
      comp=Z,20nm,0.5s
FRAZ  Fraserburg        7.63  223  eP      Pn       14 43 20.0 +1.4
FRAZ                               eS      Sn       14 44 41.6 -3.8
FRAZ                                IAML            14 45 27.9
      comp=Z,14nm,0.6s
SUR   Sutherland        8.31  223   Pn     Pn       14 43 30.0 +2.0
      comp=Z,1.5nm,0.3s,baz=54,slow=11,SNR=31
SUR                                 Sn     Sn       14 45 00.3 -1.9
      comp=Z,1.6nm,0.3s,baz=157,slow=21,SNR=6.3
SUR                                 Lg     Lg       14 45 45.2
      comp=Z,2.3nm,0.3s,baz=306,slow=22,SNR=2.3
      comp=Z,8.6nm,0.5s
CVNA  Calvinia          8.44  232  eP      Pn       14 43 31.2 +1.5
CVNA                               eS      Sn       14 45 01.7 -3.6
CVNA                                IAML            14 45 55.6
      comp=Z,44nm,0.5s
MATJ  Matjiesfontein    9.07  220  eP      Pn       14 43 40.1 +1.8
MATJ                               eS      Sn       14 45 16.1 -4.6
MATJ                                IAML            14 45 48.6
      comp=Z,8.6nm,0.6s
KOMG  Komaggas          9.47  247  eP      Pn       14 43 44.2 +0.4
KOMG                               eS      Sn       14 45 26.0 -4.5
KOMG                                IAML            14 46 37.6
      comp=Z,13nm,0.6s
KRI   Karoi             9.79   12  i P     Pn       14 43 42.3 -6.0
KRI                                i S     Sn       14 45 19.4  -19
TORD  Torodi Ar. Bea   46.72  324   P      P        14 49 57.3 +0.5
      comp=Z,0.8nm,0.5s,baz=128,slow=6.5,SNR=11
      comp=Z,0.8nm,0.5s
FINES FINESS Array B   87.61  359   P      P        14 54 16.9 +1.6
      comp=Z,4.1nm,1.0s,baz=181,slow=6.5,SNR=1.9
      comp=Z,4.1nm,1.0s
MKAR  Makanchi Array   88.09   34   P      P        14 54 18.5 +0.5
      comp=Z,0.2nm,0.6s,baz=222,slow=5.3,SNR=2.3
      comp=Z,0.2nm,0.6s
NVAR  Mina Array Bea  148.98  301   PKPbc  PKPbc    15 01 17.7 +1.6
      comp=Z,0.3nm,0.6s,baz=92,slow=2.9,SNR=4.1
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*IDC **07** 14:44:15.3±3.2, 28°.24S×67°.51W, h106km±26km, mb3.8/4, mbtmp4.0/6, Error ellipse: s-maj=35.6km s-min=20.4km az=57.0*
*SJA **07** 14:44:16.1±0.7, 28°.17S×67°.50W, h140km±6km, ML3.9, MW3.8, Hypocentre not reviewed by the ISC*
ISC 07 14:44:18.5±0.9, 28°.0S±0°.1×67°.3W±0°.2, h135km, n11, σ0s.90/12, mb4.0/4, La Rioja Province

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Code  Station Name       Δ°   AZ°    Phase ID        Time      Res
                                    Op     ISC      h  m  s    ISC
CYA   Choya             1.38  107  eP               14 44 46.4
CYA                                eS               14 45 07.6
ACLC  CERRO LA CRUZ     1.42  168  eP               14 44 44.3
ACLC                               eS               14 45 05.0
ACLC                                IAML            14 45 06.2
      comp=Z,1µm,0.4s
AC02  Maricunga         2.02  306  eP               14 44 52.9
AC02                               eS               14 45 28.8
GO03  Copiap            2.64  279  eP               14 44 57.7
GO03                               eS               14 45 27.8
AC05  El Transito       2.74  252  eP               14 44 58.9
AC05                               eS               14 45 30.5
AC05                                IAML            14 45 31.2
      comp=Z,1µm,0.6s
CO01  Juntas del Tor    3.12  231  eP               14 45 04.2
CO01                               eS               14 45 39.5
CO01                                IAML            14 45 40.4
      comp=Z,176nm,0.6s
LCO   Las Campanas      3.15  251  eP               14 45 03.4
LCO                                eS               14 45 38.5
LCO                                 IAML            14 45 39.9
      comp=Z,654nm,0.3s
AC04  Llanos de Chal    3.34  266  eP               14 45 05.4
AC04                               eS               14 45 43.0
AC04                                IAML            14 45 53.4
      comp=Z,182nm,0.5s
RTLL  Cerro Villicun    3.44  197  eP               14 45 07.5
RTLL                               eS               14 45 45.5
AC01  Pan de Azucar     3.49  302  eP               14 45 09.2
AC01                               eS               14 45 48.6
AC01                                IAML            14 45 57.0
      comp=Z,228nm,0.3s
GO02  Mina Guanaco      3.52  324  eP               14 45 12.0
GO02                               eS               14 45 52.4
GO04  Tololo Observa    3.73  234  eP               14 45 10.5
GO04                               eS               14 45 50.5
RTLS  Leoncito          4.13  204  eP               14 45 16.8
RTLS                               eS               14 46 03.6
RTLS                                IAML            14 46 03.7
      comp=Z,148nm,0.8s
PB14  IPOC Station P    4.39  320  eP               14 45 22.5
PB14                               eS               14 46 11.8
PB14                                IAML            14 46 13.6
      comp=Z,102nm,0.4s
CO02  Combarbal         4.51  225  eP               14 45 20.0
CO02                               eS               14 46 09.7
CO02                                IAML            14 46 11.5
      comp=Z,115nm,0.5s
ASAL  Salagasta         4.73  196  eP               14 45 24.5
LVC   Limon Verde       5.59  345   P      Pn       14 45 39.8 -0.3
      comp=Z,2.2nm,0.3s,baz=190,slow=10,SNR=10
LVC                                 S      Sn       14 46 42.8 -0.7
      comp=Z,8.4nm,0.4s,baz=198,slow=14,SNR=5.7
CPUP  Villa Florida     9.04   81   P      Pn       14 46 25.1 -0.8
      comp=Z,1.4nm,0.5s,baz=241,slow=13,SNR=3.6
SNAA  Sanae            55.66  160   P      P        14 53 39.5 -0.7
      comp=Z,1.9nm,0.9s,baz=307,slow=13,SNR=5.6
      comp=Z,1.9nm,0.9s
TORD  Torodi Ar. Bea   78.29   68   P      P        14 56 05.3 +1.4
      comp=Z,7.2nm,0.7s,baz=257,slow=5.2,SNR=36
      comp=Z,7.2nm,0.7s
BOSA  Boshof           79.16  117   P      P        14 56 09.2 +0.4
      comp=Z,1.3nm,0.6s,baz=243,slow=4.5,SNR=2.0
      comp=Z,1.3nm,0.6s
PDAR  Pinedale Array   80.48  330   P      P        14 56 16.4 +0.8
      comp=Z,0.2nm,0.6s,baz=129,slow=14,SNR=2.1
      comp=Z,0.2nm,0.6s
ASAR  Alice Springs   124.68  204   PKP    PKPdf    15 03 01.6 -1.2
      comp=Z,0.3nm,0.5s,baz=130,slow=1.7,SNR=9.2
WRA   Warramunga Arr  127.92  206   PKP    PKPdf    15 03 08.0 -1.0
      comp=Z,0.3nm,0.4s,baz=156,slow=1.8,SNR=5.2
KURBB Kurchatov Arra  145.72   39   PKPbc  PKPab    15 03 42.1 +0.3
      comp=Z,6.5nm,0.2s,baz=298,slow=3.6,SNR=4.5
ZALV  Zalesovo Beam   147.03   31   PKPbc  PKPbc    15 03 45.7 +0.7
      comp=Z,5.3nm,0.8s,baz=304,slow=3.6,SNR=6.4
MKAR  Makanchi Array  149.71   44   PKPbc  PKiKP    15 03 53.1  0.0
      comp=Z,2.4nm,0.7s,baz=303,slow=2.2,SNR=9.4
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*IDC **07** 14:58:38.6±1.1, 36°.54N×67°.57E, h0km, mb3.8/10, mbtmp3.8/16, ML3.3/6, MS3.2/5, Error ellipse: s-maj=18.4km s-min=14.7km az=164.0*
*NNC **07** 14:58:42.2±4.3, 37°.03N×67°.44E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=37.0km s-min=24.9km az=7.0*
ISC 07 14:58:40.7±0.6, 36°.77N±0°.06×67°.54E±0°.05, h10km, n37, σ1s.61/43, mb3.7/8, MS3.2/4, 5C-6D, Hindu Kush region

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Code  Station Name       Δ°   AZ°    Phase ID        Time      Res
                                    Op     ISC      h  m  s    ISC
CEP   Cherat            4.63  128   P      Pb       15 00 02.2 +0.2
CEP                                 S      Sg       15 01 07.0 -2.2
THW   Thamme Wali       5.26  138   P      Pb       15 00 14.8 +2.1
CHCP  Chirah Chowk      5.62  122   P      Pn       15 00 05.2 +0.9
KK31  Karatay Array     6.72   19 ⇑P       Pn       15 00 21.6 +2.2
      2.2nm,0.4s,baz=209,slow=14,SNR=28
KK31                              ⇓S       Sn       15 01 36.7 +0.6
      5.3nm,0.6s,baz=207,slow=22,SNR=4.3
AML   Almayashu         7.16   40   P      Pn       15 00 27.0 +1.2
      SNR=20
AML   Almayashu         7.16   40 ⇑P       Pn       15 00 26.6 +0.8
      3.5nm,1.1s
AML                               ⇓S       Sn       15 01 46.9 -0.5
      2.0nm,0.6s
EKS2  Erkin-Say         7.59   37   P      Pn       15 00 33.6 +2.2
      SNR=10.0
GEYT  Alibeck           7.60  282   Pn     Pn       15 00 31.1 -0.3
      0.7nm,0.3s,baz=104,slow=12,SNR=4.7
GEYT                                Sn     Sn       15 01 59.1 +1.5
      1.0nm,0.3s,baz=101,slow=24,SNR=1.5
      1.6nm,0.4s
UCH   Uchtor            7.66   43   P      Pn       15 00 34.1 +1.4
      SNR=39
AAK   Ala-Archa         7.94   40   P      Pn       15 00 38.0 +1.8
      SNR=13
AAK   Ala-Archa         7.94   40   Pn     Pn       15 00 37.6 +1.4
      1.4nm,0.3s,baz=182,slow=6.8,SNR=34
AAK                                 Sn     Sn       15 02 07.6 +1.5
      0.4nm,0.3s,baz=202,slow=9.6,SNR=1.6
AAK                                 LR     LR       15 04 31.6
      comp=Z,107nm,19.5s,baz=260,slow=44
      6.3nm,0.5s
KBK   Karagaybulak      8.19   42   P      Pn       15 00 41.8 +2.1
      SNR=25
CHMS  Chumysh           8.33   39   P      Pn       15 00 43.0 +1.6
      SNR=11
USP   Ospenovka         8.40   37   P      Pn       15 00 43.3 +0.9
      SNR=7.0
TKM2  Tokmak 2          8.72   43   P      Pn       15 00 48.8 +1.8
      SNR=5.8
TKM2  Tokmak 2          8.72   43 ⇑P       Pn       15 00 47.7 +0.7
      14nm,0.6s
TKM2                              ⇑S       Sn       15 02 25.8 +0.4
      7.0nm,0.9s
MDOK  Medeo             9.69   46 ⇓P       Pn       15 01 01.0 +0.7
      8.4nm,0.6s
PDGK  Podgornoye       11.25   51 ⇑P       Pn       15 01 20.8 -0.8
      5.2nm,1.1s
AB31  Akbulak array    13.65  338   P      Pn       15 01 53.2 -1.0
      0.8nm,0.6s,baz=159,slow=10,SNR=17
AB31                              ⇓S       Sn       15 04 24.7 -1.1
      2.2nm,0.8s
MKAR  Makanchi Array   14.85   43   Pn     Pn       15 02 09.8 -0.9
      0.1nm,0.3s,baz=222,slow=15,SNR=14
      2.5nm,1.0s
AKTO  Aktyubinsk       15.28  336   Pn     Pn       15 02 16.4  0.0
      0.2nm,0.3s,baz=152,slow=14,SNR=2.3
AKTO                                Sn     Sn       15 05 00.1 -5.5
      0.1nm,0.3s,baz=119,slow=15,SNR=1.4
      0.8nm,0.6s
AKTO  Aktyubinsk       15.28  336 ⇓P       Pn       15 02 15.4 -0.9
      2.2nm,0.9s
AKTO                              ⇓S       Sn       15 05 02.7 -2.9
      1.9nm,0.9s
KURBB Kurchatov Arra   15.94   26   Pn     Pn       15 02 23.3 -1.6
      0.1nm,0.3s,baz=216,slow=12,SNR=9.7
      0.6nm,0.2s
BVAR  Borovoye Array   16.38    6   Pn     Pn       15 02 29.4 -1.0
      0.1nm,0.3s,baz=176,slow=12,SNR=9.7
      0.5nm,0.3s
ZALV  Zalesovo Beam    20.94   29   P      P        15 03 23.9 +0.6
      8.5nm,0.6s,baz=227,slow=11,SNR=44
      8.5nm,0.6s
BELG  Belogornoye      20.99  324   P      P        15 03 25.1 +1.1
      17nm,0.9s,baz=293,slow=4.7,SNR=4.7
      17nm,0.9s
BRTR  Keskin Array B   26.70  287   P      P        15 04 21.9 +1.7
      1.2nm,0.7s,baz=312,slow=38,SNR=1.9
      1.2nm,0.7s
EIL   Elat             28.08  265   LR     LR       15 18 14.5
      comp=Z,45nm,21.0s,baz=153,slow=42
SONM  Songino Array    30.49   56   P      P        15 04 55.0 +1.2
      0.8nm,0.6s,baz=271,slow=8.5,SNR=4.8
      0.8nm,0.6s
CMAR  Chiang Mai Arr   33.06  115   P      P        15 05 15.4 -1.2
      0.5nm,0.5s,baz=294,slow=8.1,SNR=5.4
CMAR                                LR     LR       15 22 18.1
      comp=Z,25nm,21.1s,baz=315,slow=43
      0.5nm,0.5s
NRIK  Noril'sk         34.41   12   P      P        15 05 27.7 -0.1
      1.4nm,0.4s,baz=225,slow=2.9,SNR=1.8
      1.4nm,0.4s
FINES FINESS Array B   35.72  327   P      P        15 05 39.2 +0.1
      3.1nm,1.1s,baz=142,slow=12,SNR=2.0
      3.1nm,1.1s
HFS   Hagfors          41.14  322   LR     LR       15 27 09.7
      comp=Z,120nm,20.5s,baz=140,slow=41
NOA   NORSAR Array B   42.49  323   LR     LR       15 25 55.0
      comp=Z,40nm,21.1s,baz=0.0,slow=38
TORD  Torodi Ar. Bea   62.95  266   P      P        15 09 06.2 -1.5
      0.5nm,0.8s,baz=56,slow=6.8,SNR=2.4
      0.5nm,0.8s
YKA   Yellowknife Ar   81.06    1   P      P        15 10 56.5 +1.0
      0.1nm,0.7s,baz=350,slow=5.6,SNR=2.0
      0.1nm,0.7s
ASAR  Alice Springs    86.72  123   P      P        15 11 24.0 -1.0
      0.1nm,0.8s,baz=308,slow=4.6,SNR=1.5
      0.1nm,0.8s
```

IDC 07 15:09:06.9±8.2, 31°.49S×178°.56E, h200km±102km, mb3.4/4, mbtmp3.9/5, Error ellipse: s-maj=87.8km s-min=18.6km az=163.0, Kermadec Islands region

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Code  Station Name       Δ°   AZ°    Phase ID        Time      Res
                                    Op     ISC      h  m  s    ISC
URZ   Urewera           6.86  190   P      Pn       15 10 43.6 -1.5
      4.4nm,0.3s,baz=346,slow=4.8,SNR=23
URZ                                 S      S        15 12 04.6 +1.6
      5.4nm,0.3s,baz=184,slow=10,SNR=11
RAR   Rarotonga        21.91   67   P      P        15 13 44.8 +0.5
      12nm,0.4s,baz=146,slow=7.1,SNR=5.7
      12nm,0.4s
ASAR  Alice Springs    40.12  270   P      P        15 16 23.7 +0.4
      0.1nm,0.4s,baz=109,slow=8.0,SNR=5.4
      0.1nm,0.4s
WRA   Warramunga Arr   41.21  275   P      P        15 16 32.0 -0.3
      0.2nm,0.3s,baz=111,slow=8.0,SNR=6.2
      0.2nm,0.3s
PDAR  Pinedale Array   98.98   45   P      Pdif     15 22 22.7 -2.0
      0.4nm,0.9s,baz=224,slow=5.0,SNR=2.4
      0.4nm,0.9s
```

IDC 07 15:15:05.5±2.2, 19°.10S×169°.78E, h0km, mb3.5/3, mbtmp3.5/4, ML3.2/1, Error ellipse: s-maj=90.5km s-min=29.5km az=144.0, Vanuatu Islands

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Code  Station Name       Δ°   AZ°    Phase ID        Time      Res
                                    Op     ISC      h  m  s    ISC
DZM   Mont Dzumac       4.30  226   Pn     Pn       15 16 10.9 -1.4
      1.2nm,0.3s,baz=123,slow=16,SNR=34
DZM                                 Sn     Sn       15 17 04.4 +1.1
      2.9nm,0.3s,baz=152,slow=13,SNR=6.9
      2.6nm,0.4s
WRA   Warramunga Arr   33.38  263   P      P        15 21 46.4 +0.5
      0.2nm,0.4s,baz=96,slow=8.2,SNR=2.2
      0.2nm,0.4s
ASAR  Alice Springs    33.66  256   P      P        15 21 48.3  0.0
      0.5nm,0.8s,baz=75,slow=8.3,SNR=14
      0.5nm,0.8s
NVAR  Mina Array Bea   88.33   48   P      P        15 27 59.5 -0.1
      0.4nm,0.8s,baz=243,slow=6.0,SNR=2.5
      0.4nm,0.8s
```

WEL 07 15:22:12.9±0.5, 42°S±3°×17°3E±°, h9km±4km, M2.2/3, ML2.6/8, MLv2.2/3, Error ellipse: s-maj=0.0km s-min=0.0km az=93.2, confirmed, South Island

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Code  Station Name       Δ°   AZ°    Phase ID        Time      Res
                                    Op     ISC      h  m  s    ISC
KHZ   Kahutara          0.08   98   P      Pg       15 22 15.7 +0.5
KHZ                                 S      Sg       15 22 17.8 +1.1
THZ   Tophouse          0.75  328   P      Pb       15 22 27.8 -0.4
BSWZ  Blackbirch Sta    0.76   26   P      Pb       15 22 28.3  0.0
LTZ   Lake Taylor       0.94  246   P      Pg       15 22 31.0  0.0
TUWZ  Tuamarina         1.05   21   P      Pg       15 22 33.0  0.0
MRNZ  Matariki Terra    1.13  333   P      Pn       15 22 34.7 -0.1
NNZ   Nelson            1.19  358   P      Pb       15 22 35.4 -0.1
OXZ   Oxford            1.38  228   P      Pn       15 22 36.5 -1.8
MQZ   McQueen's Vall    1.42  204   P      Pn       15 22 36.4 -2.4
QRZ   Quartz Range      1.72  336   P      Pb       15 22 43.8 -0.8
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*NEIC **07** 15:37:04.3±1.8, 11°.82S±0°.07×75°.18W±0°.09, h51km±26km, mb4.3/5, Error ellipse: s-maj=13.5km s-min=9.5km az=106.0*
*IDC **07** 15:37:05.7±1.7, 12°.00S×75°.19W, h60km±18km, mb3.4/7, mbtmp3.7/10, MS3.0/4, Error ellipse: s-maj=21.8km s-min=13.2km az=13.0*
*VAO **07** 15:37:13.7±0.7, 11°.19S×74°.18W, h10km, mb4.2*
ISC 07 15:37:01.2±0.6, 11°.74S±0°.07×75°.13W±0°.06, h10km, n57, σ2s.21/54, mb3.8/7, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	1.70	262	P	Pn	15 37 31.1	+0.2
	157nm,0.4s,baz=85,slow=14,SNR=27						
NNA				S	Sn	15 37 52.1	-0.7
	421nm,0.3s,baz=161,slow=22,SNR=21						
NNA				LR	LR	15 38 25.7	
	comp=Z,346nm,20.1s,baz=5.0,slow=49						
NNA	Nana	1.70	262	Pn	Pn	15 37 31.0	+0.1
CZSB	Cruzeiro do Su	4.65	31		Pn	15 38 12.3	+0.8
CZSB	Cruzeiro do Su	4.65	31	eP	Pn	15 38 10.8	-0.7
ATAH	Atahualpa	5.60	325	P	Pn	15 38 30.4	+5.4
	30nm,0.4s,baz=148,slow=5.2,SNR=42						
ATAH				S	Sn	15 39 35.3	+5.7
	19nm,0.7s,baz=355,slow=4.7,SNR=1.4						
ATAH				LR	LR	15 41 15.8	
	comp=Z,74nm,20.4s,baz=154,slow=43						
LPAZ	La Paz	8.16	124	P	Pn	15 39 01.5	+1.2
	3.2nm,0.7s,baz=281,slow=8.2,SNR=5.6						
LPAZ				LR	LR	15 41 58.4	
	comp=Z,46nm,18.8s,baz=224,slow=36						
LPAZ	La Paz	8.16	124	Pn	Pn	15 39 01.7	+1.4
PB16	IPOC Station P	8.51	141	Pn	Pn	15 39 05.7	+0.6
ETMB	Extrema	8.96	79	Pn	Pn	15 39 09.6	-1.2
ETMB	Extrema	8.96	79	eP	Pn	15 39 09.1	-1.8
TBTG	Tabatinga, AM	9.11	35	eP	Pn	15 39 12.6	-0.2
PSGCX	Pisagua	9.18	149	Pn	Pn	15 39 13.3	-0.6
PB11	IPOC Station P	9.56	147	Pn	Pn	15 39 18.8	-0.3
PORT	Chimborazo Vol	10.83	340		Pn	15 39 37.8	+0.8
SAML	Samuel	12.07	78	Pn	Pn	15 39 50.6	-2.8
SAML	Samuel	12.07	78	eP	Pn	15 39 50.4	-3.0
LVC	Limon Verde	12.33	152	LR	LR	15 43 59.7	
	comp=Z,66nm,18.3s,baz=6.0,slow=34						
OTAV	Otavalo	12.35	344	eP	Pn	15 40 05.9	+8.3
TEFE	Tefe	13.22	53	eP	Pn	15 40 07.1	-2.1
SIV	San Ignacio	14.29	109	P	Pn	15 40 25.1	+1.3
	0.7nm,0.5s,baz=302,slow=14,SNR=2.7						
SIV				S	Sn	15 43 00.5	-1.9
	1.9nm,0.6s,baz=270,slow=20,SNR=2.0						
VILB	Vilhena	14.63	96	eP	Pn	15 40 28.9	+0.4
BBSD	Serra de San D	15.06	113	eP	P	15 40 37.0	-2.6
PTLB	Pontes e Lacer	15.97	105		Pn	15 40 47.5	+1.3
BBRB	Robore, Bolivi	16.16	116	eP	P	15 40 52.5	+0.7
CHIC	Chingaza	16.32	5	eP	Pn	15 40 50.3	-0.8
NORC	Norcasia	17.19	1	eP	P	15 41 05.6	+2.3
CBOC	Ciudad Bolivar	17.51	357	eP	P	15 41 09.5	+2.5
RUSC	La Rusia	17.64	7	P	P	15 41 09.5	+0.8
RUSC	La Rusia	17.64	7	eP	P	15 41 08.5	-0.2
PTBC	PUERTO BERRIO,	18.17	2	eP	Pn	15 41 13.3	-0.5
ZARC	Zaragoza, Cauc	19.11	1	eP	Pn	15 41 24.8	-0.4
PANT	Pantanal (Braz	19.24	114	eP	Pn	15 41 31.2	+4.4
MURT	Porto Murtinho	19.44	123	eP	Pn	15 41 33.9	+4.7
BDQN	Bodoquena, MS	19.65	118	eP	Pn	15 41 37.1	+5.4
NPGB	Novo Progresso	20.05	78	eP	P	15 41 33.3	-1.5
BOAV	Boa Vista	20.20	47	P	P	15 41 35.1	-1.2
BOAV				IAmb	IAmb	15 41 42.9	
	comp=Z,15nm,1.5s						
BOAV	Boa Vista	20.20	47	eP	P	15 41 35.4	-1.0
BOAV	Boa Vista	20.20	47	eP	P	15 41 35.6	-0.7
PP1B	Ponte de Pedra	20.43	109	eP	Pn	15 41 42.8	+1.8
ITTB	Itaituba	20.54	71	eP	P	15 41 39.0	-1.1
VACA	Villa Angela C	20.81	142	eP	Pn	15 41 53.0	+7.6
SDV	Santo Domingo	20.97	12	P	P	15 41 45.9	+1.0
	comp=Z,11nm,0.7s,baz=178,slow=6.7,SNR=9.9						
	comp=Z,11nm,0.7s						
SDV	Santo Domingo	20.97	12	P	P	15 41 44.0	-0.9
SDV				IAmb	IAmb	15 41 50.3	
	comp=Z,9.9nm,0.7s						
BAUV	El Baul	21.72	19	P	P	15 41 50.9	-1.8
BAUV				IAmb	IAmb	15 42 13.3	
	comp=Z,34nm,1.4s						
AMBA	Amambai (Brazi	22.18	123	eP	P	15 42 03.3	+5.6
MALB	Monte Alegre	22.90	66	eP	P	15 42 05.7	+0.2
ARAG	Araguaiana, MT	22.99	103	eP	P	15 42 08.0	+1.7
SNDB	Serra Nova Dou	23.33	93	eP	P	15 42 13.0	+3.2
BDFB	Brasilia	26.62	101	LR	LR	15 53 48.9	
	comp=Z,112nm,19.9s,baz=347,slow=38						
SMTB	Santa Maria do	27.24	87	eP	P	15 42 48.7	+2.9
TXAR	Lajitas Array	49.25	327	P	P	15 45 50.2	-0.2
	comp=Z,0.1nm,0.5s,baz=136,slow=9.8,SNR=1.9						
	comp=Z,0.1nm,0.5s						
PDAR	Pinedale Array	62.74	332	P	P	15 47 26.3	-0.6
	comp=Z,0.2nm,0.5s,baz=122,slow=6.7,SNR=2.1						
	comp=Z,0.2nm,0.5s						
NVAR	Mina Array Bea	64.16	323	P	P	15 47 34.7	-1.7
	comp=Z,0.1nm,0.4s,baz=154,slow=5.0,SNR=1.7						
	comp=Z,0.1nm,0.4s						
YKA	Yellowknife Ar	80.10	343	P	P	15 49 10.2	-0.8
	comp=Z,0.8nm,0.7s,baz=141,slow=6.3,SNR=16						
	comp=Z,0.8nm,0.7s						
TORD	Torodi Ar. Bea	80.11	74	P	P	15 49 10.1	-1.9
	comp=Z,1.1nm,0.7s,baz=252,slow=4.6,SNR=5.5						
	comp=Z,1.1nm,0.7s						
ESDC	Sonseca Array	83.37	47	P	P	15 49 28.7	-0.1
	comp=Z,0.6nm,0.7s,baz=282,slow=6.0,SNR=2.8						
	comp=Z,0.6nm,0.7s						
PZH	PanZhiHua	165.02	11	PKP	PKPdf	15 57 03.3	-3.3

IDC 07 15:42:06.0±2.0, 19.°50S×169.°99E, h0km, mb3.8/3, mbtmp3.7/4, ML3.1/1, Error ellipse: s-maj=93.4km s-min=25.8km az=147.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.19	232	Pn	Pn	15 43 11.1	-0.2
	1.0nm,0.3s,baz=116,slow=13,SNR=59						
DZM				Sn	Sn	15 44 03.3	+2.3
	5.6nm,0.3s,baz=137,slow=17,SNR=7.3						
	3.8nm,0.3s						
WRA	Warramunga Arr	33.53	263	P	P	15 48 48.4	+0.7
	0.3nm,0.3s,baz=98,slow=8.4,SNR=9.4						
	0.3nm,0.3s						
ASAR	Alice Springs	33.76	256	P	P	15 48 48.1	-1.5
	1.1nm,0.7s,baz=73,slow=8.5,SNR=26						
	1.1nm,0.7s						
NVAR	Mina Array Bea	88.44	48	P	P	15 54 59.7	-0.9
	0.7nm,0.7s,baz=219,slow=7.5,SNR=5.0						
	0.7nm,0.7s						
GERES	GERESS Array B	145.06	332	PKPbc	PKPdf	16 01 46.0	+0.5
	0.4nm,0.6s,baz=53,slow=3.9,SNR=4.3						

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*IDC **07** 15:45:38.2±0.4, 6.°17S×102.°30E, h0km, mb4.9/41, mbtmp4.9/42, ML4.7/1, MS5.2/16, Error ellipse: s-maj=14.4km s-min=9.4km az=43.0*

*DJA **07** 15:45:38.2±1.1, 6°S±3°×10°2E±°, h11km±7km, M5.4/90, mb5.3/90, mB5.9/78, MLv5.7/17, Mw5.3/106, Mw(mB)5.5/78, MwMwp5.4/50, Mwp5.5/50*

*KLM **07** 15:45:38, 6.°42S×101.°97E, h15km, mb5.7*

*NEIC **07** 15:45:39.6, 6.°54S×101.°88E, h12km, Moment Tensor Solution. Duration: 2s5 Moment tensor: Scale 10¹⁷Nm; Mrr0.93; Mθθ-0.57; Mφφ-0.36; Mrθ1.28; Mθφ0.46; Mφr-1.25; Fault plane solution: M₀2.01000×10¹⁷ NP1: φs133.70000°, δ76.28000°, λ92.50000°. NP2: φs303.25000°, δ13.94000°, λ79.85000°. Principal axes: T 2.0134, Plg59.0000°, Azm47.0000°; N -0.0032, Plg2.0000°, Azm313.0000°; P -2.0102, Plg31.0000°, Azm222.0000°;*

*MOS **07** 15:45:39.4±1.1, 6.°17S×102.°34E, h20km, mb5.6/77, MS5.4/20 Error ellipse: s-maj=7.6km s-min=4.2km az=109.9*

*NEIC **07** 15:45:39.6, 6.°24S×102.°18E, h12km*

*NEIC **07** 15:45:39.6±1.5, 6.°26S±0.°06×102.°19E±0.°07, h10km±1km, mb5.6/112, Ms_20 5.6/179, Mww5.5/18, Error ellipse: s-maj=11.2km s-min=10.4km az=100.0*

*BJI **07** 15:45:39.0±0.0, 6.°20S×102.°30E, h10km, mb5.3/89, mB5.8/76, Ms5.9/92, Ms7 5.8/86*

*GCMT **07** 15:45:41.6±0.1, 6.°61S±0.°01×101.°94E±0.°01, h14km, MW5.5/124, Moment Tensor Solution. s121, c192; s124, c217; Duration: 1s3 Moment tensor: Scale 10¹⁷ Nm; Mrr1.05±.03; Mθθ-0.78±.02; Mφφ-0.26±.02; Mrθ1.29±.07; Mθφ0.53±.01; Mφr-0.99±.06; Best double couple: M₀1.95400×10¹⁷ NP1: φs127.00000°, δ73.00000°, λ93.00000°. NP2: φs297.00000°, δ17.00000°, λ81.00000°. Principal axes: T 1.9240, Plg62.0000°, Azm41.0000°; N 0.0590, Plg3.0000°, Azm306.0000°; P -1.9840, Plg28.0000°, Azm214.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 15:45:40.8±0.3, 6.°32S±0.°03×102.°18E±0.°04, h21km±4km, h22km:pP-P, n899, σ1s87/961, mb5.4/181, MS5.6/150, 90C-23D, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	2.09	22	Pn	Pn	15 46 12.7	-1.9
MNAI	Manna	2.09	22	P	Pn	15 46 14.6	0.0
MNAI	Manna	2.09	22	P	Pn	15 46 13.9	-0.7
KSI	Kapahiang	2.68	9	P	Pn	15 46 21.8	-0.9
KSI	Kapahiang	2.68	9	P	Pn	15 46 21.6	-1.1
KLI	Kotabumi	3.03	62	P	Pn	15 46 28.7	+1.2
KLI	Kotabumi	3.03	62	P	Pn	15 46 28.3	+0.8
BLSI	Bandar Lampung	3.19	73	P	Pn	15 46 29.9	+0.1
CGJI	Cibinong	3.51	95	P	Pn	15 46 33.6	-0.5
SBJI	Serang	3.93	87	P	Pn	15 46 40.4	+0.4
PPSI	Pulau Pagai	4.14	328	P	Pn	15 46 41.5	-1.3
PMBI	Palembang	4.25	38	Pn	Pn	15 46 43.1	-1.1
PMBI	Palembang	4.25	38	P	Pn	15 46 45.3	+1.1
PMBI	Palembang	4.25	38	P	Pn	15 46 44.6	+0.4
SKJI	Sukabumi	4.40	99	P	Pn	15 46 45.0	-1.4
CBJI	Citeko	4.64	92	P	Pn	15 46 52.1	+2.4
JMBI	JAMBI	4.88	17	P	Pn	15 46 52.9	0.0
CNJI	Cibinong	5.01	102	P	Pn	15 46 53.7	-1.1
	821nm,0.9s,13µm8µm4.8nm						
XMI	Christmas Isla	5.38	140	P	Pn	15 46 58.3	-1.6
BBJI	Bungbulang	5.55	102	P	Pn	15 47 01.3	-1.0
PDSI	Padang	5.63	342	P	Pn	15 47 01.0	-2.4
	448nm,1.0s,7µm24µm3.4nm						
PPBI	Pangkal Pinang	5.71	44	P	Pn	15 47 04.8	+0.4
	260nm,1.5s,7µm26µm4.5nm						
DSRI	Dabo	6.27	23	P	Pn	15 47 12.0	-0.1
	407nm,1.5s,7µm28µm1.6nm						
CMJI	Cimerak	6.39	104	P	Pn	15 47 12.5	-1.3
	949nm,1.0s,11µm9µm4.0nm						
BKNI	Bangkinang	6.70	350	Pn	Pn	15 47 16.1	-1.9
BKNI	Bangkinang	6.70	350	P	Pn	15 47 17.4	-0.5
BKNI	Bangkinang	6.70	350	P	Pn	15 47 16.6	-1.3
	384nm,1.3s,7µm13µm2.4nm						
KPJI	Karang Pucung	6.78	99	P	Pn	15 47 19.8	+0.7
	623nm,1.1s,13µm18µm3.5nm						
BTDF	Bukit Timah Da	7.79	12	P	Pn	15 47 32.8	-0.2
COCO	West Island	7.87	222	Pn	Pn	15 47 32.2	-1.8
COCO	West Island	7.87	222	P	Pn	15 47 32.2	-1.8
YOGI	Yogyakarta	8.19	101	P	Pn	15 47 37.5	-1.0
	761nm,1.1s,7µm						
SMRI	Semarang	8.24	96	Pn	Pn	15 47 38.7	-0.5
SMRI	Semarang	8.24	96	P	Pn	15 47 41.6	+2.4
SMRI	Semarang	8.24	96	P	Pn	15 47 38.7	-0.5
	1µm,1.1s,25µm14µm						
UGM	Wanagama	8.43	101	Pn	Pn	15 47 41.4	-0.4
UGM	Wanagama	8.43	101	P	Pn	15 47 41.8	0.0
UGM	Wanagama	8.43	101	P	Pn	15 47 40.5	-1.3
	927nm,1.1s,15µm11µm						
UWJI	Ujung Watu	8.72	91	P	Pn	15 47 46.9	+1.2
	623nm,0.9s,11µm						
GSI	Gunungsitoli	8.85	329	Pn	Pn	15 47 44.7	-2.9
GSI	Gunungsitoli	8.85	329	P	Pn	15 47 45.2	-2.4
GSI	Gunungsitoli	8.85	329	P	Pn	15 47 46.4	-1.2
	163nm,0.8s,4µm8µm						
NGJI	Ngawi	9.28	97	P	Pn	15 47 53.6	+0.2
	449nm,1.2s,11µm21µm						
RPSI	Rantau Prapat	9.52	340	Pn	Pn	15 47 53.7	-3.0
TBJI	Tambak Boyo	9.62	94	P	Pn	15 47 58.2	+0.1
	553nm,1.1s,10µm						
PSI	Prapat	9.62	340	P	Pn	15 47 57.4	-0.8
PSI	Prapat	9.62	340	P	Pn	15 47 53.7	-4.5
PWJI	Pagerwojo	9.70	101	P	Pn	15 47 58.4	-0.8
	709nm,1.0s,5µm						
PBKI	Pangkalan Bun	10.12	70	P	Pn	15 48 07.0	+2.1
	338nm,1.3s,6µm						
JRMM	Jerantut	10.14	2	P	Pn	15 48 05.0	-0.2
GRJI	Gresik	10.25	94	P	Pn	15 48 06.7	-0.1
	572nm,1.2s,12µm6µm						
BWJI	Bawean	10.43	88	P	Pn	15 48 10.3	+1.1
	967nm,1.4s						
SNSI	Sinabang, Aceh	10.45	326	P	Pn	15 48 08.0	-1.5
	424nm,1.3s,4µm3µm						
KCSI	Kotacane, Aceh	10.72	336	P	Pn	15 48 14.1	+0.9
	34nm,0.6s,1µm						
IPM	Ipoh	10.79	354	Pn	Pn	15 48 11.9	-2.2
IPM	Ipoh	10.79	354	P	Pn	15 48 15.4	+1.3
IPM	Ipoh	10.79	354	P	Pn	15 48 16.0	+1.9
KSM	Kuching	11.21	47	Pn	Pn	15 48 18.5	-1.5
KSM	Kuching	11.21	47	P	Pn	15 48 21.7	+1.7
KSM	Kuching	11.21	47	P	Pn	15 48 21.0	+1.0
GMJI	Gumukmas	11.34	101	P	Pn	15 48 20.9	-0.8
	115nm,1.1s,3µm						
BLJI	Banyuglugur	11.42	98	P	Pn	15 48 21.2	-1.6
	197nm,1.6s,4µm8µm						
KULM	Kulim	11.63	352		Pn	15 48 22.9	-2.7
KULM	Kulim	11.63	352	P	Pn	15 48 24.0	-1.6
MLSI	Meulaboh, Aceh	11.99	331	P	Pn	15 48 28.8	-1.8
	206nm,1.0s						
ABJI	Asem Bagus	12.06	98	P	Pn	15 48 31.2	-0.3
	791nm,1.5s,10µm9µm						
JAGI	Jajag, Banyuwa	12.07	101	Pn	Pn	15 48 29.2	-2.4
JAGI	Jajag, Banyuwa	12.07	101	P	Pn	15 48 33.6	+2.0
JAGI	Jajag, Banyuwa	12.07	101	P	Pn	15 48 29.4	-2.2
	331nm,1.3s,5µm4µm						
SRBI	Singaraja	13.05	99	P	Pn	15 48 44.6	-0.5
	194nm,1.5s,3µm5µm						
IGBI	Denpasar	13.09	102	P	Pn	15 48 44.7	-1.0
	241nm,1.3s,5µm						
SBUM	Sibu	13.28	49		Pn	15 48 49.0	+0.8
SBUM	Sibu	13.28	49	P	Pn	15 48 51.0	+2.8
TWSI	Taliwang, Sumb	14.78	100	P	Pn	15 49 07.0	-1.7
	110nm,1.2s,2µm3µm						
SRIT	Nakonsritamara	15.03	350	P	Pn	15 49 12.0	-0.1
	60nm,1.2s						
BKB	Balikpapan	15.52	72	Pn	Pn	15 49 17.9	-0.6
BKB				IAmb	IAmb	15 49 23.8	
	comp=Z,424nm,1.8s						
BKB	Balikpapan	15.52	72	P	P	15 49 21.0	-1.7
BKB	Balikpapan	15.52	72	P	Pn	15 49 19.3	+0.8
	comp=Z,406nm,2.3s,comp=Z,13µmcomp=Z,14µm						
SURA	Surathani	15.59	351	P	Pn	15 49 18.9	-0.5
PLAI	Plampang	15.66	100	P	P	15 49 22.6	-1.8
PLAI	Plampang	15.66	100	P	Pn	15 49 17.6	-2.8
	comp=Z,407nm,1.0s,comp=Z,6µmcomp=Z,3µm						
KAPI	Kappang	17.54	87	P	Pn	15 49 43.2	-0.9
	comp=Z,2.6nm,0.3s,baz=264,slow=14,SNR=1.5						
	comp=Z,6.7nm,0.3s						
KAPI	Kappang	17.54	87	P	P	15 49 47.0	+1.9
KAPI	Kappang	17.54	87	ceP	Pn	15 49 42.0	-2.1
SPSI	Sidrap Palu	17.68	83	P	Pn	15 49 43.5	-2.4
	comp=Z,86nm,2.3s,comp=Z,4µmcomp=Z,9µm						
BKSI	Bulukumba	17.88	88	P	Pn	15 49 47.1	-1.3
	comp=Z,109nm,2.1s,comp=Z,3µmcomp=Z,8µm						
SPMM	Sapulut	17.98	53	P	P	15 49 51.0	+0.9
BSSI	Bau Bau, Buton	18.21	90	P	P	15 49 52.6	+0.1
	comp=Z,225nm,2.0s,comp=Z,5µmcomp=Z,7µm						
BASI	Baing, Sumba	18.61	103	P	P	15 49 56.8	-0.2
	comp=Z,2µm,1.7s,comp=Z,25µmcomp=Z,7µm						
KKM	Kota Kinabalu	18.63	49	P	P	15 49 55.9	-1.4
KKM				IAmb	IAmb	15 49 59.2	
	comp=Z,614nm,1.7s						
KKM	Kota Kinabalu	18.63	49	P	Pn	15 49 58.6	+1.0
MPSI	Mapaga	18.88	70	P	Pn	15 50 00.4	-0.2
	comp=Z,260nm,1.6s,comp=Z,10µmcomp=Z,13µm						
DLV	T Lat	19.19	19	P	Pn	15 50 06.1	+1.5
MYLDM	Lahad Datu	19.90	55	P	P	15 50 10.3	-0.8
TOLI2	Tolitoli	19.98	69	P	P	15 50 11.5	-0.5
TOLI2				IAmb	IAmb	15 50 21.3	
	comp=Z,389nm,1.3s						
TOLI2	Tolitoli	19.98	69	P	P	15 50 12.8	+0.8
MMRI	Maumere	20.02	98	P	P	15 50 10.8	-1.6
MMRI				IAmb	IAmb	15 50 23.9	
	comp=Z,233nm,0.9s						
MMRI	Maumere	20.02	98	P	P	15 50 12.4	-0.1
MMRI	Maumere	20.02	98	P	P	15 50 11.5	-1.0
PBA	Port Blair	20.17	332	P	P	15 50 14.1	0.0
NAYO	Nakonayok	20.52	358	P	P	15 50 17.9	+0.1
	comp=Z,1µm,1.0s						
MRSI	Marisa	20.85	72	P	P	15 50 19.8	-1.6
	comp=Z,272nm,1.5s,comp=Z,5µmcomp=Z,9µm						
LUWI	Luwuk	21.20	77	P	P	15 50 23.9	-1.3
LUWI				IAmb	IAmb	15 50 31.4	
	comp=Z,430nm,1.3s						
LUWI	Luwuk	21.20	77	P	P	15 50 28.6	+3.3
LUWI	Luwuk	21.20	77	P	P	15 50 24.9	-0.4
	comp=Z,541nm,1.4s,comp=Z,7µmcomp=Z,10µm						
BATP	Bataraza	21.63	46	⇑iP	P	15 50 25.7	-4.2
GTOI	Gorontalo	21.91	72	P	P	15 50 28.9	-4.0
	comp=Z,69nm,1.2s,comp=Z,2µm						
SOEI	Soe	22.14	100	P	P	15 50 33.8	-1.7
SOEI	Soe	22.14	100	P	P	15 50 36.8	+1.4
SOEI	Soe	22.14	100	P	P	15 50 33.7	-1.7
	comp=Z,827nm,1.0s,comp=Z,11µmcomp=Z,9µm						
MBWA	Marble Bar	22.51	133	P	P	15 50 39.0	-0.3
MBWA	Marble Bar	22.51	133	P	P	15 50 41.0	+1.8
PSA00	Pilbara Seismi	22.85	133	P	P	15 50 43.4	+0.6
PSA00				IAmb	IAmb	15 50 58.8	
	comp=Z,272nm,1.5s						
PSA00	Pilbara Seismi	22.85	133	P	P	15 50 44.5	+1.6
PPR	Puerto Princes	22.97	46	⇓iP	P	15 50 42.3	-1.8
SANI	Sanana	24.12	81	P	P	15 50 54.6	-0.8
SANI	Sanana	24.12	81	P	P	15 50 52.8	-2.6
	comp=Z,224nm,1.5s,comp=Z,4µmcomp=Z,6µm						
NONG	Nongkai	24.24	2	P	P	15 50 57.9	+1.5
ENPP	El Nido	24.45	45	⇑iP	P	15 50 57.7	-0.7
ENPP				eS	S	15 55 18.5	+1.1
IPIL	Ipil	24.70	56	⇑eP	P	15 50 59.9	-0.8
IPIL				eS	S	15 55 19.3	-2.3
PHRA	Phrae	24.73	356	P	P	15 51 00.7	-0.1
CM31	Chiang Mai Arr	24.82	353	P	P	15 51 01.4	-0.4
CM31				IAmb	IAmb	15 51 04.1	
	comp=Z,205nm,1.1s						
CM31	Chiang Mai Arr	24.82	353	P	P	15 51 02.3	+0.6
	SNR=90						
CM31				S	sS	15 55 35.4	+1.8
CMAR	Chiang Mai Arr	24.82	353	P	P	15 51 02.2	+0.5
	comp=Z,64nm,0.9s,baz=189,slow=8.5,SNR=214						
CMAR				PcP	PcP	15 54 39.0	+1.0
	comp=Z,1.4nm,0.7s,baz=191,slow=4.2,SNR=2.0						
CMAR				LR	LR	16 01 39.6	
	comp=Z,4µm,19.6s,baz=165,slow=39						
	comp=Z,64nm,0.9s						
CMAR	Chiang Mai Arr	24.82	353	P	P	15 51 01.6	-0.1
CMAR	Chiang Mai Arr	24.82	353	ceP	P	15 51 01.9	+0.2
CMAR				pmax	pmax		
	comp=Z,69nm,0.9s						
NLAI	Namlea	25.02	84	P	P	15 51 02.4	-1.2
	comp=Z,23nm,1.2s,comp=Z,10µm						
CHTO	Chiang Mai	25.17	353	P	P	15 51 04.8	-0.1
CHTO	Chiang Mai	25.17	353	P	P	15 51 04.8	-0.1
PALK	Pallekele	25.32	302	P	P	15 51 08.6	+2.2
	comp=Z,8.2nm,0.9s,baz=220,slow=6.9,SNR=5.8						
PALK				LR	LR	15 59 11.2	
	comp=Z,5µm,20.0s,baz=227,slow=32						
	comp=Z,8.2nm,0.9s						
PALK	Pallekele	25.32	302	deP	P	15 51 07.2	+0.8
PALK				pmax	pmax		
	comp=Z,13nm,0.9s						
BUSP	Coron	25.54	45	⇑eP	P	15 51 08.1	-0.1
BUSP				eS	S	15 55 35.1	+0.1
MEEK	Meekatharra	25.57	144	P	P	15 51 10.0	+1.5
	baz=26,SNR=4.2						
MEEK	Meekatharra	25.57	144	P	P	15 51 09.8	+1.3
SKMP	Bagumbayan, Su	25.70	61	⇑iP	P	15 51 09.3	-0.4
SKMP				eS	S	15 55 37.5	-0.2
FITZ	Fitzroy Crossi	25.71	119	P	P	15 51 09.3	-0.5
FITZ	Fitzroy Crossi	25.71	119	P	P	15 51 11.6	+1.8
DCPH	Dipolog City	25.78	55	⇑eP	P	15 51 10.2	-0.2
CTBH	Cotabato--PC H	25.80	59	⇑eP	P	15 51 10.4	-0.3
LBMI	Labuha	25.89	78	P	P	15 51 11.2	-0.3
	comp=Z,741nm,1.4s,comp=Z,10µm						
CNOP	Candoni, Negro	25.94	52	⇑iP	P	15 51 09.6	-2.3
AAI	Ambon	26.05	85	P	P	15 51 12.5	-0.4
	comp=Z,40nm,1.5s,comp=Z,2µm						
TNTI	Ternate	26.11	75	P	P	15 51 10.7	-2.8
TNTI				IAmb	IAmb	15 51 30.9	
	comp=Z,157nm,1.2s						
TNTI	Ternate	26.11	75	P	P	15 51 16.4	+2.9
TNTI	Ternate	26.11	75	P	P	15 51 11.0	-2.5
	comp=Z,120nm,1.5s,comp=Z,2µmcomp=Z,2µm						
MORW	Morawa	26.15	152	P	P	15 51 14.9	+1.2
QIZ	Qiongzhong	26.29	17	⇓iP	P	15 51 16.0	+1.0
QIZ				S	S	15 55 48.8	+2.0
QIZ				SS	SnSn	15 56 54.1	+6.6
QIZ				pmax	pmax		
	comp=Z,79nm,1.9s						
QIZ				pmax	pmax		
	comp=Z,2µm,11.2s						
QIZ				LR	LR		
	comp=Z,13µm,12.9s						
QIZ				LR	LR		
	comp=Z,11µm,12.9s						
QIZ				LR	LR		
	comp=Z,12µm,16.7s						
QIZ	Qiongzhong	26.29	17	P	P	15 51 15.2	+0.2
QIZ				IAmb	IAmb	15 51 18.7	
	comp=Z,247nm,1.7s						
QIZ	Qiongzhong	26.29	17	P	P	15 51 16.6	+1.6
LSIP	Lazi, Siquijor	26.32	55	⇑eP	P	15 51 14.2	-1.1
GUIM	Jordan	26.39	50	⇑eP	P	15 51 15.0	-1.0
GUIM				eS	S	15 55 41.6	-6.8
KCP	Kidapawan	26.42	60	⇑iP	P	15 51 15.9	-0.5
CRAI	Chiangrai	26.44	356	P	P	15 51 15.9	-0.4
LUBP	Lubang	26.81	42	⇑iP	P	15 51 19.3	-0.4
LUBP				eS	S	15 56 01.6	+6.7
CGP	Cagayan de Oro	26.82	57	⇓eP	P	15 51 24.1	+4.2
BUKP	Musuan	26.83	59	⇑eP	P	15 51 19.8	-0.2
BUKP				eS	S	15 55 55.1	-0.4
BUKP	Musuan	26.83	59	⇑eP	P	15 51 20.2	+0.2
DAV	Davao City (W)	26.87	61	P	P	15 51 21.3	+0.9
	comp=Z,78nm,0.3s,baz=233,slow=6.3,SNR=12						
DAV				LR	LR	16 01 53.7	
	comp=Z,4µm,18.8s,baz=158,slow=36						
OTRP	Odiongan	27.08	47	⇓eP	P	15 51 22.9	+0.7
OTRP				eS	S	15 55 57.8	-1.6
RCP	Roxas	27.09	49	⇓eP	P	15 51 22.7	+0.4
GHBP	Garcia Hernand	27.16	55	⇑eP	P	15 51 20.6	-2.3
LLP	Lapu-Lapu	27.27	53	eP	P	15 51 25.2	+1.3
MATI	Mati	27.40	62	⇓eP	P	15 51 20.6	-4.6
MATI				eS	S	15 56 03.7	-0.8
TABP	Talibon, Bohol	27.43	54	⇑eP	P	15 51 22.7	-2.6
MACP	Maragondon, Ca	27.50	42	⇑iP	P	15 51 25.1	-0.9
MACP				eS	S	15 56 08.9	+3.0
BNDI	Bandanaira	27.66	88	P	P	15 51 26.3	-1.2
	comp=Z,185nm,1.3s,comp=Z,3µm						
KNRA	Kununurra	27.67	112	P	P	15 51 28.3	+0.8
	baz=28,SNR=6.2						
KNRA	Kununurra	27.67	112	P	P	15 51 27.6	0.0
KNRA				IAmb	IAmb	15 51 42.6	
	comp=Z,87nm,0.9s						
KNRA	Kununurra	27.67	112	P	P	15 51 29.1	+1.6
BOAC	Boac	27.70	45	⇑eP	P	15 51 26.3	-1.5
BOAC				eS	S	15 56 08.2	-0.9
BUTP	Butuan	27.87	57	⇓eP	P	15 51 28.8	-0.5
BUTP				eS	S	15 56 12.2	+0.4
MSLP	Maasin	27.88	54	⇓eP	P	15 51 27.0	-2.4
MSLP				eS	S	15 56 09.4	-2.7
LQP	Lukban	27.95	43	⇓eP	P	15 51 32.9	+2.7
QVP	Quezon City--P	27.95	42	⇑eP	P	15 51 50.4	+20
BIPH	Bislig	28.09	59	⇓eP	P	15 51 29.7	-1.6
GLSP	General Luna,	28.72	56	⇑eP	P	15 51 33.9	-3.0
GLSP				eS	S	15 56 23.3	-2.0
MND	Mandalay	28.78	348	P	P	15 51 37.5	+0.2
JCNP	Jose Panganiba	28.87	45	⇑iP	P	15 51 35.4	-2.8
JCNP				eS	S	15 56 28.1	+0.5
SAUI	Saumlaki	28.94	95	P	P	15 51 36.8	-2.1
SAUI	Saumlaki	28.94	95	P	P	15 51 40.7	+1.8
SAUI	Saumlaki	28.94	95	P	P	15 51 35.5	-3.4
	comp=Z,273nm,1.4s						
SCSP	San Jose Seism	29.03	47	⇑eP	P	15 51 38.3	-1.3
SCSP				eS	S	15 56 29.7	-0.3
BALP	Baler	29.14	41	⇑eP	P	15 51 47.8	+7.2
MTN	Manton Dam	29.26	105	P	P	15 51 42.4	+0.7
	baz=29,SNR=11						
MTN	Manton Dam	29.26	105	P	P	15 51 40.6	-1.1
MTN	Manton Dam	29.26	105	P	P	15 51 42.2	+0.5
PVCP	Virac	29.45	48	⇑eP	P	15 51 50.2	+6.8
H08S2	Diego Garcia H	29.49	266	T	T	16 23 31.3	
	baz=88,slow=75,SNR=415						
H08S3	Diego Garcia H	29.50	266	T	T	16 23 18.6	
	baz=88,slow=75,SNR=539						
H08S1	Diego Carcia H	29.51	266	T	T	16 23 41.3	
	baz=88,slow=75,SNR=693						
SAMP	Sagada Mountai	29.71	38	⇓eP	P	15 51 45.6	-0.1
SAMP				eS	S	15 56 34.7	-6.1
KAAM	Kaadhehdhoo	29.90	282	P	P	15 51 47.3	-0.1
NWAO	Narrogin (SRO)	29.96	154	P	P	15 51 49.5	+1.8
	comp=Z,6.8nm,0.9s,baz=335,slow=7.8,SNR=2.8						
NWAO				LR	LR	16 05 10.9	
	comp=Z,5µm,18.6s,baz=326,slow=39						
	comp=Z,6.8nm,0.9s						
NWAO	Narrogin (SRO)	29.96	154	P	P	15 51 46.4	-1.3

NWAO	Narrogin (SRO)	29.96	154	P	P	15 51 48.9	+1.2
NWAO	Narrogin (SRO)	29.96	154	P	P	15 51 46.4	-1.3
NWAO				pmax	pmax		
	comp=Z,44nm,1.2s						
NWAO				MLR	MLR		
	comp=Z,5µm,18.0s						
ABRA	Dolores	30.04	37	⇑eP	P	15 51 47.7	-0.8
FAKI	Fak Fak	30.16	85	P	P	15 51 49.0	-0.7
	comp=Z,95nm,1.7s,comp=Z,3µmcomp=Z,3µm						
CAUP	Cauayan	30.19	40	⇓eP	P	15 51 49.5	-0.4
CAUP				eS	S	15 56 38.0	-10
H01W3	Cape Leeuwin H	30.50	160	T	T	16 24 00.6	
	baz=338,slow=76,SNR=39						
H01W2	Cape Leeuwin H	30.51	160	T	T	16 24 22.5	
	baz=338,slow=76,SNR=41						
H01W1	Cape Leeuwin H	30.51	160	T	T	16 24 20.9	
	baz=338,slow=76,SNR=60						
KDU	Kakadu	30.52	104	P	P	15 51 51.7	-1.2
	baz=30,SNR=4.1						
KDU	Kakadu	30.52	104	P	P	15 51 52.7	-0.2
BRDH	Bariadhala	30.60	341	LR	LR	16 07 59.0	
	comp=Z,10µm,18.0s,baz=92,slow=44						
PCHI	Peechi	30.69	303	eP	P	15 52 05.0	+11
PCHI				eS	S	15 57 00.6	+4.4
KMBL	Kambalda	31.01	146	P	P	15 51 57.1	+0.1
	baz=31,SNR=4.4						
KMBL	Kambalda	31.01	146	P	P	15 51 58.7	+1.7
WRKA	Warakurna	31.17	130	P	P	15 51 59.0	+0.4
	baz=31,SNR=7.1						
WRKA	Warakurna	31.17	130	P	P	15 52 00.6	+2.0
GZH	Guangzhou	31.20	20	P	P	15 52 04.5	+5.8
GZH				S	sS	15 57 18.4	+4.1
GZH				pmax	pmax		
	comp=Z,43nm,1.4s						
GZH				LR	LR		
	comp=Z,10µm,11.8s						
GZH				LR	LR		
	comp=Z,4µm,11.0s						
KMI	Kunming	31.25	1	⇑P	P	15 52 00.9	+1.5
KMI				S	S	15 57 03.5	-1.7
KMI				pmax	pmax		
	comp=Z,67nm,1.9s						
KMI				pmax	pmax		
	comp=Z,1µm,7.5s						
KMI				LR	LR		
	comp=Z,16µm,14.1s						
KMI				LR	LR		
	comp=Z,10µm,12.8s						
KMI				LR	LR		
	comp=Z,16µm,12.6s						
SGCP	Gonzaga	31.30	38	⇓eP	P	15 51 58.5	-1.2
TNCH	TengChong	31.36	354	⇑P	P	15 52 01.1	+0.8
TNCH				pP	pP	15 52 04.1	-1.8
TNCH				sP	sP	15 52 06.4	-1.7
TNCH				PP	PP	15 53 05.5	-5.9
TNCH				S	S	15 57 08.9	+2.2
TNCH				sS	pS	15 57 13.1	-0.2
TNCH				pmax	pmax		
	comp=Z,86nm,1.9s						
TNCH				pmax	pmax		
	comp=Z,880nm,5.8s						
TNCH				LR	LR		
	comp=Z,15µm,11.1s						
TNCH				LR	LR		
	comp=Z,7µm,11.7s						
TNCH				LR	LR		
	comp=Z,27µm,14.6s						
RKPI	Ransiki, Papua	32.27	83	P	P	15 52 07.2	-1.1
	comp=Z,44nm,1.6s						
MNCI	Minicoy	32.45	296	P	P	15 52 09.4	-0.5
PZH	PanZhiHua	32.63	359	⇑P	P	15 52 11.7	+0.3
PZH				sP	pP	15 52 17.8	+0.8
PZH				PP	PP	15 53 23.0	-2.4
PZH				S	S	15 57 27.8	+1.4
PZH				sS	pS	15 57 34.5	+1.3
PZH				SS	SnSn	15 59 26.9	+5.1
PZH				pmax	pmax		
	comp=Z,40nm,1.5s						
PZH				pmax	pmax		
	comp=Z,810nm,8.0s						
PZH				LR	LR		
	comp=Z,8µm,14.5s						
PZH				LR	LR		
	comp=Z,12µm,15.7s						
PZH				LR	LR		
	comp=Z,11µm,13.0s						
GYA	Guiyang	32.87	7	⇓P	P	15 52 14.4	+0.9
GYA				S	S	15 57 29.7	-0.4
GYA				pmax	pmax		
	comp=Z,72nm,2.0s						
GYA				pmax	pmax		
	comp=Z,1µm,9.1s						
GYA				LR	LR		
	comp=Z,4µm,19.9s						
GYA				LR	LR		
	comp=Z,5µm,14.7s						
GYA				LR	LR		
	comp=Z,3µm,22.8s						
BBP	Basco	32.94	36	⇑eP	P	15 52 12.9	-1.2
HYB	Hyderabad	33.18	316	eP	P	15 52 17.5	+1.2
HYB				IVmB_BB		15 52 26.8	
	comp=Z,414nm,2.8s						
HYB				IVMs_BB	IVMs_BB	16 09 03.6	
	comp=Z,695nm,12.7s						
SHL	Shillong	33.23	343	P	P	15 52 15.9	-0.9
SHL				IAmb	IAmb	15 52 18.5	
	comp=Z,87nm,1.1s						
SHL	Shillong	33.23	343	P	P	15 52 15.9	-0.9
SHL				pmax	pmax		
	comp=Z,87nm,1.1s						
SHL	Shillong	33.23	343	P	P	15 52 17.0	+0.2
	SNR=42						
WB0	Warramunga Arr	34.03	116	P	P	15 52 23.1	-0.6
WB0				IAmb	IAmb	15 52 35.8	
	comp=Z,73nm,1.2s						
WRA	Warramunga Arr	34.04	117	P	P	15 52 23.6	-0.1
	comp=Z,10nm,1.0s,baz=288,slow=11,SNR=26						
	comp=Z,10nm,1.0s						
WRA	Warramunga Arr	34.04	117	P	P	15 52 23.0	-0.7
WRA	Warramunga Arr	34.04	117	P	P	15 52 23.0	-0.7
WRA				pmax	pmax		
	comp=Z,15nm,1.5s						
WRAB	Tennant Creek	34.04	117	P	P	15 52 23.4	-0.4
WRAB				IAmb	IAmb	15 52 36.1	
	comp=Z,54nm,1.0s						
WRAB	Tennant Creek	34.04	117	P	P	15 52 25.7	+1.9
WRAB	Tennant Creek	34.04	117	P	P	15 52 23.4	-0.4
WRAB				pmax	pmax		
	comp=Z,54nm,1.0s						
WRAB				MLR	MLR		
	comp=Z,4µm,19.0s						
WB2	Warramunga Arr	34.05	117	P	P	15 52 23.3	-0.5
WB2				IAmb	IAmb	15 52 38.4	
	comp=Z,132nm,1.5s						
WR0	Warramunga Arr	34.22	116	P	P	15 52 24.9	-0.4
WR0				IAmb	IAmb	15 52 42.1	
	comp=Z,110nm,1.2s						
FORT	Forrest	34.38	138	P	P	15 52 26.7	+0.2
FORT	Forrest	34.38	138	P	P	15 52 28.1	+1.6
TPUB	Ta-pu	34.52	31	P	P	15 52 27.1	-0.7
TPUB				IAmb	IAmb	15 52 51.4	
	comp=Z,130nm,1.2s						
TPUB	Ta-pu	34.52	31	P	P	15 52 29.4	+1.6
YULB	Yu-li	34.94	32	P	P	15 52 32.7	+1.3
AS31	Alice Springs	35.03	123	P	P	15 52 31.7	-0.6
ASAR	Alice Springs	35.03	123	P	P	15 52 32.2	-0.1
	comp=Z,8.6nm,0.8s,baz=296,slow=7.7,SNR=183						
ASAR				PcP	PcP	15 55 04.5	+0.2
	comp=Z,2.8nm,0.9s,baz=301,slow=1.9,SNR=2.3						
ASAR				LR	LR	16 08 38.0	
	comp=Z,2µm,18.5s,baz=302,slow=39						
	comp=Z,8.6nm,0.8s						
ASAR	Alice Springs	35.03	123	P	P	15 52 31.9	-0.4
AS01	Alice Springs	35.07	123	P	P	15 52 34.3	+1.6
	comp=Z,24nm,1.0s						
SSLB	Suanglung	35.09	31	P	P	15 52 31.2	-1.5
SSLB	Suanglung	35.09	31	P	P	15 52 34.8	+2.1
NACB	Ninganchiao	35.73	31	P	P	15 52 37.0	-1.3
NACB				IAmb	IAmb	15 53 07.8	
	comp=Z,67nm,1.3s						
CNSH	ChangSha	35.83	16	⇑P	P	15 52 39.0	0.0
CNSH				PP	PP	15 53 58.6	-2.1
CNSH				S	S	15 58 18.7	+3.1
CNSH				SS	SnSn	16 00 40.3	+0.9
CNSH				pmax	pmax		
	comp=Z,59nm,1.3s						
CNSH				LR	LR		
	comp=Z,16µm,14.0s						
CNSH				LR	LR		
	comp=Z,12µm,14.0s						
CNSH				LR	LR		
	comp=Z,15µm,14.1s						
YHNB	Yeheng	36.03	31	P	P	15 52 39.6	-1.3
YHNB				IAmb	IAmb	15 52 51.8	
	comp=Z,78nm,1.3s						
YHNB	Yeheng	36.03	31	P	P	15 52 41.6	+0.7
CD2	Chengdu	37.05	2	P	P	15 52 49.1	-0.3
CD2				PP	PnPn	15 54 15.0	+0.6
CD2				S	S	15 58 33.8	-0.4
CD2				pmax	pmax		
	comp=Z,80nm,1.0s						
CD2				pmax	pmax		
	comp=Z,990nm,4.7s						
CD2				LR	LR		
	comp=Z,4µm,15.3s						
CD2				LR	LR		
	comp=Z,6µm,12.8s						
CD2				LR	LR		
	comp=Z,8µm,17.9s						
ENH	Enshi	37.05	11	P	P	15 52 48.3	-1.1
ENH				IAmb	IAmb	15 52 51.0	
	comp=Z,147nm,1.1s						
ENH	Enshi	37.05	11	P	P	15 52 49.4	0.0
LSA	Lhasa	37.34	344	P	P	15 52 53.5	+1.1
LSA				pmax	pmax		
	comp=Z,22nm,0.8s						
LSA	Lhasa	37.34	344	P	P	15 52 51.5	-0.9
LSA	Lhasa	37.34	344	P	P	15 52 51.5	-0.9
LSA				pmax	pmax		
	comp=Z,67nm,1.1s						
LSA				MLR	MLR		
	comp=Z,3µm,21.0s						
LSA	Lhasa	37.34	344	P	P	15 52 52.0	-0.4
GENI	Genyem	38.05	86	P	P	15 53 01.1	+3.0
GENI	Genyem	38.05	86	P	P	15 52 56.3	-1.8
	comp=Z,142nm,1.6s,comp=Z,3µm						
MULG	Mulgathing	38.28	132	P	P	15 53 01.4	+1.5
OOD	Oodnadatta	38.29	128	P	P	15 53 01.8	+1.9
WHN	Wuhan	38.46	17	⇑iP	P	15 53 01.7	+0.4
WHN				sP	sP	15 53 09.2	+0.2
WHN				PP	PnPn	15 54 34.7	+3.2
WHN				S	S	15 58 58.2	+2.6
WHN				pmax	pmax		
	comp=Z,260nm,1.2s						
WHN				pmax	pmax		
	comp=Z,3µm,9.9s						
WHN				LR	LR		
	comp=Z,18µm,19.2s						
WHN				LR	LR		
	comp=Z,25µm,14.5s						
WHN				LR	LR		
	comp=Z,35µm,13.5s						
QIS	Mount Isa	38.94	115	P	P	15 53 06.7	+1.2
	baz=39,SNR=5.1						
QIS	Mount Isa	38.94	115	P	P	15 53 05.5	-0.1
XAN	Xi'an	40.64	9	⇑P	P	15 53 18.9	-0.6
XAN				pP	pP	15 53 23.4	-1.7
XAN				sP	sP	15 53 26.0	-1.4
XAN				PP	PnPn	15 54 56.3	-1.2
XAN				S	S	15 59 28.6	+0.2
XAN				sS	pS	15 59 35.2	0.0
XAN				pmax	pmax		
	comp=Z,140nm,1.2s						
XAN				pmax	pmax		
	comp=Z,1µm,5.5s						
XAN				LR	LR		
	comp=Z,12µm,12.4s						
XAN				LR	LR		
	comp=Z,8µm,12.9s						
XAN				LR	LR		
	comp=Z,18µm,12.5s						
COEN	Coen	41.01	104	P	P	15 53 22.7	-0.2
	baz=41,SNR=4.8						
COEN	Coen	41.01	104	P	P	15 53 22.0	-0.9
COEN				IAmb	IAmb	15 53 37.4	
	comp=Z,298nm,1.8s						
COEN	Coen	41.01	104	P	P	15 53 24.4	+1.5
BBOO	Buckleboo	41.07	134	P	P	15 53 22.1	-1.0
NJ2	Nanjing	41.33	22	⇑iP	P	15 53 25.5	+0.3
NJ2				pP	pP	15 53 29.9	-0.9
NJ2				sP	sP	15 53 33.5	+0.2
NJ2				S	S	15 59 41.2	+2.6
NJ2				pmax	pmax		
	comp=Z,50nm,1.6s						
NJ2				pmax	pmax		
	comp=Z,1µm,4.1s						
NJ2				LR	LR		
	comp=Z,9µm,16.1s						
NJ2				LR	LR		
	comp=Z,6µm,15.7s						
NJ2				LR	LR		
	comp=Z,10µm,15.7s						
SSE	Sheshan	41.41	25	P	P	15 53 26.4	+0.6
SSE				S	S	15 59 42.8	+3.1
SSE				pmax	pmax		
	comp=Z,26nm,0.7s						
SSE				pmax	pmax		
	comp=Z,480nm,7.7s						
SSE				LR	LR		
	comp=Z,2µm,15.0s						
SSE				LR	LR		
	comp=Z,2µm,16.3s						
LCRK	Leigh Creek	41.48	130	P	P	15 53 29.0	+2.5
LYN	LuoYang	41.79	13	⇑iP	P	15 53 29.5	+0.6
LYN				pP	pP	15 53 34.4	-0.2
LYN				sP	pwP	15 53 37.6	-0.7
LYN				PP	PnPn	15 55 08.6	-2.3
LYN				S	S	15 59 48.7	+3.3
LYN				sS	sS	15 59 55.7	-0.3
LYN				pmax	pmax		
	comp=Z,140nm,2.0s						
LYN				pmax	pmax		
	comp=Z,1µm,7.5s						
LYN				LR	LR		
	comp=Z,11µm,16.1s						
LYN				LR	LR		
	comp=Z,7µm,14.3s						
LYN				LR	LR		
	comp=Z,11µm,15.7s						
LZH	Lanzhou	42.21	2	eP	P	15 53 33.4	+0.9
LZH				pP	pP	15 53 36.8	-1.4
LZH				sP	sP	15 53 39.5	-1.0
LZH				PP	PcP	15 55 19.1	-7.4
LZH				S	S	15 59 43.5	-8.3
LZH				pmax	pmax		
	comp=Z,89nm,1.2s						
LZH				pmax	pmax		
	comp=Z,1µm,4.1s						
LZH				LR	LR		
	comp=Z,7µm,16.3s						
LZH				LR	LR		
	comp=Z,18µm,16.5s						
LZH				LR	LR		
	comp=Z,15µm,17.5s						
INKA	Innaminka	42.31	125	P	P	15 53 35.4	+2.1
MTSU	Mount Surprise	42.72	110	P	P	15 53 38.1	+1.3
	baz=43,SNR=18						
MTSU	Mount Surprise	42.72	110	P	P	15 53 39.6	+2.8
GOMU	GeErMu	42.85	351	P	P	15 53 38.4	+0.4
GOMU				pP	pP	15 53 41.9	-1.5
GOMU				sP	sP	15 53 43.0	-2.6
GOMU				PP	PP	15 55 16.9	-0.8
GOMU				S	S	16 00 02.0	+0.3
GOMU				pmax	pmax		
	comp=Z,26nm,1.1s						
GOMU				LR	LR		
	comp=Z,3µm,13.5s						
GOMU				LR	LR		
	comp=Z,4µm,13.9s						
GOMU				LR	LR		
	comp=Z,3µm,16.6s						
HTT	Hallett	43.45	133	P	P	15 53 43.1	+0.6
	baz=44,SNR=7.5						
HTT	Hallett	43.45	133	P	P	15 53 45.6	+3.1
TIA	Tai'an	44.57	17	⇑P	P	15 53 50.3	-1.0
TIA				PcP	PP	15 55 36.6	+0.9
TIA				ScP	ScP	15 59 26.8	+1.3
TIA				S	S	16 00 19.1	-7.0
TIA				pmax	pmax		
	comp=Z,24nm,1.3s						
TIA				LR	LR		
	comp=Z,2µm,16.5s						
TIA				LR	LR		
	comp=Z,4µm,20.1s						
PMG	Port Moresby	44.64	97	P	P	15 53 52.5	+0.2
	comp=Z,33nm,0.8s,baz=299,slow=7.0,SNR=25						
	comp=Z,33nm,0.8s						
PMG	Port Moresby	44.64	97	P	P	15 53 51.1	-1.1
PMG	Port Moresby	44.64	97	P	P	15 53 54.0	+1.7
PMG	Port Moresby	44.64	97	P	P	15 53 54.2	+1.9
PMG	Port Moresby	44.64	97	P	P	15 53 51.2	-1.1
PMG				pmax	pmax		
	comp=Z,226nm,1.2s						
STKA	Stephens Creek	44.70	130	P	P	15 53 53.1	+0.5
	comp=Z,19nm,0.9s,baz=296,slow=9.8,SNR=13						
STKA				LR	LR	16 15 31.9	
	comp=Z,3µm,18.7s,baz=297,slow=40						
	comp=Z,19nm,0.9s						
STKA	Stephens Creek	44.70	130	P	P	15 53 53.3	+0.7
	baz=45,SNR=19						
STKA	Stephens Creek	44.70	130	P	P	15 53 52.4	-0.2
STKA	Stephens Creek	44.70	130	P	P	15 53 55.3	+2.7
STKA	Stephens Creek	44.70	130	P	P	15 53 52.4	-0.2
STKA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
QLP	Quilpie	44.80	122	P	P	15 53 53.8	+0.3
	baz=45,SNR=8.2						
QLP	Quilpie	44.80	122	P	P	15 53 57.3	+3.9
TIY	Taiyuan	44.83	12	⇑P	P	15 53 54.0	+0.5
TIY				S	S	16 00 31.5	+1.5
TIY				ScS	ScS	16 03 45.2	-4.9
TIY				pmax	pmax		
	comp=Z,57nm,0.6s						
TIY				pmax	pmax		
	comp=Z,1µm,3.9s						
TIY				LR	LR		
	comp=Z,6µm,18.2s						
TIY				LR	LR		
	comp=Z,5µm,13.5s						
TIY				LR	LR		
	comp=Z,6µm,14.7s						
CTA	Charters Tower	44.89	112	P	P	15 53 54.6	+0.4
	comp=Z,7.0nm,0.9s,baz=279,slow=9.7,SNR=9.7						
	comp=Z,7.0nm,0.9s						
CTAO	Charters Tower	44.89	112	P	P	15 53 54.0	-0.2
CTAO	Charters Tower	44.89	112	P	P	15 53 55.6	+1.4
CTAO	Charters Tower	44.89	112	P	P	15 53 54.0	-0.2
CTAO				pmax	pmax		
	comp=Z,377nm,1.9s						
HNS	HongShan	45.03	14	⇑P	P	15 53 54.9	-0.1
HNS				PP	PP	15 55 41.4	+0.8
HNS				S	S	16 00 33.3	+0.6
HNS				SS	ScS	16 03 47.7	-3.5
HNS				pmax	pmax		
	comp=Z,60nm,1.8s						
HNS				pmax	pmax		
	comp=Z,1µm,7.5s						
HNS				LR	LR		
	comp=Z,7µm,15.7s						
HNS				LR	LR		
	comp=Z,4µm,15.6s						
HNS				LR	LR		
	comp=Z,7µm,17.3s						
TV1H	Townsville Har	45.23	111	P	P	15 53 58.9	+2.0
GTA	Gaotai	45.55	357	⇑P	P	15 53 59.7	+0.5
GTA				pP	pP	15 54 04.5	-0.5
GTA				sP	pwP	15 54 08.6	+0.1
GTA				PP	PP	15 55 46.7	+0.6
GTA				S	S	16 00 39.4	-1.0
GTA				SS	ScS	16 03 51.5	-3.3
GTA				pmax	pmax		
	comp=Z,32nm,2.1s						
GTA				pmax	pmax		
	comp=Z,1µm,8.4s						
GTA				LR	LR		
	comp=Z,6µm,15.1s						
GTA				LR	LR		
	comp=Z,5µm,17.9s						
GTA				LR	LR		
	comp=Z,11µm,15.1s						
MSEY	Mahe Island	46.50	270	P	P	15 54 13.7	+6.6
BTO	Baotou	47.24	8	eP	P	15 54 13.5	+1.0
BTO				S	S	16 01 07.9	+3.3
RER	Riviere de l'E	47.26	247	P	P	15 54 23.3	+10
RER				S	S	16 01 04.5	-1.0
HHC	Hu-ho-hao-te	47.72	10	eP	P	15 54 17.0	+0.8
HHC				S	S	16 01 11.2	-0.2
HHC				ScS	ScS	16 04 05.7	-3.2
HHC				pmax	pmax		
	comp=Z,110nm,1.0s						
HHC				pmax	pmax		
	comp=Z,2µm,7.4s						
HHC				LR	LR		
	comp=Z,17µm,12.7s						
HHC				LR	LR		
	comp=Z,7µm,13.3s						
HHC				LR	LR		
	comp=Z,21µm,14.0s						
CMSA	Cobar Meteorol	47.75	127	P	P	15 54 17.7	+1.2
	baz=48,SNR=14						
CMSA	Cobar Meteorol	47.75	127	P	P	15 54 19.3	+2.8
JNU	Nakatsue	47.76	33	P	P	15 54 15.4	-1.2
JNU				IAmb	IAmb	15 54 32.0	
	comp=Z,51nm,1.0s						
JNU	Nakatsue	47.76	33	P	P	15 54 20.6	+4.0
BJT	Baijiatuau	47.88	14	P	P	15 54 17.0	-0.3
BJT	Baijiatuau	47.88	14	P	P	15 54 18.5	+1.2
BJT	Baijiatuau	47.88	14	P	P	15 54 17.0	-0.3
BJT				pmax	pmax		
	comp=Z,141nm,1.6s						
BJT				MLR	MLR		
	comp=Z,9µm,18.0s						
BJI	Beijing	47.90	14	P	P	15 54 17.5	0.0
BJI				pP	pP	15 54 21.8	-1.4
BJI				sP	sP	15 54 24.7	-0.7
BJI				PP	PP	15 56 11.4	+1.8
BJI				PcS	PcS	15 59 39.0	-2.3
BJI				S	S	16 01 15.4	+1.7
BJI				pmax	pmax		
	comp=Z,25nm,1.0s						
BJI				pmax	pmax		
	comp=Z,520nm,4.0s						
BJI				LR	LR		
	comp=Z,570nm,12.4s						
BJI				LR	LR		
	comp=Z,340nm,13.2s						
BJI				LR	LR		
	comp=Z,1µm,16.9s						
DL2	Dalian	48.48	20	P	P	15 54 20.1	-1.8
DL2				PP	PP	15 56 11.3	-3.6
DL2				S	S	16 01 18.1	-3.8
DL2				SS	SS	16 04 40.7	-11
DL2				pmax	pmax		
	comp=Z,36nm,1.5s						
DL2				pmax	pmax		
	comp=Z,760nm,6.3s						
DL2				LR	LR		
	comp=Z,6µm,14.5s						
DL2				LR	LR		
	comp=Z,5µm,14.2s						
DL2				LR	LR		
	comp=Z,7µm,23.5s						
TJN	Taejon	48.59	27	P	P	15 54 23.9	+1.0
TJN	Taejon	48.59	27	⇑eP	P	15 54 24.7	+1.8
RMQ	Roma	48.64	120	P	P	15 54 23.6	0.0
	baz=49,SNR=5.1						
RMQ	Roma	48.64	120	P	P	15 54 26.1	+2.6
AULRC	Lightning Ridg	48.86	124	P	P	15 54 26.9	+1.8
INCN	Inchon	49.19	26	IAMs_20	IAMs_20	16 15 25.9	
	comp=Z,6µm,21.0s						
KSAR	Wonju Array Be	49.71	27	P	P	15 54 30.8	-0.6
KSAR	Wonju Array Be	49.71	27	P	P	15 54 30.8	-0.6
KSRS	Korea Array	49.73	27	P	P	15 54 31.5	-0.1
	comp=Z,14nm,0.9s,baz=240,slow=7.7,SNR=29						
	comp=Z,14nm,0.9s						
KS19	Wonju Array Si	49.75	27	P	P	15 54 31.5	-0.3
JMN	Monobe	49.88	35	P	P	15 54 31.8	-1.0
JMN				IAmb	IAmb	15 55 42.6	
	comp=Z,119nm,1.4s						
AUDCS	Dubbo College	50.33	127	P	P	15 54 40.4	+4.1
EIDS	Eidsvold	50.38	118	P	P	15 54 38.2	+1.4
JHS	Saijyo	50.39	33	P	P	15 54 35.5	-1.2
JLN	Jalan Bani Buh	50.54	305	P	P	15 54 40.6	+2.6
	SNR=5.3						
JLN				S	S	16 01 55.9	+4.4

NGCH	Negor - Chabah	50.82	310	P	P	15 54 45.7	+5.6
NGCH				S	S	16 01 59.2	+4.0
YNG	Young	50.90	130	P	P	15 54 43.2	+2.6
JCJ	Chichijima	51.01	48	P	P	15 54 40.9	-0.5
DQM	DQM	51.07	302	P	P	15 54 48.3	+6.2
DQM				S	S	16 02 01.1	+2.3
WBK	Wadi Bani Khal	51.12	306	P	P	15 54 48.7	+6.3
WBK				S	S	16 02 03.8	+4.3
MHTO	MHTO	51.18	303	P	P	15 54 46.9	+4.1
	SNR=6.3						
MHTO				S	S	16 02 00.7	+0.4
KBL	Kabul	51.28	325	P	P	15 54 42.9	-0.8
KBL				IAmb	IAmb	15 54 53.4	
	comp=Z,82nm,1.6s						
KBL	Kabul	51.28	325	P	P	15 54 42.9	-0.8
KBL				pmax	pmax		
	comp=Z,82nm,1.6s						
XLT	XiLinHaoTe	51.54	13	*e*P	P	15 54 44.9	-0.4
XLT				pP	pP	15 54 48.9	-2.1
XLT				sP	sP	15 54 52.8	-0.5
XLT				ScP	ScP	15 59 53.6	-1.2
XLT				S	S	16 02 04.5	-0.2
XLT				sS	sS	16 02 13.9	-1.2
XLT				ScS	ScS	16 04 28.4	-6.2
XLT				pmax	pmax		
	comp=Z,38nm,1.1s						
XLT				pmax	pmax		
	comp=Z,1µm,5.5s						
XLT				LR	LR		
	comp=Z,8µm,14.5s						
XLT				LR	LR		
	comp=Z,8µm,19.6s						
WMQ	Urumqi	51.59	347	⇑P	P	15 54 46.7	+1.1
WMQ				pP	pP	15 54 51.3	+0.1
WMQ				S	S	16 02 07.2	+1.7
WMQ				ScS	ScS	16 04 36.1	+1.2
WMQ				pmax	pmax		
	comp=Z,110nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,850nm,4.7s						
WMQ				LR	LR		
	comp=Z,3µm,14.3s						
WMQ				LR	LR		
	comp=Z,5µm,13.1s						
WMQ				LR	LR		
	comp=Z,3µm,19.7s						
KSH	Kashi	51.64	334	P	P	15 54 45.1	-1.0
KSH				sP	pwP	15 54 58.1	+1.8
KSH				PP	PP	15 56 39.5	-4.4
KSH				S	S	16 02 03.8	-2.6
KSH				pmax	pmax		
	comp=Z,38nm,1.1s						
KSH				LR	LR		
	comp=Z,3µm,17.1s						
KSH				LR	LR		
	comp=Z,2µm,25.4s						
KSH				LR	LR		
	comp=Z,3µm,21.0s						
WSAR	Wadi Sarin	51.70	306	P	P	15 54 48.0	+1.3
	comp=Z,4.0nm,0.8s,baz=136,slow=8.8,SNR=2.1						
WSAR				LR	LR	16 16 49.7	
	comp=Z,3µm,18.1s,baz=136,slow=36						
	comp=Z,4.0nm,0.8s						
WSAR	Wadi Sarin	51.70	306	P	P	15 54 49.5	+2.8
	SNR=5.8						
WSAR				S	S	16 02 10.9	+3.5
JMDO	Jabal Madar	51.71	305	P	P	15 54 51.3	+4.5
	SNR=5.6						
JMDO				S	S	16 02 10.0	+2.4
CAN	Canberra	51.75	131	IAMs_20	IAMs_20	16 15 57.7	
	comp=Z,4µm,20.0s						
SNY	Shenyang	51.75	20	⇓P	P	15 54 45.9	-0.8
SNY				S	S	16 02 06.0	-1.5
SNY				pmax	pmax		
	comp=Z,33nm,1.9s						
SNY				pmax	pmax		
	comp=Z,990nm,7.6s						
SNY				LR	LR		
	comp=Z,4µm,15.5s						
SNY				LR	LR		
	comp=Z,7µm,16.8s						
SNY				LR	LR		
	comp=Z,8µm,14.8s						
AUPHS	Peel High Scho	51.77	125	P	P	15 54 50.6	+3.4
SBV	Sambava	51.88	258	P	P	15 54 57.7	+9.5
SHAO	Shalim	51.91	299	P	P	15 54 54.3	+5.9
SHAO				S	S	16 02 12.4	+1.9
SMDO	Samad	52.08	306	P	P	15 54 52.8	+3.1
	SNR=9.3						
BIDO	Bidbid	52.24	306	P	P	15 54 54.6	+3.8
	SNR=6.6						
DMTO	DMTO	52.39	298	P	P	15 54 55.1	+3.2
DMTO				S	S	16 02 18.2	+1.1
AUWSH	Wavell State H	52.57	120	P	P	15 54 54.8	+1.7
BSY	Bisya	52.62	305	P	P	15 54 57.4	+3.8
	SNR=12						
INU	Inuyama	52.84	36	P	P	15 54 54.2	-0.8
HOQ	Hoqain	52.92	306	P	P	15 55 01.5	+5.7
	SNR=7.1						
HOQ				S	S	16 02 29.5	+5.3
RBK	Rabkut	52.96	297	P	P	15 55 00.6	+4.3
	SNR=18						
RBK				S	S	16 02 26.5	+1.6
JGF	Kuroka	53.22	36	P	P	15 54 55.7	-2.2
JGF				IAmb	IAmb	15 56 25.8	
	comp=Z,166nm,2.0s						
SHLS	Shalkode	53.38	339	*e*P	P	15 54 57.9	-1.1
	comp=Z,48nm,1.2s,baz=340						
SHLS				*e*S	S	16 02 30.2	+0.1
	baz=340						
SHLS	Shalkode	53.38	339	*e*P	P	15 54 57.9	-1.1
SHLS				*e*S	S	16 02 30.2	+0.1
SHLS				pmax	pmax		
	comp=Z,48nm,1.2s						
ARQ	Araqi	53.45	305	P	P	15 55 03.7	+4.0
	SNR=6.0						
ARQ				S	S	16 02 31.4	0.0
DOK	Doka	53.45	299	P	P	15 55 05.0	+5.2
	SNR=11						
DOK				S	S	16 02 31.7	+0.1
WHFO	Wadi Hawf	53.50	298	P	P	15 55 03.1	+2.9
	SNR=11						
WHFO				S	S	16 02 32.3	0.0
UZB	Uzynbulak	53.53	339	*e*P	P	15 54 59.9	-0.3
	comp=Z,31nm,1.0s,baz=339						
UZB				*e*S	S	16 02 32.8	+0.7
	baz=339						
UZB	Uzynbulak	53.53	339	*e*P	P	15 54 59.8	-0.3
UZB				*e*S	S	16 02 32.8	+0.7
UZB				pmax	pmax		
	comp=Z,31nm,1.0s						
JASK	Jask - Hormozg	53.60	309	P	P	15 55 06.3	+5.5
SATY	Saty	53.67	338	*e*P	P	15 55 01.3	+0.1
	comp=Z,32nm,1.1s,baz=338						
SATY				*e*S	S	16 02 35.4	+1.3
	baz=338						
SATY	Saty	53.67	338	*e*P	P	15 55 01.2	+0.1
SATY				*e*S	S	16 02 35.3	+1.2
SATY				pmax	pmax		
	comp=Z,32nm,1.1s						
ABTO	Aybut	53.71	297	P	P	15 55 09.5	+7.7
	SNR=16						
ABTO				S	S	16 02 34.9	-0.3
ZHN	Zhinishke	53.76	339	*e*P	P	15 55 02.1	+0.3
	baz=338						
ZHN	Zhinishke	53.76	339	*e*P	P	15 55 02.0	+0.3
SOHO	SOHO	53.81	306	*i* P	P	15 55 06.5	+4.2
	SNR=9.5						
SOHO	SOHO	53.81	306	P	P	15 55 07.4	+5.1
SOHO				S	S	16 02 38.8	+2.5
GAR	Garm	53.89	329	P	P	15 55 01.3	-1.5
GAR				IAmb	IAmb	15 55 18.3	
	comp=Z,50nm,1.0s						
KPKS	Kokpek	53.93	339	*e*P	P	15 55 02.6	-0.3
	comp=Z,33nm,1.2s,baz=339						
KPKS				*e*S	S	16 02 38.1	+0.7
	baz=339						
KPKS	Kokpek	53.93	339	*e*P	P	15 55 02.6	-0.3
KPKS				*e*S	S	16 02 38.1	+0.7
KPKS				pmax	pmax		
	comp=Z,33nm,1.2s						
SONM	Songino Array	54.05	4	P	P	15 55 04.3	+0.5
	comp=Z,27nm,0.8s,baz=183,slow=7.9,SNR=92						
	comp=Z,27nm,0.8s						
SONM	Songino Array	54.05	4	P	P	15 55 04.2	+0.5
SONM	Songino Array	54.05	4	P	P	15 55 04.2	+0.5
SONM				pmax	pmax		
	comp=Z,332nm,1.9s						
ULN	Ulaanbaatar	54.12	4	P	P	15 55 04.6	+0.3
ULN				IAmb	IAmb	15 55 19.8	
	comp=Z,122nm,1.4s						
ULN	Ulaanbaatar	54.12	4	P	P	15 55 04.6	+0.3
ULN				pmax	pmax		
	comp=Z,122nm,1.5s						
ULN				MLR	MLR		
	comp=Z,7µm,21.0s						
CN2	Changchun	54.14	21	P	P	15 55 03.5	-0.9
CN2				PP	PP	15 57 11.8	+5.6
CN2				pmax	pmax		
	comp=Z,40nm,1.3s						
CN2				pmax	pmax		
	comp=Z,1µm,10.0s						
CN2				LR	LR		
	comp=Z,3µm,17.0s						
CN2				LR	LR		
	comp=Z,10µm,17.0s						
CN2				LR	LR		
	comp=Z,10µm,19.0s						
CHGR	Chuyangaron	54.23	328	P	P	15 55 05.0	-0.2
CHGR				IAmb	IAmb	15 55 19.2	
	comp=Z,81nm,1.2s						
CHGR	Chuyangaron	54.23	328	P	P	15 55 05.0	-0.2
CHGR				pmax	pmax		
	comp=Z,81nm,1.2s						
MDOK	Medeo	54.27	337	*e*P	P	15 55 04.8	-0.7
	baz=337						
MDOK				*e*S	S	16 02 43.4	+1.3
	baz=337						
MDOK	Medeo	54.27	337	*e*P	P	15 55 04.8	-0.7
MDOK				*e*S	S	16 02 43.4	+1.3
UMZA	Um Al Zommool	54.28	304	P	P	15 55 14.2	+8.4
UMZA				S	S	16 02 45.5	+2.8
AAA	Alma-Ata	54.36	337	*e*P	P	15 55 05.9	-0.2
	baz=337						
AAA	Alma-Ata	54.36	337	*e*P	P	15 55 05.8	-0.2
MAJO	Matsushiro	54.37	36	P	P	15 55 07.1	+0.9
MAJO	Matsushiro	54.37	36	⇑*e*P	P	15 55 05.6	-0.6
MAJO				pmax	pmax		
	comp=Z,16nm,1.0s						
MJAR	Matsushiro Arr	54.37	36	P	P	15 55 04.2	-2.0
	comp=Z,15nm,1.1s,baz=207,slow=7.5,SNR=12						
	comp=Z,15nm,1.1s						
MJB9	Matsu-Tunnel	54.37	36	P	P	15 55 04.4	-1.8
ALNE	Al Ain	54.41	305	*i* P	P	15 55 13.0	+6.3
	SNR=9.1						
ALNE	Al Ain	54.41	305	P	P	15 55 12.2	+5.5
	SNR=11						
ALNE				S	S	16 02 46.1	+1.8
ASHO	Ashiyiah	54.45	306	P	P	15 55 12.4	+5.3
ASHO	Ashiyiah	54.45	306	P	P	15 55 11.5	+4.4
ASHO				S	S	16 02 48.4	+3.4
HATD	Hatta, Dubai	54.46	306	*i* P	P	15 55 13.4	+6.4
	SNR=8.7						
HATD	Hatta, Dubai	54.46	306	P	P	15 55 11.1	+4.0
HATD				S	S	16 02 50.7	+5.6
UOSS	Minazif	54.46	307	P	P	15 55 09.8	+2.8
UCH	Uchtor	54.50	335	P	P	15 55 08.1	+0.5
	SNR=15						
MDH	Madha	54.55	307	P	P	15 55 13.1	+5.4
MDH				S	S	16 02 48.3	+2.0
TKM2	Tokmak 2	54.63	336	P	P	15 55 08.5	+0.3
	SNR=36						
KBK	Karagaybulak	54.67	336	P	P	15 55 09.5	+0.9
	SNR=17						
MSFE	Esma-Masafi	54.69	307	*i* P	P	15 55 14.0	+5.2
	SNR=7.0						
MASF	Masafi	54.70	307	P	P	15 55 10.8	+2.0
MASF				S	S	16 02 51.9	+3.6
AML	Almayashu	54.77	334	P	P	15 55 09.8	+0.3
	SNR=29						
AAK	Ala-Archa	54.85	335	P	P	15 55 10.3	+0.6
	SNR=6.3						
AAK	Ala-Archa	54.85	335	P	P	15 55 09.8	+0.1
	comp=Z,8.3nm,0.9s,baz=170,slow=5.5,SNR=27						
	comp=Z,8.3nm,0.9s						
AAK	Ala-Archa	54.85	335	P	P	15 55 09.6	-0.2
AAK				IAmb	IAmb	15 55 32.3	
	comp=Z,59nm,1.4s						
AAK	Ala-Archa	54.85	335	P	P	15 55 09.6	-0.2
AAK				pmax	pmax		
	comp=Z,59nm,1.4s						
AAK				MLR	MLR		
	comp=Z,2µm,19.0s						
AAK	Ala-Archa	54.85	335	*i* P	P	15 55 08.9	-0.9
	SNR=15						
BANOM	Banah	54.85	308	P	P	15 55 18.5	+8.5
FAQ	Al Faqa, Dubai	54.85	306	*i* P	P	15 55 17.1	+7.2
	SNR=5.9						
FAQ	Al Faqa, Dubai	54.85	306	P	P	15 55 15.7	+5.8
	SNR=6.2						
FAQ				S	S	16 02 51.6	+1.2
CHKK	Chushkaly	54.88	338	*e*P	P	15 55 08.7	-1.1
	baz=338						
CHKK	Chushkaly	54.88	338	*e*P	P	15 55 08.7	-1.1
NAZ	Nazwa, Dubai	54.91	306	P	P	15 55 17.6	+7.3
NAZ	Nazwa, Dubai	54.91	306	P	P	15 55 13.5	+3.1
NAZ				S	S	16 02 51.2	+0.1
ASUD	Al Ashush, Dub	55.01	306	P	P	15 55 17.0	+6.0
ASUD				S	S	16 02 56.7	+4.3
CHMS	Chumysh	55.04	336	P	P	15 55 12.4	+1.4
	SNR=12						
SHME	Shamm	55.04	308	P	P	15 55 17.6	+6.4
SHME	Shamm	55.04	308	P	P	15 55 16.2	+4.9
SHME				S	S	16 02 55.0	+2.2
KUU	Kurty	55.16	337	*e*P	P	15 55 11.5	-0.3
	baz=337						
KUU				*e*S	S	16 02 53.6	-0.2
	baz=337						
KUU	Kurty	55.16	337	*e*P	P	15 55 11.5	-0.3
KUU				*e*S	S	16 02 53.6	-0.2
UMQ	Umm Al-Quwin	55.17	307	P	P	15 55 18.3	+6.2
UMQ				S	S	16 03 00.8	+6.4
EKS2	Erkin-Say	55.17	335	P	P	15 55 12.8	+0.7
	SNR=34						
AJN	Ajban	55.26	306	P	P	15 55 19.2	+6.4
AJN				S	S	16 02 58.3	+2.6
USP	Ospenovka	55.36	336	P	P	15 55 15.2	+1.9
	SNR=25						
TDK	Taldyqorghan	55.36	340	*e*P	P	15 55 13.3	+0.1
	comp=Z,27nm,0.9s,baz=340						
TDK	Taldyqorghan	55.36	340	*e*P	P	15 55 13.3	+0.1
TDK				pmax	pmax		
	comp=Z,27nm,0.9s						
SGDS	Sogindy	55.46	336	*e*P	P	15 55 14.0	-0.1
	baz=336						
SGDS				*e*S	S	16 02 58.0	0.0
	baz=336						
SGDS	Sogindy	55.46	336	*e*P	P	15 55 14.0	-0.1
SGDS				*e*S	S	16 02 58.0	0.0
VOI	Vohitsoka	55.60	248	P	P	15 55 21.7	+6.1
ZSN	Zaisan	55.68	346	⇑*i*P	P	15 55 16.6	+1.0
	baz=346						
ZSN				*e*S	S	16 03 02.9	+2.2
	baz=346						
ZSN	Zaisan	55.68	346	*c i*P	P	15 55 16.5	+1.0
ZSN				*e*S	S	16 03 02.8	+2.2
MK31	Makanchi Array	55.75	344	P	P	15 55 15.6	-0.4
MK31				IAmb	IAmb	15 55 18.1	
	comp=Z,38nm,0.8s						
MK31	Makanchi Array	55.75	344	P	P	15 55 15.6	-0.4
MK31				pmax	pmax		
	comp=Z,38nm,0.9s						
MKAR	Makanchi Array	55.75	344	P	P	15 55 16.1	0.0
	comp=Z,54nm,0.8s,baz=151,slow=7.0,SNR=216						
	comp=Z,54nm,0.8s						
MKAR	Makanchi Array	55.75	344	P	P	15 55 16.0	0.0
MZWR	Madinat Zayed	55.80	304	P	P	15 55 21.5	+4.7
MZWR				S	S	16 03 03.4	+0.4
MZR	Muzera	55.80	303	*i* P	P	15 55 23.3	+6.5
	SNR=8.7						
MZR	Muzera	55.80	303	P	P	15 55 20.3	+3.5
MZR				S	S	16 03 07.2	+4.1
MAKZ	Makanchi	55.85	343	P	P	15 55 16.3	-0.4
MAKZ				IAmb	IAmb	15 55 29.9	
	comp=Z,55nm,1.4s						
MAKZ	Makanchi	55.85	343	P	P	15 55 16.3	-0.4
MAKZ				pmax	pmax		
	comp=Z,55nm,1.4s						
VLA	Vladivostok	56.10	26	*ce*P	P	15 55 19.7	+1.2
VLA				pmax	pmax		
	comp=Z,82nm,1.7s						
MDJ	Mudanjiang	56.38	23	P	P	15 55 20.6	+0.1
MDJ				sP	pP	15 55 26.1	-0.2
MDJ				PP	PP	15 57 26.2	-0.1
MDJ				ScP	ScP	16 00 17.4	+1.5
MDJ				S	S	16 03 10.0	0.0
MDJ				sS	pS	16 03 15.4	-1.9
MDJ				ScS	ScS	16 05 09.4	+0.8
MDJ				SS	SS	16 06 57.9	+0.5
MDJ				pmax	pmax		
	comp=Z,29nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,1µm,7.8s						
MDJ	Mudanjiang	56.38	23	P	P	15 55 22.6	+2.1
DZA	Taraz	56.42	333	*e*P	P	15 55 20.5	-0.5
	baz=333						
DZA	Taraz	56.42	333	*e*P	P	15 55 20.4	-0.5
IUG	Iuzhnay	56.44	332	*e*P	P	15 55 21.0	-0.1
	baz=332						
IUG	Iuzhnay	56.44	332	*e*P	P	15 55 21.0	-0.1
ZAK	Zakamensk	56.48	1	*e*P	P	15 55 21.2	0.0
ZAK				pmax	pmax		
	comp=Z,20nm,1.4s						
BNX	BinXian	56.51	21	⇑P	P	15 55 21.0	-0.4
BNX				pP	pP	15 55 24.3	-2.9
BNX				PP	PP	15 57 31.2	+3.7
BNX				S	S	16 03 14.0	+2.3
BNX				sS	sS	16 03 22.4	+0.2
BNX				pmax	pmax		
	comp=Z,57nm,1.4s						
BNX				pmax	pmax		
	comp=Z,1µm,7.6s						
BNX				LR	LR		
	comp=Z,2µm,13.0s						
BNX				LR	LR		
	comp=Z,7µm,18.7s						
BNX				LR	LR		
	comp=Z,8µm,20.6s						
GHWR	Ruwais	56.71	304	P	P	15 55 27.9	+4.6
GHWR				S	S	16 03 16.1	+0.9
CHM	Chimkent	56.77	331	*e*P	P	15 55 23.3	-0.2
	baz=331						
CHM	Chimkent	56.77	331	*e*P	P	15 55 23.2	-0.2
JMM	Marumori	56.78	36	P	P	15 55 23.6	+0.1
KK31	Karatay Array	56.96	333	P	P	15 55 24.3	-0.4
KK31	Karatay Array	56.96	333	P	P	15 55 24.3	-0.4
KK31				pmax	pmax		
	comp=Z,26nm,1.2s						
KKAR	Karatay Array	56.96	333	P	P	15 55 23.8	-0.9
KKAR	Karatay Array	56.96	333	P	P	15 55 23.8	-0.9
USRK	Ussuriysk Ar.	57.02	25	P	P	15 55 24.5	-0.5
	comp=Z,15nm,0.8s,baz=212,slow=8.2,SNR=19						
	comp=Z,15nm,0.8s						
USRK	Ussuriysk Ar.	57.02	25	P	P	15 55 24.1	-0.9
BTLS	Baital	57.02	337	*e*P	P	15 55 24.4	-0.7
	baz=336						
BTLS	Baital	57.02	337	*e*P	P	15 55 24.6	-0.4
BTLS				pmax	pmax		
	comp=Z,36nm,2.2s						
USA0B	Ussuriysk Arra	57.02	25	P	P	15 55 24.1	-0.9
USA0B				IAmb	IAmb	15 55 50.9	
	comp=Z,44nm,1.0s						
USA0B	Ussuriysk Arra	57.02	25	P	P	15 55 24.1	-0.9
USA0B				pmax	pmax		
	comp=Z,44nm,1.0s						
DGZ	Jazzator, Alta	57.24	349	*c i*P	P	15 55 27.3	+0.5
DGZ				pmax	pmax		
	comp=Z,75nm,0.9s						
HNR	Honiara	57.26	97	P	P	15 55 26.7	-0.7
	comp=Z,716nm,0.7s,baz=221,slow=5.1,SNR=4.8						
HNR	Honiara	57.26	97	P	P	15 55 26.4	-0.9
HNR	Honiara	57.26	97	P	P	15 55 30.1	+2.8
HNR	Honiara	57.26	97	P	P	15 55 26.4	-0.9
HNR				pmax	pmax		
	comp=Z,304nm,1.1s						
HIA	Hailar	57.44	14	P	P	15 55 27.1	-0.9
HIA				IAmb	IAmb	15 55 41.8	
	comp=Z,50nm,1.3s						
HIA	Hailar	57.44	14	P	P	15 55 27.5	-0.5
HIA	Hailar	57.44	14	P	P	15 55 27.1	-0.9
HIA				pmax	pmax		
	comp=Z,50nm,1.3s						
SLWR	Sila	57.74	303	P	P	15 55 35.7	+5.2
SLWR				S	S	16 03 25.9	-2.8
MOY	Mondy	57.76	359	*e*P	P	15 55 31.2	+0.9
MOY				pmax	pmax		
	comp=Z,102nm,2.1s						
IRK	Irkutsk	58.36	2	*e*P	P	15 55 35.0	+0.7
IRK				*e*S	S	16 03 40.8	+5.0
IRK				pmax	pmax		
	comp=Z,351nm,2.2s						
SMRA	Abu-Samra	58.74	304	P	P	15 55 42.6	+5.1
SMRA				S	S	16 03 41.0	-0.7
JTM	Tenmabayashi	58.91	34	P	P	15 55 37.0	-1.4
CIT	Chita	58.92	8	*e*P	P	15 55 39.0	+0.7
CIT				*e*		15 55 47.5	
CIT				*e*		15 56 23.5	
CIT				pmax	pmax		
	comp=Z,159nm,3.6s						
SHMA	Al-Shehemyia	59.09	305	P	P	15 55 45.0	+5.1
SHMA				S	S	16 03 45.8	-0.5
SAKB	Bahrain	59.49	305	P	P	15 55 48.0	+5.3
SAKB				S	S	16 03 52.5	+1.1
GEYT	Alibeck	60.13	321	P	P	15 55 47.0	0.0
	comp=Z,10.0nm,1.0s,baz=145,slow=3.5,SNR=18						
	comp=Z,10.0nm,1.0s						
KURBB	Kurchatov Arra	60.28	343	P	P	15 55 47.4	-0.2
	comp=Z,23nm,0.9s,baz=158,slow=6.5,SNR=92						
	comp=Z,23nm,0.9s						
KURK	Kurchatov	60.34	343	P	P	15 55 47.6	-0.4
KURK	Kurchatov	60.34	343	IAMs_20	IAMs_20	16 26 47.8	
	comp=Z,3µm,19.0s						
KURK	Kurchatov	60.34	343	P	P	15 55 47.6	-0.4
KURK				pmax	pmax		
	comp=Z,100nm,1.3s						
KURK				MLR	MLR		
	comp=Z,3µm,19.0s						
HEH	HeiHe	60.44	18	*e*P	P	15 55 48.0	-0.7
HEH				S	S	16 04 04.6	+1.9
HEH				sS	pS	16 04 10.1	+0.3
HEH				SS	SS	16 07 58.5	-2.5
HEH				pmax	pmax		
	comp=Z,42nm,1.1s						
HEH				pmax	pmax		
	comp=Z,970nm,7.5s						
HEH				LR	LR		
	comp=Z,6µm,17.1s						
HEH				LR	LR		
	comp=Z,7µm,18.0s						
HEH				LR	LR		
	comp=Z,13µm,19.7s						
KLR	Kul'dur	61.04	22	*ce*P	P	15 55 52.1	-0.8
KLR				pmax	pmax		
	comp=Z,47nm,1.7s						
ATD	Arta Tunnel	61.63	287	*e*P	P	15 55 57.0	-0.6
ATD	Arta Tunnel	61.63	287	P	P	15 56 01.1	+3.5
ATD				S	S	16 04 18.0	-1.2
BRZS	Berezniki	61.64	339	*e*P	P	15 55 56.5	-0.4
	comp=Z,42nm,2.1s,baz=339						
BRZS	Berezniki	61.64	339	*e*P	P	15 55 56.5	-0.4
BRZS				pmax	pmax		
	comp=Z,43nm,2.1s						
KOUNC	Koumac, New Ca	61.71	110	P	P	15 55 59.9	+1.9
ZAA0	Zalesovo Array	61.79	348	P	P	15 55 57.4	-0.4
ZALV	Zalesovo Beam	61.79	348	P	P	15 55 57.8	0.0
	comp=Z,55nm,0.9s,baz=158,slow=4.3,SNR=97						
	comp=Z,55nm,0.9s						
ZALV	Zalesovo Beam	61.79	348	P	P	15 55 57.5	-0.3
ZALV	Zalesovo Beam	61.79	348	*i* P	P	15 55 57.7	-0.1
ZALV				pmax	pmax		
	comp=Z,54nm,0.9s						
ASAJ	Asahikawa	62.01	32	P	P	15 55 59.0	-0.5
ASAJ				pmax	pmax		
	comp=Z,58nm,1.3s						
JKA	Kamikawa-asahi	62.02	32	P	P	15 55 59.0	-0.6
JKA				IAmb	IAmb	15 56 21.1	
	comp=Z,58nm,1.3s						
RAYN	Ar Rayn	62.75	300	P	P	15 56 05.3	+0.4
RAYN				IAmb	IAmb	15 56 15.7	
	comp=Z,57nm,1.2s						
RAYN	Ar Rayn	62.75	300	P	P	15 56 05.3	+0.4
RAYN				pmax	pmax		
	comp=Z,57nm,1.3s						
RAYN				MLR	MLR		
	comp=Z,2µm,18.0s						

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RAYN  Ar Rayn          62.75 300 i P     P        15 56 10.9 +5.9
      SNR=14
RAYN                             i P     sP       15 56 12.0 -0.6
      SNR=21
ZEA   Zeya             63.45  16 eP      P        15 56 09.3 +0.4
ZEA                              eS      S        16 04 46.0 +5.3
ZEA                               pmax   pmax
      comp=N,20nm,1.3s
ZEA                               pmax   pmax
      comp=Z,30nm,1.2s
ZEA                               pmax   pmax
      comp=N,300nm,8.9s
ZEA                               pmax   pmax
      comp=Z,600nm,9.3s
ZEA                               MLR    MLR
      comp=N,3µm,14.0s
ZEA                               MLR    MLR
      comp=E,1µm,16.0s
ZEA                               MLR    MLR
      comp=Z,4µm,14.0s
KIBK  Kibwezi          64.04 270  P      P        15 56 16.0 +2.2
KIBK                              S      S        16 04 48.5 -1.1
YSS   Yuzh-Sakhalins   64.05  30  P      P        15 56 12.2 -0.8
YSS                               IAmb   IAmb     15 56 15.1
      comp=Z,70nm,1.2s
YSS   Yuzh-Sakhalins   64.05  30  P      P        15 56 14.2 +1.2
YSS   Yuzh-Sakhalins   64.05  30αeP      P        15 56 12.4 -0.6
YSS                              e*SP    pP       15 56 17.2 -1.5
YSS                              e                15 58 30.2
YSS                              eS      S        16 04 44.4 -4.0
YSS                              ePPS    PPS      16 05 10.0
YSS                               pmax   pmax
      comp=Z,40nm,1.1s
YSS                               pmax   pmax
      comp=Z,500nm,7.7s
YSS                               MLR    MLR
      comp=Z,1µm,16.0s
GRNR  Gornyy           64.06  23⇑iP      P        15 56 12.9 -0.2
GRNR                             eS      S        16 04 53.8 +5.3
GRNR                              pmax   pmax
      comp=E,2.0nm,1.2s
GRNR                              pmax   pmax
      comp=N,3.0nm,1.1s
GRNR                              pmax   pmax
      comp=Z,10.0nm,1.2s
GRNR                              smax   smax
      comp=N,2.0nm,0.7s
GRNR                              MLR    MLR
      comp=E,2µm,15.0s
GRNR                              MLR    MLR
      comp=N,2µm,16.0s
GRNR                              MLR    MLR
      comp=Z,3µm,14.0s
ANKE  Ethiopia-Afar    64.19 284 eP      P        15 56 14.4 -0.6
OUENC Ouen Island, N   64.21 112  P      P        15 56 16.5 +1.9
YATNC Mamie plateau,   64.23 111  P      P        15 56 16.5 +1.7
DESE  Dese             64.60 285 eP      P        15 56 15.1 -2.6
BOD   Bodaibo          64.64   7 eP      P        15 56 16.1 -0.5
BOD                               pmax   pmax
      comp=Z,56nm,1.9s
KMBO  Kilima Mbogo     64.96 272  LR     LR       16 19 42.9
      comp=Z,9.4nm,20.8s,baz=97,slow=31
KMBO  Kilima Mbogo     64.96 272  P      P        15 56 19.8 -0.1
KMBO  Kilima Mbogo     64.96 272  P      P        15 56 19.8 -0.1
KMBO                              pmax   pmax
      comp=Z,42nm,1.9s
KMBO  Kilima Mbogo     64.96 272 eP      P        15 56 14.4 -5.5
BVAR  Borovoye Array   64.96 339  P      P        15 56 18.5 -0.4
      comp=Z,13nm,0.7s,baz=146,slow=7.7,SNR=56
      comp=Z,13nm,0.7s
DILA  Dilla            65.00 280 eP      P        15 56 18.7 -1.5
AAE   Adis Abeba       65.01 283 eP      P        15 56 18.7 -1.7
BRVK  Borovoye         65.02 339  P      P        15 56 18.6 -0.7
BRVK                              IAmb   IAmb     15 56 33.3
      comp=Z,109nm,1.9s
BRVK  Borovoye         65.02 339  P      P        15 56 18.6 -0.7
BRVK                              pmax   pmax
      comp=Z,109nm,1.9s
BRVK                              MLR    MLR
      comp=Z,1µm,20.0s
FURI  Furi             65.07 283  IAMs_20 IAMs_20 16 25 48.7
      comp=Z,3µm,18.0s
FURI  Furi             65.07 283 eP      P        15 56 19.2 -1.6
UGL   Uglegorsk        65.22  28 eP      P        15 56 21.1 +0.5
UGL                               pmax   pmax
      comp=Z,40nm,1.3s
ABKAR Akbulak array    66.44 331  P      P        15 56 28.1 -0.4
ABKAR Akbulak array    66.44 331  P      P        15 56 28.0 -0.4
ABKAR                             IAmb   IAmb     15 56 39.2
      comp=Z,94nm,1.3s
MAW   Mawson           66.69 195  LR     LR       16 19 16.2
      comp=Z,2µm,21.3s,baz=27,slow=30
TYV   Tymovskoe        66.76  27 eP      P        15 56 30.8 +0.3
TYV                              eS      S        16 05 26.9 +5.5
TYV                               pmax   pmax
      comp=Z,21nm,1.9s
TYV                               pmax   pmax
      comp=Z,300nm,4.2s
TYV                               smax   smax
      comp=N,400nm,6.2s
TYV                               smax   smax
      comp=E,500nm,6.2s
LODK  Lodwar           67.41 276 eP      P        15 56 33.0 -2.4
LODK  Lodwar           67.41 276  P      P        15 56 37.4 +1.9
      SNR=15
NKL   Nikolayevsk      67.59  24 eP      P        15 56 34.1 -1.5
NKL                              eS      S        16 05 28.0 -3.2
NKL                               pmax   pmax
      comp=N,69nm,1.1s
NKL                               pmax   pmax
      comp=E,92nm,1.1s
NKL                               pmax   pmax
      comp=Z,168nm,1.4s
NKL                               smax   smax
      comp=E,418nm,7.2s
NKL                               smax   smax
      comp=N,117nm,3.2s
DCZ   Deep Cove        68.07 137  IAMs_20 IAMs_20 16 29 42.6
      comp=Z,2µm,20.0s
AKTO  Aktyubinsk       68.16 331  P      P        15 56 39.0 -0.3
      comp=Z,14nm,0.9s,baz=134,slow=2.9,SNR=22
      comp=Z,14nm,0.9s
MLZ   Mavora Lakes     68.70 136  IAMs_20 IAMs_20 16 30 12.5
      comp=Z,3µm,19.0s
WHZ   Wether Hill Ro   68.71 137  IAMs_20 IAMs_20 16 28 20.6
      comp=Z,2µm,19.0s
AKT   Akhty            68.77 319 eP      P        15 56 40.9 -2.6
AKT                              e                15 57 04.8
AKT                              e                15 59 14.4
AKT                               pmax   pmax
      comp=Z,92nm,1.5s
NAX   Nakhchivan       69.17 316  P      P        15 56 51.3 +5.3
GANJ  Ganja            69.29 318  P      P        15 56 52.4 +5.7
MAK   Makhachkala      69.65 320 eP      P        15 56 45.4 -3.4
MAK                              eS      S        16 05 53.4 -2.8
MAK                              eSS     SS       16 10 23.1 -1.6
MAK                               pmax   pmax
      comp=Z,189nm,1.1s
LBZ   Lake Benmore     69.94 135  IAMs_20 IAMs_20 16 31 20.1
      comp=Z,3µm,19.0s
GNI   Garni            70.13 317deP      P        15 56 53.6 +1.6
GNI                               pmax   pmax
      comp=Z,27nm,1.8s
ODZ   Otahua Downs     70.38 136  IAMs_20 IAMs_20 16 31 05.9
      comp=Z,4µm,20.0s
GROC  Groznyy          70.86 320 eP      P        15 56 55.8 -0.4
GROC                             e                15 57 18.0
GROC                             eS      S        16 06 09.9 -0.5
GROC                              pmax   pmax
      comp=Z,346nm,1.6s
OXZ   Oxford           71.07 134  IAMs_20 IAMs_20 16 32 20.1
      comp=Z,3µm,18.0s
YAK   Yakutsk          71.38  13  P      P        15 56 57.7 -1.2
YAK                               IAMs_20 IAMs_20 16 21 45.8
      comp=Z,3µm,20.0s
YAK   Yakutsk          71.38  13c iP     P        15 56 58.0 -0.9
YAK                              e*PP    pP       15 57 02.3 -2.4
YAK                              e                15 57 19.5
YAK                              e                15 59 35.6
YAK                              eS      S        16 06 16.3 +0.7
YAK                              e                16 06 59.8
YAK                              eSS     SS       16 10 49.9 -0.7
YAK                               pmax   pmax
      comp=Z,52nm,0.8s
YAK                               pmax   pmax
      comp=E,15nm,1.3s
YAK                               pmax   pmax
      comp=N,18nm,1.1s
YAK                               pmax   pmax
      comp=Z,240nm,3.1s
YAK                               pmax   pmax
      comp=E,35nm,2.8s
YAK                               pmax   pmax
      comp=N,69nm,2.8s
YAK                               smax   smax
      comp=N,614nm,4.8s
YAK                               smax   smax
      comp=E,74nm,2.4s
YAK                               MLR    MLR
      comp=Z,6µm,17.0s
YAK                               MLR    MLR
      comp=N,3µm,17.0s
YAK                               MLR    MLR
      comp=E,3µm,20.0s
SVE   Sverdlovsk       71.47 337deP      P        15 57 00.2 +0.6
SVE                              eS      S        16 06 15.8 -1.2
SVE                               pmax   pmax
      comp=Z,128nm,2.0s
KARS  Kars             71.48 316  P      P        15 56 59.9 -0.3
KARS  Kars             71.48 316  P      P        15 56 59.9 -0.3
KARS                              pmax   pmax
      comp=Z,483nm,1.8s
MBAR  Mbarara          71.49 271  LR     LR       16 24 44.3
      comp=Z,847nm,18.7s,baz=88,slow=33
MBAR  Mbarara          71.49 271 eP      P        15 56 56.3 -4.5
AKH   Akhalkalaki      71.54 317  P      P        15 57 01.9 +1.3
ZEI   Tsey             71.89 319 eP      P        15 57 02.9 +0.2
ZEI                               pmax   pmax
      comp=Z,16nm,1.0s
ARU   Arti             72.00 336  P      P        15 57 02.8 -0.1
      comp=Z,22nm,0.8s,baz=134,slow=4.7,SNR=27
      comp=Z,22nm,0.8s
ARU   Arti             72.00 336  P      P        15 57 02.4 -0.4
ARU                               IAmb   IAmb     15 57 13.7
      comp=Z,78nm,1.3s
ARU                               IAMs_20 IAMs_20 16 34 04.6
      comp=Z,2µm,18.0s
ARU   Arti             72.00 336ceP      P        15 57 02.9 +0.1
ARU                               pmax   pmax
      comp=Z,39nm,1.0s
TCW   Tory Channel     72.41 131  P      P        15 57 07.3 +1.6
ASF   Jabal al Asfar   72.87 306  P      P        15 57 10.0 +1.4
      comp=Z,7.5nm,1.0s,baz=116,slow=3.9,SNR=10
      comp=Z,7.5nm,1.0s
ASF   Jabal al Asfar   72.87 306  P      P        15 57 10.0 +1.4
NEY   Neytrino         72.87 319⇑eP      P        15 57 08.3 -0.2
BHW   Baring Head      72.88 131  IAMs_20 IAMs_20 16 26 25.0
      comp=Z,3µm,20.0s
LSZ   Lusaka           72.95 256  IAMs_20 IAMs_20 16 30 49.4
      comp=Z,2µm,18.0s
KBZ   Khabaz           72.97 319  P      P        15 57 10.2 +1.3
      comp=Z,6.0nm,0.8s,baz=122,slow=3.7,SNR=13
      comp=Z,6.0nm,0.8s
KBZ   Khabaz           72.97 319ceP      P        15 57 09.2 +0.4
KBZ                               pmax   pmax
      comp=Z,7.0nm,0.9s
KIV   Kislovodsk       73.21 319 eP      P        15 57 10.9 +0.5
KIV                               pmax   pmax
      comp=Z,20nm,1.1s
GHAJ  Ghor Haditha     73.67 305  IAMs_20 IAMs_20 16 33 40.2
      comp=Z,3µm,18.0s
EIL   Elat             73.68 303  P      P        15 57 15.7 +2.4
      comp=Z,14nm,0.8s,baz=109,slow=8.8,SNR=13
      comp=Z,14nm,0.8s
BFZ   Birch Farm       73.83 130  P      P        15 57 14.5 +0.4
BFZ                               IAmb   IAmb     15 57 29.7
      comp=Z,98nm,1.1s
BFZ                               IAMs_20 IAMs_20 16 26 56.3
      comp=Z,3µm,21.0s
BKZ   Black Stump Fm   73.88 129  P      P        15 57 14.7 +0.2
BKZ                               IAmb   IAmb     15 57 29.8
      comp=Z,59nm,1.1s
RTZ   Ruatahuna        74.21 128  IAMs_20 IAMs_20 16 34 30.5
      comp=Z,2µm,19.0s
URZ   Urewera          74.29 128  LR     LR       16 33 50.8
      comp=Z,2µm,18.1s,baz=14,slow=39
MMAI  Mount Meron Ar   74.33 307  P      P        15 57 20.0 +2.8
      comp=Z,5.0nm,0.8s,baz=104,slow=3.5,SNR=7.3
      comp=Z,5.0nm,0.8s
BELG  Belogornoye      74.52 329  P      P        15 57 18.5 +0.8
      comp=Z,31nm,0.9s,baz=149,slow=9.3,SNR=4.4
      comp=Z,31nm,0.9s
BELG  Belogornoye      74.52 329deP      P        15 57 18.4 +0.7
BELG                              pmax   pmax
      comp=Z,8.0nm,1.1s
SOC   Sochi            75.00 318 eP      P        15 57 14.6 -6.1
SOC                              ePPP    PPP      16 02 00.0
SOC                              eS      SKiKP    16 06 49.4 +5.3
SOC                               MLR    MLR
      comp=Z,488nm,21.0s
MXZ   Matakaoa Point   75.18 127  IAMs_20 IAMs_20 16 27 31.2
      comp=Z,3µm,20.0s
LBTB  Lobatse          75.21 246  P      P        15 57 22.5  0.0
LBTB  Lobatse          75.21 246  P      P        15 57 22.5  0.0
LBTB                              pmax   pmax
      comp=Z,39nm,1.7s
SOE   Somerset East    75.36 238  P      P        15 57 23.3  0.0
SOE                               IAmb   IAmb     15 57 36.2
      comp=Z,116nm,1.7s
PEA0B Petropavlovsk-   75.40  31  P      P        15 57 22.3 -0.5
PEA0B                             IAmb   IAmb     15 58 11.3
      comp=Z,80nm,1.4s
PEA0B Petropavlovsk-   75.40  31  P      P        15 57 22.3 -0.5
PEA0B                             pmax   pmax
      comp=Z,79nm,1.5s
PETK  Petropavlovsk-   75.40  31  P      P        15 57 22.2 -0.6
      comp=Z,6.3nm,0.8s,baz=234,slow=3.4,SNR=7.7
      comp=Z,6.3nm,0.8s
BOSA  Boshof           75.53 242  P      P        15 57 25.0 +0.6
      comp=Z,11nm,0.9s,baz=99,slow=6.1,SNR=14
BOSA                              LR     LR       16 27 07.7
      comp=Z,1µm,18.1s,baz=86,slow=33
      comp=Z,11nm,0.9s
BOSA  Boshof           75.53 242  P      P        15 57 24.0 -0.3
BOSA  Boshof           75.53 242  P      P        15 57 24.0 -0.3
BOSA                              pmax   pmax
      comp=Z,21nm,1.1s
PET   Petropavlovsk    75.85  31  P      P        15 57 24.4 -1.0
PET                               IAmb   IAmb     15 57 26.9
      comp=Z,59nm,1.0s
PET   Petropavlovsk    75.85  31 eP      P        15 57 23.6 -1.8
PET                              eS      S        16 07 04.4 -2.1
PET                               pmax   pmax
      comp=Z,81nm,0.9s
PET                               pmax   pmax
      comp=Z,1µm,18.1s
MA2   Magadan          76.08  23  P      P        15 57 26.6  0.0
      comp=Z,18nm,0.9s,baz=230,slow=4.8,SNR=7.7
      comp=Z,18nm,0.9s
MA2   Magadan          76.08  23  P      P        15 57 26.6  0.0
MA2                               IAmb   IAmb     15 57 29.0
      comp=Z,105nm,1.3s
MA2   Magadan          76.08  23⇑eP      P        15 57 27.2 +0.6
MA2                               pmax   pmax
      comp=Z,112nm,1.7s
NRIK  Noril'sk         76.16 355  P      P        15 57 26.6 -0.2
      comp=Z,13nm,0.9s,baz=167,slow=5.5,SNR=25
      comp=Z,13nm,0.9s
NRIK  Noril'sk         76.16 355  P      P        15 57 26.2 -0.6
NRIK  Noril'sk         76.16 355ceP      P        15 57 26.5 -0.3
NRIK                              pmax   pmax
      comp=Z,50nm,1.3s
CSS   Mathiatis        76.57 308  IAMs_20 IAMs_20 16 33 55.9
      comp=Z,2µm,19.0s
ANN   Anapa            76.99 319 eP      P        15 57 25.0 -7.0
ANN                              e                15 57 44.5
ANN                              eS      S        16 07 12.3 -7.0
ANN                              e                16 07 42.9
ANN                               pmax   pmax
      comp=Z,10.0nm,0.8s
VRH   Novokhopyorsk    77.09 326 eP      P        15 57 32.5  0.0
VRH                              eS      S        16 07 19.1 -1.1
VRH                               pmax   pmax
      comp=Z,110nm,1.5s
VRH                               smax   smax
      comp=N,920nm,16.3s
KIRV  Kirov            77.17 335  P      P        15 57 33.6 +0.9
      comp=N,48nm,0.7s,baz=117,slow=2.3,SNR=17
      comp=N,48nm,0.7s
KIRV  Kirov            77.17 335ceP      P        15 57 33.4 +0.7
VNDA  Vanda            77.53 169  P      P        15 57 36.4 +1.8
      comp=N,5.1nm,0.9s,baz=285,slow=5.1,SNR=9.1
VNDA                              LR     LR       16 28 39.0
      comp=N,781nm,19.3s,baz=332,slow=33
      comp=N,5.1nm,0.9s
VNDA  Vanda            77.53 169  P      P        15 57 34.4 -0.2
VNDA  Vanda            77.53 169  P      P        15 57 34.4 -0.2
VNDA                              pmax   pmax
      comp=Z,28nm,1.2s
BR131 Keskin Array S   77.82 313  P      P        15 57 36.2 -0.9
BR131 Keskin Array S   77.82 313⇑eP      P        15 57 37.5 +0.4
BR131 Keskin Array S   77.82 313  P      P        15 57 41.1 +4.0
      SNR=5.2
BR131                             S      S        16 07 27.0 -2.0
BRTR  Keskin Array B   77.82 313  P      P        15 57 38.0 +1.0
      comp=Z,2.9nm,0.8s,baz=113,slow=8.2,SNR=8.3
      comp=Z,2.9nm,0.8s
BRTR  Keskin Array B   77.82 313  P      P        15 57 36.3 -0.8
RAO   Raoul Island     78.15 118  IAMs_20 IAMs_20 16 35 31.6
      comp=Z,3µm,19.0s
BZK   Bozkurt          78.30 315 ⇑P      P        15 57 38.1 -1.3
VORD  Divnogorie       78.36 325 eP      P        15 57 40.0 +0.5
VORD                             eS      S        16 07 28.2 -5.7
VORD                              pmax   pmax
      comp=Z,50nm,1.6s
VORD                              smax   smax
      comp=N,360nm,7.2s
VSR   Storozhevoye     78.54 325 eP      P        15 57 41.0 +0.5
VSR                              eS      S        16 07 31.1 -4.7
VSR                               pmax   pmax
      comp=Z,40nm,1.1s
VSR                               smax   smax
      comp=N,450nm,7.7s
VORR  Voronezh         78.71 326⇑iP      P        15 57 42.4 +0.9
VORR                              S      S        16 07 32.9 -4.7
VORR                              pmax   pmax
      comp=Z,131nm,1.6s
SEY   Seymchan         78.82  21  P      P        15 57 42.1 +0.3
      comp=Z,11nm,0.8s,baz=230,slow=5.2,SNR=30
      comp=Z,11nm,0.8s
SEY   Seymchan         78.82  21⇑eP      P        15 57 41.9 +0.1
SEY                               pmax   pmax
      comp=Z,120nm,2.5s
SIM   Simferopol'      79.24 318 eP      P        15 57 46.5 +2.0
SIM                              eS      S        16 07 48.0 +4.4
SIM                               pmax   pmax
      comp=Z,35nm,0.7s
LPSR  Galich'ya Gora   79.26 326 eP      P        15 57 45.0 +0.5
LPSR                             eS      S        16 07 39.5 -4.0
LPSR                              pmax   pmax
      comp=Z,50nm,1.0s
LPSR                              smax   smax
      comp=E,1µm,15.2s
SUR   Sutherland       79.37 238  LR     LR       16 29 41.8
      comp=E,988nm,18.0s,baz=108,slow=33
SUR   Sutherland       79.37 238  P      P        15 57 45.8  0.0
TIXI  Tiksi            79.77   8  P      P        15 57 45.7 -1.1
      comp=E,21nm,0.6s,baz=270,slow=24,SNR=68
      comp=E,21nm,0.6s
TIXI  Tiksi            79.77   8  P      P        15 57 45.6 -1.1
TIXI                              IAmb   IAmb     15 57 47.9
      comp=Z,35nm,0.8s
TIXI  Tiksi            79.77   8c iP     P        15 57 45.8 -1.1
TIXI                              pmax   pmax
      comp=Z,29nm,1.0s
BORA  Eskisehir        80.21 312  P      P        15 57 50.5 +0.4
ELIB  Princess Elisa   80.57 198 dP      P        15 57 52.8 +1.3
MOS   Moscow           81.29 329 eP      P        15 57 54.1 -1.2
MOS                              eS      S        16 08 01.7 -3.0
MOS                               pmax   pmax
      comp=Z,247nm,1.7s
OBN   Obninsk          81.58 328  P      P        15 57 57.2 +0.4
      comp=Z,2.6nm,0.3s,baz=98,slow=7.1,SNR=11
      comp=Z,2.6nm,0.3s
OBN   Obninsk          81.58 328  P      P        15 57 57.0 +0.1
OBN   Obninsk          81.58 328d iP     P        15 57 58.4 +1.5
OBN                              e*SP    pP       15 58 02.1 -0.3
OBN                              i                15 58 05.6
OBN                              e                16 01 02.9
OBN                              i S     S        16 08 06.0 -1.7
OBN                              ePS              16 09 04.3
OBN                               pmax   pmax
      comp=Z,43nm,1.0s
OBN                               MLR    MLR
      comp=Z,1µm,19.0s
KLMR  Klimovskoe       82.63 334 eP      P        15 58 03.4 +1.1
KLMR                             eP      P        15 58 03.4 +1.1
KLMR                             eP      P        15 58 03.4 +1.1
KLMR                              AMP             15 58 13.5
      comp=Z,122nm,1.4s
KLMR                              PP     PP       16 01 03.9 -8.2
KLMR                              S      S        16 08 19.9 +1.6
KLMR                              S      S        16 08 19.9 +1.6
KLMR                              SS     SS       16 13 44.7 +4.2
KLMR                              LQ     LQ       16 29 55.4
KLMR                              LQ     LQ       16 29 55.4
KLMR                              LR     LR       16 32 23.1
KLMR                              AMP             16 45 51.4
      comp=Z,2µm,20.2s
KLMR  Klimovskoe       82.63 334 eP      P        15 58 03.3 +1.0
KLMR                              S      S        16 08 19.9 +1.6
KLMR                              SS     SS       16 13 44.7 +4.2
KLMR                              pmax   pmax
      comp=Z,122nm,1.4s
TSUM  Tsumeb           82.86 251  P      P        15 58 04.8 +0.2
TIRR  Tirgusor         82.95 316  P      P        15 58 04.0 -0.3
TIRR                              IAmb   IAmb     15 58 15.2
      comp=Z,43nm,0.9s
TIRR  Tirgusor         82.95 316  P      P        15 58 04.0 -0.3
TIRR                              pmax   pmax
      comp=Z,43nm,0.9s
WIN   Windhoek         83.08 248  IAMs_20 IAMs_20 16 29 19.6
      comp=Z,2µm,21.0s
CFR   Carcaliu         83.34 317 ⇑P      P        15 58 08.0 +1.7
CFR   Carcaliu         83.34 317 ⇑P      P        15 58 08.0 +1.7
MILM  Milestii Mici    83.37 319 eP      P        15 58 05.0 -1.4
      comp=Z,150nm,1.8s
MILM                             eS      S        16 08 24.0 -2.4
MILM  Milestii Mici    83.37 319 eP      P        15 58 05.0 -1.4
MILM                             eS      S        16 08 24.0 -2.4
MILM                             ePS              16 09 25.0
MILM                              pmax   pmax
      comp=Z,150nm,1.8s
QSPA  South Pole Qui   83.67 180  LR     LR       16 33 38.5
      comp=Z,1µm,18.0s,baz=295,slow=34
QSPA  South Pole Qui   83.67 180  IAMs_20 IAMs_20 16 33 07.9
      comp=Z,2µm,20.0s
SORM  Soroca           84.01 320 ⇑P      P        15 58 06.5 -3.2
SORM  Soroca           84.01 320 ⇑P      P        15 58 06.5 -3.2
NVL   N'lazarevskaya   84.20 199 eP      P        15 58 21.8 +12
NVL                              eS      S        16 08 31.1 -2.8
NVL                              eSS     SS       16 14 11.2 +8.4
NVL                               pmax   pmax
      comp=Z,28nm,1.2s
NVL                               MLR    MLR
      comp=Z,600nm,19.0s
AKASG Malin Array Be   84.20 322  P      P        15 58 09.6 -1.0
      comp=Z,2.7nm,0.7s,baz=88,slow=5.0,SNR=14
      comp=Z,2.7nm,0.7s
AKASG Malin Array Be   84.20 322  P      P        15 58 11.2 +0.6
AKASG                             IAmb   IAmb     15 58 20.4
      comp=Z,43nm,1.7s
AKASG Malin Array Be   84.20 322  P      P        15 58 11.2 +0.6
AKASG                             pmax   pmax
      comp=Z,43nm,1.7s
AKBB  Malin Array Si   84.20 322  P      P        15 58 10.8 +0.2
AKBB                              IAmb   IAmb     15 58 20.1
      comp=Z,52nm,1.6s
AKBB  Malin Array Si   84.20 322  P      P        15 58 10.8 +0.2
AKBB                              pmax   pmax
      comp=Z,52nm,1.6s
VRI   Vrincioaia       84.47 317 ⇑P      P        15 58 14.5 +2.3
VRI   Vrincioaia       84.47 317 ⇑P      P        15 58 14.5 +2.3
PLOR  Plostina         84.52 317 ⇑P      P        15 58 04.5 -7.9
PLOR  Plostina         84.52 317 ⇑P      P        15 58 04.5 -7.9
ADZR  Andozero         84.53 337 eP      P        15 58 13.2 +1.2
ADZR                              pmax   pmax
      comp=Z,33nm,0.9s
TESR  Tescani          84.69 318 ⇑P      P        15 58 13.4 +0.2
MLR   Muntele Rosu     84.91 317 ⇑P      P        15 58 16.7 +2.2
MLR   Muntele Rosu     84.91 317  P      P        15 58 15.0 +0.5
MLR                               IAmb   IAmb     15 58 25.9
      comp=Z,63nm,1.2s
MLR   Muntele Rosu     84.91 317  P      P        15 58 15.0 +0.5
MLR                               pmax   pmax
      comp=Z,63nm,1.2s
PLVB  Pleven           85.33 314 ⇓P      P        15 58 17.9 +1.4
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DOPR	Dopca	85.40	317	⇑P	P	15 58 18.1	+1.3
ARR	Arges	85.78	316	⇑P	P	15 58 20.1	+1.4
BURAR	Bucovina Array	85.91	319	⇑P	P	15 58 21.4	+2.0
BURAR	Bucovina Array	85.91	319	P	P	15 58 20.0	+0.6
BURAR	Bucovina Array	85.91	319	⇑P	P	15 58 21.4	+2.0
BUR08	Bucovina Ar. S	85.93	319	P	P	15 58 19.8	+0.3
MNK	Minsk	86.09	326	*i* P	P	15 58 20.8	+0.8
	comp=E,3.0nm,0.9s						
MNK				*i* P	P	15 58 20.8	+0.8
	comp=N,28nm,0.8s						
MNK				*i* P	P	15 58 20.8	+0.8
	comp=Z,11nm,0.8s,baz=103						
MNK				*i* PP	PP	16 01 24.6	-16
MNK				*i* PPP	PPP	16 03 53.4	
MNK				*i* S	S	16 08 46.5	-6.7
MNK				*i* SS	SS	16 14 02.4	-29
MNK				*i* SSS	SSS	16 16 43.8	
MNK				*i* LQ	LQ	16 36 10.9	
MNK				*i* LR	LR	16 39 20.1	
MNK				*i* LRM	MLR	16 41 27.7	
	comp=N,1µm,18.9s						
MNK				*i* LRM	MLR	16 41 38.5	
	comp=E,92nm,18.1s						
MNK				*i* LRM	MLR	16 41 45.4	
	comp=Z,568nm,18.1s						
MNK	Minsk	86.09	326	*i* P	P	15 58 20.7	+0.8
MNK				*i*		15 58 29.3	
MNK				*i* S	S	16 08 46.4	-6.7
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,11nm,0.8s						
MNK				pmax	pmax		
	comp=N,28nm,0.8s						
VTS	Vitosha	86.16	313	⇑P	P	15 58 23.6	+2.8
VTS	Vitosha	86.16	313	P	P	15 58 20.1	-0.7
VTS	Vitosha	86.16	313	P	P	15 58 20.1	-0.7
VTS				pmax	pmax		
	comp=Z,30nm,1.4s						
LIT	Litokhoron	86.19	311	P	P	15 58 20.1	-0.8
LIT	Litokhoron	86.19	311	P	P	15 58 20.1	-0.8
LIT				pmax	pmax		
	comp=Z,20nm,1.1s						
BILL	Bilibino	86.44	20	P	P	15 58 20.7	-0.7
BILL				IAmb	IAmb	15 58 34.3	
	comp=Z,48nm,1.4s						
BILL				IAMs_20	IAMs_20	16 28 44.0	
	comp=Z,2µm,19.0s						
BILL	Bilibino	86.44	20*d*	*i*P	P	15 58 21.1	-0.3
BILL				*e**PP	PcP	15 58 25.0	+1.1
BILL				*i* *SP	sP	15 58 28.7	-0.8
BILL				*i* S	SKSac	16 08 44.5	-1.9
BILL				*e*PPS	PPS	16 10 16.9	
BILL				pmax	pmax		
	comp=Z,11nm,1.0s						
BILL				MLR	MLR		
	comp=Z,972nm,17.0s						
NACGM	Naroch	86.82	326	*e*P	P	15 58 24.0	+0.5
	comp=Z,23nm,0.9s,baz=106						
MARR	Marisel-Cluj	87.10	317	⇑P	P	15 58 26.9	+1.7
LVV	L'vov	87.19	321	*e*P	P	15 58 30.6	+5.1
DRGR		87.39	317	⇑P	P	15 58 28.9	+2.2
DRGR		87.39	317	⇑P	P	15 58 28.9	+2.2
LVZ	Lovozero	87.56	340	P	P	15 58 26.5	-0.4
LVZ				IAmb	IAmb	15 58 38.7	
	comp=Z,46nm,1.1s						
LVZ	Lovozero	87.56	340	P	P	15 58 26.5	-0.4
LVZ				pmax	pmax		
	comp=Z,47nm,1.1s						
LVZ				MLR	MLR		
	comp=Z,3µm,18.0s						
TRPA	Tarpa	87.79	319	⇑P	P	15 58 30.8	+2.4
BZS	Buzias	87.90	316	⇑P	P	15 58 31.1	+2.1
BZS	Buzias	87.90	316	⇑P	P	15 58 31.1	+2.1
SIRR	Siria	88.00	317	⇑P	P	15 58 29.3	-0.1
PABE	Paberze	88.53	326	IAMs_20	IAMs_20	16 46 01.1	
	comp=Z,2µm,22.0s						
SNAA	Sanae	88.73	198	LR	LR	16 34 22.0	
	comp=Z,826nm,18.6s,baz=85,slow=33						
SNAA	Sanae	88.73	198	P	P	15 58 34.2	+1.6
SNAA				IAmb	IAmb	15 58 52.5	
	comp=Z,65nm,1.5s						
SNAA	Sanae	88.73	198	P	P	15 58 34.2	+1.6
SNAA				pmax	pmax		
	comp=Z,65nm,1.5s						
DIVS	Divibare	88.76	314	P	P	15 58 33.2	-0.1
DIVS				IAmb	IAmb	15 58 44.0	
	comp=Z,59nm,1.5s						
STHS	Stebnicka Huta	88.88	320	*e*P	P	15 58 35.4	+1.8
STHS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
STHS	Stebnicka Huta	88.88	320	*e*P	P	15 58 35.4	+1.8
FIA1	FINESS Array S	88.92	332	P	P	15 58 33.9	+0.5
FIA1				IAmb	IAmb	15 58 44.6	
	comp=Z,41nm,1.1s						
FINES	FINESS Array B	88.92	332	P	P	15 58 33.6	+0.1
	comp=Z,5.5nm,0.8s,baz=103,slow=6.1,SNR=9.9						
	comp=Z,5.5nm,0.8s						
FINES	FINESS Array B	88.92	332	P	P	15 58 33.8	+0.5
FINES	FINESS Array B	88.92	332	*i* P	P	15 58 33.9	+0.5
FINES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KIWB	Kanaga Island	89.19	38	P	P	15 58 35.0	+0.1
PSZ	Piszkesteto	89.49	318	⇑P	P	15 58 38.6	+2.1
PSZ	Piszkesteto	89.49	318	⇑P	P	15 58 38.6	+2.1
LANS	Liptovska Anna	89.98	319	*e*P	P	15 58 41.4	+2.6
LANS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LANS	Liptovska Anna	89.98	319	*e*P	P	15 58 41.4	+2.6
MORH	Mrgy, Hungar	90.05	316	⇑P	P	15 58 40.7	+1.6
VYHS	Vyhne	90.28	319	*e*P	P	15 58 43.2	+3.0
VYHS	Vyhne	90.28	319	*e*P	P	15 58 43.2	+3.0
OKC	Ostrava-Krasne	90.94	320	*e*P	P	15 58 45.5	+2.4
OKC	Ostrava-Krasne	90.94	320	*e*P	P	15 58 45.5	+2.4
JAVC	Velka Javorina	91.10	319	*e*P	P	15 58 48.2	+4.2
ARCES	ARCESS Array B	91.24	340	P	P	15 58 43.1	-1.1
	comp=Z,6.6nm,0.8s,baz=106,slow=4.3,SNR=9.8						
	comp=Z,6.6nm,0.8s						
ARCES	ARCESS Array B	91.24	340	P	P	15 58 44.6	+0.5
ARCES	ARCESS Array B	91.24	340	P	P	15 58 44.6	+0.5
ARCES				pmax	pmax		
	comp=Z,121nm,1.7s						
MODS	Modra-Piesok	91.29	318	*e*P	P	15 58 48.0	+3.1
MODS	Modra-Piesok	91.29	318	*e*P	P	15 58 48.0	+3.1
MORC	Moravsky Berou	91.31	320	⇑P	P	15 58 45.3	+0.3
MORC	Moravsky Berou	91.31	320	P	P	15 58 45.1	+0.1
MORC	Moravsky Berou	91.31	320	*e*P	P	15 58 46.5	+1.5
MORC	Moravsky Berou	91.31	320	P	P	15 58 45.1	+0.1
MORC				pmax	pmax		
	comp=Z,14nm,1.1s						
KRLC	Kraliky	91.84	320	*e*P	P	15 58 49.4	+2.0
KRLC				*e*x	x	15 58 56.5	
KRLC	Kraliky	91.84	320	*e*P	P	15 58 49.4	+2.0
KRLC				*e*		15 58 56.5	
VRAC	Vranov	91.86	319	*e*P	P	15 58 48.9	+1.4
KRUC	Moravsky	91.96	319	*e*P	P	15 58 50.1	+2.2
DPC	Dobruska-Polom	92.17	320	*e*P	P	15 58 50.8	+1.9
DPC				*e*x	x	15 58 58.0	
DPC	Dobruska-Polom	92.17	320	*e*P	P	15 58 50.8	+1.9
DPC				*e*		15 58 58.0	
CKRC	Cesky Krumlov	93.30	319	*e*P	P	15 58 56.2	+2.1
CKRC				*e*x	x	15 59 02.9	
CKRC	Cesky Krumlov	93.30	319	*e*P	P	15 58 56.2	+2.1
CKRC				*e*		15 59 02.9	
GERES	GERESS Array B	93.70	319	P	P	15 58 56.3	+0.2
	comp=Z,1.1nm,0.7s,baz=98,slow=5.5,SNR=8.0						
	comp=Z,1.1nm,0.7s						
BRG	Berggiesshubel	93.73	321	*e*P	P	15 59 05.5	+9.4
BRG				Amp		15 59 06.9	
	comp=Z,7.4nm,1.0s						
BRG				PP	PP	16 02 51.1	+10
BRG				Amp		16 02 53.5	
	comp=Z,8.9nm,1.4s						
BRG	Berggiesshubel	93.73	321	*e*P	P	15 59 05.4	+9.3
BRG						16 02 51.1	
BRG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KHC	Kasperske Hory	93.81	319	*e*P	P	15 58 55.2	-1.3
KHC				*e*x	x	15 59 04.6	
KHC	Kasperske Hory	93.81	319	*e*P	P	15 58 55.2	-1.3
KHC				*e*		15 59 04.6	
CLL	Collm	94.36	321	*e*P	P	15 59 00.0	+1.1
CLL				*e*S	S	16 10 01.0	-8.7
CLL				MLR	MLR		
	comp=Z,2µm,21.0s						
RGN	Rugen	94.43	324	IAMs_20	IAMs_20	16 49 54.3	
	comp=Z,2µm,21.0s						
KEST	Kesra	95.94	305	P	P	15 59 05.8	-0.8
NB2	NORSAR Subarra	95.95	331	P	P	15 59 06.8	+0.8
	comp=Z,18nm,1.4s,baz=95,slow=4.6						
NB2	NORSAR Subarra	95.95	331	P	P	15 59 06.8	+0.8
	baz=95,slow=4.6						
NOA	NORSAR Array B	95.95	331	P	P	15 59 06.5	+0.5
	comp=Z,0.5nm,0.6s,baz=92,slow=4.6,SNR=2.4						
	comp=Z,0.5nm,0.6s						
KBS	Kingsbay	96.20	349	IAMs_20	IAMs_20	16 48 49.6	
	comp=Z,2µm,20.0s						
KONO	Kongsberg	96.71	329	IAMs_20	IAMs_20	16 51 14.2	
	comp=Z,1µm,18.0s						
ANM	Nome	96.71	26	P	P	15 59 09.0	-0.4
ANM				IAmb	IAmb	15 59 22.8	
	comp=Z,34nm,1.8s						
ANM	Nome	96.71	26	P	P	15 59 09.0	-0.4
ANM				pmax	pmax		
	comp=Z,34nm,1.8s						
A21K	Barrow	99.54	19	IAMs_20	IAMs_20	16 49 12.1	
	comp=Z,2µm,18.0s						
TOLK	Toolik Lake Re	102.46	21	IAMs_20	IAMs_20	16 49 19.5	
	comp=Z,2µm,19.0s						
H23K	Yukon River	103.18	24	IAMs_20	IAMs_20	16 37 21.7	
	comp=Z,2µm,20.0s						
H24K	Noodor Dome	103.84	23	IAMs_20	IAMs_20	16 37 34.1	
	comp=Z,1µm,19.0s						
POKR	Poker Plat Res	104.21	24	IAMs_20	IAMs_20	16 37 54.1	
	comp=Z,2µm,20.0s						
FYU	Fort Yukon	104.65	22	IAMs_20	IAMs_20	16 56 57.4	
	comp=Z,2µm,20.0s						
I26K	Coal Creek Min	105.87	23	IAMs_20	IAMs_20	16 38 37.8	
	comp=Z,1µm,20.0s						
J26L	Joseph Creek	105.98	24	IAMs_20	IAMs_20	16 38 18.8	
	comp=Z,1µm,21.0s						
EGAK	Eagle	106.85	24	IAMs_20	IAMs_20	16 39 15.7	
	comp=Z,1µm,20.0s						
I29M	Ogilvie Camp,	107.73	23	IAMs_20	IAMs_20	16 40 19.9	
	comp=Z,2µm,20.0s						
EPYK	Eagle Plains	107.88	21	IAMs_20	IAMs_20	16 41 20.7	
	comp=Z,1µm,20.0s						
J29M	Klondike Camp	108.14	23	IAMs_20	IAMs_20	16 40 26.9	
	comp=Z,2µm,20.0s						
A36M	Sachs Harbour	108.25	14	IAMs_20	IAMs_20	16 46 20.0	
	comp=Z,1µm,21.0s						
PMSA	Palmer Station	108.36	186	IAMs_20	IAMs_20	16 44 39.5	
	comp=Z,2µm,21.0s						
M30M	Minto, Yukon	109.52	25	IAMs_20	IAMs_20	16 39 46.4	
	comp=Z,1µm,22.0s						
TULEG	Thule	109.65	358	IAMs_20	IAMs_20	16 45 36.7	
	comp=Z,2µm,22.0s						
AVE	Averroes	109.81	303	IAMs_20	IAMs_20	16 56 05.4	
	comp=Z,2µm,19.0s						
M31M	Drury Creek, Y	110.69	25	IAMs_20	IAMs_20	16 39 41.3	
	comp=Z,1µm,21.0s						
P33M	Teslin, Yukon	112.30	26	IAMs_20	IAMs_20	16 40 34.9	
	comp=Z,1µm,22.0s						
YKA	Yellowknife Ar	117.80	18	PKP	PKPdf	16 04 24.8	-0.5
	comp=Z,0.7nm,0.7s,baz=321,slow=1.8,SNR=3.9						
YKA				PKKPab	PKKPab	16 14 52.0	+2.4
	comp=Z,0.9nm,1.0s,baz=130,slow=4.2,SNR=5.7						
FFC	Flin Flon	127.96	18	IAMs_20	IAMs_20	16 53 00.4	
	comp=Z,1µm,20.0s						
MSO	Missoula	129.11	31	P	PKiKP	16 04 50.1	+1.8
	baz=311						
EGMT	Eagleton	130.34	28	IAMs_20	IAMs_20	16 48 42.2	
	comp=Z,1µm,22.0s						
SCHQ	Schefferville	130.82	352	PKP	PKiKP	16 04 51.1	-0.2
	comp=Z,2.4nm,1.0s,baz=12,slow=19,SNR=3.8						
HLID	Hailey	130.94	35	P	PKiKP	16 04 54.2	+2.0
	baz=308						
BOZ	Bozeman (W)	131.12	31	P	PKiKP	16 04 52.5	0.0
	baz=313						
NVAR	Mina Array Bea	131.41	43	PKP	PKiKP	16 04 54.2	+0.8
	comp=Z,0.7nm,0.6s,baz=298,slow=1.9,SNR=8.5						
ELK	Elko	132.13	39	PKP	PKiKP	16 04 56.4	+1.6
	comp=Z,1.1nm,0.5s,baz=280,slow=6.1,SNR=2.6						
DGMT	Dagmar	132.39	24	IAMs_20	IAMs_20	16 56 52.2	
	comp=Z,1µm,19.0s						
PLCA	Paso Flores	132.71	188	PKP	PKiKP	16 04 55.8	0.0
	comp=Z,1.3nm,0.9s,baz=140,slow=20,SNR=2.2						
LAO	LASA Array	132.94	27	IAMs_20	IAMs_20	16 50 36.8	
	comp=Z,1µm,22.0s						
MPMC	Manual Prospec	133.16	45	P	PKiKP	16 04 58.4	+1.5
	baz=300						
R11A	Troy Canyon, C	133.27	41	P	PKiKP	16 04 58.4	+1.4
	baz=303						
ULM	Lac du Bonnet	133.67	16	PKP	PKiKP	16 04 56.8	-0.4
	comp=Z,5.3nm,0.9s,baz=342,slow=2.4,SNR=4.1						
DUG	Dugway, Tooele	133.95	38	P	PKiKP	16 04 59.6	+1.3
	baz=308						
PDAR	Pinedale Array	134.15	33	PKP	PKPdf	16 04 57.5	+0.1
	comp=Z,0.7nm,0.6s,baz=123,slow=1.2,SNR=7.3						
AGMN	Agassiz Nation	135.44	17	IAMs_20	IAMs_20	17 18 20.1	
	comp=Z,1µm,19.0s						
RSSD	Black Hills	135.90	27	IAMs_20	IAMs_20	17 18 26.2	
	comp=Z,1µm,19.0s						
RCBR	Riachuelo	136.45	255	IAMs_20	IAMs_20	16 56 55.0	
	comp=Z,890nm,19.0s						
EYMN	Ely	136.91	13	IAMs_20	IAMs_20	17 16 16.7	
	comp=Z,1µm,18.0s						
SPB	Sao Paulo	138.00	224	IAMs_20	IAMs_20	16 57 06.3	
	comp=Z,856nm,19.0s						
ISCO	Idaho Springs	138.34	33	IAMs_20	IAMs_20	17 13 36.6	
	comp=Z,878nm,20.0s						
PQI	Presque Isle	138.91	350	IAMs_20	IAMs_20	17 07 04.6	
	comp=Z,1µm,21.0s						
ECSD	EROS Data Cent	139.24	21	IAMs_20	IAMs_20	16 55 05.9	
	comp=Z,1µm,21.0s						
SDCO	Great Sand Dun	139.85	35	PKPpre	PKPpre	16 05 03.9	
MECA	Mercedes	139.86	207	*e*P	PKPdf	16 05 08.3	+0.2
FRBT	Francisco Belt	139.90	216	*e*P	PKPdf	16 05 07.5	-0.8
PTGB	Pitanga	140.24	218	*e*P	PKPdf	16 05 10.1	+1.0
BB19B	Bebedouro	140.41	226	*e*P	PKPdf	16 05 08.6	-0.8
EMMW	East Machias	140.70	348	IAMs_20	IAMs_20	17 16 12.9	
	comp=Z,1µm,20.0s						
CFA	Coronel Fontan	141.20	193	PKhKP	PKPpre	16 05 04.5	
	comp=Z,1.9nm,0.7s,baz=210,slow=2.9,SNR=3.8						
CFA				PKP	PKPdf	16 05 10.5	-0.1
	comp=Z,6.5nm,0.8s,baz=169,slow=2.9,SNR=9.0						
LONY	Lake Ozonia	141.74	356	IAMs_20	IAMs_20	17 14 41.2	
	comp=Z,1µm,21.0s						
VT1	Waterbury	141.88	354	IAMs_20	IAMs_20	17 14 19.0	
	comp=Z,1µm,21.0s						
JFWS	Jewell Farm	141.93	15	IAMs_20	IAMs_20	16 56 54.8	
	comp=Z,1µm,22.0s						
CPUP	Villa Florida	141.94	211	PKhKP	PKPpre	16 05 06.2	
	comp=Z,0.9nm,0.4s,baz=220,slow=12,SNR=2.6						
CPUP				PKP	PKiKP	16 05 14.7	-0.2
	comp=Z,2.2nm,0.7s,baz=175,slow=4.7,SNR=3.0						
SCIA	State Center	142.01	19	IAMs_20	IAMs_20	16 55 57.1	
	comp=Z,1µm,22.0s						
VACA	Villa Angela C	142.41	205	*e*P	PKPdf	16 05 12.6	-0.2
HNH	Hanover	142.44	353	IAMs_20	IAMs_20	17 16 44.8	
	comp=Z,1µm,20.0s						
ITRB	Iturama	142.59	226	*e*P	PKPdf	16 05 13.1	-0.2
FFD	Franklin Falls	142.60	353	IAMs_20	IAMs_20	17 11 46.0	
	comp=Z,1µm,20.0s						
CO01	Juntas del Tor	143.16	191		PKPdf	16 05 13.2	-1.2
KSU1	Kansas State U	143.21	25	IAMs_20	IAMs_20	17 17 32.6	
	comp=Z,958nm,18.0s						
BDFB	Brasilia	143.29	233	PKhKP	PKPpre	16 05 11.7	
	comp=Z,2.6nm,0.5s,baz=350,slow=4.2,SNR=4.2						
BDFB	Brasilia	143.29	233	*e*P	PKPdf	16 05 14.4	-0.3
TICA	Tres Isletas	143.35	207	*e*P	PKPdf	16 05 13.9	-0.6
WES	Weston	143.62	352	IAMs_20	IAMs_20	17 12 30.0	
	comp=Z,1µm,21.0s						
ESFA	Espinillo Form	143.66	210	*e*P	PKPdf	16 05 14.7	-0.4
L61B	Northampton	143.73	354	IAMs_20	IAMs_20	17 20 23.8	
	comp=Z,897nm,18.0s						
BRYW	Bryant College	144.11	352	IAMs_20	IAMs_20	17 05 50.0	
	comp=Z,1µm,22.0s						
OK035	E0210 Rd and N	144.23	29	IAMs_20	IAMs_20	16 56 06.0	
	comp=Z,751nm,22.0s						
BINY	Binghamton	144.23	358	PKPdf	PKPdf	16 05 14.8	-0.8
BINY	Binghamton	144.23	358	P	PKPdf	16 05 15.4	-0.2
	baz=3.1						
GDL2	Guadalupe Moun	144.28	40	PKPdf	PKPbc	16 05 15.1	+0.8
AC05	El Transito	144.30	191		PKPdf	16 05 15.4	-0.8
M65A	Busby, Falmout	144.32	351	IAMs_20	IAMs_20	17 20 57.7	
	comp=Z,1µm,18.0s						
HDIL	Hopedale	144.39	15		PKPdf	16 05 15.1	-0.7
OK032	Salt Plains WL	144.39	29	IAMs_20	IAMs_20	17 21 25.2	
	comp=Z,1µm,19.0s						
KSCT	Kent School, K	144.53	354		PKPbc	16 05 14.7	+0.1
KSPA	Keystone Colle	144.86	357		PKPab	16 05 15.1	-0.5
KSPA	Keystone Colle	144.86	357	P	PKPab	16 05 14.5	-1.1
	baz=3.5,SNR=8.5						
N47A	Urbana	144.87	10	P	PKPab	16 05 13.7	-1.9
	baz=346,SNR=6.1						
N47A				P	PKPab	16 05 13.7	-1.9
	baz=346,SNR=6.1						
BRNY	Black Rk. Fore	144.89	355	P	PKPab	16 05 15.4	-0.3
	baz=6.5,SNR=6.4						
M53A	WI Miller and	144.93	4	IAMs_20	IAMs_20	17 14 37.6	
	comp=Z,967nm,19.0s						
M53A	WI Miller and	144.93	4	P	PKPab	16 05 15.4	-0.5
	baz=355						
WSPT	Westport, CT	145.06	354	IAMs_20	IAMs_20	17 09 21.1	
	comp=Z,796nm,20.0s						
N49A	Columbus Grove	145.07	8	P	PKPbc	16 05 16.3	-0.1
	baz=349,SNR=6.0						
N49A				P	PKPbc	16 05 16.3	-0.1
	baz=349,SNR=6.0						
SFIN	Lafayette	145.08	12	P	PKPdf	16 05 16.8	-0.2
	baz=344						
M57A	Sunshine Farm,	145.12	359	P	PKPbc	16 05 16.6	0.0
	baz=1.2,SNR=14						
M57A				P	PKPbc	16 05 16.6	0.0
	baz=1.2,SNR=14						
P43A	Skaggs, Pawnee	145.19	16	P	PKPab	16 05 16.9	0.0
	baz=339						
ODNJ	Ogdensburg	145.26	356	P	PKPbc	16 05 17.0	0.0
	baz=5.6,SNR=12						
PAL	Palisades	145.28	355	IAMs_20	IAMs_20	17 20 42.9	
	comp=Z,864nm,19.0s						
PAL	Palisades	145.28	355	P	PKPdf	16 05 17.3	0.0
	baz=6.8						
PAL	Palisades	145.28	355	P	PKPbc	16 05 16.9	-0.1
	baz=6.8,SNR=6.9						
OK050	Pawnee Station	145.30	28	IAMs_20	IAMs_20	17 22 34.2	
	comp=Z,1µm,20.0s						
N53A	Lisbon	145.55	4	P	PKPdf	16 05 17.0	-0.9
	baz=355,SNR=6.0						
N53A				P	PKPdf	16 05 17.0	-0.9
	baz=355,SNR=6.0						
O48B	Farmland	145.57	10	P	PKPdf	16 05 17.5	-0.4
	baz=347						
O48B	Farmland	145.57	10	P	PKPdf	16 05 16.7	-1.2
	baz=347,SNR=6.3						
N58A	Sunbury	145.61	359	P	PKPdf	16 05 17.7	-0.2
	baz=1.9,SNR=19						
N58A				P	PKPdf	16 05 17.7	-0.2
	baz=1.9,SNR=19						
OK052	Battle Ridge R	145.71	28	IAMs_20	IAMs_20	17 22 02.1	
	comp=Z,973nm,18.0s						
O49A	Covington	145.77	9	P	PKPdf	16 05 18.1	-0.2
	baz=348						
O49A				P	PKPdf	16 05 18.1	-0.2
	baz=348						
OK030	Cody Creek RV	145.77	28	IAMs_20	IAMs_20	17 22 51.7	
	comp=Z,986nm,20.0s						
P46A	Rosedale	145.78	13	P	PKPbc	16 05 18.7	0.0
	baz=343						
OK025	Westminster Rd	145.79	29	IAMs_20	IAMs_20	17 21 57.4	
	comp=Z,1µm,20.0s						
SSPA	Standing Stone	145.83	0	P	PKPbc	16 05 18.8	0.0
	baz=360						
SSPA	Standing Stone	145.83	0	P	PKPdf	16 05 18.5	+0.2
	baz=360,SNR=12						
ACSO	Alum Creek Sta	145.91	7	P	PKPbc	16 05 18.8	-0.3
	baz=351						
ACSO	Alum Creek Sta	145.91	7	P	PKPdf	16 05 18.6	+0.2
	baz=351,SNR=8.0						
Q44A	Meyer Farm, Va	146.01	16	P	PKPab	16 05 20.9	+1.0
	baz=340						
P49A	Miami Univ. Ec	146.35	10	PKPdf	PKPdf	16 05 18.8	-0.5
P49A	Miami Univ. Ec	146.35	10	P	PKPab	16 05 20.9	-0.3
	baz=348						
TX31	Lajitas Ar. Si	146.55	44	P	PKPab	16 05 22.4	-0.1
	baz=308						
TXAR	Lajitas Array	146.55	44	PKPbc	PKPab	16 05 22.3	-0.2
	comp=Z,8.4nm,0.8s,baz=319,slow=1.2,SNR=45						
TXAR	Lajitas Array	146.55	44	PKPbc	PKPbc	16 05 21.7	+0.2
GEDE	Greenville	146.59	357	P	PKPdf	16 05 20.1	+0.5
	baz=3.9						
P52A	Corning	146.60	6	IAMs_20	IAMs_20	17 20 03.9	
	comp=Z,1µm,19.0s						
P52A	Corning	146.60	6	P	PKPab	16 05 21.8	-0.4
	baz=352						
MCWV	Mont Chateau	146.75	3	P	PKPab	16 05 22.8	+0.1
	baz=356						
MCWV	Mont Chateau	146.75	3	P	PKPab	16 05 22.9	+0.1
	baz=356,SNR=5.1						
P57A	Homestead Farm	146.98	0	P	PKPbc	16 05 22.3	+0.1
	baz=360						
P57A				P	PKPbc	16 05 22.3	+0.1
	baz=360						
Q51A	Peebles	147.06	8	P	PKPbc	16 05 22.7	+0.2
	baz=350,SNR=11						
Q51A				P	PKPbc	16 05 22.7	+0.2
	baz=350,SNR=11						
Q52A	Bidwell	147.25	6	P	PKPbc	16 05 22.7	-0.3
	baz=352,SNR=8.1						
Q52A				P	PKPbc	16 05 22.7	-0.3
	baz=352,SNR=8.1						
WCI	Wyandotte Cave	147.31	12		PKPbc	16 05 22.3	-0.9
WCI	Wyandotte Cave	147.31	12	PKP2	PKPbc	16 05 22.3	-0.9
WCI				MLR	MLR		
	comp=Z,1µm,20.0s						
WCI	Wyandotte Cave	147.31	12	P	PKPbc	16 05 22.5	-0.7
	baz=344						
Q54A	Coxs Mills	147.36	4	P	PKPbc	16 05 23.0	-0.4
	baz=354						
Q54A				P	PKPbc	16 05 23.0	-0.4
	baz=354						
R49A	Shelbyville	147.48	11	P	PKPbc	16 05 23.1	-0.6
	baz=346						
R49A				P	PKPbc	16 05 23.1	-0.6
	baz=346						
R50A	Paris	147.64	10	P	PKPdf	16 05 22.7	+1.2
	baz=348						
R50A				P	PKPdf	16 05 22.7	+1.2
	baz=348						
R53A	Hurricane	147.91	6	P	PKPbc	16 05 24.8	0.0
	baz=352						
R53A				P	PKPbc	16 05 24.8	0.0
	baz=352						
LCAR	Lake Charles	147.96	21	PKPbc	PKPbc	16 05 24.8	-0.2
JCT	Junction City	148.31	38	IAMs_20	IAMs_20	17 18 12.3	
	comp=Z,729nm,20.0s						
MIAR	Mount Ida	148.36	25	IAMs_20	IAMs_20	17 25 01.9	
	comp=Z,990nm,18.0s						
GNAR	Gosnell	148.44	19		PKiKP	16 05 28.0	+0.1
S57A	Dark Hollow, R	148.68	2	P	PKPbc	16 05 27.1	+0.2
	baz=358						
S57A				P	PKPbc	16 05 27.1	+0.2
	baz=358						
T50A	Nancy	148.77	11	P	PKPbc	16 05 26.1	-1.1
	baz=346						
T50A				P	PKPbc	16 05 26.1	-1.1
	baz=346						
WVT	Waverly	148.94	16		PKPbc	16 05 27.1	-0.5
WVT	Waverly	148.94	16	IAMs_20	IAMs_20	17 24 06.3	
	comp=Z,868nm,18.0s						
WVT	Waverly	148.94	16	PKP2	PKPbc	16 05 27.1	-0.5
WVT				MLR	MLR		
	comp=Z,900nm,18.0s						
WVT	Waverly	148.94	16	P	PKPbc	16 05 27.6	0.0
	baz=340						
WVT	Waverly	148.94	16	P	PKPbc	16 05 26.9	-0.7
	baz=340						
CLTN	Cedars of Leba	149.35	14		PKPdf	16 05 22.9	-1.4
T59A	Double "B" Far	149.49	360	P	PKPbc	16 05 28.9	-0.1
	baz=0.5						
T59A				P	PKPbc	16 05 28.9	-0.1
	baz=0.5						
V48A	Smith Brothers	149.57	15	P	PKPbc	16 05 28.4	-0.8
	baz=342						
PLAL	Pickwick Lake	149.94	17		PKPbc	16 05 29.7	-0.5
PLAL				IAMs_20	IAMs_20	17 06 11.0	
	comp=Z,984nm,20.0s						
LVC	Limon Verde	149.96	197	PKPbc	PKiKP	16 05 31.9	-0.1
	comp=Z,11nm,0.9s,baz=149,slow=1.0,SNR=7.1						
LVC				PKPab	sPKPbc	16 05 38.8	+0.4
	comp=Z,17nm,0.8s,baz=147,slow=4.5,SNR=14						
LVC	Limon Verde	149.96	197	IAMs_20	IAMs_20	17 25 37.4	
	comp=Z,774nm,18.0s						
OXF	Oxford	149.97	19	P	PKiKP	16 05 31.0	-0.2
	baz=337						
PB06	IPOC Station P	150.05	195		PKPab	16 05 35.6	-0.9

V52A	Sevierville	150.14	9	P	PKPbc	16 05 30.6	-0.1
	baz=348						
NATX	Nacogdoches	150.19	30	IAMs_20	IAMs_20	17 00 46.9	
	comp=Z,1μm,22.0s						
TKL	Tuckaleechee C	150.29	10	PKPbc	PKPbc	16 05 30.8	-0.2
	comp=Z,20nm,0.7s,baz=60,slow=1.3,SNR=18						
TKL	Tuckaleechee C	150.29	10	P	PKPbc	16 05 31.1	+0.1
	baz=348						
CPCT	Cooper Cave	150.36	11		PKPbc	16 05 30.7	-0.5
V53A	Saluda	150.43	8	P	PKPbc	16 05 31.4	0.0
	baz=350						
V53A				P	PKPbc	16 05 31.4	0.0
	baz=350						
V55A	Taylorsville	150.44	6	P	PKPbc	16 05 31.3	-0.1
	baz=353						
V55A				P	PKPbc	16 05 31.3	-0.1
	baz=353						
X48A	Hartselle	150.73	16	P	PKPbc	16 05 30.9	-1.1
	baz=341						
W52A	Murphy	150.81	10	P	PKPbc	16 05 32.4	+0.1
	baz=348						
HKT	Hockley	151.01	34	IAMs_20	IAMs_20	17 24 18.9	
	comp=Z,899nm,20.0s						
KMSC	Kings Mountain	151.13	6	P	PKPbc	16 05 32.7	-0.3
	baz=353						
Y49A	Blount Mountai	151.46	15	P	PKPbc	16 05 32.8	-1.0
	baz=342						
PTLB	Pontes e Lacer	151.53	220		PKPbc	16 05 33.2	-1.1
LRAL	Lakeview Retre	152.08	17	PKPab	PKPab	16 05 43.1	-1.4
LRAL				IAMs_20	IAMs_20	17 17 47.3	
	comp=Z,1μm,21.0s						
SAML	Samuel	158.96	224	IAMs_20	IAMs_20	17 21 37.7	
	comp=Z,984nm,21.0s						
TULM	Tulcn-Chalpat	174.44	180		PKPab	16 07 21.5	-1.5

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*PGC **07** 15:50:52.4±0.8, 48.°99N×129.°77W, h10^{km}, MLSn3.3/21, Mw3.9/21, 254km southwest of Pt. Hardy, Bc Vancouver Island, Canada Region*

*IDC **07** 15:50:56.9±1.5, 49.°29N×129.°05W, h0^{km}, mb3.6/4, mbtmp3.7/12, ML3.5/8, MS3.6/13, Error ellipse: s-maj=26.0km s-min=11.3km az=69.0*

*NEIC **07** 15:50:57.2±1.6, 49.°34N±0.°08×129.°34W±0.°09, h10^{km}±1^{km}, mb4.0/48, Error ellipse: s-maj=16.1km s-min=4.8km az=215.0*

ISC 07 15:50:59.1±1.9**, 49.°26N**±0.°05×**129.°41W**±0.°06**, h31**^{km}±13^{km}**, n267, σ1.s27**/274**, mb3.9**/8**, MS4.1**/5**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NCHR	NEPTUNE Canada	1.30	170	P	Pn	15 51 11.7	-9.3
NCHR				S	Sn	15 51 25.0	-12
KEMF	NEPTUNE Canada	1.33	171	P	Pn	15 51 11.8	-9.4
KEMF				S	Sn	15 51 25.5	-12
HOLB	Holberg	1.61	30	Pn	Pn	15 51 23.2	-2.2
HOLB	Holberg	1.61	30	Pn	Pn	15 51 23.3	-2.1
HOLB				Sn	Sn	15 51 46.2	+1.0
EDB	Eliza Dome	1.61	67	Pn	Pn	15 51 23.1	-2.4
NC89	ODP889	1.79	108	Pn	Pn	15 51 24.8	-2.8
NC89				Sn	Sn	15 51 48.3	-0.9
MAYB	Maynard	1.85	51	Pn	Pn	15 51 26.9	-1.9
ETB	Estevan Point	1.88	85	Pn	Pn	15 51 26.9	-2.2
ETB				Sn	Sn	15 51 52.3	+0.5
WOSB	Woss	2.05	63	Pn	Pn	15 51 30.2	-1.3
WOSB				Sn	Sn	15 51 57.7	+1.6
GDR	Gold River	2.26	75	Pn	Pn	15 51 32.2	-2.1
NCBC	Barkley Canyon	2.29	110	Sn	Sn	15 51 59.4	-2.4
NCRB	Newcastle Ridg	2.46	61	Pn	Pn	15 51 36.1	-1.0
BTB	Buttle Lake	2.55	84	Sn	Sn	15 52 09.0	+0.4
B012	Ucluelet	2.56	96	Pn	Pn	15 51 36.0	-2.5
B012				Sn	Sn	15 52 06.6	-2.0
OZB	Mount Ozzard	2.59	95	Pn	Pn	15 51 36.1	-2.8
OZB	Mount Ozzard	2.59	95	Pn	Pn	15 51 36.1	-2.8
OZB				Sn	Sn	15 52 07.5	-1.9
CBB	Campbell River	2.74	72		Pn	15 51 39.7	-1.2
CBB	Campbell River	2.74	72	Pn	Pn	15 51 40.1	-0.9
BFSB	Bamfield	2.84	97	Pn	Pn	15 51 39.6	-2.7
BFSB				Sn	Sn	15 52 13.2	-2.2
B928	Bamfield	2.84	97	Pn	Pn	15 51 39.5	-2.8
B928				Sn	Sn	15 52 13.4	-2.1
B927	Port Alberni	3.01	89	Pn	Pn	15 51 42.5	-2.1
BBB	Bella Bella	3.04	15	Pn	Pn	15 51 43.8	-1.3
	11nm,0.3s,baz=208,slow=11,SNR=4.6						
BBB				Sn	Sn	15 52 19.3	-1.1
	42nm,0.3s,baz=297,slow=24,SNR=5.7						
BBB				LR	LR	15 52 54.4	
	comp=Z,490nm,20.6s,baz=204,slow=40						
	28nm,0.3s						
MGB	Mount Grey	3.11	93	Pn	Pn	15 51 43.9	-2.3
MGB				Sn	Sn	15 52 21.2	-1.1
HG4B	Hotspring	3.24	340	Pn	Pn	15 51 44.7	-3.2
OCP	Olym-Cheeka Pk	3.31	105	Pn	Pn	15 51 46.0	-2.8
PFB	Port Renfrew	3.35	100	Pn	Pn	15 51 47.3	-2.0
PFB				Sn	Sn	15 52 26.5	-1.5
GHNB	Nanoose	3.39	87	Pn	Pn	15 51 48.8	-1.0
GHNB				Sn	Sn	15 52 30.5	+1.6
C03A	Quillayute Air	3.47	110	Pn	Pn	15 51 49.4	-1.6
CLRS	Cowichan Lake	3.50	95	Pn	Pn	15 51 49.5	-1.8
CLRS	Cowichan Lake	3.50	95	Pn	Pn	15 51 49.6	-1.7
CLRS				Sn	Sn	15 52 31.1	-0.6
OBC	Olympics--Boni	3.74	107	Pn	Pn	15 51 53.6	-1.1
SYMB	Survey Mountai	3.77	99	Pn	Pn	15 51 53.5	-1.6
SYMB				Sn	Sn	15 52 37.2	-1.2
GOBB	Galiano Island	3.89	92	Pn	Pn	15 51 56.1	-0.6
BIB	Bowen Island	3.99	86	Pn	Pn	15 51 57.1	-1.1
BIB				Sn	Sn	15 52 45.5	+1.7
WPB	Watts Point	4.06	82	Pn	Pn	15 51 55.3	-3.8
B04A	Port Angeles	4.09	105	Pn	Pn	15 51 58.3	-1.2
WISH	Wishkah	4.34	117	Pn	Pn	15 52 01.3	-1.6
HWKB	Hawksbury Isla	4.35	2	Pn	Pn	15 52 00.9	-2.2
HWKB				Sn	Sn	15 52 52.2	-0.5
MCW	Mount Constitu	4.37	95	Pn	Pn	15 52 03.0	-0.4
HNBB	Haney	4.47	87	Pn	Pn	15 52 04.6	-0.2
HNBB				Sn	Sn	15 52 56.6	+0.8
HDW	Hoodsport	4.53	108	Pn	Pn	15 52 03.9	-1.6
GRNB	Grenville Isla	4.61	356	Pn	Pn	15 52 04.8	-1.8
GRNB	Grenville Isla	4.61	356	Pn	Pn	15 52 05.1	-1.5
GRNB				Sn	Sn	15 52 57.6	-1.4
VDB	Vedder Mountai	4.80	90	Pn	Pn	15 52 08.5	-0.8
LLLB	Lillooet	5.04	72	Pn	Pn	15 52 12.4	-0.2
LLLB	Lillooet	5.04	72	Pn	Pn	15 52 12.6	-0.1
RPW	Rockport	5.27	96	Pn	Pn	15 52 15.1	-0.8
FSJB	Fort St James	6.09	29	Pn	Pn	15 52 27.8	+0.7
FSB	Fort Saint Jam	6.10	29	Pn	Pn	15 52 27.6	+0.5
LTY	Liberty	6.17	106		Pn	15 52 25.9	-2.2
V35K	Ketchikan	6.23	348	P	Pn	15 52 27.1	-1.7
	baz=169						
PNT	Penticton	6.41	86	Pn	Pn	15 52 29.9	-1.4
H04D	Lebanon	6.58	134	Pn	Pn	15 52 33.6	-0.1
BUCK	Buck Mountain	6.71	137	Pn	Pn	15 52 36.0	+0.3
H04A	Detroit Lake	6.73	130	Pn	Pn	15 52 35.4	-0.5
G05A	Wamic	6.82	123	Pn	Pn	15 52 36.9	-0.1
I03D	Drain, OR	6.96	141	Pn	Pn	15 52 39.2	+0.3
I04A	Tendick Farm,	7.29	136	Pn	Pn	15 52 44.0	+0.5
DBO	Dodson Butte	7.48	143	Pn	Pn	15 52 47.3	+1.1
SLEB	Sale Mountain	7.48	71	Pn	Pn	15 52 46.2	-0.1
C09A	Chrisman Ranch	7.54	97		Pn	15 52 46.0	-0.8
MNB	Mounoet Dainar	7.59	63	Pn	Pn	15 52 48.6	+0.8
K02D	Willamette Mer	7.69	147	Pn	Pn	15 52 49.6	+0.6
T35M	Bob Quinn	7.75	357	P	Pn	15 52 50.1	+0.4
	baz=178						
PINE	Pine Mountain	8.00	130	Pn	Pn	15 52 54.2	+0.9
HUMO	Hull Mountain	8.03	144	Pn	Pn	15 52 54.5	+0.9
NEW	Newport	8.18	92	Pn	Pn	15 52 54.5	-1.2
	0.7nm,0.3s,baz=303,slow=14,SNR=6.7						
NEW				LR	LR	15 56 08.2	
	comp=Z,457nm,19.1s,baz=276,slow=39						
	2.1nm,0.4s						
NEW	Newport	8.18	92	Pn	Pn	15 52 55.2	-0.5
NEW	Newport	8.18	92	P	Pn	15 52 56.1	+0.4
	baz=280						
L02F	Cave Junction	8.22	148	Pn	Pn	15 52 57.0	+0.7
I07A	Izee	8.55	124	Pn	Pn	15 53 01.5	+0.6
L04D	Klamath Falls	8.61	142	Pn	Pn	15 53 03.1	+1.4
YBH	Yreka Blue Hor	8.87	146	Pn	Pn	15 53 05.9	+0.6
	0.1nm,0.3s,baz=331,slow=14,SNR=14						
YBH				LR	LR	15 56 08.8	
	comp=Z,468nm,20.3s,baz=344,slow=36						
	11nm,1.0s						
YBH	Yreka Blue Hor	8.87	146	Pn	Pn	15 53 07.0	+1.7
NBC5	NorthernBC 5	9.20	23	Pn	Pn	15 53 11.1	+1.4
DLBC	Dease Lake	9.20	358	LR	LR	15 56 38.7	
	comp=Z,485nm,19.1s,baz=248,slow=37						
DLBC	Dease Lake	9.20	358	P	Pn	15 53 10.1	+0.5
	baz=179						
BMO	Blue Mountains	9.36	114	Pn	Pn	15 53 12.2	+0.3
MOD	Modoc Plateau	9.73	136	Pn	Pn	15 53 17.9	+0.8
WVOR	Wild Horse Val	10.14	128		Pn	15 53 24.6	+2.0
FNBB	Fort Nelson	10.35	19	Pn	Pn	15 53 25.8	+0.5
HOPS	Hopland Field	11.22	154	Pn	Pn	15 53 38.8	+1.5
KOTAN	Kotaneelee Air	11.32	14	P	Pn	15 53 39.3	+0.7
	baz=199						
HLID	Hailey	11.81	113	P	Pn	15 53 45.7	+0.2
	baz=302						
PAHR	Pah Rah Range	11.92	139		Pn	15 53 48.9	+1.9
MPK	Martis Peak	12.01	143	Pn	Pn	15 53 49.9	+1.6
O30N	Mendenhall	12.15	344	P	Pn	15 53 51.3	+1.4
	baz=160						
O29M	Mount Kennedy	12.25	338	P	Pn	15 53 51.7	+0.3
	baz=152						
HYT	Haines Junctio	12.47	341	P	Pn	15 53 53.0	-1.4
	baz=156						
BOZ	Bozeman (W)	12.58	100	P	Pn	15 53 57.0	+1.0
	baz=292						
YUK6	Outpost Mounta	12.76	340	P	Pn	15 53 56.8	-1.7
	baz=154						
N30M	Aishikik Lake	12.97	343	P	Pn	15 54 00.5	-0.7
	baz=158						
O28M	Mount Upton	13.06	336	P	Pn	15 54 02.9	+0.3
	baz=149						
ELK	Elko	13.14	125	LR	LR	15 59 08.4	
	comp=Z,160nm,21.4s,baz=318,slow=38						
FARO	Faro, Yukon	13.19	352	P	Pn	15 54 06.3	+2.2
	baz=170						
YUK4	Talbot Arm	13.19	340	P	Pn	15 54 05.2	+1.0
	baz=154						
M31M	Drury Creek, Y	13.27	350	P	Pn	15 54 08.2	+3.0
	baz=167						
NVAR	Mina Array Bea	13.45	139	Pn	Pn	15 54 09.5	+1.5
	0.1nm,0.3s,baz=319,slow=9.4,SNR=10						
NVAR				LR	LR	15 59 06.0	
	comp=Z,348nm,19.5s,baz=331,slow=36						
	1.0nm,0.7s						
NV11	Mina Array Sit	13.51	139		Pn	15 54 08.3	-0.4
LHV	Little Huntoon	13.52	140		Pn	15 54 09.9	+1.3
CTG	Chitna Glacier	13.54	334	P	Pn	15 54 10.1	+1.1
	baz=146						
BARN	Barnard Glacie	13.71	334	Pn	Pn	15 54 12.6	+1.2
M30M	Minto, Yukon	13.96	346	P	Pn	15 54 16.0	+1.4
	baz=161						
YUK3	Moose Creek	13.99	338	P	Pn	15 54 15.5	+0.3
	baz=150						
M29M	Somme Creek	14.14	343	P	Pn	15 54 18.8	+1.7
	baz=156						
RLMT	Red Lodge	14.30	99	P	P	15 54 25.6	-0.7
	baz=293						
MCARA	McCarthy VSAT	14.37	333	Pn	Pn	15 54 21.2	+1.1
MZP	Montezuma Peak	14.46	139	P	P	15 54 28.7	+0.5
Q12A	Willow Creek R	14.60	129	P	P	15 54 30.6	+1.0
L29M	L29M	14.68	344	P	Pn	15 54 25.0	+0.6
	baz=158						
LCH	Last Change Ra	14.74	140	P	P	15 54 32.1	+0.9
M27K	Edge Creek, AK	14.84	337	P	Pn	15 54 26.9	+0.3
	baz=148						
N25K	Chitina, Valde	15.02	331	P	Pn	15 54 28.8	-0.3
	baz=140						
M26K	Nabesna, AK	15.17	335	P	Pn	15 54 31.3	+0.3
	baz=145						
PDAR	Pinedale Array	15.22	108	Pn	Pn	15 54 32.4	+0.5
	0.1nm,0.3s,baz=311,slow=10,SNR=6.2						
PDAR				LR	LR	16 00 35.0	
	comp=Z,126nm,21.9s,baz=302,slow=38						
	0.6nm,0.8s						
PDAR	Pinedale Array	15.22	108	P	P	15 54 36.5	-0.1
K29M	Barlow Dome	15.27	346	P	Pn	15 54 32.3	+0.1
	baz=161						
L27K	Beaver Creek,	15.42	338	P	Pn	15 54 34.0	-0.2
	baz=149						
WCT	Wildcat Mounta	15.55	138	P	P	15 54 41.1	+1.0
WCT				IAmb	IAmb	15 54 43.7	
	comp=Z,12nm,1.3s						
TPNV	Topopah Spring	15.58	137	P	P	15 54 41.5	+0.9
TPNV				IAmb	IAmb	15 54 49.9	
	comp=Z,19nm,1.4s						
TPNV	Topopah Spring	15.58	137	P	Pn	15 54 38.7	+2.1
	baz=325						
YKA	Yellowknife Ar	15.59	26	Pn	Pn	15 54 33.8	-2.5
	comp=Z,0.3nm,0.3s,baz=212,slow=13,SNR=15						
	comp=Z,0.5nm,0.5s						
YKA	Yellowknife Ar	15.59	26	Pn	Pn	15 54 35.0	-1.4
PRN	Pahroc Range	15.76	133	P	P	15 54 43.7	+1.2
PRN				IAmb	IAmb	15 54 53.5	
	comp=Z,12nm,1.3s						
DAWY	Dawson	15.79	344	Pn	Pn	15 54 39.7	+0.7
DAWY				IAmb	IAmb	15 54 53.5	
	comp=Z,15nm,1.4s						
DAWY	Dawson	15.79	344	P	Pn	15 54 39.0	0.0
	baz=156						
HARP	HAARP	15.80	332	P	Pn	15 54 39.8	+0.7
	baz=140						
SEW	Seward	15.81	321	P	P	15 54 45.0	+2.3
MPMC	Manual Prospec	15.81	142	P	Pn	15 54 40.6	+1.0
	baz=329						
KDAK	Kodiak Island	16.14	311	LR	LR	15 59 05.8	
	comp=Z,216nm,20.3s,baz=132,slow=30						
QSM	Queen of Sheba	16.15	141	P	P	15 54 47.7	+1.1
BRSE	Bradley Lake S	16.16	319	P	Pn	15 54 44.0	+0.3
	baz=122						
KNK	Knik Glacier	16.21	326		P	15 54 46.8	-0.5
KNK				IAmb	IAmb	15 54 55.7	
	comp=Z,14nm,1.0s						
KNK	Knik Glacier	16.21	326	P	P	15 54 46.2	-1.1
	baz=131						
LRMC	Laurel Mtn Rad	16.24	144	P	P	15 54 47.2	-0.7
	baz=330						
CNPM	China Poot	16.26	317	P	P	15 54 50.7	+2.9
PAX	Paxson	16.33	333	P	Pn	15 54 46.2	+0.3
	baz=141						
DOT	Dot Lake	16.47	337		Pn	15 54 48.7	+1.0
SCRK	Sand Creek	16.72	337		P	15 54 52.2	-0.8
SCRK	Sand Creek	16.72	337	P	Pn	15 54 50.1	-0.8
	baz=146						
GSC	Goldstone, Bar	16.74	142	P	Pn	15 54 52.0	+0.7
	baz=329						
RIDG	Independent Ri	16.75	336	P	Pn	15 54 50.8	-0.4
	baz=144						
EGAK	Eagle	16.77	342	P	Pn	15 54 52.1	+0.7
EGAK				IAmb	IAmb	15 54 56.8	
	comp=Z,16nm,1.4s						
EGAK	Eagle	16.77	342	P	P	15 54 52.7	-0.6
	baz=154						
J26L	Joseph Creek	17.05	339		P	15 54 56.6	0.0
J26L	Joseph Creek	17.05	339	P	Pn	15 54 54.8	-0.2
	baz=148						
K24K	Donnelly Dome	17.06	335	P	P	15 54 56.7	+0.1
	baz=142						
SUA	Susitna One	17.11	324	P	Pn	15 54 55.2	-0.6
	baz=127						
O20K	Slope Mountain	17.15	318	P	Pn	15 54 55.8	-0.5
	baz=120						
K22A	Casper	17.19	104	P	P	15 54 58.9	+0.5
	baz=300						
P19K	Oil Pt	17.22	316	P	Pn	15 54 56.9	-0.2
	baz=118						
ILSW	Iliamna Southw	17.33	317		P	15 55 00.7	+1.0
BFSC	Mount Baldy Ra	17.35	146	P	P	15 55 01.2	+1.1
	baz=332						
SPCR	Spurr Chakacha	17.55	322	P	P	15 55 02.7	+0.6
	baz=124						
EPYK	Eagle Plains	17.57	350	P	Pn	15 55 01.0	-0.4
	baz=165						
I27K	Kandik River	17.60	343	P	Pn	15 55 00.6	-1.2
	baz=154						
I26K	Coal Creek Min	17.65	341	P	P	15 55 03.7	+0.6
	baz=150						
Q18K	Katmai Hardscr	17.65	312	P	Pn	15 55 02.1	-0.4
	baz=112						
FFC	Flin Flon	17.69	62		P	15 55 03.6	0.0
U15A	North Rim	17.89	129	P	P	15 55 07.2	+1.0
MCK	McKinley	17.95	331	P	Pn	15 55 04.5	-1.5
	baz=136						
Q17K	Contact Creek	17.95	310	P	Pn	15 55 05.6	-0.7
	baz=110						
ELS	Elsinore Mount	17.96	146	P	P	15 55 07.3	+0.5
ELS				IAmb	IAmb	15 55 14.9	
	comp=Z,22nm,1.4s						
IL31		18.12	336	P	Pn	15 55 08.2	+0.2
ILAR	Eielson Array	18.12	336	P	P	15 55 08.7	+0.5
	baz=149,slow=12,SNR=16						
ILAR				LR	LR	16 01 29.7	
	comp=Z,107nm,20.3s,baz=138,slow=35						
	comp=Z,1.6nm,0.9s						
ILAR	Eielson Array	18.12	336	P	P	15 55 08.9	+0.6
H27K	Steamboat Moun	18.14	344	P	Pn	15 55 08.4	0.0
	baz=155						
TRF	Thorofare Moun	18.20	329	P	Pn	15 55 08.6	-0.7
	baz=133						
WRH	Wood River Hil	18.23	334	P	P	15 55 10.1	+0.6
CCB	Clear Creek Bu	18.28	334	P	Pn	15 55 10.4	+0.4
CCB				IAmb	IAmb	15 55 11.3	
	comp=Z,15nm,1.2s						
M20K	Styx River	18.29	323	P	P	15 55 09.5	-0.7
	baz=124						
N19K	Bonanza Creek	18.31	319	P	P	15 55 08.9	-1.5
N19K				IAmb	IAmb	15 55 17.5	
	comp=Z,10.0nm,1.0s						
N19K	Bonanza Creek	18.31	319	P	P	15 55 08.8	-1.6
	baz=119						
F31M	Tsiigehtchic	18.37	355	P	P	15 55 10.0	-0.9
	baz=172,SNR=6.2						
PRP	Porcupine Dome	18.37	338	P	P	15 55 11.1	0.0
PRP				IAmb	IAmb	15 55 18.0	
	comp=Z,16nm,1.4s						
PRP	Porcupine Dome	18.37	338	P	P	15 55 10.2	-0.9
	baz=146						
PV11	David Mesa, Pa	18.38	119	P	P	15 55 11.4	-0.1
KTH	Kantishna Hill	18.48	329	P	P	15 55 12.0	-0.3
KTH				IAmb	IAmb	15 55 16.1	
	comp=Z,12nm,1.2s						
PV13	Radium Mtn., P	18.50	119	P	P	15 55 12.6	-0.3
PPLA	Purkeypile	18.51	326	P	P	15 55 12.6	-0.1
PPLA				IAmb	IAmb	15 55 42.3	
	comp=Z,16nm,1.4s						
POKR	Poker Plat Res	18.54	336	P	P	15 55 12.8	0.0
POKR				IAmb	IAmb	15 55 29.2	
	comp=Z,6.5nm,0.8s						
POKR	Poker Plat Res	18.54	336	P	Pn	15 55 13.4	+0.2
	baz=141						
NEA2	Nenana	18.61	333	P	P	15 55 13.2	-0.4
NEA2	Nenana	18.61	333	P	P	15 55 13.5	-0.1
	baz=137						
MDM	Murphy Dome	18.63	335	P	Pn	15 55 14.7	+0.3
PV01	Paradox Valley	18.66	119		Pn	15 55 15.7	+0.5
PV01				IAmb	IAmb	15 55 27.6	
	comp=Z,9.2nm,1.1s						
G27K	Doyon Strip	18.69	345	P	P	15 55 14.7	+0.2
	baz=155						
CAST	Castle Rocks	18.79	327	P	P	15 55 15.1	-0.6
CAST	Castle Rocks	18.79	327	P	P	15 55 15.8	+0.1
	baz=130						
CHGN	Chignik	18.80	303	P	Pn	15 55 16.9	+0.4
	baz=101						
M19K	Big River Lodg	18.81	322	P	P	15 55 15.4	-0.4
M19K	Big River Lodg	18.81	322	P	P	15 55 15.5	-0.4
	baz=122						
BPAW	Bear Paw Mtn.	18.86	330	P	P	15 55 16.9	+0.5
	baz=133						
L20K	Farewell, AK	18.91	324	P	P	15 55 16.8	-0.2
	baz=124						
SVW2	Sparrevohn	18.91	319	P	P	15 55 16.1	-0.9
SVW2				IAmb	IAmb	15 55 21.1	
	comp=Z,23nm,1.5s						
MONP2	Monument Peak	19.01	145	P	Pn	15 55 20.6	+1.2
	baz=332						
I23K	Minto, Yukon-K	19.10	334	P	P	15 55 19.4	+0.4
	baz=138,SNR=7.3						
L19K	White Mountain	19.14	322	P	P	15 55 19.8	+0.3
L19K	White Mountain	19.14	322	P	P	15 55 20.0	+0.5
	baz=122						
FYU	Fort Yukon	19.17	341	P	P	15 55 19.8	0.0
G26K	Porcupine Rive	19.20	343	P	Pn	15 55 21.1	-0.1
	baz=151						
H24K	Noodor Dome	19.21	337	P	P	15 55 20.6	+0.3
H24K				IAmb	IAmb	15 55 23.4	
	comp=Z,18nm,1.4s						
H24K	Noodor Dome	19.21	337	P	P	15 55 21.0	+0.7
	baz=142,SNR=5.9						
INK	Inuvik	19.21	355	P	Pn	15 55 21.3	0.0
	comp=Z,0.1nm,0.3s,baz=163,slow=9.2,SNR=7.7						
INK				LR	LR	16 02 40.1	
	comp=Z,124nm,18.3s,baz=160,slow=37						
	comp=Z,5.4nm,1.1s						
INK	Inuvik	19.21	355	P	P	15 55 20.9	+0.7
	baz=173,SNR=5.5						
MVCO	Mesa Verde	19.34	121	P	P	15 55 22.1	-0.1
MVCO				IAmb	IAmb	15 55 36.7	
	comp=Z,17nm,1.4s						
MVCO	Mesa Verde	19.34	121	P	Pn	15 55 25.7	+2.4
	baz=314						
ISCO	Idaho Springs	19.35	110	P	P	15 55 23.0	+0.7
	baz=306						
MLY	Manley	19.42	332	P	P	15 55 22.2	-0.4
MLY				IAmb	IAmb	15 55 30.0	
	comp=Z,13nm,1.4s						
MLY	Manley	19.42	332	P	P	15 55 22.1	-0.4
	baz=135,SNR=7.0						
O16K	Kokwok River B	19.47	313	P	P	15 55 22.8	-0.2
	baz=110						
K20K	Telida	19.48	326	P	P	15 55 22.4	-0.7
K20K				IAmb	IAmb	15 55 31.9	
	comp=Z,13nm,1.4s						
K20K	Telida	19.48	326	P	P	15 55 23.4	+0.3
	baz=126						
G25K	Bearman Lake	19.53	340	P	P	15 55 24.1	+0.4
	baz=147,SNR=8.0						
H23K	Yukon River	19.65	335	P	Pn	15 55 26.8	+0.2
	baz=139						
BMAR	Burnt Mountain	19.77	343	P	P	15 55 25.7	-0.7
G24K	Hadweenzic Riv	19.80	339	P	P	15 55 26.6	0.0
	baz=144						
I21K	Tanana	19.91	332	P	P	15 55 27.4	-0.4
I21K				IAmb	IAmb	15 55 30.9	
	comp=Z,11nm,1.0s						
I21K	Tanana	19.91	332	P	Pn	15 55 28.9	-0.7
	baz=133,SNR=8.0						
F26K	Sheenjek River	19.92	343	P	P	15 55 28.3	+0.3
	baz=152						
E27K	Coleen River	19.93	347	P	P	15 55 27.9	-0.2
	baz=157						
TTA	Tatalina	19.98	323	P	P	15 55 29.2	+0.4
	baz=122,SNR=8.6						
N16K	Nishlik Lake	20.09	315	P	P	15 55 29.9	0.0
	baz=112						
F25K	Christian Rive	20.13	342	P	P	15 55 30.9	+0.6
	baz=149						
H22K	Ishtalitna Cre	20.22	334	P	P	15 55 31.5	+0.2
	baz=136						
G23K	Bananza Creek	20.44	336	P	P	15 55 33.6	0.0
	baz=140						
H21K	Melozitna Rive	20.48	332	P	P	15 55 33.0	-1.0
H21K				IAmb	IAmb	15 55 37.5	
	comp=Z,7.7nm,0.9s						
H21K	Melozitna Rive	20.48	332	P	P	15 55 34.6	+0.5
	baz=133						
F24K	Squaw Lake	20.55	340	P	P	15 55 34.4	-0.4
	baz=145						
COLD	Coldfoot	20.88	337	P	P	15 55 38.8	+0.5
COLD				IAmb	IAmb	15 55 44.1	
	comp=Z,6.6nm,1.1s						
COLD	Coldfoot	20.88	337	P	P	15 55 38.4	+0.1
	baz=140						
IMAR	Indian Mountai	20.99	332	P	P	15 55 39.0	-0.6
E24K	Your Creek	21.14	340	P	P	15 55 40.8	-0.4
	baz=144						
G21K	Allakaket	21.27	333	P	P	15 55 41.7	-0.9
	baz=133						
214A	Organ Pipe Nat	21.31	138	P	P	15 55 46.2	+2.9
	baz=328						
E23K	Chandalar	21.38	339	P	P	15 55 44.2	+0.4
	baz=142						
C27K	Jago River	21.57	346	P	P	15 55 46.0	+0.2
	baz=155						
ULM	Lac du Bonnet	21.59	75	P	P	15 55 45.1	-1.0
	comp=Z,1.5nm,0.4s,baz=281,slow=12,SNR=21						
ULM				LR	LR	16 04 23.0	
	comp=Z,293nm,18.6s,baz=176,slow=38						
	comp=Z,1.5nm,0.4s						
D25K	Kavik River	21.75	344	P	P	15 55 47.1	-0.6
	baz=150						
F21K	Alatna River	21.75	335	P	P	15 55 50.7	+3.0
	baz=135						
TOLK	Toolik Lake Re	21.83	340	P	P	15 55 49.0	+0.4
TOLK				IAmb	IAmb	15 56 01.9	
	comp=Z,7.4nm,1.1s						
TOLK	Toolik Lake Re	21.83	340	P	P	15 55 48.2	-0.4

	baz=144						
TUC	Tucson	21.94	134	P	P	15 55 51.3	+1.3
	baz=325						
C26K	Camden Bay	22.02	346	P	P	15 55 51.4	+0.9
	baz=153						
ANMO	Albuquerque	22.12	122	P	P	15 55 52.0	-0.1
	comp=Z,2.7nm,0.9s,baz=319,slow=20,SNR=2.1						
	comp=Z,2.7nm,0.9s						
ANMO	Albuquerque	22.12	122	P	P	15 55 52.5	+0.4
ANMO				IAmb	IAmb	15 56 02.5	
	comp=Z,5.6nm,1.1s						
ANMO	Albuquerque	22.12	122	P	P	15 55 54.1	+1.9
	baz=316						
ECSD	EROS Data Cent	23.12	91	P	P	15 56 02.1	-0.3
ECSD	EROS Data Cent	23.12	91	P	P	15 56 02.7	+0.3
	baz=295						
121A	Cookes Peak, D	23.25	128	P	P	15 56 07.2	+3.3
	baz=322						
EYMN	Ely	24.94	78	P	P	15 56 20.4	+1.0
MNTX	Cornudas Mount	25.16	125	P	P	15 56 22.3	+0.8
	baz=320						
A21K	Barrow	25.45	340	P	P	15 56 23.9	+0.1
TXAR	Lajitas Array	27.93	126	P	P	15 56 47.1	+0.5
	comp=Z,0.2nm,0.4s,baz=331,slow=5.4,SNR=2.2						
	comp=Z,0.2nm,0.4s						
SADO	Sadowa	34.05	78	LR	LR	16 11 55.0	
	comp=Z,326nm,19.1s,baz=272,slow=37						
SCHQ	Schefferville	37.74	57	LR	LR	16 11 47.6	
	comp=Z,155nm,18.1s,baz=223,slow=33						
H11N2	WAKE ISLAND Hy	58.19	264	T	T	17 03 29.8	
	baz=43,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	58.20	264	T	T	17 03 28.4	
	baz=43,slow=75,SNR=16						
H11N1	WAKE ISLAND Hy	58.21	264	T	T	17 03 31.0	
	baz=43,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	59.20	263	T	T	17 04 41.4	
	baz=39						
H11S2	WAKE ISLAND Hy	59.22	263	T	T	17 04 47.2	
	baz=39						
H11S3	WAKE ISLAND Hy	59.22	263	T	T	17 04 44.0	
	baz=39						
XLT	XiLinHaoTe	71.00	316	*e*P	P	16 02 12.7	-1.0
XLT				pP	pP	16 02 17.6	-4.9
XLT				sP	pwP	16 02 21.4	-4.4
XLT				PcP	PcP	16 02 31.6	-2.3
XLT				S	S	16 11 26.1	-1.4
XLT				sS	pS	16 11 37.0	-1.4
XLT				SKS	SKSac	16 12 10.6	-3.3
XLT				pmax	pmax		
	comp=Z,8.0nm,1.0s						
XLT				pmax	pmax		
	comp=Z,850nm,9.2s						
XLT				LR	LR		
	comp=N,490nm,14.0s						
XLT				LR	LR		
	comp=E,8µm,14.0s						
XLT				LR	LR		
	comp=Z,8µm,20.0s						
HHC	Hu-ho-hao-te	75.46	317	*e*P	P	16 02 40.9	+0.8
HHC				pmax	pmax		
	comp=Z,35nm,0.9s						
HHC				pmax	pmax		
	comp=Z,1µm,6.9s						
MKAR	Makanchi Array	80.45	339	P	P	16 03 12.4	+4.8
	comp=Z,0.6nm,0.8s,baz=15,slow=3.3,SNR=3.3						
	comp=Z,0.6nm,0.8s						
WMQ	Urumqi	81.77	334	*e*P	P	16 03 17.1	+2.4
WMQ	Urumqi	81.77	334	SKS	S	16 13 29.5	+4.0
WMQ				pmax	pmax		
	comp=Z,15nm,2.4s						
WMQ				LR	LR		
	comp=N,2µm,20.9s						
WMQ				LR	LR		
	comp=E,5µm,16.5s						
WMQ				LR	LR		
	comp=Z,3µm,18.7s						

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*ANF **07** 16:03:09.4±0.3, 36°.72N×97°.71W, h5^{km}, ML3.7/8, Error ellipse: s-maj=4.9km s-min=2.3km az=165.0*
*NEIC **07** 16:03:09.8±0.2, 36°.691N±0°.008×97°.688W±0°.008, h2^{km}±4^{km}, Error ellipse: s-maj=1.5km s-min=0.3km az=219.0*
*TUL **07** 16:03:09.4±0.3, 36°.70N±0°.01×97°.68W±0°.01, h8^{km}±3^{km}, ML3.3, mb_Lg3.2/73(NEIC), ML3.3/70(NEIC), Error ellipse: s-maj=1.7km s-min=1.5km az=98.0*
ISC 07 16:03:09.3±1.0**, 36°.68N**±0°.02×**97°.68W**±0°.02**, h8**^{km}±11^{km}**, n95,** σ**0^{s}.66**/72**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GC02	Grant County #	0.22	321		Pg	16 03 13.8	0.0
GC02				Sg	Sg	16 03 16.8	-0.1
CROK	Carrier	0.30	234		Pg	16 03 15.6	+0.4
CROK				Sg	Sg	16 03 19.8	+0.6
KAN14	Manchester OK	0.36	321		Pg	16 03 16.3	-0.1
KAN14				Sg	Sg	16 03 21.0	-0.1
KAN17	Caldwell West	0.37	350		Pg	16 03 16.5	-0.1
KAN17				IAML		16 03 21.8	
	comp=E,4µm,0.3s						
KAN17				IAML		16 03 23.5	
	comp=N,3µm,0.3s						
KAN13	South Haven SW	0.37	26		Pg	16 03 16.6	0.0
KAN13				IAML		16 03 21.9	
	comp=E,2µm,0.4s						
KAN13				IAML		16 03 26.8	
	comp=N,3µm,0.3s						
BLOK	Blackwell	0.39	77		Pg	16 03 16.9	+0.1
BLOK				IAML		16 03 23.4	
	comp=E,3µm,0.2s						
BLOK				IAML		16 03 27.0	
	comp=N,3µm,0.2s						
OK032	Salt Plains WL	0.44	287		Pg	16 03 17.9	0.0
OK032				IAML		16 03 24.4	
	comp=N,2µm,0.2s						
KAN05	Bluff City Nor	0.46	341		Pg	16 03 18.1	-0.1
KAN05				IAML		16 03 26.2	
	comp=E,2µm,0.2s						
KAN05				IAML		16 03 26.7	
	comp=N,2µm,0.2s						
KAN09	Caldwell North	0.46	7		Pg	16 03 18.1	-0.2
KAN09				IAML		16 03 24.9	
	comp=N,4µm,0.3s						
KAN09				IAML		16 03 29.9	
	comp=E,4µm,0.3s						
KAN01	Argonia South	0.48	353	Pg	Pg	16 03 18.4	-0.2
KAN01				IAML		16 03 25.2	
	comp=E,2µm,0.3s						
KS20	Mayfield South	0.56	11		Pg	16 03 19.9	-0.3
KS20				IAML		16 03 27.6	
	comp=E,2µm,0.2s						
KAN06	Argonia West S	0.59	346		Pg	16 03 20.5	-0.1
KAN08	Anthony NE Sta	0.59	337		Pg	16 03 20.5	-0.3
KAN08				IAML		16 03 32.0	
	comp=N,1µm,0.2s						
KS21	Milan North St	0.61	2		Pg	16 03 20.8	-0.3
OK050	Pawnee Station	0.63	116		Pg	16 03 21.6	+0.1
OK050				IAML		16 03 30.5	
	comp=N,2µm,0.2s						
OK050				IAML		16 03 35.9	
	comp=N,1µm,0.2s						
OK045	Pawnee Station	0.65	110		Pg	16 03 21.9	0.0
OK045				IAML		16 03 33.3	
	comp=N,1µm,0.2s						
OK045				IAML		16 03 33.5	
	comp=N,2µm,0.2s						
KAN12	Harper NE Stat	0.67	338		Pg	16 03 22.0	-0.2
OK046	Pawnee Station	0.69	114	Pg	Pg	16 03 22.5	0.0
OK044	Pawnee Station	0.78	113		Pg	16 03 24.1	-0.1
OK044				IAML		16 03 41.8	
	comp=N,862nm,0.3s						
OK035	E0210 Rd and N	0.82	272		Pg	16 03 24.8	-0.3
OK035				IAML		16 03 43.5	
	comp=N,881nm,0.2s						
OK035				IAML		16 03 45.3	
	comp=N,846nm,0.2s						
OK033	Mehan	0.87	136	Pg	Pg	16 03 26.1	0.0
OK033				IAML		16 03 39.6	
	comp=N,1µm,0.2s						
OK033				IAML		16 03 40.7	
	comp=N,717nm,0.4s						
OK038	West end E0370	0.88	257		Pg	16 03 24.9	-1.3
OK029	Liberty Lake	0.90	168		Pg	16 03 26.6	0.0
OK029				IAML		16 03 43.5	
	comp=N,897nm,0.5s						
QUOK	Quay	0.94	122	Pg	Pg	16 03 27.1	-0.2
QUOK				IAML		16 03 46.2	
	comp=E,1µm,0.2s						
T35B	Sooner Cattle	0.97	75	P	Pg	16 03 27.6	-0.4
	baz=257,SNR=24						
T35B				S	Sg	16 03 40.5	0.0
	baz=257						
OK053	SW of W Deep R	0.98	132		Pg	16 03 28.0	-0.1
OK052	Battle Ridge R	0.99	134		Pg	16 03 28.0	-0.2
OK052				IAML		16 03 43.4	
	comp=E,1µm,0.3s						
OK031	S. Brethren Rd	0.99	136		Pg	16 03 28.2	-0.1
OK031				IAML		16 03 47.0	
	comp=E,805nm,0.2s						
OK031				IAML		16 03 47.8	
	comp=E,961nm,0.2s						
NOKA	Waynoka	1.00	268		Pg	16 03 28.1	-0.5
NOKA				IAML		16 03 48.3	
	comp=E,977nm,0.2s						
OK034	N. Norfolk Rd.	1.03	130		Pg	16 03 28.9	-0.1
OK034				IAML		16 03 48.0	
	comp=E,1µm,0.2s						
OK034				IAML		16 03 48.1	
	comp=E,895nm,0.2s						
OK030	Cody Creek RV	1.04	136		Pg	16 03 29.1	-0.2
U32A	Winter Ranch,	1.10	255		Pb	16 03 29.8	-0.8
U32A				IAML		16 03 51.5	
	comp=E,555nm,0.2s						
U32A				IAML		16 03 58.8	
	comp=N,692nm,0.8s						
U32A	Winter Ranch,	1.10	255	P	Pb	16 03 30.0	-0.6
	baz=73,SNR=8.1						
U32A				S	Sb	16 03 45.1	-0.1
	baz=73						
OK025	Westminster Rd	1.13	166	Pg	Pb	16 03 30.8	-0.3
OK025				IAML		16 03 50.2	
	comp=N,771nm,0.2s						
OK025				IAML		16 03 51.0	
	comp=N,991nm,0.6s						
DEOK	Depew	1.27	131		Pn	16 03 32.7	-0.6
CSTR	Hydro, Custer	1.31	219	Pg	Pn	16 03 33.7	-0.2
FNO	Franklin	1.44	171		Pb	16 03 35.9	-0.4
ELIS	Ellis County	1.53	247		Pb	16 03 37.6	-0.3
W35A	Tecumseh	1.66	156	Pn	Pb	16 03 39.3	-0.8
TUL1	Leonard	1.71	116		Pb	16 03 40.2	-0.8
TUL1				IAmb_Lg		16 04 06.4	
	comp=Z,95nm,0.8s						
TUL1	Leonard	1.71	116	P	Pb	16 03 40.3	-0.6
	baz=298,SNR=28						
TUL1				S	Sg	16 04 03.5	-0.7
	baz=298						
R32A	Long Quarter,	1.92	335	P	Pn	16 03 42.8	+0.4
	baz=154						
X34A	Smith Ranch, M	2.08	183	Pn	Pn	16 03 45.6	+1.2
WMOK	Wichita Mounta	2.13	205		Pn	16 03 45.8	+0.6
WMOK	Wichita Mounta	2.13	205	P	Pn	16 03 46.1	+0.9
	baz=24,SNR=64						
WMOK				S	Sb	16 04 14.2	-0.6
	baz=24						
RLO	Rose Lookout	2.21	103		Pn	16 03 47.0	+0.8
KSU1	Kansas State U	2.56	19		Pn	16 03 51.9	+0.7
U38A	Gravette	2.67	94	P	Pn	16 03 53.8	+1.3
	baz=277						
CBKS	Cedar Bluff	2.68	323	Pn	Pn	16 03 54.0	+1.2
LOOK	Love County	2.71	171	Pn	Pn	16 03 54.1	+1.0
X37A	Clayton	2.81	137	Pn	Pn	16 03 55.5	+1.0
X37A				IAmb_Lg		16 04 46.3	
	comp=Z,87nm,0.8s						
X37A	Clayton	2.81	137	P	Pn	16 03 56.2	+1.7
	baz=319						
WTFS	Witchita Falls	2.98	193	Pn	Pn	16 03 57.6	+0.8
HHAR	Hobbs	3.04	96		Pn	16 03 58.3	+0.6
S39A	Bolivar	3.63	73	P	Pn	16 04 06.9	+1.2
	baz=255						
FW03	Perrin-Whitt E	3.64	185	IAmb_Lg		16 05 09.9	
	comp=Z,26nm,0.8s						
AMTX	Amarillo	3.71	242	Pn	Pn	16 04 08.4	+1.4
AMTX				IAmb_Lg		16 05 15.3	
	comp=Z,44nm,0.7s						
MIAR	Mount Ida	3.96	121	Pn	Pn	16 04 10.0	-0.3
MIAR				IAmb_Lg		16 05 18.5	
	comp=Z,44nm,0.8s						
FW07	Weatherford	3.97	181	Pn	Pn	16 04 11.5	+1.1
FW07				IAmb_Lg		16 05 21.5	
	comp=Z,26nm,1.0s						
N33A	J Bar K, Exete	4.06	3	IAmb_Lg		16 05 28.4	
	comp=Z,62nm,1.0s						
Z38A	Mt. Pleasant	4.07	146	IAmb_Lg		16 05 22.1	
	comp=Z,79nm,0.7s						
FW16	Waxahatchie	4.24	171	IAmb_Lg		16 05 24.5	
	comp=Z,44nm,1.1s						
FW13	Cleburne	4.32	177	IAmb_Lg		16 05 37.6	
	comp=Z,31nm,0.9s						
ABTX	Abilene, Hawle	4.36	202	Pn	Pn	16 04 16.9	+1.1
ABTX				IAmb_Lg		16 05 30.9	
	comp=Z,35nm,1.1s						
N35A	Tabor	4.47	20	IAmb_Lg		16 05 41.7	
	comp=Z,44nm,0.8s						
X40A	Basin Creek Fa	4.52	118	Pn	Pn	16 04 18.8	+0.8
FCAR	Ozark Folk Cen	4.56	98	Pn	Pn	16 04 18.9	+0.4
FCAR				IAmb_Lg		16 05 42.3	
	comp=Z,72nm,1.2s						
WHAR	Wooly Hollow	4.59	106	IAmb_Lg		16 05 43.8	
	comp=Z,40nm,0.8s						
WHTX	Lake Whitney,	4.68	178	Pn	Pn	16 04 21.0	+0.8
WHTX				IAmb_Lg		16 05 45.8	
	comp=Z,36nm,1.1s						
BGNE	Belgrade	4.74	356	Pn	Pn	16 04 22.0	+1.0
BGNE				IAmb_Lg		16 05 47.0	
	comp=Z,68nm,0.8s						
UALR	University of	4.74	112	IAmb_Lg		16 05 44.0	
	comp=Z,39nm,1.0s						
POST	Post	4.78	222	Pn	Pn	16 04 22.3	+0.6
POST				IAmb_Lg		16 05 42.2	
	comp=Z,30nm,0.8s						
WLAR	White Oak Lake	4.79	127	IAmb_Lg		16 05 47.5	
	comp=Z,46nm,0.9s						
P40A	Paris	5.28	56	IAmb_Lg		16 05 58.5	
	comp=Z,54nm,0.8s						
LCAR	Lake Charles	5.30	95	IAmb_Lg		16 06 07.0	
	comp=Z,34nm,0.9s						
L34A	Svendsen Farm,	5.38	10	IAmb_Lg		16 06 04.9	
	comp=Z,44nm,0.7s						
N38A	Joes South For	5.38	39	IAmb_Lg		16 06 11.8	
	comp=Z,45nm,0.8s						
T25A	Trinidad	5.41	277	Pn	Pn	16 04 30.9	+0.4
T25A				IAmb_Lg		16 06 12.4	
	comp=Z,35nm,1.1s						
OGNE	Ogallala	5.45	323	IAmb_Lg		16 06 11.8	
	comp=Z,52nm,0.8s						
NATX	Nacogdoches	5.51	152	IAmb_Lg		16 06 10.9	
	comp=Z,48nm,1.2s						
PBMO	Poplar Bluff	5.83	87	IAmb_Lg		16 06 15.5	
	comp=Z,41nm,0.8s						
435B	Jarrell	5.88	179	IAmb_Lg		16 06 27.0	
	comp=Z,24nm,0.7s						
FVM	French Village	5.93	75	IAmb_Lg		16 06 18.5	
	comp=Z,53nm,0.8s						
ODSA	Odessa	6.07	223	IAmb_Lg		16 06 27.5	
	comp=Z,27nm,1.2s						
SLM	Saint Louis	6.22	69	IAmb_Lg		16 06 35.8	
	comp=Z,44nm,1.0s						
SCIA	State Center	6.27	32	IAmb_Lg		16 06 35.0	
	comp=Z,34nm,0.7s						
JCT	Junction City	6.43	197	IAmb_Lg		16 06 38.6	
	comp=Z,49nm,1.2s						
CGM3	Cape Girardeau	6.45	82	IAmb_Lg		16 06 33.3	
	comp=Z,25nm,0.8s						
143A	Socs Landing,	6.52	126	IAmb_Lg		16 06 36.3	
	comp=Z,38nm,0.9s						
N41A	Harden Midland	6.69	51	IAmb_Lg		16 06 52.5	
	comp=Z,46nm,0.9s						
Q44A	Meyer Farm, Va	7.21	69	IAmb_Lg		16 07 16.6	
	comp=Z,41nm,0.9s						
L40A	Anamosa	7.34	41	IAmb_Lg		16 07 09.1	
	comp=Z,27nm,0.9s						
HDIL	Hopedale	7.62	57	IAmb_Lg		16 07 12.0	
	comp=Z,40nm,0.8s						
N23A	Red Feather La	7.70	306	IAmb_Lg		16 07 25.8	
	comp=Z,22nm,0.8s						
JFWS	Jewell Farm	8.46	40	IAmb_Lg		16 07 35.9	
	comp=Z,18nm,0.8s						

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*TUL **07** 16:06:01.2±0.4, 36°.700N±0°.010×97°.68W±0°.02, h8^{km}±1^{km}, ML3.7, mb_Lg3.6/103(NEIC), ML3.6/70(NEIC), Mwr3.2/11(SLM), Error ellipse: s-maj=1.8km s-min=1.4km az=103.0*
*ANF **07** 16:06:01.1±0.3, 36°.67N×97°.68W, h5^{km}, ML4.3/15, Error ellipse: s-maj=3.2km s-min=2.7km az=174.0*
*NEIC **07** 16:06:01.6±0.1, 36°.689N±0°.008×97°.685W±0°.009, h2^{km}±4^{km}, Error ellipse: s-maj=1.5km s-min=0.5km az=223.0*
*NEIC **07** 16:06:01, 36°.70N×97°.68W, h3^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M$_{rr}$-0.96; M$_{\theta\theta}$6.00; M$_{\phi\phi}$-5.04; M$_{r\theta}$0.10; M$_{\theta\phi}$-5.26; M$_{\phi r}$2.96; Fault plane solution: M$_{0}$8.22000×10^{13} NP1:ϕ_s249.00000°, δ70.00000°, λ-169.00000°. NP2:ϕ_s155.00000°, δ80.00000°, λ-20.00000°. Principal axes: T 8.2225, Plg7.0000°, Azm203.0000°; N -0.0009, Plg68.0000°, Azm309.0000°; P -8.2216, Plg21.0000°, Azm110.0000°;*
ISC 07 16:06:01.2±1.1**, 36°.68N**±0°.02×**97°.69W**±0°.02**, h5**^{km}±9^{km}**, n116,** σ**0^{s}.54**/81**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GC02	Grant County #	0.22	321		Pg	16 06 05.6	0.0
GC02				Sg	Sg	16 06 08.7	+0.1
CROK	Carrier	0.30	234	Pg	Pg	16 06 07.3	+0.3
CROK				Sg	Sg	16 06 11.7	+0.8
KAN14	Manchester OK	0.36	321		Pg	16 06 08.1	-0.1
KAN14				Sg	Sg	16 06 12.5	-0.4
KAN17	Caldwell West	0.37	350	Pg	Pg	16 06 08.3	-0.1
KAN17				Sg	Sg	16 06 13.2	-0.1
KAN17				IAML		16 06 13.9	
	comp=E,10µm,0.3s						
KAN17				IAML		16 06 18.0	
	comp=N,5µm,0.3s						
KAN13	South Haven SW	0.37	26		Pg	16 06 08.4	-0.1
KAN13				IAML		16 06 13.9	
	comp=E,6µm,0.3s						
KAN13				IAML		16 06 18.6	
	comp=N,6µm,0.3s						
BLOK	Blackwell	0.39	78		Pg	16 06 08.7	-0.1
BLOK				IAML		16 06 15.0	
	comp=E,9µm,0.2s						
OK032	Salt Plains WL	0.44	287	Pg	Pg	16 06 09.7	-0.1
OK032				IAML		16 06 20.3	
	comp=E,4µm,0.2s						
KAN05	Bluff City Nor	0.45	341		Pg	16 06 09.8	-0.2
KAN05				IAML		16 06 17.9	
	comp=E,5µm,0.5s						
KAN05				IAML		16 06 18.1	
	comp=N,4µm,0.4s						
KAN09	Caldwell North	0.46	7		Pg	16 06 09.9	-0.2
KAN09				IAML		16 06 20.2	
	comp=N,7µm,0.3s						
KAN01	Argonia South	0.48	353		Pg	16 06 10.2	-0.3
KAN01				IAML		16 06 17.1	
	comp=E,7µm,0.5s						
KS20	Mayfield South	0.56	11		Pg	16 06 11.7	-0.3
KS20				IAML		16 06 22.3	
	comp=E,3µm,0.2s						
KAN06	Argonia West S	0.58	346		Pg	16 06 12.2	-0.3
KAN06				IAML		16 06 22.1	
	comp=E,3µm,0.5s						
KAN08	Anthony NE Sta	0.59	337		Pg	16 06 12.5	-0.2
KAN08				IAML		16 06 20.9	
	comp=E,6µm,0.5s						
KS21	Milan North St	0.61	2	IAML		16 06 21.1	
	comp=E,3µm,0.5s						
KS21	Milan North St	0.61	2		Pg	16 06 12.6	-0.4
OK050	Pawnee Station	0.63	116	Pg	Pg	16 06 13.3	-0.1
OK050				IAML		16 06 26.1	
	comp=E,3µm,0.2s						
OK045	Pawnee Station	0.65	110	Pg	Pg	16 06 13.7	-0.1
OK045				IAML		16 06 29.4	
	comp=E,4µm,0.3s						
OK045				IAML		16 06 32.7	
	comp=E,3µm,0.2s						
KAN12	Harper NE Stat	0.67	338		Pg	16 06 13.8	-0.2
OK046	Pawnee Station	0.69	114	Pg	Pg	16 06 14.3	-0.1
OK044	Pawnee Station	0.78	113	Pg	Pg	16 06 15.9	-0.2
OK044				IAML		16 06 33.7	
	comp=E,2µm,0.2s						
OK044				IAML		16 06 33.7	
	comp=E,2µm,0.3s						
OK035	E0210 Rd and N	0.82	272		Pg	16 06 16.8	-0.3
OK035				IAML		16 06 32.7	
	comp=E,2µm,0.7s						
OK033	Mehan	0.87	136	Pg	Pg	16 06 17.8	-0.2
OK033				IAML		16 06 32.2	
	comp=E,2µm,0.6s						
OK033				IAML		16 06 35.7	
	comp=E,2µm,0.5s						
OK038	West end E0370	0.87	257	Pg	Pg	16 06 16.8	-1.2
OK029	Liberty Lake	0.90	168	Pg	Pg	16 06 18.3	-0.2
QUOK	Quay	0.94	122	Pg	Pg	16 06 18.8	-0.4
QUOK				IAML		16 06 37.4	
	comp=E,3µm,0.2s						
T35B	Sooner Cattle	0.97	76	P	Pg	16 06 19.4	-0.5
	baz=256						
T35B				S	Sg	16 06 32.0	-0.5
	baz=256						
OK053	SW of W Deep R	0.98	132	Pg	Pg	16 06 19.8	-0.3
OK053				IAML		16 06 39.2	
	comp=E,2µm,0.3s						
OK052	Battle Ridge R	0.99	134		Pg	16 06 19.8	-0.3
OK052				IAML		16 06 35.2	
	comp=E,2µm,0.3s						
OK052				IAML		16 06 39.3	
	comp=E,2µm,0.3s						
OK031	S. Brethren Rd	1.00	136		Pg	16 06 19.9	-0.4
OK031				IAML		16 06 37.7	
	comp=E,2µm,0.8s						
OK031				IAML		16 06 39.6	
	comp=E,1µm,0.6s						
NOKA	Waynoka	1.00	268		Pg	16 06 20.1	-0.4
NOKA				IAML		16 06 40.8	
	comp=N,2µm,0.7s						
NOKA				IAML		16 06 41.1	
	comp=E,1µm,0.2s						
OK034	N. Norfolk Rd.	1.03	130	Pg	Pg	16 06 20.5	-0.5
OK034				IAML		16 06 39.5	
	comp=E,2µm,0.2s						
OK034				IAML		16 06 40.2	
	comp=E,2µm,0.4s						
OK030	Cody Creek RV	1.04	136		Pg	16 06 20.9	-0.4
OK030				IAML		16 06 44.6	
	comp=E,2µm,0.2s						
U32A	Winter Ranch,	1.10	255		Pg	16 06 21.8	-0.5
U32A				IAML		16 06 50.3	
	comp=N,2µm,0.9s						
U32A				IAML		16 06 59.0	
	comp=E,1µm,0.7s						
U32A	Winter Ranch,	1.10	255	P	Pg	16 06 21.6	-0.8
	baz=74						
U32A				S	Sg	16 06 37.0	+0.4
	baz=74						
OK025	Westminster Rd	1.13	166	Pg	Pg	16 06 22.6	-0.4
OK025				IAML		16 06 47.0	
	comp=E,2µm,0.5s						
DEOK	Depew	1.27	131		Pg	16 06 24.6	-1.0
CSTR	Hydro, Custer	1.31	219		Pn	16 06 25.9	-0.4
FNO	Franklin	1.44	171		Pn	16 06 27.6	-0.3
W35A	Tecumseh	1.66	156	Pn	Pn	16 06 31.1	+0.1
TUL1	Leonard	1.71	116		Pn	16 06 31.8	+0.1
TUL1				IAmb_Lg		16 06 56.4	
	comp=Z,530nm,1.0s						
TUL1	Leonard	1.71	116	P	Pn	16 06 32.1	+0.4
	baz=297						
TUL1				S	Sb	16 06 55.1	+0.1
	baz=297						
R32A	Long Quarter,	1.92	335	IAmb_Lg		16 07 04.7	
	comp=Z,275nm,0.8s						
R32A	Long Quarter,	1.92	335	P	Pn	16 06 35.4	+0.8
	baz=155						
R32A				S	Sb	16 07 00.4	-0.7
	baz=155						
WMOK	Wichita Mounta	2.13	205	Pn	Pn	16 06 37.5	0.0
WMOK				IAmb_Lg		16 07 09.1	
	comp=Z,152nm,0.8s						
WMOK	Wichita Mounta	2.13	205	P	Pn	16 06 37.9	+0.4
	baz=24						
RLO	Rose Lookout	2.21	103	Pn	Pn	16 06 38.9	+0.3
KSU1	Kansas State U	2.56	19		Pn	16 06 43.6	+0.2
KSU1	Kansas State U	2.56	19	P	Pn	16 06 44.0	+0.5
	baz=200						
U38A	Gravette	2.67	94	P	Pn	16 06 45.7	+0.8
	baz=276						

CBKS	Cedar Bluff	2.68	323	Pn	Pn	16 06 45.4	+0.3
CBKS	Cedar Bluff	2.68	323	S	Sn	16 07 18.2	+0.2
	baz=142						
LOOK	Love County	2.71	171	Pn	Pn	16 06 46.0	+0.5
LOOK				IAmb_Lg		16 07 34.0	
	comp=Z,165nm,0.9s						
X37A	Clayton	2.81	137	Pn	Pn	16 06 47.9	+1.1
X37A				IAmb_Lg		16 07 37.7	
	comp=Z,311nm,0.8s						
X37A	Clayton	2.81	137	P	Pn	16 06 46.7	-0.1
	baz=319						
X37A				S	Sn	16 07 22.4	+1.3
	baz=319						
WTFS	Witchita Falls	2.98	193	Pn	Pn	16 06 48.8	-0.3
WTFS				IAmb_Lg		16 07 38.0	
	comp=Z,27nm,0.7s						
HHAR	Hobbs	3.04	96	Pn	Pn	16 06 50.2	+0.1
HHAR				IAmb_Lg		16 07 42.4	
	comp=Z,96nm,0.8s						
Z35A	Perchaven, San	3.36	174	P	Pn	16 06 54.7	+0.4
	baz=354						
S39A	Bolivar	3.63	73	IAmb_Lg		16 08 04.8	
	comp=Z,114nm,0.8s						
FW03	Perrin-Whitt E	3.64	185	Pn	Pn	16 06 58.6	+0.4
FW03				IAmb_Lg		16 08 07.1	
	comp=Z,49nm,0.8s						
FW06	Azle	3.70	178	IAmb_Lg		16 08 09.3	
	comp=Z,74nm,1.0s						
AMTX	Amarillo	3.71	242	Pn	Pn	16 07 00.2	+0.9
AMTX				IAmb_Lg		16 08 05.4	
	comp=Z,213nm,0.7s						
AMTX	Amarillo	3.71	242	S	Sn	16 07 44.0	+0.6
	baz=60						
MIAR	Mount Ida	3.97	121	Pn	Pn	16 07 04.1	+1.4
MIAR				IAmb_Lg		16 08 10.3	
	comp=Z,114nm,0.8s						
FW07	Weatherford	3.97	181	Pn	Pn	16 07 03.5	+0.7
FW07				IAmb_Lg		16 08 13.4	
	comp=Z,73nm,0.9s						
N33A	J Bar K, Exete	4.06	3	IAmb_Lg		16 08 09.8	
	comp=Z,82nm,1.0s						
Z38A	Mt. Pleasant	4.07	146	S	Sn	16 07 53.2	+1.1
	baz=328						
FW16	Waxahatchie	4.24	171	IAmb_Lg		16 08 26.9	
	comp=Z,97nm,1.0s						
FW13	Cleburne	4.32	177	Pn	Pn	16 07 08.3	+0.8
FW13				IAmb_Lg		16 08 25.6	
	comp=Z,60nm,1.1s						
ABTX	Abilene, Hawle	4.36	202	Pn	Pn	16 07 07.5	-0.6
P38A	Dawn	4.40	47	IAmb_Lg		16 08 20.6	
	comp=Z,246nm,0.9s						
N35A	Tabor	4.47	20	IAmb_Lg		16 08 26.0	
	comp=Z,219nm,0.8s						
N35A	Tabor	4.47	20	P	Pn	16 07 10.2	+0.6
	baz=201						
X40A	Basin Creek Fa	4.52	118	Pn	Pn	16 07 09.7	-0.5
KSCO	Kaye Shedlock'	4.55	302	IAmb_Lg		16 08 37.0	
	comp=Z,106nm,0.8s						
FCAR	Ozark Folk Cen	4.56	98	IAmb_Lg		16 08 25.4	
	comp=Z,100nm,0.7s						
WHAR	Wooly Hollow	4.59	106	IAmb_Lg		16 08 38.6	
	comp=Z,113nm,0.8s						
R40A	Maddies Statio	4.60	68	IAmb_Lg		16 08 28.4	
	comp=Z,162nm,0.8s						
R40A	Maddies Statio	4.60	68	P	Pn	16 07 11.8	+0.4
	baz=251						
R40A				S	Sn	16 08 04.0	-1.2
	baz=251						
WHTX	Lake Whitney,	4.68	178	Pn	Pn	16 07 12.7	+0.3
WHTX	Lake Whitney,	4.68	178	P	Pn	16 07 12.8	+0.3
	baz=358						
WHTX				S	Sn	16 08 06.1	-1.1
	baz=358						
BGNE	Belgrade	4.74	356	Pn	Pn	16 07 13.1	-0.2
UALR	University of	4.74	112	IAmb_Lg		16 08 33.0	
	comp=Z,83nm,0.8s						
POST	Post	4.78	222	IAmb_Lg		16 08 45.4	
	comp=Z,73nm,1.0s						
WLAR	White Oak Lake	4.79	127	IAmb_Lg		16 08 39.6	
	comp=Z,90nm,1.0s						
237A	Washetta, Mont	4.92	161	IAmb_Lg		16 08 50.7	
	comp=Z,85nm,0.7s						
MSTX	Muleshoe	4.96	238	IAmb_Lg		16 08 52.1	
	comp=Z,58nm,0.9s						
T42A	Van Buren	5.30	84	IAmb_Lg		16 08 56.4	
	comp=Z,85nm,0.7s						
LCAR	Lake Charles	5.30	95	IAmb_Lg		16 08 53.3	
	comp=Z,88nm,0.7s						
L34A	Svendsen Farm,	5.38	10	IAmb_Lg		16 08 58.6	
	comp=Z,137nm,0.8s						
N38A	Joes South For	5.38	39	IAmb_Lg		16 08 59.2	
	comp=Z,164nm,0.8s						
T25A	Trinidad	5.41	277	Pn	Pn	16 07 22.7	-0.1
T25A				IAmb_Lg		16 09 06.2	
	comp=Z,69nm,0.8s						
OGNE	Ogallala	5.45	323	IAmb_Lg		16 09 03.7	
	comp=Z,173nm,0.8s						
NATX	Nacogdoches	5.51	152	IAmb_Lg		16 09 07.1	
	comp=Z,93nm,0.9s						
PBMO	Poplar Bluff	5.83	87	IAmb_Lg		16 09 12.3	
	comp=Z,133nm,0.7s						
435B	Jarrell	5.88	179	IAmb_Lg		16 09 19.0	
	comp=Z,82nm,0.8s						
FVM	French Village	5.93	75	IAmb_Lg		16 09 08.4	
	comp=Z,160nm,0.8s						
SLM	Saint Louis	6.22	69	IAmb_Lg		16 09 20.7	
	comp=Z,140nm,0.9s						
SCIA	State Center	6.27	32	IAmb_Lg		16 09 28.9	
	comp=Z,99nm,0.7s						
JCT	Junction City	6.43	197	IAmb_Lg		16 09 33.6	
	comp=Z,82nm,1.1s						
CGM3	Cape Girardeau	6.46	82	IAmb_Lg		16 09 23.4	
	comp=Z,143nm,0.8s						
N41A	Harden Midland	6.69	51	IAmb_Lg		16 09 47.5	
	comp=Z,148nm,1.0s						
K38A	Parkersburg	7.06	31	IAmb_Lg		16 09 54.4	
	comp=Z,113nm,0.7s						
W45A	Hickory Valley	7.06	100	IAmb_Lg		16 09 51.3	
	comp=Z,84nm,0.8s						
OXF	Oxford	7.08	105	IAmb_Lg		16 09 56.4	
	comp=Z,147nm,1.1s						
Y45A	Yeager Farm, C	7.23	110	IAmb_Lg		16 09 59.8	
	comp=Z,56nm,0.7s						
L40A	Anamosa	7.34	41	IAmb_Lg		16 10 00.9	
	comp=Z,76nm,0.8s						
PHWY	Pilot Hill	7.61	310	IAmb_Lg		16 10 01.7	
	comp=Z,66nm,0.8s						
N23A	Red Feather La	7.70	306	IAmb_Lg		16 10 12.1	
	comp=Z,82nm,0.9s						
SUSD	Miller	7.82	353	IAmb_Lg		16 10 16.3	
	comp=Z,100nm,0.8s						
L42A	Oliver, Polo	8.18	47	IAmb_Lg		16 10 19.1	
	comp=Z,87nm,0.7s						
JFWS	Jewell Farm	8.46	40	IAmb_Lg		16 10 41.7	
	comp=Z,64nm,0.7s						
RSSD	Black Hills	8.87	329	IAmb_Lg		16 11 03.8	
	comp=Z,40nm,0.7s						
I40A	Norwalk	9.00	35	IAmb_Lg		16 10 56.9	
	comp=Z,49nm,0.9s						
K22A	Casper	9.05	314	IAmb_Lg		16 11 03.3	
	comp=Z,62nm,1.0s						
F33A	5 Mile Ranch,	9.21	6	IAmb_Lg		16 10 57.8	
	comp=Z,41nm,1.0s						
K43A	Burlington	9.39	47	IAmb_Lg		16 11 08.0	
	comp=Z,94nm,0.8s						

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*BJI **07** 16:08:15.0±0.0, 41°.43N×142°.31E, h65^{km}, mb4.9/43, mB5.6/21, Ms5.3/36, Ms7 5.2/36*

*MOS **07** 16:08:17.5±1.0, 41°.50N×141°.92E, h59^{km}, mb5.2/69, MS5.3/24, Error ellipse: s-maj=5.2km s-min=3.7km az=108.0*

*NEIC **07** 16:08:18, 41°.51N×141°.97E, h54^{km}*

*NEIC **07** 16:08:19.0±1.1, 41°.52N±0°.05×141°.90E±0°.10, h56^{km}±1^{km}, mb5.2/254, Mwb5.7/52, Mwr5.6/27, Mww5.7, Error ellipse: s-maj=13.0km s-min=8.2km az=115.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.55; $M_{\theta\theta}$-0.02; $M_{\phi\phi}$-1.53; $M_{r\theta}$0.06; $M_{\theta\phi}$-0.77; $M_{\phi r}$2.15; Fault plane solution: $M_0$2.75000×10^{17} NP1:ϕ_s222.20000°, δ22.45000°, λ124.32000°. NP2:ϕ_s5.75000°, δ71.62000°, λ76.89000°. Principal axes: T 2.6824, Plg61.0000°, Azm256.0000°; N 0.1321, Plg12.0000°, Azm10.0000°; P -2.8145, Plg26.0000°, Azm106.0000°; Moment Tensor Solution. Moment tensor: Scale 10^{17} Nm; M_{rr}3.89; $M_{\theta\theta}$0.14; $M_{\phi\phi}$-4.02; $M_{r\theta}$1.18; $M_{\theta\phi}$-0.48; $M_{\phi r}$2.74; Fault plane solution: $M_0$4.98000×10^{17} NP1:ϕ_s176.11000°, δ27.98000°, λ71.81000°. NP2:ϕ_s16.51000°, δ63.53000°, λ99.41000°. Principal axes: T 4.9447, Plg70.0000°, Azm306.0000°; N 0.0614, Plg8.0000°, Azm192.0000°; P -5.0061, Plg18.0000°, Azm100.0000°;*

*BGR **07** 16:08:19.2, 42°.56N×143°.78E, h33^{km}, mb5.1, Ms5.3*

*JMA **07** 16:08:19.0±0.1, 41°.5N±0°.5×142°.0E±0°.7, h65^{km}±2^{km}, MD5.2/40, MW5.7/40, E OFF AOMORI PREF*

JMA Felt III J1 at E OFF AOMORI PREF .

*IDC **07** 16:08:19.9±1.6, 41°.47N×141°.91E, h68^{km}±14^{km}, mb4.4/29, mbtmp4.7/39, MS4.9/72, Error ellipse: s-maj=11.5km s-min=9.8km az=122.0*

*NIED **07** 16:08:19.0, 41°.48N×141°.98E, h65^{km}, MW5.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}1.66; $M_{\theta\theta}$-0.17; $M_{\phi\phi}$-1.49; $M_{r\theta}$1.13; $M_{\theta\phi}$-0.33; $M_{\phi r}$2.50; Fault plane solution: $M_0$3.18000×10^{17} NP1:ϕ_s23.00000°, δ75.00000°, λ95.00000°. NP2:ϕ_s186.00000°, δ16.00000°, λ74.00000°.*

*NEIC **07** 16:08:19, 41°.53N×141°.90E, h55^{km}*

*NEIC **07** 16:08:19, 41°.53N×141°.90E, h55^{km}*

*GCMT **07** 16:08:22.0±0.1, 41°.49N±0°.01×142°.16E±0°.01, h55^{km}, MW5.7/158, Moment Tensor Solution. s146,c279; s158,c329; Duration: 1^{s}7 Moment tensor: Scale 10^{17} Nm; M_{rr}3.56±.06; $M_{\theta\theta}$-0.43±.04; $M_{\phi\phi}$-3.13±.04; $M_{r\theta}$1.23±.04; $M_{\theta\phi}$-1.27±.04; $M_{\phi r}$2.32±.04; Best double couple: $M_0$4.45300×10^{17} NP1:ϕ_s25.00000°, δ63.00000°, λ93.00000°. NP2:ϕ_s198.00000°, δ27.00000°, λ83.00000°. Principal axes: T 4.4250, Plg72.0000°, Azm303.0000°; N 0.0580, Plg3.0000°, Azm204.0000°; P -4.4820, Plg18.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **07** 16:08:26, 41°.41N×142°.24E, h60^{km}, Moment Tensor Solution. Duration: 16^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}3.56; $M_{\theta\theta}$-0.56; $M_{\phi\phi}$-3.00; $M_{r\theta}$0.99; $M_{\theta\phi}$-1.47; $M_{\phi r}$1.57; Fault plane solution: $M_0$4.07000×10^{17} NP1: ϕ_s202.00000°, δ32.00000°, λ84.00000°. NP2:ϕ_s28.00000°, δ59.00000°, λ94.00000°. Principal axes: T 4.0112, Plg76.0000°, Azm309.0000°; N 0.1146, Plg3.0000°, Azm207.0000°; P -4.1258, Plg13.0000°, Azm116.0000°;*

ISC 07 16:08:19.1±0.3**, 41°.49N**±0°.03×**141°.99E**±0°.03**, h61**^{km}±1^{km}**, h61**^{km}**:pP-P, n1105,** σ1^s**44**/1056**, mb5.1**/279**, 40C-63D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAHD	Aomorihigashid	0.54	246	⇓P	Pn	16 08 32.0	+0.4
JAHD				⇓S	Sn	16 08 41.5	+0.9
JAHD	Aomorihigashid	0.54	246	A	A	16 08 32.0	
	comp=E,241nm,1.6s,comp=E,293nm,3.8s						
JARK	Aomorirokkasho	0.67	225	⇓P	Pn	16 08 33.0	-0.1
JARK				⇓eS	Sn	16 08 43.2	-0.1
JARK	Aomorirokkasho	0.67	225	A	A	16 08 33.0	
	comp=E,107nm,3.9s,comp=E,112nm,3.3s						
JOT	Ohata	0.72	262	⇓P	Pn	16 08 33.6	0.0
JOT	Ohata	0.72	262	A	A	16 08 33.6	
	comp=E,51nm,3.0s,comp=E,39nm,2.4s						
JKB	Kayabe	0.82	300	⇓iP	Pn	16 08 34.7	-0.2
JKB				⇓eS	Sn	16 08 45.9	-0.7
JKB	Kayabe	0.82	300	A	A	16 08 34.7	
	comp=E,36nm,4.3s,comp=E,39nm,5.1s						
JNBK	Urakawa-nobuka	0.98	35	i P	Pn	16 08 36.7	-0.2
JNBK	Urakawa-nobuka	0.98	35	A	A	16 08 36.7	
	comp=E,106nm,3.0s,comp=E,174nm,2.4s						
JTM	Tenmabayashi	0.99	225		Pn	16 08 37.0	0.0
JTM				Sn	Sn	16 08 49.4	-0.9
JTM	Tenmabayashi	0.99	225	P	Pn	16 08 37.4	+0.4
JTM	Tenmabayashi	0.99	225	⇓iP	Pn	16 08 37.3	+0.4
JTM				⇓S	Sn	16 08 50.8	+0.5
JTM	Tenmabayashi	0.99	225	A	A	16 08 37.3	
	comp=E,62nm,1.7s,comp=E,73nm,3.4s						
JSHD	Hidakashinhida	0.99	21	A	A	16 08 37.4	
	comp=E,128nm,4.0s,comp=E,159nm,4.4s						
ERM	Erimo	1.02	58		Pn	16 08 37.6	+0.2
ERM	Erimo	1.02	58	P	Pn	16 08 38.2	+0.8
ERM	Erimo	1.02	58	c iP	Pn	16 08 37.7	+0.3
JEM	Erimo	1.02	58	P	Pn	16 08 38.1	+0.7
JEM	Erimo	1.02	58	i P	Pn	16 08 37.7	+0.3
JEM	Erimo	1.02	58	A	A	16 08 37.7	
	comp=E,225nm,4.5s,comp=E,115nm,4.4s						
JIAM	Iburiatsuma	1.14	357	⇓iP	Pn	16 08 40.0	+1.0
JIAM	Iburiatsuma	1.14	357	A	A	16 08 40.0	
	comp=E,109nm,1.0s,comp=E,137nm,5.2s						
JANG	Nango	1.17	198	i P	Pn	16 08 39.2	-0.2
JANG				S	Sn	16 08 54.2	-0.3
JANG	Nango	1.17	198	A	A	16 08 39.2	
	comp=E,66nm,3.2s,comp=E,65nm,3.2s						
JSR	Shiriuchi	1.18	273	⇓iP	Pn	16 08 39.8	+0.2
JSR	Shiriuchi	1.18	273	A	A	16 08 39.8	
	comp=E,26nm,2.8s,comp=E,20nm,8.3s						
JNB	Noboribetsu	1.21	324	⇓iP	Pn	16 08 39.6	-0.4
JNB				⇓S	Sn	16 08 55.2	-0.3
JNB	Noboribetsu	1.21	324	A	A	16 08 39.6	
	comp=E,20nm,2.0s,comp=E,21nm,7.2s						
JTHR	Tokachihiroo	1.27	50	A	A	16 08 41.1	
	comp=E,139nm,4.1s,comp=E,69nm,1.2s						
JSI2	Shiura 2	1.27	251	A	A	16 08 40.9	
	comp=E,41nm,1.4s,comp=E,50nm,4.8s						
JKEN	Kujiedanarisaw	1.30	190	A	A	16 08 41.3	
	comp=E,128nm,1.5s,comp=E,105nm,0.3s						
JBT2	Biratori 2	1.32	12	⇓iP	Pn	16 08 42.0	+0.5
JBT2				⇓eS	Sn	16 08 59.3	+1.1
JBT2	Biratori 2	1.32	12	A	A	16 08 42.0	
	comp=E,54nm,4.8s,comp=E,50nm,5.1s						
JYM2	Yakumo 2	1.37	298	⇓iP	Pn	16 08 42.6	+0.6
JYM2	Yakumo 2	1.37	298	A	A	16 08 42.6	
	comp=E,17nm,2.6s,comp=E,26nm,2.4s						
JEW	Eniwo	1.41	344	⇓iP	Pn	16 08 43.1	+0.5
JEW				⇓eS	Sn	16 09 00.6	+0.3
JEW	Eniwo	1.41	344	A	A	16 08 43.1	
	comp=E,68nm,1.2s,comp=E,80nm,5.7s						
JHHS	Hirosakihyakuz	1.49	237	A	A	16 08 43.9	
	comp=E,67nm,1.7s,comp=E,125nm,2.7s						
JOMM	Oshimamatsumae	1.49	272	P	Pn	16 08 43.7	+0.1
JOMM	Oshimamatsumae	1.49	272	A	A	16 08 43.7	
	comp=E,18nm,8.1s,comp=E,14nm,8.1s						
JCH	Churui	1.52	42	i P	Pn	16 08 45.0	+0.9
JCH	Churui	1.52	42	A	A	16 08 45.0	
	comp=E,112nm,5.8s,comp=E,58nm,3.4s						
JTH	Tanohata	1.55	184	A	A	16 08 44.8	
	comp=E,38nm,5.0s,comp=E,28nm,3.2s						
JKZ	Kuzumaki	1.58	199	A	A	16 08 45.2	
	comp=E,31nm,2.3s,comp=E,26nm,4.8s						
JAH	Hinai	1.65	219	⇓iP	Pn	16 08 46.7	+0.8
JAH				⇓eS	Sn	16 09 08.3	+2.2
JAH	Hinai	1.65	219	A	A	16 08 46.7	
	comp=E,34nm,1.8s,comp=E,32nm,1.6s						
JFR	Furan	1.74	15	A	A	16 08 47.6	
	comp=E,32nm,4.0s,comp=E,25nm,6.7s						
JIW	Iwasaki	1.75	240	A	A	16 08 47.5	
	comp=E,33nm,1.0s,comp=E,27nm,0.9s						
JHST	Hiyamasetana	1.84	301	A	A	16 08 48.8	
	comp=E,21nm,2.7s,comp=E,17nm,2.7s						
JISS	Ishikarishitsu	1.84	347	A	A	16 08 48.9	
	comp=E,55nm,3.3s,comp=E,73nm,6.2s						
JNTW	Noshirotokiwa	1.84	229	A	A	16 08 48.8	
	comp=E,103nm,3.7s,comp=E,120nm,3.1s						
MIYJ	Miyakonagasawa	1.91	184	A	A	16 08 49.9	
	comp=E,73nm,4.0s,comp=E,23nm,1.9s						
JSZI	Iwateshizukuis	1.91	205	A	A	16 08 50.4	
	comp=E,102nm,2.8s,comp=E,67nm,4.4s						
JOB	Onbets	1.97	43	A	A	16 08 50.9	
	comp=E,75nm,3.8s,comp=E,71nm,4.7s						
JOSM	Okushiri--Mats	1.98	288	i P	Pn	16 08 50.0	-0.2
JOSM	Okushiri--Mats	1.98	288	A	A	16 08 50.0	
	comp=E,13nm,6.4s,comp=E,11nm,7.0s						
JAB	Ashibetsu	2.03	5	A	A	16 08 51.6	
	comp=E,40nm,4.0s,comp=E,65nm,3.5s						
JOM	Ohasama	2.08	195	A	A	16 08 52.2	
	comp=E,41nm,2.2s,comp=E,32nm,2.7s						
JAR	Ashorobuto	2.24	35	A	A	16 08 54.7	
	comp=E,35nm,3.2s,comp=E,25nm,4.7s						
JHR	Hokuryu	2.27	355	A	A	16 08 55.0	
	comp=E,42nm,3.5s,comp=E,36nm,2.8s						
JRG	Rokugo	2.33	207	A	A	16 08 55.7	
	comp=E,34nm,5.8s,comp=E,32nm,3.0s						
JYW	Yuwa	2.37	216	A	A	16 08 56.3	
	comp=E,42nm,2.6s,comp=E,64nm,2.6s						
OFUJ	Ofunato	2.42	186	A	A	16 08 56.9	
	comp=E,56nm,3.7s,comp=E,22nm,4.4s						
JKK2	Kamakawa 2	2.45	13	A	A	16 08 57.6	
	comp=E,14nm,2.2s,comp=E,21nm,2.0s						
JAK	Akkeshi	2.51	52	A	A	16 08 58.5	
	comp=E,63nm,3.9s,comp=E,52nm,4.6s						
JMK	Ichinoseki	2.60	193	A	A	16 08 59.5	
	comp=E,25nm,2.9s,comp=E,16nm,5.8s						
ASAJ	Asahikawa	2.67	9	P	Pn	16 09 00.3	+0.6
	142nm,0.3s,baz=215,slow=12,SNR=373						
ASAJ				S	Sn	16 09 31.4	+0.5
	505nm,0.4s,baz=222,slow=20,SNR=4.9						
ASAJ	Asahikawa	2.67	9	A	A	16 09 00.6	
	comp=E,19nm,6.3s,comp=E,15nm,5.6s						
JKA	Kamikawa-asahi	2.67	9	Pn	Pn	16 08 60.0	+0.3
JKMT	Kesennumamotoy	2.70	189	A	A	16 09 00.9	
	comp=E,24nm,3.8s,comp=E,15nm,2.7s						
JOG3	Oga3	2.71	236	A	A	16 08 55.0	
	comp=E,40nm,2.0s,comp=E,28nm,6.1s						
JMP	Maruseppu	2.71	21	A	A	16 09 01.3	
	comp=E,17nm,3.2s,comp=E,13nm,1.8s						
JKHN	Kushirohamanak	2.84	55	A	A	16 09 03.1	
	comp=E,52nm,7.4s,comp=E,66nm,4.3s						
JYK	Kaneyama	2.85	207	A	A	16 09 03.0	
	comp=E,18nm,5.3s,comp=E,17nm,3.1s						
JTKR	Abashiri--Toko	2.86	29	A	A	16 09 03.3	
	comp=E,13nm,2.6s,comp=E,12nm,2.3s						
JNK	Nakash	2.91	43	A	A	16 09 04.1	
	comp=E,17nm,6.8s,comp=E,17nm,6.4s						
JSS	Shosan	2.92	358	A	A	16 09 04.1	
	comp=E,33nm,7.2s,comp=E,39nm,6.6s						
JYYZ	Yamagatayuza	2.93	213	A	A	16 09 04.1	
	comp=E,45nm,3.8s,comp=E,42nm,3.7s						
JTB	Tobi-shima	2.95	220	A	A	16 09 04.4	
	comp=E,19nm,5.1s,comp=E,19nm,2.4s						
JYG	Yagishiri	2.97	352	A	A	16 09 04.9	
	comp=E,14nm,6.9s,comp=E,19nm,5.7s						
JOFO	Osakifurukawao	3.00	196	A	A	16 09 05.1	
	comp=E,146nm,3.5s,comp=E,120nm,2.6s						
JIO	Ouri	3.07	189	A	A	16 09 06.1	
	comp=E,29nm,4.8s,comp=E,19nm,4.5s						
JNSB	Nemuroshibetsu	3.19	43	A	A	16 09 08.0	
	comp=E,57nm,3.6s,comp=E,55nm,3.0s						
JOU	Okura	3.28	199	A	A	16 09 09.0	
	comp=E,22nm,2.6s,comp=E,22nm,2.7s						
NMR	Nemuro--Hokkai	3.34	54	⇓iP	Pn	16 09 07.0	-1.9
NMR				eS	Sn	16 09 43.2	-4.2
NEM2	Nemuro 2	3.35	55	A	A	16 09 10.3	
	comp=E,27nm,3.8s,comp=E,21nm,4.7s						
JRA	Rausu	3.37	42	A	A	16 09 10.5	
	comp=E,23nm,5.4s,comp=E,19nm,5.5s						
JYA	Atsumi	3.38	212	A	A	16 09 10.4	
	comp=E,18nm,2.9s,comp=E,21nm,1.0s						
JSE	Soyaes	3.50	7	A	A	16 09 12.3	
	comp=E,12nm,8.8s,comp=E,8.0nm,3.3s						
RUSJ	Misakicho	3.55	41	⇓iP	Pn	16 09 12.1	+0.4
RUSJ				eS	Sn	16 09 54.3	+2.0
JYS	Shirataka	3.58	205	A	A	16 09 13.2	
	comp=E,35nm,2.5s,comp=E,37nm,2.6s						
JRR	Rishiri	3.69	352	A	A	16 09 14.9	
	comp=E,46nm,4.2s,comp=E,56nm,4.7s						
JAW	Awa shima	3.69	216	A	A	16 09 14.7	
	comp=E,15nm,2.9s,comp=E,13nm,6.8s						
JMM	Marumori	3.73	195		Pn	16 09 14.3	+0.1
JMM	Marumori	3.73	195	P	Pn	16 09 16.2	+2.0
JMM	Marumori	3.73	195	A	A	16 09 15.3	
	comp=E,22nm,4.0s,comp=E,19nm,4.7s						
YUK	Yuzh-Kuril'sk	3.82	47	d iP	Pn	16 09 15.1	-0.3
YUK				eS	Sn	16 09 57.4	-1.6
YUK				pmax	pmax		
	comp=Z,3µm,0.3s						
YUK				pmax	pmax		
	comp=N,456nm,0.2s						
YUK				pmax	pmax		
	comp=E,635nm,0.2s						
YUK				smax	smax		
	comp=E,12µm,0.6s						
YUK				smax	smax		
	comp=N,10µm,0.4s						
JWK2	Keihoku	3.83	359	A	A	16 09 16.9	
	comp=N,14nm,3.6s,comp=N,18nm,4.1s						
JYAR	Yonezawaarcadi	3.84	202	A	A	16 09 16.9	
	comp=N,27nm,1.4s,comp=N,28nm,4.1s						
JMST	Minamisoumatoc	3.85	193	A	A	16 09 17.1	
	comp=N,25nm,2.7s,comp=N,22nm,3.4s						
JRBN	Rebuntou	4.00	351	A	A	16 09 19.2	
	comp=N,4.0nm,6.0s,comp=N,3.0nm,6.5s						
JOTO	OTAMA OYAMA	4.12	199	A	A	16 09 20.9	
	comp=N,20nm,2.3s,comp=N,22nm,4.9s						
JFK	Kawauchi	4.20	192	A	A	16 09 22.0	
	comp=N,19nm,5.0s,comp=N,14nm,5.8s						
JNS	Sasagawa	4.20	210	A	A	16 09 21.9	
	comp=N,8.0nm,3.3s,comp=N,9.0nm,3.7s						
SHO	Shikotan	4.29	55	⇓iP	Pn	16 09 20.0	-1.8
SHO				eS	Sn	16 10 05.8	-4.7
SHO				pmax	pmax		
	comp=Z,378nm,0.3s						
SHO				pmax	pmax		
	comp=N,180nm,0.2s						
SHO				pmax	pmax		
	comp=E,280nm,0.2s						
SHO				smax	smax		
	comp=N,3µm,0.3s						
SHO				smax	smax		
	comp=E,2µm,0.2s						
JFY	Yanaizu	4.44	204	A	A	16 09 25.3	
	comp=E,12nm,3.1s,comp=E,12nm,4.2s						
ONAJ	Iwakimizuishiy	4.47	192	A	A	16 09 25.7	
	comp=E,16nm,4.4s,comp=E,13nm,3.1s						
JSD	Sado	4.49	221	Pn	Pn	16 09 24.1	-0.4
JSD	Sado	4.49	221	P	Pn	16 09 26.5	+2.0
JFFD	Fukushimafurud	4.53	195	A	A	16 09 26.5	
	comp=E,20nm,6.6s,comp=E,8.0nm,5.5s						
JIZZ	Izumozaki	4.69	214	A	A	16 09 28.8	
	comp=E,31nm,3.4s,comp=E,31nm,3.6s						
JSB	Shiboa	4.79	200	A	A	16 09 30.1	
	comp=E,23nm,2.5s,comp=E,24nm,4.4s						
JUON	Uonuma	4.84	209	A	A	16 09 30.8	
	comp=E,6.0nm,3.2s,comp=E,6.0nm,5.8s						
JHO	Hitachi	4.99	193	A	A	16 09 33.0	
	comp=E,7.0nm,7.5s,comp=E,7.0nm,5.0s						
JKT	Katashina	5.17	205	A	A	16 09 35.5	
	comp=E,15nm,4.5s,comp=E,13nm,5.0s						
JHYU	Hitachinakayam	5.25	192	A	A	16 09 36.7	
	comp=E,9.0nm,4.7s,comp=E,9.0nm,3.4s						
JJN	Nakama	5.29	215	A	A	16 09 37.1	
	comp=E,12nm,4.6s,comp=E,13nm,2.4s						
TEY	Ternei	5.30	314	⇑eP	Pn	16 09 36.2	+0.6
TEY				pmax	pmax		
	comp=N,30nm,0.7s						
TEY				pmax	pmax		
	comp=E,30nm,0.7s						
TEY				pmax	pmax		
	comp=Z,30nm,0.7s						
JAG	Ashikaga	5.43	202	A	A	16 09 39.0	
	comp=Z,7.0nm,4.1s,comp=Z,9.0nm,5.1s						
JYT	Yasato	5.43	196	A	A	16 09 39.1	
	comp=Z,20nm,2.5s,comp=Z,12nm,3.0s						
YSS	Yuzh-Sakhalins	5.50	5	Pn	Pn	16 09 39.0	+0.7
YSS	Yuzh-Sakhalins	5.50	5	P	Pn	16 09 40.8	+2.5
YSS	Yuzh-Sakhalins	5.50	5	⇑eP	Pn	16 09 39.9	+1.6
YSS				eS	Sn	16 10 39.8	-0.3
YSS				pmax	pmax		
	comp=Z,900nm,4.9s						
YSS				pmax	pmax		
	comp=N,290nm,1.2s						
YSS				pmax	pmax		
	comp=Z,210nm,1.2s						
YSS				smax	smax		
	comp=E,2µm,5.7s						
YSS				smax	smax		
	comp=N,200nm,0.8s						
YSS				smax	smax		
	comp=E,120nm,0.8s						
YSS				MLR	MLR		
	comp=E,6µm,16.0s						
YSS				MLR	MLR		
	comp=Z,9µm,16.0s						
JGK	Kuni	5.56	209	A	A	16 09 41.0	
	comp=Z,11nm,3.2s,comp=Z,11nm,6.7s						
JIHU	Itakohorinouch	5.63	192	A	A	16 09 41.9	
	comp=Z,53nm,4.0s,comp=Z,46nm,6.6s						
KUR	Kuril'sk	5.69	47	eP	Pn	16 09 42.5	+1.5
KUR				eS	Sn	16 10 45.2	+0.4
KUR				pmax	pmax		
	comp=Z,1µm,0.6s						
KUR				pmax	pmax		
	comp=E,383nm,0.5s						

KUR				pmax	pmax		
	comp=N,238nm,0.9s						
KUR				smax	smax		
	comp=E,1µm,0.8s						
KUR				smax	smax		
	comp=N,531nm,0.5s						
KUR				smax	smax		
	comp=E,23µm,8.8s						
KUR				smax	smax		
	comp=N,13µm,5.0s						
MJB9	Matsu-Tunnel	5.75	212	Pn	Pn	16 09 45.4	+3.5
MAJO	Matsushiro	5.75	212	Pn	Pn	16 09 44.5	+2.6
MAJO	Matsushiro	5.75	212	P	Pn	16 09 45.1	+3.2
MAJO	Matsushiro	5.75	212	P	Pn	16 09 44.5	+2.6
MJAR	Matsushiro Arr	5.75	212	P	Pn	16 09 43.9	+2.1
	comp=N,43nm,0.7s,baz=23,slow=13,SNR=45						
MJAR				LR	LR	16 12 24.1	
	comp=N,12µm,21.2s,baz=30,slow=43						
CHOJ	Chosi	5.84	189	A	A	16 09 44.8	
	comp=N,12nm,3.0s,comp=N,10.0nm,1.9s						
JRY	Ryogami san	5.97	205	A	A	16 09 46.6	
	comp=N,6.0nm,5.4s,comp=N,10.0nm,5.2s						
JHU	Hanno	6.01	202	A	A	16 09 47.2	
	comp=N,8.0nm,4.6s,comp=N,12nm,5.2s						
TOK	Tokyo	6.05	198	A	A	16 09 47.7	
	comp=N,44nm,4.4s,comp=N,47nm,5.2s						
JCN	Nagara	6.22	194	A	A	16 09 50.1	
	comp=N,48nm,4.1s,comp=N,43nm,3.7s						
JGF	Kuroka	6.91	213	Pn	Pn	16 09 58.2	+0.4
JGF	Kuroka	6.91	213	P	Pn	16 10 02.0	+4.3
INU	Inuyama	7.26	214	Pn	Pn	16 10 02.9	+0.3
INU	Inuyama	7.26	214	P	Pn	16 10 06.6	+4.0
UGL	Uglegorsk	7.59	0	*e*P	Pn	16 10 13.3	+6.3
UGL				S	Sn	16 11 23.6	-7.9
UGL				pmax	pmax		
	comp=Z,56nm,0.8s						
VLA	Vladivostok	7.67	286	⇑*e*P	Pn	16 10 08.2	+0.1
USA0B	Ussuriysk Arra	7.84	294		Pn	16 10 08.9	-1.4
USA0B	Ussuriysk Arra	7.84	294	P	Pn	16 10 09.0	-1.4
USRK	Ussuriysk Ar.	7.84	294	P	Pn	16 10 10.6	+0.3
	comp=Z,22nm,0.7s,baz=97,slow=13,SNR=37						
USRK				LR	LR	16 13 20.1	
	comp=Z,11µm,19.3s,baz=95,slow=39						
USRK	Ussuriysk Ar.	7.84	294	Pn	Pn	16 10 09.6	-0.8
JHJ	Hachijo jima 2	8.53	193	P	Pn	16 10 19.4	-0.5
	comp=Z,87nm,0.3s,baz=298,slow=23,SNR=8.4						
JHJ				S	Sn	16 11 49.5	-5.2
	comp=Z,292nm,0.8s,baz=237,slow=23,SNR=1.1						
JHJ2	Mitsune	8.54	192	Pn	Pn	16 10 19.6	-0.3
TYV	Tymovskoe	9.39	3	*e*P	Pn	16 10 33.8	+2.2
TYV				*e*S	Sn	16 12 21.7	+6.2
TYV				pmax	pmax		
	comp=Z,200nm,3.5s						
TYV				pmax	pmax		
	comp=Z,20nm,1.1s						
TYV				smax	smax		
	comp=N,42nm,1.4s						
TYV				smax	smax		
	comp=E,41nm,1.4s						
TYV				smax	smax		
	comp=N,900nm,5.6s						
TYV				smax	smax		
	comp=E,2µm,5.6s						
TYV				MLR	MLR		
	comp=N,9µm,18.0s						
TYV				MLR	MLR		
	comp=Z,9µm,18.0s						
JHS	Saijyo	9.52	230	Pn	Pn	16 10 34.0	+0.5
JHS	Saijyo	9.52	230	P	Pn	16 10 38.1	+4.6
MDJ	Mudanjiang	9.60	293	P	Pn	16 10 36.6	+2.1
MDJ				sP		16 10 52.7	
MDJ				S	Sn	16 12 30.7	+10
MDJ				SS		16 12 41.7	
MDJ				PcP	PcP	16 16 46.4	+0.4
MDJ				pmax	pmax		
	comp=Z,530nm,6.0s						
MDJ				LR	LR		
	comp=Z,4µm,16.8s						
MDJ				LR	LR		
	comp=Z,11µm,21.4s						
MDJ				LR	LR		
	comp=Z,18µm,25.0s						
MDJ	Mudanjiang	9.60	293	Pn	Pn	16 10 32.5	-2.0
GRNR	Gornyy	10.05	339	⇑*i*P	Pn	16 10 42.8	+2.1
GRNR				*e*S	Sn	16 12 37.9	+6.1
GRNR				pmax	pmax		
	comp=N,4.0nm,0.7s						
GRNR				pmax	pmax		
	comp=E,3.0nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GRNR				smax	smax		
	comp=N,7.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,3µm,13.0s						
GRNR				MLR	MLR		
	comp=Z,5µm,18.0s						
KLR	Kul'dur	10.57	321	P	Pn	16 10 47.8	0.0
	comp=Z,21nm,1.2s,baz=124,slow=14,SNR=23						
KLR				LR	LR	16 15 00.7	
	comp=Z,12µm,20.6s,baz=133,slow=38						
KLR	Kul'dur	10.57	321	*de*P	Pn	16 10 49.5	+1.8
BNX	BinXian	11.40	297	⇓P	Pn	16 11 01.9	+2.9
BNX				pmax	pmax		
	comp=Z,15nm,0.8s						
KSRS	Korea Array	11.59	254	P	Pn	16 11 06.0	+4.3
	comp=Z,41nm,0.7s,baz=63,slow=14,SNR=31						
KSRS				S	Sn	16 13 13.6	+4.1
	comp=Z,6.5nm,0.7s,baz=68,slow=23,SNR=3.1						
KSRS				LR	LR	16 15 09.9	
	comp=Z,8µm,21.2s,baz=60,slow=36						
KS19	Wonju Array Si	11.62	255	Pn	Pn	16 11 01.2	-0.8
KSAR	Wonju Array Be	11.63	254	Pn	Pn	16 11 01.8	-0.4
KSAR	Wonju Array Be	11.63	254	P	Pn	16 11 01.8	-0.4
NKL	Nikolayevsk	11.71	356	*e*P	Pn	16 11 00.5	-2.6
NKL				*e*S	Sn	16 13 11.4	-0.6
NKL				pmax	pmax		
	comp=E,93nm,1.2s						
NKL				pmax	pmax		
	comp=Z,245nm,1.2s						
NKL				pmax	pmax		
	comp=N,94nm,1.0s						
NKL				smax	smax		
	comp=N,355nm,8.0s						
NKL				smax	smax		
	comp=E,596nm,8.0s						
NKL				MLR	MLR		
	comp=E,6µm,16.0s						
NKL				MLR	MLR		
	comp=N,13µm,15.0s						
NKL				MLR	MLR		
	comp=Z,23µm,19.0s						
OKH	Okha	12.09	3	*de*P	P	16 11 14.3	-4.8
OKH				*i* S	Sn	16 13 29.7	+8.4
OKH				pmax	pmax		
	comp=Z,400nm,8.9s						
OKH				smax	smax		
	comp=E,1µm,12.7s						
OKH				MLR	MLR		
	comp=N,8µm,18.0s						
JNU	Nakatsue	12.16	230	P	Pn	16 11 10.4	+1.0
	comp=N,12nm,0.6s,baz=46,slow=6.8,SNR=7.1						
JNU				LR	LR	16 15 45.4	
	comp=N,7µm,21.6s,baz=36,slow=37						
CN2	Changchun	12.40	286	P	P	16 11 17.8	-4.9
CN2				pmax	pmax		
	comp=N,10.0nm,0.6s						
CN2				LR	LR		
	comp=N,3µm,17.0s						
CN2				LR	LR		
	comp=N,10µm,17.0s						
CN2				LR	LR		
	comp=N,10µm,19.0s						
HEH	HeiHe	13.40	316	*e*P	Pn	16 11 27.4	+1.2
HEH				pP	P	16 11 35.8	+2.1
HEH				S	Sn	16 13 58.1	+4.7
HEH				SS	SnSn	16 14 09.6	+3.4
HEH				pmax	pmax		
	comp=N,670nm,9.7s						
HEH				LR	LR		
	comp=N,3µm,16.3s						
HEH				LR	LR		
	comp=N,3µm,17.7s						
HEH				LR	LR		
	comp=N,3µm,17.4s						
SKR	Severo-Kuril's	13.42	42	*e*P	Pn	16 11 24.3	-2.2
SKR				pmax	pmax		
	comp=Z,107nm,0.8s						
JSU	Suzuyama	13.60	227		Pn	16 11 28.1	-1.0
SNY	Shenyang	13.78	278	⇓P	P	16 11 39.1	+1.2
SNY				S	S	16 14 20.4	-1.3
SNY				pmax	pmax		
	comp=Z,30nm,1.2s						
SNY				pmax	pmax		
	comp=Z,2µm,10.5s						
SNY				LR	LR		
	comp=N,4µm,15.8s						
SNY				LR	LR		
	comp=E,7µm,16.9s						
SNY				LR	LR		
	comp=Z,8µm,15.7s						
JCJ	Chichijima	14.36	179	P	Pn	16 11 38.6	-0.5
	comp=Z,28nm,0.3s,baz=270,slow=23,SNR=5.5						
JCJ				S	Sn	16 14 09.3	-7.5
	comp=Z,109nm,0.7s,baz=270,slow=21,SNR=1.6						
JCJ				LR	LR	16 19 12.2	
	comp=Z,876nm,20.5s,baz=349,slow=46						
PETK	Petropavlovsk-	15.73	37	P	Pn	16 11 56.0	-0.6
	comp=Z,3.5nm,0.8s,baz=189,slow=7.7,SNR=11						
ZEA	Zeya	15.74	326	*e*P	Pn	16 11 55.7	-1.1
ZEA				pmax	pmax		
	comp=E,20nm,1.0s						
ZEA				pmax	pmax		
	comp=N,30nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,60nm,0.9s						
ZEA				MLR	MLR		
	comp=E,2µm,13.0s						
ZEA				MLR	MLR		
	comp=N,3µm,14.0s						
ZEA				MLR	MLR		
	comp=Z,3µm,16.0s						
DL2	Dalian	15.77	267	P	Pn	16 11 57.5	+0.2
DL2				pmax	pmax		
	comp=Z,73nm,1.0s						
DL2				LR	LR		
	comp=Z,5µm,12.3s						
DL2				LR	LR		
	comp=Z,1µm,11.9s						
DL2				LR	LR		
	comp=Z,5µm,13.8s						
PET	Petropavlovsk	16.11	39	⇓*e*P	Pn	16 12 02.6	+1.1
PET				pmax	pmax		
	comp=Z,14nm,1.1s						
HIA	Hailar	17.42	304		Pn	16 12 16.6	-1.2
HIA	Hailar	17.42	304	P	Pn	16 12 16.6	-1.2
HIA				pmax	pmax		
	comp=Z,17nm,0.9s						
JOW	Kunigami	18.47	222	P	P	16 12 29.4	-0.6
	comp=Z,25nm,0.9s,baz=41,slow=12,SNR=2.7						
JOW				LR	LR	16 19 54.3	
	comp=Z,6µm,21.1s,baz=39,slow=38						
MA2	Magadan	18.92	14	P	P	16 12 34.5	-0.2
	comp=Z,27nm,0.8s,baz=200,slow=11,SNR=9.0						
MA2				LR	LR	16 20 57.2	
	comp=Z,2µm,19.5s,baz=204,slow=40						
MA2	Magadan	18.92	14		P	16 12 34.4	-0.2
MA2	Magadan	18.92	14	*ce*P	P	16 12 34.7	0.0
MA2				pmax	pmax		
	comp=Z,18nm,1.1s						
XLT	XiLinHaoTe	19.18	286	*e*P	P	16 12 38.0	+0.3
XLT				pP	pP	16 12 50.0	-0.7
XLT				sP	sP	16 12 59.2	+0.8
XLT				sS	sS	16 16 34.7	+2.1
XLT				pmax	pmax		
	comp=Z,1µm,11.8s						
XLT				LR	LR		
	comp=Z,8µm,14.5s						
XLT				LR	LR		
	comp=Z,8µm,20.0s						
BJI	Beijing	19.59	274	P	P	16 12 41.1	-1.0
BJI				pP	pP	16 12 53.0	-2.2
BJI				sP	sP	16 13 02.2	-0.7
BJI				S	S	16 16 11.6	-8.3
BJI				PcP	PcP	16 17 00.3	+0.6
BJI				LR	LR		
	comp=Z,6µm,16.3s						
BJI				LR	LR		
	comp=Z,4µm,17.5s						
BJI				LR	LR		
	comp=Z,8µm,17.3s						
BJT	Baijiatuau	19.60	274	P	P	16 12 41.9	-0.4
BJT	Baijiatuau	19.60	274	P	P	16 12 41.9	-0.4
BJT				pmax	pmax		
	comp=Z,57nm,1.1s						
TIA	Tai'an	20.04	263	*e*P	P	16 12 45.5	-1.6
NJ2	Nanjing	20.74	250	*e*P	P	16 12 54.3	-0.3
NJ2				pP	pP	16 13 05.5	-2.4
NJ2				sP	sP	16 13 13.1	-2.4
NJ2				LR	LR		
	comp=Z,7µm,15.7s						
NJ2				LR	LR		
	comp=Z,5µm,14.1s						
NJ2				LR	LR		
	comp=Z,7µm,19.6s						
HNS	HongShan	21.43	268	⇑P	P	16 12 59.2	-2.7
YAK	Yakutsk	21.87	344	P	P	16 13 04.0	-2.4
	comp=Z,9.8nm,0.4s,baz=139,slow=2.8,SNR=15						
YAK				LR	LR	16 22 06.4	
	comp=Z,3µm,18.3s,baz=174,slow=38						
YAK	Yakutsk	21.87	344	P	P	16 13 04.2	-2.2
YAK				IAmb	IAmb	16 13 10.3	
	comp=Z,65nm,0.8s						
YAK	Yakutsk	21.87	344	*e*P	P	16 13 03.1	-3.3
YAK				*e*		16 13 26.1	
YAK				*e*S	S	16 17 01.5	-2.9
YAK				*e*		16 17 02.3	
YAK				*e**SS	sS	16 17 23.1	-2.7
YAK				*e*SS	SnSn	16 17 33.5	-0.1
YAK				pmax	pmax		
	comp=N,16nm,0.9s						
YAK				pmax	pmax		
	comp=Z,75nm,0.9s						
YAK				smax	smax		
	comp=N,330nm,2.0s						
YAK				smax	smax		
	comp=E,65nm,1.6s						
CIT	Chita	22.01	308	*e*P	P	16 13 09.4	+1.2
CIT				*e*		16 13 29.2	
CIT				*e*		16 13 43.1	
CIT				*e*		16 17 38.0	
SEY	Seymchan	22.35	13	P	P	16 13 09.2	-2.5
	comp=E,8.2nm,0.7s,baz=204,slow=8.5,SNR=23						
SEY				LR	LR	16 22 14.4	
	comp=E,3µm,21.9s,baz=199,slow=37						
SEY	Seymchan	22.35	13	⇑*e*P	P	16 13 09.7	-1.9
SEY				pmax	pmax		
	comp=Z,17nm,1.3s						
HHC	Hu-ho-hao-te	22.86	279	*e*P	P	16 13 16.4	-1.0
HHC				pmax	pmax		
	comp=Z,33nm,0.9s						
HHC				pmax	pmax		
	comp=Z,3µm,5.8s						
YHNB	Yeheng	23.98	232	P	P	16 13 28.3	+0.3
BOD	Bodaibo	24.14	322	*e*P	P	16 13 27.6	-1.5
BOD				pmax	pmax		
	comp=Z,14nm,0.9s						
LYN	LuoYang	24.19	263	⇑*i*P	P	16 13 37.4	+7.6
LYN				pP	sP	16 13 49.4	-2.5
LYN				pmax	pmax		
	comp=Z,14nm,0.4s						
WHN	Wuhan	24.78	253	⇓P	P	16 13 34.3	-0.9
WHN				pP	pP	16 13 50.5	+0.5
WHN				sP	sP	16 13 59.7	+2.4
ULN	Ulaanbaatar	25.50	296	P	P	16 13 41.1	-0.6
ULN	Ulaanbaatar	25.50	296	P	P	16 13 41.1	-0.6
ULN				pmax	pmax		
	comp=Z,15nm,0.9s						
SONM	Songino Array	25.94	296	P	P	16 13 45.1	-0.7
	comp=Z,6.0nm,0.7s,baz=89,slow=8.8,SNR=40						
SONM				LR	LR	16 24 48.8	
	comp=Z,8µm,18.0s,baz=86,slow=38						
	comp=Z,6.0nm,0.7s						
SONM	Songino Array	25.94	296	P	P	16 13 45.0	-0.7
SONM	Songino Array	25.94	296	P	P	16 13 45.0	-0.7
SONM				pmax	pmax		
	comp=Z,47nm,1.5s						
XAN	Xi'an	27.06	265	P	P	16 13 56.2	+0.4
XAN				pP	pP	16 14 11.2	+0.5
XAN				sP	sP	16 14 17.8	-0.1
XAN				S	S	16 18 30.5	+1.1
XAN				pmax	pmax		
	comp=Z,20nm,0.8s						
XAN				LR	LR		
	comp=Z,2µm,13.1s						
XAN				LR	LR		
	comp=Z,3µm,13.1s						
XAN				LR	LR		
	comp=Z,4µm,13.1s						
IRK	Irkutsk	27.64	306	*e*P	P	16 14 00.2	-0.6
IRK				pmax	pmax		
	comp=Z,94nm,2.7s						
GUMO	Guam	27.91	174	LR	LR	16 25 06.6	
	comp=Z,2µm,21.6s,baz=7.0,slow=36						
ZAK	Zakamensk	28.08	302	*e*P	P	16 14 04.3	-0.5
ZAK				pmax	pmax		
	comp=Z,27nm,1.3s						
ENH	Enshi	28.46	257	P	P	16 14 07.7	-0.6
MOY	Mondy	29.60	304	*e*P	P	16 14 18.1	-0.3
MOY				pmax	pmax		
	comp=Z,44nm,1.9s						
BILL	Bilibino	29.65	18	P	P	16 14 17.4	-1.1
BILL	Bilibino	29.65	18	⇑*i*P	P	16 14 18.3	-0.1
BILL				*PP	pP	16 14 33.0	-0.1
BILL				*e**SP	sP	16 14 40.8	+0.6
BILL				*e*		16 15 15.6	
BILL				*i* S	S	16 19 12.0	+2.7
BILL				SS	SnSn	16 20 42.0	-1.2
BILL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BILL				MLR	MLR		
	comp=Z,2µm,18.0s						
LZH	Lanzhou	30.05	272	*e*P	P	16 14 24.2	+1.7
LZH				pP	pP	16 14 34.8	-2.7
LZH				sP	sP	16 14 43.6	-1.1
H11N2	WAKE ISLAND Hy	30.30	128	T	T	16 46 04.3	
	baz=322,slow=75,SNR=655						
H11N1	WAKE ISLAND Hy	30.31	128	T	T	16 46 05.1	
	baz=322,slow=75,SNR=1016						
H11N3	WAKE ISLAND Hy	30.32	128	T	T	16 46 13.6	
	baz=322,slow=75,SNR=962						
TIXI	Tiksi	30.94	352	P	P	16 14 27.4	-2.4
	comp=Z,1.9nm,0.4s,baz=270,slow=23,SNR=11						
TIXI	Tiksi	30.94	352	P	P	16 14 27.9	-1.9
TIXI	Tiksi	30.94	352	⇑*e*P	P	16 14 29.0	-0.7
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.7s						
TIXI	Tiksi	30.94	352	P	P	16 14 29.1	-0.6
TIXI				sP	sP	16 14 51.1	-0.5
H11S1	WAKE ISLAND Hy	31.14	130	T	T	16 47 10.0	
	baz=324,slow=76,SNR=659						
H11S3	WAKE ISLAND Hy	31.14	130	T	T	16 47 12.2	
	baz=324,slow=76,SNR=622						
H11S2	WAKE ISLAND Hy	31.16	130	T	T	16 47 11.2	
	baz=324,slow=76,SNR=643						
GTA	Gaotai	31.94	280	*e*P	P	16 14 38.7	-0.4
GTA				pP	pP	16 14 52.6	-1.5
GTA				sP	sP	16 15 00.4	-0.8
GTA				LR	LR		
	comp=Z,2µm,20.3s						
GTA				LR	LR		
	comp=Z,4µm,16.3s						
GTA				LR	LR		
	comp=Z,5µm,17.5s						
CD2	Chengdu	32.38	263	P	P	16 14 41.5	-1.4
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
GYA	Guiyang	32.65	254	⇓P	P	16 14 47.0	+1.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
QIZ	Qiongzhong	35.35	240	P	P	16 15 09.7	+1.0
QIZ				S	S	16 20 41.4	+2.7
QIZ				LR	LR		
	comp=Z,4µm,15.9s						
QIZ				LR	LR		
	comp=Z,2µm,12.7s						
QIZ				LR	LR		
	comp=Z,3µm,11.2s						
PZH	PanZhiHua	36.22	258	P	P	16 15 15.4	-0.9
PZH				sP	sP	16 15 38.5	0.0
PZH				PcP	PcP	16 17 40.3	-0.2
PZH				pmax	pmax		
	comp=Z,30nm,0.9s						
KMI	Kunming	36.29	256	⇑P	P	16 15 16.9	-0.1
KMI				sP	sP	16 15 39.3	+0.1
KMI				pmax	pmax		
	comp=Z,26nm,0.9s						
KMI				LR	LR		
	comp=Z,2µm,13.0s						
KMI				LR	LR		
	comp=Z,3µm,13.4s						
KMI				LR	LR		
	comp=Z,4µm,13.2s						
GOMU	GeErMu	36.76	278	P	P	16 15 20.9	-0.2
GOMU				S	S	16 20 52.4	-8.5
GOMU				pmax	pmax		
	comp=Z,9.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,3µm,10.9s						
GOMU				LR	LR		
	comp=Z,3µm,13.0s						
GOMU				LR	LR		
	comp=Z,1µm,14.3s						
GOMU				LR	LR		
	comp=Z,3µm,16.8s						
TNA	Tin City	36.80	32	P	P	16 15 20.9	+0.2
TNA				IAmb	IAmb	16 16 32.8	
	comp=Z,24nm,1.0s						
TNA	Tin City	36.80	32	P	P	16 15 20.8	+0.1
	baz=254						
DAV	Davao City (W)	37.25	208	LR	LR	16 30 10.6	
	comp=Z,788nm,21.5s,baz=36,slow=35						
ANM	Nome	37.62	34	P	P	16 15 27.9	+0.4
ANM	Nome	37.62	34	P	P	16 15 27.9	+0.4
ANM				pmax	pmax		
	comp=Z,87nm,1.6s						
ANM	Nome	37.62	34	P	P	16 15 27.9	+0.4
	baz=258						
DGZ	Jazzator, Alta	38.30	301	*c i*P	P	16 15 34.6	+0.9
DGZ				pmax	pmax		
	comp=Z,34nm,1.0s						
RDOG	Red Dog Mine	39.37	29	P	P	16 15 42.1	-0.1
RDOG	Red Dog Mine	39.37	29	P	P	16 15 42.5	+0.3
	baz=256						
ZAA0	Zalesovo Array	39.37	308	P	P	16 15 42.1	-0.3
ZAA0				IAmb	IAmb	16 15 53.7	
	comp=Z,37nm,0.8s						
ZALV	Zalesovo Beam	39.37	308	P	P	16 15 42.2	-0.1
	comp=Z,22nm,0.6s,baz=87,slow=7.8,SNR=63						
ZALV				LR	LR	16 32 52.2	
	comp=Z,3µm,20.1s,baz=126,slow=37						
	comp=Z,22nm,0.6s						
ZALV	Zalesovo Beam	39.37	308	P	P	16 15 41.9	-0.5
ZALV	Zalesovo Beam	39.37	308	*i* P	P	16 15 42.5	+0.1
ZALV				pmax	pmax		
	comp=Z,22nm,0.6s						
WMQ	Urumqi	39.40	292	*e*P	P	16 15 42.6	-0.3
WMQ				pP	pP	16 16 00.9	+2.7
WMQ				pmax	pmax		
	comp=Z,46nm,1.1s						
WMQ				LR	LR		
	comp=Z,2µm,20.1s						
WMQ				LR	LR		
	comp=Z,5µm,13.3s						
WMQ				LR	LR		
	comp=Z,3µm,16.3s						
TNCH	TengChong	39.44	259	P	P	16 15 44.8	+1.3
TNCH				pP	pP	16 15 57.3	-1.6
TNCH				sP	sP	16 16 05.7	-0.2
TNCH				PP	PP	16 17 19.1	+4.2
TNCH				pmax	pmax		
	comp=Z,53nm,1.4s						
TNCH				pmax	pmax		
	comp=Z,3µm,11.0s						
NRIK	Noril'sk	39.46	333	P	P	16 15 43.0	0.0
	comp=Z,11nm,0.5s,baz=127,slow=5.2,SNR=20						
	comp=Z,11nm,0.5s						
NRIK	Noril'sk	39.46	333	P	P	16 15 41.8	-1.1
NRIK	Noril'sk	39.46	333	*de*P	P	16 15 42.6	-0.3
NRIK				pmax	pmax		
	comp=Z,20nm,1.3s						
N16K	Nishlik Lake	40.22	41	P	P	16 15 50.4	+1.0
	baz=270,SNR=11						
ZSN	Zaisan	40.41	298	*e*P	P	16 15 51.5	+0.4
	comp=Z,11nm,0.9s,baz=298						
ZSN	Zaisan	40.41	298	*e*P	P	16 15 51.5	+0.4
ZSN				pmax	pmax		

	comp=Z,11nm,0.9s						
O16K	**Kokwok River B**	**40.56**	**43**	P	**P**	**16 15 54.3**	**+2.2**
	baz=271						
P16K	**Nushagak River**	**40.62**	**43**	P	**P**	**16 15 53.6**	**+1.0**
	baz=272,SNR=12						
CRAI	**Chiangrai**	**41.04**	**252**	P	**P**	**16 15 56.8**	**+0.2**
O17K	**Koliganek Bris**	**41.06**	**42**	P	**P**	**16 15 57.0**	**+0.7**
	baz=272,SNR=10						
GCSA	**Galena City Sc**	**41.26**	**35**	P	**P**	**16 15 58.3**	**+0.5**
	baz=266						
ZIRO	**ZIRO**	**41.53**	**266**	*e*P	**P**	**16 16 01.0**	**+0.3**
ZIRO				IAmb	IAmb	16 16 07.9	
	comp=Z,69nm,1.2s						
TTA	**Tatalina**	**41.56**	**38**	P	**P**	**16 16 01.0**	**+0.6**
TTA				IAmb	IAmb	16 16 07.0	
	comp=Z,36nm,1.2s						
TTA	**Tatalina**	**41.56**	**38**	P	**P**	**16 16 01.0**	**+0.6**
TTA				pmax	pmax		
	comp=Z,36nm,1.2s						
TTA	**Tatalina**	**41.56**	**38**	P	**P**	**16 16 01.2**	**+0.7**
	baz=269,SNR=21						
MOKO	**MOKOCHONG**	**41.69**	**264**	*e*P	**P**	**16 16 03.0**	**+1.0**
MOKO				IAmb	IAmb	16 16 12.7	
	comp=Z,69nm,0.5s						
Q17K	**Contact Creek**	**41.76**	**45**	P	**P**	**16 16 02.5**	**+0.3**
	baz=274						
SVW2	**Sparrevohn**	**41.77**	**40**	P	**P**	**16 16 02.9**	**+0.8**
SVW2				IAmb	IAmb	16 16 09.2	
	comp=Z,32nm,1.1s						
ITAN	**ITANAGAR**	**41.83**	**266**	*e*P	**P**	**16 16 04.4**	**+1.4**
O18K	**Koktuh Hills**	**42.01**	**42**	P	**P**	**16 16 05.1**	**+1.0**
	baz=273						
L19K	**White Mountain**	**42.10**	**39**	P	**P**	**16 16 05.2**	**+0.4**
L19K	**White Mountain**	**42.10**	**39**	P	**P**	**16 16 05.6**	**+0.8**
	baz=271,SNR=6.7						
Q18K	**Katmai Hardscr**	**42.19**	**44**	P	**P**	**16 16 06.1**	**+0.4**
	baz=275						
A21K	**Barrow**	**42.21**	**25**	P	**P**	**16 16 05.3**	**-0.2**
	baz=259						
PHRA	**Phrae**	**42.27**	**250**	P	**P**	**16 16 06.9**	**+0.2**
MK31	**Makanchi Array**	**42.27**	**298**	P	**P**	**16 16 06.1**	**-0.3**
MK31				IAmb	IAmb	16 17 16.7	
	comp=Z,33nm,1.1s						
MK31	**Makanchi Array**	**42.27**	**298**	P	**P**	**16 16 06.1**	**-0.3**
MK31				pmax	pmax		
	comp=Z,33nm,1.1s						
MKAR	**Makanchi Array**	**42.27**	**298**	P	**P**	**16 16 06.2**	**-0.2**
	comp=Z,14nm,0.8s,baz=82,slow=10,SNR=39						
MKAR				LR	LR	16 35 03.6	
	comp=Z,3µm,18.4s,baz=120,slow=38						
	comp=Z,14nm,0.8s						
MKAR	**Makanchi Array**	**42.27**	**298**	*i* P	**P**	**16 16 06.4**	**0.0**
MKAR				pmax	pmax		
	comp=Z,13nm,0.8s						
N19K	**Bonanza Creek**	**42.32**	**41**	P	**P**	**16 16 06.7**	**+0.1**
N19K	**Bonanza Creek**	**42.32**	**41**	P	**P**	**16 16 07.9**	**+1.2**
	baz=273,SNR=6.9						
KOHI	**KOHIMA**	**42.32**	**264**	*e*P	**P**	**16 16 06.9**	**-0.3**
KOHI				IAmb	IAmb	16 16 24.6	
	comp=Z,97nm,0.8s						
M19K	**Big River Lodg**	**42.32**	**39**	P	**P**	**16 16 07.2**	**+0.6**
M19K	**Big River Lodg**	**42.32**	**39**	P	**P**	**16 16 06.8**	**+0.2**
	baz=272						
LSA	**Lhasa**	**42.43**	**271**	P	**P**	**16 16 08.9**	**+0.5**
LSA	**Lhasa**	**42.43**	**271**	P	**P**	**16 16 08.3**	**-0.1**
LSA				IAmb	IAmb	16 17 00.4	
	comp=Z,57nm,1.4s						
LSA	**Lhasa**	**42.43**	**271**	P	**P**	**16 16 08.3**	**-0.1**
LSA				pmax	pmax		
	comp=Z,57nm,1.4s						
O19K	**Port Alsworth**	**42.43**	**42**	P	**P**	**16 16 08.7**	**+1.2**
	baz=274						
K20K	**Telida**	**42.45**	**37**	P	**P**	**16 16 07.9**	**+0.3**
K20K	**Telida**	**42.45**	**37**	P	**P**	**16 16 08.4**	**+0.8**
	baz=270,SNR=27						
MAKZ	**Makanchi**	**42.48**	**298**	P	**P**	**16 16 08.0**	**-0.1**
MAKZ				IAmb	IAmb	16 16 33.9	
	comp=Z,49nm,0.9s						
MAKZ	**Makanchi**	**42.48**	**298**	P	**P**	**16 16 08.0**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,49nm,1.0s						
MAKZ	**Makanchi**	**42.48**	**298**	P	**P**	**16 16 08.0**	**-0.1**
MAKZ				pP	**pP**	**16 16 23.1**	**-0.3**
MAKZ				sP	**sP**	**16 16 30.2**	**-0.3**
L20K	**Farewell, AK**	**42.55**	**38**	P	**P**	**16 16 09.0**	**+0.6**
	baz=272						
IMAR	**Indian Mountai**	**42.64**	**33**	P	**P**	**16 16 09.1**	**+0.1**
G21K	**Allakaket**	**42.76**	**32**	P	**P**	**16 16 10.2**	**+0.2**
	baz=267						
F21K	**Alatna River**	**42.80**	**31**	P	**P**	**16 16 10.8**	**+0.4**
	baz=267						
TEZP	**TEZPUR**	**42.81**	**266**	*e*P	**P**	**16 16 11.0**	**+0.1**
TEZP				IAmb	IAmb	16 16 17.4	
	comp=Z,22nm,0.7s						
Q19K	**Cape Douglas,**	**42.88**	**43**	P	**P**	**16 16 11.6**	**+0.5**
Q19K				IAmb	IAmb	16 16 51.0	
	comp=Z,76nm,1.1s						
Q19K	**Cape Douglas,**	**42.88**	**43**	P	**P**	**16 16 12.0**	**+0.8**
	baz=276						
M20K	**Styx River**	**42.92**	**39**	P	**P**	**16 16 12.4**	**+0.9**
	baz=273						
IMP	**Imphal**	**42.95**	**263**	*e*P	**P**	**16 16 12.1**	**-0.1**
IMP				IAmb	IAmb	16 16 19.3	
	comp=Z,15nm,0.7s						
CHTO	**Chiang Mai**	**42.98**	**252**	P	**P**	**16 16 12.4**	**0.0**
CHTO	**Chiang Mai**	**42.98**	**252**	P	**P**	**16 16 12.4**	**0.0**
H21K	**Melozitna Rive**	**43.02**	**33**	P	**P**	**16 16 12.6**	**+0.4**
H21K				IAmb	IAmb	16 17 34.7	
	comp=Z,38nm,1.1s						
H21K	**Melozitna Rive**	**43.02**	**33**	P	**P**	**16 16 12.5**	**+0.4**
	baz=269						
ILSW	**Iliamna Southw**	**43.04**	**42**	P	**P**	**16 16 12.7**	**+0.2**
RSO	**Redoubt South**	**43.19**	**41**	P	**P**	**16 16 13.9**	**+0.1**
CM31	**Chiang Mai Arr**	**43.21**	**251**	P	**P**	**16 16 15.2**	**+0.9**
CM31				IAmb	IAmb	16 17 32.0	
	comp=Z,45nm,1.4s						
CMAR	**Chiang Mai Arr**	**43.21**	**251**	P	**P**	**16 16 14.5**	**+0.2**
	comp=Z,3.6nm,0.7s,baz=40,slow=7.6,SNR=24						
CMAR				LR	LR	16 34 45.3	
	comp=Z,2µm,19.0s,baz=55,slow=37						
	comp=Z,3.6nm,0.7s						
CMAR	**Chiang Mai Arr**	**43.21**	**251**	P	**P**	**16 16 15.0**	**+0.7**
CMAR	**Chiang Mai Arr**	**43.21**	**251**	*i* P	**P**	**16 16 14.8**	**+0.5**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CHUM	**Lake Minchumin**	**43.23**	**36**	P	**P**	**16 16 15.0**	**+1.2**
	baz=271,SNR=8.1						
OHAK	**Old Harbor**	**43.26**	**46**	P	**P**	**16 16 14.5**	**+0.4**
OHAK	**Old Harbor**	**43.26**	**46**	P	**P**	**16 16 15.1**	**+0.9**
	baz=278						
O20K	**Slope Mountain**	**43.29**	**42**	P	**P**	**16 16 15.3**	**+0.8**
	baz=275						
PPLA	**Purkeypile**	**43.31**	**38**	P	**P**	**16 16 15.9**	**+1.1**
PPLA	**Purkeypile**	**43.31**	**38**	P	**P**	**16 16 15.6**	**+0.8**
	baz=272,SNR=10						
CAST	**Castle Rocks**	**43.34**	**37**	P	**P**	**16 16 15.9**	**+1.0**
CAST				IAmb	IAmb	16 17 25.4	
	comp=Z,35nm,0.6s						
CAST	**Castle Rocks**	**43.34**	**37**	P	**P**	**16 16 15.8**	**+1.0**
	baz=272,SNR=30						
I21K	**Tanana**	**43.35**	**34**	P	**P**	**16 16 15.8**	**+1.0**
I21K				IAmb	IAmb	16 17 56.4	
	comp=Z,28nm,0.7s						
I21K	**Tanana**	**43.35**	**34**	P	**P**	**16 16 15.9**	**+1.0**
	baz=270						
SPCR	**Spurr Chakacha**	**43.40**	**40**	P	**P**	**16 16 14.8**	**-0.6**
	baz=274,SNR=6.4						
SPU	**Mount Spurr**	**43.48**	**40**	P	**P**	**16 16 16.9**	**+0.9**
KDAK	**Kodiak Island**	**43.56**	**45**	P	**P**	**16 16 17.4**	**+0.8**
	comp=Z,30nm,1.0s,baz=241,slow=19,SNR=13						
KDAK				LR	LR	16 38 00.1	
	comp=Z,474nm,18.1s,baz=271,slow=41						
	comp=Z,30nm,1.0s						
KDAK	**Kodiak Island**	**43.56**	**45**	P	**P**	**16 16 16.7**	**+0.1**
KDAK	**Kodiak Island**	**43.56**	**45**	⇑*e*P	**P**	**16 16 17.8**	**+1.2**
KDAK				pmax	pmax		
	comp=Z,34nm,1.0s						
KDAK	**Kodiak Island**	**43.56**	**45**	P	**P**	**16 16 21.1**	**+4.5**
KDAK				pP	**sP**	**16 16 36.2**	**-2.6**
KDAK				sP	pP	16 16 43.5	+12
H22K	**Ishtalitna Cre**	**43.61**	**33**	P	**P**	**16 16 18.1**	**+1.2**
	baz=270						
KURK	**Kurchatov**	**43.66**	**305**	P	**P**	**16 16 17.3**	**-0.2**
KURK				IAmb	IAmb	16 16 38.6	
	comp=Z,45nm,0.7s						
KURK	**Kurchatov**	**43.66**	**305**	P	**P**	**16 16 17.3**	**-0.2**
KURK				pmax	pmax		
	comp=Z,45nm,0.7s						
KURK	**Kurchatov**	**43.66**	**305**	P	**P**	**16 16 17.2**	**-0.2**
SKT	**Skwentna**	**43.67**	**39**	P	**P**	**16 16 18.2**	**+0.7**
	baz=274						
KURBB	**Kurchatov Arra**	**43.73**	**304**	P	**P**	**16 16 17.9**	**-0.2**
	comp=Z,15nm,0.5s,baz=78,slow=8.7,SNR=100						
KURBB				LR	LR	16 34 06.8	
	comp=Z,2µm,19.4s,baz=102,slow=35						
	comp=Z,15nm,0.5s						
BPAW	**Bear Paw Mtn.**	**43.80**	**36**	P	**P**	**16 16 19.4**	**+0.9**
BPAW				IAmb	IAmb	16 16 25.3	
	comp=Z,33nm,1.0s						
BPAW	**Bear Paw Mtn.**	**43.80**	**36**	P	**P**	**16 16 18.9**	**+0.4**
	baz=272,SNR=21						
KTH	**Kantishna Hill**	**43.86**	**37**	P	**P**	**16 16 19.6**	**+0.6**
MLY	**Manley**	**43.88**	**34**	P	**P**	**16 16 20.1**	**+0.9**
MLY				IAmb	IAmb	16 16 26.0	
	comp=Z,46nm,1.1s						
MLY	**Manley**	**43.88**	**34**	P	**P**	**16 16 19.9**	**+0.7**
	baz=272,SNR=38						
LBMI	**Labuha**	**43.94**	**201**	P	**P**	**16 16 21.5**	**+1.4**
	comp=Z,39nm,0.9s						
LBMI				pP	**pP**	**16 16 36.1**	**+0.7**
	comp=Z,39nm,0.9s						
D23K	**Nanushuk River**	**43.95**	**29**	P	**P**	**16 16 20.0**	**+0.4**
	baz=268						
CNPM	**China Poot**	**44.04**	**42**	P	**P**	**16 16 20.8**	**+0.3**
SHL	**Shillong**	**44.07**	**265**	P	**P**	**16 16 20.9**	**-0.5**
SHL				IAmb	IAmb	16 16 47.0	
	comp=Z,25nm,0.8s						
SHL	**Shillong**	**44.07**	**265**	*e*P	**P**	**16 16 21.7**	**+0.4**
SHL	**Shillong**	**44.07**	**265**	P	**P**	**16 16 20.9**	**-0.5**
SHL				pmax	pmax		
	comp=Z,25nm,0.8s						
COLD	**Coldfoot**	**44.08**	**31**	P	**P**	**16 16 20.7**	**0.0**
COLD	**Coldfoot**	**44.08**	**31**	P	**P**	**16 16 20.9**	**+0.2**
	baz=270						
SUA	**Susitna One**	**44.08**	**40**	P	**P**	**16 16 20.8**	**-0.1**
	baz=275						
GTOI	**Gorontalo**	**44.13**	**208**	P	**P**	**16 16 21.0**	**-0.6**
	comp=Z,12nm,0.8s						
GTOI				pP	**sP**	**16 16 42.5**	**-1.4**
	comp=Z,12nm,0.8s						
TRF	**Thorofare Moun**	**44.15**	**37**	P	**P**	**16 16 21.4**	**-0.1**
	baz=274						
G23K	**Bananza Creek**	**44.15**	**32**	P	**P**	**16 16 22.4**	**+1.1**
	baz=270						
BRLK	**Bradley Lake**	**44.19**	**42**	P	**P**	**16 16 22.7**	**+1.1**
CUT	**Chulitna**	**44.23**	**38**	P	**P**	**16 16 22.4**	**+0.6**
CUT				IAmb	IAmb	16 17 32.4	
	comp=Z,64nm,1.2s						
CUT	**Chulitna**	**44.23**	**38**	P	**P**	**16 16 22.1**	**+0.2**
	baz=275						
BRSE	**Bradley Lake S**	**44.27**	**42**	P	**P**	**16 16 22.4**	**+0.2**
	baz=277						
E23K	**Chandalar**	**44.31**	**30**	P	**P**	**16 16 22.9**	**+0.3**
	baz=269						
TOLK	**Toolik Lake Re**	**44.34**	**29**	P	**P**	**16 16 22.5**	**-0.3**
	baz=269						
H23K	**Yukon River**	**44.36**	**33**	P	**P**	**16 16 24.3**	**+1.3**
H23K				IAmb	IAmb	16 17 21.6	
	comp=Z,39nm,1.0s						
H23K	**Yukon River**	**44.36**	**33**	P	**P**	**16 16 23.7**	**+0.7**
	baz=272						
I23K	**Minto, Yukon-K**	**44.46**	**34**	P	**P**	**16 16 23.0**	**-0.7**
I23K				IAmb	IAmb	16 16 31.2	
	comp=Z,59nm,1.3s						
I23K	**Minto, Yukon-K**	**44.46**	**34**	P	**P**	**16 16 23.7**	**0.0**
	baz=273,SNR=29						
BWN	**Browne**	**44.47**	**36**	P	**P**	**16 16 24.8**	**+1.0**
TOLI2	**Tolitoli**	**44.52**	**211**	P	**P**	**16 16 25.3**	**+0.6**
RC01	**Rabbit Creek A**	**44.61**	**40**	P	**P**	**16 16 25.6**	**+0.6**
RC01				IAmb	IAmb	16 16 49.2	
	comp=Z,70nm,1.4s						
RC01	**Rabbit Creek A**	**44.61**	**40**	P	**P**	**16 16 24.9**	**-0.1**
	baz=276,SNR=5.4						
NEA2	**Nenana**	**44.62**	**35**	P	**P**	**16 16 25.7**	**+0.8**
NEA2				IAmb	IAmb	16 16 31.5	
	comp=Z,56nm,1.0s						
NEA2	**Nenana**	**44.62**	**35**	P	**P**	**16 16 24.9**	**0.0**
	baz=274,SNR=36						
MRSI	**Marisa**	**44.66**	**209**	P	**P**	**16 16 26.7**	**+0.8**
	comp=Z,56nm,1.0s						
C24K	**Franklin Bluff**	**44.68**	**28**	P	**P**	**16 16 25.6**	**+0.2**
	baz=269						
MCK	**McKinley**	**44.73**	**36**	P	**P**	**16 16 26.8**	**+0.8**
MCK				IAmb	IAmb	16 17 15.0	
	comp=Z,47nm,1.3s						
MCK	**McKinley**	**44.73**	**36**	P	**P**	**16 16 26.8**	**+0.8**
MCK				pmax	pmax		
	comp=Z,47nm,1.3s						
MCK	**McKinley**	**44.73**	**36**	P	**P**	**16 16 26.0**	**0.0**
	baz=274,SNR=11						
E24K	**Your Creek**	**44.74**	**30**	P	**P**	**16 16 25.4**	**-0.5**
	baz=270						
RND	**Reindeer**	**44.79**	**37**	P	**P**	**16 16 27.5**	**+1.0**
RND				IAmb	IAmb	16 16 32.4	
	comp=Z,33nm,1.2s						
RND	**Reindeer**	**44.79**	**37**	P	**P**	**16 16 27.5**	**+1.0**
RND				pmax	pmax		
	comp=Z,33nm,1.2s						
PMR	**Palmer**	**44.84**	**39**	P	**P**	**16 16 26.4**	**-0.4**
	baz=276						
SEW	**Seward**	**44.87**	**41**	P	**P**	**16 16 26.8**	**-0.1**
	baz=278						
MDM	**Murphy Dome**	**44.95**	**34**	P	**P**	**16 16 28.7**	**+1.1**
MDM				IAmb	IAmb	16 16 34.3	
	comp=Z,52nm,1.0s						
F24K	**Squaw Lake**	**44.97**	**31**	P	**P**	**16 16 28.6**	**+0.7**
	baz=272						
SAIH	**SAIHA**	**45.02**	**261**	*e*P	**P**	**16 16 28.8**	**0.0**
SAIH				IAmb	IAmb	16 16 38.3	
	comp=Z,172nm,0.9s						
H24K	**Noodor Dome**	**45.05**	**33**	P	**P**	**16 16 29.8**	**+1.4**
H24K				IAmb	IAmb	16 16 35.4	
	comp=Z,60nm,1.2s						
H24K	**Noodor Dome**	**45.05**	**33**	P	**P**	**16 16 29.1**	**+0.7**
	baz=273						
WRH	**Wood River Hil**	**45.05**	**35**	P	**P**	**16 16 29.4**	**+1.1**
WRH				IAmb	IAmb	16 17 03.5	
	comp=Z,31nm,1.1s						
FAKI	**Fak Fak**	**45.08**	**194**	P	**P**	**16 16 28.9**	**-0.2**
FAKI	**Fak Fak**	**45.08**	**194**	P	**P**	**16 16 30.0**	**+0.9**
	comp=Z,53nm,0.8s						
COLA	**College**	**45.12**	**35**	*ce*P	**P**	**16 16 29.9**	**+1.0**
COLA				pmax	pmax		
	comp=Z,29nm,0.9s						
COLA	**College**	**45.12**	**35**	P	**P**	**16 16 30.3**	**+1.4**
COLA				sP	**sP**	**16 16 52.7**	**+1.6**
CCB	**Clear Creek Bu**	**45.16**	**35**	P	**P**	**16 16 29.6**	**+0.4**
CCB				IAmb	IAmb	16 16 38.0	
	comp=Z,77nm,2.0s						
G24K	**Hadweenzic Riv**	**45.16**	**32**	P	**P**	**16 16 29.9**	**+0.5**
	baz=273						
KNK	**Knik Glacier**	**45.18**	**39**	P	**P**	**16 16 29.5**	**0.0**
KNK	**Knik Glacier**	**45.18**	**39**	P	**P**	**16 16 29.2**	**-0.3**
	baz=277						
SML	**Sawmill**	**45.20**	**39**	P	**P**	**16 16 30.0**	**+0.3**
SML				IAmb	IAmb	16 17 07.8	
	comp=Z,41nm,0.8s						
SML	**Sawmill**	**45.20**	**39**	P	**P**	**16 16 29.0**	**-0.7**
SML				pmax	pmax		
	comp=Z,41nm,0.8s						
SML	**Sawmill**	**45.20**	**39**	P	**P**	**16 16 29.2**	**-0.5**
	baz=277						
POKR	**Poker Plat Res**	**45.28**	**34**	P	**P**	**16 16 29.5**	**-0.7**
	baz=274,SNR=42						
SHLS	**Shalkode**	**45.30**	**294**	*e*P	**P**	**16 16 28.4**	**-2.5**
	baz=294						
SHLS	**Shalkode**	**45.30**	**294**	*e*P	**P**	**16 16 28.5**	**-2.4**
SHLS				pmax	pmax		
	comp=Z,61nm,2.4s						
PWL	**Port Wells**	**45.31**	**40**	P	**P**	**16 16 29.4**	**-1.2**
	baz=278						
TDK	**Taldyqorghan**	**45.40**	**297**	*e*P	**P**	**16 16 32.1**	**+0.6**
	comp=Z,20nm,0.7s,baz=297						
TDK	**Taldyqorghan**	**45.40**	**297**	*e*P	**P**	**16 16 32.0**	**+0.6**
TDK				pmax	pmax		
	comp=Z,19nm,0.7s						
M23K	**Glacier View**	**45.48**	**39**	P	**P**	**16 16 30.8**	**-1.1**
	baz=277						
D25K	**Kavik River**	**45.49**	**28**	P	**P**	**16 16 31.4**	**-0.5**
	baz=271,SNR=17						
IL31		**45.54**	**35**	P	**P**	**16 16 32.9**	**+0.7**
IL31				IAmb	IAmb	16 16 38.9	
	comp=Z,52nm,1.0s						
ILAR	**Eielson Array**	**45.54**	**35**	P	**P**	**16 16 32.9**	**+0.6**
	comp=Z,16nm,0.8s,baz=271,slow=6.1,SNR=81						
ILAR				LR	LR	16 38 31.9	
	comp=Z,951nm,18.2s,baz=268,slow=40						
	comp=Z,16nm,0.8s						
HDA	**Harding Lake**	**45.55**	**35**	P	**P**	**16 16 32.7**	**+0.3**
HDA				IAmb	IAmb	16 16 52.9	
	comp=Z,30nm,1.0s						
HDA	**Harding Lake**	**45.55**	**35**	P	**P**	**16 16 32.2**	**-0.2**
	baz=276,SNR=20						
MPSI	**Mapaga**	**45.57**	**212**	P	**P**	**16 16 34.3**	**+1.2**
	comp=Z,11nm,0.7s						
MPSI				pP	**sP**	**16 16 55.1**	**-0.3**
	comp=Z,11nm,0.7s						
GTK	**Tadong**	**45.58**	**269**	*e*P	**P**	**16 16 34.5**	**+1.3**
GTK				IAmb	IAmb	16 16 38.1	
	comp=Z,30nm,1.1s						
UZB	**Uzynbulak**	**45.61**	**294**	*e*P	**P**	**16 16 33.3**	**0.0**
	baz=294						
UZB	**Uzynbulak**	**45.61**	**294**	*e*P	**P**	**16 16 34.5**	**+1.2**
UZB				pmax	pmax		
	comp=Z,17nm,1.2s						
SCM	**Sheep Creek Mo**	**45.66**	**39**	P	**P**	**16 16 34.1**	**+0.7**
SCM				IAmb	IAmb	16 17 38.0	
	comp=Z,34nm,0.9s						
SCM	**Sheep Creek Mo**	**45.66**	**39**	P	**P**	**16 16 34.1**	**+0.7**
SCM				pmax	pmax		
	comp=Z,34nm,0.9s						
SCM	**Sheep Creek Mo**	**45.66**	**39**	P	**P**	**16 16 33.3**	**-0.1**
	baz=278,SNR=5.4						
G25K	**Bearman Lake**	**45.71**	**32**	P	**P**	**16 16 34.3**	**+0.8**
	baz=274						
SANI	**Sanana**	**45.71**	**203**	P	**P**	**16 16 33.7**	**-0.4**
	comp=Z,30nm,0.8s						
SANI				pP	**sP**	**16 16 55.1**	**-1.4**
	comp=Z,30nm,0.8s						
KPKS	**Kokpek**	**45.73**	**295**	*e*P	**P**	**16 16 34.3**	**+0.1**
	baz=295						
KPKS	**Kokpek**	**45.73**	**295**	*e*P	**P**	**16 16 33.8**	**-0.4**
KPKS				pmax	pmax		
	comp=Z,43nm,2.6s						
E25K	**Arctic Village**	**45.83**	**30**	P	**P**	**16 16 34.3**	**-0.3**
	baz=273						
F25K	**Christian Rive**	**45.83**	**31**	P	**P**	**16 16 35.1**	**+0.5**
	baz=274						
P23K	**Montague Islan**	**45.90**	**41**	P	**P**	**16 16 35.9**	**+0.7**
	baz=279						
BRDH	**Bariadhala**	**45.91**	**262**	LR	LR	16 36 07.7	
	comp=Z,1µm,22.0s,baz=59,slow=36						
C26K	**Camden Bay**	**45.99**	**27**	P	**P**	**16 16 36.5**	**+0.8**
	baz=272						
ZHN	**Zhinishke**	**46.00**	**294**	*e*P	**P**	**16 16 36.4**	**-0.1**
	baz=294						
ZHN	**Zhinishke**	**46.00**	**294**	*e*P	**P**	**16 16 36.3**	**-0.1**
PRP	**Porcupine Dome**	**46.04**	**34**	P	**P**	**16 16 37.3**	**+0.9**
PRP	**Porcupine Dome**	**46.04**	**34**	P	**P**	**16 16 36.4**	**0.0**
	baz=276,SNR=50						
ARXS	**Arharly**	**46.05**	**296**	*e*P	**P**	**16 16 36.5**	**-0.2**
SATY	**Saty**	**46.06**	**294**	*e*P	**P**	**16 16 37.0**	**+0.2**
	baz=294						
SATY	**Saty**	**46.06**	**294**	*e*P	**P**	**16 16 37.0**	**+0.2**
FYU	**Fort Yukon**	**46.07**	**32**	P	**P**	**16 16 37.5**	**+1.2**
K24K	**Donnelly Dome**	**46.12**	**36**	P	**P**	**16 16 37.4**	**+0.4**
	baz=277						
M24K	**Tolsona, Glenn**	**46.17**	**38**	P	**P**	**16 16 37.6**	**+0.3**
M24K				IAmb	IAmb	16 17 17.1	
	comp=Z,46nm,1.0s						
M24K	**Tolsona, Glenn**	**46.17**	**38**	P	**P**	**16 16 38.0**	**+0.6**
	baz=278						
WUS	**Wushi**	**46.18**	**292**	P	**P**	**16 16 38.6**	**+0.7**
WUS				sP	**sP**	**16 17 00.8**	**+0.4**
BMAR	**Burnt Mountain**	**46.25**	**31**	P	**P**	**16 16 38.2**	**+0.3**
PAX	**Paxson**	**46.37**	**37**	P	**P**	**16 16 38.9**	**-0.1**
	baz=278						
KLU	**Klutina**	**46.38**	**39**	P	**P**	**16 16 38.4**	**-0.6**
KLU				IAmb	IAmb	16 17 04.5	
	comp=Z,38nm,1.0s						
KLU	**Klutina**	**46.38**	**39**	P	**P**	**16 16 38.5**	**-0.6**
	baz=279,SNR=5.6						
F26K	**Sheenjek River**	**46.40**	**30**	P	**P**	**16 16 38.9**	**-0.1**
	baz=275						
C27K	**Jago River**	**46.42**	**28**	P	**P**	**16 16 38.8**	**-0.4**
	baz=273,SNR=18						
KRVT	**Keravat (AS076**	**46.48**	**166**	LR	LR	16 35 02.2	
	comp=Z,382nm,19.9s,baz=111,slow=34						
RIDG	**Independent Ri**	**46.54**	**36**	P	**P**	**16 16 40.2**	**-0.1**
RIDG				IAmb	IAmb	16 17 35.6	
	comp=Z,60nm,1.4s						
RIDG	**Independent Ri**	**46.54**	**36**	P	**P**	**16 16 40.3**	**+0.1**
	baz=278						
HARP	**HAARP**	**46.59**	**38**	P	**P**	**16 16 40.3**	**-0.3**
	baz=279,SNR=6.1						
G26K	**Porcupine Rive**	**46.60**	**31**	P	**P**	**16 16 41.3**	**+0.8**
	baz=276						
EYAK	**Cordova Ski Ar**	**46.62**	**40**	P	**P**	**16 16 41.9**	**+1.1**
	baz=280						
AAI	**Ambon**	**46.69**	**199**	P	**P**	**16 16 42.8**	**+1.0**
	comp=Z,56nm,0.8s						
CHKK	**Chushkaly**	**46.74**	**296**	*e*P	**P**	**16 16 42.0**	**-0.1**
	baz=296						
CHKK	**Chushkaly**	**46.74**	**296**	*e*P	**P**	**16 16 41.9**	**-0.1**
SCRK	**Sand Creek**	**46.88**	**36**	P	**P**	**16 16 43.2**	**+0.2**
SCRK	**Sand Creek**	**46.88**	**36**	P	**P**	**16 16 42.9**	**-0.1**
	baz=278,SNR=24						
DOT	**Dot Lake**	**46.90**	**36**	P	**P**	**16 16 43.0**	**0.0**
MDOK	**Medeo**	**46.95**	**295**	*e*P	**P**	**16 16 43.9**	**0.0**
	baz=295						
MDOK	**Medeo**	**46.95**	**295**	*e*P	**P**	**16 16 43.8**	**0.0**
N25K	**Chitina, Valde**	**46.98**	**39**	P	**P**	**16 16 43.7**	**-0.1**
	baz=280						
J26L	**Joseph Creek**	**46.99**	**35**	P	**P**	**16 16 43.8**	**0.0**
J26L	**Joseph Creek**	**46.99**	**35**	P	**P**	**16 16 44.2**	**+0.4**
	baz=278						
AAA	**Alma-Ata**	**47.02**	**295**	*e*P	**P**	**16 16 44.7**	**+0.4**
	baz=295						
AAA	**Alma-Ata**	**47.02**	**295**	*e*P	**P**	**16 16 44.7**	**+0.4**
I26K	**Coal Creek Min**	**47.05**	**34**	P	**P**	**16 16 44.4**	**+0.3**
I26K	**Coal Creek Min**	**47.05**	**34**	P	**P**	**16 16 43.2**	**-0.9**
	baz=278						
KUU	**Kurty**	**47.17**	**296**	⇑*i*P	**P**	**16 16 44.9**	**-0.5**
	comp=Z,13nm,0.8s,baz=296						
KUU	**Kurty**	**47.17**	**296**	*c i*P	**P**	**16 16 44.9**	**-0.5**
KUU				pmax	pmax		
	comp=Z,13nm,0.8s						
E27K	**Coleen River**	**47.31**	**30**	P	**P**	**16 16 46.2**	**+0.1**
	baz=277						
L26K	**Log Cabin Wild**	**47.32**	**37**	P	**P**	**16 16 46.1**	**-0.1**
	baz=280,SNR=15						
GLB	**Gilahina Butte**	**47.39**	**39**	P	**P**	**16 16 47.1**	**+0.3**
GLB				IAmb	IAmb	16 17 35.4	
	comp=Z,17nm,0.9s						
G27K	**Doyon Strip**	**47.45**	**31**	P	**P**	**16 16 48.2**	**+0.9**
	baz=278						
BRZS	**Berezniki**	**47.52**	**305**	⇑*i*P	**P**	**16 16 47.9**	**-0.1**
	baz=305						
BRZS	**Berezniki**	**47.52**	**305**	*e*P	**P**	**16 16 47.5**	**-0.5**
BRZS				pmax	pmax		
	comp=Z,38nm,2.6s						
M26K	**Nabesna, AK**	**47.59**	**38**	P	**P**	**16 16 48.3**	**-0.1**
	baz=281,SNR=7.6						
H27K	**Steamboat Moun**	**47.59**	**32**	P	**P**	**16 16 49.2**	**+0.8**
	baz=278						
VRDI	**Verde Repeater**	**47.60**	**39**	P	**P**	**16 16 49.6**	**+1.0**
VRDI				IAmb	IAmb	16 17 40.9	
	comp=Z,25nm,1.0s						
I27K	**Kandik River**	**47.65**	**33**	P	**P**	**16 16 49.4**	**+0.6**
	baz=279						
MCARA	**McCarthy VSAT**	**47.77**	**39**	P	**P**	**16 16 50.4**	**+0.7**
MCARA	**McCarthy VSAT**	**47.77**	**39**	P	**P**	**16 16 49.3**	**-0.5**
	baz=282,SNR=6.1						
EGAK	**Eagle**	**47.97**	**34**	P	**P**	**16 16 51.4**	**+0.1**
EGAK				IAmb	IAmb	16 16 58.1	
	comp=Z,46nm,1.3s						
EGAK	**Eagle**	**47.97**	**34**	P	**P**	**16 16 51.5**	**+0.3**
	baz=280,SNR=13						
L27K	**Beaver Creek,**	**47.99**	**37**	P	**P**	**16 16 52.0**	**+0.5**
L27K	**Beaver Creek,**	**47.99**	**37**	P	**P**	**16 16 51.4**	**-0.1**
	baz=281,SNR=19						
BVAR	**Borovoye Array**	**48.00**	**310**	LR	LR	16 38 09.4	
	comp=Z,3µm,19.6s,baz=92,slow=37						
BCAR	**Beaver Creek A**	**48.01**	**37**	P	**P**	**16 16 52.3**	**+0.6**
TKM2	**Tokmak 2**	**48.03**	**295**	P	**P**	**16 16 53.0**	**+0.7**
	SNR=54						
BRVK	**Borovoye**	**48.05**	**310**	P	**P**	**16 16 50.6**	**-1.4**
BRVK				IAmb	IAmb	16 18 03.4	
	comp=Z,29nm,0.9s						

BRVK	Borovoye	48.05	310	P	P	16 16 50.6	-1.4
BRVK				pmax	pmax		
	comp=Z,29nm,0.9s						
BRVK	Borovoye	48.05	310	P	P	16 16 52.3	+0.2
M27K	Edge Creek, AK	48.11	37	P	P	16 16 53.3	+0.8
M27K	Edge Creek, AK	48.11	37	P	P	16 16 52.6	+0.1
	baz=282						
BTLS	Baital	48.29	298	eP	P	16 16 53.5	-0.5
	baz=298						
BTLS	Baital	48.29	298	eP	P	16 16 53.7	-0.3
BTLS				pmax	pmax		
	comp=Z,32nm,2.5s						
BARN	Barnard Glacie	48.48	39	P	P	16 16 56.4	+0.9
BARN				IAmb	IAmb	16 17 56.3	
	comp=Z,36nm,1.2s						
SGDS	Sogindy	48.48	296	eP	P	16 16 55.6	0.0
	baz=296						
SGDS	Sogindy	48.48	296	eP	P	16 16 55.6	0.0
BVCY	Beaver Creek	48.56	37	P	P	16 16 55.6	-0.3
	baz=282,SNR=6.7						
KBK	Karagaybulak	48.57	295	P	P	16 16 57.0	+0.6
	SNR=35						
USP	Ospenovka	48.64	296	P	P	16 16 56.9	+0.1
	SNR=21						
CTG	Chitna Glacier	48.66	39	P	P	16 16 56.4	-0.3
	baz=283						
DAWY	Dawson	48.86	35	P	P	16 16 58.1	-0.1
	baz=282						
YUK3	Moose Creek	48.88	38	P	P	16 16 58.2	-0.4
	baz=283,SNR=5.3						
AAK	Ala-Archa	48.89	295	P	P	16 16 59.0	+0.2
	SNR=11						
AAK	Ala-Archa	48.89	295	LR	LR	16 39 27.2	
	comp=Z,3µm,20.4s,baz=80,slow=38						
AAK	Ala-Archa	48.89	295	P	P	16 16 58.5	-0.3
AAK				IAmb	IAmb	16 17 35.9	
	comp=Z,31nm,1.1s						
AAK	Ala-Archa	48.89	295	P	P	16 16 58.6	-0.3
AAK				pmax	pmax		
	comp=Z,31nm,1.2s						
AAK	Ala-Archa	48.89	295	P	P	16 16 58.8	0.0
KSM	Kuching	49.01	224	P	P	16 16 59.9	+0.2
KSM				IAmb	IAmb	16 17 07.8	
	comp=Z,25nm,0.9s						
I29M	Ogilvie Camp,	49.05	33	P	P	16 16 59.3	-0.3
	baz=282,SNR=24						
KSH	Kashi	49.12	291	P	P	16 17 04.4	+3.8
KSH				pP	sP	16 17 20.4	-2.9
KSH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KSH				LR	LR		
	comp=Z,2µm,17.1s						
KSH				LR	LR		
	comp=Z,3µm,15.2s						
KSH				LR	LR		
	comp=Z,4µm,21.6s						
O28M	Mount Upton	49.25	39	P	P	16 17 00.7	-0.7
	baz=284						
YUK8	Steele Glacier	49.32	39	P	P	16 17 01.2	-0.8
	baz=284						
EKS2	Erkin-Say	49.36	295	P	P	16 17 02.5	+0.1
	SNR=20						
PCA	Pinnacle	49.38	40	P	P	16 17 02.3	+0.1
PCA				IAmb	IAmb	16 17 26.8	
	comp=Z,29nm,1.0s						
EPYK	Eagle Plains	49.47	32	P	P	16 17 01.4	-1.4
EPYK	Eagle Plains	49.47	32	P	P	16 17 03.1	+0.3
	baz=282,SNR=27						
G30M	tAoh Zraii Nji	49.54	31	P	P	16 17 03.1	-0.2
	baz=282						
BOK	Bokaro	49.57	267	eP	P	16 17 05.9	+1.8
BOK				IAmb	IAmb	16 17 29.2	
	comp=Z,72nm,1.8s						
L29M	L29M	49.62	36	P	P	16 17 06.3	+2.2
	baz=284						
AML	Almayashu	49.63	295	P	P	16 17 05.4	+0.6
	SNR=13						
M29M	Somme Creek	49.64	37	P	P	16 17 04.7	+0.5
	baz=284						
K29M	Barlow Dome	49.71	35	P	P	16 17 05.7	+0.9
	baz=284						
YUK4	Talbot Arm	49.83	38	P	P	16 17 05.4	-0.3
	baz=285						
YUK6	Outpost Mounta	50.07	39	P	P	16 17 07.3	-0.3
	baz=286						
O29M	Mount Kennedy	50.14	40	P	P	16 17 08.5	+0.5
	baz=286						
INK	Inuvik	50.25	29	P	P	16 17 09.3	+0.8
	comp=Z,16nm,0.6s,baz=294,slow=6.9,SNR=40						
INK				LR	LR	16 41 48.5	
	comp=Z,861nm,18.4s,baz=272,slow=40						
	comp=Z,16nm,0.6s						
INK	Inuvik	50.25	29	P	P	16 17 09.2	+0.7
INK				IAmb	IAmb	16 17 14.9	
	comp=Z,46nm,1.2s						
INK	Inuvik	50.25	29	P	P	16 17 09.2	+0.7
INK				pmax	pmax		
	comp=Z,46nm,1.3s						
INK	Inuvik	50.25	29	P	P	16 17 08.7	+0.2
	baz=284,SNR=30						
M30M	Minto, Yukon	50.35	36	P	P	16 17 08.3	-1.2
M30M				IAmb	IAmb	16 17 55.8	
	comp=Z,51nm,1.5s						
M30M	Minto, Yukon	50.35	36	P	P	16 17 09.4	-0.1
	baz=286						
F31M	Tsiigehtchic	50.37	30	P	P	16 17 09.4	-0.1
	baz=284,SNR=21						
MAYO	Mayo, Yukon	50.48	35	P	P	16 17 10.5	+0.1
	baz=285						
HYT	Haines Junctio	50.51	39	P	P	16 17 11.1	+0.2
HYT	Haines Junctio	50.51	39	P	P	16 17 11.2	+0.4
	baz=286,SNR=33						
N30M	Aishikik Lake	50.52	38	P	P	16 17 10.9	+0.1
	baz=286						
KAPI	Kappang	50.54	209	LR	LR	16 39 02.2	
	comp=Z,352nm,21.4s,baz=7.0,slow=36						
PMG	Port Moresby	50.86	173	LR	LR	16 39 14.9	
	comp=Z,188nm,19.5s,baz=335,slow=36						
DZA	Taraz	50.92	297	eP	P	16 17 14.1	0.0
	comp=Z,7.5nm,0.6s,baz=297						
DZA	Taraz	50.92	297	eP	P	16 17 14.1	0.0
DZA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
P30M	Million Dollar	50.97	40	P	P	16 17 15.2	+1.0
	baz=287						
DGPR	DIGLIPUR	51.02	251	eP	P	16 17 15.8	+0.8
DGPR				IAmb	IAmb	16 17 26.6	
	comp=Z,28nm,0.7s						
N31M	Braeburn, Yuko	51.12	38	P	P	16 17 15.3	0.0
N31M	Braeburn, Yuko	51.12	38	P	P	16 17 15.3	0.0
	baz=287,SNR=7.5						
O30N	Mendenhall	51.18	39	P	P	16 17 15.7	-0.1
	baz=287						
KK31	Karatay Array	51.38	297	P	P	16 17 17.2	-0.3
KK31				IAmb	IAmb	16 17 37.2	
	comp=Z,22nm,0.9s						
KK31	Karatay Array	51.38	297	P	P	16 17 17.3	-0.3
KK31				pmax	pmax		
	comp=Z,22nm,0.9s						
KKAR	Karatay Array	51.38	297	P	P	16 17 17.2	-0.4
KKAR	Karatay Array	51.38	297	P	P	16 17 16.7	-0.9
KKAR				IAmb	IAmb	16 17 37.3	
	comp=Z,22nm,0.9s						
KKAR	Karatay Array	51.38	297	P	P	16 17 16.7	-0.9
KKAR				pmax	pmax		
	comp=Z,22nm,0.9s						
PLBC	Pleasant Camp	51.45	40	P	P	16 17 17.6	-0.2
	baz=288						
KULM	Kulim	51.53	237	P	P	16 17 19.2	+0.4
KULM				IAmb	IAmb	16 17 27.1	
	comp=Z,24nm,0.8s						
M31M	Drury Creek, Y	51.53	37	P	P	16 17 18.5	+0.1
	baz=288,SNR=6.6						
PBKI	Pangkalan Bun	51.91	220	P	P	16 17 24.5	+2.8
	comp=Z,63nm,1.1s						
IPM	Ipoh	51.92	236	P	P	16 17 22.2	+0.4
IPM				IAmb	IAmb	16 18 06.8	
	comp=Z,20nm,1.1s						
A36M	Sachs Harbour	51.98	23	P	P	16 17 22.1	+0.6
A36M	Sachs Harbour	51.98	23	P	P	16 17 22.8	+1.3
	baz=288,SNR=41						
FARO	Faro, Yukon	51.99	36	P	P	16 17 22.0	+0.2
FARO				IAmb	IAmb	16 17 54.5	
	comp=Z,14nm,1.0s						
FARO	Faro, Yukon	51.99	36	P	P	16 17 22.3	+0.5
	baz=288						
IUG	Iuzhnay	52.11	296	eP	P	16 17 22.8	-0.3
	baz=296						
IUG	Iuzhnay	52.11	296	eP	P	16 17 22.7	-0.3
SVE	Sverdlovsk	52.17	317	eP	P	16 17 24.0	+0.9
SVE				pmax	pmax		
	comp=Z,42nm,0.9s						
SVE				MLR	MLR		
	comp=Z,5µm,18.0s						
CHM	Chimkent	52.32	297	eP	P	16 17 24.6	0.0
	baz=297						
CHM	Chimkent	52.32	297	eP	P	16 17 24.5	0.0
P33M	Teslin, Yukon	52.90	39	P	P	16 17 28.4	-0.2
P33M				IAmb	IAmb	16 17 54.2	
	comp=Z,36nm,1.0s						
P33M	Teslin, Yukon	52.90	39	P	P	16 17 29.5	+0.9
	baz=290,SNR=5.8						
C36M	Paulatuk	53.22	26	P	P	16 17 30.4	-0.3
C36M	Paulatuk	53.22	26	P	P	16 17 31.1	+0.5
	baz=291,SNR=10.0						
GAR	Garm	53.30	293	P	P	16 17 31.5	-0.4
ARU	Arti	53.38	317	LR	LR	16 42 51.5	
	comp=Z,6µm,18.5s,baz=78,slow=39						
ARU	Arti	53.38	317	P	P	16 17 31.4	-0.6
ARU	Arti	53.38	317c	iP	P	16 17 31.6	-0.5
ARU						16 18 38.3	
ARU				S	S	16 25 01.1	+1.8
ARU				pmax	pmax		
	comp=Z,23nm,1.4s						
ARU				MLR	MLR		
	comp=Z,6µm,18.0s						
ARU	Arti	53.38	317	P	P	16 17 31.9	-0.2
ARU				pP	pP	16 17 48.6	+0.7
SOEI	Soe	53.53	202	P	P	16 17 32.8	-0.9
SOEI	Soe	53.53	202	P	P	16 17 33.6	-0.1
	comp=Z,83nm,0.7s						
U33K	Whale Pass	54.25	43	P	P	16 17 38.4	0.0
	baz=293						
CHGR	Chuyangaron	54.26	293	P	P	16 17 38.4	-0.5
CHGR	Chuyangaron	54.26	293	P	P	16 17 38.4	-0.5
CHGR				pmax	pmax		
	comp=Z,92nm,0.8s						
PPBI	Pangkal Pinang	54.28	226	P	P	16 17 40.2	+1.1
	comp=Z,36nm,1.1s						
PSI	Prapat	54.53	237	P	P	16 17 41.0	-0.1
PSI				pmax	pmax		
	comp=Z,13nm,0.9s						
RPSI	Rantau Prapat	54.61	237	P	P	16 17 41.0	-0.5
DLBC	Dease Lake	54.89	40	P	P	16 17 42.4	-0.8
	baz=294						
MTN	Manton Dam	54.98	193	P	P	16 17 44.4	+0.4
MTN				IAmb	IAmb	16 18 17.5	
	comp=Z,29nm,1.0s						
SRBI	Singaraja	55.11	213	P	P	16 17 47.6	+2.5
	comp=Z,40nm,0.8s						
COEN	Coen	55.17	179	P	P	16 17 45.6	+0.1
COEN				IAmb	IAmb	16 18 09.3	
	comp=Z,14nm,0.9s						
T35M	Bob Quinn	55.37	42	P	P	16 17 46.9	+0.4
	baz=294						
ABKAR	Akbulak array	55.48	308	P	P	16 17 47.2	-0.3
ALE	Alert	55.65	4	P	P	16 17 48.5	+0.4
ALE				pP	pP	16 18 05.0	+1.1
ALE				sP	sP	16 18 11.7	+0.9
HOPEN	Hopen	55.84	345	eP	P	16 17 50.5	+0.9
SDSI	Sungai Dareh	55.94	232	P	P	16 17 51.8	+0.7
	comp=Z,77nm,1.1s						
AKTO	Aktyubinsk	56.10	310	LR	LR	16 43 37.8	
	comp=Z,2µm,20.2s,baz=75,slow=38						
BHPL	Bhopal	56.24	272	eP	P	16 17 52.4	-0.9
BHPL				IAmb	IAmb	16 18 26.1	
	comp=Z,17nm,1.0s						
SPA0	Spitsbergen Ar	56.26	348	eP	P	16 17 54.4	+1.8
SPB2	Spitsbergen Ar	56.26	348	P	P	16 17 54.5	+1.9
SPITS	Spitsbergen Ar	56.26	348	P	P	16 17 54.1	+1.5
SPITS				pmax	pmax		
	comp=Z,232nm,2.0s						
KBL	Kabul	56.34	289	P	P	16 17 52.7	-1.3
KBL				IAmb	IAmb	16 18 12.6	
	comp=Z,24nm,0.8s						
KBL	Kabul	56.34	289	P	P	16 17 52.7	-1.3
KBL				pmax	pmax		
	comp=Z,24nm,0.9s						
LIRD	Liard River Hi	56.34	38	P	P	16 17 53.7	+0.3
	baz=296						
PWJI	Pagerwojo	56.52	217	P	P	16 17 56.0	+0.9
	comp=Z,33nm,0.8s						
GSI	Gunungsitoli	56.53	237	P	P	16 17 55.2	-0.2
GSI	Gunungsitoli	56.53	237	P	P	16 17 55.7	+0.3
NOR	Nord	56.65	356	i P	P	16 17 54.1	-1.2
NOR				IAmb	IAmb	16 17 57.9	
	comp=Z,4.4nm,0.9s						
KOTAN	Kotaneelee Air	56.95	37	P	P	16 17 58.1	+0.3
	baz=297						
KIRV	Kirov	57.01	321	LR	LR	16 44 55.0	
	comp=Z,2µm,19.2s,baz=98,slow=38						
KIRV	Kirov	57.01	321c	iP	P	16 17 57.9	-0.2
KNRA	Kununurra	58.18	195	P	P	16 18 06.9	+0.2
RES	Resolute Bay	58.19	15	P	P	16 18 05.9	-0.3
RES				IAmb	IAmb	16 18 44.6	
	comp=Z,26nm,1.0s						
RES	Resolute Bay	58.19	15	P	P	16 18 05.9	-0.3
RES				pmax	pmax		
	comp=Z,26nm,1.0s						
CGJI	Cibinong	58.26	224	P	P	16 18 05.0	-2.4
	comp=Z,45nm,1.4s						
VADS	Vadso	58.59	338	eP	P	16 18 10.7	+1.7
VADS				IAmb	IAmb	16 18 18.9	
	comp=Z,89nm,1.4s						
BBB	Bella Bella	58.61	46	LR	LR	16 43 58.3	
	comp=Z,312nm,19.5s,baz=298,slow=36						
APA	Apatity	58.84	335⇓	iP	P	16 18 10.5	-0.3
APA				i		16 19 04.0	
APA				i		16 20 29.0	
APA				i PPP	PPP	16 21 43.0	
APA				i S	S	16 26 06.0	-5.3
APA				i PS	PnS	16 26 23.0	-8.0
APA				i SSS	SSS	16 32 28.0	
APA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HYB	Hyderabad	58.86	266	eP	P	16 18 11.6	-0.2
HYB	Hyderabad	58.86	266	eP	P	16 18 11.9	+0.1
ADZR	Andozero	59.11	330	eP	P	16 18 11.4	-1.3
ADZR				pmax	pmax		
	comp=Z,15nm,0.6s						
KEV	Kevo	59.46	339	P	P	16 18 15.0	0.0
KEV	Kevo	59.46	339	P	P	16 18 15.0	0.0
KEV				pmax	pmax		
	comp=Z,100nm,1.7s						
YKA	Yellowknife Ar	59.76	32	P	P	16 18 17.4	+0.1
	comp=Z,11nm,1.2s,baz=301,slow=6.8,SNR=26						
YKA				LR	LR	16 48 19.5	
	comp=Z,633nm,18.7s,baz=298,slow=40						
	comp=Z,11nm,1.2s						
YKA	Yellowknife Ar	59.76	32	P	P	16 18 16.9	-0.3
ARA0	ARCESS Array S	60.01	339	eP	P	16 18 20.2	+1.3
ARCES	ARCESS Array B	60.01	339	P	P	16 18 19.1	+0.3
	comp=Z,1.8nm,0.5s,baz=45,slow=6.5,SNR=13						
ARCES				LR	LR	16 47 38.1	
	comp=Z,2µm,18.1s,baz=69,slow=39						
	comp=Z,1.8nm,0.5s						
KLMR	Klimovskoe	60.27	327	eP	P	16 18 18.9	-1.8
KLMR				AMP		16 18 27.5	
	comp=Z,38nm,1.6s						
KLMR				esP	sP	16 18 45.1	+1.6
KLMR				ePcP	PcP	16 19 01.8	-3.7
KLMR	Klimovskoe	60.27	327	eP	P	16 18 18.9	-1.8
KLMR				e*SP	sP	16 18 45.1	+1.6
KLMR				e		16 19 01.7	
KLMR				pmax	pmax		
	comp=Z,38nm,1.6s						
TULEG	Thule	60.63	8	P	P	16 18 22.2	-0.8
TULEG				IAmb	IAmb	16 18 44.4	
	comp=Z,24nm,0.8s						
TULEG	Thule	60.63	8	i P	P	16 18 22.0	-1.1
TULEG				IAmb	IAmb	16 18 25.0	
	comp=Z,17nm,0.7s						
BELG	Belogornoye	60.89	316	LR	LR	16 47 24.5	
	comp=Z,4µm,18.8s,baz=73,slow=38						
BELG	Belogornoye	60.89	316c	eP	P	16 18 25.1	0.0
BELG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KTK1	Kautokeino	60.96	339	eP	P	16 18 26.5	+1.1
KTK1				IAmb	IAmb	16 18 31.6	
	comp=Z,36nm,1.3s						
NEEM	North Greenlan	61.06	3	i P	P	16 18 25.2	-1.2
NEEM				IAmb	IAmb	16 18 29.7	
	comp=Z,18nm,0.9s						
JETT	Jettan, Norway	61.34	340	eP	P	16 18 30.1	+2.1
WB0	Warramunga Arr	61.34	188	P	P	16 18 27.2	-1.3
DAG	Danmarks Havn	61.38	355	i P	P	16 18 26.6	-1.5
DAG				IAmb	IAmb	16 18 30.3	
	comp=Z,7.8nm,0.8s						
CTA	Charters Tower	61.39	175	LR	LR	16 43 36.2	
	comp=Z,390nm,21.9s,baz=345,slow=34						
CTAO	Charters Tower	61.39	175	P	P	16 18 33.6	+4.8
CTAO				pP	sP	16 18 49.7	-1.8
WRAB	Tennant Creek	61.51	188	P	P	16 18 28.6	-1.0
WRAB				IAmb	IAmb	16 19 17.6	
	comp=Z,21nm,0.8s						
WRAB	Tennant Creek	61.51	188	P	P	16 18 28.6	-1.0
WRAB				pmax	pmax		
	comp=Z,21nm,0.9s						
WRAB	Tennant Creek	61.51	188	P	P	16 18 28.6	-1.0
WRAB				pP	pP	16 18 45.2	-0.5
WR0	Warramunga Arr	61.52	188	P	P	16 18 28.9	-0.8
WR0				IAmb	IAmb	16 18 36.4	
	comp=Z,21nm,0.8s						
WB2	Warramunga Arr	61.52	188	P	P	16 18 28.8	-0.9
WB2				IAmb	IAmb	16 19 17.6	
	comp=Z,23nm,0.8s						
WRA	Warramunga Arr	61.52	188	P	P	16 18 28.7	-1.0
	comp=Z,6.8nm,0.7s,baz=4.7,slow=6.6,SNR=50						
WRA				LR	LR	16 45 41.9	
	comp=Z,308nm,19.7s,baz=354,slow=36						
	comp=Z,6.8nm,0.7s						
WRA	Warramunga Arr	61.52	188	P	P	16 18 28.4	-1.3
WRA	Warramunga Arr	61.52	188	i P	P	16 18 28.6	-1.1
WRA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TRO	Tromso	61.66	341	eP	P	16 18 31.6	+1.5
TRO				IAmb	IAmb	16 18 39.1	
	comp=Z,34nm,1.0s						
GEYT	Alibeck	62.14	297	P	P	16 18 33.4	-0.5
	comp=Z,12nm,0.8s,baz=46,slow=4.3,SNR=19						
GEYT				LR	LR	16 47 56.5	
	comp=Z,3µm,18.1s,baz=74,slow=38						
	comp=Z,12nm,0.8s						
KULLO	Kullorsuaq	63.51	6	i P	P	16 18 42.6	+0.3
KULLO				IAmb	IAmb	16 18 45.9	
	comp=Z,5.3nm,0.6s						
PALK	Pallekele	63.83	256	LR	LR	16 47 48.1	
	comp=Z,1µm,21.7s,baz=154,slow=37						
PALK	Pallekele	63.83	256⇓	eP	P	16 18 44.7	-0.6
PALK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MOS	Moscow	63.97	322	eP	P	16 18 44.7	-0.9
MOS				e		16 19 08.6	
MOS				e		16 19 20.5	
MOS				e		16 21 16.4	
MOS				eS	S	16 27 20.7	+4.0
MOS				pmax	pmax		
	comp=Z,48nm,1.6s						
MOS				MLR	MLR		
	comp=Z,2µm,18.0s						
FAUS	Fauske	64.22	340	eP	P	16 18 48.8	+1.7
FAUS				IAmb	IAmb	16 18 52.1	
	comp=Z,25nm,1.2s						
VRH	Novokhopyorsk	64.62	317	eP	P	16 18 47.0	-2.9
VRH				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VRH				MLR	MLR		
	comp=Z,3µm,17.0s						
OBN	Obninsk	64.83	322	LR	LR	16 50 04.2	
	comp=Z,386nm,18.4s,baz=87,slow=39						
OBN	Obninsk	64.83	322⇓	iP	P	16 18 50.3	-0.9
OBN				e*PP	pP	16 19 09.6	+2.2
OBN				e*SP	sP	16 19 16.5	+2.4
OBN				i		16 19 28.8	
OBN						16 21 21.0	
OBN				S	S	16 27 29.0	+1.8
OBN				e		16 28 12.4	
OBN				eSSS	SSS	16 34 39.2	
OBN				pmax	pmax		
	comp=Z,42nm,1.7s						
OBN				MLR	MLR		
	comp=Z,2µm,17.0s						
FIA1	FINESS Array S	65.10	332	P	P	16 18 52.1	-0.7
FIA1				IAmb	IAmb	16 19 19.0	
	comp=Z,28nm,0.7s						
FIA0	FINESS Array S	65.11	332	P	P	16 18 52.0	-0.9
FIA0	FINESS Array S	65.11	332	P	P	16 18 52.0	-0.9
FINES	FINESS Array B	65.11	332	P	P	16 18 52.6	-0.2
	comp=Z,10nm,0.6s,baz=49,slow=7.8,SNR=29						
FINES				LR	LR	16 49 36.8	
	comp=Z,3µm,20.0s,baz=52,slow=38						
	comp=Z,10nm,0.6s						
FINES	FINESS Array B	65.11	332	P	P	16 18 52.1	-0.9
FINES	FINESS Array B	65.11	332	i P	P	16 18 52.5	-0.4
FINES				pmax	pmax		
	comp=Z,11nm,0.6s						
LPSR	Galich'ya Gora	65.20	319	eP	P	16 18 53.9	+0.2
LPSR				pmax	pmax		
	comp=Z,20nm,1.1s						
LPSR				MLR	MLR		
	comp=Z,560nm,13.0s						
AS31	Alice Springs	65.25	188	P	P	16 18 53.0	-1.3
ASAR	Alice Springs	65.25	188	P	P	16 18 54.0	-0.2
	comp=Z,5.3nm,0.7s,baz=7.7,slow=6.3,SNR=41						
ASAR				LR	LR	16 46 49.6	
	comp=Z,865nm,21.9s,baz=0.5,slow=35						
	comp=Z,5.3nm,0.7s						
ASAR	Alice Springs	65.25	188	P	P	16 18 53.5	-0.8
MOR8	Moi Rana	65.36	339	eP	P	16 18 52.5	-2.0
MOR8				IAmb	IAmb	16 19 03.5	
	comp=Z,19nm,0.8s						
VORR	Voronezh	65.62	318	eP	P	16 18 54.9	-1.5
VORR				pmax	pmax		
	comp=Z,20nm,1.4s						
VORR				MLR	MLR		
	comp=Z,1µm,17.0s						
MBWA	Marble Bar	65.66	203	P	P	16 18 57.1	+0.3
VSR	Storozhevoye	65.91	318	eP	P	16 18 56.8	-1.5
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
VSR				MLR	MLR		
	comp=Z,1µm,16.0s						
VORD	Divnogorie	66.00	318	eP	P	16 18 57.7	-1.1
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VORD				MLR	MLR		
	comp=Z,5µm,23.0s						
PSA00	Pilbara Seismi	66.01	203	P	P	16 18 58.7	-0.5
PSA00				IAmb	IAmb	16 19 30.7	
	comp=Z,25nm,1.3s						
MAK	Makhachkala	66.11	307	eP	P	16 18 57.9	-1.8
MAK				e*PP	pP	16 19 14.4	-1.6
MAK				e*SP	sP	16 19 20.7	-2.1
MAK				eS	S	16 27 40.5	-2.8
MAK				e*SS	sS	16 28 10.1	-1.0
MAK				eSS	SS	16 31 53.6	-5.5
I04A	Tendick Farm,	66.29	52	P	P	16 19 02.0	+1.0
NEW	Newport	66.66	46	P	P	16 19 03.8	+0.6
	comp=Z,2.7nm,0.4s,baz=306,slow=18,SNR=3.3						
NEW				LR	LR	16 48 34.0	
	comp=Z,519nm,21.9s,baz=311,slow=36						
	comp=Z,2.7nm,0.4s						
NEW	Newport	66.66	46	P	P	16 19 03.4	+0.1
	baz=307						
AKT	Akhty	66.83	305	eP	P	16 19 04.8	+0.3
AKT				e*PP	pP	16 19 19.6	-1.2
AKT				e*SP	sP	16 19 26.1	-1.5
AKT				e		16 19 31.2	
AKT				pmax	pmax		
	comp=Z,29nm,0.8s						
VSU	Vasula	66.86	329⇑	eP	P	16 19 04.0	-0.2
VSU				pmax	pmax		
	comp=Z,84nm,1.5s						
RAF	Rauma	66.91	333	eP	P	16 19 04.0	-0.5
GROC	Groznyy	66.99	308	eP	P	16 19 06.4	+1.1
GROC				e*PP	pP	16 19 21.8	+0.1
GROC				e		16 19 33.2	
GROC				e		16 21 30.6	
GROC				pmax	pmax		
	comp=Z,175nm,1.9s						
EIDS	Eidsvold	67.05	171	P	P	16 19 06.4	+0.7
EIDS				IAmb	IAmb	16 19 29.9	
	comp=Z,18nm,0.8s						
PINE	Pine Mountain	67.16	51	P	P	16 19 05.4	-1.2
PINE				IAmb	IAmb	16 19 31.1	
	comp=Z,25nm,0.8s						
DZM	Mont Dzumac	67.18	155	eLR	LR	16 39 27.6	

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       comp=Z,3µm,22.8s
DZM    Mont Dzumac       67.18 155  LR     LR     16 44 26.4
       comp=Z,1µm,22.0s,baz=344,slow=32
SEKA   Sheki             67.31 305  P      P      16 19 11.2 +3.7
YBH    Yreka Blue Hor    67.31  54  LR     LR     16 43 50.3
       comp=Z,502nm,21.8s,baz=312,slow=32
ZKTA   Zakatala          67.41 306  P      P      16 19 12.2 +4.1
MNGR   Mingechevir, A    67.64 305  P      P      16 19 13.0 +3.6
MSVF   Nonsavu           67.72 143  LR     LR     16 43 15.5
       comp=Z,524nm,21.8s,baz=330,slow=31
LKRN   Lenkeran, Azer    67.79 302  P      P      16 19 14.0 +3.6
MTSE   Matsula           67.80 330 eP      P      16 19 10.4 +0.3
K05A   Summer Lake       67.82  52  P      P      16 19 10.8  0.0
K05A                                IAmb   IAmb   16 19 35.4
       comp=Z,31nm,1.0s
WALA   Waterton Lakes    67.87  44  P      P      16 19 11.3 +0.4
WALA                                IAmb   IAmb   16 19 55.8
       comp=Z,38nm,1.6s
AAL    Aland             68.12 333 eP      P      16 19 12.8 +0.6
ZEI    Tsey              68.36 308 eP      P      16 19 11.3 -2.9
ZEI                                 pmax   pmax
       comp=Z,11nm,0.6s
KVAR   Kislovodsk Arr    68.36 310  LR     LR     16 52 45.6
       comp=Z,1µm,20.2s,baz=256,slow=39
KIV    Kislovodsk        68.36 310  P      P      16 19 13.1 -1.0
KIV    Kislovodsk        68.36 310 eP      P      16 19 14.9 +0.8
KIV                                eS      S      16 28 11.7 +1.1
KIV                                 pmax   pmax
       comp=Z,54nm,1.0s
KIV                                 MLR    MLR
       comp=Z,1µm,17.0s
KIV    Kislovodsk        68.36 310  P      P      16 19 15.0 +0.9
KIV                                 pP     pP     16 19 32.0 +1.5
KBZ    Khabaz            68.38 310  P      P      16 19 14.2 +0.2
       comp=Z,13nm,0.9s,baz=58,slow=4.6,SNR=17
KBZ                                 LR     LR     16 54 13.0
       comp=Z,1µm,19.1s,baz=42,slow=40
       comp=Z,13nm,0.9s
KBZ    Khabaz            68.38 310ceP      P      16 19 14.6 +0.6
KBZ                                 pmax   pmax
       comp=Z,11nm,0.9s
MOD    Modoc Plateau     68.66  53  P      P      16 19 16.7 +0.6
ONI    Oni               68.74 308  P      P      16 19 16.7 +0.3
ONI                                 IAmb   IAmb   16 20 07.8
       comp=Z,39nm,1.2s
ONI    Oni               68.74 308  P      P      16 19 16.7 +0.3
ONI                                 pmax   pmax
       comp=Z,39nm,1.2s
NEY    Neytrino          68.77 309⇑eP      P      16 19 16.0 -0.7
NEY                                 pmax   pmax
       comp=Z,1.0nm,0.8s
MNK    Minsk             69.08 325 i P     P      16 19 20.7 +2.4
       comp=E,3.0nm,0.9s
MNK                                i P     P      16 19 20.7 +2.4
       comp=N,29nm,0.9s
MNK                                i P     P      16 19 20.7 +2.4
       comp=Z,18nm,0.9s,baz=47
MNK                                i pP    pP     16 19 36.2 +1.6
MNK                                i sP    PcP    16 19 44.0 +2.1
MNK                                i PP    PP     16 21 53.4 +2.5
MNK                                i PPP   PPP    16 23 34.0
MNK                                i S     S      16 28 21.3 +2.8
MNK                                i sS    sS     16 28 49.5 +3.2
MNK                                i SS    SS     16 32 35.2 -9.3
MNK                                i SSS   SSS    16 36 06.2
MNK                                i LQ    LQ     16 44 53.2
MNK                                i LR    LR     16 49 05.6
MNK                                i LRM   MLR    16 51 59.9
       comp=Z,2µm,19.0s
MNK                                i LRM   MLR    16 52 06.2
       comp=N,1µm,19.0s
MNK                                i LRM   MLR    16 52 11.5
       comp=E,219nm,19.0s
MNK    Minsk             69.08 325 i P     P      16 19 20.6 +2.4
MNK                                i *PP   pP     16 19 36.1 +1.6
MNK                                i *SP   PcP    16 19 44.0 +2.1
MNK                                i              16 19 44.3
MNK                                i              16 21 53.4
MNK                                i PPP   PPP    16 23 33.9
MNK                                i S     S      16 28 21.3 +2.8
MNK                                i *SS   sS     16 28 49.5 +3.2
MNK                                 pmax   pmax
       comp=E,3.0nm,0.9s
MNK                                 pmax   pmax
       comp=Z,18nm,0.9s
MNK                                 pmax   pmax
       comp=N,29nm,0.9s
MNK                                 MLR    MLR
       comp=Z,2µm,19.0s
MNK                                 MLR    MLR
       comp=N,1µm,19.0s
MNK                                 MLR    MLR
       comp=E,219nm,19.0s
ILULI  Ilulissat         69.19   5 i P     P      16 19 18.6 -0.1
ILULI                               IAmb   IAmb   16 19 21.0
       comp=Z,11nm,0.7s
PLID   Pearl Lake        69.20  48  P      P      16 19 18.8 -0.7
MSO    Missoula          69.24  45  P      P      16 19 18.5 -1.0
       baz=309
NACGM  Naroch            69.27 326 eP      P      16 19 20.2 +0.8
       comp=E,574nm,0.9s
GNI    Garni             69.44 306  LR     LR     16 51 55.9
       comp=E,960nm,21.2s,baz=61,slow=38
GNI    Garni             69.44 306  P      P      16 19 21.2 +0.2
GNI    Garni             69.44 306  P      P      16 19 21.2 +0.2
GNI                                 pmax   pmax
       comp=Z,79nm,1.4s
NAX    Nakhchivan        69.57 304  P      P      16 19 25.1 +3.5
AFI    Afiamalu          69.69 132  LR     LR     16 43 47.5
       comp=Z,792nm,21.9s,baz=324,slow=30
ICESG  Greenland Ices    69.74   1 i P     P      16 19 22.2 -0.2
ICESG                               IAmb   IAmb   16 19 25.4
       comp=Z,17nm,0.9s
FFC    Flin Flon         69.74  34  P      P      16 19 22.4 +0.1
FFC                                 IAmb   IAmb   16 19 45.7
       comp=Z,17nm,0.9s
FFC    Flin Flon         69.74  34  P      P      16 19 22.4 +0.1
FFC                                 pmax   pmax
       comp=Z,17nm,0.9s
FFC    Flin Flon         69.74  34  P      P      16 19 22.7 +0.4
FFC                                 pP     pP     16 19 38.9 +0.3
FFC                                 sP     sP     16 19 45.2 -0.1
FCC    Fort Churchill    69.84  27  P      P      16 19 22.6 -0.1
FCC                                 IAmb   IAmb   16 19 55.4
       comp=Z,38nm,1.4s
FCC    Fort Churchill    69.84  27  P      P      16 19 22.6 -0.1
FCC                                 pmax   pmax
       comp=Z,38nm,1.4s
PABE   Paberze           70.01 328  P      P      16 19 23.4 -0.5
PABE                                IAmb   IAmb   16 19 52.9
       comp=Z,52nm,1.1s
NC405  NORSAR Array S    70.06 337  P      P      16 19 23.4 -0.8
DOMB   Dombas            70.07 338 eP      P      16 19 24.0 -0.3
NC303  NORSAR Array S    70.07 337  P      P      16 19 23.8 -0.4
NC303                               IAmb   IAmb   16 20 07.3
       comp=Z,40nm,1.2s
WSAR   Wadi Sarin        70.20 284  LR     LR     16 53 40.6
       comp=Z,783nm,20.4s,baz=88,slow=39
NC204  NORSAR Array S    70.21 337  P      P      16 19 24.8 -0.4
HFS    Hagfors           70.23 335  LR     LR     16 52 53.4
       comp=Z,2µm,18.4s,baz=50,slow=38
NB201  NORSAR Array S    70.23 337  P      P      16 19 24.9 -0.3
NB2    NORSAR Subarra    70.27 337  P      P      16 19 24.8 -0.7
       comp=Z,4.0nm,0.7s,baz=37,slow=6.2
NB2    NORSAR Subarra    70.27 337  P      P      16 19 24.8 -0.7
       slow=6.2
NOA    NORSAR Array B    70.27 337  P      P      16 19 25.1 -0.4
       comp=Z,7.0nm,0.7s,baz=37,slow=6.1,SNR=22
NOA                                 LR     LR     16 53 19.7
       comp=Z,1µm,21.7s,baz=35,slow=38
       comp=Z,7.0nm,0.7s
SOC    Sochi             70.29 311 eP      P      16 19 26.8 +0.9
SOC                                eS      S      16 28 36.7 +3.6
SOC                                eSS     SS     16 33 01.8 -1.8
SOC                                 pmax   pmax
       comp=Z,24nm,1.1s
SOC                                 MLR    MLR
       comp=Z,1µm,20.0s
NBO00  NORSAR Array S    70.40 337  P      P      16 19 25.9 -0.3
MPK    Martis Peak       70.41  55  P      P      16 19 26.8 -0.2
MPK                                 IAmb   IAmb   16 19 52.1
       comp=Z,35nm,0.9s
NC602  NORSAR Array S    70.41 337  P      P      16 19 25.8 -0.5
NC602  NORSAR Array S    70.41 337 eP      P      16 19 26.2 -0.1
VIKU   Vikbolandet       70.50 333 eP      P      16 19 26.5 -0.3
PAHR   Pah Rah Range     70.55  54  P      P      16 19 28.4 +0.6
PAHR                                IAmb   IAmb   16 19 52.6
       comp=Z,28nm,1.0s
EGMT   Eagleton          70.66  43  P      P      16 19 26.9 -1.2
       baz=311
LRM    Limekiln Ridge    70.68  46  P      P      16 19 28.7 +0.2
ANN    Anapa             70.79 313 eP      P      16 19 28.5 -0.4
ANN                                e*PP    pP     16 19 44.9 -0.4
ANN                                eS      S      16 28 43.1 +4.2
ANN                                e              16 29 31.0
ANN                                eSS     SS     16 33 20.0 +8.8
ANN                                 pmax   pmax
       comp=Z,24nm,0.8s
ANN                                 MLR    MLR
       comp=N,1µm,17.0s
ANN                                 MLR    MLR
       comp=E,458nm,16.0s
ANN                                 MLR    MLR
       comp=Z,1µm,14.0s
DLMT   Dillon            70.90  46  P      P      16 19 30.5 +0.7
DLMT                                IAmb   IAmb   16 20 12.5
       comp=Z,30nm,1.1s
UOSS   Minazif           70.92 287  P      P      16 19 29.8 -0.2
UOSS                                IAmb   IAmb   16 19 49.2
       comp=Z,25nm,0.8s
UOSS   Minazif           70.92 287  P      P      16 19 30.0  0.0
HLID   Hailey            71.05  48  P      P      16 19 31.6 +0.9
       baz=310
AKASG  Malin Array Be    71.07 322  P      P      16 19 29.8 -0.6
       comp=Z,4.0nm,0.4s,baz=44,slow=6.0,SNR=47
AKASG                               LR     LR     16 53 24.3
       comp=Z,2µm,18.5s,baz=62,slow=38
       comp=Z,4.0nm,0.4s
AKASG  Malin Array Be    71.07 322  P      P      16 19 30.1 -0.4
AKASG  Malin Array Be    71.07 322  P      P      16 19 30.1 -0.4
AKASG                               pmax   pmax
       comp=Z,12nm,1.1s
AKBB   Malin Array Si    71.07 322  P      P      16 19 29.9 -0.6
AKBB                                IAmb   IAmb   16 19 57.8
       comp=Z,61nm,1.4s
AKBB   Malin Array Si    71.07 322  P      P      16 19 29.9 -0.6
AKBB                                pmax   pmax
       comp=Z,61nm,1.5s
AK05   Malin Array Si    71.14 322  P      P      16 19 30.2 -0.7
AK05                                IAmb   IAmb   16 20 25.4
       comp=Z,38nm,1.2s
BOZ    Bozeman (W)       71.27  45  P      P      16 19 32.5 +0.5
BOZ    Bozeman (W)       71.27  45  P      P      16 19 32.5 +0.5
BOZ                                 pmax   pmax
       comp=Z,13nm,0.9s
BOZ    Bozeman (W)       71.27  45  P      P      16 19 32.9 +0.9
       baz=311
SFJD   Kangerlussuaq     71.42   5  LR     LR     16 52 16.8
       comp=Z,1µm,21.7s,baz=358,slow=37
SFJD   Kangerlussuaq     71.42   5  P      P      16 19 32.1 -0.1
SFJD                                IAmb   IAmb   16 20 10.7
       comp=Z,25nm,1.1s
SFJD   Kangerlussuaq     71.42   5  P      P      16 19 32.1 -0.1
SFJD                                pmax   pmax
       comp=Z,25nm,1.2s
SFJD   Kangerlussuaq     71.42   5 i P     P      16 19 32.2 -0.1
KVN    Kaiserville       71.73  54  P      P      16 19 35.4 +0.4
KVN                                 IAmb   IAmb   16 20 00.1
       comp=Z,28nm,0.9s
KVN    Kaiserville       71.73  54  P      P      16 19 35.4 +0.4
KVN                                 pmax   pmax
       comp=Z,29nm,0.9s
LHV    Little Huntoon    71.99  55  P      P      16 19 37.5 +1.3
LHV                                 IAmb   IAmb   16 20 02.0
       comp=Z,34nm,0.9s
NVAR   Mina Array Bea    72.00  54  P      P      16 19 37.2 +0.6
       comp=Z,2.0nm,0.7s,baz=294,slow=6.3,SNR=18
NVAR                                LR     LR     16 49 17.9
       comp=Z,303nm,20.4s,baz=309,slow=34
       comp=Z,2.0nm,0.7s
NVAR   Mina Array Bea    72.00  54  P      P      16 19 37.4 +0.8
MDPB   Devils Postpil    72.02  56  P      P      16 19 37.3 +0.5
GURO   Guroymak-BITLI    72.08 306  P      P      16 19 37.5 +0.6
GURO                                IAmb   IAmb   16 20 09.1
       comp=Z,20nm,1.0s
NV11   Mina Array Sit    72.09  54  P      P      16 19 38.1 +1.1
DY2G   Dye2              72.19   3 i P     P      16 19 36.7 -0.5
DY2G                                IAmb   IAmb   16 19 39.1
       comp=Z,21nm,0.7s
ELK    Elko              72.37  51  P      P      16 19 39.7 +0.9
       comp=Z,0.4nm,0.3s,baz=308,slow=8.8,SNR=4.0
ELK                                 LR     LR     16 47 40.3
       comp=Z,487nm,21.4s,baz=324,slow=33
       comp=Z,0.4nm,0.3s
SIM    Simferopol'       72.49 315 eP      P      16 19 39.9 +0.8
SIM                                e              16 19 58.0
SIM                                 SS     SS     16 33 41.0 +3.8
SIM                                 pmax   pmax
       comp=Z,71nm,1.0s
ODD1   Odda              72.50 338 eP      P      16 19 39.3 +0.3
H17A   Grant Village     72.62  46  P      P      16 19 41.0 +0.8
       baz=312
IMW    Indian Meadow     72.75  46  P      P      16 19 41.8 +0.8
IMW                                 IAmb   IAmb   16 20 06.8
       comp=Z,51nm,1.6s
DSP    Deep Springs      72.87  55  P      P      16 19 42.4 +1.0
DSP                                 IAmb   IAmb   16 20 07.2
       comp=Z,21nm,1.0s
FXWY   Fox Creek         72.87  47  P      P      16 19 42.7 +0.9
TPH    Tonopah           72.88  54  P      P      16 19 42.2 +0.4
TPH    Tonopah           72.88  54  P      P      16 19 42.2 +0.4
TPH                                 pmax   pmax
       comp=Z,85nm,0.9s
MOOW   Moose Ponds       72.95  46  P      P      16 19 42.4 +0.2
STKA   Stephens Creek    73.00 180  P      P      16 19 42.0 -0.1
       comp=Z,2.6nm,0.7s,baz=345,slow=6.9,SNR=6.0
STKA                                LR     LR     16 51 14.6
       comp=Z,527nm,21.9s,baz=11,slow=35
       comp=Z,2.6nm,0.7s
STKA   Stephens Creek    73.00 180  P      P      16 19 42.2 +0.2
STKA   Stephens Creek    73.00 180  P      P      16 19 42.2 +0.2
STKA                                pmax   pmax
       comp=Z,3.0nm,1.2s
FORT   Forrest           73.05 193  P      P      16 19 43.4 +1.1
FORT                                IAmb   IAmb   16 20 32.5
       comp=Z,24nm,0.8s
DEL    Delary            73.05 333 eP      P      16 19 42.8 +0.7
SORM   Soroca            73.25 320 ⇓P      P      16 19 44.2 +0.7
SORM   Soroca            73.25 320 ⇓P      P      16 19 44.2 +0.7
PKM    Mcpherson Peak    73.28  58  P      P      16 19 44.5 +0.4
       baz=309
BORG   Borgarnes         73.30 353  LR     LR     16 52 11.8
       comp=Z,509nm,20.8s,baz=31,slow=36
LAO    LASA Array        73.34  42  P      P      16 19 43.6 -0.6
       baz=313
CWC    Cottonwood Cre    73.39  56  P      P      16 19 45.2 +0.3
       baz=310
GRAC   Grapevine Rang    73.48  55  P      P      16 19 46.3 +1.2
       baz=310
R11A   Troy Canyon, C    73.70  53  P      P      16 19 46.7 +0.1
R11A   Troy Canyon, C    73.70  53  P      P      16 19 47.0 +0.4
       baz=310
MILM   Milestii Mici     73.87 319 eP      P      16 19 49.0 +1.8
       comp=Z,600nm,7.6s
MILM                                LRM    MLR    16 55 35.0
       comp=Z,2µm,21.5s
MILM   Milestii Mici     73.87 319 eP      P      16 19 49.0 +1.8
MILM                                pmax   pmax
       comp=Z,600nm,7.6s
HWUT   Hardware Ranch    73.92  48  P      P      16 19 48.2 +0.4
HWUT                                IAmb   IAmb   16 20 44.0
       comp=Z,30nm,1.4s
MPMC   Manual Prospec    74.00  56  P      P      16 19 48.7 +0.3
       baz=310
DIKM   Dikmen            74.05 312 ⇑P      P      16 19 49.1 +0.8
S11A   Rachel            74.06  54  P      P      16 19 49.5 +0.9
S11A                                IAmb   IAmb   16 21 00.9
       comp=Z,51nm,1.1s
LVV    L'vov             74.06 323 eP      P      16 19 48.4 +0.1
LVV                                 MLR    MLR
       comp=N,700nm,16.0s
LVV                                 MLR    MLR
       comp=E,1µm,16.0s
LVV                                 MLR    MLR
       comp=Z,1µm,16.0s
WCT    Wildcat Mounta    74.07  55  P      P      16 19 48.6 -0.1
FURC   Furnace Creek,    74.13  55  P      P      16 19 49.5 +0.7
       baz=310
BBOO   Buckleboo         74.13 185  P      P      16 19 50.5 +1.8
BBOO                                IAmb   IAmb   16 20 31.0
       comp=Z,42nm,1.6s
DUG    Dugway, Tooele    74.13  50  P      P      16 19 49.3 +0.2
DUG                                 IAmb   IAmb   16 20 44.3
       comp=Z,39nm,1.4s
DUG    Dugway, Tooele    74.13  50  P      P      16 19 49.3 +0.2
DUG                                 pmax   pmax
       comp=Z,39nm,1.4s
DUG    Dugway, Tooele    74.13  50  P      P      16 19 49.7 +0.6
       baz=311
MORW   Morawa            74.19 203  P      P      16 19 49.5 +0.4
MORW                                IAmb   IAmb   16 20 20.8
       comp=Z,37nm,1.4s
TPNV   Topopah Spring    74.20  55  P      P      16 19 50.2 +0.7
TPNV                                IAmb   IAmb   16 20 45.9
       comp=Z,18nm,0.9s
TPNV   Topopah Spring    74.20  55  P      P      16 19 50.2 +0.7
TPNV                                pmax   pmax
       comp=Z,18nm,0.9s
TPNV   Topopah Spring    74.20  55  P      P      16 19 49.5  0.0
       baz=310
LRMC   Laurel Mtn Rad    74.25  57  P      P      16 19 50.3 +0.5
       baz=310
BW06   Boulder Array     74.25  47  P      P      16 19 49.2 -0.7
BW06   Boulder Array     74.25  47  P      P      16 19 49.6 -0.2
       baz=312
PD31   Pinedale Array    74.25  47  P      P      16 19 49.5 -0.4
PDAR   Pinedale Array    74.25  47  P      P      16 19 50.2 +0.4
       comp=Z,2.6nm,0.6s,baz=318,slow=2.0,SNR=16
PDAR                                LR     LR     16 53 10.1
       comp=Z,522nm,21.4s,baz=338,slow=36
       comp=Z,2.6nm,0.6s
PDAR   Pinedale Array    74.25  47  P      P      16 19 48.9 -0.9
GWY    Greenwater Val    74.43  55  P      P      16 19 49.5 -1.3
GWY                                 IAmb   IAmb   16 20 34.6
       comp=Z,24nm,1.1s
EDW2   Edwards Air Fo    74.44  57  P      P      16 19 51.2 +0.4
       baz=310
QSM    Queen of Sheba    74.45  56  P      P      16 19 49.5 -1.3
QSM                                 IAmb   IAmb   16 20 31.0
       comp=Z,40nm,1.3s
SNCC   San Nicolas Is    74.50  59  P      P      16 19 51.7 +0.6
       baz=310
BZK    Bozkurt           74.54 313  P      P      16 19 48.7 -2.5
PRN    Pahroc Range      74.63  54  P      P      16 19 52.4 +0.4
NLU    North Lily Min    74.72  50  P      P      16 19 52.4 -0.2
GSC    Goldstone, Bar    74.91  56  P      P      16 19 53.7 +0.1
       baz=310
BFSC   Mount Baldy Ra    75.06  58  P      P      16 19 54.4 -0.1
       baz=310
BUR08  Bucovina Ar. S    75.10 321  P      P      16 19 54.3 -0.1
BURAR  Bucovina Array    75.11 321 ⇑P      P      16 19 54.6 +0.1
BURAR  Bucovina Array    75.11 321  P      P      16 19 54.6 +0.1
BURAR  Bucovina Array    75.11 321 ⇑P      P      16 19 54.6 +0.1
CIS    Catalina Islan    75.12  59  P      P      16 19 54.8 +0.1
       baz=310
SHPR   Sheep Range       75.15  54  P      P      16 19 55.8 +0.8
TESR   Tescani           75.22 320 ⇑P      P      16 19 55.0  0.0
ILGA   Ilgaz             75.31 312  P      P      16 19 55.2 -0.8
TUQ    Turquoise Moun    75.38  56  P      P      16 19 56.4 +0.1
       baz=311
TCRU   Three Creeks R    75.39  51  P      P      16 19 57.0 +0.6
CFR    Carcaliu          75.43 318 ⇓P      P      16 19 55.7 -0.5
CFR    Carcaliu          75.43 318 ⇓P      P      16 19 55.7 -0.5
TPGR   Topolog           75.51 318 ⇑P      P      16 19 57.7 +0.9
BBRC   Big Bear Solar    75.51  57  P      P      16 19 57.6 +0.4
       baz=311
HEC    Hector,Ludlow     75.51  56  P      P      16 19 58.0 +0.9
       baz=311
BNN    Bunyan            75.57 309  P      P      16 19 57.3 -0.1
STHS   Stebnicka Huta    75.59 325 eP      P      16 19 56.8 -0.3
STHS                                pmax   pmax
       comp=Z,10.0nm,0.9s
STHS   Stebnicka Huta    75.59 325 eP      P      16 19 56.8 -0.3
MVU    Marysvale         75.60  51  P      P      16 19 58.2 +0.5
OJC    Ojcow             75.61 326 eP      P      16 19 57.7 +0.5
OJC    Ojcow             75.61 326  P      P      16 19 56.2 -1.0
OJC                                 IAmb   IAmb   16 20 35.7
       comp=Z,52nm,1.2s
OJC    Ojcow             75.61 326  P      P      16 19 56.2 -1.0
OJC                                 pmax   pmax
       comp=Z,52nm,1.2s
MSU    Marysvale         75.61  51  P      P      16 19 58.4 +0.6
MSU    Marysvale         75.61  51  P      P      16 19 58.4 +0.6
VRI    Vrincioaia        75.64 319 ⇓P      P      16 19 58.9 +1.4
VRI    Vrincioaia        75.64 319 ⇓P      P      16 19 58.9 +1.4
PLOR   Plostina          75.69 319 ⇓P      P      16 19 58.0 +0.2
PLOR   Plostina          75.69 319 ⇓P      P      16 19 58.0 +0.2
RDMU   Red Mountain      75.73  48  P      P      16 19 58.6 +0.3
RDMU                                IAmb   IAmb   16 21 12.5
       comp=Z,28nm,0.7s
P17A   Butcher Ranch,    75.81  50  P      P      16 19 59.2 +0.5
V12A   Nelson            75.85  55  P      P      16 19 59.6 +0.6
GAZ    Gaziantep         75.88 307  P      P      16 19 59.0 -0.1
GAZ                                 IAmb   IAmb   16 20 36.9
       comp=Z,43nm,1.3s
OZUR                     75.93 320 ⇑P      P      16 20 00.3 +1.1
GMRC   Granite Mounta    75.96  56  P      P      16 20 00.3 +0.6
       baz=311
TRPA   Tarpa             75.97 323 ⇓P      P      16 19 59.9 +0.6
P18A   Preston Nutter    75.98  49  P      P      16 20 00.2 +0.2
NIE    Niedzica          76.00 325 eP      P      16 20 01.4 +1.9
SRU    San Rafael Swe    76.17  50  P      P      16 20 01.2 +0.4
SRU                                 IAmb   IAmb   16 20 27.9
       comp=Z,16nm,0.8s
SRU    San Rafael Swe    76.17  50  P      P      16 20 01.3 +0.4
SRU                                 pmax   pmax
       comp=Z,16nm,0.8s
DOPR   Dopca             76.22 320 ⇑P      P      16 20 01.2 +0.4
PFO    Pinyon Flats O    76.23  57  P      P      16 20 02.3 +1.1
       comp=Z,1.9nm,0.6s,baz=306,slow=17,SNR=2.5
       comp=Z,1.9nm,0.6s
PFO    Pinyon Flats O    76.23  57  P      P      16 20 01.5 +0.3
       baz=311
RSSD   Black Hills       76.23  43  P      P      16 20 01.7 +0.6
       baz=315
TPFO   Pinon Flats       76.23  57  P      P      16 20 01.1 -0.1
       baz=311
BR131  Keskin Array S    76.25 311  P      P      16 20 01.1 -0.1
BR131  Keskin Array S    76.25 311  P      P      16 20 01.1 -0.1
BR131                               pmax   pmax
       comp=Z,13nm,1.0s
BRTR   Keskin Array B    76.25 311  P      P      16 20 00.9 -0.3
       comp=Z,6.2nm,1.0s,baz=64,slow=5.6,SNR=7.7
BRTR                                LR     LR     16 58 29.8
       comp=Z,1µm,19.4s,baz=60,slow=40
       comp=Z,6.2nm,1.0s
BRTR   Keskin Array B    76.25 311  P      P      16 20 01.1 -0.1
BRTR   Keskin Array B    76.25 311 i P     P      16 20 01.7 +0.4
BRTR                                pmax   pmax
       comp=Z,6.0nm,1.0s
BELC   Belle Mtn. Jos    76.26  57  P      P      16 20 01.9 +0.5
       baz=311
MLR    Muntele Rosu      76.29 319 ⇑P      P      16 20 01.4 +0.1
MLR    Muntele Rosu      76.29 319  LR     LR     16 55 43.4
       comp=Z,2µm,21.5s,baz=52,slow=37
MLR    Muntele Rosu      76.29 319 ⇑P      P      16 20 01.4 +0.1
BSEG   Bad Segeberg      76.30 333 eL      L      16 56 02.7
       comp=Z,2µm,21.3s
LANS   Liptovska Anna    76.56 325 eP      P      16 20 04.4 +1.7
LANS                                pmax   pmax
       comp=Z,6.0nm,0.7s
LANS   Liptovska Anna    76.56 325 eP      P      16 20 04.3 +1.6
KSP    Ksiaz             76.56 328 eP      P      16 20 04.1 +1.5
OKC    Ostrava-Krasne    76.59 326 eP      P      16 20 01.2 -1.6
OKC                                 AMS    AMS    16 56 20.0
       comp=Z,2µm,21.6s
OKC    Ostrava-Krasne    76.59 326 eP      P      16 20 01.2 -1.6
OKC                                 MLR    MLR
       comp=Z,2µm,21.6s
ANTO   Ankara            76.63 312 ⇓P      P      16 20 03.8 +0.5
ANTO   Ankara            76.63 312  P      P      16 20 03.0 -0.3
ANTO                                IAmb   IAmb   16 20 39.9
       comp=Z,24nm,0.8s
ANTO   Ankara            76.63 312  P      P      16 20 03.0 -0.3
ANTO                                pmax   pmax
       comp=Z,24nm,0.8s
IRM    Iron Mountain     76.69  56  P      P      16 20 04.4 +0.7
       baz=311
MONP2  Monument Peak     76.72  58  P      P      16 20 04.5 +0.5
       baz=311
VOIR                     76.77 320 ⇓P      P      16 20 04.8 +0.9
VOIR                     76.77 320 ⇓P      P      16 20 04.8 +0.9
MARR   Marisel-Cluj      76.78 322 ⇓P      P      16 20 04.6 +0.6
OSTC   Ostas             76.82 328 eP      P      16 20 08.4 +4.3
OSTC                                AMS    AMS    16 56 20.0
       comp=Z,2µm,17.4s
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OSTC  Ostas            76.82 328 eP      P       16 20 08.4 +4.3
OSTC                              MLR    MLR
      comp=Z,2µm,17.4s
W13A  Hualapai Mount   76.85  55  P      P       16 20 05.2 +0.4
DRGR                   76.88 322 ⇓P      P       16 20 05.4 +0.8
DRGR                   76.88 322 ⇓P      P       16 20 05.4 +0.8
MORC  Moravsky Berou   76.88 327 ⇓P      P       16 20 05.0 +0.5
MORC  Moravsky Berou   76.88 327  P      P       16 20 04.4 -0.1
MORC                              IAmb   IAmb    16 20 11.3
      comp=Z,30nm,1.2s
MORC  Moravsky Berou   76.88 327 eP      P       16 20 04.8 +0.3
MORC  Moravsky Berou   76.88 327  P      P       16 20 04.4 -0.1
MORC                              pmax   pmax
      comp=Z,30nm,1.2s
DPC   Dobruska-Polom   76.94 328 eP      P       16 20 05.4 +0.6
DPC                              ex      x       16 20 33.2
DPC                               AMS    AMS     16 56 30.0
      comp=Z,1µm,16.4s
DPC   Dobruska-Polom   76.94 328 eP      P       16 20 05.4 +0.6
DPC                              e               16 20 33.2
DPC                               MLR    MLR
      comp=Z,1µm,16.4s
UPC   Upice            76.94 328 eP      P       16 20 06.5 +1.8
UPC                               AMS    AMS     16 47 40.0
      comp=Z,2µm,18.9s
UPC   Upice            76.94 328 eP      P       16 20 06.5 +1.8
UPC                               MLR    MLR
      comp=Z,2µm,18.9s
KRLC  Kraliky          76.96 327 eP      P       16 20 05.1 +0.2
KRLC                              AMS    AMS     16 56 30.0
      comp=Z,2µm,20.0s
KRLC  Kraliky          76.96 327 eP      P       16 20 05.1 +0.2
KRLC                              MLR    MLR
      comp=Z,2µm,20.0s
ARR   Arges            77.02 320 ⇑P      P       16 20 06.5 +1.1
IKP   In-Ko-Pah, Jac   77.08  58  P      P       16 20 07.0 +1.1
      baz=311
SWSC  Sam W. Stewart   77.08  57  P      P       16 20 07.5 +1.7
      baz=311
MDUB  Mudurnu          77.11 313  P      P       16 20 05.7 -0.2
PDMCI Parker Dam,Lak   77.22  55  P      P       16 20 08.0 +1.4
      baz=312
PSZ   Piszkesteto      77.31 324 ⇑P      P       16 20 06.8 -0.1
PSZ   Piszkesteto      77.31 324  P      P       16 20 07.3 +0.3
PSZ                               IAmb   IAmb    16 20 48.0
      comp=Z,24nm,1.1s
PSZ   Piszkesteto      77.31 324  P      P       16 20 07.3 +0.3
PSZ                               pmax   pmax
      comp=Z,24nm,1.1s
VYHS  Vyhne            77.33 325 eP      P       16 20 09.8 +2.8
VYHS                              pmax   pmax
      comp=Z,12nm,1.2s
VYHS  Vyhne            77.33 325 eP      P       16 20 09.8 +2.8
BRG   Berggiesshubel   77.46 329 eP      P       16 20 09.4 +1.8
BRG                               Amp            16 20 14.1
      comp=Z,8.9nm,1.1s
BRG   Berggiesshubel   77.46 329 eP      P       16 20 09.4 +1.8
BRG                                              16 20 29.0
BRG                                              16 20 36.8
BRG                               pmax   pmax
      comp=Z,9.0nm,1.1s
CLL   Collm            77.47 330  P      P       16 20 07.2 -0.5
CLL                               IAmb   IAmb    16 20 42.0
      comp=Z,21nm,1.0s
CLL   Collm            77.47 330 i P     P       16 20 07.5 -0.2
      comp=Z,34nm,1.8s
CLL                              i Pmax          16 20 12.6
      comp=Z,27nm,1.2s
CLL                              epP     pP      16 20 25.0 +0.8
CLL                              i x     x       16 20 27.4
CLL                              i sPcP          16 20 39.4
CLL                              ePP     PP      16 23 06.0 +3.8
CLL                              eS      S       16 29 48.0 -5.5
CLL                              esS     sS      16 30 24.0 +2.3
CLL                              ePS     PnS     16 30 36.0 -3.8
CLL                              eSS     SS      16 34 54.0 +1.8
CLL                              ex      x       16 36 18.0
CLL                              eSSS    SSS     16 38 36.0
CLL                               AMS    AMS     16 56 00.0
      comp=Z,2µm,21.0s
CLL   Collm            77.47 330 i P     P       16 20 07.5 -0.2
CLL                              e*PP    pP      16 20 25.0 +0.8
CLL                               pmax   pmax
      comp=Z,27nm,1.2s
CLL   Collm            77.47 330 eL      L       16 56 26.0
      comp=Z,2µm,21.0s
PV23  Carpenter Ridg   77.49  50  P      P       16 20 09.2 +0.8
PV23                              IAmb   IAmb    16 20 31.2
      comp=Z,23nm,1.0s
PVCC  Panska Ves       77.49 329 eP      P       16 20 10.1 +2.3
PVCC                              AMS    AMS     16 48 10.0
      comp=Z,2µm,22.4s
PVCC  Panska Ves       77.49 329 eP      P       16 20 10.1 +2.3
PVCC                              MLR    MLR
      comp=Z,2µm,22.4s
N23A  Red Feather La   77.50  46  P      P       16 20 09.2 +0.8
      baz=315
PV14  Lion Creek, Pa   77.53  50  P      P       16 20 08.9 +0.3
PV14                              IAmb   IAmb    16 20 37.5
      comp=Z,23nm,1.0s
JAVC  Velka Javorina   77.54 326 eP      P       16 20 10.6 +2.4
PV22  Blue Mesa, Par   77.56  49  P      P       16 20 08.9 +0.2
PV22                              IAmb   IAmb    16 20 35.9
      comp=Z,15nm,0.9s
GLA   Glamis           77.62  57  P      P       16 20 09.8 +0.9
      baz=312
PV17  East Wray Mesa   77.63  50  P      P       16 20 09.5 +0.4
PV17                              IAmb   IAmb    16 20 36.4
      comp=Z,37nm,1.1s
VRAC  Vranov           77.64 327 ⇑P      P       16 20 08.0 -0.7
VRAC  Vranov           77.64 327 eP      P       16 20 09.2 +0.5
VRAC  Vranov           77.64 327 ⇑P      P       16 20 08.0 -0.7
PV11  David Mesa, Pa   77.67  50  P      P       16 20 09.7 +0.4
PV11                              IAmb   IAmb    16 20 32.2
      comp=Z,27nm,1.0s
PV03  Paradox Valley   77.72  50  P      P       16 20 09.8 +0.2
PV03                              IAmb   IAmb    16 20 50.3
      comp=Z,21nm,1.0s
GOPC  GO Pecny, Ondr   77.89 328  AMS    AMS     16 51 00.0
      comp=Z,2µm,26.3s
SMOL  Smolenice        77.91 326 eP      P       16 20 11.0 +0.8
KRUC  Moravsky         77.91 327 eP      P       16 20 10.5 +0.3
BORA  Eskisehir        77.92 313  P      P       16 20 10.0 -0.6
PRU   Pruhonice        77.93 328 eP      P       16 20 10.3  0.0
PRU                              esP     sP      16 20 32.0 -1.5
PRU                               AMS    AMS     16 49 00.0
      comp=Z,2µm,26.6s
PRU   Pruhonice        77.93 328 eP      P       16 20 10.3  0.0
PRU                              e               16 20 32.0
PRU                               MLR    MLR
      comp=Z,2µm,26.6s
MODS  Modra-Piesok     78.08 326 eP      P       16 20 14.2 +3.0
MODS  Modra-Piesok     78.08 326 eP      P       16 20 14.2 +3.0
TREC  Trest            78.10 327  AMS    AMS     16 57 10.0
      comp=Z,2µm,18.1s
WUAZ  Wupatki          78.10  53  P      P       16 20 12.7 +1.0
WUAZ                              IAmb   IAmb    16 21 04.0
      comp=Z,18nm,1.1s
WUAZ  Wupatki          78.10  53  P      P       16 20 11.8 +0.1
      baz=313
BZS   Buzias           78.26 322 ⇓P      P       16 20 12.3 +0.1
BZS   Buzias           78.26 322 ⇓P      P       16 20 12.3 +0.1
HERR  Herculane        78.44 321 ⇓P      P       16 20 12.8 -0.4
ISCO  Idaho Springs    78.45  47  P      P       16 20 12.6 -1.1
ISCO                              IAmb   IAmb    16 21 09.6
      comp=Z,37nm,1.8s
ISCO  Idaho Springs    78.45  47  P      P       16 20 12.6 -1.1
ISCO                              pmax   pmax
      comp=Z,37nm,1.8s
ISCO  Idaho Springs    78.45  47  P      P       16 20 14.2 +0.4
      baz=315
PLVB  Pleven           78.47 319 ⇑P      P       16 20 13.9 +0.5
MOX   Moxa             78.52 330 eP      P       16 20 14.9 +1.4
      comp=Z,11nm,1.1s,baz=34,slow=4.6
MOX                              eL      L       16 58 00.6
      comp=Z,2µm,18.0s
NKC   Novy Kostel      78.54 330 eP      P       16 20 16.9 +3.2
NKC                               AMS    AMS     16 51 20.0
      comp=Z,2µm,19.1s
NKC   Novy Kostel      78.54 330 eP      P       16 20 16.9 +3.2
NKC                               MLR    MLR
      comp=Z,2µm,19.1s
MVCO  Mesa Verde       78.64  50  P      P       16 20 15.5 +0.8
      baz=314
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CKRC  Cesky Krumlov    78.95 328 eP      P       16 20 15.6 -0.3
CKRC                             ex      x       16 20 34.2
CKRC  Cesky Krumlov    78.95 328 eP      P       16 20 15.6 -0.3
CKRC                             e               16 20 34.2
KHC   Kasperske Hory   78.99 328  P      P       16 20 16.3 +0.1
KHC                               IAmb   IAmb    16 20 56.8
      comp=Z,25nm,1.2s
KHC   Kasperske Hory   78.99 328 eP      P       16 20 16.3 +0.1
KHC                              epP     pP      16 20 31.0 -1.8
KHC                               AMS    AMS     16 51 30.0
      comp=Z,2µm,20.1s
KHC   Kasperske Hory   78.99 328  P      P       16 20 16.3 +0.1
KHC                               pmax   pmax
      comp=Z,25nm,1.2s
RONA  Rosalia, Austr   79.02 326 eP      P       16 20 17.5 +1.1
      comp=Z,7.3nm,0.8s
CONA  Conrad Observa   79.02 326 eP      P       16 20 17.3 +0.8
      comp=Z,11nm,1.1s
EKA   Eskdalemuir Ar   79.09 341  LR     LR      17 00 06.2
      comp=Z,1µm,18.4s,baz=52,slow=39
ESK   Eskdalemuir      79.12 341  P      P       16 20 16.1 -0.6
ESK   Eskdalemuir      79.12 341  P      P       16 20 16.1 -0.6
ESK                               pmax   pmax
      comp=Z,101nm,1.7s
MORH  Mrgy, Hungar     79.16 324 ⇓P      P       16 20 16.4 -0.7
EYMN  Ely              79.17  33  P      P       16 20 16.7 -0.4
EYMN                              IAmb   IAmb    16 21 18.9
      comp=Z,34nm,1.1s
EYMN  Ely              79.17  33  P      P       16 20 17.4 +0.2
      baz=322
GEC2  GERESS Array S   79.17 328  P      P       16 20 16.8 -0.5
GEC2  GERESS Array S   79.17 328 eL      L       16 58 10.1
      comp=Z,1µm,19.6s
GERES GERESS Array B   79.17 328  P      P       16 20 17.2 -0.1
      comp=Z,2.1nm,0.7s,baz=40,slow=6.9,SNR=11
      comp=Z,2.1nm,0.7s
GERES GERESS Array B   79.17 328  P      P       16 20 16.9 -0.3
S22A  4UR Ranch, Cre   79.22  49  P      P       16 20 18.4 +0.4
S22A  4UR Ranch, Cre   79.22  49  P      P       16 20 18.3 +0.4
      baz=315
RAYN  Ar Rayn          79.40 292  P      P       16 20 18.2 -0.6
RAYN  Ar Rayn          79.40 292  P      P       16 20 18.3 -0.6
RAYN                              pmax   pmax
      comp=Z,12nm,0.8s
FRGS  Fruska Gora      79.44 322 ⇑P      P       16 20 18.8 +0.1
GRA1  Grafenberg Arr   79.44 330  P      P       16 20 18.5 -0.1
GRF   Grafenberg Arr   79.44 330  P      P       16 20 18.5 -0.1
GRF                               pmax   pmax
      comp=Z,164nm,2.0s
GRF   Grafenberg Arr   79.44 330 eP      P       16 20 19.3 +0.7
      comp=Z,37nm,1.3s,baz=34,slow=4.6
GRF                              eL      L       16 57 04.6
      comp=Z,1µm,19.9s
GRFO  Grafenberg       79.45 330  P      P       16 20 18.5 -0.1
GRFO                              IAmb   IAmb    16 20 50.4
      comp=Z,32nm,1.1s
GRFO  Grafenberg       79.45 330  P      P       16 20 18.5 -0.1
GRFO                              pmax   pmax
      comp=Z,32nm,1.1s
214A  Organ Pipe Nat   79.62  57  P      P       16 20 20.7 +0.8
      baz=313
CSS   Mathiatis        79.69 308  P      P       16 20 20.0 -0.3
CSS                               IAmb   IAmb    16 20 26.1
      comp=Z,28nm,0.9s
BOVS  Bovan            79.71 320 ⇓P      P       16 20 16.7 -3.4
VTS   Vitosha          79.72 319 ⇓P      P       16 20 18.7 -1.8
VTS   Vitosha          79.72 319  P      P       16 20 21.0 +0.6
VTS                               IAmb   IAmb    16 21 00.4
      comp=Z,30nm,1.1s
VTS   Vitosha          79.72 319  P      P       16 20 21.0 +0.6
VTS                               pmax   pmax
      comp=Z,30nm,1.1s
MOA   Molln            79.74 327 eP      P       16 20 22.6 +2.3
      comp=Z,3.9nm,0.8s
MMAI  Mount Meron Ar   79.77 305  LR     LR      16 59 30.4
      comp=Z,927nm,19.3s,baz=216,slow=38
SDCO  Great Sand Dun   79.96  48  P      P       16 20 21.6 -0.5
      baz=315
TNS   Taunus Mts       80.02 332 eL      L       16 57 54.1
      comp=Z,2µm,20.5s
BIOA  Bad Ischl, Aus   80.12 327 eP      P       16 20 22.8 +0.4
      comp=Z,16nm,1.1s
ECSD  EROS Data Cent   80.16  39  P      P       16 20 22.8 +0.2
ECSD  EROS Data Cent   80.16  39  P      P       16 20 23.3 +0.7
      baz=320
DIVS  Divibare         80.17 322  P      P       16 20 22.8 +0.1
SOKA  Soboth           80.36 326 eP      P       16 20 23.8 +0.1
      comp=Z,18nm,1.1s
ELL   Elmali           80.43 311  P      P       16 20 24.1 -0.2
ELL   Elmali           80.43 311  P      P       16 20 24.1 -0.2
ELL                               pmax   pmax
      comp=Z,101nm,1.0s
MEM   Membach          80.54 333 dP      P       16 20 24.6 +0.1
TUC   Tucson           80.64  55  P      P       16 20 25.9 +0.5
      baz=314
FUR   Furstenfeldbru   80.67 329 eL      L       16 57 01.9
      comp=Z,1µm,21.4s
OBKA  Obir             80.69 326 eP      P       16 20 24.9 -0.6
      comp=Z,15nm,0.9s
KBA   Koelnbreinsper   80.73 327 eP      P       16 20 26.2 +0.4
      comp=Z,27nm,1.1s,SNR=5.0
SCHQ  Schefferville    80.94  16  P      P       16 20 26.8 +0.2
      comp=Z,7.4nm,0.8s,baz=22,slow=6.1,SNR=9.7
      comp=Z,7.4nm,0.8s
SCHQ  Schefferville    80.94  16  P      P       16 20 26.2 -0.4
AKAS  Kas              80.97 311  P      P       16 20 26.6 -0.7
AKAS                              IAmb   IAmb    16 21 14.1
      comp=Z,35nm,0.9s
MYKA  Terra Mystica    80.97 327 eP      P       16 20 28.1 +1.1
      comp=Z,11nm,1.1s
T25A  Trinidad         81.00  48  P      P       16 20 27.7 +0.2
T25A                              IAmb   IAmb    16 21 22.9
      comp=Z,68nm,1.9s
T25A  Trinidad         81.00  48  P      P       16 20 28.4 +0.9
      baz=316
BGES  Gesves           81.04 334 dP      P       16 20 26.4 -0.8
BGES                             dx      x       16 20 55.2
PRED  Cave del Predi   81.15 327  P      P       16 20 27.1 -0.8
BMRD  Maredsous        81.22 334 dP      P       16 20 27.4 -0.7
WATA  Walderalm        81.23 328 eP      P       16 20 29.6 +1.1
      comp=Z,21nm,1.7s
WTTA  Wattenberg       81.27 328 ePcP    P       16 20 30.3 +1.7
      comp=Z,18nm,1.4s
ANMO  Albuquerque      81.40  51⇑eP      P       16 20 31.0 +1.4
ANMO                              pmax   pmax
      comp=Z,10.0nm,1.7s
ANMO  Albuquerque      81.40  51  P      P       16 20 30.2 +0.6
      baz=315
MOTA  Moosalm          81.41 329 eP      P       16 20 29.9 +0.5
      comp=Z,29nm,1.0s
CLUD  Cludinico        81.42 327  P      P       16 20 28.7 -0.6
CLUD                              IAmb   IAmb    16 21 33.8
      comp=Z,18nm,0.9s
RETA  Reutte           81.42 329 eP      P       16 20 30.4 +1.1
      comp=Z,18nm,1.2s
DOU   Dourbes          81.45 334 dP      P       16 20 30.5 +1.2
SQTA  Sankt Quirin     81.47 329 eP      P       16 20 30.0 +0.3
      comp=Z,8.3nm,0.8s
BFO   Black Forest     81.64 331  P      P       16 20 30.3 -0.1
BFO   Black Forest     81.64 331  P      P       16 20 30.3 -0.1
BFO                               pmax   pmax
      comp=Z,11nm,0.9s
BFO   Black Forest     81.64 331 eL      L       16 56 34.2
      comp=Z,1µm,21.5s
LENM  Lemitar          81.64  51  P      P       16 20 30.9  0.0
CIMO  Cimolais         81.72 327  P      P       16 20 30.5 -0.4
CIMO                              IAmb   IAmb    16 22 20.6
      comp=Z,42nm,1.8s
FETA  Feichten         81.82 329 eP      P       16 20 31.8 +0.2
      comp=Z,9.7nm,1.1s
DAVA  Damuels          81.93 329 eP      P       16 20 33.0 +0.8
      comp=Z,19nm,1.5s
319A  Douglas          82.21  55  P      P       16 20 33.3 -0.5
319A                              IAmb   IAmb    16 21 10.6
      comp=Z,22nm,1.0s
CTI   Castel Tesino    82.25 328  P      P       16 20 32.7 -1.1
CTI                               IAmb   IAmb    16 20 38.9
      comp=Z,22nm,1.1s
CTI   Castel Tesino    82.25 328  P      P       16 20 32.7 -1.1
CTI                               pmax   pmax
      comp=Z,22nm,1.1s
121A  Cookes Peak, D   82.31  53  P      P       16 20 34.3 -0.1
121A                              IAmb   IAmb    16 21 00.1
      comp=Z,17nm,1.0s
121A  Cookes Peak, D   82.31  53  P      P       16 20 34.8 +0.4
      baz=315
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FUORN Ofenpass-Fuorn   82.33 329  P      P       16 20 34.2 -0.2
FUORN                             IAmb   IAmb    16 21 45.4
      comp=Z,16nm,0.8s
EIL   Elat             82.34 303  LR     LR      17 01 32.6
      comp=Z,469nm,18.8s,baz=56,slow=39
RAR   Rarotonga        82.43 127  LR     LR      16 51 33.3
      comp=Z,618nm,20.0s,baz=294,slow=31
AMTX  Amarillo         84.16  48  P      P       16 20 44.4 +0.6
      baz=318
MSTX  Muleshoe         84.21  49  P      P       16 20 43.8 -0.4
      baz=317
IDI   Anoyia           84.29 313 ⇓P      P       16 20 43.1 -1.3
IDI   Anoyia           84.29 313  LR     LR      17 02 31.7
      comp=Z,476nm,21.8s,baz=50,slow=39
IDI   Anoyia           84.29 313  P      P       16 20 43.5 -0.9
MNTX  Cornudas Mount   84.34  52  P      P       16 20 44.5 -0.2
      baz=316
SSF   Saint Saulge     84.44 333 eP      P       16 20 47.0 +2.2
SSF                               pmax   pmax
      comp=Z,57nm,1.9s
ITM   Ithomi           84.47 316  P      P       16 20 44.7 -0.5
GLMI  Grayling         84.47  31  P      P       16 20 45.3 +0.2
      baz=327
GDL2  Guadalupe Moun   84.58  51  P      P       16 20 46.5 +0.6
LPL   La Plagne        84.60 330 eP      P       16 20 47.1 +1.1
LPL                               pmax   pmax
      comp=Z,20nm,1.0s
BNI   Bardonecchia     85.02 330  P      P       16 20 47.9 -0.1
BNI                               IAmb   IAmb    16 21 30.0
      comp=Z,22nm,1.1s
BNI   Bardonecchia     85.02 330  P      P       16 20 47.9 -0.1
BNI                               pmax   pmax
      comp=Z,22nm,1.1s
PMOR  Pomariorio Ree   85.57 114 eT      T       17 54 25.9
      comp=Z,24nm,0.2s
URZ   Urewera          85.59 153  LR     LR      16 56 53.4
      comp=Z,594nm,19.6s,baz=42,slow=34
WMOK  Wichita Mounta   85.86  46  P      P       16 20 52.8 +0.5
      baz=319
HDIL  Hopedale         86.02  37  P      P       16 20 52.9  0.0
      baz=324
MFF   Saint Martin d   86.04 335 eP      P       16 20 55.0 +2.1
MFF                               pmax   pmax
      comp=Z,24nm,1.0s
PPT   Papeete          86.24 117  LR     LR      16 53 36.8
      comp=Z,2µm,19.9s,baz=295,slow=32
PPT2  Papeete2         86.26 117 eP      P       16 20 56.4 +2.1
      comp=Z,218nm,24.8s
PPT2  Papeete2         86.26 117 eS      S       16 31 26.1 +1.3
      comp=Z,552nm,26.0s
PPT2  Papeete2         86.26 117 eLR     LR      16 48 19.5
      comp=Z,3µm,26.5s
PPT2                             eLR     LR      16 48 19.6
      comp=Z,4µm,25.8s
LPIG  La Paz           86.60  61  LR     LR      16 53 19.9
      comp=Z,321nm,21.8s,baz=284,slow=31
CAF   Calviac          86.79 333 eP      P       16 20 57.6 +1.0
CAF                               pmax   pmax
      comp=Z,22nm,0.8s
TAOE  Nuku Hiva Isla   86.83 105 eLR     LR      16 48 35.3
      comp=Z,3µm,23.1s
TX31  Lajitas Ar. Si   87.06  53  P      P       16 20 58.1 -0.2
TX32  Lajitas Array    87.06  53  P      P       16 20 58.3  0.0
TXAR  Lajitas Array    87.06  53  P      P       16 20 58.5 +0.2
      comp=Z,1.5nm,1.0s,baz=305,slow=4.4,SNR=7.6
      comp=Z,1.5nm,1.0s
TXAR  Lajitas Array    87.06  53  P      P       16 20 58.2 -0.1
CCM   Cathedral Cave   87.13  39  P      P       16 20 58.1 -0.2
CCM   Cathedral Cave   87.13  39  P      P       16 20 58.1 -0.2
CCM                               pmax   pmax
      comp=Z,65nm,1.7s
CCM   Cathedral Cave   87.13  39  P      P       16 20 58.8 +0.5
      baz=323
SFIN  Lafayette        87.14  35  P      P       16 20 58.7 +0.4
      baz=326
LFF   La Frestale      87.23 334 eP      P       16 21 01.0 +2.3
LFF                               pmax   pmax
      comp=Z,17nm,0.8s
MEH   Mehetia          87.47 116 eT      T       17 57 07.1
      comp=Z,36nm,0.3s
VAE   Valguarnera      87.98 321  LR     LR      17 02 46.1
      comp=Z,1µm,19.1s,baz=104,slow=37
BATG  Bathurst New B   88.18  19  P      P       16 21 03.5 +0.3
BATG                              IAmb   IAmb    16 21 29.0
      comp=Z,16nm,0.9s
JCT   Junction City    88.48  50  P      P       16 21 05.4 +0.5
      baz=319
MIAR  Mount Ida        88.75  43  P      P       16 21 06.2 +0.1
MIAR                              IAmb   IAmb    16 21 44.1
      comp=Z,16nm,1.0s
MIAR  Mount Ida        88.75  43  P      P       16 21 06.2 +0.1
MIAR                              pmax   pmax
      comp=Z,16nm,1.0s
MIAR  Mount Ida        88.75  43  P      P       16 21 06.7 +0.5
      baz=322
RPZ   Rata Peaks       88.75 159  LR     LR      16 55 42.2
      comp=Z,648nm,21.5s,baz=341,slow=32
P49A  Miami Univ. Ec   88.86  34  P      P       16 21 07.0 +0.5
      baz=327
M53A  WI Miller and    88.87  31  P      P       16 21 06.9 +0.4
      baz=330
ATD   Arta Tunnel      89.20 285  LR     LR      17 06 52.7
      comp=Z,18nm,18.5s,baz=42,slow=39
ATD   Arta Tunnel      89.20 285  P      P       16 21 08.5  0.0
ATD                               IAmb   IAmb    16 21 42.0
      comp=Z,19nm,1.0s
PKME  Peaks-Kenny Pk   89.21  22  P      P       16 21 08.1 +0.1
      baz=337
LMN   Caledonia Moun   89.81  18  P      P       16 21 10.1 -0.8
833A  Chaparral WMA,   90.33  51  P      P       16 21 13.9 +0.3
      baz=319
TBI   Tubuai           90.43 121 eP      P       16 21 16.2 +2.3
      comp=Z,681nm,26.2s
TBI   Tubuai           90.43 121 eS      S       16 32 04.7 +0.8
      comp=Z,3µm,28.0s
TBI   Tubuai           90.43 121 eLR     LR      16 50 12.0
      comp=Z,10µm,28.0s
TBI                              eLR     LR      16 50 15.0
      comp=Z,38µm,23.2s
TBI   Tubuai           90.43 121 eT      T       18 01 01.4
      comp=Z,16nm,0.2s
SSPA  Standing Stone   90.61  29  P      P       16 21 15.0 +0.3
      baz=331
KEST  Kesra            91.75 323  LR     LR      17 07 14.3
      comp=Z,2µm,19.4s,baz=348,slow=38
TKL   Tuckaleechee C   92.51  36  LR     LR      17 05 04.9
      comp=Z,695nm,21.8s,baz=342,slow=37
ESDC  Sonseca Array    93.49 334  P      P       16 21 27.7 -0.4
      comp=Z,2.6nm,0.7s,baz=7.2,slow=3.8,SNR=13
      comp=Z,2.6nm,0.7s
ESDC  Sonseca Array    93.49 334  P      P       16 21 27.7 -0.4
ESDC                              IAmb   IAmb    16 21 29.2
      comp=Z,24nm,1.9s
NVL   N'lazarevskaya  141.56 204 ePKIKP  PKPdf   16 27 43.3 +1.3
NVL                               pmax   pmax
      comp=Z,9.0nm,0.6s
BELA  Belgrano 2      143.47 181  PKPpre PKPpre  16 27 40.9
SNAA  Sanae           145.12 199         PKPab   16 27 48.1  0.0
SNAA  Sanae           145.12 199  PKIKP  PKPab   16 27 48.2  0.0
SMTB  Santa Maria do  146.42  17 eP      PKPab   16 27 54.4 -0.1
PB07  IPOC Station P  146.73  64  PKPdf  PKPdf   16 27 52.0 -0.7
H03N2 Juan Fernandez  146.79  89  T      T       19 11 24.6
      baz=300,slow=76,SNR=36
H03N3 Juan Fernandez  146.80  90  T      T       19 11 24.8
      baz=300,slow=76,SNR=36
H03N1 Juan Fernandez  146.80  89  T      T       19 11 26.6
      baz=300,slow=76,SNR=40
LVC   Limon Verde     147.99  64 eP      PKiKP   16 28 00.3 +0.2
PTLB  Pontes e Lacer  148.27  41         PKPbc   16 27 58.3 -0.3
SNDB  Serra Nova Dou  148.38  25 eP      PKPbc   16 27 59.2 +0.2
BBSD  Serra de San D  148.97  45 eP      PKPbc   16 28 00.2 -0.2
BBRB  Robore, Bolivi  150.29  45 eP      PKPbc   16 28 03.6  0.0
SDBA  SAO DESIDERIO   150.41  14 eP      PKPbc   16 28 03.4 -0.7
ARAG  Araguaiana, MT  151.67  29 eP      PKPbc   16 28 05.0 -1.9
PP1B  Ponte de Pedra  152.14  36 eP      PKPbc   16 28 06.4 -1.6
BDFB  Brasilia        152.83  22  PKPbc  PKPbc   16 28 08.8 -0.8
      comp=Z,1.2nm,0.3s,baz=153,slow=2.7,SNR=3.9
JANB  Januaria        153.11  14 eP      PKPbc   16 28 08.5 -1.7
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*IDC **07** 16:22:23.0±0.7, 36°.64N×85°.03E, h0km, mb4.2/17, mbtmp4.3/22, ML3.9/5, Error ellipse: s-maj=21.0km s-min=13.8km az=52.0*

*MOS **07** 16:22:24.0±1.0, 36°.73N×84°.92E, h11km, mb4.6/27, Error ellipse: s-maj=7.9km s-min=3.6km az=118.1*

NEIC ***07*** *16:22:25.7±0.9, 36°.66N±0°.08×84°.9E±0°.1, h13^{km}±3^{km}, mb4.7/44, Error ellipse: s-maj=15.2km s-min=9.4km az=52.0*

BJI ***07*** *16:22:26.0±0.0, 36°.67N×84°.93E, h20^{km}, mb4.4/34, ML4.8/9, Ms4.3/7, Ms7 4.3/7*

NNC ***07*** *16:22:27.1±1.4, 36°.87N×84°.89E, h0^{km}, mb5.1, mpv5.2, Error ellipse: s-maj=13.7km s-min=10.0km az=91.0*

ISC 07 16:22:25.5±0.4**, 36°.64N**±0°.05×**84°.89E**±0°.05**, h10^{km}, n243,** σ**1^{s}.40**/249**, mb4.5**/60**, 53C-16D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**7.49**	**16**	*e*Pn	**Pn**	**16 24 16.1**	**+1.3**
WMQ				Sn	**Sn**	**16 25 42.8**	**+3.0**
WMQ				smax	smax		
	comp=N,240nm,1.3s						
WMQ				smax	smax		
	comp=E,270nm,1.1s						
KSH	**Kashi**	**7.60**	**295**	Pn	**Pn**	**16 24 20.4**	**+4.0**
KSH				Sn	**Sn**	**16 25 49.2**	**+6.5**
KSH				smax	smax		
	comp=N,510nm,1.4s						
KSH				smax	smax		
	comp=E,610nm,1.0s						
SHLS	**Shalkode**	**7.73**	**329**	*e*P	Pn	16 24 16.2	-2.0
	baz=331						
SHLS	**Shalkode**	**7.73**	**329**	*e*P	Pn	16 24 16.2	-2.0
PDGK	**Podgornoye**	**7.86**	**330**	⇓Pn	**Pn**	**16 24 19.9**	**-0.1**
	69nm,0.7s						
PDGK				⇓Sn	**Sn**	**16 25 47.7**	**-1.5**
	188nm,0.8s						
PDGK				⇓Lg	Lg	16 26 33.4	
	540nm,1.0s						
PDGK	**Podgornoye**	**7.86**	**330**	P	**Pn**	**16 24 19.9**	**-0.1**
PDGK				SN	**Sn**	**16 25 47.7**	**-1.5**
UZB	**Uzynbulak**	**7.91**	**327**	*e*P	**Pn**	**16 24 21.1**	**+0.4**
	baz=327						
UZB				*e*S	**Sn**	**16 25 51.6**	**+1.2**
	baz=327						
UZB	**Uzynbulak**	**7.91**	**327**	*e*P	**Pn**	**16 24 21.1**	**+0.4**
UZB				*e*S	**Sn**	**16 25 51.5**	**+1.2**
GOMU	**GeErMu**	**8.01**	**90**	P	**Pn**	**16 24 26.3**	**+4.0**
GOMU				pmax	pmax		
	comp=Z,15nm,1.1s						
GOMU				LR	LR		
	comp=E,1µm,13.5s						
GOMU				LR	LR		
	comp=Z,3µm,17.2s						
SATY	**Saty**	**8.12**	**324**	*e*P	**Pn**	**16 24 24.1**	**+0.5**
	baz=324						
SATY				*e*S	**Sn**	**16 25 56.2**	**+0.6**
	baz=324						
SATY	**Saty**	**8.12**	**324**	*e*P	**Pn**	**16 24 24.1**	**+0.5**
SATY				*e*S	**Sn**	**16 25 56.1**	**+0.6**
ZHN	**Zhinishke**	**8.19**	**325**	*e*P	**Pn**	**16 24 24.8**	**+0.3**
	baz=325						
ZHN	**Zhinishke**	**8.19**	**325**	*e*P	**Pn**	**16 24 24.8**	**+0.3**
KPKS	**Kokpek**	**8.32**	**327**	*e*P	**Pn**	**16 24 26.0**	**-0.3**
	baz=327						
KPKS	**Kokpek**	**8.32**	**327**	*e*P	**Pn**	**16 24 25.9**	**-0.3**
ULHL	**Ulahol**	**8.72**	**313**	P	**Pn**	**16 24 33.3**	**+1.4**
	SNR=15						
MDOK	**Medeo**	**8.88**	**320**	⇑Pn	**Pn**	**16 24 34.0**	**+0.1**
	66nm,0.7s						
MDOK				Lg	Lg	16 27 05.5	
	389nm,1.0s						
MDOK	**Medeo**	**8.88**	**320**	*e*P	**Pn**	**16 24 34.4**	**+0.4**
	baz=320						
MDOK	**Medeo**	**8.88**	**320**	P	**Pn**	**16 24 34.3**	**+0.4**
KNDC	**Almaty**	**8.96**	**320**	⇑Pn	**Pn**	**16 24 36.7**	**+1.7**
	136nm,0.7s						
KNDC				⇑Lg	Lg	16 27 07.7	
	787nm,0.9s						
KNDC	**Almaty**	**8.96**	**320**	P	**Pn**	**16 24 36.7**	**+1.7**
ARXS	**Arharly**	**9.29**	**327**	*e*P	**Pn**	**16 24 38.4**	**-1.1**
CHKK	**Chushkaly**	**9.40**	**322**	*e*P	**Pn**	**16 24 40.9**	**-0.1**
	baz=322						
CHKK				*e*S	**Sn**	**16 26 26.3**	**-0.6**
	baz=322						
CHKK	**Chushkaly**	**9.40**	**322**	*e*P	**Pn**	**16 24 40.9**	**-0.1**
CHKK				*e*S	**Sn**	**16 26 26.2**	**-0.6**
TKM2	**Tokmak 2**	**9.51**	**314**	P	**Pn**	**16 24 43.2**	**+0.4**
	SNR=22						
TKM2	**Tokmak 2**	**9.51**	**314**	⇑Pn	**Pn**	**16 24 43.0**	**+0.2**
	19nm,0.7s						
TKM2				⇑Lg	Lg	16 27 22.1	
	113nm,0.8s						
TKM2	**Tokmak 2**	**9.51**	**314**	P	**Pn**	**16 24 42.9**	**+0.2**
TDK	**Taldyqorghan**	**9.69**	**332**	*e*P	**Pn**	**16 24 45.5**	**+0.4**
	baz=332						
TDK	**Taldyqorghan**	**9.69**	**332**	*e*P	**Pn**	**16 24 45.4**	**+0.4**
KBK	**Karagaybulak**	**9.74**	**311**	P	**Pn**	**16 24 49.6**	**+3.8**
	SNR=12						
KUU	**Kurty**	**9.76**	**321**	*e*P	**Pn**	**16 24 46.2**	**+0.3**
	baz=321						
KUU	**Kurty**	**9.76**	**321**	*e*P	**Pn**	**16 24 46.1**	**+0.3**
UCH	**Uchtor**	**9.78**	**308**	P	**Pn**	**16 24 46.5**	**0.0**
	SNR=14						
CHCP	**Chirah Chowk**	**9.97**	**256**	P	**Pn**	**16 24 49.1**	**+0.2**
AAK	**Ala-Archa**	**10.01**	**310**	P	**Pn**	**16 24 51.5**	**+2.1**
	SNR=11						
AAK	**Ala-Archa**	**10.01**	**310**	Pn	**Pn**	**16 24 50.1**	**+0.7**
	0.9nm,0.3s,baz=107,slow=8.0,SNR=20						
AAK				Lg	Lg	16 27 36.1	
	1.4nm,0.3s,baz=311,slow=12,SNR=5.5						
	5.4nm,0.5s						
AAK	**Ala-Archa**	**10.01**	**310**	Pn	**Pn**	**16 24 48.6**	**-0.9**
AAK	**Ala-Archa**	**10.01**	**310**	*de*P	**Pn**	**16 24 49.5**	**0.0**
AAK				pmax	pmax		
	comp=Z,12nm,0.9s						
AML	**Almayashu**	**10.26**	**306**	P	**Pn**	**16 24 54.6**	**+1.5**
	SNR=28						
AML	**Almayashu**	**10.26**	**306**	⇓Pn	**Pn**	**16 24 54.3**	**+1.2**
	comp=Z,4.9nm,0.8s						
AML				⇑Lg	Lg	16 27 47.7	
	comp=Z,7.7nm,0.7s						
AML	**Almayashu**	**10.26**	**306**	P	**Pn**	**16 24 54.3**	**+1.2**
MK31	**Makanchi Array**	**10.33**	**350**		**Pn**	**16 24 52.9**	**-0.8**
MK31	**Makanchi Array**	**10.33**	**350**	⇑Pn	**Pn**	**16 24 53.2**	**-0.6**
	comp=Z,102nm,1.1s,baz=166,slow=14,SNR=185						
MK31				⇑Sn	**Sn**	**16 26 49.8**	**+0.2**
	comp=Z,42nm,1.0s,baz=173,slow=23,SNR=3.5						
MK31				⇑Lg	Lg	16 27 48.0	
	comp=Z,100nm,1.1s						
MK31	**Makanchi Array**	**10.33**	**350**	P	**Pn**	**16 24 53.2**	**-0.6**
MK31				SN	**Sn**	**16 26 49.8**	**+0.2**
MKAR	**Makanchi Array**	**10.33**	**350**	Pn	**Pn**	**16 24 53.2**	**-0.6**
	comp=Z,3.0nm,0.3s,baz=163,slow=13,SNR=145						
MKAR				Sn	**Sn**	**16 26 49.9**	**+0.3**
	comp=Z,1.6nm,0.3s,baz=176,slow=25,SNR=3.7						
MKAR				Lg	Lg	16 27 52.0	
	comp=Z,1.4nm,0.3s,baz=167,slow=28,SNR=2.1						
	comp=Z,42nm,0.8s						
MKAR	**Makanchi Array**	**10.33**	**350**	Pn	**Pn**	**16 24 52.9**	**-0.9**
MAKZ	**Makanchi**	**10.39**	**349**	Pn	**Pn**	**16 24 53.7**	**-0.9**
MAKZ	**Makanchi**	**10.39**	**349**	⇑Pn	**Pn**	**16 24 53.4**	**-1.2**
	comp=Z,46nm,0.8s						
MAKZ				⇓Sn	**Sn**	**16 26 50.2**	**-0.9**
	comp=Z,21nm,0.7s						
MAKZ				⇑Lg	Lg	16 27 48.9	
	comp=Z,61nm,1.2s						
MAKZ	**Makanchi**	**10.39**	**349**	P	**Pn**	**16 24 53.4**	**-1.2**
MAKZ				SN	**Sn**	**16 26 50.2**	**-0.9**
SGDS	**Sogindy**	**10.40**	**314**	*e*P	**Pn**	**16 24 55.1**	**+0.3**
	baz=314						
SGDS	**Sogindy**	**10.40**	**314**	*e*P	**Pn**	**16 24 55.0**	**+0.3**
EKS2	**Erkin-Say**	**10.47**	**308**	P	**Pn**	**16 24 57.2**	**+1.4**
	SNR=18						
ZSN	**Zaisan**	**10.81**	**360**	*e*P	**Pn**	**16 25 00.3**	**+0.1**
	baz=360						
ZSN	**Zaisan**	**10.81**	**360**	*e*P	**Pn**	**16 25 00.3**	**+0.1**
CEP	**Cherat**	**10.98**	**259**	P	**Pn**	**16 25 02.2**	**-0.6**
THW	**Thamme Wali**	**11.48**	**254**	P	**Pn**	**16 25 08.4**	**-1.1**
BTLS	**Baital**	**11.74**	**319**	*e*P	**Pn**	**16 25 13.2**	**+0.2**
	baz=319						
BTLS	**Baital**	**11.74**	**319**	*e*P	**Pn**	**16 25 13.1**	**+0.2**
GAR	**Garm**	**11.77**	**286**		Pn	16 25 11.4	-2.2
GTA	**Gaotai**	**12.09**	**72**	*e*P	**Pn**	**16 25 19.2**	**+1.3**
GTA				pP		16 25 23.8	
GTA				sP		16 25 27.1	
GTA				pmax	pmax		
	comp=Z,22nm,1.4s						
DZA	**Taraz**	**12.16**	**305**	*e*P	**Pn**	**16 25 19.3**	**+0.6**
	baz=305						
DZA	**Taraz**	**12.16**	**305**	*e*P	**Pn**	**16 25 19.3**	**+0.6**
CHGR	**Chuyangaron**	**12.63**	**284**	Pn	Pn	16 25 21.6	-3.7
CHGR	**Chuyangaron**	**12.63**	**284**	P	Pn	16 25 21.6	-3.8
IUG	**Iuzhnay**	**12.74**	**300**	*e*P	**Pn**	**16 25 26.9**	**+0.1**
	baz=300						
IUG	**Iuzhnay**	**12.74**	**300**	*e*P	**Pn**	**16 25 26.9**	**+0.1**
KK31	**Karatay Array**	**12.79**	**305**	Pn	**Pn**	**16 25 27.1**	**-0.2**
KK31	**Karatay Array**	**12.79**	**305**	⇓Pn	**Pn**	**16 25 27.7**	**+0.4**
	comp=Z,11nm,1.1s,baz=120,slow=11,SNR=21						
KK31				⇓Lg	Lg	16 29 07.9	
	comp=Z,13nm,0.8s						
KK31	**Karatay Array**	**12.79**	**305**	P	**Pn**	**16 25 27.7**	**+0.4**
KKAR	**Karatay Array**	**12.79**	**305**		**Pn**	**16 25 27.3**	**0.0**
KKAR	**Karatay Array**	**12.79**	**305**	P	**Pn**	**16 25 27.3**	**0.0**
KBL	**Kabul**	**13.07**	**265**	Pn	Pn	16 25 27.5	-3.9
KBL	**Kabul**	**13.07**	**265**	P	Pn	16 25 27.5	-3.9
CHM	**Chimkent**	**13.10**	**300**	*e*P	**Pn**	**16 25 32.5**	**+0.8**
	baz=300						
CHM	**Chimkent**	**13.10**	**300**	*e*P	**Pn**	**16 25 32.4**	**+0.8**
DGZ	**Jazzator, Alta**	**13.19**	**7**	*ce*P	**Pn**	**16 25 32.0**	**-0.9**
KURBB	**Kurchatov Arra**	**14.71**	**344**	Pn	Pn	16 25 50.7	-2.8
	comp=Z,0.2nm,0.3s,baz=160,slow=12,SNR=20						
KURBB				Lg	Lg	16 30 16.0	
	baz=162,slow=28,SNR=2.4						
	comp=Z,11nm,1.0s						
KURK	**Kurchatov**	**14.78**	**344**	Pn	Pn	16 25 51.3	-3.2
KURK				P	**P**	**16 26 00.1**	**-0.4**
KURK	**Kurchatov**	**14.78**	**344**	P	Pn	16 25 51.3	-3.2
LZH	**Lanzhou**	**15.28**	**86**	*e*P	**Pn**	**16 26 01.3**	**-0.2**
LZH				pP	P	16 26 06.0	-0.4
LZH				sP	pP	16 26 09.0	-1.5
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
BRZS	**Berezniki**	**16.00**	**330**	*e*P	**Pn**	**16 26 14.3**	**+3.7**
TNCH	**TengChong**	**16.44**	**131**	P	**Pn**	**16 26 16.3**	**-0.2**
TNCH				pP	P	16 26 19.3	+0.1
TNCH				sP	pP	16 26 22.3	-1.0
TNCH				pmax	pmax		
	comp=Z,11nm,0.4s						
ZAA0	**Zalesovo Array**	**17.31**	**360**	Pn	Pn	16 26 23.3	-3.8
ZALV	**Zalesovo Beam**	**17.31**	**360**	P	**Pn**	**16 26 24.4**	**-2.7**
	comp=Z,0.9nm,0.3s,baz=178,slow=13,SNR=40						
	comp=Z,50nm,0.6s						
ZALV	**Zalesovo Beam**	**17.31**	**360**	Pn	**Pn**	**16 26 23.8**	**-3.4**
ZALV	**Zalesovo Beam**	**17.31**	**360**	*i* P	**Pn**	**16 26 24.7**	**-2.4**
ZALV				pmax	pmax		
	comp=Z,50nm,0.6s						
PZH	**PanZhiHua**	**17.53**	**120**	P	**Pn**	**16 26 33.7**	**+3.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MOY	**Mondy**	**18.89**	**32**	*e*P	**P**	**16 26 47.9**	**+1.8**
ZAK	**Zakamensk**	**19.07**	**38**	*e*P	**P**	**16 26 49.5**	**+1.4**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KMI	**Kunming**	**19.11**	**122**	⇑P	**P**	**16 26 50.2**	**+1.4**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BVAR	**Borovoye Array**	**19.28**	**333**	P	**P**	**16 26 50.9**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=138,slow=11,SNR=124						
BVAR				Lg	Lg	16 32 40.9	
	baz=141,slow=26,SNR=2.8						
	comp=Z,63nm,0.8s						
BRVK	**Borovoye**	**19.35**	**333**		**P**	**16 26 50.6**	**-0.3**
BRVK	**Borovoye**	**19.35**	**333**	*d i*P	**P**	**16 26 50.8**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,143nm,1.0s						
SONM	**Songino Array**	**19.39**	**48**		**P**	**16 26 50.9**	**-0.7**
SONM	**Songino Array**	**19.39**	**48**	P	**P**	**16 26 50.9**	**-0.7**
SONM				pmax	pmax		
	comp=Z,10.0nm,1.2s						
XAN	**Xi'an**	**19.76**	**90**	P	**P**	**16 26 56.9**	**+1.2**
XAN				pmax	pmax		
	comp=Z,18nm,1.4s						
ULN	**Ulaanbaatar**	**19.80**	**49**	P	**P**	**16 26 55.8**	**-0.4**
ULN	**Ulaanbaatar**	**19.80**	**49**	⇑*e*P	**P**	**16 26 56.7**	**+0.6**
ULN				pmax	pmax		
	comp=Z,12nm,1.0s						
HYB	**Hyderabad**	**19.95**	**198**	*e*P	**P**	**16 26 58.2**	**+0.4**
IRK	**Irkutsk**	**20.75**	**35**	*e*P	**P**	**16 27 07.2**	**+0.9**
IRK				pmax	pmax		
	comp=Z,47nm,2.4s						
GYA	**Guiyang**	**21.10**	**113**	⇓P	**P**	**16 27 12.8**	**+2.4**
GYA				pmax	pmax		
	comp=Z,27nm,1.0s						
HHC	**Hu-ho-hao-te**	**21.19**	**70**	*e*P	**P**	**16 27 13.8**	**+2.6**
HHC				pmax	pmax		
	comp=Z,38nm,0.9s						
CRAI	**Chiangrai**	**21.23**	**136**	P	**P**	**16 27 09.9**	**-1.7**
GEYT	**Alibeck**	**21.32**	**282**	P	**P**	**16 27 13.5**	**+0.9**
	comp=Z,15nm,0.8s,baz=106,slow=11,SNR=24						
	comp=Z,15nm,0.8s						
CHTO	**Chiang Mai**	**21.63**	**141**	P	**P**	**16 27 14.8**	**-1.2**
CHTO	**Chiang Mai**	**21.63**	**141**	P	**P**	**16 27 14.8**	**-1.2**
CM31	**Chiang Mai Arr**	**21.93**	**142**	P	**P**	**16 27 19.1**	**-0.1**
CMAR	**Chiang Mai Arr**	**21.93**	**142**	P	**P**	**16 27 17.9**	**-1.4**
	comp=Z,7.1nm,0.8s,baz=324,slow=10,SNR=32						
	comp=Z,7.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**21.93**	**142**	P	**P**	**16 27 18.3**	**-0.9**
CMAR	**Chiang Mai Arr**	**21.93**	**142**	*i* P	**P**	**16 27 18.5**	**-0.7**
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ABKAR	**Akbulak array**	**22.08**	**313**	P	**P**	**16 27 19.7**	**-0.8**
LYN	**LuoYang**	**22.49**	**87**	⇓P	P	16 27 33.0	+7.9
LYN				pmax	pmax		
	comp=Z,16nm,1.6s						
AKTO	**Aktyubinsk**	**23.71**	**314**	P	**P**	**16 27 37.2**	**-0.3**
	comp=Z,6.2nm,0.7s,baz=106,slow=8.5,SNR=12						
	comp=Z,6.2nm,0.7s						
HNS	**HongShan**	**23.78**	**79**	⇑P	**P**	**16 27 40.2**	**+2.0**
HNS				pmax	pmax		
	comp=Z,18nm,1.3s						
XLT	**XiLinHaoTe**	**24.77**	**63**	*e*P	**P**	**16 27 49.4**	**+1.9**
XLT				pP	pP	16 27 53.2	+1.3
XLT				sP	sP	16 27 56.2	+2.4
XLT				pmax	pmax		
	comp=Z,13nm,1.2s						
TIA	**Tai'an**	**25.88**	**81**	*e*P	**P**	**16 28 01.1**	**+3.7**
TIA				pmax	pmax		
	comp=Z,13nm,0.8s						
SVE	**Sverdlovsk**	**25.91**	**329**	*e*P	**P**	**16 27 58.4**	**+0.9**
SVE				pmax	pmax		
	comp=Z,40nm,1.2s						
ARU	**Arti**	**26.55**	**327**	P	**P**	**16 28 02.8**	**-0.5**
	comp=Z,7.5nm,0.7s,baz=95,slow=5.0,SNR=5.2						
	comp=Z,7.5nm,0.7s						
ARU	**Arti**	**26.55**	**327**	P	**P**	**16 28 03.8**	**+0.5**
ARU				IAmb	IAmb	16 28 07.9	
	comp=Z,14nm,0.9s						
ARU	**Arti**	**26.55**	**327**	*d i*P	**P**	**16 28 04.2**	**+0.9**
ARU						16 28 44.8	
ARU				S	**S**	**16 32 42.7**	**+5.2**
ARU				SS	**SnSn**	**16 33 43.3**	**+4.0**
ARU				pmax	pmax		
	comp=Z,16nm,0.9s						
NJ2	**Nanjing**	**28.32**	**89**	*e*P	**P**	**16 28 17.9**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
BELG	**Belogornoye**	**30.48**	**313**	⇑*e*P	**P**	**16 28 37.0**	**-1.3**
BELG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KNMB	**Chin-men Tao**	**31.14**	**103**	P	P	16 28 42.4	-2.0
GNI	**Garni**	**31.48**	**289**	⇑*e*P	**P**	**16 28 48.1**	**+0.6**
GNI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KIRV	**Kirov**	**31.87**	**325**	⇑*e*P	**P**	**16 28 50.2**	**-0.3**
ZEI	**Tsey**	**31.89**	**294**	*e*P	**P**	**16 28 54.0**	**+2.9**
ZEI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ONI	**Oni**	**32.23**	**294**	P	**P**	**16 28 55.7**	**+1.7**
ONI	**Oni**	**32.23**	**294**	P	**P**	**16 28 55.7**	**+1.7**
ONI				pmax	pmax		
	comp=Z,19nm,1.1s						
KBZ	**Khabaz**	**32.58**	**296**	P	**P**	**16 28 57.0**	**+0.1**
	comp=Z,1.9nm,0.9s,baz=161,slow=9.9,SNR=4.0						
	comp=Z,1.9nm,0.9s						
KBZ	**Khabaz**	**32.58**	**296**	⇑*e*P	**P**	**16 28 57.6**	**+0.7**
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KIV	**Kislovodsk**	**32.73**	**296**	⇑P	**P**	**16 29 01.8**	**+3.5**
KIV	**Kislovodsk**	**32.73**	**296**	*e*P	**P**	**16 28 58.4**	**0.0**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NRIK	**Noril'sk**	**32.79**	**2**	P	**P**	**16 28 57.7**	**-0.7**
	comp=Z,3.4nm,0.6s,baz=167,slow=5.9,SNR=8.3						
	comp=Z,3.4nm,0.6s						
NRIK	**Noril'sk**	**32.79**	**2**	P	**P**	**16 28 58.2**	**-0.3**
NRIK				IAmb	IAmb	16 28 59.6	
	comp=Z,8.4nm,1.2s						
NRIK	**Noril'sk**	**32.79**	**2**	⇑*e*P	**P**	**16 28 57.8**	**-0.7**
NRIK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GEVA	**Gevas**	**33.04**	**286**	P	**P**	**16 29 01.3**	**+0.1**
GEVA				IAmb	IAmb	16 29 07.1	
	comp=Z,11nm,1.4s						
ZEA	**Zeya**	**33.79**	**46**	*e*P	**P**	**16 29 08.8**	**+1.4**
KULM	**Kulim**	**34.38**	**151**	P	**P**	**16 29 11.7**	**-1.1**
KULM				IAmb	IAmb	16 29 13.8	
	comp=Z,13nm,1.0s						
KLR	**Kul'dur**	**35.98**	**55**	⇑*e*P	**P**	**16 29 26.9**	**+0.6**
KLR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KLMR	**Klimovskoe**	**37.37**	**325**	*e*P	**P**	**16 29 36.6**	**-1.4**
KLMR				AMP		16 29 39.3	
	comp=Z,19nm,1.5s						
KLMR				*e*PP	**PP**	**16 31 03.3**	**+0.2**
KLMR	**Klimovskoe**	**37.37**	**325**	*e*P	**P**	**16 29 36.6**	**-1.4**
KLMR				*e*		16 31 03.3	
KLMR				pmax	pmax		
	comp=Z,19nm,1.5s						
YAK	**Yakutsk**	**37.52**	**33**	⇑*e*P	**P**	**16 29 38.7**	**-0.6**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BZK	**Bozkurt**	**39.27**	**294**	⇑P	**P**	**16 29 53.6**	**-0.6**
BR131	**Keskin Array S**	**39.96**	**291**	P	**P**	**16 29 59.9**	**-0.4**
BR131				IAmb	IAmb	16 30 03.2	
	comp=Z,9.9nm,0.7s						
BR131	**Keskin Array S**	**39.96**	**291**	P	**P**	**16 29 59.9**	**-0.4**
BR131				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BRTR	**Keskin Array B**	**39.96**	**291**	P	**P**	**16 30 00.1**	**-0.2**
	comp=Z,5.5nm,0.8s,baz=97,slow=8.6,SNR=12						
	comp=Z,5.5nm,0.8s						
BRTR	**Keskin Array B**	**39.96**	**291**	P	**P**	**16 29 59.8**	**-0.4**
BRTR	**Keskin Array B**	**39.96**	**291**	*i* P	**P**	**16 30 00.8**	**+0.5**
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AKASG	**Malin Array Be**	**41.67**	**308**	P	**P**	**16 30 13.0**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=74,slow=7.0,SNR=7.9						
AKASG				PP	**PP**	**16 31 49.4**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=72,slow=10,SNR=4.2						
	comp=Z,0.8nm,0.5s						
AKASG	**Malin Array Be**	**41.67**	**308**	*i* P	**P**	**16 30 15.6**	**+1.6**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKBB	**Malin Array Si**	**41.67**	**308**	⇑*e*P	**P**	**16 30 15.4**	**+1.4**
TIXI	**Tiksi**	**41.68**	**19**	P	**P**	**16 30 13.0**	**-0.8**
TIXI	**Tiksi**	**41.68**	**19**	⇓*e*P	**P**	**16 30 12.7**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CFR	**Carcaliu**	**42.95**	**300**	⇑P	**P**	**16 30 25.3**	**+0.8**
CFR	**Carcaliu**	**42.95**	**300**	⇑P	**P**	**16 30 25.3**	**+0.8**
NACGM	**Naroch**	**43.08**	**314**	*e*P	**P**	**16 30 30.0**	**+4.7**
	comp=E,795nm,1.1s						
ICOR	**Ion Corvin**	**43.37**	**298**	⇑P	**P**	**16 30 26.6**	**-1.3**
ELL	**Elmali**	**43.56**	**287**	P	**P**	**16 30 29.6**	**-0.2**
ELL	**Elmali**	**43.56**	**287**	P	**P**	**16 30 29.6**	**-0.2**
ELL				pmax	pmax		
	comp=Z,41nm,1.0s						
TESR	**Tescani**	**43.77**	**302**	⇑P	**P**	**16 30 31.4**	**+0.2**
VRI	**Vrincioaia**	**43.82**	**301**	⇑P	**P**	**16 30 32.1**	**+0.5**
VRI	**Vrincioaia**	**43.82**	**301**	⇑P	**P**	**16 30 32.1**	**+0.5**
FIA1	**FINESS Array S**	**43.85**	**324**	P	**P**	**16 30 30.9**	**-0.6**
FIA1				IAmb	IAmb	16 30 33.4	
	comp=Z,11nm,1.0s						
FINES	**FINESS Array B**	**43.85**	**324**	P	P	16 30 28.6	-2.9
	comp=Z,2.6nm,0.7s,baz=102,slow=6.4,SNR=7.8						
FINES	**FINESS Array B**	**43.85**	**324**	P	**P**	**16 30 30.9**	**-0.6**
FINES	**FINESS Array B**	**43.85**	**324**	*i* P	**P**	**16 30 32.4**	**+0.9**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
PLOR	**Plostina**	**43.88**	**301**	⇑P	**P**	**16 30 33.3**	**+1.2**
PLOR	**Plostina**	**43.88**	**301**	⇑P	**P**	**16 30 33.3**	**+1.2**
AKAS	**Kas**	**43.95**	**287**	P	**P**	**16 30 32.0**	**-0.8**
AKAS				IAmb	IAmb	16 30 37.8	
	comp=Z,12nm,0.7s						
COVR	**Voineasa-Covas**	**44.19**	**301**	⇑P	**P**	**16 30 35.9**	**+1.4**
MLR	**Muntele Rosu**	**44.42**	**301**	⇑P	**P**	**16 30 37.5**	**+0.9**
MLR	**Muntele Rosu**	**44.42**	**301**	P	**P**	**16 30 36.8**	**+0.2**
MLR				IAmb	IAmb	16 30 40.9	
	comp=Z,18nm,1.2s						
MLR	**Muntele Rosu**	**44.42**	**301**	P	**P**	**16 30 36.8**	**+0.2**
MLR				pmax	pmax		
	comp=Z,19nm,1.2s						
BURAR	**Bucovina Array**	**44.58**	**304**	⇑P	**P**	**16 30 37.8**	**+0.1**
BURAR	**Bucovina Array**	**44.58**	**304**	P	**P**	**16 30 37.3**	**-0.4**
BURAR	**Bucovina Array**	**44.58**	**304**	⇑P	**P**	**16 30 37.8**	**+0.1**
BUR08	**Bucovina Ar. S**	**44.59**	**304**	P	**P**	**16 30 37.4**	**-0.4**
DOPR	**Dopca**	**44.73**	**301**	⇑P	**P**	**16 30 40.0**	**+1.2**
VOIR		**45.05**	**301**	⇑P	**P**	**16 30 41.8**	**+0.3**
VOIR		**45.05**	**301**	⇑P	**P**	**16 30 41.8**	**+0.3**
ARR	**Arges**	**45.36**	**301**	⇑P	**P**	**16 30 44.5**	**+0.6**
ARCES	**ARCESS Array B**	**45.55**	**335**	P	**P**	**16 30 43.8**	**-1.3**
	comp=Z,2.2nm,0.5s,baz=94,slow=6.7,SNR=19						
	comp=Z,2.2nm,0.5s						
ARCES	**ARCESS Array B**	**45.55**	**335**	P	**P**	**16 30 45.0**	**0.0**
ARCES	**ARCESS Array B**	**45.55**	**335**	P	**P**	**16 30 45.0**	**0.0**
ARCES				pmax	pmax		
	comp=Z,34nm,1.5s						
MARR	**Marisel-Cluj**	**46.15**	**303**	⇑P	**P**	**16 30 50.8**	**+0.6**
TRPA	**Tarpa**	**46.28**	**305**	⇑P	**P**	**16 30 52.2**	**+1.2**
DRGR		**46.40**	**303**	⇑P	**P**	**16 30 52.6**	**+0.5**
DRGR		**46.40**	**303**	⇑P	**P**	**16 30 52.6**	**+0.5**
SURR	**Surduc**	**47.01**	**302**	⇑P	**P**	**16 30 56.7**	**-0.1**
BZS	**Buzias**	**47.38**	**302**	⇑P	**P**	**16 30 59.7**	**0.0**
BZS	**Buzias**	**47.38**	**302**	⇑P	**P**	**16 30 59.7**	**0.0**
BOVS	**Bovan**	**47.78**	**299**	⇑P	**P**	**16 31 01.5**	**-1.4**
SEY	**Seymchan**	**47.99**	**35**	⇑*e*P	**P**	**16 31 04.2**	**0.0**
SEY				pmax	pmax		
	comp=Z,3.0nm,1.1s						
VYHS	**Vyhne**	**48.64**	**306**	*e*P	**P**	**16 31 11.4**	**+1.9**
VYHS				*e*		16 33 04.3	
VYHS	**Vyhne**	**48.64**	**306**	*e*P	**P**	**16 31 11.4**	**+1.9**
VYHS				*e*PP	**PP**	**16 33 04.3**	**+2.1**
MORC	**Moravsky Berou**	**49.22**	**308**	*e*P	**P**	**16 31 16.0**	**+2.1**
MORH	**Mrgy, Hungar**	**49.27**	**303**	⇑P	**P**	**16 31 12.6**	**-1.6**
JAVC	**Velka Javorina**	**49.32**	**307**	*e*P	**P**	**16 31 19.2**	**+4.5**
VRAC	**Vranov**	**49.92**	**307**	*e*P	**P**	**16 31 18.2**	**-1.0**
NB2	**NORSAR Subarra**	**51.02**	**323**	P	**P**	**16 31 26.2**	**-1.2**
	comp=Z,2.2nm,0.6s,baz=84,slow=7.9						
NOA	**NORSAR Array B**	**51.02**	**323**	P	P	16 31 25.8	-1.6
	comp=Z,1.5nm,0.7s,baz=83,slow=7.5,SNR=6.8						
	comp=Z,1.5nm,0.7s						
BRG	**Berggiesshubel**	**51.24**	**310**	*e*P	**P**	**16 31 32.2**	**+3.0**
BRG				Amp		16 31 34.7	
	comp=Z,6.4nm,1.1s						
BRG				Amp		16 55 31.0	
	comp=N,1.1nm,16.0s						
BRG				Amp		16 55 41.0	
	comp=Z,1.7nm,17.1s						
BRG				Amp		16 55 46.0	
	comp=E,1.0nm,21.5s						
BRG	**Berggiesshubel**	**51.24**	**310**	*e*P	**P**	**16 31 32.2**	**+3.0**
BRG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BRG				MLR	MLR		
	comp=N,1µm,16.0s						
BRG				MLR	MLR		
	comp=Z,2µm,17.1s						
BRG				MLR	MLR		
	comp=E,958nm,21.5s						
CLL	**Collm**	**51.72**	**311**	*e*P	P	16 31 31.0	-1.7
CLL				*e*pP	pP	16 31 37.0	-0.4
CLL				*e*PP	**PP**	**16 33 27.0**	**-3.1**
CLL	**Collm**	**51.72**	**311**	*e*P	P	16 31 31.0	-1.7
GERES	**GERESS Array B**	**51.88**	**307**	P	**P**	**16 31 34.2**	**+0.2**
	comp=E,1.5nm,0.6s,baz=69,slow=7.3,SNR=13						
	comp=E,1.5nm,0.6s						
GERES	**GERESS Array B**	**51.88**	**307**	P	**P**	**16 31 33.7**	**-0.4**
KHC	**Kasperske Hory**	**51.88**	**308**	⇓*e*P	**P**	**16 31 34.4**	**+0.4**
KHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BILL	**Bilibino**	**53.42**	**28**	⇓*e*P	**P**	**16 31 45.8**	**+0.7**
BILL				*e*		16 31 48.9	
BILL				*e*SS	SKiKP	16 42 52.6	-8.5
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,418nm,15.0s						
ESDC	**Sonseca Array**	**67.03**	**303**	P	**P**	**16 33 18.4**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=54,slow=6.4,SNR=7.8						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,1.5nm,0.8s						
TOLK	Toolik Lake Re	67.57	19	P	P	16 33 21.5	-0.3
TOLK				IAmb	IAmb	16 33 25.4	
	comp=Z,5.2nm,0.8s						
IMAR	Indian Mountai	68.23	22	P	P	16 33 25.8	-0.2
H21K	Melozitna Rive	68.74	22	P	P	16 33 29.0	-0.1
A36M	Sachs Harbour	69.62	10	P	P	16 33 34.0	-0.4
A36M				IAmb	IAmb	16 33 35.1	
	comp=Z,4.8nm,0.9s						
MLY	Manley	69.80	22	P	P	16 33 35.8	0.0
I23K	Minto, Yukon-K	70.13	21	P	P	16 33 37.6	-0.1
I23K				IAmb	IAmb	16 33 42.0	
	comp=Z,11nm,1.4s						
BPAW	Bear Paw Mtn.	70.39	23	P	P	16 33 38.9	-0.4
BPAW				IAmb	IAmb	16 34 04.5	
	comp=Z,8.2nm,1.4s						
MDM	Murphy Dome	70.60	21	P	P	16 33 40.3	-0.3
MDM				IAmb	IAmb	16 33 45.0	
	comp=Z,9.9nm,1.5s						
NEA2	Nenana	70.62	22	P	P	16 33 40.2	-0.5
POKR	Poker Plat Res	70.71	21	P	P	16 33 40.8	-0.5
POKR				IAmb	IAmb	16 33 42.5	
	comp=Z,6.5nm,1.1s						
COLA	College	70.77	21	⇑eP	P	16 33 41.7	+0.2
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CCB	Clear Creek Bu	70.95	21	P	P	16 33 42.0	-0.6
CCB				IAmb	IAmb	16 33 46.7	
	comp=Z,7.1nm,1.4s						
ILAR	Eielson Array	71.12	21	P	P	16 33 42.8	-0.9
	comp=Z,2.5nm,0.9s,baz=312,slow=5.0,SNR=20						
ILAR				PP	PP	16 36 18.8	-2.0
	comp=Z,0.7nm,0.8s,baz=307,slow=7.2,SNR=4.9						
	comp=Z,2.5nm,0.9s						
ILAR	Eielson Array	71.12	21	P	P	16 33 42.5	-1.2
SKT	Skwentna	71.72	24	P	P	16 33 46.1	-1.3
SKT				IAmb	IAmb	16 33 52.0	
	comp=Z,12nm,1.3s						
J26L	Joseph Creek	72.26	20	P	P	16 33 50.1	-0.6
J26L				IAmb	IAmb	16 33 51.3	
	comp=Z,11nm,1.4s						
SUA	Susitna One	72.35	25	P	P	16 33 51.1	-0.2
SCRK	Sand Creek	72.55	20	P	P	16 33 51.8	-0.7
SCRK				IAmb	IAmb	16 33 56.6	
	comp=Z,5.9nm,1.2s						
WRAB	Tennant Creek	73.11	132	⇓eP	P	16 33 55.4	-0.8
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.2s						
WRA	Warramunga Arr	73.11	132	P	P	16 33 55.0	-1.2
	comp=Z,0.7nm,0.7s,baz=327,slow=6.1,SNR=4.7						
	comp=Z,0.7nm,0.7s						
WRA	Warramunga Arr	73.11	132	i P	P	16 33 56.7	+0.5
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SCM	Sheep Creek Mo	73.19	23	P	P	16 33 55.7	-0.6
SCM	Sheep Creek Mo	73.19	23	P	P	16 33 55.7	-0.6
SCM				pmax	pmax		
	comp=Z,15nm,1.2s						
L27K	Beaver Creek,	73.87	20	P	P	16 34 00.5	+0.3
L27K				IAmb	IAmb	16 34 05.3	
	comp=Z,5.7nm,1.1s						
BCAR	Beaver Creek A	73.88	20	P	P	16 34 00.6	+0.3
KDAK	Kodiak Island	74.33	28	⇑eP	P	16 34 03.3	+0.4
KDAK				pmax	pmax		
	comp=Z,32nm,1.4s						
MCARA	McCarthy VSAT	74.86	22	P	P	16 34 05.7	-0.2
ASAR	Alice Springs	75.72	134	P	P	16 34 10.3	-1.1
	comp=Z,0.8nm,0.7s,baz=333,slow=6.4,SNR=2.4						
	comp=Z,0.8nm,0.7s						
TORD	Torodi Ar. Bea	76.87	277	P	P	16 34 17.4	-0.8
	comp=Z,2.5nm,0.9s,baz=48,slow=4.9,SNR=6.8						
	comp=Z,2.5nm,0.9s						
YKA	Yellowknife Ar	79.97	9	P	P	16 34 33.1	-1.3
	comp=Z,1.8nm,0.9s,baz=342,slow=4.9,SNR=14						
	comp=Z,1.8nm,0.9s						
YKA	Yellowknife Ar	79.97	9	i P	P	16 34 35.0	+0.5
YKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CTAO	Charters Tower	80.82	123	P	P	16 34 38.6	-1.1
CTAO				IAmb	IAmb	16 35 08.5	
	comp=Z,7.6nm,1.3s						
CTAO	Charters Tower	80.82	123	P	P	16 34 38.6	-1.1
CTAO				pmax	pmax		
	comp=Z,8.0nm,1.3s						

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*IDC **07** 16:24:11.9±0.8, 0°.60S×122°.34E, h0^{km}, mb3.9/12, mbtmp4.0/13, ML4.6/1, Error ellipse: s-maj=31.0km s-min=14.6km az=64.0*

*DJA **07** 16:24:14.9±0.2, 1°S±2°×12°2E±°, h10^{km}, M4.7/18, mb4.9/18, mB5.1/5, MLv4.7/18, Mw4.4, Mw(mB)4.4/5*

*NEIC **07** 16:24:18.4±2.4, 0°.87S±0°.07×122°.30E±0°.06, h41^{km}±11^{km}, mb4.3/14, Error ellipse: s-maj=11.1km s-min=7.5km az=206.0*

ISC 07 16:24:16.4±0.5, **0°.82S**±0°.06×**122°.25E**±0°.05, **h26**^{km}, **n60**, σ1^{s}.**66**/62, **mb4.3**/23, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	0.56	113		Pb	16 24 27.2	-0.5
LUWI				Sn	Sn	16 24 36.8	-0.4
LUWI	Luwuk	0.56	113	P	Pb	16 24 27.4	-0.3
LUWI				S	Sn	16 24 36.5	-0.7
MRSI	Marisa	1.33	346	P	Pn	16 24 34.7	-4.5
GTOI	Gorontalo	1.63	28	P	Pn	16 24 40.7	-2.7
TOLI2	Tolitoli	2.42	322	Pn	Pn	16 24 54.6	+0.4
MPSI	Mapaga	2.62	296	P	Pn	16 24 55.2	-1.8
SANI	Sanana	3.93	108	P	Pn	16 25 14.6	-0.4
SPSI	Sidrap Palu	3.99	218	P	Pn	16 25 16.4	+0.5
KAPI	Kappang	4.86	211	Pn	Pn	16 25 28.0	+0.2
	25nm,0.3s,baz=24,slow=6.3,SNR=27						
KAPI				Sn	Sn	16 26 21.7	-1.5
	16nm,0.3s,baz=220,slow=21,SNR=7.1						
	76nm,0.5s						
BKSI	Bulukumba	4.95	205	P	Pn	16 25 29.4	+0.3
	96nm,0.7s,0.5nm						
LBMI	Labuha	5.25	88	P	Pn	16 25 33.6	+0.4
	167nm,0.5s,3µm2.0nm						
TNTI	Ternate	5.35	73		Pn	16 25 36.2	+1.6
TNTI	Ternate	5.35	73	P	Pn	16 25 38.1	+3.5
	118nm,0.9s,0.6nm						
BKB	Balikpapan	5.38	265		Pn	16 25 35.8	+0.8
BKB	Balikpapan	5.38	265	P	Pn	16 25 34.6	-0.3
	200nm,0.6s,0.7nm						
NLAI	Namlea	5.41	116	P	Pn	16 25 37.5	+2.1
	50nm,0.6s,0.5nm						
BSSI	Bau Bau, Buton	5.57	198	P	Pn	16 25 38.6	+0.9
	143nm,0.8s,0.5nm						
AAI	Ambon	6.58	116	P	Pn	16 25 54.4	+2.8
	123nm,0.8s,2µm0.4nm						
MYLDM	Lahad Datu	7.04	328	Pn	Pn	16 26 00.3	+2.5
MSAI	Masohi	7.13	111	P	Pn	16 26 01.6	+2.6
	15nm,0.6s,278nm0.1nm						
MMRI	Maumere	7.76	180	Pn	Pn	16 26 06.5	-1.2
SOEI	Soe	9.10	167	P	Pn	16 26 30.0	+3.8
	72nm,0.9s						
KKM	Kota Kinabalu	9.10	319	Pn	Pn	16 26 29.3	+3.1
FAKI	Fak Fak	10.20	102	Pn	Pn	16 26 41.2	-0.1
FAKI	Fak Fak	10.20	102	P	Pn	16 26 40.9	-0.4
	39nm,0.9s						
SBUM	Sibu	10.54	288	Pn	Pn	16 26 47.5	+1.5
SDSI	Sungai Dareh	20.82	270	P	P	16 28 56.6	+0.4
	23nm,1.5s						
PDSI	Padang	21.79	270	P	P	16 29 06.4	-0.2
	21nm,0.8s						
WB0	Warramunga Arr	22.27	148	P	P	16 29 11.7	0.0
WB0				IAmb	IAmb	16 29 17.6	
	comp=Z,12nm,0.9s						
WRAB	Tennant Creek	22.38	149	P	P	16 29 12.1	-0.9
WRAB				IAmb	IAmb	16 29 21.1	
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	22.39	149	P	P	16 29 14.1	+1.2
	comp=Z,7.7nm,1.0s,baz=329,slow=9.7,SNR=15						
	comp=Z,7.7nm,1.0s						
WRA	Warramunga Arr	22.39	149	P	P	16 29 13.3	+0.4
WB2	Warramunga Arr	22.39	149	P	P	16 29 11.6	-1.4
WB2				IAmb	IAmb	16 29 21.0	
	comp=Z,14nm,1.2s						
WR0	Warramunga Arr	22.50	148	P	P	16 29 13.1	-1.1
WR0				IAmb	IAmb	16 29 22.7	
	comp=Z,14nm,1.1s						
GSI	Gunungsitoli	24.77	275	P	P	16 29 36.8	+0.5
GSI	Gunungsitoli	24.77	275	P	P	16 29 36.5	+0.2
	comp=Z,66nm,0.7s						
AS31	Alice Springs	25.37	154	P	P	16 29 41.9	+0.3
ASAR	Alice Springs	25.37	154	P	P	16 29 42.5	+0.9
	comp=Z,0.8nm,0.7s,baz=325,slow=8.0,SNR=21						
	comp=Z,0.8nm,0.7s						
ASAR	Alice Springs	25.37	154	P	P	16 29 41.9	+0.3
PMG	Port Moresby	26.21	110	P	P	16 29 50.3	+1.0
	comp=Z,2.2nm,0.3s,baz=243,slow=6.8,SNR=2.1						
	comp=Z,2.2nm,0.3s						
PHRA	Phrae	28.94	313	P	P	16 30 14.9	+1.1
CMAR	Chiang Mai Arr	29.87	311	P	P	16 30 21.6	-0.4
	comp=Z,0.7nm,0.7s,baz=142,slow=6.8,SNR=4.9						
	comp=Z,0.7nm,0.7s						
CHTO	Chiang Mai	30.09	312	P	P	16 30 24.3	+0.3
PZH	PanZhiHua	33.60	325	P	P	16 30 57.1	+2.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
STKA	Stephens Creek	35.89	151	P	P	16 31 14.2	-0.2
	comp=Z,1.6nm,0.8s,baz=340,slow=15,SNR=2.7						
	comp=Z,1.6nm,0.8s						
MJAR	Matsushiro Arr	40.02	20	P	P	16 31 46.0	-3.3
	comp=Z,0.8nm,0.5s,baz=190,slow=9.5,SNR=1.6						
	comp=Z,0.8nm,0.5s						
HHC	Hu-ho-hao-te	42.60	348	eP	P	16 32 13.3	+2.8
HHC				pmax	pmax		
	comp=Z,38nm,1.0s						
HHC				pmax	pmax		
	comp=Z,910nm,6.2s						
XLT	XiLinHaoTe	44.86	354	eP	P	16 32 32.2	+3.6
SONM	Songino Array	50.39	346	P	P	16 33 10.4	-1.1
	comp=Z,2.9nm,0.9s,baz=162,slow=9.2,SNR=5.8						
	comp=Z,2.9nm,0.9s						
SONM	Songino Array	50.39	346	P	P	16 33 10.8	-0.8
SONM				IAmb	IAmb	16 33 22.6	
	comp=Z,5.6nm,1.1s						
WMQ	Urumqi	54.11	330	eP	P	16 33 41.8	+2.6
MK31	Makanchi Array	58.92	329	P	P	16 34 12.5	-0.9
MK31				IAmb	IAmb	16 34 40.2	
	comp=Z,1.7nm,0.8s						
MKAR	Makanchi Array	58.92	329	P	P	16 34 12.4	-0.9
	comp=Z,0.9nm,0.6s,baz=128,slow=8.7,SNR=7.1						
	comp=Z,0.9nm,0.6s						
MAKZ	Makanchi	59.09	329	P	P	16 34 13.7	-0.9
MAKZ				IAmb	IAmb	16 34 29.1	
	comp=Z,2.0nm,0.8s						
AAK	Ala-Archa	60.90	321	P	P	16 34 26.9	-0.3
AAK				IAmb	IAmb	16 34 38.1	
	comp=Z,4.9nm,1.3s						
KBL	Kabul	60.90	311	P	P	16 34 26.5	-1.0
PETK	Petropavlovsk-	61.33	23	P	P	16 34 26.1	-3.6
	comp=Z,4.6nm,1.1s,baz=224,slow=8.1,SNR=1.5						
	comp=Z,4.6nm,1.1s						
ZALV	Zalesovo Beam	62.75	336	P	P	16 34 37.1	-2.1
	comp=Z,0.9nm,0.7s,baz=139,slow=6.8,SNR=2.3						
	comp=Z,0.9nm,0.7s						
KURBB	Kurchatov Arra	63.30	330	P	P	16 34 41.5	-1.4
	comp=Z,0.6nm,0.7s,baz=138,slow=5.9,SNR=2.0						
	comp=Z,0.6nm,0.7s						
BVAR	Borovoye Array	68.80	329	P	P	16 35 17.3	-1.0
	comp=Z,0.6nm,0.7s,baz=110,slow=8.3,SNR=1.1						
	comp=Z,0.6nm,0.7s						

IDC 07 16:50:47.9±1.6, **35°.37N**×**12°.63E**, **h0**^{km}, **mb3.1**/2, **mbtmp3.1**/4, **ML3.3**/2, **Error ellipse: s-maj=41.4km s-min=24.5km az=156.0, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEST	Kesra	2.70	279	Pn	Pn	16 51 33.5	+0.9
	2.1nm,0.3s,baz=52,slow=14,SNR=10						
KEST				Sn	Sn	16 52 05.2	-0.9
	3.5nm,0.3s,baz=313,slow=1.2,SNR=8.8						
	7.4nm,0.5s						
AKASG	Malin Array Be	19.48	33	P	P	16 55 16.1	-0.1
	0.2nm,0.3s,baz=225,slow=10.0,SNR=2.4						
	0.5nm,0.5s						
TORD	Torodi Ar. Bea	24.23	207	P	P	16 56 06.4	-0.1
	0.2nm,0.4s,baz=33,slow=9.1,SNR=3.3						
	0.2nm,0.4s						
MKAR	Makanchi Array	52.13	55	P	P	16 59 59.8	-0.1
	0.1nm,0.6s,baz=283,slow=5.5,SNR=1.7						
	0.1nm,0.6s						

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*IDC **07** 16:52:40.9±0.6, 16°.56S×66°.65E, h0^{km}, mb4.3/15, mbtmp4.3/16, ML4.2/1, MS4.1/10, Error ellipse: s-maj=20.1km s-min=16.5km az=159.0*

*NEIC **07** 16:52:42.6±2.4, 16°.55S±0°.09×66°.59E±0°.10, h10^{km}±1^{km}, mb4.6/24, Error ellipse: s-maj=18.7km s-min=12.5km az=132.0*

*GCMT **07** 16:52:45.6±0.4, 16°.35S±0°.03×66°.56E±0°.02, h16^{km}±2^{km}, MW4.9/75, Moment Tensor Solution. s10,c10; s75,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.36±.15; $M_{\theta\theta}$-2.14±.12; $M_{\phi\phi}$2.50±.15; $M_{r\theta}$-1.48±.53; $M_{\theta\phi}$0.74±.11; $M_{\phi r}$-0.97±.48; Best double couple: $M_0$3.02700×10^{16} NP1:ϕ_s52.00000°, δ85.00000°, λ-37.00000°. NP2: ϕ_s145.00000°, δ54.00000°, λ-174.00000°. Principal axes: T 3.0720, Plg21.0000°, Azm104.0000°; N -0.0880, Plg53.0000°, Azm225.0000°; P -2.9820, Plg29.0000°, Azm2.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 16:52:42.1±0.5, **16°.58S**±0°.09×**66°.60E**±0°.08, **h10**^{km}, **n76**, σ1^{s}.**25**/62, **mb4.5**/28, **MS4.2**/10, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROCAM	Rodrigues Isla	4.41	224	Pn	Pn	16 53 47.2	-1.8
H08S1	Diego Carcia H	10.57	34	T	T	17 05 48.9	
	baz=212,slow=75,SNR=2781						
H08S2	Diego Garcia H	10.58	34	T	T	17 05 50.3	
	baz=212,slow=75,SNR=1418						
H08S3	Diego Garcia H	10.59	34	T	T	17 05 51.5	
	baz=212,slow=75,SNR=2517						
DGAR	Diego Garcia	10.76	33		Pn	16 55 13.2	-3.1
RER	Riviere de l'E	11.24	244	Pn	Pn	16 55 21.7	-1.2
MSEY	Mahe Island	16.09	316	Pn	Pn	16 56 29.3	+0.6
MSEY				IAmb	IAmb	16 56 34.8	
	comp=Z,75nm,1.5s						
OPO	Ambohidratompo	18.61	261	P	Pn	16 57 02.4	+2.2
	comp=Z,0.1nm,0.3s,baz=90,slow=18,SNR=1.8						
	comp=Z,3.7nm,0.7s						
PALK	Pallekele	27.50	32	LR	LR	17 07 24.9	
	comp=Z,264nm,18.9s,baz=73,slow=32						
KIBK	Kibwezi	31.45	294	P	P	16 59 03.7	-0.4
KIBK				IAmb	IAmb	16 59 05.9	
	comp=Z,8.8nm,1.5s						
CRZF	Crozet Islands	32.19	199	P	P	16 59 10.2	0.0
KMBO	Kilima Mbogo	32.73	295	P	P	16 59 16.1	+0.6
KMBO				IAmb	IAmb	16 59 20.2	
	comp=Z,6.7nm,1.4s						
LODK	Lodwar	36.71	300	P	P	16 59 50.8	+1.0
LBTB	Lobatse	39.12	251	P	P	17 00 11.2	+1.1
	comp=Z,9.0nm,0.9s,baz=0.9,slow=2.3						
	comp=Z,9.0nm,0.9s						
LBTB	Lobatse	39.12	251	P	P	17 00 10.7	+0.6
LBTB				IAmb	IAmb	17 00 12.1	
	comp=Z,16nm,1.1s						
BOSA	Boshof	39.82	245	P	P	17 00 16.2	+0.2
	comp=Z,4.8nm,1.0s,baz=86,slow=11,SNR=4.4						
	comp=Z,4.8nm,1.0s						
BOSA	Boshof	39.82	245	P	P	17 00 16.1	+0.2
BOSA				IAmb	IAmb	17 00 17.7	
	comp=Z,17nm,1.3s						
MYKOM	Kota Tinggi	41.05	67	P	P	17 00 26.1	0.0
H01W3	Cape Leeuwin H	46.08	123	T	T	17 50 28.4	
	baz=278,slow=75,SNR=77						
H01W2	Cape Leeuwin H	46.08	123	T	T	17 50 24.7	
	baz=278,slow=75,SNR=64						
H01W1	Cape Leeuwin H	46.09	123	T	T	17 50 26.9	
	baz=278,slow=75,SNR=83						
CMAR	Chiang Mai Arr	47.17	44	P	P	17 01 15.9	+0.8
	comp=Z,2.9nm,0.9s,baz=236,slow=9.8,SNR=11						
CMAR				LR	LR	17 17 58.3	
	comp=Z,135nm,21.8s,baz=190,slow=32						
	comp=Z,2.9nm,0.9s						
CMAR	Chiang Mai Arr	47.17	44	P	P	17 01 12.8	-2.4
NWAO	Narrogin (SRO)	48.32	119	LR	LR	17 18 27.7	
	comp=Z,203nm,19.9s,baz=100,slow=32						
SBUM	Sibu	48.85	72	P	P	17 01 27.9	-0.3
SBUM				IAmb	IAmb	17 01 38.5	
	comp=Z,6.5nm,0.8s						
KAPI	Kappang	53.31	84	LR	LR	17 21 01.0	
	comp=Z,140nm,20.8s,baz=276,slow=32						
PZH	PanZhiHua	54.77	39	P	P	17 02 12.8	+0.4
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,160nm,7.1s						
GOMU	GeErMu	58.88	27	P	P	17 02 46.0	+4.3
GOMU				pP	pwP	17 02 50.8	+2.6
GOMU				sP	sP	17 02 52.0	+7.3
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AAK	Ala-Archa	59.37	7	LR	LR	17 26 23.8	
	comp=Z,193nm,20.1s,baz=246,slow=34						
AAK	Ala-Archa	59.37	7	P	P	17 02 44.7	+0.1
KKAR	Karatay Array	59.49	3	P	P	17 02 45.3	-0.1
GNI	Garni	60.00	341	P	P	17 02 47.6	-1.5
ASAR	Alice Springs	63.10	108	P	P	17 03 10.4	+0.1
	comp=Z,3.1nm,0.8s,baz=272,slow=6.0,SNR=36						
ASAR				LR	LR	17 27 20.1	
	comp=Z,410nm,19.5s,baz=256,slow=33						
	comp=Z,3.1nm,0.8s						
ASAR	Alice Springs	63.10	108	P	P	17 03 10.2	-0.1
AS31	Alice Springs	63.10	108	P	P	17 03 09.9	-0.4
GTA	Gaotai	63.75	28	eP	P	17 03 14.7	+0.4
GTA				pP	sP	17 03 18.0	+0.7
GTA				sP	pwP	17 03 21.6	+0.7
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BRTR	Keskin Array B	63.90	332	P	P	17 03 15.2	-0.1
	comp=Z,1.2nm,0.7s,baz=153,slow=7.7,SNR=2.6						
	comp=Z,1.2nm,0.7s						
WRA	Warramunga Arr	64.03	104	P	P	17 03 16.4	-0.1
	comp=Z,4.3nm,0.7s,baz=268,slow=6.2,SNR=12						
WRA				LR	LR	17 28 56.8	
	comp=Z,111nm,19.7s,baz=297,slow=34						
	comp=Z,4.3nm,0.7s						
WRA	Warramunga Arr	64.03	104	P	P	17 03 16.9	+0.4
XAN	Xi'an	64.48	38	P	P	17 03 19.2	+0.1
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MAKZ	Makanchi	64.59	12	P	P	17 03 18.8	-0.8
MAKZ				IAmb	IAmb	17 03 23.5	
	comp=Z,2.8nm,1.0s						
MK31	Makanchi Array	64.64	12	P	P	17 03 18.9	-0.9
MKAR	Makanchi Array	64.64	12	P	P	17 03 19.0	-0.9
	comp=Z,2.1nm,0.8s,baz=216,slow=7.9,SNR=15						
	comp=Z,2.1nm,0.8s						
ABKAR	Akbulak array	65.81	355	P	P	17 03 26.1	-1.2
KURK	Kurchatov	67.83	8	P	P	17 03 39.9	-0.3
KURK				IAmb	IAmb	17 03 40.9	
	comp=Z,4.2nm,1.1s						
STKA	Stephens Creek	68.88	118	LR	LR	17 30 30.0	
	comp=Z,226nm,18.4s,baz=218,slow=33						
BVAR	Borovoye Array	69.39	2	LR	LR	17 33 47.0	
	comp=Z,138nm,18.1s,baz=217,slow=36						
BRVK	Borovoye	69.42	2	P	P	17 03 49.8	-0.3
BRVK				IAmb	IAmb	17 03 52.9	
	comp=Z,4.0nm,0.8s						
TORD	Torodi Ar. Bea	70.60	291	P	P	17 03 57.7	-0.5
	comp=Z,1.9nm,1.2s,baz=175,slow=5.1,SNR=4.3						
	comp=Z,1.9nm,1.2s						
ZAA0	Zalesovo Array	71.96	11	P	P	17 04 04.4	-1.1
ZAA0				IAmb	IAmb	17 04 12.5	
	comp=Z,3.9nm,0.8s						
ZALV	Zalesovo Beam	71.96	11	P	P	17 04 05.2	-0.3
	comp=Z,2.4nm,0.6s,baz=198,slow=5.3,SNR=12						
	comp=Z,2.4nm,0.6s						
ZALV	Zalesovo Beam	71.96	11	P	P	17 04 04.5	-1.0
SONM	Songino Array	73.33	27	P	P	17 04 14.6	+0.5
	comp=Z,2.1nm,0.8s,baz=212,slow=6.9,SNR=19						
	comp=Z,2.1nm,0.8s						
SONM	Songino Array	73.33	27	P	P	17 04 13.8	-0.2
QSPA	South Pole Qui	73.51	180	P	P	17 04 15.4	+0.4
	comp=Z,4.2nm,1.0s,baz=87,slow=2.5,SNR=7.5						
	comp=Z,4.2nm,1.0s						
QSPA	South Pole Qui	73.51	180	P	P	17 04 16.1	+1.2
AKASG	Malin Array Be	74.59	336	P	P	17 04 23.0	+1.9
	comp=Z,0.8nm,0.5s,baz=137,slow=4.9,SNR=5.4						
	comp=Z,0.8nm,0.5s						
CTA	Charters Tower	75.01	107	LR	LR	17 34 36.6	
	comp=Z,188nm,20.6s,baz=227,slow=34						
CTAO	Charters Tower	75.01	107	P	P	17 04 24.6	+0.2
CTAO				IAmb	IAmb	17 04 32.6	
	comp=Z,6.8nm,1.1s						
ARSA	Arzberg	78.30	327	ePcP	PcP	17 04 49.9	-1.7
	comp=Z,4.9nm,0.9s						
CONA	Conrad Observa	78.56	328	ePcP	PcP	17 04 50.1	-2.7
	comp=Z,3.2nm,0.8s						
MORC	Moravsky Berou	78.96	330	eP	P	17 04 44.2	-1.7
VRAC	Vranov	79.11	329	eP	P	17 04 46.7	0.0
MOA	Molln	79.33	327	ePcP	PcP	17 04 54.2	-2.0
	comp=Z,6.7nm,1.3s						
ABTA	Abfaltersbach	79.58	326	ePcP	PcP	17 04 55.8	-1.6
	comp=Z,8.7nm,1.0s						
KLMR	Klimovskoe	80.17	347	eP	P	17 04 58.1	+5.9
KLMR				AMP		17 05 07.4	
	comp=Z,25nm,1.5s						
CN2	Changchun	80.58	39	P	P	17 04 56.3	+1.5
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
MOTA	Moosalm	80.71	325	ePcP	PcP	17 05 02.2	-0.1
	comp=Z,7.0nm,1.2s						
FETA	Feichten	80.72	325	ePcP	PcP	17 05 02.5	+0.1
	comp=Z,5.8nm,1.0s						
DAVA	Damuels	81.34	325	ePcP	PcP	17 05 06.7	+1.6
	comp=Z,6.9nm,1.1s						
USRK	Ussuriysk Ar.	84.82	41	P	P	17 05 16.3	-0.5
	comp=Z,1.6nm,0.6s,baz=224,slow=4.0,SNR=3.1						
	comp=Z,1.6nm,0.6s						
MJAR	Matsushiro Arr	85.67	50	P	P	17 05 22.3	+0.9
	comp=Z,2.4nm,0.9s,baz=229,slow=5.2,SNR=3.4						
	comp=Z,2.4nm,0.9s						
ESDC	Sonseca Array	86.22	313	P	P	17 05 24.3	+0.3
	comp=Z,1.9nm,1.0s,baz=90,slow=5.0,SNR=6.3						
	comp=Z,1.9nm,1.0s						
ILAR	Eielson Array	126.80	17	PKP	PKiKP	17 11 47.3	+1.3
	comp=Z,0.5nm,0.9s,baz=302,slow=2.8,SNR=4.3						
YKA	Yellowknife Ar	134.13	1	PKP	PKiKP	17 12 01.1	+0.2
	comp=Z,0.4nm,0.8s,baz=2.3,slow=2.0,SNR=3.9						
NVAR	Mina Array Bea	157.81	10	PKPab	PKPab	17 13 13.9	+1.9
	comp=Z,0.5nm,0.6s,baz=356,slow=4.5,SNR=3.9						

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*IDC **07** 16:55:53.3±1.3, 4°.19S×133°.67E, h0^{km}, mb3.6/4, mbtmp3.7/6, ML3.6/2, MS3.5/2, Error ellipse: s-maj=52.6km s-min=23.5km az=65.0*

*DJA **07** 16:55:53.9±0.3, 4°S±3°×13°4E±°, h10^{km}, M4.3/10, mb4.2/9, mB6.0/1, MLv4.3/10, Mw(mB)5.7/1*

ISC 07 16:55:57.5±0.8, **4°.13S**±0°.10×**133°.66E**±0°.08, **h35**^{km}, **n17**, σ2^{s}.**31**/15, **mb3.7**/3, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	1.85	311	P	Pn	16 56 22.6	-4.1
RKPI	Ransiki, Papua	2.65	11	P	Pn	16 56 33.8	-4.0
SRPI	Serui, Papua	3.42	49	P	Pn	16 56 47.6	-0.7
BNDI	Bandanaira	3.76	264	P	Pn	16 56 52.8	-0.2
AAI	Ambon	5.47	274	P	Pn	16 57 16.7	+0.2
SMPI	Sarmi	5.48	67	P	Pn	16 57 16.7	+0.1
	58nm,1.8s,0.4nm						
NLAI	Namlea	6.60	277	P	Pn	16 57 32.2	+0.1
	11nm,0.5s,12µm0.1nm						
LBMI	Labuha	7.06	299	P	Pn	16 57 36.1	-2.3
	19nm,0.8s,0.2nm						
SANI	Sanana	7.93	285	P	Pn	16 57 49.1	-1.3
	11nm,0.6s,0.1nm						
DAV	Davao City (W)	13.74	324	LR	LR	17 04 05.2	
	comp=Z,146nm,19.8s,baz=119,slow=36						
WRA	Warramunga Arr	15.73	178	Pn	Pn	16 59 33.9	-2.7
	0.3nm,0.3s,baz=2.5,slow=13,SNR=14						
WRA				Sn	Sn	17 02 19.0	-11
	0.3nm,0.3s,baz=358,slow=23,SNR=8.7						
	0.8nm,0.5s						
ASAR	Alice Springs	19.43	179	P	P	17 00 20.6	-0.4
	0.2nm,0.3s,baz=0.7,slow=12,SNR=20						
ASAR				S	S	17 03 45.9	-13
	1.7nm,1.0s,baz=5.2,slow=22,SNR=5.7						
	1.7nm,0.8s						
CTA	Charters Tower	20.06	143	P	P	17 00 28.8	+0.9
	2.7nm,0.8s,baz=320,slow=12,SNR=4.0						
	2.7nm,0.8s						
JNU	Nakatsue	37.14	356	LR	LR	17 17 45.9	
	comp=Z,97nm,20.7s,baz=168,slow=35						
CMAR	Chiang Mai Arr	40.91	304	P	P	17 03 38.5	+1.7
	0.3nm,0.3s,baz=124,slow=5.6,SNR=4.1						
	0.3nm,0.3s						
MKAR	Makanchi Array	67.92	325	P	P	17 06 52.7	0.0
	0.5nm,0.7s,baz=119,slow=7.7,SNR=5.3						
	0.5nm,0.7s						
ILAR	Eielson Array	89.22	25	P	P	17 08 53.0	+3.5

0.3nm,0.7s,baz=244,slow=3.9,SNR=2.8
0.3nm,0.7s

IDC 07 17:04:33.4±1.9,**0°.55N×123°.77E,h0^{km},mb3.1**/3,
mbtmp3.1/3,**Error ellipse: s-maj=202.6km**
s-min=28.5km az=62.0,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.85**	**154**	P	P	17 09 38.7	+0.2
	0.5nm,0.6s,baz=332,slow=10,SNR=5.3						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**26.00**	**158**	P	P	17 10 07.9	-0.4
	0.1nm,0.6s,baz=333,slow=7.6,SNR=4.1						
	0.1nm,0.6s						
MKAR	**Makanchi Array**	**58.56**	**328**	P	P	17 14 32.1	+0.1
	0.4nm,1.0s,baz=126,slow=8.9,SNR=1.9						
	0.4nm,1.0s						

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*FUNV **07** 17:11:12.1, 7°.36N×72°.09W, h4^{km}, MW4.3*
*NEIC **07** 17:11:13.9±2.2, 7°.29N±0°.05×71°.97W±0°.06, h39^{km}±10^{km},*
mb4.4/29, Error ellipse: s-maj=9.2km s-min=6.8km
az=125.0
*RSNC **07** 17:11:14.0±0.8, 7°.28N×72°.15W, h2^{km}±3^{km}, ML3.7, Mw4.1*
*VAO **07** 17:11:15.9±0.5, 7°.30N×71°.93W, h44^{km}, mb4.3*
*IDC **07** 17:11:17.4±1.0, 7°.31N×71°.98W, h74^{km}±10^{km}, mb3.6/10,*
mbtmp4.0/14, Error ellipse: s-maj=15.4km s-min=7.7km
az=123.0
ISC 07 17:11:13.6±0.5,**7°.32N**±0°.03×**72°.00W**±0°.03,**h39**^{km}±3^{km},
n126,σ**2^{s}.24**/165,**mb4.3**/22,**7C-4D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	**Capacho**	**0.62**	**330**	⇑*e*P	**Pn**	**17 11 22.6**	**-3.7**
CAPV				*e*S	**Sn**	**17 11 31.1**	**-4.1**
PAMC	**Pamplona, Colo**	**0.69**	**272**	⇓*i*P	Pn	17 11 22.5	-4.9
PAMC				*e*S	**Sn**	**17 11 30.6**	**-6.6**
PAMC				*i*		17 11 31.8	
	comp=Z,4μm,0.3s						
TAMC	**Tame, Arauca**	**0.90**	**167**	⇑*i*P	**Pn**	**17 11 29.8**	**-0.1**
TAMC				*e*S	**Sn**	**17 11 43.4**	**+1.7**
TAMC				*i*		17 11 48.6	
	comp=Z,2μm,0.5s						
BARC	**Barichara**	**1.38**	**238**	⇓*e*P	**Pn**	**17 11 35.3**	**-1.3**
BARC				*e*S	**Sn**	**17 11 53.3**	**-0.4**
BARC				*i*		17 11 57.1	
	comp=Z,1μm,0.5s						
SOCV	**Socops**	**1.48**	**50**	⇓*e*P	**Pn**	**17 11 39.4**	**+1.5**
SOCV				*e*S	**Sn**	**17 11 59.5**	**+3.4**
BRRC	**Barranca, Sant**	**1.71**	**263**	⇓*i*P	**Pn**	**17 11 41.5**	**+0.5**
BRRC				*e*S	**Sn**	**17 12 02.8**	**+1.2**
BRRC				*i*		17 12 12.1	
	comp=Z,823nm,0.5s						
RUSC	**La Rusia**	**1.78**	**217**		**Pn**	**17 11 42.9**	**+0.6**
RUSC				Sn	**Sn**	**17 12 04.8**	**+0.9**
RUSC	**La Rusia**	**1.78**	**217**	⇑*i*P	**Pn**	**17 11 43.3**	**+1.0**
RUSC				*e*S	**Sn**	**17 12 05.3**	**+1.4**
RUSC				*i*		17 12 12.9	
	comp=Z,1μm,0.8s						
SDV	**Santo Domingo**	**2.06**	**41**	P	**Pn**	**17 11 48.4**	**+2.4**
	comp=Z,721nm,0.3s,baz=210,slow=5.7,SNR=805						
SDV				S	**Sn**	**17 12 15.8**	**+5.2**
	comp=Z,2μm,0.4s,baz=46,slow=18,SNR=14						
SDV	**Santo Domingo**	**2.06**	**41**		**Pn**	**17 11 48.2**	**+2.2**
SDV	**Santo Domingo**	**2.06**	**41**	*e*P	**Pn**	**17 11 47.4**	**+1.5**
PTBC	**PUERTO BERRIO,**	**2.56**	**253**	⇑*i*P	**Pn**	**17 11 52.4**	**-0.2**
PTBC				*e*S	**Sn**	**17 12 23.5**	**+0.9**
PTBC				*i*		17 12 29.4	
	comp=Z,1μm,0.5s						
SPBC	**San Pablo de B**	**2.64**	**231**	*e*P	**Pn**	**17 11 55.3**	**+1.5**
SPBC				*e*S	**Sn**	**17 12 31.2**	**+6.5**
SPBC				*i*		17 12 34.3	
	comp=Z,536nm,0.4s						
LL1C	**La Loma 1 Cana**	**2.69**	**325**	*e*P	Pn	17 12 02.0	+7.6
LL1C				*e*S	Sn	17 12 36.5	+11
LL1C				*i*		17 12 41.6	
	comp=Z,1μm,0.5s						
ZARC	**Zaragoza, Cauc**	**2.84**	**274**	*e*P	**Pn**	**17 11 57.1**	**+0.6**
ZARC				*e*S	**Sn**	**17 12 30.9**	**+1.5**
ZARC				*i*		17 12 38.5	
	comp=Z,629nm,0.5s						
PTGC	**Puerto Gaitan,**	**3.10**	**182**	*e*P	**Pn**	**17 11 60.0**	**-0.1**
PTGC				*e*S	**Sn**	**17 12 40.4**	**+4.4**
PTGC				*i*		17 12 56.7	
	comp=Z,418nm,0.3s						
CHIC	**Chingaza**	**3.18**	**213**	⇑*e*P	**Pn**	**17 12 02.4**	**+0.9**
CHIC				*e*S	Sn	17 12 49.4	+11
CHIC				*i*		17 12 55.9	
	comp=Z,144nm,0.5s						
NORC	**Norcasia**	**3.34**	**239**	*e*P	**Pn**	**17 12 03.5**	**+0.1**
NORC				*e*S	**Sn**	**17 12 48.7**	**+6.8**
NORC				*i*		17 12 52.3	
	comp=Z,222nm,0.4s						
CURV	**Curarigua**	**3.35**	**37**	*e*P	**Pn**	**17 12 04.7**	**+1.1**
CURV				*e*S	**Sn**	**17 12 43.9**	**+1.7**
ARGC	**Ariguani, Magd**	**3.36**	**319**	*e*P	**Pn**	**17 12 07.6**	**+4.0**
ARGC				*e*S	**Sn**	**17 12 45.2**	**+2.9**
ARGC				*i*		17 13 01.8	
	comp=Z,83nm,0.5s						
ROSC	**El Rosal**	**3.37**	**223**	P	**Pn**	**17 12 07.0**	**+2.8**
	comp=Z,68nm,0.5s,baz=84,slow=11,SNR=28						
ROSC				S	**Sn**	**17 12 49.2**	**+6.1**
	comp=Z,136nm,0.6s,baz=57,slow=23,SNR=2.0						
ROSC	**El Rosal**	**3.37**	**223**		**Pn**	**17 12 06.8**	**+2.7**
ROSC	**El Rosal**	**3.37**	**223**	⇑*i*P	**Pn**	**17 12 06.9**	**+2.8**
ROSC				*e*S	**Sn**	**17 12 46.7**	**+3.5**
ROSC				*i*		17 13 07.4	
	comp=Z,136nm,0.5s						
UREC	**San Jos de Ur**	**3.53**	**277**	*e*P	**Pn**	**17 12 07.2**	**+1.2**
UREC				*e*S	**Sn**	**17 12 52.8**	**+6.3**
UREC				*i*		17 13 00.4	
	comp=Z,152nm,0.3s						
VILC	**Villavicencio,**	**3.60**	**208**	*e*P	**Pn**	**17 12 08.7**	**+1.6**
VILC				*e*S	Sn	17 13 08.8	+20
HELC	**Santa Helena**	**3.68**	**252**		**Pn**	**17 12 08.6**	**+0.2**
HELC				Sn	**Sn**	**17 12 50.5**	**-0.1**
GUY2C	**Guyana, Caldas**	**3.94**	**238**	*e*P	**Pn**	**17 12 10.2**	**-1.8**
GUY2C				*e*S	**Sn**	**17 13 01.5**	**+4.2**
GUY2C				IAML		17 13 22.2	
	comp=Z,290nm,0.6s						
SIQV	**Siquisique**	**3.96**	**33**	*e*P	**Pn**	**17 12 13.0**	**+1.1**
SIQV				*e*S	**Sn**	**17 12 55.4**	**-1.6**
SJCC	**San Jacinto, C**	**4.05**	**309**	*e*P	**Pn**	**17 12 14.8**	**+1.6**
SJCC				*e*S	**Sn**	**17 13 04.3**	**+4.8**
SJCC				*i*		17 13 23.7	
	comp=Z,146nm,0.5s						
NIZA	**Niza - Manizal**	**4.12**	**237**	*e*P	**Pn**	**17 12 16.8**	**+2.5**
NIZA				*e*S	**Sn**	**17 13 02.1**	**+0.8**
DBBC	**Dabeiba**	**4.19**	**266**	*e*P	**Pn**	**17 12 16.6**	**+1.5**
DBBC				*e*S	**Sn**	**17 13 07.8**	**+4.9**
DBBC				*i*		17 13 24.8	
	comp=Z,92nm,0.7s						
BAUV	**El Baul**	**4.24**	**67**	Pn	**Pn**	**17 12 15.8**	**+0.1**
BAUV	**El Baul**	**4.24**	**67**	*e*P	**Pn**	**17 12 16.0**	**+0.3**
BAUV				*e*S	**Sn**	**17 13 04.4**	**+0.4**
CBOC	**Ciudad Bolivar**	**4.24**	**250**	*e*P	Pn	17 12 03.3	-13
CBOC				*e*S	**Sn**	**17 13 04.6**	**+0.4**
CBOC				*i*		17 13 28.5	
	comp=Z,134nm,0.6s						
MAPV	**Macapo**	**4.30**	**54**	*e*P	**Pn**	**17 12 17.5**	**+0.9**
MAPV				*e*S	**Sn**	**17 13 05.6**	**0.0**
URIC	**Uribia, Colomb**	**4.36**	**0**		**Pn**	**17 12 16.8**	**-0.5**
URIC				Sn	**Sn**	**17 13 06.2**	**-0.6**
URIC	**Uribia, Colomb**	**4.36**	**0**	*e*P	**Pn**	**17 12 20.5**	**+3.2**
URIC				*e*S	**Sn**	**17 13 07.4**	**+0.6**
ANIL	**Santa Ana**	**4.40**	**230**	*e*P	**Pn**	**17 12 19.1**	**+0.9**
ANIL				*e*S	**Sn**	**17 13 13.9**	**+5.6**
ANIL				*i*		17 13 17.7	
	comp=Z,193nm,0.5s						
APAC	**Apartado, Choc**	**4.58**	**278**	*e*P	**Pn**	**17 12 22.0**	**+1.7**
APAC				*e*S	**Sn**	**17 13 18.1**	**+5.8**
APAC				*i*		17 13 51.6	
	comp=Z,108nm,0.7s						
PRAC	**Prado**	**4.59**	**219**	Pn	**Pn**	**17 12 20.9**	**+0.2**
PRAC	**Prado**	**4.59**	**219**	*e*P	**Pn**	**17 12 21.6**	**+1.0**
PRAC				*e*S	**Sn**	**17 13 14.1**	**+1.3**
PRAC				*i*		17 13 43.7	
	comp=Z,121nm,0.5s						
ORTC	**Ortega, Tolima**	**4.68**	**224**	⇑*e*P	**Pn**	**17 12 22.5**	**+0.7**
ORTC				*e*S	**Sn**	**17 13 16.4**	**+1.5**
ORTC				*i*		17 13 44.6	
	comp=Z,69nm,0.6s						
JACV	**Jacura**	**4.88**	**40**	*e*P	**Pn**	**17 12 26.1**	**+1.5**
BENV	**Beln**	**5.08**	**59**	*e*P	**Pn**	**17 12 29.4**	**+2.0**
TURV	**Turiamo**	**5.16**	**53**	*e*P	**Pn**	**17 12 29.5**	**+1.2**
TURV				*e*S	**Sn**	**17 13 26.1**	**-0.5**
CACV	**CAICARA DEL OR**	**5.42**	**87**	*e*P	Pn	17 12 39.8	+7.8
CACV				*e*S	Sn	17 13 48.4	+15
YOTC	**Yotoco, Valle**	**5.45**	**233**	*e*P	**Pn**	**17 12 33.7**	**+1.3**
YOTC				*e*S	**Sn**	**17 13 41.6**	**+7.6**
YOTC				*i*		17 14 15.3	
	comp=Z,19nm,0.7s						
MACC	**Macarena, Meta**	**5.46**	**200**	*e*P	**Pn**	**17 12 32.0**	**-0.5**
MACC				*e*S	**Sn**	**17 13 31.9**	**-2.2**
TACV	**Tcata**	**5.66**	**60**	*e*P	**Pn**	**17 12 36.1**	**+0.8**
MERV	**Las Mercedes**	**5.96**	**71**	*e*P	**Pn**	**17 12 39.9**	**+0.4**
MERV				*e*S	**Sn**	**17 13 45.8**	**-0.7**
FUNV	**FUNVISIS**	**6.01**	**58**	*e*P	**Pn**	**17 12 41.3**	**+1.2**
FUNV				*e*S	**Sn**	**17 13 45.4**	**-2.4**
GARC	**Garzon, Huila**	**6.17**	**214**	*e*P	**Pn**	**17 12 42.8**	**+0.3**
GARC				*e*S	**Sn**	**17 13 53.4**	**+1.4**
GARC				*i*		17 14 35.6	
	comp=Z,39nm,0.3s						
JAMC	**Jamundi, Valle**	**6.19**	**229**	*e*P	**Pn**	**17 12 44.1**	**+1.4**
JAMC				*e*S	**Sn**	**17 13 58.4**	**+6.1**
JAMC				*i*		17 14 13.3	
	comp=Z,12nm,0.6s						
BIRV	**Birongo**	**6.47**	**61**	Pn	**Pn**	**17 12 47.3**	**+0.9**
BIRV	**Birongo**	**6.47**	**61**	*e*P	**Pn**	**17 12 47.3**	**+0.9**
POPC	**Popayan, Colom**	**6.65**	**225**	*e*P	**Pn**	**17 12 50.2**	**+1.2**
FLOC	**Florencia**	**6.76**	**213**	*e*P	**Pn**	**17 12 50.2**	**-0.2**
FLOC				*e*S	Sn	17 14 18.1	+12
FLOC				*i*		17 14 53.8	
	comp=Z,21nm,0.7s						
BBAC	**Balboa, Cauca**	**7.42**	**225**	*e*P	Pn	17 13 06.2	+6.6
BBAC				*e*S	**Sn**	**17 14 25.1**	**+2.5**
BBAC				*i*		17 14 53.7	
	comp=Z,3.7nm,0.7s						
PRGV	**PARIAGUAN**	**7.42**	**78**	*e*P	**Pn**	**17 12 59.4**	**-0.1**
BCIP	**Isla Barro Col**	**7.97**	**284**	Pn	**Pn**	**17 13 07.4**	**+0.5**
SGCB	**S£o Gabriel d**	**8.90**	**146**	*e*P	**Pn**	**17 13 19.3**	**-0.5**
SDDR	**Presa de Saban**	**11.61**	**3**	Pn	**Pn**	**17 13 57.8**	**+0.9**
TBTG	**Tabatinga, AM**	**11.62**	**170**	*e*P	**Pn**	**17 13 56.9**	**-0.1**
DR12	**Loma Pena Alta**	**11.68**	**12**	Pn	**Pn**	**17 13 56.7**	**-1.2**
SJG	**San Juan**	**12.15**	**27**	P	**Pn**	**17 14 02.6**	**-1.6**
	comp=Z,10nm,0.4s,baz=215,slow=20,SNR=1.6						
GCPR	**Guaynabo City**	**12.35**	**27**	Pn	**Pn**	**17 14 04.8**	**-2.2**
BOAV	**Boa Vista**	**12.44**	**113**	Pn	**Pn**	**17 14 07.4**	**-0.8**
BOAV					**Sn**	**17 16 21.2**	**-4.3**
BOAV	**Boa Vista**	**12.44**	**113**	*e*P	**Pn**	**17 14 07.9**	**-0.3**
CZSB	**Cruzeiro do Su**	**14.97**	**183**		**Pn**	**17 14 40.0**	**-2.6**
ATAH	**Atahualpa**	**15.71**	**204**	P	**Pn**	**17 14 53.6**	**+1.0**
	comp=Z,5.5nm,0.9s,baz=41,slow=20,SNR=1.5						
ETMB	**Extrema**	**17.97**	**161**		**Pn**	**17 15 18.1**	**-2.6**
ETMB	**Extrema**	**17.97**	**161**	*e*P	**P**	**17 15 21.0**	**+0.2**
SAML	**Samuel**	**18.39**	**151**	P	**P**	**17 15 23.1**	**-2.3**
MDP	**Montagnes des**	**19.37**	**95**	P	**P**	**17 15 35.4**	**-0.9**
	comp=Z,12nm,0.9s,baz=270,slow=11,SNR=2.4						
NPGB	**Novo Progresso**	**21.89**	**130**	*e*P	**P**	**17 16 04.9**	**+1.4**
LPAZ	**La Paz**	**23.77**	**171**	P	**P**	**17 16 23.8**	**+0.4**
	comp=Z,2.9nm,0.6s,baz=341,slow=9.7,SNR=7.3						
	comp=Z,2.9nm,0.6s						
LPAZ	**La Paz**	**23.77**	**171**	P	**P**	**17 16 22.4**	**-0.9**
LPAZ	**La Paz**	**23.77**	**171**	*e*P	**P**	**17 16 24.3**	**+1.0**
PDRB	**Porto dos Gac**	**24.18**	**141**	*e*P	**P**	**17 16 27.0**	**+0.5**
SIV	**San Ignacio**	**25.56**	**155**	P	**P**	**17 16 39.9**	**+0.7**
	comp=Z,8.9nm,0.8s,baz=333,slow=8.7,SNR=36						
	comp=Z,8.9nm,0.8s						
PB16	**IPOC Station P**	**25.61**	**175**	P	**P**	**17 16 38.6**	**-1.5**
PTLB	**Pontes e Lacer**	**25.96**	**151**	P	**P**	**17 16 42.6**	**-0.1**
PTLB	**Pontes e Lacer**	**25.96**	**151**	*e*P	**P**	**17 16 44.4**	**+1.7**
MNMC	**Minye Minye**	**26.39**	**175**	P	**P**	**17 16 45.6**	**-1.3**
MNMC				IAmb	IAmb	17 16 48.1	
	comp=Z,6.0nm,0.8s						
PSGCX	**Pisagua**	**26.81**	**176**	P	**P**	**17 16 49.4**	**-1.1**
BBSD	**Serra de San D**	**26.83**	**155**	*e*P	**P**	**17 16 51.2**	**+0.7**
GO01	**Chusmiza**	**26.96**	**174**	P	**P**	**17 16 51.2**	**-1.0**
PB11	**IPOC Station P**	**27.01**	**175**	P	**P**	**17 16 50.7**	**-1.6**
PB11				IAmb	IAmb	17 16 54.1	
	comp=Z,12nm,0.9s						
BBRB	**Robore, Bolivi**	**28.14**	**155**	*e*P	**P**	**17 17 03.3**	**+1.1**
PB01	**IPOC Station P**	**28.29**	**175**	P	**P**	**17 17 02.5**	**-1.2**
LVC	**Limon Verde**	**29.90**	**174**	P	**P**	**17 17 14.9**	**-3.4**
LVC				IAmb	IAmb	17 17 18.8	
	comp=Z,4.2nm,0.7s						
LVC	**Limon Verde**	**29.90**	**174**	*e*P	**P**	**17 17 18.5**	**+0.3**
PANT	**Pantanal (Braz**	**30.22**	**150**	*e*P	**P**	**17 17 22.4**	**+1.6**
BDQN	**Bodoquena, MS**	**31.41**	**152**	*e*P	**P**	**17 17 32.7**	**+1.5**
AQDB	**Aquidauana**	**31.93**	**150**	*e*P	**P**	**17 17 37.1**	**+1.3**
MURT	**Porto Murtinho**	**32.07**	**154**	*e*P	**P**	**17 17 37.2**	**+0.2**
WVT	**Waverly**	**32.12**	**335**	P	**P**	**17 17 37.7**	**+0.4**
WVT				IAmb	IAmb	17 18 03.2	
	comp=Z,8.3nm,1.4s						
ZAIG	**Zacatecas**	**33.17**	**301**	P	**P**	**17 17 45.3**	**-1.7**
ZAIG				IAmb	IAmb	17 18 00.3	
	comp=Z,4.7nm,0.5s						
AC02	**Maricunga**	**34.06**	**175**	P	**P**	**17 17 54.5**	**-0.4**
AC02				IAmb	IAmb	17 17 58.3	
	comp=Z,6.6nm,1.2s						
T42A	**Van Buren**	**34.30**	**332**	P	**P**	**17 17 56.0**	**-0.3**
T42A				IAmb	IAmb	17 18 04.1	
	comp=Z,8.7nm,1.4s						
AMBA	**Amambai (Brazi**	**34.36**	**151**	*e*P	**P**	**17 17 57.7**	**+0.7**
LCO	**Las Campanas**	**36.14**	**178**	P	**P**	**17 18 11.0**	**-1.5**
LCO				IAmb	IAmb	17 18 13.6	
	comp=Z,7.6nm,0.9s						
WMOK	**Wichita Mounta**	**36.77**	**322**	P	**P**	**17 18 16.9**	**-0.6**
WMOK				IAmb	IAmb	17 18 17.7	
	comp=Z,2.3nm,0.6s						
TXAR	**Lajitas Array**	**36.98**	**310**	P	**P**	**17 18 19.6**	**0.0**
	comp=Z,0.4nm,0.5s,baz=119,slow=9.0,SNR=7.8						
TXAR				PcP	**PcP**	**17 20 41.6**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=119,slow=7.4,SNR=4.5						
	comp=Z,0.4nm,0.5s						
TX31	**Lajitas Ar. Si**	**36.98**	**310**	P	**P**	**17 18 19.5**	**0.0**
TX31				IAmb	IAmb	17 18 37.8	
	comp=Z,4.6nm,1.0s						
CO06	**Fray Jorge**	**37.78**	**179**	P	**P**	**17 18 26.0**	**-0.1**
ROC1	**El Roble**	**40.08**	**179**	P	**P**	**17 18 45.7**	**0.0**
MT09	**Talagante**	**40.88**	**179**	P	**P**	**17 18 51.4**	**-0.7**
MT09				IAmb	IAmb	17 18 53.1	
	comp=Z,10nm,0.9s						
BO02	**Sierra Bellavi**	**41.90**	**178**	P	**P**	**17 18 59.7**	**-0.7**
EYMN	**Ely**	**43.75**	**341**	P	**P**	**17 19 15.3**	**+0.1**
PV13	**Radium Mtn., P**	**45.26**	**318**	P	**P**	**17 19 28.9**	**+1.2**
PV13				IAmb	IAmb	17 19 29.6	
	comp=Z,2.4nm,0.6s						
TRQA	**Tornquist**	**46.10**	**169**	*e*P	**P**	**17 19 34.3**	**+0.3**
U15A	**North Rim**	**46.76**	**314**	P	**P**	**17 19 40.9**	**+1.3**
SCHQ	**Schefferville**	**47.56**	**4**	P	**P**	**17 19 46.0**	**+0.8**
	comp=Z,3.4nm,0.8s,baz=201,slow=7.6,SNR=6.7						
	comp=Z,3.4nm,0.8s						
SCHQ	**Schefferville**	**47.56**	**4**	P	**P**	**17 19 46.3**	**+1.1**
SCHQ				IAmb	IAmb	17 19 52.5	
	comp=Z,6.6nm,1.1s						
MSU	**Marysvale**	**47.70**	**317**	P	**P**	**17 19 48.1**	**+1.3**
PLCA	**Paso Flores**	**47.83**	**179**	P	**P**	**17 19 46.9**	**-0.7**
	comp=Z,5.7nm,1.0s,baz=356,slow=9.3,SNR=8.0						
	comp=Z,5.7nm,1.0s						
PLCA	**Paso Flores**	**47.83**	**179**	P	**P**	**17 19 46.8**	**-0.7**
PLCA	**Paso Flores**	**47.83**	**179**	*e*P	**P**	**17 19 47.4**	**-0.1**
PDAR	**Pinedale Array**	**48.34**	**323**	P	**P**	**17 19 50.0**	**-1.7**
	comp=Z,0.5nm,0.7s,baz=120,slow=8.8,SNR=3.8						
	comp=Z,0.5nm,0.7s						
NVAR	**Mina Array Bea**	**51.93**	**314**	P	**P**	**17 20 19.5**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=120,slow=5.5,SNR=1.9						
	comp=Z,0.2nm,0.6s						
YKA	**Yellowknife Ar**	**63.19**	**339**	P	**P**	**17 21 37.2**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=131,slow=7.0,SNR=27						
	comp=Z,1.6nm,0.6s						
TORD	**Torodi Ar. Bea**	**72.55**	**79**	P	**P**	**17 22 37.5**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=271,slow=3.0,SNR=1.6						
	comp=Z,0.2nm,0.5s						
ILAR	**Eielson Array**	**76.99**	**335**	P	**P**	**17 23 02.2**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=98,slow=3.9,SNR=3.1						
	comp=Z,0.3nm,0.7s						
ASAR	**Alice Springs**	**150.30**	**234**	PKPbc	**PKPbc**	**17 31 01.2**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=116,slow=3.7,SNR=23						
WRA	**Warramunga Arr**	**151.55**	**241**	PKPbc	**PKPbc**	**17 31 04.0**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=107,slow=2.8,SNR=20						

DJA 07 17:36:54.2±0.6,**1°S**±3°×**12°2E**±°,**h12**^{km}±6^{km},**M3.9**/10,
mb4.4/3,**MLv3.7**/10,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.62**	**135**	P	Pb	17 37 07.3	+0.3
MRSI	**Marisa**	**1.14**	**340**	P	Pb	17 37 14.7	-1.1
GTOI	**Gorontalo**	**1.40**	**29**	P	Pn	17 37 19.5	-0.1
MPSI	**Mapaga**	**2.60**	**291**	P	Pn	17 37 36.0	-0.1
SANI	**Sanana**	**3.93**	**112**	P	Pn	17 37 54.4	0.0
SPSI	**Sidrap Palu**	**4.21**	**217**	P	Pn	17 37 57.9	-0.3
NLAI	**Namlea**	**5.44**	**119**	P	Pn	17 38 15.6	+0.4
	136nm,1.5s,1.0nm						
BSSI	**Bau Bau, Buton**	**5.80**	**198**	P	Pn	17 38 20.4	+0.2

ROM 07 17:42:57.2±0.1,**42°.777N**±0°.003×**13°.146E**±0°.005,
h8^{km}**,ML1.6**/3,**3C-1D,Error ellipse: s-maj=0.4km**
s-min=0.2km az=291.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.05**	**111**	P	Pg	17 42 59.3	+0.2
T1214				S	Sg	17 43 00.6	+0.1
T1214				AML	AML		
	comp=E,1235μm,0.2s						
T1214				AML	AML		
	comp=N,1245μm,0.1s						
T1214				AML	AML		
	comp=N,1260μm,0.6s						
T1214				AML	AML		
	comp=E,1155μm,0.1s						
T1214				AML	AML		
	comp=N,1255μm,0.6s						
T1212	**Cascia, Frazio**	**0.08**	**251**	⇑P	Pg	17 42 59.6	+0.3
T1212				AML	AML		
	comp=E,285μm,1.0s						
T1212				AML	AML		
	comp=N,358μm,0.9s						
T1212				AML	AML		
	comp=E,274μm,0.1s						
T1212				AML	AML		
	comp=N,368μm,1.2s						
T1212				AML	AML		
	comp=E,285μm,1.0s						
T1212				AML	AML		
	comp=E,285μm,1.0s						
T1212				AML	AML		
	comp=N,358μm,0.9s						
T1245	**Castelsantange**	**0.09**	**21**	P	Pg	17 42 59.8	+0.2
T1245				S	Sg	17 43 01.6	+0.3
T1245				AML	AML		
	comp=E,854μm,0.1s						
T1245				AML	AML		
	comp=E,788μm,0.1s						
T1245				AML	AML		
	comp=N,760μm,0.3s						
T1245				AML	AML		
	comp=N,838μm,0.3s						
T1218	**Civita (PG)**	**0.11**	**192**	P	Pg	17 43 00.1	+0.3
T1218				S	Sg	17 43 02.3	+0.6
T1218				AML	AML		
	comp=E,474μm,0.3s						
T1218				AML	AML		
	comp=N,770μm,0.2s						
T1218				AML	AML		
	comp=E,464μm,0.4s						
T1218				AML	AML		
	comp=N,758μm,0.2s						
MC2	**Monte Cornacci**	**0.14**	**14**	P	Pg	17 43 01.3	+1.0
T1216	**Preci, Frazion**	**0.15**	**321**	P	Pg	17 43 00.7	+0.3
T1217	**Poggiodomo (PG**	**0.17**	**248**	⇑P	Pg	17 43 01.2	+0.4
MMO1	**Montemonaco**	**0.18**	**47**	P	Pg	17 43 01.4	+0.4
MMO1				S	Sg	17 43 04.7	+1.1
SMA1	**SAN MARTINO**	**0.20**	**136**	P	Pg	17 43 02.1	+0.7
T1215	**Vallo di Nera,**	**0.21**	**277**	⇑P	Pg	17 43 01.8	+0.4
RM33	**Pellescritta (**	**0.27**	**169**	P	Pg	17 43 03.2	+0.5
CSP1	**Cessapalombo**	**0.32**	**8**	⇓P	Pg	17 43 04.0	+0.5
TERO	**Teramo**	**0.37**	**114**	P	Pg	17 43 04.6	+0.1
T0110	**Collepietro**	**0.72**	**139**	P	Pb	17 43 12.0	0.0
PE3	**Peglio**	**1.03**	**333**	P	Pg	17 43 14.8	-2.3

ROM 07 17:43:11.0±0.1,**42°.778N**±0°.003×**13°.132E**±0°.005,
h7^{km}±1^{km},**ML1.4**/10,**2C-1D,Error ellipse: s-maj=0.3km**
s-min=0.3km az=333.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.06**	**108**	P	Pg	17 43 12.9	+0.1
T1214				S	Sg	17 43 14.2	0.0
T1214				AML	AML		
	comp=E,1458μm,0.1s						
T1214				AML	AML		
	comp=N,1413μm,0.1s						
T1214				AML	AML		
	comp=N,1449μm,0.1s						
T1214				AML	AML		
	comp=E,1311μm,0.1s						
T1212	**Cascia, Frazio**	**0.07**	**248**	P	Pg	17 43 13.3	+0.4
T1212				AML	AML		
	comp=E,354μm,0.1s						
T1212				AML	AML		
	comp=N,539μm,0.2s						
T1212				AML	AML		
	comp=N,518μm,0.2s						
T1212				AML	AML		
	comp=E,326μm,0.1s						
T1245	**Castelsantange**	**0.09**	**28**	P	Pg	17 43 13.4	+0.2
T1245				S	Sg	17 43 15.2	+0.4
T1245				AML	AML		
	comp=N,1004μm,0.1s						
T1245				AML	AML		
	comp=E,961μm,0.1s						
T1245				AML	AML		
	comp=N,945μm,0.1s						
T1245				AML	AML		
	comp=E,1096μm,0.1s						
T1218	**Civita (PG)**	**0.11**	**186**	P	Pg	17 43 13.7	+0.3
T1218				S	Sg	17 43 16.0	+0.8
T1218				AML	AML		
	comp=N,922μm,0.2s						
T1218				AML	AML		
	comp=N,899μm,0.2s						
T1218				AML	AML		
	comp=E,395μm,0.2s						
T1218				AML	AML		
	comp=E,421μm,0.1s						
T1216	**Preci, Frazion**	**0.14**	**324**	⇑P	Pg	17 43 14.5	+0.5
T1216				AML	AML		
	comp=N,176μm,0.3s						
T1216				AML	AML		
	comp=E,169μm,0.2s						
MC2	**Monte Cornacci**	**0.14**	**18**	P	Pg	17 43 14.7	+0.7
T1217	**Poggiodomo (PG**	**0.16**	**246**	P	Pg	17 43 14.8	+0.5
T1217				AML	AML		
	comp=E,140μm,0.1s						
T1217				AML	AML		
	comp=N,157μm,0.1s						
T1217				AML	AML		
	comp=E,161μm,0.1s						
MMO1	**Montemonaco**	**0.19**	**50**	⇓P	Pg	17 43 15.1	+0.3
T1215	**Vallo di Nera,**	**0.20**	**277**	P	Pg	17 43 15.4	+0.5
T1215				S	Sg	17 43 18.8	+1.1
T1215				AML	AML		
	comp=N,96μm,0.1s						
T1215				AML	AML		
	comp=E,97μm,0.1s						
T1215				AML	AML		
	comp=N,92μm,0.1s						
T1215				AML	AML		
	comp=E,92μm,0.1s						
CESI	**CESI - Serrava**	**0.28**	**324**	⇑P	Pg	17 43 17.4	+0.9
CESI				AML	AML		
	comp=N,78μm,0.1s						
T1219	**Muccia, Frazio**	**0.29**	**342**	S	Sg	17 43 22.0	+1.3
T1220	**Camerino, Fraz**	**0.33**	**355**	P	Pg	17 43 18.1	+0.6
T1220				AML	AML		
	comp=N,182μm,0.2s						

WEL 07 17:57:55.2,43°S±5°×**17°3E**±°,**h14**^{km}±11^{km},**M2.7**/13,
mB4.9/1,**ML3.1**/20,**MLv2.7**/13,**Mw(mB)4.2**/1,**Error**
ellipse: s-maj=0.0km s-min=0.0km az=79.7,South
Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	**Greta Valley S**	**0.01**	**289**	P	Pg	17 57 58.1	+0.5

AMCZ	**Amberley**	**0.36**	**235**	P	Pn	17 58 05.2	-0.7
LTZ	**Lake Taylor**	**0.60**	**288**	P	Pn	17 58 09.0	-0.3
KHZ	**Kahutara**	**0.66**	**33**	P	Pn	17 58 09.5	-0.6
MQZ	**McQueen's Vall**	**0.79**	**201**	P	Pn	17 58 11.6	-0.3
OXZ	**Oxford**	**0.82**	**244**	P	Pn	17 58 13.0	+0.6
AKCZ	**Akaroa Harbour**	**0.91**	**186**	P	Pn	17 58 15.0	+1.5
RACZ	**Rakaia**	**1.00**	**221**	P	Pn	17 58 15.9	+1.0
INZ	**Inchbonnie**	**1.21**	**281**	P	Pg	17 58 19.3	+0.9
THZ	**Tophouse**	**1.21**	**355**	P	Pg	17 58 18.9	+0.4
MHCZ	**Mount Hutt**	**1.22**	**242**	P	Pg	17 58 18.5	-0.1
WACZ	**Wakanui South**	**1.31**	**222**	P	Pb	17 58 19.6	0.0
BSWZ	**Blackbirch Sta**	**1.40**	**26**	P	Pg	17 58 21.8	-0.2
DSZ	**Denniston Nort**	**1.53**	**323**	P	Pb	17 58 23.9	+0.5
MRNZ	**Matariki Terra**	**1.58**	**352**	P	Pb	17 58 24.9	+0.6
RPZ	**Rata Peaks**	**1.63**	**242**	P	Pb	17 58 24.4	-0.6
ARCZ	**Arundel**	**1.68**	**234**	P	Pn	17 58 24.8	+0.7
TUWZ	**Tuamarina**	**1.68**	**24**	P	Pg	17 58 26.8	-0.6
WVZ	**Waitaha Valley**	**1.70**	**266**	P	Pb	17 58 26.4	+0.2
GCSZ	**Gaunt Creek Bo**	**2.02**	**259**	P	Pb	17 58 31.1	-0.5
TMZ	**Timaru**	**2.05**	**226**	P	Pn	17 58 30.3	+1.1
QRZ	**Quartz Range**	**2.18**	**350**	P	Pb	17 58 33.0	-1.3
CAW	**Cannon Point**	**2.39**	**40**	P	Pb	17 58 39.4	+1.4
FOZ	**Fox Glacier**	**2.43**	**256**	P	Pb	17 58 37.1	-1.5
LBZ	**Lake Benmore**	**2.51**	**235**	P	Pn	17 58 36.8	+1.2
ODZ	**Otahua Downs**	**2.70**	**219**	P	Pn	17 58 38.9	+0.7

WEL 07 17:58:52.6±1.0**,37°S**±6°×**17°8E**±°**,h65**^{km}±10^{km}**,M2.6**/8**, ML2.9**/12**,MLv2.6**/8**,Error ellipse: s-maj=0.0km s-min=0.0km az=108.9,confirmed,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAZ	**Te Kaha**	**0.41**	**170**	P	Pn	17 59 05.4	+1.3
HAZ				S	Sn	17 59 15.3	+2.7
MXZ	**Matakaoa Point**	**0.53**	**113**	P	Pn	17 59 06.6	+1.3
MXZ				S	Sn	17 59 18.8	+4.1
RUGZ	**Raukumara Rang**	**0.61**	**181**	P	Pn	17 59 06.7	+0.4
RUGZ				S	Sn	17 59 17.8	+1.5
PKGZ	**Pakihiroa**	**0.61**	**150**	P	Pn	17 59 07.4	+1.1
PKGZ				S	Sn	17 59 18.9	+2.6
WMGZ	**Waiomatatini S**	**0.74**	**129**	P	Pn	17 59 08.3	+0.6
WMGZ				S	Sn	17 59 20.9	+2.2
PUZ	**Puketiti**	**0.84**	**148**	P	Pn	17 59 09.1	+0.1
MWZ	**Matawai**	**0.98**	**188**	P	Pn	17 59 10.9	+0.2
URZ	**Urewera**	**1.01**	**207**	P	Pn	17 59 11.3	+0.3
OPRZ	**Ohinepanea**	**1.03**	**241**	P	Pn	17 59 12.3	+1.1
TKGZ	**Te Karaka**	**1.09**	**174**	P	Pn	17 59 12.1	+0.1
TKGZ				S	Sn	17 59 27.2	+0.8
CNGZ	**Carnagh Statio**	**1.20**	**160**	P	Pn	17 59 13.5	+0.1
CNGZ				S	Sn	17 59 30.4	+1.4
RIGZ	**Rimuhau**	**1.35**	**178**	P	Pn	17 59 14.9	-0.6
RIGZ				S	Sn	17 59 32.5	-0.1
RTZ	**Ruatahuna**	**1.38**	**204**	P	Pn	17 59 15.7	-0.2
SNGZ	**Shannon Statio**	**1.45**	**191**	P	Pn	17 59 16.6	-0.2
SNGZ	**Shannon Statio**	**1.45**	**191**	P	Pn	17 59 16.6	-0.2
SNGZ				S	Sn	17 59 35.8	+0.8
MTHZ	**Maungataniwha**	**1.64**	**204**	P	Pn	17 59 18.9	-0.4
MTHZ				S	Sn	17 59 40.4	+0.9
TOZ	**Tahuroa Road**	**1.78**	**257**	P	Pn	17 59 21.9	+0.7
TOZ	**Tahuroa Road**	**1.78**	**257**	P	Pn	17 59 21.6	+0.4
NMHZ	**Naumai**	**1.87**	**202**	P	Pn	17 59 22.1	-0.4
ARHZ	**Aropaoanui**	**1.98**	**196**	P	Pn	17 59 22.9	-1.0
ARHZ				S	Sn	17 59 47.5	-0.2
BKZ	**Black Stump Fm**	**2.04**	**207**	P	Pn	17 59 23.9	-0.8
MCHZ	**McNeill Hill**	**2.23**	**200**	P	Pn	17 59 26.1	-1.2
KWHZ	**Kaweka Forest**	**2.29**	**205**	P	Pn	17 59 26.8	-1.4
KAHZ	**Kahuranaki**	**2.52**	**194**	P	Pn	17 59 29.3	-1.9
MOVZ	**Moawhango**	**2.55**	**216**	P	Pn	17 59 30.4	-1.3
MOVZ				S	Sn	18 00 00.3	-1.5
PRHZ	**Porangahau**	**3.02**	**196**	P	Pn	17 59 34.9	-3.1

UPP ***07*** *18:08:46.8±0.1, 67°.04N×20°.97E, h0^{km}, ML2.7, Suspected explosion*
IDC ***07*** *18:08:47.7±0.9, 67°.05N×21°.09E, h0^{km}, mbtmp3.0/4, ML1.9/4, Error ellipse: s-maj=17.1km s-min=7.9km az=116.0*
HEL ***07*** *18:08:47.0±0.4, 67°.05N×20°.93E, h0^{km}, ML2.2, Explosion*
BER ***07*** *18:08:49.5±1.7, 66°.99N×21°.05E, h0^{km}, ML1.7, Suspected explosion*

ISC 07 18:08:46.7±0.7**,67°.07N**±0°.02×**20°.99E**±0°.02**,h0**^{km}**,n57, σ1^{s}.24**/81**,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.17**	**287**	P	**Pg**	**18 08 50.4**	**+0.3**
DUNU				S	**Sg**	**18 08 52.8**	**+0.6**
MASU	**Masugnsbyn**	**0.55**	**45**	P	**Pg**	**18 08 57.8**	**+0.5**
ERTU	**Ertsjaerv**	**0.70**	**137**	P	**Pg**	**18 08 59.7**	**-0.4**
ERTU				S	**Sg**	**18 09 09.1**	**-0.2**
ERTU	**Ertsjaerv**	**0.70**	**137**	PG	**Pg**	**18 08 59.6**	**-0.6**
	baz=316						
ERTU				SG	**Sg**	**18 09 06.5**	**-2.7**
PAJU	**Pajala**	**0.83**	**92**	P	**Pg**	**18 09 02.4**	**-0.3**
PAJU	**Pajala**	**0.83**	**92**	PG	**Pg**	**18 09 02.2**	**-0.5**
HARU	**Harads**	**0.91**	**180**	P	**Pg**	**18 09 03.4**	**-0.8**
KUA	**Kurravaara**	**0.92**	**344**	P	**Pg**	**18 09 04.1**	**-0.3**
RATU	**Laukkuluspa**	**0.93**	**325**	P	**Pg**	**18 09 04.2**	**-0.3**
SALU	**Saltoluokta**	**1.01**	**289**	P	**Pg**	**18 09 05.7**	**-0.5**
LANU	**Lannavaara**	**1.05**	**21**	P	**Pg**	**18 09 06.6**	**-0.3**
LANU	**Lannavaara**	**1.05**	**21**	PG	**Pg**	**18 09 06.4**	**-0.5**
	baz=206						
LANU				SG	**Sg**	**18 09 18.7**	**-1.9**
NIKU	**Nikkaluokta**	**1.10**	**318**	P	**Pg**	**18 09 07.3**	**-0.5**
KLF	**Kolari**	**1.17**	**81**	PG	**Pg**	**18 09 08.6**	**-0.5**
	baz=259						
KLF				MSG		18 09 23.3	
	comp=Z,24nm,0.2s						
KLF				SG	**Sg**	**18 09 25.2**	**+0.8**
KOVU	**Salmi**	**1.20**	**345**	P	**Pg**	**18 09 09.2**	**-0.5**
KALU	**Kalix**	**1.54**	**141**	P	**Pn**	**18 09 14.7**	**-0.8**
KALU	**Kalix**	**1.54**	**141**	PG	**Pn**	**18 09 14.5**	**-0.9**
	baz=319						
KALU				SN	**Sg**	**18 09 38.6**	**+2.3**
SJUU	**Sjulsmark**	**1.59**	**171**	P	**Pn**	**18 09 15.4**	**-0.6**
TOF	**Tornio**	**1.66**	**125**	PG	**Pn**	**18 09 17.0**	**-0.1**
TOF				MSG		18 09 37.0	
	comp=Z,12nm,0.2s						
TOF				SN	**Sn**	**18 09 39.4**	**+0.3**
HEF	**Hetta**	**1.69**	**36**	*e*P	**Pn**	**18 09 17.7**	**+0.3**
HEF				*e*S	**Sg**	**18 09 40.6**	**-0.2**
HEF	**Hetta**	**1.69**	**36**	PG	**Pn**	**18 09 17.3**	**-0.1**
	baz=217						
HEF				MSG		18 09 38.3	
	comp=Z,18nm,0.2s						
HEF				SN	**Sg**	**18 09 42.2**	**+1.4**
KIF	**Kilpisjarvi**	**1.94**	**358**	*e*P	**Pb**	**18 09 22.8**	**-0.1**
KIF				*e*S	**Sg**	**18 09 49.2**	**+0.1**
KIF	**Kilpisjarvi**	**1.94**	**358**	PG	**Pb**	**18 09 22.5**	**-0.4**
KIF				MSG		18 09 46.6	
	comp=Z,43nm,0.2s						
KIF				SG	**Sg**	**18 09 49.9**	**+0.8**
RNF	**Rovaniemi**	**2.04**	**101**	PG	**Pn**	**18 09 23.1**	**+0.9**
RNF				SG	**Sb**	**18 09 51.4**	**+0.9**
KTK1	**Kautokeino**	**2.12**	**22**	*e*P	**Pb**	**18 09 25.1**	**-1.0**
KTK1				*e*S	**Sb**	**18 09 52.5**	**-0.5**
KTK1				IAML		18 10 03.2	
	comp=Z,9.1nm,0.2s						
KTK1	**Kautokeino**	**2.12**	**22**	PG	**Pb**	**18 09 25.3**	**-0.8**
KTK1				SG	**Sg**	**18 09 55.1**	**+0.2**
SGF	**Sodankyl**	**2.18**	**78**	PG	**Pn**	**18 09 25.7**	**+1.4**
SGF				SG	**Sg**	**18 09 56.5**	**-0.3**
I37NO	**I37NO**	**2.20**	**337**	I	I	18 24 20.0	
	baz=158,slow=315,SNR=1.9						
FAUS	**Fauske**	**2.24**	**281**	*e*P	**Pn**	**18 09 26.4**	**+1.3**
FAUS				*e*S	**Sn**	**18 09 53.6**	**+0.2**
FAUS				IAML		18 10 02.9	
	comp=Z,14nm,0.2s						
STEI	**Steigen**	**2.37**	**294**	*e*P	**Pn**	**18 09 27.5**	**+0.6**
STEI				*e*S	**Sn**	**18 09 57.1**	**+0.5**
STEI				IAML		18 10 08.7	
	comp=Z,5.1nm,0.3s						
JETT	**Jettan, Norway**	**2.51**	**355**	*e*P	**Pb**	**18 09 32.1**	**-0.5**
JETT				IAML		18 10 14.1	
	comp=Z,16nm,0.2s						
TRO	**Tromso**	**2.69**	**344**	SG	**Sg**	**18 10 12.1**	**-0.8**
MOR8	**Moi Rana**	**2.76**	**254**	*e*P	**Pn**	**18 09 32.4**	**+0.2**
MOR8				IAML		18 10 20.5	
	comp=Z,6.8nm,0.2s						
OBF4	**Vikkela, Lumij**	**2.82**	**141**	PN	**Pn**	**18 09 33.6**	**+0.6**
	baz=320						
OBF4				MSG		18 10 09.9	
	comp=Z,4.5nm,0.2s						
OUL	**Oulu**	**2.82**	**133**	PB	**Pn**	**18 09 34.5**	**+1.5**
	baz=314						
OBF0	**Syolatti, Pyha**	**2.91**	**151**	PB	**Pn**	**18 09 35.6**	**+1.4**
OBF0				MSG		18 10 12.2	
	comp=Z,6.9nm,0.2s						
ARA0	**ARCESS Array S**	**2.99**	**32**	PN	**Pn**	**18 09 36.1**	**+0.8**
	baz=221						
ARA0				SN	**Sn**	**18 10 10.3**	**-1.5**
ARCES	**ARCESS Array B**	**2.99**	**32**	Pn	**Pn**	**18 09 36.0**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=211,slow=14,SNR=76						
ARCES				Sn	**Sn**	**18 10 14.3**	**+2.4**
	comp=Z,0.6nm,0.3s,baz=212,slow=25,SNR=8.1						
	comp=Z,1.5nm,0.2s						
LOF	**Lofoten**	**3.04**	**294**	*e*P	**Pn**	**18 09 36.5**	**+0.4**
LOF				IAML		18 10 31.3	
	comp=Z,4.4nm,0.2s						
OUF	**Merijarvi**	**3.12**	**149**	PB	**Pn**	**18 09 38.4**	**+1.3**
OUF				MSG		18 10 18.5	
	comp=Z,4.3nm,0.2s						
KONS	**Konsvik**	**3.17**	**263**	*e*P	**Pn**	**18 09 39.1**	**+1.3**
KONS				IAML		18 10 35.9	
	comp=Z,7.6nm,0.2s						
UMAU	**Umeaa**	**3.21**	**182**	PB	**Pn**	**18 09 38.8**	**+0.6**
	baz=357						
UMAU				SG	**Sb**	**18 10 25.1**	**+1.2**
STOK	**Stokkvaagen**	**3.25**	**261**	*e*P	**Pn**	**18 09 40.0**	**+1.1**
VRF	**Varrio**	**3.40**	**75**	PN	**Pn**	**18 09 41.9**	**+1.0**
VRF				SG	**Sb**	**18 10 30.7**	**+1.2**
MSF	**Maaselka**	**3.43**	**106**	PN	**Pn**	**18 09 42.3**	**+0.9**
KEV	**Kevo**	**3.49**	**37**	*e*P	**Pn**	**18 09 43.5**	**+1.3**
KEV	**Kevo**	**3.49**	**37**	PN	**Pn**	**18 09 44.0**	**+1.7**
KU6	**Riekki**	**3.71**	**102**	PN	**Pn**	**18 09 45.9**	**+0.7**
	baz=293						
HAMF	**Hammerfest**	**3.72**	**14**	*e*P	**Pn**	**18 09 47.4**	**+2.1**
HUSU	**Husum**	**3.82**	**192**	PN	**Pn**	**18 09 47.5**	**+0.8**
HUSU				SB	**Sn**	**18 10 36.7**	**+4.5**
VAF	**Ylistaro**	**4.11**	**169**	PN	**Pn**	**18 09 52.0**	**+1.3**
VADS	**Vadso**	**4.33**	**41**	*e*P	**Pn**	**18 09 55.5**	**+1.8**
NSS	**Namsos**	**4.50**	**240**	*e*P	**Pn**	**18 09 56.6**	**+0.5**
RMF	**Romuvaara**	**4.68**	**124**	PN	**Pn**	**18 10 00.5**	**+2.0**
FINES	**FINESS Array B**	**6.07**	**156**	Pn	**Pn**	**18 10 18.1**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=350,slow=12,SNR=14						
FINES				Sn	**Sn**	**18 11 28.4**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=344,slow=22,SNR=5.1						
	comp=Z,1.3nm,0.9s						
NOA	**NORSAR Array B**	**7.41**	**220**	Pn	**Pn**	**18 10 35.5**	**-0.5**
	baz=65,slow=16,SNR=1.4						
NOA				Sn	**Sn**	**18 11 58.3**	**-2.4**
	baz=33,slow=17,SNR=1.5						
	comp=Z,0.4nm,0.7s						
HFS	**Hagfors**	**7.68**	**208**	Pn	**Pn**	**18 10 39.0**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=35,slow=15,SNR=7.1						
HFS				Sn	**Sn**	**18 12 03.4**	**-3.8**
	comp=Z,0.2nm,0.3s,baz=27,slow=23,SNR=1.2						
	comp=Z,2.1nm,0.8s						

IDC ***07*** *18:19:08.1±1.4, 17°.20N×121°.50E, h0^{km}, mb3.3/5, mbtmp3.3/5, Error ellipse: s-maj=58.4km s-min=22.1km az=60.0*
MAN ***07*** *18:19:10.2, 17°.41N×121°.04E, h17^{km}, mb4.5, ML3.3, MS3.2*

ISC 07 18:19:09.7±1.3**,17°.38N**±0°.03×**121°.08E**±0°.04**,h5**^{km}±9^{km}**, n19,σ2^{s}.24**/30**,mb3.2**/5**,11C-3D,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAMP	**Sagada Mountai**	**0.34**	**209**	⇑*i*P	**Pg**	**18 19 16.0**	**-0.4**
SAMP				*e*S	**Sg**	**18 19 20.3**	**-0.6**
ABRA	**Dolores**	**0.44**	**307**	⇑*e*P	**Pb**	**18 19 18.7**	**-1.2**
ABRA				*e*S	**Sb**	**18 19 25.2**	**-1.6**
CVP	**Callao Caves**	**0.78**	**66**	⇑*i*P	**Pb**	**18 19 24.7**	**-1.1**
CVP				*i* S	**Sg**	**18 19 36.6**	**+1.7**
SIPP	**Brgy, Tapao**	**0.80**	**312**	⇓*e*P	**Pn**	**18 19 25.8**	**-1.8**
SIPP				*e*S	**Sn**	**18 19 41.3**	**+1.5**
CAUP	**Cauayan**	**0.84**	**121**	⇓*e*P	**Pn**	**18 19 27.7**	**-0.4**
CAUP				*e*S	**Sn**	**18 19 40.8**	**0.0**
SGCP	**Gonzaga**	**1.26**	**47**	⇓*i*P	**Pn**	**18 19 32.3**	**-1.6**
SGCP				*e*S	**Sn**	**18 19 50.1**	**-1.2**
BALP	**Baler**	**1.70**	**164**	⇑*e*P	**Pn**	**18 19 39.5**	**-0.6**
BALP				*e*S	**Sn**	**18 20 01.4**	**-0.7**
PCPH	**Palayan**	**1.81**	**179**	⇑*e*P	**Pn**	**18 19 41.6**	**+0.1**
PCPH				*e*S	**Sg**	**18 20 14.9**	**+7.0**
CICP	**Calayan Island**	**1.91**	**12**	⇑*e*P	Pn	18 19 36.6	-6.3
QVP	**Quezon City--P**	**2.75**	**181**	⇑*e*P	**Pn**	**18 19 53.3**	**-1.1**
QVP				*e*S	**Sn**	**18 20 27.6**	**-0.4**
MACP	**Maragondon, Ca**	**3.12**	**186**	⇑*e*P	**Pb**	**18 20 03.5**	**-2.2**
MACP				*e*S	**Sb**	**18 20 43.6**	**-0.5**
BBP	**Basco**	**3.16**	**15**	⇑*e*P	**Pn**	**18 19 59.8**	**-0.2**
BBP				*e*S	**Sn**	**18 20 38.4**	**+0.3**
LQP	**Lukban**	**3.28**	**172**	⇑*e*P	Pn	18 19 48.4	-14
LQP				*e*S	**Sg**	**18 20 53.5**	**-1.8**
JCNP	**Jose Panganiba**	**3.45**	**153**	⇑*e*P	**Pn**	**18 20 05.2**	**+1.1**
JCNP				*e*S	**Sn**	**18 20 46.5**	**+1.2**
CMAR	**Chiang Mai Arr**	**21.09**	**276**	P	**P**	**18 23 59.5**	**+4.4**
	0.3nm,0.3s,baz=93,slow=8.2,SNR=5.8						
	0.3nm,0.3s						
SONM	**Songino Array**	**32.67**	**342**	P	**P**	**18 25 45.5**	**+2.6**
	0.2nm,0.6s,baz=170,slow=8.8,SNR=2.0						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**39.31**	**160**	P	**P**	**18 26 36.1**	**-3.8**
	0.4nm,0.8s,baz=341,slow=9.2,SNR=2.4						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**42.68**	**163**	P	**P**	**18 27 04.8**	**-2.9**
	0.2nm,0.7s,baz=340,slow=7.3,SNR=6.3						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**43.35**	**321**	P	**P**	**18 27 14.3**	**+1.4**
	0.6nm,0.9s,baz=124,slow=8.1,SNR=6.6						
	0.6nm,0.9s						

IDC ***07*** *18:46:24.8±1.6, 2°.29S×115°.36E, h0^{km}, mb3.3/6, mbtmp3.4/7, ML3.2/1, MS3.3/5, Error ellipse: s-maj=96.0km s-min=17.9km az=51.0*
DJA ***07*** *18:46:30.8±0.3, 2°S±3°×11°6E±°, h10^{km}, M4.6/12, mb4.5/8, mB4.9/2, MLv4.7/12, Mw(mB)4.2/2*

ISC 07 18:46:27.8±1.0**,2°.09S**±0°.07×**115°.92E**±0°.07**,h10**^{km}**,n21, σ2^{s}.44**/16**,mb3.4**/6**,MS3.2**/3**,Borneo**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKB	**Balikpapan**	**1.28**	**50**	P	**Pn**	**18 46 54.2**	**+2.5**
BBKI	**Banjar Baru**	**1.74**	**218**	P	**Pn**	**18 46 59.8**	**+1.8**
SPSI	**Sidrap Palu**	**4.27**	**116**	P	**Pn**	**18 47 35.4**	**+2.5**
PBKI	**Pangkalan Bun**	**4.29**	**262**	P	Pn	18 47 38.8	+5.6
MPSI	**Mapaga**	**4.65**	**59**	P	**Pn**	**18 47 38.9**	**+0.7**
KAPI	**Kappang**	**4.80**	**127**	Pn	**Pn**	**18 47 43.7**	**+3.5**
	0.9nm,0.3s,baz=234,slow=16,SNR=1.6						
KAPI				Sn	**Sb**	**18 48 46.0**	**-4.0**
	0.3nm,0.3s,baz=82,slow=23,SNR=1.5						
KAPI				LR	LR	18 49 22.1	
	comp=Z,182nm,21.8s,baz=321,slow=34						
	11nm,0.9s						
BKSI	**Bulukumba**	**5.28**	**128**	P	**Pn**	**18 47 47.1**	**+0.3**
	83nm,1.1s,691nm0.4nm						
BSSI	**Bau Bau, Buton**	**6.08**	**132**	P	**Pn**	**18 48 00.5**	**+2.7**
	77nm,1.4s,1µm0.6nm						
MRSI	**Marisa**	**6.54**	**67**	P	**Pn**	**18 48 06.0**	**+1.9**
	54nm,1.0s,0.2nm						
DNP	**Denpasar**	**6.58**	**186**	P	**Pn**	**18 48 06.4**	**+1.7**
	195nm,0.8s,1.9nm						
NGJI	**Ngawi**	**6.87**	**220**	P	**Pn**	**18 48 11.4**	**+2.7**
LUWI	**Luwuk**	**6.93**	**81**	P	**Pn**	**18 48 11.7**	**+2.2**
	38nm,1.1s,0.5nm						
DAV	**Davao City (W)**	**13.26**	**47**	LR	LR	18 55 59.1	
	comp=Z,148nm,19.3s,baz=356,slow=42						
WRA	**Warramunga Arr**	**25.28**	**136**	P	**P**	**18 51 55.3**	**+0.8**
	0.8nm,0.8s,baz=314,slow=10,SNR=7.5						
	0.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**26.38**	**321**	P	**P**	**18 52 02.2**	**-2.4**
	0.5nm,0.4s,baz=144,slow=6.3,SNR=2.9						
CMAR				LR	LR	19 03 47.8	
	comp=Z,54nm,18.3s,baz=165,slow=40						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**27.63**	**142**	P	**P**	**18 52 15.8**	**-0.1**
	0.2nm,0.7s,baz=315,slow=9.1,SNR=1.9						
	0.2nm,0.7s						
GUMO	**Guam**	**32.66**	**61**	LR	LR	19 05 24.7	
	comp=Z,56nm,21.8s,baz=196,slow=34						
PALK	**Pallekele**	**36.35**	**285**	LR	LR	19 08 15.9	
	comp=Z,93nm,18.8s,baz=241,slow=37						
SONM	**Songino Array**	**50.41**	**352**	P	**P**	**18 55 24.7**	**-0.8**
	0.1nm,0.4s,baz=153,slow=9.7,SNR=2.3						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**56.95**	**333**	P	P	18 56 12.0	-1.4
	0.2nm,0.6s,baz=137,slow=5.3,SNR=2.3						
	0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**61.54**	**340**	P	P	18 56 42.8	-2.1
	0.2nm,0.3s,baz=126,slow=7.4,SNR=1.3						
	0.2nm,0.3s						

IDC 07 18:57:09.5±10.0**,10°.11S**×**161°.30E,h0**^{km}**,mb3.5**/3**, mbtmp3.5**/3**,Error ellipse: s-maj=286.7km s-min=42.7km az=117.0,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**27.77**	**246**	P	P	19 03 00.3	0.0
	0.7nm,1.0s,baz=76,slow=9.3,SNR=2.6						
	0.7nm,1.0s						
ASAR	**Alice Springs**	**29.40**	**239**	P	P	19 03 14.8	0.0
	0.2nm,0.6s,baz=66,slow=9.4,SNR=1.4						
	0.2nm,0.6s						
SONM	**Songino Array**	**75.38**	**325**	P	P	19 08 55.1	0.0
	0.7nm,0.8s,baz=138,slow=5.8,SNR=6.4						
	0.7nm,0.8s						

IDC 07 19:03:24.3±5.3**,5°.44S**×**131°.97E,h0**^{km}**,mb3.2**/1**, mbtmp3.1**/3**,ML3.3**/2**,Error ellipse: s-maj=356.2km s-min=33.3km az=74.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.60**	**171**	Pn	Pn	19 06 52.7	+0.3
	0.1nm,0.3s,baz=352,slow=13,SNR=5.6						
WRA				Sn	Sn	19 09 22.9	-12
	0.2nm,0.3s,baz=230,slow=50,SNR=2.4						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**18.22**	**174**	P	Pn	19 07 38.6	-0.3
	0.1nm,0.3s,baz=349,slow=9.0,SNR=9.8						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**68.03**	**326**	P	P	19 14 25.6	0.0
	0.1nm,0.4s,baz=130,slow=7.8,SNR=2.5						
	0.1nm,0.4s						

IDC 07 19:04:04.4±2.5**,22°.12N**×**45°.29W,h0**^{km}**,mb3.4**/4**, mbtmp3.4**/4**,MS3.3**/10**,Error ellipse: s-maj=107.0km s-min=30.7km az=21.0,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SADO	**Sadowa**	**35.78**	**317**	LR	LR	19 23 25.2	
	comp=Z,30nm,19.0s,baz=126,slow=32						
TKL	**Tuckaleechee C**	**36.07**	**301**	LR	LR	19 22 43.8	
	comp=Z,35nm,20.2s,baz=148,slow=31						
DBIC	**Dimbokro**	**41.90**	**105**	LR	LR	19 26 29.1	
	comp=Z,28nm,21.9s,baz=210,slow=32						
H10N3	**ASCENSION HYDR**	**42.39**	**131**	T	T	19 57 11.6	
	baz=316,slow=75,SNR=100						
H10N2	**ASCENSION HYDR**	**42.39**	**131**	T	T	19 57 19.8	
	baz=316,slow=75,SNR=90						
H10N1	**ASCENSION HYDR**	**42.41**	**131**	T	T	19 57 21.1	
	baz=316,slow=75,SNR=66						
H10S3	**ASCENSION HYDR**	**43.07**	**133**	T	T	19 58 02.9	
	baz=314,slow=74,SNR=44						
H10S2	**ASCENSION HYDR**	**43.09**	**133**	T	T	19 58 15.1	
	baz=266,slow=74,SNR=42						
TORD	**Torodi Ar. Bea**	**45.50**	**93**	P	P	19 12 25.8	-0.1
	1.4nm,0.9s,baz=291,slow=6.1,SNR=5.8						
TORD				LR	LR	19 28 22.3	
	comp=Z,62nm,20.2s,baz=191,slow=32						
	1.4nm,0.9s						
ULM	**Lac du Bonnet**	**48.32**	**318**	LR	LR	19 31 07.7	
	comp=Z,44nm,18.6s,baz=314,slow=34						
TXAR	**Lajitas Array**	**52.63**	**291**	P	P	19 13 20.6	0.0
	0.1nm,0.6s,baz=95,slow=11,SNR=2.1						
TXAR				LR	LR	19 34 28.2	
	comp=Z,25nm,20.9s,baz=154,slow=35						
	0.1nm,0.6s						
ANMO	**Albuquerque**	**54.50**	**298**	LR	LR	19 36 30.7	
	comp=Z,39nm,18.9s,baz=160,slow=36						
PDAR	**Pinedale Array**	**56.66**	**307**	LR	LR	19 37 25.5	
	comp=Z,26nm,18.1s,baz=312,slow=35						
YKA	**Yellowknife Ar**	**61.08**	**330**	P	P	19 14 19.8	-0.1
	0.4nm,0.8s,baz=101,slow=7.6,SNR=6.8						
	0.4nm,0.8s						
NEW	**Newport**	**61.86**	**314**	LR	LR	19 38 39.5	
	comp=Z,40nm,21.6s,baz=131,slow=34						
NVAR	**Mina Array Bea**	**63.61**	**303**	LR	LR	19 41 44.3	
	comp=Z,31nm,19.2s,baz=216,slow=36						
ILAR	**Eielson Array**	**75.03**	**334**	P	P	19 15 47.6	0.0
	0.3nm,0.7s,baz=61,slow=4.4,SNR=3.3						
	0.3nm,0.7s						

IDC 07 19:16:16.1±2.0**,1°.39N**×**125°.52E,h0**^{km}**,mb3.3**/3**, mbtmp3.4**/3**,Error ellipse: s-maj=191.0km s-min=25.6km az=64.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.90**	**158**	P	P	19 21 21.5	-0.2
	0.5nm,0.3s,baz=336,slow=11,SNR=9.7						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**26.20**	**162**	P	P	19 21 53.0	+0.1
	0.1nm,0.3s,baz=349,slow=7.4,SNR=5.6						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**58.80**	**327**	P	P	19 26 16.4	0.0
	0.3nm,0.5s,baz=120,slow=7.5,SNR=5.8						
	0.3nm,0.5s						

IDC 07 19:18:37.7±3.6**,30°.94N**×**140°.72E,h0**^{km}**,mb3.5**/3**, mbtmp3.4**/4**,ML2.4**/1**,Error ellipse: s-maj=146.4km s-min=25.7km az=73.0,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**5.97**	**340**	Pn	Pn	19 20 06.7	-0.7
	0.1nm,0.3s,baz=159,slow=11,SNR=6.1						
	1.9nm,0.7s						
MKAR	**Makanchi Array**	**47.10**	**307**	P	P	19 27 11.4	0.0
	0.3nm,0.5s,baz=94,slow=6.1,SNR=5.7						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**50.96**	**188**	P	P	19 27 41.1	0.0
	0.4nm,0.6s,baz=4.7,slow=7.7,SNR=6.5						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**54.68**	**188**	P	P	19 28 08.4	-0.2
	0.6nm,1.1s,baz=16,slow=12,SNR=6.9						
	0.6nm,1.1s						

RSNC 07 19:40:26.3±0.9**,6°.80N**×**73°.17W,h134**^{km}±9^{km}**,ML1.5,1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRRC	**Barranca, Sant**	**0.62**	**300**	*e*P	Pn	19 40 46.3	-0.3
BRRC				*e*S	Sn	19 41 01.1	-0.7
BRRC				*i*		19 41 03.2	
	comp=Z,10nm,0.3s						
PAMC	**Pamplona, Colo**	**0.71**	**41**	⇓*e*P	Pn	19 40 47.4	-0.4
PAMC				*e*S	Sn	19 41 04.0	0.0
PAMC				*i*		19 41 06.1	
	comp=Z,3.5nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.30**	**259**	*e*P	Pn	19 40 51.3	-1.2
PTBC				*e*S	Sn	19 41 11.9	-0.6
PTBC				*i*		19 41 18.7	
	comp=Z,2.7nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.81**	**293**	*e*S	Sn	19 41 22.6	-0.1
NORC	**Norcasia**	**2.08**	**234**	*e*S	Sn	19 41 28.7	+0.1

MOS ***07*** *19:51:50.7±0.9, 39°.86N×143°.17E, h15^{km}, mb5.0/56, MS4.3/5, Error ellipse: s-maj=6.2km s-min=3.8km az=107.0*
JMA ***07*** *19:51:51.6±0.2, 40°.0N±0°.5×143°.2E±0°.9, h16^{km}±2^{km}, MD4.6/38, MW4.7/38, FAR E OFF SANRIKU*
JMA Felt II J1 at FAR E OFF SANRIKU .
NIED ***07*** *19:51:51.6, 39°.95N×143°.23E, h16^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$3.94; M$_{\theta\theta}$0.80; M$_{\phi\phi}$-4.74; M$_{r\theta}$3.54; M$_{\theta\phi}$-2.08; M$_{\phi r}$6.19; Fault plane solution: M$_0$8.56000×10^{15} NP1:ϕ_s29.00000°, δ74.00000°,λ98.00000°. NP2:ϕ_s182.00000°,δ18.00000°,*

λ64.00000°.

*BJI **07** 19:51:53.2±0.0, 39°.79N×142°.95E, h27^{km}, mb4.8/70, mB4.9/42, Ms4.4/64, Ms7 4.2/62*

*BGR **07** 19:51:54.5, 39°.63N×143°.70E, h33^{km}, mb4.8, Ms4.2*

*NEIC **07** 19:51:54.5±1.4, 39°.85N±0°.06×143°.1E±0°.1, h27^{km}±5^{km}, mb4.7/111, Error ellipse: s-maj=12.6km s-min=6.7km az=116.0*

*IDC **07** 19:51:56.0±2.7, 39°.89N×143°.15E, h36^{km}±21^{km}, mb4.2/28, mbtmp4.4/34, ML3.8/6, MS4.0/56, Error ellipse: s-maj=15.5km s-min=11.1km az=109.0*

ISC 07 19:51:54.0±0.5, **39°.84N**±0°.04×**143°.18E**±0°.04, **h27**^{km}±2^{km}, **h27^{km}:pP-P, n506,** σ1^{s}48/469, **mb4.8**/149, **MS4.2**/77, **37C-33D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.01	276	⇓P	Pn	19 52 11.2	-1.2
JTH				⇓*e*S	Sn	19 52 25.3	-0.5
JTH	Tanohata	1.01	276	A	A	19 52 11.2	
	comp=E,16nm,0.7s,comp=E,10.0nm,1.0s						
MIYJ	Miyakonagasawa	1.08	256	⇓P	Pn	19 52 12.8	-0.5
MIYJ				⇓*e*S	Sb	19 52 28.1	+0.4
MIYJ	Miyakonagasawa	1.08	256	A	A	19 52 12.8	
	comp=E,13nm,1.0s,comp=E,20nm,3.0s						
JKEN	Kujiedanarisaw	1.18	288	⇓P	Pn	19 52 13.2	-1.5
JKEN				⇓*e*S	Sn	19 52 27.9	-2.0
JKEN	Kujiedanarisaw	1.18	288	A	A	19 52 13.2	
	comp=E,24nm,1.1s,comp=E,18nm,0.7s						
JANG	Nango	1.38	293	⇓*i*P	Pn	19 52 16.2	-1.2
JANG	Nango	1.38	293	A	A	19 52 16.2	
	comp=E,8.0nm,1.3s,comp=E,5.0nm,2.9s						
OFUJ	Ofunato	1.39	237	A	A	19 52 18.0	
	comp=E,9.0nm,1.2s,comp=E,16nm,0.6s						
JKZ	Kuzumaki	1.43	276	A	A	19 52 17.6	
	comp=E,16nm,0.6s,comp=E,13nm,0.4s						
JOM	Ohasama	1.50	256	⇓*i*P	Pn	19 52 19.6	+0.6
JOM				⇓S	Sb	19 52 40.3	+0.5
JOM	Ohasama	1.50	256	A	A	19 52 19.6	
	comp=E,24nm,0.6s,comp=E,24nm,1.4s						
JKMT	Kesennumamotoy	1.68	233	A	A	19 52 22.4	
	comp=E,7.0nm,2.8s,comp=E,8.0nm,1.9s						
JSZI	Iwateshizukuis	1.71	267	A	A	19 52 22.8	
	comp=E,31nm,1.3s,comp=E,32nm,1.5s						
JMK	Ichinoseki	1.76	240	*i* P	Pn	19 52 23.5	+0.9
JMK				*e*S	Sb	19 52 46.9	-0.2
JMK	Ichinoseki	1.76	240	A	A	19 52 23.5	
	comp=E,7.0nm,1.6s,comp=E,8.0nm,2.0s						
JARK	Aomorirokkasho	1.81	311	A	A	19 52 22.4	
	comp=E,10.0nm,1.5s,comp=E,13nm,0.7s						
JTM	Tenmabayashi	1.87	301	Pn	Pn	19 52 24.1	0.0
JTM	Tenmabayashi	1.87	301	⇓*i*P	Pn	19 52 24.3	+0.2
JTM				⇓S	Sn	19 52 47.2	+0.4
JTM	Tenmabayashi	1.87	301	A	A	19 52 24.3	
	comp=E,10.0nm,2.3s,comp=E,8.0nm,1.1s						
JAH	Hinai	1.98	281	⇓*i*P	Pn	19 52 26.3	+0.7
JAH				⇓*e*S	Sb	19 52 51.9	-1.7
JAH	Hinai	1.98	281	A	A	19 52 26.3	
	comp=E,16nm,0.6s,comp=E,12nm,0.6s						
JIO	Ouri	1.98	226	P	Pn	19 52 26.0	+0.3
JIO				*e*S	Sb	19 52 52.5	-1.2
JAHD	Aomorihigashid	2.00	316	A	A	19 52 24.9	
	comp=E,28nm,1.1s,comp=E,21nm,2.3s						
JRG	Rokugo	2.01	258	P	Pn	19 52 27.3	+1.1
JRG				*e*S	Sb	19 52 54.4	-0.2
JRG	Rokugo	2.01	258	A	A	19 52 27.3	
	comp=E,24nm,0.9s,comp=E,28nm,2.6s						
JOFO	Osakifurukawao	2.15	236	A	A	19 52 29.1	
	comp=E,37nm,3.4s,comp=E,40nm,2.6s						
ERM	Erimo	2.17	360	Pn	Pn	19 52 28.6	+0.3
ERM	Erimo	2.17	360	P	Pn	19 52 28.6	+0.3
JEM	Erimo	2.17	360	P	Pn	19 52 28.6	+0.3
JOT	Ohata	2.23	314	*i* P	Pn	19 52 29.4	+0.2
JOT	Ohata	2.23	314	A	A	19 52 29.4	
	comp=E,7.0nm,0.8s,comp=E,9.0nm,2.1s						
JHHS	Hirosakihyakuz	2.30	291	A	A	19 52 30.1	
	comp=E,17nm,0.7s,comp=E,23nm,3.1s						
JYW	Yuwa	2.31	263	A	A	19 52 30.9	
	comp=E,27nm,1.3s,comp=E,30nm,2.7s						
JNTW	Noshirotokiwa	2.35	281	A	A	19 52 31.1	
	comp=E,36nm,3.6s,comp=E,29nm,2.8s						
JYK	Kaneyama	2.37	248	*i* P	Pn	19 52 32.5	+1.4
JYK	Kaneyama	2.37	248	A	A	19 52 32.5	
	comp=E,8.0nm,1.3s,comp=E,9.0nm,1.9s						
JSI2	Shiura 2	2.43	301	A	A	19 52 31.7	
	comp=E,14nm,0.9s,comp=E,12nm,1.2s						
JOU	Okura	2.45	234	A	A	19 52 33.4	
	comp=E,9.0nm,0.7s,comp=E,10.0nm,1.7s						
JNBK	Urakawa-nobuka	2.46	353	P	Pn	19 52 32.3	+0.1
JNBK				*e*S	Sn	19 53 01.0	-0.3
JNBK	Urakawa-nobuka	2.46	353	A	A	19 52 32.3	
	comp=E,9.0nm,2.3s,comp=E,6.0nm,2.0s						
JIW	Iwasaki	2.54	288	A	A	19 52 33.6	
	comp=E,5.0nm,2.9s,comp=E,5.0nm,1.0s						
JKB	Kayabe	2.61	322	A	A	19 52 33.6	
	comp=E,7.0nm,0.6s,comp=E,5.0nm,3.2s						
JSHD	Hidakashinhida	2.62	348	A	A	19 52 33.2	
	comp=E,9.0nm,3.2s,comp=E,11nm,4.8s						
JYYZ	Yamagatayuza	2.65	253	A	A	19 52 35.9	
	comp=E,26nm,2.4s,comp=E,28nm,1.8s						
JSR	Shiriuchi	2.69	310	A	A	19 52 35.1	
	comp=E,4.0nm,3.6s,comp=E,5.0nm,1.9s						
JMM	Marumori	2.71	224		Pn	19 52 35.5	-0.3
JCH	Churui	2.77	3	A	A	19 52 35.2	
	comp=E,4.0nm,5.0s,comp=E,4.0nm,2.5s						
JYS	Shirataka	2.91	237	A	A	19 52 40.0	
	comp=E,12nm,0.8s,comp=E,15nm,1.4s						
JIAM	Iburiatsuma	2.93	342	A	A	19 52 37.9	
	comp=E,17nm,0.7s,comp=E,19nm,0.6s						
JOMM	Oshimamatsumae	2.94	306	A	A	19 52 38.7	
	comp=E,2.0nm,1.7s,comp=E,3.0nm,3.4s						
JYA	Atsumi	2.96	246	A	A	19 52 40.6	
	comp=E,20nm,1.8s,comp=E,14nm,1.9s						
JBT2	Biratori 2	3.00	348	A	A	19 52 38.6	
	comp=E,4.0nm,5.0s,comp=E,4.0nm,4.8s						
JYAR	Yonezawaarcadi	3.05	232	A	A	19 52 42.1	
	comp=E,11nm,1.0s,comp=E,10.0nm,0.9s						
JFK	Kawauchi	3.06	217	A	A	19 52 42.4	
	comp=E,3.0nm,4.0s,comp=E,2.0nm,3.8s						
JNB	Noboribetsu	3.08	329	A	A	19 52 40.2	
	comp=E,4.0nm,3.6s,comp=E,3.0nm,6.3s						
JYM2	Yakumo 2	3.11	318	A	A	19 52 40.9	
	comp=E,3.0nm,2.0s,comp=E,5.0nm,1.6s						
JOG3	Oga3	3.15	273	A	A	19 52 34.7	
	comp=E,14nm,3.5s,comp=E,10.0nm,3.2s						
JEW	Eniwo	3.26	337	A	A	19 52 42.6	
	comp=E,9.0nm,0.7s,comp=E,8.0nm,1.3s						
JAK	Akkeshi	3.35	19	A	A	19 52 43.4	
	comp=E,4.0nm,1.4s,comp=E,3.0nm,4.8s						
JAR	Ashorobuto	3.48	7	A	A	19 52 45.2	
	comp=E,4.0nm,0.8s,comp=E,4.0nm,1.3s						
JNS	Sasagawa	3.63	237	A	A	19 52 50.2	
	comp=E,3.0nm,5.0s,comp=E,3.0nm,1.6s						
JAB	Ashibetsu	3.73	349	A	A	19 52 49.0	
	comp=E,4.0nm,2.3s,comp=E,7.0nm,4.0s						
JSB	Shiboa	3.84	223	A	A	19 52 53.4	
	comp=E,6.0nm,2.0s,comp=E,4.0nm,2.3s						
NMR	Nemuro--Hokkai	4.01	28	⇓*i*P	Pn	19 52 52.1	-1.4
NMR				*e*S	Sn	19 53 34.2	-5.4
JHR	Hokuryu	4.04	345	A	A	19 52 53.5	
	comp=E,5.0nm,3.1s,comp=E,4.0nm,1.7s						
JNSB	Nemuroshibetsu	4.16	19	A	A	19 52 54.9	
	comp=E,5.0nm,1.8s,comp=E,7.0nm,3.1s						
JSD	Sado	4.24	246	Pn	Pn	19 52 54.7	-1.9
JKA	Kamikawa-asahi	4.29	354	Pn	Pn	19 52 57.4	0.0
ASAJ	Asahikawa	4.29	354	Pn	Pn	19 52 58.1	+0.7
	5.2nm,0.3s,baz=206,slow=14,SNR=45						
ASAJ				Sn	Sn	19 53 45.6	-1.0
	15nm,0.3s,baz=241,slow=17,SNR=4.1						
	46nm,0.6s						
RUSJ	Misakicho	4.53	19	⇑*i*P	Pn	19 53 00.5	-0.2
RUSJ				*e*S	Sn	19 53 50.8	-1.6
YUK	Yuzh-Kuril'sk	4.64	25	*e*P	Pn	19 53 00.8	-1.4
YUK				*i* S	Sn	19 53 49.6	-5.6
YUK				pmax	pmax		
	comp=E,120nm,0.3s						
YUK				pmax	pmax		
	comp=Z,309nm,0.3s						
YUK				pmax	pmax		
	comp=N,125nm,0.2s						
YUK				smax	smax		
	comp=N,2µm,0.4s						
YUK				smax	smax		
	comp=E,1µm,0.2s						
SHO	Shikotan	4.86	33	*c* *i*P	Pn	19 53 03.4	-1.8
SHO				*e*S	Sn	19 53 54.2	-6.4
SHO				pmax	pmax		
	comp=Z,65nm,0.4s						
SHO				pmax	pmax		
	comp=N,43nm,0.2s						
SHO				pmax	pmax		
	comp=E,21nm,0.2s						
SHO				smax	smax		
	comp=N,265nm,0.2s						
SHO				smax	smax		
	comp=E,600nm,0.2s						
MJAR	Matsushiro Arr	5.12	231	Pn	Pn	19 53 11.1	+2.3
	comp=E,1.1nm,0.3s,baz=45,slow=11,SNR=58						
MJAR				LR	LR	19 55 24.3	
	comp=E,917nm,19.1s,baz=106,slow=41						
	comp=E,21nm,0.5s						
MJB9	Matsu-Tunnel	5.12	232	Pn	Pn	19 53 11.3	+2.5
MAJO	Matsushiro	5.12	231	Pn	Pn	19 53 10.1	+1.3
MAJO	Matsushiro	5.12	231	P	Pn	19 53 10.1	+1.3
JGF	Kuroka	6.26	229	Pn	Pn	19 53 26.3	+1.8
KUR	Kuril'sk	6.40	31	*e*P	Pn	19 53 26.0	-0.4
KUR				*e*S	Sn	19 54 33.5	-5.1
JSG	Sagara	6.51	219	Pn	Pn	19 53 29.9	+1.9
INU	Inuyama	6.63	229	Pn	Pn	19 53 30.8	+1.1
TEY	Ternei	7.11	319	⇑*e*P	Pn	19 53 38.7	+2.6
TEY				pmax	pmax		
	comp=N,40nm,0.7s						
TEY				pmax	pmax		
	comp=E,40nm,0.7s						
TEY				pmax	pmax		
	comp=Z,40nm,0.7s						
YSS	Yuzh-Sakhalins	7.11	358	Pn	Pn	19 53 36.3	+0.2
YSS	Yuzh-Sakhalins	7.11	358	*e*P	Pn	19 53 36.6	+0.4
YSS				*e*S	Sn	19 54 53.9	-2.1
YSS				pmax	pmax		
	comp=Z,100nm,2.9s						
YSS				pmax	pmax		
	comp=Z,50nm,1.0s						
YSS				MLR	MLR		
	comp=Z,1µm,13.0s						
JHJ2	Mitsune	7.24	203	Pn	Pn	19 53 38.2	+0.2
JHJ	Hachijo jima 2	7.25	203	Pn	Pn	19 53 38.9	+0.9
	comp=Z,14nm,0.3s,baz=118,slow=23,SNR=5.9						
JHJ				Sn	Sn	19 54 55.0	-4.4
	comp=Z,20nm,0.3s,baz=50,slow=22,SNR=2.0						
JHJ				LR	LR	19 57 04.9	
	comp=Z,415nm,18.1s,baz=106,slow=42						
	comp=Z,224nm,1.0s						
JHS	Saijyo	9.35	242	Pn	Pn	19 54 08.1	+1.2
USA0B	Ussuriysk Arra	9.39	301		Pn	19 54 09.8	+2.4
USA0B	Ussuriysk Arra	9.39	301	*ce*P	Pn	19 54 09.9	+2.4
USRK	Ussuriysk Ar.	9.39	301	Pn	Pn	19 54 10.2	+2.7
	comp=Z,3.1nm,0.3s,baz=90,slow=14,SNR=40						
USRK				LR	LR	19 57 37.4	
	comp=Z,1µm,19.0s,baz=99,slow=36						
	comp=Z,26nm,0.6s						
USRK	Ussuriysk Ar.	9.39	301	Pn	Pn	19 54 07.6	+0.2
JMN	Monobe	9.63	234	Pn	Pn	19 54 12.1	+1.3
TYV	Tymovskoe	11.03	358	*e*P	Pn	19 54 29.2	-0.6
TYV				*e*S	Sn	19 56 31.3	-0.8
TYV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TYV				pmax	pmax		
	comp=Z,100nm,2.8s						
TYV				smax	smax		
	comp=N,200nm,4.8s						
MDJ	Mudanjiang	11.14	300	P	Pn	19 54 33.6	+2.2
MDJ				pP		19 54 38.0	
MDJ				sP		19 54 44.8	
MDJ				S	Sn	19 56 38.0	+3.1
MDJ				sS		19 56 44.6	
MDJ				SS	SnSn	19 56 47.7	+1.0
MDJ				PcS	PcS	20 04 06.1	+5.6
MDJ				ScS	ScS	20 07 37.0	+4.4
MDJ				pmax	pmax		
	comp=N,15nm,1.0s						
MDJ				pmax	pmax		
	comp=N,220nm,5.1s						
MDJ				LR	LR		
	comp=N,610nm,15.7s						
MDJ				LR	LR		
	comp=N,1µm,16.3s						
MDJ				LR	LR		
	comp=N,2µm,15.7s						
MDJ	Mudanjiang	11.14	300	Pn	Pn	19 54 31.6	+0.2
GRNR	Gornyy	11.91	339	⇓*i*P	Pn	19 54 42.8	+1.0
GRNR				*e*S	Sn	19 56 56.2	+2.5
GRNR				pmax	pmax		
	comp=E,5.0nm,0.6s						
GRNR				pmax	pmax		
	comp=N,8.0nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GRNR				smax	smax		
	comp=N,2.0nm,0.6s						
GRNR				MLR	MLR		
	comp=E,310nm,16.0s						
GRNR				MLR	MLR		
	comp=N,230nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,350nm,16.0s						
JNU	Nakatsue	11.95	240	Pn	Pn	19 54 44.5	+1.9
	comp=Z,0.3nm,0.3s,baz=63,slow=9.5,SNR=2.0						
JNU				LR	LR	19 59 39.3	
	comp=Z,836nm,18.5s,baz=46,slow=39						
	comp=Z,7.5nm,0.8s						
JNU	Nakatsue	11.95	240	Pn	Pn	19 54 41.1	-1.5
KSRS	Korea Array	12.16	264	Pn	Pn	19 54 50.1	+4.7
	comp=Z,0.7nm,0.3s,baz=80,slow=13,SNR=12						
KSRS				LR	LR	19 59 11.1	
	comp=Z,863nm,18.6s,baz=70,slow=36						
KS19	Wonju Array Si	12.19	264	Pn	Pn	19 54 42.4	-3.5
KSAR	Wonju Array Be	12.20	264	Pn	Pn	19 54 45.1	-0.7
KSAR	Wonju Array Be	12.20	264	P	Pn	19 54 45.2	-0.7
KLR	Kul'dur	12.42	323	Pn	Pn	19 54 49.3	+0.5
	comp=Z,0.2nm,0.3s,baz=141,slow=12,SNR=12						
KLR				LR	LR	19 59 47.3	
	comp=Z,733nm,19.7s,baz=138,slow=38						
	comp=Z,3.7nm,0.8s						
KLR	Kul'dur	12.42	323	*de*P	Pn	19 54 49.2	+0.4
KLR				pmax	pmax		
	comp=Z,10.0nm,1.7s						
JCJ	Chichijima	12.74	184	Pn	Pn	19 54 51.4	-2.0
BNX	BinXian	12.99	302	⇓P	Pn	19 54 57.7	+1.1
BNX				pmax	pmax		
	comp=Z,25nm,0.9s						
BNX				pmax	pmax		
	comp=Z,170nm,5.4s						
CN2	Changchun	13.80	292	P	Pn	19 55 05.5	-2.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				LR	LR		
	comp=Z,500nm,15.0s						
CN2				LR	LR		
	comp=Z,600nm,15.0s						
CN2				LR	LR		
	comp=Z,800nm,17.0s						
HEH	HeiHe	15.21	318	*e*P	Pn	19 55 25.4	-1.4
HEH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HEH				LR	LR		
	comp=Z,320nm,13.3s						
HEH				LR	LR		
	comp=Z,740nm,15.3s						
HEH				LR	LR		
	comp=Z,1µm,16.0s						
PEA0B	Petropavlovsk-	16.57	32	Pn	Pn	19 55 44.8	+0.6
PEA0B	Petropavlovsk-	16.57	32	P	Pn	19 55 44.8	+0.6
PEA0B				pmax	pmax		
	comp=Z,57nm,1.5s						
PETK	Petropavlovsk-	16.57	32	LR	LR	20 01 39.4	
	comp=Z,174nm,21.6s,baz=216,slow=35						
PETK	Petropavlovsk-	16.57	32	Pn	Pn	19 55 44.9	+0.7
PETK	Petropavlovsk-	16.57	32	P	Pn	19 55 44.9	+0.7
ZEA	Zeya	17.61	327	*e*P	Pn	19 55 54.9	-2.2
ZEA				pmax	pmax		
	comp=N,30nm,0.8s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,400nm,18.0s						
JOW	Kunigami	17.95	228	P	Pn	19 55 59.4	-2.2
HIA	Hailar	19.11	307	P	P	19 56 12.4	-2.2
HIA	Hailar	19.11	307	P	P	19 56 12.4	-2.2
HIA				pmax	pmax		
	comp=Z,16nm,0.8s						
MA2	Magadan	20.33	11	P	P	19 56 28.7	+1.0
	comp=Z,26nm,0.8s,baz=186,slow=8.1,SNR=11						
MA2				LR	LR	20 05 25.6	
	comp=Z,127nm,19.6s,baz=147,slow=40						
	comp=Z,26nm,0.8s						
MA2	Magadan	20.33	11		P	19 56 27.9	+0.2
MA2				IAmb	IAmb	19 56 30.4	
	comp=Z,27nm,0.9s						
MA2	Magadan	20.33	11	*ce*P	P	19 56 28.3	+0.6
MA2				pmax	pmax		
	comp=Z,27nm,0.9s						
XLT	XiLinHaoTe	20.54	290	*e*P	P	19 56 27.6	-2.7
XLT				pP	Pn	19 56 35.0	+2.4
XLT				sP	sP	19 56 41.5	+0.8
XLT				PP	PnPn	19 56 49.7	+1.7
XLT				S	S	20 00 13.6	-5.1
XLT				sS	sS	20 00 30.2	+0.3
XLT				pmax	pmax		
	comp=Z,34nm,1.2s						
XLT				pmax	pmax		
	comp=Z,83nm,5.5s						
XLT				LR	LR		
	comp=Z,440nm,16.6s						
XLT				LR	LR		
	comp=Z,420nm,17.0s						
BJI	Beijing	20.68	279	P	P	19 56 29.9	-1.8
BJI				pP	pP	19 56 36.8	-2.0
BJI				sP	sP	19 56 40.4	-1.7
BJI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BJI				pmax	pmax		
	comp=Z,79nm,5.3s						
BJI				LR	LR		
	comp=Z,230nm,16.6s						
BJI				LR	LR		
	comp=Z,280nm,18.0s						
BJI				LR	LR		
	comp=Z,290nm,18.1s						
BJT	Baijiatuau	20.69	279	P	P	19 56 28.8	-3.0
BJT	Baijiatuau	20.69	279	P	P	19 56 28.8	-3.0
BJT				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TIA	Tai'an	20.81	268	⇑P	P	19 56 32.4	-0.8
TIA				PP	PnPn	19 56 55.5	+3.7
TIA				S	S	20 00 27.0	+3.0
TIA				pmax	pmax		
	comp=Z,26nm,0.9s						
TIA				pmax	pmax		
	comp=Z,75nm,3.5s						
TIA				LR	LR		
	comp=Z,270nm,13.7s						
TIA				LR	LR		
	comp=Z,710nm,15.1s						
TIA				LR	LR		
	comp=Z,970nm,15.1s						
NJ2	Nanjing	21.13	256	*e*P	P	19 56 35.8	-0.8
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,450nm,16.7s						
NJ2				LR	LR		
	comp=Z,340nm,14.2s						
NJ2				LR	LR		
	comp=Z,570nm,15.9s						
HNS	HongShan	22.34	273	⇑P	P	19 56 46.8	-2.8
HNS				S	S	20 00 49.6	-4.0
HNS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HNS				LR	LR		
	comp=Z,320nm,14.9s						
HNS				LR	LR		
	comp=Z,730nm,16.9s						
HNS				LR	LR		
	comp=Z,650nm,15.9s						
YAK	Yakutsk	23.69	344	P	P	19 57 01.7	-1.4
	comp=Z,45nm,0.8s,baz=347,slow=2.7,SNR=43						
YAK				LR	LR	20 07 02.0	
	comp=Z,116nm,20.2s,baz=230,slow=38						
	comp=Z,45nm,0.8s						
YAK	Yakutsk	23.69	344	P	P	19 57 00.3	-2.8
YAK	Yakutsk	23.69	344	*e*P	P	19 57 01.1	-2.0
YAK				*e**PP	pP	19 57 11.7	+1.2
YAK				*e*		19 57 29.9	
YAK				*e*		20 00 45.0	
YAK				*e*S	S	20 01 13.9	-2.2
YAK				*e*		20 08 09.1	
YAK				pmax	pmax		
	comp=Z,85nm,0.9s						
YAK				pmax	pmax		
	comp=N,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,22nm,0.8s						
YAK				smax	smax		
	comp=N,45nm,1.8s						
YAK				smax	smax		
	comp=E,38nm,1.9s						
SEY	Seymchan	23.78	10	P	P	19 57 03.9	0.0
	comp=E,30nm,0.9s,baz=193,slow=7.5,SNR=30						
	comp=E,30nm,0.9s						
SEY	Seymchan	23.78	10	⇑*e*P	P	19 57 01.2	-2.7
SEY				pmax	pmax		
	comp=Z,48nm,1.3s						
NACB	Ninganchiao	23.97	236	P	P	19 57 03.7	-2.4
NACB				IAmb	IAmb	19 57 30.3	
	comp=Z,24nm,0.8s						
HHC	Hu-ho-hao-te	24.05	283	*e*P	P	19 57 07.1	+0.2
HHC				pmax	pmax		
	comp=Z,23nm,0.7s						
HHC				pmax	pmax		
	comp=Z,74nm,5.4s						
HHC				LR	LR		
	comp=Z,380nm,13.3s						
HHC				LR	LR		
	comp=Z,1µm,15.2s						
HHC				LR	LR		
	comp=Z,2µm,15.7s						
SSLB	Suanglung	24.65	236	P	P	19 57 09.7	-2.7
SSLB				IAmb	IAmb	19 57 25.7	
	comp=Z,18nm,1.0s						
YULB	Yu-li	24.72	235	P	P	19 57 10.7	-2.3
YULB				IAmb	IAmb	19 57 31.2	
	comp=Z,49nm,1.4s						
LYN	LuoYang	24.95	268	⇑P	P	19 57 14.9	-0.1
LYN				pP	pP	19 57 24.4	+1.8
LYN				sP	sP	19 57 30.3	+4.5
LYN				pmax	pmax		
	comp=Z,16nm,1.0s						
LYN				pmax	pmax		
	comp=Z,74nm,5.0s						
LYN				LR	LR		
	comp=Z,370nm,14.3s						
LYN				LR	LR		
	comp=Z,730nm,14.7s						
LYN				LR	LR		
	comp=Z,810nm,14.6s						
TPUB	Ta-pu	25.21	236	P	P	19 57 15.6	-1.9
TPUB				IAmb	IAmb	19 57 29.1	
	comp=Z,24nm,0.8s						
WHN	Wuhan	25.23	257	⇓P	P	19 57 18.3	+0.8
WHN				pmax	pmax		
	comp=Z,96nm,0.7s						
WHN				LR	LR		
	comp=Z,1µm,17.7s						
TWG	Pinlang	25.28	234	P	P	19 57 16.9	-1.2
BOD	Bodaibo	25.99	323	*e*P	P	19 57 24.2	0.0
BOD				pmax	pmax		
	comp=Z,31nm,1.0s						
GUMO	Guam	26.20	176	LR	LR	20 06 49.2	
	comp=Z,81nm,21.5s,baz=16,slow=34						
ULN	Ulaanbaatar	27.06	299	P	P	19 57 32.8	-1.3
ULN				IAmb	IAmb	19 57 35.8	
	comp=Z,16nm,1.0s						
ULN	Ulaanbaatar	27.06	299	P	P	19 57 32.8	-1.3
ULN				pmax	pmax		
	comp=Z,16nm,1.0s						
SONM	Songino Array	27.50	299	P	P	19 57 38.7	+0.6
	comp=Z,9.6nm,0.8s,baz=92,slow=8.4,SNR=66						
SONM				LR	LR	20 09 03.1	
	comp=Z,666nm,19.1s,baz=100,slow=37						
	comp=Z,9.6nm,0.8s						
SONM	Songino Array	27.50	299	P	P	19 57 38.2	+0.1
SONM	Songino Array	27.50	299	P	P	19 57 38.2	+0.1
SONM				pmax	pmax		

	comp=Z,11nm,0.8s						
XAN	**Xi'an**	**27.87**	**269**	P	**P**	**19 57 38.1**	**-3.3**
XAN				pP	pP	19 57 48.8	-0.2
XAN				S	**S**	**20 02 17.9**	**-5.3**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,65nm,4.8s						
XAN				LR	LR		
	comp=Z,220nm,12.7s						
XAN				LR	LR		
	comp=Z,330nm,12.2s						
XAN				LR	LR		
	comp=Z,520nm,14.1s						
H11N2	**WAKE ISLAND Hy**	**28.58**	**128**	T	T	20 28 47.6	
	baz=318,slow=75,SNR=638						
H11N1	**WAKE ISLAND Hy**	**28.59**	**128**	T	T	20 28 48.3	
	baz=318,slow=75,SNR=491						
H11N3	**WAKE ISLAND Hy**	**28.60**	**128**	T	T	20 28 52.9	
	baz=318,slow=75,SNR=433						
ENH	**Enshi**	**29.04**	**261**	P	**P**	**19 57 51.2**	**-0.6**
H11S1	**WAKE ISLAND Hy**	**29.40**	**130**	T	T	20 28 55.0	
	baz=322,slow=76,SNR=78						
H11S3	**WAKE ISLAND Hy**	**29.40**	**130**	T	T	20 28 55.9	
	baz=322,slow=76,SNR=63						
H11S2	**WAKE ISLAND Hy**	**29.42**	**130**	T	T	20 29 26.3	
	baz=322,slow=76,SNR=62						
ZAK	**Zakamensk**	**29.73**	**304**	*e*P	**P**	**19 57 57.1**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BILL	**Bilibino**	**30.94**	**17**	P	**P**	**19 58 08.4**	**+0.2**
BILL				IAmb	IAmb	19 58 32.0	
	comp=Z,9.0nm,0.9s						
BILL	**Bilibino**	**30.94**	**17**	⇑*e*P	**P**	**19 58 09.2**	**+1.0**
BILL				*i* *PP	**pwP**	**19 58 17.5**	**+1.7**
BILL				*e*PPP	PPP	19 59 22.4	
BILL				*i*		20 01 03.5	
BILL				pmax	pmax		
	comp=Z,11nm,2.5s						
LZH	**Lanzhou**	**31.06**	**276**	*e*P	**P**	**19 58 11.8**	**+2.0**
LZH				pP	sP	19 58 20.6	-0.1
LZH				sP	pP	19 58 26.0	+8.5
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				LR	LR		
	comp=Z,220nm,14.6s						
LZH				LR	LR		
	comp=Z,470nm,12.4s						
LZH				LR	LR		
	comp=Z,520nm,14.9s						
MOY	**Mondy**	**31.29**	**306**	*e*P	**P**	**19 58 11.6**	**0.0**
TIXI	**Tiksi**	**32.69**	**352**	LR	LR	20 13 01.0	
	comp=Z,125nm,18.7s,baz=96,slow=39						
TIXI	**Tiksi**	**32.69**	**352**	P	**P**	**19 58 22.5**	**-1.0**
TIXI	**Tiksi**	**32.69**	**352**	⇓*e*P	**P**	**19 58 23.2**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,9.0nm,2.5s						
GYA	**Guiyang**	**33.12**	**257**	⇓P	**P**	**19 58 28.3**	**+0.4**
GYA				pP	pwP	19 58 37.9	+0.2
GYA				S	**S**	**20 03 42.8**	**-2.8**
GYA				pmax	pmax		
	comp=Z,51nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,4.0s						
GYA				LR	LR		
	comp=Z,260nm,17.4s						
GYA				LR	LR		
	comp=Z,220nm,16.3s						
GYA				LR	LR		
	comp=Z,320nm,21.5s						
CD2	**Chengdu**	**33.13**	**267**	P	**P**	**19 58 28.1**	**+0.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				LR	LR		
	comp=Z,330nm,13.2s						
CD2				LR	LR		
	comp=Z,170nm,13.5s						
CD2				LR	LR		
	comp=Z,470nm,14.9s						
GTA	**Gaotai**	**33.16**	**283**	⇓P	**P**	**19 58 29.1**	**+0.9**
GTA				pP	pP	19 58 36.8	+1.0
GTA				sP	sP	19 58 40.6	+1.7
GTA				PcP	**PcP**	**20 01 12.3**	**+1.7**
GTA				pmax	pmax		
	comp=Z,16nm,1.0s						
GTA				LR	LR		
	comp=Z,230nm,18.7s						
GTA				LR	LR		
	comp=Z,660nm,18.3s						
GTA				LR	LR		
	comp=Z,760nm,18.3s						
QIZ	**Qiongzhong**	**35.38**	**244**	P	**P**	**19 58 43.9**	**-3.5**
QIZ				S	**S**	**20 04 17.2**	**-3.1**
QIZ				LR	LR		
	comp=Z,270nm,23.1s						
QIZ				LR	LR		
	comp=Z,190nm,20.7s						
QIZ				LR	LR		
	comp=Z,250nm,17.1s						
DAV	**Davao City (W)**	**36.25**	**210**	LR	LR	20 15 12.7	
	comp=Z,84nm,18.8s,baz=343,slow=38						
KMI	**Kunming**	**36.81**	**259**	⇑P	**P**	**19 59 00.6**	**+0.8**
KMI				sP	sP	19 59 10.0	-0.5
KMI				pmax	pmax		
	comp=Z,32nm,1.1s						
KMI				pmax	pmax		
	comp=Z,95nm,3.4s						
KMI				LR	LR		
	comp=Z,350nm,15.2s						
KMI				LR	LR		
	comp=Z,250nm,14.1s						
KMI				LR	LR		
	comp=Z,390nm,16.5s						
PZH	**PanZhiHua**	**36.82**	**262**	P	**P**	**19 59 00.1**	**+0.2**
PZH				pP	**pP**	**19 59 08.2**	**+0.7**
PZH				sP	**sP**	**19 59 12.3**	**+1.8**
PZH				S	**S**	**20 04 44.2**	**+1.6**
PZH				pmax	pmax		
	comp=Z,40nm,0.9s						
PZH				pmax	pmax		
	comp=Z,120nm,6.3s						
PZH				LR	LR		
	comp=Z,170nm,13.3s						
PZH				LR	LR		
	comp=Z,240nm,12.0s						
PZH				LR	LR		
	comp=Z,310nm,13.5s						
TNA	**Tin City**	**37.73**	**31**	P	**P**	**19 59 07.8**	**+0.8**
GOMU	**GeErMu**	**37.91**	**280**	P	**P**	**19 59 10.5**	**+1.3**
GOMU				pP	pP	19 59 13.7	-3.3
GOMU				pmax	pmax		
	comp=Z,13nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,120nm,4.4s						
GOMU				LR	LR		
	comp=Z,140nm,14.5s						
GOMU				LR	LR		
	comp=Z,120nm,14.7s						
GOMU				LR	LR		
	comp=Z,140nm,15.0s						
ANM	**Nome**	**38.48**	**33**	P	**P**	**19 59 14.1**	**+0.8**
ANM	**Nome**	**38.48**	**33**	P	**P**	**19 59 14.1**	**+0.8**
ANM				pmax	pmax		
	comp=Z,8.0nm,1.2s						
DGZ	**Jazzator, Alta**	**39.94**	**303**	*c i*P	**P**	**19 59 27.1**	**+1.2**
DGZ				pmax	pmax		
	comp=Z,23nm,0.8s						
TNCH	**TengChong**	**40.06**	**262**	P	**P**	**19 59 27.7**	**+0.5**
TNCH				sP	sP	19 59 38.8	+0.7
TNCH				PP	**PP**	**20 00 57.5**	**-2.0**
TNCH				S	**S**	**20 05 33.7**	**+2.0**
TNCH				sS	sS	20 05 47.6	+3.0
TNCH				pmax	pmax		
	comp=Z,42nm,0.4s						
TNCH				pmax	pmax		
	comp=Z,130nm,4.2s						
TNCH				LR	LR		
	comp=Z,140nm,12.1s						
TNCH				LR	LR		
	comp=Z,170nm,9.3s						
TNCH				LR	LR		
	comp=Z,210nm,14.8s						
WMQ	**Urumqi**	**40.88**	**294**	⇓*i*P	**P**	**19 59 34.8**	**+1.2**
WMQ				pP	sP	19 59 44.2	-0.3
WMQ				pmax	pmax		
	comp=Z,24nm,0.9s						
WMQ				LR	LR		
	comp=Z,210nm,10.5s						
ZAA0	**Zalesovo Array**	**41.11**	**310**	P	**P**	**19 59 34.2**	**-1.1**
ZAA0				IAmb	IAmb	19 59 46.5	
	comp=Z,14nm,0.7s						
ZALV	**Zalesovo Beam**	**41.11**	**310**	P	**P**	**19 59 35.6**	**+0.4**
	comp=Z,12nm,0.6s,baz=86,slow=7.8,SNR=56						
ZALV				PcP	**PcP**	**20 01 34.9**	**+0.6**
	comp=Z,3.8nm,0.7s,baz=130,slow=2.3,SNR=4.8						
ZALV				LR	LR	20 17 25.0	
	comp=Z,316nm,18.5s,baz=74,slow=37						
	comp=Z,12nm,0.6s						
ZALV	**Zalesovo Beam**	**41.11**	**310**	P	**P**	**19 59 35.0**	**-0.2**
NRIK	**Noril'sk**	**41.33**	**334**	P	**P**	**19 59 37.1**	**+0.2**
	comp=Z,4.8nm,0.8s,baz=81,slow=5.5,SNR=8.2						
NRIK				LR	LR	20 17 56.3	
	comp=Z,344nm,19.2s,baz=116,slow=38						
	comp=Z,4.8nm,0.8s						
NRIK	**Noril'sk**	**41.33**	**334**	P	**P**	**19 59 35.9**	**-1.0**
NRIK	**Noril'sk**	**41.33**	**334**	⇓*e*P	**P**	**19 59 37.2**	**+0.3**
NRIK				pmax	pmax		
	comp=Z,12nm,1.3s						
CRAI	**Chiangrai**	**41.42**	**255**	P	**P**	**19 59 37.2**	**-1.1**
CRAI				IAmb	IAmb	19 59 45.6	
	comp=Z,15nm,0.8s						
ZSN	**Zaisan**	**42.00**	**300**	*e*P	**P**	**19 59 43.5**	**+0.9**
	baz=300						
ZSN	**Zaisan**	**42.00**	**300**	*e*P	**P**	**19 59 43.5**	**+0.9**
PHRA	**Phrae**	**42.60**	**253**	P	**P**	**19 59 47.4**	**-0.4**
K20K	**Telida**	**43.24**	**36**	P	**P**	**19 59 54.2**	**+1.7**
A21K	**Barrow**	**43.33**	**24**	P	**P**	**19 59 54.1**	**+1.0**
A21K				IAmb	IAmb	20 00 01.8	
	comp=Z,13nm,0.9s						
CHTO	**Chiang Mai**	**43.35**	**254**	P	**P**	**19 59 54.5**	**+0.5**
CHTO	**Chiang Mai**	**43.35**	**254**	P	**P**	**19 59 54.5**	**+0.5**
LSA	**Lhasa**	**43.38**	**273**	P	**P**	**19 59 54.2**	**-0.5**
LSA	**Lhasa**	**43.38**	**273**	P	**P**	**19 59 54.2**	**-0.5**
LSA				pmax	pmax		
	comp=Z,11nm,1.1s						
Q19K	**Cape Douglas,**	**43.47**	**42**	P	**P**	**19 59 55.2**	**+0.7**
IMAR	**Indian Mountai**	**43.54**	**32**		**P**	**19 59 56.0**	**+1.2**
CMAR	**Chiang Mai Arr**	**43.58**	**254**	P	**P**	**19 59 56.4**	**+0.6**
	comp=Z,3.0nm,0.8s,baz=47,slow=6.5,SNR=30						
CMAR				LR	LR	20 19 19.8	
	comp=Z,53nm,18.4s,baz=50,slow=38						
	comp=Z,3.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**43.58**	**254**	P	**P**	**19 59 54.8**	**-0.9**
CMAR	**Chiang Mai Arr**	**43.58**	**254**	*i* P	**P**	**19 59 56.7**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
M20K	**Styx River**	**43.64**	**38**	P	**P**	**19 59 58.4**	**+2.5**
ILSW	**Iliamna Southw**	**43.68**	**41**	P	**P**	**19 59 57.5**	**+1.3**
ILSW				IAmb	IAmb	20 00 23.4	
	comp=Z,28nm,1.4s						
RSO	**Redoubt South**	**43.85**	**40**	P	**P**	**19 59 59.4**	**+1.7**
MK31	**Makanchi Array**	**43.86**	**300**	P	**P**	**19 59 57.8**	**+0.1**
MK31				IAmb	IAmb	19 59 59.1	
	comp=Z,9.3nm,0.8s						
MK31	**Makanchi Array**	**43.86**	**300**	P	**P**	**19 59 57.8**	**+0.1**
MK31				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MKAR	**Makanchi Array**	**43.86**	**300**	P	**P**	**19 59 58.3**	**+0.5**
	comp=Z,10.0nm,0.9s,baz=83,slow=9.3,SNR=83						
MKAR				LR	LR	20 19 10.1	
	comp=Z,407nm,18.3s,baz=74,slow=37						
	comp=Z,10.0nm,0.9s						
MKAR	**Makanchi Array**	**43.86**	**300**	P	**P**	**19 59 57.7**	**0.0**
MKAR	**Makanchi Array**	**43.86**	**300**	*i* P	**P**	**19 59 58.0**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
H21K	**Melozitna Rive**	**43.90**	**33**	P	**P**	**19 59 59.1**	**+1.3**
MAKZ	**Makanchi**	**44.06**	**300**	P	**P**	**19 59 59.4**	**0.0**
MAKZ				IAmb	IAmb	20 00 10.5	
	comp=Z,11nm,0.9s						
MAKZ	**Makanchi**	**44.06**	**300**	P	**P**	**19 59 59.4**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,11nm,0.9s						
PPLA	**Purkeypile**	**44.08**	**37**	P	**P**	**20 00 00.3**	**+0.9**
KDAK	**Kodiak Island**	**44.10**	**44**	P	**P**	**20 00 00.0**	**+0.5**
	comp=Z,7.4nm,0.9s,baz=332,slow=5.2,SNR=7.1						
	comp=Z,7.4nm,0.9s						
KDAK	**Kodiak Island**	**44.10**	**44**	P	**P**	**20 00 01.2**	**+1.7**
KDAK	**Kodiak Island**	**44.10**	**44**	P	**P**	**20 00 01.2**	**+1.7**
KDAK				pmax	pmax		
	comp=Z,47nm,1.4s						
CAST	**Castle Rocks**	**44.13**	**36**	P	**P**	**20 00 00.2**	**+0.5**
SEM	**Semipalatinsk**	**44.39**	**305**	*e*P	**P**	**20 00 01.9**	**-0.3**
	baz=305						
SEM	**Semipalatinsk**	**44.39**	**305**	*e*P	**P**	**20 00 01.8**	**-0.3**
KTH	**Kantishna Hill**	**44.66**	**36**	P	**P**	**20 00 05.4**	**+1.5**
KTH				IAmb	IAmb	20 00 17.1	
	comp=Z,11nm,1.0s						
MLY	**Manley**	**44.74**	**33**	P	**P**	**20 00 06.0**	**+1.4**
SUA	**Susitna One**	**44.79**	**39**	P	**P**	**20 00 06.1**	**+1.0**
SUA				IAmb	IAmb	20 00 24.6	
	comp=Z,22nm,1.2s						
SHL	**Shillong**	**44.87**	**268**	P	**P**	**20 00 05.2**	**-1.0**
SHL				IAmb	IAmb	20 00 19.0	
	comp=Z,16nm,1.1s						
SHL	**Shillong**	**44.87**	**268**	P	**P**	**20 00 05.2**	**-1.0**
SHL				pmax	pmax		
	comp=Z,16nm,1.1s						
COLD	**Coldfoot**	**45.03**	**30**		**P**	**20 00 07.1**	**+0.3**
M22K	**Willow**	**45.08**	**38**	P	**P**	**20 00 08.4**	**+1.2**
H23K	**Yukon River**	**45.25**	**32**	P	**P**	**20 00 09.4**	**+0.8**
H23K				IAmb	IAmb	20 00 20.9	
	comp=Z,6.1nm,0.8s						
BWN	**Browne**	**45.29**	**35**	P	**P**	**20 00 09.9**	**+1.0**
I23K	**Minto, Yukon-K**	**45.33**	**33**	P	**P**	**20 00 09.7**	**+0.6**
KURK	**Kurchatov**	**45.34**	**306**	P	**P**	**20 00 09.1**	**-0.4**
KURK	**Kurchatov**	**45.34**	**306**	*c i*P	**P**	**20 00 09.3**	**-0.2**
KURK				pmax	pmax		
	comp=Z,38nm,1.3s						
O22K	**Cooper Landing**	**45.35**	**40**	P	**P**	**20 00 10.2**	**+0.8**
NEA2	**Nenana**	**45.46**	**34**	P	**P**	**20 00 10.4**	**+0.2**
NEA2				IAmb	IAmb	20 00 22.8	
	comp=Z,8.2nm,0.9s						
RND	**Reindeer**	**45.59**	**36**	P	**P**	**20 00 13.0**	**+1.6**
RND				IAmb	IAmb	20 00 26.0	
	comp=Z,9.9nm,1.3s						
RND	**Reindeer**	**45.59**	**36**	P	**P**	**20 00 13.0**	**+1.6**
RND				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MDM	**Murphy Dome**	**45.81**	**34**	P	**P**	**20 00 13.8**	**+0.8**
MDM				IAmb	IAmb	20 00 25.5	
	comp=Z,7.0nm,1.0s						
WRH	**Wood River Hil**	**45.88**	**34**		**P**	**20 00 14.6**	**+1.0**
SML	**Sawmill**	**45.92**	**38**	P	**P**	**20 00 14.3**	**+0.3**
SML				IAmb	IAmb	20 00 28.4	
	comp=Z,12nm,1.0s						
SML	**Sawmill**	**45.92**	**38**	P	**P**	**20 00 14.3**	**+0.3**
SML				pmax	pmax		
	comp=Z,12nm,1.0s						
H24K	**Noodor Dome**	**45.94**	**32**	P	**P**	**20 00 15.6**	**+1.6**
HDA	**Harding Lake**	**46.38**	**34**	P	**P**	**20 00 18.5**	**+1.0**
HDA				IAmb	IAmb	20 00 41.4	
	comp=Z,13nm,1.5s						
ILAR	**Eielson Array**	**46.39**	**34**	P	**P**	**20 00 18.4**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=270,slow=6.2,SNR=16						
ILAR				LR	LR	20 20 10.7	
	comp=Z,40nm,21.0s,baz=240,slow=37						
	comp=Z,1.2nm,0.8s						
ILAR	**Eielson Array**	**46.39**	**34**	P	**P**	**20 00 17.6**	**+0.1**
SCM	**Sheep Creek Mo**	**46.39**	**38**	P	**P**	**20 00 17.0**	**-0.7**
SCM				IAmb	IAmb	20 00 55.9	
	comp=Z,20nm,1.3s						
SCM	**Sheep Creek Mo**	**46.39**	**38**	P	**P**	**20 00 17.0**	**-0.7**
SCM				pmax	pmax		
	comp=Z,20nm,1.3s						
BRDH	**Bariadhala**	**46.61**	**264**	LR	LR	20 22 33.7	
	comp=Z,88nm,18.5s,baz=289,slow=39						
SHLS	**Shalkode**	**46.81**	**296**	*e*P	**P**	**20 00 19.1**	**-2.3**
	baz=296						
SHLS	**Shalkode**	**46.81**	**296**	*e*P	**P**	**20 00 19.0**	**-2.3**
PRP	**Porcupine Dome**	**46.92**	**33**	P	**P**	**20 00 22.9**	**+1.0**
PRP				IAmb	IAmb	20 00 34.5	
	comp=Z,11nm,0.9s						
TDK	**Taldyqorghan**	**46.95**	**299**	*e*P	**P**	**20 00 23.0**	**+0.6**
	baz=298						
TDK	**Taldyqorghan**	**46.95**	**299**	*e*P	**P**	**20 00 22.9**	**+0.6**
UZB	**Uzynbulak**	**47.12**	**296**	*e*P	**P**	**20 00 23.8**	**0.0**
	baz=296						
UZB	**Uzynbulak**	**47.12**	**296**	*e*P	**P**	**20 00 23.7**	**0.0**
BMAR	**Burnt Mountain**	**47.21**	**30**	P	**P**	**20 00 25.4**	**+1.4**
KPKS	**Kokpek**	**47.25**	**297**	*e*P	**P**	**20 00 25.1**	**+0.4**
	baz=296						
KPKS	**Kokpek**	**47.25**	**297**	*e*P	**P**	**20 00 25.1**	**+0.4**
ZHN	**Zhinishke**	**47.52**	**296**	*e*P	**P**	**20 00 27.0**	**+0.2**
	baz=296						
ZHN	**Zhinishke**	**47.52**	**296**	*e*P	**P**	**20 00 27.0**	**+0.2**
SATY	**Saty**	**47.57**	**296**	⇑*i*P	**P**	**20 00 27.8**	**+0.5**
	baz=296						
SATY	**Saty**	**47.57**	**296**	*c i*P	**P**	**20 00 27.7**	**+0.5**
SCRK	**Sand Creek**	**47.71**	**35**	P	**P**	**20 00 28.8**	**+0.7**
SCRK				IAmb	IAmb	20 00 40.5	
	comp=Z,6.1nm,0.8s						
CHKK	**Chushkaly**	**48.28**	**298**	*e*P	**P**	**20 00 32.9**	**+0.2**
	baz=297						
CHKK	**Chushkaly**	**48.28**	**298**	*e*P	**P**	**20 00 32.8**	**+0.2**
MDOK	**Medeo**	**48.47**	**297**	*i* P	**P**	**20 00 35.1**	**+0.8**
	baz=296						
MDOK	**Medeo**	**48.47**	**297**	*i* P	**P**	**20 00 35.0**	**+0.8**
AAA	**Alma-Ata**	**48.55**	**297**	*e*P	**P**	**20 00 35.6**	**+0.9**
	baz=297						
AAA	**Alma-Ata**	**48.55**	**297**	*e*P	**P**	**20 00 35.6**	**+0.9**
KUU	**Kurty**	**48.71**	**298**	*e*P	**P**	**20 00 35.9**	**0.0**
	baz=298						
KUU	**Kurty**	**48.71**	**298**	*e*P	**P**	**20 00 35.9**	**0.0**
L27K	**Beaver Creek,**	**48.78**	**36**	P	**P**	**20 00 37.0**	**+0.7**
L27K				IAmb	IAmb	20 01 20.2	
	comp=Z,7.4nm,1.2s						
BCAR	**Beaver Creek A**	**48.80**	**36**	P	**P**	**20 00 36.8**	**+0.4**
EGAK	**Eagle**	**48.83**	**33**	P	**P**	**20 00 37.1**	**+0.6**
EGAK				IAmb	IAmb	20 00 49.6	
	comp=Z,7.7nm,0.9s						
BRZS	**Berezniki**	**49.21**	**307**	⇑*i*P	**P**	**20 00 39.8**	**+0.2**
	baz=306						
BRZS	**Berezniki**	**49.21**	**307**	*c i*P	**P**	**20 00 39.8**	**+0.2**
TKM2	**Tokmak 2**	**49.55**	**297**	P	**P**	**20 00 43.8**	**+1.1**
	SNR=61						
BVAR	**Borovoye Array**	**49.74**	**311**	LR	LR	20 22 52.0	
	comp=Z,216nm,18.4s,baz=79,slow=37						
BRVK	**Borovoye**	**49.80**	**311**	P	**P**	**20 00 44.2**	**+0.2**
BRVK	**Borovoye**	**49.80**	**311**	P	**P**	**20 00 44.2**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,14nm,0.8s						
BTLS	**Baital**	**49.87**	**300**	*e*P	**P**	**20 00 44.7**	**-0.1**
	baz=300						
BTLS	**Baital**	**49.87**	**300**	*e*P	**P**	**20 00 44.6**	**-0.1**
SGDS	**Sogindy**	**50.03**	**298**	*e*P	**P**	**20 00 46.5**	**+0.5**
	baz=298						
SGDS	**Sogindy**	**50.03**	**298**	*e*P	**P**	**20 00 46.5**	**+0.5**
KBK	**Karagaybulak**	**50.10**	**297**	P	**P**	**20 00 47.7**	**+1.0**
	SNR=39						
CHMS	**Chumysh**	**50.11**	**297**	P	**P**	**20 00 46.8**	**+0.2**
	SNR=5.6						
USP	**Ospenovka**	**50.18**	**298**	P	**P**	**20 00 47.7**	**+0.6**
	SNR=14						
EPYK	**Eagle Plains**	**50.41**	**31**	P	**P**	**20 00 49.8**	**+1.2**
EPYK				IAmb	IAmb	20 01 00.9	
	comp=Z,8.9nm,0.8s						
AAK	**Ala-Archa**	**50.41**	**297**	P	**P**	**20 00 49.7**	**+0.6**
	SNR=7.6						
AAK	**Ala-Archa**	**50.41**	**297**	LR	LR	20 23 16.4	
	comp=Z,281nm,19.5s,baz=60,slow=37						
AAK	**Ala-Archa**	**50.41**	**297**	P	**P**	**20 00 49.2**	**+0.1**
AAK				IAmb	IAmb	20 01 00.3	
	comp=Z,7.4nm,0.8s						
AAK	**Ala-Archa**	**50.41**	**297**	*c i*P	**P**	**20 00 49.5**	**+0.4**
AAK				pmax	pmax		
	comp=Z,14nm,1.7s						
UCH	**Uchtor**	**50.55**	**296**	P	**P**	**20 00 51.7**	**+1.2**
	SNR=6.0						
KSH	**Kashi**	**50.56**	**293**	P	**P**	**20 00 54.6**	**+4.4**
KSH				pP	pP	20 00 58.0	-0.2
KSH				sP	sP	20 01 04.6	+3.4
KSH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KSH				LR	LR		
	comp=Z,210nm,14.0s						
KSH				LR	LR		
	comp=Z,330nm,16.5s						
KSH				LR	LR		
	comp=Z,500nm,19.4s						
EKS2	**Erkin-Say**	**50.90**	**297**	P	**P**	**20 00 53.3**	**+0.6**
	SNR=20						
AML	**Almayashu**	**51.15**	**297**	P	**P**	**20 00 56.1**	**+1.2**
	SNR=17						
HYT	**Haines Junctio**	**51.23**	**38**	P	**P**	**20 00 57.9**	**+3.0**
HYT				IAmb	IAmb	20 01 27.7	
	comp=Z,9.4nm,0.9s						
INK	**Inuvik**	**51.26**	**28**	P	**P**	**20 00 56.0**	**+1.2**
	comp=Z,1.5nm,0.6s,baz=297,slow=8.0,SNR=4.7						
	comp=Z,1.5nm,0.6s						
INK	**Inuvik**	**51.26**	**28**	P	**P**	**20 00 56.0**	**+1.2**
INK				IAmb	IAmb	20 01 06.0	
	comp=Z,5.6nm,0.8s						
INK	**Inuvik**	**51.26**	**28**	P	**P**	**20 00 56.1**	**+1.3**
INK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KULM	**Kulim**	**51.43**	**239**	P	**P**	**20 00 57.9**	**+1.1**
KULM				IAmb	IAmb	20 01 18.1	
	comp=Z,16nm,1.3s						
HNR	**Honiara**	**51.43**	**159**	LR	LR	20 23 56.7	
	comp=Z,530nm,18.5s,baz=328,slow=37						
DZA	**Taraz**	**52.48**	**298**	*e*P	**P**	**20 01 04.7**	**+0.3**
	baz=298						
DZA	**Taraz**	**52.48**	**298**	*e*P	**P**	**20 01 04.7**	**+0.3**
KK31	**Karatay Array**	**52.95**	**299**	P	**P**	**20 01 07.8**	**-0.1**
KK31				IAmb	IAmb	20 01 08.9	
	comp=Z,8.2nm,0.8s						
KK31	**Karatay Array**	**52.95**	**299**	P	**P**	**20 01 07.8**	**-0.1**
KK31				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KKAR	**Karatay Array**	**52.95**	**299**	P	**P**	**20 01 07.9**	**+0.1**
KKAR	**Karatay Array**	**52.95**	**299**	P	**P**	**20 01 07.1**	**-0.7**
KKAR				IAmb	IAmb	20 01 08.9	
	comp=Z,8.2nm,0.8s						
KKAR	**Karatay Array**	**52.95**	**299**	P	**P**	**20 01 07.1**	**-0.7**
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
A36M	**Sachs Harbour**	**53.14**	**23**	P	**P**	**20 01 08.8**	**+0.1**
A36M				IAmb	IAmb	20 01 21.6	
	comp=Z,5.8nm,0.8s						
COEN	**Coen**	**53.52**	**180**	P	**P**	**20 01 13.5**	**+1.4**
COEN				IAmb	IAmb	20 01 26.7	
	comp=Z,12nm,1.1s						
MTN	**Manton Dam**	**53.60**	**195**	P	**P**	**20 01 12.3**	**-0.4**
MTN				IAmb	IAmb	20 01 31.6	
	comp=Z,11nm,1.1s						
IUG	**Iuzhnay**	**53.65**	**298**	*e*P	**P**	**20 01 13.8**	**+0.7**
	baz=298						
IUG	**Iuzhnay**	**53.65**	**298**	*e*P	**P**	**20 01 13.8**	**+0.7**
CHM	**Chimkent**	**53.88**	**298**	*e*P	**P**	**20 01 15.2**	**+0.5**
	baz=298						
CHM	**Chimkent**	**53.88**	**298**	*e*P	**P**	**20 01 15.1**	**+0.5**
SVE	**Sverdlovsk**	**53.98**	**318**	*e*P	**P**	**20 01 16.6**	**+1.4**
SVE				pmax	pmax		
	comp=Z,26nm,0.8s						
SVE				MLR	MLR		
	comp=Z,665nm,15.0s						
PSI	**Prapat**	**54.42**	**239**	P	**P**	**20 01 18.1**	**-0.9**
PSI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
RPSI	**Rantau Prapat**	**54.50**	**239**	P	**P**	**20 01 18.1**	**-1.3**
GAR	**Garm**	**54.77**	**294**	P	**P**	**20 01 21.4**	**0.0**
ARU	**Arti**	**55.20**	**318**	LR	LR	20 27 26.2	
	comp=Z,402nm,19.3s,baz=50,slow=39						
ARU	**Arti**	**55.20**	**318**	P	**P**	**20 01 23.8**	**-0.2**
ARU	**Arti**	**55.20**	**318**	*c i*P	**P**	**20 01 24.5**	**+0.5**
ARU				*PP	**sP**	**20 01 34.8**	**-0.2**
ARU						20 03 24.8	
ARU				S	**S**	**20 09 06.7**	**+1.4**
ARU				SS	**SS**	**20 12 52.5**	**+3.5**
ARU				pmax	pmax		
	comp=Z,24nm,1.1s						
ARU				MLR	MLR		
	comp=Z,530nm,16.0s						
CHGR	**Chuyangaron**	**55.74**	**294**	P	**P**	**20 01 27.9**	**-0.4**
CHGR	**Chuyangaron**	**55.74**	**294**	P	**P**	**20 01 27.9**	**-0.4**
CHGR				pmax	pmax		
	comp=Z,39nm,0.9s						
KNRA	**Kununurra**	**56.84**	**197**	P	**P**	**20 01 37.1**	**+1.1**
ABKAR	**Akbulak array**	**57.21**	**309**	P	**P**	**20 01 38.1**	**-0.3**
ABKAR	**Akbulak array**	**57.21**	**309**	P	**P**	**20 01 38.2**	**-0.2**
KBL	**Kabul**	**57.73**	**290**	P	**P**	**20 01 42.2**	**-0.4**
KBL	**Kabul**	**57.73**	**290**	P	**P**	**20 01 42.2**	**-0.4**
KBL				pmax	pmax		
	comp=Z,24nm,0.9s						
AKTO	**Aktyubinsk**	**57.85**	**311**	LR	LR	20 27 49.9	

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      comp=Z,158nm,18.7s,baz=52,slow=37
SPITS Spitsbergen Ar   58.04 349   LR      LR     20 28 29.6
      comp=Z,87nm,19.9s,baz=19,slow=38
NOR   Nord             58.34 357 i P       P      20 01 44.5 -1.4
NOR                                IAmb    IAmb   20 01 46.7
      comp=Z,1.6nm,0.7s
KIRV  Kirov            58.86 322   LR      LR     20 31 33.2
      comp=Z,101nm,18.4s,baz=46,slow=40
KIRV  Kirov            58.86 322ceP        P      20 01 50.4 +0.6
RES   Resolute Bay     59.53  15   P       P      20 01 54.3  0.0
RES                                IAmb    IAmb   20 01 55.7
      comp=Z,4.8nm,0.8s
RES   Resolute Bay     59.53  15   P       P      20 01 54.3  0.0
RES                                pmax    pmax
      comp=Z,5.0nm,0.9s
WB0   Warramunga Arr   59.86 190   P       P      20 01 57.0 -0.2
FITZ  Fitzroy Crossi   59.92 199   P       P      20 01 58.5 +0.9
WRAB  Tennant Creek    60.03 190   P       P      20 01 58.2 -0.1
WRAB                               IAmb    IAmb   20 02 09.2
      comp=Z,11nm,1.1s
WRAB  Tennant Creek    60.03 190   P       P      20 01 58.2 -0.1
WRAB                               pmax    pmax
      comp=Z,11nm,1.2s
WR0   Warramunga Arr   60.03 189   P       P      20 01 58.1 -0.2
WR0                                IAmb    IAmb   20 02 09.7
      comp=Z,5.7nm,0.8s
WB2   Warramunga Arr   60.04 190   P       P      20 01 58.1 -0.3
WB2                                IAmb    IAmb   20 02 09.8
      comp=Z,6.5nm,0.8s
WRA   Warramunga Arr   60.04 190   P       P      20 01 58.8 +0.4
      comp=Z,2.9nm,0.8s,baz=6.8,slow=7.2,SNR=19
      comp=Z,2.9nm,0.8s
WRA   Warramunga Arr   60.04 190   P       P      20 01 57.7 -0.7
WRA   Warramunga Arr   60.04 190   P       P      20 01 57.7 -0.7
YKA   Yellowknife Ar   60.69  31   P       P      20 02 03.3 +1.0
      comp=Z,0.3nm,0.6s,baz=298,slow=6.5,SNR=5.3
      comp=Z,0.3nm,0.6s
ADZR  Andozero         60.98 331  eP       P      20 02 04.0 -0.3
ADZR                               pmax    pmax
      comp=Z,10.0nm,0.8s
ARCES ARCESS Array B   61.86 339   P       P      20 02 11.0 +0.8
      comp=Z,5.2nm,1.0s,baz=54,slow=9.1,SNR=2.6
ARCES                              LR      LR     20 31 54.4
      comp=Z,108nm,19.4s,baz=61,slow=39
      comp=Z,5.2nm,1.0s
KLMR  Klimovskoe       62.13 327  eP       P      20 02 10.6 -1.5
KLMR                               AMP            20 02 14.9
      comp=Z,19nm,1.7s
KLMR                              ePP      PP     20 04 28.8 +0.3
KLMR                               LR      LR     20 27 20.1
KLMR  Klimovskoe       62.13 327  eP       P      20 02 10.6 -1.5
KLMR                              e               20 04 28.7
KLMR                               pmax    pmax
      comp=Z,19nm,1.7s
NEEM  North Greenlan   62.65   3 i P       P      20 02 15.2 -0.6
NEEM                               IAmb    IAmb   20 02 25.7
      comp=Z,4.7nm,1.0s
BELG  Belogornoye      62.70 317   LR      LR     20 31 48.7
      comp=Z,269nm,18.6s,baz=122,slow=38
BELG  Belogornoye      62.70 317c iP       P      20 02 16.5 +0.5
BELG                               pmax    pmax
      comp=Z,6.0nm,0.9s
DAG   Danmarks Havn    63.09 355 i P       P      20 02 13.9 -4.4
DAG                                IAmb    IAmb   20 02 19.4
      comp=Z,4.4nm,0.8s
GEYT  Alibeck          63.70 299   P       P      20 02 23.3 +0.3
      comp=Z,9.2nm,0.8s,baz=29,slow=3.4,SNR=24
GEYT                               LR      LR     20 31 31.9
      comp=Z,70nm,20.0s,baz=124,slow=37
      comp=Z,9.2nm,0.8s
AS31  Alice Springs    63.77 189   P       P      20 02 23.2 -0.3
ASAR  Alice Springs    63.77 189   P       P      20 02 24.4 +0.9
      comp=Z,1.2nm,0.8s,baz=4.0,slow=4.8,SNR=13
ASAR                               PcP     PcP    20 03 02.4 +3.2
      comp=Z,0.9nm,0.8s,baz=9.2,slow=9.0,SNR=4.1
      comp=Z,1.2nm,0.8s
ASAR  Alice Springs    63.77 189   P       P      20 02 22.8 -0.6
PALK  Pallekele        64.33 257   LR      LR     20 33 16.5
      comp=Z,88nm,19.5s,baz=248,slow=39
DZM   Mont Dzumac      65.31 156  eLR      LR     20 22 11.4
      comp=Z,130nm,22.1s
DZM   Mont Dzumac      65.31 156   LR      LR     20 26 49.8
      comp=Z,72nm,21.4s,baz=24,slow=32
MSVF  Nonsavu          65.87 143   LR      LR     20 26 25.6
      comp=Z,58nm,21.0s,baz=342,slow=31
VRH   Novokhopyorsk    66.43 318⇓iP        P      20 02 40.7 +0.3
VRH                                pmax    pmax
      comp=Z,21nm,0.9s
OBN   Obninsk          66.68 323   LR      LR     20 34 15.6
      comp=Z,30nm,19.7s,baz=328,slow=38
OBN   Obninsk          66.68 323⇑eP        P      20 02 43.2 +1.3
OBN                                *PP     sP     20 02 54.0 +0.9
OBN                               i               20 03 15.8
OBN                                pmax    pmax
      comp=Z,12nm,0.5s
OBN                                MLR     MLR
      comp=Z,259nm,16.0s
FINES FINESS Array B   66.97 332   P       P      20 02 44.2 +0.5
      comp=Z,8.9nm,0.8s,baz=48,slow=7.5,SNR=18
FINES                              LR      LR     20 34 34.2
      comp=Z,275nm,18.5s,baz=58,slow=38
      comp=Z,8.9nm,0.8s
LPSR  Galich'ya Gora   67.04 320  eP       P      20 02 44.3  0.0
LPSR                               pmax    pmax
      comp=Z,10.0nm,0.8s
VORR  Voronezh         67.44 319  eP       P      20 02 47.5 +0.6
VORR                              e               20 02 58.5
VORR                               pmax    pmax
      comp=Z,10.0nm,1.2s
JMIC  Jan Mayen        67.62 350   LR      LR     20 33 08.3
      comp=Z,13nm,18.3s,baz=201,slow=37
VSR   Storozhevoye     67.73 319  eP       P      20 02 49.1 +0.4
VSR                                pmax    pmax
      comp=Z,10.0nm,0.8s
VORD  Divnogorie       67.82 318  eP       P      20 02 49.3 +0.1
VORD                               pmax    pmax
      comp=Z,7.0nm,0.7s
AFI   Afiamalu         67.93 132   LR      LR     20 27 28.4
      comp=Z,84nm,21.9s,baz=297,slow=31
AKT   Akhty            68.52 307  eP       P      20 02 54.4 +0.4
AKT                               e               20 03 19.5
AKT                                pmax    pmax
      comp=Z,16nm,0.8s
ZEI   Tsey             70.09 309  eP       P      20 03 00.8 -3.0
ZEI                                pmax    pmax
      comp=Z,10.0nm,1.0s
KIV   Kislovodsk       70.11 311   P       P      20 03 03.0 -0.7
KIV   Kislovodsk       70.11 311  eP       P      20 03 04.8 +1.0
KIV                                pmax    pmax
      comp=Z,40nm,1.0s
KIV                                MLR     MLR
      comp=Z,157nm,18.0s
KBZ   Khabaz           70.12 311   P       P      20 03 05.0 +1.3
      comp=Z,13nm,0.8s,baz=60,slow=4.2,SNR=39
KBZ                                LR      LR     20 39 06.1
      comp=Z,108nm,18.0s,baz=56,slow=40
      comp=Z,13nm,0.8s
ONI   Oni              70.47 309   P       P      20 03 06.5 +0.6
ONI   Oni              70.47 309   P       P      20 03 06.6 +0.6
ONI                                pmax    pmax
      comp=Z,12nm,0.9s
NEY   Neytrino         70.51 310⇑eP        P      20 03 08.6 +2.2
NEY                                pmax    pmax
      comp=Z,3.0nm,0.9s
MNK   Minsk            70.94 326 i P       P      20 03 09.1 +0.5
      comp=E,2.0nm,0.9s
MNK                              i P       P      20 03 09.1 +0.5
      comp=N,9.0nm,0.9s
MNK                              i P       P      20 03 09.1 +0.5
      comp=Z,18nm,0.9s,baz=47
MNK                              i PcP     PcP    20 03 29.1 +0.2
MNK                              i PP      PP     20 05 46.5 +1.2
MNK                              i PPP     PPP    20 07 29.8
MNK                              i S       S      20 12 25.9 +3.7
MNK                              i SS      SS     20 15 47.9  -66
MNK                              i SSS     SSS    20 20 42.7
MNK                              i LQ      LQ     20 27 33.2
MNK                              i LR      LR     20 31 58.5
MNK                              i LRM     MLR    20 36 07.3
      comp=E,25nm,18.6s
MNK                              i LRM     MLR    20 36 24.6
      comp=N,497nm,18.0s
MNK                              i LRM     MLR    20 36 34.9
      comp=Z,171nm,18.5s
MNK   Minsk            70.94 326 i P       P      20 03 09.0 +0.5
MNK                              i                20 03 29.1
MNK                              i                20 05 46.5
MNK                              i PPP     PPP    20 07 29.8
MNK                              i S       S      20 12 25.9 +3.7
MNK                                pmax    pmax
      comp=Z,18nm,0.9s
MNK                                pmax    pmax
      comp=E,2.0nm,0.9s
MNK                                pmax    pmax
      comp=N,9.0nm,0.9s
MNK                                MLR     MLR
      comp=E,25nm,19.0s
MNK                                MLR     MLR
      comp=N,497nm,18.0s
MNK                                MLR     MLR
      comp=Z,171nm,18.0s
GNI   Garni            71.14 307   LR      LR     20 37 28.5
      comp=Z,121nm,18.1s,baz=114,slow=38
GNI   Garni            71.14 307   P       P      20 03 10.4 +0.2
GNI   Garni            71.14 307⇑eP        P      20 03 11.3 +1.1
GNI                                pmax    pmax
      comp=Z,13nm,1.3s
NACGM Naroch           71.14 327  eP       P      20 03 10.4 +0.8
      comp=Z,30nm,0.9s,baz=47
ICESG Greenland Ices   71.36   1 i P       P      20 03 11.9 +0.6
ICESG                              IAmb    IAmb   20 03 13.0
      comp=Z,9.9nm,0.8s
STKA  Stephens Creek   71.37 181   P       P      20 03 12.8 +1.5
      comp=Z,0.7nm,0.6s,baz=15,slow=12,SNR=2.0
      comp=Z,0.7nm,0.6s
WSAR  Wadi Sarin       71.48 285   LR      LR     20 38 50.3
      comp=Z,39nm,18.7s,baz=180,slow=39
SOC   Sochi            72.05 312  eP       P      20 03 13.7 -1.7
SOC                               e               20 05 51.8
SOC                               ePPP     PPP    20 07 36.2
SOC                               eS       S      20 12 32.2 -3.1
SOC                               eSSS     SSS    20 20 28.6
SOC                                pmax    pmax
      comp=Z,10.0nm,0.7s
SOC                                MLR     MLR
      comp=Z,66nm,16.0s
NC204 NORSAR Array S   72.07 338   P       P      20 03 15.0 -0.3
HFS   Hagfors          72.09 336   LR      LR     20 38 09.3
      comp=Z,121nm,18.6s,baz=20,slow=38
NB2   NORSAR Subarra   72.13 338   P       P      20 03 16.3 +0.7
      comp=Z,3.1nm,0.7s,baz=37,slow=6.2
NOA   NORSAR Array B   72.13 338   P       P      20 03 16.3 +0.7
      comp=Z,5.6nm,0.8s,baz=38,slow=6.0,SNR=22
NOA                                LR      LR     20 39 00.5
      comp=Z,78nm,18.5s,baz=35,slow=39
      comp=Z,5.6nm,0.8s
AKASG Malin Array Be   72.92 323   P       P      20 03 20.8 +0.4
      comp=Z,4.7nm,0.8s,baz=42,slow=5.7,SNR=20
AKASG                              LR      LR     20 38 08.7
      comp=Z,149nm,18.2s,baz=7.5,slow=38
      comp=Z,4.7nm,0.8s
AKBB  Malin Array Si   72.92 323   P       P      20 03 19.7 -0.8
AKBB                               IAmb    IAmb   20 03 21.7
      comp=Z,12nm,1.1s
AKBB  Malin Array Si   72.92 323   P       P      20 03 19.7 -0.8
AKBB                               pmax    pmax
      comp=Z,12nm,1.1s
SFJD  Kangerlussuaq    72.97   6   LR      LR     20 37 16.8
      comp=Z,108nm,18.6s,baz=344,slow=37
FRB   Frobisher Bay    73.72  14   P       P      20 03 25.6 +0.7
      comp=Z,7.8nm,0.8s,baz=326,slow=6.7,SNR=20
FRB                                LR      LR     20 39 02.8
      comp=Z,101nm,19.8s,baz=356,slow=38
      comp=Z,7.8nm,0.8s
DY2G  Dye2             73.76   4 i P       P      20 03 25.9 +0.5
DY2G                               IAmb    IAmb   20 03 27.0
      comp=Z,8.3nm,0.7s
GURO  Guroymak-BITLI   73.78 307   P       P      20 03 26.3 +0.4
GURO                               IAmb    IAmb   20 03 28.5
      comp=Z,12nm,0.9s
KOPT  Kop Dagi         73.80 309   P       P      20 03 26.6 +0.4
KOPT                               IAmb    IAmb   20 03 29.2
      comp=Z,10nm,1.1s
SIM   Simferopol'      74.29 316  eP       P      20 03 29.9 +1.3
SIM                                               20 03 45.0
SIM                                pmax    pmax
      comp=Z,23nm,0.9s
PDAR  Pinedale Array   74.72  47   P       P      20 03 32.3 +0.8
      comp=Z,0.3nm,0.6s,baz=306,slow=2.1,SNR=2.8
      comp=Z,0.3nm,0.6s
SORM  Soroca           75.09 321 ⇓P        P      20 03 33.5 +0.3
SORM  Soroca           75.09 321 ⇓P        P      20 03 33.5 +0.3
DIKM  Dikmen           75.82 313 ⇓P        P      20 03 39.3 +1.8
BUR08 Bucovina Ar. S   76.94 322   P       P      20 03 44.3 +0.4
BURAR Bucovina Array   76.96 322 ⇑P        P      20 03 44.6 +0.6
BURAR Bucovina Array   76.96 322   P       P      20 03 43.9  0.0
BURAR                              IAmb    IAmb   20 03 46.2
      comp=Z,5.7nm,0.8s
BURAR Bucovina Array   76.96 322 ⇑P        P      20 03 44.6 +0.6
CFR   Carcaliu         77.25 319 ⇑P        P      20 03 45.1 -0.4
CFR   Carcaliu         77.25 319 ⇑P        P      20 03 45.1 -0.4
BNN   Bunyan           77.31 310   P       P      20 03 46.0 -0.2
TPGR  Topolog          77.33 319 ⇑P        P      20 03 47.0 +1.0
OJC   Ojcow            77.47 327   P       P      20 03 46.6 -0.1
OJC                                IAmb    IAmb   20 04 04.7
      comp=Z,14nm,1.1s
OJC   Ojcow            77.47 327   P       P      20 03 46.6 -0.1
OJC                                pmax    pmax
      comp=Z,15nm,1.1s
VRI   Vrincioaia       77.47 320 ⇑P        P      20 03 47.8 +1.0
VRI   Vrincioaia       77.47 320 ⇑P        P      20 03 47.8 +1.0
GAZ   Gaziantep        77.60 308   P       P      20 03 47.5 -0.2
GAZ                                IAmb    IAmb   20 03 50.4
      comp=Z,11nm,0.9s
TRPA  Tarpa            77.82 324 ⇑P        P      20 03 50.2 +1.6
BRTR  Keskin Array B   78.02 312   P       P      20 03 50.8 +0.7
      comp=Z,1.9nm,0.8s,baz=64,slow=2.9,SNR=5.7
BRTR                               LR      LR     20 43 56.3
      comp=Z,88nm,18.5s,baz=38,slow=40
      comp=Z,1.9nm,0.8s
BRTR  Keskin Array B   78.02 312   P       P      20 03 49.7 -0.4
MLR   Muntele Rosu     78.12 320   LR      LR     20 41 53.2
      comp=Z,156nm,18.0s,baz=76,slow=38
ANTO  Ankara           78.40 313 ⇓P        P      20 03 53.7 +1.6
ANTO  Ankara           78.40 313 ⇓P        P      20 03 53.7 +1.6
LANS  Liptovska Anna   78.42 326  eP       P      20 03 54.3 +2.3
LANS                               pmax    pmax
      comp=Z,3.0nm,1.0s
LANS  Liptovska Anna   78.42 326  eP       P      20 03 54.3 +2.3
VOIR                   78.60 321 ⇓P        P      20 03 53.7 +0.5
VOIR                   78.60 321 ⇓P        P      20 03 53.7 +0.5
MORC  Moravsky Berou   78.75 328 ⇓P        P      20 03 54.4 +0.6
MORC  Moravsky Berou   78.75 328   P       P      20 03 54.3 +0.5
MORC                               IAmb    IAmb   20 03 56.0
      comp=Z,6.6nm,0.9s
MORC  Moravsky Berou   78.75 328  eP       P      20 03 54.6 +0.8
MORC  Moravsky Berou   78.75 328   P       P      20 03 54.3 +0.5
MORC                               pmax    pmax
      comp=Z,7.0nm,0.9s
DPC   Dobruska-Polom   78.80 328  eP       P      20 03 55.4 +1.3
DPC                               ex       x      20 04 07.8
DPC   Dobruska-Polom   78.80 328  eP       P      20 03 55.4 +1.3
DPC                               e               20 04 07.8
UPC   Upice            78.81 329  eP       P      20 03 55.1 +1.0
UPC   Upice            78.81 329  eP       P      20 03 55.1 +1.0
KRLC  Kraliky          78.83 328  eP       P      20 03 55.2 +0.9
KRLC                              epP      sP     20 04 06.3 +0.7
KRLC  Kraliky          78.83 328  eP       P      20 03 55.2 +0.9
KRLC                              e               20 04 06.3
ARR   Arges            78.86 321 ⇑P        P      20 03 57.1 +2.6
MDUB  Mudurnu          78.89 314   P       P      20 03 54.5 -0.3
PSZ   Piszkesteto      79.16 325 ⇑P        P      20 03 57.4 +1.2
PSZ   Piszkesteto      79.16 325   P       P      20 03 56.2  0.0
PSZ                                IAmb    IAmb   20 03 58.6
      comp=Z,7.2nm,1.0s
PSZ   Piszkesteto      79.16 325   P       P      20 03 56.2  0.0
PSZ                                pmax    pmax
      comp=Z,7.0nm,1.0s
VYHS  Vyhne            79.19 326  eP       P      20 03 57.3 +1.1
VYHS                               pmax    pmax
      comp=Z,5.0nm,1.0s
VYHS  Vyhne            79.19 326  eP       P      20 03 57.3 +1.1
CLL   Collm            79.34 331   P       P      20 03 56.5 -0.5
CLL                                IAmb    IAmb   20 03 58.5
      comp=Z,6.1nm,0.9s
CLL   Collm            79.34 331 i P       P      20 03 57.3 +0.4
CLL                               esP      sP     20 04 09.0 +0.7
CLL                               epPcP           20 04 13.0
CLL                                AMS     AMS    20 41 00.0
      comp=Z,200nm,18.0s
CLL   Collm            79.34 331   P       P      20 03 56.5 -0.5
CLL                                pmax    pmax
      comp=Z,6.0nm,0.9s
CLL   Collm            79.34 331  eL       L      20 41 48.3
      comp=Z,164nm,18.0s
JAVC  Velka Javorina   79.40 327  eP       P      20 03 59.4 +1.9
VRAC  Vranov           79.50 328 ⇑P        P      20 03 59.4 +1.5
VRAC  Vranov           79.50 328   LR      LR     20 42 40.5
      comp=Z,196nm,18.0s,baz=42,slow=38
VRAC  Vranov           79.50 328  eP       P      20 03 59.0 +1.1
VRAC  Vranov           79.50 328 ⇑P        P      20 03 59.4 +1.5
SURR  Surduc           79.77 322 ⇑P        P      20 04 00.4 +1.0
SMOL  Smolenice        79.77 327  eP       P      20 04 00.7 +1.3
SMOL                               pmax    pmax
      comp=Z,17nm,1.8s
KRUC  Moravsky         79.78 328  eP       P      20 04 00.4 +1.0
PRU   Pruhonice        79.80 329  eP       P      20 04 00.2 +0.7
PRU   Pruhonice        79.80 329  eP       P      20 04 00.2 +0.7
CLZ   Clausthal        79.87 332  eP       P      20 04 01.1 +1.2
      comp=Z,11nm,1.1s,baz=36,slow=4.4
SRO   Srobarova        79.93 326  eP       P      20 04 02.2 +2.0
SRO                                pmax    pmax
      comp=Z,10.0nm,0.8s
SRO   Srobarova        79.93 326  eP       P      20 04 02.2 +2.0
MOX   Moxa             80.39 331  eP       P      20 04 03.6 +0.9
      comp=Z,6.4nm,1.1s,baz=36,slow=4.4
MOX                               eL       L      20 42 17.8
      comp=Z,145nm,18.1s
NKC   Novy Kostel      80.41 330  eP       P      20 04 04.3 +1.5
NKC   Novy Kostel      80.41 330  eP       P      20 04 04.3 +1.5
RAR   Rarotonga        80.73 128   LR      LR     20 34 52.7
      comp=Z,134nm,19.5s,baz=313,slow=32
CKRC  Cesky Krumlov    80.82 329  eP       P      20 04 05.7 +0.7
CKRC                              ex       x      20 04 17.2
CKRC  Cesky Krumlov    80.82 329  eP       P      20 04 05.7 +0.7
RAYN  Ar Rayn          80.86 293   P       P      20 04 05.5 -0.2
RAYN                               IAmb    IAmb   20 04 07.1
      comp=Z,6.2nm,0.9s
RAYN  Ar Rayn          80.86 293   P       P      20 04 05.5 -0.2
RAYN                               pmax    pmax
      comp=Z,6.0nm,0.9s
KHC   Kasperske Hory   80.86 329   P       P      20 04 05.4 +0.1
KHC                                IAmb    IAmb   20 04 07.4
      comp=Z,7.0nm,1.0s
KHC   Kasperske Hory   80.86 329  eP       P      20 04 06.0 +0.7
KHC                               epP      sP     20 04 16.6  0.0
KHC   Kasperske Hory   80.86 329  eP       P      20 04 06.0 +0.7
KHC                               e               20 04 16.6
RONA  Rosalia, Austr   80.88 327  eP       P      20 04 07.2 +1.8
      comp=Z,4.3nm,0.7s
CONA  Conrad Observa   80.89 327  eP       P      20 04 07.0 +1.5
      comp=Z,5.2nm,0.8s
EKA   Eskdalemuir Ar   80.93 341   LR      LR     20 44 17.7
      comp=Z,71nm,18.2s,baz=72,slow=39
GEC2  GERESS Array S   81.04 329  eL       L      20 42 48.8
      comp=Z,88nm,20.5s
GERES GERESS Array B   81.04 329   P       P      20 04 07.0 +0.7
      comp=Z,1.7nm,0.8s,baz=32,slow=5.2,SNR=11
GERES                              LR      LR     20 42 27.3
      comp=Z,86nm,18.8s,baz=10,slow=37
      comp=Z,1.7nm,0.8s
GRF   Grafenberg Arr   81.31 331  eP       P      20 04 08.3 +0.6
      comp=Z,14nm,1.0s,baz=36,slow=4.4
GRF                               eL       L      20 43 07.5
      comp=Z,78nm,20.8s
MMAI  Mount Meron Ar   81.45 306   LR      LR     20 44 09.5
      comp=Z,143nm,20.0s,baz=316,slow=38
VTS   Vitosha          81.55 320 ⇓P        P      20 04 11.9 +2.6
VTS   Vitosha          81.55 320   P       P      20 04 09.9 +0.6
VTS                                IAmb    IAmb   20 04 12.6
      comp=Z,8.1nm,0.9s
VTS   Vitosha          81.55 320   P       P      20 04 09.9 +0.6
VTS                                pmax    pmax
      comp=Z,8.0nm,0.9s
TNS   Taunus Mts       81.89 333  eL       L      20 43 12.9
      comp=Z,131nm,20.0s
BIOA  Bad Ischl, Aus   81.99 328  eP       P      20 04 12.3 +1.0
      comp=Z,2.6nm,0.6s
SOKA  Soboth           82.22 327  eP       P      20 04 13.3 +0.7
      comp=Z,5.7nm,0.8s
SCHQ  Schefferville    82.25  17   LR      LR     20 43 29.6
      comp=Z,42nm,18.8s,baz=96,slow=38
FUR   Furstenfeldbru   82.54 330  eL       L      20 44 13.0
      comp=Z,127nm,18.9s
OBKA  Obir             82.56 327  eP       P      20 04 15.2 +0.9
      comp=Z,4.9nm,0.7s
KBA   Koelnbreinsper   82.60 328  ePcP     P      20 04 16.0 +1.4
      comp=Z,5.5nm,0.9s
MYKA  Terra Mystica    82.84 328  eP       P      20 04 15.9 +0.1
      comp=Z,6.4nm,0.9s
WTTA  Wattenberg       83.14 329  eP       P      20 04 18.2 +0.8
      comp=Z,2.4nm,0.6s
MOTA  Moosalm          83.28 329 i P       P      20 04 18.6 +0.4
      comp=Z,7.2nm,1.1s
BFO   Black Forest     83.51 332  eL       L      20 44 21.0
      comp=Z,91nm,18.4s
FETA  Feichten         83.69 329  ePcP     P      20 04 21.2 +0.9
      comp=Z,4.9nm,1.1s
DAVA  Damuels          83.80 330  ePcP     P      20 04 22.0 +1.1
      comp=Z,8.4nm,1.1s
EIL   Elat             83.99 304   LR      LR     20 46 47.2
      comp=Z,66nm,19.3s,baz=192,slow=39
PMOR  Pomariorio Ree   84.07 115  eT       T      21 37 06.6
      comp=Z,5.7nm,0.2s
FUORN Ofenpass-Fuorn   84.20 330   P       P      20 04 23.5 +0.5
FUORN                              IAmb    IAmb   20 04 25.6
      comp=Z,7.9nm,1.1s
DAVOX Davos/Dischmat   84.22 330   LR      LR     20 45 30.4
      comp=Z,109nm,18.0s,baz=68,slow=38
PPT   Papeete          84.69 118   LR      LR     20 41 24.6
      comp=Z,71nm,18.6s,baz=337,slow=35
PPT2  Papeete2         84.70 118  eLR      LR     20 31 10.7
      comp=Z,132nm,22.8s
PPT2                              eLR      LR     20 31 11.1
      comp=Z,104nm,26.5s
TAOE  Nuku Hiva Isla   85.54 105  eLR      LR     20 31 34.4
      comp=Z,206nm,22.9s
MEH   Mehetia          85.93 117  eT       T      21 39 28.0
      comp=Z,16nm,0.3s
TXAR  Lajitas Array    87.33  53   P       P      20 04 39.5 +0.9
      comp=Z,0.1nm,0.4s,baz=335,slow=4.0,SNR=1.2
      comp=Z,0.1nm,0.4s
TBI   Tubuai           88.81 122  eLR      LR     20 33 04.8
      comp=Z,372nm,25.8s
KEST  Kesra            93.60 324   P       P      20 05 08.6 +0.8
      comp=Z,6.1nm,0.9s,baz=202,slow=5.4,SNR=4.7
      comp=Z,6.1nm,0.9s
ESDC  Sonseca Array    95.36 335   P       P      20 05 16.1 +0.4
      comp=Z,0.8nm,0.8s,baz=24,slow=4.4,SNR=4.6
ESDC                               LR      LR     20 53 38.4
      comp=Z,108nm,18.9s,baz=30,slow=39
      comp=Z,0.8nm,0.8s
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*DDA **07** 20:02:38.0±0.0, 39.°56N×26.°11E, h7km±1km, ML1.5*

ISK 07 20:02:37.4, 39.°56N×26.°08E, h10km, ML1.9/8, Turkey

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Code  Station Name      Δ°   AZ°   Phase ID        Time       Res
                                   Op     ISC      h  m  s    ISC
KOCA  Canakkale, Ayv    0.07 140   P      Pg       20 02 40.2 +0.5
KOCA                               S      Sg       20 02 41.4 -0.1
GPNR  Gulpinar-Canak    0.11 157   Pg     Pg       20 02 40.7 +0.5
GPNR                               Sg     Sg       20 02 42.8 +0.6
BOZC  Bozcaada          0.28 356   Pg     Pg       20 02 43.6 +0.4
BOZC                               Sg     Sg       20 02 48.0 +1.0
BOZC  Bozcaada          0.28 356   P      Pg       20 02 43.8 +0.7
BOZC                             i AML    AML      20 02 48.0
      comp=E,107nm,0.4s
BOZC                               S      Sg       20 02 48.1 +1.1
BOZC                             i AML    AML      20 02 49.0
      comp=N,56nm,0.5s
EZN   Ezine             0.33  36   Pg     Pg       20 02 44.4 +0.4
EZN                                Sg     Sb       20 02 49.5 -1.1
SIGR  SIGRI             0.39 206   Pg     Pg       20 02 45.6 +0.5
BAYC  CANAKKALE_Bayr    0.41  63   P      Pg       20 02 45.9 +0.5
BAYC                               S      Sg       20 02 51.3 +0.5
COMU  Canakkale         0.62  29   Pg     Pg       20 02 49.8 +0.4
COMU                               Sg     Sb       20 02 59.1  0.0
GADA  Gvkgeada          0.65 348   Pg     Pb       20 02 50.4 -0.3
DKL   Dikili            0.81 127   Pg     Pb       20 02 53.3 -0.2
CANM  Can-anakkale      0.88  59   Pg     Pb       20 02 54.6 -0.1
GELI  Tayfur-Gelibol    0.89  20   Pg     Pb       20 02 54.8 -0.1
ERIK  Erikli-Kesan      1.16  17   Pn     Pn       20 02 59.6  0.0
KRBG  Karabiga-Canak    1.25  48   Pn     Pb       20 03 01.2 +0.1
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IDC 07 20:23:01.0±3.2, 13.°72S×123.°27E, h0km, mb3.0/1,

mbtmp3.4/3, ML3.6/2, Error ellipse: s-maj=201.4km s-min=33.5km az=45.0, Northwest of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	12.27	122	Pn	Pn	20 25 56.9	-0.3
	0.4nm,0.3s,baz=298,slow=14,SNR=14						
WRA				Sn	Sn	20 28 06.9	-7.9
	0.6nm,0.3s,baz=75,slow=22,SNR=9.8						
	0.7nm,0.4s						
ASAR	Alice Springs	14.11	136	Pn	Pn	20 26 22.8	+0.4
	0.3nm,0.3s,baz=312,slow=12,SNR=25						
ASAR				Sn	Sn	20 28 55.8	-4.0
	0.3nm,0.3s,baz=318,slow=26,SNR=9.4						
	1.1nm,0.6s						
MKAR	Makanchi Array	70.56	331	P	P	20 34 18.0	0.0
	0.1nm,0.6s,baz=123,slow=5.3,SNR=1.4						
	0.1nm,0.6s						

IDC 07 20:27:25.1±1.8, 4°.62S×150°.84E, h0^{km}, mb2.9/2, mbtmp3.0/2, Error ellipse: s-maj=76.1km s-min=13.0km az=159.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.22	75	Pg	Pb	20 27 49.0	-0.1
	62nm,0.3s,baz=240,slow=1.8,SNR=28						
KRVT				Lg	Lg	20 28 04.5	
	54nm,0.3s,baz=317,slow=22,SNR=33						
WRA	Warramunga Arr	22.14	225	P	P	20 32 23.3	+0.6
	0.2nm,0.6s,baz=50,slow=9.9,SNR=2.0						
	0.2nm,0.6s						
ASAR	Alice Springs	25.01	219	P	P	20 32 50.6	-0.4
	0.3nm,0.7s,baz=54,slow=8.9,SNR=2.2						
	0.3nm,0.7s						
TORD	Torodi Ar. Bea	148.40	288	PKPbc	PKPbc	20 47 13.9	-0.8
	0.3nm,0.6s,baz=64,slow=2.4,SNR=1.7						

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*IDC **07** 20:43:01.1±1.3, 1°.31N×125°.64E, h0^{km}, mb3.9/6, mbtmp3.9/6, Error ellipse: s-maj=151.0km s-min=17.5km az=65.0*

*DJA **07** 20:43:03.9±1.6, 2°N±5°×12°7E±°, h11^{km}±16^{km}, M3.9/10, mb4.2/2, mB4.8/1, MLv3.7/10, Mw(mB)4.0/1*

ISC 07 20:43:06.5±1.0, 1°.68N±0°.10×126°.64E±0°.08, h47^{km}, n15, σ0ˢ92/15, mb4.0/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.16	141	P	Pn	20 43 25.4	-0.9
SGSI	Sangihe	2.28	331	P	Pn	20 43 41.7	-0.1
LBMI	Labuha	2.46	160	P	Pn	20 43 43.9	-0.3
SANI	Sanana	3.76	190	P	Pn	20 44 00.8	-1.3
GTOI	Gorontalo	3.77	254	P	Pn	20 44 02.9	+0.6
LUWI	Luwuk	4.72	235	P	Pn	20 44 14.1	-1.1
MRSI	Marisa	4.85	256	P	Pn	20 44 16.1	-0.9
NLAI	Namlea	4.91	175	P	Pn	20 44 17.3	-0.5
SPSI	Sidrap Palu	8.87	231	P	Pn	20 45 12.2	+0.1
WRA	Warramunga Arr	22.78	161	P	P	20 48 04.4	-0.8
	3.9nm,0.5s,baz=337,slow=11,SNR=43						
	3.9nm,0.5s						
ASAR	Alice Springs	26.16	165	P	P	20 48 37.3	+0.5
	1.5nm,0.6s,baz=350,slow=14,SNR=22						
	1.5nm,0.6s						
STKA	Stephens Creek	36.26	158	P	P	20 50 07.3	+1.8
	1.1nm,0.6s,baz=318,slow=11,SNR=2.8						
	1.1nm,0.6s						
MKAR	Makanchi Array	59.19	326	P	P	20 53 02.3	-0.5
	0.6nm,0.5s,baz=119,slow=7.6,SNR=19						
	0.6nm,0.5s						
KURBB	Kurchatov Arra	63.41	328	P	P	20 53 30.9	-0.4
	0.5nm,0.3s,baz=127,slow=6.7,SNR=5.9						
	0.5nm,0.3s						
BVAR	Borovoye Array	68.98	327	P	P	20 54 06.8	-0.2
	0.3nm,0.3s,baz=131,slow=8.1,SNR=4.4						
	0.3nm,0.3s						

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*ISK **07** 20:53:38.6, 39°.52N×26°.13E, h12^{km}, ML2.6/13*

*THE **07** 20:53:39.2, 39°.51N×26°.13E, h5^{km}±1^{km}, ML2.3/6, Error ellipse: s-maj=1.4km s-min=0.4km az=208.0*

*ATH **07** 20:53:39.7, 39°.51N×26°.13E, h10^{km}±2^{km}, ML2.6/4, Error ellipse: s-maj=3.3km s-min=0.9km az=228.0*

*DDA **07** 20:53:39.2±0.0, 39°.52N×26°.17E, h9^{km}, ML2.5*

ISC 07 20:53:39.1±0.8, 39°.51N±0°.02×26°.14E±0°.02, h11^{km}±5^{km}, n45, σ0ˢ38/71, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.01	171	P	Pg	20 53 41.2	+0.1
KOCA				S	Sg	20 53 42.5	0.0
GPNR	Gulpinar-Canak	0.06	182	Pg	Pg	20 53 41.1	-0.2
GPNR				Sg	Sg	20 53 42.8	-0.1
PRK	Paraskevi	0.29	158	P	Pg	20 53 45.2	+0.3
PRK				S	Sg	20 53 48.8	0.0
	1µm,0.3s						
PRK	Paraskevi	0.29	158	P	Pg	20 53 45.3	+0.3
PRK				S	Sg	20 53 49.6	+0.8
PRK				AML	AML	20 53 50.5	
	comp=N,2398µm,0.5s						
PRK				AML	AML	20 53 51.1	
	comp=E,1878µm,0.2s						
EZN	Ezine	0.34	25	P	Pg	20 53 46.0	-0.1
EZN				S	Sg	20 53 50.9	+0.2
	comp=E,898nm,0.2s						
EZN	Ezine	0.34	25	Pg	Pg	20 53 46.3	+0.2
EZN				Sg	Sg	20 53 51.3	+0.6
SIGR	SIGRI	0.37	216	P	Pg	20 53 46.6	+0.1
SIGR				S	Sg	20 53 51.7	+0.3
	comp=E,600nm,0.2s						
SIGR	SIGRI	0.37	216	Pg	Pg	20 53 46.4	-0.1
SIGR				Sg	Sg	20 53 52.2	+0.8
SIGR	SIGRI	0.37	216	P	Pg	20 53 46.7	+0.1
SIGR				S	Sg	20 53 52.1	+0.6
SIGR				AML	AML	20 53 52.9	
	comp=E,1383µm,0.3s						
SIGR				AML	AML	20 53 53.8	
	comp=N,1042µm,0.2s						
BAYC	CANAKKALE_Bayr	0.39	54	P	Pg	20 53 46.7	-0.2
BAYC				S	Sg	20 53 51.9	-0.2
BAYC				*i* AML	AML	20 53 52.0	
	comp=N,318nm,0.6s						
ECEA	Canakkale, Ece	0.53	3	P	Pg	20 53 49.4	-0.1
ECEA				S	Sg	20 53 57.2	+0.6
ECEA				*i* AML	AML	20 54 02.0	
	comp=N,234nm,0.2s						
ECEA				*i* AML	AML	20 54 04.0	
	comp=N,201nm,0.3s						
GOKA	anakkale-Gk	0.70	346	P	Pg	20 53 52.8	+0.1
GOKA				S	Sg	20 54 01.3	-0.6
GOKA				*i* AML	AML	20 54 03.0	
	comp=N,230nm,0.2s						
GOKA				*i* AML	AML	20 54 07.0	
	comp=N,269nm,0.5s						
GADA	Gvkgeada	0.70	345	Pg	Pg	20 53 52.4	-0.4
BUHA	Balikesir, Bur	0.73	91	P	Pg	20 53 53.1	-0.1
BUHA				S	Sn	20 54 06.0	-0.5
DKL	Dikili	0.74	126	Pg	Pg	20 53 53.7	+0.2
LIA	Limnos Island	0.83	298	P	Pg	20 53 55.1	-0.1
LIA				S	Sb	20 54 06.7	0.0
	comp=N,560nm,0.3s						
LIA	Limnos Island	0.83	298	P	Pb	20 53 55.4	-0.1
LIA				S	Sb	20 54 06.7	0.0
LIA				AML	AML	20 54 08.6	
	comp=E,1843µm,0.3s						
LIA				AML	AML	20 54 10.6	
	comp=N,1517µm,0.3s						
KARB	zmir-Karabur	0.87	166	P	Pg	20 53 55.9	-0.1
KARB				S	Sg	20 54 07.7	+0.3
KARB				*i* AML	AML	20 54 10.0	
	comp=N,206nm,0.2s						
KARB				*i* AML	AML	20 54 10.0	
	comp=N,229nm,0.5s						
ZEDA	zmir-Bergama	0.91	126	P	Pg	20 53 56.7	0.0
ZEDA				S	Sn	20 54 10.3	-0.7
ZEDA				*i* AML	AML	20 54 11.0	
	comp=N,130nm,0.3s						
ZEDA				*i* AML	AML	20 54 13.0	
	comp=N,106nm,0.5s						
GELI	Tayfur-Gelibol	0.92	16	Pg	Pg	20 53 56.5	-0.4
LPK	Lapseki	0.98	29	Pg	Pg	20 53 57.8	-0.3
SMTH	Samothraki Isl	1.06	334	P	Pg	20 53 59.2	-0.4
SMTH				S	Sn	20 54 14.3	-0.6
	comp=N,130nm,0.2s						
SMTH	Samothraki Isl	1.06	334	P	Pg	20 53 59.6	-0.1
SMTH				S	Sb	20 54 14.1	+0.5
PSRA	Psara	1.07	205	P	Pn	20 54 00.2	+0.2
PSRA				AML	AML	20 54 18.2	
	comp=E,1293µm,0.2s						
PSRA				AML	AML	20 54 18.6	
	comp=N,1168µm,0.2s						
CHOS	Chios island	1.13	183	P	Pb	20 54 00.1	-0.5
BALY	Balya	1.17	78	P	Pb	20 54 01.5	+0.1
BALY				S	Sb	20 54 16.6	+0.1
CAVK	Edirne/Enez-Ca	1.18	1	P	Pg	20 54 01.9	0.0
CAVK				S	Sn	20 54 18.2	+0.6
CAVK				*i* AML	AML	20 54 19.0	
	comp=N,138nm,0.3s						
CAVK				*i* AML	AML	20 54 20.0	
	comp=N,96nm,0.4s						
ERIK	Erikli-Kesan	1.19	14	Pn	Pb	20 54 01.4	-0.4
URLA	Izmir	1.21	163	Pn	Pn	20 54 01.3	-0.7
ENEZ	Enez	1.22	1	P	Pn	20 54 02.1	-0.1
ENEZ	Enez	1.22	1	Pn	Pn	20 54 01.9	-0.3
STEP	BALIKESIR_Sava	1.23	96	P	Pn	20 54 02.5	+0.2
STEP				S	Sn	20 54 19.9	+0.9
STEP				*i* AML	AML	20 54 25.0	
	comp=N,60nm,0.8s						
KRBG	Karabiga-Canak	1.25	45	Pn	Pn	20 54 02.3	-0.3
GONE	Gonen-Balikesi	1.31	65	Pn	Pn	20 54 03.2	-0.1
KNL	Balıkesir	1.31	54	P	Pn	20 54 03.6	+0.2
KNL				S	Sg	20 54 21.9	+0.5
KNL				*i* AML	AML	20 54 22.0	
	comp=N,94nm,0.8s						
KNL				*i* AML	AML	20 54 27.0	
	comp=N,86nm,0.5s						
BLCB	Balcova	1.33	148	P	Pn	20 54 03.5	-0.1
BLCB	Balcova	1.33	148	Pn	Pn	20 54 03.5	-0.1
BALB	Balikesir	1.35	84	Pn	Pn	20 54 03.5	-0.5
KESN	Edirne-Kesan	1.38	17	P	Pb	20 54 05.2	+0.1
KESN				S	Sg	20 54 24.6	+1.1
KESN				*i* AML	AML	20 54 27.0	
	comp=N,169nm,0.3s						
KESN				*i* AML	AML	20 54 27.0	
	comp=N,127nm,0.2s						
ALN	Alexandroupoli	1.39	357	P	Pn	20 54 04.3	-0.1
ALN				S	Sn	20 54 22.9	+0.2
	comp=N,118nm,0.3s						
ALN	Alexandroupoli	1.39	357	P	Pn	20 54 04.4	-0.1
BKES	Balkesir-Mer	1.40	80	P	Pb	20 54 05.3	0.0
BKES				S	Sg	20 54 24.0	-0.3
RDO	Rodhopi	1.69	345	P	Pn	20 54 08.7	0.0
SMG	Samos	1.88	163	P	Pn	20 54 10.7	-0.6
KAVA	Kavala	1.93	321	P	Pn	20 54 12.1	+0.1

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*IDC **07** 21:07:15.0±1.7, 53°.65N×163°.69W, h0^{km}, mb3.8/13, mbtmp3.8/15, ML3.3/2, MS3.3/7, Error ellipse: s-maj=39.2km s-min=17.1km az=171.0*

*NEIC **07** 21:07:18.2±2.5, 53°.58N±0°.06×163°.69W±0°.08, h28^{km}±7^{km}, mb3.9/13, ML3.6/6, ML3.5(AEIC), Error ellipse: s-maj=8.9km s-min=6.3km az=200.0*

*AEIC **07** 21:07:19.8±2.2, 53°.64N±0°.08×163°.7W±0°.1, h40^{km}±5^{km}, Error ellipse: s-maj=13.0km s-min=6.6km az=150.0*

ISC 07 21:07:18.6±0.8, 53°.61N±0°.08×163°.53W±0°.05, h29^{km}, n99, σ1ˢ24/92, mb4.0/14, MS3.2/7, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FALS	False Pass	1.25	3		Pb	21 07 41.3	-0.2
FALS				Sg	Sb	21 07 58.1	+0.9
FALS	False Pass	1.25	3	P	Pb	21 07 41.1	-0.5
	baz=187						
AKUT	Akutan	1.43	292	Pn	Pn	21 07 42.3	-0.2
AKUT					Sn	21 07 57.5	-2.7
AKUT				IAML		21 08 07.0	
	comp=N,695nm,0.5s						
UNV	Unalaska Valle	1.78	279		Sn	21 08 09.1	+0.1
UNV	Unalaska Valle	1.78	279		Pn	21 07 46.4	-1.0
UNV	Unalaska Valle	1.78	279	P	Pn	21 07 46.5	-1.0
	baz=96						
UNV				S	Sn	21 08 09.1	+0.1
	baz=96						
S12K	Black Hills	2.26	22	P	Pn	21 07 55.5	+1.4
	baz=205						
SDPT	Sand Point	2.49	44		Pn	21 07 58.1	+1.0
SDPT				IAML		21 08 38.1	
	comp=E,351nm,1.2s						
SDPT	Sand Point	2.49	44	P	Pn	21 07 58.2	+1.1
	baz=229						
NIKH	Nikolski High	3.26	261		Pn	21 08 05.9	-1.8
NIKH	Nikolski High	3.26	261	P	Pn	21 08 06.9	-0.8
	baz=76						
CHGN	Chignik	4.00	46		Pn	21 08 19.0	+1.2
CHGN				IAML		21 09 25.2	
	comp=N,83nm,0.9s						
CHGN				IAML		21 09 34.1	
	comp=E,99nm,1.1s						
SPIA	Saint Paul Isl	5.23	316	Pn	Pn	21 08 34.9	+0.1
R17K	Ugashik Creek	5.71	42	P	Pn	21 08 43.1	+1.7
	baz=229						
P16K	Nushagak River	6.24	27	P	Pn	21 08 49.7	+1.0
	baz=213						
Q17K	Contact Creek	6.34	40	P	Pn	21 08 51.4	+1.4
	baz=227						
O16K	Kokwok River B	6.70	24	P	Pn	21 08 56.0	+1.0
	baz=210						
OHAK	Old Harbor	6.86	54	Pn	Pn	21 08 59.0	+1.9
O17K	Koliganek Bris	7.12	27	P	Pn	21 09 01.7	+1.1
	baz=213						
KDAK	Kodiak Island	7.46	52	Pn	Pn	21 09 04.6	-0.8
	comp=E,0.7nm,0.3s,baz=270,slow=5.1,SNR=17						
KDAK				Sn	Sn	21 10 24.3	-4.6
	comp=E,0.4nm,0.3s,baz=352,slow=22,SNR=8.2						
	comp=E,13nm,1.1s						
KDAK	Kodiak Island	7.46	52	Pn	Pn	21 09 06.8	+1.4
Q19K	Cape Douglas,	7.66	42	Pn	Pn	21 09 09.2	+1.1
Q19K	Cape Douglas,	7.66	42	P	Pn	21 09 09.5	+1.5
	baz=231						
ADK	Adak	8.17	263	Pn	Pn	21 09 14.3	-0.8
ILSW	Iliamna Southw	8.55	38	Pn	Pn	21 09 22.2	+1.7
SVW2	Sparrevohn	8.64	27	Pn	Pn	21 09 23.1	+1.5
N19K	Bonanza Creek	8.72	31	Pn	Pn	21 09 24.2	+1.4
CNPM	China Poot	9.00	44	Pn	Pn	21 09 27.1	+0.6
M19K	Big River Lodg	9.63	27	Pn	Pn	21 09 37.1	+2.0
L19K	White Mountain	9.74	25	Pn	Pn	21 09 38.3	+1.6
M20K	Styx River	9.97	30	Pn	Pn	21 09 41.6	+1.9
TTA	Tatalina	10.14	20	Pn	Pn	21 09 43.8	+1.7
SKT	Skwentna	10.54	32	Pn	Pn	21 09 49.0	+1.5
K20K	Telida	10.94	23	Pn	Pn	21 09 55.0	+2.0
PWL	Port Wells	10.96	42	Pn	Pn	21 09 52.9	-0.3
ANM	Nome	11.03	356	Pn	Pn	21 09 56.5	+2.3
PPLA	Purkeypile	11.04	28	Pn	Pn	21 09 56.4	+1.9
KNK	Knik Glacier	11.24	40	Pn	Pn	21 09 56.4	-0.7
CAST	Castle Rocks	11.49	27	Pn	Pn	21 10 01.0	+0.5
SCM	Sheep Creek Mo	11.92	40	Pn	Pn	21 10 05.5	-1.0
KLU	Klutina	12.28	43	Pn	Pn	21 10 10.0	-1.5
BPAW	Bear Paw Mtn.	12.33	27	Pn	Pn	21 10 13.0	+1.0
MLY	Manley	13.14	24	Pn	Pn	21 10 23.4	+0.3
VRDI	Verde Repeater	13.19	47	Pn	Pn	21 10 23.2	-0.7
PAX	Paxson	13.30	38	Pn	Pn	21 10 26.0	+0.8
IMAR	Indian Mountai	13.32	18	Pn	Pn	21 10 26.1	+0.6
M26K	Nabesna, AK	13.94	43	Pn	Pn	21 10 33.0	-1.0
RIDG	Independent Ri	13.99	36	Pn	Pn	21 10 33.7	-0.9
IL31		14.01	30	Pn	Pn	21 10 33.4	-1.4
ILAR	Eielson Array	14.01	30	Pn	Pn	21 10 33.5	-1.4
	comp=E,0.1nm,0.3s,baz=216,slow=12,SNR=6.7						
	comp=E,0.2nm,0.6s						
ILAR	Eielson Array	14.01	30	Pn	Pn	21 10 34.0	-0.8
CTGM	Chitina Glacie	14.03	50	Pn	Pn	21 10 36.0	+0.7
H23K	Yukon River	14.08	24	Pn	Pn	21 10 36.4	+0.5
DOT	Dot Lake	14.21	37	Pn	Pn	21 10 39.4	+1.7
M27K	Edge Creek, AK	14.38	44	Pn	Pn	21 10 39.4	-0.6
BCAR	Beaver Creek A	14.76	41	Pn	Pn	21 10 43.9	-1.2
J26L	Joseph Creek	14.90	35	Pn	Pn	21 10 45.7	-1.4
COLD	Coldfoot	15.10	20	Pn	Pn	21 10 49.8	+0.2
COLD				IAmb	IAmb	21 11 06.0	
	comp=Z,7.5nm,1.0s						
I26K	Coal Creek Min	15.54	33	Pn	Pn	21 10 55.6	+0.3
EGAK	Eagle	15.90	37	Pn	Pn	21 11 00.7	+0.7
EGAK				IAmb	IAmb	21 11 15.0	
	comp=Z,8.2nm,1.1s						
TOLK	Toolik Lake Re	16.44	18	Pn	Pn	21 11 07.4	+0.5
BMAR	Burnt Mountain	16.59	26	Pn	Pn	21 11 08.1	-0.7
FARO	Faro, Yukon	18.05	49	P	P	21 11 28.9	+1.7
FARO				IAmb	IAmb	21 11 50.3	
	comp=Z,6.1nm,0.8s						
BILL	Bilibino	20.31	327	P	P	21 11 49.9	-1.9
BILL				IAmb	IAmb	21 11 57.2	
	comp=Z,4.6nm,1.0s						
INK	Inuvik	20.39	32	P	P	21 11 52.6	0.0
	comp=Z,0.7nm,0.5s,baz=238,slow=11,SNR=2.8						
	comp=Z,0.7nm,0.5s						
INK	Inuvik	20.39	32	P	P	21 11 52.0	-0.6
BBB	Bella Bella	21.28	79	LR	LR	21 19 15.6	
	comp=Z,48nm,18.2s,baz=232,slow=34						
PEA0B	Petropavlovsk-	22.95	285	P	P	21 12 18.9	-1.4
PETK	Petropavlovsk-	22.95	285	P	P	21 12 20.0	-0.3
	comp=Z,1.9nm,0.7s,baz=82,slow=13,SNR=10						
PETK				LR	LR	21 21 48.3	
	comp=Z,60nm,19.6s,baz=94,slow=38						
	comp=Z,1.9nm,0.7s						
A36M	Sachs Harbour	24.67	28	P	P	21 12 36.5	+0.1
YKA	Yellowknife Ar	26.74	51	P	P	21 12 57.3	+2.1
	comp=Z,0.6nm,0.6s,baz=270,slow=9.2,SNR=11						
	comp=Z,0.6nm,0.6s						
YKA	Yellowknife Ar	26.74	51	P	P	21 12 55.1	-0.1
NEW	Newport	29.31	81	LR	LR	21 23 34.0	
	comp=Z,41nm,18.5s,baz=88,slow=33						
YBH	Yreka Blue Hor	29.53	97	LR	LR	21 22 17.2	
	comp=Z,48nm,18.0s,baz=257,slow=30						
TIXI	Tiksi	33.52	328	P	P	21 13 54.7	-0.4
	comp=Z,1.4nm,0.5s,baz=270,slow=20,SNR=18						
	comp=Z,1.4nm,0.5s						
TIXI	Tiksi	33.52	328	P	P	21 13 54.4	-0.7
TIXI				IAmb	IAmb	21 13 56.1	
	comp=Z,1.4nm,0.5s						
RES	Resolute Bay	33.70	26	P	P	21 13 56.4	-0.2
RES				IAmb	IAmb	21 14 09.8	
	comp=Z,2.8nm,1.3s						
YAK	Yakutsk	35.02	311	LR	LR	21 30 28.9	
	comp=Z,57nm,18.2s,baz=264,slow=40						
KLR	Kul'dur	39.35	291	LR	LR	21 30 40.7	
	comp=Z,39nm,20.2s,baz=88,slow=36						
H11N2	WAKE ISLAND Hy	40.74	225	T	T	21 58 35.9	
	baz=26,slow=76,SNR=37						
H11N3	WAKE ISLAND Hy	40.74	225	T	T	21 58 36.4	
	baz=26,slow=76,SNR=49						
H11N1	WAKE ISLAND Hy	40.76	225	T	T	21 58 37.9	
	baz=26,slow=76,SNR=29						
H11S1	WAKE ISLAND Hy	41.91	225	T	T	22 00 13.0	
	baz=26,slow=76,SNR=56						
H11S2	WAKE ISLAND Hy	41.92	225	T	T	22 00 05.2	
	baz=26,slow=76,SNR=46						
H11S3	WAKE ISLAND Hy	41.93	225	T	T	22 00 05.2	
	baz=26,slow=76,SNR=43						
FRB	Frobisher Bay	45.87	38	P	P	21 15 38.5	+0.8
	comp=Z,0.8nm,0.3s,baz=322,slow=9.9,SNR=3.4						
FRB				LR	LR	21 35 57.3	
	comp=Z,73nm,18.1s,baz=288,slow=38						
	comp=Z,0.8nm,0.3s						
TXAR	Lajitas Array	49.26	95	P	P	21 16 05.5	+0.9
	comp=Z,0.4nm,0.6s,baz=302,slow=5.2,SNR=1.3						
	comp=Z,0.4nm,0.6s						
SONM	Songino Array	53.63	303	P	P	21 16 37.7	+0.5
	comp=Z,1.1nm,0.7s,baz=40,slow=7.5,SNR=7.5						
	comp=Z,1.1nm,0.7s						
ARCES	ARCESS Array B	56.99	356	P	P	21 17 00.6	-0.2
	comp=Z,0.9nm,0.7s,baz=6.8,slow=8.1,SNR=5.4						
	comp=Z,0.9nm,0.7s						
ZALV	Zalesovo Beam	58.81	320	P	P	21 17 14.4	+0.6
	comp=Z,0.4nm,0.3s,baz=46,slow=8.3,SNR=3.2						
	comp=Z,0.4nm,0.3s						
FINES	FINESS Array B	65.04	355	P	P	21 17 55.8	+0.4
	comp=Z,1.6nm,0.7s,baz=23,slow=7.5,SNR=1.9						
	comp=Z,1.6nm,0.7s						
FINES	FINESS Array B	65.04	355	P	P	21 17 55.2	-0.2
MK31	Makanchi Array	65.42	316	P	P	21 17 57.7	-0.6
MK31				IAmb	IAmb	21 18 05.7	
	comp=Z,1.1nm,1.1s						
MKAR	Makanchi Array	65.42	316	P	P	21 17 58.2	-0.1
	comp=Z,0.2nm,0.3s,baz=48,slow=7.7,SNR=8.2						
	comp=Z,0.2nm,0.3s						
MKAR	Makanchi Array	65.42	316	P	P	21 17 57.6	-0.7
ABKAR	Akbulak array	71.13	332	P	P	21 18 34.4	+0.4
ABKAR	Akbulak array	71.13	332	P	P	21 18 34.7	+0.8
ABKAR				IAmb	IAmb	21 18 41.9	
	comp=Z,2.4nm,0.9s						
AKASG	Malin Array Be	75.51	352	P	P	21 18 59.9	+0.2
	comp=Z,0.9nm,0.5s,baz=12,slow=5.9,SNR=5.6						
	comp=Z,0.9nm,0.5s						
ESDC	Sonseca Array	85.43	16	P	P	21 19 54.6	+1.4
	comp=Z,0.5nm,0.8s,baz=332,slow=4.2,SNR=2.2						
	comp=Z,0.5nm,0.8s						

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*IDC **07** 21:10:20.4±1.3, 6°.44S×130°.68E, h0^{km}, mb4.1/5, mbtmp4.3/7, ML4.9/2, MS3.0/3, Error ellipse: s-maj=92.7km s-min=20.4km az=67.0*

*DJA **07** 21:10:30.3±0.2, 7°S±2°×13°1E±°, h121^{km}±5^{km}, M4.6/13, mB5.0/9, mb4.6/13, MLv4.8/13, Mw(mB)4.4/9*

*NEIC **07** 21:10:31.8±1.1, 6°.50S±0°.07×130°.55E±0°.02, h89^{km}±7^{km}, mb4.3/28, Error ellipse: s-maj=9.7km s-min=3.1km az=189.0*

ISC 07 21:10:31.0±0.5, 6°.52S±0°.05×130°.61E±0°.06, h90^{km}, n87, σ1ˢ39/84, mb4.3/17, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.61	155	Pn	Pn	21 10 59.2	+1.0
SAUI				Sn	Sn	21 11 19.9	+1.2
SAUI	Saumlaki	1.61	155	P	Pn	21 10 59.2	+1.0
SAUI				S	Sn	21 11 19.9	+1.2
BNDI	Bandanaira	2.10	340	P	Pn	21 11 04.8	+0.2
BNDI	Bandanaira	2.10	340	P	Pn	21 11 04.8	+0.2
MSAI	Masohi	3.57	332	P	Pn	21 11 25.5	+1.3
AAI	Ambon	3.70	319	P	Pn	21 11 26.2	+0.2
FAKI	Fak Fak	3.93	25	Pn	Pn	21 11 28.3	-0.8
FAKI	Fak Fak	3.93	25	P	Pn	21 11 28.2	-0.9
FAKI	Fak Fak	3.93	25	P	Pn	21 11 28.2	-0.9
NLAI	Namlea	4.78	313	P	Pn	21 11 41.4	+0.8
RKPI	Ransiki, Papua	6.11	36	P	Pn	21 11 58.9	+0.1
	187nm,0.5s,4µm2.5nm						
MTN	Manton Dam	6.31	175	Pn	Pn	21 12 00.4	-1.1
MTN	Manton Dam	6.31	175	P	Pn	21 12 00.2	-1.3
SANI	Sanana	6.40	314	P	Pn	21 12 05.1	+2.4
	197nm,0.8s						
SANI	Sanana	6.40	314	P	Pn	21 12 04.7	+2.0
	196nm,0.8s,2µm0.6nm						
KDU	Kakadu	6.40	163	P	Pn	21 12 00.9	-1.8
LBMI	Labuha	6.61	332	P	Pn	21 12 06.6	+1.0
SOEI	Soe	7.06	242	Pn	Pn	21 12 11.8	0.0
SOEI	Soe	7.06	242	P	Pn	21 12 11.8	0.0
	85nm,0.6s						
SOEI	Soe	7.06	242	P	Pn	21 12 12.3	+0.5
	83nm,0.8s,1µm0.9nm						
MMRI	Maumere	8.56	255	Pn	Pn	21 12 34.4	+2.2
KNRA	Kununurra	9.28	191	Pn	Pn	21 12 39.1	-2.9
KNRA	Kununurra	9.28	191	P	Pn	21 12 39.4	-2.6
KAPI	Kappang	10.91	277	LR	LR	21 17 36.3	
	comp=Z,50nm,18.1s,baz=250,slow=40						
PLAI	Plampang	12.93	259	P	Pn	21 13 29.8	-1.5
	33nm,1.3s						
PLAI	Plampang	12.93	259	P	Pn	21 13 29.2	-2.1
	32nm,1.3s						
TWSI	Taliwang, Sumb	13.79	260	P	Pn	21 13 40.6	-2.0
	18nm,1.1s						
WRA	Warramunga Arr	13.83	165	Pn	Pn	21 13 37.9	-5.3
	5.9nm,0.3s,baz=350,slow=13,SNR=89						
WRA				Sn	Sn	21 16 01.0	-14
	3.8nm,0.3s,baz=346,slow=20,SNR=4.6						
	12nm,0.5s						
COEN	Coen	14.40	122	Pn	Pn	21 13 48.2	-2.4
COEN	Coen	14.40	122	P	Pn	21 13 48.5	-2.1
	35nm,0.6s						
JAGI	Jajag, Banyuwa	16.43	262	Pn	Pn	21 14 14.2	-2.1
JAGI	Jajag, Banyuwa	16.43	262	P	Pn	21 14 16.5	+0.2
	28nm,1.1s						
JAGI	Jajag, Banyuwa	16.43	262	P	Pn	21 14 13.9	-2.4
	28nm,1.1s						
QIS	Mount Isa	16.46	149	P	Pn	21 14 14.5	-2.1
	21nm,0.8s						
PMG	Port Moresby	16.64	101		P	21 14 20.5	+0.8
PMG				IAmb	IAmb	21 14 49.9	
	comp=Z,10nm,0.8s						
AS31	Alice Springs	17.34	170		Pn	21 14 24.6	-2.9
AS31				IAmb	IAmb	21 14 29.7	
	comp=Z,5.8nm,0.4s						
ASAR	Alice Springs	17.34	170	P	Pn	21 14 25.1	-2.4
	comp=Z,3.9nm,0.3s,baz=350,slow=8.9,SNR=133						
ASAR				S	Sn	21 17 24.3	-16
	comp=Z,4.7nm,0.6s,baz=332,slow=14,SNR=8.8						
	comp=Z,7.9nm,0.5s						

ASAR	**Alice Springs**	17.34	170		Pn	21 14 25.3	-2.2
AS01	**Alice Springs**	17.35	170	P	Pn	21 14 25.0	-2.5
	comp=Z,24nm,0.5s						
MTSU	**Mount Surprise**	17.66	132	P	Pn	21 14 31.5	+0.1
	comp=Z,11nm,0.6s						
MBWA	**Marble Bar**	17.97	215	P	P	21 14 33.0	-1.3
MBWA				IAmb	IAmb	21 14 58.6	
	comp=Z,24nm,1.1s						
MBWA	**Marble Bar**	17.97	215	P	P	21 14 34.5	+0.1
	comp=Z,9.4nm,1.5s						
PSA00	**Pilbara Seismi**	18.23	214		P	21 14 36.6	-0.6
PSA00				IAmb	IAmb	21 14 54.2	
	comp=Z,32nm,1.2s						
PSA00	**Pilbara Seismi**	18.23	214	P	P	21 14 37.8	+0.5
	comp=Z,20nm,0.6s						
WRKA	**Warakurna**	18.55	187	P	P	21 14 40.4	-0.4
	comp=Z,12nm,0.6s						
KKM	**Kota Kinabalu**	19.03	311	P	P	21 14 46.6	+0.5
KKM				IAmb	IAmb	21 14 48.9	
	comp=Z,11nm,0.6s						
KKM	**Kota Kinabalu**	19.03	311	P	Pn	21 14 48.6	+0.8
	comp=Z,15nm,1.2s						
CTA	**Charters Tower**	20.31	133	P	Pn	21 15 02.5	-0.3
	comp=Z,8.6nm,0.7s,baz=327,slow=13,SNR=12						
CTAO	**Charters Tower**	20.31	133		P	21 15 00.9	+0.9
CTAO				IAmb	IAmb	21 15 03.4	
	comp=Z,9.8nm,0.8s						
SBUM	**Sibu**	20.41	295	P	P	21 15 00.8	-0.2
SBUM				IAmb	IAmb	21 15 03.6	
	comp=Z,17nm,1.5s						
MEEK	**Meekatharra**	23.05	208	P	P	21 15 29.0	+0.2
	comp=Z,9.8nm,0.9s						
INKA	**Innaminka**	23.20	157	P	P	21 15 31.9	+1.7
	comp=Z,16nm,0.8s						
MULG	**Mulgathing**	23.86	173	P	P	21 15 37.0	+0.8
	comp=Z,11nm,0.9s						
FORT	**Forrest**	24.26	185	P	P	21 15 41.3	+1.6
FORT				IAmb	IAmb	21 16 02.1	
	comp=Z,12nm,0.8s						
GUMO	**Guam**	24.48	35	LR	LR	21 27 26.5	
	comp=Z,26nm,18.1s,baz=150,slow=42						
MORW	**Morawa**	26.32	210	P	P	21 15 58.6	+0.2
MORW				IAmb	IAmb	21 16 16.8	
	comp=Z,14nm,1.2s						
BBOO	**Buckleboo**	26.65	170	P	P	21 16 01.3	-0.1
BBOO	**Buckleboo**	26.65	170	P	P	21 16 01.9	+0.5
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	27.24	159	P	P	21 16 07.1	+0.4
	comp=Z,1.2nm,0.3s,baz=328,slow=9.4,SNR=4.0						
	comp=Z,1.2nm,0.3s						
STKA	**Stephens Creek**	27.24	159	P	P	21 16 06.8	+0.1
BLDU	**Ballidu**	27.30	207	P	P	21 16 09.8	+2.6
CMSA	**Cobar Meteorol**	28.61	152	P	P	21 16 20.8	+1.9
KULM	**Kulim**	32.12	291	P	P	21 16 48.2	-2.0
KULM				IAmb	IAmb	21 16 50.1	
	comp=Z,8.9nm,1.1s						
JOW	**Kunigami**	33.23	356	LR	LR	21 30 55.2	
	comp=Z,29nm,18.3s,baz=234,slow=37						
PHRA	**Phrae**	38.93	310	P	P	21 17 48.0	-0.4
CRAI	**Chiangrai**	39.88	312	P	P	21 17 55.5	-0.7
CMAR	**Chiang Mai Arr**	39.89	309	P	P	21 17 56.5	+0.1
	comp=Z,1.3nm,0.6s,baz=134,slow=7.0,SNR=11						
	comp=Z,1.3nm,0.6s						
CHTO	**Chiang Mai**	40.10	309	P	P	21 17 57.2	-0.9
ENH	**Enshi**	41.82	332	P	P	21 18 11.8	-0.3
PZH	**PanZhiHua**	43.14	321	P	P	21 18 24.8	+1.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,5.3s						
HHC	**Hu-ho-hao-te**	50.28	341	*e*P	P	21 19 20.4	+2.0
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC				pmax	pmax		
	comp=Z,190nm,5.1s						
LSA	**Lhasa**	52.27	316	P	P	21 19 33.2	-0.8
SONM	**Songino Array**	58.18	341	P	P	21 20 16.5	+0.8
	comp=Z,0.6nm,0.5s,baz=168,slow=6.6,SNR=6.9						
	comp=Z,0.6nm,0.5s						
SONM	**Songino Array**	58.18	341	P	P	21 20 16.4	+0.7
WMQ	**Urumqi**	63.32	327	*e*P	P	21 20 52.7	+2.1
MK31	**Makanchi Array**	68.16	326	P	P	21 21 22.1	+0.5
MK31				IAmb	IAmb	21 21 23.8	
	comp=Z,1.9nm,0.6s						
MKAR	**Makanchi Array**	68.16	326	P	P	21 21 22.4	+0.7
	comp=Z,3.3nm,0.6s,baz=119,slow=8.0,SNR=24						
	comp=Z,3.3nm,0.6s						
MKAR	**Makanchi Array**	68.16	326	P	P	21 21 22.1	+0.5
MAKZ	**Makanchi**	68.34	326	P	P	21 21 22.9	+0.2
MAKZ				IAmb	IAmb	21 21 24.8	
	comp=Z,2.7nm,0.6s						
AAK	**Ala-Archa**	70.57	319	P	P	21 21 37.6	+0.8
AAK				IAmb	IAmb	21 21 44.8	
	comp=Z,3.0nm,1.2s						
ZALV	**Zalesovo Beam**	71.42	333	P	P	21 21 41.4	-0.1
	comp=Z,0.7nm,0.5s,baz=141,slow=5.6,SNR=4.0						
	comp=Z,0.7nm,0.5s						
GAR	**Garm**	71.76	315	P	P	21 21 45.5	+1.6
KKAR	**Karatay Array**	73.38	319	P	P	21 21 53.6	+0.2
TIXI	**Tiksi**	78.02	359	P	P	21 22 19.7	+0.6
ABKAR	**Akbulak array**	82.51	321	P	P	21 22 44.4	+0.6
ABKAR	**Akbulak array**	82.51	321	P	P	21 22 44.1	+0.4
ABKAR				IAmb	IAmb	21 23 10.2	
	comp=Z,1.2nm,1.1s						
QSPA	**South Pole Qui**	83.46	180	P	P	21 22 50.0	+1.4

IDC 07 21:12:03.9±26.0**, 31°.26N×104°.95E, h0^{km}, mb3.4**/2**, mbtmp3.4**/3**, ML3.4**/1**, Error ellipse: s-maj=402.7km s-min=95.2km az=147.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	16.59	3	Pn	Pn	21 15 58.1	+0.2
	0.1nm,0.3s,baz=181,slow=12,SNR=5.5						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	23.34	318	P	P	21 17 13.8	0.0
	0.4nm,0.6s,baz=116,slow=10,SNR=5.2						
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	26.90	333	P	P	21 17 46.4	0.0
	0.6nm,0.5s,baz=133,slow=7.6,SNR=3.8						
	0.6nm,0.5s						

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*KRNET **07** 21:16:18.0±0.1, 39°.90N×77°.23E, mb2.9*
*SOME **07** 21:16:20.4, 40°.00N×77°.10E, h15^{km}*
*NNC **07** 21:16:22.1±1.1, 40°.09N×77°.23E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=7.4km s-min=5.5km az=152.0*
ISC 07 21:16:20.1±2.0**, 39°.89N**±0°.08×**77°.29E**±0°.05**, h1^{km}**±15^{km}**, n72, σ1^{s}27**/90**, 29C-11D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	**Naryn**	1.83	328	⇑*e*P	Pn	21 16 51.6	-1.4
	baz=28						
NRN				⇑*i*S	Sn	21 17 15.9	-1.1
	baz=28						
TARG	**Taragay, Kyrgy**	1.88	12	⇑*e*P	Pn	21 16 53.1	-0.7
	baz=13						
TARG				⇑*i*S	Sb	21 17 18.6	-1.0
	baz=13						
KDJ	**Kajisay**	2.24	358	⇑*e*P	Pn	21 16 58.2	-0.3
	baz=59						
KDJ				⇑*i*S	Sb	21 17 27.3	-2.5
	baz=59						
ULHL	**Ulahol**	2.48	342	P	Pb	21 17 03.4	-2.3
	SNR=5.8						
ULHL	**Ulahol**	2.48	342	⇑*i*P	Pn	21 17 01.5	-0.4
	baz=43						
ULHL				⇑*i*S	Sn	21 17 33.1	+0.1
	baz=43						
PRZ	**Przheval'sk**	2.72	18	⇓*i*P	Pn	21 17 05.4	+0.2
	baz=18						
PRZ				⇓*i*S	Sn	21 17 40.1	+1.2
	baz=18						
BOOM	**Boomskoye usch**	2.79	339	⇑*i*P	Pn	21 17 05.8	-0.3
	baz=40						
BOOM				⇑*i*S	Sn	21 17 40.8	+0.3
	baz=40						
ANVS	**Anan'yevo**	2.90	5	⇑*i*P	Pn	21 17 07.7	0.0
	baz=6.0						
ANVS				⇑*i*S	Sn	21 17 43.8	+0.5
	baz=6.0						
ARLS	**Aral**	2.99	312	⇑*e*P	Pn	21 17 08.2	-0.6
	baz=13						
ARLS				⇑*i*S	Sn	21 17 44.4	-1.0
	baz=13						
UCH	**Uchtor**	3.14	319	P	Pn	21 17 12.1	+1.0
	SNR=16						
UCH	**Uchtor**	3.14	319	⇑*i*P	Pn	21 17 10.5	-0.7
	baz=20						
UCH				⇑*i*S	Sn	21 17 48.6	-0.9
	baz=20						
TNSS	**Tian-Shan**	3.15	355	Pg	Pb	21 17 17.2	0.0
TNSS				Lg	Lg	21 17 56.8	
TNSS	**Tian-Shan**	3.15	355	*e*Pg	Pb	21 17 16.9	-0.3
	3.3nm,0.2s						
TNSS				*e*Lg	Lg	21 17 56.8	
	46nm,0.2s						
MDOK	**Medeo**	3.27	357	⇓Pg	Pb	21 17 17.9	-1.2
	8.8nm,0.6s						
MDOK				Pg	Pb	21 17 18.6	-0.6
	8.6nm,0.7s						
MDOK				Lg	Lg	21 17 59.9	
	73nm,0.8s						
MDOK				Lg	Lg	21 18 00.7	
	53nm,0.6s						
MDOK	**Medeo**	3.27	357	*e*Pg	Pb	21 17 18.6	-0.6
	8.5nm,0.2s						
MDOK				*e*Lg	Lg	21 17 59.9	
	73nm,0.3s						
SATY	**Saty**	3.27	14	Pg	Pb	21 17 18.0	-1.1
	17nm,0.5s						
SATY				Lg	Lg	21 17 58.8	
	51nm,0.6s						
SATY	**Saty**	3.27	14	*e*Pg	Pb	21 17 18.0	-1.1
	17nm,0.5s						
SATY				*e*Lg	Lg	21 17 58.8	
	51nm,0.6s						
KBK	**Karagaybulak**	3.28	328	P	Pb	21 17 18.1	-1.1
	SNR=13						
KBK	**Karagaybulak**	3.28	328	⇑*e*P	Pn	21 17 12.5	-0.3
	baz=29						
KBK				⇑*i*S	Sn	21 17 51.8	-0.8
	baz=29						
TKM2	**Tokmak 2**	3.28	338	P	Pn	21 17 14.2	+1.3
	SNR=20						
TKM2	**Tokmak 2**	3.28	338	⇑Pg	Pb	21 17 15.9	-3.4
	5.4nm,0.5s						
TKM2				⇓Lg	Lg	21 18 01.2	
	26nm,0.5s						
MTBS	**Maitube**	3.30	349	Pg	Pb	21 17 19.8	+0.2
	6.1nm,0.4s						
MTBS				Lg	Lg	21 18 01.3	
	29nm,0.6s						
MTBS	**Maitube**	3.30	349	*e*Pg	Pb	21 17 18.5	-1.0
	6.0nm,0.1s						
MTBS				*e*Lg	Lg	21 17 59.2	
	29nm,0.6s						
KST	**Kastek**	3.30	343	Pg	Pb	21 17 19.9	+0.3
	8.1nm,0.6s						
KST				Lg	Lg	21 18 01.9	
	33nm,0.7s						
KST	**Kastek**	3.30	343	*e*Pg	Pb	21 17 18.4	-1.2
	5.3nm,0.1s						
KST				*e*Lg	Lg	21 17 59.1	
	33nm,0.7s						
AAA	**Alma-Ata**	3.33	355	Pg	Pb	21 17 21.0	+1.1
	26nm,0.3s						
AAA				Lg	Lg	21 18 03.4	
	106nm,0.6s						
AAA	**Alma-Ata**	3.33	355	*e*Pg	Pb	21 17 19.4	-0.6
	15nm,0.1s						
AAA				*e*Lg	Lg	21 18 00.7	
	108nm,0.3s						
KNDC	**Almaty**	3.33	356	⇓Pg	Pb	21 17 18.3	-1.8
	23nm,0.6s						
KNDC				⇑Lg	Lg	21 18 03.8	
	159nm,0.6s						
KOTS	**Kotyrbulak**	3.34	358	Pg	Pb	21 17 20.2	-0.1
	9.7nm,0.5s						
KOTS				Lg	Lg	21 18 02.8	
	113nm,0.8s						
KOTS	**Kotyrbulak**	3.34	358	*e*Pg	Pb	21 17 20.2	-0.1
	9.7nm,0.5s						
KOTS				*e*Lg	Lg	21 18 02.8	
	113nm,0.8s						
ZHN	**Zhinishke**	3.38	14	*e*Pg	Pb	21 17 20.5	-0.5
	9.7nm,0.1s						
ZHN				*e*Lg	Lg	21 18 02.5	
	41nm,0.5s						
UZB	**Uzynbulak**	3.50	21	Pg	Pb	21 17 23.3	+0.3
	6.7nm,0.3s						
UZB				Lg	Lg	21 18 08.0	
	17nm,0.6s						
UZB	**Uzynbulak**	3.50	21	*e*Pg	Pb	21 17 23.3	+0.3
	6.7nm,0.3s						
UZB				*e*Lg	Lg	21 18 08.0	
	17nm,0.6s						
OHH	**Osh**	3.51	282	⇓*i*P	Pn	21 17 14.8	-1.1
	baz=82						
OHH				⇓*i*S	Sn	21 17 56.7	-1.4
	baz=82						
AML	**Almayashu**	3.52	311	P	Pn	21 17 17.5	+1.2
	SNR=12						
AML	**Almayashu**	3.52	311	⇓Pn	Pn	21 17 17.0	+0.7
	1.1nm,0.5s						
AML				⇑Lg	Lg	21 18 08.3	
	5.9nm,0.7s						
DGS	**Degeres**	3.54	342	Pg	Pb	21 17 22.8	-0.7
	11nm,0.5s						
DGS				Lg	Lg	21 18 06.6	
	31nm,0.6s						
DGS	**Degeres**	3.54	342	*e*Pg	Pb	21 17 22.8	-0.7
	11nm,0.5s						
DGS				*e*Lg	Lg	21 18 06.6	
	31nm,0.6s						
FRU1	**Bishkek**	3.54	326	⇑*i*P	Pn	21 17 15.9	-0.4
	baz=27						
FRU1				⇑*i*S	Sn	21 17 58.9	+0.1
	baz=27						
SHLS	**Shalkode**	3.65	26	Pg	Pg	21 17 29.2	-0.7
	12nm,0.5s						
SHLS				Lg	Lg	21 18 18.0	
	24nm,0.5s						
SHLS	**Shalkode**	3.65	26	*e*Pg	Pg	21 17 29.2	-0.7
	12nm,0.5s						
SHLS				*e*Lg	Lg	21 18 17.9	
	24nm,0.5s						
KURS	**Kuram**	3.65	10	Pg	Pb	21 17 24.8	-0.7
	4.8nm,0.6s						
KURS				Lg	Lg	21 18 10.7	
	9.4nm,0.8s						
KURS	**Kuram**	3.65	10	*e*Pg	Pb	21 17 24.8	-0.7
	4.8nm,0.6s						
KURS				*e*Lg	Lg	21 18 10.7	
	9.4nm,0.8s						
KPKS	**Kokpek**	3.72	16	Pg	Pb	21 17 27.7	+1.0
	11nm,0.3s						
KPKS				Lg	Lg	21 18 15.1	
	42nm,0.8s						
KPKS	**Kokpek**	3.72	16	*e*Pg	Pb	21 17 26.0	-0.7
	7.7nm,0.2s						
KPKS				*e*Lg	Lg	21 18 12.0	
	42nm,0.3s						
PDGK	**Podgornoye**	3.81	25	Pg	Pb	21 17 28.2	0.0
	3.4nm,0.5s						
PDGK				Lg	Lg	21 18 16.5	
	14nm,0.9s						
PDGK	**Podgornoye**	3.81	25	⇓Pg	Pb	21 17 27.1	-1.2
	6.2nm,0.6s						
PDGK				⇑Lg	Lg	21 18 17.2	
	24nm,0.6s						
EKS2	**Erkin-Say**	3.83	317	P	Pn	21 17 22.2	+1.8
	SNR=31						
KTBS	**Karatobe**	3.84	353	Pg	Pb	21 17 29.1	+0.3
	5.3nm,0.6s						
KTBS				Lg	Lg	21 18 17.9	
	35nm,0.5s						
KTBS	**Karatobe**	3.84	353	*e*Pg	Pb	21 17 29.1	+0.3
	5.3nm,0.6s						
KTBS				*e*Lg	Lg	21 18 17.9	
	35nm,0.5s						
CHKK	**Chushkaly**	3.97	357	Pg	Pb	21 17 30.7	-0.1
	5.7nm,0.4s						
CHKK				Lg	Lg	21 18 20.7	
	64nm,0.7s						
CHKK	**Chushkaly**	3.97	357	*e*Pg	Pb	21 17 30.7	-0.1
	5.7nm,0.4s						
CHKK				*e*Lg	Lg	21 18 20.7	
	64nm,0.7s						
KRBS	**Karabastau**	3.99	343	Pg	Pb	21 17 31.7	+0.5
KRBS				Lg	Lg	21 18 22.2	
KRBS	**Karabastau**	3.99	343	*e*P	Pb	21 17 31.7	+0.5
KRBS				*e*S	Sb	21 18 22.2	+2.2
KUU	**Kurty**	4.06	350	Pg	Pb	21 17 32.9	+0.5
	4.4nm,0.9s						
KUU				Lg	Lg	21 18 23.7	
	45nm,0.7s						
KUU	**Kurty**	4.06	350	*e*Pg	Pb	21 17 32.9	+0.5
	4.4nm,0.9s						
KUU				*e*Lg	Lg	21 18 23.7	
	45nm,0.7s						
SGDS	**Sogindy**	4.08	332	Pg	Pb	21 17 33.3	+0.5
	2.7nm,0.5s						
SGDS				Lg	Lg	21 18 24.6	
	18nm,0.7s						
MRKS	**Merke**	4.18	314	*e*P	Pb	21 17 34.9	+0.3
	2.3nm,0.2s						
DRK	**Karamyk**	4.25	266	⇑*i*P	Pn	21 17 25.7	-0.7
	baz=66						
DRK				⇑*i*S	Sn	21 18 15.2	-1.6
	baz=66						
ARXS	**Arharly**	4.34	5	Pg	Pb	21 17 38.3	+1.1
ARXS				Lg	Lg	21 18 33.7	
ARXS	**Arharly**	4.34	5	*e*P	Pb	21 17 38.3	+1.1
ARXS				*e*S	Sb	21 18 33.7	+3.6
MNAS	**Manas**	4.45	307	⇓*i*P	Pn	21 17 28.6	-0.2
	baz=8.0						
MNAS				⇓*i*S	Sn	21 18 20.2	-1.1
	baz=8.0						
ARK	**Arkit**	4.47	297	⇑*i*P	Pn	21 17 28.6	-0.5
	baz=97						
ARK				⇑*i*S	Sn	21 18 20.6	-1.2
	baz=97						
DJR	**Jarkent**	4.81	22	Pg	Pb	21 17 46.7	+1.5
	2.1nm,0.4s						
DJR				Lg	Lg	21 18 47.8	
	7.8nm,0.6s						
DJR	**Jarkent**	4.81	22	*e*Pg	Pb	21 17 46.8	+1.5
	2.1nm,0.4s						
DJR				*e*Lg	Lg	21 18 47.8	
	7.8nm,0.6s						
TDK	**Taldyqorghan**	5.17	9	Pg	Pb	21 17 53.4	+2.0
	8.4nm,0.3s						
TDK				Lg	Lg	21 18 59.0	
	29nm,0.6s						
TDK	**Taldyqorghan**	5.17	9	*e*Pg	Pb	21 17 53.4	+2.0
	8.4nm,0.3s						
TDK				*e*Lg	Lg	21 18 59.0	
	29nm,0.6s						
BTLS	**Baital**	5.68	336	Pg	Pb	21 18 01.9	+1.9
	1.4nm,0.4s						
BTLS				Lg	Lg	21 19 13.7	
	5.4nm,0.4s						
BTLS	**Baital**	5.68	336	*e*Pg	Pb	21 18 01.9	+1.9
	1.4nm,0.4s						
BTLS				*e*Lg	Lg	21 19 13.7	
	5.4nm,0.4s						
IUG	**Iuzhnay**	5.93	295	Pg	Pb	21 18 08.1	+3.7
	5.4nm,0.2s						
IUG				Lg	Lg	21 19 24.6	
	17nm,1.0s						
IUG	**Iuzhnay**	5.93	295	*e*Pg	Pb	21 18 08.2	+3.7
	5.4nm,0.2s						
IUG				*e*Lg	Lg	21 19 24.6	
	17nm,1.0s						
KK31	**Karatay Array**	6.02	304	Pg	Pb	21 18 06.1	+0.4
	2.0nm,0.8s,baz=118,slow=17,SNR=9.5						
KK31				⇑Lg	Lg	21 19 28.6	
	2.2nm,0.5s,baz=120,slow=27,SNR=5.2						

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*IDC **07** 21:34:53.8±0.5, 52°.27N×170°.62W, h0^{km}, mb4.4/32, mbtmp4.4/34, ML3.8/2, MS3.8/55, Error ellipse: s-maj=17.6km s-min=10.1km az=174.0*
*BGR **07** 21:34:57.6, 52°.33N×170°.01W, h10^{km}, mb4.7, Ms4.0*
*MOS **07** 21:34:57.3±0.9, 52°.24N×170°.57W, h37^{km}, mb4.7/49, Error ellipse: s-maj=8.6km s-min=5.1km az=90.8*
*NEIC **07** 21:34:58.7±1.8, 52°.20N±0°.07×170°.51W±0°.09, h35^{km}±1^{km}, mb4.5/106, ML4.6/6, ML4.2(AEIC), Error ellipse: s-maj=13.4km s-min=7.7km az=335.0*
*AEIC **07** 21:34:60.0±2.7, 52°.18N±0°.08×170°.38W±0°.09, h25^{km}±4^{km}, Error ellipse: s-maj=11.8km s-min=6.9km az=153.0*
*GCMT **07** 21:35:00.7±0.5, 52°.11N±0°.03×170°.31W±0°.04, h38^{km}±1^{km}, MW4.9/56, Moment Tensor Solution. s35,c37; s56,c72; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.47±.19; $M_{\theta\theta}$-1.89±.14; $M_{\phi\phi}$-0.58±.13; $M_{r\theta}$1.16±.13; $M_{\theta\phi}$-1.08±.07; $M_{\phi r}$0.31±.12; Best double couple: $M_0$2.76000×10^{16} NP1:ϕ_s67.00000°, δ58.00000°, λ97.00000°. NP2: ϕ_s234.00000°, δ33.00000°, λ80.00000°. Principal axes: T 2.7600, Plg76.0000°, Azm357.0000°; N -0.0060, Plg6.0000°, Azm243.0000°; P -2.7600, Plg13.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 07 21:34:59.9±0.8**, 52°.21N**±0°.07×**170°.47W**±0°.04**, h51^{km}**±5^{km}**, n605, σ1^{s}24**/579**, mb4.6**/130**, MS3.9**/59**, 28C-20D, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLES	**Cleveland East**	0.70	29		Pn	21 35 12.7	-1.1
CLES				Sn	Sn	21 35 23.6	-0.1
CLES				IAML		21 35 24.4	
	comp=N,27μm,0.5s						
CLES				IAML		21 35 27.7	
	comp=E,22μm,0.2s						
NIKH	**Nikolski High**	1.24	52	Pn	Pn	21 35 19.4	-1.5
NIKH	**Nikolski High**	1.24	52	P	Pn	21 35 19.6	-1.3
	baz=230,SNR=18						
NIKH				S	Sn	21 35 34.6	-1.9
	baz=230						
UNV	**Unalaska Valle**	2.90	54		Pn	21 35 43.2	-0.3
UNV	**Unalaska Valle**	2.90	54		Sn	21 36 16.6	-0.4
UNV	**Unalaska Valle**	2.90	54	P	Pn	21 35 43.8	+0.3
	baz=236,SNR=18						
UNV				S	Sn	21 36 16.4	-0.6
	baz=236						
AKUT	**Akutan**	3.42	54		Pn	21 35 51.0	+0.4
AKUT				IAML		21 36 49.5	
	comp=N,571nm,1.1s						
GSTR	**Great Sitkin T**	3.45	270		Pn	21 35 50.8	-0.3
ADK	**Adak**	3.85	268	Pn	Pn	21 35 55.5	-1.1
ADK				IAML		21 37 00.4	
	comp=N,2μm,1.1s						
ADK	**Adak**	3.85	268	P	Pn	21 35 56.2	-0.4
ADK				S	Sn	21 36 41.0	+0.4
KIWB	**Kanaga Island**	4.14	268		Pn	21 36 00.6	-0.1
FALS	**False Pass**	4.97	55	Pn	Pn	21 36 12.9	+1.0
FALS	**False Pass**	4.97	55	P	Pn	21 36 14.2	+2.4
	baz=240						
SPIA	**Saint Paul Isl**	4.98	1		Pn	21 36 12.3	+0.3
SPIA	**Saint Paul Isl**	4.98	1	P	Pn	21 36 14.0	+2.1
	baz=181						
S12K	**Black Hills**	6.07	52	P	Pn	21 36 28.6	+1.6
	baz=238						
SDPT	**Sand Point**	6.70	58	Pn	Pn	21 36 35.3	-0.3
SDPT	**Sand Point**	6.70	58	P	Pn	21 36 37.4	+1.8
	baz=246						
R16K	**Pilot Point**	9.15	49	P	Pn	21 37 11.2	+2.0
	baz=239						
SHEM	**Shemya Is, Ala**	9.44	279	LR	LR	21 40 39.9	
	comp=N,573nm,20.2s,baz=69,slow=37						
R17K	**Ugashik Creek**	9.75	51	P	Pn	21 37 18.7	+1.4
	baz=242						
P16K	**Nushagak River**	9.81	41	P	Pn	21 37 20.1	+2.0
	baz=231						
O16K	**Kokwok River B**	10.13	38	P	Pn	21 37 25.3	+2.8
	baz=228						
Q17K	**Contact Creek**	10.29	48	P	Pn	21 37 26.5	+1.8
	baz=240						
N16K	**Nishlik Lake**	10.50	33	P	Pn	21 37 31.4	+3.7
	baz=223						
P17K	**Kvichak River**	10.55	43	P	Pn	21 37 31.8	+3.7
	baz=234						
O17K	**Koliganek Bris**	10.63	39	P	Pn	21 37 31.1	+1.7
	baz=230,SNR=6.7						
Q18K	**Katmai Hardscr**	10.88	48	P	Pn	21 37 33.3	+0.5
	baz=240						
OHAK	**Old Harbor**	11.12	56	P	Pn	21 37 37.1	+1.1
	baz=250						
O18K	**Koktuh Hills**	11.44	42	P	Pn	21 37 42.3	+1.8
	baz=234						
Q19K	**Cape Douglas,**	11.63	48	Pn	Pn	21 37 43.6	+0.5
Q19K	**Cape Douglas,**	11.63	48	P	Pn	21 37 44.6	+1.5
	baz=242						
KDAK	**Kodiak Island**	11.67	54	Pn	Pn	21 37 41.0	-2.5

	comp=N,0.6nm,0.3s,baz=258,slow=2.7,SNR=27						
KDAK				Sn	Sn	21 39 45.4	-6.7
	baz=137,slow=21						
KDAK	Kodiak Island	11.67	54	Pn	Pn	21 37 42.7	-0.8
KDAK	Kodiak Island	11.67	54	P	Pn	21 37 42.7	-0.8
SVW2	Sparrevohn	12.06	37	Pn	Pn	21 37 49.5	+0.6
Q20K	Shuyak Island	12.08	51	P	Pn	21 37 50.8	+1.7
	baz=246						
P19K	Oil Pt	12.17	46	P	Pn	21 37 52.2	+1.8
	baz=240						
N19K	Bonanza Creek	12.30	39		Pn	21 37 53.0	+0.7
N19K	Bonanza Creek	12.30	39	P	Pn	21 37 54.3	+2.1
	baz=232						
O20K	Slope Mountain	12.65	45	P	Pn	21 37 59.0	+2.0
	baz=239						
ANM	Nome	12.66	10	Pn	Pn	21 37 58.0	+1.0
ANM	Nome	12.66	10	P	Pn	21 37 58.1	+1.0
ANM	Nome	12.66	10	P	Pn	21 37 59.0	+2.0
	baz=194,SNR=11						
RSO	Redoubt South	12.80	43		Pn	21 37 58.9	-0.2
M19K	Big River Lodg	13.03	36	P	Pn	21 38 04.4	+2.4
	baz=229,SNR=10						
L19K	White Mountain	13.05	34	Pn	Pn	21 38 03.7	+1.3
L19K	White Mountain	13.05	34	P	Pn	21 38 05.4	+3.1
	baz=227						
TTA	Tatalina	13.21	30	Pn	Pn	21 38 05.4	+0.9
TTA	Tatalina	13.21	30	P	Pn	21 38 05.4	+0.9
TTA	Tatalina	13.21	30	P	Pn	21 38 06.5	+1.9
	baz=222,SNR=8.9						
BRSE	Bradley Lake S	13.33	48	P	Pn	21 38 08.5	+2.3
	baz=244						
SPCR	Spurr Chakacha	13.43	41	P	Pn	21 38 08.3	+0.8
	baz=236						
TNA	Tin City	13.45	5	Pn	Pn	21 38 07.2	-0.6
TNA	Tin City	13.45	5	P	Pn	21 38 09.9	+2.2
	baz=186,SNR=6.4						
M20K	Styx River	13.47	37	P	Pn	21 38 08.4	+0.2
	baz=232						
L20K	Farewell, AK	13.59	34	P	Pn	21 38 11.7	+2.0
	baz=228						
SEW	Seward	14.07	48	Pn	Pn	21 38 15.3	-0.9
O22K	Cooper Landing	14.12	46		Pn	21 38 16.2	-0.6
O22K	Cooper Landing	14.12	46	P	Pn	21 38 17.0	+0.2
	baz=243						
K20K	Telida	14.13	31		Pn	21 38 18.6	+1.7
K20K	Telida	14.13	31	P	Pn	21 38 18.4	+1.5
	baz=225,SNR=6.0						
SKT	Skwentna	14.14	39		Pn	21 38 18.3	+1.2
SKT	Skwentna	14.14	39	P	Pn	21 38 18.1	+0.9
	baz=234						
GCSA	Galena City Sc	14.39	24	P	Pn	21 38 23.2	+2.9
	baz=215						
PPLA	Purkeypile	14.45	35		Pn	21 38 22.4	+1.0
PPLA	Purkeypile	14.45	35	P	Pn	21 38 24.0	+2.6
	baz=230						
CAST	Castle Rocks	14.83	34		Pn	21 38 26.2	0.0
CAST	Castle Rocks	14.83	34	P	Pn	21 38 27.7	+1.5
	baz=229,SNR=6.4						
PWL	Port Wells	14.90	46	Pn	Pn	21 38 26.4	-0.7
CHUM	Lake Minchumin	15.06	32	P	P	21 38 33.7	+0.1
	baz=227						
KNK	Knik Glacier	15.09	44		Pn	21 38 28.5	-1.2
KNK				IAmb	IAmb	21 38 37.6	
	comp=Z,11nm,0.7s						
KNK	Knik Glacier	15.09	44	P	Pn	21 38 30.4	+0.7
	baz=242						
KTH	Kantishna Hill	15.31	35	P	Pn	21 38 34.5	+2.0
KTH				IAmb	IAmb	21 39 07.1	
	comp=Z,14nm,1.0s						
SML	Sawmill	15.33	43		Pn	21 38 33.4	+0.6
SML				IAmb	IAmb	21 39 09.0	
	comp=Z,21nm,1.2s						
SML	Sawmill	15.33	43	P	Pn	21 38 33.8	+1.0
SML	Sawmill	15.33	43	P	Pn	21 38 33.7	+0.9
	baz=241						
TRF	Thorofare Moun	15.47	36		Pn	21 38 36.3	+1.6
TRF	Thorofare Moun	15.47	36	P	Pn	21 38 34.6	-0.2
	baz=232						
M23K	Glacier View	15.58	43	P	Pn	21 38 37.2	+1.2
	baz=242,SNR=5.3						
BPAW	Bear Paw Mtn.	15.64	33		Pn	21 38 36.9	+0.1
BPAW				IAmb	IAmb	21 39 09.1	
	comp=Z,17nm,1.0s						
BPAW	Bear Paw Mtn.	15.64	33	P	Pn	21 38 37.7	+0.9
	baz=229,SNR=9.7						
SCM	Sheep Creek Mo	15.77	43		Pn	21 38 37.0	-1.4
SCM				IAmb	IAmb	21 38 45.1	
	comp=Z,18nm,0.6s						
SCM	Sheep Creek Mo	15.77	43	P	Pn	21 38 37.0	-1.4
SCM				pmax	pmax		
	comp=Z,18nm,0.6s						
SCM	Sheep Creek Mo	15.77	43	P	Pn	21 38 37.6	-0.8
	baz=243						
I21K	Tanana	16.07	29	P	Pn	21 38 42.0	-0.1
	baz=225						
MCK	McKinley	16.13	36		Pn	21 38 43.9	+0.9
MCK				IAmb	IAmb	21 39 01.5	
	comp=Z,26nm,1.3s						
MCK	McKinley	16.13	36	P	Pn	21 38 43.9	+0.9
MCK				pmax	pmax		
	comp=Z,26nm,1.3s						
MCK	McKinley	16.13	36	P	Pn	21 38 42.9	-0.1
	baz=234						
IMAR	Indian Mountai	16.17	25	P	P	21 38 45.7	-0.2
H21K	Melozitna Rive	16.18	27		Pn	21 38 43.8	+0.2
H21K				IAmb	IAmb	21 39 08.2	
	comp=Z,26nm,1.5s						
H21K	Melozitna Rive	16.18	27	P	Pn	21 38 44.0	+0.5
	baz=222						
KLU	Klutina	16.22	45		Pn	21 38 42.7	-1.5
KLU				IAmb	IAmb	21 38 51.8	
	comp=Z,12nm,0.6s						
KLU	Klutina	16.22	45	P	Pn	21 38 44.3	+0.1
	baz=246						
RDOG	Red Dog Mine	16.31	10	P	Pn	21 38 46.4	+1.3
RDOG	Red Dog Mine	16.31	10	P	P	21 38 47.1	-0.3
	baz=196						
MLY	Manley	16.34	31	P	Pn	21 38 47.0	+1.4
MLY	Manley	16.34	31	P	Pn	21 38 46.8	+1.1
	baz=227,SNR=5.4						
M24K	Tolsona, Glenn	16.38	43	Pn	Pn	21 38 46.3	+0.2
M24K				IAmb	IAmb	21 39 17.3	
	comp=Z,25nm,1.1s						
M24K	Tolsona, Glenn	16.38	43	P	Pn	21 38 45.3	-0.8
	baz=244						
NEA2	Nenana	16.60	33	P	Pn	21 38 48.9	+0.1
	baz=232						
G21K	Allakaket	16.65	24	P	P	21 38 51.8	+0.7
	baz=219						
H22K	Ishtalitna Cre	16.75	28	P	P	21 38 52.3	0.0
	baz=224						
N25K	Chitina, Valde	16.85	46		Pn	21 38 51.2	-0.9
N25K	Chitina, Valde	16.85	46	P	Pn	21 38 51.2	-0.9
	baz=248						
I23K	Minto, Yukon-K	16.86	32	P	P	21 38 53.9	+0.5
	baz=230						
WRH	Wood River Hil	16.86	35	P	Pn	21 38 52.4	+0.3
HARP	HAARP	16.93	43	P	Pn	21 38 52.2	-0.8
	baz=244						
PAX	Paxson	17.06	41	Pn	Pn	21 38 54.3	-0.4
PAX	Paxson	17.06	41	P	Pn	21 38 54.3	-0.4
PAX				pmax	pmax		
	comp=Z,14nm,1.3s						
PAX	Paxson	17.06	41	P	Pn	21 38 53.3	-1.4
	baz=242						
CCB	Clear Creek Bu	17.07	34		Pn	21 38 53.2	-1.4
COLA	College	17.19	34	⇑eP	Pn	21 38 55.3	-0.8
COLA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
F21K	Alatna River	17.21	23	P	P	21 38 57.7	+0.3
	baz=217						
VRDI	Verde Repeater	17.23	48		Pn	21 38 56.1	-0.8
HDA	Harding Lake	17.23	36	P	Pn	21 38 53.1	-3.6
	baz=236						
H23K	Yukon River	17.25	30		P	21 38 57.9	+0.1
H23K	Yukon River	17.25	30	P	Pn	21 38 53.9	-3.0
	baz=228						
K24K	Donnelly Dome	17.34	38	P	Pn	21 38 56.0	-2.1
	baz=239						
IL31		17.46	35		Pn	21 38 57.4	-2.1
ILAR	Eielson Array	17.46	35	P	Pn	21 38 58.4	-1.2
	comp=Z,0.2nm,0.3s,baz=236,slow=10,SNR=16						
ILAR				PcP	PcP	21 43 38.4	+0.8
	comp=Z,0.8nm,0.7s,baz=283,slow=3.0,SNR=7.3						
	comp=Z,0.6nm,0.7s						
ILAR	Eielson Array	17.46	35	Pn	Pn	21 38 57.6	-1.9
MCARA	McCarthy VSAT	17.48	48	Pn	Pn	21 38 58.2	-1.6
MCARA	McCarthy VSAT	17.48	48	P	Pn	21 38 59.2	-0.6
	baz=250						
RIDG	Independent Ri	17.67	39		Pn	21 39 01.3	-0.9
RIDG	Independent Ri	17.67	39	P	Pn	21 39 00.7	-1.5
	baz=241						
G23K	Bananza Creek	17.72	27	P	Pn	21 39 00.8	-1.9
	baz=225						
F22K	John River	17.75	23	P	Pn	21 39 02.5	-0.5
	baz=219						
H24K	Noodor Dome	17.77	31	P	Pn	21 39 02.3	-1.1
H24K	Noodor Dome	17.77	31	P	Pn	21 39 03.5	+0.1
	baz=230						
M26K	Nabesna, AK	17.85	44	P	Pn	21 39 03.5	-1.0
	baz=248						
L26K	Log Cabin Wild	17.95	42	P	Pn	21 39 06.2	+0.6
L26K	Log Cabin Wild	17.95	42	P	Pn	21 39 06.0	+0.4
	baz=245						
BARN	Barnard Glacie	18.01	49	P	P	21 39 06.1	-0.3
COLD	Coldfoot	18.04	26	P	P	21 39 06.9	+0.3
	baz=223						
SCRK	Sand Creek	18.12	39	P	P	21 39 06.7	-0.8
SCRK	Sand Creek	18.12	39	P	P	21 39 07.7	+0.1
	baz=242						
CTG	Chitna Glacier	18.13	50	P	P	21 39 07.5	-0.2
	baz=254						
M27K	Edge Creek, AK	18.32	45	P	P	21 39 10.1	+0.3
M27K	Edge Creek, AK	18.32	45	P	P	21 39 09.0	-0.8
	baz=249						
PRP	Porcupine Dome	18.36	34	P	Pn	21 39 10.9	+0.3
	baz=235,SNR=6.4						
G24K	Hadweenzic Riv	18.46	29	P	Pn	21 39 11.9	+0.3
	baz=229						
J26L	Joseph Creek	18.53	38	P	P	21 39 11.0	-1.1
J26L				IAmb	IAmb	21 39 16.4	
	comp=Z,10nm,0.7s						
J26L	Joseph Creek	18.53	38	P	P	21 39 12.3	+0.2
	baz=241						
L27K	Beaver Creek,	18.60	43	P	P	21 39 13.1	+0.4
	baz=247						
BCAR	Beaver Creek A	18.62	43	P	P	21 39 13.0	0.0
O28M	Mount Upton	18.63	51	P	Pn	21 39 14.3	+0.3
	baz=256						
PET	Petropavlovsk	18.70	285	P	P	21 39 14.1	+0.3
PET				IAmb	IAmb	21 39 45.2	
	comp=Z,83nm,1.5s						
PET	Petropavlovsk	18.70	285	⇑eP	P	21 39 13.9	+0.1
PET				pmax	pmax		
	comp=Z,11nm,0.9s						
YUK3	Moose Creek	18.77	48	P	P	21 39 15.1	+0.4
	baz=253,SNR=6.7						
E23K	Chandalar	18.81	25	P	Pn	21 39 16.5	+0.6
	baz=223						
F24K	Squaw Lake	18.89	27	P	Pn	21 39 17.1	+0.3
	baz=227						
K27K	Chicken	18.90	40	P	Pn	21 39 16.9	0.0
K27K	Chicken	18.90	40	P	Pn	21 39 17.5	+0.6
	baz=244						
YUK8	Steele Glacier	18.95	49	P	Pn	21 39 17.8	-0.2
	baz=255						
I26K	Coal Creek Min	19.09	36	P	Pn	21 39 19.6	+0.4
	baz=240						
E24K	Your Creek	19.11	25	P	Pn	21 39 19.6	0.0
	baz=224						
D23K	Nanushuk River	19.24	22	P	Pn	21 39 20.6	-0.4
	baz=219						
TOLK	Toolik Lake Re	19.25	23	P	Pn	21 39 22.4	+1.2
	baz=222						
PEA0B	Petropavlovsk-	19.25	285	P	P	21 39 20.3	+0.5
PEA0B				IAmb	IAmb	21 39 21.3	
	comp=Z,28nm,0.8s						
PEA0B	Petropavlovsk-	19.25	285	deP	P	21 39 20.4	+0.5
PETK	Petropavlovsk-	19.25	285	P	P	21 39 20.2	+0.3
	comp=Z,3.2nm,0.3s,baz=90,slow=12,SNR=54						
PETK				LR	LR	21 46 56.1	
	comp=Z,203nm,20.3s,baz=88,slow=38						
	comp=Z,14nm,0.5s						
PETK	Petropavlovsk-	19.25	285		P	21 39 19.7	-0.2
O29M	Mount Kennedy	19.31	53	P	P	21 39 21.2	+0.6
	baz=259						
BILL	Bilibino	19.43	333		Pn	21 39 22.8	-0.5
BILL	Bilibino	19.43	333	⇓iP	Pn	21 39 25.3	+2.0
BILL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BILL				MLR	MLR		
	comp=Z,209nm,16.0s						
YUK4	Talbot Arm	19.49	50	P	Pn	21 39 24.5	+0.3
	baz=256						
YUK6	Outpost Mounta	19.54	51	P	P	21 39 22.8	-0.4
	baz=258,SNR=7.9						
EGAK	Eagle	19.58	39	P	P	21 39 23.8	+0.4
EGAK	Eagle	19.58	39	P	Pn	21 39 24.6	-0.5
	baz=244						
F25K	Christian Rive	19.58	29	P	P	21 39 23.3	-0.1
	baz=230						
G26K	Porcupine Rive	19.76	32	P	P	21 39 26.3	+1.0
	baz=235						
I27K	Kandik River	19.79	36	P	Pn	21 39 27.1	-0.5
	baz=241						
BMAR	Burnt Mountain	19.80	30	P	P	21 39 26.7	+0.9
M29M	Somme Creek	19.86	47	P	P	21 39 27.4	+0.9
	baz=254,SNR=6.5						
HYT	Haines Junctio	19.93	51	P	P	21 39 28.1	+0.9
HYT				IAmb	IAmb	21 39 32.3	
	comp=Z,55nm,0.9s						
HYT	Haines Junctio	19.93	51	P	Pn	21 39 28.9	-0.4
	baz=259,SNR=40						
E25K	Arctic Village	19.95	28	P	P	21 39 28.7	+1.3
	baz=229						
DAWY	Dawson	19.99	42	P	P	21 39 27.2	-0.8
DAWY	Dawson	19.99	42	P	P	21 39 28.4	+0.4
	baz=248						
P30M	Million Dollar	20.07	54	P	Pn	21 39 30.3	-0.7
	baz=262						
F26K	Sheenjek River	20.09	30	P	P	21 39 28.6	-0.4
	baz=232						
H27K	Steamboat Moun	20.13	35	P	P	21 39 29.6	+0.2
	baz=240						
A21K	Barrow	20.16	13	P	P	21 39 29.1	-0.4
A21K				IAmb	IAmb	21 39 36.7	
	comp=Z,24nm,1.1s						
A21K	Barrow	20.16	13	P	P	21 39 29.7	+0.2
	baz=205						
L29M	L29M	20.20	45	P	P	21 39 30.8	+0.6
	baz=252						
N30M	Aishikik Lake	20.25	50	P	P	21 39 30.0	-0.8
	baz=258						
C24K	Franklin Bluff	20.27	22	P	P	21 39 31.9	+1.1
	baz=221						
PLBC	Pleasant Camp	20.29	56	P	P	21 39 32.4	+1.3
	baz=264,SNR=6.7						
G27K	Doyon Strip	20.39	33	P	P	21 39 31.8	-0.4
	baz=238						
D25K	Kavik River	20.54	24	P	P	21 39 33.6	-0.2
	baz=226						
O30N	Mendenhall	20.60	52	P	P	21 39 35.4	+0.9
	baz=261						
J29M	Klondike Camp	20.61	41	P	P	21 39 36.1	+1.4
	baz=249						
M30M	Minto, Yukon	20.64	47	P	P	21 39 35.8	+0.8
	baz=255						
K29M	Barlow Dome	20.69	43	P	P	21 39 36.9	+1.3
	baz=251						
SKAG	Skagway	20.82	56	P	P	21 39 37.1	+0.3
SKAG				IAmb	IAmb	21 39 40.3	
	comp=Z,44nm,1.0s						
SKAG	Skagway	20.82	56	P	P	21 39 38.1	+1.3
	baz=265						
N31M	Braeburn, Yuko	20.87	50	P	P	21 39 38.9	+1.5
	baz=259						
I29M	Ogilvie Camp,	20.92	39	P	P	21 39 37.4	-0.6
	baz=246						
E27K	Coleen River	21.16	30	P	P	21 39 41.8	+1.3
	baz=235						
C26K	Camden Bay	21.33	24	P	P	21 39 43.5	+1.3
	baz=227						
C27K	Jago River	21.44	26	P	P	21 39 44.4	+1.0
	baz=229						
P32M	Atlin	21.65	56	P	P	21 39 47.3	+1.5
	baz=266						
M31M	Drury Creek, Y	21.65	48	P	P	21 39 46.3	+0.6
	baz=259						
EPYK	Eagle Plains	21.93	37	P	P	21 39 47.7	-1.0
EPYK				IAmb	IAmb	21 40 26.8	
	comp=Z,12nm,0.8s						
EPYK	Eagle Plains	21.93	37	P	P	21 39 48.6	-0.1
	baz=246,SNR=8.7						
FARO	Faro, Yukon	22.14	49	P	P	21 39 48.4	-2.5
	baz=260						
P33M	Teslin, Yukon	22.14	54	P	P	21 39 51.4	+0.3
	baz=266						
SEY	Seymchan	22.28	313	P	P	21 39 52.6	+0.2
	comp=Z,9.0nm,0.8s,baz=115,slow=12,SNR=15						
SEY				PcP	PcP	21 43 47.5	+1.2
	comp=Z,1.4nm,0.6s,baz=290,slow=2.5,SNR=2.6						
	comp=Z,9.0nm,0.8s						
SEY	Seymchan	22.28	313	⇓eP	P	21 39 52.9	+0.4
SEY				pmax	pmax		
	comp=Z,8.0nm,0.8s						
G30M	tAoh Zraii Nji	22.36	36	P	P	21 39 52.3	-1.0
	baz=245						
MA2	Magadan	22.67	304	P	P	21 39 57.7	+1.1
	comp=Z,21nm,0.8s,baz=121,slow=10,SNR=7.3						
MA2	Magadan	22.67	304	P	P	21 39 56.2	-0.4
MA2				IAmb	IAmb	21 39 59.8	
	comp=Z,21nm,0.8s						
MA2	Magadan	22.67	304	diP	P	21 39 58.8	+2.1
MA2				pmax	pmax		
	comp=Z,24nm,1.3s						
S34M	Telegraph Cree	22.98	60	P	P	21 40 00.6	+0.8
	baz=273						
MMPY	Sheldon Lake,	23.16	48	P	P	21 40 02.9	+1.3
	baz=261,SNR=7.1						
F31M	Tsiigehtchic	23.43	35	P	P	21 40 04.3	+0.2
	baz=248						
T35M	Bob Quinn	23.52	62	P	P	21 40 05.5	+0.4
	baz=275						
DLBC	Dease Lake	23.54	59	P	P	21 40 08.7	+3.3
	comp=Z,17nm,1.0s,baz=264,slow=13,SNR=9.3						
DLBC				LR	LR	21 49 11.4	
	comp=Z,118nm,21.0s,baz=280,slow=36						
DLBC	Dease Lake	23.54	59	P	P	21 40 05.6	+0.2
DLBC				IAmb	IAmb	21 40 11.4	
	comp=Z,14nm,0.9s						
DLBC	Dease Lake	23.54	59	P	P	21 40 05.9	+0.5
	baz=272						
INK	Inuvik	23.85	34	P	P	21 40 03.8	-4.2
	comp=Z,2.6nm,0.5s,baz=319,slow=6.3,SNR=21						
INK				PcP	PcP	21 43 50.8	+1.3
	comp=Z,3.4nm,0.8s,baz=185,slow=0.6,SNR=6.9						
INK	Inuvik	23.85	34	P	P	21 40 04.9	-3.1
	baz=246						
LIRD	Liard River Hi	25.53	56	P	P	21 40 25.1	+1.7
	baz=273						
BBB	Bella Bella	25.69	73	LR	LR	21 48 46.5	
	comp=Z,104nm,20.7s,baz=266,slow=32						
KOTAN	Kotaneelee Air	26.52	54	P	P	21 40 33.8	+1.5
	baz=273,SNR=7.1						
WRGLY	Wrigley	26.77	47	P	P	21 40 36.9	+2.4
	baz=268						
A36M	Sachs Harbour	27.87	28	P	P	21 40 44.2	-0.1
	baz=249						
HILA	High Level	30.30	57	P	P	21 41 06.4	+0.4
YSS	Yuzh-Sakhalins	30.35	279	⇑eP	P	21 41 03.8	-2.8
YSS				pmax	pmax		
	comp=Z,5.0nm,1.2s						
YKA	Yellowknife Ar	30.85	49	P	P	21 41 11.8	+1.1
	comp=Z,1.9nm,0.8s,baz=274,slow=8.8,SNR=26						
YKA				PcP	PcP	21 44 08.2	+1.8
	comp=Z,1.3nm,0.8s,baz=277,slow=2.6,SNR=9.7						
YKA				LR	LR	21 55 05.9	
	comp=Z,173nm,18.3s,baz=280,slow=39						
	comp=Z,1.9nm,0.8s						
YKA	Yellowknife Ar	30.85	49	P	P	21 41 11.0	+0.2
ASAJ	Asahikawa	31.85	274	LR	LR	21 52 51.2	
	comp=Z,193nm,21.5s,baz=70,slow=34						
B08A	Colville Reser	32.34	76	P	P	21 41 24.1	0.0
B08A				IAmb	IAmb	21 41 43.2	
	comp=Z,3.9nm,0.8s						
TIXI	Tiksi	32.52	329	P	P	21 41 26.0	+0.6
	comp=Z,0.7nm,0.3s,baz=270,slow=20,SNR=2.9						
TIXI				PcP	PcP	21 44 11.8	+1.0
	comp=Z,2.3nm,0.8s,baz=269,slow=22,SNR=8.0						
	comp=Z,0.7nm,0.3s						
TIXI	Tiksi	32.52	329	⇓eP	P	21 41 24.9	-0.5
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.1s						
YAK	Yakutsk	32.77	311	LR	LR	21 54 37.4	
	comp=Z,246nm,21.6s,baz=76,slow=36						
YAK	Yakutsk	32.77	311	P	P	21 41 27.0	-0.6
YAK	Yakutsk	32.77	311	eP	P	21 41 27.2	-0.4
YAK				e*PP	pP	21 41 37.6	-3.0
YAK				e		21 42 40.5	
YAK				e		21 44 12.3	
YAK				eS	S	21 46 42.8	+2.3
YAK				e*SS	sS	21 47 01.4	-0.3
YAK				eSS	SnSn	21 48 44.5	+4.7
YAK				e		21 51 53.7	
YAK				pmax	pmax		
	comp=Z,25nm,1.0s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,112nm,4.7s						
YAK				pmax	pmax		
	comp=E,79nm,4.4s						
YAK				pmax	pmax		
	comp=N,70nm,4.6s						
YAK				smax	smax		
	comp=N,116nm,5.2s						
YAK				smax	smax		
	comp=E,46nm,3.8s						
YBH	Yreka Blue Hor	33.66	89	LR	LR	21 52 00.6	
	comp=E,198nm,21.3s,baz=304,slow=30						
NEW	Newport	33.70	75	P	P	21 41 37.9	+1.9
	comp=E,4.2nm,0.7s,baz=280,slow=7.6,SNR=5.8						
NEW				LR	LR	21 54 44.0	
	comp=E,91nm,18.6s,baz=296,slow=35						
	comp=E,4.2nm,0.7s						
NEW	Newport	33.70	75	P	P	21 41 37.1	+1.1
NEW				IAmb	IAmb	21 41 38.6	
	comp=Z,4.5nm,0.7s						
NEW	Newport	33.70	75	P	P	21 41 37.1	+1.1
NEW				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NEW	Newport	33.70	75	P	P	21 41 37.9	+1.9
	baz=297						
KLR	Kul'dur	35.87	289	P	P	21 41 53.7	-0.9
	comp=Z,5.3nm,0.9s,baz=48,slow=10,SNR=11						
KLR				LR	LR	21 57 18.8	
	comp=Z,173nm,19.6s,baz=69,slow=38						
	comp=Z,5.3nm,0.9s						
KLR	Kul'dur	35.87	289	deP	P	21 41 53.5	-1.1
KLR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
RES	Resolute Bay	36.80	25	LR	LR	22 00 08.2	
	comp=Z,123nm,19.9s,baz=202,slow=41						
H11N2	WAKE ISLAND Hy	36.92	217	T	T	22 21 16.9	
	baz=22,slow=75,SNR=34						
H11N3	WAKE ISLAND Hy	36.92	217	T	T	22 21 22.0	
	baz=22,slow=75,SNR=41						
H11N1	WAKE ISLAND Hy	36.94	217	T	T	22 21 17.6	
	baz=22,slow=75,SNR=38						
HEH	HeiHe	37.90	293	eP	P	21 42 10.5	-1.3
HEH				pmax	pmax		
	comp=Z,24nm,0.8s						
MCMT	McKenzie Canyo	37.97	78	P	P	21 42 13.8	+1.0
H11S1	WAKE ISLAND Hy	38.11	217	T	T	22 22 50.3	
	baz=22,slow=76,SNR=152						
H11S2	WAKE ISLAND Hy	38.12	217	T	T	22 22 49.5	
	baz=22,slow=76,SNR=143						
H11S3	WAKE ISLAND Hy	38.13	217	T	T	22 22 51.6	
	baz=22,slow=76,SNR=97						
EGMT	Eagleton	38.15	71	P	P	21 42 15.1	+0.9
	baz=300						
USRK	Ussuriysk Ar.	38.27	281	P	P	21 42 13.9	-1.1
	comp=Z,3.2nm,0.8s,baz=50,slow=13,SNR=4.3						
USRK				LR	LR	21 57 05.7	
	comp=Z,122nm,20.2s,baz=40,slow=35						
	comp=Z,3.2nm,0.8s						
BOZ	Bozeman (W)	38.29	76	P	P	21 42 16.8	+1.4
BOZ				IAmb	IAmb	21 42 32.3	
	comp=Z,4.8nm,1.1s						
BOZ	Bozeman (W)	38.29	76	P	P	21 42 16.8	+1.4
BOZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BOZ	Bozeman (W)	38.29	76	P	P	21 42 16.9	+1.6
	baz=302						
NVAR	Mina Array Bea	38.34	90	P	P	21 42 17.9	+2.0
	comp=Z,0.5nm,0.5s,baz=300,slow=6.1,SNR=5.2						
	comp=Z,0.5nm,0.5s						
ELK	Elko	38.82	85	P	P	21 42 21.7	+1.8

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      comp=Z,1.3nm,0.8s,baz=297,slow=14,SNR=5.9
ELK                               LR     LR      21 56 32.4
      comp=Z,152nm,18.1s,baz=308,slow=33
      comp=Z,1.3nm,0.8s
ELK   Elko             38.82  85  P      P       21 42 20.1 +0.1
ELK   Elko             38.82  85  P      P       21 42 20.1 +0.1
ELK                               pmax   pmax
      comp=Z,2.0nm,0.8s
MJAR  Matsushiro Arr   39.02 267  P      P       21 42 21.9 +0.6
      comp=Z,3.5nm,0.8s,baz=40,slow=7.5,SNR=7.6
MJAR                              LR     LR      21 56 20.5
      comp=Z,181nm,21.5s,baz=50,slow=33
      comp=Z,3.5nm,0.8s
MAJO  Matsushiro       39.02 267  P      P       21 42 22.1 +0.7
MAJO                              IAmb   IAmb    21 42 23.9
      comp=Z,13nm,0.8s
MAJO  Matsushiro       39.02 267  P      P       21 42 22.1 +0.7
MAJO                              pmax   pmax
      comp=Z,13nm,0.8s
MJB9  Matsu-Tunnel     39.02 267  P      P       21 42 22.7 +1.3
MJB9                              IAmb   IAmb    21 42 24.9
      comp=Z,13nm,0.8s
FFC   Flin Flon        39.38  58  P      P       21 42 24.8 +0.7
FFC   Flin Flon        39.38  58  P      P       21 42 24.8 +0.7
FFC                               pmax   pmax
      comp=Z,3.0nm,0.8s
H17A  Grant Village    39.57  77  P      P       21 42 27.8 +1.7
      baz=303
RLMT  Red Lodge        39.95  75  P      P       21 42 30.1 +0.8
RLMT                              IAmb   IAmb    21 42 48.1
      comp=Z,13nm,1.2s
RLMT  Red Lodge        39.95  75  P      P       21 42 29.9 +0.6
      baz=303
R11A  Troy Canyon, C   40.06  88  P      P       21 42 30.9 +0.7
      baz=309
JGF   Kuroka           40.15 267  P      P       21 42 30.6 -0.3
BNX   BinXian          40.17 286 ⇓P      P       21 42 29.4 -1.4
BNX                               pmax   pmax
      comp=Z,17nm,1.0s
BNX                               pmax   pmax
      comp=Z,79nm,4.1s
TPNV  Topopah Spring   40.53  90  P      P       21 42 35.7 +1.6
TPNV                              IAmb   IAmb    21 43 03.8
      comp=Z,6.4nm,1.1s
TPNV  Topopah Spring   40.53  90  P      P       21 42 35.7 +1.6
TPNV                              pmax   pmax
      comp=Z,6.0nm,1.1s
TPNV  Topopah Spring   40.53  90  P      P       21 42 34.1 -0.1
      baz=310
DUG   Dugway, Tooele   40.63  84  P      P       21 42 34.9  0.0
      baz=307
BW06  Boulder Array    41.09  78  P      P       21 42 39.1 +0.3
      baz=305,SNR=6.4
PD31  Pinedale Array   41.09  78  P      P       21 42 39.4 +0.6
PD31                              IAmb   IAmb    21 42 55.9
      comp=Z,4.0nm,0.8s
PDAR  Pinedale Array   41.09  78  P      P       21 42 40.5 +1.7
      comp=Z,2.5nm,0.6s,baz=306,slow=2.5,SNR=37
PDAR                              LR     LR      21 57 16.3
      comp=Z,92nm,20.5s,baz=306,slow=33
      comp=Z,2.5nm,0.6s
PDAR  Pinedale Array   41.09  78  P      P       21 42 40.1 +1.3
GSC   Goldstone, Bar   41.26  92  P      P       21 42 40.7 +0.6
      baz=311
FCC   Fort Churchill   41.56  50  P      P       21 42 43.0 +0.9
FCC                               IAmb   IAmb    21 42 44.2
      comp=Z,15nm,0.8s
FCC   Fort Churchill   41.56  50  P      P       21 42 43.0 +0.9
FCC                               pmax   pmax
      comp=Z,15nm,0.9s
BOD   Bodaibo          41.57 309 eP      P       21 42 41.7 -0.5
BOD                               pmax   pmax
      comp=Z,19nm,0.9s
CN2   Changchun        42.40 285  P      P       21 42 48.4 -0.8
CN2                               pmax   pmax
      comp=Z,10.0nm,0.9s
CN2                               LR     LR
      comp=N,200nm,15.0s
CN2                               LR     LR
      comp=E,200nm,15.0s
CN2                               LR     LR
      comp=Z,200nm,15.0s
PFO   Pinyon Flats O   42.60  94  LR     LR      21 57 22.8
      comp=Z,139nm,18.8s,baz=300,slow=32
HIA   Hailar           42.71 295  P      P       21 42 51.0 -0.6
HIA                               IAmb   IAmb    21 42 51.9
      comp=Z,11nm,0.9s
HIA   Hailar           42.71 295  P      P       21 42 51.0 -0.6
HIA                               pmax   pmax
      comp=Z,11nm,0.9s
JCJ   Chichijima       43.22 253  LR     LR      21 59 51.8
      comp=Z,47nm,19.6s,baz=72,slow=35
O20A  White River Ci   43.45  81  P      P       21 42 58.2 +0.3
O20A                              IAmb   IAmb    21 43 17.5
      comp=Z,10nm,1.0s
O20A  White River Ci   43.45  81  P      P       21 42 58.1 +0.1
      baz=308
PV13  Radium Mtn., P   44.33  83  P      P       21 43 05.6 +0.6
PV13                              IAmb   IAmb    21 43 23.9
      comp=Z,8.2nm,1.0s
KSRS  Korea Array      44.75 276  P      P       21 43 08.7 +0.6
      comp=Z,9.6nm,1.0s,baz=58,slow=7.7,SNR=13
KSRS                              LR     LR      22 00 38.4
      comp=Z,64nm,21.5s,baz=50,slow=35
      comp=Z,9.6nm,1.0s
KSAR  Wonju Array Be   44.78 276  P      P       21 43 08.2 -0.2
KSAR  Wonju Array Be   44.78 276  P      P       21 43 08.2 -0.2
ULM   Lac du Bonnet    44.82  61  P      P       21 43 09.2 +0.7
      comp=Z,4.1nm,0.7s,baz=283,slow=7.4,SNR=4.8
ULM                               LR     LR      22 04 14.4
      comp=Z,97nm,18.3s,baz=328,slow=39
      comp=Z,4.1nm,0.7s
NEEM  North Greenlan   45.32  16 i P     P       21 43 12.4 -0.1
NEEM                              IAmb   IAmb    21 43 14.7
      comp=Z,8.0nm,0.9s
JNU   Nakatsue         45.79 269  P      P       21 43 16.4  0.0
      comp=Z,21nm,0.9s,baz=9.4,slow=6.5,SNR=4.9
      comp=Z,21nm,0.9s
NRIK  Noril'sk         46.24 331  P      P       21 43 19.6 +0.1
      comp=Z,2.2nm,0.6s,baz=65,slow=6.6,SNR=4.8
NRIK                              LR     LR      22 04 19.2
      comp=Z,78nm,18.0s,baz=110,slow=38
      comp=Z,2.2nm,0.6s
NRIK  Noril'sk         46.24 331  P      P       21 43 19.7 +0.2
NRIK                              IAmb   IAmb    21 43 21.2
      comp=Z,4.0nm,0.9s
NRIK  Noril'sk         46.24 331⇑eP      P       21 43 19.9 +0.4
NRIK                              pmax   pmax
      comp=Z,5.0nm,0.9s
XLT   XiLinHaoTe       47.83 291 eP      P       21 43 29.4 -2.9
XLT                               pP     pP      21 43 45.3 -0.4
XLT                               sP     sP      21 43 50.5 -1.0
XLT                               pmax   pmax
      comp=Z,8.0nm,0.8s
XLT                               pmax   pmax
      comp=Z,99nm,5.8s
ANMO  Albuquerque      47.85  85  LR     LR      22 01 37.1
      comp=Z,125nm,20.1s,baz=47,slow=33
ECSD  EROS Data Cent   48.16  69  P      P       21 43 35.0 +0.2
      baz=308
FRB   Frobisher Bay    49.49  35  P      P       21 43 45.2 +0.5
      comp=Z,2.6nm,0.4s,baz=318,slow=7.8,SNR=9.4
FRB                               LR     LR      22 06 44.0
      comp=Z,248nm,18.5s,baz=342,slow=39
      comp=Z,2.6nm,0.4s
SPA0  Spitsbergen Ar   49.80 358 eP      P       21 43 47.1 +0.2
SPITS Spitsbergen Ar   49.80 358  LR     LR      22 05 51.7
      comp=Z,121nm,18.2s,baz=339,slow=37
DAG   Danmarks Havn    50.04   8 i P     P       21 43 46.7 -2.0
DAG                               IAmb   IAmb    21 43 48.9
      comp=Z,6.1nm,0.7s
ULN   Ulaanbaatar      50.43 300  P      P       21 43 52.0 -0.2
ULN                               IAmb   IAmb    21 43 53.0
      comp=Z,6.1nm,0.8s
ULN   Ulaanbaatar      50.43 300  P      P       21 43 52.0 -0.2
ULN                               pmax   pmax
      comp=Z,6.0nm,0.9s
MNTX  Cornudas Mount   50.72  87  P      P       21 43 55.1 +0.7
      baz=314
SONM  Songino Array    50.80 300  P      P       21 43 55.3 +0.3
      comp=Z,3.4nm,0.7s,baz=59,slow=6.9,SNR=25
SONM                              PcP    PcP     21 45 11.7 +0.6
      comp=Z,2.7nm,0.9s,baz=69,slow=1.9,SNR=7.4
SONM                              ScP    ScP     21 49 05.0 +2.1
      comp=Z,0.5nm,0.8s,baz=38,slow=2.6,SNR=4.4
SONM                              LR     LR      22 08 24.5
      comp=Z,180nm,18.3s,baz=38,slow=40
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      comp=Z,3.4nm,0.7s
SONM  Songino Array    50.80 300  P      P       21 43 55.0  0.0
SONM                              IAmb   IAmb    21 43 56.0
      comp=Z,11nm,1.4s
SONM  Songino Array    50.80 300  P      P       21 43 55.0  0.0
SONM                              pmax   pmax
      comp=Z,11nm,1.4s
ZAK   Zakamensk        50.85 305 eP      P       21 43 54.8 -0.5
ZAK                               pmax   pmax
      comp=Z,6.0nm,1.3s
MOY   Mondy            51.21 307 eP      P       21 43 58.6 +0.6
MOY                               pmax   pmax
      comp=Z,21nm,3.5s
TIA   Tai'an           52.12 282 ⇓P      P       21 44 05.1 +0.3
TIA                               pmax   pmax
      comp=Z,10.0nm,0.9s
DBG   Daneborg         52.18  10 i P     P       21 44 02.9 -1.9
DBG                               IAmb   IAmb    21 44 04.7
      comp=Z,6.0nm,0.7s
HHC   Hu-ho-hao-te     52.34 290 eP      P       21 44 06.0 -0.6
HHC                               pmax   pmax
      comp=Z,22nm,0.9s
HHC                               pmax   pmax
      comp=Z,110nm,5.4s
HHC                               LR     LR
      comp=N,190nm,17.1s
HHC                               LR     LR
      comp=E,320nm,17.1s
HHC                               LR     LR
      comp=Z,420nm,17.1s
WMOK  Wichita Mounta   52.67  79  P      P       21 44 09.3 +0.3
      baz=313
HNS   HongShan         52.77 285 ⇑P      P       21 44 10.5 +0.9
HNS                               S      S       21 51 28.8 -5.2
HNS                               pmax   pmax
      comp=Z,25nm,1.0s
HNS                               LR     LR
      comp=E,440nm,23.1s
HNS                               LR     LR
      comp=Z,270nm,21.0s
SFJD  Kangerlussuaq    52.80  25  LR     LR      22 08 12.4
      comp=Z,96nm,21.8s,baz=318,slow=38
TX31  Lajitas Ar. Si   53.42  88  P      P       21 44 15.4 +0.7
TXAR  Lajitas Array    53.42  88  P      P       21 44 16.0 +1.3
      comp=Z,2.4nm,0.9s,baz=294,slow=4.9,SNR=13
TXAR                              LR     LR      22 04 38.1
      comp=Z,85nm,20.5s,baz=328,slow=33
      comp=Z,2.4nm,0.9s
TXAR  Lajitas Array    53.42  88  P      P       21 44 15.4 +0.7
TXAR  Lajitas Array    53.42  88  P      P       21 44 16.0 +1.3
ICESG Greenland Ices   53.74  20 i P     P       21 44 15.7 -1.1
ICESG                             IAmb   IAmb    21 44 17.6
      comp=Z,5.5nm,1.1s
DY2G  Dye2             54.33  24 i P     P       21 44 21.0 +0.1
CCM   Cathedral Cave   54.92  71  P      P       21 44 25.1 -0.2
      baz=312
MIAR  Mount Ida        55.93  76  P      P       21 44 31.8 -0.8
      baz=314
SCHQ  Schefferville    56.01  43  P      P       21 44 33.6 +0.7
      comp=Z,18nm,0.9s,baz=316,slow=7.9,SNR=21
SCHQ                              LR     LR      22 09 33.1
      comp=Z,72nm,19.1s,baz=24,slow=37
      comp=Z,18nm,0.9s
SCHQ  Schefferville    56.01  43  P      P       21 44 33.3 +0.4
JMIC  Jan Mayen        56.43   7  LR     LR      22 09 40.7
      comp=Z,78nm,18.0s,baz=250,slow=37
O48B  Farmland         56.91  66  P      P       21 44 38.7 -0.8
      baz=313
ZALV  Zalesovo Beam    57.08 317  P      P       21 44 41.1 +0.6
      comp=Z,0.4nm,0.4s,baz=15,slow=6.0,SNR=5.0
ZALV                              PcP    PcP     21 45 35.3 +0.5
      comp=Z,3.5nm,0.8s,baz=57,slow=3.0,SNR=10
ZALV                              LR     LR      22 09 45.6
      comp=Z,120nm,21.9s,baz=48,slow=37
      comp=Z,0.4nm,0.4s
ZALV  Zalesovo Beam    57.08 317  P      P       21 44 41.3 +0.8
ZALV  Zalesovo Beam    57.08 317 i P     P       21 44 42.0 +1.5
ZALV                              pmax   pmax
      comp=Z,1.0nm,0.4s
SADO  Sadowa           57.10  58  LR     LR      22 10 23.1
      comp=Z,117nm,20.6s,baz=302,slow=37
P49A  Miami Univ. Ec   57.65  66  P      P       21 44 43.7 -1.1
      baz=314
WCI   Wyandotte Cave   57.66  68  P      P       21 44 44.6 -0.2
      baz=314
WHN   Wuhan            57.70 279 ⇓P      P       21 44 45.6 +0.4
WHN                               pmax   pmax
      comp=Z,62nm,1.0s
ARA0  ARCESS Array S   58.00 353 eP      P       21 44 46.7 -0.1
ARCES ARCESS Array B   58.00 353  P      P       21 44 46.6 -0.2
      comp=Z,3.1nm,0.8s,baz=16,slow=10,SNR=6.9
ARCES                             LR     LR      22 09 45.5
      comp=Z,110nm,21.9s,baz=344,slow=36
      comp=Z,3.1nm,0.8s
ARCES ARCESS Array B   58.00 353  P      P       21 44 46.4 -0.4
ARCES                             IAmb   IAmb    21 45 03.5
      comp=Z,9.4nm,1.1s
ARCES ARCESS Array B   58.00 353  P      P       21 44 46.4 -0.4
ARCES                             pmax   pmax
      comp=Z,9.0nm,1.2s
WVT   Waverly          58.22  71  P      P       21 44 49.1 +0.4
WVT                               IAmb   IAmb    21 45 06.5
      comp=Z,11nm,1.4s
WVT   Waverly          58.22  71  P      P       21 44 49.2 +0.4
WVT                               pmax   pmax
      comp=Z,11nm,1.4s
WVT   Waverly          58.22  71  P      P       21 44 49.0 +0.2
      baz=314
TRO   Tromso           58.27 356 eP      P       21 44 49.2 +0.6
JETT  Jettan, Norway   58.28 356 eP      P       21 44 48.1 -0.7
OXF   Oxford           58.43  73  P      P       21 44 49.0 -1.2
      baz=315
XAN   Xi'an            58.50 286  P      P       21 44 50.8  0.0
XAN                               pP     pP      21 45 03.6 -1.1
XAN                               pmax   pmax
      comp=Z,9.0nm,1.1s
SSLB  Suanglung        58.53 269  P      P       21 44 51.0 -0.2
M53A  WI Miller and    58.57  62  P      P       21 44 49.1 -2.1
      baz=314
LVZ   Lovozero         58.74 349  P      P       21 44 51.7 -0.3
LVZ   Lovozero         58.74 349  P      P       21 44 51.7 -0.3
LVZ                               pmax   pmax
      comp=Z,58nm,1.4s
PLAL  Pickwick Lake    58.88  72  P      P       21 44 53.6 +0.2
DGZ   Jazzator, Alta   58.95 312⇑eP      P       21 44 54.1 +0.2
DGZ                               pmax   pmax
      comp=Z,2.0nm,0.7s
GTA   Gaotai           59.95 296 eP      P       21 45 00.5 -0.4
GTA                               pP     pP      21 45 07.5 -7.2
GTA                               sP     sP      21 45 11.9 -8.6
GTA                               pmax   pmax
      comp=Z,8.0nm,1.0s
GTA                               LR     LR
      comp=N,170nm,19.1s
GTA                               LR     LR
      comp=E,180nm,17.9s
GTA                               LR     LR
      comp=Z,200nm,18.3s
LZH   Lanzhou          60.02 291 eP      P       21 45 02.0 +0.6
LZH                               pP     pP      21 45 08.2 -7.1
LZH                               sP     sP      21 45 11.3  -10
LZH                               pmax   pmax
      comp=Z,26nm,1.2s
LZH                               LR     LR
      comp=N,170nm,15.5s
LZH                               LR     LR
      comp=E,150nm,14.5s
LZH                               LR     LR
      comp=Z,230nm,18.3s
STEI  Steigen          60.10 358 eP      P       21 45 01.4 +0.2
TZTN  Tazewell         60.40  68  P      P       21 45 03.8  0.0
      baz=315
BINY  Binghamton       60.54  58  P      P       21 45 04.4 -0.4
      baz=315
FPAL  Fort Paine       60.63  71  P      P       21 45 05.4 -0.1
SSPA  Standing Stone   60.64  61  P      P       21 45 05.2 -0.2
      baz=315
FAUS  Fauske           60.65 357 eP      P       21 45 04.7 -0.4
ENH   Enshi            60.83 283  P      P       21 45 06.4 -0.5
TKL   Tuckaleechee C   60.90  69  LR     LR      22 10 51.6
      comp=Z,82nm,19.6s,baz=322,slow=35
BORG  Borgarnes        60.95  15  LR     LR      22 14 24.6
      comp=Z,32nm,18.2s,baz=352,slow=39
LBNH  Lisbon           61.16  54  P      P       21 45 06.5 -2.4
      baz=316
BLA   Blacksburg       61.69  65  P      P       21 45 11.9 -0.6
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      baz=316
BATG  Bathurst New B   61.77  48  P      P       21 45 13.8 +0.9
MOR8  Moi Rana         61.88 358 eP      P       21 45 12.7 -0.8
KURK  Kurchatov        62.04 318  P      P       21 45 14.4 -0.2
KURK                              IAmb   IAmb    21 45 15.6
      comp=Z,4.4nm,0.7s
KURK  Kurchatov        62.04 318⇑eP      P       21 45 14.7  0.0
KURK                              pmax   pmax
      comp=Z,7.0nm,1.7s
KMSC  Kings Mountain   62.66  67  P      P       21 45 18.0 -1.0
      baz=316
WMQ   Urumqi           63.09 307 eP      P       21 45 25.0 +3.1
WMQ                               LR     LR
      comp=Z,110nm,15.5s
LMN   Caledonia Moun   63.40  49  P      P       21 45 24.6 +0.7
MK31  Makanchi Array   63.42 313  P      P       21 45 23.2 -0.8
MK31  Makanchi Array   63.42 313  P      P       21 45 23.2 -0.8
MK31                              pmax   pmax
      comp=Z,1.0nm,0.8s
MKAR  Makanchi Array   63.42 313  P      P       21 45 23.2 -0.8
      comp=Z,1.1nm,0.7s,baz=49,slow=6.4,SNR=17
      comp=Z,1.1nm,0.7s
MKAR  Makanchi Array   63.42 313 i P     P       21 45 23.5 -0.5
MKAR                              pmax   pmax
      comp=Z,1.0nm,0.7s
BVAR  Borovoye Array   63.43 324  LR     LR      22 15 04.5
      comp=Z,51nm,18.4s,baz=37,slow=38
BRVK  Borovoye         63.45 324  P      P       21 45 23.9 -0.1
BRVK                              IAmb   IAmb    21 45 25.9
      comp=Z,5.0nm,0.8s
BRVK  Borovoye         63.45 324⇓eP      P       21 45 24.0  0.0
BRVK                              pmax   pmax
      comp=Z,5.0nm,0.8s
MAKZ  Makanchi         63.55 313  P      P       21 45 24.1 -0.7
MAKZ  Makanchi         63.55 313  P      P       21 45 24.1 -0.7
MAKZ                              pmax   pmax
      comp=Z,2.0nm,1.0s
NSS   Namsos           63.58 359 eP      P       21 45 25.0 +0.4
DRLN  Deer Lake        64.01  42  P      P       21 45 27.5 -0.3
ARU   Arti             64.45 332  LR     LR      22 18 39.3
      comp=Z,120nm,18.2s,baz=354,slow=41
ARU   Arti             64.45 332  P      P       21 45 30.0 -0.5
ARU                               IAmb   IAmb    21 45 31.6
      comp=Z,4.7nm,0.8s
ARU   Arti             64.45 332c iP     P       21 45 30.0 -0.5
ARU                                              21 46 04.5
ARU                                              21 47 50.5
ARU                               S      S       21 54 09.6 +4.5
ARU                               pmax   pmax
      comp=Z,5.0nm,0.8s
KIRV  Kirov            64.90 338  LR     LR      22 17 09.4
      comp=Z,84nm,18.5s,baz=33,slow=39
KIRV  Kirov            64.90 338⇑eP      P       21 45 33.6 +0.2
GOMU  GeErMu           65.00 297  P      P       21 45 34.9  0.0
FIA1  FINESS Array S   65.92 351  P      P       21 45 39.2 -0.8
FINES FINESS Array B   65.93 351  P      P       21 45 39.7 -0.3
      comp=Z,3.9nm,0.9s,baz=17,slow=7.0,SNR=12
FINES                             LR     LR      22 14 48.7
      comp=Z,110nm,21.7s,baz=13,slow=36
      comp=Z,3.9nm,0.9s
FINES FINESS Array B   65.93 351  P      P       21 45 39.1 -0.9
FINES FINESS Array B   65.93 351 i P     P       21 45 38.2 -1.8
FINES                             pmax   pmax
      comp=Z,4.0nm,0.9s
AKN   Aaknes           65.94   1 eP      P       21 45 40.4 +0.2
DOMB  Dombas           66.09   0 eP      P       21 45 41.4 +0.3
NC303 NORSAR Array S   66.90 359  P      P       21 45 46.1 -0.1
NB2   NORSAR Subarra   67.09 359  P      P       21 45 47.4 -0.1
      comp=Z,5.4nm,0.8s,baz=0.8,slow=6.5
NB2   NORSAR Subarra   67.09 359  P      P       21 45 47.4 -0.1
      slow=6.5
NOA   NORSAR Array B   67.09 359  P      P       21 45 47.8 +0.3
      comp=Z,3.3nm,0.7s,baz=0.7,slow=6.3,SNR=15
NOA                               LR     LR      22 15 54.4
      comp=Z,42nm,18.3s,baz=0.0,slow=37
      comp=Z,3.3nm,0.7s
NC602 NORSAR Array S   67.39 359 eP      P       21 45 49.6 +0.2
SKAR  Skarslia         67.45   1 eP      P       21 45 50.2 +0.4
CMIG  Matias Romero    67.86  90  LR     LR      22 11 13.2
      comp=Z,93nm,21.7s,baz=330,slow=32
HFS   Hagfors          67.96 358  LR     LR      22 17 05.4
      comp=Z,46nm,18.5s,baz=3.0,slow=37
PZH   PanZhiHua        68.22 285  P      P       21 45 56.1 +0.9
PZH                               pmax   pmax
      comp=Z,20nm,1.2s
PZH                               pmax   pmax
      comp=Z,110nm,4.7s
KONO  Kongsberg        68.49 360  P      P       21 45 57.3 +1.0
KONO  Kongsberg        68.49 360 eP      P       21 45 57.0 +0.7
KMI   Kunming          68.65 284 ⇑P      P       21 45 58.3 +0.2
KMI                               pmax   pmax
      comp=Z,10.0nm,1.0s
BLS5  Blasjo           68.69   2 eP      P       21 45 57.9 +0.3
TARG  Taragay, Kyrgy   69.38 312  P      P       21 46 02.7 +0.1
TARG                              IAmb   IAmb    21 46 04.5
      comp=Z,2.0nm,0.7s
TARG  Taragay, Kyrgy   69.38 312  P      P       21 46 02.7 +0.1
TARG                              pmax   pmax
      comp=Z,2.0nm,0.7s
AKTO  Aktyubinsk       69.81 329  LR     LR      22 18 52.6
      comp=Z,94nm,21.5s,baz=64,slow=38
AAK   Ala-Archa        70.13 315  LR     LR      22 18 58.0
      comp=Z,110nm,20.4s,baz=35,slow=38
AAK   Ala-Archa        70.13 315  P      P       21 46 06.7 -0.2
AAK                               IAmb   IAmb    21 46 08.2
      comp=Z,2.6nm,0.8s
AAK   Ala-Archa        70.13 315⇑eP      P       21 46 06.9  0.0
AAK                               pmax   pmax
      comp=Z,5.0nm,1.7s
ABKAR Akbulak array    70.21 328  P      P       21 46 06.6 -0.5
ABKAR Akbulak array    70.21 328         P       21 46 06.5 -0.5
ABKAR                             IAmb   IAmb    21 46 08.8
      comp=Z,3.8nm,0.8s
OBN   Obninsk          70.71 344  LR     LR      22 21 07.3
      comp=Z,30nm,18.8s,baz=5.5,slow=39
BELG  Belogornoye      70.96 336  LR     LR      22 19 32.6
      comp=Z,134nm,19.3s,baz=20,slow=38
BELG  Belogornoye      70.96 336⇑eP      P       21 46 11.9 +0.3
BELG                              pmax   pmax
      comp=Z,2.0nm,0.9s
TNCH  TengChong        71.23 287  P      P       21 46 14.3 +0.4
TNCH                              pP     pP      21 46 22.9 -5.2
TNCH                              sP     sP      21 46 27.3 -6.5
TNCH                              PP     PP      21 48 50.3 -1.6
TNCH                              S      S       21 55 22.1 -5.3
TNCH                              sS     pS      21 55 41.4 -3.4
TNCH                              SKS    SKSac   21 56 04.6 -8.1
TNCH                              pmax   pmax
      comp=Z,18nm,1.1s
TNCH                              pmax   pmax
      comp=Z,89nm,4.6s
TNCH                              LR     LR
      comp=N,140nm,4.7s
TNCH                              LR     LR
      comp=E,69nm,4.1s
TNCH                              LR     LR
      comp=Z,160nm,8.7s
KK31  Karatay Array    71.45 318  P      P       21 46 14.4 -0.4
KK31                              IAmb   IAmb    21 46 15.5
      comp=Z,1.7nm,0.7s
KK31  Karatay Array    71.45 318  P      P       21 46 14.4 -0.4
KK31                              pmax   pmax
      comp=Z,2.0nm,0.7s
KKAR  Karatay Array    71.45 318  P      P       21 46 14.5 -0.3
KKAR  Karatay Array    71.45 318  P      P       21 46 14.5 -0.3
ISAL  Salakas          71.71 350 eP      P       21 46 09.6 -6.4
PPT   Papeete          71.83 159  LR     LR      22 11 00.9
      comp=Z,65nm,20.5s,baz=63,slow=30
IDID  Didziasalis      71.89 350 eP      P       21 46 09.6 -7.5
LSA   Lhasa            71.91 295  P      P       21 46 19.3 +1.0
LSA   Lhasa            71.91 295  P      P       21 46 19.3 +1.0
LSA                               pmax   pmax
      comp=Z,12nm,0.8s
IIGN  Ignalina         71.91 350 eP      P       21 46 10.0 -7.2
KSH   Kashi            71.98 312  P      P       21 46 22.0 +3.9
KSH                               sP     sP      21 46 39.3 +1.3
KSH                               pmax   pmax
      comp=Z,6.0nm,0.8s
PABE  Paberze          71.98 351  P      P       21 46 18.0 +0.3
PABE  Paberze          71.98 351 eP      P       21 46 17.4 -0.3
FAKI  Fak Fak          73.01 241  P      P       21 46 24.5 +0.2
RAR   Rarotonga        73.71 170  LR     LR      22 13 38.5
      comp=Z,132nm,20.2s,baz=302,slow=32
CRAI  Chiangrai        73.77 282  P      P       21 46 29.6 +0.7
SHL   Shillong         74.67 292  P      P       21 46 33.0 -1.2
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SHL				IAmb	IAmb	21 46 34.1	
	comp=Z,5.8nm,0.9s						
SHL	Shillong	74.67	292	P	P	21 46 33.0	-1.2
SHL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GKP	Gorka Klasztor	74.69	355	eP	P	21 46 34.1	+0.5
GAR	Garm	74.93	315	P	P	21 46 34.8	-0.7
GAR				IAmb	IAmb	21 46 36.5	
	comp=Z,10nm,1.1s						
PHRA	Phrae	75.19	281	P	P	21 46 37.3	+0.3
RETH	Rethem/Aller,	75.42	0	eP	P	21 46 38.9	+1.1
	comp=Z,9.8nm,1.0s,baz=360,slow=5.0						
NRDL	Niedersach Rie	75.66	360	eP	P	21 46 40.1	+1.0
	comp=Z,3.9nm,0.8s,baz=360,slow=5.0						
CHGR	Chuyangaron	75.71	316	P	P	21 46 40.1	+0.2
CHGR	Chuyangaron	75.71	316	P	P	21 46 40.1	+0.2
CHGR				pmax	pmax		
	comp=Z,13nm,0.7s						
CHTO	Chiang Mai	75.72	282	P	P	21 46 40.1	0.0
CHTO	Chiang Mai	75.72	282	P	P	21 46 40.1	0.0
CM31	Chiang Mai Arr	75.99	282	P	P	21 46 42.4	+0.7
CMAR	Chiang Mai Arr	75.99	282	P	P	21 46 42.6	+0.9
	comp=Z,17nm,0.8s,baz=26,slow=6.7,SNR=116						
	comp=Z,17nm,0.8s						
CMAR	Chiang Mai Arr	75.99	282	P	P	21 46 41.8	+0.1
CMAR	Chiang Mai Arr	75.99	282	iP	P	21 46 42.5	+0.9
CMAR				pmax	pmax		
	comp=Z,19nm,0.8s						
AKASG	Malin Array Be	76.11	347	P	P	21 46 41.5	-0.3
	comp=Z,4.7nm,0.8s,baz=13,slow=5.6,SNR=14						
AKASG				LR	LR	22 24 13.7	
	comp=Z,53nm,19.5s,baz=360,slow=39						
	comp=Z,4.7nm,0.8s						
AKASG	Malin Array Be	76.11	347	iP	P	21 46 41.4	-0.5
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AKBB	Malin Array Si	76.11	347	P	P	21 46 41.1	-0.7
AKBB				IAmb	IAmb	21 46 42.0	
	comp=Z,8.4nm,1.1s						
AKBB	Malin Array Si	76.11	347	P	P	21 46 41.1	-0.7
AKBB				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CLZ	Clausthal	76.32	359	eP	P	21 46 44.7	+1.7
	comp=Z,5.5nm,0.7s,baz=360,slow=5.0						
CLL	Collm	76.81	358	iP	P	21 46 46.2	+0.4
	comp=Z,8.0nm,0.9s						
CLL				epP	PcP	21 46 57.0	+0.1
CLL				epPcP		21 47 08.0	
CLL	Collm	76.81	358	iP	P	21 46 46.2	+0.4
CLL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BRG	Berggiesshubel	77.22	357	iP	P	21 46 49.0	+0.9
BRG				Amp		21 46 49.7	
	comp=Z,7.7nm,0.9s						
BRG	Berggiesshubel	77.22	357	iP	P	21 46 49.0	+0.9
BRG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
OSTC	Ostas	77.45	356	eP	P	21 46 50.0	+0.6
OSTC	Ostas	77.45	356	eP	P	21 46 50.0	+0.6
MOX	Moxa	77.50	359	P	P	21 46 51.1	+1.4
MOX				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MOX	Moxa	77.50	359	eP	P	21 46 50.7	+1.0
	comp=Z,7.9nm,0.9s,baz=360,slow=5.0						
MOX				eL	L	22 25 32.5	
	comp=Z,77nm,19.3s						
MEM	Membach	77.51	2	dP	P	21 46 50.2	+0.5
BTNL	Ternell	77.53	2	dP	P	21 46 50.9	+1.0
PVCC	Panska Ves	77.55	357	eP	P	21 46 50.8	+0.9
PVCC	Panska Ves	77.55	357	eP	P	21 46 50.8	+0.9
LVV	L'vov	77.60	350	eP	P	21 46 49.8	-0.5
DPC	Dobruska-Polom	77.65	356	eP	P	21 46 50.4	-0.2
DPC	Dobruska-Polom	77.65	356	eP	P	21 46 50.4	-0.2
BCLA	Clavier	77.68	3	dP	P	21 46 50.5	-0.2
GUNZ	Gunzen	77.77	358	eP	P	21 46 52.4	+1.1
	comp=Z,3.2nm,0.8s,baz=360,slow=5.0						
BMRD	Maredsous	77.78	3	dP	P	21 46 52.3	+1.1
	comp=Z,7.9nm,0.9s						
WERN	Wernitzgruen	77.85	358	eP	P	21 46 53.1	+1.4
	comp=Z,7.4nm,0.9s,baz=360,slow=5.0						
NKC	Novy Kostel	77.90	358	eP	P	21 46 52.8	+0.8
NKC	Novy Kostel	77.90	358	eP	P	21 46 52.8	+0.8
KRLC	Kraliky	77.90	355	eP	P	21 46 52.4	+0.4
KRLC	Kraliky	77.90	355	eP	P	21 46 52.4	+0.4
RCHB	Rochefort	77.94	3	dP	P	21 46 52.1	0.0
NIL	Nilore	78.02	310	P	P	21 46 53.0	0.0
NIL	Nilore	78.02	310	P	P	21 46 53.0	0.0
NIL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
OKC	Ostrava-Krasne	78.06	354	eP	P	21 46 53.2	+0.4
OKC	Ostrava-Krasne	78.06	354	eP	P	21 46 53.2	+0.4
PRU	Pruhonice	78.08	357	eP	P	21 46 53.6	+0.7
MORC	Moravsky Berou	78.16	355	⇑P	P	21 46 53.9	+0.5
MORC	Moravsky Berou	78.16	355	P	P	21 46 54.2	+0.8
MORC				IAmb	IAmb	21 46 55.1	
	comp=Z,5.5nm,0.9s						
MORC	Moravsky Berou	78.16	355	eP	P	21 46 53.7	+0.3
MORC	Moravsky Berou	78.16	355	P	P	21 46 54.2	+0.8
MORC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
STHS	Stebnicka Huta	78.26	352	eP	P	21 46 54.7	+0.8
STHS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
STHS	Stebnicka Huta	78.26	352	eP	P	21 46 54.7	+0.8
GRF	Grafenberg Arr	78.46	359	eP	P	21 46 56.3	+1.3
	comp=Z,11nm,0.8s,baz=360,slow=5.0						
GRF				eL	L	22 22 14.9	
	comp=Z,60nm,18.9s						
LANS	Liptovska Anna	78.66	353	eP	P	21 46 58.2	+2.0
LANS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LANS	Liptovska Anna	78.66	353	eP	P	21 46 58.2	+2.0
VRAC	Vranov	78.68	355	⇑P	P	21 46 57.5	+1.2
VRAC	Vranov	78.68	355	eP	P	21 46 56.9	+0.7
VRAC	Vranov	78.68	355	P	P	21 46 57.4	+1.2
SORM	Soroca	78.75	347	⇑P	P	21 46 55.9	-0.7
SORM	Soroca	78.75	347	P	P	21 46 55.9	-0.7
KRUC	Moravsky	78.93	355	eP	P	21 46 58.6	+1.0
KHC	Kasperske Hory	78.97	357	P	P	21 46 59.1	+1.2
KHC				IAmb	IAmb	21 47 00.1	
	comp=Z,7.7nm,0.9s						
KHC	Kasperske Hory	78.97	357	eP	P	21 46 58.8	+0.8
KHC	Kasperske Hory	78.97	357	ceP	P	21 46 58.7	+0.8
KHC				pmax	pmax		
	comp=Z,17nm,1.0s						
JAVC	Velka Javorina	79.07	355	eP	P	21 47 00.5	+2.0
KBL	Kabul	79.21	314	P	P	21 46 58.7	-1.0
KBL				IAmb	IAmb	21 46 59.7	
	comp=Z,4.1nm,0.8s						
KBL	Kabul	79.21	314	P	P	21 46 58.7	-1.0
KBL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GEC2	GERESS Array S	79.26	357	P	P	21 47 00.1	+0.5
GEC2				IAmb	IAmb	21 47 01.2	
	comp=Z,6.5nm,0.9s						
GEC2	GERESS Array S	79.26	357	eP	P	21 47 00.4	+0.9
	comp=Z,4.5nm,0.8s,baz=360,slow=5.0						
GERES	GERESS Array B	79.26	357	P	P	21 47 00.3	+0.7
	comp=Z,3.3nm,0.8s,baz=17,slow=4.9,SNR=28						
	comp=Z,3.3nm,0.8s						
GERES	GERESS Array B	79.26	357	P	P	21 47 00.1	+0.5
CKRC	Cesky Krumlov	79.26	357	eP	P	21 46 59.7	+0.2
CKRC	Cesky Krumlov	79.26	357	eP	P	21 46 59.7	+0.2
VYHS	Vyhne	79.36	354	eP	P	21 47 01.0	+1.0
VYHS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VYHS	Vyhne	79.36	354	eP	P	21 47 01.0	+1.0
TRPA	Tarpa	79.42	351	⇓P	P	21 47 01.2	+1.0
MODS	Modra-Piesok	79.57	355	eP	P	21 47 02.8	+1.6
MODS				pmax	pmax		
	comp=Z,20nm,1.0s						
MODS	Modra-Piesok	79.57	355	eP	P	21 47 02.8	+1.6
BUR08	Bucovina Ar. S	79.62	349	P	P	21 47 01.5	-0.1
BUR08				IAmb	IAmb	21 47 03.6	
	comp=Z,5.5nm,1.2s						
BURAR	Bucovina Array	79.65	349	⇑P	P	21 47 01.9	+0.2
BURAR	Bucovina Array	79.65	349	P	P	21 47 01.8	+0.1
BURAR				IAmb	IAmb	21 47 03.0	
	comp=Z,4.1nm,0.8s						
BURAR	Bucovina Array	79.65	349	P	P	21 47 01.9	+0.2
BMR	Baia Mare	79.78	350	P	P	21 47 03.4	+1.1
BMR	Baia Mare	79.78	350	P	P	21 47 03.4	+1.1
FUR	Furstenfeldbru	79.99	359	eP	P	21 47 21.9	+18
	baz=360,slow=5.0						
KIV	Kislovodsk	80.03	336	eP	P	21 47 04.9	+1.1
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CONA	Conrad Observa	80.09	356	eP	P	21 47 05.0	+0.9
	comp=Z,8.1nm,0.8s						
KBZ	Khabaz	80.19	336	P	P	21 47 05.7	+1.3
	comp=Z,1.8nm,0.8s,baz=160,slow=4.6,SNR=4.8						
KBZ				LR	LR	22 26 25.2	
	comp=Z,71nm,19.1s,baz=18,slow=39						
	comp=Z,1.8nm,0.8s						
KBZ	Khabaz	80.19	336	⇑eP	P	21 47 05.8	+1.3
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MOA	Molln	80.23	357	eP	P	21 47 05.7	+1.0
	comp=Z,3.3nm,0.8s						
BIOA	Bad Ischl, Aus	80.41	357	eP	P	21 47 06.7	+1.0
	comp=Z,4.6nm,0.7s						
RETA	Reutte	80.67	359	eP	P	21 47 08.1	+1.0
	comp=Z,5.6nm,0.9s,SNR=4.1						
CJR	Cluj-Napoca	80.72	350	P	P	21 47 07.6	+0.2
CJR	Cluj-Napoca	80.72	350	P	P	21 47 07.6	+0.2
DRGR		80.73	351	P	P	21 47 07.3	-0.2
DRGR		80.73	351	P	P	21 47 07.2	-0.2
ARSA	Arzberg	80.78	356	eP	P	21 47 08.3	+0.5
	comp=Z,3.9nm,0.7s,SNR=4.1						
MARR	Marisel-Cluj	80.80	351	⇑P	P	21 47 07.9	0.0
MOTA	Moosalm	80.81	359	eP	P	21 47 09.1	+1.1
	comp=Z,8.9nm,1.0s,SNR=5.2						
ZEI	Tsey	80.81	335	eP	P	21 46 59.2	-9.0
ZEI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
WATA	Walderalm	80.81	359	eP	P	21 47 08.9	+0.9
	comp=Z,6.0nm,0.8s						
WTTA	Wattenberg	80.89	359	eP	P	21 47 09.6	+1.1
	comp=Z,8.4nm,0.7s,SNR=5.3						
SQTA	Sankt Quirin	80.93	359	eP	P	21 47 09.9	+1.2
	comp=Z,10nm,0.8s,SNR=8.5						
SSF	Saint Saulge	80.97	4	eP	P	21 47 09.3	+0.6
SSF				pmax	pmax		
	comp=Z,12nm,1.0s						
KBA	Koelnbreinsper	81.03	357	eP	P	21 47 10.7	+1.5
	comp=Z,16nm,0.7s,SNR=21						
FETA	Feichten	81.14	359	iP	P	21 47 11.2	+1.4
	comp=Z,12nm,0.9s						
MFF	Saint Martin d	81.21	7	eP	P	21 47 10.7	+0.7
MFF				pmax	pmax		
	comp=Z,38nm,1.3s						
CTA	Charters Tower	81.27	221	P	P	21 47 11.3	+0.9
	comp=Z,3.6nm,0.8s,baz=53,slow=3.6,SNR=4.2						
	comp=Z,3.6nm,0.8s						
COVR	Voineasa-Covas	81.27	348	⇑P	P	21 47 11.4	+1.0
SLCR	Slobozia Conac	81.32	347	P	P	21 47 09.5	-1.0
SOKA	Soboth	81.37	356	eP	P	21 47 11.9	+0.9
	comp=Z,7.5nm,0.8s						
DAVOX	Davos/Dischmat	81.38	360	LR	LR	22 25 12.6	
	comp=Z,30nm,18.0s,baz=315,slow=37						
ABTA	Abfaltersbach	81.39	358	eP	P	21 47 11.4	+0.4
	comp=Z,7.7nm,0.9s,SNR=4.8						
OBKA	Obir	81.56	357	eP	P	21 47 13.3	+1.3
	comp=Z,6.2nm,0.7s						
MLR	Muntele Rosu	81.66	348	⇑P	P	21 47 13.9	+1.3
MLR	Muntele Rosu	81.66	348	LR	LR	22 26 47.6	
	comp=Z,99nm,20.5s,baz=38,slow=38						
MLR	Muntele Rosu	81.66	348	P	P	21 47 13.8	+1.3
CFR	Carcaliu	81.67	347	⇑P	P	21 47 13.3	+0.9
CFR	Carcaliu	81.67	347	P	P	21 47 13.3	+0.9
SURR	Surduc	81.81	351	⇓P	P	21 47 13.9	+0.7
VOIR		81.81	349	⇓P	P	21 47 14.3	+1.0
VOIR		81.81	349	P	P	21 47 14.3	+1.0
ARR	Arges	81.93	349	⇑P	P	21 47 13.7	-0.1
MTN	Manton Dam	81.93	237	P	P	21 47 13.7	-0.4
ISR	Istrita	81.94	348	P	P	21 47 13.6	-0.3
ISR	Istrita	81.94	348	P	P	21 47 13.6	-0.3
LOT	Lotru	81.95	350	P	P	21 47 13.0	-1.0
BZS	Buzias	82.00	351	⇑P	P	21 47 14.2	0.0
BZS	Buzias	82.00	351	P	P	21 47 14.1	0.0
GZR	Gura Zlata	82.11	351	⇑P	P	21 47 15.1	+0.2
GZR	Gura Zlata	82.11	351	P	P	21 47 15.0	+0.2
LFF	La Frestale	82.93	6	eP	P	21 47 21.7	+2.7
LFF				pmax	pmax		
	comp=Z,20nm,1.2s						
CAF	Calviac	83.03	5	eP	P	21 47 20.4	+0.9
CAF				pmax	pmax		
	comp=Z,55nm,1.9s						
GNI	Garni	83.05	334	LR	LR	22 29 21.6	
	comp=Z,34nm,19.3s,baz=356,slow=39						
DIKM	Dikmen	83.89	341	⇑P	P	21 47 24.6	+0.7
PLVB	Pleven	83.89	349	⇓P	P	21 47 23.9	0.0
SJG	San Juan	84.33	68	LR	LR	22 24 47.9	
	comp=Z,38nm,21.6s,baz=190,slow=36						
VTS	Vitosha	84.80	350	⇑P	P	21 47 30.3	+1.4
VTS	Vitosha	84.80	350	P	P	21 47 30.2	+1.4
BR131	Keskin Array S	86.06	342	⇑eP	P	21 47 35.0	-0.1
BRTR	Keskin Array B	86.06	342	P	P	21 47 35.9	+0.8
	comp=Z,1.7nm,0.9s,baz=48,slow=17,SNR=4.4						
BRTR				LR	LR	22 29 25.0	
	comp=Z,45nm,21.8s,baz=22,slow=38						
	comp=Z,1.7nm,0.9s						
BRTR	Keskin Array B	86.06	342	iP	P	21 47 36.2	+1.1
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WRAB	Tennant Creek	86.37	231	⇓eP	P	21 47 35.2	-1.3
WRAB				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WRA	Warramunga Arr	86.38	231	P	P	21 47 36.0	-0.6
	comp=Z,2.4nm,0.9s,baz=37,slow=6.1,SNR=16						
	comp=Z,2.4nm,0.9s						
WRA	Warramunga Arr	86.38	231	iP	P	21 47 35.5	-1.1
WRA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ESDC	Sonseca Array	87.74	10	P	P	21 47 43.5	+0.4
	comp=Z,4.8nm,0.8s,baz=350,slow=4.6,SNR=28						
	comp=Z,4.8nm,0.8s						
ASAR	Alice Springs	89.78	229	P	P	21 47 53.4	+0.6
	comp=Z,7.6nm,0.9s,baz=34,slow=4.6,SNR=55						
	comp=Z,7.6nm,0.9s						
STKA	Stephens Creek	93.65	219	LR	LR	22 25 32.0	
	comp=Z,76nm,19.2s,baz=191,slow=32						
EIL	Elat	95.48	338	LR	LR	22 33 57.3	
	comp=Z,30nm,21.9s,baz=246,slow=37						
RAYN	Ar Rayn	98.29	327	P	Pdif	21 48 32.3	+0.2
TORD	Torodi Ar. Bea	114.56	8	PKP	PKPdf	21 53 34.5	0.0
	comp=Z,0.3nm,0.5s,baz=335,slow=2.4,SNR=5.3						
H03N2	Juan Fernandez	116.50	111	T	T	00 01 12.5	
	baz=318,slow=77,SNR=17						
H03N1	Juan Fernandez	116.51	111	T	T	00 01 05.4	
	baz=318,slow=77,SNR=23						
H03N3	Juan Fernandez	116.51	111	T	T	00 01 03.3	
	baz=318,slow=77,SNR=19						
BOSA	Boshof	153.68	328	PKPbc	PKiKP	21 54 54.0	+0.9
	comp=Z,1.1nm,0.4s,baz=356,slow=2.5,SNR=7.9						
BOSA	Boshof	153.68	328	PKIKP	PKiKP	21 54 54.0	+0.9

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*IDC **07** 21:45:59.1±1.5, 8°.64S×119°.51E, h0^{km}, mb3.8/5, mbtmp3.7/7, ML3.6/2, MS3.1/2, Error ellipse: s-maj=83.1km s-min=19.2km az=60.0*

*DJA **07** 21:46:04.2±0.3, 8°S±3°×12°0E±°, h10^{km}, M4.1/9, mb4.3/1, MLv4.0/9*

ISC 07 21:46:02.8±0.8**, 8°.19S**±0°.05×**120°.28E**±0°.06**, h10^{km}, n16, σ1^{s}.78**/17**, mb3.9**/4**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	1.99	103	P	Pn	21 46 38.7	+2.2
BSSI	Bau Bau, Buton	2.04	6	P	Pn	21 46 37.7	+0.5
BSSI				S	Sn	21 47 01.4	-1.4
BASI	Baing, Sumba	2.04	172	P	Pn	21 46 38.7	+1.4
PLAI	Plampang	2.56	255	P	Pn	21 46 46.4	+2.1
BKSI	Bulukumba	2.85	357	P	Pn	21 46 49.6	+1.2
KAPI	Kappang	3.19	351	Pn	Pn	21 46 56.7	+3.6
	5.5nm,0.3s,baz=158,slow=8.1,SNR=12						
KAPI				Sn	Sn	21 47 32.5	+1.3
	2.7nm,0.3s,baz=52,slow=19,SNR=2.1						
KAPI				LR	LR	21 48 05.0	
	comp=Z,46nm,18.6s,baz=198,slow=35						
	22nm,0.5s						
TWSI	Taliwang, Sumb	3.40	260	P	Pn	21 46 57.4	+1.4
SOEI	Soe	4.24	112	P	Pn	21 47 09.9	+2.3
JAGI	Jajag, Banyuwa	6.07	267	P	Pn	21 47 33.7	+1.0
WRA	Warramunga Arr	17.94	132	P	Pn	21 50 11.8	-0.9
	0.2nm,0.3s,baz=305,slow=13,SNR=8.7						
	0.7nm,0.6s						
ASAR	Alice Springs	20.19	141	P	P	21 50 37.9	+0.1
	2.4nm,0.6s,baz=325,slow=13,SNR=21						
	2.4nm,0.6s						
STKA	Stephens Creek	30.80	143	P	P	21 52 18.2	-0.7
	0.6nm,0.3s,baz=324,slow=8.7,SNR=1.5						
	0.6nm,0.3s						
DZM	Mont Dzumac	46.46	113	LR	LR	22 15 19.7	
	comp=Z,93nm,20.3s,baz=229,slow=38						
SONM	Songino Array	57.11	349	P	P	21 55 49.8	+0.2
	1.1nm,1.0s,baz=154,slow=8.1,SNR=5.5						
	1.1nm,1.0s						
MKAR	Makanchi Array	64.32	332	P	P	21 56 36.6	-2.1
	0.5nm,0.7s,baz=134,slow=6.9,SNR=7.7						
	0.5nm,0.7s						
ZALV	Zalesovo Beam	68.74	338	P	P	21 57 05.6	-1.1
	0.5nm,0.6s,baz=145,slow=5.4,SNR=4.4						
	0.5nm,0.6s						

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*TRN **07** 21:59:42.3, 9°.74N×62°.82W, h112^{km}, MD3.5*

*FUNV **07** 21:59:43.1, 9°.91N×62°.90W, h15^{km}, MW3.5*

ISC 07 21:59:37.7±1.4**, 9°.68N**±0°.06×**62°.87W**±0°.04**, h7^{km}**±11^{km}**, n19, σ2^{s}.42**/32**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	Carupano	1.05	340	eP	Pb	21 59 57.9	-0.2
CRUV				eS	Sg	22 00 07.3	-4.2
TRN	Trinidad (W)	1.73	56	eP	Pg	22 00 11.6	+0.6
TRN				eS	Sn	22 00 31.3	+0.8
PRGV	PARIAGUAN	1.98	243	eP	Pg	22 00 16.4	+0.7
PRGV				eS	Sg	22 00 42.3	+1.0
TPR	Prospect	2.54	54	eP	Pb	22 00 22.5	-1.2
GRGR	Grenville	2.71	26	eP	Pn	22 00 23.0	+1.3
GRGR				eS	Sn	22 00 54.0	-0.7
TOSP	Speyside	2.80	55	eP	Pn	22 00 24.9	+2.0
TOSP				eS	Sn	22 00 56.9	-0.1
GRSS	Sisters	2.88	25	eP	Pn	22 00 26.1	+2.2
GRSS				eS	Sn	22 00 58.4	-0.4
GCMP	Grenada, Carri	3.12	27	eP	Pn	22 00 28.8	+1.5
GCMP				eS	Sn	22 01 04.2	-0.8
MERV	Las Mercedes	3.41	263	eP	Pn	22 00 34.8	+3.6
MERV				eS	Sn	22 01 13.5	+1.6
BIRV	Birongo	3.44	284	eP	Pn	22 00 34.5	+2.9
BIRV				eS	Sn	22 01 12.1	-0.6
SVB	Belmont	3.90	24	eP	Pn	22 00 40.1	+2.0
TACV	Tcata	4.12	277	eP	Pn	22 00 43.9	+2.8
TACV				eS	Sn	22 01 28.1	-1.5
CACV	CAICARA DEL OR	4.19	240	eP	Pn	22 00 40.5	-1.5
CACV				eS	Sn	22 01 23.7	-7.6
BENV	Beln	4.67	274	eP	Pn	22 00 51.8	+3.1
BENV				eS	Sn	22 01 41.7	-1.5
SLBI	Saint Lucia, B	4.70	23	eP	Pn	22 00 49.3	+0.3
MPOM	Morne Pois Mar	5.12	22	eP	Pn	22 00 55.2	+0.3
BAUV	El Baul	5.16	262	eP	Pn	22 00 58.1	+2.7
BAUV				eS	Sn	22 01 53.4	-1.7
BAUV	El Baul	5.16	262	eP	Pn	22 00 58.0	+2.7
BAUV	El Baul	5.16	262	eS	Sn	22 01 54.2	-0.9

IDC 07 22:02:28.1±2.2**, 1°.24S**×**126°.97E, h0^{km}, mb3.3**/2**, mbtmp3.3**/3**, ML3.5**/1**, MS3.6**/1**, Error ellipse: s-maj=167.2km s-min=28.2km az=66.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.94	159	P	Pn	22 07 02.7	-0.7
	0.2nm,0.3s,baz=339,slow=9.8,SNR=8.0						
	0.5nm,0.5s						
ASAR	Alice Springs	23.28	164	P	P	22 07 37.3	-0.4
	0.6nm,0.3s,baz=345,slow=12,SNR=18						
	0.6nm,0.3s						
BRDH	Bariadhala	41.83	307	LR	LR	22 30 07.6	
	comp=Z,69nm,19.4s,baz=51,slow=40						
DZM	Mont Dzumac	43.62	121	eLR	LR	22 10 33.1	
	comp=Z,115nm,22.1s						
MKAR	Makanchi Array	61.78	327	P	P	22 12 48.6	-0.2
	0.3nm,1.0s,baz=124,slow=7.2,SNR=1.4						
	0.3nm,1.0s						

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*BJI **07** 22:10:49.1±0.0, 24°.41N×121°.95E, h12^{km}, mb4.6/63, mB4.6/35, ML4.5/9, Ms4.1/41, Ms7 3.8/36*

*MOS **07** 22:10:50.6±0.8, 24°.38N×122°.26E, h66^{km}, mb5.0/63, Error ellipse: s-maj=7.3km s-min=4.3km az=118.8*

*TAP **07** 22:10:51.6, 24°.31N×122°.10E, h60^{km}, ML5.3, B*

*ASIES **07** 22:10:51.1, 24°.33N×122°.21E, h49^{km}, MW4.5*

*NEIC **07** 22:10:51.8±1.4, 24°.31N±0°.05×122°.18E±0°.04, h58^{km}±5^{km}, mb4.9/118, Mwr4.6/22, Error ellipse: s-maj=7.5km s-min=5.1km az=187.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.66; $M_{\theta\theta}$-0.05; $M_{\phi\phi}$-0.61; $M_{r\theta}$0.60; $M_{\theta\phi}$-0.27; $M_{\phi r}$0.50; Fault plane solution: $M_0$1.04000×10^{16} NP1:ϕ_s183.20000°, δ24.83000°, λ53.67000°. NP2:ϕ_s42.22000°, δ70.23000°, λ105.33000°. Principal axes: T 1.0624, Plg62.0000°, Azm335.0000°; N -0.0391, Plg14.0000°, Azm217.0000°; P -1.0233, Plg24.0000°, Azm120.0000°;*

*NEIC **07** 22:10:51.8, 24°.31N×122°.18E, h58^{km}*

*NIED **07** 22:10:51.4, 24°.27N×122°.14E, h60^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.79; $M_{\theta\theta}$-0.33; $M_{\phi\phi}$-0.46; $M_{r\theta}$0.70; $M_{\theta\phi}$-0.21; $M_{\phi r}$0.35; Fault plane solution: $M_0$1.04000×10^{16} NP1:ϕ_s56.00000°, δ69.00000°, λ99.00000°. NP2:ϕ_s212.00000°, δ22.00000°, λ68.00000°.*

*JMA **07** 22:10:51.4±0.1, 24°.3N±0°.7×122°.1E±0°.3, h60^{km}±1^{km}, MD4.7/15, MV4.8/15, TAIWAN REGION*

JMA Felt I J1 at TAIWAN REGION .

*IDC **07** 22:10:52.7±1.7, 24°.45N×122°.26E, h66^{km}±15^{km}, mb4.3/28, mbtmp4.6/30, MS3.7/43, Error ellipse: s-maj=12.8km s-min=9.5km az=57.0*

ISC 07 22:10:51.1±0.4**, 24°.32N**±0°.02×**122°.16E**±0°.02**, h55^{km}**±3^{km}**, h56^{km}:pP-P, n739, σ1^{s}.47**/933**, mb4.8**/142**, MS3.8**/42**, 35C-122D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS2	EOS2	0.12	34	iP	Pn	22 11 00.7	+1.2
	baz=47						
EOS2				iS	Sn	22 11 07.5	+2.0
	baz=47						
EOS4	EOS4	0.24	143	iP	Pn	22 11 00.8	+0.9
	baz=133						
EOS4				iS	Sn	22 11 07.9	+1.7
	baz=133						
EWUT	Wuta	0.37	290	⇓iP	Pn	22 11 01.9	+0.5
	baz=295						
EWUT				S	Sn	22 11 08.8	+0.1
	baz=295						
EHP	Heping Village	0.38	269	iP	Pn	22 11 02.2	+0.7
	baz=270						
EHP				S	Sn	22 11 10.4	+1.5
	baz=270						
ENA	Nanau	0.40	286	⇓iP	Pn	22 11 02.4	+0.7
	baz=290						
ENA				iS	Sn	22 11 09.9	+0.7
	baz=290						
TWC	Suao	0.40	316	⇓iP	Pn	22 11 02.3	+0.6
	baz=324						
TWC				iS	Sn	22 11 09.5	+0.1
	baz=324						
NDS	Dongshan	0.51	308	⇓iP	Pn	22 11 03.9	+1.0
	baz=313						
NDS				eS	Sn	22 11 12.2	+0.8
	baz=313						
ETL	Fush Village	0.51	252	⇓iP	Pn	22 11 03.4	+0.4
	baz=251						
ETL				S	Sn	22 11 12.2	+0.8
	baz=251						
NACB	Ninganchiao	0.53	255		Pn	22 11 03.4	+0.2
NACB				Sn	Sn	22 11 12.0	+0.2
NACB	Ninganchiao	0.53	255	P	Pn	22 11 03.3	+0.2
NACB	Ninganchiao	0.53	255	⇓iP	Pn	22 11 03.4	+0.2
	baz=254						
NACB				S	Sn	22 11 12.2	+0.4
	baz=254						
EGS		0.56	339	⇓iP	Pn	22 11 04.2	+0.8
	baz=345						
EGS				S	Sn	22 11 13.3	+0.9
	baz=345						
TWD	Chiawan	0.56	245	⇓iP	Pn	22 11 03.9	+0.4
	baz=243						
TWD				S	Sn	22 11 13.1	+0.7

	baz=243						
ILA	**Ilan**	0.58	320	⇓*i*P	Pn	22 11 05.1	+1.4
	baz=325						
ILA				*e*S	Sn	22 11 14.5	+1.7
	baz=325						
TWE	**Neicheng**	0.60	312	⇓*i*P	Pn	22 11 05.0	+1.1
	baz=317						
TWE				*e*S	Sn	22 11 14.3	+1.1
	baz=317						
HWA	**Hwalien**	0.61	236	⇓*i*P	Pn	22 11 04.9	+0.9
	baz=233						
HWA				*e*S	Sn	22 11 14.8	+1.5
	baz=233						
NTC	**Toucheng**	0.61	331	⇓*e*P	Pn	22 11 04.8	+0.8
	baz=336						
NTC				*e*S	Sn	22 11 14.1	+0.7
	baz=336						
LATG	**Datong**	0.61	291	⇓*i*P	Pn	22 11 05.0	+0.8
	baz=293						
LATG				*e*S	Sn	22 11 15.6	+1.9
	baz=293						
ETLH	**Xiulin Townshi**	0.63	260	⇓*i*P	Pn	22 11 04.8	+0.4
	baz=260						
ETLH				S	Sn	22 11 14.3	+0.4
	baz=260						
ENTT	**Nioudou**	0.63	301	⇓*i*P	Pn	22 11 05.4	+1.1
	baz=304						
ENTT				*e*S	Sn	22 11 15.2	+1.4
	baz=304						
TEYL	**Yanliau Villag**	0.68	229	⇑P	Pn	22 11 05.4	+0.6
	baz=229						
TEYL				*e*S	Sn	22 11 16.0	+1.2
	baz=229						
FUSB	**Fushanzhiwuyua**	0.68	310	⇓*i*P	Pn	22 11 06.2	+1.2
	baz=314						
FUSB				*e*S	Sn	22 11 16.7	+1.7
	baz=314						
ETM	**Tongmen**	0.70	240	⇓P	Pn	22 11 05.7	+0.5
	baz=238						
ETM				*e*S	Sn	22 11 16.2	+0.8
	baz=238						
TWB1	**Santiao Chiao**	0.70	347	⇓*i*P	Pn	22 11 05.6	+0.4
	baz=352						
TWB1				S	Sn	22 11 15.2	-0.2
	baz=352						
NNSB	**Datong**	0.71	279	⇓P	Pn	22 11 06.2	+0.8
	baz=280						
NNSB				*e*S	Sn	22 11 16.9	+1.0
	baz=280						
NNSH	**Datong**	0.71	279	⇓P	Pn	22 11 06.1	+0.7
	baz=280						
NNSH				*e*S	Sn	22 11 16.2	+0.4
	baz=280						
TIPB	**Shuangxi**	0.72	335	⇓*i*P	Pn	22 11 06.1	+0.7
	baz=339						
TIPB				*e*S	Sn	22 11 16.2	+0.4
	baz=339						
NNS	**Nan Shan**	0.72	280	⇓P	Pn	22 11 06.3	+0.7
	baz=281						
NNS				*e*S	Sn	22 11 17.1	+1.0
	baz=281						
JYNG	**Yonagunijimaku**	0.73	79	*i* P	Pn	22 11 06.6	+1.1
JYNG				S	Sn	22 11 17.4	+1.4
JYNG	**Yonagunijimaku**	0.73	79	A	A	22 11 06.6	
	comp=E,110nm,1.4s,comp=E,53nm,0.5s						
NWLT	**Wulai**	0.75	308	⇓*i*P	Pn	22 11 07.1	+1.2
	baz=311						
NWLT				*e*S	Sn	22 11 17.8	+1.3
	baz=311						
YOJ	**Yonaguni jima**	0.79	79		Pn	22 11 07.0	+0.7
YOJ				Sn	Sn	22 11 18.2	+0.8
YOJ	**Yonaguni jima**	0.79	79	P	Pn	22 11 07.3	+1.0
YOJ	**Yonaguni jima**	0.79	79	*i* P	Pn	22 11 07.3	+1.0
YOJ				S	Sn	22 11 18.6	+1.2
YOJ	**Yonaguni jima**	0.79	79	A	A	22 11 07.3	
	comp=E,62nm,1.4s,comp=E,33nm,0.5s						
YOJ	**Yonaguni jima**	0.79	79	⇓*i*P	Pn	22 11 07.2	+1.0
	baz=79						
YOJ				S	Sn	22 11 18.3	+0.9
	baz=79						
YOJ	**Yonaguni jima**	0.79	79	P	Pn	22 11 07.0	+0.7
YOJ						22 11 18.2	
YHNB	**Yeheng**	0.79	296		Pn	22 11 07.3	+0.9
YHNB				Sn	Sn	22 11 18.6	+1.1
YHNB	**Yeheng**	0.79	296	P	Pn	22 11 07.1	+0.7
YHNB	**Yeheng**	0.79	296	⇓*i*P	Pn	22 11 07.5	+1.1
	baz=299						
YHNB				*e*S	Sn	22 11 18.7	+1.1
	baz=299						
NSK	**Sanguang**	0.81	296	⇓*i*P	Pn	22 11 07.6	+1.0
	baz=299						
NSK				*e*S	Sn	22 11 18.7	+0.7
	baz=299						
SXI1	**Grass Mountain**	0.81	342	⇓*i*P	Pn	22 11 07.3	+0.6
	baz=345						
SXI1				*e*S	Sn	22 11 17.9	-0.2
	baz=345						
NWF	**Wu-fen Shan**	0.82	336	⇓*i*P	Pn	22 11 07.6	+0.8
	baz=339						
NWF				*e*S	Sn	22 11 18.5	+0.2
	baz=339						
WFSB	**Wu-fen Shan**	0.82	336	⇓P	Pn	22 11 07.7	+0.9
	baz=339						
WFSB				*e*S	Sn	22 11 18.2	+0.1
	baz=339						
TEGC	**Jichi Village**	0.83	223	*e*P	Pn	22 11 07.7	+1.0
	baz=220						
TEGC				*e*S	Sn	22 11 19.8	+1.6
	baz=220						
ESL	**Shilin**	0.83	233	⇓*i*P	Pn	22 11 07.1	+0.3
	baz=231						
ESL				*e*S	Sn	22 11 18.4	+0.1
	baz=231						
WHF	**Hehuan Shan**	0.83	258	⇓*i*P	Pn	22 11 07.9	+0.7
	baz=258						
WHF				*e*S	Sn	22 11 19.3	+0.4
	baz=258						
TWA	**Mucha**	0.84	322	⇓P	Pn	22 11 08.2	+1.3
	baz=325						
TWA				*e*S	Sn	22 11 19.7	+1.1
	baz=325						
NHDH	**Xindian Distri**	0.86	318	⇓P	Pn	22 11 08.7	+1.4
	baz=321						
NHDH				*e*S	Sn	22 11 20.3	+1.3
	baz=321						
TATO	**Taipei**	0.90	317		Pn	22 11 08.9	+1.3
TATO				Sn	Sn	22 11 21.0	+1.2
TATO	**Taipei**	0.90	317	P	Pn	22 11 09.2	+1.6
TATO	**Taipei**	0.90	317	⇓*e*P	Pn	22 11 08.9	+1.3
	baz=320						
TATO				*e*S	Sn	22 11 21.2	+1.5
	baz=320						
NHY	**Taipei**	0.90	323	*e*P	Pn	22 11 08.8	+1.1
	baz=326						
NHY				*e*S	Sn	22 11 21.2	+1.4
	baz=326						
TWT	**Tachien**	0.90	266	⇓*e*P	Pn	22 11 09.2	+1.4
	baz=266						
TWT				*e*S	Sn	22 11 21.7	+1.6
	baz=266						
TNOU	**National Taiwa**	0.90	337	⇓P	Pn	22 11 08.2	+0.5
	baz=340						
TNOU				*e*S	Sn	22 11 19.8	-0.1
	baz=340						
TDCB	**Techi**	0.91	266	⇓*e*P	Pn	22 11 09.3	+1.3
	baz=266						
TDCB				*e*S	Sn	22 11 21.2	+0.7
	baz=266						
TAP1	**Taipei**	0.92	321	*e*P	Pn	22 11 10.3	+2.4
	baz=324						
TAP1				*e*S	Sn	22 11 22.6	+2.2
	baz=324						
EGFH	**Guangfu**	0.93	226	⇓*e*P	Pn	22 11 08.7	+0.6
	baz=224						
EGFH				*e*S	Sn	22 11 20.8	+0.3
	baz=224						
TAP	**Taipei**	0.93	321	⇓*e*P	Pn	22 11 09.3	+1.2
	baz=324						
TAP				*e*S	Sn	22 11 21.8	+1.2
	baz=324						
CHGB	**Renai**	0.93	254	⇓P	Pn	22 11 09.4	+1.0
	baz=254						
CHGB				*e*S	Sn	22 11 21.6	+0.6
	baz=254						
BACT	**New Taipei Cit**	0.94	316	*e*P	Pn	22 11 09.7	+1.5
	baz=319						
BACT				*e*S	Sn	22 11 23.1	+2.3
	baz=319						
OWD	**Renai**	0.97	248	⇓P	Pn	22 11 09.5	+0.8
	baz=247						
OWD				*e*S	Sn	22 11 21.9	+0.2
	baz=247						
YM01	**YM01**	0.98	327	⇓*e*P	Pn	22 11 09.6	+0.7
	baz=330						
YM01				*e*S	Sn	22 11 22.7	+0.8
	baz=330						
NWRT	**Kuosheng**	0.99	333	*e*P	Pn	22 11 09.5	+0.6
	baz=336						
NWRT				*e*S	Sn	22 11 22.0	0.0
	baz=336						
NFF	**Wufeng Townshi**	1.00	289	⇓*e*P	Pn	22 11 10.2	+1.2
	baz=290						
NFF				*e*S	Sn	22 11 23.6	+1.3
	baz=290						
WUSB	**Renai**	1.00	251	⇓*e*P	Pn	22 11 10.3	+1.1
	baz=251						
WUSB				*e*S	Sn	22 11 23.1	+0.6
	baz=251						
YM08	**YM08**	1.01	329	⇓*e*P	Pn	22 11 09.6	+0.4
	baz=332						
YM08				*e*S	Sn	22 11 21.8	-0.6
	baz=332						
TWS1	**Kuangyinshan**	1.03	319	⇓*e*P	Pn	22 11 10.7	+1.3
	baz=322						
TWS1				*e*S	Sn	22 11 24.5	+1.5
	baz=322						
NTY	**Taoyuan**	1.04	311	⇓*e*P	Pn	22 11 11.0	+1.5
	baz=313						
NTY				*e*S	Sn	22 11 25.2	+2.1
	baz=313						
ANP	**Anpu**	1.04	326	⇓*e*P	Pn	22 11 10.1	+0.5
	baz=329						
ANP				*e*S	Sn	22 11 24.7	+1.4
	baz=329						
NJD	**Zhudong**	1.06	293	⇓*e*P	Pn	22 11 11.7	+1.9
	baz=295						
NJD				*e*S	Sn	22 11 26.3	+2.6
	baz=295						
HGSD	**Ruisui**	1.06	219	⇑*e*P	Pn	22 11 10.3	+0.5
	baz=217						
HGSD				*e*S	Sn	22 11 24.1	+0.4
	baz=217						
NTST	**Danshui**	1.06	323	⇓*e*P	Pn	22 11 10.9	+1.1
	baz=325						
NTST				*e*S	Sn	22 11 24.0	+0.4
	baz=325						
TWY	**Chenhua**	1.08	332	⇓*e*P	Pn	22 11 10.9	+0.8
	baz=335						
TWY				*e*S	Sn	22 11 23.9	-0.2
	baz=335						
VWDT	**VWDT**	1.08	239	⇓*e*P	Pn	22 11 11.3	+1.2
	baz=238						
VWDT				*e*S	Sn	22 11 24.6	+0.4
	baz=238						
LIOB	**Emei**	1.09	288	⇓*e*P	Pn	22 11 12.0	+1.8
	baz=289						
LIOB				*e*S	Sn	22 11 26.5	+2.1
	baz=289						
NCU	**National Centr**	1.10	307	⇓*e*P	Pn	22 11 11.6	+1.3
	baz=308						
NCU				*e*S	Sn	22 11 26.3	+1.8
	baz=308						
NSM	**Shimen**	1.10	332	*e*P	Pn	22 11 11.5	+1.2
	baz=334						
NSM				*e*S	Sn	22 11 25.9	+1.4
	baz=334						
NCUH	**Zhongli**	1.10	306	⇓*e*P	Pn	22 11 11.6	+1.3
	baz=308						
NCUH				*e*S	Sn	22 11 25.8	+1.3
	baz=308						
NSTT	**Nanjuang**	1.10	287	⇓*e*P	Pn	22 11 12.0	+1.7
	baz=288						
NSTT				*e*S	Sn	22 11 26.6	+2.0
	baz=288						
WHP	**Taichung City**	1.11	268	⇓*e*P	Pn	22 11 12.5	+2.0
	baz=268						
WHP				*e*S	Sn	22 11 27.2	+2.3
	baz=268						
EHY	**Hungye**	1.11	224	⇓*e*P	Pn	22 11 10.7	+0.2
	baz=221						
EHY				*e*S	Sn	22 11 21.7	-3.2
	baz=221						
HSN1	**Hsinchu**	1.13	294	⇓*e*P	Pn	22 11 12.4	+1.6
	baz=295						
HSN1				*e*S	Sn	22 11 28.0	+2.6
	baz=295						
WPL	**Puli Township**	1.14	255	⇓*e*P	Pn	22 11 12.3	+1.5
	baz=254						
WPL				*e*S	Sn	22 11 26.6	+1.1
	baz=254						
DPDB	**Guoxing**	1.16	256	⇓*e*P	Pn	22 11 12.8	+1.6
	baz=256						
DPDB				*e*S	Sn	22 11 26.7	+0.6
	baz=256						
SBCB	**Hsinchu**	1.17	294	⇓*e*P	Pn	22 11 12.8	+1.5
	baz=295						
SBCB				*e*S	Sn	22 11 28.5	+2.3
	baz=295						
WCS	**Beigang Elemen**	1.17	257	⇓*e*P	Pn	22 11 12.8	+1.6
	baz=257						
WCS				*e*S	Sn	22 11 27.6	+1.4
	baz=257						
HSN	**Hsinchu**	1.18	294	⇓*e*P	Pn	22 11 12.5	+1.1
	baz=298						
HSN				*e*S	Sn	22 11 27.6	+1.0
	baz=298						
ECBN	**Changbin**	1.19	213	⇑*e*P	Pn	22 11 12.0	+0.5
	baz=211						
ECBN				*e*S	Sn	22 11 26.6	-0.1
	baz=211						
YULB	**Yu-li**	1.21	221		Pn	22 11 11.9	0.0
YULB	**Yu-li**	1.21	221	P	Pn	22 11 12.8	+0.9
YULB	**Yu-li**	1.21	221	⇑*e*P	Pn	22 11 12.0	+0.1
	baz=219						
YULB				*e*S	Sn	22 11 27.0	-0.3
	baz=219						
SSLB	**Suanglung**	1.22	245	Pn	Pn	22 11 12.9	+0.9
SSLB	**Suanglung**	1.22	245	P	Pn	22 11 13.2	+1.2
SSLB	**Suanglung**	1.22	245	⇓*e*P	Pn	22 11 13.1	+1.2
	baz=244						
SSLB				*e*S	Sn	22 11 27.9	+0.3
	baz=244						
NHW	**Xinwu Township**	1.22	304	⇓*e*P	Pn	22 11 13.2	+1.2
	baz=306						
NHW				*e*S	Sn	22 11 29.2	+1.7
	baz=306						
NJN	**Zhunan**	1.23	288	*e*P	Pn	22 11 13.7	+1.6
	baz=288						
NJN				*e*S	Sn	22 11 29.6	+2.0
	baz=288						
SMLT	**Sun Moon Lake**	1.23	250	⇓*e*P	Pn	22 11 13.6	+1.4
	baz=249						
SMLT				*e*S	Sn	22 11 28.4	+0.6
	baz=249						
EYUL	**Yuli**	1.23	219	*e*P	Pn	22 11 12.6	+0.5
	baz=217						
EYUL				*e*S	Sn	22 11 28.0	+0.2
	baz=217						
TWF1	**Yuli**	1.24	220	P	Pn	22 11 12.5	+0.3
	baz=217						
TWF1				*e*S	Sn	22 11 26.2	-1.8
	baz=217						
TYC	**Yuchr**	1.26	251	⇓*e*P	Pn	22 11 13.9	+1.5
	baz=250						
TYC				*e*S	Sn	22 11 30.1	+1.8
	baz=250						
TWQ1	**Liyutan**	1.26	272	⇓*e*P	Pn	22 11 14.4	+1.9
	baz=272						
TWQ1				*e*S	Sn	22 11 31.3	+2.8
	baz=272						
NMLH	**Miaoli**	1.26	280	⇓*e*P	Pn	22 11 14.3	+1.8
	baz=281						
NMLH				*e*S	Sn	22 11 30.7	+2.2
	baz=281						
NSY	**Sanyi**	1.28	275	⇓*e*P	Pn	22 11 14.7	+2.0
	baz=275						
NSY				*e*S	Sn	22 11 31.4	+2.5
	baz=275						
PCYT	**Pengchaiyu**	1.31	357	⇓*e*P	Pn	22 11 13.8	+0.7
	baz=359						
PCYT				*e*S	Sn	22 11 30.3	+0.7
	baz=359						
WWF	**Wufeng**	1.36	259	⇓*e*P	Pn	22 11 16.3	+2.5
	baz=258						
WWF				*e*S	Sn	22 11 34.4	+3.5
	baz=258						
TCU	**Taichung**	1.36	263	⇓*e*P	Pn	22 11 16.0	+2.2
	baz=263						
TCU				*e*S	Sn	22 11 33.6	+2.7
	baz=263						
FULB	**Fuli**	1.37	216	⇑*e*P	Pn	22 11 14.3	+0.3
	baz=214						
FULB				*e*S	Sn	22 11 31.0	-0.1
	baz=214						
WDJ	**Dajia District**	1.38	272	⇓*e*P	Pn	22 11 15.8	+1.7
	baz=272						
WDJ				*e*S	Sn	22 11 33.7	+2.3
	baz=272						
WJS	**Zhushan**	1.40	250	⇓*e*P	Pn	22 11 16.8	+2.5
	baz=249						
WJS				*e*S	Sn	22 11 34.7	+3.0
	baz=249						
WNT1	**Nantou City**	1.41	253	*e*P	Pn	22 11 17.4	+2.9
	baz=253						
WNT1				*e*S	Sn	22 11 36.1	+4.1
	baz=253						
CHKT	**Chengkung**	1.41	211	⇑P	Pn	22 11 14.5	-0.1
	baz=209						
CHKT				*e*S	Sn	22 11 30.5	-1.6
	baz=209						
WNT	**Mingjian**	1.42	252	⇓*e*P	Pn	22 11 17.1	+2.5
	baz=252						
WNT				*e*S	Sn	22 11 36.0	+3.8
	baz=252						
IRIF	**Iriomote-Funau**	1.44	89	*i* P	Pn	22 11 15.6	+0.8
IRIF				S	Sn	22 11 33.5	+0.9
EHD	**Haiduan**	1.45	217	*e*P	Pn	22 11 14.9	-0.2
	baz=215						
EHD				*e*S	Sn	22 11 32.5	-0.6
	baz=215						
ALS	**Alishan**	1.48	237	⇓*e*P	Pn	22 11 17.4	+1.7
	baz=236						
ALS				*e*S	Sn	22 11 35.7	+1.7
	baz=236						
WCHH	**Zhanghua**	1.48	261	⇓*e*P	Pn	22 11 17.2	+1.8
	baz=261						
WCHH				*e*S	Sn	22 11 36.1	+2.4
	baz=261						
WYL	**Yuanlin Townsh**	1.48	256	*e*P	Pn	22 11 17.8	+2.3
	baz=256						
WYL				*e*S	Sn	22 11 37.4	+3.5
	baz=256						
ECS	**Chishang**	1.49	215	*e*P	Pn	22 11 16.3	+0.7
	baz=214						
ECS				*e*S	Sn	22 11 34.4	+0.4
	baz=214						
HATJ	**Hateruma jima**	1.53	99	*i* P	Pn	22 11 17.5	+1.5
HATJ				S	Sn	22 11 37.0	+2.1
CHN5	**Tsauling**	1.53	242	⇓*e*P	Pn	22 11 18.4	+2.2
	baz=241						
CHN5				*e*S	Sn	22 11 38.5	+3.4
	baz=241						
ELDTW	**Lidau**	1.53	223	*e*P	Pn	22 11 16.6	+0.3
	baz=221						
ELDTW				*e*S	Sn	22 11 35.0	-0.2
	baz=221						
EDH	**Donghe**	1.55	210	⇑*e*P	Pn	22 11 16.4	0.0
	baz=209						
EDH				*e*S	Sn	22 11 33.6	-1.9
	baz=209						
WGK	**Gukeng**	1.59	247	⇓*e*P	Pn	22 11 19.5	+2.6
	baz=246						
WGK				*e*S	Sn	22 11 40.2	+3.8
	baz=246						
WDLH	**Douliu**	1.61	247	⇓*e*P	Pn	22 11 19.6	+2.4
	baz=247						
WDLH				*e*S	Sn	22 11 40.0	+3.1
	baz=247						
WCKO	**Fanlu**	1.67	239	⇓*e*P	Pn	22 11 20.3	+2.2
	baz=238						
WCKO				*e*S	Sn	22 11 41.6	+3.2
	baz=238						
WRL	**Guolierlin Hig**	1.68	256	⇓*e*P	Pn	22 11 19.8	+1.6
	baz=256						
WRL				*e*S	Sn	22 11 40.1	+1.5
	baz=256						
LONT	**Longtian**	1.69	214	⇑*e*P	Pn	22 11 18.4	0.0
	baz=213						
LONT				*e*S	Sn	22 11 38.0	-0.9
	baz=213						
JKRS	**Kuro-shima**	1.69	92	*i* P	Pn	22 11 19.7	+1.4
JKRS				S	Sn	22 11 40.4	+1.5
JKRS	**Kuro-shima**	1.69	92	A	A	22 11 19.7	
	comp=E,21nm,2.4s,comp=E,27nm,1.2s						
STYH	**Taoyuan**	1.71	228	⇓*e*P	Pn	22 11 20.2	+1.7
	baz=227						
STYH				*e*S	Sn	22 11 39.9	+0.7
	baz=227						
STYT	**Tauyuan**	1.72	228	*e*P	Pn	22 11 20.5	+1.7
	baz=227						
STYT				*e*S	Sn	22 11 41.8	+2.0
	baz=227						
CHN4	**Tsaushan**	1.73	236	⇓*e*P	Pn	22 11 21.1	+2.3
	baz=235						
CHN4				*e*S	Sn	22 11 43.0	+3.3
	baz=235						
CHN2	**Minshiung**	1.73	243	*e*P	Pn	22 11 21.5	+2.7
	baz=243						
CHN2				*e*S	Sn	22 11 44.3	+4.5
	baz=243						
TPUB	**Ta-pu**	1.73	234	Pn	Pn	22 11 20.5	+1.6
TPUB	**Ta-pu**	1.73	234	P	Pn	22 11 21.5	+2.7
TPUB	**Ta-pu**	1.73	234	⇓*e*P	Pn	22 11 20.9	+2.1
	baz=233						
TPUB				*e*S	Sn	22 11 42.3	+2.5
	baz=233						
WTK	**Tuku**	1.73	249	⇓*e*P	Pn	22 11 20.9	+2.0
	baz=248						
WTK				*e*S	Sn	22 11 42.2	+2.2
	baz=248						
LDUT	**Ludao**	1.75	201	⇑P	Pn	22 11 18.7	-0.5
	baz=200						
LDUT				*e*S	Sn	22 11 38.6	-1.8
	baz=200						
WTP	**Ta-pu**	1.77	233	⇓*e*P	Pn	22 11 21.6	+2.1
	baz=232						
WTP				*e*S	Sn	22 11 43.5	+2.6
	baz=232						
WTCT	**Ta-ch'eng**	1.77	256	*e*P	Pn	22 11 21.3	+1.8
	baz=255						
WTCT				*e*S	Sn	22 11 42.9	+2.0
	baz=255						
CHY	**Chiayi**	1.78	243	⇓*e*P	Pn	22 11 22.0	+2.5
	baz=242						
CHY				*e*S	Sn	22 11 44.6	+3.5
	baz=242						
TWGBT	**Beinan**	1.79	214	P	Pn	22 11 20.0	+0.3
TWGBT	**Beinan**	1.79	214	*e*P	Pn	22 11 19.5	-0.2
	baz=212						
TWGBT				*e*S	Sn	22 11 40.2	-1.2
	baz=212						
TWG	**Pinlang**	1.79	214		Pn	22 11 19.4	-0.3
TWG	**Pinlang**	1.79	214	*e*P	Pn	22 11 19.5	-0.3
	baz=212						
TWG				*e*S	Sn	22 11 40.2	-1.1
	baz=212						
TTN	**Taitung**	1.81	211	*e*P	Pn	22 11 20.7	+0.8
	baz=209						
JIJ	**Ishigaki jima**	1.81	88	*i* P	Pn	22 11 20.6	+0.6
JIJ				S	Sn	22 11 42.1	+0.3
JIJ	**Ishigaki jima**	1.81	88	A	A	22 11 20.6	
	comp=E,5.0nm,1.6s,comp=E,8.0nm,2.5s						
WMLT	**Mailiao**	1.84	254	*e*P	Pn	22 11 21.9	+1.6
	baz=254						
WMLT				*e*S	Sn	22 11 44.8	+2.2
	baz=254						
TWK	**Hsinying**	1.85	236	⇓*e*P	Pn	22 11 22.7	+2.1
	baz=235						
TWK				*e*S	Sn	22 11 45.9	+3.0
	baz=235						
CHN1	**Nanshi**	1.87	233	⇓*e*P	Pn	22 11 22.9	+2.1
	baz=232						
CHN1				*e*S	Sn	22 11 46.5	+3.1
	baz=232						
SNST	**Tainan City**	1.87	235	*e*P	Pn	22 11 24.9	+4.1
	baz=234						
SNST				*e*S	Sn	22 11 47.9	+4.6
	baz=234						
WSF	**Szhu**	1.90	249	*e*P	Pn	22 11 22.9	+1.8
	baz=249						
WSF				*e*S	Sn	22 11 46.4	+2.5
	baz=249						
SGST	**Jiashian**	1.90	230	⇓*e*P	Pn	22 11 22.7	+1.6
	baz=229						

SGST				eS	Sn	22 11 46.5	+2.6
	baz=229						
SLGT	Liugui	1.91	227	eP	Pn	22 11 24.7	+3.3
	baz=226						
SLGT				eS	Sn	22 11 48.0	+3.7
	baz=226						
WSL	Shuilin Townsh	1.94	246	eP	Pn	22 11 23.4	+1.7
	baz=245						
WSL				eS	Sn	22 11 47.1	+2.2
	baz=245						
ICHU	Yijhu	1.97	241	eP	Pn	22 11 24.4	+2.4
	baz=241						
ICHU				eS	Sn	22 11 48.7	+3.1
	baz=241						
JISG	Ishigakijimahi	1.98	82	iP	Pn	22 11 22.9	+0.7
JISG				S	Sn	22 11 46.6	+0.7
JISG	Ishigakijimahi	1.98	82	A	A	22 11 22.9	
	comp=E,12nm,0.5s,comp=E,12nm,0.5s						
CHN8	Yiju	2.03	242	eP	Pn	22 11 24.9	+2.0
	baz=241						
CHN8				eS	Sn	22 11 50.5	+3.4
	baz=241						
ECL	Taimali	2.04	213	eP	Pn	22 11 22.9	-0.2
	baz=212						
ECL				eS	Sn	22 11 43.6	-3.7
	baz=212						
CHN3	Shinhua	2.06	233	eP	Pn	22 11 26.2	+2.9
	baz=232						
CHN3				eS	Sn	22 11 52.3	+4.5
	baz=232						
SSHA	Shanhua	2.08	236	eP	Pn	22 11 26.6	+3.0
	baz=235						
SSHA				eS	Sn	22 11 52.5	+4.2
	baz=235						
SCST	Cishan	2.09	227	eP	Pn	22 11 26.5	+2.8
	baz=226						
SCST				eS	Sn	22 11 52.2	+3.6
	baz=226						
SSD	Sandimen	2.10	222	eP	Pn	22 11 25.7	+1.8
	baz=221						
SSD				eS	Sn	22 11 51.1	+2.3
	baz=221						
SHHT	Tainan City	2.10	232	eP	Pn	22 11 27.1	+3.2
	baz=231						
TSMG	Majia	2.12	221	eP	Pn	22 11 25.8	+1.5
	baz=220						
SCLT	Jiali	2.13	238	eP	Pn	22 11 26.8	+2.5
	baz=237						
TAI1	Yung-k'ang	2.18	235	eP	Pn	22 11 27.9	+2.9
	baz=234						
TWM1	Shoushan	2.18	227	eP	Pn	22 11 28.5	+3.5
	baz=226						
MASBT	Mashibuluo	2.20	220	eP	Pn	22 11 26.5	+1.2
	baz=219						
SGLT	Jiouru	2.20	224	eP	Pn	22 11 27.9	+2.6
	baz=223						
SGLT				eS	Sn	22 11 54.9	+3.5
	baz=223						
TSCK	Chigu Township	2.23	239	eP	Pn	22 11 27.8	+2.2
	baz=238						
TSCK				eS	Sn	22 11 54.5	+2.5
	baz=238						
TSPT	Pingtung City	2.23	223	eP	Pn	22 11 29.9	+4.2
	baz=222						
TSPT				eS	Sn	22 11 57.3	+5.1
	baz=222						
TAW	Tawu	2.27	211	eP	Pn	22 11 26.9	+0.6
	baz=210						
EAST	Anshuo	2.27	212	eP	Pn	22 11 26.7	+0.4
	baz=211						
EAST				eS	Sn	22 11 53.3	+0.2
	baz=211						
TAWH	Dawu Township	2.29	211	eP	Pn	22 11 26.6	+0.1
	baz=210						
TAWH				eS	Sn	22 11 52.6	-0.8
	baz=210						
LAY	Lan-yu	2.34	194	eP	Pn	22 11 26.7	-0.4
	baz=192						
LAY				eS	Sn	22 11 50.9	-3.8
	baz=192						
JTJ	Tarama	2.34	82	iP	Pn	22 11 28.5	+1.3
JTJ				eS	Sn	22 11 56.3	+1.5
JTJ	Tarama	2.34	82	A	A	22 11 28.5	
	comp=E,11nm,1.5s,comp=E,10.0nm,1.8s						
LYUB	Lan-yu	2.36	193	eP	Pn	22 11 26.5	-1.0
	baz=192						
LYUB				eS	Sn	22 11 52.1	-3.3
	baz=192						
SCZT	Fangliau	2.40	216	eP	Pn	22 11 30.1	+2.2
	baz=215						
SCZT				eS	Sn	22 11 58.8	+2.6
	baz=215						
KAU	Kaohsiung	2.43	225	eP	Pn	22 11 34.8	+6.4
	baz=223						
PNG	Penghu	2.50	253	⇓eP	Pn	22 11 29.8	+0.6
	baz=252						
PNG				eS	Sn	22 11 58.5	-0.1
	baz=252						
PHUB	P'eng-hu	2.50	252	⇓eP	Pn	22 11 29.9	+0.5
	baz=251						
PHUB				eS	Sn	22 11 57.2	-1.4
	baz=251						
WDGT	Dungji	2.52	246	eP	Pn	22 11 30.9	+1.3
	baz=245						
WDGT				eS	Sn	22 11 59.8	+0.7
	baz=245						
VWUC	VWUC	2.55	286	⇓eP	Pn	22 11 30.4	+0.3
	baz=286						
VWUC				eS	Sn	22 11 57.9	-2.1
	baz=286						
TWP	Hsiaoliuchiu	2.56	220	eP	Pn	22 11 35.5	+5.3
	baz=219						
SMST	Manzhou Townsh	2.59	208	eP	Pn	22 11 31.3	+0.7
	baz=207						
SMST				eS	Sn	22 12 01.1	+0.2
	baz=207						
HEN	Hengchun	2.65	210	eP	Pn	22 11 33.2	+1.8
	baz=209						
HEN				eS	Sn	22 12 03.4	+1.1
	baz=209						
TSEB	Hengchuen, Pin	2.67	206	eP	Pn	22 11 33.1	+1.4
	baz=206						
TSEB				eS	Sn	22 12 03.7	+0.9
	baz=206						
TWKBT	Hengchun	2.67	208	eP	Pn	22 11 32.6	+0.9
	baz=207						
TWKBT				eS	Sn	22 12 03.2	+0.3
	baz=207						
TWK1	Hengchun	2.67	208	eP	Pn	22 11 32.4	+0.7
	baz=207						
TWK1				eS	Sn	22 12 03.4	+0.5
	baz=207						
MATB	Ma-tsu	2.71	313	⇓eP	Pn	22 11 32.4	+0.1
	baz=313						
MATB				eS	Sn	22 12 02.1	-1.7
	baz=313						
VCHM	Qimei	2.73	247	eS	Sn	22 12 04.2	-0.2
	baz=246						
MSUT	Lienchiang	2.74	313	eP	Pn	22 11 32.7	+0.1
	baz=313						
MSUT				eS	Sn	22 12 02.9	-1.6
	baz=313						
JIRB	Irabujima	2.79	79	iP	Pn	22 11 34.6	+1.3
JIRB				S	Sn	22 12 07.6	+1.8
JIRB	Irabujima	2.79	79	A	A	22 11 34.6	
	comp=E,5.0nm,4.1s,comp=E,5.0nm,3.9s						
JIKM	Ikemajima	2.88	77	S	Sn	22 12 09.4	+1.5
JIKM	Ikemajima	2.88	77	A	A	22 12 09.4	
	comp=E,6.0nm,4.1s,comp=E,6.0nm,3.4s						
JMJ	Miyako jima 2	2.90	80	P	Pn	22 11 37.5	+2.7
JMJ	Miyako jima 2	2.90	80	eP	Pn	22 11 36.9	+2.0
	baz=80						
JMJ				eS	Sn	22 12 09.8	+1.3
	baz=80						
JMJ2	Miyako jima3	2.92	81	iP	Pn	22 11 37.0	+1.9
JMJ2				eS	Sn	22 12 11.2	+2.3
JMJ2	Miyako jima3	2.92	81	A	A	22 11 37.0	
	comp=E,6.0nm,5.0s,comp=E,6.0nm,4.6s						
JOGS	Gusukube	2.99	81	P	Pn	22 11 38.1	+2.0
JOGS				S	Sn	22 12 13.2	+2.4
JOGS	Gusukube	2.99	81	A	A	22 11 38.1	
	comp=E,9.0nm,2.3s,comp=E,9.0nm,4.5s						
LYJJ	Jianjiangzhen	3.10	316	⇓eP	Pn	22 11 37.9	+0.2
	baz=317						
LYJJ				eS	Sn	22 12 11.8	-1.7
	baz=317						
XPSS	Dashiqiu	3.15	326	eP	Pn	22 11 38.3	0.0
	baz=327						
XPSS				eS	Sn	22 12 13.2	-1.5
	baz=327						
MHZQ	Yeshan	3.34	303	⇓eP	Pn	22 11 40.7	-0.2
	baz=303						
MHZQ				eS	Sn	22 12 17.4	-1.9
	baz=303						
KNM	Kinmen	3.40	272	⇓eP	Pn	22 11 43.5	+1.8
	baz=272						
KNM				eS	Sn	22 12 20.5	-0.2
	baz=272						
KNMB	Chin-men Tao	3.44	273	Pn	Pn	22 11 42.2	0.0
KNMB	Chin-men Tao	3.44	273	⇓eP	Pn	22 11 42.2	0.0
	baz=273						
KNMB				eS	Sn	22 12 18.7	-3.1
	baz=273						
AXDP	Jialang	3.85	280	⇓eP	Pn	22 11 48.4	+0.4
	baz=279						
AXDP				eS	Sn	22 12 29.1	-2.9
	baz=279						
BBP	Basco	3.86	183	⇓eP	Pn	22 11 47.9	-0.1
BBP				eS	Sn	22 12 28.8	-3.3
ZPLA	Ao Xicun	4.04	265	⇓eP	Pn	22 11 50.8	+0.3
	baz=265						
ZPLA				eS	Sn	22 12 34.3	-2.3
	baz=265						
DSXP	Dongshan	4.37	263	⇓eP	Pn	22 11 55.3	+0.3
	baz=262						
DSXP				eS	Sn	22 12 41.2	-3.4
	baz=262						
SXFK	Yanhouchang	4.58	298	eP	Pn	22 11 57.6	-0.3
	baz=297						
SXFK				eS	Sn	22 12 45.5	-4.4
	baz=297						
CICP	Calayan Island	5.07	187	⇑eP	Pn	22 12 04.7	+0.2
CICP				eS	Sn	22 12 57.6	-4.2
SGCP	Gonzaga	6.05	181	⇓eP	Pn	22 12 18.9	+0.9
SGCP				eS	Sn	22 13 23.9	-2.0
JOW	Kunigami	6.07	64	P	Pn	22 12 18.4	+0.2
	172nm,0.3s,baz=168,slow=13,SNR=342						
JOW				S	Sn	22 13 25.5	-0.8
	23nm,0.3s,baz=108,slow=16,SNR=1.0						
JOW	Kunigami	6.07	64	Pn	Pn	22 12 18.3	0.0
JOW	Kunigami	6.07	64	eP	Pn	22 12 18.2	0.0
	baz=66						
JOW				eS	Sn	22 13 25.8	-0.5
	baz=66						
CVP	Callao Caves	6.59	183	eP	Pn	22 12 26.8	+1.4
ABRA	Dolores	6.77	192	⇓eP	Pn	22 12 30.7	+2.8
ABRA				eS	Sn	22 13 47.4	+3.7
SSE	Sheshan	6.81	353	Pn	Pn	22 12 36.0	+7.6
SSE				Sn	Sn	22 13 41.2	-3.3
SSE				smax	smax		
	comp=N,91nm,1.0s						
SSE				smax	smax		
	comp=E,67nm,0.9s						
SSE				LR	LR		
	comp=N,220nm,23.5s						
SSE				LR	LR		
	comp=E,270nm,18.2s						
SAMP	Sagada Mountai	7.30	189	⇓eP	Pn	22 12 38.1	+2.9
SAMP				eS	Sn	22 13 58.3	+1.6
CAUP	Cauayan	7.34	183	⇓eP	Pn	22 12 40.7	+4.9
CAUP				eS	Sn	22 13 57.5	-0.3
HKPS	Hong Kong Po S	7.64	256	Pn	Pn	22 12 40.8	+0.9
NJ2	Nanjing	8.24	340	eP	Pn	22 12 49.1	+1.1
NJ2				pP		22 12 55.6	
NJ2				S	Sn	22 14 16.0	-3.6
NJ2				pmax	pmax		
	comp=E,15nm,0.5s						
NJ2				smax	smax		
	comp=E,290nm,0.8s						
NJ2				smax	smax		
	comp=E,130nm,0.8s						
NJ2				LR	LR		
	comp=E,690nm,7.6s						
NJ2				LR	LR		
	comp=E,930nm,7.9s						
NJ2				LR	LR		
	comp=E,490nm,9.5s						
JMZ	Minamidaito 2	8.35	78	Pn	Pn	22 12 47.7	-1.9
BALP	Baler	8.55	184	⇓eP	Pn	22 12 56.4	+4.1
BALP				eS	Sn	22 14 28.7	+1.3
CNSH	ChangSha	9.13	297	⇑P	Pn	22 12 59.2	-1.0
CNSH				S	Sn	22 14 38.5	-3.1
CNSH				smax	smax		
	comp=E,330nm,0.7s						
CNSH				smax	smax		
	comp=E,190nm,0.7s						
WHN	Wuhan	9.30	314	⇓P	Pn	22 13 02.5	0.0
WHN				sP		22 13 16.1	
WHN				S	Sn	22 14 49.5	+3.8
WHN				pmax	pmax		
	comp=E,52nm,0.5s						
JCNP	Jose Panganiba	9.99	177	⇓eP	Pn	22 13 14.0	+2.0
JCNP				eS	Sn	22 14 59.6	-3.1
JNU	Nakatsue	11.64	39	P	Pn	22 13 36.9	+2.4
	comp=E,18nm,1.1s,baz=214,slow=15,SNR=2.7						
JNU				LR	LR	22 18 20.4	
	comp=E,150nm,20.5s,baz=224,slow=39						
QIZ	Qiongzhong	12.60	248	P	Pn	22 13 49.7	+2.1
QIZ				S	Sn	22 16 06.7	+0.3
QIZ				LR	LR		
	comp=E,410nm,21.1s						
QIZ				LR	LR		
	comp=E,330nm,18.4s						
TIA	Tai'an	12.62	341	eP	Pn	22 13 52.4	+4.5
TIA				S	Sn	22 16 15.0	+8.1
TIA				pmax	pmax		
	comp=E,8.0nm,0.9s						
TIA				pmax	pmax		
	comp=E,100nm,4.5s						
ENH	Enshi	12.73	301	Pn	Pn	22 13 50.9	+1.5
LYN	LuoYang	13.23	323	⇑P	P	22 14 07.3	+2.9
LYN				pmax	pmax		
	comp=Z,34nm,0.7s						
LYN				LR	LR		
	comp=N,380nm,9.9s						
LYN				LR	LR		
	comp=E,440nm,5.2s						
LYN				LR	LR		
	comp=Z,350nm,19.6s						
KSAR	Wonju Array Be	13.97	19	Pn	Pn	22 14 07.1	+0.9
KSAR	Wonju Array Be	13.97	19	P	Pn	22 14 07.1	+0.9
KSRS	Korea Array	13.99	19	P	Pn	22 14 08.3	+1.8
	comp=Z,21nm,0.7s,baz=198,slow=13,SNR=14						
KSRS				LR	LR	22 20 19.1	
	comp=Z,86nm,18.3s,baz=205,slow=41						
KS19	Wonju Array Si	14.02	19		Pn	22 14 07.2	+0.3
GYA	Guiyang	14.17	282	⇓iP	Pn	22 14 11.1	+2.1
GYA				S	Sn	22 16 46.8	+2.0
GYA				pmax	pmax		
	comp=Z,23nm,0.8s						
GYA				pmax	pmax		
	comp=Z,160nm,3.5s						
GYA				LR	LR		
	comp=Z,260nm,11.4s						
GYA				LR	LR		
	comp=Z,330nm,11.9s						
GYA				LR	LR		
	comp=Z,390nm,17.3s						
JHS	Saijyo	14.27	39	Pn	Pn	22 14 10.3	0.0
HNS	HongShan	14.52	336	⇓P	P	22 14 16.9	-1.7
HNS				S	Sn	22 17 00.7	+7.8
HNS				pmax	pmax		
	comp=Z,17nm,1.5s						
HNS				LR	LR		
	comp=Z,380nm,14.0s						
HNS				LR	LR		
	comp=Z,450nm,12.9s						
HNS				LR	LR		
	comp=Z,350nm,18.6s						
DL2	Dalian	14.55	358	P	P	22 14 21.4	+2.4
DL2				pmax	pmax		
	comp=Z,46nm,1.0s						
DL2				LR	LR		
	comp=N,220nm,11.8s						
DL2				LR	LR		
	comp=E,270nm,13.4s						
DL2				LR	LR		
	comp=Z,260nm,18.0s						
XAN	Xi'an	15.07	313	P	Pn	22 14 21.6	+0.9
XAN				pP	pP	22 14 31.7	-5.4
XAN				S	Sn	22 17 07.7	+1.2
XAN				pmax	pmax		
	comp=Z,25nm,0.9s						
XAN				pmax	pmax		
	comp=Z,96nm,3.6s						
XAN				LR	LR		
	comp=Z,640nm,5.0s						
XAN				LR	LR		
	comp=Z,380nm,4.3s						
XAN				LR	LR		
	comp=Z,260nm,6.4s						
BJT	Baijiatuau	16.45	344		Pn	22 14 37.8	-0.4
BJT	Baijiatuau	16.45	344	P	Pn	22 14 37.8	-0.4
BJT				pmax	pmax		
	comp=Z,30nm,1.8s						
BJI	Beijing	16.47	344	P	P	22 14 40.5	+0.2
BJI				pP	pP	22 14 50.2	-2.1
BJI				PP	sP	22 14 54.7	-4.7
BJI				PcP	PcP	22 19 30.1	+2.6
BJI				pmax	pmax		
	comp=Z,72nm,4.7s						
DAV	Davao City (W)	17.46	169	LR	LR	22 22 06.8	
	comp=Z,73nm,18.1s,baz=6.5,slow=38						
CD2	Chengdu	17.57	296	P	P	22 14 53.4	+0.8
CD2				pmax	pmax		
	comp=Z,40nm,0.8s						
CD2				LR	LR		
	comp=Z,460nm,5.4s						
CD2				LR	LR		
	comp=Z,350nm,6.0s						
CD2				LR	LR		
	comp=Z,480nm,5.3s						
KMI	Kunming	17.66	277	⇑P	P	22 14 57.3	+3.4
KMI				S	Sn	22 18 09.9	+0.2
KMI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KMI				pmax	pmax		
	comp=Z,85nm,6.5s						
KMI				LR	LR		
	comp=Z,200nm,9.8s						
KMI				LR	LR		
	comp=Z,350nm,13.1s						
KMI				LR	LR		
	comp=Z,350nm,13.9s						
JCJ	Chichijima	18.26	77	LR	LR	22 21 21.1	
	comp=Z,190nm,18.6s,baz=248,slow=35						
MJAR	Matsushiro Arr	18.41	45	P	P	22 15 01.1	-0.7
	comp=Z,1.5nm,0.7s,baz=215,slow=9.6,SNR=3.1						
MJAR				LR	LR	22 23 10.9	
	comp=Z,103nm,20.0s,baz=219,slow=40						
PZH	PanZhiHua	18.57	281	P	Pn	22 15 06.6	+2.1
PZH				sP	pP	22 15 18.1	+1.8
PZH				S	Sn	22 18 26.6	-4.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,80nm,5.7s						
PZH				LR	LR		
	comp=Z,240nm,11.3s						
PZH				LR	LR		
	comp=Z,250nm,11.8s						
PZH				LR	LR		
	comp=Z,290nm,12.7s						
HHC	Hu-ho-hao-te	18.72	334	eP	Pn	22 15 08.1	+1.9
HHC				pmax	pmax		
	comp=Z,48nm,1.0s						
HHC				pmax	pmax		
	comp=Z,300nm,5.3s						
HHC				LR	LR		
	comp=Z,300nm,14.6s						
HHC				LR	LR		
	comp=Z,200nm,13.4s						
HHC				LR	LR		
	comp=Z,540nm,15.9s						
BTO	Baotou	19.17	331	eP	Pn	22 15 13.6	+2.1
BTO				PP	sP	22 15 34.3	+4.9
BTO				S	Sn	22 18 48.0	+2.4
BTO				pmax	pmax		
	comp=Z,640nm,5.0s						
BTO				LR	LR		
	comp=Z,1µm,7.1s						
BTO				LR	LR		
	comp=Z,1µm,11.6s						
BTO				LR	LR		
	comp=Z,920nm,6.7s						
LZH	Lanzhou	19.66	311	eP	Pn	22 15 18.5	+1.0
LZH				pP	pP	22 15 28.1	+0.1
LZH				pmax	pmax		
	comp=Z,34nm,1.2s						
LZH				LR	LR		
	comp=Z,200nm,13.9s						
LZH				LR	LR		
	comp=Z,390nm,12.0s						
LZH				LR	LR		
	comp=Z,410nm,14.9s						
XLT	XiLinHaoTe	20.16	347	eP	P	22 15 22.0	+1.1
XLT				pP	pP	22 15 34.0	+0.8
XLT				S	S	22 19 05.3	+1.1
XLT				pmax	pmax		
	comp=Z,29nm,1.1s						
XLT				pmax	pmax		
	comp=Z,58nm,3.5s						
XLT				LR	LR		
	comp=Z,200nm,13.2s						
XLT				LR	LR		
	comp=Z,160nm,16.6s						
CRAI	Chiangrai	20.56	263	P	P	22 15 25.0	-0.4
MDJ	Mudanjiang	21.14	15	P	P	22 15 32.8	+1.4
MDJ				pP	pP	22 15 45.1	+1.6
MDJ				PP	PnPn	22 15 53.2	+0.6
MDJ				S	S	22 19 23.0	-0.4
MDJ				PcP	PcP	22 19 37.3	+1.8
MDJ				PcS	PcS	22 23 15.1	+1.7
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,110nm,4.5s						
MDJ				LR	LR		
	comp=Z,230nm,16.3s						
MDJ	Mudanjiang	21.14	15	P	P	22 15 30.7	-0.7
PHRA	Phrae	21.21	258	P	P	22 15 31.8	-0.6
PHRA				IAmb	IAmb	22 15 37.8	
	comp=Z,85nm,0.9s						
USA0B	Ussuriysk Arra	21.40	20	deP	P	22 15 33.7	-0.5
USRK	Ussuriysk Ar.	21.40	20	P	P	22 15 33.9	-0.3
	comp=Z,5.9nm,0.8s,baz=202,slow=8.9,SNR=12						
USRK				LR	LR	22 24 21.1	
	comp=Z,79nm,18.9s,baz=200,slow=38						
	comp=Z,5.9nm,0.8s						
USRK	Ussuriysk Ar.	21.40	20	P	P	22 15 33.1	-1.0
BNX	BinXian	21.79	10	⇓P	P	22 15 37.5	-0.8
BNX				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BNX				pmax	pmax		
	comp=Z,120nm,6.0s						
CHTO	Chiang Mai	22.26	260	P	P	22 15 44.2	+0.6
CHTO	Chiang Mai	22.26	260	P	P	22 15 44.2	+0.6
CM31	Chiang Mai Arr	22.38	259	P	P	22 15 44.6	-0.3
CMAR	Chiang Mai Arr	22.38	259	P	P	22 15 47.2	+2.3
	comp=Z,3.4nm,0.6s,baz=62,slow=8.6,SNR=23						
CMAR				PcP	PcP	22 19 39.4	+1.0
	comp=Z,1.2nm,0.3s,baz=50,slow=1.3,SNR=4.6						
CMAR				LR	LR	22 24 37.9	
	comp=Z,103nm,20.1s,baz=75,slow=37						
	comp=Z,3.4nm,0.6s						
CMAR	Chiang Mai Arr	22.38	259	P	P	22 15 45.3	+0.4
CMAR	Chiang Mai Arr	22.38	259	ceP	P	22 15 47.0	+2.1
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SBUM	Sibu	23.77	205	P	P	22 15 58.0	-0.7
GUMO	Guam	23.95	112	LR	LR	22 24 56.7	
	comp=Z,99nm,20.2s,baz=297,slow=35						
GTA	Gaotai	24.13	314	eP	P	22 16 03.0	+1.0
GTA				pmax	pmax		
	comp=Z,21nm,1.1s						
HIA	Hailar	24.98	356	P	P	22 16 09.2	-0.3
HIA	Hailar	24.98	356	P	P	22 16 09.2	-0.3
HIA				pmax	pmax		
	comp=Z,15nm,0.7s						
ASAJ	Asahikawa	25.87	35	P	P	22 16 16.8	-0.7
	comp=Z,4.8nm,0.5s,baz=242,slow=14,SNR=4.3						
	comp=Z,4.8nm,0.5s						
KLR	Kul'dur	25.98	14	P	P	22 16 18.2	-0.3
	comp=Z,3.9nm,0.6s,baz=204,slow=9.9,SNR=14						
KLR				PcP	PcP	22 19 45.9	+0.2
	comp=Z,2.6nm,0.5s,baz=220,slow=2.1,SNR=12						
KLR				LR	LR	22 27 00.2	
	comp=Z,142nm,19.7s,baz=208,slow=37						
	comp=Z,3.9nm,0.6s						
KLR	Kul'dur	25.98	14	⇑eP	P	22 16 17.7	-0.8

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KLR                                  pmax      pmax
      comp=Z,2.0nm,0.8s
HEH   HeiHe             26.21    8  eP        P         22 16 20.4  -0.2
HEH                                  pmax      pmax
      comp=Z,22nm,0.8s
HEH                                  pmax      pmax
      comp=Z,110nm,4.7s
GOMU  GeErMu            26.33 303    P         P         22 16 23.9 +1.6
GOMU                                 pmax      pmax
      comp=Z,4.0nm,0.8s
ULN   Ulaanbaatar       26.38 337    P         P         22 16 22.2  -0.2
ULN                                  lAmb      lAmb      22 16 23.7
      comp=Z,36nm,0.7s
ULN   Ulaanbaatar       26.38 337c iP          P         22 16 22.6 +0.2
ULN                                  pmax      pmax
      comp=Z,43nm,0.8s
SONM  Songino Array     26.60 336    P         P         22 16 24.6 +0.3
      comp=Z,40nm,0.8s,baz=152,slow=10,SNR=223
SONM                                 PcP       PcP       22 19 47.4 +0.1
      comp=Z,1.3nm,0.5s,baz=176,slow=4.0,SNR=7.8
SONM                                 ScP       ScP       22 23 22.9 +0.2
      comp=Z,0.5nm,0.8s,baz=165,slow=5.3,SNR=3.2
SONM                                 LR        LR        22 28 19.5
      comp=Z,236nm,18.7s,baz=154,slow=40
      comp=Z,40nm,0.8s
SONM  Songino Array     26.60 336    P         P         22 16 24.2  -0.1
SONM                                 lAmb      lAmb      22 16 25.7
      comp=Z,46nm,0.8s
SONM  Songino Array     26.60 336    P         P         22 16 24.2  -0.1
SONM                                 pmax      pmax
      comp=Z,46nm,0.8s
SHL   Shillong          27.45 279    P         P         22 16 31.8  -0.5
SHL                                  lAmb      lAmb      22 16 39.1
      comp=Z,22nm,1.0s
SHL   Shillong          27.45 279    P         P         22 16 31.8  -0.5
SHL                                  pmax      pmax
      comp=Z,22nm,1.0s
YSS   Yuzh-Sakhalins    27.95   31  eP         P         22 16 33.3  -2.9
YSS                                  pmax      pmax
      comp=Z,10.0nm,0.8s
LSA   Lhasa             28.09 288    P         P         22 16 40.2 +1.9
LSA                                  pmax      pmax
      comp=Z,13nm,0.7s
LSA   Lhasa             28.09 288    P         P         22 16 39.2 +0.9
LSA   Lhasa             28.09 288    P         P         22 16 39.2 +0.9
LSA                                  pmax      pmax
      comp=Z,7.0nm,0.7s
FAKI  Fak Fak           28.80 159    P         P         22 16 44.1   0.0
FAKI                                 lAmb      lAmb      22 17 27.7
      comp=Z,21nm,1.1s
KAPI  Kappang           29.25 185    LR        LR        22 29 57.0
      comp=Z,55nm,18.5s,baz=356,slow=39
ZEA   Zeya              29.63    6  eP         P         22 16 50.9  -0.2
ZEA                                  pmax      pmax
      comp=Z,10.0nm,1.1s
ZAK   Zakamensk         29.86 335   eP         P         22 16 52.4  -0.9
ZAK                                  pmax      pmax
      comp=Z,8.0nm,1.1s
PSI   Prapat            30.99 230    P         P         22 17 04.6 +0.9
PSI                                  pmax      pmax
      comp=Z,6.0nm,0.9s
IRK   Irkutsk           31.04 339   eP         P         22 17 03.1  -0.5
IRK                                  pmax      pmax
      comp=Z,41nm,1.0s
RPSI  Rantau Prapat     31.07 230    P         P         22 17 04.6 +0.4
MOY   Mondy             31.76 335   eP         P         22 17 10.0  -0.1
MOY                                  pmax      pmax
      comp=Z,18nm,1.6s
GSI   Gunungsitoli      33.00 230    P         P         22 17 20.7  -0.4
GSI                                  lAmb      lAmb      22 17 31.5
      comp=Z,51nm,1.8s
WMQ   Urumqi            34.21 313   eP         P         22 17 32.9 +1.4
WMQ                                  pmax      pmax
      comp=Z,5.0nm,0.7s
DGZ   Jazzator, Alta    37.03 322deP           P         22 17 55.9 +0.2
DGZ                                  pmax      pmax
      comp=Z,5.0nm,1.0s
ZSN   Zaisan            37.50 318   eP         P         22 17 59.7 +0.1
      baz=317
ZSN   Zaisan            37.50 318   eP         P         22 17 59.6 +0.1
YAK   Yakutsk           38.04    6   P         P         22 18 02.5  -1.4
      comp=Z,3.0nm,0.4s,baz=116,slow=1.4,SNR=4.2
YAK                                  LR        LR        22 34 51.6
      comp=Z,78nm,18.6s,baz=260,slow=38
      comp=Z,3.0nm,0.4s
YAK   Yakutsk           38.04    6   P         P         22 18 02.0  -1.8
YAK                                  lAmb      lAmb      22 18 03.2
      comp=Z,10nm,0.8s
YAK   Yakutsk           38.04    6  eP         P         22 18 01.8  -2.0
YAK                                 e*PP       pP        22 18 15.1  -2.9
YAK                                 e                    22 20 18.5
YAK                                 eS         S         22 23 50.6  -1.6
YAK                                 e*SS       sS        22 24 15.0 +0.4
YAK                                 e                    22 28 06.1
YAK                                  pmax      pmax
      comp=Z,16nm,1.4s
YAK                                  pmax      pmax
      comp=E,3.0nm,1.4s
YAK                                  pmax      pmax
      comp=N,9.0nm,1.3s
YAK                                  smax      smax
      comp=N,65nm,3.2s
YAK                                  smax      smax
      comp=E,30nm,3.6s
MK31  Makanchi Array    38.86 315    P         P         22 18 11.0   0.0
MK31                                 lAmb      lAmb      22 18 12.6
      comp=Z,9.3nm,0.8s
MK31  Makanchi Array    38.86 315    P         P         22 18 11.0   0.0
MK31                                 pmax      pmax
      comp=Z,9.0nm,0.8s
MKAR  Makanchi Array    38.86 315    P         P         22 18 11.5 +0.4
      comp=Z,9.6nm,0.5s,baz=100,slow=9.4,SNR=270
MKAR                                 PcP       PcP       22 20 20.9  -0.2
      comp=Z,2.9nm,0.8s,baz=110,slow=4.2,SNR=6.7
MKAR                                 ScP       ScP       22 24 03.6  -1.1
      comp=Z,0.6nm,0.8s,baz=109,slow=5.9,SNR=4.1
MKAR                                 LR        LR        22 35 27.0
      comp=Z,122nm,19.4s,baz=78,slow=38
      comp=Z,9.6nm,0.5s
MKAR  Makanchi Array    38.86 315    P         P         22 18 11.0   0.0
MAKZ  Makanchi          39.07 315    P         P         22 18 12.9 +0.2
MAKZ                                 lAmb      lAmb      22 18 14.4
      comp=Z,24nm,1.1s
MAKZ  Makanchi          39.07 315    P         P         22 18 12.9 +0.2
MAKZ                                 pmax      pmax
      comp=Z,24nm,1.1s
PETK  Petropavlovsk-    39.26   34   LR        LR        22 34 33.0
      comp=Z,70nm,21.3s,baz=204,slow=36
PETK  Petropavlovsk-    39.26   34   P         P         22 18 14.0  -0.2
PETK  Petropavlovsk-    39.26   34   P         P         22 18 14.0  -0.2
SHLS  Shalkode          39.67 309⇑iP           P         22 18 16.6  -1.3
      comp=Z,7.6nm,0.5s,baz=309
SHLS  Shalkode          39.67 309c iP          P         22 18 16.6  -1.3
SHLS                                 pmax      pmax
      comp=Z,8.0nm,0.5s
UZB   Uzynbulak         39.98 309   eP         P         22 18 21.7 +1.2
      baz=309
UZB   Uzynbulak         39.98 309   eP         P         22 18 21.7 +1.2
KNRA  Kununurra         40.27 170    P         P         22 18 22.5  -0.4
KNRA                                 lAmb      lAmb      22 19 24.5
      comp=Z,45nm,1.6s
KPKS  Kokpek            40.29 309   eP         P         22 18 24.1 +1.0
      baz=309
KPKS  Kokpek            40.29 309   eP         P         22 18 24.0 +1.0
SATY  Saty              40.40 309   eP         P         22 18 25.4 +1.4
      baz=308
SATY  Saty              40.40 309   eP         P         22 18 25.3 +1.4
ZHN   Zhinishke         40.40 309   eP         P         22 18 25.1 +1.1
      baz=309
ZHN   Zhinishke         40.40 309   eP         P         22 18 25.1 +1.1
MA2   Magadan           40.53   22   LR        LR        22 35 14.6
      comp=Z,86nm,21.6s,baz=129,slow=36
TARG  Taragay, Kyrgy    40.55 306    P         P         22 18 26.2 +0.6
TARG                                 lAmb      lAmb      22 18 28.8
      comp=Z,19nm,1.5s
TARG  Taragay, Kyrgy    40.55 306    P         P         22 18 26.2 +0.6
TARG                                 pmax      pmax
      comp=Z,19nm,1.5s
ZAA0  Zalesovo Array    40.62 327    P         P         22 18 24.7  -0.7
ZAA0                                 lAmb      lAmb      22 18 25.7
      comp=Z,30nm,0.9s
ZALV  Zalesovo Beam     40.62 327    P         P         22 18 25.1  -0.4
      comp=Z,21nm,0.4s,baz=118,slow=8.5,SNR=120
ZALV                                 LR        LR        22 36 27.4
      comp=Z,158nm,19.5s,baz=120,slow=38
      comp=Z,21nm,0.4s
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ZALV  Zalesovo Beam     40.62 327    P         P         22 18 24.9  -0.6
ZALV  Zalesovo Beam     40.62 327  i P         P         22 18 24.8  -0.6
ZALV                                 pmax      pmax
      comp=Z,21nm,0.4s
KRVT  Keravat (AS076    40.68 130    LR        LR        22 33 18.9
      comp=Z,61nm,21.9s,baz=222,slow=33
TDK   Taldyqorghan      40.88 311   eP         P         22 18 29.2 +1.5
      comp=Z,12nm,0.7s,baz=311
TDK   Taldyqorghan      40.88 311   eP         P         22 18 29.2 +1.5
TDK                                  pmax      pmax
      comp=Z,12nm,0.7s
MDOK  Medeo             41.39 308   eP         P         22 18 33.4 +1.3
      baz=308
MDOK  Medeo             41.39 308   eP         P         22 18 33.4 +1.3
PMG   Port Moresby      41.47 141    P         P         22 18 33.6 +0.8
      comp=Z,15nm,0.7s,baz=56,slow=3.0,SNR=5.3
      comp=Z,15nm,0.7s
PMG   Port Moresby      41.47 141    P         P         22 18 32.6  -0.2
PMG                                  lAmb      lAmb      22 18 35.3
      comp=Z,18nm,0.9s
PMG   Port Moresby      41.47 141    P         P         22 18 32.6  -0.2
PMG                                  pmax      pmax
      comp=Z,18nm,1.0s
KSH   Kashi             41.57 303    P         P         22 18 37.5 +3.8
KSH                                  pmax      pmax
      comp=Z,10.0nm,1.1s
CHKK  Chushkaly         41.58 309   eP         P         22 18 34.1 +0.6
      baz=309
CHKK  Chushkaly         41.58 309   eP         P         22 18 34.1 +0.6
ULHL  Ulahol            41.79 307    P         P         22 18 36.9 +1.4
      SNR=5.5
KUU   Kurty             42.05 309⇑iP           P         22 18 38.5 +1.1
      comp=Z,9.0nm,0.7s,baz=309
KUU   Kurty             42.05 309c iP          P         22 18 38.4 +1.1
KUU                                  pmax      pmax
      comp=Z,9.0nm,0.7s
TKM2  Tokmak 2          42.38 308    P         P         22 18 41.5 +1.2
      SNR=29
KURK  Kurchatov         42.56 320    P         P         22 18 41.5 +0.1
KURK                                 lAmb      lAmb      22 18 42.5
      comp=Z,25nm,1.2s
KURK  Kurchatov         42.56 320    P         P         22 18 41.5 +0.1
KURK                                 pmax      pmax
      comp=Z,25nm,1.2s
KURBB Kurchatov Arra    42.58 319    P         P         22 18 41.5   0.0
      comp=Z,5.1nm,0.6s,baz=114,slow=9.2,SNR=57
KURBB                                PcP       PcP       22 20 32.7  -0.3
      comp=Z,1.8nm,1.0s,baz=115,slow=3.4,SNR=4.9
      comp=Z,5.1nm,0.6s
KBK   Karagaybulak      42.81 307    P         P         22 18 45.5 +1.8
      SNR=9.7
CHMS  Chumysh           43.01 308    P         P         22 18 46.5 +1.4
      SNR=8.0
UCH   Uchtor            43.05 306    P         P         22 18 48.2 +2.2
      SNR=23
AAK   Ala-Archa         43.13 307    P         P         22 18 48.0 +1.6
      SNR=6.8
AAK   Ala-Archa         43.13 307    P         P         22 18 47.4 +1.1
      comp=Z,4.2nm,0.7s,baz=127,slow=5.7,SNR=21
AAK                                  PcP       PcP       22 20 35.3   0.0
      comp=Z,3.1nm,0.7s,baz=153,slow=5.0,SNR=7.3
AAK                                  LR        LR        22 38 53.6
      comp=Z,81nm,21.4s,baz=49,slow=39
      comp=Z,4.2nm,0.7s
AAK   Ala-Archa         43.13 307    P         P         22 18 47.2 +0.8
AAK   Ala-Archa         43.13 307c iP          P         22 18 47.7 +1.3
AAK                                  pmax      pmax
      comp=Z,6.0nm,1.3s
SGDS  Sogindy           43.18 308   eP         P         22 18 47.5 +0.9
      baz=308
SGDS  Sogindy           43.18 308   eP         P         22 18 47.5 +0.9
COEN  Coen              43.23 149    P         P         22 18 48.1 +1.0
COEN                                 lAmb      lAmb      22 18 51.1
      comp=Z,14nm,0.9s
USP   Ospenovka         43.24 308    P         P         22 18 48.0 +0.9
      SNR=5.3
NIL   Nilore            43.44 294    P         P         22 18 48.9 +0.1
NIL   Nilore            43.44 294    P         P         22 18 48.9 +0.1
NIL                                  pmax      pmax
      comp=Z,8.0nm,0.8s
AML   Almayashu         43.64 306    P         P         22 18 52.8 +2.0
      SNR=14
EKS2  Erkin-Say         43.66 307    P         P         22 18 52.1 +1.5
      SNR=8.7
BTLS  Baital            43.89 310⇑iP           P         22 18 52.1  -0.1
      baz=310
BTLS  Baital            43.89 310c iP          P         22 18 52.9 +0.7
WB0   Warramunga Arr    45.41 164    P         P         22 19 04.8 +0.2
WB0                                  lAmb      lAmb      22 19 24.7
      comp=Z,7.5nm,0.7s
WRAB  Tennant Creek     45.56 164⇑eP           P         22 19 07.0 +1.3
WRAB                                 pmax      pmax
      comp=Z,6.0nm,0.8s
WRA   Warramunga Arr    45.56 164    P         P         22 19 06.4 +0.6
      comp=Z,6.2nm,0.8s,baz=346,slow=8.7,SNR=30
WRA                                  PcP       PcP       22 20 43.9 +0.3
      comp=Z,2.8nm,0.8s,baz=343,slow=3.5,SNR=5.9
      comp=Z,6.2nm,0.8s
WRA   Warramunga Arr    45.56 164    P         P         22 19 05.5  -0.2
WRA   Warramunga Arr    45.56 164  i P         P         22 19 06.3 +0.6
WRA                                  pmax      pmax
      comp=Z,5.0nm,0.6s
PSA00 Pilbara Seismi    45.67 183    P         P         22 19 05.8  -0.8
GAR   Garm              45.90 301    P         P         22 19 09.3 +0.8
BRZS  Berezniki         45.94 317⇑iP           P         22 19 09.1 +0.6
      comp=Z,6.3nm,0.7s,baz=317
BRZS  Berezniki         45.94 317c iP          P         22 19 09.0 +0.6
BRZS                                 pmax      pmax
      comp=Z,6.0nm,0.7s
KK31  Karatay Array     46.10 307    P         P         22 19 10.6 +0.8
KK31  Karatay Array     46.10 307    P         P         22 19 10.6 +0.8
KK31                                 pmax      pmax
      comp=Z,6.0nm,0.9s
KKAR  Karatay Array     46.10 307    P         P         22 19 10.4 +0.6
KKAR  Karatay Array     46.10 307    P         P         22 19 10.4 +0.6
IUG   Iuzhnay           46.35 306⇑iP           P         22 19 13.4 +1.5
      comp=Z,9.7nm,0.7s,baz=306
IUG   Iuzhnay           46.35 306c iP          P         22 19 13.3 +1.5
IUG                                  pmax      pmax
      comp=Z,10.0nm,0.7s
CHM   Chimkent          46.68 306   eP         P         22 19 14.7 +0.3
      baz=306
CHM   Chimkent          46.68 306   eP         P         22 19 14.7 +0.3
CHGR  Chuyangaron       46.79 301    P         P         22 19 15.9 +0.6
CHGR  Chuyangaron       46.79 301    P         P         22 19 16.0 +0.6
CHGR                                 pmax      pmax
      comp=Z,24nm,0.8s
TAS   Tashkent          46.83 305    P         P         22 19 16.1 +0.6
TAS   Tashkent          46.83 305    P         P         22 19 16.1 +0.6
KBL   Kabul             46.91 295    P         P         22 19 17.1 +0.6
KBL                                  lAmb      lAmb      22 19 19.0
      comp=Z,21nm,0.8s
KBL   Kabul             46.91 295    P         P         22 19 17.1 +0.6
KBL                                  pmax      pmax
      comp=Z,21nm,0.8s
TIXI  Tiksi             47.52    3   LR        LR        22 41 33.7
      comp=Z,96nm,18.8s,baz=178,slow=39
TIXI  Tiksi             47.52    3   P         P         22 19 18.9  -1.5
TIXI                                 lAmb      lAmb      22 19 20.0
      comp=Z,18nm,0.7s
TIXI  Tiksi             47.52    3c iP         P         22 19 18.8  -1.5
TIXI                                 pmax      pmax
      comp=Z,21nm,0.8s
BVAR  Borovoye Array    48.13 320    P         P         22 19 25.6 +0.1
      comp=Z,13nm,0.5s,baz=102,slow=8.1,SNR=116
BVAR                                 PcP       PcP       22 20 52.0  -0.2
      comp=Z,4.3nm,0.8s,baz=108,slow=4.8,SNR=5.6
BVAR                                 LR        LR        22 42 27.7
      comp=Z,55nm,20.4s,baz=101,slow=39
      comp=Z,13nm,0.5s
BRVK  Borovoye          48.21 320    P         P         22 19 25.8  -0.2
BRVK  Borovoye          48.21 320c iP          P         22 19 26.3 +0.3
BRVK                                 pmax      pmax
      comp=Z,23nm,0.8s
ASAR  Alice Springs     49.04 166    P         P         22 19 33.9 +1.1
      comp=Z,1.6nm,0.7s,baz=342,slow=8.1,SNR=20
ASAR                                 PcP       PcP       22 20 56.4 +0.5
      comp=Z,1.6nm,0.9s,baz=348,slow=4.0,SNR=2.1
ASAR                                 ScP       ScP       22 24 44.7  -1.6
      comp=Z,0.5nm,0.7s,baz=340,slow=3.8,SNR=4.5
      comp=Z,1.6nm,0.7s
NRIK  Noril'sk          49.51 345    P         P         22 19 34.6  -1.1
      comp=Z,6.8nm,0.9s,baz=122,slow=6.6,SNR=7.5
NRIK                                 LR        LR        22 42 03.1
      comp=Z,98nm,20.3s,baz=140,slow=38
      comp=Z,6.8nm,0.9s
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NRIK  Noril'sk          49.51 345    P         P         22 19 34.6  -1.1
NRIK                                 lAmb      lAmb      22 19 35.5
      comp=Z,13nm,1.1s
NRIK  Noril'sk          49.51 345deP           P         22 19 34.8  -0.9
NRIK                                 pmax      pmax
      comp=Z,9.0nm,1.0s
CTA   Charters Tower    49.99 150    P         P         22 19 40.5 +0.5
      comp=Z,3.5nm,0.9s,baz=319,slow=10.0,SNR=3.8
CTA                                  PcP       PcP       22 21 00.8 +1.3
      comp=Z,4.3nm,0.7s,baz=335,slow=6.8,SNR=4.8
CTA                                  LR        LR        22 42 08.1
      comp=Z,59nm,19.9s,baz=245,slow=38
      comp=Z,3.5nm,0.9s
CTAO  Charters Tower    49.99 150    P         P         22 19 39.8  -0.2
CTAO                                 lAmb      lAmb      22 19 49.4
      comp=Z,6.9nm,0.9s
CTAO  Charters Tower    49.99 150    P         P         22 19 39.8  -0.2
CTAO                                 pmax      pmax
      comp=Z,7.0nm,0.9s
BILL  Bilibino          51.26   20   P         P         22 19 48.1  -0.9
BILL  Bilibino          51.26   20⇓eP          P         22 19 48.8  -0.2
BILL                                e*PP       sP        22 20 07.1  -2.8
BILL                                e*SP       pP        22 20 12.1 +8.5
BILL                                i                    22 21 04.8
BILL                                 pmax      pmax
      comp=Z,3.0nm,0.9s
BILL                                 MLR       MLR
      comp=Z,44nm,17.0s
ABKAR Akbulak array     53.98 314    P         P         22 20 09.9 +0.5
ABKAR Akbulak array     53.98 314    P         P         22 20 09.8 +0.3
SVE   Sverdlovsk        54.46 324   eP         P         22 20 12.8   0.0
SVE                                  pmax      pmax
      comp=Z,27nm,0.7s
FORT  Forrest           55.08 174    P         P         22 20 16.5  -0.9
AKTO  Aktyubinsk        55.30 316    LR        LR        22 45 29.5
      comp=Z,75nm,20.1s,baz=36,slow=38
GEYT  Alibeck           55.50 300    P         P         22 20 22.3 +1.7
      comp=Z,19nm,0.7s,baz=90,slow=3.0,SNR=41
GEYT                                 LR        LR        22 46 43.3
      comp=Z,135nm,19.4s,baz=143,slow=39
      comp=Z,19nm,0.7s
ARU   Arti              55.54 323    LR        LR        22 45 30.4
      comp=Z,88nm,20.0s,baz=124,slow=37
ARU   Arti              55.54 323    P         P         22 20 19.6  -0.9
ARU   Arti              55.54 323c iP          P         22 20 19.9  -0.6
ARU                                  *PP       pP        22 20 33.8  -1.6
ARU                                                      22 21 17.2
ARU                                  S         S         22 28 03.3 +1.6
ARU                                                      22 30 05.2
ARU                                  SS        SS        22 31 44.3  -2.7
ARU                                  pmax      pmax
      comp=Z,19nm,0.7s
EIDS  Eidsvold          56.78 148    P         P         22 20 29.6  -0.1
EIDS                                 lAmb      lAmb      22 20 40.1
      comp=Z,35nm,1.7s
SPIA  Saint Paul Isl    57.80   37   P         P         22 20 36.5  -0.1
      baz=265
BBOO  Buckleboo         58.34 166    P         P         22 20 40.4  -0.1
BBOO                                 lAmb      lAmb      22 21 01.5
      comp=Z,18nm,1.4s
NIKH  Nikolski High     58.40   42   P         P         22 20 41.3 +0.5
      baz=269
STKA  Stephens Creek    58.89 161    P         P         22 20 45.5 +1.1
      comp=Z,4.4nm,0.6s,baz=345,slow=5.5,SNR=14
      comp=Z,4.4nm,0.6s
STKA  Stephens Creek    58.89 161    P         P         22 20 45.2 +0.8
STKA  Stephens Creek    58.89 161    P         P         22 20 45.2 +0.8
STKA                                 pmax      pmax
      comp=Z,1.0nm,0.7s
UOSS  Minazif           59.39 286    P         P         22 20 48.8 +0.6
UOSS                                 lAmb      lAmb      22 22 55.6
      comp=Z,21nm,1.2s
UNV   Unalaska Valle    59.81   41   P         P         22 20 50.7 +0.2
      baz=270
TNA   Tin City          59.82   27   P         P         22 20 50.8 +0.4
      baz=262
KIRV  Kirov             60.62 325    LR        LR        22 48 55.0
      comp=Z,147nm,19.4s,baz=92,slow=38
KIRV  Kirov             60.62 325c iP          P         22 20 55.3  -0.7
ANM   Nome              60.79   28   P         P         22 20 57.1   0.0
ANM                                  lAmb      lAmb      22 20 59.4
      comp=Z,31nm,1.9s
ANM   Nome              60.79   28   P         P         22 20 57.1   0.0
ANM                                  pmax      pmax
      comp=Z,31nm,1.9s
ANM   Nome              60.79   28   P         P         22 20 57.4 +0.3
      baz=265,SNR=5.7
FALS  False Pass        61.59   39   P         P         22 21 02.3  -0.3
      baz=272
AKT   Akhty             62.98 306   eP         P         22 21 13.2 +0.8
AKT                                 e                    22 21 51.1
AKT                                  pmax      pmax
      comp=Z,24nm,1.4s
DZM   Mont Dzumac       63.08 133    LR        LR        22 46 35.6
      comp=Z,71nm,18.1s,baz=23,slow=34
SDPT  Sand Point        63.25   39   P         P         22 21 14.2 +0.5
      baz=274
N16K  Nishlik Lake      63.81   33   P         P         22 21 18.1 +0.7
      baz=273
O16K  Kokwok River B    64.21   34   P         P         22 21 19.8  -0.2
      baz=274
P16K  Nushagak River    64.30   34   P         P         22 21 21.0 +0.4
      baz=275
CHGN  Chignik           64.33   37   P         P         22 21 20.6  -0.2
      baz=276
A21K  Barrow            64.37   21   P         P         22 21 21.2 +0.4
      baz=270
O17K  Koliganek Bris    64.70   34   P         P         22 21 23.3 +0.2
      baz=275
TTA   Tatalina          64.95   30   P         P         22 21 24.7  -0.2
TTA                                  lAmb      lAmb      22 21 26.3
      comp=Z,7.5nm,0.7s
TTA   Tatalina          64.95   30   P         P         22 21 24.7  -0.2
TTA                                  pmax      pmax
      comp=Z,8.0nm,0.7s
TTA   Tatalina          64.95   30   P         P         22 21 25.2 +0.3
      baz=275,SNR=7.4
Q16K  King Salmon       65.03   35   P         P         22 21 25.7 +0.4
      baz=276
TOO   Toolangi          65.36 160    P         P         22 21 27.5  -0.2
TOO   Toolangi          65.36 160    P         P         22 21 27.5  -0.2
TOO                                  pmax      pmax
      comp=Z,45nm,1.8s
GNI   Garni             65.46 305    LR        LR        22 53 58.5
      comp=Z,43nm,18.3s,baz=200,slow=40
GNI   Garni             65.46 305    P         P         22 21 29.4 +0.7
GNI                                  lAmb      lAmb      22 21 31.3
      comp=Z,31nm,1.6s
GNI   Garni             65.46 305⇓eP           P         22 21 30.5 +1.8
GNI                                  pmax      pmax
      comp=Z,15nm,1.3s
Q17K  Contact Creek     65.47   35   P         P         22 21 28.2  -0.1
      baz=277
KLMR  Klimovskoe        65.53 328   eP         P         22 21 26.8  -1.7
KLMR                                 AMP                 22 21 28.7
      comp=Z,27nm,1.8s
KLMR  Klimovskoe        65.53 328   eP         P         22 21 26.8  -1.7
KLMR                                 pmax      pmax
      comp=Z,27nm,1.8s
L19K  White Mountain    65.55   31   P         P         22 21 29.0 +0.2
      baz=276
ZEI   Tsey              65.55 308   eP         P         22 21 28.9  -0.4
ZEI                                  pmax      pmax
      comp=Z,8.0nm,1.0s
VRH   Novokhopyorsk     65.56 317c iP          P         22 21 28.3  -0.6
VRH                                  pmax      pmax
      comp=Z,10.0nm,1.8s
F21K  Alatna River      65.66   25   P         P         22 21 29.7 +0.3
      baz=275
IMAR  Indian Mountai    65.67   27   P         P         22 21 29.4   0.0
P18K  Big Mountain,     65.68   34   P         P         22 21 29.7 +0.1
      baz=277
G21K  Allakaket         65.72   26   P         P         22 21 29.9 +0.2
      baz=275
K20K  Telida            65.79   29   P         P         22 21 31.1 +0.9
      baz=276,SNR=7.1
M19K  Big River Lodg    65.80   31   P         P         22 21 31.0 +0.7
      baz=276
N19K  Bonanza Creek     65.88   32   P         P         22 21 31.4 +0.5
      baz=277
Q18K  Katmai Hardscr    65.89   35   P         P         22 21 30.3  -0.7
      baz=277
ONI   Oni               65.92 308    P         P         22 21 31.7 +0.2
ONI                                  lAmb      lAmb      22 21 34.3
      comp=Z,9.0nm,0.9s
ONI   Oni               65.92 308    P         P         22 21 31.7 +0.2
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ONI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
L20K	Farewell, AK	65.97	30	P	P	22 21 32.2	+0.8
	baz=277						
O19K	Port Alsworth	66.04	33	P	P	22 21 31.9	+0.1
	baz=277						
H21K	Melozitna Rive	66.09	27	P	P	22 21 32.6	+0.5
	baz=276						
KBZ	Khabaz	66.09	309	P	P	22 21 33.1	+0.7
	comp=Z,5.5nm,0.9s,baz=113,slow=2.7,SNR=10						
KBZ				LR	LR	22 54 18.6	
	comp=Z,63nm,18.8s,baz=100,slow=39						
	comp=Z,5.5nm,0.9s						
KBZ	Khabaz	66.09	309	⇓*e*P	P	22 21 33.4	+1.0
KBZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
AKH	Akhalkalaki	66.13	306	P	P	22 21 33.9	+0.9
AKH	Akhalkalaki	66.13	306	P	P	22 21 33.9	+0.9
AKH				pmax	pmax		
	comp=Z,61nm,1.1s						
F22K	John River	66.14	25	P	P	22 21 33.2	+0.8
	baz=276						
KIV	Kislovodsk	66.19	309	P	P	22 21 33.5	+0.3
KIV	Kislovodsk	66.19	309	*e*P	P	22 21 34.1	+0.8
KIV				pmax	pmax		
	comp=Z,17nm,1.1s						
KIV				MLR	MLR		
	comp=Z,47nm,17.0s						
M20K	Styx River	66.39	31	P	P	22 21 34.9	+0.7
	baz=278						
I21K	Tanana	66.48	27	P	P	22 21 35.5	+0.9
	baz=277						
CHUM	Lake Minchumin	66.50	29	P	P	22 21 36.2	+1.5
	baz=277,SNR=5.1						
D23K	Nanushuk River	66.53	23	P	P	22 21 35.7	+0.8
	baz=277,SNR=19						
H22K	Ishtalitna Cre	66.64	27	P	P	22 21 36.3	+0.6
	baz=277						
CAST	Castle Rocks	66.67	29	P	P	22 21 35.8	0.0
CAST				IAmb	IAmb	22 21 37.5	
	comp=Z,13nm,0.9s						
CAST	Castle Rocks	66.67	29	P	P	22 21 36.3	+0.5
	baz=278,SNR=10						
PPLA	Purkeypile	66.69	30	P	P	22 21 36.6	+0.4
	baz=278						
O20K	Slope Mountain	66.89	33	P	P	22 21 37.2	-0.2
	baz=279						
SPCR	Spurr Chakacha	66.93	32	P	P	22 21 38.0	+0.4
	baz=279						
COLD	Coldfoot	66.93	25	P	P	22 21 37.9	+0.4
	baz=278,SNR=7.0						
TOLK	Toolik Lake Re	66.98	23	P	P	22 21 38.0	+0.3
TOLK				IAmb	IAmb	22 21 39.3	
	comp=Z,11nm,0.7s						
TOLK	Toolik Lake Re	66.98	23	P	P	22 21 38.1	+0.3
	baz=278						
MLY	Manley	67.02	27	P	P	22 21 38.4	+0.3
	baz=278,SNR=13						
VORR	Voronezh	67.04	318	*e*P	P	22 21 39.1	+0.8
VORR				pmax	pmax		
	comp=Z,23nm,2.0s						
LPSR	Galich'ya Gora	67.04	319	*e*P	P	22 21 35.6	-2.7
LPSR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
E23K	Chandalar	67.04	24	P	P	22 21 38.6	+0.4
	baz=278						
BPAW	Bear Paw Mtn.	67.05	28	P	P	22 21 38.3	0.0
BPAW				IAmb	IAmb	22 21 39.9	
	comp=Z,6.8nm,0.6s						
BPAW	Bear Paw Mtn.	67.05	28	P	P	22 21 38.7	+0.4
	baz=278,SNR=7.9						
G23K	Bananza Creek	67.07	26	P	P	22 21 38.9	+0.5
	baz=278						
VORD	Divnogorie	67.11	317	*e*P	P	22 21 36.5	-2.3
VORD				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SKT	Skwentna	67.13	31	P	P	22 21 38.8	0.0
	baz=279						
C24K	Franklin Bluff	67.14	22	P	P	22 21 39.2	+0.5
	baz=278						
GEVA	Gevas	67.14	303	P	P	22 21 40.2	+0.8
GEVA				IAmb	IAmb	22 21 41.5	
	comp=Z,8.6nm,0.8s						
VSR	Storozhevoye	67.15	317	*e*P	P	22 21 36.5	-2.5
VSR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KTH	Kantishna Hill	67.16	29	P	P	22 21 39.0	0.0
KTH				IAmb	IAmb	22 21 40.8	
	comp=Z,7.0nm,0.8s						
H23K	Yukon River	67.40	26	P	P	22 21 40.8	+0.4
	baz=279,SNR=16						
E24K	Your Creek	67.46	24	P	P	22 21 41.7	+0.8
	baz=279						
TRF	Thorofare Moun	67.46	29	P	P	22 21 41.2	+0.2
TRF				IAmb	IAmb	22 21 44.3	
	comp=Z,6.8nm,0.7s						
TRF	Thorofare Moun	67.46	29	P	P	22 21 41.7	+0.6
	baz=279						
SUA	Susitna One	67.58	31	P	P	22 21 42.1	+0.3
	baz=280						
I23K	Minto, Yukon-K	67.58	27	P	P	22 21 42.0	+0.5
	baz=279,SNR=8.2						
CUT	Chulitna	67.64	30	P	P	22 21 41.9	-0.1
CUT				IAmb	IAmb	22 21 42.2	
	comp=Z,20nm,1.0s						
CUT	Chulitna	67.64	30	P	P	22 21 42.1	+0.1
	baz=280						
F24K	Squaw Lake	67.77	25	P	P	22 21 43.2	+0.4
	baz=280						
NEA2	Nenana	67.80	28	P	P	22 21 43.0	0.0
	baz=280,SNR=22						
GURO	Guroymak-BITLI	67.86	303	P	P	22 21 45.0	+1.0
BRSE	Bradley Lake S	67.89	33	P	P	22 21 44.5	+0.9
	baz=280						
OBN	Obninsk	67.95	322	LR	LR	22 55 13.1	
	comp=Z,26nm,19.1s,baz=360,slow=39						
OBN	Obninsk	67.95	322	⇑*e*P	P	22 21 44.4	+0.4
OBN						22 22 10.0	
OBN						22 24 15.0	
OBN				pmax	pmax		
	comp=Z,11nm,0.5s						
OBN				MLR	MLR		
	comp=Z,93nm,17.0s						
D25K	Kavik River	68.01	23	P	P	22 21 44.5	+0.3
	baz=280						
MCK	McKinley	68.01	29	P	P	22 21 44.5	+0.2
MCK				IAmb	IAmb	22 21 45.8	
	comp=Z,8.7nm,0.8s						
MCK	McKinley	68.01	29	P	P	22 21 44.5	+0.2
MCK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MCK	McKinley	68.01	29	P	P	22 21 44.6	+0.3
	baz=280,SNR=6.5						
H24K	Noodor Dome	68.07	26	P	P	22 21 45.2	+0.5
	baz=280,SNR=8.8						
G24K	Hadweenzic Riv	68.08	25	P	P	22 21 44.9	+0.2
	baz=280,SNR=13						
WRH	Wood River Hil	68.24	28	P	P	22 21 45.6	0.0
WRH				IAmb	IAmb	22 21 48.1	
	comp=Z,7.3nm,0.8s						
O22K	Cooper Landing	68.25	32	P	P	22 21 45.7	-0.1
	baz=281						
COLA	College	68.26	27	⇑*e*P	P	22 21 46.4	+0.6
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
VADS	Vadso	68.31	338	*e*P	P	22 21 46.3	+0.3
PMR	Palmer	68.32	31	P	P	22 21 46.2	-0.1
	baz=281						
CCB	Clear Creek Bu	68.33	28	P	P	22 21 46.0	-0.2
CCB				IAmb	IAmb	22 21 48.7	
	comp=Z,16nm,1.8s						
POKR	Poker Plat Res	68.39	27	P	P	22 21 47.3	+0.7
POKR				IAmb	IAmb	22 21 48.4	
	comp=Z,12nm,0.7s						
POKR	Poker Plat Res	68.39	27	P	P	22 21 46.8	+0.2
	baz=281						
C26K	Camden Bay	68.40	22	P	P	22 21 47.2	+0.6
	baz=282						
SEW	Seward	68.45	33	P	P	22 21 46.8	-0.3
	baz=281						
E25K	Arctic Village	68.53	24	P	P	22 21 48.1	+0.7
	baz=282,SNR=7.1						
G25K	Bearman Lake	68.60	25	P	P	22 21 49.1	+1.3
	baz=282						
F25K	Christian Rive	68.61	24	P	P	22 21 49.0	+0.9
	baz=282						
SML	Sawmill	68.65	31	P	P	22 21 48.6	+0.2
	baz=282						
KOPT	Kop Dagi	68.66	305	P	P	22 21 50.6	+1.5
KOPT				IAmb	IAmb	22 21 52.4	
	comp=Z,21nm,1.3s						
KNK	Knik Glacier	68.67	31	P	P	22 21 48.8	+0.3
	baz=282						
IL31		68.69	27	P	P	22 21 47.7	-0.8
ILAR	Eielson Array	68.69	27	P	P	22 21 47.5	-1.1
	comp=Z,2.0nm,0.5s,baz=259,slow=5.5,SNR=49						
	comp=Z,2.0nm,0.5s						
HDA	Harding Lake	68.74	28	P	P	22 21 48.2	-0.7
	baz=282						
PWL	Port Wells	68.84	32	P	P	22 21 49.1	-0.5
	baz=282						
C27K	Jago River	68.87	22	P	P	22 21 50.3	+0.8
	baz=283						
M23K	Glacier View	68.93	31	P	P	22 21 50.3	+0.2
	baz=282						
BMAR	Burnt Mountain	69.04	24	P	P	22 21 51.3	+0.5
PRP	Porcupine Dome	69.09	26	P	P	22 21 50.5	-0.7
PRP				IAmb	IAmb	22 22 35.7	
	comp=Z,22nm,2.0s						
PRP	Porcupine Dome	69.09	26	P	P	22 21 51.3	+0.1
	baz=283,SNR=5.6						
SCM	Sheep Creek Mo	69.11	31	P	P	22 21 51.2	-0.1
SCM	Sheep Creek Mo	69.11	31	P	P	22 21 51.2	-0.1
SCM				pmax	pmax		
	comp=Z,31nm,0.6s						
SCM	Sheep Creek Mo	69.11	31	P	P	22 21 51.2	-0.1
	baz=282,SNR=5.1						
F26K	Sheenjek River	69.14	24	P	P	22 21 52.1	+0.7
	baz=283						
RAYN	Ar Rayn	69.16	287	P	P	22 21 52.0	-0.2
RAYN				IAmb	IAmb	22 21 53.9	
	comp=Z,15nm,1.3s						
RAYN	Ar Rayn	69.16	287	P	P	22 21 52.0	-0.2
RAYN				pmax	pmax		
	comp=Z,15nm,1.3s						
KEV	Kevo	69.18	338	P	P	22 21 51.2	-0.3
KEV	Kevo	69.18	338	P	P	22 21 51.2	-0.3
KEV				pmax	pmax		
	comp=Z,65nm,1.4s						
K24K	Donnelly Dome	69.37	28	P	P	22 21 52.5	-0.2
	baz=283,SNR=12						
G26K	Porcupine Rive	69.45	25	P	P	22 21 53.6	+0.4
	baz=284						
P23K	Montague Islan	69.48	32	P	P	22 21 53.9	+0.4
	baz=283						
SPB2	Spitsbergen Ar	69.54	348	P	P	22 21 53.0	-0.5
SPA0	Spitsbergen Ar	69.54	348	*e*P	P	22 21 53.2	-0.4
SPITS	Spitsbergen Ar	69.54	348	LR	LR	22 56 30.8	
	comp=Z,63nm,19.6s,baz=55,slow=39						
SPITS	Spitsbergen Ar	69.54	348	P	P	22 21 53.1	-0.5
SPITS				pmax	pmax		
	comp=Z,70nm,1.5s						
M24K	Tolsona, Glenn	69.58	30	P	P	22 21 55.0	+0.8
	baz=283,SNR=5.8						
PAX	Paxson	69.70	29	P	P	22 21 55.2	+0.3
	baz=284						
ARA0	ARCESS Array S	69.75	338	*e*P	P	22 21 57.1	+2.1
ARCES	ARCESS Array B	69.75	338	P	P	22 21 54.8	-0.2
	comp=Z,3.0nm,0.8s,baz=54,slow=6.2,SNR=17						
	comp=Z,3.0nm,0.8s						
ARCES	ARCESS Array B	69.75	338	P	P	22 21 54.6	-0.4
ARCES				IAmb	IAmb	22 22 48.5	
	comp=Z,40nm,1.5s						
ARCES	ARCESS Array B	69.75	338	P	P	22 21 54.6	-0.4
ARCES				pmax	pmax		
	comp=Z,40nm,1.5s						
RIDG	Independent Ri	69.79	28	P	P	22 21 54.8	-0.6
RIDG				IAmb	IAmb	22 22 28.6	
	comp=Z,20nm,1.5s						
RIDG	Independent Ri	69.79	28	P	P	22 21 55.3	-0.1
	baz=284						
KLU	Klutina	69.84	31	P	P	22 21 56.1	+0.3
	baz=284						
E27K	Coleen River	69.96	23	P	P	22 21 57.1	+0.7
	baz=285						
HARP	HAARP	69.97	30	P	P	22 21 57.1	+0.5
	baz=284						
SCRK	Sand Creek	70.10	28	P	P	22 21 57.1	-0.3
SCRK	Sand Creek	70.10	28	P	P	22 21 56.7	-0.6
	baz=284,SNR=8.7						
I26K	Coal Creek Min	70.11	26	P	P	22 21 57.1	-0.2
	baz=285						
J26L	Joseph Creek	70.14	27	P	P	22 21 57.2	-0.4
	baz=285						
DOT	Dot Lake	70.15	28	P	P	22 21 57.4	-0.2
G27K	Doyon Strip	70.30	25	P	P	22 21 59.3	+0.8
	baz=286						
N25K	Chitina, Valde	70.43	30	P	P	22 21 59.7	+0.3
	baz=285						
H27K	Steamboat Moun	70.51	25	P	P	22 22 00.5	+0.8
	baz=286						
L26K	Log Cabin Wild	70.62	29	P	P	22 22 00.6	+0.2
	baz=285						
I27K	Kandik River	70.65	26	P	P	22 22 01.4	+0.7
	baz=286						
KTK1	Kautokeino	70.67	338	*e*P	P	22 22 00.7	+0.1
KTK1				IAmb	IAmb	22 22 02.4	
	comp=Z,13nm,1.2s						
K27K	Chicken	70.89	28	P	P	22 22 02.7	+0.6
	baz=286						
M26K	Nabesna, AK	70.94	29	P	P	22 22 03.0	+0.5
	baz=286						
EGAK	Eagle	71.06	27	P	P	22 22 02.7	-0.4
EGAK				IAmb	IAmb	22 22 03.9	
	comp=Z,9.2nm,0.6s						
EGAK	Eagle	71.06	27	P	P	22 22 02.9	-0.2
	baz=287,SNR=12						
MCARA	McCarthy VSAT	71.22	30	P	P	22 22 04.5	+0.4
	baz=286						
L27K	Beaver Creek,	71.28	29	P	P	22 22 05.3	+0.8
	baz=287						
BCAR	Beaver Creek A	71.29	29	P	P	22 22 05.0	+0.4
JETT	Jettan, Norway	71.45	339	*e*P	P	22 22 05.6	+0.2
JETT				IAmb	IAmb	22 22 07.5	
	comp=Z,7.0nm,0.6s						
M27K	Edge Creek, AK	71.46	29	P	P	22 22 05.8	+0.1
	baz=287,SNR=5.3						
FIA1	FINESS Array S	71.78	330	P	P	22 22 06.4	-1.0
FINES	FINESS Array B	71.78	330	P	P	22 22 07.0	-0.4
	comp=Z,1.9nm,0.4s,baz=50,slow=5.9,SNR=25						
FINES				LR	LR	22 57 07.8	
	comp=Z,99nm,19.7s,baz=68,slow=39						
	comp=Z,1.9nm,0.4s						
FINES	FINESS Array B	71.78	330	P	P	22 22 06.8	-0.6
FINES	FINESS Array B	71.78	330	*i* P	P	22 22 07.5	+0.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
GAZ	Gaziantep	71.91	303	P	P	22 22 08.9	+0.1
GAZ				IAmb	IAmb	22 22 11.0	
	comp=Z,28nm,1.2s						
DAWY	Dawson	72.01	27	P	P	22 22 09.0	+0.2
DAWY				IAmb	IAmb	22 22 10.0	
	comp=Z,11nm,0.6s						
DAWY	Dawson	72.01	27	P	P	22 22 09.3	+0.5
	baz=288,SNR=15						
I29M	Ogilvie Camp,	72.04	26	P	P	22 22 09.7	+0.8
	baz=289						
CTG	Chitna Glacier	72.12	31	P	P	22 22 09.8	+0.1
	baz=288						
YUK3	Moose Creek	72.27	30	P	P	22 22 11.0	+0.3
	baz=288						
G30M	tAoh Zraii Nji	72.29	24	P	P	22 22 10.3	-0.2
	baz=290						
NOR	Nord	72.30	354	*i* P	P	22 22 08.2	-2.1
NOR				IAmb	IAmb	22 22 09.7	
	comp=Z,6.0nm,0.6s						
EPYK	Eagle Plains	72.31	25	P	P	22 22 10.2	-0.4
EPYK				IAmb	IAmb	22 22 11.3	
	comp=Z,13nm,0.6s						
EPYK	Eagle Plains	72.31	25	P	P	22 22 10.3	-0.3
	baz=290,SNR=11						
J29M	Klondike Camp	72.37	27	P	P	22 22 11.6	+0.6
	baz=289						
BNN	Bunyan	72.44	305	P	P	22 22 12.2	+0.2
O28M	Mount Upton	72.71	31	P	P	22 22 13.7	+0.2
	baz=289						
YUK8	Steele Glacier	72.74	30	P	P	22 22 13.9	+0.4
	baz=289						
INK	Inuvik	72.77	22	P	P	22 22 12.7	-0.5
INK				IAmb	IAmb	22 22 13.9	
	comp=Z,13nm,0.8s						
INK	Inuvik	72.77	22	P	P	22 22 12.7	-0.5
INK				pmax	pmax		
	comp=Z,13nm,0.8s						
INK	Inuvik	72.77	22	P	P	22 22 13.0	-0.2
	baz=292,SNR=18						
L29M	L29M	72.86	28	P	P	22 22 14.7	+0.8
	baz=290						
K29M	Barlow Dome	72.86	27	P	P	22 22 14.5	+0.5
	baz=290						
PINM	Pinnacle	72.90	31	P	P	22 22 15.1	+0.8
	baz=289						
M29M	Somme Creek	72.94	29	P	P	22 22 15.9	+1.4
	baz=290						
F31M	Tsiigehtchic	73.02	23	P	P	22 22 14.3	-0.4
	baz=292,SNR=14						
YUK4	Talbot Arm	73.23	30	P	P	22 22 17.0	+0.6
	baz=290						
AKASG	Malin Array Be	73.36	318	P	P	22 22 16.3	-0.7
	comp=Z,1.6nm,0.6s,baz=59,slow=6.2,SNR=8.7						
	comp=Z,1.6nm,0.6s						
AKBB	Malin Array Si	73.36	318	⇓*e*P	P	22 22 16.3	-0.7
NACGM	Naroch	73.44	323	*e*P	P	22 22 18.2	+0.8
	comp=Z,17nm,1.1s,baz=71						
YUK6	Outpost Mounta	73.50	30	P	P	22 22 18.9	+0.9
	baz=290						
M30M	Minto, Yukon	73.62	28	P	P	22 22 19.1	+0.7
	baz=291,SNR=5.3						
O29M	Mount Kennedy	73.62	31	P	P	22 22 19.0	+0.4
	baz=290						
A36M	Sachs Harbour	73.73	17	P	P	22 22 19.0	+0.2
	baz=299						
BR131	Keskin Array S	73.81	307	P	P	22 22 20.2	+0.1
BR131				IAmb	IAmb	22 22 21.5	
	comp=Z,21nm,1.0s						
BR131	Keskin Array S	73.81	307	P	P	22 22 20.2	+0.1
BR131				pmax	pmax		
	comp=Z,21nm,1.0s						
BRTR	Keskin Array B	73.81	307	P	P	22 22 20.7	+0.6
	comp=Z,9.3nm,0.9s,baz=101,slow=6.4,SNR=22						
	comp=Z,9.3nm,0.9s						
BRTR	Keskin Array B	73.81	307	P	P	22 22 20.0	-0.1
STEI	Steigen	73.81	338	*e*P	P	22 22 19.4	0.0
STEI				IAmb	IAmb	22 22 23.6	
	comp=Z,142nm,1.8s						
N30M	Aishikik Lake	73.89	29	P	P	22 22 21.2	+1.1
	baz=291						
HYT	Haines Junctio	73.93	30	P	P	22 22 20.9	+0.5
HYT	Haines Junctio	73.93	30	P	P	22 22 21.1	+0.6
	baz=291						
P30M	Million Dollar	74.44	31	P	P	22 22 24.0	+0.7
	baz=292						
N31M	Braeburn, Yuko	74.47	29	P	P	22 22 24.3	+0.9
	baz=292						
O30N	Mendenhall	74.60	30	P	P	22 22 25.0	+0.8
	baz=292						
MMAI	Mount Meron Ar	74.61	300	LR	LR	23 01 03.6	
	comp=Z,45nm,19.2s,baz=262,slow=40						
M31M	Drury Creek, Y	74.80	28	P	P	22 22 25.8	+0.5
	baz=293,SNR=6.1						
PLBC	Pleasant Camp	74.97	31	P	P	22 22 26.8	+0.6
	baz=292						
FARO	Faro, Yukon	75.23	28	P	P	22 22 28.1	+0.4
FARO				IAmb	IAmb	22 22 29.7	
	comp=Z,9.8nm,0.9s						
FARO	Faro, Yukon	75.23	28	P	P	22 22 28.2	+0.4
	baz=294,SNR=5.2						
SKAG	Skagway	75.46	31	P	P	22 22 29.5	+0.5
	baz=293						
CSS	Mathiatis	75.58	302	P	P	22 22 30.4	+0.1
MMPY	Sheldon Lake,	75.95	27	P	P	22 22 32.0	0.0
	baz=296						
BORA	Eskisehir	76.08	308	P	P	22 22 32.9	-0.2
BORA				IAmb	IAmb	22 22 34.0	
	comp=Z,12nm,0.8s						
P32M	Atlin	76.16	31	P	P	22 22 33.4	+0.2
	baz=294						
P33M	Teslin, Yukon	76.31	30	P	P	22 22 34.0	0.0
	baz=295						
DAG	Danmarks Havn	76.37	351	*i* P	P	22 22 31.2	-2.7
DAG				IAmb	IAmb	22 22 33.1	
	comp=Z,4.2nm,0.8s						
NSS	Namsos	76.52	335	*e*P	P	22 22 35.1	+0.1
BUR08	Bucovina Ar. S	76.88	316	P	P	22 22 37.0	-0.5
BURAR	Bucovina Array	76.88	316	P	P	22 22 37.4	-0.1
Q32M	Nakina River	77.10	31	P	P	22 22 38.9	+0.3
	baz=296						
MLR	Muntele Rosu	77.20	314	LR	LR	22 58 33.3	
	comp=Z,79nm,19.7s,baz=58,slow=37						
MLR	Muntele Rosu	77.20	314	P	P	22 22 39.0	-0.4
MLR				IAmb	IAmb	22 22 40.0	
	comp=Z,14nm,1.4s						
MLR	Muntele Rosu	77.20	314	P	P	22 22 39.0	-0.4
MLR				pmax	pmax		
	comp=Z,14nm,1.4s						
ELL	Elmali	77.57	305	P	P	22 22 41.4	-0.3
ELL	Elmali	77.57	305	P	P	22 22 41.4	-0.3
ELL				pmax	pmax		
	comp=Z,46nm,0.8s						
HFS	Hagfors	77.88	331	LR	LR	23 00 20.7	
	comp=Z,145nm,19.9s,baz=63,slow=38						
U33K	Whale Pass	77.91	34	P	P	22 22 42.9	0.0
	baz=296						
AKAS	Kas	77.99	304	P	P	22 22 43.4	-0.5
S34M	Telegraph Cree	78.10	31	P	P	22 22 44.1	+0.2
	baz=297						
NC405	NORSAR Array S	78.27	332	P	P	22 22 43.9	-1.0
DLBC	Dease Lake	78.38	31	P	P	22 22 46.4	+0.7
	baz=298						
NEEM	North Greenlan	78.38	358	*i* P	P	22 22 43.7	-1.9
NEEM				IAmb	IAmb	22 22 46.3	
	comp=Z,12nm,0.7s						
RES	Resolute Bay	78.39	9	P	P	22 22 44.1	-1.1
RES	Resolute Bay	78.39	9	P	P	22 22 44.1	-1.1
RES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NB2	NORSAR Subarra	78.52	332	P	P	22 22 45.4	-0.9
	comp=Z,1.6nm,0.7s,baz=61,slow=5.6						
NB2	NORSAR Subarra	78.52	332	P	P	22 22 45.4	-0.9
	slow=5.6						
NOA	NORSAR Array B	78.52	332	P	P	22 22 45.5	-0.9
	comp=Z,1.5nm,0.7s,baz=59,slow=5.4,SNR=11						
NOA				LR	LR	23 00 43.8	
	comp=Z,83nm,19.6s,baz=65,slow=38						
	comp=Z,1.5nm,0.7s						
DBG	Daneborg	78.62	350	*i* P	P	22 22 44.0	-2.6
DBG				IAmb	IAmb	22 22 46.0	
	comp=Z,4.4nm,0.7s						
DOMB	Dombas	78.90	334	*e*P	P	22 22 48.6	+0.3
DOMB				IAmb	IAmb	22 22 52.2	
	comp=Z,103nm,2.3s						
JMIC	Jan Mayen	78.93	345	LR	LR	23 02 23.3	
	comp=Z,31nm,18.8s,baz=36,slow=39						
KARP	Karpathos	80.08	304	P	P	22 22 55.2	-0.1
VTS	Vitosha	80.11	312	P	P	22 22 55.6	+0.1
VTS				IAmb	IAmb	22 22 58.0	
	comp=Z,8.6nm,0.9s						
VTS	Vitosha	80.11	312	P	P	22 22 55.6	+0.1
VTS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
VYHS	Vyhne	80.45	319	*e*P	P	22 22 57.3	+0.3
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VYHS	Vyhne	80.45	319	*e*P	P	22 22 57.3	+0.3
KULLO	Kullorsuaq	81.34	360	*i* P	P	22 22 58.6	-2.6
KULLO				IAmb	IAmb	22 23 01.1	
	comp=Z,8.8nm,0.8s						
VRAC	Vranov	81.41	320	LR	LR	23 03 35.8	
	comp=Z,60nm,18.1s,baz=46,slow=39						
SNART	Snartemo	81.67	331	*e*P	P	22 23 03.5	+0.3
IDI	Anoyia	81.89	305	P	P	22 23 04.5	-0.5
AGG	Agios Georgios	82.21	309	P	P	22 23 05.2	-1.4
AGG	Agios Georgios	82.21	309	P	P	22 23 05.2	-1.4
AGG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CLL	Collm	82.48	323	*e*P	P	22 23 08.0	+0.4
CLL				*e*PP	PP	22 26 17.0	+0.1
CLL	Collm	82.48	323	*e*P	P	22 23 08.0	+0.4
YKA	Yellowknife Ar	82.50	23	P	P	22 23 07.1	-0.4
	comp=Z,9.2nm,0.8s,baz=312,slow=4.7,SNR=136						
	comp=Z,9.2nm,0.8s						
YKA	Yellowknife Ar	82.50	23	*i* P	P	22 23 07.0	-0.5
YKA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
UPNV	Upernavik	83.15	359	*i* P	P	22 23 08.0	-2.7
UPNV				IAmb	IAmb	22 23 10.6	
	comp=Z,11nm,0.7s						
GERES	GERESS Array B	83.30	321	P	P	22 23 12.4	+0.3
	comp=Z,0.9nm,0.8s,baz=67,slow=4.5,SNR=9.1						
	comp=Z,0.9nm,0.8s						

KIBK	**Kibwezi**	**85.59**	**265**	P	**P**	**22 23 24.5**	**+0.2**
KIBK				IAmb	IAmb	22 23 26.9	
	comp=Z,8.6nm,0.9s						
LODK	**Lodwar**	**85.69**	**272**	P	**P**	**22 23 25.1**	**+0.3**
KMBO	**Kilima Mbogo**	**85.81**	**267**	P	**P**	**22 23 25.8**	**+0.2**
KMBO				IAmb	IAmb	22 23 28.3	
	comp=Z,8.7nm,0.9s						
KMBO	**Kilima Mbogo**	**85.81**	**267**	P	**P**	**22 23 25.8**	**+0.2**
KMBO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ICESG	**Greenland Ices**	**85.93**	**354**	*i* P	**P**	**22 23 23.5**	**-1.7**
ICESG				IAmb	IAmb	22 23 24.9	
	comp=Z,5.8nm,0.8s						
FUORN	**Ofenpass-Fuorn**	**86.43**	**320**	P	**P**	**22 23 28.0**	**-0.1**
FUORN				IAmb	IAmb	22 23 49.1	
	comp=Z,8.7nm,1.4s						
LLLB	**Lillooet**	**86.49**	**35**	P	**P**	**22 23 28.4**	**+0.4**
LLLB				IAmb	IAmb	22 23 29.1	
	comp=Z,7.1nm,0.7s						
DAVOX	**Davos/Dischmat**	**86.57**	**320**	LR	LR	23 03 11.8	
	comp=Z,70nm,18.6s,baz=66,slow=36						
BORG	**Borgarnes**	**86.83**	**345**	LR	LR	23 05 52.6	
	comp=Z,37nm,18.6s,baz=19,slow=38						
EKA	**Eskdalemuir Ar**	**88.01**	**332**	LR	LR	23 06 43.9	
	comp=Z,108nm,19.1s,baz=64,slow=38						
DY2G	**Dye2**	**89.07**	**355**	*i* P	**P**	**22 23 39.1**	**-1.2**
DY2G				IAmb	IAmb	22 23 40.0	
	comp=Z,6.1nm,0.6s						
B08A	**Colville Reser**	**89.16**	**36**	P	**P**	**22 23 41.3**	**+0.5**
NEW	**Newport**	**90.39**	**35**	P	**P**	**22 23 47.2**	**+0.7**
NEW				IAmb	IAmb	22 23 48.4	
	comp=Z,8.6nm,0.8s						
NEW	**Newport**	**90.39**	**35**	P	**P**	**22 23 47.2**	**+0.7**
NEW				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NEW	**Newport**	**90.39**	**35**	P	**P**	**22 23 47.2**	**+0.7**
	baz=308						
WALA	**Waterton Lakes**	**91.52**	**33**	P	**P**	**22 23 52.1**	**+0.2**
FRB	**Frobisher Bay**	**91.83**	**5**	LR	LR	23 09 17.8	
	comp=Z,36nm,18.9s,baz=20,slow=38						
FCC	**Fort Churchill**	**91.95**	**18**	P	**P**	**22 23 52.5**	**-0.9**
FCC	**Fort Churchill**	**91.95**	**18**	P	**P**	**22 23 52.5**	**-0.9**
FCC				pmax	pmax		
	comp=Z,12nm,0.8s						
FFC	**Flin Flon**	**92.65**	**24**	P	**P**	**22 23 56.1**	**-0.7**
FFC	**Flin Flon**	**92.65**	**24**	P	**P**	**22 23 56.1**	**-0.7**
FFC				pmax	pmax		
	comp=Z,15nm,1.0s						
MSO	**Missoula**	**92.96**	**35**	P	**P**	**22 23 59.1**	**+0.5**
	baz=311						
PLID	**Pearl Lake**	**92.98**	**37**	P	**P**	**22 24 00.1**	**+1.2**
PLID				IAmb	IAmb	22 25 37.1	
	comp=Z,11nm,1.6s						
HLID	**Hailey**	**94.83**	**38**	P	**P**	**22 24 07.4**	**+0.1**
	baz=310						
BOZ	**Bozeman (W)**	**94.98**	**35**	P	**P**	**22 24 08.4**	**+0.5**
	baz=312						
NVAR	**Mina Array Bea**	**95.73**	**43**	P	**P**	**22 24 12.2**	**+0.6**
	comp=Z,2.1nm,0.7s,baz=297,slow=5.2,SNR=16						
	comp=Z,2.1nm,0.7s						
RLMT	**Red Lodge**	**96.52**	**34**	P	**P**	**22 24 15.2**	**+0.1**
	baz=314						
R11A	**Troy Canyon, C**	**97.46**	**42**	P	**P**	**22 24 19.3**	**-0.1**
	baz=309						
PFO	**Pinyon Flats O**	**99.84**	**46**	LR	LR	23 03 12.6	
	comp=Z,33nm,19.9s,baz=229,slow=32						
CCM	**Cathedral Cave**	**110.48**	**28**	P	**PKiKP**	**22 29 17.0**	**-0.6**
	baz=328						
ZARC	**Zaragoza, Cauc**	**144.29**	**30**	*e*P	**PKPab**	**22 30 19.7**	**-0.1**
PTBC	**PUERTO BERRIO,**	**145.31**	**30**	*e*P	**PKPbc**	**22 30 22.3**	**-1.1**
PAMC	**Pamplona, Colo**	**145.36**	**27**	*e*P	**PKPbc**	**22 30 24.0**	**-0.2**
NORC	**Norcasia**	**145.98**	**31**	*e*P	**PKPdf**	**22 30 25.0**	**+0.1**
GUY2C	**Guyana, Caldas**	**146.03**	**32**	*e*P	**PKPdf**	**22 30 25.6**	**+0.1**
SPBC	**San Pablo de B**	**146.27**	**30**	*e*P	**PKPdf**	**22 30 23.7**	**-1.6**
RUSC	**La Rusia**	**146.50**	**28**	*e*P	**PKPdf**	**22 30 27.0**	**+0.7**
YOTC	**Yotoco, Valle**	**146.60**	**35**	*e*P	**PKPdf**	**22 30 26.5**	**+0.5**
CHIC	**Chingaza**	**147.33**	**30**	*e*P	**PKPbc**	**22 30 30.1**	**+0.2**
POPC	**Popayan, Colom**	**147.63**	**37**	*e*P	**PKPbc**	**22 30 30.1**	**-0.5**
VILC	**Villavicencio,**	**147.80**	**31**	*e*P	**PKPbc**	**22 30 31.3**	**+0.4**
OTAV	**Otavalo**	**148.46**	**42**	*e*P	**PKPbc**	**22 30 31.3**	**-1.7**

IDC 07 22:27:30.5±2.3**, 6°.82S×130°.11E, h0**^{km}**, mb3.4**/1**, mbtmp3.2**/3**, ML3.1**/2**, Error ellipse: s-maj=142.4km s-min=32.3km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.68**	**163**	Pn	Pn	22 30 45.5	-0.4
	0.1nm,0.3s,baz=346,slow=13,SNR=6.3						
WRA				Sn	Sn	22 33 06.5	-12
	0.4nm,0.3s,baz=298,slow=14,SNR=9.0						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**17.14**	**168**	P	Pn	22 31 32.0	+0.4
	0.1nm,0.3s,baz=347,slow=9.6,SNR=5.7						
ASAR				S	Sn	22 34 28.7	-14
	0.1nm,0.3s,baz=335,slow=13,SNR=2.4						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**68.13**	**327**	P	P	22 38 32.5	0.0
	0.1nm,0.3s,baz=118,slow=7.7,SNR=6.3						
	0.1nm,0.3s						

IDC 07 22:32:25.1±2.2**, 1°.70N×125°.98E, h0**^{km}**, mb3.2**/3**, mbtmp3.2**/3**, Error ellipse: s-maj=183.2km s-min=28.2km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.02**	**160**	P	P	22 37 30.8	-1.1
	0.5nm,0.5s,baz=338,slow=10,SNR=5.6						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**26.36**	**163**	P	P	22 38 03.9	+0.7
	0.3nm,0.5s,baz=347,slow=13,SNR=6.4						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**58.80**	**326**	P	P	22 42 25.4	+0.1
	0.1nm,0.4s,baz=111,slow=8.0,SNR=1.4						
	0.1nm,0.4s						

*SKHL **07** 22:41:33.3±0.2, 43°.70N×148°.00E, h53^{km}±2^{km}, mb4.5/3*
*JMA **07** 22:41:33.2±0.3, 44°N±1°×14°8E±°, h21^{km}, MV3.5/23, E OFF HOKKAIDO*
ISC 07 22:41:31.8±3.1**, 43°.7N**±0°.1×**148°.0E**±0°.1**, h34**^{km}±4^{km}**, n14, σ0^{s}.87**/20**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.90**	**284**	*i* P	**Pb**	**22 41 48.6**	**-0.4**
SHO				AMB	AMB	22 41 49.5	
	310nm,0.2s						
SHO				*i* S	**Sn**	**22 42 00.0**	**+0.2**
SHO				A	A	22 42 01.8	
	970nm,0.2s						
SHO				A	A	22 42 01.8	
	840nm,0.2s						
KUR	**Kuril'sk**	**1.58**	**356**	*e*P	**Pn**	**22 41 57.7**	**+0.3**
KUR				AMB	AMB	22 41 57.9	
	30nm,0.2s						
KUR				*i* S	**Sn**	**22 42 15.9**	**-0.7**
KUR				A	A	22 42 16.9	
	300nm,0.2s						
KUR				A	A	22 42 16.9	
	140nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.62**	**284**	*i* P	**Pn**	**22 41 58.3**	**+0.4**
YUK				AMB	AMB	22 42 00.1	
	170nm,0.2s						
YUK				*i* S	**Sn**	**22 42 17.2**	**-0.3**
YUK				A	A	22 42 19.8	
	250nm,0.2s						
YUK				A	A	22 42 19.8	
	430nm,0.2s						
NEM2	**Nemuro 2**	**1.69**	**261**	*e*P	**Pn**	**22 41 59.2**	**+0.2**
NEM2				*e*S	**Sn**	**22 42 18.4**	**-1.1**
NMR	**Nemuro--Hokkai**	**1.70**	**261**	*i* P	**Pn**	**22 41 59.2**	**+0.1**
NMR				*i* S	**Sn**	**22 42 18.6**	**-1.1**
JRA	**Rausu**	**2.13**	**278**	*e*P	**Pn**	**22 42 05.7**	**+0.8**
JKHN	**Kushirohamanak**	**2.17**	**256**	*e*P	**Pn**	**22 42 06.2**	**+0.7**
JNSB	**Nemuroshibetsu**	**2.20**	**274**	*e*P	**Pn**	**22 42 07.0**	**+1.1**
AKK	**Akkeshi**	**2.42**	**256**	*i* P	**Pn**	**22 42 09.9**	**+1.0**
AKK				*i* S	**Sn**	**22 42 36.6**	**-0.7**
JAK	**Akkeshi**	**2.52**	**256**	*e*P	**Pn**	**22 42 10.8**	**+0.4**
JTKR	**Abashiri--Toko**	**3.00**	**277**	*e*P	**Pn**	**22 42 18.3**	**+1.4**
JAR	**Ashorobuto**	**3.13**	**265**	*e*P	**Pn**	**22 42 19.8**	**+1.1**
JOB	**Onbets**	**3.16**	**258**	*e*S	**Sn**	**22 42 54.6**	**-1.0**
JNBK	**Urakawa-nobuka**	**4.11**	**252**	*e*P	**Pn**	**22 42 33.1**	**+0.9**

*ISK **07** 23:02:25.8, 39°.51N×26°.13E, h12^{km}, ML2.5/18*
*THE **07** 23:02:26.1, 39°.50N×26°.16E, h6^{km}±1^{km}, ML2.2/5, Error ellipse: s-maj=1.3km s-min=0.4km az=191.0*
*ATH **07** 23:02:26.6, 39°.48N×26°.16E, h11^{km}±3^{km}, ML2.1/4, Error ellipse: s-maj=3.8km s-min=0.9km az=220.0*
*DDA **07** 23:02:26.3±0.0, 39°.51N×26°.20E, h7^{km}±1^{km}, ML2.1*
ISC 07 23:02:26.0±0.8**, 39°.49N**±0°.02×**26°.16E**±0°.02**, h13**^{km}±5^{km}**, n55, σ0^{s}.47**/88**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.02**	**295**	P	**Pg**	**23 02 28.3**	**-0.1**
KOCA				S	**Sg**	**23 02 29.5**	**-0.5**
PRK	**Paraskevi**	**0.26**	**161**	P	**Pg**	**23 02 31.7**	**+0.3**
PRK				S	**Sg**	**23 02 35.2**	**+0.1**
	1µm,0.3s						
PRK	**Paraskevi**	**0.26**	**161**	P	**Pg**	**23 02 31.8**	**+0.3**
PRK				S	**Sg**	**23 02 35.4**	**+0.3**
PRK				AML	AML	23 02 36.1	
	comp=N,2694µm,0.2s						
PRK				AML	AML	23 02 38.5	
	comp=E,1547µm,0.5s						
EZN	**Ezine**	**0.35**	**20**	P	**Pg**	**23 02 33.1**	**-0.1**
EZN				S	**Sg**	**23 02 37.8**	**-0.2**
	comp=E,835nm,0.2s						
EZN	**Ezine**	**0.35**	**20**	Pg	**Pg**	**23 02 33.2**	**0.0**
EZN				Sg	**Sg**	**23 02 38.3**	**+0.3**
BOZC	**Bozcaada**	**0.36**	**346**	Pg	**Pg**	**23 02 33.2**	**-0.1**
BOZC				Sg	**Sg**	**23 02 38.2**	**+0.1**
BOZC	**Bozcaada**	**0.36**	**346**	P	**Pg**	**23 02 33.2**	**-0.1**
BOZC				*i* AML	AML	23 02 38.0	
	comp=E,205nm,0.4s						
BOZC				*i* AML	AML	23 02 38.0	
	comp=E,154nm,0.6s						
BOZC				S	**Sg**	**23 02 38.5**	**+0.3**
SIGR	**SIGRI**	**0.37**	**221**	P	**Pg**	**23 02 33.5**	**+0.1**
SIGR				S	**Sg**	**23 02 38.9**	**+0.6**
	comp=E,375nm,0.4s						
SIGR	**SIGRI**	**0.37**	**221**	Pg	**Pg**	**23 02 33.5**	**+0.1**
SIGR				Sg	**Sg**	**23 02 39.2**	**+0.8**
SIGR	**SIGRI**	**0.37**	**221**	P	**Pg**	**23 02 33.6**	**+0.2**
SIGR				S	**Sg**	**23 02 39.0**	**+0.6**
SIGR				AML	AML	23 02 39.7	
	comp=E,494µm,0.2s						
SIGR				AML	AML	23 02 40.3	
	comp=N,948µm,0.4s						
BAYC	**CANAKKALE_Bayr**	**0.39**	**50**	P	**Pg**	**23 02 33.4**	**-0.3**
BAYC				S	**Sg**	**23 02 38.7**	**-0.3**
BAYC				*i* AML	AML	23 02 39.0	
	comp=N,218nm,0.2s						
BAYC				*i* AML	AML	23 02 39.0	
	comp=N,320nm,0.4s						
AYVA	**Ayvalik**	**0.45**	**114**	P	**Pg**	**23 02 35.5**	**+0.7**
ECEA	**Canakkale, Ece**	**0.55**	**1**	P	**Pg**	**23 02 37.0**	**+0.2**
ECEA				S	**Sb**	**23 02 44.6**	**-0.7**
ECEA				*i* AML	AML	23 02 45.0	
	comp=N,219nm,0.5s						
ECEA				*i* AML	AML	23 02 45.0	
	comp=N,224nm,0.2s						
COMU	**Canakkale**	**0.65**	**21**	Pg	**Pg**	**23 02 38.6**	**-0.1**
COMU				Sg	**Sb**	**23 02 48.3**	**+0.1**
BUHA	**Balikesir, Bur**	**0.71**	**89**	P	**Pg**	**23 02 39.4**	**-0.3**
BUHA				S	**Sg**	**23 02 48.7**	**-0.3**
BUHA				*i* AML	AML	23 02 53.0	
	comp=N,66nm,0.4s						
BUHA				*i* AML	AML	23 02 54.0	
	comp=N,49nm,0.2s						
DKL	**Dikili**	**0.71**	**126**	Pg	**Pb**	**23 02 40.7**	**+0.5**
GOKA	**anakkale-Gk**	**0.72**	**344**	P	**Pb**	**23 02 40.7**	**+0.2**
GOKA				S	**Sb**	**23 02 50.1**	**-0.2**
GADA	**Gvkgeada**	**0.73**	**344**	Pg	**Pg**	**23 02 39.8**	**-0.3**
GADA				Sg	**Sb**	**23 02 49.9**	**-0.5**
KARB	**zmir-Karabur**	**0.85**	**167**	P	**Pg**	**23 02 42.7**	**+0.3**
KARB				S	**Sg**	**23 02 53.4**	**-0.2**
KARB				*i* AML	AML	23 02 55.0	
	comp=N,60nm,0.6s						
KARB				*i* AML	AML	23 02 56.0	
	comp=N,87nm,0.2s						
CANM	**Can-anakkale**	**0.86**	**53**	Pg	**Pb**	**23 02 43.3**	**+0.5**
LIA	**Limnos Island**	**0.86**	**298**	P	**Pg**	**23 02 42.6**	**0.0**
LIA				S	**Sb**	**23 02 54.5**	**+0.3**
	comp=N,130nm,0.2s						
LIA	**Limnos Island**	**0.86**	**298**	P	**Pg**	**23 02 42.8**	**+0.2**
LIA				S	**Sb**	**23 02 54.7**	**+0.5**
ZEDA	**zmir-Bergama**	**0.88**	**126**	P	**Pb**	**23 02 43.7**	**+0.5**
ZEDA				S	**Sn**	**23 02 56.7**	**0.0**
ZEDA				*i* AML	AML	23 02 57.0	
	comp=N,63nm,0.6s						
ZEDA				*i* AML	AML	23 02 57.0	
	comp=N,54nm,0.4s						
GELI	**Tayfur-Gelibol**	**0.94**	**15**	Pg	**Pg**	**23 02 43.9**	**-0.2**
LPK	**Lapseki**	**0.99**	**27**	Pg	**Pb**	**23 02 45.3**	**+0.3**
PSRA	**Psara**	**1.06**	**206**	P	**Pb**	**23 02 45.9**	**-0.2**
SMTH	**Samothraki Isl**	**1.09**	**334**	P	**Pb**	**23 02 46.7**	**-0.1**
SMTH	**Samothraki Isl**	**1.09**	**334**	P	**Pb**	**23 02 46.6**	**-0.1**
SMTH				S	**Sg**	**23 03 01.5**	**+0.2**
SMTH				AML	AML	23 03 03.8	
	comp=N,122µm,0.2s						
SMTH				AML	AML	23 03 04.1	
	comp=E,124µm,0.3s						
CHOS	**Chios island**	**1.11**	**184**	P	**Pb**	**23 02 46.4**	**-0.6**
CHOS	**Chios island**	**1.11**	**184**	Pn	**Pb**	**23 02 47.5**	**+0.5**
CHOS	**Chios island**	**1.11**	**184**	P	**Pb**	**23 02 46.6**	**-0.4**
BALY	**Balya**	**1.15**	**77**	P	**Pb**	**23 02 48.0**	**+0.2**
BALY				S	**Sb**	**23 03 02.6**	**0.0**
BALY				*i* AML	AML	23 03 04.0	
	comp=E,48nm,0.3s						
BALY				*i* AML	AML	23 03 05.0	
	comp=E,82nm,0.2s						
URLA	**Izmir**	**1.18**	**163**	Pn	**Pn**	**23 02 47.6**	**-0.6**
URLA	**Izmir**	**1.18**	**163**	P	**Pn**	**23 02 47.4**	**-0.8**
URLA				S	**Sb**	**23 03 03.0**	**-0.5**
URLA				*i* AML	AML	23 03 06.0	
	comp=E,36nm,0.7s						
URLA				*i* AML	AML	23 03 06.0	
	comp=E,40nm,1.0s						
ERIK	**Erikli-Kesan**	**1.21**	**13**	Pn	**Pn**	**23 02 48.4**	**-0.2**
STEP	**BALIKESIR_Sava**	**1.21**	**95**	P	**Pn**	**23 02 48.6**	**-0.1**
STEP				S	**Sg**	**23 03 05.2**	**+0.2**
STEP				*i* AML	AML	23 03 07.0	
	comp=E,19nm,0.4s						
STEP				*i* AML	AML	23 03 10.0	
	comp=E,28nm,0.7s						
ENEZ	**Enez**	**1.24**	**360**	Pn	**Pn**	**23 02 49.0**	**-0.1**
KRBG	**Karabiga-Canak**	**1.25**	**44**	Pn	**Pn**	**23 02 49.2**	**0.0**
ZEYE	**Izmir, Urla-Ze**	**1.28**	**168**	P	**Pn**	**23 02 48.9**	**-0.7**
ZEYE				S	**Sb**	**23 03 06.5**	**+0.3**
ZEYE				*i* AML	AML	23 03 09.0	
	comp=E,51nm,1.3s						
ZEYE				*i* AML	AML	23 03 13.0	
	comp=E,45nm,0.5s						
GONE	**Gonen-Balikesi**	**1.30**	**64**	Pn	**Pn**	**23 02 50.3**	**+0.5**
BLCB	**Balcova**	**1.30**	**148**	P	**Pn**	**23 02 49.6**	**-0.2**
BLCB	**Balcova**	**1.30**	**148**	Pn	**Pb**	**23 02 50.8**	**+0.5**
KNL	**Balıkesir**	**1.30**	**53**	P	**Pn**	**23 02 49.8**	**-0.1**
KNL				S	**Sn**	**23 03 07.6**	**+0.4**
KNL				*i* AML	AML	23 03 10.0	
	comp=E,90nm,0.8s						
KNL				*i* AML	AML	23 03 13.0	
	comp=E,71nm,0.7s						
BALB	**Balikesir**	**1.33**	**83**	Pn	**Pb**	**23 02 51.1**	**+0.2**
BKES	**Balkesir-Mer**	**1.38**	**79**	P	**Pb**	**23 02 52.1**	**+0.3**
BKES				S	**Sg**	**23 03 11.8**	**+1.2**
BKES				*i* AML	AML	23 03 12.0	
	comp=E,34nm,0.4s						
KESN	**Edirne-Kesan**	**1.39**	**16**	P	**Pn**	**23 02 51.4**	**0.0**
KESN				S	**Sb**	**23 03 09.7**	**-0.2**
KESN				*i* AML	AML	23 03 12.0	
	comp=E,61nm,0.4s						
KESN				*i* AML	AML	23 03 12.0	
	comp=E,77nm,0.3s						
ALN	**Alexandroupoli**	**1.41**	**356**	P	**Pn**	**23 02 51.1**	**-0.2**
ALN				S	**Sb**	**23 03 10.2**	**+0.3**
	comp=E,58nm,0.3s						
ALN	**Alexandroupoli**	**1.41**	**356**	Pn	**Pn**	**23 02 51.7**	**+0.4**
ALN	**Alexandroupoli**	**1.41**	**356**	P	**Pn**	**23 02 51.4**	**0.0**
ALN				S	**Sb**	**23 03 10.3**	**+0.3**
ALN				AML	AML	23 03 12.0	
	comp=N,105µm,0.3s						
ALN				AML	AML	23 03 12.9	
	comp=E,117µm,0.3s						
RKY	**Sarkoy-Tekirda**	**1.42**	**33**	Pn	**Pn**	**23 02 51.8**	**+0.2**
EDC	**Edincik**	**1.56**	**56**	Pn	**Pn**	**23 02 53.7**	**+0.3**
UKOP	**Uzunkopru-Edir**	**1.67**	**12**	Pn	**Pn**	**23 02 55.6**	**+0.6**
BAND	**Balkesir-Ban**	**1.72**	**59**	P	**Pn**	**23 02 56.1**	**+0.5**
BAND				S	**Sn**	**23 03 15.9**	**-1.6**
BAND				*i* AML	AML	23 03 21.0	
	comp=E,17nm,0.3s						
BAND				*i* AML	AML	23 03 23.0	
	comp=E,14nm,0.2s						
RDO	**Rodhopi**	**1.72**	**344**	P	**Pn**	**23 02 55.8**	**+0.2**
RDO				S	**Sn**	**23 03 18.2**	**+0.8**
DURS	**Dursunbey**	**1.79**	**86**	P	**Pn**	**23 02 56.7**	**0.0**
DURS				S	**Sn**	**23 03 17.4**	**-1.9**
DURS				*i* AML	AML	23 03 27.0	
	comp=E,20nm,0.5s						
DURS				*i* AML	AML	23 03 27.0	
	comp=E,18nm,0.4s						

IDC 07 23:30:21.4±2.1**, 0°.20N×126°.05E, h0**^{km}**, mb3.2**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=169.3km s-min=28.7km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.60**	**158**	P	P	23 35 12.6	-0.5
	0.5nm,0.4s,baz=336,slow=11,SNR=8.1						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**24.92**	**163**	P	P	23 35 46.8	+0.4
	0.4nm,0.5s,baz=350,slow=15,SNR=6.1						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**60.08**	**327**	P	P	23 40 30.3	-0.1
	0.2nm,0.7s,baz=131,slow=8.4,SNR=2.0						
	0.2nm,0.7s						

*SNET **07** 23:34:05.6±0.8, 13°.60N×90°.47W, h72^{km}±10^{km}, ML3.0*
*GCG **07** 23:34:07.4±0.6, 13°.52N×90°.69W, h19^{km}±9^{km}, MD3.5*
ISC 07 23:34:05.9±3.1**, 13°.4N**±0°.2×**90°.48W**±0°.06**, h34**^{km}±4^{km}**, n12, σ0^{s}.61**/20**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**0.84**	**54**	*e*P	**Pn**	**23 34 20.8**	**-0.8**
NUBE				*e*S	**Sn**	**23 34 33.1**	**+0.3**
LOAL	**Lomas de Alarc**	**0.90**	**49**	*e*S	**Sn**	**23 34 34.8**	**+0.6**
SLOZ	**Alcaldia de Sa**	**0.92**	**47**	*e*P	**Pn**	**23 34 22.1**	**-0.4**
SLOZ				*e*S	**Sn**	**23 34 34.6**	**+0.1**
CEVE	**Cerro Verde**	**0.94**	**63**	*e*P	**Pn**	**23 34 23.2**	**+0.4**
CEVE				*e*S	**Sb**	**23 34 36.9**	**+0.7**
CEVE				IAML		23 34 38.6	
	comp=Z,313nm,0.4s						
SBLS	**San Blas**	**0.94**	**62**	*e*P	**Pn**	**23 34 23.4**	**+0.4**
RTR	**El Retiro**	**0.95**	**59**	*e*P	**Pn**	**23 34 23.7**	**+0.7**
PCG	**Pacaya**	**0.99**	**353**	*e*P	**Pn**	**23 34 23.8**	**+0.1**
PCG				*e*S	**Sn**	**23 34 37.3**	**+0.6**
JAYA	**Jayaque - finc**	**1.03**	**76**	*e*P	**Pn**	**23 34 24.6**	**+0.4**
JAYA				*e*S	**Sb**	**23 34 38.6**	**-0.2**
JAYA				IAML		23 34 39.5	
	comp=Z,295nm,0.2s						
FUG	**Fuego 3**	**1.10**	**341**	*e*P	**Pn**	**23 34 24.8**	**-0.3**
FUG				*e*S	**Sn**	**23 34 38.5**	**-0.7**
PMON	**Piamonte**	**1.18**	**75**	*e*P	**Pn**	**23 34 26.4**	**+0.3**
PMON				*e*S	**Sb**	**23 34 42.4**	**-0.4**
PMON				*e*S		23 34 42.5	
STG3	**Santiaguito 3,**	**1.68**	**321**	*e*P	**Pn**	**23 34 33.6**	**+0.5**
STG3				*e*S	**Sn**	**23 34 53.3**	**-0.2**
P5NO	**Presa 5 de nov**	**1.77**	**71**	*e*P	**Pn**	**23 34 32.9**	**-1.3**

*NEIC **07** 23:38:22.9, 15°.01S×168°.13E, h9^{km}*
*NEIC **07** 23:38:22.5±1.6, 15°.02S±0°.07×168°.16E±0°.09, h8^{km}±1^{km}, mb5.4/130, Ms_20 5.1/171, Mwb5.5/21, Mww5.6/18, Error ellipse: s-maj=14.8km s-min=12.4km az=79.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.84; $M_{\theta\theta}$-0.63; $M_{\phi\phi}$-1.21; $M_{r\theta}$1.24; $M_{\theta\phi}$0.13; $M_{\phi r}$-1.57; Fault plane solution: $M_0$2.58000×10^{17} NP1: ϕ_s147.05000°, δ71.51000°, λ84.06000°. NP2: ϕ_s345.22000°, δ19.39000°, λ107.21000°. Principal axes: T 2.8578, Plg63.0000°, Azm48.0000°; N -0.6992, Plg6.0000°, Azm149.0000°; P -2.1585, Plg26.0000°, Azm242.0000°;*
*BJI **07** 23:38:22.0±0.0, 15°.00S×168°.10E, h10^{km}, mb5.1/69, mB5.6/69, Ms5.0/61, Ms7 4.7/60*
*NEIC **07** 23:38:24, 15°.01S×168°.04E, h16^{km}*
*NEIC **07** 23:38:24, 14°.91S×168°.04E, h16^{km}, Moment Tensor Solution. Duration: 3^{s}.1 Moment tensor: Scale 10^{17}Nm; M_{rr}2.84; $M_{\theta\theta}$-0.27; $M_{\phi\phi}$-2.57; $M_{r\theta}$0.53; $M_{\theta\phi}$0.59; $M_{\phi r}$-0.10; Fault plane solution: $M_0$2.83000×10^{17} NP1: ϕ_s157.26000°, δ47.97000°, λ77.70000°. NP2: ϕ_s355.30000°, δ43.47000°, λ103.30000°. Principal axes: T 2.9261, Plg81.0000°, Azm360.0000°; N -0.2021, Plg9.0000°, Azm166.0000°; P -2.7240, Plg2.0000°, Azm256.0000°;*
*MOS **07** 23:38:25.3±1.0, 14°.96S×167°.98E, h33^{km}, mb5.4/56, MS4.9/13 Error ellipse: s-maj=8.4km s-min=7.3km az=130.5*
*NOU **07** 23:38:26.1, 15°.14S×167°.81E, h4^{km}, ML5.5/106, Vanuatu Islands*
*IDC **07** 23:38:27.0±2.7, 14°.99S×168°.09E, h34^{km}±19^{km}, mb4.7/24, mbtmp4.9/26, ML5.2/2, MS4.7/47, Error ellipse: s-maj=15.2km s-min=11.8km az=81.0*
*GCMT **07** 23:38:26.5±0.1, 14°.94S±0°.01×168°.07E, h12^{km}, MW5.5/161, Moment Tensor Solution. s142,c227; s161,c315; Duration: 1^{s}.4 Moment tensor: Scale 10^{17} Nm; M_{rr}2.21±.02; $M_{\theta\theta}$-0.03±.02; $M_{\phi\phi}$-2.18±.02; $M_{r\theta}$0.69±.06; $M_{\theta\phi}$0.69±.02; $M_{\phi r}$0.10±.06; Best double couple: $M_0$2.40200×10^{17} NP1: ϕ_s147.00000°, δ49.00000°, λ67.00000°. NP2: ϕ_s0.00000°, δ46.00000°, λ114.00000°. Principal axes: T 2.4220, Plg73.0000°, Azm347.0000°; N -0.0390, Plg17.0000°, Azm163.0000°; P -2.3820, Plg1.0000°, Azm253.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 07 23:38:23.9±0.5**, 15°.01S**±0°.04×**168°.15E**±0°.04**, h17**^{km}±2^{km}**, n737, σ1^{s}.53**/703**, mb5.3**/160**, MS5.0**/163**, 20C-16D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.70**	**179**	P	**Pn**	**23 39 06.8**	**+0.2**
RTV	**Rentapao**	**2.78**	**175**	P	**Pn**	**23 39 08.5**	**+0.8**
LIFNC	**LIFOU**	**5.80**	**188**	Pn	**Pn**	**23 39 47.2**	**-2.0**
KOUNC	**Koumac, New Ca**	**6.62**	**213**	Pn	**Pn**	**23 40 00.4**	**-0.2**
KOUNC	**Koumac, New Ca**	**6.62**	**213**	P	**Pn**	**23 40 01.7**	**+1.1**
YATNC	**Mamie plateau,**	**7.11**	**189**	P	**Pn**	**23 40 06.7**	**-0.6**
DZM	**Mont Dzumac**	**7.21**	**193**	*e*Pn	**Pn**	**23 40 06.7**	**-1.9**
	444nm,0.7s						
DZM				*e*Sn	**Sn**	**23 41 25.4**	**-4.8**
	491nm,0.9s						
DZM				*e*LR	LR	23 41 42.2	
	comp=Z,13µm,28.2s						
DZM	**Mont Dzumac**	**7.21**	**193**	Pn	**Pn**	**23 40 09.3**	**+0.7**
	39nm,0.3s,baz=48,slow=18,SNR=171						
DZM				Sn	**Sn**	**23 41 29.7**	**-0.5**
	22nm,0.3s,baz=310,slow=22,SNR=6.7						
	302nm,0.5s						
DZM	**Mont Dzumac**	**7.21**	**193**	Pn	**Pn**	**23 40 07.8**	**-0.8**
DZM	**Mont Dzumac**	**7.21**	**193**	P	**Pn**	**23 40 08.9**	**+0.3**
NOUC	**Port Laguerre**	**7.27**	**194**	P	**Pn**	**23 40 10.9**	**+1.5**
ONTNC	**Ouen Toro**	**7.43**	**192**	Pn	**Pn**	**23 40 11.3**	**-0.4**
ONTNC	**Ouen Toro**	**7.43**	**192**	P	**Pn**	**23 40 12.4**	**+0.7**
OUENC	**Ouen Island, N**	**7.47**	**189**	Pn	**Pn**	**23 40 12.5**	**+0.3**
OUENC	**Ouen Island, N**	**7.47**	**189**	P	**Pn**	**23 40 13.5**	**+1.3**
PINNC	**Pines Island,**	**7.59**	**185**	Pn	**Pn**	**23 40 13.5**	**-0.3**
PINNC	**Pines Island,**	**7.59**	**185**	P	**Pn**	**23 40 14.5**	**+0.7**
YSA	**Yasawairara**	**9.23**	**102**	P	Pn	23 40 45.2	+8.9
HNR	**Honiara**	**9.75**	**304**	Pn	**Pn**	**23 40 44.8**	**+1.4**
	1µm,0.3s,baz=205,slow=6.0,SNR=22						
HNR				Sn	**Sn**	**23 42 31.4**	**-1.2**
	491nm,0.3s,baz=173,slow=19,SNR=1.7						
HNR				LR	LR	23 44 11.3	
	comp=Z,85µm,21.8s,baz=133,slow=36						
HNR	**Honiara**	**9.75**	**304**	Pn	**Pn**	**23 40 43.0**	**-0.5**
HNR	**Honiara**	**9.75**	**304**	P	**Pn**	**23 40 44.1**	**+0.7**
MSVF	**Nonsavu**	**9.88**	**107**	Pn	Pn	23 40 52.4	+7.1
	0.9nm,0.3s,baz=248,slow=7.4,SNR=24						
MSVF				LR	LR	23 43 52.0	
	comp=Z,20µm,18.5s,baz=300,slow=33						

MSVF	**Nonsavu**	**9.88**	**107**	Pn	Pn	23 40 52.0	+6.6
MSVF	**Nonsavu**	**9.88**	**107**	P	Pn	23 40 54.9	+10
MSVF	**Nonsavu**	**9.88**	**107**	P	Pn	23 40 52.0	+6.7
TAVE	**Taveuni**	**11.62**	**100**	P	Pn	23 41 18.6	+10
	296nm,2.7s						
FUNA	**Funafuti**	**12.59**	**60**	Pn	**Pn**	**23 41 22.2**	**-0.1**
FUTU	**Fugatoga**	**13.30**	**89**	P	**P**	**23 41 40.3**	**-1.5**
	110nm,2.6s						
GD1S	**Gladstone Soft**	**18.25**	**239**	P	**P**	**23 42 38.6**	**+2.0**
AUWSH	**Wavell State H**	**18.70**	**226**	P	**Pn**	**23 42 43.9**	**+2.0**
EIDS	**Eidsvold**	**19.03**	**235**	P	**Pn**	**23 42 46.4**	**+0.4**
	baz=19,SNR=46						
EIDS	**Eidsvold**	**19.03**	**235**		**Pn**	**23 42 46.7**	**+0.7**
EIDS				IAmb	IAmb	23 42 49.3	
	comp=Z,182nm,0.8s						
EIDS	**Eidsvold**	**19.03**	**235**	P	**Pn**	**23 42 47.9**	**+1.9**
KRVT	**Keravat (AS076**	**19.11**	**302**	P	**Pn**	**23 42 48.1**	**+1.1**
	comp=Z,8.8nm,0.3s,baz=52,slow=1.3,SNR=9.5						
KRVT				LR	LR	23 50 04.8	
	comp=Z,3µm,21.8s,baz=264,slow=37						
	comp=Z,119nm,0.8s						
TV1H	**Townsville Har**	**20.84**	**255**	P	Pn	23 43 07.3	-0.1
	comp=Z,152nm,0.8s						
PMG	**Port Moresby**	**21.25**	**283**	P	**P**	**23 43 11.0**	**+1.5**
	comp=Z,134nm,1.1s,baz=82,slow=5.6,SNR=19						
PMG				LR	LR	23 50 27.5	
	comp=Z,7µm,19.1s,baz=55,slow=34						
	comp=Z,134nm,1.1s						
PMG	**Port Moresby**	**21.25**	**283**	P	**P**	**23 43 09.4**	**-0.1**
PMG				IAmb	IAmb	23 43 18.4	
	comp=Z,145nm,1.0s						
PMG	**Port Moresby**	**21.25**	**283**	IAMs_20	IAMs_20	23 50 16.0	
	comp=Z,7µm,19.0s						
PMG	**Port Moresby**	**21.25**	**283**	P	**P**	**23 43 10.3**	**+0.8**
PMG	**Port Moresby**	**21.25**	**283**	P	**P**	**23 43 09.4**	**-0.1**
PMG				pmax	pmax		
	comp=Z,145nm,1.0s						
PMG				MLR	MLR		
	comp=Z,7µm,19.0s						
RMQ	**Roma**	**21.40**	**235**	P	**P**	**23 43 12.5**	**+1.6**
	baz=21,SNR=30						
RMQ	**Roma**	**21.40**	**235**	P	**P**	**23 43 13.0**	**+2.0**
CTA	**Charters Tower**	**21.47**	**253**	P	**P**	**23 43 12.9**	**+1.1**
	comp=Z,62nm,0.8s,baz=83,slow=11,SNR=42						
CTA				LR	LR	23 50 22.1	
	comp=Z,8µm,20.7s,baz=62,slow=33						
	comp=Z,62nm,0.8s						
CTA	**Charters Tower**	**21.47**	**253**	P	**P**	**23 43 13.0**	**+1.1**
CTAO	**Charters Tower**	**21.47**	**253**	P	**P**	**23 43 12.0**	**+0.2**
CTAO	**Charters Tower**	**21.47**	**253**	IAMs_20	IAMs_20	23 50 09.4	
	comp=Z,7µm,20.0s						
CTAO	**Charters Tower**	**21.47**	**253**	P	**P**	**23 43 12.0**	**+0.2**
CTAO	**Charters Tower**	**21.47**	**253**	P	**P**	**23 43 12.0**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,73nm,0.9s						
CTAO				MLR	MLR		
	comp=Z,8µm,20.0s						
ARMA	**Armidale**	**21.58**	**222**	P	**P**	**23 43 14.0**	**+1.0**
	baz=22,SNR=21						
ARMA	**Armidale**	**21.58**	**222**	P	**P**	**23 43 13.0**	**+0.1**
ARMA	**Armidale**	**21.58**	**222**	P	**P**	**23 43 14.0**	**+1.0**
AUPHS	**Peel High Scho**	**22.50**	**222**	P	**P**	**23 43 24.5**	**+1.7**
MTSU	**Mount Surprise**	**23.05**	**259**	P	**P**	**23 43 29.3**	**+0.7**
	baz=23,SNR=87						
MTSU	**Mount Surprise**	**23.05**	**259**	P	**P**	**23 43 29.2**	**+0.5**
NTLH	**Newcastle Hard**	**23.25**	**217**	P	**P**	**23 43 33.2**	**+2.7**
	comp=Z,209nm,0.8s						
AULRC	**Lightning Ridg**	**23.49**	**229**	P	**P**	**23 43 34.8**	**+1.8**
	comp=Z,171nm,1.9s						
MGCD	**Mangrove Creek**	**23.82**	**217**	P	**P**	**23 43 37.7**	**+1.6**
	baz=24,SNR=13						
MGCD	**Mangrove Creek**	**23.82**	**217**	P	**P**	**23 43 37.7**	**+1.6**
COEN	**Coen**	**24.20**	**269**	P	**P**	**23 43 40.2**	**+0.3**
	baz=24,SNR=15						
COEN	**Coen**	**24.20**	**269**	P	**P**	**23 43 39.8**	**-0.1**
COEN	**Coen**	**24.20**	**269**	P	**P**	**23 43 41.8**	**+1.9**
	comp=Z,78nm,1.3s						
SYDH	**Sydney Hard Ro**	**24.42**	**217**	P	**P**	**23 43 43.5**	**+1.8**
	comp=Z,143nm,0.8s						
URZ	**Urewera**	**24.48**	**163**	P	**P**	**23 43 44.3**	**+2.2**
	comp=Z,45nm,0.7s,baz=105,slow=3.1,SNR=11						
	comp=Z,45nm,0.7s						
AUDCS	**Dubbo College**	**24.70**	**223**	P	**P**	**23 43 46.2**	**+1.9**
RTZ	**Ruatahuna**	**24.77**	**163**	P	**P**	**23 43 45.0**	**+0.1**
RTZ				IAmb	IAmb	23 43 51.0	
	comp=Z,98nm,1.2s						
WOLH	**Wollongong Har**	**24.81**	**216**	P	**P**	**23 43 47.6**	**+2.4**
	comp=Z,131nm,0.9s						
QLP	**Quilpie**	**25.10**	**239**	P	**P**	**23 43 48.6**	**+0.7**
	baz=25,SNR=165						
QLP	**Quilpie**	**25.10**	**239**	P	**P**	**23 43 49.5**	**+1.6**
BKZ	**Black Stump Fm**	**25.16**	**165**	P	**P**	**23 43 49.0**	**+0.7**
BKZ				IAmb	IAmb	23 44 02.9	
	comp=Z,57nm,0.9s						
CMSA	**Cobar Meteorol**	**26.30**	**227**	P	**P**	**23 43 59.4**	**+0.6**
	baz=26,SNR=69						
CMSA	**Cobar Meteorol**	**26.30**	**227**	P	**P**	**23 44 00.0**	**+1.2**
CNB	**Canberra Magne**	**26.33**	**216**	P	**P**	**23 44 00.6**	**+1.5**
MRZ	**Mangatainoka R**	**26.36**	**167**	P	**P**	**23 43 58.0**	**-1.2**
MRZ				IAmb	IAmb	23 44 24.0	
	comp=Z,104nm,1.3s						
CAN	**Canberra**	**26.54**	**217**	P	**P**	**23 44 00.5**	**-0.5**
CAN	**Canberra**	**26.54**	**217**	P	**P**	**23 44 00.5**	**-0.5**
CAN				pmax	pmax		
	comp=Z,33nm,1.0s						
CAN				MLR	MLR		
	comp=Z,3µm,20.0s						
BHW	**Baring Head**	**26.94**	**169**	IAMs_20	IAMs_20	23 53 45.6	
	comp=Z,4µm,19.0s						
MILA	**Mila**	**27.70**	**214**	P	**P**	**23 44 12.6**	**+1.2**
	baz=28,SNR=4.0						
QIS	**Mount Isa**	**27.71**	**254**	P	**P**	**23 44 11.6**	**-0.1**
	baz=28,SNR=26						
QIS	**Mount Isa**	**27.71**	**254**	P	**P**	**23 44 11.8**	**+0.1**
LTZ	**Lake Taylor**	**27.90**	**174**	P	**P**	**23 44 12.6**	**-0.5**
LTZ				IAmb	IAmb	23 44 13.8	
	comp=Z,102nm,1.7s						
INKA	**Innaminka**	**28.41**	**239**	P	**P**	**23 44 19.1**	**+1.3**
RPZ	**Rata Peaks**	**28.71**	**176**	P	**P**	**23 44 21.8**	**+1.5**
	comp=Z,20nm,1.2s,baz=333,slow=12,SNR=2.3						
RPZ				LR	LR	23 55 03.0	
	comp=Z,2µm,19.1s,baz=348,slow=35						
	comp=Z,20nm,1.2s						
STKA	**Stephens Creek**	**29.47**	**231**	P	**P**	**23 44 27.9**	**+0.7**
	comp=Z,32nm,0.8s,baz=48,slow=8.0,SNR=61						
STKA				LR	LR	23 55 14.5	
	comp=Z,2µm,19.7s,baz=59,slow=34						
	comp=Z,32nm,0.8s						
STKA	**Stephens Creek**	**29.47**	**231**	P	**P**	**23 44 28.1**	**+0.9**
	baz=29,SNR=43						
STKA	**Stephens Creek**	**29.47**	**231**	P	**P**	**23 44 27.3**	**+0.2**
STKA	**Stephens Creek**	**29.47**	**231**	P	**P**	**23 44 28.4**	**+1.3**
STKA	**Stephens Creek**	**29.47**	**231**	P	**P**	**23 44 27.3**	**+0.2**
STKA				pmax	pmax		
	comp=Z,17nm,1.3s						
ODZ	**Otahua Downs**	**30.01**	**176**	P	**P**	**23 44 35.6**	**+3.8**
TOO	**Toolangi**	**30.14**	**218**	P	**P**	**23 44 34.2**	**+1.1**
	baz=30,SNR=12						
TOO	**Toolangi**	**30.14**	**218**	P	**P**	**23 44 32.7**	**-0.4**
TOO				IAmb	IAmb	23 44 35.4	
	comp=Z,39nm,0.8s						
TOO	**Toolangi**	**30.14**	**218**	P	**P**	**23 44 34.8**	**+1.7**
TOO	**Toolangi**	**30.14**	**218**	P	**P**	**23 44 32.7**	**-0.4**
TOO				pmax	pmax		
	comp=Z,39nm,0.8s						
BRAT	**Ballarat**	**31.06**	**219**	P	**P**	**23 44 43.3**	**+2.2**
	comp=Z,24nm,0.8s						
RAR	**Rarotonga**	**31.07**	**106**	LR	LR	23 54 36.1	
	comp=Z,2µm,20.6s,baz=294,slow=31						
RAR	**Rarotonga**	**31.07**	**106**	P	P	23 44 48.2	+6.8
	comp=Z,54nm,1.7s						
GLAD	**Gladstone**	**31.24**	**210**	P	**P**	**23 44 44.0**	**+1.3**
	comp=Z,97nm,0.7s						
GEXS	**Deakin Univers**	**31.27**	**218**	P	**P**	**23 44 45.6**	**+2.7**
	comp=Z,150nm,0.7s						
LCRK	**Leigh Creek**	**31.47**	**236**	P	**P**	**23 44 46.0**	**+1.2**
SMPI	**Sarmi**	**31.80**	**291**	P	**P**	**23 44 49.1**	**+1.2**
	comp=Z,266nm,1.3s,comp=Z,5µm						
AULHS	**Lilydale High**	**31.83**	**211**	P	**P**	**23 44 50.0**	**+2.1**
ARPS	**Mount Arapiles**	**31.90**	**222**	P	**P**	**23 44 49.6**	**+1.0**
	baz=32,SNR=6.2						
ARPS	**Mount Arapiles**	**31.90**	**222**	P	**P**	**23 44 49.4**	**+0.8**
CORO	**Coronation Par**	**32.02**	**211**	P	**P**	**23 44 51.4**	**+1.9**
HTT	**Hallett**	**32.19**	**230**	P	**P**	**23 44 51.9**	**+0.7**
	baz=32,SNR=18						
HTT	**Hallett**	**32.19**	**230**	P	**P**	**23 44 51.4**	**+0.2**
WR0	**Warramunga Arr**	**32.40**	**256**	P	**P**	**23 44 51.6**	**-1.6**
WB0	**Warramunga Arr**	**32.52**	**257**	P	**P**	**23 44 52.8**	**-1.5**
WB0				IAmb	IAmb	23 44 54.4	
	comp=Z,66nm,0.9s						
WB2	**Warramunga Arr**	**32.57**	**256**	P	**P**	**23 44 53.6**	**-1.1**
	baz=32						
WB2	**Warramunga Arr**	**32.57**	**256**	P	**P**	**23 44 53.2**	**-1.5**
WB2				IAmb	IAmb	23 44 54.8	
	comp=Z,37nm,0.8s						
WRAB	**Tennant Creek**	**32.57**	**256**	P	**P**	**23 44 53.3**	**-1.4**
WRAB				IAmb	IAmb	23 44 58.0	
	comp=Z,32nm,0.7s						
WRAB	**Tennant Creek**	**32.57**	**256**	P	**P**	**23 44 53.6**	**-1.1**
WRAB	**Tennant Creek**	**32.57**	**256**	P	**P**	**23 44 53.3**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,32nm,0.7s						
WRAB				MLR	MLR		
	comp=Z,8µm,19.0s						
WB1	**Warramunga Ar.**	**32.58**	**256**	P	**P**	**23 44 53.5**	**-1.2**
	comp=Z,61nm,0.8s						
WRA	**Warramunga Arr**	**32.59**	**256**	P	**P**	**23 44 53.7**	**-1.1**
	comp=Z,34nm,0.8s,baz=87,slow=9.4,SNR=268						
WRA				PcP	**PcP**	**23 47 41.0**	**-0.1**
	comp=Z,4.1nm,0.9s,baz=93,slow=3.5,SNR=4.9						
WRA				ScP	**ScP**	**23 51 22.4**	**-2.2**
	comp=Z,1.3nm,1.0s,baz=87,slow=3.7,SNR=1.2						
WRA				LR	LR	23 57 27.7	
	comp=Z,8µm,19.5s,baz=76,slow=35						
	comp=Z,34nm,0.8s						
WRA	**Warramunga Arr**	**32.59**	**256**	P	**P**	**23 44 52.9**	**-1.9**
WRA	**Warramunga Arr**	**32.59**	**256**	P	**P**	**23 44 52.9**	**-1.9**
OOD	**Oodnadatta**	**32.68**	**242**	P	**P**	**23 44 56.6**	**+1.1**
MOO	**Moorlands**	**32.75**	**209**	P	**P**	**23 44 57.4**	**+1.4**
	baz=33,SNR=7.3						
MOO	**Moorlands**	**32.75**	**209**	P	**P**	**23 44 57.9**	**+1.9**
WHYH	**Whyalla**	**33.02**	**232**	P	**P**	**23 44 59.4**	**+1.0**
	comp=Z,37nm,0.9s						
TAU	**Tasmania Unive**	**33.05**	**209**	IAMs_20	IAMs_20	23 55 25.9	
	comp=Z,3µm,19.0s						
TAU	**Tasmania Unive**	**33.05**	**209**	P	**P**	**23 45 02.0**	**+3.4**
AS01	**Alice Springs**	**33.33**	**250**	P	**P**	**23 45 00.5**	**-0.8**
	comp=Z,183nm,0.8s						
AS31	**Alice Springs**	**33.37**	**250**	P	**P**	**23 45 00.4**	**-1.2**
ASAR	**Alice Springs**	**33.37**	**250**	P	**P**	**23 45 01.2**	**-0.5**
	comp=Z,153nm,0.8s,baz=78,slow=9.2,SNR=649						
ASAR				PcP	**PcP**	**23 47 42.8**	**-0.6**
	comp=Z,4.3nm,0.8s,baz=82,slow=2.9,SNR=5.5						
ASAR				ScP	**ScP**	**23 51 26.4**	**-0.8**
	comp=Z,0.8nm,1.0s,baz=85,slow=4.1,SNR=1.7						
ASAR				LR	LR	23 57 38.4	
	comp=Z,8µm,21.0s,baz=83,slow=35						
ASAR	**Alice Springs**	**33.37**	**250**	P	**P**	**23 45 00.7**	**-1.0**
BBOO	**Buckleboo**	**34.08**	**233**	P	**P**	**23 45 08.0**	**+0.3**
	baz=34,SNR=124						
BBOO	**Buckleboo**	**34.08**	**233**	P	**P**	**23 45 07.7**	**0.0**
BBOO	**Buckleboo**	**34.08**	**233**	P	**P**	**23 45 08.3**	**+0.6**
KDU	**Kakadu**	**34.70**	**269**	P	**P**	**23 45 12.6**	**-0.6**
	baz=35,SNR=5.2						
KDU	**Kakadu**	**34.70**	**269**	P	**P**	**23 45 13.4**	**+0.2**
MULG	**Mulgathing**	**34.78**	**238**	P	**P**	**23 45 14.2**	**+0.4**
MTN	**Manton Dam**	**35.97**	**269**	P	**P**	**23 45 23.9**	**-0.3**
	baz=36,SNR=4.7						
MTN	**Manton Dam**	**35.97**	**269**	P	**P**	**23 45 22.3**	**-1.9**
MTN	**Manton Dam**	**35.97**	**269**	P	**P**	**23 45 26.2**	**+2.1**
RKPI	**Ransiki, Papua**	**36.12**	**289**	P	**P**	**23 45 28.2**	**+2.8**
	comp=Z,203nm,1.2s						
GUMO	**Guam**	**36.58**	**320**	LR	LR	23 59 04.4	
	comp=Z,927nm,22.0s,baz=142,slow=34						
SAUI	**Saumlaki**	**36.74**	**277**	IAMs_20	IAMs_20	23 59 39.5	
	comp=Z,4µm,18.0s						
FAKI	**Fak Fak**	**37.37**	**285**	P	**P**	**23 45 35.4**	**-0.8**
FAKI				IAmb	IAmb	23 45 58.4	
	comp=Z,118nm,1.4s						
FAKI				IAMs_20	IAMs_20	00 00 29.2	
	comp=Z,4µm,22.0s						
FAKI	**Fak Fak**	**37.37**	**285**	P	**P**	**23 45 36.7**	**+0.6**
	comp=Z,55nm,1.0s,comp=Z,1µm						
KNRA	**Kununurra**	**37.95**	**264**	P	**P**	**23 45 40.2**	**-0.8**
	baz=38,SNR=23						
KNRA	**Kununurra**	**37.95**	**264**	P	**P**	**23 45 40.0**	**-1.0**
KNRA	**Kununurra**	**37.95**	**264**	P	**P**	**23 45 42.2**	**+1.2**
WRKA	**Warakurna**	**38.62**	**249**	P	**P**	**23 45 46.3**	**-0.3**
	baz=38,SNR=171						
WRKA	**Warakurna**	**38.62**	**249**	P	**P**	**23 45 46.8**	**+0.1**
BNDI	**Bandanaira**	**39.04**	**282**	P	**P**	**23 45 52.7**	**+2.5**
SWI	**Sorong**	**39.05**	**288**	P	**P**	**23 45 50.9**	**+0.6**
	comp=Z,129nm,1.2s,comp=Z,2µm						
FORT	**Forrest**	**39.89**	**240**	P	**P**	**23 45 57.6**	**+0.5**
	baz=40,SNR=53						
FORT	**Forrest**	**39.89**	**240**	P	**P**	**23 45 56.8**	**-0.3**
FORT	**Forrest**	**39.89**	**240**	P	**P**	**23 45 58.7**	**+1.6**
PPT2	**Papeete2**	**40.60**	**100**	*e*P	**P**	**23 46 05.0**	**+1.8**
	comp=Z,160nm,27.8s						
PPT2				*e*S	**S**	**23 52 14.5**	**+2.1**
	comp=Z,1µm,23.8s						
PPT2				*e*LQ	LQ	23 55 31.2	
	comp=Z,3µm,28.2s						
PPT2				*e*LR	LR	23 57 14.1	
	comp=Z,4µm,30.8s						
PPT2				*e*LR	LR	23 57 14.2	
	comp=Z,7µm,28.5s						
PPT	**Papeete**	**40.60**	**100**	LR	LR	00 00 28.9	
	comp=Z,627nm,18.2s,baz=258,slow=32						
TBI	**Tubuai**	**40.77**	**108**	*e*P	**P**	**23 46 06.0**	**+1.6**
	comp=Z,644nm,27.2s						
TBI				*e*S	**S**	**23 52 16.9**	**+2.2**
	comp=Z,5µm,24.8s						
TBI				*e*LQ	LQ	23 55 35.0	
	comp=Z,19µm,29.2s						
TBI				*e*LR	LR	23 57 18.4	
	comp=Z,23µm,28.8s						
FITZ	**Fitzroy Crossi**	**40.80**	**260**	P	**P**	**23 46 03.9**	**-0.9**
NLAI	**Namlea**	**42.10**	**282**	P	**P**	**23 46 16.0**	**+0.5**
	comp=Z,72nm,1.2s						
LBMI	**Labuha**	**42.61**	**286**	P	**P**	**23 46 21.2**	**+1.5**
	comp=Z,151nm,1.6s,comp=Z,3µm						
SOEI	**Soe**	**43.12**	**272**	P	**P**	**23 46 21.6**	**-2.4**
SOEI				IAmb	IAmb	23 46 56.9	
	comp=Z,90nm,0.9s						
SOEI				IAMs_20	IAMs_20	00 07 18.6	
	comp=Z,2µm,21.0s						
SOEI	**Soe**	**43.12**	**272**	P	**P**	**23 46 27.0**	**+3.0**
SOEI	**Soe**	**43.12**	**272**	P	**P**	**23 46 27.6**	**+3.6**
	comp=Z,105nm,1.2s,comp=Z,2µmcomp=Z,2µm						
SANI	**Sanana**	**43.53**	**283**	P	**P**	**23 46 28.4**	**+1.2**
SANI	**Sanana**	**43.53**	**283**	P	**P**	**23 46 27.8**	**+0.6**
	comp=Z,99nm,1.1s,comp=Z,2µmcomp=Z,3µm						
KMBL	**Kambalda**	**45.19**	**241**	P	**P**	**23 46 40.2**	**0.0**
	baz=45,SNR=16						
KMBL	**Kambalda**	**45.19**	**241**	P	**P**	**23 46 40.5**	**+0.2**
PSA00	**Pilbara Seismi**	**46.18**	**254**	P	**P**	**23 46 47.9**	**-0.3**
PSA00	**Pilbara Seismi**	**46.18**	**254**	P	**P**	**23 46 48.7**	**+0.5**
MBWA	**Marble Bar**	**46.29**	**255**	P	**P**	**23 46 47.9**	**-1.1**
MBWA	**Marble Bar**	**46.29**	**255**	P	**P**	**23 46 49.3**	**+0.2**
LUWI	**Luwuk**	**46.90**	**283**	P	**P**	**23 46 53.5**	**-0.4**
LUWI	**Luwuk**	**46.90**	**283**	P	**P**	**23 46 55.5**	**+1.6**
LUWI	**Luwuk**	**46.90**	**283**	P	**P**	**23 46 54.0**	**+0.1**
	comp=Z,120nm,1.3s,comp=Z,3µm						
GTOI	**Gorontalo**	**47.26**	**285**	P	**P**	**23 46 58.1**	**+1.4**
	comp=Z,17nm,0.8s,comp=Z,450nm						
MEEK	**Meekatharra**	**47.46**	**248**	P	**P**	**23 46 58.2**	**0.0**
	baz=47,SNR=25						
MEEK	**Meekatharra**	**47.46**	**248**	P	**P**	**23 46 59.3**	**+1.1**
DAV	**Davao City (W)**	**47.56**	**295**	LR	LR	00 04 48.9	
	comp=Z,348nm,21.4s,baz=104,slow=33						
BKSI	**Bulukumba**	**48.15**	**276**	P	**P**	**23 47 04.4**	**+0.8**
	comp=Z,54nm,1.0s,comp=Z,956nm						
MRSI	**Marisa**	**48.20**	**284**	P	**P**	**23 47 04.4**	**+0.4**
	comp=Z,37nm,1.1s,comp=Z,789nm						
KAPI	**Kappang**	**48.59**	**277**	LR	LR	00 07 15.4	
	comp=Z,710nm,19.9s,baz=99,slow=36						
KAPI	**Kappang**	**48.59**	**277**	P	**P**	**23 47 06.3**	**-0.7**
KAPI	**Kappang**	**48.59**	**277**	P	**P**	**23 47 08.5**	**+1.5**
KAPI	**Kappang**	**48.59**	**277**	P	**P**	**23 47 06.3**	**-0.7**
KAPI				pmax	pmax		
	comp=Z,109nm,1.1s						
KLBR	**Kellerberrin**	**48.71**	**241**	P	**P**	**23 47 07.5**	**-0.3**
	baz=48,SNR=9.8						
KLBR	**Kellerberrin**	**48.71**	**241**	P	**P**	**23 47 07.7**	**-0.1**
SPSI	**Sidrap Palu**	**48.85**	**278**	P	**P**	**23 47 08.8**	**-0.3**
	comp=Z,36nm,1.0s,comp=Z,1µm						
JCJ	**Chichijima**	**48.86**	**329**	LR	LR	00 09 01.5	
	comp=Z,180nm,18.5s,baz=153,slow=38						
AUALB	**St Joseph's Co**	**49.14**	**237**	P	**P**	**23 47 12.7**	**+1.7**
NWAO	**Narrogin (SRO)**	**49.34**	**239**	LR	LR	00 07 55.0	
	comp=Z,4µm,18.4s,baz=66,slow=36						
NWAO	**Narrogin (SRO)**	**49.34**	**239**	P	**P**	**23 47 12.5**	**-0.1**
	baz=49,SNR=7.6						
NWAO				P	**P**	**23 47 12.5**	**-0.1**
	baz=49,SNR=7.6						
NWAO	**Narrogin (SRO)**	**49.34**	**239**	P	**P**	**23 47 11.4**	**-1.1**
NWAO	**Narrogin (SRO)**	**49.34**	**239**	P	**P**	**23 47 12.7**	**+0.2**
NWAO	**Narrogin (SRO)**	**49.34**	**239**	P	**P**	**23 47 11.4**	**-1.1**
NWAO				pmax	pmax		
	comp=Z,374nm,1.2s						
BLDU	**Ballidu**	**49.48**	**242**	P	**P**	**23 47 13.4**	**-0.3**
	baz=49,SNR=8.6						
BLDU	**Ballidu**	**49.48**	**242**	P	**P**	**23 47 14.8**	**+1.1**
TOLI2	**Tolitoli**	**49.51**	**285**	P	**P**	**23 47 12.2**	**-1.8**
TOLI2				IAmb	IAmb	23 47 17.9	
	comp=Z,47nm,1.1s						
TOLI2	**Tolitoli**	**49.51**	**285**	P	**P**	**23 47 16.0**	**+2.0**
PLAI	**Plampang**	**49.58**	**271**	P	**P**	**23 47 16.1**	**+1.4**
PLAI	**Plampang**	**49.58**	**271**	P	**P**	**23 47 15.3**	**+0.6**
	comp=Z,93nm,0.9s,comp=Z,2µm						
MORW	**Morawa**	**49.91**	**245**	P	**P**	**23 47 16.8**	**-0.2**
	baz=50,SNR=18						
MORW	**Morawa**	**49.91**	**245**	P	**P**	**23 47 16.1**	**-0.9**
MORW	**Morawa**	**49.91**	**245**	P	**P**	**23 47 18.3**	**+1.3**
MPSI	**Mapaga**	**50.07**	**283**	P	**P**	**23 47 17.0**	**-1.3**
	comp=Z,114nm,1.1s,comp=Z,2µm						
MUN	**Mundaring**	**50.07**	**241**	P	**P**	**23 47 17.8**	**-0.3**
	baz=50,SNR=6.9						
MUN	**Mundaring**	**50.07**	**241**	P	**P**	**23 47 19.7**	**+1.6**
TWSI	**Taliwang, Sumb**	**50.47**	**271**	P	**P**	**23 47 21.6**	**+0.2**
TAOE	**Nuku Hiva Isla**	**50.86**	**89**	*e*P	**P**	**23 47 26.5**	**+2.0**
	comp=Z,164nm,25.1s						
TAOE				*e*S	**S**	**23 54 41.5**	**+1.0**
	comp=Z,2µm,25.7s						
TAOE				*e*SS	**SS**	**23 58 18.1**	**+2.6**
	comp=Z,639nm,25.4s						
TAOE				*e*LR	LR	00 01 59.5	
	comp=Z,4µm,31.0s						
GIRL	**Giralia**	**51.37**	**253**	P	**P**	**23 47 27.8**	**-0.3**
	baz=51,SNR=3.6						
JHJ	**Hachijo jima 2**	**55.00**	**331**	LR	LR	00 12 02.5	
	comp=Z,252nm,18.3s,baz=126,slow=37						
KKM	**Kota Kinabalu**	**55.56**	**288**	P	**P**	**23 47 57.6**	**-1.4**
KKM	**Kota Kinabalu**	**55.56**	**288**	P	**P**	**23 48 01.3**	**+2.3**
JOW	**Kunigami**	**56.83**	**317**	P	**P**	**23 48 07.9**	**+0.1**
	comp=Z,32nm,0.9s,baz=122,slow=12,SNR=4.5						
	comp=Z,32nm,0.9s						
SBUM	**Sibu**	**58.00**	**283**	P	**P**	**23 48 16.1**	**-0.2**
SBUM				IAmb	IAmb	23 48 21.5	
	comp=Z,50nm,1.3s						
MJAR	**Matsushiro Arr**	**58.55**	**332**	P	**P**	**23 48 19.1**	**-0.6**
	comp=Z,5.6nm,0.8s,baz=171,slow=8.9,SNR=13						
MJAR				LR	LR	00 11 13.0	
	comp=Z,196nm,21.6s,baz=150,slow=34						
	comp=Z,5.6nm,0.8s						
MAJO	**Matsushiro**	**58.55**	**332**	⇓*e*P	**P**	**23 48 19.3**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,17nm,1.0s						
KSM	**Kuching**	**59.50**	**281**	P	**P**	**23 48 25.3**	**-1.4**
KSM	**Kuching**	**59.50**	**281**	P	**P**	**23 48 29.2**	**+2.5**
JNU	**Nakatsue**	**59.65**	**324**	P	**P**	**23 48 26.9**	**-0.5**
	comp=Z,13nm,0.8s,baz=164,slow=5.5,SNR=5.1						
	comp=Z,13nm,0.8s						
JNU	**Nakatsue**	**59.65**	**324**	P	**P**	**23 48 30.3**	**+2.9**
BBJI	**Bungbulang**	**59.66**	**270**	P	**P**	**23 48 29.7**	**+1.7**
JTM	**Tenmabayashi**	**60.94**	**337**	P	P	23 48 41.2	+5.2
ERM	**Erimo**	**61.25**	**339**	⇓*e*P	**P**	**23 48 37.7**	**-0.4**
ERM				pmax	pmax		
	comp=Z,31nm,0.8s						
VNDA	**Vanda**	**62.60**	**182**	P	**P**	**23 48 47.0**	**+0.3**
	comp=Z,4.2nm,0.7s,baz=344,slow=6.4,SNR=12						
VNDA				LR	LR	00 13 30.7	
	comp=Z,337nm,18.5s,baz=16,slow=34						
	comp=Z,4.2nm,0.7s						
VNDA	**Vanda**	**62.60**	**182**	P	**P**	**23 48 47.8**	**+1.0**
VNDA	**Vanda**	**62.60**	**182**	P	**P**	**23 48 47.8**	**+1.0**
VNDA				pmax	pmax		
	comp=Z,96nm,2.0s						
SBA	**Scott Base**	**62.86**	**180**	P	**P**	**23 48 49.2**	**+0.7**
SBA				IAmb	IAmb	23 49 08.1	
	comp=Z,50nm,1.2s						
SBA	**Scott Base**	**62.86**	**180**	P	**P**	**23 48 49.2**	**+0.7**
SBA				pmax	pmax		
	comp=Z,50nm,1.2s						
JKA	**Kamikawa-asahi**	**63.30**	**340**	P	**P**	**23 48 52.0**	**+0.2**
JKA				IAmb	IAmb	23 48 54.2	
	comp=Z,35nm,1.0s						
ASAJ	**Asahikawa**	**63.30**	**340**	LR	LR	00 13 12.8	
	comp=Z,429nm,20.0s,baz=162,slow=33						
ASAJ	**Asahikawa**	**63.30**	**340**	P	**P**	**23 48 52.0**	**+0.2**
ASAJ				pmax	pmax		
	comp=Z,35nm,1.0s						
CASY	**Casey**	**63.59**	**202**	P	**P**	**23 48 53.4**	**-0.1**
KSRS	**Korea Array**	**64.45**	**325**	P	**P**	**23 48 59.4**	**-0.1**
	comp=Z,2.5nm,0.7s,baz=142,slow=6.5,SNR=7.6						
	comp=Z,2.5nm,0.7s						
KSAR	**Wonju Array Be**	**64.47**	**325**	P	**P**	**23 48 59.6**	**0.0**
KSAR	**Wonju Array Be**	**64.47**	**325**	P	**P**	**23 48 59.6**	**0.0**
DLV	**T Lat**	**64.87**	**291**	P	**P**	**23 49 04.8**	**+1.8**
YSS	**Yuzh-Sakhalins**	**65.77**	**341**	P	**P**	**23 49 08.3**	**+0.5**
YSS				IAmb	IAmb	23 49 10.3	
	comp=Z,33nm,0.8s						
YSS	**Yuzh-Sakhalins**	**65.77**	**341**	P	**P**	**23 49 09.8**	**+2.0**
YSS	**Yuzh-Sakhalins**	**65.77**	**341**	*ce*P	**P**	**23 49 09.1**	**+1.3**
YSS				*e*		23 49 40.7	
YSS				*e*		23 51 29.0	
YSS				*e*S	**S**	**23 57 52.1**	**-1.4**
YSS				*e*SS	**SS**	**00 02 04.5**	**-4.1**
YSS				pmax	pmax		
	comp=Z,700nm,8.2s						
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
NJ2	**Nanjing**	**66.47**	**315**	⇑*i*P	**P**	**23 49 12.0**	**-0.7**
NJ2				S	**S**	**23 58 04.2**	**+1.5**
NJ2				sS	**sS**	**23 58 10.8**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,650nm,7.3s						
QIZ	**Qiongzhong**	**66.62**	**299**	P	**P**	**23 49 10.0**	**-3.9**
QIZ				pP	**pP**	**23 49 15.2**	**-3.7**
QIZ				S	**S**	**23 58 06.0**	**+1.0**
QIZ				ScS	**SKSac**	**23 59 00.1**	**-10**
QIZ				pmax	pmax		
	comp=Z,29nm,1.4s						
QIZ				pmax	pmax		
	comp=Z,630nm,7.5s						
QIZ				LR	LR		
	comp=N,300nm,17.5s						
QIZ				LR	LR		
	comp=E,380nm,30.3s						
QIZ				LR	LR		
	comp=Z,580nm,27.9s						
VLA	**Vladivostok**	**66.72**	**332**	*de*P	**P**	**23 49 17.3**	**+3.2**
VLA				pmax	pmax		
	comp=Z,86nm,2.0s						
USA0B	**Ussuriysk Arra**	**67.52**	**333**	P	**P**	**23 49 19.1**	**0.0**
USA0B	**Ussuriysk Arra**	**67.52**	**333**	P	**P**	**23 49 19.1**	**0.0**
USA0B				pmax	pmax		
	comp=Z,108nm,1.6s						
USRK	**Ussuriysk Ar.**	**67.52**	**333**	P	**P**	**23 49 20.4**	**+1.2**
	comp=Z,5.9nm,0.7s,baz=140,slow=6.2,SNR=21						
USRK				LR	LR	00 15 19.4	
	comp=Z,241nm,20.8s,baz=152,slow=33						
	comp=Z,5.9nm,0.7s						
USRK	**Ussuriysk Ar.**	**67.52**	**333**	P	**P**	**23 49 19.6**	**+0.4**
SHEM	**Shemya Is, Ala**	**67.66**	**4**	LR	LR	00 12 27.2	
	comp=Z,369nm,21.4s,baz=114,slow=30						
BKNI	**Bangkinang**	**68.01**	**277**	P	**P**	**23 49 21.6**	**-1.4**
BKNI	**Bangkinang**	**68.01**	**277**	P	**P**	**23 49 26.0**	**+3.1**
PET	**Petropavlovsk**	**68.25**	**354**	*c i*P	**P**	**23 49 24.0**	**+0.5**
PET				*e*S	**S**	**23 58 24.3**	**+1.1**
PET				*e*PS	**PnS**	**23 58 45.7**	**-2.0**
PET				*e*PPS	PPS	23 58 58.5	
PET				pmax	pmax		
	comp=Z,300nm,11.6s						
PETK	**Petropavlovsk-**	**68.44**	**353**	P	**P**	**23 49 25.3**	**+0.6**
	comp=Z,4.5nm,0.8s,baz=158,slow=12,SNR=4.7						
PETK				LR	LR	00 15 19.7	
	comp=Z,356nm,19.3s,baz=160,slow=32						
	comp=Z,4.5nm,0.8s						
WHN	**Wuhan**	**68.76**	**312**	⇓P	**P**	**23 49 27.9**	**+0.7**
WHN				S	**S**	**23 58 28.4**	**-1.9**
WHN				pmax	pmax		
	comp=Z,970nm,5.2s						

WHN				LR	LR		
	comp=Z,1µm,21.1s						
MDJ	**Mudanjiang**	**68.93**	**332**	P	**P**	**23 49 28.1**	**+0.1**
MDJ				sP	pP	23 49 33.6	+0.4
MDJ				PcP	**PcP**	**23 49 52.2**	**-0.1**
MDJ				PP	**PP**	**23 52 01.5**	**+0.9**
MDJ				S	**S**	**23 58 35.2**	**+3.4**
MDJ				ScS	**SKSac**	**23 59 25.6**	**-1.3**
MDJ				SS	**SS**	**00 03 01.8**	**+4.0**
MDJ				pmax	pmax		
	comp=Z,37nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,850nm,7.2s						
MDJ				LR	LR		
	comp=Z,270nm,15.7s						
MDJ				LR	LR		
	comp=Z,230nm,12.7s						
MDJ				LR	LR		
	comp=Z,380nm,24.3s						
MDJ	**Mudanjiang**	**68.93**	**332**	P	**P**	**23 49 29.4**	**+1.4**
	comp=Z,48nm,1.5s						
DL2	**Dalian**	**69.04**	**323**	P	**P**	**23 49 28.6**	**-0.2**
DL2				S	**S**	**23 58 33.1**	**-0.1**
DL2				pmax	pmax		
	comp=Z,48nm,1.4s						
DL2				pmax	pmax		
	comp=Z,410nm,6.8s						
DL2				LR	LR		
	comp=Z,220nm,16.1s						
DL2				LR	LR		
	comp=Z,330nm,20.5s						
DL2				LR	LR		
	comp=Z,390nm,18.4s						
IPM	**Ipoh**	**69.23**	**281**	P	**P**	**23 49 29.6**	**-1.0**
IPM				IAmb	IAmb	23 49 35.1	
	comp=Z,46nm,1.1s						
IPM	**Ipoh**	**69.23**	**281**	P	**P**	**23 49 31.2**	**+0.6**
	comp=Z,40nm,1.4s						
TYV	**Tymovskoe**	**69.29**	**343**	*e*P	**P**	**23 49 30.8**	**+0.7**
TYV				*e*S	**S**	**23 58 39.6**	**+3.9**
TYV				pmax	pmax		
	comp=Z,13nm,1.1s						
TYV				pmax	pmax		
	comp=Z,400nm,4.2s						
TYV				smax	smax		
	comp=E,400nm,7.1s						
KULM	**Kulim**	**69.84**	**281**	P	**P**	**23 49 33.6**	**-0.7**
KULM				IAmb	IAmb	23 49 38.8	
	comp=Z,42nm,1.3s						
SNY	**Shenyang**	**69.91**	**326**	⇓P	**P**	**23 49 34.5**	**+0.4**
SNY				S	**S**	**23 58 45.2**	**+1.8**
SNY				pmax	pmax		
	comp=Z,22nm,2.5s						
SNY				pmax	pmax		
	comp=Z,620nm,7.8s						
SNY				LR	LR		
	comp=Z,380nm,20.1s						
SNY				LR	LR		
	comp=Z,530nm,20.4s						
SNY				LR	LR		
	comp=Z,590nm,21.4s						
TIA	**Tai'an**	**70.11**	**318**	*e*P	**P**	**23 49 35.3**	**-0.2**
TIA				PP	**PP**	**23 52 12.0**	**+1.0**
TIA				S	**S**	**23 58 43.9**	**-2.2**
TIA				pmax	pmax		
	comp=Z,13nm,0.6s						
TIA				pmax	pmax		
	comp=Z,380nm,6.4s						
TIA				LR	LR		
	comp=Z,280nm,20.8s						
TIA				LR	LR		
	comp=Z,340nm,20.1s						
TIA				LR	LR		
	comp=Z,490nm,14.4s						
CN2	**Changchun**	**70.33**	**329**	P	**P**	**23 49 37.1**	**+0.5**
CN2				S	**S**	**23 58 46.2**	**-2.0**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,500nm,7.0s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
NIKH	**Nikolski High**	**70.55**	**15**	P	**P**	**23 49 38.7**	**+1.0**
	baz=204						
RPSI	**Rantau Prapat**	**70.71**	**278**	P	**P**	**23 49 38.5**	**-1.2**
RPSI				IAmb	IAmb	23 49 43.4	
	comp=Z,74nm,1.5s						
PSI	**Prapat**	**70.74**	**278**	P	**P**	**23 49 41.8**	**+1.8**
PSI	**Prapat**	**70.74**	**278**	P	**P**	**23 49 38.5**	**-1.5**
PSI				pmax	pmax		
	comp=Z,74nm,1.5s						
BNX	**BinXian**	**70.79**	**331**	⇓P	**P**	**23 49 39.9**	**+0.5**
BNX				pP	**pP**	**23 49 43.5**	**-1.1**
BNX				sP	**sP**	**23 49 45.8**	**-0.8**
BNX				PP	**PP**	**23 52 18.4**	**+1.8**
BNX				S	**S**	**23 58 57.7**	**+4.1**
BNX				sS	**sS**	**23 59 03.4**	**+1.3**
BNX				pmax	pmax		
	comp=Z,28nm,0.9s						
BNX				pmax	pmax		
	comp=Z,310nm,6.2s						
BNX				LR	LR		
	comp=Z,170nm,7.9s						
BNX				LR	LR		
	comp=Z,250nm,9.8s						
BNX				LR	LR		
	comp=Z,330nm,18.4s						
GRNR	**Gornyy**	**71.15**	**339**	⇑*i*P	**P**	**23 49 42.3**	**+0.8**
GRNR				pmax	pmax		
	comp=Z,20nm,0.8s						
KLR	**Kul'dur**	**71.61**	**336**	P	**P**	**23 49 44.6**	**+0.4**
	comp=Z,6.5nm,0.6s,baz=132,slow=3.4,SNR=25						
KLR				LR	LR	00 20 43.9	
	comp=Z,242nm,18.6s,baz=154,slow=35						
	comp=Z,6.5nm,0.6s						
KLR	**Kul'dur**	**71.61**	**336**	*c i*P	**P**	**23 49 45.1**	**+0.8**
KLR				pmax	pmax		
	comp=Z,66nm,2.5s						
GSI	**Gunungsitoli**	**71.61**	**276**	P	**P**	**23 49 43.5**	**-1.6**
GSI				IAmb	IAmb	23 49 49.6	
	comp=Z,49nm,0.9s						
GSI	**Gunungsitoli**	**71.61**	**276**	P	**P**	**23 49 46.8**	**+1.7**
SRIT	**Nakonsritamara**	**71.86**	**284**	P	**P**	**23 49 50.6**	**+4.0**
NONG	**Nongkai**	**71.99**	**295**	P	**P**	**23 49 48.0**	**+0.7**
	comp=Z,29nm,0.9s						
SURA	**Surathani**	**72.02**	**285**	P	**P**	**23 49 49.9**	**+2.4**
NAYO	**Nakonayok**	**72.22**	**291**	P	**P**	**23 49 50.5**	**+1.8**
LYN	**LuoYang**	**72.28**	**314**	⇑*i*P	**P**	**23 49 49.0**	**+0.3**
LYN				pP	pP	23 49 52.4	-1.4
LYN				sP	sP	23 49 59.4	+3.7
LYN				S	**S**	**23 59 11.1**	**-0.1**
LYN				pmax	pmax		
	comp=Z,19nm,1.0s						
LYN				pmax	pmax		
	comp=Z,500nm,7.0s						
LYN				LR	LR		
	comp=Z,340nm,19.2s						
LYN				LR	LR		
	comp=Z,180nm,20.7s						
LYN				LR	LR		
	comp=Z,390nm,21.1s						
HNS	**HongShan**	**72.38**	**318**	⇑P	**P**	**23 49 49.9**	**+0.7**
HNS				PP	**PP**	**23 52 27.2**	**-3.2**
HNS				S	**S**	**23 59 13.8**	**+1.6**
HNS				SKS	**SKSac**	**23 59 48.2**	**-5.1**
HNS				pmax	pmax		
	comp=Z,25nm,1.9s						
HNS				pmax	pmax		
	comp=Z,700nm,8.2s						
HNS				LR	LR		
	comp=Z,540nm,20.0s						
HNS				LR	LR		
	comp=Z,520nm,18.0s						
GYA	**Guiyang**	**72.58**	**304**	⇑P	**P**	**23 49 54.4**	**+3.6**
GYA				PP	**PP**	**23 52 30.2**	**-2.3**
GYA				S	**S**	**23 59 15.3**	**+0.1**
GYA				pmax	pmax		
	comp=Z,13nm,1.5s						
GYA				LR	LR		
	comp=Z,330nm,17.2s						
GYA				LR	LR		
	comp=Z,260nm,15.4s						
GYA				LR	LR		
	comp=Z,340nm,23.3s						
BJI	**Beijing**	**73.02**	**321**	P	**P**	**23 49 53.1**	**+0.2**
BJI				pP	**pP**	**23 49 57.5**	**-0.6**
BJI				S	**S**	**23 59 21.3**	**+1.9**
BJI				pmax	pmax		
	comp=Z,300nm,7.0s						
TIY	**Taiyuan**	**74.04**	**317**	*e*P	**P**	**23 50 00.6**	**+1.5**
TIY				PP	**PP**	**23 52 43.8**	**-0.9**
TIY				S	**S**	**23 59 33.6**	**+2.3**
TIY				pmax	pmax		
	comp=Z,15nm,1.0s						
TIY				pmax	pmax		
	comp=Z,600nm,6.1s						
TIY				LR	LR		
	comp=Z,250nm,23.4s						
TIY				LR	LR		
	comp=Z,230nm,21.3s						
TIY				LR	LR		
	comp=Z,400nm,21.3s						
HEH	**HeiHe**	**74.18**	**334**	*e*P	**P**	**23 49 59.4**	**-0.1**
HEH				S	**S**	**23 59 36.7**	**+4.6**
HEH				sS	**sS**	**23 59 42.1**	**+1.4**
HEH				pmax	pmax		
	comp=Z,21nm,1.1s						
HEH				pmax	pmax		
	comp=Z,720nm,7.0s						
HEH				LR	LR		
	comp=Z,440nm,15.3s						
HEH				LR	LR		
	comp=Z,350nm,15.5s						
HEH				LR	LR		
	comp=Z,560nm,19.9s						
XAN	**Xi'an**	**74.51**	**312**	P	**P**	**23 50 02.2**	**+0.3**
XAN				PP	**PP**	**23 52 52.3**	**+3.6**
XAN				S	**S**	**23 59 38.8**	**+2.2**
XAN				sS	sS	23 59 45.8	+0.8
XAN				SS	**SS**	**00 04 27.3**	**+3.5**
XAN				pmax	pmax		
	comp=Z,17nm,1.1s						
XAN				pmax	pmax		
	comp=Z,610nm,7.6s						
XAN				LR	LR		
	comp=Z,230nm,17.2s						
XAN				LR	LR		
	comp=Z,180nm,16.3s						
XAN				LR	LR		
	comp=Z,420nm,18.6s						
PHRA	**Phrae**	**74.72**	**294**	P	**P**	**23 50 02.8**	**-0.6**
S12K	**Black Hills**	**74.78**	**17**	P	**P**	**23 50 01.7**	**-1.2**
	baz=210						
QSPA	**South Pole Qui**	**75.02**	**180**	LR	LR	00 21 02.7	
	comp=Z,312nm,18.3s,baz=8.0,slow=34						
QSPA	**South Pole Qui**	**75.02**	**180**	P	**P**	**23 50 03.6**	**-0.8**
QSPA				IAmb	IAmb	23 50 09.5	
	comp=Z,85nm,1.6s						
KMI	**Kunming**	**75.18**	**301**	⇑P	**P**	**23 50 06.5**	**+0.3**
KMI				pP	pP	23 50 10.8	-0.5
KMI				PcP	**PcP**	**23 50 20.3**	**+0.6**
KMI				PP	**PP**	**23 52 52.8**	**-2.0**
KMI				S	**S**	**23 59 45.9**	**+1.1**
KMI				pmax	pmax		
	comp=Z,21nm,0.9s						
KMI				pmax	pmax		
	comp=Z,620nm,7.5s						
KMI				LR	LR		
	comp=Z,160nm,22.0s						
KMI				LR	LR		
	comp=Z,350nm,29.2s						
KMI				LR	LR		
	comp=Z,690nm,28.1s						
CRAI	**Chiangrai**	**75.24**	**296**	P	**P**	**23 50 05.8**	**-0.6**
CRAI				IAmb	IAmb	23 50 08.6	
	comp=Z,30nm,0.9s						
XLT	**XiLinHaoTe**	**75.43**	**324**	*e*P	**P**	**23 50 07.4**	**+0.4**
XLT				pP	sP	23 50 14.0	-0.2
XLT				sP	PcP	23 50 16.5	-3.6
XLT				S	**S**	**23 59 49.7**	**+3.1**
XLT				sS	sS	23 59 54.8	-0.3
XLT				pmax	pmax		
	comp=Z,23nm,1.0s						
XLT				pmax	pmax		
	comp=Z,580nm,7.5s						
XLT				LR	LR		
	comp=Z,32nm,19.6s						
XLT				LR	LR		
	comp=Z,240nm,17.5s						
XLT				LR	LR		
	comp=Z,340nm,24.7s						
MA2	**Magadan**	**75.65**	**351**	LR	LR	00 18 05.1	
	comp=Z,390nm,21.6s,baz=149,slow=31						
CM31	**Chiang Mai Arr**	**75.84**	**294**	P	**P**	**23 50 09.8**	**0.0**
CMAR	**Chiang Mai Arr**	**75.84**	**294**	P	**P**	**23 50 10.7**	**+0.8**
	comp=Z,7.6nm,0.8s,baz=133,slow=4.3,SNR=41						
CMAR				LR	LR	00 24 02.0	
	comp=Z,82nm,20.6s,baz=100,slow=36						
	comp=Z,7.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**75.84**	**294**	P	**P**	**23 50 10.1**	**+0.3**
CMAR	**Chiang Mai Arr**	**75.84**	**294**	*ce*P	**P**	**23 50 10.6**	**+0.8**
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CHTO	**Chiang Mai**	**75.97**	**294**	P	**P**	**23 50 09.9**	**-0.7**
CHTO	**Chiang Mai**	**75.97**	**294**	P	**P**	**23 50 09.9**	**-0.7**
HHC	**Hu-ho-hao-te**	**76.35**	**319**	*e*P	**P**	**23 50 12.7**	**+0.3**
HHC				S	**S**	**23 59 57.4**	**+0.5**
HHC				pmax	pmax		
	comp=Z,42nm,1.2s						
HHC				pmax	pmax		
	comp=Z,960nm,6.9s						
HHC				LR	LR		
	comp=Z,500nm,17.1s						
HHC				LR	LR		
	comp=Z,640nm,19.7s						
HHC				LR	LR		
	comp=Z,1µm,21.6s						
CHGN	**Chignik**	**76.36**	**18**	P	**P**	**23 50 10.9**	**-0.9**
	baz=213						
PZH	**PanZhiHua**	**76.57**	**302**	P	**P**	**23 50 13.8**	**-0.2**
PZH				pP	**pP**	**23 50 17.8**	**-1.3**
PZH				PcP	**PcP**	**23 50 26.1**	**+0.6**
PZH				S	**S**	**23 59 59.7**	**-0.2**
PZH				SKS	**SKSac**	**00 00 21.7**	**-3.8**
PZH				SS	**SS**	**00 04 57.4**	**+1.9**
PZH				pmax	pmax		
	comp=Z,20nm,0.9s						
PZH				pmax	pmax		
	comp=Z,460nm,8.0s						
PZH				LR	LR		
	comp=Z,760nm,28.4s						
PZH				LR	LR		
	comp=Z,1µm,27.9s						
PZH				LR	LR		
	comp=Z,1µm,27.5s						
CD2	**Chengdu**	**76.86**	**307**	P	**P**	**23 50 16.3**	**+0.9**
CD2				PP	**PP**	**23 53 08.0**	**-0.6**
CD2				S	**S**	**00 00 02.1**	**-0.6**
CD2				pmax	pmax		
	comp=Z,20nm,1.1s						
CD2				pmax	pmax		
	comp=Z,520nm,8.4s						
CD2				LR	LR		
	comp=Z,150nm,12.5s						
CD2				LR	LR		
	comp=Z,120nm,8.7s						
CD2				LR	LR		
	comp=Z,310nm,17.0s						
ZEA	**Zeya**	**76.89**	**336**	*e*P	**P**	**23 50 16.0**	**+1.0**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=E,100nm,5.6s						
ZEA				pmax	pmax		
	comp=N,200nm,5.5s						
ZEA				pmax	pmax		
	comp=Z,400nm,5.6s						
HIA	**Hailar**	**76.95**	**330**	⇓*e*P	**P**	**23 50 15.0**	**-0.5**
HIA				pmax	pmax		
	comp=Z,26nm,1.7s						
R17K	**Ugashik Creek**	**78.09**	**19**	P	**P**	**23 50 21.2**	**-0.4**
	baz=215						
TNCH	**TengChong**	**78.65**	**300**	⇑P	**P**	**23 50 24.6**	**-1.1**
TNCH				pP	pP	23 50 30.2	-0.6
TNCH				sP	sP	23 50 32.6	-0.1
TNCH				PP	**PP**	**23 53 30.4**	**+6.5**
TNCH				S	**S**	**00 00 20.5**	**-2.1**
TNCH				sS	sS	00 00 33.5	+2.7
TNCH				SS	**SS**	**00 05 29.9**	**+2.8**
TNCH				pmax	pmax		
	comp=Z,23nm,0.6s						
TNCH				pmax	pmax		
	comp=Z,300nm,6.8s						
TNCH				LR	LR		
	comp=Z,430nm,7.2s						
TNCH				LR	LR		
	comp=Z,350nm,8.1s						
TNCH				LR	LR		
	comp=Z,260nm,13.3s						
SEY	**Seymchan**	**78.67**	**353**	LR	LR	00 22 07.0	
	comp=Z,326nm,19.5s,baz=178,slow=33						
SEY	**Seymchan**	**78.67**	**353**	⇓*e*P	**P**	**23 50 25.2**	**+0.5**
SEY				pmax	pmax		
	comp=Z,36nm,2.1s						
OHAK	**Old Harbor**	**78.75**	**20**	P	**P**	**23 50 24.5**	**-0.8**
	baz=218						
Q17K	**Contact Creek**	**78.76**	**18**	P	**P**	**23 50 24.6**	**-0.9**
	baz=215						
P16K	**Nushagak River**	**78.78**	**17**	P	**P**	**23 50 24.5**	**-0.8**
	baz=213						
LZH	**Lanzhou**	**79.14**	**312**	*e*P	**P**	**23 50 29.3**	**+1.2**
LZH				pP	sP	23 50 34.8	-0.4
LZH				sP	PcP	23 50 37.9	+1.4
LZH				S	**S**	**00 00 30.2**	**+2.8**
LZH				pmax	pmax		
	comp=Z,35nm,1.0s						
LZH				pmax	pmax		
	comp=Z,680nm,5.3s						
LZH				LR	LR		
	comp=Z,170nm,15.5s						
LZH				LR	LR		
	comp=Z,340nm,16.0s						
LZH				LR	LR		
	comp=Z,510nm,17.7s						
O16K	**Kokwok River B**	**79.22**	**17**	P	**P**	**23 50 26.4**	**-1.4**
	baz=213						
Q18K	**Katmai Hardscr**	**79.34**	**19**	P	**P**	**23 50 27.8**	**-0.8**
	baz=216						
KDAK	**Kodiak Island**	**79.43**	**20**	LR	LR	00 24 45.5	
	comp=Z,391nm,18.2s,baz=215,slow=35						
O17K	**Koliganek Bris**	**79.65**	**17**	P	**P**	**23 50 29.7**	**-0.4**
	baz=214						
N16K	**Nishlik Lake**	**79.78**	**16**	P	**P**	**23 50 30.1**	**-0.7**
	baz=212						
Q19K	**Cape Douglas,**	**79.99**	**19**	P	**P**	**23 50 31.8**	**-0.2**
	baz=217						
P19K	**Oil Pt**	**80.70**	**19**	P	**P**	**23 50 35.6**	**-0.3**
	baz=218						
N19K	**Bonanza Creek**	**81.25**	**18**	IAMs_20	IAMs_20	00 21 28.3	
	comp=Z,798nm,20.0s						
BRSE	**Bradley Lake S**	**81.56**	**20**	P	**P**	**23 50 40.5**	**+0.1**
	baz=220						
ANM	**Nome**	**81.87**	**11**	P	**P**	**23 50 42.3**	**+0.4**
ANM				IAmb	IAmb	23 50 44.4	
	comp=Z,40nm,1.5s						
ANM	**Nome**	**81.87**	**11**	P	**P**	**23 50 42.3**	**+0.4**
ANM				pmax	pmax		
	comp=Z,40nm,1.5s						
ANM	**Nome**	**81.87**	**11**	P	**P**	**23 50 42.5**	**+0.6**
	baz=206,SNR=11						
M19K	**Big River Lodg**	**82.16**	**17**		**P**	**23 50 43.8**	**+0.3**
M19K				IAmb	IAmb	23 52 20.9	
	comp=Z,11nm,0.4s						
M19K				IAMs_20	IAMs_20	00 22 28.2	
	comp=Z,834nm,20.0s						
M19K	**Big River Lodg**	**82.16**	**17**	P	**P**	**23 50 44.1**	**+0.6**
	baz=216						
L19K	**White Mountain**	**82.26**	**17**	P	**P**	**23 50 44.1**	**0.0**
L19K				IAMs_20	IAMs_20	00 21 13.8	
	comp=Z,839nm,20.0s						
L19K	**White Mountain**	**82.26**	**17**	P	**P**	**23 50 44.4**	**+0.4**
	baz=216,SNR=8.0						
SEW	**Seward**	**82.26**	**20**	P	**P**	**23 50 44.2**	**+0.2**
	baz=221						
TNA	**Tin City**	**82.33**	**10**	P	**P**	**23 50 43.9**	**-0.4**
TNA				IAmb	IAmb	23 50 46.4	
	comp=Z,50nm,1.7s						
TNA	**Tin City**	**82.33**	**10**	P	**P**	**23 50 44.2**	**0.0**
	baz=203						
O22K	**Cooper Landing**	**82.45**	**20**	P	**P**	**23 50 44.6**	**-0.5**
O22K				IAmb	IAmb	23 51 00.9	
	comp=Z,37nm,0.8s						
O22K	**Cooper Landing**	**82.45**	**20**	P	**P**	**23 50 45.0**	**0.0**
	baz=221						
M20K	**Styx River**	**82.50**	**17**	IAMs_20	IAMs_20	00 22 28.0	
	comp=Z,759nm,19.0s						
M20K	**Styx River**	**82.50**	**17**	P	**P**	**23 50 45.3**	**-0.1**
	baz=218						
YAK	**Yakutsk**	**82.55**	**343**	LR	LR	00 27 49.5	
	comp=Z,377nm,18.2s,baz=122,slow=36						
YAK	**Yakutsk**	**82.55**	**343**	P	**P**	**23 50 45.2**	**-0.3**
YAK				IAmb	IAmb	23 50 46.6	
	comp=Z,34nm,0.7s						
YAK	**Yakutsk**	**82.55**	**343**	*e*P	**P**	**23 50 46.2**	**+0.7**
YAK				*e*S	**S**	**00 00 56.0**	**-5.5**
YAK				*e**SS		00 02 21.0	
YAK				pmax	pmax		
	comp=Z,32nm,1.0s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.3s						
YAK				smax	smax		
	comp=E,134nm,16.0s						
YAK				smax	smax		
	comp=N,184nm,15.7s						
YAK				MLR	MLR		
	comp=Z,465nm,18.0s						
YAK				MLR	MLR		
	comp=N,362nm,16.0s						
YAK				MLR	MLR		
	comp=E,110nm,14.0s						
TTA	**Tatalina**	**82.56**	**16**	P	**P**	**23 50 46.1**	**+0.4**
	baz=215						
L20K	**Farewell, AK**	**82.77**	**17**	P	**P**	**23 50 47.2**	**+0.5**
	baz=217						
BILL	**Bilibino**	**82.83**	**359**	P	**P**	**23 50 46.4**	**-0.5**
BILL				IAmb	IAmb	23 50 48.2	
	comp=Z,28nm,1.2s						
BILL	**Bilibino**	**82.83**	**359**	*d i*P	**P**	**23 50 46.5**	**-0.4**
BILL				*i*		23 50 52.9	
BILL				S	**S**	**00 01 05.0**	**+0.8**
BILL				*e*PS	**PnS**	**00 02 03.5**	**+7.7**
BILL				SS	**SS**	**00 06 21.0**	**-6.5**
BILL				pmax	pmax		
	comp=Z,56nm,2.5s						
ULN	**Ulaanbaatar**	**82.87**	**324**	P	**P**	**23 50 47.5**	**-0.2**
ULN				IAmb	IAmb	23 50 49.7	
	comp=Z,47nm,1.1s						
ULN	**Ulaanbaatar**	**82.87**	**324**	P	**P**	**23 50 47.6**	**-0.2**
ULN				pmax	pmax		
	comp=Z,47nm,1.1s						
P23K	**Montague Islan**	**82.87**	**21**	P	**P**	**23 50 47.5**	**+0.2**
	baz=223						
SUA	**Susitna One**	**82.88**	**19**	P	**P**	**23 50 46.7**	**-0.7**
SUA				IAmb	IAmb	23 51 37.5	
	comp=Z,19nm,0.4s						
SUA	**Susitna One**	**82.88**	**19**	P	**P**	**23 50 47.3**	**-0.1**
	baz=220						
RC01	**Rabbit Creek A**	**82.91**	**19**	P	**P**	**23 50 46.4**	**-1.1**
RC01				IAmb	IAmb	23 50 48.4	
	comp=Z,40nm,1.2s						
RC01	**Rabbit Creek A**	**82.91**	**19**	P	**P**	**23 50 47.8**	**+0.3**
	baz=221						
SKT	**Skwentna**	**83.05**	**18**	IAMs_20	IAMs_20	00 18 32.8	
	comp=Z,692nm,22.0s						
PWL	**Port Wells**	**83.19**	**20**	P	**P**	**23 50 48.9**	**0.0**
	baz=222						
SONM	**Songino Array**	**83.23**	**323**	P	**P**	**23 50 49.6**	**0.0**
	comp=Z,17nm,1.0s,baz=141,slow=5.6,SNR=87						
SONM				LR	LR	00 28 02.2	
	comp=Z,170nm,18.4s,baz=131,slow=36						
	comp=Z,17nm,1.0s						
SONM	**Songino Array**	**83.23**	**323**	P	**P**	**23 50 49.1**	**-0.5**
SONM				IAmb	IAmb	23 50 51.4	
	comp=Z,50nm,1.2s						
SONM	**Songino Array**	**83.23**	**323**	P	**P**	**23 50 49.1**	**-0.5**
SONM				pmax	pmax		
	comp=Z,51nm,1.2s						
M22K	**Willow**	**83.30**	**19**	P	**P**	**23 50 49.1**	**-0.3**
M22K				IAMs_20	IAMs_20	00 20 51.6	
	comp=Z,718nm,19.0s						
M22K	**Willow**	**83.30**	**19**	P	**P**	**23 50 48.9**	**-0.5**
	baz=220						
K20K	**Telida**	**83.42**	**16**	P	**P**	**23 50 49.7**	**-0.3**

K20K				IAMs_20	IAMs_20	00 21 49.7	
	comp=Z,626nm,20.0s						
K20K	**Telida**	**83.42**	**16**	P	**P**	**23 50 50.4**	**+0.3**
	baz=216,SNR=7.1						
GTA	**Gaotai**	**83.48**	**314**	*e*P	**P**	**23 50 51.6**	**+0.5**
GTA				pP	PcP	23 50 55.4	0.0
GTA				sP	sP	23 50 59.2	+1.0
GTA				pmax	pmax		
	comp=Z,22nm,1.3s						
GTA				pmax	pmax		
	comp=Z,550nm,7.6s						
GTA				LR	LR		
	comp=Z,230nm,19.9s						
GTA				LR	LR		
	comp=Z,170nm,18.3s						
GTA				LR	LR		
	comp=Z,200nm,19.5s						
PMR	**Palmer**	**83.48**	**19**	P	**P**	**23 50 49.5**	**-0.9**
PMR	**Palmer**	**83.48**	**19**	P	**P**	**23 50 49.5**	**-0.9**
PMR				pmax	pmax		
	comp=Z,130nm,1.9s						
PMR	**Palmer**	**83.48**	**19**	P	**P**	**23 50 50.6**	**+0.3**
	baz=221						
KNK	**Knik Glacier**	**83.56**	**19**	P	**P**	**23 50 51.0**	**+0.2**
	baz=222						
PPLA	**Purkeypile**	**83.57**	**17**	P	**P**	**23 50 49.8**	**-1.2**
PPLA				IAmb	IAmb	23 52 22.4	
	comp=Z,29nm,1.4s						
PPLA	**Purkeypile**	**83.57**	**17**	P	**P**	**23 50 49.5**	**-1.6**
	baz=218						
GHO	**Glory Hole Cre**	**83.69**	**19**	P	**P**	**23 50 51.5**	**-0.1**
BRDH	**Bariadhala**	**83.71**	**295**	P	**P**	**23 50 52.7**	**+0.3**
	comp=Z,100nm,0.3s,baz=91,slow=10,SNR=5.6						
CUT	**Chulitna**	**83.75**	**18**	P	**P**	**23 50 51.0**	**-0.8**
CUT	**Chulitna**	**83.75**	**18**	P	**P**	**23 50 50.9**	**-0.8**
	baz=220						
EYAK	**Cordova Ski Ar**	**83.84**	**21**	P	**P**	**23 50 52.0**	**-0.1**
	baz=224						
CAST	**Castle Rocks**	**84.01**	**17**	P	**P**	**23 50 52.1**	**-1.0**
CAST				IAMs_20	IAMs_20	00 23 26.5	
	comp=Z,702nm,20.0s						
CAST	**Castle Rocks**	**84.01**	**17**	P	**P**	**23 50 52.0**	**-1.0**
	baz=218,SNR=28						
BBGB	**Big Mountain B**	**84.09**	**50**	P	**P**	**23 50 54.1**	**-0.1**
BBGB				IAmb	IAmb	23 51 17.9	
	comp=Z,40nm,1.1s						
CHUM	**Lake Minchumin**	**84.32**	**16**	P	**P**	**23 50 53.9**	**-0.7**
	baz=218,SNR=7.1						
KTH	**Kantishna Hill**	**84.45**	**17**	IAMs_20	IAMs_20	00 23 40.9	
	comp=Z,823nm,19.0s						
SHL	**Shillong**	**84.45**	**298**	P	**P**	**23 50 56.0**	**-0.4**
SHL	**Shillong**	**84.45**	**298**	P	**P**	**23 50 56.0**	**-0.4**
SHL				pmax	pmax		
	comp=Z,52nm,0.8s						
TRF	**Thorofare Moun**	**84.55**	**17**	IAMs_20	IAMs_20	00 22 12.1	
	comp=Z,854nm,21.0s						
TRF	**Thorofare Moun**	**84.55**	**17**	P	**P**	**23 50 55.2**	**-0.8**
	baz=220						
BCW	**Bitter Crk WRg**	**84.67**	**52**	P	**P**	**23 50 55.8**	**-1.4**
BPAW	**Bear Paw Mtn.**	**84.85**	**17**	P	**P**	**23 50 56.2**	**-1.1**
	baz=219						
RND	**Reindeer**	**84.94**	**18**	P	**P**	**23 50 56.9**	**-0.9**
RND				IAmb	IAmb	23 50 59.1	
	comp=Z,33nm,1.4s						
RND	**Reindeer**	**84.94**	**18**	P	**P**	**23 50 56.9**	**-0.9**
RND				pmax	pmax		
	comp=Z,33nm,1.4s						
ORV	**Oroville**	**84.95**	**47**	IAMs_20	IAMs_20	00 20 10.2	
	comp=Z,819nm,20.0s						
N25K	**Chitina, Valde**	**84.98**	**21**	P	**P**	**23 50 57.3**	**-0.8**
N25K				IAmb	IAmb	23 50 59.8	
	comp=Z,50nm,1.7s						
N25K	**Chitina, Valde**	**84.98**	**21**	P	**P**	**23 50 57.9**	**-0.2**
	baz=225						
YBH	**Yreka Blue Hor**	**85.02**	**45**	LR	LR	00 20 22.1	
	comp=Z,549nm,21.7s,baz=250,slow=30						
BOD	**Bodaibo**	**85.10**	**334**	*e*P	**P**	**23 50 58.6**	**0.0**
BOD				pmax	pmax		
	comp=Z,50nm,1.9s						
VRDI	**Verde Repeater**	**85.11**	**21**	P	**P**	**23 50 57.5**	**-1.4**
VRDI				IAmb	IAmb	23 51 03.0	
	comp=Z,54nm,2.0s						
GLB	**Gilahina Butte**	**85.14**	**21**	P	**P**	**23 50 59.2**	**+0.4**
GLB				IAmb	IAmb	23 51 17.1	
	comp=Z,34nm,1.6s						
CMB	**Columbia Colle**	**85.14**	**49**	P	**P**	**23 50 58.9**	**-0.5**
CMB				IAMs_20	IAMs_20	00 19 31.9	
	comp=Z,1μm,21.0s						
CMB	**Columbia Colle**	**85.14**	**49**	P	**P**	**23 50 58.9**	**-0.5**
CMB				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MCK	**McKinley**	**85.16**	**18**	P	**P**	**23 50 58.9**	**0.0**
MCK				IAmb	IAmb	23 51 00.0	
	comp=Z,44nm,1.3s						
MCK	**McKinley**	**85.16**	**18**	P	**P**	**23 50 58.9**	**0.0**
MCK				pmax	pmax		
	comp=Z,44nm,1.3s						
MCK	**McKinley**	**85.16**	**18**	P	**P**	**23 50 58.2**	**-0.7**
	baz=221,SNR=8.4						
BWN	**Browne**	**85.34**	**17**	IAMs_20	IAMs_20	00 23 47.8	
	comp=Z,815nm,19.0s						
HARP	**HAARP**	**85.36**	**20**	P	**P**	**23 50 60.0**	**+0.1**
	baz=225						
MCARA	**McCarthy VSAT**	**85.37**	**21**	P	**P**	**23 50 59.5**	**-0.5**
	baz=227						
I21K	**Tanana**	**85.43**	**16**	P	**P**	**23 51 00.3**	**+0.1**
I21K				IAMs_20	IAMs_20	00 23 45.6	
	comp=Z,759nm,21.0s						
I21K	**Tanana**	**85.43**	**16**	P	**P**	**23 51 00.2**	**+0.1**
	baz=218,SNR=19						
RDOG	**Red Dog Mine**	**85.45**	**11**	P	**P**	**23 51 01.0**	**+0.8**
	baz=208						
H21K	**Melozitna Rive**	**85.59**	**15**	P	**P**	**23 51 01.3**	**+0.3**
	baz=218						
IMAR	**Indian Mountai**	**85.62**	**15**	P	**P**	**23 51 01.5**	**+0.4**
BARN	**Barnard Glacie**	**85.64**	**22**	P	**P**	**23 51 01.8**	**+0.2**
MLY	**Manley**	**85.64**	**16**	P	**P**	**23 51 00.8**	**-0.5**
MLY				IAmb	IAmb	23 51 02.6	
	comp=Z,43nm,1.7s						
MLY	**Manley**	**85.64**	**16**	P	**P**	**23 51 00.8**	**-0.5**
	baz=220,SNR=7.9						
ISA	**Isabella, Lake**	**85.66**	**51**	P	**P**	**23 51 01.8**	**-0.3**
ISA				IAmb	IAmb	23 51 14.1	
	comp=Z,30nm,1.4s						
ISA	**Isabella, Lake**	**85.66**	**51**	P	**P**	**23 51 01.8**	**-0.3**
ISA				pmax	pmax		
	comp=Z,30nm,1.4s						
PAX	**Paxson**	**85.66**	**19**	P	**P**	**23 51 01.1**	**-0.5**
	baz=224						
CTG	**Chitna Glacier**	**85.69**	**22**	P	**P**	**23 51 02.2**	**+0.5**
	baz=228						
ELS	**Elsinore Mount**	**85.73**	**54**	P	**P**	**23 51 02.5**	**0.0**
ELS				IAmb	IAmb	23 51 18.3	
	comp=Z,43nm,1.6s						
EDW2	**Edwards Air Fo**	**85.73**	**52**	P	**P**	**23 51 03.8**	**+1.3**
	baz=248,SNR=10						
BFSC	**Mount Baldy Ra**	**85.76**	**53**	P	**P**	**23 51 04.0**	**+1.3**
	baz=249						
NEA2	**Nenana**	**85.77**	**17**	IAMs_20	IAMs_20	00 24 28.9	
	comp=Z,658nm,20.0s						
NEA2	**Nenana**	**85.77**	**17**	P	**P**	**23 51 01.1**	**-0.8**
	baz=221,SNR=8.0						
GOMU	**GeErMu**	**85.83**	**309**	P	**P**	**23 51 04.4**	**+1.1**
GOMU				pP	sP	23 51 09.6	-0.8
GOMU				sP	pP	23 51 11.0	+2.5
GOMU				SS	SS	00 07 19.1	+5.2
GOMU				pmax	pmax		
	comp=Z,81nm,8.1s						
GOMU				LR	LR		
	comp=Z,150nm,17.1s						
GOMU				LR	LR		
	comp=Z,110nm,16.4s						
GOMU				LR	LR		
	comp=Z,220nm,19.8s						
MURC	**Murrieta**	**85.89**	**54**	P	**P**	**23 51 04.1**	**+0.8**
	baz=249						
MDPB	**Devils Postpil**	**85.94**	**49**	P	**P**	**23 51 03.7**	**0.0**
WRH	**Wood River Hil**	**85.96**	**17**	P	**P**	**23 51 01.8**	**-1.0**
WRH				IAmb	IAmb	23 51 29.8	
	comp=Z,62nm,1.9s						
O28M	**Mount Upton**	**85.99**	**23**	P	**P**	**23 51 03.9**	**+0.5**
	baz=229						
OMMB	**Old Mammoth Mi**	**85.99**	**50**	P	**P**	**23 51 02.5**	**-1.5**
M26K	**Nabesna, AK**	**86.08**	**21**	P	**P**	**23 51 03.5**	**-0.1**
M26K	**Nabesna, AK**	**86.08**	**21**	P	**P**	**23 51 03.4**	**-0.1**
	baz=227,SNR=7.4						
G21K	**Allakaket**	**86.11**	**14**	P	**P**	**23 51 04.1**	**+0.6**
	baz=217						
H22K	**Ishtalitna Cre**	**86.14**	**15**	P	**P**	**23 51 04.3**	**+0.6**
	baz=219						
K24K	**Donnelly Dome**	**86.16**	**19**	P	**P**	**23 51 04.0**	**+0.1**
	baz=224,SNR=5.4						
CCB	**Clear Creek Bu**	**86.17**	**17**	IAMs_20	IAMs_20	00 24 53.5	
	comp=Z,569nm,19.0s						
LRMC	**Laurel Mtn Rad**	**86.19**	**52**	P	**P**	**23 51 06.2**	**+1.3**
	baz=249,SNR=6.3						
CWC	**Cottonwood Cre**	**86.24**	**51**	P	**P**	**23 51 06.2**	**+1.1**
	baz=248						
MONP2	**Monument Peak**	**86.25**	**55**	P	**P**	**23 51 06.7**	**+1.5**
	baz=250,SNR=6.1						
HDA	**Harding Lake**	**86.25**	**18**	P	**P**	**23 51 03.4**	**-0.9**
HDA				IAmb	IAmb	23 51 04.9	
	comp=Z,13nm,0.7s						
HDA				IAMs_20	IAMs_20	00 22 12.6	
	comp=Z,878nm,22.0s						
HDA	**Harding Lake**	**86.25**	**18**	P	**P**	**23 51 03.8**	**-0.5**
	baz=223,SNR=18						
ZAK	**Zakamensk**	**86.27**	**324**	*e*P	**P**	**23 51 03.8**	**-1.0**
ZAK				pmax	pmax		
	comp=Z,26nm,1.4s						
MDM	**Murphy Dome**	**86.28**	**17**	P	**P**	**23 51 03.3**	**-1.2**
MDM				IAmb	IAmb	23 51 05.3	
	comp=Z,58nm,1.8s						
MDM				IAMs_20	IAMs_20	00 25 26.5	
	comp=Z,601nm,19.0s						
TCOL	**CIGO, UAF Yank**	**86.33**	**17**	IAMs_20	IAMs_20	00 25 16.6	
	comp=Z,568nm,19.0s						
COLA	**College**	**86.33**	**17**⇓	*e*P	**P**	**23 51 04.0**	**-0.6**
COLA				pmax	pmax		
	comp=Z,33nm,1.9s						
BELA	**Belgrano 2**	**86.38**	**175**	P	**P**	**23 51 03.5**	**-1.4**
V35K	**Ketchikan**	**86.39**	**30**	P	**P**	**23 51 07.2**	**+2.1**
	baz=237						
L26K	**Log Cabin Wild**	**86.39**	**20**	IAMs_20	IAMs_20	00 23 02.5	
	comp=Z,639nm,20.0s						
RIDG	**Independent Ri**	**86.41**	**19**	P	**P**	**23 51 04.5**	**-0.7**
RIDG				IAmb	IAmb	23 51 06.6	
	comp=Z,54nm,1.8s						
RIDG	**Independent Ri**	**86.41**	**19**	P	**P**	**23 51 04.8**	**-0.3**
	baz=225,SNR=5.4						
IKP	**In-Ko-Pah, Jac**	**86.41**	**55**	P	**P**	**23 51 07.5**	**+1.6**
	baz=250						
RMX	**La Rumorosa**	**86.42**	**55**	P	**P**	**23 51 04.7**	**-1.3**
LSA	**Lhasa**	**86.43**	**302**	P	**P**	**23 51 07.2**	**+0.6**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
M27K	**Edge Creek, AK**	**86.44**	**21**	P	**P**	**23 51 05.6**	**+0.2**
	baz=228						
PFO	**Pinyon Flats O**	**86.47**	**54**	LR	LR	00 22 38.0	
	comp=Z,1μm,19.7s,baz=266,slow=31						
PFO	**Pinyon Flats O**	**86.47**	**54**	P	**P**	**23 51 05.9**	**-0.4**
PFO				IAmb	IAmb	23 51 21.1	
	comp=Z,33nm,1.6s						
PFO	**Pinyon Flats O**	**86.47**	**54**	P	**P**	**23 51 05.9**	**-0.4**
PFO				pmax	pmax		
	comp=Z,33nm,1.6s						
PFO	**Pinyon Flats O**	**86.47**	**54**	P	**P**	**23 51 07.0**	**+0.8**
	baz=249						
TPFO	**Pinon Flats**	**86.47**	**54**	P	**P**	**23 51 07.2**	**+0.9**
	baz=249						
YUK8	**Steele Glacier**	**86.48**	**22**	P	**P**	**23 51 05.5**	**-0.3**
	baz=230						
PAHR	**Pah Rah Range**	**86.51**	**47**	P	**P**	**23 51 06.3**	**0.0**
PAHR				IAmb	IAmb	23 51 21.2	
	comp=Z,48nm,1.8s						
IL31		**86.53**	**18**	P	**P**	**23 51 04.3**	**-1.3**
ILAR	**Eielson Array**	**86.53**	**18**	P	**P**	**23 51 04.7**	**-1.0**
	comp=Z,7.6nm,0.6s,baz=238,slow=5.0,SNR=94						
ILAR				LR	LR	00 27 55.0	
	comp=Z,512nm,18.0s,baz=230,slow=34						
	comp=Z,7.6nm,0.6s						
ILAR	**Eielson Array**	**86.53**	**18**	P	**P**	**23 51 04.3**	**-1.4**
BBB	**Bella Bella**	**86.53**	**34**	LR	LR	00 24 11.7	
	comp=Z,426nm,18.9s,baz=226,slow=32						
MPMC	**Manual Prospec**	**86.55**	**51**	P	**P**	**23 51 07.7**	**+1.0**
	baz=249,SNR=8.7						
PMD	**Palm Desert**	**86.55**	**54**	P	**P**	**23 51 05.9**	**-0.5**
PMD				IAmb	IAmb	23 51 22.1	
	comp=Z,46nm,1.8s						
YUK3	**Moose Creek**	**86.55**	**22**	P	**P**	**23 51 05.9**	**-0.2**
	baz=229						
H23K	**Yukon River**	**86.57**	**16**	P	**P**	**23 51 05.9**	**0.0**
	baz=221						
DOT	**Dot Lake**	**86.59**	**19**	P	**P**	**23 51 05.6**	**-0.4**
LHV	**Little Huntoon**	**86.60**	**49**	P	**P**	**23 51 07.1**	**+0.6**
LHV				IAmb	IAmb	23 51 11.6	
	comp=Z,28nm,1.3s						
POKR	**Poker Plat Res**	**86.63**	**17**	P	**P**	**23 51 05.8**	**-0.4**
	baz=223						
WRAK	**Wrangell Islan**	**86.64**	**29**	IAMs_20	IAMs_20	00 19 60.0	
	comp=Z,635nm,20.0s						
DSP	**Deep Springs**	**86.66**	**50**	P	**P**	**23 51 07.4**	**+0.5**
F21K	**Alatna River**	**86.68**	**14**	P	**P**	**23 51 06.9**	**+0.6**
	baz=217						
R32K	**Eaglecrest**	**86.73**	**26**	P	**P**	**23 51 07.3**	**+0.6**
	baz=234						
MOD	**Modoc Plateau**	**86.73**	**45**	IAMs_20	IAMs_20	00 18 19.1	
	comp=Z,760nm,22.0s						
SWSC	**Sam W. Stewart**	**86.76**	**55**	P	**P**	**23 51 08.9**	**+1.4**
	baz=250						
YUK6	**Outpost Mounta**	**86.79**	**23**	P	**P**	**23 51 07.2**	**-0.1**
	baz=231						
GSC	**Goldstone, Bar**	**86.80**	**52**	P	**P**	**23 51 07.8**	**+0.1**
GSC				IAmb	IAmb	23 51 23.7	
	comp=Z,43nm,1.6s						
GSC	**Goldstone, Bar**	**86.80**	**52**	P	**P**	**23 51 07.9**	**+0.1**
GSC				pmax	pmax		
	comp=Z,43nm,1.6s						
GSC	**Goldstone, Bar**	**86.80**	**52**	P	**P**	**23 51 08.6**	**+0.8**
	baz=249						
NVAR	**Mina Array Bea**	**86.81**	**49**	P	**P**	**23 51 09.6**	**+1.7**
	comp=Z,5.2nm,0.8s,baz=232,slow=7.6,SNR=25						
NVAR				LR	LR	00 21 23.9	
	comp=Z,829nm,22.0s,baz=247,slow=30						
	comp=Z,5.2nm,0.8s						
NVAR	**Mina Array Bea**	**86.81**	**49**	P	**P**	**23 51 08.3**	**+0.4**
P30M	**Million Dollar**	**86.82**	**24**	P	**P**	**23 51 07.8**	**+0.6**
	baz=232						
SCRK	**Sand Creek**	**86.85**	**19**	P	**P**	**23 51 06.9**	**-0.5**
SCRK	**Sand Creek**	**86.85**	**19**	P	**P**	**23 51 07.5**	**+0.1**
	baz=226,SNR=5.3						
LCH	**Last Change Ra**	**86.86**	**50**	P	**P**	**23 51 06.9**	**-1.2**
L27K	**Beaver Creek,**	**86.93**	**20**	P	**P**	**23 51 08.1**	**+0.5**
	baz=228						
YUK4	**Talbot Arm**	**86.93**	**23**	P	**P**	**23 51 08.9**	**+1.0**
	baz=231						
BELC	**Belle Mtn. Jos**	**86.96**	**54**	P	**P**	**23 51 10.2**	**+1.5**
	baz=250,SNR=14						
GRAC	**Grapevine Rang**	**86.98**	**51**	P	**P**	**23 51 10.2**	**+1.7**
	baz=249						
QSM	**Queen of Sheba**	**86.98**	**52**	P	**P**	**23 51 08.6**	**+0.1**
QSM				IAmb	IAmb	23 51 13.2	
	comp=Z,37nm,1.7s						
HEC	**Hector,Ludlow**	**86.99**	**53**	P	**P**	**23 51 09.9**	**+1.2**
	baz=249						
H24K	**Noodor Dome**	**87.04**	**17**	IAMs_20	IAMs_20	00 24 49.6	
	comp=Z,643nm,19.0s						
G23K	**Bananza Creek**	**87.13**	**15**	P	**P**	**23 51 09.1**	**+0.6**
	baz=220						
FURC	**Furnace Creek,**	**87.17**	**51**	P	**P**	**23 51 11.1**	**+1.8**
	baz=249						
F22K	**John River**	**87.21**	**14**	P	**P**	**23 51 09.1**	**+0.2**
	baz=218						
BC3	**Big Chuckawall**	**87.27**	**54**	P	**P**	**23 51 12.1**	**+1.9**
	baz=250,SNR=8.7						
J26L	**Joseph Creek**	**87.35**	**19**	P	**P**	**23 51 10.4**	**+0.6**
	baz=226						
SHOC	**Shoshone, Teco**	**87.41**	**52**	P	**P**	**23 51 11.8**	**+1.1**
	baz=249						
WCT	**Wildcat Mounta**	**87.46**	**51**	P	**P**	**23 51 11.1**	**+0.1**
WCT				IAmb	IAmb	23 51 22.9	
	comp=Z,22nm,1.3s						
PRP	**Porcupine Dome**	**87.47**	**18**	IAMs_20	IAMs_20	00 22 58.9	
	comp=Z,608nm,21.0s						
PRP	**Porcupine Dome**	**87.47**	**18**	P	**P**	**23 51 09.9**	**-0.5**
	baz=224						
COLD	**Coldfoot**	**87.48**	**15**	P	**P**	**23 51 10.4**	**+0.2**
	baz=220						
GMRC	**Granite Mounta**	**87.50**	**53**	P	**P**	**23 51 12.6**	**+1.4**
	baz=250,SNR=9.5						
K27K	**Chicken**	**87.50**	**20**	IAMs_20	IAMs_20	00 24 06.7	
	comp=Z,601nm,20.0s						
K27K	**Chicken**	**87.50**	**20**	P	**P**	**23 51 11.0**	**+0.7**
	baz=228						
TUQ	**Turquoise Moun**	**87.52**	**52**	P	**P**	**23 51 12.6**	**+1.3**
	baz=250,SNR=12						
GLA	**Glamis**	**87.56**	**55**	P	**P**	**23 51 13.3**	**+1.8**
	baz=250						
IRM	**Iron Mountain**	**87.68**	**54**	P	**P**	**23 51 13.3**	**+1.3**
	baz=250,SNR=18						
M29M	**Somme Creek**	**87.70**	**22**	P	**P**	**23 51 11.8**	**+0.3**
	baz=231						
G24K	**Hadweenzic Riv**	**87.79**	**16**	P	**P**	**23 51 11.6**	**-0.1**
	baz=222						
TPNV	**Topopah Spring**	**87.80**	**51**	P	**P**	**23 51 12.1**	**-0.5**
TPNV				IAmb	IAmb	23 51 28.8	
	comp=Z,26nm,1.3s						
TPNV	**Topopah Spring**	**87.80**	**51**	P	**P**	**23 51 12.1**	**-0.5**
TPNV				pmax	pmax		
	comp=Z,26nm,1.3s						
TPNV	**Topopah Spring**	**87.80**	**51**	P	**P**	**23 51 13.8**	**+1.1**
	baz=249,SNR=7.9						
S34M	**Telegraph Cree**	**88.02**	**28**	P	**P**	**23 51 13.4**	**+0.5**
	baz=237						
I26K	**Coal Creek Min**	**88.03**	**18**	IAMs_20	IAMs_20	00 23 37.7	
	comp=Z,771nm,21.0s						
I26K	**Coal Creek Min**	**88.03**	**18**	P	**P**	**23 51 13.5**	**+0.6**
	baz=226						
BLYC	**Blythe**	**88.03**	**54**	P	**P**	**23 51 13.7**	**+0.1**
MOY	**Mondy**	**88.15**	**325**	*e*P	**P**	**23 51 13.6**	**-0.3**
MOY				pmax	pmax		
	comp=Z,45nm,2.7s						
E23K	**Chandalar**	**88.26**	**15**	P	**P**	**23 51 14.4**	**+0.4**
	baz=220						
F24K	**Squaw Lake**	**88.29**	**15**	P	**P**	**23 51 15.1**	**+1.0**
	baz=222						
EGAK	**Eagle**	**88.30**	**19**	P	**P**	**23 51 13.6**	**-0.6**
EGAK	**Eagle**	**88.30**	**19**	P	**P**	**23 51 14.0**	**-0.1**
	baz=228						
M30M	**Minto, Yukon**	**88.39**	**22**	IAMs_20	IAMs_20	00 26 49.4	
	comp=Z,552nm,18.0s						
M30M	**Minto, Yukon**	**88.39**	**22**	P	**P**	**23 51 13.9**	**-0.8**
	baz=232						
DAWY	**Dawson**	**88.41**	**20**	P	**P**	**23 51 14.7**	**-0.1**
	baz=230						
V12A	**Nelson**	**88.44**	**52**	P	**P**	**23 51 16.0**	**+0.4**
V12A				IAmb	IAmb	23 51 50.0	
	comp=Z,50nm,1.7s						
SHPR	**Sheep Range**	**88.47**	**52**	P	**P**	**23 51 15.7**	**-0.1**
PDMCI	**Parker Dam,Lak**	**88.52**	**54**	P	**P**	**23 51 17.6**	**+1.7**
	baz=251,SNR=11						
LPIG	**La Paz**	**88.55**	**65**	LR	LR	00 22 40.5	
	comp=Z,576nm,19.8s,baz=232,slow=30						
E24K	**Your Creek**	**88.55**	**15**	P	**P**	**23 51 16.2**	**+0.9**
	baz=222						
D23K	**Nanushuk River**	**88.70**	**14**	P	**P**	**23 51 16.3**	**+0.3**
	baz=220						
I27K	**Kandik River**	**88.70**	**19**	P	**P**	**23 51 16.1**	**-0.1**
	baz=228						
TOLK	**Toolik Lake Re**	**88.72**	**14**	IAMs_20	IAMs_20	00 26 15.6	
	comp=Z,815nm,20.0s						
TOLK	**Toolik Lake Re**	**88.72**	**14**	P	**P**	**23 51 16.0**	**-0.1**
	baz=220						
R11A	**Troy Canyon, C**	**88.78**	**50**	P	**P**	**23 51 17.3**	**0.0**
R11A	**Troy Canyon, C**	**88.78**	**50**	P	**P**	**23 51 17.8**	**+0.6**
	baz=250,SNR=9.0						
DLBC	**Dease Lake**	**88.79**	**28**	LR	LR	00 24 07.1	
	comp=Z,476nm,20.0s,baz=278,slow=31						
214A	**Organ Pipe Nat**	**88.82**	**57**	P	**P**	**23 51 17.8**	**+0.3**
	baz=252						
F25K	**Christian Rive**	**88.93**	**16**	P	**P**	**23 51 17.1**	**-0.1**
	baz=224						
G26K	**Porcupine Rive**	**88.99**	**17**	P	**P**	**23 51 17.1**	**-0.2**
	baz=226						
M31M	**Drury Creek, Y**	**89.06**	**23**	IAMs_20	IAMs_20	00 22 52.3	
	comp=Z,565nm,20.0s						
BMAR	**Burnt Mountain**	**89.10**	**16**	P	**P**	**23 51 18.1**	**+0.1**
H27K	**Steamboat Moun**	**89.15**	**18**	P	**P**	**23 51 17.3**	**-0.9**
	baz=228						
E25K	**Arctic Village**	**89.33**	**16**	P	**P**	**23 51 18.5**	**-0.5**
	baz=224						
A21K	**Barrow**	**89.39**	**11**	P	**P**	**23 51 19.0**	**-0.1**
A21K				IAmb	IAmb	23 51 21.1	
	comp=Z,36nm,1.5s						
A21K	**Barrow**	**89.39**	**11**	P	**P**	**23 51 18.7**	**-0.4**
	baz=214						
F26K	**Sheenjek River**	**89.41**	**16**	P	**P**	**23 51 19.3**	**0.0**
	baz=226						
PALK	**Pallekele**	**89.41**	**278**	P	**P**	**23 51 21.5**	**+0.9**
	comp=Z,3.8nm,0.7s,baz=277,slow=9.7,SNR=5.2						
PALK				LR	LR	00 31 09.1	
	comp=Z,551nm,21.4s,baz=220,slow=35						
	comp=Z,3.8nm,0.7s						
PALK	**Pallekele**	**89.41**	**278**	IAMs_20	IAMs_20	00 32 45.9	
	comp=Z,542nm,19.0s						
PALK	**Pallekele**	**89.41**	**278**⇑	*e*P	**P**	**23 51 20.5**	**-0.1**
PALK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
FARO	**Faro, Yukon**	**89.48**	**24**	P	**P**	**23 51 18.9**	**-0.9**
	baz=235						
G27K	**Doyon Strip**	**89.50**	**18**	P	**P**	**23 51 19.5**	**-0.3**
	baz=228						
I29M	**Ogilvie Camp,**	**89.60**	**20**	P	**P**	**23 51 19.6**	**-0.7**
	baz=231						
D08A	**Wollman Farm,**	**89.65**	**41**	P	**P**	**23 51 21.1**	**+0.2**
D08A				IAmb	IAmb	23 51 36.9	
	comp=Z,58nm,1.8s						
C24K	**Franklin Bluff**	**89.74**	**14**	P	**P**	**23 51 20.0**	**-0.8**
	baz=221						
ELK	**Elko**	**89.85**	**48**	LR	LR	00 23 36.4	
	comp=Z,601nm,21.1s,baz=256,slow=30						
ELK	**Elko**	**89.85**	**48**	IAMs_20	IAMs_20	00 22 54.8	
	comp=Z,887nm,21.0s						
BMO	**Blue Mountains**	**89.87**	**43**	IAMs_20	IAMs_20	00 23 04.2	
	comp=Z,557nm,20.0s						
SPR3	**Spring Creek 3**	**89.92**	**50**	P	**P**	**23 51 22.7**	**-0.1**
SPR3				IAmb	IAmb	23 51 44.9	
	comp=Z,23nm,1.4s						
D25K	**Kavik River**	**90.00**	**15**	P	**P**	**23 51 22.2**	**+0.1**
	baz=224						
LCMT	**Little Creek M**	**90.08**	**52**	P	**P**	**23 51 24.0**	**+0.6**
LCMT				IAmb	IAmb	23 51 39.5	
	comp=Z,44nm,1.6s						
ELIB	**Princess Elisa**	**90.09**	**190**	*d*P	**P**	**23 51 22.5**	**-0.4**
TIXI	**Tiksi**	**90.41**	**348**⇓	*e*P	**P**	**23 51 23.0**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.3s						
E27K	**Coleen River**	**90.45**	**17**	P	**P**	**23 51 24.4**	**+0.2**
	baz=228						
TUC	**Tucson**	**90.56**	**57**	P	**P**	**23 51 24.1**	**-1.5**
TUC				IAmb	IAmb	23 51 42.1	
	comp=Z,28nm,1.4s						
TUC	**Tucson**	**90.56**	**57**	P	**P**	**23 51 24.1**	**-1.5**
TUC				pmax	pmax		
	comp=Z,28nm,1.5s						
TUC	**Tucson**	**90.56**	**57**	P	**P**	**23 51 27.1**	**+1.5**
	baz=253						
U15A	**North Rim**	**90.63**	**52**	P	**P**	**23 51 25.7**	**-0.4**
U15A				IAmb	IAmb	23 51 31.4	
	comp=Z,19nm,0.9s						
EPYK	**Eagle Plains**	**90.74**	**19**	IAMs_20	IAMs_20	00 25 17.3	
	comp=Z,686nm,22.0s						
EPYK	**Eagle Plains**	**90.74**	**19**	P	**P**	**23 51 26.0**	**+0.4**
	baz=232						
C26K	**Camden Bay**	**90.78**	**15**	P	**P**	**23 51 26.7**	**+1.1**
	baz=225						
C27K	**Jago River**	**90.87**	**15**	P	**P**	**23 51 27.2**	**+1.1**
	baz=226						
WUAZ	**Wupatki**	**91.06**	**54**	P	**P**	**23 51 29.7**	**+1.7**
	baz=252						
PMSA	**Palmer Station**	**91.22**	**160**	LR	LR	00 29 57.1	
	comp=Z,171nm,18.0s,baz=162,slow=34						
NEW	**Newport**	**91.23**	**40**	LR	LR	00 28 14.8	
	comp=Z,298nm,18.5s,baz=252,slow=33						
HLID	**Hailey**	**91.37**	**45**	IAMs_20	IAMs_20	00 24 29.0	
	comp=Z,650nm,20.0s						
HLID	**Hailey**	**91.37**	**45**	P	**P**	**23 51 30.9**	**+1.6**
	baz=251						
DUG	**Dugway, Tooele**	**91.42**	**49**	P	**P**	**23 51 28.1**	**-1.4**
DUG				IAmb	IAmb	23 51 57.1	
	comp=Z,20nm,1.5s						
DUG				IAMs_20	IAMs_20	00 23 32.8	
	comp=Z,930nm,21.0s						
DUG	**Dugway, Tooele**	**91.42**	**49**	P	**P**	**23 51 28.1**	**-1.4**
DUG				pmax	pmax		
	comp=Z,20nm,1.5s						
DUG	**Dugway, Tooele**	**91.42**	**49**	P	**P**	**23 51 31.0**	**+1.5**
	baz=252						
DUN6	**Lazy B Ranch**	**92.00**	**57**	P	**P**	**23 51 31.0**	**-1.4**
HWUT	**Hardware Ranch**	**92.75**	**48**	IAMs_20	IAMs_20	00 24 26.6	

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      comp=Z,597nm,20.0s
INK   Inuvik            92.88  18    LR        LR        00 27 56.5
      comp=Z,424nm,20.4s,baz=210,slow=32
NVL   N'lazarevskaya    92.89 188  eP          P         23 51 29.7  -5.9
NVL                                eS          SKSac     00 02 03.3  -5.3
NVL                                  pmax      pmax
      comp=Z,6.0nm,0.9s
NVL                                  MLR       MLR
      comp=Z,605nm,17.0s
BSUT  Blindstream Ca    93.01  49    P         P         23 51 34.4  -2.8
BSUT                                 IAmb      IAmb      23 51 49.5
      comp=Z,20nm,1.6s
P18A  Preston Nutter    93.13  50    P         P         23 51 36.2  -1.5
SNAA  Sanae             93.31 183⇑ eP          P         23 51 38.2  +0.5
SNAA                                 pmax      pmax
      comp=Z,5.0nm,1.0s
AHID  Auburn Hatcher    93.42  47    IAMs_20   IAMs_20   00 24 12.4
      comp=Z,639nm,22.0s
WMQ   Urumqi            93.53 314  ⇓P          P         23 51 40.0  +0.9
WMQ                                  pP        pP        23 51 42.5  -1.9
WMQ                                  S         S         00 02 44.2  -2.8
WMQ                                  pmax      pmax
      comp=Z,25nm,1.9s
WMQ                                  pmax      pmax
      comp=Z,350nm,5.7s
WMQ                                  LR        LR
      comp=Z,290nm,18.3s
WMQ                                  LR        LR
      comp=Z,240nm,22.1s
FXWY  Fox Creek         93.73  46    IAMs_20   IAMs_20   00 24 49.5
      comp=Z,819nm,22.0s
MVCO  Mesa Verde        93.77  53    P         P         23 51 41.8  +1.2
      baz=254
BOZ   Bozeman (W)       93.90  44    IAMs_20   IAMs_20   00 27 18.9
      comp=Z,572nm,19.0s
BOZ   Bozeman (W)       93.90  44    P         P         23 51 42.1  +1.2
      baz=253
MOOW  Moose Ponds       93.96  46    IAMs_20   IAMs_20   00 25 51.4
      comp=Z,809nm,20.0s
FLWY  Flagg Ranch       94.09  46    IAMs_20   IAMs_20   00 25 13.9
      comp=Z,871nm,22.0s
Y22D  IRIS PASSCAL I    94.17  56    IAMs_20   IAMs_20   00 25 46.0
      comp=Z,871nm,20.0s
PCHI  Peechi            94.40 280  eP          P         23 51 43.1  -0.5
LKWY  Lake              94.43  45    IAMs_20   IAMs_20   00 27 24.0
      comp=Z,1μm,20.0s
BW06  Boulder Array     94.51  47    IAMs_20   IAMs_20   00 25 08.2
      comp=Z,635nm,22.0s
PDAR  Pinedale Array    94.51  47    P         P         23 51 45.9  +2.1
      comp=Z,0.6nm,0.7s,baz=230,slow=3.7,SNR=5.3
PDAR                                 LR        LR        00 29 51.4
      comp=Z,307nm,18.4s,baz=258,slow=33
      comp=Z,0.6nm,0.7s
O20A  White River Ci    94.75  50    P         P         23 51 45.9  +1.0
      baz=254
ANMO  Albuquerque       94.76  55    LR        LR        00 25 36.8
      comp=Z,785nm,21.8s,baz=339,slow=30
ANMO  Albuquerque       94.76  55    IAMs_20   IAMs_20   00 24 18.7
      comp=Z,957nm,21.0s
ANMO  Albuquerque       94.76  55⇓eP           P         23 51 46.8  +1.7
ANMO                                 pmax      pmax
      comp=Z,13nm,3.5s
ANMO  Albuquerque       94.76  55    P         P         23 51 46.2  +1.0
      baz=255
MNTX  Cornudas Mount    94.81  59    P         P         23 51 46.1  +0.9
      baz=255
RLMT  Red Lodge         95.36  45    IAMs_20   IAMs_20   00 28 39.6
      comp=Z,846nm,19.0s
DGZ   Jazzator, Alta    95.42 320ceP           P         23 51 47.5  -0.3
DGZ                                  pmax      pmax
      comp=Z,13nm,1.0s
SMCO  Snowmass          95.44  51    IAMs_20   IAMs_20   00 27 35.6
      comp=Z,877nm,19.0s
TX31  Lajitas Ar. Si    95.66  61    P         P         23 51 48.2  -1.1
TX32  Lajitas Array     95.66  61    P         P         23 51 47.6  -1.6
TXAR  Lajitas Array     95.66  61    P         P         23 51 50.3  +1.0
      comp=Z,1.0nm,0.8s,baz=240,slow=4.2,SNR=7.5
TXAR                                 LR        LR        00 27 00.6
      comp=Z,504nm,20.6s,baz=250,slow=30
      comp=Z,1.0nm,0.8s
RWWY  Rawlins           95.91  49    IAMs_20   IAMs_20   00 28 04.2
      comp=Z,659nm,21.0s
C36M  Paulatuk          96.37  19    P         P         23 51 50.9  -0.5
      baz=244
ISCO  Idaho Springs     96.62  51    IAMs_20   IAMs_20   00 29 44.6
      comp=Z,936nm,20.0s
PHWY  Pilot Hill        97.09  49    IAMs_20   IAMs_20   00 29 47.1
      comp=Z,541nm,19.0s
A36M  Sachs Harbour     97.19  17    P         P         23 51 54.1  -1.0
A36M  Sachs Harbour     97.19  17    P         P         23 51 54.8  -0.3
      baz=243
YKA   Yellowknife Ar    97.41  27    P         P         23 51 56.0  -0.2
      comp=Z,3.8nm,0.8s,baz=253,slow=4.5,SNR=40
YKA                                  LR        LR        00 30 05.1
      comp=Z,230nm,19.8s,baz=273,slow=32
      comp=Z,3.8nm,0.8s
YKA   Yellowknife Ar    97.41  27    P         P         23 51 53.5  -2.7
BRIGG Briggsdale        97.76  50    IAMs_20   IAMs_20   00 28 16.9
      comp=Z,788nm,20.0s
MK31  Makanchi Array    97.99 316    P         P         23 51 58.6  -0.7
MK31  Makanchi Array    97.99 316    P         P         23 51 58.6  -0.7
MK31                                 pmax      pmax
      comp=Z,17nm,1.1s
MKAR  Makanchi Array    98.00 316    P         Pdif      23 51 59.5  +0.1
      comp=Z,7.5nm,0.8s,baz=96,slow=6.2,SNR=77
MKAR                                 PP        PP        23 55 52.4  -6.0
      comp=Z,1.3nm,1.0s,baz=115,slow=8.1,SNR=4.8
MKAR                                 PKiKP     PKiKP     23 56 32.4  -0.3
      comp=Z,0.2nm,0.6s,baz=136,slow=1.3,SNR=4.2
      comp=Z,7.5nm,0.8s
MKAR  Makanchi Array    98.00 316    P         P         23 51 59.0  -0.3
ZAA0  Zalesovo Array    98.12 324    P         P         23 51 58.5  -1.1
ZAA0                                 IAmb      IAmb      23 51 59.9
      comp=Z,9.5nm,1.1s
ZALV  Zalesovo Beam     98.12 324    P         P         23 51 58.7  -1.0
      comp=Z,4.3nm,0.8s,baz=113,slow=4.5,SNR=23
ZALV                                 LR        LR        00 36 49.6
      comp=Z,144nm,19.1s,baz=100,slow=36
      comp=Z,4.3nm,0.8s
ZALV  Zalesovo Beam     98.12 324    P         P         23 51 56.8  -2.8
MAKZ  Makanchi          98.21 316    P         P         23 51 59.5  -0.8
MAKZ  Makanchi          98.21 316    P         P         23 51 59.5  -0.8
MAKZ                                 pmax      pmax
      comp=Z,27nm,1.3s
MAKZ                                 MLR       MLR
      comp=Z,200nm,20.0s
RSSD  Black Hills       98.74  47    IAMs_20   IAMs_20   00 31 40.2
      comp=Z,737nm,20.0s
JCT   Junction City     99.19  61    IAMs_20   IAMs_20   00 33 00.5
      comp=Z,644nm,19.0s
OGNE  Ogallala          99.54  50    IAMs_20   IAMs_20   00 29 03.9
      comp=Z,712nm,21.0s
H03S2 Juan Fernandez    99.82 129    T         T         01 43 13.7
      baz=243,slow=74,SNR=5.2
H03S1 Juan Fernandez    99.84 129    T         T         01 43 16.5
      baz=243,slow=74,SNR=5.5
H03S3 Juan Fernandez    99.84 129    T         T         01 43 16.1
      baz=243,slow=74,SNR=5.2
H03N2 Juan Fernandez    99.99 129    T         T         01 43 26.7
      baz=271,slow=76,SNR=11
H03N3 Juan Fernandez    99.99 129    T         T         01 43 28.3
      baz=271,slow=76,SNR=17
H03N1 Juan Fernandez   100.00 129    T         T         01 43 28.0
      baz=271,slow=76,SNR=17
NRIK  Noril'sk         100.64 339    P         Pdif      23 52 09.8  -0.7
      comp=Z,1.9nm,0.7s,baz=128,slow=4.7,SNR=5.6
NRIK  Noril'sk         100.64 339⇓eP           Pdif      23 52 10.4  -0.1
NRIK                                 pmax      pmax
      comp=Z,2.0nm,0.9s
NRIK                                 MLR       MLR
      comp=Z,277nm,19.0s
CBKS  Cedar Bluff      100.86  53    IAMs_20   IAMs_20   00 30 50.2
      comp=Z,781nm,21.0s
WMOK  Wichita Mounta   100.87  57    IAMs_20   IAMs_20   00 28 56.5
      comp=Z,621nm,22.0s
435B  Jarrell          101.12  61    IAMs_20   IAMs_20   00 29 00.7
      comp=Z,737nm,21.0s
KURK  Kurchatov        101.17 320    Pdif      Pdif      23 52 12.5  -0.8
KURK  Kurchatov        101.17 320  i P         Pdif      23 52 12.5  -0.8
KURK                                 MLR       MLR
      comp=Z,400nm,20.0s
KURBB Kurchatov Arra   101.20 320    P         Pdif      23 52 13.0  -0.5
      comp=Z,0.7nm,0.9s,baz=118,slow=3.1,SNR=6.3
KURBB                                PP        PP        23 56 20.7  -2.0
      comp=Z,0.7nm,0.7s,baz=104,slow=7.1,SNR=5.5
OK038 West end E0370   101.22  55    IAMs_20   IAMs_20   00 30 44.7
      comp=Z,797nm,20.0s
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OK035 E0210 Rd and N   101.29  55    IAMs_20   IAMs_20   00 34 08.4
      comp=Z,746nm,20.0s
OK032 Salt Plains WL   101.70  55    IAMs_20   IAMs_20   00 28 39.3
      comp=Z,766nm,21.0s
FFC   Flin Flon        102.03  36    IAMs_20   IAMs_20   00 32 30.5
      comp=Z,709nm,20.0s
OK033 Mehan            102.58  56    IAMs_20   IAMs_20   00 30 11.8
      comp=Z,918nm,21.0s
OK046 Pawnee Station   102.66  55    IAMs_20   IAMs_20   00 32 36.9
      comp=Z,861nm,20.0s
OK052 Battle Ridge R   102.68  56    IAMs_20   IAMs_20   00 32 12.4
      comp=Z,817nm,20.0s
TUL1  Leonard          103.48  56    IAMs_20   IAMs_20   00 30 51.5
      comp=Z,850nm,21.0s
ECSD  EROS Data Cent   103.96  48    IAMs_20   IAMs_20   00 37 05.2
      comp=Z,613nm,20.0s
MIAR  Mount Ida        105.07  58    IAMs_20   IAMs_20   00 30 19.1
      comp=Z,573nm,22.0s
BVAR  Borovoye Array   106.50 321    PKiKP     PKiKP     23 56 47.7  -0.2
      comp=Z,0.6nm,0.6s,baz=126,slow=2.6,SNR=3.6
TGUH  Tegucigalpa,Un   107.35  80    IAMs_20   IAMs_20   00 29 11.3
      comp=Z,612nm,20.0s
CCM   Cathedral Cave   107.36  54    IAMs_20   IAMs_20   00 32 31.2
      comp=Z,681nm,19.0s
OXF   Oxford           108.49  58    IAMs_20   IAMs_20   00 42 09.4
      comp=Z,535nm,18.0s
WVT   Waverly          109.91  57    IAMs_20   IAMs_20   00 38 04.9
      comp=Z,502nm,20.0s
WCI   Wyandotte Cave   111.27  55    IAMs_20   IAMs_20   00 35 11.6
      comp=Z,803nm,21.0s
P49A  Miami Univ. Ec   112.54  53    IAMs_20   IAMs_20   00 35 47.2
      comp=Z,794nm,22.0s
LPAZ  La Paz           116.32 117    PKP       PKPdf     23 57 08.2  -0.1
      comp=Z,1.5nm,0.7s,baz=296,slow=6.0,SNR=3.6
SADO  Sadowa           116.51  47    PKP       PKiKP     23 57 07.3  +0.2
      comp=Z,9.3nm,1.0s,baz=295,slow=4.5,SNR=1.9
CBN   Corbin Frederi   118.29  55    IAMs_20   IAMs_20   00 43 39.5
      comp=Z,693nm,20.0s
CPUP  Villa Florida    119.64 133    PKP       PKPdf     23 57 13.3  -0.4
      comp=Z,1.0nm,0.5s,baz=310,slow=5.0,SNR=3.7
APA   Apatity          119.92 342⇓iPKIKP       PKiKP     23 57 17.8  +4.8
APA                                  pmax      pmax
      comp=Z,7.0nm,1.1s
PAL   Palisades        120.72  51    IAMs_20   IAMs_20   00 43 23.1
      comp=Z,601nm,21.0s
ARCES ARCESS Array B   120.74 346    PKP       PKPdf     23 57 13.9  -0.6
      comp=Z,2.9nm,0.6s,baz=34,slow=1.5,SNR=21
KLMR  Klimovskoe       121.32 333  ePKPdf      PKPdf     23 57 13.5  -2.3
KLMR                                 AMP                 23 57 29.3
      comp=Z,20nm,1.7s
KLMR                                 LR        LR        00 43 13.6
KLMR  Klimovskoe       121.32 333  ePKIKP      PKPdf     23 57 13.5  -2.3
KLMR                                 pmax      pmax
      comp=Z,20nm,1.7s
SCHQ  Schefferville    122.06  34    PKP       PKPdf     23 57 17.0  -0.4
      comp=Z,2.6nm,0.8s,baz=240,slow=7.2,SNR=5.2
BOSA  Boshof           123.71 220    PKP       PKPdf     23 57 21.1  -0.5
      comp=Z,1.3nm,0.7s,baz=121,slow=0.9,SNR=4.7
SAML  Samuel           123.83 112    PKPdf     PKPdf     23 57 19.7  -2.3
SAML  Samuel           123.83 112    PKIKP     PKPdf     23 57 19.7  -2.3
VRH   Novokhopyorsk    124.13 322    PKIKP     PKiKP     23 57 21.9  +0.1
VRH                                  pmax      pmax
      comp=Z,17nm,1.9s
PTLB  Pontes e Lacer   124.33 121    PKPdf     PKPdf     23 57 21.0  -2.0
MOS   Moscow           124.57 329  i PKIKP     PKPdf     23 57 21.5  -0.7
MOS                                e                     23 59 05.8
GNI   Garni            124.97 309⇑iPKIKP       PKiKP     23 57 25.2  +1.1
GNI                                  pmax      pmax
      comp=Z,12nm,1.7s
ZEI   Tsey             125.07 312  i PKIKP     PKiKP     23 57 37.9  +14
ZEI                                  pmax      pmax
      comp=Z,5.0nm,1.0s
OBN   Obninsk          125.39 328⇑iPKIKP       PKiKP     23 57 24.7  +0.6
OBN                                e                     23 57 38.4
OBN                                  pmax      pmax
      comp=Z,8.0nm,0.5s
VORR  Voronezh         125.42 324  ePKIKP      PKiKP     23 57 24.9  +0.6
VORR                                 pmax      pmax
      comp=Z,10.0nm,1.5s
RAYN  Ar Rayn          125.49 288    PKPdf     PKPdf     23 57 22.6  -2.4
RAYN  Ar Rayn          125.49 288    IAMs_20   IAMs_20   00 48 07.8
      comp=Z,420nm,21.0s
RAYN  Ar Rayn          125.49 288    PKIKP     PKPdf     23 57 22.6  -2.4
KBZ   Khabaz           125.56 313    PKP       PKiKP     23 57 25.6  +0.8
      comp=Z,1.0nm,0.7s,baz=113,slow=4.7,SNR=4.9
VSR   Storozhevoye     125.62 323  ePKIKP      PKPdf     23 57 22.8  -1.6
VSR                                  pmax      pmax
      comp=Z,2.0nm,0.6s
KIV   Kislovodsk       125.66 314  i PKIKP     PKPdf     23 57 24.3  -0.5
KIV                                e                     23 59 16.0
KIV                                ePS         PS        00 09 15.2  -3.6
KIV                                eSS         SS        00 16 15.1  -1.0
KIV                                  pmax      pmax
      comp=Z,5.0nm,1.1s
AKH   Akhalkalaki      125.66 310    PKPdf     PKPdf     23 57 24.2  -0.8
AKH   Akhalkalaki      125.66 310    PKIKP     PKPdf     23 57 24.2  -0.8
FINES FINESS Array B   126.30 339    PKP       PKPdf     23 57 24.9  -0.4
      comp=Z,4.6nm,0.9s,baz=122,slow=6.9,SNR=7.0
FINES FINESS Array B   126.30 339c iPKIKP      PKiKP     23 57 25.8   0.0
FINES                                pmax      pmax
      comp=Z,5.0nm,0.9s
ATD   Arta Tunnel      126.76 273    IAMs_20   IAMs_20   00 52 43.3
      comp=Z,542nm,19.0s
KMBO  Kilima Mbogo     128.87 256    PKPdf     PKPdf     23 57 29.2  -2.8
KMBO  Kilima Mbogo     128.87 256    PKIKP     PKPdf     23 57 29.2  -2.8
MNK   Minsk            129.98 331  i PKP       PKPdf     23 57 32.6   0.0
      comp=E,1.0nm,1.0s
MNK                                i PKP       PKPdf     23 57 32.6   0.0
      comp=N,48nm,1.0s
MNK                                i PKP       PKPdf     23 57 32.6   0.0
      comp=Z,5.0nm,1.0s,baz=54
MNK                                i PP        PP        23 59 44.8  +0.5
MNK                                i SKP                 00 01 07.8
MNK                                i PKS       PKSdf     00 01 09.1  +0.3
MNK                                i PPP       PPP       00 02 32.1
MNK                                i SKS       SKSdf     00 04 44.1  +0.7
MNK                                i SKKS                00 08 14.8
MNK                                i SS        SS        00 17 11.4  +3.1
MNK                                i SSS       SSS       00 21 59.5
MNK                                i LQ        LQ        00 45 22.9
MNK                                i LR        LR        00 49 12.9
MNK                                i LRM       MLR       00 55 44.8
      comp=Z,270nm,20.1s
MNK                                i LRM       MLR       00 55 49.3
      comp=E,33nm,20.1s
MNK                                i LRM       MLR       00 55 55.4
      comp=N,371nm,20.1s
MNK   Minsk            129.98 331  i PKIKP     PKPdf     23 57 32.5   0.0
MNK                                i                     23 59 44.8
MNK                                i PPP       PPP       00 02 32.1
MNK                                i                     00 04 44.1
MNK                                i SS        SS        00 17 11.4  +3.1
MNK                                i SSS       SSS       00 21 59.5
MNK                                  pmax      pmax
      comp=N,48nm,1.0s
MNK                                  pmax      pmax
      comp=E,1.0nm,1.0s
MNK                                  pmax      pmax
      comp=Z,5.0nm,1.0s
MNK                                  MLR       MLR
      comp=Z,270nm,20.0s
MNK                                  MLR       MLR
      comp=E,33nm,20.0s
MNK                                  MLR       MLR
      comp=N,371nm,20.0s
NACGM Naroch           130.25 332  ePKP        PKiKP     23 57 34.4  +0.5
      comp=Z,10.0nm,1.2s,baz=53
FURI  Furi             130.28 269    IAMs_20   IAMs_20   00 47 24.5
      comp=Z,379nm,21.0s
NB2   NORSAR Subarra131.11 345       PKPdf     PKiKP     23 57 35.4  -0.1
      comp=Z,2.2nm,1.1s,baz=31,slow=1.9
NOA   NORSAR Array B131.11 345       PKP       PKPdf     23 57 34.7  +0.1
      comp=Z,0.9nm,0.7s,baz=37,slow=2.0,SNR=5.6
AKASG Malin Array Be   131.44 326    PKP       PKPdf     23 57 35.4   0.0
      comp=Z,0.4nm,0.4s,baz=56,slow=1.9,SNR=9.3
AKASG Malin Array Be   131.44 326c iPKIKP      PKPdf     23 57 35.7  +0.2
AKBB  Malin Array Si   131.44 326⇑iPKIKP       PKiKP     23 57 36.1  -0.3
BDFB  Brasilia         133.05 129    PKP       PKPdf     23 57 39.7   0.0
      comp=Z,3.2nm,0.7s,baz=231,slow=3.4,SNR=6.3
CSS   Mathiatis        134.93 305    IAMs_20   IAMs_20   01 03 27.2
      comp=Z,315nm,19.0s
MBAR  Mbarara          135.13 254⇑iPKIKP       PKPdf     23 57 43.6  -0.2
MORC  Moravsky Berou   137.88 332  ePKP        PKPdf     23 57 43.9  -3.7
OSTC  Ostas            137.91 333  ePKPDF      PKPdf     23 57 47.8  +0.2
OSTC  Ostas            137.91 333  ePKIKP      PKPdf     23 57 47.8  +0.2
PSZ   Piszkesteto      138.01 328    IAMs_20   IAMs_20   01 06 33.5
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      comp=Z,342nm,20.0s
KRLC  Kraliky          138.01 333  ePKPDF      PKPdf     23 57 47.9   0.0
KRLC  Kraliky          138.01 333  ePKIKP      PKPdf     23 57 47.9   0.0
DPC   Dobruska-Polom   138.02 333  ePKPpre     PKPpre    23 57 39.6
DPC   Dobruska-Polom   138.02 333  ePKHKP      PKPpre    23 57 39.6
VYHS  Vyhne            138.16 329  ePKIKP      PKiKP     23 57 51.0  +0.8
VYHS  Vyhne            138.16 329  ePKP        PKiKP     23 57 51.0  +0.8
BRG   Berggiesshubel   138.62 335  ePKP        PKiKP     23 57 54.4  +3.3
BRG                                  Amp                 23 57 57.0
      comp=Z,13nm,1.6s
BRG   Berggiesshubel   138.62 335  ePKIKP      PKiKP     23 57 54.3  +3.3
BRG                                  pmax      pmax
      comp=Z,13nm,1.6s
VRAC  Vranov           138.65 332  ePKP        PKPdf     23 57 48.9  -0.1
CLL   Collm            138.65 336  ePKPdf      PKPdf     23 57 50.0  +1.1
CLL                                ePP         PP        00 00 42.0  +2.8
CLL                                ePPS        PPS       00 13 00.0
CLL                                ex          x         00 15 54.0
CLL                                eSS         SS        00 19 00.0  +7.5
CLL                                ex          x         00 21 18.0
CLL                                eSSS        SSS       00 24 06.0
CLL                                  AMS       AMS       01 02 00.0
      comp=Z,300nm,19.5s
CLL   Collm            138.65 336  ePKIKP      PKPdf     23 57 50.0  +1.1
CLL                                  MLR       MLR
      comp=Z,300nm,19.5s
KRUC  Moravsky         138.92 332  ePKP        PKPdf     23 57 48.7  -0.8
MODS  Modra-Piesok     138.99 330  ePKIKP      PKiKP     23 57 53.1  +1.2
MODS  Modra-Piesok     138.99 330  ePKP        PKiKP     23 57 53.1  +1.2
NKC   Novy Kostel      139.72 336  ePKPDF      PKiKP     23 57 54.1  +0.8
NKC   Novy Kostel      139.72 336  ePKIKP      PKiKP     23 57 54.1  +0.8
CKRC  Cesky Krumlov    140.03 333  ePKPDF      PKiKP     23 57 54.1  +0.1
CKRC  Cesky Krumlov    140.03 333  ePKIKP      PKiKP     23 57 54.1  +0.1
KHC   Kasperske Hory   140.11 334  ePKPDF      PKPdf     23 57 48.3  -3.4
KHC   Kasperske Hory   140.11 334  ePKIKP      PKPdf     23 57 48.3  -3.4
GERES GERESS Array B   140.28 334    PKhKP     PKPpre    23 57 46.0
      comp=Z,1.3nm,0.8s,baz=48,slow=2.0,SNR=9.0
WTTA  Wattenberg       142.38 334    PKP       PKPdf     23 57 51.0  -5.1
      comp=Z,7.8nm,1.0s
ABTA  Abfaltersbach    142.39 332  ePKP        PKPdf     23 57 51.0  -5.0
      comp=Z,8.7nm,1.1s
MOTA  Moosalm          142.54 334  ePKP        PKPdf     23 57 51.8  -4.5
      comp=Z,11nm,1.3s
SQTA  Sankt Quirin     142.60 334  ePKP        PKPdf     23 57 52.4  -4.0
      comp=Z,6.3nm,0.7s
FETA  Feichten         142.96 334    PKP       PKPdf     23 57 53.9  -3.2
      comp=Z,17nm,1.2s
DAVA  Damuels          143.09 335    PKP       PKPab     23 57 53.3  +0.6
      comp=Z,8.9nm,0.9s
FUORN Ofenpass-Fuorn   143.47 334    PKPdf     PKPbc     23 57 55.9  +0.6
SENIN Lac Senin/Sane   144.87 337    PKPdf     PKPab     23 57 58.0  -1.5
BNI   Bardonecchia     146.20 336    PKPdf     PKPdf     23 58 01.3  -1.4
BNI   Bardonecchia     146.20 336    PKIKP     PKPdf     23 58 01.3  -1.4
KEST  Kesra            151.97 321    PKPbc     PKPbc     23 58 18.8  +0.1
      comp=Z,9.5nm,0.8s,baz=121,slow=8.5,SNR=5.4
ESDC  Sonseca Array    154.47 346    PKP       PKPdf     23 58 15.8  +0.2
      comp=Z,0.5nm,0.9s,baz=259,slow=1.5,SNR=4.0
ESDC                                 PKPbc     PKiKP     23 58 24.5  +0.5
      comp=Z,1.9nm,1.0s,baz=8.2,slow=3.9,SNR=8.1
ESDC                                 PKPab     PKPab     23 58 38.1  -0.2
      comp=Z,2.3nm,0.7s,baz=11,slow=3.8,SNR=13
TORD  Torodi Ar. Bea   166.73 264    PKP       PKPdf     23 58 29.4  -0.2
      comp=Z,1.4nm,0.8s,baz=31,slow=1.0,SNR=8.0
TORD                                 PKPab     PKPab     23 59 31.9  -0.6
      comp=Z,6.7nm,1.1s,baz=98,slow=3.7,SNR=5.6
DBIC  Dimbokro         169.24 220    PKPab     PKPab     23 59 43.2  -0.1
      comp=Z,3.1nm,0.8s,baz=135,slow=4.3,SNR=1.6
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ISK ***07*** *23:43:08.4, 36°.29N×26°.99E, h100^{km}, ML2.9/6*
ATH ***07*** *23:43:09.3, 36°.33N×26°.90E, h95^{km}±9^{km}, ML3.0/3, Error ellipse: s-maj=10.0km s-min=2.2km az=133.0*
THE ***07*** *23:43:10.4, 36°.28N×26°.92E, h95^{km}±6^{km}, ML3.1/2, Error ellipse: s-maj=7.0km s-min=1.1km az=113.0*
GII ***07*** *23:43:10.2±0.0, 35°.82N×27°.53E, h1^{km}±1^{km}, Mm3.3/3*
DDA ***07*** *23:43:11.0±0.0, 36°.32N×27°.19E, h97^{km}±3^{km}, ML2.5*
ISC 07 23:43:07.6±1.7**, 36°.17N**±0°.05×**27°.11E**±0°.07**, h117**^{km}±9^{km}**,**
n43, σ1ˢ.**22**/70**, Dodecanese Islands**

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Code  Station Name      Δ°   AZ°   Phase ID            Time       Res
                                   Op        ISC       h  m  s    ISC
KARP  Karpathos         0.62 176   P         Pn        23 43 26.7  +0.6
KARP                               S         Sn        23 43 38.6  -1.4
      1μm,0.2s
KARP  Karpathos         0.62 176   Pg        Pn        23 43 26.9  +0.8
KARP                               Sg        Sn        23 43 40.4  +0.3
KARP  Karpathos         0.62 176   P         Pn        23 43 26.8  +0.6
KARP                               S         Sn        23 43 40.3  +0.3
KARP                               AML       AML       23 43 43.7
      comp=N,2592μm,0.2s
KARP                               AML       AML       23 43 44.2
      comp=E,1437μm,0.1s
DAT   Datca             0.68  34   P         Pn        23 43 26.0  -0.6
DAT                                S         Sn        23 43 38.4  -2.6
DAT   Datca             0.68  34   P         Pn        23 43 26.1  -0.5
DAT                                S         Sn        23 43 38.7  -2.3
DAT                              i AML       AML       23 43 39.0
      comp=E,62nm,0.3s
DAT                              i AML       AML       23 43 43.0
      comp=E,58nm,0.9s
ARG   Arkhangelos       0.83  86   P         Pn        23 43 29.0  +1.3
ARG                                S         Sn        23 43 43.1  +0.2
      comp=E,702nm,0.2s
ARG   Arkhangelos       0.83  86   Pg        Pn        23 43 28.7  +1.0
ARG                                Sg        Sn        23 43 43.5  +0.6
ARG   Arkhangelos       0.83  86   P         Pn        23 43 29.0  +1.3
ARG                                S         Sn        23 43 43.7  +0.8
ARG                                AML       AML       23 43 45.1
      comp=E,1788μm,0.3s
ARG                                AML       AML       23 43 45.2
      comp=N,1001μm,0.2s
TURN  Turunc            1.10  56   Pn        Pn        23 43 30.7  +0.4
TURN  Turunc            1.10  56   P         Pn        23 43 30.8  +0.4
TURN                             i AML       AML       23 43 47.0
      comp=N,185nm,0.3s
TURN                               S         Sn        23 43 47.2  -0.5
TURN                             i AML       AML       23 43 48.0
      comp=N,179nm,0.4s
MLSB  Milas             1.25  25   Pn        Pn        23 43 31.7  -0.3
STIA  Sitia Lasithi     1.27 221   P         Pn        23 43 32.6  +0.4
ZKR   Zakros            1.27 215   P         Pn        23 43 33.4  +1.1
ZKR                                S         Sn        23 43 50.0  -1.0
ZKR   Zakros            1.27 215   Pn        Pn        23 43 33.4  +1.1
ZKR                                Sn        Sn        23 43 51.7  +0.7
ZKR   Zakros            1.27 215   P         Pn        23 43 33.1  +0.8
ZKR                                AML       AML       23 43 53.5
      comp=N,184μm,0.4s
ZKR                                AML       AML       23 43 53.6
      comp=E,287μm,0.3s
SANT  Santorini         1.35 279   P         Pn        23 43 31.3  -1.8
YER   Yerkesik          1.35  44   Pn        Pn        23 43 33.6  +0.4
DALY  Dalyan (Mula)     1.41  62   Pn        Pn        23 43 34.8  +1.1
MULA  Mugla, Merkez-    1.46  42   P         Pn        23 43 35.0  +0.5
MULA                               S         Sn        23 43 54.2  -0.7
MULA                             i AML       AML       23 43 55.0
      comp=E,86nm,0.7s
MULA                             i AML       AML       23 43 56.0
      comp=E,49nm,0.4s
SMG   Samos             1.55 352   P         Pn        23 43 33.6  -1.9
SMG   Samos             1.55 352   P         Pn        23 43 33.8  -1.7
AYDN  Tasoluk           1.61  22   P         Pn        23 43 35.8  -0.4
IZZE  Mula-Seydike      1.73  80   P         Pn        23 43 38.6  +1.0
IZZE                               S         Sn        23 44 00.7  +0.2
IZZE                             i AML       AML       23 44 02.0
      comp=E,87nm,0.3s
IZZE                             i AML       AML       23 44 03.0
      comp=E,151nm,0.3s
CAME  Cameli-Denizli    1.93  66   Pn        Pn        23 43 41.5  +1.3
CAME                               Sn        Sn        23 44 05.9  +0.8
TAVA  DENIZLI_Tavas     1.94  48   P         Pn        23 43 41.0  +0.7
TAVA                               S         Sn        23 44 03.9  -1.4
TAVA                             i AML       AML       23 44 05.0
      comp=E,14nm,0.2s
TAVA                             i AML       AML       23 44 06.0
      comp=E,20nm,0.4s
CAEL  Denizli, Camel    2.02  61   P         Pn        23 43 42.7  +1.4
CAEL                               S         Sn        23 44 07.5  +0.4
CAEL                             i AML       AML       23 44 11.0
      comp=E,53nm,0.3s
CAEL                             i AML       AML       23 44 12.0
      comp=E,50nm,0.6s
AKAS  Kas               2.02  87   Pn        Pn        23 43 43.5  +2.2
AKAS  Kas               2.02  87   P         Pn        23 43 43.0  +1.7
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AKAS				S	Sn	23 44 06.7	-0.4
AKAS				i AML	AML	23 44 11.0	
	comp=E,112nm,0.3s						
AKAS				i AML	AML	23 44 13.0	
	comp=E,74nm,0.3s						
GOLH	Golhisar	2.24	61	P	Pn	23 43 45.9	+1.8
GOLH				S	Sn	23 44 12.8	+0.7
GOLH				i AML	AML	23 44 14.0	
	comp=E,45nm,0.2s						
GOLH				i AML	AML	23 44 20.0	
	comp=E,42nm,0.6s						
AKUM	Antalya-Kumluc	2.62	86	P	Pn	23 43 51.3	+2.5
AKUM				S	Sn	23 44 22.2	+1.7
AKUM				i AML	AML	23 44 25.0	
	comp=E,21nm,0.5s						
AKUM				i AML	AML	23 44 25.0	
	comp=E,45nm,0.3s						
BRDR	BURDUR-Merkez	2.82	56	P	Pn	23 43 52.5	+1.1
BRDR				S	Sn	23 44 24.4	-0.8
BRDR				i AML	AML	23 44 27.0	
	comp=E,12nm,0.5s						
BRDR				i AML	AML	23 44 29.0	
	comp=E,7.5nm,0.3s						
CSS	Mathiatis	5.21	102	Pn	Pn	23 44 24.4	+1.0
CSS				Sn	Sn	23 45 21.6	-0.8
GEM	Giv'at Ha'Em	7.64	110	Pn	Pn	23 44 56.7	+0.5
NATI	Neve Ativ	7.67	110	Pn	Pn	23 44 57.2	+0.6
NATI				Sn	Sn	23 46 20.6	-1.3
KZIT	Kziot	8.03	129	Pn	Pn	23 45 02.2	+0.7
DSI	Dead Sea	8.27	121	Pn	Pn	23 45 04.9	+0.2
MDBI	Mazsada	8.40	123	Pn	Pn	23 45 06.8	+0.3
MSBI	Mazada	8.40	123	Pn	Pn	23 45 07.8	+1.3
ZFRI	Zfri	8.77	127	Pn	Pn	23 45 12.1	+0.7
ZFRI				Sn	Sn	23 46 47.4	-1.1
KRMI	Paran Flat	8.78	131	Pn	Pn	23 45 11.6	-0.1
KRMI				Sn	Sn	23 46 46.3	-2.7
PRNI	Paran	8.79	129	Pn	Pn	23 45 12.6	+0.8
PRNI				Sn	Sn	23 46 47.6	-1.6
HRFI	Mount Harif	9.03	130	Pn	Pn	23 45 16.0	+0.9
HRFI				Sn	Sn	23 46 53.6	-1.4
EIL	Elat	9.24	132	Pn	Pn	23 45 19.1	+1.2
EIL				Sn	Sn	23 46 57.6	-2.4

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*IDC **08** 00:02:32.0±1.8, 52°.14N×170°.57W, h0^{km}, mb3.6/3, mbtmp3.6/4, ML2.9/1, MS4.3/7, Error ellipse: s-maj=73.0km s-min=32.9km az=160.0*

*NEIC **08** 00:02:37.4±2.9, 52°.1N±0°.1×170°.4W±0°.1, h33^{km}±15^{km}, Error ellipse: s-maj=20.3km s-min=8.2km az=167.0*

*AEIC **08** 00:02:38.1±2.1, 52°.18N±0°.09×170°.40W±0°.10, h21^{km}±8^{km}, ML3.1, ML3.6/6(NEIC), Error ellipse: s-maj=15.1km s-min=6.0km az=153.0*

ISC 08 00:02:36.7±1.1, **52°.1N**±0°.1×**170°.42W**±0°.08, **h31**^{km}, **n27**, σ**1^{s}.20**/19, **mb3.8**/3, **MS4.5**/7, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLES	Cleveland East	0.81	23		Pb	00 02 51.2	-1.1
CLES				Sn	Sb	00 03 01.9	-1.0
CLES				IAML		00 03 06.5	
	comp=E,3µm,0.2s						
CLES				IAML		00 03 07.7	
	comp=N,3µm,0.2s						
NIKH	Nikolski High	1.31	46	Pn	Pn	00 02 57.8	-1.0
NIKH				Sn	Sn	00 03 13.9	-1.3
UNV	Unalaska Valle	2.95	52		Sn	00 03 56.0	+0.3
UNV	Unalaska Valle	2.95	52	Pn	Pn	00 03 22.5	+1.1
AKUT	Akutan	3.47	52		Pn	00 03 29.5	+1.0
AKUT				IAML		00 04 19.8	
	comp=E,71nm,4.4s						
GSTR	Great Sitkin T	3.48	272	Pn	Pn	00 03 29.6	+0.8
ADK	Adak	3.88	270	Pn	Pn	00 03 34.5	+0.3
ADK				IAML		00 04 50.2	
	comp=E,107nm,3.8s						
KIWB	Kanaga Island	4.17	270	Pn	Pn	00 03 38.9	+0.7
SPIA	Saint Paul Isl	5.11	1	Pn	Pn	00 03 52.6	+1.6
M19K	Big River Lodg	13.12	35	Pn	Pn	00 05 43.5	+2.8
K20K	Telida	14.22	31	P	P	00 06 01.8	-1.0
PPLA	Purkeypile	14.54	35	P	P	00 06 07.0	+0.6
CAST	Castle Rocks	14.92	33	P	P	00 06 10.5	0.0
PETK	Petropavlovsk-	19.32	286	P	P	00 06 57.4	-1.7
	comp=E,0.2nm,0.3s,baz=86,slow=13,SNR=4.8						
	comp=E,0.8nm,0.5s						
YKA	Yellowknife Ar	30.92	48	P	P	00 08 50.2	0.0
	comp=E,0.2nm,0.7s,baz=287,slow=7.3,SNR=3.6						
	comp=E,0.2nm,0.7s						
H11S1	WAKE ISLAND Hy	38.02	217	T	T	00 50 29.1	
	baz=22,slow=76,SNR=15						
H11S2	WAKE ISLAND Hy	38.04	217	T	T	00 50 32.3	
	baz=22,slow=76,SNR=9.1						
H11S3	WAKE ISLAND Hy	38.04	217	T	T	00 50 33.4	
	baz=22,slow=76,SNR=6.9						
NRIK	Noril'sk	46.37	331	LR	LR	00 32 40.9	
	comp=E,205nm,21.3s,baz=120,slow=39						
TKL	Tuckaleechee C	60.91	68	LR	LR	00 37 59.3	
	comp=E,455nm,21.9s,baz=282,slow=35						
ARU	Arti	64.58	332	LR	LR	00 43 45.8	
	comp=E,139nm,21.5s,baz=90,slow=38						
AKTO	Aktyubinsk	69.93	329	LR	LR	00 48 13.2	
	comp=E,256nm,18.4s,baz=72,slow=39						
CMAR	Chiang Mai Arr	76.05	282	P	P	00 14 20.8	-0.3
	comp=E,0.8nm,0.4s,baz=16,slow=6.8,SNR=5.4						
	comp=E,0.8nm,0.4s						
KBZ	Khabaz	80.32	336	LR	LR	00 54 30.5	
	comp=E,101nm,18.7s,baz=70,slow=39						
ASAR	Alice Springs	89.72	229	P	P	00 15 31.5	-0.2
	comp=E,0.3nm,0.5s,baz=22,slow=4.7,SNR=4.4						
	comp=E,0.3nm,0.5s						
MMAI	Mount Meron Ar	92.29	339	LR	LR	01 04 07.5	
	comp=E,254nm,18.6s,baz=130,slow=40						
EIL	Elat	95.61	338	LR	LR	01 02 33.5	
	comp=E,240nm,19.9s,baz=109,slow=38						

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*IDC **08** 00:04:58.2±0.7, 52°.76S×19°.77E, h0^{km}, mb4.1/9, mbtmp4.1/9, MS4.0/7, Error ellipse: s-maj=37.4km s-min=16.7km az=83.0*

*NEIC **08** 00:04:59.5±1.1, 52°.7S±0°.1×19°.7E±0°.2, h10^{km}±1^{km}, mb4.6/14, Error ellipse: s-maj=24.3km s-min=22.3km az=163.0*

ISC 08 00:04:59.2±0.6, **52°.71S**±0°.10×**19°.7E**±0°.1, **h10**^{km}, **n35**, σ**0^{s}.81**/30, **mb4.5**/13, **MS3.7**/7, **Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	Sutherland	20.34	3	P	Pn	00 09 38.1	+0.4
	7.9nm,1.1s,baz=174,slow=9.2,SNR=2.3						
SUR				LR	LR	00 16 22.6	
	comp=Z,254nm,19.0s,baz=224,slow=34						
	7.9nm,1.1s						
TROLL	Troll, Antarti	20.77	195	P	Pn	00 09 43.3	+0.9
SNAA	Sanae	21.46	199	P	P	00 09 48.2	+0.9
SNAA	Sanae	21.46	199	P	P	00 09 47.6	+0.3
	4.8nm,0.7s,baz=47,slow=11,SNR=12						
SNAA				LR	LR	00 15 52.3	
	comp=Z,366nm,21.6s,baz=329,slow=30						
	4.8nm,0.7s						
SNAA	Sanae	21.46	199	P	P	00 09 47.1	-0.3
VNA2	Neumayer--Watz	21.93	204	P	P	00 09 54.4	+2.0
	baz=21,slow=4.0						
VNA3	Neumayer Olymp	22.70	204	P	P	00 10 02.0	+1.4
BOSA	Boshof	24.43	12	P	P	00 10 19.8	+1.8
	2.9nm,0.9s,baz=179,slow=11,SNR=3.8						
BOSA				LR	LR	00 18 32.5	
	comp=Z,182nm,19.4s,baz=228,slow=33						
	2.9nm,0.9s						
BOSA	Boshof	24.43	12	P	P	00 10 18.1	+0.1
BOSA				IAmb	IAmb	00 10 58.6	
	comp=Z,19nm,1.5s						
POGA	Pongola	26.88	24	P	P	00 10 40.7	+0.6
LBTB	Lobatse	28.02	11	LR	LR	00 20 23.3	
	comp=Z,179nm,19.8s,baz=228,slow=33						
BELA	Belgrano 2	31.71	199	P	P	00 11 22.4	-0.1
BELA				IAmb	IAmb	00 11 23.6	
	comp=Z,3.7nm,0.6s						
QSPA	South Pole Qui	37.52	180	P	P	00 12 13.3	+0.3
	comp=Z,5.7nm,0.6s,baz=260,slow=1.9,SNR=61						
	comp=Z,5.7nm,0.6s						
QSPA	South Pole Qui	37.52	180	P	P	00 12 13.0	0.0
QSPA				IAmb	IAmb	00 12 47.4	
	comp=Z,16nm,1.5s						
VNDA	Vanda	47.93	170	P	P	00 13 37.3	+0.3
	comp=Z,2.5nm,0.6s,baz=235,slow=6.9,SNR=16						
	comp=Z,2.5nm,0.6s						
VNDA	Vanda	47.93	170	P	P	00 13 36.8	-0.2
VNDA				IAmb	IAmb	00 14 16.8	
	comp=Z,5.5nm,1.2s						
SBA	Scott Base	48.13	171	P	P	00 13 39.6	+1.1
SBA				IAmb	IAmb	00 14 22.4	
	comp=Z,14nm,1.2s						
TRQA	Tornquist	56.16	250	P	P	00 14 38.5	-0.3
ITQB	Itaqui	58.92	261	P	P	00 14 57.8	-0.6
CPUP	Villa Florida	61.78	263	LR	LR	00 38 54.3	
	comp=Z,106nm,21.2s,baz=226,slow=33						
DBIC	Dimbokro	62.73	332	P	P	00 15 24.6	+0.3
	comp=Z,3.7nm,0.8s,baz=188,slow=5.9,SNR=4.1						
	comp=Z,3.7nm,0.8s						
CO01	Juntas del Tor	66.63	251	P	P	00 15 49.0	-1.1
CO01				IAmb	IAmb	00 15 51.8	
	comp=Z,3.4nm,0.9s						
TORD	Torodi Ar. Bea	67.40	341	P	P	00 15 54.9	+0.3
	comp=Z,0.8nm,0.9s,baz=186,slow=7.0,SNR=4.4						
	comp=Z,0.8nm,0.9s						
AC02	Maricunga	68.43	254	P	P	00 16 02.3	+0.5
AC02				IAmb	IAmb	00 16 37.8	
	comp=Z,7.6nm,1.5s						
AC01	Pan de Azucar	69.81	253	P	P	00 16 10.0	+0.2
SIV	San Ignacio	71.86	267	LR	LR	00 42 53.0	
	comp=Z,301nm,21.5s,baz=287,slow=32						
BBOO	Buckleboo	78.44	130	P	P	00 16 59.0	-1.0
BBOO				IAmb	IAmb	00 17 02.1	
	comp=Z,10nm,1.3s						
SAML	Samuel	78.62	270	P	P	00 17 00.9	-0.3
MDP	Montagnes des	83.46	287	LR	LR	00 50 03.1	
	comp=Z,232nm,20.8s,baz=320,slow=32						
ASAR	Alice Springs	84.96	123	P	P	00 17 34.8	+0.1
	comp=Z,0.5nm,0.5s,baz=208,slow=4.3,SNR=8.6						
	comp=Z,0.5nm,0.5s						
ASAR	Alice Springs	84.96	123	P	P	00 17 33.7	-1.0
WRA	Warramunga Arr	88.27	121	P	P	00 17 50.7	-0.2
	comp=Z,0.4nm,0.7s,baz=206,slow=4.2,SNR=4.7						
	comp=Z,0.4nm,0.7s						
PDAR	Pinedale Array	145.12	274	PKPbc	PKPbc	00 24 35.4	-0.6
	comp=Z,3.2nm,0.6s,baz=131,slow=5.1,SNR=35						
NVAR	Mina Array Bea	147.81	261	PKPbc	PKiKP	00 24 45.6	-0.3
	comp=Z,1.2nm,0.7s,baz=130,slow=3.4,SNR=7.3						
YKA	Yellowknife Ar	154.18	310	PKPbc	PKiKP	00 24 58.1	+0.2
	comp=Z,0.5nm,0.8s,baz=95,slow=2.1,SNR=5.4						
YKA				PKPab	pPKPab	00 25 13.0	-1.0
	comp=Z,0.6nm,0.6s,baz=96,slow=4.8,SNR=9.2						

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*JMA **08** 00:35:00.8±0.1, 36°.6N±0°.3×141°.2E±0°.7, h48^{km}±1^{km}, MV3.2/35, E OFF IBARAKI PREF*

*IDC **08** 00:35:02.3±6.9, 36°.22N×141°.16E, h69^{km}±54^{km}, mb2.7/2, mbtmp3.0/3, ML2.4/1, Error ellipse: s-maj=57.6km s-min=34.1km az=67.0*

ISC 08 00:34:55.9±2.0, **36°.50N**±0°.06×**141°.28E**±0°.08, **h12**^{km}±11^{km}, **n24**, σ**1^{s}.70**/25, **2D**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	0.58	255	i P	Pn	00 35 12.3	+2.4
JHYU				S	Sn	00 35 20.4	+1.0
JHO	Hitachi	0.58	281	⇓iP	Pn	00 35 11.5	+1.5
JHO				⇓S	Sn	00 35 19.3	-0.2
ONAJ	Iwakimizuishiy	0.72	328	i P	Pn	00 35 12.7	+0.8
ONAJ				S	Sb	00 35 21.1	+0.9
JFFD	Fukushimafurud	0.83	316	i P	Pn	00 35 14.3	+0.9
JYT	Yasato	0.92	253	P	Pn	00 35 16.6	+2.0
JYT				S	Sn	00 35 27.8	+0.1
JFK	Kawauchi	0.93	340	i P	Pn	00 35 15.6	+0.8
JOTO	OTAMA OYAMA	1.30	325	i P	Pg	00 35 21.9	+1.0
JOTO				S	Sg	00 35 37.1	-0.7
JMM	Marumori	1.42	344	P	Pg	00 35 23.2	0.0
JMM	Marumori	1.42	344	i P	Pg	00 35 22.8	-0.4
JMM				S	Sn	00 35 39.0	-1.1
MJAR	Matsushiro Arr	2.47	272	P	Pb	00 35 38.9	-1.4
	0.9nm,0.3s,baz=86,slow=15,SNR=28						
MJAR				S	Sn	00 36 07.7	+1.5
	5.8nm,0.4s,baz=100,slow=27,SNR=8.3						
	12nm,0.6s						
MAJO	Matsushiro	2.47	272	P	Pb	00 35 39.5	-0.8
JSD	Sado	2.86	303	P	Pb	00 35 45.3	-1.5
JGF	Kuroka	3.30	255	P	Pb	00 35 53.4	-1.0
JTM	Tenmabayashi	4.29	358	P	Pn	00 36 04.2	+3.3
ERM	Erimo	5.70	14	P	Pn	00 36 23.3	+3.0
JEM	Erimo	5.70	14	P	Pn	00 36 23.0	+2.7
H11N2	WAKE ISLAND Hy	27.97	120	T	T	01 10 12.4	
	baz=313,slow=75,SNR=5.0						
H11N1	WAKE ISLAND Hy	27.98	120	T	T	01 10 16.2	
	baz=313,slow=75,SNR=4.3						
H11N3	WAKE ISLAND Hy	27.99	120	T	T	01 10 15.1	
	baz=313,slow=75,SNR=2.8						
H11S1	WAKE ISLAND Hy	28.66	122	T	T	01 11 11.9	
	baz=314,slow=74						
H11S3	WAKE ISLAND Hy	28.66	122	T	T	01 11 04.7	
	baz=314,slow=74						
H11S2	WAKE ISLAND Hy	28.68	122	T	T	01 11 06.0	
	baz=314						
MKAR	Makanchi Array	44.31	303	P	P	00 43 05.7	+0.1
	0.1nm,0.5s,baz=86,slow=6.5,SNR=1.7						
	0.1nm,0.5s						
WRA	Warramunga Arr	56.52	188	P	P	00 44 35.4	-2.7
	0.1nm,0.7s,baz=5.1,slow=7.6,SNR=2.2						
	0.1nm,0.7s						

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*IDC **08** 01:01:02.9±3.7, 5°.42S×105°.76E, h0^{km}, mb3.6/4, mbtmp3.6/4, MS3.4/2, Error ellipse: s-maj=207.9km s-min=29.5km az=52.0*

*DJA **08** 01:01:06.2±0.3, 6°S±5°×10°5E±°, h10^{km}, M3.6/10, MLv3.6/10*

ISC 08 01:01:05.7±0.9, **6°.11S**±0°.06×**105°.48E**±0°.07, **h10**^{km}, **n17**, σ**0^{s}.88**/14, **mb3.7**/4, **Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGJI	Cibinong	0.55	157	P	Pg	01 01 15.9	-0.5
SBJI	Serang	0.65	91	P	Pg	01 01 17.4	-0.9
BLSI	Bandar Lampung	0.77	343	P	Pg	01 01 19.5	-1.0
KASI	Kota Agung	1.13	301	P	Pb	01 01 26.0	-1.4
KLI	Kotabumi	1.38	333	P	Pb	01 01 32.2	+0.6
SKJI	Sukabumi	1.40	130	P	Pn	01 01 30.9	-0.4
LWLI	Liwa	1.78	307	P	Pn	01 01 37.6	+1.0
CNJI	Cibinong	2.03	126	P	Pn	01 01 40.6	+0.6
MDSI	Maura Dua	2.06	321	P	Pn	01 01 40.6	+0.2
MNAI	Manna	3.05	304	P	Pn	01 01 55.1	+1.1
CMJI	Cimerak	3.39	120	P	Pn	01 01 59.6	+0.9
CMAR	Chiang Mai Arr	25.24	345	LR	LR	01 16 37.6	
	comp=Z,25nm,18.3s,baz=150,slow=38						
WRA	Warramunga Arr	31.23	119	P	P	01 07 25.6	-0.1
	0.7nm,0.6s,baz=296,slow=9.7,SNR=9.8						
	0.7nm,0.6s						
ASAR	Alice Springs	32.44	126	P	P	01 07 36.1	-0.2
	0.4nm,0.5s,baz=303,slow=8.6,SNR=4.2						
	0.4nm,0.5s						
STKA	Stephens Creek	42.36	132	P	P	01 09 01.1	+0.8
	2.2nm,0.8s,baz=311,slow=10,SNR=3.9						
	2.2nm,0.8s						
MKAR	Makanchi Array	56.55	341	P	P	01 10 43.2	-5.1
	0.3nm,0.9s,baz=134,slow=6.2,SNR=2.4						
	0.3nm,0.9s						
ARU	Arti	73.17	335	LR	LR	01 50 16.3	
	comp=Z,76nm,19.8s,baz=284,slow=41						

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*IDC **08** 01:02:02.7±1.9, 57°.70S×23°.76W, h0^{km}, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=77.7km s-min=38.3km az=11.0*

*NEIC **08** 01:02:05±0.8, 57°.6S±0°.2×23°.7W±0°.3, h10^{km}±1^{km}, mb4.4/9, Error ellipse: s-maj=33.6km s-min=15.5km az=214.0*

ISC 08 01:02:04.4±0.7, **57°.7S**±0°.1×**23°.7W**±0°.1, **h10**^{km}, **n37**, σ**0^{s}.66**/37, **mb4.2**/6, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.94	290	Pn	Pn	01 04 00.8	+1.1
VNA1	Neumayer--Stat	14.60	159	P	Pn	01 05 32.4	+1.7
VNA1				S	Sn	01 08 02.7	-10
VNA3	Neumayer Olymp	14.85	162	P	Pn	01 05 33.8	-0.3
VNA3				S	Sn	01 08 06.6	-12
VNA2	Neumayer--Watz	14.99	159	P	Pn	01 05 35.9	-0.1
	baz=322,slow=14						
VNA2				S	Sn	01 08 07.9	-14
	baz=323,slow=20						
SNAA	Sanae	16.49	157	P	Pn	01 05 56.6	+1.0
SNAA				S	Sn	01 08 39.0	-19
SNAA	Sanae	16.49	157	Pn	P	01 05 57.4	-0.9
ESPZ	Base Esperanza	17.22	237	Pn	Pn	01 06 04.7	0.0
ESPZ				IAmb	IAmb	01 06 31.2	
	comp=Z,21nm,0.9s						
EFI	East Falkland	20.60	272	P	P	01 06 43.3	0.0
PLTB	Pedras Altas	33.01	309	P	P	01 08 39.0	-0.5
CPUP	Villa Florida	39.32	308	P	P	01 09 33.7	+0.3
	comp=Z,1.8nm,0.6s,baz=145,slow=9.1,SNR=4.2						
	comp=Z,1.8nm,0.6s						
AC05	El Transito	43.22	291	P	P	01 10 04.3	-1.4
AC05				IAmb	IAmb	01 10 13.0	
	comp=Z,12nm,1.2s						
LPAZ	La Paz	52.87	302	P	P	01 11 20.1	-0.9
	comp=Z,1.7nm,0.6s,baz=148,slow=8.4,SNR=4.8						
	comp=Z,1.7nm,0.6s						
LPAZ	La Paz	52.87	302	P	P	01 11 21.3	+0.3
SAML	Samuel	57.31	312	P	P	01 11 53.1	+0.8
SAML				IAmb	IAmb	01 11 53.7	
	comp=Z,2.6nm,0.7s						
OTAV	Otavalo	72.14	301	P	P	01 13 29.4	-0.2
OTAV				IAmb	IAmb	01 13 51.9	
	comp=Z,2.8nm,1.2s						
TORD	Torodi Ar. Bea	73.59	26	P	P	01 13 37.8	+0.3
	comp=Z,1.1nm,0.8s,baz=191,slow=6.3,SNR=6.3						
	comp=Z,1.1nm,0.8s						
YKA	Yellowknife Ar	138.66	315	PKP	PKPdf	01 21 28.4	-0.5
	comp=Z,0.5nm,0.7s,baz=114,slow=2.1,SNR=5.8						
INK	Inuvik	148.28	318		PKPdf	01 21 47.2	+1.6
SONM	Songino Array	148.90	87	PKPbc	PKPbc	01 21 51.0	-0.4
	comp=Z,0.4nm,0.5s,baz=205,slow=3.7,SNR=4.7						
SONM	Songino Array	148.90	87	PKPbc	PKPbc	01 21 51.1	-0.4
EPYK	Eagle Plains	148.92	314		PKPbc	01 21 50.7	-0.1
DAWY	Dawson	149.30	309	PKPbc	PKPbc	01 21 50.8	-1.0
M27K	Edge Creek, AK	149.81	305	PKPbc	PKPbc	01 21 53.3	0.0
BCAR	Beaver Creek A	150.00	307	PKPbc	PKPbc	01 21 53.5	-0.1
L27K	Beaver Creek,	150.02	307	PKPbc	PKPbc	01 21 53.8	+0.2
VRDI	Verde Repeater	150.12	303	PKPbc	PKPbc	01 21 53.8	-0.3
GLB	Gilahina Butte	150.36	303	PKPbc	PKPbc	01 21 54.7	+0.2
K27K	Chicken	150.42	308	PKPbc	PKPbc	01 21 54.2	-0.2
N25K	Chitina, Valde	150.77	303	PKPbc	PKiKP	01 21 55.7	-0.4
DOT	Dot Lake	151.15	307	PKPbc	PKPbc	01 21 55.9	-0.3
J26L	Joseph Creek	151.17	309	PKPbc	PKiKP	01 21 57.0	+0.2
I26K	Coal Creek Min	151.20	311	PKPbc	PKPbc	01 21 56.2	0.0
SCRK	Sand Creek	151.21	308	PKPbc	PKPbc	01 21 56.6	+0.1
RIDG	Independent Ri	151.51	307	PKPbc	PKiKP	01 21 57.4	-0.1
BMAR	Burnt Mountain	152.18	315	PKPbc	PKPbc	01 21 58.3	-0.2
ILAR	Eielson Array	152.63	309	PKPbc	PKiKP	01 21 59.6	-0.1
	comp=Z,0.9nm,0.7s,baz=105,slow=2.1,SNR=9.8						
ILAR	Eielson Array	152.63	309	PKPbc	PKPbc	01 21 59.1	-0.4

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*SGS **08** 01:26:46.5, 25°.76N×37°.37E, h10^{km}, Ml3.2*

*GII **08** 01:26:52.6±0.0, 24°.60N×35°.00E, h20^{km}±2^{km}, mb4.0/2, MD3.8/4, Mm3.9/4*

ISC 08 01:26:46.6±0.9, **25°.77N**±0°.03×**37°.33E**±0°.05, **h10**^{km}, **n28**, σ**2^{s}.53**/36, **Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNY09	LNY09	0.47	141	P	Pg	01 26 55.0	-0.9
LNY09	LNY09	0.47	141	S	Sg	01 27 01.0	-1.2
LNY16	LNY16	0.48	150	S	Sg	01 27 00.8	-1.7
LNY16				P	Pg	01 26 55.1	-1.0
UMJS	Umm Lajj	0.54	182	S	Sg	01 27 03.1	-1.1
UMJS	Umm Lajj	0.54	182	P	Pg	01 26 56.4	-0.6
OLAS	OLAS	0.55	29	P	Pg	01 26 56.7	-0.6
OLAS	OLAS	0.55	29	S	Sg	01 27 03.4	-1.1
LNY11	LNY11	0.60	138	P	Pg	01 26 57.3	-1.1
LNY12	LNY12	0.64	141	P	Pg	01 26 57.9	-1.1
LNY14	LNY14	0.65	143	P	Pg	01 26 58.1	-1.1
LNY13	LNY13	0.66	155	P	Pg	01 26 58.1	-1.3
LNY15	LNY15	0.66	140	P	Pg	01 26 58.4	-1.0
LNY07	LNY07	0.68	161	P	Pg	01 26 58.7	-1.0
LNY17	LNY17	0.68	141	P	Pg	01 26 58.6	-1.2
LNY10	LNY10	0.69	136	P	Pg	01 26 59.0	-1.0
LNY01	LNY01	0.79	134	P	Pg	01 27 00.6	-1.3
LNY08	LNY08	0.87	147	P	Pg	01 27 01.9	-1.6
LNYS	LNYS	0.88	141	P	Pg	01 27 02.2	-1.5
URD03	Al Ula	0.90	7	P	Pg	01 27 03.1	-0.9
SUMJS	Umluj	1.01	176	P	Pg	01 27 04.9	-1.2
TRAS	Al Qrash	1.32	122	P	Pn	01 27 10.1	-1.1
EIL	Elat	4.42	332	Pn	Pb	01 28 07.4	+3.1
EIL				Sn	Sg	01 29 04.4	-4.2
MBRI	Mt Berech	4.54	332	Pn	Pb	01 28 07.9	+1.4
MBRI				Sn	Sg	01 29 08.9	-3.6
HRFI	Mount Harif	4.71	335	Pn	Pb	01 28 12.7	+3.4
HRFI				Sn	Sg	01 29 14.7	-3.1
KRMI	Paran Flat	4.90	333	Pn	Pb	01 28 14.0	+1.4
KRMI				Sn	Sb	01 29 17.0	+5.3
PRNI	Paran	5.00	336	Pn	Pb	01 28 17.2	+2.9
PRNI				Sn	Sg	01 29 22.7	-4.6
ZFRI	Zfri	5.13	339	Pn	Pb	01 28 20.2	+3.8
ZFRI				Sn	Sg	01 29 27.7	-3.6
GHAJ	Ghor Haditha	5.72	345	Pn	Pb	01 28 29.8	+3.2
GHAJ				Sn	Sg	01 29 45.8	-4.7

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*SKHL **08** 01:33:09.1±0.5, 47°.20N×153°.70E, h28^{km}±5^{km}, mb5.6/4*

*MOS **08** 01:33:09.3±1.2, 47°.26N×153°.82E, h27^{km}, mb4.6/27, Error ellipse: s-maj=7.6km s-min=5.3km az=86.2*

*NEIC **08** 01:33:12.4±1.6, 47°.3N±0°.1×153°.8E±0°.1, h35^{km}±2^{km}, mb4.4/64, Error ellipse: s-maj=20.0km s-min=12.1km az=144.0*

*IDC **08** 01:33:14.6±2.3, 47°.36N×153°.71E, h47^{km}±19^{km}, mb4.0/21, mbtmp4.2/27, ML3.5/4, MS3.4/4, Error ellipse: s-maj=21.8km s-min=11.3km az=153.0*

*BGR **08** 01:33:16.1, 47°.68N×154°.68E, h33^{km}, mb4.8, Ms4.0*

ISC 08 01:33:11.9±0.6, **47°.21N**±0°.07×**153°.79E**±0°.06, **h35**^{km}, **n301**, σ**1^{s}.40**/290, **mb4.4**/97, **MS4.1**/5, **36C-13D**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.80	23	ePN	Pn	01 34 06.1	-1.8
SKR				eS	Sn	01 34 50.8	-0.5
SKR				pmax	pmax		
	comp=Z,26nm,0.6s						
SKR				smax	smax		
	comp=N,125nm,0.5s						
SKR				smax	smax		
	comp=E,69nm,0.3s						
SKR				MLR	MLR		
	comp=Z,600nm,12.0s						
SKR	Severo-Kuril's	3.80	23	eP	Pn	01 34 06.8	-1.1
SKR				AMB	AMB	01 34 08.4	
	comp=Z,30nm,0.3s						
SKR				AMB	AMB	01 34 15.2	
	comp=Z,1µm,3.0s						
SKR				eS	Sn	01 34 49.9	-1.4
SKR				A	A	01 34 54.3	
	comp=Z,130nm,0.3s						
SKR				A	A	01 34 54.3	
	comp=Z,70nm,0.3s						
SKR				AMS	AMS	01 35 35.1	
	comp=Z,600nm,12.0s						
KUR	Kuril'sk	4.56	247	⇑iPN	Pn	01 34 21.0	+2.7
KUR				eS	Sn	01 35 12.1	+2.0
KUR	Kuril'sk	4.56	247	i P	Pn	01 34 16.5	-1.8
KUR				AMB	AMB	01 34 22.1	
	comp=Z,120nm,0.3s						
KUR				AMB	AMB	01 34 22.3	
	comp=Z,800nm,4.0s						
KUR				eS	Sn	01 35 08.4	-1.7
KUR				A	A	01 35 15.0	
	comp=Z,1µm,4.0s						
KUR				A	A	01 35 15.0	
	comp=Z,1µm,4.0s						
KUR				A	A	01 35 30.8	
	comp=Z,120nm,0.3s						
KUR				A	A	01 35 30.8	
	comp=Z,370nm,0.3s						
PAU	Pauzhetka	4.70	24	eP	Pn	01 34 20.0	-0.2
PAU				AMB	AMB	01 34 24.2	
	comp=Z,500nm,3.0s						
PAU				AMB	AMB	01 34 26.4	
	comp=Z,40nm,0.4s						
PAU				eS	Sn	01 35 13.0	-0.4
PAU				A	A	01 35 15.1	
	comp=Z,180nm,0.3s						
PAU				A	A	01 35 15.1	
	comp=Z,210nm,0.3s						
PAU				A	A	01 35 16.6	

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       comp=Z,1µm,3.0s
PAU                               A       A       01 35 16.6
       comp=Z,400nm,3.0s
SHO    Shikotan           5.92 238⇑iPN    Pn      01 34 35.3 -1.7
SHO                               pmax    pmax
       comp=N,12nm,0.3s
SHO                               pmax    pmax
       comp=E,20nm,0.3s
SHO                               pmax    pmax
       comp=Z,49nm,0.3s
SHO    Shikotan           5.92 238 eP     Pn      01 34 35.6 -1.4
SHO                               AMB     AMB     01 34 37.7
       comp=Z,50nm,0.3s
SHO                              eS       Sn      01 35 40.9 -2.6
SHO                               A       A       01 35 56.6
       comp=Z,80nm,0.4s
SHO                               A       A       01 35 56.6
       comp=Z,90nm,0.4s
YUK    Yuzh-Kuril'sk      6.40 243 ePN    Pn      01 34 42.4 -1.2
YUK                               pmax    pmax
       comp=Z,137nm,0.2s
YUK    Yuzh-Kuril'sk      6.40 243 eP     Pn      01 34 43.0 -0.6
YUK                               AMB     AMB     01 34 46.6
       comp=Z,140nm,0.4s
YUK                              eS       Sn      01 35 53.0 -2.4
YUK                               A       A       01 35 58.0
       comp=Z,1µm,2.0s
YUK                               A       A       01 35 58.0
       comp=Z,700nm,2.0s
PEA0B  Petropavlovsk-     6.42  22  Pn    Pn      01 34 40.9 -2.9
PEA0B  Petropavlovsk-     6.42  22  PN    Pn      01 34 40.9 -2.9
PETK   Petropavlovsk-     6.42  22  P     Pn      01 34 44.5 +0.7
       comp=Z,1.2nm,0.3s,baz=180,slow=15,SNR=16
PETK                              S       Sn      01 35 57.1 +1.4
       comp=Z,5.0nm,0.8s,baz=110,slow=18,SNR=1.4
PETK                              LR      LR      01 37 26.7
       comp=Z,179nm,19.8s,baz=191,slow=40
       comp=Z,3.3nm,0.5s
PETK   Petropavlovsk-     6.42  22  Pn    Pn      01 34 41.0 -2.8
PETK   Petropavlovsk-     6.42  22  PN    Pn      01 34 41.0 -2.8
PET    Petropavlovsk      6.61  26  Pn    Pn      01 34 44.2 -2.2
PET    Petropavlovsk      6.61  26 ePN    Pn      01 34 47.1 +0.7
PET                               pmax    pmax
       comp=Z,37nm,0.9s
PET                               MLR     MLR
       comp=Z,100nm,9.0s
PET    Petropavlovsk      6.61  26 eP     Pn      01 34 47.0 +0.7
PET                               AMB     AMB     01 34 52.7
       comp=Z,600nm,3.0s
PET                               AMB     AMB     01 35 00.1
       comp=Z,30nm,0.4s
PET                              eS       Sn      01 35 58.9 -1.5
PET                               A       A       01 36 00.4
       comp=Z,630nm,3.0s
PET                               A       A       01 36 00.4
       comp=Z,580nm,3.0s
PET                               A       A       01 36 03.7
       comp=Z,40nm,0.7s
PET                               A       A       01 36 03.7
       comp=Z,60nm,0.7s
PET                               AMS     AMS     01 39 42.1
       comp=Z,100nm,10.0s
RUSJ   Misakicho          6.74 246 ePN    Pn      01 34 50.6 +2.3
NMR    Nemuro--Hokkai     6.86 239⇑iPN    Pn      01 34 48.3 -1.6
NMR    Nemuro--Hokkai     6.86 239 i P    Pn      01 34 48.4 -1.5
NMR                                i S    Sn      01 36 02.6 -4.1
YSS    Yuzh-Sakhalins     7.54 272  Pn    Pn      01 34 58.0 -1.2
YSS    Yuzh-Sakhalins     7.54 272 ePN    Pn      01 35 04.9 +5.7
YSS                              eS       Sn      01 36 37.3  +14
YSS                               pmax    pmax
       comp=Z,20nm,0.4s
YSS                               MLR     MLR
       comp=N,200nm,12.0s
YSS                               MLR     MLR
       comp=Z,400nm,12.0s
YSS                               MLR     MLR
       comp=E,200nm,11.0s
YSS    Yuzh-Sakhalins     7.54 272 eP     Pn      01 35 00.8 +1.6
YSS                               AMB     AMB     01 35 05.5
       comp=E,20nm,0.4s
YSS                               AMS     AMS     01 38 19.0
       comp=E,400nm,12.0s
AKK    Akkeshi            7.59 240 eP     Pn      01 34 58.7 -1.2
UGL    Uglegorsk          8.07 288 eP     Pn      01 35 04.8 -1.6
UGL                               AMB     AMB     01 35 09.9
       comp=E,20nm,0.5s
TYV    Tymovskoe          8.18 301 eP     Pn      01 35 07.7 -0.3
TYV                               AMB     AMB     01 35 16.5
       comp=E,30nm,0.6s
JKA    Kamikawa-asahi     8.43 253  Pn    Pn      01 35 11.7 +0.3
ASAJ   Asahikawa          8.43 253  P     Pn      01 35 14.7 +3.3
       comp=E,1.8nm,0.3s,baz=98,slow=16,SNR=7.3
       comp=E,13nm,0.6s
ERM    Erimo              9.19 239  Pn    Pn      01 35 21.3 -0.5
ERM    Erimo              9.19 239dePN    Pn      01 35 23.4 +1.6
ERM                               pmax    pmax
       comp=Z,38nm,1.3s
OKH    Okha               9.40 316 eP     Pn      01 35 24.1 -0.5
OKH                               AMB     AMB     01 35 26.6
       comp=Z,40nm,0.3s
OKH                               AMS     AMS     01 40 51.0
       comp=Z,200nm,13.0s
JTM    Tenmabayashi      11.18 240  Pn    Pn      01 35 44.6 -4.5
GRNR   Gornyy            11.95 294 eP     Pn      01 35 57.2 -2.4
GRNR                              AMB     AMB     01 36 03.9
       comp=Z,10.0nm,0.2s
GRNR                              AMS     AMS     01 41 10.0
       comp=Z,300nm,15.0s
TEY    Ternei            12.13 266 eP     Pn      01 36 00.5 -1.5
TEY                               AMB     AMB     01 36 08.8
       comp=Z,10.0nm,0.8s
MA2    Magadan           12.52 353  P     Pn      01 36 08.7 +1.4
       comp=Z,4.8nm,0.4s,baz=172,slow=10,SNR=5.2
MA2                               LR      LR      01 41 03.9
       comp=Z,93nm,18.6s,baz=98,slow=38
MA2    Magadan           12.52 353  Pn    Pn      01 36 05.1 -2.3
MA2    Magadan           12.52 353⇓ePN    Pn      01 36 06.5 -0.8
MA2                               pmax    pmax
       comp=Z,26nm,1.8s
MA2    Magadan           12.52 353 eP     Pn      01 36 06.5 -0.8
KLR    Kul'dur           14.83 286  P     Pn      01 36 40.6 +1.9
       baz=100,slow=14,SNR=1.7
KLR                               LR      LR      01 42 47.4
       comp=Z,182nm,18.6s,baz=42,slow=39
       comp=Z,0.2nm,0.3s
USA0B  Ussuriysk Arra    15.52 267⇓eP     Pn      01 36 47.2 -0.7
USRK   Ussuriysk Ar.     15.52 267  P     Pn      01 36 48.5 +0.6
       comp=Z,0.6nm,0.3s,baz=68,slow=12,SNR=2.8
       comp=Z,2.8nm,0.7s
MAJO   Matsushiro        15.73 233⇓eP     Pn      01 36 49.4 -1.2
MAJO                              pmax    pmax
       comp=Z,12nm,1.0s
MJAR   Matsushiro Arr    15.73 233  P     Pn      01 36 50.9 +0.3
       comp=Z,3.7nm,0.7s,baz=33,slow=12,SNR=5.1
SEY    Seymchan          15.78 358  P     Pn      01 36 50.5 -0.6
       comp=Z,0.5nm,0.3s,baz=175,slow=18,SNR=1.4
SEY    Seymchan          15.78 358⇑eP     Pn      01 36 50.3 -0.9
SEY                               pmax    pmax
       comp=Z,2.0nm,1.1s
HEH    HeiHe             17.64 290 eP     P       01 37 16.7 +1.4
HEH                               pmax    pmax
       comp=Z,7.0nm,0.8s
JHJ    Hachijo jima 2    17.64 222  LR    LR      01 44 09.0
       comp=Z,232nm,20.7s,baz=277,slow=37
ZEA    Zeya              18.05 301 eP     Pn      01 37 15.1 -4.5
YAK    Yakutsk           20.20 326⇑eP     P       01 37 43.4 +0.2
YAK                               pmax    pmax
       comp=Z,6.0nm,0.7s
YAK    Yakutsk           20.20 326 eP     P       01 37 43.4 +0.2
KSRS   Korea Array       21.38 252  P     P       01 37 57.9 +1.7
       comp=Z,3.3nm,0.8s,baz=65,slow=9.3,SNR=6.3
       comp=Z,3.3nm,0.8s
BILL   Bilibino          21.84  13⇑eP     P       01 38 00.6 -0.3
BILL                               e              01 38 24.4
BILL                              pmax    pmax
       comp=Z,4.0nm,1.0s
BILL                              MLR     MLR
       comp=Z,45nm,18.0s
BILL   Bilibino          21.84  13 eP     P       01 38 00.6 -0.3
TIXI   Tiksi             27.16 343  P     P       01 38 50.3 -1.1
TIXI   Tiksi             27.16 343  P     P       01 38 50.3 -1.1
TIXI                              pmax    pmax
       comp=Z,3.0nm,1.0s
TIXI   Tiksi             27.16 343 eP     P       01 38 50.3 -1.1
JOW    Kunigami          28.57 234  P     P       01 39 06.5 +2.1
       comp=Z,14nm,0.7s,baz=97,slow=8.1,SNR=2.2
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       comp=Z,14nm,0.7s
H11N2  WAKE ISLAND Hy    29.42 154  T     T       02 09 51.9
       baz=341,slow=75,SNR=89
H11N1  WAKE ISLAND Hy    29.43 154  T     T       02 09 51.9
       baz=341,slow=75,SNR=59
H11N3  WAKE ISLAND Hy    29.43 154  T     T       02 09 53.1
       baz=341,slow=75,SNR=37
H11S1  WAKE ISLAND Hy    30.52 155  T     T       02 11 18.0
       baz=343,slow=76,SNR=182
H11S3  WAKE ISLAND Hy    30.53 155  T     T       02 11 18.0
       baz=343,slow=76,SNR=194
H11S2  WAKE ISLAND Hy    30.54 155  T     T       02 11 17.4
       baz=343,slow=76,SNR=169
HHC    Hu-ho-hao-te      30.73 274 eP     P       01 39 25.4 +1.8
HHC                               pmax    pmax
       comp=Z,24nm,0.8s
HHC                               pmax    pmax
       comp=Z,130nm,5.4s
HHC                               LR      LR
       comp=E,790nm,9.9s
HHC                               LR      LR
       comp=Z,340nm,12.9s
ULN    Ulaanbaatar       31.19 289⇓eP     P       01 39 27.4 -0.2
ULN                               pmax    pmax
       comp=Z,1.0nm,1.0s
ULN    Ulaanbaatar       31.19 289 eP     P       01 39 27.4 -0.2
SONM   Songino Array     31.62 289  P     P       01 39 31.2 -0.2
       comp=Z,1.0nm,0.7s,baz=72,slow=7.8,SNR=7.9
       comp=Z,1.0nm,0.7s
SONM   Songino Array     31.62 289  P     P       01 39 31.3 -0.2
SONM   Songino Array     31.62 289  P     P       01 39 31.3 -0.1
SONM                              pmax    pmax
       comp=Z,3.0nm,1.5s
TTA    Tatalina          31.77  42  P     P       01 39 31.8 -0.7
TTA    Tatalina          31.77  42  P     P       01 39 31.8 -0.7
TTA                               pmax    pmax
       comp=Z,4.0nm,1.3s
K20K   Telida            32.69  41  P     P       01 39 41.2 +0.8
IMAR   Indian Mountai    33.12  36  P     P       01 39 43.4 -0.8
H21K   Melozitna Rive    33.47  37  P     P       01 39 46.4 -0.8
H21K                              IAmb    IAmb    01 39 54.5
       comp=Z,5.8nm,1.4s
CAST   Castle Rocks      33.58  41  P     P       01 39 47.3 -1.0
SKT    Skwentna          33.80  44  P     P       01 39 50.1 -0.1
SKT                               IAmb    IAmb    01 40 15.8
       comp=Z,4.1nm,1.2s
BPAW   Bear Paw Mtn.     34.10  40  P     P       01 39 52.9 +0.1
BPAW                              IAmb    IAmb    01 39 54.2
       comp=Z,3.3nm,1.1s
KTH    Kantishna Hill    34.11  41  P     P       01 39 51.7 -1.2
KTH                               IAmb    IAmb    01 39 55.8
       comp=Z,7.1nm,1.3s
MLY    Manley            34.27  38  P     P       01 39 54.1 -0.1
TRF    Thorofare Moun    34.39  41  P     P       01 39 55.3 -0.2
TRF                               IAmb    IAmb    01 40 23.2
       comp=Z,3.6nm,1.1s
COLD   Coldfoot          34.69  35  P     P       01 39 57.4 -0.4
KNK    Knik Glacier      35.28  45  P     P       01 40 01.3 -1.6
KNK                               IAmb    IAmb    01 40 14.9
       comp=Z,11nm,1.2s
SML    Sawmill           35.32  44  P     P       01 40 03.3  0.0
WRH    Wood River Hil    35.38  39  P     P       01 40 02.0 -1.7
WRH                               IAmb    IAmb    01 40 41.7
       comp=Z,6.6nm,1.4s
COLA   College           35.49  39⇑eP     P       01 40 04.5 -0.1
COLA                              pmax    pmax
       comp=Z,4.0nm,0.9s
CCB    Clear Creek Bu    35.51  39  P     P       01 40 03.6 -1.1
SCM    Sheep Creek Mo    35.79  44  P     P       01 40 06.9 -0.5
SCM    Sheep Creek Mo    35.79  44  P     P       01 40 06.9 -0.5
SCM                               pmax    pmax
       comp=Z,19nm,1.4s
HDA    Harding Lake      35.88  40  P     P       01 40 07.3 -0.7
HDA                               IAmb    IAmb    01 40 18.8
       comp=Z,4.3nm,1.1s
ILAR   Eielson Array     35.90  39  P     P       01 40 08.1 -0.2
       comp=Z,0.8nm,1.0s,baz=258,slow=8.4,SNR=5.9
       comp=Z,0.8nm,1.0s
XAN    Xi'an             36.02 265  P     P       01 40 10.9 +1.3
XAN                               pmax    pmax
       comp=Z,9.0nm,0.9s
FYU    Fort Yukon        36.60  36  P     P       01 40 13.4 -0.7
FYU                               IAmb    IAmb    01 40 21.8
       comp=Z,13nm,1.3s
BMAR   Burnt Mountain    36.88  34  P     P       01 40 16.3 -0.2
DOT    Dot Lake          37.17  41  P     P       01 40 18.0 -1.1
SCRK   Sand Creek        37.19  40  P     P       01 40 18.8 -0.5
L27K   Beaver Creek,     38.23  42  P     P       01 40 28.5 +0.4
L27K                              IAmb    IAmb    01 40 33.0
       comp=Z,6.4nm,1.3s
BCAR   Beaver Creek A    38.25  42  P     P       01 40 27.0 -1.2
LZH    Lanzhou           38.34 272 eP     P       01 40 31.3 +1.9
LZH                               pP      sP      01 40 42.3 -0.5
LZH                               sP      pwP     01 40 48.9 +6.8
LZH                               pmax    pmax
       comp=Z,18nm,1.1s
BARN   Barnard Glacie    38.59  45  P     P       01 40 30.3 -1.0
BARN                              IAmb    IAmb    01 40 46.2
       comp=Z,10.0nm,1.4s
NRIK   Noril'sk          38.61 329⇑eP     P       01 40 30.5 -0.6
NRIK                              pmax    pmax
       comp=Z,2.0nm,1.1s
CTGM   Chitina Glacie    38.76  45  P     P       01 40 32.9 +0.3
CTGM                              IAmb    IAmb    01 41 11.7
       comp=Z,8.6nm,1.3s
INK    Inuvik            41.02  33  P     P       01 40 51.5 +0.5
       comp=Z,2.1nm,0.9s,baz=287,slow=7.1,SNR=5.5
       comp=Z,2.1nm,0.9s
INK    Inuvik            41.02  33  P     P       01 40 50.4 -0.6
INK    Inuvik            41.02  33  P     P       01 40 50.4 -0.6
INK                               pmax    pmax
       comp=Z,6.0nm,1.4s
CD2    Chengdu           41.38 265  P     P       01 40 55.7 +1.1
CD2                               pmax    pmax
       comp=Z,30nm,0.9s
FARO   Faro, Yukon       42.23  42  P     P       01 40 59.7 -1.4
FARO                              IAmb    IAmb    01 41 31.7
       comp=Z,8.2nm,1.5s
ZAA0   Zalesovo Array    42.72 306  P     P       01 41 04.5 -0.7
ZALV   Zalesovo Beam     42.72 306  P     P       01 41 04.8 -0.3
       comp=Z,2.9nm,0.5s,baz=61,slow=6.7,SNR=16
ZALV                              PcP     PcP     01 42 55.2 -1.1
       comp=Z,0.4nm,0.5s,baz=42,slow=2.3,SNR=2.4
       comp=Z,2.9nm,0.5s
ZALV   Zalesovo Beam     42.72 306  P     P       01 41 04.5 -0.7
DGZ    Jazzator, Alta    42.79 299⇓eP     P       01 41 06.4 +0.4
DGZ                               pmax    pmax
       comp=Z,1.0nm,1.1s
A36M   Sachs Harbour     43.23  27  P     P       01 41 08.9 -0.2
A36M                              IAmb    IAmb    01 41 12.7
       comp=Z,6.3nm,0.8s
C36M   Paulatuk          44.19  30  P     P       01 41 16.6 -0.2
GOMU   GeErMu            44.41 278  P     P       01 41 19.4 -0.1
GOMU                              pP      pP      01 41 23.2 -5.8
GOMU                              sP      pwP     01 41 24.3 -8.0
GOMU                              pmax    pmax
       comp=Z,4.0nm,0.8s
GOMU                              pmax    pmax
       comp=Z,71nm,5.0s
DLBC   Dease Lake        44.94  46  P     P       01 41 23.7 +0.7
DLBC                              IAmb    IAmb    01 41 26.9
       comp=Z,12nm,1.4s
WMQ    Urumqi            45.20 291 eP     P       01 41 28.1 +2.8
PZH    PanZhiHua         45.54 262  P     P       01 41 29.1 +0.9
PZH                               pmax    pmax
       comp=Z,10.0nm,0.6s
MK31   Makanchi Array    47.15 297  P     P       01 41 39.8 -0.7
MK31                              IAmb    IAmb    01 41 41.1
       comp=Z,2.0nm,0.8s
MK31   Makanchi Array    47.15 297  P     P       01 41 39.8 -0.7
MK31                              pmax    pmax
       comp=Z,2.0nm,0.8s
MKAR   Makanchi Array    47.15 297  P     P       01 41 40.5  0.0
       comp=Z,2.3nm,0.8s,baz=67,slow=7.8,SNR=26
MKAR                              PcP     PcP     01 43 11.9 +0.2
       comp=Z,0.3nm,0.6s,baz=43,slow=4.5,SNR=3.1
       comp=Z,2.3nm,0.8s
MKAR   Makanchi Array    47.15 297  P     P       01 41 40.3 -0.2
MAKZ   Makanchi          47.33 297  P     P       01 41 41.8 -0.1
MAKZ   Makanchi          47.33 297  P     P       01 41 41.8 -0.1
MAKZ                              pmax    pmax
       comp=Z,3.0nm,1.3s
KURK   Kurchatov         47.50 304  P     P       01 41 42.5 -0.7
KURK   Kurchatov         47.50 304d iP    P       01 41 43.1  0.0
KURK                              pmax    pmax
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       comp=Z,8.0nm,0.9s
KURK   Kurchatov         47.50 304 eP     P       01 41 43.1  0.0
KURBB  Kurchatov Arra    47.59 303  P     P       01 41 43.9 +0.1
       comp=Z,7.7nm,0.7s,baz=66,slow=8.4,SNR=29
       comp=Z,7.7nm,0.7s
RES    Resolute Bay      50.26  19  P     P       01 42 04.8 +0.9
RES                               IAmb    IAmb    01 42 06.0
       comp=Z,3.2nm,0.8s
RES    Resolute Bay      50.26  19  P     P       01 42 04.8 +0.9
RES                               pmax    pmax
       comp=Z,3.0nm,0.9s
YKA    Yellowknife Ar    50.28  37  P     P       01 42 05.3 +1.0
       comp=Z,0.5nm,0.8s,baz=295,slow=7.5,SNR=5.2
YKA                               PcP     PcP     01 43 25.4 +2.7
       comp=Z,0.4nm,1.0s,baz=297,slow=4.1,SNR=3.8
       comp=Z,0.5nm,0.8s
CRAI   Chiangrai         50.73 257  P     P       01 42 07.7 -0.5
CRAI                              IAmb    IAmb    01 42 11.2
       comp=Z,4.0nm,0.6s
BVAR   Borovoye Array    50.93 309  P     P       01 42 09.5 +0.1
       comp=Z,2.8nm,0.4s,baz=51,slow=8.2,SNR=13
       comp=Z,2.8nm,0.4s
BRVK   Borovoye          50.97 309  P     P       01 42 09.3 -0.3
BRVK                              IAmb    IAmb    01 42 10.9
       comp=Z,5.2nm,0.9s
BRVK   Borovoye          50.97 309  P     P       01 42 09.3 -0.3
BRVK                              pmax    pmax
       comp=Z,5.0nm,1.0s
BRVK   Borovoye          50.97 309 eP     P       01 42 09.3 -0.3
SPB2   Spitsbergen Ar    52.25 350  P     P       01 42 18.3 -0.6
CMAR   Chiang Mai Arr    52.93 257  P     P       01 42 26.2 +1.5
       comp=Z,1.1nm,0.3s,baz=29,slow=7.4,SNR=8.5
       comp=Z,1.1nm,0.3s
AAK    Ala-Archa         54.05 296  P     P       01 42 33.4 +0.6
AAK                               IAmb    IAmb    01 42 34.0
       comp=Z,2.1nm,0.7s
AAK    Ala-Archa         54.05 296  P     P       01 42 33.4 +0.6
AAK                               pmax    pmax
       comp=Z,2.0nm,0.7s
AAK    Ala-Archa         54.05 296 eP     P       01 42 33.4 +0.6
ARU    Arti              54.99 318  P     P       01 42 38.8 -0.4
ARU    Arti              54.99 318c iP    P       01 42 39.1 -0.1
ARU                               *PP     pP      01 42 44.4 -4.6
ARU                                               01 43 38.8
ARU                                               01 44 38.8
ARU                               S       S       01 50 21.8 +3.3
ARU                               SS      SS      01 54 06.1 +4.4
ARU                               pmax    pmax
       comp=Z,9.0nm,0.8s
ARU    Arti              54.99 318 eP     P       01 42 39.1 -0.1
KK31   Karatay Array     56.19 299  P     P       01 42 48.0  0.0
KK31   Karatay Array     56.19 299  P     P       01 42 48.0  0.0
KK31                              pmax    pmax
       comp=Z,1.0nm,0.8s
KKAR   Karatay Array     56.19 299  P     P       01 42 47.7 -0.3
KKAR   Karatay Array     56.19 299  P     P       01 42 47.7 -0.3
ARCES  ARCESS Array B    57.58 341  P     P       01 42 56.7 -0.7
       comp=Z,3.7nm,1.0s,baz=21,slow=7.7,SNR=7.1
       comp=Z,3.7nm,1.0s
ARCES  ARCESS Array B    57.58 341  P     P       01 42 57.8 +0.4
ARCES  ARCESS Array B    57.58 341  P     P       01 42 57.8 +0.4
ARCES                             pmax    pmax
       comp=Z,29nm,1.5s
KIRV   Kirov             57.69 323⇑eP     P       01 42 57.9 -0.5
ABKAR  Akbulak array     58.49 310  P     P       01 43 04.3 +0.2
JETT   Jettan, Norway    58.65 343 eP     P       01 43 05.2 +0.2
GAR    Garm              58.74 295  P     P       01 43 06.2  0.0
GAR                               IAmb    IAmb    01 43 07.5
       comp=Z,5.2nm,0.7s
CHGR   Chuyangaron       59.67 295  P     P       01 43 12.5 -0.1
CHGR   Chuyangaron       59.67 295  P     P       01 43 12.5 -0.1
CHGR                              pmax    pmax
       comp=Z,9.0nm,0.8s
FAUS   Fauske            61.51 343 eP     P       01 43 25.5 +0.9
FAUS                              IAmb    IAmb    01 43 30.1
       comp=Z,38nm,1.3s
NVAR   Mina Array Bea    61.81  63  P     P       01 43 26.7 -0.6
       comp=Z,0.1nm,0.3s,baz=316,slow=7.6,SNR=1.4
KBL    Kabul             62.33 292  P     P       01 43 30.9  0.0
KBL                               IAmb    IAmb    01 43 31.4
       comp=Z,3.2nm,0.6s
KBL    Kabul             62.33 292  P     P       01 43 30.9  0.0
KBL                               pmax    pmax
       comp=Z,3.0nm,0.6s
MOR8   Moi Rana          62.73 343 eP     P       01 43 32.3 -0.5
MOR8                              IAmb    IAmb    01 43 32.9
       comp=Z,24nm,1.2s
FIA1   FINESS Array S    63.82 335  P     P       01 43 40.1 +0.1
FINES  FINESS Array B    63.83 335  P     P       01 43 40.5 +0.5
       comp=Z,3.1nm,0.3s,baz=34,slow=7.4,SNR=71
       comp=Z,3.1nm,0.3s
FINES  FINESS Array B    63.83 335  P     P       01 43 40.4 +0.3
PDAR   Pinedale Array    64.10  54  P     P       01 43 45.2 +2.7
       comp=Z,0.6nm,1.0s,baz=306,slow=3.0,SNR=2.1
       comp=Z,0.6nm,1.0s
OBN    Obninsk           65.19 326⇑eP     P       01 43 48.9 -0.2
OBN                                e              01 46 10.3
OBN                               pmax    pmax
       comp=Z,3.0nm,0.8s
OBN                               MLR     MLR
       comp=Z,68nm,16.0s
OBN    Obninsk           65.19 326 eP     P       01 43 48.9 -0.2
GEYT   Alibeck           66.77 301  P     P       01 44 00.7 +1.1
       comp=Z,1.5nm,0.5s,baz=346,slow=3.1,SNR=3.6
       comp=Z,1.5nm,0.5s
AKN    Aaknes            67.77 344 eP     P       01 44 07.3 +1.9
AKN                               IAmb    IAmb    01 44 07.7
       comp=Z,27nm,1.1s
NC405  NORSAR Array S    67.77 341  P     P       01 44 06.6 +1.1
NB201  NORSAR Array S    67.92 341  P     P       01 44 06.6 +0.1
NB2    NORSAR Subarra    67.94 341  P     P       01 44 07.2 +0.5
       comp=Z,7.4nm,0.7s,baz=29,slow=6.5
NB2    NORSAR Subarra    67.94 341  P     P       01 44 07.2 +0.5
       slow=6.5
NOA    NORSAR Array B    67.94 341  P     P       01 44 07.7 +1.0
       comp=Z,8.6nm,0.9s,baz=26,slow=6.3,SNR=25
       comp=Z,8.6nm,0.9s
NC602  NORSAR Array S    68.15 341 eP     P       01 44 08.8 +1.0
NC602                             IAmb    IAmb    01 44 10.3
       comp=Z,6.7nm,0.9s
MNK    Minsk             68.84 330 i LRM  MLR     02 17 15.4
       comp=Z,68nm,16.9s
MNK    Minsk             68.84 330 i P    P       01 44 01.5  -11
MNK                                i              01 46 48.9
MNK                                i PPP  PPP     01 48 27.3
MNK                               pmax    pmax
       comp=Z,11nm,0.7s
MNK                               pmax    pmax
       comp=E,5.0nm,1.6s
MNK                               pmax    pmax
       comp=N,54nm,1.0s
MNK                               MLR     MLR
       comp=N,300nm,14.0s
MNK                               MLR     MLR
       comp=E,17nm,15.0s
MNK                               MLR     MLR
       comp=Z,68nm,17.0s
MNK    Minsk             68.84 330 i P    P       01 44 01.5  -11
       comp=E,5.0nm,1.6s
MNK    Minsk             68.84 330 i P    P       01 44 07.3 -5.0
       comp=Z,11nm,0.7s,baz=36
MNK    Minsk             68.84 330 i P    P       01 44 07.3 -5.0
       comp=N,54nm,1.0s
MNK    Minsk             68.84 330 i PP   PP      01 46 48.9 +5.0
MNK    Minsk             68.84 330 i PPP  PPP     01 48 27.3
MNK    Minsk             68.84 330 i S    S       01 52 56.9  -16
MNK    Minsk             68.84 330 i SS   SS      01 57 06.1  -32
MNK    Minsk             68.84 330 i SSS  SSS     02 00 22.8
MNK    Minsk             68.84 330 i LQ   LQ      02 08 27.7
MNK    Minsk             68.84 330 i LR   LR      02 11 48.4
MNK    Minsk             68.84 330 i LRM  MLR     02 16 03.9
       comp=N,300nm,14.4s
MNK    Minsk             68.84 330 i LRM  MLR     02 16 52.5
       comp=E,17nm,15.1s
SUE    Sulen             69.22 344 eP     P       01 44 14.8 +0.4
KONO   Kongsberg         69.55 342 eP     P       01 44 18.6 +2.0
STRU   Stroemstad        69.75 340 i P    P       01 44 18.9 +1.1
BORU   Boraas            70.64 339 i P    P       01 44 23.5 +0.3
KIV    Kislovodsk        70.81 314  P     P       01 44 25.9 +1.2
KIV                               IAmb    IAmb    01 44 27.9
       comp=Z,4.7nm,0.7s
KIV    Kislovodsk        70.81 314 eP     P       01 44 25.6 +0.9
KIV                               pmax    pmax
       comp=Z,6.0nm,1.1s
KIV    Kislovodsk        70.81 314 eP     P       01 44 25.6 +0.9
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KBZ    Khabaz              70.88 314   P        P        01 44 26.5 +1.5
       comp=Z,4.6nm,0.8s,baz=83,slow=2.5,SNR=16
       comp=Z,4.6nm,0.8s
KBZ    Khabaz              70.88 314 ceP        P        01 44 26.3 +1.3
KBZ                                    pmax     pmax
       comp=Z,4.0nm,0.9s
KBZ    Khabaz              70.88 314  eP        P        01 44 26.3 +1.3
BLEU   Blekinge            71.03 337  i P       P        01 44 24.6 -1.0
FABU   Falkenberg          71.21 339  i P       P        01 44 26.7 -0.1
SNART  Snartemo            71.26 342  i P       P        01 44 28.3 +1.3
AKASG  Malin Array Be      71.42 326   P        P        01 44 28.0 -0.1
       comp=Z,2.0nm,0.5s,baz=32,slow=6.5,SNR=16
       comp=Z,2.0nm,0.5s
AKBB   Malin Array Si      71.42 326⇑eP        P        01 44 28.0 -0.2
ONI    Oni                 71.44 313   P        P        01 44 29.9 +1.4
ONI                                    IAmb     IAmb     01 44 32.1
       comp=Z,4.9nm,1.0s
ONI    Oni                 71.44 313   P        P        01 44 29.9 +1.4
ONI                                    pmax     pmax
       comp=Z,5.0nm,1.0s
GOET   G??ttrup            72.01 341  i P       P        01 44 32.9 +1.3
GOET                                   IAmb     IAmb     01 44 34.1
       comp=Z,18nm,0.7s
LUNU   Lund                72.25 338  i P       P        01 44 33.9 +0.8
AKH    Akhalkalaki         72.30 312   P        P        01 44 34.4 +0.6
AKH    Akhalkalaki         72.30 312   P        P        01 44 34.4 +0.6
AKH                                    pmax     pmax
       comp=Z,13nm,0.7s
BSD    Bornholm Skovb      72.32 337  i P       P        01 44 33.1 -0.4
BSD                                    IAmb     IAmb     01 44 34.9
       comp=Z,12nm,0.7s
MUD    Monsted U'grnd      72.55 340  i P       P        01 44 35.8 +1.0
MUD                                    IAmb     IAmb     01 44 36.9
       comp=Z,3.5nm,0.6s
SORM   Soroca              73.84 325 ⇑P        P        01 44 43.2 +0.6
SORM   Soroca              73.84 325 ⇑P        P        01 44 43.2 +0.6
GURO   Guroymak-BITLI      75.18 311   P        P        01 44 51.2 +0.4
GURO                                   IAmb     IAmb     01 44 54.2
       comp=Z,3.4nm,1.0s
BUR08  Bucovina Ar. S      75.44 327   P        P        01 44 52.7 +0.7
BUR08                                  IAmb     IAmb     01 45 25.4
       comp=Z,7.3nm,1.4s
BURAR  Bucovina Array      75.46 327 ⇓P        P        01 44 53.3 +1.1
BURAR  Bucovina Array      75.46 327   P        P        01 44 52.3 +0.1
BURAR  Bucovina Array      75.46 327 ⇓P        P        01 44 53.3 +1.1
TESR   Tescani             75.84 325 ⇑P        P        01 44 54.6 +0.5
TRPA   Tarpa               76.00 329 ⇑P        P        01 44 56.2 +1.2
DIKM   Dikmen              76.10 317 ⇑P        P        01 44 58.3 +2.6
DPC    Dobruska-Polom      76.12 334  eP        P        01 44 53.1 -2.7
DPC                                   ex        x        01 56 54.1
DPC    Dobruska-Polom      76.12 334  eP        P        01 44 53.1 -2.7
LANS   Liptovska Anna      76.18 331  eP        P        01 44 58.8 +2.7
LANS                                   pmax     pmax
       comp=Z,4.0nm,0.8s
LANS   Liptovska Anna      76.18 331  eP        P        01 44 58.8 +2.7
KRLC   Kraliky             76.23 333  eP        P        01 44 58.2 +1.8
KRLC                                  ex        x        01 56 45.5
KRLC   Kraliky             76.23 333  eP        P        01 44 58.2 +1.8
CLL    Collm               76.24 336   P        P        01 44 56.4 +0.1
CLL    Collm               76.24 336  i P       P        01 44 56.8 +0.4
       comp=Z,16nm,1.2s
CLL    Collm               76.24 336  i P       P        01 44 56.8 +0.4
CLL                                   e*PP      pP       01 45 03.0 -3.5
CLL                                    pmax     pmax
       comp=Z,16nm,1.2s
CLL                                    MLR      MLR
       comp=Z,400nm,18.5s
CLL    Collm               76.24 336  eP        P        01 44 57.7 +1.3
       comp=Z,16nm,1.2s,baz=25,slow=5.0
MORC   Moravsky Berou      76.25 333 ⇑P        P        01 44 58.2 +1.7
MORC   Moravsky Berou      76.25 333   P        P        01 44 57.8 +1.3
MORC                                   IAmb     IAmb     01 44 59.5
       comp=Z,4.9nm,0.9s
MORC   Moravsky Berou      76.25 333   P        P        01 44 57.8 +1.3
MORC                                   pmax     pmax
       comp=Z,5.0nm,0.9s
PVCC   Panska Ves          76.49 335  eP        P        01 44 59.7 +1.9
PVCC   Panska Ves          76.49 335  eP        P        01 44 59.7 +1.9
TPGR   Topolog             76.50 323 ⇓P        P        01 44 59.3 +1.4
TX31   Lajitas Ar. Si      76.86  61   P        P        01 44 59.6 -0.8
TX31                                   IAmb     IAmb     01 45 25.1
       comp=Z,9.6nm,1.3s
TX32   Lajitas Array       76.86  61   P        P        01 45 00.0 -0.4
TXAR   Lajitas Array       76.86  61   P        P        01 45 00.1 -0.3
       comp=Z,0.8nm,0.7s,baz=304,slow=4.8,SNR=9.9
       comp=Z,0.8nm,0.7s
TXAR   Lajitas Array       76.86  61   P        P        01 44 59.7 -0.7
VYHS   Vyhne               76.95 331  eP        P        01 45 01.4 +0.9
VYHS                                   pmax     pmax
       comp=Z,3.0nm,1.1s
VYHS   Vyhne               76.95 331  eP        P        01 45 01.4 +0.9
MLR    Muntele Rosu        76.96 325 ⇑P        P        01 45 02.6 +1.9
MLR    Muntele Rosu        76.96 325   P        P        01 45 00.6 -0.1
MLR                                    IAmb     IAmb     01 45 04.3
       comp=Z,7.3nm,1.2s
MLR    Muntele Rosu        76.96 325   P        P        01 45 00.6 -0.1
MLR                                    pmax     pmax
       comp=Z,7.0nm,1.2s
VRAC   Vranov              76.96 333 ⇑P        P        01 45 02.4 +1.9
VRAC   Vranov              76.96 333 ⇑P        P        01 45 02.4 +1.9
PRU    Pruhonice           76.98 334  eP        P        01 45 01.9 +1.3
PRU    Pruhonice           76.98 334  eP        P        01 45 01.9 +1.3
PSZ    Piszkesteto         77.10 330 ⇓P        P        01 45 11.4  +10
PSZ    Piszkesteto         77.10 330 ⇓P        P        01 45 11.4  +10
MOX    Moxa                77.22 336  eP        P        01 45 03.5 +1.6
       comp=Z,2.6nm,0.7s,baz=25,slow=5.0
MOX                                   eL        L        02 23 00.4
       comp=Z,64nm,21.5s
VOIR                       77.35 326 ⇑P        P        01 45 04.7 +1.9
VOIR                       77.35 326 ⇑P        P        01 45 04.7 +1.9
ICOR   Ion Corvin          77.36 323 ⇑P        P        01 45 03.4 +0.6
NKC    Novy Kostel         77.36 336  eP        P        01 45 04.0 +1.2
NKC    Novy Kostel         77.36 336  eP        P        01 45 04.0 +1.2
ARR    Arges               77.57 326 ⇑P        P        01 45 07.1 +3.0
BNN    Bunyan              78.02 315   P        P        01 45 07.0 +0.2
KHC    Kasperske Hory      78.03 335  eP        P        01 45 07.3 +0.8
KHC                                   ex        x        01 56 58.6
KHC    Kasperske Hory      78.03 335⇓eP        P        01 45 07.7 +1.2
KHC                                    pmax     pmax
       comp=Z,13nm,0.9s
CKRC   Cesky Krumlov       78.09 334  ex        x        01 57 06.6
SURR   Surduc              78.17 328 ⇑P        P        01 45 08.4 +1.1
GRA1   Grafenberg Arr      78.19 336   P        P        01 45 08.2 +0.8
GRF    Grafenberg Arr      78.19 336   P        P        01 45 08.2 +0.8
GRF                                    pmax     pmax
       comp=Z,8.0nm,0.7s
GRF    Grafenberg Arr      78.19 336  eP        P        01 45 09.7 +2.3
       comp=Z,9.0nm,0.7s,baz=25,slow=5.0
GRF                                   eL        L        02 21 11.4
       comp=Z,80nm,19.7s
GZR    Gura Zlata          78.24 327 ⇑P        P        01 45 08.8 +1.0
GZR    Gura Zlata          78.24 327 ⇑P        P        01 45 08.8 +1.0
GERES  GERESS Array B      78.25 334   P        P        01 45 08.3 +0.5
       comp=Z,1.0nm,0.6s,baz=38,slow=6.8,SNR=8.5
       comp=Z,1.0nm,0.6s
GERES  GERESS Array B      78.25 334   P        P        01 45 08.4 +0.6
BRTR   Keskin Array B      78.38 317   P        P        01 45 10.8 +2.0
       comp=Z,2.1nm,0.8s,baz=51,slow=0.8,SNR=5.9
       comp=Z,2.1nm,0.8s
BRTR   Keskin Array B      78.38 317   P        P        01 45 09.1 +0.3
CONA   Conrad Observa      78.41 333  eP        P        01 45 09.6 +1.0
       comp=Z,1.9nm,0.6s
BZS    Buzias              78.48 328 ⇑P        P        01 45 10.2 +1.2
BZS    Buzias              78.48 328 ⇑P        P        01 45 10.2 +1.2
MOA    Molln               78.97 334  eP        P        01 45 12.6 +0.9
       comp=Z,0.9nm,0.4s
MORH   Mrgy, Hungar        79.00 330 ⇑P        P        01 45 12.7 +0.9
FRGS   Fruska Gora         79.52 329 ⇑P        P        01 45 15.7 +1.0
KBA    Koelnbreinsper      79.94 334  eP        P        01 45 18.8 +1.7
       comp=Z,7.1nm,0.9s
BOVS   Bovan               80.14 327 ⇑P        P        01 45 19.0 +0.9
WATA   Walderalm           80.23 335  eP        P        01 45 20.7 +2.0
       comp=Z,3.0nm,0.6s
WTTA   Wattenberg          80.28 335  eP        P        01 45 20.6 +1.6
       comp=Z,4.4nm,0.6s
RETA   Reutte              80.32 336  ePcP      P        01 45 21.5 +2.3
       comp=Z,1.4nm,0.7s
MOTA   Moosalm             80.36 335  eP        P        01 45 21.0 +1.6
       comp=Z,4.3nm,0.8s
VTS    Vitosha             80.43 325 ⇑P        P        01 45 21.0 +1.1
VTS    Vitosha             80.43 325   P        P        01 45 19.8 -0.1
VTS                                    IAmb     IAmb     01 45 24.1
       comp=Z,7.8nm,0.9s
VTS    Vitosha             80.43 325   P        P        01 45 19.8 -0.1
VTS                                    pmax     pmax
       comp=Z,8.0nm,0.9s
SQTA   Sankt Quirin        80.44 335  eP        P        01 45 21.5 +1.7
       comp=Z,2.0nm,0.5s
ABTA   Abfaltersbach       80.49 334  i PcP     P        01 45 22.5 +2.5
       comp=Z,0.6nm,0.3s
DAVA   Damuels             80.75 336  ePcP      PcP      01 45 24.6 -3.5
       comp=Z,1.1nm,0.4s
FETA   Feichten            80.76 335  ePcP      P        01 45 23.9 +2.4
       comp=Z,0.9nm,0.6s
PDG    Podgorica           82.09 328   P        P        01 45 29.3 +0.9
ELL    Elmali              82.50 318   P        P        01 45 32.4 +1.5
ELL    Elmali              82.50 318   P        P        01 45 32.4 +1.5
RAYN   Ar Rayn             84.61 299 ⇑P        P        01 45 42.8 +0.9
H03N2  Juan Fernandez     138.29  90   T        T        04 26 05.7
       baz=308,slow=77,SNR=6.3
H03N1  Juan Fernandez     138.30  90   T        T        04 26 11.5
       baz=308,slow=77,SNR=6.3
H03N3  Juan Fernandez     138.30  90   T        T        04 26 10.9
       baz=308,slow=77,SNR=6.9
PLCA   Paso Flores        147.78  95   PKPbc    PKPab    01 52 55.6 +0.5
       comp=Z,2.1nm,1.0s,baz=242,slow=2.5,SNR=3.0
NVL    N'lazarevskaya     150.24 204  ePKIKP    PKiKP    01 52 59.2 +0.8
NVL                                    pmax     pmax
       comp=Z,6.0nm,0.8s
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KLM ***08*** *01:38:38,2°.46N×128°.89E,h10^{km},mb5.7*

BJI ***08*** *01:38:40.3±0.0,2°.05N×128°.99E,h65^{km},mb5.1/85, mB5.1/63,Ms4.8/88,Ms7 4.7/81*

MOS ***08*** *01:38:40.0±1.0,2°.39N×128°.55E,h36^{km},mb5.6/72, MS4.6/9,Error ellipse: s-maj=7.4km s-min=4.1km az=111.3*

IDC ***08*** *01:38:42.8±1.2,2°.36N×128°.46E,h40^{km}±9^{km},mb4.9/39, mbtmp5.2/42,ML5.1/3,MS4.5/58,Error ellipse: s-maj=13.0km s-min=6.7km az=75.0*

GCMT ***08*** *01:38:43.1±0.1,2°.62N±0°.01×128°.65E±0°.01,h42^{km}±1^{km}, MW5.2/127,Moment Tensor Solution. s96,c142; s127,c212; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.47±.02; M$_{\theta\theta}$-0.63±.01; M$_{\phi\phi}$0.16±.02; M$_{r\theta}$-0.51±.02; M$_{\theta\phi}$0.33±.01; M$_{\phi r}$0.44±.02; Best double couple: M$_0$0.92300×10^{17} NP1:φ$_s$310.00000°,δ71.00000°, λ110.00000°. NP2:φ$_s$82.00000°,δ27.00000°,λ45.00000°. Principal axes: T 0.8260, Plg59.0000°, Azm248.0000°; N 0.1950, Plg19.0000°, Azm123.0000°; P -1.0210, Plg23.0000°, Azm25.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***08*** *01:38:44.5,2°.30N×128°.62E,h58^{km}*

NEIC ***08*** *01:38:44.1±1.9,2°.30N±0°.06×128°.66E±0°.06,h58^{km}±4^{km}, mb5.6/205,Mww5.2/12,Error ellipse: s-maj=8.5km s-min=8.0km az=216.0*

NEIC ***08*** *01:38:44.5,3°.10N×128°.62E,h60^{km},Moment Tensor Solution. Duration: 1^{s}1.0 Moment tensor: Scale 10^{16} Nm; M$_{rr}$7.27; M$_{\theta\theta}$-7.61; M$_{\phi\phi}$0.34; M$_{r\theta}$-2.41; M$_{\theta\phi}$1.24; M$_{\phi r}$3.33; Fault plane solution: M$_0$8.59000×10^{16} NP1: φ$_s$297.63000°,δ58.55000°,λ111.48000°. NP2: φ$_s$80.60000°,δ37.45000°,λ59.09000°. Principal axes: T 8.8068, Plg68.0000°, Azm253.0000°; N -0.4392, Plg18.0000°, Azm106.0000°; P -8.3676, Plg11.0000°, Azm12.0000°;*

DJA ***08*** *01:38:45.2±0.1,2°N±2°×12°9E±°,h61^{km}±1^{km},M5.5/116, mb5.7/116,mB5.9/84,MLv5.5/18,Mw5.1/68,Mw(mB)5.5/84, MwMwp5.1/23,Mwp5.4/23*

ISC 08 01:38:43.8±0.3,**2°.31N**±0°.03×**128°.59E**±0°.03,**h55**^{km}±2^{km}, **h56**^{km}**:pP-P,n970,**σ**1^{s}55**/1033,**mb5.5**/240,**MS4.6**/106, **49C-28D,Halmahera**

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Code   Station Name         Δ°  AZ°    Phase ID          Time      Res
                                       Op       ISC      h  m  s   ISC
TNTI   Ternate              1.96 219            Pn       01 39 14.6  0.0
TNTI   Ternate              1.96 219   P        Pn       01 39 15.4 +0.7
TNTI   Ternate              1.96 219   P        Pn       01 39 14.7  0.0
LBMI   Labuha               3.13 200   P        Pn       01 39 31.7 +1.0
SGSI   Sangihe              3.35 294   P        Pn       01 39 34.5 +0.7
SIJI   Sorong               4.14 140   Pn       Pn       01 39 44.4 -0.1
       49nm,0.3s,baz=126,slow=15,SNR=105
SIJI                                   Sn       Sn       01 40 29.0 -2.7
       30nm,0.3s,baz=149,slow=22,SNR=7.7
       122nm,0.3s
SANI   Sanana               5.05 211   P        Pn       01 39 59.2 +2.1
SANI   Sanana               5.05 211   P        Pn       01 39 57.0 -0.1
       565nm,0.9s,5µm15µm2.1nm
GSPH   General Santos       5.22 316⇑i P       Pn       01 39 59.8 +0.2
GSPH                                  i S       Sn       01 40 59.9 +1.4
DAV    Davao City (W)       5.60 328   Pn       Pn       01 40 05.2 +0.6
       72nm,0.3s,baz=113,slow=3.1,SNR=9.9
DAV    Davao City (W)       5.60 328   Pn       Pn       01 40 05.9 +1.2
DAV    Davao City (W)       5.60 328   P        Pn       01 40 08.8 +4.2
DAV                                    S        Sn       01 41 19.8  +12
MSAI   Masohi               5.63 177   P        Pn       01 40 07.8 +2.8
       90nm,0.8s,0.2nm
NLAI   Namlea               5.71 195   P        Pn       01 40 07.0 +0.9
       145nm,0.9s,8µm0.8nm
GTOI   Gorontalo            5.82 253   P        Pn       01 40 10.0 +2.3
       585nm,0.7s,4µm1.7nm
KCP    Kidapawan            5.83 323⇑i P       Pn       01 40 08.8 +1.0
KCP                                   i S       Sn       01 41 22.7 +9.3
CDOP   Cateel, Davao        5.85 339⇑eP        Pn       01 40 05.9 -2.1
CDOP                                  eS        Sn       01 41 20.8 +7.2
AAI    Ambon                5.97 184   P        Pn       01 40 10.1 +0.4
       273nm,0.7s,8µm10µm1.5nm
BIPH   Bislig               6.24 339⇓eP        Pn       01 40 10.3 -3.1
BIPH                                  i S       Sn       01 41 19.1 -4.3
FAKI   Fak Fak              6.35 145   Pn       Pn       01 40 14.3 -0.6
FAKI   Fak Fak              6.35 145   P        Pn       01 40 15.0 +0.1
FAKI   Fak Fak              6.35 145   P        Pn       01 40 14.6 -0.3
       283nm,1.1s,3µm4µm0.9nm
CTBH   Cotabato--PC H       6.52 319⇑i P       Pn       01 40 18.5 +1.2
CTBH                                  i S       Sn       01 41 32.5 +2.1
BUKP   Musuan               6.55 328⇑eP        Pn       01 40 19.0 +1.3
BUKP                                  eS        Sn       01 41 45.2  +14
TASP   Talacogon, Agu       6.70 336⇑eP        Pn       01 40 21.0 +1.3
LUWI   Luwuk                6.71 240   Pn       Pn       01 40 20.1 +0.3
LUWI   Luwuk                6.71 240   P        Pn       01 40 22.6 +2.8
LUWI   Luwuk                6.71 240   P        Pn       01 40 20.0 +0.3
       1µm,1.0s,17µm9µm6.5nm
RKPI   Ransiki, Papua       6.75 124   P        Pn       01 40 22.5 +2.1
       354nm,0.7s,6µm4µm2.6nm
MRSI   Marisa               6.90 255   P        Pn       01 40 23.8 +1.4
       2µm,1.0s,16µm5µm5.8nm
BNDI   Bandanaira           6.91 169   P        Pn       01 40 23.9 +1.3
       662nm,1.1s,9µm7µm2.7nm
CGP    Cagayan de Oro       7.23 328⇓i P       Pn       01 40 30.1 +3.1
CGP                                   i S       Sn       01 41 40.4 -7.4
PAGZ   Pagadian             7.56 317⇓eP        Pn       01 40 31.3 -0.2
I39PW  PALAU INFRASON       7.88  49   Pn       Pn       01 40 34.2 -1.7
       baz=227,slow=14
I39PW                                  I        I        02 28 30.0
       baz=231,slow=311,SNR=0.8
TOLI2  Tolitoli             7.90 261            Pn       01 40 36.4 +0.3
TOLI2  Tolitoli             7.90 261   P        Pn       01 40 37.0 +0.9
ZCP    Zamboanga City       7.96 305⇑i P       Pn       01 40 38.0 +1.1
ZCP                                   i S       Sn       01 42 05.6 +0.1
SCPH   Surigao              8.04 338⇓eP        Pn       01 40 38.4 +0.3
DCPH   Dipolog City         8.13 320⇓i P       Pn       01 40 42.0 +2.7
LSIP   Lazi, Siquijor       8.38 324⇑eP        Pn       01 40 43.3 +0.5
GHBP   Garcia Hernand       8.42 330⇑eP        Pn       01 40 44.0 +0.7
GHBP                                  eS        Sn       01 42 30.2  +13
SNPH   Sibulan              8.79 323  eP        Pn       01 40 50.8 +2.5
TABP   Talibon, Bohol       8.81 331⇑eP        Pn       01 40 47.8 -0.8
MPSI   Mapaga               8.91 257   P        Pn       01 40 51.4 +1.4
       468nm,0.8s,4µm
LLP    Lapu-Lapu            9.19 330  eP        Pn       01 40 53.4 -0.4
MYLDM  Lahad Datu          10.47 286   Pn       Pn       01 41 13.7 +2.4
SAUI   Saumlaki            10.57 165   Pn       Pn       01 41 10.1 -2.6
SPSI   Sidrap Palu         10.80 235   P        Pn       01 41 16.0 +0.2
       665nm,0.8s,6µm
RCP    Roxas               10.87 328⇑eP        Pn       01 41 17.1 +0.3
SMPI   Sarmi               10.98 113   P        Pn       01 41 21.5 +3.2
       104nm,0.9s
BKSI   Bulukumba           11.36 228   P        Pn       01 41 23.9 +0.4
       310nm,0.6s,5µm
KAPI   Kappang             11.45 231   Pn       Pn       01 41 24.4 -0.3
       17nm,0.3s,baz=278,slow=3.2,SNR=47
KAPI                                   Sn       Sn       01 43 30.7 -0.4
       baz=26,slow=22
KAPI                                   LR       LR       01 46 32.6
       comp=Z,2µm,20.2s,baz=30,slow=41
       100nm,0.6s
KAPI   Kappang             11.45 231   Pn       Pn       01 41 24.9 +0.3
KAPI   Kappang             11.45 231   P        Pn       01 41 26.4 +1.7
KAPI   Kappang             11.45 231   P        Pn       01 41 26.2 +1.5
KAPI                                   S        Sn       01 43 28.5 -2.5
BSSI   Bau Bau, Buton      11.66 224   P        Pn       01 41 29.0 +1.4
       465nm,1.3s,5µm
BKB    Balikpapan          12.22 253   Pn       Pn       01 41 33.8 -1.5
BKB    Balikpapan          12.22 253   P        Pn       01 41 35.7 +0.4
PPR    Puerto Princes      12.29 308⇑eP        Pn       01 41 39.9 +3.7
SPMM   Sapulut             12.34 281   P        Pn       01 41 40.0 +3.1
GENI   Genyem              12.55 113   P        Pn       01 41 42.4 +2.6
       189nm,1.1s,3µm
MMRI   Maumere             12.59 210   Pn       Pn       01 41 40.1 -0.1
MMRI   Maumere             12.59 210   P        Pn       01 41 42.2 +2.0
       271nm,0.9s,5µm4µm
SOEI   Soe                 12.74 200   Pn       Pn       01 41 42.9 +0.5
SOEI   Soe                 12.74 200   P        Pn       01 41 45.7 +3.3
       513nm,1.1s,6µm7µm
KKM    Kota Kinabalu       12.89 287   Pn       Pn       01 41 44.0 -0.5
MTKI   Muara Teweh, K      14.07 257   P        Pn       01 42 00.3 -0.2
       219nm,1.1s
BASI   Baing, Sumba        14.79 213   P        Pn       01 42 11.1 +1.3
       644nm,0.9s,6µm
BBKI   Banjar Baru         14.89 247   P        Pn       01 42 11.5 +0.3
       363nm,1.1s,6µm
MTN    Manton Dam          15.27 171   P        Pn       01 42 16.4 +0.4
       baz=15,SNR=8.7
MTN    Manton Dam          15.27 171   Pn       Pn       01 42 14.0 -2.0
KDU    Kakadu              15.39 166   P        Pn       01 42 14.2 -3.4
       baz=16,SNR=6.8
PLAI   Plampang            15.45 224   P        P        01 42 20.3 -1.6
PLAI   Plampang            15.45 224   P        Pn       01 42 20.0 +1.6
       664nm,0.9s,8µm5µm
TWSI   Taliwang, Sumb      16.02 227   P        P        01 42 27.0 -1.3
       521nm,1.1s,5µm
SBUM   Sibu                16.36 271   Pn       Pn       01 42 29.3 -0.7
CVP    Callao Caves        16.68 337⇑eP        P        01 42 35.3 -0.2
SRBI   Singaraja           16.88 232   P        P        01 42 37.9 +0.2
       705nm,1.1s,8µm5µm
DNP    Denpasar            17.24 231   P        P        01 42 43.4 +1.7
       2µm,1.3s,44µm
IGBI   Denpasar            17.38 230   P        P        01 42 44.8 +1.5
       762nm,0.9s,10µm
ABJI   Asem Bagus          17.49 235   P        P        01 42 45.5 +0.9
       700nm,1.0s,7µm8µm
KNRA   Kununurra           17.87 179   P        P        01 42 49.8 +1.1
       baz=18,SNR=46
KNRA   Kununurra           17.87 179            Pn       01 42 46.6 -2.0
KNRA                                   IAmb     IAmb     01 42 54.3
       comp=Z,469nm,1.4s
KNRA   Kununurra           17.87 179   P        P        01 42 50.4 +1.7
JAGI   Jajag, Banyuwa      17.95 233   P        Pn       01 42 48.8 -0.8
JAGI   Jajag, Banyuwa      17.95 233   P        P        01 42 52.6 +3.0
JAGI   Jajag, Banyuwa      17.95 233   P        P        01 42 50.9 +1.3
       comp=Z,851nm,1.1s,comp=Z,10µmcomp=Z,9µm
BLJI   Banyuglugur         17.99 236   P        P        01 42 50.8 +0.7
       comp=Z,2µm,0.8s,comp=Z,13µm
KSM    Kuching             18.30 268   P        Pn       01 42 53.8 -0.1
KSM                                    IAmb     IAmb     01 42 59.6
       comp=Z,206nm,0.8s
GRJI   Gresik              18.51 240   P        Pn       01 42 56.9 +0.4
       comp=Z,337nm,1.0s,comp=Z,6µmcomp=Z,4µm
GUMO   Guam                19.61  54   P        Pn       01 43 08.9 -0.6
       comp=Z,7.7nm,0.3s,baz=209,slow=12,SNR=5.9
GUMO                                   LR       LR       01 49 37.7
       comp=Z,3µm,21.4s,baz=229,slow=33
       comp=Z,243nm,0.9s
GUMO   Guam                19.61  54   P        P        01 43 06.7 -1.1
GUMO                                   IAmb     IAmb     01 43 14.5
       comp=Z,443nm,1.1s
GUMO   Guam                19.61  54   P        P        01 43 06.7 -1.1
GUMO                                   pmax     pmax
       comp=Z,443nm,1.1s
NGJI   Ngawi               19.61 241   P        Pn       01 43 10.1 +0.5
       comp=Z,1µm,1.1s,comp=Z,10µm
UWJI   Ujung Watu          19.64 244   P        Pn       01 43 09.0 -0.9
       comp=Z,425nm,1.0s
PWJI   Pagerwojo           19.64 238   P        Pn       01 43 09.2 -0.8
       comp=Z,850nm,1.1s,comp=Z,7µm
SMRI   Semarang            20.36 243   P        P        01 43 17.0 +0.9
SMRI   Semarang            20.36 243   P        Pn       01 43 18.1 -0.4
       comp=Z,812nm,1.3s,comp=Z,12µm
FITZ   Fitzroy Crossi      20.49 188   P        P        01 43 17.8 +0.5
       baz=21
FITZ   Fitzroy Crossi      20.49 188   P        P        01 43 16.3 -0.9
UGM    Wanagama            20.69 240   P        P        01 43 20.2 +0.6
UGM    Wanagama            20.69 240   P        Pn       01 43 21.2 -1.2
UGM    Wanagama            20.69 240   P        P        01 43 20.7 +1.1
       comp=Z,821nm,1.1s,comp=Z,12µmcomp=Z,6µm
YOGI   Yogyakarta          20.84 241   P        P        01 43 21.6 +0.4
       comp=Z,1µm,1.3s,comp=Z,16µm
TWGBT  Beinan              21.65 341   P        P        01 43 28.2 -1.6
TWG    Pinlang             21.66 341   P        P        01 43 26.3 -3.5
TWG                                    IAmb     IAmb     01 43 28.5
       comp=Z,134nm,0.7s
COEN   Coen                21.68 139   P        P        01 43 31.9 +1.7
       baz=22,SNR=22
COEN   Coen                21.68 139   P        P        01 43 29.8 -0.4
COEN   Coen                21.68 139   P        P        01 43 31.7 +1.5
KPJI   Karang Pucung       21.84 244   P        P        01 43 32.2 +0.4
       comp=Z,589nm,1.1s,comp=Z,6µm
PMG    Port Moresby        21.86 122   P        P        01 43 33.3 +1.3
       comp=Z,94nm,1.2s,baz=340,slow=9.3,SNR=15
PMG                                    LR       LR       01 53 06.0
       comp=Z,2µm,20.9s,baz=320,slow=39
       comp=Z,94nm,1.2s
PMG    Port Moresby        21.86 122   P        P        01 43 31.4 -0.6
PMG    Port Moresby        21.86 122   P        P        01 43 31.4 -0.6
PMG                                    pmax     pmax
       comp=Z,104nm,1.3s
JCJI   Jatiwangi           22.09 247   P        P        01 43 36.7 +2.1
       comp=Z,1µm,1.0s,comp=Z,12µm
YULB   Yu-li               22.12 342   P        P        01 43 32.3 -2.5
YULB   Yu-li               22.12 342   P        P        01 43 32.3 -2.5
TPUB   Ta-pu               22.25 340   P        P        01 43 34.6 -1.6
TPUB                                   IAmb     IAmb     01 43 56.8
       comp=Z,296nm,0.9s
TPUB   Ta-pu               22.25 340   P        P        01 43 35.1 -1.1
CMJI   Cimerak             22.46 243   P        P        01 43 37.0 -1.6
       comp=Z,674nm,0.8s,comp=Z,5µmcomp=Z,3µm
SSLB   Suanglung           22.59 342   P        P        01 43 37.6 -2.4
SSLB                                   IAmb     IAmb     01 43 47.9
       comp=Z,209nm,0.7s
SSLB   Suanglung           22.59 342   P        P        01 43 38.9 -1.0
WB0    Warramunga Arr      22.67 166   P        P        01 43 40.8 +0.1
WB0                                    IAmb     IAmb     01 43 43.4
       comp=Z,263nm,0.8s
YOJ    Yonaguni jima       22.67 347   P        P        01 43 39.6 -1.1
YOJ                                    IAmb     IAmb     01 43 50.7
       comp=Z,308nm,1.0s
YOJ    Yonaguni jima       22.67 347   P        P        01 43 40.7  0.0
YOJ    Yonaguni jima       22.67 347   P        P        01 43 39.6 -1.1
YOJ                                    pmax     pmax
       comp=Z,308nm,1.0s
NACB   Ninganchiao         22.76 343   P        P        01 43 40.4 -1.2
NACB   Ninganchiao         22.76 343   P        P        01 43 41.6 -0.1
WRAB   Tennant Creek       22.82 166   P        P        01 43 42.8 +0.5
WRAB                                   IAmb     IAmb     01 43 49.6
       comp=Z,254nm,0.8s
WRAB   Tennant Creek       22.82 166   P        P        01 43 43.0 +0.7
WRAB   Tennant Creek       22.82 166   P        P        01 43 42.8 +0.5
WRAB                                   pmax     pmax
       comp=Z,254nm,0.9s
WRA    Warramunga Arr      22.82 166   P        P        01 43 43.3 +0.9
       comp=Z,169nm,0.7s,baz=342,slow=10,SNR=220
WRA                                    S        S        01 47 51.1 +3.4
       comp=Z,17nm,1.2s,baz=338,slow=14,SNR=4.7
WRA                                    ScP      ScP      01 51 06.5 +1.0
       comp=Z,11nm,0.9s,baz=339,slow=3.1,SNR=10
WRA                                    LR       LR       01 54 51.5
       comp=Z,1µm,18.1s,baz=339,slow=42
WRA                                    P3KPbc            02 17 07.8
       comp=Z,0.5nm,1.1s,baz=170,slow=4.2,SNR=2.2
       comp=Z,169nm,0.7s
WRA    Warramunga Arr      22.82 166   P        P        01 43 41.9 -0.5
WB2    Warramunga Arr      22.83 166   P        P        01 43 43.0 +0.6
       baz=23
WB2    Warramunga Arr      22.83 166   P        P        01 43 42.2 -0.2
WB2                                    IAmb     IAmb     01 43 49.7
       comp=Z,300nm,0.9s
WB1    Warramunga Ar.      22.84 166   P        P        01 43 43.7 +1.2
PPBI   Pangkal Pinang      22.89 259   P        P        01 43 42.6 -0.5
       comp=Z,306nm,1.0s,comp=Z,28µm
WR0    Warramunga Arr      22.89 165   P        P        01 43 43.4 +0.4
WR0                                    IAmb     IAmb     01 43 50.4
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	comp=Z,196nm,0.9s						
BBJI	**Bungbulang**	**23.04**	**245**	P	**P**	**01 43 44.1**	**-0.6**
YHNB	**Yeheng**	**23.30**	**343**	P	**P**	**01 43 45.1**	**-1.9**
YHNB	**Yeheng**	**23.30**	**343**	P	**P**	**01 43 46.7**	**-0.4**
CBJI	**Citeko**	**23.38**	**248**	P	**P**	**01 43 47.7**	**-0.2**
	comp=Z,634nm,1.1s,comp=Z,12µm						
CNJI	**Cibinong**	**23.45**	**246**	P	**P**	**01 43 47.7**	**-0.9**
	comp=Z,401nm,0.9s,comp=Z,22µm						
JMZ	**Minamidaito 2**	**23.51**	**6**	P	**P**	**01 43 47.4**	**-1.5**
TATO	**Taipei**	**23.55**	**344**	P	**P**	**01 43 47.7**	**-1.7**
TATO				IAmb	IAmb	01 43 51.4	
	comp=Z,149nm,0.8s						
TATO	**Taipei**	**23.55**	**344**	P	**P**	**01 43 48.2**	**-1.1**
SBJI	**Serang**	**23.94**	**249**	P	**P**	**01 43 54.5**	**+1.4**
	comp=Z,430nm,1.2s,comp=Z,8µm						
TPRI	**Tanjung Pinang**	**24.10**	**267**	P	**P**	**01 43 55.4**	**+0.9**
	comp=Z,211nm,1.1s,comp=Z,4µm						
KNMB	**Chin-men Tao**	**24.13**	**337**	P	**P**	**01 43 52.9**	**-1.8**
DSRI	**Dabo**	**24.17**	**264**	P	**P**	**01 43 56.0**	**+0.8**
	comp=Z,127nm,1.3s,comp=Z,3µmcomp=Z,2µm						
KRVT	**Keravat (AS076**	**24.32**	**106**	P	**P**	**01 43 59.8**	**+3.2**
	comp=Z,94nm,0.7s,baz=197,slow=3.3,SNR=10.0						
KRVT				LR	LR	01 51 35.3	
	comp=Z,3µm,20.1s,baz=72,slow=32						
	comp=Z,94nm,0.7s						
PMBI	**Palembang**	**24.38**	**258**	P	**P**	**01 43 56.6**	**-0.4**
PMBI	**Palembang**	**24.38**	**258**	P	**P**	**01 43 59.7**	**+2.6**
	comp=Z,1µm,1.0s						
JOW	**Kunigami**	**24.38**	**359**	P	**P**	**01 43 57.8**	**+0.8**
	comp=Z,80nm,0.9s,baz=192,slow=8.0,SNR=13						
JOW				LR	LR	01 52 25.9	
	comp=Z,3µm,21.3s,baz=208,slow=34						
	comp=Z,80nm,0.9s						
JOW	**Kunigami**	**24.38**	**359**	P	**P**	**01 43 56.2**	**-0.7**
JOW	**Kunigami**	**24.38**	**359**	P	**P**	**01 43 57.9**	**+0.9**
RABL	**Rabaul**	**24.42**	**105**	P	**P**	**01 43 58.5**	**+0.9**
RABL				IAmb	IAmb	01 44 07.8	
	comp=Z,142nm,0.8s						
CGJI	**Cibinong**	**24.52**	**249**	P	**P**	**01 43 57.8**	**-0.6**
	comp=Z,1µm,1.1s,comp=Z,12µm						
BLSI	**Bandar Lampung**	**24.54**	**252**	P	**P**	**01 43 59.1**	**+0.5**
	comp=Z,539nm,0.7s,comp=Z,5µm						
MYKOM	**Kota Tinggi**	**24.73**	**269**	P	**P**	**01 44 00.5**	**+0.1**
MYKOM				IAmb	IAmb	01 44 04.9	
	comp=Z,222nm,1.2s						
MYKOM	**Kota Tinggi**	**24.73**	**269**	P	**P**	**01 44 03.0**	**+2.7**
QIZ	**Qiongzhong**	**24.76**	**313**	P	**P**	**01 44 01.9**	**+1.4**
QIZ				S	**S**	**01 48 21.7**	**+2.6**
QIZ				sS	**sS**	**01 48 47.2**	**+4.8**
QIZ				pmax	pmax		
	comp=Z,70nm,0.9s						
QIZ				pmax	pmax		
	comp=Z,310nm,3.6s						
QIZ				LR	LR		
	comp=Z,900nm,19.3s						
QIZ				LR	LR		
	comp=Z,650nm,15.8s						
QIZ				LR	LR		
	comp=Z,1µm,23.9s						
QIZ	**Qiongzhong**	**24.76**	**313**	P	**P**	**01 44 00.0**	**-0.5**
KLI	**Kotabumi**	**24.76**	**253**	P	**P**	**01 44 00.6**	**0.0**
	comp=Z,530nm,0.7s,comp=Z,6µm						
MBWA	**Marble Bar**	**24.89**	**200**	P	**P**	**01 44 00.3**	**-1.3**
MBWA				IAmb	IAmb	01 44 02.4	
	comp=Z,108nm,0.8s						
MBWA	**Marble Bar**	**24.89**	**200**	P	**P**	**01 44 01.2**	**-0.4**
MBWA	**Marble Bar**	**24.89**	**200**	P	**P**	**01 44 01.4**	**-0.2**
MBWA				S	**S**	**01 48 18.2**	**-2.9**
QIS	**Mount Isa**	**25.16**	**155**	P	**P**	**01 44 06.1**	**+1.9**
	baz=25,SNR=74						
QIS	**Mount Isa**	**25.16**	**155**	P	**P**	**01 44 05.4**	**+1.3**
PSA00	**Pilbara Seismi**	**25.23**	**199**	P	**P**	**01 44 03.1**	**-1.7**
PSA00					**PcP**	**01 47 36.9**	**-0.4**
PSA00	**Pilbara Seismi**	**25.23**	**199**	P	**P**	**01 44 04.9**	**+0.2**
JMBI	**JAMBI**	**25.25**	**261**	P	**P**	**01 44 07.2**	**+2.1**
	comp=Z,531nm,1.2s,comp=Z,5µm						
KASI	**Kota Agung**	**25.30**	**252**	P	**P**	**01 44 05.1**	**-0.3**
	comp=Z,646nm,0.8s,comp=Z,5µm						
MDSI	**Maura Dua**	**25.31**	**255**	P	**P**	**01 44 05.8**	**+0.2**
	comp=Z,269nm,1.0s,comp=Z,3µmcomp=Z,2µm						
GZH	**Guangzhou**	**25.40**	**326**	P	**P**	**01 44 10.4**	**+4.2**
GZH				S	**S**	**01 48 36.7**	**+7.5**
GZH				pmax	pmax		
	comp=Z,59nm,0.9s						
MTSU	**Mount Surprise**	**25.55**	**143**	P	**P**	**01 44 09.9**	**+2.2**
	baz=26,SNR=15						
LWLI	**Liwa**	**25.57**	**253**	P	**P**	**01 44 08.9**	**+0.8**
	comp=Z,1µm,0.7s,comp=Z,11µm						
JRMM	**Jerantut**	**26.12**	**274**	P	**P**	**01 44 16.0**	**+3.0**
AS31	**Alice Springs**	**26.33**	**169**	P	**P**	**01 44 15.0**	**+0.2**
AS31				PcP	**PcP**	**01 47 40.8**	**+1.0**
ASAR	**Alice Springs**	**26.33**	**169**	P	**P**	**01 44 15.6**	**+0.8**
	comp=Z,24nm,0.6s,baz=360,slow=8.1,SNR=270						
ASAR				PcP	**PcP**	**01 47 40.4**	**+0.6**
	comp=Z,16nm,0.7s,baz=351,slow=2.0,SNR=9.3						
ASAR				S	**S**	**01 48 47.5**	**+3.5**
	comp=Z,6.0nm,1.1s,baz=346,slow=18,SNR=3.1						
ASAR				ScP	**ScP**	**01 51 16.1**	**+1.0**
	comp=Z,7.9nm,0.8s,baz=351,slow=1.9,SNR=13						
ASAR				ScS	**ScS**	**01 55 03.5**	**-1.9**
	comp=Z,0.9nm,0.8s,baz=329,slow=4.5,SNR=5.3						
ASAR				LR	LR	01 56 07.9	
	comp=Z,2µm,21.1s,baz=338,slow=40						
ASAR				P3KPbc		02 16 53.8	
	comp=Z,0.3nm,0.8s,baz=116,slow=2.2,SNR=1.9						
	comp=Z,24nm,0.6s						
ASAR	**Alice Springs**	**26.33**	**169**	P	**P**	**01 44 15.4**	**+0.6**
ASAR				PcP	**PcP**	**01 47 39.6**	**-0.2**
AS01	**Alice Springs**	**26.34**	**169**	P	**P**	**01 44 16.0**	**+1.2**
MNAI	**Manna**	**26.46**	**256**	P	**P**	**01 44 16.3**	**+0.3**
MNAI	**Manna**	**26.46**	**256**	P	**P**	**01 44 17.2**	**+1.2**
MNAI	**Manna**	**26.46**	**256**	P	**P**	**01 44 16.3**	**+0.3**
	comp=Z,526nm,1.1s						
KSI	**Kapahiang**	**26.65**	**257**	P	**P**	**01 44 19.6**	**+1.8**
	comp=Z,245nm,1.0s						
MASI	**Maura Aman, Be**	**26.89**	**258**	P	**P**	**01 44 20.4**	**+0.4**
	comp=Z,438nm,1.2s,comp=Z,3µm						
WRKA	**Warakurna**	**27.19**	**181**	P	**P**	**01 44 22.7**	**+0.3**
	baz=27,SNR=199						
WRKA	**Warakurna**	**27.19**	**181**	P	**P**	**01 44 22.9**	**+0.5**
SDSI	**Sungai Dareh**	**27.35**	**264**	P	**P**	**01 44 24.4**	**+0.4**
	comp=Z,49nm,0.9s,comp=Z,2µm						
IPM	**Ipoh**	**27.60**	**275**	P	**P**	**01 44 25.6**	**-0.7**
IPM	**Ipoh**	**27.60**	**275**	P	**P**	**01 44 28.0**	**+1.7**
BKNI	**Bangkinang**	**27.62**	**266**	P	**P**	**01 44 27.2**	**+0.8**
BKNI				IAmb	IAmb	01 44 34.5	
	comp=Z,238nm,1.2s						
BKNI	**Bangkinang**	**27.62**	**266**	P	**P**	**01 44 27.8**	**+1.4**
	comp=Z,136nm,0.9s,comp=Z,2µmcomp=Z,2µm						
JCJ	**Chichijima**	**27.88**	**27**	P	**P**	**01 44 29.2**	**+0.7**
	comp=Z,289nm,0.7s,baz=159,slow=4.0,SNR=8.1						
JCJ				LR	LR	01 52 59.5	
	comp=Z,2µm,21.4s,baz=230,slow=31						
JCJ	**Chichijima**	**27.88**	**27**	P	**P**	**01 44 27.3**	**-1.2**
KULM	**Kulim**	**28.04**	**277**	P	**P**	**01 44 29.2**	**-0.9**
KULM	**Kulim**	**28.04**	**277**	P	**P**	**01 44 33.0**	**+2.9**
CTA	**Charters Tower**	**28.21**	**143**	P	**P**	**01 44 33.0**	**+1.4**
	comp=Z,40nm,1.2s,baz=327,slow=10,SNR=16						
CTA				ScP	**ScP**	**01 51 22.3**	**+1.4**
	comp=Z,6.8nm,0.8s,baz=5.0,slow=3.0,SNR=4.3						
CTA				LR	LR	01 57 05.7	
	comp=Z,1µm,21.4s,baz=321,slow=39						
	comp=Z,40nm,1.2s						
CTA	**Charters Tower**	**28.21**	**143**	P	**P**	**01 44 33.4**	**+1.8**
	baz=28						
CTAO	**Charters Tower**	**28.21**	**143**	P	**P**	**01 44 32.0**	**+0.4**
CTAO	**Charters Tower**	**28.21**	**143**	P	**P**	**01 44 32.0**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,127nm,1.8s						
PDSI	**Padang**	**28.31**	**264**	P	**P**	**01 44 32.4**	**-0.2**
	comp=Z,56nm,1.0s						
GIRL	**Giralia**	**28.49**	**209**	P	**P**	**01 44 35.1**	**+1.1**
	baz=29,SNR=7.8						
GIRL	**Giralia**	**28.49**	**209**	P	**P**	**01 44 34.6**	**+0.6**
PPSI	**Pulau Pagai**	**29.02**	**260**	P	**P**	**01 44 37.6**	**-1.2**
	comp=Z,267nm,1.2s,comp=Z,3µm						
NAYO	**Nakonayok**	**29.46**	**295**	P	**P**	**01 44 46.0**	**+3.3**
SSE	**Sheshan**	**29.47**	**347**	P	**P**	**01 44 44.7**	**+2.0**
SSE				S	**S**	**01 49 34.4**	**+1.2**
SSE				pmax	pmax		
	comp=Z,27nm,0.6s						
SSE				pmax	pmax		
	comp=Z,110nm,3.2s						
SSE				LR	LR		
	comp=Z,440nm,17.8s						
SSE				LR	LR		
	comp=Z,170nm,17.7s						
SRIT	**Nakonsritamara**	**29.51**	**283**	P	**P**	**01 44 43.2**	**-0.1**
PSI	**Prapat**	**29.64**	**272**	P	**P**	**01 44 43.7**	**-0.9**
PSI				pmax	pmax		
	comp=Z,51nm,1.0s						
RPSI	**Rantau Prapat**	**29.64**	**271**	P	**P**	**01 44 43.7**	**-0.7**
CNSH	**ChangSha**	**29.76**	**331**	⇑P	**P**	**01 44 46.3**	**+1.1**
CNSH				S	**S**	**01 49 40.0**	**+2.2**
CNSH				LR	LR		
	comp=Z,840nm,18.8s						
CNSH				LR	LR		
	comp=Z,620nm,18.2s						
CNSH				LR	LR		
	comp=Z,1µm,18.0s						
MEEK	**Meekatharra**	**30.35**	**198**	P	**P**	**01 44 50.0**	**-0.5**
	baz=30,SNR=18						
MEEK	**Meekatharra**	**30.35**	**198**	P	**P**	**01 44 50.0**	**-0.5**
JNU	**Nakatsue**	**30.73**	**4**	P	**P**	**01 44 53.5**	**-0.3**
	comp=Z,56nm,1.1s,baz=168,slow=8.6,SNR=8.3						
JNU				LR	LR	01 55 55.3	
	comp=Z,2µm,21.8s,baz=178,slow=34						
	comp=Z,56nm,1.1s						
JNU	**Nakatsue**	**30.73**	**4**	P	**P**	**01 44 52.8**	**-0.9**
JNU				IAmb	IAmb	01 46 00.3	
	comp=Z,127nm,0.9s						
KCSI	**Kotacane, Aceh**	**30.80**	**273**	P	**P**	**01 44 53.6**	**-1.1**
	comp=Z,38nm,1.0s						
KCSI				pP	**sP**	**01 45 10.7**	**-4.7**
	comp=Z,38nm,1.0s						
NJ2	**Nanjing**	**30.97**	**344**	*e*P	**P**	**01 44 57.6**	**+1.7**
NJ2				pP	**pP**	**01 45 10.4**	**+0.5**
NJ2				sP	**sP**	**01 45 20.6**	**+4.2**
NJ2				S	**S**	**01 49 58.6**	**+1.9**
NJ2				sS	sS	01 50 27.2	+6.9
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,96nm,3.5s						
NJ2				LR	LR		
	comp=Z,430nm,11.8s						
NJ2				LR	LR		
	comp=Z,590nm,13.7s						
NJ2				LR	LR		
	comp=Z,1µm,18.9s						
GSI	**Gunungsitoli**	**31.02**	**269**	P	**P**	**01 44 55.4**	**-1.2**
GSI	**Gunungsitoli**	**31.02**	**269**	P	**P**	**01 44 55.3**	**-1.2**
	comp=Z,175nm,1.1s,comp=Z,9µm						
WHN	**Wuhan**	**31.15**	**336**	⇑P	**P**	**01 44 59.2**	**+1.7**
WHN				pP	**pP**	**01 45 13.6**	**+2.1**
WHN				sP	**sP**	**01 45 18.8**	**+0.8**
WHN				S	**S**	**01 50 03.5**	**+3.9**
WHN				pmax	pmax		
	comp=Z,200nm,0.7s						
WHN				pmax	pmax		
	comp=Z,710nm,4.2s						
WHN				LR	LR		
	comp=Z,3µm,17.8s						
WHN				LR	LR		
	comp=Z,3µm,17.4s						
WHN				LR	LR		
	comp=Z,4µm,18.7s						
GYA	**Guiyang**	**31.93**	**321**	⇓*i*P	**P**	**01 45 06.7**	**+2.1**
GYA				pP	sP	01 45 22.9	-2.3
GYA				S	**S**	**01 50 11.8**	**-0.4**
GYA				pmax	pmax		
	comp=Z,24nm,0.9s						
GYA				pmax	pmax		
	comp=Z,91nm,4.1s						
GYA				LR	LR		
	comp=Z,630nm,18.0s						
GYA				LR	LR		
	comp=Z,560nm,18.3s						
GYA				LR	LR		
	comp=Z,680nm,18.1s						
PHRA	**Phrae**	**32.11**	**302**	P	**P**	**01 45 06.8**	**+0.7**
MLSI	**Meulaboh, Aceh**	**32.19**	**274**	P	**P**	**01 45 08.0**	**+1.1**
	comp=Z,45nm,0.8s						
SNSI	**Sinabang, Aceh**	**32.24**	**271**	P	**P**	**01 45 06.8**	**-0.5**
SNSI				pP	**sP**	**01 45 23.2**	**-4.8**
JHJ	**Hachijo jima 2**	**32.40**	**18**	LR	LR	01 57 55.4	
	comp=Z,1µm,19.3s,baz=110,slow=36						
QLP	**Quilpie**	**32.45**	**153**	P	**P**	**01 45 10.6**	**+1.6**
	baz=33,SNR=5.9						
JHS	**Saijyo**	**32.79**	**7**	P	**P**	**01 45 11.9**	**0.0**
CRAI	**Chiangrai**	**32.80**	**305**	P	**P**	**01 45 12.5**	**+0.3**
MULG	**Mulgathing**	**32.83**	**171**	P	**P**	**01 45 12.7**	**+0.5**
FORT	**Forrest**	**32.91**	**181**	P	**P**	**01 45 13.2**	**+0.3**
	baz=33,SNR=99						
FORT	**Forrest**	**32.91**	**181**	P	**P**	**01 45 12.3**	**-0.6**
FORT				PcP	**PcP**	**01 47 56.8**	**+0.4**
FORT	**Forrest**	**32.91**	**181**	P	**P**	**01 45 12.6**	**-0.3**
ENH	**Enshi**	**33.19**	**329**	P	**P**	**01 45 15.2**	**-0.2**
ENH				IAmb	IAmb	01 45 26.2	
	comp=Z,129nm,1.0s						
CM31	**Chiang Mai Arr**	**33.19**	**301**	P	**P**	**01 45 15.9**	**+0.3**
CM31	**Chiang Mai Arr**	**33.19**	**301**	P	**P**	**01 45 17.4**	**+1.8**
	SNR=20						
CM31				S	**S**	**01 50 36.0**	**+4.3**
CMAR	**Chiang Mai Arr**	**33.19**	**301**	P	**P**	**01 45 15.5**	**-0.1**
	comp=Z,14nm,0.9s,baz=117,slow=7.4,SNR=63						
CMAR				ScP	**ScP**	**01 51 40.0**	**+2.6**
	comp=Z,6.7nm,0.8s,baz=147,slow=2.1,SNR=17						
	comp=Z,14nm,0.9s						
CMAR	**Chiang Mai Arr**	**33.19**	**301**	P	**P**	**01 45 15.9**	**+0.3**
CMAR	**Chiang Mai Arr**	**33.19**	**301**	*i* P	**P**	**01 45 17.2**	**+1.6**
CMAR				pmax	pmax		
	comp=Z,26nm,0.8s						
HNR	**Honiara**	**33.34**	**111**	LR	LR	01 58 02.8	
	comp=Z,8µm,20.1s,baz=292,slow=35						
CHTO	**Chiang Mai**	**33.34**	**302**	P	**P**	**01 45 16.8**	**-0.1**
CHTO	**Chiang Mai**	**33.34**	**302**	P	**P**	**01 45 16.8**	**-0.1**
CHTO	**Chiang Mai**	**33.34**	**302**	P	**P**	**01 45 18.0**	**+1.1**
MORW	**Morawa**	**33.44**	**200**	P	**P**	**01 45 17.0**	**-0.6**
	baz=34,SNR=14						
MORW	**Morawa**	**33.44**	**200**	P	**P**	**01 45 15.9**	**-1.7**
MORW				PcP	**PcP**	**01 47 57.6**	**-0.4**
MORW	**Morawa**	**33.44**	**200**	P	**P**	**01 45 17.3**	**-0.3**
KMI	**Kunming**	**33.69**	**315**	⇑P	**P**	**01 45 22.6**	**+2.5**
KMI				sP	sP	01 45 43.8	+3.1
KMI				S	**S**	**01 50 41.3**	**+1.5**
KMI				pmax	pmax		
	comp=Z,38nm,0.9s						
KMI				pmax	pmax		
	comp=Z,210nm,5.5s						
KMI				LR	LR		
	comp=Z,280nm,14.6s						
KMI				LR	LR		
	comp=Z,650nm,19.8s						
KMI				LR	LR		
	comp=Z,910nm,18.5s						
INU	**Inuyama**	**33.79**	**12**	P	**P**	**01 45 19.9**	**-0.6**
INU				IAmb	IAmb	01 45 21.2	
	comp=Z,70nm,0.7s						
INU	**Inuyama**	**33.79**	**12**	P	**P**	**01 45 20.3**	**-0.2**
LCRK	**Leigh Creek**	**33.84**	**165**	P	**P**	**01 45 22.5**	**+1.4**
TJN	**Taejon**	**33.92**	**358**	P	**P**	**01 45 21.5**	**-0.1**
TJN	**Taejon**	**33.92**	**358**	P	**P**	**01 45 21.5**	**-0.1**
TJN				pmax	pmax		
	comp=Z,665nm,1.1s						
KMBL	**Kambalda**	**34.09**	**190**	P	**P**	**01 45 23.1**	**-0.1**
	baz=34,SNR=29						
KMBL	**Kambalda**	**34.09**	**190**	P	**P**	**01 45 23.5**	**+0.2**
JGF	**Kuroka**	**34.11**	**13**	P	**P**	**01 45 22.5**	**-0.8**
JGF	**Kuroka**	**34.11**	**13**	P	**P**	**01 45 22.9**	**-0.5**
RMQ	**Roma**	**34.63**	**147**	P	**P**	**01 45 28.8**	**+0.8**
	baz=35,SNR=9.9						
BLDU	**Ballidu**	**34.65**	**198**	P	**P**	**01 45 27.4**	**-0.6**
	baz=35,SNR=29						
BLDU	**Ballidu**	**34.65**	**198**	P	**P**	**01 45 27.7**	**-0.4**
COCO	**West Island**	**34.69**	**245**	P	**P**	**01 45 27.8**	**-0.8**
COCO	**West Island**	**34.69**	**245**	P	**P**	**01 45 27.8**	**-0.8**
COCO				pmax	pmax		
	comp=Z,228nm,0.9s						
KSAR	**Wonju Array Be**	**34.97**	**359**	P	**P**	**01 45 30.3**	**-0.4**
KSAR	**Wonju Array Be**	**34.97**	**359**	P	**P**	**01 45 30.3**	**-0.4**
KSRS	**Korea Array**	**34.98**	**359**	P	**P**	**01 45 30.7**	**-0.1**
	comp=Z,42nm,0.9s,baz=177,slow=10,SNR=75						
KSRS				ScP	**ScP**	**01 51 45.5**	**+2.2**
	comp=Z,7.4nm,0.9s,baz=194,slow=3.5,SNR=12						
KSRS				LR	LR	01 58 37.1	
	comp=Z,2µm,21.4s,baz=180,slow=34						
	comp=Z,42nm,0.9s						
KS19	**Wonju Array Si**	**35.03**	**359**	P	**P**	**01 45 30.4**	**-0.8**
KS19				IAmb	IAmb	01 45 32.1	
	comp=Z,152nm,1.4s						
INCN	**Inchon**	**35.05**	**357**	P	**P**	**01 45 31.5**	**+0.1**
INCN				IAmb	IAmb	01 45 33.3	
	comp=Z,43nm,0.8s						
INCN	**Inchon**	**35.05**	**357**	P	**P**	**01 45 31.5**	**+0.1**
INCN				pmax	pmax		
	comp=Z,43nm,0.9s						
EIDS	**Eidsvold**	**35.10**	**143**	P	**P**	**01 45 33.7**	**+1.7**
	baz=35,SNR=22						
EIDS	**Eidsvold**	**35.10**	**143**	P	**P**	**01 45 32.2**	**+0.2**
EIDS				IAmb	IAmb	01 45 34.5	
	comp=Z,74nm,0.9s						
MAJO	**Matsushiro**	**35.20**	**13**	P	**P**	**01 45 31.0**	**-1.8**
MAJO				IAmb	IAmb	01 45 33.2	
	comp=Z,92nm,0.9s						
MAJO	**Matsushiro**	**35.20**	**13***c*	*i*P	**P**	**01 45 31.3**	**-1.5**
MAJO				pmax	pmax		
	comp=Z,62nm,0.8s						
MJAR	**Matsushiro Arr**	**35.20**	**13**	P	**P**	**01 45 31.0**	**-1.7**
	comp=Z,45nm,0.7s,baz=186,slow=9.4,SNR=77						
MJAR				ScP	**ScP**	**01 51 45.5**	**+1.4**
	comp=Z,7.6nm,1.0s,baz=209,slow=4.9,SNR=7.6						
MJAR				LR	LR	01 58 58.0	
	comp=Z,2µm,19.7s,baz=193,slow=34						
	comp=Z,45nm,0.7s						
MJB9	**Matsu-Tunnel**	**35.20**	**13**	IAmb	IAmb	01 45 34.2	
	comp=Z,91nm,0.9s						
PZH	**PanZhiHua**	**35.25**	**315**	P	**P**	**01 45 34.4**	**+0.9**
PZH				pP	**pP**	**01 45 52.7**	**+5.1**
PZH				sP	**sP**	**01 45 58.5**	**+4.4**
PZH				S	**S**	**01 51 02.6**	**-1.0**
PZH				SS	**SS**	**01 53 33.6**	**-5.1**
PZH				pmax	pmax		
	comp=Z,40nm,1.1s						
PZH				pmax	pmax		
	comp=Z,170nm,5.1s						
PZH				LR	LR		
	comp=Z,420nm,18.3s						
PZH				LR	LR		
	comp=Z,580nm,16.9s						
PZH				LR	LR		
	comp=Z,770nm,17.6s						
KLBR	**Kellerberrin**	**35.26**	**196**	P	**P**	**01 45 32.7**	**-0.5**
	baz=36,SNR=52						
KLBR	**Kellerberrin**	**35.26**	**196**	P	**P**	**01 45 33.1**	**-0.2**
TIA	**Tai'an**	**35.36**	**344**	*e*P	**P**	**01 45 33.6**	**-0.5**
TIA				S	**S**	**01 50 57.3**	**-7.5**
TIA				pmax	pmax		
	comp=Z,38nm,1.2s						
TIA				pmax	pmax		
	comp=Z,130nm,5.3s						
TIA				LR	LR		
	comp=Z,670nm,21.2s						
TIA				LR	LR		
	comp=Z,250nm,15.3s						
TIA				LR	LR		
	comp=Z,800nm,22.1s						
LYN	**LuoYang**	**35.42**	**337**	⇑P	**P**	**01 45 35.5**	**+0.8**
LYN				pP	pP	01 45 48.7	0.0
LYN				sP	sP	01 45 57.2	+2.0
LYN				PP	**PnPn**	**01 46 53.3**	**-1.6**
LYN				S	**S**	**01 51 06.9**	**+1.2**
LYN				SS	**SnSn**	**01 53 29.1**	**-0.5**
LYN				pmax	pmax		
	comp=Z,18nm,0.7s						
LYN				pmax	pmax		
	comp=Z,190nm,5.3s						
LYN				LR	LR		
	comp=Z,470nm,22.0s						
LYN				LR	LR		
	comp=Z,570nm,18.7s						
LYN				LR	LR		
	comp=Z,670nm,21.6s						
BBOO	**Buckleboo**	**35.64**	**169**	P	**P**	**01 45 37.4**	**+0.9**
	baz=36,SNR=42						
BBOO	**Buckleboo**	**35.64**	**169**	P	**P**	**01 45 36.2**	**-0.3**
BBOO				PcP	**PcP**	**01 48 04.5**	**+0.2**
BBOO	**Buckleboo**	**35.64**	**169**	P	**P**	**01 45 37.4**	**+0.9**
MUN	**Mundaring**	**36.07**	**198**	P	**P**	**01 45 39.6**	**-0.7**
	baz=36,SNR=8.4						
MUN	**Mundaring**	**36.07**	**198**	P	**P**	**01 45 40.3**	**0.0**
WHYH	**Whyalla**	**36.16**	**167**	P	**P**	**01 45 42.5**	**+1.5**
STKA	**Stephens Creek**	**36.17**	**161**	P	**P**	**01 45 42.5**	**+1.4**
	comp=Z,109nm,0.7s,baz=336,slow=8.7,SNR=205						
STKA				ScP	**ScP**	**01 51 49.9**	**+2.1**
	comp=Z,3.6nm,0.7s,baz=322,slow=10,SNR=3.1						
STKA				LR	LR	02 02 59.4	
	comp=Z,784nm,19.2s,baz=335,slow=40						
	comp=Z,109nm,0.7s						
STKA	**Stephens Creek**	**36.17**	**161**	P	**P**	**01 45 42.4**	**+1.2**
	baz=36,SNR=122						
STKA	**Stephens Creek**	**36.17**	**161**	P	**P**	**01 45 41.0**	**-0.1**
STKA	**Stephens Creek**	**36.17**	**161**	P	**P**	**01 45 42.5**	**+1.4**
STKA	**Stephens Creek**	**36.17**	**161**	P	**P**	**01 45 41.0**	**-0.1**
STKA				pmax	pmax		
	comp=Z,25nm,0.7s						
XAN	**Xi'an**	**36.52**	**332**	P	**P**	**01 45 44.3**	**+0.1**
XAN				pP	pP	01 45 58.6	+0.3
XAN				sP	sP	01 46 05.2	+0.4
XAN				PP	**PnPn**	**01 47 09.1**	**+0.7**
XAN				S	**S**	**01 51 22.0**	**-0.7**
XAN				sS	ScP	01 51 47.9	-1.2
XAN				SS	**SnSn**	**01 53 51.1**	**-5.2**
XAN				ScS	**ScS**	**01 55 53.1**	**-2.6**
XAN				pmax	pmax		
	comp=Z,170nm,0.7s						
XAN				pmax	pmax		
	comp=Z,99nm,5.2s						
XAN				LR	LR		
	comp=Z,400nm,16.1s						
XAN				LR	LR		
	comp=Z,430nm,14.4s						
XAN				LR	LR		
	comp=Z,830nm,18.2s						
JSD	**Sado**	**36.64**	**13**	P	**P**	**01 45 44.3**	**-0.7**
NWAO	**Narrogin (SRO)**	**36.66**	**196**	P	**P**	**01 45 45.0**	**-0.3**
	comp=Z,61nm,1.0s,baz=16,slow=9.8,SNR=16						
NWAO				PcP	**PcP**	**01 48 07.7**	**+0.4**
	comp=Z,32nm,1.0s,baz=314,slow=4.6,SNR=5.1						
NWAO				ScP	**ScP**	**01 51 51.4**	**+1.9**
	comp=Z,20nm,1.0s,baz=52,slow=9.2,SNR=4.3						
NWAO				LR	LR	02 01 47.1	
	comp=Z,928nm,20.8s,baz=37,slow=38						
	comp=Z,61nm,1.0s						
NWAO	**Narrogin (SRO)**	**36.66**	**196**	P	**P**	**01 45 45.2**	**-0.1**
	baz=37,SNR=15						
NWAO				P	**P**	**01 45 45.2**	**-0.1**
	baz=37,SNR=15						
NWAO	**Narrogin (SRO)**	**36.66**	**196**	P	**P**	**01 45 44.9**	**-0.3**
NWAO				IAmb	IAmb	01 45 46.7	
	comp=Z,108nm,1.2s						
NWAO				PcP	**PcP**	**01 48 06.9**	**-0.3**
NWAO	**Narrogin (SRO)**	**36.66**	**196**	P	**P**	**01 45 45.4**	**+0.2**
NWAO	**Narrogin (SRO)**	**36.66**	**196**	P	**P**	**01 45 45.3**	**0.0**
HTT	**Hallett**	**36.86**	**166**	P	**P**	**01 45 48.6**	**+1.6**
	baz=37,SNR=42						
HTT	**Hallett**	**36.86**	**166**	P	**P**	**01 45 48.8**	**+1.8**
CD2	**Chengdu**	**36.88**	**323**	P	**P**	**01 45 47.8**	**+0.5**
CD2				S	**S**	**01 51 28.6**	**+0.3**
CD2				pmax	pmax		
	comp=Z,70nm,1.0s						
CD2				pmax	pmax		
	comp=Z,110nm,5.1s						
CD2				LR	LR		
	comp=Z,310nm,14.5s						
CD2				LR	LR		
	comp=Z,260nm,14.3s						
CD2				LR	LR		
	comp=Z,810nm,19.4s						
JMM	**Marumori**	**37.12**	**16**	P	**P**	**01 45 49.0**	**0.0**
HNS	**HongShan**	**37.18**	**342**	⇓P	**P**	**01 45 49.2**	**-0.4**
HNS				PP	**PP**	**01 47 15.1**	**-0.2**
HNS				S	**S**	**01 51 32.6**	**+0.1**
HNS				SS	**SnSn**	**01 54 09.0**	**-3.0**
HNS				pmax	pmax		
	comp=Z,87nm,1.0s						
HNS				LR	LR		
	comp=Z,660nm,19.0s						
HNS				LR	LR		
	comp=Z,810nm,19.8s						
CMSA	**Cobar Meteorol**	**37.38**	**156**	P	**P**	**01 45 52.8**	**+1.4**
	baz=38,SNR=23						
CMSA	**Cobar Meteorol**	**37.38**	**156**	P	**P**	**01 45 53.4**	**+2.0**
TIY	**Taiyuan**	**38.23**	**339**	*e*P	**P**	**01 45 58.4**	**-0.2**
TIY				S	**S**	**01 51 49.0**	**+0.4**
TIY				sS	sS	01 52 22.7	+10
TIY				pmax	pmax		

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       comp=Z,18nm,0.6s
TIY                                  LR      LR
       comp=Z,410nm,21.3s
TIY                                  LR      LR
       comp=Z,470nm,18.6s
TIY                                  LR      LR
       comp=Z,670nm,24.0s
RKGY   Rocky Gully        38.31 196  P       P       01 46 00.5 +1.3
       baz=38,SNR=14
RKGY   Rocky Gully        38.31 196  P       P       01 46 00.7 +1.5
BJT    Baijiatuau         39.19 345  P       P       01 46 05.4  -1.1
BJT                                  IAmb    IAmb    01 46 14.2
       comp=Z,46nm,0.7s
BJT    Baijiatuau         39.19 345  P       P       01 46 05.4  -1.1
BJT                                  pmax    pmax
       comp=Z,46nm,0.7s
BJI    Beijing            39.21 345  P       P       01 46 06.2  -0.5
BJI                                  sP      sP      01 46 28.5 +1.1
BJI                                  S       S       01 52 02.6  -0.5
BJI                                  pmax    pmax
       comp=Z,19nm,1.1s
BJI                                  pmax    pmax
       comp=Z,61nm,3.7s
BJI                                  LR      LR
       comp=Z,180nm,16.6s
ARMA   Armidale           39.27 148  P       P       01 46 09.8 +2.3
       baz=39,SNR=25
ARMA   Armidale           39.27 148  P       P       01 46 08.1 +0.6
ARMA                                 IAmb    IAmb    01 46 10.6
       comp=Z,71nm,0.8s
ARMA   Armidale           39.27 148  P       P       01 46 09.4 +1.9
SNY    Shenyang           39.60 354 ⇓P       P       01 46 09.5  -0.3
SNY                                  S       S       01 52 11.6 +2.8
SNY                                  pmax    pmax
       comp=Z,28nm,0.9s
SNY                                  pmax    pmax
       comp=Z,150nm,3.5s
SNY                                  LR      LR
       comp=Z,820nm,21.6s
SNY                                  LR      LR
       comp=Z,870nm,16.1s
SNY                                  LR      LR
       comp=Z,2µm,19.2s
JTM    Tenmabayashi       39.93  15  P       P       01 46 12.6   0.0
JTM    Tenmabayashi       39.93  15  P       P       01 46 13.2 +0.6
H11S3  WAKE ISLAND Hy     40.63  64  T       T       02 29 26.9
       baz=251,slow=75
H11S2  WAKE ISLAND Hy     40.65  64  T       T       02 29 35.3
       baz=251,slow=75
H11S1  WAKE ISLAND Hy     40.65  64  T       T       02 29 35.7
       baz=251,slow=75
LZH    Lanzhou            40.67 329 eP       P       01 46 20.8 +1.8
LZH                                  pP      pP      01 46 36.0 +2.5
LZH                                  sP      sP      01 46 42.9 +2.9
LZH                                  S       S       01 52 27.7 +2.3
LZH                                  sS      sS      01 52 51.4 +1.9
LZH                                  SS      SS      01 55 24.9  -2.7
LZH                                  pmax    pmax
       comp=Z,69nm,1.1s
LZH                                  pmax    pmax
       comp=Z,340nm,5.0s
LZH                                  LR      LR
       comp=Z,1µm,18.4s
LZH                                  LR      LR
       comp=Z,1µm,18.4s
LZH                                  LR      LR
       comp=Z,1µm,19.5s
VLA    Vladivostok        40.74    4deP      P       01 46 21.3 +2.0
VLA                                  pmax    pmax
       comp=Z,122nm,1.1s
ARPS   Mount Arapiles     40.79 164  P       P       01 46 21.9 +2.1
       baz=41,SNR=41
ARPS   Mount Arapiles     40.79 164  P       P       01 46 21.6 +1.8
BRDH   Bariadhala         41.16 302  LR      LR      02 05 12.9
       comp=Z,226nm,21.7s,baz=110,slow=39
H11N1  WAKE ISLAND Hy     41.22  62  T       T       02 30 18.6
       baz=250,slow=75
H11N2  WAKE ISLAND Hy     41.23  62  T       T       02 30 20.6
       baz=250,slow=75
H11N3  WAKE ISLAND Hy     41.24  62  T       T       02 30 23.2
       baz=250,slow=75
HHC    Hu-ho-hao-te       41.34 340 eP       P       01 46 25.2 +0.8
HHC                                  S       S       01 52 37.3 +2.2
HHC                                  sS      sS      01 53 08.7  +10
HHC                                  pmax    pmax
       comp=Z,33nm,0.9s
HHC                                  pmax    pmax
       comp=Z,430nm,5.1s
HHC                                  LR      LR
       comp=Z,1µm,21.0s
HHC                                  LR      LR
       comp=Z,700nm,16.7s
HHC                                  LR      LR
       comp=Z,1µm,22.8s
CN2    Changchun          41.41 357 eP       P       01 46 24.2  -0.6
CN2                                  S       S       01 52 35.8   0.0
CN2                                  pmax    pmax
       comp=Z,10.0nm,1.0s
CN2                                  pmax    pmax
       comp=Z,200nm,6.0s
CN2                                  LR      LR
       comp=Z,400nm,16.0s
CN2                                  LR      LR
       comp=Z,600nm,16.0s
CN2                                  LR      LR
       comp=Z,600nm,19.2s
ERM    Erimo              41.63  16  P       P       01 46 26.1  -0.5
ERM    Erimo              41.63  16  P       P       01 46 26.1  -0.5
ERM                                  pmax    pmax
       comp=Z,72nm,1.1s
BTO    Baotou             41.66 339 eP       P       01 46 27.9 +0.9
BTO                                  S       S       01 52 41.0 +1.1
BTO                                  LR      LR
       comp=Z,3µm,21.6s
BTO                                  LR      LR
       comp=Z,2µm,20.6s
USA0B  Ussuriysk Arra     41.82   4  P       P       01 46 28.3 +0.2
USA0B                                IAmb    IAmb    01 46 29.8
       comp=Z,121nm,0.9s
USA0B  Ussuriysk Arra     41.82   4  P       P       01 46 28.3 +0.2
USA0B                                pmax    pmax
       comp=Z,121nm,1.0s
USRK   Ussuriysk Ar.      41.82   4  P       P       01 46 28.8 +0.7
       comp=Z,93nm,0.8s,baz=187,slow=7.5,SNR=94
USRK                                 LR      LR      02 00 58.2
       comp=Z,744nm,21.5s,baz=176,slow=32
       comp=Z,93nm,0.8s
CAN    Canberra           42.03 155  P       P       01 46 29.8  -0.3
CAN                                  IAmb    IAmb    01 46 34.1
       comp=Z,313nm,2.0s
CAN    Canberra           42.03 155  P       P       01 46 29.8  -0.3
CAN                                  pmax    pmax
       comp=Z,313nm,2.0s
MDJ    Mudanjiang         42.14   1  P       P       01 46 31.6 +0.9
MDJ                                  pP      pP      01 46 45.4 +0.4
MDJ                                  sP      sP      01 46 53.3 +1.9
MDJ                                  ScP     ScP     01 52 08.8  -1.6
MDJ                                  PcS     PcS     01 52 16.2 +0.1
MDJ                                  S       S       01 52 49.1 +2.6
MDJ                                  ScS     ScS     01 56 26.8  -1.2
MDJ                                  pmax    pmax
       comp=Z,94nm,1.4s
MDJ                                  pmax    pmax
       comp=Z,330nm,3.5s
MDJ                                  LR      LR
       comp=Z,1µm,17.1s
MDJ                                  LR      LR
       comp=Z,270nm,15.7s
MDJ                                  LR      LR
       comp=Z,1µm,21.4s
MDJ    Mudanjiang         42.14   1  IAmb    IAmb    01 46 41.3
       comp=Z,144nm,1.1s
SHL    Shillong           42.21 307  P       P       01 46 31.9   0.0
SHL    Shillong           42.21 307  P       P       01 46 31.9   0.0
SHL                                  pmax    pmax
       comp=Z,173nm,0.8s
SHL    Shillong           42.21 307  P       P       01 46 32.8 +0.9
       SNR=63
TOO    Toolangi           42.66 160  P       P       01 46 38.0 +2.8
       baz=43,SNR=5.2
TOO    Toolangi           42.66 160  P       P       01 46 34.8  -0.4
TOO    Toolangi           42.66 160  P       P       01 46 37.9 +2.8
TOO    Toolangi           42.66 160  P       P       01 46 34.8  -0.4
TOO                                  pmax    pmax
       comp=Z,44nm,1.0s
XLT    XiLinHaoTe         42.88 347⇑iP       P       01 46 36.9   0.0
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XLT                                  pP      pP      01 46 55.6 +4.3
XLT                                  sP      sP      01 46 58.7 +1.0
XLT                                  S       S       01 52 53.5  -4.2
XLT                                  pmax    pmax
       comp=Z,62nm,1.0s
XLT                                  LR      LR
       comp=Z,720nm,24.1s
XLT                                  LR      LR
       comp=Z,650nm,19.2s
TEY    Ternei             43.13    8⇑eP      P       01 46 36.6  -2.1
TEY                                  pmax    pmax
       comp=Z,100nm,1.4s
TEY                                  pmax    pmax
       comp=Z,60nm,1.0s
TEY                                  pmax    pmax
       comp=N,40nm,1.0s
BNX    BinXian            43.26 359 ⇑P       P       01 46 39.4  -0.4
BNX                                  pP      pP      01 46 54.8 +0.6
BNX                                  sP      sP      01 47 01.4 +0.8
BNX                                  PP      PP      01 48 21.6 +0.3
BNX                                  S       S       01 53 04.5 +1.4
BNX                                  sS      sS      01 53 31.3 +4.0
BNX                                  pmax    pmax
       comp=N,21nm,1.0s
BNX                                  pmax    pmax
       comp=N,190nm,4.3s
BNX                                  LR      LR
       comp=N,1µm,20.1s
BNX                                  LR      LR
       comp=N,420nm,16.3s
BNX                                  LR      LR
       comp=N,2µm,20.6s
ASAJ   Asahikawa          43.44  15  P       P       01 46 41.7 +0.4
       comp=N,22nm,0.8s,baz=238,slow=13,SNR=12
ASAJ                                 LR      LR      02 04 01.5
       comp=N,1µm,20.8s,baz=182,slow=35
       comp=N,22nm,0.8s
ASAJ   Asahikawa          43.44  15  P       P       01 46 41.0  -0.3
ASAJ                                 pmax    pmax
       comp=Z,46nm,0.8s
JKA    Kamikawa-asahi     43.44  15  P       P       01 46 41.0  -0.3
DZM    Mont Dzumac        44.20 125 eSS      SS      01 56 37.8 +0.4
       comp=Z,332nm,24.4s
DZM                                 eLR      LR      01 59 13.4
       comp=Z,1µm,29.0s
DZM    Mont Dzumac        44.20 125  P       P       01 46 48.6 +0.8
       comp=Z,7.9nm,1.0s,baz=11,slow=5.0,SNR=2.3
DZM                                  LR      LR      02 06 42.7
       comp=Z,259nm,18.4s,baz=26,slow=38
       comp=Z,7.9nm,1.0s
LSA    Lhasa              44.77 311  P       P       01 46 54.4 +1.6
LSA                                  pmax    pmax
       comp=Z,12nm,0.7s
LSA    Lhasa              44.77 311  P       P       01 46 52.7  -0.1
LSA                                  IAmb    IAmb    01 47 19.9
       comp=Z,169nm,1.4s
LSA    Lhasa              44.77 311  P       P       01 46 52.7  -0.1
LSA                                  pmax    pmax
       comp=Z,169nm,1.4s
GTA    Gaotai             45.27 328 eP       P       01 46 56.8 +0.6
GTA                                  pP      pP      01 47 11.3 +0.5
GTA                                  sP      sP      01 47 19.1 +1.9
GTA                                  ScP     ScP     01 52 24.6 +1.1
GTA                                  S       S       01 53 32.8 +0.1
GTA                                  sS      sS      01 53 58.3 +1.2
GTA                                  SS      ScS     01 56 49.5 +1.3
GTA                                  pmax    pmax
       comp=Z,15nm,1.0s
GTA                                  pmax    pmax
       comp=Z,89nm,6.4s
GTA                                  LR      LR
       comp=Z,740nm,18.7s
GTA                                  LR      LR
       comp=Z,750nm,21.1s
GTA                                  LR      LR
       comp=Z,1µm,20.3s
GOMU   GeErMu             45.95 321  P       P       01 47 03.6 +1.7
GOMU                                 S       S       01 53 46.5 +3.4
GOMU                                 pmax    pmax
       comp=Z,6.0nm,0.8s
GOMU                                 pmax    pmax
       comp=Z,140nm,3.8s
GOMU                                 LR      LR
       comp=Z,440nm,19.4s
GOMU                                 LR      LR
       comp=Z,340nm,20.4s
GOMU                                 LR      LR
       comp=Z,460nm,21.1s
YSS    Yuzh-Sakhalins     46.14  13  P       P       01 47 02.3  -0.5
YSS                                  IAmb    IAmb    01 47 12.5
       comp=Z,34nm,0.7s
YSS    Yuzh-Sakhalins     46.14  13 eP       P       01 47 01.7  -1.0
YSS                                 e                01 47 11.5
YSS                                 eS       S       01 53 42.7  -2.0
YSS                                  pmax    pmax
       comp=Z,30nm,1.2s
YSS                                  pmax    pmax
       comp=Z,200nm,2.2s
YSS                                  MLR     MLR
       comp=Z,400nm,16.0s
YSS                                  MLR     MLR
       comp=N,300nm,17.0s
YSS                                  MLR     MLR
       comp=E,300nm,18.0s
KLR    Kul'dur            46.82   3  P       P       01 47 08.4 +0.3
       comp=E,33nm,0.8s,baz=204,slow=5.6,SNR=75
KLR                                  LR      LR      02 06 28.2
       comp=E,540nm,20.3s,baz=180,slow=36
       comp=E,33nm,0.8s
KLR    Kul'dur            46.82   3deP       P       01 47 07.8  -0.2
KLR                                  pmax    pmax
       comp=Z,53nm,1.4s
HIA    Hailar             47.39 352deP       P       01 47 12.3  -0.2
HIA                                  pmax    pmax
       comp=Z,34nm,1.4s
HEH    HeiHe              47.78 359 eP       P       01 47 14.4  -1.1
HEH                                  sP      sP      01 47 38.8 +2.5
HEH                                  S       S       01 54 06.4  -1.6
HEH                                  pmax    pmax
       comp=Z,61nm,0.8s
HEH                                  pmax    pmax
       comp=Z,350nm,3.9s
HEH                                  LR      LR
       comp=Z,2µm,20.8s
HEH                                  LR      LR
       comp=Z,620nm,19.6s
HEH                                  LR      LR
       comp=Z,2µm,20.8s
PALK   Pallekele          47.95 278c iP      P       01 47 17.7 +0.2
PALK                                 pmax    pmax
       comp=Z,52nm,1.0s
UGL    Uglegorsk          48.00  12⇓iP       P       01 47 17.6 +0.4
UGL                                 eS       S       01 54 09.2  -1.9
UGL                                  pmax    pmax
       comp=Z,100nm,0.9s
UGL                                  smax    smax
       comp=E,1µm,17.0s
UGL                                  smax    smax
       comp=N,1µm,18.0s
GRNR   Gornyy             48.74    7⇑iP      P       01 47 22.5  -0.4
GRNR                                eS       S       01 54 23.1 +1.6
GRNR                                 pmax    pmax
       comp=N,10.0nm,0.9s
GRNR                                 pmax    pmax
       comp=E,4.0nm,0.9s
GRNR                                 pmax    pmax
       comp=Z,20nm,1.3s
GRNR                                 smax    smax
       comp=N,2.0nm,0.7s
ULN    Ulaanbaatar        49.05 341  P       P       01 47 25.5   0.0
ULN    Ulaanbaatar        49.05 341  P       P       01 47 25.5   0.0
ULN                                  pmax    pmax
       comp=Z,87nm,0.9s
ULN    Ulaanbaatar        49.05 341  P       P       01 47 26.1 +0.6
ULN                                  S       S       01 54 26.0  -0.3
SONM   Songino Array      49.24 340  P       P       01 47 27.1 +0.1
       comp=Z,8.9nm,0.6s,baz=154,slow=8.2,SNR=46
SONM                                 PcP     PcP     01 48 50.4 +1.2
       comp=Z,6.8nm,0.9s,baz=129,slow=2.0,SNR=1.6
SONM                                 ScP     ScP     01 52 41.3 +1.3
       comp=Z,4.3nm,1.0s,baz=156,slow=4.2,SNR=6.8
SONM                                 LR      LR      02 10 24.6
       comp=Z,515nm,20.9s,baz=156,slow=39
       comp=Z,8.9nm,0.6s
SONM   Songino Array      49.24 340  P       P       01 47 26.5  -0.4
SONM                                 IAmb    IAmb    01 47 34.2
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       comp=Z,29nm,0.8s
SONM   Songino Array      49.24 340  P       P       01 47 26.5  -0.4
SONM                                 pmax    pmax
       comp=Z,29nm,0.8s
TYV    Tymovskoe          49.82  12 eP       P       01 47 31.9 +0.8
TYV                                 eS       S       01 54 39.4 +2.8
TYV                                  pmax    pmax
       comp=Z,20nm,1.0s
TYV                                  pmax    pmax
       comp=Z,100nm,2.2s
TYV                                  smax    smax
       comp=N,200nm,5.5s
TYV                                  smax    smax
       comp=E,300nm,5.5s
CIT    Chita              51.11 348 eP       P       01 47 38.4  -2.5
CIT                                 e                01 47 47.0
CIT                                 e                01 47 57.9
CIT                                 e                01 48 54.6
CIT                                  pmax    pmax
       comp=Z,109nm,1.4s
ZEA    Zeya               51.27 359 eP       P       01 47 40.8  -1.2
HYB    Hyderabad          51.35 290 eP       P       01 47 43.9 +0.6
HYB                                  IVmB_BB         01 47 44.4
       comp=Z,770nm,0.8s
ZAK    Zakamensk          52.48 340 eP       P       01 47 51.1  -0.1
ZAK                                  pmax    pmax
       comp=Z,16nm,1.0s
PCHI   Peechi             52.49 281⇑eP       P       01 47 52.1 +0.3
PCHI                                eS       S       01 55 15.6 +0.9
MSVF   Nonsavu            52.63 114  P       P       01 47 54.2 +1.4
       comp=Z,17nm,0.9s,baz=242,slow=7.7,SNR=5.8
       comp=Z,17nm,0.9s
MSVF   Nonsavu            52.63 114  P       P       01 47 52.0  -0.8
MSVF                                 IAmb    IAmb    01 48 29.8
       comp=Z,50nm,1.2s
MSVF   Nonsavu            52.63 114  P       P       01 47 52.0  -0.8
MSVF                                 pmax    pmax
       comp=Z,50nm,1.3s
IRK    Irkutsk            53.74 342 eP       P       01 48 00.6 +0.3
IRK                                 eS       S       01 55 32.6 +2.1
IRK                                  pmax    pmax
       comp=Z,59nm,1.8s
MOY    Mondy              54.35 339 eP       P       01 48 05.4 +0.5
MOY                                  pmax    pmax
       comp=Z,64nm,1.9s
WMQ    Urumqi             54.95 325 eP       P       01 48 10.2 +0.8
WMQ                                  pP      pP      01 48 30.1 +5.8
WMQ                                  sP      sP      01 48 35.5 +4.9
WMQ                                  PcP     PcP     01 49 05.0  -5.7
WMQ                                  S       S       01 55 48.3 +1.1
WMQ                                  ScS     ScS     01 57 52.7  -1.2
WMQ                                  pmax    pmax
       comp=Z,83nm,0.9s
WMQ                                  pmax    pmax
       comp=Z,230nm,4.1s
WMQ                                  LR      LR
       comp=Z,800nm,20.3s
WMQ                                  LR      LR
       comp=Z,630nm,21.5s
WMQ                                  LR      LR
       comp=Z,830nm,22.5s
KAAM   Kaadhehdhoo        55.61 269  P       P       01 48 13.6  -0.9
KAAM   Kaadhehdhoo        55.61 269  P       P       01 48 14.6 +0.1
PEA0B  Petropavlovsk-     56.06  21deP       P       01 48 17.1   0.0
PETK   Petropavlovsk-     56.06  21  P       P       01 48 17.4 +0.3
       comp=Z,49nm,0.8s,baz=205,slow=9.8,SNR=43
PETK                                 LR      LR      02 13 13.6
       comp=Z,319nm,19.4s,baz=214,slow=37
       comp=Z,49nm,0.8s
PET    Petropavlovsk      56.34  21  P       P       01 48 18.9  -0.1
PET    Petropavlovsk      56.34  21 eP       P       01 48 20.0 +1.0
PET                                 eS       S       01 56 09.4 +4.2
PET                                 eSS      SS      01 59 52.6  -0.3
PET                                  pmax    pmax
       comp=Z,55nm,1.4s
PET                                  MLR     MLR
       comp=Z,400nm,17.0s
BOD    Bodaibo            56.54 351 eP       P       01 48 20.6 +0.2
BOD                                  pmax    pmax
       comp=Z,62nm,1.3s
DGAR   Diego Garcia       56.84 260  P       P       01 48 23.2  -0.1
DGAR   Diego Garcia       56.84 260ceP       P       01 48 24.6 +1.3
DGAR                                 pmax    pmax
       comp=Z,417nm,1.7s
DGAR   Diego Garcia       56.84 260  P       P       01 48 23.5 +0.2
ZSN    Zaisan             58.70 327 eP       P       01 48 36.3 +0.4
       comp=Z,14nm,1.1s,baz=327
ZSN                                 eS       S       01 56 37.3 +0.7
       baz=327
ZSN    Zaisan             58.70 327 eP       P       01 48 36.2 +0.4
ZSN                                 eS       S       01 56 37.3 +0.7
ZSN                                  pmax    pmax
       comp=Z,14nm,1.1s
DGZ    Jazzator, Alta     58.74 330d iP      P       01 48 36.4 +0.2
DGZ                                  pmax    pmax
       comp=Z,7.0nm,0.9s
DGZ                                  MLR     MLR
       comp=Z,808nm,25.0s
RPZ    Rata Peaks         59.54 145  P       P       01 48 43.1 +1.4
       comp=Z,28nm,0.8s,baz=104,slow=4.4,SNR=6.5
       comp=Z,28nm,0.8s
RPZ    Rata Peaks         59.54 145  P       P       01 48 41.0  -0.6
RPZ                                  IAmb    IAmb    01 48 52.2
       comp=Z,72nm,1.1s
YAK    Yakutsk            59.58   1  P       P       01 48 41.9 +0.3
       comp=Z,92nm,0.7s,baz=182,slow=1.6,SNR=39
YAK                                  LR      LR      02 12 36.7
       comp=Z,709nm,21.4s,baz=185,slow=34
       comp=Z,92nm,0.7s
YAK    Yakutsk            59.58   1  P       P       01 48 41.1  -0.4
YAK    Yakutsk            59.58   1d iP      P       01 48 41.6 +0.1
YAK                                 e*PP     pP      01 48 51.5  -5.1
YAK                                 e                01 49 29.9
YAK                                 eS       S       01 56 46.3  -1.0
YAK                                 e*SS     pS      01 57 00.9  -2.8
YAK                                 e                01 58 24.2
YAK                                 eSS      SS      02 00 37.5  -6.1
YAK                                 eSSS     SSS     02 03 06.0
YAK                                  pmax    pmax
       comp=Z,206nm,0.9s
YAK                                  pmax    pmax
       comp=N,67nm,1.1s
YAK                                  pmax    pmax
       comp=E,15nm,1.1s
YAK                                  smax    smax
       comp=E,176nm,2.3s
YAK                                  smax    smax
       comp=N,124nm,2.5s
YAK                                  MLR     MLR
       comp=E,253nm,20.0s
SHLS   Shalkode           59.62 320 eP       P       01 48 40.9  -1.6
       comp=E,24nm,0.9s,baz=320
SHLS   Shalkode           59.62 320 eP       P       01 48 40.8  -1.6
SHLS                                 pmax    pmax
       comp=Z,24nm,0.9s
MA2    Magadan            59.64  13  P       P       01 48 42.6 +0.6
       comp=Z,49nm,1.0s,baz=203,slow=6.1,SNR=14
MA2                                  LR      LR      02 12 34.0
       comp=Z,312nm,20.6s,baz=210,slow=34
       comp=Z,49nm,1.0s
MA2    Magadan            59.64  13  P       P       01 48 41.7  -0.3
MA2                                  IAmb    IAmb    01 48 49.8
       comp=Z,55nm,0.8s
MA2    Magadan            59.64  13  P       P       01 48 41.7  -0.3
MA2                                  pmax    pmax
       comp=Z,55nm,0.8s
MK31   Makanchi Array     59.78 325  P       P       01 48 42.3  -1.0
MK31                                 IAmb    IAmb    01 48 50.1
       comp=Z,40nm,0.9s
MK31   Makanchi Array     59.78 325  P       P       01 48 42.3  -1.0
MK31                                 pmax    pmax
       comp=Z,40nm,0.9s
MKAR   Makanchi Array     59.78 325  P       P       01 48 43.2  -0.1
       comp=Z,16nm,0.6s,baz=118,slow=7.9,SNR=136
MKAR                                 ScP     ScP     01 53 26.3 +0.3
       comp=Z,5.4nm,0.9s,baz=116,slow=5.5,SNR=4.1
MKAR                                 LR      LR      02 17 41.3
       comp=Z,376nm,18.6s,baz=130,slow=39
MKAR                                 PKPPKP  P'P'df  02 18 04.2  -6.8
       comp=Z,0.5nm,0.9s,baz=310,slow=3.2,SNR=4.2
       comp=Z,16nm,0.6s
MKAR   Makanchi Array     59.78 325  P       P       01 48 42.3  -1.0
UZB    Uzynbulak          59.90 320 eP       P       01 48 44.5 +0.2
       comp=Z,15nm,0.7s,baz=320
UZB                                 eS       S       01 56 53.0 +0.6
       baz=320
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UZB	Uzynbulak	59.90	320	eP	P	01 48 44.5	+0.2
UZB				eS	S	01 56 53.0	+0.6
UZB				pmax	pmax		
	comp=Z,15nm,0.7s						
MAKZ	Makanchi	59.97	325	P	P	01 48 44.1	-0.5
MAKZ	Makanchi	59.97	325	P	P	01 48 44.1	-0.5
MAKZ				pmax	pmax		
	comp=Z,71nm,1.0s						
TARG	Taragay, Kyrgy	60.04	318	P	P	01 48 45.6	-0.1
TARG				IAmb	IAmb	01 49 19.6	
	comp=Z,24nm,0.8s						
TARG	Taragay, Kyrgy	60.04	318	P	P	01 48 45.6	-0.1
TARG				pmax	pmax		
	comp=Z,24nm,0.8s						
URZ	Urewera	60.24	137	LR	LR	02 14 34.6	
	comp=Z,475nm,20.5s,baz=38,slow=36						
SATY	Saty	60.26	320	eP	P	01 48 47.1	+0.3
	comp=Z,34nm,0.8s,baz=320						
SATY	Saty	60.26	320	eP	P	01 48 47.0	+0.3
SATY				pmax	pmax		
	comp=Z,34nm,0.8s						
NIL	Nilore	60.26	308	P	P	01 48 45.6	-1.3
NIL				IAmb	IAmb	01 49 15.3	
	comp=Z,39nm,0.8s						
NIL	Nilore	60.26	308	P	P	01 48 45.6	-1.3
NIL				pmax	pmax		
	comp=Z,39nm,0.9s						
KPKS	Kokpek	60.27	320	eP	P	01 48 46.8	0.0
	comp=Z,18nm,0.7s,baz=320						
KPKS	Kokpek	60.27	320	eP	P	01 48 46.8	0.0
KPKS				pmax	pmax		
	comp=Z,18nm,0.7s						
ZHN	Zhinishke	60.29	320	eP	P	01 48 46.8	-0.2
	baz=320						
ZHN	Zhinishke	60.29	320	eP	P	01 48 46.7	-0.2
RTZ	Ruatahuna	60.33	138	P	P	01 48 47.1	-0.2
RTZ				IAmb	IAmb	01 49 01.0	
	comp=Z,60nm,1.1s						
KSH	Kashi	60.36	315	P	P	01 48 48.8	+1.3
KSH				S	S	01 57 00.7	+2.3
KSH				pmax	pmax		
	comp=Z,20nm,1.0s						
KSH				LR	LR		
	comp=Z,550nm,19.7s						
KSH				LR	LR		
	comp=Z,170nm,15.2s						
KSH				LR	LR		
	comp=Z,470nm,19.0s						
ARXS	Arharly	61.17	321	eP	P	01 48 57.6	+4.7
TDK	Taldyqorghan	61.18	322	eP	P	01 48 52.8	-0.1
	baz=322						
TDK	Taldyqorghan	61.18	322	eP	P	01 48 52.7	-0.1
MDOK	Medeo	61.19	319	eP	P	01 48 53.4	+0.2
	baz=319						
MDOK				eS	S	01 57 08.8	-0.2
	baz=319						
MDOK	Medeo	61.19	319	eP	P	01 48 53.3	+0.2
MDOK				eS	S	01 57 08.7	-0.2
AFI	Afiamalu	61.25	107	LR	LR	02 12 55.5	
	comp=Z,341nm,19.9s,baz=286,slow=33						
CHKK	Chushkaly	61.54	320	eP	P	01 48 54.6	-0.8
	baz=320						
CHKK	Chushkaly	61.54	320	eP	P	01 48 54.5	-0.8
KUU	Kurty	61.97	320	eP	P	01 48 58.1	-0.1
	baz=320						
KUU				eS	S	01 57 18.9	+0.3
	baz=320						
KUU	Kurty	61.97	320	eP	P	01 48 58.1	-0.1
KUU				eS	S	01 57 18.9	+0.3
TKM2	Tokmak 2	62.03	318	P	P	01 48 59.3	+0.4
	SNR=9.8						
KBK	Karagaybulak	62.36	318	P	P	01 49 06.5	+5.4
	SNR=6.9						
UCH	Uchtor	62.47	317	P	P	01 49 03.2	+1.0
	SNR=17						
CHMS	Chumysh	62.63	318	P	P	01 49 08.1	+5.4
	SNR=5.2						
AAK	Ala-Archa	62.65	318	P	P	01 49 03.1	+0.1
	comp=Z,2.1nm,0.5s,baz=182,slow=9.1,SNR=13						
AAK				LR	LR	02 19 19.2	
	comp=Z,546nm,21.9s,baz=92,slow=39						
	comp=Z,2.1nm,0.5s						
AAK	Ala-Archa	62.65	318	P	P	01 49 02.3	-0.7
AAK				IAmb	IAmb	01 50 00.8	
	comp=Z,38nm,1.2s						
AAK	Ala-Archa	62.65	318	P	P	01 49 02.3	-0.7
AAK				pmax	pmax		
	comp=Z,38nm,1.3s						
AAK	Ala-Archa	62.65	318	P	P	01 49 06.3	+3.3
ZAA0	Zalesovo Array	62.69	333	IAmb	IAmb	01 49 12.8	
	comp=Z,55nm,1.3s						
ZALV	Zalesovo Beam	62.69	333	P	P	01 49 01.9	-0.9
	comp=Z,6.7nm,0.7s,baz=119,slow=5.6,SNR=24						
ZALV				PKP2bc	P'P'bc	02 18 11.7	-1.6
	comp=Z,2.5nm,0.9s,baz=289,slow=4.5,SNR=8.4						
ZALV				LR	LR	02 18 30.9	
	comp=Z,516nm,20.7s,baz=132,slow=38						
	comp=Z,6.7nm,0.7s						
ZALV	Zalesovo Beam	62.69	333	P	P	01 49 01.5	-1.3
SHEM	Shemya Is, Ala	62.76	29	LR	LR	02 12 55.1	
	comp=Z,704nm,20.3s,baz=178,slow=33						
SGDS	Sogindy	62.90	319	eP	P	01 49 04.4	-0.1
	baz=319						
SGDS	Sogindy	62.90	319	eP	P	01 49 04.4	-0.1
USP	Ospenovka	62.91	318	P	P	01 49 04.6	+0.1
	SNR=12						
AML	Almayashu	62.99	317	P	P	01 49 06.1	+0.6
	SNR=17						
SEY	Seymchan	63.01	12	P	P	01 49 05.1	+0.4
	comp=Z,42nm,1.0s,baz=212,slow=6.2,SNR=76						
SEY				LR	LR	02 15 31.2	
	comp=Z,374nm,20.6s,baz=220,slow=35						
	comp=Z,42nm,1.0s						
SEY	Seymchan	63.01	12d	eP	P	01 49 06.0	+1.3
SEY				pmax	pmax		
	comp=Z,98nm,1.3s						
EKS2	Erkin-Say	63.15	317	P	P	01 49 06.6	+0.3
	SNR=13						
KBL	Kabul	63.86	308	P	P	01 49 10.7	-0.5
KBL	Kabul	63.86	308	P	P	01 49 10.7	-0.5
KBL				pmax	pmax		
	comp=Z,38nm,1.0s						
KBL	Kabul	63.86	308	P	P	01 49 15.8	+4.6
	SNR=22						
KURBB	Kurchatov Arra	63.93	327	P	P	01 49 10.9	-0.1
	comp=Z,14nm,0.5s,baz=127,slow=6.2,SNR=62						
KURBB				LR	LR	02 18 54.0	
	comp=Z,458nm,20.0s,baz=150,slow=38						
	comp=Z,14nm,0.5s						
KURK	Kurchatov	63.93	327	P	P	01 49 10.1	-1.0
KURK				IAmb	IAmb	01 49 18.0	
	comp=Z,73nm,0.8s						
KURK	Kurchatov	63.93	327	P	P	01 49 10.1	-1.0
KURK				pmax	pmax		
	comp=Z,73nm,0.9s						
KURK	Kurchatov	63.93	327	P	P	01 49 11.2	+0.1
BTLS	Baital	63.95	320	eP	P	01 49 10.9	-0.4
	baz=320						
BTLS	Baital	63.95	320	eP	P	01 49 15.7	+4.4
BTLS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DZA	Taraz	64.89	317	eP	P	01 49 17.1	-0.5
	baz=317						
DZA	Taraz	64.89	317	eP	P	01 49 17.1	-0.5
CHGR	Chuyangaron	64.99	312	P	P	01 49 16.1	-2.3
CHGR				IAmb	IAmb	01 49 42.9	
	comp=Z,54nm,0.9s						
CHGR	Chuyangaron	64.99	312	P	P	01 49 16.1	-2.3
CHGR				pmax	pmax		
	comp=Z,54nm,0.9s						
IUG	Iuzhnay	65.52	316	eP	P	01 49 21.9	+0.1
	comp=Z,22nm,0.9s,baz=316						
IUG				eS	S	01 58 02.2	-0.7
	baz=316						
IUG	Iuzhnay	65.52	316	eP	P	01 49 21.8	+0.1
IUG				eS	S	01 58 02.2	-0.7
IUG				pmax	pmax		
	comp=Z,22nm,0.9s						
KK31	Karatay Array	65.53	317	P	P	01 49 21.1	-0.6
KK31				IAmb	IAmb	01 49 34.8	
	comp=Z,44nm,1.0s						
KK31	Karatay Array	65.53	317	P	P	01 49 21.1	-0.6
KK31				pmax	pmax		
	comp=Z,44nm,1.0s						
KKAR	Karatay Array	65.53	317	P	P	01 49 20.8	-0.9
KKAR	Karatay Array	65.53	317	P	P	01 49 20.8	-0.9
CHM	Chimkent	65.88	316	eP	P	01 49 23.9	0.0
	baz=316						
CHM	Chimkent	65.88	316	eP	P	01 49 23.9	0.0
KIWB	Kanaga Island	66.83	33	P	P	01 49 28.4	-1.4
BRZS	Berezniki	66.92	324	eP	P	01 49 30.4	-0.1
	baz=324						
BRZS				eS	S	01 58 19.4	0.0
	baz=324						
BRZS	Berezniki	66.92	324	eP	P	01 49 30.3	-0.1
BRZS				eS	S	01 58 19.3	0.0
TIXI	Tiksi	69.24	0	P	P	01 49 43.1	-1.4
TIXI				IAmb	IAmb	01 49 45.8	
	comp=Z,86nm,1.4s						
BVAR	Borovoye Array	69.52	327	LR	LR	02 21 53.3	
	comp=Z,384nm,21.5s,baz=108,slow=37						
BRVK	Borovoye	69.59	327	P	P	01 49 45.6	-1.4
BRVK				IAmb	IAmb	01 49 57.8	
	comp=Z,72nm,1.0s						
BRVK	Borovoye	69.59	327	P	P	01 49 45.6	-1.4
BRVK				pmax	pmax		
	comp=Z,72nm,1.0s						
BRVK	Borovoye	69.59	327	P	P	01 49 47.0	0.0
JLN	Jalan Bani Buh	69.87	293	P	P	01 49 49.9	+0.6
WBK	Wadi Bani Khal	70.32	293	P	P	01 49 52.4	+0.2
BILL	Bilibino	70.45	14	P	P	01 49 51.4	-0.7
BILL	Bilibino	70.45	14c	iP	P	01 49 51.7	-0.4
BILL				e		01 52 30.4	
BILL				ePPP	PPP	01 54 14.7	
BILL				eS	S	01 58 57.7	-2.9
BILL				eSS	SS	02 03 40.9	+8.4
BILL				pmax	pmax		
	comp=Z,24nm,1.3s						
BILL				MLR	MLR		
	comp=Z,368nm,17.0s						
WSAR	Wadi Sarin	70.69	294	P	P	01 49 55.6	+1.2
JMDO	Jabal Madar	71.09	293	P	P	01 49 56.5	-0.3
MHTO	MHTO	71.09	291	P	P	01 49 56.8	0.0
BIDO	Bidbid	71.18	294	P	P	01 49 57.5	+0.1
SMDO	Samad	71.21	293	P	P	01 49 56.1	-1.6
DQM	DQM	71.41	290	P	P	01 50 00.3	+1.5
JASK	Jask - Hormozg	71.67	296	P	P	01 50 02.6	+2.3
NIKH	Nikolski High	71.91	34	P	P	01 50 00.8	-0.3
	baz=249						
HOQ	Hoqain	71.93	294	P	P	01 50 02.1	+0.2
BSY	Bisya	71.96	293	P	P	01 50 02.4	+0.3
NRIK	Noril'sk	72.25	346	P	P	01 50 02.9	+0.1
	comp=Z,34nm,0.9s,baz=124,slow=6.5,SNR=41						
	comp=Z,34nm,0.9s						
NRIK	Noril'sk	72.25	346	IAmb	IAmb	01 50 13.4	
	comp=Z,73nm,1.2s						
NRIK	Noril'sk	72.25	346d	iP	P	01 50 02.6	-0.2
NRIK				pmax	pmax		
	comp=Z,46nm,1.0s						
ARQ	Araqi	72.63	294	P	P	01 50 07.5	+1.4
SOHO	SOHO	72.69	294	P	P	01 50 06.4	0.0
SPIA	Saint Paul Isl	72.78	30	P	P	01 50 06.6	+0.4
	baz=246						
UOSS	Minazif	73.07	295	P	P	01 50 07.3	-1.4
UOSS	Minazif	73.07	295	P	P	01 50 10.6	+1.9
BANOM	Banah	73.08	296	P	P	01 50 11.2	+2.5
SHAO	Shalim	73.09	288	P	P	01 50 10.0	+1.1
	SNR=12						
HATD	Hatta, Dubai	73.12	295	P	P	01 50 10.6	+1.6
ASHO	Ashiyiah	73.18	295	P	P	01 50 12.0	+2.6
GEYT	Alibeck	73.23	309	P	P	01 50 09.6	+0.2
	comp=Z,6.3nm,0.7s,baz=160,slow=4.7,SNR=13						
GEYT				LR	LR	02 27 28.2	
	comp=Z,168nm,19.6s,baz=93,slow=40						
	comp=Z,6.3nm,0.7s						
SHME	Shamm	73.23	296	P	P	01 50 11.8	+2.2
ALNE	Al Ain	73.40	294	P	P	01 50 12.2	+1.6
	SNR=12						
NAZ	Nazwa, Dubai	73.56	295	P	P	01 50 14.7	+3.2
KIP	Kipapa	73.70	68	⇑eP	P	01 50 14.5	+2.1
KIP				pmax	pmax		
	comp=Z,228nm,2.5s						
DMTO	DMTO	73.72	288	P	P	01 50 12.4	-0.2
RAR	Rarotonga	73.78	113	LR	LR	02 19 40.8	
	comp=Z,228nm,21.4s,baz=280,slow=33						
ASUD	Al Ashush, Dub	73.83	295	P	P	01 50 14.8	+1.7
UMZA	Um Al Zommool	73.83	293	P	P	01 50 13.0	-0.1
AJN	Ajban	74.14	295	P	P	01 50 15.2	+0.3
ABKAR	Akbulak array	74.42	321	P	P	01 50 15.4	-0.6
RBK	Rabkut	74.42	287	P	P	01 50 18.1	+1.4
	SNR=6.3						
DOK	Doka	74.55	289	P	P	01 50 17.0	-0.4
	SNR=15						
WHFO	Wadi Hawf	74.85	288	P	P	01 50 18.1	-1.1
	SNR=15						
ABTO	Aybut	75.28	287	P	P	01 50 22.0	+0.2
	SNR=7.6						
MZR	Muzera	75.40	293	P	P	01 50 22.4	+0.1
FALS	False Pass	75.57	34	P	P	01 50 22.7	+0.2
	baz=253						
AKTO	Aktyubinsk	75.92	322	LR	LR	02 27 33.5	
	comp=Z,690nm,20.4s,baz=71,slow=39						
GHWR	Ruwais	76.02	294	P	P	01 50 25.6	-0.1
JRN	Qarnain Island	76.10	295	P	P	01 50 27.4	+1.2
SVE	Sverdlovsk	76.14	328	eP	P	01 50 25.3	-0.4
SVE				eS	S	02 00 03.0	-2.3
SVE				pmax	pmax		
	comp=Z,65nm,0.9s						
S12K	Black Hills	76.55	33	P	P	01 50 28.0	-0.2
	baz=254						
SLWR	Sila	77.10	294	P	P	01 50 32.1	+0.3
ARU	Arti	77.12	328	LR	LR	02 27 47.3	
	comp=Z,128nm,18.9s,baz=94,slow=38						
ARU	Arti	77.12	328	P	P	01 50 29.4	-1.9
ARU				IAmb	IAmb	01 50 37.2	
	comp=Z,42nm,0.8s						
ARU	Arti	77.12	328c	iP	P	01 50 30.1	-1.2
ARU						01 50 38.9	
ARU				*PP	pP	01 50 45.1	-2.0
ARU						01 53 20.7	
ARU				S	S	02 00 15.6	-0.5
ARU				pmax	pmax		
	comp=Z,23nm,1.3s						
TNA	Tin City	77.17	22	P	P	01 50 31.1	-0.3
TNA	Tin City	77.17	22	P	P	01 50 32.1	+0.7
	baz=246						
SDPT	Sand Point	77.33	34	P	P	01 50 31.1	-1.3
SDPT	Sand Point	77.33	34	P	P	01 50 32.4	-0.1
	baz=255						
ANM	Nome	77.80	24	P	P	01 50 35.2	+0.4
ANM	Nome	77.80	24	P	P	01 50 35.3	+0.4
ANM				pmax	pmax		
	comp=Z,23nm,1.0s						
ANM	Nome	77.80	24	P	P	01 50 35.7	+0.8
	baz=249						
SMRA	Abu-Samra	77.93	295	P	P	01 50 35.6	-0.8
SAKB	Bahrain	78.25	296	P	P	01 50 38.3	0.0
R16K	Pilot Point	79.42	32	P	P	01 50 44.0	0.0
	baz=257						
N16K	Nishlik Lake	79.48	29	P	P	01 50 45.3	+0.9
	baz=256						
P16K	Nushagak River	79.53	30	P	P	01 50 45.6	+1.1
	baz=257,SNR=11						
O16K	Kokwok River B	79.61	30	P	P	01 50 45.0	+0.1
	baz=257						
RDOG	Red Dog Mine	79.93	21	P	P	01 50 47.4	+0.8
	baz=251,SNR=10.0						
R17K	Ugashik Creek	80.06	32	P	P	01 50 47.6	+0.2
	baz=258						
Q16K	King Salmon	80.13	31	P	P	01 50 47.9	+0.2
	baz=258						
O17K	Koliganek Bris	80.14	30	P	P	01 50 49.0	+1.2
	baz=257,SNR=15						
Q17K	Contact Creek	80.44	31	P	P	01 50 49.9	+0.3
	baz=259,SNR=7.0						
LKRN	Lenkeran, Azer	80.61	309	P	P	01 50 56.1	+5.3
Q18K	Katmai Hardscr	80.97	31	P	P	01 50 52.5	0.0
	baz=260,SNR=5.1						
O18K	Koktuh Hills	81.09	30	P	P	01 50 53.9	+1.0
	baz=259						
TTA	Tatalina	81.32	27	P	P	01 50 54.3	+0.1
TTA				IAmb	IAmb	01 51 06.5	
	comp=Z,49nm,1.1s						
TTA	Tatalina	81.32	27	P	P	01 50 54.3	+0.1
TTA				pmax	pmax		
	comp=Z,49nm,1.1s						
TTA	Tatalina	81.32	27	P	P	01 50 55.0	+0.7
	baz=258,SNR=17						
GCSA	Galena City Sc	81.34	25	P	P	01 50 55.2	+1.1
	baz=257,SNR=10						
O19K	Port Alsworth	81.59	29	P	P	01 50 55.1	-0.4
O19K				IAmb	IAmb	01 50 58.4	
	comp=Z,99nm,1.8s						
O19K	Port Alsworth	81.59	29	P	P	01 50 56.6	+1.0
	baz=260						
N19K	Bonanza Creek	81.62	29	P	P	01 50 56.9	+1.0
	baz=260						
AKT	Akhty	81.63	311	eP	P	01 50 56.2	-0.1
AKT				e*PP	pP	01 51 12.7	+0.5
AKT				pmax	pmax		
	comp=Z,19nm,0.9s						
OHAK	Old Harbor	81.63	33	P	P	01 50 55.5	-0.3
OHAK	Old Harbor	81.63	33	P	P	01 50 56.6	+0.7
	baz=261						
L19K	White Mountain	81.70	27	P	P	01 50 56.9	+0.7
L19K				IAmb	IAmb	01 51 08.5	
	comp=Z,54nm,1.1s						
L19K	White Mountain	81.70	27	P	P	01 50 57.3	+1.1
	baz=259						
Q19K	Cape Douglas,	81.72	31	P	P	01 50 57.3	+1.0
	baz=261						
VNDA	Vanda	81.80	173	P	P	01 50 57.0	+0.6
	comp=Z,16nm,1.0s,baz=322,slow=5.9,SNR=25						
VNDA				LR	LR	02 26 13.9	
	comp=Z,464nm,21.1s,baz=334,slow=35						
	comp=Z,16nm,1.0s						
VNDA	Vanda	81.80	173	P	P	01 50 55.7	-0.6
VNDA	Vanda	81.80	173	P	P	01 50 55.7	-0.6
VNDA				pmax	pmax		
	comp=Z,15nm,0.9s						
M19K	Big River Lodg	81.86	28	P	P	01 50 57.3	+0.3
M19K	Big River Lodg	81.86	28	P	P	01 50 58.5	+1.5
	baz=260						
MAK	Makhachkala	81.91	313	eP	P	01 50 55.9	-1.7
MAK				e*PP	pP	01 51 12.1	-1.4
MAK				eS	S	02 01 03.3	-3.9
MAK				pmax	pmax		
	comp=Z,269nm,1.3s						
SEKA	Sheki	82.01	311	P	P	01 51 03.0	+4.7
MNGR	Mingechevir, A	82.06	311	P	P	01 51 03.7	+5.2
KDAK	Kodiak Island	82.09	32	P	P	01 50 59.6	+1.3
	comp=Z,35nm,0.7s,baz=274,slow=4.5,SNR=21						
KDAK				LR	LR	02 21 55.9	
	comp=Z,674nm,21.9s,baz=262,slow=32						
	comp=Z,35nm,0.7s						
KDAK	Kodiak Island	82.09	32	P	P	01 50 58.2	0.0
KDAK	Kodiak Island	82.09	32c	eP	P	01 50 59.4	+1.2
KDAK				pmax	pmax		
	comp=Z,79nm,1.0s						
L20K	Farewell, AK	82.20	27	P	P	01 50 59.8	+1.0
	baz=260,SNR=18						
K20K	Telida	82.27	26	P	P	01 50 59.9	+0.7
K20K				IAmb	IAmb	01 51 11.5	
	comp=Z,131nm,1.7s						
K20K	Telida	82.27	26	P	P	01 51 00.0	+0.9
	baz=260,SNR=20						
Q20K	Shuyak Island	82.31	31	P	P	01 50 59.8	+0.4
	baz=262						
KIRV	Kirov	82.39	329	LR	LR	02 30 54.8	
	comp=Z,282nm,21.6s,baz=93,slow=38						
KIRV	Kirov	82.39	329d	eP	P	01 50 59.5	-0.3
RSO	Redoubt South	82.40	29	P	P	01 50 59.1	-1.0
O20K	Slope Mountain	82.41	30	P	P	01 51 00.2	+0.2
	baz=261						
M20K	Styx River	82.44	28	P	P	01 51 00.3	+0.2
M20K				IAmb	IAmb	01 51 24.8	
	comp=Z,41nm,1.0s						
M20K	Styx River	82.44	28	P	P	01 51 01.1	+1.0
	baz=261						
GANJ	Ganja	82.63	311	P	P	01 51 06.9	+5.4
BELG	Belogornoye	82.66	322	LR	LR	02 30 03.1	
	comp=Z,274nm,21.9s,baz=110,slow=37						
BELG	Belogornoye	82.66	322d	eP	P	01 51 00.8	-0.5
BELG				pmax	pmax		
	comp=Z,9.0nm,1.0s						
RAYN	Ar Rayn	82.75	293	P	P	01 51 01.7	-0.8
RAYN				IAmb	IAmb	01 51 18.8	
	comp=Z,37nm,0.8s						
RAYN	Ar Rayn	82.75	293	⇑P	P	01 51 02.0	-0.5
RAYN	Ar Rayn	82.75	293	P	P	01 51 02.7	+0.2
SPCR	Spurr Chakacha	82.78	29	P	P	01 51 02.4	+0.5
	baz=262						
HOM	Homer	82.84	30	P	P	01 51 02.5	+0.4
	baz=262						
SPU	Mount Spurr	82.85	29	P	P	01 51 01.6	-0.6
PPT	Papeete	82.91	108	LR	LR	02 24 06.7	
	comp=Z,150nm,21.5s,baz=302,slow=33						
PPT2	Papeete2	82.91	108	eS	S	02 01 15.6	-3.0
	comp=Z,124nm,24.8s						
PPT2	Papeete2	82.91	108	eLR	LR	02 17 10.1	
	comp=Z,492nm,24.8s						
PPT2				eLR	LR	02 17 10.3	
	comp=Z,400nm,25.0s						
A21K	Barrow	82.97	18	P	P	01 51 03.1	+0.6
A21K				IAmb	IAmb	01 51 13.8	
	comp=Z,95nm,1.0s						
A21K	Barrow	82.97	18	P	P	01 51 03.5	+1.0
	baz=256,SNR=22						
PPLA	Purkeypile	83.04	27	P	P	01 51 02.8	-0.5
PPLA				IAmb	IAmb	01 51 21.9	
	comp=Z,88nm,1.3s						
PPLA	Purkeypile	83.04	27	P	P	01 51 04.1	+0.8
	baz=261,SNR=10						
G21K	Allakaket	83.07	23	P	P	01 51 04.6	+1.4
	baz=260						
MAW	Mawson	83.08	201	LR	LR	02 25 59.2	
	comp=Z,248nm,20.6s,baz=78,slow=34						
CHUM	Lake Minchumin	83.13	26	P	P	01 51 04.8	+1.3
	baz=261,SNR=15						
CAST	Castle Rocks	83.16	26	P	P	01 51 03.1	-0.7
CAST	Castle Rocks	83.16	26	P	P	01 51 04.2	+0.4
	baz=261,SNR=31						
GROC	Groznyy	83.17	313	eP	P	01 51 02.1	-2.1
GROC				e*PP	pP	01 51 18.9	-1.2
GROC				e		01 54 14.5	
GROC				eS	S	02 01 19.4	-0.8
GROC				pmax	pmax		
	comp=Z,122nm,1.2s						
NAX	Nakhchivan	83.19	309	P	P	01 51 09.6	+5.1
F21K	Alatna River	83.21	23	P	P	01 51 05.0	+1.0
	baz=260						
H21K	Melozitna Rive	83.21	24	P	P	01 51 04.7	+0.8
H21K				IAmb	IAmb	01 51 15.3	
	comp=Z,84nm,1.1s						
H21K	Melozitna Rive	83.21	24	P	P	01 51 05.3	+1.4
	baz=260						
SKT	Skwentna	83.21	28	IAmb	IAmb	01 51 15.0	
	comp=Z,87nm,1.2s						
SKT	Skwentna	83.21	28	P	P	01 51 03.7	-0.3
	baz=262,SNR=20						
CAPN	Captain Cook N	83.23	29	P	P	01 51 05.2	+1.1
	baz=262						
VOI	Vohitsoka	83.25	248	P	P	01 51 04.2	-1.0
VOI				IAmb	IAmb	01 51 05.8	
	comp=Z,35nm,0.8s						
VOI	Vohitsoka	83.25	248	P	P	01 51 05.2	0.0
VOI	Vohitsoka	83.25	248	P	P	01 51 04.3	-1.0
BRSE	Bradley Lake S	83.30	30	P	P	01 51 05.7	+1.1
	baz=263						
I21K	Tanana	83.47	25	P	P	01 51 05.4	+0.1
I21K				IAmb	IAmb	01 51 16.7	
	comp=Z,93nm,1.1s						
I21K	Tanana	83.47	25	P	P	01 51 06.1	+0.8
	baz=261						
SUA	Susitna One	83.51	28	P	P	01 51 04.9	-0.8
SUA				IAmb	IAmb	01 51 07.0	
	comp=Z,68nm,1.1s						
SUA	Susitna One	83.51	28	P	P	01 51 05.3	-0.5
	baz=263,SNR=6.6						
TBI	Tubuai	83.52	114	eS	S	02 01 21.7	-2.7
	comp=Z,452nm,26.5s						
TBI	Tubuai	83.52	114	eLR	LR	02 17 26.4	
	comp=Z,2µm,25.2s						
TBI				eLR	LR	02 17 26.7	
	comp=Z,6µm,23.2s						
KTH	Kantishna Hill	83.70	26	IAmb	IAmb	01 51 17.6	
	comp=Z,108nm,1.2s						
BPAW	Bear Paw Mtn.	83.74	26	P	P	01 51 06.1	-0.6
BPAW				IAmb	IAmb	01 51 17.5	
	comp=Z,57nm,1.2s						
BPAW	Bear Paw Mtn.	83.74	26	P	P	01 51 07.3	+0.6
	baz=262,SNR=20						
F22K	John River	83.75	22	P	P	01 51 08.2	+1.5
	baz=261						
GNI	Garni	83.81	310	LR	LR	02 34 50.6	
	comp=Z,90nm,20.6s,baz=79,slow=40						
GNI	Garni	83.81	310	⇓eP	P	01 51 06.6	-1.2

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GNI                                       pmax     pmax
      comp=Z,2.0nm,0.9s
H22K  Ishtalitna Cre   83.82  24  P        P        01 51 08.4 +1.3
      baz=262
M22K  Willow           83.84  28  P        P        01 51 07.2  0.0
      baz=263,SNR=8.1
CUT   Chulitna         83.85  28  P        P        01 51 06.8 -0.5
CUT   Chulitna         83.85  28  P        P        01 51 07.2  0.0
      baz=263,SNR=8.3
O22K  Cooper Landing   83.89  30  P        P        01 51 07.3 -0.2
O22K  Cooper Landing   83.89  30  P        P        01 51 07.9 +0.4
      baz=264,SNR=9.3
RC01  Rabbit Creek A   83.95  29  IAmb     IAmb     01 51 18.5
      comp=Z,98nm,1.1s
RC01  Rabbit Creek A   83.95  29  P        P        01 51 08.2 +0.3
      baz=264,SNR=15
TRF   Thorofare Moun   83.97  27  P        P        01 51 08.1  0.0
TRF                               IAmb     IAmb     01 51 18.8
      comp=Z,74nm,1.0s
MLY   Manley           83.97  25  P        P        01 51 08.4 +0.5
MLY                               IAmb     IAmb     01 51 18.8
      comp=Z,63nm,1.0s
MLY   Manley           83.97  25  P        P        01 51 08.7 +0.8
      baz=262,SNR=47
SEW   Seward           83.99  30  P        P        01 51 07.5 -0.5
SEW                               IAmb     IAmb     01 51 22.5
      comp=Z,86nm,1.0s
SEW   Seward           83.99  30  P        P        01 51 08.3 +0.4
      baz=264,SNR=7.2
PMR   Palmer           84.30  28  P        P        01 51 08.8 -0.7
PMR                               IAmb     IAmb     01 51 19.6
      comp=Z,76nm,1.0s
PMR   Palmer           84.30  28  P        P        01 51 08.8 -0.7
PMR                               pmax     pmax
      comp=Z,76nm,1.0s
PMR   Palmer           84.30  28  P        P        01 51 09.8 +0.3
      baz=264,SNR=20
GHO   Glory Hole Cre   84.41  28  IAmb     IAmb     01 51 44.3
      comp=Z,54nm,1.1s
COLD  Coldfoot         84.47  23  P        P        01 51 10.6 +0.3
COLD  Coldfoot         84.47  23  P        P        01 51 11.6 +1.2
      baz=263,SNR=52
G23K  Bananza Creek    84.47  23  P        P        01 51 11.8 +1.4
      baz=263
D23K  Nanushuk River   84.52  21  P        P        01 51 12.3 +1.7
      baz=262
ZEI   Tsey             84.54 313 eP        P        01 51 09.8 -1.7
ZEI                               pmax     pmax
      comp=Z,41nm,1.3s
H23K  Yukon River      84.56  24  P        P        01 51 11.5 +0.6
H23K                              IAmb     IAmb     01 51 22.7
      comp=Z,54nm,1.0s
H23K  Yukon River      84.56  24  P        P        01 51 12.1 +1.2
      baz=263
I23K  Minto, Yukon-K   84.56  25  IAmb     IAmb     01 51 22.4
      comp=Z,89nm,1.1s
I23K  Minto, Yukon-K   84.56  25  P        P        01 51 11.9 +1.1
      baz=264,SNR=37
KNK   Knik Glacier     84.60  29  P        P        01 51 11.0 -0.2
KNK   Knik Glacier     84.60  29  P        P        01 51 12.0 +0.9
      baz=265,SNR=24
MCK   McKinley         84.60  26  P        P        01 51 11.3 +0.2
      baz=264,SNR=38
RND   Reindeer         84.60  27  IAmb     IAmb     01 51 21.5
      comp=Z,68nm,1.0s
PWL   Port Wells       84.61  29  P        P        01 51 10.7 -0.5
PWL   Port Wells       84.61  29  P        P        01 51 11.8 +0.6
      baz=265,SNR=12
NEA2  Nenana           84.63  25  IAmb     IAmb     01 51 23.1
      comp=Z,51nm,1.0s
NEA2  Nenana           84.63  25  P        P        01 51 11.2  0.0
      baz=264,SNR=23
SML   Sawmill          84.69  28  P        P        01 51 11.5 -0.1
SML   Sawmill          84.69  28  P        P        01 51 12.0 +0.4
      baz=265,SNR=46
E23K  Chandalar        84.79  22  P        P        01 51 13.3 +1.2
      baz=263,SNR=65
AKH   Akhalkalaki      84.80 311  P        P        01 51 11.8 -1.0
AKH   Akhalkalaki      84.80 311  P        P        01 51 11.8 -1.0
AKH                               pmax     pmax
      comp=Z,113nm,1.0s
TOLK  Toolik Lake Re   84.88  21  P        P        01 51 12.3 -0.2
TOLK                              IAmb     IAmb     01 51 24.5
      comp=Z,70nm,1.0s
TOLK  Toolik Lake Re   84.88  21  P        P        01 51 13.4 +1.0
      baz=263,SNR=26
M23K  Glacier View     84.98  28  P        P        01 51 13.4 +0.4
      baz=266,SNR=18
P23K  Montague Islan   85.00  30  P        P        01 51 14.1 +1.0
      baz=266,SNR=7.8
WRH   Wood River Hil   85.04  26  P        P        01 51 13.0 -0.2
WRH                               IAmb     IAmb     01 51 23.7
      comp=Z,70nm,1.1s
GEVA  Gevas            85.07 308  P        P        01 51 13.6 -0.7
GEVA                              IAmb     IAmb     01 51 37.3
      comp=Z,40nm,0.9s
KARS  Kars             85.10 310  P        P        01 51 13.6 -0.7
KARS  Kars             85.10 310  P        P        01 51 13.6 -0.7
KARS                              pmax     pmax
      comp=Z,245nm,1.1s
SCM   Sheep Creek Mo   85.17  28  P        P        01 51 14.0 -0.1
SCM   Sheep Creek Mo   85.17  28  P        P        01 51 14.0 -0.1
SCM                               pmax     pmax
      comp=Z,217nm,1.1s
SCM   Sheep Creek Mo   85.17  28  P        P        01 51 14.4 +0.3
      baz=266,SNR=29
TCOL  CIGO, UAF Yank   85.17  25  P        P        01 51 15.1 +1.2
      baz=265
COLA  College          85.17  25ceP        P        01 51 13.9  0.0
COLA                              pmax     pmax
      comp=Z,5.0nm,1.1s
COLA  College          85.17  25  P        P        01 51 15.4 +1.5
      baz=265
CCB   Clear Creek Bu   85.18  25  P        P        01 51 12.9 -1.0
CCB                               IAmb     IAmb     01 51 24.1
      comp=Z,46nm,1.1s
E24K  Your Creek       85.22  22  P        P        01 51 14.2  0.0
      baz=264
H24K  Noodor Dome      85.25  24  P        P        01 51 14.1 -0.2
H24K                              IAmb     IAmb     01 51 26.9
      comp=Z,92nm,1.6s
H24K  Noodor Dome      85.25  24  P        P        01 51 14.5 +0.2
      baz=265
KBZ   Khabaz           85.30 314  P        P        01 51 15.0  0.0
      comp=Z,4.6nm,1.0s,baz=291,slow=5.5,SNR=5.4
KBZ                               LR       LR       02 34 15.9
      comp=Z,204nm,21.8s,baz=69,slow=39
      comp=Z,4.6nm,1.0s
KBZ   Khabaz           85.30 314deP        P        01 51 14.8 -0.2
KBZ                               pmax     pmax
      comp=Z,13nm,1.1s
C24K  Franklin Bluff   85.31  20  P        P        01 51 15.3 +0.9
      baz=264
POKR  Poker Plat Res   85.37  25  P        P        01 51 15.0 +0.1
      baz=265
ATD   Arta Tunnel      85.38 281  P        P        01 51 14.1 -1.9
ATD                               IAmb     IAmb     01 51 35.0
      comp=Z,40nm,0.9s
ATD   Arta Tunnel      85.38 281  P        P        01 51 17.3 +1.3
F24K  Squaw Lake       85.39  23  P        P        01 51 15.4 +0.4
      baz=265
NEY   Neytrino         85.42 313⇑eP        P        01 51 18.5 +2.7
NEY                               pmax     pmax
      comp=Z,3.0nm,0.9s
KIV   Kislovodsk       85.46 314 ⇑P        P        01 51 21.1 +5.2
KIV   Kislovodsk       85.46 314 eP        P        01 51 15.7 -0.2
KIV                               pmax     pmax
      comp=Z,9.0nm,1.1s
KIV                               MLR      MLR
      comp=Z,192nm,20.0s
KIV   Kislovodsk       85.46 314  P        P        01 51 21.0 +5.1
G24K  Hadweenzic Riv   85.48  23  P        P        01 51 15.5  0.0
      baz=265
Q23K  Middleton Isla   85.50  31  P        P        01 51 15.8 +0.2
      baz=267
HDA   Harding Lake     85.53  26  P        P        01 51 15.2 -0.5
HDA   Harding Lake     85.53  26  P        P        01 51 15.4 -0.3
      baz=266,SNR=8.0
IL31                   85.58  25  P        P        01 51 14.9 -0.9
ILAR  Eielson Array    85.58  25  P        P        01 51 15.6 -0.4
      comp=Z,5.7nm,1.0s,baz=255,slow=5.5,SNR=35
ILAR                              PKKP     PKKPbc   02 09 18.8 -3.0
      comp=Z,0.8nm,1.0s,baz=137,slow=0.1,SNR=5.4
      comp=Z,5.7nm,1.0s
ILAR  Eielson Array    85.58  25  P        P        01 51 14.6 -1.4
M24K  Tolsona, Glenn   85.73  28  P        P        01 51 16.7 -0.1
      baz=267,SNR=18
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KLU   Klutina          85.82  29  P        P        01 51 18.0 +0.7
KLU                               IAmb     IAmb     01 51 28.8
      comp=Z,51nm,1.1s
KLU   Klutina          85.82  29  P        P        01 51 17.2 -0.1
      baz=267,SNR=15
EYAK  Cordova Ski Ar   85.86  30  P        P        01 51 17.1 -0.3
      baz=267
DIV   Divide           85.88  29  P        P        01 51 17.6 +0.1
GURO  Guroymak-BITLI   85.88 308  P        P        01 51 17.4 -0.8
GURO                              IAmb     IAmb     01 51 43.1
      comp=Z,42nm,1.1s
K24K  Donnelly Dome    86.00  26  P        P        01 51 18.0 -0.1
      baz=267,SNR=5.2
G25K  Bearman Lake     86.03  23  P        P        01 51 18.3 +0.2
      baz=266
D25K  Kavik River      86.09  21  P        P        01 51 18.5  0.0
      baz=266,SNR=14
PAX   Paxson           86.10  27  IAmb     IAmb     01 51 30.0
      comp=Z,54nm,1.1s
PAX   Paxson           86.10  27  P        P        01 51 19.2 +0.5
      baz=267,SNR=18
PRP   Porcupine Dome   86.20  25  P        P        01 51 19.6 +0.4
      baz=267
HARP  HAARP            86.22  28  P        P        01 51 19.8 +0.6
      baz=268,SNR=5.7
VRH   Novokhopyorsk    86.25 321 eP        P        01 51 18.4 -1.1
VRH                               pmax     pmax
      comp=Z,19nm,1.6s
F25K  Christian Rive   86.26  23  P        P        01 51 20.3 +1.0
      baz=267
E25K  Arctic Village   86.31  22  P        P        01 51 20.0 +0.5
      baz=267,SNR=14
RIDG  Independent Ri   86.41  26  IAmb     IAmb     01 51 31.1
      comp=Z,47nm,1.0s
RIDG  Independent Ri   86.41  26  P        P        01 51 19.8 -0.3
      baz=268,SNR=11
N25K  Chitina, Valde   86.46  29  P        P        01 51 20.6 +0.1
      baz=268,SNR=11
C26K  Camden Bay       86.64  20  P        P        01 51 21.2 +0.2
      baz=267
BMAR  Burnt Mountain   86.66  23  P        P        01 51 21.8 +0.5
SCRK  Sand Creek       86.80  26  P        P        01 51 21.8 -0.4
SCRK  Sand Creek       86.80  26  P        P        01 51 22.1  0.0
      baz=269
GLB   Gilahina Butte   86.83  29  IAmb     IAmb     01 51 35.8
      comp=Z,61nm,1.0s
F26K  Sheenjek River   86.83  22  P        P        01 51 22.2 +0.1
      baz=268,SNR=11
G26K  Porcupine Rive   86.95  23  P        P        01 51 23.1 +0.5
      baz=269
J26L  Joseph Creek     87.00  26  P        P        01 51 23.6 +0.5
      baz=269
VRDI  Verde Repeater   87.00  29  IAmb     IAmb     01 51 34.7
      comp=Z,45nm,1.2s
C27K  Jago River       87.04  21  P        P        01 51 23.9 +0.8
      baz=269
KOPT  Kop Dagi         87.07 310  P        P        01 51 23.4 -0.8
KOPT                              IAmb     IAmb     01 51 59.8
      comp=Z,57nm,1.0s
L26K  Log Cabin Wild   87.07  27  P        P        01 51 23.8 +0.4
      baz=269
I26K  Coal Creek Min   87.18  25  P        P        01 51 23.9 +0.1
      baz=269
MCARA McCarthy VSAT    87.21  29  P        P        01 51 24.3 +0.3
      baz=270
M26K  Nabesna, AK      87.23  28  P        P        01 51 24.4 +0.2
M26K  Nabesna, AK      87.23  28  P        P        01 51 24.4 +0.2
      baz=270
KLMR  Klimovskoe       87.55 331 eP        P        01 51 23.8 -1.8
KLMR                               AMP              01 51 34.7
      comp=Z,52nm,1.2s
KLMR                             ePP       PP       01 54 47.8 -3.2
KLMR  Klimovskoe       87.55 331 eP        P        01 51 23.7 -1.8
KLMR                             e                  01 54 47.7
KLMR                               pmax    pmax
      comp=Z,52nm,1.2s
SOC   Sochi            87.61 313 eP        P        01 51 24.2 -2.1
SOC                              e                  01 54 48.4
SOC                              ePPP      PPP      01 56 47.5
SOC                              eS        SKSac    02 01 46.1 -3.7
SOC                              eSSS      SSS      02 11 29.0
SOC                                MLR     MLR
      comp=Z,154nm,20.0s
M27K  Edge Creek, AK   87.75  28  P        P        01 51 26.6 -0.2
M27K  Edge Creek, AK   87.75  28  P        P        01 51 26.9 +0.1
      baz=271
L27K  Beaver Creek,    87.77  27  P        P        01 51 26.4 -0.3
      baz=271
G27K  Doyon Strip      87.79  23  P        P        01 51 26.3 -0.4
      baz=271
E27K  Coleen River     87.80  22  P        P        01 51 26.8  0.0
      baz=271
VORR  Voronezh         87.82 321 eP        P        01 51 25.0 -2.1
VORR                               pmax    pmax
      comp=Z,10.0nm,1.2s
I27K  Kandik River     87.83  25  P        P        01 51 27.6 +0.6
      baz=271
H27K  Steamboat Moun   87.85  24  P        P        01 51 27.5 +0.4
      baz=271
VSR   Storozhevoye     87.86 321 eP        P        01 51 26.6 -0.7
VSR                                pmax    pmax
      comp=Z,30nm,0.9s
BARN  Barnard Glacie   87.87  29  P        P        01 51 27.5 +0.1
BARN                              IAmb     IAmb     01 51 39.2
      comp=Z,32nm,1.0s
LPSR  Galich'ya Gora   87.98 322 eP        P        01 51 26.8 -1.0
LPSR                               pmax    pmax
      comp=Z,30nm,0.7s
EGAK  Eagle            88.03  25  IAmb     IAmb     01 53 30.6
      comp=Z,25nm,0.7s
EGAK  Eagle            88.03  25  P        P        01 51 28.0 +0.1
      baz=271
ADZR  Andozero         88.08 334 eP        P        01 51 26.3 -1.8
ADZR                               pmax    pmax
      comp=Z,19nm,1.1s
BVCY  Beaver Creek     88.22  28  P        P        01 51 28.9  0.0
      baz=272
YUK3  Moose Creek      88.43  28  P        P        01 51 29.8 -0.3
      baz=272
PINM  Pinnacle         88.59  30  P        P        01 51 31.3 +0.6
      baz=272
O28M  Mount Upton      88.60  29  P        P        01 51 31.4 +0.5
      baz=272
MOS   Moscow           88.66 326 eP        P        01 51 28.8 -2.2
MOS                              e*PP      pP       01 51 44.3 -2.7
MOS                              e                  01 54 57.0
MOS                              eS        SKSac    02 01 53.0 -2.5
MOS                              e                  02 02 04.5
MOS                                pmax    pmax
      comp=Z,31nm,0.9s
MOS                                MLR     MLR
      comp=Z,400nm,21.0s
YUK8  Steele Glacier   88.78  29  P        P        01 51 31.6 -0.2
      baz=272
DAWY  Dawson           88.82  26  IAmb     IAmb     01 53 07.5
      comp=Z,22nm,0.7s
DAWY  Dawson           88.82  26  P        P        01 51 31.5 -0.2
      baz=273
PNL   Peninsula        89.04  30  P        P        01 51 32.8 +0.1
      baz=273
ANN   Anapa            89.21 315 eP        P        01 51 36.8 +3.0
ANN                              e*PP      sP       01 51 51.1 -4.9
ANN                              e                  02 02 01.5
ANN                                pmax    pmax
      comp=Z,25nm,1.1s
I29M  Ogilvie Camp,    89.21  25  P        P        01 51 33.9 +0.4
      baz=274
OBN   Obninsk          89.28 325  LR       LR       02 34 15.1
      comp=Z,85nm,21.3s,baz=76,slow=37
OBN   Obninsk          89.28 325⇓eP        P        01 51 32.7 -1.2
OBN                              e                  01 55 13.6
OBN                              ePPP      PPP      01 57 00.9
OBN                                pmax    pmax
      comp=Z,21nm,1.0s
OBN                                MLR     MLR
      comp=Z,463nm,23.0s
YUK4  Talbot Arm       89.32  29  P        P        01 51 34.9 +0.6
      baz=274
M29M  Somme Creek      89.34  28  P        P        01 51 34.6 +0.3
      baz=274
O29M  Mount Kennedy    89.42  30  P        P        01 51 33.8 -0.9
      baz=274
L29M  L29M             89.44  27  P        P        01 51 35.3 +0.7
      baz=274
YUK6  Outpost Mounta   89.48  29  P        P        01 51 34.5 -0.5
      baz=274
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K29M  Barlow Dome      89.66  26  P        P        01 51 35.8 +0.1
      baz=274
EPYK  Eagle Plains     89.78  24  P        P        01 51 36.1 -0.1
      baz=275
APA   Apatity          89.87 338⇓iP        P        01 51 34.4 -2.0
APA                               pmax     pmax
      comp=Z,13nm,0.9s
HYT   Haines Junctio   89.91  29  P        P        01 51 36.4 -0.6
HYT   Haines Junctio   89.91  29  P        P        01 51 37.3 +0.4
      baz=274
G30M  tAoh Zraii Nji   89.92  23  P        P        01 51 37.2 +0.4
      baz=276
N30M  Aishikik Lake    90.06  29  P        P        01 51 38.2 +0.7
      baz=275
M30M  Minto, Yukon     90.10  27  P        P        01 51 37.6  0.0
M30M                              IAmb     IAmb     01 53 11.2
      comp=Z,52nm,1.2s
M30M  Minto, Yukon     90.10  27  P        P        01 51 38.2 +0.5
      baz=275
P30M  Million Dollar   90.24  30  P        P        01 51 38.5 +0.1
      baz=275
PLBC  Pleasant Camp    90.60  31  P        P        01 51 39.7 -0.2
      baz=276
KIBK  Kibwezi          90.64 268  P        P        01 51 40.0 -1.4
KIBK  Kibwezi          90.64 268  P        P        01 51 42.1 +0.8
KIBK                              P        PcP      01 51 42.4  0.0
      SNR=5.5
BNN   Bunyan           90.71 309  IAmb     IAmb     01 51 59.4
      comp=Z,27nm,1.1s
INK   Inuvik           90.79  22  P        P        01 51 40.6  0.0
      comp=Z,5.6nm,1.1s,baz=270,slow=5.6,SNR=9.2
INK                               LR       LR       02 33 15.4
      comp=Z,152nm,20.8s,baz=290,slow=36
      comp=Z,5.6nm,1.1s
INK   Inuvik           90.79  22  P        P        01 51 39.4 -1.3
INK                               IAmb     IAmb     01 53 32.6
      comp=Z,20nm,0.7s
INK   Inuvik           90.79  22  P        P        01 51 39.4 -1.3
INK                               pmax     pmax
      comp=Z,21nm,0.7s
INK   Inuvik           90.79  22  P        P        01 51 41.2 +0.5
      baz=278
F31M  Tsiigehtchic     90.83  22  P        P        01 51 40.0 -0.9
      baz=278
M31M  Drury Creek, Y   91.25  28  P        P        01 51 43.5 +0.5
      baz=277
KMBO  Kilima Mbogo     91.39 269  P        P        01 51 44.2 -0.8
KMBO  Kilima Mbogo     91.39 269  P        P        01 51 44.2 -0.8
KMBO                              pmax     pmax
      comp=Z,11nm,0.9s
KMBO  Kilima Mbogo     91.39 269  P        P        01 51 45.5 +0.5
MMAI  Mount Meron Ar   91.43 303  LR       LR       02 39 33.8
      comp=Z,72nm,19.6s,baz=340,slow=40
SIM   Simferopol'      91.56 315 eP        P        01 51 45.6 +0.8
SIM                              e                  01 55 25.4
SIM                              eS        S        02 02 37.9 -2.7
SIM                               pmax     pmax
      comp=Z,21nm,1.1s
SIM                               pmax     pmax
      comp=Z,45nm,18.0s
TAOE  Nuku Hiva Isla   91.59  99 eLR       LR       02 21 11.0
      comp=Z,496nm,23.2s
TAOE  Nuku Hiva Isla   91.59  99 eT        T        03 33 10.0
      comp=Z,54nm,0.2s
FARO  Faro, Yukon      91.73  28  P        P        01 51 45.2 -0.1
      baz=278
P32M  Atlin            91.92  30  P        P        01 51 45.6 -0.6
      baz=278
N32M  Quiet Lake       92.01  29  P        P        01 51 45.7 -0.9
      baz=278
EIL   Elat             92.04 300  LR       LR       02 39 02.5
      comp=Z,69nm,20.2s,baz=92,slow=39
SPA0  Spitsbergen Ar   92.22 349 eP        P        01 51 46.9 -0.4
SPA0                              IAmb     IAmb     01 51 48.3
      comp=Z,27nm,1.1s
SPITS Spitsbergen Ar   92.22 349  LR       LR       02 38 53.4
      comp=Z,357nm,20.9s,baz=28,slow=39
QSPA  South Pole Qui   92.23 180  P        P        01 51 48.2 +0.6
      comp=Z,12nm,0.9s,baz=326,slow=2.7,SNR=19
QSPA                              LR       LR       02 33 45.6
      comp=Z,314nm,19.8s,baz=291,slow=36
      comp=Z,12nm,0.9s
QSPA  South Pole Qui   92.23 180  P        P        01 51 47.1 -0.4
QSPA                              IAmb     IAmb     01 51 49.1
      comp=Z,37nm,1.2s
P33M  Teslin, Yukon    92.28  30  P        P        01 51 47.3 -0.6
P33M                              IAmb     IAmb     01 54 11.3
      comp=Z,12nm,0.8s
P33M  Teslin, Yukon    92.28  30  P        P        01 51 47.9  0.0
      baz=279
BRTR  Keskin Array B   92.35 310  P        P        01 51 48.1 -0.7
      comp=Z,1.3nm,0.8s,baz=103,slow=5.7,SNR=2.2
BRTR                              LR       LR       02 40 52.4
      comp=Z,120nm,19.9s,baz=68,slow=40
      comp=Z,1.3nm,0.8s
BRTR  Keskin Array B   92.35 310  P        P        01 51 46.6 -2.2
ARA0  ARCESS Array S   92.41 340 eP        P        01 51 47.7 -0.5
ARA0                              IAmb     IAmb     01 51 48.2
      comp=Z,28nm,1.0s
ARCES ARCESS Array B   92.41 340  P        P        01 51 47.5 -0.7
      comp=Z,15nm,0.9s,baz=85,slow=6.1,SNR=33
ARCES                             LR       LR       02 38 07.0
      comp=Z,380nm,20.8s,baz=74,slow=39
      comp=Z,15nm,0.9s
ARCES ARCESS Array B   92.41 340  IAmb     IAmb     01 52 04.3
      comp=Z,25nm,1.0s
MMPY  Sheldon Lake,    92.63  27  P        P        01 51 49.5 +0.1
      baz=280
KBS   Kingsbay         92.71 350 eP        P        01 51 50.5 +1.1
HAMF  Hammerfest       92.75 341 eP        P        01 51 48.7 -1.1
Q32M  Nakina River     92.75  31  P        P        01 51 48.2 -2.0
      baz=279
WRAK  Wrangell Islan   93.10  33  P        P        01 51 50.8 -0.8
      baz=279
KTK1  Kautokeino       93.32 340 eP        P        01 51 51.7 -0.7
V35K  Ketchikan        93.68  34  P        P        01 51 54.4 +0.1
      baz=279
C36M  Paulatuk         93.91  20  IAmb     IAmb     01 52 05.3
      comp=Z,28nm,1.1s
C36M  Paulatuk         93.91  20  P        P        01 51 56.3 +1.3
      baz=287
FINES FINESS Array B   93.95 332  P        P        01 51 54.5 -1.0
      comp=Z,3.2nm,0.8s,baz=69,slow=4.3,SNR=10
FINES                             LR       LR       02 39 22.4
      comp=Z,249nm,18.3s,baz=62,slow=39
      comp=Z,3.2nm,0.8s
DLBC  Dease Lake       93.99  31  P        P        01 51 55.4 -0.4
DLBC  Dease Lake       93.99  31  P        P        01 51 55.8  0.0
      baz=281
JETT  Jettan, Norway   94.13 340 eP        P        01 51 55.9 -0.3
JETT                              IAmb     IAmb     01 51 56.6
      comp=Z,47nm,0.9s
T35M  Bob Quinn        94.15  33  P        P        01 51 57.0 +0.5
      baz=281
AKASG Malin Array Be   94.16 321  P        P        01 51 55.1 -1.5
      comp=Z,0.6nm,0.2s,baz=66,slow=3.7,SNR=9.1
      comp=Z,0.6nm,0.2s
AKASG Malin Array Be   94.16 321ceP        P        01 51 55.0 -1.6
AKASG                             pmax     pmax
      comp=Z,1.0nm,0.6s
AKBB  Malin Array Si   94.16 321⇓eP        P        01 51 55.9 -0.7
MNK   Minsk            94.35 325 i P       P        01 51 54.2 -3.3
      comp=E,4.0nm,1.4s
MNK                              i P       PcP      01 51 56.0 -1.8
      comp=N,40nm,0.8s
MNK                              i P       PcP      01 51 56.0 -1.8
      comp=Z,11nm,0.9s,baz=80
MNK                              i pP      pP       01 52 13.0 -0.4
MNK                              i PP      PP       01 55 43.4 -1.5
MNK                              i PPP     PPP      01 57 25.1
MNK                              i S       SKSac    02 02 24.1 -3.8
MNK                              i sS      SKKSac   02 02 51.9 +2.7
MNK                              i SS      SS       02 09 31.5 +4.4
MNK                              i SSS     SSS      02 13 06.7
MNK                              i LQ      LQ       02 27 02.1
MNK                              i LR      LR       02 31 10.7
MNK                              i LRM     MLR      02 37 12.6
      comp=N,371nm,14.4s
MNK                              i LRM     MLR      02 37 33.6
      comp=E,77nm,22.7s
MNK                              i LRM     MLR      02 37 39.4
      comp=Z,512nm,25.3s
MNK   Minsk            94.35 325 i P       P        01 51 54.1 -3.3
MNK                              i *PP     pP       01 52 13.0 -0.4
MNK                              i                  01 55 43.4
MNK                              i S       SKSac    02 02 24.1 -3.8
MNK                              i SS      SS       02 09 31.5 +4.4
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MNK				*i* SSS	SSS	02 13 06.6	
MNK				pmax	pmax		
	comp=N,40nm,0.8s						
MNK				pmax	pmax		
	comp=Z,11nm,0.9s						
MNK				pmax	pmax		
	comp=E,4.0nm,1.4s						
MNK				MLR	MLR		
	comp=N,371nm,14.0s						
MNK				MLR	MLR		
	comp=E,77nm,23.0s						
MNK				MLR	MLR		
	comp=Z,512nm,25.0s						
TRO	Tromso	94.60	341	*e*P	P	01 51 57.7	-0.5
NOR	Nord	94.65	355	*i* P	P	01 51 57.9	-0.5
NOR				IAmb	IAmb	01 52 00.1	
	comp=Z,2.3nm,0.8s						
NACGM	Naroch	94.90	325	*e*P	P	01 52 08.1	+8.1
	comp=Z,9.0nm,0.8s,baz=79						
SORM	Soroca	95.12	319	⇑P	P	01 52 10.2	+9.1
SORM	Soroca	95.12	319	⇑P	P	01 52 10.2	+9.1
CFR	Carcaliu	95.74	316	⇑P	P	01 52 04.4	+0.4
CFR	Carcaliu	95.74	316	⇑P	P	01 52 04.4	+0.4
TESR	Tescani	96.54	317	⇑P	P	01 52 08.2	+0.6
KOTAN	Kotaneelee Air	96.58	29	P	P	01 52 08.4	+0.9
	baz=286						
VRI	Vrincioaia	96.60	316	⇑P	P	01 52 09.1	+1.1
VRI	Vrincioaia	96.60	316	⇑P	P	01 52 09.1	+1.1
PLOR	Plostina	96.66	316	⇑P	P	01 52 09.2	+1.0
PLOR	Plostina	96.66	316	⇑P	P	01 52 09.2	+1.0
FAUS	Fauske	96.66	339	*e*P	P	01 52 07.3	-0.4
NEHR	Nehoiu	96.98	316	⇑P	P	01 52 10.8	+1.1
MLR	Muntele Rosu	97.21	316	⇑P	Pdif	01 52 11.3	+0.3
MLR	Muntele Rosu	97.21	316	LR	LR	02 41 55.6	
	comp=Z,336nm,22.0s,baz=71,slow=39						
MLR	Muntele Rosu	97.21	316	IAmb	IAmb	01 52 25.1	
	comp=Z,12nm,0.9s						
MLR	Muntele Rosu	97.21	316	⇑P	Pdif	01 52 11.3	+0.4
BURAR	Bucovina Array	97.29	318	⇓P	Pdif	01 52 11.6	+0.4
BURAR	Bucovina Array	97.29	318	P	P	01 52 10.1	-1.0
BURAR	Bucovina Array	97.29	318	⇓P	Pdif	01 52 11.6	+0.4
MBAR	Mbarara	97.87	270	LR	LR	02 34 17.5	
	comp=Z,76nm,20.6s,baz=100,slow=34						
MBAR	Mbarara	97.87	270	P	Pdif	01 52 15.5	+0.8
ARR	Arges	98.14	316	⇑P	Pdif	01 52 15.8	+0.8
RES	Resolute Bay	98.86	11	LR	LR	02 40 00.3	
	comp=Z,177nm,19.5s,baz=3.0,slow=37						
RES	Resolute Bay	98.86	11	P	Pdif	01 52 17.6	+0.1
RES				IAmb	IAmb	01 52 27.4	
	comp=Z,10nm,0.8s						
RES	Resolute Bay	98.86	11	P	Pdif	01 52 17.6	+0.1
RES				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MARR	Marisel-Cluj	98.89	318	⇑P	Pdif	01 52 19.1	+0.7
DAG	Danmarks Havn	98.89	353	*i* P	P	01 52 15.4	-2.1
DAG				IAmb	IAmb	01 52 19.8	
	comp=Z,4.6nm,0.7s						
NSS	Namsos	99.06	337	*e*P	Pdif	01 52 17.3	-1.2
SIRR	Siria	99.97	318	⇑P	Pdif	01 52 20.2	-2.8
YKA	Yellowknife Ar	100.00	25	P	Pdif	01 52 23.2	+0.4
	comp=Z,2.8nm,1.0s,baz=292,slow=4.6,SNR=20						
YKA				PKiKP	PKiKP	01 56 51.2	+0.8
	comp=Z,1.2nm,0.9s,baz=303,slow=1.5,SNR=4.7						
YKA				PKKPbc	PKKPbc	02 08 41.3	-2.8
	comp=Z,1.1nm,0.8s,baz=118,slow=2.7,SNR=14						
NEEM	North Greenlan	100.34	360	*i* P	Pdif	01 52 24.9	+0.5
NEEM				IAmb	IAmb	01 52 27.9	
	comp=Z,4.4nm,0.7s						
NB2	NORSAR Subarra	100.87	334	P	Pdif	01 52 25.2	-1.5
	comp=Z,6.5nm,1.0s,baz=67,slow=4.4						
NB2	NORSAR Subarra	100.87	334	P	Pdif	01 52 25.2	-1.5
	baz=67,slow=4.4						
NOA	NORSAR Array B	100.87	334	P	Pdif	01 52 25.3	-1.5
	comp=Z,3.8nm,0.8s,baz=66,slow=4.5,SNR=9.3						
DBG	Daneborg	101.19	352	*i* P	Pdif	01 52 26.4	-1.5
DBG				IAmb	IAmb	01 52 34.8	
	comp=Z,3.1nm,0.8s						
KRLC	Kraliky	102.04	322	AMS	AMS	02 47 10.0	
	comp=Z,300nm,20.6s						
AKN	Aaknes	102.14	336	*e*P	Pdif	01 52 32.5	+0.1
OSTC	Ostas	102.23	323	AMS	AMS	02 42 40.0	
	comp=Z,400nm,20.2s						
DPC	Dobruska-Polom	102.23	323	AMS	AMS	02 42 30.0	
	comp=Z,300nm,16.3s						
UPC	Upice	102.37	323	AMS	AMS	02 42 10.0	
	comp=Z,400nm,16.5s						
BOSA	Boshof	102.81	241	Pdiff	Pdif	01 52 37.5	+1.2
	comp=Z,4.8nm,1.1s,baz=140,slow=7.4,SNR=3.7						
TREC	Trest	103.09	322	AMS	AMS	02 43 50.0	
	comp=Z,400nm,20.3s						
PVCC	Panska Ves	103.23	323	AMS	AMS	02 42 40.0	
	comp=Z,500nm,22.2s						
GOPC	GO Pecny, Ondr	103.31	323	AMS	AMS	02 42 40.0	
	comp=Z,300nm,21.4s						
PRU	Pruhonice	103.43	323	AMS	AMS	02 43 10.0	
	comp=Z,400nm,18.2s						
BRG	Berggiesshubel	103.48	324	*e*P	Pdif	01 52 40.1	+1.5
BRG				Amp		01 52 44.0	
	comp=Z,4.5nm,1.1s						
BRG	Berggiesshubel	103.48	324	*e*P	Pdif	01 52 40.0	+1.5
BRG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BLS5	Blasjo	103.73	334	*e*P	Pdif	01 52 40.0	+0.5
CLL	Collm	103.87	324	*e*PP	PKiKP	01 56 58.0	+0.2
CLL				*e*(sPP)		01 57 17.0	
CLL				*e*Sdif	Sdif	02 04 29.0	+3.4
CLL				*e*SS	SS	02 11 30.0	-10
CLL				AMS	AMS	02 44 00.0	
	comp=Z,300nm,20.0s						
CLL				AMS	AMS	02 53 00.0	
	comp=Z,400nm,18.5s						
KHC	Kasperske Hory	104.32	322	AMS	AMS	02 42 50.0	
	comp=Z,400nm,20.9s						
GERES	GERESS Array B	104.34	322	Pdiff	Pdif	01 52 43.5	+0.9
	comp=Z,0.1nm,0.3s,baz=84,slow=26,SNR=3.7						
GERES				PKiKP	PKiKP	01 56 59.0	+0.2
	comp=Z,0.1nm,0.3s,baz=45,slow=1.5,SNR=1.7						
NKC	Novy Kostel	104.60	323	AMS	AMS	02 45 00.0	
	comp=Z,400nm,17.1s						
NVAR	Mina Array Bea	106.45	49	Pdiff	Pdif	01 52 53.9	+1.6
	comp=Z,0.2nm,0.5s,baz=289,slow=5.4,SNR=1.6						
NVAR				PP	PP	01 57 18.2	+0.8
	comp=Z,0.4nm,0.6s,baz=278,slow=6.9,SNR=3.6						
NVAR				PKKPbc	PKKPbc	02 08 23.3	-1.2
	comp=Z,0.5nm,0.9s,baz=141,slow=4.5,SNR=2.2						
BCLA	Clavier	108.67	326	*d*PKiKP	PKiKP	01 57 06.4	-0.3
PDAR	Pinedale Array	111.17	42	PKKPbc	PKKPbc	02 08 08.1	-1.6
	comp=Z,0.5nm,0.8s,baz=126,slow=1.2,SNR=3.2						
ISCO	Idaho Springs	115.13	44	P	PKPdf	01 57 20.1	+0.4
	baz=296						
S22A	4UR Ranch, Cre	115.16	46	P	PKPdf	01 57 21.1	+1.3
	baz=295						
ANMO	Albuquerque	116.58	49	⇓*i*PKIKP	PKiKP	01 57 23.9	+1.4
ANMO				pmax	pmax		
	comp=Z,5.0nm,2.5s						
MNTX	Cornudas Mount	118.68	52	P	PKiKP	01 57 26.9	+0.5
	baz=293						
ECSD	EROS Data Cent	118.86	36	P	PKiKP	01 57 27.2	+0.7
	baz=306						
ESDC	Sonseca Array	119.74	319	PKP	PKiKP	01 57 29.3	+1.0
	comp=Z,0.4nm,0.7s,baz=53,slow=1.6,SNR=5.2						
ESDC				PP	PP	01 58 54.9	+3.5
	comp=Z,1.1nm,0.9s,baz=60,slow=7.0,SNR=4.9						
AMTX	Amarillo	120.14	47	P	PKPdf	01 57 28.3	-1.0
	baz=297						
TXAR	Lajitas Array	120.96	54	PKP	PKiKP	01 57 32.0	+1.0
	comp=Z,0.8nm,0.8s,baz=180,slow=0.5,SNR=8.3						
TXAR				PKKPbc	PKKPab	02 07 35.8	0.0
	comp=Z,0.5nm,0.7s,baz=116,slow=7.1,SNR=6.7						
KSU1	Kansas State U	121.51	40	P	PKiKP	01 57 31.8	0.0
	baz=304						
SCHQ	Schefferville	121.64	10	PKP	PKiKP	01 57 32.2	+0.7
	comp=Z,2.4nm,0.9s,baz=357,slow=3.3,SNR=5.7						
SCHQ				PKKPbc	PKKPab	02 07 30.4	-2.2
	comp=Z,3.1nm,1.0s,baz=156,slow=3.6,SNR=3.9						
WMOK	Wichita Mounta	122.31	46	P	PKPdf	01 57 32.9	-0.4
	baz=300						
JCT	Junction City	123.54	51	P	PKPdf	01 57 35.2	-0.6
	baz=296						
TORD	Torodi Ar. Bea	125.12	288	PKP	PKPdf	01 57 39.0	-0.1
	comp=Z,9.1nm,0.7s,baz=72,slow=1.7,SNR=50						
TORD				PKP2ab		02 13 50.2	
	comp=Z,1.4nm,1.3s,baz=195,slow=4.0,SNR=3.6						
CCM	Cathedral Cave	125.53	38	P	PKPdf	01 57 39.4	+0.1
	baz=308						
MIAR	Mount Ida	126.06	43	P	PKPdf	01 57 40.5	0.0
	baz=304						
LRAL	Lakeview Retre	131.36	41	P	PKPdf	01 57 50.9	+0.3
	baz=309						
DBIC	Dimbokro	132.69	281	PKP	PKiKP	01 57 54.6	-0.1
	comp=Z,8.7nm,0.9s,baz=67,slow=2.5,SNR=7.9						
DBIC				SKPbc	SKPbc	02 01 17.8	+1.4
	comp=Z,24nm,1.3s,baz=111,slow=2.9,SNR=5.0						
CMIG	Matias Romero	132.98	64	PKP	PKiKP	01 57 55.1	-0.1
	comp=Z,2.2nm,0.7s,baz=338,slow=9.0,SNR=3.6						
PLCA	Paso Flores	138.02	158	PKP	PKPdf	01 58 04.0	+1.1
	comp=Z,4.7nm,0.7s,baz=186,slow=1.7,SNR=13						
PLCA				SKPbc	SKPbc	02 01 34.8	+2.3
	comp=Z,5.1nm,0.9s,baz=200,slow=4.2,SNR=6.4						
BO02	Sierra Bellavi	142.99	153			01 58 08.1	
TRQA	Tornquist	143.13	166	PKPdf	PKPbc	01 58 08.7	-0.4
TRQA	Tornquist	143.13	166	PKIKP	PKPbc	01 58 08.7	-0.4
BO01	Tunca	143.18	152		PKPab	01 58 08.8	+0.8
MT01	Popeta	143.54	152	PKPdf	PKPbc	01 58 10.8	+0.5
MT09	Talagante	143.74	152	PKPdf	PKPab	01 58 10.5	+0.1
MT02	Curacav	144.09	151	PKPdf	PKPbc	01 58 12.6	+0.6
JTS	Las Juntas de	144.34	69	PKP	PKPdf	01 58 14.9	0.0
	comp=Z,21nm,0.9s,baz=247,slow=5.5,SNR=8.0						
ROC1	El Roble	144.38	151	PKPdf	PKPab	01 58 12.8	-0.1
PEL	Peldehue	144.40	152	PKPdf	PKPab	01 58 11.9	-0.9
PEL	Peldehue	144.40	152	PKIKP	PKPab	01 58 11.9	-0.9
CFA	Coronel Fontan	146.82	153	PKPbc	PKPbc	01 58 20.4	-0.2
	comp=Z,24nm,0.7s,baz=226,slow=3.1,SNR=25						
LCO	Las Campanas	147.71	147		PKPdf	01 58 21.5	+0.9
LCO	Las Campanas	147.71	147	PKIKP	PKPdf	01 58 21.5	+0.9
AC05	El Transito	148.08	148		PKPdf	01 58 22.4	+1.3
AC04	Llanos de Chal	148.13	146		PKPdf	01 58 21.9	+1.0
GO03	Copiap	149.07	146		PKPbc	01 58 27.2	+0.4
AC01	Pan de Azucar	149.97	144	PKPab	PKiKP	01 58 30.0	+0.1
AC02	Maricunga	150.28	147		PKPdf	01 58 26.3	+1.2
GO02	Mina Guanaco	151.31	144	PKPdf	PKPdf	01 58 24.0	-2.5
ATAH	Atahualpa	152.69	101	PKPbc	PKiKP	01 58 37.5	+1.3
	comp=Z,14nm,0.8s,baz=173,slow=3.8,SNR=5.9						
OTAV	Otavalo	152.84	85	*e*P	PKPdf	01 58 31.7	+2.5
NNA	Nana	153.02	112	PKPbc	PKiKP	01 58 38.4	+2.0
	comp=Z,6.1nm,0.4s,baz=253,slow=7.3,SNR=4.0						
SJCC	San Jacinto, C	153.40	63	*e*P	PKPdf	01 58 30.1	+0.5
LVC	Limon Verde	153.62	141	PKPbc	PKiKP	01 58 39.9	+2.0
	comp=Z,7.4nm,0.7s,baz=259,slow=2.5,SNR=8.3						
UREC	San Jos de Ur	153.94	67	*e*P	PKPdf	01 58 32.5	+2.3
CBOC	Ciudad Bolivar	154.12	72	*e*P	PKiKP	01 58 40.4	+1.4
POPC	Popayan, Colom	154.28	79	*e*P	PKPbc	01 58 37.5	-1.8
YOTC	Yotoco, Valle	154.30	76	*e*P	PKPbc	01 58 37.5	-1.7
ZARC	Zaragoza, Cauc	154.66	67	*e*P	PKPdf	01 58 35.2	+4.0
GUY2C	Guyana, Caldas	154.92	73	*e*P	PKiKP	01 58 42.2	+1.3
SJG	San Juan	155.04	35	PKPbc	PKPdf	01 58 42.2	+11
	comp=Z,12nm,0.2s,baz=307,slow=19,SNR=6.0						
ORTC	Ortega, Tolima	155.39	76	*e*P	PKPab	01 58 47.8	-10
CPUP	Villa Florida	155.45	167	PKP	PKPdf	01 58 33.1	+1.1
	comp=Z,3.6nm,0.8s,baz=192,slow=0.9,SNR=7.5						
FLOC	Florencia	155.45	81	*e*P	PKPab	01 59 00.6	+2.4
GARC	Garzon, Huila	155.51	80	*e*P	PKPdf	01 58 36.1	+3.3
PRAC	Prado	155.78	76	*e*P	PKPdf	01 58 42.8	+10
SPBC	San Pablo de B	156.02	71	*e*P	PKPdf	01 58 33.5	+0.3
ROSC	El Rosal	156.03	73	PKPab	PKPab	01 59 02.8	+1.8
	comp=Z,6.7nm,0.4s,baz=162,slow=4.7,SNR=5.4						
BARC	Barichara	156.53	68	*e*P	PKPab	01 59 04.0	+1.0
CHIC	Chingaza	156.65	73	*e*P	PKPdf	01 58 42.0	+7.5
PAMC	Pamplona, Colo	156.69	66	*e*P	PKPab	01 58 59.4	-4.6
SMRT	St. Maarten	156.73	29		PKPab	01 58 58.9	-4.3
RUSC	La Rusia	156.87	69	*e*P	PKPdf	01 58 38.2	+3.4
MACC	Macarena, Meta	157.13	79	*e*P	PKPdf	01 58 34.6	0.0
SDV	Santo Domingo	157.84	60	PKP	PKPdf	01 58 36.0	+0.4
	comp=Z,5.6nm,0.3s,baz=344,slow=4.5,SNR=5.0						
LPAZ	La Paz	158.46	131	PKP	PKPdf	01 58 37.4	+0.5
	comp=Z,3.7nm,0.9s,baz=344,slow=1.9,SNR=6.9						
SIV	San Ignacio	163.40	146	PKP	PKPdf	01 58 41.9	+0.4
	comp=Z,3.5nm,0.9s,baz=177,slow=1.8,SNR=16						
BDFB	Brasilia	166.34	194	PKP	PKPdf	01 58 44.4	+0.3
	comp=Z,3.0nm,0.8s,baz=198,slow=9.4,SNR=5.0						
BDFB				PKPab	PKPab	01 59 46.1	+0.9
	comp=Z,4.1nm,0.7s,baz=114,slow=6.3,SNR=5.3						

HVO ***08*** *01:45:14.0±0.9, 19°.35N±0°.01×155°.310W±0°.009, h3^{km}±3^{km}, ML2.5/23, ML2.0/38(NEIC), Error ellipse: s-maj=2.0km s-min=0.9km az=144.0*

NEIC 08 01:45:13.3±1.2**, 19°.332N**±0°.010×**155°.30W**±0°.01**, h15**^{km}±2^{km}**, Error ellipse: s-maj=1.7km s-min=1.3km az=126.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HLP	Hilina Pali	0.04	192	Pg	Pg	01 45 15.9	-0.1
HLP				IAML		01 45 16.7	
	comp=E,1µm,0.4s						
HLP				Sg	Sg	01 45 17.1	-0.8
SDHHI	Sand Hill	0.06	6		Pg	01 45 15.6	-0.7
SDHHI				Sg	Sg	01 45 16.2	-2.1
SDHHI				IAML		01 45 16.3	
	comp=N,2µm,0.3s						
SDHHI				IAML		01 45 16.4	
	comp=E,2µm,0.1s						
RIM	Rim	0.07	21	Pg	Pg	01 45 15.8	-0.6
RIM				Sg	Sg	01 45 17.2	-1.2
KKO	Keanakako`i	0.07	26	Pg	Pg	01 45 16.1	-0.4
KKO				Sg	Sg	01 45 17.3	-1.2
KKO				IAML		01 45 17.8	
	comp=E,2µm,0.4s						
WRMHI	West Rim	0.07	0		Pg	01 45 17.2	+0.7
NPH	North Pit	0.08	13	Pg	Pg	01 45 15.8	-0.7
NPH				IAML		01 45 17.8	
	comp=N,885nm,0.3s						
OBL	Observatory Le	0.09	10	Sg	Sg	01 45 17.9	-0.8
BYL	Byron's Ledge	0.09	25	Sg	Sg	01 45 17.3	-1.4
UWE	Uwekahuna	0.09	4	Pg	Pg	01 45 15.9	-0.7
UWE				IAML		01 45 17.9	
	comp=E,972nm,1.0s						
UWE				IAML		01 45 18.0	
	comp=N,2µm,0.7s						
PUH	Pauahi	0.09	62	Pg	Pg	01 45 16.4	-0.1
PUH				Sg	Sg	01 45 18.0	-0.7
PUH				IAML		01 45 18.7	
	comp=N,693nm,1.2s						
UWB	Uwekahuna B	0.10	13	Pg	Pg	01 45 16.3	-0.4
UWB				Sg	Sg	01 45 17.8	-1.0
HATHI	Halema‘uma‘u T	0.10	22	Pg	Pg	01 45 16.4	-0.3
HATHI				Sg	Sg	01 45 17.5	-1.4
HATHI				IAML		01 45 18.6	
	comp=N,1µm,0.5s						
SBLHI	Steaming Bluff	0.10	18	Pg	Pg	01 45 16.4	-0.3
SBLHI				Sg	Sg	01 45 17.3	-1.6
SBLHI				IAML		01 45 18.4	
	comp=E,1µm,0.6s						
HTC	Hot Caves	0.13	224		Pb	01 45 17.6	+0.1
KNHH	Kane Nui o Ham	0.13	69		Pg	01 45 17.2	+0.2
RSD	Rainshed	0.13	9	Pg	Pg	01 45 16.7	-0.4
RSD				IAML		01 45 19.2	
	comp=E,968nm,2.5s						
RSD				IAML		01 45 19.3	
	comp=N,630nm,0.3s						
AIN	Ainahou	0.15	285	Pg	Pg	01 45 17.6	+0.2
AIN				Sg	Sg	01 45 20.1	0.0
STCH	Steam Cracks	0.17	72	Pg	Pg	01 45 17.2	-0.4
STCH				IAML		01 45 21.5	
	comp=N,370nm,0.9s						
MLH	Mauna Loa	0.18	333	Pg	Pg	01 45 18.1	+0.2
MLH				Sg	Sg	01 45 21.1	+0.2
MLH				IAML		01 45 21.6	
	comp=E,608nm,0.6s						
NPOC	North of Pu‘u	0.19	71	Pg	Pg	01 45 17.8	-0.1
NPOC				IAML		01 45 21.0	
	comp=E,416nm,0.9s						
NPOC				IAML		01 45 22.2	
	comp=N,316nm,0.8s						
KHU	Kahuku	0.31	254	Pg	Pg	01 45 20.0	+0.2
KHU				IAML		01 45 23.3	
	comp=E,307nm,4.1s						
MWH	Moku‘aweowe	0.32	299	Pg	Pg	01 45 20.2	+0.1
MWH				IAML		01 45 29.6	
	comp=N,239nm,0.4s						
HMH	Humu‘ula Sheep	0.32	327	Pg	Pg	01 45 20.3	+0.2
HMH				IAML		01 45 25.8	
	comp=E,211nm,1.7s						
HMH				IAML		01 45 29.0	
	comp=N,183nm,1.9s						
ALEP	Alea Permanent	0.39	303		Pg	01 45 21.2	-0.1
POHA	Pohakuloa	0.48	333	Pg	Pg	01 45 22.6	-0.3
POHA				Sg	Sg	01 45 29.4	0.0
HUH	Hualalai	0.61	305	Pg	Pb	01 45 25.7	-0.2
KHLU	Kahalu`u	0.62	295	Pg	Pg	01 45 25.3	-0.1

MOS ***08*** *01:55:14.9±1.3, 41°.98N×142°.44E, h83^{km}, mb4.1/19, Error ellipse: s-maj=8.5km s-min=6.9km az=101.2*

JMA ***08*** *01:55:14.5±0.2, 41°.9N±0°.9×142°.3E±0°.9, h71^{km}±3^{km}, MV3.8/39, S OFF URAKAWA*

JMA Felt I J1 at S OFF URAKAWA .

NEIC ***08*** *01:55:14.7±1.1, 41°.89N±0°.06×142°.34E±0°.07, h67^{km}±7^{km}, mb4.3/28, Error ellipse: s-maj=10.0km s-min=5.7km az=134.0*

IDC ***08*** *01:55:16.7±1.7, 42°.05N×142°.29E, h79^{km}±13^{km}, mb3.5/15, mbtmp3.9/20, MS4.3/10, Error ellipse: s-maj=17.3km s-min=11.5km az=126.0*

ISC 08 01:55:15.3±0.7**, 41°.91N**±0°.04×**142°.35E**±0°.03**, h71**^{km}±5^{km}**, n135, σ1^{s}17**/148**, mb4.2**/39**, 2C-18D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.48	38	*e*P	Pn	01 55 26.5	-1.5
JSHD	Hidakashinhida	0.51	9	P	Pn	01 55 27.3	-1.0
JSHD				*e*S	Sn	01 55 37.0	-0.8
ERM	Erimo	0.61	79		Pn	01 55 28.9	-0.4
ERM				Sn	Sn	01 55 38.4	-1.2
ERM	Erimo	0.61	79	P	Pn	01 55 28.9	-0.4
ERM						01 55 38.4	
JEM	Erimo	0.61	79	*e*P	Pn	01 55 28.9	-0.3
JEM				*e*S	Sn	01 55 39.3	-0.3
JIAM	Iburiatsuma	0.79	336	*i* P	Pn	01 55 30.9	-0.3
JIAM				*e*S	Sn	01 55 42.9	-0.1
JBT2	Biratori 2	0.87	0	⇓*e*P	Pn	01 55 31.0	-1.3
JBT2				⇓*e*S	Sn	01 55 43.6	-1.3
JKB	Kayabe	0.99	269	⇓P	Pn	01 55 32.5	-1.1
JKB				⇓*e*S	Sn	01 55 45.7	-1.6
JCH	Churui	1.03	46	*e*P	Pn	01 55 33.7	-0.5
JCH				*e*S	Sn	01 55 47.9	-0.4
JOT	Ohata	1.11	242	⇓*e*P	Pn	01 55 34.5	-0.7
JOT				⇓*e*S	Sn	01 55 49.0	-1.0
JNB	Noboribetsu	1.13	300	⇓*e*P	Pn	01 55 33.7	-1.7
JFR	Furan	1.27	8	*e*P	Pn	01 55 36.3	-1.0
JFR				*e*S	Sn	01 55 52.3	-1.5
JTM	Tenmabayashi	1.48	221	Pn	Pn	01 55 39.2	-0.8
JTM				Sn	Sn	01 55 57.5	-1.1
JTM	Tenmabayashi	1.48	221	*e*P	Pn	01 55 40.0	0.0
JOB	Onbets	1.48	47	*e*P	Pn	01 55 40.5	+0.4
JYM2	Yakumo 2	1.49	279	*e*P	Pn	01 55 39.0	-1.2
JSR	Shiriuchi	1.50	256	*e*P	Pn	01 55 39.6	-0.6
JSR				*e*S	Sn	01 55 58.6	-0.4
JANG	Nango	1.66	203	*e*P	Pn	01 55 42.6	+0.2
JAR	Ashorobuto	1.74	36	*e*P	Pn	01 55 43.1	-0.3
JOMM	Oshimamatsumae	1.80	259	*e*P	Pn	01 55 43.7	-0.5
JOMM				*e*S	Sn	01 56 05.0	-1.2
JHR	Hokuryu	1.89	346	⇓*e*P	Pn	01 55 45.4	-0.1
ASAJ	Asahikawa	2.22	5	P	Pn	01 55 50.1	+0.3
	36nm,0.3s,baz=208,slow=13,SNR=29						
ASAJ				S	Sn	01 56 14.1	-2.3
	222nm,0.7s,baz=338,slow=30,SNR=5.4						
JKA	Kamikawa-asahi	2.22	5	Pn	Pn	01 55 49.2	-0.7
JKA				Sn	Sn	01 56 15.4	-0.9
NMR	Nemuro--Hokkai	2.89	58	*e*P	Pn	01 55 57.4	-1.6
NMR				*e*S	Sn	01 56 29.8	-2.7
RUSJ	Misakicho	3.06	43	*e*P	Pn	01 56 02.9	+1.7
RUSJ				*e*S	Sn	01 56 35.7	-0.9
YUK	Yuzh-Kuril'sk	3.34	49	*e*P	Pn	01 56 05.5	+0.4
YUK				*e*S	Sn	01 56 42.3	-1.3
YUK				pmax	pmax		
	comp=Z,206nm,0.2s						
YUK				pmax	pmax		
	comp=N,28nm,0.1s						
YUK				pmax	pmax		
	comp=E,31nm,0.1s						
YUK				smax	smax		
	comp=E,209nm,0.3s						
YUK				smax	smax		
	comp=N,927nm,0.5s						
SHO	Shikotan	3.83	58	*e*P	Pn	01 56 10.2	-1.6
SHO				*e*S	Sn	01 56 51.4	-4.2
SHO				pmax	pmax		
	comp=E,36nm,0.2s						
SHO				pmax	pmax		
	comp=Z,50nm,0.2s						
SHO				smax	smax		
	comp=N,301nm,0.5s						
SHO				smax	smax		
	comp=E,138nm,0.4s						
JMM	Marumori	4.21	197	Pn	Pn	01 56 16.3	-0.7
JMM				Sn	Sn	01 57 02.9	-2.0
JSD	Sado	4.98	220	Pn	Pn	01 56 26.4	-1.1
YSS	Yuzh-Sakhalins	5.06	3	*e*P	Pn	01 56 29.8	+1.3
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
KUR	Kuril'sk	5.21	48	*e*P	Pn	01 56 31.8	+1.2
KUR				*e*S	Sn	01 57 32.4	+3.2
MJAR	Matsushiro Arr	6.25	212	P	Pn	01 56 49.4	+4.5
	comp=Z,1.9nm,0.4s,baz=22,slow=14,SNR=6.2						
USA0B	Ussuriysk Arra	7.93	290	Pn	Pn	01 57 08.1	+0.3
USA0B	Ussuriysk Arra	7.93	290	*ce*P	Pn	01 57 09.5	+1.7
USRK	Ussuriysk Ar.	7.93	290	P	Pn	01 57 09.3	+1.5
	comp=Z,6.1nm,0.7s,baz=97,slow=14,SNR=8.2						
USRK	Ussuriysk Ar.	7.93	290	Pn	Pn	01 57 08.6	+0.8
KLR	Kul'dur	10.43	318	P	Pn	01 57 42.8	+0.9
	comp=Z,5.0nm,0.9s,baz=122,slow=14,SNR=18						
KLR	Kul'dur	10.43	318	*de*P	Pn	01 57 44.3	+2.4
KLR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KSRS	Korea Array	11.97	253	P	Pn	01 58 06.3	+3.4
	comp=Z,2.8nm,0.8s,baz=66,slow=13,SNR=4.9						
HHC	Hu-ho-hao-te	23.07	278	*e*P	P	02 00 14.4	-0.5
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,260nm,7.3s						
ULN	Ulaanbaatar	25.55	296	⇓*e*P	P	02 00 37.7	+0.2
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM	Songino Array	26.00	296	P	P	02 00 41.5	0.0
	comp=Z,1.0nm,0.5s,baz=81,slow=8.2,SNR=13						
SONM				PcP	PcP	02 04 07.2	-0.8
	comp=Z,0.3nm,0.7s,baz=114,slow=0.3,SNR=2.1						
	comp=Z,1.0nm,0.5s						
SONM	Songino Array	26.00	296	P	P	02 00 40.4	-1.1
SONM	Songino Array	26.00	296	P	P	02 00 40.4	-1.1
SONM				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BILL	Bilibino	29.16	18	⇓*e*P	P	02 01 08.2	-1.2
BILL				*e*		02 02 07.5	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,448nm,25.0s						
H11N2	WAKE ISLAND Hy	30.35	129	T	T	02 33 58.9	
	baz=324						
H11N1	WAKE ISLAND Hy	30.36	129	T	T	02 33 59.7	
	baz=324,slow=74						
H11N3	WAKE ISLAND Hy	30.37	129	T	T	02 33 58.4	
	baz=324,slow=74						
H11S1	WAKE ISLAND Hy	31.21	131	T	T	02 34 59.1	
	baz=323,slow=76,SNR=7.1						
H11S3	WAKE ISLAND Hy	31.21	131	T	T	02 34 57.1	
	baz=323,slow=76,SNR=6.2						
H11S2	WAKE ISLAND Hy	31.22	131	T	T	02 35 02.9	
	baz=323,slow=76,SNR=7.2						
PZH	PanZhiHua	36.57	258	P	P	02 02 14.7	+0.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
DGZ	Jazzator, Alta	38.31	301	⇓*e*P	P	02 02 30.1	+1.0
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ZAA0	Zalesovo Array	39.32	308	P	P	02 02 36.0	-1.2
ZAA0				IAmb	IAmb	02 02 38.4	
	comp=Z,7.9nm,1.5s						
ZALV	Zalesovo Beam	39.32	308	P	P	02 02 37.1	-0.2
	comp=Z,1.5nm,0.5s,baz=79,slow=7.7,SNR=8.9						
	comp=Z,1.5nm,0.5s						
ZALV	Zalesovo Beam	39.32	308	P	P	02 02 36.5	-0.7
ZALV	Zalesovo Beam	39.32	308	*i* P	P	02 02 37.4	+0.2
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WMQ	Urumqi	39.50	292	*e*P	P	02 02 42.3	+3.4
WMQ				ScP	ScP	02 08 25.3	-2.3
WMQ				pmax	pmax		

	comp=Z,17nm,0.7s						
WMQ				LR	LR		
	comp=N,340nm,19.5s						
WMQ				LR	LR		
	comp=E,290nm,16.5s						
WMQ				LR	LR		
	comp=Z,250nm,20.1s						
IMAR	Indian Mountai	42.14	33	P	P	02 02 60.0	-0.3
MK31	Makanchi Array	42.32	298	P	P	02 03 00.8	-1.2
MK31	Makanchi Array	42.32	298	P	P	02 03 00.8	-1.2
MK31				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MKAR	Makanchi Array	42.32	298	P	P	02 03 02.0	0.0
	comp=Z,2.1nm,0.8s,baz=82,slow=9.4,SNR=18						
MKAR				PcP	PcP	02 04 54.1	-0.3
	comp=Z,0.1nm,0.3s,baz=65,slow=4.4,SNR=1.7						
	comp=Z,2.1nm,0.8s						
MKAR	Makanchi Array	42.32	298	P	P	02 03 00.9	-1.1
MAKZ	Makanchi	42.52	298	P	P	02 03 02.4	-1.2
MAKZ				IAmb	IAmb	02 03 05.0	
	comp=Z,4.4nm,1.1s						
MAKZ	Makanchi	42.52	298	P	P	02 03 02.4	-1.2
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KURK	Kurchatov	43.64	304	P	P	02 03 12.2	-0.3
KURK				IAmb	IAmb	02 03 13.3	
	comp=Z,5.1nm,0.8s						
KURK	Kurchatov	43.64	304	deP	P	02 03 12.7	+0.1
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
TOLK	Toolik Lake Re	43.84	29	P	P	02 03 13.5	-0.5
H24K	Noodor Dome	44.55	33	P	P	02 03 19.9	+0.2
H24K				IAmb	IAmb	02 03 45.1	
	comp=Z,5.5nm,1.4s						
SML	Sawmill	44.70	39	P	P	02 03 20.5	-0.5
ILAR	Eielson Array	45.04	35	P	P	02 03 23.8	+0.3
	comp=Z,0.9nm,0.9s,baz=275,slow=6.3,SNR=9.6						
	comp=Z,0.9nm,0.9s						
ILAR	Eielson Array	45.04	35	P	P	02 03 23.5	-0.1
SCRK	Sand Creek	46.38	36	P	P	02 03 34.4	+0.1
TAPN	Taplejung	46.50	270	eP	P	02 03 36.8	+0.9
L27K	Beaver Creek,	47.49	37	P	P	02 03 44.3	+1.5
L27K				IAmb	IAmb	02 04 24.2	
	comp=Z,6.8nm,1.5s						
BCAR	Beaver Creek A	47.51	37	P	P	02 03 42.8	-0.2
RAMN	Ramite	47.55	270	eP	P	02 03 44.1	+0.1
	comp=Z,4.8nm,0.4s						
GUN	Gumba	47.57	272	eP	P	02 03 44.8	+0.5
	comp=Z,11nm,0.4s						
M27K	Edge Creek, AK	47.61	38	P	P	02 03 43.4	-0.5
M27K				IAmb	IAmb	02 04 11.7	
	comp=Z,7.1nm,1.4s						
BRVK	Borovoye	47.99	309	P	P	02 03 47.1	+0.3
BRVK				IAmb	IAmb	02 03 55.6	
	comp=Z,4.2nm,1.2s						
BRVK	Borovoye	47.99	309	P	P	02 03 47.1	+0.3
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
DANN	Dangsing	48.91	274	eP	P	02 03 55.3	+0.7
	comp=Z,13nm,0.5s						
AAK	Ala-Archa	48.95	295	P	P	02 03 54.6	+0.1
AAK				IAmb	IAmb	02 04 00.5	
	comp=Z,2.3nm,1.1s						
AAK	Ala-Archa	48.95	295	P	P	02 03 54.6	+0.1
AAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
PYUN	Piuthan	49.62	274	eP	P	02 04 00.2	+0.3
INK	Inuvik	49.75	29	P	P	02 04 00.2	+0.2
	comp=Z,0.8nm,0.5s,baz=254,slow=2.5,SNR=4.0						
	comp=Z,0.8nm,0.5s						
INK	Inuvik	49.75	29	P	P	02 03 59.2	-0.8
INK				IAmb	IAmb	02 04 20.5	
	comp=Z,3.6nm,1.4s						
INK	Inuvik	49.75	29	P	P	02 03 59.2	-0.8
INK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
KK31	Karatay Array	51.43	297	P	P	02 04 12.8	-0.3
KK31				IAmb	IAmb	02 04 13.2	
	comp=Z,2.0nm,0.6s						
KK31	Karatay Array	51.43	297	P	P	02 04 12.8	-0.3
KK31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KKAR	Karatay Array	51.43	297	P	P	02 04 12.8	-0.3
KKAR	Karatay Array	51.43	297	P	P	02 04 12.8	-0.3
A36M	Sachs Harbour	51.49	23	P	P	02 04 13.3	+0.3
A36M				IAmb	IAmb	02 04 17.8	
	comp=Z,5.2nm,1.1s						
ARU	Arti	53.26	316	P	P	02 04 25.7	-0.7
ARU				IAmb	IAmb	02 04 27.3	
	comp=Z,3.7nm,0.9s						
ARU	Arti	53.26	316	d iP	P	02 04 25.4	-1.0
ARU						02 05 30.4	
ARU				S	S	02 11 53.1	+1.0
ARU				SS	SS	02 15 29.3	-2.7
ARU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GAR	Garm	53.38	293	P	P	02 04 26.9	-0.8
GAR				IAmb	IAmb	02 04 30.7	
	comp=Z,4.1nm,1.0s						
CHGR	Chuyangaron	54.34	293	P	P	02 04 33.4	-1.3
CHGR	Chuyangaron	54.34	293	P	P	02 04 33.4	-1.3
CHGR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ABKAR	Akbulak array	55.44	308	P	P	02 04 41.8	-0.5
KIRV	Kirov	56.85	321	deP	P	02 04 52.4	+0.2
YKA	Yellowknife Ar	59.26	32	P	P	02 05 09.1	+0.1
	comp=Z,0.6nm,0.8s,baz=306,slow=6.7,SNR=9.0						
YKA				LR	LR	02 35 30.3	
	comp=Z,174nm,19.8s,baz=296,slow=41						
	comp=Z,0.6nm,0.8s						
YKA	Yellowknife Ar	59.26	32	ceP	P	02 05 09.5	+0.5
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BELG	Belogornoye	60.78	316	deP	P	02 05 20.8	+1.3
BELG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WB0	Warramunga Arr	61.80	189	P	P	02 05 25.6	-1.1
WB0				IAmb	IAmb	02 05 59.4	
	comp=Z,5.6nm,1.3s						
WRA	Warramunga Arr	61.98	189	P	P	02 05 27.8	-0.1
	comp=Z,0.5nm,0.7s,baz=5.8,slow=7.0,SNR=5.6						
	comp=Z,0.5nm,0.7s						
WRA	Warramunga Arr	61.98	189	P	P	02 05 27.2	-0.7
WRA	Warramunga Arr	61.98	189	i P	P	02 05 31.7	+3.8
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GEYT	Alibeck	62.19	297	P	P	02 05 28.3	-1.0
	comp=Z,1.1nm,0.5s,baz=52,slow=9.3,SNR=2.1						
	comp=Z,1.1nm,0.5s						
FIA1	FINESS Array S	64.86	332	P	P	02 05 45.7	-0.8
FINES	FINESS Array B	64.86	332	P	P	02 05 46.2	-0.2
	comp=Z,1.3nm,0.4s,baz=51,slow=7.3,SNR=47						
	comp=Z,1.3nm,0.4s						
FINES	FINESS Array B	64.86	332	P	P	02 05 46.1	-0.3
ASAR	Alice Springs	65.71	188	P	P	02 05 51.9	-0.4
	comp=Z,0.2nm,0.7s,baz=0.0,slow=8.0,SNR=1.9						
	comp=Z,0.2nm,0.7s						
YBH	Yreka Blue Hor	66.85	54	LR	LR	02 31 47.4	
	comp=Z,244nm,20.6s,baz=284,slow=33						
KIV	Kislovodsk	68.30	310	eP	P	02 06 10.8	+2.0
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KBZ	Khabaz	68.32	310	P	P	02 06 07.2	-1.5
	comp=Z,1.8nm,0.8s,baz=11,slow=5.2,SNR=4.3						
	comp=Z,1.8nm,0.8s						
KBZ	Khabaz	68.32	310	⇓eP	P	02 06 08.9	+0.1
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NC405	NORSAR Array S	69.78	337	P	P	02 06 17.4	-0.2
NC204	NORSAR Array S	69.92	337	P	P	02 06 18.2	-0.3
NB2	NORSAR Subarra	69.98	337	P	P	02 06 18.6	-0.3
	comp=Z,1.2nm,0.5s,baz=30,slow=6.2						
NOA	NORSAR Array B	69.98	337	P	P	02 06 17.9	-1.0
	comp=Z,0.9nm,0.7s,baz=31,slow=5.1,SNR=12						
NOA				LR	LR	02 42 11.0	
	comp=Z,148nm,21.8s,baz=70,slow=40						
	comp=Z,0.9nm,0.7s						
AKASG	Malin Array Be	70.91	322	P	P	02 06 24.1	-0.5
	comp=Z,1.1nm,0.5s,baz=42,slow=7.5,SNR=7.0						
AKASG				LR	LR	02 38 59.9	
	comp=Z,223nm,21.1s,baz=70,slow=37						
	comp=Z,1.1nm,0.5s						
AKBB	Malin Array Si	70.91	322	⇓eP	P	02 06 24.5	-0.1
NVAR	Mina Array Bea	71.54	55	P	P	02 06 30.6	+1.7
	comp=Z,0.4nm,0.7s,baz=307,slow=6.9,SNR=4.1						
NVAR				LR	LR	02 36 11.6	
	comp=Z,179nm,20.3s,baz=294,slow=34						
	comp=Z,0.4nm,0.7s						
GCMT	Greycliff	71.69	45	P	P	02 06 30.4	+0.8
ELK	Elko	71.89	51	LR	LR	02 35 22.0	
	comp=Z,296nm,21.0s,baz=280,slow=34						
PDAR	Pinedale Array	73.77	47	P	P	02 06 42.9	+0.8
	comp=Z,0.5nm,0.7s,baz=265,slow=4.0,SNR=6.1						
PDAR				LR	LR	02 36 56.8	
	comp=Z,263nm,21.8s,baz=321,slow=34						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	73.77	47	P	P	02 06 42.1	0.0
BUR08	Bucovina Ar. S	74.94	321	P	P	02 06 49.1	+0.4
BURAR	Bucovina Array	74.95	321	P	P	02 06 48.5	-0.2
BURAR	Bucovina Array	74.95	321	P	P	02 06 48.5	-0.2
BURAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ULM	Lac du Bonnet	75.06	34	LR	LR	02 43 00.0	
	comp=Z,162nm,19.8s,baz=322,slow=38						
CLL	Collm	77.24	330	eP	P	02 07 01.0	-0.5
CLL	Collm	77.24	330	eP	P	02 07 01.0	-0.5
ANMO	Albuquerque	80.92	51	LR	LR	02 42 59.4	
	comp=Z,189nm,19.9s,baz=44,slow=35						
DAVOX	Davos/Dischmat	82.13	329	LR	LR	02 46 36.1	
	comp=Z,261nm,20.3s,baz=52,slow=38						

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*IDC **08** 01:59:48.6±7.6, 19°.67S×177°.38W, h411km±87km, mb3.4/4, mbtmp4.3/6, Error ellipse: s-maj=45.9km s-min=28.6km az=2.0*

*NEIC **08** 01:59:53.8±0.8, 19°.72S±0°.07×177°.7W±0°.2, h440km±15km, mb4.3/18, Error ellipse: s-maj=27.0km s-min=8.1km az=102.0*

ISC 08 01:59:53.1±1.0**, 19°.6S**±0°.1×**177°.7W**±0°.1**, h450**km**, n28,** σ**1ˢ01**/28**, mb4.2**/13**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUNA	Funafuti	11.44	344	P	P	02 02 27.2	+1.2
PINNC	Pines Island,	14.20	255	P	P	02 02 55.5	-0.3
LIFNC	LIFOU	14.21	263	P	P	02 02 53.0	-2.8
DZM	Mont Dzumac	15.04	258	P	P	02 03 04.7	-0.2
	6.7nm,0.7s,baz=83,slow=18,SNR=2.4						
URZ	Urewera	19.12	193	P	P	02 03 43.9	-2.3
	6.6nm,0.7s,baz=45,slow=7.1,SNR=1.6						
RTZ	Ruatahuna	19.49	193	P	P	02 03 48.7	-1.1
QRZ	Quartz Range	22.73	200	P	P	02 04 19.0	-0.2
NNZ	Nelson	22.84	198	P	P	02 04 20.1	0.0
LTZ	Lake Taylor	24.60	198	P	P	02 04 36.2	+0.3
WHZ	Wether Hill Ro	28.76	201	P	P	02 05 12.4	-0.1
WHZ				IAmb	IAmb	02 05 23.9	
	comp=Z,22nm,1.4s						
EIDS	Eidsvold	29.38	253	P	P	02 05 18.9	+0.6
EIDS				IAmb	IAmb	02 06 07.5	
	comp=Z,20nm,1.4s						
ARMA	Armidale	29.73	243	P	P	02 05 21.6	+0.2
ARMA				IAmb	IAmb	02 05 37.1	
	comp=Z,45nm,1.5s						
CTA	Charters Tower	33.89	263	P	P	02 05 57.0	-0.1
	comp=Z,1.3nm,0.3s,baz=104,slow=8.3,SNR=1.8						
	comp=Z,1.3nm,0.3s						
CTAO	Charters Tower	33.89	263	P	P	02 05 57.2	+0.1
CTAO				IAmb	IAmb	02 06 04.2	
	comp=Z,10nm,1.4s						
TOO	Toolangi	36.66	233	P	P	02 06 20.7	+0.5
TOO				IAmb	IAmb	02 06 52.8	
	comp=Z,7.7nm,0.9s						
WB0	Warramunga Arr	45.00	261	P	P	02 07 26.9	-0.4
WB2	Warramunga Arr	45.02	261	P	P	02 07 27.0	-0.4
AS31	Alice Springs	45.02	256	P	P	02 07 28.0	+0.6
ASAR	Alice Springs	45.02	256	P	P	02 07 27.9	+0.5
	comp=Z,5.1nm,0.6s,baz=92,slow=8.2,SNR=62						
	comp=Z,5.1nm,0.6s						
ASAR	Alice Springs	45.02	256	P	P	02 07 26.6	-0.8
WRA	Warramunga Arr	45.03	261	P	P	02 07 27.7	+0.2
	comp=Z,1.2nm,0.3s,baz=97,slow=7.6,SNR=30						
	comp=Z,1.2nm,0.3s						
WRA	Warramunga Arr	45.03	261	P	P	02 07 26.9	-0.5
FORT	Forrest	49.92	246	P	P	02 08 04.8	+0.5
FORT				IAmb	IAmb	02 08 10.0	
	comp=Z,10.0nm,0.9s						
PSA00	Pilbara Seismi	58.16	256	P	P	02 09 03.6	+0.6
PSA00				IAmb	IAmb	02 09 15.3	
	comp=Z,31nm,1.4s						
MBWA	Marble Bar	58.34	257	P	P	02 09 04.7	+0.5
MBWA				IAmb	IAmb	02 09 48.4	
	comp=Z,23nm,1.4s						
SBA	Scott Base	58.76	184	P	P	02 09 07.9	+1.8
SBA				IAmb	IAmb	02 09 32.1	
	comp=Z,24nm,1.3s						
QSPA	South Pole Qui	70.44	180	P	P	02 10 21.3	+0.5
QSPA				IAmb	IAmb	02 10 25.9	
	comp=Z,4.8nm,1.2s						
NVAR	Mina Array Bea	80.18	43	P	P	02 11 14.2	-1.7
	comp=Z,0.7nm,0.8s,baz=228,slow=8.1,SNR=4.4						
	comp=Z,0.7nm,0.8s						

DJA 08 02:15:06.8±1.7**, 9°S**±4°×**11°0E**±°**, h14**km±13km**, M4.2**/18**, mb4.4**/5**, mB5.4**/1**, MLv4.1**/18**, Mw(mB)4.9**/1**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UGM	Wanagama	1.21	16	P	Pn	02 15 29.1	-0.2
YOGI	Yogyakarta	1.26	5	P	Pn	02 15 29.3	-0.7
PWJI	Pagerwojo	1.92	57	P	Pn	02 15 38.6	-0.5
SMRI	Semarang	2.03	7	P	Pn	02 15 40.7	0.0
NGJI	Ngawi	2.12	37	P	Pn	02 15 42.8	+0.9
KPJI	Karang Pucung	2.13	324	P	Pn	02 15 42.8	+0.8
CMJI	Cimerak	2.14	307	P	Pn	02 15 42.0	-0.2
UWJI	Ujung Watu	2.75	16	P	Pn	02 15 49.4	-1.1
GRJI	Gresik	3.13	47	P	Pn	02 15 55.4	-0.4
CNJI	Cibinong	3.50	300	P	Pn	02 16 00.5	-0.3
BLJI	Banyuglugur	3.63	69	P	Pn	02 16 02.7	+0.1
JAGI	Jajag, Banyuwa	3.97	82	P	Pn	02 16 07.2	-0.2
ABJI	Asem Bagus	4.21	73	P	Pn	02 16 10.9	+0.3
IGBI	Denpasar	4.91	87	P	Pn	02 16 20.2	-0.1
SRBI	Singaraja	5.07	79	P	Pn	02 16 22.7	+0.2
	40nm,0.8s,0.2nm						
TWSI	Taliwang, Sumb	6.63	88	P	Pn	02 16 44.0	+0.1
	20nm,1.5s,0.1nm						
PLAI	Plampang	7.51	89	P	Pn	02 16 55.9	-0.1
	22nm,1.2s,0.1nm						

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*HVO **08** 02:39:24.1±0.8, 19°.20N±0°.02×155°.47W±0°.02, h36km±3km, ML2.0/8, ML2.5/44(NEIC), Error ellipse: s-maj=3.4km s-min=2.5km az=161.0*

NEIC 08 02:39:22.2±1.2**, 19°.21N**±0°.02×**155°.48W**±0°.02**, h43**km±1km**, Error ellipse: s-maj=3.4km s-min=2.3km az=163.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTC	Hot Caves	0.08	68		Pn	02 39 29.7	+0.6
KHU	Kahuku	0.14	287	Pn	Pn	02 39 29.7	+0.1
KHU				Sn	Sn	02 39 34.0	-0.8
KHU				IAML		02 39 34.6	
	comp=N,707nm,0.1s						
HPO	Honuapo	0.14	212		Pn	02 39 29.9	+0.5
HPO					Sn	02 39 34.1	-0.2
AIN	Ainahou	0.17	6	Pn	Pn	02 39 30.2	+0.4
AIN				Sn	Sn	02 39 34.7	-0.4
HLP	Hilina Pali	0.18	61	Pn	Pn	02 39 30.1	+0.4
HLP				Sn	Sn	02 39 34.5	-0.5
HLP				IAML		02 39 35.6	
	comp=E,465nm,1.2s						
HLP				IAML		02 39 39.1	
	comp=N,529nm,3.0s						
SDHHI	Sand Hill	0.25	43	Pn	Pn	02 39 30.5	+0.2
SDHHI				Sn	Sn	02 39 35.4	-0.7
WRMHI	West Rim	0.26	40		Pn	02 39 30.7	+0.2
WRMHI					Sn	02 39 35.6	-0.6
UWE	Uwekahuna	0.27	39	Pn	Pn	02 39 30.8	+0.2
UWE				Sn	Sn	02 39 35.4	-1.1
KKO	Keanakako`i	0.28	46	Pn	Pn	02 39 30.6	0.0
KKO				IAML		02 39 35.6	
	comp=E,546nm,1.6s						
KKO				Sn	Sn	02 39 35.7	-0.7
OBL	Observatory Le	0.28	41	Pn	Pn	02 39 30.7	+0.1
OBL				Sn	Sn	02 39 35.8	-0.7
UWB	Uwekahuna B	0.29	41	Pn	Pn	02 39 30.2	-0.5
UWB				Sn	Sn	02 39 35.0	-1.7
UWB				IAML		02 39 39.6	
	comp=N,292nm,2.1s						
BYL	Byron's Ledge	0.29	45	Pn	Pn	02 39 30.7	0.0
BYL				IAML		02 39 35.7	
	comp=E,381nm,1.6s						
BYL				IAML		02 39 43.0	
	comp=N,488nm,1.1s						
SBLHI	Steaming Bluff	0.29	42	Pn	Pn	02 39 30.7	-0.1
SBLHI				Sn	Sn	02 39 35.5	-1.3
SBLHI				IAML		02 39 36.2	
	comp=N,475nm,0.7s						
SBLHI				IAML		02 39 37.5	
	comp=E,295nm,1.5s						
HATHI	Halema‘uma‘u T	0.30	43	Pn	Pn	02 39 30.6	-0.2
HATHI					Sn	02 39 36.0	-0.9
HATHI				IAML		02 39 37.2	
	comp=N,368nm,1.2s						
HATHI				IAML		02 39 41.4	
	comp=E,429nm,0.9s						
PUH	Pauahi	0.30	56	Pn	Pn	02 39 30.9	+0.1
PUH				Sn	Sn	02 39 35.9	-0.9
PUH				IAML		02 39 37.4	
	comp=E,318nm,1.5s						
MLH	Mauna Loa	0.30	17	Pn	Pn	02 39 31.3	+0.3
MLH				Sn	Sn	02 39 36.7	-0.4
MLH				IAML		02 39 38.3	
	comp=N,316nm,1.3s						
MWH	Moku‘aweowe	0.30	338		Pn	02 39 31.3	+0.1
RSD	Rainshed	0.32	36	Pn	Pn	02 39 30.9	-0.1
RSD				IAML		02 39 39.4	
	comp=E,330nm,3.4s						
RSD				IAML		02 39 47.0	
	comp=N,331nm,3.7s						
KNHH	Kane Nui o Ham	0.34	59		Pn	02 39 31.4	+0.2
KNHH					Sn	02 39 36.7	-0.8
MLOA	Mauna Loa Obse	0.34	344	Pn	Pn	02 39 31.6	0.0
MLOA				Sn	Sn	02 39 37.0	-1.1
ALEP	Alea Permanent	0.37	335		Pn	02 39 31.9	0.0
ALEP					Sn	02 39 37.7	-0.9
STCH	Steam Cracks	0.38	62	Pn	Pn	02 39 31.7	+0.1
STCH				Sn	Sn	02 39 37.4	-0.9
STCH				IAML		02 39 37.8	
	comp=E,317nm,0.1s						
STCH				IAML		02 39 48.1	
	comp=N,413nm,1.0s						
NPOC	North of Pu‘u	0.39	62	Pn	Pn	02 39 32.7	+0.9
NPOC				Sn	Sn	02 39 37.4	-1.1
NPOC				IAML		02 39 49.3	
	comp=E,424nm,0.7s						
HMH	Humu‘ula Sheep	0.39	359	Pn	Pn	02 39 32.5	+0.4
HMH				Sn	Sn	02 39 38.8	-0.2
HMH				IAML		02 39 48.7	
	comp=E,341nm,3.6s						
JCUZ	Jacuzzi	0.40	63	Pn	Pn	02 39 31.8	0.0
JCUZ				Sn	Sn	02 39 37.7	-0.9
JOKA	Jonika Flow	0.50	63		Pn	02 39 33.2	+0.1
JOKA					Sn	02 39 39.9	-0.9
CPH	Captain Cook	0.50	304		Sn	02 39 39.6	-1.3
KHLU	Kahalu`u	0.55	314	Pn	Pn	02 39 33.9	+0.1
KHLU				Sn	Sn	02 39 41.0	-1.0
KHLU				IAML		02 39 46.2	
	comp=N,248nm,3.8s						
HUH	Hualalai	0.58	325		Pn	02 39 34.6	+0.2
HUH				IAML		02 39 45.4	
	comp=E,202nm,2.4s						
HUH				IAML		02 39 47.8	
	comp=N,252nm,1.1s						

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*NEIC **08** 02:42:09.9±1.5, 7°.2S±0°.1×156°.2E±0°.1, h50km±5km, mb4.3/15, Error ellipse: s-maj=19.5km s-min=15.8km az=97.0*

*IDC **08** 02:42:21.4±1.3, 7°.18S×155°.78E, h137km±12km, mb3.6/9, mbtmp4.1/13, MS3.5/3, Error ellipse: s-maj=15.9km s-min=11.2km az=28.0*

ISC 08 02:42:21.8±0.6**, 7°.23S**±0°.08×**155°.75E**±0°.07**, h150**km**, n43,** σ**1ˢ37**/39**, mb3.9**/16**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	4.67	310	Pn	Pn	02 43 22.3	-8.7
HNR	Honiara	4.70	118	P	Pn	02 43 31.7	+0.5
	2µm,0.7s,baz=288,slow=20,SNR=1.5						
HNR				S	Sn	02 44 23.8	-1.5
	3µm,0.8s,baz=351,slow=8.8,SNR=1.7						
KRVT	Keravat (AS076	4.70	308	P	Pn	02 43 29.8	-1.6
	33nm,0.4s,baz=145,slow=12,SNR=1.5						
KRVT				S	Sn	02 44 26.2	+0.7
	115nm,0.6s,baz=311,slow=3.0,SNR=2.1						
PMG	Port Moresby	8.77	255	P	Pn	02 44 24.7	-0.9
	27nm,0.6s,baz=62,slow=8.2,SNR=11						
PMG				S	Sn	02 46 04.3	+1.3
	8.2nm,0.4s,baz=66,slow=20,SNR=3.3						
PMG	Port Moresby	8.77	255	Pn	Pn	02 44 19.1	-6.5
COEN	Coen	14.05	241	Pn	Pn	02 45 31.1	-3.3
CTA	Charters Tower	15.75	215	P	P	02 45 57.3	+0.8
	3.0nm,0.6s,baz=32,slow=13,SNR=5.6						
CTA				LR	LR	02 51 03.5	
	comp=Z,170nm,20.9s,baz=86,slow=33						
CTAO	Charters Tower	15.75	215	P	Pn	02 45 53.6	-2.0
CTAO				IAmb	IAmb	02 46 01.3	
	comp=Z,10nm,1.2s						
FAKI	Fak Fak	23.79	279	P	P	02 47 22.7	+1.6
WR0	Warramunga Arr	24.15	236	P	P	02 47 21.7	-2.5
WR0				IAmb	IAmb	02 47 46.9	
	comp=Z,13nm,1.3s						
WB0	Warramunga Arr	24.18	237	P	P	02 47 24.5	0.0
WB0				IAmb	IAmb	02 47 47.1	
	comp=Z,14nm,1.2s						
WB2	Warramunga Arr	24.30	237	P	P	02 47 24.1	-1.5
WB2				IAmb	IAmb	02 47 48.3	
	comp=Z,15nm,1.4s						
WRA	Warramunga Arr	24.31	237	P	P	02 47 27.4	+1.8
	comp=Z,3.1nm,0.8s,baz=63,slow=9.7,SNR=16						
WRA				PcP	PcP	02 51 01.2	-0.5
	comp=Z,0.8nm,1.0s,baz=62,slow=2.0,SNR=4.5						
	comp=Z,3.1nm,0.8s						
WRA	Warramunga Arr	24.31	237	P	P	02 47 24.9	-0.8
MTN	Manton Dam	24.86	255	P	P	02 47 29.0	-1.7
MTN				IAmb	IAmb	02 47 33.7	
	comp=Z,12nm,0.8s						
AS31	Alice Springs	26.58	230	P	P	02 47 46.8	+0.5
ASAR	Alice Springs	26.59	230	P	P	02 47 47.6	+1.4
	comp=Z,0.8nm,0.5s,baz=58,slow=10.0,SNR=17						
ASAR				PcP	PcP	02 51 09.5	+2.6
	comp=Z,0.9nm,0.9s,baz=67,slow=2.7,SNR=5.4						
	comp=Z,0.8nm,0.5s						
KNRA	Kununurra	27.72	250	P	P	02 47 57.0	+0.5
H11S3	WAKE ISLAND Hy	27.75	23	T	T	03 16 18.5	
	baz=202,slow=76,SNR=75						
H11S2	WAKE ISLAND Hy	27.75	23	T	T	03 16 06.6	
	baz=202,slow=76,SNR=74						
H11S1	WAKE ISLAND Hy	27.76	23	T	T	03 16 07.8	
	baz=202,slow=76,SNR=56						
STKA	Stephens Creek	27.85	206	P	P	02 47 58.7	+1.3
	comp=Z,1.3nm,0.7s,baz=33,slow=15,SNR=4.1						
STKA				LR	LR	02 59 32.4	
	comp=Z,114nm,18.2s,baz=171,slow=37						
	comp=Z,1.3nm,0.7s						
H11N1	WAKE ISLAND Hy	28.93	22	T	T	03 17 48.5	
	baz=216,slow=74						
H11N3	WAKE ISLAND Hy	28.94	22	T	T	03 17 47.7	
	baz=216,slow=74						
H11N2	WAKE ISLAND Hy	28.95	22	T	T	03 17 46.9	
	baz=216						
FITZ	Fitzroy Crossi	31.25	247	P	P	02 48 27.4	-0.2
FORT	Forrest	34.94	224	P	P	02 48 59.7	+0.2
FORT				IAmb	IAmb	02 49 20.3	
	comp=Z,8.7nm,0.8s						
MBWA	Marble Bar	37.45	245	P	P	02 49 19.6	-1.3
PETK	Petropavlovsk-	60.13	1	LR	LR	03 15 47.0	
	comp=Z,31nm,21.2s,baz=186,slow=33						
CMAR	Chiang Mai Arr	61.56	295	P	P	02 52 23.8	+0.2
	comp=Z,1.7nm,0.3s,baz=128,slow=5.8,SNR=2.4						
	comp=Z,1.7nm,0.3s						
CMAR	Chiang Mai Arr	61.56	295	P	P	02 52 24.0	+0.4
SONM	Songino Array	69.94	327	P	P	02 53 17.7	+0.8
	comp=Z,1.7nm,1.0s,baz=141,slow=6.1,SNR=9.6						
	comp=Z,1.7nm,1.0s						
SONM	Songino Array	69.94	327	P	P	02 53 17.4	+0.5
SONM				IAmb	IAmb	02 53 18.4	
	comp=Z,2.7nm,1.1s						
IMAR	Indian Mountai	81.71	19	P	P	02 54 22.3	-0.9
QSPA	South Pole Qui	82.75	180	P	P	02 54 28.6	-0.2
QSPA				IAmb	IAmb	02 54 55.4	

	comp=Z,10.0nm,1.4s						
ILAR	**Eielson Array**	**83.32**	**21**	P	**P**	**02 54 34.1**	**+2.5**
	comp=Z,0.2nm,0.8s,baz=236,slow=4.8,SNR=1.7						
	comp=Z,0.2nm,0.8s						
MK31	**Makanchi Array**	**84.07**	**319**	P	**P**	**02 54 35.9**	**+0.1**
MK31				IAmb	IAmb	02 55 04.2	
	comp=Z,1.3nm,0.8s						
MKAR	**Makanchi Array**	**84.07**	**319**	P	**P**	**02 54 37.1**	**+1.2**
	comp=Z,2.1nm,0.9s,baz=99,slow=5.2,SNR=15						
	comp=Z,2.1nm,0.9s						
MKAR	**Makanchi Array**	**84.07**	**319**	P	**P**	**02 54 35.4**	**-0.5**
ZALV	**Zalesovo Beam**	**84.79**	**326**	P	**P**	**02 54 40.2**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=121,slow=7.4,SNR=2.4						
	comp=Z,0.4nm,0.4s						
YKA	**Yellowknife Ar**	**96.19**	**28**	P	**P**	**02 55 31.6**	**-0.9**
	comp=Z,0.2nm,0.8s,baz=257,slow=5.6,SNR=2.6						
	comp=Z,0.2nm,0.8s						
BDFB	**Brasilia**	**147.28**	**134**	PKPbc	**PKiKP**	**03 01 51.4**	**+0.3**
	comp=Z,1.5nm,0.8s,baz=269,slow=4.2,SNR=3.6						
TORD	**Torodi Ar. Bea**	**153.81**	**285**	PKPbc	**PKPbc**	**03 02 03.2**	**-1.1**
	comp=Z,0.8nm,0.9s,baz=105,slow=3.4,SNR=3.9						

*HVO **08** 03:09:11.5±0.7, 19°.35N±0°.04×155°.30W±0°.04, h28^{km}±1^{km}, ML2.9/24, ML2.9/52(NEIC), Error ellipse: s-maj=5.5km s-min=4.9km az=181.0*

NEIC 08 03:09:09.7±1.1**, 19°.37N**±0°.08×**155°.30W**±0°.05**, h35**^{km}±10^{km}**, Error ellipse: s-maj=12.2km s-min=6.3km az=177.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDHHI	**Sand Hill**	**0.02**	**21**		Sb	03 09 19.8	0.0
SDHHI	**Sand Hill**	**0.02**	**21**	Pg	Pb	03 09 15.9	+0.2
SDHHI				IAML		03 09 19.3	
	comp=N,2μm,0.4s						
WRMHI	**West Rim**	**0.04**	**3**		Pb	03 09 15.9	+0.1
WRMHI					Sb	03 09 19.1	-0.7
RIM	**Rim**	**0.04**	**46**		Pb	03 09 16.0	+0.3
RIM					Sb	03 09 19.2	-0.6
RIM	**Rim**	**0.04**	**46**	IAML		03 09 19.5	
	comp=N,773nm,0.7s						
RIM				IAML		03 09 22.6	
	comp=E,806nm,0.5s						
KKO	**Keanakako`i**	**0.04**	**51**		Sb	03 09 19.2	-0.6
KKO	**Keanakako`i**	**0.04**	**51**	Pg	Pb	03 09 15.9	+0.2
KKO	**Keanakako`i**	**0.04**	**51**	IAML		03 09 19.4	
	comp=E,784nm,0.9s						
KKO				IAML		03 09 25.6	
	comp=N,836nm,0.7s						
NPH	**North Pit**	**0.05**	**25**		Pb	03 09 16.0	+0.2
NPH					Sb	03 09 19.0	-0.8
NPH	**North Pit**	**0.05**	**25**	IAML		03 09 21.0	
	comp=E,286nm,1.4s						
NPH				IAML		03 09 22.6	
	comp=N,406nm,0.5s						
OBL	**Observatory Le**	**0.05**	**20**		Pb	03 09 15.9	+0.2
OBL				Sg	Sb	03 09 19.2	-0.6
OBL				IAML		03 09 21.4	
	comp=N,1μm,0.6s						
OBL				IAML		03 09 23.6	
	comp=E,1μm,0.3s						
UWE	**Uwekahuna**	**0.05**	**10**	Sg	Sb	03 09 19.2	-0.7
UWE				IAML		03 09 19.7	
	comp=N,1μm,0.2s						
UWE				IAML		03 09 19.7	
	comp=E,1μm,0.9s						
UWE	**Uwekahuna**	**0.05**	**10**		Pb	03 09 16.0	+0.2
BYL	**Byron's Ledge**	**0.06**	**43**		Pb	03 09 16.0	+0.3
BYL					Sb	03 09 19.5	-0.4
BYL	**Byron's Ledge**	**0.06**	**43**	IAML		03 09 19.8	
	comp=E,664nm,0.4s						
BYL				IAML		03 09 24.2	
	comp=N,508nm,0.5s						
UWB	**Uwekahuna B**	**0.06**	**23**	Sg	Sb	03 09 18.9	-0.9
UWB	**Uwekahuna B**	**0.06**	**23**		Pb	03 09 15.9	+0.1
SBLHI	**Steaming Bluff**	**0.07**	**30**	Sg	Sb	03 09 19.1	-0.9
SBLHI	**Steaming Bluff**	**0.07**	**30**		Pb	03 09 16.0	+0.2
HATHI	**Halema‘uma‘u T**	**0.07**	**36**		Pb	03 09 16.0	+0.2
HATHI	**Halema‘uma‘u T**	**0.07**	**36**	Sg	Sb	03 09 19.4	-0.5
HATHI				IAML		03 09 22.1	
	comp=N,548nm,0.3s						
HATHI				IAML		03 09 22.7	
	comp=E,625nm,0.8s						
HLP	**Hilina Pali**	**0.07**	**184**	Pg	Pb	03 09 16.2	+0.4
HLP				IAML		03 09 19.7	
	comp=N,5μm,0.2s						
HLP				IAML		03 09 19.8	
	comp=E,5μm,0.1s						
HLP	**Hilina Pali**	**0.07**	**184**		Sb	03 09 19.6	-0.3
PUH	**Pauahi**	**0.08**	**87**		Pb	03 09 16.1	+0.3
PUH					Sb	03 09 19.4	-0.6
PUH	**Pauahi**	**0.08**	**87**	IAML		03 09 19.6	
	comp=E,913nm,0.5s						
PUH				IAML		03 09 20.5	
	comp=N,1μm,0.4s						
RSD	**Rainshed**	**0.10**	**14**		Pb	03 09 16.2	+0.2
RSD					Sb	03 09 19.6	-0.6
RSD	**Rainshed**	**0.10**	**14**	IAML		03 09 21.0	
	comp=E,558nm,0.1s						
RSD				IAML		03 09 21.4	
	comp=N,595nm,0.1s						
KNHH	**Kane Nui o Ham**	**0.13**	**86**		Pb	03 09 16.4	+0.4
KNHH					Sb	03 09 19.8	-0.6
AIN	**Ainahou**	**0.15**	**271**		Pb	03 09 16.9	+0.5
AIN					Sb	03 09 20.8	0.0
AIN	**Ainahou**	**0.15**	**271**	IAML		03 09 21.2	
	comp=E,8μm,0.3s						
AIN				IAML		03 09 21.5	
	comp=N,7μm,0.2s						
MLH	**Mauna Loa**	**0.15**	**327**		Pb	03 09 16.9	+0.5
MLH					Sb	03 09 20.7	-0.2
MLH	**Mauna Loa**	**0.15**	**327**	IAML		03 09 21.3	
	comp=N,4μm,0.2s						
MLH				IAML		03 09 21.3	
	comp=E,3μm,0.2s						
HTC	**Hot Caves**	**0.16**	**214**		Pb	03 09 16.8	+0.5
HTC					Sb	03 09 20.9	+0.3
STCH	**Steam Cracks**	**0.17**	**85**		Pb	03 09 16.7	+0.3
STCH					Sb	03 09 20.4	-0.5
STCH	**Steam Cracks**	**0.17**	**85**	IAML		03 09 20.7	
	comp=N,6μm,0.1s						
STCH				IAML		03 09 20.7	
	comp=E,8μm,0.1s						
NPOC	**North of Pu‘u**	**0.18**	**83**		Pb	03 09 16.9	+0.4
NPOC	**North of Pu‘u**	**0.18**	**83**	Sg	Sb	03 09 20.5	-0.6
NPOC				IAML		03 09 20.8	
	comp=E,2μm,0.3s						
NPOC				IAML		03 09 21.0	
	comp=N,1μm,0.2s						
JCUZ	**Jacuzzi**	**0.19**	**86**		Pb	03 09 16.9	+0.4
JCUZ	**Jacuzzi**	**0.19**	**86**	Sg	Sb	03 09 20.7	-0.5
JCUZ				IAML		03 09 21.0	
	comp=E,2μm,0.4s						
JCUZ				IAML		03 09 21.3	
	comp=N,966nm,0.2s						
HMH	**Humu‘ula Sheep**	**0.29**	**324**		Pb	03 09 18.5	+0.7
HMH					Sb	03 09 23.6	+0.3
HMH	**Humu‘ula Sheep**	**0.29**	**324**	IAML		03 09 24.0	
	comp=N,13μm,0.3s						
HMH				IAML		03 09 24.0	
	comp=E,4μm,0.4s						
JOKA	**Jonika Flow**	**0.29**	**77**		Pb	03 09 17.8	+0.2
JOKA					Sn	03 09 22.5	+0.2
MWH	**Moku‘aweowe**	**0.30**	**292**		Pb	03 09 18.3	+0.1
MWH					Sn	03 09 23.5	+0.3
MWH	**Moku‘aweowe**	**0.30**	**292**	IAML		03 09 24.0	
	comp=E,2μm,0.7s						
MWH				IAML		03 09 24.1	
	comp=N,1μm,0.4s						
MLOA	**Mauna Loa Obse**	**0.31**	**303**		Pb	03 09 18.6	+0.4
MLOA					Sn	03 09 23.6	+0.3
MLOA	**Mauna Loa Obse**	**0.31**	**303**	IAML		03 09 24.0	
	comp=E,11μm,0.2s						
MLOA				IAML		03 09 24.0	
	comp=N,14μm,0.1s						
KHU	**Kahuku**	**0.32**	**247**		Pb	03 09 18.2	0.0
KHU	**Kahuku**	**0.32**	**247**		Sn	03 09 23.2	-0.3
KHU				IAML		03 09 23.6	
	comp=E,1μm,0.1s						
KHU				IAML		03 09 23.6	
	comp=N,1μm,0.1s						
ALEP	**Alea Permanent**	**0.36**	**298**		Pb	03 09 18.9	0.0
ALEP					Sn	03 09 24.2	-0.7
HPO	**Honuapo**	**0.37**	**220**		Pn	03 09 18.6	0.0
PHO	**Puu Honuaula**	**0.41**	**74**		Pn	03 09 19.3	+0.2
POHA	**Pohakuloa**	**0.44**	**331**		Pn	03 09 19.9	+0.1
POHA	**Pohakuloa**	**0.44**	**331**		Sb	03 09 26.4	-0.3
CPH	**Captain Cook**	**0.59**	**282**		Pn	03 09 21.4	-0.3
CPH					Sn	03 09 28.9	-1.2
HUH	**Hualalai**	**0.59**	**302**		Pb	03 09 22.3	+0.2
HUH				IAML		03 09 38.2	
	comp=E,2μm,0.3s						
KHLU	**Kahalu`u**	**0.60**	**292**		Pn	03 09 21.8	-0.1
KHLU				IAML		03 09 30.5	
	comp=E,1μm,0.1s						
HPAH	**Hawaii Prepara**	**0.76**	**331**		Pn	03 09 23.7	-0.3
HPAH				IAML		03 09 33.2	
	comp=N,1μm,0.2s						
HPAH	**Hawaii Prepara**	**0.76**	**331**		Sn	03 09 32.7	-1.6

*JSN **08** 03:24:00.0±0.8, 18°.25N×76°.36W, h0^{km}±43^{km}, MD2.4*
*SSNC **08** 03:24:02.3±2.0, 18°.39N×76°.58W, h7^{km}±16^{km}, MD3.0*

ISC 08 03:24:00.4±1.0**, 18°.38N**±0°.07×**76°.50W**±0°.07**, h18**^{km}**, n8, σ0^{s}.71**/13**, 3C, Jamaica region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GWJ	**Greenwich**	**0.37**	**215**	⇑*i*P	**Pg**	**03 24 07.7**	**-0.6**
STH	**Stony Hill**	**0.42**	**224**	⇑*i*P	**Pg**	**03 24 08.6**	**-0.4**
HOJ	**Hope**	**0.44**	**212**	*i* P	**Pg**	**03 24 08.5**	**-0.9**
PCJ	**Portland Cotta**	**0.89**	**225**	⇑*i*P	**Pb**	**03 24 17.2**	**-0.1**
MCJ	**Malvern**	**1.21**	**248**	*i* P	**Pg**	**03 24 23.7**	**-0.2**
MCJ				*i* S	**Sg**	**03 24 41.0**	**+1.3**
RCC	**Rio Carpintero**	**1.78**	**25**	*e*P	**Pn**	**03 24 30.8**	**+0.6**
RCC				*e*S	**Sn**	**03 24 52.1**	**-0.3**
RCC				*e*Sg	**Sb**	**03 24 54.2**	**-0.2**
GTBY	**Guantanamo Bay**	**2.02**	**40**	*e*P	**Pn**	**03 24 34.7**	**+1.1**
GTBY				*e*S	**Sb**	**03 25 01.0**	**-0.5**
CCCC	**Cccc**	**3.05**	**337**	*e*P	**Pn**	**03 24 47.5**	**-0.1**
CCCC				*e*P	**Sn**	**03 25 23.3**	**-0.4**

*IDC **08** 03:26:58.7±1.5, 6°.22S×154°.67E, h82^{km}±13^{km}, mb3.8/13, mbtmp4.1/17, MS3.4/6, Error ellipse: s-maj=15.2km s-min=10.6km az=40.0*

ISC 08 03:26:56.9±0.6**, 6°.16S**±0°.08×**154°.70E**±0°.07**, h61**^{km}**, n20, σ1^{s}.44**/24**, mb4.0**/13**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.24**	**304**	P	**Pn**	**03 27 46.9**	**+1.6**
	59nm,0.4s,baz=270,slow=2.0,SNR=2.1						
KRVT				S	**Sn**	**03 28 25.6**	**+3.0**
	315nm,0.6s,baz=230,slow=21,SNR=6.4						
KRVT				LR	LR	03 29 27.2	
	comp=Z,337nm,18.5s,baz=233,slow=46						
HNR	**Honiara**	**6.13**	**122**	P	**Pn**	**03 28 26.5**	**+1.6**
	840nm,0.4s,baz=202,slow=5.9,SNR=1.1						
HNR				S	**Sn**	**03 29 36.1**	**+2.4**
	2μm,0.5s,baz=162,slow=19,SNR=1.8						
HNR				LR	LR	03 30 23.0	
	comp=Z,2μm,19.9s,baz=252,slow=33						
PMG	**Port Moresby**	**8.14**	**246**	P	**Pn**	**03 28 53.9**	**+1.5**
	73nm,0.7s,baz=53,slow=8.4,SNR=26						
PMG				S	**Sn**	**03 30 24.1**	**+1.0**
	10nm,0.5s,baz=162,slow=23,SNR=7.7						
PMG				LR	LR	03 32 05.2	
	comp=Z,166nm,19.8s,baz=329,slow=38						
CTA	**Charters Tower**	**16.10**	**210**	P	**Pn**	**03 30 39.4**	**0.0**
	1.6nm,0.6s,baz=9.3,slow=17,SNR=2.4						
CTA				LR	LR	03 36 25.4	
	comp=Z,107nm,19.0s,baz=82,slow=35						
DZM	**Mont Dzumac**	**19.47**	**146**	P	**P**	**03 31 19.4**	**+0.4**
	6.5nm,0.7s,baz=317,slow=19,SNR=2.4						
GUMO	**Guam**	**21.91**	**334**	LR	LR	03 39 15.9	
	comp=Z,56nm,21.2s,baz=118,slow=34						
WRA	**Warramunga Arr**	**24.07**	**233**	P	**P**	**03 32 05.9**	**-0.8**
	3.3nm,0.6s,baz=57,slow=9.9,SNR=21						
WRA				PcP	**PcP**	**03 35 46.4**	**-0.7**
	1.0nm,0.7s,baz=55,slow=2.3,SNR=5.8						
	3.3nm,0.6s						
ASAR	**Alice Springs**	**26.52**	**227**	P	**P**	**03 32 27.9**	**-1.1**
	1.3nm,0.4s,baz=57,slow=9.2,SNR=26						
ASAR				PcP	**PcP**	**03 35 52.1**	**-0.5**
	1.3nm,0.7s,baz=66,slow=2.5,SNR=11						
	1.3nm,0.4s						
STKA	**Stephens Creek**	**28.37**	**204**	P	**P**	**03 32 43.6**	**-1.8**
	0.5nm,0.3s,baz=13,slow=14,SNR=1.3						
STKA				LR	LR	03 42 44.6	
	comp=Z,84nm,18.8s,baz=192,slow=33						
	0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**60.16**	**295**	P	**P**	**03 37 00.2**	**+1.4**
	2.2nm,0.3s,baz=113,slow=5.0,SNR=11						
	2.2nm,0.3s						
SONM	**Songino Array**	**68.48**	**327**	P	**P**	**03 37 52.3**	**-0.5**
	0.4nm,0.5s,baz=159,slow=4.3,SNR=2.6						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**82.59**	**319**	P	**P**	**03 39 13.0**	**-0.5**
	0.7nm,0.5s,baz=96,slow=5.4,SNR=11						
	0.7nm,0.5s						
ILAR	**Eielson Array**	**82.71**	**22**	P	**P**	**03 39 12.7**	**-1.0**
	0.7nm,0.6s,baz=245,slow=5.0,SNR=7.4						
	0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**83.33**	**326**	P	**P**	**03 39 15.4**	**-1.7**
	0.5nm,0.5s,baz=116,slow=6.6,SNR=2.6						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**86.03**	**322**	P	**P**	**03 39 29.9**	**-0.9**
	0.4nm,0.5s,baz=102,slow=5.2,SNR=5.7						
	0.4nm,0.5s						
NVAR	**Mina Array Bea**	**91.43**	**52**	P	**P**	**03 39 57.8**	**+0.8**
	1.7nm,0.8s,baz=255,slow=7.0,SNR=12						
	1.7nm,0.8s						
BVAR	**Borovoye Array**	**91.45**	**323**	P	**P**	**03 39 55.0**	**-1.5**
	0.5nm,0.4s,baz=70,slow=5.1,SNR=5.6						
	0.5nm,0.4s						
YKA	**Yellowknife Ar**	**95.74**	**28**	P	**P**	**03 40 15.5**	**-0.4**
	0.4nm,0.8s,baz=261,slow=4.4,SNR=7.1						
	0.4nm,0.8s						
PDAR	**Pinedale Array**	**98.36**	**48**	P	**P**	**03 40 27.8**	**-0.7**
	0.4nm,0.7s,baz=242,slow=1.9,SNR=2.6						
	0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**152.52**	**287**	PKPbc	**PKPbc**	**03 46 45.7**	**-1.8**
	2.6nm,0.8s,baz=71,slow=2.0,SNR=16						

*IDC **08** 03:28:35.0±0.7, 14°.38S×70°.48W, h203^{km}±6^{km}, mb3.8/14, mbtmp4.4/20, MS3.5/1, Error ellipse: s-maj=13.7km s-min=7.8km az=46.0*
*VAO **08** 03:28:35.1±0.3, 14°.48S×70°.66W, h192^{km}, mb4.3*
*NEIC **08** 03:28:35.6±1.9, 14°.49S±0°.07×70°.59W±0°.09, h205^{km}±10^{km}, mb4.6/107, Error ellipse: s-maj=13.6km s-min=10.6km az=75.0*

ISC 08 03:28:34.5±0.4**, 14°.50S**±0°.05×**70°.62W**±0°.06**, h200**^{km}**, n239, σ1^{s}.26**/250**, mb4.6**/57**, 1C, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**2.99**	**127**	P	**Pn**	**03 29 26.4**	**+1.8**
	1μm,0.4s,baz=305,slow=8.0,SNR=4496						
LPAZ				S	**Sn**	**03 30 04.3**	**+0.6**
	138nm,0.4s,baz=182,slow=25,SNR=13						
LPAZ	**La Paz**	**2.99**	**127**		**Pn**	**03 29 26.6**	**+2.0**
LPAZ				Sn	**Sn**	**03 30 04.0**	**+0.3**
LPAZ	**La Paz**	**2.99**	**127**	*e*P	**Pn**	**03 29 25.7**	**+1.1**
PB18	**Visviri**	**3.26**	**160**		**Pn**	**03 29 30.3**	**+2.5**
PB18				Sn	**Sn**	**03 30 11.6**	**+2.1**
PB18	**Visviri**	**3.26**	**160**	⇑*i*P	**Pn**	**03 29 30.7**	**+2.9**
PB18				*i* S	**Sn**	**03 30 13.8**	**+4.2**
AP01	**Chacalluta**	**3.86**	**176**		**Pn**	**03 29 34.2**	**-0.3**
AP01	**Chacalluta**	**3.86**	**176**	*e*P	**Pn**	**03 29 33.9**	**-0.6**
AP01				*i* S	**Sn**	**03 30 19.5**	**-2.3**
PB16	**IPOC Station P**	**3.96**	**164**	Pn	**Pn**	**03 29 36.7**	**+0.4**
PB16	**IPOC Station P**	**3.96**	**164**	*e*P	**Pn**	**03 29 36.5**	**+0.1**
PB16				*i* S	**Sn**	**03 30 26.9**	**+1.9**
PB12	**IPOC Station P**	**4.10**	**176**		**Pn**	**03 29 36.5**	**-1.1**
MNMC	**Minye Minye**	**4.71**	**168**		**Pn**	**03 29 45.3**	**-0.2**
PB11	**IPOC Station P**	**5.31**	**170**		**Pn**	**03 29 51.2**	**-1.8**
PB08	**IPOC Station P**	**5.78**	**166**		**Pn**	**03 29 58.6**	**-0.7**
ETMB	**Extrema**	**6.34**	**43**	Pn	**Pn**	**03 30 06.1**	**-0.1**
ETMB	**Extrema**	**6.34**	**43**	*e*P	**Pn**	**03 30 05.9**	**-0.3**
NNA	**Nana**	**6.55**	**292**	P	**Pn**	**03 30 08.7**	**-0.2**
	90nm,0.7s,baz=135,slow=10.0,SNR=43						
NNA				S	**Sn**	**03 31 27.2**	**+3.3**
	15nm,0.4s,baz=246,slow=20,SNR=2.0						
NNA	**Nana**	**6.55**	**292**		**Pn**	**03 30 08.0**	**-1.0**
LVC	**Limon Verde**	**8.23**	**169**	P	**Pn**	**03 30 29.8**	**-1.3**
	20nm,0.3s,baz=19,slow=8.3,SNR=102						
LVC				S	**Sn**	**03 31 57.7**	**-6.2**
	94nm,0.4s,baz=41,slow=24,SNR=26						
LVC	**Limon Verde**	**8.23**	**169**	Pn	**Pn**	**03 30 29.6**	**-1.4**
LVC	**Limon Verde**	**8.23**	**169**	*e*P	**Pn**	**03 30 30.7**	**-0.3**
PB15	**IPOC Station P**	**8.73**	**173**		**Pn**	**03 30 35.2**	**-2.2**
PB10	**IPOC Station P**	**8.97**	**180**		**Pn**	**03 30 37.8**	**-2.5**
SAML	**Samuel**	**9.13**	**54**	Pn	**Pn**	**03 30 41.2**	**-1.4**
SAML	**Samuel**	**9.13**	**54**	*e*P	**Pn**	**03 30 41.6**	**-0.9**
SIV	**San Ignacio**	**9.34**	**100**	P	**Pn**	**03 30 43.5**	**-1.7**
	12nm,0.4s,baz=290,slow=9.4,SNR=52						
BBSD	**Serra de San D**	**10.00**	**107**	*e*P	**Pn**	**03 30 52.8**	**-1.0**
PB14	**IPOC Station P**	**10.08**	**179**	Pn	**Pn**	**03 30 52.6**	**-2.4**
VILB	**Vilhena**	**10.24**	**83**	Pn	**Pn**	**03 30 56.7**	**-0.3**
VILB	**Vilhena**	**10.24**	**83**	*e*P	**Pn**	**03 30 56.5**	**-0.4**
TBTG	**Tabatinga, AM**	**10.27**	**4**	*e*P	**Pn**	**03 30 57.5**	**+0.2**
ATAH	**Atahualpa**	**10.57**	**313**	P	**Pn**	**03 31 01.5**	**-0.1**
	8.7nm,0.8s,baz=56,slow=3.8,SNR=4.2						
GO02	**Mina Guanaco**	**10.65**	**175**	Pn	**Pn**	**03 31 00.6**	**-1.8**
BBRB	**Robore, Bolivi**	**11.04**	**111**	*e*P	**Pn**	**03 31 06.3**	**-0.8**
PTLB	**Pontes e Lacer**	**11.14**	**96**		**Pn**	**03 31 07.6**	**-0.8**
PTLB	**Pontes e Lacer**	**11.14**	**96**	*e*P	**Pn**	**03 31 08.3**	**-0.1**
AC02	**Maricunga**	**12.35**	**174**	Pn	**Pn**	**03 31 24.0**	**-0.3**
TEFE	**Tefe**	**12.41**	**29**	*e*P	**Pn**	**03 31 23.2**	**-1.5**
MCRA	**Macar, Loja**	**13.63**	**317**	Pn	**Pn**	**03 31 40.2**	**+0.2**
PDRB	**Porto dos Gac**	**13.84**	**80**	*e*P	**Pn**	**03 31 42.6**	**+0.1**
MURT	**Porto Murtinho**	**14.27**	**122**	*e*P	**Pn**	**03 31 48.2**	**+0.5**
AC05	**El Transito**	**14.27**	**179**	Pn	**Pn**	**03 31 47.7**	**-0.1**
SALV	**Santo Antonio**	**14.48**	**97**	*e*P	**Pn**	**03 31 51.5**	**+1.1**
BDQN	**Bodoquena, MS**	**14.49**	**116**	*e*P	**Pn**	**03 31 51.8**	**+1.2**
MACA	**Manacapuru-AM**	**14.94**	**42**		**Pn**	**03 31 55.4**	**-0.6**
MACA	**Manacapuru-AM**	**14.94**	**42**	*e*P	**Pn**	**03 31 55.2**	**-0.8**
PORT	**Chimborazo Vol**	**15.25**	**327**		**Pn**	**03 32 00.3**	**-0.2**
CHSH	**Refugio Sur-Vo**	**15.28**	**327**		**Pn**	**03 31 59.7**	**-1.1**
CO01	**Juntas del Tor**	**15.41**	**178**	P	**Pn**	**03 32 02.3**	**+0.4**
AQDB	**Aquidauana**	**15.42**	**115**		**Pn**	**03 32 02.6**	**+0.8**
AQDB				IAmb	IAmb	03 32 05.0	
	comp=Z,21nm,1.2s						
AQDB	**Aquidauana**	**15.42**	**115**	*e*P	**Pn**	**03 32 02.3**	**+0.4**
ESFA	**Espinillo Form**	**15.44**	**134**	*e*P	**Pn**	**03 32 02.2**	**+0.1**
PP1B	**Ponte de Pedra**	**15.44**	**104**	*e*P	**P**	**03 32 03.6**	**+1.3**
GO04	**Tololo Observa**	**15.60**	**181**	P	**Pn**	**03 32 04.1**	**-0.1**
RVDE	**Rio Verde (Bra**	**15.68**	**109**	*e*P	**P**	**03 32 05.6**	**+0.7**
SLOR	**San Lorenzo -**	**15.74**	**330**	P	**P**	**03 32 07.2**	**+1.0**
SLOR				IAmb	IAmb	03 32 21.0	
	comp=Z,30nm,0.8s						
PULU	**Pululahua**	**16.40**	**331**		**P**	**03 32 14.3**	**+1.0**
IMBA	**Imbabura, San**	**16.48**	**332**	P	**P**	**03 32 14.0**	**-0.4**
OTAV	**Otavalo**	**16.57**	**331**	P	**P**	**03 32 14.4**	**-0.8**
OTAV				IAmb	IAmb	03 32 24.1	
	comp=Z,21nm,0.9s						
OTAV	**Otavalo**	**16.57**	**331**	*e*P	**Pn**	**03 32 17.3**	**+1.1**
TULM	**Tulcn-Chalpat**	**16.70**	**334**	P	**P**	**03 32 17.1**	**+0.4**
NPGB	**Novo Progresso**	**16.72**	**65**	*e*P	**P**	**03 32 16.9**	**+0.4**
FLOC	**Florencia**	**16.74**	**342**	*e*P	**P**	**03 32 17.2**	**+0.6**
AMBA	**Amambai (Brazi**	**17.00**	**122**	*e*P	**P**	**03 32 20.2**	**+0.8**
CPUP	**Villa Florida**	**17.12**	**136**	P	**P**	**03 32 21.6**	**+0.8**
	comp=Z,6.3nm,0.4s,baz=312,slow=11,SNR=22						
CPUP	**Villa Florida**	**17.12**	**136**	P	**P**	**03 32 21.5**	**+0.8**
CPUP				IAmb	IAmb	03 32 22.1	
	comp=Z,9.6nm,0.6s						
CPUP	**Villa Florida**	**17.12**	**136**	*e*P	**P**	**03 32 21.1**	**+0.4**
CRUC	**La Cruz**	**17.15**	**338**	*e*P	**Pn**	**03 32 23.6**	**+0.6**
CFA	**Coronel Fontan**	**17.17**	**173**	P	**P**	**03 32 22.9**	**+1.6**
	comp=Z,5.5nm,0.3s,baz=28,slow=11,SNR=24						
GARC	**Garzon, Huila**	**17.27**	**343**	*e*P	**P**	**03 32 23.7**	**+1.0**
C2SB	**Chapadao do Su**	**17.56**	**106**	*e*P	**Pn**	**03 32 30.1**	**+2.7**
BBAC	**Balboa, Cauca**	**17.68**	**338**	*e*P	**P**	**03 32 28.4**	**+1.2**
ITTB	**Itaituba**	**17.79**	**57**	*e*P	**P**	**03 32 29.1**	**+0.9**
POPC	**Popayan, Colom**	**17.96**	**340**	*e*P	**P**	**03 32 31.2**	**+0.9**
VA03	**San Esteban**	**18.18**	**180**	P	**P**	**03 32 32.9**	**+0.6**
VA03				IAmb	IAmb	03 32 38.2	
	comp=Z,12nm,0.8s						
ARAG	**Araguaiana, MT**	**18.20**	**96**	*e*P	**P**	**03 32 33.6**	**+1.0**
MCR1	**Marechal Candi**	**18.49**	**125**	*e*P	**P**	**03 32 36.9**	**+1.2**
JAMC	**Jamundi, Valle**	**18.59**	**341**	*e*P	**P**	**03 32 36.5**	**-0.6**
PTGC	**Puerto Gaitan,**	**18.64**	**355**	*e*P	**P**	**03 32 36.0**	**-1.4**
MECA	**Mercedes**	**18.69**	**144**	*e*P	**P**	**03 32 39.2**	**+1.5**
VILC	**Villavicencio,**	**18.74**	**350**	*e*P	**P**	**03 32 39.9**	**+1.3**
ORTC	**Ortega, Tolima**	**18.86**	**346**	*e*P	**P**	**03 32 38.5**	**-1.3**
SNDB	**Serra Nova Dou**	**18.98**	**85**	*e*P	**P**	**03 32 42.9**	**+1.8**
AZCA	**Azaras, Argent**	**19.17**	**137**	*e*P	**P**	**03 32 43.8**	**+0.8**
MT09	**Talagante**	**19.20**	**181**	P	**P**	**03 32 44.2**	**+0.9**
MT09				IAmb	IAmb	03 32 49.9	
	comp=Z,9.8nm,0.7s						
YOTC	**Yotoco, Valle**	**19.22**	**342**	*e*P	**P**	**03 32 42.9**	**-0.8**
CHIC	**Chingaza**	**19.25**	**351**	*e*P	**P**	**03 32 44.8**	**+0.4**
LMEL	**Las Melosas**	**19.27**	**179**	P	**P**	**03 32 46.2**	**+2.1**
MT01	**Popeta**	**19.29**	**182**	P	**P**	**03 32 45.3**	**+1.1**
MT01				IAmb	IAmb	03 32 47.3	
	comp=Z,22nm,1.2s						
BOAV	**Boa Vista**	**19.54**	**32**	P	**P**	**03 32 47.6**	**+0.5**
BOAV	**Boa Vista**	**19.54**	**32**	*e*P	**P**	**03 32 47.3**	**+0.2**
BOAV	**Boa Vista**	**19.54**	**32**	*e*P	**P**	**03 32 47.6**	**+0.5**
MALC	**Bahia Malaga**	**19.56**	**340**	*e*P	**P**	**03 32 47.8**	**+0.5**
ROSC	**El Rosal**	**19.56**	**349**	P	**P**	**03 32 46.6**	**-1.1**
	comp=Z,6.1nm,0.5s,baz=120,slow=20,SNR=1.5						
PCMB	**Pacaembu**	**19.71**	**114**	*e*P	**P**	**03 32 48.7**	**-0.2**
BO01	**Tunca**	**19.81**	**181**	P	**P**	**03 32 50.8**	**+1.0**
BO01				IAmb	IAmb	03 32 52.5	
	comp=Z,12nm,1.0s						
ITQB	**Itaqui**	**19.87**	**142**	P	**P**	**03 32 50.9**	**+0.5**
ITQB	**Itaqui**	**19.87**	**142**	*e*P	**P**	**03 32 51.0**	**+0.5**
ITRB	**Iturama**	**20.04**	**108**	*e*P	**P**	**03 32 52.3**	**-0.1**
GUY2C	**Guyana, Caldas**	**20.15**	**346**	*e*P	**P**	**03 32 52.3**	**-1.8**
BO02	**Sierra Bellavi**	**20.21**	**180**	P	**P**	**03 32 55.7**	**+1.6**
BO02				IAmb	IAmb	03 32 59.1	
	comp=Z,11nm,0.7s						
SPBC	**San Pablo de B**	**20.31**	**350**	*e*P	**P**	**03 32 53.0**	**-2.4**
NORC	**Norcasia**	**20.37**	**348**	*e*P	**P**	**03 32 52.6**	**-3.4**
RUSC	**La Rusia**	**20.41**	**353**	*e*P	**P**	**03 32 53.9**	**-2.9**
MALB	**Monte Alegre**	**20.47**	**54**	*e*P	**P**	**03 32 57.2**	**+0.2**
TAMC	**Tame, Arauca**	**20.83**	**357**	*e*P	**P**	**03 33 00.1**	**-0.7**
CBOC	**Ciudad Bolivar**	**20.93**	**345**	*e*P	**P**	**03 33 00.7**	**-1.3**
HELC	**Santa Helena**	**21.12**	**346**	*e*P	**P**	**03 33 01.8**	**-2.5**
RODS	**Rosario do Sul**	**21.22**	**141**	*e*P	**P**	**03 33 04.3**	**-0.6**
PTBC	**PUERTO BERRIO,**	**21.25**	**349**	*e*P	**P**	**03 33 00.5**	**-4.8**
ITAB	**Concordia**	**21.39**	**129**	P	**P**	**03 33 07.1**	**+0.5**
ITAB				IAmb	IAmb	03 33 08.2	
	comp=Z,20nm,0.8s						
ITAB	**Concordia**	**21.39**	**129**	*e*P	**P**	**03 33 07.5**	**+0.9**
ALGR	**Alto Alegre (B**	**21.63**	**134**	*e*P	**P**	**03 33 10.5**	**+1.3**
PAMC	**Pamplona, Colo**	**21.80**	**354**	*e*P	**P**	**03 33 11.0**	**-0.4**
BDFB	**Brasilia**	**21.86**	**96**	P	**P**	**03 33 10.7**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=231,slow=14,SNR=1.6						
	comp=Z,0.9nm,0.5s						
BDFB	**Brasilia**	**21.86**	**96**	*e*P	**P**	**03 33 13.2**	**+1.6**
PRPB	**Parauapebas**	**22.06**	**70**	*e*P	**P**	**03 33 14.0**	**+0.5**
ZARC	**Zaragoza, Cauc**	**22.25**	**349**	*e*P	**P**	**03 33 12.9**	**-2.3**
CPSB	**Cacapava Do Su**	**22.37**	**138**	*e*P	**P**	**03 33 15.4**	**-0.7**
UREC	**San Jos de Ur**	**22.64**	**347**	*e*P	**P**	**03 33 16.4**	**-2.3**
MCPB	**Macapa, AP**	**23.12**	**54**	*e*P	**P**	**03 33 24.1**	**+1.1**
PLTB	**Pedras Altas**	**23.19**	**141**	P	**P**	**03 33 23.2**	**-0.4**
PLTB				IAmb	IAmb	03 33 26.2	
	comp=Z,11nm,0.9s						
PLTB	**Pedras Altas**	**23.19**	**141**	*e*P	**P**	**03 33 25.0**	**+1.5**
SMTB	**Santa Maria do**	**23.23**	**79**	*e*P	**P**	**03 33 25.2**	**+1.0**
SDV	**Santo Domingo**	**23.23**	**360**	P	**P**	**03 33 23.6**	**-0.6**
	comp=Z,7.4nm,0.3s,baz=180,slow=20,SNR=12						
	comp=Z,7.4nm,0.3s						
SDV	**Santo Domingo**	**23.23**	**360**	P	**P**	**03 33 23.8**	**-0.5**
SDV				IAmb	IAmb	03 33 28.5	
	comp=Z,18nm,1.2s						
SDV	**Santo Domingo**	**23.23**	**360**	*e*P	**P**	**03 33 23.5**	**-0.7**
BAUV	**El Baul**	**23.43**	**6**	P	**P**	**03 33 25.0**	**-0.9**
CNLB	**Canela**	**23.48**	**132**	*e*P	**P**	**03 33 26.3**	**+0.1**
PMNB	**Patos De Minas**	**23.52**	**103**	*e*P	**P**	**03 33 26.8**	**0.0**
SJCC	**San Jacinto, C**	**24.66**	**349**	*e*P	**P**	**03 33 35.2**	**-1.9**
TMAB	**Tom-Au,PA,Br**	**25.29**	**64**	*e*P	**P**	**03 33 45.1**	**+2.3**
PLCA	**Paso Flores**	**26.14**	**180**	P	**P**	**03 33 50.4**	**+0.2**
	comp=Z,1.8nm,0.4s,baz=340,slow=9.4,SNR=10						
	comp=Z,1.8nm,0.4s						
PLCA	**Paso Flores**	**26.14**	**180**	*e*P	**P**	**03 33 52.2**	**+2.0**
MDP	**Montagnes des**	**26.40**	**44**	P	**P**	**03 33 52.6**	**-0.2**
	comp=Z,6.8nm,0.6s,baz=207,slow=7.1,SNR=6.3						
	comp=Z,6.8nm,0.6s						
JTS	**Las Juntas de**	**28.43**	**329**	LR	LR	03 46 34.0	
	comp=Z,97nm,18.4s,baz=58,slow=38						
NBCL	**Cascavel-CE**	**33.45**	**75**	*e*P	**P**	**03 34 56.6**	**+1.8**
CMIG	**Matias Romero**	**39.48**	**322**	P	**P**	**03 35 47.7**	**+1.9**
	comp=Z,1.2nm,0.3s,baz=118,slow=7.5,SNR=6.2						
	comp=Z,1.2nm,0.3s						
152A	**Waverly Hall**	**48.80**	**344**	P	**P**	**03 36 58.1**	**-1.3**

152A				IAmb	IAmb	03 36 58.9	
	comp=Z,22nm,1.1s						
NATX	**Nacogdoches**	**51.45**	**334**	P	**P**	**03 37 19.6**	**+0.2**
WVT	**Waverly**	**52.92**	**343**	P	**P**	**03 37 27.8**	**-2.3**
WVT				IAmb	IAmb	03 37 28.9	
	comp=Z,7.5nm,0.6s						
MIAR	**Mount Ida**	**53.43**	**336**	P	**P**	**03 37 32.7**	**-1.2**
FW07	**Weatherford**	**53.65**	**331**	P	**P**	**03 37 36.2**	**+0.8**
FW07				IAmb	IAmb	03 37 36.8	
	comp=Z,26nm,0.6s						
FW06	**Azle**	**53.77**	**332**	P	**P**	**03 37 36.9**	**+0.6**
FW06				IAmb	IAmb	03 37 37.9	
	comp=Z,20nm,0.7s						
LCAR	**Lake Charles**	**53.91**	**339**	P	**P**	**03 37 35.7**	**-1.6**
TXAR	**Lajitas Array**	**54.01**	**324**	P	**P**	**03 37 38.4**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=156,slow=9.0,SNR=6.3						
	comp=Z,0.5nm,0.6s						
TX31	**Lajitas Ar. Si**	**54.01**	**324**	P	**P**	**03 37 37.4**	**-0.9**
FW03	**Perrin-Whitt E**	**54.06**	**331**	P	**P**	**03 37 39.1**	**+0.6**
FW03				IAmb	IAmb	03 37 39.4	
	comp=Z,9.3nm,0.6s						
FCAR	**Ozark Folk Cen**	**54.09**	**338**	P	**P**	**03 37 36.8**	**-1.8**
FCAR				IAmb	IAmb	03 37 37.6	
	comp=Z,11nm,0.5s						
X37A	**Clayton**	**54.19**	**335**		**P**	**03 37 39.7**	**+0.3**
X37A				IAmb	IAmb	03 37 40.0	
	comp=Z,9.9nm,0.7s						
ABTX	**Abilene, Hawle**	**54.46**	**330**	P	**P**	**03 37 41.4**	**0.0**
ABTX				IAmb	IAmb	03 37 42.8	
	comp=Z,17nm,0.8s						
USIN	**University of**	**54.59**	**343**	P	**P**	**03 37 41.0**	**-1.1**
USIN				IAmb	IAmb	03 37 43.1	
	comp=Z,16nm,0.8s						
S44A	**Carbondale**	**54.79**	**342**	P	**P**	**03 37 42.1**	**-1.5**
WTFS	**Witchita Falls**	**54.84**	**332**		**P**	**03 37 43.9**	**-0.2**
WTFS				IAmb	IAmb	03 37 45.5	
	comp=Z,37nm,0.7s						
HHAR	**Hobbs**	**55.10**	**337**	P	**P**	**03 37 44.9**	**-1.0**
HHAR				IAmb	IAmb	03 37 45.4	
	comp=Z,13nm,1.4s						
X34A	**Smith Ranch, M**	**55.26**	**333**		**P**	**03 37 47.7**	**+0.6**
W35A	**Tecumseh**	**55.31**	**334**		**P**	**03 37 46.0**	**-1.4**
W35A				IAmb	IAmb	03 37 47.7	
	comp=Z,16nm,0.9s						
TUL1	**Leonard**	**55.51**	**335**		**P**	**03 37 48.1**	**-0.7**
TUL1				IAmb	IAmb	03 37 48.7	
	comp=Z,7.5nm,0.7s						
FNO	**Franklin**	**55.62**	**333**		**P**	**03 37 49.6**	**0.0**
POST	**Post**	**55.74**	**329**	P	**P**	**03 37 51.3**	**+0.7**
POST				IAmb	IAmb	03 37 52.3	
	comp=Z,11nm,1.1s						
CCM	**Cathedral Cave**	**55.75**	**340**	P	**P**	**03 37 48.9**	**-1.5**
CCM				IAmb	IAmb	03 37 53.4	
	comp=Z,8.3nm,1.0s						
WMOK	**Wichita Mounta**	**55.80**	**332**	P	**P**	**03 37 50.8**	**-0.1**
WMOK				IAmb	IAmb	03 37 52.1	
	comp=Z,8.7nm,0.5s						
OK025	**Westminster Rd**	**55.87**	**334**		**P**	**03 37 51.0**	**-0.4**
OK030	**Cody Creek RV**	**55.93**	**334**	P	**P**	**03 37 51.3**	**-0.5**
OK030				IAmb	IAmb	03 37 52.2	
	comp=Z,18nm,0.9s						
OK034	**N. Norfolk Rd.**	**55.97**	**335**		**P**	**03 37 51.9**	**-0.2**
OK031	**S. Brethren Rd**	**55.97**	**334**	P	**P**	**03 37 52.0**	**-0.2**
OK052	**Battle Ridge R**	**55.99**	**334**	P	**P**	**03 37 52.1**	**-0.1**
OK053	**SW of W Deep R**	**56.00**	**334**	P	**P**	**03 37 52.3**	**0.0**
QUOK	**Quay**	**56.11**	**335**		**P**	**03 37 53.2**	**+0.2**
QUOK				IAmb	IAmb	03 37 53.6	
	comp=Z,16nm,0.9s						
S39A	**Bolivar**	**56.13**	**338**	P	**P**	**03 37 52.0**	**-1.2**
S39A				IAmb	IAmb	03 37 52.5	
	comp=Z,14nm,0.6s						
R40A	**Maddies Statio**	**56.30**	**340**	P	**P**	**03 37 53.1**	**-1.3**
R40A				IAmb	IAmb	03 37 53.4	
	comp=Z,9.9nm,0.6s						
OK044	**Pawnee Station**	**56.31**	**335**	P	**P**	**03 37 54.6**	**+0.1**
OK044				IAmb	IAmb	03 37 55.4	
	comp=Z,24nm,1.3s						
OK046	**Pawnee Station**	**56.38**	**335**		**P**	**03 37 54.2**	**-0.8**
OK046				IAmb	IAmb	03 37 56.4	
	comp=Z,17nm,1.1s						
OK050	**Pawnee Station**	**56.41**	**335**	P	**P**	**03 37 55.5**	**+0.3**
OK050				IAmb	IAmb	03 37 56.6	
	comp=Z,28nm,1.3s						
BLOK	**Blackwell**	**56.82**	**335**	P	**P**	**03 37 58.3**	**+0.2**
BLOK				IAmb	IAmb	03 37 59.0	
	comp=Z,18nm,1.0s						
ELIS	**Ellis County**	**57.19**	**332**	P	**P**	**03 38 01.2**	**+0.5**
U32A	**Winter Ranch,**	**57.27**	**333**		**P**	**03 38 01.4**	**+0.2**
OK032	**Salt Plains WL**	**57.28**	**334**	P	**P**	**03 38 01.4**	**+0.1**
KAN14	**Manchester OK**	**57.30**	**334**	P	**P**	**03 38 01.2**	**-0.2**
KAN14				IAmb	IAmb	03 38 02.1	
	comp=Z,8.3nm,0.6s						
KAN01	**Argonia South**	**57.38**	**334**		**P**	**03 38 02.3**	**+0.3**
KAN01				IAmb	IAmb	03 38 02.9	
	comp=Z,17nm,0.9s						
P38A	**Dawn**	**57.93**	**339**	P	**P**	**03 38 03.9**	**-1.9**
P38A				IAmb	IAmb	03 38 05.2	
	comp=Z,7.2nm,0.6s						
CBKS	**Cedar Bluff**	**59.62**	**334**	P	**P**	**03 38 17.5**	**0.0**
ANMO	**Albuquerque**	**59.79**	**326**	P	**P**	**03 38 19.0**	**+0.1**
T25A	**Trinidad**	**60.42**	**329**	P	**P**	**03 38 24.3**	**+1.1**
T25A				IAmb	IAmb	03 38 29.3	
	comp=Z,10nm,1.4s						
SDCO	**Great Sand Dun**	**61.43**	**329**	P	**P**	**03 38 31.2**	**+1.1**
SDCO				IAmb	IAmb	03 38 31.9	
	comp=Z,8.8nm,0.6s						
S22A	**4UR Ranch, Cre**	**62.10**	**328**	P	**P**	**03 38 35.4**	**+0.9**
OGNE	**Ogallala**	**62.37**	**334**	P	**P**	**03 38 36.5**	**+0.5**
MVCO	**Mesa Verde**	**62.58**	**326**	P	**P**	**03 38 37.8**	**+0.1**
MVCO				IAmb	IAmb	03 38 39.5	
	comp=Z,10nm,1.2s						
ISCO	**Idaho Springs**	**63.09**	**330**	P	**P**	**03 38 41.3**	**+0.3**
SMCO	**Snowmass**	**63.27**	**329**	P	**P**	**03 38 42.8**	**+0.4**
SMCO				IAmb	IAmb	03 38 44.7	
	comp=Z,4.8nm,0.6s						
PV15	**Paradox Valley**	**63.41**	**327**	P	**P**	**03 38 43.4**	**+0.2**
PV15				IAmb	IAmb	03 38 45.4	
	comp=Z,9.9nm,0.7s						
PV13	**Radium Mtn., P**	**63.45**	**327**	P	**P**	**03 38 43.7**	**+0.3**
PV13				IAmb	IAmb	03 38 45.7	
	comp=Z,6.2nm,0.7s						
PHWY	**Pilot Hill**	**64.19**	**331**	P	**P**	**03 38 48.9**	**+0.7**
PHWY				IAmb	IAmb	03 38 49.7	
	comp=Z,7.5nm,0.7s						
O20A	**White River Ci**	**64.63**	**329**	P	**P**	**03 38 51.5**	**+0.5**
O20A				IAmb	IAmb	03 38 52.8	
	comp=Z,7.2nm,0.8s						
KNB	**Kanab**	**64.84**	**324**	P	**P**	**03 38 53.5**	**+1.2**
P18A	**Preston Nutter**	**65.28**	**327**	P	**P**	**03 38 55.2**	**-0.1**
MVU	**Marysvale**	**65.54**	**325**	P	**P**	**03 38 58.6**	**+1.7**
MVU				IAmb	IAmb	03 38 59.9	
	comp=Z,9.8nm,0.9s						
RDMU	**Red Mountain**	**65.63**	**328**	P	**P**	**03 38 58.2**	**+0.8**
RDMU				IAmb	IAmb	03 38 59.0	
	comp=Z,7.3nm,0.5s						
K22A	**Casper**	**65.74**	**332**	P	**P**	**03 38 58.9**	**+0.8**
K22A				IAmb	IAmb	03 38 59.5	
	comp=Z,9.9nm,0.6s						
RSSD	**Black Hills**	**65.82**	**334**	P	**P**	**03 38 59.1**	**+0.6**
RSSD				IAmb	IAmb	03 38 59.9	
	comp=Z,6.5nm,0.5s						
BSUT	**Blindstream Ca**	**66.22**	**328**	P	**P**	**03 39 02.5**	**+1.1**
PD31	**Pinedale Array**	**67.27**	**330**	P	**P**	**03 39 08.4**	**+0.6**
PDAR	**Pinedale Array**	**67.27**	**330**	P	**P**	**03 39 07.8**	**+0.1**
	comp=Z,2.2nm,0.5s,baz=120,slow=8.7,SNR=42						
	comp=Z,2.2nm,0.5s						
BW06	**Boulder Array**	**67.27**	**330**	P	**P**	**03 39 08.2**	**+0.4**
HWUT	**Hardware Ranch**	**67.41**	**328**	P	**P**	**03 39 09.1**	**+0.5**
AHID	**Auburn Hatcher**	**68.02**	**329**	P	**P**	**03 39 13.0**	**+0.5**
AHID				IAmb	IAmb	03 39 13.8	
	comp=Z,7.3nm,0.7s						
HVU	**Hansel Valley**	**68.17**	**327**	P	**P**	**03 39 13.6**	**+0.3**
ULM	**Lac du Bonnet**	**68.19**	**343**	P	**P**	**03 39 11.4**	**-1.6**
	comp=Z,4.0nm,0.3s,baz=156,slow=5.9,SNR=12						
	comp=Z,4.0nm,0.3s						
REDW	**Red Top Meadow**	**68.34**	**330**	P	**P**	**03 39 15.4**	**+0.9**
DBIC	**Dimbokro**	**68.52**	**77**	P	**P**	**03 39 14.2**	**-1.7**
	comp=Z,2.7nm,0.8s,baz=269,slow=11,SNR=6.2						
	comp=Z,2.7nm,0.8s						
MOOW	**Moose Ponds**	**68.58**	**330**	P	**P**	**03 39 16.2**	**+0.3**
FXWY	**Fox Creek**	**68.63**	**330**	P	**P**	**03 39 16.5**	**+0.2**
FLWY	**Flagg Ranch**	**68.80**	**330**	P	**P**	**03 39 18.2**	**+0.9**
FLWY				IAmb	IAmb	03 39 19.5	
	comp=Z,16nm,1.1s						
RLMT	**Red Lodge**	**68.91**	**332**	P	**P**	**03 39 18.8**	**+0.9**
RLMT				IAmb	IAmb	03 39 19.5	
	comp=Z,6.5nm,0.5s						
NVAR	**Mina Array Bea**	**69.01**	**322**	P	**P**	**03 39 20.1**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=129,slow=7.2,SNR=2.2						
	comp=Z,0.2nm,0.5s						
LKWY	**Lake**	**69.02**	**331**	P	**P**	**03 39 19.1**	**+0.5**
LKWY				IAmb	IAmb	03 39 21.5	
	comp=Z,9.1nm,0.7s						
SCHQ	**Schefferville**	**69.13**	**2**	P	**P**	**03 39 16.4**	**-2.4**
	comp=Z,1.5nm,0.5s,baz=198,slow=4.3,SNR=8.5						
	comp=Z,1.5nm,0.5s						
GCMT	**Greycliff**	**69.60**	**332**	P	**P**	**03 39 23.0**	**+0.9**
YHL	**Hebgen Lake**	**69.60**	**330**	P	**P**	**03 39 23.2**	**+0.9**
HLID	**Hailey**	**70.28**	**328**	P	**P**	**03 39 27.2**	**+0.9**
MCMT	**McKenzie Canyo**	**70.39**	**329**	P	**P**	**03 39 27.6**	**+0.5**
MFID	**Camas Ranch**	**70.92**	**327**	P	**P**	**03 39 29.4**	**-0.7**
AFDM	**Forest Hills D**	**70.96**	**321**	P	**P**	**03 39 29.2**	**-1.1**
HRY	**Holter Researc**	**71.28**	**331**	P	**P**	**03 39 32.5**	**+0.3**
EGMT	**Eagleton**	**71.34**	**333**	P	**P**	**03 39 33.1**	**+0.7**
EGMT				IAmb	IAmb	03 39 33.7	
	comp=Z,12nm,0.7s						
MSO	**Missoula**	**72.36**	**330**	P	**P**	**03 39 38.9**	**+0.3**
TORD	**Torodi Ar. Bea**	**76.68**	**73**	P	**P**	**03 40 02.4**	**-1.6**
	comp=Z,2.0nm,0.3s,baz=243,slow=4.7,SNR=78						
	comp=Z,2.0nm,0.3s						
ESDC	**Sonseca Array**	**82.07**	**46**	P	**P**	**03 40 32.7**	**0.0**
	comp=Z,2.1nm,0.6s,baz=253,slow=5.7,SNR=24						
	comp=Z,2.1nm,0.6s						
YKA	**Yellowknife Ar**	**84.08**	**341**	P	**P**	**03 40 41.8**	**-0.5**
	comp=Z,4.9nm,0.5s,baz=135,slow=5.4,SNR=138						
	comp=Z,4.9nm,0.5s						
RES	**Resolute Bay**	**90.30**	**354**	P	**P**	**03 41 12.1**	**+0.1**
BVAR	**Borovoye Array**	**130.77**	**30**	PKP	**PKPdf**	**03 47 20.7**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=318,slow=1.9,SNR=4.1						
ASAR	**Alice Springs**	**135.12**	**213**	PKP	**PKPdf**	**03 47 30.6**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=139,slow=2.1,SNR=2.0						
ASAR				SKPbc	**SKPbc**	**03 50 41.8**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=136,slow=4.5,SNR=2.3						
ZALV	**Zalesovo Beam**	**136.17**	**21**	PKP	**PKPdf**	**03 47 31.7**	**-0.1**
	comp=Z,4.8nm,0.7s,baz=310,slow=2.5,SNR=20						
KURBB	**Kurchatov Arra**	**136.18**	**28**	PKP	**PKPdf**	**03 47 31.5**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=305,slow=3.1,SNR=4.7						
WRA	**Warramunga Arr**	**137.88**	**216**	PKP	**PKPdf**	**03 47 36.7**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=129,slow=1.8,SNR=8.7						
WRA				SKP	**SKPbc**	**03 50 51.7**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=138,slow=2.6,SNR=12						
MKAR	**Makanchi Array**	**140.65**	**30**	PKP	**PKPdf**	**03 47 39.9**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=313,slow=2.3,SNR=4.3						
MKAR				SKPbc	**SKPbc**	**03 50 56.1**	**-1.7**
	comp=Z,0.6nm,0.6s,baz=327,slow=3.4,SNR=7.2						
USRK	**Ussuriysk Ar.**	**144.68**	**331**	PKP	**PKPab**	**03 47 46.9**	**+0.2**
	comp=Z,2.2nm,0.4s,baz=19,slow=3.1,SNR=9.7						
MJAR	**Matsushiro Arr**	**146.18**	**316**	PKPbc	**PKPdf**	**03 47 51.9**	**+1.7**
	comp=Z,1.1nm,0.5s,baz=116,slow=2.4,SNR=4.1						
SONM	**Songino Array**	**146.67**	**4**	PKPbc	**PKPdf**	**03 47 52.9**	**+2.0**
	comp=Z,3.3nm,0.5s,baz=323,slow=1.9,SNR=28						
SONM				SKPbc	**SKPbc**	**03 51 12.0**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=311,slow=1.7,SNR=2.4						
KSRS	**Korea Array**	**151.81**	**328**	PKPbc	**PKPbc**	**03 48 06.5**	**+0.7**
	comp=Z,3.4nm,0.5s,baz=18,slow=2.0,SNR=9.0						

IDC 08 03:38:11.0±5.3**,6.°97S**×**129.°67E,h0**^{km}**,mb4.0**/1**,**
mbtmp3.6/3**,ML3.2**/2**,Error ellipse: s-maj=113.4km**
s-min=53.1km az=83.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.66**	**161**	Pn	Pn	03 41 26.2	0.0
	0.1nm,0.3s,baz=342,slow=12,SNR=4.1						
WRA				Sn	Sn	03 44 01.6	+2.7
	0.1nm,0.3s,baz=340,slow=22,SNR=6.1						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**17.09**	**167**	P	P	03 42 13.2	-0.1
	0.1nm,0.3s,baz=344,slow=11,SNR=6.6						
ASAR				S	Sn	03 45 22.6	+0.3
	0.4nm,1.0s,baz=353,slow=31,SNR=1.5						
	0.8nm,0.7s						
STKA	**Stephens Creek**	**27.16**	**157**	P	P	03 43 55.9	-0.4
	1.5nm,0.7s,baz=307,slow=10,SNR=4.6						
	1.5nm,0.7s						

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*GCMT **08** 03:39:42.7±0.4, 15.°93N±0.°03×93.°48W±0.°03, h110^{km}±5^{km}, MW4.9/81, Moment Tensor Solution. s8,c10; s81,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.91±.10; $M_{\theta\theta}$-0.94±.11; $M_{\phi\phi}$1.86±.11; $M_{r\theta}$0.98±.06; $M_{\theta\phi}$-1.47±.13; $M_{\phi r}$-0.81±.07; Best double couple: $M_0$2.41500×10^{16} NP1:ϕ_s300.00000°,δ78.00000°,λ-141.00000°. NP2: ϕ_s200.00000°,δ52.00000°,λ-15.00000°. Principal axes: T 2.8370, Plg17.0000°, Azm65.0000°; N -0.8410, Plg49.0000°, Azm314.0000°; P -1.9930, Plg36.0000°, Azm167.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MEX **08** 03:39:44.8±0.6, 15.°87N×93.°58W, h103^{km}±5^{km}, MD4.7*

*NEIC **08** 03:39:44.7±1.4, 15.°92N±0.°05×93.°47W±0.°05, h100^{km}±6^{km}, mb4.8/274, Md4.7/114(MEX), Error ellipse: s-maj=7.9km s-min=5.8km az=223.0*

*IDC **08** 03:39:44.4±0.6, 16.°04N×93.°08W, h106^{km}±4^{km}, mb4.0/21, mbtmp4.4/22, MS3.4/12, Error ellipse: s-maj=16.8km s-min=9.3km az=61.0*

*GCG **08** 03:39:45.4±2.6, 16.°02N×93.°32W, h105^{km}±999^{km}, MD4.9*

*INET **08** 03:39:48.7±1.2, 16.°09N×92.°80W, h226^{km}±20^{km}, MW3.8*

*SNET **08** 03:39:53.2±3.2, 16.°01N×92.°27W, h158^{km}±27^{km}, ML4.8*

ISC 08 03:39:43.4±0.3**, 15.°82N**±0.°03×**93.°51W**±0.°03**, h103**^{km}±3^{km}**,**
h103^{km}**:pP-P, n614,** σ1§**89**/633**, mb4.7**/112**, 1D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**0.30**	**111**		**Pn**	**03 39 58.4**	**+0.1**
PCIG					**Sn**	**03 40 09.9**	**+0.5**
PCIG		**0.30**	**111**	*i* P	**Pn**	**03 39 58.4**	**+0.1**
PCIG				*i* S	**Sn**	**03 40 09.9**	**+0.5**
TGIG		**1.03**	**21**		**Pn**	**03 40 04.4**	**0.0**
TGIG					**Sn**	**03 40 19.5**	**-0.7**
TGIG		**1.03**	**21**	*i* P	**Pn**	**03 40 04.4**	**0.0**
TGIG				*i* S	**Sn**	**03 40 19.5**	**-0.7**
TGBT	**Tuxtla Gutierr**	**1.04**	**23**		**Pn**	**03 40 04.7**	**+0.2**
TGBT					**Sn**	**03 40 19.6**	**-0.6**
TGBT	**Tuxtla Gutierr**	**1.04**	**23**	*e*P	**Pn**	**03 40 04.7**	**+0.2**
TGBT				*e*S	**Sn**	**03 40 19.6**	**-0.6**
NILT	**Santiago Nilte**	**1.30**	**305**	*e*P	**Pn**	**03 40 07.0**	**-0.4**
NILT				*e*S	**Sn**	**03 40 23.8**	**-1.7**
CCIG	**Comitan**	**1.40**	**70**		**Pn**	**03 40 09.4**	**+0.7**
CCIG				Sn	**Sn**	**03 40 27.8**	**-0.1**
CCIG	**Comitan**	**1.40**	**70**	*e*P	**Pn**	**03 40 09.7**	**+0.9**
CCIG				*e*S	**Sn**	**03 40 29.4**	**+1.5**
PATR	**El Naranjo**	**1.41**	**119**	*e*P	**Pn**	**03 40 09.7**	**+0.7**
PATR				*e*S	**Sn**	**03 40 29.9**	**+1.6**
PAVE	**Pavencul**	**1.43**	**116**	*e*P	**Pn**	**03 40 10.4**	**+1.2**
PAVE				*e*S	**Sn**	**03 40 30.2**	**+1.6**
THIG		**1.50**	**127**		**Pn**	**03 40 11.3**	**+1.5**
THIG					**Sn**	**03 40 32.6**	**+2.8**
THIG		**1.50**	**127**	*e*P	**Pn**	**03 40 11.3**	**+1.5**
THIG				*e*S	**Sn**	**03 40 32.6**	**+2.8**
CHUJ	**Union Juarez**	**1.53**	**118**	*e*P	**Pn**	**03 40 11.4**	**+1.0**
CHUJ				*e*S	**Sn**	**03 40 32.5**	**+1.6**
CMIG	**Matias Romero**	**1.83**	**314**	P	**Pn**	**03 40 14.0**	**+0.1**
	289nm,0.4s,baz=127,slow=10,SNR=1119						
CMIG				S	**Sn**	**03 40 35.9**	**-1.2**
	3μm,0.4s,baz=70,slow=19,SNR=43						
CMIG	**Matias Romero**	**1.83**	**314**		**Pn**	**03 40 13.7**	**-0.2**
CMIG					**Sn**	**03 40 35.5**	**-1.7**
CMIG	**Matias Romero**	**1.83**	**314**	*e*P	**Pn**	**03 40 13.7**	**-0.2**
CMIG				*i* S	**Sn**	**03 40 35.5**	**-1.7**
HUEH	**Huehuetenango**	**2.00**	**104**		**Pn**	**03 40 17.9**	**+1.6**
HUEH	**Huehuetenango**	**2.00**	**104**	*e*P	**Pn**	**03 40 18.1**	**+1.8**
HUEH				*e*S	**Sn**	**03 40 41.8**	**+0.4**
HUEH				IAML		03 40 46.4	
	comp=Z,7μm,0.7s						
RTAL	**Retalhuleu**	**2.17**	**126**		**Pn**	**03 40 20.4**	**+2.1**
VHSA	**Villahermosa**	**2.22**	**14**	*e*S	**Sn**	**03 40 47.4**	**+1.2**
TUIG	**Tuzandepetl**	**2.37**	**339**	*e*P	**Pn**	**03 40 20.1**	**-0.8**
TUIG				*i* S	**Sn**	**03 40 47.5**	**-2.2**
MIHL	**Minatitlan**	**2.38**	**336**	*e*P	**Pn**	**03 40 19.9**	**-1.1**
MIHL				*e*S	**Sn**	**03 40 47.6**	**-2.2**
SULM	**Suchitepequez,**	**2.41**	**128**	*e*P	**Pn**	**03 40 24.2**	**+2.8**
HUIG	**Huatulco**	**2.50**	**269**		**Pn**	**03 40 20.4**	**-2.3**
HUIG					**Sn**	**03 40 48.4**	**-4.3**
HUIG	**Huatulco**	**2.50**	**269**	*e*P	**Pn**	**03 40 20.4**	**-2.3**
HUIG				*e*S	**Sn**	**03 40 48.4**	**-4.3**
PANG	**Puerto Angel**	**2.86**	**267**		**Pn**	**03 40 25.1**	**-2.2**
PANG					**Sn**	**03 40 55.6**	**-5.6**
PANG	**Puerto Angel**	**2.86**	**267**	*e*P	**Pn**	**03 40 25.1**	**-2.2**
PANG				*e*S	**Sn**	**03 40 55.6**	**-5.6**
NEUV	**Arroyo Zacate**	**2.90**	**311**	*e*P	**Pn**	**03 40 27.3**	**-0.5**
FUG	**Fuego 3**	**2.91**	**117**	*e*P	**Pn**	**03 40 30.7**	**+2.5**
PMUV	**Sontecomapan**	**3.12**	**331**	*e*P	**Pn**	**03 40 28.6**	**-2.3**
PMUV				*i* S	**Sn**	**03 41 03.4**	**-4.2**
NBG	**Las Nubes**	**3.29**	**111**	*e*P	**Pn**	**03 40 36.1**	**+2.8**
NBG				*e*S	**Sn**	**03 41 05.8**	**-6.0**
OXBJ	**Oaxaca**	**3.33**	**292**		**Pn**	**03 40 33.0**	**-0.8**
OXBJ					**Sn**	**03 41 09.5**	**-3.2**
OXBJ	**Oaxaca**	**3.33**	**292**	*e*P	**Pn**	**03 40 33.0**	**-0.8**
OXBJ				*e*S	**Sn**	**03 41 09.5**	**-3.2**
OXIG	**Oaxaca**	**3.34**	**292**		**Pn**	**03 40 34.7**	**+0.8**
OXIG					**Sn**	**03 41 11.1**	**-1.8**
VHO	**Vista Hermosa**	**3.34**	**292**	*e*P	**Pn**	**03 40 34.7**	**+0.8**
VHO				*e*S	**Sn**	**03 41 11.1**	**-1.8**
PEIG	**Puerto Escondi**	**3.50**	**273**		**Pn**	**03 40 34.0**	**-2.0**
PEIG					**Sn**	**03 41 13.2**	**-3.5**
PEIG	**Puerto Escondi**	**3.50**	**273**	*e*P	**Pn**	**03 40 34.0**	**-2.0**
PEIG				*i* S	**Sn**	**03 41 13.2**	**-3.5**
PETF	**Flores**	**3.66**	**72**		**Pn**	**03 40 38.9**	**+0.8**
PETF	**Flores**	**3.66**	**72**	*e*P	**Pn**	**03 40 38.9**	**+0.8**
PETF				*e*S	**Sn**	**03 41 19.2**	**-1.3**
SCIG	**Sabancuy**	**3.84**	**35**	*e*P	**Pn**	**03 40 40.2**	**-0.2**
SCIG				*e*S	**Sn**	**03 41 22.2**	**-2.4**
YOIG	**Yosondua**	**4.01**	**286**		**Pn**	**03 40 43.1**	**0.0**
YOIG					**Sn**	**03 41 26.9**	**-2.4**
YOIG	**Yosondua**	**4.01**	**286**	*e*P	**Pn**	**03 40 43.1**	**0.0**
YOIG				*e*S	**Sn**	**03 41 26.9**	**-2.4**
TOIG	**Toxpalan**	**4.09**	**304**		**Pn**	**03 40 44.4**	**+0.5**
TOIG					**Sn**	**03 41 26.1**	**-4.7**
TOIG	**Toxpalan**	**4.09**	**304**	*e*P	**Pn**	**03 40 44.4**	**+0.5**
TOIG				*e*S	**Sn**	**03 41 26.1**	**-4.7**
ESQI	**Esquipulas**	**4.21**	**107**		**Pn**	**03 40 46.2**	**+0.6**
ESQI	**Esquipulas**	**4.21**	**107**	*e*S	Sn	03 41 22.6	-11
CEVE	**Cerro Verde**	**4.25**	**117**	*e*P	**Pn**	**03 40 48.4**	**+2.2**
CEVE				*e*S	**Sn**	**03 41 29.1**	**-5.7**
MTO3	**Montecristo**	**4.25**	**109**	*e*P	**Pn**	**03 40 46.8**	**+0.6**
PNIG	**Pinotepa**	**4.48**	**278**		**Pn**	**03 40 47.3**	**-1.8**
PNIG					**Sn**	**03 41 32.6**	**-7.5**
PNIG	**Pinotepa**	**4.48**	**278**	*i* P	**Pn**	**03 40 47.3**	**-1.8**
PNIG				*i* S	**Sn**	**03 41 32.6**	**-7.5**
TPIG	**Tehuac#an**	**4.50**	**306**		**Pn**	**03 40 50.5**	**+0.9**
TPIG					**Sn**	**03 41 38.3**	**-2.6**
TPIG	**Tehuac#an**	**4.50**	**306**	*e*P	**Pn**	**03 40 50.5**	**+0.9**
TPIG				*i* S	**Sn**	**03 41 38.3**	**-2.6**
OZST	**Orizaba**	**4.57**	**312**	*e*P	**Pn**	**03 40 49.4**	**-1.1**
OZST				*e*S	**Sn**	**03 41 39.0**	**-3.6**
SNET	**Serv Nac Est T**	**4.65**	**117**		**Pn**	**03 40 53.5**	**+2.0**
JAUV	**Jalcomulco**	**4.73**	**319**	*e*P	**Pn**	**03 40 50.6**	**-1.8**
JAUV				*i* S	**Sn**	**03 41 42.2**	**-4.0**
LVIG	**Laguna Verde**	**4.77**	**325**	*e*P	**Pn**	**03 40 51.1**	**-2.0**
LVIG				*e*S	**Sn**	**03 41 41.6**	**-5.7**
FTIG	**Fresnillo de T**	**4.89**	**296**		**Pn**	**03 40 56.1**	**+1.3**
FTIG					**Sn**	**03 41 45.9**	**-4.4**
FTIG	**Fresnillo de T**	**4.89**	**296**	*e*P	**Pn**	**03 40 56.1**	**+1.3**
FTIG				*i* S	**Sn**	**03 41 45.9**	**-4.4**
P5NO	**Presa 5 de nov**	**4.94**	**111**	*e*P	**Pn**	**03 40 54.8**	**-0.6**
MGIG	**Malinaltepec**	**5.11**	**287**		**Pn**	**03 40 58.4**	**+0.5**
MGIG					**Sn**	**03 41 52.2**	**-3.6**
MGIG	**Malinaltepec**	**5.11**	**287**	*i* P	**Pn**	**03 40 58.4**	**+0.5**
MGIG				*e*S	**Sn**	**03 41 52.2**	**-3.6**
TLIG	**Tlapa**	**5.15**	**290**		**Pn**	**03 40 59.3**	**+1.0**
TLIG	**Tlapa**	**5.15**	**290**	*i* P	**Pn**	**03 40 58.9**	**+0.7**
TLIG				*e*S	**Sn**	**03 41 54.4**	**-2.2**
COEB	**Comit de Eme**	**5.34**	**115**	*e*P	**Pn**	**03 41 01.0**	**+0.1**
PACA	**Pacayal**	**5.54**	**114**	IAML		03 41 56.7	
	comp=Z,1μm,0.8s						
CXUV	**Coxquihui**	**5.82**	**319**	*i* P	**Pn**	**03 41 06.7**	**-0.6**
CXUV				*i* S	**Sn**	**03 42 08.6**	**-4.1**
DAIG	**Los Arroyos**	**6.01**	**282**		**Pn**	**03 41 09.2**	**-0.7**
DAIG					**Sn**	**03 42 14.6**	**-2.8**
DAIG	**Los Arroyos**	**6.01**	**282**	*i* P	**Pn**	**03 41 09.2**	**-0.7**
DAIG				*e*S	**Sn**	**03 42 14.6**	**-2.8**
AMVM	**AMECAMECA**	**6.02**	**304**		**Pn**	**03 41 10.3**	**+0.1**
AMVM					**Sn**	**03 42 16.8**	**-1.2**
AMVM	**AMECAMECA**	**6.02**	**304**	*e*P	**Pn**	**03 41 13.0**	**+2.8**
AMVM				*e*S	**Sn**	**03 42 16.8**	**-1.2**
YAIG	**Yautepec**	**6.11**	**301**		**Pn**	**03 41 13.3**	**+1.9**
YAIG					**Sn**	**03 42 16.2**	**-3.8**
YAIG	**Yautepec**	**6.11**	**301**	*i* P	**Pn**	**03 41 13.3**	**+1.9**
YAIG				*i* S	**Sn**	**03 42 16.2**	**-3.8**
MPVM	**San Francisco**	**6.24**	**303**	*e*P	**Pn**	**03 41 16.0**	**+2.9**
THVM	**De Xico**	**6.26**	**304**	*e*P	Pn	03 41 07.4	-6.1
TGUH	**Tegucigalpa,Un**	**6.28**	**105**	Pn	**Pn**	**03 41 15.4**	**+1.8**
TGUH	**Tegucigalpa,Un**	**6.28**	**105**	*e*P	**Pn**	**03 41 14.9**	**+1.3**
PLIG	**Platanillo**	**6.28**	**295**		**Pn**	**03 41 15.2**	**+1.7**
PLIG					**Sn**	**03 42 18.9**	**-5.1**
PLIG	**Platanillo**	**6.28**	**295**	*e*P	**Pn**	**03 41 15.2**	**+1.7**
PLIG				*i* S	**Sn**	**03 42 18.9**	**-5.1**
TLVM	**San Miguel Top**	**6.36**	**303**	*e*P	**Pn**	**03 41 17.7**	**+2.8**
PBVM	**Pinon**	**6.42**	**305**		**Pn**	**03 41 16.3**	**+0.8**
PBVM	**Pinon**	**6.42**	**305**	*e*P	**Pn**	**03 41 16.3**	**+0.8**
UNM	**Universidad Na**	**6.44**	**304**	*e*S	**Sn**	**03 42 25.9**	**-2.2**
AOVM	**Tlapan**	**6.52**	**303**	*e*P	**Pn**	**03 41 19.4**	**+2.2**
AOVM				*e*S	**Sn**	**03 42 24.5**	**-5.9**
PTVM	**Pico Tres Padr**	**6.53**	**306**		**Pn**	**03 41 16.3**	**-0.9**
PTVM	**Pico Tres Padr**	**6.53**	**306**	*e*P	**Pn**	**03 41 16.3**	**-0.9**
CAIG	**El Cayaco**	**6.60**	**282**		**Pn**	**03 41 17.2**	**-0.7**
CAIG					**Sn**	**03 42 28.1**	**-3.6**
CAIG	**El Cayaco**	**6.60**	**282**	*e*P	**Pn**	**03 41 17.2**	**-0.7**
CAIG				*e*S	**Sn**	**03 42 28.1**	**-3.6**
TEIG	**Tepich**	**6.63**	**48**	Pn	**Pn**	**03 41 16.9**	**-1.4**
TEIG	**Tepich**	**6.63**	**48**	*e*P	**Pn**	**03 41 17.1**	**-1.3**
TOVM	**TOLUCA**	**6.82**	**301**		**Pn**	**03 41 22.3**	**+1.1**
TOVM					**Sn**	**03 42 32.1**	**-5.4**
TOVM	**TOLUCA**	**6.82**	**301**	*e*P	**Pn**	**03 41 23.6**	**+2.4**
TOVM				*e*S	**Sn**	**03 42 32.1**	**-5.4**
DEIG	**Demacu**	**6.89**	**311**	*e*P	**Pn**	**03 41 23.9**	**+1.8**
DEIG				*e*S	**Sn**	**03 42 35.0**	**-4.1**
DHIG	**Demacu**	**6.89**	**311**		**Pn**	**03 41 23.9**	**+1.8**
DHIG					**Sn**	**03 42 35.0**	**-4.1**
ARIG	**Puente Sto Nin**	**6.99**	**292**		**Pn**	**03 41 24.6**	**+1.5**
ARIG					**Sn**	**03 42 37.4**	**-3.7**
ARIG	**Puente Sto Nin**	**6.99**	**292**	*i* P	**Pn**	**03 41 24.6**	**+1.5**
ARIG				*e*S	**Sn**	**03 42 37.4**	**-3.7**
CRIN	**San Cristobal**	**6.99**	**115**		**Pn**	**03 41 25.6**	**+2.4**
CTUV	**Llano Grande**	**7.26**	**322**	*e*P	**Pn**	**03 41 22.7**	**-4.2**
CTUV				*e*S	**Sn**	**03 42 43.8**	**-4.0**
CNGN	**Cerro Negro**	**7.38**	**116**		**Pn**	**03 41 29.5**	**+0.9**
ZIIG	**Zihuatanejo**	**7.83**	**284**		**Pn**	**03 41 34.9**	**+0.3**
ZIIG					**Sn**	**03 42 58.0**	**-3.6**
ZIIG	**Zihuatanejo**	**7.83**	**284**	*i* P	**Pn**	**03 41 34.9**	**+0.3**
ZIIG				*e*S	**Sn**	**03 42 58.0**	**-3.6**
MATN	**Matagalpa**	**7.89**	**110**		**Pn**	**03 41 38.5**	**+3.0**
MOIG	**Morelia**	**8.26**	**299**		**Pn**	**03 41 43.2**	**+2.5**
MOIG	**Morelia**	**8.26**	**299**	*e*P	**Pn**	**03 41 42.3**	**+1.6**
MOIG				*e*S	**Sn**	**03 43 15.9**	**+3.3**
BOAB	**BOACO BROADBAN**	**8.31**	**113**	Pn	**Pn**	**03 41 42.3**	**+1.1**
ACON	**Acoyapa**	**8.95**	**114**		**Pn**	**03 41 51.2**	**+1.3**
HZTE	**Horizontes, Gu**	**9.22**	**122**		**Pn**	**03 41 55.2**	**+1.6**
ORTG	**Ortega, Santa**	**9.53**	**124**	Pn	**Pn**	**03 42 00.0**	**+2.1**
ORTG	**Ortega, Santa**	**9.53**	**124**	*e*P	**Pn**	**03 42 00.1**	**+2.3**
DUNO	**Dulce Nombre,**	**9.67**	**125**		**Pn**	**03 42 01.6**	**+1.9**
MMIG	**Aquila**	**9.72**	**286**		**Pn**	**03 42 00.6**	**+0.2**
MMIG					**Sn**	**03 43 41.0**	**-6.7**
MMIG	**Aquila**	**9.72**	**286**	*e*P	**Pn**	**03 42 00.6**	**+0.2**
MMIG				*e*S	**Sn**	**03 43 41.0**	**-6.7**
JTS	**Las Juntas de**	**9.98**	**122**	P	**Pn**	**03 42 05.2**	**+1.3**
	comp=Z,40nm,0.3s,baz=320,slow=6.6,SNR=45						
JTS				S	**Sn**	**03 43 49.9**	**-4.2**
	comp=Z,3.8nm,0.4s,baz=121,slow=23,SNR=1.2						
JTS	**Las Juntas de**	**9.98**	**122**	Pn	**Pn**	**03 42 05.5**	**+1.6**
JTS	**Las Juntas de**	**9.98**	**122**	*e*P	**Pn**	**03 42 04.9**	**+1.0**
COVE	**Coope Vega, Sa**	**10.21**	**119**		**Pn**	**03 42 07.9**	**+0.9**
JUBC	**Volcan de Coli**	**10.27**	**292**	*e*P	**Pn**	**03 42 11.1**	**+3.0**
JUBC				*e*S	**Sn**	**03 43 59.1**	**-2.4**
COIG	**Colima**	**10.27**	**290**	*e*P	**Pn**	**03 42 04.7**	**-3.2**
COIG				*e*S	**Sn**	**03 44 00.9**	**-0.3**
EZ5V		**10.29**	**292**		**Sn**	**03 43 59.8**	**-2.0**
EZ5V		**10.29**	**292**	*e*P	**Pn**	**03 42 12.8**	**+4.5**
EZ5V				*e*S	**Sn**	**03 43 59.8**	**-2.0**
LAFE	**Finca La Fe, P**	**10.29**	**124**	*e*P	**Pn**	**03 42 09.2**	**+1.1**
MNGA	**Volcan de Coli**	**10.30**	**292**	*e*P	**Pn**	**03 42 11.1**	**+2.7**
MNGA				*e*S	**Sn**	**03 44 04.2**	**+2.1**
INCO	**Volcan de Coli**	**10.30**	**292**	*e*P	**Pn**	**03 42 12.0**	**+3.4**

INCO				*e*S	Sn	03 44 00.0	-2.4
SOMAC	Volcano de Col	10.33	292	*e*P	Pn	03 42 11.6	+2.7
SOMAC				*e*S	Sn	03 44 03.7	+0.8
CDAR	Ciudad de Arme	10.50	289	*e*P	Pn	03 42 10.2	-0.7
CDAR				*e*S	Sn	03 44 06.0	-0.5
R15V		10.53	290		Sn	03 44 06.0	-1.5
R15V		10.53	290	*e*P	Pn	03 42 14.0	+2.5
R15V				*e*S	Sn	03 44 06.0	-1.5
JACO	JACO, Garabito	10.58	124	Pn	Pn	03 42 13.6	+1.6
HDC	Heredia	10.83	121	*e*P	Pn	03 42 16.8	+1.3
LCR2	La Lucha 2	11.06	122	*e*P	Pn	03 42 20.0	+1.2
PEZE	Perez Zeledon,	11.53	123		Pn	03 42 26.2	+1.3
CJM	Chamela	11.59	290	*e*P	Pn	03 42 26.9	+1.3
SOR	Soroa	12.10	53	Pn	Pn	03 42 30.4	-1.9
BRU2	Volcan	12.66	122	Pn	Pn	03 42 39.6	-0.4
BRU2	Volcan	12.66	122	*e*P	Pn	03 42 40.8	+0.8
833A	Chaparral WMA,	13.59	337	P	Pn	03 42 52.6	+0.8
	baz=155,SNR=14						
HKT	Hockley	14.23	352	Pn	Pn	03 43 00.6	+0.4
435B	Jarrell	15.36	347	IAmb	IAmb	03 43 21.6	
	comp=Z,41nm,0.6s						
435B	Jarrell	15.36	347	P	Pn	03 43 15.0	+0.5
	baz=165						
JCT	Junction City	15.70	340		P	03 43 20.2	-0.5
JCT				IAmb	IAmb	03 43 55.7	
	comp=Z,53nm,0.8s						
JCT	Junction City	15.70	340	P	Pn	03 43 19.9	+1.1
	baz=157,SNR=8.7						
NATX	Nacogdoches	15.91	356	P	Pn	03 43 20.8	-0.6
NATX				IAmb	IAmb	03 43 23.9	
	comp=Z,55nm,1.4s						
NATX	Nacogdoches	15.91	356	P	Pn	03 43 21.6	+0.2
	baz=176						
BRAL	Brewton	16.38	20	P	Pn	03 43 27.6	+0.4
BRAL	Brewton	16.38	20	P	P	03 43 28.8	+0.5
	baz=202,SNR=9.2						
TXAR	Lajitas Array	16.39	327	P	P	03 43 29.9	+1.5
	comp=Z,1.6nm,0.5s,baz=150,slow=11,SNR=20						
WHTX	Lake Whitney,	16.50	348	IAmb	IAmb	03 44 04.3	
	comp=Z,45nm,0.8s						
WHTX	Lake Whitney,	16.50	348	P	Pn	03 43 29.0	+0.3
	baz=166						
VBMS	Vicksburg	16.55	9	P	Pn	03 43 29.5	+0.2
VBMS				IAmb	IAmb	03 43 31.0	
	comp=Z,81nm,1.1s						
VBMS	Vicksburg	16.55	9	P	Pn	03 43 29.2	-0.2
	baz=190						
DWPF	Disney Wildern	16.57	40	P	Pn	03 43 30.2	+0.6
DWPF	Disney Wildern	16.57	40	P	Pn	03 43 29.4	-0.2
	baz=225						
FW14	Alvarado	16.85	349	IAmb	IAmb	03 44 06.3	
	comp=Z,58nm,0.9s						
FW07	Weatherford	17.25	348	IAmb	IAmb	03 44 12.6	
	comp=Z,52nm,0.7s						
Z41A	Richland Creek	17.38	2	P	P	03 43 37.9	-1.3
FW06	Azle	17.47	349	IAmb	IAmb	03 44 15.3	
	comp=Z,65nm,1.2s						
ABTX	Abilene, Hawle	17.64	343	IAmb	IAmb	03 44 17.1	
	comp=Z,34nm,0.8s						
ABTX	Abilene, Hawle	17.64	343	P	Pn	03 43 42.8	+0.2
	baz=160,SNR=7.6						
FW03	Perrin-Whitt E	17.64	347	IAmb	IAmb	03 44 17.2	
	comp=Z,86nm,0.9s						
WLAR	White Oak Lake	17.80	1	IAmb	IAmb	03 44 30.6	
	comp=Z,56nm,1.2s						
LPIG	La Paz	17.80	300	P	Pn	03 43 49.7	+5.1
	comp=Z,13nm,0.3s,baz=139,slow=9.3,SNR=1.2						
LPIG				S	S	03 47 10.2	+6.8
	comp=Z,26nm,0.3s,baz=147,slow=4.4,SNR=2.2						
TIGA	Tifton	18.00	28	P	P	03 43 46.4	+0.4
	baz=212,SNR=11						
CCAR	Cane Creek	18.09	5	IAmb	IAmb	03 43 51.0	
	comp=Z,57nm,0.9s						
LRAL	Lakeview Retre	18.13	18	IAmb	IAmb	03 43 50.8	
	comp=Z,46nm,1.0s						
LRAL	Lakeview Retre	18.13	18	P	P	03 43 47.3	-0.2
	baz=200,SNR=16						
ODSA	Odessa	18.20	335	IAmb	IAmb	03 44 23.9	
	comp=Z,100nm,1.4s						
Y45A	Yeager Farm, C	18.33	11	IAmb	IAmb	03 43 52.5	
	comp=Z,92nm,1.3s						
LOOK	Love County	18.40	350	IAmb	IAmb	03 44 34.2	
	comp=Z,33nm,0.8s						
WTFS	Witchita Falls	18.43	347	IAmb	IAmb	03 44 26.6	
	comp=Z,43nm,1.1s						
POST	Post	18.64	339	IAmb	IAmb	03 44 24.6	
	comp=Z,20nm,0.8s						
MIAR	Mount Ida	18.65	360	IAmb	IAmb	03 43 59.5	
	comp=Z,31nm,0.7s						
MIAR	Mount Ida	18.65	360	P	P	03 43 53.3	+0.1
	baz=180,SNR=27						
X37A	Clayton	18.77	355	IAmb	IAmb	03 44 32.5	
	comp=Z,64nm,1.3s						
SJCC	San Jacinto, C	18.81	106	*e*P	P	03 43 53.7	-1.4
UALR	University of	18.91	3	IAmb	IAmb	03 43 57.3	
	comp=Z,26nm,0.7s						
OXF	Oxford	18.98	10	P	P	03 43 57.6	+0.9
	baz=192,SNR=8.6						
DBBC	Dabeiba	19.06	115	*e*P	Pn	03 44 00.5	+0.6
X34A	Smith Ranch, M	19.11	349	IAmb	IAmb	03 44 41.3	
	comp=Z,39nm,0.6s						
MNTX	Cornudas Mount	19.16	328	P	P	03 43 59.1	+0.3
	baz=143,SNR=9.4						
UREC	San Jos de Ur	19.32	112	*e*P	P	03 43 58.8	-1.9
WMOK	Wichita Mounta	19.43	347	P	P	03 44 01.8	+0.1
	baz=164,SNR=12						
W35A	Tecumseh	19.49	352	IAmb	IAmb	03 44 37.3	
	comp=Z,78nm,1.1s						
PLAL	Pickwick Lake	19.70	13	IAmb	IAmb	03 44 09.7	
	comp=Z,94nm,1.4s						
CBOC	Ciudad Bolivar	19.81	118	*e*P	P	03 44 06.7	+0.6
Y52A	Lilburn	19.89	24	IAmb	IAmb	03 44 11.6	
	comp=Z,53nm,0.7s						
MSTX	Muleshoe	19.91	337	IAmb	IAmb	03 44 12.6	
	comp=Z,25nm,0.8s						
MSTX	Muleshoe	19.91	337	P	P	03 44 07.1	0.0
	baz=153,SNR=11						
FPAL	Fort Paine	19.95	19	IAmb	IAmb	03 44 12.7	
	comp=Z,34nm,0.7s						
FCAR	Ozark Folk Cen	20.03	3	IAmb	IAmb	03 44 43.8	
	comp=Z,36nm,1.2s						
ZARC	Zaragoza, Cauc	20.04	112	*e*P	P	03 44 06.4	-2.0
HELC	Santa Helena	20.06	116	P	P	03 44 08.6	-0.5
HELC	Santa Helena	20.06	116	*e*P	P	03 44 08.0	-1.0
TUL1	Leonard	20.12	355	IAmb	IAmb	03 44 47.4	
	comp=Z,28nm,0.8s						
TUL1	Leonard	20.12	355	P	P	03 44 10.0	+0.9
	baz=173,SNR=8.7						
DEOK	Depew	20.12	353	P	P	03 44 09.6	+0.4
DEOK				IAmb	IAmb	03 44 45.0	
	comp=Z,24nm,0.8s						
OK030	Cody Creek RV	20.24	352	IAmb	IAmb	03 44 46.9	
	comp=Z,90nm,1.3s						
LCAR	Lake Charles	20.28	6	P	P	03 44 10.7	-0.2
LCAR				IAmb	IAmb	03 44 46.0	
	comp=Z,42nm,1.2s						
RLO	Rose Lookout	20.31	356	IAmb	IAmb	03 44 47.4	
	comp=Z,21nm,0.8s						
OK034	N. Norfolk Rd.	20.32	352	IAmb	IAmb	03 44 47.0	
	comp=Z,37nm,0.7s						
OK053	SW of W Deep R	20.33	352	IAmb	IAmb	03 44 48.0	
	comp=Z,92nm,1.3s						
AMTX	Amarillo	20.36	340	P	P	03 44 12.1	+0.3
	baz=157						
HHAR	Hobbs	20.39	359	IAmb	IAmb	03 44 47.7	
	comp=Z,35nm,1.1s						
PAPH	Port-au-Prince	20.44	79	P	P	03 44 12.8	0.0
QUOK	Quay	20.47	353	IAmb	IAmb	03 44 49.8	
	comp=Z,54nm,1.1s						
SWET	Sewanee	20.48	18	IAmb	IAmb	03 44 50.5	
	comp=Z,42nm,0.8s						
YOTC	Yotoco, Valle	20.57	123	*e*P	P	03 44 15.4	+1.1
CRJC	Cerrejon, Guaj	20.62	101	*e*P	P	03 44 16.0	+1.2
W50A	Signal Mountai	20.66	19	IAmb	IAmb	03 44 20.8	
	comp=Z,85nm,1.2s						
OK044	Pawnee Station	20.68	352	IAmb	IAmb	03 44 52.8	
	comp=Z,96nm,1.2s						
GUY2C	Guyana, Caldas	20.69	119	*e*P	P	03 44 16.0	+0.1
OK046	Pawnee Station	20.72	352	IAmb	IAmb	03 44 52.8	
	comp=Z,59nm,1.0s						
JAMC	Jamundi, Valle	20.77	125	*e*P	P	03 44 17.4	+0.8
OK045	Pawnee Station	20.77	352	IAmb	IAmb	03 44 53.4	
	comp=Z,70nm,0.9s						
PTBC	PUERTO BERRIO,	20.82	114	*e*P	P	03 44 14.7	-2.2
ELIS	Ellis County	20.84	346	IAmb	IAmb	03 44 54.3	
	comp=Z,67nm,1.2s						
WVT	Waverly	20.86	13	P	P	03 44 16.3	-0.8
WVT				IAmb	IAmb	03 44 22.3	
	comp=Z,28nm,0.6s						
WVT	Waverly	20.86	13	P	P	03 44 17.8	+0.8
	baz=195						
NORC	Norcasia	20.94	117	*e*P	P	03 44 17.5	-0.7
HODGE	Hodges	20.95	27	IAmb	IAmb	03 44 19.3	
	comp=Z,30nm,0.8s						
CROK	Carrier	20.99	350	P	P	03 44 19.2	+0.8
NHSC	New Hope	21.02	33	P	P	03 44 20.6	+1.8
NHSC	New Hope	21.02	33	P	P	03 44 20.2	+1.3
	baz=218						
BBAC	Balboa, Cauca	21.09	129	*e*P	P	03 44 21.9	+1.9
121A	Cookes Peak, D	21.09	325	IAmb	IAmb	03 44 27.3	
	comp=Z,27nm,0.9s						
121A	Cookes Peak, D	21.09	325	P	P	03 44 22.3	+2.4
	baz=138,SNR=13						
BLOK	Blackwell	21.12	352	IAmb	IAmb	03 44 57.9	
	comp=Z,68nm,1.0s						
CPCT	Cooper Cave	21.14	21	IAmb	IAmb	03 44 56.5	
	comp=Z,71nm,1.5s						
CLTN	Cedars of Leba	21.18	16	IAmb	IAmb	03 44 55.6	
	comp=Z,28nm,1.0s						
POPC	Popayan, Colom	21.19	127	*e*P	P	03 44 22.6	+1.6
OK035	E0210 Rd and N	21.32	348	IAmb	IAmb	03 44 24.4	
	comp=Z,36nm,0.5s						
BG3	Lake Jocassee	21.32	24	IAmb	IAmb	03 44 39.2	
	comp=Z,42nm,0.6s						
KAN13	South Haven SW	21.41	351	IAmb	IAmb	03 45 00.2	
	comp=Z,28nm,0.8s						
KAN14	Manchester OK	21.43	350	IAmb	IAmb	03 44 24.6	
	comp=Z,14nm,0.5s						
SDDR	Presa de Saban	21.43	78	P	P	03 44 23.5	0.0
SDDR				IAmb	IAmb	03 44 25.7	
	comp=Z,55nm,0.8s						
JSC	Jenkinsville	21.44	29	IAmb	IAmb	03 44 24.6	
	comp=Z,24nm,0.7s						
OTAV	Otavalo	21.46	135	P	P	03 44 25.4	+1.2
KAN17	Caldwell West	21.48	351	IAmb	IAmb	03 45 01.8	
	comp=Z,21nm,0.7s						
ORTC	Ortega, Tolima	21.51	121	*e*P	P	03 44 24.3	0.0
KAN09	Caldwell North	21.55	351	IAmb	IAmb	03 44 44.8	
	comp=Z,20nm,0.6s						
SPBC	San Pablo de B	21.58	116	*e*P	P	03 44 23.8	-1.3
KAN01	Argonia South	21.59	351	IAmb	IAmb	03 44 26.7	
	comp=Z,22nm,0.4s						
TKL	Tuckaleechee C	21.59	22	P	P	03 44 23.1	-1.8
	comp=Z,8.3nm,0.6s,baz=191,slow=15,SNR=27						
TKL				S	S	03 48 12.7	-5.6
	comp=Z,2.4nm,0.5s,baz=76,slow=12,SNR=1.5						
	comp=Z,8.3nm,0.6s						
IMBA	Imbabura, San	21.61	134	P	P	03 44 28.8	+3.1
CRUC	La Cruz	21.61	129	*e*P	P	03 44 27.4	+1.7
KS20	Mayfield South	21.63	351	IAmb	IAmb	03 45 02.1	
	comp=Z,30nm,1.1s						
PAULI	Pauline	21.64	27	IAmb	IAmb	03 44 31.7	
	comp=Z,24nm,0.8s						
CGM3	Cape Girardeau	21.67	8	IAmb	IAmb	03 45 01.6	
	comp=Z,54nm,1.3s						
U49A	Red Boiling Sp	21.73	17	IAmb	IAmb	03 45 01.9	
	comp=Z,50nm,0.9s						
ROSC	El Rosal	21.78	118	P	P	03 44 27.0	-0.5
	comp=Z,9.4nm,0.4s,baz=132,slow=12,SNR=4.6						
	comp=Z,9.4nm,0.4s						
ROSC	El Rosal	21.78	118	P	P	03 44 27.5	0.0
S39A	Bolivar	21.79	0	IAmb	IAmb	03 45 02.7	
	comp=Z,64nm,1.4s						
T47A	Sharon Grove	21.84	14	IAmb	IAmb	03 45 04.1	
	comp=Z,44nm,0.8s						
DUN6	Lazy B Ranch	21.86	322	IAmb	IAmb	03 44 55.0	
	comp=Z,69nm,1.1s						
SC01	Santiago de lo	22.00	77	P	P	03 44 29.4	-0.1
PAMC	Pamplona, Colo	22.04	110	*e*P	P	03 44 28.9	-1.5
S44A	Carbondale	22.11	9	IAmb	IAmb	03 44 39.8	
	comp=Z,76nm,1.1s						
KMSC	Kings Mountain	22.12	27	P	P	03 44 31.1	+0.5
	baz=212,SNR=5.3						
CCM	Cathedral Cave	22.24	5	P	P	03 44 30.5	-1.2
CCM				IAmb	IAmb	03 45 07.8	
	comp=Z,31nm,1.0s						
CCM	Cathedral Cave	22.24	5	P	P	03 44 30.9	-0.9
	baz=186						
ANMO	Albuquerque	22.31	331	P	P	03 44 34.3	+1.5
	comp=Z,6.2nm,0.9s,baz=243,slow=9.8,SNR=21						
	comp=Z,6.2nm,0.9s						
ANMO	Albuquerque	22.31	331	P	P	03 44 34.4	+1.6
ANMO	Albuquerque	22.31	331	P	P	03 44 34.2	+1.4
	baz=145						
GARC	Garzon, Huila	22.33	126	*e*P	P	03 44 34.6	+1.5
RUSC	La Rusia	22.33	114	*e*P	P	03 44 31.1	-2.3
CHIC	Chingaza	22.39	118	*e*P	P	03 44 33.2	-0.7
TZTN	Tazewell	22.47	21	IAmb	IAmb	03 45 10.3	
	comp=Z,33nm,1.1s						
TZTN	Tazewell	22.47	21	P	P	03 44 33.3	-0.8
	baz=206						
CHSH	Refugio Sur-Vo	22.48	139	IAmb	IAmb	03 44 46.5	
	comp=Z,17nm,0.6s						
PORT	Chimborazo Vol	22.51	138	IAmb	IAmb	03 45 04.2	
	comp=Z,43nm,1.4s						
FLOC	Florencia	22.58	127	*e*P	P	03 44 37.2	+1.6
USIN	University of	22.66	12	IAmb	IAmb	03 45 10.8	
	comp=Z,54nm,0.8s						
TUC	Tucson	22.71	319	P	P	03 44 37.4	+0.6
TUC	Tucson	22.71	319	P	P	03 44 38.1	+1.4
	baz=132						
WCI	Wyandotte Cave	23.22	15	P	P	03 44 40.4	-1.0
	baz=198						
TAMC	Tame, Arauca	23.24	111	*e*P	P	03 44 40.2	-1.7
OLIL	Olney	23.32	11	IAmb	IAmb	03 45 06.0	
	comp=Z,63nm,1.1s						
Q44A	Meyer Farm, Va	23.34	9	IAmb	IAmb	03 45 05.8	
	comp=Z,42nm,0.9s						
T25A	Trinidad	23.34	338	IAmb	IAmb	03 44 46.2	
	comp=Z,21nm,0.7s						
T25A	Trinidad	23.34	338	P	P	03 44 44.7	+1.8
	baz=152,SNR=18						
KSU1	Kansas State U	23.36	354	IAmb	IAmb	03 44 43.2	
	comp=Z,23nm,0.7s						
KSU1	Kansas State U	23.36	354	P	P	03 44 41.9	-0.9
	baz=172,SNR=8.6						
SDV	Santo Domingo	23.37	104	P	P	03 44 42.0	-1.3
	comp=Z,3.0nm,0.3s,baz=248,slow=11,SNR=4.0						
SDV				LR	LR	03 54 59.6	
	comp=Z,37nm,18.5s,baz=264,slow=40						
	comp=Z,3.0nm,0.3s						
SDV	Santo Domingo	23.37	104	P	P	03 44 43.2	-0.1
SDV				IAmb	IAmb	03 44 49.2	
	comp=Z,18nm,0.6s						
SDV	Santo Domingo	23.37	104	*e*P	P	03 44 41.7	-1.6
S51A	Beattyville	23.44	20	P	P	03 44 43.1	-0.5
S51A				IAmb	IAmb	03 45 19.0	
	comp=Z,30nm,0.9s						
CBKS	Cedar Bluff	23.56	348	IAmb	IAmb	03 45 13.2	
	comp=Z,77nm,1.4s						
CBKS	Cedar Bluff	23.56	348	P	P	03 44 44.1	-0.5
	baz=165,SNR=9.9						
MACC	Macarena, Meta	23.66	123	*e*P	P	03 44 46.8	+1.0
P40A	Paris	23.66	3	IAmb	IAmb	03 45 25.0	
	comp=Z,24nm,0.9s						
PTGC	Puerto Gaitan,	23.97	117	*e*P	P	03 44 47.0	-1.6
P43A	Skaggs, Pawnee	23.99	8	IAmb	IAmb	03 45 24.4	
	comp=Z,47nm,0.9s						
BLO	Bloomington	24.06	13	P	P	03 44 48.5	-0.5
BLO				IAmb	IAmb	03 45 13.5	
	comp=Z,38nm,0.8s						
BLA	Blacksburg	24.27	26	P	P	03 44 50.8	-0.2
	baz=212						
SDCO	Great Sand Dun	24.28	336	P	P	03 44 52.4	+1.0
	baz=151,SNR=11						
KSCO	Kaye Shedlock’	24.45	343	IAmb	IAmb	03 44 55.6	
	comp=Z,35nm,0.8s						
KSCO	Kaye Shedlock’	24.45	343	P	P	03 44 54.0	+1.2
	baz=158,SNR=8.9						
Q51A	Peebles	24.78	19	IAmb	IAmb	03 45 32.8	
	comp=Z,59nm,1.2s						
S22A	4UR Ranch, Cre	24.82	334	P	P	03 44 57.4	+1.1
	baz=148,SNR=7.7						
HDIL	Hopedale	24.92	8	P	P	03 44 55.1	-1.8
	baz=190						
N35A	Tabor	25.02	356	IAmb	IAmb	03 45 20.7	
	comp=Z,27nm,0.9s						
SFIN	Lafayette	25.10	12	P	P	03 44 56.8	-1.8
	baz=194						
MVCO	Mesa Verde	25.11	331	P	P	03 44 60.0	+1.0
	baz=144,SNR=6.8						
Q24A	Divide	25.22	338	P	P	03 45 01.2	+1.1
	baz=153						
WUAZ	Wupatki	25.30	324	IAmb	IAmb	03 45 40.5	
	comp=Z,25nm,1.1s						
WUAZ	Wupatki	25.30	324	P	P	03 45 02.7	+2.1
	baz=136						
O48B	Farmland	25.42	15	P	P	03 44 59.5	-1.8
	baz=199						
P52A	Corning	25.73	21	P	P	03 45 03.3	-0.9
	baz=206						
BGNE	Belgrade	25.82	352	IAmb	IAmb	03 45 06.3	
	comp=Z,29nm,0.6s						
BGNE	Belgrade	25.82	352	P	P	03 45 04.4	-0.7
	baz=170						
OGNE	Ogallala	26.11	345	IAmb	IAmb	03 45 13.6	
	comp=Z,27nm,0.8s						
OGNE	Ogallala	26.11	345	P	P	03 45 08.4	+0.7
	baz=161						
ISCO	Idaho Springs	26.13	338	P	P	03 45 08.2	0.0
	baz=153						
PDMCI	Parker Dam,Lak	26.14	319	P	P	03 45 10.0	+2.0
	baz=129						
SJG	San Juan	26.26	81	P	P	03 45 06.4	-2.8
	comp=Z,18nm,1.1s,baz=283,slow=19,SNR=1.3						
SJG				LR	LR	03 55 14.2	
	comp=Z,59nm,19.8s,baz=156,slow=36						
	comp=Z,18nm,1.1s						
L42A	Oliver, Polo	26.31	6	P	P	03 45 08.2	-1.2
PV23	Carpenter Ridg	26.36	332	IAmb	IAmb	03 45 39.7	
	comp=Z,23nm,0.9s						
BC3	Big Chuckawall	26.60	316	P	P	03 45 14.6	+2.3
	baz=126,SNR=9.4						
IRM	Iron Mountain	26.70	317	P	P	03 45 15.5	+2.4
	baz=128						
JFWS	Jewell Farm	27.15	5	IAmb	IAmb	03 45 52.7	
	comp=Z,33nm,0.9s						
JFWS	Jewell Farm	27.15	5	P	P	03 45 16.0	-1.0
	baz=187						
PFO	Pinyon Flats O	27.26	315	LR	LR	03 57 08.5	
	comp=Z,79nm,18.2s,baz=136,slow=38						
GMRC	Granite Mounta	27.42	318	P	P	03 45 21.2	+1.6
	baz=128						
O20A	White River Ci	27.42	335	P	P	03 45 20.9	+1.2
	baz=148						
V12A	Nelson	27.50	320	P	P	03 45 20.6	+0.3
ECSD	EROS Data Cent	27.95	355	IAmb	IAmb	03 45 24.4	
	comp=Z,19nm,0.7s						
ECSD	EROS Data Cent	27.95	355	P	P	03 45 23.7	-0.4
	baz=174,SNR=19						
K22A	Casper	28.98	340	P	P	03 45 34.3	+0.9
	baz=153						
TPNV	Topopah Spring	29.15	321	P	P	03 45 37.5	+2.5
	baz=130						
SPMN	Marine on St.	29.32	1	IAmb	IAmb	03 45 37.2	
	comp=Z,16nm,0.5s						
MPMC	Manual Prospec	29.38	318	P	P	03 45 38.9	+1.8
	baz=127						
RSSD	Black Hills	29.60	345	P	P	03 45 39.5	+0.5
RSSD	Black Hills	29.60	345	P	P	03 45 40.3	+1.4
	baz=159						
R11A	Troy Canyon, C	29.69	323	P	P	03 45 40.6	+0.8
	baz=133						
GRAC	Grapevine Rang	29.87	319	P	P	03 45 43.6	+2.3
	baz=128						
BW06	Boulder Array	30.18	336	P	P	03 45 45.2	+1.0
	baz=148						
PDAR	Pinedale Array	30.18	336	P	P	03 45 44.7	+0.6
	comp=Z,1.4nm,0.8s,baz=141,slow=9.6,SNR=10						
PDAR				PcP	PcP	03 48 42.9	-0.1
	comp=Z,0.4nm,0.6s,baz=120,slow=5.3,SNR=2.6						
	comp=Z,1.4nm,0.8s						
VES	Vestal, Richgr	30.30	316	P	P	03 45 47.7	+2.7
	baz=124						
SGCB	S£o Gabriel d	30.56	119	*e*P	P	03 45 47.1	-0.5
CZSB	Cruzeiro do Su	31.17	137	P	P	03 45 54.4	+1.4
CZSB				IAmb	IAmb	03 45 58.7	
	comp=Z,20nm,0.7s						
CZSB	Cruzeiro do Su	31.17	137	*e*P	P	03 45 55.0	+2.1
ELK	Elko	31.18	327	LR	LR	04 00 17.5	
	comp=Z,70nm,18.2s,baz=137,slow=40						
REDW	Red Top Meadow	31.19	335	IAmb	IAmb	03 45 56.5	
	comp=Z,24nm,1.0s						
SADO	Sadowa	31.31	20	LR	LR	04 00 47.9	
	comp=Z,58nm,18.6s,baz=158,slow=41						
NVAR	Mina Array Bea	31.35	321	P	P	03 45 57.2	+2.7
	comp=Z,4.4nm,0.7s,baz=132,slow=8.8,SNR=40						
NVAR				pP	pP	03 46 20.7	+2.9
	comp=Z,3.3nm,0.8s,baz=132,slow=9.4,SNR=5.4						
NVAR				sP	sP	03 46 31.9	+2.1
	comp=Z,3.8nm,0.8s,baz=136,slow=9.1,SNR=4.2						
	comp=Z,4.4nm,0.7s						
H17A	Grant Village	31.95	337	P	P	03 46 00.5	+0.7
	baz=148						
RLMT	Red Lodge	32.09	339	P	P	03 46 02.4	+1.4
	baz=150,SNR=9.6						
YMR	Madison River	32.33	336	IAmb	IAmb	03 46 06.3	
	comp=Z,13nm,0.9s						
MDND	Maddock	32.34	352	P	P	03 46 02.4	-0.4
	baz=169						
AGMN	Agassiz Nation	32.45	357	P	P	03 46 03.2	-0.5
	baz=176						
LAO	LASA Array	32.55	344	IAmb	IAmb	03 46 06.1	
	comp=Z,13nm,1.1s						
LAO	LASA Array	32.55	344	P	P	03 46 05.5	+0.7
	baz=157						
HLID	Hailey	32.89	331	P	P	03 46 09.9	+2.0
	baz=141						
BOZ	Bozeman (W)	33.36	337	P	P	03 46 13.9	+2.0
	baz=147						
DLMT	Dillon	33.55	335	IAmb	IAmb	03 46 16.8	
	comp=Z,16nm,1.1s						
DGMT	Dagmar	33.73	347	P	P	03 46 14.7	-0.2
	baz=161						
ULM	Lac du Bonnet	34.40	357	P	P	03 46 18.6	-2.1
	comp=Z,2.7nm,0.3s,baz=179,slow=8.5,SNR=7.1						
	comp=Z,2.7nm,0.3s						
ULM	Lac du Bonnet	34.40	357	IAmb	IAmb	03 46 19.7	
	comp=Z,11nm,0.9s						
TEFE	Tefe	34.42	121	*e*P	P	03 46 21.2	0.0
J08A	Circle Bar Ran	34.73	327	IAmb	IAmb	03 47 03.7	
	comp=Z,13nm,0.9s						
PLID	Pearl Lake	34.79	332	IAmb	IAmb	03 46 54.9	
	comp=Z,9.5nm,1.1s						
EGMT	Eagleton	34.80	341	IAmb	IAmb	03 46 26.4	
	comp=Z,21nm,1.1s						
EGMT	Eagleton	34.80	341	P	P	03 46 25.6	+1.4
	baz=152,SNR=12						
BOAV	Boa Vista	35.12	109	*e*P	P	03 46 26.4	-0.9
MSO	Missoula	35.28	335	IAmb	IAmb	03 46 30.8	
	comp=Z,10nm,1.1s						
MSO	Missoula	35.28	335	P	P	03 46 29.8	+1.3
	baz=144,SNR=7.0						
ETMB	Extrema	37.14	132	IAmb	IAmb	03 46 46.1	
	comp=Z,12nm,1.3s						
ETMB	Extrema	37.14	132	*e*P	P	03 46 44.5	+0.1
MACA	Manacapuru-AM	37.55	117	*e*P	P	03 46 47.5	-0.5
NEW	Newport	37.73	334	P	P	03 46 50.3	+1.1
	baz=141						
C09A	Chrisman Ranch	37.88	333	IAmb	IAmb	03 47 16.9	
	comp=Z,14nm,1.3s						
SAML	Samuel	38.83	127	P	P	03 46 56.9	-1.8
SAML				IAmb	IAmb	03 46 58.3	
	comp=Z,8.1nm,0.9s						
SAML	Samuel	38.83	127	P	P	03 46 56.8	-1.8
SAML				sP	sP	03 47 29.1	-4.9
FFC	Flin Flon	39.38	352	P	P	03 47 02.9	+0.1
FFC				IAmb	IAmb	03 47 03.3	
	comp=Z,9.2nm,0.7s						
FFC	Flin Flon	39.38	352	P	P	03 47 02.3	-0.5
LPAZ	La Paz	40.56	141	P	P	03 47 14.3	+0.6
	comp=Z,4.6nm,0.7s,baz=328,slow=10,SNR=13						
	comp=Z,4.6nm,0.7s						
LPAZ	La Paz	40.56	141	P	P	03 47 14.6	+0.9
LPAZ	La Paz	40.56	141	*e*P	P	03 47 14.6	+0.9
LPAZ	La Paz	40.56	141	P	P	03 47 14.5	+0.9
PB16	IPOC Station P	41.36	144	P	P	03 47 20.5	+0.4
MDP	Montagnes des	41.49	100	LR	LR	04 06 21.3	
	comp=Z,47nm,18.6s,baz=164,slow=39						
MNMC	Minye Minye	41.95	145	IAmb	IAmb	03 47 27.6	
	comp=Z,9.5nm,0.8s						
ITTB	Itaituba	42.42	115	*e*P	P	03 47 26.9	-1.4
BRLDA	Berland Lookou	42.50	339	P	P	03 47 28.9	+0.4
BRLDA				IAmb	IAmb	03 47 29.9	
	comp=Z,15nm,0.9s						
VILB	Vilhena	43.62	129	*e*P	P	03 47 37.7	-0.2
MCPB	Macapa, AP	43.96	108	*e*P	P	03 47 39.3	-1.4
SCHQ	Schefferville	44.06	22	P	P	03 47 37.9	-3.1
	comp=Z,0.9nm,0.4s,baz=187,slow=6.3,SNR=10.0						
SCHQ				PcP	PcP	03 49 23.7	-0.8

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       comp=Z,4.1nm,0.6s,baz=249,slow=4.4,SNR=10.0
       comp=Z,0.9nm,0.4s
LVC    Limon Verde       45.15 147  eP     P       03 47 52.4 +2.0
LVC    Limon Verde       45.15 147   P     P       03 47 52.0 +1.6
CLDB   Colider           45.79 123  eP     P       03 47 54.4 -0.8
PTLB   Pontes e Lacer    46.01 131   P     P       03 47 56.9  0.0
PTLB                                 IAmb  IAmb    03 47 57.5
       comp=Z,8.6nm,0.9s
PTLB   Pontes e Lacer    46.01 131  eP     P       03 47 56.8  0.0
BBSD   Serra de San D    46.13 134  eP     P       03 47 58.2 +0.4
GO02   Mina Guanaco      46.93 150   P     P       03 48 06.3 +2.0
GO02                                 IAmb  IAmb    03 48 07.0
       comp=Z,9.6nm,0.8s
BBRB   Robore, Bolivi    47.43 134  eP     P       03 48 08.6 +0.7
AC02   Maricunga         48.56 151   P     P       03 48 18.9 +1.8
AC02                                 IAmb  IAmb    03 48 20.3
       comp=Z,9.3nm,1.1s
SALV   Santo Antonio     48.85 128  eP     P       03 48 18.4 -0.5
YKA    Yellowknife Ar    48.94 347   P     P       03 48 18.6 -0.3
       comp=Z,9.6nm,0.6s,baz=152,slow=7.6,SNR=24
YKA                                  pP    pP      03 48 43.5 -0.1
       comp=Z,2.8nm,0.6s,baz=152,slow=7.4,SNR=4.8
       comp=Z,9.6nm,0.6s
YKA    Yellowknife Ar    48.94 347   P     P       03 48 19.0 +0.1
KOTAN  Kotaneelee Air    49.50 340   P     P       03 48 24.6 +1.4
       baz=140,SNR=10
T35M   Bob Quinn         49.53 335   P     P       03 48 26.2 +2.6
       baz=131
LCO    Las Campanas      49.72 154   P     P       03 48 27.2 +1.6
LCO                                  IAmb  IAmb    03 48 28.5
       comp=Z,17nm,1.2s
LCO    Las Campanas      49.72 154   P     P       03 48 27.0 +1.5
LCO                                  pP    pP      03 48 49.7 -0.4
AC05   El Transito       49.75 153   P     P       03 48 26.9 +1.2
AC05                                 IAmb  IAmb    03 48 28.3
       comp=Z,6.5nm,0.8s
SNDB   Serra Nova Dou    50.07 121  eP     P       03 48 28.2  0.0
DLBC   Dease Lake        50.41 336   P     P       03 48 32.6 +2.4
DLBC   Dease Lake        50.41 336   P     P       03 48 33.5 +3.2
       baz=132,SNR=8.7
S34M   Telegraph Cree    50.51 335   P     P       03 48 33.4 +2.5
       baz=130
PP1B   Ponte de Pedra    50.52 130  eP     P       03 48 31.9 +0.3
FRB    Frobisher Bay     50.90  14   LR    LR      04 12 04.4
       comp=Z,48nm,18.8s,baz=183,slow=38
BDQN   Bodoquena, MS     51.01 134  eP     P       03 48 35.5 +0.3
WTLY   Watson Lake, Y    51.10 338   P     P       03 48 36.7 +1.4
WTLY   Watson Lake, Y    51.10 338   P     P       03 48 37.3 +1.9
       baz=134
MURT   Porto Murtinho    51.25 136  eP     P       03 48 37.5 +0.6
RVDE   Rio Verde (Bra    51.38 131  eP     P       03 48 38.0  0.0
CO02   Combarbal         51.51 155   P     P       03 48 40.4 +1.6
Q32M   Nakina River      51.64 336   P     P       03 48 42.0 +2.4
       baz=130
SMTB   Santa Maria do    51.66 115  eP     P       03 48 38.2 -1.9
ARAG   Araguaiana, MT    51.73 125  eP     P       03 48 40.2 -0.4
AQDB   Aquidauana        51.77 133   P     P       03 48 41.1 +0.3
AQDB                                 IAmb  IAmb    03 48 41.6
       comp=Z,8.8nm,1.1s
AQDB   Aquidauana        51.77 133  eP     P       03 48 41.0 +0.2
P32M   Atlin             52.61 336   P     P       03 48 48.6 +2.0
       baz=128
P33M   Teslin, Yukon     52.66 337   P     P       03 48 48.5 +1.6
P33M                                 IAmb  IAmb    03 49 18.9
       comp=Z,19nm,1.4s
P33M   Teslin, Yukon     52.66 337   P     P       03 48 49.0 +2.1
       baz=130
VA03   San Esteban       53.06 156   P     P       03 48 51.6 +1.3
N32M   Quiet Lake        53.36 337   P     P       03 48 54.2 +2.1
       baz=130
MMPY   Sheldon Lake,     53.70 339   P     P       03 48 56.6 +2.1
       baz=133,SNR=11
MT03   Universidad Ad    53.72 156   P     P       03 48 56.3 +1.2
AMBA   Amambai (Brazi    53.88 135  eP     P       03 48 56.8 +0.5
FARO   Faro, Yukon       54.16 338   P     P       03 48 59.4 +1.5
FARO                                 IAmb  IAmb    03 49 28.2
       comp=Z,12nm,1.0s
FARO   Faro, Yukon       54.16 338   P     P       03 48 59.2 +1.3
       baz=130
O30N   Mendenhall        54.28 336   P     P       03 49 00.8 +2.1
       baz=126
BO01   Tunca             54.30 157   P     P       03 49 00.5 +1.4
BO01                                 IAmb  IAmb    03 49 01.6
       comp=Z,9.9nm,0.8s
M31M   Drury Creek, Y    54.52 338   P     P       03 49 01.6 +1.2
M31M                                       pP      03 49 26.0 +0.4
M31M                                 IAmb  IAmb    03 49 31.7
       comp=Z,7.8nm,0.9s
M31M   Drury Creek, Y    54.52 338   P     P       03 49 01.7 +1.2
       baz=129
N31M   Braeburn, Yuko    54.59 337   P     P       03 49 03.2 +2.2
N31M   Braeburn, Yuko    54.59 337   P     P       03 49 03.2 +2.2
       baz=127
CPUP   Villa Florida     54.70 140   P     P       03 49 01.6 -0.6
       comp=Z,2.3nm,0.6s,baz=343,slow=7.2,SNR=5.6
       comp=Z,2.3nm,0.6s
CPUP   Villa Florida     54.70 140  eP     P       03 49 01.9 -0.3
CPUP   Villa Florida     54.70 140   P     P       03 49 01.7 -0.5
CPUP                                 pP    pP      03 49 25.9 -1.1
BDFB   Brasilia          54.72 123   P     P       03 49 01.6 -1.1
       comp=Z,17nm,0.7s,baz=293,slow=9.4,SNR=30
       comp=Z,17nm,0.7s
BDFB   Brasilia          54.72 123   P     P       03 49 02.0 -0.6
BDFB   Brasilia          54.72 123  eP     P       03 49 01.8 -0.8
BO02   Sierra Bellavi    54.77 157   P     P       03 49 04.2 +1.6
BO02                                 IAmb  IAmb    03 49 11.5
       comp=Z,12nm,1.1s
N30M   Aishikik Lake     55.08 336   P     P       03 49 06.5 +1.9
       baz=126
ITRB   Iturama           55.19 128  eP     P       03 49 06.2 +0.4
YUK6   Outpost Mounta    55.28 335   P     P       03 49 08.1 +1.8
       baz=124
YUK4   Talbot Arm        55.62 336   P     P       03 49 10.9 +2.3
       baz=124
M30M   Minto, Yukon      55.63 337   P     P       03 49 10.1 +1.6
M30M   Minto, Yukon      55.63 337   P     P       03 49 10.1 +1.6
       baz=127
SDBA   SAO DESIDERIO     55.67 117  eP     P       03 49 09.1 -0.3
PCMB   Pacaembu          55.67 131  eP     P       03 49 10.2 +0.9
IPMB   Ipameri, GO       55.85 125  eP     P       03 49 10.3 -0.4
O28M   Mount Upton       55.94 334   P     P       03 49 12.1 +1.1
       baz=122
YUK8   Steele Glacier    56.04 335   P     P       03 49 13.9 +2.2
       baz=123
M29M   Somme Creek       56.18 337   P     P       03 49 13.6 +1.1
       baz=125
MECA   Mercedes          56.35 143  eP     P       03 49 15.4 +1.5
L29M   L29M              56.44 337   P     P       03 49 15.6 +1.4
       baz=126,SNR=9.4
K29M   Barlow Dome       56.66 338   P     P       03 49 16.4 +0.6
       baz=127
C36M   Paulatuk          56.82 348   P     P       03 49 16.8 +0.1
       baz=144
BVCY   Beaver Creek      57.09 336   P     P       03 49 20.7 +1.9
       baz=122
FRBT   Francisco Belt    57.22 136  eP     P       03 49 21.6 +1.3
BB19B  Bebedouro         57.37 128  eP     P       03 49 21.4  0.0
MCARA  McCarthy VSAT     57.43 334   P     P       03 49 23.0 +1.8
MCARA  McCarthy VSAT     57.43 334   P     P       03 49 23.1 +1.9
       baz=120
DAWY   Dawson            57.46 338   P     P       03 49 22.1 +0.8
DAWY                                 pP    pP      03 49 46.9 +0.2
DAWY                                 IAmb  IAmb    03 49 50.8
       comp=Z,4.5nm,0.8s
DAWY   Dawson            57.46 338   P     P       03 49 22.5 +1.2
       baz=125
M27K   Edge Creek, AK    57.46 336   P     P       03 49 23.1 +1.5
       baz=121
JANB   Januaria          57.47 120  eP     P       03 49 22.3 +0.1
ITQB   Itaqui            57.54 142  eP     P       03 49 24.1 +1.8
PMNB   Patos De Minas    57.56 125  eP     P       03 49 22.9 +0.1
CRSM   Crissiumal (Br    57.60 138  eP     P       03 49 23.5 +0.7
F31M   Tsiigehtchic      57.76 343   P     P       03 49 23.9 +0.6
       baz=133,SNR=11
BCAR   Beaver Creek A    57.80 336   P     P       03 49 25.5 +1.7
L27K   Beaver Creek,     57.81 336   P     P       03 49 24.4 +0.5
L27K                                 IAmb  IAmb    03 49 54.3
       comp=Z,17nm,1.1s
L27K   Beaver Creek,     57.81 336   P     P       03 49 25.3 +1.4
       baz=122
EPYK   Eagle Plains      57.95 341   P     P       03 49 25.4 +0.6
EPYK                                 IAmb  IAmb    03 49 56.5
       comp=Z,19nm,1.4s
EPYK   Eagle Plains      57.95 341   P     P       03 49 25.0 +0.2
       baz=129
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G30M   tAoh Zraii Nji    58.18 342   P     P       03 49 26.6 +0.2
       baz=130
N25K   Chitina, Valde    58.20 334   P     P       03 49 28.9 +2.2
N25K                                 IAmb  IAmb    03 49 54.4
       comp=Z,8.6nm,0.8s
N25K   Chitina, Valde    58.20 334   P     P       03 49 27.0 +0.4
       baz=118
INK    Inuvik            58.30 344   P     P       03 49 27.4 +0.4
       comp=Z,15nm,0.6s,baz=124,slow=6.4,SNR=63
INK                                  pP    pP      03 49 52.2 -0.3
       comp=Z,28nm,0.9s,baz=112,slow=7.2,SNR=13
       comp=Z,15nm,0.6s
INK    Inuvik            58.30 344   P     P       03 49 27.6 +0.6
INK    Inuvik            58.30 344   P     P       03 49 27.8 +0.7
       baz=133,SNR=23
EGAK   Eagle             58.49 338   P     P       03 49 28.7 +0.2
EGAK                                 IAmb  IAmb    03 49 57.9
       comp=Z,9.0nm,0.9s
EGAK   Eagle             58.49 338   P     P       03 49 29.0 +0.5
       baz=123
ITAB   Concordia         58.68 136  eP     P       03 49 30.6 +0.3
KLU    Klutina           58.71 334   P     P       03 49 33.2 +3.0
       baz=117
RES    Resolute Bay      58.88 360   P     P       03 49 30.2 -0.8
RES                                  IAmb  IAmb    03 49 31.3
       comp=Z,8.0nm,0.7s
RODS   Rosario do Sul    58.88 141  eP     P       03 49 33.5 +1.7
RCLB   Rio Claro- Sao    58.92 129  eP     P       03 49 32.7 +0.6
I27K   Kandik River      59.11 339   P     P       03 49 34.5 +1.6
       baz=123
SCRK   Sand Creek        59.12 337   P     P       03 49 35.2 +2.2
SCRK                                 IAmb  IAmb    03 50 03.6
       comp=Z,10nm,1.0s
SCRK   Sand Creek        59.12 337   P     P       03 49 34.6 +1.5
       baz=120
ALGR   Alto Alegre (B    59.15 138  eP     P       03 49 34.6 +0.9
PAX    Paxson            59.21 335   P     P       03 49 35.2 +1.6
       baz=118,SNR=6.1
J26L   Joseph Creek      59.22 337   P     P       03 49 35.1 +1.4
J26L   Joseph Creek      59.22 337   P     P       03 49 35.3 +1.6
       baz=121
RIDG   Independent Ri    59.33 336   P     P       03 49 35.9 +1.4
RIDG   Independent Ri    59.33 336   P     P       03 49 35.8 +1.4
       baz=119
H27K   Steamboat Moun    59.43 340   P     P       03 49 35.7 +0.7
       baz=124
I26K   Coal Creek Min    59.49 338   P     P       03 49 36.4 +1.0
       baz=122
M23K   Glacier View      59.62 333   P     P       03 49 38.0 +1.6
       baz=115
SPB    Sao Paulo         59.68 130  eP     P       03 49 38.4 +1.0
K24K   Donnelly Dome     59.72 336   P     P       03 49 38.7 +1.6
       baz=118,SNR=6.9
G27K   Doyon Strip       59.80 340   P     P       03 49 37.7 +0.2
       baz=124
CPSB   Cacapava Do Su    60.00 140  eP     P       03 49 40.9 +1.6
PLCA   Paso Flores       60.16 160   P     P       03 49 41.0 +0.6
       comp=Z,7.8nm,0.9s,baz=348,slow=6.9,SNR=8.5
       comp=Z,7.8nm,0.9s
PLCA   Paso Flores       60.16 160   P     P       03 49 41.8 +1.3
PLCA   Paso Flores       60.16 160  eP     P       03 49 42.0 +1.6
PLCA   Paso Flores       60.16 160   P     P       03 49 41.5 +1.1
PLCA                                 pP    pP      03 50 04.8 -0.8
PLCA                                 sP    sP      03 50 16.4 -0.6
BSCB   Bom Sucesso       60.22 126  eP     P       03 49 41.7 +0.5
PRP    Porcupine Dome    60.45 338   P     P       03 49 43.5 +1.4
PRP                                  pP    pP      03 50 07.4 -0.4
PRP    Porcupine Dome    60.45 338   P     P       03 49 43.6 +1.4
       baz=119,SNR=8.7
HDA    Harding Lake      60.46 336   P     P       03 49 42.8 +0.7
HDA                                        pP      03 50 07.5 -0.2
HDA                                  IAmb  IAmb    03 50 11.3
       comp=Z,9.2nm,0.9s
HDA    Harding Lake      60.46 336   P     P       03 49 43.0 +0.9
       baz=117
E27K   Coleen River      60.56 341   P     P       03 49 43.9 +1.2
       baz=124
G26K   Porcupine Rive    60.58 340   P     P       03 49 44.3 +1.5
       baz=122
IL31                     60.60 337   P     P       03 49 43.8 +0.8
IL31                                       pP      03 50 08.7 +0.1
IL31                                 IAmb  IAmb    03 50 13.0
       comp=Z,14nm,1.1s
ILAR   Eielson Array     60.60 337   P     P       03 49 43.4 +0.3
       comp=Z,2.5nm,0.9s,baz=125,slow=5.3,SNR=24
ILAR                                 pP    pP      03 50 08.6 -0.1
       comp=Z,7.7nm,1.0s,baz=128,slow=5.0,SNR=12
       comp=Z,2.5nm,0.9s
ILAR   Eielson Array     60.60 337   P     P       03 49 43.9 +0.9
ILAR                                       pP      03 50 08.8 +0.2
RND    Reindeer          60.77 335   P     P       03 49 44.1 -0.2
SUA    Susitna One       60.81 332   P     P       03 49 46.9 +2.2
       baz=112
PLTB   Pedras Altas      60.85 141  eP     P       03 49 45.5 +0.3
MCK    McKinley          60.95 335   P     P       03 49 45.8 +0.4
       baz=115
CUT    Chulitna          60.96 334   P     P       03 49 47.9 +2.4
       baz=113
POKR   Poker Plat Res    60.97 337   P     P       03 49 46.5 +0.9
       baz=117
COLA   College           61.02 337   P     P       03 49 48.2 +2.5
COLA                                 pP    pP      03 50 11.1 -0.3
F26K   Sheenjek River    61.09 340   P     P       03 49 48.0 +1.6
       baz=122
BMAR   Burnt Mountain    61.09 340   P     P       03 49 47.7 +1.4
BMAR                                 pP    pP      03 50 12.4 +0.4
MDM    Murphy Dome       61.20 337   P     P       03 49 47.1  0.0
MDM                                        pP      03 50 12.8  0.0
G25K   Bearman Lake      61.27 339   P     P       03 49 48.7 +1.2
       baz=119
SKT    Skwentna          61.35 333   P     P       03 49 49.5 +1.3
       baz=111,SNR=6.1
TRF    Thorofare Moun    61.38 335   P     P       03 49 50.1 +1.6
TRF                                        pP      03 50 14.0 -0.2
H24K   Noodor Dome       61.47 338   P     P       03 49 50.1 +1.2
H24K                                       pP      03 50 15.2 +0.6
H24K   Noodor Dome       61.47 338   P     P       03 49 49.8 +0.9
       baz=117
F25K   Christian Rive    61.53 340   P     P       03 49 50.7 +1.4
       baz=120
KTH    Kantishna Hill    61.68 335   P     P       03 49 50.7 +0.2
KTH                                        pP      03 50 16.6 +0.4
I23K   Minto, Yukon-K    61.72 337   P     P       03 49 51.7 +1.2
I23K                                       pP      03 50 16.8 +0.5
I23K   Minto, Yukon-K    61.72 337   P     P       03 49 51.7 +1.2
       baz=115,SNR=8.9
G24K   Hadweenzic Riv    61.72 339   P     P       03 49 51.5 +0.9
       baz=118
E25K   Arctic Village    61.77 340   P     P       03 49 52.7 +1.8
       baz=120,SNR=6.6
SJMB   Sao Joao De Ma    61.88 122  eP     P       03 49 52.0 -0.4
BPAW   Bear Paw Mtn.     61.92 335   P     P       03 49 53.0 +1.0
BPAW                                 pP    pP      03 50 17.6 -0.1
BPAW   Bear Paw Mtn.     61.92 335   P     P       03 49 52.6 +0.7
       baz=113,SNR=9.9
VAS01  Vassouras-RJ      61.95 126  eP     P       03 49 54.3 +1.5
PPLA   Purkeypile        61.97 334   P     P       03 49 53.0 +0.6
PPLA                                       pP      03 50 18.2 +0.1
PPLA   Purkeypile        61.97 334   P     P       03 49 52.7 +0.3
       baz=111
GUA01  Guaratinga, BA    61.99 119  eP     P       03 49 53.8 +0.7
C27K   Jago River        62.00 342   P     P       03 49 53.3 +0.9
       baz=123
M20K   Styx River        62.02 332   P     P       03 49 53.4 +0.6
M20K                                 IAmb  IAmb    03 50 22.2
       comp=Z,8.2nm,1.1s
CAST   Castle Rocks      62.12 334   P     P       03 49 53.7 +0.5
CAST                                       pP      03 50 18.9  0.0
CAST                                 IAmb  IAmb    03 50 19.4
       comp=Z,9.5nm,0.8s
CAST   Castle Rocks      62.12 334   P     P       03 49 53.8 +0.5
       baz=112,SNR=7.1
MLY    Manley            62.20 336   P     P       03 49 54.6 +0.8
MLY                                        pP      03 50 19.9 +0.3
MLY    Manley            62.20 336   P     P       03 49 55.4 +1.6
       baz=114,SNR=8.7
F24K   Squaw Lake        62.25 339   P     P       03 49 55.5 +1.4
       baz=118
N19K   Bonanza Creek     62.29 331   P     P       03 49 55.7 +1.2
C26K   Camden Bay        62.51 342   P     P       03 49 57.4 +1.7
       baz=122
M19K   Big River Lodg    62.59 332   P     P       03 49 57.5 +1.0
M19K                                       pP      03 50 22.8 +0.6
M19K                                 IAmb  IAmb    03 50 23.5
       comp=Z,11nm,1.0s
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M19K   Big River Lodg    62.59 332   P     P       03 49 58.3 +1.9
       baz=109
G23K   Bananza Creek     62.63 338   P     P       03 49 57.8 +1.1
       baz=115
D25K   Kavik River       62.64 341   P     P       03 49 58.0 +1.4
       baz=120
DUB01  Friburgo-RJ       62.68 126  eP     P       03 49 59.3 +1.7
E24K   Your Creek        62.71 340   P     P       03 49 58.3 +1.1
       baz=117
Q16K   King Salmon       62.73 328   P     P       03 49 58.6 +1.2
       baz=105
I21K   Tanana            62.74 336   P     P       03 49 58.0 +0.6
I21K                                       pP      03 50 22.8 -0.2
I21K                                 IAmb  IAmb    03 50 27.2
       comp=Z,9.8nm,1.1s
I21K   Tanana            62.74 336   P     P       03 49 59.0 +1.6
       baz=112
H22K   Ishtalitna Cre    62.79 337   P     P       03 49 59.6 +1.9
       baz=114
COLD   Coldfoot          62.92 339   P     P       03 50 00.2 +1.7
COLD                                 IAmb  IAmb    03 50 29.4
       comp=Z,11nm,1.0s
COLD   Coldfoot          62.92 339   P     P       03 50 00.2 +1.7
       baz=115
K20K   Telida            62.93 334   P     P       03 49 59.4 +0.7
K20K                                       pP      03 50 24.9 +0.5
K20K   Telida            62.93 334   P     P       03 49 59.6 +0.9
       baz=110,SNR=8.1
E23K   Chandalar         63.08 340   P     P       03 50 01.8 +2.1
       baz=116,SNR=7.1
ALF01  Guarapari-ES      63.22 123  eP     P       03 50 01.6 +0.5
H21K   Melozitna Rive    63.24 336   P     P       03 50 00.2 -0.5
H21K                                       pP      03 50 25.7 -0.7
H21K   Melozitna Rive    63.24 336   P     P       03 50 03.3 +2.6
       baz=112
TOLK   Toolik Lake Re    63.33 340   P     P       03 50 02.6 +1.4
TOLK                                 pP    pP      03 50 27.0  0.0
TOLK                                 IAmb  IAmb    03 50 31.7
       comp=Z,9.7nm,0.8s
TOLK   Toolik Lake Re    63.33 340   P     P       03 50 02.9 +1.6
       baz=116,SNR=8.3
C24K   Franklin Bluff    63.55 341   P     P       03 50 04.0 +1.5
       baz=118
TTA    Tatalina          63.63 333   P     P       03 50 03.8 +0.4
TTA                                  pP    pP      03 50 28.3 -0.8
TTA                                  IAmb  IAmb    03 50 29.6
       comp=Z,14nm,0.9s
TTA    Tatalina          63.63 333   P     P       03 50 04.2 +0.8
       baz=108,SNR=10
O16K   Kokwok River B    63.68 329   P     P       03 50 04.1 +0.4
       baz=104
F22K   John River        63.73 338   P     P       03 50 04.3 +0.4
       baz=113
G21K   Allakaket         63.83 337   P     P       03 50 05.7 +1.1
       baz=112
D23K   Nanushuk River    63.83 340   P     P       03 50 06.2 +1.6
       baz=116
F21K   Alatna River      64.08 338   P     P       03 50 08.8 +2.5
       baz=112,SNR=15
COYC   Coyhaique         64.11 163   P     P       03 50 07.9 +1.3
N16K   Nishlik Lake      64.22 330   P     P       03 50 09.1 +1.8
       baz=104
A21K   Barrow            66.63 342   P     P       03 50 23.5 +1.0
A21K                                       pP      03 50 47.7 -0.8
A21K                                 IAmb  IAmb    03 50 53.0
       comp=Z,19nm,1.2s
A21K   Barrow            66.63 342   P     P       03 50 23.8 +1.4
       baz=111,SNR=5.8
ALE    Alert             67.87   4   P     P       03 50 29.1 -1.2
ALE                                  pP    PcP     03 50 54.1 -1.9
ANM    Nome              68.06 334   P     P       03 50 33.1 +1.5
ANM                                  IAmb  IAmb    03 50 59.0
       comp=Z,5.5nm,0.7s
ANM    Nome              68.06 334   P     P       03 50 33.5 +1.8
       baz=99,SNR=7.7
TNA    Tin City          69.27 335   P     P       03 50 41.0 +1.8
       baz=97,SNR=5.1
EKA    Eskdalemuir Ar    77.35  36   LR    LR      04 25 19.3
       comp=Z,25nm,19.7s,baz=176,slow=36
BILL   Bilibino          79.24 338   P     P       03 51 38.0 +1.0
BILL                                 pP    pP      03 52 03.7 -0.1
BILL                                 IAmb  IAmb    03 52 04.9
       comp=Z,12nm,0.9s
ESDC   Sonseca Array     79.74  52   P     P       03 51 38.0 -2.4
       comp=Z,0.6nm,0.9s,baz=283,slow=7.8,SNR=2.5
ESDC                                 pP    pP      03 52 06.4 -0.7
       comp=Z,2.4nm,0.8s,baz=284,slow=6.4,SNR=11
       comp=Z,0.6nm,0.9s
NOA    NORSAR Array B    83.25  28   P     P       03 51 57.0 -1.4
       comp=Z,0.6nm,0.6s,baz=298,slow=5.4,SNR=3.9
NOA                                  LR    LR      04 28 03.9
       comp=Z,15nm,19.2s,baz=0.0,slow=35
       comp=Z,0.6nm,0.6s
BCLA   Clavier           83.46  40  dP     P       03 52 00.4 +0.8
HFS    Hagfors           84.72  29   LR    LR      04 29 07.2
       comp=Z,72nm,18.6s,baz=236,slow=35
ARCES  ARCESS Array B    84.88  18   P     P       03 52 05.9 -0.5
       comp=Z,3.2nm,0.8s,baz=284,slow=4.9,SNR=10.0
       comp=Z,3.2nm,0.8s
DAVOX  Davos/Dischmat    87.50  42   LR    LR      04 27 01.8
       comp=Z,40nm,20.3s,baz=258,slow=33
TIXI   Tiksi             88.19 348   P     P       03 52 22.4  0.0
TIXI                                 IAmb  IAmb    03 52 23.2
       comp=Z,10nm,1.4s
FINES  FINESS Array B    89.47  25   P     P       03 52 26.3 -2.4
       comp=Z,1.4nm,0.8s,baz=292,slow=1.0,SNR=7.3
       comp=Z,1.4nm,0.8s
TORD   Torodi Ar. Bea    91.37  76   P     P       03 52 35.0 -3.5
       comp=Z,0.2nm,0.5s,baz=297,slow=6.0,SNR=5.7
       comp=Z,0.2nm,0.5s
AKASG  Malin Array Be    97.01  33   LR    LR      04 37 51.3
       comp=Z,11nm,18.7s,baz=352,slow=36
SONM   Songino Array    114.18 345   PKiKP PKPdf   03 58 12.5 +1.4
       comp=Z,0.3nm,0.7s,baz=317,slow=2.5,SNR=2.5
MKAR   Makanchi Array   117.57   3   PKP   PKPdf   03 58 16.7 -0.8
       comp=Z,0.6nm,0.7s,baz=358,slow=1.2,SNR=6.7
GEYT   Alibeck          120.26  26   PKP   PKiKP   03 58 23.2 +0.2
       comp=Z,2.1nm,0.6s,baz=271,slow=9.9,SNR=3.7
BOSA   Boshof           122.43 114   PKP   PKiKP   03 58 27.9 +0.3
       comp=Z,5.8nm,0.8s,baz=265,slow=2.8,SNR=8.3
STKA   Stephens Creek   127.65 242   PKP   PKiKP   03 58 37.9 +0.2
       comp=Z,2.4nm,0.7s,baz=86,slow=1.3,SNR=7.7
WRA    Warramunga Arr   134.39 257   PKP   PKPdf   03 58 51.0 +0.8
       comp=Z,1.8nm,0.6s,baz=82,slow=2.3,SNR=22
ASAR   Alice Springs    134.86 252   PKP   PKPdf   03 58 51.8 +0.7
       comp=Z,1.1nm,0.8s,baz=105,slow=1.8,SNR=10
PZH    PanZhiHua        135.40 340   PKP   PKPdf   03 58 52.9 +0.7
CMAR   Chiang Mai Arr   143.80 340   PKP   PKPbc   03 59 05.7 +0.4
       comp=Z,1.2nm,0.3s,baz=15,slow=3.9,SNR=1.6
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*REY **08** 03:55:32.8, 64°.62N×17°.47W, h11km*
*IDC **08** 03:55:33.4±1.0, 64°.36N×17°.59W, h0km, mb3.3/7, mbtmp3.4/8, ML3.9/1, MS3.4/1, Error ellipse: s-maj=32.6km s-min=16.2km az=25.0*
ISC 08 03:55:34.0±0.7**, 64°.63N**±0°.03×**17°.49W**±0°.03**, h10**km**, n34, σ2s.35**/33**, mb3.5**/7**, Iceland**

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Code   Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op    ISC       h  m  s     ISC
IVON   Vonarskard         0.13 293   P     Pg      03 55 35.8 -1.2
       baz=292
IDJK   Dyngjujokull       0.16 138   P     Pg      03 55 36.4 -1.2
       baz=140
IDYN   Dyngjuhals         0.17  17   P     Pg      03 55 36.6 -1.2
       baz=14
IGRF   Grimsfjall         0.24 156   P     Pg      03 55 37.4 -1.5
       baz=158
IURH   Urdarhals          0.24  36   P     Pg      03 55 37.7 -1.3
       baz=34
IHUS   Husbondi           0.34 193   P     Pg      03 55 39.5 -1.3
       baz=194
IVOT   Vottur             0.38 160   P     Pg      03 55 39.9 -1.6
       baz=161
ISKR   Skrokkalda         0.39 261   P     Pg      03 55 40.4 -1.4
       baz=261
IJOK   Jokulheimar        0.45 226   P     Pg      03 55 41.0 -1.6
       baz=227
THOR   Thorvaldshraun     0.47  48   P     Pg      03 55 41.3 -1.7
       baz=47
IKRE   Kreppuhraun        0.50  71   P     Pg      03 55 41.8 -2.0
       baz=70
IIEY   Innrieyrar         0.60 208   P     Pg      03 55 43.6 -2.0
       baz=209
IMKO   Mokollar           0.61  54   P     Pg      03 55 43.7 -2.0
       baz=53
IKSK   Karasker           0.64 136   P     Pg      03 55 43.6 -2.8
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	baz=137						
IKAL	**Kalfafell**	**0.69**	**187**	P	**Pg**	**03 55 45.1**	**-2.1**
	baz=188						
ISVA	**Svartarkot**	**0.72**	**8**	P	**Pg**	**03 55 45.6**	**-2.3**
	baz=7.1						
IVSH	**V-Sauoahnukur**	**0.78**	**75**	P	**Pg**	**03 55 46.3**	**-2.6**
	baz=75						
IFAG	**Fagurholsmyri**	**0.84**	**154**	P	**Pg**	**03 55 47.3**	**-2.7**
	baz=154						
IADA	**Aoalbol**	**0.91**	**63**	P	**Pg**	**03 55 48.4**	**-3.0**
	baz=63						
ISTE	**Stelbrattur**	**0.95**	**285**	P	**Pg**	**03 55 49.3**	**-2.9**
	baz=285						
BORG	**Borgarnes**	**1.66**	**276**	Pn	**Pn**	**03 56 01.8**	**-1.2**
	12nm,0.3s,baz=81,slow=6.0,SNR=21						
BORG				Sn	**Sg**	**03 56 26.1**	**-1.0**
	13nm,0.3s,baz=224,slow=22,SNR=9.1						
EKA	**Eskdalemuir Ar**	**11.72**	**136**	Pn	**Pn**	**03 58 20.2**	**-0.9**
	baz=321,slow=13						
	1.3nm,0.6s						
CLL	**Collm**	**20.68**	**116**	*e*sP	sP	04 00 17.0	-1.6
	comp=Z,17nm,1.6s						
KHC	**Kasperske Hory**	**22.65**	**118**	*e*P	**P**	**04 00 37.1**	**+2.2**
KHC				*e*x	x	04 01 34.9	
DPC	**Dobruska-Polom**	**22.74**	**113**	*e*P	**P**	**04 00 39.6**	**+3.7**
DPC				*e*x	x	04 01 30.6	
GERES	**GERESS Array B**	**22.93**	**119**	P	**P**	**04 00 37.4**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=329,slow=6.9,SNR=2.1						
	comp=Z,0.3nm,0.6s						
KRLC	**Kraliky**	**23.14**	**113**	*e*P	**P**	**04 00 44.7**	**+4.7**
BELG	**Belogornoye**	**34.49**	**79**	LR	LR	04 17 44.3	
	comp=Z,50nm,18.1s,baz=159,slow=38						
YKA	**Yellowknife Ar**	**39.25**	**313**	P	**P**	**04 03 04.0**	**+2.1**
	comp=Z,0.3nm,0.8s,baz=50,slow=9.0,SNR=4.1						
	comp=Z,0.3nm,0.8s						
ILAR	**Eielson Array**	**45.73**	**332**	P	P	04 03 58.3	+3.7
	comp=Z,0.7nm,1.0s,baz=28,slow=6.5,SNR=6.1						
ILAR				PcP	**PP**	**04 05 36.0**	**-5.3**
	comp=Z,0.2nm,0.8s,baz=20,slow=2.9,SNR=2.2						
	comp=Z,0.7nm,1.0s						
MKAR	**Makanchi Array**	**52.74**	**58**	P	**P**	**04 04 49.5**	**+1.0**
	comp=Z,0.7nm,1.1s,baz=298,slow=7.5,SNR=3.9						
	comp=Z,0.7nm,1.1s						
TORD	**Torodi Ar. Bea**	**53.10**	**156**	P	**P**	**04 04 50.8**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=339,slow=9.2,SNR=2.9						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**53.20**	**293**	P	**P**	**04 04 53.8**	**+1.7**
	comp=Z,0.4nm,0.7s,baz=36,slow=4.7,SNR=5.3						
	comp=Z,0.4nm,0.7s						
SONM	**Songino Array**	**59.67**	**40**	P	**P**	**04 05 40.2**	**+2.1**
	comp=Z,0.3nm,0.7s,baz=301,slow=3.0,SNR=2.5						
	comp=Z,0.3nm,0.7s						

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*IDC **08** 03:56:24.5±1.0, 64°.49N×17°.67W, h0^{km}, mb3.5/6, mbtmp3.6/8, ML3.4/2, MS3.1/1, Error ellipse: s-maj=30.0km s-min=16.4km az=27.0*
*REY **08** 03:56:24.7, 64°.63N×17°.45W, h5^{km}*
ISC 08 03:56:24.7±0.8**, 64°.63N**±0°.02×**17°.47W**±0°.02**, h10**^{km}±5^{km}**, n58,** σ1^{s}.**39**/77**, mb3.6**/6**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.13**	**288**	P	**Pg**	**03 56 27.8**	**0.0**
	baz=290						
IVON				S	**Sg**	**03 56 30.9**	**+0.9**
	baz=290						
IDJK	**Dyngjujokull**	**0.16**	**142**	P	**Pg**	**03 56 28.2**	**-0.1**
	baz=143						
IDJK				S	**Sg**	**03 56 31.0**	**+0.1**
	baz=143						
IDYN	**Dyngjuhals**	**0.17**	**15**	P	**Pg**	**03 56 28.3**	**0.0**
	baz=12						
IDYN				S	**Sg**	**03 56 31.3**	**+0.4**
	baz=12						
IURH	**Urdarhals**	**0.23**	**36**	P	**Pg**	**03 56 29.3**	**-0.2**
	baz=33						
IURH				S	**Sg**	**03 56 32.8**	**-0.1**
	baz=33						
IGRF	**Grimsfjall**	**0.24**	**159**	P	**Pg**	**03 56 29.2**	**-0.5**
	baz=160						
IGRF				S	**Sg**	**03 56 33.3**	**+0.2**
	baz=160						
IHUS	**Husbondi**	**0.35**	**194**	P	**Pg**	**03 56 31.2**	**-0.4**
	baz=196						
IHUS				S	**Sg**	**03 56 36.6**	**+0.4**
	baz=196						
IVOT	**Vottur**	**0.38**	**161**	P	**Pg**	**03 56 31.7**	**-0.6**
	baz=162						
IVOT				S	**Sg**	**03 56 37.6**	**+0.3**
	baz=162						
ISKR	**Skrokkalda**	**0.40**	**260**	P	**Pg**	**03 56 32.2**	**-0.4**
	baz=261						
ISKR				S	**Sb**	**03 56 39.0**	**-1.1**
	baz=261						
THOR	**Thorvaldshraun**	**0.45**	**48**	P	**Pb**	**03 56 32.9**	**-1.9**
	baz=46						
THOR				S	**Sb**	**03 56 40.2**	**-1.4**
	baz=46						
IJOK	**Jokulheimar**	**0.46**	**226**	P	**Pg**	**03 56 32.8**	**-0.8**
	baz=228						
IJOK				S	**Sg**	**03 56 39.6**	**-0.1**
	baz=228						
IKRE	**Kreppuhraun**	**0.49**	**71**	P	**Pb**	**03 56 33.4**	**-2.0**
	baz=70						
IKRE				S	**Sb**	**03 56 41.0**	**-1.6**
	baz=70						
IMKO	**Mokollar**	**0.59**	**54**	P	**Pb**	**03 56 35.5**	**-1.7**
	baz=53						
IMKO				S	**Sb**	**03 56 44.0**	**-1.6**
	baz=53						
IIEY	**Innrieyrar**	**0.61**	**208**	P	**Pg**	**03 56 35.4**	**-1.1**
	baz=209						
IIEY				S	**Sg**	**03 56 44.2**	**-0.3**
	baz=209						
IKSK	**Karasker**	**0.64**	**137**	P	**Pg**	**03 56 35.6**	**-1.4**
	baz=137						
IKSK				S	**Sg**	**03 56 44.5**	**-1.0**
	baz=137						
IKAL	**Kalfafell**	**0.69**	**188**	P	**Pg**	**03 56 36.9**	**-1.1**
	baz=189						
IKAL				S	**Sg**	**03 56 46.8**	**-0.3**
	baz=189						
ISVA	**Svartarkot**	**0.71**	**7**	P	**Pb**	**03 56 37.4**	**-1.8**
	baz=6.4						
IVSH	**V-Sauoahnukur**	**0.77**	**76**	P	**Pb**	**03 56 38.2**	**-1.9**
	baz=75						
IVSH				S	**Sb**	**03 56 49.2**	**-1.4**
	baz=75						
IFAG	**Fagurholsmyri**	**0.84**	**155**	P	**Pg**	**03 56 39.3**	**-1.5**
	baz=155						
IFAG				S	**Sg**	**03 56 51.3**	**-0.4**
	baz=155						
IADA	**Aoalbol**	**0.90**	**64**	P	**Pg**	**03 56 40.2**	**-1.8**
	baz=63						
ISTE	**Stelbrattur**	**0.95**	**285**	P	**Pg**	**03 56 41.4**	**-1.6**
	baz=285						
ISTE				S	**Sg**	**03 56 54.0**	**-1.4**
	baz=285						
IMEL	**Melhnausar**	**1.00**	**20**	P	**Pb**	**03 56 42.3**	**-1.8**
	baz=19						
ISNB	**Snabyli**	**1.03**	**210**	S	**Sg**	**03 56 56.6**	**-1.3**
	baz=211						
ISNB				P	**Pg**	**03 56 42.7**	**-1.8**
	baz=211						
IREN	**Reynihlio**	**1.05**	**13**	P	**Pb**	**03 56 43.0**	**-1.9**
	baz=12						
IHES	**Hestalda**	**1.08**	**238**	P	**Pg**	**03 56 44.1**	**-1.3**
	baz=239						
ISLY	**Slysaalda**	**1.09**	**222**	P	**Pg**	**03 56 43.5**	**-2.1**
	baz=223						
IFED	**Fedgar**	**1.15**	**239**	P	**Pg**	**03 56 44.9**	**-1.7**
	baz=239						
IRJU	**Rjupnafell**	**1.15**	**208**	P	**Pb**	**03 56 44.8**	**-1.7**
	baz=208						
IGRS	**Grimsstaoir**	**1.16**	**29**	P	**Pg**	**03 56 44.8**	**-2.1**
	baz=28						
IMJO	**Mjoaskard**	**1.19**	**235**	P	**Pb**	**03 56 45.6**	**-1.7**
	baz=235						
IAUS	**Austmannsbunga**	**1.20**	**217**	P	**Pb**	**03 56 45.7**	**-1.8**
	baz=218						
ISKI	**Skildingahlsh**	**1.26**	**8**	P	**Pb**	**03 56 46.3**	**-2.1**
	baz=7.8						
IGHA	**Grjothals**	**1.26**	**15**	P	**Pb**	**03 56 46.4**	**-2.1**
	baz=15						
IGOD	**Go??abunga**	**1.27**	**221**	P	**Pn**	**03 56 46.9**	**-1.6**
	baz=221						
IHAU	**Haukadalur**	**1.28**	**240**	P	**Pn**	**03 56 47.3**	**-1.2**
	baz=240						
IGRA	**Granastaoir**	**1.29**	**358**	P	**Pn**	**03 56 47.0**	**-1.7**
	baz=358						
IGFL	**Graenufjoll**	**1.32**	**214**	P	**Pn**	**03 56 47.6**	**-1.6**
	baz=214						
IDIM	**Dimmadalss**	**1.35**	**9**	P	**Pn**	**03 56 47.9**	**-1.7**
	baz=8.9						
IALF	**Alftagrof**	**1.37**	**214**	P	**Pn**	**03 56 48.7**	**-1.1**
	baz=215						
IHLA	**Hella**	**1.37**	**344**	P	**Pb**	**03 56 48.4**	**-1.9**
	baz=344						
ISAU	**Saurbar**	**1.44**	**245**	P	**Pn**	**03 56 49.1**	**-1.6**
	baz=245						
IHED	**Heoinshofoi**	**1.46**	**3**	P	**Pn**	**03 56 49.6**	**-1.4**
	baz=2.2						
IBRE	**Brettingsstaoi**	**1.51**	**353**	P	**Pn**	**03 56 50.5**	**-1.2**
	baz=353						
IASM	**Asmuli**	**1.59**	**241**	P	**Pn**	**03 56 52.0**	**-0.8**
	baz=242						
ISIG	**Siglufjorour**	**1.62**	**339**	P	**Pn**	**03 56 52.2**	**-1.0**
	baz=338						
BORG	**Borgarnes**	**1.66**	**276**	Pn	**Pb**	**03 56 53.6**	**-1.7**
	24nm,0.3s,baz=88,slow=6.5,SNR=9.0						
BORG				Sn	**Sg**	**03 57 16.2**	**-1.9**
	6.9nm,0.3s,baz=218,slow=19,SNR=1.1						
ISOL	**Solvholt**	**1.67**	**247**	P	**Pn**	**03 56 53.3**	**-0.6**
	baz=247						
IEDA	**Engidalur**	**1.79**	**254**	P	**Pn**	**03 56 55.2**	**-0.4**
	baz=254						
IHRN	**Hraun**	**1.85**	**324**	P	**Pn**	**03 56 55.8**	**-0.7**
	baz=324						
IGRI	**Grimsey**	**1.93**	**354**	P	**Pn**	**03 56 56.4**	**-1.1**
	baz=353						
JMIC	**Jan Mayen**	**7.22**	**24**	LR	LR	04 00 28.7	
	comp=Z,125nm,19.2s,baz=207,slow=33						
EKA	**Eskdalemuir Ar**	**11.72**	**136**	Pn	**Pn**	**03 59 12.3**	**+0.6**
	baz=322,slow=13						
	1.6nm,0.5s						
FINES	**FINESS Array B**	**19.70**	**79**	P	**Pn**	**04 00 56.7**	**+1.6**
	0.1nm,0.3s,baz=272,slow=5.1,SNR=1.4						
	1.4nm,0.8s						
ESDC	**Sonseca Array**	**26.22**	**156**	P	**P**	**04 01 59.7**	**+0.4**
	0.6nm,0.8s,baz=354,slow=11,SNR=2.9						
	0.6nm,0.8s						
YKA	**Yellowknife Ar**	**39.25**	**313**	P	**P**	**04 03 53.5**	**+0.8**
	0.6nm,1.0s,baz=46,slow=8.7,SNR=2.9						
	0.6nm,1.0s						
ILAR	**Eielson Array**	**45.72**	**332**	P	**P**	**04 04 48.0**	**+2.8**
	0.7nm,1.0s,baz=23,slow=4.9,SNR=4.1						
	0.7nm,1.0s						
MKAR	**Makanchi Array**	**52.73**	**58**	P	**P**	**04 05 40.9**	**+1.8**
	0.7nm,1.0s,baz=344,slow=6.3,SNR=3.6						
	0.7nm,1.0s						
TORD	**Torodi Ar. Bea**	**53.10**	**156**	P	**P**	**04 05 42.8**	**+0.8**
	0.7nm,0.9s,baz=344,slow=9.1,SNR=3.8						
	0.7nm,0.9s						
PDAR	**Pinedale Array**	**53.20**	**293**	P	**P**	**04 05 44.4**	**+1.5**
	0.8nm,0.8s,baz=40,slow=4.7,SNR=7.1						
	0.8nm,0.8s						

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*DDA **08** 04:07:50.8±0.0, 37°.59N×38°.51E, h8^{km}±2^{km}, ML2.5*
*ISK **08** 04:07:51.4, 37°.52N×38°.51E, h14^{km}, ML2.5/8*
ISC 08 04:07:50.9±0.9**, 37°.57N**±0°.03×**38°.51E**±0°.02**, h12**^{km}±7^{km}**, n26,** σ**0^{s}.64**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	**Bozova**	**0.20**	**239**	P	**Pg**	**04 07 55.7**	**+0.4**
ATAB				S	**Sg**	**04 07 58.8**	**+0.4**
ATAB				*i* AML	AML	04 07 59.0	
	comp=E,991nm,0.2s						
ATAB				*i* AML	AML	04 08 01.0	
	comp=N,726nm,0.5s						
HANM	**anlurfa/Hi**	**0.29**	**88**	P	**Pg**	**04 07 57.0**	**0.0**
HANM				S	**Sg**	**04 08 01.0**	**-0.1**
HANM				*i* AML	AML	04 08 01.0	
	comp=N,597nm,0.4s						
AZEY	**Adyaman-Merk**	**0.32**	**319**	P	**Pg**	**04 07 57.5**	**+0.1**
AZEY				S	**Sg**	**04 08 01.5**	**-0.2**
AZEY				*i* AML	AML	04 08 02.0	
	comp=E,478nm,0.2s						
NARI	**Adyaman-Kaht**	**0.37**	**32**	P	**Pg**	**04 07 58.1**	**-0.2**
NARI				S	**Sg**	**04 08 02.7**	**-0.7**
AKCA	**Adyaman/G¶l**	**0.69**	**289**	P	**Pg**	**04 08 04.4**	**0.0**
MAYA	**Malatya/Merkez**	**0.76**	**355**	P	**Pg**	**04 08 04.8**	**-0.8**
GZT	**Gaziantep**	**0.78**	**254**	P	**Pg**	**04 08 05.5**	**-0.6**
GZT				*i* AML	AML	04 08 20.0	
	comp=N,332nm,0.3s						
GZT				*i* AML	AML	04 08 21.0	
	comp=E,190nm,0.2s						
NZIP	**Nizip/Gaziante**	**0.85**	**232**	P	**Pb**	**04 08 07.6**	**0.0**
NZIP				*i* AML	AML	04 08 26.0	
	comp=N,152nm,0.4s						
AKCD	**Akcadag**	**0.86**	**327**	P	**Pg**	**04 08 07.3**	**-0.3**
AKCD				*i* AML	AML	04 08 19.0	
	comp=N,204nm,0.2s						
GAZ	**Gaziantep**	**1.11**	**249**	Pn	**Pn**	**04 08 13.0**	**+0.7**
KAHM	**Kahramanmaras,**	**1.21**	**268**	P	**Pn**	**04 08 12.2**	**-1.5**
KAHM				S	**Sb**	**04 08 28.9**	**-0.5**
KMRS	**Kahramanmaras**	**1.28**	**267**	Pn	**Pn**	**04 08 14.6**	**-0.1**
DARE	**Darende-Malaty**	**1.29**	**321**	Pn	**Pg**	**04 08 15.8**	**+0.1**
DARE				Sn	**Sg**	**04 08 34.0**	**+1.6**
ELBS	**KAHRAMANMARAS**	**1.32**	**305**	P	**Pb**	**04 08 16.0**	**+0.3**
DYBB	**Diyarbakir**	**1.34**	**73**	Pn	**Pn**	**04 08 16.2**	**+0.6**
DYBB				Sn	**Sg**	**04 08 34.9**	**+0.6**
HEKM	**Malatya_Hekimh**	**1.38**	**342**	P	**Pn**	**04 08 16.2**	**+0.1**
HEKM				S	**Sn**	**04 08 35.1**	**+0.8**
HEKM				*i* AML	AML	04 08 40.0	
	comp=E,75nm,0.5s						
KUZU	**Kuzuini**	**1.40**	**236**	P	**Pg**	**04 08 18.3**	**+0.6**
KUZU				S	**Sg**	**04 08 36.3**	**+0.4**
KAMA	**Osmaniye**	**1.52**	**256**	P	**Pn**	**04 08 17.5**	**-0.5**
KAMA				S	**Sn**	**04 08 37.3**	**-0.4**
ARPR	**Arapgir-MALATY**	**1.52**	**355**	Pn	**Pb**	**04 08 19.4**	**+0.2**
ARPR				Sn	**Sg**	**04 08 40.3**	**+0.2**
KOVA	**Elazig, Kovanc**	**1.53**	**42**	P	**Pb**	**04 08 19.5**	**+0.3**
KOVA				S	**Sn**	**04 08 38.4**	**+0.5**
MAZI	**Mazidag**	**1.54**	**94**	Pn	**Pb**	**04 08 19.3**	**-0.2**
ANDN	**Andirin**	**1.72**	**271**	P	**Pn**	**04 08 20.9**	**+0.1**
SARI	**SarD1z-Kayseri**	**1.85**	**297**	Pn	**Pb**	**04 08 24.1**	**-0.7**
SAIM	**ADANA**	**1.97**	**283**	P	**Pn**	**04 08 25.0**	**+0.8**
KOZT	**Kozan**	**2.14**	**268**	Pn	**Pb**	**04 08 28.5**	**-1.0**
SVAN	**Silvan-Diyarba**	**2.20**	**74**	Pn	**Pb**	**04 08 29.6**	**-1.1**

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*IEPN **08** 04:09:10.0, 85°.43N×17°.64E, h10^{km}*
ISC 08 04:09:16.0±3.9**, 84°.8N**±0°.2×**16°.9E**±0°.1**, h10**^{km}**, n13,** σ**0^{s}.91**/22**, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZFI2	**Zemlya Franca-**	**5.43**	**120**	*e*P	**Pn**	**04 10 37.4**	**+0.6**
ZFI2				S	**Sn**	**04 11 38.5**	**-0.7**
	5.2nm,1.3s						
ZFI	**Zemlya Franca-**	**5.44**	**120**	*e*P	**Pn**	**04 10 37.3**	**+0.5**
ZFI				*e*S	**Sn**	**04 11 38.9**	**-0.4**
	9.3nm,2.2s						
OMEGA	**Omega**	**5.46**	**120**	*e*P	**Pn**	**04 10 37.8**	**+0.6**
OMEGA				*e*S	**Sn**	**04 11 39.5**	**-0.5**
	8.2nm,2.1s						
KBS	**Kingsbay**	**5.92**	**189**	*e*P	**Pn**	**04 10 43.0**	**-0.5**
KBS				*e*S	**Sn**	**04 11 52.5**	**+1.2**
KBS	**Kingsbay**	**5.92**	**189**	*e*P	**Pn**	**04 10 43.3**	**-0.2**
KBS				*e*S	**Sn**	**04 11 52.1**	**+0.9**
KBS				IAML		04 11 58.5	
	comp=Z,4.1nm,0.7s						
SPA0	**Spitsbergen Ar**	**6.64**	**181**	*e*P	**Pn**	**04 10 53.4**	**+0.1**
SPA0				*e*S	**Sn**	**04 12 09.6**	**+0.7**
SPA0	**Spitsbergen Ar**	**6.64**	**181**	*e*P	**Pn**	**04 10 53.6**	**+0.3**
SPA0				*e*S	**Sn**	**04 12 08.0**	**-0.9**
SPA0				IAML		04 12 32.2	
	comp=Z,3.1nm,0.8s						
BRBB	**Barentsburg B**	**6.73**	**185**	*e*P	**Pn**	**04 10 54.6**	**0.0**
BRBB				*e*S	**Sn**	**04 12 11.1**	**-0.1**
BRBA	**Barentsburg A**	**6.77**	**185**	*e*P	**Pn**	**04 10 56.3**	**+1.2**
BRBA				IAML		04 12 24.2	
	comp=Z,3.1nm,0.5s						
HOPEN	**Hopen**	**8.40**	**167**	*e*P	**Pn**	**04 11 17.7**	**+0.3**
HOPEN				S	**Sn**	**04 12 51.7**	**-0.5**
HOPEN	**Hopen**	**8.40**	**167**	*e*P	**Pn**	**04 11 18.2**	**+0.8**
HOPEN				*e*S	**Sn**	**04 12 53.1**	**+1.0**
HOPEN				IAML		04 13 05.8	
	comp=Z,4.5nm,0.7s						
DAG	**Danmarks Havn**	**9.53**	**234**	*e*S	Sn	04 12 57.3	-23
BJO1	**Bjornoya**	**10.34**	**177**	*e*P	**Pn**	**04 11 41.5**	**-2.5**

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*ISK **08** 04:10:28.5, 37°.59N×38°.53E, h4^{km}, ML2.6/9*
*DDA **08** 04:10:28.2±0.0, 37°.60N×38°.46E, h7^{km}±2^{km}, ML2.4*
ISC 08 04:10:28.6±1.0**, 37°.59N**±0°.03×**38°.47E**±0°.02**, h6**^{km}±9^{km}**, n25,** σ**0^{s}.75**/37**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	**Bozova**	**0.19**	**228**	P	**Pg**	**04 10 32.6**	**+0.3**
ATAB				S	**Sg**	**04 10 35.5**	**+0.6**
ATAB				*i* AML	AML	04 10 38.0	
	comp=N,1µm,0.3s						
ATAB				*i* AML	AML	04 10 38.0	
	comp=E,1µm,0.3s						
AZEY	**Adyaman-Merk**	**0.28**	**321**	P	**Pg**	**04 10 34.5**	**+0.4**
AZEY				S	**Sg**	**04 10 38.2**	**+0.4**
HANM	**anlurfa/Hi**	**0.33**	**92**	P	**Pg**	**04 10 34.8**	**-0.2**
HANM				*i* AML	AML	04 10 48.0	
	comp=N,425nm,0.4s						
NARI	**Adyaman-Kaht**	**0.37**	**38**	P	**Pg**	**04 10 35.8**	**0.0**
NARI				S	**Sg**	**04 10 40.5**	**-0.2**
AKCA	**Adyaman/G¶l**	**0.65**	**288**	P	**Pg**	**04 10 41.0**	**-0.1**
AKCA				S	**Sg**	**04 10 50.0**	**+0.3**
AKCA				*i* AML	AML	04 10 56.0	
	comp=N,178nm,0.6s						
MAYA	**Malatya/Merkez**	**0.73**	**357**	P	**Pg**	**04 10 42.3**	**-0.3**
GZT	**Gaziantep**	**0.76**	**252**	P	**Pg**	**04 10 43.5**	**+0.3**
GZT				*i* AML	AML	04 10 57.0	
	comp=N,171nm,0.3s						
GZT				*i* AML	AML	04 11 00.0	
	comp=E,124nm,0.6s						
AKCD	**Akcadag**	**0.82**	**328**	P	**Pg**	**04 10 43.0**	**-1.4**
NZIP	**Nizip/Gaziante**	**0.84**	**229**	P	**Pg**	**04 10 45.0**	**+0.3**
NZIP				S	**Sg**	**04 10 55.4**	**-0.2**
NZIP				*i* AML	AML	04 10 59.0	
	comp=E,128nm,0.4s						
NZIP				*i* AML	AML	04 11 02.0	
	comp=N,142nm,0.6s						
GAZ	**Gaziantep**	**1.09**	**248**	Pn	**Pn**	**04 10 50.5**	**+0.1**
GAZ				Sn	**Sn**	**04 11 06.7**	**+0.9**
KAHM	**Kahramanmaras,**	**1.18**	**267**	P	**Pg**	**04 10 50.3**	**-0.9**
KAHM				S	**Sg**	**04 11 06.5**	**-0.1**
DARE	**Darende-Malaty**	**1.25**	**322**	Pn	**Pn**	**04 10 53.8**	**+1.2**
DARE				Sn	**Sn**	**04 11 12.1**	**+2.3**
HEKM	**Malatya_Hekimh**	**1.34**	**343**	P	**Pn**	**04 10 53.4**	**-0.7**
HEKM				S	**Sn**	**04 11 12.5**	**+0.2**
DYBB	**Diyarbakir**	**1.37**	**74**	Pn	**Pg**	**04 10 55.2**	**+0.4**
DYBB				Sn	**Sn**	**04 11 13.5**	**+0.8**
KUZU	**Kuzuini**	**1.38**	**234**	P	**Pn**	**04 10 53.9**	**-0.5**
KAMA	**Osmaniye**	**1.49**	**255**	P	**Pn**	**04 10 55.9**	**-0.1**
KAMA				S	**Sn**	**04 11 14.2**	**-1.6**
ARPR	**Arapgir-MALATY**	**1.50**	**356**	Pn	**Pn**	**04 10 56.3**	**+0.2**
KOVA	**Elazig, Kovanc**	**1.53**	**43**	P	**Pb**	**04 10 57.0**	**-0.4**
KOVA				S	**Sg**	**04 11 17.8**	**-0.1**
KOVA				*i* AML	AML	04 11 23.0	
	comp=E,47nm,0.8s						
MAZI	**Mazidag**	**1.58**	**94**	Pn	**Pb**	**04 10 57.3**	**-0.9**
ANDN	**Andirin**	**1.69**	**270**	P	**Pb**	**04 10 59.6**	**-0.5**
SARI	**SarD1z-Kayseri**	**1.81**	**297**	Pn	**Pb**	**04 11 01.9**	**-0.3**
SAIM	**ADANA**	**1.93**	**282**	P	**Pn**	**04 11 02.7**	**+0.7**
SAIM				*i* AML	AML	04 11 33.0	
	comp=N,35nm,0.4s						
SAIM				*i* AML	AML	04 11 38.0	
	comp=E,34nm,0.4s						
KOZT	**Kozan**	**2.10**	**268**	Pn	**Pb**	**04 11 06.5**	**-0.6**
BNGB	**Bingl**	**2.23**	**51**	Pn	**Pn**	**04 11 06.8**	**+0.7**
SVAN	**Silvan-Diyarba**	**2.23**	**75**	Pn	**Pn**	**04 11 06.0**	**0.0**

HEL 08 04:14:01.2±0.2**, 67°.68N**×**33°.71E, h0**^{km}**, ML1.4, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVZ	**Lovozero**	**0.42**	**58**	PG	Pg	04 14 09.4	+0.2
LVZ				SG	Sg	04 14 12.8	-1.9
VRF	**Varrio**	**1.56**	**274**	PG	Pn	04 14 29.4	-0.8
	baz=87						
VRF				MSG		04 14 48.1	
	comp=Z,4.2nm,0.2s						
VRF				SG	Sn	04 14 49.1	-2.0
KU6	**Riekki**	**2.25**	**224**	PG	Pb	04 14 41.3	-1.3
KU6				MSG		04 15 07.5	
	comp=Z,0.8nm,0.2s						
KU6				SG	Sb	04 15 11.2	+0.4
MSF	**Maaselka**	**2.56**	**228**	SG	Sb	04 15 20.8	+0.8
SGF	**Sodankyl**	**2.77**	**268**	PG	Pb	04 14 50.9	-0.5
RNF	**Rovaniemi**	**3.19**	**254**	PN	Pn	04 14 53.1	+0.6
KEV	**Kevo**	**3.21**	**314**	PN	Pn	04 14 53.3	+0.5
KEV				SN	Sn	04 15 31.2	-0.5
ARA0	**ARCESS Array S**	**3.54**	**306**	PN	Pn	04 14 57.1	-0.2
	baz=119						
ARA0				SG	Sb	04 15 48.7	+0.8
PAJU	**Pajala**	**4.15**	**266**	PN	Pn	04 15 03.9	-1.8

WEL 08 04:35:19.2±0.9**, 39°S**±4°×**17°9E**±°**, h23**^{km}±8^{km}**, M3.6**/12**, ML3.9**/14**, MLv3.6**/12**, Error ellipse: s-maj=0.0km s-min=0.0km az=85.7, confirmed, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNGZ	**Carnagh Statio**	**0.47**	**278**	P	Pn	04 35 29.8	-0.8
CNGZ				S	Sn	04 35 38.4	+0.2
PUZ	**Puketiti**	**0.65**	**318**	P	Pb	04 35 32.2	+0.3
PUZ				S	Sb	04 35 40.6	+0.1
TWGZ	**Tauwhareparae**	**0.75**	**300**	P	Pn	04 35 34.1	-0.3
TWGZ				S	Sn	04 35 44.4	-0.7
TKGZ	**Te Karaka**	**0.76**	**278**	P	Pb	04 35 34.0	+0.2
TKGZ				S	Sn	04 35 44.5	-0.8
WMGZ	**Waiomatatini S**	**0.80**	**337**	P	Pn	04 35 35.7	+0.7
WMGZ				S	Sn	04 35 46.8	+0.7
RIGZ	**Rimuhau**	**0.83**	**259**	P	Pn	04 35 35.4	-0.1
RIGZ				S	Sn	04 35 47.6	+0.5
PKGZ	**Pakihiroa**	**0.88**	**319**	P	Pn	04 35 36.3	+0.1
PKGZ				S	Sb	04 35 47.6	+0.4
MHGZ	**Mahia Peninsul**	**0.92**	**229**	P	Pn	04 35 37.2	+0.4
KNZ	**Kokohu**	**1.00**	**242**	P	Pn	04 35 37.7	-0.1
MWZ	**Matawai**	**1.03**	**282**	P	Pn	04 35 37.7	-0.6
RUGZ	**Raukumara Rang**	**1.06**	**303**	P	Pn	04 35 38.3	-0.5
MXZ	**Matakaoa Point**	**1.07**	**338**	P	Pb	04 35 39.8	+0.8
RAGZ	**Rawiri**	**1.09**	**273**	P	Pb	04 35 39.6	+0.1
HAZ	**Te Kaha**	**1.13**	**314**	P	Pn	04 35 39.7	+0.1
SNGZ	**Shannon Statio**	**1.17**	**258**	P	Pn	04 35 40.3	+0.1
WHHZ	**Waihua**	**1.33**	**246**	P	Pn	04 35 42.7	+0.3
URZ	**Urewera**	**1.36**	**282**	P	Pn	04 35 42.9	+0.1
RAHZ	**Arahi**	**1.39**	**254**	P	Pn	04 35 43.6	+0.4
RTZ	**Ruatahuna**	**1.43**	**267**	P	Pn	04 35 44.0	+0.1
MTHZ	**Maungataniwha**	**1.57**	**258**	P	Pn	04 35 45.9	+0.3
ARHZ	**Aropaoanui**	**1.58**	**243**	P	Pn	04 35 46.3	+0.5
MUGZ	**Murupara**	**1.60**	**272**	P	Pb	04 35 47.5	-0.6
NMHZ	**Naumai**	**1.65**	**250**	P	Pn	04 35 47.6	+0.7
TARZ	**Mount Tarawera**	**1.83**	**279**	P	Pb	04 35 53.2	+1.1
MCHZ	**McNeill Hill**	**1.87**	**241**	P	Pn	04 35 50.6	+0.8
BKZ	**Black Stump Fm**	**1.91**	**251**	P	Pn	04 35 50.7	+0.4
KAHZ	**Kahuranaki**	**1.94**	**230**	P	Pn	04 35 51.2	+0.3
HRRZ	**Handcock Road**	**1.99**	**274**	P	Pb	04 35 56.3	+1.6
KWHZ	**Kaweka Forest**	**2.05**	**244**	P	Pn	04 35 52.4	+0.1
PXZ	**Pawanui**	**2.11**	**225**	P	Pn	04 35 52.9	-0.1
BHHZ	**Black Hill Sta**	**2.33**	**246**	P	Pn	04 35 56.2	0.0
WPHZ	**Waipukurau**	**2.38**	**230**	P	Pn	04 35 56.8	+0.1
PRHZ	**Porangahau**	**2.40**	**224**	P	Pn	04 35 56.4	-0.6
PNHZ	**Pukenui**	**2.44**	**235**	P	Pn	04 35 57.1	-0.5
TMVZ	**Te Maari**	**2.49**	**256**	P	Pn	04 35 59.4	+1.0
NTVZ	**North Tongarir**	**2.50**	**256**	P	Pn	04 35 59.4	+0.7
OTVZ	**Oturere**	**2.53**	**255**	P	Pn	04 35 59.6	+0.6
MOVZ	**Moawhango**	**2.53**	**249**	P	Pn	04 35 59.5	+0.6
SNVZ	**South Ngauruho**	**2.55**	**255**	P	Pn	04 36 00.1	+0.8
TUVZ	**Tukino**	**2.56**	**253**	P	Pn	04 36 00.1	+0.7
WNVZ	**Wahianoa**	**2.62**	**252**	P	Pn	04 36 00.5	+0.3
FWVZ	**Far West T-bar**	**2.63**	**254**	P	Pn	04 36 01.0	+0.5
TRVZ	**Turoa**	**2.65**	**253**	P	Pn	04 36 01.1	+0.5
TSZ	**Takapari Road**	**2.67**	**235**	P	Pn	04 36 00.1	-0.7
DVHZ	**Dannevirke**	**2.69**	**229**	P	Pn	04 36 00.4	-0.7
PKVZ	**Pokaka**	**2.80**	**254**	P	Pn	04 36 03.3	+0.7
BFZ	**Birch Farm**	**2.90**	**222**	P	Pn	04 36 02.5	-1.5
PRWZ	**Pori Road**	**2.96**	**227**	P	Pn	04 36 04.6	-0.3
POWZ	**Post Office Ro**	**2.98**	**231**	P	Pn	04 36 04.7	-0.4
MRZ	**Mangatainoka R**	**3.26**	**229**	P	Pn	04 36 07.7	-1.2

TMWZ	Te Maipa	3.40	220	P	Pn	04 36 08.6	-2.2
HOWZ	Holdsworth Sta	3.45	226	P	Pn	04 36 10.0	-1.6
OGWZ	Otaki Gorge	3.60	230	P	Pn	04 36 12.1	-1.5
MTW	Mount Morrison	3.64	223	P	Pn	04 36 12.0	-2.0
KIW	Kapiti Island	3.79	231	P	Pn	04 36 14.7	-1.4
MRNZ	Matariki Terra	5.45	237	P	Pn	04 36 36.7	-2.2
KHZ	Kahutara	5.57	224	P	Pn	04 36 40.5	-0.1
CTZ	Chatham Island	6.22	148	P	Pn	04 36 51.3	+1.7
CTZ				S	Sn	04 37 58.2	-1.7

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*SJA **08** 04:35:42.8±1.4,21°.05S×68°.95W,h100km,ML3.6,MW3.6, Hypocentre not reviewed by the ISC*

*GUC **08** 04:35:45.3±0.5,21°.14S×68°.99W,h108km±3km,ML3.6*

*IDC **08** 04:36:14.9±3.6,17°.05S×68°.64W,h312km±9km,mb2.6/2, mbtmp3.3/2,Error ellipse: s-maj=116.6km s-min=55.7km az=18.0*

ISC 08 04:35:44.5±1.2,**21°.13S**±0°.04×**69°.07W**±0°.09,**h114**km±9km, **n17**,σ**0s.41**/30,**10C-1D**,**Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.40	283	⇑*i*P	Pn	04 36 01.1	-0.2
PB01				*e*S	Sn	04 36 13.3	-0.7
PB01				IAML		04 36 14.2	
	comp=E,7µm,0.2s						
PB01	IPOC Station P	0.40	283	*e*P		04 36 01.2	
PB01				*e*S		04 36 13.6	
PB01				IAML		04 36 14.0	
	comp=Z,3µm,0.2s						
PB09	IPOC Station P	0.68	194	⇑*i*P	Pn	04 36 03.3	0.0
PB09				*e*S	Sn	04 36 17.5	0.0
PB09	IPOC Station P	0.68	194	*e*P		04 36 02.0	
PB09				*e*S		04 36 18.2	
PB09				IAML		04 36 19.6	
	comp=Z,793nm,0.4s						
PB02	IPOC Station P	0.79	256	⇑*i*P	Pn	04 36 04.6	+0.4
PB02				*i* S	Sn	04 36 19.6	+0.6
PB02				IAML		04 36 20.8	
	comp=E,2µm,0.4s						
PB02	IPOC Station P	0.79	256	*e*P		04 36 04.5	
PB02				*e*S		04 36 19.8	
PB02				IAML		04 36 22.9	
	comp=Z,2µm,0.3s						
PB07	IPOC Station P	0.96	232	⇑*i*P	Pn	04 36 06.1	+0.2
PB07				*i* S	Sn	04 36 22.4	+0.3
PB07				IAML		04 36 23.5	
	comp=N,1µm,0.4s						
PB07	IPOC Station P	0.96	232	*e*P		04 36 05.0	
PB07				*e*S		04 36 22.5	
PB07				IAML		04 36 23.2	
	comp=Z,720nm,0.2s						
PB08	IPOC Station P	0.99	355	⇓*e*P	Pn	04 36 06.6	+0.2
PB08				*e*S	Sn	04 36 23.1	+0.2
PB08				IAML		04 36 23.8	
	comp=E,1µm,0.3s						
PB08	IPOC Station P	0.99	355	*e*P		04 36 06.7	
PB08				*e*S		04 36 23.0	
PB08				IAML		04 36 24.9	
	comp=Z,572nm,0.1s						
PB03	IPOC Station P	1.11	215	⇑*i*P	Pn	04 36 07.5	+0.1
PB03				*i* S	Sn	04 36 24.4	-0.2
PB03				IAML		04 36 26.4	
	comp=E,885nm,0.2s						
PB03	IPOC Station P	1.11	215	*e*P		04 36 07.6	
PB03				*e*S		04 36 24.6	
TA01	Diego Aracena	1.18	298	⇑*i*P	Pn	04 36 08.3	+0.4
TA01				*e*S	Sn	04 36 26.0	+0.3
TA01				IAML		04 36 27.4	
	comp=N,1µm,0.4s						
TA01	Diego Aracena	1.18	298	*e*P		04 36 07.0	
TA01				IAML		04 36 27.6	
	comp=Z,450nm,0.4s						
TA02	Huaiquique	1.31	311	*e*P	Pn	04 36 09.6	+0.2
TA02				*e*S	Sn	04 36 28.4	+0.1
TA02				IAML		04 36 30.6	
	comp=N,2µm,0.1s						
TA02	Huaiquique	1.31	311	*e*P		04 36 08.0	
TA02				*e*S		04 36 09.3	
TA02				IAML		04 36 34.8	
	comp=Z,756nm,0.1s						
PB11	IPOC Station P	1.47	338	⇑*i*P	Pn	04 36 11.6	+0.1
PB11				*e*S	Sn	04 36 32.0	+0.2
PB11				IAML		04 36 33.1	
	comp=E,3µm,0.3s						
PB11	IPOC Station P	1.47	338	*e*P		04 36 11.6	
PB11				*e*S		04 36 32.1	
PB11				IAML		04 36 34.3	
	comp=Z,729nm,0.5s						
LVC	Limon Verde	1.48	174	*e*P	Pn	04 36 12.2	+0.5
LVC				*e*S	Sn	04 36 32.6	+0.3
LVC	Limon Verde	1.48	174	*e*P		04 36 11.0	
PB04	IPOC Station P	1.56	220	⇑*i*P	Pn	04 36 12.8	+0.3
PB04				*e*S	Sn	04 36 33.9	+0.1
PB04	IPOC Station P	1.56	220	*e*P		04 36 12.0	
PB06	IPOC Station P	1.63	197	*e*P	Pn	04 36 13.7	+0.3
PB06				*e*S	Sn	04 36 35.4	+0.1
PB06				IAML		04 36 36.3	
	comp=E,597nm,0.4s						
PB06	IPOC Station P	1.63	197	*e*P		04 36 13.0	
PSGC	Pisagua	1.82	327	⇑*e*P	Pn	04 36 15.2	-0.3
PSGC				*e*S	Sn	04 36 38.6	-0.6
PSGC				IAML		04 36 41.4	
	comp=N,387nm,0.2s						
PSGCX	Pisagua	1.82	327	*e*P		04 36 14.0	
MNMC	Minye Minye	2.05	346	⇑*e*P	Pn	04 36 19.1	+0.4
MNMC				*e*S	Sn	04 36 45.7	+1.0
MNMC				IAML		04 36 47.9	
	comp=N,940nm,0.2s						
MNMCX	Minye Minye	2.05	346	*e*P		04 36 18.0	
PB10	IPOC Station P	2.74	210	*e*P		04 36 27.2	
PB16	IPOC Station P	2.81	351	*e*P		04 36 30.1	
YJA	Yavi	3.47	108	*e*P		04 36 37.0	
HJA	Humahuaca	3.97	122	*e*P		04 36 45.0	
GO02	Mina Guanaco	4.04	187	*e*P		04 36 44.0	
LPAZ	La Paz	4.90	11	P	Pn	04 36 57.1	+0.5
	comp=N,0.8nm,0.3s,baz=212,slow=4.1,SNR=6.2						
LPAZ				S	Sn	04 37 30.7	-22
	comp=N,1.2nm,0.4s,baz=163,slow=3.2,SNR=2.5						
ASTB	Santa Barbara	5.10	124	*e*P		04 36 58.0	
TORD	Torodi Ar. Bea	77.37	70	P	P	04 47 26.8	-0.6
	comp=N,0.4nm,0.8s,baz=258,slow=5.7,SNR=4.4 comp=N,0.4nm,0.8s						
YKA	Yellowknife Ar	90.79	341	P	P	04 48 25.3	-9.1
	comp=N,0.1nm,0.5s,baz=134,slow=5.2,SNR=1.7 comp=N,0.1nm,0.5s						

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*IDC **08** 04:35:48.0±5.2,6°.03S×154°.48E,h198km±33km,mb3.1/4, mbtmp3.7/7,Error ellipse: s-maj=62.6km s-min=18.1km az=103.0*

ISC 08 04:35:47.9±1.5,**6°.0S**±0°.1×**154°.5E**±0°.2,**h200**km,**n8**, σ**1s.16**/10,**mb3.2**/4,**Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.02	304	P	Pn	04 36 37.5	-0.3
	69nm,0.4s,baz=214,slow=3.6,SNR=2.8						
KRVT				S	Sn	04 37 16.0	-0.9
	117nm,0.5s,baz=166,slow=6.8,SNR=4.0						
PMG	Port Moresby	8.05	245	P	Pn	04 37 42.4	+0.5
	8.4nm,0.5s,baz=87,slow=8.6,SNR=3.1						
PMG				S	Sn	04 39 13.1	+0.4
	5.9nm,0.4s,baz=217,slow=20,SNR=1.1						
CTA	Charters Tower	16.14	209	P	P	04 39 22.4	-1.1
	1.4nm,0.6s,baz=38,slow=14,SNR=2.0						
WRA	Warramunga Arr	24.02	233	P	P	04 40 45.1	+0.4
	2.2nm,0.6s,baz=56,slow=10,SNR=20 2.2nm,0.6s						
ASAR	Alice Springs	26.50	226	P	P	04 41 06.0	-1.1
	0.1nm,0.3s,baz=58,slow=9.6,SNR=5.2 0.1nm,0.3s						
SONM	Songino Array	68.27	327	P	P	04 46 29.0	+1.7
	0.2nm,0.4s,baz=133,slow=6.1,SNR=2.8 0.2nm,0.4s						
MKAR	Makanchi Array	82.37	319	P	P	04 47 48.1	+0.5
	0.4nm,0.7s,baz=105,slow=5.8,SNR=4.8 0.4nm,0.7s						
TORD	Torodi Ar. Bea	152.32	287	PKPbc	PKPbc	04 55 19.5	-1.6
	0.2nm,0.8s,baz=61,slow=3.2,SNR=1.5						

WEL 08 04:43:36.5±1.0,**42°S**±6°×**17°2E**±°,**h81**km±9km,**M3.0**/2, **MLv3.0**/2,**Error ellipse: s-maj=0.0km s-min=0.0km az=138.7,confirmed,South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DSZ	Denniston Nort	0.30	273	P	Pn	04 43 50.9	+1.9
DSZ				S	Sn	04 44 01.1	+2.9
THZ	Tophouse	0.52	90	P	Pn	04 43 52.1	+1.5
THZ				S	Sn	04 44 03.9	+2.9
MRNZ	Matariki Terra	0.55	49	P	Pn	04 43 51.8	+1.0
MRNZ				S	Sn	04 44 03.1	+1.7
QRZ	Quartz Range	0.97	15	P	Pn	04 43 55.7	+0.4
QRZ				S	Sn	04 44 09.5	+0.3
LTZ	Lake Taylor	1.02	177	P	Pn	04 43 57.4	+1.5
NNZ	Nelson	1.03	59	P	Pn	04 43 56.1	+0.1
NNZ				S	Sn	04 44 11.1	+0.5
INZ	Inchbonnie	1.12	210	P	Pn	04 43 57.0	0.0
KHZ	Kahutara	1.19	124	P	Pn	04 43 58.7	+0.8
MHCZ	Mount Hutt	1.83	195	P	Pn	04 44 06.3	0.0
MHCZ				S	Sn	04 44 28.3	-0.5
MQZ	McQueen's Vall	1.97	171	P	Pn	04 44 07.7	-0.3
FOZ	Fox Glacier	2.50	224	P	Pn	04 44 14.8	-0.3
TMZ	Timaru	2.77	198	P	Pn	04 44 18.1	-0.7

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*NEIC **08** 04:53:33.9±1.0,3°.6S±0°.1×152°.9E±0°.1,h25km±5km, mb4.6/28,Error ellipse: s-maj=20.2km s-min=8.4km az=130.0*

*IDC **08** 04:53:36.2±2.4,3°.53S×152°.82E,h49km±21km,mb4.0/14, mbtmp4.2/15,ML3.9/1,MS3.6/2,Error ellipse: s-maj=28.2km s-min=17.4km az=98.0*

ISC 08 04:53:34.5±0.5,**3°.55S**±0°.09×**152°.9E**±0°.1,**h35**km,**n53**, σ**0s.95**/55,**mb4.5**/27,**New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	0.99	230		Pn	04 53 52.4	+0.4
RABL					Sn	04 54 04.8	+0.1
KRVT	Keravat (AS076	1.17	230	P	Pn	04 53 54.4	0.0
	340nm,0.3s,baz=206,slow=1.2,SNR=51						
KRVT				LR	LR	04 53 57.1	
	comp=Z,72nm,21.1s,baz=236,slow=19						
KRVT				S	Sn	04 54 09.7	+0.6
	4µm,0.5s,baz=180,slow=19,SNR=27						
PATS	Pohnpei	11.64	28	Pn	Pn	04 56 17.4	-0.8
CTA	Charters Tower	17.68	201	P	P	04 57 40.1	+1.3
	0.3nm,0.3s,baz=14,slow=13,SNR=3.7						
CTA				LR	LR	05 04 11.2	
	comp=Z,47nm,18.4s,baz=122,slow=36 2.7nm,0.8s						
WB0	Warramunga Arr	24.22	227	P	P	04 58 47.9	-0.3
WR0	Warramunga Arr	24.24	226	P	P	04 58 48.1	-0.3
WRAB	Tennant Creek	24.36	227	P	P	04 58 49.5	0.0
WB2	Warramunga Arr	24.36	227	P	P	04 58 49.1	-0.4
WB2				IAmb	IAmb	04 59 04.2	
	comp=Z,23nm,1.5s						
WRA	Warramunga Arr	24.37	227	P	P	04 58 49.0	-0.7
	comp=Z,1.3nm,0.4s,baz=52,slow=9.7,SNR=31						
WRA				PcP	PcP	05 02 26.8	-1.8
	comp=Z,0.4nm,0.8s,baz=51,slow=2.6,SNR=3.3 comp=Z,1.3nm,0.4s						
WRA	Warramunga Arr	24.37	227	P	P	04 58 49.0	-0.7
ARMA	Armidale	26.75	182	P	P	04 59 10.6	-0.6
ARMA				IAmb	IAmb	04 59 51.4	
	comp=Z,22nm,1.2s						
ASAR	Alice Springs	27.16	221	P	P	04 59 13.9	-0.9
	comp=Z,0.2nm,0.4s,baz=54,slow=9.1,SNR=6.0 comp=Z,0.2nm,0.4s						
FORT	Forrest	35.83	218	P	P	05 00 30.4	-0.5
FORT				IAmb	IAmb	05 00 40.2	
	comp=Z,7.5nm,0.8s						
JHJ	Hachijo jima 2	38.53	342	LR	LR	05 14 14.8	
	comp=Z,328nm,20.6s,baz=74,slow=32						
JAGI	Jajag, Banyuwa	38.85	261	P	P	05 00 56.2	-0.5
INZ	Inchbonnie	42.36	160	P	P	05 01 25.0	-0.3
MLZ	Mavora Lakes	43.73	164	P	P	05 01 35.4	-1.1
MLZ				IAmb	IAmb	05 01 59.6	
	comp=Z,20nm,1.5s						
KEKH	Kekaha	52.80	59	P	P	05 02 46.4	-0.4
PEA0B	Petropavlovsk-	56.59	3	P	P	05 03 14.1	+0.4
PETK	Petropavlovsk-	56.59	3	P	P	05 03 13.8	+0.1
	comp=Z,2.5nm,0.6s,baz=178,slow=8.3,SNR=6.3 comp=Z,2.5nm,0.6s						
SONM	Songino Array	65.34	327	P	P	05 04 13.9	+0.5
	comp=Z,1.0nm,0.6s,baz=151,slow=6.2,SNR=6.5 comp=Z,1.0nm,0.6s						
SONM	Songino Array	65.34	327	P	P	05 04 13.8	+0.5
VNDA	Vanda	74.07	178	P	P	05 05 07.2	+0.7
	comp=Z,0.9nm,0.6s,baz=327,slow=5.6,SNR=7.4 comp=Z,0.9nm,0.6s						
VNDA	Vanda	74.07	178	P	P	05 05 07.6	+1.1
VNDA				IAmb	IAmb	05 05 42.2	
	comp=Z,7.2nm,1.5s						
ANM	Nome	74.55	17	P	P	05 05 10.8	+1.4
ANM				IAmb	IAmb	05 05 12.2	
	comp=Z,4.2nm,0.8s						
Q19K	Cape Douglas,	75.18	26	P	P	05 05 14.3	+1.1
L19K	White Mountain	76.56	22	P	P	05 05 22.8	+1.8
L19K				IAmb	IAmb	05 05 36.9	
	comp=Z,6.1nm,0.9s						
TTA	Tatalina	76.57	21	P	P	05 05 22.9	+1.8
M20K	Styx River	77.05	23	P	P	05 05 25.9	+2.0
M20K				IAmb	IAmb	05 05 39.5	
	comp=Z,5.2nm,1.1s						
K20K	Telida	77.53	22	P	P	05 05 28.8	+2.3
K20K				IAmb	IAmb	05 05 42.7	
	comp=Z,3.8nm,0.8s						
RC01	Rabbit Creek A	78.00	25	P	P	05 05 30.2	+1.1
RC01				IAmb	IAmb	05 05 45.6	
	comp=Z,11nm,1.2s						
CAST	Castle Rocks	78.31	22	P	P	05 05 31.6	+0.8
CAST				IAmb	IAmb	05 05 46.3	
	comp=Z,5.6nm,1.0s						
KTH	Kantishna Hill	78.82	22	P	P	05 05 34.4	+0.7
SML	Sawmill	78.94	24	P	P	05 05 35.5	+1.1
IMAR	Indian Mountai	79.17	20	P	P	05 05 36.9	+1.4
H21K	Melozitna Rive	79.30	20	P	P	05 05 37.2	+1.0
H21K				IAmb	IAmb	05 05 54.2	
	comp=Z,5.8nm,1.3s						
MKAR	Makanchi Array	79.47	319	P	P	05 05 37.4	-0.1
	comp=Z,0.8nm,0.7s,baz=105,slow=6.2,SNR=9.4 comp=Z,0.8nm,0.7s						
MKAR	Makanchi Array	79.47	319	P	P	05 05 37.8	+0.3
MLY	Manley	79.68	21	P	P	05 05 39.8	+1.5
MLY				IAmb	IAmb	05 05 40.5	
	comp=Z,14nm,1.2s						
KLU	Klutina	79.80	25	P	P	05 05 40.3	+1.2
ZALV	Zalesovo Beam	80.19	326	P	P	05 05 40.2	-1.0
	comp=Z,0.6nm,0.4s,baz=105,slow=6.1,SNR=4.6 comp=Z,0.6nm,0.4s						
ZALV	Zalesovo Beam	80.19	326	P	P	05 05 40.4	-0.9
WRH	Wood River Hil	80.36	22	P	P	05 05 42.7	+0.7
WRH				IAmb	IAmb	05 05 43.4	
	comp=Z,6.6nm,1.1s						
ILAR	Eielson Array	80.96	22	P	P	05 05 44.9	-0.3
	comp=Z,3.7nm,0.9s,baz=250,slow=5.3,SNR=30 comp=Z,3.7nm,0.9s						
KURBB	Kurchatov Arra	82.90	322	P	P	05 05 55.7	+0.1
	comp=Z,3.3nm,0.2s,baz=123,slow=4.6,SNR=4.1 comp=Z,3.3nm,0.2s						
AAK	Ala-Archa	83.90	313	P	P	05 06 01.8	+0.6
	comp=Z,2.5nm,0.4s,baz=200,slow=3.3,SNR=6.2 comp=Z,2.5nm,0.4s						
NRIK	Noril'sk	84.83	341	P	P	05 06 04.5	-0.6
	comp=Z,2.1nm,0.4s,baz=104,slow=4.9,SNR=5.7 comp=Z,2.1nm,0.4s						
BVAR	Borovoye Array	88.32	323	P	P	05 06 21.7	-0.8
	comp=Z,4.2nm,0.7s,baz=102,slow=6.2,SNR=20 comp=Z,4.2nm,0.7s						
NVAR	Mina Array Bea	91.22	52	P	P	05 06 37.2	+0.4
	comp=Z,0.4nm,0.7s,baz=247,slow=6.7,SNR=3.6 comp=Z,0.4nm,0.7s						
YKA	Yellowknife Ar	94.27	28	P	P	05 06 50.4	+0.4
	comp=Z,0.8nm,0.7s,baz=269,slow=4.7,SNR=16 comp=Z,0.8nm,0.7s						
PLCA	Paso Flores	120.70	143	PKP	PKiKP	05 12 23.8	+0.4
	comp=Z,6.0nm,1.3s,baz=269,slow=4.7,SNR=6.5						
TORD	Torodi Ar. Bea	150.01	290	PKPbc	PKPbc	05 13 21.3	-1.2
	comp=Z,0.9nm,0.8s,baz=80,slow=2.3,SNR=6.2						
BDFB	Brasilia	151.84	133	PKPbc	PKPbc	05 13 27.1	+0.2
	comp=Z,2.5nm,0.6s,baz=140,slow=5.5,SNR=6.2						

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*NOU **08** 04:55:06.6,40°.42S×174°.06E,h83km,MLv4.0/10,Cook Strait, New Zealand*

*WEL **08** 04:55:07.5±0.4,40°S±2°×17°4E±°,h64km±8km,M3.4/40, ML3.6/44,MLv3.4/40,Error ellipse: s-maj=0.0km s-min=0.0km az=112.2,confirmed*

ISC 08 04:55:05.6±1.4,**40°.43S**±0°.03×**174°.11E**±0°.04,**h92**km±10km, **n104**,σ**1s.18**/113,**Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUWZ	D'Urville Isla	0.40	201	P	Pn	04 55 20.3	+0.3
DUWZ				S	Sn	04 55 30.4	-0.3
KIW	Kapiti Island	0.75	126	P	Pn	04 55 22.9	0.0
KIW				S	Sn	04 55 34.2	-1.5
TCW	Tory Channel	0.79	171	P	Pn	04 55 23.9	+0.7
TCW				S	Sn	04 55 36.3	-0.1
OGWZ	Otaki Gorge	0.90	116	P	Pn	04 55 25.6	+1.2
OGWZ				S	Sn	04 55 36.9	-1.5
WAZ	Wanganui	0.95	45	P	Pn	04 55 25.4	+0.4
NNZ	Nelson	0.96	215	P	Pn	04 55 25.9	+0.8
NNZ				S	Sn	04 55 40.2	+0.5
LREZ	Lake Rotokare	0.99	13	P	Pn	04 55 26.0	+0.6
SNZO	South Karori	0.99	153	P	Pn	04 55 26.1	+0.7
WEL	Wellington	0.99	150	P	Pn	04 55 26.1	+0.7
WEL				S	Sn	04 55 39.3	-0.9
CAW	Cannon Point	1.00	133	P	Pn	04 55 25.9	+0.4
CAW				S	Sn	04 55 39.2	-1.1
TUWZ	Tuamarina	1.01	187	P	Pn	04 55 26.3	+0.7
TUWZ				S	Sn	04 55 40.6	+0.1
NMEZ	Namu Road	1.03	350	P	Pn	04 55 26.1	+0.3
NMEZ				S	Sn	04 55 40.6	-0.3
TKNZ	Takaka Hill	1.06	235	P	Pn	04 55 26.9	+0.7
KHEZ	Kahui Hut	1.13	356	P	Pn	04 55 27.6	+0.5
KHEZ	Kahui Hut	1.13	356	P	Pn	04 55 27.4	+0.2
MRZ	Mangatainoka R	1.15	102	P	Pn	04 55 27.1	-0.1
NEZ	North Egmont	1.16	360	P	Pn	04 55 27.7	+0.3
HOWZ	Holdsworth Sta	1.17	114	P	Pn	04 55 27.6	+0.2
NBEZ	Newall Road No	1.17	351	P	Pn	04 55 27.9	+0.4
PKE	Pukeiti	1.23	356	P	Pn	04 55 28.6	+0.4
DREZ	Durham Road	1.24	3	P	Pn	04 55 28.7	+0.4
QRZ	Quartz Range	1.27	251	P	Pn	04 55 28.9	+0.3
QRZ	Quartz Range	1.27	251	P	Pn	04 55 28.8	+0.2
POWZ	Post Office Ro	1.27	89	P	Pn	04 55 30.2	+1.6
MTW	Mount Morrison	1.29	125	P	Pn	04 55 28.8	0.0
BSWZ	Blackbirch Sta	1.30	188	P	Pn	04 55 30.4	+1.4
CMWZ	Cape Campbell	1.32	177	P	Pn	04 55 27.0	-2.3
VRZ	Vera Road	1.40	21	P	Pn	04 55 30.5	+0.3
TIWZ	Tintock	1.40	105	P	Pn	04 55 34.7	+4.4
MRNZ	Matariki Terra	1.41	226	P	Pn	04 55 31.5	+1.2
PLWZ	Palliser	1.43	143	P	Pn	04 55 30.9	+0.2
PKVZ	Pokaka	1.48	40	P	Pn	04 55 31.5	+0.2
TMWZ	Te Maipa	1.52	117	P	Pn	04 55 32.3	+0.6
TRWZ	Traveller	1.54	129	P	Pn	04 55 33.7	+1.7
DVHZ	Dannevirke	1.58	86	P	Pn	04 55 31.8	-0.7
TRVZ	Turoa	1.58	45	P	Pn	04 55 32.7	-0.1
WNVZ	Wahianoa	1.59	47	P	Pn	04 55 32.9	+0.1
DRZ	Dome Shelter	1.61	45	P	Pn	04 55 33.9	+0.7
THZ	Tophouse	1.61	214	P	Pn	04 55 34.4	+1.4
WHVZ	Whangaehu Hut	1.61	45	P	Pn	04 55 34.2	+1.0
FWVZ	Far West T-bar	1.62	44	P	Pn	04 55 33.3	+0.1
MOVZ	Moawhango	1.63	52	P	Pn	04 55 32.8	-0.4
BFZ	Birch Farm	1.65	100	P	Pn	04 55 33.4	0.0
BFZ	Birch Farm	1.65	100	P	Pn	04 55 33.0	-0.4
TUVZ	Tukino	1.66	46	P	Pn	04 55 34.1	+0.4
PNHZ	Pukenui	1.68	73	P	Pn	04 55 33.2	-0.7
NGZ	Ngauruhoe	1.70	43	P	Pn	04 55 34.5	+0.3
TWVZ	Taurewa	1.70	38	P	Pn	04 55 34.4	+0.2
SNVZ	South Ngauruho	1.71	44	P	Pn	04 55 34.5	+0.1
WTVZ	West Tongariro	1.74	42	P	Pn	04 55 34.6	-0.1
NNVZ	North Ngauruho	1.74	42	P	Pn	04 55 35.4	+0.7
OTVZ	Oturere	1.74	44	P	Pn	04 55 34.7	0.0
BHHZ	Black Hill Sta	1.77	59	P	Pn	04 55 34.3	-0.8
NTVZ	North Tongarir	1.80	43	P	Pn	04 55 36.3	+0.9
TMVZ	Te Maari	1.80	44	P	Pn	04 55 35.7	+0.3
WPHZ	Waipukurau	1.82	79	P	Pn	04 55 34.9	-0.7
KATZ	Kakaramea	1.90	41	P	Pn	04 55 37.6	+0.9
HIZ	Hauiti	2.00	17	P	Pn	04 55 37.9	0.0
HIZ	Hauiti	2.00	17	P	Pn	04 55 37.8	0.0
KHZ	Kahutara	2.03	192	P	Pn	04 55 39.6	+1.3
KHZ	Kahutara	2.03	192	P	Pn	04 55 39.5	+1.3
KWHZ	Kaweka Forest	2.04	61	P	Pn	04 55 39.4	+0.8
WATZ	Wairara	2.13	37	P	Pn	04 55 40.7	+1.0
DSZ	Denniston Nort	2.18	232	P	Pn	04 55 41.3	+1.0
KAHZ	Kahuranaki	2.22	74	P	Pn	04 55 40.0	-0.8
MCHZ	McNeill Hill	2.22	65	P	Pn	04 55 45.0	+4.2
BKZ	Black Stump Fm	2.23	56	P	Pn	04 55 40.3	-0.6
TLZ	Tolley Road	2.37	28	P	Pn	04 55 43.0	+0.2
NMHZ	Naumai	2.47	58	P	Pn	04 55 48.5	+4.3
MTHZ	Maungataniwha	2.63	54	P	Pn	04 55 47.3	+1.0
GVZ	Greta Valley S	2.66	197	P	Pn	04 55 47.1	+0.5
LTZ	Lake Taylor	2.73	210	P	Pn	04 55 47.9	+0.4
RAHZ	Arahi	2.75	58	P	Pn	04 55 52.5	+4.6
TOZ	Tahuroa Road	2.90	22	P	Pn	04 55 49.9	0.0
AMCZ	Amberley	2.95	201	P	Pn	04 55 50.7	+0.2
INZ	Inchbonnie	3.04	220	P	Pn	04 55 52.5	+0.8
URZ	Urewera	3.18	48	P	Pn	04 55 55.8	+2.2
URZ	Urewera	3.18	48	P	Pn	04 55 55.4	+1.8
OXZ	Oxford	3.28	207	P	Pn	04 55 54.1	-0.9
MWZ	Matawai	3.38	53	P	Pn	04 55 58.0	+1.7
AWAZ	Awhitu Peninsu	3.38	7	P	Pn	04 55 56.7	+0.3
MQZ	McQueen's Vall	3.45	198	P	Pn	04 55 55.9	-1.3
WTAZ	Waiatarua	3.51	6	P	Pn	04 55 58.1	+0.1
ETAZ	East Tamaki Re	3.53	11	P	Pn	04 55 58.6	+0.3
AKCZ	Akaroa Harbour	3.56	194	P	Pn	04 55 58.0	-0.6
RACZ	Rakaia	3.61	203	P	Pn	04 55 58.3	-1.0
MHCZ	Mount Hutt	3.63	211	P	Pn	04 55 59.1	-0.7
WVZ	Waitaha Valley	3.65	223	P	Pn	04 56 01.5	+1.5
RVAZ	Riverhead Bore	3.67	6	P	Pn	04 56 00.6	+0.4
MBAZ	Motutapu North	3.71	10	P	Pn	04 56 01.3	+0.6
RUGZ	Raukumara Rang	3.71	50	P	Pn	04 55 59.5	-1.3
WIAZ	Waiheke Island	3.72	13	P	Pn	04 56 01.6	+0.7
WACZ	Wakanui South	3.90	205	P	Pn	04 56 02.5	-0.7
GCSZ	Gaunt Creek Bo	4.04	223	P	Pn	04 56 05.3	+0.2
ARCZ	Arundel	4.14	211	P	Pn	04 56 07.2	+0.6
FOZ	Fox Glacier	4.46	224	P	Pn	04 56 10.5	-0.3
TMZ	Timaru	4.57	209	P	Pn	04 56 11.2	-1.2
LBZ	Lake Benmore	4.91	215	P	Pn	04 56 17.7	+0.8
ODZ	Otahua Downs	5.27	208	P	Pn	04 56 21.9	0.0
	31nm,2.9s						
ODZ	Otahua Downs	5.27	208	P	Pn	04 56 21.8	-0.1
JCZ	Jackson Bay	5.37	226	P	Pn	04 56 22.9	-0.5
JCZ	Jackson Bay	5.37	226	P	Pn	04 56 22.7	-0.7
WKZ	Wanaka	5.78	219	P	Pn	04 56 30.4	+1.6
SYZ	Scrubby Hill	7.09	209	P	Pn	04 56 48.5	+1.8

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*IDC **08** 05:05:10.4±1.6,18°.49S×177°.92W,h573km±15km, mb3.2/11,mbtmp4.2/14,Error ellipse: s-maj=44.8km s-min=12.7km az=148.0*

ISC 08 05:05:08.9±1.2,**18°.5S**±0°.3×**177°.8W**±0°.2,**h557**km,**n17**, σ**1s.50**/17,**mb3.6**/11,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.03	280	P	P	05 06 34.6	+3.0
	32nm,0.7s,baz=130,slow=11,SNR=13						
AFI	Afiamalu	7.36	53	P	P	05 07 02.2	+1.4
	38nm,0.4s,baz=227,slow=2.0,SNR=11						
AFI				S	S	05 08 29.3	-3.0
	77nm,1.3s,baz=216,slow=17,SNR=1.6						
DZM	Mont Dzumac	15.21	254	P	P	05 08 19.2	-1.4
	6.9nm,0.8s,baz=106,slow=20,SNR=2.2						
CTA	Charters Tower	33.94	261	P	P	05 11 06.4	-0.3
	3.0nm,0.3s,baz=98,slow=8.3,SNR=8.7 3.0nm,0.3s						
STKA	Stephens Creek	38.87	242	P	P	05 11 47.0	0.0
	3.2nm,0.3s,baz=95,slow=10.0,SNR=15 3.2nm,0.3s						
WRA	Warramunga Arr	45.11	260	P	P	05 12 34.9	-1.4
	2.4nm,0.4s,baz=98,slow=6.9,SNR=44 2.4nm,0.4s						
ASAR	Alice Springs	45.20	255	P	P	05 12 36.3	-0.7
	3.8nm,0.4s,baz=87,slow=8.8,SNR=44 3.8nm,0.4s						
PETK	Petropavlovsk-	74.40	345	P	P	05 15 50.7	+0.6
	1.9nm,0.6s,baz=130,slow=7.5,SNR=8.1 1.9nm,0.6s						
NVAR	Mina Array Bea	79.44	43	P	P	05 16 19.3	+1.1
	0.5nm,0.8s,baz=216,slow=8.7,SNR=4.1 0.5nm,0.8s						
TXAR	Lajitas Array	85.81	57	P	P	05 16 51.2	+0.9
	0.4nm,0.7s,baz=218,slow=7.9,SNR=3.9 0.4nm,0.7s						
ILAR	Eielson Array	86.33	13	P	P	05 16 51.7	-0.1

	0.5nm,0.4s,baz=217,slow=5.0,SNR=10.0						
	0.5nm,0.4s						
PDAR	Pinedale Array	87.37	43	P	P	05 16 58.2	+0.7
	0.6nm,0.9s,baz=225,slow=3.8,SNR=4.1						
	0.6nm,0.9s						
SONM	Songino Array	94.38	319	P	P	05 17 27.7	-1.9
	0.3nm,0.7s,baz=134,slow=4.2,SNR=2.5						
	0.3nm,0.7s						
YKA	Yellowknife Ar	94.62	25	P	P	05 17 29.4	-0.7
	0.3nm,0.8s,baz=243,slow=5.2,SNR=2.9						
	0.3nm,0.8s						
ARCES	ARCESS Array B	127.00	350	PKP	PKPdf	05 23 08.9	-0.4
	1.7nm,0.9s,baz=337,slow=2.1,SNR=6.2						
FINES	FINESS Array B	133.92	344	PKP	PKPdf	05 23 22.3	-0.3
	0.5nm,0.5s,baz=225,slow=1.8,SNR=1.1						
AKASG	Malin Array Be	141.36	332	PKhKP	PKPpre	05 23 30.8	
	0.4nm,0.3s,baz=37,slow=4.3,SNR=6.0						

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*DDA **08** 05:13:12.6±0.0, 37°.59N×38°.50E, h7^{km}±2^{km}, ML3.3*
*ISK **08** 05:13:12.6, 37°.48N×38°.52E, h14^{km}, ML3.4/14*
ISC 08 05:13:12.8±0.9**, 37°.56N**±0°.03×**38°.51E**±0°.02**, h10**^{km}±7^{km}**,**
n35, σ0^{s}.70/56**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
ATAB	Bozova	0.19	242	P	Pg	05 13 17.2	+0.3
ATAB				S	Sg	05 13 20.3	+0.6
ATAB				*i* AML	AML	05 13 24.0	
	comp=E,9µm,0.5s						
HANM	anlurfa/Hi	0.30	86	P	Pg	05 13 18.7	-0.1
AZEY	Adyaman-Merk	0.32	321	P	Pg	05 13 19.2	-0.2
AZEY				S	Sg	05 13 23.1	-0.6
NARI	Adyaman-Kaht	0.38	32	P	Pg	05 13 20.0	-0.4
NARI				S	Sg	05 13 24.7	-0.8
AKCA	Adyaman/G¶l	0.69	290	P	Pg	05 13 26.1	-0.2
AKCA				S	Sg	05 13 34.7	-0.6
AKCA				*i* AML	AML	05 13 41.0	
	comp=N,2µm,0.5s						
AKCA				*i* AML	AML	05 13 41.0	
	comp=E,1µm,1.1s						
MAYA	Malatya/Merkez	0.77	355	P	Pg	05 13 26.9	-0.8
GZT	Gaziantep	0.78	255	P	Pb	05 13 28.1	-0.4
GZT				*i* AML	AML	05 13 42.0	
	comp=N,1µm,0.4s						
GZT				*i* AML	AML	05 13 48.0	
	comp=E,1µm,0.7s						
NZIP	Nizip/Gaziante	0.84	232	P	Pb	05 13 29.5	-0.1
NZIP				S	Sb	05 13 40.8	-0.1
NZIP				*i* AML	AML	05 13 44.0	
	comp=E,923nm,0.3s						
NZIP				*i* AML	AML	05 13 52.0	
	comp=N,1µm,0.4s						
AKCD	Akcadag	0.87	328	P	Pg	05 13 29.1	-0.5
AKCD				S	Sg	05 13 39.6	-1.3
GAZ	Gaziantep	1.10	250	Pn	Pn	05 13 34.0	-0.4
GAZ				Sn	Sn	05 13 49.4	-0.3
KAHM	Kahramanmaras,	1.21	268	P	Pn	05 13 35.4	-0.4
KAHM				S	Sb	05 13 51.1	-0.4
KMRS	Kahramanmaras	1.28	268	Pn	Pn	05 13 36.2	-0.6
KMRS				Sn	Sg	05 13 54.3	+0.3
HCB	Kahramanmara	1.29	261	P	Pn	05 13 36.7	-0.2
HCB				S	Sb	05 13 53.0	-0.8
HCB				*i* AML	AML	05 13 58.0	
	comp=E,460nm,0.5s						
DARE	Darende-Malaty	1.29	322	Pn	Pb	05 13 37.6	+0.3
DARE				Sn	Sg	05 13 56.4	+1.9
ELBS	KAHRAMANMARAS	1.33	306	P	Pg	05 13 38.2	-0.1
ELBS				S	Sg	05 13 56.3	+0.7
ELBS				*i* AML	AML	05 14 07.0	
	comp=N,449nm,0.7s						
DYBB	Diyarbakir	1.35	73	Pn	Pb	05 13 37.9	-0.4
DYBB				Sn	Sg	05 13 56.4	0.0
HEKM	Malatya_Hekimh	1.39	342	P	Pn	05 13 38.1	-0.4
HEKM				S	Sn	05 13 56.9	0.0
KUZU	Kuzuini	1.39	236	P	Pg	05 13 39.9	+0.4
KUZU				S	Sg	05 13 58.0	+0.5
KAMA	Osmaniye	1.51	256	P	Pn	05 13 39.9	-0.1
KAMA				S	Sb	05 13 59.8	-0.5
ARPR	Arapgir-MALATY	1.54	355	Pn	Pn	05 13 41.0	+0.5
KOVA	Elazig, Kovanc	1.54	42	P	Pb	05 13 41.7	+0.2
KOVA				S	Sn	05 14 00.8	+0.2
MAZI	Mazidag	1.54	93	Pn	Pn	05 13 39.9	-0.6
MAZI				Sn	Sn	05 14 00.4	-0.3
ANDN	Andirin	1.72	271	P	Pn	05 13 42.9	0.0
ANDN				S	Sb	05 14 05.9	-0.3
HANI	Diyarbakir_Han	1.72	60	P	Pn	05 13 43.3	+0.4
HANI				S	Sn	05 14 05.1	+0.1
TNCL	Tunceli-Merkez	1.75	27	P	Pg	05 13 46.3	-0.2
SARI	SarD1z-Kayseri	1.85	298	Pn	Pn	05 13 45.7	+0.9
SAIM	ADANA	1.97	283	P	Pn	05 13 46.8	+0.5
SAIM				S	Sb	05 14 12.4	-1.0
KOZT	Kozan	2.13	269	Pn	Pn	05 13 48.7	+0.2
SVAN	Silvan-Diyarba	2.21	74	Pn	Pn	05 13 49.8	+0.2
BNGB	Bingl	2.23	49	Pn	Pn	05 13 51.3	+1.4
CEYT	Ceyhan	2.27	257	Pn	Pn	05 13 50.8	+0.5
BNN	Bunyan	2.46	302	Pn	Pn	05 13 54.4	+1.3
YEDI	Yedisu-Bingol	2.46	40	Pn	Pn	05 13 54.7	+1.5
SVSK	Karacayir	2.63	334	Pn	Pn	05 13 57.0	+1.7
GURO	Guroymak-BITLI	2.95	69	Pn	Pn	05 14 01.2	+1.3

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*IDC **08** 05:18:52.5±1.1, 42°.73N×140°.89E, h152^{km}±9^{km}, mb3.2/14, mbtmp3.6/18, Error ellipse: s-maj=15.5km s-min=12.0km az=136.0*
*JMA **08** 05:18:53.1±0.1, 42°.8N±0°.5×140°.8E±0°.6, h146^{km}±1^{km}, MV3.2/40, SHIRIBESHI REGION*
ISC 08 05:18:52.2±0.6**, 42°.71N**±0°.05×**140°.81E**±0°.05**, h153**^{km}±5^{km}**,**
n46, σ1^{s}.33/61**, mb3.4**/14**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
JNB	Noboribetsu	0.29	144	*e*P	Pn	05 19 13.2	+0.2
JNB				*e*S	Sn	05 19 28.6	-0.2
JEW	Eniwo	0.49	74	*e*P	Pn	05 19 14.4	+0.6
JEW				*e*S	Sn	05 19 30.7	+0.4
JSH	Shimam	0.57	264	*e*P	Pn	05 19 14.6	+0.5
JSH				*e*S	Sn	05 19 30.9	0.0
JYM2	Yakumo 2	0.67	209	*e*P	Pn	05 19 15.5	+0.7
JYM2				*e*S	Sn	05 19 32.1	+0.1
JISS	Ishikarishitsu	0.72	38	*e*P	Pn	05 19 15.4	+0.4
JISS				*e*S	Sn	05 19 32.8	+0.1
JHST	Hiyamasetana	0.74	248	*e*P	Pn	05 19 15.5	+0.3
JHST				*e*S	Sn	05 19 32.7	-0.1
JIAM	Iburiatsuma	0.82	95	*e*P	Pn	05 19 16.6	+0.8
JIAM				*e*S	Sn	05 19 34.9	+1.1
JKB	Kayabe	0.83	168	*e*P	Pn	05 19 16.6	+0.7
JKB				*e*S	Sn	05 19 34.2	+0.2
JBT2	Biratori 2	1.15	86	*e*P	Pn	05 19 18.8	+0.3
JBT2				*e*S	Sn	05 19 39.5	+0.9
JOSM	Okushiri--Mats	1.17	238	*e*P	Pn	05 19 19.2	+0.6
JOSM				*e*S	Sn	05 19 39.1	+0.2
JHR	Hokuryu	1.23	33	*e*P	Pn	05 19 20.0	+0.7
JHR				*e*S	Sn	05 19 40.4	+0.3
JOMM	Oshimamatsumae	1.32	207	*e*P	Pn	05 19 21.3	+1.2
JOT	Ohata	1.33	172	*e*P	Pn	05 19 21.0	+0.7
JNBK	Urakawa-nobuka	1.50	106	*e*P	Pn	05 19 22.5	+0.6
JKK2	Kamakawa 2	1.83	50	*e*P	Pn	05 19 25.9	+0.3
JKK2				*e*S	Sn	05 19 50.7	-0.6
JSS	Shosan	1.86	24	*e*P	Pn	05 19 26.5	+0.8
JEM	Erimo	1.87	111	P	Pn	05 19 27.6	+1.6
ERM	Erimo	1.87	111	P	Pn	05 19 27.5	+1.5
JCH	Churui	1.89	92	*e*P	Pn	05 19 25.7	-0.5
ASAJ	Asahikawa	1.92	42	P	Pn	05 19 26.5	0.0
	66nm,0.3s,baz=235,slow=13,SNR=73						
ASAJ				S	Sn	05 19 52.5	-0.5
	81nm,0.6s,baz=16,slow=20,SNR=4.8						
JTM	Tenmabayashi	1.93	174	P	Pn	05 19 27.6	+0.9
JAR	Ashorobuto	2.25	74	*e*P	Pn	05 19 30.3	-0.1
YSS	Yuzh-Sakhalins	4.47	17	P	Pn	05 19 58.9	+0.4
JSD	Sado	5.05	203	P	Pn	05 20 08.2	+1.9
MAJO	Matsushiro	6.47	199	P	Pn	05 20 27.3	+2.0
MJAR	Matsushiro Arr	6.47	199	P	Pn	05 20 26.3	+1.0
	3.3nm,0.4s,baz=198,slow=21,SNR=8.1						
USRK	Ussuriysk Ar.	6.59	286	P	Pn	05 20 27.5	+0.8
	2.3nm,0.7s,baz=99,slow=12,SNR=2.5						
JGF	Kuroka	7.58	202	P	Pn	05 20 42.4	+2.3
KLR	Kul'dur	9.07	319	P	Pn	05 20 59.2	-0.5
	1.4nm,0.8s,baz=148,slow=13,SNR=4.2						
JHJ	Hachijo jima 2	9.61	185	P	Pn	05 21 04.1	-2.8
	92nm,0.6s,baz=225,slow=20,SNR=1.9						
JHJ				S	Sn	05 22 47.2	-6.2
	92nm,0.6s,baz=270,slow=20,SNR=1.6						
PETK	Petropavlovsk-	15.34	41	P	Pn	05 22 19.6	-0.8
	2.8nm,0.7s,baz=207,slow=6.3,SNR=6.5						
YAK	Yakutsk	20.46	345	P	P	05 23 14.8	-2.6
	12nm,0.5s,baz=318,slow=6.2,SNR=4.6						
SEY	Seymchan	21.37	15	P	P	05 23 25.4	-1.7
	4.1nm,0.4s,baz=200,slow=8.7,SNR=20						
	4.1nm,0.4s						
SONM	Songino Array	24.62	294	P	P	05 23 59.4	+1.0
	0.4nm,0.6s,baz=85,slow=9.1,SNR=4.1						
	0.4nm,0.6s						
ZALV	Zalesovo Beam	37.93	307	P	P	05 25 55.3	+0.9
	1.2nm,0.3s,baz=95,slow=8.7,SNR=6.5						
	1.2nm,0.3s						
MKAR	Makanchi Array	40.93	297	P	P	05 26 21.2	+1.8
	0.2nm,0.6s,baz=85,slow=11,SNR=3.3						
MKAR				PcP	PcP	05 28 17.1	+0.4
	0.3nm,0.7s,baz=80,slow=4.7,SNR=2.5						
	0.2nm,0.6s						
ILAR	Eielson Array	45.04	35	P	P	05 26 53.1	+1.0
	0.6nm,0.5s,baz=275,slow=9.9,SNR=15						
	0.6nm,0.5s						
YKA	Yellowknife Ar	59.18	32	P	P	05 28 36.6	+0.1
	0.2nm,0.5s,baz=303,slow=7.9,SNR=4.0						
	0.2nm,0.5s						
WRA	Warramunga Arr	62.62	187	P	P	05 29 00.3	+0.1
	0.5nm,0.5s,baz=4.9,slow=7.0,SNR=7.2						
	0.5nm,0.5s						
FINES	FINESS Array B	63.61	331	P	P	05 29 06.2	0.0
	1.1nm,0.5s,baz=49,slow=5.8,SNR=7.2						
	1.1nm,0.5s						
ASAR	Alice Springs	66.35	187	P	P	05 29 25.2	+0.8
	0.3nm,0.5s,baz=9.3,slow=5.0,SNR=5.2						
	0.3nm,0.5s						
NOA	NORSAR Array B	68.80	336	P	P	05 29 41.4	+2.1
	0.4nm,0.7s,baz=36,slow=6.3,SNR=1.7						
	0.4nm,0.7s						
AKASG	Malin Array Be	69.57	321	P	P	05 29 43.1	-1.1
	0.2nm,0.4s,baz=45,slow=7.2,SNR=2.3						
	0.2nm,0.4s						
NVAR	Mina Array Bea	72.00	54	P	P	05 29 59.0	-0.5
	0.4nm,0.7s,baz=286,slow=6.9,SNR=3.7						
	0.4nm,0.7s						
PDAR	Pinedale Array	74.05	46	P	P	05 30 10.8	-0.6
	0.2nm,0.6s,baz=306,slow=3.1,SNR=4.3						
	0.2nm,0.6s						
TXAR	Lajitas Array	87.02	52	P	P	05 31 21.1	+0.6
	0.2nm,0.5s,baz=312,slow=8.1,SNR=1.6						
	0.2nm,0.5s						

IDC 08 05:40:46.5±10.0**, 3°.00N**×**65°.42E, h0**^{km}**, mb3.6**/5**,**
mbtmp3.6/5**, MS3.3**/8**, Error ellipse: s-maj=336.3km**
s-min=31.9km az=72.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
PALK	Pallekele	15.80	74	LR	LR	05 49 25.1	
	comp=Z,106nm,18.5s,baz=330,slow=33						
WSAR	Wadi Sarin	21.17	342	LR	LR	05 52 01.7	
	comp=Z,90nm,20.4s,baz=194,slow=32						
BRDH	Bariadhala	32.08	50	LR	LR	05 59 40.1	
	comp=Z,79nm,19.7s,baz=266,slow=35						
CMAR	Chiang Mai Arr	36.24	62	LR	LR	06 01 60.0	
	comp=Z,25nm,18.0s,baz=215,slow=35						
AAK	Ala-Archa	40.29	10	LR	LR	06 05 48.1	
	comp=Z,33nm,19.3s,baz=216,slow=37						
MKAR	Makanchi Array	46.03	16	P	P	05 49 11.6	-0.3
	0.8nm,1.1s,baz=201,slow=7.7,SNR=3.3						
MKAR				LR	LR	06 08 15.5	
	comp=Z,33nm,18.4s,baz=242,slow=36						
	0.8nm,1.1s						
ZALV	Zalesovo Beam	53.23	14	P	P	05 50 06.4	-0.2
	0.4nm,0.4s,baz=194,slow=11,SNR=2.1						
	0.4nm,0.4s						
ARU	Arti	53.56	355	LR	LR	06 11 30.7	
	comp=Z,23nm,19.4s,baz=258,slow=34						
SONM	Songino Array	56.88	32	P	P	05 50 33.6	+0.2
	0.2nm,0.4s,baz=234,slow=6.9,SNR=2.4						
	0.2nm,0.4s						
H01W3	Cape Leeuwin H	59.20	134	T	T	06 54 42.3	
	baz=300,slow=75						
H01W2	Cape Leeuwin H	59.20	134	T	T	06 54 37.3	
	baz=300,slow=75						
H01W1	Cape Leeuwin H	59.22	134	T	T	06 54 42.2	
	baz=300,slow=75						
WRA	Warramunga Arr	71.32	112	P	P	05 52 08.6	-0.1
	1.1nm,0.8s,baz=290,slow=5.7,SNR=6.6						
	1.1nm,0.8s						
ASAR	Alice Springs	71.64	116	P	P	05 52 10.8	+0.2
	0.5nm,0.8s,baz=280,slow=5.9,SNR=5.4						
	0.5nm,0.8s						
SPITS	Spitsbergen Ar	79.29	351	LR	LR	06 31 03.6	
	comp=Z,40nm,18.9s,baz=192,slow=38						

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*DDA **08** 05:43:07.0±0.0, 37°.61N×38°.47E, h7^{km}±1^{km}, ML2.8*
*ISK **08** 05:43:08.0, 37°.53N×38°.53E, h22^{km}, ML2.6/10*
ISC 08 05:43:07.4±0.9**, 37°.61N**±0°.03×**38°.49E**±0°.03**, h12**^{km}±7^{km}**,**
n24, σ0^{s}.62/40**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
ATAB	Bozova	0.21	228	P	Pg	05 43 11.7	-0.1
ATAB				S	Sg	05 43 14.9	0.0
ATAB				*i* AML	AML	05 43 15.0	
	comp=N,2µm,0.2s						
AZEY	Adyaman-Merk	0.28	317	P	Pg	05 43 12.9	-0.3
AZEY				S	Sg	05 43 16.8	-0.2
URFA	Urfa	0.31	122	Pg	Pg	05 43 05.8	-8.0
HANM	anlurfa/Hi	0.31	95	P	Pg	05 43 13.8	+0.1
HANM				S	Sg	05 43 18.5	+0.5
NARI	Adyaman-Kaht	0.35	38	P	Pg	05 43 14.3	-0.2
NARI				S	Sg	05 43 19.2	-0.1
AKCA	Adyaman/G¶l	0.66	287	P	Pg	05 43 19.9	-0.4
AKCA				S	Sg	05 43 29.1	+0.1
AKCA				*i* AML	AML	05 43 34.0	
	comp=N,367nm,0.3s						
MAYA	Malatya/Merkez	0.72	356	P	Pg	05 43 20.7	-0.6
MAYA				S	Sn	05 43 34.9	+0.4
GZT	Gaziantep	0.78	251	P	Pg	05 43 22.2	-0.2
GZT				S	Sn	05 43 35.0	-0.9
GZT				*i* AML	AML	05 43 36.0	
	comp=E,224nm,0.4s						
AKCD	Akcadag	0.82	327	P	Pg	05 43 22.8	-0.5
AKCD				S	Sg	05 43 33.9	-0.1
NZIP	Nizip/Gaziante	0.86	229	P	Pg	05 43 23.7	-0.3
NZIP				S	Sb	05 43 35.3	-0.5
ELZG	Elazig	0.97	24	P	Pb	05 43 25.3	-1.0
ELZG				S	Sb	05 43 38.2	-0.9
GAZ	Gaziantep	1.11	247	Pn	Pg	05 43 29.3	+0.6
GAZ				Sn	Sn	05 43 43.4	-0.6
KAHM	Kahramanmaras,	1.20	266	P	Pn	05 43 29.3	-0.7
KAHM				S	Sg	05 43 46.3	+0.3
DARE	Darende-Malaty	1.25	321	Pn	Pb	05 43 31.8	+0.9
DARE				Sn	Sg	05 43 49.4	+1.8
KMRS	Kahramanmaras	1.27	266	Pn	Pb	05 43 31.3	+0.1
KMRS				Sn	Sn	05 43 48.1	+0.2
HEKM	Malatya_Hekimh	1.34	342	P	Pn	05 43 32.0	-0.1
HEKM				S	Sb	05 43 51.3	+1.6
DYBB	Diyarbakir	1.35	75	Pn	Pn	05 43 32.1	-0.1
KUZU	Kuzuini	1.40	234	P	Pg	05 43 34.2	-0.1
KUZU				*i* AML	AML	05 43 53.0	
	comp=E,300nm,0.2s						
KUZU				S	Sg	05 43 53.3	+0.8
ARPR	Arapgir-MALATY	1.49	355	Pn	Pb	05 43 35.6	+0.5
KAMA	Osmaniye	1.51	254	P	Pb	05 43 35.7	+0.3
KAMA				S	Sn	05 43 53.2	-0.7
MAZI	Mazidag	1.56	95	Pn	Pn	05 43 35.2	+0.1
SARI	SarD1z-Kayseri	1.82	297	Pn	Pb	05 43 40.5	-0.2
BNGB	Bingl	2.21	51	Pn	Pn	05 43 44.3	+0.3
SVAN	Silvan-Diyarba	2.21	75	Pn	Pn	05 43 44.3	+0.4

IDC 08 05:57:31.0±1.5**, 5°.21S**×**151°.37E, h84**^{km}±29^{km}**, mb3.3**/2**,**
mbtmp3.6/2**, Error ellipse: s-maj=56.6km s-min=31.0km**
az=121.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.11	36	P	Pn	05 57 50.6	-1.0
	85nm,0.3s,baz=213,slow=1.0,SNR=14						
KRVT				S	Sn	05 58 07.3	+0.2
	244nm,0.4s,baz=124,slow=22,SNR=22						
WRA	Warramunga Arr	22.11	227	P	P	06 02 19.5	-0.2
	0.8nm,0.5s,baz=52,slow=10,SNR=12						
	0.8nm,0.5s						
ASAR	Alice Springs	24.90	221	P	P	06 02 46.7	+0.4
	1.3nm,0.6s,baz=56,slow=8.9,SNR=19						
	1.3nm,0.6s						
TORD	Torodi Ar. Bea	149.07	287	PKPbc	PKPbc	06 17 09.9	-0.7
	0.3nm,0.6s,baz=65,slow=2.5,SNR=1.9						

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*NEIC **08** 07:16:38.3±1.7, 17°.56S±0°.08×174°.1W±0°.1, h57^{km}±8^{km}, mb4.7/33, Error ellipse: s-maj=15.8km s-min=10.7km az=65.0*
*IDC **08** 07:16:38.2±3.1, 17°.50S×174°.12W, h64^{km}±28^{km}, mb3.9/14, mbtmp4.3/15, ML5.0/1, MS3.0/1, Error ellipse: s-maj=27.9km s-min=13.7km az=129.0*
ISC 08 07:16:36.7±0.5**, 17°.58S**±0°.07×**174°.11W**±0°.09**, h50**^{km}**, n72,**
σ1^{s}.85/67**, mb4.5**/29**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.25	111		Pn	07 17 39.6	+0.7
AFI	Afiamalu	4.28	32	P	Pn	07 17 40.9	+1.4
	89nm,0.3s,baz=204,slow=4.0,SNR=72						
AFI				S	Sn	07 18 25.3	-3.0
	412nm,0.5s,baz=233,slow=20,SNR=6.3						
AFI				LR	LR	07 18 51.4	
	comp=Z,183nm,19.5s,baz=153,slow=32						
	329nm,0.4s						
AFI	Afiamalu	4.28	32	Pn	Pn	07 17 41.1	+1.5
MSVF	Nonsavu	7.47	268	P	Pn	07 18 36.0	+13
	26nm,1.0s,baz=104,slow=14,SNR=5.8						
LIFNC	LIFOU	17.90	257		Pn	07 20 42.6	+0.4
PINNC	Pines Island,	18.03	251		P	07 20 42.9	-0.8
PINNC				IAmb	IAmb	07 20 44.6	
	comp=Z,72nm,1.3s						
DZM	Mont Dzumac	18.83	253	P	Pn	07 20 59.3	+5.7
	comp=Z,20nm,1.1s,baz=63,slow=8.9,SNR=2.9						
MXZ	Matakaoa Point	21.00	197	P	P	07 21 17.9	+1.9
MXZ				IAmb	IAmb	07 21 27.9	
	comp=Z,68nm,1.0s						
URZ	Urewera	21.99	199	P	P	07 21 26.7	0.0
	comp=Z,27nm,0.6s,baz=342,slow=5.6,SNR=15						
URZ				S	S	07 25 18.8	-7.7
	comp=Z,8.1nm,0.8s,baz=330,slow=20,SNR=2.1						
	comp=Z,27nm,0.6s						
RTZ	Ruatahuna	22.36	199	P	P	07 21 32.5	+1.9
RTZ				IAmb	IAmb	07 21 35.7	
	comp=Z,29nm,1.3s						
HIZ	Hauiti	22.98	203	P	P	07 21 40.0	+2.8
QRZ	Quartz Range	25.87	204	P	P	07 22 05.5	+1.7
RPZ	Rata Peaks	28.92	203	P	P	07 22 32.7	+1.6
	comp=Z,11nm,0.9s,baz=34,slow=7.3,SNR=2.4						
	comp=Z,11nm,0.9s						
FOZ	Fox Glacier	29.23	204	P	P	07 22 36.3	+2.5
TOO	Toolangi	40.58	232	P	P	07 24 12.1	+0.4
TOO				IAmb	IAmb	07 24 58.2	
	comp=Z,17nm,1.4s						
STKA	Stephens Creek	42.39	242	P	P	07 24 26.4	-0.1
	comp=Z,1.8nm,0.7s,baz=75,slow=12,SNR=4.0						
	comp=Z,1.8nm,0.7s						
STKA	Stephens Creek	42.39	242	P	P	07 24 27.0	+0.6
BBOO	Buckleboo	47.15	241	P	P	07 25 04.3	-0.1
WR0	Warramunga Arr	48.53	259	P	P	07 25 16.4	+1.2
WR0				IAmb	IAmb	07 25 50.9	
	comp=Z,24nm,2.0s						
WB0	Warramunga Arr	48.68	259	P	P	07 25 16.7	+0.2
WB2	Warramunga Arr	48.70	259	P	P	07 25 17.0	+0.4
WB2				IAmb	IAmb	07 25 17.3	
	comp=Z,4.7nm,1.1s						
WRA	Warramunga Arr	48.72	259	P	P	07 25 16.1	-0.6
	comp=Z,1.8nm,0.9s,baz=98,slow=5.8,SNR=18						
	comp=Z,1.8nm,0.9s						
WRA	Warramunga Arr	48.72	259	P	P	07 25 17.2	+0.5
AS31	Alice Springs	48.82	254	P	P	07 25 17.6	+0.1
AS31				IAmb	IAmb	07 25 18.4	
	comp=Z,3.7nm,0.7s						
ASAR	Alice Springs	48.82	254	P	P	07 25 17.4	-0.1
	comp=Z,11nm,0.6s,baz=89,slow=8.5,SNR=168						
ASAR				S	S	07 32 10.5	-7.0
	comp=Z,0.5nm,0.7s,baz=94,slow=15,SNR=6.5						
	comp=Z,11nm,0.6s						
ASAR	Alice Springs	48.82	254	P	P	07 25 17.7	+0.2
FORT	Forrest	53.85	244	P	P	07 25 55.2	+0.2
KNRA	Kununurra	54.59	263	P	P	07 26 00.5	-0.1
FITZ	Fitzroy Crossi	57.12	260	P	P	07 26 20.8	+2.1
VNDA	Vanda	61.15	186	P	P	07 26 47.7	+2.1
	comp=Z,1.2nm,0.9s,baz=41,slow=14,SNR=2.2						
	comp=Z,1.2nm,0.9s						
VNDA	Vanda	61.15	186	P	P	07 26 47.8	+2.1
PETK	Petropavlovsk-	74.49	343	P	P	07 28 09.5	-0.2
	comp=Z,3.6nm,0.9s,baz=90,slow=6.3,SNR=1.9						
	comp=Z,3.6nm,0.9s						
YBH	Yreka Blue Hor	75.74	37	P	P	07 28 16.2	-1.1
	comp=Z,2.5nm,1.1s,baz=143,slow=5.1,SNR=1.8						
	comp=Z,2.5nm,1.1s						
NVAR	Mina Array Bea	76.39	42	P	P	07 28 20.5	-0.7
	comp=Z,0.7nm,0.7s,baz=225,slow=9.4,SNR=7.2						
	comp=Z,0.7nm,0.7s						
U15A	North Rim	79.29	46	P	P	07 28 38.3	+0.8
TXAR	Lajitas Array	82.39	56	P	P	07 28 54.0	+0.1
	comp=Z,0.4nm,0.9s,baz=230,slow=3.1,SNR=3.5						
	comp=Z,0.4nm,0.9s						
NEA2	Nenana	84.14	11	P	P	07 29 02.6	+0.6
NEA2				IAmb	IAmb	07 29 03.7	
	comp=Z,3.5nm,0.8s						
WRH	Wood River Hil	84.21	11	P	P	07 29 02.3	0.0
WRH				IAmb	IAmb	07 29 03.3	
	comp=Z,15nm,1.1s						
MLY	Manley	84.27	10	P	P	07 29 02.3	-0.4
MLY				IAmb	IAmb	07 29 03.6	
	comp=Z,5.0nm,1.1s						
BW06	Boulder Array	84.33	42	P	P	07 29 03.5	-0.4
PD31	Pinedale Array	84.33	42	P	P	07 29 03.4	-0.5
PDAR	Pinedale Array	84.33	42	P	P	07 29 03.0	-0.8
	comp=Z,2.0nm,0.8s,baz=212,slow=3.4,SNR=18						
	comp=Z,2.0nm,0.8s						
PDAR	Pinedale Array	84.33	42	P	P	07 29 03.3	-0.5
HDA	Harding Lake	84.36	11	P	P	07 29 02.8	-0.4
HDA				IAmb	IAmb	07 29 04.9	
	comp=Z,8.4nm,0.9s						
CCB	Clear Creek Bu	84.42	11	P	P	07 29 03.4	0.0
CCB				IAmb	IAmb	07 29 04.1	
	comp=Z,8.6nm,0.7s						
H21K	Melozitna Rive	84.54	9	P	P	07 29 03.8	-0.2
H21K				IAmb	IAmb	07 29 05.8	
	comp=Z,10nm,1.4s						
H03S2	Juan Fernandez	84.57	124	T	T	09 02 13.3	
	baz=250,slow=75,SNR=6.7						
H03S1	Juan Fernandez	84.59	124	T	T	09 02 14.4	
	baz=250,slow=75,SNR=5.8						
H03S3	Juan Fernandez	84.59	124	T	T	09 02 13.0	
	baz=250,slow=75,SNR=6.7						
MDM	Murphy Dome	84.62	11	P	P	07 29 03.7	-0.8
MDM				IAmb	IAmb	07 29 05.2	
	comp=Z,14nm,1.3s						
H03N2	Juan Fernandez	84.69	123	T	T	09 02 25.0	
	baz=249						
H03N3	Juan Fernandez	84.69	123	T	T	09 02 19.6	
	baz=249						
H03N1	Juan Fernandez	84.70	123	T	T	09 02 32.9	
	baz=249						
IL31		84.70	11	P	P	07 29 04.4	-0.4
ILAR	Eielson Array	84.70	11	P	P	07 29 04.5	-0.3
	comp=Z,1.8nm,0.7s,baz=235,slow=6.4,SNR=46						
	comp=Z,1.8nm,0.7s						
ILAR	Eielson Array	84.70	11	P	P	07 29 04.9	+0.1
IMAR	Indian Mountai	84.71	8	P	P	07 29 05.7	+0.8
POKR	Poker Plat Res	84.91	11	IAmb	IAmb	07 29 06.7	
	comp=Z,9.1nm,0.8s						
PRP	Porcupine Dome	85.63	12	P	P	07 29 09.9	+0.3
PRP				IAmb	IAmb	07 29 10.9	
	comp=Z,5.8nm,0.9s						
DAWY	Dawson	85.69	15	P	P	07 29 10.3	+0.5
DAWY				IAmb	IAmb	07 29 10.9	
	comp=Z,2.6nm,0.7s						
INK	Inuvik	90.53	14	P	P	07 29 31.8	-1.0
	comp=Z,1.2nm,0.9s,baz=220,slow=3.8,SNR=4.6						
	comp=Z,1.2nm,0.9s						
YKA	Yellowknife Ar	92.36	24	P	P	07 29 40.8	-0.6
	comp=Z,0.2nm,0.5s,baz=232,slow=3.8,SNR=5.9						
	comp=Z,0.2nm,0.5s						
MKAR	Makanchi Array	111.85	314	PKiKP	PKiKP	07 35 04.7	-1.5
	comp=Z,0.3nm,0.5s,baz=13,slow=1.1,SNR=5.5						
ARU	Arti	124.81	327	PKP	PKPdf	07 35 29.8	-0.9
	comp=Z,0.9nm,0.2s,baz=17,slow=1.9,SNR=3.9						
ARCES	ARCESS Array B	126.65	352	PKP	PKPdf	07 35 32.4	-1.5
	comp=Z,2.3nm,0.8s,baz=336,slow=1.5,SNR=5.5						
DPC	Dobruska-Polom	146.25	348	*e*PKP	PKPbc	07 36 12.9	+1.2

KRLC	Kraliky	146.41	347	*e*PKP	PKPdf	07 36 12.8	+1.9
PRU	Pruhonice	146.92	350	*e*PKP	PKPbc	07 36 14.3	+0.7
BRTR	Keskin Array B	147.36	318	PKPbc	PKPbc	07 36 15.9	+0.5
	comp=Z,2.0nm,0.8s,baz=146,slow=4.3,SNR=4.4						
KHC	Kasperske Hory	147.91	350	*e*PKP	PKPbc	07 36 17.1	+0.7
GERES	GERESS Array B	148.17	350	PKPbc	PKPbc	07 36 17.3	+0.1
	comp=Z,0.9nm,0.7s,baz=23,slow=4.4,SNR=8.3						
TORD	Torodi Ar. Bea	174.02	137	PKPab	PKPab	07 38 11.6	-1.2
	comp=Z,0.1nm,0.4s,baz=270,slow=4.3,SNR=3.0						

DJA 08 07:25:25.5±0.7, 9°S±6°×11°7E±°, h34^{km}±10^{km}, M3.8/9, mb3.9/2, mB5.0/1, MLv3.7/9, Mw(mB)4.3/1, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWSI	Taliwang, Sumb	0.57	354	P	Pb	07 25 37.9	+0.6
TWSI				S	Sn	07 25 49.0	+3.6
PLAI	Plampang	0.95	60	P	Pn	07 25 42.4	-0.1
PLAI				S	Sn	07 25 55.4	+0.4
DNP	Denpasar	1.82	290	P	Pn	07 25 54.7	+0.3
DNP				S	Sn	07 26 16.5	+0.2
IGBI	Denpasar	1.84	285	P	Pn	07 25 54.8	+0.1
SRBI	Singaraja	2.10	305	P	Pn	07 25 59.5	+1.3
SRBI				S	Sn	07 26 24.7	+1.5
JAGI	Jajag, Banyuwa	2.88	287	P	Pn	07 26 08.9	-0.1
JAGI				S	Sn	07 26 43.1	+0.6
GMJI	Gumukmas	3.61	286	P	Pn	07 26 19.0	0.0
GMJI				S	Sn	07 27 00.8	+0.4
BASI	Baing, Sumba	3.70	104	P	Pn	07 26 20.7	+0.4
BKSI	Bulukumba	5.07	39	P	Pn	07 26 39.3	+0.2
	15nm,1.1s,0.1nm						
PWJI	Pagerwojo	5.24	284	P	Pn	07 26 42.4	+1.0

VAO 08 07:26:04.2±0.7, 5°.64N×53°.13W, h10^{km}, mbR4.1, French Guiana

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCPB	Macapa, AP	6.06	170	*e*P	Pn	07 27 34.1	+0.2
MCPB				*e*S	Sn	07 28 44.6	+1.2
MALB	Monte Alegre	7.53	189	*e*S	Sn	07 29 21.3	+1.6
TMAB	Tom-Au,PA,Br	9.41	148	*e*P	Pn	07 28 19.6	-0.4
TMAB				*e*S	Sn	07 30 06.8	+0.8
ITTB	Itaituba	10.28	195	*e*P	Pn	07 28 31.9	+0.1
ITTB				*e*S	Sn	07 30 28.4	+1.2
MACA	Manacapuru-AM	11.55	221	*e*P	Pn	07 28 49.8	+0.5
MACA				*e*S	Sn	07 30 59.5	+1.0
PRPB	Parauapebas	12.19	164	*e*P	Pn	07 28 57.9	-0.2
PRPB				*e*S	Sn	07 31 15.7	+1.4
NPGB	Novo Progresso	12.80	190	*e*P	Pn	07 29 06.7	+0.3
NPGB				*e*S	Sn	07 31 29.7	+0.6
CLDB	Colider	16.62	189	*e*P	Pn	07 29 57.7	+0.2
PDRB	Porto dos Gac	17.51	192	*e*P	Pn	07 30 08.6	-0.1
SNDB	Serra Nova Dou	17.59	174	*e*P	Pn	07 30 09.6	-0.1
SAML	Samuel	17.62	215	*e*P	Pn	07 30 09.9	-0.1
VILB	Vilhena	19.77	201	*e*P	P	07 30 34.5	-0.2
VILB				*e*S	S	07 34 17.1	-0.5
ARAG	Araguaiana, MT	21.25	177	*e*P	P	07 30 50.6	-0.1
ARAG				*e*S	S	07 34 48.6	+1.6
SALV	Santo Antonio	21.55	187	*e*P	P	07 30 53.8	-0.2
PTLB	Pontes e Lacer	21.78	196	*e*P	P	07 30 56.5	+0.1
PTLB				*e*S	S	07 34 58.9	+1.4

WEL 08 07:27:12.1±1.3, 34°S±25°×17°9W±3°4, h186^{km}±40^{km}, M4.1/6, mB4.6/4, ML4.2/8, MLv4.2/6, Mw(mB)3.8/4, Error ellipse: s-maj=0.1km s-min=0.0km az=123.4, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.03	209	P	Pn	07 28 12.3	-1.4
WMGZ	Waiomatatini S	4.21	206	P	Pn	07 28 16.6	+0.6
WMGZ				S	Sn	07 29 07.7	+1.4
PKGZ	Pakihiroa	4.40	209	P	Pn	07 28 17.6	-0.9
PKGZ				S	Sn	07 29 10.5	-0.3
HAZ	Te Kaha	4.42	212	P	Pn	07 28 18.5	-0.1
HAZ				S	Sn	07 29 12.1	+1.1
PUZ	Puketiti	4.49	206	P	Pn	07 28 20.0	+0.4
PUZ				S	Sn	07 29 12.1	-0.7
RUGZ	Raukumara Rang	4.64	212	P	Pn	07 28 21.7	+0.1
TWGZ	Tauwhareparae	4.69	208	P	Pn	07 28 21.2	-1.0
TWGZ				S	Sn	07 29 18.6	+1.3
CNGZ	Carnagh Statio	4.88	204	P	Pn	07 28 24.3	-0.3
TKGZ	Te Karaka	4.97	208	P	Pn	07 28 25.8	+0.1
MWZ	Matawai	5.01	211	P	Pn	07 28 26.0	-0.3
MWZ				S	Sn	07 29 24.5	-0.2
URZ	Urewera	5.13	214	P	Pn	07 28 28.0	+0.1
RIGZ	Rimuhau	5.24	207	P	Pn	07 28 29.9	+0.7
RIGZ				S	Sn	07 29 29.7	-0.3
SNGZ	Shannon Statio	5.47	209	P	Pn	07 28 32.1	-0.1
SNGZ				S	Sn	07 29 35.2	-0.1
RAHZ	Arahi	5.69	210	P	Pn	07 28 36.3	+1.2
MTHZ	Maungataniwha	5.74	212	P	Pn	07 28 36.6	+0.9
NMHZ	Naumai	5.96	211	P	Pn	07 28 39.3	+0.7
BKZ	Black Stump Fm	6.15	213	P	Pn	07 28 40.4	-0.7
OTVZ	Oturere	6.54	217	P	Pn	07 28 45.5	-0.9

BJI ***08*** *07:30:39.2±0.0, 6°.31S×148°.07E, h60^{km}, mb4.8/42, mB5.1/25, Ms4.7/1, Ms7 4.3/2*

IDC ***08*** *07:30:42.9±1.3, 6°.27S×147°.51E, h62^{km}±11^{km}, mb4.4/22, mbtmp4.7/28, MS3.6/21, Error ellipse: s-maj=15.8km s-min=8.3km az=87.0*

DJA ***08*** *07:30:43.8±0.4, 6°S±2°×14°8E±°, h70^{km}±4^{km}, M5.2/46, mB5.7/19, mb5.2/46, MLv5.2/3, Mw(mB)5.3/19*

NEIC ***08*** *07:30:44.0±1.2, 6°.30S±0°.03×147°.59E±0°.10, h67^{km}±7^{km}, mb4.7/48, Error ellipse: s-maj=14.1km s-min=2.8km az=102.0*

GCMT ***08*** *07:30:46.0±0.4, 6°.54S±0°.03×147°.62E±0°.03, h64^{km}±3^{km}, MW4.8/53, Moment Tensor Solution. s34,c39; s53,c63; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.72±.14; $M_{\theta\theta}$-1.39±.12; $M_{\phi\phi}$-0.32±.13; $M_{r\theta}$1.29±.08; $M_{\theta\phi}$-0.53±.12; $M_{\phi r}$-0.06±.09; Best double couple: $M_0$2.10000×10^{16} NP1:ϕ_s82.00000°, δ64.00000°, λ102.00000°. NP2: ϕ_s237.00000°, δ28.00000°, λ68.00000°. Principal axes: T 2.2070, Plg69.0000°, Azm15.0000°; N -0.2080, Plg10.0000°, Azm257.0000°; P -1.9930, Plg18.0000°, Azm163.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 07:30:43.2±0.3, 6°.32S±0°.04×147°.58E±0°.06, h63^{km}, n239, σ1^{s}25/229, mb4.8/64, 2C-4D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.10	188	P	Pn	07 31 30.2	+0.5
	1µm,0.8s,baz=350,slow=5.9,SNR=108						
PMG				S	Sn	07 32 05.9	+0.3
	917nm,0.7s,baz=27,slow=20,SNR=7.1						
PMG				LR	LR	07 32 35.5	
	comp=Z,713nm,20.3s,baz=32,slow=36						
PMG	Port Moresby	3.10	188	P	Pn	07 31 30.6	+0.9
KRVT	Keravat (AS076	4.85	66	P	Pn	07 31 55.0	+1.3
	67nm,0.3s,baz=150,slow=19,SNR=2.7						
RABL	Rabaul	5.03	65		Pn	07 31 56.6	+0.6
RABL	Rabaul	5.03	65	P	Pn	07 32 00.8	+4.7
GENI	Genyem	8.27	296	P	Pn	07 32 46.3	+5.8
GENI	Genyem	8.27	296	P	Pn	07 32 42.8	+2.3
	143nm,0.9s,7µm						
COEN	Coen	8.75	209	P	Pn	07 32 47.4	+0.4
	baz=8.6,SNR=43						
COEN	Coen	8.75	209	Pn	Pn	07 32 47.4	+0.4
COEN	Coen	8.75	209	P	Pn	07 32 47.5	+0.4
SMPI	Sarmi	9.84	296	P	Pn	07 33 03.9	+1.9
	110nm,1.2s						
MTSU	Mount Surprise	12.17	195	P	Pn	07 33 34.6	+0.7
	baz=12,SNR=109						
MTSU	Mount Surprise	12.17	195	P	Pn	07 33 34.4	+0.5
TV1H	Townsville Har	12.89	183	P	Pn	07 33 46.8	+3.2
	16nm,0.7s						
CTA	Charters Tower	13.75	185	P	Pn	07 33 56.4	+1.1
	9.3nm,0.6s,baz=0.0,slow=13,SNR=20						
CTA				LR	LR	07 39 06.2	
	comp=Z,181nm,20.4s,baz=5.5,slow=36						
CTA	Charters Tower	13.75	185	P	Pn	07 33 57.1	+1.8
CTAO	Charters Tower	13.75	185	Pn	Pn	07 33 56.2	+0.9
CTAO	Charters Tower	13.75	185	P	Pn	07 33 57.1	+1.8
FAKI	Fak Fak	15.65	282	Pn	Pn	07 34 20.4	+0.3
FAKI				IAmb	IAmb	07 34 48.1	
	comp=Z,44nm,0.8s						
FAKI	Fak Fak	15.65	282	P	P	07 34 23.9	+0.9
FAKI	Fak Fak	15.65	282	P	Pn	07 34 21.2	+1.2
	comp=Z,63nm,0.9s						
QIS	Mount Isa	16.14	208	P	Pn	07 34 26.0	-0.2
	baz=16,SNR=26						
QIS	Mount Isa	16.14	208	P	P	07 34 28.0	-0.3
KDU	Kakadu	16.19	246	P	Pn	07 34 27.3	+0.5
	baz=16,SNR=8.7						
KDU	Kakadu	16.19	246	P	P	07 34 29.3	+0.4
SIJI	Sorong	17.16	288	P	Pn	07 34 37.6	-1.3
	comp=Z,17nm,0.5s,baz=153,slow=14,SNR=5.7						
SIJI				LR	LR	07 43 26.2	
	comp=Z,87nm,19.9s,baz=68,slow=45						
SWI	Sorong	17.16	288	P	P	07 34 40.9	+1.2
	comp=Z,133nm,1.0s						
MTN	Manton Dam	17.46	247	P	Pn	07 34 42.9	+0.2
	baz=17,SNR=19						
MTN	Manton Dam	17.46	247		P	07 34 43.1	+0.1
MTN				IAmb	IAmb	07 35 08.2	
	comp=Z,23nm,0.6s						
MTN	Manton Dam	17.46	247	P	P	07 34 45.1	+2.1
BNDI	Bandanaira	17.69	275	P	P	07 34 47.3	+1.8
	comp=Z,168nm,0.6s,comp=Z,14µm						
GD1S	Gladstone Soft	17.76	169	P	P	07 34 48.6	+2.3
WB0	Warramunga Arr	18.52	223	P	P	07 34 54.3	-0.4
WR0	Warramunga Arr	18.56	222	P	P	07 34 54.7	-0.4
WRAB	Tennant Creek	18.67	222	P	P	07 34 55.5	-0.8
WRAB				IAmb	IAmb	07 35 18.2	
	comp=Z,17nm,0.6s						
WRAB	Tennant Creek	18.67	222	P	P	07 34 56.5	+0.2
WB2	Warramunga Arr	18.68	222	P	P	07 34 56.6	+0.3
	baz=18						
WB2	Warramunga Arr	18.68	222	P	P	07 34 55.7	-0.6
WB2				IAmb	IAmb	07 35 18.4	
	comp=Z,20nm,0.6s						
WRA	Warramunga Arr	18.68	222	P	P	07 34 56.2	-0.3
	comp=Z,9.4nm,0.5s,baz=53,slow=10,SNR=82						
WRA				S	S	07 38 13.5	-12
	comp=Z,0.5nm,0.4s,baz=75,slow=29,SNR=1.9						
WRA				PcP	PcP	07 39 23.7	+0.9
	comp=Z,3.0nm,0.5s,baz=25,slow=1.7,SNR=6.0						
WRA				ScP	ScP	07 42 53.4	+0.3
	comp=Z,4.4nm,1.0s,baz=26,slow=1.8,SNR=7.2						
WRA	Warramunga Arr	18.68	222	P	P	07 34 55.4	-1.1
MSAI	Masohi	18.82	278	P	Pn	07 34 59.4	+0.3
	comp=Z,32nm,0.5s						
EIDS	Eidsvold	19.24	170	P	Pn	07 35 03.7	-0.3
	baz=19,SNR=16						
EIDS	Eidsvold	19.24	170	P	P	07 35 03.0	+0.5
EIDS				IAmb	IAmb	07 35 05.1	
	comp=Z,32nm,0.6s						
EIDS	Eidsvold	19.24	170	P	Pn	07 35 04.3	+0.3
AAI	Ambon	19.49	277	P	Pn	07 35 06.3	-0.8
	comp=Z,112nm,0.6s,comp=Z,3µm						
GUMO	Guam	19.96	352	P	P	07 35 10.3	-0.1
	comp=Z,64nm,0.7s,baz=172,slow=14,SNR=4.4						
RMQ	Roma	20.09	177	P	Pn	07 35 13.6	-0.5
	baz=20,SNR=26						
RMQ	Roma	20.09	177	P	Pn	07 35 14.3	+0.3
QLP	Quilpie	20.41	189	P	P	07 35 16.0	+0.8
	baz=20,SNR=22						
QLP	Quilpie	20.41	189	P	Pn	07 35 17.0	-0.7
NLAI	Namlea	20.64	278	P	Pn	07 35 19.9	-0.7
	comp=Z,22nm,0.5s						
KNRA	Kununurra	20.67	242	P	P	07 35 18.3	+0.2
	baz=20,SNR=17						
KNRA	Kununurra	20.67	242	P	P	07 35 17.9	-0.1
KNRA				IAmb	IAmb	07 35 39.7	
	comp=Z,36nm,0.7s						
KNRA	Kununurra	20.67	242	P	Pn	07 35 20.6	-0.3
AUWSH	Wavell State H	21.60	167	P	P	07 35 28.7	+0.8
AS01	Alice Springs	21.67	216	P	P	07 35 29.0	+0.2
	comp=Z,33nm,0.7s						
AS31	Alice Springs	21.70	216	P	P	07 35 29.2	+0.2
ASAR	Alice Springs	21.70	216	P	P	07 35 29.2	+0.2
	comp=Z,14nm,0.5s,baz=54,slow=8.6,SNR=258						
ASAR				S	S	07 39 24.2	-1.8
	comp=Z,6.1nm,1.0s,baz=28,slow=22,SNR=5.3						
ASAR				ScP	ScP	07 43 00.9	+0.7
	comp=Z,4.0nm,0.8s,baz=46,slow=3.2,SNR=11						
	comp=Z,14nm,0.5s						
ASAR	Alice Springs	21.70	216	P	P	07 35 28.7	-0.4
SANI	Sanana	21.95	280	P	P	07 35 34.3	+2.5
SANI	Sanana	21.95	280	P	P	07 35 32.0	+0.2
	comp=Z,79nm,0.9s						
AULRC	Lightning Ridg	23.00	179	P	P	07 35 43.0	+0.3
SOEI	Soe	23.34	260	P	P	07 35 48.0	+1.6
SOEI	Soe	23.34	260	P	P	07 35 47.8	+1.4
SOEI	Soe	23.34	260	P	P	07 35 47.4	+1.0
	comp=Z,53nm,0.7s						
DZM	Mont Dzumac	24.03	133	P	P	07 35 52.4	-0.1
	comp=Z,4.8nm,0.6s,baz=302,slow=19,SNR=1.9						
DZM				LR	LR	07 44 03.7	
	comp=Z,465nm,20.1s,baz=14,slow=33						
	comp=Z,4.8nm,0.6s						
OOD	Oodnadatta	24.16	206	P	P	07 35 53.9	+0.3
ARMA	Armidale	24.28	171	P	P	07 35 55.6	+0.9
	baz=24,SNR=26						
ARMA	Armidale	24.28	171	P	P	07 35 54.7	0.0
ARMA				IAmb	IAmb	07 35 58.5	
	comp=Z,28nm,0.7s						
ARMA	Armidale	24.28	171	P	P	07 35 55.5	+0.8
AUPHS	Peel High Scho	24.85	173	P	P	07 36 01.2	+1.3
CMSA	Cobar Meteorol	25.16	184	P	P	07 36 03.5	+0.9
	baz=25,SNR=38						
CMSA	Cobar Meteorol	25.16	184	P	P	07 36 04.1	+1.5
MMRI	Maumere	25.23	263	P	P	07 36 03.7	+0.2
	comp=Z,135nm,1.0s,comp=Z,4µm						
LUWI	Luwuk	25.30	281	P	P	07 36 05.1	+1.0
LUWI	Luwuk	25.30	281	P	P	07 36 05.9	+1.8
LUWI	Luwuk	25.30	281	P	P	07 36 04.7	+0.6
	comp=Z,282nm,1.0s,comp=Z,6µm						
GTOI	Gorontalo	25.48	285	P	P	07 36 07.1	+1.3
	comp=Z,49nm,0.6s,comp=Z,694nm						
LCRK	Leigh Creek	25.57	199	P	P	07 36 06.8	+0.4
DAV	Davao City (W)	25.67	301	P	P	07 36 04.7	-2.7
	comp=Z,157nm,0.3s,baz=27,slow=4.5,SNR=2.1						
DAV				LR	LR	07 47 07.5	
	comp=Z,63nm,18.6s,baz=96,slow=38						
AUDCS	Dubbo College	25.80	178	P	P	07 36 10.8	+2.3
STKA	Stephens Creek	26.04	192	P	P	07 36 10.5	-0.2
	comp=Z,18nm,0.5s,baz=356,slow=8.2,SNR=40						
	comp=Z,18nm,0.5s						
STKA	Stephens Creek	26.04	192	P	P	07 36 10.6	0.0
	baz=26,SNR=40						
STKA	Stephens Creek	26.04	192	P	P	07 36 10.4	-0.2
STKA	Stephens Creek	26.04	192	P	P	07 36 10.9	+0.3
WRKA	Warakurna	26.23	223	P	P	07 36 12.0	-0.4
	baz=26,SNR=88						
WRKA	Warakurna	26.23	223	P	P	07 36 12.9	+0.5
MGCD	Mangrove Creek	26.96	173	P	P	07 36 19.8	+0.9
	baz=27,SNR=15						
MULG	Mulgathing	27.02	206	P	P	07 36 19.8	+0.3
KAPI	Kappang	27.73	271	P	P	07 36 25.8	-0.2
	comp=Z,6.4nm,0.5s,baz=10,slow=6.4,SNR=5.3						
	comp=Z,6.4nm,0.5s						
HTT	Hallett	28.15	195	P	P	07 36 29.9	+0.2
	baz=28,SNR=9.2						
HTT	Hallett	28.15	195	P	P	07 36 30.5	+0.9
WHYH	Whyalla	28.17	198	P	P	07 36 29.9	+0.2
	comp=Z,41nm,0.8s						
MPSI	Mapaga	28.41	282	P	P	07 36 31.9	-0.2
	comp=Z,38nm,0.9s						
BBOO	Buckleboo	28.46	201	P	P	07 36 32.3	0.0
	baz=28,SNR=12						
BBOO	Buckleboo	28.46	201	IAmb	IAmb	07 36 33.6	
	comp=Z,11nm,0.8s						
BBOO	Buckleboo	28.46	201	P	P	07 36 32.8	+0.5
FORT	Forrest	30.46	215	P	P	07 36 50.2	+0.1
	baz=30,SNR=24						
FORT	Forrest	30.46	215	P	P	07 36 50.1	+0.1
FORT	Forrest	30.46	215	P	P	07 36 51.6	+1.5
MBWA	Marble Bar	30.74	239	P	P	07 36 53.4	+0.7
MBWA				IAmb	IAmb	07 36 54.4	
	comp=Z,11nm,0.7s						
ARPS	Mount Arapiles	30.76	189	P	P	07 36 53.4	+0.7
	baz=31,SNR=5.9						
ARPS	Mount Arapiles	30.76	189	P	P	07 36 53.7	+1.0
MSVF	Nonsavu	31.83	114	LR	LR	07 47 10.3	
	comp=Z,166nm,19.8s,baz=340,slow=31						
JCJ	Chichijima	33.62	351	P	P	07 37 18.7	+0.9
	comp=Z,46nm,0.4s,baz=222,slow=18,SNR=1.4						
MEEK	Meekatharra	34.20	230	P	P	07 37 23.6	+0.7
	baz=34,SNR=17						
MEEK	Meekatharra	34.20	230	P	P	07 37 24.1	+1.2
SBUM	Sibu	36.37	283	P	P	07 37 42.1	+0.5
SBUM				IAmb	IAmb	07 37 43.7	
	comp=Z,8.1nm,0.8s						
MORW	Morawa	37.40	229	P	P	07 37 50.9	+0.7
	baz=37,SNR=4.6						
KLBR	Kellerberrin	37.55	224	P	P	07 37 51.5	+0.1
	baz=37,SNR=11						
KLBR	Kellerberrin	37.55	224	P	P	07 37 51.6	+0.1
JOW	Kunigami	37.89	331	LR	LR	07 50 08.7	
	comp=Z,134nm,21.7s,baz=105,slow=31						
NWAO	Narrogin (SRO)	38.69	223	P	P	07 38 00.8	-0.2
	comp=Z,11nm,0.7s,baz=52,slow=7.6,SNR=7.7						
NWAO				LR	LR	07 54 32.1	
	comp=Z,152nm,22.0s,baz=52,slow=37						
	comp=Z,11nm,0.7s						
NWAO	Narrogin (SRO)	38.69	223	P	P	07 38 01.6	+0.5
	baz=39,SNR=5.5						
NWAO				P	P	07 38 01.6	+0.5
	baz=39,SNR=5.5						
BBJI	Bungbulang	39.65	266	P	P	07 38 09.0	-0.4
AFI	Afiamalu	40.66	104	LR	LR	07 51 48.3	
	comp=Z,189nm,20.2s,baz=274,slow=31						
URZ	Urewera	41.56	144	P	P	07 38 25.5	+0.8
	comp=Z,7.3nm,0.6s,baz=37,slow=5.1,SNR=2.2						
URZ				LR	LR	07 53 42.6	
	comp=Z,89nm,21.0s,baz=349,slow=33						
	comp=Z,7.3nm,0.6s						
JNU	Nakatsue	42.31	339	P	P	07 38 29.7	-1.2
	comp=Z,3.1nm,0.4s,baz=218,slow=4.0,SNR=1.7						
JNU				LR	LR	07 54 46.2	
	comp=Z,62nm,21.4s,baz=164,slow=34						
	comp=Z,3.1nm,0.4s						
RPZ	Rata Peaks	42.58	155	P	P	07 38 33.7	+0.8
	comp=Z,21nm,0.6s,baz=6.8,slow=19,SNR=16						
RPZ				LR	LR	07 54 15.9	
	comp=Z,125nm,20.4s,baz=294,slow=33						
	comp=Z,21nm,0.6s						
MDSI	Maura Dua	43.24	270	P	P	07 38 39.2	+0.4
	comp=Z,24nm,1.0s						
DSRI	Dabo	43.30	276	P	P	07 38 39.7	+0.5
MJAR	Matsushiro Arr	43.53	349	P	P	07 38 39.9	-0.8
	comp=Z,4.9nm,0.7s,baz=172,slow=8.3,SNR=9.3						
MJAR				LR	LR	07 55 14.9	
	comp=Z,48nm,21.0s,baz=158,slow=34						
	comp=Z,4.9nm,0.7s						
MASI	Maura Aman, Be	45.29	272	P	P	07 38 54.4	-0.8
	comp=Z,68nm,0.7s						
SDSI	Sungai Dareh	46.35	275	P	P	07 39 03.7	+0.2
	comp=Z,79nm,0.8s,comp=Z,11µm						
NJ2	Nanjing	46.96	326	*e*P	P	07 39 10.4	+2.4
NJ2				pP	pP	07 39 23.1	-1.2
NJ2				sP	sP	07 39 29.0	-2.7
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
KSRS	Korea Array	47.25	339	P	P	07 39 10.1	-0.1
	comp=Z,3.4nm,0.7s,baz=152,slow=8.0,SNR=10						
KSRS				PcP	PcP	07 40 39.2	-1.3
	comp=Z,0.6nm,0.3s,baz=171,slow=3.7,SNR=1.8						
	comp=Z,3.4nm,0.7s						
PDSI	Padang	47.31	275	P	P	07 39 09.9	-1.2
	comp=Z,37nm,0.5s,comp=Z,6µm						
IPM	Ipoh	47.70	282	P	P	07 39 13.6	-0.5
IPM	Ipoh	47.70	282	P	P	07 39 15.2	+1.1
	comp=Z,32nm,0.9s						
KULM	Kulim	48.25	283	P	P	07 39 17.6	-0.7
WHN	Wuhan	48.54	321	⇓P	P	07 39 20.9	+0.7
RPSI	Rantau Prapat	49.40	279	P	P	07 39 26.7	-0.4
PSI	Prapat	49.42	279	P	P	07 39 28.4	+1.0
ASAJ	Asahikawa	50.40	355	LR	LR	07 57 27.6	
	comp=Z,51nm,21.8s,baz=147,slow=32						
GSI	Gunungsitoli	50.49	277	P	P	07 39 34.1	-1.3
GSI	Gunungsitoli	50.49	277	P	P	07 39 37.1	+1.7
GSI	Gunungsitoli	50.49	277	P	P	07 39 35.0	-0.4
	comp=Z,116nm,0.7s,comp=Z,3µm						
KCSI	Kotacane, Aceh	50.69	280	P	P	07 39 36.1	-0.8
	comp=Z,80nm,0.7s,comp=Z,1µm						
MLSI	Meulaboh, Aceh	52.17	280	P	P	07 39 47.1	-0.8
	comp=Z,153nm,0.5s						
USRK	Ussuriysk Ar.	52.22	346	P	P	07 39 48.1	+0.5
	comp=Z,5.2nm,0.6s,baz=158,slow=8.1,SNR=5.9						
USRK				LR	LR	08 00 15.8	
	comp=Z,26nm,20.4s,baz=152,slow=34						
	comp=Z,5.2nm,0.6s						
PHRA	Phrae	52.80	299	P	P	07 39 52.9	+0.4
HNS	HongShan	53.22	327	⇑P	P	07 39 54.8	-0.4
HNS				pmax	pmax		
	comp=Z,21nm,1.0s						
MDJ	Mudanjiang	53.22	344	P	P	07 39 56.7	+1.6
MDJ				pP	pP	07 40 07.7	-3.9
MDJ				sP	sP	07 40 19.3	+0.6
MDJ				PcP	PcP	07 40 58.9	-3.4
MDJ				PP	PP	07 42 00.7	+4.8
MDJ				S	S	07 47 29.4	+7.8
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,79nm,6.8s						
CMAR	Chiang Mai Arr	53.91	298	LR	LR	08 02 04.6	
	comp=Z,17nm,21.1s,baz=105,slow=35						
XAN	Xi'an	54.29	320	P	P	07 40 02.7	-0.6
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BJI	Beijing	54.46	331	P	P	07 40 03.9	-0.3
BJI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BNX	BinXian	54.87	343	⇓P	P	07 40 06.9	-0.2
BNX				pmax	pmax		
	comp=Z,11nm,0.8s						
BNX				pmax	pmax		
	comp=Z,150nm,4.1s						
PZH	PanZhiHua	55.11	308	P	P	07 40 11.7	+2.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,120nm,4.0s						
KLR	Kul'dur	57.02	348	LR	LR	08 02 26.7	
	comp=Z,28nm,21.9s,baz=214,slow=33						
HHC	Hu-ho-hao-te	57.41	328	*e*P	P	07 40 27.0	+1.5
HHC				pmax	pmax		
	comp=Z,32nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,6.5s						
BTO	Baotou	58.06	327	*e*P	P	07 40 30.7	+0.6
HEH	HeiHe	58.99	345	*e*P	P	07 40 35.3	-0.9
HEH				pmax	pmax		
	comp=Z,11nm,0.7s						
HEH				pmax	pmax		
	comp=Z,130nm,5.3s						
PETK	Petropavlovsk-	59.82	7	P	P	07 40 41.7	-0.1
	comp=Z,11nm,0.7s,baz=165,slow=6.8,SNR=31						
PETK				LR	LR	08 01 42.6	
	comp=Z,61nm,21.9s,baz=192,slow=31						
	comp=Z,11nm,0.7s						
ULN	Ulaanbaatar	64.66	331	P	P	07 41 14.6	0.0
ULN				IAmb	IAmb	07 41 15.7	
	comp=Z,9.0nm,0.9s						
SONM	Songino Array	64.96	331	P	P	07 41 16.3	-0.1
	comp=Z,6.0nm,1.0s,baz=146,slow=5.7,SNR=29						
	comp=Z,6.0nm,1.0s						
SONM	Songino Array	64.96	331	P	P	07 41 16.4	-0.1
SONM				IAmb	IAmb	07 41 17.5	
	comp=Z,6.1nm,1.0s						
PALK	Pallekele	68.07	280	P	P	07 41 37.5	+0.6
PALK				IAmb	IAmb	07 41 38.8	
	comp=Z,12nm,0.7s						
VNDA	Vanda	71.57	177	P	P	07 41 58.0	+0.9
	comp=Z,2.0nm,0.6s,baz=332,slow=7.1,SNR=18						
	comp=Z,2.0nm,0.6s						
VNDA	Vanda	71.57	177	P	P	07 41 58.1	+0.9
VNDA				IAmb	IAmb	07 42 16.7	
	comp=Z,7.4nm,1.1s						
WMQ	Urumqi	73.41	319	*e*P	P	07 42 08.2	-0.6
WMQ				pP	PcP	07 42 23.4	-1.3
WMQ				PcP	pP	07 42 27.4	+1.0
WMQ				sP	sP	07 42 33.3	-0.2
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BILL	Bilibino	75.35	7	P	P	07 42 19.7	+0.2
MK31	Makanchi Array	78.11	320	P	P	07 42 34.8	-0.7
MKAR	Makanchi Array	78.11	320	P	P	07 42 34.5	-1.0
	comp=Z,2.9nm,0.6s,baz=98,slow=7.9,SNR=40						
	comp=Z,2.9nm,0.6s						
MAKZ	Makanchi	78.31	320	P	P	07 42 35.3	-1.4
MAKZ				IAmb	IAmb	07 42 36.8	

```
     comp=Z,7.2nm,1.0s
TIXI  Tiksi              78.78 354  P       P        07 42 38.3 -0.3
ZAA0  Zalesovo Array     79.59 328  IAmb    IAmb     07 42 42.0
     comp=Z,5.4nm,0.6s
ZALV  Zalesovo Beam      79.59 328  P       P        07 42 41.4 -2.0
     comp=Z,5.2nm,0.4s,baz=110,slow=6.2,SNR=31
ZALV                                LR      LR       08 16 54.9
     comp=Z,38nm,20.7s,baz=75,slow=35
     comp=Z,5.2nm,0.4s
ZALV  Zalesovo Beam      79.59 328  P       P        07 42 41.8 -1.6
KDAK  Kodiak Island      79.90  28  LR      LR       08 11 31.5
     comp=Z,75nm,21.9s,baz=217,slow=31
NIL   Nilore             80.58 305  P       P        07 42 48.3 -1.0
KURK  Kurchatov          81.81 323  P       P        07 42 53.8 -1.5
AAK   Ala-Archa          81.97 315  P       P        07 42 56.1 -0.6
MAW   Mawson             82.18 203  P       P        07 42 55.3 -1.7
     comp=Z,49nm,1.0s,baz=114,slow=11,SNR=2.1
     comp=Z,49nm,1.0s
QSPA  South Pole Qui     83.65 180  P       P        07 43 05.5 +0.6
GAR   Garm               84.13 310  IAmb    IAmb     07 43 32.1
     comp=Z,8.7nm,1.2s
KK31  Karatay Array      84.92 314  P       P        07 43 10.4 -1.2
KK31                                IAmb    IAmb     07 43 11.8
     comp=Z,6.9nm,1.1s
KKAR  Karatay Array      84.92 314  P       P        07 43 10.9 -0.7
KKAR  Karatay Array      84.92 314  IAmb    IAmb     07 43 11.7
     comp=Z,6.9nm,1.1s
ILAR  Eielson Array      85.54  23  P       P        07 43 12.1 -2.1
     comp=Z,2.5nm,0.6s,baz=251,slow=5.0,SNR=8.6
     comp=Z,2.5nm,0.6s
A21K  Barrow             85.61  16  P       P        07 43 14.2 -0.1
A21K                                IAmb    IAmb     07 43 14.9
     comp=Z,5.5nm,0.8s
NRIK  Noril'sk           85.75 342  P       P        07 43 14.2 -0.9
     comp=Z,4.8nm,0.6s,baz=119,slow=5.0,SNR=12
     comp=Z,4.8nm,0.6s
NRIK  Noril'sk           85.75 342  IAmb    IAmb     07 43 15.5
     comp=Z,17nm,1.5s
M27K  Edge Creek, AK     86.69  26  IAmb    IAmb     07 43 22.4
     comp=Z,6.2nm,1.0s
ABKAR Akbulak array      93.19 319  P       P        07 43 48.9 -1.7
ABKAR                               IAmb    IAmb     07 43 49.3
     comp=Z,2.8nm,0.8s
GEYT  Alibeck            93.42 308  P       P        07 43 50.4 -1.6
     comp=Z,1.8nm,0.6s,baz=194,slow=8.7,SNR=2.3
     comp=Z,1.8nm,0.6s
A36M  Sachs Harbour      95.08  18  P       P        07 43 57.8 -1.1
A36M                                IAmb    IAmb     07 44 04.1
     comp=Z,3.5nm,0.8s
NVAR  Mina Array Bea     97.10  52  P       P        07 44 08.2 -0.8
     comp=Z,0.5nm,0.7s,baz=255,slow=7.2,SNR=5.0
     comp=Z,0.5nm,0.7s
YKA   Yellowknife Ar     99.18  28  P       Pdif     07 44 16.5 -1.0
     comp=Z,0.2nm,0.7s,baz=272,slow=4.3,SNR=3.6
     comp=Z,0.2nm,0.7s
KIRV  Kirov              99.62 328  LR      LR       08 29 44.9
     comp=Z,54nm,21.1s,baz=69,slow=36
PDAR  Pinedale Array    103.70  48  Pdiff   Pdif     07 44 37.1 -1.3
     comp=Z,0.2nm,0.6s,baz=277,slow=0.7,SNR=2.6
FINES FINESS Array B    110.21 334  PKiKP   PKiKP    07 49 06.3 -1.3
     comp=Z,2.1nm,0.9s,baz=144,slow=3.1,SNR=4.1
AKASG Malin Array Be    112.62 323  PKiKP   PKiKP    07 49 10.6 -1.9
     comp=Z,0.3nm,0.5s,baz=73,slow=1.5,SNR=4.4
CLL   Collm             121.53 328 i PKPdf  PKPdf    07 49 29.0 -0.6
     comp=Z,5.0nm,0.8s
CLL                                eSSS     SSS      08 12 18.0
PLCA  Paso Flores       121.54 147  PKP     PKPdf    07 49 29.8 -0.4
     comp=Z,3.3nm,0.6s,baz=254,slow=2.0,SNR=17
CONA  Conrad Observa    121.72 324 i PKP    PKPdf    07 49 29.6 -0.7
     comp=Z,0.5nm,0.3s
GERES GERESS Array B    122.49 326  PKP     PKPdf    07 49 30.6 -1.1
     comp=Z,1.4nm,0.5s,baz=76,slow=1.8,SNR=9.2
MOA   Molln             122.69 324 i PKP    PKPdf    07 49 31.7 -0.3
     comp=Z,0.4nm,0.2s
KBA   Koelnbreinsper    123.62 324 ePKP     PKPdf    07 49 33.4 -0.6
     comp=Z,2.6nm,0.6s
SCHQ  Schefferville     124.30  23  PKP     PKPdf    07 49 33.9 -1.0
     comp=Z,1.4nm,0.7s,baz=278,slow=7.1,SNR=1.8
MOTA  Moosalm           124.77 325 ePKP     PKPdf    07 49 35.4 -0.8
     comp=Z,6.3nm,0.7s
FETA  Feichten          125.16 325 ePKP     PKPdf    07 49 36.4 -0.6
     comp=Z,3.5nm,0.8s
DAVA  Damuels           125.49 326 ePKP     PKPdf    07 49 36.8 -0.8
     comp=Z,4.5nm,1.0s
MALC  Bahia Malaga      135.22  91 eP       PKiKP    07 49 59.3 +1.0
POPC  Popayan, Colom    135.73  93 eP       PKPdf    07 49 56.6 -1.4
JAMC  Jamundi, Valle    135.80  92 eP       PKiKP    07 50 00.1 +0.3
YOTC  Yotoco, Valle     136.20  91 eP       PKiKP    07 49 59.7 -0.7
DBBC  Dabeiba           136.51  86 eP       PKiKP    07 50 00.5 -0.5
CBOC  Ciudad Bolivar    136.66  88 eP       PKPdf    07 49 59.5 -0.1
HELC  Santa Helena      137.15  88 eP       PKPdf    07 50 00.5 -0.3
UREC  San Jos de Ur     137.20  85 eP       PKPdf    07 49 58.6 -1.9
GUY2C Guyana, Caldas    137.26  89 eP       PKPdf    07 50 01.7 +0.5
ORTC  Ortega, Tolima    137.28  91 eP       PKPdf    07 50 01.2 +0.6
SJCC  San Jacinto, C    137.54  82 eP       PKPdf    07 50 01.2 +0.1
NORC  Norcasia          137.78  89 eP       PKPdf    07 50 01.4 -0.2
ZARC  Zaragoza, Cauc    137.86  86 eP       PKPdf    07 50 01.5 -0.2
ESDC  Sonseca Array     138.07 327  PKP     PKPdf    07 50 01.7 +0.3
     comp=Z,0.2nm,0.3s,baz=338,slow=4.0,SNR=1.7
LPAZ  La Paz            138.13 123  PKhKP   PKPpre   07 49 57.0
     comp=Z,1.5nm,0.5s,baz=271,slow=5.1,SNR=3.7
LPAZ  La Paz            138.13 123 eP       PKPdf    07 49 59.1 -3.7
PTBC  PUERTO BERRIO,138.23  87 eP       PKiKP    07 50 05.3 +0.9
ROSC  El Rosal          138.28  90  PKP     PKPdf    07 50 04.0 +1.0
     comp=Z,11nm,0.5s,baz=144,slow=19,SNR=8.6
MACC  Macarena, Meta    138.49  94 eP       PKPdf    07 50 03.2 +0.3
SPBC  San Pablo de B    138.57  89 eP       PKPpre   07 49 52.8
VILC  Villavicencio,    138.84  91 eP       PKPpre   07 49 57.7
CHIC  Chingaza          138.85  90 eP       PKPpre   07 49 53.7
CPUP  Villa Florida     139.54 144  PKP     PKPdf    07 50 05.1 +0.7
     comp=Z,1.9nm,0.8s,baz=174,slow=1.9,SNR=2.3
RUSC  La Rusia          139.57  88 eP       PKPpre   07 49 57.2
PAMC  Pamplona, Colo    140.00  86 eP       PKPdf    07 50 05.3 -0.9
BAUV  El Baul           144.60  83 eP       PKPab    07 50 11.8 -0.7
TORD  Torodi Ar. Bea    145.73 284  PKPbc   PKPdf    07 50 15.9 +0.2
     comp=Z,40nm,0.6s,baz=77,slow=3.8,SNR=171
TORD                                SKPbc   SKPbc    07 53 48.5 -1.8
     comp=Z,1.1nm,0.7s,baz=42,slow=1.3,SNR=5.9
TPP   Pointe-a-Pierr    151.00  80 e        PKPbc    07 50 29.3 -0.8
TRN   Trinidad (W)      151.02  79 e        PKPbc    07 50 30.0 -0.1
TBH   Brigand Hill      151.36  80 e        PKiKP    07 50 32.8 +1.4
BOAV  Boa Vista         151.71  97 eP       PKiKP    07 50 32.5 +0.4
TOSP  Speyside          151.79  78 e        PKPbc    07 50 31.3 -0.5
KIC   Kosan Boka        152.50 272⇓iPKP1    PKiKP    07 50 34.1 +0.3
     comp=Z,15nm,0.4s
DBIC  Dimbokro          152.62 272  PKPbc   PKPbc    07 50 33.7 -0.1
     comp=Z,14nm,0.7s,baz=88,slow=2.9,SNR=17
DBIC                                PKPab   pPKPdf   07 50 46.0 +0.2
     comp=Z,10nm,0.6s,baz=93,slow=3.4,SNR=7.2
LIC   Lamto             152.78 271⇓iPKP1    PKiKP    07 50 34.7 +0.4
     comp=Z,63nm,0.7s
TIC   Toumodi           152.78 272⇑iPKP1    PKiKP    07 50 34.9 +0.5
     comp=Z,9.6nm,0.4s
BDFB  Brasilia          153.27 145  PKPbc   PKPbc    07 50 35.3  0.0
     comp=Z,14nm,0.8s,baz=197,slow=0.8,SNR=18
```

IDC 08 07:44:47.0±999.0**,51°.76N×168°.92W,h0^{km},Error ellipse: s-maj=725.9km s-min=245.0km az=41.0,Fox Islands**

```
Code  Station Name         Δ°   AZ°    Phase ID          Time      Res
                                      Op      ISC      h  m  s    ISC
I53US FAIRBANKS INFR 17.05  32   I       I        09 20 45.0
     0.3nm,1.4s,baz=230,slow=338,SNR=24
I56US NEWPORT INFRAS32.90  75   I       I        11 08 36.0
     baz=291,slow=305,SNR=3.0
I59US HAWAII INFRASO 33.69 157   I       I        11 41 25.4
     0.1nm,9.1s,baz=346,slow=321,SNR=1.1
I18DK QAANAAQ INFRAS42.12  19   I       I        12 03 20.0
     0.1nm,4.5s,baz=291,slow=326,SNR=1.9
```

HLW 08 07:54:13.1,29°.41N×32°.37E,h0^{km}±13^{km},Ml2.4,Egypt

```
Code  Station Name         Δ°   AZ°    Phase ID          Time      Res
                                      Op      ISC      h  m  s    ISC
ZAF   Zafarana             0.20 130  P       Pg       07 54 17.6 +0.7
     baz=130
SUZ   Suez                 0.58  43  P       Pg       07 54 25.1 +0.7
     baz=42
GLL   Jalalah              0.60 286  P       Pg       07 54 25.3 +0.6
     baz=287
HSAF  As Saff              0.74 286  P       Pg       07 54 27.9 +0.5
     baz=287
GRB   Gharib               1.19 162  P       Pb       07 54 36.4 -0.2
     baz=162
```

BGR ***08*** *07:54:46.0,35°.19N×25°.75E,h10^{km},mb4.3,Ms2.9*
MOS ***08*** *07:54:59.5±1.4,35°.57N×24°.43E,h66^{km},mb4.4/6,Error ellipse: s-maj=6.8km s-min=3.6km az=90.0*
ISK ***08*** *07:55:01.5,35°.78N×24°.54E,h51^{km}±1^{km},ML4.3/35*
IDC ***08*** *07:55:01.7±1.9,35°.82N×24°.56E,h73^{km}±16^{km},mb3.9/27, mbtmp4.2/31,MS3.2/13,Error ellipse: s-maj=13.1km s-min=10.7km az=142.0*
NEIC ***08*** *07:55:01.4±2.4,35°.65N±0°.09×24°.51E±0°.07,h68^{km}±9^{km}, mb4.4/30,Error ellipse: s-maj=13.6km s-min=8.3km az=189.0*
ATH ***08*** *07:55:02.6,35°.73N×24°.51E,h52^{km}±3^{km},ML4.3/26,Error ellipse: s-maj=3.8km s-min=0.8km az=175.0*
PDG ***08*** *07:55:02.1±0.3,35°.75N×24°.55E,h48^{km}±3^{km},ML4.5/10, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
THE ***08*** *07:55:03.0,35°.76N×24°.52E,h48^{km}±2^{km},ML4.4/16,Error ellipse: s-maj=2.9km s-min=0.5km az=176.0*
GII ***08*** *07:55:05.1±0.5,35°.64N×25°.29E,h40^{km},mb4.5/4, MD4.4/4,Mm4.5/3*
ISC 08 07:55:00.2±0.5**,35°.67N**±0°.03×**24°.55E**±0°.03**,h63**^{km}±5^{km}**, n427,**σ**2**^{s}.**24**/496**,mb4.3**/43**,24C-22D,Crete**

```
Code  Station Name         Δ°   AZ°    Phase ID          Time      Res
                                      Op      ISC      h  m  s    ISC
IDI   Anoyia               0.47 144 ⇓P       Pn       07 55 14.1 +1.9
IDI                                 ⇓S       Sn       07 55 22.8 +1.8
IDI   Anoyia               0.47 144  P       Pn       07 55 14.0 +1.8
IDI                                  S       Sn       07 55 22.6 +1.6
     23µm,0.3s
IDI   Anoyia               0.47 144  Pg      Pn       07 55 14.1 +1.9
IDI                                  Sg      Sn       07 55 22.8 +1.8
IDI   Anoyia               0.47 144  Pn      Pn       07 55 14.0 +1.8
IDI   Anoyia               0.47 144  P       Pn       07 55 14.1 +1.9
IDI   Anoyia               0.47 144  P       Pn       07 55 14.0 +1.8
IDI                                  S       Sn       07 55 22.6 +1.6
IDI                                  AML     AML      07 55 23.2
     comp=N,42912µm,0.3s
IDI                                  AML     AML      07 55 23.3
     comp=E,50562µm,0.3s
IMMV  Iera Moni Meta       0.51 246  P       Pn       07 55 14.4 +1.9
IMMV                                 S       Sn       07 55 22.8 +1.3
     comp=E,25µm,0.4s
IMMV  Iera Moni Meta       0.51 246  Pg      Pn       07 55 14.4 +1.9
IMMV                                 Sg      Sn       07 55 23.0 +1.5
IMMV  Iera Moni Meta       0.51 246  P       Pn       07 55 14.3 +1.9
IMMV                                 S       Sn       07 55 21.4 -0.1
IMMV                                 AML     AML      07 55 27.0
     comp=N,47354µm,0.3s
IMMV                                 AML     AML      07 55 27.6
     comp=E,52870µm,0.4s
IACM  Heraklion            0.56 130  P       Pn       07 55 15.2 +2.1
IACM                                 S       Sn       07 55 25.2 +2.8
     comp=E,151µm,0.4s
IACM  Heraklion            0.56 130  P       Pn       07 55 15.1 +2.1
IACM                                 S       Sn       07 55 24.7 +2.3
IACM                                 AML     AML      07 55 31.9
IACM                                 AML     AML      07 55 35.7
GVD   Gavdhos              0.91 205  P       Pn       07 55 20.1 +2.8
GVD                                  S       Sn       07 55 34.4 +4.6
     comp=E,22µm,0.5s
GVD   Gavdhos              0.91 205  Pg      Pn       07 55 20.2 +2.9
GVD   Gavdhos              0.91 205  P       Pn       07 55 20.1 +2.8
GVD                                  AML     AML      07 55 40.0
     comp=N,34240µm,0.4s
GVD                                  AML     AML      07 55 43.3
     comp=E,45707µm,0.7s
SAP3  Santorini-Thir       1.00  40  P       Pn       07 55 20.0 +1.7
SAP3                                 S       Sn       07 55 32.2 +0.4
SANT  Santorini            1.02  46 ⇑P       Pn       07 55 20.3 +1.7
SANT                                ⇓S       Sn       07 55 33.8 +1.6
SANT  Santorini            1.02  46  P       Pn       07 55 20.2 +1.7
SANT                                 S       Sn       07 55 33.5 +1.2
     comp=E,15µm,0.4s
SANT  Santorini            1.02  46  Pg      Pn       07 55 20.3 +1.7
SANT  Santorini            1.02  46          Pn       07 55 20.3 +1.7
SANT  Santorini            1.02  46  P       Pn       07 55 20.1 +1.5
SANT                                 S       Sn       07 55 33.4 +1.2
SANT                                 AML     AML      07 55 35.0
     comp=E,36029µm,0.4s
SANT                                 AML     AML      07 55 35.1
     comp=N,24841µm,0.4s
MHLO  Agia Marina, M       1.02 353  P       Pn       07 55 20.0 +1.4
MHLO                                 S       Sn       07 55 33.1 +0.8
     comp=N,142µm,0.2s
MHLO  Agia Marina, M       1.02 353  P       Pn       07 55 19.7 +1.1
MHLO                                 S       Sn       07 55 32.4  0.0
MHLO                                 AML     AML      07 55 33.7
MHLO                                 AML     AML      07 55 33.8
ANKY  Antikythira Is       1.03 281  P       Pn       07 55 20.4 +1.6
ANKY                                 S       Sn       07 55 33.5 +1.0
     comp=N,14µm,0.4s
ANKY  Antikythira Is       1.03 281  P       Pn       07 55 20.0 +1.2
ANKY                                 S       Sn       07 55 33.0 +0.4
ANKY                                 AML     AML      07 55 34.5
     comp=E,26225µm,0.5s
ANKY                                 AML     AML      07 55 35.4
     comp=N,29071µm,0.3s
CMBO  Columbo, Santo       1.06  41  P       Pn       07 55 20.8 +1.7
CMBO                                 S       Sn       07 55 34.2 +1.1
     comp=N,38µm,0.4s
CMBO  Columbo, Santo       1.06  41  P       Pn       07 55 20.7 +1.7
CMBO                                 S       Sn       07 55 34.3 +1.1
CMBO                                 AML     AML      07 55 35.9
     comp=E,74874µm,0.3s
CMBO                                 AML     AML      07 55 36.8
KTHA  Kythira Island       1.34 296  P       Pn       07 55 24.0 +1.1
KTHA                                 S       Sn       07 55 39.9 +0.1
     comp=E,27µm,0.3s
KTHA  Kythira Island       1.34 296  Pn      Pn       07 55 23.9 +1.1
KTHA                                 Sn      Sn       07 55 40.2 +0.4
KTHA  Kythira Island       1.34 296  P       Pn       07 55 23.7 +0.9
KTHA                                 S       Sn       07 55 39.0 -0.8
KTHA                                 AML     AML      07 55 42.0
     comp=N,35011µm,0.3s
KTHA                                 AML     AML      07 55 42.0
     comp=E,73239µm,0.3s
ZKR   Zakros               1.47 112  P       Pn       07 55 27.6 +3.0
ZKR                                  S       Sn       07 55 46.7 +3.7
     comp=E,3µm,0.6s
ZKR   Zakros               1.47 112  Pn      Pn       07 55 27.8 +3.2
ZKR   Zakros               1.47 112  P       Pn       07 55 27.8 +3.2
ZKR                                  S       Sn       07 55 45.9 +2.9
ZKR                                  AML     AML      07 55 48.7
     comp=E,6399µm,0.7s
ZKR                                  AML     AML      07 55 49.5
     comp=N,4602µm,0.6s
MNVA  Monemvasia           1.59 310  P       Pn       07 55 28.3 +2.3
MNVA                                 S       Sn       07 55 46.5 +0.8
MNVA                                 AML     AML      07 55 47.1
     comp=E,14933µm,0.4s
MNVA                                 AML     AML      07 55 48.4
     comp=N,15993µm,0.4s
APE   Apeiranthos          1.60  29 ⇓P       Pn       07 55 27.7 +1.3
APE                                 ⇓S       Sn       07 55 47.2 +1.1
APE   Apeiranthos          1.60  29  P       Pn       07 55 27.6 +1.2
APE                                  S       Sn       07 55 46.4 +0.2
     comp=N,6µm,0.4s
APE   Apeiranthos          1.60  29  Pn      Pn       07 55 27.4 +1.0
APE                                  Sn      Sn       07 55 45.7 -0.5
APE   Apeiranthos          1.60  29  Pn      Pn       07 55 27.6 +1.2
APE                                  Sn      Sn       07 55 46.8 +0.6
APE   Apeiranthos          1.60  29  P       Pn       07 55 27.6 +1.2
APE                                  S       Sn       07 55 46.4 +0.2
APE   Apeiranthos          1.60  29  P       Pn       07 55 27.4 +1.0
APE                                  S       Sn       07 55 46.4 +0.2
APE                                  AML     AML      07 55 48.2
     comp=N,12096µm,0.4s
APE                                  AML     AML      07 55 48.4
     comp=E,12472µm,0.3s
VLI   Veliai               1.67 309  P       Pn       07 55 28.2 +1.0
VLI                                  S       Sn       07 55 47.3 -0.4
     comp=E,14µm,0.2s
VLI   Veliai               1.67 309  P       Pn       07 55 28.3 +1.0
VLI                                  S       Sn       07 55 47.1 -0.6
VLI                                  AML     AML      07 55 48.0
     comp=N,34571µm,0.2s
VLI                                  AML     AML      07 55 48.0
     comp=E,21815µm,0.2s
KRND  KRANIDI              2.04 327  P       Pn       07 55 33.6 +1.3
KRND                                 S       Sn       07 55 57.5 +0.8
     comp=E,7µm,0.3s
KRND  KRANIDI              2.04 327  P       Pn       07 55 33.6 +1.3
KRND                                 AML     AML      07 56 03.2
     comp=E,13372µm,0.2s
KRND                                 AML     AML      07 56 03.8
     comp=N,14670µm,0.3s
KARP  Karpathos            2.13  93  P       Pn       07 55 35.3 +1.8
KARP  Karpathos            2.13  93  Pn      Pn       07 55 35.4 +1.9
KARP  Karpathos            2.13  93  Pn      Pn       07 55 35.2 +1.6
KARP  Karpathos            2.13  93  P       Pn       07 55 35.5 +1.9
KARP  Karpathos            2.13  93  P       Pn       07 55 35.3 +1.9
KARP                                 AML     AML      07 56 08.1
     comp=E,5198µm,0.6s
KARP                                 AML     AML      07 56 08.5
     comp=N,6422µm,0.6s
VLY   Voula,Athens         2.26 345  P       Pn       07 55 36.5 +1.3
VLY                                  S       Sn       07 56 02.7 +0.7
     comp=N,3µm,0.6s
VLY   Voula,Athens         2.26 345  P       Pn       07 55 36.5 +1.3
VLY                                  AML     AML      07 56 06.9
     comp=E,5322µm,0.7s
VLY                                  AML     AML      07 56 08.3
     comp=N,5482µm,0.3s
ATHU  Athens Univers       2.37 345  P       Pn       07 55 38.2 +1.4
ATHU                                 S       Sn       07 56 05.2 +0.5
ATHU  Athens Univers       2.37 345  P       Pn       07 55 38.1 +1.4
ATHU                                 AML     AML      07 56 07.0
     comp=E,1146µm,0.5s
ATHU                                 AML     AML      07 56 08.1
     comp=N,1186µm,0.6s
ATH   Athens Observa       2.39 344  P       Pn       07 55 38.6 +1.6
ATH                                  S       Sn       07 56 05.2 +0.1
     comp=N,2µm,0.5s
ATH   Athens Observa       2.39 344  P       Pn       07 55 38.6 +1.6
ATH                                  S       Sn       07 56 05.2 +0.1
ATH   Athens Observa       2.39 344  P       Pn       07 55 38.5 +1.5
ATH                                  AML     AML      07 56 06.5
     comp=E,3482µm,0.3s
ATH                                  AML     AML      07 56 08.5
     comp=N,3826µm,0.3s
PTL   Penteli              2.43 347  P       Pn       07 55 40.2 +2.5
DION  Dionisos Attik       2.45 349  P       Pn       07 55 40.4 +2.6
DION                                 AML     AML      07 56 08.7
     comp=E,13361µm,0.7s
DION                                 AML     AML      07 56 09.1
     comp=N,7571µm,0.7s
PYL   PYLOS                2.57 299  P       Pn       07 55 40.0 +0.5
ITM   Ithomi               2.59 306  P       Pn       07 55 41.6 +1.8
ITM                                  S       Sn       07 56 10.9 +0.7
ITM   Ithomi               2.59 306  Pn      Pn       07 55 41.3 +1.5
ITM   Ithomi               2.59 306  Pn      Pn       07 55 41.5 +1.7
LOUT  Loutraki             2.63 332  P       Pn       07 55 41.8 +1.4
LOUT                                 AML     AML      07 56 18.5
     comp=E,970µm,0.7s
LOUT                                 AML     AML      07 56 20.6
     comp=N,832µm,0.7s
DAT   Datca                2.67  66  P       Pn       07 55 43.0 +2.1
DAT   Datca                2.67  66  Pn      Pn       07 55 42.9 +2.1
DAT                                  Sn      Sn       07 56 13.4 +1.3
VILL  Villia               2.68 339  P       Pn       07 55 42.7 +1.8
VILL                                 S       Sn       07 56 12.6 +0.4
     comp=N,3µm,0.5s
VIL2  Platees              2.73 338  P       Pn       07 55 42.6 +0.9
VIL2                                 S       Sn       07 56 12.1 -1.5
VIL2                                 AML     AML      07 56 15.4
     comp=E,8199µm,0.6s
VIL2                                 AML     AML      07 56 16.3
     comp=N,3716µm,0.4s
SMG   Samos                2.74  41  P       Pn       07 55 43.5 +1.7
SMG                                  S       Sn       07 56 14.5 +0.7
EREA  Eretria              2.79 350  P       Pn       07 55 44.4 +2.0
EREA                                 S       Sn       07 56 14.7 -0.2
EREA  Eretria              2.79 350  P       Pn       07 55 44.2 +1.8
EREA                                 AML     AML      07 56 17.4
     comp=E,2230µm,0.3s
EREA                                 AML     AML      07 56 17.4
     comp=N,2222µm,0.6s
THAL  Thalero              2.80 328  P       Pn       07 55 44.4 +1.8
THAL  Thalero              2.80 328  P       Pn       07 55 44.0 +1.4
THAL                                 AML     AML      07 56 24.1
     comp=E,16498µm,0.5s
THAL                                 AML     AML      07 56 25.2
     comp=N,14389µm,0.4s
ARG   Arkhangelos          2.95  78  P       Pn       07 55 47.5 +2.9
ARG                                  S       Sn       07 56 20.5 +1.6
ARG   Arkhangelos          2.95  78  Pn      Pn       07 55 47.5 +2.9
ARG   Arkhangelos          2.95  78  Pn      Pn       07 55 47.6 +2.9
ARG                                          Sn       07 56 20.9 +1.9
ARG   Arkhangelos          2.95  78  P       Pn       07 55 47.6 +2.9
ARG                                                   07 56 20.9
CHOS  Chios island         2.96  24  Pn      Pn       07 55 45.9 +1.0
KYMI  Kymi, Euboea I       2.98 353  P       Pn       07 55 46.4 +1.4
KYMI                                 S       Sn       07 56 21.0 +1.5
KYMI  Kymi, Euboea I       2.98 353  P       Pn       07 55 46.6 +1.6
KLV   Kalavryta, Ach       3.05 322  P       Pn       07 55 47.3 +1.3
KLV   Kalavryta, Ach       3.05 322  P       Pn       07 55 47.1 +1.1
KLV                                  AML     AML      07 56 23.8
     comp=E,2425µm,0.3s
KLV                                  AML     AML      07 56 29.1
     comp=N,2848µm,0.8s
MLSB  Milas                3.06  57  Pn      Pn       07 55 48.3 +2.1
URLA  Izmir                3.14  31  Pn      Pn       07 55 48.3 +1.0
TURN  Turunc               3.19  69  Pn      Pn       07 55 50.8 +3.0
DRO   Drossia              3.22 316  P       Pn       07 55 50.9 +2.5
DRO                                  AML     AML      07 56 32.3
     comp=E,7875µm,0.5s
DRO                                  AML     AML      07 56 34.1
     comp=N,4602µm,0.4s
ALIK  Aliki, Aigiali       3.24 324  P       Pn       07 55 50.8 +2.3
ATAL  Atalanti             3.25 338  P       Pn       07 55 50.5 +1.8
ATAL  Atalanti             3.25 338  P       Pn       07 55 50.0 +1.2
ATAL                                 AML     AML      07 56 28.6
     comp=E,1214µm,0.5s
ATAL                                 AML     AML      07 56 29.5
     comp=N,1542µm,0.4s
LAKA  Lakka                3.29 322  P       Pn       07 55 50.5 +1.3
LAKA  Lakka                3.29 322  P       Pn       07 55 50.3 +1.1
YER   Yerkesik             3.35  63  Pn      Pn       07 55 52.7 +2.6
YER   Yerkesik             3.35  63  P       Pn       07 55 52.6 +2.5
BLCB  Balcova              3.36  36  Pn      Pn       07 55 51.5 +1.2
AXAR  Agios Charalam       3.44 335  P       Pn       07 55 53.0 +1.7
EFP   Efpalio              3.47 323  P       Pn       07 55 53.4 +1.7
DALY  Dalyan (Mula)        3.51  70  Pn      Pn       07 55 55.2 +3.0
ANX   Ano Chora            3.59 325  P       Pn       07 55 55.0 +1.6
SIGR  SIGRI                3.68  16  Pn      Pn       07 55 55.8 +1.2
AGG   Agios Georgios       3.78 333  Pn      Pn       07 55 57.8 +1.8
AGG   Agios Georgios       3.78 333          Pn       07 55 57.3 +1.3
AGG   Agios Georgios       3.78 333  P       Pn       07 55 57.3 +1.3
FETY  Fethiye              3.79  74  Pn      Pn       07 55 59.8 +3.6
MAKR  Makrakomi, Fth       3.85 331  P       Pn       07 55 59.3 +2.3
DKL   Dikili               3.88  28  Pn      Pn       07 55 58.9 +1.6
CAME  Cameli-Denizli       4.04  70  Pn      Pn       07 56 02.9 +3.2
AKAS  Kas                  4.14  81  Pn      Pn       07 56 03.4 +2.4
AKAS  Kas                  4.14  81          Pn       07 56 03.8 +2.7
APMY  Acipayam-Deniz       4.23  63  Pn      Pn       07 56 05.1 +2.9
MANT  Manisa               4.26  48  Pn      Pn       07 56 06.2 +3.4
KULA  Kula-Manisa          4.34  48  Pn      Pn       07 56 06.5 +2.8
EZN   Ezine                4.38  18  Pn      Pn       07 56 05.9 +1.8
EZN   Ezine                4.38  18  P       Pn       07 56 05.8 +1.7
ELL   Elmali               4.47  75  Pn      Pn       07 56 07.9 +2.4
ELL   Elmali               4.47  75  Pn      Pn       07 56 08.5 +3.0
ELL   Elmali               4.47  75  P       Pn       07 56 08.5 +3.0
GADA  Gvkgeada             4.63  13  Pn      Pn       07 56 09.3 +1.7
COMU  Canakkale            4.67  18  Pn      Pn       07 56 10.1 +1.9
LIT   Litokhoron           4.71 340          Pn       07 56 10.5 +1.8
LIT   Litokhoron           4.71 340  P       Pn       07 56 10.5 +1.8
KORT  Korkueli             4.87  73  Pn      Pn       07 56 15.2 +4.2
SIMA  Simav-Kutahya        4.91  45  Pn      Pn       07 56 14.9 +3.5
ANTB  Antalya              5.08  74  Pn      Pn       07 56 18.4 +4.6
ISP   Isparta              5.25  64 i P      Pn       07 56 19.4 +3.1
ALN   Alexandroupoli       5.35  12  Pn      Pn       07 56 18.6 +1.2
ALN   Alexandroupoli       5.35  12  P       Pn       07 56 18.6 +1.2
KCTX  Karacabey (Bur       5.48  32  Pn      Pn       07 56 21.6 +2.3
SUTC  Sutluce-Ispart       5.50  69  Pn      Pn       07 56 23.6 +4.0
KEK   Kerkira              5.52 318  Pn      Pn       07 56 20.9 +1.1
RDO   Rodhopi              5.52   8          Pn       07 56 21.3 +1.6
SHUT  Suhut-Afyon          5.59  57  Pn      Pn       07 56 24.1 +3.2
FNA   Florina              5.68 335  Pn      Pn       07 56 23.0 +1.0
FNA   Florina              5.68 335  P       Pn       07 56 23.0 +1.0
VAY   Valandovo            5.85 345 i Pn     Pn       07 56 26.7 +2.4
MMB   Musomiste            5.94 354  P       Pn       07 56 26.3 +0.7
KDZ   Kurdzhali            6.01   6  P       Pn       07 56 27.9 +1.5
RZN   Rozhen               6.01   1  P       Pn       07 56 28.8 +2.2
KKB   Krupnik              6.29 350  P       Pn       07 56 32.8 +2.5
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STIP	Stip	6.29	344	*i* Pn	Pn	07 56 32.0	+1.8
SCTE	Santa Cesarea	6.51	314	Pn	Pn	07 56 32.8	-0.5
SKO	Skopje	6.74	340	*i* Pn	Pn	07 56 39.3	+2.8
TIR	Tirane	6.75	328	⇑P	Pn	07 56 37.8	+1.2
TIR				⇓S	Sn	07 57 53.0	+1.0
TIR	Tirane	6.75	328	Pn	Pn	07 56 37.1	+0.5
TIR	Tirane	6.75	328	P	Pn	07 56 37.8	+1.2
TIR				S	Sn	07 57 53.0	+1.0
PGB	Panagyurishte	6.87	358	P	Pn	07 56 40.4	+2.1
VTS	Vitosha	7.01	352	⇑P	Pn	07 56 43.1	+2.7
VTS	Vitosha	7.01	352	Pn	Pn	07 56 43.3	+3.0
VTS	Vitosha	7.01	352	P	Pn	07 56 43.0	+2.7
VTS	Vitosha	7.01	352	P	Pn	07 56 43.2	+3.0
PLAC	Placanica	7.05	296	⇓P	Pn	07 56 41.8	+1.0
TIP	Timpagrande	7.12	302	⇓P	Pn	07 56 41.8	+0.1
TIP	Timpagrande	7.12	302	⇓P	Pn	07 56 41.8	+0.1
CSS	Mathiatis	7.21	93		Pn	07 56 42.2	-0.8
CSS	Mathiatis	7.21	93	Pn	Pn	07 56 41.8	-1.2
CEL	Celeste	7.39	293	Pn	Pn	07 56 44.9	-0.6
ULC	Ulcinj	7.52	328	⇓*i*Pn	Pn	07 56 47.2	0.0
ULC				*i* Sn	Sn	07 58 06.8	-4.2
PLVB	Pleven	7.71	0	⇓P	Pn	07 56 52.2	+2.6
DRME	Dracevica, Mon	7.73	329	*e*Pn	Pn	07 56 48.2	-1.7
DRME	Dracevica, Mon	7.73	329	⇑*i*Pn	Pn	07 56 48.3	-1.7
DRME				*i* Sn	Sn	07 58 12.2	-3.8
ANTO	Ankara	7.76	55	P	Pn	07 56 55.9	+5.5
PVY	Plav	7.78	334	⇑*i*Pn	Pn	07 56 52.9	+2.2
PVY				*i* Sn	Sn	07 58 14.4	-2.9
PDG	Podgorica	7.90	330	⇓P	Pn	07 56 52.7	+0.3
PDG	Podgorica	7.90	330	Pn	Pn	07 56 52.0	-0.3
PDG	Podgorica	7.90	330	⇑*i*Pn	Pn	07 56 52.0	-0.3
PDG				*i* Sn	Sn	07 58 16.1	-4.1
MATE	Matera	7.93	311	⇑P	Pn	07 56 53.5	+0.8
BUM	Brajici-Budva	7.95	328	⇓*i*Pn	Pn	07 56 53.5	+0.5
BUM				*i* Sn	Sn	07 58 16.9	-4.5
IVA	Berane	8.04	335	*e*Pn	Pn	07 56 53.4	-1.0
IVA				*i* Sn	Sn	07 58 19.2	-4.6
CEME	Cevo	8.14	329	⇑*i*Pn	Pn	07 56 53.5	-2.1
CEME				*i* Sn	Sn	07 58 21.9	-4.2
CUC	Castrocucco	8.14	305		Pn	07 56 56.2	+0.5
HCY	Herceg Novi	8.24	327	*e*Pn	Pn	07 56 55.2	-1.8
HCY	Herceg Novi	8.24	327	⇑*i*Pn	Pn	07 56 55.9	-1.1
HCY				*i* Sn	Sn	07 58 21.8	-6.7
BOVS	Bovan	8.25	345	⇓P	Pn	07 56 58.5	+1.4
BR131	Keskin Array S	8.26	58	*i* P	Pn	07 57 00.9	+3.5
BRTR	Keskin Array B	8.26	58	P	Pn	07 57 00.6	+3.2
	comp=N,10.0nm,0.5s,baz=234,slow=14,SNR=19						
BRTR				LR	LR	08 00 52.9	
	comp=N,92nm,19.3s,baz=299,slow=43						
BRTR	Keskin Array B	8.26	58	*i* P	Pn	07 57 02.4	+5.0
BRTR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NKME	Niksic	8.31	330	⇑*i*Pn	Pn	07 56 56.7	-1.2
NKME				*i* Sn	Sn	07 58 25.5	-4.7
VAE	Valguarnera	8.35	285	P	Pn	07 57 01.9	+3.3
	comp=Z,19nm,0.6s,baz=159,slow=18,SNR=1.4						
VAE				S	Sn	07 58 27.9	-3.5
	comp=Z,58nm,0.5s,baz=45,slow=17,SNR=7.1						
SJES	Sjenica	8.36	336	*e*Pn	Pn	07 56 57.1	-1.6
TREB	Trebinje	8.52	328	*e*Pn	Pn	07 56 57.8	-3.0
DBRK	Dubrovnik	8.57	327	*e*Pn	Pn	07 56 58.3	-3.2
DBRK				Sn	Sn	07 58 26.3	-10
BRY	Bratogost	8.59	329	*e*Pn	Pn	07 56 58.7	-3.2
PLE	Pljevlja	8.62	334	⇓*i*Pn	Pn	07 57 01.4	-0.9
PLE				*i* Sn	Sn	07 58 33.0	-5.0
UPM	Unac-Piva	8.69	332	*e*Pn	Pn	07 57 00.0	-3.3
RUDO	Rudo	8.88	335	*e*Pn	Pn	07 57 03.9	-1.8
DIVS	Divibare	9.11	339	*e*Pn	Pn	07 57 08.0	-1.0
SGRT	San Giovanni R	9.17	314	Pn	Pn	07 57 08.9	-0.9
LSTV	Lastovo	9.24	322	*e*Pn	Pn	07 57 08.0	-2.6
LSTV				Sn	Sn	07 58 40.0	-13
HERR	Herculane	9.34	351	⇑P	Pn	07 57 13.9	+1.9
MDVR	Moldovita	9.35	347	⇑P	Pn	07 57 14.1	+1.9
MMAI	Mount Meron Ar	9.36	103	P	Pn	07 57 10.7	-1.7
	comp=Z,5.4nm,0.3s,baz=315,slow=14,SNR=14						
MMAI				S	Sn	07 58 50.5	-5.6
	comp=Z,5.0nm,0.3s,baz=309,slow=12,SNR=2.5						
MMAI				LR	LR	08 01 56.8	
	comp=Z,22nm,21.5s,baz=216,slow=44						
HAPS	Han Pijesak,BI	9.44	335	*e*Pn	Pn	07 57 10.6	-2.8
HWQ	Hawqa	9.46	95	*e*P	Pn	07 57 11.8	-2.0
PAOL	Paolisi	9.49	307		Pn	07 57 15.0	+0.9
GEM	Giv'at Ha'Em	9.50	102	Pn	Pn	07 57 11.8	-2.5
KZIT	Kziot	9.51	117	Pn	Pn	07 57 12.8	-1.6
KZIT				Sn	Sn	07 58 51.9	-7.9
NATI	Neve Ativ	9.55	101	Pn	Pn	07 57 12.8	-2.0
NATI	Neve Ativ	9.55	101	P	Pn	07 57 13.0	-1.8
SALP	Salfit	9.55	109	Pn	Pn	07 57 12.9	-2.1
SALP				Sn	Sn	07 58 53.7	-7.1
RCY	Rachaya	9.56	100	*e*P	Pn	07 57 13.1	-2.0
MMLI	Mount Malkishu	9.58	107	Pn	Pn	07 57 14.3	-1.1
BEIL	Beino	9.60	93	*e*P	Pn	07 57 13.5	-2.2
TEKS	Tekeris	9.66	338	*e*Pn	Pn	07 57 13.4	-3.0
RICI	Ricice	9.68	326	*e*Pn	Pn	07 57 15.2	-1.4
RICI				Sn	Sn	07 58 53.3	-10
ARR	Arges	9.69	0	⇑P	Pn	07 57 19.3	+2.5
HMDT	Nahal Hemdat	9.73	107	Pn	Pn	07 57 14.9	-2.5
HMDT				Sn	Sn	07 58 58.3	-6.9
QRNJ	Al-Qirein	9.74	107	P	Pn	07 57 16.2	-1.3
VOIR		9.76	2	⇑P	Pn	07 57 20.1	+2.2
VOIR		9.76	2	P	Pn	07 57 20.0	+2.2
HVAR	Hvar	9.76	323	*e*Pn	Pn	07 57 15.7	-2.1
HVAR				Sn	Sn	07 58 54.2	-12
LOT	Lotru	9.78	357	⇑P	Pn	07 57 20.8	+2.6
GZR	Gura Zlata	9.80	353	⇓P	Pn	07 57 20.7	+2.3
GZR	Gura Zlata	9.80	353	P	Pn	07 57 20.6	+2.3
YTIR	Yattir	9.81	113	Pn	Pn	07 57 16.5	-2.1
YTIR	Yattir	9.81	113	P	Pn	07 57 17.5	-1.1
MLR	Muntele Rosu	9.87	6	⇓P	Pn	07 57 21.4	+2.0
MLR	Muntele Rosu	9.87	6	P	Pn	07 57 21.1	+1.8
	comp=Z,14nm,0.7s,baz=220,slow=4.7,SNR=22						
MLR				LR	LR	08 01 46.2	
	comp=Z,151nm,19.1s,baz=184,slow=42						
MLR	Muntele Rosu	9.87	6	Pn	Pn	07 57 20.0	+0.7
MLR	Muntele Rosu	9.87	6	P	Pn	07 57 21.3	+2.0
DSI	Dead Sea	9.91	111	Pn	Pn	07 57 18.3	-1.6
DSI	Dead Sea	9.91	111	P	Pn	07 57 18.4	-1.5
MDBI	Mazsada	10.02	113	Pn	Pn	07 57 19.0	-2.3
MDBI	Mazsada	10.02	113	P	Pn	07 57 19.4	-1.9
MSBI	Mazada	10.02	113	Pn	Pn	07 57 19.2	-2.1
MSBI				Sn	Sn	07 59 04.2	-7.9
FRGS	Fruska Gora	10.14	341	⇑P	Pn	07 57 23.5	+0.7
FRGS	Fruska Gora	10.14	341	*e*Pn	Pn	07 57 23.2	+0.3
BZS	Buzias	10.18	348	⇑P	Pn	07 57 25.5	+2.1
BZS	Buzias	10.18	348	P	Pn	07 57 25.5	+2.1
KRMI	Paran Flat	10.19	120	Pn	Pn	07 57 21.7	-2.0
KRMI				Sn	Sn	07 59 08.0	-8.4
WALJ	Wala	10.25	110	P	Pn	07 57 23.2	-1.2
PRNI	Paran	10.26	118	Pn	Pn	07 57 22.9	-1.6
PRNI				Sn	Sn	07 59 10.6	-7.4
PRNI	Paran	10.26	118	P	Pn	07 57 23.0	-1.6
ZFRI	Zfri	10.27	117	Pn	Pn	07 57 22.8	-1.9
PLOR	Plostina	10.29	8	⇓P	Pn	07 57 27.8	+2.8
PLOR	Plostina	10.29	8	P	Pn	07 57 27.8	+2.8
DOPR	Dopca	10.30	3	⇓P	Pn	07 57 28.1	+2.9
VRI	Vrincioaia	10.31	9	⇓P	Pn	07 57 28.1	+2.7
VRI	Vrincioaia	10.31	9	P	Pn	07 57 28.0	+2.7
INTR	Introdacqua	10.43	311		Pn	07 57 28.2	+1.2
MGRS	Mrkonjic Grad	10.44	329	*e*Pn	Pn	07 57 26.6	-0.4
OZUR		10.46	5	⇑P	Pn	07 57 29.6	+2.3
HRFI	Mount Harif	10.46	120	Pn	Pn	07 57 25.8	-1.5
HRFI				Sn	Sn	07 59 15.0	-7.9
MBRI	Mt Berech	10.51	121	Pn	Pn	07 57 26.8	-1.4
MBRI	Mt Berech	10.51	121	P	Pn	07 57 26.9	-1.3
ZIRJ	Zirje	10.51	322	*e*Pn	Pn	07 57 25.8	-2.2
ZIRJ				Sn	Sn	07 59 12.3	-12
EIL	Elat	10.61	121	P	Pn	07 57 28.1	-1.4
	comp=Z,24nm,0.3s,baz=266,slow=3.4,SNR=72						
EIL				S	Sn	07 59 18.0	-8.7
	comp=Z,15nm,0.4s,baz=10.0,slow=17,SNR=4.8						
EIL	Elat	10.61	121	Pn	Pn	07 57 27.9	-1.5
EIL				Sn	Sn	07 59 19.4	-7.3
MORI	Morici	10.63	323	*e*Pn	Pn	07 57 28.0	-1.7
MORI				Sn	Sn	07 59 17.0	-10
AQBJ	Aqaba	10.65	121	P	Pn	07 57 29.4	-0.5
BLY	Banja Luka	10.67	330	*e*Pn	Pn	07 57 26.8	-3.3
A050A	Klekovaca	10.72	328	*e*Pn	Pn	07 57 29.8	-1.2
ASF	Jabal al Asfar	10.84	105	P	Pn	07 57 30.8	-1.8
	comp=Z,3.4nm,0.4s,baz=350,slow=0.9,SNR=5.2						
ASF				S	Sn	07 59 27.2	-5.1
	comp=Z,3.2nm,0.4s,baz=12,slow=15,SNR=1.9						
A051A	Mrakovica	10.99	330	*e*Pn	Pn	07 57 31.1	-3.5
MARR	Marisel-Cluj	11.05	355	⇓P	Pn	07 57 37.9	+2.6
DUGI	Dugi Otok	11.05	322	*e*Pn	Pn	07 57 33.7	-1.6
DUGI				Sn	Sn	07 59 25.6	-12
UDBI	Udbina	11.10	325	Sn	Sn	07 59 28.5	-10
DRGR		11.19	353	⇓P	Pn	07 57 38.4	+1.0
DRGR		11.19	353	P	Pn	07 57 38.3	+1.0
VIRC	Vir	11.27	323	*e*Pn	Pn	07 57 36.9	-1.4
VIRC				Sn	Sn	07 59 31.1	-11
PLIT	Plitvice	11.44	326	*e*Pn	Pn	07 57 39.4	-1.3
PLIT				Sn	Sn	07 59 37.3	-9.5
NVLJ	Novalja	11.55	323	*e*Pn	Pn	07 57 40.0	-2.2
NVLJ				Sn	Sn	07 59 36.9	-13
BURAR	Bucovina Array	11.94	2	⇑P	Pn	07 57 50.8	+3.2
BURAR	Bucovina Array	11.94	2	Pn	Pn	07 57 50.8	+3.2
BURAR	Bucovina Array	11.94	2	P	Pn	07 57 50.8	+3.2
BUR08	Bucovina Ar. S	11.97	2	Pn	Pn	07 57 50.9	+2.8
BOJS	Bojanci	12.09	327	*e*Pn	Pn	07 57 47.1	-2.4
SMRN	Sveta Marina	12.25	323	*e*Pn	Pn	07 57 49.3	-2.3
SMRN				Sn	Sn	07 59 55.8	-11
BRJN	Brijuni	12.36	322	*e*Pn	Pn	07 57 51.3	-1.8
CEY	Cerknica	12.64	326	*e*Pn	Pn	07 57 54.6	-2.5
SKDS	Skadanscina	12.69	324	*e*Pn	Pn	07 57 55.1	-2.6
SOKA	Soboth	13.11	330	*i* Pn	Pn	07 58 00.1	-3.4
	comp=Z,1.8nm,0.3s						
OBKA	Obir	13.18	328	*e*Pn	Pn	07 58 00.9	-3.6
	comp=Z,1.2nm,0.2s						
OBKA	Obir	13.18	328	*e*Pn	Pn	07 58 00.6	-3.8
ARSA	Arzberg	13.39	333	*e*Pn	Pn	07 58 04.5	-2.7
	comp=Z,4.7nm,0.5s						
VYHS	Vyhne	13.49	344	*e*P	P	07 58 13.2	-2.5
VYHS	Vyhne	13.49	344	*e*PN	P	07 58 13.2	-2.5
STAL	STALIGIAL	13.83	323		Pn	07 58 10.8	-2.4
CONA	Conrad Observa	13.84	335	*e*Pn	Pn	07 58 16.1	+2.8
	comp=Z,1.0nm,0.4s						
CLUD	Cludinico	13.89	324	Pn	Pn	07 58 13.8	-0.2
STHS	Stebnicka Huta	13.95	351	*e*P	P	07 58 18.4	-2.4
STHS	Stebnicka Huta	13.95	351	*e*PN	P	07 58 18.4	-2.4
CIMO	Cimolais	14.00	323	Pn	Pn	07 58 13.1	-2.3
KBA	Koelnbreinsper	14.14	327	*e*Pn	Pn	07 58 16.5	-0.9
	comp=Z,2.7nm,0.3s,SNR=4.8						
ABTA	Abfaltersbach	14.28	324	*e*P	P	07 58 26.8	+2.2
	comp=Z,17nm,0.6s,SNR=6.5						
MOA	Molln	14.37	331	*e*Pn	Pn	07 58 20.5	+0.3
	comp=Z,2.2nm,0.5s						
SALO	Salr	14.54	317	Pn	Pn	07 58 23.3	+0.8
VRAC	Vranov	14.82	339	LR	LR	08 05 03.8	
	comp=Z,44nm,18.4s,baz=162,slow=41						
RJOB	Jochberg	14.89	328	*e*L	L	08 05 07.2	
	comp=Z,88nm,21.9s						
OKC	Ostrava-Krasne	14.91	344	*e*P	P	07 58 31.4	0.0
OKC	Ostrava-Krasne	14.91	344	*e*P	P	07 58 31.4	0.0
MORC	Moravsky Berou	14.99	342	P	P	07 58 32.5	+0.1
MORC	Moravsky Berou	14.99	342	P	P	07 58 32.5	+0.1
MORC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WTTA	Wattenberg	15.07	324	*e*Pn	Pn	07 58 28.9	-0.5
	comp=Z,6.9nm,0.4s,SNR=4.5						
CKRC	Cesky Krumlov	15.15	333	*e*P	P	07 58 36.0	+1.9
CKRC	Cesky Krumlov	15.15	333	*e*P	P	07 58 36.0	+1.9
WATA	Walderalm	15.15	324	*e*Pn	Pn	07 58 30.9	+0.5
	comp=Z,26nm,0.7s,SNR=6.6						
SQTA	Sankt Quirin	15.24	323	*e*Pn	Pn	07 58 32.0	+0.4
	comp=Z,2.7nm,0.2s						
FUORN	Ofenpass-Fuorn	15.32	320	P	P	07 58 38.5	+2.2
FETA	Feichten	15.34	322	*e*Pn	Pn	07 58 33.8	+0.8
	comp=Z,29nm,0.9s,SNR=6.7						
MOTA	Moosalm	15.38	323	*e*Pn	Pn	07 58 34.2	+0.8
	comp=Z,13nm,0.6s						
GEC2	GERESS Array S	15.40	332	IAmb	IAmb	07 58 39.2	
	comp=Z,13nm,0.7s						
GERES	GERESS Array B	15.40	332	P	Pn	07 58 33.0	-0.5
	comp=Z,7.9nm,0.5s,baz=152,slow=12,SNR=21						
GERES				LR	LR	08 04 53.4	
	comp=Z,51nm,19.2s,baz=80,slow=39						
AKASG	Malin Array Be	15.40	11	P	Pn	07 58 33.8	+0.4
	comp=Z,1.2nm,0.4s,baz=201,slow=10.0,SNR=16						
AKASG				LR	LR	08 05 05.3	
	comp=Z,43nm,18.6s,baz=220,slow=40						
AKASG	Malin Array Be	15.40	11		P	07 58 35.2	-1.6
AKASG	Malin Array Be	15.40	11	P	P	07 58 35.2	-1.6
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKBB	Malin Array Si	15.40	11	Pn	Pn	07 58 34.4	+1.0
AKBB				IAmb	IAmb	07 58 52.7	
	comp=Z,33nm,1.5s						
AKBB	Malin Array Si	15.40	11	P	Pn	07 58 34.4	+1.0
AKBB				pmax	pmax		
	comp=Z,33nm,1.5s						
KRLC	Kraliky	15.46	341	*e*P	P	07 58 37.7	+0.1
KRLC	Kraliky	15.46	341	*e*P	P	07 58 37.7	+0.1
DAVOX	Davos/Dischmat	15.62	320	P	Pn	07 58 36.5	-0.1
	comp=Z,2.1nm,0.5s,baz=136,slow=14,SNR=3.2						
DAVOX				S	Sn	08 01 21.9	-6.8
	comp=Z,2.6nm,0.5s,baz=154,slow=23,SNR=2.1						
KHC	Kasperske Hory	15.68	332	IAmb	IAmb	07 58 43.0	
	comp=Z,12nm,0.6s						
KHC	Kasperske Hory	15.68	332	*e*P	Pn	07 58 37.5	+0.4
KHC				*e*x	x	07 58 40.5	
KHC	Kasperske Hory	15.68	332	*e*P	Pn	07 58 37.5	+0.4
DPC	Dobruska-Polom	15.84	340	*e*P	P	07 58 41.8	0.0
DPC	Dobruska-Polom	15.84	340	*e*P	P	07 58 41.8	0.0
FUR	Furstenfeldbru	15.89	326	*e*L	L	08 05 26.4	
	comp=Z,72nm,18.0s						
NEY	Neytrino	15.93	56	*i* P	P	07 58 44.2	+1.2
DAVA	Damuels	15.95	321	*e*Pn	P	07 58 43.6	+0.5
	comp=Z,20nm,0.6s,SNR=5.2						
OSTC	Ostas	16.05	340	*e*P	P	07 58 44.2	+0.1
OSTC	Ostas	16.05	340	*e*P	P	07 58 44.2	+0.1
UPC	Upice	16.07	340	*e*P	P	07 58 44.2	-0.1
UPC	Upice	16.07	340	*e*P	P	07 58 44.2	-0.1
SHA1	Shidzhatmaz	16.07	54	*i* P	P	07 58 47.2	+2.5
KIV	Kislovodsk	16.18	54	*e*P	P	07 58 47.0	+1.3
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KVAR	Kislovodsk Arr	16.19	54	P	P	07 58 46.1	+0.3
	comp=Z,2.7nm,0.4s,baz=267,slow=17,SNR=2.3						
KBZ	Khabaz	16.23	55	P	P	07 58 47.4	+1.3
	comp=Z,5.4nm,0.7s,baz=224,slow=7.1,SNR=14						
KBZ				LR	LR	08 06 41.7	
	comp=Z,42nm,19.8s,baz=186,slow=43						
KBZ	Khabaz	16.23	55	*ce*P	P	07 58 48.4	+2.3
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GNI	Garni	16.55	68	LR	LR	08 06 20.3	
	comp=Z,51nm,18.9s,baz=277,slow=41						
SENIN	Lac Senin/Sane	16.80	315	P	Pn	07 58 51.6	+0.3
BRG	Berggiesshubel	17.01	337	*e*P	P	07 58 55.6	+0.9
BRG				Amp		07 58 56.3	
	comp=Z,6.9nm,0.8s						
BRG	Berggiesshubel	17.01	337	*e*P	P	07 58 55.6	+0.9
BRG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GRFO	Grafenberg	17.06	329	P	P	07 58 56.3	+1.1
GRFO				IAmb	IAmb	07 58 57.8	
	comp=Z,23nm,0.8s						
GRFO	Grafenberg	17.06	329	P	P	07 58 56.3	+1.1
GRFO				pmax	pmax		
	comp=Z,23nm,0.8s						
GRF	Grafenberg Arr	17.06	329	*e*P	P	07 58 56.8	+1.5
	comp=Z,36nm,1.0s,baz=138,slow=12						
GRF				*e*L	L	08 05 45.4	
	comp=Z,56nm,19.3s						
BFO	Black Forest	17.43	322		P	07 58 59.6	+0.3
BFO				IAmb	IAmb	07 59 01.8	
	comp=Z,11nm,0.6s						
BFO	Black Forest	17.43	322	P	P	07 58 59.6	+0.3
BFO				pmax	pmax		
	comp=Z,11nm,0.6s						
BFO	Black Forest	17.43	322	*e*P	P	07 59 01.0	+1.7
	comp=Z,13nm,0.6s,baz=138,slow=12						
MOX	Moxa	17.65	332	*e*L	L	08 06 58.7	
	comp=Z,57nm,19.2s						
CLL	Collm	17.70	336	*e*P	Pn	07 59 02.0	-0.1
	comp=Z,8.0nm,0.7s						
CLL				*e*x	x	07 59 42.0	
CLL	Collm	17.70	336	*e*P	Pn	07 59 02.0	-0.1
CLL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ECH	Echery	17.96	320	P	Pn	07 59 06.3	+0.9
ECH	Echery	17.96	320	P	Pn	07 59 06.3	+0.9
ECH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TNS	Taunus Mts	18.66	326	*e*P	Pn	07 59 15.0	+1.1
	comp=Z,12nm,0.6s,baz=138,slow=12						
MNK	Minsk	18.97	6	*i* P	P	07 59 16.3	+0.1
	comp=Z,11nm,0.8s,baz=188						
MNK				*i* P	Pn	07 59 18.9	+1.4
	comp=E,5.0nm,1.4s						
MNK				*i* P	Pn	07 59 18.9	+1.4
	comp=N,47nm,1.0s						
MNK				*i* pP	pP	07 59 27.6	-1.8
MNK				*i* S	Sn	08 02 51.2	+2.1
MNK				*i* SS	SnSn	08 03 12.2	+8.1
MNK				*i* LQ	LQ	08 05 02.9	
MNK				*i* LR	LR	08 06 26.6	
MNK	Minsk	18.97	6	*i* P	P	07 59 16.3	+0.1
MNK				*i* S	Sn	08 02 51.2	+2.1
MNK				pmax	pmax		
	comp=Z,11nm,0.8s						
MNK				pmax	pmax		
	comp=N,47nm,1.0s						
MNK				pmax	pmax		
	comp=E,5.0nm,1.4s						
NACGM	Naroch	19.29	4	*e*P	P	07 59 19.2	-0.5
	comp=Z,20nm,0.8s,baz=186						
PABE	Paberze	19.84	359	IAmb	IAmb	07 59 40.5	
	comp=Z,41nm,0.9s						
TAM	Tamanrasset	20.94	237	P	Pn	07 59 41.2	+0.1
OBN	Obninsk	21.14	19	⇑*e*P	P	07 59 41.1	+1.5
OBN				*e*		08 00 01.5	
OBN				*e*S	S	08 03 25.7	-5.4
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,43nm,13.0s						
RAYN	Ar Rayn	21.82	118	P	P	07 59 54.4	+7.1
DEL	Delary	22.03	344	*i* P	P	07 59 47.0	-2.2
ESBB	Sonseca Array	22.87	289	P	P	07 59 59.2	+0.8
ESDC	Sonseca Array	22.87	289	P	P	07 59 58.0	-0.4
	comp=Z,3.4nm,0.5s,baz=81,slow=11,SNR=30						
	comp=Z,3.4nm,0.5s						
ESDC	Sonseca Array	22.87	289	P	P	08 00 00.0	+1.6
BELG	Belogornoye	23.39	37	P	P	08 00 02.6	-0.6
	comp=Z,2.4nm,0.3s,baz=242,slow=23,SNR=7.9						
	comp=Z,2.4nm,0.3s						
BELG	Belogornoye	23.39	37	*i* P	P	08 00 04.3	+1.1
BELG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MDT	Midelt	24.23	272	P	P	08 00 12.1	+0.8
	comp=Z,1.7nm,0.4s,baz=66,slow=5.0,SNR=5.2						
	comp=Z,1.7nm,0.4s						
MVO	Moncorvo	25.26	292	*e*P	P	08 00 21.8	+1.4
PBAR	Barrancos	25.31	285	*e*P	P	08 00 21.7	+0.8
HFS	Hagfors	25.47	347	P	P	08 00 20.5	-1.6
	comp=Z,2.4nm,0.4s,baz=149,slow=12,SNR=24						
HFS				PcP	PcP	08 03 51.4	-0.8
	comp=Z,3.6nm,1.0s,baz=166,slow=3.1,SNR=1.4						
	comp=Z,2.4nm,0.4s						
PMRV	Marv??o	25.53	288	*e*P	P	08 00 23.6	+0.8
FINES	FINESS Array B	25.81	2	P	P	08 00 23.0	-2.1
	comp=Z,1.4nm,0.3s,baz=165,slow=9.1,SNR=13						
FINES				PcP	PcP	08 03 52.9	0.0
	comp=Z,1.1nm,0.3s,baz=180,slow=1.6,SNR=7.9						
FINES				ScP	ScP	08 07 24.9	-2.1
	comp=Z,1.6nm,0.7s,baz=215,slow=2.3,SNR=4.1						
	comp=Z,1.4nm,0.3s						
FINES	FINESS Array B	25.81	2	P	P	08 00 23.4	-1.7
FIA1	FINESS Array S	25.81	2	P	P	08 00 23.9	-1.2
FIA1				IAmb	IAmb	08 00 25.4	
	comp=Z,21nm,1.4s						
PVAQ	Vaqueiros	25.92	283	P	P	08 00 26.1	-0.3
PVAQ				IAmb	IAmb	08 00 54.6	
	comp=Z,14nm,1.5s						
PVAQ	Vaqueiros	25.92	283	*e*P	P	08 00 29.1	+2.7
EVO	Evora	26.05	286	*e*P	P	08 00 30.0	+2.4
EVO				A	A	08 00 30.6	
	comp=Z,21nm,1.5s						
MESJ	Messejana	26.27	285	*e*P	P	08 00 32.0	+2.4
MESJ				A	A	08 00 37.2	
	comp=Z,17nm,2.0s						
NC602	NORSAR Array S	26.43	346	P	P	08 00 31.0	+0.2
NC602				IAmb	IAmb	08 00 33.4	
	comp=Z,12nm,0.8s						
NB2	NORSAR Subarra	26.78	346	P	P	08 00 33.9	0.0
	comp=Z,0.8nm,0.6s,baz=156,slow=9.3						
NOA	NORSAR Array B	26.78	346	P	P	08 00 33.1	-0.8
	comp=Z,0.6nm,0.5s,baz=149,slow=9.4,SNR=4.4						
NOA				LR	LR	08 11 52.9	
	comp=Z,15nm,18.6s,baz=330,slow=38						
	comp=Z,0.6nm,0.5s						
GEYT	Alibeck	26.89	75	P	P	08 00 35.7	+0.5
	comp=Z,3.2nm,0.6s,baz=270,slow=10,SNR=5.0						
	comp=Z,3.2nm,0.6s						
EKA	Eskdalemuir Ar	27.33	325	P	P	08 00 39.2	+0.3
	comp=Z,4.1nm,0.5s,baz=123,slow=10,SNR=16						
	comp=Z,4.1nm,0.5s						
ESK	Eskdalemuir	27.35	325	P	P	08 00 39.3	+0.3
ESK	Eskdalemuir	27.35	325	P	P	08 00 39.3	+0.3
ESK				pmax	pmax		
	comp=Z,36nm,1.3s						
ABKAR	Akbulak array	29.14	51	P	P	08 00 54.6	-0.4
ABKAR	Akbulak array	29.14	51	IAmb	IAmb	08 00 58.2	
	comp=Z,2.7nm,1.2s						
TORD	Torodi Ar. Bea	30.45	228	P	P	08 01 07.8	+0.9
	comp=Z,12nm,0.5s,baz=32,slow=8.7,SNR=137						
TORD				PcP	PcP	08 04 05.6	+0.5
	comp=Z,0.9nm,0.7s,baz=29,slow=3.5,SNR=4.1						
	comp=Z,12nm,0.5s						
ARCES	ARCESS Array B	33.92	1	P	P	08 01 34.8	-2.0
	comp=Z,2.9nm,0.5s,baz=179,slow=9.4,SNR=32						
ARCES				PcP	PcP	08 04 13.6	-0.1
	comp=Z,3.1nm,1.1s,baz=180,slow=1.1,SNR=3.5						
	comp=Z,2.9nm,0.5s						
ARCES	ARCESS Array B	33.92	1	P	P	08 01 35.3	-1.5
ARCES	ARCESS Array B	33.92	1	P	P	08 01 35.3	-1.5
ARCES				pmax	pmax		
	comp=Z,17nm,1.3s						
KK31	Karatay Array	35.92	64	IAmb	IAmb	08 02 14.3	
	comp=Z,3.0nm,0.7s						
KKAR	Karatay Array	35.92	64	P	P	08 01 55.4	+1.0
KKAR	Karatay Array	35.92	64	IAmb	IAmb	08 02 14.3	
	comp=Z,3.0nm,0.7s						
KKAR	Karatay Array	35.92	64	P	P	08 01 55.4	+1.0
BRVK	Borovoye	36.30	47	P	P	08 01 58.5	+1.0
BRVK				IAmb	IAmb	08 01 59.0	
	comp=Z,3.2nm,0.5s						
BRVK	Borovoye	36.30	47	P	P	08 01 58.5	+1.0
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AAK	Ala-Archa	38.88	64	P	P	08 02 20.3	+0.8
	comp=Z,1.7nm,0.4s,baz=345,slow=0.9,SNR=5.0						
	comp=Z,1.7nm,0.4s						
AAK	Ala-Archa	38.88	64	P	P	08 02 21.0	+1.4
AAK				pP	pP	08 02 34.8	-0.2
AAK				IAmb	IAmb	08 02 38.4	
	comp=Z,4.5nm,0.7s						
DBIC	Dimbokro	39.50	230	P	P	08 02 25.4	+0.6
	comp=Z,14nm,0.5s,baz=46,slow=8.7,SNR=30						
	comp=Z,14nm,0.5s						
DBIC	Dimbokro	39.50	230	P	P	08 02 25.6	+0.8
DBIC	Dimbokro	39.50	230	P	P	08 02 25.6	+0.8
DBIC				pmax	pmax		
	comp=Z,13nm,0.5s						
TIC	Toumodi	39.63	230	⇑*e*P	P	08 02 26.3	+0.4
	comp=Z,23nm,0.6s						
KIC	Kosan Boka	39.67	230	⇑*e*P	P	08 02 26.8	+0.6
	comp=Z,21nm,0.4s						
LIC	Lamto	39.96	230	⇑*e*P	P	08 02 29.2	+0.6
	comp=Z,44nm,0.4s						
KURK	Kurchatov	41.25	51	P	P	08 02 39.0	+0.1
KURK				IAmb	IAmb	08 02 39.5	
	comp=Z,4.6nm,0.8s						
KURK	Kurchatov	41.25	51	P	P	08 02 39.0	+0.1
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SCO	Scoresbysund	42.68	339	P	P	08 02 52.2	+2.0
SCO	Scoresbysund	42.68	339	P	P	08 02 52.2	+2.0
SCO				pmax	pmax		
	comp=Z,34nm,1.4s						
SPITS	Spitsbergen Ar	42.75	358	P	P	08 02 49.9	-0.9
	comp=Z,0.4nm,0.3s,baz=152,slow=11,SNR=10						
	comp=Z,0.4nm,0.3s						
MAKZ	Makanchi	43.70	57	P	P	08 03 00.1	+1.3
MAKZ	Makanchi	43.70	57	P	P	08 03 00.1	+1.3
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MK31	Makanchi Array	43.91	57	P	P	08 03 00.9	+0.3
MK31				IAmb	IAmb	08 03 18.1	
	comp=Z,3.5nm,0.6s						
MK31	Makanchi Array	43.91	57	P	P	08 03 00.9	+0.3

MK31				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR	**Makanchi Array**	**43.91**	**57**	P	**P**	**08 03 00.7**	**+0.1**
	comp=Z,1.9nm,0.4s,baz=270,slow=7.8,SNR=41						
MKAR				ScP	**ScP**	**08 08 30.4**	**-1.5**
	comp=Z,0.3nm,0.7s,baz=262,slow=3.7,SNR=3.5						
	comp=Z,1.9nm,0.4s						
MKAR	**Makanchi Array**	**43.91**	**57**	P	**P**	**08 03 01.0**	**+0.4**
MKAR	**Makanchi Array**	**43.91**	**57**	P	**P**	**08 03 01.0**	**+0.4**
ZAA0	**Zalesovo Array**	**45.01**	**47**	IAmb	IAmb	08 03 09.2	
	comp=Z,4.4nm,0.7s						
ZAA0				pP	pP	08 03 23.9	-0.9
ZALV	**Zalesovo Beam**	**45.01**	**47**	P	**P**	**08 03 08.6**	**-0.6**
	comp=Z,4.0nm,0.4s,baz=268,slow=9.0,SNR=24						
ZALV				ScP	**ScP**	**08 08 34.0**	**-2.1**
	comp=Z,0.4nm,0.4s,baz=192,slow=2.7,SNR=1.8						
	comp=Z,4.0nm,0.4s						
SONM	**Songino Array**	**59.55**	**51**	P	**P**	**08 04 57.0**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=286,slow=7.4,SNR=14						
	comp=Z,0.9nm,0.5s						
SONM	**Songino Array**	**59.55**	**51**	P	**P**	**08 04 57.0**	**-0.2**
FRB	**Frobisher Bay**	**59.97**	**329**	P	**P**	**08 04 59.3**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=68,slow=7.6,SNR=6.5						
	comp=Z,0.9nm,0.5s						
SCHQ	**Schefferville**	**62.47**	**319**	P	**P**	**08 05 16.8**	**+0.1**
	comp=Z,1.7nm,0.3s,baz=70,slow=4.9,SNR=15						
	comp=Z,1.7nm,0.3s						
RES	**Resolute Bay**	**63.04**	**345**	P	**P**	**08 05 20.9**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=96,slow=7.5,SNR=2.2						
	comp=Z,0.8nm,0.5s						
RES	**Resolute Bay**	**63.04**	**345**	P	**P**	**08 05 21.0**	**+0.8**
BOSA	**Boshof**	**63.95**	**179**	P	**P**	**08 05 28.4**	**+1.6**
	comp=Z,4.2nm,0.5s,baz=1.8,slow=7.9,SNR=12						
	comp=Z,4.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**67.01**	**83**	P	**P**	**08 05 46.1**	**-0.7**
	comp=Z,1.7nm,0.3s,baz=297,slow=7.6,SNR=7.1						
	comp=Z,1.7nm,0.3s						
KLR	**Kul'dur**	**73.71**	**41**	LR	LR	08 41 05.2	
	comp=Z,33nm,18.7s,baz=342,slow=38						
INK	**Inuvik**	**75.04**	**352**	P	**P**	**08 06 35.0**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=359,slow=4.0,SNR=1.3						
	comp=Z,0.3nm,0.3s						
YKA	**Yellowknife Ar**	**76.81**	**342**	P	**P**	**08 06 44.1**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=28,slow=5.4,SNR=8.0						
YKA				LR	LR	08 42 38.7	
	comp=Z,85nm,19.7s,baz=37,slow=37						
	comp=Z,0.5nm,0.6s						
YKA	**Yellowknife Ar**	**76.81**	**342**	*i* P	**P**	**08 06 46.4**	**+1.7**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KSRS	**Korea Array**	**78.36**	**52**	P	**P**	**08 06 53.9**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=308,slow=4.5,SNR=5.8						
	comp=Z,1.4nm,0.5s						
ILAR	**Eielson Array**	**79.66**	**356**	P	**P**	**08 07 00.2**	**-0.3**
	comp=Z,0.1nm,0.5s,baz=331,slow=4.3,SNR=4.6						
	comp=Z,0.1nm,0.5s						
BDFB	**Brasilia**	**85.44**	**247**	P	**P**	**08 07 32.4**	**+1.0**
	comp=Z,2.6nm,0.6s,baz=60,slow=10,SNR=5.8						
	comp=Z,2.6nm,0.6s						
JHJ	**Hachijo jima 2**	**88.60**	**49**	LR	LR	08 53 38.4	
	comp=Z,78nm,18.4s,baz=24,slow=40						
SDV	**Santo Domingo**	**89.06**	**280**	LR	LR	08 42 26.2	
	comp=Z,31nm,20.1s,baz=81,slow=32						
PDAR	**Pinedale Array**	**91.41**	**328**	P	**P**	**08 08 01.1**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=43,slow=5.4,SNR=2.0						
	comp=Z,0.1nm,0.3s						
WRA	**Warramunga Arr**	**117.14**	**96**	PKP	**PKPdf**	**08 13 38.4**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=317,slow=1.6,SNR=12						
ASAR	**Alice Springs**	**118.63**	**100**	PKP	**PKiKP**	**08 13 41.4**	**0.0**
	comp=Z,1.2nm,0.4s,baz=308,slow=1.4,SNR=31						
STKA	**Stephens Creek**	**128.32**	**105**	PKP	**PKiKP**	**08 14 00.2**	**0.0**
	comp=Z,0.6nm,0.4s,baz=20,slow=4.1,SNR=5.0						

ROM 08 07:55:20.5±0.0**, 42°.722N**±0°.002×**13°.196E**±0°.004**, h11**^{km}**, ML2.1**/5**, Error ellipse: s-maj=0.3km s-min=0.2km az=255.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1214	**Arquata del Tr**	**0.04**	**14**	P	Pg	07 55 23.0	+0.2
T1214				S	Sg	07 55 24.3	-0.2
T1218	**Civita (PG)**	**0.08**	**229**	P	Pg	07 55 23.6	+0.4
T1218				S	Sg	07 55 25.4	+0.3
T1212	**Cascia, Frazio**	**0.12**	**285**	P	Pg	07 55 24.0	+0.4
T1212				S	Sg	07 55 26.2	+0.5
T1245	**Castelsantange**	**0.14**	**358**	P	Pg	07 55 24.3	+0.4
T1245				S	Sg	07 55 27.1	+0.7
SMA1	**SAN MARTINO**	**0.14**	**132**	P	Pg	07 55 24.3	+0.5
MC2	**Monte Cornacci**	**0.19**	**359**	P	Pg	07 55 25.3	+0.5
MC2				S	Sg	07 55 28.9	+1.1
T1217	**Poggiodomo (PG**	**0.20**	**267**	P	Pg	07 55 25.3	+0.5
T1217				S	Sg	07 55 28.7	+0.9
MMO1	**Montemonaco**	**0.20**	**28**	P	Pg	07 55 25.4	+0.5
MMO1				S	Sg	07 55 28.9	+1.0
RM33	**Pellescritta (**	**0.21**	**176**	P	Pg	07 55 25.7	+0.6
RM33				S	Sg	07 55 29.1	+0.8
RM33				AML	AML		
	comp=E,1210µm,1.3s						
RM33				AML	AML		
	comp=N,1020µm,0.8s						
RM33				AML	AML		
	comp=N,1020µm,0.8s						
RM33				AML	AML		
	comp=E,1210µm,0.7s						
T1216	**Preci, Frazion**	**0.21**	**322**	P	Pg	07 55 25.4	+0.3
T1216				S	Sg	07 55 29.1	+0.9
T1241	**Roccafluvione,**	**0.22**	**52**	P	Pg	07 55 25.6	+0.4
T1241				S	Sg	07 55 29.3	+1.0
CAMP	**Campotosto**	**0.24**	**140**	P	Pg	07 55 26.1	+0.5
CAMP				S	Sg	07 55 30.0	+0.9
CAMP				AML	AML		
	comp=N,602µm,0.3s						
CAMP				AML	AML		
	comp=E,345µm,0.2s						
T1246	**Crognaleto (TE**	**0.26**	**122**	P	Pg	07 55 26.4	+0.5
T1246				S	Sg	07 55 30.4	+0.9
FEMA	**Monte Fema**	**0.26**	**336**	P	Pg	07 55 26.6	+0.6
FEMA				S	Sb	07 55 30.9	-1.1
T1247	**Pizzolo (AQ)**	**0.29**	**165**	P	Pg	07 55 27.0	+0.5
T1247				S	Sg	07 55 31.5	+1.1
T1247				AML	AML		
	comp=E,1180µm,0.2s						
T1247				AML	AML		
	comp=N,1265µm,0.4s						
T1247				AML	AML		
	comp=N,1265µm,1.6s						
T1247				AML	AML		
	comp=E,1180µm,0.2s						
T1211	**Morro Reatino**	**0.31**	**233**	P	Pg	07 55 27.3	+0.4
T1211				S	Sb	07 55 32.5	-0.9
T1211				AML	AML		
	comp=E,386µm,1.5s						
T1211				AML	AML		
	comp=N,533µm,1.1s						
T1211				AML	AML		
	comp=E,324µm,1.5s						
T1211				AML	AML		
	comp=N,498µm,0.5s						
T1222	**Castel Sant'An**	**0.34**	**200**	P	Pg	07 55 27.7	+0.3
T1222				S	Sb	07 55 33.2	-0.9
T1222				AML	AML		
	comp=E,298µm,0.3s						
T1222				AML	AML		
	comp=N,216µm,0.3s						
GIGS	**Gran Sasso**	**0.39**	**134**	P	Pg	07 55 28.3	+0.1
GIGS				S	Sg	07 55 33.9	+0.5
FIAM	**Fiamignano**	**0.46**	**187**	P	Pg	07 55 29.7	+0.2
FIAM				S	Sg	07 55 36.5	+0.9
FIAM				AML	AML		
	comp=E,158µm,1.5s						
FIAM				AML	AML		
	comp=N,245µm,0.7s						
FIAM				AML	AML		
	comp=N,244µm,0.7s						
FIAM				AML	AML		
	comp=E,158µm,0.5s						
SNTG	**Esanatoglia**	**0.56**	**341**	AML	AML		
	comp=E,138µm,1.3s						
SNTG				AML	AML		
	comp=N,141µm,0.8s						
VCEL	**Villa Celiera**	**0.58**	**124**	P	Pb	07 55 32.6	-0.1
VCEL				S	Sb	07 55 41.8	+0.8
T0110	**Collepietro**	**0.66**	**139**	P	Pg	07 55 33.4	+0.1
T0110				S	Sb	07 55 43.2	0.0

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*DNK **08** 08:05:31.7±5.2, 76°.52N×58°.09W, h0^{km}, Presumed Glacial event*

IDC 08 08:06:07.5±2.5**, 76°.50N×60°.36W, h0**^{km}**, mb3.1**/4**, mbtmp3.3**/5**, ML3.5**/1**, MS3.5**/18**, Error ellipse: s-maj=70.9km s-min=27.9km az=158.0, Western Kalaallit Nunaat**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I18DK	**QAANAAQ INFRAS**	**2.25**	**300**	I	I	08 19 50.0	
	0.4nm,0.7s,baz=117,slow=347,SNR=23						
RES	**Resolute Bay**	**8.70**	**275**	Pn	Pn	08 08 13.3	-1.0
	0.5nm,0.3s,baz=55,slow=12,SNR=4.5						
RES				Sn	Sn	08 09 52.1	-0.8
	0.4nm,0.3s,baz=292,slow=12,SNR=2.5						
	2.0nm,0.5s						
SFJD	**Kangerlussuaq**	**10.01**	**158**	LR	LR	08 12 09.3	
	comp=Z,232nm,18.3s,baz=350,slow=36						
JMIC	**Jan Mayen**	**15.01**	**84**	LR	LR	08 15 14.4	
	comp=Z,158nm,18.6s,baz=278,slow=36						
INK	**Inuvik**	**21.93**	**288**	P	P	08 11 01.8	-0.1
	1.1nm,0.7s,baz=38,slow=9.4,SNR=4.5						
	1.1nm,0.7s						
YKA	**Yellowknife Ar**	**22.39**	**262**	P	P	08 11 08.6	+1.7
	0.2nm,0.7s,baz=35,slow=9.9,SNR=4.6						
YKA				LR	LR	08 19 11.9	
	comp=Z,99nm,21.9s,baz=136,slow=35						
	0.2nm,0.7s						
ARCES	**ARCESS Array B**	**23.67**	**61**	LR	LR	08 20 48.6	
	comp=Z,62nm,19.5s,baz=10,slow=37						
NOA	**NORSAR Array B**	**27.71**	**83**	LR	LR	08 21 10.8	
	comp=Z,56nm,19.3s,baz=325,slow=33						
HFS	**Hagfors**	**29.09**	**82**	LR	LR	08 22 51.0	
	comp=Z,133nm,18.4s,baz=335,slow=34						
EKA	**Eskdalemuir Ar**	**29.49**	**103**	LR	LR	08 22 32.9	
	comp=Z,175nm,21.8s,baz=350,slow=33						
ULM	**Lac du Bonnet**	**29.77**	**229**	LR	LR	08 23 43.6	
	comp=Z,59nm,18.3s,baz=66,slow=36						
NRIK	**Noril'sk**	**33.06**	**20**	LR	LR	08 25 35.0	
	comp=Z,57nm,19.6s,baz=306,slow=35						
KDAK	**Kodiak Island**	**35.32**	**292**	LR	LR	08 31 08.2	
	comp=Z,56nm,19.4s,baz=78,slow=42						
OBN	**Obninsk**	**38.80**	**66**	LR	LR	08 28 07.6	
	comp=Z,35nm,19.5s,baz=357,slow=34						
SEY	**Seymchan**	**39.29**	**337**	LR	LR	08 30 52.3	
	comp=Z,97nm,20.1s,baz=274,slow=38						
MA2	**Magadan**	**42.74**	**337**	LR	LR	08 32 40.3	
	comp=Z,54nm,21.0s,baz=335,slow=37						
YBH	**Yreka Blue Hor**	**43.43**	**255**	LR	LR	08 30 51.2	
	comp=Z,57nm,20.4s,baz=28,slow=34						
BELG	**Belogornoye**	**43.64**	**58**	LR	LR	08 32 34.5	
	comp=Z,73nm,18.8s,baz=84,slow=36						
ESDC	**Sonseca Array**	**44.08**	**112**	LR	LR	08 32 46.3	
	comp=Z,28nm,18.1s,baz=0.5,slow=36						
MLR	**Muntele Rosu**	**45.45**	**80**	LR	LR	08 31 41.0	
	comp=Z,106nm,21.1s,baz=309,slow=34						
NVAR	**Mina Array Bea**	**45.61**	**249**	P	P	08 14 28.4	-0.9
	0.3nm,0.6s,baz=4.1,slow=6.3,SNR=3.6						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**47.00**	**39**	LR	LR	08 37 24.7	
	comp=Z,58nm,18.4s,baz=354,slow=40						
MKAR	**Makanchi Array**	**54.69**	**31**	P	P	08 15 37.7	0.0
	0.3nm,0.8s,baz=335,slow=6.4,SNR=2.5						
	0.3nm,0.8s						

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*IDC **08** 08:10:52.0±1.1, 31°.43N×41°.01W, h0^{km}, mb3.6/7, mbtmp3.6/7, MS3.6/9, Error ellipse: s-maj=38.7km s-min=25.0km az=34.0*

ISC 08 08:10:54.2±1.0**, 31°.4N**±0°.2×**41°.0W**±0°.2**, h14**^{km}**, n18,** σ**0^s.76**/7**, mb3.7**/7**, MS3.6**/9**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCHQ	**Schefferville**	**29.73**	**329**	LR	LR	08 28 19.3	
	comp=Z,111nm,18.6s,baz=240,slow=35						
TKL	**Tuckaleechee C**	**35.70**	**289**	LR	LR	08 31 02.0	
	comp=Z,64nm,19.5s,baz=9.5,slow=34						
FRB	**Frobisher Bay**	**36.70**	**340**	LR	LR	08 32 31.7	
	comp=Z,44nm,19.1s,baz=218,slow=35						
DBIC	**Dimbokro**	**41.79**	**118**	LR	LR	08 35 47.8	
	comp=Z,75nm,18.1s,baz=292,slow=36						
TORD	**Torodi Ar. Bea**	**43.17**	**105**	P	**P**	**08 18 54.7**	**-0.1**
	1.4nm,0.9s,baz=298,slow=5.8,SNR=8.0						
	1.4nm,0.9s						
H10N2	**ASCENSION HYDR**	**46.55**	**142**	T	T	09 09 03.4	
	baz=328,slow=75,SNR=70						
H10N3	**ASCENSION HYDR**	**46.55**	**142**	T	T	09 09 03.6	
	baz=328,slow=75,SNR=33						
H10N1	**ASCENSION HYDR**	**46.57**	**142**	T	T	09 09 04.8	
	baz=328,slow=75,SNR=64						
H10S3	**ASCENSION HYDR**	**47.41**	**143**	T	T	09 10 06.5	
	baz=328,slow=74,SNR=83						
H10S2	**ASCENSION HYDR**	**47.43**	**143**	T	T	09 10 07.5	
	baz=252,slow=74,SNR=29						
TXAR	**Lajitas Array**	**53.44**	**285**	P	**P**	**08 20 14.2**	**+0.1**
	0.4nm,0.8s,baz=122,slow=4.7,SNR=3.5						
	0.4nm,0.8s						
ANMO	**Albuquerque**	**54.02**	**293**	LR	LR	08 41 55.6	
	comp=Z,45nm,18.7s,baz=124,slow=34						
LPAZ	**La Paz**	**54.13**	**213**	P	**P**	**08 20 19.6**	**-0.1**
	1.1nm,0.7s,baz=342,slow=6.7,SNR=4.0						
LPAZ				LR	LR	08 42 10.9	
	comp=Z,40nm,19.1s,baz=165,slow=35						
	1.1nm,0.7s						
PDAR	**Pinedale Array**	**54.47**	**303**	P	**P**	**08 20 20.7**	**-0.8**
	0.7nm,0.9s,baz=64,slow=10,SNR=5.4						
PDAR				LR	LR	08 42 37.7	
	comp=Z,74nm,18.0s,baz=86,slow=35						
	0.7nm,0.9s						
YKA	**Yellowknife Ar**	**55.14**	**327**	P	**P**	**08 20 25.1**	**-0.7**
	0.3nm,0.8s,baz=93,slow=7.6,SNR=5.7						
	0.3nm,0.8s						
ELK	**Elko**	**59.09**	**302**	LR	LR	08 44 08.0	
	comp=Z,55nm,21.8s,baz=82,slow=34						
NVAR	**Mina Array Bea**	**62.05**	**300**	P	**P**	**08 21 15.5**	**+0.9**
	0.3nm,0.6s,baz=78,slow=8.4,SNR=2.4						
NVAR				LR	LR	08 47 24.7	
	comp=Z,120nm,18.7s,baz=68,slow=35						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**68.38**	**334**	P	**P**	**08 21 55.6**	**+0.7**
	1.0nm,0.9s,baz=95,slow=1.7,SNR=6.2						
	1.0nm,0.9s						

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*IDC **08** 08:26:52.1±2.7, 35°.95N×141°.55E, h0^{km}, mb3.5/2, mbtmp3.6/4, ML3.1/2, MS2.6/1, Error ellipse: s-maj=55.4km s-min=27.2km az=55.0*

*JMA **08** 08:27:01.0±0.2, 35°.7N±0°.5×140°.8E±0°.7, h48^{km}±1^{km}, MV3.0/34, NEAR CHOSHI CITY*

ISC 08 08:26:56.3±3.1**, 35°.76N**±0°.07×**141°.20E**±0°.10**, h17**^{km}±15^{km}**, n16,** σ**1^s.64**/17**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.28**	**258**	*i* P	**Pn**	**08 27 08.5**	**+2.8**
CHOJ				S	**Sn**	**08 27 13.9**	**+2.3**
JIHU	**Itakohorinouch**	**0.58**	**290**	*i* P	**Pn**	**08 27 11.0**	**+1.2**
JIHU				S	**Sn**	**08 27 18.6**	**-0.4**
JSMT	**Sammumatsuo**	**0.62**	**259**	*i* P	**Pb**	**08 27 09.8**	**+1.1**
JSMT				S	**Sg**	**08 27 16.4**	**-0.4**
JCN	**Nagara**	**0.88**	**247**	*i* P	**Pb**	**08 27 12.9**	**-0.3**
JCN				*e*S	**Sb**	**08 27 21.3**	**-3.4**
JYT	**Yasato**	**0.94**	**300**	*i* P	**Pn**	**08 27 14.8**	**0.0**
BSO4	**Boso 4**	**1.04**	**223**	P	**Pb**	**08 27 15.7**	**-0.2**
BSO3	**Boso 3**	**1.11**	**211**	P	**Pn**	**08 27 17.5**	**+0.6**
MJAR	**Matsushiro Arr**	**2.54**	**289**	Pn	**Pn**	**08 27 37.1**	**+0.3**
	1.1nm,0.3s,baz=98,slow=8.1,SNR=53						
MJAR				Sn	**Sb**	**08 28 12.6**	**+0.2**
	1.0nm,0.3s,baz=224,slow=56,SNR=2.1						
MJAR				LR	LR	08 28 39.3	
	comp=Z,107nm,19.8s,baz=150,slow=39						
	10.0nm,0.3s						
JHJ	**Hachijo jima 2**	**2.89**	**204**	Pn	**Pn**	**08 27 43.8**	**+2.2**
	18nm,0.3s,baz=89,slow=22,SNR=5.4						
JHJ				Sn	**Sn**	**08 28 14.6**	**-1.3**
	21nm,0.3s,baz=57,slow=23,SNR=1.7						
	55nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**27.67**	**118**	T	T	09 01 56.7	
	baz=322,slow=74,SNR=9.7						
H11N3	**WAKE ISLAND Hy**	**27.69**	**118**	T	T	09 02 01.1	
	baz=312,slow=74,SNR=8.0						
H11S1	**WAKE ISLAND Hy**	**28.34**	**121**	T	T	09 02 45.9	
	baz=312,slow=75,SNR=15						
H11S3	**WAKE ISLAND Hy**	**28.34**	**121**	T	T	09 02 43.3	
	baz=312,slow=75,SNR=12						
H11S2	**WAKE ISLAND Hy**	**28.36**	**121**	T	T	09 02 42.4	
	baz=312,slow=75,SNR=10						
MKAR	**Makanchi Array**	**44.66**	**303**	P	**P**	**08 35 07.5**	**-0.5**
	0.5nm,0.6s,baz=87,slow=9.3,SNR=6.8						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**55.78**	**188**	P	**P**	**08 36 32.2**	**-0.3**
	0.2nm,0.4s,baz=1.2,slow=7.5,SNR=6.1						
	0.2nm,0.4s						

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*IDC **08** 08:43:43.7±3.2, 0°.45S×98°.57E, h0^{km}, mb3.8/5, mbtmp3.8/6, ML4.5/1, Error ellipse: s-maj=126.7km s-min=21.8km az=59.0*

*DJA **08** 08:43:50.4±0.6, 0°S±5°×9°9E±°, h53^{km}±16^{km}, M4.0/8, MLv4.0/8*

ISC 08 08:43:50.4±1.0**, 0°.30S**±0°.08×**98°.66E**±0°.08**, h50**^{km}**, n20,** σ**1^s.54**/17**, mb4.0**/5**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBSI	**Pulau Batu**	**0.45**	**302**	P	**Pn**	**08 44 02.3**	**+1.2**
PPI	**Padang Panjang**	**1.75**	**95**	P	**Pn**	**08 44 19.5**	**+1.2**
SBSI	**Sibolga**	**1.85**	**7**	P	**Pn**	**08 44 19.3**	**-0.4**
PDSI	**Padang**	**1.90**	**109**	P	**Pn**	**08 44 20.0**	**-0.5**
GSI	**Gunungsitoli**	**1.92**	**326**	P	**Pn**	**08 44 20.8**	**+0.1**
BKNI	**Bangkinang**	**2.46**	**75**	P	**Pn**	**08 44 29.9**	**+1.8**
PPSI	**Pulau Pagai**	**2.80**	**151**	P	**Pn**	**08 44 33.1**	**+0.3**
SDSI	**Sungai Dareh**	**2.84**	**103**	P	**Pn**	**08 44 34.6**	**+1.3**
KCSI	**Kotacane, Aceh**	**3.89**	**347**	P	**Pn**	**08 44 47.3**	**-0.5**
MDSI	**Maura Dua**	**6.91**	**127**	P	**Pn**	**08 45 30.3**	**+1.1**
CMAR	**Chiang Mai Arr**	**18.64**	**1**	P	**Pn**	**08 48 05.5**	**+0.6**
	0.6nm,0.3s,baz=188,slow=12,SNR=6.3						
	1.0nm,0.3s						
LUWI	**Luwuk**	**24.12**	**92**	P	**P**	**08 48 57.4**	**-4.5**
H08S2	**Diego Garcia H**	**27.09**	**254**	T	T	09 17 23.5	
	baz=75,slow=74						
H08S3	**Diego Garcia H**	**27.09**	**254**	T	T	09 17 22.4	
	baz=75,slow=74						
H08S1	**Diego Carcia H**	**27.11**	**254**	T	T	09 17 27.5	
	baz=75						
WRA	**Warramunga Arr**	**40.01**	**121**	P	**P**	**08 51 20.2**	**-0.7**
	0.2nm,0.4s,baz=304,slow=8.6,SNR=2.8						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**41.34**	**127**	P	**P**	**08 51 31.8**	**+0.1**
	0.3nm,0.4s,baz=299,slow=7.6,SNR=6.7						
	0.3nm,0.4s						
SONM	**Songino Array**	**48.41**	**7**	P	**P**	**08 52 28.6**	**+0.9**
	1.9nm,0.6s,baz=189,slow=9.2,SNR=11						
	1.9nm,0.6s						
MKAR	**Makanchi Array**	**49.04**	**345**	P	**P**	**08 52 33.5**	**+1.0**
	0.7nm,0.3s,baz=159,slow=8.0,SNR=17						
	0.7nm,0.3s						
ZALV	**Zalesovo Beam**	**55.26**	**350**	P	**P**	**08 53 19.2**	**+0.7**
	0.5nm,0.3s,baz=190,slow=7.3,SNR=2.4						
	0.5nm,0.3s						

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*ISK **08** 09:01:15.8, 39°.52N×26°.06E, h4^{km}, ML3.3/31*

*DDA **08** 09:01:16.5±0.0, 39°.49N×26°.16E, h13^{km}±1^{km}, ML3.1*

*THE **08** 09:01:16.8, 39°.51N×26°.12E, h5^{km}, ML2.9/7, Error ellipse: s-maj=0.9km s-min=0.4km az=216.0*

*ATH **08** 09:01:17.1, 39°.49N×26°.10E, h14^{km}±1^{km}, ML2.9/7, Error ellipse: s-maj=1.7km s-min=0.8km az=225.0*

ISC 08 09:01:16.5±0.8**, 39°.50N**±0°.01×**26°.11E**±0°.02**, h13**^{km}±5^{km}**, n79,** σ**0^s.66**/110**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	**Canakkale, Ayv**	**0.02**	**80**	P	**Pg**	**09 01 18.9**	**0.0**
GPNR	**Gulpinar-Canak**	**0.05**	**159**	Pg	**Pg**	**09 01 18.1**	**-0.8**
PRK	**Paraskevi**	**0.28**	**154**	P	**Pg**	**09 01 22.6**	**+0.3**
PRK				S	**Sg**	**09 01 26.8**	**+0.5**
	5µm,0.3s						
PRK	**Paraskevi**	**0.28**	**154**	P	**Pg**	**09 01 22.7**	**+0.3**
PRK				S	**Sg**	**09 01 27.0**	**+0.8**
PRK				AML	AML	09 01 27.5	
	comp=N,9078µm,0.2s						
PRK				AML	AML	09 01 27.9	
	comp=E,10902µm,0.5s						
SIGR	**SIGRI**	**0.35**	**215**	P	**Pg**	**09 01 23.6**	**+0.1**
SIGR				S	**Sg**	**09 01 29.2**	**+0.9**
	comp=E,2µm,0.2s						
SIGR	**SIGRI**	**0.35**	**215**	Pg	**Pg**	**09 01 22.9**	**-0.7**
SIGR				Sg	**Sg**	**09 01 29.3**	**+0.9**
SIGR	**SIGRI**	**0.35**	**215**	P	**Pg**	**09 01 23.7**	**+0.1**
SIGR				S	**Sg**	**09 01 29.1**	**+0.9**
SIGR				AML	AML	09 01 29.5	
	comp=E,4586µm,0.2s						
SIGR				AML	AML	09 01 31.3	
	comp=N,4657µm,0.2s						
EZN	**Ezine**	**0.37**	**27**	P	**Pg**	**09 01 23.8**	**-0.1**
EZN				S	**Sg**	**09 01 28.9**	**0.0**
	comp=N,2µm,0.2s						
EZN	**Ezine**	**0.37**	**27**	Pg	**Pg**	**09 01 23.9**	**0.0**
EZN				Sg	**Sg**	**09 01 29.2**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**0.41**	**54**	P	**Pg**	**09 01 24.4**	**-0.4**
BAYC				S	**Sg**	**09 01 30.2**	**-0.2**
BAYC				*i* AML	AML	09 01 35.0	
	comp=N,750nm,0.2s						
BAYC				*i* AML	AML	09 01 35.0	
	comp=N,840nm,0.1s						
ECEA	**Canakkale, Ece**	**0.55**	**5**	P	**Pg**	**09 01 27.4**	**+0.1**
ECEA				*i* AML	AML	09 01 36.0	
	comp=N,1µm,0.7s						
ECEA				*i* AML	AML	09 01 36.0	
	comp=N,1µm,0.7s						
COMU	**Canakkale**	**0.66**	**25**	Pg	**Pg**	**09 01 29.4**	**0.0**
COMU				Sg	**Sb**	**09 01 39.7**	**+0.6**
GOKA	**anakkale-Gk**	**0.71**	**347**	P	**Pg**	**09 01 30.1**	**-0.2**
GOKA				*i* AML	AML	09 01 41.0	
	comp=N,830nm,0.2s						
GOKA				*i* AML	AML	09 01 41.0	
	comp=N,1µm,0.2s						
GADA	**Gvkgeada**	**0.71**	**347**	Pg	**Pg**	**09 01 29.9**	**-0.4**
BUHA	**Balikesir, Bur**	**0.75**	**90**	P	**Pg**	**09 01 30.5**	**-0.5**
BUHA				S	**Sg**	**09 01 40.0**	**-0.8**
BUHA				*i* AML	AML	09 01 43.0	
	comp=N,813nm,0.4s						
BUHA				*i* AML	AML	09 01 46.0	
	comp=N,770nm,0.5s						
DKL	**Dikili**	**0.75**	**124**	Pg	**Pb**	**09 01 31.8**	**+0.4**
DKL				Sg	**Sn**	**09 01 43.2**	**-0.8**
LIA	**Limnos Island**	**0.82**	**299**	P	**Pg**	**09 01 32.6**	**+0.2**
LIA				S	**Sb**	**09 01 44.4**	**+0.8**
	comp=N,2µm,0.2s						
LIA	**Limnos Island**	**0.82**	**299**	P	**Pg**	**09 01 32.5**	**+0.2**
LIA				S	**Sb**	**09 01 43.7**	**+0.1**
LIA				AML	AML	09 01 45.2	
	comp=E,4544µm,0.3s						
LIA				AML	AML	09 01 45.7	
	comp=N,2825µm,0.2s						
KARB	**zmir-Karabur**	**0.87**	**164**	P	**Pg**	**09 01 33.4**	**+0.1**
KARB				S	**Sg**	**09 01 45.1**	**+0.5**
KARB				*i* AML	AML	09 01 47.0	
	comp=N,1µm,0.2s						
KARB				*i* AML	AML	09 01 48.0	
	comp=N,848nm,0.4s						
CANM	**Can-anakkale**	**0.89**	**54**	Pg	**Pg**	**09 01 33.8**	**+0.1**
CANM				Sg	**Sn**	**09 01 47.2**	**-0.3**
ZEDA	**zmir-Bergama**	**0.92**	**125**	P	**Pg**	**09 01 34.0**	**-0.3**
ZEDA				S	**Sg**	**09 01 45.8**	**-0.4**
ZEDA				*i* AML	AML	09 01 48.0	
	comp=N,639nm,0.3s						
ZEDA				*i* AML	AML	09 01 49.0	
	comp=N,512nm,0.2s						
GELI	**Tayfur-Gelibol**	**0.94**	**17**	Pg	**Pg**	**09 01 34.3**	**-0.4**
LPK	**Lapseki**	**1.00**	**30**	Pg	**Pb**	**09 01 35.5**	**-0.3**
LPK				Sg	**Sn**	**09 01 49.9**	**-0.5**
PSRA	**Psara**	**1.05**	**204**	P	**Pb**	**09 01 36.6**	**+0.1**
PSRA				S	**Sb**	**09 01 50.1**	**0.0**
PSRA				AML	AML	09 01 54.6	
	comp=N,4629µm,0.2s						
PSRA				AML	AML	09 01 54.9	
	comp=E,2902µm,0.2s						
SMTH	**Samothraki Isl**	**1.07**	**335**	P	**Pb**	**09 01 36.5**	**-0.4**
SMTH	**Samothraki Isl**	**1.07**	**335**	P	**Pb**	**09 01 36.7**	**-0.2**
SMTH				S	**Sg**	**09 01 51.1**	**0.0**
SMTH				AML	AML	09 01 53.3	
	comp=E,483µm,0.2s						
SMTH				AML	AML	09 01 53.6	
	comp=N,686µm,0.2s						
CHOS	**Chios island**	**1.11**	**182**	P	**Pb**	**09 01 37.6**	**0.0**
CAVK	**Edirne/Enez-Ca**	**1.19**	**2**	P	**Pn**	**09 01 39.0**	**+0.1**
CAVK				S	**Sb**	**09 01 54.1**	**-0.2**

CAVK				i AML	AML	09 01 56.0	
	comp=N,241nm,0.7s						
CAVK				i AML	AML	09 02 01.0	
	comp=N,331nm,0.6s						
URLA	Izmir	1.20	161	Pn	Pn	09 01 38.4	-0.6
ERIK	Erikli-Kesan	1.21	15	Pn	Pn	09 01 38.9	-0.2
ENEZ	Enez	1.24	1	P	Pn	09 01 39.7	+0.2
ENEZ				S	Sg	09 01 56.7	+0.3
	comp=N,672nm,0.5s						
ENEZ	Enez	1.24	1	Pn	Pn	09 01 39.5	0.0
ENEZ				Sn	Sg	09 01 57.5	+1.1
STEP	BALIKESIR_Sava	1.25	95	P	Pn	09 01 39.6	-0.1
STEP				S	Sb	09 01 56.0	0.0
STEP				i AML	AML	09 02 01.0	
	comp=N,436nm,0.4s						
STEP				i AML	AML	09 02 03.0	
	comp=N,456nm,0.5s						
KRBG	Karabiga-Canak	1.28	45	Pn	Pn	09 01 39.9	-0.1
ZEYE	Izmir, Urla-Ze	1.29	166	P	Pn	09 01 39.0	-1.3
ZEYE				S	Sb	09 01 57.5	+0.3
ZEYE				i AML	AML	09 02 01.0	
	comp=N,546nm,0.3s						
ZEYE				i AML	AML	09 02 01.0	
	comp=N,521nm,0.2s						
BLCB	Balcova	1.33	147	P	Pn	09 01 41.4	+0.7
BLCB				S	Sg	09 01 59.9	+0.6
BLCB	Balcova	1.33	147	Pn	Pg	09 01 42.5	+0.5
GONE	Gonen-Balikesi	1.33	65	Pn	Pb	09 01 41.8	+0.5
KNL	Balıkesir	1.33	54	P	Pn	09 01 40.6	-0.2
KNL				S	Sg	09 01 59.4	-0.1
KNL				i AML	AML	09 02 00.0	
	comp=N,461nm,0.8s						
KNL				i AML	AML	09 02 01.0	
	comp=N,626nm,0.6s						
BALB	Balikesir	1.37	84	Pn	Pn	09 01 41.5	+0.1
ALN	Alexandroupoli	1.40	358	P	Pn	09 01 41.6	-0.1
ALN				S	Sg	09 02 00.9	-0.7
	comp=N,362nm,0.4s						
ALN	Alexandroupoli	1.40	358	Pn	Pb	09 01 42.3	-0.2
ALN	Alexandroupoli	1.40	358	P	Pn	09 01 41.6	-0.1
ALN				AML	AML	09 02 02.0	
	comp=E,886µm,0.3s						
ALN				AML	AML	09 02 03.4	
	comp=N,589µm,0.4s						
BKES	Balkesir-Mer	1.42	80	P	Pb	09 01 43.4	+0.4
RKY	Sarkoy-Tekirda	1.44	34	Pn	Pn	09 01 42.9	+0.5
AKS	Akhisar	1.46	115	Pn	Pb	09 01 44.1	+0.6
THAS	Thassos island	1.54	316	P	Pn	09 01 44.1	+0.5
THAS				S	Sg	09 02 05.3	-0.7
	comp=N,155nm,0.3s						
THAS	Thassos island	1.54	316	P	Pn	09 01 43.7	0.0
DGB	zmir	1.56	157	P	Pn	09 01 43.4	-0.6
DGB				S	Sn	09 02 03.3	-0.8
EDC	Edincik	1.59	57	Pn	Pn	09 01 45.2	+0.8
GOMA	Golmarmara-Man	1.61	119	Pn	Pb	09 01 46.1	0.0
UKOP	Uzunkopru-Edir	1.68	14	Pn	Pn	09 01 46.3	+0.8
RDO	Rodhopi	1.70	345	P	Pn	09 01 46.0	+0.1
RDO				S	Sn	09 02 08.1	+0.5
RDO	Rodhopi	1.70	345	Pn	Pn	09 01 46.3	+0.4
RDO	Rodhopi	1.70	345	P	Pn	09 01 46.0	+0.1
RDO				AML	AML	09 02 10.9	
	comp=N,110µm,0.2s						
RDO				AML	AML	09 02 11.6	
	comp=E,209µm,0.3s						
BAND	Balkesir-Ban	1.75	60	P	Pn	09 01 46.4	-0.2
BAND				S	Sn	09 02 09.0	+0.2
BAND				i AML	AML	09 02 15.0	
	comp=E,162nm,0.3s						
BAND				i AML	AML	09 02 20.0	
	comp=E,116nm,0.2s						
KYMI	Kymi, Euboea I	1.79	242	P	Pn	09 01 46.4	-0.7
SMG	Samos	1.88	162	P	Pn	09 01 48.1	-0.2
KCTX	Karacabey (Bur	1.89	65	Pn	Pn	09 01 48.9	+0.4
KAVA	Kavala	1.93	321	P	Pn	09 01 48.9	-0.2
DST	Dursunbey	1.94	86	Pn	Pn	09 01 50.7	+1.4
EREA	Eretria	2.01	238	P	Pn	09 01 49.7	-0.5
MANT	Manisa	2.15	117	P	Pn	09 01 52.5	+0.1
KDZ	Kurdzhali	2.21	346	Pn	Pn	09 01 53.8	+0.8
ORLT	Orhaneli	2.21	75	Pn	Pb	09 01 54.9	-1.5
DION	Dionisos Attik	2.22	231	P	Pn	09 01 52.5	-0.5
KULA	Kula-Manisa	2.22	116	Pn	Pb	09 01 55.4	-1.1
SIMA	Simav-Kutahya	2.27	100	Pn	Pb	09 01 56.1	-1.2
SLVT	Silivri	2.36	42	Pn	Pb	09 01 57.2	-1.6
ARMT	Armutlu	2.37	62	Pn	Pn	09 01 56.9	+1.9
USAK	Uak-Merkez	2.39	108	P	Pn	09 01 55.9	+0.5
EDRB	Edirne	2.40	11	Pn	Pn	09 01 56.9	+1.5
KIRK	Kırklareli	2.40	18	P	Pn	09 01 56.5	+1.0
ULDT	Uludag	2.42	74	P	Pn	09 01 56.3	+0.4
CTYL	Yalikoy Yolu	2.58	39	Pn	Pn	09 01 59.9	+1.9
BGKT	Bogazkoy	2.64	50	Pn	Pn	09 02 00.7	+1.9
BILE	Bilecik/Merkez	2.97	76	P	Pn	09 02 04.2	+0.7
BORA	Eskisehir	3.37	82	P	Pn	09 02 09.5	+0.6
KAYN	Sakarya, Kayna	3.55	64	P	Pn	09 02 12.1	+0.7

ROM 08 09:34:34.3±0.0**, 42°.738N**±0°.002×**13°.283E**±0°.004**,**
h13^{km}, ML2.2/22**, 11C-5D, Error ellipse: s-maj=0.3km**
s-min=0.0km az=78.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SMA1	SAN MARTINO	0.11	160	⇓P	Pg	09 34 37.9	+0.3
SMA1				S	Sg	09 34 40.2	+0.3
SMA1				AML	AML		
	comp=E,2710µm,0.8s						
SMA1				AML	AML		
	comp=N,4055µm,0.3s						
T1245	Castelsantange	0.14	329	⇑P	Pg	09 34 38.1	+0.2
T1245				S	Sg	09 34 40.8	+0.3
T1245				AML	AML		
	comp=E,2450µm,0.5s						
T1245				AML	AML		
	comp=E,2540µm,0.3s						
T1245				AML	AML		
	comp=N,3580µm,0.3s						
T1245				AML	AML		
	comp=N,3885µm,0.3s						
T1245				AML	AML		
	comp=E,2540µm,1.7s						
T1218	Civita (PG)	0.14	241	⇑P	Pg	09 34 38.2	+0.3
T1218				S	Sg	09 34 40.9	+0.5
T1218				AML	AML		
	comp=E,2475µm,0.8s						
T1218				AML	AML		
	comp=N,2110µm,0.2s						
T1218				AML	AML		
	comp=E,2340µm,0.8s						
T1218				AML	AML		
	comp=N,2150µm,0.2s						
T1241	Roccafluvione,	0.16	43	P	Pg	09 34 38.4	+0.3
T1241				S	Sg	09 34 41.4	+0.5
T1241				AML	AML		
	comp=E,2275µm,0.2s						
T1241				AML	AML		
	comp=N,805µm,1.3s						
T1241				AML	AML		
	comp=N,777µm,1.2s						
T1241				AML	AML		
	comp=E,2240µm,0.2s						
T1241				AML	AML		
	comp=N,805µm,0.7s						
T1241				AML	AML		
	comp=N,777µm,0.8s						
T1241				AML	AML		
	comp=E,2270µm,0.2s						
MMO1	Montemonaco	0.16	11	P	Pg	09 34 38.5	+0.3
MMO1				S	Sg	09 34 41.5	+0.5
T1212	Cascia, Frazio	0.18	274	P	Pg	09 34 38.7	+0.3
T1212				S	Sg	09 34 42.0	+0.7
T1212				AML	AML		
	comp=E,498µm,0.7s						
T1212				AML	AML		
	comp=N,607µm,0.1s						
T1212				AML	AML		
	comp=N,580µm,0.1s						
T1212				AML	AML		
	comp=E,498µm,0.7s						
T1212				AML	AML		
	comp=N,606µm,0.1s						
T1212				AML	AML		
	comp=E,489µm,0.2s						
T1212				AML	AML		
	comp=E,498µm,1.3s						
CAMP	Campotosto	0.22	155	⇑P	Pg	09 34 39.5	+0.3
CAMP				S	Sg	09 34 43.3	+0.8
CAMP				AML	AML		
	comp=E,1150µm,0.3s						
CAMP				AML	AML		
	comp=N,476µm,0.7s						
RM33	Pellescritta (	0.23	192	P	Pg	09 34 39.8	+0.4
RM33				S	Sb	09 34 44.0	-0.7
RM33				AML	AML		
	comp=N,312µm,0.4s						
RM33				AML	AML		
	comp=E,402µm,0.5s						
T1216	Preci, Frazion	0.25	308	⇑P	Pg	09 34 39.8	+0.2
T1216				S	Sg	09 34 44.0	+0.9
T1216				AML	AML		
	comp=E,510µm,1.6s						
T1216				AML	AML		
	comp=E,510µm,0.4s						
T1216				AML	AML		
	comp=N,552µm,0.3s						
T1217	Poggiodomo (PG	0.26	264	⇑P	Pg	09 34 40.1	+0.3
T1217				S	Sb	09 34 44.5	-0.9
T1217				AML	AML		
	comp=E,298µm,0.8s						
T1217				AML	AML		
	comp=E,298µm,1.2s						
T1217				AML	AML		
	comp=N,373µm,0.9s						
TERO	Teramo	0.26	116	⇑P	Pg	09 34 40.1	+0.2
TERO				S	Sg	09 34 44.3	+0.7
TERO				AML	AML		
	comp=E,1102µm,0.2s						
TERO				AML	AML		
	comp=N,1080µm,1.1s						
TERO				AML	AML		
	comp=E,1180µm,0.2s						
TERO				AML	AML		
	comp=N,1215µm,1.1s						
TERO				AML	AML		
	comp=N,1215µm,0.9s						
TERO				AML	AML		
	comp=E,1102µm,1.8s						
TERO				AML	AML		
	comp=E,1180µm,1.8s						
TERO				AML	AML		
	comp=N,1080µm,0.9s						
T1256	Bolognola (MC)	0.27	351	⇑P	Pg	09 34 40.3	+0.2
T1256				S	Sg	09 34 44.9	+0.9
T1256				AML	AML		
	comp=E,328µm,1.6s						
T1256				AML	AML		
	comp=N,233µm,1.5s						
T1256				AML	AML		
	comp=E,328µm,0.4s						
T1256				AML	AML		
	comp=N,233µm,0.5s						
T1215	Vallo di Nera,	0.31	282	⇑P	Pg	09 34 40.9	+0.2
T1215				S	Sb	09 34 46.0	-0.9
GUMA	Gualdo di Mace	0.33	7	P	Pb	09 34 41.7	-0.3
GUMA				AML	AML		
	comp=E,722µm,0.4s						
GUMA				AML	AML		
	comp=N,496µm,1.5s						
GUMA				AML	AML		
	comp=N,496µm,0.5s						
GUMA				AML	AML		
	comp=E,722µm,1.6s						
OFFI	Offida	0.35	56	⇓P	Pb	09 34 42.8	+0.2
GIGS	Gran Sasso	0.36	144	P	Pg	09 34 41.5	0.0
GIGS				S	Sg	09 34 47.1	+0.7
GIGS				AML	AML		
	comp=E,175µm,0.6s						
GIGS				AML	AML		
	comp=N,182µm,0.1s						
GIGS				AML	AML		
	comp=E,175µm,1.4s						
CSP1	Cessapalombo	0.36	351	⇑P	Pg	09 34 41.8	+0.2
CSP1				S	Sb	09 34 47.6	-0.7
CSP1				AML	AML		
	comp=E,594µm,0.2s						
CSP1				AML	AML		
	comp=N,448µm,1.2s						
T1211	Morro Reatino	0.38	237	⇓P	Pg	09 34 42.1	+0.2
T1211				S	Sb	09 34 48.1	-0.7
T1211				AML	AML		
	comp=E,441µm,0.1s						
T1211				AML	AML		
	comp=E,426µm,0.1s						
T1211				AML	AML		
	comp=E,426µm,1.9s						
T1211				AML	AML		
	comp=N,632µm,0.1s						
T1211				AML	AML		
	comp=N,619µm,0.1s						
T1211				AML	AML		
	comp=E,441µm,1.9s						
T1219	Muccia, Frazio	0.38	328	P	Pg	09 34 42.0	+0.1
T1219				S	Sb	09 34 48.1	-0.7
T1219				AML	AML		
	comp=E,510µm,1.3s						
T1219				AML	AML		
	comp=N,994µm,0.2s						
T1219				AML	AML		
	comp=E,1110µm,1.6s						
T1219				AML	AML		
	comp=N,53150µm,1.6s						
T1219				AML	AML		
	comp=E,510µm,0.7s						
T1222	Castel Sant'An	0.38	208	P	Pg	09 34 42.1	+0.1
T1222				S	Sb	09 34 48.0	-0.9
CESI	CESI - Serrava	0.39	314	⇑P	Pg	09 34 42.2	+0.2
CESI				S	Sb	09 34 48.4	-0.6
CESI				AML	AML		
	comp=E,260µm,1.5s						
CESI				AML	AML		
	comp=N,726µm,0.3s						
CESI				AML	AML		
	comp=E,260µm,0.5s						
T1220	Camerino, Fraz	0.40	339	P	Pg	09 34 42.4	+0.1
T1220				S	Sb	09 34 48.8	-0.5
T1220				AML	AML		
	comp=N,1885µm,1.1s						
T1220				AML	AML		
	comp=E,1915µm,0.3s						
ARRO	Arrone	0.41	248	⇓P	Pb	09 34 43.1	-0.4
ARRO				AML	AML		
	comp=E,167µm,1.3s						
ARRO				AML	AML		
	comp=N,216µm,1.6s						
ARRO				AML	AML		
	comp=E,167µm,0.7s						
ARRO				AML	AML		
	comp=N,216µm,0.4s						
FIAM	Fiamignano	0.49	195	⇑P	Pg	09 34 44.3	+0.4
FIAM				S	Sb	09 34 51.5	-0.4
FAGN	Fagnano	0.52	155	S	Sb	09 34 52.9	0.0
FAGN				AML	AML		
	comp=N,288µm,1.3s						
FAGN				AML	AML		
	comp=E,370µm,0.3s						
FAGN				AML	AML		
	comp=N,288µm,0.7s						
T0110	Collepietro	0.63	144	⇓P	Pg	09 34 46.4	-0.2
T0110				AML	AML		
	comp=E,265µm,1.6s						
T0110				AML	AML		
	comp=N,245µm,1.4s						
T0110				AML	AML		
	comp=E,265µm,0.4s						

ROM 08 09:34:55.1±0.1**, 43°.060N**±0°.002×**13°.108E**±0°.003**,**
h6^{km}, ML1.4/4**, 3C-1D, Error ellipse: s-maj=0.2km**
s-min=0.1km az=166.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
T1220	Camerino, Fraz	0.05	344	⇑P	Pg	09 34 56.9	+0.2
T1220				S	Sg	09 34 58.1	+0.4
T1220				AML	AML		
	comp=E,1910µm,0.3s						
T1220				AML	AML		
	comp=N,1890µm,1.1s						
T1220				AML	AML		
	comp=E,1915µm,0.3s						
T1220				AML	AML		
	comp=N,1885µm,1.1s						
T1219	Muccia, Frazio	0.07	267	⇑P	Pg	09 34 57.1	+0.2
T1219				S	Sg	09 34 58.6	+0.3
T1219				AML	AML		
	comp=E,1190µm,1.6s						
T1219				AML	AML		
	comp=N,58000µm,1.6s						
T1219				AML	AML		
	comp=E,1110µm,1.6s						
T1219				AML	AML		
	comp=N,53150µm,1.6s						
T1219				AML	AML		
	comp=E,510µm,0.7s						
T1219				AML	AML		
	comp=N,994µm,0.2s						
CSP1	Cessapalombo	0.08	66	P	Pg	09 34 57.2	+0.2
CSP1				S	Sg	09 34 58.8	+0.4
CSP1				AML	AML		
	comp=E,594µm,0.2s						
T1256	Bolognola (MC)	0.10	122	P	Pg	09 34 57.6	+0.1
T1256				S	Sg	09 34 59.4	+0.4
T1256				AML	AML		
	comp=E,214µm,0.6s						
T1256				AML	AML		
	comp=N,388µm,0.9s						
FEMA	Monte Fema	0.11	204	P	Pg	09 34 57.8	+0.3
FEMA				S	Sg	09 34 59.7	+0.6
CESI	CESI - Serrava	0.16	250	⇓P	Pg	09 34 58.7	+0.3
CESI				S	Sg	09 35 01.8	+1.3
CESI				AML	AML		
	comp=E,184µm,1.6s						
CESI				AML	AML		
	comp=N,182µm,2.4s						
MC2	Monte Cornacci	0.16	158	⇑P	Pg	09 34 59.0	+0.6
MC2				S	Sg	09 35 01.7	+1.1
MNTP	Montappone	0.28	74	S	Sg	09 35 05.3	+1.1
MURB	Monte Urbino	0.47	296	P	Pg	09 35 04.7	+0.4

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*IDC **08** 10:05:15.3±1.4, 3°.25S×67°.83E, h0^{km}, mb3.8/9,*
mbtmp3.8/9, Error ellipse: s-maj=40.1km s-min=25.7km
az=49.0

ISC 08 10:05:16.8±1.4**, 3°.3S**±0°.2×**67°.8E**±0°.2**, h10^{km}, n14,**
σ0^{s}86/11**, mb3.9**/9**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
H08S3	Diego Garcia H	6.35	133	T	T	10 13 23.1	
	baz=312						
H08S1	Diego Carcia H	6.36	133	T	T	10 13 22.1	
	baz=312						
H08S2	Diego Garcia H	6.37	133	T	T	10 13 22.9	
	baz=312						
CMAR	Chiang Mai Arr	37.49	54	P	P	10 12 31.7	+0.6
	1.7nm,0.7s,baz=243,slow=10,SNR=8.5						
	1.7nm,0.7s						
MKAR	Makanchi Array	51.46	13	P	P	10 14 21.8	-0.5
	0.7nm,1.1s,baz=190,slow=5.9,SNR=2.6						
	0.7nm,1.1s						
AKTO	Aktyubinsk	54.15	352	P	P	10 14 41.9	-0.2
	1.2nm,0.7s,baz=161,slow=8.8,SNR=4.8						
	1.2nm,0.7s						
KURBB	Kurchatov Arra	54.47	8	P	P	10 14 44.0	-0.4
	0.6nm,0.6s,baz=203,slow=7.5,SNR=5.1						
	0.6nm,0.6s						
ZALV	Zalesovo Beam	58.76	12	P	P	10 15 13.7	-1.2
	0.6nm,0.7s,baz=204,slow=2.8,SNR=1.9						
	0.6nm,0.7s						
SONM	Songino Array	61.05	29	P	P	10 15 31.6	+0.6
	1.1nm,0.9s,baz=219,slow=6.5,SNR=5.8						
	1.1nm,0.9s						
ASAR	Alice Springs	66.82	114	P	P	10 16 09.2	-0.1
	0.5nm,0.7s,baz=282,slow=5.6,SNR=3.3						
	0.5nm,0.7s						
WRA	Warramunga Arr	66.83	110	P	P	10 16 09.6	+0.1
	1.3nm,0.8s,baz=282,slow=6.2,SNR=6.1						
	1.3nm,0.8s						
ESDC	Sonseca Array	78.18	311	P	P	10 17 17.9	+1.1
	0.6nm,0.6s,baz=126,slow=3.7,SNR=4.8						
	0.6nm,0.6s						
NVAR	Mina Array Bea	144.56	8	PKP	PKPdf	10 24 53.0	-1.4
	0.3nm,0.8s,baz=336,slow=2.0,SNR=2.3						
TXAR	Lajitas Array	152.84	344	PKPbc	PKiKP	10 25 15.2	-0.1
	0.5nm,0.8s,baz=85,slow=2.6,SNR=4.9						

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*MAN **08** 10:06:42.4, 4°.02N×125°.96E, h1^{km}, mb4.9, ML3.8, MS3.9*
*NEIC **08** 10:06:45.6±1.6, 4°.07N±0°.05×126°.25E±0°.07, h53^{km}±8^{km},*
mb4.5/33, Error ellipse: s-maj=10.6km s-min=6.6km
az=107.0
*IDC **08** 10:06:45.7±1.9, 4°.05N×125°.98E, h56^{km}±16^{km}, mb4.0/26,*
mbtmp4.3/27, ML4.3/1, Error ellipse: s-maj=24.5km
s-min=9.1km az=77.0

ISC 08 10:06:45.6±0.7**, 4°.03N**±0°.04×**126°.25E**±0°.07**, h56^{km}**±5^{km}**,**
n85, σ1^{s}70/103**, mb4.4**/43**, MS4.3**/3**, 3C-2D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GSPH	General Santos	2.42	328	⇓iP	Pn	10 07 20.6	-2.3
GSPH				i S	Sn	10 07 50.6	-0.8
DAV	Davao City (W)	3.09	348	P	Pn	10 07 31.4	-0.6
	43nm,0.3s,baz=197,slow=2.8,SNR=1.8						
DAV				S	Sn	10 08 05.9	-1.8
	226nm,0.5s,baz=274,slow=14,SNR=2.8						
	113nm,0.3s						
DAV	Davao City (W)	3.09	348	Pn	Pn	10 07 31.7	-0.2
KCP	Kidapawan	3.17	339	⇑iP	Pn	10 07 35.0	+1.9
KCP				i S	Sn	10 08 09.5	-0.3
TNTI	Ternate	3.43	161	Pn	Pn	10 07 37.0	+0.4
CTBH	Cotabato--PC H	3.74	328	⇑iP	Pn	10 07 40.6	-0.3
CTBH				i S	Sn	10 08 25.3	+1.6
BUKP	Musuan	4.00	343	⇓eP	Pn	10 07 44.3	-0.2
BIPH	Bislig	4.13	2	⇑iP	Pn	10 07 45.9	-0.3
BIPH				i S	Sn	10 08 43.2	+10
LUWI	Luwuk	6.12	215	Pn	Pn	10 08 13.9	+0.4
TOLI2	Tolitoli	6.18	242	Pn	Pn	10 08 14.2	-0.2
MYLDM	Lahad Datu	7.81	279	Pn	Pn	10 08 36.9	+0.3
FAKI	Fak Fak	9.15	139	Pn	Pn	10 08 54.9	-0.1
KKM	Kota Kinabalu	10.19	282	Pn	Pn	10 09 09.3	-0.1
MTN	Manton Dam	17.45	164		Pn	10 10 43.3	-2.0
MTN				IAmb	IAmb	10 10 58.0	
	comp=Z,13nm,0.5s						
KNRA	Kununurra	19.74	173	P	P	10 11 11.3	+0.4
KNRA				IAmb	IAmb	10 11 36.6	
	comp=Z,13nm,0.8s						
TPUB	Ta-pu	19.91	345	P	P	10 11 11.1	-1.6
TPUB				IAmb	IAmb	10 11 47.8	
	comp=Z,45nm,1.2s						
SSLB	Suanglung	20.30	346	P	P	10 11 16.0	-0.9
SSLB				IAmb	IAmb	10 11 33.3	
	comp=Z,58nm,1.5s						
QIZ	Qiongzhong	21.89	314	P	P	10 11 33.0	-1.0
QIZ				S	S	10 15 36.0	+3.1
QIZ				LR	LR		
	comp=N,310nm,20.7s						
QIZ				LR	LR		
	comp=E,380nm,19.1s						
QIZ				LR	LR		
	comp=Z,390nm,15.1s						
FITZ	Fitzroy Crossi	22.00	182	P	P	10 11 35.6	+0.4
JOW	Kunigami	22.75	5	P	P	10 11 44.0	+0.7
	comp=Z,24nm,0.6s,baz=225,slow=15,SNR=6.2						
	comp=Z,24nm,0.6s						
COEN	Coen	24.52	137	P	P	10 11 59.3	-0.8
WB0	Warramunga Arr	24.97	162	P	P	10 12 04.0	-0.1
WB0				IAmb	IAmb	10 12 15.5	
	comp=Z,11nm,0.9s						
WRAB	Tennant Creek	25.11	162	P	P	10 12 05.8	+0.4
WRAB				IAmb	IAmb	10 12 17.0	
	comp=Z,9.6nm,0.8s						
WRA	Warramunga Arr	25.12	162	P	P	10 12 05.7	+0.2
	comp=Z,2.1nm,0.3s,baz=342,slow=10.0,SNR=44						
WRA				PcP	PcP	10 15 39.3	+0.6
	comp=Z,0.3nm,0.5s,baz=335,slow=2.2,SNR=2.5						
	comp=Z,2.1nm,0.3s						
WRA	Warramunga Arr	25.12	162	P	P	10 12 04.9	-0.6
WB2	Warramunga Arr	25.12	162	P	P	10 12 05.9	+0.5
WB2				IAmb	IAmb	10 12 17.1	
	comp=Z,8.9nm,0.7s						
IPM	Ipoh	25.16	272	P	P	10 12 04.8	-1.1
IPM				IAmb	IAmb	10 12 18.9	
	comp=Z,12nm,0.9s						
WR0	Warramunga Arr	25.20	161	P	P	10 12 06.0	-0.2
WR0				IAmb	IAmb	10 12 22.7	
	comp=Z,7.9nm,0.7s						
PSA00	Pilbara Seismi	26.21	194	P	P	10 12 16.4	+1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AS31	Alice Springs	28.52	165	P	P	10 12 36.8	+0.7
ASAR	Alice Springs	28.52	165	P	P	10 12 36.5	+0.4
	comp=Z,1.8nm,0.7s,baz=344,slow=7.2,SNR=44						
ASAR				PcP	PcP	10 15 47.0	+0.3
	comp=Z,0.4nm,0.4s,baz=346,slow=2.6,SNR=4.7						
	comp=Z,1.8nm,0.7s						
NJ2	Nanjing	28.73	347	*e*P	P	10 12 39.2	+1.5
NJ2				pP	pP	10 12 52.1	+1.3
NJ2				sP	sP	10 12 58.0	+0.9
PHRA	Phrae	29.22	301	P	P	10 12 40.9	-1.4
CMAR	Chiang Mai Arr	30.30	300	P	P	10 12 51.2	-0.7
	comp=Z,0.9nm,0.3s,baz=123,slow=6.5,SNR=1.7						
	comp=Z,0.9nm,0.3s						
CTA	Charters Tower	31.00	141	P	P	10 12 59.9	+1.8
	comp=Z,2.8nm,0.7s,baz=329,slow=5.9,SNR=3.6						
	comp=Z,2.8nm,0.7s						
KSRS	Korea Array	33.30	2	P	P	10 13 18.8	+0.9
	comp=Z,3.2nm,0.5s,baz=186,slow=9.9,SNR=16						
	comp=Z,3.2nm,0.5s						
XAN	Xi'an	33.93	334	P	P	10 13 22.0	-1.6
XAN				pmax	pmax		
	comp=Z,7.0nm,0.5s						
FORT	Forrest	34.66	177	P	P	10 13 30.5	+0.7
NWAO	Narrogin (SRO)	37.74	192	P	P	10 13 56.6	+0.5
	comp=Z,3.6nm,0.5s,baz=21,slow=7.1,SNR=7.7						
	comp=Z,3.6nm,0.5s						
NWAO	Narrogin (SRO)	37.74	192	P	P	10 13 56.8	+0.7
BBOO	Buckleboo	37.80	166	P	P	10 13 57.6	+1.0
EIDS	Eidsvold	37.88	142	P	P	10 13 57.2	-0.3
EIDS				IAmb	IAmb	10 14 21.4	
	comp=Z,12nm,1.2s						
STKA	Stephens Creek	38.58	159	P	P	10 14 03.8	+0.6
	comp=Z,4.5nm,0.7s,baz=342,slow=9.6,SNR=13						
	comp=Z,4.5nm,0.7s						
STKA	Stephens Creek	38.58	159	P	P	10 14 03.9	+0.6
HHC	Hu-ho-hao-te	38.96	342	*e*P	P	10 14 05.8	-0.7
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.0s						
SHL	Shillong	39.31	306	P	P	10 14 08.2	-1.4
SHL				IAmb	IAmb	10 14 21.0	
	comp=Z,6.7nm,0.8s						
USRK	Ussuriysk Ar.	40.32	6	P	P	10 14 18.2	+0.7
	comp=Z,5.3nm,0.8s,baz=181,slow=5.8,SNR=7.0						
	comp=Z,5.3nm,0.8s						
MDJ	Mudanjiang	40.53	4	P	P	10 14 20.4	+1.2
MDJ				sP	sP	10 14 40.8	+1.9
MDJ				PP	PP	10 15 53.3	-0.2
MDJ				PcS	PcS	10 19 59.8	-12
MDJ				ScP	ScP	10 20 09.5	+3.9
MDJ				S	S	10 20 28.6	+4.3
MDJ				SS	SnSn	10 23 33.1	-1.0
MDJ				ScS	ScS	10 24 11.0	-8.8
MDJ				pmax	pmax		
	comp=Z,11nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,120nm,6.5s						
LSA	Lhasa	41.88	311	P	P	10 14 29.6	-1.6
LSA				IAmb	IAmb	10 14 43.1	
	comp=Z,5.4nm,0.5s						
ARMA	Armidale	41.98	146	P	P	10 14 31.1	-0.4
GOMU	GeErMu	43.15	322	P	P	10 14 51.4	+10
GOMU				pP	pP	10 14 54.6	-0.7
GOMU				sP	pwP	10 14 55.6	-2.1
GOMU				PP	PP	10 16 10.6	-12
GOMU				S	S	10 21 12.2	+8.1
GOMU				sS	sS	10 21 22.7	-4.5
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,69nm,4.6s						
GOMU				LR	LR		
	comp=N,270nm,20.8s						
GOMU				LR	LR		
	comp=E,190nm,18.7s						
GOMU				LR	LR		
	comp=Z,420nm,21.8s						
KLR	Kul'dur	45.28	5	P	P	10 14 58.0	+0.4
	comp=Z,1.6nm,0.3s,baz=180,slow=8.4,SNR=7.8						
	comp=Z,1.6nm,0.3s						
HEH	HeiHe	46.07	1	*e*P	P	10 15 04.2	+0.4
HEH				pmax	pmax		
	comp=Z,14nm,0.7s						
HEH				pmax	pmax		
	comp=Z,120nm,4.1s						
SONM	Songino Array	46.86	342	P	P	10 15 09.8	-0.5
	comp=Z,0.8nm,0.7s,baz=159,slow=9.3,SNR=5.7						
SONM				PcP	PcP	10 16 42.9	+0.5
	comp=Z,0.8nm,0.6s,baz=154,slow=4.6,SNR=4.2						
	comp=Z,0.8nm,0.7s						
SONM	Songino Array	46.86	342	P	P	10 15 09.6	-0.7
WMQ	Urumqi	52.20	325	*e*P	P	10 15 53.8	+2.9
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				LR	LR		
	comp=N,470nm,17.9s						
WMQ				LR	LR		
	comp=E,260nm,18.9s						
WMQ				LR	LR		
	comp=Z,460nm,22.7s						
PEA0B	Petropavlovsk-	55.34	22	P	P	10 16 12.8	-0.7
PETK	Petropavlovsk-	55.34	22	P	P	10 16 14.2	+0.6
	comp=Z,2.8nm,0.5s,baz=186,slow=4.3,SNR=20						
	comp=Z,2.8nm,0.5s						
PETK	Petropavlovsk-	55.34	22	P	P	10 16 13.8	+0.2
MK31	Makanchi Array	57.03	325	P	P	10 16 24.8	-1.1
MKAR	Makanchi Array	57.03	325	P	P	10 16 24.6	-1.3
	comp=Z,1.1nm,0.4s,baz=126,slow=6.8,SNR=26						
MKAR				PcP	PcP	10 17 19.0	-1.4
	comp=Z,1.7nm,0.6s,baz=121,slow=3.2,SNR=7.8						
MKAR				ScP	ScP	10 21 12.8	-2.6
	comp=Z,0.2nm,0.6s,baz=131,slow=4.6,SNR=2.1						
	comp=Z,1.1nm,0.4s						
MKAR	Makanchi Array	57.03	325	P	P	10 16 24.9	-1.0
MAKZ	Makanchi	57.22	325	P	P	10 16 26.6	-0.5
MAKZ				IAmb	IAmb	10 16 47.9	
	comp=Z,3.1nm,1.1s						
YAK	Yakutsk	57.92	2	P	P	10 16 32.3	+0.6
	comp=Z,3.8nm,0.3s,baz=199,slow=0.3,SNR=4.8						
	comp=Z,3.8nm,0.3s						
YAK	Yakutsk	57.92	2	P	P	10 16 31.2	-0.6
ZALV	Zalesovo Beam	60.10	333	P	P	10 16 45.5	-1.5
	comp=Z,0.5nm,0.3s,baz=131,slow=7.7,SNR=4.9						
ZALV				PcP	PcP	10 17 31.0	-1.3
	comp=Z,0.6nm,0.5s,baz=149,slow=3.0,SNR=2.3						
	comp=Z,0.5nm,0.3s						
KURBB	Kurchatov Arra	61.23	327	P	P	10 16 53.1	-1.6
	comp=Z,1.5nm,0.5s,baz=131,slow=6.6,SNR=16						
	comp=Z,1.5nm,0.5s						
KURK	Kurchatov	61.23	328	P	P	10 16 53.6	-1.1
KURK				IAmb	IAmb	10 16 57.4	
	comp=Z,4.2nm,0.7s						
BVAR	Borovoye Array	66.81	327	P	P	10 17 29.7	-1.6
	comp=Z,1.0nm,0.4s,baz=180,slow=8.2,SNR=7.1						
	comp=Z,1.0nm,0.4s						
TIXI	Tiksi	67.55	1	P	P	10 17 35.2	-0.5
	comp=Z,4.8nm,0.5s,baz=90,slow=23,SNR=15						
	comp=Z,4.8nm,0.5s						
TIXI	Tiksi	67.55	1	P	P	10 17 34.8	-0.8
ABKAR	Akbulak array	71.61	321	P	P	10 18 00.7	-0.4
ABKAR				IAmb	IAmb	10 18 07.2	
	comp=Z,5.0nm,1.4s						
AKTO	Aktyubinsk	73.12	322	P	P	10 18 10.0	-0.1
	comp=Z,1.4nm,0.6s,baz=90,slow=11,SNR=2.3						
	comp=Z,1.4nm,0.6s						
ARU	Arti	74.43	328	P	P	10 18 18.3	+0.7
	comp=Z,1.7nm,0.4s,baz=82,slow=7.1,SNR=3.4						
	comp=Z,1.7nm,0.4s						
MLY	Manley	83.41	25	P	P	10 19 06.6	-0.2
MLY				IAmb	IAmb	10 19 18.7	
	comp=Z,6.0nm,1.2s						
VNDA	Vanda	83.78	173	P	P	10 19 09.2	+0.9
	comp=Z,1.1nm,0.5s,baz=319,slow=7.1,SNR=7.3						
	comp=Z,1.1nm,0.5s						
VNDA	Vanda	83.78	173	P	P	10 19 09.2	+0.9
VNDA				IAmb	IAmb	10 19 37.4	
	comp=Z,7.5nm,1.4s						
ILAR	Eielson Array	85.04	25	P	P	10 19 15.8	+0.9
	comp=Z,0.3nm,0.7s,baz=264,slow=6.0,SNR=4.4						
	comp=Z,0.3nm,0.7s						
ARCES	ARCESS Array B	90.00	340	P	P	10 19 38.0	-0.8
	comp=Z,1.0nm,0.4s,baz=80,slow=6.9,SNR=13						
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	91.34	332	P	P	10 19 43.8	-1.3
	comp=Z,0.9nm,0.6s,baz=60,slow=8.2,SNR=5.4						
	comp=Z,0.9nm,0.6s						
AKASG	Malin Array Be	91.36	321	P	P	10 19 43.8	-1.6
	comp=Z,0.2nm,0.3s,baz=71,slow=5.0,SNR=1.5						
	comp=Z,0.2nm,0.3s						
YKA	Yellowknife Ar	99.42	24	P	Pdif	10 20 22.6	+0.7
	comp=Z,0.2nm,0.6s,baz=303,slow=4.4,SNR=3.6						
	comp=Z,0.2nm,0.6s						
SCHQ	Schefferville	120.34	9	PKP	PKiKP	10 25 31.5	+0.8
	comp=Z,1.0nm,0.4s,baz=14,slow=4.2,SNR=8.0						
TXAR	Lajitas Array	121.79	52	PKP	PKPdf	10 25 34.1	-0.1
	comp=Z,0.7nm,0.8s,baz=278,slow=8.7,SNR=5.9						
TORD	Torodi Ar. Bea	122.37	288	PKP	PKPdf	10 25 35.4	-0.1
	comp=Z,0.6nm,0.6s,baz=92,slow=1.9,SNR=4.8						

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*IDC **08** 10:07:41.0±0.8, 3°.24S×68°.00E, h0^{km}, mb4.0/16, mbtmp4.0/17, ML3.9/1, MS4.2/4, Error ellipse: s-maj=23.2km s-min=19.1km az=18.0*

*NEIC **08** 10:07:41.5±1.3, 3°.46S±0°.10×68°.04E±0°.09, h10^{km}±1^{km}, mb4.5/28, Error ellipse: s-maj=16.9km s-min=16.0km az=185.0*

*GCMT **08** 10:07:44.5±0.2, 3°.23S±0°.02×67°.94E±0°.02, h12^{km}, MW4.9/113, Moment Tensor Solution. s45,c52; s113,c150; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.92±.07; M$_{\theta\theta}$2.00±.08; M$_{\phi\phi}$0.93±.08; M$_{r\theta}$0.68±.30; M$_{\theta\phi}$-1.20±.06; M$_{\phi r}$0.34±.29; Best double couple: M$_0$2.94200×10^{16} NP1:ϕ_s291.00000°, δ50.00000°, λ-105.00000°. NP2:ϕ_s134.00000°, δ42.00000°, λ-73.00000°. Principal axes: T 2.8050, Plg4.0000°, Azm32.0000°; N 0.2840, Plg11.0000°, Azm301.0000°; P -3.0790, Plg78.0000°, Azm141.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 10:07:42.3±0.6**, 3°.39S**±0°.09×**68°.18E**±0°.09**, h15^{km}, n60, σ0^{s}.99**/54**, mb4.3**/27**, MS4.0**/3**, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DGAR	Diego Garcia	5.84	133	Pn	Pn	10 09 06.9	-1.6
H08S3	Diego Garcia H	6.01	135	T	T	10 15 54.5	
	baz=308						
H08S1	Diego Carcia H	6.01	135	T	T	10 15 51.9	
	baz=308						
H08S2	Diego Garcia H	6.03	135	T	T	10 15 55.6	
	baz=308						
KAAM	Kaadhehdhoo	6.17	51	Pn	Pn	10 09 12.1	-0.8
MSEY	Mahe Island	12.73	264	Pn	Pn	10 10 38.7	-4.4
PALK	Pallekele	16.38	50	Pn	P	10 11 34.9	+0.2
	0.4nm,0.3s,baz=3.9,slow=17,SNR=1.8						
PALK				LR	LR	10 16 27.7	
	comp=Z,2μm,20.3s,baz=336,slow=32						
	1.5nm,0.4s						
PALK	Pallekele	16.38	50	Pn	Pn	10 11 31.1	-0.8
WSAR	Wadi Sarin	28.05	341	LR	LR	10 22 51.5	
	comp=Z,226nm,18.3s,baz=168,slow=33						
RPSI	Rantau Prapat	31.32	79	P	P	10 14 02.1	-0.3
RPSI				IAmb	IAmb	10 14 10.0	
	comp=Z,8.2nm,1.2s						
BRDH	Bariadhala	34.58	40	LR	LR	10 30 31.5	
	comp=Z,582nm,18.1s,baz=269,slow=40						
CMAR	Chiang Mai Arr	37.27	53	P	P	10 14 56.9	+2.9
	comp=Z,1.1nm,0.4s,baz=245,slow=10,SNR=14						
CMAR				LR	LR	10 29 45.1	
	comp=Z,252nm,18.6s,baz=245,slow=36						
	comp=Z,1.1nm,0.4s						
CMAR	Chiang Mai Arr	37.27	53	P	P	10 14 55.3	+1.3
CHTO	Chiang Mai	37.47	53	P	P	10 14 56.0	+0.4
KBL	Kabul	37.73	1	P	P	10 14 57.7	-0.2
KBL				IAmb	IAmb	10 15 00.4	
	comp=Z,17nm,1.5s						
CRAI	Chiangrai	39.36	52	P	P	10 15 11.7	+0.1
LSA	Lhasa	39.58	32	P	P	10 15 13.3	-0.5
LSA				IAmb	IAmb	10 15 17.7	
	comp=Z,17nm,1.2s						
LSZ	Lusaka	41.11	251	P	P	10 15 27.6	+1.3
	comp=Z,2.1nm,0.4s,baz=49,slow=4.7,SNR=3.9						
	comp=Z,2.1nm,0.4s						
GAR	Garm	42.22	2	P	P	10 15 34.9	-0.1
KSM	Kuching	42.39	84	P	P	10 15 36.8	+0.2
AAK	Ala-Archa	46.16	6	P	P	10 16 06.5	-0.2
AAK				IAmb	IAmb	10 16 22.1	
	comp=Z,5.0nm,1.1s						
KK31	Karatay Array	46.32	2	P	P	10 16 07.5	-0.2
KKAR	Karatay Array	46.32	2	P	P	10 16 07.2	-0.5
GNI	Garni	48.37	336	P	P	10 16 23.9	0.0
MAKZ	Makanchi	51.44	12	P	P	10 16 47.0	+0.1
MK31	Makanchi Array	51.50	12	P	P	10 16 47.9	+0.5
ENH	Enshi	51.73	47	P	P	10 16 50.9	+1.4
KBZ	Khabaz	52.12	337	P	P	10 16 52.2	+0.2
	comp=Z,2.7nm,0.8s,baz=183,slow=2.2,SNR=5.9						
	comp=Z,2.7nm,0.8s						
ABKAR	Akbulak array	52.91	353	P	P	10 16 56.8	-1.0
BRTR	Keskin Array B	53.36	327	P	P	10 17 01.3	-0.2
	comp=Z,1.3nm,0.8s,baz=159,slow=9.1,SNR=2.4						
	comp=Z,1.3nm,0.8s						
BRTR	Keskin Array B	53.36	327	P	P	10 17 00.4	-1.0
AKTO	Aktyubinsk	54.32	352	P	P	10 17 07.2	-0.9
	comp=Z,2.6nm,0.9s,baz=162,slow=8.0,SNR=5.9						
	comp=Z,2.6nm,0.9s						
KURBB	Kurchatov Arra	54.53	8	P	P	10 17 09.8	+0.2
	comp=Z,1.1nm,0.7s,baz=198,slow=7.6,SNR=9.0						
	comp=Z,1.1nm,0.7s						
KURK	Kurchatov	54.63	8	P	P	10 17 09.9	-0.4
KURK				IAmb	IAmb	10 17 14.0	
	comp=Z,10nm,1.4s						
BVAR	Borovoye Array	56.23	2	P	P	10 17 21.4	-0.5
	comp=Z,0.5nm,0.8s,baz=179,slow=7.2,SNR=4.0						
	comp=Z,0.5nm,0.8s						
BRVK	Borovoye	56.26	2	P	P	10 17 22.5	+0.4
BRVK				IAmb	IAmb	10 17 31.6	
	comp=Z,7.3nm,1.4s						
ZAA0	Zalesovo Array	58.80	11	P	P	10 17 39.8	-0.1
ZAA0				IAmb	IAmb	10 17 50.1	
	comp=Z,2.8nm,1.0s						
ZALV	Zalesovo Beam	58.80	11	P	P	10 17 39.5	-0.3
	comp=Z,1.1nm,0.6s,baz=205,slow=6.4,SNR=4.9						
	comp=Z,1.1nm,0.6s						
ZALV	Zalesovo Beam	58.80	11	P	P	10 17 39.7	-0.2
ARU	Arti	60.13	354	P	P	10 17 48.7	-0.4
	comp=Z,0.9nm,0.3s,baz=171,slow=5.2,SNR=4.3						
	comp=Z,0.9nm,0.3s						
ARU	Arti	60.13	354	P	P	10 17 47.1	-2.0
SONM	Songino Array	60.98	28	P	P	10 17 56.5	+1.3
	comp=Z,2.9nm,1.1s,baz=217,slow=7.0,SNR=8.7						
	comp=Z,2.9nm,1.1s						
SONM	Songino Array	60.98	28	P	P	10 17 55.7	+0.5
SONM				IAmb	IAmb	10 18 07.0	
	comp=Z,6.9nm,1.3s						
ULN	Ulaanbaatar	61.32	29	P	P	10 17 57.8	+0.3
ULN				IAmb	IAmb	10 18 00.2	
	comp=Z,4.5nm,1.2s						
MLR	Muntele Rosu	61.43	327	P	P	10 17 57.1	-1.2
MLR				IAmb	IAmb	10 18 15.2	
	comp=Z,6.6nm,1.2s						
BURAR	Bucovina Array	63.19	329	P	P	10 18 09.9	-0.1
BURAR				IAmb	IAmb	10 18 10.6	
	comp=Z,2.9nm,1.3s						
AK05	Malin Array Si	63.31	333	P	P	10 18 09.2	-1.5
AK05				IAmb	IAmb	10 18 21.5	
	comp=Z,2.8nm,0.9s						
AKASG	Malin Array Be	63.36	333	P	P	10 18 09.7	-1.3
	comp=Z,0.9nm,0.7s,baz=135,slow=5.7,SNR=5.8						
	comp=Z,0.9nm,0.7s						
ASAR	Alice Springs	66.44	114	P	P	10 18 34.0	+2.3
	comp=Z,1.4nm,1.1s,baz=287,slow=5.8,SNR=5.3						
	comp=Z,1.4nm,1.1s						
ASAR	Alice Springs	66.44	114	P	P	10 18 31.4	-0.2
WRA	Warramunga Arr	66.45	110	P	P	10 18 34.0	+2.2
	comp=Z,2.5nm,1.0s,baz=283,slow=6.3,SNR=7.9						
	comp=Z,2.5nm,1.0s						
WB0	Warramunga Arr	66.49	110	P	P	10 18 31.0	-1.0
TORD	Torodi Ar. Bea	67.99	286	P	P	10 18 41.5	-0.1
	comp=Z,0.2nm,0.4s,baz=98,slow=2.1,SNR=2.0						
	comp=Z,0.2nm,0.4s						
ESDC	Sonseca Array	78.52	311	P	P	10 19 44.1	+0.7
	comp=Z,0.7nm,0.7s,baz=90,slow=4.3,SNR=4.9						
	comp=Z,0.7nm,0.7s						
TIXI	Tiksi	84.31	16	P	P	10 20 13.5	+0.2
	comp=Z,0.7nm,0.2s,baz=270,slow=23,SNR=4.9						
	comp=Z,0.7nm,0.2s						
TIXI	Tiksi	84.31	16	P	P	10 20 13.8	+0.5
TIXI				IAmb	IAmb	10 20 31.2	
	comp=Z,7.3nm,1.4s						
YKA	Yellowknife Ar	120.99	2	PKP	PKPdf	10 26 34.1	+0.1
	comp=Z,0.2nm,0.8s,baz=330,slow=2.4,SNR=2.7						
PDAR	Pinedale Array	140.74	357	PKP	PKPdf	10 27 10.9	-1.3
	comp=Z,0.1nm,0.4s,baz=346,slow=1.9,SNR=2.8						
NVAR	Mina Array Bea	144.62	9	PKP	PKPdf	10 27 19.2	0.0
	comp=Z,0.6nm,1.0s,baz=5.0,slow=3.1,SNR=3.5						
TXAR	Lajitas Array	153.06	344	PKPbc	PKPbc	10 27 38.6	-1.7
	comp=Z,0.6nm,0.9s,baz=26,slow=2.3,SNR=2.7						

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*IDC **08** 10:08:38.9±1.2, 3°.76S×67°.78E, h0^{km}, mb3.8/6, mbtmp3.8/6, MS3.7/3, Error ellipse: s-maj=46.8km s-min=26.9km az=19.0*

ISC 08 10:08:40.5±1.3**, 3°.8S**±0°.3×**67°.8E**±0°.2**, h10^{km}, n13, σ1^{s}.45**/6**, mb3.9**/6**, MS3.6**/4**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H08S3	Diego Garcia H	6.04	130	T	T	10 16 45.8	
	baz=309						
H08S1	Diego Carcia H	6.05	130	T	T	10 16 45.8	
	baz=309						
H08S2	Diego Garcia H	6.06	130	T	T	10 16 45.8	
	baz=309						
ATD	Arta Tunnel	29.10	302	LR	LR	10 23 35.6	
	comp=Z,5.6nm,21.7s,baz=94,slow=31						
CMAR	Chiang Mai Arr	37.78	53	P	P	10 15 55.9	-1.4
	0.6nm,0.4s,baz=242,slow=9.0,SNR=2.0						
	0.6nm,0.4s						
SONM	Songino Array	61.47	29	P	P	10 18 59.4	+1.8
	1.6nm,1.0s,baz=214,slow=7.6,SNR=2.6						
	1.6nm,1.0s						
OBN	Obninsk	64.08	341	LR	LR	10 47 35.2	
	comp=Z,24nm,21.3s,baz=154,slow=36						
ASAR	Alice Springs	66.63	114	P	P	10 19 32.2	+0.3
	0.8nm,0.7s,baz=292,slow=6.1,SNR=4.6						
	0.8nm,0.7s						
WRA	Warramunga Arr	66.68	110	P	P	10 19 32.3	+0.1
	1.4nm,0.7s,baz=284,slow=6.3,SNR=5.7						
	1.4nm,0.7s						
TORD	Torodi Ar. Bea	67.73	286	P	P	10 19 39.2	+0.2
	0.4nm,0.8s,baz=113,slow=7.9,SNR=2.0						
	0.4nm,0.8s						
HFS	Hagfors	76.32	335	LR	LR	10 54 59.6	
	comp=Z,90nm,18.4s,baz=126,slow=36						
NOA	NORSAR Array B	77.84	335	LR	LR	10 56 17.2	
	comp=Z,61nm,21.2s,baz=105,slow=37						
ESDC	Sonseca Array	78.48	312	P	P	10 20 41.3	-0.9
	0.7nm,0.7s,baz=88,slow=6.5,SNR=4.5						
	0.7nm,0.7s						

IDC 08 10:15:44.2±3.2**, 36°.15S**×**98°.20W, h0^{km}, mb3.8**/5**, mbtmp3.9**/5**, MS3.7**/13**, Error ellipse: s-maj=92.4km s-min=30.1km az=30.0, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	13.06	310	LR	LR	10 22 27.4	
	comp=Z,482nm,21.4s,baz=133,slow=31						
H03S2	Juan Fernandez	15.97	87	T	T	10 36 07.9	
	baz=254,slow=75,SNR=13						
H03S1	Juan Fernandez	15.98	87	T	T	10 36 08.2	
	baz=254,slow=75,SNR=6.6						
H03S3	Juan Fernandez	15.98	87	T	T	10 36 02.8	
	baz=254,slow=75,SNR=7.3						
H03N2	Juan Fernandez	16.06	86	T	T	10 36 05.3	
	baz=257,slow=72,SNR=27						
H03N3	Juan Fernandez	16.06	86	T	T	10 36 06.7	
	baz=257,slow=72,SNR=41						
H03N1	Juan Fernandez	16.08	86	T	T	10 35 56.5	
	baz=257,slow=72,SNR=57						
PLCA	Paso Flores	22.09	110	P	P	10 20 40.7	-0.4
	2.0nm,0.8s,baz=302,slow=10,SNR=4.2						
PLCA				LR	LR	10 27 02.2	
	comp=Z,106nm,19.4s,baz=250,slow=31						
	2.0nm,0.8s						
CFA	Coronel Fontan	25.23	88	LR	LR	10 28 40.1	
	comp=Z,88nm,18.8s,baz=250,slow=31						
LVC	Limon Verde	28.74	70	LR	LR	10 30 14.2	
	comp=Z,203nm,18.9s,baz=224,slow=30						
NNA	Nana	30.82	44	LR	LR	10 31 12.3	
	comp=Z,235nm,21.2s,baz=224,slow=30						
LPAZ	La Paz	33.24	61	P	P	10 22 24.3	+0.4
	9.9nm,0.8s,baz=207,slow=6.0,SNR=32						
LPAZ				LR	LR	10 30 53.5	
	comp=Z,45nm,21.8s,baz=236,slow=27						
	9.9nm,0.8s						
ATAH	Atahualpa	34.09	37	LR	LR	10 33 00.6	
	comp=Z,139nm,21.0s,baz=225,slow=30						
SIV	San Ignacio	38.61	68	LR	LR	10 36 57.9	
	comp=Z,70nm,20.8s,baz=261,slow=33						
ROSC	El Rosal	46.51	34	LR	LR	10 40 58.6	
	comp=Z,95nm,18.7s,baz=214,slow=33						
SDV	Santo Domingo	51.77	36	LR	LR	10 44 23.3	
	comp=Z,78nm,19.9s,baz=88,slow=33						
CMIG	Matias Romero	53.04	4	LR	LR	10 42 41.0	
	comp=Z,33nm,18.6s,baz=186,slow=30						
MDP	Montagnes des	59.16	56	LR	LR	10 48 30.6	
	comp=Z,118nm,19.8s,baz=166,slow=33						
TXAR	Lajitas Array	65.34	355	P	P	10 26 27.2	-1.1
	0.2nm,0.8s,baz=168,slow=9.2,SNR=1.9						
	0.2nm,0.8s						
RPZ	Rata Peaks	66.62	232	LR	LR	10 49 44.9	
	comp=Z,56nm,19.6s,baz=190,slow=31						
NVAR	Mina Array Bea	76.50	344	P	P	10 27 37.2	+1.1
	0.6nm,0.6s,baz=179,slow=7.2,SNR=5.8						
	0.6nm,0.6s						
PDAR	Pinedale Array	79.22	352	P	P	10 27 50.8	-0.3
	0.8nm,0.7s,baz=158,slow=7.3,SNR=7.6						
	0.8nm,0.7s						

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*IDC **08** 10:19:21.4±2.5, 12°.26N×144°.17E, h51^{km}±24^{km}, mb3.3/8, mbtmp3.6/8, Error ellipse: s-maj=36.8km s-min=15.5km az=106.0*

ISC 08 10:19:19.8±0.9**, 12°.2N**±0°.1×**144°.1E**±0°.2**, h35^{km}, n13, σ1^{s}.16**/11**, mb3.6**/9**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.54	30	P	Pn	10 19 45.0	+0.1
	108nm,0.3s,baz=46,slow=3.8,SNR=20						
GUMO				S	Sn	10 20 04.4	+0.7
	235nm,0.5s,baz=185,slow=17,SNR=6.0						
H11N1	WAKE ISLAND Hy	23.14	68	T	T	10 48 47.1	
	baz=254						
H11N2	WAKE ISLAND Hy	23.14	68	T	T	10 48 42.6	
	baz=254						
H11N3	WAKE ISLAND Hy	23.15	68	T	T	10 48 50.3	
	baz=254						
WRA	Warramunga Arr	33.39	197	P	P	10 25 56.5	+1.4
	0.3nm,0.5s,baz=19,slow=9.5,SNR=7.3						
	0.3nm,0.5s						
ASAR	Alice Springs	37.05	196	P	P	10 26 26.2	-0.4
	0.3nm,0.5s,baz=22,slow=11,SNR=10						
	0.3nm,0.5s						
PETK	Petropavlovsk-	42.20	12	P	P	10 27 09.8	+0.7
	7.8nm,1.1s,baz=180,slow=4.3,SNR=3.5						
	7.8nm,1.1s						
SONM	Songino Array	47.40	326	P	P	10 27 51.6	+0.8
	0.2nm,0.6s,baz=125,slow=7.2,SNR=2.3						
	0.2nm,0.6s						
MKAR	Makanchi Array	61.93	317	P	P	10 29 36.4	+0.3
	0.6nm,0.6s,baz=90,slow=9.1,SNR=12						
	0.6nm,0.6s						
ILAR	Eielson Array	70.11	25	P	P	10 30 26.2	-2.0
	0.8nm,1.1s,baz=261,slow=5.8,SNR=4.1						
	0.8nm,1.1s						
YKA	Yellowknife Ar	84.40	27	P	P	10 31 48.4	0.0
	0.2nm,0.6s,baz=287,slow=5.2,SNR=3.1						
	0.2nm,0.6s						
NVAR	Mina Array Bea	88.36	51	P	P	10 32 09.2	+0.5
	0.1nm,0.3s,baz=240,slow=2.9,SNR=2.3						
	0.1nm,0.3s						
FINES	FINESS Array B	92.05	335	P	P	10 32 23.4	-1.6
	6.0nm,1.1s,baz=73,slow=4.8,SNR=2.7						

TAP 08 10:46:22.5, 24°.34N×121°.74E, h9^{km}, ML2.0, C, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EHP	Heping Village	0.03	172	*e*S	Sg	10 46 26.3	+0.8
	baz=161						
ENA	Nanau	0.09	3	P	Pg	10 46 24.8	0.0
	baz=7.0						
ENA				*i* S	Sg	10 46 26.6	+0.1
	baz=7.0						
EWUT	Wuta	0.11	21	*i* P	Pg	10 46 25.1	-0.1

	baz=20						
EWUT				*e*S	Sg	10 46 26.9	-0.2
	baz=20						
ETL	**Fush Village**	**0.21**	**209**	P	Pg	10 46 26.8	-0.1
	baz=209						
ETL				*e*S	Sg	10 46 30.1	+0.3
	baz=209						
NACB	**Ninganchiao**	**0.21**	**217**	*i* P	Pg	10 46 26.8	0.0
	baz=217						
NACB				S	Sg	10 46 30.3	+0.5
	baz=217						
ETLH	**Xiulin Townshi**	**0.27**	**240**	*i* P	Pg	10 46 27.9	-0.1
	baz=239						
ETLH				*e*S	Sg	10 46 31.6	0.0
	baz=239						
LATG	**Datong**	**0.27**	**315**	P	Pg	10 46 27.9	-0.1
	baz=315						
LATG				S	Sg	10 46 31.8	+0.1
	baz=315						
TWC	**Suao**	**0.28**	**21**	*i* P	Pg	10 46 28.2	0.0
	baz=23						
TWC				*e*S	Sg	10 46 32.1	0.0
	baz=23						
NDS	**Dongshan**	**0.29**	**356**	*i* P	Pg	10 46 28.3	0.0
	baz=356						
NDS				*e*S	Sg	10 46 32.3	+0.1
	baz=356						
TWD	**Chiawan**	**0.29**	**206**	P	Pg	10 46 28.2	-0.2
	baz=204						
NNSB	**Datong**	**0.33**	**285**	*i* P	Pg	10 46 29.0	-0.2
	baz=284						
NNSB				*e*S	Sg	10 46 33.4	-0.2
	baz=284						
ENTT	**Nioudou**	**0.33**	**332**	P	Pg	10 46 29.2	0.0
	baz=333						
ENTT				S	Sg	10 46 33.7	+0.1
	baz=333						
NNS	**Nan Shan**	**0.34**	**286**	P	Pg	10 46 29.4	0.0
	baz=286						
NNS				S	Sg	10 46 33.7	-0.3
	baz=286						
TWE	**Neicheng**	**0.38**	**351**	P	Pg	10 46 30.1	+0.1
	baz=352						
TWE				S	Sg	10 46 35.4	+0.3
	baz=352						
FUSB	**Fushanzhiwuyua**	**0.44**	**342**	P	Pg	10 46 31.1	+0.1
	baz=341						
FUSB				S	Sg	10 46 37.3	+0.4
	baz=341						
YHNB	**Yeheng**	**0.46**	**315**	*e*P	Pg	10 46 31.7	+0.2
	baz=314						
YHNB				*i* S	Sg	10 46 38.2	+0.6
	baz=314						
WHF	**Hehuan Shan**	**0.47**	**245**	P	Pg	10 46 31.7	-0.1
	baz=244						
WHF				*e*S	Sg	10 46 36.2	-1.9
	baz=244						
NSK	**Sanguang**	**0.48**	**314**	*e*P	Pg	10 46 32.0	+0.1
	baz=314						
NSK				S	Sg	10 46 38.4	+0.3
	baz=314						
NWLT	**Wulai**	**0.48**	**334**	P	Pg	10 46 31.9	0.0
	baz=333						
NWLT				S	Sg	10 46 38.0	-0.3
	baz=333						
TDCB	**Techi**	**0.54**	**260**	*e*P	Pb	10 46 33.7	-0.4
	baz=260						
CHGB	**Renai**	**0.58**	**241**	P	Pg	10 46 33.9	0.0
	baz=241						
CHGB				S	Sb	10 46 42.7	-0.8
	baz=241						
TIPB	**Shuangxi**	**0.63**	**7**	P	Pg	10 46 34.7	0.0
	baz=7.0						
TIPB				*e*S	Sg	10 46 42.5	-0.5
	baz=7.0						
NFF	**Wufeng Townshi**	**0.63**	**297**	P	Pg	10 46 34.1	-0.6
	baz=297						
NFF				*e*S	Sg	10 46 42.9	-0.2
	baz=297						
LIOB	**Emei**	**0.72**	**295**	P	Pg	10 46 36.1	-0.4
	baz=294						
LIOB				S	Sg	10 46 46.5	+0.6
	baz=294						
NSTT	**Nanjuang**	**0.73**	**293**	P	Pg	10 46 36.2	-0.3
	baz=293						
NSTT				S	Sg	10 46 46.6	+0.5
	baz=293						
SXI1	**Grass Mountain**	**0.76**	**10**	*e*P	Pb	10 46 37.6	-0.2
	baz=9.0						
SXI1				*e*S	Sg	10 46 46.7	-0.3
	baz=9.0						

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*IDC **08** 10:49:16.9±1.4, 5°.85S×150°.86E, h57km±17km, mb3.1/5, mbtmp3.4/6, ML1.6/1, Error ellipse: s-maj=68.5km s-min=9.1km az=129.0*

ISC 08 10:49:16.4±1.3**, 5°.8S**±0°.3×**150°.9E**±0°.3**, h50**km**, n8, σ1ˢ.48**/10**, mb3.2**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.88**	**38**	P	**Pn**	**10 49 45.9**	**-0.3**
	517nm,0.4s,baz=285,slow=0.5,SNR=71						
KRVT				S	**Sn**	**10 50 11.0**	**+2.3**
	482nm,0.3s,baz=137,slow=23,SNR=14						
PMG	**Port Moresby**	**5.13**	**225**	P	**Pn**	**10 50 32.6**	**+1.9**
	1.6nm,0.3s,baz=21,slow=14,SNR=2.1						
PMG				S	**Sn**	**10 51 27.5**	**-1.2**
	6.1nm,0.4s,baz=320,slow=20,SNR=1.9						
	4.2nm,0.3s						
WRA	**Warramunga Arr**	**21.35**	**227**	P	**P**	**10 53 59.8**	**+0.1**
	0.7nm,0.6s,baz=54,slow=10,SNR=7.9						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**24.13**	**221**	P	**P**	**10 54 28.1**	**+0.3**
	0.6nm,0.6s,baz=58,slow=9.5,SNR=14						
	0.6nm,0.6s						
SONM	**Songino Array**	**66.15**	**329**	P	**P**	**10 59 59.8**	**+1.0**
	0.1nm,0.4s,baz=142,slow=5.3,SNR=1.9						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**79.80**	**319**	P	**P**	**11 01 18.8**	**-0.8**
	0.1nm,0.4s,baz=93,slow=7.5,SNR=2.1						
	0.1nm,0.4s						
ILAR	**Eielson Array**	**83.80**	**22**	P	**P**	**11 01 38.5**	**-1.7**
	0.2nm,0.6s,baz=232,slow=6.8,SNR=2.2						
	0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**148.74**	**286**	PKPbc	**PKPbc**	**11 08 58.9**	**-0.5**
	2.0nm,0.7s,baz=93,slow=2.3,SNR=10						

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*GCMT **08** 10:50:31.0±0.2, 36°.33S±0°.01×98°.24W±0°.02, h24km±1km, MW5.0/113, Moment Tensor Solution. s47,c56; s113,c168; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.41±.16; $M_{\theta\theta}$-0.19±.12; $M_{\phi\phi}$0.60±.11; $M_{r\theta}$0.12±.16; $M_{\theta\phi}$-4.06±.10; $M_{\phi r}$0.55±.16; Best double couple: $M_0$4.12000×10^{16} NP1:ϕ_s183.00000°,δ88.00000°, λ-8.00000°. NP2:ϕ_s273.00000°,δ82.00000°, λ-178.00000°. Principal axes: T 4.3080, Plg4.0000°, Azm228.0000°; N -0.3740, Plg82.0000°, Azm346.0000°; P -3.9330, Plg7.0000°, Azm137.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

IDC 08 10:50:30.2±3.1**, 35°.77S**×**97°.94W, h0**km**, mb3.8**/5**, mbtmp3.9**/5**, MS4.1**/27 **Error ellipse: s-maj=92.6km s-min=30.3km az=31.0, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**12.98**	**308**	LR	LR	10 57 05.0	
	comp=Z,972nm,21.4s,baz=100,slow=30						
H03S2	**Juan Fernandez**	**15.74**	**88**	T	T	11 10 48.0	
	baz=256,slow=74						
H03S1	**Juan Fernandez**	**15.76**	**89**	T	T	11 10 50.1	
	baz=256,slow=74						
H03S3	**Juan Fernandez**	**15.76**	**88**	T	T	11 10 55.5	
	baz=256						
H03N2	**Juan Fernandez**	**15.83**	**87**	T	T	11 10 53.3	
	baz=250,slow=72						
H03N3	**Juan Fernandez**	**15.83**	**87**	T	T	11 10 50.4	
	baz=250,slow=72						
H03N1	**Juan Fernandez**	**15.84**	**87**	T	T	11 10 46.6	
	baz=250,slow=72						
PLCA	**Paso Flores**	**22.03**	**111**	P	P	10 55 26.8	+0.4
	3.9nm,1.1s,baz=267,slow=11,SNR=4.0						
PLCA				LR	LR	11 01 52.0	
	comp=Z,488nm,20.0s,baz=279,slow=31						
	3.9nm,1.1s						
CFA	**Coronel Fontan**	**25.02**	**89**	LR	LR	11 03 24.5	
	comp=Z,622nm,20.3s,baz=254,slow=31						
LVC	**Limon Verde**	**28.42**	**70**	LR	LR	11 04 48.8	
	comp=Z,760nm,21.7s,baz=228,slow=30						
NNA	**Nana**	**30.40**	**44**	LR	LR	11 06 05.9	
	comp=Z,406nm,19.1s,baz=202,slow=31						
LPAZ	**La Paz**	**32.87**	**62**	P	P	10 57 06.4	-0.3
	3.7nm,0.9s,baz=207,slow=6.5,SNR=8.4						
	3.7nm,0.9s						
ATAH	**Atahualpa**	**33.66**	**37**	LR	LR	11 07 44.0	
	comp=Z,323nm,20.8s,baz=204,slow=31						
PMSA	**Palmer Station**	**35.41**	**156**	LR	LR	11 07 24.6	
	comp=Z,332nm,21.9s,baz=263,slow=29						
CPUP	**Villa Florida**	**35.83**	**86**	LR	LR	11 09 54.0	
	comp=Z,182nm,20.5s,baz=231,slow=32						
SIV	**San Ignacio**	**38.27**	**69**	LR	LR	11 11 31.1	
	comp=Z,227nm,21.0s,baz=184,slow=33						
TBI	**Tubuai**	**46.02**	**271**	*e*LR	LR	11 11 32.9	
	comp=Z,3μm,24.2s						
TBI				*e*LR	LR	11 11 33.2	
	comp=Z,887nm,27.0s						
ROSC	**El Rosal**	**46.07**	**34**	LR	LR	11 15 41.7	
	comp=Z,256nm,18.9s,baz=190,slow=33						
TAOE	**Nuku Hiva Isla**	**46.82**	**294**	*e*LR	LR	11 12 03.1	
	comp=Z,218nm,27.9s						
JTS	**Las Juntas de**	**47.42**	**17**	LR	LR	11 14 14.2	
	comp=Z,272nm,21.2s,baz=114,slow=30						
PPT2	**Papeete2**	**48.99**	**278**	*e*LR	LR	11 12 57.6	
	comp=Z,222nm,25.5s						
PPT2				*e*LR	LR	11 12 57.7	
	comp=Z,330nm,23.5s						
PPT	**Papeete**	**49.00**	**278**	LR	LR	11 14 56.9	
	comp=Z,114nm,21.0s,baz=152,slow=30						
SDV	**Santo Domingo**	**51.33**	**35**	LR	LR	11 20 28.0	
	comp=Z,176nm,18.9s,baz=162,slow=35						
VNDA	**Vanda**	**57.55**	**195**	LR	LR	11 18 10.0	
	comp=Z,136nm,21.5s,baz=184,slow=29						
SNAA	**Sanae**	**58.05**	**158**	LR	LR	11 19 39.3	
	comp=Z,391nm,21.0s,baz=18,slow=30						
MDP	**Montagnes des**	**58.77**	**56**	LR	LR	11 23 43.6	
	comp=Z,210nm,19.1s,baz=261,slow=34						
SJG	**San Juan**	**61.47**	**35**	LR	LR	11 25 10.6	
	comp=Z,77nm,20.5s,baz=244,slow=34						
TXAR	**Lajitas Array**	**64.98**	**354**	P	P	11 01 12.9	+1.0
	0.5nm,0.9s,baz=179,slow=9.8,SNR=4.1						
	0.5nm,0.9s						
URZ	**Urewera**	**65.47**	**240**	LR	LR	11 22 30.0	
	comp=Z,132nm,19.6s,baz=246,slow=29						
RAO	**Raoul Island**	**66.01**	**250**	LR	LR	11 21 07.4	
	comp=Z,316nm,21.6s,baz=68,slow=28						
RPZ	**Rata Peaks**	**67.02**	**232**	LR	LR	11 23 22.9	
	comp=Z,131nm,21.6s,baz=154,slow=29						
AFI	**Afiamalu**	**68.97**	**268**	LR	LR	11 25 02.4	
	comp=Z,167nm,18.8s,baz=119,slow=30						
TKL	**Tuckaleechee C**	**72.28**	**12**	LR	LR	11 30 38.4	
	comp=Z,37nm,18.4s,baz=154,slow=33						
NVAR	**Mina Array Bea**	**76.19**	**344**	P	P	11 02 20.5	+0.2
	0.7nm,0.8s,baz=172,slow=7.1,SNR=6.2						
	0.7nm,0.8s						
PDAR	**Pinedale Array**	**78.88**	**351**	P	P	11 02 34.7	-0.5
	1.1nm,0.9s,baz=160,slow=5.6,SNR=4.9						
	1.1nm,0.9s						
SUR	**Sutherland**	**91.20**	**132**	LR	LR	11 37 46.7	
	comp=Z,127nm,20.8s,baz=186,slow=31						
BBTS	**Babate**	**91.65**	**73**	LR	LR	11 40 55.2	
	comp=Z,123nm,21.4s,baz=219,slow=33						
SCHQ	**Schefferville**	**94.11**	**17**	LR	LR	11 42 59.3	
	comp=Z,75nm,19.6s,baz=184,slow=34						
DBIC	**Dimbokro**	**96.35**	**86**	LR	LR	11 42 11.1	
	comp=Z,111nm,21.2s,baz=207,slow=32						
CTA	**Charters Tower**	**97.70**	**239**	LR	LR	11 40 34.8	
	comp=Z,89nm,20.7s,baz=144,slow=31						
MKAR	**Makanchi Array**	**168.98**	**359**	PKPab	PKPab	11 11 48.6	-1.4
	0.5nm,0.8s,baz=10,slow=3.2,SNR=2.5						

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*DJA **08** 11:07:58.1±0.5, 3°S±4°×14°1E±°, h10km, M4.9/6, mb4.8/6, MLv5.0/4*

*IDC **08** 11:08:06.2±3.3, 3°.51S×140°.03E, h40km±32km, mb3.6/9, mbtmp3.9/11, ML4.4/1, MS3.9/18, Error ellipse: s-maj=27.8km s-min=12.0km az=90.0*

*NEIC **08** 11:08:10.4±1.7, 3°.76S±0°.10×140°.24E±0°.09, h58km±10km, mb4.4/14, Error ellipse: s-maj=16.9km s-min=8.5km az=219.0*

ISC 08 11:08:07.3±0.5**, 3°.43S**±0°.05×**140°.20E**±0°.07**, h56**km**, n53, σ1ˢ.93**/40**, mb3.9**/12**, MS3.7**/15**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.84**	**358**	P	Pn	11 08 17.2	-5.9
GENI				S	**Sn**	**11 08 29.7**	**-5.0**
SMPI	**Sarmi**	**2.06**	**314**	P	**Pn**	**11 08 39.3**	**-0.4**
SRPI	**Serui, Papua**	**4.25**	**291**	P	**Pn**	**11 09 10.8**	**+1.3**
FAKI	**Fak Fak**	**7.95**	**273**		**Pn**	**11 10 04.0**	**+3.6**
FAKI	**Fak Fak**	**7.95**	**273**	P	**Pn**	**11 10 03.4**	**+3.0**
	20nm,0.9s						
PMG	**Port Moresby**	**9.11**	**131**	P	**Pn**	**11 10 17.1**	**+0.8**
	17nm,0.9s,baz=46,slow=5.1,SNR=6.6						
PMG				S	**Sn**	**11 11 59.3**	**+1.8**
	4.5nm,0.4s,baz=75,slow=21,SNR=1.0						
PMG	**Port Moresby**	**9.11**	**131**	Pn	**Pn**	**11 10 15.5**	**-0.7**
SAUI	**Saumlaki**	**9.94**	**243**	Pn	**Pn**	**11 10 28.5**	**+0.9**
COEN	**Coen**	**10.86**	**164**		**Pn**	**11 10 38.8**	**-1.5**
RABL	**Rabaul**	**11.96**	**94**	Pn	**Pn**	**11 10 56.9**	**+1.6**
MTN	**Manton Dam**	**12.95**	**223**	Pn	**Pn**	**11 11 08.0**	**-0.8**
KNRA	**Kununurra**	**16.57**	**222**		**Pn**	**11 11 55.6**	**-0.5**
KNRA				IAmb	IAmb	11 12 19.4	
	comp=Z,28nm,0.8s						
SOEI	**Soe**	**17.02**	**248**	P	**P**	**11 12 06.1**	**+3.2**
SOEI	**Soe**	**17.02**	**248**	P	**P**	**11 12 04.3**	**+1.4**
WB0	**Warramunga Arr**	**17.19**	**199**		**Pn**	**11 12 02.5**	**-1.3**
WB0				IAmb	IAmb	11 12 29.9	
	comp=Z,17nm,0.7s						
WR0	**Warramunga Arr**	**17.33**	**198**		**Pn**	**11 12 03.9**	**-1.6**
WR0				IAmb	IAmb	11 12 10.2	
	comp=Z,22nm,0.6s						
WRAB	**Tennant Creek**	**17.36**	**199**		**Pn**	**11 12 04.2**	**-1.7**
WRAB				IAmb	IAmb	11 12 10.5	
	comp=Z,20nm,0.7s						
WB2	**Warramunga Arr**	**17.37**	**199**	P	**Pn**	**11 12 04.6**	**-1.4**
WB2				IAmb	IAmb	11 12 10.7	
	comp=Z,20nm,0.6s						
WRA	**Warramunga Arr**	**17.38**	**199**	P	**Pn**	**11 12 04.8**	**-1.3**
	comp=Z,1.6nm,0.3s,baz=16,slow=13,SNR=42						
WRA				S	**Sn**	**11 15 12.2**	**-6.6**
	comp=Z,2.3nm,0.7s,baz=18,slow=24,SNR=3.5						
WRA				Lg	Lg	11 17 12.6	
	baz=35,slow=29						
WRA				LR	LR	11 19 05.8	
	comp=Z,717nm,18.5s,baz=7.5,slow=38						
	comp=Z,6.0nm,0.7s						
WRA	**Warramunga Arr**	**17.38**	**199**		**Pn**	**11 12 04.0**	**-2.1**
GUMO	**Guam**	**17.54**	**15**	LR	LR	11 18 57.1	
	comp=Z,206nm,18.9s,baz=198,slow=37						
CTA	**Charters Tower**	**17.58**	**161**	Lg	Lg	11 17 23.1	
	comp=Z,0.1nm,0.3s,baz=38,slow=19,SNR=1.5						
CTA				LR	LR	11 19 21.0	
	comp=Z,642nm,19.0s,baz=341,slow=38						
FITZ	**Fitzroy Crossi**	**20.39**	**223**		Pn	11 12 41.4	-0.9
KAPI	**Kappang**	**20.45**	**265**	LR	LR	11 22 15.2	
	comp=Z,236nm,20.3s,baz=84,slow=42						
AS31	**Alice Springs**	**21.01**	**196**		**P**	**11 12 46.1**	**-0.3**
ASAR	**Alice Springs**	**21.01**	**196**	P	**P**	**11 12 46.1**	**-0.4**
	comp=Z,13nm,0.8s,baz=29,slow=9.6,SNR=63						
ASAR				S	**S**	**11 16 37.5**	**-0.1**
	comp=Z,2.7nm,0.9s,baz=13,slow=26,SNR=4.7						
ASAR				LR	LR	11 21 38.7	
	comp=Z,430nm,21.2s,baz=22,slow=39						
	comp=Z,13nm,0.8s						
EIDS	**Eidsvold**	**24.19**	**155**	P	**P**	**11 13 19.2**	**+0.5**
EIDS				IAmb	IAmb	11 13 30.6	
	comp=Z,15nm,1.0s						
FORT	**Forrest**	**29.52**	**202**	P	**P**	**11 14 06.4**	**-0.1**
FORT				IAmb	IAmb	11 14 28.4	
	comp=Z,9.2nm,0.9s						
JOW	**Kunigami**	**32.22**	**340**	LR	LR	11 26 01.5	
	comp=Z,174nm,21.1s,baz=72,slow=33						
NWAO	**Narrogin (SRO)**	**36.37**	**214**	LR	LR	11 31 30.6	
	comp=Z,395nm,18.9s,baz=12,slow=39						
JNU	**Nakatsue**	**37.41**	**347**	LR	LR	11 28 45.6	
	comp=Z,112nm,20.0s,baz=156,slow=33						
MJAR	**Matsushiro Arr**	**39.81**	**358**	LR	LR	11 30 22.8	
	comp=Z,67nm,18.9s,baz=166,slow=34						
KSRS	**Korea Array**	**42.25**	**345**	P	**P**	**11 15 56.5**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=154,slow=8.6,SNR=2.2						
KSRS				LR	LR	11 31 46.9	
	comp=Z,108nm,21.0s,baz=145,slow=34						
	comp=Z,0.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**46.08**	**300**	P	**P**	**11 16 26.5**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=112,slow=5.8,SNR=5.1						
	comp=Z,0.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**46.08**	**300**	P	P	11 16 34.2	+7.9
ASAJ	**Asahikawa**	**47.38**	**2**	LR	LR	11 37 21.4	
	comp=Z,39nm,19.1s,baz=169,slow=37						
USRK	**Ussuriysk Ar.**	**47.99**	**352**	LR	LR	11 33 51.5	
	comp=Z,121nm,20.7s,baz=147,slow=32						
URZ	**Urewera**	**48.32**	**141**	LR	LR	11 37 33.5	
	comp=Z,148nm,18.1s,baz=303,slow=36						
RPZ	**Rata Peaks**	**48.52**	**150**	LR	LR	11 36 48.0	
	comp=Z,234nm,19.9s,baz=210,slow=36						
KLR	**Kul'dur**	**52.96**	**353**	P	**P**	**11 17 17.4**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=191,slow=5.2,SNR=2.3						
	comp=Z,0.6nm,0.5s						
PETK	**Petropavlovsk-**	**58.23**	**12**	LR	LR	11 39 46.3	
	comp=Z,59nm,21.8s,baz=172,slow=33						
SONM	**Songino Array**	**59.01**	**334**	P	**P**	**11 18 01.9**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=134,slow=6.2,SNR=1.5						
	comp=Z,0.2nm,0.6s						
PALK	**Pallekele**	**60.31**	**280**	LR	LR	11 47 09.5	
	comp=Z,52nm,19.5s,baz=293,slow=39						
MKAR	**Makanchi Array**	**71.27**	**322**	P	**P**	**11 19 21.0**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=104,slow=7.4,SNR=5.8						
	comp=Z,0.5nm,0.7s						
VNDA	**Vanda**	**74.94**	**175**	P	**P**	**11 19 41.9**	**0.0**
	comp=Z,0.9nm,0.7s,baz=317,slow=4.8,SNR=2.3						
VNDA				LR	LR	11 52 54.1	
	comp=Z,219nm,18.6s,baz=187,slow=36						
	comp=Z,0.9nm,0.7s						
VNDA	**Vanda**	**74.94**	**175**	P	**P**	**11 19 42.1**	**+0.1**
VNDA				IAmb	IAmb	11 20 01.5	
	comp=Z,4.1nm,1.2s						
KURBB	**Kurchatov Arra**	**75.17**	**325**	P	**P**	**11 19 44.1**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=113,slow=5.6,SNR=2.4						
	comp=Z,0.5nm,0.3s						
SBA	**Scott Base**	**75.68**	**174**	P	**P**	**11 19 47.6**	**+1.4**
BVAR	**Borovoye Array**	**80.75**	**325**	P	**P**	**11 20 15.0**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=100,slow=5.3,SNR=6.7						
	comp=Z,0.9nm,0.6s						
ILAR	**Eielson Array**	**85.88**	**24**	P	**P**	**11 20 39.3**	**-1.5**
	comp=Z,1.1nm,0.8s,baz=263,slow=4.5,SNR=8.3						
QSPA	**South Pole Qui**	**86.52**	**180**	LR	LR	12 00 03.3	
	comp=Z,220nm,19.7s,baz=223,slow=36						
QSPA	**South Pole Qui**	**86.52**	**180**	P	**P**	**11 20 44.5**	**+0.3**
LPAZ	**La Paz**	**145.82**	**126**	PKPbc	**PKPdf**	**11 27 42.0**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=260,slow=3.4,SNR=3.6						

IDC 08 11:19:36.5±7.6**, 0°.52S**×**16°.29W, h0**km**, mb3.6**/1**, mbtmp3.9**/2**, ML3.9**/1**, MS3.5**/3**, Error ellipse: s-maj=500.8km s-min=82.4km az=137.0, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**7.48**	**166**	T	T	11 30 00.1	
	baz=344,slow=74,SNR=36						
H10N3	**ASCENSION HYDR**	**7.49**	**166**	T	T	11 30 01.1	
	baz=344,slow=74,SNR=38						
H10N1	**ASCENSION HYDR**	**7.50**	**166**	T	T	11 30 04.6	
	baz=344,slow=74,SNR=52						
H10S3	**ASCENSION HYDR**	**8.53**	**169**	T	T	11 31 20.1	
	baz=347,slow=74,SNR=17						
H10S2	**ASCENSION HYDR**	**8.54**	**169**	T	T	11 31 23.8	
	baz=233,slow=74,SNR=15						
DBIC	**Dimbokro**	**13.46**	**58**	Pn	Pn	11 22 48.2	-0.7
	0.6nm,0.3s,baz=248,slow=11,SNR=2.3						
DBIC				Sn	Sn	11 25 08.2	-11
	0.2nm,0.3s,baz=163,slow=20,SNR=1.3						
DBIC				LR	LR	11 26 38.8	
	comp=Z,41nm,19.4s,baz=226,slow=31						
	1.8nm,0.4s						
TORD	**Torodi Ar. Bea**	**22.41**	**52**	P	P	11 24 37.3	+0.3
	2.3nm,0.8s,baz=243,slow=11,SNR=11						
	2.3nm,0.8s						
LSZ	**Lusaka**	**46.29**	**111**	LR	LR	11 43 35.4	
	comp=Z,127nm,18.9s,baz=191,slow=31						
ATAH	**Atahualpa**	**62.27**	**262**	LR	LR	11 54 42.5	
	comp=Z,50nm,19.7s,baz=31,slow=34						
ASAR	**Alice Springs**	**142.37**	**132**	PKP	PKPdf	11 39 11.4	-0.8
	0.1nm,0.6s,baz=222,slow=1.2,SNR=1.2						

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*NNC **08** 11:22:57.2±0.6, 50°.03N×78°.74E, h0km, mb2.7, mpv2.4, Error ellipse: s-maj=12.7km s-min=2.7km az=72.0, Suspected Mining explosion.*

*IDC **08** 11:22:58.5±0.8, 50°.08N×78°.79E, h0km, mbtmp2.7/3, ML2.0/3, Error ellipse: s-maj=11.1km s-min=6.3km az=55.0*

ISC 08 11:22:58.4±0.9**, 50°.03N**±0°.05×**78°.71E**±0°.08**, h0**km**, n18, σ0ˢ.76**/29**, 18C-8D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.57**	**347**	⇑P	**Pg**	**11 23 08.6**	**-0.7**
KUR07				⇑S	**Sg**	**11 23 17.0**	**+0.3**
KUR06	**Kurchatov Arra**	**0.59**	**348**	⇑P	**Pg**	**11 23 08.9**	**-0.8**
KUR06				⇓S	**Sg**	**11 23 17.2**	**0.0**
KUR14	**Kurchatov Arra**	**0.59**	**353**	⇓P	**Pg**	**11 23 09.0**	**-0.8**
KUR14				⇑S	**Sg**	**11 23 17.4**	**0.0**
KUR15	**Kurchatov Arra**	**0.60**	**351**	⇑P	**Pg**	**11 23 09.1**	**-0.8**
KUR15				⇑S	**Sg**	**11 23 17.7**	**+0.1**
KURBB	**Kurchatov Arra**	**0.61**	**349**	Pg	**Pg**	**11 23 08.8**	**-1.3**
	0.8nm,0.3s,baz=165,slow=18,SNR=52						
KURBB				Lg	Lg	11 23 17.3	
	0.8nm,0.3s,baz=168,slow=31,SNR=8.6						
KURBB	**Kurchatov Arra**	**0.61**	**349**	⇑P	**Pg**	**11 23 09.2**	**-0.9**
	6.5nm,0.3s						
KURBB				⇑S	**Sg**	**11 23 19.1**	**+1.2**
	7.5nm,0.3s						
KUR16	**Kurchatov Arra**	**0.61**	**347**	⇓P	**Pg**	**11 23 09.4**	**-0.8**
KUR16				⇓S	**Sg**	**11 23 18.1**	**-0.1**
KUR17	**Kurchatov Arra**	**0.62**	**346**	⇑P	**Pg**	**11 23 09.7**	**-0.6**
KUR17				⇓S	**Sg**	**11 23 18.7**	**+0.2**
KUR05	**Kurchatov Arra**	**0.62**	**350**	⇑P	**Pg**	**11 23 09.4**	**-0.9**
KUR05				⇑S	**Sg**	**11 23 17.6**	**-0.8**
KUR04	**Kurchatov Arra**	**0.64**	**350**	⇑P	**Pg**	**11 23 09.9**	**-0.9**
KUR04				⇑S	**Sg**	**11 23 18.9**	**-0.2**
KURK	**Kurchatov**	**0.69**	**355**	⇓P	**Pg**	**11 23 10.6**	**-1.0**
	2.0nm,0.3s						
KURK				⇑S	**Sg**	**11 23 20.3**	**-0.3**
	2.5nm,0.4s						
MAKZ	**Makanchi**	**3.89**	**145**	⇑Pg	**Pb**	**11 24 08.7**	**+0.8**
	0.3nm,0.4s						
MAKZ				⇓Lg	Lg	11 24 56.1	
	0.5nm,0.3s						
MK31	**Makanchi Array**	**4.02**	**142**	⇓Pn	**Pn**	**11 24 01.2**	**0.0**
	baz=316,slow=9.8,SNR=38						
MK31				⇑Pg	**Pb**	**11 24 10.5**	**+0.5**
	0.2nm,0.2s,baz=336,slow=18,SNR=6.4						
MK31				⇑Lg	Lg	11 25 05.0	
	2.8nm,0.5s,baz=332,slow=26,SNR=13						
MKAR	**Makanchi Array**	**4.02**	**142**	Pn	**Pn**	**11 24 01.3**	**+0.1**
	0.2nm,0.3s,baz=322,slow=10.0,SNR=33						
MKAR				Pg	**Pb**	**11 24 09.0**	**-1.1**
	0.4nm,0.3s,baz=326,slow=15,SNR=14						
MKAR				Lg	Lg	11 25 01.6	
	0.6nm,0.3s,baz=326,slow=28,SNR=11						
	0.2nm,0.2s						
OTUK	**Ortayu**	**4.55**	**249**	⇑Lg	Lg	11 25 20.6	
	1.0nm,0.5s						
I46RU	**ZALESOVO INFRA**	**5.44**	**42**	I	I	11 53 00.0	
	baz=224,slow=319,SNR=2.1						
ZALV	**Zalesovo Beam**	**5.44**	**42**	Pn	**Pn**	**11 24 21.9**	**+1.1**
	0.4nm,0.3s,baz=230,slow=13,SNR=6.9						
ZALV				Lg	Lg	11 25 46.6	
	0.2nm,0.3s,baz=226,slow=31,SNR=1.8						
	0.9nm,0.2s						
BVAR	**Borovoye Array**	**6.00**	**303**	Pn	**Pn**	**11 24 29.3**	**+1.0**
	baz=122,slow=13,SNR=5.1						
BVAR				Sn	**Sn**	**11 25 37.9**	**+0.3**
	baz=116,slow=23,SNR=5.3						
BVAR				Lg	Lg	11 26 05.7	
	baz=121,slow=25,SNR=2.0						
	0.2nm,0.3s						

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*DDA **08** 11:26:48.5±0.0, 37°.59N×38°.50E, h7km±1km, MW3.6*

*ISK **08** 11:26:49.7, 37°.55N×38°.44E, h13km, ML3.5/19*

ISC 08 11:26:48.7±1.1**, 37°.57N**±0°.03×**38°.51E**±0°.02**, h5**km±10km**, n29, σ1ˢ.17**/42**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HANM	anlurfa/Hi	0.30	88	P	Pg	11 26 54.9	+0.4
HANM				S	Sg	11 26 59.4	+0.9
HANM				*i* AML	AML	11 27 02.0	
	comp=N,3µm,0.4s						
AZEY	Adyaman-Merk	0.31	320	P	Pg	11 26 54.8	0.0
AZEY				S	Sg	11 26 59.3	+0.3
AZEY				*i* AML	AML	11 27 06.0	
	comp=N,2µm,0.7s						
NARI	Adyaman-Kaht	0.37	33	P	Pg	11 26 56.0	+0.1
NARI				S	Sg	11 27 00.8	-0.1
NARI				*i* AML	AML	11 27 05.0	
	comp=N,2µm,0.5s						
SANL	SANLIURFA_Merk	0.56	136	P	Pb	11 26 60.0	-0.9
SANL				S	Sb	11 27 08.0	-1.2
SANL				*i* AML	AML	11 27 20.0	
	comp=E,2µm,0.6s						
AKCA	Adyaman/G¶l	0.69	289	P	Pg	11 27 01.9	0.0
AKCA				S	Sg	11 27 11.5	+0.7
AKCA				*i* AML	AML	11 27 17.0	
	comp=N,1µm,0.4s						
SURC	SANLIURFA_SURC	0.70	173	P	Pb	11 27 02.7	-0.7
SURC				S	Sn	11 27 15.9	-0.5
MAYA	Malatya/Merkez	0.76	355	P	Pg	11 27 02.7	-0.5
GZT	Gaziantep	0.78	254	SPECP		11 27 03.0	
GZT				P	Pg	11 27 03.8	+0.1
GZT				S	Sn	11 27 17.6	-1.0
GZT				*i* AML	AML	11 27 18.0	
	comp=N,2µm,0.3s						
NZIP	Nizip/Gaziante	0.85	232	P	Pg	11 27 05.2	+0.2
NZIP				S	Sn	11 27 19.3	-0.9
NZIP				*i* AML	AML	11 27 20.0	
	comp=N,1µm,0.8s						
GAZ	Gaziantep	1.10	249	Pg	Pb	11 27 10.5	+0.2
GAZ				Sg	Sb	11 27 25.2	+0.1
KAHM	Kahramanmaras,	1.21	268	P	Pg	11 27 11.1	-0.8
KAHM				S	Sb	11 27 28.5	+0.6
KMRS	Kahramanmaras	1.28	268	Pn	Pg	11 27 12.4	-0.8
KMRS				Sn	Sb	11 27 30.1	+0.1
DARE	Darende-Malaty	1.28	321	Pn	Pg	11 27 13.3	0.0
DARE				Sn	Sn	11 27 31.3	+0.3
DYBB	Diyarbakir	1.35	73	Pn	Pb	11 27 14.8	+0.3
DYBB				Sn	Sn	11 27 34.8	+2.2
ARPR	Arapgir-MALATY	1.52	355	Pn	Pn	11 27 16.9	+0.1
SARI	SarD1z-Kayseri	1.85	297	Pn	Pn	11 27 21.7	+0.5
KOZT	Kozan	2.13	268	Pn	Pn	11 27 25.3	+0.3
SVAN	Silvan-Diyarba	2.21	74	Pn	Pb	11 27 28.5	-0.7
BNGB	Bingl	2.22	50	Pn	Pb	11 27 27.9	-1.5
ERZN	Erzincan	2.23	25	Pn	Pb	11 27 28.1	-1.4
BNN	Bunyan	2.45	302	Pn	Pn	11 27 30.4	+0.9
YEDI	Yedisu-Bingol	2.46	40	Pn	Pb	11 27 31.4	-2.1
YAYL	Yayladag	2.46	232	Pn	Pn	11 27 30.3	+0.7
SVSK	Karacayir	2.62	334	Pn	Pn	11 27 33.4	+1.7
VRTB	Varto-Mus	2.81	55	Pn	Pb	11 27 36.9	-2.6
GURO	Guroymak-BITLI	2.95	70	Pn	Pb	11 27 38.9	-3.0
BAYT	Aydıntepe-Bayb	3.09	24	Pn	Pn	11 27 40.5	+2.1
TOKT	Tokat	3.14	332	Pn	Pn	11 27 40.5	+1.6
YOZ	Yozgat	3.24	311	Pn	Pn	11 27 41.8	+1.5

ROM 08 11:34:40.0±0.1**, 43°.025N**±0°.002×**13°.140E**±0°.003**,**
h8^{km}, ML1.1/8**, 1C, Error ellipse: s-maj=0.2km**
s-min=0.1km az=215.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1256	Bolognola (MC)	0.07	107	P	Pg	11 34 42.2	+0.2
T1256				S	Sg	11 34 43.7	+0.2
T1256				AML	AML		
	comp=N,240µm,1.6s						
T1256				AML	AML		
	comp=E,314µm,0.7s						
T1256				AML	AML		
	comp=N,240µm,1.6s						
T1256				AML	AML		
	comp=E,314µm,1.3s						
T1256				AML	AML		
	comp=N,176µm,2.6s						
CSP1	Cessapalombo	0.08	35	P	Pg	11 34 42.5	+0.3
CSP1				S	Sg	11 34 44.1	+0.2
CSP1				AML	AML		
	comp=E,140µm,0.5s						
CSP1				AML	AML		
	comp=N,92µm,0.2s						
FEMA	Monte Fema	0.09	226	P	Pg	11 34 42.8	+0.4
FEMA				S	Sg	11 34 44.5	+0.5
T1220	Camerino, Fraz	0.09	336	P	Pg	11 34 42.7	+0.4
T1220				S	Sg	11 34 44.7	+0.8
T1220				AML	AML		
	comp=N,476µm,0.2s						
T1220				AML	AML		
	comp=E,233µm,2.6s						
T1220				AML	AML		
	comp=E,400µm,0.4s						
T1219	Muccia, Frazio	0.10	287	P	Pg	11 34 42.7	+0.2
T1219				S	Sg	11 34 44.5	+0.3
T1219				AML	AML		
	comp=N,178µm,0.3s						
T1219				AML	AML		
	comp=E,105µm,1.3s						
MC2	Monte Cornacci	0.12	162	P	Pg	11 34 43.1	+0.3
MC2				S	Sg	11 34 45.4	+0.6
GUMA	Gualdo di Mace	0.15	75	⇑P	Pg	11 34 44.5	+1.3
T1216	Preci, Frazion	0.16	214	P	Pg	11 34 44.0	+0.6
T1216				S	Sg	11 34 46.8	+1.1
T1216				AML	AML		
	comp=E,86µm,2.1s						
CESI	CESI - Serrava	0.17	263	P	Pg	11 34 44.1	+0.5
CESI				S	Sg	11 34 47.4	+1.3
CESI				AML	AML		
	comp=E,145µm,0.9s						
CESI				AML	AML		
	comp=N,172µm,0.1s						
CESI				AML	AML		
	comp=N,172µm,1.9s						
CESI				AML	AML		
	comp=E,71µm,1.3s						
MMO1	Montemonaco	0.19	133	P	Pg	11 34 44.4	+0.6
MMO1				S	Sg	11 34 47.7	+1.3
T1214	Arquata del Tr	0.27	169	P	Pg	11 34 46.0	+0.6
T1214				AML	AML		
	comp=E,420µm,0.4s						
T1214				AML	AML		
	comp=N,362µm,0.9s						
T1214				AML	AML		
	comp=E,406µm,1.1s						
T1214				AML	AML		
	comp=N,281µm,0.9s						
T1241	Roccafluvione,	0.27	128	S	Sb	11 34 52.0	+0.1
T1241				AML	AML		
	comp=N,885µm,0.1s						
T1241				AML	AML		
	comp=E,537µm,0.1s						
T1212	Cascia, Frazio	0.28	194	S	Sb	11 34 52.2	0.0
T1212				AML	AML		
	comp=N,281µm,0.9s						
T1212				AML	AML		
	comp=E,286µm,0.2s						
T1215	Vallo di Nera,	0.30	222	S	Sb	11 34 53.6	+0.9
T1215				AML	AML		
	comp=E,96µm,1.2s						
T1215				AML	AML		
	comp=N,178µm,1.3s						
T1217	Poggiodomo (PG	0.35	206	S	Sb	11 34 53.6	-0.5
T1218	Civita (PG)	0.35	183	S	Sb	11 34 53.1	-1.3
TERO	Teramo	0.53	140	S	Sg	11 34 55.7	-1.4

ROM 08 11:35:19.6±0.1**, 42°.643N**±0°.004×**13°.230E**±0°.004**,**
h11^{km}, ML1.9/5**, 8C, Error ellipse: s-maj=0.4km**
s-min=0.3km az=198.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMA1	SAN MARTINO	0.08	99	P	Pg	11 35 22.6	+0.4
SMA1				S	Sg	11 35 24.6	+0.4
SMA1				AML	AML		
	comp=E,2610µm,0.3s						
SMA1				AML	AML		
	comp=N,1315µm,0.2s						
SMA1				AML	AML		
	comp=E,2610µm,1.7s						
T1218	Civita (PG)	0.09	288	⇑P	Pg	11 35 22.7	+0.3
T1218				S	Sg	11 35 24.6	+0.2
T1218				AML	AML		
	comp=E,1920µm,0.1s						
T1218				AML	AML		
	comp=N,3315µm,0.4s						
T1218				AML	AML		
	comp=N,3300µm,0.4s						
T1218				AML	AML		
	comp=E,1770µm,0.1s						
T1218				AML	AML		
	comp=N,3315µm,1.6s						
T1218				AML	AML		
	comp=N,3300µm,1.6s						
T1218				AML	AML		
	comp=E,1915µm,0.1s						
RM33	Pellescritta (	0.14	185	⇑P	Pg	11 35 23.6	+0.6
RM33				S	Sg	11 35 26.3	+0.9
RM33				AML	AML		
	comp=E,468µm,1.6s						
RM33				AML	AML		
	comp=E,468µm,1.6s						
RM33				AML	AML		
	comp=N,337µm,0.8s						
RM33				AML	AML		
	comp=E,468µm,0.4s						
RM33				AML	AML		
	comp=N,337µm,1.2s						
CAMP	Campotosto	0.17	129	⇑P	Pg	11 35 24.0	+0.5
CAMP				S	Sg	11 35 27.0	+0.8
T1212	Cascia, Frazio	0.17	308	⇑P	Pg	11 35 24.0	+0.4
T1212				S	Sg	11 35 26.8	+0.5
T1217	Poggiodomo (PG	0.23	287	⇑P	Pg	11 35 24.9	+0.4
T1217				S	Sg	11 35 28.8	+0.9
MMO1	Montemonaco	0.27	16	⇑P	Pg	11 35 25.5	+0.3
MMO1				S	Sg	11 35 29.8	+0.9
MC2	Monte Cornacci	0.27	354	P	Pg	11 35 25.9	+0.5
TERO	Teramo	0.28	94	⇑P	Pg	11 35 25.5	+0.2
TERO				S	Sg	11 35 29.8	+0.6
TERO				AML	AML		
	comp=E,196µm,1.3s						
TERO				AML	AML		
	comp=N,402µm,0.1s						
TERO				AML	AML		
	comp=E,240µm,0.1s						
TERO				AML	AML		
	comp=N,490µm,0.1s						
T1216	Preci, Frazion	0.29	328	P	Pb	11 35 26.3	-0.6
T1216				S	Sg	11 35 30.5	+0.9
T1211	Morro Reatino	0.30	248	⇑P	Pg	11 35 26.2	+0.5
T1211				S	Sb	11 35 31.0	-1.0
T1215	Vallo di Nera,	0.31	301	P	Pg	11 35 26.2	+0.2
T1215				S	Sg	11 35 31.1	+0.9
CSP1	Cessapalombo	0.45	358	P	Pg	11 35 28.7	+0.2
CSP1				S	Sb	11 35 36.0	-0.3
LRP	Arpino	1.03	165	S	Sb	11 35 53.0	0.0

*IDC **08** 11:42:58.4±1.6, 4°.63S×133°.66E, h0^{km}, mb3.5/2,*
mbtmp3.6/6, ML3.4/4, MS4.0/1, Error ellipse: s-maj=94.0km
s-min=22.5km az=67.0
ISC 08 11:42:59.5±1.2**, 4°.9S**±0°.1×**133°.2E**±0°.3**, h10^{km}, n6, σ2^{s}.72**/9**,**
Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.46	334	Pn	Pn	11 44 07.6	+0.4
	0.9nm,0.3s,baz=180,slow=20,SNR=1.8						
SIJI				Sn	Sn	11 44 56.6	-2.6
	1.7nm,0.3s,baz=357,slow=22,SNR=2.0						
SIJI				LR	LR	11 46 25.6	
	comp=Z,2µm,21.2s,baz=146,slow=47 2.9nm,0.3s						
WRA	Warramunga Arr	14.99	176	Pn	Pn	11 46 33.2	+1.7
	0.2nm,0.3s,baz=356,slow=13,SNR=3.6						
WRA				Sn	Sn	11 49 14.5	-3.3
	0.1nm,0.3s,baz=360,slow=23,SNR=5.8 0.3nm,0.3s						
ASAR	Alice Springs	18.67	178	P	Pn	11 47 21.8	+3.6
	0.2nm,0.3s,baz=3.8,slow=11,SNR=37						
ASAR				S	Sn	11 50 45.1	-2.0
	0.5nm,0.8s,baz=2.0,slow=29,SNR=4.2 2.3nm,0.7s						
CTA	Charters Tower	19.71	141	P	Pn	11 47 29.1	-1.6
	0.1nm,0.3s,baz=327,slow=13,SNR=2.4 2.5nm,0.8s						
MKAR	Makanchi Array	68.30	325	P	P	11 54 00.5	-0.3
	0.3nm,0.5s,baz=111,slow=7.9,SNR=6.0 0.3nm,0.5s						
KURBB	Kurchatov Arra	72.46	327	P	P	11 54 28.2	+2.0
	0.2nm,0.6s,baz=122,slow=5.4,SNR=2.4 0.2nm,0.6s						

*IDC **08** 11:43:21.9±1.4, 63°.05N×28°.02E, h0^{km}, mbtmp3.0/3,*
ML2.4/3, Error ellipse: s-maj=17.5km s-min=6.7km
az=106.0
*HEL **08** 11:43:21.6±0.1, 63°.13N×27°.82E, h0^{km}, ML2.3, Explosion*
*UPP **08** 11:43:23.8±2.5, 63°.19N×27°.56E, h0^{km}, ML2.1*
*BER **08** 11:43:23.6±2.0, 63°.07N×27°.75E, h0^{km}, ML1.9,*
ML2.3(HEL), Suspected explosion
ISC 08 11:43:20.9±0.8**, 63°.10N**±0°.02×**27°.74E**±0°.03**, h0^{km}, n62,**
σ2^{s}.09/103**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAF	Kangasniemi	1.19	215	PG	Pg	11 43 43.8	+0.2
	baz=30						
KAF				MSG		11 43 58.9	
	comp=Z,36nm,0.2s						
KAF				SG	Sg	11 43 59.8	+0.8
KAF	Kangasniemi	1.19	215	PG	Pg	11 43 43.8	+0.2
	baz=30						
KAF				MSG		11 43 58.9	
	comp=Z,36nm,0.2s						
KAF				SG	Sg	11 43 59.8	+0.8
RMF	Romuvaara	1.49	40	PN	Pn	11 43 48.6	-0.4
	baz=226						
RMF				MSG		11 44 04.9	
	comp=Z,21nm,0.2s						
RMF	Romuvaara	1.49	40	PN	Pn	11 43 48.6	-0.4
	baz=226						
RMF				MSG		11 44 04.9	
	comp=Z,21nm,0.2s						
KEF	Keuruu	1.62	236	PG	Pn	11 43 51.6	+0.9
KEF				MSG		11 44 11.6	
	comp=Z,18nm,0.2s						
KEF				SN	Sn	11 44 12.9	+0.6
KEF	Keuruu	1.62	236	PG	Pn	11 43 51.6	+0.9
KEF				MSG		11 44 11.6	
	comp=Z,18nm,0.2s						
KEF				SN	Sn	11 44 12.9	+0.6
JOF	Joensuu	1.64	95	PN	Pn	11 43 51.0	0.0
JOF				SN	Sb	11 44 12.8	-0.4
JOF	Joensuu	1.64	95	PN	Pn	11 43 51.0	0.0
JOF				SN	Sb	11 44 12.8	-0.4
RUF	Ruokolahti	1.77	161	PG	Pb	11 43 53.8	-0.4
	baz=341						
RUF				MSG		11 44 15.0	
	comp=Z,20nm,0.2s						
RUF				SG	Sg	11 44 17.3	-0.4
FIA0	FINESS Array S	1.83	206	PG	Pn	11 43 54.8	+1.2
	baz=21						
FIA0				MSG		11 44 17.6	
	comp=Z,36nm,0.2s						
FIA0				SN	Sb	11 44 19.3	+0.6
FINES	FINESS Array B	1.83	206	Pg	Pb	11 43 55.3	+0.1
	comp=Z,1.5nm,0.3s,baz=24,slow=17,SNR=126						
FINES				Lg	Lg	11 44 19.4	
	comp=Z,7.9nm,0.3s,baz=30,slow=29,SNR=9.2						
OUF	Merijarvi	1.85	315	PG	Pn	11 43 54.8	+0.9
OUF				MSG		11 44 16.8	
	comp=Z,48nm,0.2s						
OUF				SG	Sn	11 44 19.7	+1.8
OBF4	Vikkela, Lumij	2.08	327	PG	Pn	11 43 58.8	+1.8
OBF4				MSG		11 44 23.0	
	comp=Z,24nm,0.2s						
OBF4				SG	Sb	11 44 26.7	+0.8
OBF0	Syolatti, Pyha	2.10	314	PG	Pn	11 43 58.9	+1.6
OBF0				MSG		11 44 24.1	
	comp=Z,24nm,0.2s						
OBF0				SG	Sb	11 44 27.2	+0.9
OUL	Oulu	2.15	339	PG	Pn	11 43 59.8	+1.7
	baz=153						
OUL				SG	Sn	11 44 27.2	+1.8
OBF8	Ulkokalla	2.28	305	PG	Pn	11 44 02.0	+2.3
OBF8				MSG		11 44 29.5	
	comp=Z,22nm,0.2s						
OBF8				SG	Sb	11 44 32.6	+1.1
VAF	Ylistaro	2.31	271	PG	Pn	11 44 02.7	+2.6
	baz=84						
VAF				MSG		11 44 31.1	
	comp=Z,17nm,0.2s						
VAF				SG	Sb	11 44 33.5	+1.1
VJF	Virojoki	2.57	182	PN	Pn	11 44 04.1	+0.4
VJF				MSG		11 44 38.3	
	comp=Z,16nm,0.2s						
VJF				SG	Sb	11 44 40.0	+0.1
PVF	Pernaja	2.71	200	PB	Pb	11 44 09.5	-0.7
PVF				MSG		11 44 42.7	
	comp=Z,15nm,0.2s						
PVF				SB	Sb	11 44 44.8	+0.8
MSF	Maaselka	2.88	11	PB	Pn	11 44 09.8	+1.7
MSF				SB	Sn	11 44 44.8	+1.4
NUR	Nurmijrvi	2.98	211	MSG		11 44 50.5	
	comp=Z,14nm,0.2s						
NUR				SB	Sb	11 44 51.9	+0.1
KU6	Riekki	3.09	17	PB	Pn	11 44 12.4	+1.5
	baz=200						
KU6				SB	Sn	11 44 50.5	+2.1
KU6				MSG		11 44 51.0	
	comp=Z,6.0nm,0.2s						
BURU	Burvik	3.19	301	P	Pn	11 44 13.1	+0.8
BURU				S	Sn	11 44 53.2	+2.3
BURU	Burvik	3.19	301	PN	Pn	11 44 13.0	+0.8
UMAU	Umeaa	3.26	287	P	Pn	11 44 14.4	+1.1
UMAU	Umeaa	3.26	287	PN	Pn	11 44 14.5	+1.2
	baz=101						
UMAU				SB	Sn	11 44 56.1	+3.4
MEF	Metsahovi	3.30	210	SB	Sb	11 45 00.5	-0.4
OLKF	Oulanka, Finla	3.32	12	PB	Pn	11 44 16.0	+2.0
OLKF				SB	Sn	11 44 56.7	+2.6
TOF	Tornio	3.34	335	PB	Pn	11 44 16.5	+2.2
TOF				SN	Sn	11 44 55.6	+1.0
KALU	Kalix	3.36	328	P	Pn	11 44 16.0	+1.4
KALU	Kalix	3.36	328	PN	Pn	11 44 15.9	+1.4
KALU				SB	Sn	11 44 58.0	+2.9
ODEU	Stanfors	3.39	296	P	Pn	11 44 15.9	+0.9
RAF	Rauma	3.50	236	PB	Pb	11 44 20.9	-2.7
RAF				SB	Sn	11 45 03.1	+4.6
RNF	Rovaniemi	3.60	349	PN	Pn	11 44 19.7	+1.7
RNF				SB	Sb	11 45 08.6	-1.1
SJUU	Sjulsmark	3.60	315	P	Pn	11 44 19.6	+1.6
ARBE	Arbavere	3.77	194	SG	Sb	11 45 17.9	+3.6
HUSU	Husum	3.86	277	P	Pn	11 44 24.1	+2.6
HUSU	Husum	3.86	277	PN	Pn	11 44 24.1	+2.6
SVAU	Svanoeiden	3.88	295	P	Pn	11 44 22.6	+0.8
LILU	Lilltraesk	4.09	306	P	Pn	11 44 25.3	+0.7
LILU				S	Sn	11 45 13.8	+0.7
ERTU	Ertsjaerv	4.20	328	PN	Pn	11 44 27.9	+1.7
SGF	Sodankyl	4.39	354	PN	Pn	11 44 30.0	+1.2
PAJU	Pajala	4.40	336	PN	Pn	11 44 30.7	+1.7
PAJU				SN	Sn	11 45 20.8	-0.1
KLF	Kolari	4.45	341	PN	Pn	11 44 31.0	+1.4
	baz=153						
KLF				SN	Sn	11 45 21.3	-0.7
HEMU	Hemsoen	4.46	269	PN	Pn	11 44 30.8	+1.1
HEMU				SN	Sn	11 45 23.7	+1.5
VSU	Vasula	4.67	186	SG	Sg	11 45 46.8	-4.1
AAL	Aland	4.71	235	SN	Sn	11 45 29.6	+1.2
VRF	Varrio	4.74	9	PG	Pb	11 44 45.2	+0.4
VRF				SG	Sb	11 45 46.4	+4.1
HEF	Hetta	5.59	344	*e*P	Pn	11 44 46.5	+1.2
HEF				*e*S	Sn	11 45 47.9	-2.3
MOR8	Moi Rana	6.49	304	*e*P	Pn	11 44 57.0	-0.6
MOR8				*e*S	Sn	11 46 05.5	-6.8
MOR8				IAML		11 46 17.4	
	comp=Z,1.7nm,0.2s						
ARA0	ARCESS Array S	6.53	353	*e*P	Pn	11 44 58.9	+0.7
ARA0				*e*S	Sn	11 46 10.4	-2.8
ARA0				IAML		11 46 18.1	
	comp=Z,1.9nm,0.2s						
ARCES	ARCESS Array B	6.53	353	Pn	Pn	11 44 58.6	+0.5
	comp=Z,0.1nm,0.3s,baz=166,slow=14,SNR=17						
ARCES				Sn	Sn	11 46 10.8	-2.3
	comp=Z,0.3nm,0.3s,baz=170,slow=22,SNR=7.5						
ARCES				Lg	Lg	11 46 40.2	
	comp=Z,0.6nm,0.3s,baz=176,slow=26,SNR=7.6 comp=Z,0.9nm,0.6s						
KIF	Kilpisjarvi	6.57	338	*e*P	Pn	11 44 59.8	+1.2
KIF				*e*S	Sn	11 46 09.4	-4.6
KEV	Kevo	6.70	358	*e*P	Pn	11 45 00.7	+0.3
KEV				*e*S	Sn	11 46 11.5	-5.8
FAUS	Fauske	6.76	315	*e*P	Pn	11 45 02.2	+0.9
FAUS				*e*S	Sn	11 46 13.0	-5.9
FAUS				IAML		11 46 23.3	
	comp=Z,1.5nm,0.2s						
VADS	Vadso	7.09	5	*e*P	Pn	11 45 06.4	+0.7
VADS				IAML		11 46 27.4	
	comp=Z,4.0nm,0.8s						
STEI	Steigen	7.10	319	*e*P	Pn	11 45 06.3	+0.5
STEI				*e*S	Sn	11 46 23.4	-3.6
KONS	Konsvik	7.11	305	*e*P	Pn	11 45 06.5	+0.5
JETT	Jettan, Norway	7.12	339	*e*P	Pn	11 45 05.9	-0.3
JETT				*e*S	Sn	11 46 21.4	-6.3
NSS	Namsos	7.12	289	*e*P	Pn	11 45 06.2	0.0
HFS	Hagfors	7.32	252	Pn	Pn	11 45 09.8	+0.8
	comp=Z,0.3nm,0.3s,baz=67,slow=15,SNR=15						
HFS				Sn	Sn	11 46 30.7	-2.0
	comp=Z,0.3nm,0.3s,baz=62,slow=25,SNR=6.8						
HFS				Lg	Lg	11 47 08.7	
	comp=Z,0.3nm,0.3s,baz=65,slow=30,SNR=2.1 comp=Z,0.8nm,0.2s						
NOA	NORSAR Array B	8.02	263	Pn	Pn	11 45 19.1	+0.5
	baz=62,slow=14,SNR=3.9						
NOA				Sn	Sn	11 46 48.2	-1.9
	baz=63,slow=20,SNR=1.4						
NOA				Lg	Lg	11 47 30.4	
	baz=64,slow=19,SNR=1.3 comp=Z,0.2nm,0.5s						

*IDC **08** 11:44:55.8±1.0, 17°.26S×167°.84E, h0^{km}, mb4.2/12,*
mbtmp4.2/13, ML3.7/1, MS3.8/9, Error ellipse:
s-maj=25.2km s-min=20.2km az=78.0
*NOU **08** 11:44:57.6, 17°.25S×167°.80E, h8^{km}, MLv4.6/12, Vanuatu*
Islands
*NEIC **08** 11:45:02.3±0.9, 17°.39S±0°.07×167°.7E±0°.2, h30^{km}±7^{km},*
mb4.7/14, Error ellipse: s-maj=22.9km s-min=5.1km
az=68.0
ISC 08 11:45:00.2±0.6**, 17°.34S**±0°.07×**167°.79E**±0°.08**, h27^{km}, n60,**
σ0^{s}.88/56**, mb4.4**/14**, MS3.6**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	0.55	136	P	Pb	11 45 10.1	-1.2
RTV	Rentapao	0.76	127	P	Pb	11 45 14.0	-0.9
LIFNC	LIFOU	3.46	188	Pn	Pn	11 45 52.3	-0.1
KOUNC	Koumac, New Ca	4.61	225		Pn	11 46 07.5	-0.7
KOUNC	Koumac, New Ca	4.61	225	P	Pn	11 46 08.7	+0.6
YATNC	Mamie plateau,	4.78	190	P	Pn	11 46 10.5	0.0
DZM	Mont Dzumac	4.88	195	Pn	Pn	11 46 11.4	-0.6
	2.8nm,0.3s,baz=104,slow=12,SNR=20						
DZM				Sn	Sn	11 47 05.1	-2.5
	3.7nm,0.3s,baz=141,slow=22,SNR=6.7 13nm,0.5s						
DZM	Mont Dzumac	4.88	195		Pn	11 46 11.7	-0.3
DZM	Mont Dzumac	4.88	195	P	Pn	11 46 12.5	+0.5
NOUC	Port Laguerre	4.94	196	P	Pn	11 46 13.7	+0.9
ONTNC	Ouen Toro	5.10	194	Pn	Pn	11 46 15.5	+0.5
ONTNC	Ouen Toro	5.10	194	P	Pn	11 46 15.5	+0.5
OUENC	Ouen Island, N	5.13	190	Pn	Pn	11 46 16.1	+0.7
OUENC	Ouen Island, N	5.13	190	P	Pn	11 46 16.2	+0.8
PINNC	Pines Island,	5.26	183	Pn	Pn	11 46 18.1	+1.0
PINNC	Pines Island,	5.26	183	P	Pn	11 46 18.3	+1.2
MSVF	Nonsavu	9.80	94	LR	LR	11 50 18.2	
	comp=Z,381nm,19.9s,baz=278,slow=33						
HNR	Honiara	10.95	315	Pn	Pn	11 47 35.3	+0.1
	69nm,0.3s,baz=139,slow=3.3,SNR=5.0						
HNR				LR	LR	11 50 47.2	
	comp=Z,3µm,20.4s,baz=152,slow=32						
HNR	Honiara	10.95	315		Pn	11 47 36.0	+0.8
AFI	Afiamalu	19.97	83	LR	LR	11 55 25.3	
	comp=Z,214nm,18.5s,baz=120,slow=32						
RABL	Rabaul	20.13	309	P	Pn	11 49 33.1	-1.2
RABL				IAmb	IAmb	11 49 48.6	
	comp=Z,22nm,0.8s						
CTA	Charters Tower	20.58	259	P	Pn	11 49 38.3	-1.2
	comp=Z,5.6nm,0.7s,baz=84,slow=10,SNR=8.9						

CTA				LR	LR	11 56 05.5	
	comp=Z,186nm,19.4s,baz=122,slow=32 comp=Z,5.6nm,0.7s						
CTAO	**Charters Tower**	**20.58**	**259**	P	**P**	**11 49 36.9**	**-0.3**
CTAO				IAmb	IAmb	11 49 49.6	
	comp=Z,26nm,1.4s						
PMG	**Port Moresby**	**21.54**	**289**	P	**P**	**11 49 48.3**	**+0.7**
	comp=Z,2.6nm,0.4s,baz=50,slow=10,SNR=3.2						
PMG				LR	LR	11 56 55.2	
	comp=Z,237nm,18.6s,baz=163,slow=33 comp=Z,2.6nm,0.4s						
PMG	**Port Moresby**	**21.54**	**289**	P	**P**	**11 49 46.9**	**-0.8**
URZ	**Urewera**	**22.39**	**160**	P	**P**	**11 49 57.6**	**+1.1**
	comp=Z,7.2nm,0.6s,baz=0.0,slow=1.0,SNR=1.9 comp=Z,7.2nm,0.6s						
RTZ	**Ruatahuna**	**22.68**	**161**	P	**P**	**11 50 00.5**	**+0.8**
RTZ				IAmb	IAmb	11 50 35.6	
	comp=Z,50nm,1.5s						
RPZ	**Rata Peaks**	**26.44**	**175**	P	**P**	**11 50 36.2**	**+1.3**
	comp=Z,5.9nm,0.7s,baz=325,slow=19,SNR=1.9 comp=Z,5.9nm,0.7s						
STKA	**Stephens Creek**	**27.77**	**234**	P	**P**	**11 50 46.4**	**-0.6**
	comp=Z,2.4nm,0.7s,baz=38,slow=4.3,SNR=6.1 comp=Z,2.4nm,0.7s						
RAR	**Rarotonga**	**30.83**	**102**	LR	LR	12 02 34.0	
	comp=Z,57nm,20.1s,baz=251,slow=34						
WB0	**Warramunga Arr**	**31.72**	**260**	P	**P**	**11 51 22.6**	**+0.5**
WB0				IAmb	IAmb	11 51 30.4	
	comp=Z,7.2nm,1.1s						
WRA	**Warramunga Arr**	**31.77**	**260**	P	**P**	**11 51 21.3**	**-1.3**
	comp=Z,1.0nm,0.8s,baz=94,slow=9.9,SNR=5.9						
WRA				LR	LR	12 02 56.5	
	comp=Z,122nm,20.6s,baz=132,slow=34 comp=Z,1.0nm,0.8s						
AS31	**Alice Springs**	**32.30**	**253**	P	**P**	**11 51 27.2**	**0.0**
ASAR	**Alice Springs**	**32.30**	**253**	P	**P**	**11 51 26.5**	**-0.7**
	comp=Z,3.2nm,0.5s,baz=79,slow=8.4,SNR=57						
ASAR				PcP	**PcP**	**11 54 14.8**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=75,slow=3.6,SNR=2.9						
ASAR				LR	LR	12 03 49.8	
	comp=Z,150nm,19.8s,baz=142,slow=35 comp=Z,3.2nm,0.5s						
ASAR	**Alice Springs**	**32.30**	**253**	P	**P**	**11 51 27.4**	**+0.2**
KNRA	**Kununurra**	**37.41**	**267**	P	**P**	**11 52 11.8**	**+0.5**
KNRA				IAmb	IAmb	11 52 48.0	
	comp=Z,24nm,1.2s						
FITZ	**Fitzroy Crossi**	**40.09**	**262**	P	**P**	**11 52 34.1**	**+0.3**
PPT	**Papeete**	**40.61**	**97**	LR	LR	12 07 05.0	
	comp=Z,86nm,18.1s,baz=300,slow=33						
MBWA	**Marble Bar**	**45.40**	**257**	P	**P**	**11 53 16.6**	**-0.3**
SBA	**Scott Base**	**60.55**	**180**	P	**P**	**11 55 09.6**	**+1.8**
QSPA	**South Pole Qui**	**72.71**	**180**	P	**P**	**11 56 27.1**	**+1.4**
QSPA				IAmb	IAmb	11 56 27.9	
	comp=Z,10nm,0.8s						
CMAR	**Chiang Mai Arr**	**76.47**	**294**	P	**P**	**11 56 49.4**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=129,slow=3.6,SNR=8.1 comp=Z,0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**76.47**	**294**	P	**P**	**11 56 48.5**	**+0.3**
BELA	**Belgrano 2**	**84.10**	**175**	P	**P**	**11 57 28.4**	**+0.1**
BELA				IAmb	IAmb	11 57 29.3	
	comp=Z,7.7nm,0.8s						
SONM	**Songino Array**	**84.88**	**324**	P	**P**	**11 57 32.9**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=153,slow=6.1,SNR=18 comp=Z,2.2nm,0.8s						
SONM	**Songino Array**	**84.88**	**324**	P	**P**	**11 57 33.1**	**+0.3**
SONM				IAmb	IAmb	11 57 40.8	
	comp=Z,5.5nm,1.2s						
ILAR	**Eielson Array**	**88.84**	**18**	P	**P**	**11 57 49.9**	**-1.6**
	comp=Z,0.2nm,0.7s,baz=252,slow=5.4,SNR=4.5 comp=Z,0.2nm,0.7s						
SNAA	**Sanae**	**90.99**	**183**	P	**P**	**11 58 02.1**	**+0.5**
MKAR	**Makanchi Array**	**99.42**	**316**	P	**Pdif**	**11 58 40.2**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=96,slow=6.4,SNR=4.8 comp=Z,0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**99.77**	**323**	P	**Pdif**	**11 58 40.5**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=83,slow=3.3,SNR=4.2 comp=Z,0.4nm,0.5s						
ARCES	**ARCESS Array B**	**122.88**	**345**	PKP	**PKPdf**	**12 03 52.1**	**-1.2**
	comp=Z,6.1nm,1.0s,baz=48,slow=2.7,SNR=4.1						
CONA	**Conrad Observa**	**141.81**	**329**	*e*PKP	**PKPdf**	**12 04 29.3**	**-0.2**
	comp=Z,6.7nm,1.4s						
GERES	**GERESS Array B**	**142.17**	**332**	PKP	**PKPdf**	**12 04 29.6**	**-0.6**
	comp=Z,0.2nm,0.2s,baz=75,slow=4.2,SNR=1.7						
SOKA	**Soboth**	**143.08**	**328**	*e*PKP	**PKPdf**	**12 04 32.1**	**+0.3**
	comp=Z,12nm,1.4s						
OBKA	**Obir**	**143.44**	**329**	*e*PKP	**PKPdf**	**12 04 33.0**	**+0.5**
	comp=Z,17nm,1.7s						
WTTA	**Wattenberg**	**144.27**	**332**	*e*PKP	**PKPdf**	**12 04 32.9**	**-1.2**
	comp=Z,4.2nm,0.8s						
MOTA	**Moosalm**	**144.45**	**332**	*e*PKP	**PKPdf**	**12 04 33.5**	**-0.8**
	comp=Z,2.9nm,0.7s						
FETA	**Feichten**	**144.86**	**332**	*e*PKP	**PKPdf**	**12 04 34.2**	**-0.9**
	comp=Z,7.1nm,0.9s						
DAVA	**Damuels**	**145.03**	**333**	*e*PKP	**PKPdf**	**12 04 34.7**	**-0.7**
	comp=Z,11nm,0.9s						
TORD	**Torodi Ar. Bea**	**165.95**	**255**	PKP	**PKPdf**	**12 05 02.8**	**-0.9**
	comp=Z,1.4nm,1.0s,baz=142,slow=2.8,SNR=5.2						

IDC 08 11:45:55.5±19.0, 36°.22S×98°.28W, h0^{km}, mb3.8/3, mbtmp3.8/3, MS3.5/3, Error ellipse: s-maj=552.9km s-min=48.1km az=7.0, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**16.04**	**87**	T	T	12 06 16.0	
	baz=254						
H03S1	**Juan Fernandez**	**16.05**	**87**	T	T	12 06 15.8	
	baz=254						
H03S3	**Juan Fernandez**	**16.05**	**87**	T	T	12 06 15.3	
	baz=254						
H03N2	**Juan Fernandez**	**16.13**	**86**	T	T	12 06 12.8	
	baz=247,slow=73						
H03N3	**Juan Fernandez**	**16.13**	**86**	T	T	12 06 14.1	
	baz=247,slow=73						
H03N1	**Juan Fernandez**	**16.15**	**86**	T	T	12 06 13.8	
	baz=247,slow=73						
NNA	**Nana**	**30.92**	**44**	LR	LR	12 01 24.7	
	comp=Z,66nm,21.4s,baz=252,slow=30						
LPAZ	**La Paz**	**33.33**	**61**	P	P	11 52 36.0	0.0
	2.5nm,0.8s,baz=200,slow=6.5,SNR=6.6						
LPAZ				LR	LR	12 02 39.4	
	comp=Z,75nm,20.1s,baz=180,slow=30 2.5nm,0.8s						
SIV	**San Ignacio**	**38.70**	**68**	LR	LR	12 07 32.3	
	comp=Z,77nm,18.9s,baz=196,slow=34						
NVAR	**Mina Array Bea**	**76.55**	**344**	P	P	11 57 48.1	+0.5
	0.4nm,0.7s,baz=170,slow=5.5,SNR=4.4 0.4nm,0.7s						
PDAR	**Pinedale Array**	**79.28**	**352**	P	P	11 58 02.3	-0.5
	0.5nm,0.7s,baz=161,slow=6.0,SNR=4.6 0.5nm,0.7s						
MKAR	**Makanchi Array**	**169.43**	**358**	PKPab	PKPab	12 07 16.9	-0.3
	0.3nm,0.9s,baz=29,slow=3.3,SNR=2.0						

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*BJI **08** 11:51:53.7±0.0, 31°.54N×142°.26E, h5^{km}, mb4.4/48, mB4.7/34, Ms4.5/41, Ms7 4.3/38*

*MOS **08** 11:51:58.0±1.5, 31°.78N×142°.01E, h10^{km}, mb4.7/27, MS4.0/4, Error ellipse: s-maj=10.1km s-min=5.1km az=99.7*

*IDC **08** 11:51:58.6±0.6, 31°.66N×141°.88E, h0^{km}, mb4.2/21, mbtmp4.2/27, ML3.6/5, MS3.9/49, Error ellipse: s-maj=16.1km s-min=13.5km az=74.0*

*NIED **08** 11:52:00.9, 31°.67N×141°.91E, h55^{km}, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}1.34; $M_{\theta\theta}$-0.11; $M_{\phi\phi}$-1.23; $M_{r\theta}$-0.39; $M_{\theta\phi}$0.33; $M_{\phi r}$0.57; Fault plane solution: $M_0$1.50000×10^{16} NP1: ϕ_s336.00000°, δ59.00000°, λ81.00000°. NP2: ϕ_s173.00000°, δ32.00000°, λ104.00000°.*

*NEIC **08** 11:52:00.1±1.3, 31°.68N±0°.06×142°.0E±0°.1, h10^{km}±1^{km}, mb4.7/60 Error ellipse: s-maj=14.8km s-min=10.1km az=73.0*

*JMA **08** 11:52:00.9±0.3, 31°.7N±0°.8×14°2E±°, h55^{km}, MV4.4/23, NEAR TORISHIMA IS*

*GCMT **08** 11:52:04.1±0.4, 31°.51N±0°.04×141°.98E±0°.02, h20^{km}±1^{km}, MW4.8/76, Moment Tensor Solution. s15,c19; s76,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.29±.16; $M_{\theta\theta}$-0.23±.08; $M_{\phi\phi}$-2.06±.11; $M_{r\theta}$0.41±.20; $M_{\theta\phi}$0.24±.06; $M_{\phi r}$0.65±.18; Best double couple: $M_0$2.31300×10^{16} NP1: ϕ_s4.00000°, δ54.00000°, λ102.00000°. NP2: ϕ_s163.00000°, δ38.00000°, λ74.00000°. Principal axes: T 2.4560, Plg77.0000°, Azm317.0000°; N -0.2870, Plg10.0000°, Azm176.0000°; P -2.1710, Plg8.0000°, Azm85.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 11:52:02.4±0.4, 31°.63N±0°.04×141°.97E±0°.05, h29^{km}, n224, $\sigma 1^{s}87$/205, mb4.6/69, MS4.1/61, 11C-3D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**2.05**	**295**	A	A	11 52 32.9	
	comp=E,35nm,6.2s,comp=E,20nm,6.3s						
JHCJ	**Hachijojimakas**	**2.34**	**309**	A	A	11 52 37.0	
	comp=E,10.0nm,5.2s,comp=E,7.0nm,4.9s						
JHJ2	**Mitsune**	**2.35**	**310**	Pn	**Pn**	**11 52 37.1**	**-2.0**
JHJ2	**Mitsune**	**2.35**	**310**	A	A	11 52 37.2	
	comp=E,12nm,6.4s,comp=E,10.0nm,5.5s						
JHJ	**Hachijo jima 2**	**2.38**	**309**	Pn	**Pn**	**11 52 37.0**	**-2.4**
	80nm,0.3s,baz=63,slow=21,SNR=20						
JHJ				Sn	**Sn**	**11 53 02.5**	**-5.1**
	96nm,0.3s,baz=86,slow=23,SNR=8.0						
JHJ				LR	LR	11 53 42.8	
	comp=Z,3µm,18.9s,baz=123,slow=46 190nm,0.3s						
JMKN	**Mikurajimanish**	**3.02**	**319**	A	A	11 52 46.6	
	comp=E,11nm,8.7s,comp=E,15nm,6.2s						
JOD2	**Odawara 2**	**4.36**	**327**	P	**Pn**	**11 53 05.0**	**-1.7**
JSG	**Sagara**	**4.40**	**315**	Pn	**Pn**	**11 53 05.5**	**-1.7**
CBIJ	**Chichi jima**	**4.52**	**178**	P	**Pn**	**11 53 09.3**	**+0.4**
CBIJ				*e*S	**Sn**	**11 53 59.5**	**-1.0**
JCJ	**Chichijima**	**4.52**	**178**	Pn	**Pn**	**11 53 10.7**	**+1.7**
	131nm,0.3s,baz=293,slow=20,SNR=14						
JCJ				Sn	**Sn**	**11 53 58.5**	**-1.9**
	10nm,0.3s,baz=281,slow=22,SNR=1.2						
JCJ				LR	LR	11 54 39.7	
	comp=Z,711nm,21.5s,baz=36,slow=35						
JCJ	**Chichijima**	**4.52**	**178**	Pn	**Pn**	**11 53 09.2**	**+0.3**
JHU	**Hanno**	**4.78**	**333**	*e*P	**Pn**	**11 53 10.5**	**-1.9**
JHU				*e*S	**Sn**	**11 54 03.4**	**-3.4**
JYT	**Yasato**	**4.82**	**343**	*e*S	**Sn**	**11 54 06.5**	**-1.4**
JHO	**Hitachi**	**5.11**	**347**	P	**Pn**	**11 53 15.4**	**-1.6**
JAG	**Ashikaga**	**5.22**	**337**	*e*P	**Pn**	**11 53 18.1**	**-0.5**
JGF	**Kuroka**	**5.53**	**317**		**Pn**	**11 53 23.8**	**+1.0**
INU	**Inuyama**	**5.56**	**313**	Pn	**Pn**	**11 53 22.4**	**-0.8**
MJAR	**Matsushiro Arr**	**5.81**	**329**	Pn	**Pn**	**11 53 26.2**	**-0.5**
	0.9nm,0.3s,baz=159,slow=13,SNR=40						
MJAR				Sn	**Sn**	**11 54 30.7**	**-1.8**
	baz=162,slow=19						
MJAR				LR	LR	11 55 51.7	
	comp=Z,1µm,18.1s,baz=128,slow=40 6.2nm,0.5s						
MAJO	**Matsushiro**	**5.81**	**329**		**Pn**	**11 53 25.0**	**-1.7**
MAJO	**Matsushiro**	**5.81**	**329**	*i* P	**Pn**	**11 53 25.1**	**-1.7**
MJB9	**Matsu-Tunnel**	**5.82**	**329**		**Pn**	**11 53 25.4**	**-1.4**
JMM	**Marumori**	**6.30**	**351**		**Pn**	**11 53 31.6**	**-1.8**
JSD	**Sado**	**7.09**	**336**	Pn	**Pn**	**11 53 42.9**	**-1.3**
JMN	**Monobe**	**7.14**	**289**	Pn	**Pn**	**11 53 43.7**	**-1.2**
JTM	**Tenmabayashi**	**9.17**	**356**	Pn	**Pn**	**11 54 11.8**	**-1.0**
JNU	**Nakatsue**	**9.50**	**282**	Pn	**Pn**	**11 54 16.6**	**-0.8**
	0.2nm,0.3s,baz=112,slow=19,SNR=1.2						
JNU				LR	LR	11 57 51.3	
	comp=Z,628nm,19.1s,baz=102,slow=38 6.5nm,0.7s						
ERM	**Erimo**	**10.41**	**5**	Pn	**Pn**	**11 54 26.5**	**-3.3**
ERM	**Erimo**	**10.41**	**5**	P	**Pn**	**11 54 26.5**	**-3.3**
NMR	**Nemuro--Hokkai**	**12.10**	**13**	⇓*i*P	**Pn**	**11 54 48.5**	**-4.2**
JKA	**Kamikawa-asahi**	**12.48**	**2**	Pn	**Pn**	**11 54 55.1**	**-2.9**
ASAJ	**Asahikawa**	**12.48**	**2**	Pn	**Pn**	**11 54 55.0**	**-3.0**
	1.6nm,0.3s,baz=219,slow=13,SNR=11						
ASAJ				Sn	Sn	11 57 03.4	-13
	0.6nm,0.3s,baz=180,slow=20,SNR=1.2						
ASAJ				LR	LR	12 00 45.8	
	comp=Z,575nm,19.7s,baz=186,slow=42 3.7nm,0.3s						
RUSJ	**Misakicho**	**12.72**	**11**	*e*P	**Pn**	**11 54 57.9**	**-3.4**
YUK	**Yuzh-Kuril'sk**	**12.76**	**13**	*e*P	**Pn**	**11 54 57.2**	**-4.6**
YUK				pmax	pmax		
	comp=Z,53nm,0.8s						
YUK				pmax	pmax		
	comp=N,40nm,0.5s						
YUK				pmax	pmax		
	comp=E,41nm,0.6s						
YUK				MLR	MLR		
	comp=Z,2µm,21.0s						
SHO	**Shikotan**	**12.81**	**16**	*e*P	**Pn**	**11 54 57.9**	**-4.6**
SHO				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SHO				pmax	pmax		
	comp=E,5.0nm,0.2s						
SHO				pmax	pmax		
	comp=N,4.0nm,0.3s						
JOW	**Kunigami**	**12.88**	**252**	LR	LR	11 59 27.9	
	comp=N,495nm,20.4s,baz=114,slow=35						
KSRS	**Korea Array**	**12.96**	**300**	Pn	**Pn**	**11 55 06.0**	**+1.5**
	comp=N,0.3nm,0.3s,baz=106,slow=13,SNR=3.7						
KSRS				LR	LR	11 59 59.3	
	comp=N,848nm,18.6s,baz=110,slow=37						
KUR	**Kuril'sk**	**14.34**	**17**	*e*P	**Pn**	**11 55 19.2**	**-4.2**
USRK	**Ussuriysk Ar.**	**14.80**	**331**	LR	LR	12 01 11.0	
	comp=N,521nm,18.9s,baz=137,slow=38						
YSS	**Yuzh-Sakhalins**	**15.32**	**2**	Pn	**Pn**	**11 55 34.4**	**-2.2**
YSS	**Yuzh-Sakhalins**	**15.32**	**2**	*e*P	**Pn**	**11 55 33.8**	**-2.7**
YSS				*e*S	**Sn**	**11 58 25.6**	**+0.4**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS				MLR	MLR		
	comp=Z,1µm,15.0s						
MDJ	**Mudanjiang**	**16.20**	**327**	P	**Pn**	**11 55 46.4**	**-1.4**
MDJ				pP	P	11 55 48.9	-1.8
MDJ				sP	pP	11 55 50.5	-6.1
MDJ				PP	**PnPn**	**11 55 54.4**	**-2.5**
MDJ				S	**Sn**	**11 58 51.2**	**+4.7**
MDJ				SS	**SnSn**	**11 59 05.5**	**+5.8**
MDJ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,120nm,4.9s						
MDJ				LR	LR		
	comp=Z,870nm,13.8s						
MDJ				LR	LR		
	comp=Z,610nm,13.7s						
MDJ				LR	LR		
	comp=Z,1µm,14.8s						
SSE	**Sheshan**	**17.76**	**274**	P	**Pn**	**11 56 06.0**	**-1.6**
SSE				S	**Sn**	**11 59 23.8**	**-0.9**
SSE				pmax	pmax		
	comp=Z,16nm,0.7s						
SSE				pmax	pmax		
	comp=Z,150nm,7.1s						
SSE				LR	LR		
	comp=Z,200nm,11.0s						
SSE				LR	LR		
	comp=Z,150nm,11.2s						
SNY	**Shenyang**	**17.89**	**310**	⇓P	**Pn**	**11 56 08.0**	**-1.0**
SNY				S	**Sn**	**11 59 28.1**	**+0.6**
SNY				pmax	pmax		
	comp=Z,23nm,1.1s						
SNY				pmax	pmax		
	comp=Z,230nm,5.8s						
SNY				LR	LR		
	comp=Z,490nm,13.4s						
SNY				LR	LR		
	comp=Z,830nm,12.6s						
SNY				LR	LR		
	comp=Z,960nm,14.1s						
BNX	**BinXian**	**18.07**	**325**	⇓P	**Pn**	**11 56 10.2**	**-1.0**
BNX				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BNX				pmax	pmax		
	comp=Z,120nm,4.1s						
DL2	**Dalian**	**18.11**	**299**	P	**P**	**11 56 15.0**	**+3.0**
DL2				pmax	pmax		
	comp=Z,18nm,1.0s						
DL2				pmax	pmax		
	comp=Z,190nm,7.4s						
DL2				LR	LR		
	comp=Z,1µm,14.4s						
DL2				LR	LR		
	comp=Z,550nm,15.8s						
DL2				LR	LR		
	comp=Z,1µm,13.9s						
GUMO	**Guam**	**18.15**	**171**	P	**Pn**	**11 56 13.3**	**+0.9**
GUMO	**Guam**	**18.15**	**171**	P	**Pn**	**11 56 13.3**	**+0.9**
GUMO				pmax	pmax		
	comp=Z,218nm,1.2s						
YOJ	**Yonaguni jima**	**18.18**	**252**	P	**Pn**	**11 56 10.8**	**-2.0**
YOJ				IAmb	IAmb	11 56 31.9	
	comp=Z,112nm,1.2s						
YOJ	**Yonaguni jima**	**18.18**	**252**	P	**Pn**	**11 56 10.8**	**-2.0**
YOJ				pmax	pmax		
	comp=Z,112nm,1.2s						
KLR	**Kul'dur**	**19.20**	**339**	P	**P**	**11 56 22.2**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=134,slow=11,SNR=12 comp=Z,4.2nm,1.0s						
KLR	**Kul'dur**	**19.20**	**339**	*ce*P	**P**	**11 56 22.6**	**-1.2**
KLR				pmax	pmax		
	comp=Z,7.0nm,1.3s						
YHNB	**Yeheng**	**19.42**	**254**	P	**P**	**11 56 24.8**	**-1.8**
YHNB				IAmb	IAmb	11 56 30.3	
	comp=Z,90nm,1.5s						
GRNR	**Gornyy**	**19.57**	**349**	⇑*i*P	**Pn**	**11 56 28.8**	**-0.5**
GRNR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NJ2	**Nanjing**	**19.64**	**277**	*e*P	**P**	**11 56 28.1**	**-0.7**
NJ2				pP	**Pn**	**11 56 30.5**	**+0.1**
NJ2				sP	**pP**	**11 56 33.2**	**-1.6**
NJ2				S	**Sn**	**12 00 10.5**	**+0.4**
NJ2				sS	**sS**	**12 00 19.4**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,140nm,4.4s						
NJ2				LR	LR		
	comp=Z,630nm,13.3s						
NJ2				LR	LR		
	comp=Z,360nm,10.9s						
NJ2				LR	LR		
	comp=Z,520nm,14.7s						
YULB	**Yu-li**	**20.07**	**251**	P	**P**	**11 56 32.9**	**-0.7**
YULB				IAmb	IAmb	11 57 00.2	
	comp=Z,26nm,0.9s						
SSLB	**Suanglung**	**20.16**	**252**	P	**P**	**11 56 34.8**	**+0.2**
SSLB				IAmb	IAmb	11 56 35.9	
	comp=Z,69nm,1.4s						
HNS	**HongShan**	**23.15**	**292**	⇑P	**P**	**11 57 04.8**	**-1.6**
HNS				S	**S**	**12 01 11.4**	**-4.6**
HNS				pmax	pmax		
	comp=Z,120nm,6.7s						
HNS				LR	LR		
	comp=Z,840nm,16.3s						
HNS				LR	LR		
	comp=Z,1µm,16.3s						
HNS				LR	LR		
	comp=Z,1µm,15.9s						
WHN	**Wuhan**	**23.66**	**275**	⇑P	**P**	**11 57 10.3**	**-1.2**
WHN				PP	**PnPn**	**11 57 43.8**	**+4.6**
WHN				LR	LR		
	comp=Z,670nm,12.2s						
WHN				LR	LR		
	comp=Z,3µm,13.8s						
WHN				LR	LR		
	comp=Z,3µm,15.1s						
XLT	**XiLinHaoTe**	**23.75**	**308**	*e*P	**P**	**11 57 10.4**	**-1.9**
XLT				S	**S**	**12 01 27.3**	**+1.5**
XLT				sS	pS	12 01 29.9	-2.9
XLT				pmax	pmax		
	comp=Z,4.0nm,0.8s						
XLT				LR	LR		
	comp=Z,600nm,15.0s						
XLT				LR	LR		
	comp=Z,560nm,15.5s						
PETK	**Petropavlovsk-**	**24.31**	**23**	LR	LR	12 07 26.4	
	comp=Z,350nm,20.5s,baz=215,slow=38						
ZEA	**Zeya**	**24.51**	**339**	*e*P	**P**	**11 57 19.7**	**+0.6**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=N,30nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**25.85**	**115**	T	T	12 25 27.9	
	baz=305						
H11S1	**WAKE ISLAND Hy**	**25.85**	**114**	T	T	12 25 10.8	
	baz=305						
H11S2	**WAKE ISLAND Hy**	**25.87**	**114**	T	T	12 25 22.5	
	baz=305						
HHC	**Hu-ho-hao-te**	**26.09**	**299**	*e*P	**P**	**11 57 34.4**	**+0.7**
HHC				S	**S**	**12 02 06.8**	**+3.5**
HHC				sS	pS	12 02 12.6	+1.9
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,5.7s						
HHC				LR	LR		
	comp=Z,740nm,13.5s						
HHC				LR	LR		
	comp=Z,1µm,13.1s						
HHC				LR	LR		
	comp=Z,2µm,13.2s						
BTO	**Baotou**	**27.20**	**298**	*e*P	**P**	**11 57 39.0**	**-4.8**
BTO				pmax	pmax		
	comp=Z,13nm,0.6s						
BTO				pmax	pmax		
	comp=Z,310nm,6.6s						
BTO				LR	LR		
	comp=Z,3µm,16.5s						
BTO				LR	LR		
	comp=Z,2µm,19.9s						
XAN	**Xi'an**	**27.81**	**284**	P	**P**	**11 57 46.6**	**-2.6**
XAN				sP	pP	11 57 53.2	-2.5
XAN				S	**S**	**12 02 28.7**	**-1.8**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,67nm,4.0s						
XAN				LR	LR		
	comp=Z,450nm,12.5s						
XAN				LR	LR		
	comp=Z,280nm,12.9s						
XAN				LR	LR		
	comp=Z,330nm,13.1s						
MA2	**Magadan**	**28.57**	**9**	LR	LR	12 12 35.6	
	comp=Z,98nm,18.8s,baz=182,slow=43						
DAV	**Davao City (W)**	**28.83**	**216**	LR	LR	12 07 53.8	
	comp=Z,207nm,20.9s,baz=9.0,slow=33						
ULN	**Ulaanbaatar**	**31.04**	**312**	P	**P**	**11 58 17.7**	**-0.1**
ULN	**Ulaanbaatar**	**31.04**	**312**	P	**P**	**11 58 17.7**	**-0.1**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SHEM	**Shemya Is, Ala**	**31.40**	**38**	LR	LR	12 09 01.7	
	comp=Z,275nm,21.1s,baz=62,slow=33						
SONM	**Songino Array**	**31.45**	**311**	P	**P**	**11 58 22.1**	**+0.7**
	comp=Z,2.0nm,0.6s,baz=126,slow=8.5,SNR=18						
SONM				LR	LR	12 11 43.6	
	comp=Z,405nm,18.5s,baz=89,slow=38 comp=Z,2.0nm,0.6s						
SONM	**Songino Array**	**31.45**	**311**	P	**P**	**11 58 20.4**	**-1.0**
SONM				IAmb	IAmb	11 58 27.8	
	comp=Z,14nm,1.5s						
SONM	**Songino Array**	**31.45**	**311**	P	**P**	**11 58 20.4**	**-1.0**
SONM				pmax	pmax		
	comp=Z,14nm,1.5s						
QIZ	**Qiongzhong**	**31.51**	**254**	P	**P**	**11 58 20.8**	**-1.3**
QIZ				S	**S**	**12 03 29.4**	**+0.7**
QIZ				sS	**sS**	**12 03 40.5**	**+0.6**
QIZ				LR	LR		
	comp=Z,340nm,13.5s						
QIZ				LR	LR		
	comp=Z,350nm,17.5s						
QIZ				LR	LR		
	comp=Z,250nm,14.9s						
LZH	**Lanzhou**	**31.84**	**289**	*e*P	**P**	**11 58 21.4**	**-3.6**
LZH				sP	pP	11 58 32.0	+0.5
LZH				pmax	pmax		
	comp=Z,12nm,1.1s						
SEY	**Seymchan**	**32.02**	**9**	P	**P**	**11 58 27.7**	**+1.7**
	comp=Z,1.7nm,0.5s,baz=221,slow=20,SNR=4.1 comp=Z,1.7nm,0.5s						
SEY	**Seymchan**	**32.02**	**9**	*i* P	**P**	**11 58 27.5**	**+1.4**
SEY				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GTA	**Gaotai**	**34.93**	**295**	*e*P	**P**	**11 58 52.4**	**+0.5**
GTA				pP	pP	11 58 57.0	-1.4
GTA				sP	sP	11 58 59.4	-1.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				LR	LR		
	comp=Z,360nm,16.3s						
GTA				LR	LR		
	comp=Z,510nm,15.9s						
GTA				LR	LR		
	comp=Z,500nm,17.5s						

KMI	**Kunming**	**34.98**	**269**	⇑P	P	11 58 47.9	-4.7
KMI				S	**S**	**12 04 31.8**	**+8.8**
KMI				pmax	pmax		
	comp=Z,11nm,0.9s						
KMI				LR	LR		
	comp=Z,170nm,14.2s						
KMI				LR	LR		
	comp=Z,450nm,15.5s						
KMI				LR	LR		
	comp=Z,510nm,15.0s						
PZH	**PanZhiHua**	**35.39**	**272**	P	**P**	**11 58 57.2**	**+1.2**
PZH				S	**S**	**12 04 30.7**	**+1.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,100nm,5.7s						
PZH				LR	LR		
	comp=Z,220nm,13.8s						
PZH				LR	LR		
	comp=Z,250nm,15.0s						
PZH				LR	LR		
	comp=Z,250nm,14.9s						
FAKI	**Fak Fak**	**35.58**	**197**	P	**P**	**11 58 56.7**	**-0.7**
FAKI				IAmb	IAmb	11 59 13.9	
	comp=Z,21nm,1.4s						
KRVT	**Keravat (AS076**	**36.99**	**163**	LR	LR	12 13 41.7	
	comp=Z,76nm,19.9s,baz=83,slow=35						
TNCH	**TengChong**	**38.62**	**271**	P	**P**	**11 59 22.0**	**-1.5**
TNCH				S	**S**	**12 05 17.5**	**-0.8**
TNCH				sS	pS	12 05 25.0	-1.3
TNCH				pmax	pmax		
	comp=Z,86nm,3.5s						
TNCH				LR	LR		
	comp=Z,210nm,13.1s						
TNCH				LR	LR		
	comp=Z,240nm,16.5s						
TNCH				LR	LR		
	comp=Z,240nm,15.3s						
CRAI	**Chiangrai**	**38.88**	**263**	P	**P**	**11 59 25.7**	**+0.1**
GOMU	**GeErMu**	**39.10**	**290**	P	**P**	**11 59 26.2**	**-1.4**
GOMU				pP	pP	11 59 30.7	-3.6
GOMU				sP	sP	11 59 33.1	-4.0
GOMU				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GOMU				pmax	pmax		
	comp=Z,44nm,4.3s						
GOMU				LR	LR		
	comp=Z,220nm,16.5s						
GOMU				LR	LR		
	comp=Z,110nm,16.4s						
GOMU				LR	LR		
	comp=Z,150nm,15.1s						
BILL	**Bilibino**	**39.11**	**14**	⇑*e*P	**P**	**11 59 26.4**	**-0.4**
BILL				*e*		12 00 57.9	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,148nm,19.0s						
PHRA	**Phrae**	**39.77**	**261**	P	**P**	**11 59 31.9**	**-1.1**
TIXI	**Tiksi**	**40.70**	**354**	P	**P**	**11 59 38.9**	**-1.0**
	comp=Z,0.9nm,0.4s,baz=90,slow=12,SNR=5.2						
	comp=Z,0.9nm,0.4s						
TIXI	**Tiksi**	**40.70**	**354**	P	**P**	**11 59 40.0**	**0.0**
TIXI	**Tiksi**	**40.70**	**354**	*i* P	**P**	**11 59 40.9**	**+0.9**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CHTO	**Chiang Mai**	**40.72**	**262**	P	**P**	**11 59 39.0**	**-1.8**
CHTO	**Chiang Mai**	**40.72**	**262**	P	**P**	**11 59 39.0**	**-1.8**
CMAR	**Chiang Mai Arr**	**40.88**	**262**	P	**P**	**11 59 40.1**	**-2.0**
	comp=Z,1.0nm,0.3s,baz=56,slow=7.5,SNR=4.5						
CMAR				LR	LR	12 18 03.5	
	comp=Z,141nm,18.4s,baz=65,slow=38						
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**40.88**	**262**	*i* P	**P**	**11 59 43.2**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WMQ	**Urumqi**	**43.90**	**302**	*e*P	**P**	**12 00 06.7**	**+0.2**
WMQ				pP	pP	12 00 12.5	-0.6
WMQ				sP	sP	12 00 14.1	-1.7
WMQ				PcP	**PcP**	**12 01 54.4**	**+2.1**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WMQ				LR	LR		
	comp=Z,400nm,19.7s						
WMQ				LR	LR		
	comp=Z,220nm,18.3s						
WMQ				LR	LR		
	comp=Z,270nm,25.7s						
DGZ	**Jazzator, Alta**	**44.10**	**311**	*i* P	**P**	**12 00 08.0**	**-0.1**
DGZ				pmax	pmax		
	comp=Z,12nm,0.9s						
HNR	**Honiara**	**44.30**	**154**	LR	LR	12 15 57.6	
	comp=Z,2µm,21.7s,baz=126,slow=32						
BRDH	**Bariadhala**	**45.33**	**272**	LR	LR	12 21 12.1	
	comp=Z,121nm,18.6s,baz=353,slow=39						
COEN	**Coen**	**45.34**	**178**	P	**P**	**12 00 17.6**	**-0.5**
COEN				IAmb	IAmb	12 00 23.8	
	comp=Z,18nm,1.2s						
MTN	**Manton Dam**	**45.42**	**195**	P	**P**	**12 00 19.4**	**+0.6**
MTN				IAmb	IAmb	12 00 31.5	
	comp=Z,8.7nm,0.7s						
ZAA0	**Zalesovo Array**	**46.02**	**316**	P	**P**	**12 00 22.1**	**-1.0**
ZALV	**Zalesovo Beam**	**46.02**	**316**	P	**P**	**12 00 22.9**	**-0.2**
	comp=Z,1.5nm,0.5s,baz=97,slow=8.4,SNR=8.8						
ZALV				PcP	**PcP**	**12 01 59.8**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=76,slow=3.3,SNR=2.4						
ZALV				LR	LR	12 20 20.8	
	comp=Z,225nm,18.5s,baz=92,slow=37						
	comp=Z,1.5nm,0.5s						
ZALV	**Zalesovo Beam**	**46.02**	**316**	P	**P**	**12 00 22.7**	**-0.5**
ZALV	**Zalesovo Beam**	**46.02**	**316**	*i* P	**P**	**12 00 23.2**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MK31	**Makanchi Array**	**47.55**	**306**	P	**P**	**12 00 35.4**	**+0.2**
MK31				IAmb	IAmb	12 00 56.3	
	comp=Z,4.3nm,0.9s						
MK31	**Makanchi Array**	**47.55**	**306**	P	**P**	**12 00 35.4**	**+0.2**
MK31				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MKAR	**Makanchi Array**	**47.55**	**306**	P	**P**	**12 00 35.1**	**-0.1**
	comp=Z,2.0nm,0.5s,baz=90,slow=9.6,SNR=32						
MKAR				LR	LR	12 21 26.7	
	comp=Z,172nm,19.0s,baz=94,slow=37						
	comp=Z,2.0nm,0.5s						
MKAR	**Makanchi Array**	**47.55**	**306**	P	**P**	**12 00 35.7**	**+0.5**
MKAR	**Makanchi Array**	**47.55**	**306**	*c i*P	**P**	**12 00 35.0**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MAKZ	**Makanchi**	**47.76**	**307**	P	**P**	**12 00 36.8**	**-0.1**
MAKZ				IAmb	IAmb	12 00 49.5	
	comp=Z,11nm,1.4s						
MAKZ	**Makanchi**	**47.76**	**307**	P	**P**	**12 00 36.8**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,11nm,1.4s						
NRIK	**Noril'sk**	**48.39**	**337**	P	**P**	**12 00 41.1**	**-0.3**
	comp=Z,2.8nm,0.5s,baz=118,slow=7.7,SNR=5.0						
	comp=Z,2.8nm,0.5s						
NRIK	**Noril'sk**	**48.39**	**337**	P	**P**	**12 00 41.1**	**-0.3**
NRIK				IAmb	IAmb	12 00 45.0	
	comp=Z,3.5nm,0.7s						
KNRA	**Kununurra**	**48.71**	**197**	P	**P**	**12 00 45.5**	**+1.1**
KURK	**Kurchatov**	**49.76**	**312**	P	**P**	**12 00 51.6**	**-0.5**
KURK				IAmb	IAmb	12 00 53.3	
	comp=Z,12nm,0.9s						
KURK	**Kurchatov**	**49.76**	**312**	P	**P**	**12 00 51.6**	**-0.5**
KURK				pmax	pmax		
	comp=Z,12nm,0.9s						
KURBB	**Kurchatov Arra**	**49.82**	**312**	P	**P**	**12 00 52.0**	**-0.5**
	comp=Z,6.8nm,0.8s,baz=88,slow=7.5,SNR=45						
	comp=Z,6.8nm,0.8s						
KDAK	**Kodiak Island**	**50.91**	**39**	LR	LR	12 21 01.7	
	comp=Z,178nm,21.4s,baz=274,slow=34						
IMAR	**Indian Mountai**	**51.12**	**28**	P	**P**	**12 01 02.3**	**+0.1**
H21K	**Melozitna Rive**	**51.46**	**29**	IAmb	IAmb	12 01 20.6	
	comp=Z,9.9nm,1.2s						
CTA	**Charters Tower**	**51.58**	**175**	LR	LR	12 20 21.3	
	comp=Z,51nm,20.9s,baz=232,slow=33						
WB0	**Warramunga Arr**	**51.61**	**189**	P	**P**	**12 01 06.4**	**+0.1**
WR0	**Warramunga Arr**	**51.78**	**189**	P	**P**	**12 01 08.1**	**+0.5**
WRAB	**Tennant Creek**	**51.78**	**189**	P	**P**	**12 01 08.4**	**+0.8**
WRAB	**Tennant Creek**	**51.78**	**189**	P	**P**	**12 01 08.4**	**+0.8**
WRAB				pmax	pmax		
	comp=Z,11nm,0.7s						
WB2	**Warramunga Arr**	**51.79**	**189**	P	**P**	**12 01 08.0**	**+0.4**
WB2				IAmb	IAmb	12 01 20.2	
	comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**51.79**	**189**	P	**P**	**12 01 07.7**	**0.0**
	comp=Z,7.1nm,0.6s,baz=3.4,slow=7.6,SNR=90						
WRA				LR	LR	12 22 15.1	
	comp=Z,133nm,19.0s,baz=350,slow=35						
	comp=Z,7.1nm,0.6s						
WRA	**Warramunga Arr**	**51.79**	**189**	P	**P**	**12 01 08.2**	**+0.5**
WRA	**Warramunga Arr**	**51.79**	**189**	P	**P**	**12 01 08.2**	**+0.5**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**51.86**	**200**	P	**P**	**12 01 09.2**	**+1.0**
KNK	**Knik Glacier**	**53.08**	**34**	P	**P**	**12 01 16.8**	**0.0**
KNK				IAmb	IAmb	12 01 24.3	
	comp=Z,17nm,1.3s						
KSH	**Kashi**	**53.20**	**298**	P	**P**	**12 01 22.0**	**+3.8**
KSH				LR	LR		
	comp=Z,380nm,17.2s						
KSH				LR	LR		
	comp=Z,170nm,13.7s						
KSH				LR	LR		
	comp=Z,440nm,17.2s						
AAK	**Ala-Archa**	**53.61**	**302**	LR	LR	12 26 18.8	
	comp=Z,192nm,18.2s,baz=72,slow=38						
AAK	**Ala-Archa**	**53.61**	**302**	P	**P**	**12 01 21.3**	**+0.1**
AAK	**Ala-Archa**	**53.61**	**302**	P	**P**	**12 01 21.3**	**+0.1**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILAR	**Eielson Array**	**53.87**	**30**	P	**P**	**12 01 22.9**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=267,slow=5.6,SNR=15						
ILAR				LR	LR	12 22 05.0	
	comp=Z,40nm,21.9s,baz=258,slow=34						
	comp=Z,0.8nm,0.7s						
BRVK	**Borovoye**	**54.70**	**315**	P	**P**	**12 01 28.8**	**0.0**
BRVK	**Borovoye**	**54.70**	**315**	P	**P**	**12 01 28.8**	**0.0**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
AS31	**Alice Springs**	**55.52**	**189**	P	**P**	**12 01 35.7**	**+0.8**
AS31				IAmb	IAmb	12 01 49.1	
	comp=Z,4.0nm,0.6s						
ASAR	**Alice Springs**	**55.52**	**189**	P	**P**	**12 01 35.3**	**+0.3**
	comp=Z,2.6nm,0.5s,baz=4.7,slow=6.4,SNR=69						
ASAR				LR	LR	12 23 60.0	
	comp=Z,185nm,20.7s,baz=326,slow=35						
	comp=Z,2.6nm,0.5s						
ASAR	**Alice Springs**	**55.52**	**189**	P	**P**	**12 01 35.6**	**+0.6**
ASAR	**Alice Springs**	**55.52**	**189**	P	**P**	**12 01 35.6**	**+0.6**
KK31	**Karatay Array**	**56.36**	**303**	P	**P**	**12 01 40.1**	**-0.8**
KK31				IAmb	IAmb	12 01 42.9	
	comp=Z,4.8nm,0.8s						
KK31	**Karatay Array**	**56.36**	**303**	P	**P**	**12 01 40.1**	**-0.8**
KK31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KKAR	**Karatay Array**	**56.36**	**303**	P	**P**	**12 01 40.3**	**-0.6**
KKAR	**Karatay Array**	**56.36**	**303**	P	**P**	**12 01 40.3**	**-0.6**
NIL	**Nilore**	**56.90**	**292**	P	**P**	**12 01 43.7**	**-1.2**
NIL				IAmb	IAmb	12 01 47.3	
	comp=Z,8.8nm,0.8s						
NIL	**Nilore**	**56.90**	**292**	P	**P**	**12 01 43.7**	**-1.2**
NIL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
DAWY	**Dawson**	**57.14**	**31**	P	**P**	**12 01 45.4**	**-0.7**
DAWY				IAmb	IAmb	12 02 12.1	
	comp=Z,6.4nm,1.3s						
EPYK	**Eagle Plains**	**58.03**	**28**	P	**P**	**12 01 52.7**	**+0.4**
EPYK				IAmb	IAmb	12 01 59.7	
	comp=Z,9.0nm,0.9s						
DZM	**Mont Dzumac**	**58.31**	**153**	*e*LR	LR	12 19 02.9	
	comp=Z,141nm,20.8s						
DZM	**Mont Dzumac**	**58.31**	**153**	LR	LR	12 26 34.8	
	comp=Z,132nm,19.5s,baz=30,slow=36						
CHGR	**Chuyangaron**	**58.54**	**299**	P	**P**	**12 01 56.1**	**-0.3**
CHGR	**Chuyangaron**	**58.54**	**299**	P	**P**	**12 01 56.1**	**-0.3**
CHGR				pmax	pmax		
	comp=Z,17nm,0.8s						
INK	**Inuvik**	**59.02**	**26**	P	**P**	**12 01 59.8**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=253,slow=1.8,SNR=5.0						
	comp=Z,0.9nm,0.5s						
KBL	**Kabul**	**59.92**	**294**	P	**P**	**12 02 05.3**	**-0.9**
KBL	**Kabul**	**59.92**	**294**	P	**P**	**12 02 05.3**	**-0.9**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ARU	**Arti**	**60.77**	**321**	LR	LR	12 30 18.5	
	comp=Z,110nm,20.2s,baz=83,slow=38						
ARU	**Arti**	**60.77**	**321**	P	**P**	**12 02 11.1**	**-0.3**
ARU				IAmb	IAmb	12 02 36.6	
	comp=Z,5.3nm,0.9s						
ARU	**Arti**	**60.77**	**321**	*c i*P	**P**	**12 02 11.8**	**+0.4**
ARU						12 04 20.1	
ARU				S	**S**	**12 10 30.6**	**+4.1**
ARU				SS	**SS**	**12 14 32.9**	**+7.9**
ARU				pmax	pmax		
	comp=Z,14nm,2.0s						
A36M	**Sachs Harbour**	**61.12**	**21**	P	**P**	**12 02 13.5**	**0.0**
A36M				IAmb	IAmb	12 02 20.7	
	comp=Z,4.4nm,0.9s						
PALK	**Pallekele**	**61.81**	**261**	LR	LR	12 30 44.0	
	comp=Z,59nm,19.4s,baz=196,slow=38						
ABKAR	**Akbulak array**	**61.85**	**313**	P	**P**	**12 02 18.4**	**-0.4**
ABKAR	**Akbulak array**	**61.85**	**313**	P	**P**	**12 02 18.5**	**-0.3**
ABKAR				IAmb	IAmb	12 02 21.1	
	comp=Z,3.6nm,0.6s						
C36M	**Paulatuk**	**62.16**	**24**	P	**P**	**12 02 20.8**	**+0.3**
C36M				IAmb	IAmb	12 02 22.2	
	comp=Z,2.6nm,0.8s						
AFI	**Afiamalu**	**63.37**	**128**	LR	LR	12 26 03.7	
	comp=Z,164nm,19.1s,baz=34,slow=32						
FORT	**Forrest**	**63.45**	**193**	P	**P**	**12 02 29.8**	**+0.3**
KIRV	**Kirov**	**64.88**	**325**	LR	LR	12 33 28.6	
	comp=Z,226nm,18.1s,baz=65,slow=38						
KIRV	**Kirov**	**64.88**	**325**	*ce*P	**P**	**12 02 39.9**	**+1.3**
BBB	**Bella Bella**	**65.67**	**43**	LR	LR	12 27 48.7	
	comp=Z,24nm,21.4s,baz=288,slow=33						
GEYT	**Alibeck**	**66.94**	**301**	LR	LR	12 33 35.6	
	comp=Z,148nm,18.3s,baz=82,slow=37						
RES	**Resolute Bay**	**67.72**	**14**	LR	LR	12 39 27.8	
	comp=Z,34nm,18.8s,baz=2.0,slow=42						
RES	**Resolute Bay**	**67.72**	**14**	P	**P**	**12 02 56.7**	**+0.1**
RES	**Resolute Bay**	**67.72**	**14**	P	**P**	**12 02 56.7**	**+0.1**
RES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BELG	**Belogornoye**	**68.12**	**319**	*i* P	**P**	**12 02 59.7**	**+0.3**
BELG				pmax	pmax		
	comp=Z,5.0nm,2.3s						
YKA	**Yellowknife Ar**	**68.27**	**29**	P	**P**	**12 03 00.6**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=293,slow=5.8,SNR=11						
	comp=Z,0.7nm,0.8s						
YKA	**Yellowknife Ar**	**68.27**	**29**	*ce*P	**P**	**12 03 01.3**	**+1.0**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WSAR	**Wadi Sarin**	**72.80**	**287**	LR	LR	12 39 17.4	
	comp=Z,64nm,18.2s,baz=130,slow=39						
FINES	**FINESS Array B**	**73.82**	**333**	P	**P**	**12 03 34.4**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=87,slow=6.7,SNR=7.1						
	comp=Z,1.6nm,0.6s						
FINES	**FINESS Array B**	**73.82**	**333**	*i* P	**P**	**12 03 35.7**	**+1.8**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KBZ	**Khabaz**	**74.82**	**312**	P	**P**	**12 03 41.4**	**+1.4**
	comp=Z,2.6nm,0.8s,baz=207,slow=2.1,SNR=6.8						
KBZ				LR	LR	12 37 50.3	
	comp=Z,97nm,19.0s,baz=104,slow=37						
	comp=Z,2.6nm,0.8s						
KIV	**Kislovodsk**	**74.84**	**312**	*e*P	**P**	**12 03 39.0**	**-1.3**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,88nm,18.0s						
GNI	**Garni**	**75.36**	**308**	LR	LR	12 39 37.5	
	comp=Z,98nm,18.7s,baz=80,slow=38						
RAR	**Rarotonga**	**76.64**	**125**	LR	LR	12 29 20.7	
	comp=Z,92nm,20.6s,baz=282,slow=29						
NACGM	**Naroch**	**77.51**	**328**	*e*P	**P**	**12 03 56.6**	**+1.4**
	comp=Z,6.0nm,0.8s,baz=52						
LRM	**Limekiln Ridge**	**77.71**	**44**	P	**P**	**12 03 57.0**	**+0.2**
NVAR	**Mina Array Bea**	**77.89**	**52**	P	**P**	**12 03 59.0**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=290,slow=5.8,SNR=12						
NVAR				LR	LR	12 32 50.0	
	comp=Z,123nm,20.6s,baz=296,slow=31						
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**78.88**	**323**	P	**P**	**12 04 03.1**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=51,slow=5.9,SNR=10						
AKASG				LR	LR	12 41 47.7	
	comp=Z,298nm,19.3s,baz=27,slow=38						
	comp=Z,0.8nm,0.4s						
AKBB	**Malin Array Si**	**78.88**	**323**	*ce*P	**P**	**12 04 03.9**	**+1.1**
NB2	**NORSAR Subarra**	**79.35**	**338**	P	**P**	**12 04 05.6**	**+0.3**
	comp=Z,2.4nm,0.9s,baz=41,slow=5.6						
NOA	**NORSAR Array B**	**79.35**	**338**	P	**P**	**12 04 05.3**	**0.0**
	comp=Z,1.1nm,0.7s,baz=41,slow=5.3,SNR=4.5						
NOA				LR	LR	12 44 32.0	
	comp=Z,113nm,18.7s,baz=30,slow=40						
	comp=Z,1.1nm,0.7s						
PDAR	**Pinedale Array**	**81.14**	**45**	P	**P**	**12 04 16.2**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=279,slow=1.7,SNR=9.2						
	comp=Z,0.8nm,0.7s						
SFJD	**Kangerlussuaq**	**81.22**	**5**	LR	LR	12 40 52.2	
	comp=Z,44nm,22.0s,baz=355,slow=36						
PFO	**Pinyon Flats O**	**81.68**	**56**	LR	LR	12 38 24.8	
	comp=Z,112nm,19.6s,baz=268,slow=34						
PPT	**Papeete**	**81.82**	**116**	LR	LR	12 40 54.9	
	comp=Z,118nm,18.6s,baz=180,slow=36						
PPT2	**Papeete2**	**81.83**	**116**	*e*LR	LR	12 29 57.0	
	comp=Z,126nm,22.0s						
FRB	**Frobisher Bay**	**81.92**	**13**	LR	LR	12 48 17.0	
	comp=Z,44nm,18.5s,baz=343,slow=41						
P17A	**Butcher Ranch,**	**82.29**	**48**	IAmb	IAmb	12 04 40.0	
	comp=Z,3.5nm,0.9s						
RDMU	**Red Mountain**	**82.40**	**47**	IAmb	IAmb	12 04 27.5	
	comp=Z,4.5nm,0.7s						
P18A	**Preston Nutter**	**82.51**	**48**	P	**P**	**12 04 22.9**	**-0.1**
P18A				IAmb	IAmb	12 04 31.9	
	comp=Z,3.5nm,0.8s						
SRU	**San Rafael Swe**	**82.63**	**48**	P	**P**	**12 04 23.6**	**+0.2**
SRU				IAmb	IAmb	12 04 42.1	
	comp=Z,4.1nm,0.7s						
SRU	**San Rafael Swe**	**82.63**	**48**	P	**P**	**12 04 23.6**	**+0.2**
SRU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRTR	**Keskin Array B**	**82.81**	**312**	P	**P**	**12 04 25.8**	**+1.5**
	comp=Z,1.2nm,0.8s,baz=116,slow=6.6,SNR=2.4						
BRTR				LR	LR	12 45 19.8	
	comp=Z,105nm,18.6s,baz=123,slow=39						
	comp=Z,1.2nm,0.8s						
RAYN	**Ar Rayn**	**83.17**	**293**	P	**P**	**12 04 26.3**	**0.0**
RAYN	**Ar Rayn**	**83.17**	**293**	P	**P**	**12 04 26.3**	**0.0**
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ULM	**Lac du Bonnet**	**83.76**	**33**	LR	LR	12 40 57.5	
	comp=Z,82nm,20.7s,baz=353,slow=35						
PV13	**Radium Mtn., P**	**84.27**	**48**	IAmb	IAmb	12 04 41.8	
	comp=Z,7.5nm,1.2s						
TAOE	**Nuku Hiva Isla**	**84.42**	**104**	*e*LR	LR	12 31 08.1	
	comp=Z,161nm,25.9s						
TBI	**Tubuai**	**85.36**	**121**	*e*LR	LR	12 31 33.9	
	comp=Z,2µm,23.2s						
TBI				*e*LR	LR	12 31 34.7	
	comp=Z,326nm,22.0s						
VYHS	**Vyhne**	**85.44**	**326**	*e*P	**P**	**12 04 38.8**	**+1.5**
VYHS	**Vyhne**	**85.44**	**326**	*e*P	**P**	**12 04 38.8**	**+1.5**
CLL	**Collm**	**86.02**	**331**	*e*P	**P**	**12 04 41.0**	**+1.0**
CLL	**Collm**	**86.02**	**331**	*e*P	**P**	**12 04 41.0**	**+1.0**
ANMO	**Albuquerque**	**87.71**	**50**	LR	LR	12 42 39.3	
	comp=Z,172nm,18.7s,baz=41,slow=35						
SCHQ	**Schefferville**	**90.39**	**16**	LR	LR	12 54 55.9	
	comp=Z,20nm,18.1s,baz=70,slow=42						
LPIG	**La Paz**	**91.45**	**61**	LR	LR	12 48 07.1	
	comp=Z,118nm,18.8s,baz=265,slow=37						
TX31	**Lajitas Ar. Si**	**93.03**	**53**	P	**P**	**12 05 13.2**	**-0.5**
TX32	**Lajitas Array**	**93.03**	**53**	P	**P**	**12 05 13.6**	**-0.1**
TX32				IAmb	IAmb	12 05 23.9	
	comp=Z,3.5nm,1.1s						
TXAR	**Lajitas Array**	**93.03**	**53**	P	**P**	**12 05 15.3**	**+1.6**
	comp=Z,1.4nm,0.7s,baz=301,slow=2.8,SNR=22						
	comp=Z,1.4nm,0.7s						
TXAR	**Lajitas Array**	**93.03**	**53**	P	**P**	**12 05 13.7**	**0.0**
SADO	**Sadowa**	**95.25**	**28**	LR	LR	12 53 03.6	
	comp=Z,20nm,19.6s,baz=330,slow=38						
PLCA	**Paso Flores**	**152.35**	**118**	PKPbc	**PKiKP**	**12 11 57.0**	**+1.2**
	comp=Z,2.1nm,0.9s,baz=333,slow=6.8,SNR=1.7						

WEL ***08*** *12:13:11.9±0.2, 39°S±3°×17°5E±°, h17km±2km, M3.4/43, ML3.7/44, MLv3.4/43, Error ellipse: s-maj=0.0km s-min=0.0km az=174.5, confirmed*

NOU ***08*** *12:13:11.7, 39.°41S×175.°05E, h22km, MLv3.9/11, North Island, New Zealand*

ISC 08 12:13:12.3±1.0**, 39.°43S**±0.°02×**175.°05E**±0.°02**, h29**km±8km**,**
n117, σ0.s89/124**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PKVZ	**Pokaka**	**0.27**	**60**	P	**Pb**	**12 13 19.4**	**+0.1**
PKVZ				S	**Sn**	**12 13 24.8**	**-0.8**
MTVZ	**Mangateitei**	**0.33**	**83**	P	**Pb**	**12 13 20.1**	**0.0**
MTVZ				S	**Sn**	**12 13 26.1**	**-1.0**
WAZ	**Wanganui**	**0.33**	**188**	P	**Pb**	**12 13 20.3**	**+0.2**
WAZ				S	**Sn**	**12 13 27.0**	**-0.1**
VRZ	**Vera Road**	**0.38**	**323**	P	**Pn**	**12 13 21.0**	**-0.8**
VRZ				S	**Sn**	**12 13 28.2**	**+0.1**
TRVZ	**Turoa**	**0.41**	**72**	P	**Pb**	**12 13 21.3**	**-0.1**
TRVZ				S	**Sb**	**12 13 27.4**	**-0.2**
DRZ	**Dome Shelter**	**0.43**	**70**	P	**Pb**	**12 13 21.6**	**-0.1**
FWVZ	**Far West T-bar**	**0.43**	**67**	P	**Pb**	**12 13 21.5**	**-0.2**
WNVZ	**Wahianoa**	**0.44**	**77**	P	**Pb**	**12 13 21.6**	**-0.2**
WNVZ				S	**Sb**	**12 13 28.4**	**+0.1**
WHVZ	**Whangaehu Hut**	**0.44**	**71**	P	**Pb**	**12 13 21.6**	**-0.3**
TWVZ	**Taurewa**	**0.47**	**41**	P	**Pb**	**12 13 21.7**	**-0.5**
NGZ	**Ngauruhoe**	**0.50**	**60**	P	**Pb**	**12 13 22.4**	**-0.3**
TUVZ	**Tukino**	**0.50**	**72**	P	**Pb**	**12 13 22.6**	**-0.1**
LREZ	**Lake Rotokare**	**0.50**	**266**	P	**Pb**	**12 13 23.0**	**+0.3**
LREZ				S	**Sn**	**12 13 31.8**	**+0.6**
SNVZ	**South Ngauruho**	**0.52**	**63**	P	**Pb**	**12 13 22.7**	**-0.3**
WTVZ	**West Tongariro**	**0.52**	**54**	P	**Pb**	**12 13 22.7**	**-0.4**
NNVZ	**North Ngauruho**	**0.53**	**57**	P	**Pb**	**12 13 22.9**	**-0.3**
MOVZ	**Moawhango**	**0.55**	**88**	P	**Pb**	**12 13 22.8**	**-0.7**
OTVZ	**Oturere**	**0.55**	**62**	P	**Pb**	**12 13 23.2**	**-0.4**
KRVZ	**Karewarewa**	**0.57**	**55**	P	**Pb**	**12 13 23.3**	**-0.5**
NTVZ	**North Tongarir**	**0.59**	**56**	P	**Pb**	**12 13 23.6**	**-0.6**
ETVZ	**East Tongariro**	**0.59**	**61**	P	**Pb**	**12 13 23.8**	**-0.4**
TMVZ	**Te Maari**	**0.60**	**59**	P	**Pb**	**12 13 23.9**	**-0.5**
KATZ	**Kakaramea**	**0.68**	**48**	P	**Pb**	**12 13 25.0**	**-0.7**
PREZ	**Palmer Road**	**0.69**	**277**	P	**Pn**	**12 13 26.3**	**+0.1**
DREZ	**Durham Road**	**0.70**	**290**	P	**Pn**	**12 13 26.1**	**-0.1**
NEZ	**North Egmont**	**0.75**	**282**	P	**Pb**	**12 13 26.9**	**0.0**
RITZ	**Rihia Road**	**0.77**	**55**	P	**Pn**	**12 13 27.6**	**+0.3**
BHHZ	**Black Hill Sta**	**0.79**	**95**	P	**Pb**	**12 13 26.2**	**-1.3**
RATZ	**Rangitukua**	**0.79**	**46**	P	**Pb**	**12 13 26.8**	**-0.7**
KHEZ	**Kahui Hut**	**0.81**	**279**	P	**Pb**	**12 13 27.7**	**-0.2**
KHEZ	**Kahui Hut**	**0.81**	**279**	P	**Pb**	**12 13 27.7**	**-0.2**
PKE	**Pukeiti**	**0.85**	**285**	P	**Pn**	**12 13 28.5**	**0.0**
WATZ	**Wairara**	**0.89**	**37**	P	**Pb**	**12 13 28.5**	**-0.8**
NMEZ	**Namu Road**	**0.91**	**270**	P	**Pn**	**12 13 29.3**	**+0.2**
HIZ	**Hauiti**	**0.92**	**351**	P	**Pb**	**12 13 28.6**	**-1.1**
HIZ	**Hauiti**	**0.92**	**351**	P	**Pb**	**12 13 28.7**	**-1.0**
NBEZ	**Newall Road No**	**0.93**	**279**	P	**Pn**	**12 13 29.6**	**+0.2**
TSZ	**Takapari Road**	**0.95**	**132**	P	**Pb**	**12 13 28.9**	**-1.2**
KWHZ	**Kaweka Forest**	**1.07**	**90**	P	**Pb**	**12 13 30.6**	**-1.6**
POWZ	**Post Office Ro**	**1.11**	**150**	P	**Pn**	**12 13 31.9**	**-0.1**
KUTZ	**Kaahu Road**	**1.11**	**33**	P	**Pn**	**12 13 31.3**	**-0.7**
BKZ	**Black Stump Fm**	**1.15**	**77**	P	**Pn**	**12 13 31.6**	**-0.9**
BKZ	**Black Stump Fm**	**1.15**	**77**	P	**Pn**	**12 13 32.0**	**-0.6**
TLZ	**Tolley Road**	**1.16**	**19**	P	**Pn**	**12 13 31.6**	**-1.0**
MRHZ	**Matea Rd**	**1.22**	**61**	P	**Pb**	**12 13 35.5**	**+0.8**
DVHZ	**Dannevirke**	**1.23**	**136**	P	**Pn**	**12 13 33.8**	**+0.3**
WPHZ	**Waipukurau**	**1.25**	**121**	P	**Pb**	**12 13 34.9**	**-0.3**
WPRZ	**Whakapapatarin**	**1.25**	**44**	P	**Pb**	**12 13 38.2**	**+2.9**
MCHZ	**McNeill Hill**	**1.28**	**91**	P	**Pb**	**12 13 35.8**	**+0.1**
MRZ	**Mangatainoka R**	**1.30**	**162**	P	**Pn**	**12 13 34.6**	**+0.1**
ALRZ	**Allen Road**	**1.33**	**50**	P	**Pb**	**12 13 39.1**	**+2.6**
PRWZ	**Pori Road**	**1.33**	**148**	P	**Pb**	**12 13 36.0**	**-0.7**
GRRZ	**Galatos Road**	**1.36**	**38**	P	**Pb**	**12 13 39.1**	**+2.0**
OGWZ	**Otaki Gorge**	**1.39**	**176**	P	**Pn**	**12 13 35.8**	**0.0**
PRRZ	**Plateau Road**	**1.40**	**49**	P	**Pb**	**12 13 39.4**	**+1.6**
NMHZ	**Naumai**	**1.41**	**77**	P	**Pb**	**12 13 37.8**	**-0.1**
KIW	**Kapiti Island**	**1.44**	**184**	P	**Pn**	**12 13 36.1**	**-0.3**
KAHZ	**Kahuranaki**	**1.46**	**105**	P	**Pb**	**12 13 38.5**	**-0.3**
PRHZ	**Porangahau**	**1.48**	**125**	P	**Pb**	**12 13 38.4**	**-0.8**
TIWZ	**Tintock**	**1.49**	**155**	P	**Pn**	**12 13 38.3**	**+1.0**
HOWZ	**Holdsworth Sta**	**1.51**	**166**	P	**Pn**	**12 13 38.2**	**+0.7**
ARHZ	**Aropaoanui**	**1.52**	**84**	P	**Pb**	**12 13 40.0**	**+0.1**
PXZ	**Pawanui**	**1.52**	**114**	P	**Pb**	**12 13 39.4**	**-0.5**
BFZ	**Birch Farm**	**1.56**	**144**	P	**Pn**	**12 13 38.5**	**+0.5**
BFZ	**Birch Farm**	**1.56**	**144**	P	**Pn**	**12 13 38.5**	**+0.5**
CKHZ	**Cape Kidnapper**	**1.59**	**99**	P	**Pb**	**12 13 41.6**	**+0.7**
DUWZ	**D'Urville Isla**	**1.62**	**212**	P	**Pn**	**12 13 39.1**	**+0.1**
RAHZ	**Arahi**	**1.67**	**73**	P	**Pb**	**12 13 41.2**	**-1.1**
CAW	**Cannon Point**	**1.68**	**179**	P	**Pn**	**12 13 40.2**	**+0.4**
TOZ	**Tahuroa Road**	**1.73**	**12**	P	**Pn**	**12 13 39.3**	**-1.1**
MTW	**Mount Morrison**	**1.77**	**169**	P	**Pn**	**12 13 41.8**	**+0.8**
TMWZ	**Te Maipa**	**1.80**	**159**	P	**Pn**	**12 13 42.3**	**+0.9**

WEL	Wellington	1.87	186	P	Pn	12 13 42.8	+0.4
TCW	Tory Channel	1.88	198	P	Pn	12 13 42.3	-0.1
SNGZ	Shannon Statio	1.90	71	P	Pn	12 13 44.2	+1.4
SNZO	South Karori	1.90	188	P	Pn	12 13 43.4	+0.6
TGRZ	Tauranga	1.94	30	P	Pb	12 13 47.0	0.0
URZ	Urewera	1.99	55	P	Pn	12 13 44.4	+0.4
URZ	Urewera	1.99	55	P	Pn	12 13 45.4	+1.4
TRWZ	Traveller	2.03	166	P	Pb	12 13 48.4	-0.1
PLWZ	Palliser	2.15	176	P	Pn	12 13 46.5	+0.3
TUWZ	Tuamarina	2.17	202	P	Pn	12 13 47.4	+0.9
NNZ	Nelson	2.20	215	P	Pn	12 13 47.6	+0.8
MWZ	Matawai	2.22	61	P	Pn	12 13 48.4	+1.2
RIGZ	Rimuhau	2.23	72	P	Pn	12 13 48.8	+1.4
TKNZ	Takaka Hill	2.27	224	P	Pn	12 13 48.8	+1.0
AWAZ	Awhitu Peninsu	2.38	352	P	Pn	12 13 49.9	+0.6
QRZ	Quartz Range	2.38	233	P	Pn	12 13 49.8	+0.4
QRZ	Quartz Range	2.38	233	P	Pn	12 13 49.1	-0.3
BSWZ	Blackbirch Sta	2.46	201	P	Pn	12 13 51.3	+0.9
ETAZ	East Tamaki Re	2.47	358	P	Pn	12 13 50.4	-0.2
WTAZ	Waiatarua	2.52	351	P	Pn	12 13 51.7	+0.4
RUGZ	Raukumara Rang	2.52	56	P	Pn	12 13 53.2	+1.8
TWGZ	Tauwhareparae	2.61	62	P	Pn	12 13 55.2	+2.6
MRNZ	Matariki Terra	2.63	221	P	Pn	12 13 53.2	+0.3
RVAZ	Riverhead Bore	2.68	352	P	Pn	12 13 53.6	+0.2
PKGZ	Pakihiroa	2.83	58	P	Pn	12 13 57.2	+1.6
THZ	Tophouse	2.85	214	P	Pn	12 13 57.4	+1.6
PUZ	Puketiti	2.85	63	P	Pn	12 13 56.6	+0.8
WMGZ	Waiomatatini S	3.09	60	P	Pn	12 14 00.0	+1.0
KHZ	Kahutara	3.20	200	P	Pn	12 14 00.7	+0.1
KHZ	Kahutara	3.20	200	P	Pn	12 14 00.4	-0.2
DSZ	Denniston Nort	3.38	226	P	Pn	12 14 03.4	+0.2
WCZ	Waipu Caves	3.52	351	P	Pn	12 14 04.7	-0.4
GVZ	Greta Valley S	3.85	203	P	Pn	12 14 08.8	-0.8
LTZ	Lake Taylor	3.95	211	P	Pn	12 14 10.5	-0.5
INZ	Inchbonnie	4.28	218	P	Pn	12 14 15.8	+0.4
OXZ	Oxford	4.51	209	P	Pn	12 14 16.9	-1.7
WVZ	Waitaha Valley	4.88	220	P	Pn	12 14 25.7	+1.9
RPZ	Rata Peaks	5.23	214	P	Pn	12 14 29.9	+1.4
RPZ	Rata Peaks	5.23	214	P	Pn	12 14 29.4	+0.9
GCSZ	Gaunt Creek Bo	5.26	221	P	Pn	12 14 29.7	+0.7
FOZ	Fox Glacier	5.68	222	P	Pn	12 14 35.3	+0.6
TMZ	Timaru	5.80	210	P	Pn	12 14 34.4	-1.9
ODZ	Otahua Downs	6.50	209	P	Pn	12 14 44.7	-1.2
JCZ	Jackson Bay	6.59	223	P	Pn	12 14 46.6	-0.7
JCZ	Jackson Bay	6.59	223	P	Pn	12 14 46.4	-0.9

*IDC **08** 12:21:29.0±1.2, 31°.62N×141°.88E, h0km, mb3.7/8, mbtmp3.6/11, ML3.1/3, Error ellipse: s-maj=40.8km s-min=17.1km az=71.0*

*JMA **08** 12:21:31.8±0.2, 31°.8N±0°.8×14°2E±°, h47km, MV3.6/19, NEAR TORISHIMA IS*

ISC 08 12:21:30.6±1.1**, 31°.72N**±0°.08×**141°.9E**±0°.1**, h10km, n20, σ1s.17**/29**, mb3.8**/8**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.25	309	*e*P	Pn	12 22 08.0	+0.2
JHJ2				*e*S	Sn	12 22 34.6	-1.0
JHJ	Hachijo jima 2	2.27	308	Pn	Pn	12 22 07.6	-0.6
	23nm,0.3s,baz=66,slow=20,SNR=8.8						
JHJ				Sn	Sn	12 22 33.4	-3.0
	19nm,0.3s,baz=240,slow=19,SNR=1.9						
	73nm,0.3s						
BSO1	Boso 1	3.03	345	*e*P	Pn	12 22 18.1	-0.1
BSO1				*e*S	Sn	12 22 54.0	-0.1
BSO3	Boso 3	3.29	340	*e*P	Pn	12 22 22.1	+0.1
BSO3				*e*S	Sn	12 23 00.7	-0.3
JOD2	Odawara 2	4.25	327	*e*P	Pn	12 22 35.9	+0.6
JOD2				*e*S	Sn	12 23 24.0	-1.0
JRY	Ryogami san	4.96	331	P	Pn	12 22 46.4	+1.2
JRY				*e*S	Sn	12 23 42.8	+0.1
JHO	Hitachi	5.01	348	P	Pn	12 22 45.9	+0.1
JHO				S	Sn	12 23 41.2	-2.5
JAG	Ashikaga	5.12	337	P	Pn	12 22 47.6	+0.3
JAG				S	Sn	12 23 45.0	-1.5
JFK	Kawauchi	5.70	352	*e*P	Pn	12 22 55.1	-0.2
MJAR	Matsushiro Arr	5.71	329	Pn	Pn	12 22 56.6	+1.2
	0.2nm,0.3s,baz=151,slow=11,SNR=11						
MJAR				Sn	Sn	12 24 02.6	+1.7
	0.1nm,0.3s,baz=163,slow=24,SNR=2.0						
	1.9nm,0.5s						
ASAJ	Asahikawa	12.39	2	Pn	Pn	12 24 24.9	-2.1
	0.3nm,0.3s,baz=225,slow=9.1,SNR=2.0						
ASAJ				Sn	Sn	12 26 35.1	-10
	0.2nm,0.3s,baz=156,slow=18,SNR=1.9						
KLR	Kul'dur	19.09	339	P	P	12 25 53.3	0.0
	0.1nm,0.3s,baz=169,slow=5.2,SNR=2.5						
	0.7nm,0.7s						
SONM	Songino Array	31.35	311	P	P	12 27 52.8	+1.4
	0.7nm,0.6s,baz=118,slow=9.8,SNR=8.4						
	0.7nm,0.6s						
ZALV	Zalesovo Beam	45.92	316	P	P	12 29 54.0	+0.8
	0.4nm,0.4s,baz=95,slow=8.3,SNR=2.6						
	0.4nm,0.4s						
MKAR	Makanchi Array	47.44	306	P	P	12 30 05.6	+0.2
	0.5nm,0.5s,baz=86,slow=10,SNR=12						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	49.72	312	P	P	12 30 22.3	-0.5
	0.8nm,0.5s,baz=89,slow=7.1,SNR=17						
	0.8nm,0.5s						
WRA	Warramunga Arr	51.88	189	P	P	12 30 38.1	-1.1
	1.1nm,0.6s,baz=4.4,slow=7.7,SNR=18						
	1.1nm,0.6s						
ILAR	Eielson Array	53.82	30	P	P	12 30 53.9	+0.7
	0.2nm,0.9s,baz=256,slow=7.1,SNR=1.3						
	0.2nm,0.9s						
BVAR	Borovoye Array	54.54	315	P	P	12 30 59.0	+0.4
	0.8nm,0.5s,baz=81,slow=9.2,SNR=3.1						
	0.8nm,0.5s						
ASAR	Alice Springs	55.60	189	P	P	12 31 06.0	-0.5
	0.3nm,0.5s,baz=12,slow=7.5,SNR=7.3						
	0.3nm,0.5s						

*DDA **08** 12:22:15.6±0.0, 37°.61N×38°.49E, h7km±2km, ML2.5*

*ISK **08** 12:22:16.0, 37°.63N×38°.50E, h5km, ML2.9/10*

ISC 08 12:22:16.0±1.1**, 37°.60N**±0°.04×**38°.47E**±0°.03**, h7**km±10km**, n18, σ0s.94**/30**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AZEY	Adyaman-Merk	0.27	321	P	Pg	12 22 21.7	+0.3
AZEY				S	Sg	12 22 25.7	+0.7
URFA	Urfa	0.32	119	Pg	Pg	12 22 22.9	+0.6
NARI	Adyaman-Kaht	0.37	39	P	Pg	12 22 22.6	-0.6
NARI				S	Sg	12 22 28.1	+0.1
AKCA	Adyaman/G¶l	0.65	288	P	Pg	12 22 28.6	+0.1
AKCA				S	Sg	12 22 38.1	+1.1
AKCA				*i* AML	AML	12 22 43.0	
	comp=N,363nm,0.5s						
GZT	Gaziantep	0.76	252	P	Pg	12 22 30.4	-0.2
GZT				S	Sb	12 22 43.5	+1.3
GZT				*i* AML	AML	12 22 44.0	
	comp=N,422nm,0.3s						
NZIP	Nizip/Gaziante	0.84	229	P	Pg	12 22 32.3	+0.2
NZIP				S	Sb	12 22 46.0	+1.4
NZIP				*i* AML	AML	12 22 47.0	
	comp=N,178nm,0.4s						
GAZ	Gaziantep	1.09	247	Pn	Pb	12 22 37.6	+0.4
GAZ				Sn	Sn	12 22 53.9	+0.8
KAHM	Kahramanmaras,	1.18	266	P	Pg	12 22 37.8	-0.8
KAHM				S	Sn	12 22 55.3	-0.1
KAHM				*i* AML	AML	12 22 58.0	
	comp=N,91nm,0.8s						
DARE	Darende-Malaty	1.24	322	Pn	Pn	12 22 40.1	+0.2
DARE				Sn	Sn	12 22 57.6	+0.6
HCB	Kahramanmara	1.27	259	P	Pn	12 22 37.9	-2.3
HCB				S	Sg	12 22 56.8	+0.1
HCB				*i* AML	AML	12 22 58.0	
	comp=N,95nm,0.2s						
DYBB	Diyarbakir	1.37	75	Pn	Pn	12 22 41.2	-0.4
DYBB				Sn	Sn	12 23 00.9	+0.8
KAMA	Osmaniye	1.49	255	P	Pb	12 22 44.3	+0.2
KAMA				S	Sb	12 23 03.8	+0.5
KAMA				*i* AML	AML	12 23 05.0	
	comp=N,68nm,0.2s						
ARPR	Arapgir-MALATY	1.50	356	Pn	Pb	12 22 43.9	-0.3
ARPR				Sn	Sg	12 23 04.0	-0.1
SARI	SarD1z-Kayseri	1.81	297	Pn	Pb	12 22 48.7	-0.9
KOZT	Kozan	2.10	268	Pn	Pb	12 22 53.3	-1.2
SVAN	Silvan-Diyarba	2.23	75	Pn	Pb	12 22 54.9	-1.8
YAYL	Yayladag	2.46	231	Pn	Pb	12 22 59.0	-1.5
GURO	Guroymak-BITLI	2.97	70	Pn	Pn	12 23 04.7	+1.0

*IDC **08** 12:22:54.9±2.1, 31°.63N×142°.02E, h0km, mb3.4/3, mbtmp3.5/6, ML2.7/3, Error ellipse: s-maj=65.9km s-min=21.9km az=76.0*

ISC 08 12:22:58.7±1.4**, 31°.64N**±0°.10×**142°.0E**±0°.2**, h29km, n6, σ2s.24**/8**, mb3.4**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.36	309	Pn	Pn	12 23 33.6	-1.8
	5.3nm,0.3s,baz=94,slow=11,SNR=1.5						
JHJ				Sn	Sn	12 24 02.9	-0.5
	12nm,0.3s,baz=292,slow=22,SNR=2.0						
	53nm,0.4s						
MJAR	Matsushiro Arr	5.79	329	Pn	Pn	12 24 22.6	-0.1
	baz=164,slow=18,SNR=1.4						
	1.3nm,0.5s						
ASAJ	Asahikawa	12.47	2	Pn	Pn	12 25 51.6	-2.4
	0.1nm,0.3s,baz=188,slow=15,SNR=1.4						
ASAJ				Sn	Sn	12 28 14.7	+2.8
	0.2nm,0.3s,baz=305,slow=14,SNR=1.2						
	2.7nm,0.7s						
SONM	Songino Array	31.43	311	P	P	12 29 20.1	+2.6
	0.3nm,0.6s,baz=122,slow=7.0,SNR=2.6						
	0.3nm,0.6s						
WRA	Warramunga Arr	51.81	189	P	P	12 32 03.6	-0.4
	0.5nm,0.6s,baz=4.6,slow=7.4,SNR=2.1						
	0.5nm,0.6s						
ASAR	Alice Springs	55.53	189	P	P	12 32 32.2	+0.9
	0.3nm,0.8s,baz=359,slow=7.1,SNR=2.1						
	0.3nm,0.8s						

HEL 08 12:24:48.9±0.4**, 67°.82N×20°.24E, h0km, ML1.3, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANU	Lannavaara	0.70	70	PG	Pg	12 25 00.9	-1.4
LANU				SG	Sg	12 25 10.1	-1.3
KIF	Kilpisjarvi	1.21	10	*e*P	Pg	12 25 10.2	-1.8
KIF	Kilpisjarvi	1.21	10	PG	Pg	12 25 11.4	-0.6
KIF				MSG		12 25 26.8	
	comp=Z,3.9nm,0.2s						
KIF				SG	Sg	12 25 27.0	-0.7
PAJU	Pajala	1.37	124	PG	Pg	12 25 13.2	-1.8
	baz=305						
PAJU				SN	Sn	12 25 33.9	-0.2
HEF	Hetta	1.41	64	*e*P	Pn	12 25 13.4	-2.4
HEF	Hetta	1.41	64	PG	Pn	12 25 14.4	-1.4
HEF				MSG		12 25 31.4	
	comp=Z,1.9nm,0.2s						
HEF				SN	Sn	12 25 36.0	+0.9
ERTU	Ertsjaerv	1.48	148	PN	Pn	12 25 16.1	-0.6
	baz=326						
ERTU				SN	Sn	12 25 38.8	+2.0
KLF	Kolari	1.55	111	PN	Pn	12 25 18.0	+0.3
KLF				MSG		12 25 35.3	
	comp=Z,1.5nm,0.2s						
TOF	Tornio	2.37	136	MSG		12 25 59.1	
	comp=Z,1.3nm,0.2s						
RNF	Rovaniemi	2.56	116	PG	Pn	12 25 33.4	+1.9
RNF				SG	Sb	12 26 07.7	+0.2
KEV	Kevo	3.13	49	MSG		12 26 20.9	
	comp=Z,0.7nm,0.2s						
KEV				SB	Sb	12 26 22.5	-1.6

*DDA **08** 12:29:45.8±0.0, 37°.33N×37°.11E, h7km±1km, ML2.5*

*ISK **08** 12:29:45.8, 37°.31N×37°.10E, h5km, ML2.3/7*

ISC 08 12:29:46.3±1.0**, 37°.31N**±0°.03×**37°.11E**±0°.02**, h5**km±9km**, n16, σ0s.63**/26**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZ	Gaziantep	0.16	150	Pg	Pg	12 29 49.7	+0.2
HCB	Kahramanmara	0.17	282	P	Pg	12 29 49.6	0.0
HCB				S	Sg	12 29 52.6	+0.7
HCB				*i* AML	AML	12 29 54.0	
	comp=N,905nm,0.3s						
KAHM	Kahramanmaras,	0.23	334	P	Pg	12 29 50.5	-0.4
KAHM				S	Sg	12 29 54.0	+0.1
KMRS	Kahramanmaras	0.26	319	Pg	Pg	12 29 51.4	0.0
GZT	Gaziantep	0.36	83	P	Pg	12 29 53.0	-0.4
GZT				S	Sg	12 29 58.1	0.0
KAMA	Osmaniye	0.38	251	P	Pg	12 29 53.8	+0.2
KAMA				S	Sg	12 29 59.2	+0.7
NZIP	Nizip/Gaziante	0.52	120	P	Pg	12 29 56.5	+0.1
NZIP				S	Sg	12 30 04.2	+1.0
NZIP				*i* AML	AML	12 30 07.0	
	comp=N,286nm,0.5s						
KUZU	Kuzuini	0.54	183	P	Pb	12 29 57.4	-0.8
AKCA	Adyaman/G¶l	0.67	43	P	Pg	12 29 58.8	-0.3
AKCA				S	Sg	12 30 07.9	+0.1
AKCA				*i* AML	AML	12 30 08.0	
	comp=N,254nm,0.3s						
AZEY	Adyaman-Merk	1.03	61	P	Pb	12 30 06.2	-0.5
AZEY				S	Sb	12 30 20.5	-0.1
KOZT	Kozan	1.04	280	Pg	Pn	12 30 06.9	-0.7
KOZT				Sg	Sn	12 30 21.9	-0.6
CEYT	Ceyhan	1.13	255	Pn	Pn	12 30 08.9	+0.1
SARI	SarD1z-Kayseri	1.23	334	Pn	Pn	12 30 10.4	+0.1
SARI				Sn	Sn	12 30 28.2	+0.8
DARE	Darende-Malaty	1.29	13	Pn	Pg	12 30 11.6	+0.5
DARE				Sn	Sn	12 30 30.6	+1.7
BNN	Bunyan	1.84	327	Pn	Pb	12 30 20.0	-0.5
ARPR	Arapgir-MALATY	2.02	28	Pn	Pb	12 30 23.0	-0.7

ROM 08 12:31:48.0±0.1**, 42°.651N**±0°.004×**13°.274E**±0°.005**, h9km, ML1.1**/3**, 1C, Error ellipse: s-maj=0.6km s-min=0.3km az=40.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	SAN MARTINO	0.05	114	P	Pg	12 31 50.2	+0.2
SMA1				S	Sg	12 31 51.7	+0.3
SMA1				AML	AML		
	comp=E,182µm,1.5s						
SMA1				AML	AML		
	comp=N,143µm,1.6s						
SMA1				AML	AML		
	comp=E,182µm,0.5s						
T1214	Arquata del Tr	0.12	336	P	Pg	12 31 51.1	+0.2
T1214				S	Sg	12 31 53.6	+0.7
T1218	Civita (PG)	0.12	279	⇑P	Pg	12 31 51.3	+0.5
T1218				S	Sg	12 31 53.6	+0.8
T1212	Cascia, Frazio	0.20	301	P	Pg	12 31 52.7	+0.5
T1212				S	Sg	12 31 56.2	+1.3
T1212				AML	AML		
	comp=E,117µm,1.6s						
T1212				AML	AML		
	comp=N,69µm,1.6s						
T1212				AML	AML		
	comp=E,117µm,0.4s						
T1245	Castelsantange	0.21	343	P	Pg	12 31 48.4	-4.1
T1220	Camerino, Fraz	0.48	344	S	Sb	12 32 09.1	+3.2
INTR	Introdacqua	0.79	144	P	Pn	12 32 05.2	-0.3

ROM 08 12:32:42.8±0.2**, 42°.745N**±0°.007×**13°.118E**±0°.007**, h12**km±1km**, ML0.9**/3**, 1C, Error ellipse: s-maj=0.8km s-min=0.2km az=329.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	Cascia, Frazio	0.05	277	⇑P	Pg	12 32 45.6	+0.4
T1212				S	Sg	12 32 47.1	+0.2
T1212				AML	AML		
	comp=N,54µm,0.2s						
T1212				AML	AML		
	comp=N,51µm,0.3s						
T1214	Arquata del Tr	0.07	78	P	Pg	12 32 45.8	+0.4
T1214				S	Sg	12 32 47.6	+0.3
T1214				AML	AML		
	comp=E,68µm,0.3s						
T1214				AML	AML		
	comp=E,100µm,0.9s						
T1218	Civita (PG)	0.07	181	P	Pg	12 32 46.0	+0.6
T1218				S	Sg	12 32 47.2	-0.2
T1218				AML	AML		
	comp=N,192µm,0.8s						
T1218				AML	AML		
	comp=N,193µm,0.8s						
T1218				AML	AML		
	comp=N,149µm,0.2s						
T1218				AML	AML		
	comp=E,136µm,0.8s						
T1245	Castelsantange	0.12	25	P	Pg	12 32 46.5	+0.4
T1245				S	Sg	12 32 48.8	+0.4
T1217	Poggiodomo (PG	0.14	257	P	Pg	12 32 46.8	+0.6
T1217				S	Sg	12 32 49.5	+0.8
T1216	Preci, Frazion	0.16	334	P	Pg	12 32 47.0	+0.5
T1216				S	Sg	12 32 49.8	+0.6
MC2	Monte Cornacci	0.18	18	P	Pg	12 32 47.4	+0.5
MC2				S	Sg	12 32 50.5	+0.8
MMO1	Montemonaco	0.22	45	P	Pg	12 32 47.2	-0.3
MMO1				S	Sg	12 32 51.4	+0.7

MAN 08 12:47:18.0, 18°.27N×120°.50E, h26km, mb3.9, ML2.6, MS2.1, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	0.35	187	⇓*e*P	Pn	12 47 27.0	-0.4

IDC 08 13:09:18.2±486.0**, 54°.53N×0°.69E, h0km, Error ellipse: s-maj=265.4km s-min=191.4km az=92.0, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I26DE	FREYUNG INFRAS	9.88	120	I	I	14 09 20.0	
	baz=311,slow=325,SNR=0.6						
I37NO	I37NO	16.75	23	I	I	14 55 40.0	
	baz=221,slow=333,SNR=1.2						
I43RU	DUBNA INFRASON	20.59	69	I	I	15 17 00.0	
	baz=278,slow=317,SNR=0.6						

BER 08 13:10:04.3±1.6**, 60°.24N×6°.17E, h0km, ML1.0, Suspected explosion, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ODD1	Odda	0.40	145	*e*P	Pg	13 10 11.6	-0.4
ODD1				*e*S	Sg	13 10 16.9	-0.2
ODD1				IAML		13 10 22.3	
	comp=Z,8.2nm,0.7s						
NBO00	NORSAR Array S	2.40	69	*e*P	Pn	13 10 42.5	-2.4
NBO00				*e*S	Sn	13 11 10.4	-4.6
NBO00				IAML		13 11 12.4	
	comp=Z,2.9nm,0.2s						
NC204	NORSAR Array S	2.48	63	*e*P	Pn	13 10 43.9	-2.1
NC204				*e*S	Sn	13 11 13.3	-3.6
NC204				IAML		13 11 15.3	
	comp=Z,1.6nm,0.2s						
NC303	NORSAR Array S	2.74	67	*e*P	Pn	13 10 48.3	-1.1
NC303				*e*S	Sn	13 11 20.9	-2.3

IDC 08 13:29:56.0±6.0**, 16°.11S×72°.99W, h132**km±51km**, mb3.3**/3**, mbtmp3.6**/4**, Error ellipse: s-maj=63.3km s-min=35.1km az=100.0, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	4.67	93	P	Pn	13 31 05.4	0.0
	1.0nm,0.3s,baz=281,slow=8.3,SNR=3.8						
H03N1	Juan Fernandez	18.07	196	T	T	13 52 28.1	
	baz=18,slow=73,SNR=43						
H03N2	Juan Fernandez	18.07	196	T	T	13 52 23.8	
	baz=18,slow=73,SNR=37						
H03N3	Juan Fernandez	18.09	196	T	T	13 52 26.0	
	baz=18,slow=73,SNR=42						
PLCA	Paso Flores	24.63	176	P	P	13 35 04.2	0.0
	2.5nm,1.0s,baz=10,slow=11,SNR=2.1						
	2.5nm,1.0s						
TORD	Torodi Ar. Bea	79.34	73	P	P	13 41 47.8	+0.1
	0.9nm,1.0s,baz=255,slow=4.3,SNR=3.3						
	0.9nm,1.0s						
YKA	Yellowknife Ar	84.87	342	P	P	13 42 15.5	0.0
	0.2nm,0.7s,baz=134,slow=6.2,SNR=4.4						
	0.2nm,0.7s						

*SJA **08** 13:33:53.2±0.9, 33°.86S×71°.47W, h69km±4km, ML3.7, MW3.7, Hypocentre not reviewed by the ISC*

*GUC **08** 13:33:55.3±0.7, 33°.87S×71°.46W, h61km±2km, ML3.6*

*IDC **08** 13:33:57.3±4.8, 33°.93S×71°.42W, h73km±41km, mb3.4/1, mbtmp3.7/3, ML4.1/2, Error ellipse: s-maj=92.1km s-min=37.2km az=100.0*

ISC 08 13:33:55.4±0.9**, 33°.88S**±0°.03×**71°.47W**±0°.04**, h58**km±6km**, n31, σ0s.47**/52**, 10C-10D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MT01	Popeta	0.18	86	⇑*e*P	Pn	13 34 04.6	0.0
MT01				*e*S	Sn	13 34 11.0	-0.2
MT01				IAML		13 34 12.1	
	comp=E,4µm,0.2s						
MT01	Popeta	0.18	86	*e*P		13 34 04.5	
VA05	Santo Domingo	0.25	332	⇑*e*P	Pn	13 34 04.8	-0.1
VA05				*e*S	Sn	13 34 11.6	-0.3
VA05				IAML		13 34 14.2	
	comp=E,12µm,0.6s						
MT09	Talagante	0.41	76	⇓*e*P	Pn	13 34 06.2	-0.3
MT09				*e*S	Sn	13 34 14.5	-0.1
MT09				IAML		13 34 15.3	
	comp=N,9µm,0.2s						
BO01	Tunca	0.61	148	⇑*e*P	Pn	13 34 08.7	+0.3
BO01				*e*S	Sn	13 34 18.2	+0.3
BO01				IAML		13 34 18.9	
	comp=N,7µm,0.2s						
BO01	Tunca	0.61	148	*e*P		13 34 08.4	
BO01				*e*S		13 34 18.6	
BO01				IAML		13 34 18.7	
	comp=Z,3µm,0.6s						
MT02	Curacav	0.68	24	⇓*e*P	Pn	13 34 09.2	0.0
MT02				*e*S	Sn	13 34 19.0	-0.4
MT02				IAML		13 34 19.7	
	comp=N,3µm,0.4s						
MT02	Curacav	0.68	24	*e*P		13 34 08.9	
MT02				*e*S		13 34 19.1	
MT02				IAML		13 34 19.7	
	comp=Z,2µm,0.5s						
BO03	Pichilemu	0.74	213	⇑*e*P	Pn	13 34 09.7	-0.3
BO03				*e*S	Sn	13 34 20.4	-0.3
BO03				IAML		13 34 21.1	
	comp=N,2µm,0.1s						
MT05	Renca	0.78	52	⇓*e*P	Pn	13 34 10.6	0.0
MT05				*e*S	Sn	13 34 22.0	+0.2
MT05				IAML		13 34 22.7	
	comp=N,9µm,0.3s						
MT05	Renca	0.78	52	*e*P		13 34 10.0	
MT05				*e*S		13 34 22.5	
MT05				IAML		13 34 22.7	
	comp=Z,1µm,0.2s						
MT12	Pirque	0.78	80	⇑*e*P	Pn	13 34 10.2	-0.4
MT12				*e*S	Sn	13 34 21.8	0.0
MT12				IAML		13 34 22.3	
	comp=N,3µm,0.2s						
VA01	Torpederas	0.86	350	⇓*e*P	Pn	13 34 11.9	+0.3
VA01				*e*S	Sn	13 34 23.7	+0.2
VA01				IAML		13 34 24.4	
	comp=N,4µm,0.4s						
VA01	Torpederas	0.86	350	*e*P		13 34 11.0	
MT03	Universidad Ad	0.89	65	⇓*e*P	Pn	13 34 11.8	-0.2
MT03				*e*S	Sn	13 34 24.3	0.0
MT03				IAML		13 34 28.2	
	comp=N,3µm,0.2s						
MT03	Universidad Ad	0.89	65	*e*P		13 34 11.0	
MT03				*e*S		13 34 24.7	
MT03				IAML		13 34 26.8	
	comp=Z,2µm,0.1s						
ROCH	El Roble	0.98	23	*e*P	Pn	13 34 13.6	+0.3
ROCH				*e*P	Pn	13 34 13.6	+0.3
ROCH				*e*S	Sn	13 34 27.0	+0.4
ROCH				*e*S	Sn	13 34 27.3	+0.7
ROCH				IAML		13 34 28.9	
	comp=N,3µm,0.5s						
ROCH				IAML		13 34 29.9	
	comp=N,4µm,0.3s						
PEL	Peldehue	0.98	42	⇓*e*P	Pn	13 34 13.3	+0.1
PEL				*e*S	Sn	13 34 26.5	+0.1
PEL				IAML		13 34 31.3	
	comp=E,3µm,0.5s						

MT13	San Alfonso	1.00	83	⇑eP	Pn	13 34 13.5	+0.1
MT13				eS	Sn	13 34 27.0	+0.2
MT13				IAML		13 34 28.0	
	comp=E,2µm,0.3s						
LMEL	Las Melosas	1.06	89	⇑eP	Pn	13 34 14.2	-0.1
LMEL				eS	Sn	13 34 28.6	+0.4
LMEL				IAML		13 34 30.2	
	comp=E,4µm,0.2s						
BO02	Sierra Bellavi	1.08	148	⇑eP	Pn	13 34 13.8	-0.7
BO02				eS	Sn	13 34 28.7	+0.1
BO02				IAML		13 34 29.6	
	comp=N,5µm,0.3s						
BO02	Sierra Bellavi	1.08	148	eP		13 34 14.8	
BO02				eS		13 34 29.3	
BO02				IAML		13 34 31.9	
	comp=Z,2µm,0.1s						
FCH	Farellones	1.13	61	⇓eP	Pn	13 34 15.3	-0.1
FCH				eS	Sn	13 34 29.6	-0.6
FCH				IAML		13 34 32.2	
	comp=N,3µm,0.4s						
GO05	Huala	1.19	198	⇓eP	Pn	13 34 15.8	-0.2
GO05				i S	Sn	13 34 31.7	+0.5
GO05				IAML		13 34 35.4	
	comp=N,577nm,0.2s						
GO05	Huala	1.19	198	eP		13 34 15.7	
GO05				eS		13 34 32.2	
MT04	Ro Olivares	1.21	67	⇑eP	Pn	13 34 16.3	0.0
MT04				eS	Sn	13 34 31.8	-0.1
MT04				IAML		13 34 33.1	
	comp=N,3µm,0.3s						
MT08	Bocatoma Ro	1.29	71	⇑eP	Pn	13 34 17.1	-0.3
MT08				eS	Sn	13 34 33.0	-0.8
MT08				IAML		13 34 35.7	
	comp=N,1µm,0.3s						
VA06	Catapilco	1.32	6	eP	Pn	13 34 17.7	0.0
VA06				eS	Sn	13 34 33.7	-0.6
VA06				IAML		13 34 37.6	
	comp=E,3µm,0.4s						
VA03	San Esteban	1.35	35	⇓eP	Pn	13 34 18.4	+0.3
VA03				eS	Sn	13 34 35.8	+0.6
VA03				IAML		13 34 37.0	
	comp=N,2µm,0.3s						
VA03				IAML		13 34 37.4	
	comp=E,2µm,0.2s						
VA03	San Esteban	1.35	35	eP		13 34 17.0	
AAGR	Agrelo	2.35	71	eP		13 34 33.0	
CO02	Combarbal	2.69	9	⇓eP	Pn	13 34 36.1	-0.3
CO02				eS	Sn	13 35 06.5	-1.4
CO02				IAML		13 35 24.2	
	comp=E,804nm,0.3s						
CO02	Combarbal	2.69	9	eP		13 34 35.0	
RTLS	Leoncito	2.77	42	eP		13 34 39.0	
CFA	Coronel Fontan	3.54	51	eP		13 34 48.0	
GO04	Tololo Observa	3.74	9	eP		13 34 49.0	
CO01	Juntas del Tor	4.06	17	eP		13 34 55.0	
LCO	Las Campanas	4.89	8	eP		13 35 05.0	
H03S1	Juan Fernandez	6.18	268	T	T	13 41 29.3	
	baz=86,slow=75						
H03S3	Juan Fernandez	6.19	268	T	T	13 41 33.1	
	baz=86,slow=75						
H03S2	Juan Fernandez	6.20	268	T	T	13 41 28.1	
	baz=86,slow=75						
PLCA	Paso Flores	6.88	174	P	Pn	13 35 34.9	+1.2
	comp=E,1.2nm,0.3s,baz=340,slow=14,SNR=41						
	comp=E,3.3nm,0.4s						
LPAZ	La Paz	17.77	11	P	P	13 38 00.6	+1.0
	comp=E,0.2nm,0.3s,baz=194,slow=12,SNR=3.8						
	comp=E,1.0nm,0.5s						
TORD	Torodi Ar. Bea	83.72	70	P	P	13 46 18.0	-0.4
	comp=E,0.4nm,0.6s,baz=243,slow=6.1,SNR=4.0						
	comp=E,0.4nm,0.6s						
WRA	Warramunga Arr	121.10	209	PKP	PKPdf	13 52 41.4	-0.7
	comp=E,0.3nm,0.9s,baz=154,slow=2.1,SNR=1.7						
BVAR	Borovoye Array	146.87	43	PKPbc	PKPbc	13 53 31.3	+0.7
	comp=E,0.4nm,0.7s,baz=297,slow=4.7,SNR=2.2						
MKAR	Makanchi Array	156.33	49	PKPab	PKPab	13 54 11.3	-0.4
	comp=E,0.1nm,0.4s,baz=313,slow=2.8,SNR=1.9						

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*MOS **08** 13:43:12.2±0.8, 45.°69N×26.°45E, h150^{km}, mb4.1/10, Error ellipse: s-maj=5.8km s-min=4.3km az=86.1*

*IDC **08** 13:43:12.8±0.3, 45.°68N×26.°31E, h140^{km}±3^{km}, mb3.5/19, mbtmp3.9/27, MS3.8/1, Error ellipse: s-maj=13.8km s-min=9.7km az=154.0*

*MCSM **08** 13:43:12.7±0.7, 46°N±7°×2°6E±°, h145^{km}±4^{km}, ML4.1*

*SOF **08** 13:43:13.6, 45.°75N×26.°39E, h43^{km}, MD4.0*

*SIGU **08** 13:43:13.1±0.1, 45.°7N±0.°8×26.°5E±0.°8, h144^{km}, mb3.4/3, MD3.9/21*

*BEO **08** 13:43:13.2±0.9, 45.°57N×26.°16E, h0^{km}, ML3.7/4*

*CFUSG **08** 13:43:13.3, 45.°60N×26.°60E, h150^{km}, mb3.6/4, Romania Magtype MSH 3.7 from 3 stations*

*NEIC **08** 13:43:13.1±1.5, 45.°66N±0.°02×26.°46E±0.°06, h149^{km}±3^{km}, mb4.1/17, ML4.2/7(BUC), Error ellipse: s-maj=6.2km s-min=2.7km az=83.0*

*BUC **08** 13:43:13.3±0.2, 45.°64N×26.°48E, h143^{km}±1^{km}, ml4.2/76, Error ellipse: s-maj=1.6km s-min=1.4km az=175.0*

ISC 08 13:43:12.9±0.5**, 45.°66N**±0.°03×**26.°48E**±0.°02**, h147**^{km}±4^{km}**, n368, σ0.^{s}96**/486**, mb4.0**/33**, 99C-47D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BISRR	Bisoca	0.20	124	⇑P	Pn	13 43 33.6	+0.7
BISRR				⇑S	Sn	13 43 48.6	+0.5
PLOR	Plostina	0.23	32	⇑P	Pn	13 43 33.0	0.0
PLOR				⇑S	Sn	13 43 48.1	-0.2
PLOR	Plostina	0.23	32	P	Pn	13 43 32.9	0.0
PLOR	Plostina	0.23	32	P	Pn	13 43 32.9	0.0
PLOR				S	Sn	13 43 48.0	-0.2
NEHR	Nehoiu	0.26	209	⇑P	Pn	13 43 33.6	+0.5
NEHR				⇓S	Sn	13 43 48.6	+0.4
NEHR	Nehoiu	0.26	209		Pn	13 43 33.6	+0.5
NEHR					Sn	13 43 48.6	+0.4
COVR	Voineasa-Covas	0.27	315	⇑P	Pn	13 43 33.0	-0.1
COVR				⇓S	Sn	13 43 47.3	-1.0
COVR	Voineasa-Covas	0.27	315		Pn	13 43 33.0	-0.1
COVR					Sn	13 43 47.3	-1.0
VRI	Vrincioaia	0.27	40	⇑P	Pn	13 43 33.3	+0.2
VRI				⇓S	Sn	13 43 48.3	0.0
VRI	Vrincioaia	0.27	40	P	Pn	13 43 33.2	+0.2
VRI				S	Sn	13 43 49.6	+1.2
VRI	Vrincioaia	0.27	40	P	Pn	13 43 33.2	+0.2
VRI				S	Sn	13 43 48.3	0.0
MLR	Muntele Rosu	0.41	246	⇑P	Pn	13 43 33.9	+0.2
MLR				⇑S	Sn	13 43 48.9	-0.5
MLR	Muntele Rosu	0.41	246	P	Pn	13 43 33.8	+0.2
	2µm,0.5s,baz=73,slow=2.2,SNR=1685						
MLR				S	Sn	13 43 48.6	-0.7
	979nm,0.4s,baz=110,slow=15,SNR=17						
MLR	Muntele Rosu	0.41	246	Pn	Pn	13 43 33.4	-0.3
MLR				Sn	Sn	13 43 48.8	-0.5
MLR	Muntele Rosu	0.41	246	P	Pn	13 43 33.8	+0.2
ODBI	Odobesti	0.42	75	⇑P	Pn	13 43 34.7	+1.2
ODBI				⇑S	Sn	13 43 50.2	+1.1
ODBI	Odobesti	0.42	75		Pn	13 43 34.7	+1.2
ODBI					Sn	13 43 50.2	+1.1
GRER		0.45	128	⇑P	Pn	13 43 35.0	+1.4
GRER				⇓S	Sn	13 43 49.3	-0.1
GRER		0.45	128		Pn	13 43 35.0	+1.4
GRER					Sn	13 43 49.3	-0.1
PANC	Panciu	0.52	65	⇑P	Pn	13 43 34.6	+0.6
PANC				⇑S	Sn	13 43 51.0	+1.1
PANC	Panciu	0.52	65		Pn	13 43 34.6	+0.6
PANC					Sn	13 43 51.0	+1.1
ISR	Istrita	0.54	175	⇑P	Pn	13 43 34.7	+0.5
ISR				⇑S	Sn	13 43 50.3	-0.1
ISR	Istrita	0.54	175	P	Pn	13 43 34.7	+0.5
ISR				S	Sn	13 43 50.2	-0.1
OZUR		0.65	313	⇑P	Pn	13 43 34.6	-0.2
OZUR				⇑S	Sn	13 43 50.3	-1.2
SECR		0.69	205	⇑P	Pn	13 43 35.8	+0.8
SECR		0.69	205		Pn	13 43 35.8	+0.8
GHRR		0.77	58	⇑P	Pn	13 43 36.1	+0.6
GHRR				⇓S	Sn	13 43 53.4	+0.7
PLAR	PLOIESTI	0.81	203	⇓P	Pn	13 43 36.6	+0.8
PLAR				⇑S	Sn	13 43 54.5	+1.3
PLAR	PLOIESTI	0.81	203		Pn	13 43 36.6	+0.8
PLAR					Sn	13 43 54.5	+1.3
DOPR	Dopca	0.82	293	⇑P	Pn	13 43 36.0	+0.1
PGOR	Pogoanele	0.83	154	⇓P	Pn	13 43 36.8	+0.7
PGOR				⇓S	Sn	13 43 54.9	+1.3
PGOR	Pogoanele	0.83	154		Pn	13 43 36.8	+0.7
PGOR					Sn	13 43 54.9	+1.3
TUDR		0.84	94	⇑P	Pn	13 43 36.1	+0.1
TUDR		0.84	94		Pn	13 43 36.2	+0.1
TESR	Tescani	0.86	8	⇑P	Pn	13 43 36.2	-0.1
TESR	Tescani	0.86	8	P	Pn	13 43 36.1	-0.1
SLCR	Slobozia Conac	0.91	94	⇑P	Pn	13 43 37.0	+0.3
IZVR	Izvoarele	0.91	97	⇑P	Pn	13 43 36.6	0.0
IZVR				⇑S	Sn	13 43 53.9	-0.7
IZVR	Izvoarele	0.91	97		Pn	13 43 36.6	0.0
IZVR					Sn	13 43 53.9	-0.7
SCHL	Schela	0.96	99	⇑P	Pn	13 43 37.2	+0.2
SCHL				⇓S	Sn	13 43 55.0	-0.4
SCHL	Schela	0.96	99		Pn	13 43 37.2	+0.2
SCHL					Sn	13 43 55.0	-0.4
SULR		0.99	189	⇑P	Pn	13 43 37.9	+0.6
SULR				⇑S	Sn	13 43 56.8	+0.9
BIR	Birlad	1.01	52	⇑P	Pn	13 43 37.8	+0.4
BIR				⇑S	Sn	13 43 56.3	+0.1
BIR	Birlad	1.01	52		Pn	13 43 37.8	+0.4
BIR					Sn	13 43 56.3	+0.1
BIR	Birlad	1.01	52	P	Pn	13 43 37.8	+0.4
BIR						13 43 56.3	
VOIR		1.03	258	⇑P	Pn	13 43 37.5	-0.3
VOIR		1.03	258	P	Pn	13 43 37.4	-0.3
VOIR		1.03	258	P	Pn	13 43 37.5	-0.3
SCTR	Scanteiesti	1.06	89	⇑P	Pn	13 43 38.6	+0.7
SCTR	Scanteiesti	1.06	89		Pn	13 43 38.6	+0.7
MTUR	Matau	1.08	247	⇑P	Pn	13 43 38.5	+0.3
MTUR	Matau	1.08	247		Pn	13 43 38.5	+0.3
MTUR	Matau	1.08	247	P	Pn	13 43 39.6	+1.4
TATR	Tatarca	1.11	93	⇑P	Pn	13 43 38.9	+0.6
TATR				⇓S	Sn	13 43 57.4	-0.2
TATR	Tatarca	1.11	93		Pn	13 43 38.9	+0.6
TATR					Sn	13 43 57.4	-0.2
GISR	Galati	1.13	100	⇑P	Pn	13 43 39.0	+0.5
GISR				⇓S	Sn	13 43 58.0	0.0
GISR	Galati	1.13	100		Pn	13 43 39.0	+0.5
GISR					Sn	13 43 58.0	0.0
VLDR	Vladesti	1.14	80	⇑P	Pn	13 43 39.1	+0.5
VLDR				⇑S	Sn	13 43 57.8	-0.4
VLDR	Vladesti	1.14	80		Pn	13 43 39.1	+0.5
VLDR					Sn	13 43 57.8	-0.4
LEHL	Lehliu	1.21	168	⇑P	Pn	13 43 39.8	+0.6
LEHL				⇑S	Sn	13 43 59.7	+0.3
AMRR	Amara	1.21	150	⇑P	Pn	13 43 39.9	+0.6
AMRR				⇓S	Sn	13 43 59.5	+0.1
AMRR	Amara	1.21	150	P	Pn	13 43 39.9	+0.6
GIUM	Giurgiulesti	1.23	97	⇑P	Pn	13 43 40.1	+0.6
GIUM				⇓S	Sn	13 43 59.9	+0.2
GIUM	Giurgiulesti	1.23	97		Pn	13 43 40.0	+0.6
GIUM					Sn	13 43 59.9	+0.2
GIUM	Giurgiulesti	1.23	97	P	Pn	13 43 40.0	+0.6
GIUM				S	Sn	13 43 59.8	+0.2
INCR	INCERC-Sediu C	1.24	191	⇑P	Pn	13 43 39.8	+0.2
INCR				⇓S	Sn	13 43 59.8	0.0
INCR	INCERC-Sediu C	1.24	191		Pn	13 43 39.8	+0.2
INCR					Sn	13 43 59.8	0.0
CFR	Carcaliu	1.26	112	⇑P	Pn	13 43 39.8	0.0
CFR	Carcaliu	1.26	112	P	Pn	13 43 39.9	+0.1
GIRR	Girov	1.30	1	⇓P	Pn	13 43 40.7	+0.5
GIRR	Girov	1.30	1		Pn	13 43 40.7	+0.5
BIZ	Bicaz	1.31	349	⇓S	Sn	13 44 01.7	+0.5
ARR	Arges	1.33	258	⇑P	Pn	13 43 40.6	0.0
ARR				⇓S	Sn	13 44 01.5	-0.1
ARR	Arges	1.33	258	P	Pn	13 43 40.5	0.0
STFAR	Stefanesti-Arg	1.33	234	⇓P	Pn	13 43 41.3	+0.7
STFAR	Stefanesti-Arg	1.33	234		Pn	13 43 41.3	+0.7
VASR	Vaslui	1.34	42	⇑P	Pn	13 43 40.9	+0.3
VASR				⇓S	Sn	13 44 01.1	-0.7
VASR	Vaslui	1.34	42		Pn	13 43 40.9	+0.3
VASR					Sn	13 44 01.1	-0.7
BUC1	Bucharest	1.35	194	⇑P	Pn	13 43 41.0	+0.3
BUC1				⇑S	Sn	13 44 01.8	+0.1
BUC1	Bucharest	1.35	194		Pn	13 43 41.0	+0.3
BUC1					Sn	13 44 01.8	+0.1
BUC1	Bucharest	1.35	194	P	Pn	13 43 40.9	+0.3
HARR	Harsova	1.41	133	⇑P	Pn	13 43 41.6	+0.4
HARR	Harsova	1.41	133		Pn	13 43 41.6	+0.4
HARR	Harsova	1.41	133	P	Pn	13 43 41.7	+0.4
LEOM	Leova	1.48	56	⇑P	Pn	13 43 42.4	+0.5
LEOM				⇑S	Sn	13 44 03.9	-0.3
LEOM				⇓S	Sn	13 44 03.9	-0.3
LEOM	Leova	1.48	56	P	Pn	13 43 42.2	+0.3
LEOM				S	Sn	13 44 03.9	-0.3
LEOM	Leova	1.48	56	P	Pn	13 43 42.2	+0.3
LEOM				S	Sn	13 44 03.9	-0.3
SGRR	Singureni	1.48	194	⇑P	Pn	13 43 42.1	+0.1
SGRR				⇑S	Sn	13 44 03.4	-0.8
RASA	Rasa	1.52	161	⇑P	Pn	13 43 42.8	+0.4
RASA				⇓S	Sn	13 44 04.5	-0.5
HUMR	Humele	1.55	224	⇑P	Pn	13 43 42.7	-0.1
HUMR				⇑S	Sn	13 44 04.7	-0.8
TLBR	Topalu	1.57	134	⇑P	Pn	13 43 43.4	+0.4
TLBR				⇑S	Sn	13 44 04.9	-1.1
TLBR	Topalu	1.57	134		Pn	13 43 43.5	+0.4
TLBR					Sn	13 44 04.9	-1.1
TPGR	Topolog	1.59	120	⇑P	Pn	13 43 43.3	+0.1
TPGR	Topolog	1.59	120		Pn	13 43 43.3	+0.1
IAS	Iasi	1.71	25	⇓P	Pn	13 43 44.8	+0.4
IAS				⇑S	Sn	13 44 07.5	-1.3
IAS	Iasi	1.71	25	P	Pn	13 43 44.7	+0.2
IAS				S	Sn	13 44 07.4	-1.3
TLCR		1.71	105	⇑P	Pn	13 43 44.8	+0.2
TLCR		1.71	105		Pn	13 43 45.1	+0.7
TLCR		1.71	105	P	Pn	13 43 45.2	+0.7
CVDA	Cernavoda	1.73	140	⇑P	Pn	13 43 45.2	+0.5
CVDA				⇑S	Sn	13 44 08.0	-1.0
CVDA	Cernavoda	1.73	140		Pn	13 43 45.2	+0.5
CVDA					Sn	13 44 08.0	-1.0
COPA	Copaceanca	1.77	211	⇑P	Pn	13 43 45.1	-0.1
COPA				⇑S	Sn	13 44 08.6	-1.2
ICOR	Ion Corvin	1.81	148	⇓P	Pn	13 43 46.2	+0.6
ICOR				⇑S	Sn	13 44 09.8	-0.8
TIRR	Tirgusor	1.82	130	⇑P	Pn	13 43 46.0	+0.3
TIRR				⇑S	Sn	13 44 09.7	-1.2
TIRR	Tirgusor	1.82	130	Pn	Pn	13 43 45.7	-0.1
TIRR				Sn	Sn	13 44 09.2	-1.7
TIRR	Tirgusor	1.82	130		Pn	13 43 46.0	+0.3
TIRR					Sn	13 44 09.7	-1.2
TIRR	Tirgusor	1.82	130	P	Pn	13 43 45.7	-0.1
TIRR						13 44 09.7	
LOT	Lotru	1.91	265	⇑P	Pn	13 43 46.7	-0.3
MFTR	Murfatlar	2.02	136	⇓P	Pn	13 43 48.5	+0.3
MFTR				⇑S	Sn	13 44 14.4	-0.8
MFTR	Murfatlar	2.02	136		Pn	13 43 48.5	+0.3
MFTR					Sn	13 44 14.4	-0.8
ARCR	ARCALIA	2.05	315	⇓P	Pn	13 43 48.3	-0.1
ARCR	ARCALIA	2.05	315		Pn	13 43 48.4	0.0
MILM	Milestii Mici	2.05	51	⇑iP	Pn	13 43 48.9	+0.5
	360nm,0.1s						
MILM				eS	Sn	13 44 14.0	-1.7
	1µm,0.3s						
MILM	Milestii Mici	2.05	51	c iP	Pn	13 43 48.9	+0.5
MILM				eS	Sn	13 44 14.0	-1.7
MILM				pmax	pmax		
	comp=Z,400nm,0.1s						
MILM				smax	smax		
	comp=N,2µm,1.0s						
MILM				smax	smax		
	comp=E,4µm,1.2s						
RAZG	Razgrad	2.09	179	⇑P	Pn	13 43 49.1	+0.1
RAZG				⇑S	Sn	13 44 16.0	-0.6
RAZG	Razgrad	2.09	179		Pn	13 43 49.1	+0.1
RAZG					Sn	13 44 16.0	-0.6
KIS	Kishinev	2.10	50	⇑eP	Pn	13 43 49.1	+0.1
	comp=E,150nm,0.1s						
KIS				eS	Sn	13 44 15.3	-1.5
	comp=E,2µm,0.4s						
KIS	Kishinev	2.10	50	⇑P	Pn	13 43 49.3	+0.3
KIS	Kishinev	2.10	50		Pn	13 43 49.3	+0.3
KIS	Kishinev	2.10	50	c iP	Pn	13 43 49.1	+0.1
KIS				eS	Sn	13 44 15.3	-1.5
KIS				pmax	pmax		
	comp=Z,150nm,0.2s						
KIS				smax	smax		
	comp=N,2µm,0.4s						
KIS				smax	smax		
	comp=E,2µm,0.8s						
KIS	Kishinev	2.10	50	P	Pn	13 43 49.3	+0.3
BURAR	Bucovina Array	2.14	337	⇓P	Pn	13 43 50.9	+1.3
BURAR	Bucovina Array	2.14	337	Pn	Pn	13 43 50.2	+0.6
BURAR	Bucovina Array	2.14	337	P	Pn	13 43 50.9	+1.3
TSCT	Constanta Port	2.15	133	⇓P	Pn	13 43 50.2	+0.5
TSCT				⇑S	Sn	13 44 17.2	-0.6
TSCT	Constanta Port	2.15	133		Pn	13 43 50.2	+0.5
TSCT					Sn	13 44 17.2	-0.6
BUR08	Bucovina Ar. S	2.17	337	Pn	Pn	13 43 50.8	+0.8
EFOR	EFORIE	2.20	135	⇓P	Pn	13 43 50.8	+0.6
EFOR				⇓S	Sn	13 44 18.4	-0.4
VLAD	Vladila	2.22	222	⇑P	Pn	13 43 50.1	-0.4
CJR	Cluj-Napoca	2.26	299	⇓P	Pn	13 43 50.9	-0.1
CJR	Cluj-Napoca	2.26	299	P	Pn	13 43 52.0	+1.0
PSN	Preselentsi	2.32	148	P	Pn	13 43 52.2	+0.5
TSSL	Sulina	2.34	101	⇑S	Sn	13 44 22.1	+0.3
TSSL	Sulina	2.34	101		Sn	13 44 22.1	+0.3
MANR	Mangalia	2.38	140	⇓P	Pn	13 43 52.8	+0.4
MANR				⇓S	Sn	13 44 22.0	-0.7
TSMN	Mangalia Port-	2.39	140	⇑P	Pn	13 43 53.0	+0.5
TSMN				⇑S	Sn	13 44 22.6	-0.4
TSMN	Mangalia Port-	2.39	140		Pn	13 43 52.0	-0.5
TSMN					Sn	13 44 22.6	-0.4
SZH	Strazhica	2.42	189	P	Pn	13 43 52.1	-0.8
SZH				S	Sn	13 44 22.4	-1.3
SZH	Strazhica	2.42	189	P	Pn	13 43 52.8	-0.1
NEF	NEVSHA	2.46	166	P	Pn	13 43 53.5	+0.1
NEF				SN	Sn	13 44 21.4	-3.2
DEV	Deva	2.51	276	⇑P	Pn	13 43 55.0	+1.0
DEV				⇓S	Sn	13 44 26.8	+1.1
DEV	Deva	2.51	276	P	Pn	13 43 55.0	+1.0
DEV				S	Sn	13 44 26.7	+1.1
PURM	Purcari	2.52	69	⇑P	Pn	13 43 54.4	+0.4
PURM				⇓S	Sn	13 44 24.7	-1.0
PURM	Purcari	2.52	69		Pn	13 43 54.4	+0.4
PURM					Sn	13 44 24.7	-1.0
SRE	Strehaia	2.52	248	⇑P	Pn	13 43 53.9	-0.2
SRE				⇑S	Sn	13 44 24.6	-1.2
SRE	Strehaia	2.52	248	P	Pn	13 43 53.9	-0.2
PRD	Provadia	2.54	165	P	Pn	13 43 55.3	+0.9
MARR	Marisel-Cluj	2.55	295		Pn	13 43 54.0	-0.6
PVL	Pavlikeni	2.57	199	P	Pn	13 43 56.1	+1.3
GZR	Gura Zlata	2.61	266	⇑P	Pn	13 43 55.3	-0.1
GZR				⇓S	Sn	13 44 28.9	+0.8
PLVB	Pleven	2.63	211	⇑P	Pn	13 43 55.3	-0.2
PLVB	Pleven	2.63	211		Pn	13 43 55.3	-0.2
CHRU	Chernivtsi	2.67	352	eP	Pn	13 43 51.5	-4.4
BAIL	Bailesti	2.76	235	⇑P	Pn	13 43 56.8	-0.3
BAIL				⇑S	Sn	13 44 30.7	-0.5
SORM	Soroca	2.79	27	⇓P	Pn	13 43 57.2	-0.3
SORM	Soroca	2.79	27		Pn	13 43 57.2	-0.3
SORM	Soroca	2.79	27	P	Pn	13 43 57.1	-0.3
SORM	Soroca	2.79	27	P	Pn	13 43 57.2	-0.3
SORM	Soroca	2.79	27	P	Pn	13 43 57.1	-0.3
KSV	Kosov	2.83	341	eP	Pn	13 43 57.6	-0.3
DRGR		2.85	295	⇓P	Pn	13 43 57.6	-0.7
DRGR		2.85	295	P	Pn	13 43 57.6	-0.7
DRGR		2.85	295	ePn	Pn	13 43 57.5	-0.7
RAKU	Rahkiv	2.85	327	eP	Pn	13 43 58.0	-0.2
BMR	Baia Mare	2.88	316	P	Pn	13 43 58.8	+0.3
NSLU	Nyzhne Selyshc	2.89	332	eP	Pn	13 44 04.0	+5.3
KMPD	K-Podol'skiy	2.91	360	P	Pn	13 43 57.6	-1.3
KMPD	K-Podol'skiy	2.91	360	eP	Pn	13 43 58.5	-0.4
DJES	Djerdap	2.97	252	Pn	Pn	13 43 58.3	-1.4
HERR	Herculane	2.97	256	⇑P	Pn	13 43 59.4	-0.3
NDNU	Novodnistrovsk	3.00	11	eP	Pn	13 43 59.7	-0.4
JMB	Yambol	3.19	179	P	Pn	13 44 02.2	-0.4
STNU	Starunia	3.34	337	eP	Pn	13 44 05.0	+0.6
KORU	Korolevo	3.39	319	eP	Pn	13 44 04.9	-0.2
BZS	Buzias	3.41	271	⇑P	Pn	13 44 05.0	-0.4
BZS	Buzias	3.41	271	P	Pn	13 44 05.0	-0.4
BZS	Buzias	3.41	271	ePn	Pn	13 44 04.9	-0.5
TRSU	Trosnyk	3.43	317	eP	Pn	13 44 06.3	+0.7
MDVR	Moldovita	3.48	257	⇓P	Pn	13 44 06.0	-0.3
MEZ	Mezhgor'ye	3.50	326	eP	Pn	13 44 07.4	+0.8
ZAGS	Zajecar	3.54	240	ePn	Pn	13 44 05.4	-1.7
HORU	Horodok	3.56	359	eP	Pn	13 44 07.2	-0.1
BRIU	Brid	3.58	320	eP	Pn	13 44 07.2	-0.3
KUBS	Kucevo	3.62	252	ePn	Pn	13 44 06.5	-1.7
KUBS				eSn	Sn	13 44 48.1	-2.9
ZAPS	Zavoj	3.64	230	ePn	Pn	13 44 07.6	-0.8
ZAPS				eSn	Sn	13 44 48.1	-3.3
BERU	Beregovo	3.68	316	eP	Pn	13 44 07.9	-0.9
BANR	Banloc	3.76	268	⇑P	Pn	13 44 10.4	+0.4
MUKU	Mukachevo	3.81	319	eP	Pn	13 44 10.7	+0.2
VTS	Vitosha	3.83	219	⇑P	Pn	13 44 12.1	+1.1
VTS	Vitosha	3.83	219	Pn	Pn	13 44 11.2	+0.2
VTS	Vitosha	3.83	219	P	Pn	13 44 11.2	+0.2
VTS				SN	Sn	13 44 57.4	+1.3
VTS	Vitosha	3.83	219	P	Pn	13 44 11.5	+0.5
PLNA	Plana	3.87	216	P	Pn	13 44 12.6	+1.1
MORS	Morshin	3.90	334	eP	Pn	13 44 12.9	+1.3
BOVS	Bovan	3.96	241	ePn	Pn	13 44 11.5	-1.0
BOVS				eSn	Sn	13 44 56.4	-2.4
HOLU	Holmets	4.01	317	eP	Pn	13 44 13.3	+0.2
KDZ	Kurdzhali	4.08	191	P	Pn	13 44 15.8	+1.6
KDZ				SN	Sn	13 45 02.9	+1.2
KDZ	Kurdzhali	4.08	191	P	Pn	13 44 14.1	-0.1
UZHM	Uzhgorod	4.12	318	P	Pn	13 44 14.3	-0.3
UZH	Uzhgorod	4.12	318	eP	Pn	13 44 14.6	0.0
SHIU	Shidnytsya	4.15	330	eP	Pn	13 44 16.4	+1.4
STZU	Stuzhytsa	4.26	323	eP	Pn	13 44 17.2	+0.8
LUBAR	Lubar, Ukraine	4.35	11	P	Pn	13 44 16.5	-1.1
LUBAR				sP		13 44 48.8	
BARS	Barje	4.39	231	ePn	Pn	13 44 18.1	-0.1
GRUS	Gruza	4.47	249	ePn	Pn	13 44 18.8	-0.4
PRVS	Prvonek	4.47	227	ePn	Pn	13 44 19.3	0.0
LVV	L'vov	4.48	339	eP	Pn	13 44 19.8	+0.5
LVV				eS	Sn	13 45 11.5	+0.5
LVV				pmax	pmax		
	comp=Z,110nm,1.0s						
LVV				smax	smax		
	comp=N,110nm,2.3s						
LVV				MLR	MLR		
	comp=E,200nm,2.2s						
KKB	Krupnik	4.52	214	P	Pn	13 44 23.8	+3.9
KKB				SN	Sn	13 45 12.9	+0.9
TRUS	Trudelj	4.54	254	ePn	Pn	13 44 19.4	-0.8
SELS	Selova	4.54	239	ePn	Pn	13 44 19.7	-0.6
RDO	Rodhopi	4.56	189		Pn	13 44 20.2	-0.2
FRGS	Fruska Gora	4.72	266	⇑P	Pn	13 44 22.4	-0.2
FRGS	Fruska Gora	4.72	266	ePn	Pn	13 44 22.4	-0.2
ALN	Alexandroupoli	4.77	184	Pn	Pn	13 44 23.1	-0.1
ALN	Alexandroupoli	4.77	184	P	Pn	13 44 23.1	-0.1
DIVS	Divibare	4.87	254	Pn	Pn	13 44 23.9	-0.6
DIVS	Divibare	4.87	254	ePn	Pn	13 44 23.9	-0.6
IVAS	Ivanjica	4.97	248	ePn	Pn	13 44 25.1	-0.8
KECS	Kecovo	4.97	307	eP	Pn	13 44 25.8	-0.1
KECS	Kecovo	4.97	307	eP	Pn	13 44 25.8	-0.1
STIP	Stip	5.04	220	i Pn	Pn	13 44 24.1	-2.7
PSZ	Piszkesteto	5.05	299	Pn	Pn	13 44 25.9	-1.1
PSZ	Piszkesteto	5.05	299	P	Pn	13 44 25.9	-1.1
STHS	Stebnicka Huta	5.17	319	eP	Pn	13 44 27.9	-0.5
STHS	Stebnicka Huta	5.17	319	eP	Pn	13 44 27.9	-0.5
VAY	Valandovo	5.18	215	i Pn	Pn	13 44 18.8	-10
SEV	Sevastopol'	5.21	100	⇓eP	Pn	13 44 29.4	+0.4
SEV				Pm		13 44 29.6	
	comp=Z,10.0nm,0.3s						
SEV				eS	Sn	13 45 27.7	-0.7
SEV				Sm		13 45 29.4	
	comp=N,31nm,0.7s						
SEV				Sm		13 45 29.4	
	comp=E,17nm,0.4s						
SEV	Sevastopol'	5.21	100	⇓eP	Pn	13 44 29.4	+0.4
SEV				eS	Sn	13 45 27.7	-0.7
SEV	Sevastopol'	5.21	100	P	Pn	13 44 29.4	+0.4
SEV				Pm		13 44 29.6	
SEV				S	Sn	13 45 27.7	-0.7
SEV				Sm		13 45 29.4	
AK07	Malin Array Si	5.23	19	P	Pn	13 44 28.6	-0.6
SJES	Sjenica	5.24	245	ePn	Pn	13 44 29.9	+0.4
AK13	Malin Array Si	5.25	18	P	Pn	13 44 28.7	-0.8
AK06	Malin Array Si	5.26	19	P	Pn	13 44 28.9	-0.7
AK14	Malin Array Si	5.28	19	P	Pn	13 44 29.2	-0.7
AK10	Malin Array Si	5.28	20	P	Pn	13 44 29.3	-0.6
AK05	Malin Array Si	5.29	19	Pn	Pn	13 44 29.1	-0.9
AK05	Malin Array Si	5.29	19	P	Pn	13 44 29.5	-0.5
AK09	Malin Array Si	5.30	20	P	Pn	13 44 29.6	-0.6
AK08	Malin Array Si	5.32	19	P	Pn	13 44 29.8	-0.5
AK16	Malin Array Si	5.32	18	P	Pn	13 44 29.7	-0.6
AK17	Malin Array Si	5.32	18	P	Pn	13 44 29.7	-0.7
AK02	Malin Array Si	5.33	19	P	Pn	13 44 30.2	-0.3

AK11	Malin Array Si	5.34	19	P	Pn	13 44 30.0	-0.6
MI28	Mi28,Pidlybu	5.34	8	P	Pn	13 44 30.1	-0.5
AK15	Malin Array Si	5.34	18	P	Pn	13 44 30.1	-0.6
AK19	Malin Array Si	5.34	18	P	Pn	13 44 29.9	-0.8
BBLS	Lazići	5.34	253	*e*Pn	Pn	13 44 30.9	0.0
AK18	Malin Array Si	5.36	18	P	Pn	13 44 30.2	-0.7
AK01	Malin Array Si	5.36	19	P	Pn	13 44 30.6	-0.3
AK20	Malin Array Si	5.36	17	P	Pn	13 44 30.2	-0.8
AKASG	Malin Array Be	5.37	19	P	Pn	13 44 30.5	-0.5
	comp=E,5.7nm,0.3s,baz=205,slow=12,SNR=30						
AKASG				S	Sn	13 45 28.2	-4.0
	comp=E,26nm,0.7s,baz=199,slow=22,SNR=18						
AKASG	Malin Array Be	5.37	19	Pn	Pn	13 44 29.9	-1.2
AKASG	Malin Array Be	5.37	19	*i* P	Pn	13 44 30.7	-0.4
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.3s						
AKBB	Malin Array Si	5.37	19	Pn	Pn	13 44 30.0	-1.1
AKBB	Malin Array Si	5.37	19	P	Pn	13 44 30.3	-0.8
AKBB				sP		13 45 02.8	
AKBB	Malin Array Si	5.37	19	*ce*P	Pn	13 44 30.2	-0.8
AK04	Malin Array Si	5.38	19	P	Pn	13 44 30.5	-0.7
AK22	Malin Array Si	5.39	18	P	Pn	13 44 30.6	-0.8
AK03	Malin Array Si	5.39	19	P	Pn	13 44 30.8	-0.6
AK21	Malin Array Si	5.40	18	P	Pn	13 44 30.7	-0.8
AK23	Malin Array Si	5.41	18	P	Pn	13 44 30.8	-0.8
SIM	Simferopol'	5.44	95	⇓*e*P	Pn	13 44 32.2	+0.2
SIM				Pm		13 44 32.4	
	comp=Z,25nm,0.3s						
SIM				*e*S	Sn	13 45 32.7	-1.0
SIM				Sm		13 45 34.5	
	comp=N,111nm,1.4s						
SIM				Sm		13 45 34.5	
	comp=E,246nm,1.6s						
SIM	Simferopol'	5.44	95	P	Pn	13 44 32.2	+0.2
SIM				*e*		13 45 32.5	
SIM				pmax	pmax		
	comp=Z,17nm,0.2s						
SIM	Simferopol'	5.44	95	P	Pn	13 44 32.2	+0.2
SIM				Pm		13 44 32.4	
SIM				S	Sn	13 45 32.7	-1.0
SIM				Sm		13 45 34.5	
ALU	Alushta	5.69	97	⇓*e*P	Pn	13 44 35.8	+0.4
ALU				Pm		13 44 36.0	
	comp=Z,21nm,0.5s						
ALU	Alushta	5.69	97	⇓*e*P	Pn	13 44 35.8	+0.4
ALU	Alushta	5.69	97	P	Pn	13 44 35.8	+0.4
ALU				Pm		13 44 36.0	
LANS	Liptovska Anna	5.90	309	*e*P	Pn	13 44 38.6	+0.4
LANS	Liptovska Anna	5.90	309	*e*P	Pn	13 44 38.6	+0.4
VYHS	Vyhne	5.94	301	*e*P	Pn	13 44 38.6	-0.1
VYHS	Vyhne	5.94	301	*e*P	Pn	13 44 38.6	-0.1
SUDU	Sudak	6.06	94	⇓*e*P	Pn	13 44 39.8	-0.6
SUDU				Pm		13 44 41.4	
	comp=Z,162nm,0.7s						
SUDU				*e*S	Sn	13 45 48.6	-0.1
SUDU				Sm		13 45 50.7	
	comp=N,51nm,0.8s						
SUDU				Sm		13 45 50.7	
	comp=E,65nm,0.9s						
SUDU	Sudak	6.06	94	⇓*e*P	Pn	13 44 39.8	-0.6
SUDU				*e*S	Sn	13 45 48.6	-0.1
SUDU	Sudak	6.06	94	P	Pn	13 44 39.8	-0.6
SUDU				Pm	Sn	13 45 48.6	-0.1
SUDU				S	Sn	13 45 48.6	-0.1
SUDU				Sm		13 45 50.7	
FNA	Florina	6.13	219	Pn	Pn	13 44 41.7	+0.3
FNA	Florina	6.13	219	P	Pn	13 44 41.7	+0.3
MDUB	Mudurnu	6.23	145	Pn	Pn	13 44 43.3	+0.5
JAVC	Velka Javorina	6.79	301	*e*PN	Pn	13 44 51.0	+0.8
DIKM	Dikmen	7.52	119	⇓P	Pn	13 44 59.1	-0.8
DIKM	Dikmen	7.52	119		Pn	13 44 59.1	-0.8
VRAC	Vranov	7.63	302	P	Pn	13 45 00.3	-0.9
	comp=E,4.4nm,0.7s,baz=101,slow=12,SNR=4.4						
VRAC	Vranov	7.63	302	*e*PN	Pn	13 45 00.9	-0.3
BR131	Keskin Array S	7.93	136	Pn	Pn	13 45 05.2	-0.4
BR131	Keskin Array S	7.93	136	*i* P	Pn	13 45 05.5	0.0
BRTR	Keskin Array B	7.93	136	P	Pn	13 45 05.6	0.0
	comp=E,2.5nm,0.6s,baz=320,slow=10,SNR=6.8						
BRTR	Keskin Array B	7.93	136	Pn	Pn	13 45 05.5	0.0
MNK	Minsk	8.90	5	*i* P	Pn	13 45 16.8	-1.4
	comp=N,47nm,1.0s						
MNK				*i* P	Pn	13 45 17.1	-1.1
	comp=E,2.0nm,0.8s						
MNK				*i* P	Pn	13 45 17.1	-1.1
	comp=Z,10.0nm,0.9s,baz=187						
MNK				*i* pP		13 45 48.5	
MNK				*i* S	Sn	13 46 55.6	-1.2
MNK	Minsk	8.90	5	*i* P	Pn	13 45 16.7	-1.4
MNK				*i* S	Sn	13 46 55.6	-1.2
MNK				*i* S	Sn	13 46 56.7	-0.1
MNK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,47nm,1.0s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
GERES	GERESS Array B	9.26	295	P	Pn	13 45 22.0	-1.1
	comp=E,0.8nm,0.6s,baz=111,slow=10,SNR=6.6						
GERES	GERESS Array B	9.26	295	P	Pn	13 45 22.0	-1.1
NACGM	Naroch	9.26	1	*e*P	Pn	13 45 22.4	-0.5
	comp=Z,10.0nm,1.1s,baz=181						
TIP	Timpagrande	9.67	231	Pn	Pn	13 45 28.1	-0.5
LPSR	Galich'ya Gora	10.71	45	*e*P	Pn	13 45 40.8	-1.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
OBN	Obninsk	11.44	31	⇑*e*P	Pn	13 45 51.5	-0.2
OBN				*e*S	Sn	13 47 48.2	-10
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VRH	Novokhopyorsk	11.54	56	*e*P	Pn	13 45 51.0	-2.1
VRH				*e*S	Sn	13 47 54.7	-5.7
VRH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIV	Kislovodsk	11.64	93	*e*P	Pn	13 45 54.6	0.0
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KBZ	Khabaz	11.85	94	P	Pn	13 45 58.4	+1.2
	comp=Z,1.0nm,0.7s,baz=231,slow=6.5,SNR=1.8						
MOS	Moscow	12.30	31	*e*P	Pn	13 45 59.7	-3.3
BELG	Belogornoye	15.39	56	P	P	13 46 43.9	+0.5
	comp=Z,53nm,0.9s,baz=262,slow=1.8,SNR=12						
FINES	FINESS Array B	15.82	359	P	Pn	13 46 43.4	-3.9
	comp=Z,3.3nm,0.9s,baz=183,slow=12,SNR=5.7						
FINES	FINESS Array B	15.82	359	P	Pn	13 46 45.5	-1.8
FINES	FINESS Array B	15.82	359	P	Pn	13 46 45.5	-1.8
HFS	Hagfors	16.38	337	P	Pn	13 46 53.6	-0.5
	comp=Z,3.4nm,0.9s,baz=139,slow=11,SNR=4.3						
KLMR	Klimovskoe	17.05	22	*e*Pn	P	13 46 59.6	-2.1
KLMR				*e*Pn	P	13 46 59.6	-2.1
KLMR				*e*Pn	P	13 46 59.6	-2.1
KLMR				AMP		13 47 03.7	
	comp=Z,14nm,1.0s						
KLMR				Sn	S	13 49 56.3	-15
KLMR				Sn	S	13 49 56.3	-15
KLMR	Klimovskoe	17.05	22	*e*P	P	13 46 59.5	-2.1
KLMR						13 49 56.3	
KLMR				pmax	pmax		
	comp=Z,14nm,1.0s						
NAO01	NORSAR Array S	17.77	334	P	P	13 47 09.5	0.0
NAO01				IAmb	IAmb	13 47 20.3	
	comp=Z,22nm,1.0s						
NB2	NORSAR Subarra	17.82	335	P	P	13 47 10.5	+0.3
	comp=Z,0.9nm,0.7s,baz=141,slow=12						
NOA	NORSAR Array B	17.82	335	P	P	13 47 09.8	-0.4
	comp=Z,0.9nm,0.7s,baz=150,slow=11,SNR=3.9						
NC204	NORSAR Array S	18.14	335	P	P	13 47 13.0	-0.8
KIRV	Kirov	19.00	39	P	P	13 47 23.5	+0.6
	comp=Z,16nm,0.6s,baz=252,slow=3.2,SNR=7.1						
AKTO	Aktyubinsk	21.52	66	P	P	13 47 51.8	+1.6
	comp=Z,3.5nm,0.6s,baz=280,slow=7.1,SNR=9.6						
	comp=Z,3.5nm,0.6s						
ARU	Arti	22.66	50	P	P	13 48 01.0	-0.5
	comp=Z,4.2nm,0.4s,baz=244,slow=8.0,SNR=9.6						
	comp=Z,4.2nm,0.4s						
ARU	Arti	22.66	50	P	P	13 48 00.9	-0.5
ARU				IAmb	IAmb	13 48 03.3	
	comp=Z,5.6nm,0.8s						
ARU	Arti	22.66	50	*d i*P	P	13 48 02.0	+0.6
ARU						13 48 42.7	
ARU				S	S	13 52 00.7	+2.6
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LVZ	Lovozero	22.70	8	P	P	13 48 01.1	-0.7
LVZ	Lovozero	22.70	8	P	P	13 48 01.1	-0.7
LVZ				pmax	pmax		
	comp=Z,44nm,1.2s						
ABKAR	Akbulak array	22.80	69	P	P	13 48 03.5	+0.7
ESDC	Sonseca Array	23.08	266	P	P	13 48 04.1	-1.5
	comp=Z,1.0nm,0.6s,baz=63,slow=9.1,SNR=10						
	comp=Z,1.0nm,0.6s						
ARCES	ARCESS Array B	23.95	359	P	P	13 48 13.3	+0.1
	comp=Z,2.2nm,0.9s,baz=178,slow=11,SNR=1.8						
ARCES				pP	pP	13 48 40.6	-1.8
	comp=Z,1.3nm,0.5s,baz=180,slow=11,SNR=2.6						
	comp=Z,2.2nm,0.9s						
BRVK	Borovoye	29.09	59	P	P	13 49 00.9	+1.5
BRVK				IAmb	IAmb	13 49 02.0	
	comp=Z,2.4nm,0.6s						
BRVK	Borovoye	29.09	59	P	P	13 49 00.9	+1.5
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVAR	Borovoye Array	29.16	59	P	P	13 49 01.8	+1.8
	comp=Z,1.0nm,0.5s,baz=274,slow=7.8,SNR=6.7						
BVAR				pP	pP	13 49 30.6	-0.5
	comp=Z,0.6nm,0.5s,baz=268,slow=13,SNR=1.6						
	comp=Z,1.0nm,0.5s						
KK31	Karatay Array	31.28	79	P	P	13 49 19.9	+1.1
KK31	Karatay Array	31.28	79	P	P	13 49 20.0	+1.1
KK31				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KKAR	Karatay Array	31.28	79	P	P	13 49 19.7	+0.8
KKAR	Karatay Array	31.28	79	P	P	13 49 19.7	+0.8
SPITS	Spitsbergen Ar	32.87	356	P	P	13 49 32.9	+0.6
	comp=Z,4.1nm,0.9s,baz=141,slow=9.3,SNR=1.5						
	comp=Z,4.1nm,0.9s						
AAK	Ala-Archa	34.18	78	P	P	13 49 47.2	+2.9
AAK	Ala-Archa	34.18	78	*i* P	P	13 49 46.0	+1.8
AAK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
KURBB	Kurchatov Arra	34.49	63	P	P	13 49 47.6	+1.0
	comp=Z,1.1nm,0.5s,baz=286,slow=9.5,SNR=8.4						
	comp=Z,1.1nm,0.5s						
KURK	Kurchatov	34.53	62	P	P	13 49 47.6	+0.7
KURK				IAmb	IAmb	13 49 51.0	
	comp=Z,5.1nm,1.5s						
KURK	Kurchatov	34.53	62	P	P	13 49 47.6	+0.7
KURK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
ZAA0	Zalesovo Array	37.58	56	P	P	13 50 13.2	+0.5
ZAA0				IAmb	IAmb	13 50 14.8	
	comp=Z,2.7nm,0.8s						
ZALV	Zalesovo Beam	37.58	56	P	P	13 50 14.2	+1.4
	comp=Z,2.4nm,0.4s,baz=283,slow=8.6,SNR=17						
	comp=Z,2.4nm,0.4s						
ZALV	Zalesovo Beam	37.58	56	P	P	13 50 13.8	+1.1
MK31	Makanchi Array	37.94	68	P	P	13 50 17.3	+1.3
MK31	Makanchi Array	37.94	68	P	P	13 50 17.3	+1.3
MK31				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	37.94	68	P	P	13 50 17.5	+1.5
	comp=Z,0.8nm,0.4s,baz=272,slow=8.2,SNR=26						
	comp=Z,0.8nm,0.4s						
MKAR	Makanchi Array	37.94	68	P	P	13 50 17.3	+1.3
TORD	Torodi Ar. Bea	38.61	221	P	P	13 50 22.4	+0.6
	comp=Z,1.5nm,0.5s,baz=26,slow=9.3,SNR=24						
	comp=Z,1.5nm,0.5s						
DGZ	Jazzator, Alta	40.25	61	*i* P	P	13 50 37.4	+2.1
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WMQ	Urumqi	42.59	70	*e*P	P	13 50 56.3	+2.0
MBAR	Mbarara	46.22	174	LR	LR	14 12 48.1	
	comp=Z,108nm,18.5s,baz=280,slow=38						
DBIC	Dimbokro	47.37	225	P	P	13 51 31.8	-0.5
	comp=Z,3.0nm,0.3s,baz=41,slow=7.8,SNR=19						
	comp=Z,3.0nm,0.3s						
DBIC	Dimbokro	47.37	225	P	P	13 51 31.7	-0.5
DBIC	Dimbokro	47.37	225	P	P	13 51 31.7	-0.5
DBIC				pmax	pmax		
	comp=Z,14nm,1.4s						
TIXI	Tiksi	51.06	23	P	P	13 52 00.3	+0.8
	comp=Z,0.4nm,0.4s,baz=270,slow=20,SNR=4.0						
	comp=Z,0.4nm,0.4s						
SONM	Songino Array	52.45	57	P	P	13 52 12.0	+1.6
	comp=Z,1.0nm,0.5s,baz=297,slow=8.0,SNR=11						
	comp=Z,1.0nm,0.5s						
SONM	Songino Array	52.45	57	P	P	13 52 10.9	+0.6
SONM	Songino Array	52.45	57	P	P	13 52 11.0	+0.6
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
HHC	Hu-ho-hao-te	59.34	61	*e*P	P	13 53 00.8	+1.4
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,200nm,4.7s						
A36M	Sachs Harbour	60.97	350	P	P	13 53 10.5	+0.6
PZH	PanZhiHua	61.56	80	P	P	13 53 14.6	-0.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,80nm,6.0s						
BJI	Beijing	62.64	60	P	P	13 53 21.4	-0.1
BJI				pmax	pmax		
	comp=Z,2.0nm,0.7s						
C36M	Paulatuk	63.27	349	P	P	13 53 25.4	+0.2
C36M				IAmb	IAmb	13 53 59.3	
	comp=Z,3.5nm,1.4s						
SEY	Seymchan	63.53	24	P	P	13 53 28.4	+1.4
	comp=Z,1.0nm,0.6s,baz=40,slow=6.6,SNR=7.8						
	comp=Z,1.0nm,0.6s						
CMAR	Chiang Mai Arr	64.86	89	P	P	13 53 37.1	+0.7
	comp=Z,0.5nm,0.3s,baz=308,slow=7.6,SNR=6.5						
	comp=Z,0.5nm,0.3s						
CMAR	Chiang Mai Arr	64.86	89	*ce*P	P	13 53 36.7	+0.3
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	Inuvik	65.37	352	P	P	13 53 39.0	+0.1
	comp=Z,0.7nm,0.4s,baz=33,slow=6.8,SNR=3.5						
	comp=Z,0.7nm,0.4s						
INK	Inuvik	65.37	352	P	P	13 53 38.8	-0.1
INK				IAmb	IAmb	13 54 05.5	
	comp=Z,1.9nm,0.6s						
INK	Inuvik	65.37	352	P	P	13 53 38.8	-0.1
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BMAR	Burnt Mountain	67.04	356	P	P	13 53 51.3	+1.6
YKA	Yellowknife Ar	67.79	342	P	P	13 53 54.2	-0.1
	comp=Z,0.3nm,0.6s,baz=33,slow=5.8,SNR=6.7						
	comp=Z,0.3nm,0.6s						
IMAR	Indian Mountai	68.69	0	P	P	13 54 01.0	+1.1
ILAR	Eielson Array	69.79	357	P	P	13 54 07.2	+0.5
	comp=Z,0.1nm,0.7s,baz=343,slow=5.6,SNR=2.0						
	comp=Z,0.1nm,0.7s						
DAWY	Dawson	70.05	353	P	P	13 54 09.1	+0.7
DAWY				IAmb	IAmb	13 54 11.3	
	comp=Z,4.8nm,1.4s						
CAST	Castle Rocks	71.27	359	P	P	13 54 16.3	+0.6
CAST				IAmb	IAmb	13 54 17.4	
	comp=Z,3.2nm,1.0s						
PDAR	Pinedale Array	83.65	329	P	P	13 55 24.8	-0.4
	comp=Z,0.3nm,0.6s,baz=54,slow=7.5,SNR=3.7						
	comp=Z,0.3nm,0.6s						

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*SKHL **08** 13:50:49.1±0.1, 42°.70N×145°.00E, h61^{km}±4^{km}, mb4.7/4*
*MOS **08** 13:50:49.2±1.7, 42°.80N×144°.87E, h55^{km}, mb4.4/1, Error ellipse: s-maj=18.0km s-min=10.8km az=83.1*
*JMA **08** 13:50:50.5±0.1, 42°.9N±0°.5×144°.9E±0°.5, h51^{km}±1^{km}, MV3.3/40, OFF NEMURO PENINSULA*
JMA Felt I J1 at OFF NEMURO PENINSULA .
*IDC **08** 13:50:54.6±3.3, 42°.97N×144°.77E, h81^{km}±24^{km}, mb3.3/8, mbtmp3.6/8, Error ellipse: s-maj=30.6km s-min=23.6km az=3.0*
ISC 08 13:50:50.4±0.9**, 42°.83N**±0°.06×**144°.99E**±0°.03**, h48**^{km}±6^{km}**, n39,** σ**0^{s}.93**/52**, mb3.5**/8**, 1C-3D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AKK	Akkeshi	0.22	330	*i* P	Pn	13 50 58.6	-0.1
AKK				*i* S	Sn	13 51 05.0	+0.5
JAK	Akkeshi	0.27	308	P	Pn	13 50 58.9	-0.2
JAK				*e*S	Sn	13 51 05.0	-0.2
JKHN	Kushirohamanak	0.28	27	*i* P	Pn	13 50 59.6	+0.4
JKHN				*e*S	Sn	13 51 06.2	+0.7
NMR	Nemuro--Hokkai	0.76	45	⇑*i*PN	Pn	13 51 04.5	-0.4
NMR				*i* S	Sn	13 51 14.4	-1.0
NMR	Nemuro--Hokkai	0.76	45	*i* P	Pn	13 51 04.5	-0.4
NMR				AMB	AMB	13 51 04.8	
	320nm,0.3s						
NMR				*i* S	Sn	13 51 14.6	-0.8
NMR				A	A	13 51 14.8	
	2µm,0.2s						
NMR				A	A	13 51 14.8	
	1µm,0.2s						
NEM2	Nemuro 2	0.77	46	P	Pn	13 51 04.4	-0.5
NEM2				*e*S	Sn	13 51 14.4	-1.1
JNK	Nakash	0.78	345	P	Pn	13 51 04.3	-0.9
JNK				*e*S	Sn	13 51 14.1	-1.7
JOB	Onbets	0.85	275	P	Pn	13 51 05.6	-0.5
JOB				*e*S	Sn	13 51 16.5	-1.0
JAR	Ashorobuto	1.01	298	P	Pn	13 51 07.6	-0.6
JAR				*e*S	Sn	13 51 19.9	-1.4
JRA	Rausu	1.11	5	P	Pn	13 51 09.0	-0.6
JRA				*e*S	Sn	13 51 22.6	-1.2
JCH	Churui	1.22	260	P	Pn	13 51 10.3	-0.7
JCH				*e*S	Sn	13 51 25.1	-1.3
RUSJ	Misakicho	1.29	8	⇓*i*PN	Pn	13 51 11.8	-0.2
RUSJ				*i* S	Sn	13 51 28.1	0.0
YUK	Yuzh-Kuril'sk	1.36	28	*d i*PN	Pn	13 51 13.0	0.0
YUK				*e*S	Sn	13 51 28.7	-1.2
YUK				pmax	pmax		
	comp=N,107nm,0.2s						
YUK				pmax	pmax		
	comp=E,110nm,0.2s						
YUK				pmax	pmax		
	comp=Z,248nm,0.2s						
YUK				smax	smax		
	comp=E,2µm,0.3s						
YUK				smax	smax		
	comp=N,1µm,0.2s						
YUK	Yuzh-Kuril'sk	1.36	28	*i* P	Pn	13 51 12.6	-0.4
YUK				AMB	AMB	13 51 17.1	
	comp=N,250nm,0.2s						
YUK				*e*S	Sn	13 51 29.3	-0.6
YUK				A	A	13 51 30.6	
	comp=N,1µm,0.4s						
YUK				A	A	13 51 30.6	
	comp=N,2µm,0.4s						
JTKR	Abashiri--Toko	1.39	326	P	Pn	13 51 13.2	-0.1
SHO	Shikotan	1.70	52	*d i*PN	Pn	13 51 16.9	-0.7
SHO				*e*S	Sn	13 51 35.8	-2.3
SHO				pmax	pmax		
	comp=E,24nm,0.3s						
SHO				pmax	pmax		
	comp=Z,44nm,0.3s						
SHO				pmax	pmax		
	comp=N,24nm,0.2s						
SHO				smax	smax		
	comp=N,566nm,0.2s						
SHO				smax	smax		
	comp=E,924nm,0.2s						
SHO	Shikotan	1.70	52	*e*P	Pn	13 51 17.3	-0.3
SHO				AMB	AMB	13 51 17.8	
	comp=E,80nm,0.2s						
SHO				*e*S	Sn	13 51 37.2	-0.9
SHO				A	A	13 51 39.4	
	comp=E,20nm,0.2s						
SHO				A	A	13 51 39.4	
	comp=E,190nm,0.2s						
JKA	Kamikawa-asahi	2.16	307	*e*P	Pn	13 51 24.7	+0.8
JKA				*e*S	Sn	13 51 50.5	+1.0
ASAJ	Asahikawa	2.16	307	P	Pn	13 51 24.7	+0.8
	comp=E,31nm,0.3s,baz=155,slow=10,SNR=111						
ASAJ				S	Sn	13 51 50.5	+0.9
	comp=E,72nm,0.7s,baz=48,slow=23,SNR=7.9						
KUR	Kuril'sk	3.17	40	PN	Pn	13 51 43.2	+5.4
KUR				*e*S	Sn	13 52 15.5	+1.1
KUR				pmax	pmax		
	comp=Z,23nm,0.3s						
KUR				pmax	pmax		
	comp=N,19nm,0.4s						
KUR				smax	smax		
	comp=N,53nm,0.4s						
KUR				smax	smax		
	comp=E,82nm,0.4s						
KUR	Kuril'sk	3.17	40	*e*P	Pn	13 51 39.0	+1.2
KUR				AMB	AMB	13 51 49.2	
	comp=E,60nm,0.2s						
KUR				*e*S	Sn	13 52 14.0	-0.4
KUR				A	A	13 52 25.9	
	comp=E,60nm,0.2s						
KUR				A	A	13 52 25.9	
	comp=E,90nm,0.2s						
YSS	Yuzh-Sakhalins	4.42	340	*e*PN	Pn	13 51 55.8	+0.9
YSS	Yuzh-Sakhalins	4.42	340	*e*P	Pn	13 51 55.7	+0.9
SONM	Songino Array	27.39	294	P	P	13 56 30.3	-0.9
	comp=E,0.6nm,0.8s,baz=93,slow=8.8,SNR=4.1						
	comp=E,0.6nm,0.8s						
H11N2	WAKE ISLAND Hy	29.51	134	T	T	14 27 54.6	
	baz=328,slow=75,SNR=106						
H11N1	WAKE ISLAND Hy	29.52	135	T	T	14 27 55.5	
	baz=328,slow=75,SNR=72						
H11N3	WAKE ISLAND Hy	29.53	134	T	T	14 27 56.1	
	baz=328,slow=75,SNR=78						
H11S1	WAKE ISLAND Hy	30.43	136	T	T	14 29 01.1	
	baz=329,slow=76,SNR=110						
H11S3	WAKE ISLAND Hy	30.43	136	T	T	14 29 05.9	
	baz=329,slow=76,SNR=122						
H11S2	WAKE ISLAND Hy	30.45	136	T	T	14 29 07.2	
	baz=329,slow=76,SNR=100						
ILAR	Eielson Array	43.16	36	P	P	13 58 46.8	+0.9
	comp=E,0.3nm,0.7s,baz=274,slow=8.4,SNR=5.9						
	comp=E,0.3nm,0.7s						
MKAR	Makanchi Array	43.61	298	P	P	13 58 49.1	-0.7
	comp=E,0.9nm,0.7s,baz=82,slow=9.1,SNR=10						
	comp=E,0.9nm,0.7s						
KURK	Kurchatov	44.74	304	P	P	13 58 58.3	-0.4
KURK	Kurchatov	44.74	304	*e*P	P	13 58 58.3	-0.4
KURBB	Kurchatov Arra	44.82	304	P	P	13 58 58.3	-1.0
	comp=E,0.5nm,0.5s,baz=74,slow=8.8,SNR=5.0						
	comp=E,0.5nm,0.5s						
BVAR	Borovoye Array	48.87	309	P	P	13 59 30.0	-0.9
	comp=E,0.2nm,0.3s,baz=78,slow=9.6,SNR=3.3						
	comp=E,0.2nm,0.3s						
WRA	Warramunga Arr	63.23	191	P	P	14 01 15.3	+1.6
	comp=E,0.2nm,0.8s,baz=9.5,slow=6.9,SNR=2.3						
	comp=E,0.2nm,0.8s						
FINES	FINESS Array B	64.97	332	P	P	14 01 23.5	-1.2
	comp=E,3.2nm,0.9s,baz=50,slow=7.5,SNR=4.4						
	comp=E,3.2nm,0.9s						
NVAR	Mina Array Bea	69.40	56	P	P	14 01 54.6	+1.1
	comp=E,0.2nm,0.5s,baz=300,slow=7.2,SNR=2.5						
	comp=E,0.2nm,0.5s						

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*IGIL **08** 13:56:49.8, 32°.24N×7°.92W, h2^{km}, ML2.4*
*MDD **08** 13:56:50.0±1.2, 32°.13N×7°.77W, h68^{km}±22^{km}, Mb3.8/6, Error ellipse: s-maj=12.1km s-min=9.1km az=76.0*
*INMG **08** 13:56:50.8±1.7, 32°.20N×7°.86W, h31^{km}±16^{km}, ML2.4, Error ellipse: s-maj=11.8km s-min=8.8km az=77.0*
*SFS **08** 13:56:51.4, 32°.41N×7°.76W, h1^{km}, mb3.5/7, ML3.6/10, MLv3.7/10*
ISC 08 13:56:56.2±2.9**, 32°.8N**±0°.1×**7°.62W**±0°.09**, h10**^{km}**, n29,** σ**1^{s}.00**/50**, 6C, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AVE	Averroes	0.58	18	P	Pb	13 57 09.0	+0.6
AVE				S	Sn	13 57 20.8	+0.8
IFR	Ifrane	2.23	69	S	Sn	13 57 59.7	-1.4
IFR				Pg	Pb	13 57 36.9	+0.2
PVLZ	Peæn de	3.67	48	P	Pn	13 57 53.4	+0.4
PVLZ				S	Sn	13 58 39.0	+2.7
PFVI	Vila Bisbo	4.49	348	P	Pn	13 58 03.1	-1.1
PFVI	Vila Bisbo	4.49	348	*e*P	Pn	13 58 03.5	-0.7
MORF	Marmelete	4.62	350	*e*P	Pn	13 58 05.3	-0.8
MORF				*e*S	Sn	13 59 00.6	+0.7
MORF				A	A	13 59 04.0	
	3.5nm,0.2s						
MORF	Marmelete	4.62	350	*e*P	Pn	13 58 05.0	-1.1
MORF				*e*S	Sn	13 59 00.0	+0.1
MORF				IAML		13 59 03.9	
	comp=E,8.0nm,0.3s						
PVAQ	Vaqueiros	4.65	359	*e*P	Pn	13 58 05.8	-0.6
PVAQ				*e*S	Sn	13 59 01.9	+1.5
PVAQ				A	A	13 59 03.5	
	comp=E,3.2nm,0.7s						
WMELI	Melilla	4.65	55	P	Pn	13 58 07.2	+0.8
EGRO	El Granado	4.78	1	S	Sn	13 59 05.1	+1.4
EGRO				P	Pn	13 58 08.1	-0.1
EGRO	El Granado	4.78	1	P	Pn	13 58 07.6	-0.6
EGRO				⇑*i*Vmb_V		13 58 12.3	
	comp=E,134nm,SNR=1.9						
EGRO				S	Sn	13 59 04.1	+0.5
PTEO	Sao Teotonio	4.87	350	*e*P	Pn	13 58 08.7	-0.8

PTEO				eS	Sn	13 59 07.3	+1.4
PCVE	Castro Verde	4.89	356	S	Sn	13 59 07.7	+1.4
PCVE				P	Pn	13 58 09.1	-0.6
PCVE	Castro Verde	4.89	356	eP	Pn	13 58 09.3	-0.4
PCVE				eS	Sn	13 59 06.7	+0.4
EMIN	Mina Concepcio	5.07	9	S	Sn	13 59 11.1	+0.2
EMIN				P	Pn	13 58 11.3	-0.9
EMIN	Mina Concepcio	5.07	9	P	Pn	13 58 10.8	-1.4
EMIN				⇑iVmb_V		13 58 15.6	
	comp=E,100nm,SNR=2.1						
EMIN				S	Sn	13 59 11.2	+0.4
MESJ	Messejana	5.11	355	eP	Pn	13 58 12.6	-0.1
MESJ				eS	Sn	13 59 12.9	+1.2
MESJ	Messejana	5.11	355	eS	Sn	13 59 11.4	-0.3
MESJ				IAML		13 59 14.5	
	comp=E,3.1nm,0.5s						
PNCL	Nicolau / Gran	5.40	352	S	Sn	13 59 19.2	+0.2
PNCL				P	Pn	13 58 16.0	-0.8
PBAR	Barrancos	5.44	5	eP	Pn	13 58 16.8	-0.5
PBAR				eS	Sn	13 59 20.6	+0.7
PBAR				A	A	13 59 22.5	
	comp=E,1.6nm,0.4s						
ECAB	El Cabril	5.61	18	S	Sn	13 59 22.9	-1.3
ECAB				P	Pn	13 58 18.8	-0.9
ECAB	El Cabril	5.61	18	P	Pn	13 58 18.5	-1.2
ECAB				⇑iVmb_V		13 58 25.3	
	comp=E,94nm,SNR=2.2						
ECAB				S	Sn	13 59 23.0	-1.3
EADA	Adamuz	5.95	24	P	Pn	13 58 23.8	-0.6
EADA				S	Sn	13 59 32.2	-0.4
EADA	Adamuz	5.95	24	P	Pn	13 58 23.6	-0.8
EADA				⇑iVmb_V		13 58 25.1	
	comp=E,87nm,SNR=1.7						
EADA				S	Sn	13 59 30.7	-1.9
EBAD	Badajoz	6.02	5	P	Pn	13 58 24.0	-1.2
EBAD				⇑iVmb_V		13 58 25.1	
	comp=E,98nm,SNR=1.9						
PMTG	Montargil	6.33	356	eP	Pn	13 58 28.7	-0.8
PMRV	Marv??o	6.67	2	eP	Pn	13 58 33.5	-0.7
PSIM	Granatula de C	6.83	26	P	Pn	13 58 35.3	-1.0
PSIM				S	Sn	13 59 53.0	-1.1
EPLA	Plasencia	7.41	9	P	Pn	13 58 44.1	-0.2
EPLA				⇑iVmb_V		13 58 53.5	
	comp=E,98nm,SNR=1.4						

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*IDC **08** 14:03:28.5±0.4, 54°.06S×134°.11W, h0^{km}, mb4.6/15, mbtmp4.6/15, MS4.6/43, Error ellipse: s-maj=20.1km s-min=14.5km az=155.0*

*NEIC **08** 14:03:30.7±1.2, 54°.1S±0°.1×133°.9W±0°.2, h10^{km}±1^{km}, mb5.1/86, Error ellipse: s-maj=17.7km s-min=16.8km az=236.0*

*BJI **08** 14:03:32.1±0.0, 54°.10S×133°.90W, h25^{km}, mB5.3/3, Ms5.2/1, Ms7 5.1/4*

*GCMT **08** 14:03:33.7±0.1, 54°.30S±0°.01×133°.90W±0°.02, h12^{km}, MW5.3/135, Moment Tensor Solution. s89,c136; s135,c229; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.98±.01; $M_{\theta\theta}$1.05±.01; $M_{\phi\phi}$-0.06±.01; $M_{r\theta}$0.19±.04; $M_{\theta\phi}$-0.05±.01; $M_{\phi r}$-0.17±.04; Best double couple: $M_0$1.04700×10^{17} NP1:ϕ_s282.00000°, δ51.00000°, λ-78.00000°. NP2:ϕ_s83.00000°, δ40.00000°, λ-105.00000°. Principal axes: T 1.0710, Plg5.0000°, Azm3.0000°; N -0.0430, Plg9.0000°, Azm94.0000°; P -1.0230, Plg79.0000°, Azm243.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 14:03:30.5±0.3, **54°.10S**±0°.07×**133°.93W**±0°.06, **h12**^{km}, **n294**, σ**1^{s}23**/255, **mb5.0**/55, **MS4.7**/47, **Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTCN	Pitcairn Islan	29.13	7	P	P	14 09 29.0	-2.2
SBA	Scott Base	31.41	200	P	P	14 09 52.6	+1.7
VNDA	Vanda	32.38	201	P	P	14 10 01.1	+1.7
	2.7nm,0.8s,baz=83,slow=10,SNR=6.5						
VNDA				LR	LR	14 19 49.5	
	comp=Z,2µm,20.1s,baz=106,slow=30						
	2.7nm,0.8s						
VNDA	Vanda	32.38	201	P	P	14 10 01.6	+2.2
RPN	Rapa Nui	32.45	44	LR	LR	14 19 53.1	
	comp=Z,1µm,19.0s,baz=220,slow=30						
TBI	Tubuai	32.85	333	eS	S	14 15 21.9	+0.8
	1µm,32.0s						
TBI				eLR	LR	14 18 42.6	
	comp=Z,14µm,26.5s						
TBI				eLR	LR	14 18 42.6	
	comp=Z,45µm,23.2s						
TBI	Tubuai	32.85	333	eT	T	14 44 28.9	
	247nm,0.4s						
PMSA	Palmer Station	35.22	136	LR	LR	14 21 11.0	
	comp=Z,1µm,19.3s,baz=246,slow=30						
QSPA	South Pole Qui	36.08	180	P	P	14 10 32.8	+1.1
	8.8nm,0.8s,baz=90,slow=4.2,SNR=20						
QSPA				LR	LR	14 23 22.4	
	comp=Z,1µm,18.1s,baz=81,slow=33						
	8.8nm,0.8s						
QSPA	South Pole Qui	36.08	180	P	P	14 10 32.8	+1.1
QSPA				IAmb	IAmb	14 10 41.5	
	comp=Z,81nm,1.7s						
RTZ	Ruatahuna	36.44	275	P	P	14 10 37.1	+2.0
RTZ				IAmb	IAmb	14 10 39.5	
	comp=Z,54nm,1.3s						
URZ	Urewera	36.60	275	LR	LR	14 22 07.1	
	comp=Z,1µm,20.0s,baz=250,slow=31						
RPZ	Rata Peaks	36.74	263	LR	LR	14 21 52.1	
	comp=Z,852nm,20.4s,baz=111,slow=30						
LBZ	Lake Benmore	36.85	262	P	P	14 10 40.7	+2.3
LBZ				IAmb	IAmb	14 10 45.7	
	comp=Z,99nm,1.8s						
INZ	Inchbonnie	37.10	265	P	P	14 10 42.5	+2.0
WHZ	Wether Hill Ro	37.29	258	P	P	14 10 42.5	+0.5
HIZ	Hauiti	37.76	273	P	P	14 10 48.0	+1.8
RAR	Rarotonga	38.25	319	LR	LR	14 22 30.9	
	comp=Z,881nm,18.6s,baz=158,slow=30						
PPT2	Papeete2	38.40	336	eP	P	14 10 52.9	+1.2
	comp=Z,93nm,25.8s						
PPT2				eS	S	14 16 47.4	+1.1
	comp=Z,396nm,26.5s						
PPT2				eLR	LR	14 21 16.4	
	comp=Z,4µm,26.0s						
PPT2				eLR	LR	14 21 16.4	
	comp=Z,2µm,24.8s						
PPT	Papeete	38.42	336	LR	LR	14 22 11.4	
	comp=Z,1µm,21.1s,baz=149,slow=29						
BELA	Belgrano 2	39.67	161	P	P	14 11 01.2	-0.5
VAH	Vaihoa	40.23	339	eT	T	14 53 45.9	
	comp=Z,60nm,0.3s						
RAO	Raoul Island	40.25	290	LR	LR	14 25 45.6	
	comp=Z,268nm,18.2s,baz=100,slow=33						
PMOR	Pomariorio Ree	40.51	339	eT	T	14 54 04.7	
	comp=Z,11nm,0.3s						
H03S2	Juan Fernandez	43.19	85	T	T	14 57 35.3	
	baz=223,slow=74,SNR=65						
H03S1	Juan Fernandez	43.20	85	T	T	14 57 36.0	
	baz=223,slow=74,SNR=73						
H03S3	Juan Fernandez	43.21	85	T	T	14 57 35.7	
	baz=223,slow=74,SNR=66						
PLCA	Paso Flores	43.46	99	P	P	14 11 34.4	+1.1
	comp=Z,2.6nm,0.9s,baz=210,slow=11,SNR=3.1						
	comp=Z,2.6nm,0.9s						
H03N3	Juan Fernandez	43.46	85	T	T	14 57 54.1	
	baz=226,slow=72,SNR=2073						
H03N2	Juan Fernandez	43.47	85	T	T	14 57 51.7	
	baz=226,slow=72,SNR=1201						
H03N1	Juan Fernandez	43.48	85	T	T	14 57 53.9	
	baz=226,slow=72,SNR=1275						
TAOE	Nuku Hiva Isla	45.39	351	eP	P	14 11 50.3	+1.4
	comp=Z,92nm,24.8s						
TAOE				eS	S	14 18 30.6	+0.8
	comp=Z,380nm,24.9s						
TAOE				eLR	LR	14 24 30.9	
	comp=Z,3µm,25.6s						
GO05	Huala	46.48	92	P	P	14 11 58.4	+1.1
GO05				IAmb	IAmb	14 12 00.2	
	comp=Z,19nm,1.3s						
BO02	Sierra Bellavi	47.31	93	P	P	14 12 03.7	-0.2
BO02				IAmb	IAmb	14 12 06.6	
	comp=Z,10nm,0.8s						
MT01	Popeta	47.69	91	P	P	14 12 07.9	+1.1
MT01				IAmb	IAmb	14 13 43.8	
	comp=Z,13nm,1.1s						
MT09	Talagante	47.90	92	P	P	14 12 09.0	+0.4
MT09				IAmb	IAmb	14 13 40.2	
	comp=Z,26nm,1.6s						
LMEL	Las Melosas	48.31	92	P	P	14 12 11.9	+0.1
ROC1	El Roble	48.45	91	P	P	14 12 12.1	-0.9
ROC1				IAmb	IAmb	14 12 23.6	
	comp=Z,9.5nm,0.7s						
PEL	Peldehue	48.53	91	P	P	14 12 13.4	+0.1
PEL				IAmb	IAmb	14 13 07.4	
	comp=Z,22nm,1.3s						
VA03	San Esteban	48.88	91	P	P	14 12 15.5	-0.6
CO02	Combarbal	49.74	89	P	P	14 12 22.7	+0.1
CO02				IAmb	IAmb	14 12 25.7	
	comp=Z,12nm,0.8s						
AFI	Afiamalu	49.86	309	LR	LR	14 28 10.5	
	comp=Z,375nm,19.2s,baz=150,slow=30						
SNAA	Sanae	49.90	162	LR	LR	14 31 09.8	
	comp=Z,1µm,21.8s,baz=206,slow=33						
TRQA	Tornquist	50.20	102	P	P	14 12 26.7	+0.7
GO04	Tololo Observa	50.60	88	P	P	14 12 29.0	-0.4
AC04	Llanos de Chal	51.89	86	P	P	14 12 39.8	+1.0
AC02	Maricunga	54.06	87	P	P	14 12 55.4	0.0
AC02				IAmb	IAmb	14 12 58.0	
	comp=Z,29nm,1.9s						
DZM	Mont Dzumac	54.68	281	eS	S	14 20 40.6	+1.3
	comp=Z,148nm,22.2s						
DZM				eLR	LR	14 28 50.0	
	comp=Z,598nm,28.4s						
DZM	Mont Dzumac	54.68	281	LR	LR	14 33 04.4	
	comp=Z,386nm,18.1s,baz=188,slow=32						
CAN	Canberra	55.05	257	P	P	14 13 02.7	+0.8
TOO	Toolangi	55.44	252	P	P	14 13 05.6	+0.9
TOO				IAmb	IAmb	14 13 50.4	
	comp=Z,36nm,1.6s						
PB03	IPOC Station P	57.34	83	P	P	14 13 19.0	+0.4
LVC	Limon Verde	57.40	84	P	P	14 13 18.9	-0.4
LVC				IAmb	IAmb	14 13 33.6	
	comp=Z,51nm,2.0s						
LVC	Limon Verde	57.40	84	eP	P	14 13 20.0	+0.8
MAW	Mawson	57.97	188	LR	LR	14 37 54.2	
	comp=Z,496nm,18.3s,baz=192,slow=36						
PB01	IPOC Station P	58.27	82	P	P	14 13 25.3	+0.2
FUNA	Funafuti	58.85	302	P	P	14 13 28.7	-0.3
PB11	IPOC Station P	59.17	81	P	P	14 13 31.4	0.0
PB11				IAmb	IAmb	14 13 35.0	
	comp=Z,15nm,0.9s						
ITQB	Itaqui	59.29	99	P	P	14 13 32.8	+0.8
ITQB				IAmb	IAmb	14 13 34.5	
	comp=Z,27nm,1.0s						
ITQB	Itaqui	59.29	99	eP	P	14 13 31.9	0.0
PLTB	Pedras Altas	59.49	103	eP	P	14 13 33.9	+0.6
GO01	Chusmiza	59.52	81	P	P	14 13 34.2	0.0
RODS	Rosario do Sul	59.62	101	eP	P	14 13 35.8	+1.6
MNMC	Minye Minye	59.70	81	P	P	14 13 34.8	-0.4
PB16	IPOC Station P	60.38	80	P	P	14 13 40.0	-0.2
PB16				IAmb	IAmb	14 13 44.0	
	comp=Z,16nm,1.2s						
CPSB	Cacapava Do Su	60.59	102	eP	P	14 13 42.4	+1.5
AZCA	Azaras, Argent	60.85	98	eP	P	14 13 43.6	+0.9
EIDS	Eidsvold	61.16	266	P	P	14 13 44.7	-0.1
EIDS				IAmb	IAmb	14 13 45.8	
	comp=Z,39nm,1.5s						
NNA	Nana	61.32	69	LR	LR	14 33 59.4	
	comp=Z,440nm,19.6s,baz=216,slow=30						
CPUP	Villa Florida	61.38	96	P	P	14 13 45.6	-0.7
	comp=Z,4.1nm,0.9s,baz=235,slow=4.5,SNR=6.3						
CPUP				LR	LR	14 35 54.8	
	comp=Z,384nm,21.6s,baz=224,slow=32						
	comp=Z,4.1nm,0.9s						
CPUP	Villa Florida	61.38	96	P	P	14 13 45.5	-0.7
CPUP				IAmb	IAmb	14 13 47.9	
	comp=Z,21nm,1.5s						
STKA	Stephens Creek	61.77	254	P	P	14 13 48.8	-0.1
	comp=Z,3.4nm,0.6s,baz=147,slow=6.5,SNR=12						
STKA				LR	LR	14 36 07.0	
	comp=Z,248nm,20.7s,baz=156,slow=32						
	comp=Z,3.4nm,0.6s						
STKA	Stephens Creek	61.77	254	P	P	14 13 49.0	+0.1
CRSM	Crissiumal (Br	62.42	99	eP	P	14 13 54.7	+1.4
LPAZ	La Paz	62.80	80	P	P	14 13 57.5	+0.9
	comp=Z,8.4nm,0.8s,baz=212,slow=3.8,SNR=18						
LPAZ				LR	LR	14 34 33.0	
	comp=Z,274nm,21.9s,baz=208,slow=30						
	comp=Z,8.4nm,0.8s						
LPAZ	La Paz	62.80	80	P	P	14 13 56.4	-0.2
LPAZ				IAmb	IAmb	14 14 05.0	
	comp=Z,18nm,1.0s						
LPAZ	La Paz	62.80	80	eP	P	14 13 57.3	+0.7
CNLB	Canela	62.89	103	eP	P	14 13 58.4	+1.9
ITAB	Concordia	63.72	101	eP	P	14 14 03.0	+1.0
ATAH	Atahualpa	64.50	65	LR	LR	14 35 51.5	
	comp=Z,258nm,19.2s,baz=218,slow=30						
AMBA	Amambai (Brazi	65.34	95	eP	P	14 14 14.6	+2.0
MCRA	Macar, Loja	66.01	62	P	P	14 14 16.6	-0.4
MCRA				IAmb	IAmb	14 14 24.1	
	comp=Z,8.0nm,0.8s						
BBRB	Robore, Bolivi	66.11	88	eP	P	14 14 17.5	0.0
BBSD	Serra de San D	66.49	87	eP	P	14 14 19.5	-0.5
CZSB	Cruzeiro do Su	67.11	71	P	P	14 14 24.0	0.0
CZSB				IAmb	IAmb	14 14 27.2	
	comp=Z,22nm,0.9s						
CZSB	Cruzeiro do Su	67.11	71	eP	P	14 14 25.1	+1.2
CTA	Charters Tower	68.05	266	LR	LR	14 39 44.8	
	comp=Z,299nm,20.4s,baz=152,slow=32						
CTAO	Charters Tower	68.05	266	P	P	14 14 30.2	+0.4
FRTB	Fartura	68.19	100	eP	P	14 14 31.6	+0.8
HNR	Honiara	68.48	284	LR	LR	14 37 45.2	
	comp=Z,2µm,21.4s,baz=151,slow=30						
PCMB	Pacaembu	68.54	97	eP	P	14 14 33.7	+0.8
PTLB	Pontes e Lacer	68.72	87	P	P	14 14 33.6	-0.5
PTLB	Pontes e Lacer	68.72	87	eP	P	14 14 34.0	-0.1
ETMB	Extrema	69.08	77	P	P	14 14 35.5	-0.9
ETMB	Extrema	69.08	77	eP	P	14 14 36.1	-0.2
PP1B	Ponte de Pedra	69.54	92	eP	P	14 14 41.2	+2.0
VAO	Valinhos	69.95	102	eP	P	14 14 43.3	+1.6
VILB	Vilhena	70.07	85	P	P	14 14 41.6	-0.8
VILB	Vilhena	70.07	85	eP	P	14 14 43.1	+0.6
FORT	Forrest	70.07	245	P	P	14 14 41.6	-0.7
SALV	Santo Antonio	70.39	90	eP	P	14 14 44.4	0.0
ITRB	Iturama	70.55	97	eP	P	14 14 47.4	+2.0
BB19B	Bebedouro	70.56	99	eP	P	14 14 45.8	+0.3
OTAV	Otavalo	70.70	61	P	P	14 14 46.4	-0.4
OTAV				IAmb	IAmb	14 15 19.8	
	comp=Z,18nm,1.4s						
OTAV	Otavalo	70.70	61	eP	P	14 14 47.9	+1.1
TULM	Tulcn-Chalpat	71.45	61	P	P	14 14 50.8	-0.6
SAML	Samuel	71.53	80	P	P	14 14 50.0	-1.3
SAML	Samuel	71.53	80	eP	P	14 14 51.1	-0.2
AS31	Alice Springs	72.41	254	P	P	14 14 55.2	-1.5
ASAR	Alice Springs	72.41	254	P	P	14 14 55.2	-1.4
	comp=Z,11nm,0.7s,baz=141,slow=6.8,SNR=142						
ASAR				LR	LR	14 43 27.4	
	comp=Z,502nm,18.4s,baz=149,slow=33						
	comp=Z,11nm,0.7s						
ASAR	Alice Springs	72.41	254	P	P	14 14 55.0	-1.6
BSCB	Bom Sucesso	72.78	102	eP	P	14 15 00.5	+1.6
ARAG	Araguaiana, MT	72.83	93	eP	P	14 14 58.6	-0.4
IPMB	Ipameri, GO	73.15	97	eP	P	14 15 02.8	+1.7
PMNB	Patos De Minas	73.75	99	eP	P	14 15 06.5	+1.9
H01W1	Cape Leeuwin H	73.77	233	T	T	15 36 34.8	
	baz=145,slow=76,SNR=86						
H01W2	Cape Leeuwin H	73.78	233	T	T	15 36 35.2	
	baz=145,slow=76,SNR=75						
H01W3	Cape Leeuwin H	73.79	233	T	T	15 36 36.1	
	baz=145,slow=76,SNR=91						
NWAO	Narrogin (SRO)	73.90	236	LR	LR	14 40 04.1	
	comp=Z,333nm,21.4s,baz=218,slow=30						
WR0	Warramunga Arr	74.96	257	P	P	14 15 10.5	-1.1
WR0				IAmb	IAmb	14 15 12.2	
	comp=Z,13nm,0.8s						
WB2	Warramunga Arr	75.09	257	P	P	14 15 10.8	-1.5
WRA	Warramunga Arr	75.09	257	P	P	14 15 11.2	-1.1
	comp=Z,9.9nm,0.7s,baz=144,slow=5.1,SNR=108						
WRA				LR	LR	14 44 50.1	
	comp=Z,460nm,19.9s,baz=143,slow=33						
	comp=Z,9.9nm,0.7s						
WRA	Warramunga Arr	75.09	257	P	P	14 15 11.2	-1.1
BDFB	Brasilia	75.11	96	P	P	14 15 12.9	+0.3
	comp=Z,4.0nm,0.7s,baz=354,slow=2.1,SNR=4.9						
BDFB				LR	LR	14 45 04.3	
	comp=Z,561nm,19.8s,baz=163,slow=33						
	comp=Z,4.0nm,0.7s						
BDFB	Brasilia	75.11	96	eP	P	14 15 13.4	+0.8
H06S1	SOCORRO T	75.17	22	T	T	15 37 38.2	
	SNR=4.3						
AIN	Ainahou	75.47	339	P	P	14 15 14.3	-0.2
PMG	Port Moresby	75.94	273	LR	LR	14 44 56.1	
	comp=Z,243nm,19.2s,baz=146,slow=33						
PMG	Port Moresby	75.94	273	P	P	14 15 17.9	+0.7
PMG				IAmb	IAmb	14 15 19.0	
	comp=Z,39nm,1.3s						
SNDB	Serra Nova Dou	76.08	91	eP	P	14 15 18.4	+0.4
JTS	Las Juntas de	76.29	50	LR	LR	14 40 59.6	
	comp=Z,679nm,21.6s,baz=202,slow=30						
SGCB	S£o Gabriel d	76.54	71	eP	P	14 15 19.8	-0.8
SJMB	Sao Joao De Ma	76.65	103	eP	P	14 15 20.8	-0.4
ROSC	El Rosal	76.75	62	P	P	14 15 22.5	+0.3
	comp=Z,7.0nm,0.5s,baz=151,slow=13,SNR=3.8						
ROSC				LR	LR	14 42 44.5	
	comp=Z,230nm,20.8s,baz=226,slow=31						
	comp=Z,7.0nm,0.5s						
KRVT	Keravat (AS076	77.19	280	LR	LR	14 44 47.0	
	comp=Z,93nm,19.7s,baz=281,slow=32						
NPGB	Novo Progresso	77.62	85	eP	P	14 15 26.2	-0.5
MACA	Manacapuru-AM	77.65	78	P	P	14 15 25.7	-1.2
MACA	Manacapuru-AM	77.65	78	eP	P	14 15 26.2	-0.7
JANB	Januaria	77.73	99	eP	P	14 15 26.7	-0.7
RUSC	La Rusia	78.29	63	P	P	14 15 29.8	-1.1
CMIG	Matias Romero	78.38	38	LR	LR	14 42 42.1	
	comp=Z,415nm,21.4s,baz=194,slow=30						
SDBA	SAO DESIDERIO	79.50	97	eP	P	14 15 37.2	+0.1
ITTB	Itaituba	79.56	83	eP	P	14 15 36.8	-0.6
SMTB	Santa Maria do	80.75	92	eP	P	14 15 44.1	+0.3
PRPB	Parauapebas	81.58	89	eP	P	14 15 48.1	-0.1
KNRA	Kununurra	81.67	255	P	P	14 15 48.9	+0.2
SDV	Santo Domingo	82.09	63	LR	LR	14 46 25.6	
	comp=Z,110nm,19.3s,baz=168,slow=31						
SDV	Santo Domingo	82.09	63	eP	P	14 15 50.1	-0.9
BOAV	Boa Vista	82.27	75	eP	P	14 15 51.9	+0.1
MALB	Monte Alegre	82.44	83	eP	P	14 15 53.0	+0.2
MTN	Manton Dam	82.59	258	P	P	14 15 52.0	-1.5
MTN				IAmb	IAmb	14 15 54.0	
	comp=Z,30nm,1.2s						
MCPB	Macapa, AP	84.93	84	eP	P	14 16 05.7	+0.1
TMAB	Tom-Au,PA,Br	85.64	88	eP	P	14 16 08.7	-0.3
TX31	Lajitas Ar. Si	87.11	26	P	P	14 16 15.7	-0.2
TX31				IAmb	IAmb	14 16 17.8	
	comp=Z,22nm,1.1s						
TXAR	Lajitas Array	87.11	26	P	P	14 16 16.8	+0.8
	comp=Z,2.9nm,0.8s,baz=198,slow=8.9,SNR=27						
	comp=Z,2.9nm,0.8s						
TXAR	Lajitas Array	87.11	26	P	P	14 16 16.0	+0.1
PIX	Pinacate	87.12	17	P	P	14 16 16.8	+1.0
PIX				IAmb	IAmb	14 16 18.3	
	comp=Z,9.8nm,1.1s						
833A	Chaparral WMA,	87.34	30	P	P	14 16 18.7	+1.8
	baz=199						
214A	Organ Pipe Nat	87.63	18	P	P	14 16 19.0	+0.7
214A				IAmb	IAmb	14 16 21.3	
	comp=Z,16nm,0.9s						
214A	Organ Pipe Nat	87.63	18	P	P	14 16 20.1	+1.9
	baz=192						
RMX	La Rumorosa	87.72	15	P	P	14 16 18.3	-0.5
RMX				IAmb	IAmb	14 16 20.9	
	comp=Z,9.9nm,0.8s						
319A	Douglas	87.75	21	P	P	14 16 18.9	-0.1
IKP	In-Ko-Pah, Jac	87.76	15	P	P	14 16 20.8	+1.9
	baz=190						
YUH	Yuha Desert	87.78	15	P	P	14 16 20.1	+1.1
YUH				IAmb	IAmb	14 16 22.8	
	comp=Z,12nm,1.0s						
MONP2	Monument Peak	87.95	15	P	P	14 16 22.1	+2.1
	baz=190						
113A	Mohawk Valley,	88.25	17	P	P	14 16 21.6	+0.4
113A				IAmb	IAmb	14 16 23.4	
	comp=Z,10nm,0.9s						
GLA	Glamis	88.35	16	P	P	14 16 23.9	+2.2
	baz=191						
TUC	Tucson	88.35	19	P	P	14 16 22.5	+0.7
TUC				IAmb	IAmb	14 16 24.1	
	comp=Z,8.9nm,0.9s						
TUC	Tucson	88.35	19	P	P	14 16 23.7	+2.0
	baz=193						
MURC	Murrieta	88.53	14	P	P	14 16 24.5	+2.0
	baz=190						
ELS	Elsinore Mount	88.54	14	P	P	14 16 23.1	+0.5
ELS				IAmb	IAmb	14 16 25.1	
	comp=Z,12nm,0.8s						
TPFO	Pinon Flats	88.64	15	P	P	14 16 25.1	+1.9
	baz=190						
PFO	Pinyon Flats O	88.65	15	P	P	14 16 24.4	+1.2
	comp=Z,5.3nm,0.9s,baz=176,slow=2.5,SNR=7.2						
PFO				LR	LR	14 47 04.1	
	comp=Z,467nm,21.3s,baz=210,slow=30						
	comp=Z,5.3nm,0.9s						
PFO	Pinyon Flats O	88.65	15	P	P	14 16 24.2	+1.0
PFO				IAmb	IAmb	14 16 31.8	
	comp=Z,28nm,1.6s						
PFO	Pinyon Flats O	88.65	15	P	P	14 16 25.3	+2.1
	baz=190						
BC3	Big Chuckawall	88.84	15	P	P	14 16 26.3	+2.2
	baz=191						
DUN6	Lazy B Ranch	88.93	21	P	P	14 16 24.8	+0.2
MNTX	Cornudas Mount	88.94	24	P	P	14 16 25.7	+1.2
	baz=196						
MDP	Montagnes des	89.00	80	LR	LR	14 50 35.4	
	comp=Z,114nm,21.9s,baz=184,slow=32						
BLYC	Blythe	89.08	16	P	P	14 16 25.0	-0.1
BLYC				IAmb	IAmb	14 16 27.4	
	comp=Z,10.0nm,0.9s						
BFSC	Mount Baldy Ra	89.09	13	P	P	14 16 27.0	+1.7
	baz=190						
BELC	Belle Mtn. Jos	89.10	15	P	P	14 16 27.6	+2.3
	baz=190						
121A	Cookes Peak, D	89.19	22	P	P	14 16 27.7	+1.8
	baz=195						
H11N3	WAKE ISLAND Hy	89.23	306	T	T	15 55 12.2	
	baz=149,slow=76,SNR=7.4						
H11N1	WAKE ISLAND Hy	89.24	306	T	T	15 55 07.4	
	baz=149,slow=76,SNR=8.4						
H11N2	WAKE ISLAND Hy	89.25	306	T	T	15 55 09.6	
	baz=149,slow=76,SNR=5.1						
JCT	Junction City	89.25	29	P	P	14 16 27.1	+1.1
	baz=199						
IRM	Iron Mountain	89.38	15	P	P	14 16 28.7	+2.2
	baz=191						
PKM	Mcpherson Peak	89.46	12	P	P	14 16 28.8	+1.8
	baz=188						
Y14A	Wickenburg	89.53	17	P	P	14 16 28.0	+0.8
EDW2	Edwards Air Fo	89.68	13	P	P	14 16 29.2	+1.2
	baz=189						
PDMCI	Parker Dam,Lak	89.69	16	P	P	14 16 30.0	+2.1
	baz=191						
HEC	Hector,Ludlow	89.86	14	P	P	14 16 30.5	+1.7
	baz=190						
GMRC	Granite Mounta	89.92	15	P	P	14 16 31.5	+2.3
	baz=191						
GSC	Goldstone, Bar	90.26	14	P	P	14 16 32.7	+2.1
	baz=190						
LRMC	Laurel Mtn Rad	90.31	13	P	P	14 16 32.9	+1.9
	baz=189						
VES	Vestal, Richgr	90.49	12	P	P	14 16 33.3	+1.7
	baz=189						
QSM	Queen of Sheba	90.90	14	P	P	14 16 34.0	+0.5
MPMC	Manual Prospec	90.91	13	P	P	14 16 35.2	+1.4
	baz=190						
V12A	Nelson	90.97	15	P	P	14 16 34.7	+0.8
V12A				IAmb	IAmb	14 16 36.6	
	comp=Z,5.8nm,0.8s						
BNM	Barren Site	91.00	22	P	P	14 16 34.8	+0.4
SUR	Sutherland	91.15	159	LR	LR	14 51 42.7	
	comp=Z,574nm,21.5s,baz=183,slow=32						
ABTX	Abilene, Hawle	91.31	28	P	P	14 16 36.4	+0.8
WUAZ	Wupatki	91.35	18	P	P	14 16 37.3	+1.4
	baz=193						
FURC	Furnace Creek,	91.39	14	P	P	14 16 38.0	+2.2
	baz=190						
WCT	Wildcat Mounta	91.75	14	P	P	14 16 38.9	+1.4
WCT				IAmb	IAmb	14 16 40.7	
	comp=Z,9.5nm,1.4s						
ANMO	Albuquerque	91.81	22	P	P	14 16 38.8	+0.8
	comp=Z,6.2nm,0.8s,baz=279,slow=5.1,SNR=19						
	comp=Z,6.2nm,0.8s						
ANMO	Albuquerque	91.81	22	P	P	14 16 38.9	+0.9
	baz=196						
TPNV	Topopah Spring	91.95	14	P	P	14 16 39.7	+1.1
TPNV	Topopah Spring	91.95	14	P	P	14 16 40.5	+1.9
	baz=190						
LCH	Last Change Ra	92.04	13	P	P	14 16 39.6	+0.6
LCH				IAmb	IAmb	14 17 43.6	
	comp=Z,16nm,2.0s						
U15A	North Rim	92.08	17	P	P	14 16 39.7	+0.4

DSP	**Deep Springs**	92.14	13	P	**P**	**14 16 39.6**	**+0.4**
DSP				IAmb	IAmb	14 16 42.3	
	comp=Z,23nm,1.8s						
SJG	**San Juan**	92.17	62	LR	LR	14 52 44.6	
	comp=Z,90nm,20.9s,baz=174,slow=32						
KNB	**Kanab**	92.56	17	P	**P**	**14 16 42.4**	**+1.0**
KNB				IAmb	IAmb	14 16 44.0	
	comp=Z,6.5nm,1.0s						
LHV	**Little Huntoon**	92.94	12	P	**P**	**14 16 44.1**	**+1.3**
LHV				IAmb	IAmb	14 16 44.7	
	comp=Z,18nm,1.6s						
NVAR	**Mina Array Bea**	93.14	12	P	**P**	**14 16 45.5**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=199,slow=7.1,SNR=5.3						
NVAR				LR	LR	14 50 01.2	
	comp=Z,526nm,19.3s,baz=182,slow=30						
	comp=Z,0.5nm,0.7s						
R11A	**Troy Canyon, C**	93.42	14	P	**P**	**14 16 47.4**	**+2.0**
	baz=191						
MVCO	**Mesa Verde**	93.55	20	P	**P**	**14 16 47.1**	**+1.1**
	baz=195						
KVN	**Kaiserville**	93.77	12	P	**P**	**14 16 47.4**	**+0.4**
KVN				IAmb	IAmb	14 17 12.8	
	comp=Z,16nm,2.0s						
HMU	**Henry Mountain**	93.82	18	P	**P**	**14 16 47.5**	**+0.2**
HMU				IAmb	IAmb	14 16 49.3	
	comp=Z,6.6nm,1.0s						
MSU	**Marysvale**	94.13	17	P	**P**	**14 16 49.9**	**+1.2**
S22A	**4UR Ranch, Cre**	94.42	21	P	**P**	**14 16 51.3**	**+1.3**
	baz=196						
PV23	**Carpenter Ridg**	94.65	19	P	**P**	**14 16 51.5**	**+0.3**
PV23				IAmb	IAmb	14 16 53.6	
	comp=Z,4.8nm,0.8s						
SDCO	**Great Sand Dun**	94.70	22	P	**P**	**14 16 52.5**	**+1.1**
	baz=196						
KAPI	**Kappang**	95.44	254	LR	LR	14 55 58.0	
	comp=Z,141nm,21.6s,baz=160,slow=33						
BOSA	**Boshof**	95.68	162	LR	LR	14 57 11.9	
	comp=Z,295nm,19.9s,baz=192,slow=34						
GUMO	**Guam**	95.80	285	LR	LR	14 51 42.9	
	comp=Z,85nm,21.3s,baz=128,slow=30						
ELK	**Elko**	95.83	14	LR	LR	14 51 03.2	
	comp=Z,278nm,21.7s,baz=196,slow=30						
YBH	**Yreka Blue Hor**	95.94	8	LR	LR	14 50 07.2	
	comp=Z,644nm,22.0s,baz=158,slow=29						
PDAR	**Pinedale Array**	98.72	18	P	**P**	**14 17 09.2**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=180,slow=3.4,SNR=5.1						
PDAR				LR	LR	14 53 13.2	
	comp=Z,431nm,20.5s,baz=194,slow=30						
	comp=Z,0.6nm,0.6s						
LBTB	**Lobatse**	99.25	161	LR	LR	14 57 26.2	
	comp=Z,354nm,20.6s,baz=183,slow=33						
TKL	**Tuckaleechee C**	99.30	39	LR	LR	14 55 27.5	
	comp=Z,216nm,21.8s,baz=212,slow=31						
YKA	**Yellowknife Ar**	117.24	10	PKP	**PKPdf**	**14 22 13.2**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=174,slow=2.3,SNR=7.8						
YKA				PKKPbc	**PKKPbc**	**14 32 37.6**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=5.5,slow=4.0,SNR=5.8						
SCRK	**Sand Creek**	118.00	355	P	**PKiKP**	**14 22 16.1**	**+0.3**
	baz=173						
HDA	**Harding Lake**	118.60	354	P	**PKiKP**	**14 22 16.9**	**+0.1**
	baz=171						
EGAK	**Eagle**	118.67	356	P	**PKPdf**	**14 22 16.9**	**0.0**
	baz=175						
ILAR	**Eielson Array**	118.96	354	PKP	**PKPdf**	**14 22 17.1**	**-0.3**
	comp=Z,3.9nm,0.8s,baz=200,slow=1.9,SNR=48						
PRP	**Porcupine Dome**	119.61	354	P	**PKPdf**	**14 22 18.9**	**0.0**
	baz=172						
I21K	**Tanana**	119.75	351	P	**PKiKP**	**14 22 19.0**	**+0.1**
	baz=168						
EPYK	**Eagle Plains**	120.16	359	P	**PKPdf**	**14 22 19.6**	**-0.1**
	baz=178						
G27K	**Doyon Strip**	120.72	356	P	**PKiKP**	**14 22 21.3**	**+0.4**
	baz=175						
G30M	**tAoh Zraii Nji**	120.77	359	P	**PKPdf**	**14 22 20.6**	**-0.3**
	baz=178						
G24K	**Hadweenzic Riv**	120.91	354	P	**PKiKP**	**14 22 21.8**	**+0.6**
	baz=171						
PETK	**Petropavlovsk-**	120.92	319	PKP	**PKPdf**	**14 22 20.4**	**-1.2**
	comp=Z,4.0nm,0.7s,baz=109,slow=3.6,SNR=10						
G23K	**Bananza Creek**	121.10	353	P	**PKiKP**	**14 22 22.3**	**+0.7**
	baz=169						
G21K	**Allakaket**	121.20	351	P	**PKiKP**	**14 22 22.4**	**+0.5**
	baz=167						
F25K	**Christian Rive**	121.69	355	P	**PKiKP**	**14 22 23.7**	**+0.9**
	baz=172						
F26K	**Sheenjek River**	121.71	355	P	**PKiKP**	**14 22 23.6**	**+0.8**
	baz=173						
F24K	**Squaw Lake**	121.75	354	P	**PKiKP**	**14 22 23.7**	**+0.8**
	baz=170						
SCHQ	**Schefferville**	121.77	39	PKP	**PKPdf**	**14 22 21.9**	**-1.3**
	comp=Z,2.0nm,0.8s,baz=260,slow=6.1,SNR=2.0						
F21K	**Alatna River**	121.89	351	P	**PKiKP**	**14 22 23.8**	**+0.6**
	baz=167						
INK	**Inuvik**	122.09	0	PKP	**PKPdf**	**14 22 22.4**	**-0.9**
	comp=Z,1.1nm,0.7s,baz=160,slow=3.1,SNR=5.9						
E27K	**Coleen River**	122.10	357	P	**PKiKP**	**14 22 24.0**	**+0.4**
	baz=175						
E25K	**Arctic Village**	122.21	355	P	**PKiKP**	**14 22 24.1**	**+0.3**
	baz=172						
E24K	**Your Creek**	122.33	354	P	**PKiKP**	**14 22 24.7**	**+0.7**
	baz=170						
TOLK	**Toolik Lake Re**	122.97	353	P	**PKiKP**	**14 22 25.6**	**+0.3**
	baz=169						
D23K	**Nanushuk River**	123.37	353	P	**PKiKP**	**14 22 26.9**	**+0.9**
	baz=168						
D25K	**Kavik River**	123.44	355	P	**PKPdf**	**14 22 24.9**	**-1.1**
	baz=171						
C27K	**Jago River**	123.62	356	P	**PKiKP**	**14 22 26.8**	**+0.3**
	baz=173						
C26K	**Camden Bay**	123.96	355	P	**PKiKP**	**14 22 28.0**	**+0.8**
	baz=172						
NJ2	**Nanjing**	125.09	278	*e*PKP	**PKiKP**	**14 22 31.2**	**+0.6**
A36M	**Sachs Harbour**	125.94	3	P	**PKPdf**	**14 22 30.5**	**-0.1**
	baz=186						
CMAR	**Chiang Mai Arr**	126.28	250	PKP	**PKPdf**	**14 22 32.6**	**-0.3**
	comp=Z,1.6nm,0.9s,baz=209,slow=1.8,SNR=13						
TORD	**Torodi Ar. Bea**	126.35	122	PKP	**PKPdf**	**14 22 32.2**	**-0.9**
	comp=Z,1.8nm,0.9s,baz=227,slow=1.8,SNR=6.1						
PZH	**PanZhiHua**	131.02	259	PKP	**PKPdf**	**14 22 38.0**	**-3.9**
HEH	**HeiHe**	132.58	300	*e*PKP	**PKPdf**	**14 22 44.2**	**+0.3**
HHC	**Hu-ho-hao-te**	135.39	281	*e*PKP	**PKPdf**	**14 22 46.0**	**-3.6**
MDT	**Midelt**	138.60	100	PKP	**PKPdf**	**14 22 55.1**	**-0.7**
	comp=Z,2.4nm,0.7s,baz=226,slow=2.6,SNR=6.4						
GTA	**Gaotai**	141.34	270	*e*PKP	**PKPdf**	**14 22 57.8**	**-2.9**
GOMU	**GeErMu**	142.12	262	PKP	**PKPdf**	**14 22 59.3**	**-3.2**
GOMU				pPKP	sPKPdf	14 23 14.0	+7.4
GOMU				sPKP		14 23 18.6	
GOMU				AMB	AMB		
	comp=Z,85nm,4.3s						
SONM	**Songino Array**	142.53	286	PKhKP	PKPpre	14 22 57.6	
	comp=Z,1.2nm,0.4s,baz=131,slow=2.3,SNR=19						
ESDC	**Sonseca Array**	143.69	93	PKP	PKPbc	14 23 02.6	+0.3
	comp=Z,3.5nm,1.1s,baz=238,slow=3.5,SNR=14						
BORG	**Borgarnes**	145.80	45	PKPdf	**PKPab**	**14 23 09.4**	**+0.9**
SCO	**Scoresbysund**	146.64	35	PKPdf	**PKPbc**	**14 23 09.8**	**-0.6**
SCO	**Scoresbysund**	146.64	35	*i* P	**PKPbc**	**14 23 10.0**	**-0.3**
NOR	**Nord**	147.03	14	*i* P	**PKPbc**	**14 23 10.8**	**-0.5**
DBG	**Daneborg**	147.36	28	*i* P	**PKPbc**	**14 23 12.4**	**+0.1**
DAG	**Danmarks Havn**	147.60	23	*i* P	**PKPbc**	**14 23 11.8**	**-1.1**
KEST	**Kesra**	148.64	111	PKPbc	**PKPbc**	**14 23 17.5**	**+0.5**
	comp=Z,14nm,0.8s,baz=283,slow=7.9,SNR=5.8						
WMQ	**Urumqi**	151.20	266	*e*PKPbc	**PKPdf**	**14 23 18.6**	**+1.6**
SPITS	**Spitsbergen Ar**	153.67	13	PKPbc	**PKiKP**	**14 23 27.6**	**0.0**
	comp=Z,5.6nm,0.6s,baz=108,slow=2.7,SNR=20						
SPITS				PKPab	**PKPab**	**14 23 40.6**	**+0.2**
	comp=Z,11nm,0.9s,baz=32,slow=3.3,SNR=5.0						
SPB2	**Spitsbergen Ar**	153.68	13	PKPbc	**PKPbc**	**14 23 27.5**	**+0.1**
KSH	**Kashi**	155.11	246	PKP	**PKPdf**	**14 23 22.9**	**0.0**
NRIK	**Noril'sk**	155.80	325	PKP	**PKPdf**	**14 23 20.6**	**-2.2**
	comp=Z,0.9nm,0.3s,baz=164,slow=20,SNR=1.3						
NRIK				PKPab	**PKPab**	**14 23 49.6**	**0.0**
	comp=Z,4.4nm,0.7s,baz=81,slow=4.0,SNR=8.6						
MKAR	**Makanchi Array**	156.02	267	PKP	**PKPdf**	**14 23 21.7**	**-2.1**
	comp=Z,1.1nm,1.1s,baz=74,slow=4.3,SNR=5.3						
MKAR				PKPbc	**sPKPdf**	**14 23 32.4**	**+4.5**
	comp=Z,1.5nm,0.8s,baz=111,slow=2.7,SNR=11						
MKAR				PKPab	**PKPab**	**14 23 50.5**	**-0.8**
	comp=Z,7.0nm,0.9s,baz=96,slow=4.9,SNR=16						
MKAR				PP	**PP**	**14 27 25.0**	**-4.3**
	comp=Z,0.5nm,0.8s,baz=152,slow=6.5,SNR=3.3						
ZALV	**Zalesovo Beam**	157.42	285	PKP	**PKPdf**	**14 23 24.6**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=96,slow=30,SNR=2.1						
ZALV				PKPab	**PKPab**	**14 23 56.2**	**-0.8**
	comp=Z,7.8nm,0.7s,baz=116,slow=3.7,SNR=16						
GERES	**GERESS Array B**	159.28	91	PKP	**PKPdf**	**14 23 27.7**	**-0.2**
	comp=Z,0.3nm,0.2s,baz=253,slow=3.0,SNR=4.0						
CLL	**Collm**	159.87	84	*e*PKPdf	**PKPdf**	**14 23 30.0**	**+1.7**
CLL				*e*PKPab	**PKPab**	**14 24 09.0**	**+1.3**
	comp=Z,12nm,1.3s						
CLL				AMS	AMS	15 43 00.0	
	comp=Z,200nm,19.5s						
GEYT	**Alibeck**	161.84	212	PKPab	**PKPab**	**14 24 15.2**	**-1.4**
	comp=Z,1.7nm,0.6s,baz=259,slow=1.5,SNR=3.6						
VYHS	**Vyhne**	162.13	97	*e*PKP	**PKPdf**	**14 23 33.6**	**+2.8**
VYHS				*e*		14 24 20.0	
FINES	**FINESS Array B**	167.08	47	PKPab	**PKPab**	**14 24 38.5**	**-0.5**
	comp=Z,3.4nm,0.9s,baz=239,slow=5.6,SNR=5.1						
AKASG	**Malin Array Be**	169.16	101	PKPab	**PKPab**	**14 24 48.5**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=267,slow=3.7,SNR=4.6						
KBZ	**Khabaz**	169.42	167	PKPab	**PKPab**	**14 24 49.8**	**+0.1**
	comp=Z,2.2nm,1.0s,baz=170,slow=5.0,SNR=3.9						

IDC 08 14:05:21.2±59.0, 20°.72S×176°.13W, h0^{km}, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=1090.0km s-min=177.7km az=84.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	39.27	245	P	P	14 12 50.3	-1.5
	0.9nm,0.5s,baz=78,slow=9.3,SNR=3.3						
	0.9nm,0.5s						
ASAR	**Alice Springs**	46.17	257	P	P	14 13 48.0	-0.1
	1.6nm,0.8s,baz=100,slow=6.6,SNR=16						
	1.6nm,0.8s						
WRA	**Warramunga Arr**	46.30	262	P	P	14 13 49.9	+0.8
	1.3nm,0.6s,baz=92,slow=8.4,SNR=23						
	1.3nm,0.6s						

IDC 08 14:11:54.1±2.3, 9°.23S×120°.05E, h0^{km}, mb3.7/3, mbtmp3.7/5, ML3.7/2, Error ellipse: s-maj=163.2km s-min=25.3km az=54.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	17.44	129	P	P	14 15 60.0	-0.3
	0.3nm,0.3s,baz=303,slow=13,SNR=6.4						
WRA				S	Sn	14 18 57.8	-16
	0.6nm,0.8s,baz=294,slow=22,SNR=4.1						
	1.4nm,0.6s						
ASAR	**Alice Springs**	19.54	139	P	P	14 16 23.1	-0.4
	0.2nm,0.3s,baz=319,slow=11,SNR=10						
ASAR				S	Sn	14 19 45.9	-19
	0.6nm,0.8s,baz=306,slow=22,SNR=3.4						
	1.4nm,0.8s						
SONM	**Songino Array**	58.09	349	P	P	14 21 50.2	+0.8
	0.3nm,0.5s,baz=162,slow=7.7,SNR=3.5						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	65.14	332	P	P	14 22 36.8	-0.1
	0.6nm,0.5s,baz=144,slow=7.6,SNR=9.4						
	0.6nm,0.5s						
ZALV	**Zalesovo Beam**	69.62	339	P	P	14 23 04.3	-0.8
	0.2nm,0.3s,baz=150,slow=6.0,SNR=2.1						
	0.2nm,0.3s						

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*KRNET **08** 14:16:59.0±0.1, 41°.06N×73°.59E, h15^{km}, mb2.7*
*ISU **08** 14:16:59.1, 40°.85N×73°.73E, h30^{km}*
*SOME **08** 14:17:01.9, 41°.22N×73°.48E, h15^{km}*
*NNC **08** 14:17:01.3±0.9, 41°.19N×73°.45E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=7.1km s-min=4.2km az=179.0*
*KNET **08** 14:17:01.5±0.6, 41°.22N×73°.54E, h12^{km}±4^{km}, ml2.3, Error ellipse: s-maj=6.9km s-min=3.6km az=78.0*

ISC 08 14:16:58.6±1.1, 41°.06N±0°.02×73°.61E±0°.02, h12^{km}±10^{km}, n77, $\sigma 0^{s}.85$/111, 45C-15D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	**Osh**	0.82	230	⇑*i*P	**Pg**	**14 17 14.4**	**-0.1**
	baz=29						
OHH				⇑*i*S	**Sb**	**14 17 25.8**	**-0.1**
	baz=29						
OHH	**Osh**	0.82	230	P	**Pg**	**14 17 14.4**	**-0.1**
OHH				S	**Sb**	**14 17 25.7**	**-0.1**
ARLS	**Aral**	0.97	34	⇑*i*P	**Pb**	**14 17 17.4**	**0.0**
	baz=35						
ARLS				⇑*i*S	**Sg**	**14 17 30.8**	**+0.8**
	baz=35						
ANR	**Andizhan**	0.99	253	P	**Sn**	**14 17 33.2**	**+0.9**
AML	**Almayashu**	1.07	3	⇑P	**Pb**	**14 17 19.5**	**+0.1**
	16nm,0.3s,SNR=13						
AML				⇓S	**Sg**	**14 17 34.1**	**+0.6**
	153nm,0.5s						
AML	**Almayashu**	1.07	3	⇑P	**Pb**	**14 17 19.3**	**-0.1**
	0.1nm,0.2s						
AML				⇓S	**Sn**	**14 17 34.4**	**-0.5**
	5.6nm,0.6s						
AML	**Almayashu**	1.07	3	⇑*i*P	**Pb**	**14 17 19.5**	**+0.1**
	baz=4.0						
AML				⇑*i*S	**Sn**	**14 17 34.4**	**-0.5**
	baz=4.0						
UCH	**Uchtor**	1.35	30	⇑P	**Pb**	**14 17 24.8**	**+0.7**
	5.1nm,0.2s,SNR=11						
UCH				⇑S	**Sg**	**14 17 42.8**	**+0.5**
	30nm,0.2s						
UCH	**Uchtor**	1.35	30	⇑*i*P	**Pb**	**14 17 24.7**	**+0.5**
	baz=30						
UCH				⇑*i*S	**Sg**	**14 17 43.3**	**+1.0**
	baz=30						
ARK	**Arkit**	1.44	301	⇑*i*P	**Pb**	**14 17 25.8**	**+0.3**
	baz=2.0						
ARK				⇑*i*S	**Sg**	**14 17 45.5**	**+0.5**
	baz=2.0						
FRG	**Fergana**	1.54	244	P	**Pg**	**14 17 27.9**	**-0.4**
FRG				S	**Sg**	**14 17 50.0**	**+1.7**
EKS2	**Erkin-Say**	1.61	5	⇑P	**Pg**	**14 17 29.3**	**-0.2**
	6.7nm,0.2s,SNR=17						
EKS2				⇑S	**Sb**	**14 17 49.4**	**+0.7**
	12nm,0.2s						
EKS2	**Erkin-Say**	1.61	5	⇑*i*P	**Pb**	**14 17 29.0**	**+0.7**
	baz=5.0						
EKS2				⇑*i*S	**Sg**	**14 17 50.9**	**+0.5**
	baz=5.0						
MNAS	**Manas**	1.65	330	⇓*i*P	**Pb**	**14 17 29.4**	**+0.4**
	baz=31						
MNAS				⇓*i*S	**Sg**	**14 17 51.6**	**-0.1**
	baz=31						
MRKS	**Merke**	1.71	351	P	**Pb**	**14 17 31.0**	**+0.9**
	12nm,0.2s						
MRKS				S	**Sb**	**14 17 51.8**	**+0.3**
	93nm,0.4s						
MRKS	**Merke**	1.71	351	*e*P	**Pg**	**14 17 31.8**	**+0.3**
	12nm,0.2s						
MRKS				*e*S	**Sg**	**14 17 53.3**	**-0.3**
	93nm,0.4s						
AAK	**Ala-Archa**	1.71	23	⇓P	**Pg**	**14 17 31.3**	**-0.3**
	6.5nm,0.2s,SNR=14						
AAK				⇑S	**Sg**	**14 17 53.9**	**+0.1**
	36nm,0.2s						
AAK	**Ala-Archa**	1.71	23	⇑*i*P	**Pb**	**14 17 30.9**	**+0.8**
	baz=23						
AAK				⇑*i*S	**Sg**	**14 17 54.2**	**+0.4**
	baz=23						
CHMI	**Chimion**	1.77	244	P	**Sg**	**14 17 57.4**	**+1.9**
NRN	**Naryn**	1.84	77	⇑*i*P	**Pb**	**14 17 32.9**	**+0.4**
	baz=78						
NRN				⇑*i*S	**Sg**	**14 17 57.6**	**-0.4**
	baz=78						
KBK	**Karagaybulak**	1.89	32	⇓P	**Pg**	**14 17 34.4**	**-0.4**
	2.5nm,0.1s						
KBK				⇓S	**Sg**	**14 17 59.9**	**+0.6**
	55nm,0.3s						
KBK	**Karagaybulak**	1.89	32	⇑*i*P	**Pb**	**14 17 34.0**	**+0.9**
	baz=32						
KBK				⇑*i*S	**Sg**	**14 17 59.5**	**+0.2**
	baz=32						
FRU1	**Bishkek**	1.91	23	⇓*i*P	**Pb**	**14 17 34.7**	**+1.2**
	baz=23						
FRU1				⇓*i*S	**Sg**	**14 18 00.6**	**+0.5**
	baz=23						
TRKS	**Terek-Say**	1.92	285	⇑*i*P	**Pb**	**14 17 33.5**	**-0.1**
	baz=83						
TRKS				⇑*i*S	**Sg**	**14 17 59.0**	**-1.3**
	baz=83						
DRK	**Karamyk**	2.10	222	⇑*i*P	**Pb**	**14 17 37.0**	**+0.3**
	baz=22						
DRK				⇑*i*S	**Sg**	**14 18 04.6**	**-1.4**
	baz=22						
CHMS	**Chumysh**	2.12	23	⇑P	**Pb**	**14 17 38.1**	**+1.1**
	4.7nm,0.3s						
CHMS				⇑S	**Sg**	**14 18 06.6**	**-0.1**
	20nm,0.4s						
CHMS	**Chumysh**	2.12	23	⇑*e*P	**Pb**	**14 17 37.5**	**+0.5**
	baz=24						
CHMS				⇑*i*S	**Sg**	**14 18 05.4**	**-1.4**
	baz=24						
BOOM	**Boomskoye usch**	2.26	50	⇑*e*P	**Pb**	**14 17 39.4**	**0.0**
	baz=50						
BOOM				⇑*i*S	**Sb**	**14 18 08.9**	**+1.5**
	baz=50						
ULHL	**Ulahol**	2.31	58	⇑*e*P	**Pb**	**14 17 40.2**	**0.0**
	baz=58						
ULHL				⇑*i*S	**Sb**	**14 18 10.1**	**+1.3**
	baz=58						
USP	**Ospenovka**	2.31	16	⇓*e*P	**Pb**	**14 17 39.9**	**-0.3**
	baz=17						
USP				⇓*i*S	**Sb**	**14 18 09.7**	**+1.1**
	baz=17						
BTK	**Batken**	2.35	246	⇑*i*P	**Pb**	**14 17 40.5**	**-0.4**
	baz=46						
BTK				⇑*i*S	**Sb**	**14 18 10.9**	**+1.1**
	baz=46						
TKM2	**Tokmak 2**	2.38	38	⇓P	**Pb**	**14 17 42.0**	**+0.4**
	3.8nm,0.3s,SNR=7.1						
TKM2				⇓S	**Sg**	**14 18 14.3**	**-0.9**
	13nm,0.3s						
TKM2	**Tokmak 2**	2.38	38	⇓P	**Pb**	**14 17 42.8**	**+1.2**
	2.4nm,0.4s						
TKM2				⇑S	**Sg**	**14 18 14.1**	**-1.1**
	7.2nm,0.5s						
TKM2	**Tokmak 2**	2.38	38	⇑*i*P	**Pb**	**14 17 41.2**	**-0.4**
	baz=38						
TKM2				⇑*i*S	**Sb**	**14 18 12.0**	**+1.0**
	baz=38						
DZA	**Taraz**	2.50	318	Pg	**Pb**	**14 17 44.3**	**+0.9**
	87nm,0.1s						
DZA				Lg	Lg	14 18 14.6	
	182nm,0.3s						
DZA	**Taraz**	2.50	318	*e*Pg	**Pb**	**14 17 44.3**	**+0.9**
	87nm,0.1s						
DZA				*e*Lg	Lg	14 18 14.6	
	182nm,0.3s						
SGDS	**Sogindy**	2.51	17	Pg	**Pg**	**14 17 46.2**	**-0.6**
	5.8nm,0.4s						
SGDS				Lg	Lg	14 18 17.7	
	16nm,0.3s						
KST	**Kastek**	2.65	41	Pg	**Pg**	**14 17 49.6**	**+0.2**
	2.3nm,0.2s						
KST				Lg	Lg	14 18 23.7	
	16nm,0.5s						
KST	**Kastek**	2.65	41	*e*Pg	**Pg**	**14 17 49.6**	**+0.2**
	2.3nm,0.2s						
KST				*e*Lg	Lg	14 18 23.7	
	16nm,0.5s						
DGS	**Degeres**	2.71	36	Pg	**Pg**	**14 17 50.6**	**0.0**
	7.4nm,0.6s						
DGS				Lg	Lg	14 18 25.5	
	18nm,0.4s						
DGS	**Degeres**	2.71	36	*e*Pg	**Pg**	**14 17 50.6**	**0.0**
	7.4nm,0.6s						
DGS				*e*Lg	Lg	14 18 25.5	
	18nm,0.4s						
KDJ	**Kajisay**	2.89	67	⇑*i*P	**Pb**	**14 17 48.4**	**-1.8**
	baz=67						
KDJ				⇑*i*S	**Sb**	**14 18 24.4**	**-1.1**
	baz=67						
IUG	**Iuzhnay**	2.89	293	Pg	**Pg**	**14 17 52.4**	**-1.7**
	18nm,0.4s						
IUG				Lg	Lg	14 18 28.4	
	157nm,0.3s						
IUG	**Iuzhnay**	2.89	293	*e*Pg	**Pg**	**14 17 52.4**	**-1.7**
	18nm,0.4s						
IUG				*e*Lg	Lg	14 18 28.4	
	157nm,0.3s						
MTBS	**Maitube**	2.95	44	Pg	**Pg**	**14 17 54.9**	**-0.3**
	5.9nm,0.3s						
MTBS				Lg	Lg	14 18 32.7	
	12nm,0.4s						
MTBS	**Maitube**	2.95	44	*e*Pg	**Pg**	**14 17 54.9**	**-0.3**
	5.9nm,0.3s						
MTBS				*e*Lg	Lg	14 18 32.7	
	12nm,0.4s						
IZV	**Izvestkoviy**	2.99	48	Pg	**Pg**	**14 17 56.1**	**+0.3**
	3.5nm,0.5s						
IZV				Lg	Lg	14 18 34.4	
	18nm,0.3s						
IZV	**Izvestkoviy**	2.99	48	*e*Pg	**Pg**	**14 17 56.1**	**+0.3**
	3.5nm,0.5s						
IZV				*e*Lg	Lg	14 18 34.4	
	18nm,0.3s						
KRBS	**Karabastau**	3.05	29	Pg	**Pg**	**14 17 56.3**	**-0.8**
	2.6nm,0.3s						
KRBS				Lg	Lg	14 18 35.1	
	15nm,0.4s						
KRBS	**Karabastau**	3.05	29	*e*Pg	**Pg**	**14 17 56.3**	**-0.8**
	2.6nm,0.3s						
KRBS				*e*Lg	Lg	14 18 35.1	
	15nm,0.4s						
KK31	**Karatay Array**	3.08	313	⇓Pg	**Pb**	**14 17 54.7**	**+1.3**
	1.7nm,0.3s,baz=130,slow=16,SNR=7.7						
KK31				⇑Lg	Lg	14 18 35.4	
	7.2nm,0.5s,baz=134,slow=30,SNR=15						
TNSS	**Tian-Shan**	3.18	50	Pg	**Pg**	**14 17 59.7**	**+0.1**
	3.6nm,0.4s						
TNSS				Lg	Lg	14 18 41.1	
	7.8nm,0.6s						
TNSS	**Tian-Shan**	3.18	50	*e*Pg	**Pg**	**14 17 59.7**	**+0.1**
	3.6nm,0.4s						
TNSS				*e*Lg	Lg	14 18 41.1	
	7.8nm,0.6s						
MDOK	**Medeo**	3.31	49	Pg	**Pg**	**14 18 01.4**	**-0.7**
	7.1nm,1.3s						
MDOK				Pg	**Pg**	**14 18 02.3**	**+0.2**
	1.2nm,0.4s						
MDOK				Lg	Lg	14 18 44.1	
	7.8nm,0.4s						
MDOK				Lg	Lg	14 18 45.0	
	6.9nm,0.6s						
MDOK	**Medeo**	3.31	49	*e*Pg	**Pg**	**14 18 01.4**	**-0.7**
	7.1nm,1.3s						
MDOK				*e*Lg	Lg	14 18 44.1	
	7.8nm,0.4s						
KOTS	**Kotyrbulak**	3.40	49	Pg	**Pg**	**14 18 03.6**	**0.0**
	3.6nm,0.6s						
KOTS				Lg	Lg	14 18 47.7	
	12nm,0.5s						
KOTS	**Kotyrbulak**	3.40	49	*e*Pg	**Pg**	**14 18 03.6**	**0.0**
	3.6nm,0.6s						
KOTS				*e*Lg	Lg	14 18 47.7	
	12nm,0.5s						
KUU	**Kurty**	3.48	35	Pg	**Pg**	**14 18 04.1**	**-1.2**
	2.1nm,0.4s						
KUU				Lg	Lg	14 18 48.6	
	7.2nm,0.5s						
KUU	**Kurty**	3.48	35	*e*Pg	**Pg**	**14 18 04.1**	**-1.2**
	2.1nm,0.4s						
KUU				*e*Lg	Lg	14 18 48.5	
	7.2nm,0.5s						
KTBS	**Karatobe**	3.50	40	Pg	**Pg**	**14 18 04.8**	**-0.8**
	1.8nm,0.3s						
KTBS				Lg	Lg	14 18 49.9	
	19nm,0.3s						
KTBS	**Karatobe**	3.50	40	*e*Pg	**Pg**	**14 18 04.8**	**-0.8**
	1.8nm,0.3s						
KTBS				*e*Lg	Lg	14 18 49.9	
	19nm,0.3s						
CHKK	**Chushkaly**	3.75	41	Pg	**Pg**	**14 18 09.6**	**-0.9**
	0.9nm,0.1s						
CHKK				Lg	Lg	14 18 57.8	
	7.3nm,0.1s						
CHKK	**Chushkaly**	3.75	41	*e*Pg	**Pg**	**14 18 09.6**	**-0.9**
	0.9nm,0.1s						
CHKK				*e*Lg	Lg	14 18 57.8	
	7.3nm,0.1s						
BTLS	**Baital**	4.00	4	Pg	**Pg**	**14 18 12.7**	**-2.4**
	1.7nm,0.4s						
BTLS				Lg	Lg	14 19 03.4	
	6.4nm,0.2s						
BTLS	**Baital**	4.00	4	*e*Pg	**Pg**	**14 18 12.7**	**-2.4**
	1.7nm,0.4s						
BTLS				*e*Lg	Lg	14 19 03.4	
	6.4nm,0.2s						
SATY	**Saty**	4.09	59	Pg	**Pg**	**14 18 17.1**	**0.0**
	5.1nm,0.7s						
SATY				Lg	Lg	14 19 11.2	
	7.0nm,0.3s						
SATY	**Saty**	4.09	59	*e*Pg	**Pg**	**14 18 17.1**	**0.0**
	5.1nm,0.7s						
SATY				*e*Lg	Lg	14 19 11.2	
	7.0nm,0.3s						
KURS	**Kuram**	4.17	53	Pg	**Pg**	**14 18 18.0**	**-0.4**
	2.0nm,0.2s						

KURS				Lg	Lg	14 19 12.4	
	3.4nm,0.3s						
KURS	Kuram	4.17	53	ePg	Pg	14 18 18.0	-0.4
	2.0nm,0.2s						
KURS				eLg	Lg	14 19 12.4	
	3.4nm,0.3s						
ARXS	Arharly	4.43	43	Pg	Pg	14 18 22.3	-1.2
	3.1nm,0.4s						
ARXS				Lg	Lg	14 19 19.5	
	6.5nm,0.4s						
ARXS	Arharly	4.43	43	ePg	Pg	14 18 22.3	-1.2
	3.1nm,0.4s						
ARXS				eLg	Lg	14 19 19.5	
	6.5nm,0.4s						
KPKS	Kokpek	4.47	56	Pg	Pg	14 18 23.4	-0.8
	1.9nm,0.2s						
KPKS				Lg	Lg	14 19 21.8	
	4.4nm,0.4s						
KPKS	Kokpek	4.47	56	ePg	Pg	14 18 23.4	-0.8
	1.9nm,0.2s						
KPKS				eLg	Lg	14 19 21.8	
	4.4nm,0.4s						
UZB	Uzynbulak	4.54	61	Pg	Pg	14 18 25.1	-0.4
	5.8nm,0.3s						
UZB				Lg	Lg	14 19 24.6	
	4.2nm,0.3s						
UZB	Uzynbulak	4.54	61	ePg	Pg	14 18 25.1	-0.4
	5.8nm,0.3s						
UZB				eLg	Lg	14 19 24.6	
	4.2nm,0.3s						
BLB	Baldybastay	4.71	48	Pg	Pg	14 18 27.6	-1.2
	4.2nm,0.3s						
BLB				Lg	Lg	14 19 29.0	
	5.2nm,0.2s						
PDGK	Podgornoye	4.92	61	Pg	Pg	14 18 32.3	-0.6
	0.9nm,0.8s						
PDGK				Lg	Lg	14 19 36.9	
	1.5nm,0.5s						

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*NEIC **08** 14:21:02.0±2.4, 17°.5S±0°.1×179°.0W±0°.1, h565^{km}±9^{km}, mb4.2/34, Error ellipse: s-maj=17.6km s-min=15.2km az=87.0*

*IDC **08** 14:21:01.7±0.8, 17°.41S×179°.24W, h556^{km}±8^{km}, mb3.4/17, mbtmp4.2/18, Error ellipse: s-maj=16.8km s-min=9.8km az=143.0*

ISC 08 14:21:01.2±0.4**, 17°.39S**±0°.09×**179°.14W**±0°.08**, h550**^{km}**, n72, σ1^{s}16**/76**, mb4.0**/35**, 4C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	2.70	262	P	P	14 22 16.9	+2.4
	345nm,0.7s,baz=85,slow=4.5,SNR=134						
MSVF				S	S	14 23 14.3	0.0
	3.8nm,0.5s,baz=273,slow=24,SNR=0.6						
MSVF	Nonsavu	2.70	262	P	P	14 22 16.6	+2.0
NIUE	Niue	8.91	102	P	P	14 23 06.9	-1.2
KOUNC	Koumac, New Ca	15.99	256	P	P	14 24 22.7	+2.1
URZ	Urewera	21.05	188	P	P	14 25 04.6	-2.0
	4.9nm,0.3s,baz=350,slow=2.6,SNR=14						
	4.9nm,0.3s						
RTZ	Ruatahuna	21.42	188	P	P	14 25 08.3	-1.7
LTZ	Lake Taylor	26.35	194	P	P	14 25 51.4	-2.3
LTZ				IAmb	IAmb	14 26 27.1	
	comp=Z,8.3nm,1.0s						
OXZ	Oxford	26.92	194	P	P	14 25 57.2	-1.4
OXZ				IAmb	IAmb	14 26 38.9	
	comp=Z,8.8nm,0.9s						
RPZ	Rata Peaks	27.52	196	P	P	14 26 03.0	-0.9
	comp=Z,5.1nm,0.8s,baz=353,slow=14,SNR=2.0						
	comp=Z,5.1nm,0.8s						
ARMA	Armidale	29.61	239	P	P	14 26 22.7	+0.3
WHZ	Wether Hill Ro	30.39	198	P	P	14 26 28.5	-0.3
WHZ				IAmb	IAmb	14 26 29.4	
	comp=Z,9.9nm,0.8s						
COEN	Coen	36.41	270	P	P	14 27 19.6	-0.2
COEN				IAmb	IAmb	14 27 45.3	
	comp=Z,13nm,1.5s						
TOO	Toolangi	36.96	230	P	P	14 27 25.3	+1.1
STKA	Stephens Creek	38.27	240	P	P	14 27 35.8	+0.9
	comp=Z,2.8nm,0.6s,baz=94,slow=8.3,SNR=8.8						
	comp=Z,2.8nm,0.6s						
STKA	Stephens Creek	38.27	240	P	P	14 27 35.6	+0.7
BBOO	Buckleboo	43.05	240	P	P	14 28 13.1	+0.2
BBOO				IAmb	IAmb	14 28 13.6	
	comp=Z,6.4nm,0.9s						
WB2	Warramunga Arr	44.03	259	P	P	14 28 19.6	-1.2
WRA	Warramunga Arr	44.04	259	P	P	14 28 20.1	-0.7
	comp=Z,0.6nm,0.3s,baz=96,slow=7.5,SNR=14						
WRA				S	S	14 34 10.2	-3.4
	comp=Z,0.4nm,0.9s,baz=95,slow=12,SNR=3.1						
	comp=Z,0.6nm,0.3s						
WRA	Warramunga Arr	44.04	259	P	P	14 28 19.9	-0.9
AS31	Alice Springs	44.26	254	P	P	14 28 21.9	-0.6
AS31				IAmb	IAmb	14 28 23.1	
	comp=Z,3.0nm,0.5s						
ASAR	Alice Springs	44.26	254	P	P	14 28 22.5	0.0
	comp=Z,6.4nm,0.4s,baz=89,slow=8.0,SNR=236						
ASAR				PcP	PcP	14 29 55.2	+0.3
	comp=Z,0.3nm,0.5s,baz=105,slow=4.7,SNR=2.4						
ASAR				ScP	ScP	14 32 54.1	-0.7
	comp=Z,0.6nm,0.8s,baz=89,slow=4.5,SNR=5.7						
ASAR				S	S	14 34 14.2	-2.5
	comp=Z,0.8nm,1.0s,baz=88,slow=16,SNR=5.1						
	comp=Z,6.4nm,0.4s						
ASAR	Alice Springs	44.26	254	P	P	14 28 21.9	-0.6
FORT	Forrest	49.60	244	P	P	14 29 02.0	-0.6
FORT				IAmb	IAmb	14 29 14.0	
	comp=Z,7.3nm,0.8s						
KNRA	Kununurra	49.85	264	P	P	14 29 04.9	+0.4
VNDA	Vanda	60.90	185	P	P	14 30 21.4	+1.1
	comp=Z,1.3nm,0.9s,baz=14,slow=4.2,SNR=1.9						
	comp=Z,1.3nm,0.9s						
MJAR	Matsushiro Arr	67.08	324	P	P	14 31 00.1	-0.1
	comp=Z,1.9nm,0.6s,baz=154,slow=5.7,SNR=5.1						
	comp=Z,1.9nm,0.6s						
JHS	Saijyo	69.05	319	P	P	14 31 12.7	+0.4
JKA	Kamikawa-asahi	70.49	332	P	P	14 31 21.2	+0.6
UNV	Unalaska Valle	71.77	8	P	P	14 31 26.1	-1.7
QSPA	South Pole Qui	72.66	180	P	P	14 31 33.1	0.0
QSPA				IAmb	IAmb	14 31 53.5	
	comp=Z,4.8nm,1.2s						
PETK	Petropavlovsk-	73.00	346	P	P	14 31 33.5	-1.5
	comp=Z,4.0nm,0.9s,baz=118,slow=7.4,SNR=4.7						
	comp=Z,4.0nm,0.9s						
YBH	Yreka Blue Hor	78.57	40	P	P	14 32 06.3	+0.1
	comp=Z,2.0nm,0.8s,baz=198,slow=6.4,SNR=2.6						
	comp=Z,2.0nm,0.8s						
YERR	Yerington	79.22	43	P	P	14 32 09.8	0.0
YERR				IAmb	IAmb	14 32 11.0	
	comp=Z,4.8nm,0.6s						
LHV	Little Huntoon	79.31	44	P	P	14 32 10.6	+0.5
LHV				IAmb	IAmb	14 32 11.8	
	comp=Z,5.3nm,1.0s						
NVAR	Mina Array Bea	79.54	44	P	P	14 32 12.2	+0.6
	comp=Z,1.8nm,0.7s,baz=224,slow=9.1,SNR=18						
	comp=Z,1.8nm,0.7s						
ILSW	Iliamna Southw	79.94	13	P	P	14 32 12.0	-1.0
ILSW				IAmb	IAmb	14 32 12.8	
	comp=Z,7.8nm,0.9s						
KVN	Kaiserville	80.00	44	P	P	14 32 14.4	+0.5
TPNV	Topopah Spring	80.17	46	P	P	14 32 15.2	+0.4
BRLK	Bradley Lake	80.24	14	P	P	14 32 13.2	-1.4
BRLK				IAmb	IAmb	14 32 32.2	
	comp=Z,24nm,1.3s						
SVW2	Sparrevohn	80.47	11	P	P	14 32 15.0	-0.6
SVW2				IAmb	IAmb	14 32 46.0	
	comp=Z,14nm,1.4s						
U15A	North Rim	82.69	48	P	P	14 32 28.5	+0.6
U15A				IAmb	IAmb	14 32 29.9	
	comp=Z,3.8nm,0.9s						
ELK	Elko	82.76	43	P	P	14 32 28.2	+0.1
	comp=Z,1.3nm,0.6s,baz=253,slow=8.7,SNR=8.1						
	comp=Z,1.3nm,0.6s						
CAST	Castle Rocks	83.27	12	P	P	14 32 27.8	-2.1
CAST				IAmb	IAmb	14 32 28.8	
	comp=Z,6.3nm,0.9s						
TRF	Thorofare Moun	83.66	13	P	P	14 32 30.5	-1.5
TRF				IAmb	IAmb	14 32 31.5	
	comp=Z,9.3nm,1.0s						
HLID	Hailey	84.70	41	P	P	14 32 38.3	+0.7
L27K	Beaver Creek,	85.33	16	P	P	14 32 40.2	+0.2
L27K				IAmb	IAmb	14 32 45.5	
	comp=Z,4.0nm,1.1s						
ILAR	Eielson Array	85.54	13	P	P	14 32 39.7	-1.2
	comp=Z,0.6nm,0.4s,baz=225,slow=5.3,SNR=18						
	comp=Z,0.6nm,0.4s						
TXAR	Lajitas Array	86.31	58	P	P	14 32 47.0	+1.4
	comp=Z,1.1nm,0.8s,baz=216,slow=6.3,SNR=13						
	comp=Z,1.1nm,0.8s						
TXAR	Lajitas Array	86.31	58	P	P	14 32 46.5	+1.0
I26K	Coal Creek Min	86.85	14	P	P	14 32 46.5	-0.6
EGAK	Eagle	86.90	15	P	P	14 32 46.7	-0.7
EGAK				IAmb	IAmb	14 32 58.4	
	comp=Z,4.8nm,1.4s						
PDAR	Pinedale Array	87.46	44	P	P	14 32 50.9	+0.1
	comp=Z,1.0nm,0.5s,baz=220,slow=3.6,SNR=16						
	comp=Z,1.0nm,0.5s						
CMAR	Chiang Mai Arr	88.05	290	P	P	14 32 54.6	+0.8
	comp=Z,0.6nm,0.4s,baz=72,slow=2.9,SNR=4.8						
	comp=Z,0.6nm,0.4s						
INK	Inuvik	91.57	15	P	P	14 33 08.4	-0.5
	comp=Z,0.6nm,0.6s,baz=176,slow=4.9,SNR=2.0						
	comp=Z,0.6nm,0.6s						
YKA	Yellowknife Ar	94.16	25	P	P	14 33 20.4	-0.5
	comp=Z,0.6nm,0.7s,baz=244,slow=4.5,SNR=12						
	comp=Z,0.6nm,0.7s						
RES	Resolute Bay	105.12	16	PKiKP	PKiKP	14 38 22.3	+1.9
	comp=Z,5.3nm,0.6s,baz=236,slow=1.3,SNR=18						
MKAR	Makanchi Array	108.28	314	PKiKP	PKiKP	14 38 26.4	-0.8
	comp=Z,0.1nm,0.5s,baz=155,slow=1.8,SNR=4.9						
ARCES	ARCESS Array B	125.68	350	PKP	PKPdf	14 38 59.4	-0.4
	comp=Z,3.7nm,1.0s,baz=66,slow=4.1,SNR=5.0						
BURAR	Bucovina Array	143.83	332	⇑P	PKPbc	14 39 34.0	+0.7
TPGR	Topolog	144.18	326	⇑P	PKPab	14 39 36.1	+1.4
CLL	Collm	144.80	347	*i* PKPbc	PKPdf	14 39 35.9	+0.4
	comp=Z,11nm,1.0s						
MARR	Marisel-Cluj	145.48	333	⇑P	PKPdf	14 39 38.8	+1.8
DRGR		145.56	333	⇑P	PKPdf	14 39 38.9	+1.8
ARR	Arges	145.76	330	⇓P	PKPdf	14 39 36.4	-1.1
GERES	GERESS Array B	146.93	344	PKPbc	PKPbc	14 39 42.4	+0.1
	comp=Z,1.0nm,0.4s,baz=96,slow=1.3,SNR=8.1						
CONA	Conrad Observa	147.15	341	ePKP	PKPbc	14 39 43.4	+0.5
RONA	Rosalia, Austr	147.22	341	ePKP	PKPbc	14 39 43.6	+0.6
	comp=Z,4.1nm,0.8s						
WATA	Walderalm	148.86	346	ePKP	PKiKP	14 39 48.9	+0.7
	comp=Z,2.6nm,0.4s						
WTTA	Wattenberg	148.91	346	ePKP	PKPbc	14 39 47.3	-0.2
	comp=Z,5.3nm,0.5s						
MYKA	Terra Mystica	148.98	343	ePKP	PKPdf	14 39 44.1	+1.3
	comp=Z,9.7nm,1.2s						
SQTA	Sankt Quirin	149.05	346	ePKP	PKPbc	14 39 46.9	-0.8
	comp=Z,8.1nm,0.8s						
FETA	Feichten	149.35	347	ePKP	PKPbc	14 39 48.7	+0.2
	comp=Z,9.6nm,1.7s						

IDC 08 14:39:54.6±2.3**, 6°.72S**×**129°.08E, h0**^{km}**, mb3.5**/1**, mbtmp3.4**/3**, ML3.4**/2**, MS3.3**/2**, Error ellipse: s-maj=144.0km s-min=32.7km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.10	159	Pn	Pn	14 43 15.6	-0.1
	0.2nm,0.3s,baz=342,slow=13,SNR=8.1						
WRA				Sn	Sn	14 45 40.4	-13
	baz=336,slow=21,SNR=2.0						
	1.0nm,0.8s						
ASAR	Alice Springs	17.47	165	P	Pn	14 44 00.1	+0.1
	0.1nm,0.3s,baz=341,slow=9.8,SNR=16						
ASAR				S	Sn	14 47 06.6	-8.6
	0.2nm,0.6s,baz=350,slow=26,SNR=2.5						
	0.3nm,0.7s						
JNU	Nakatsue	39.66	2	LR	LR	15 01 40.2	
	comp=Z,111nm,20.8s,baz=123,slow=33						
KSRS	Korea Array	43.96	359	LR	LR	15 07 59.2	
	comp=Z,14nm,19.7s,baz=130,slow=38						
MKAR	Makanchi Array	67.50	327	P	P	14 50 52.6	0.0
	0.3nm,0.6s,baz=126,slow=7.3,SNR=3.5						
	0.3nm,0.6s						

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*NEIC **08** 14:42:23.3, 38°.11S×73°.81W, h13^{km}*

*VAO **08** 14:42:24.8±0.6, 38°.27S×73°.64W, h23^{km}, mb4.7*

*GUC **08** 14:42:24.7±0.7, 38°.16S×73°.70W, h37^{km}±2^{km}, ML4.2*

*NEIC **08** 14:42:24.6±1.5, 38°.07S±0°.05×73°.8W±0°.1, h24^{km}±6^{km}, mb4.5/15, Mwr4.4/30, Mwr4.5(GUC), Error ellipse: s-maj=16.1km s-min=7.5km az=94.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.95; $M_{\theta\theta}$0.58; $M_{\phi\phi}$-3.54; $M_{r\theta}$0.62; $M_{\theta\phi}$-2.88; $M_{\phi r}$-3.13; Fault plane solution: $M_0$5.41000×10^{15} NP1:ϕ_s59.84000°, δ39.12000°, λ144.61000°. NP2:ϕ_s178.70000°, δ68.57000°, λ56.45000°. Principal axes: T 4.9438, Plg54.0000°, Azm47.0000°; N 0.8300, Plg31.0000°, Azm192.0000°; P -5.7738, Plg17.0000°, Azm293.0000°;*

*IDC **08** 14:42:29.2±2.9, 38°.11S×73°.34W, h45^{km}±25^{km}, mb4.0/12, mbtmp4.2/13, ML3.9/1, MS4.0/19 Error ellipse: s-maj=28.7km s-min=14.3km az=82.0*

ISC 08 14:42:23.7±1.1**, 38°.10S**±0°.02×**73°.58W**±0°.06**, h12**^{km}±7^{km}**, n169, σ1^{s}10**/169**, mb4.5**/19**, MS4.1**/17**, 8C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BI04	Isla Mocha	0.40	218	⇑eP	Pb	14 42 32.4	-0.2
BI04				eS	Sg	14 42 37.7	+0.8
LC02	Puerto Saavedr	0.71	168		Pg	14 42 38.0	+0.5
LC02	Puerto Saavedr	0.71	168	⇑eP	Pg	14 42 38.0	+0.5
LC02				eS	Sg	14 42 46.0	-0.8
CCSP	San Pedro de C	1.31	17	⇑eP	Pb	14 42 48.1	0.0
CCSP				eS	Sg	14 43 05.8	0.0
BI05	Punta Hualpn	1.38	13	Pn	Pg	14 42 49.8	-0.4
BI05	Punta Hualpn	1.38	13	⇑eP	Pb	14 42 49.4	-0.1
BI05				*i* S	Sg	14 43 07.9	-0.4
BI05				IAML		14 43 13.7	
	comp=E,8μm,0.3s						
LR02	Universidad Au	1.72	172	eP	Pn	14 42 51.6	-1.8
LR02				eS	Sn	14 43 13.1	-2.3
LR04	Corral	1.78	176	Pn	Pn	14 42 52.9	-1.3
LR04	Corral	1.78	176	eP	Pn	14 42 53.0	-1.2
LR04				eS	Sn	14 43 14.3	-2.6
LR04				IAML		14 43 22.1	
	comp=N,6μm,0.3s						
LR03	Panguipulli	1.81	148	Pn	Pn	14 42 55.3	+0.6
LR03	Panguipulli	1.81	148	eP	Pn	14 42 53.9	-0.8
LR03				eS	Sn	14 43 16.3	-1.1
GO06	Curarrehue	2.21	133		Pn	14 43 01.8	+1.4
GO06	Curarrehue	2.21	133	⇑eP	Pn	14 43 00.7	+0.4
GO06				eS	Sn	14 43 28.1	+0.5
GO06				IAML		14 43 39.6	
	comp=N,1μm,0.7s						
LL04	Puerto Octay	2.95	163		Pn	14 43 09.8	-0.5
LL04	Puerto Octay	2.95	163	eP	Pn	14 43 09.6	-0.8
LL04				eS	Sn	14 43 43.4	-2.2
LL04				IAML		14 44 05.7	
	comp=E,985nm,0.7s						
LL03	Petrohue	3.17	164		Pn	14 43 12.7	-0.6
LL05	Los Muermos	3.30	179		Pn	14 43 15.2	0.0
GO05	Huala	3.36	24		Pn	14 43 16.4	+0.5
GO05	Huala	3.36	24	⇑eP	Pn	14 43 16.9	+0.9
GO05				eS	Sn	14 43 56.5	+0.8
PLCA	Paso Flores	3.52	139	P	Pn	14 43 19.4	+1.1
	comp=E,3.0nm,0.3s,baz=306,slow=9.3,SNR=78						
PLCA				S	Sn	14 43 59.7	-0.2
	comp=E,134nm,0.7s,baz=159,slow=22,SNR=2.2						
PLCA				LR	LR	14 45 02.5	
	comp=E,1μm,19.5s,baz=274,slow=45						
	comp=E,16nm,0.5s						
PLCA	Paso Flores	3.52	139		Pn	14 43 20.1	+1.8
PLCA	Paso Flores	3.52	139	⇑eP	Pn	14 43 20.3	+2.0
PLCA	Paso Flores	3.52	139	eP	Pn	14 43 18.0	-0.3
BO03	Pichilemu	3.83	20	eP	Pn	14 43 22.9	+0.5
BO02	Sierra Bellavi	4.00	35	Pn	Pn	14 43 25.7	+0.9
LL06	Loncomilla	4.11	181		Pn	14 43 25.9	-0.4
BO01	Tunca	4.21	29	Pn	Pn	14 43 28.4	+0.7
BO01	Tunca	4.21	29	⇓*i*P	Pn	14 43 28.6	+0.9
BO01				eS	Sg	14 44 38.2	-0.7
MT01	Popeta	4.63	25		Pn	14 43 33.4	0.0
MT01	Popeta	4.63	25	eP	Pn	14 43 33.9	+0.5
VA05	Santo Domingo	4.71	20	Pn	Pn	14 43 33.9	-0.6
MT09	Talagante	4.80	27		Pn	14 43 36.3	+0.4
GO07	Milladeo Hill,	5.01	181		Pn	14 43 39.1	+0.5
LMEL	Las Melosas	5.05	34		Pn	14 43 40.2	+0.9
MT02	Curacav	5.22	23	Pn	Pn	14 43 40.8	-0.8
MT03	Universidad Ad	5.23	29		Pn	14 43 41.5	-0.3
MT05	Renca	5.23	27	Pn	Pn	14 43 42.0	+0.2
LL02	Futaleuf	5.25	166	Pn	Pn	14 43 40.8	-1.2
VA01	Torpederas	5.30	18	Pn	Pn	14 43 42.5	-0.2
FCH	Farellones	5.46	30	eP	Pn	14 43 46.1	+1.0
PEL	Peldehue	5.48	26	Pn	Pn	14 43 45.7	+0.6
PEL	Peldehue	5.48	26	eP	Pn	14 43 45.8	+0.6
ROC1	El Roble	5.52	23	Pn	Pn	14 43 46.0	+0.1
ROCH	El Roble	5.53	23	⇓eP	Pn	14 43 46.4	+0.4
VA06	Catapilco	5.83	19	Pn	Pn	14 43 49.3	-0.7
VA03	San Esteban	5.87	26		Pn	14 43 50.9	+0.4
H03S1	Juan Fernandez	6.06	313	T	T	14 49 53.1	
	baz=134,slow=75,SNR=2009						
H03S3	Juan Fernandez	6.07	313	T	T	14 49 57.5	
	baz=134,slow=75,SNR=1636						
H03S2	Juan Fernandez	6.07	313	T	T	14 49 54.8	
	baz=134,slow=75,SNR=1540						
VA04	Juan Fernndez	6.16	315	eP	Pn	14 43 54.6	+0.1
AY01	Puyuhuapi	6.36	174	Pn	Pn	14 43 57.7	+0.6
CO02	Combarbal	7.20	18		Pn	14 44 09.0	+0.2
COYC	Coyhaique	7.55	172	Pn	Pn	14 44 15.2	+1.7
CFA	Coronel Fontan	7.82	36	P	Pn	14 44 13.5	-3.9
	comp=E,4.4nm,0.5s,baz=158,slow=17,SNR=2.6						
CFA				S	Sn	14 45 44.6	-1.2
	comp=E,17nm,0.8s,baz=28,slow=19,SNR=1.8						
CFA				LR	LR	14 48 05.9	
	comp=E,526nm,18.2s,baz=227,slow=44						
GO04	Tololo Observa	8.23	17		Pn	14 44 22.6	-0.5
CO05	La Serena	8.39	14		Pn	14 44 24.0	-1.0
CO01	Juntas del Tor	8.60	21		Pn	14 44 28.4	+0.2
TRQA	Tornquist	9.15	93	Pn	Pn	14 44 38.1	+2.6
LCO	Las Campanas	9.38	16	Pn	Pn	14 44 38.1	-0.7
AC05	El Transito	9.64	18		Pn	14 44 41.6	-0.8
GO03	Copiap	10.85	16		Pn	14 44 58.3	-0.5
VACA	Villa Angela C	15.01	50	eP	Pn	14 45 57.3	+1.7
PB15	IPOC Station P	15.25	15	P	Pn	14 45 58.7	-0.4
PB15				IAmb	IAmb	14 46 14.1	
	comp=Z,18nm,0.7s						
MECA	Mercedes	15.52	60	eP	Pn	14 46 03.2	+0.9
LVC	Limon Verde	15.95	16	P	Pn	14 46 04.7	-3.6
	comp=Z,1.2nm,0.5s,baz=322,slow=12,SNR=1.7						
LVC	Limon Verde	15.95	16	eP	Pn	14 46 08.1	-0.2
PB03	IPOC Station P	16.33	13		Pn	14 46 11.6	-1.4
PB03				IAmb	IAmb	14 46 36.9	
	comp=Z,29nm,1.5s						
PLTB	Pedras Altas	17.54	75	eP	Pn	14 46 27.6	-0.5
CPUP	Villa Florida	18.04	54	P	Pn	14 46 29.8	-4.4
	comp=Z,3.0nm,0.7s,baz=76,slow=9.1,SNR=2.1						
CPUP	Villa Florida	18.04	54	P	P	14 46 34.5	-0.2
CPUP	Villa Florida	18.04	54	eP	P	14 46 34.4	-0.2
CPSB	Cacapava Do Su	18.31	71	eP	P	14 46 37.9	+0.3
ESFA	Espinillo Form	18.33	49	eP	P	14 46 38.9	+1.1
MNMC	Minye Minye	19.22	12	P	P	14 46 46.7	-1.2
ALGR	Alto Alegre (B	19.46	68	eP	P	14 46 50.6	+0.3
CRSM	Crissiumal (Br	19.49	63	eP	P	14 46 49.7	-0.9
PB12	IPOC Station P	19.62	9	P	P	14 46 50.2	-1.9
PB12				IAmb	IAmb	14 47 09.9	
	comp=Z,19nm,1.0s						
PB16	IPOC Station P	20.01	11	P	P	14 46 54.3	-2.6
PB16				IAmb	IAmb	14 47 12.4	
	comp=Z,12nm,0.7s						
CNLB	Canela	20.80	72	eP	P	14 47 03.1	-1.7
ITAB	Concordia	21.01	65	eP	P	14 47 06.3	-0.7
FRBT	Francisco Belt	21.13	61	eP	P	14 47 09.5	+1.1
MURT	Porto Murtinho	21.40	45	eP	P	14 47 10.8	-0.5
MCR1	Marechal Candi	21.48	56	eP	P	14 47 12.7	+0.5
AMBA	Amambai (Brazi	21.96	52	eP	P	14 47 17.5	+0.2
LPAZ	La Paz	22.25	14	P	P	14 47 23.2	+2.1
	comp=Z,6.2nm,1.0s,baz=180,slow=10,SNR=9.4						
	comp=Z,6.2nm,1.0s						
LPAZ	La Paz	22.25	14	eP	P	14 47 23.4	+2.3
BDQN	Bodoquena, MS	22.84	44	eP	P	14 47 26.2	-0.6
BBRB	Robore, Bolivi	23.13	35	eP	P	14 47 29.4	-0.3
AQDB	Aquidauana	23.41	46	P	P	14 47 33.1	+0.6
AQDB				IAmb	IAmb	14 47 43.3	
	comp=Z,10nm,0.6s						
AQDB	Aquidauana	23.41	46	eP	P	14 47 33.2	+0.7
BBSD	Serra de San D	23.74	32	eP	P	14 47 35.5	-0.3
SIV	San Ignacio	24.63	30	P	P	14 47 43.8	-0.2
	comp=Z,12nm,1.0s,baz=220,slow=9.4,SNR=29						
SIV				LR	LR	14 59 00.8	
	comp=Z,248nm,20.6s,baz=258,slow=40						
	comp=Z,12nm,1.0s						
RVDE	Rio Verde (Bra	24.99	46	eP	P	14 47 47.4	0.0
FRTB	Fartura	25.25	61	eP	P	14 47 49.2	-0.5
PCMB	Pacaembu	25.29	56	eP	P	14 47 49.6	-0.4
PTLB	Pontes e Lacer	25.92	33	P	P	14 47 56.1	+0.4
PTLB				IAmb	IAmb	14 48 06.5	
	comp=Z,11nm,0.9s						
PTLB	Pontes e Lacer	25.92	33	eP	P	14 47 56.5	+0.8
NNA	Nana	26.17	353	LR	LR	14 56 04.1	
	comp=Z,111nm,19.5s,baz=177,slow=31						
PP1B	Ponte de Pedra	26.18	44	eP	P	14 47 58.3	+0.2
PET01	Itanhaem-SP	26.27	66	eP	P	14 47 58.9	0.0
C2SB	Chapadao do Su	26.42	49	eP	P	14 48 01.1	+0.9
SPB	Sao Paulo	26.59	65	eP	P	14 48 00.7	-1.0
SALV	Santo Antonio	27.16	40	eP	P	14 48 07.5	+0.7
ITRB	Iturama	27.25	54	eP	P	14 48 08.4	+0.7
RCLB	Rio Claro- Sao	27.27	62	eP	P	14 48 08.0	+0.1
VAO	Valinhos	27.29	64	eP	P	14 48 08.6	+0.4
BB19B	Bebedouro	27.49	59	eP	P	14 48 09.6	-0.3
ETMB	Extrema	28.93	15	P	P	14 48 22.8	0.0
ETMB				IAmb	IAmb	14 48 34.3	
	comp=Z,11nm,0.9s						
ETMB	Extrema	28.93	15	eP	P	14 48 23.4	+0.7
ARAG	Araguaiana, MT	29.43	47	eP	P	14 48 27.0	-0.1
IPMB	Ipameri, GO	29.88	55	eP	P	14 48 31.1	-0.2
BSCB	Bom Sucesso	30.13	64	eP	P	14 48 34.3	+0.8
VAS01	Vassouras-RJ	30.27	67	eP	P	14 48 35.1	+0.4
SAML	Samuel	30.50	21	P	P	14 48 35.6	-1.0
PMNB	Patos De Minas	30.65	58	eP	P	14 48 37.9	-0.2
BDFB	Brasilia	31.75	52	P	P	14 48 47.2	-0.6
	comp=Z,2.0nm,0.5s,baz=205,slow=9.5,SNR=3.3						
BDFB				LR	LR	15 03 09.8	
	comp=Z,331nm,20.4s,baz=179,slow=39						
	comp=Z,2.0nm,0.5s						
BDFB	Brasilia	31.75	52	eP	P	14 48 46.8	-1.1
RPN	Rapa Nui	31.87	279	LR	LR	14 58 05.2	
	comp=Z,247nm,20.1s,baz=120,slow=29						
SNDB	Serra Nova Dou	32.75	43	eP	P	14 48 55.3	-1.2
ALF01	Guarapari-ES	33.29	68	eP	P	14 49 02.1	+1.0
SJMB	Sao Joao De Ma	34.18	65	eP	P	14 49 07.4	-1.5
JANB	Januaria	34.56	56	eP	P	14 49 11.4	-0.9
NPGB	Novo Progresso	35.05	33	eP	P	14 49 16.3	-0.2
TEFE	Tefe	35.38	16	eP	P	14 49 19.9	+0.6
SDBA	SAO DESIDERIO	36.16	53	eP	P	14 49 25.9	-0.1
GUA01	Guaratinga, BA	36.56	63	eP	P	14 49 29.6	+0.1
ITTB	Itaituba	37.31	30	eP	P	14 49 36.4	+0.6
SMTB	Santa Maria do	37.36	46	eP	P	14 49 36.8	+0.6
SGCB	S£o Gabriel d	38.27	11	eP	P	14 49 43.7	-0.2
PRPB	Parauapebas	38.41	40	eP	P	14 49 46.1	+1.0
MALB	Monte Alegre	40.19	31	eP	P	14 50 01.9	+1.9
BELA	Belgrano 2	43.09	169	P	P	14 50 24.1	+1.0
RUSC	La Rusia	43.77	1	P	P	14 50 27.4	-2.3
RUSC				IAmb	IAmb	14 50 41.9	
	comp=Z,8.9nm,0.9s						
SDV	Santo Domingo	46.82	4	P	P	14 50 54.1	+0.5
	comp=Z,4.6nm,0.8s,baz=305,slow=10,SNR=2.8						
	comp=Z,4.6nm,0.8s						
SDV	Santo Domingo	46.82	4	eP	P	14 50 53.9	+0.3
MDP	Montagnes des	47.18	29	LR	LR	15 11 25.3	
	comp=Z,112nm,18.1s,baz=193,slow=37						
SNAA	Sanae	48.30	156	P	P	14 51 05.4	+1.0
SNAA	Sanae	48.30	156	P	P	14 51 04.1	-0.3
	comp=Z,8.1nm,0.9s,baz=284,slow=7.6,SNR=9.3						
	comp=Z,8.1nm,0.9s						
SNAA	Sanae	48.30	156	P	P	14 51 04.8	+0.4
TROLL	Troll, Antarti	49.99	157	P	P	14 51 18.0	+0.6
QSPA	South Pole Qui	52.15	180	P	P	14 51 34.7	+1.0
	comp=Z,2.0nm,0.8s,baz=141,slow=1.9,SNR=10						
	comp=Z,2.0nm,0.8s						
QSPA	South Pole Qui	52.15	180	P	P	14 51 34.5	+0.9
QSPA				IAmb	IAmb	14 51 51.7	
	comp=Z,9.6nm,1.1s						
SBA	Scott Base	58.82	192	P	P	14 52 19.1	-2.2
PPT	Papeete	68.50	264	LR	LR	15 18 07.4	
	comp=Z,139nm,18.3s,baz=150,slow=31						
MAW	Mawson	69.61	164	LR	LR	15 24 59.7	
	comp=Z,136nm,18.9s,baz=254,slow=37						
LPIG	La Paz	70.83	325	LR	LR	15 17 16.4	
	comp=Z,145nm,19.3s,baz=171,slow=29						
TXAR	Lajitas Array	72.75	333	P	P	14 53 52.5	+0.7
	comp=Z,0.6nm,0.8s,baz=148,slow=7.4,SNR=5.6						
TXAR				LR	LR	15 21 04.2	
	comp=Z,74nm,18.1s,baz=159,slow=32						
	comp=Z,0.6nm,0.8s						
SUR	Sutherland	73.95	119	LR	LR	15 22 05.9	
	comp=Z,88nm,19.2s,baz=178,slow=32						
BBTS	Babate	74.88	57	LR	LR	15 26 05.5	

	comp=Z,168nm,20.0s,baz=220,slow=35						
LIC	Lamto	77.25	72	⇑iP	P	14 54 18.8	+0.8
	comp=Z,53nm,0.8s						
TIC	Toumodi	77.53	71	⇓iP	P	14 54 20.9	+1.3
	comp=Z,3.3nm,0.2s						
KIC	Kosan Boka	77.56	72	⇓iP	P	14 54 20.9	+1.2
	comp=Z,12nm,0.6s						
DBIC	Dimbokro	77.67	71	P	P	14 54 20.9	+0.5
	comp=Z,20nm,0.8s,baz=231,slow=5.5,SNR=20						
	comp=Z,20nm,0.8s						
BOSA	Boshof	79.27	118	P	P	14 54 28.4	-0.9
	comp=Z,5.1nm,0.9s,baz=241,slow=7.4,SNR=5.2						
BOSA				LR	LR	15 25 51.7	
	comp=Z,85nm,19.3s,baz=186,slow=33						
	comp=Z,5.1nm,0.9s						
LBTB	Lobatse	81.70	115	LR	LR	15 25 08.8	
	comp=Z,90nm,19.5s,baz=181,slow=31						
NVAR	Mina Array Bea	86.57	326	P	P	14 55 09.3	+2.6
	comp=Z,0.1nm,0.4s,baz=158,slow=5.8,SNR=1.8						
	comp=Z,0.1nm,0.4s						
TORD	Torodi Ar. Bea	86.76	71	P	P	14 55 07.9	0.0
	comp=Z,5.3nm,0.9s,baz=238,slow=4.3,SNR=22						
	comp=Z,5.3nm,0.9s						
PDAR	Pinedale Array	86.88	334	P	P	14 55 09.2	+1.1
	comp=Z,0.2nm,0.4s,baz=144,slow=7.7,SNR=1.9						
PDAR				LR	LR	15 30 03.6	
	comp=Z,47nm,18.6s,baz=48,slow=33						
	comp=Z,0.2nm,0.4s						
AFI	Afiamalu	87.85	254	LR	LR	15 26 11.9	
	comp=Z,74nm,18.9s,baz=128,slow=30						
LSZ	Lusaka	89.68	109	LR	LR	15 31 44.3	
	comp=Z,124nm,19.0s,baz=180,slow=33						
DZM	Mont Dzumac	97.82	234	LR	LR	15 33 53.9	
	comp=Z,85nm,18.3s,baz=214,slow=32						
ASAR	Alice Springs	113.36	207	PKKPbc	PKKPbc	15 11 46.6	+1.1
	comp=Z,0.3nm,0.5s,baz=340,slow=3.0,SNR=12						
GERES	GERESS Array B	115.88	47	PKP	PKiKP	15 01 06.0	+0.2
	comp=Z,0.3nm,0.3s,baz=159,slow=3.0,SNR=4.0						
AKASG	Malin Array Be	125.83	50	PKP	PKPdf	15 01 24.1	-0.6
	comp=Z,0.4nm,0.5s,baz=256,slow=2.4,SNR=4.9						
NRIK	Noril'sk	147.08	12	PKPbc	PKPbc	15 02 05.5	+0.2
	comp=Z,2.7nm,0.6s,baz=343,slow=2.5,SNR=4.3						
ZALV	Zalesovo Beam	158.31	36	PKP	PKPdf	15 02 19.9	-0.1
	comp=Z,0.6nm,0.3s,baz=259,slow=1.5,SNR=7.5						
ZALV				PKPab	PKPab	15 02 55.1	+0.8
	comp=Z,1.6nm,0.6s,baz=296,slow=4.8,SNR=5.7						
CMAR	Chiang Mai Arr	159.37	159	PKPab	PKPab	15 02 59.7	-0.1
	comp=Z,0.4nm,0.6s,baz=191,slow=2.8,SNR=1.6						
MKAR	Makanchi Array	160.25	56	PKP	PKPdf	15 02 22.8	+0.2
	comp=Z,1.1nm,1.0s,baz=302,slow=2.7,SNR=6.8						
MKAR				PKPab	PKPab	15 03 03.3	+0.2
	comp=Z,1.3nm,0.9s,baz=291,slow=3.8,SNR=6.6						
MKAR				PP	PP	15 06 46.9	+1.1
	comp=Z,0.8nm,1.0s,baz=292,slow=3.5,SNR=3.9						
SONM	Songino Array	170.27	0	PKPab	PKPab	15 03 48.2	+1.0
	comp=Z,0.9nm,0.9s,baz=0.0,slow=4.4,SNR=5.4						

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*NEIC **08** 14:46:30±1.4, 23°.1S±0°.1×171°.48E±0°.08, h10^{km}±1^{km}, mb4.6/16, Error ellipse: s-maj=20.3km s-min=12.8km az=175.0*

*IDC **08** 14:46:35.0±2.4, 22°.96S×171°.22E, h43^{km}±21^{km}, mb3.9/9, mbtmp4.2/12, ML4.3/3, MS3.6/8, Error ellipse: s-maj=20.2km s-min=16.5km az=12.0*

*NOU **08** 14:46:41.6, 22°.97S×170°.35E, h217^{km}, MLv4.4/12, Southeast of Loyalty Islands*

ISC 08 14:46:33.3±0.5**, 23°.14S**±0°.07×**171°.34E**±0°.07**, h35^{km}, n95, σ1^{s}.08**/91**, mb4.4**/12**, MS3.5**/5**, 5C-8D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	Pines Island,	3.63	278	Pn	Pn	14 47 27.5	+0.6
PINNC	Pines Island,	3.63	278	P	Pn	14 47 27.2	+0.3
OUENC	Ouen Island, N	4.21	279	Pn	Pn	14 47 35.2	+0.2
OUENC	Ouen Island, N	4.21	279	P	Pn	14 47 35.0	0.0
YATNC	Mamie plateau,	4.25	284	P	Pn	14 47 35.3	-0.2
LIFNC	LIFOU	4.47	301	Pn	Pn	14 47 38.7	+0.2
LIFNC	LIFOU	4.47	301	P	Pn	14 47 39.2	+0.6
ONTNC	Ouen Toro	4.58	279	Pn	Pn	14 47 40.6	+0.5
ONTNC	Ouen Toro	4.58	279	P	Pn	14 47 41.8	+1.7
DZM	Mont Dzumac	4.64	282	P	Pn	14 47 41.1	+0.1
	2.0nm,0.3s,baz=127,slow=12,SNR=38						
DZM				S	Sn	14 48 31.7	-2.1
	24nm,0.6s,baz=285,slow=23,SNR=8.2						
	5.2nm,0.3s						
DZM	Mont Dzumac	4.64	282		Pn	14 47 40.6	-0.4
DZM	Mont Dzumac	4.64	282	P	Pn	14 47 40.9	-0.1
NOUC	Port Laguerre	4.76	282	P	Pn	14 47 43.1	+0.5
RTV	Rentapao	5.98	332	P	Pn	14 48 02.4	+3.1
DVP	Devils Point	6.14	331	P	Pn	14 48 03.6	+2.0
KOUNC	Koumac, New Ca	7.04	290	Pn	Pn	14 48 15.4	+1.6
MSVF	Nonsavu	8.28	51	P	Pn	14 48 32.6	+1.7
	0.8nm,0.3s,baz=173,slow=20,SNR=7.0						
MSVF				LR	LR	14 50 53.5	
	comp=Z,336nm,18.1s,baz=239,slow=31						
	9.2nm,0.6s						
MSVF	Nonsavu	8.28	51		Pn	14 48 29.1	-1.9
URZ	Urewera	15.86	163	P	P	14 50 18.8	+1.6
	0.3nm,0.3s,baz=190,slow=13,SNR=2.5						
URZ				LR	LR	14 54 30.4	
	comp=Z,228nm,19.0s,baz=131,slow=30						
	9.9nm,0.9s						
RTZ	Ruatahuna	16.16	164		P	14 50 20.6	0.0
MRZ	Mangatainoka R	17.83	169	P	Pn	14 50 37.4	-1.2
MRZ				IAmb	IAmb	14 50 51.3	
	comp=Z,52nm,1.4s						
BFZ	Birch Farm	17.97	168	P	Pn	14 50 40.5	+0.2
BFZ				IAmb	IAmb	14 51 06.7	
	comp=Z,68nm,1.3s						
TUWZ	Tuamarina	18.37	174	P	Pn	14 50 46.2	+1.1
AFI	Afiamalu	18.44	63	LR	LR	14 56 05.2	
	comp=Z,185nm,18.7s,baz=163,slow=31						
BHW	Baring Head	18.45	172	P	P	14 50 45.9	0.0
OXZ	Oxford	20.14	179	P	Pn	14 51 05.9	-0.5
OXZ				IAmb	IAmb	14 51 23.4	
	comp=Z,44nm,1.5s						
FOZ	Fox Glacier	20.38	183	P	Pn	14 51 10.1	+1.0
FOZ				IAmb	IAmb	14 51 41.1	
	comp=Z,31nm,1.2s						
RPZ	Rata Peaks	20.52	181	P	Pn	14 51 11.4	+0.6
	comp=Z,14nm,0.9s,baz=82,slow=12,SNR=5.5						
RPZ				LR	LR	14 57 39.6	
	comp=Z,158nm,20.8s,baz=266,slow=32						
	comp=Z,14nm,0.9s						
CTA	Charters Tower	23.51	273	LR	LR	15 00 52.1	
	comp=Z,150nm,18.8s,baz=174,slow=37						
TOO	Toolangi	26.43	231	P	P	14 52 06.9	+0.1
TOO				IAmb	IAmb	14 52 27.2	
	comp=Z,19nm,1.3s						
STKA	Stephens Creek	27.71	245	P	P	14 52 19.1	+0.7
	comp=Z,1.2nm,0.6s,baz=88,slow=9.9,SNR=4.7						
STKA				LR	LR	15 03 19.8	
	comp=Z,105nm,18.4s,baz=138,slow=36						
	comp=Z,1.2nm,0.6s						
STKA	Stephens Creek	27.71	245	P	P	14 52 18.9	+0.5
COEN	Coen	28.17	284	P	P	14 52 23.7	+1.1
COEN				IAmb	IAmb	14 52 30.2	
	comp=Z,14nm,1.4s						
AS31	Alice Springs	34.29	262	P	P	14 53 18.0	+1.5
ASAR	Alice Springs	34.30	262	P	P	14 53 17.1	+0.6
	comp=Z,1.0nm,0.9s,baz=79,slow=8.3,SNR=10						
ASAR				LR	LR	15 07 10.5	
	comp=Z,108nm,18.2s,baz=148,slow=36						
	comp=Z,1.0nm,0.9s						
ASAR	Alice Springs	34.30	262	P	P	14 53 18.1	+1.6
WRA	Warramunga Arr	34.50	268	P	P	14 53 18.1	-0.2
	comp=Z,0.3nm,0.3s,baz=97,slow=8.4,SNR=0.7						
	comp=Z,0.3nm,0.3s						
WRA	Warramunga Arr	34.50	268	P	P	14 53 20.4	+2.0
FORT	Forrest	39.13	249	P	P	14 53 58.7	+1.1
FORT				IAmb	IAmb	14 54 07.4	
	comp=Z,12nm,0.9s						
QSPA	South Pole Qui	66.93	180	P	P	14 57 23.6	+1.5
	comp=Z,3.1nm,0.9s,baz=329,slow=0.6,SNR=10						
	comp=Z,3.1nm,0.9s						
QSPA	South Pole Qui	66.93	180	P	P	14 57 23.3	+1.2
MJAR	Matsushiro Arr	67.10	331	LR	LR	15 23 44.0	
	comp=Z,34nm,20.9s,baz=137,slow=33						
KLR	Kul'dur	80.22	335	P	P	14 58 39.9	0.0
	comp=Z,1.0nm,0.8s,baz=162,slow=6.9,SNR=4.4						
	comp=Z,1.0nm,0.8s						
CMAR	Chiang Mai Arr	81.88	294	P	P	14 58 50.9	+1.4
	comp=Z,1.8nm,0.3s,baz=139,slow=4.3,SNR=4.4						
	comp=Z,1.8nm,0.3s						
NVAR	Mina Array Bea	89.94	48	P	P	14 59 29.1	-0.1
	comp=Z,2.5nm,0.7s,baz=226,slow=8.5,SNR=23						
	comp=Z,2.5nm,0.7s						
NVAR	Mina Array Bea	89.94	48	P	P	14 59 28.5	-0.7
NV11	Mina Array Sit	90.04	48	P	P	14 59 28.9	-0.6
KVN	Kaiserville	90.38	47	P	P	14 59 30.4	-0.8
SONM	Songino Array	91.50	322	P	P	14 59 35.2	-0.9
	comp=Z,1.8nm,0.9s,baz=131,slow=4.2,SNR=12						
	comp=Z,1.8nm,0.9s						
ILAR	Eielson Array	93.37	17	P	P	14 59 39.9	-4.3
	comp=Z,0.3nm,0.7s,baz=224,slow=5.0,SNR=2.6						
BMAR	Burnt Mountain	96.04	16	P	P	14 59 55.1	-1.4
ARCES	ARCESS Array B	129.32	345	PKP	PKPdf	15 05 36.6	-0.6
	comp=Z,2.0nm,0.9s,baz=90,slow=1.8,SNR=4.0						
ISR	Istrita	143.95	316	⇑P	PKiKP	15 06 07.4	-1.2
DOPR	Dopca	144.29	318	⇓P	PKPab	15 06 02.7	-0.8
VOIR		144.75	317	⇑P	PKPdf	15 06 06.0	-0.5
ARR	Arges	145.04	318	⇑P	PKPdf	15 06 07.5	+0.5
MARR	Marisel-Cluj	145.30	320	⇓P	PKPdf	15 06 08.1	+0.7
DRGR		145.48	321	⇓P	PKPdf	15 06 07.0	-0.7
LOT	Lotru	145.53	318	⇓P	PKPab	15 06 09.4	+1.1
SIRR	Siria	146.37	321	⇓P	PKPab	15 06 11.2	-0.1
MORC	Moravsky Berou	146.40	329	⇓P	PKPdf	15 06 06.2	-2.9
MORC	Moravsky Berou	146.40	329	ePKP	PKPbc	15 06 10.1	-0.3
KRLC	Kraliky	146.55	330	ePKP	PKPbc	15 06 10.8	-0.1
KRLC				ex	x	15 06 15.7	
DPC	Dobruska-Polom	146.57	331	ePKP	PKPbc	15 06 10.9	0.0
UPC	Upice	146.60	331	ePKP	PKPab	15 06 11.2	-0.8
BZS	Buzias	146.75	320	⇓P	PKPbc	15 06 11.3	-0.2
JAVC	Velka Javorina	146.96	328	ePKP	PKPab	15 06 13.4	-0.1
MDVR	Moldovita	147.13	318	⇓P	PKPbc	15 06 11.5	-1.2
VRAC	Vranov	147.17	329	⇑P	PKPbc	15 06 11.7	-0.9
VRAC	Vranov	147.17	329	ePKP	PKPbc	15 06 13.0	+0.4
PVCC	Panska Ves	147.21	332	ePKP	PKPbc	15 06 13.1	+0.5
CLL	Collm	147.26	335	i PKPbc	PKPbc	15 06 12.2	-0.6
	comp=Z,7.0nm,1.0s						
KRUC	Moravsky	147.44	329	ePKP	PKPbc	15 06 13.5	+0.2
PRU	Pruhonice	147.62	332	ePKP	PKPbc	15 06 13.6	-0.2
TREC	Trest	147.70	330	ePKP	PKPbc	15 06 14.6	+0.5
MORH	Mrgy, Hungar	148.12	323	⇑P	PKPbc	15 06 14.5	-0.7
NKC	Novy Kostel	148.32	334	ePKP	PKPbc	15 06 16.0	+0.3
RONA	Rosalia, Austr	148.41	327	ePKP	PKPbc	15 06 16.3	+0.3
	comp=Z,6.6nm,0.6s						
CONA	Conrad Observa	148.47	328	ePKP	PKPbc	15 06 16.6	+0.3
	comp=Z,5.8nm,0.8s						
CKRC	Cesky Krumlov	148.58	330	ePKP	PKPbc	15 06 16.3	-0.1
CKRC				ex	x	15 06 19.7	
KHC	Kasperske Hory	148.68	331	ePKP	PKPbc	15 06 14.6	-2.1
KHC				ex	x	15 06 19.7	
GERES	GERESS Array B	148.84	331	PKPbc	PKPbc	15 06 17.1	-0.1
	comp=Z,2.0nm,0.6s,baz=60,slow=3.2,SNR=17						
ARSA	Arzberg	149.10	327	ePKP	PKiKP	15 06 18.3	-0.7
	comp=Z,2.9nm,0.7s						
SOKA	Soboth	149.74	327	i PKP	PKPbc	15 06 19.2	-0.3
	comp=Z,4.7nm,1.0s						
KBA	Koelnbreinsper	150.29	329	ePKP	PKPbc	15 06 20.7	-0.2
	comp=Z,3.4nm,0.6s						
MYKA	Terra Mystica	150.46	328	i PKP	PKPbc	15 06 20.5	-0.7
	comp=Z,5.0nm,0.6s						
WATA	Walderalm	150.91	331	ePKP	PKPbc	15 06 22.4	0.0
	comp=Z,2.6nm,0.5s						
ABTA	Abfaltersbach	150.92	329	i PKP	PKPbc	15 06 21.7	-0.6
	comp=Z,6.3nm,0.7s						
WTTA	Wattenberg	150.94	331	i PKP	PKPbc	15 06 22.5	0.0
	comp=Z,1.0nm,0.4s						
MOTA	Moosalm	151.11	332	ePKP	PKPbc	15 06 22.5	-0.3
	comp=Z,5.1nm,0.7s						
RETA	Reutte	151.15	332	i PKP	PKiKP	15 06 22.9	-0.4
	comp=Z,11nm,1.5s						
SQTA	Sankt Quirin	151.16	331	i PKP	PKPbc	15 06 22.9	0.0
	comp=Z,4.8nm,0.5s						
FETA	Feichten	151.53	332	ePKP	PKPbc	15 06 23.7	-0.1
	comp=Z,6.4nm,0.9s						
DAVA	Damuels	151.69	333	ePKiKP	PKiKP	15 06 25.3	+0.8
	comp=Z,3.4nm,0.6s						
TORD	Torodi Ar. Bea	166.02	226	PKP	PKPdf	15 06 35.8	+0.4
	comp=Z,0.5nm,0.9s,baz=107,slow=1.5,SNR=2.4						
TORD				PKPab	PKPab	15 07 35.7	+0.2
	comp=Z,0.4nm,0.8s,baz=116,slow=3.4,SNR=1.9						

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*NEIC **08** 15:01:10.9±2.5, 7°.05S±0°.07×156°.15E±0°.08, h58^{km}±6^{km}, mb4.2/17, Error ellipse: s-maj=11.4km s-min=10.4km az=59.0*

*IDC **08** 15:01:13.9±1.7, 7°.03S×155°.79E, h72^{km}±17^{km}, mb3.4/5, mbtmp3.8/7, MS3.5/1, Error ellipse: s-maj=25.2km s-min=12.1km az=37.0*

ISC 08 15:01:12.5±0.7**, 7°.03S**±0°.09×**155°.84E**±0°.08**, h62^{km}, n31, σ1^{s}.42**/30**, mb4.0**/13**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	4.62	307	Pn	Pn	15 02 23.6	+3.7
KRVT	Keravat (AS076	4.66	305	P	Pn	15 02 20.6	+0.2
	2.5nm,0.3s,baz=36,slow=21,SNR=1.2						
KRVT				S	Sn	15 03 14.9	+1.6
	14nm,0.4s,baz=243,slow=14,SNR=1.8						
HNR	Honiara	4.71	121	P	Pn	15 02 22.0	+0.8
	231nm,0.5s,baz=40,slow=13,SNR=1.9						
HNR				S	Sn	15 03 18.1	+3.5
	761nm,1.0s,baz=127,slow=16,SNR=1.6						
HNR	Honiara	4.71	121		Pn	15 02 15.3	-5.9
PMG	Port Moresby	8.91	254	Pn	Pn	15 03 20.7	+2.1
ARMA	Armidale	23.60	189	P	P	15 06 17.3	-0.8
FAKI	Fak Fak	23.85	279	P	P	15 06 20.5	+0.1
FAKI				IAmb	IAmb	15 06 23.8	
	comp=Z,16nm,1.3s						
WR0	Warramunga Arr	24.33	236	P	P	15 06 24.7	0.0
WR0				IAmb	IAmb	15 06 45.6	
	comp=Z,6.1nm,1.2s						
WB0	Warramunga Arr	24.36	237	P	P	15 06 25.3	+0.4
WB0				IAmb	IAmb	15 06 46.8	
	comp=Z,7.1nm,1.4s						
WRA	Warramunga Arr	24.49	236	P	P	15 06 25.1	-1.0
	comp=Z,1.2nm,0.7s,baz=63,slow=10.0,SNR=9.1						
WRA				PcP	PcP	15 10 03.3	-0.3
	comp=Z,0.3nm,0.7s,baz=55,slow=2.0,SNR=4.6						
	comp=Z,1.2nm,0.7s						
WRA	Warramunga Arr	24.49	236	P	P	15 06 24.9	-1.3
MTN	Manton Dam	25.00	255	P	P	15 06 30.2	-0.6
MTN				IAmb	IAmb	15 07 10.5	
	comp=Z,21nm,1.4s						
AS31	Alice Springs	26.78	229	P	P	15 06 45.2	-1.7
ASAR	Alice Springs	26.78	229	P	P	15 06 46.8	-0.1
	comp=Z,0.4nm,0.5s,baz=58,slow=10,SNR=26						
ASAR				PcP	PcP	15 10 08.6	-0.2
	comp=Z,0.4nm,0.6s,baz=65,slow=2.6,SNR=6.2						
	comp=Z,0.4nm,0.5s						
H11S3	WAKE ISLAND Hy	27.53	23	T	T	15 35 18.5	
	baz=202,slow=75,SNR=86						
H11S2	WAKE ISLAND Hy	27.54	23	T	T	15 35 19.5	
	baz=202,slow=75,SNR=84						
H11S1	WAKE ISLAND Hy	27.55	23	T	T	15 35 21.6	
	baz=202,slow=75,SNR=53						
STKA	Stephens Creek	28.06	206	P	P	15 06 59.8	+1.5
	comp=Z,0.8nm,0.5s,baz=54,slow=14,SNR=3.6						
	comp=Z,0.8nm,0.5s						
FITZ	Fitzroy Crossi	31.40	247	P	P	15 07 27.2	-0.8
BBOO	Buckleboo	31.55	213	P	P	15 07 28.5	-0.6
FORT	Forrest	35.14	224	P	P	15 08 00.2	-0.2
LTZ	Lake Taylor	38.44	160	P	P	15 08 26.6	-1.8
JNU	Nakatsue	46.45	331	LR	LR	15 26 19.9	
	comp=Z,48nm,18.8s,baz=88,slow=32						
SONM	Songino Array	69.82	327	P	P	15 12 17.0	+0.3
	comp=Z,1.0nm,0.8s,baz=136,slow=6.9,SNR=6.3						
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	69.82	327	P	P	15 12 16.4	-0.3
SONM				IAmb	IAmb	15 12 17.3	
	comp=Z,1.7nm,1.1s						
VNDA	Vanda	70.52	179	P	P	15 12 20.4	+0.1
VNDA				IAmb	IAmb	15 13 03.9	
	comp=Z,6.6nm,1.4s						
SBA	Scott Base	71.01	178	P	P	15 12 23.8	+0.5
SBA				IAmb	IAmb	15 12 24.8	
	comp=Z,1.4nm,1.0s						
QSPA	South Pole Qui	82.94	180	P	P	15 13 30.3	-0.4
QSPA				IAmb	IAmb	15 13 56.5	
	comp=Z,7.4nm,1.4s						
LOGN	Logan Glacier	83.48	26	P	P	15 13 31.4	-2.1
LOGN				IAmb	IAmb	15 13 42.5	
	comp=Z,7.8nm,1.2s						
MK31	Makanchi Array	83.99	319	P	P	15 13 34.7	-1.5
MKAR	Makanchi Array	83.99	319	P	P	15 13 35.7	-0.5
	comp=Z,0.3nm,0.6s,baz=106,slow=5.1,SNR=4.9						
	comp=Z,0.3nm,0.6s						

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*NEIC **08** 15:18:38.2±1.9, 33°.82N±0°.07×141°.78E±0°.08, h10^{km}±1^{km}, mb4.4/38, Error ellipse: s-maj=13.2km s-min=9.5km az=128.0*

*JMA **08** 15:18:41.6±0.2, 33°.9N±0°.6×14°2E±°, h60^{km}±3^{km}, MV4.1/34, FAR SE OFF BOSO PEN*

*NIED **08** 15:18:41.6, 33°.87N×141°.71E, h60^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.20; M$_{\theta\theta}$0.93; M$_{\phi\phi}$0.27; M$_{r\theta}$-0.12; M$_{\theta\phi}$-0.84; M$_{\phi r}$0.87; Fault plane solution: M$_{0}$1.63000×10^{15} NP1: φ$_{s}$148.00000°, δ62.00000°, λ-62.00000°. NP2: φ$_{s}$280.00000°, δ39.00000°, λ-131.00000°.*

*IDC **08** 15:18:42.2±2.0, 33°.77N×141°.74E, h45^{km}±19^{km}, mb3.7/14, mbtmp4.0/17, ML3.3/2, MS3.1/4 Error ellipse: s-maj=17.0km s-min=10.8km az=104.0*

ISC 08 15:18:38.9±1.8**, 33°.80N**±0°.04×**141°.78E**±0°.06**, h20^{km}**±8^{km}**, n97, σ1^{s}.19**/108**, mb4.3**/33**, 6D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.08	322	⇓iP	Pg	15 18 59.6	-0.1
BSO1				⇓eS	Sn	15 19 13.0	+0.5
BSO3	Boso 3	1.45	314	⇓P	Pb	15 19 05.3	+0.2
BSO4	Boso 4	1.68	315	⇓P	Pb	15 19 09.0	-0.1
JHJ2	Mitsune	1.78	248	Pn	Pb	15 19 10.3	-0.5
JHJ2				Sn	Sn	15 19 30.9	+0.3
JHJ2	Mitsune	1.78	248	P	Pb	15 19 10.4	-0.4
JHJ2				eS	Sn	15 19 32.3	+1.7
JHJ	Hachijo jima 2	1.81	248	P	Pb	15 19 10.6	-0.7
	2µm,0.3s,baz=82,slow=22,SNR=383						
JHJ				S	Sn	15 19 30.6	-0.6
	2µm,0.3s,baz=51,slow=20,SNR=5.4						
KTR	Katsuura	1.81	318	P	Pn	15 19 10.3	+1.3
KTR				eS	Sn	15 19 31.9	+0.6
JHCJ	Hachijojimakas	1.81	247	P	Pb	15 19 10.8	-0.6
JHCJ				eS	Sn	15 19 31.8	+0.4
JMKN	Mikurajimanish	1.83	273	P	Pn	15 19 10.6	+1.4
JMKN				eS	Sn	15 19 31.3	-0.5
JMYK	Miyake Tsubota	1.88	279	eP	Pn	15 19 11.1	+1.2
JMYK				eS	Sn	15 19 33.6	+0.7
JKUC	kamogawauchiur	1.88	316	⇓iP	Pn	15 19 11.2	+1.3
JKUC				⇓S	Sn	15 19 33.1	0.0
JIM2	Oshima 3	2.15	296	P	Pn	15 19 14.2	+0.6
JIM2				eS	Sn	15 19 39.4	-0.5
JAOM	Aogashimamukai	2.16	232	P	Pn	15 19 15.6	+1.8
JIZS	Izushimoda	2.57	292	P	Pn	15 19 20.4	+1.0
JIZS				eS	Sn	15 19 49.6	-0.6
JOD2	Odawara 2	2.66	304	P	Pn	15 19 21.2	+0.5
JOD2				eS	Sn	15 19 50.3	-2.1
JFNN	Fujinakano	2.91	299	S	Sn	15 19 57.6	-0.9
JYN	Shimob	3.16	303	P	Pn	15 19 28.9	+1.3
SHZ3	Shizuoka 3	3.21	294	P	Pn	15 19 30.3	+2.0
SHZ3				eS	Sn	15 20 07.5	+1.4
MJAR	Matsushiro Arr	4.01	314	P	Pn	15 19 41.1	+1.9
	1.0nm,0.3s,baz=155,slow=10,SNR=20						
MJAR				S	Sn	15 20 26.1	+0.6
	14nm,0.4s,baz=80,slow=37,SNR=2.8						
	5.6nm,0.4s						
MAJO	Matsushiro	4.01	314	Pn	Pn	15 19 40.8	+1.6
MJB9	Matsu-Tunnel	4.01	314	Pn	Pn	15 19 40.8	+1.6
JGF	Kuroka	4.06	297	Pn	Pn	15 19 41.7	+1.7
JMM	Marumori	4.13	349	Pn	Pn	15 19 40.7	-0.2
INU	Inuyama	4.22	293	Pn	Pn	15 19 42.3	+0.2
JSD	Sado	5.10	327	Pn	Pn	15 19 54.5	+0.3
JMN	Monobe	6.58	272	Pn	Pn	15 20 15.8	+1.2
JCJ	Chichijima	6.69	177	P	Pn	15 20 17.4	+1.4
	98nm,0.6s,baz=91,slow=23,SNR=6.0						
JCJ				S	Sn	15 21 28.2	-3.6
	90nm,0.3s,baz=288,slow=20,SNR=6.8						
JCJ				LR	LR	15 22 42.1	
	comp=Z,41nm,19.1s,baz=94,slow=36						
JCJ	Chichijima	6.69	177	Pn	Pn	15 20 17.1	+1.0
JTM	Tenmabayashi	7.00	356	Pn	Pn	15 20 19.7	-0.5
JHS	Saijyo	7.26	282	Pn	Pn	15 20 26.5	+2.6
ERM	Erimo	8.27	7	Pn	Pn	15 20 35.5	-2.2
JNU	Nakatsue	9.14	269	P	Pn	15 20 51.1	+1.4
	0.4nm,0.3s,baz=64,slow=21,SNR=1.4						
	5.9nm,0.9s						
ASAJ	Asahikawa	10.32	3	P	Pn	15 21 03.9	-1.9
	7.4nm,0.3s,baz=223,slow=9.7,SNR=44						
ASAJ				S	Sn	15 22 51.5	-9.3
	7.3nm,0.6s,baz=291,slow=14,SNR=2.2						
JKA	Kamikawa-asahi	10.32	3	Pn	Pn	15 21 03.4	-2.4
KSRS	Korea Array	11.85	292	LR	LR	15 25 57.9	
	comp=Z,66nm,18.6s,baz=100,slow=37						
YSS	Yuzh-Sakhalins	13.16	3	Pn	Pn	15 21 43.1	-1.4
JOW	Kunigami	13.57	243	LR	LR	15 26 43.0	
	comp=Z,80nm,20.3s,baz=304,slow=36						
SSLB	Suanglung	20.77	247	P	P	15 23 16.1	-2.6
SSLB				IAmb	IAmb	15 23 41.9	
	comp=Z,26nm,1.2s						
TPUB	Ta-pu	21.29	246	P	P	15 23 22.6	-1.7
ENH	Enshi	27.54	272	P	P	15 24 22.2	-2.2
ENH				IAmb	IAmb	15 24 24.6	
	comp=Z,5.7nm,0.7s						
SEY	Seymchan	29.91	10	P	P	15 24 46.1	+1.0
	comp=Z,0.8nm,0.5s,baz=168,slow=8.5,SNR=8.8						
	comp=Z,0.8nm,0.5s						
SONM	Songino Array	29.94	309	P	P	15 24 46.7	+0.9
	comp=Z,0.6nm,0.6s,baz=104,slow=9.7,SNR=4.4						
	comp=Z,0.6nm,0.6s						
GOMU	GeErMu	38.26	287	P	P	15 25 56.3	-1.9
GOMU				pP	pP	15 26 00.3	-1.6
GOMU				sP	sP	15 26 02.3	-0.9
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,79nm,6.0s						
CM31	Chiang Mai Arr	41.08	259	P	P	15 26 20.4	-1.0
CM31				IAmb	IAmb	15 26 40.7	
	comp=Z,6.6nm,1.4s						
CMAR	Chiang Mai Arr	41.08	259	P	P	15 26 20.9	-0.6
	comp=Z,1.5nm,0.7s,baz=49,slow=7.4,SNR=16						
	comp=Z,1.5nm,0.7s						
CMAR	Chiang Mai Arr	41.08	259	P	P	15 26 20.0	-1.4
ANM	Nome	44.22	30	P	P	15 26 48.0	+1.6
ZALV	Zalesovo Beam	44.36	315	P	P	15 26 48.3	+0.7
	comp=Z,0.2nm,0.3s,baz=101,slow=7.6,SNR=1.7						
	comp=Z,0.2nm,0.3s						
MK31	Makanchi Array	46.15	305	P	P	15 27 01.8	-0.2
MKAR	Makanchi Array	46.15	305	P	P	15 27 02.5	+0.5
	comp=Z,0.5nm,0.4s,baz=85,slow=9.7,SNR=15						
	comp=Z,0.5nm,0.4s						
MKAR	Makanchi Array	46.15	305	P	P	15 27 01.6	-0.4
MAKZ	Makanchi	46.36	305	P	P	15 27 03.6	0.0
K20K	Telida	48.85	33	P	P	15 27 24.4	+1.6
K20K				IAmb	IAmb	15 28 01.5	
	comp=Z,5.0nm,1.2s						
IMAR	Indian Mountai	49.30	29	P	P	15 27 26.4	+0.4
A21K	Barrow	49.32	22	P	P	15 27 27.4	+1.3
A21K				IAmb	IAmb	15 27 28.2	
	comp=Z,4.2nm,0.8s						
KDAK	Kodiak Island	49.34	40	P	P	15 27 26.8	+0.3
	comp=Z,5.8nm,0.7s,baz=280,slow=6.1,SNR=5.8						
	comp=Z,5.8nm,0.7s						
KDAK	Kodiak Island	49.34	40	P	P	15 27 26.7	+0.3
H21K	Melozitna Rive	49.64	30	P	P	15 27 29.6	+0.9
H21K				IAmb	IAmb	15 27 59.5	
	comp=Z,7.2nm,1.5s						
PPLA	Purkeypile	49.67	33	P	P	15 27 30.0	+0.9
CAST	Castle Rocks	49.75	33	P	P	15 27 30.8	+1.2
CAST				IAmb	IAmb	15 28 05.3	
	comp=Z,8.2nm,1.4s						
I21K	Tanana	49.94	30	P	P	15 27 32.0	+1.1
I21K				IAmb	IAmb	15 27 47.3	
	comp=Z,6.5nm,1.5s						
MLY	Manley	50.45	31	P	P	15 27 36.1	+1.2
KNRA	Kununurra	50.74	196	P	P	15 27 37.9	+0.4
TOLK	Toolik Lake Re	51.22	26	P	P	15 27 41.0	+0.4
TOLK				IAmb	IAmb	15 27 48.2	
	comp=Z,6.6nm,1.4s						
SML	Sawmill	51.44	35	P	P	15 27 43.0	+0.6
MDM	Murphy Dome	51.51	31	P	P	15 27 44.1	+1.3
MDM				IAmb	IAmb	15 27 44.9	
	comp=Z,4.8nm,0.9s						
H24K	Noodor Dome	51.69	30	P	P	15 27 44.3	+0.1
IL31		52.08	31	P	P	15 27 46.6	-0.4
IL31				IAmb	IAmb	15 27 47.9	
	comp=Z,3.5nm,0.8s						
ILAR	Eielson Array	52.08	31	P	P	15 27 47.2	+0.2
	comp=Z,1.8nm,0.7s,baz=264,slow=6.0,SNR=22						
	comp=Z,1.8nm,0.7s						
GSI	Gunungsitoli	52.47	242	P	P	15 27 49.5	-1.0

BMAR	Burnt Mountain	53.03	28	P	P	15 27 54.7	+0.5
SCRK	Sand Creek	53.36	32	P	P	15 27 56.8	+0.1
J26L	Joseph Creek	53.52	31	P	P	15 27 57.5	-0.3
WB0	Warramunga Arr	53.73	189	P	P	15 27 59.5	-0.2
WB0				IAmb	IAmb	15 28 01.9	
	comp=Z,2.9nm,0.6s						
FITZ	Fitzroy Crossi	53.86	199	P	P	15 28 01.7	+1.1
WR0	Warramunga Arr	53.91	188	P	P	15 28 00.7	-0.3
WR0				IAmb	IAmb	15 28 05.6	
	comp=Z,3.2nm,0.8s						
WB2	Warramunga Arr	53.91	189	P	P	15 28 01.0	-0.1
WB2				IAmb	IAmb	15 28 21.5	
	comp=Z,7.5nm,1.3s						
WRA	Warramunga Arr	53.91	189	P	P	15 28 00.7	-0.4
	comp=Z,1.3nm,0.4s,baz=1.0,slow=7.6,SNR=33						
	comp=Z,1.3nm,0.4s						
WRA	Warramunga Arr	53.91	189	P	P	15 28 00.8	-0.2
BCAR	Beaver Creek A	54.41	33	P	P	15 28 06.0	+1.7
EGAK	Eagle	54.53	31	P	P	15 28 05.3	+0.2
EGAK				IAmb	IAmb	15 28 27.3	
	comp=Z,6.1nm,1.3s						
M30M	Minto, Yukon	56.75	33	P	P	15 28 21.7	+0.5
M30M				IAmb	IAmb	15 28 23.5	
	comp=Z,2.9nm,0.8s						
INK	Inuvik	57.13	26	P	P	15 28 23.9	+0.3
	comp=Z,0.7nm,0.5s,baz=314,slow=8.0,SNR=4.7						
	comp=Z,0.7nm,0.5s						
INK	Inuvik	57.13	26	P	P	15 28 23.7	+0.1
INK				IAmb	IAmb	15 29 06.5	
	comp=Z,4.1nm,1.4s						
CHGR	Chuyangaron	57.37	297	P	P	15 28 25.6	-0.4
CHGR				IAmb	IAmb	15 28 52.6	
	comp=Z,8.9nm,1.2s						
AS31	Alice Springs	57.64	189	P	P	15 28 28.9	+1.1
AS31				IAmb	IAmb	15 28 33.8	
	comp=Z,0.9nm,0.4s						
ASAR	Alice Springs	57.64	189	P	P	15 28 28.1	+0.3
	comp=Z,1.0nm,0.4s,baz=6.7,slow=7.7,SNR=32						
	comp=Z,1.0nm,0.4s						
ASAR	Alice Springs	57.64	189	P	P	15 28 27.9	+0.2
M31M	Drury Creek, Y	57.92	33	P	P	15 28 30.2	+0.8
M31M				IAmb	IAmb	15 29 06.6	
	comp=Z,7.8nm,1.5s						
MBWA	Marble Bar	58.56	204	P	P	15 28 35.4	+1.2
FORT	Forrest	65.53	193	P	P	15 29 24.7	+3.9
YKA	Yellowknife Ar	66.46	29	P	P	15 29 26.0	-0.5
	comp=Z,0.4nm,0.7s,baz=294,slow=6.2,SNR=5.9						
	comp=Z,0.4nm,0.7s						
NWAO	Narrogin (SRO)	70.28	202	P	P	15 29 50.2	-0.5
	comp=Z,13nm,1.1s,baz=257,slow=4.4,SNR=1.8						
	comp=Z,13nm,1.1s						
NWAO	Narrogin (SRO)	70.28	202	P	P	15 29 52.1	+1.4
FINES	FINESS Array B	71.82	333	P	P	15 29 59.9	+0.2
	comp=Z,1.8nm,0.9s,baz=46,slow=4.0,SNR=2.4						
	comp=Z,1.8nm,0.9s						
AKASG	Malin Array Be	77.04	323	P	P	15 30 29.7	-0.6
	comp=Z,0.2nm,0.4s,baz=44,slow=6.7,SNR=1.0						
	comp=Z,0.2nm,0.4s						
SFJD	Kangerlussuaq	79.07	5	LR	LR	16 05 14.6	
	comp=Z,66nm,21.9s,baz=50,slow=35						

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*JMA **08** 15:20:12.2±0.1, 24°.7N±0°.4×122°.2E±0°.2, h0^{km}, TAIWAN REGION*
*TAP **08** 15:20:12.8, 24°.73N×122°.17E, h4^{km}, ML2.8, C*
ISC 08 15:20:12.6±1.0**, 24°.74N**±0°.02×**122°.23E**±0°.02**, h9**^{km}±9^{km}**, n38,** σ**0^{s}.61**/73**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		0.29	291	*e*P	Pg	15 20 18.4	0.0
	baz=298						
EOS2	EOS2	0.32	180	P	Pb	15 20 19.7	-0.7
	baz=169						
EOS2				S	Sb	15 20 25.8	0.0
	baz=169						
TWB1	Santiao Chiao	0.34	320	*e*P	Pg	15 20 19.2	-0.2
	baz=330						
TWB1				*e*S	Sg	15 20 23.7	-0.3
	baz=330						
TWC	Suao	0.37	249	*i* P	Pg	15 20 20.1	+0.1
	baz=246						
TWC				S	Sg	15 20 25.2	+0.3
	baz=246						
TIPB	Shuangxi	0.43	302	P	Pg	15 20 21.1	0.0
	baz=307						
TIPB				*e*S	Sb	15 20 29.9	+0.8
	baz=307						
SXI1	Grass Mountain	0.47	317	*i* P	Pb	15 20 22.8	-0.4
	baz=323						
SXI1				*e*S	Sg	15 20 29.2	+1.0
	baz=323						
NDS	Dongshan	0.48	257	P	Pb	15 20 22.7	-0.5
	baz=256						
NDS				S	Sb	15 20 29.1	-1.3
	baz=256						
EWUT	Wuta	0.51	234	*i* P	Pb	15 20 23.0	-0.7
	baz=231						
EWUT				S	Sb	15 20 31.1	-0.1
	baz=231						
TWE	Neicheng	0.51	268	P	Pg	15 20 22.5	-0.1
	baz=268						
TWE				S	Sb	15 20 30.3	-1.1
	baz=268						
NWF	Wu-fen Shan	0.52	309	P	Pb	15 20 24.1	+0.1
	baz=314						
NWF				S	Sb	15 20 32.1	+0.4
	baz=314						
ENA	Nanau	0.55	235	P	Pg	15 20 23.1	0.0
	baz=231						
ENA				*e*S	Sb	15 20 33.0	+0.7
	baz=231						
FUSB	Fushanzhiwuyua	0.58	272	P	Pb	15 20 24.2	-0.8
	baz=273						
FUSB				S	Sb	15 20 32.2	-1.3
	baz=273						
ENTT	Nioudou	0.61	260	P	Pb	15 20 25.4	-0.2
	baz=260						
ENTT				S	Sb	15 20 33.2	-1.0
	baz=260						
EOS4	EOS4	0.62	173	P	Pb	15 20 26.1	+0.6
	baz=167						
EOS4				S	Sb	15 20 35.9	+1.7
	baz=167						
NWLT	Wulai	0.66	273	P	Pb	15 20 26.2	-0.2
	baz=274						
NWLT				*e*S	Sg	15 20 34.2	+0.1
	baz=274						
LATG	Datong	0.67	252	*i* P	Pb	15 20 26.1	-0.5
	baz=251						
LATG				S	Sb	15 20 35.4	-0.7
	baz=251						
NHDH	Xindian Distri	0.68	289	P	Pb	15 20 27.1	+0.5
	baz=291						
NHDH				S	Sb	15 20 36.3	+0.2
	baz=291						
JYNG	Yonagunijimaku	0.71	114	P	Pg	15 20 25.9	-0.4
JYNG				*e*S	Sg	15 20 35.7	+0.1
YM01	YM01	0.72	304	*i* P	Pb	15 20 27.1	-0.3
	baz=307						
YM01				S	Sb	15 20 38.0	+0.5
	baz=307						
YOJ	Yonaguni jima	0.76	111	P	Pg	15 20 26.7	-0.6
YOJ				S	Sg	15 20 37.0	-0.3
YOJ	Yonaguni jima	0.76	111	*e*P	Pg	15 20 27.1	-0.2
	baz=108						
TWY	Chenhua	0.78	313	P	Pb	15 20 28.4	0.0
	baz=316						
TWY				S	Sb	15 20 39.7	+0.6
	baz=316						
YHNB	Yeheng	0.78	265	*i* P	Pb	15 20 27.9	-0.5
	baz=265						
YHNB				*i* S	Sb	15 20 39.0	-0.2
	baz=265						
NSK	Sanguang	0.80	265	P	Pb	15 20 28.3	-0.4
	baz=265						
NSK				*e*S	Sg	15 20 38.0	-0.3
	baz=265						
ETL	Fush Village	0.80	224	P	Pb	15 20 28.2	-0.6
	baz=221						
ETL				S	Sb	15 20 39.6	-0.2
	baz=221						
NACB	Ninganchiao	0.81	226	*e*P	Pb	15 20 28.1	-0.8
	baz=223						
NACB				*e*S	Sb	15 20 39.3	-0.6
	baz=223						
NNSB	Datong	0.83	248	P	Pg	15 20 28.4	-0.3
	baz=247						
NNSB				*i* S	Sb	15 20 40.6	-0.1
	baz=247						
NNS	Nan Shan	0.84	249	P	Pb	15 20 29.3	-0.2
	baz=247						
NNS				S	Sb	15 20 40.4	-0.5
	baz=247						
ETLH	Xiulin Townshi	0.87	232	P	Pb	15 20 29.4	-0.4
	baz=230						
ETLH				S	Sb	15 20 41.5	-0.2
	baz=230						
TWD	Chiawan	0.88	221	P	Pb	15 20 29.6	-0.4
	baz=218						
TWD				S	Sb	15 20 42.8	+0.9
	baz=218						
PCYT	Pengchaiyu	0.89	351	*e*P	Pg	15 20 28.6	-1.2
	baz=354						
PCYT				*e*S	Sg	15 20 42.2	+0.7
	baz=354						
NFF	Wufeng Townshi	1.02	264	*e*P	Pn	15 20 33.0	-0.2
	baz=264						
NFF				*i* S	Sb	15 20 46.2	+0.2
	baz=264						
WHF	Hehuan Shan	1.06	236	P	Pb	15 20 33.1	-0.3
	baz=234						
WHF				S	Sb	15 20 48.1	+0.5
	baz=234						
NSTT	Nanjuang	1.12	265	*e*P	Pn	15 20 35.4	+0.8
	baz=264						
NSTT				*e*S	Sn	15 20 50.4	+0.2
	baz=264						
CHGB	Renai	1.18	235	P	Pn	15 20 35.6	+0.1
	baz=233						
CHGB				*i* S	Sn	15 20 51.4	-0.4
	baz=233						
OWD	Renai	1.24	231	P	Pn	15 20 36.4	+0.1
	baz=229						
OWD				S	Sn	15 20 53.5	+0.3
	baz=229						
WUSB	Renai	1.26	234	P	Pn	15 20 37.0	+0.5
	baz=232						
WUSB				*e*S	Sb	15 20 53.3	+0.2
	baz=232						
WCS	Beigang Elemen	1.38	241	*e*P	Pb	15 20 40.2	+1.6
	baz=239						

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*TEH **08** 15:22:58.1, 36°.36N×53°.70E, h9^{km}±18^{km}, ML3.1*
*AZER **08** 15:23:03.6±1.6, 36°.64N×53°.34E, h10^{km}, Error ellipse: s-maj=21.7km s-min=13.8km az=42.0*
ISC 08 15:22:57.8±0.8**, 36°.40N**±0°.03×**53°.68E**±0°.03**, h10**^{km}**, n46,** σ**1^{s}.98**/59**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGLO	Ghaloghah	0.16	48	Pg	Pg	15 23 01.9	+0.5
IGLO				Sg	Sg	15 23 05.8	+1.8
ISHM	Shahmirzad	0.67	208	Pg	Pg	15 23 11.0	+0.3
ISHM				Sg	Sb	15 23 21.6	+0.5
IANJ	Anjilo	0.94	168	Pg	Pb	15 23 16.3	0.0
IANJ				Sg	Sb	15 23 28.4	-0.6
IFIR	Firoozkooh	1.06	225	Pg	Pg	15 23 18.3	0.0
IPRN	Peran	1.10	262	Pg	Pg	15 23 19.2	+0.4
ILAS	Lasjerd	1.17	210	Pg	Pn	15 23 20.4	0.0
IDMV	Damavand	1.57	239	Pg	Pb	15 23 27.4	+0.3
DAMV	Damavand	1.58	242	Pg	Pb	15 23 27.8	+0.5
IMND	Minoodasht	1.63	58	Pg	Pg	15 23 29.1	+0.1
MZPU	Pul - Mazandar	1.71	272	Pg	Pb	15 23 29.4	+0.1
SHRO	Shahrood	1.93	101	Pn	Pg	15 23 34.1	-0.5
IVRN	Varamin	2.12	229	Pn	Pb	15 23 35.7	-0.6
KLST	Kelardasht - M	2.12	274	Pn	Pb	15 23 35.8	-0.7
CHTH	Charan	2.13	258	Pn	Pb	15 23 36.4	-0.2
MRVT	Maraveh tapeh	2.30	56	Pn	Pn	15 23 37.6	+1.8
THKV	Tehran--Karaj	2.32	259	Pn	Pb	15 23 39.4	-0.4
ISFB	Sefidab	2.35	210	Pn	Pb	15 23 38.6	-1.7
QALM	Alamut, Qazvin	2.45	272	Pn	Pb	15 23 40.9	-1.1
IMHD	Mahdasht	2.54	255	Pn	Pb	15 23 41.9	-1.6
IQOM	Qom	2.63	235	Pn	Pn	15 23 43.0	+2.5
GHVR	GHOM	2.73	226	Pn	Pb	15 23 45.5	-1.2
KRSH	Karshahi	2.73	208	Pn	Pn	15 23 44.1	+2.2
IGZV	Ghazvin	2.79	271	Pn	Pn	15 23 45.6	+2.9
ANAR	Anarak	3.20	179	Pn	Pn	15 23 49.8	+1.6
IRAZ	Razeghan	3.20	253	Pn	Pn	15 23 51.5	+3.1
QAMS	Qamsar	3.25	216	Pn	Pn	15 23 52.0	+3.0
ASAO	Ashtian	3.51	239	Pn	Pn	15 23 55.7	+3.1
NASN	Na'in	3.66	192	Pn	Pb	15 23 58.6	-4.1
IZEF	Zefreh	3.67	198	Pn	Pn	15 23 57.6	+2.8
TABS	Tabas	3.93	133	Pn	Pn	15 24 02.5	+4.2
TKDS	Koohdasht(Taba	3.96	134	Pn	Pn	15 24 00.5	+1.8
ZNJK	Zanjan	4.03	275	Pn	Pn	15 24 02.1	+2.3
YZKH	Yazd	4.07	169	Pn	Pn	15 24 04.4	+4.3
IAKL	Akhelmad	4.09	86	Pn	Pn	15 24 03.7	+3.1
TPRV	Parvadeh(Tabas	4.17	143	Pn	Pn	15 24 03.7	+2.2
LRK	Lerik	4.80	299	P	Pn	15 24 11.2	+0.9
	SNR=4.7						
LRK				S	Sn	15 25 04.0	-2.1
YRD	Yardimli	5.00	302	P	Pn	15 24 14.0	+1.0
	SNR=5.6						
YRD				S	Sn	15 25 09.1	-1.9
GLBA	Clilabad	5.06	306	P	Pn	15 24 14.3	+0.6
GLBA				S	Sn	15 25 09.3	-2.9
PQL	Pirkuli	5.93	319	P	Pn	15 24 26.6	+0.9
PQL				S	Sn	15 25 33.0	-0.7
QUBA	Quba, Azerbaij	6.40	322	P	Pn	15 24 33.2	+1.2
QUBA				S	Sn	15 25 42.4	-2.7
XNQ	Khinaliq	6.44	319	P	Pn	15 24 33.9	+1.1
	SNR=17						
XNQ				S	Sn	15 25 43.4	-3.1
QBL	Gabala	6.45	317	P	Pn	15 24 33.0	+0.2
QBL				S	Sn	15 25 43.9	-2.5
ORD	Ordubad	6.60	295	P	Pn	15 24 37.3	+2.3
ORD				S	Sn	15 25 48.3	-2.0
GANJ	Ganja	7.16	309	S	Sn	15 26 00.8	-3.2
GDB	GEDABAY	7.56	307	P	Pn	15 24 48.9	+0.7
	SNR=4.8						
GDB				S	Sn	15 26 12.5	-1.6
ZKTA	Zakatala	7.59	316	P	Pn	15 24 48.1	-0.3
ZKTA				S	Sn	15 26 14.0	-0.5

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*IDC **08** 15:35:48.9±1.4, 24°.05S×66°.75W, h197^{km}±22^{km}, mb3.4/1, mbtmp4.1/7, Error ellipse: s-maj=29.8km s-min=16.6km az=98.0*
*NEIC **08** 15:35:48.5±0.7, 24°.05S±0°.07×67°.0W±0°.2, h253^{km}±22^{km}, mb4.2/2, ML4.1(GUC), Error ellipse: s-maj=25.6km s-min=7.5km az=105.0*
*SJA **08** 15:35:50.6±1.1, 24°.10S×66°.86W, h180^{km}, ML3.9, MW3.7, Hypocentre not reviewed by the ISC*
*GUC **08** 15:35:50.9±0.7, 24°.02S×67°.39W, h233^{km}±9^{km}, ML4.0*
ISC 08 15:35:48.3±0.8**, 24°.08S**±0°.05×**67°.0W**±0°.1**, h225**^{km}±14^{km}**, n57,** σ**1^{s}.42**/75**, 12C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.51	115	*e*P		15 36 23.0	
HJA	Humahuaca	1.71	60	*e*P		15 36 25.4	
AZAP	Zapla	1.78	95	*e*P		15 36 25.5	
AZAP				*e*S		15 37 00.8	
LVC	Limon Verde	2.28	310	P	Pn	15 36 33.5	+1.5
	64nm,0.3s,baz=121,slow=6.4,SNR=181						
LVC				S	S	15 37 06.5	+0.6
	96nm,0.2s,baz=278,slow=20,SNR=38						
LVC	Limon Verde	2.28	310	⇑*e*P	Pn	15 36 33.4	+1.4
LVC				*e*S	S	15 37 06.2	+0.3
LVC	Limon Verde	2.28	310	*e*P		15 36 33.4	
LVC				*e*S		15 37 06.7	
ASTB	Santa Barbara	2.34	87	*e*P		15 36 30.9	
YJA	Yavi	2.34	36	*e*P		15 36 32.1	
YJA				*e*S		15 37 04.3	
PB15	IPOC Station P	2.42	291		Pn	15 36 35.1	+1.9
PB15	IPOC Station P	2.42	291	⇑*e*P	Pn	15 36 35.1	+1.9
PB15				*e*S	S	15 37 07.9	-0.3
PB15	IPOC Station P	2.42	291	*e*P		15 36 35.2	
PB15				*e*S		15 37 09.5	
PB15				IAML		15 37 14.1	
	comp=Z,894nm,0.2s						
GO02	Mina Guanaco	2.58	245	Pn	Pn	15 36 37.0	+2.0
GO02	Mina Guanaco	2.58	245	⇑*e*P	Pn	15 36 37.1	+2.2
GO02				*e*S	S	15 37 12.0	+0.5
GO02				IAML		15 37 13.5	
	comp=N,702nm,0.3s						
GO02	Mina Guanaco	2.58	245	*e*P		15 36 37.1	
GO02				*e*S		15 37 13.1	
PB06	IPOC Station P	2.72	300	Pn	Pn	15 36 38.1	+1.7
PB06	IPOC Station P	2.72	300	⇑*e*P	Pn	15 36 38.2	+1.7
PB06				*e*S	S	15 37 13.6	-0.3
PB06				IAML		15 37 15.1	
	comp=N,395nm,0.4s						
PB06	IPOC Station P	2.72	300	*e*P		15 36 38.1	
PB06				*e*S		15 37 14.5	
PB06				IAML		15 37 19.4	
	comp=Z,164nm,0.3s						
ALOL	LOMAS DE OLMED	2.78	85	*e*P		15 36 35.5	
PB09	IPOC Station P	3.07	317	Pn	Pn	15 36 41.9	+1.7
PB09	IPOC Station P	3.07	317	⇑*e*P	Pn	15 36 42.1	+1.8
PB09				*e*S	S	15 37 21.3	+0.4
PB09				IAML		15 37 24.9	
	comp=N,153nm,0.6s						
PB09	IPOC Station P	3.07	317	*e*P		15 36 42.2	
PB09				*e*S		15 37 21.8	
PB09				IAML		15 37 23.6	
	comp=Z,136nm,0.3s						
PB14	IPOC Station P	3.14	259	Pn	Pn	15 36 43.1	+1.8
PB14	IPOC Station P	3.14	259	*e*P	Pn	15 36 43.0	+1.8
PB14				*e*S	S	15 37 22.3	-0.3
PB14				IAML		15 37 26.6	
	comp=E,92nm,0.3s						
PB14	IPOC Station P	3.14	259	*e*P		15 36 43.3	
PB14				*e*S		15 37 23.5	
PB14				IAML		15 37 25.9	
	comp=Z,105nm,0.5s						
PB03	IPOC Station P	3.24	308	Pn	Pn	15 36 43.4	+1.2
PB03	IPOC Station P	3.24	308	⇑*e*P	Pn	15 36 43.7	+1.5
PB03				*e*S	S	15 37 23.4	-0.9
PB03	IPOC Station P	3.24	308	*e*P		15 36 43.7	
PB03				*e*S		15 37 24.4	
PB03				IAML		15 37 26.6	
	comp=Z,237nm,0.4s						
PB10	IPOC Station P	3.29	279	Pn	Pn	15 36 44.6	+1.9
PB10	IPOC Station P	3.29	279	*e*P	Pn	15 36 44.8	+2.2
PB10				*e*S	S	15 37 24.4	-0.8
PB10	IPOC Station P	3.29	279	*e*P		15 36 44.8	
PB10				*e*S		15 37 26.7	
PB10				IAML		15 37 29.4	
	comp=Z,114nm,0.3s						
AC02	Maricunga	3.34	214	Pn	Pn	15 36 45.9	+2.2
AC02	Maricunga	3.34	214	*e*P		15 36 46.3	
AC02				*e*S		15 37 21.8	
AC02				*e*S		15 37 40.3	
PB04	IPOC Station P	3.37	300	Pn	Pn	15 36 45.1	+1.3
PB04	IPOC Station P	3.37	300	⇑*e*P	Pn	15 36 45.2	+1.5
PB04				*e*S	S	15 37 26.2	-1.0
PB04	IPOC Station P	3.37	300	*e*P		15 36 45.5	
PB04				*e*S		15 37 26.9	
PB04				IAML		15 37 30.3	
	comp=Z,230nm,0.5s						
PB07	IPOC Station P	3.54	311	Pn	Pn	15 36 46.8	+1.0
PB07	IPOC Station P	3.54	311	⇑*e*P	Pn	15 36 47.1	+1.3
PB07				*e*S	S	15 37 29.3	-1.5
PB07	IPOC Station P	3.54	311	*e*P		15 36 47.2	
PB07				*e*S		15 37 30.1	
PB07				IAML		15 37 32.5	
	comp=Z,191nm,0.3s						
PB01	IPOC Station P	3.79	322	Pn	Pn	15 36 49.7	+1.0
PB01	IPOC Station P	3.79	322	⇑*e*P	Pn	15 36 49.4	+0.7
PB01				*e*S	S	15 37 34.7	-1.4
PB01	IPOC Station P	3.79	322	*e*P		15 36 49.9	
PB01				*e*S		15 37 35.4	
PB01				IAML		15 37 36.4	
	comp=Z,153nm,0.2s						
PB02	IPOC Station P	3.83	315	Pn	Pn	15 36 50.1	+0.9
PB02	IPOC Station P	3.83	315	⇑*e*P	Pn	15 36 50.0	+0.9
PB02				*e*S	S	15 37 34.9	-2.0
PB02	IPOC Station P	3.83	315	*e*P		15 36 50.3	
PB02				*e*S		15 37 35.9	
PB02				IAML		15 37 44.0	
	comp=Z,325nm,0.4s						
AC01	Pan de Azucar	3.85	237	Pn	Pn	15 36 50.4	+1.2
AC01	Pan de Azucar	3.85	237	*e*P	Pn	15 36 50.5	+1.2
AC01				*e*S	S	15 37 36.4	-0.7
AC01	Pan de Azucar	3.85	237	*e*P		15 36 50.6	
AC01				*e*S		15 37 37.2	
AC01				IAML		15 37 38.0	
	comp=Z,112nm,0.2s						
PB08	IPOC Station P	4.40	333	Pn	Pn	15 36 57.5	+1.2
PB08	IPOC Station P	4.40	333	⇑*e*P	Pn	15 36 57.8	+1.5
PB08				*e*S	S	15 37 49.1	-0.8
PB08	IPOC Station P	4.40	333	*e*P		15 36 58.0	
PB08				*e*S		15 37 49.9	
CYA	Choya	4.47	166	*e*P		15 36 58.2	
GO03	Copiap	4.54	219	Pn	Pn	15 36 58.9	+1.1
GO03	Copiap	4.54	219	*e*S	S	15 37 52.2	-0.3
GO03	Copiap	4.54	219	*e*P		15 36 59.4	
GO03				*e*S		15 37 52.5	
TA01	Diego Aracena	4.57	319	Pn	Pn	15 36 58.7	+0.7
TA01	Diego Aracena	4.57	319	⇑*e*P	Pn	15 36 58.9	+0.8
TA01				*e*S	S	15 37 50.5	-2.5
TA02	Huaiquique	4.77	322	Pn	Pn	15 37 01.6	+1.0
GO01	Chusmiza	4.84	335	Pn	Pn	15 37 02.8	+0.9
GO01	Chusmiza	4.84	335	*e*P		15 37 03.5	
GO01				*e*S		15 38 00.3	
GO01				*e*S		15 38 00.8	
PB11	IPOC Station P	4.95	330	Pn	Pn	15 37 03.0	+0.1
PB11	IPOC Station P	4.95	330	*e*P		15 37 03.3	
PB11				*e*S		15 37 59.4	
PB11				*e*S		15 38 00.3	
PB11				IAML		15 38 00.5	
	comp=Z,89nm,0.2s						
PSGCX	Pisagua	5.32	326	*e*P		15 37 07.0	
PSGCX				*e*S		15 38 06.8	
PSGCX	Pisagua	5.32	326	Pn	Pn	15 37 06.9	-0.5
MNMC	Minye Minye	5.48	334	Pn	Pn	15 37 10.2	+0.4
AC04	Llanos de Chal	5.49	221	Pn	Pn	15 37 10.3	+0.8
AC05	El Transito	5.56	211	Pn	Pn	15 37 09.9	-0.6
LCO	Las Campanas	5.92	213	Pn	Pn	15 37 15.9	+0.8
PB16	IPOC Station P	6.17	337	Pn	Pn	15 37 18.8	-0.1
PB12	IPOC Station P	6.26	330	Pn	Pn	15 37 18.8	-0.6
GO04	Tololo Observa	6.94	208	Pn	Pn	15 37 28.3	+0.1
CFA	Coronel Fontan	7.57	188	P	Pn	15 37 36.0	0.0
	comp=Z,7.8nm,0.3s,baz=37,slow=15,SNR=68						
CFA				S	S	15 38 58.1	-4.1
	comp=Z,5.1nm,0.3s,baz=237,slow=13,SNR=10						
CO06	Fray Jorge	7.74	211	Pn	Pn	15 37 38.4	+0.2
LPAZ	La Paz	7.83	352	P	Pn	15 37 40.5	+0.5
	comp=Z,3.7nm,0.4s,baz=120,slow=4.3,SNR=30						
LPAZ				S	S	15 39 08.2	-1.1
	comp=Z,1.9nm,0.5s,baz=317,slow=13,SNR=4.2						
LPAZ	La Paz	7.83	352	Pn	Pn	15 37 39.2	-0.8
SIV	San Ignacio	9.79	36	P	Pn	15 38 02.4	-2.3
	comp=Z,1.6nm,0.3s,baz=216,slow=13,SNR=7.1						
PTLB	Pontes e Lacer	11.34	42	P	P	15 38 28.7	-0.4
TRQA	Tornquist	14.58	164		Pn	15 39 03.6	-0.7
PLCA	Paso Flores	16.87	189	P	Pn	15 39 33.8	+2.1
	comp=Z,1.6nm,0.8s,baz=22,slow=8.5,SNR=4.7						
PLCA	Paso Flores	16.87	189	P	P	15 39 27.2	-2.8
PLCA				IAmb	IAmb	15 39 55.8	
	comp=Z,8.8nm,1.4s						
BDFB	Brasilia	19.73	68	P	P	15 40 02.4	+1.2
	comp=Z,7.3nm,0.7s,baz=228,slow=11,SNR=1.7						
BDFB	Brasilia	19.73	68	P	P	15 40 00.6	-0.7
BDFB				IAmb	IAmb	15 40 04.0	
	comp=Z,7.6nm,0.7s						
TORD	Torodi Ar. Bea	76.61	69	P	P	15 47 17.0	+2.5
	comp=Z,0.5nm,0.4s,baz=258,slow=5.5,SNR=9.8						
	comp=Z,0.5nm,0.4s						
MKAR	Makanchi Array	146.59	40	PKPbc	PKiKP	15 55 05.2	-0.5
	comp=Z,0.2nm,0.5s,baz=324,slow=3.9,SNR=2.5						

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*JMA **08** 16:15:28.2±0.2, 37°.7N±0°.3×141°.9E±0°.7, h24^{km}±1^{km}, MV3.8/40, SE OFF MIYAGI PREF*
*IDC **08** 16:15:28.6±2.5, 37°.22N×142°.17E, h0^{km}, mb3.3/3, mbtmp3.2/4, ML2.3/1, Error ellipse: s-maj=52.7km s-min=31.9km az=39.0*
ISC 08 16:15:26.8±3.4**, 37°.72N**±0°.04×**141°.94E**±0°.08**, h10**^{km}±23^{km}**, n24,** σ**0^{s}.97**/30**, mb3.4**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.69	328	*i* P	Pb	16 15 41.4	+0.4
JIKH				S	Sb	16 15 50.3	-0.3
JMST	Minamisoumatoc	0.83	270	*i* P	Pb	16 15 43.0	-0.3
JMST				S	Sb	16 15 53.7	-0.9

JIO	Ouri	0.86	328	*i* P	Pb	16 15 44.1	+0.2
JIO				S	Sb	16 15 55.1	-0.4
JFK	Kawauchi	0.92	247	*i* P	Pb	16 15 44.4	-0.4
JFK				S	Sb	16 15 56.1	-0.9
JMM	Marumori	0.92	279	*i* P	Pb	16 15 44.5	-0.3
JMM				S	Sb	16 15 56.5	-0.6
ONAJ	Iwakimizuishiy	1.10	236	*i* P	Pb	16 15 47.4	-0.6
ONAJ				S	Sb	16 16 01.3	-1.0
JKMT	Kesennumamotoy	1.14	342	*i* P	Pn	16 15 48.5	-0.4
JKMT				S	Sb	16 16 02.5	-1.1
JOU	Okura	1.19	303	*i* P	Pn	16 15 49.7	+0.2
JOU				S	Sb	16 16 05.2	+0.2
JOTO	OTAMA OYAMA	1.28	263	*i* P	Pn	16 15 51.1	+0.3
JOTO				S	Sn	16 16 07.5	-0.6
JMK	Ichinoseki	1.35	335	*i* P	Pn	16 15 51.9	+0.2
JMK				S	Sn	16 16 08.6	-1.1
JYS	Shirataka	1.56	289	P	Pb	16 15 56.2	+0.4
JYS				S	Sn	16 16 15.5	+0.6
JYK	Kaneyama	1.72	314	P	Pn	16 15 57.9	+1.1
JFY	Yanaizu	1.80	261	P	Pb	16 15 59.1	-0.8
JFY				S	Sn	16 16 21.6	+0.8
JOM	Ohasama	1.82	344	*i* P	Pn	16 15 58.7	+0.6
MJAR	Matsushiro Arr	3.21	250	Pn	Pn	16 16 20.4	+3.1
	0.3nm,0.3s,baz=77,slow=15,SNR=14						
MJAR				Sn	Sb	16 17 01.2	-1.7
	0.4nm,0.3s,baz=107,slow=42,SNR=2.0 2.3nm,0.4s						
H11N2	WAKE ISLAND Hy	28.16	123	T	T	16 50 49.0	
	baz=315,slow=75,SNR=19						
H11N1	WAKE ISLAND Hy	28.16	123	T	T	16 50 49.6	
	baz=315,slow=75,SNR=26						
H11N3	WAKE ISLAND Hy	28.17	123	T	T	16 50 51.5	
	baz=315,slow=75,SNR=15						
H11S1	WAKE ISLAND Hy	28.90	125	T	T	16 51 45.1	
	baz=317,slow=76,SNR=41						
H11S3	WAKE ISLAND Hy	28.90	125	T	T	16 51 44.6	
	baz=317,slow=76,SNR=47						
H11S2	WAKE ISLAND Hy	28.91	125	T	T	16 51 48.2	
	baz=317,slow=76,SNR=43						
MKAR	Makanchi Array	44.11	302	P	P	16 23 41.8	+6.6
	0.3nm,0.7s,baz=87,slow=7.7,SNR=2.9 0.3nm,0.7s						
WRA	Warramunga Arr	57.80	188	P	P	16 25 17.8	-0.5
	0.2nm,0.6s,baz=4.6,slow=7.2,SNR=1.5 0.2nm,0.6s						
ASAR	Alice Springs	61.53	188	P	P	16 25 44.6	+0.7
	0.2nm,0.7s,baz=11,slow=6.8,SNR=4.7 0.2nm,0.7s						

IDC 08 16:26:36.2±9.3, 15°.87S×174°.10W, h0^{km}, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=412.1km s-min=68.6km az=140.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	49.08	257	P	P	16 35 25.7	-0.1
	0.2nm,0.4s,baz=92,slow=6.5,SNR=1.7 0.2nm,0.4s						
ASAR	Alice Springs	49.32	252	P	P	16 35 27.3	-0.3
	0.8nm,0.6s,baz=87,slow=8.1,SNR=19 0.8nm,0.6s						
BRTR	Keskin Array B	146.08	320	PKPbc	PKPdf	16 46 18.0	+0.1
	0.4nm,0.7s,baz=49,slow=1.0,SNR=2.2						

WEL 08 16:28:59.8±0.7, 32°S±5°×17°8E±°, h33^{km}, M4.3/6, ML4.7/17, MLv4.3/6, Error ellipse: s-maj=0.0km s-min=0.0km az=109.2, confirmed, North of New Zealand

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.33	56	S	Sn	16 30 47.8	-4.7
MXZ	Matakaoa Point	5.79	177	P	Pn	16 30 26.1	+2.8
MXZ				S	Sn	16 31 31.7	+3.1
HAZ	Te Kaha	5.98	182	P	Pn	16 30 29.7	+3.8
HAZ				S	Sn	16 31 38.2	+4.9
WMGZ	Waiomatatini S	6.05	177	P	Pn	16 30 30.1	+3.2
WMGZ				S	Sn	16 31 36.8	+1.8
PKGZ	Pakihiroa	6.11	179	P	Pn	16 30 31.2	+3.4
PKGZ				S	Sn	16 31 38.6	+2.0
RUGZ	Raukumara Rang	6.19	182	P	Pn	16 30 32.2	+3.2
RUGZ				S	Sn	16 31 41.6	+2.9
PUZ	Puketiti	6.30	178	P	Pn	16 30 32.6	+2.3
PUZ				S	Sn	16 31 40.6	-0.6
TWGZ	Tauwhareparae	6.40	180	P	Pn	16 30 34.7	+2.9
TWGZ				S	Sn	16 31 45.2	+1.5
URZ	Urewera	6.52	186	P	Pn	16 30 36.1	+2.7
URZ				S	Sn	16 31 51.4	+4.8
MWZ	Matawai	6.57	183	P	Pn	16 30 36.0	+1.9
MWZ				S	Sn	16 31 49.4	+1.6
CNGZ	Carnagh Statio	6.71	178	P	Pn	16 30 36.8	+0.9
CNGZ				S	Sn	16 31 52.9	+1.8
RTZ	Ruatahuna	6.89	187	P	Pn	16 30 40.6	+2.2
RTZ				S	Sn	16 31 57.3	+1.6
RIGZ	Rimuhau	6.93	181	P	Pn	16 30 39.5	+0.4
RIGZ				S	Sn	16 31 56.0	-0.7
MTHZ	Maungataniwha	7.13	187	P	Pn	16 30 44.2	+2.4
MTHZ				S	Sn	16 32 02.5	+0.7
RAHZ	Arahi	7.17	186	P	Pn	16 30 43.1	+0.7
RAHZ				S	Sn	16 32 05.4	+2.7
NMHZ	Naumai	7.38	187	P	Pn	16 30 46.7	+1.5
NMHZ				S	Sn	16 32 11.0	+3.1
BKZ	Black Stump Fm	7.49	189	P	Pn	16 30 47.4	+0.8
BKZ				S	Sn	16 32 11.7	+1.3
OTVZ	Oturere	7.62	194	P	Pn	16 30 50.0	+1.4
KWHZ	Kaweka Forest	7.75	189	P	Pn	16 30 50.2	-0.1
KWHZ				S	Sn	16 32 17.2	+0.3
WNVZ	Wahianoa	7.79	194	P	Pn	16 30 52.6	+1.6
VRZ	Vera Road	7.80	199	P	Pn	16 30 56.4	+5.5
BHHZ	Black Hill Sta	7.87	191	P	Pn	16 30 51.7	-0.2
BHHZ				S	Sn	16 32 19.5	-0.3
KAHZ	Kahuranaki	8.06	186	P	Pn	16 30 53.4	-1.2
KAHZ				S	Sn	16 32 21.9	-2.7
PXZ	Pawanui	8.30	186	P	Pn	16 30 54.8	-2.9
PXZ				S	Sn	16 32 25.1	-5.2
PRHZ	Porangahau	8.56	187	P	Pn	16 30 58.6	-2.7
BFZ	Birch Farm	9.01	188	P	Pn	16 31 03.8	-3.7
BFZ				S	Sn	16 32 40.7	-7.1
MRZ	Mangatainoka R	9.09	192	P	Pn	16 31 04.7	-3.9
MRZ				S	Sn	16 32 42.7	-7.1
HOWZ	Holdsworth Sta	9.33	192	P	Pn	16 31 07.8	-4.1
HOWZ				S	Sn	16 32 49.0	-6.7
TMWZ	Te Maipa	9.48	190	P	Pn	16 31 09.5	-4.4

ROM 08 16:31:33.8±0.0, 42°.732N±0°.002×13°.034E±0°.002, h10^{km}, ML1.5/5, 3C-4D, Error ellipse: s-maj=0.2km s-min=0.2km az=143.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1217	Poggiodomo (PG	0.08	255	P	Pg	16 31 36.6	+0.3
T1217				S	Sg	16 31 38.5	+0.4
T1217				AML	AML		
	comp=E,326µm,0.4s						
T1217				AML	AML		
	comp=N,305µm,0.2s						
T1218	Civita (PG)	0.09	136	⇑P	Pg	16 31 36.8	+0.4
T1218				S	Sg	16 31 38.9	+0.6
T1218				AML	AML		
	comp=E,285µm,0.5s						
T1218				AML	AML		
	comp=N,738µm,0.4s						
T1218				AML	AML		
	comp=E,268µm,0.5s						
T1218				AML	AML		
	comp=N,736µm,0.4s						
T1218				AML	AML		
	comp=E,268µm,0.5s						
T1218				AML	AML		
	comp=E,268µm,1.5s						
T1218				AML	AML		
	comp=E,285µm,1.5s						
T1218				AML	AML		
	comp=N,738µm,0.4s						
T1218				AML	AML		
	comp=N,736µm,0.4s						
T1214	Arquata del Tr	0.13	78	P	Pg	16 31 37.5	+0.4
T1214				S	Sg	16 31 40.1	+0.8
T1215	Vallo di Nera,	0.14	300	⇑P	Pg	16 31 37.6	+0.5
T1215				S	Sg	16 31 40.0	+0.5
T1216	Preci, Frazion	0.16	356	⇓P	Pg	16 31 38.1	+0.7
T1216				S	Sg	16 31 41.0	+1.0
T1216				AML	AML		
	comp=E,188µm,1.5s						
T1216				AML	AML		
	comp=N,206µm,0.4s						
T1216				AML	AML		
	comp=N,206µm,0.4s						
T1216				AML	AML		
	comp=E,188µm,0.5s						
T1245	Castelsantange	0.17	42	⇓P	Pg	16 31 38.1	+0.4
T1245				S	Sg	16 31 41.0	+0.6
T1245				AML	AML		
	comp=E,255µm,1.3s						
T1245				AML	AML		
	comp=E,211µm,0.5s						
T1245				AML	AML		
	comp=N,324µm,0.4s						
T1245				AML	AML		
	comp=E,255µm,0.7s						
T1245				AML	AML		
	comp=N,399µm,0.6s						
MC2	Monte Cornacci	0.21	33	P	Pg	16 31 38.9	+0.4
MC2				S	Sg	16 31 42.9	+1.3
T1211	Morro Reatino	0.24	214	⇓P	Pg	16 31 39.4	+0.6
T1211				S	Sg	16 31 43.5	+1.3
T1211				AML	AML		
	comp=N,234µm,0.2s						
T1211				AML	AML		
	comp=E,217µm,1.0s						
ARRO	Arrone	0.25	232	⇓P	Pg	16 31 39.6	+0.7
ARRO				S	Sg	16 31 42.8	+0.4
RM33	Pellescritta (	0.26	149	P	Pg	16 31 39.6	+0.5
RM33				S	Sg	16 31 43.9	+1.2
MMO1	Montemonaco	0.27	52	P	Pg	16 31 39.9	+0.4
MMO1				S	Sg	16 31 44.3	+1.1
T1241	Roccafluvione,	0.32	67	P	Pg	16 31 40.6	+0.4
T1241				S	Sb	16 31 45.9	-0.9
T1219	Muccia, Frazio	0.32	357	⇑P	Pg	16 31 40.6	+0.3
T1219				S	Sg	16 31 45.8	+1.0
CSP1	Cessapalombo	0.38	19	P	Pg	16 31 41.9	+0.5
CSP1				S	Sb	16 31 48.2	-0.5
ASSB	Assisi San Ben	0.41	319	P	Pg	16 31 42.4	+0.4
ASSB				S	Sb	16 31 49.0	-0.6
CAFI	Castiglion Fio	0.98	308	P	Pb	16 31 53.1	+0.1
CAFI				AML	AML		
	comp=E,51µm,1.6s						
CAFI				AML	AML		
	comp=N,53µm,1.6s						

ROM 08 16:32:21.1±0.1, 42°.652N±0°.003×13°.154E±0°.004, h11^{km}, ML1.4/6, 5C-3D, Error ellipse: s-maj=0.3km s-min=0.3km az=61.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1218	Civita (PG)	0.03	302	P	Pg	16 32 23.6	+0.3
T1218				S	Sg	16 32 25.1	+0.3
T1218				AML	AML		
	comp=E,602µm,0.3s						
T1218				AML	AML		
	comp=N,538µm,0.2s						
T1218				AML	AML		
	comp=E,574µm,0.3s						
T1218				AML	AML		
	comp=N,538µm,0.3s						
T1218				AML	AML		
	comp=E,602µm,0.3s						
T1218				AML	AML		
	comp=N,538µm,0.2s						
T1214	Arquata del Tr	0.12	21	⇑P	Pg	16 32 24.5	+0.3
T1214				S	Sg	16 32 26.6	+0.2
T1214				AML	AML		
	comp=E,247µm,1.6s						
T1214				AML	AML		
	comp=E,272µm,1.6s						
T1212	Cascia, Frazio	0.13	321	⇓P	Pg	16 32 24.8	+0.5
T1212				S	Sg	16 32 27.1	+0.6
T1212				AML	AML		
	comp=N,109µm,0.7s						
T1212				AML	AML		
	comp=N,148µm,0.7s						
SMA1	SAN MARTINO	0.14	99	⇑P	Pb	16 32 25.1	-0.6
SMA1				S	Sg	16 32 27.7	+1.0
SMA1				AML	AML		
	comp=E,478µm,0.3s						
SMA1				AML	AML		
	comp=N,331µm,0.3s						
SMA1				AML	AML		
	comp=E,478µm,0.3s						
SMA1				AML	AML		
	comp=N,330µm,0.3s						
SMA1				AML	AML		
	comp=E,478µm,1.7s						
SMA1				AML	AML		
	comp=N,330µm,1.7s						
RM33	Pellescritta (	0.15	163	⇓P	Pg	16 32 25.1	+0.5
RM33				S	Sg	16 32 28.0	+0.9
RM33				AML	AML		
	comp=E,166µm,1.3s						
RM33				AML	AML		
	comp=N,170µm,0.3s						
RM33				AML	AML		
	comp=E,166µm,1.3s						
T1217	Poggiodomo (PG	0.17	290	P	Pg	16 32 25.5	+0.5
T1217				S	Sg	16 32 28.8	+1.0
T1211	Morro Reatino	0.25	242	P	Pg	16 32 26.8	+0.5
T1211				S	Sg	16 32 30.9	+1.1
T1215	Vallo di Nera,	0.26	306	P	Pg	16 32 27.0	+0.6
T1215				S	Sg	16 32 31.0	+1.0
T1222	Castel Sant'An	0.27	199	⇑P	Pg	16 32 26.9	+0.4
T1222				S	Sb	16 32 31.4	-1.1
MMO1	Montemonaco	0.28	27	P	Pg	16 32 27.1	+0.3
MMO1				S	Sb	16 32 31.9	-1.0
T1241	Roccafluvione,	0.29	45	⇑P	Pg	16 32 27.2	+0.2
AQU	L'Aquila	0.35	148	⇑P	Pg	16 32 22.1	-6.0
T1219	Muccia, Frazio	0.42	345	P	Pg	16 32 28.2	-1.2
CSP1	Cessapalombo	0.44	5	⇓P	Pg	16 32 30.1	+0.2
CSP1				S	Sb	16 32 37.3	-0.4

IDC 08 16:38:36.3±2.3, 3°.70S×128°.56E, h0^{km}, mb3.3/2, mbtmp3.2/3, ML3.0/1, Error ellipse: s-maj=145.2km s-min=30.3km az=68.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.10	161	P	Pn	16 42 35.4	-1.6
	0.1nm,0.3s,baz=340,slow=13,SNR=2.3 0.2nm,0.5s						
ASAR	Alice Springs	20.51	166	P	P	16 43 17.0	+0.7
	0.6nm,0.5s,baz=347,slow=11,SNR=32 0.6nm,0.5s						
MKAR	Makanchi Array	64.70	327	P	P	16 49 16.1	-0.1
	0.2nm,0.6s,baz=120,slow=4.8,SNR=2.5 0.2nm,0.6s						

IDC ***08*** *16:38:44.1±1.0, 6°.35N×125°.03E, h0^{km}, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=24.3km s-min=10.3km az=117.0*

MAN ***08*** *16:38:46.3, 6°.73N×126°.29E, h19^{km}, mb4.6, ML3.4, MS3.3*

ISC 08 16:38:45.5±1.0, 6°.85N±0°.06×126°.35E±0°.07, h20^{km}±8^{km}, n14, σ1^{s}42/23, mb3.6/5, 3C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.80	286	Pg	Pn	16 39 01.8	+0.2
	202nm,0.3s,baz=55,slow=3.2,SNR=25						
DAV				Lg	Lg	16 39 13.8	
	398nm,0.3s,baz=260,slow=22,SNR=38						
DAV				LR	LR	16 39 17.5	
	comp=Z,163nm,19.7s,baz=314,slow=37						
CDOP	Cateel, Davao	0.94	5	⇑*i*P	Pb	16 39 02.5	-0.6
CDOP				*e*S	Sb	16 39 13.8	-1.2
KCP	Kidapawan	1.26	277	⇓*i*P	Pn	16 39 07.6	-0.4
KCP				*i* S	Sn	16 39 23.6	-0.8
BIPH	Bislig	1.33	0	⇓*i*P	Pn	16 39 07.9	-1.0
BIPH				*e*S	Sn	16 39 23.3	-2.7
GSPH	General Santos	1.58	242	⇑*e*P	Pn	16 39 11.3	-1.2
GSPH				*i* S	Sn	16 39 29.6	-2.9
BUKP	Musuan	1.64	309	⇑*e*P	Pb	16 39 14.5	-0.5
BUKP				*e*S	Sn	16 39 32.4	-1.3
TASP	Talacogon, Agu	1.68	341	⇓*e*P	Pb	16 39 16.2	+0.4
TASP				*e*S	Sb	16 39 39.5	+2.9
CTBH	Cotabato--PC H	2.12	280	⇓*i*P	Pn	16 39 19.8	0.0
CTBH				*i* S	Sn	16 39 44.1	-1.4
CGP	Cagayan de Oro	2.29	314	⇓*e*P	Pn	16 39 22.6	+0.5
CGP				*e*S	Sn	16 39 49.9	+0.1
WRA	Warramunga Arr	27.76	164	P	P	16 44 34.0	+1.0
	0.5nm,0.8s,baz=343,slow=9.7,SNR=3.5 0.5nm,0.8s						
ASAR	Alice Springs	31.21	167	P	P	16 45 04.8	+1.2
	0.3nm,0.4s,baz=339,slow=7.0,SNR=11						
ASAR				PcP	PcP	16 47 58.9	+0.5
	0.3nm,0.5s,baz=344,slow=2.9,SNR=7.5 0.3nm,0.4s						
STKA	Stephens Creek	41.16	160	P	P	16 46 29.8	+1.2
	2.1nm,0.8s,baz=333,slow=6.8,SNR=3.8 2.1nm,0.8s						
MKAR	Makanchi Array	54.81	324	P	P	16 48 13.8	-0.3
	0.4nm,0.5s,baz=118,slow=8.3,SNR=7.6 0.4nm,0.5s						
KURBB	Kurchatov Arra	58.94	327	P	P	16 48 42.5	-0.8
	0.2nm,0.4s,baz=130,slow=7.0,SNR=5.0 0.2nm,0.4s						

ROM 08 16:41:51.2±0.0, 43°.068N±0°.001×13°.052E±0°.003, h10^{km}, ML2.7/49, 24C-18D, Error ellipse: s-maj=0.2km s-min=0.1km az=67.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1220	Camerino, Fraz	0.05	33	P	Pg	16 41 53.4	+0.1
T1220				S	Sg	16 41 54.9	+0.2
T1220				AML	AML		
	comp=E,91100µm,0.2s						
T1220				AML	AML		
	comp=E,97300µm,0.2s						
T1220				AML	AML		
	comp=E,90700µm,0.2s						
T1220				AML	AML		
	comp=N,53500µm,1.5s						
T1220				AML	AML		
	comp=E,97200µm,0.2s						
T1220				AML	AML		
	comp=N,54150µm,1.5s						
T1220				AML	AML		
	comp=E,90850µm,0.2s						
T1220				AML	AML		
	comp=N,54100µm,1.5s						
T1220				AML	AML		
	comp=N,53500µm,0.5s						
T1220				AML	AML		
	comp=N,54100µm,0.5s						
FEMA	Monte Fema	0.11	181	⇑P	Pg	16 41 54.5	+0.4
FEMA				S	Sg	16 41 56.9	+1.0
FEMA				AML	AML		
	comp=N,11650µm,0.7s						
FEMA				AML	AML		
	comp=E,12350µm,1.3s						
FEMA				AML	AML		
	comp=N,11600µm,0.7s						
FEMA				AML	AML		
	comp=E,12350µm,0.7s						
SEF1	Sefro	0.11	316	⇓P	Pg	16 41 54.4	+0.4
SEF1				S	Sg	16 41 56.6	+0.7
SEF1				AML	AML		
	comp=E,11255µm,0.8s						
SEF1				AML	AML		
	comp=N,9285µm,0.9s						
SEF1				AML	AML		
	comp=E,11235µm,0.8s						
SEF1				AML	AML		
	comp=N,9280µm,0.9s						
SEF1				AML	AML		
	comp=E,11250µm,0.8s						
CSP1	Cessapalombo	0.12	78	⇑P	Pg	16 41 54.5	+0.4
CSP1				S	Sg	16 41 56.8	+0.6
CSP1				AML	AML		
	comp=E,7780µm,0.8s						
CSP1				AML	AML		
	comp=N,15750µm,0.3s						
CSP1				AML	AML		
	comp=E,7775µm,0.8s						
CESI	CESI - Serrava	0.12	240	⇑P	Pg	16 41 54.8	+0.6
CESI				S	Sg	16 41 57.0	+0.7
CESI				AML	AML		
	comp=N,9675µm,0.6s						
CESI				AML	AML		
	comp=E,5550µm,0.1s						
MDAR	Monte D'Aria	0.14	28	P	Pg	16 41 54.9	+0.4
MDAR				S	Sg	16 41 57.5	+0.7
T1256	Bolognola (MC)	0.14	116	P	Pg	16 41 55.0	+0.4
T1256				S	Sg	16 41 57.6	+0.7
T1256				AML	AML		
	comp=E,3865µm,1.4s						
T1256				AML	AML		
	comp=N,8920µm,0.3s						
T1256				AML	AML		
	comp=E,3860µm,1.4s						
T1256				AML	AML		
	comp=N,9145µm,0.3s						
T1256				AML	AML		
	comp=N,9145µm,0.3s						
T1256				AML	AML		
	comp=E,3760µm,1.4s						
T1256				AML	AML		
	comp=N,9145µm,1.7s						
T1256				AML	AML		
	comp=E,3865µm,0.6s						
T1256				AML	AML		
	comp=E,3760µm,0.6s						
T1256				AML	AML		
	comp=N,8920µm,1.7s						
GAG1	Gagliole	0.17	4	P	Pg	16 41 55.6	+0.6
GAG1				S	Sg	16 41 58.8	+1.4
GAG1				AML	AML		
	comp=E,8240µm,1.0s						
GAG1				AML	AML		
	comp=N,10650µm,0.4s						
GAG1				AML	AML		
	comp=E,8245µm,1.0s						
GAG1				AML	AML		
	comp=N,10700µm,0.4s						
GAG1				AML	AML		
	comp=E,8245µm,1.0s						
GAG1				AML	AML		
	comp=N,10700µm,1.6s						
T1216	Preci, Frazion	0.18	188	⇑P	Pg	16 41 55.6	+0.5
T1216				S	Sg	16 41 58.9	+1.2
T1216				AML	AML		
	comp=E,9685µm,0.3s						
T1216				AML	AML		
	comp=N,11020µm,0.3s						
T1216				AML	AML		
	comp=E,9680µm,0.3s						
T1216				AML	AML		
	comp=N,11020µm,0.4s						
T1216				AML	AML		
	comp=E,9680µm,1.7s						
MC2	Monte Cornacci	0.19	147	⇓P	Pg	16 41 55.8	+0.5
MC2				S	Sg	16 41 59.4	+1.3
MTL1	Matelica	0.19	351	P	Pg	16 41 55.9	+0.7
MTL1				S	Sg	16 41 59.7	+1.6
MTL1				AML	AML		
	comp=E,9410µm,0.3s						
MTL1				AML	AML		
	comp=N,7715µm,0.3s						
MTL1				AML	AML		
	comp=N,7720µm,0.3s						
MTL1				AML	AML		
	comp=E,9410µm,0.3s						
SNTG	Esanatoglia	0.20	336	⇓P	Pg	16 41 56.0	+0.4
SNTG				S	Sg	16 41 59.5	+1.0
SNTG				AML	AML		
	comp=E,3065µm,0.5s						
SNTG				AML	AML		
	comp=E,3065µm,0.5s						
SNTG				AML	AML		
	comp=N,3195µm,0.6s						
SNTG				AML	AML		
	comp=E,3080µm,0.5s						
SNTG				AML	AML		
	comp=E,3065µm,1.5s						
SNTG				AML	AML		
	comp=E,3080µm,1.5s						
SNTG				AML	AML		
	comp=N,3140µm,0.7s						
GUMA	Gualdo di Mace	0.21	91	⇓P	Pg	16 41 56.5	+0.9
GUMA				S	Sg	16 42 00.5	+1.9

GUMA				AML	AML		
	comp=E,15700µm,0.2s						
GUMA				AML	AML		
	comp=N,13750µm,0.3s						
GUMA				AML	AML		
	comp=E,29150µm,0.2s						
GUMA				AML	AML		
	comp=N,20600µm,0.2s						
T1245	**Castelsantange**	**0.23**	**155**	⇓P	Pg	16 41 56.6	+0.5
T1245				S	Sg	16 42 00.9	+1.5
T1245				AML	AML		
	comp=E,7860µm,0.2s						
T1245				AML	AML		
	comp=N,9465µm,0.2s						
T1245				AML	AML		
	comp=N,9275µm,0.2s						
T1245				AML	AML		
	comp=E,7235µm,0.2s						
EL6	**Elcito**	**0.26**	**8**	P	Pg	16 41 57.1	+0.5
EL6				S	Sb	16 42 01.9	-0.9
EL6				AML	AML		
	comp=N,6505µm,0.2s						
EL6				AML	AML		
	comp=E,5265µm,0.3s						
EL6				AML	AML		
	comp=N,6500µm,0.2s						
EL6				AML	AML		
	comp=E,5265µm,1.7s						
MMO1	**Montemonaco**	**0.26**	**130**	P	Pg	16 41 57.1	+0.5
MMO1				S	Sb	16 42 01.7	-1.1
ASSB	**Assisi San Ben**	**0.29**	**265**	⇑P	Pg	16 41 57.6	+0.6
ASSB				S	Sb	16 42 02.4	-1.1
ASSB				AML	AML		
	comp=N,5240µm,0.2s						
ASSB				AML	AML		
	comp=E,2065µm,0.2s						
T1215	**Vallo di Nera,**	**0.30**	**207**	P	Pg	16 41 57.7	+0.5
T1215				S	Sb	16 42 02.8	-0.9
FOSV	**Fossato di Vic**	**0.31**	**317**	P	Pg	16 41 57.9	+0.4
FOSV				S	Sb	16 42 03.1	-1.0
FOSV				AML	AML		
	comp=E,1845µm,0.4s						
FOSV				AML	AML		
	comp=N,3095µm,0.3s						
T1212	**Cascia, Frazio**	**0.32**	**181**	⇑P	Pg	16 41 58.1	+0.5
T1212				S	Sb	16 42 03.5	-0.7
T1212				AML	AML		
	comp=N,3100µm,0.7s						
T1212				AML	AML		
	comp=E,3830µm,0.9s						
T1212				AML	AML		
	comp=N,3125µm,0.7s						
T1212				AML	AML		
	comp=E,3780µm,0.9s						
T1212				AML	AML		
	comp=N,3125µm,1.3s						
T1212				AML	AML		
	comp=N,3100µm,1.3s						
T1212				AML	AML		
	comp=E,3830µm,1.1s						
T1212				AML	AML		
	comp=E,3780µm,1.1s						
ATCC	**AVT- Casa Cast**	**0.32**	**291**	⇓P	Pg	16 41 58.4	+0.7
ATCC				S	Sb	16 42 04.0	-0.4
ATCC				AML	AML		
	comp=N,3140µm,0.5s						
ATCC				AML	AML		
	comp=E,5255µm,0.3s						
CING	**Cingoli**	**0.33**	**19**	⇑P	Pg	16 41 58.3	+0.5
CING				S	Sb	16 42 03.8	-0.8
CING				AML	AML		
	comp=N,2105µm,0.1s						
CING				AML	AML		
	comp=E,2430µm,0.6s						
T1214	**Arquata del Tr**	**0.33**	**159**	⇓P	Pg	16 41 58.3	+0.4
T1214				S	Sb	16 42 04.1	-0.6
T1214				AML	AML		
	comp=N,1910µm,0.2s						
T1214				AML	AML		
	comp=E,1840µm,0.5s						
T1214				AML	AML		
	comp=N,1895µm,0.2s						
T1214				AML	AML		
	comp=N,1895µm,0.2s						
T1214				AML	AML		
	comp=E,1835µm,0.6s						
T1214				AML	AML		
	comp=E,1930µm,0.6s						
T1241	**Roccafluvione,**	**0.35**	**127**	⇓P	Pg	16 41 58.7	+0.5
T1241				S	Sb	16 42 04.8	-0.4
T1241				AML	AML		
	comp=E,838µm,0.6s						
T1241				AML	AML		
	comp=N,750µm,0.7s						
T1241				AML	AML		
	comp=E,838µm,0.6s						
T1241				AML	AML		
	comp=N,685µm,0.7s						
T1241				AML	AML		
	comp=N,686µm,0.7s						
T1241				AML	AML		
	comp=E,838µm,1.4s						
T1241				AML	AML		
	comp=E,838µm,1.4s						
T1217	**Poggiodomo (PG**	**0.37**	**194**	⇑P	Pg	16 41 59.0	+0.5
T1217				S	Sb	16 42 05.3	-0.5
T1217				AML	AML		
	comp=E,1385µm,1.2s						
T1217				AML	AML		
	comp=N,2145µm,0.2s						
T1217				AML	AML		
	comp=E,1140µm,1.2s						
T1217				AML	AML		
	comp=E,1385µm,1.2s						
T1217				AML	AML		
	comp=N,2120µm,0.2s						
T1218	**Civita (PG)**	**0.40**	**173**	⇓P	Pg	16 41 59.6	+0.4
T1218				S	Sb	16 42 05.9	-0.8
T1218				AML	AML		
	comp=E,1465µm,0.1s						
T1218				AML	AML		
	comp=N,2180µm,0.6s						
T1218				AML	AML		
	comp=N,2170µm,0.5s						
T1218				AML	AML		
	comp=E,1420µm,0.1s						
SSFR	**Montelago di S**	**0.42**	**332**	⇓P	Pg	16 41 59.9	+0.4
SSFR				S	Sb	16 42 07.2	-0.1
SSFR				AML	AML		
	comp=N,3670µm,0.2s						
SSFR				AML	AML		
	comp=E,4100µm,1.1s						
SSFR				AML	AML		
	comp=E,3415µm,0.2s						
SSFR				AML	AML		
	comp=E,4100µm,0.9s						
SSFR				AML	AML		
	comp=N,3400µm,0.1s						
MURB	**Monte Urbino**	**0.43**	**297**	⇓P	Pg	16 42 00.3	+0.6
MURB				AML	AML		
	comp=E,2630µm,0.2s						
MURB				AML	AML		
	comp=E,2710µm,0.2s						
MURB				AML	AML		
	comp=N,1865µm,1.2s						
MURB				AML	AML		
	comp=N,1960µm,1.3s						
ARVD	**Arcevia**	**0.44**	**349**	⇑P	Pg	16 42 00.2	+0.4
ARVD				AML	AML		
	comp=E,1680µm,0.2s						
ARVD				AML	AML		
	comp=N,1132µm,1.4s						
ARVD				AML	AML		
	comp=N,1132µm,0.6s						
MOMA	**Monte Martano**	**0.44**	**233**	P	Pg	16 42 00.3	+0.4
MOMA				AML	AML		
	comp=N,592µm,0.4s						
MOMA				AML	AML		
	comp=E,708µm,0.1s						
MOMA				AML	AML		
	comp=N,496µm,0.4s						
MOMA				AML	AML		
	comp=N,592µm,0.4s						
MOMA				AML	AML		
	comp=E,676µm,0.2s						
ATFO	**Monte Foce - G**	**0.46**	**311**	⇓P	Pg	16 42 00.8	+0.5
ATFO				AML	AML		
	comp=E,368µm,0.3s						
ATFO				AML	AML		
	comp=N,358µm,0.5s						
ATFO				AML	AML		
	comp=N,358µm,1.5s						
OFFI	**Offida**	**0.48**	**106**	⇑P	Pb	16 42 02.1	+0.3
OFFI				AML	AML		
	comp=E,890µm,0.8s						
OFFI				AML	AML		
	comp=N,986µm,1.0s						
OFFI				AML	AML		
	comp=E,890µm,0.8s						
OFFI				AML	AML		
	comp=E,890µm,1.2s						
OFFI				AML	AML		
	comp=N,986µm,1.0s						
SMA1	**SAN MARTINO**	**0.48**	**154**	⇓P	Pg	16 42 00.9	+0.2
SMA1				AML	AML		
	comp=E,758µm,0.2s						
SMA1				AML	AML		
	comp=N,1055µm,0.4s						
FRON	**Frontone**	**0.51**	**332**	⇑P	Pg	16 42 01.5	+0.3
FRON				AML	AML		
	comp=E,646µm,0.7s						
FRON				AML	AML		
	comp=N,986µm,0.3s						
PP3	**Marolino**	**0.51**	**53**	⇑P	Pb	16 42 02.7	+0.4
PP3				AML	AML		
	comp=E,1053µm,1.5s						
PP3				AML	AML		
	comp=N,1038µm,0.2s						
PP3				AML	AML		
	comp=N,1038µm,0.2s						
PP3				AML	AML		
	comp=E,1053µm,0.5s						
ATTE	**AVT- Monte Tez**	**0.53**	**284**	P	Pg	16 42 01.9	+0.4
ATTE				AML	AML		
	comp=N,174µm,0.3s						
ATTE				AML	AML		
	comp=E,156µm,0.3s						
ARRO	**Arrone**	**0.53**	**203**	P	Pg	16 42 01.8	+0.3
ARRO				S	Sb	16 42 10.4	0.0
ARRO				AML	AML		
	comp=N,383µm,0.2s						
ARRO				AML	AML		
	comp=E,562µm,0.3s						
T1211	**Morro Reatino**	**0.55**	**195**	⇑P	Pg	16 42 02.3	+0.3
T1211				S	Sb	16 42 11.2	+0.1
T1211				AML	AML		
	comp=N,818µm,1.4s						
T1211				AML	AML		
	comp=E,602µm,0.6s						
T1211				AML	AML		
	comp=N,746µm,0.3s						
T1211				AML	AML		
	comp=E,605µm,0.6s						
T1211				AML	AML		
	comp=N,818µm,1.4s						
T1211				AML	AML		
	comp=E,602µm,0.6s						
T1211				AML	AML		
	comp=N,746µm,0.3s						
T1211				AML	AML		
	comp=N,818µm,0.6s						
T1211				AML	AML		
	comp=E,605µm,1.4s						
T1211				AML	AML		
	comp=E,602µm,1.4s						
T1211				AML	AML		
	comp=N,746µm,1.7s						
COR1	**Corinaldo**	**0.56**	**356**	⇑P	Pb	16 42 03.4	+0.1
COR1				AML	AML		
	comp=E,532µm,1.1s						
COR1				AML	AML		
	comp=N,1189µm,0.2s						
COR1				AML	AML		
	comp=E,532µm,1.1s						
COR1				AML	AML		
	comp=N,1191µm,0.2s						
COR1				AML	AML		
	comp=E,532µm,0.9s						
ATVO	**AVT- Monte Val**	**0.57**	**304**	⇓P	Pg	16 42 02.5	+0.3
ATVO				S	Sb	16 42 11.1	-0.4
ATVO				AML	AML		
	comp=N,273µm,1.3s						
ATVO				AML	AML		
	comp=E,307µm,0.3s						
ATVO				AML	AML		
	comp=N,273µm,0.7s						
RM33	**Pellescritta (**	**0.57**	**168**	⇑P	Pg	16 42 02.5	+0.1
RM33				AML	AML		
	comp=E,519µm,0.3s						
RM33				AML	AML		
	comp=N,601µm,1.0s						
RM33				AML	AML		
	comp=N,618µm,1.0s						
RM33				AML	AML		
	comp=E,518µm,0.3s						
RM33				AML	AML		
	comp=E,536µm,0.2s						
RM33				AML	AML		
	comp=N,600µm,1.0s						
RM33				AML	AML		
	comp=N,618µm,1.0s						
CESX	**Cesi**	**0.57**	**217**	⇑P	Pg	16 42 02.5	+0.1
CESX				AML	AML		
	comp=E,338µm,1.2s						
CESX				AML	AML		
	comp=N,410µm,0.2s						
CAMP	**Campotosto**	**0.59**	**154**	⇓P	Pg	16 42 02.8	0.0
CAMP				AML	AML		
	comp=E,584µm,0.2s						
CAMP				AML	AML		
	comp=N,267µm,0.9s						
MPAG	**Monte Paganucc**	**0.60**	**339**	⇑P	Pg	16 42 03.3	+0.4
MPAG				S	Sb	16 42 13.7	+1.3
MPAG				AML	AML		
	comp=E,810µm,0.3s						
MPAG				AML	AML		
	comp=N,762µm,0.3s						
PIEI	**Pieia**	**0.60**	**321**	⇑P	Pg	16 42 03.0	+0.1
PIEI				S	Sb	16 42 13.1	+0.6
PIEI				AML	AML		
	comp=E,562µm,0.2s						
PIEI				AML	AML		
	comp=N,346µm,0.2s						
TERO	**Teramo**	**0.60**	**137**	P	Pg	16 42 02.9	0.0
TERO				AML	AML		
	comp=E,448µm,0.2s						
TERO				AML	AML		
	comp=N,411µm,0.5s						
TERO				AML	AML		
	comp=E,467µm,0.2s						
TERO				AML	AML		
	comp=N,428µm,0.5s						
TERO				AML	AML		
	comp=E,448µm,0.2s						
ATPI	**Pietralunga -**	**0.61**	**309**	⇓P	Pg	16 42 03.4	+0.3
ATPI				AML	AML		
	comp=E,206µm,1.6s						
ATPI				AML	AML		
	comp=N,190µm,1.1s						
ATPI				AML	AML		
	comp=E,206µm,0.4s						
FSSB	**Fossombrone**	**0.66**	**342**	⇑P	Pb	16 42 04.4	-0.4
FSSB				S	Sb	16 42 15.2	+1.2
FSSB				AML	AML		
	comp=N,1195µm,0.4s						
FSSB				AML	AML		
	comp=E,1358µm,0.3s						
FSSB				AML	AML		
	comp=N,1195µm,1.6s						
T1222	**Castel Sant'An**	**0.67**	**181**	S	Sb	16 42 15.0	+0.7
T1222				AML	AML		
	comp=E,338µm,1.4s						
T1222				AML	AML		
	comp=N,278µm,1.5s						
T1222				AML	AML		
	comp=N,243µm,0.4s						
T1222				AML	AML		
	comp=E,356µm,1.4s						
T1222				AML	AML		
	comp=N,278µm,0.5s						
BADI	**Badiali**	**0.74**	**307**	⇑P	Pg	16 42 05.8	+0.3
BADI				S	Sb	16 42 17.7	+1.4
PE3	**Peglio**	**0.75**	**327**	⇓P	Pb	16 42 06.4	+0.1
FIAM	**Fiamignano**	**0.80**	**177**	S	Sb	16 42 18.9	+0.6
FIAM				AML	AML		
	comp=E,192µm,1.3s						
FIAM				AML	AML		
	comp=N,186µm,0.9s						
FIAM				AML	AML		
	comp=N,186µm,1.1s						
FIAM				AML	AML		
	comp=E,192µm,0.7s						
PARC	**Parchiule**	**0.83**	**315**	⇑P	Pg	16 42 07.4	+0.2
PARC				S	Sn	16 42 21.2	-0.2
PARC				AML	AML		
	comp=E,104µm,1.1s						
PARC				AML	AML		
	comp=N,114µm,0.6s						
CAFI	**Castiglion Fio**	**0.84**	**289**	⇑P	Pb	16 42 07.9	0.0
CAFI				S	Sn	16 42 20.7	-0.8
CAFI				AML	AML		
	comp=E,93µm,0.4s						
CAFI				AML	AML		
	comp=N,111µm,1.1s						
CAFI				AML	AML		
	comp=E,104µm,1.6s						
CAFI				AML	AML		
	comp=N,114µm,0.3s						
CAFI				AML	AML		
	comp=E,104µm,0.4s						
CAFI				AML	AML		
	comp=E,93µm,1.6s						
VCEL	**Villa Celiera**	**0.89**	**139**	⇑P	Pg	16 42 08.4	+0.1
FAGN	**Fagnano**	**0.89**	**154**	⇑P	Pb	16 42 08.9	0.0
FAGN				AML	AML		
	comp=E,368µm,1.6s						
FAGN				AML	AML		
	comp=N,520µm,1.4s						
FAGN				AML	AML		
	comp=N,520µm,0.6s						
T0110	**Collepietro**	**1.00**	**147**	⇓P	Pg	16 42 10.0	-0.5
T0110				AML	AML		
	comp=N,262µm,0.4s						
T0110				AML	AML		
	comp=E,228µm,0.6s						
LAV9	**Lanuvio**	**1.41**	**191**	S	Sg	16 42 36.8	+0.1
RNI2	**Rionero Sannit**	**1.59**	**149**	S	Sb	16 42 40.7	-0.3
ZIRJ	**Zirje**	**1.98**	**72**	Sn	Sn	16 42 50.1	+0.4
NVLJ	**Novalja**	**1.99**	**41**	*e*Pn	Pn	16 42 25.4	+0.5
NVLJ				Sn	Sn	16 42 51.0	+1.0
MORI	**Morici**	**2.09**	**67**	Sn	Sb	16 42 54.6	-0.7

ROM 08 16:42:38.0±0.0**, 43°.073N**±0°.003×**13°.047E**±0°.004**,**
h10^{km}, ML1.9/6**, 6C-5D, Error ellipse: s-maj=0.3km**
s-min=0.3km az=345.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.03**	**240**	P	Pg	16 42 40.1	+0.1
T1219				S	Sg	16 42 41.1	-0.2
T1219				AML	AML		
	comp=E,1370µm,0.2s						
T1219				AML	AML		
	comp=N,2440µm,0.3s						
T1219				AML	AML		
	comp=N,2305µm,0.3s						
T1219				AML	AML		
	comp=E,1500µm,0.2s						
T1220	**Camerino, Fraz**	**0.05**	**39**	P	Pg	16 42 40.3	+0.2
T1220				S	Sg	16 42 41.6	+0.1
T1220				AML	AML		
	comp=E,4395µm,0.2s						
T1220				AML	AML		
	comp=N,2525µm,1.5s						
T1220				AML	AML		
	comp=N,2525µm,0.5s						
SEF1	**Sefro**	**0.10**	**316**	P	Pg	16 42 41.2	+0.5
SEF1				S	Sg	16 42 43.3	+0.7
CSP1	**Cessapalombo**	**0.12**	**81**	P	Pg	16 42 41.4	+0.4
CSP1				S	Sg	16 42 43.6	+0.5
CSP1				AML	AML		
	comp=N,814µm,1.6s						
CSP1				AML	AML		
	comp=N,814µm,1.6s						
CSP1				AML	AML		
	comp=E,430µm,0.3s						
CSP1				AML	AML		
	comp=N,814µm,0.4s						
CESI	**CESI - Serrava**	**0.12**	**237**	P	Pg	16 42 41.6	+0.6
CESI				S	Sg	16 42 44.1	+1.0
CESI				AML	AML		
	comp=E,382µm,0.1s						
CESI				AML	AML		
	comp=N,504µm,0.6s						
MDAR	**Monte D'Aria**	**0.14**	**30**	P	Pg	16 42 41.8	+0.5
MDAR				S	Sg	16 42 44.4	+0.9
T1256	**Bolognola (MC)**	**0.15**	**117**	⇓P	Pg	16 42 41.9	+0.5
T1256				S	Sg	16 42 44.7	+0.9
T1216	**Preci, Frazion**	**0.18**	**186**	⇓P	Pg	16 42 42.6	+0.7
T1216				S	Sg	16 42 45.7	+1.1
T1216				AML	AML		
	comp=N,552µm,0.4s						
T1216				AML	AML		
	comp=E,420µm,0.3s						
MC2	**Monte Cornacci**	**0.19**	**146**	⇓P	Pg	16 42 42.8	+0.6
MC2				S	Sg	16 42 46.5	+1.4
SNTG	**Esanatoglia**	**0.20**	**337**	P	Pg	16 42 42.9	+0.7
T1245	**Castelsantange**	**0.24**	**154**	⇑P	Pg	16 42 43.6	+0.6
T1245				S	Sg	16 42 48.0	+1.7
EL6	**Elcito**	**0.26**	**9**	⇑P	Pg	16 42 44.1	+0.7
MMO1	**Montemonaco**	**0.27**	**130**	⇓P	Pg	16 42 44.0	+0.5
MMO1				S	Sb	16 42 48.5	-1.2
ASSB	**Assisi San Ben**	**0.29**	**264**	⇑P	Pb	16 42 44.6	-0.7
T1215	**Vallo di Nera,**	**0.30**	**206**	P	Pg	16 42 44.6	+0.6
T1215				S	Sb	16 42 49.6	-1.0
ATCC	**AVT- Casa Cast**	**0.32**	**291**	⇓P	Pb	16 42 45.2	-0.6
ATCC				AML	AML		
	comp=N,250µm,0.1s						
ATCC				AML	AML		
	comp=E,379µm,0.3s						
T1212	**Cascia, Frazio**	**0.32**	**180**	⇑P	Pg	16 42 45.0	+0.6
T1212				S	Sb	16 42 50.4	-0.8
CING	**Cingoli**	**0.32**	**20**	⇑P	Pg	16 42 45.1	+0.7
T1214	**Arquata del Tr**	**0.34**	**159**	⇑P	Pg	16 42 45.3	+0.6
T1214				S	Sb	16 42 50.9	-0.8

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*NOU **08** 16:46:45.0, 36°.82S×179°.33W, h0^{km}, MLv4.5/7, East of*
North Island, N.Z.
*WEL **08** 16:47:06.6±0.9, 37°S±4°×17°9E±°, h12^{km}, M3.6/18,*
ML3.8/21, MLv3.6/18, Error ellipse: s-maj=0.0km
s-min=0.0km az=100.3, confirmed
ISC 08 16:47:04.9±2.8**, 37°.28S**±0°.10×**179°.1E**±0°.1**, h21**^{km}±6^{km}**,**
n93, σ0^{s}.94/106**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.71**	**246**	P	**Pb**	**16 47 18.6**	**0.0**
MXZ	**Matakaoa Point**	**0.71**	**246**	P	**Pb**	**16 47 18.7**	**+0.2**
MXZ				S	**Sb**	**16 47 26.8**	**-1.1**
WMGZ	**Waiomatatini S**	**0.78**	**226**	P	**Pn**	**16 47 21.8**	**+1.2**
WMGZ				S	**Sn**	**16 47 32.2**	**+0.6**
PKGZ	**Pakihiroa**	**1.03**	**234**	P	**Pn**	**16 47 24.8**	**+0.6**
PKGZ				S	**Sb**	**16 47 37.2**	**+0.1**
PUZ	**Puketiti**	**1.04**	**221**	P	**Pb**	**16 47 25.3**	**+1.0**
PUZ				S	**Sb**	**16 47 38.1**	**+0.6**
HAZ	**Te Kaha**	**1.16**	**246**	P	**Pb**	**16 47 26.8**	**+0.5**
HAZ				S	**Sb**	**16 47 40.1**	**-0.9**
TWGZ	**Tauwhareparae**	**1.27**	**225**	P	**Pb**	**16 47 28.4**	**+0.2**
TWGZ				S	**Sb**	**16 47 44.3**	**+0.2**
RUGZ	**Raukumara Rang**	**1.33**	**239**	P	**Pb**	**16 47 29.4**	**+0.1**
RUGZ				S	**Sn**	**16 47 45.0**	**-0.5**
CNGZ	**Carnagh Statio**	**1.40**	**211**	P	**Pb**	**16 47 31.0**	**+0.6**
TKGZ	**Te Karaka**	**1.53**	**221**	P	**Pn**	**16 47 31.6**	**+0.6**
TKGZ				S	**Sn**	**16 47 50.4**	**+0.1**
WSRZ	**White Island S**	**1.56**	**261**	P	**Pb**	**16 47 32.6**	**-0.6**
WSRZ				S	**Sn**	**16 47 50.0**	**-1.1**
MWZ	**Matawai**	**1.64**	**230**	P	**Pn**	**16 47 33.1**	**+0.5**
MWZ				S	**Sn**	**16 47 51.8**	**-1.3**
RIGZ	**Rimuhau**	**1.78**	**217**	P	**Pn**	**16 47 34.9**	**+0.4**
RIGZ				S	**Sn**	**16 47 56.1**	**-0.4**
WHRZ	**Whale Island**	**1.80**	**251**	P	**Pn**	**16 47 35.6**	**+0.9**
RAGZ	**Rawiri**	**1.81**	**228**	P	**Pn**	**16 47 35.6**	**+0.6**
URZ	**Urewera**	**1.87**	**238**	P	**Pn**	**16 47 36.0**	**+0.4**
URZ	**Urewera**	**1.87**	**238**	P	**Pn**	**16 47 36.1**	**+0.5**
URZ				S	**Sn**	**16 47 57.7**	**-0.9**

SNGZ	Shannon Statio	2.05	223	P	Pn	16 47 38.4	+0.2
SNGZ				S	Sn	16 48 02.4	-0.8
EDRZ	Edgecumbe	2.06	246	P	Pn	16 47 38.9	+0.6
MARZ	Manawahe	2.06	249	P	Pn	16 47 38.4	0.0
KNZ	Kokohu	2.08	213	P	Pn	16 47 38.2	-0.3
MHGZ	Mahia Peninsul	2.10	207	P	Pn	16 47 39.3	+0.5
OPRZ	Ohinepanea	2.11	254	P	Pn	16 47 38.7	-0.3
RTZ	Ruatahuna	2.15	231	P	Pn	16 47 40.0	+0.4
MUGZ	Murupara	2.21	237	P	Pn	16 47 40.6	+0.2
TARZ	Mount Tarawera	2.28	245	P	Pn	16 47 41.9	+0.5
LIRZ	Lichensteins R	2.29	251	P	Pn	16 47 41.8	+0.4
RAHZ	Arahi	2.29	224	P	Pn	16 47 42.0	+0.5
TGRZ	Tauranga	2.32	258	P	Pn	16 47 41.6	-0.2
RRRZ	Republican Roa	2.32	242	P	Pn	16 47 42.6	+0.7
WHHZ	Waihua	2.33	219	P	Pn	16 47 42.3	+0.4
OMRZ	Omania	2.33	248	P	Pn	16 47 42.8	+0.7
MTHZ	Maungataniwha	2.39	228	P	Pn	16 47 43.4	+0.6
HLRZ	Highlands Stat	2.40	245	P	Pn	16 47 43.6	+0.6
KARZ	Kaharoa	2.40	251	P	Pn	16 47 43.0	+0.1
ALRZ	Allen Road	2.54	239	P	Pn	16 47 45.1	+0.2
NMHZ	Naumai	2.57	224	P	Pn	16 47 46.0	+0.7
ARHZ	Aropaoanui	2.59	220	P	Pn	16 47 45.8	+0.3
MRHZ	Matea Rd	2.64	233	P	Pn	16 47 46.4	+0.1
WPRZ	Whakapapatarin	2.65	241	P	Pn	16 47 47.1	+0.8
KUZ	Kuaotunu	2.77	280	P	Pn	16 47 47.2	-0.9
KUZ	Kuaotunu	2.77	280	P	Pn	16 47 47.1	-1.0
BKZ	Black Stump Fm	2.80	227	P	Pn	16 47 48.3	-0.1
BKZ	Black Stump Fm	2.80	227	P	Pn	16 47 48.4	-0.1
CKHZ	Cape Kidnapper	2.86	213	P	Pn	16 47 48.7	-0.7
KUTZ	Kaahu Road	2.87	244	P	Pn	16 47 49.9	+0.4
MCHZ	McNeill Hill	2.88	221	P	Pn	16 47 49.5	-0.1
TOZ	Tahuroa Road	2.91	260	P	Pn	16 47 49.7	-0.3
KWHZ	Kaweka Forest	3.01	224	P	Pn	16 47 51.0	-0.5
KAHZ	Kahuranaki	3.06	214	P	Pn	16 47 51.3	-0.8
RITZ	Rihia Road	3.08	236	P	Pn	16 47 52.8	+0.5
WIAZ	Waiheke Island	3.23	278	P	Pn	16 47 54.0	-0.4
TMVZ	Te Maari	3.25	235	P	Pn	16 47 54.6	-0.3
BHHZ	Black Hill Sta	3.26	227	P	Pn	16 47 54.2	-0.7
ETVZ	East Tongariro	3.26	234	P	Pn	16 47 54.6	-0.3
NTVZ	North Tongarir	3.26	235	P	Pn	16 47 54.7	-0.2
PXZ	Pawanui	3.26	212	P	Pn	16 47 53.5	-1.4
KRVZ	Karewarewa	3.28	236	P	Pn	16 47 55.1	-0.1
OTVZ	Oturere	3.31	234	P	Pn	16 47 55.2	-0.4
NNVZ	North Ngauruho	3.32	235	P	Pn	16 47 55.9	+0.1
WTVZ	West Tongariro	3.33	236	P	Pn	16 47 56.1	+0.2
SNVZ	South Ngauruho	3.33	234	P	Pn	16 47 55.5	-0.4
NGZ	Ngauruhoe	3.35	235	P	Pn	16 47 55.9	-0.3
ETAZ	East Tamaki Re	3.37	274	P	Pn	16 47 56.3	0.0
MOVZ	Moawhango	3.39	230	P	Pn	16 47 55.9	-0.8
WHVZ	Whangaehu Hut	3.42	233	P	Pn	16 47 57.0	-0.3
FWVZ	Far West T-bar	3.43	234	P	Pn	16 47 56.9	-0.4
WNVZ	Wahianoa	3.44	233	P	Pn	16 47 56.8	-0.6
TRVZ	Turoa	3.46	233	P	Pn	16 47 57.3	-0.4
WPHZ	Waipukurau	3.48	216	P	Pn	16 47 56.7	-1.2
MTVZ	Mangateitei	3.56	233	P	Pn	16 47 58.3	-0.7
PRHZ	Porangahau	3.56	212	P	Pn	16 47 57.1	-1.8
PKVZ	Pokaka	3.58	235	P	Pn	16 47 59.2	-0.1
AWAZ	Awhitu Peninsu	3.58	272	P	Pn	16 47 59.6	+0.4
HIZ	Hauiti	3.59	249	P	Pn	16 48 00.2	+0.9
HIZ	Hauiti	3.59	249	P	Pn	16 48 00.4	+1.0
RVAZ	Riverhead Bore	3.67	277	P	Pn	16 48 00.8	+0.4
TSZ	Takapari Road	3.71	221	P	Pn	16 47 59.4	-1.7
DVHZ	Dannevirke	3.79	217	P	Pn	16 48 00.3	-1.9
VRZ	Vera Road	3.90	241	P	Pn	16 48 04.1	+0.5
POWZ	Post Office Ro	4.06	219	P	Pn	16 48 04.2	-1.6
BFZ	Birch Farm	4.07	213	P	Pn	16 48 03.3	-2.6
WCZ	Waipu Caves	4.07	288	P	Pn	16 48 06.4	+0.5
WAZ	Wanganui	4.08	231	P	Pn	16 48 06.5	+0.5
PRWZ	Pori Road	4.09	216	P	Pn	16 48 04.8	-1.3
LREZ	Lake Rotokare	4.30	238	P	Pn	16 48 09.9	+0.8
DREZ	Durham Road	4.32	242	P	Pn	16 48 12.5	+3.2
PREZ	Palmer Road	4.41	241	P	Pn	16 48 12.4	+1.8
NEZ	North Egmont	4.42	242	P	Pn	16 48 12.5	+1.6
PKE	Pukeiti	4.47	243	P	Pn	16 48 13.8	+2.3
KHEZ	Kahui Hut	4.49	242	P	Pn	16 48 13.4	+1.6
KHEZ	Kahui Hut	4.49	242	P	Pn	16 48 13.4	+1.6
CTZ	Chatham Island	7.22	155	P	Pn	16 48 52.3	+3.2

IDC 08 16:55:26.7±3.9**, 17°.79S×178°.59W, h623^{km}**±22^{km}**, mb3.0**/3**, mbtmp3.9**/4**, Error ellipse: s-maj=121.1km s-min=62.3km az=153.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.20	270	P	P	16 56 48.9	-0.1
	19nm,0.8s,baz=104,slow=7.1,SNR=7.6						
STKA	Stephens Creek	38.53	241	P	P	17 01 58.4	+0.4
	0.6nm,0.4s,baz=88,slow=13,SNR=3.0 0.6nm,0.4s						
WRA	Warramunga Arr	44.48	259	P	P	17 02 44.5	-0.3
	0.6nm,0.3s,baz=96,slow=7.5,SNR=19						
WRA				PcP	PcP	17 04 14.0	-0.2
	0.1nm,0.3s,baz=92,slow=3.5,SNR=1.6 0.6nm,0.3s						
ASAR	Alice Springs	44.66	254	P	P	17 02 46.3	+0.1
	2.9nm,0.5s,baz=89,slow=8.1,SNR=111						
ASAR				PcP	PcP	17 04 14.6	-0.3
	0.2nm,0.5s,baz=104,slow=4.2,SNR=2.4 2.9nm,0.5s						

IDC 08 16:56:13.6±3.3**, 12°.67N×143°.69E, h0^{km}, mb3.4**/5**, mbtmp3.4**/5**, Error ellipse: s-maj=105.0km s-min=25.8km az=78.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	33.69	196	P	P	17 02 56.5	-0.1
	0.4nm,0.7s,baz=16,slow=9.6,SNR=4.6 0.4nm,0.7s						
ASAR	Alice Springs	37.36	195	P	P	17 03 27.9	-0.2
	0.2nm,0.8s,baz=20,slow=11,SNR=1.3 0.2nm,0.8s						
CMAR	Chiang Mai Arr	43.40	283	P	P	17 04 18.5	+0.1
	0.5nm,0.8s,baz=81,slow=7.0,SNR=4.5 0.5nm,0.8s						
SONM	Songino Array	46.83	326	P	P	17 04 45.2	-0.1
	0.7nm,0.7s,baz=145,slow=8.5,SNR=7.2 0.7nm,0.7s						
MKAR	Makanchi Array	61.35	317	P	P	17 06 31.2	-0.2
	0.2nm,0.5s,baz=96,slow=6.8,SNR=1.9 0.2nm,0.5s						

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*NNC **08** 17:03:51.6±1.1, 44°.65N×79°.44E, h0^{km}, mb2.1, mpv2.6, Error ellipse: s-maj=8.0km s-min=7.2km az=127.0*
*SOME **08** 17:03:52.0, 44°.63N×79°.38E, h5^{km}*
ISC 08 17:03:51.4±1.7**, 44°.66N**±0°.06×**79°.41E**±0°.05**, h4^{km}**±14^{km}**, n14, σ0^{s}.38**/23**, 1C-4D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	0.43	140	*e*P	Pg	17 04 00.2	+0.5
	2.0nm,0.1s						
DJR				*e*S	Sg	17 04 05.8	+0.5
	8.4nm,0.1s						
BLB	Baldybastay	0.87	230	P	Pb	17 04 09.1	-0.1
	2.9nm,0.1s						
BLB				S	Sb	17 04 21.0	-0.2
	7.1nm,0.1s						
KPKS	Kokpek	1.30	204	P	Pg	17 04 16.3	-0.1
	1.2nm,0.1s						
KPKS				S	Sg	17 04 33.3	+0.1
	4.5nm,0.1s						
KPKS	Kokpek	1.30	204	*e*P	Pg	17 04 16.3	-0.1
	1.2nm,0.1s						
KPKS				*e*S	Sg	17 04 33.3	+0.1
	4.5nm,0.1s						
PDGK	Podgornoye	1.33	177	P	Pg	17 04 16.5	-0.5
	0.7nm,0.1s						
PDGK				S	Sg	17 04 33.5	-0.8
	0.6nm,0.2s						
PDGK	Podgornoye	1.33	177	⇓P	Pg	17 04 16.5	-0.5
	0.2nm,0.2s						
PDGK				⇓S	Sn	17 04 35.3	+0.2
	0.2nm,0.2s						
UZB	Uzynbulak	1.54	190	P	Pb	17 04 20.6	+0.1
	2.9nm,0.2s						
UZB				S	Sg	17 04 40.6	-0.2
	3.0nm,0.1s						
UZB	Uzynbulak	1.54	190	*e*P	Pb	17 04 20.6	+0.1
	2.9nm,0.2s						
UZB				*e*S	Sg	17 04 40.6	-0.2
	3.0nm,0.1s						
SATY	Saty	1.76	205	P	Pb	17 04 24.7	+0.4
	1.4nm,0.1s						
SATY				S	Sg	17 04 47.7	-0.1
	5.2nm,0.1s						
SATY	Saty	1.76	205	*e*P	Pb	17 04 24.7	+0.4
	1.4nm,0.1s						
SATY				*e*S	Sg	17 04 47.7	-0.1
	5.2nm,0.1s						
KTBS	Karatobe	2.18	245	Pg	Pb	17 04 31.9	+0.5
	0.7nm,0.2s						
KTBS				Lg	Lg	17 05 00.1	
	6.1nm,0.4s						
KTBS	Karatobe	2.18	245	*e*Pg	Pb	17 04 31.9	+0.5
	0.7nm,0.2s						
KTBS				*e*Lg	Lg	17 05 00.1	
	6.1nm,0.4s						
MK31	Makanchi Array	2.94	42	⇑Pg	Pb	17 04 44.1	-0.2
	0.1nm,0.3s						
MK31				⇓Lg	Lg	17 05 20.1	
	0.2nm,0.3s,baz=330,slow=37,SNR=4.0						
BVA0	Borovoye Array	10.26	328	Pn	Pn	17 06 12.0	-7.3
	0.2nm,0.5s,baz=103,slow=16,SNR=2.8						
BVA0				⇓Lg	Lg	17 06 35.1	
	0.2nm,0.2s,baz=99,slow=25,SNR=11						

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*KRNET **08** 17:04:11.1±0.1, 40°.30N×74°.73E, h28^{km}, mb3.0*
*SOME **08** 17:04:12.4, 40°.28N×74°.68E, h15^{km}*
*NNC **08** 17:04:12.6±1.2, 40°.33N×74°.74E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=8.9km s-min=5.4km az=173.0*
ISC 08 17:04:14.4±1.6**, 40°.29N**±0°.05×**74°.70E**±0°.03**, h26^{km}**±16^{km}**, n65, σ0^{s}.79**/83**, 28C-15D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	1.48	280	⇑*i*P	Pn	17 04 38.2	-1.2
	baz=79						
OHH				⇑*i*S	Sn	17 04 58.4	+0.4
	baz=79						
NRN	Naryn	1.51	40	⇓*e*P	Pn	17 04 38.1	-2.0
	baz=40						
NRN				⇓*i*S	Sn	17 04 57.5	-1.5
	baz=40						
ARLS	Aral	1.59	350	⇑*i*P	Pn	17 04 40.1	-1.0
	baz=49						
ARLS				⇑*i*S	Sn	17 05 01.0	+0.1
	baz=49						
UCH	Uchtor	1.94	356	P	Pb	17 04 48.2	-1.2
	SNR=34						
UCH	Uchtor	1.94	356	⇓*e*P	Pn	17 04 45.7	-0.4
	baz=55						
UCH				⇓*i*S	Sn	17 05 10.5	+0.6
	baz=55						
AML	Almayashu	1.99	338	P	Pb	17 04 49.0	-1.2
	SNR=18						
AML	Almayashu	1.99	338	⇑Pn	Pb	17 04 49.3	-0.9
	0.5nm,0.4s						
AML				⇓Sn	Sb	17 05 16.0	+1.3
	1.3nm,0.6s						
AML	Almayashu	1.99	338	⇓*i*P	Pn	17 04 46.3	-0.4
	baz=37						
AML				⇓*i*S	Sn	17 05 11.8	+0.8
	baz=37						
ULHL	Ulahol	2.27	30	⇑*i*P	Pn	17 04 49.8	-0.7
	baz=30						
ULHL				⇑*i*S	Sn	17 05 17.8	+0.1
	baz=30						
AAK	Ala-Archa	2.35	356	P	Pb	17 04 56.2	0.0
	SNR=9.0						
AAK	Ala-Archa	2.35	356	⇑*e*P	Pn	17 04 50.8	-0.7
	baz=56						
AAK				⇑*i*S	Sn	17 05 20.1	+0.5
	baz=56						
KBK	Karagaybulak	2.37	4	P	Pb	17 04 56.3	-0.2
	SNR=14						
KBK	Karagaybulak	2.37	4	⇓*i*P	Pn	17 04 51.1	-0.7
	baz=4.0						
KBK				⇓*i*S	Sn	17 05 20.4	+0.3
	baz=4.0						
EKS2	Erkin-Say	2.47	344	⇓*i*P	Pn	17 04 52.8	-0.3
	baz=44						
EKS2				⇓*i*S	Sn	17 05 23.2	+0.8
	baz=44						
ARK	Arkit	2.56	307	⇑*i*P	Pn	17 04 54.0	-0.3
	baz=7.0						
ARK				⇑*i*S	Sn	17 05 25.4	+0.7
	baz=7.0						
KDJ	Kajisay	2.62	45	⇑*i*P	Pn	17 04 54.7	-0.5
	baz=45						
KDJ				⇑*i*S	Sn	17 05 26.5	+0.2
	baz=45						
MRKS	Merke	2.69	336	Lg	Lg	17 05 35.2	
	8.1nm,0.5s						
MRKS	Merke	2.69	336	*e*Pg	Pb	17 05 00.8	-1.2
	4.1nm,0.2s						
MRKS				*e*Lg	Lg	17 05 36.2	
	8.1nm,0.5s						
CHMS	Chumysh	2.71	1	⇑*i*P	Pn	17 04 55.6	-0.7
	baz=0.0						
CHMS				⇑*i*S	Sn	17 05 28.0	-0.2
	baz=0.0						
TKM2	Tokmak 2	2.71	14	P	Pb	17 05 02.1	-0.3
	SNR=6.8						
TKM2	Tokmak 2	2.71	14	⇑Pg	Pb	17 05 01.4	-1.0
	2.8nm,0.3s						
TKM2				⇑Lg	Lg	17 05 35.5	
	15nm,0.8s						
TKM2	Tokmak 2	2.71	14	⇑*i*P	Pn	17 04 56.0	-0.5
	baz=14						
TKM2				⇑*i*S	Sn	17 05 28.8	+0.2
	baz=14						
MNAS	Manas	2.75	324	⇓*i*P	Pn	17 04 56.9	0.0
	baz=23						
MNAS				⇓*i*S	Sn	17 05 30.2	+0.9
	baz=23						
KST	Kastek	2.91	19	Pg	Pb	17 05 04.4	-1.2
	3.3nm,0.3s						
KST				Lg	Lg	17 05 43.7	
	19nm,0.3s						
KST	Kastek	2.91	19	*e*Pg	Pb	17 05 05.5	-0.1
	3.3nm,0.3s						
KST				*e*Lg	Lg	17 05 44.7	
	19nm,0.3s						
TRKS	Terek-Say	2.97	296	⇑*i*P	Pn	17 04 59.1	-0.9
	baz=95						
TRKS				⇑*i*S	Sn	17 05 34.1	-0.7
	baz=95						
USP	Ospenovka	2.98	357	P	Pb	17 05 06.8	0.0
	SNR=9.9						
USP	Ospenovka	2.98	357	⇓*i*P	Pn	17 04 59.6	-0.4
	baz=57						
USP				⇓*i*S	Sn	17 05 34.8	-0.1
	baz=57						
BTK	Batken	2.98	267	⇑*i*P	Pn	17 04 59.9	-0.2
	baz=67						
BTK				⇑*i*S	Sn	17 05 35.8	+0.7
	baz=67						
DGS	Degeres	3.06	15	Pg	Pb	17 05 07.3	-0.9
	8.7nm,0.2s						
DGS				Lg	Lg	17 05 48.5	
	28nm,0.4s						
DGS	Degeres	3.06	15	*e*Pg	Pb	17 05 08.3	+0.1
	8.7nm,0.2s						
DGS				*e*Lg	Lg	17 05 49.3	
	28nm,0.4s						
IZV	Izvestkoviy	3.10	27	Pg	Pb	17 05 07.9	-1.0
	2.3nm,0.4s						
IZV				Lg	Lg	17 05 49.6	
	13nm,0.3s						
IZV	Izvestkoviy	3.10	27	*e*Pg	Pb	17 05 08.8	-0.1
	2.3nm,0.4s						
IZV				*e*Lg	Lg	17 05 50.5	
	13nm,0.3s						
MTBS	Maitube	3.12	24	Pg	Pb	17 05 08.3	-0.9
	4.2nm,0.5s						
MTBS				Lg	Lg	17 05 50.3	
	9.2nm,0.2s						
MTBS	Maitube	3.12	24	*e*Pg	Pb	17 05 08.9	-0.3
	4.2nm,0.5s						
MTBS				*e*Lg	Lg	17 05 51.0	
	9.2nm,0.2s						
SGDS	Sogindy	3.16	359	Pg	Pb	17 05 08.4	-1.5
	1.8nm,0.3s						
SGDS				Lg	Lg	17 05 50.5	
	8.2nm,0.3s						
TNSS	Tian-Shan	3.22	31	Pg	Pb	17 05 10.9	-0.2
	4.0nm,0.3s						
TNSS				Lg	Lg	17 05 54.7	
	3.3nm,0.3s						
TNSS	Tian-Shan	3.22	31	*e*Pg	Pb	17 05 10.8	-0.3
	4.0nm,0.3s						
TNSS				*e*Lg	Lg	17 05 53.4	
	3.3nm,0.3s						
MDOK	Medeo	3.37	31	Pg	Pb	17 05 12.6	-0.9
	3.1nm,0.4s						
MDOK				Lg	Lg	17 05 57.9	
	8.9nm,0.4s						
MDOK	Medeo	3.37	31	*e*Pg	Pb	17 05 13.6	+0.2
	2.6nm,0.7s						
MDOK				*e*Lg	Lg	17 05 58.4	
	8.9nm,0.4s						
KOTS	Kotyrbulak	3.45	31	Pg	Pb	17 05 14.4	-0.5
	4.3nm,0.4s						
KOTS				Lg	Lg	17 06 00.9	
	17nm,0.5s						
KOTS	Kotyrbulak	3.45	31	*e*Pg	Pb	17 05 15.3	+0.4
	4.3nm,0.4s						
KOTS				*e*Lg	Lg	17 06 01.7	
	17nm,0.5s						
KRBS	Karabastau	3.48	12	Pg	Pb	17 05 14.6	-0.7
	3.7nm,0.4s						
KRBS				Lg	Lg	17 06 01.0	
	15nm,0.7s						
KRBS	Karabastau	3.48	12	*e*Pg	Pb	17 05 15.6	+0.3
	3.7nm,0.4s						
KRBS				*e*Lg	Lg	17 06 02.1	
	15nm,0.7s						
GAR	Garm	3.62	251	⇑*i*P	Pn	17 05 09.0	+0.1
	baz=51						
GAR				⇑*i*S	Sn	17 05 51.1	+0.2
	baz=51						
KTBS	Karatobe	3.72	23	Pg	Pb	17 05 19.3	-0.2
	2.6nm,0.4s						
KTBS				Lg	Lg	17 06 09.2	
	18nm,0.3s						
KTBS	Karatobe	3.72	23	*e*Pg	Pb	17 05 20.0	+0.5
	2.6nm,0.4s						
KTBS				*e*Lg	Lg	17 06 09.8	
	18nm,0.3s						
KUU	Kurty	3.80	18	Pg	Pb	17 05 21.1	+0.3
	2.6nm,0.3s						
KUU				Lg	Lg	17 06 12.4	
	20nm,0.7s						
KUU	Kurty	3.80	18	*e*Pg	Pb	17 05 21.1	+0.3
	2.6nm,0.3s						
KUU				*e*Lg	Lg	17 06 11.7	
	20nm,0.7s						
SATY	Saty	3.92	44	Pg	Pb	17 05 23.1	+0.3
	5.3nm,0.3s						
SATY				Lg	Lg	17 06 15.7	
	7.4nm,0.3s						
SATY	Saty	3.92	44	*e*Pg	Pb	17 05 23.1	+0.3
	5.3nm,0.3s						
SATY				*e*Lg	Lg	17 06 15.7	
	7.4nm,0.3s						
CHKK	Chushkaly	3.95	25	Pg	Pb	17 05 23.5	+0.3
	1.2nm,0.1s						
CHKK				Lg	Lg	17 06 16.6	
	11nm,0.2s						
CHKK	Chushkaly	3.95	25	*e*Pg	Pb	17 05 24.2	+1.0
	1.2nm,0.1s						
CHKK				*e*Lg	Lg	17 06 16.6	
	11nm,0.2s						
IUG	Iuzhnay	3.98	299	Pg	Pb	17 05 22.1	-1.8
	4.0nm,0.3s						
IUG				Lg	Lg	17 06 14.1	
	16nm,0.6s						
IUG	Iuzhnay	3.98	299	*e*Pg	Pb	17 05 24.2	+0.4
	4.0nm,0.3s						
IUG				*e*Lg	Lg	17 06 17.1	
	16nm,0.6s						
KK31	Karatay Array	4.21	313	Pg	Pb	17 05 32.6	+4.8
	0.4nm,0.4s,baz=137,slow=15,SNR=6.5						
KK31				⇑Lg	Lg	17 06 25.2	
	1.3nm,0.5s,baz=128,slow=28,SNR=4.6						
KKAR	Karatay Array	4.21	313	⇑*e*P	Pn	17 05 16.9	0.0
	baz=13						
KKAR				⇑*i*S	Sn	17 06 05.1	-0.1
	baz=13						
UZB	Uzynbulak	4.31	47	Pg	Pb	17 05 30.5	+0.9
	4.4nm,0.2s						
UZB				Lg	Lg	17 06 28.5	
	2.6nm,0.2s						
UZB	Uzynbulak	4.31	47	*e*Pg	Pb	17 05 29.9	+0.3
	4.4nm,0.2s						
UZB				*e*Lg	Lg	17 06 27.0	
	2.6nm,0.2s						
KPKS	Kokpek	4.35	42	Pg	Pb	17 05 30.6	+0.4
	3.7nm,0.4s						
KPKS				Lg	Lg	17 06 28.6	
	6.9nm,0.3s						
KPKS	Kokpek	4.35	42	*e*Pg	Pb	17 05 29.5	-0.6
	3.7nm,0.4s						
KPKS				*e*Lg	Lg	17 06 26.6	
	6.9nm,0.3s						
PDGK	Podgornoye	4.69	48	Pg	Pb	17 05 37.7	+1.7
	1.1nm,0.5s						
PDGK				Lg	Lg	17 06 40.7	
	2.0nm,0.6s						
BLB	Baldybastay	4.73	35	Pg	Pb	17 05 37.8	+1.2
	3.6nm,0.3s						
BLB				Lg	Lg	17 06 41.2	
	5.2nm,0.4s						
BTLS	Baital	4.77	354	Pg	Pb	17 05 38.2	+0.9
	1.2nm,0.2s						
BTLS				Lg	Lg	17 06 41.8	
	3.0nm,0.7s						
BTLS	Baital	4.77	354	*e*Pg	Pb	17 05 39.5	+2.2
	1.2nm,0.2s						
BTLS				*e*Lg	Lg	17 06 43.3	
	3.0nm,0.7s						

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*JMA **08** 17:19:25.5±0.1, 35°.3N±0°.2×141°.3E±0°.7, h38^{km}±1^{km}, MV2.6/28, E OFF BOSO PENINSULA*
*IDC **08** 17:19:29.9±1.5, 34°.18N×137°.90E, h0^{km}, mb3.6/2, mbtmp3.6/2, ML1.7/1, Error ellipse: s-maj=34.8km s-min=21.5km az=83.0*
ISC 08 17:19:24.3±1.5**, 35°.24N**±0°.05×**141°.3E**±0°.1**, h27^{km}, n11, σ0^{s}.80**/15**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.60	321	P	Pn	17 19 37.0	0.0
CHOJ				S	Sn	17 19 45.3	-0.6
BSO1	Boso 1	0.65	206	P	Pn	17 19 38.0	+0.7
BSO3	Boso 3	0.80	237	P	Pn	17 19 39.9	+0.4
BSO3				*e*X		17 19 52.1	
KTR	Katsuura	0.83	264	*e*P	Pn	17 19 40.3	+0.1
KTR				*e*S	Sn	17 19 51.1	-0.5
BSO4	Boso 4	0.85	253	P	Pn	17 19 40.8	+0.5
BSO4				X		17 19 53.3	
JKUC	kamogawauchiur	0.93	265	P	Pb	17 19 41.7	0.0
JYT	Yasato	1.35	317	P	Pb	17 19 48.3	-0.6
JHJ	Hachijo jima 2	2.47	212	Pn	Pn	17 20 03.1	+0.3
	13nm,0.3s,baz=292,slow=14,SNR=9.3						
JHJ				Sn	Sn	17 20 31.0	-1.1
	29nm,0.3s,baz=344,slow=20,SNR=6.1						
MJAR	Matsushiro Arr	2.84	298	Pn	Pn	17 20 10.0	+2.1
	0.2nm,0.3s,baz=309,slow=15,SNR=11						
MJAR				Sn	Sn	17 20 40.8	-0.6
	0.2nm,0.3s,baz=124,slow=16,SNR=4.9						
WRA	Warramunga Arr	55.28	188	P	P	17 28 55.4	+0.1
	0.8nm,0.6s,baz=1.3,slow=7.6,SNR=12 0.8nm,0.6s						
ASAR	Alice Springs	59.00	188	P	P	17 29 21.7	+0.1
	0.5nm,0.9s,baz=17,slow=9.7,SNR=4.6 0.5nm,0.9s						

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*NCEDC **08** 17:20:23.5±2.4, 36°.64N±0°.01×121°.26W±0°.02, h7^{km}±4^{km}, Mwr3.7/4, ML3.6/84(NEIC), Error ellipse: s-maj=2.2km s-min=1.6km az=65.0*
*ANF **08** 17:20:23.1±0.7, 36°.57N×121°.21W, h0^{km}, ML3.8/27, Error ellipse: s-maj=7.2km s-min=4.9km az=136.0*
*NEIC **08** 17:20:23.5±1.5, 36°.60N±0°.02×121°.32W±0°.03, h17^{km}±2^{km}, Error ellipse: s-maj=3.5km s-min=2.5km az=66.0*
*NEIC **08** 17:20:23.5, 36°.63N×121°.26W, h7^{km}*
*NEIC **08** 17:20:23.5, 36°.63N×121°.26W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.56; $M_{\theta\theta}$-4.56; $M_{\phi\phi}$4.00; $M_{r\theta}$-0.55; $M_{\theta\phi}$0.98; $M_{\phi r}$-1.46; Fault*

plane solution: $M_0$4.68000×10^{14} NP1:ϕ_s233.23000°, δ78.98000°,λ17.72000°. NP2:ϕ_s139.74000°,δ72.62000°, λ168.45000°. Principal axes: T 4.6651, Plg20.0000°, Azm97.0000°; N 0.0325, Plg69.0000°, Azm264.0000°; P -4.6976, Plg4.0000°, Azm6.0000°;

ISC 08 17:20:23.8±0.9**, 36°.62N**±0°.02×**121°.29W**±0°.02**, h17**^{km}±5^{km}**, n260, σ0ˢ.98**/269**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJOM	**Mount Johnson**	**0.02**	**307**		**Pg**	**17 20 26.4**	**-0.2**
SCZ	**Santa Cruz**	**0.09**	**259**		**Pg**	**17 20 28.1**	**+0.9**
BJCM	**Johnson Can.**	**0.11**	**230**		**Pg**	**17 20 26.5**	**-0.8**
BHRM	**Hodges Ranch**	**0.11**	**11**		**Pg**	**17 20 26.6**	**-0.9**
BVYM	**Vineyard**	**0.17**	**324**		**Pg**	**17 20 27.2**	**-0.9**
BSLM	**Silva Ranch**	**0.17**	**344**		**Pg**	**17 20 28.0**	**-0.1**
BSRM	**Salinas Radio**	**0.19**	**286**		**Pg**	**17 20 27.8**	**-0.6**
SAO	**San Andreas Ge**	**0.19**	**320**		**Pg**	**17 20 27.6**	**-0.9**
BBNM	**San Benito**	**0.20**	**121**		**Pg**	**17 20 28.0**	**-0.7**
BSGM	**Shirttail Gulc**	**0.20**	**171**		**Pg**	**17 20 27.8**	**-0.8**
BBGB	**Big Mountain B**	**0.21**	**100**	Pg	**Pg**	**17 20 28.2**	**-0.5**
FRP	**Fremont Peak**	**0.21**	**311**		**Pg**	**17 20 27.9**	**-0.9**
BAVM	**Antelope Valle**	**0.21**	**82**		**Pg**	**17 20 27.9**	**-0.8**
BSMM	**Soledad Missio**	**0.26**	**205**		**Pg**	**17 20 29.4**	**-0.1**
HSFM	**Saint Francis**	**0.26**	**320**		**Pg**	**17 20 29.1**	**-0.4**
BPCNC	**Pine Canyon**	**0.27**	**261**		**Pg**	**17 20 29.8**	**0.0**
LRV	**Little Rabbit**	**0.29**	**131**		**Pg**	**17 20 29.6**	**-0.5**
HAST	**Hastings Reser**	**0.31**	**223**		**Pg**	**17 20 30.2**	**-0.1**
HTUM	**Tustin Road**	**0.35**	**307**		**Pg**	**17 20 30.6**	**-0.5**
ANZ	**Anzar Road**	**0.36**	**318**		**Pg**	**17 20 30.7**	**-0.6**
HFEM	**San Felipe**	**0.38**	**347**		**Pg**	**17 20 31.5**	**-0.1**
BCWM	**Chews Ridge**	**0.38**	**216**		**Pg**	**17 20 31.7**	**0.0**
PACP	**Pacheco Peak**	**0.39**	**1**		**Pg**	**17 20 31.8**	**-0.1**
HCOM	**Corn Cob Canyo**	**0.43**	**309**		**Pg**	**17 20 32.2**	**-0.3**
CDC	**Canada Road**	**0.44**	**339**		**Pg**	**17 20 32.7**	**+0.1**
HPCM	**Pacheco Lake**	**0.44**	**2**		**Pg**	**17 20 32.6**	**-0.2**
SLD	**San Luis Dam**	**0.46**	**7**		**Pg**	**17 20 32.7**	**-0.4**
GHS	**Gilroy Hot Spr**	**0.49**	**346**		**Pg**	**17 20 33.6**	**-0.1**
HMOM	**Monterey**	**0.50**	**268**		**Pg**	**17 20 33.8**	**0.0**
JELB	**Ellicott, Sant**	**0.53**	**306**		**Pg**	**17 20 34.0**	**-0.3**
PCCM	**Crazy Canyon**	**0.54**	**169**		**Pb**	**17 20 34.3**	**-0.4**
PMPB	**Monarch Peak**	**0.56**	**135**		**Pg**	**17 20 34.4**	**-0.6**
PMPB				IAML		17 20 50.0	
	comp=N,6μm,0.5s						
SCKWR	**San Luis Creek**	**0.59**	**17**		**Pb**	**17 20 35.8**	**0.0**
CADM	**Anderson Res.**	**0.61**	**334**		**Pg**	**17 20 35.6**	**-0.2**
JTGM	**Trout Gulch Ro**	**0.62**	**311**		**Pg**	**17 20 36.5**	**+0.4**
JLAB	**Laurel Hill**	**0.64**	**327**		**Pg**	**17 20 36.4**	**-0.1**
JRGM	**Rodeo Gulch Ro**	**0.68**	**308**		**Pg**	**17 20 36.4**	**-0.8**
PJUM	**Juniper Ridge**	**0.68**	**124**		**Pb**	**17 20 36.8**	**-0.5**
PPTM	**Peach Tree Val**	**0.69**	**138**		**Pg**	**17 20 36.6**	**-0.6**
AMC	**Almaden**	**0.70**	**321**		**Pg**	**17 20 36.9**	**-0.7**
PAPM	**Alder Peak**	**0.70**	**185**		**Pb**	**17 20 37.5**	**-0.2**
CCOB	**Coe Ranch Numb**	**0.71**	**335**		**Pg**	**17 20 38.1**	**+0.4**
CMPM	**Mikes Peak**	**0.74**	**358**		**Pg**	**17 20 38.5**	**+0.2**
ARN	**Arnold Ranch**	**0.76**	**345**		**Pg**	**17 20 38.5**	**-0.1**
C072	**Blauer Lane Sa**	**0.77**	**331**		**Pb**	**17 20 39.4**	**+0.7**
MHC	**Mount Hamilton**	**0.78**	**339**		**Pg**	**17 20 38.8**	**-0.2**
C054	**Valleyhaven Wa**	**0.78**	**327**		**Pg**	**17 20 39.0**	**-0.1**
PSMM	**Smith Mountain**	**0.78**	**134**		**Pb**	**17 20 38.6**	**-0.5**
PDRM	**Domengine Ranc**	**0.80**	**110**		**Pb**	**17 20 39.2**	**0.0**
JJOM	**Saint Joseph's**	**0.81**	**317**		**Pg**	**17 20 38.5**	**-1.0**
SCCB	**Santa Clara Co**	**0.81**	**326**		**Pg**	**17 20 39.4**	**-0.2**
PHSB	**Hesperia Broad**	**0.81**	**166**		**Pg**	**17 20 39.1**	**-0.5**
PHPM	**Hope Ranch**	**0.84**	**139**		**Pg**	**17 20 39.5**	**-0.6**
C041	**El Campo Drive**	**0.87**	**331**		**Pg**	**17 20 40.7**	**0.0**
PANM	**San Antonio Re**	**0.89**	**159**		**Pg**	**17 20 40.5**	**-0.6**
PWMM	**Westland Maint**	**0.89**	**102**		**Pb**	**17 20 40.9**	**+0.1**
COSM	**Mount Oso**	**0.89**	**356**		**Pg**	**17 20 41.2**	**+0.1**
JSGM	**Saratoga Golf**	**0.90**	**318**		**Pg**	**17 20 40.4**	**-0.9**
PKD	**Bear Valley Ra**	**0.90**	**138**		**Pg**	**17 20 40.2**	**-1.2**
PVCM	**Vineyard Canyo**	**0.92**	**138**		**Pg**	**17 20 40.7**	**-1.0**
PPO	**Portuguese Can**	**0.93**	**144**		**Pb**	**17 20 41.2**	**-0.2**
CALM	**Calaveras Res.**	**0.93**	**334**		**Pg**	**17 20 41.1**	**-0.7**
PSTM	**Stockdale Moun**	**0.93**	**137**		**Pg**	**17 20 40.7**	**-1.2**
PHCM	**Hearst Castle**	**0.94**	**173**		**Pg**	**17 20 41.5**	**-0.5**
JSCM	**Stevens Creek**	**0.94**	**315**		**Pg**	**17 20 40.8**	**-1.3**
JSJM	**St Joseph**	**0.96**	**318**		**Pg**	**17 20 41.7**	**-0.7**
JBMM	**Black Mountain**	**0.98**	**316**		**Pg**	**17 20 41.7**	**-1.2**
PHFM	**Heflinger Ranc**	**1.03**	**135**		**Pg**	**17 20 42.6**	**-1.0**
CTM	**Castle Mountai**	**1.03**	**131**		**Pn**	**17 20 43.7**	**+0.1**
JFP	**Foothills Park**	**1.03**	**316**		**Pg**	**17 20 42.4**	**-1.4**
MYLM	**Yosemite Lake**	**1.04**	**42**		**Pg**	**17 20 42.4**	**-1.4**
RAMR	**Ramage Ranch**	**1.04**	**161**		**Pg**	**17 20 42.7**	**-1.1**
JSFB	**Stanford Teles**	**1.06**	**318**		**Pg**	**17 20 42.8**	**-1.4**
PHAM	**Harlan Ranch**	**1.06**	**137**		**Pg**	**17 20 43.1**	**-1.2**
WENL	**Wente Vineyard**	**1.07**	**340**		**Pg**	**17 20 43.4**	**-1.1**
GHC	**Gold Hill**	**1.09**	**136**		**Pg**	**17 20 43.5**	**-1.4**
JRSC	**Jasper Ridge**	**1.09**	**316**		**Pg**	**17 20 43.0**	**-1.9**
CVLM	**Vallecito**	**1.10**	**337**		**Pg**	**17 20 44.0**	**-1.0**
PKEM	**Kettleman Hill**	**1.10**	**120**		**Pn**	**17 20 44.9**	**+0.4**
BGH	**Bear Gulch**	**1.11**	**311**		**Pg**	**17 20 43.6**	**-1.6**
PSRM	**Scobie Ranch**	**1.11**	**132**		**Pg**	**17 20 43.9**	**-1.4**
PKLM	**Kerr Lake**	**1.14**	**137**		**Pg**	**17 20 44.3**	**-1.5**
PSNM	**Stone Corral**	**1.15**	**135**		**Pg**	**17 20 44.4**	**-1.7**
TCAS	**Cass Winery, P**	**1.17**	**149**		**Pg**	**17 20 44.8**	**-1.5**
TCHL	**Shandon**	**1.17**	**142**		**Pg**	**17 20 45.2**	**-1.2**
ARDC	**Alexander Ranc**	**1.18**	**167**		**Pg**	**17 20 44.7**	**-1.8**
PMRM	**Maxey Ranch**	**1.19**	**134**		**Pg**	**17 20 45.1**	**-1.6**
MHDM	**Hidden Dam**	**1.23**	**66**		**Pg**	**17 20 45.0**	**-2.4**
CBSNC	**Byron Hot Spri**	**1.23**	**347**		**Pn**	**17 20 46.0**	**-0.2**
TRAM	**Private Proper**	**1.25**	**138**		**Pg**	**17 20 45.9**	**-2.0**
JCHM	**Cahill Ridge**	**1.25**	**316**		**Pn**	**17 20 45.4**	**-1.1**
CMOB	**Morgan Territo**	**1.26**	**341**		**Pn**	**17 20 46.0**	**-0.7**
JCPM	**Coyote Point**	**1.27**	**320**		**Pn**	**17 20 45.6**	**-1.2**
CSLM	**San Leandro Hi**	**1.29**	**329**		**Pn**	**17 20 45.5**	**-1.6**
TSCN	**Private Proper**	**1.31**	**144**		**Pn**	**17 20 46.8**	**-0.6**
SAC	**San Andreas**	**1.32**	**317**		**Pn**	**17 20 46.4**	**-1.1**
BGC	**Bolinger Road**	**1.35**	**333**		**Pn**	**17 20 47.1**	**-0.8**
CRHM	**Round Hill Res**	**1.36**	**336**		**Pn**	**17 20 47.5**	**-0.5**
LSDC	**Los Osos Digit**	**1.36**	**164**		**Pn**	**17 20 47.7**	**-0.4**
EFD	**Emergency Oper**	**1.37**	**160**		**Pn**	**17 20 47.4**	**-0.8**
JSBM	**San Bruno Moun**	**1.38**	**321**		**Pn**	**17 20 46.7**	**-1.6**
JMGM	**Milagra Ridge**	**1.39**	**318**		**Pn**	**17 20 47.1**	**-1.4**
TSCS	**Shell Creek So**	**1.40**	**147**		**Pn**	**17 20 47.5**	**-1.1**
VPDC	**Valencia Peak**	**1.42**	**166**		**Pn**	**17 20 48.2**	**-0.6**
TRAY	**Twisselman Ran**	**1.42**	**138**		**Pn**	**17 20 48.2**	**-0.7**
DPD	**Davis Peak**	**1.44**	**163**		**Pn**	**17 20 48.9**	**-0.3**
DCD	**Diablo Creek**	**1.45**	**165**		**Pn**	**17 20 48.5**	**-0.7**
MCUB	**Copperopolis B**	**1.46**	**21**		**Pn**	**17 20 48.5**	**-1.0**
BKS	**Berkeley--Byer**	**1.47**	**329**		**Pn**	**17 20 48.4**	**-1.1**
CVPM	**Vollmer Peak**	**1.47**	**330**		**Pn**	**17 20 48.7**	**-0.9**
BL67	**Building 67, L**	**1.47**	**329**		**Pn**	**17 20 49.2**	**-0.5**
VAK	**Adit at Lawren**	**1.47**	**329**		**Pn**	**17 20 49.0**	**-0.6**
BRK	**Berkeley--Havi**	**1.48**	**329**		**Pn**	**17 20 48.4**	**-1.2**
MMIM	**Miami Mountain**	**1.48**	**57**		**Pn**	**17 20 49.1**	**-0.6**
JPRM	**Presidio of Sa**	**1.51**	**322**		**Pn**	**17 20 48.2**	**-1.8**
CTAM	**Taylor**	**1.52**	**338**		**Pn**	**17 20 49.7**	**-0.5**
CPIM	**Pinole Ridge**	**1.56**	**332**		**Pn**	**17 20 50.2**	**-0.5**
VOG	**Valley Oaks Go**	**1.57**	**100**		**Pn**	**17 20 50.5**	**-0.4**
VOG	**Valley Oaks Go**	**1.57**	**100**	P	**Pn**	**17 20 48.9**	**-1.9**
	baz=282,SNR=7.0						
VOG				S	**Sb**	**17 21 11.9**	**0.0**
	baz=282						
CMB	**Columbia Colle**	**1.59**	**27**		**Pn**	**17 20 50.8**	**-0.5**
CMB				IAML		17 21 17.5	
	comp=E,1μm,0.8s						
CMB				IAML		17 21 17.6	
	comp=N,612nm,0.8s						
CPMM	**Point Molate**	**1.60**	**327**		**Pn**	**17 20 50.0**	**-1.4**
NLHM	**Lake Herman**	**1.65**	**336**		**Pn**	**17 20 51.7**	**-0.3**
SMMC	**Simmler**	**1.67**	**141**		**Pn**	**17 20 51.7**	**-0.7**
SMMC	**Simmler**	**1.67**	**141**	P	**Pn**	**17 20 51.7**	**-0.7**
	baz=323,SNR=79						
SMMC				S	**Sb**	**17 21 14.9**	**-0.1**
	baz=323						
RCTC	**Rector, Farmer**	**1.68**	**100**		**Pn**	**17 20 51.7**	**-0.7**
KCC	**Kaiser Creek**	**1.73**	**65**		**Pn**	**17 20 53.7**	**+0.5**
BCH	**Branch Mountai**	**1.73**	**145**		**Pn**	**17 20 52.4**	**-0.9**
FARB	**Farallon Islan**	**1.74**	**309**		**Pn**	**17 20 52.1**	**-1.1**
CARC	**Carrizo Plain**	**1.75**	**138**		**Pn**	**17 20 53.1**	**-0.4**
MRHM	**Rocky Hill**	**1.81**	**100**		**Pn**	**17 20 53.0**	**-1.2**
SNT	**Sears Point**	**1.82**	**330**		**Pn**	**17 20 53.5**	**-0.8**
CRGC	**Crocker Grade**	**1.87**	**137**		**Pn**	**17 20 55.6**	**+0.4**
NADM	**Allendale**	**1.92**	**344**		**Pn**	**17 20 56.0**	**+0.3**
NBRB	**Beebe Ranch Br**	**1.92**	**329**		**Pn**	**17 20 54.6**	**-1.1**
VES	**Vestal, Richgr**	**1.94**	**113**		**Pn**	**17 20 55.9**	**-0.2**
VES	**Vestal, Richgr**	**1.94**	**113**	P	**Pn**	**17 20 55.3**	**-0.7**
	baz=295,SNR=27						
VES				S	**Sn**	**17 21 21.1**	**+1.0**
	baz=295						
NPRM	**Point Reyes**	**1.95**	**316**		**Pn**	**17 20 54.5**	**-1.6**
CVS	**Carmenet Viney**	**1.96**	**332**		**Pn**	**17 20 55.1**	**-1.2**
NAPC	**Atlas Peak**	**1.97**	**338**		**Pn**	**17 20 55.8**	**-0.8**
MCCM	**Marconi Confer**	**1.98**	**321**		**Pn**	**17 20 55.2**	**-1.3**
MCCM				IAML		17 21 33.5	
	comp=E,547nm,0.6s						
MCCM				IAML		17 21 33.5	
	comp=N,409nm,0.7s						
MRDM	**Red Cones**	**2.04**	**61**		**Pn**	**17 20 58.3**	**+0.7**
MDPB	**Devils Postpil**	**2.04**	**59**		**Pn**	**17 20 58.0**	**+0.4**
MINS	**Minaret Summit**	**2.06**	**59**		**Pn**	**17 20 58.6**	**+0.7**
MMSM	**Mammoth Summit**	**2.07**	**60**		**Pn**	**17 20 59.9**	**+1.8**
NTYM	**Taylor**	**2.08**	**329**		**Pn**	**17 20 57.3**	**-0.6**
SPG2	**Springville 2**	**2.08**	**101**		**Pn**	**17 20 57.6**	**-0.4**
MLIM	**Lincoln Peak**	**2.08**	**60**		**Pn**	**17 20 60.0**	**+1.6**
OMMB	**Old Mammoth Mi**	**2.08**	**61**		**Pn**	**17 20 58.8**	**+0.5**
OMMB				IAML		17 21 28.8	
	comp=E,722nm,0.5s						
MDYM	**Dry Creek**	**2.10**	**60**		**Pn**	**17 21 00.2**	**+1.7**
PKM	**Mcpherson Peak**	**2.10**	**145**		**Pn**	**17 20 58.3**	**-0.1**
PKM	**Mcpherson Peak**	**2.10**	**145**	P	**Pn**	**17 20 58.1**	**-0.3**
	baz=327,SNR=66						
PKM				S	**Sb**	**17 21 26.7**	**-0.8**
	baz=327						
MDCM	**Deadman Creek**	**2.10**	**58**		**Pn**	**17 20 59.3**	**+0.8**
MMLB	**Mammoth Lakes**	**2.12**	**60**		**Pn**	**17 21 00.5**	**+1.7**
MLCM	**Laurel Creek C**	**2.14**	**62**		**Pn**	**17 21 00.4**	**+1.3**
MEMM	**East Mammoth H**	**2.15**	**60**		**Pn**	**17 21 00.3**	**+1.1**
GATR	**Gnd/Air Tx Cnt**	**2.16**	**162**		**Pn**	**17 20 59.2**	**+0.1**
MGPM	**Gravel Pit**	**2.16**	**61**		**Pn**	**17 21 00.8**	**+1.6**
FIGC	**Figueroa Mtn.**	**2.16**	**150**		**Pn**	**17 20 58.8**	**-0.4**
NBPM	**Berryessa Peak**	**2.17**	**341**		**Pn**	**17 20 59.4**	**+0.2**
MCSM	**Casa Diablo Ho**	**2.17**	**61**		**Pn**	**17 21 01.3**	**+1.8**
MCBM	**Casa Benchmark**	**2.17**	**61**		**Pn**	**17 21 01.1**	**+1.6**
LMCR	**Lookout Mounta**	**2.18**	**59**		**Pn**	**17 21 01.2**	**+1.7**
MCVM	**Convict Lake**	**2.20**	**63**		**Pn**	**17 21 01.0**	**+1.2**
NDHM	**Dunnigan Hills**	**2.20**	**347**		**Pn**	**17 20 59.6**	**+0.1**
LUL	**Lundy Lake**	**2.21**	**49**		**Pn**	**17 20 59.8**	**-0.2**
MDRNC	**Doe Ridge**	**2.21**	**62**		**Pn**	**17 21 01.6**	**+1.6**
MAC	**Mark West Spri**	**2.24**	**330**		**Pn**	**17 20 59.4**	**-0.7**
MLHM	**Little Hot Cre**	**2.25**	**61**		**Pb**	**17 21 02.7**	**-1.4**
BCW	**Bitter Crk WRg**	**2.27**	**137**		**Pn**	**17 21 01.1**	**+0.5**
BCW				IAML		17 21 44.4	
	comp=N,513nm,0.7s						
NJQ	**Nojoqui County**	**2.27**	**156**		**Pn**	**17 21 00.4**	**-0.1**
NHSM	**Mount Saint He**	**2.29**	**333**		**Pn**	**17 21 00.0**	**-0.9**
MTUM	**Tungsten Hills**	**2.31**	**71**		**Pn**	**17 21 02.6**	**+1.4**
AFDM	**Forest Hills D**	**2.34**	**6**		**Pn**	**17 21 01.7**	**+0.1**
AFDM	**Forest Hills D**	**2.34**	**6**	IAML		17 21 40.6	
	comp=E,205nm,0.6s						
SYP	**Santa Ynez Pea**	**2.34**	**152**		**Pn**	**17 21 01.1**	**-0.5**
BHPR	**Bishop**	**2.35**	**72**		**Pn**	**17 21 03.1**	**+1.2**
WOFM	**Oak Flat**	**2.35**	**117**		**Pb**	**17 21 06.2**	**+0.5**
WASM	**Alta Sierra Ca**	**2.38**	**111**		**Pn**	**17 21 02.8**	**+0.6**
GAXM	**Alexander Vall**	**2.39**	**331**		**Pn**	**17 21 00.9**	**-1.4**
MGNR	**McGee Canyon**	**2.39**	**59**		**Pn**	**17 21 04.7**	**+2.2**
MFBM	**Five Bridges**	**2.43**	**70**		**Pb**	**17 21 05.5**	**-1.6**
GCRM	**Castle Rock Sp**	**2.43**	**333**		**Pn**	**17 21 01.6**	**-1.3**
BENR	**Benton**	**2.43**	**62**		**Pn**	**17 21 05.3**	**+2.3**
MNRC	**McLaughlin Min**	**2.44**	**338**		**Pn**	**17 21 02.5**	**-0.4**
GBGM	**Boggs Mountain**	**2.46**	**334**		**Sn**	**17 21 36.0**	**+3.1**
MCDM	**Chidago Canyon**	**2.46**	**67**		**Pb**	**17 21 06.2**	**-1.5**
MRCM	**Red Rock Canyo**	**2.46**	**64**		**Pb**	**17 21 06.0**	**-1.8**
ISA	**Isabella, Lake**	**2.47**	**112**		**Pn**	**17 21 03.4**	**0.0**
ISA				IAML		17 21 38.5	
	comp=N,284nm,0.9s						
ISA				IAML		17 21 43.9	
	comp=E,289nm,0.6s						
ISA	**Isabella, Lake**	**2.47**	**112**	P	**Pn**	**17 21 03.7**	**+0.3**
	baz=294,SNR=52						
ISA				S	**Sn**	**17 21 34.9**	**+1.7**
	baz=294						
ARVC	**Arvin**	**2.49**	**126**	P	**Pn**	**17 21 03.9**	**+0.3**
	baz=308						
ARVC				S	**Sn**	**17 21 36.1**	**+2.5**
	baz=308						
GDXM	**Geysers**	**2.49**	**332**		**Pn**	**17 21 02.5**	**-1.1**
TIN	**Tinemaha, Big**	**2.50**	**79**		**Pn**	**17 21 05.4**	**+1.6**
TIN	**Tinemaha, Big**	**2.50**	**79**	P	**Pn**	**17 21 05.5**	**+1.7**
	baz=261						
GHCM	**House Creek**	**2.50**	**323**		**Pn**	**17 21 02.2**	**-1.5**
SBC	**Santa Barbara**	**2.52**	**149**	P	**Pn**	**17 21 04.8**	**+0.8**
	baz=331						
RYS	**Reyes Peak**	**2.52**	**141**		**Pn**	**17 21 05.2**	**+1.0**
TEJ	**El Tejon**	**2.52**	**122**		**Pn**	**17 21 04.1**	**0.0**
CWC	**Cottonwood Cre**	**2.59**	**93**	P	**Pn**	**17 21 06.1**	**+0.9**
	baz=275						
HCK	**Huntoon Valley**	**2.60**	**55**		**Pb**	**17 21 08.2**	**-1.7**
WORM	**Onyx Ranch**	**2.63**	**110**		**Pn**	**17 21 07.1**	**+1.5**
SUTB	**Sutter Butte**	**2.64**	**352**		**Pn**	**17 21 04.9**	**-0.8**
LHV	**Little Huntoon**	**2.75**	**53**		**Pn**	**17 21 07.6**	**+0.4**
HOPS	**Hopland Field**	**2.76**	**330**		**Pn**	**17 21 06.3**	**-1.0**
DSP	**Deep Springs**	**2.76**	**73**		**Pn**	**17 21 07.5**	**+0.2**
DSP				IAML		17 21 56.2	
	comp=N,173nm,1.0s						
DSP				IAML		17 21 58.4	
	comp=E,249nm,0.8s						
CGO	**Cerro Gordo**	**2.81**	**90**		**Pn**	**17 21 10.5**	**+2.2**
MPK	**Martis Peak**	**2.86**	**20**		**Pn**	**17 21 09.6**	**+0.7**
YERR	**Yerington**	**2.87**	**34**		**Pn**	**17 21 09.4**	**+0.4**
OSI	**Osito Audit: C**	**2.89**	**133**	P	**Pn**	**17 21 10.2**	**+1.0**
	baz=315,SNR=8.7						
OSI				S	**Sn**	**17 21 46.9**	**+3.3**
	baz=315						
ORV	**Oroville**	**2.94**	**357**		**Pn**	**17 21 09.8**	**+0.1**
ORV				IAML		17 22 13.2	
	comp=E,118nm,1.4s						
SCZ2	**Santa Cruz Isl**	**2.94**	**152**	P	**Pn**	**17 21 09.9**	**0.0**
	baz=334						
LCH	**Last Change Ra**	**2.99**	**77**		**Pn**	**17 21 11.0**	**+0.4**
LCH				IAML		17 21 57.2	
	comp=N,221nm,0.5s						
LCH				IAML		17 21 57.4	
	comp=E,228nm,0.4s						
NVAR	**Mina Array Bea**	**2.99**	**52**		**Pn**	**17 21 11.2**	**+0.6**
CCAC	**Calif City Air**	**3.03**	**118**		**Pn**	**17 21 11.6**	**+0.5**
CCAC				IAML		17 22 11.3	
	comp=E,224nm,0.7s						
CCAC				IAML		17 22 13.4	
	comp=N,266nm,1.3s						
NV11	**Mina Array Sit**	**3.08**	**53**		**Pn**	**17 21 12.6**	**+0.7**
NV11				IAML		17 22 05.4	
	comp=N,121nm,1.4s						
NV11				IAML		17 22 08.0	
	comp=E,142nm,1.0s						
MPMC	**Manual Prospec**	**3.12**	**99**	P	**Pn**	**17 21 13.1**	**+0.7**
	baz=282,SNR=82						
LRMC	**Laurel Mtn Rad**	**3.14**	**110**	P	**Pn**	**17 21 12.9**	**+0.3**
	baz=293,SNR=28						
LRMC				Sb	**Sb**	**17 21 59.0**	**+1.7**
	baz=293						
GRAC	**Grapevine Rang**	**3.17**	**82**	Pn	**Pn**	**17 21 14.0**	**+1.0**
GRAC				IAML		17 22 08.7	
	comp=N,278nm,0.5s						
GRAC				IAML		17 22 15.0	
	comp=E,227nm,0.8s						
GRAC	**Grapevine Rang**	**3.17**	**82**	P	**Pn**	**17 21 13.5**	**+0.4**
	baz=265						
EDW2	**Edwards Air Fo**	**3.19**	**122**	P	**Pn**	**17 21 13.9**	**+0.6**
	baz=304,SNR=26						
MZP	**Montezuma Peak**	**3.31**	**70**		**Pn**	**17 21 16.5**	**+1.5**
MZP				IAML		17 22 11.7	
	comp=N,83nm,0.6s						
PAHR	**Pah Rah Range**	**3.43**	**25**		**Pn**	**17 21 17.2**	**+0.5**
PAHR				IAML		17 22 17.9	
	comp=E,122nm,1.4s						
PAHR				IAML		17 22 20.4	
	comp=N,111nm,1.0s						
KVN	**Kaiserville**	**3.51**	**45**		**Pn**	**17 21 18.1**	**+0.3**
KVN				IAML		17 22 16.4	
	comp=E,162nm,0.6s						
PASC	**Pasadena Art C**	**3.52**	**133**		**Pn**	**17 21 18.1**	**+0.4**
PASC	**Pasadena Art C**	**3.52**	**133**	Pn	**Pn**	**17 21 18.0**	**+0.2**
TPH	**Tonopah**	**3.56**	**65**		**Pn**	**17 21 18.8**	**+0.4**
KCPM	**Cahto Peak**	**3.56**	**330**		**Pn**	**17 21 18.4**	**0.0**
QSM	**Queen of Sheba**	**3.63**	**99**		**Pn**	**17 21 20.3**	**+1.0**
QSM				IAML		17 22 30.6	
	comp=N,65nm,0.9s						
SNCC	**San Nicolas Is**	**3.66**	**156**	Pn	**Pn**	**17 21 19.6**	**-0.1**
SNCC				IAML		17 22 35.8	
	comp=N,69nm,2.9s						
SNCC				IAML		17 23 15.4	
	comp=E,72nm,4.9s						
SNCC	**San Nicolas Is**	**3.66**	**156**	P	**Pn**	**17 21 20.1**	**+0.4**
	baz=338						
GWY	**Greenwater Val**	**3.75**	**95**		**Pn**	**17 21 21.2**	**+0.1**
GWY				IAML		17 22 41.9	
	comp=E,61nm,1.0s						
WCT	**Wildcat Mounta**	**3.75**	**86**		**Pn**	**17 21 21.4**	**+0.4**
BFSC	**Mount Baldy Ra**	**3.80**	**128**	P	**Pn**	**17 21 22.2**	**+0.5**
	baz=310,SNR=13						
GSC	**Goldstone, Bar**	**3.87**	**108**		**Pn**	**17 21 22.9**	**+0.3**
GSC				IAML		17 22 26.7	
	comp=N,69nm,0.9s						
GSC				IAML		17 22 31.0	
	comp=E,100nm,0.7s						
GSC	**Goldstone, Bar**	**3.87**	**108**	P	**Pn**	**17 21 23.0**	**+0.4**
	baz=292,SNR=8.3						
LBPM	**Beegum Peak**	**3.90**	**342**		**Pb**	**17 21 31.1**	**-1.1**
Q09A	**Carvers**	**3.94**	**55**		**Pn**	**17 21 23.2**	**-0.5**
CIS	**Catalina Islan**	**3.98**	**143**	P	**Pn**	**17 21 24.0**	**-0.1**
	baz=325						
TPNV	**Topopah Spring**	**4.06**	**84**		**Pn**	**17 21 26.1**	**+0.8**
TPNV				IAML		17 22 44.4	
	comp=E,72nm,1.1s						
TPNV				IAML		17 22 50.4	
	comp=E,70nm,1.1s						
TPNV	**Topopah Spring**	**4.06**	**84**	P	**Pn**	**17 21 26.1**	**+0.8**
	baz=267,SNR=23						
KMRM	**Mail Ridge**	**4.07**	**333**	Pn	**Pn**	**17 21 25.7**	**+0.3**
KMRM				IAML		17 23 22.0	
	comp=N,54nm,3.7s						
KMRM				IAML		17 23 45.5	
	comp=E,49nm,4.5s						
SHOC	**Shoshone, Teco**	**4.12**	**99**	P	**Pn**	**17 21 26.9**	**+0.9**
	baz=282						
ELS	**Elsinore Mount**	**4.33**	**132**		**Pn**	**17 21 29.5**	**+0.5**
HEC	**Hector,Ludlow**	**4.41**	**112**	P	**Pn**	**17 21 30.4**	**+0.4**
	baz=296,SNR=6.9						
TUQ	**Turquoise Moun**	**4.51**	**104**	P	**Pn**	**17 21 31.8**	**+0.4**
	baz=287,SNR=7.6						
MURC	**Murrieta**	**4.51**	**131**	P	**Pn**	**17 21 31.7**	**+0.3**
	baz=314						
R11A	**Troy Canyon, C**	**4.86**	**67**	P	**Pn**	**17 21 36.4**	**+0.1**
	baz=251						
GMRC	**Granite Mounta**	**4.93**	**110**	P	**Pn**	**17 21 37.1**	**-0.2**
	baz=294,SNR=14						
PFO	**Pinyon Flats O**	**4.97**	**126**	Pn	**Pn**	**17 21 37.6**	**-0.1**
PFO	**Pinyon Flats O**	**4.97**	**126**	P	**Pn**	**17 21 38.2**	**+0.5**
	baz=309						
PFO				S	**Sn**	**17 22 36.6**	**+1.7**
	baz=309						
PMD	**Palm Desert**	**5.00**	**125**	Pn	**Pn**	**17 21 38.4**	**+0.3**
BELC	**Belle Mtn. Jos**	**5.05**	**120**	P	**Pn**	**17 21 39.4**	**+0.5**
	baz=303						
PRN	**Pahroc Range**	**5.06**	**79**	Pn	**Pn**	**17 21 38.8**	**-0.2**
PRN				IAML		17 23 07.0	
	comp=N,54nm,0.8s						
PRN				IAML		17 23 20.6	
	comp=E,57nm,0.9s						
MONP2	**Monument Peak**	**5.46**	**131**	P	**Pn**	**17 21 44.8**	**+0.1**
	baz=315						
MONP2				S	**Sn**	**17 22 47.5**	**+0.2**
	baz=315						
BAR	**Barrett**	**5.47**	**135**	Pn	**Pn**	**17 21 44.9**	**+0.4**
IRM	**Iron Mountain**	**5.59**	**114**	P	**Pn**	**17 21 46.3**	**+0.1**
	baz=298						
BC3	**Big Chuckawall**	**5.62**	**120**	P	**Pn**	**17 21 47.1**	**+0.3**
	baz=304						
CBX	**Cerro Bola**	**5.75**	**137**	Pn	**Pn**	**17 21 48.7**	**+0.2**
PDMCI	**Parker Dam,Lak**	**6.28**	**109**	P	**Pn**	**17 21 55.8**	**+0.3**
	baz=294						
Y14A	**Wickenburg**	**7.28**	**109**		**Pn**	**17 22 10.0**	**+0.5**
MTPU	**Mount Pierson**	**7.39**	**76**	Pn	**Pn**	**17 22 10.1**	**-1.2**

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*JMA **08** 17:22:30.6±0.6, 44°N±2°×15°0E±°, h30^{km}, MV3.8/15, SE OFF ETOROFU*

*NIED **08** 17:22:30.6, 44°.46N×149°.78E, h30^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.82; $M_{\theta\theta}$3.93; $M_{\phi\phi}$-4.75; $M_{r\theta}$2.37; $M_{\theta\phi}$-3.05; $M_{\phi r}$1.22; Fault plane solution: $M_0$5.96000×10^{14} NP1:ϕ_s61.00000°, δ85.00000°,λ152.00000°. NP2:ϕ_s153.00000°,δ63.00000°, λ5.00000°.*

*MOS **08** 17:22:31.7±1.1, 44°.24N×149°.77E, h50^{km}, mb4.0/1 Error ellipse: s-maj=12.4km s-min=10.1km az=17.1*

*SKHL **08** 17:22:31.0±0.2, 44°.10N×149°.90E, h54^{km}±5^{km}, mb4.5/5*

*IDC **08** 17:22:33.9±2.6, 44°.32N×149°.85E, h46^{km}±23^{km}, mb3.4/13, mbtmp3.7/17, ML3.1/4, MS3.1/5, Error ellipse: s-maj=24.0km s-min=16.5km az=153.0*

ISC 08 17:22:31.0±0.7**, 44°.04N**±0°.06×**149°.90E**±0°.07**, h35**^{km}**, n49, σ1ˢ.96**/63**, mb3.6**/13**, 2C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.88**	**310**	⇑*i*PN	**Pn**	**17 22 59.3**	**-1.3**
KUR				*e*S	**Sn**	**17 23 18.9**	**-4.1**
KUR				pmax	pmax		
	comp=Z,197nm,0.6s						
KUR				pmax	pmax		
	comp=N,51nm,0.3s						
KUR				pmax	pmax		
	comp=E,52nm,0.7s						
KUR				smax	smax		
	comp=E,366nm,0.4s						
KUR				smax	smax		
	comp=N,232nm,0.7s						
KUR	**Kuril'sk**	**1.88**	**310**	*i* P	**Pn**	**17 22 59.3**	**-1.3**
KUR				AMB	AMB	17 23 00.0	
	comp=N,150nm,0.5s						
KUR				*e*S	**Sn**	**17 23 20.4**	**-2.6**
KUR				A	A	17 23 21.8	
	comp=N,250nm,0.4s						
KUR				A	A	17 23 21.8	
	comp=N,390nm,0.4s						
SHO	**Shikotan**	**2.22**	**267**	*c i*PN	**Pn**	**17 23 04.6**	**-0.7**
SHO				*e*S	**Sn**	**17 23 29.9**	**-1.6**
SHO				pmax	pmax		
	comp=Z,33nm,0.3s						
SHO				pmax	pmax		
	comp=N,14nm,0.2s						
SHO				pmax	pmax		
	comp=E,29nm,0.2s						
SHO				smax	smax		
	comp=N,261nm,0.5s						
SHO				smax	smax		
	comp=E,218nm,0.5s						
SHO	**Shikotan**	**2.22**	**267**	*i* P	**Pn**	**17 23 04.6**	**-0.7**
SHO				AMB	AMB	17 23 06.5	
	comp=E,150nm,0.5s						
SHO				*e*S	**Sn**	**17 23 29.9**	**-1.6**
SHO				A	A	17 23 31.7	
	comp=E,260nm,0.3s						
SHO				A	A	17 23 31.7	
	comp=E,220nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.91**	**271**	*d i*PN	**Pn**	**17 23 14.5**	**-0.3**
YUK				*e*S	**Sn**	**17 23 47.1**	**-1.4**
YUK				pmax	pmax		
	comp=Z,62nm,0.4s						
YUK				pmax	pmax		
	comp=E,6.0nm,0.2s						
YUK				pmax	pmax		
	comp=N,14nm,0.4s						
YUK				smax	smax		
	comp=N,167nm,0.5s						
YUK				smax	smax		
	comp=E,121nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**2.91**	**271**	*i* P	**Pn**	**17 23 14.5**	**-0.3**
YUK				AMB	AMB	17 23 14.9	
	comp=E,60nm,0.4s						
YUK				*e*S	**Sn**	**17 23 47.1**	**-1.4**
YUK				A	A	17 23 52.2	
	comp=E,180nm,0.4s						
YUK				A	A	17 23 52.2	
	comp=E,140nm,0.4s						
NEM2	**Nemuro 2**	**3.08**	**259**	*e*P	**Pn**	**17 23 16.8**	**-0.4**
NEM2				*e*S	**Sn**	**17 23 50.3**	**-2.5**
NMR	**Nemuro--Hokkai**	**3.09**	**259**	⇓*i*PN	**Pn**	**17 23 16.8**	**-0.5**
NMR				*e*S	**Sn**	**17 23 51.3**	**-1.7**
NMR	**Nemuro--Hokkai**	**3.09**	**259**	*i* P	**Pn**	**17 23 16.8**	**-0.5**
NMR				*e*S	**Sn**	**17 23 51.3**	**-1.7**
RUSJ	**Misakicho**	**3.35**	**273**	⇓*i*PN	**Pn**	**17 23 22.0**	**+1.2**
RUSJ				*e*S	**Sn**	**17 24 01.2**	**+1.8**
JRA	**Rausu**	**3.45**	**270**	*e*P	**Pn**	**17 23 23.4**	**+1.3**
JNK	**Nakash**	**3.77**	**265**	*e*P	**Pn**	**17 23 26.7**	**+0.1**
JNK				*e*S	**Sn**	**17 24 09.3**	**-0.6**
AKK	**Akkeshi**	**3.81**	**256**	*e*P	**Pn**	**17 23 26.9**	**-0.3**

JAK	Akkeshi	3.92	256	eP	Pn	17 23 28.8	+0.1
JAK				eS	Sn	17 24 11.8	-1.6
JTKR	Abashiri--Toko	4.32	271	eP	Pn	17 23 35.2	+1.1
JAR	Ashorobuto	4.50	263	eP	Pn	17 23 37.7	+1.0
JAR				eS	Sn	17 24 28.3	+0.5
JOB	Onbets	4.55	258	eP	Pn	17 23 38.0	+0.6
JCH	Churui	4.97	256	eP	Pn	17 23 43.4	+0.3
JCH				eS	Sn	17 24 38.4	-1.0
JKK2	Kamakawa 2	5.16	271	eP	Pn	17 23 47.1	+1.4
JKA	Kamikawa-asahi	5.26	273	eP	Pn	17 23 49.2	+2.2
ASAJ	Asahikawa comp=E,0.9nm,0.3s,baz=101,slow=9.1,SNR=6.5	5.26	273	P	Pn	17 23 49.1	+2.1
ASAJ	comp=E,5.3nm,0.6s,baz=222,slow=30,SNR=1.3 comp=E,4.4nm,0.6s			S	Sn	17 24 49.1	+2.7
JNBK	Urakawa-nobuka	5.51	254	eP	Pn	17 23 50.7	+0.1
JNBK				eS	Sn	17 24 50.8	-1.9
YSS	Yuzh-Sakhalins	5.80	303	ePN	Pn	17 23 56.8	+2.3
YSS	comp=Z,200nm,16.0s			MLR	MLR		
YSS	Yuzh-Sakhalins	5.80	303	eP	Pn	17 23 55.4	+0.9
YSS	comp=Z,30nm,0.4s			AMB	AMB	17 23 57.5	
YSS				eS	Sn	17 24 58.3	-1.5
YSS	comp=Z,20nm,0.4s			A	A	17 25 04.0	
YSS	comp=Z,10.0nm,0.4s			A	A	17 25 04.0	
YSS	comp=Z,200nm,16.0s			AMS	AMS	17 26 38.5	
JANG	Nango	7.22	242	eP	Pn	17 24 13.1	-0.8
JANG				eS	Sn	17 25 28.8	-5.9
JTH	Tanohata	7.25	238	eS	Sn	17 25 28.2	-7.3
PETK	Petropavlovsk- comp=Z,0.1nm,0.3s,baz=74,slow=37,SNR=1.7 comp=Z,5.7nm,1.0s	10.44	27	P	Pn	17 24 57.7	-0.4
USRK	Ussuriysk Ar. comp=Z,0.2nm,0.3s,baz=73,slow=15,SNR=1.4 comp=Z,1.4nm,0.5s	12.87	277	P	Pn	17 25 31.9	+0.6
KLR	Kul'dur comp=Z,0.1nm,0.3s,baz=129,slow=18,SNR=1.7	13.50	299	P	Pn	17 25 41.2	+1.4
KLR	comp=Z,72nm,18.4s,baz=68,slow=41 comp=Z,0.3nm,0.2s			LR	LR	17 31 37.4	
KLR	Kul'dur	13.50	299	eP	Pn	17 25 40.3	+0.4
MA2	Magadan comp=Z,46nm,18.4s,baz=252,slow=39	15.57	2	LR	LR	17 32 32.2	
JNU	Nakatsue comp=Z,48nm,18.4s,baz=12,slow=42	18.39	240	LR	LR	17 35 31.5	
SEY	Seymchan comp=Z,1.2nm,0.7s,baz=221,slow=15,SNR=4.2	18.99	3	P	P	17 26 44.8	-4.4
YAK	Yakutsk comp=Z,37nm,19.5s,baz=322,slow=38	21.57	334	LR	LR	17 35 52.1	
SONM	Songino Array comp=Z,1.5nm,0.8s,baz=84,slow=8.4,SNR=16 comp=Z,1.5nm,0.8s	30.19	293	P	P	17 28 38.7	+0.7
ILAR	Eielson Array comp=Z,0.2nm,0.6s,baz=269,slow=8.1,SNR=1.5 comp=Z,0.2nm,0.6s	40.08	36	P	P	17 30 02.1	-0.5
ZALV	Zalesovo Beam comp=Z,0.3nm,0.3s,baz=82,slow=7.3,SNR=2.6 comp=Z,0.3nm,0.3s	42.41	307	P	P	17 30 20.1	-1.7
INK	Inuvik comp=Z,0.3nm,0.4s,baz=274,slow=12,SNR=1.1 comp=Z,0.3nm,0.4s	45.15	31	P	P	17 30 44.2	+0.6
MKAR	Makanchi Array comp=Z,3.6nm,0.7s,baz=72,slow=8.1,SNR=50 comp=Z,3.6nm,0.7s	46.20	298	P	P	17 30 53.1	+0.8
YKA	Yellowknife Ar comp=Z,0.2nm,0.5s,baz=300,slow=6.7,SNR=2.7 comp=Z,0.2nm,0.5s	54.45	35	P	P	17 31 54.4	0.0
WRA	Warramunga Arr comp=Z,0.3nm,0.8s,baz=14,slow=6.9,SNR=2.0 comp=Z,0.3nm,0.8s	65.24	196	P	P	17 33 11.9	+2.9
FINES	FINESS Array B comp=Z,1.9nm,0.7s,baz=38,slow=9.6,SNR=11 comp=Z,1.9nm,0.7s	65.50	334	P	P	17 33 09.3	-0.9
GEYT	Alibeck comp=Z,43nm,18.9s,baz=294,slow=36	66.03	300	LR	LR	18 02 37.3	
ASAR	Alice Springs comp=Z,0.1nm,0.6s,baz=9.2,slow=6.5,SNR=1.7 comp=Z,0.1nm,0.6s	68.95	196	P	P	17 33 36.1	+3.7
NB2	NORSAR Subarra comp=Z,2.4nm,0.7s,baz=32,slow=6.5	70.03	340	P	P	17 33 38.9	+0.1
NOA	NORSAR Array B comp=Z,0.7nm,0.6s,baz=29,slow=6.7,SNR=5.2 comp=Z,0.7nm,0.6s	70.03	340	P	P	17 33 38.9	+0.1
KBZ	Khabaz comp=Z,2.4nm,0.8s,baz=25,slow=1.4,SNR=6.9 comp=Z,2.4nm,0.8s	71.08	313	P	P	17 33 46.3	+0.9
AKASG	Malin Array Be comp=Z,0.9nm,0.4s,baz=37,slow=7.4,SNR=8.3 comp=Z,0.9nm,0.4s	72.50	325	P	P	17 33 54.1	+0.3
TXAR	Lajitas Array comp=Z,0.2nm,0.6s,baz=289,slow=5.6,SNR=2.4 comp=Z,0.2nm,0.6s	80.83	58	P	P	17 34 41.8	+0.4

DJA 08 17:25:16.7±0.3,6°S±8°×10°6E±°,h209^{km}±5^{km},M3.9/14, mb4.2/11,mB5.2/3,MLv3.7/14,Mw(mB)4.5/3, MwMwp5.4/1,Mwp5.6/1,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGJI	Cibinong	0.71	217	P	Pn	17 25 47.0	+1.3
CGJI				S	S	17 26 08.4	0.0
CNJI	Cibinong	1.61	142	P	Pn	17 25 52.1	-0.1
CNJI				S	S	17 26 19.3	-0.3
KASI	Kota Agung	1.69	288	P	Pn	17 25 54.8	+1.9
KASI				S	S	17 26 22.0	+1.2
LWLI	Liwa	2.29	296	P	Pn	17 26 01.3	+2.3
MDSI	Maura Dua	2.47	309	P	Pn	17 25 58.6	-2.3
CMJI	Cimerak	2.89	127	P	Pn	17 26 05.4	-0.1
CMJI				S	S	17 26 42.6	-0.7
KPJI	Karang Pucung	3.07	115	P	Pn	17 26 08.7	+1.0
MNAI	Manna	3.57	298	P	Pn	17 26 15.5	+1.9
MNAI				S	S	17 26 57.3	-0.4
UGM	Wanagama	4.75	113	P	Pn	17 26 28.7	+0.5
MASI	Maura Aman, Be	4.82	306	P	Pn	17 26 31.1	+1.9
PPSI	Pulau Pagai 62nm,0.8s,0.3nm	6.91	298	P	Pn	17 26 56.4	+0.6
GMJI	Gumukmas 22nm,1.2s,18µm0.1nm	7.60	107	P	Pn	17 27 05.0	+0.2
PDSI	Padang	7.61	312	P	Pn	17 27 03.8	-1.1
JAGI	Jajag, Banyuwa 30nm,1.7s	8.33	107	P	Pn	17 27 14.2	0.0
BBKI	Banjar Baru	9.06	74	P	Pn	17 27 24.3	+0.5
PBSI	Pulau Batu 56nm,1.5s	9.83	307	P	Pn	17 27 32.6	-1.1
TWSI	Taliwang, Sumb 19nm,0.9s	11.00	105	P	Pn	17 27 48.4	-0.4
GSI	Gunungsitoli 9.8nm,0.6s	11.22	310	P	Pn	17 27 49.4	-2.2
BKB	Balikpapan 34nm,0.5s	11.75	67	P	Pn	17 27 59.3	+1.0
TSI	Tuntungan 40nm,0.5s	12.11	321	P	Pn	17 28 03.4	+0.5
SNSI	Sinabang, Aceh	12.89	310	P	Pn	17 28 10.7	-1.9
BKSI	Bulukumba	13.95	88	P	Pn	17 28 25.9	+0.1

IDC 08 17:44:20.1±7.3,26°.56N×124°.71E,h118^{km}±81^{km},mb2.9/5, mbtmp3.3/6,ML3.1/1,MS2.9/3,Error ellipse: s-maj=50.3km s-min=21.8km az=58.0

ISC 08 17:44:18.4±1.2,26°.5N±0°.1×124°.7E±0°.2,h100^{km},n7, σ0^{s}.43/6,mb3.1/5,Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array 0.1nm,0.3s,baz=191,slow=14,SNR=3.4	11.26	13	P	Pn	17 46 56.3	+0.2
KSRS	comp=Z,32nm,19.2s,baz=215,slow=38 1.2nm,0.5s			LR	LR	17 51 20.7	
KLR	Kul'dur comp=Z,39nm,18.6s,baz=178,slow=36	23.34	12	LR	LR	17 58 27.8	
CMAR	Chiang Mai Arr 0.2nm,0.3s,baz=47,slow=8.0,SNR=2.2 0.2nm,0.3s	25.04	257	P	P	17 49 34.0	+0.5
SONM	Songino Array 0.6nm,0.9s,baz=144,slow=7.7,SNR=4.3	25.66	331	P	P	17 49 38.8	-0.2
SONM	comp=Z,35nm,18.5s,baz=356,slow=39 0.6nm,0.9s			LR	LR	18 01 07.6	
MKAR	Makanchi Array 0.4nm,0.7s,baz=96,slow=9.7,SNR=4.3 0.4nm,0.7s	38.97	313	P	P	17 51 34.5	-0.4
WRA	Warramunga Arr 0.3nm,0.8s,baz=344,slow=8.4,SNR=2.0 0.3nm,0.8s	47.12	168	P	P	17 52 40.4	-0.3
ASAR	Alice Springs 0.1nm,0.5s,baz=356,slow=11,SNR=9.5 0.1nm,0.5s	50.67	169	P	P	17 53 07.9	+0.1

IDC 08 18:35:02.6±3.0,31°.79N×139°.81E,h0^{km},mb3.2/3, mbtmp3.2/4,ML1.9/1,Error ellipse: s-maj=124.8km s-min=27.5km az=74.0,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr 0.1nm,0.3s,baz=158,slow=12,SNR=1.9 1.1nm,0.6s	4.92	345	Pn	Pn	18 36 18.0	+0.1
MKAR	Makanchi Array 0.1nm,0.5s,baz=92,slow=7.6,SNR=2.0 0.1nm,0.5s	45.96	306	P	P	18 43 27.1	-0.3
WRA	Warramunga Arr 0.5nm,0.7s,baz=4.7,slow=7.6,SNR=5.0 0.5nm,0.7s	51.71	187	P	P	18 44 11.4	-0.2
ASAR	Alice Springs 0.2nm,0.6s,baz=350,slow=5.0,SNR=4.4 0.2nm,0.6s	55.43	187	P	P	18 44 39.1	+0.1

TAP 08 18:35:47.0,21°.55N×122°.27E,h48^{km},ML3.7,D
MAN 08 18:35:50.0,21°.10N×122°.22E,h24^{km},mb4.5,ML3.3, MS3.1
JMA 08 18:35:49.5±0.6,22°N±3°×12°2E±°,h58^{km},MV3.8/14, TAIWAN REGION

ISC 08 18:35:41.1±1.3,21°.45N±0°.02×122°.23E±0°.03,h1^{km}±10^{km}, n114,σ1^{s}.58/174,2C-2D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LYUB	Lan-yu baz=306	0.81	313	iP	Pn	18 36 02.0	+2.3
LYUB	baz=306			iS	Sn	18 36 12.8	+0.4
LAY	Lan-yu baz=307	0.86	313	iP	Pn	18 36 01.8	+1.4
LAY	baz=307			S	Sn	18 36 11.9	-1.7
BBP	Basco	1.03	194⇑	eP	Pn	18 36 03.8	+1.0
BBP				eS	Sb	18 36 15.1	-0.8
TSEB	Hengchuen, Pin baz=285	1.31	290	eP	Pn	18 36 11.0	+4.4
TSEB	baz=285			eS	Sn	18 36 26.9	+2.2
TWKBT	Hengchun baz=296	1.40	291	eP	Pg	18 36 10.4	+2.4
TWKBT	baz=296			eS	Sn	18 36 28.1	+1.0
LDUT	Ludao baz=327	1.41	330	iP	Pg	18 36 09.1	+1.1
LDUT	baz=327			S	Sb	18 36 25.6	-1.0
TWK1	Hengchun baz=296	1.41	291	eP	Pg	18 36 11.2	+3.0
SMST	Manzhou Townsh baz=290	1.41	294	eP	Pg	18 36 10.2	+2.1
SMST	baz=290			eS	Sn	18 36 28.3	+1.1
HEN	Hengchun baz=297	1.49	292	eP	Pg	18 36 12.8	+3.2
HEN	baz=297			eS	Sg	18 36 29.7	+0.7
TAWH	Dawu Township baz=302	1.53	306	P	Pg	18 36 12.1	+1.7
TAWH	baz=302			eS	Sg	18 36 29.4	-0.7
TAW	Tawu baz=303	1.53	306	eP	Pg	18 36 12.2	+1.7
TAW	baz=303			eS	Sg	18 36 29.8	-0.5
EAST	Anshuo baz=303	1.58	306	P	Pg	18 36 12.8	+1.4
EAST	baz=303			eS	Sg	18 36 31.6	-0.3
TTN	Taitung baz=326	1.64	323	eP	Pg	18 36 13.2	+0.7
ECL	Taimali baz=301	1.64	314	P	Pg	18 36 12.9	+0.4
ECL	baz=301			eS	Sn	18 36 32.0	-0.9
TWGBT	Beinan baz=307	1.73	322	eP	Pg	18 36 14.8	+0.6
TWGBT	baz=307			eS	Sb	18 36 35.4	-0.5
TWG	Pinlang baz=307	1.73	322	eP	Pg	18 36 14.9	+0.6
TWG	baz=307			eS	Sb	18 36 35.2	-0.9
EDH	Donghe baz=336	1.74	331	P	Pg	18 36 14.2	-0.3
EDH	baz=336			eS	Sn	18 36 33.8	-1.5
SCZT	Fangliau baz=307	1.75	302	eP	Pg	18 36 15.8	+1.2
SCZT	baz=307			eS	Sg	18 36 36.0	-1.4
LONT	Longtian baz=309	1.77	325	eP	Pg	18 36 15.7	+0.6
LONT	baz=309			eS	Sg	18 36 37.5	-0.5
CHKT	Chengkung baz=339	1.82	334	iP	Pb	18 36 15.1	-0.3
CHKT	baz=339			eS	Sn	18 36 35.6	-1.9
MASBT	Mashibuluo baz=305	1.88	308	eP	Pg	18 36 17.4	+0.3
TSMG	Majia baz=300	1.93	311	eP	Pg	18 36 18.9	+0.9
EHD	Haiduan baz=335	1.94	331	iP	Pg	18 36 17.6	-0.7
EHD	baz=335			eS	Sn	18 36 39.4	-0.9
FULB	Fuli baz=340	1.94	334	eP	Pb	18 36 16.8	-0.5
FULB	baz=340			eS	Sn	18 36 39.4	-1.0
ELDTW	Lidau baz=325	2.06	327	P	Pb	18 36 19.2	-0.2
EYUL	Yuli baz=341	2.07	336	P	Pb	18 36 19.1	-0.3
EYUL	baz=341			eS	Sn	18 36 43.0	-0.5
YULB	Yu-li baz=341	2.12	336	P	Pb	18 36 19.9	-0.4
YULB	baz=341			eS	Sn	18 36 44.6	0.0
SLGT	Liugui baz=314	2.12	317	eP	Pg	18 36 22.8	+1.0
SCST	Cishan baz=302	2.15	312	eP	Pg	18 36 22.5	+0.2
TWM1	Shoushan baz=307	2.16	310	eP	Pg	18 36 24.2	+1.7
HGSD	Ruisui baz=344	2.16	340	P	Pb	18 36 19.6	-1.5
HGSD	baz=344			eS	Sn	18 36 44.8	-1.0
STYH	Taoyuan baz=311	2.18	322	eP	Pg	18 36 22.0	-0.8
STYH	baz=311			eS	Sb	18 36 47.6	-1.2
EHY	Hungye baz=342	2.21	338	P	Pb	18 36 21.2	-0.7
EHY	baz=342			eS	Sn	18 36 47.1	+0.1
SGST	Jiashian baz=315	2.23	317	eP	Pg	18 36 22.9	-0.9
SGST	baz=315			eS	Sb	18 36 50.2	0.0
CICP	Calayan Island	2.29	198⇓	eP	Pb	18 36 21.4	-1.7
CICP				eS	Sn	18 36 46.0	-2.8
EGFH	Guangfu baz=347	2.33	342	eP	Pb	18 36 23.3	-0.6
EGFH	baz=347			eS	Sn	18 36 50.2	+0.4
WTP	Ta-pu baz=318	2.33	320	eP	Pg	18 36 25.4	-0.3
WTP	baz=318			eS	Sb	18 36 53.8	+0.5
CHN1	Nanshi baz=316	2.33	318	eP	Pg	18 36 25.7	-0.2
CHN1	baz=316			eS	Sb	18 36 53.6	+0.1
TPUB	Ta-pu baz=319	2.36	322	P	Pg	18 36 25.4	-1.0
TPUB	baz=319			eS	Sb	18 36 54.1	-0.1
CHN3	Shinhua baz=311	2.37	314	eP	Pg	18 36 27.4	+0.9
TWK	Hsinying baz=317	2.42	319	eP	Pg	18 36 26.4	-1.1
TWK	baz=317			eS	Sb	18 36 54.9	-1.0
CHN4	Tsaushan baz=319	2.42	322	iP	Pg	18 36 26.7	-0.8
CHN4	baz=319			eS	Sb	18 36 55.1	-0.8
ALS	Alishan baz=314	2.44	328	eP	Pb	18 36 26.5	+0.6
ALS	baz=314			eS	Sb	18 36 54.3	-2.3
ESL	Shilin baz=347	2.46	343	eP	Pb	18 36 24.9	-1.3
ESL	baz=347			eS	Sn	18 36 52.6	-0.6
WCKO	Fanlu baz=321	2.48	323	eP	Pg	18 36 27.3	-1.4
WCKO	baz=321			eS	Sb	18 36 57.5	-0.2
VWDT	VWDT baz=335	2.50	337	eP	Pb	18 36 26.0	-0.9
TSCK	Chigu Township baz=308	2.60	311	eP	Pb	18 36 27.9	-0.7
TSCK	baz=308			eS	Sb	18 36 57.9	-3.2
SSLB	Suanglung baz=339	2.61	333	P	Pb	18 36 28.1	-0.6
SSLB	baz=339			eS	Sn	18 36 56.0	-0.8
ICHU	Yijhu baz=315	2.62	317	eP	Pb	18 36 28.3	-0.5
CHY	Chiayi baz=319	2.63	321	eP	Pb	18 36 28.4	-0.7
OWD	Renai baz=345	2.67	339	P	Pb	18 36 28.4	-1.5
OWD	baz=345			eS	Sn	18 36 58.8	+0.1
TWD	Chiawan baz=346	2.68	348	eP	Pb	18 36 28.6	-1.3
SMLT	Sun Moon Lake baz=340	2.71	333	eP	Pb	18 36 30.2	-0.3
WDLH	Douliu baz=323	2.72	325	eP	Pb	18 36 30.2	-0.3
WDLH	baz=323			eS	Sb	18 37 03.2	-1.3
WUSB	Renai baz=330	2.73	338	P	Pb	18 36 29.6	-1.2
WUSB	baz=330			S	Sn	18 36 59.8	-0.2
WJS	Zhushan baz=316	2.74	330	P	Pg	18 36 32.1	-1.5
WJS	baz=316			eS	Sb	18 37 05.1	+0.1
TYC	Yuchr baz=340	2.75	333	eP	Pb	18 36 31.4	+0.3
ETL	Fush Village baz=347	2.75	348	eP	Pb	18 36 29.2	-1.9
WSL	Shuilin Townsh baz=316	2.77	318	eP	Pb	18 36 30.0	-1.4
WSL	baz=316			eS	Sb	18 37 02.5	-3.4
NACB	Ninganchiao baz=353	2.77	348	eP	Pn	18 36 28.6	+1.9
CHGB	Renai baz=346	2.77	340	P	Pb	18 36 30.1	-1.5
CHGB	baz=346			eS	Sn	18 37 00.3	-0.8
WTK	Tuku baz=321	2.80	323	eP	Pb	18 36 31.0	-0.9
WNT	Mingjian baz=316	2.81	330	P	Pb	18 36 32.5	+0.5
WNT	baz=316			eS	Sb	18 37 05.6	-1.3
WHF	Hehuan Shan baz=350	2.83	342	eP	Pb	18 36 30.5	-2.1
ETLH	Xiulin Townshi baz=353	2.83	346	P	Pb	18 36 30.5	-2.0
WCS	Beigang Elemen baz=320	2.86	335	eP	Pb	18 36 32.5	-0.5
TWT	Tachien baz=346	2.95	341	eP	Pb	18 36 33.4	-1.3
TDCB	Techi baz=346	2.96	341	eP	Pb	18 36 33.5	-1.3
HATJ	Hateruma jima	2.97	29	P	Pb	18 36 34.0	-1.0
HATJ				eS	Sn	18 37 06.9	+1.1
WRL	Guolierlin Hig baz=324	2.98	325	eP	Pb	18 36 33.2	-1.8
WDGT	Dungji baz=306	2.98	308	eP	Pb	18 36 32.4	-2.6
ENA	Nanau baz=350	3.00	351	P	Pb	18 36 32.8	-2.5
ENA	baz=350			eS	Sn	18 37 06.0	-0.3
EWUT	Wuta baz=351	3.01	352	P	Pb	18 36 33.1	-2.4
EWUT	baz=351			eS	Sn	18 37 06.5	-0.2
WCHH	Zhanghua baz=315	3.04	330	eP	Pb	18 36 35.4	-0.6
TCU	Taichung baz=316	3.04	332	eP	Pb	18 36 35.9	-0.2
JYNG	Yonagunijimaku	3.06	12	eP	Pb	18 36 34.6	-1.7
JYNG				eS	Sn	18 37 08.2	+0.3
NNSB	Datong baz=344	3.06	345	eP	Pn	18 36 33.3	+2.5
NNSB	baz=344			eS	Sn	18 37 08.1	-0.1
NNS	Nan Shan baz=344	3.08	345	eP	Pn	18 36 33.6	+2.6
YOJ	Yonaguni jima	3.08	13	P	Pb	18 36 35.5	-1.3
YOJ				eS	Sn	18 37 09.0	+0.5
YOJ	Yonaguni jima baz=1.0	3.08	13	eP	Pb	18 36 34.7	-2.1
PACPP	Pamplona Cagay	3.09	196⇑	eP	Pn	18 36 33.1	+2.1
PACPP				eS	Sn	18 37 06.8	-1.8
VCHM	Qimei baz=302	3.13	305	eP	Pb	18 36 35.0	-2.5
VCHM	baz=302			eS	Sn	18 37 07.4	-2.2
LATG	Datong baz=356	3.14	348	eP	Pn	18 36 34.6	+2.7
TWC	Suao baz=1.0	3.16	354	eP	Pb	18 36 35.3	-2.9
TWQ1	Liyutan baz=322	3.18	335	P	Pb	18 36 37.9	-0.6
IRIF	Iriomote-Funau	3.19	25	P	Pb	18 36 37.1	-1.4
IRIF				S	Sn	18 37 12.3	+1.3
PHUB	P'eng-hu baz=308	3.20	310	eP	Pn	18 36 34.6	+2.0
PHUB	baz=308			eS	Sn	18 37 09.3	-2.1
NDS	Dongshan baz=351	3.20	352	eP	Pb	18 36 36.8	-2.1
JKRS	Kuro-shima	3.22	30	P	Pb	18 36 37.4	-1.8
JKRS				eS	Sn	18 37 13.2	+1.2
ENTT	Nioudou baz=348	3.23	349	eP	Pb	18 36 36.4	-2.9
WDJ	Dajia District baz=319	3.23	333	eP	Pb	18 36 39.2	-0.1
PNG	Penghu baz=309	3.25	311	eP	Pn	18 36 35.1	+1.9
TWE	Neicheng baz=350	3.30	351	P	Pb	18 36 37.8	-2.6
TWE	baz=350			eS	Sn	18 37 14.1	+0.3
YHNB	Yeheng baz=353	3.30	346	eP	Pb	18 36 37.9	-2.7
NSK	Sanguang baz=354	3.31	346	eP	Pn	18 36 37.2	+3.0
NSK	baz=354			eS	Sn	18 37 14.1	-0.1
NFF	Wufeng Townshi baz=348	3.33	342	eP	Pb	18 36 39.5	-1.4
NMLH	Miaoli baz=322	3.34	337	eP	Pb	18 36 39.4	-1.8
NSTT	Nanjuang baz=324	3.36	341	eP	Pb	18 36 39.7	-1.8
LIOB	Emei baz=324	3.37	341	eP	Pb	18 36 39.9	-1.8

NWLT	**Wulai**	**3.38**	**349**	eP	**Pb**	**18 36 39.5**	**-2.3**
	baz=348						
NWLT				eS	**Sn**	**18 37 14.8**	**-1.0**
	baz=348						
JIJ	**Ishigaki jima**	**3.40**	**31**	P	**Pb**	**18 36 39.2**	**-2.9**
JIJ				S	**Sn**	**18 37 16.5**	**+0.3**
TIPB	**Shuangxi**	**3.52**	**354**	eP	**Pb**	**18 36 41.5**	**-2.8**
	baz=1.0						
TWB1	**Santiao Chiao**	**3.55**	**356**	eP	**Pb**	**18 36 41.4**	**-3.3**
	baz=5.0						
JISG	**Ishigakijimahi**	**3.66**	**31**	eP	**Pn**	**18 36 42.9**	**+3.9**
JISG				eS	**Sn**	**18 37 23.0**	**+0.1**
YM01	**YM01**	**3.73**	**351**	eP	**Pn**	**18 36 43.1**	**+3.3**
	baz=350						
JTJ	**Tarama**	**3.91**	**35**	S	**Sn**	**18 37 30.1**	**+1.3**
JIRB	**Irabujima**	**4.32**	**38**	eS	**Sn**	**18 37 39.9**	**+0.9**
JMJ2	**Miyako jima3**	**4.34**	**40**	S	**Sn**	**18 37 40.2**	**+0.5**
VWUC	**VWUC**	**4.35**	**325**	eP	**Pn**	**18 36 51.6**	**+3.2**
	baz=323						
JOGS	**Gusukube**	**4.41**	**41**	S	**Sn**	**18 37 42.7**	**+1.5**
JIKM	**Ikemajima**	**4.43**	**38**	eS	**Sn**	**18 37 42.7**	**+0.9**
KNMB	**Chin-men Tao**	**4.64**	**311**	eP	**Pn**	**18 36 55.2**	**+2.9**
	baz=309						
AXDP	**Jialang**	**5.21**	**312**	eP	**Pn**	**18 37 02.8**	**+2.6**
	baz=310						
PCPH	**Palayan**	**5.96**	**191⇓**	eP	**Pn**	**18 37 12.6**	**+2.2**

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*REN **08** 18:46:49.7±2.0, 39°.27N±0°.02×115°.02W±0°.04, h6km±5km, ML3.1/4, ML3.1/142(NEIC), Error ellipse: s-maj=4.6km s-min=3.3km az=90.0*

NEIC 08 18:46:50.5±2.2**, 39°.29N**±0°.02×**114°.98W**±0°.03**, h5**km±2km**, Error ellipse: s-maj=4.5km s-min=3.9km az=55.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Q12A	**Willow Creek R**	**0.28**	**155**		Pg	18 46 55.7	-0.3
Q12A					Sg	18 46 59.7	-0.1
Q12A	**Willow Creek R**	**0.28**	**155**	IAML		18 47 01.2	
	comp=E,4µm,0.7s						
Q12A				IAML		18 47 03.5	
	comp=N,4µm,0.7s						
SPR3	**Spring Creek 3**	**0.59**	**120**		Pb	18 47 03.0	-0.4
SPR3					Sb	18 47 12.2	0.0
R11A	**Troy Canyon, C**	**1.05**	**207**		Pg	18 47 09.3	-1.4
R11A					Sg	18 47 24.0	-0.4
ELK	**Elko**	**1.46**	**352**		Pn	18 47 17.6	-0.3
ELK					Sg	18 47 39.0	+1.3
ELK	**Elko**	**1.46**	**352**	IAML		18 47 39.6	
	comp=N,169nm,0.6s						
ELK				IAML		18 47 41.8	
	comp=N,164nm,0.6s						
S11A	**Rachel**	**1.75**	**200**		Pn	18 47 20.8	-0.9
S11A					Sg	18 47 46.6	-0.2
S11A	**Rachel**	**1.75**	**200**	IAML		18 48 13.4	
	comp=N,299nm,0.9s						
Q09A	**Carvers**	**1.77**	**256**		Pn	18 47 22.2	+0.2
Q09A					Sg	18 47 47.8	+0.4
PRN	**Pahroc Range**	**1.88**	**182**		Pn	18 47 24.2	+0.7
PRN					Sg	18 47 51.3	+0.3
PRN	**Pahroc Range**	**1.88**	**182**	IAML		18 48 00.9	
	comp=N,288nm,0.6s						
DUG	**Dugway, Tooele**	**1.90**	**61**		Pn	18 47 23.8	+0.1
DUG				IAML		18 47 55.6	
	comp=N,186nm,0.9s						
DUG				IAML		18 47 56.5	
	comp=N,115nm,0.8s						
TCRU	**Three Creeks R**	**2.09**	**108**		Pn	18 47 27.3	+0.8
TCRU				IAML		18 48 01.9	
	comp=N,183nm,0.6s						
TCRU				IAML		18 48 05.6	
	comp=E,173nm,0.8s						
TPH	**Tonopah**	**2.13**	**236**		Pn	18 47 26.7	-0.3
BGU	**Big Grassy Mou**	**2.21**	**42**		Pn	18 47 27.9	-0.2
BGU				IAML		18 48 06.3	
	comp=E,73nm,0.4s						
MVU	**Marysvale**	**2.30**	**109**		Pn	18 47 30.2	+0.9
MSU	**Marysvale**	**2.32**	**109**		Pn	18 47 30.7	+1.0
NLU	**North Lily Min**	**2.34**	**73**		Pn	18 47 30.5	+0.6
NLU				IAML		18 48 14.6	
	comp=E,76nm,0.7s						
NLU				IAML		18 48 15.2	
	comp=N,69nm,0.7s						
KVN	**Kaiserville**	**2.43**	**265**		Pn	18 47 30.3	-0.8
KVN				IAML		18 48 08.2	
	comp=E,190nm,0.6s						
MZP	**Montezuma Peak**	**2.46**	**231**		Pn	18 47 31.2	-0.5
CPY	**CP-1**	**2.50**	**200**		Pn	18 47 33.1	+1.1
MTPU	**Mount Pierson**	**2.52**	**119**		Pn	18 47 30.8	-1.8
MTPU				IAML		18 48 19.5	
	comp=E,63nm,1.0s						
MTPU				IAML		18 48 20.3	
	comp=N,73nm,1.8s						
TPNV	**Topopah Spring**	**2.54**	**203**		Pn	18 47 30.6	-2.1
TPNV				IAML		18 48 14.8	
	comp=N,76nm,0.9s						
TPNV				IAML		18 48 26.8	
	comp=N,62nm,0.7s						
NV11	**Mina Array Sit**	**2.62**	**252**		Pn	18 47 32.4	-1.3
NV11				IAML		18 48 16.3	
	comp=E,61nm,0.6s						
NV11				IAML		18 48 22.8	
	comp=N,82nm,0.9s						
LCMT	**Little Creek M**	**2.66**	**148**		Pn	18 47 32.0	-2.2
LCMT				IAML		18 48 23.1	
	comp=N,49nm,1.2s						
LCMT				IAML		18 48 27.4	
	comp=E,59nm,1.2s						
NVAR	**Mina Array Bea**	**2.73**	**253**		Pn	18 47 32.4	-2.9
NV08	**Mina Array Sit**	**2.75**	**252**		Pn	18 47 35.4	-0.1
NV09	**Mina Array Sit**	**2.75**	**253**		Pn	18 47 35.4	-0.2
SHPR	**Sheep Range**	**2.79**	**183**		Pn	18 47 33.2	-2.8
SPUT	**South Promonto**	**2.79**	**43**		Pn	18 47 36.6	+0.5
SPUT				IAML		18 48 29.8	
	comp=N,66nm,0.6s						
PKCU	**Pink Cliffs**	**2.80**	**130**		Pn	18 47 34.3	-2.0
WCT	**Wildcat Mounta**	**2.81**	**208**		Pn	18 47 32.9	-3.4
WCT				IAML		18 48 35.4	
	comp=E,44nm,0.7s						
SGV	**South Grapevin**	**2.82**	**216**		Pb	18 47 39.0	-2.5
KNB	**Kanab**	**2.84**	**142**		Pn	18 47 36.2	-0.5
KNB				IAML		18 48 21.2	
	comp=E,122nm,0.8s						
KNB				IAML		18 48 21.9	
	comp=N,101nm,1.0s						
CTU	**Camp Tracy**	**2.85**	**60**		Pn	18 47 35.8	-1.0
TMUT	**Trail Mountain**	**2.93**	**89**		Pn	18 47 37.1	-1.0
TMUT				IAML		18 48 33.0	
	comp=N,81nm,0.7s						
TMUT				IAML		18 48 34.2	
	comp=E,85nm,0.7s						
LCH	**Last Change Ra**	**2.94**	**226**		Pn	18 47 37.3	-0.7
LCH				IAML		18 48 27.4	
	comp=E,49nm,0.6s						
LCH				IAML		18 48 28.0	
	comp=N,43nm,0.9s						
LHV	**Little Huntoon**	**2.94**	**250**		Pb	18 47 42.6	-0.8
LHV				IAML		18 48 37.5	
	comp=E,112nm,0.8s						
GRAC	**Grapevine Rang**	**2.96**	**220**		Pb	18 47 44.6	+0.7
GRAC				IAML		18 48 32.4	
	comp=N,97nm,0.4s						
GRAC				IAML		18 48 45.5	
	comp=E,78nm,0.5s						
Q16A	**Castle Valley**	**2.99**	**96**		Pb	18 47 44.2	-0.2
Q16A				IAML		18 48 31.2	
	comp=E,41nm,0.6s						
HVU	**Hansel Valley**	**3.00**	**33**		Pn	18 47 39.1	+0.2
HVU				IAML		18 48 34.3	
	comp=E,73nm,0.8s						
HVU				IAML		18 48 40.7	
	comp=N,74nm,0.6s						
DSP	**Deep Springs**	**3.03**	**232**		Pb	18 47 44.9	-0.1
DSP				IAML		18 48 27.2	
	comp=E,42nm,0.8s						
P17A	**Butcher Ranch,**	**3.29**	**86**		Pb	18 47 49.5	0.0
P17A				IAML		18 48 39.2	
	comp=E,27nm,0.8s						
YERR	**Yerington**	**3.32**	**266**		Pn	18 47 42.0	-1.3
YERR				IAML		18 48 38.4	
	comp=N,75nm,0.5s						
GWY	**Greenwater Val**	**3.38**	**204**		Pn	18 47 41.8	-2.3
GWY				IAML		18 48 50.0	
	comp=N,47nm,1.1s						
GWY				IAML		18 48 52.1	
	comp=E,46nm,1.0s						
PAHR	**Pah Rah Range**	**3.43**	**278**		Pn	18 47 42.6	-2.2
PAHR				IAML		18 48 40.9	
	comp=E,37nm,1.5s						
PAHR				IAML		18 48 42.0	
	comp=N,30nm,1.0s						
SRU	**San Rafael Swe**	**3.47**	**92**		Pn	18 47 46.0	+0.7
SRU				IAML		18 48 45.1	
	comp=E,56nm,0.6s						
SRU				IAML		18 48 45.9	
	comp=N,47nm,0.7s						
BSUT	**Blindstream Ca**	**3.48**	**68**		Pn	18 47 48.5	+2.8
HWUT	**Hardware Ranch**	**3.48**	**47**		Pn	18 47 44.4	-1.2
HWUT				IAML		18 49 01.3	
	comp=N,24nm,0.8s						
V12A	**Nelson**	**3.56**	**178**		Pn	18 47 45.4	-1.1
V12A				IAML		18 48 44.3	
	comp=E,25nm,0.8s						
V12A				IAML		18 48 51.5	
	comp=N,31nm,1.1s						
U15A	**North Rim**	**3.57**	**142**		Pn	18 47 46.5	-0.3
U15A				IAML		18 48 48.1	
	comp=N,61nm,1.2s						
OMMB	**Old Mammoth Mi**	**3.57**	**243**		Pb	18 47 55.6	+1.2
MDPB	**Devils Postpil**	**3.62**	**244**		Pb	18 47 54.0	-1.1
QSM	**Queen of Sheba**	**3.64**	**205**		Pg	18 47 59.0	-1.3
P18A	**Preston Nutter**	**3.68**	**83**		Pb	18 47 52.8	-3.5
P18A				IAML		18 48 50.5	
	comp=E,22nm,1.6s						
PLTX	**Planet X, Gerl**	**3.72**	**294**	Pn	Pn	18 47 45.9	-2.9
MPK	**Martis Peak**	**3.92**	**272**		Pn	18 47 50.5	-1.0
MPK				IAML		18 48 58.9	
	comp=E,37nm,0.9s						
MPK				IAML		18 49 02.0	
	comp=N,46nm,0.8s						
MFID	**Camas Ranch**	**4.17**	**352**		Pb	18 48 01.2	-3.2
WVOR	**Wild Horse Val**	**4.19**	**320**		Pb	18 48 03.2	-1.5
WVOR				IAML		18 49 11.2	
	comp=N,19nm,2.0s						
WVOR				IAML		18 49 13.1	
	comp=N,22nm,1.0s						
GSC	**Goldstone, Bar**	**4.24**	**201**		Pn	18 47 51.5	-4.4
GSC				IAML		18 50 21.9	
	comp=N,22nm,0.1s						
W13A	**Hualapai Mount**	**4.28**	**168**		Pb	18 48 03.3	-3.1
HLID	**Hailey**	**4.29**	**6**		Pn	18 47 56.0	-0.6
HLID				IAML		18 49 08.3	
	comp=N,20nm,0.5s						
HLID				IAML		18 49 08.4	
	comp=N,30nm,0.7s						
RDMU	**Red Mountain**	**4.35**	**71**		Pn	18 48 02.0	+4.4
CMB	**Columbia Colle**	**4.41**	**255**		Pn	18 47 56.1	-2.1
AHID	**Auburn Hatcher**	**4.54**	**39**		Pn	18 48 00.9	+0.8
AHID				IAML		18 49 21.1	
	comp=N,14nm,0.8s						
AHID				IAML		18 49 45.9	
	comp=N,13nm,1.4s						
PV23	**Carpenter Ridg**	**4.74**	**98**		Pn	18 48 01.6	-1.3
WUAZ	**Wupatki**	**4.74**	**142**	Pg	Pb	18 48 15.3	+1.1
MOD	**Modoc Plateau**	**4.81**	**304**		Pb	18 48 11.3	-4.2
MOD				IAML		18 48 38.9	
	comp=N,13nm,3.7s						
MOD				IAML		18 50 23.3	
	comp=E,15nm,3.9s						
J08A	**Circle Bar Ran**	**4.84**	**328**		Pb	18 48 15.0	-0.8
PV11	**David Mesa, Pa**	**4.88**	**100**		Pn	18 48 04.1	-0.6
PV13	**Radium Mtn., P**	**4.95**	**101**		Pn	18 48 05.7	-0.1
PV13				IAML		18 49 31.7	
	comp=N,21nm,0.6s						
PV07	**Paradox Valley**	**5.02**	**98**		Pg	18 48 23.0	-3.7
PV15	**Paradox Valley**	**5.17**	**99**	Pn	Pn	18 48 05.8	-2.9
PV15				IAML		18 49 49.7	
	comp=N,18nm,1.6s						
PV15				IAML		18 49 56.5	
	comp=E,21nm,1.6s						
O20A	**White River Ci**	**5.27**	**79**	Pn	Pn	18 48 06.9	-3.2
O20A				IAML		18 49 43.9	
	comp=N,15nm,1.9s						
BW06	**Boulder Array**	**5.37**	**48**	Pn	Pn	18 48 13.0	+1.4
PD31	**Pinedale Array**	**5.37**	**48**	Pn	Pn	18 48 14.8	+3.3
PDAR	**Pinedale Array**	**5.37**	**48**	Pn	Pn	18 48 15.5	+4.0
MVCO	**Mesa Verde**	**5.51**	**110**		Pn	18 48 18.1	+4.6
Y14A	**Wickenburg**	**5.58**	**163**	Pn	Pn	18 48 11.0	-3.2
PFO	**Pinyon Flats O**	**5.79**	**192**	Pn	Pn	18 48 13.5	-3.7
BMO	**Blue Mountains**	**5.82**	**343**		Pb	18 48 33.1	+0.5
PLID	**Pearl Lake**	**5.84**	**353**		Pn	18 48 15.0	-3.0
W18A	**Petrified Fore**	**5.91**	**133**		Pb	18 48 33.9	-0.2

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*IDC **08** 18:49:55.1±1.0, 6°.13N×125°.28E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=33.9km s-min=9.9km az=98.0*

*MAN **08** 18:49:57.0, 6°.47N×126°.36E, h27km, mb4.7, ML3.6, MS3.6*

*NEIC **08** 18:50:01.3±2.1, 6°.68N±0°.10×126°.1E±0°.1, h58km±12km, mb4.3/18, Error ellipse: s-maj=22.7km s-min=9.2km az=58.0*

ISC 08 18:50:00.2±1.3**, 6°.50N**±0°.05×**126°.20E**±0°.07**, h41**km±15km**, n39, σ1s77**/44**, mb4.1**/14**, 4C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.84**	**312**	Pg	**Pn**	**18 50 14.1**	**-1.4**
	260nm,0.3s,baz=144,slow=0.9,SNR=22						
DAV				Lg	Lg	18 50 27.3	
	188nm,0.3s,baz=266,slow=22,SNR=16						
DAV				LR	LR	18 50 51.6	
	comp=Z,145nm,21.0s,baz=31,slow=58						
DAV	**Davao City (W)**	**0.84**	**312**	Pn	**Pn**	**18 50 14.4**	**-1.2**
KCP	**Kidapawan**	**1.21**	**295⇓**	iP	**Pn**	**18 50 20.1**	**-0.6**
KCP				iS	**Sn**	**18 50 36.1**	**0.0**
CDOP	**Cateel, Davao**	**1.29**	**10⇓**	eP	**Pn**	**18 50 19.8**	**-2.1**
CDOP				eS	**Sn**	**18 50 35.1**	**-2.8**
GSPH	**General Santos**	**1.31**	**252⇓**	iP	**Pn**	**18 50 20.4**	**-1.8**
GSPH				iS	**Sn**	**18 50 37.0**	**-1.5**
BIPH	**Bislig**	**1.68**	**5⇑**	eP	**Pn**	**18 50 25.6**	**-1.5**
BIPH				iS	**Sn**	**18 50 46.3**	**-1.1**
BUKP	**Musuan**	**1.78**	**320⇑**	eP	**Pn**	**18 50 27.8**	**-0.7**
TASP	**Talacogon, Agu**	**1.98**	**349⇓**	eP	**Pn**	**18 50 34.4**	**+3.2**
TASP				eS	**Sn**	**18 51 01.3**	**+6.5**
CTBH	**Cotabato--PC H**	**2.07**	**290⇑**	iP	**Pn**	**18 50 32.3**	**-0.1**
CGP	**Cagayan de Oro**	**2.45**	**322⇑**	eP	**Pn**	**18 50 37.7**	**0.0**
CGP				eS	**Sn**	**18 51 08.9**	**+2.5**
TNTI	**Ternate**	**5.81**	**168**	Pn	**Pn**	**18 51 27.8**	**+3.9**
TOLI2	**Tolitoli**	**7.61**	**226**	Pn	**Pn**	**18 51 47.6**	**-1.1**
MYLDM	**Lahad Datu**	**7.77**	**261**	Pn	**Pn**	**18 51 49.5**	**-1.4**
LUWI	**Luwuk**	**8.24**	**205**	Pn	**Pn**	**18 51 59.9**	**+2.7**
MTN	**Manton Dam**	**19.83**	**166**	P	**Pn**	**18 54 29.4**	**-0.2**
MTN				IAmb	IAmb	18 54 34.5	
	comp=Z,6.7nm,0.5s						
KNRA	**Kununurra**	**22.18**	**173**	P	**P**	**18 54 53.2**	**+0.2**
KNRA				IAmb	IAmb	18 55 37.3	
	comp=Z,35nm,1.4s						
FITZ	**Fitzroy Crossi**	**24.45**	**181**	P	**P**	**18 55 15.9**	**+0.5**
COEN	**Coen**	**26.40**	**140**	P	**P**	**18 55 33.1**	**-0.1**
COEN				IAmb	IAmb	18 55 51.6	
	comp=Z,6.2nm,1.1s						
WB0	**Warramunga Arr**	**27.32**	**163**	P	**P**	**18 55 41.0**	**-0.3**
WB0				IAmb	IAmb	18 55 45.5	
	comp=Z,5.8nm,1.3s						
WRA	**Warramunga Arr**	**27.47**	**163**	P	**P**	**18 55 42.4**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=336,slow=11,SNR=11						
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**27.47**	**163**	P	**P**	**18 55 42.1**	**-0.6**
WB2	**Warramunga Arr**	**27.47**	**163**	P	**P**	**18 55 42.1**	**-0.6**
WB2				IAmb	IAmb	18 55 53.6	
	comp=Z,5.5nm,1.3s						
WR0	**Warramunga Arr**	**27.55**	**163**	P	**P**	**18 55 42.6**	**-0.8**
WR0				IAmb	IAmb	18 56 24.1	
	comp=Z,8.0nm,1.4s						
PSA00	**Pilbara Seismi**	**28.59**	**192**	P	**P**	**18 55 52.4**	**-0.2**
PSA00				IAmb	IAmb	18 55 55.6	
	comp=Z,16nm,1.1s						
AS31	**Alice Springs**	**30.91**	**166**	P	**P**	**18 56 12.5**	**-0.7**
ASAR	**Alice Springs**	**30.91**	**166**	P	**P**	**18 56 13.3**	**0.0**
	comp=Z,1.2nm,0.4s,baz=343,slow=7.2,SNR=51						
ASAR				PcP	**PcP**	**18 59 08.5**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=348,slow=2.3,SNR=5.0						
	comp=Z,1.2nm,0.4s						
ASAR	**Alice Springs**	**30.91**	**166**	P	**P**	**18 56 11.8**	**-1.4**
MAJO	**Matsushiro**	**31.85**	**19**	P	P	18 56 13.8	-7.6
MAJO				IAmb	IAmb	18 56 33.5	
	comp=Z,11nm,1.1s						
MJB9	**Matsu-Tunnel**	**31.86**	**18**	P	P	18 56 14.5	-7.0
MJB9				IAmb	IAmb	18 56 34.5	
	comp=Z,11nm,1.1s						
MORW	**Morawa**	**36.69**	**195**	P	**P**	**18 57 02.2**	**-1.2**
FORT	**Forrest**	**37.11**	**177**	P	**P**	**18 57 07.5**	**+0.6**
NWAO	**Narrogin (SRO)**	**40.13**	**192**	P	**P**	**18 57 32.8**	**+0.6**
NWAO	**Narrogin (SRO)**	**40.13**	**192**	P	**P**	**18 57 32.6**	**+0.4**
NWAO				IAmb	IAmb	18 57 38.7	
	comp=Z,101nm,1.3s						
BBOO	**Buckleboo**	**40.20**	**167**	P	**P**	**18 57 33.4**	**+0.6**
BBOO				IAmb	IAmb	18 57 34.0	
	comp=Z,6.5nm,0.6s						
STKA	**Stephens Creek**	**40.89**	**160**	P	**P**	**18 57 38.9**	**+0.4**
	comp=Z,3.1nm,0.5s,baz=335,slow=8.1,SNR=12						
	comp=Z,3.1nm,0.5s						
STKA	**Stephens Creek**	**40.89**	**160**	P	**P**	**18 57 39.0**	**+0.4**
SONM	**Songino Array**	**44.52**	**341**	P	**P**	**18 58 09.5**	**+1.6**
	comp=Z,0.2nm,0.7s,baz=168,slow=8.8,SNR=2.4						
	comp=Z,0.2nm,0.7s						
MKAR	**Makanchi Array**	**55.00**	**324**	P	**P**	**18 59 26.9**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=118,slow=7.5,SNR=9.1						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**55.00**	**324**	P	**P**	**18 59 25.3**	**-2.3**

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*IDC **08** 18:51:06.8±0.6, 85°.21N×12°.46E, h0km, mb3.7/18, mbtmp3.7/19, ML4.6/2, MS3.4/48, Error ellipse: s-maj=17.9km s-min=12.7km az=65.0*

*NEIC **08** 18:51:08.1±2.6, 85°.1N±0°.1×°±°, h10km±2km, mb4.3/9, Error ellipse: s-maj=27.0km s-min=15.1km az=51.0*

*IEPN **08** 18:51:10.0, 85°.21N×12°.08E, h10km*

*KOLA **08** 18:51:12.1, 85°.02N×7°.11E, h0km, ML1.9, Error ellipse: s-maj=125.1km s-min=25.2km az=80.0, Arctic Ocean, Gakkel ridge*

ISC 08 18:51:08.4±0.5**, 85°.00N**±0°.05×**13°.34E**±0°.06**, h10**km**, n119, σ1s87**/108**, mb3.8**/19**, MS3.3**/45**, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOR	**Nord**	**4.80**	**241**	Pn	**Pn**	**18 52 22.4**	**+1.8**
NOR	**Nord**	**4.80**	**241**	iP	**Pn**	**18 52 22.6**	**+2.0**
NOR	**Nord**	**4.80**	**241**	eP	**Pn**	**18 52 22.1**	**+1.5**
ZFI2	**Zemlya Franca-**	**5.82**	**117**	eP	**Pn**	**18 52 35.5**	**+0.9**
ZFI2				eS	**Sn**	**18 53 39.0**	**-2.3**
	55nm,0.4s						
ZFI	**Zemlya Franca-**	**5.83**	**117**	eP	**Pn**	**18 52 35.5**	**+0.8**
ZFI				iS	**Sn**	**18 53 38.6**	**-2.7**
OMEGA	**Omega**	**5.85**	**117**	eP	**Pn**	**18 52 35.7**	**+0.7**
OMEGA				eS	**Sn**	**18 53 39.4**	**-2.6**
	56nm,0.8s						
KBS	**Kingsbay**	**6.11**	**183**	Pn	**Pn**	**18 52 40.5**	**+1.9**
KBS				Sn	**Sn**	**18 53 47.3**	**-1.1**
KBS	**Kingsbay**	**6.11**	**183**		**Pn**	**18 52 39.3**	**+0.7**
KBS	**Kingsbay**	**6.11**	**183**	eP	**Pn**	**18 52 38.9**	**+0.3**
KBS				iS	**Sn**	**18 53 45.9**	**-2.6**
KBS	**Kingsbay**	**6.11**	**183**	P	**Pn**	**18 52 39.3**	**+0.7**
KBS				S	**Sn**	**18 53 46.8**	**-1.7**
KBS	**Kingsbay**	**6.11**	**183**	iP	**Pn**	**18 52 40.2**	**+1.6**
KBS				iS	**Sn**	**18 53 46.2**	**-2.2**
KBS	**Kingsbay**	**6.11**	**183**	eP	**Pn**	**18 52 40.0**	**+1.4**
KBS				eS	**Sn**	**18 53 46.0**	**-2.5**
KBS				IAML		18 53 51.1	
	comp=Z,19nm,0.5s						
SPA0	**Spitsbergen Ar**	**6.88**	**175**	Pn	**Pn**	**18 52 49.8**	**+0.7**
	baz=8.8,slow=14						
SPA0	**Spitsbergen Ar**	**6.88**	**175**	eP	**Pn**	**18 52 49.7**	**+0.6**
SPA0				eS	**Sn**	**18 54 04.6**	**-2.7**
SPA0	**Spitsbergen Ar**	**6.88**	**175**	Pn	**Pn**	**18 52 49.8**	**+0.7**
	baz=8.8,slow=14						
SPA0				eS	**Sn**	**18 54 04.5**	**-2.7**
SPA0				IAML		18 54 18.8	
	comp=Z,8.0nm,0.5s						
SPITS	**Spitsbergen Ar**	**6.88**	**175**	Pn	**Pn**	**18 52 50.1**	**+1.1**
	baz=20,slow=11						
SPITS				Sn	**Sn**	**18 54 03.8**	**-3.5**
	baz=6.3,slow=14						
SPITS	**Spitsbergen Ar**	**6.88**	**175**	P	**Pn**	**18 52 50.1**	**+1.1**
SPITS				S	**Sn**	**18 54 04.5**	**-2.7**
SPB2	**Spitsbergen Ar**	**6.88**	**175**		**Pn**	**18 52 50.7**	**+1.6**
BRBB	**Barentsburg B**	**6.95**	**179**	Pn	**Pn**	**18 52 52.0**	**+2.0**
BRBB				Sn	**Sn**	**18 54 09.1**	**+0.1**
BRBB	**Barentsburg B**	**6.95**	**179**	P	**Pn**	**18 52 50.9**	**+0.8**
BRBB				S	**Sn**	**18 54 09.3**	**+0.4**
BRBB	**Barentsburg B**	**6.95**	**179**	eP	**Pn**	**18 52 51.2**	**+1.2**
BRBB				eS	**Sn**	**18 54 05.8**	**-3.2**
BRBA	**Barentsburg A**	**6.98**	**179**	Pn	**Pn**	**18 52 52.0**	**+1.5**
BRBA				Sn	**Sn**	**18 54 10.3**	**+0.5**
BRBA	**Barentsburg A**	**6.98**	**179**	Pn	**Pn**	**18 52 52.0**	**+1.5**
BRBA				Sn	**Sn**	**18 54 10.3**	**+0.5**
BRBA				IAML		18 54 30.7	
	comp=Z,10nm,0.7s						
HSPB	**Hornsund (broa**	**8.05**	**176**	eP	**Pn**	**18 53 07.3**	**+2.2**
HSPB				eS	**Sn**	**18 54 34.2**	**-1.8**
HSPB	**Hornsund (broa**	**8.05**	**176**	P	**Pn**	**18 53 07.3**	**+2.2**
HSPB				S	**Sn**	**18 54 36.0**	**-0.1**
HSPB	**Hornsund (broa**	**8.05**	**176**	eP	**Pn**	**18 53 06.4**	**+1.3**
HSPB				eS	**Sn**	**18 54 31.6**	**-4.5**
HSPB				IAML		18 55 03.4	
	comp=Z,6.5nm,0.6s						
HOPEN	**Hopen**	**8.71**	**162**	Pn	**Pn**	**18 53 14.9**	**+0.9**
HOPEN				Sn	**Sn**	**18 54 49.8**	**-2.3**
HOPEN	**Hopen**	**8.71**	**162**	eP	**Pn**	**18 53 14.7**	**+0.6**
HOPEN				eS	**Sn**	**18 54 46.9**	**-5.1**
HOPEN	**Hopen**	**8.71**	**162**	eP	**Pn**	**18 53 14.2**	**+0.2**
HOPEN				eS	**Sn**	**18 54 47.0**	**-5.1**
HOPEN				IAML		18 54 52.0	
	comp=Z,10nm,0.5s						
DAG	**Danmarks Havn**	**9.42**	**228**	iP	**Pn**	**18 53 23.4**	**-0.6**
DAG	**Danmarks Havn**	**9.42**	**228**	eP	**Pn**	**18 53 25.2**	**+1.3**
BJO1	**Bjornoya**	**10.60**	**172**	Pn	**Pn**	**18 53 41.1**	**+1.1**
BJO1	**Bjornoya**	**10.60**	**172**	eP	**Pn**	**18 53 40.5**	**+0.5**
BJO1				S	**Sn**	**18 55 33.0**	**-5.4**
BJO1	**Bjornoya**	**10.60**	**172**	eP	**Pn**	**18 53 39.4**	**-0.6**
BJO1				IAML		18 55 44.4	
	comp=Z,14nm,0.9s						
NEEM	**North Greenlan**	**11.39**	**268**	eP	Pn	18 53 47.0	-4.0
NEEM				eS	Sn	18 55 44.7	-14
NEEM				IAML		18 55 52.6	
	comp=Z,6.2nm,0.5s						
SVZ	**Severnaya Zeml**	**11.76**	**67**	eP	**Pn**	**18 53 55.2**	**-0.6**
	comp=Z,4.6nm,1.0s						
SVZ				eS	Sn	18 55 55.0	-12
DBG	**Daneborg**	**11.92**	**227**	Pn	**Pn**	**18 53 57.9**	**-0.1**
DBG	**Daneborg**	**11.92**	**227**	iP	**Pn**	**18 53 57.2**	**-0.8**
DBG	**Daneborg**	**11.92**	**227**	eP	**Pn**	**18 53 56.4**	**-1.7**
TULEG	**Thule**	**13.78**	**283**	Pn	Pn	18 54 17.5	-5.9
HAMF	**Hammerfest**	**14.55**	**166**	eP	**Pn**	**18 54 32.9**	**-1.1**
JMIC	**Jan Mayen**	**14.57**	**209**	LR	LR	18 59 01.9	
	comp=Z,91nm,20.9s,baz=75,slow=32						
VADS	**Vadso**	**15.22**	**159**	eP	**Pn**	**18 54 41.7**	**-1.3**
KEV	**Kevo**	**15.52**	**162**	P	**P**	**18 54 49.7**	**-1.6**
KEV	**Kevo**	**15.52**	**162**	Pn	**P**	**18 54 49.6**	**-1.7**
KEV				IAmb	IAmb	18 54 54.3	
	comp=Z,47nm,1.4s						
KEV	**Kevo**	**15.52**	**162**	eP	**Pn**	**18 54 45.8**	**-1.1**
JETT	**Jettan, Norway**	**15.59**	**171**	P	**P**	**18 54 50.5**	**-1.6**
ARA0	**ARCESS Array S**	**15.70**	**164**	P	**Pn**	**18 54 50.5**	**+1.2**
	baz=356,slow=11						
ARA0	**ARCESS Array S**	**15.70**	**164**	P	**Pn**	**18 54 50.5**	**+1.2**
	baz=356,slow=11						
ARCES	**ARCESS Array B**	**15.70**	**164**	Pn	**Pn**	**18 54 48.4**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=359,slow=12,SNR=23						
ARCES				LR	LR	19 00 16.5	
	comp=Z,86nm,21.6s,baz=67,slow=34						
	comp=Z,1.3nm,0.3s						
ARCES	**ARCESS Array B**	**15.70**	**164**	Pn	**Pn**	**18 54 50.6**	**+1.3**
ARCES				IAmb	IAmb	18 55 23.8	
	comp=Z,23nm,1.4s						
KIF	**Kilpisjarvi**	**16.14**	**170**	P	**P**	**18 54 56.7**	**-1.5**
KIF	**Kilpisjarvi**	**16.14**	**170**	eP	**Pn**	**18 54 55.1**	**+0.2**
KTK1	**Kautokeino**	**16.18**	**167**	eP	**Pn**	**18 54 54.7**	**-0.7**
RES	**Resolute Bay**	**17.63**	**304**	LR	LR	19 02 03.4	
	comp=Z,146nm,18.6s,baz=350,slow=38						
RES	**Resolute Bay**	**17.63**	**304**	Pn	Pn	18 55 07.0	-6.6
LVZ	**Lovozero**	**17.64**	**153**	Pn	**Pn**	**18 55 13.0**	**-0.8**
LVZ				IAmb	IAmb	18 55 27.8	
	comp=Z,39nm,1.2s						
APA0	**Apatity Array**	**17.86**	**155**	P	**Pn**	**18 55 15.9**	**-0.6**
	baz=355,slow=16						
APA0	**Apatity Array**	**17.86**	**155**	P	**Pn**	**18 55 15.9**	**-0.6**
	baz=355,slow=16						
NRIK	**Noril'sk**	**19.99**	**92**	P	**Pn**	**18 55 42.2**	**0.0**
	comp=Z,3.2nm,0.9s,baz=349,slow=12,SNR=5.7						

	comp=Z,3.2nm,0.9s						
NRIK	Noril'sk	19.99	92	P	Pn	18 55 42.9	+0.8
NRIK				IAmb	IAmb	18 56 10.4	
	comp=Z,12nm,1.3s						
TIXI	Tiksi	21.11	53	P	P	18 55 53.5	+0.9
	comp=Z,0.7nm,0.6s,baz=17,slow=19,SNR=1.7						
TIXI				LR	LR	19 02 59.0	
	comp=Z,36nm,21.6s,baz=281,slow=34						
	comp=Z,0.7nm,0.6s						
TIXI	Tiksi	21.11	53	P	P	18 55 55.3	+2.7
LSH	Leshukonskoye	21.18	141	*e*P	P	18 56 00.5	+7.1
	comp=Z,56nm,1.6s						
SFJD	Kangerlussuaq	21.39	256	LR	LR	19 03 39.9	
	comp=Z,58nm,20.7s,baz=352,slow=35						
BORG	Borgarnes	21.44	222	LR	LR	19 02 44.0	
	comp=Z,31nm,20.2s,baz=3.1,slow=32						
FIA1	FINESS Array S	23.83	165	P	P	18 56 23.4	+2.3
FIA0	FINESS Array S	23.83	165	P	P	18 56 24.6	+3.6
	baz=352,slow=10						
FINES	FINESS Array B	23.83	165	P	P	18 56 21.9	+0.8
	comp=Z,7.2nm,0.9s,baz=26,slow=11,SNR=12						
FINES				LR	LR	19 05 06.5	
	comp=Z,65nm,18.3s,baz=50,slow=35						
	comp=Z,7.2nm,0.9s						
FINES	FINESS Array B	23.83	165	P	P	18 56 21.7	+0.6
NOA	NORSAR Array B	24.09	183	P	P	18 56 26.6	+3.0
	comp=Z,3.2nm,0.9s,baz=2.0,slow=9.5,SNR=3.5						
NOA				LR	LR	19 06 28.8	
	comp=Z,51nm,18.1s,baz=5.0,slow=38						
	comp=Z,3.2nm,0.9s						
KLMR	Klimovskoe	24.88	149	*e*P	P	18 56 32.8	+2.1
	comp=Z,25nm,1.3s						
HFS	Hagfors	25.00	180	P	P	18 56 34.3	+2.6
	comp=Z,3.6nm,0.8s,baz=39,slow=7.4,SNR=2.9						
HFS				LR	LR	19 06 16.1	
	comp=Z,54nm,18.0s,baz=334,slow=36						
	comp=Z,3.6nm,0.8s						
FRB	Frobisher Bay	26.14	272	LR	LR	19 06 38.8	
	comp=Z,87nm,18.6s,baz=126,slow=36						
INK	Inuvik	26.18	333	P	P	18 56 39.5	-2.8
	comp=Z,2.4nm,0.9s,baz=9.8,slow=15,SNR=5.5						
INK				LR	LR	19 08 08.5	
	comp=Z,85nm,19.9s,baz=324,slow=39						
	comp=Z,2.4nm,0.9s						
INK	Inuvik	26.18	333	P	P	18 56 40.7	-1.7
INK				IAmb	IAmb	18 56 51.2	
	comp=Z,5.8nm,1.0s						
BMAR	Burnt Mountain	27.44	342	P	P	18 56 53.1	-0.7
KIRV	Kirov	27.66	138	LR	LR	19 09 50.6	
	comp=Z,66nm,19.1s,baz=357,slow=40						
ILAR	Eielson Array	30.16	343	P	P	18 57 16.7	-1.3
	comp=Z,0.4nm,0.8s,baz=0.6,slow=7.6,SNR=6.0						
ILAR				LR	LR	19 08 58.9	
	comp=Z,83nm,19.9s,baz=358,slow=36						
	comp=Z,0.4nm,0.8s						
ARU	Arti	30.39	129	LR	LR	19 13 08.2	
	comp=Z,44nm,20.2s,baz=334,slow=43						
YKA	Yellowknife Ar	31.00	315	P	P	18 57 23.1	-2.2
	comp=Z,0.5nm,0.9s,baz=7.4,slow=8.2,SNR=7.4						
YKA				PcP	PcP	19 00 19.6	-1.2
	comp=Z,0.1nm,0.5s,baz=357,slow=2.0,SNR=3.9						
YKA				LR	LR	19 08 58.1	
	comp=Z,52nm,21.6s,baz=314,slow=35						
	comp=Z,0.5nm,0.9s						
BELG	Belogornoye	33.73	142	LR	LR	19 14 39.8	
	comp=Z,56nm,19.5s,baz=112,slow=42						
MA2	Magadan	34.45	37	LR	LR	19 10 39.8	
	comp=Z,33nm,20.2s,baz=318,slow=34						
BVAR	Borovoye Array	34.64	117	LR	LR	19 15 10.9	
	comp=Z,42nm,18.3s,baz=348,slow=42						
AKASG	Malin Array Be	34.67	162	P	P	18 57 58.7	+1.2
	comp=Z,1.3nm,0.7s,baz=348,slow=8.5,SNR=7.4						
AKASG				LR	LR	19 11 10.5	
	comp=Z,122nm,18.4s,baz=358,slow=34						
	comp=Z,1.3nm,0.7s						
ZALV	Zalesovo Beam	34.92	102	P	P	18 57 58.8	-0.8
	comp=Z,0.4nm,0.5s,baz=343,slow=7.5,SNR=2.6						
ZALV				LR	LR	19 14 25.1	
	comp=Z,48nm,18.1s,baz=22,slow=40						
	comp=Z,0.4nm,0.5s						
VRAC	Vranov	35.85	176	LR	LR	19 13 48.3	
	comp=Z,54nm,18.5s,baz=335,slow=38						
GERES	GERESS Array B	36.31	180	LR	LR	19 12 43.6	
	comp=Z,75nm,19.5s,baz=22,slow=36						
AKTO	Aktyubinsk	36.32	131	LR	LR	19 15 21.4	
	comp=Z,50nm,18.4s,baz=276,slow=40						
KDAK	Kodiak Island	37.29	348	LR	LR	19 12 19.2	
	comp=Z,56nm,21.8s,baz=35,slow=34						
DAVOX	Davos/Dischmat	38.39	184	LR	LR	19 14 19.5	
	comp=Z,41nm,19.7s,baz=342,slow=36						
MLR	Muntele Rosu	39.80	166	LR	LR	19 14 17.7	
	comp=Z,71nm,18.5s,baz=40,slow=35						
MKAR	Makanchi Array	41.80	106	P	P	18 58 57.9	+0.3
	comp=Z,0.2nm,0.8s,baz=0.1,slow=4.4,SNR=2.1						
MKAR				LR	LR	19 19 11.8	
	comp=Z,49nm,18.0s,baz=338,slow=40						
	comp=Z,0.2nm,0.8s						
BBB	Bella Bella	42.04	325	LR	LR	19 17 33.2	
	comp=Z,51nm,18.3s,baz=302,slow=38						
KBZ	Khabaz	42.14	148	P	P	18 59 03.6	+3.3
	comp=Z,2.0nm,0.9s,baz=20,slow=3.1,SNR=4.7						
KBZ				LR	LR	19 17 01.3	
	comp=Z,51nm,19.1s,baz=3.5,slow=37						
	comp=Z,2.0nm,0.9s						
SONM	Songino Array	42.87	81	P	P	18 59 07.9	+1.5
	comp=Z,1.2nm,0.9s,baz=352,slow=5.2,SNR=7.8						
SONM				PcP	PcP	19 00 57.2	+0.2
	comp=Z,0.5nm,0.7s,baz=338,slow=3.1,SNR=3.0						
SONM				LR	LR	19 18 29.9	
	comp=Z,35nm,18.5s,baz=196,slow=38						
	comp=Z,1.2nm,0.9s						
KLR	Kul'dur	43.54	57	LR	LR	19 16 42.9	
	comp=Z,24nm,20.5s,baz=338,slow=35						
AAK	Ala-Archa	45.29	115	LR	LR	19 19 58.0	
	comp=Z,40nm,20.1s,baz=13,slow=38						
NEW	Newport	45.33	314	LR	LR	19 18 20.7	
	comp=Z,76nm,18.3s,baz=4.0,slow=36						
ESDC	Sonseca Array	45.73	199	P	P	18 59 30.6	+1.3
	comp=Z,0.7nm,0.9s,baz=357,slow=7.4,SNR=4.7						
	comp=Z,0.7nm,0.9s						
BRTR	Keskin Array B	45.77	158	LR	LR	19 19 20.7	
	comp=Z,63nm,19.4s,baz=316,slow=37						
GNI	Garni	45.80	146	LR	LR	19 21 46.8	
	comp=Z,34nm,18.8s,baz=286,slow=40						
GEYT	Alibeck	48.77	132	LR	LR	19 24 22.0	
	comp=Z,62nm,20.5s,baz=3.0,slow=41						
CPNY	Central Park	49.35	272	P	P	18 59 53.2	-4.1
ASAJ	Asahikawa	49.38	47	LR	LR	19 20 29.2	
	comp=Z,27nm,18.8s,baz=175,slow=36						
PDAR	Pinedale Array	50.30	307	P	P	19 00 05.0	+0.2
	comp=Z,0.2nm,0.6s,baz=359,slow=8.2,SNR=2.6						
PDAR				LR	LR	19 20 56.5	
	comp=Z,57nm,20.4s,baz=40,slow=36						
	comp=Z,0.2nm,0.6s						
YBH	Yreka Blue Hor	52.17	319	LR	LR	19 23 16.4	
	comp=Z,67nm,18.6s,baz=6.5,slow=37						
ELK	Elko	52.69	312	LR	LR	19 22 25.2	
	comp=Z,52nm,18.8s,baz=22,slow=36						
NVAR	Mina Array Bea	55.20	314	LR	LR	19 24 54.0	
	comp=Z,45nm,18.9s,baz=320,slow=37						
TKL	Tuckaleechee C	55.30	281	LR	LR	19 22 25.7	
	comp=Z,61nm,21.4s,baz=4.0,slow=34						
ANMO	Albuquerque	57.85	303	LR	LR	19 25 45.2	
	comp=Z,68nm,19.5s,baz=104,slow=36						
PFO	Pinyon Flats O	59.87	312	LR	LR	19 27 44.1	
	comp=Z,45nm,18.3s,baz=40,slow=37						
TXAR	Lajitas Array	63.21	299	P	P	19 01 34.9	-1.5
	comp=Z,0.4nm,0.8s,baz=10,slow=5.5,SNR=3.2						
TXAR				LR	LR	19 29 13.8	
	comp=Z,61nm,18.4s,baz=336,slow=36						
	comp=Z,0.4nm,0.8s						
LPIG	La Paz	68.90	305	LR	LR	19 32 40.5	
	comp=Z,51nm,18.4s,baz=221,slow=36						
CMAR	Chiang Mai Arr	71.34	93	P	P	19 02 28.0	0.0
	comp=Z,1.2nm,0.8s,baz=346,slow=7.5,SNR=8.3						
CMAR				LR	LR	19 36 30.3	
	comp=Z,27nm,18.3s,baz=165,slow=38						
	comp=Z,1.2nm,0.8s						
TORD	Torodi Ar. Bea	72.01	192	P	P	19 02 33.5	+1.6
	comp=Z,1.1nm,1.0s,baz=356,slow=5.6,SNR=4.4						
	comp=Z,1.1nm,1.0s						
JTS	Las Juntas de	80.54	279	LR	LR	19 38 23.8	
	comp=Z,35nm,19.2s,baz=62,slow=35						
ASAR	Alice Springs	116.01	61	PKP	PKPdf	19 09 49.0	-1.6
	comp=Z,0.2nm,0.6s,baz=22,slow=1.8,SNR=4.3						
STKA	Stephens Creek	124.73	54	PKP	PKPdf	19 10 05.8	-1.3
	comp=Z,0.6nm,0.2s,baz=312,slow=8.2,SNR=3.2						

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*DDA **08** 19:03:37.9±0.0, 39°.58N×26°.10E, h7^{km}±1^{km}, ML2.6*
*ISK **08** 19:03:37.1, 39°.55N×26°.05E, h8^{km}, ML2.8/24*
*THE **08** 19:03:37.8, 39°.56N×26°.05E, h6^{km}±9^{km}, ML2.5/6, Error ellipse: s-maj=9.1km s-min=0.5km az=119.0*
*ATH **08** 19:03:38.2, 39°.54N×26°.03E, h13^{km}±2^{km}, ML2.5/5, Error ellipse: s-maj=2.7km s-min=0.8km az=225.0*
ISC 08 19:03:37.7±0.9**, 39°.56N**±0°.02×**26°.06E**±0°.02**, h14**^{km}±6^{km}**, n61, σ0^{s}.52**/83**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.08	131	P	Pg	19 03 40.2	-0.4
GPNR	Gulpinar-Canak	0.11	150	Pg	Pg	19 03 40.4	-0.5
BOZC	Bozcaada	0.29	359	Pg	Pg	19 03 43.7	0.0
BOZC				Sg	Sg	19 03 47.9	+0.1
EZN	Ezine	0.34	37	P	Pg	19 03 44.5	-0.1
EZN				S	Sg	19 03 49.3	0.0
	930nm,0.3s						
EZN	Ezine	0.34	37	Pg	Pg	19 03 44.6	-0.1
EZN				Sg	Sg	19 03 49.4	+0.1
PRK	Paraskevi	0.35	152	P	Pg	19 03 44.9	+0.1
PRK				S	Sg	19 03 49.9	+0.3
	2µm,0.4s						
PRK	Paraskevi	0.35	152	P	Pg	19 03 44.9	+0.1
PRK				S	Sg	19 03 49.9	+0.3
PRK				AML	AML	19 03 50.2	
	comp=N,2508µm,0.4s						
PRK				AML	AML	19 03 51.5	
	comp=E,4517µm,0.4s						
SIGR	SIGRI	0.38	205	P	Pg	19 03 45.3	0.0
SIGR				S	Sg	19 03 50.6	+0.2
	comp=E,1µm,0.3s						
SIGR	SIGRI	0.38	205	Pg	Pg	19 03 44.9	-0.4
SIGR				Sg	Sg	19 03 50.6	+0.2
SIGR	SIGRI	0.38	205	P	Pg	19 03 45.3	0.0
SIGR				S	Sg	19 03 50.6	+0.2
SIGR				AML	AML	19 03 51.3	
	comp=E,2481µm,0.2s						
SIGR				AML	AML	19 03 51.7	
	comp=N,2072µm,0.3s						
BAYC	CANAKKALE_Bayr	0.42	64	P	Pg	19 03 45.7	-0.4
BAYC				S	Sg	19 03 51.0	-0.8
ECEA	Canakkale, Ece	0.50	10	P	Pg	19 03 47.2	-0.3
ECEA				*i* AML	AML	19 03 55.0	
	comp=N,619nm,0.3s						
ECEA				S	Sb	19 03 55.4	0.0
COMU	Canakkale	0.63	30	Pg	Pg	19 03 49.9	-0.1
COMU				Sg	Sb	19 03 59.3	0.0
GOKA	anakkale-Gk	0.65	350	P	Pg	19 03 50.0	-0.3
GADA	Gvkgeada	0.65	349	Pg	Pg	19 03 49.9	-0.4
LIA	Limnos Island	0.76	297	P	Pg	19 03 52.6	+0.2
LIA				S	Sg	19 04 02.6	+0.2
	comp=N,922nm,0.3s						
LIA	Limnos Island	0.76	297	P	Pg	19 03 52.6	+0.2
LIA				S	Sg	19 04 02.6	+0.2
LIA				AML	AML	19 04 05.7	
	comp=N,1712µm,0.3s						
LIA				AML	AML	19 04 05.7	
	comp=E,1963µm,0.3s						
BUHA	Balikesir, Bur	0.79	94	P	Pg	19 03 52.7	-0.3
BUHA				S	Sg	19 04 03.2	-0.1
DKL	Dikili	0.81	126	Pg	Pg	19 03 53.7	+0.2
DKL				Sg	Sb	19 04 05.2	+0.7
CANM	Can-anakkale	0.89	59	Pg	Pg	19 03 55.3	+0.4
GELI	Tayfur-Gelibol	0.90	21	Pg	Pg	19 03 54.7	-0.4
KARB	zmir-Karabur	0.93	163	P	Pg	19 03 55.5	-0.2
KARB				S	Sg	19 04 07.7	-0.2
KARB				*i* AML	AML	19 04 09.0	
	comp=E,144nm,0.7s						
LPK	Lapseki	0.98	33	Pg	Pg	19 03 56.1	-0.5
ZEDA	zmir-Bergama	0.98	126	P	Pg	19 03 56.3	-0.4
SMTH	Samothraki Isl	1.00	336	P	Pg	19 03 56.6	-0.4
SMTH				S	Sb	19 04 10.3	+0.4
	comp=E,128nm,0.2s						
SMTH	Samothraki Isl	1.00	336	P	Pg	19 03 56.6	-0.4
SMTH				S	Sb	19 04 10.3	+0.4
SMTH				AML	AML	19 04 12.1	
	comp=E,201µm,0.2s						
SMTH				AML	AML	19 04 13.0	
	comp=N,310µm,0.2s						
PSRA	Psara	1.08	201	P	Pg	19 03 58.5	-0.1
CAVK	Edirne/Enez-Ca	1.14	4	P	Pg	19 03 58.6	-1.0
CHOS	Chios island	1.17	180	P	Pg	19 03 58.8	-1.4
CHOS	Chios island	1.17	180	P	Pg	19 03 58.8	-1.4
ERIK	Erikli-Kesan	1.17	17	Pn	Pg	19 03 59.2	-1.0
ENEZ	Enez	1.18	3	Pn	Pb	19 03 59.9	0.0
URLA	Izmir	1.26	161	Pn	Pn	19 04 00.5	-0.5
KRBG	Karabiga-Canak	1.27	48	Pn	Pn	19 04 01.1	+0.1
STEP	BALIKESIR_Sava	1.30	97	P	Pn	19 04 01.1	-0.3
KNL	Balıkesir	1.33	57	P	Pn	19 04 02.0	+0.1
KNL				S	Sb	19 04 20.5	+0.9
KNL				*i* AML	AML	19 04 21.0	
	comp=N,271nm,0.9s						
ALN	Alexandroupoli	1.34	360	P	Pn	19 04 02.3	+0.2
ALN				S	Sb	19 04 20.1	+0.4
	comp=N,120nm,0.4s						
ALN	Alexandroupoli	1.34	360	Pn	Pn	19 04 02.5	+0.5
ALN	Alexandroupoli	1.34	360	P	Pn	19 04 02.3	+0.2
ALN				S	Sb	19 04 20.1	+0.4
ALN				AML	AML	19 04 21.6	
	comp=E,315µm,0.5s						
ALN				AML	AML	19 04 21.8	
	comp=N,159µm,0.4s						
GONE	Gonen-Balikesi	1.35	68	Pn	Pn	19 04 02.5	+0.4
BLCB	Balcova	1.40	146	Pn	Pn	19 04 03.4	+0.6
BALB	Balikesir	1.41	86	Pn	Pn	19 04 02.5	-0.5
RKY	Sarkoy-Tekirda	1.42	37	Pn	Pn	19 04 03.3	+0.1
THAS	Thassos island	1.47	316	P	Pn	19 04 03.7	-0.1
THAS	Thassos island	1.47	316	P	Pn	19 04 03.7	-0.1
THAS				S	Sn	19 04 21.7	-1.2
EDC	Edincik	1.60	60	Pn	Pn	19 04 06.0	+0.4
UKOP	Uzunkopru-Edir	1.63	15	Pn	Pn	19 04 06.5	+0.5
RDO	Rodhopi	1.64	346	P	Pn	19 04 06.3	+0.2
RDO	Rodhopi	1.64	346	Pn	Pn	19 04 06.7	+0.6
RDO	Rodhopi	1.64	346	P	Pn	19 04 07.0	+0.9
OUR	Ouranopolis	1.78	297	Pn	Pn	19 04 09.1	+1.1
TKR	Tekirdag	1.82	38	Pn	Pn	19 04 09.7	+1.0
KAVA	Kavala	1.86	321	P	Pn	19 04 09.2	0.0
KAVA	Kavala	1.86	321	P	Pn	19 04 09.2	0.0
KCTX	Karacabey (Bur	1.90	67	Pn	Pn	19 04 10.9	+1.1
KOKK	Kokkinochori,	2.02	309	P	Pn	19 04 11.5	+0.1
KOKK	Kokkinochori,	2.02	309	P	Pn	19 04 11.5	+0.1
CRLT	Corlu	2.03	39	Pn	Pn	19 04 12.3	+0.8
KULA	Kula-Manisa	2.28	116	Pn	Pn	19 04 15.9	+0.9
KNT	Kendrikon	2.90	305	P	Pn	19 04 23.9	+0.4
KNT	Kendrikon	2.90	305	P	Pn	19 04 24.2	+0.7

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*IDC **08** 19:11:37.1±1.4, 20°.44S×178°.59W, h601^{km}±15^{km}, mb3.3/12, mbtmp4.3/14, Error ellipse: s-maj=19.9km s-min=14.4km az=143.0*
*NEIC **08** 19:11:37.2±1.1, 20°.49S±0°.05×178°.5W±0°.2, h613^{km}±8^{km}, mb4.4/63, Error ellipse: s-maj=22.6km s-min=6.4km az=82.0*
ISC 08 19:11:35.5±0.5**, 20°.54S**±0°.09×**178°.61W**±0°.08**, h587**^{km}**, n113, σ1^{s}.21**/117**, mb4.3**/43**, 4C-4D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.21	311	P	P	19 13 05.3	+3.6
	66nm,0.5s,baz=153,slow=6.8,SNR=40						
MSVF	Nonsavu	4.21	311	P	P	19 13 05.7	+4.0
AFI	Afiamalu	9.28	46	P	P	19 13 46.2	-0.8
	34nm,0.5s,baz=163,slow=20,SNR=5.2						
PINNC	Pines Island,	13.13	258	P	P	19 14 27.0	+1.2
LIFNC	LIFOU	13.25	266	P	P	19 14 25.1	-1.9
OUENC	Ouen Island, N	13.67	260	P	P	19 14 29.1	-2.2
URZ	Urewera	18.04	191	P	P	19 15 09.8	-2.0
	7.0nm,0.3s,baz=15,slow=1.0,SNR=16						
RTZ	Ruatahuna	18.41	191	P	P	19 15 14.6	-0.7
RTZ				IAmb	IAmb	19 15 30.5	
	comp=Z,23nm,1.4s						
BKZ	Black Stump Fm	19.04	192	P	P	19 15 19.8	-1.1
BKZ				IAmb	IAmb	19 15 20.8	
	comp=Z,22nm,1.3s						
BFZ	Birch Farm	20.55	191	P	P	19 15 33.5	-1.1
MRZ	Mangatainoka R	20.66	193	P	P	19 15 34.0	-1.5
QRZ	Quartz Range	21.58	199	P	P	19 15 43.2	-0.6
DSZ	Denniston Nort	22.64	199	P	P	19 15 53.5	+0.1
KHZ	Kahutara	22.79	195	P	P	19 15 53.4	-1.1
GVZ	Greta Valley S	23.44	196	P	P	19 15 59.0	-1.3
LTZ	Lake Taylor	23.46	197	P	P	19 15 58.5	-2.0
WKZ	Wanaka	26.30	200	P	P	19 16 25.4	-0.2
WHZ	Wether Hill Ro	27.59	201	P	P	19 16 38.6	+1.8
CTAO	Charters Tower	32.91	265	P	P	19 17 24.2	+1.3
CTAO				IAmb	IAmb	19 17 40.0	
	comp=Z,11nm,1.2s						
COEN	Coen	37.01	274	P	P	19 17 58.5	+1.6
BBOO	Buckleboo	42.02	243	P	P	19 18 37.6	+0.9
BBOO				IAmb	IAmb	19 18 57.5	
	comp=Z,12nm,1.4s						
WR0	Warramunga Arr	43.84	262	P	P	19 18 51.2	+0.1
AS31	Alice Springs	43.95	257	P	P	19 18 52.6	+0.7
ASAR	Alice Springs	43.95	257	P	P	19 18 52.6	+0.7
	comp=Z,4.4nm,0.5s,baz=95,slow=7.5,SNR=92						
ASAR				PcP	PcP	19 20 24.6	0.0
	comp=Z,0.8nm,0.5s,baz=100,slow=3.8,SNR=6.4						
ASAR				ScP	ScP	19 23 19.9	-1.1
	comp=Z,0.3nm,0.9s,baz=120,slow=5.6,SNR=1.7						
ASAR				S	S	19 24 39.4	-2.7
	comp=Z,1.6nm,0.8s,baz=94,slow=15,SNR=9.9						
	comp=Z,4.4nm,0.5s						
ASAR	Alice Springs	43.95	257	P	P	19 18 52.2	+0.3
WB0	Warramunga Arr	44.00	262	P	P	19 18 52.8	+0.4
WB0				IAmb	IAmb	19 18 53.1	
	comp=Z,5.7nm,0.5s						
WB2	Warramunga Arr	44.01	262	P	P	19 18 52.6	+0.2
WRAB	Tennant Creek	44.02	262	P	P	19 18 52.5	+0.1
WRAB				IAmb	IAmb	19 19 00.3	
	comp=Z,20nm,1.4s						
WRA	Warramunga Arr	44.03	262	P	P	19 18 52.8	+0.3
	comp=Z,2.3nm,0.3s,baz=97,slow=7.8,SNR=77						
WRA				PcP	PcP	19 20 24.9	0.0
	comp=Z,0.3nm,0.5s,baz=100,slow=3.0,SNR=1.8						
WRA				S	S	19 24 38.8	-4.4
	comp=Z,0.4nm,0.8s,baz=99,slow=12,SNR=2.8						
	comp=Z,2.3nm,0.3s						
WRA	Warramunga Arr	44.03	262	P	P	19 18 52.1	-0.4
MTN	Manton Dam	48.59	271	P	P	19 19 26.4	-0.6
MTN				IAmb	IAmb	19 19 27.6	
	comp=Z,8.4nm,0.7s						
FORT	Forrest	48.75	247	P	P	19 19 26.4	-1.6
FORT				IAmb	IAmb	19 19 30.5	
	comp=Z,11nm,1.0s						
KNRA	Kununurra	50.08	266	P	P	19 19 38.5	+0.6
KNRA				IAmb	IAmb	19 19 41.2	
	comp=Z,13nm,1.1s						
FAKI	Fak Fak	50.95	283	P	P	19 19 45.0	+0.7
FAKI				IAmb	IAmb	19 19 59.2	
	comp=Z,26nm,1.1s						
FITZ	Fitzroy Crossi	52.45	263	P	P	19 19 55.3	+0.4
SOEI	Soe	55.93	272	P	P	19 20 21.1	+1.6
SOEI				IAmb	IAmb	19 20 31.2	
	comp=Z,24nm,0.9s						
PSA00	Pilbara Seismi	57.10	257	P	P	19 20 27.4	+0.1
PSA00				IAmb	IAmb	19 20 48.4	
	comp=Z,30nm,1.4s						
MBWA	Marble Bar	57.28	258	P	P	19 20 28.7	+0.1
MBWA				IAmb	IAmb	19 20 46.5	
	comp=Z,25nm,1.4s						
VNDA	Vanda	57.82	185	P	P	19 20 32.5	+1.2
	comp=Z,1.9nm,0.9s,baz=5.8,slow=7.8,SNR=7.2						
	comp=Z,1.9nm,0.9s						
VNDA	Vanda	57.82	185	P	P	19 20 32.5	+1.2
JAGI	Jajag, Banyuwa	65.81	270	P	P	19 21 23.8	-0.3
KKM	Kota Kinabalu	69.21	285	P	P	19 21 45.2	+0.2
KKM				IAmb	IAmb	19 22 25.9	
	comp=Z,27nm,1.5s						
QSPA	South Pole Qui	69.53	180	P	P	19 21 46.7	+0.7
MJAR	Matsushiro Arr	69.90	324	P	P	19 21 48.6	+0.1
	comp=Z,2.1nm,0.6s,baz=164,slow=6.2,SNR=7.2						
	comp=Z,2.1nm,0.6s						
JSU	Suzuyama	71.15	316	P	P	19 21 56.4	+0.4
JHS	Saijyo	71.76	320	P	P	19 22 00.5	+1.0
TPUB	Ta-pu	73.52	303	P	P	19 22 08.7	-1.0
SSLB	Suanglung	73.52	304	P	P	19 22 09.2	-0.6
SSLB				IAmb	IAmb	19 22 23.4	
	comp=Z,18nm,1.2s						
PETK	Petropavlovsk-	76.16	346	P	P	19 22 23.0	-0.9
	comp=Z,3.8nm,0.7s,baz=101,slow=7.7,SNR=7.1						
	comp=Z,3.8nm,0.7s						
PETK	Petropavlovsk-	76.16	346	P	P	19 22 23.4	-0.4
KSRS	Korea Array	76.54	319	P	P	19 22 27.0	+0.8
	comp=Z,1.0nm,0.6s,baz=140,slow=5.9,SNR=4.6						
	comp=Z,1.0nm,0.6s						
BELA	Belgrano 2	79.59	173	P	P	19 22 41.9	-0.1
NVAR	Mina Array Bea	81.45	44	P	P	19 22 53.4	+0.8
	comp=Z,0.6nm,0.6s,baz=226,slow=8.4,SNR=6.6						
	comp=Z,0.6nm,0.6s						
CNPM	China Poot	82.87	14	P	P	19 22 58.8	-0.2
ILSW	Iliamna Southw	82.88	13	P	P	19 22 58.5	-0.6
BRLK	Bradley Lake	83.17	14	P	P	19 23 00.0	-0.3
BRLK				IAmb	IAmb	19 23 09.6	
	comp=Z,10nm,1.1s						
N19K	Bonanza Creek	83.38	12	P	P	19 23 01.0	-0.6
N19K				IAmb	IAmb	19 23 34.9	
	comp=Z,22nm,1.5s						
SVW2	Sparrevohn	83.45	11	P	P	19 23 01.2	-0.6
SVW2				IAmb	IAmb	19 23 02.2	
	comp=Z,13nm,1.3s						
GSI	Gunungsitoli	84.66	273	P	P	19 23 09.8	+1.0
GSI				IAmb	IAmb	19 23 10.8	
	comp=Z,4.8nm,0.6s						
PPLA	Purkeypile	85.73	12	P	P	19 23 11.9	-1.1
PPLA				IAmb	IAmb	19 23 49.5	
	comp=Z,14nm,1.4s						
K20K	Telida	85.81	11	P	P	19 23 13.0	-0.2
SCM	Sheep Creek Mo	85.81	14	P	P	19 23 12.8	-0.5
SCM				IAmb	IAmb	19 23 13.7	
	comp=Z,7.8nm,0.8s						
CAST	Castle Rocks	86.23	12	P	P	19 23 14.0	-1.2
N25K	Chitina, Valde	86.28	16	P	P	19 23 15.3	-0.2
N25K				IAmb	IAmb	19 23 38.8	
	comp=Z,6.3nm,1.2s						
GLB	Gilahina Butte	86.34	16	P	P	19 23 15.6	-0.2
GLB				IAmb	IAmb	19 23 49.7	
	comp=Z,6.6nm,1.2s						
BARN	Barnard Glacie	86.59	17	P	P	19 23 17.3	+0.2
BARN				IAmb	IAmb	19 23 17.6	
	comp=Z,5.2nm,1.0s						
TRF	Thorofare Moun	86.61	12	P	P	19 23 16.4	-0.8
TRF				IAmb	IAmb	19 23 17.8	
	comp=Z,6.5nm,0.8s						
MCK	McKinley	87.14	13	P	P	19 23 18.3	-1.1
MCK				IAmb	IAmb	19 24 00.5	
	comp=Z,7.3nm,1.3s						
TXAR	Lajitas Array	87.56	58	P	P	19 23 23.0	+0.7
	comp=Z,0.5nm,0.9s,baz=207,slow=8.0,SNR=4.4						
	comp=Z,0.5nm,0.9s						
MLY	Manley	87.95	11	P	P	19 23 22.4	-0.9
WRH	Wood River Hil	87.97	13	P	P	19 23 22.5	-0.8
WRH				IAmb	IAmb	19 23 23.5	
	comp=Z,5.5nm,0.8s						
DOT	Dot Lake	88.15	15	P	P	19 23 23.0	-1.2
H21K	Melozitna Rive	88.15	10	P	P	19 23 23.6	-0.5
HDA	Harding Lake	88.15	13	P	P	19 23 23.6	-0.5
HDA				IAmb	IAmb	19 23 24.4	
	comp=Z,3.5nm,0.6s						
CCB	Clear Creek Bu	88.18	13	P	P	19 23 23.6	-0.6
CCB				IAmb	IAmb	19 23 24.2	
	comp=Z,4.8nm,0.7s						
IMAR	Indian Mountai	88.29	10	P	P	19 23 24.7	-0.1
MDM	Murphy Dome	88.37	12	P	P	19 23 24.4	-0.8
MDM				IAmb	IAmb	19 23 25.2	
	comp=Z,3.9nm,0.8s						
IL31		88.48	13	P	P	19 23 24.9	-0.6
IL31				IAmb	IAmb	19 23 33.6	
	comp=Z,5.6nm,1.4s						
ILAR	Eielson Array	88.48	13	P	P	19 23 24.8	-0.9
	comp=Z,1.0nm,0.5s,baz=221,slow=5.6,SNR=19						
	comp=Z,1.0nm,0.5s						
ILAR	Eielson Array	88.48	13	P	P	19 23 25.0	-0.7
J26L	Joseph Creek	88.99	14	P	P	19 23 28.6	+0.5
J26L				IAmb	IAmb	19 23 29.5	
	comp=Z,3.7nm,0.8s						
M30M	Minto, Yukon	89.19	18	P	P	19 23 29.5	+0.4
M30M				IAmb	IAmb	19 23 30.4	
	comp=Z,3.7nm,1.1s						
BW06	Boulder Array	89.39	43		P	19 23 30.1	-0.6
PDAR	Pinedale Array	89.39	43	P	P	19 23 30.8	+0.1
	comp=Z,0.7nm,0.6s,baz=192,slow=4.1,SNR=7.3						
	comp=Z,0.7nm,0.6s						
PDAR	Pinedale Array	89.39	43	P	P	19 23 30.4	-0.3
CMAR	Chiang Mai Arr	89.59	290	P	P	19 23 33.5	+1.6
	comp=Z,1.6nm,0.9s,baz=126,slow=2.7,SNR=14						
	comp=Z,1.6nm,0.9s						
CMAR	Chiang Mai Arr	89.59	290	P	P	19 23 32.4	+0.5
PLCA	Paso Flores	89.66	134	P	P	19 23 32.9	+0.9

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             comp=Z,2.3nm,1.0s,baz=180,slow=5.3,SNR=2.8
             comp=Z,2.3nm,1.0s
ARCES  ARCESS Array B 128.85 349  PKP      PKPdf    19 29 35.3 -1.1
             comp=Z,2.7nm,0.9s,baz=0.0,slow=1.2,SNR=7.7
FINES  FINESS Array B 135.65 343  PKP      PKPdf    19 29 49.0 -0.4
             comp=Z,0.9nm,0.7s,baz=98,slow=3.2,SNR=7.0
AKASG  Malin Array Be 142.77 331  PKhKP    PKPpre   19 29 59.2
             comp=Z,5.4nm,0.4s,baz=42,slow=4.2,SNR=58
AKASG  Malin Array Be 142.77 331           PKPdf    19 29 59.4 -3.2
AKBB   Malin Array Si 142.77 331           PKPdf    19 29 59.2 -3.3
AK05   Malin Array Si 142.83 331  PKPdf    PKPdf    19 29 59.6 -3.1
GAZ    Gaziantep      144.77 306  PKPdf    PKPdf    19 30 05.7 -0.9
SORM   Soroca         144.94 328 ⇑P        PKPbc    19 30 06.8 -0.4
BNN    Bunyan         145.21 309  PKPdf    PKPdf    19 30 06.6 -0.8
BRTR   Keskin Array B 146.44 312  PKPbc    PKPbc    19 30 11.6 -0.3
             comp=Z,2.0nm,0.6s,baz=134,slow=4.2,SNR=5.0
BUR08  Bucovina Ar. S 146.80 330  PKPbc    PKPbc    19 30 11.8 -0.8
BURAR  Bucovina Array 146.81 330 ⇑P        PKPbc    19 30 13.2 +0.6
BURAR  Bucovina Array 146.81 330  PKPbc    PKPbc    19 30 11.6 -1.0
DOPR   Dopca          147.90 328 ⇑P        PKPbc    19 30 14.5 -0.9
CLL    Collm          147.97 346 i PKPbc   PKPbc    19 30 15.2 -0.1
             comp=Z,9.0nm,0.7s
CLL                              i PKPab   PKPab    19 30 19.9 -0.3
             comp=Z,5.0nm,0.8s
DPC    Dobruska-Polom 147.99 342 ePKP      PKPbc    19 30 15.8 +0.3
VOIR                  148.44 327 ⇓P        PKiKP    19 30 17.5 -0.4
ARR    Arges          148.70 328 ⇓P        PKiKP    19 30 17.9 -0.6
PRU    Pruhonice      148.81 344 ePKP      PKPbc    19 30 17.6 +0.1
SIRR   Siria          149.44 332 ⇑P        PKiKP    19 30 19.3 -0.6
KHC    Kasperske Hory 149.85 344 ePKP      PKPbc    19 30 19.9 -0.2
CKRC   Cesky Krumlov  149.94 343 ePKP      PKPbc    19 30 20.0 -0.2
BZS    Buzias         149.96 331 ⇓P        PKPbc    19 30 19.0 -1.4
GERES  GERESS Array B 150.08 344  PKPbc    PKPbc    19 30 20.0 -0.7
             comp=Z,0.9nm,0.6s,baz=73,slow=6.0,SNR=4.6
HERR   Herculane      150.14 329 ⇓P        PKPbc    19 30 19.8 -1.0
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*NEIC **08** 19:28:40.1±1.1, 21.°0S±0.°1×178.°1W±0.°1, h501km±9km, mb4.2/15, Error ellipse: s-maj=21.2km s-min=18.2km az=131.0*

*IDC **08** 19:28:41.6±2.1, 20.°90S×178.°30W, h511km±19km, mb3.1/10, mbtmp3.9/11, Error ellipse: s-maj=30.6km s-min=17.2km az=137.0*

ISC 08 19:28:39.9±0.6**, 21.°0S**±0.°1×**178.°2W**±0.°1**, h495**km**, n32, σ0.s84**/34**, mb3.9**/19**, Fiji Islands region**

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Code   Station Name      Δ°  AZ°   Phase ID          Time     Res
                                   Op      ISC       h  m  s   ISC
MSVF   Nonsavu          4.80 312   P       P        19 30 06.4 +1.4
             45nm,0.5s,baz=30,slow=20,SNR=37
MSVF   Nonsavu          4.80 312   P       P        19 30 05.8 +0.8
URZ    Urewera         17.63 192   P       P        19 32 14.6 -2.3
             8.9nm,0.8s,baz=349,slow=14,SNR=2.0
QRZ    Quartz Range    21.24 200   P       P        19 32 50.3 +0.5
LTZ    Lake Taylor     23.10 198   P       P        19 33 06.6  0.0
LTZ                                IAmb    IAmb     19 33 49.4
             comp=Z,40nm,1.5s
WHZ    Wether Hill Ro  27.26 201   P       P        19 33 42.6 -0.8
WHZ                                IAmb    IAmb     19 33 45.0
             comp=Z,12nm,1.1s
CTAO   Charters Tower  33.22 265   P       P        19 34 34.7 -0.6
CTAO                               IAmb    IAmb     19 34 58.7
             comp=Z,12nm,1.3s
TOO    Toolangi        35.41 234   P       P        19 34 53.0 -0.5
TOO                                IAmb    IAmb     19 35 32.4
             comp=Z,18nm,1.2s
STKA   Stephens Creek  37.36 245   P       P        19 35 10.4 +0.7
             comp=Z,0.7nm,0.3s,baz=50,slow=7.9,SNR=2.9
             comp=Z,0.7nm,0.3s
BBOO   Buckleboo       42.12 244   P       P        19 35 48.2 +0.2
BBOO                               IAmb    IAmb     19 36 20.6
             comp=Z,10.0nm,1.2s
ASAR   Alice Springs   44.19 257   P       P        19 36 04.9 +0.5
             comp=Z,0.7nm,0.5s,baz=89,slow=8.6,SNR=15
ASAR                               PcP     PcP      19 37 38.2 -0.5
             comp=Z,0.3nm,0.8s,baz=94,slow=5.8,SNR=2.0
ASAR                               ScP     ScP      19 40 42.0 -1.2
             comp=Z,0.2nm,0.6s,baz=114,slow=4.5,SNR=1.4
             comp=Z,0.7nm,0.5s
WB0    Warramunga Arr  44.29 263   P       P        19 36 05.0 -0.2
WB0                                IAmb    IAmb     19 36 40.5
             comp=Z,5.6nm,1.5s
WRA    Warramunga Arr  44.31 263   P       P        19 36 05.3 -0.1
             comp=Z,0.9nm,0.6s,baz=96,slow=7.3,SNR=11
             comp=Z,0.9nm,0.6s
WRA    Warramunga Arr  44.31 263   P       P        19 36 05.3 -0.1
KNRA   Kununurra       50.41 267   P       P        19 36 52.1 +0.8
KNRA                               IAmb    IAmb     19 37 16.5
             comp=Z,15nm,1.2s
VNDA   Vanda           57.36 185   P       P        19 37 41.1 +1.4
             comp=Z,0.9nm,0.8s,baz=0.0,slow=7.1,SNR=1.7
             comp=Z,0.9nm,0.8s
VNDA   Vanda           57.36 185   P       P        19 37 41.0 +1.4
QSPA   South Pole Qui  69.04 180   P       P        19 38 55.9 +0.7
ADK    Adak            72.61   1   P       P        19 39 15.0 -1.1
PEA0B  Petropavlovsk-  76.73 345   P       P        19 39 39.6 +0.3
PETK   Petropavlovsk-  76.73 345   P       P        19 39 39.3  0.0
             comp=Z,3.5nm,0.9s,baz=132,slow=8.7,SNR=5.7
             comp=Z,3.5nm,0.9s
PETK   Petropavlovsk-  76.73 345   P       P        19 39 39.6 +0.3
NVAR   Mina Array Bea  81.56  43   P       P        19 40 05.9 +0.2
             comp=Z,0.3nm,0.5s,baz=219,slow=9.2,SNR=3.8
             comp=Z,0.3nm,0.5s
SEY    Seymchan        86.84 347   P       P        19 40 30.5 -0.2
             comp=Z,1.5nm,0.6s,baz=119,slow=6.1,SNR=9.9
             comp=Z,1.5nm,0.6s
TXAR   Lajitas Array   87.53  57   P       P        19 40 35.7 +0.8
             comp=Z,0.9nm,1.0s,baz=224,slow=5.0,SNR=4.0
             comp=Z,0.9nm,1.0s
MLY    Manley          88.36  11   P       P        19 40 37.2 -0.7
MLY                                IAmb    IAmb     19 40 53.6
             comp=Z,4.5nm,1.5s
WRH    Wood River Hil  88.37  13   P       P        19 40 37.4 -0.4
WRH                                IAmb    IAmb     19 40 37.7
             comp=Z,2.5nm,1.0s
IMAR   Indian Mountai  88.72  10   P       P        19 40 39.2 -0.3
ILAR   Eielson Array   88.88  13   P       P        19 40 39.0 -1.2
             comp=Z,0.3nm,0.6s,baz=228,slow=2.8,SNR=4.8
             comp=Z,0.3nm,0.6s
CMAR   Chiang Mai Arr  90.09 290   P       P        19 40 47.0 +0.1
             comp=Z,0.5nm,0.8s,baz=123,slow=3.4,SNR=4.3
             comp=Z,0.5nm,0.8s
AKASG  Malin Array Be 143.37 331   PKP     PKPab    19 47 14.7 -0.6
             comp=Z,2.1nm,0.6s,baz=41,slow=4.0,SNR=15
CLL    Collm          148.53 346 i PKPbc   PKiKP    19 47 30.6 -0.8
             comp=Z,5.0nm,0.8s
CLL                              i PKPab   PKPab    19 47 35.8 +0.3
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*IDC **08** 19:37:17.5±0.7, 39.°96N×145.°04E, h0km, mb3.7/17, mbtmp3.8/21, ML3.5/4, MS3.0/8, Error ellipse: s-maj=18.5km s-min=15.9km az=119.0*

*NIED **08** 19:37:21.5, 40.°07N×144.°84E, h44km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.07; $M_{\theta\theta}$0.26; $M_{\phi\phi}$0.80; $M_{r\theta}$0.41; $M_{\theta\phi}$0.22; $M_{\phi r}$0.20; Fault plane solution: $M_0$1.06000×10^{15} NP1: ϕ_s214.00000°, δ56.00000°, λ-75.00000°. NP2: ϕ_s9.00000°, δ37.00000°, λ-110.00000°.*

*JMA **08** 19:37:21.5±0.3, 40.°1N±0.°8×14 °5E± °, h44km, MV4.1/30, FAR E OFF NORTH HONSHU*

ISC 08 19:37:22.2±0.7**, 40.°01N**±0.°05×**144.°92E**±0.°07**, h32**km**, n44, σ1.s88**/60**, mb3.8**/17**, MS3.3**/4**, Off east coast of Honshu**

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Code   Station Name      Δ°  AZ°   Phase ID          Time     Res
                                   Op      ISC       h  m  s   ISC
JTH    Tanohata         2.35 269   P       Pn       19 37 57.6 -0.9
JTH                               eS       Sn       19 38 24.6 -1.8
JEM    Erimo            2.41 327  eP       Pn       19 37 58.8 -0.6
JEM                               eS       Sn       19 38 26.7 -1.1
MIYJ   Miyakonagasawa   2.43 261   P       Pn       19 37 59.3 -0.4
MIYJ                               S       Sn       19 38 27.4 -0.8
JKEN   Kujiedanarisaw   2.47 276   P       Pn       19 37 59.3 -0.9
JKEN                              eS       Sn       19 38 26.9 -2.4
JANG   Nango            2.63 279  i P      Pn       19 38 01.9 -0.6
JANG                               S       Sn       19 38 31.8 -1.6
JNBK   Urakawa-nobuka   2.80 325  eP       Pn       19 38 04.6 -0.1
JNBK                               S       Sn       19 38 37.3 -0.1
JOM    Ohasama          2.85 260  i P      Pn       19 38 05.6 +0.1
JOM                               eS       Sn       19 38 37.8 -0.9
JCH    Churui           2.86 336   P       Pn       19 38 04.7 -0.8
JCH                                S       Sn       19 38 36.8 -2.0
JAK    Akkeshi          2.99 357   P       Pn       19 38 05.7 -1.7
JAK                                S       Sn       19 38 40.2 -1.9
JMK    Ichinoseki       3.05 251  i P      Pn       19 38 08.1 -0.2
JMK                                S       Sn       19 38 42.4 -1.3
JOT    Ohata            3.25 296   P       Pn       19 38 11.1 +0.1
JOT                               eS       Sn       19 38 47.3 -1.2
JAR    Ashorobuto       3.40 346  i P      Pn       19 38 11.7 -1.3
JAR                                S       Sn       19 38 49.5 -2.7
NEM2   Nemuro 2         3.41  10   P       Pn       19 38 10.7 -2.4
NEM2                              eS       Sn       19 38 47.7 -4.8
JYK    Kaneyama         3.70 254   P       Pn       19 38 17.5 +0.4
JYK                               eS       Sn       19 38 59.5 -0.1
JEW    Eniwo            3.85 318   P       Pn       19 38 20.1 +0.9
JEW                                S       Sn       19 39 03.9 +0.6
JRA    Rausu            3.93   2   P       Pn       19 38 18.1 -2.2
JRA                                S       Sn       19 39 01.4 -3.9
JTKR   Abashiri--Toko   4.03 350   P       Pn       19 38 21.2 -0.5
JTKR                               S       Sn       19 39 06.3 -1.4
ASAJ   Asahikawa        4.46 338   Pn      Pn       19 38 26.8 -0.8
             4.8nm,0.3s,baz=200,slow=9.1,SNR=18
ASAJ                               Sn      Sn       19 39 16.4 -1.8
             1.4nm,0.3s,baz=281,slow=29,SNR=1.6
             9.5nm,0.4s
JRY    Ryogami san      6.20 232   P       Pn       19 38 50.7 -0.8
JRY                               eS       Sn       19 39 57.9 -3.5
MJAR   Matsushiro Arr   6.31 239   Pn      Pn       19 38 53.2 +0.1
             0.4nm,0.3s,baz=81,slow=14,SNR=26
MJAR                               LR      LR       19 40 55.6
             comp=Z,31nm,20.5s,baz=36,slow=34
             13nm,0.8s
JHJ    Hachijo jima 2   8.02 213   Sn      Sn       19 40 37.2 -8.9
             6.2nm,0.3s,baz=73,slow=18,SNR=2.2
USRK   Ussuriysk Ar.   10.48 298   Pn      Pn       19 39 51.4 +1.2
             0.5nm,0.3s,baz=102,slow=12,SNR=6.1
             5.6nm,0.7s
KLR    Kul'dur         13.14 319   Pn      Pn       19 40 26.7 +0.3
             0.1nm,0.3s,baz=118,slow=15,SNR=6.0
KLR                                LR      LR       19 45 48.6
             comp=Z,50nm,20.3s,baz=136,slow=39
             1.4nm,0.8s
JNU    Nakatsue        13.21 243   LR      LR       19 45 50.5
             comp=Z,57nm,18.2s,baz=24,slow=39
KSRS   Korea Array     13.52 265   LR      LR       19 45 33.3
             comp=Z,45nm,18.7s,baz=75,slow=36
SEY    Seymchan        23.39   9   P       P        19 42 27.8 -0.1
             5.1nm,0.8s,baz=188,slow=8.0,SNR=16
             5.1nm,0.8s
SONM   Songino Array   28.59 299   P       P        19 43 14.9 -0.5
             0.4nm,0.6s,baz=94,slow=6.7,SNR=4.7
SONM                               LR      LR       19 54 47.9
             comp=Z,44nm,20.7s,baz=121,slow=37
             0.4nm,0.6s
ZALV   Zalesovo Beam   42.03 310   P       P        19 45 11.1 +0.7
             1.0nm,0.8s,baz=69,slow=8.1,SNR=4.8
ZALV                               PcP     PcP      19 47 06.5 +1.7
             2.2nm,0.4s,baz=96,slow=4.2,SNR=9.9
             1.0nm,0.8s
CMAR   Chiang Mai Arr  44.92 255   P       P        19 45 35.1 +1.0
             0.2nm,0.6s,baz=49,slow=7.3,SNR=2.8
CMAR                               LR      LR       20 05 06.0
             comp=Z,11nm,18.3s,baz=145,slow=37
             0.2nm,0.6s
MKAR   Makanchi Array  44.94 300   P       P        19 45 35.0 +1.0
             0.5nm,0.8s,baz=74,slow=13,SNR=3.6
             0.5nm,0.8s
ILAR   Eielson Array   45.50  34   P       P        19 45 38.2  0.0
             0.2nm,0.7s,baz=265,slow=5.4,SNR=1.6
             0.2nm,0.7s
RES    Resolute Bay    59.02  16   P       P        19 47 18.6 +0.3
             1.4nm,0.8s,baz=315,slow=3.6,SNR=3.7
             1.4nm,0.8s
YKA    Yellowknife Ar  59.85  32   P       P        19 47 24.3 +0.1
             0.2nm,0.6s,baz=296,slow=6.1,SNR=2.5
             0.2nm,0.6s
WRA    Warramunga Arr  60.45 191   P       P        19 47 28.1 -0.7
             0.6nm,0.5s,baz=12,slow=7.1,SNR=11
             0.6nm,0.5s
ASAR   Alice Springs   64.17 191   P       P        19 47 53.5 -0.2
             0.4nm,0.7s,baz=5.9,slow=6.0,SNR=7.6
             0.4nm,0.7s
FINES  FINESS Array B  67.45 333   P       P        19 48 15.1 +0.7
             1.9nm,0.8s,baz=70,slow=2.2,SNR=11
             1.9nm,0.8s
NVAR   Mina Array Bea  71.02  56   P       P        19 48 37.1  0.0
             0.3nm,0.6s,baz=284,slow=2.4,SNR=4.0
             0.3nm,0.6s
KBZ    Khabaz          71.03 311   P       P        19 48 38.6 +1.9
             2.4nm,0.9s,baz=136,slow=2.4,SNR=5.8
             2.4nm,0.9s
NOA    NORSAR Array B  72.48 338   P       P        19 48 45.4 +0.1
             1.0nm,0.9s,baz=59,slow=7.0,SNR=1.3
             1.0nm,0.9s
HFS    Hagfors         72.48 337   P       P        19 48 44.7 -0.6
             2.4nm,1.0s,baz=60,slow=8.5,SNR=1.4
             2.4nm,1.0s
AKASG  Malin Array Be  73.60 323   LR      LR       20 24 18.5
             comp=Z,30nm,18.2s,baz=202,slow=38
PDAR   Pinedale Array  73.63  48   P       P        19 48 52.8 +0.1
             0.6nm,0.5s,baz=9.9,slow=1.7,SNR=7.6
             0.6nm,0.5s
VRAC   Vranov          80.07 329   LR      LR       20 31 30.9
             comp=Z,32nm,19.1s,baz=200,slow=41
TXAR   Lajitas Array   86.14  55   P       P        19 50 01.1 +0.7
             0.3nm,0.5s,baz=300,slow=3.6,SNR=4.7
             0.3nm,0.5s
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*IDC **08** 19:39:38.7±1.4, 85.°16N×12.°52E, h0km, mb3.6/6, mbtmp3.7/8, ML4.2/2, MS3.2/16, Error ellipse: s-maj=42.3km s-min=20.0km az=86.0*

*IEPN **08** 19:39:40.0, 85.°40N×14.°05E, h10km*

*KOLA **08** 19:39:43.6, 85.°03N×10.°62E, h0km, ML2.5, Error ellipse: s-maj=111.1km s-min=21.1km az=90.0, Arctic Ocean,Gakkel ridge*

ISC 08 19:39:40.6±1.1**, 84.°97N**±0.°08×**13.°82E**±0.°08**, h10**km**, n36, σ1.s45**/37**, mb3.5**/6**, MS3.1**/14**, North of Svalbard**

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Code   Station Name      Δ°  AZ°   Phase ID          Time     Res
                                   Op      ISC       h  m  s   ISC
ZFI2   Zemlya Franca-   5.77 117  eP       Pn       19 41 06.9 +0.8
ZFI2                              eS       Sn       19 42 10.8 -1.4
ZFI    Zemlya Franca-   5.77 117  eP       Pn       19 41 06.8 +0.6
ZFI                               eS       Sn       19 42 10.7 -1.6
OMEGA  Omega            5.80 117  eP       Pn       19 41 07.0 +0.5
OMEGA                             eS       Sn       19 42 10.7 -2.2
             20nm,0.6s
KBS    Kingsbay         6.08 183  eP       Pn       19 41 10.4 -0.1
KBS                               i S      Sn       19 42 18.5 -1.4
KBS    Kingsbay         6.08 183   P       Pn       19 41 11.2 +0.7
KBS                                S       Sn       19 42 18.6 -1.3
KBS    Kingsbay         6.08 183  eP       Pn       19 41 10.3 -0.1
KBS                               eS       Sn       19 42 18.4 -1.6
KBS                                IAML             19 42 22.6
             comp=Z,6.7nm,0.5s
SPA0   Spitsbergen Ar   6.84 176  eP       Pn       19 41 21.3 +0.5
SPA0                              i S      Sn       19 42 38.5 -0.1
SPA0   Spitsbergen Ar   6.84 176  eP       Pn       19 41 20.9 +0.1
SPA0                              eS       Sn       19 42 36.1 -2.4
SPA0                               IAML             19 42 48.8
             comp=Z,3.9nm,0.7s
SPITS  Spitsbergen Ar   6.84 176   Pn      Pn       19 41 21.4 +0.7
             baz=18,slow=11
             comp=Z,20nm,0.3s
SPITS  Spitsbergen Ar   6.84 176   P       Pn       19 41 21.5 +0.7
SPITS                              S       Sn       19 42 35.2 -3.4
BRBB   Barentsburg B    6.92 179   P       Pn       19 41 22.5 +0.7
BRBB                               S       Sn       19 42 39.8 -0.6
BRBB   Barentsburg B    6.92 179  eP       Pn       19 41 22.6 +0.8
BRBB                              eS       Sn       19 42 37.8 -2.6
BRBA   Barentsburg A    6.95 179  eP       Pn       19 41 23.3 +1.0
HSPB   Hornsund (broa   8.02 177   P       Pn       19 41 36.9  0.0
HSPB   Hornsund (broa   8.02 177   P       Pn       19 41 39.4 +2.5
HSPB   Hornsund (broa   8.02 177  eP       Pn       19 41 37.1 +0.2
HOPEN  Hopen            8.66 162  eP       Pn       19 41 45.8 +0.1
HOPEN                              S       Sn       19 43 17.2 -6.0
HOPEN  Hopen            8.66 162  eP       Pn       19 41 46.2 +0.5
HOPEN                             eS       Sn       19 43 21.9 -1.3
HOPEN                              IAML             19 43 30.2
             comp=Z,4.8nm,0.7s
ARCES  ARCESS Array B  15.66 165   Pn      Pn       19 43 19.3 -1.7
             comp=Z,0.2nm,0.3s,baz=359,slow=12,SNR=18
ARCES                              LR      LR       19 48 36.2
             comp=Z,75nm,18.5s,baz=268,slow=34
             comp=Z,0.8nm,0.5s
RES    Resolute Bay    17.69 304   LR      LR       19 49 10.2
             comp=Z,63nm,20.7s,baz=52,slow=33
FINES  FINESS Array B  23.79 165   P       P        19 44 53.4 +0.5
             comp=Z,3.2nm,0.8s,baz=359,slow=10,SNR=6.7
             comp=Z,3.2nm,0.8s
NOA    NORSAR Array B  24.06 183   P       P        19 44 56.9 +1.4
             comp=Z,1.3nm,0.9s,baz=2.9,slow=9.9,SNR=2.3
NOA                                LR      LR       19 55 36.7
             comp=Z,16nm,19.2s,baz=5.0,slow=40
             comp=Z,1.3nm,0.9s
HFS    Hagfors         24.96 180   LR      LR       19 55 44.9
             comp=Z,25nm,18.6s,baz=44,slow=38
INK    Inuvik          26.23 333   LR      LR       19 57 29.5
             comp=Z,44nm,18.4s,baz=356,slow=41
KIRV   Kirov           27.61 139   LR      LR       19 57 34.3
             comp=Z,33nm,21.4s,baz=325,slow=39
ILAR   Eielson Array   30.20 344   P       P        19 45 48.3 -2.3
             comp=Z,0.7nm,1.1s,baz=359,slow=7.2,SNR=7.5
ILAR                               LR      LR       19 59 09.1
             comp=Z,39nm,18.7s,baz=252,slow=39
             comp=Z,0.7nm,1.1s
ARU    Arti            30.33 129   LR      LR       19 59 38.3
             comp=Z,53nm,18.9s,baz=15,slow=39
YKA    Yellowknife Ar  31.05 315   LR      LR       19 58 03.2
             comp=Z,38nm,19.9s,baz=294,slow=36
MA2    Magadan         34.45  38   LR      LR       20 01 33.3
             comp=Z,45nm,18.4s,baz=282,slow=38
AKASG  Malin Array Be  34.62 163   P       P        19 46 31.9 +2.6
             comp=Z,0.2nm,0.3s,baz=341,slow=8.2,SNR=1.9
AKASG                              LR      LR       20 00 53.8
             comp=Z,36nm,18.5s,baz=359,slow=37
             comp=Z,0.2nm,0.3s
VRAC   Vranov          35.82 177   LR      LR       20 00 16.8
             comp=Z,36nm,20.2s,baz=320,slow=34
KDAK   Kodiak Island   37.33 348   LR      LR       20 03 23.6
             comp=Z,71nm,18.9s,baz=67,slow=38
SONM   Songino Array   42.83  82   P       P        19 47 39.2 +0.9
             comp=Z,0.6nm,0.9s,baz=350,slow=7.6,SNR=3.7
             comp=Z,0.6nm,0.9s
GEYT   Alibeck         48.72 133   LR      LR       20 12 10.3
             comp=Z,32nm,20.8s,baz=357,slow=40
ANMO   Albuquerque     57.90 303   LR      LR       20 15 09.2
             comp=Z,45nm,18.3s,baz=98,slow=37
CMAR   Chiang Mai Arr  71.30  93   P       P        19 50 59.8 -0.2
             comp=Z,0.5nm,0.4s,baz=354,slow=7.7,SNR=4.9
CMAR                               LR      LR       20 24 05.0
             comp=Z,13nm,19.9s,baz=105,slow=37
             comp=Z,0.5nm,0.4s
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*IDC **08** 20:09:48.5±6.2, 39.°08N×26.°88E, h0km, mb3.6/4, mbtmp3.6/6, ML4.1/3, MS3.6/1, Error ellipse: s-maj=94.6km s-min=22.2km az=40.0*

*SOF **08** 20:09:51.2, 39.°62N×27.°89E, h2km, MD4.3*

*ISK **08** 20:09:58.3, 39.°98N×27.°66E, h8km, ML4.0/47*

*DDA **08** 20:09:58.4±0.0, 39.°97N×27.°65E, h15km, MW4.1*

*THE **08** 20:09:59.5, 39.°97N×27.°55E, h0km±1km, ML3.9/7, Error ellipse: s-maj=2.6km s-min=1.0km az=89.0*

*CFUSG **08** 20:10:02.1, 40.°30N×27.°90E, h5km, mb3.3/5, Western Turkey Magtype MSH 3.3 from 4 stations*

ISC 08 20:09:58.9±0.8**, 39.°98N**±0.°01×**27.°68E**±0.°01**, h17**km±5km**, n153, σ1.s14**/204**, mb3.6**/4**, 22C-12D, Turkey**

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Code   Station Name      Δ°  AZ°   Phase ID          Time     Res
                                   Op      ISC       h  m  s   ISC
GONE   Gonen-Balikesi   0.07   6   Pg      Pg       20 10 01.5 -0.7
BALY   Balya            0.24 190   P       Pg       20 10 03.9 -0.5
BALY                               S       Sg       20 10 07.8 -0.3
BKES   Balkesir-Mer     0.31 141   P       Pb       20 10 05.7 -0.2
BKES                              i AML    AML      20 10 10.0
             comp=E,5µm,0.2s
BKES                               S       Sb       20 10 10.6 -0.2
KNL    Balıkesir        0.32 339   P       Pb       20 10 05.6 -0.4
KNL                               i AML    AML      20 10 10.0
             comp=E,3µm,0.4s
KNL                                S       Sg       20 10 10.4 +0.2
KNL                               i AML    AML      20 10 11.0
             comp=N,2µm,0.2s
BALB   Balikesir        0.37 155   Pg      Pg       20 10 06.3 -0.2
BALB                               Sg      Sg       20 10 11.4 -0.4
EDC    Edincik          0.40  21   Pg      Pg       20 10 06.9 -0.1
EDC                                Sg      Sg       20 10 12.9 +0.3
CANM   Can-anakkale     0.48 274   Pg      Pg       20 10 08.0 -0.5
CANM                               Sg      Sg       20 10 14.9 -0.1
BAND   Balkesir-Ban     0.50  40   P       Pg       20 10 08.7 -0.2
BAND                               S       Sg       20 10 15.8 +0.2
BAND                              i AML    AML      20 10 16.0
             comp=N,2µm,0.2s
BAND                              i AML    AML      20 10 17.0
             comp=E,2µm,0.2s
KRBG   Karabiga-Canak   0.51 325   Pg      Pg       20 10 08.6 -0.4
KRBG                               Sg      Sg       20 10 15.8 -0.1
KCTX   Karacabey (Bur   0.60  61   Pg      Pg       20 10 10.5 -0.2
KCTX                               Sg      Sg       20 10 18.8 +0.1
STEP   BALIKESIR_Sava   0.60 177   P       Pg       20 10 10.3 -0.5
STEP                               S       Sb       20 10 19.2 +0.1
BUHA   Balikesir, Bur   0.66 224   P       Pg       20 10 11.5 -0.4
BUHA                              i AML    AML      20 10 20.0
             comp=N,1µm,0.3s
BUHA                               S       Sb       20 10 20.5 -0.4
BUHA                              i AML    AML      20 10 24.0
             comp=E,10µm,0.6s
DURS   Dursunbey        0.72 121   P       Pg       20 10 12.8 -0.2
DURS                               S       Sg       20 10 22.7 +0.1
LPK    Lapseki          0.81 300   Pg      Pg       20 10 14.2 -0.4
LPK                                Sg      Sb       20 10 25.4 +0.4
RKY    Sarkoy-Tekirda   0.81 332   Pg      Pg       20 10 14.3 -0.3
RKY                                Sg      Sb       20 10 25.7 +0.6
DST    Dursunbey        0.82 117   Pg      Pg       20 10 14.6 -0.2
BAYC   CANAKKALE_Bayr   0.90 255   SPECP            20 10 15.0
BAYC                               P       Pg       20 10 15.2 -1.1
BAYC                               S       Sg       20 10 26.6 -1.6
COMU   Canakkale        0.93 278   Pg      Pg       20 10 16.3 -0.7
ORLT   Orhaneli         0.94  85   Pg      Pg       20 10 16.6 -0.5
MDNY   Mudanya-Bursa    1.00  67   Pg      Pg       20 10 18.1 -0.3
GELI   Tayfur-Gelibol   1.01 295   Pg      Pg       20 10 17.6 -0.9
TKR    Tekirdag         1.02 354   Pg      Pb       20 10 18.9 +0.9
EZN    Ezine            1.05 262   P       Pg       20 10 17.9 -1.3
EZN                                S       Sg       20 10 31.6 -1.4
             3µm,0.3s
EZN    Ezine            1.05 262   Pg      Pg       20 10 18.2 -1.0
ARMT   Armutlu          1.08  57   Pn      Pg       20 10 19.3 -0.5
DKL    Dikili           1.08 214   Pg      Pb       20 10 19.3 +0.2
AKS    Akhisar          1.10 174   Pn      Pb       20 10 19.6 +0.2
ZEDA   zmir-Bergama     1.11 205   P       Pg       20 10 19.4 -1.0
ZEDA                               S       Sb       20 10 34.9 +1.2
ERIK   Erikli-Kesan     1.13 308   Pn      Pg       20 10 19.9 -0.8
ULDT   Uludag           1.13  81   P       Pg       20 10 19.8 -1.0
ULDT                               S       Sg       20 10 35.5 -0.2
ULDT                              i AML    AML      20 10 38.0
             comp=N,5µm,0.5s
ULDT                              i AML    AML      20 10 38.0
             comp=E,4µm,0.2s
KESN   Edirne-Kesan     1.14 318   P       Pg       20 10 20.2 -0.8
KESN                               S       Sg       20 10 35.5 -0.5
CRLT   Corlu            1.15   2   Pn      Pb       20 10 20.9 +0.6
ECEA   Canakkale, Ece   1.16 274   P       Pg       20 10 20.3 -0.9
ECEA                               S       Sb       20 10 36.4 +1.4
DEMI   Demirci          1.23 139   P       Pb       20 10 22.3 +0.6
DEMI                               S       Sb       20 10 38.4 +1.1
DEMI                              i AML    AML      20 10 39.0
             comp=E,3µm,0.3s
DEMI                              i AML    AML      20 10 40.0
             comp=N,4µm,0.6s
GEMT   Gemlik           1.25  68   Pn      Pg       20 10 22.1 -0.8
BOZC   Bozcaada         1.26 264   Pn      Pg       20 10 21.9 -1.2
BOZC   Bozcaada         1.26 264   P       Pg       20 10 21.7 -1.4
BOZC                               P       Pg       20 10 21.9 -1.2
BOZC                               S       Sg       20 10 37.7 -1.8
BOZC                               S       Sb       20 10 38.1 +0.2
BOZC                              i AML    AML      20 10 40.0
             comp=N,6µm,0.4s
YKBL   Yakuplu-Istanb   1.27  36   Pn      Pg       20 10 22.3 -1.0
KOCA   Canakkale, Ayv   1.28 249   P       Pg       20 10 21.8 -1.7
KOCA                               S       Sg       20 10 38.8 -1.4
GOMA   Golmarmara-Man   1.28 172   Pn      Pg       20 10 22.6 -1.0
AVCI   Avcilar-stanb    1.29  38   Pn      Pn       20 10 22.7 +0.6
ELBA   Catalca          1.30  26   P       Pn       20 10 22.1 -0.2
ELBA                               S       Sg       20 10 40.1 -0.9
PRK    Paraskevi        1.31 237   P       Pn       20 10 22.7 +0.4
PRK                                S       Sg       20 10 39.7 -1.4
             7µm,0.5s
SLVT   Silivri          1.32  18   Pn      Pn       20 10 23.1 +0.7
KURT   Yalova, Merkez   1.32  62   P       Pn       20 10 22.4 -0.1
KURT                               S       Sb       20 10 40.4 +0.5
HVHR   Bakirkoy-Istan   1.33  42   Pn      Pn       20 10 23.2 +0.5
SMAA   Simav-Kutahya    1.33 131   Pn      Pg       20 10 24.3 -0.3
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SIMA	**Simav-Kutahya**	**1.35**	**131**	Pn	**Pb**	**20 10 24.2**	**+0.5**
CAVK	**Edirne/Enez-Ca**	**1.36**	**302**	P	**Pn**	**20 10 23.6**	**+0.7**
CAVK				S	**Sb**	**20 10 41.1**	**+0.3**
GOKA	**anakkale-Gk**	**1.37**	**280**	P	**Pn**	**20 10 24.1**	**+0.9**
GOKA				S	**Sn**	**20 10 43.3**	**+2.4**
GADA	**Gvkgeada**	**1.38**	**280**	Pn	**Pn**	**20 10 24.1**	**+0.8**
ENEZ	**Enez**	**1.39**	**304**	P	**Pn**	**20 10 24.2**	**+0.8**
ENEZ				S	**Sb**	**20 10 42.6**	**+0.8**
	4µm,0.6s						
ENEZ	**Enez**	**1.39**	**304**	Pn	**Pn**	**20 10 24.3**	**+0.8**
BRGA	**Burgazada-Ista**	**1.40**	**49**	Pn	**Pn**	**20 10 24.6**	**+1.1**
UKOP	**Uzunkopru-Edir**	**1.40**	**326**	Pn	**Pn**	**20 10 24.7**	**+1.1**
BUYA	**Buyukada-Istan**	**1.42**	**51**	Pn	**Pb**	**20 10 25.7**	**+0.8**
YLV	**Yalova**	**1.43**	**65**	Pn	**Pn**	**20 10 24.8**	**+0.8**
BGKT	**Bogazkoy**	**1.47**	**34**	Pn	**Pn**	**20 10 24.9**	**+0.4**
TUZL	**Tuzla-Istanbul**	**1.47**	**55**	Pn	**Pn**	**20 10 26.1**	**+1.5**
YLVH	**Yalova**	**1.48**	**60**	Pn	**Pb**	**20 10 26.5**	**+0.6**
LAFA	**Gebze-Kocaeli**	**1.50**	**58**	Pn	**Pn**	**20 10 26.5**	**+1.5**
KAVV	**Kandilli-Istan**	**1.51**	**44**	Pn	**Pn**	**20 10 26.3**	**+1.1**
ISK	**Istanbul-Kandi**	**1.52**	**44**	Pn	**Pn**	**20 10 26.1**	**+0.9**
ALN	**Alexandroupoli**	**1.55**	**307**	P	**Pn**	**20 10 26.0**	**+0.4**
ALN				S	**Sn**	**20 10 46.8**	**+1.5**
	3µm,0.4s						
ALN	**Alexandroupoli**	**1.55**	**307**	Pn	**Pb**	**20 10 27.1**	**+0.1**
SIGR	**SIGRI**	**1.60**	**242**	P	**Pn**	**20 10 26.3**	**0.0**
SIGR				S	**Sb**	**20 10 48.8**	**+1.0**
	4µm,0.4s						
SIGR	**SIGRI**	**1.60**	**242**	Pn	**Pn**	**20 10 26.3**	**0.0**
VIZE	**Kirklareli, Vi**	**1.61**	**4**	P	**Pn**	**20 10 26.5**	**+0.1**
VIZE				S	**Sg**	**20 10 50.1**	**-0.5**
GEDZ	**Gediz**	**1.63**	**124**	Pn	**Pb**	**20 10 28.7**	**+0.2**
MANT	**Manisa**	**1.63**	**155**	P	**Pn**	**20 10 27.5**	**+0.5**
MANT				S	**Sg**	**20 10 50.8**	**-0.7**
USAK	**Uak-Merkez**	**1.63**	**140**	P	**Pn**	**20 10 28.2**	**+1.3**
USAK				S	**Sb**	**20 10 49.7**	**+0.8**
KARB	**zmir-Karabur**	**1.64**	**217**	P	**Pn**	**20 10 26.9**	**0.0**
KARB				S	**Sg**	**20 10 51.9**	**+0.2**
ADVT	**Abdulvahap**	**1.64**	**73**	Pn	**Pn**	**20 10 28.4**	**+1.5**
KLYT	**Kilyos**	**1.65**	**39**	Pn	**Pn**	**20 10 27.8**	**+0.9**
KULA	**Kula-Manisa**	**1.65**	**152**	P	**Pn**	**20 10 28.2**	**+1.1**
GDZ	**Gediz**	**1.65**	**122**	P	**Pn**	**20 10 28.0**	**+0.8**
GDZ				S	**Sb**	**20 10 50.8**	**+1.3**
PHSR	**Pinarhisar**	**1.66**	**356**	Pn	**Pn**	**20 10 27.9**	**+0.8**
BLCB	**Balcova**	**1.66**	**197**	P	**Pb**	**20 10 29.1**	**+0.1**
CAVI	**Cavuskoy**	**1.68**	**82**	Pn	**Pn**	**20 10 29.2**	**+1.8**
BILE	**Bilecik/Merkez**	**1.70**	**83**	P	**Pn**	**20 10 28.3**	**+0.5**
BILE				S	**Sg**	**20 10 54.4**	**+0.8**
SMTH	**Samothraki Isl**	**1.72**	**287**	P	**Pn**	**20 10 28.4**	**+0.5**
SMTH				S	**Sn**	**20 10 51.2**	**+1.7**
	4µm,0.5s						
HRT	**Hereke**	**1.74**	**60**	Pn	**Pn**	**20 10 29.8**	**+1.5**
ANDZ	**Kutahya, Merke**	**1.78**	**105**	P	**Pn**	**20 10 29.9**	**+1.1**
ANDZ				S	**Sg**	**20 10 57.4**	**+1.3**
AUBOZ	**BOZOYUK**	**1.81**	**91**	P	**Pn**	**20 10 29.8**	**+0.5**
AUBOZ				S	**Sg**	**20 10 57.6**	**+0.3**
URLA	**Izmir**	**1.82**	**208**	P	**Pb**	**20 10 31.8**	**+0.1**
URLA				S	**Sg**	**20 10 57.9**	**+0.4**
LIA	**Limnos Island**	**1.92**	**268**	P	**Pn**	**20 10 31.1**	**+0.4**
LIA				S	**Sn**	**20 10 56.2**	**+1.8**
	3µm,0.5s						
ZEYE	**Izmir, Urla-Ze**	**1.96**	**208**	P	**Pn**	**20 10 32.4**	**+1.1**
ZEYE				S	**Sg**	**20 11 02.9**	**+1.0**
EDRB	**Edirne**	**2.00**	**340**	P	**Pn**	**20 10 32.2**	**+0.4**
RDO	**Rodhopi**	**2.00**	**306**	P	**Pn**	**20 10 32.7**	**+0.8**
DGB	**zmir**	**2.02**	**198**	P	**Pn**	**20 10 33.0**	**+0.9**
DGB				S	**Sg**	**20 11 03.2**	**-0.6**
PASA	**Karahalli, USA**	**2.15**	**139**	P	**Pn**	**20 10 35.2**	**+1.2**
PASA				S	**Sg**	**20 11 07.7**	**-0.3**
SMG	**Samos**	**2.36**	**196**	P	**Pn**	**20 10 37.2**	**+0.4**
KDZ	**Kurdzhali**	**2.40**	**315**	*i* P	**Pn**	**20 10 38.3**	**+1.0**
KAVA	**Kavala**	**2.62**	**294**	P	**Pn**	**20 10 40.9**	**+0.6**
JMB	**Yambol**	**2.62**	**342**	*i* P	**Pn**	**20 10 41.8**	**+1.4**
DIM	**Dimitrovgrad**	**2.63**	**323**	*i* P	**Pn**	**20 10 41.7**	**+1.2**
RZN	**Rozhen**	**2.82**	**308**	*i* P	**Pn**	**20 10 44.1**	**+0.8**
PLD	**Plovdiv**	**3.10**	**314**	*i* P	**Pn**	**20 10 47.8**	**+0.9**
ROIA	**ROIAK**	**3.12**	**356**	*i* P	**Pn**	**20 10 49.1**	**+1.8**
KDZE	**Karadeniz Ereo**	**3.16**	**64**	⇓P	**Pb**	**20 10 53.4**	**-1.2**
PRD	**Provadia**	**3.23**	**356**	*i* P	**Pn**	**20 10 49.7**	**+1.0**
MMB	**Musomiste**	**3.40**	**300**	*i* P	**Pn**	**20 10 51.6**	**+0.4**
SZH	**Strazhica**	**3.54**	**339**	*i* P	**Pn**	**20 10 53.8**	**+0.8**
RAZG	**Razgrad**	**3.69**	**347**	⇑P	**Pn**	**20 10 55.9**	**+0.8**
ANTO	**Ankara**	**3.94**	**90**	⇑P	**Pb**	**20 11 06.3**	**-1.5**
KKB	**Krupnik**	**3.96**	**300**	*i* P	**Pn**	**20 10 59.9**	**+1.1**
PLVB	**Pleven**	**4.11**	**327**	⇑P	**Pn**	**20 11 01.9**	**+1.1**
VAY	**Valandovo**	**4.11**	**291**	*i* Pn	**Pn**	**20 11 02.8**	**+2.0**
ICOR	**Ion Corvin**	**4.14**	**1**	⇓P	**Pn**	**20 11 02.5**	**+1.3**
MFTR	**Murfatlar**	**4.24**	**7**	⇑P	**Pn**	**20 11 03.8**	**+1.2**
VTS	**Vitosha**	**4.26**	**310**	⇓P	**Pn**	**20 11 05.0**	**+1.9**
VTS	**Vitosha**	**4.26**	**310**	*i* P	**Pn**	**20 11 04.3**	**+1.2**
STIP	**Stip**	**4.50**	**294**	*i* Pn	**Pn**	**20 11 05.4**	**-0.9**
TIRR	**Tirgusor**	**4.51**	**7**	⇑P	**Pn**	**20 11 07.0**	**+0.7**
TLBR	**Topalu**	**4.57**	**3**	⇑P	**Pn**	**20 11 07.9**	**+0.7**
BRTR	**Keskin Array B**	**4.60**	**91**	Pn	**Pn**	**20 11 08.8**	**+1.1**
	1.1nm,0.3s,baz=263,slow=11,SNR=80						
BRTR				Pg	**Pg**	**20 11 23.8**	**-3.1**
	1.6nm,0.3s,baz=267,slow=11,SNR=4.7						
BRTR				Lg	Lg	20 12 28.6	
	1.7nm,0.3s,baz=276,slow=25,SNR=9.4						
	2.0nm,0.3s						
HARR	**Harsova**	**4.71**	**2**	⇑P	**Pn**	**20 11 09.8**	**+0.7**
TPGR	**Topolog**	**4.91**	**6**	⇓P	**Pn**	**20 11 12.0**	**+0.1**
CFR	**Carcaliu**	**5.21**	**4**	⇓P	**Pn**	**20 11 16.4**	**+0.5**
TLCR		**5.27**	**9**	⇓P	**Pn**	**20 11 17.5**	**+0.7**
NEHR	**Nehoiu**	**5.54**	**350**	⇓P	**Pn**	**20 11 22.4**	**+1.8**
TATR	**Tatarca**	**5.62**	**3**	⇓P	**Pn**	**20 11 22.4**	**+0.8**
MLR	**Muntele Rosu**	**5.66**	**348**	⇑P	**Pn**	**20 11 24.3**	**+2.0**
MLR	**Muntele Rosu**	**5.66**	**348**	Pn	**Pn**	**20 11 24.9**	**+2.7**
	4.7nm,0.3s,baz=93,slow=1.2,SNR=67						
MLR				Lg	Lg	20 13 03.5	
	1.4nm,0.3s,baz=97,slow=22,SNR=1.8						
BOVS	**Bovan**	**5.77**	**311**	⇑P	**Pn**	**20 11 24.9**	**+1.3**
ODBI	**Odobesti**	**5.80**	**356**	⇑P	**Pn**	**20 11 25.9**	**+1.9**
ARR	**Arges**	**5.84**	**338**	⇓P	**Pn**	**20 11 25.7**	**+1.1**
VLDR	**Vladesti**	**5.87**	**3**	⇑P	**Pn**	**20 11 26.4**	**+1.3**
PLOR	**Plostina**	**5.92**	**353**	⇑P	**Pn**	**20 11 27.6**	**+1.9**
VRI	**Vrincioaia**	**5.93**	**354**	⇑P	**Pn**	**20 11 27.7**	**+1.9**
COVR	**Voineasa-Covas**	**5.96**	**350**	⇑P	**Pn**	**20 11 27.5**	**+1.1**
LOT	**Lotru**	**6.18**	**334**	⇑P	**Pn**	**20 11 30.2**	**+0.9**
DOPR	**Dopca**	**6.22**	**345**	⇑P	**Pn**	**20 11 31.6**	**+1.8**
HERR	**Herculane**	**6.26**	**323**	⇑P	**Pn**	**20 11 30.3**	**0.0**
OZUR		**6.27**	**348**	⇑P	**Pn**	**20 11 32.3**	**+1.8**
SEV	**Sevastopol'**	**6.37**	**42**	⇓*i*P	**Pn**	**20 11 32.6**	**+0.7**
SEV				Pm		20 11 32.8	
	comp=Z,3.0nm,0.3s						
SEV				*e*S	**Sn**	**20 12 41.4**	**-2.8**
SEV				Sm		20 12 42.2	
	comp=N,3.0nm,0.3s						
SEV				Sm		20 12 42.2	
	comp=E,7.0nm,0.5s						
GZR	**Gura Zlata**	**6.51**	**328**	⇑P	**Pn**	**20 11 34.1**	**+0.3**
MDVR	**Moldovita**	**6.52**	**319**	⇑P	**Pn**	**20 11 34.7**	**+0.7**
TESR	**Tescani**	**6.58**	**354**	⇑P	**Pn**	**20 11 35.8**	**+1.1**
YAL	**Yalta**	**6.59**	**45**	*e*P	**Pn**	**20 11 34.3**	**-0.6**
YAL				Pm		20 11 45.5	
	comp=Z,6.0nm,0.3s						
YAL				*e*S	**Sn**	**20 12 44.6**	**-4.9**
YAL				Sm		20 12 50.0	
	comp=N,5.0nm,0.2s						
YAL				Sm		20 12 50.0	
	comp=E,5.0nm,0.3s						
MDB	**Medias**	**6.62**	**340**	⇓P	**Pn**	**20 11 36.9**	**+1.6**
ALU	**Alushta**	**6.85**	**44**	*e*P	**Pn**	**20 11 38.8**	**+0.3**
ALU				Pm		20 11 48.6	
	comp=Z,7.0nm,0.4s						
ALU				*e*S	**Sn**	**20 12 53.4**	**-2.6**
ALU				Sm		20 12 53.6	
	comp=N,6.0nm,0.3s						
ALU				Sm		20 12 53.6	
	comp=E,5.0nm,0.3s						
SIM	**Simferopol'**	**6.88**	**42**	*e*P	**Pn**	**20 11 39.2**	**+0.3**
SIM				Pm		20 11 45.3	
	comp=Z,37nm,0.7s						
SIM				*e*S	**Sn**	**20 12 54.3**	**-2.4**
SIM				Sm		20 12 57.0	
	comp=N,11nm,0.4s						
SIM				Sm		20 12 57.0	
	comp=E,7.0nm,0.4s						
SUDU	**Sudak**	**7.31**	**45**	*e*P	**Pn**	**20 11 46.5**	**+1.7**
SUDU				Pm		20 11 55.5	
	comp=Z,14nm,0.2s						
SUDU				*e*S	**Sn**	**20 13 06.1**	**-1.2**
SUDU				Sm		20 13 11.1	
	comp=N,12nm,0.6s						
SUDU				Sm		20 13 11.1	
	comp=E,5.0nm,0.3s						
BUR01	**Bucovina Ar. S**	**7.84**	**348**	⇓P	**Pn**	**20 11 53.2**	**+1.0**
SORM	**Soroca**	**8.17**	**3**	⇑P	**Pn**	**20 11 57.0**	**+0.4**
AKASG	**Malin Array Be**	**10.78**	**5**	Pn	Pn	20 12 37.5	+5.2
	comp=E,0.7nm,0.3s,baz=194,slow=14,SNR=3.0						
	comp=E,0.4nm,0.4s						
FINES	**FINESS Array B**	**21.52**	**358**	P	**P**	**20 14 47.1**	**+0.4**
	comp=E,3.3nm,1.0s,baz=198,slow=13,SNR=2.1						
	comp=E,3.3nm,1.0s						
ARU	**Arti**	**26.04**	**41**	P	**P**	**20 15 33.7**	**+2.7**
	comp=E,0.7nm,0.3s,baz=249,slow=6.7,SNR=3.6						
	comp=E,0.7nm,0.3s						
KURBB	**Kurchatov Arra**	**36.65**	**56**	P	**P**	**20 17 05.5**	**+1.3**
	comp=E,0.3nm,0.4s,baz=280,slow=8.5,SNR=1.9						
	comp=E,0.3nm,0.4s						
MKAR	**Makanchi Array**	**39.58**	**62**	P	**P**	**20 17 30.2**	**+1.1**
	comp=E,0.2nm,0.5s,baz=268,slow=8.7,SNR=5.0						
	comp=E,0.2nm,0.5s						
DAG	**Danmarks Havn**	**41.85**	**346**	*i* P	**P**	**20 17 44.1**	**-3.2**
FRB	**Frobisher Bay**	**57.58**	**328**	LR	LR	20 47 20.8	
	comp=E,47nm,19.5s,baz=337,slow=39						

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*IDC **08** 20:21:08.6±12.0, 6°.74N×77°.10W, h0^{km}, mbtmp3.9/1, ML2.4/1, Error ellipse: s-maj=750.3km s-min=44.0km az=24.0*

*RSNC **08** 20:21:25.4±1.3, 4°.01N×76°.58W, h66^{km}±6^{km}, ML2.7*

ISC 08 20:21:23.9±1.0, 4°.00N±0°.03×76°.62W±0°.03, h73^{km}±8^{km}, n30, σ1°.58/55, 1C, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOTC	**Yotoco, Valle**	**0.27**	**93**	*e*P	**Pn**	**20 21 34.6**	**-0.8**
YOTC				*e*S	**Sn**	**20 21 43.3**	**-0.6**
YOTC				*i*		20 21 44.2	
	comp=Z,579nm,0.1s						
MALC	**Bahia Malaga**	**0.72**	**271**	⇑*i*P	**Pn**	**20 21 39.9**	**+0.7**
MALC				*e*S	**Sn**	**20 21 53.0**	**+2.4**
MALC				*i*		20 21 54.0	
	comp=Z,394nm,0.4s						
JAMC	**Jamundi, Valle**	**0.78**	**184**	*e*P	**Pn**	**20 21 39.9**	**-0.3**
JAMC				*e*S	**Sn**	**20 21 53.0**	**+0.7**
JAMC				*i*		20 21 53.7	
	comp=Z,285nm,0.1s						
PIZC	**Pizarro, Choco**	**1.21**	**322**	*e*P	**Pn**	**20 21 46.2**	**+0.9**
PIZC				*e*S	**Sn**	**20 22 03.6**	**+2.3**
ANIL	**Santa Ana**	**1.31**	**68**	*e*P	**Pn**	**20 21 46.2**	**-0.6**
ANIL				*e*S	**Sn**	**20 22 04.5**	**+0.7**
ORTC	**Ortega, Tolima**	**1.37**	**94**	*e*P	**Pn**	**20 21 47.1**	**-0.2**
ORTC				*e*S	**Sn**	**20 22 05.3**	**+0.4**
ORTC				*i*		20 22 06.4	
	comp=Z,246nm,0.3s						
POPC	**Popayan, Colom**	**1.45**	**182**	*e*P	**Pn**	**20 21 49.5**	**+0.9**
POPC				*e*S	**Sn**	**20 22 08.7**	**+1.6**
POPC				*i*		20 22 09.7	
	comp=Z,67nm,0.3s						
NIZA	**Niza - Manizal**	**1.55**	**47**	*e*P	**Pn**	**20 21 50.7**	**+0.7**
NIZA				*e*S	**Sn**	**20 22 12.0**	**+2.4**
RECRC	**Villamaria, Ca**	**1.58**	**53**	*e*P	**Pn**	**20 21 50.7**	**+0.1**
RECRC				*e*S	**Sn**	**20 22 10.8**	**+0.1**
GUY2C	**Guyana, Caldas**	**1.74**	**46**	*e*P	**Pn**	**20 21 53.6**	**+0.9**
GUY2C				*e*S	**Sn**	**20 22 14.4**	**0.0**
GUY2C				IAML		20 22 17.1	
	comp=Z,48nm,0.3s						
PRAC	**Prado**	**1.75**	**99**	*e*P	**Pn**	**20 21 52.1**	**-0.2**
PRAC				*e*S	**Sn**	**20 22 14.6**	**+0.7**
PRAC				*i*		20 22 16.1	
	comp=Z,82nm,0.3s						
BETC	**Betania**	**1.76**	**138**	*e*P	**Pn**	**20 21 53.0**	**+0.6**
BETC				*e*S	**Sn**	**20 22 13.9**	**-0.2**
BETC				*i*		20 22 21.9	
	comp=Z,90nm,0.5s						
GR1C	**Gorgona, Isla**	**1.84**	**238**	*e*P	**Pn**	**20 21 52.2**	**-1.2**
GR1C				*e*S	**Sn**	**20 22 14.1**	**-1.8**
CBOC	**Ciudad Bolivar**	**1.95**	**18**	*e*P	**Pn**	**20 21 54.8**	**-0.3**
CBOC				*e*S	**Sn**	**20 22 16.9**	**-2.0**
CBOC				*i*		20 22 19.3	
	comp=Z,60nm,0.1s						
BBAC	**Balboa, Cauca**	**2.06**	**198**	*e*P	**Pn**	**20 21 59.2**	**+2.5**
BBAC				*e*S	**Sn**	**20 22 26.6**	**+5.0**
BBAC				*i*		20 22 31.9	
	comp=Z,27nm,0.4s						
GARC	**Garzon, Huila**	**2.12**	**148**	*e*P	**Pn**	**20 21 58.0**	**+0.5**
GARC				*e*S	**Sn**	**20 22 24.1**	**+1.0**
GARC				*i*		20 22 24.4	
	comp=Z,131nm,0.2s						
NORC	**Norcasia**	**2.33**	**48**	*e*P	**Pn**	**20 22 00.4**	**+0.2**
NORC				*e*S	**Sn**	**20 22 30.9**	**+2.9**
NORC				*i*		20 22 41.0	
	comp=Z,12nm,0.5s						
HELC	**Santa Helena**	**2.43**	**26**	*e*P	**Pn**	**20 22 02.4**	**+0.6**
HELC				*e*S	**Sn**	**20 22 31.9**	**+1.0**
HELC				*i*		20 22 36.5	
	comp=Z,13nm,0.5s						
ROSC	**El Rosal**	**2.44**	**70**	Pn	**Pn**	**20 22 02.5**	**+0.5**
	comp=Z,8.8nm,0.3s,baz=270,slow=16,SNR=5.2						
ROSC				Sn	**Sn**	**20 22 33.8**	**+2.8**
	comp=Z,6.0nm,0.3s,baz=283,slow=18,SNR=4.2						
	comp=Z,21nm,0.3s						
FLOC	**Florencia**	**2.58**	**158**	*e*P	**Pn**	**20 22 04.0**	**+0.4**
FLOC				*e*S	**Sn**	**20 22 34.4**	**+0.4**
VILC	**Villavicencio,**	**2.92**	**88**	*e*P	**Pn**	**20 22 09.8**	**+1.6**
VILC				*e*S	**Sn**	**20 22 44.1**	**+1.8**
VILC				*i*		20 22 46.7	
	comp=Z,67nm,0.4s						
CHIC	**Chingaza**	**2.94**	**78**	*e*P	**Pn**	**20 22 09.7**	**+0.9**
CHIC				*e*S	**Sn**	**20 22 43.6**	**+0.3**
CHIC				*i*		20 22 46.4	
	comp=Z,20nm,0.4s						
SPBC	**San Pablo de B**	**3.02**	**57**	*e*P	**Pn**	**20 22 10.0**	**+0.4**
DBBC	**Dabeiba**	**3.03**	**8**	*e*P	**Pn**	**20 22 09.3**	**-0.4**
DBBC				*e*S	**Sn**	**20 22 45.0**	**+0.1**
DBBC				*i*		20 22 49.6	
	comp=Z,9.4nm,0.1s						
PTBC	**PUERTO BERRIO,**	**3.32**	**40**	*e*P	**Pn**	**20 22 14.2**	**+0.7**
PTBC				*e*S	**Sn**	**20 22 51.5**	**-0.4**
PTBC				*i*		20 23 07.0	
	comp=Z,6.1nm,0.4s						
MACC	**Macarena, Meta**	**3.32**	**124**	*e*P	**Pn**	**20 22 13.5**	**-0.1**
ZARC	**Zaragoza, Cauc**	**3.89**	**27**	*e*P	**Pn**	**20 22 23.3**	**+2.0**
ZARC				*e*S	**Sn**	**20 23 09.7**	**+3.9**
ZARC				*i*		20 23 10.8	
	comp=Z,6.2nm,0.3s						
RUSC	**La Rusia**	**3.99**	**62**	*e*P	**Pn**	**20 22 25.3**	**+2.2**
ASAR	**Alice Springs**	**144.65**	**234**	PKPbc	**PKPab**	**20 40 50.0**	**-1.8**
	comp=Z,0.3nm,0.5s,baz=118,slow=3.5,SNR=6.8						
WRA	**Warramunga Arr**	**145.93**	**240**	PKPbc	**PKPdf**	**20 40 52.6**	**-2.8**
	comp=Z,0.4nm,0.9s,baz=104,slow=3.5,SNR=2.3						

IDC 08 20:30:43.8±1.9, 2°.47N×128°.21E, h0^{km}, mb3.5/4, mbtmp3.5/4, MS3.8/1, Error ellipse: s-maj=146.8km s-min=23.1km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.07**	**165**	P	P	20 35 51.9	+0.6
	0.4nm,0.3s,baz=344,slow=10,SNR=8.2						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**26.57**	**168**	P	P	20 36 23.2	-0.6
	0.2nm,0.6s,baz=1.2,slow=8.6,SNR=6.6						
	0.2nm,0.6s						
STKA	**Stephens Creek**	**36.45**	**161**	P	P	20 37 49.9	-0.6
	0.9nm,0.4s,baz=338,slow=9.1,SNR=4.9						
	0.9nm,0.4s						
DZM	**Mont Dzumac**	**44.61**	**125**	LR	LR	20 57 20.5	
	comp=Z,102nm,20.0s,baz=196,slow=36						
MKAR	**Makanchi Array**	**59.42**	**325**	P	P	20 40 48.7	+0.3
	0.2nm,0.4s,baz=117,slow=7.8,SNR=9.4						
	0.2nm,0.4s						

ROM 08 20:31:00.2±0.1, 43°.039N±0°.004×13°.027E±0°.006, h9^{km}, ML1.3/6, 7C-7D, Error ellipse: s-maj=0.4km s-min=0.4km az=73.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.02**	**319**	P	Pg	20 31 01.7	-0.2
T1219				S	Sg	20 31 02.5	-0.6
T1220	**Camerino, Fraz**	**0.08**	**33**	⇑P	Pg	20 31 02.9	+0.4
T1220				S	Sg	20 31 04.6	+0.5
T1220				AML	AML		
	comp=E,1305µm,1.1s						
T1220				AML	AML		
	comp=N,1095µm,0.2s						
T1220				AML	AML		
	comp=E,1310µm,1.1s						
CESI	**CESI - Serrava**	**0.10**	**249**	⇑P	Pg	20 31 03.2	+0.6
CESI				S	Sg	20 31 05.3	+0.8
CESI				AML	AML		
	comp=N,126µm,0.4s						
CESI				AML	AML		
	comp=E,155µm,1.0s						
CESI				AML	AML		
	comp=N,126µm,1.6s						
CSP1	**Cessapalombo**	**0.14**	**68**	P	Pg	20 31 03.9	+0.5
CSP1				S	Sg	20 31 06.5	+0.9
T1216	**Preci, Frazion**	**0.15**	**182**	⇑P	Pg	20 31 04.1	+0.7
T1216				S	Sg	20 31 07.2	+1.5
T1216				AML	AML		
	comp=E,122µm,1.4s						
T1216				AML	AML		
	comp=N,148µm,1.5s						
T1216				AML	AML		
	comp=E,122µm,1.4s						
T1216				AML	AML		
	comp=N,148µm,0.5s						
MC2	**Monte Cornacci**	**0.17**	**136**	P	Pg	20 31 04.5	+0.5
T1245	**Castelsantange**	**0.22**	**147**	⇑P	Pg	20 31 05.3	+0.6
T1245				S	Sg	20 31 09.3	+1.5
T1245				AML	AML		
	comp=N,149µm,0.4s						
T1245				AML	AML		
	comp=E,120µm,0.3s						
SNTG	**Esanatoglia**	**0.23**	**344**	P	Pg	20 31 05.5	+0.7
SNTG				S	Sg	20 31 09.7	+1.8
GUMA	**Gualdo di Mace**	**0.23**	**84**	⇓P	Pg	20 31 05.8	+1.0
GUMA				AML	AML		
	comp=E,390µm,0.2s						
GUMA				AML	AML		
	comp=N,343µm,0.2s						
MMO1	**Montemonaco**	**0.26**	**122**	⇓P	Pg	20 31 06.0	+0.5
T1215	**Vallo di Nera,**	**0.26**	**206**	⇓P	Pg	20 31 06.2	+0.7
T1215				S	Sb	20 31 10.6	-1.2
ASSB	**Assisi San Ben**	**0.27**	**271**	P	Pg	20 31 06.1	+0.5
ASSB				AML	AML		
	comp=E,59µm,1.5s						
ASSB				AML	AML		
	comp=N,81µm,0.2s						
ASSB				AML	AML		
	comp=E,59µm,0.5s						
T1212	**Cascia, Frazio**	**0.29**	**177**	⇑P	Pg	20 31 06.6	+0.7
T1212				S	Sb	20 31 11.5	-1.0
EL6	**Elcito**	**0.29**	**11**	⇑P	Pb	20 31 07.0	-0.8
T1217	**Poggiodomo (PG**	**0.34**	**192**	P	Pg	20 31 07.6	+0.8
T1217				S	Sb	20 31 13.1	-0.8
T1241	**Roccafluvione,**	**0.35**	**121**	⇓P	Pg	20 31 07.7	+0.6
T1218	**Civita (PG)**	**0.38**	**170**	⇑P	Pg	20 31 08.0	+0.4
T1218				S	Sb	20 31 14.1	-1.0
PP3	**Marolino**	**0.54**	**51**	⇓P	Pg	20 31 08.9	-1.8
PP3				S	Sg	20 31 17.5	-0.4
MPAG	**Monte Paganucc**	**0.62**	**342**	⇓P	Pg	20 31 10.2	-2.1
PE3	**Peglio**	**0.76**	**330**	⇓P	Pb	20 31 15.9	+0.2
TOLF	**Tolfa**	**1.23**	**218**	P	Pg	20 31 25.4	+1.5

ROM 08 20:31:29.4±0.1, 42°.788N±0°.002×13°.201E±0°.004, h6^{km}, ML1.6/9, 9C-10D, Error ellipse: s-maj=0.3km s-min=0.0km az=96.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.03**	**169**	P	Pg	20 31 30.6	-0.2
T1214				S	Sg	20 31 31.5	-0.3
T1245	**Castelsantange**	**0.07**	**352**	⇓P	Pg	20 31 31.3	0.0
T1245				S	Sg	20 31 32.7	+0.1
T1245				AML	AML		
	comp=E,1675µm,0.2s						
T1245				AML	AML		
	comp=E,1595µm,0.2s						
T1245				AML	AML		
	comp=N,2155µm,0.2s						
T1245				AML	AML		
	comp=N,2215µm,0.2s						
T1245				AML	AML		
	comp=E,1675µm,0.2s						
T1245				AML	AML		
	comp=N,2155µm,1.8s						
T1245				AML	AML		
	comp=N,2215µm,1.8s						
T1212	**Cascia, Frazio**	**0.12**	**253**	⇑P	Pg	20 31 32.4	+0.4
T1212				S	Sg	20 31 34.7	+0.9
T1212				AML	AML		
	comp=E,422µm,0.5s						
T1212				AML	AML		
	comp=N,373µm,0.3s						
T1212				AML	AML		
	comp=E,319µm,0.3s						
T1212				AML	AML		
	comp=N,372µm,0.3s						
T1212				AML	AML		
	comp=N,377µm,0.3s						
T1212				AML	AML		
	comp=N,377µm,1.7s						
T1212				AML	AML		
	comp=N,372µm,1.7s						
T1212				AML	AML		
	comp=E,422µm,0.4s						
T1212				AML	AML		
	comp=E,320µm,0.3s						
MC2	**Monte Cornacci**	**0.12**	**356**	⇑P	Pg	20 31 32.5	+0.4
MC2				S	Sg	20 31 34.9	+0.9
T1218	**Civita (PG)**	**0.13**	**208**	⇓P	Pg	20 31 32.6	+0.4
T1218				S	Sg	20 31 35.4	+1.3
T1218				AML	AML		
	comp=E,416µm,0.5s						
T1218				AML	AML		
	comp=E,400µm,0.5s						
T1218				AML	AML		
	comp=N,607µm,0.3s						
T1218				AML	AML		
	comp=N,596µm,0.3s						
MMO1	**Montemonaco**	**0.14**	**40**	⇑P	Pg	20 31 32.7	+0.3
MMO1				S	Sg	20 31 35.5	+1.0
T1216	**Preci, Frazion**	**0.17**	**308**	⇑P	Pg	20 31 33.1	+0.3
T1216				S	Sg	20 31 36.3	+1.2
T1216				AML	AML		
	comp=E,362µm,0.7s						
T1216				AML	AML		
	comp=N,352µm,1.4s						
T1216				AML	AML		
	comp=N,352µm,1.4s						
T1216				AML	AML		
	comp=E,362µm,1.3s						
T1216				AML	AML		
	comp=N,352µm,0.6s						
T1241	**Roccafluvione,**	**0.18**	**68**	⇓P	Pg	20 31 33.6	+0.5
T1241				S	Sg	20 31 36.8	+1.3
T1241				AML	AML		
	comp=N,246µm,0.8s						
T1241				AML	AML		
	comp=E,266µm,0.6s						
T1241				AML	AML		
	comp=E,266µm,1.4s						
SMA1	**SAN MARTINO**	**0.19**	**148**	⇑P	Pg	20 31 33.6	+0.5
SMA1				S	Sg	20 31 37.1	+1.4
SMA1				AML	AML		
	comp=N,244µm,1.0s						
SMA1				AML	AML		
	comp=E,216µm,0.9s						
T1217	**Poggiodomo (PG**	**0.21**	**249**	P	Pg	20 31 34.2	+0.5
T1217				S	Sg	20 31 37.8	+1.3
T1256	**Bolognola (MC)**	**0.22**	**5**	⇑P	Pg	20 31 34.2	+0.4
T1256				S	Sg	20 31 38.2	+1.5
T1215	**Vallo di Nera,**	**0.24**	**273**	⇓P	Pg	20 31 34.7	+0.4
RM33	**Pellescritta (**	**0.28**	**178**	⇑P	Pg	20 31 35.3	+0.4
RM33				S	Sg	20 31 39.9	+1.3
RM33				AML	AML		
	comp=E,116µm,0.6s						
RM33				AML	AML		
	comp=N,164µm,1.3s						
RM33				AML	AML		
	comp=N,164µm,0.7s						
RM33				AML	AML		
	comp=E,116µm,1.4s						
GUMA	**Gualdo di Mace**	**0.29**	**20**	⇑P	Pg	20 31 35.9	+0.7
GUMA				AML	AML		

	comp=E,248µm,0.4s						
GUMA				AML	AML		
	comp=N,212µm,0.4s						
CSP1	**Cessapalombo**	**0.30**	**1**	P	Pg	20 31 35.6	+0.2
T1220	**Camerino, Fraz**	**0.33**	**346**	⇓P	Pg	20 31 36.3	+0.3
T1220				AML	AML		
	comp=N,347µm,0.2s						
T1220				AML	AML		
	comp=E,557µm,0.3s						
TERO	**Teramo**	**0.34**	**119**	P	Pg	20 31 36.1	+0.1
TERO				AML	AML		
	comp=E,109µm,1.1s						
TERO				AML	AML		
	comp=N,136µm,1.1s						
TERO				AML	AML		
	comp=N,136µm,0.9s						
TERO				AML	AML		
	comp=E,109µm,0.9s						
T1211	**Morro Reatino**	**0.36**	**225**	S	Sb	20 31 42.9	-1.3
T1222	**Castel Sant'An**	**0.41**	**198**	⇑P	Pg	20 31 37.7	+0.5
ASSB	**Assisi San Ben**	**0.47**	**303**	⇓P	Pg	20 31 38.8	+0.2
SNTG	**Esanatoglia**	**0.51**	**338**	⇓P	Pg	20 31 39.7	+0.5
EL6	**Elcito**	**0.55**	**352**	⇓P	Pg	20 31 40.2	+0.2
ATCC	**AVT- Casa Cast**	**0.57**	**314**	⇓P	Pg	20 31 40.5	+0.1
ARVD	**Arcevia**	**0.73**	**345**	S	Sb	20 31 55.6	+0.6
RNI2	**Rionero Sannit**	**1.29**	**147**	P	Pn	20 31 53.8	-0.4
RNI2				AML	AML		
	comp=E,124µm,1.5s						
RNI2				AML	AML		
	comp=N,150µm,1.6s						
RNI2				AML	AML		
	comp=N,150µm,0.4s						
LATB	**Latina**	**1.30**	**188**	⇓P	Pn	20 31 51.1	-3.1

IDC ***08*** *20:44:39.2±0.6, 6°.38S×155°.44E, h133^{km}±4^{km}, mb4.0/23, mbtmp4.5/27, MS3.3/2, Error ellipse: s-maj=12.7km s-min=9.2km az=74.0*

NEIC ***08*** *20:44:40.7±1.7, 6°.43S±0°.07×155°.44E±0°.07, h141^{km}±5^{km}, mb4.6/87, Error ellipse: s-maj=12.0km s-min=9.2km az=223.0*

ISC 08 20:44:39.9±0.4**, 6°.41S**±0°.05×**155°.48E**±0°.06**, h138**^{km}±3^{km}**, h139**^{km}**:pP-P, n299,** σ0^{s}.**99**/313**, mb4.5**/78**,**
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.97**	**304**		**Pn**	**20 45 40.6**	**+1.1**
KRVT	**Keravat (AS076**	**4.02**	**301**	P	**Pn**	**20 45 40.5**	**+0.4**
	139nm,0.5s,baz=145,slow=1.7,SNR=18						
KRVT				S	**Sn**	**20 46 24.4**	**-2.5**
	225nm,0.5s,baz=123,slow=16,SNR=1.4						
KRVT				LR	LR	20 46 56.4	
	comp=Z,367nm,19.5s,baz=125,slow=34						
HNR	**Honiara**	**5.35**	**124**	P	**Pn**	**20 45 57.1**	**-0.6**
	2µm,0.4s,baz=238,slow=3.6,SNR=12						
HNR	**Honiara**	**5.35**	**124**		**Pn**	**20 45 57.4**	**-0.4**
PMG	**Port Moresby**	**8.76**	**250**	P	**Pn**	**20 46 47.1**	**+3.6**
	9.8nm,0.5s,baz=80,slow=7.3,SNR=3.3						
PMG				S	**Sn**	**20 48 24.6**	**+3.8**
	104nm,0.9s,baz=71,slow=20,SNR=13						
PMG				LR	LR	20 50 22.2	
	comp=Z,186nm,18.5s,baz=152,slow=39						
PMG	**Port Moresby**	**8.76**	**250**		**Pn**	**20 46 44.1**	**+0.6**
COEN	**Coen**	**14.23**	**237**		**P**	**20 47 58.8**	**+0.3**
COEN	**Coen**	**14.23**	**237**	P	**P**	**20 47 59.4**	**+0.9**
	12nm,0.8s						
CTA	**Charters Tower**	**16.28**	**213**	P	**P**	**20 48 21.9**	**+0.7**
	3.3nm,0.6s,baz=45,slow=16,SNR=3.7						
CTAO	**Charters Tower**	**16.28**	**213**		**Pn**	**20 48 20.8**	**+0.1**
DZM	**Mont Dzumac**	**18.83**	**147**	P	**Pn**	**20 48 50.9**	**-0.4**
	12nm,0.5s,baz=294,slow=6.3,SNR=14						
DZM	**Mont Dzumac**	**18.83**	**147**	Pn	**P**	**20 48 50.7**	**+1.5**
DZM				IAmb	IAmb	20 48 53.4	
	comp=Z,50nm,1.5s						
EIDS	**Eidsvold**	**19.31**	**192**	P	**P**	**20 48 55.0**	**+0.7**
OUENC	**Ouen Island, N**	**19.33**	**147**	P	**P**	**20 48 55.2**	**+0.7**
OUENC				IAmb	IAmb	20 49 11.4	
	comp=Z,31nm,1.1s						
QIS	**Mount Isa**	**20.85**	**226**	P	**P**	**20 49 11.7**	**+0.8**
	comp=Z,25nm,1.4s						
RMQ	**Roma**	**20.96**	**197**	P	**P**	**20 49 13.0**	**+0.9**
	comp=Z,21nm,0.8s						
QLP	**Quilpie**	**22.74**	**207**	P	**P**	**20 49 30.5**	**+0.2**
	comp=Z,96nm,0.6s						
FAKI	**Fak Fak**	**23.40**	**277**	P	**P**	**20 49 34.8**	**-1.8**
FAKI				IAmb	IAmb	20 49 37.9	
	comp=Z,18nm,0.9s						
ARMA	**Armidale**	**24.15**	**188**	P	**P**	**20 49 43.4**	**+0.1**
WR0	**Warramunga Arr**	**24.39**	**234**	P	**P**	**20 49 45.5**	**0.0**
WR0				IAmb	IAmb	20 49 47.8	
	comp=Z,22nm,0.9s						
WB0	**Warramunga Arr**	**24.41**	**235**	P	**P**	**20 49 45.9**	**+0.2**
WRAB	**Tennant Creek**	**24.53**	**235**	P	**P**	**20 49 46.7**	**-0.1**
WRAB				IAmb	IAmb	20 49 49.2	
	comp=Z,16nm,0.8s						
WRAB	**Tennant Creek**	**24.53**	**235**	P	**P**	**20 49 47.0**	**+0.2**
	comp=Z,23nm,0.9s						
WB2	**Warramunga Arr**	**24.53**	**235**	P	**P**	**20 49 46.6**	**-0.1**
WB2				IAmb	IAmb	20 49 49.3	
	comp=Z,14nm,0.8s						
WRA	**Warramunga Arr**	**24.54**	**235**	P	**P**	**20 49 47.0**	**+0.1**
	comp=Z,14nm,0.7s,baz=58,slow=9.7,SNR=80						
WRA				pP	**pP**	**20 50 16.1**	**+2.5**
	comp=Z,8.3nm,0.7s,baz=58,slow=9.4,SNR=5.7						
WRA				S	**S**	**20 53 53.6**	**-4.1**
	comp=Z,0.7nm,0.8s,baz=56,slow=15,SNR=3.2						
	comp=Z,14nm,0.7s						
WRA	**Warramunga Arr**	**24.54**	**235**	P	**P**	**20 49 45.6**	**-1.2**
MTN	**Manton Dam**	**24.82**	**253**	P	**P**	**20 49 49.0**	**-0.5**
MTN				IAmb	IAmb	20 50 20.4	
	comp=Z,20nm,1.1s						
INKA	**Innaminka**	**25.41**	**212**	P	**P**	**20 49 54.4**	**-0.2**
	comp=Z,56nm,0.7s						
CMSA	**Cobar Meteorol**	**26.62**	**199**	P	**P**	**20 50 05.9**	**+0.4**
	comp=Z,17nm,0.9s						
AS01	**Alice Springs**	**26.88**	**228**	P	**P**	**20 50 07.5**	**-0.5**
	comp=Z,8.9nm,0.7s						
AS31	**Alice Springs**	**26.91**	**228**	P	**P**	**20 50 07.6**	**-0.7**
ASAR	**Alice Springs**	**26.91**	**228**	P	**P**	**20 50 07.6**	**-0.7**
	comp=Z,2.6nm,0.6s,baz=57,slow=9.1,SNR=51						
ASAR				S	**S**	**20 54 32.5**	**-2.7**
	comp=Z,1.1nm,1.1s,baz=52,slow=14,SNR=3.1						
	comp=Z,2.6nm,0.6s						
ASAR	**Alice Springs**	**26.91**	**228**	P	**P**	**20 50 07.8**	**-0.5**
H11S3	**WAKE ISLAND Hy**	**27.11**	**24**	T	T	21 18 47.9	
	baz=202,slow=75,SNR=60						
H11S2	**WAKE ISLAND Hy**	**27.11**	**24**	T	T	21 18 49.9	
	baz=202,slow=75,SNR=68						
H11S1	**WAKE ISLAND Hy**	**27.12**	**24**	T	T	21 18 49.1	
	baz=202,slow=75,SNR=34						
KNRA	**Kununurra**	**27.76**	**248**	P	**P**	**20 50 15.5**	**-0.3**
KNRA				IAmb	IAmb	20 50 52.2	
	comp=Z,18nm,1.3s						
OOD	**Oodnadatta**	**28.37**	**219**	P	**P**	**20 50 20.6**	**-0.5**
	comp=Z,19nm,0.7s						
STKA	**Stephens Creek**	**28.46**	**205**	P	**P**	**20 50 21.0**	**-1.0**
	comp=Z,1.2nm,0.4s,baz=24,slow=10,SNR=8.6						
	comp=Z,1.2nm,0.4s						
STKA	**Stephens Creek**	**28.46**	**205**	P	**P**	**20 50 22.1**	**+0.2**
LCRK	**Leigh Creek**	**28.89**	**212**	P	**P**	**20 50 25.4**	**-0.3**
	comp=Z,16nm,0.8s						
MULG	**Mulgathing**	**31.13**	**218**	P	**P**	**20 50 44.7**	**-0.8**
	comp=Z,14nm,1.0s						
FITZ	**Fitzroy Crossi**	**31.32**	**246**	P	**P**	**20 50 46.5**	**-0.9**
BBOO	**Buckleboo**	**31.88**	**212**	P	**P**	**20 50 51.3**	**-0.8**
BBOO				IAmb	IAmb	20 50 51.8	
	comp=Z,6.2nm,0.6s						
WRKA	**Warakurna**	**31.93**	**232**	P	**P**	**20 50 52.1**	**-0.6**
	comp=Z,17nm,0.7s						
FORT	**Forrest**	**35.34**	**223**	P	**P**	**20 51 21.3**	**-0.8**
URZ	**Urewera**	**37.28**	**151**	P	**P**	**20 51 39.2**	**+0.7**
	comp=Z,13nm,0.8s,baz=265,slow=5.9,SNR=2.3						
	comp=Z,13nm,0.8s						
MBWA	**Marble Bar**	**37.56**	**243**	P	**P**	**20 51 40.2**	**-0.8**
PSA00	**Pilbara Seismi**	**37.59**	**243**	P	**P**	**20 51 40.2**	**-1.0**
PSA00				IAmb	IAmb	20 51 57.1	
	comp=Z,9.6nm,1.0s						
TCW	**Tory Channel**	**38.50**	**157**	P	**P**	**20 51 49.3**	**+0.7**
MRZ	**Mangatainoka R**	**38.56**	**155**	P	**P**	**20 51 49.0**	**-0.1**
BFZ	**Birch Farm**	**38.86**	**155**	P	**P**	**20 51 51.1**	**-0.5**
BHW	**Baring Head**	**38.90**	**157**	P	**P**	**20 51 51.9**	**0.0**
MORW	**Morawa**	**43.48**	**234**	P	**P**	**20 52 28.1**	**-1.6**
MORW				IAmb	IAmb	20 53 03.0	
	comp=Z,17nm,1.2s						
NWAO	**Narrogin (SRO)**	**44.23**	**228**	P	**P**	**20 52 34.8**	**-0.8**
MJAR	**Matsushiro Arr**	**45.69**	**340**	P	**P**	**20 52 46.2**	**-0.8**
	comp=Z,1.7nm,0.8s,baz=159,slow=6.9,SNR=3.3						
MJAR				PcP	**PcP**	**20 54 20.4**	**-2.3**
	comp=Z,1.9nm,0.7s,baz=170,slow=4.6,SNR=3.1						
	comp=Z,1.7nm,0.8s						
NJ2	**Nanjing**	**51.78**	**320**	*e*P	**P**	**20 53 36.1**	**+2.6**
NJ2				pP	**pP**	**20 54 06.2**	**+0.2**
NJ2				sP	**sP**	**20 54 21.7**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**54.65**	**339**	P	**P**	**20 53 53.0**	**-1.3**
	comp=Z,4.3nm,0.9s,baz=135,slow=7.2,SNR=4.6						
	comp=Z,4.3nm,0.9s						
MDJ	**Mudanjiang**	**55.88**	**338**	P	**P**	**20 54 07.5**	**+4.4**
MDJ				pP	pP	20 54 40.4	+5.0
MDJ				PcP	**sP**	**20 54 53.0**	**+2.5**
MDJ				sP	PcP	20 54 55.9	-4.3
MDJ				ScP	ScP	20 58 31.2	-15
MDJ				PcS	**PcS**	**20 59 00.5**	**-0.1**
MDJ				S	S	21 02 07.4	+28
KLR	**Kul'dur**	**59.16**	**342**	P	**P**	**20 54 26.4**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=113,slow=7.2,SNR=5.2						
	comp=Z,1.5nm,0.6s						
PEA0B	**Petropavlovsk-**	**59.32**	**2**	P	**P**	**20 54 28.3**	**+1.3**
PETK	**Petropavlovsk-**	**59.32**	**2**	P	**P**	**20 54 28.4**	**+1.4**
	comp=Z,8.6nm,0.8s,baz=187,slow=11,SNR=6.7						
	comp=Z,8.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**60.97**	**295**	P	**P**	**20 54 39.7**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=121,slow=4.7,SNR=5.4						
CMAR				pP	**pP**	**20 55 10.6**	**-1.3**
	comp=Z,5.6nm,0.8s,baz=118,slow=4.9,SNR=20						
	comp=Z,0.5nm,0.5s						
XLT	**XiLinHaoTe**	**61.41**	**329**	*e*P	**P**	**20 54 43.1**	**+1.6**
XLT				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HEH	**HeiHe**	**61.45**	**340**	*e*P	**P**	**20 54 42.0**	**+0.5**
HEH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HEH				pmax	pmax		
	comp=Z,96nm,5.9s						
PZH	**PanZhiHua**	**61.47**	**305**	P	**P**	**20 54 44.0**	**+1.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,6.4s						
HHC	**Hu-ho-hao-te**	**61.91**	**323**	*e*P	P	20 54 50.4	+5.4
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,210nm,5.3s						
CASY	**Casey**	**67.29**	**198**	P	**P**	**20 55 19.1**	**-0.2**
UNV	**Unalaska Valle**	**68.00**	**23**	P	**P**	**20 55 24.4**	**+0.5**
UNV	**Unalaska Valle**	**68.00**	**23**	P	**P**	**20 55 24.2**	**+0.3**
	baz=221						
SONM	**Songino Array**	**69.11**	**327**	P	**P**	**20 55 32.2**	**+1.1**
	comp=Z,2.6nm,0.8s,baz=137,slow=6.4,SNR=21						
SONM				pP	**pP**	**20 56 04.1**	**-0.9**
	comp=Z,1.1nm,0.8s,baz=145,slow=6.2,SNR=3.6						
	comp=Z,2.6nm,0.8s						
SONM	**Songino Array**	**69.11**	**327**	P	**P**	**20 55 32.3**	**+1.1**
SEY	**Seymchan**	**69.19**	**358**	P	**P**	**20 55 31.1**	**0.0**
	comp=Z,2.1nm,0.8s,baz=161,slow=9.9,SNR=4.4						
	comp=Z,2.1nm,0.8s						
SPIA	**Saint Paul Isl**	**69.25**	**19**	P	**P**	**20 55 31.7**	**+0.1**
	baz=217						
YAK	**Yakutsk**	**71.09**	**347**	P	**P**	**20 55 42.2**	**-0.6**
	comp=Z,1.5nm,0.5s,baz=160,slow=18,SNR=4.2						
	comp=Z,1.5nm,0.5s						
S12K	**Black Hills**	**71.12**	**24**	P	**P**	**20 55 43.6**	**+0.5**
	baz=225						
VNDA	**Vanda**	**71.15**	**179**	P	**P**	**20 55 43.4**	**+0.5**
	comp=Z,2.9nm,0.7s,baz=330,slow=6.6,SNR=16						
	comp=Z,2.9nm,0.7s						
VNDA	**Vanda**	**71.15**	**179**	P	**P**	**20 55 43.5**	**+0.5**
CHGN	**Chignik**	**73.03**	**25**	P	**P**	**20 55 54.4**	**+0.1**
	baz=228						
BILL	**Bilibino**	**74.67**	**4**	P	**P**	**20 56 04.6**	**+0.9**
BILL				IAmb	IAmb	20 56 06.2	
	comp=Z,12nm,1.1s						
R17K	**Ugashik Creek**	**74.74**	**25**	P	**P**	**20 56 04.1**	**-0.2**
	baz=230						
P16K	**Nushagak River**	**75.01**	**23**	P	**P**	**20 56 06.2**	**+0.4**
	baz=228						
Q17K	**Contact Creek**	**75.35**	**24**	P	**P**	**20 56 08.4**	**+0.4**
	baz=230						
O16K	**Kokwok River B**	**75.35**	**22**	P	**P**	**20 56 08.3**	**+0.5**
	baz=228						
N16K	**Nishlik Lake**	**75.69**	**21**	P	**P**	**20 56 10.0**	**+0.2**
	baz=227						
O17K	**Koliganek Bris**	**75.85**	**23**	P	**P**	**20 56 10.7**	**0.0**
	baz=229						
Q18K	**Katmai Hardscr**	**75.95**	**24**	P	**P**	**20 56 11.6**	**+0.3**
	baz=231						
KDAK	**Kodiak Island**	**76.44**	**26**	P	**P**	**20 56 15.2**	**+1.2**
ANM	**Nome**	**76.54**	**16**	P	**P**	**20 56 15.3**	**+0.8**
ANM				IAmb	IAmb	20 56 16.6	
	comp=Z,7.8nm,0.8s						
ANM	**Nome**	**76.54**	**16**	P	**P**	**20 56 15.3**	**+0.8**
	baz=220,SNR=7.5						
O18K	**Koktuh Hills**	**76.63**	**23**	P	**P**	**20 56 15.7**	**+0.6**
	baz=231						
TNA	**Tin City**	**76.64**	**15**	P	**P**	**20 56 15.9**	**+1.0**
TNA	**Tin City**	**76.64**	**15**	P	**P**	**20 56 16.0**	**+1.0**
	baz=218						
Q19K	**Cape Douglas,**	**76.68**	**24**	P	**P**	**20 56 15.3**	**-0.1**
Q19K	**Cape Douglas,**	**76.68**	**24**	P	**P**	**20 56 16.0**	**+0.6**
	baz=232						
N19K	**Bonanza Creek**	**77.52**	**23**	P	**P**	**20 56 21.1**	**+1.0**
	baz=231						
M19K	**Big River Lodg**	**78.24**	**22**	P	**P**	**20 56 25.6**	**+1.6**
M19K	**Big River Lodg**	**78.24**	**22**	P	**P**	**20 56 24.8**	**+0.8**
	baz=231						
L19K	**White Mountain**	**78.24**	**21**	P	**P**	**20 56 24.5**	**+0.5**
	baz=231						
TTA	**Tatalina**	**78.31**	**20**	P	**P**	**20 56 25.5**	**+1.0**
TTA				IAmb	IAmb	20 56 26.2	
	comp=Z,5.9nm,0.8s						
TTA	**Tatalina**	**78.31**	**20**	P	**P**	**20 56 25.1**	**+0.7**
	baz=230,SNR=6.5						
BRSE	**Bradley Lake S**	**78.36**	**25**	P	**P**	**20 56 24.9**	**+0.2**
	baz=235						
M20K	**Styx River**	**78.69**	**22**	P	**P**	**20 56 27.6**	**+1.1**
	baz=232						
WMQ	**Urumqi**	**78.73**	**317**	*e*P	**P**	**20 56 27.8**	**+0.7**
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
L20K	**Farewell, AK**	**78.78**	**21**	P	**P**	**20 56 28.3**	**+1.3**
	baz=232						
SEW	**Seward**	**79.10**	**25**	P	**P**	**20 56 29.5**	**+0.8**
	baz=236						
K20K	**Telida**	**79.27**	**21**	P	**P**	**20 56 30.5**	**+0.9**
K20K				IAmb	IAmb	20 56 31.6	
	comp=Z,9.5nm,1.1s						
K20K	**Telida**	**79.27**	**21**	P	**P**	**20 56 30.4**	**+0.8**
	baz=231,SNR=5.7						
SKT	**Skwentna**	**79.36**	**23**	P	**P**	**20 56 29.6**	**-0.5**
	baz=234						
RC01	**Rabbit Creek A**	**79.54**	**24**	P	**P**	**20 56 31.3**	**+0.2**
RC01	**Rabbit Creek A**	**79.54**	**24**	P	**P**	**20 56 30.7**	**-0.4**
	baz=236						
PPLA	**Purkeypile**	**79.66**	**22**	P	**P**	**20 56 31.5**	**-0.4**
	baz=233						
RDOG	**Red Dog Mine**	**79.83**	**15**	P	**P**	**20 56 34.0**	**+1.5**
RDOG	**Red Dog Mine**	**79.83**	**15**	P	**P**	**20 56 33.5**	**+1.0**
	baz=222						
TIXI	**Tiksi**	**79.85**	**352**	P	**P**	**20 56 30.9**	**-1.6**
	comp=Z,0.7nm,0.3s,baz=90,slow=24,SNR=8.8						
	comp=Z,0.7nm,0.3s						
PWL	**Port Wells**	**79.98**	**24**	P	**P**	**20 56 34.1**	**+0.6**
	baz=237						
CAST	**Castle Rocks**	**80.01**	**21**	P	**P**	**20 56 33.7**	**+0.1**
CAST				IAmb	IAmb	20 56 34.4	
	comp=Z,9.8nm,0.7s						
CAST	**Castle Rocks**	**80.01**	**21**	P	**P**	**20 56 33.6**	**+0.1**
	baz=233,SNR=8.3						
PMR	**Palmer**	**80.07**	**24**	P	**P**	**20 56 34.2**	**+0.3**
PMR				IAmb	IAmb	20 56 34.9	
	comp=Z,12nm,0.9s						
PMR	**Palmer**	**80.07**	**24**	P	**P**	**20 56 34.2**	**+0.3**
	baz=236						
CUT	**Chulitna**	**80.08**	**23**	P	**P**	**20 56 34.6**	**+0.6**
	baz=235						
CHUM	**Lake Minchumin**	**80.21**	**21**	P	**P**	**20 56 34.9**	**+0.3**
	baz=233						
KNK	**Knik Glacier**	**80.24**	**24**	P	**P**	**20 56 35.7**	**+0.8**
	baz=237						
SML	**Sawmill**	**80.50**	**24**	P	**P**	**20 56 37.1**	**+0.7**
SML	**Sawmill**	**80.50**	**24**	P	**P**	**20 56 37.4**	**+1.1**
	baz=237						
KTH	**Kantishna Hill**	**80.51**	**21**	P	**P**	**20 56 35.8**	**-0.5**
KTH				IAmb	IAmb	20 56 37.2	
	comp=Z,11nm,1.1s						
TRF	**Thorofare Moun**	**80.68**	**22**	P	**P**	**20 56 37.3**	**-0.1**
	baz=235						
M23K	**Glacier View**	**80.74**	**24**	P	**P**	**20 56 38.7**	**+1.2**
	baz=237						
BPAW	**Bear Paw Mtn.**	**80.81**	**21**	P	**P**	**20 56 37.6**	**-0.3**
BPAW	**Bear Paw Mtn.**	**80.81**	**21**	P	**P**	**20 56 38.2**	**+0.3**
	baz=234						
SCM	**Sheep Creek Mo**	**80.92**	**24**	P	**P**	**20 56 39.6**	**+1.1**
	baz=238						
IMAR	**Indian Mountai**	**81.03**	**19**	P	**P**	**20 56 40.0**	**+1.0**
I21K	**Tanana**	**81.11**	**20**	P	**P**	**20 56 40.4**	**+1.0**
I21K				IAmb	IAmb	20 56 41.8	
	comp=Z,7.4nm,0.8s						
I21K	**Tanana**	**81.11**	**20**	P	**P**	**20 56 40.8**	**+1.4**
	baz=233						
H21K	**Melozitna Rive**	**81.13**	**19**	P	**P**	**20 56 40.8**	**+1.3**
H21K	**Melozitna Rive**	**81.13**	**19**	P	**P**	**20 56 40.2**	**+0.7**
	baz=232						
RND	**Reindeer**	**81.19**	**22**	P	**P**	**20 56 40.0**	**0.0**
RND				IAmb	IAmb	20 56 40.6	
	comp=Z,7.7nm,0.8s						
KLU	**Klutina**	**81.31**	**24**	P	**P**	**20 56 41.3**	**+0.7**
KLU				IAmb	IAmb	20 56 42.7	
	comp=Z,20nm,1.3s						
KLU	**Klutina**	**81.31**	**24**	P	**P**	**20 56 41.2**	**+0.6**
	baz=239						
MCK	**McKinley**	**81.34**	**22**	P	**P**	**20 56 40.5**	**-0.2**
MCK	**McKinley**	**81.34**	**22**	P	**P**	**20 56 40.8**	**+0.1**
	baz=236,SNR=10						
G21K	**Allakaket**	**81.44**	**18**	P	**P**	**20 56 41.9**	**+0.8**
	baz=231						
MLY	**Manley**	**81.44**	**20**	P	**P**	**20 56 41.6**	**+0.4**
MLY				IAmb	IAmb	20 56 42.4	
	comp=Z,17nm,1.3s						
MLY	**Manley**	**81.44**	**20**	P	**P**	**20 56 41.2**	**-0.1**
	baz=234						
M24K	**Tolsona, Glenn**	**81.53**	**24**	P	**P**	**20 56 42.0**	**+0.3**
	baz=239						
H22K	**Ishtalitna Cre**	**81.74**	**19**	P	**P**	**20 56 43.7**	**+1.0**
	baz=234						
NEA2	**Nenana**	**81.78**	**21**	P	**P**	**20 56 42.5**	**-0.4**
NEA2				IAmb	IAmb	20 56 43.3	
	comp=Z,6.7nm,0.7s						
NEA2	**Nenana**	**81.78**	**21**	P	**P**	**20 56 42.9**	**0.0**
	baz=236						
F21K	**Alatna River**	**81.89**	**18**	P	**P**	**20 56 43.9**	**+0.5**
	baz=231						
N25K	**Chitina, Valde**	**81.92**	**25**	P	**P**	**20 56 43.9**	**+0.1**
	baz=240						
WRH	**Wood River Hil**	**82.06**	**21**	P	**P**	**20 56 44.1**	**-0.3**
WRH				IAmb	IAmb	20 56 44.8	
	comp=Z,13nm,1.4s						
GLB	**Gilahina Butte**	**82.17**	**25**	P	**P**	**20 56 45.8**	**+0.7**
GLB				IAmb	IAmb	20 56 47.3	
	comp=Z,13nm,1.1s						
PAX	**Paxson**	**82.25**	**23**	P	**P**	**20 56 45.3**	**-0.2**
	baz=239						
CCB	**Clear Creek Bu**	**82.26**	**21**	P	**P**	**20 56 44.9**	**-0.5**
CCB				IAmb	IAmb	20 56 45.6	
	comp=Z,7.7nm,1.1s						
MDM	**Murphy Dome**	**82.28**	**21**	P	**P**	**20 56 45.1**	**-0.4**
MDM				IAmb	IAmb	20 56 46.1	
	comp=Z,10.0nm,1.2s						
H23K	**Yukon River**	**82.31**	**20**	P	**P**	**20 56 46.5**	**+0.7**
	baz=235						
G22K	**Bettles**	**82.31**	**19**	P	**P**	**20 56 46.5**	**+0.8**
	baz=233						
TCOL	**CIGO, UAF Yank**	**82.36**	**21**	P	**P**	**20 56 45.2**	**-0.8**
TCOL				IAmb	IAmb	20 56 46.3	
	comp=Z,15nm,1.0s						
TCOL	**CIGO, UAF Yank**	**82.36**	**21**	P	**P**	**20 56 46.3**	**+0.3**
	baz=237						
COLA	**College**	**82.37**	**21**	P	**P**	**20 56 45.2**	**-0.8**
COLA				IAmb	IAmb	20 56 46.3	
	comp=Z,14nm,0.9s						
COLA	**College**	**82.37**	**21**	P	**P**	**20 56 45.9**	**0.0**
	baz=237						
HDA	**Harding Lake**	**82.44**	**22**	P	**P**	**20 56 45.9**	**-0.5**
HDA	**Harding Lake**	**82.44**	**22**	P	**P**	**20 56 45.9**	**-0.5**
	baz=238						
F22K	**John River**	**82.46**	**18**	P	**P**	**20 56 46.7**	**+0.2**
	baz=232						
MCARA	**McCarthy VSAT**	**82.47**	**25**	P	**P**	**20 56 46.8**	**+0.2**
	baz=242						
K24K	**Donnelly Dome**	**82.56**	**22**	P	**P**	**20 56 47.4**	**+0.3**
	baz=239						
POKR	**Poker Plat Res**	**82.65**	**21**	P	**P**	**20 56 46.6**	**-0.8**
POKR				IAmb	IAmb	20 56 48.2	
	comp=Z,12nm,1.4s						
POKR	**Poker Plat Res**	**82.65**	**21**	P	**P**	**20 56 47.1**	**-0.4**
	baz=237						
IL31		**82.66**	**21**	P	**P**	**20 56 46.8**	**-0.6**
IL31				IAmb	IAmb	20 56 47.7	
	comp=Z,7.1nm,0.9s						
ILAR	**Eielson Array**	**82.66**	**21**	P	**P**	**20 56 46.3**	**-1.2**
	comp=Z,3.9nm,0.9s,baz=252,slow=5.1,SNR=30						
	comp=Z,3.9nm,0.9s						
ILAR	**Eielson Array**	**82.66**	**21**	P	**P**	**20 56 46.4**	**-1.1**
G23K	**Bananza Creek**	**82.66**	**19**	P	**P**	**20 56 48.1**	**+0.5**
	baz=235						
RIDG	**Independent Ri**	**82.89**	**23**	P	**P**	**20 56 48.7**	**-0.1**
RIDG				IAmb	IAmb	20 56 52.2	
	comp=Z,6.4nm,0.9s						
RIDG	**Independent Ri**	**82.89**	**23**	P	**P**	**20 56 49.4**	**+0.6**
	baz=240						
H24K	**Noodor Dome**	**82.89**	**20**	P	**P**	**20 56 49.5**	**+0.8**
	baz=237						
BARN	**Barnard Glacie**	**82.90**	**26**	P	**P**	**20 56 50.1**	**+1.0**
BARN				IAmb	IAmb	20 56 51.0	
	comp=Z,6.9nm,0.8s						
COLD	**Coldfoot**	**82.91**	**19**	P	**P**	**20 56 49.8**	**+1.0**
COLD	**Coldfoot**	**82.91**	**19**	P	**P**	**20 56 49.2**	**+0.4**
	baz=234						
M26K	**Nabesna, AK**	**82.97**	**24**	P	**P**	**20 56 49.8**	**+0.5**
	baz=242						
CTG	**Chitna Glacier**	**83.00**	**26**	P	**P**	**20 56 50.3**	**+0.7**
	baz=243						
PINM	**Pinnacle**	**83.10**	**27**	P	**P**	**20 56 50.3**	**+0.3**
	baz=244						
L26K	**Log Cabin Wild**	**83.12**	**24**	P	**P**	**20 56 50.9**	**+0.9**
L26K				IAmb	IAmb	20 56 51.6	
	comp=Z,6.0nm,1.0s						
L26K	**Log Cabin Wild**	**83.12**	**24**	P	**P**	**20 56 50.8**	**+0.9**
	baz=241						
DOT	**Dot Lake**	**83.14**	**23**	P	**P**	**20 56 50.7**	**+0.6**
DOT				IAmb	IAmb	20 56 51.5	
	comp=Z,10nm,0.9s						
MK31	**Makanchi Array**	**83.28**	**319**	P	**P**	**20 56 50.5**	**-0.7**
MKAR	**Makanchi Array**	**83.28**	**319**	P	**P**	**20 56 50.7**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=104,slow=6.5,SNR=10						
MKAR				pP	**pP**	**20 57 24.1**	**-2.2**
	comp=Z,0.8nm,0.7s,baz=96,slow=5.8,SNR=4.1						
	comp=Z,0.8nm,0.7s						
MKAR	**Makanchi Array**	**83.28**	**319**	P	**P**	**20 56 50.2**	**-1.0**
SCRK	**Sand Creek**	**83.33**	**23**	P	**P**	**20 56 51.3**	**+0.1**
SCRK				IAmb	IAmb	20 56 52.2	
	comp=Z,4.2nm,0.7s						
SCRK	**Sand Creek**	**83.33**	**23**	P	**P**	**20 56 51.7**	**+0.6**
	baz=241,SNR=5.8						
M27K	**Edge Creek, AK**	**83.41**	**25**	P	**P**	**20 56 52.4**	**+0.8**
M27K	**Edge Creek, AK**	**83.41**	**25**	P	**P**	**20 56 52.0**	**+0.4**
	baz=243						
O28M	**Mount Upton**	**83.42**	**26**	P	**P**	**20 56 52.2**	**+0.3**
	baz=244						
MAKZ	**Makanchi**	**83.50**	**318**	P	**P**	**20 56 51.8**	**-0.4**
G24K	**Hadweenzic Riv**	**83.50**	**20**	P	**P**	**20 56 52.3**	**+0.5**
	baz=237						
QSPA	**South Pole Qui**	**83.56**	**180**	P	**P**	**20 56 52.3**	**-0.1**
	comp=Z,13nm,0.8s,baz=290,slow=0.4,SNR=51						
QSPA				pP	**pP**	**20 57 25.2**	**-2.1**
	comp=Z,3.1nm,0.6s,baz=218,slow=1.5,SNR=2.5						
	comp=Z,13nm,0.8s						
E23K	**Chandalar**	**83.57**	**18**	P	**P**	**20 56 53.1**	**+0.9**
	baz=235						
YUK3	**Moose Creek**	**83.74**	**25**	P	**P**	**20 56 54.3**	**+0.9**
	baz=244						
L27K	**Beaver Creek,**	**83.75**	**24**	P	**P**	**20 56 54.4**	**+1.2**
L27K				IAmb	IAmb	20 56 55.3	
	comp=Z,6.7nm,1.1s						
L27K	**Beaver Creek,**	**83.75**	**24**	P	**P**	**20 56 53.9**	**+0.7**
	baz=243						

J26L	Joseph Creek	83.75	22	P	P	20 56 53.7	+0.4
J26L	Joseph Creek	83.75	22	P	P	20 56 54.2	+1.0
	baz=241,SNR=6.4						
BCAR	Beaver Creek A	83.77	24	P	P	20 56 54.4	+1.0
D23K	Nanushuk River	83.79	17	P	P	20 56 54.6	+1.3
	baz=234						
F24K	Squaw Lake	83.81	19	P	P	20 56 55.0	+1.6
	baz=237						
YUK8	Steele Glacier	83.83	26	P	P	20 56 54.2	+0.3
	baz=245						
BVCY	Beaver Creek	83.85	25	P	P	20 56 54.6	+0.9
	baz=244						
TOLK	Toolik Lake Re	83.92	18	P	P	20 56 55.2	+1.3
	baz=235						
E24K	Your Creek	83.93	18	P	P	20 56 54.3	+0.2
	baz=236						
O29M	Mount Kennedy	83.94	27	P	P	20 56 55.2	+0.8
	baz=246						
ZALV	Zalesovo Beam	83.97	326	P	P	20 56 53.3	-1.1
	comp=Z,0.5nm,0.4s,baz=96,slow=6.0,SNR=4.1						
	comp=Z,0.5nm,0.4s						
G25K	Bearman Lake	83.99	20	P	P	20 56 55.0	+0.7
	baz=238						
K27K	Chicken	84.10	23	P	P	20 56 56.2	+1.3
	baz=242						
I26K	Coal Creek Min	84.30	22	P	P	20 56 56.5	+0.7
	baz=241						
YUK6	Outpost Mounta	84.30	27	P	P	20 56 56.4	+0.1
	baz=246						
YUK4	Talbot Arm	84.34	26	P	P	20 56 57.6	+1.1
	baz=246						
F25K	Christian Rive	84.58	19	P	P	20 56 58.4	+1.1
	baz=239						
P30M	Million Dollar	84.61	28	P	P	20 56 58.6	+1.0
	baz=247						
PLBC	Pleasant Camp	84.64	28	P	P	20 56 58.6	+0.9
	baz=248						
HYT	Haines Junctio	84.64	27	P	P	20 56 59.3	+1.4
HYT				IAmb	IAmb	20 57 00.1	
	comp=Z,12nm,0.9s						
HYT	Haines Junctio	84.64	27	P	P	20 56 58.4	+0.6
	baz=247						
C24K	Franklin Bluff	84.80	17	P	P	20 56 59.6	+1.3
	baz=236						
EGAK	Eagle	84.80	23	P	P	20 56 59.0	+0.6
EGAK				IAmb	IAmb	20 57 00.3	
	comp=Z,7.7nm,0.9s						
EGAK	Eagle	84.80	23	P	P	20 56 59.0	+0.6
	baz=243,SNR=5.2						
BMAR	Burnt Mountain	84.85	20	P	P	20 56 59.9	+1.2
M29M	Somme Creek	84.88	25	P	P	20 56 59.7	+0.7
	baz=246						
G26K	Porcupine Rive	84.88	20	P	P	20 57 00.1	+1.4
	baz=240						
E25K	Arctic Village	84.88	19	P	P	20 56 59.8	+1.0
	baz=239						
I27K	Kandik River	85.00	22	P	P	20 57 00.6	+1.1
	baz=243						
F26K	Sheenjek River	85.12	19	P	P	20 57 01.1	+1.1
	baz=240						
DAWY	Dawson	85.17	24	P	P	20 57 01.7	+1.4
DAWY	Dawson	85.17	24	P	P	20 57 01.8	+1.4
	baz=245						
O30N	Mendenhall	85.26	27	P	P	20 57 02.0	+1.2
	baz=248						
D25K	Kavik River	85.26	18	P	P	20 57 01.0	+0.3
	baz=238						
L29M	L29M	85.29	25	P	P	20 57 01.9	+0.9
	baz=246						
H27K	Steamboat Moun	85.33	21	P	P	20 57 01.9	+0.8
	baz=243						
G27K	Doyon Strip	85.55	21	P	P	20 57 03.7	+1.6
	baz=242						
M30M	Minto, Yukon	85.64	25	P	P	20 57 03.9	+1.2
M30M	Minto, Yukon	85.64	25	P	P	20 57 03.5	+0.8
	baz=247						
N31M	Braeburn, Yuko	85.67	27	P	P	20 57 03.8	+1.0
	baz=248						
K29M	Barlow Dome	85.83	24	P	P	20 57 04.7	+0.9
	baz=246						
C26K	Camden Bay	86.01	17	P	P	20 57 05.8	+1.5
	baz=239						
I29M	Ogilvie Camp,	86.14	23	P	P	20 57 05.9	+0.8
I29M				IAmb	IAmb	20 57 06.9	
	comp=Z,14nm,1.2s						
I29M	Ogilvie Camp,	86.14	23	P	P	20 57 06.4	+1.3
	baz=246						
E27K	Coleen River	86.21	19	P	P	20 57 06.9	+1.5
	baz=242						
C27K	Jago River	86.23	18	P	P	20 57 06.3	+0.9
	baz=240						
Q32M	Nakina River	86.44	30	P	P	20 57 07.2	+0.3
	baz=252						
M31M	Drury Creek, Y	86.54	26	P	P	20 57 07.7	+0.6
	baz=249						
S34M	Telegraph Cree	86.69	31	P	P	20 57 08.5	+0.7
	baz=252						
N32M	Quiet Lake	86.77	27	P	P	20 57 08.9	+0.7
	baz=251						
FARO	Faro, Yukon	87.01	26	P	P	20 57 10.0	+0.6
	baz=250						
EPYK	Eagle Plains	87.14	22	P	P	20 57 10.8	+0.8
EPYK	Eagle Plains	87.14	22	P	P	20 57 11.0	+1.1
	baz=247,SNR=15						
DLBC	Dease Lake	87.40	30	P	P	20 57 12.0	+0.6
	baz=254						
G30M	tAoh Zraii Nji	87.56	21	P	P	20 57 12.7	+0.7
	baz=248,SNR=7.8						
NRIK	Noril'sk	88.34	341	P	P	20 57 14.6	-1.0
	comp=Z,1.9nm,0.5s,baz=115,slow=6.4,SNR=4.1						
	comp=Z,1.9nm,0.5s						
NRIK	Noril'sk	88.34	341	P	P	20 57 14.7	-0.8
NRIK				IAmb	IAmb	20 57 15.6	
	comp=Z,6.9nm,1.2s						
F31M	Tsiigehtchic	88.63	21	P	P	20 57 17.2	+0.3
	baz=250,SNR=8.0						
INK	Inuvik	89.01	21	P	P	20 57 18.6	+0.1
	comp=Z,5.7nm,0.8s,baz=261,slow=1.5,SNR=14						
	comp=Z,5.7nm,0.8s						
INK	Inuvik	89.01	21	P	P	20 57 18.7	+0.1
INK				IAmb	IAmb	20 57 20.5	
	comp=Z,7.0nm,0.9s						
INK	Inuvik	89.01	21	P	P	20 57 19.0	+0.3
	baz=250,SNR=8.5						
PKM	Mcpherson Peak	89.30	55	P	P	20 57 21.3	+0.2
	baz=262						
CWC	Cottonwood Cre	90.91	54	P	P	20 57 28.4	-0.1
	baz=263						
NVAR	Mina Array Bea	90.99	52	P	P	20 57 29.7	+0.9
	comp=Z,1.7nm,0.8s,baz=260,slow=5.9,SNR=9.8						
	comp=Z,1.7nm,0.8s						
NV11	Mina Array Sit	91.10	52	P	P	20 57 30.2	+0.9
KVN	Kaiserville	91.22	51	P	P	20 57 30.9	+1.0
KVN				IAmb	IAmb	20 57 31.8	
	comp=Z,7.1nm,1.4s						
MPMC	Manual Prospec	91.34	54	P	P	20 57 30.4	-0.1
	baz=263						
MZP	Montezuma Peak	91.62	52	P	P	20 57 33.0	+1.1
MZP				IAmb	IAmb	20 57 34.0	
	comp=Z,3.1nm,1.1s						
PFO	Pinyon Flats O	91.90	57	P	P	20 57 32.2	-0.9
	baz=264						
TPFO	Pinon Flats	91.90	57	P	P	20 57 32.4	-0.7
	baz=264						
WCT	Wildcat Mounta	92.11	53	P	P	20 57 35.2	+1.2
WCT				IAmb	IAmb	20 57 35.5	
	comp=Z,5.4nm,1.4s						
HEC	Hector,Ludlow	92.13	55	P	P	20 57 33.9	-0.2
	baz=264						
BELC	Belle Mtn. Jos	92.32	56	P	P	20 57 34.9	-0.2
	baz=264						
TPNV	Topopah Spring	92.43	53	P	P	20 57 36.1	+0.6
	baz=264						
C36M	Paulatuk	92.59	21	P	P	20 57 35.4	+0.1
C36M	Paulatuk	92.59	21	P	P	20 57 36.1	+0.9
	baz=259						
GMRC	Granite Mounta	92.68	55	P	P	20 57 36.3	-0.4
	baz=264						
BC3	Big Chuckawall	92.74	57	P	P	20 57 37.4	+0.4
	baz=264						
IRM	Iron Mountain	93.04	56	P	P	20 57 38.8	+0.5
	baz=264						
R11A	Troy Canyon, C	93.10	52	P	P	20 57 39.7	+1.1
R11A	Troy Canyon, C	93.10	52	P	P	20 57 39.0	+0.3
	baz=264						
YKA	Yellowknife Ar	95.60	28	P	P	20 57 49.5	+0.3
	comp=Z,2.4nm,0.7s,baz=263,slow=4.5,SNR=36						
YKA				pP	pP	20 58 24.2	-0.1
	comp=Z,0.9nm,0.9s,baz=261,slow=4.5,SNR=3.6						
	comp=Z,2.4nm,0.7s						
YKA	Yellowknife Ar	95.60	28	P	P	20 57 49.2	0.0
BW06	Boulder Array	97.96	48	P	P	20 58 00.5	-0.2
	baz=269						
PDAR	Pinedale Array	97.96	48	P	P	20 57 59.7	-1.0
	comp=Z,0.7nm,0.8s,baz=216,slow=2.8,SNR=4.4						
	comp=Z,0.7nm,0.8s						
PDAR	Pinedale Array	97.96	48	P	P	20 58 00.0	-0.7
LAO	LASA Array	100.33	44	P	Pdif	20 58 11.2	+0.3
	baz=272						
EYMN	Ely	110.09	41	P	PKiKP	21 02 55.3	+0.1
	baz=283						
AKASG	Malin Array Be	117.34	325	PKP	PKPdf	21 03 08.3	-0.7
	comp=Z,0.5nm,0.5s,baz=61,slow=2.3,SNR=2.2						
PKME	Peaks-Kenny Pk	125.23	38	P	PKPdf	21 03 24.7	+0.4
	baz=301						
CLL	Collm	125.53	332	*i* PKPdf	PKPdf	21 03 24.4	-0.3
	comp=Z,4.0nm,0.8s						
CKRC	Cesky Krumlov	126.51	329	*e*PKPDF	PKPdf	21 03 27.0	+0.3
KHC	Kasperske Hory	126.68	330	*e*PKPDF	PKPdf	21 03 27.1	+0.1
GERES	GERESS Array B	126.80	329	PKP	PKPdf	21 03 27.6	+0.3
	comp=Z,1.4nm,0.7s,baz=108,slow=4.3,SNR=6.2						
DAVOX	Davos/Dischmat	130.10	329	PKP	PKPdf	21 03 33.8	-0.1
	comp=Z,1.3nm,0.5s,baz=140,slow=18,SNR=3.2						
LPAZ	La Paz	131.31	118	PKP	PKPdf	21 03 37.6	+0.1
	comp=Z,0.8nm,0.5s,baz=226,slow=3.0,SNR=2.1						
MESJ	Messejana	145.38	337		PKPdf	21 04 02.0	+0.2
BDFB	Brasilia	148.04	133	PKPbc	PKPbc	21 04 09.3	-1.0
	comp=Z,3.9nm,0.6s,baz=213,slow=4.8,SNR=6.5						
TORD	Torodi Ar. Bea	153.33	287	PKP	PKPdf	21 04 13.8	-1.2
	comp=Z,0.5nm,0.6s,baz=1.5,slow=1.5,SNR=3.7						
TORD				PKPbc	PKPbc	21 04 21.5	-1.2
	comp=Z,1.7nm,0.7s,baz=74,slow=2.7,SNR=10						
TORD				PKPab	PKPab	21 04 33.3	-1.9
	comp=Z,0.6nm,0.5s,baz=90,slow=4.3,SNR=5.5						
TORD				pPKPbc	pPKPbc	21 04 56.5	-3.1
	comp=Z,0.9nm,0.7s,baz=60,slow=2.1,SNR=2.9						
DBIC	Dimbokro	160.46	272	PKPab	PKPab	21 05 05.6	-0.5
	comp=Z,2.3nm,0.8s,baz=38,slow=12,SNR=3.2						

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*WEL **08** 20:51:00, 42°.98S×173°.09E, h6km, ML4.1, Mw3.8, Moment Tensor Solution. s4 Moment tensor: Scale 10^{14} Nm; M_{rr}4.63; $M_{\theta\theta}$-2.02; $M_{\phi\phi}$-2.61; $M_{r\theta}$-1.59; $M_{\theta\phi}$-3.20; $M_{\phi r}$3.65; Fault plane solution: $M_0$6.42000×10^{14} NP1: ϕ_s248.00000°, δ43.00000°, λ136.00000°. NP2: ϕ_s13.00000°, δ62.00000°, λ57.00000°. Principal axes: T 70.0600, Plg58.0000°, Azm235.0000°; N -11.6900, Plg29.0000°, Azm30.0000°; P -58.3600, Plg11.0000°, Azm127.0000°;*

*IDC **08** 20:51:22.8±1.6, 42°.91S×173°.08E, h0km, mb3.7/2, mbtmp3.7/3, ML3.7/1 Error ellipse: s-maj=45.7km s-min=28.0km az=147.0*

*NEIC **08** 20:51:23.7±1.4, 43°.09S±0°.04×173°.19E±0°.06, h10km±1km, mb4.2/3, Error ellipse: s-maj=7.0km s-min=5.7km az=250.0*

*WEL **08** 20:51:25.2±0.4, 43°S±3°×17°3E±°, h7km±2km, M4.1/18, ML4.3/18, MLv4.1/18, Error ellipse: s-maj=0.0km s-min=0.0km az=125.9, confirmed*

ISC 08 20:51:23.6±1.0, **43°.02S**±0°.03×**173°.18E**±0°.04, **h12**km±5km, **n75**, σ**0s.93**/88, **mb4.0**/5, **Off east coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	Greta Valley S	0.12	295		Pg	20 51 26.8	0.0
GVZ				Sg	Sg	20 51 28.4	-0.7
GVZ	Greta Valley S	0.12	295	P	Pg	20 51 27.0	+0.2
GVZ				S	Sg	20 51 28.3	-0.7
AMCZ	Amberley	0.42	248	Pg	Pb	20 51 33.5	+0.5
AMCZ	Amberley	0.42	248	P	Pb	20 51 34.0	+1.0
AMCZ				S	Sb	20 51 39.9	+0.6
KHZ	Kahutara	0.66	24		Pb	20 51 38.0	+1.0
KHZ	Kahutara	0.66	24	P	Pn	20 51 38.4	-0.3
KHZ				S	Sb	20 51 47.2	+1.1
LTZ	Lake Taylor	0.71	289	Pg	Pg	20 51 37.8	+0.4
LTZ	Lake Taylor	0.71	289	P	Pg	20 51 37.9	+0.5
LTZ				S	Sg	20 51 46.5	-0.3
MQZ	McQueen's Vall	0.79	209	Pn	Pn	20 51 40.1	-0.5
MQZ	McQueen's Vall	0.79	209	P	Pn	20 51 40.4	-0.2
MQZ				S	Sn	20 51 51.6	-0.7
AKCZ	Akaroa Harbour	0.88	193	P	Pn	20 51 42.3	+0.5
AKCZ				S	Sn	20 51 54.9	+0.4
OXZ	Oxford	0.89	249	Pg	Pb	20 51 41.4	+0.4
OXZ	Oxford	0.89	249	P	Pb	20 51 41.8	+0.8
OXZ				S	Sb	20 51 54.1	+1.2
RACZ	Rakaia	1.04	227	P	Pn	20 51 44.6	+0.6
THZ	Tophouse	1.27	351	Pn	Pn	20 51 47.6	+0.3
THZ	Tophouse	1.27	351	P	Pn	20 51 47.8	+0.6
THZ				S	Sb	20 52 03.3	-0.6
INZ	Inchbonnie	1.31	282		Pn	20 51 47.5	-0.2
INZ	Inchbonnie	1.31	282	P	Pn	20 51 47.7	0.0
WACZ	Wakanui South	1.35	226	P	Pn	20 51 48.4	+0.2
BSWZ	Blackbirch Sta	1.40	22	Pn	Pb	20 51 50.3	+0.6
BSWZ	Blackbirch Sta	1.40	22	P	Pg	20 51 50.6	+0.1
CMWZ	Cape Campbell	1.48	31	Pn	Pg	20 51 52.4	+0.3
CMWZ	Cape Campbell	1.48	31	P	Pg	20 51 52.2	+0.2
DSZ	Denniston Nort	1.63	321	Pn	Pn	20 51 52.4	+0.2
DSZ	Denniston Nort	1.63	321	P	Pn	20 51 52.7	+0.5
MRNZ	Matariki Terra	1.65	349	Pn	Pn	20 51 53.7	+1.3
MRNZ	Matariki Terra	1.65	349	P	Pn	20 51 53.7	+1.3
MRNZ				P	Pn	20 51 53.7	+1.3
TUWZ	Tuamarina	1.69	20	Pn	Pb	20 51 54.4	-0.2
RPZ	Rata Peaks	1.70	245	Pn	Pn	20 51 53.2	0.0
	50nm,0.3s,baz=307,slow=0.9,SNR=558						
RPZ				Sn	Sn	20 52 11.8	-3.1
	72nm,0.3s,baz=245,slow=6.3,SNR=4.2						
RPZ				LR	LR	20 52 14.7	
	comp=Z,173nm,18.9s,baz=205,slow=31						
RPZ	Rata Peaks	1.70	245		Pn	20 51 53.0	-0.1
RPZ	Rata Peaks	1.70	245	P	Pn	20 51 53.2	0.0
ARCZ	Arundel	1.73	237	P	Pn	20 51 53.6	+0.1
WVZ	Waitaha Valley	1.79	267	P	Pn	20 51 54.7	+0.3
NNZ	Nelson	1.81	5		Pb	20 51 56.1	-0.5
NNZ	Nelson	1.81	5	P	Pb	20 51 56.1	-0.5
TCW	Tory Channel	1.98	25	Pn	Pn	20 51 57.6	+0.7
TKNZ	Takaka Hill	1.99	355		Pn	20 51 58.5	+1.4
TKNZ	Takaka Hill	1.99	355	P	Pn	20 51 58.9	+1.8
BHW	Baring Head	2.04	39	Pn	Pn	20 51 58.3	+0.5
SNZO	South Karori	2.05	34		Pn	20 51 58.7	+0.9
TMZ	Timaru	2.09	228	P	Pn	20 51 58.6	+0.2
WEL	Wellington	2.10	35	P	Pn	20 51 59.5	+1.0
GCSZ	Gaunt Creek Bo	2.11	261	P	Pn	20 51 59.5	+0.8
QRZ	Quartz Range	2.24	347		Pn	20 52 01.9	+1.3
QRZ	Quartz Range	2.24	347	P	Pn	20 52 02.0	+1.5
DUWZ	D'Urville Isla	2.28	14	P	Pn	20 52 03.2	+2.1
CAW	Cannon Point	2.37	37	P	Pn	20 52 03.0	+0.7
KIW	Kapiti Island	2.51	31	P	Pn	20 52 05.2	+0.9
FOZ	Fox Glacier	2.51	257		Pn	20 52 05.3	+1.1
FOZ	Fox Glacier	2.51	257	P	Pn	20 52 05.5	+1.3
LBZ	Lake Benmore	2.57	237		Pn	20 52 05.2	+0.1
LBZ	Lake Benmore	2.57	237	P	Pn	20 52 05.5	+0.5
LBZ				P	Pn	20 52 05.6	+0.5
ODZ	Otahua Downs	2.73	221		Pn	20 52 07.5	+0.2
ODZ	Otahua Downs	2.73	221	P	Pn	20 52 07.5	+0.2
MRZ	Mangatainoka R	2.96	38		Pn	20 52 10.4	+0.1
HHSZ	Highcliff Hill	3.41	212	P	Pn	20 52 16.9	+0.3
WKZ	Wanaka	3.51	238		Pn	20 52 18.4	+0.3
EAZ	Earnscleugh	3.56	230	P	Pn	20 52 18.7	0.0
MLZ	Mavora Lakes	4.33	235		Pn	20 52 28.9	-0.4
BKZ	Black Stump Fm	4.59	34	Pn	Pn	20 52 34.8	+1.9
HIZ	Hauiti	4.68	16	Pn	Pn	20 52 35.7	+1.7
WHZ	Wether Hill Ro	4.72	231		Pn	20 52 33.4	-1.2
DCZ	Deep Cove	4.97	238		Pn	20 52 37.4	-0.7
RTZ	Ruatahuna	5.26	34	Pn	Pn	20 52 42.1	+0.1
PYZ	Puysegur Point	5.61	234	Pn	Pn	20 52 46.1	-0.7
URZ	Urewera	5.61	33	Pn	Pn	20 52 46.8	0.0
	2.4nm,0.3s,baz=213,slow=4.0,SNR=2.1						
URZ				Sn	Sn	20 53 47.5	-3.8
	4.6nm,0.3s,baz=159,slow=10,SNR=7.9						
	5.6nm,0.3s						
ASAR	Alice Springs	37.64	288	P	P	20 58 38.8	+0.3
	0.7nm,0.6s,baz=125,slow=6.8,SNR=11						
	0.7nm,0.6s						
ASAR	Alice Springs	37.64	288	P	P	20 58 38.5	0.0
COEN	Coen	38.78	309	P	P	20 58 47.9	-0.2
COEN				IAmb	IAmb	20 58 48.4	
	comp=Z,9.1nm,1.4s						
WR0	Warramunga Arr	39.69	293	P	P	20 58 56.0	+0.3
WR0				IAmb	IAmb	20 59 06.4	
	comp=Z,5.9nm,1.5s						
WRA	Warramunga Arr	39.84	293	P	P	20 58 56.9	-0.1
	comp=Z,0.6nm,0.7s,baz=130,slow=7.7,SNR=7.2						
	comp=Z,0.6nm,0.7s						
WB0	Warramunga Arr	39.92	293	P	P	20 58 57.0	-0.7
WB0				IAmb	IAmb	20 59 10.4	
	comp=Z,9.1nm,1.5s						
ARCES	ARCESS Array B	148.69	339	PKPbc	PKPbc	21 11 09.8	+0.3
	comp=Z,6.6nm,1.1s,baz=35,slow=3.0,SNR=5.3						
TORD	Torodi Ar. Bea	149.34	196	PKPbc	PKiKP	21 11 13.8	0.0
	comp=Z,0.4nm,0.4s,baz=152,slow=2.3,SNR=5.9						
BRTR	Keskin Array B	149.67	278	PKPbc	PKPbc	21 11 13.3	+0.3
	comp=Z,1.2nm,0.8s,baz=155,slow=4.8,SNR=2.4						

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*IDC **08** 21:37:26.4±0.7, 6°.14S×131°.24E, h0km, mb4.1/9, mbtmp4.2/12, ML4.6/2, MS3.3/5, Error ellipse: s-maj=34.1km s-min=14.8km az=70.0*

*NEIC **08** 21:37:35.1±1.6, 6°.09S±0°.05×131°.31E±0°.10, h68km±8km, mb4.4/27, Error ellipse: s-maj=14.3km s-min=7.0km az=90.0*

*DJA **08** 21:37:35.1±0.3, 6°S±3°×13°1E±°, h95km±13km, M4.8/14, mb4.8/8, mB5.4/6, MLv4.8/14, Mw(mB)4.8/6*

ISC 08 21:37:33.8±0.4, **6°.10S**±0°.04×**131°.35E**±0°.06, **h61**km, **n110**, σ**1s.56**/107, **mb4.3**/19, **Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.87	182	Pn	Pn	21 38 05.4	+1.9
SAUI				Sn	Sn	21 38 28.5	+2.4
SAUI	Saumlaki	1.87	182	P	Pn	21 38 05.4	+1.9
SAUI				S	Sn	21 38 28.6	+2.4
BNDI	Bandanaira	2.13	317	P	Pn	21 38 09.7	+2.7
BNDI	Bandanaira	2.13	317	P	Pn	21 38 09.1	+2.1
FAKI	Fak Fak	3.28	16	Pn	Pn	21 38 24.2	+1.4
FAKI				Sn	Sn	21 39 00.9	+0.2
FAKI	Fak Fak	3.28	16	P	Pn	21 38 24.3	+1.4
FAKI	Fak Fak	3.28	16	P	Pn	21 38 24.2	+1.4
MSAI	Masohi	3.65	318	P	Pn	21 38 29.6	+1.8
AAI	Ambon	3.95	307	P	Pn	21 38 34.0	+2.0
NLAI	Namlea	5.10	304	P	Pn	21 38 50.0	+2.3
SIJI	Sorong	5.20	359	Pn	Pn	21 38 49.6	+0.6
	117nm,0.3s,baz=48,slow=2.5,SNR=224						
SIJI				Sn	Sn	21 39 42.8	-4.9
	67nm,0.3s,baz=132,slow=23,SNR=15						
SIJI				LR	LR	21 41 34.4	
	comp=Z,111nm,20.3s,baz=104,slow=47						
RKPI	Ransiki, Papua	5.36	32	P	Pn	21 38 53.8	+2.5
	787nm,0.6s,8μm7.0nm						
KDU	Kakadu	6.64	170	P	Pn	21 39 07.6	-1.2
LBMI	Labuha	6.65	325	P	Pn	21 39 11.1	+2.2
	109nm,1.0s,2μm0.3nm						
SANI	Sanana	6.69	307	P	Pn	21 39 12.2	+2.7
SANI	Sanana	6.69	307	P	Pn	21 39 12.5	+3.0
	48nm,0.4s,807nm0.2nm						
MTN	Manton Dam	6.71	182	Pn	Pn	21 39 08.9	-0.8
MTN	Manton Dam	6.71	182	P	Pn	21 39 09.3	-0.4
SOEI	Soe	7.90	242	Pn	Pn	21 39 27.2	+1.1
SOEI	Soe	7.90	242	P	Pn	21 39 27.3	+1.1
TNTI	Ternate	7.90	330	Pn	Pn	21 39 26.6	+0.5
TNTI	Ternate	7.90	330	P	Pn	21 39 27.8	+1.8
	32nm,1.5s,0.2nm						
MMRI	Maumere	9.38	254	Pn	Pn	21 39 47.3	+1.0
GENI	Genyem	9.46	69	P	Pn	21 39 50.8	+3.5
KNRA	Kununurra	9.85	195	Pn	Pn	21 39 50.9	-1.8
KNRA	Kununurra	9.85	195	P	Pn	21 39 50.8	-1.9
LUWI	Luwuk	9.93	300	P	Pn	21 39 55.5	+1.7
FITZ	Fitzroy Crossi	13.16	205		Pn	21 40 33.4	-4.5
PLAI	Plampang	13.73	258	P	Pn	21 40 45.4	-0.2
WB0	Warramunga Arr	13.90	168		Pn	21 40 42.2	-5.8
COEN	Coen	14.01	125	Pn	Pn	21 40 46.3	-3.1
COEN	Coen	14.01	125	P	Pn	21 40 46.8	-2.6
WRA	Warramunga Arr	14.06	168	Pn	Pn	21 40 44.8	-5.3
	2.7nm,0.3s,baz=347,slow=14,SNR=44						
WRA				Sn	Sn	21 43 08.8	-16
	3.6nm,0.3s,baz=353,slow=22,SNR=10						
WRA				LR	LR	21 46 42.7	
	comp=Z,83nm,18.2s,baz=249,slow=40						
	4.7nm,0.3s						
WRA	Warramunga Arr	14.06	168		Pn	21 40 43.4	-6.7
DAV	Davao City (W)	14.29	336	LR	LR	21 46 57.6	
	comp=Z,60nm,18.5s,baz=78,slow=40						
BKB	Balikpapan	15.20	288	Pn	Pn	21 41 04.2	-0.7
PMG	Port Moresby	16.00	103	Pn	Pn	21 41 15.9	+0.7
	6.5nm,0.4s,baz=17,slow=20,SNR=3.6						
QIS	Mount Isa	16.45	152	P	Pn	21 41 18.6	-2.2
JAGI	Jajag, Banyuwa	17.22	261	Pn	Pn	21 41 28.8	-1.6
JAGI				IAmb	IAmb	21 41 49.2	
	comp=Z,31nm,1.1s						
JAGI	Jajag, Banyuwa	17.22	261	P	Pn	21 41 29.5	-0.9
AS31	Alice Springs	17.64	172	Pn	Pn	21 41 32.1	-3.4
ASAR	Alice Springs	17.64	172	P	Pn	21 41 32.1	-3.4
	comp=Z,2.0nm,0.3s,baz=350,slow=8.4,SNR=76						
ASAR				S	Sn	21 44 35.0	-16
	comp=Z,9.5nm,0.7s,baz=348,slow=26,SNR=5.9						
	comp=Z,2.0nm,0.4s						
ASAR	Alice Springs	17.64	172	Pn	Pn	21 41 32.3	-3.1
AS01	Alice Springs	17.64	172	P	Pn	21 41 32.7	-2.8
MBWA	Marble Bar	18.73	216	P	P	21 41 46.0	-1.6
MBWA				IAmb	IAmb	21 42 00.2	
	comp=Z,25nm,1.3s						
MBWA	Marble Bar	18.73	216	P	P	21 41 46.9	-0.8
	comp=Z,11nm,1.1s						
PSA00	Pilbara Seismi	18.99	215	P	P	21 41 49.9	-0.6
PSA00				IAmb	IAmb	21 41 51.1	
	comp=Z,13nm,0.8s						
PSA00	Pilbara Seismi	18.99	215	P	P	21 41 49.4	-1.2
PSA00				IAmb	IAmb	21 41 51.1	
	comp=Z,16nm,1.4s						
PSA00	Pilbara Seismi	18.99	215	P	P	21 41 50.7	+0.2
WRKA	Warakurna	19.06	189	P	P	21 41 50.4	-0.9
KKM	Kota Kinabalu	19.33	308	P	P	21 41 54.8	+0.4
KKM				IAmb	IAmb	21 42 06.8	
	comp=Z,43nm,1.4s						
CTA	Charters Tower	20.07	135	P	P	21 42 03.0	+0.7
	comp=Z,12nm,0.7s,baz=312,slow=11,SNR=16						
	comp=Z,12nm,0.7s						
CTAO	Charters Tower	20.07	135	P	Pn	21 42 03.9	-0.7
CTAO				IAmb	IAmb	21 42 05.7	
	comp=Z,14nm,0.8s						
OOD	Oodnadatta	21.97	170	P	P	21 42 22.8	+0.2
GIRL	Giralia	23.31	223	P	P	21 42 36.5	-0.1
GIRL	Giralia	23.31	223	P	P	21 42 37.3	+0.7
BBJI	Bungbulang	23.57	265	P	P	21 42 38.7	-0.6
MEEK	Meekatharra	23.76	209	P	P	21 42 40.3	-0.5
QLP	Quilpie	23.79	150	P	P	21 42 42.3	+1.3
MULG	Mulgathing	24.19	174	P	P	21 42 44.9	+0.3
FORT	Forrest	24.75	187	P	P	21 42 49.2	-0.4
FORT				IAmb	IAmb	21 42 51.1	
	comp=Z,19nm,0.7s						
FORT	Forrest	24.75	187	P	P	21 42 49.3	-0.4
LCRK	Leigh Creek	25.07	166	P	P	21 42 52.8	+0.2
RMQ	Roma	26.20	143	P	P	21 43 02.5	-0.5
KMBL	Kambalda	26.66	198	P	P	21 43 07.0	0.0
BBOO	Buckleboo	26.94	171	P	P	21 43 08.8	-0.7
BBOO	Buckleboo	26.94	171	P	P	21 43 09.5	0.0
MORW	Morawa	27.04	211	P	P	21 43 09.8	-0.7
MORW				IAmb	IAmb	21 43 36.6	
	comp=Z,13nm,1.2s						
MORW	Morawa	27.04	211	P	P	21 43 10.9	+0.4
	comp=Z,14nm,1.6s						
STKA	Stephens Creek	27.38	161	P	P	21 43 13.8	+0.4
	comp=Z,2.4nm,0.3s,baz=345,slow=7.9,SNR=21						
STKA				LR	LR	21 55 55.7	
	comp=Z,82nm,18.4s,baz=208,slow=40						
	comp=Z,2.4nm,0.3s						
STKA	Stephens Creek	27.38	161	P	P	21 43 13.6	+0.2
STKA	Stephens Creek	27.38	161	P	P	21 43 13.7	+0.2
BLDU	Ballidu	28.00	208	P	P	21 43 19.6	+0.6
NWAO	Narrogin (SRO)	29.75	204	P	P	21 43 34.4	-0.2
	comp=Z,9.0nm,0.9s,baz=34,slow=6.3,SNR=5.8						
	comp=Z,9.0nm,0.9s						
NWAO	Narrogin (SRO)	29.75	204	P	P	21 43 34.4	-0.2
NWAO	Narrogin (SRO)	29.75	204	P	P	21 43 34.4	-0.2
	comp=Z,19nm,1.4s						
CAN	Canberra	33.31	153	P	P	21 44 05.9	0.0
RPSI	Rantau Prapat	33.54	284	P	P	21 44 08.0	0.0
RPSI				IAmb	IAmb	21 44 11.6	
	comp=Z,7.8nm,1.1s						
TOO	Toolangi	33.87	160	P	P	21 44 10.7	0.0
GSI	Gunungsitoli	34.51	281	P	P	21 44 16.1	-0.4
GSI				IAmb	IAmb	21 44 18.3	
	comp=Z,7.6nm,0.7s						
CMAR	Chiang Mai Arr	40.21	308	P	P	21 45 05.2	+0.5
	comp=Z,0.5nm,0.6s,baz=142,slow=6.4,SNR=4.3						

	comp=Z,0.5nm,0.6s						
MJAR	Matsushiro Arr	42.90	8	P	P	21 45 26.3	-0.1
	comp=Z,2.2nm,0.6s,baz=175,slow=9.9,SNR=5.6						
	comp=Z,2.2nm,0.6s						
PZH	PanZhiHua	43.29	320	P	P	21 45 33.1	+3.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,110nm,6.1s						
SHL	Shillong	49.60	311	P	P	21 46 19.4	-0.1
SHL				IAmb	IAmb	21 46 23.3	
	comp=Z,2.8nm,0.6s						
HHC	Hu-ho-hao-te	50.13	340	*e*P	P	21 46 30.7	+7.6
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,4.5s						
LBZ	Lake Benmore	51.03	145	P	P	21 46 30.8	+1.1
TUWZ	Tuamarina	51.68	140	P	P	21 46 34.9	+0.3
TAPN	Taplejung	53.71	310	*e*P	P	21 46 50.4	+0.2
RAMN	Ramite	54.35	309	*e*P	P	21 46 55.3	+0.4
GUN	Gumba	55.39	310	*e*P	P	21 47 02.6	+0.1
	comp=Z,8.1nm,0.5s						
GKN	Gorkha	56.39	309	*e*P	P	21 47 09.2	-0.2
	comp=Z,7.5nm,0.4s						
DANN	Dangsing	57.23	309	*e*P	P	21 47 15.0	-0.5
PYUN	Piuthan	57.71	309	*e*P	P	21 47 18.8	0.0
	comp=Z,10nm,0.8s						
SONM	Songino Array	58.03	340	P	P	21 47 21.7	+1.2
	comp=Z,0.5nm,0.6s,baz=167,slow=7.6,SNR=5.4						
	comp=Z,0.5nm,0.6s						
SONM	Songino Array	58.03	340	P	P	21 47 21.0	+0.4
WMQ	Urumqi	63.39	326	*e*P	P	21 47 59.6	+2.6
MK31	Makanchi Array	68.22	326	P	P	21 48 28.7	+0.7
MKAR	Makanchi Array	68.22	326	P	P	21 48 29.1	+1.1
	comp=Z,0.9nm,0.5s,baz=113,slow=8.7,SNR=31						
	comp=Z,0.9nm,0.5s						
MKAR	Makanchi Array	68.22	326	P	P	21 48 28.6	+0.6
MAKZ	Makanchi	68.41	326	P	P	21 48 29.4	+0.3
MAKZ				IAmb	IAmb	21 48 54.4	
	comp=Z,2.2nm,0.7s						
SHEM	Shemya Is, Ala	68.88	26	LR	LR	22 13 16.4	
	comp=Z,79nm,20.4s,baz=28,slow=31						
ZALV	Zalesovo Beam	71.38	333	P	P	21 48 47.3	+0.1
	comp=Z,0.6nm,0.6s,baz=134,slow=6.2,SNR=2.7						
	comp=Z,0.6nm,0.6s						
ZALV	Zalesovo Beam	71.38	333	P	P	21 48 47.0	-0.2
KURK	Kurchatov	72.46	328	P	P	21 48 53.9	+0.2
KURK				IAmb	IAmb	21 49 19.4	
	comp=Z,4.9nm,1.4s						
VNDA	Vanda	73.18	173	P	P	21 48 58.3	+0.7
	comp=Z,1.1nm,0.6s,baz=322,slow=9.6,SNR=7.9						
	comp=Z,1.1nm,0.6s						
VNDA	Vanda	73.18	173	P	P	21 48 58.2	+0.6
VNDA				IAmb	IAmb	21 49 05.5	
	comp=Z,4.8nm,1.4s						
BILL	Bilibino	77.94	13	P	P	21 49 25.1	+0.2
BILL				IAmb	IAmb	21 49 48.5	
	comp=Z,5.4nm,1.5s						
QSPA	South Pole Qui	83.87	180	P	P	21 49 56.9	+0.1
QSPA				IAmb	IAmb	21 49 57.8	
	comp=Z,4.8nm,0.8s						
TORD	Torodi Ar. Bea	129.94	282	PKP	PKPdf	21 56 37.7	+0.1
	comp=Z,0.7nm,0.6s,baz=67,slow=1.6,SNR=6.1						
LPAZ	La Paz	150.56	139	PKPbc	PKiKP	21 57 21.4	+0.1
	comp=Z,2.0nm,0.4s,baz=278,slow=0.5,SNR=8.3						

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*DJA **08** 22:26:13.6±0.3, 8°S±3°×12°5E±°, h10^{km}, M4.4/9, mB5.2/1, mb4.4/9, MLv4.4/8, Mw(mB)4.5/1*

*IDC **08** 22:26:13.5±1.2, 8°.23S×125°.10E, h0^{km}, mb3.9/6, mbtmp4.0/8, ML3.8/2, MS3.6/11, Error ellipse: s-maj=55.5km s-min=20.8km az=63.0*

ISC 08 22:26:17.1±0.7**, 8°.23S**±0°.06×**125°.10E**±0°.07**, h27^{km}, n29,** σ**2^{s}52**/25**, mb4.1**/6**, MS3.6**/9**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	1.73	208	P	Pb	22 26 50.3	+2.0
SOEI	Soe	1.73	208	P	Pn	22 26 47.3	+1.7
MMRI	Maumere	2.86	262	P	Pn	22 27 03.8	+2.7
MMRI	Maumere	2.86	262	P	Pn	22 27 00.3	-0.8
MMRI				S	Sn	22 27 35.4	+0.7
BASI	Baing, Sumba	4.89	246	P	Pn	22 27 27.5	-1.4
BSSI	Bau Bau, Buton	5.02	294	P	Pn	22 27 26.1	-4.7
BSSI				S	Sn	22 28 25.9	-2.1
BKSI	Bulukumba	5.73	300	P	Pn	22 27 37.4	-3.1
	22nm,1.2s,0.1nm						
PLAI	Plampang	7.27	265	P	Pn	22 28 01.1	-0.6
	61nm,1.2s,0.2nm						
MTN	Manton Dam	7.50	128	P	Pn	22 28 09.1	+4.3
TWSI	Taliwang, Sumb	8.15	266	P	Pn	22 28 13.6	-0.1
	31nm,1.0s						
KNRA	Kununurra	8.22	155	P	Pn	22 28 16.8	+2.0
KDU	Kakadu	8.49	122	P	Pn	22 28 21.1	+2.6
FITZ	Fitzroy Crossi	9.83	177	P	Pn	22 28 37.1	+0.4
WRAB	Tennant Creek	14.68	143	P	Pn	22 29 41.4	-1.8
WRA	Warramunga Arr	14.68	143	Pn	Pn	22 29 40.8	-2.5
	0.3nm,0.3s,baz=317,slow=13,SNR=40						
WRA				Sn	Sn	22 32 19.8	-5.4
	0.4nm,0.3s,baz=332,slow=21,SNR=5.7						
WRA				LR	LR	22 36 19.0	
	comp=Z,208nm,19.0s,baz=300,slow=41						
	7.1nm,0.9s						
ASAR	Alice Springs	17.52	152	P	Pn	22 30 19.8	+0.1
	0.5nm,0.3s,baz=320,slow=10,SNR=23						
ASAR				S	Sn	22 33 28.1	-5.9
	3.6nm,0.9s,baz=318,slow=21,SNR=11						
ASAR				LR	LR	22 37 38.0	
	comp=Z,130nm,20.9s,baz=292,slow=39						
	1.4nm,0.5s						
PMG	Port Moresby	21.83	95	LR	LR	22 41 18.5	
	comp=Z,148nm,18.5s,baz=283,slow=42						
CTA	Charters Tower	23.62	122	LR	LR	22 41 04.7	
	comp=Z,127nm,19.0s,baz=270,slow=38						
STKA	Stephens Creek	28.09	149	P	P	22 32 07.6	+0.9
	0.8nm,0.7s,baz=337,slow=15,SNR=1.4						
STKA				LR	LR	22 45 00.6	
	comp=Z,145nm,18.4s,baz=230,slow=40						
	0.8nm,0.7s						
CMAR	Chiang Mai Arr	37.01	316	P	P	22 33 25.9	+1.1
	0.8nm,0.3s,baz=140,slow=6.4,SNR=10						
CMAR				LR	LR	22 52 01.2	
	comp=Z,30nm,18.3s,baz=135,slow=42						
	0.8nm,0.3s						
DZM	Mont Dzumac	42.06	114	LR	LR	22 51 51.5	
	comp=Z,96nm,19.1s,baz=210,slow=37						
BRDH	Bariadhala	44.91	314	LR	LR	22 56 12.9	
	comp=Z,95nm,18.5s,baz=224,slow=40						
MJAR	Matsushiro Arr	46.20	15	P	P	22 34 40.2	+0.4
	2.7nm,0.9s,baz=191,slow=9.2,SNR=4.2						
	2.7nm,0.9s						
PALK	Pallekele	46.87	288	LR	LR	22 54 50.4	
	comp=Z,54nm,19.2s,baz=271,slow=37						
USRK	Ussuriysk Ar.	52.55	6	P	P	22 35 29.5	+1.3
	1.5nm,0.6s,baz=145,slow=7.0,SNR=5.3						
	1.5nm,0.6s						
URZ	Urewera	55.44	131	LR	LR	23 01 16.3	
	comp=Z,78nm,18.2s,baz=274,slow=38						
SONM	Songino Array	58.22	345	P	P	22 36 09.7	+0.5
	0.5nm,0.9s,baz=163,slow=7.3,SNR=3.4						
	0.5nm,0.9s						
ZALV	Zalesovo Beam	70.63	336	P	P	22 37 29.3	-0.7
	1.2nm,0.5s,baz=123,slow=5.3,SNR=5.6						
	1.2nm,0.5s						
PPT	Papeete	83.13	107	LR	LR	23 14 48.3	
	comp=Z,48nm,19.0s,baz=178,slow=35						

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*IDC **08** 22:30:20.2±1.0, 36°.59N×98°.96W, h0^{km}, mbtmp3.6/5, ML3.9/4, Error ellipse: s-maj=14.3km s-min=10.2km az=109.0*

*TUL **08** 22:30:20.8±0.9, 36°.49N±0°.02×98°.90W±0°.03, h5^{km}±4^{km}, ML3.8, mb_Lg3.4/99(NEIC), ML3.7/12(NEIC), Error ellipse: s-maj=4.2km s-min=3.0km az=113.0*

*NEIC **08** 22:30:21.8±0.6, 36°.473N±0°.010×98°.88W±0°.05, h5^{km}±7^{km}, Error ellipse: s-maj=5.4km s-min=1.4km az=92.0*

*ANF **08** 22:30:21.8±0.7, 36°.45N×98°.88W, h8^{km}±5^{km}, ML4.4/13, Error ellipse: s-maj=1.8km s-min=1.7km az=18.0*

ISC 08 22:30:21.0±0.8**, 36°.48N**±0°.02×**98°.83W**±0°.02**, h9^{km}**±5^{km}**, n165,** σ**1^{s}22**/156**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK038	West end E0370	0.07	89	Pg	Pg	22 30 23.0	-0.2
OK038				Sg	Sg	22 30 25.2	+0.5
U32A	Winter Ranch,	0.17	235	Pg	Pg	22 30 24.1	-0.5
U32A				Sg	Sg	22 30 26.5	-0.6
U32A				IAML		22 30 26.9	
	comp=N,38µm,0.1s						
U32A	Winter Ranch,	0.17	235	P	Pg	22 30 23.8	-0.8
	baz=37,SNR=1000						
U32A				S	Sg	22 30 26.6	-0.5
	baz=37						
NOKA	Waynoka	0.18	333		Pg	22 30 24.6	-0.2
NOKA				Sg	Sg	22 30 27.2	-0.2
NOKA				IAML		22 30 27.4	
	comp=E,17µm,0.2s						
OK035	E0210 Rd and N	0.25	23	Pg	Pg	22 30 26.7	+0.6
OK035				Sg	Sg	22 30 30.9	+1.3
OK035				IAML		22 30 31.1	
	comp=E,18µm,0.3s						
OK035				IAML		22 30 31.1	
	comp=E,18µm,0.3s						
OK032	Salt Plains WL	0.60	57		Pb	22 30 33.0	-0.6
ELIS	Ellis County	0.63	229	Pg	Pg	22 30 32.6	-0.6
ELIS				IAML		22 30 41.5	
	comp=E,4µm,0.4s						
ELIS				IAML		22 30 44.2	
	comp=N,4µm,0.2s						
CROK	Carrier	0.68	87	Pg	Pb	22 30 35.0	-0.2
CSTR	Hydro, Custer	0.84	172	Pg	Pg	22 30 37.2	+0.1
KAN14	Manchester OK	0.85	55		Pb	22 30 37.6	-0.3
GC02	Grant County #	0.87	64	Pg	Pb	22 30 38.1	-0.2
KAN05	Bluff City Nor	0.99	50		Pb	22 30 40.3	-0.1
KAN08	Anthony NE Sta	1.02	42		Pb	22 30 40.7	-0.1
KAN17	Caldwell West	1.03	56	Pg	Pb	22 30 41.0	0.0
KAN12	Harper NE Stat	1.06	39		Pb	22 30 41.4	-0.1
KAN01	Argonia South	1.09	52	Pg	Pb	22 30 42.2	0.0
KAN06	Argonia West S	1.10	45		Pb	22 30 42.1	-0.1
KAN09	Caldwell North	1.18	56		Pn	22 30 43.6	-0.1
KAN13	South Haven SW	1.21	63		Pg	22 30 44.2	-0.1
KS21	Milan North St	1.24	49		Pg	22 30 44.7	-0.1
KS20	Mayfield South	1.27	53		Pg	22 30 45.4	-0.1
OK029	Liberty Lake	1.30	121		Pn	22 30 45.6	+0.2
BLOK	Blackwell	1.33	77		Pg	22 30 46.4	-0.2
BLOK				IAmb_Lg		22 31 06.5	
	comp=Z,260nm,0.8s						
OK009	Oakdale Elemen	1.45	128		Pb	22 30 48.0	-0.2
OK050	Pawnee Station	1.49	93		Pb	22 30 49.0	+0.1
OK025	Westminster Rd	1.50	126		Pb	22 30 49.3	+0.1
OK045	Pawnee Station	1.54	91		Pb	22 30 50.0	+0.3
OK046	Pawnee Station	1.55	92		Pb	22 30 50.0	0.0
OKCSW	OKLAHOMA CITY	1.56	133		Pb	22 30 50.0	0.0
OK044	Pawnee Station	1.64	93		Pb	22 30 51.6	+0.1
FNO	Franklin	1.68	136	Pn	Pb	22 30 51.6	-0.6
OK031	S. Brethren Rd	1.69	107	Pn	Pb	22 30 52.0	-0.4
OK052	Battle Ridge R	1.71	106		Pb	22 30 52.4	-0.2
OK053	SW of W Deep R	1.71	105	Pn	Pb	22 30 52.5	-0.3
WMOK	Wichita Mounta	1.74	179		Pn	22 30 51.7	+0.3
WMOK	Wichita Mounta	1.74	179	P	Pn	22 30 51.7	+0.3
	baz=357						
WMOK				S	Sb	22 31 15.3	+0.3
	baz=357						
WMOK	Wichita Mounta	1.74	179	P	Pn	22 30 51.4	+0.1
	baz=357,SNR=435						
WMOK				S	Sb	22 31 15.8	+0.8
	baz=357						
QUOK	Quay	1.74	99		Pb	22 30 53.1	-0.1
OK030	Cody Creek RV	1.74	108		Pb	22 30 52.6	-0.6
OK034	N. Norfolk Rd.	1.77	105	Pn	Pb	22 30 53.3	-0.5
T35A	Sooner Cattle	1.92	76	Pn	Pn	22 30 54.8	+1.0
T35A				IAmb_Lg		22 31 23.2	
	comp=Z,121nm,0.7s						
T35B	Sooner Cattle	1.92	76	P	Pb	22 30 55.2	-0.9
	baz=258,SNR=88						
T35B				S	Sg	22 31 22.3	-0.3
	baz=258						
R32A	Long Quarter,	1.94	3		Pn	22 30 55.1	+0.8
R32A	Long Quarter,	1.94	3	P	Pb	22 30 55.4	-1.3
	baz=184,SNR=56						
R32A				S	Sb	22 31 21.3	+0.2
	baz=184						
DEOK	Depew	1.99	108	Pn	Pn	22 30 55.7	+0.8
X34A	Smith Ranch, M	2.04	156		Pb	22 30 57.4	-0.9
X34A				IAmb_Lg		22 31 30.6	
	comp=Z,190nm,0.7s						
W35A	Tecumseh	2.07	129	Pn	Pn	22 30 56.9	+0.9
CBKS	Cedar Bluff	2.44	343	Pn	Pn	22 31 01.9	+0.7
CBKS	Cedar Bluff	2.44	343	P	Pn	22 31 02.3	+1.2
	baz=164						
CBKS				S	Sb	22 31 34.5	-0.8
	baz=164						
CBKS	Cedar Bluff	2.44	343	P	Pn	22 31 02.1	+1.0
	baz=164						
CBKS				S	Sb	22 31 35.3	-0.1
	baz=164						
TUL1	Leonard	2.52	102	Pn	Pn	22 31 02.8	+0.6
TUL1				IAmb_Lg		22 31 44.9	
	comp=Z,115nm,0.8s						
TUL1	Leonard	2.52	102	P	Pn	22 31 03.2	+1.0
	baz=284						
TUL1	Leonard	2.52	102	P	Pn	22 31 03.4	+1.2
	baz=284,SNR=13						
TUL1				S	Sb	22 31 39.4	+1.7
	baz=284						
WTFS	Witchita Falls	2.72	174		Pn	22 31 05.2	+0.3
AMTX	Amarillo	2.81	236		Pn	22 31 06.8	+0.6
AMTX	Amarillo	2.81	236	P	Pn	22 31 06.5	+0.3
	baz=54						
AMTX				Sb	Sb	22 31 47.1	+1.1
	baz=54						
AMTX	Amarillo	2.81	236	P	Pn	22 31 07.4	+1.2
	baz=54						
RLO	Rose Lookout	3.09	95		Pn	22 31 11.0	+1.0
KSU1	Kansas State U	3.16	33	Pn	Pn	22 31 12.1	+1.2
KSU1				IAmb_Lg		22 32 08.5	
	comp=Z,70nm,0.7s						
KSU1	Kansas State U	3.16	33	P	Pn	22 31 12.6	+1.7
	baz=215						
KSU1				S	Sn	22 31 51.5	+2.8
	baz=215						
KSU1	Kansas State U	3.16	33	P	Pn	22 31 12.5	+1.6
	baz=215						
X37A	Clayton	3.39	123	Pn	Pn	22 31 15.2	+1.1
X37A	Clayton	3.39	123	P	Pn	22 31 15.3	+1.2
	baz=305,SNR=31						
Z35A	Perchaven, San	3.40	157		Pn	22 31 15.7	+1.5
Z35A	Perchaven, San	3.40	157	P	Pn	22 31 15.7	+1.5
	baz=337,SNR=11						
FW03	Perrin-Whitt E	3.49	169	IAmb_Lg		22 32 19.6	
	comp=Z,35nm,0.7s						
U38A	Gravette	3.58	89	Pn	Pn	22 31 17.8	+1.0
U38A				IAmb_Lg		22 32 18.2	
	comp=Z,69nm,0.7s						
FW06	Azle	3.65	163		Pn	22 31 18.7	+1.0
FW06				IAmb_Lg		22 32 26.3	
	comp=Z,34nm,0.7s						
FW07	Weatherford	3.86	167		Pn	22 31 21.4	+0.7
FW07				IAmb_Lg		22 32 30.3	
	comp=Z,44nm,0.7s						
ABTX	Abilene, Hawle	3.90	190		Pn	22 31 21.6	+0.4
ABTX	Abilene, Hawle	3.90	190	P	Pn	22 31 21.8	+0.6
	baz=8.8,SNR=18						
ABTX				S	Sn	22 32 08.8	+1.7
	baz=8.8						
ABTX	Abilene, Hawle	3.90	190	P	Pn	22 31 21.9	+0.7
	baz=8.8						
KSCO	Kaye Shedlock'	3.93	311		Pn	22 31 21.6	-0.1
KSCO				IAmb_Lg		22 32 26.0	
	comp=Z,118nm,0.9s						
KSCO	Kaye Shedlock'	3.93	311	P	Pn	22 31 22.2	+0.6
	baz=129,SNR=17						
KSCO				Sb	Sb	22 32 21.7	+3.4
	baz=129						
HHAR	Hobbs	3.95	91		Pn	22 31 23.1	+1.2
POST	Post	4.05	214	Pn	Pn	22 31 24.5	+1.3
POST				IAmb_Lg		22 32 29.7	
	comp=Z,39nm,0.8s						
MSTX	Muleshoe	4.08	233		Pn	22 31 24.1	+0.4
MSTX	Muleshoe	4.08	233	P	Pn	22 31 24.2	+0.4
	baz=50,SNR=8.5						
MSTX				Sb	Sb	22 32 25.4	+2.7
	baz=50						
FW13	Cleburne	4.28	164	IAmb_Lg		22 32 39.2	
	comp=Z,38nm,0.8s						
FW14	Alvarado	4.29	161	IAmb_Lg		22 32 38.3	
	comp=Z,60nm,0.9s						
FW16	Waxahatchie	4.29	158	Pn	Pn	22 31 27.9	+1.4
FW16				IAmb_Lg		22 32 48.5	
	comp=Z,77nm,0.7s						
N33A	J Bar K, Exete	4.39	14	Pn	Pn	22 31 28.1	+0.2
N33A				IAmb_Lg		22 32 47.9	
	comp=Z,97nm,0.8s						
Z38A	Mt. Pleasant	4.50	134	IAmb_Lg		22 32 49.9	
	comp=Z,74nm,0.9s						
T25A	Trinidad	4.53	280	Pn	Pn	22 31 29.8	-0.2
T25A	Trinidad	4.53	280	P	Pn	22 31 30.1	+0.1
	baz=97,SNR=11						
T25A				Sb	Sb	22 32 39.1	+3.6
	baz=97						
S39A	Bolivar	4.57	73		Pn	22 31 31.3	+1.0
S39A				IAmb_Lg		22 32 47.8	
	comp=Z,56nm,0.7s						
S39A	Bolivar	4.57	73	P	Pn	22 31 31.2	+0.9
	baz=257,SNR=13						
WHTX	Lake Whitney,	4.62	165	Pn	Pn	22 31 31.6	+0.7
WHTX	Lake Whitney,	4.62	165	P	Pn	22 31 31.6	+0.7
	baz=346,SNR=8.2						
WHTX				S	Sn	22 32 25.8	+1.1
	baz=346						
WHTX	Lake Whitney,	4.62	165	P	Pn	22 31 31.6	+0.7
	baz=346,SNR=14						
MIAR	Mount Ida	4.70	113		Pn	22 31 32.7	+0.6
MIAR				IAmb_Lg		22 33 00.3	
	comp=Z,93nm,0.9s						
MIAR	Mount Ida	4.70	113	P	Pn	22 31 33.4	+1.3
	baz=296						
MIAR				S	Sn	22 32 27.7	+0.9
	baz=296						
BGNE	Belgrade	4.95	6	Pn	Pn	22 31 35.9	+0.3
BGNE	Belgrade	4.95	6	P	Pn	22 31 36.1	+0.5
	baz=187,SNR=5.7						
BGNE				S	Sn	22 32 33.9	+0.9
	baz=187						
OGNE	Ogallala	5.12	332	IAmb_Lg		22 33 06.1	
	comp=Z,89nm,0.7s						
OGNE	Ogallala	5.12	332	P	Pn	22 31 39.6	+1.7
	baz=150,SNR=9.9						
OGNE				Sb	Sg	22 32 58.9	-6.4
	baz=150						
237A	Washetta, Mont	5.12	150	IAmb_Lg		22 33 16.9	
	comp=Z,36nm,0.7s						
P38A	Dawn	5.23	51		Pn	22 31 40.7	+1.3
P38A				IAmb_Lg		22 33 06.4	
	comp=Z,40nm,0.8s						
X40A	Basin Creek Fa	5.28	110		Pn	22 31 40.9	+0.8
CPRX	Cap Rock	5.38	232		Pn	22 31 41.6	0.0
WHAR	Wooly Hollow	5.44	101		Pn	22 31 43.2	+0.9
WHAR				IAmb_Lg		22 33 23.9	
	comp=Z,68nm,0.8s						
WLAR	White Oak Lake	5.45	119	IAmb_Lg		22 33 30.0	
	comp=Z,63nm,0.8s						
FCAR	Ozark Folk Cen	5.46	94	Pn	Pn	22 31 43.7	+1.2
FCAR				IAmb_Lg		22 33 18.0	
	comp=Z,42nm,0.8s						
SDCO	Great Sand Dun	5.48	285		Pn	22 31 43.6	+0.5
SDCO	Great Sand Dun	5.48	285	P	Pn	22 31 44.3	+1.2
	baz=101,SNR=6.1						
SDCO				Sb	Sb	22 33 07.5	+4.5
	baz=101						
SDCO	Great Sand Dun	5.48	285	P	Pn	22 31 44.4	+1.3
	baz=101						
R40A	Maddies Statio	5.53	69	IAmb_Lg		22 33 19.2	
	comp=Z,36nm,0.9s						
UALR	University of	5.55	106	IAmb_Lg		22 33 30.9	
	comp=Z,70nm,0.9s						
Q24A	Divide	5.59	298	Pn	Pn	22 31 44.1	-0.5
Q24A	Divide	5.59	298	P	Pn	22 31 45.2	+0.6
	baz=115						
Q24A				S	Sn	22 32 49.6	+0.5
	baz=115						
435B	Jarrell	5.77	169	Pn	Pn	22 31 46.9	+0.1
435B				IAmb_Lg		22 33 27.4	
	comp=Z,52nm,0.8s						
435B	Jarrell	5.77	169	P	Pn	22 31 47.6	+0.8
	baz=350						
NATX	Nacogdoches	5.84	142	IAmb_Lg		22 33 40.0	
	comp=Z,29nm,0.9s						
JCT	Junction City	6.04	188	IAmb_Lg		22 33 46.6	
	comp=Z,67nm,0.7s						
JCT	Junction City	6.04	188	S	Sn	22 32 59.4	-0.4
	baz=6.9						
K31A	O'Neill	6.14	1	Pn	Pn	22 31 52.5	+0.6
N38A	Joes South For	6.14	44	Pn	Pn	22 31 53.2	+1.2
N38A	Joes South For	6.14	44	P	Pn	22 31 53.0	+1.0
	baz=228,SNR=7.4						
P40A	Paris	6.16	58	IAmb_Lg		22 33 40.4	
	comp=Z,73nm,1.0s						
LCAR	Lake Charles	6.21	91	IAmb_Lg		22 33 37.3	
	comp=Z,57nm,0.9s						
T42A	Van Buren	6.24	83	IAmb_Lg		22 33 49.6	
	comp=Z,32nm,0.8s						
CCM	Cathedral Cave	6.25	73	IAmb_Lg		22 33 39.3	
	comp=Z,55nm,0.8s						
ISCO	Idaho Springs	6.29	304	Pn	Pn	22 31 54.0	-0.2
ISCO				IAmb_Lg		22 33 46.0	
	comp=Z,33nm,0.8s						
ISCO	Idaho Springs	6.29	304	P	Pn	22 31 54.4	+0.2
	baz=120						
ISCO	Idaho Springs	6.29	304	P	Pn	22 31 54.4	+0.2
	baz=120,SNR=11						
ANMO	Albuquerque	6.39	258	Pn	Pn	22 31 56.8	+1.3
	comp=Z,0.3nm,0.3s,baz=170,slow=17,SNR=3.0						
ANMO				Pg	Pb	22 32 14.6	+2.1
	comp=Z,1.3nm,0.3s,baz=149,slow=15,SNR=9.5						
ANMO				Lg	Lg	22 33 35.7	
	comp=Z,3.8nm,0.3s,baz=53,slow=17,SNR=9.3						
	comp=Z,0.9nm,0.4s						
ANMO	Albuquerque	6.39	258	Pn	Pn	22 31 55.6	+0.1
PBMO	Poplar Bluff	6.76	85	IAmb_Lg		22 34 10.3	
	comp=Z,60nm,1.0s						
BNM	Barren Site	6.78	252	Pn	Pn	22 32 00.7	-0.3
SCIA	State Center	6.96	37	IAmb_Lg		22 34 05.0	
	comp=Z,37nm,0.7s						
PHWY	Pilot Hill	7.06	315		Pn	22 32 04.3	-0.6
PHWY				IAmb_Lg		22 34 03.8	
	comp=Z,36nm,0.7s						
SLM	Saint Louis	7.16	70	IAmb_Lg		22 34 14.6	
	comp=Z,34nm,0.8s						
143A	Socs Landing,	7.19	119	IAmb_Lg		22 34 19.7	
	comp=Z,38nm,0.8s						
MNTX	Cornudas Mount	7.23	231	Pn	Pn	22 32 06.3	-0.5
MNTX	Cornudas Mount	7.23	231	P	Pn	22 32 07.1	+0.2
	baz=46,SNR=5.7						
MNTX	Cornudas Mount	7.23	231	P	Pn	22 32 07.1	+0.2
	baz=46						
CGM3	Cape Girardeau	7.40	81	IAmb_Lg		22 34 22.2	
	comp=Z,30nm,0.7s						
ECSD	EROS Data Cent	7.44	12	P	Pn	22 32 11.8	+2.0
	baz=194						
N41A	Harden Midland	7.54	54	IAmb_Lg		22 34 26.0	
	comp=Z,41nm,0.8s						
735A	Kenedy	7.65	173	IAmb_Lg		22 34 30.9	
	comp=Z,28nm,0.8s						
K38A	Parkersburg	7.74	35	IAmb_Lg		22 34 35.1	
	comp=Z,51nm,1.0s						
S44A	Carbondale	7.75	78	IAmb_Lg		22 34 26.9	
	comp=Z,48nm,0.7s						
OXF	Oxford	7.93	102	IAmb_Lg		22 34 37.6	
	comp=Z,40nm,0.9s						
OXF	Oxford	7.93	102	P	Pn	22 32 17.8	+1.4
	baz=287						
SUSD	Miller	7.96	359	IAmb_Lg		22 34 51.5	
	comp=Z,47nm,0.7s						
P43A	Skaggs, Pawnee	7.99	64	IAmb_Lg		22 34 47.0	
	comp=Z,38nm,0.8s						
Y45A	Yeager Farm, C	8.04	106	IAmb_Lg		22 34 49.2	
	comp=Z,44nm,1.0s						
833A	Chaparral WMA,	8.14	184	IAmb_Lg		22 34 43.2	
	comp=Z,37nm,1.1s						
Q44A	Meyer Farm, Va	8.15	70	Pn	Pn	22 32 20.1	+0.7
Q44A				IAmb_Lg		22 34 54.3	
	comp=Z,50nm,0.9s						
PV11	David Mesa, Pa	8.20	286	IAmb_Lg		22 34 59.8	
	comp=Z,37nm,1.1s						
TX31	Lajitas Ar. Si	8.20	211	Pn	Pn	22 32 19.8	-0.5
TX31	Lajitas Ar. Si	8.20	211	P	Pn	22 32 20.0	-0.3
	baz=28,SNR=15						
TXAR	Lajitas Array	8.20	211	Pn	Pn	22 32 20.1	-0.2
	comp=Z,0.7nm,0.3s,baz=32,slow=10,SNR=64						
TXAR				Sn	Sn	22 33 50.6	-2.5
	comp=Z,1.0nm,0.3s,baz=26,slow=20,SNR=1.8						
TXAR				Lg	Lg	22 34 33.1	
	comp=Z,1.6nm,0.3s,baz=32,slow=29,SNR=3.7						
	comp=Z,1.0nm,0.4s						
TXAR	Lajitas Array	8.20	211	Pn	Pn	22 32 19.9	-0.4

RWWY	**Rawlins**	**8.34**	**311**	IAmb_Lg		22 34 47.9	
	comp=Z,41nm,1.0s						
HDIL	**Hopedale**	**8.51**	**59**	P	**Pn**	**22 32 25.5**	**+1.0**
	baz=245						
K22A	**Casper**	**8.56**	**318**	IAmb_Lg		22 35 03.8	
	comp=Z,26nm,0.8s						
RSSD	**Black Hills**	**8.61**	**334**	P	**Pn**	**22 32 27.5**	**+1.5**
	baz=151						
146A	**Union**	**8.92**	**113**	IAmb_Lg		22 35 24.2	
	comp=Z,31nm,0.8s						
JFWS	**Jewell Farm**	**9.22**	**43**	IAmb_Lg		22 35 16.2	
	comp=Z,25nm,0.8s						
JFWS	**Jewell Farm**	**9.22**	**43**	P	**Pn**	**22 32 35.8**	**+1.6**
	baz=229						
F33A	**5 Mile Ranch,**	**9.55**	**11**	IAmb_Lg		22 35 21.1	
	comp=Z,25nm,1.2s						
PDAR	**Pinedale Array**	**10.38**	**310**	Pn	**Pn**	**22 32 49.8**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=124,slow=15,SNR=7.5						
PDAR				Pg		22 33 23.3	
	comp=Z,0.4nm,0.3s,baz=114,slow=15,SNR=4.3						
PDAR				Lg	Lg	22 35 37.4	
	comp=Z,0.3nm,0.3s,baz=109,slow=35,SNR=2.8						
	comp=Z,0.7nm,0.5s						
TKL	**Tuckaleechee C**	**12.21**	**89**	Pn	**Pn**	**22 33 14.5**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=275,slow=15,SNR=2.3						
TKL				Lg	Lg	22 36 42.3	
	comp=Z,0.6nm,0.3s,baz=349,slow=20,SNR=5.6						
	comp=Z,2.3nm,0.4s						
ULM	**Lac du Bonnet**	**13.93**	**8**	Pn	**Pn**	**22 33 33.9**	**-4.6**
	comp=Z,2.0nm,0.9s,baz=210,slow=19,SNR=1.2						
ULM				Sn	Sn	22 35 58.5	-15
	comp=Z,0.2nm,0.3s,baz=256,slow=19,SNR=1.3						
ULM				Lg	Lg	22 37 23.6	
	comp=Z,0.3nm,0.3s,baz=100,slow=18,SNR=3.0						

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*DDA **08** 22:31:25.3±0.0, 37°.62N×38°.47E, h10^{km}±2^{km}, ML3.3*
*ISK **08** 22:31:25.4, 37°.54N×38°.47E, h16^{km}, ML3.5/23*
ISC 08 22:31:25.8±1.0**, 37°.60N**±0°.03×**38°.47E**±0°.02**, h6**^{km}±10^{km}**,**
n37, σ0^{s}.67/52**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AZEY	**Adyaman-Merk**	**0.27**	**320**	P	**Pg**	**22 31 31.1**	**0.0**
AZEY				S	**Sg**	**22 31 34.8**	**0.0**
AZEY				*i* AML	AML	22 31 37.0	
	comp=E,4µm,0.4s						
AZEY				*i* AML	AML	22 31 41.0	
	comp=N,3µm,0.3s						
HANM	**anlurfa/Hi**	**0.33**	**94**	P	**Pg**	**22 31 32.2**	**0.0**
HANM				S	**Sg**	**22 31 36.6**	**+0.1**
HANM				*i* AML	AML	22 31 40.0	
	comp=N,4µm,0.6s						
HANM				*i* AML	AML	22 31 42.0	
	comp=E,2µm,0.7s						
NARI	**Adyaman-Kaht**	**0.36**	**39**	P	**Pg**	**22 31 32.7**	**-0.2**
NARI				S	**Sg**	**22 31 37.5**	**-0.3**
NARI				*i* AML	AML	22 31 46.0	
	comp=N,3µm,0.8s						
NARI				*i* AML	AML	22 31 46.0	
	comp=E,2µm,0.6s						
SANL	**SANLIURFA_Merk**	**0.60**	**136**	P	**Pg**	**22 31 37.5**	**+0.2**
SANL				S	**Sg**	**22 31 45.8**	**+0.7**
SANL				*i* AML	AML	22 31 52.0	
	comp=N,2µm,0.3s						
SANL				*i* AML	AML	22 31 52.0	
	comp=E,2µm,0.5s						
AKCA	**Adyaman/G¶l**	**0.65**	**287**	P	**Pg**	**22 31 38.1**	**-0.2**
AKCA				S	**Sg**	**22 31 47.0**	**+0.3**
AKCA				*i* AML	AML	22 31 50.0	
	comp=E,1µm,0.3s						
AKCA				*i* AML	AML	22 31 53.0	
	comp=N,2µm,0.6s						
MAYA	**Malatya/Merkez**	**0.72**	**357**	P	**Pg**	**22 31 39.1**	**-0.6**
SURC	**SANLIURFA_SURC**	**0.73**	**171**	P	**Pg**	**22 31 40.0**	**+0.2**
SURC				S	**Sb**	**22 31 51.2**	**+0.1**
SURC				*i* AML	AML	22 31 58.0	
	comp=E,981nm,0.3s						
SURC				*i* AML	AML	22 32 02.0	
	comp=N,736nm,0.4s						
GZT	**Gaziantep**	**0.76**	**251**	P	**Pg**	**22 31 40.3**	**-0.1**
GZT				S	**Sb**	**22 31 52.9**	**+0.7**
GZT				*i* AML	AML	22 31 54.0	
	comp=N,2µm,0.8s						
GZT				*i* AML	AML	22 31 58.0	
	comp=E,1µm,0.3s						
NZIP	**Nizip/Gaziante**	**0.84**	**229**	P	**Pg**	**22 31 42.1**	**+0.2**
NZIP				S	**Sg**	**22 31 53.6**	**+0.7**
NZIP				*i* AML	AML	22 31 56.0	
	comp=E,2µm,0.5s						
NZIP				*i* AML	AML	22 32 04.0	
	comp=N,1µm,0.5s						
GAZ	**Gaziantep**	**1.09**	**247**	Pg	**Pg**	**22 31 46.5**	**-0.2**
GAZ				Sg	**Sg**	**22 32 01.7**	**+0.9**
KAHM	**Kahramanmaras,**	**1.18**	**266**	P	**Pb**	**22 31 47.4**	**-1.2**
KAHM				S	**Sb**	**22 32 03.8**	**-0.3**
KAHM				*i* AML	AML	22 32 06.0	
	comp=E,239nm,0.5s						
DARE	**Darende-Malaty**	**1.24**	**322**	Pn	**Pn**	**22 31 49.0**	**-0.7**
DARE				Sn	**Sg**	**22 32 07.2**	**+1.5**
KMRS	**Kahramanmaras**	**1.25**	**266**	Pn	**Pn**	**22 31 48.7**	**-1.1**
KMRS				Sn	**Sb**	**22 32 05.9**	**-0.2**
DYBB	**Diyarbakir**	**1.37**	**75**	Pn	**Pn**	**22 31 51.1**	**-0.4**
ARPR	**Arapgir-MALATY**	**1.49**	**356**	Pn	**Pn**	**22 31 52.8**	**-0.4**
KOVA	**Elazig, Kovanc**	**1.53**	**43**	P	**Pn**	**22 31 53.5**	**-0.2**
KOVA				S	**Sn**	**22 32 13.8**	**-0.2**
KOVA				*i* AML	AML	22 32 19.0	
	comp=N,186nm,0.4s						
MAZI	**Mazidag**	**1.58**	**95**	Pn	**Pn**	**22 31 53.6**	**-0.8**
HANI	**Diyarbakir_Han**	**1.73**	**61**	P	**Pn**	**22 31 56.0**	**-0.4**
HANI				S	**Sb**	**22 32 20.2**	**+0.3**
HANI				*i* AML	AML	22 32 24.0	
	comp=E,412nm,0.4s						
HANI				*i* AML	AML	22 32 25.0	
	comp=N,701nm,0.8s						
SARI	**SarD1z-Kayseri**	**1.81**	**297**	Pn	**Pn**	**22 31 57.9**	**+0.3**
RHAN	**Hatay/Reyhanl**	**2.01**	**229**	P	**Pn**	**22 32 00.5**	**+0.4**
RHAN				S	**Sb**	**22 32 28.9**	**+1.0**
RHAN				*i* AML	AML	22 32 41.0	
	comp=E,382nm,0.8s						
RHAN				*i* AML	AML	22 32 41.0	
	comp=N,540nm,0.5s						
KOZT	**Kozan**	**2.10**	**268**	Pn	**Pn**	**22 32 00.5**	**-1.0**
BNGB	**Bingl**	**2.22**	**51**	Pn	**Pn**	**22 32 03.6**	**+0.3**
SVAN	**Silvan-Diyarba**	**2.23**	**75**	Pn	**Pn**	**22 32 02.5**	**-0.8**
CEYT	**Ceyhan**	**2.25**	**256**	Pn	**Pn**	**22 32 02.9**	**-0.6**
BNN	**Bunyan**	**2.41**	**302**	Pn	**Pn**	**22 32 06.8**	**+0.9**
YAYL	**Yayladag**	**2.46**	**231**	Pn	**Pn**	**22 32 05.9**	**-0.6**
SVSK	**Karacayir**	**2.58**	**334**	Pn	**Pn**	**22 32 09.3**	**+1.3**
KARA	**Karaisali**	**2.74**	**264**	Pn	**Pn**	**22 32 10.5**	**+0.3**
VRTB	**Varto-Mus**	**2.82**	**56**	Pn	**Pn**	**22 32 11.9**	**+0.5**
RSDY	**Resadiye-TOKAT**	**2.93**	**343**	Pn	**Pn**	**22 32 13.6**	**+0.7**
GURO	**Guroymak-BITLI**	**2.97**	**70**	Pn	**Pn**	**22 32 13.3**	**-0.2**
BAYT	**Aydıntepe-Bayb**	**3.08**	**25**	Pn	**Pn**	**22 32 16.1**	**+1.1**
TOKT	**Tokat**	**3.10**	**332**	Pn	**Pn**	**22 32 15.9**	**+0.6**
YOZ	**Yozgat**	**3.20**	**310**	Pn	**Pn**	**22 32 17.5**	**+0.8**
MLAZ	**Malazgirt-MUS**	**3.56**	**63**	Pn	**Pn**	**22 32 22.2**	**+0.6**
KOPR	**Koprukoy-ERZUR**	**3.56**	**47**	Pn	**Pn**	**22 32 22.8**	**+1.1**
AKDM	**Akdamar-Van**	**3.64**	**77**	Pn	**Pn**	**22 32 23.9**	**+1.1**

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*IDC **08** 22:33:32.9±1.2, 43°.28N×71°.79E, h0^{km}, mb3.4/3, mbtmp3.7/11, ML3.2/8, Error ellipse: s-maj=17.8km s-min=9.8km az=27.0*
*NNC **08** 22:33:35.0±0.4, 43°.46N×71°.77E, h6^{km}±4^{km}, mb4.1, mpv3.9, Error ellipse: s-maj=4.5km s-min=2.0km az=169.0*
*KRNET **08** 22:33:36.4±0.1, 43°.38N×71°.78E, h30^{km}, mb3.7*
*SOME **08** 22:33:37.6, 43°.38N×71°.88E, h20^{km}*
*KNET **08** 22:33:37.9±0.5, 43°.38N×72°.16E, h8^{km}±4^{km}, ml3.7, Error ellipse: s-maj=4.2km s-min=3.3km az=107.0*
ISC 08 22:33:34.8±1.1**, 43°.48N**±0°.03×**71°.77E**±0°.02**, h12**^{km}±8^{km}**,**
n108, σ2^{s}.17/152**, mb3.7**/3**, 60C-27D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZA	**Taraz**	**0.67**	**209**	*e*P	**Pg**	**22 33 48.0**	**+0.2**
	130nm,0.1s						
DZA				*e*S	**Sg**	**22 33 56.0**	**-0.5**
	9µm,0.3s						
KK31	**Karatay Array**	**0.99**	**248**	⇑P	**Pb**	**22 33 54.6**	**+0.6**
	47nm,0.5s,baz=83,slow=28,SNR=4163						
KK31				⇑S	**Sg**	**22 34 07.0**	**+0.2**
	272nm,0.4s,baz=68,slow=48,SNR=34						
KKAR	**Karatay Array**	**0.99**	**248**	⇓*i*P	**Pb**	**22 33 54.5**	**+0.6**
	baz=54						
KKAR				⇓*i*S	**Sb**	**22 34 07.8**	**+0.8**
	baz=54						
MNAS	**Manas**	**1.13**	**151**	⇓*i*P	**Pg**	**22 33 55.6**	**-0.9**
	baz=49						
MNAS				⇓*i*S	**Sg**	**22 34 10.2**	**-1.0**
	baz=49						
MRKS	**Merke**	**1.30**	**124**	P	**Pg**	**22 33 58.7**	**-1.0**
	61nm,0.2s						
MRKS				S	**Sg**	**22 34 14.5**	**-2.1**
	1µm,0.6s						
MRKS	**Merke**	**1.30**	**124**	*e*P	**Pg**	**22 33 58.7**	**-1.0**
	61nm,0.2s						
MRKS				*e*S	**Sg**	**22 34 14.5**	**-2.1**
	1µm,0.6s						
EKS2	**Erkin-Say**	**1.68**	**118**	⇑P	**Pn**	**22 34 05.0**	**+0.8**
	44nm,0.1s,SNR=223						
EKS2				⇓S	**Sn**	**22 34 25.1**	**-0.7**
	605nm,0.2s						
EKS2	**Erkin-Say**	**1.68**	**118**	⇑*i*P	**Pb**	**22 34 06.0**	**+0.2**
	baz=16						
EKS2				⇑*i*S	**Sb**	**22 34 27.5**	**+0.5**
	baz=16						
ARK	**Arkit**	**1.69**	**175**	⇑*i*P	**Pn**	**22 34 05.1**	**+0.9**
	baz=75						
ARK				⇑*i*S	**Sn**	**22 34 26.0**	**+0.2**
	baz=75						
IUG	**Iuzhnay**	**1.84**	**224**	P	**Pg**	**22 34 09.6**	**-0.6**
	181nm,0.9s						
IUG				S	**Sg**	**22 34 33.3**	**-0.8**
	2µm,0.6s						
IUG	**Iuzhnay**	**1.84**	**224**	*e*P	**Pg**	**22 34 09.6**	**-0.6**
	181nm,0.9s						
IUG				*e*S	**Sg**	**22 34 33.3**	**-0.8**
	2µm,0.6s						
AML	**Almayashu**	**1.96**	**133**	⇑P	**Pn**	**22 34 09.8**	**+1.6**
	163nm,0.2s,SNR=295						
AML				⇑S	**Sn**	**22 34 33.8**	**+0.9**
	402nm,0.3s						
AML	**Almayashu**	**1.96**	**133**	⇓Pn	**Pn**	**22 34 09.8**	**+1.6**
	6.1nm,0.4s						
AML				⇓Sn	**Sn**	**22 34 34.5**	**+1.6**
	22nm,0.5s						
AML	**Almayashu**	**1.96**	**133**	⇑*i*P	**Pn**	**22 34 09.8**	**+1.6**
	baz=31						
AML				⇑*i*S	**Sn**	**22 34 33.6**	**+0.7**
	baz=31						
CHM	**Chimkent**	**1.97**	**235**	*e*Pg	**Pg**	**22 34 12.3**	**-0.2**
	105nm,0.3s						
CHM				*e*Lg	Lg	22 34 37.6	
	2µm,0.0s						
TRKS	**Terek-Say**	**2.00**	**194**	⇑*i*P	**Pn**	**22 34 10.3**	**+1.7**
	baz=93						
TRKS				⇑*i*S	**Sb**	**22 34 35.8**	**-0.4**
	baz=93						
USP	**Ospenovka**	**2.00**	**95**	⇑P	**Pn**	**22 34 09.8**	**+1.2**
	98nm,0.3s,SNR=68						
USP				⇑S	**Sn**	**22 34 34.6**	**+1.0**
	1µm,0.3s						
USP	**Ospenovka**	**2.00**	**95**	⇑*i*P	**Pb**	**22 34 10.6**	**-0.6**
	baz=92						
USP				⇑*i*S	**Sb**	**22 34 36.1**	**-0.1**
	baz=92						
SGDS	**Sogindy**	**2.08**	**90**	Pg	**Pb**	**22 34 13.1**	**+0.5**
	26nm,0.3s						
SGDS				Lg	Lg	22 34 39.2	
	447nm,0.3s						
AAK	**Ala-Archa**	**2.17**	**112**	⇑P	**Pn**	**22 34 12.7**	**+1.9**
	77nm,0.3s,SNR=46						
AAK				⇑S	**Sn**	**22 34 39.4**	**+1.6**
	690nm,0.4s						
AAK	**Ala-Archa**	**2.17**	**112**	Pn	**Pn**	**22 34 12.8**	**+1.9**
	15nm,0.3s,baz=344,slow=0.8,SNR=149						
AAK				Lg	Lg	22 34 38.7	
	54nm,0.3s,baz=170,slow=23,SNR=6.3						
	31nm,0.2s						
AAK	**Ala-Archa**	**2.17**	**112**	⇑*i*P	**Pn**	**22 34 12.8**	**+1.9**
	baz=10.0						
AAK				⇑*i*S	**Sn**	**22 34 39.4**	**+1.6**
	baz=10.0						
FRU1	**Bishkek**	**2.20**	**107**	⇑*i*P	**Pn**	**22 34 13.1**	**+1.8**
	baz=4.0						
FRU1				⇑*i*S	**Sn**	**22 34 40.3**	**+1.8**
	baz=4.0						
CHMS	**Chumysh**	**2.23**	**101**	⇑P	**Pn**	**22 34 13.5**	**+1.8**
	19nm,0.1s,SNR=12						
CHMS				⇑S	**Sn**	**22 34 40.8**	**+1.5**
	167nm,0.2s						
CHMS	**Chumysh**	**2.23**	**101**	⇑*i*P	**Pn**	**22 34 13.8**	**+2.1**
	baz=99						
CHMS				⇑*i*S	**Sn**	**22 34 41.4**	**+2.2**
	baz=99						
BTLS	**Baital**	**2.26**	**46**	Pg	**Pg**	**22 34 17.7**	**-0.5**
	26nm,0.5s						
BTLS				Lg	Lg	22 34 47.1	
	41nm,0.3s						
BTLS	**Baital**	**2.26**	**46**	*e*Pg	**Pg**	**22 34 17.7**	**-0.5**
	26nm,0.5s						
BTLS				*e*Lg	Lg	22 34 47.1	
	41nm,0.3s						
UCH	**Uchtor**	**2.38**	**121**	⇑P	**Pb**	**22 34 16.8**	**-1.0**
	42nm,0.2s,SNR=61						
UCH				⇓S	**Sb**	**22 34 46.7**	**-0.5**
	190nm,0.3s						
UCH	**Uchtor**	**2.38**	**121**	⇑*i*P	**Pn**	**22 34 15.5**	**+1.5**
	baz=19						
UCH				⇑*i*S	**Sn**	**22 34 43.8**	**+0.5**
	baz=19						
KBK	**Karagaybulak**	**2.47**	**108**	⇑P	**Pn**	**22 34 17.3**	**+2.2**
	25nm,0.1s,SNR=68						
KBK				⇓S	**Sb**	**22 34 48.5**	**-1.3**
	366nm,0.2s						
KBK	**Karagaybulak**	**2.47**	**108**	⇓*i*P	**Pn**	**22 34 17.1**	**+2.0**
	baz=6.0						
KBK				⇓*i*S	**Sn**	**22 34 46.6**	**+1.3**
	baz=6.0						
ARLS	**Aral**	**2.48**	**130**	⇑*i*P	**Pn**	**22 34 17.1**	**+1.8**
	baz=28						
ARLS				⇑*i*S	**Sn**	**22 34 46.4**	**+0.8**
	baz=28						
TAS	**Tashkent**	**2.83**	**221**	⇓*i*P	**Pn**	**22 34 21.7**	**+1.9**
	baz=23						
TAS				⇓*i*S	**Sn**	**22 34 54.5**	**+0.7**
	baz=23						
KRBS	**Karabastau**	**2.85**	**84**	Pg	**Pb**	**22 34 27.6**	**+2.0**
	10nm,0.3s						
KRBS				Lg	Lg	22 35 04.0	
	93nm,0.2s						
KRBS	**Karabastau**	**2.85**	**84**	*e*Pg	**Pb**	**22 34 27.6**	**+2.0**
	10nm,0.3s						
KRBS				*e*Lg	Lg	22 35 04.0	
	93nm,0.2s						
TKM2	**Tokmak 2**	**2.85**	**100**	⇓P	**Pn**	**22 34 22.0**	**+1.6**
	10.0nm,0.2s,SNR=21						
TKM2	**Tokmak 2**	**2.85**	**100**	⇑Pn	**Pn**	**22 34 21.8**	**+1.4**
	13nm,0.4s						
TKM2				⇓Lg	Lg	22 35 01.3	
	67nm,0.3s						
TKM2	**Tokmak 2**	**2.85**	**100**	⇑*i*P	**Pn**	**22 34 23.1**	**+2.7**
	baz=98						
TKM2				⇑*i*S	**Sn**	**22 34 56.5**	**+1.7**
	baz=98						
DGS	**Degeres**	**2.93**	**93**	Pg	**Pb**	**22 34 28.9**	**+1.8**
	17nm,0.3s						
DGS				Lg	Lg	22 35 06.6	
	104nm,0.6s						
DGS	**Degeres**	**2.93**	**93**	*e*Pg	**Pb**	**22 34 28.9**	**+1.8**
	17nm,0.3s						
DGS				*e*Lg	Lg	22 35 06.6	
	104nm,0.6s						
OHH	**Osh**	**3.05**	**165**	⇑*i*P	**Pn**	**22 34 24.1**	**+1.2**
	baz=65						
OHH				⇑*i*S	**Sn**	**22 34 59.3**	**-0.1**
	baz=65						
KST	**Kastek**	**3.10**	**97**	Pg	**Pb**	**22 34 32.3**	**+2.4**
	18nm,0.5s						
KST				Lg	Lg	22 35 11.3	
	160nm,0.3s						
KST	**Kastek**	**3.10**	**97**	*e*Pg	**Pb**	**22 34 32.3**	**+2.4**
	18nm,0.5s						
KST				*e*Lg	Lg	22 35 11.3	
	160nm,0.3s						
BOOM	**Boomskoye usch**	**3.22**	**106**	⇑*i*P	**Pn**	**22 34 27.4**	**+2.0**
	baz=5.0						
BOOM				⇑*i*S	**Sn**	**22 35 04.9**	**+1.2**
	baz=5.0						
KUU	**Kurty**	**3.34**	**81**	Pg	**Pb**	**22 34 36.5**	**+2.4**
	23nm,0.5s						
KUU				Lg	Lg	22 35 18.8	
	154nm,0.5s						
KUU	**Kurty**	**3.34**	**81**	*e*Pg	**Pb**	**22 34 36.5**	**+2.4**
	23nm,0.5s						
KUU				*e*Lg	Lg	22 35 18.8	
	154nm,0.5s						
MTBS	**Maitube**	**3.42**	**94**	Pg	**Pb**	**22 34 38.1**	**+2.6**
	25nm,0.1s						
MTBS				Lg	Lg	22 35 21.8	
	133nm,0.6s						
MTBS	**Maitube**	**3.42**	**94**	*e*Pg	**Pb**	**22 34 38.1**	**+2.6**
	25nm,0.1s						
MTBS				*e*Lg	Lg	22 35 21.8	
	133nm,0.6s						
BTK	**Batken**	**3.49**	**192**	⇑*i*P	**Pn**	**22 34 30.6**	**+1.6**
	baz=93						
BTK				⇑*i*S	**Sn**	**22 35 10.2**	**-0.1**
	baz=93						
IZV	**Izvestkoviy**	**3.57**	**95**	Pg	**Pb**	**22 34 40.7**	**+2.8**
	7.1nm,0.2s						
IZV				Lg	Lg	22 35 26.1	
	146nm,0.4s						
IZV	**Izvestkoviy**	**3.57**	**95**	*e*Pg	**Pb**	**22 34 40.7**	**+2.8**
	7.1nm,0.2s						
IZV				*e*Lg	Lg	22 35 26.1	
	146nm,0.4s						
KTBS	**Karatobe**	**3.58**	**85**	Pg	**Pb**	**22 34 40.7**	**+2.6**
	17nm,0.9s						
KTBS				Lg	Lg	22 35 26.5	
	432nm,0.8s						
KTBS	**Karatobe**	**3.58**	**85**	*e*Pg	**Pb**	**22 34 40.7**	**+2.6**
	17nm,0.9s						
KTBS				*e*Lg	Lg	22 35 26.5	
	432nm,0.8s						
NRN	**Naryn**	**3.74**	**122**	⇑*i*P	**Pn**	**22 34 34.2**	**+1.5**
	baz=21						
NRN				⇑*i*S	**Sn**	**22 35 16.6**	**-0.2**
	baz=21						
AAA	**Alma-Ata**	**3.77**	**92**	Pg	**Pg**	**22 34 44.5**	**-2.4**
	13nm,0.3s						
AAA				Lg	Lg	22 35 32.8	
	138nm,0.6s						
AAA	**Alma-Ata**	**3.77**	**92**	*e*Pg	**Pg**	**22 34 44.5**	**-2.4**
	13nm,0.3s						
AAA				*e*Lg	Lg	22 35 32.8	
	138nm,0.6s						
KNDC	**Almaty**	**3.80**	**92**	⇓Pg	**Pg**	**22 34 48.3**	**+0.7**
	23nm,0.4s						
KNDC				⇑Lg	Lg	22 35 34.6	
	211nm,0.6s						
CHKK	**Chushkaly**	**3.81**	**83**	Pg	**Pg**	**22 34 45.6**	**-2.1**
	12nm,0.6s						
CHKK				Lg	Lg	22 35 34.6	
	160nm,0.5s						
CHKK	**Chushkaly**	**3.81**	**83**	*e*Pg	**Pg**	**22 34 45.6**	**-2.1**
	12nm,0.6s						
CHKK				*e*Lg	Lg	22 35 34.6	
	160nm,0.5s						
TNSS	**Tian-Shan**	**3.81**	**95**	Pg	**Pb**	**22 34 44.9**	**+2.7**
	16nm,0.1s						
TNSS				Lg	Lg	22 35 33.7	
	35nm,0.5s						
TNSS	**Tian-Shan**	**3.81**	**95**	*e*Pg	**Pb**	**22 34 44.9**	**+2.7**
	16nm,0.1s						
TNSS				*e*Lg	Lg	22 35 33.8	
	35nm,0.5s						
MDOK	**Medeo**	**3.87**	**93**	⇑Pg	**Pb**	**22 34 44.9**	**+1.8**
	11nm,0.6s						
MDOK				Pg	**Pb**	**22 34 46.2**	**+3.2**
	7.9nm,0.3s						
MDOK				Lg	Lg	22 35 35.7	
	87nm,0.2s						
MDOK				⇓Lg	Lg	22 35 35.8	
	118nm,0.8s						
MDOK	**Medeo**	**3.87**	**93**	*e*Pg	**Pb**	**22 34 46.2**	**+3.2**
	7.9nm,0.3s						
MDOK				*e*Lg	Lg	22 35 35.7	
	87nm,0.2s						
KOTS	**Kotyrbulak**	**3.91**	**92**	Pg	**Pb**	**22 34 46.9**	**+3.2**
	11nm,0.4s						
KOTS				Lg	Lg	22 35 37.0	
	138nm,0.5s						
KOTS	**Kotyrbulak**	**3.91**	**92**	*e*Pg	**Pb**	**22 34 46.9**	**+3.2**
	11nm,0.4s						
KOTS				*e*Lg	Lg	22 35 37.0	
	138nm,0.5s						
DRK	**Karamyk**	**4.00**	**180**	⇑*i*P	**Pn**	**22 34 37.8**	**+1.6**
	baz=80						
DRK				⇑*i*S	**Sn**	**22 35 22.0**	**-1.1**
	baz=80						
KDJ	**Kajisay**	**4.21**	**107**	⇓*i*P	**Pn**	**22 34 41.7**	**+2.8**
	baz=6.0						
KDJ				⇓*i*S	**Sn**	**22 35 29.1**	**+1.0**
	baz=6.0						
ARXS	**Arharly**	**4.45**	**78**	Pg	**Pg**	**22 34 56.8**	**-3.1**
	6.9nm,0.1s						
ARXS				Lg	Lg	22 35 53.8	
	166nm,0.4s						
ARXS	**Arharly**	**4.45**	**78**	*e*Pg	**Pg**	**22 34 56.9**	**-3.1**
	6.9nm,0.1s						
ARXS				*e*Lg	Lg	22 35 53.9	
	166nm,0.4s						
KURS	**Kuram**	**4.66**	**88**	Pg	**Pb**	**22 35 00.6**	**+4.1**
	5.4nm,0.3s						
KURS				Lg	Lg	22 36 00.4	
	65nm,0.5s						
KURS	**Kuram**	**4.66**	**88**	*e*Pg	**Pb**	**22 35 00.6**	**+4.1**
	5.4nm,0.3s						
KURS				*e*Lg	Lg	22 36 00.4	
	65nm,0.5s						
OTUK	**Ortayu**	**4.78**	**5**	⇑Pn	**Pn**	**22 34 50.0**	**+3.3**
	8.1nm,0.4s						
OTUK				⇑Sn	**Sn**	**22 35 43.9**	**+1.8**
	14nm,0.5s						
OTUK				⇑Lg	Lg	22 36 02.4	
	115nm,0.7s						
SATY	**Saty**	**4.87**	**93**	Pg	**Pg**	**22 35 05.0**	**-3.0**
	5.8nm,0.6s						
SATY				Lg	Lg	22 36 07.1	
	61nm,0.4s						
SATY	**Saty**	**4.87**	**93**	*e*Pg	**Pg**	**22 35 05.0**	**-3.0**
	5.8nm,0.6s						
SATY				*e*Lg	Lg	22 36 07.1	
	61nm,0.4s						
ZHN	**Zhinishke**	**4.88**	**91**	Pg	**Pg**	**22 35 05.1**	**-3.1**
	2.5nm,0.3s						
ZHN				Lg	Lg	22 36 07.2	
	44nm,0.4s						
ZHN	**Zhinishke**	**4.88**	**91**	*e*Pg	**Pg**	**22 35 05.1**	**-3.1**
	2.5nm,0.3s						
ZHN				*e*Lg	Lg	22 36 07.2	
	44nm,0.4s						
BLB	**Baldybastay**	**4.90**	**80**	Pg	**Pg**	**22 35 05.5**	**-3.1**
	9.0nm,0.2s						
BLB				Lg	Lg	22 36 08.0	
	104nm,0.3s						
KPKS	**Kokpek**	**5.03**	**88**	Pg	**Pb**	**22 35 07.3**	**+4.4**
	4.7nm,0.5s						
KPKS				Lg	Lg	22 36 11.8	
	100nm,0.6s						
KPKS	**Kokpek**	**5.03**	**88**	*e*Pg	**Pb**	**22 35 07.3**	**+4.4**
	4.7nm,0.5s						
KPKS				*e*Lg	Lg	22 36 11.8	
	100nm,0.6s						
UZB	**Uzynbulak**	**5.30**	**91**	Pg	**Pg**	**22 35 12.8**	**-3.6**
	5.7nm,0.3s						
UZB				Lg	Lg	22 36 20.6	
	31nm,0.3s						
UZB	**Uzynbulak**	**5.30**	**91**	*e*Pg	**Pg**	**22 35 12.8**	**-3.6**
	5.7nm,0.3s						
UZB				*e*Lg	Lg	22 36 20.6	
	31nm,0.3s						
SHLS	**Shalkode**	**5.62**	**91**	Pg	**Pg**	**22 35 25.8**	**+3.3**
	5.6nm,0.8s						
SHLS				Lg	Lg	22 36 42.8	
	41nm,0.6s						
SHLS	**Shalkode**	**5.62**	**91**	*e*Pg	**Pg**	**22 35 25.8**	**+3.3**
	5.6nm,0.8s						
SHLS				*e*Lg	Lg	22 36 42.8	
	41nm,0.6s						
PDGK	**Podgornoye**	**5.63**	**89**	Pg	**Pg**	**22 35 20.3**	**-2.3**
	2.1nm,0.9s						
PDGK				Lg	Lg	22 36 34.0	
	20nm,0.7s						
PDGK	**Podgornoye**	**5.63**	**89**	⇑Pg	**Pb**	**22 35 17.0**	**+4.0**
	6.6nm,0.7s						
PDGK				⇓Lg	Lg	22 36 29.6	
	37nm,0.7s						
BRZS	**Berezniki**	**6.54**	**5**	Pg	**Pg**	**22 35 37.9**	**-2.0**
	3.0nm,0.2s						

BRZS				Lg	Lg	22 37 03.5	
	28nm,0.3s						
BRZS	**Berezniki**	**6.54**	**5**	*e*Pg	**Pg**	**22 35 37.9**	**-2.0**
	3.0nm,0.2s						
BRZS				*e*Lg	Lg	22 37 03.5	
	28nm,0.3s						
MAKZ	**Makanchi**	**7.95**	**62**	⇑Pn	**Pn**	**22 35 31.8**	**+1.6**
	2.1nm,0.5s						
MAKZ				⇓Lg	Lg	22 37 45.6	
	18nm,0.7s						
MK31	**Makanchi Array**	**8.14**	**62**	⇓Pn	**Pn**	**22 35 34.4**	**+1.5**
	3.8nm,0.5s,baz=247,slow=14,SNR=151						
MK31				⇑Sn	**Sn**	**22 37 06.5**	**+1.6**
	7.4nm,0.8s						
MK31				⇑Lg	Lg	22 37 51.1	
	22nm,0.8s,baz=249,slow=24,SNR=8.0						
MKAR	**Makanchi Array**	**8.14**	**62**	Pn	**Pn**	**22 35 34.6**	**+1.7**
	2.9nm,0.3s,baz=236,slow=14,SNR=140						
MKAR				Sn	**Sn**	**22 37 06.2**	**+1.4**
	0.8nm,0.3s,baz=237,slow=20,SNR=4.8						
MKAR				Lg	Lg	22 37 50.4	
	2.2nm,0.3s,baz=247,slow=32,SNR=6.4						
	5.6nm,0.4s						
KURBB	**Kurchatov Arra**	**8.51**	**30**	Pn	**Pn**	**22 35 38.4**	**+0.6**
	0.4nm,0.3s,baz=217,slow=13,SNR=23						
KURBB				Sn	**Sn**	**22 37 12.1**	**-1.5**
	0.3nm,0.3s,baz=208,slow=17,SNR=5.2						
KURBB				Lg	Lg	22 38 03.2	
	0.6nm,0.3s,baz=208,slow=23,SNR=3.3						
	1.2nm,0.3s						
KURK	**Kurchatov**	**8.61**	**30**	⇓Pn	**Pn**	**22 35 40.2**	**+0.9**
	2.9nm,1.0s						
KURK				⇓Lg	Lg	22 38 08.4	
	83nm,1.1s						
SEM	**Semipalatinsk**	**9.04**	**37**	Pg	Pn	22 36 24.0	+39
	2.2nm,0.1s						
SEM				Lg	Lg	22 38 22.5	
	12nm,0.1s						
SEM	**Semipalatinsk**	**9.04**	**37**	*e*P	Pn	22 36 24.0	+39
	2.2nm,0.1s						
SEM				*e*S	Sn	22 38 22.5	+55
	12nm,0.1s						
BVA0	**Borovoye Array**	**9.60**	**355**	Pn	**Pn**	**22 35 54.0**	**+1.3**
	3.3nm,0.9s,baz=152,slow=13,SNR=33						
BVA0				⇓Sn	**Sn**	**22 37 39.6**	**-0.8**
	0.5nm,0.9s,baz=168,slow=26,SNR=6.0						
BVA0				⇑Lg	Lg	22 38 41.2	
	14nm,0.8s,baz=158,slow=32,SNR=4.0						
BVAR	**Borovoye Array**	**9.60**	**355**	Pn	**Pn**	**22 35 53.9**	**+1.2**
	0.1nm,0.3s,baz=162,slow=12,SNR=12						
BVAR				Sn	**Sn**	**22 37 37.5**	**-2.9**
	0.3nm,0.3s,baz=166,slow=26,SNR=10.0						
BVAR				Lg	Lg	22 38 40.8	
	0.1nm,0.3s,baz=159,slow=25,SNR=1.9						
	1.1nm,0.4s						
BRVK	**Borovoye**	**9.64**	**355**	⇓Pn	**Pn**	**22 35 54.1**	**+0.9**
	3.3nm,0.9s						
BRVK				⇑Sn	**Sn**	**22 37 40.1**	**-1.3**
	5.6nm,0.8s						
BRVK				⇑Lg	Lg	22 38 43.9	
	24nm,1.0s						
AB31	**Akbulak array**	**10.00**	**309**	Pn	**Pn**	**22 36 00.7**	**+2.4**
	1.1nm,0.6s,baz=130,slow=10,SNR=12						
AB31				⇓Sn	**Sn**	**22 37 46.2**	**-4.2**
	0.5nm,0.3s,baz=117,slow=24,SNR=2.7						
ZSN	**Zaisan**	**10.02**	**62**	Pg	Pn	22 36 36.2	+38
	1.2nm,0.2s						
ZSN	**Zaisan**	**10.02**	**62**	*e*P	Pn	22 36 36.2	+38
	0.6nm,0.5s						
ZSN				*e*S	Sn	22 38 42.5	+52
	4.3nm,0.9s						
AKTO	**Aktyubinsk**	**11.68**	**311**	Pn	**Pn**	**22 36 22.5**	**+1.3**
	0.3nm,0.3s,baz=120,slow=11,SNR=3.6						
AKTO				Sn	**Sn**	**22 38 27.4**	**-4.1**
	0.2nm,0.3s,baz=11,slow=16,SNR=2.4						
	1.1nm,0.4s						
AKTO	**Aktyubinsk**	**11.68**	**311**	⇑Pn	**Pn**	**22 36 22.9**	**+1.6**
	2.5nm,1.1s						
AKTO				⇑Sn	**Sn**	**22 38 32.5**	**+1.0**
	2.0nm,0.6s						
GEYT	**Alibeck**	**11.74**	**246**	Pn	**Pn**	**22 36 20.6**	**-1.6**
	0.1nm,0.3s,baz=68,slow=16,SNR=1.2						
	0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**13.54**	**35**	Pn	**Pn**	**22 36 46.0**	**-0.5**
	0.5nm,0.3s,baz=224,slow=14,SNR=9.6						
ZALV				Sn	**Sn**	**22 39 12.3**	**-4.5**
	0.4nm,0.3s,baz=232,slow=24,SNR=1.9						
	1.9nm,0.3s						
ARU	**Arti**	**15.46**	**332**	Pn	**Pn**	**22 37 10.1**	**-2.5**
	baz=104,slow=19,SNR=3.0						
ARU				Sn	**Sn**	**22 39 55.8**	**-7.8**
	baz=134,slow=22,SNR=3.1						
ARU				Lg	Lg	22 41 48.2	
	baz=106,slow=20,SNR=3.2						
	1.0nm,0.3s						
SONM	**Songino Array**	**24.46**	**68**	P	**P**	**22 38 53.2**	**-0.5**
	0.2nm,0.5s,baz=284,slow=12,SNR=2.5						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**67.92**	**17**	P	**P**	**22 44 34.3**	**+1.4**
	0.6nm,0.7s,baz=330,slow=4.6,SNR=7.6						
	0.6nm,0.7s						
YKA	**Yellowknife Ar**	**74.25**	**3**	P	**P**	**22 45 12.7**	**+1.4**
	0.5nm,0.7s,baz=356,slow=5.9,SNR=6.6						
	0.5nm,0.7s						

NAO ***08*** *22:37:31.6±2.1, 72°.38N×2°.27E, ML3.1*
IDC ***08*** *22:37:33.1±1.8, 72°.30N×2°.89E, h0^{km}, mb3.1/2, mbtmp3.3/5, ML2.5/3, MS3.1/13, Error ellipse: s-maj=41.3km s-min=20.9km az=29.0*
BER ***08*** *22:37:37.3±3.3, 72°.51N×2°.52E, h22^{km}±54^{km}, ML2.0, ML3.1(NAO), Confirmed Earthquake*
DNK ***08*** *22:37:38.0±1.2, 72°.89N×1°.75E, h0^{km}±91^{km}*
ISC 08 22:37:33.5±0.9**, 72°.47N**±0°.09×**2°.94E**±0°.07**, h10**^{km}**, n47, σ1ˢ.85**/44**, MS3.2**/9**, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMIC	**Jan Mayen**	**3.90**	**253**	LR	LR	22 39 51.4	
	comp=Z,137nm,21.7s,baz=55,slow=36						
BJO1	**Bjornoya**	**5.00**	**58**	Pn	**Pn**	**22 38 49.6**	**+1.1**
LOF	**Lofoten**	**5.64**	**135**	*e*P	**Pn**	**22 38 58.9**	**+1.7**
LOF				IAML		22 39 59.4	
	comp=Z,4.0nm,0.8s						
TRO	**Tromso**	**5.93**	**111**	*e*P	**Pn**	**22 39 02.1**	**+0.9**
STEI	**Steigen**	**6.18**	**132**	*e*P	**Pn**	**22 39 05.8**	**+1.2**
STEI				IAML		22 40 18.1	
	comp=Z,2.5nm,0.3s						
BRBB	**Barentsburg B**	**6.32**	**22**	*e*P	**Pn**	**22 39 09.2**	**+2.7**
JETT	**Jettan, Norway**	**6.39**	**109**	Pn	**Pn**	**22 39 09.2**	**+1.5**
JETT				Sn	**Sn**	**22 40 19.0**	**-1.6**
JETT	**Jettan, Norway**	**6.39**	**109**	Pn	**Pn**	**22 39 09.2**	**+1.5**
JETT				Sn	**Sn**	**22 40 19.0**	**-1.6**
FAUS	**Fauske**	**6.63**	**134**	*e*P	**Pn**	**22 39 12.3**	**+1.4**
FAUS				IAML		22 40 26.6	
	comp=Z,2.4nm,0.6s						
SPA0	**Spitsbergen Ar**	**6.64**	**24**	Pn	**Pn**	**22 39 11.9**	**+0.9**
	baz=210,slow=16						
SPA0	**Spitsbergen Ar**	**6.64**	**24**	Pn	**Pn**	**22 39 11.9**	**+0.9**
	baz=210,slow=16						
KIF	**Kilpisjarvi**	**6.84**	**112**	Pn	**Pn**	**22 39 15.0**	**+1.3**
KIF				Sn	**Sn**	**22 40 28.4**	**-3.0**
KIF	**Kilpisjarvi**	**6.84**	**112**	*e*P	**Pn**	**22 39 15.2**	**+1.6**
KBS	**Kingsbay**	**6.84**	**15**	*e*P	**Pn**	**22 39 15.1**	**+1.3**
DBG	**Daneborg**	**6.86**	**296**	Pn	**Pn**	**22 39 10.8**	**-3.2**
DBG	**Daneborg**	**6.86**	**296**	*e*P	**Pn**	**22 39 10.8**	**-3.2**
DBG	**Daneborg**	**6.86**	**296**	Pn	**Pn**	**22 39 10.8**	**-3.2**
KONS	**Konsvik**	**6.97**	**144**	*e*P	**Pn**	**22 39 17.1**	**+1.5**
STOK	**Stokkvaagen**	**7.11**	**145**	*e*P	**Pn**	**22 39 19.3**	**+2.0**
DAG	**Danmarks Havn**	**7.13**	**317**	*i* P	**Pn**	**22 39 15.0**	**-2.7**
DAG				*i* S	Sn	22 40 26.5	-12
DAG				IAML		22 40 28.0	
	comp=Z,5.4nm,0.5s						
SALU	**Saltoluokta**	**7.38**	**126**	*e*P	**Pn**	**22 39 22.2**	**+1.0**
MOR8	**Moi Rana**	**7.51**	**142**	*e*P	**Pn**	**22 39 24.4**	**+1.5**
KTK1	**Kautokeino**	**7.53**	**108**	*e*P	**Pn**	**22 39 25.2**	**+2.0**
ARA0	**ARCESS Array S**	**7.90**	**101**	Pn	**Pn**	**22 39 29.2**	**+1.0**
	baz=307,slow=11						
ARA0				Sn	**Sn**	**22 40 55.4**	**-2.1**
	baz=305,slow=22						
ARA0	**ARCESS Array S**	**7.90**	**101**	Pn	**Pn**	**22 39 29.2**	**+1.0**
	baz=307,slow=11						
ARA0				Sn	**Sn**	**22 40 55.4**	**-2.1**
	baz=305,slow=22						
ARCES	**ARCESS Array B**	**7.90**	**101**	Pn	**Pn**	**22 39 29.4**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=299,slow=11,SNR=14						
ARCES				Sn	**Sn**	**22 40 53.0**	**-4.6**
	comp=Z,0.2nm,0.3s,baz=304,slow=19,SNR=5.0						
ARCES				LR	LR	22 42 17.6	
	comp=Z,104nm,19.1s,baz=292,slow=36						
	comp=Z,0.7nm,0.3s						
HEF	**Hetta**	**8.03**	**110**	*e*P	**Pn**	**22 39 31.4**	**+1.4**
SCO	**Scoresbysund**	**8.14**	**268**	*i* P	**Pn**	**22 39 31.2**	**-0.3**
KEV	**Kevo**	**8.23**	**98**	*e*P	**Pn**	**22 39 33.4**	**+0.7**
NSS	**Namsos**	**8.63**	**153**	*e*P	**Pn**	**22 39 40.2**	**+2.1**
VADS	**Vadso**	**8.76**	**93**	*e*P	**Pn**	**22 39 41.2**	**+1.2**
NOA	**NORSAR Array B**	**11.92**	**160**	Pn	**Pn**	**22 40 23.1**	**-0.2**
	baz=350,slow=13,SNR=1.9						
NOA				LR	LR	22 44 46.1	
	comp=Z,56nm,18.4s,baz=345,slow=37						
	comp=Z,0.9nm,1.0s						
HFS	**Hagfors**	**13.09**	**156**	Pn	**Pn**	**22 40 39.4**	**+0.2**
	slow=18						
HFS	**Hagfors**	**13.09**	**156**	Pn	**Pn**	**22 40 39.4**	**+0.2**
	slow=18						
FIA0	**FINESS Array S**	**14.15**	**129**	Pn	**Pn**	**22 40 54.5**	**+0.8**
	baz=341,slow=14						
FIA0	**FINESS Array S**	**14.15**	**129**	Pn	**Pn**	**22 40 54.5**	**+0.8**
	baz=341,slow=14						
FINES	**FINESS Array B**	**14.15**	**129**	Pn	**Pn**	**22 40 52.4**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=334,slow=9.3,SNR=4.5						
FINES				LR	LR	22 45 57.4	
	comp=Z,120nm,19.9s,baz=266,slow=36						
	comp=Z,1.3nm,0.8s						
VRAC	**Vranov**	**24.05**	**158**	LR	LR	22 52 18.2	
	comp=Z,26nm,19.4s,baz=260,slow=37						
GERES	**GERESS Array B**	**24.21**	**162**	LR	LR	22 52 14.6	
	comp=Z,15nm,19.3s,baz=269,slow=37						
AKASG	**Malin Array Be**	**24.74**	**138**	P	**P**	**22 42 55.3**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=338,slow=9.9,SNR=1.6						
AKASG				LR	LR	22 52 09.5	
	comp=Z,69nm,19.5s,baz=356,slow=36						
	comp=Z,0.2nm,0.4s						
DAVOX	**Davos/Dischmat**	**25.98**	**169**	LR	LR	22 52 47.7	
	comp=Z,65nm,18.2s,baz=8.0,slow=35						
ARU	**Arti**	**27.45**	**96**	LR	LR	22 53 29.2	
	comp=Z,48nm,18.6s,baz=246,slow=35						
MLR	**Muntele Rosu**	**29.13**	**146**	LR	LR	22 55 02.0	
	comp=Z,85nm,20.4s,baz=41,slow=36						
AKTO	**Aktyubinsk**	**32.48**	**102**	LR	LR	22 57 24.1	
	comp=Z,53nm,19.4s,baz=32,slow=37						
KBZ	**Khabaz**	**34.43**	**125**	LR	LR	22 58 33.7	
	comp=Z,58nm,19.0s,baz=244,slow=37						
GNI	**Garni**	**38.26**	**124**	LR	LR	23 00 57.1	
	comp=Z,47nm,18.3s,baz=212,slow=37						
YKA	**Yellowknife Ar**	**38.83**	**319**	P	**P**	**22 44 59.4**	**+1.4**
	comp=Z,0.1nm,0.4s,baz=37,slow=11,SNR=2.4						
	comp=Z,0.1nm,0.4s						

NEIC ***08*** *22:37:45.2±1.5, 17°.3N±0°.2×145°.6E±0°.2, h441^{km}±12^{km}, mb3.8/10, Error ellipse: s-maj=31.0km s-min=8.4km az=138.0*
IDC ***08*** *22:37:47.0±2.1, 17°.33N×145°.59E, h468^{km}±27^{km}, mb3.1/7, mbtmp3.9/8, Error ellipse: s-maj=32.0km s-min=25.5km az=108.0*
ISC 08 22:37:45.6±0.6**, 17°.33N**±0°.09×**145°.5E**±0°.2**, h450**^{km}**, n23, σ1ˢ.00**/27**, mb3.7**/12**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.76**	**189**	P	**P**	**22 39 01.7**	**+2.9**
	26nm,0.3s,baz=138,slow=17,SNR=1.7						
GUMO				S	**S**	**22 39 58.4**	**+0.2**
	40nm,0.3s,baz=190,slow=23,SNR=6.0						
GUMO	**Guam**	**3.76**	**189**	P	**P**	**22 38 57.4**	**-1.5**
GUMO				S	**S**	**22 39 57.9**	**-0.4**
WB0	**Warramunga Arr**	**38.44**	**197**	P	**P**	**22 44 26.9**	**-0.6**
WB0				IAmb	IAmb	22 44 27.4	
	comp=Z,4.0nm,1.2s						
WRA	**Warramunga Arr**	**38.62**	**197**	P	**P**	**22 44 28.7**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=18,slow=8.8,SNR=2.7						
	comp=Z,0.5nm,0.8s						
MKAR	**Makanchi Array**	**59.28**	**314**	P	**P**	**22 47 04.1**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=94,slow=7.8,SNR=5.3						
	comp=Z,0.5nm,0.6s						
MKAR	**Makanchi Array**	**59.28**	**314**	P	**P**	**22 47 03.4**	**+0.7**
MKAR				PcP	**PcP**	**22 47 44.1**	**-1.3**
MAKZ	**Makanchi**	**59.49**	**314**	P	**P**	**22 47 05.1**	**+0.9**
KURK	**Kurchatov**	**62.17**	**319**	P	**P**	**22 47 21.9**	**+0.1**
KURK				IAmb	IAmb	22 47 38.8	
	comp=Z,2.3nm,1.0s						
PPLA	**Purkeypile**	**62.20**	**27**	P	**P**	**22 47 21.5**	**-0.4**
SKT	**Skwentna**	**62.23**	**28**	P	**P**	**22 47 21.4**	**-0.5**
CAST	**Castle Rocks**	**62.40**	**27**	P	**P**	**22 47 23.4**	**+0.3**
CAST				IAmb	IAmb	22 47 28.4	
	comp=Z,7.5nm,1.5s						
ILAR	**Eielson Array**	**64.95**	**26**	P	**P**	**22 47 38.6**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=247,slow=5.8,SNR=14						
	comp=Z,0.6nm,0.4s						
BMAR	**Burnt Mountain**	**66.44**	**23**	P	**P**	**22 47 50.1**	**+1.3**
BMAR				PcP	**PcP**	**22 48 15.5**	**+1.1**
BRVK	**Borovoye**	**67.48**	**321**	P	**P**	**22 47 55.7**	**+0.3**
BRVK				IAmb	IAmb	22 48 10.8	
	comp=Z,2.1nm,0.8s						
KKAR	**Karatay Array**	**67.50**	**310**	P	**P**	**22 47 56.4**	**+0.6**
M31M	**Drury Creek, Y**	**70.22**	**29**	P	**P**	**22 48 12.4**	**+0.5**
M31M				IAmb	IAmb	22 48 26.6	
	comp=Z,3.5nm,1.3s						
ABKAR	**Akbulak array**	**74.21**	**317**	P	**P**	**22 48 34.9**	**-0.5**
YKA	**Yellowknife Ar**	**79.28**	**28**	P	**P**	**22 49 02.8**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=285,slow=5.2,SNR=9.5						
	comp=Z,0.9nm,0.8s						
ARCES	**ARCESS Array B**	**83.74**	**342**	P	**P**	**22 49 25.1**	**-0.8**
	comp=Z,3.2nm,0.9s,baz=81,slow=7.5,SNR=5.3						
	comp=Z,3.2nm,0.9s						
ARCES	**ARCESS Array B**	**83.74**	**342**	P	**P**	**22 49 25.6**	**-0.2**
ARCES				IAmb	IAmb	22 49 31.8	
	comp=Z,4.4nm,1.1s						
NVAR	**Mina Array Bea**	**84.13**	**52**	P	**P**	**22 49 29.0**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=263,slow=6.8,SNR=4.3						
	comp=Z,0.5nm,0.6s						
FINES	**FINESS Array B**	**88.05**	**335**	P	**P**	**22 49 45.2**	**-1.5**
	comp=Z,0.5nm,0.4s,baz=50,slow=3.0,SNR=5.9						
	comp=Z,0.5nm,0.4s						
LPAZ	**La Paz**	**147.81**	**93**	PKPbc	**PKPbc**	**22 56 40.4**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=225,slow=12,SNR=2.5						

KRNET ***08*** *22:40:54.6±0.1, 40°.29N×76°.40E, h18^{km}, mb3.5*
SOME ***08*** *22:40:55.0, 40°.32N×76°.33E, h10^{km}*
NNC ***08*** *22:40:58.0±1.1, 40°.40N×76°.39E, h0^{km}, mb4.0, mpv3.8, Error ellipse: s-maj=8.0km s-min=5.4km az=160.0*
ISC 08 22:40:58.3±1.3**, 40°.36N**±0°.06×**76°.36E**±0°.03**, h10**^{km}**, n78, σ1ˢ.28**/98**, 21C-25D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRN	**Naryn**	**1.11**	**346**	⇓*i*P	**Pg**	**22 41 17.0**	**-2.7**
	baz=44						
NRN				⇓*i*S	**Sg**	**22 41 33.7**	**-0.5**
	baz=44						
KDJ	**Kajisay**	**1.88**	**19**	⇑*i*P	**Pn**	**22 41 30.5**	**-0.2**
	baz=18						
KDJ				⇑*i*S	**Sb**	**22 41 56.7**	**+0.3**
	baz=18						
ULHL	**Ulahol**	**1.89**	**357**	P	**Pn**	**22 41 31.1**	**+0.3**
	SNR=13						
ULHL	**Ulahol**	**1.89**	**357**	⇓*i*P	**Pn**	**22 41 31.0**	**+0.1**
	baz=57						
ULHL				⇓*i*S	**Sb**	**22 41 57.5**	**+0.7**
	baz=57						
ARLS	**Aral**	**2.15**	**315**	⇑*i*P	**Pn**	**22 41 34.7**	**+0.3**
	baz=16						
ARLS				⇑*i*S	**Sb**	**22 42 03.9**	**-0.4**
	baz=16						
BOOM	**Boomskoye usch**	**2.15**	**352**	⇑*i*P	**Pn**	**22 41 34.8**	**+0.3**
	baz=51						
BOOM				⇑*i*S	**Sb**	**22 42 04.4**	**0.0**
	baz=51						
UCH	**Uchtor**	**2.33**	**324**	P	**Pb**	**22 41 39.4**	**-1.3**
	SNR=38						
UCH	**Uchtor**	**2.33**	**324**	⇓*e*P	**Pn**	**22 41 37.5**	**+0.4**
	baz=24						
UCH				⇓*i*S	**Sb**	**22 42 08.9**	**-0.8**
	baz=24						
KBK	**Karagaybulak**	**2.53**	**336**	P	**Pb**	**22 41 43.1**	**-0.8**
	SNR=80						
KBK	**Karagaybulak**	**2.53**	**336**	⇓*i*P	**Pn**	**22 41 40.3**	**+0.6**
	baz=36						
KBK				⇓*i*S	**Sb**	**22 42 13.3**	**-1.9**
	baz=36						
ANVS	**Anan'yevo**	**2.62**	**22**	⇓*e*P	**Pn**	**22 41 41.1**	**+0.3**
	baz=20						
ANVS				⇓*i*S	**Sn**	**22 42 14.9**	**+2.2**
	baz=20						
PRZ	**Przheval'sk**	**2.62**	**35**	⇑*e*P	**Pn**	**22 41 41.0**	**+0.1**
	baz=34						
PRZ				⇑*i*S	**Sb**	**22 42 15.0**	**-2.8**
	baz=34						
TKM2	**Tokmak 2**	**2.62**	**348**	P	**Pn**	**22 41 42.7**	**+1.7**
	SNR=45						
TKM2	**Tokmak 2**	**2.62**	**348**	⇓Pg	**Pn**	**22 41 42.7**	**+1.7**
	22nm,0.3s						
TKM2				⇓Lg	Lg	22 42 21.2	
	16nm,0.3s						
TKM2	**Tokmak 2**	**2.62**	**348**	⇑*i*P	**Pn**	**22 41 41.5**	**+0.5**
	baz=47						
TKM2				⇑*i*S	**Sb**	**22 42 15.7**	**-2.3**
	baz=47						
AAK	**Ala-Archa**	**2.67**	**329**	P	**Pn**	**22 41 43.3**	**+1.7**
	SNR=30						
AAK	**Ala-Archa**	**2.67**	**329**	⇓*e*P	**Pn**	**22 41 42.2**	**+0.6**
	baz=29						
AAK				⇓*i*S	**Sb**	**22 42 16.8**	**-2.6**
	baz=29						
AML	**Almayashu**	**2.68**	**312**	P	**Pn**	**22 41 42.6**	**+0.7**
	SNR=12						
AML	**Almayashu**	**2.68**	**312**	⇓Pn	**Pn**	**22 41 42.5**	**+0.6**
	0.3nm,0.3s						
AML				⇓Pg	**Pg**	**22 41 51.2**	**+1.4**
	0.8nm,0.4s						
AML				⇑Lg	Lg	22 42 23.1	
	5.9nm,0.6s						
AML	**Almayashu**	**2.68**	**312**	⇑*i*P	**Pn**	**22 41 42.2**	**+0.3**
	baz=13						
AML				⇑*i*S	**Sn**	**22 42 16.8**	**+2.2**
	baz=13						
IZV	**Izvestkoviy**	**2.68**	**4**	Pg	**Pb**	**22 41 46.7**	**+0.2**
	19nm,1.1s						
IZV				Lg	Lg	22 42 23.9	
	54nm,0.3s						
IZV	**Izvestkoviy**	**2.68**	**4**	*e*Pg	**Pb**	**22 41 46.7**	**+0.2**
	19nm,1.1s						
IZV				*e*Lg	Lg	22 42 23.9	
	54nm,0.3s						
KST	**Kastek**	**2.70**	**354**	Pg	**Pb**	**22 41 46.5**	**-0.3**
	29nm,0.3s						
KST				Lg	Lg	22 42 23.4	
	40nm,0.3s						
KST	**Kastek**	**2.70**	**354**	*e*Pg	**Pb**	**22 41 46.5**	**-0.3**
	29nm,0.3s						
KST				*e*Lg	Lg	22 42 23.4	
	40nm,0.3s						
TNSS	**Tian-Shan**	**2.71**	**9**	Pg	**Pb**	**22 41 46.5**	**-0.7**
	30nm,0.4s						
TNSS				Lg	Lg	22 42 23.4	
	17nm,0.4s						
TNSS	**Tian-Shan**	**2.71**	**9**	*e*Pg	**Pb**	**22 41 46.5**	**-0.7**
	30nm,0.4s						
TNSS				*e*Lg	Lg	22 42 23.4	
	17nm,0.4s						
OHH	**Osh**	**2.73**	**275**	⇓*i*P	**Pn**	**22 41 42.3**	**0.0**
	baz=76						
OHH				⇓*i*S	**Sn**	**22 42 17.2**	**+1.7**
	baz=76						
MTBS	**Maitube**	**2.77**	**1**	Pg	**Pb**	**22 41 47.5**	**-0.5**
	24nm,0.2s						
MTBS				Lg	Lg	22 42 25.3	
	40nm,0.4s						
MTBS	**Maitube**	**2.77**	**1**	*e*Pg	**Pb**	**22 41 47.5**	**-0.5**
	24nm,0.2s						
MTBS				*e*Lg	Lg	22 42 25.3	
	40nm,0.4s						
FRU1	**Bishkek**	**2.77**	**333**	⇑*i*P	**Pn**	**22 41 43.4**	**+0.5**
	baz=33						
FRU1				⇑*i*S	**Sn**	**22 42 18.6**	**+2.1**
	baz=33						
MDOK	**Medeo**	**2.85**	**10**	Pg	**Pb**	**22 41 48.9**	**-0.5**
	33nm,0.8s						
MDOK				Pg	**Pg**	**22 41 49.2**	**-3.7**
	27nm,0.4s						
MDOK				Lg	Lg	22 42 27.3	
	55nm,0.4s						
MDOK				Lg	Lg	22 42 28.0	
	40nm,0.6s						
MDOK	**Medeo**	**2.85**	**10**	*e*Pg	**Pb**	**22 41 48.9**	**-0.5**
	33nm,0.8s						
MDOK				*e*Lg	Lg	22 42 27.3	
	55nm,0.4s						
AAA	**Alma-Ata**	**2.88**	**8**	Pg	**Pb**	**22 41 50.4**	**+0.6**
	22nm,0.4s						
AAA				Lg	Lg	22 42 30.2	
	55nm,0.5s						
AAA	**Alma-Ata**	**2.88**	**8**	*e*Pg	**Pb**	**22 41 50.4**	**+0.6**
	22nm,0.4s						
AAA				*e*Lg	Lg	22 42 30.2	
	55nm,0.5s						
KNDC	**Almaty**	**2.89**	**9**	⇑Pg	**Pb**	**22 41 50.9**	**+0.8**
	43nm,0.5s						
KNDC				⇓Lg	Lg	22 42 29.7	
	85nm,0.5s						
CHMS	**Chumysh**	**2.90**	**336**	P	**Pn**	**22 41 46.8**	**+2.2**
	SNR=14						
DGS	**Degeres**	**2.92**	**352**	Pg	**Pb**	**22 41 50.5**	**0.0**
	27nm,0.5s						
DGS				Lg	Lg	22 42 30.1	
	48nm,0.6s						
DGS	**Degeres**	**2.92**	**352**	*e*Pg	**Pb**	**22 41 50.5**	**0.0**
	27nm,0.5s						
DGS				*e*Lg	Lg	22 42 30.1	
	48nm,0.6s						
KOTS	**Kotyrbulak**	**2.93**	**11**	Pg	**Pb**	**22 41 50.8**	**0.0**
	45nm,0.3s						
KOTS				Lg	Lg	22 42 30.7	
	76nm,0.5s						
KOTS	**Kotyrbulak**	**2.93**	**11**	*e*Pg	**Pb**	**22 41 50.8**	**0.0**
	45nm,0.3s						
KOTS				*e*Lg	Lg	22 42 30.7	
	76nm,0.5s						
EKS2	**Erkin-Say**	**3.01**	**321**	P	**Pn**	**22 41 48.3**	**+2.1**
	SNR=9.2						
SATY	**Saty**	**3.10**	**29**	Pg	**Pb**	**22 41 53.8**	**+0.1**
	36nm,0.3s						
SATY				Lg	Lg	22 42 35.9	
	49nm,0.6s						
SATY	**Saty**	**3.10**	**29**	*e*Pg	**Pb**	**22 41 53.8**	**+0.1**
	36nm,0.3s						
SATY				*e*Lg	Lg	22 42 36.0	
	49nm,0.6s						
USP	**Ospenovka**	**3.22**	**335**	P	**Pn**	**22 41 50.7**	**+1.6**
	SNR=6.3						
USP	**Ospenovka**	**3.22**	**335**	⇑*i*P	**Pn**	**22 41 49.7**	**+0.7**
	baz=35						
USP				⇑*i*S	**Sn**	**22 42 29.5**	**+2.0**
	baz=35						
MRKS	**Merke**	**3.35**	**316**	Pg	**Pb**	**22 41 57.7**	**-0.2**
	3.4nm,0.5s						
MRKS				Lg	Lg	22 42 42.4	
	42nm,0.3s						
MRKS	**Merke**	**3.35**	**316**	*e*Pg	**Pb**	**22 41 57.7**	**-0.2**
	3.4nm,0.5s						
MRKS				*e*Lg	Lg	22 42 42.4	
	42nm,0.3s						
SGDS	**Sogindy**	**3.35**	**338**	Pg	**Pb**	**22 41 57.5**	**-0.4**
	14nm,0.5s						
SGDS				Lg	Lg	22 42 42.0	
	27nm,0.8s						
KTBS	**Karatobe**	**3.36**	**4**	Pg	**Pb**	**22 41 58.1**	**0.0**
	15nm,0.4s						
KTBS				Lg	Lg	22 42 43.3	
	56nm,0.3s						
KTBS	**Karatobe**	**3.36**	**4**	*e*Pg	**Pb**	**22 41 58.1**	**0.0**
	15nm,0.4s						
KTBS				*e*Lg	Lg	22 42 43.3	
	56nm,0.3s						
KRBS	**Karabastau**	**3.38**	**352**	Pg	**Pb**	**22 41 58.6**	**+0.3**
	8.7nm,0.5s						
KRBS				Lg	Lg	22 42 44.3	
	20nm,0.4s						
KRBS	**Karabastau**	**3.38**	**352**	*e*Pg	**Pb**	**22 41 58.6**	**+0.3**
	8.7nm,0.5s						
KRBS				*e*Lg	Lg	22 42 44.3	
	20nm,0.4s						
KURS	**Kuram**	**3.41**	**23**	Pg	**Pb**	**22 41 58.7**	**-0.1**
	20nm,0.1s						
KURS				Lg	Lg	22 42 43.9	
	18nm,0.5s						
KURS	**Kuram**	**3.41**	**23**	*e*Pg	**Pb**	**22 41 58.7**	**-0.1**
	20nm,0.1s						
KURS				*e*Lg	Lg	22 42 43.9	
	18nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	**3.43**	**35**	Pg	**Pb**	**22 41 59.1**	**-0.1**
	8.7nm,0.0s						
UZB				Lg	Lg	22 42 44.7	
	23nm,0.0s						
UZB	**Uzynbulak**	**3.43**	**35**	*e*Pg	**Pb**	**22 41 59.1**	**-0.1**
	8.7nm,0.0s						
UZB				*e*Lg	Lg	22 42 44.7	
	23nm,0.0s						
CHKK	**Chushkaly**	**3.53**	**7**	Pg	**Pb**	**22 42 01.2**	**+0.4**
	14nm,1.1s						
CHKK				Lg	Lg	22 42 48.3	
	29nm,0.2s						
CHKK	**Chushkaly**	**3.53**	**7**	*e*Pg	**Pb**	**22 42 01.2**	**+0.4**
	14nm,1.1s						
CHKK				*e*Lg	Lg	22 42 48.3	
	29nm,0.2s						
KUU	**Kurty**	**3.53**	**360**	Pg	**Pb**	**22 42 01.1**	**+0.2**
	18nm,0.1s						
KUU				Lg	Lg	22 42 48.3	
	33nm,0.7s						
KUU	**Kurty**	**3.53**	**360**	*e*Pg	**Pb**	**22 42 01.1**	**+0.2**
	18nm,0.1s						
KUU				*e*Lg	Lg	22 42 48.3	
	33nm,0.7s						
KPKS	**Kokpek**	**3.56**	**28**	Pg	**Pb**	**22 42 01.3**	**-0.1**
	8.2nm,0.7s						
KPKS				Lg	Lg	22 42 48.7	
	51nm,0.5s						
KPKS	**Kokpek**	**3.56**	**28**	*e*Pg	**Pb**	**22 42 01.3**	**-0.1**
	8.2nm,0.7s						
KPKS				*e*Lg	Lg	22 42 48.6	
	51nm,0.5s						
MNAS	**Manas**	**3.60**	**308**	⇓*i*P	**Pn**	**22 41 54.8**	**+0.5**
	baz=8.0						
MNAS				⇓*i*S	**Sn**	**22 42 38.9**	**+2.0**
	baz=8.0						
DRK	**Karamyk**	**3.62**	**257**	⇑*i*P	**Pn**	**22 41 54.1**	**-0.6**
	baz=59						
DRK				⇑*i*S	**Sn**	**22 42 37.9**	**+0.4**
	baz=59						
ARK	**Arkit**	**3.62**	**295**	⇓*i*P	**Pn**	**22 41 54.4**	**-0.2**
	baz=96						
ARK				⇓*i*S	**Sn**	**22 42 38.9**	**+1.4**
	baz=96						
SHLS	**Shalkode**	**3.63**	**39**	Pg	**Pg**	**22 42 07.2**	**-0.8**
	13nm,0.5s						
SHLS				Lg	Lg	22 42 59.0	
	30nm,0.3s						
SHLS	**Shalkode**	**3.63**	**39**	*e*Pg	**Pg**	**22 42 07.2**	**-0.8**
	13nm,0.5s						
SHLS				*e*Lg	Lg	22 42 59.0	
	30nm,0.3s						
PDGK	**Podgornoye**	**3.78**	**37**	Pg	**Pb**	**22 42 05.8**	**+0.6**
	3.8nm,0.3s						
PDGK				Lg	Lg	22 42 56.2	
	19nm,0.3s						
PDGK	**Podgornoye**	**3.78**	**37**	⇑Pg	**Pg**	**22 42 10.1**	**-0.6**
	11nm,0.5s						
PDGK				⇓Lg	Lg	22 42 56.3	
	34nm,0.8s						
BLB	**Baldybastay**	**4.05**	**22**	Pg	**Pb**	**22 42 10.3**	**+0.4**
	12nm,0.5s						
BLB				Lg	Lg	22 43 04.2	
	40nm,0.3s						
DJR	**Jarkent**	**4.72**	**31**	Pg	**Pb**	**22 42 22.8**	**+1.7**
	1.4nm,0.0s						
DJR	**Jarkent**	**4.72**	**31**	*e*Pg	**Pb**	**22 42 22.8**	**+1.7**
	1.4nm,0.0s						
DJR				*e*Lg	Lg	22 43 25.9	
	8.8nm,0.5s						
TDK	**Taldyqorghan**	**4.88**	**17**	Pg	**Pb**	**22 42 27.1**	**+3.2**
	13nm,0.6s						
TDK	**Taldyqorghan**	**4.88**	**17**	*e*Pg	**Pb**	**22 42 27.1**	**+3.2**
	13nm,0.6s						
TDK				*e*Lg	Lg	22 43 32.9	
	28nm,0.4s						
BTLS	**Baital**	**4.98**	**341**	*e*Pg	**Pb**	**22 42 28.0**	**+2.4**
	2.7nm,0.9s						
BTLS				*e*Lg	Lg	22 43 34.3	
	17nm,0.5s						
IUG	**Iuzhnay**	**5.09**	**293**	Pg	**Pb**	**22 42 29.2**	**+1.6**
	5.7nm,0.1s						
IUG	**Iuzhnay**	**5.09**	**293**	*e*Pg	**Pb**	**22 42 29.2**	**+1.6**
	5.7nm,0.1s						
IUG				*e*Lg	Lg	22 43 36.8	
	21nm,0.2s						
KK31	**Karatay Array**	**5.17**	**304**	Pg	**Pg**	**22 42 34.1**	**-3.1**
	2.1nm,0.6s,baz=120,slow=16,SNR=16						
KK31				⇓Lg	Lg	22 43 38.2	
	6.9nm,0.8s,baz=122,slow=27,SNR=5.8						

JMA ***08*** *22:47:54.0±0.2, 40.°7N±0.°5×14°3E±°, h16^{km}, MV3.7/31, E OFF AOMORI PREF*

NIED ***08*** *22:47:54.0, 40.°74N×143.°31E, h16^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.07; $M_{\theta\theta}$-0.39; $M_{\phi\phi}$-2.69; $M_{r\theta}$-0.50; $M_{\theta\phi}$-1.61; $M_{\phi r}$1.15; Fault plane solution: $M_0$3.55000×10^{14} NP1:ϕ_s10.00000°, δ54.00000°, λ68.00000°. NP2:ϕ_s225.00000°, δ41.00000°, λ117.00000°.*

IDC ***08*** *22:47:58.5±3.0, 40.°90N×143.°05E, h45^{km}±22^{km}, mb3.4/8, mbtmp3.6/11, ML2.8/3, MS2.8/1 Error ellipse: s-maj=33.2km s-min=17.7km az=116.0*

ISC 08 22:47:55.6±2.0**, 40.°81N**±0.°05×**143.°21E**±0.°08**, h28**^{km}±13^{km}**, n30, σ0.ˢ81**/32**, mb3.7**/8**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**1.21**	**358**	*e*P	**Pn**	**22 48 17.2**	**+0.5**
JEM				S	**Sb**	**22 48 33.8**	**+0.7**
JKEN	**Kujiedanarisaw**	**1.29**	**243**	*e*P	**Pn**	**22 48 17.4**	**-0.3**
JTH	**Tanohata**	**1.34**	**230**	P	**Pn**	**22 48 18.8**	**+0.3**
JTH				*e*S	**Sb**	**22 48 36.9**	**0.0**
JANG	**Nango**	**1.36**	**252**	*e*P	**Pn**	**22 48 19.1**	**+0.3**
JANG				S	**Sb**	**22 48 37.4**	**+0.1**
JARK	**Aomorirokkasho**	**1.41**	**279**	*e*P	**Pn**	**22 48 20.3**	**+0.9**
JNBK	**Urakawa-nobuka**	**1.51**	**347**	*e*P	**Pn**	**22 48 21.7**	**+0.9**
JNBK				*e*S	**Sb**	**22 48 42.6**	**+0.9**
JTM	**Tenmabayashi**	**1.62**	**270**	*e*P	**Pb**	**22 48 24.0**	**-0.9**
JTM				*e*S	**Sb**	**22 48 45.1**	**+0.2**
JOT	**Ohata**	**1.73**	**290**	P	**Pn**	**22 48 25.3**	**+1.4**
JOT				*e*S	**Sb**	**22 48 48.4**	**+0.4**
JCH	**Churui**	**1.81**	**4**	P	**Pn**	**22 48 25.1**	**+0.2**
JCH				S	**Sn**	**22 48 47.8**	**+0.8**
JOM	**Ohasama**	**1.98**	**228**	P	**Pn**	**22 48 28.5**	**+1.2**
JMK	**Ichinoseki**	**2.40**	**220**	P	**Pn**	**22 48 34.0**	**+0.9**
JAR	**Ashorobuto**	**2.52**	**9**	P	**Pn**	**22 48 34.4**	**-0.4**
JAR				*e*S	**Sn**	**22 49 04.3**	**-0.3**
ASAJ	**Asahikawa**	**3.34**	**352**	P	**Pn**	**22 48 46.8**	**+0.8**
	1.0nm,0.3s,baz=188,slow=32,SNR=2.0						
ASAJ				S	**Sn**	**22 49 24.4**	**-0.4**
	16nm,0.7s,baz=215,slow=28,SNR=5.7						
	2.1nm,0.3s						
MJAR	**Matsushiro Arr**	**5.78**	**224**	P	**Pn**	**22 49 21.5**	**+1.9**
	0.2nm,0.3s,baz=41,slow=12,SNR=13						
	2.9nm,0.5s						
USRK	**Ussuriysk Ar.**	**8.95**	**296**	P	**Pn**	**22 50 02.7**	**-0.3**
	0.1nm,0.3s,baz=92,slow=16,SNR=1.8						
	2.2nm,0.7s						
KLR	**Kul'dur**	**11.68**	**320**	LR	LR	22 55 29.5	
	comp=Z,50nm,19.7s,baz=208,slow=39						
SONM	**Songino Array**	**27.06**	**297**	P	**P**	**22 53 35.8**	**+0.1**
	0.3nm,0.5s,baz=84,slow=7.8,SNR=2.8						
	0.3nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**29.16**	**129**	T	T	23 24 19.3	
	baz=322,slow=75,SNR=36						
H11N1	**WAKE ISLAND Hy**	**29.17**	**129**	T	T	23 24 18.3	
	baz=322,slow=75,SNR=27						
H11N3	**WAKE ISLAND Hy**	**29.18**	**129**	T	T	23 24 17.7	
	baz=322,slow=75,SNR=24						
H11S1	**WAKE ISLAND Hy**	**30.00**	**131**	T	T	23 25 27.0	
	baz=323,slow=76,SNR=40						
H11S3	**WAKE ISLAND Hy**	**30.00**	**131**	T	T	23 25 25.8	
	baz=323,slow=76,SNR=26						
H11S2	**WAKE ISLAND Hy**	**30.02**	**131**	T	T	23 25 26.3	
	baz=323,slow=76,SNR=29						
ZALV	**Zalesovo Beam**	**40.51**	**309**	P	**P**	**22 55 30.2**	**-1.7**
	0.7nm,0.6s,baz=82,slow=11,SNR=4.0						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**43.41**	**299**	P	**P**	**22 55 55.5**	**-0.1**
	0.5nm,0.9s,baz=89,slow=7.3,SNR=4.8						
	0.5nm,0.9s						
ILAR	**Eielson Array**	**45.58**	**34**	P	**P**	**22 56 13.3**	**+0.5**
	0.3nm,0.8s,baz=265,slow=7.1,SNR=2.5						
	0.3nm,0.8s						
INK	**Inuvik**	**50.40**	**29**	P	**P**	**22 56 50.1**	**+0.1**
	0.6nm,0.6s,baz=292,slow=5.2,SNR=2.0						
	0.6nm,0.6s						
FINES	**FINESS Array B**	**66.14**	**332**	P	**P**	**22 58 40.2**	**+0.3**
	2.5nm,1.0s,baz=68,slow=7.9,SNR=1.9						
	2.5nm,1.0s						
NOA	**NORSAR Array B**	**71.25**	**338**	P	**P**	**22 59 12.5**	**+0.6**
	1.0nm,0.9s,baz=28,slow=8.4,SNR=3.3						
	1.0nm,0.9s						
AKASG	**Malin Array Be**	**72.17**	**322**	P	**P**	**22 59 17.0**	**-0.6**
	0.6nm,0.5s,baz=46,slow=6.1,SNR=5.0						
	0.6nm,0.5s						

IDC ***08*** *22:48:54.7±0.7, 31.°62N×141.°91E, h0^{km}, mb4.0/18, mbtmp4.0/24, ML3.6/5, MS3.1/4, Error ellipse: s-maj=21.1km s-min=16.2km az=56.0*

NEIC ***08*** *22:48:58.2±1.2, 31.°67N±0.°07×141.°9E±0.°1, h18^{km}±4^{km}, mb4.4/18, Error ellipse: s-maj=14.8km s-min=8.6km az=67.0*

ISC 08 22:48:59.3±0.6**, 31.°63N**±0.°07×**141.°81E**±0.°08**, h29**^{km}**, n57, σ0.ˢ78**/60**, mb4.1**/28**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.24**	**312**	Pn	**Pn**	**22 49 33.5**	**-1.0**
JHJ2				Sn	**Sn**	**22 50 00.6**	**-0.5**
JHJ	**Hachijo jima 2**	**2.27**	**311**	Pn	**Pn**	**22 49 33.9**	**-1.0**
	42nm,0.3s,baz=262,slow=23,SNR=14						
JHJ				Sn	**Sn**	**22 50 00.8**	**-1.0**
	47nm,0.3s,baz=65,slow=22,SNR=4.1						
	83nm,0.3s						
JCJ	**Chichijima**	**4.53**	**176**	Pn	**Pn**	**22 50 06.1**	**+0.1**
	21nm,0.3s,baz=276,slow=19,SNR=2.0						
	40nm,0.3s						
JCJ	**Chichijima**	**4.53**	**176**	Pn	**Pn**	**22 50 05.0**	**-1.0**
MJAR	**Matsushiro Arr**	**5.74**	**330**	Pn	**Pn**	**22 50 22.1**	**-0.4**
	0.5nm,0.3s,baz=160,slow=13,SNR=12						
MJAR				Sn	**Sn**	**22 51 28.9**	**+1.5**
	0.1nm,0.3s,baz=153,slow=8.2,SNR=1.5						
	3.2nm,0.3s						
MAJO	**Matsushiro**	**5.74**	**330**	Pn	**Pn**	**22 50 22.3**	**-0.2**
JMM	**Marumori**	**6.27**	**353**	Pn	**Pn**	**22 50 28.1**	**-1.7**
JSD	**Sado**	**7.02**	**336**	Pn	**Pn**	**22 50 39.2**	**-1.0**
JTM	**Tenmabayashi**	**9.15**	**356**	Pn	**Pn**	**22 51 07.6**	**-1.7**
ERM	**Erimo**	**10.42**	**6**	Pn	**Pn**	**22 51 25.9**	**-0.7**
KSRS	**Korea Array**	**12.83**	**301**	Pn	**Pn**	**22 52 00.6**	**+0.8**
	0.2nm,0.3s,baz=112,slow=14,SNR=1.8						
KSRS				LR	LR	22 56 54.4	
	comp=Z,58nm,18.7s,baz=115,slow=37						
	0.8nm,0.6s						
USRK	**Ussuriysk Ar.**	**14.73**	**331**	Pn	**Pn**	**22 52 24.7**	**-0.9**
	2.8nm,0.8s,baz=133,slow=14,SNR=3.2						
USRK				LR	LR	22 58 16.8	
	comp=Z,98nm,18.3s,baz=108,slow=38						
KLR	**Kul'dur**	**19.14**	**340**	P	**P**	**22 53 19.7**	**-0.4**
	0.2nm,0.3s,baz=133,slow=10,SNR=7.9						
	2.9nm,0.9s						
YULB	**Yu-li**	**19.94**	**251**	P	**P**	**22 53 29.1**	**+0.2**
YULB				IAmb	IAmb	22 53 46.6	
	comp=Z,29nm,1.2s						
SSLB	**Suanglung**	**20.03**	**252**		**P**	**22 53 30.5**	**+0.5**
SSLB				IAmb	IAmb	22 53 43.3	
	comp=Z,23nm,1.1s						
HEH	**HeiHe**	**21.48**	**334**	*e*P	**P**	**22 53 45.0**	**-0.4**
HEH				pmax	pmax		
	comp=Z,4.0nm,1.3s						
HEH				pmax	pmax		
	comp=Z,73nm,5.5s						
XAN	**Xi'an**	**27.68**	**284**	P	**P**	**22 54 44.2**	**-0.7**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ULN	**Ulaanbaatar**	**30.93**	**312**	P	**P**	**22 55 13.7**	**0.0**
ULN				IAmb	IAmb	22 55 17.9	
	comp=Z,3.9nm,0.8s						
SONM	**Songino Array**	**31.35**	**311**	P	**P**	**22 55 18.6**	**+1.3**
	comp=Z,1.8nm,0.7s,baz=122,slow=9.4,SNR=14						
	comp=Z,1.8nm,0.7s						
SONM	**Songino Array**	**31.35**	**311**	P	**P**	**22 55 18.2**	**+0.8**
GOMU	**GeErMu**	**38.97**	**290**	P	**P**	**22 56 23.4**	**0.0**
GOMU				pP	pP	22 56 27.0	-3.5
GOMU				sP	sP	22 56 28.8	-4.1
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,55nm,7.8s						
PHRA	**Phrae**	**39.64**	**261**	P	**P**	**22 56 28.1**	**-0.6**
CMAR	**Chiang Mai Arr**	**40.74**	**262**	LR	LR	23 14 16.1	
	comp=Z,16nm,19.5s,baz=75,slow=37						
ZALV	**Zalesovo Beam**	**45.92**	**316**	P	**P**	**22 57 19.4**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=110,slow=7.7,SNR=4.9						
ZALV				LR	LR	23 18 43.1	
	comp=Z,21nm,18.0s,baz=82,slow=39						
	comp=Z,0.7nm,0.4s						
MK31	**Makanchi Array**	**47.43**	**306**	P	**P**	**22 57 31.9**	**+0.7**
MKAR	**Makanchi Array**	**47.43**	**306**	P	**P**	**22 57 32.0**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=87,slow=9.3,SNR=21						
MKAR				PcP	**PcP**	**22 59 00.3**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=101,slow=6.0,SNR=1.6						
	comp=Z,1.3nm,0.6s						
MKAR	**Makanchi Array**	**47.43**	**306**	P	**P**	**22 57 31.2**	**0.0**
MAKZ	**Makanchi**	**47.64**	**307**	P	**P**	**22 57 33.4**	**+0.5**
MAKZ				IAmb	IAmb	22 57 34.7	
	comp=Z,1.7nm,0.6s						
NRIK	**Noril'sk**	**48.33**	**337**	P	**P**	**22 57 37.9**	**+0.1**
	comp=Z,1.7nm,0.5s,baz=163,slow=11,SNR=3.6						
	comp=Z,1.7nm,0.5s						
NRIK	**Noril'sk**	**48.33**	**337**	P	**P**	**22 57 37.7**	**-0.1**
NRIK				IAmb	IAmb	22 57 41.0	
	comp=Z,7.2nm,1.3s						
KURK	**Kurchatov**	**49.65**	**312**	P	**P**	**22 57 48.2**	**+0.1**
IMAR	**Indian Mountai**	**51.18**	**28**	P	**P**	**22 57 59.0**	**-0.5**
SKT	**Skwentna**	**51.71**	**34**	P	**P**	**22 58 03.8**	**+0.3**
SKT				IAmb	IAmb	22 58 16.4	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**51.78**	**189**	P	**P**	**22 58 03.2**	**-1.3**
	comp=Z,3.7nm,0.7s,baz=5.6,slow=7.5,SNR=2.4						
	comp=Z,3.7nm,0.7s						
ILAR	**Eielson Array**	**53.93**	**30**	P	**P**	**22 58 18.6**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=263,slow=6.2,SNR=5.4						
	comp=Z,0.3nm,0.6s						
PRP	**Porcupine Dome**	**54.52**	**29**	P	**P**	**22 58 24.2**	**-0.2**
BRVK	**Borovoye**	**54.60**	**315**	P	**P**	**22 58 25.4**	**+0.4**
BMAR	**Burnt Mountain**	**54.94**	**27**	P	**P**	**22 58 28.7**	**+1.4**
DOT	**Dot Lake**	**55.17**	**32**	P	**P**	**22 58 27.9**	**-1.0**
DOT				IAmb	IAmb	22 58 52.0	
	comp=Z,3.3nm,1.2s						
ASAR	**Alice Springs**	**55.51**	**189**	P	**P**	**22 58 31.6**	**-0.1**
	comp=Z,2.2nm,0.7s,baz=10,slow=5.7,SNR=1.9						
	comp=Z,2.2nm,0.7s						
KK31	**Karatay Array**	**56.24**	**303**	P	**P**	**22 58 37.3**	**+0.4**
KK31				IAmb	IAmb	22 58 38.7	
	comp=Z,4.4nm,1.0s						
KKAR	**Karatay Array**	**56.24**	**303**	P	**P**	**22 58 37.0**	**0.0**
NIL	**Nilore**	**56.77**	**292**	P	**P**	**22 58 41.3**	**+0.4**
NIL				IAmb	IAmb	22 58 43.4	
	comp=Z,6.5nm,0.9s						
CHGR	**Chuyangaron**	**58.41**	**299**	P	**P**	**22 58 52.4**	**0.0**
INK	**Inuvik**	**59.07**	**26**	P	**P**	**22 58 55.0**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=207,slow=14,SNR=1.9						
	comp=Z,0.7nm,0.7s						
ABKAR	**Akbulak array**	**61.75**	**313**	P	**P**	**22 59 15.5**	**+0.5**
ABKAR				IAmb	IAmb	22 59 16.4	
	comp=Z,2.9nm,0.7s						
ABKAR	**Akbulak array**	**61.75**	**313**	P	**P**	**22 59 15.1**	**+0.2**
GEYT	**Alibeck**	**66.82**	**301**	P	**P**	**22 59 48.5**	**0.0**
	comp=Z,1.1nm,0.6s,baz=61,slow=15,SNR=4.0						
	comp=Z,1.1nm,0.6s						
YKA	**Yellowknife Ar**	**68.33**	**29**	P	**P**	**22 59 58.1**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=297,slow=6.1,SNR=4.6						
	comp=Z,0.2nm,0.6s						
ARCES	**ARCESS Array B**	**69.17**	**340**	P	**P**	**23 00 03.4**	**+0.7**
	comp=Z,7.0nm,1.3s,baz=61,slow=9.9,SNR=3.6						
	comp=Z,7.0nm,1.3s						
FINES	**FINESS Array B**	**73.75**	**333**	P	**P**	**23 00 30.2**	**-0.2**
	comp=Z,1.8nm,0.9s,baz=100,slow=5.8,SNR=3.7						
	comp=Z,1.8nm,0.9s						
KBZ	**Khabaz**	**74.71**	**312**	P	**P**	**23 00 36.7**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=101,slow=2.2,SNR=4.5						
	comp=Z,1.7nm,0.8s						
NVAR	**Mina Array Bea**	**77.99**	**52**	P	**P**	**23 00 54.8**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=302,slow=5.2,SNR=2.4						
	comp=Z,0.3nm,0.5s						
AKASG	**Malin Array Be**	**78.79**	**323**	P	**P**	**23 00 59.2**	**0.0**
	comp=Z,0.7nm,0.4s,baz=51,slow=5.7,SNR=6.1						
	comp=Z,0.7nm,0.4s						
NOA	**NORSAR Array B**	**79.29**	**338**	P	**P**	**23 01 01.7**	**-0.2**
	comp=Z,1.5nm,1.1s,baz=55,slow=6.5,SNR=1.8						
	comp=Z,1.5nm,1.1s						
PDAR	**Pinedale Array**	**81.23**	**45**	P	**P**	**23 01 13.5**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=350,slow=4.8,SNR=2.3						
	comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**93.14**	**53**	P	**P**	**23 02 12.1**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=296,slow=1.7,SNR=8.3						
	comp=Z,0.5nm,0.7s						

DJA ***08*** *22:49:45.7±0.2, 3°S±3°×13°8E±°, h10^{km}, M4.9/12, mb4.8/12, mB5.5/7, MLv4.9/7, Mw(mB)4.9/7*

NEIC ***08*** *22:49:49.8±1.2, 3.°3S±0.°1×137.°5E±0.°1, h62^{km}±8^{km}, mb4.4/26, Error ellipse: s-maj=17.6km s-min=11.5km az=223.0*

IDC ***08*** *22:49:49.9±4.2, 3.°24S×137.°47E, h64^{km}±39^{km}, mb3.8/11, mbtmp4.2/14, ML4.3/3, MS3.4/18, Error ellipse: s-maj=35.8km s-min=14.6km az=72.0*

ISC 08 22:49:47.9±0.5**, 3.°31S**±0.°05×**137.°55E**±0.°05**, h50**^{km}**, n71, σ1.ˢ69**/67**, mb4.2**/23**, MS3.5**/13**, 1C, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**1.75**	**41**	P	**Pn**	**22 50 14.1**	**-1.7**
SRPI	**Serui, Papua**	**1.94**	**317**	P	**Pn**	**22 50 19.0**	**+0.6**
SRPI				S	**Sn**	**22 50 41.6**	**0.0**
GENI	**Genyem**	**2.71**	**75**	P	**Pn**	**22 50 29.0**	**+0.1**
GENI				S	**Sn**	**22 51 00.3**	**-0.2**
FAKI	**Fak Fak**	**5.31**	**274**	Pn	**Pn**	**22 51 05.6**	**+1.0**
FAKI				Sn	**Sn**	**22 52 05.3**	**+0.7**
FAKI	**Fak Fak**	**5.31**	**274**	P	**Pn**	**22 51 05.9**	**+1.2**
	52nm,0.7s,0.8nm						
FAKI				S	**Sn**	**22 52 04.0**	**-0.6**
	52nm,0.7s,0.8nm						
SIJI	**Sorong**	**6.73**	**291**	P	**Pn**	**22 51 24.9**	**+0.7**
	3.2nm,0.3s,baz=236,slow=23,SNR=11						
SIJI				S	**Sn**	**22 52 35.9**	**-3.8**
	11nm,0.5s,baz=110,slow=23,SNR=0.7						
SIJI				LR	LR	22 54 49.9	
	comp=Z,160nm,19.2s,baz=88,slow=45						
	17nm,0.5s						
SWI	**Sorong**	**6.74**	**291**	P	**Pn**	**22 51 25.4**	**+1.1**
	78nm,0.7s,1µm0.4nm						
BNDI	**Bandanaira**	**7.73**	**261**	P	**Pn**	**22 51 39.6**	**+1.8**
	167nm,1.7s,1.2nm						
SAUI	**Saumlaki**	**7.76**	**233**	Pn	**Pn**	**22 51 39.5**	**+1.1**
SAUI	**Saumlaki**	**7.76**	**233**	P	**Pn**	**22 51 40.6**	**+2.3**
	120nm,0.7s,7µm0.7nm						
PMG	**Port Moresby**	**11.30**	**123**	LR	LR	22 57 41.3	
	comp=Z,146nm,21.9s,baz=280,slow=41						
MTN	**Manton Dam**	**11.41**	**213**	Pn	**Pn**	**22 52 30.0**	**+1.8**
COEN	**Coen**	**11.95**	**153**	Pn	**Pn**	**22 52 35.5**	**-0.2**
SOEI	**Soe**	**14.67**	**243**	Pn	**Pn**	**22 53 14.2**	**+1.6**
SOEI	**Soe**	**14.67**	**243**	P	**Pn**	**22 53 13.6**	**+1.0**
	47nm,1.1s						
KNRA	**Kununurra**	**15.03**	**215**	Pn	**Pn**	**22 53 17.8**	**+0.5**
KNRA				IAmb	IAmb	22 53 20.7	
	comp=Z,53nm,1.1s						
WR0	**Warramunga Arr**	**16.81**	**190**		**Pn**	**22 53 39.9**	**0.0**
WRA	**Warramunga Arr**	**16.83**	**190**	P	**Pn**	**22 53 40.2**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=11,slow=12,SNR=39						
WRA				S	**Sn**	**22 56 37.8**	**-8.6**
	comp=Z,6.5nm,1.0s,baz=12,slow=22,SNR=5.1						
WRA				LR	LR	23 00 42.6	
	comp=Z,202nm,21.8s,baz=10,slow=39						
	comp=Z,4.2nm,0.4s						
WRA	**Warramunga Arr**	**16.83**	**190**	Pn	**Pn**	**22 53 40.3**	**+0.1**
TOLI2	**Tolitoli**	**17.33**	**284**		**P**	**22 53 47.4**	**+0.2**
TOLI2				IAmb	IAmb	22 54 12.9	
	comp=Z,26nm,0.9s						
GUMO	**Guam**	**18.29**	**23**	LR	LR	23 00 31.9	
	comp=Z,99nm,21.0s,baz=177,slow=35						
CTA	**Charters Tower**	**18.71**	**154**	P	**Pn**	**22 54 04.7**	**+1.4**
	comp=Z,0.8nm,0.3s,baz=326,slow=10,SNR=13						
CTA				LR	LR	23 02 15.3	
	comp=Z,95nm,20.3s,baz=160,slow=40						
	comp=Z,5.6nm,0.6s						
CTAO	**Charters Tower**	**18.71**	**154**	P	**P**	**22 54 03.5**	**+1.0**
CTAO				IAmb	IAmb	22 54 27.7	
	comp=Z,14nm,1.1s						
FITZ	**Fitzroy Crossi**	**18.77**	**218**	P	**P**	**22 54 04.3**	**+1.3**
AS31	**Alice Springs**	**20.54**	**190**	P	**P**	**22 54 24.5**	**+2.1**
AS31				IAmb	IAmb	22 54 30.7	
	comp=Z,30nm,1.1s						
ASAR	**Alice Springs**	**20.55**	**190**	P	Pn	22 54 25.1	+0.1
	comp=Z,57nm,0.8s,baz=19,slow=9.2,SNR=167						
ASAR				S	**S**	**22 58 04.9**	**-4.7**
	comp=Z,1.3nm,0.8s,baz=12,slow=24,SNR=2.2						
ASAR				LR	LR	23 03 14.9	
	comp=Z,129nm,18.2s,baz=102,slow=39						
	comp=Z,57nm,0.8s						
ASAR	**Alice Springs**	**20.55**	**190**	P	**P**	**22 54 24.6**	**+2.2**
KKM	**Kota Kinabalu**	**23.25**	**294**	P	**P**	**22 54 51.5**	**+0.3**
KKM				IAmb	IAmb	22 54 53.6	
	comp=Z,15nm,0.8s						
MBWA	**Marble Bar**	**24.81**	**223**	P	**P**	**22 55 06.2**	**+0.7**
MBWA				IAmb	IAmb	22 55 21.8	
	comp=Z,30nm,1.2s						
PSA00	**Pilbara Seismi**	**25.02**	**222**	P	**P**	**22 55 08.5**	**+1.1**
PSA00	**Pilbara Seismi**	**25.02**	**222**	P	**P**	**22 55 07.7**	**+0.3**
PSA00				IAmb	IAmb	22 55 11.4	
	comp=Z,5.7nm,0.8s						
EIDS	**Eidsvold**	**25.50**	**151**	P	**P**	**22 55 12.6**	**+0.8**
EIDS				IAmb	IAmb	22 55 20.8	
	comp=Z,6.6nm,1.1s						
STKA	**Stephens Creek**	**28.67**	**173**	P	**P**	**22 55 41.1**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=339,slow=8.7,SNR=4.3						
STKA				LR	LR	23 08 01.0	
	comp=Z,126nm,19.1s,baz=207,slow=38						
	comp=Z,0.7nm,0.3s						
STKA	**Stephens Creek**	**28.67**	**173**	P	**P**	**22 55 40.9**	**+0.8**
FORT	**Forrest**	**28.76**	**197**	P	**P**	**22 55 41.7**	**+0.8**
FORT				IAmb	IAmb	22 56 10.5	
	comp=Z,15nm,0.9s						
BBOO	**Buckleboo**	**29.38**	**183**	P	**P**	**22 55 46.9**	**+0.4**
BBOO				IAmb	IAmb	22 56 00.2	
	comp=Z,12nm,1.4s						
MORW	**Morawa**	**32.77**	**216**	P	**P**	**22 56 17.0**	**+0.7**
MORW				IAmb	IAmb	22 56 17.7	
	comp=Z,7.5nm,0.9s						
NWAO	**Narrogin (SRO)**	**35.08**	**211**	P	**P**	**22 56 35.5**	**-0.7**
	comp=Z,5.0nm,0.7s,baz=29,slow=9.4,SNR=1.9						
NWAO				LR	LR	23 12 29.7	
	comp=Z,137nm,18.0s,baz=314,slow=39						
	comp=Z,5.0nm,0.7s						
NWAO	**Narrogin (SRO)**	**35.08**	**211**	P	**P**	**22 56 36.1**	**-0.2**
JNU	**Nakatsue**	**36.78**	**351**	LR	LR	23 09 58.4	
	comp=Z,44nm,21.7s,baz=192,slow=33						
MJAR	**Matsushiro Arr**	**39.65**	**1**	LR	LR	23 12 07.4	
	comp=Z,29nm,18.8s,baz=178,slow=34						
GSI	**Gunungsitoli**	**40.22**	**276**	P	**P**	**22 57 18.3**	**-1.8**
GSI				IAmb	IAmb	22 57 41.5	
	comp=Z,12nm,1.2s						
KSRS	**Korea Array**	**41.53**	**348**	LR	LR	23 14 12.1	
	comp=Z,20nm,18.7s,baz=185,slow=35						
PHRA	**Phrae**	**42.66**	**302**	P	**P**	**22 57 40.2**	**+0.2**
CMAR	**Chiang Mai Arr**	**43.74**	**301**	P	**P**	**22 57 49.4**	**+0.7**
	comp=Z,1.4nm,0.3s,baz=127,slow=6.3,SNR=19						
	comp=Z,1.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**43.74**	**301**	P	**P**	**22 57 48.5**	**-0.2**
CHTO	**Chiang Mai**	**43.90**	**302**	P	**P**	**22 57 49.7**	**-0.2**
KMI	**Kunming**	**44.04**	**312**	⇑P	**P**	**22 57 52.3**	**+1.0**
KMI				pP	sP	22 58 08.4	-2.2
KMI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
PZH	**PanZhiHua**	**45.57**	**313**	P	**P**	**22 58 03.7**	**+0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,110nm,5.1s						
ASAJ	**Asahikawa**	**47.43**	**5**	LR	LR	23 16 53.6	
	comp=Z,30nm,20.6s,baz=190,slow=34						
USRK	**Ussuriysk Ar.**	**47.56**	**355**	P	**P**	**22 58 17.7**	**-0.7**
	comp=Z,2.0nm,0.7s,baz=162,slow=6.1,SNR=1.8						
USRK				LR	LR	23 15 11.2	
	comp=Z,60nm,22.0s,baz=175,slow=32						
	comp=Z,2.0nm,0.7s						
HHC	**Hu-ho-hao-te**	**49.95**	**334**	*e*P	**P**	**22 58 35.5**	**-1.5**
HHC				pmax	pmax		
	comp=Z,18nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,4.5s						
RPZ	**Rata Peaks**	**49.98**	**148**	LR	LR	23 18 42.2	
	comp=Z,76nm,18.1s,baz=214,slow=35						
KLR	**Kul'dur**	**52.57**	**355**	P	**P**	**22 58 56.4**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=247,slow=17,SNR=3.3						
KLR				LR	LR	23 17 54.7	

	comp=Z,44nm,21.9s,baz=184,slow=32						
	comp=Z,1.1nm,0.5s						
SHL	Shillong	52.73	306	P	P	22 58 57.9	-0.3
PETK	Petropavlovsk-	58.71	14	LR	LR	23 20 55.7	
	comp=Z,25nm,21.6s,baz=200,slow=32						
MK31	Makanchi Array	69.56	323	P	P	23 00 51.4	-0.3
MKAR	Makanchi Array	69.56	323	P	P	23 00 51.3	-0.4
	comp=Z,1.3nm,0.7s,baz=116,slow=8.1,SNR=12						
	comp=Z,1.3nm,0.7s						
MKAR	Makanchi Array	69.56	323	P	P	23 00 51.5	-0.2
MAKZ	Makanchi	69.76	323	P	P	23 00 51.9	-1.0
MAKZ				IAmb	IAmb	23 00 53.8	
	comp=Z,2.2nm,0.7s						
KSH	Kashi	70.66	314	P	P	23 01 01.5	+2.8
KSH				pP	sP	23 01 19.0	+0.4
KSH				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ZALV	Zalesovo Beam	71.87	330	P	P	23 01 03.5	-2.0
	comp=Z,0.3nm,0.5s,baz=123,slow=5.3,SNR=1.8						
	comp=Z,0.3nm,0.5s						
VNDA	Vanda	75.29	175	P	P	23 01 26.6	+1.4
	comp=Z,1.1nm,0.7s,baz=329,slow=8.0,SNR=6.5						
	comp=Z,1.1nm,0.7s						
VNDA	Vanda	75.29	175	P	P	23 01 26.1	+0.9
VNDA				IAmb	IAmb	23 01 37.9	
	comp=Z,7.2nm,1.4s						
KKAR	Karatay Array	75.75	316	P	P	23 01 27.9	-0.6
BRVK	Borovoye	79.21	325	P	P	23 01 46.9	-0.7
KDAK	Kodiak Island	82.20	31	LR	LR	23 35 49.3	
	comp=Z,67nm,20.8s,baz=215,slow=34						
QSPA	South Pole Qui	86.64	180	P	P	23 02 26.9	+1.0
ILAR	Eielson Array	86.85	25	P	P	23 02 26.4	-0.4
	comp=Z,0.4nm,1.0s,baz=281,slow=5.1,SNR=2.4						
	comp=Z,0.4nm,1.0s						
INK	Inuvik	92.65	22	P	P	23 02 55.7	+1.8
	comp=Z,0.7nm,0.6s,baz=191,slow=6.3,SNR=3.3						
	comp=Z,0.7nm,0.6s						
YBH	Yreka Blue Hor	99.46	48	LR	LR	23 39 48.7	
	comp=Z,24nm,20.9s,baz=216,slow=30						

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*UCR **08** 22:50:02.0±1.4, 8°.87N×84°.06W, h3^{km}±12^{km}, MW3.5*
*UPA **08** 22:50:03.5±1.8, 9°.01N×83°.94W, h0^{km}±8^{km}, MW3.5*
ISC 08 22:50:02.7±1.5**, 8°.93N**±0°.05×**84°.01W**±0°.05**, h3**^{km}±12^{km},
n33, σ0^s.68/45**, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDDO	Dominical	0.36	24	*e*P	Pb	22 50 11.8	+0.2
EDDO				*e*S	Sb	22 50 16.7	-0.9
PLAN	Los Planes de	0.41	128	*e*P	Pg	22 50 11.1	+0.5
SVQ2	Quepos	0.53	343	*e*P	Pb	22 50 13.7	-0.9
SVQ2				*e*S	Sb	22 50 22.5	-0.1
EDPN	Palmar Norte	0.55	86	*e*P	Pb	22 50 14.4	-0.5
LLNJ	Naranjito	0.55	351	*e*P	Pb	22 50 14.4	-0.6
LLNJ				*e*S	Sb	22 50 24.8	+1.5
CDM	Cerro de Muert	0.67	21	*e*P	Pb	22 50 16.7	-0.6
BUS1	Rivas	0.68	22	*e*P	Pb	22 50 16.6	-0.8
BUS1				*e*S	Sn	22 50 29.1	-1.7
SRBA	San Rafael, Bu	0.71	64	*e*P	Pb	22 50 17.2	-0.6
ABE2	San Pablo	0.78	357	*e*P	Pb	22 50 18.3	-0.6
LCR2	La Lucha 2	0.81	0	*e*P	Pg	22 50 18.7	+0.4
EDP2	Potrero Grande	0.83	84	*e*P	Pb	22 50 19.9	+0.2
EDAD	Golfito	0.88	108	*e*P	Pg	22 50 18.9	-0.6
ACOS	Acosta	0.88	350	*e*P	Pg	22 50 19.5	-0.1
OCM	Ochomogo	0.96	3	*e*P	Pg	22 50 21.2	0.0
JACO	JACO, Garabito	0.97	319	*e*P	Pg	22 50 21.3	-0.1
PCAYA	Pacayas	1.00	11	*e*P	Pg	22 50 22.2	+0.2
EDSV	San Vito	1.03	96	*e*P	Pn	22 50 25.3	+1.2
RAFA	San Farael, Vo	1.04	11	*e*P	Pg	22 50 23.1	+0.3
MRVA	Moravia de Chi	1.05	32	*e*P	Pb	22 50 23.4	-0.3
MRVA				*e*S	Sn	22 50 40.5	+0.7
HAYA	Volcan Irazu	1.06	9	*e*P	Pb	22 50 23.5	-0.4
ICR3	Volcano Irazu	1.06	9	*e*P	Pb	22 50 24.0	0.0
VICA	Volcano Irazu	1.06	9	*e*P	Pg	22 50 23.3	+0.2
HDC	Heredia	1.07	354	*e*P	Pg	22 50 23.1	-0.3
HDC				*e*S	Sb	22 50 39.2	+0.7
RVSTA	Santa Teresita	1.10	19	*e*P	Pb	22 50 24.3	-0.1
LCOCO	El Coco	1.23	21	*e*P	Pn	22 50 27.1	+0.2
BRU2	Volcan	1.31	96	*i* P	Pg	22 50 27.3	-0.5
BRU2				*i* S	Sn	22 50 46.3	+0.3
BRU2	Volcan	1.31	96	*e*P	Pg	22 50 26.7	-1.1
LESP3	La Esperanza,	1.31	113	*e*P	Pn	22 50 28.2	+0.4
LESP3				*e*S	Sn	22 50 46.7	+0.8
BCO2	Palmira	1.48	98	*i* P	Pn	22 50 29.6	-0.7
BCO2				*i* S	Sn	22 50 50.4	+0.2
PTAR3	Potrerillos Ar	1.51	99	*e*P	Pn	22 50 31.2	+0.5
PTAR3				*e*S	Sn	22 50 52.1	+1.1
SOCE	Pocosol	1.57	338	*e*P	Pn	22 50 31.2	-0.3
JTS	Las Juntas de	1.65	326	*e*P	Pn	22 50 32.2	-0.3
JTS				*e*S	Sg	22 50 56.3	+0.7
LOCO3	Loma Colorada,	1.65	108	*e*P	Pn	22 50 31.6	-0.9
LOCO3				*e*S	Sn	22 50 53.9	-0.4

IDC 08 23:26:25.7±29.0**, 18°.85S**×**176°.77W, h0**^{km}**, mb4.0**/4**,**
mbtmp4.0/4**, Error ellipse: s-maj=537.8km**
s-min=154.4km az=75.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	34.84	262	P	P	23 33 19.4	+0.6
	2.5nm,0.9s,baz=78,slow=9.3,SNR=1.5						
	2.5nm,0.9s						
STKA	Stephens Creek	39.56	243	P	P	23 33 58.1	-0.6
	1.1nm,0.7s,baz=103,slow=19,SNR=3.2						
	1.1nm,0.7s						
WRA	Warramunga Arr	46.00	260	P	P	23 34 50.9	-0.3
	0.9nm,0.5s,baz=94,slow=7.7,SNR=15						
	0.9nm,0.5s						
ASAR	Alice Springs	46.04	255	P	P	23 34 51.5	-0.1
	2.7nm,0.6s,baz=92,slow=8.3,SNR=40						
	2.7nm,0.6s						

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*NOU **08** 23:33:31.5, 39°.71S×177°.20E, h16^{km}, MLv3.6/7, Off E. Coast of N. Island, N.Z.*
*WEL **08** 23:33:33.4, 40°S±3°×17°7E±°, h51^{km}±4^{km}, M3.3/48, ML3.5/48, MLv3.3/48, Error ellipse: s-maj=0.0km s-min=0.0km az=79.3, confirmed*
ISC 08 23:33:32.0±1.4**, 39°.76S**±0°.03×**177°.12E**±0°.05**, h63**^{km}±8^{km},
n115, σ0^s.96/120**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CKHZ	Cape Kidnapper	0.10	340	P	Pn	23 33 41.7	+0.3
CKHZ				S	Sn	23 33 47.8	-0.4
KAHZ	Kahuranaki	0.19	258	P	Pn	23 33 42.3	+0.4
KAHZ				S	Sn	23 33 48.6	-0.3
PXZ	Pawanui	0.34	216	P	Pn	23 33 43.0	+0.2
PXZ				S	Sn	23 33 51.5	+0.9
MCHZ	McNeill Hill	0.45	313	P	Pn	23 33 43.8	0.0
MCHZ				S	Sn	23 33 51.1	-1.2
ARHZ	Aropaoanui	0.50	349	P	Pn	23 33 44.5	+0.3
ARHZ				S	Sn	23 33 52.8	-0.3
WPHZ	Waipukurau	0.61	239	P	Pn	23 33 46.3	+0.9
WPHZ				S	Sn	23 33 56.4	+1.2
PRHZ	Porangahau	0.63	216	P	Pn	23 33 46.9	+1.2
KWHZ	Kaweka Forest	0.63	301	P	Pn	23 33 45.5	-0.3
WHHZ	Waihua	0.68	7	P	Pn	23 33 46.9	+0.6
NMHZ	Naumai	0.70	339	P	Pn	23 33 46.8	+0.3
PNHZ	Pukenui	0.73	257	P	Pn	23 33 47.2	+0.4
BKZ	Black Stump Fm	0.76	320	P	Pn	23 33 47.1	-0.2
BKZ	Black Stump Fm	0.76	320	P	Pn	23 33 47.1	-0.2
RAHZ	Arahi	0.84	358	P	Pn	23 33 48.6	+0.4
KNZ	Kokohu	0.85	30	P	Pn	23 33 49.0	+0.8
MHGZ	Mahia Peninsul	0.85	46	P	Pn	23 33 49.6	+1.3
BHHZ	Black Hill Sta	0.86	288	P	Pn	23 33 48.6	+0.1
DVHZ	Dannevirke	0.91	233	P	Pn	23 33 50.0	+0.9
MTHZ	Maungataniwha	0.93	346	P	Pn	23 33 49.4	+0.1
TSZ	Takapari Road	0.94	251	P	Pn	23 33 50.0	+0.5
SNGZ	Shannon Statio	0.99	10	P	Pn	23 33 50.5	+0.5
MRHZ	Matea Rd	1.07	329	P	Pn	23 33 51.6	+0.4
MOVZ	Moawhango	1.11	288	P	Pn	23 33 52.6	+0.8
BFZ	Birch Farm	1.14	216	P	Pn	23 33 53.0	+1.0
BFZ	Birch Farm	1.14	216	P	Pn	23 33 53.0	+1.0
RTZ	Ruatahuna	1.14	354	P	Pn	23 33 52.4	+0.2
RIGZ	Rimuhau	1.16	26	P	Pn	23 33 53.1	+0.8
PRWZ	Pori Road	1.19	227	P	Pn	23 33 53.8	+1.2
POWZ	Post Office Ro	1.22	238	P	Pn	23 33 54.1	+1.0
TUVZ	Tukino	1.24	293	P	Pn	23 33 54.9	+1.5
RITZ	Rihia Road	1.25	308	P	Pn	23 33 54.4	+0.9
WNVZ	Wahianoa	1.25	289	P	Pn	23 33 54.6	+1.0
ETVZ	East Tongariro	1.26	299	P	Pn	23 33 54.5	+0.8
TMVZ	Te Maari	1.27	300	P	Pn	23 33 54.6	+0.8
OTVZ	Oturere	1.27	297	P	Pn	23 33 54.8	+0.9
WHVZ	Whangaehu Hut	1.28	291	P	Pn	23 33 55.2	+1.2
RAGZ	Rawiri	1.28	10	P	Pn	23 33 54.3	+0.4
SNVZ	South Ngauruho	1.28	296	P	Pn	23 33 54.9	+0.9
DRZ	Dome Shelter	1.30	291	P	Pn	23 34 00.4	+6.0
NTVZ	North Tongarir	1.30	300	P	Pn	23 33 54.9	+0.7
MUGZ	Murupara	1.30	348	P	Pn	23 33 54.4	+0.3
NGZ	Ngauruhoe	1.31	296	P	Pn	23 33 55.3	+0.9
FWVZ	Far West T-bar	1.31	292	P	Pn	23 33 55.2	+0.7
NNVZ	North Ngauruho	1.32	298	P	Pn	23 33 55.5	+1.0
MTVZ	Mangateitei	1.33	286	P	Pn	23 33 55.6	+1.1
ALRZ	Allen Road	1.34	333	P	Pn	23 33 55.0	+0.4
WTVZ	West Tongariro	1.35	298	P	Pn	23 33 55.8	+1.0
CPWZ	Castlepoint	1.35	211	P	Pn	23 33 56.1	+1.3
PRRZ	Plateau Road	1.38	335	P	Pn	23 33 55.6	+0.5
TIWZ	Tintock	1.39	222	P	Pn	23 33 56.2	+0.8
WHTZ	Whakaora	1.42	320	P	Pn	23 33 56.6	+0.9
TKGZ	Te Karaka	1.43	24	P	Pn	23 33 56.3	+0.5
WPRZ	Whakapapatarin	1.44	329	P	Pn	23 33 56.2	+0.1
PKVZ	Pokaka	1.45	288	P	Pn	23 33 57.0	+0.8
MWZ	Matawai	1.45	13	P	Pn	23 33 56.3	+0.1
MRZ	Mangatainoka R	1.49	232	P	Pn	23 33 57.3	+0.7
RRRZ	Republican Roa	1.49	341	P	Pn	23 33 57.0	+0.3
URZ	Urewera	1.49	360	P	Pn	23 33 56.7	0.0
URZ	Urewera	1.49	360	P	Pn	23 33 56.7	0.0
HRRZ	Handcock Road	1.51	334	P	Pn	23 33 57.4	+0.4
CNGZ	Carnagh Statio	1.52	34	P	Pn	23 33 57.8	+0.7
TARZ	Mount Tarawera	1.59	342	P	Pn	23 33 58.7	+0.6
HSRZ	Hossack Road	1.59	334	P	Pn	23 33 58.5	+0.4
HLRZ	Highlands Stat	1.62	338	P	Pn	23 33 59.2	+0.9
KUTZ	Kaahu Road	1.62	321	P	Pn	23 33 58.8	+0.4
TMWZ	Te Maipa	1.65	214	P	Pn	23 33 59.1	+0.4
WAZ	Wanganui	1.65	269	P	Pn	23 34 00.7	+2.0
HOWZ	Holdsworth Sta	1.68	227	P	Pn	23 33 59.4	+0.3
TWGZ	Tauwhareparae	1.71	23	P	Pn	23 34 00.3	+0.7
OMRZ	Omania	1.75	340	P	Pn	23 34 00.2	+0.1
NGRZ	Ngongotaha	1.81	336	P	Pn	23 34 01.6	+0.6
OGWZ	Otaki Gorge	1.83	234	P	Pn	23 34 01.6	+0.4
RUGZ	Raukumara Rang	1.84	14	P	Pn	23 34 01.7	+0.3
MTW	Mount Morrison	1.87	221	P	Pn	23 34 01.6	-0.2
TLZ	Tolley Road	1.88	319	P	Pn	23 34 02.2	+0.2
PUZ	Puketiti	1.90	28	P	Pn	23 34 02.1	0.0
WHRZ	Whale Island	1.90	356	P	Pn	23 34 02.5	+0.3
OPRZ	Ohinepanea	1.96	347	P	Pn	23 34 03.0	+0.1
TRWZ	Traveller	1.97	213	P	Pn	23 34 02.9	-0.2
PKGZ	Pakihiroa	2.01	22	P	Pn	23 34 04.0	+0.3
KIW	Kapiti Island	2.02	236	P	Pn	23 34 04.3	+0.5
HAZ	Te Kaha	2.06	15	P	Pn	23 34 04.8	+0.5
CAW	Cannon Point	2.07	229	P	Pn	23 34 04.6	+0.1
HIZ	Hauiti	2.15	304	P	Pn	23 34 06.3	+0.7
HIZ	Hauiti	2.15	304	P	Pn	23 34 06.3	+0.7
WMGZ	Waiomatatini S	2.18	28	P	Pn	23 34 06.1	+0.1
PLWZ	Palliser	2.30	217	P	Pn	23 34 06.9	-0.7
MXZ	Matakaoa Point	2.38	23	P	Pn	23 34 09.3	+0.7
MXZ	Matakaoa Point	2.38	23	P	Pn	23 34 09.1	+0.5
TOZ	Tahuroa Road	2.38	327	P	Pn	23 34 08.9	+0.1
NEZ	North Egmont	2.39	281	P	Pn	23 34 11.4	+2.5
SNZO	South Karori	2.41	229	P	Pn	23 34 11.8	+2.8
KHEZ	Kahui Hut	2.45	280	P	Pn	23 34 12.2	+2.5
KHEZ	Kahui Hut	2.45	280	P	Pn	23 34 12.1	+2.4
PKE	Pukeiti	2.49	282	P	Pn	23 34 12.5	+2.3
TCW	Tory Channel	2.61	235	P	Pn	23 34 11.5	-0.3
DUWZ	D'Urville Isla	2.66	246	P	Pn	23 34 13.0	+0.5
TUWZ	Tuamarina	2.94	234	P	Pn	23 34 15.5	-0.8
BSWZ	Blackbirch Sta	3.15	231	P	Pn	23 34 18.4	-0.7
AWAZ	Awhitu Peninsu	3.32	323	P	Pn	23 34 21.5	0.0
TKNZ	Takaka Hill	3.42	247	P	Pn	23 34 22.8	-0.1
QRZ	Quartz Range	3.67	252	P	Pn	23 34 25.4	-0.9
MRNZ	Matariki Terra	3.71	242	P	Pn	23 34 26.8	0.0
THZ	Tophouse	3.78	237	P	Pn	23 34 26.9	-0.9
KHZ	Kahutara	3.79	224	P	Pn	23 34 27.3	-0.7
GVZ	Greta Valley S	4.45	222	P	Pn	23 34 36.3	-0.5
LTZ	Lake Taylor	4.74	229	P	Pn	23 34 39.5	-1.5
MQZ	McQueen's Vall	5.17	219	P	Pn	23 34 44.9	-1.9
INZ	Inchbonnie	5.21	233	P	Pn	23 34 45.4	-1.9
MHCZ	Mount Hutt	5.62	226	P	Pn	23 34 51.7	-1.2
WACZ	Wakanui South	5.75	222	P	Pn	23 34 53.8	-0.9
CTZ	Chatham Island	6.14	132	P	Pn	23 35 03.2	+3.1
TMZ	Timaru	6.49	223	P	Pn	23 35 04.0	-0.8
ODZ	Otahua Downs	7.13	220	P	Pn	23 35 12.9	-0.7
HHSZ	Highcliff Hill	7.78	216	P	Pn	23 35 20.9	-1.6

IDC 08 23:40:35.5±2.1**, 7°.36S**×**126°.12E, h0**^{km}**, mb3.4**/1**,**
mbtmp3.7/3**, ML3.4**/2**, Error ellipse: s-maj=217.6km**
s-min=32.5km az=62.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.83	148	Pn	Pn	23 44 05.2	-1.4
	0.2nm,0.3s,baz=320,slow=12,SNR=17						
WRA				Sn	Sn	23 46 42.9	-8.9
	0.1nm,0.3s,baz=324,slow=24,SNR=2.2						
	1.4nm,0.7s						
ASAR	Alice Springs	17.85	156	P	P	23 44 46.5	+0.2
	0.1nm,0.3s,baz=339,slow=14,SNR=19						
ASAR				S	Sn	23 47 52.6	-13
	0.5nm,0.9s,baz=316,slow=21,SNR=3.2						
	2.6nm,0.8s						
MKAR	Makanchi Array	66.48	329	P	P	23 51 26.9	-0.1
	0.4nm,0.8s,baz=133,slow=8.3,SNR=2.9						
	0.4nm,0.8s						

IDC 09 00:03:00.8±3.1**, 41°.97N**×**123°.68E, h0**^{km}**, mb3.2**/1**,**
mbtmp3.1/3**, ML2.6**/2**, Error ellipse: s-maj=34.6km**
s-min=22.5km az=85.0, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	5.57	143	Pg	Pg	00 04 43.8	-3.6
	0.5nm,0.3s,baz=330,slow=17,SNR=4.6						
KSRS				Lg	Lg	00 05 56.1	
	2.8nm,0.3s,baz=320,slow=29,SNR=14						
USRK	Ussuriysk Ar.	6.48	67	Pn	Pn	00 04 38.1	+0.7
	0.2nm,0.3s,baz=259,slow=14,SNR=2.3						
USRK				Pg	Pb	00 04 59.2	+4.8
	0.5nm,0.3s,baz=252,slow=17,SNR=4.7						
USRK				Lg	Lg	00 06 25.4	
	1.0nm,0.3s,baz=250,slow=22,SNR=7.8						
	1.1nm,0.5s						
KLR	Kul'dur	9.20	35	Pn	Pn	00 05 13.0	-1.8
	0.1nm,0.3s,baz=250,slow=15,SNR=1.3						
KLR				Lg	Lg	00 07 54.8	
	0.2nm,0.3s,baz=272,slow=9.6,SNR=5.6						
	0.3nm,0.4s						
ILAR	Eielson Array	52.77	33	P	P	00 12 17.2	+0.1
	0.3nm,0.9s,baz=294,slow=8.8,SNR=2.4						
	0.3nm,0.9s						

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*MAN **09** 00:04:43.3, 5°.80N×126°.79E, h134^{km}, mb4.6, ML3.5, MS3.4*
*IDC **09** 00:04:43.3±3.6, 5°.95N×126°.92E, h164^{km}±27^{km}, mb3.4/8, mbtmp3.8/8, Error ellipse: s-maj=116.6km s-min=12.2km az=66.0*
ISC 09 00:04:43.1±1.2**, 5°.79N**±0°.09×**126°.6E**±0°.1**, h161**^{km}±10^{km},
n16, σ1^s.24/24**, mb3.7**/8**, 3C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.61	322	P	Pn	00 05 15.2	+0.6
	192nm,0.4s,baz=6.5,slow=3.8,SNR=3.6						
DAV				S	Sn	00 05 42.1	+3.2
	390nm,0.4s,baz=300,slow=23,SNR=12						
GSPH	General Santos	1.64	280⇑	*e*P	Pn	00 05 14.3	-0.8
GSPH				*i* S	Sn	00 05 37.7	-1.9
KCP	Kidapawan	1.91	309⇑	*i*P	Pn	00 05 18.0	+0.2
KCP				*i* S	Sn	00 05 45.2	+0.5
CDOP	Cateel, Davao	1.98	356⇑	*i*P	Pn	00 05 18.8	+0.1
CDOP				*e*S	Sn	00 05 44.0	-2.2
BIPH	Bislig	2.39	355⇓	*i*P	Pn	00 05 23.5	+0.2
BIPH				*i* S	Sn	00 05 53.1	-1.5
BUKP	Musuan	2.56	324⇓	*i*P	Pn	00 05 26.1	+0.6
BUKP				*i* S	Sn	00 05 59.0	+0.6
CTBH	Cotabato--PC H	2.71	302⇓	*i*P	Pn	00 05 31.8	+4.5
CTBH				*i* S	Sn	00 06 00.8	-0.8
WRA	Warramunga Arr	26.69	164	P	P	00 10 07.3	-0.1
	0.4nm,0.4s,baz=342,slow=10,SNR=6.6						
WRA				PcP	PcP	00 13 26.5	-0.5
	0.1nm,0.5s,baz=336,slow=2.0,SNR=1.6						
	0.4nm,0.4s						
ASAR	Alice Springs	30.14	167	P	P	00 10 38.5	+0.5
	1.1nm,0.4s,baz=342,slow=7.5,SNR=22						
ASAR				PcP	PcP	00 13 35.8	+0.2
	0.4nm,0.6s,baz=342,slow=3.0,SNR=3.4						
	1.1nm,0.4s						
STKA	Stephens Creek	40.10	160	P	P	00 12 04.1	+1.0
	1.4nm,0.4s,baz=329,slow=7.9,SNR=6.5						
	1.4nm,0.4s						
SONM	Songino Array	45.31	341	P	P	00 12 45.7	+0.8
	0.1nm,0.3s,baz=152,slow=7.7,SNR=3.0						
	0.1nm,0.3s						
MKAR	Makanchi Array	55.79	325	P	P	00 14 04.2	+0.7
	0.4nm,0.4s,baz=116,slow=7.5,SNR=18						
	0.4nm,0.4s						
ZALV	Zalesovo Beam	58.69	333	P	P	00 14 23.4	-0.2
	0.5nm,0.4s,baz=146,slow=7.2,SNR=2.8						
	0.5nm,0.4s						
KURBB	Kurchatov Arra	59.93	327	P	P	00 14 32.3	+0.1
	0.5nm,0.6s,baz=126,slow=7.0,SNR=5.7						
	0.5nm,0.6s						
ARCES	ARCESS Array B	88.47	340	P	P	00 17 15.0	-1.9
	0.9nm,0.7s,baz=57,slow=4.5,SNR=4.2						
	0.9nm,0.7s						
TORD	Torodi Ar. Bea	122.11	289	PKP	PKPdf	00 23 19.3	-0.4
	0.4nm,0.9s,baz=93,slow=3.8,SNR=2.6						

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*TEH **09** 00:41:11.2, 27°.32N×55°.51E, h12^{km}±31^{km}, ML2.7*
*OMAN **09** 00:41:15.9±2.2, 26°.51N×55°.27E, h20^{km}±15^{km}, ml2.3/8, Error ellipse: s-maj=17.1km s-min=7.7km az=170.0*
ISC 09 00:41:09.6±1.3**, 26°.94N**±0°.04×**55°.39E**±0°.05**, h21**^{km}±5^{km},
n21, σ1^s.69/30**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENO	Geno	0.84	56	Pg	Pb	00 41 23.5	-2.1
SHME	Shamm	1.11	142	P	Pb	00 41 32.1	+2.0
	SNR=8.2						
SHME				S	Sn	00 41 45.1	+0.5
IBND	Bandar-abas	1.15	63	Pg	Pn	00 41 28.8	-1.6
LAR1	LAR	1.16	309	Pg	Pn	00 41 31.1	+0.5
LAR1				Sg	Sn	00 41 48.1	+2.2
BANOM	Banah	1.30	141	P	Pb	00 41 35.8	+2.5
	SNR=64						
BANOM				S	Sb	00 41 50.8	+1.2
MASF	Masafi	1.71	156	P	Pb	00 41 40.5	+0.2
MASF				S	Sb	00 42 00.8	-0.5
MDH	Madha	1.83	153	P	Pb	00 41 41.7	-0.6
MDH				S	Sb	00 42 04.4	-0.3
UOSS	Minazif	2.12	159	P	Pb	00 41 45.6	-1.6
HATD	Hatta, Dubai	2.21	162	P	Pn	00 41 46.7	+1.7
ASUD	Al Ashush, Dub	2.30	181	P	Pb	00 41 48.9	-1.5
ASHO	Ashiyiah	2.33	165	P	Pn	00 41 47.9	+1.3
	SNR=5.5						
JASK	Jask - Hormozg	2.47	115	P	Pb	00 41 53.3	+0.1
	SNR=9.0						
JASK				S	Sb	00 42 23.3	+0.2
JASK	Jask - Hormozg	2.47	115	Pn	Pb	00 41 54.8	+1.6
KBAM	BAM	3.48	50	Pn	Pn	00 42 02.7	0.0
KHGB	Koh Gabri	3.56	15	Pn	Pn	00 42 03.6	-0.1
UMZA	Um Al Zommool	4.21	183	P	Pn	00 42 13.9	+1.3
UMZA				S	Sn	00 42 59.9	-1.2
IMEH	Mehriz	4.49	352	Pn	Pn	00 42 16.4	-0.2
IBAF	Bafgh	4.64	2	Pn	Pn	00 42 18.1	-0.4
IRAM	Ramesheh	5.52	332	Pn	Pn	00 42 31.2	+0.5
MHTO	MHTO	6.38	158	P	Pn	00 42 44.5	+2.2
	SNR=6.0						
MHTO				S	Sn	00 43 51.8	-2.7
WHFO	Wadi Hawf	9.10	190	P	Pn	00 43 19.9	+0.1
	SNR=6.9						
WHFO				S	Sn	00 44 57.0	-4.7

IDC 09 00:51:24.1±1.3**, 54°.56S**×**133°.80W, h0**^{km}**, mb3.8**/3**,**
mbtmp3.8/3**, Error ellipse: s-maj=452.3km**
s-min=33.6km az=168.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	43.16	84	T	T	01 45 31.5	
	baz=223,slow=74,SNR=8.9						
H03S1	Juan Fernandez	43.16	84	T	T	01 45 32.8	
	baz=223,slow=74,SNR=10						
H03S3	Juan Fernandez	43.17	84	T	T	01 45 37.9	
	baz=223,slow=74,SNR=8.6						
H03N3	Juan Fernandez	43.43	84	T	T	01 45 49.4	
	baz=226,slow=72,SNR=201						
H03N2	Juan Fernandez	43.44	84	T	T	01 45 48.9	
	baz=226,slow=72,SNR=229						
H03N1	Juan Fernandez	43.45	84	T	T	01 45 49.4	
	baz=226,slow=72,SNR=144						
LPAZ	La Paz	62.80	80	P	P	01 01 52.3	+0.2
	1.0nm,0.7s,baz=238,slow=9.5,SNR=2.3						
	1.0nm,0.7s						
ASAR	Alice Springs	72.36	254	P	P	01 02 51.8	0.0
	0.5nm,0.7s,baz=140,slow=6.5,SNR=6.5						
	0.5nm,0.7s						
WRA	Warramunga Arr	75.06	257	P	P	01 03 07.8	+0.2
	0.5nm,0.6s,baz=143,slow=5.1,SNR=8.1						
	0.5nm,0.6s						
MKAR	Makanchi Array	156.07	266	PKP	PKPdf	01 11 17.3	-2.1
	0.4nm,1.0s,baz=98,slow=2.0,SNR=2.1						
MKAR				PKPab	PKPab	01 11 47.1	+0.2
	0.1nm,0.5s,baz=104,slow=4.8,SNR=1.6						

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*VAO **09** 00:51:48.3±0.8, 15°.46S×71°.73W, h10^{km}, mb4.3*
*IDC **09** 00:51:51.4±2.0, 15°.32S×71°.27W, h43^{km}±21^{km}, mb3.6/5, mbtmp3.8/10, ML3.5/5, MS3.4/6, Error ellipse: s-maj=24.4km s-min=15.7km az=57.0*
ISC 09 00:51:51.3±0.7**, 15°.27S**±0°.06×**71°.38W**±0°.08**, h35**^{km}**, n30,**
σ2^s.05/26**, mb4.0**/5**, 1C-1D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB18	Visviri	2.94	142⇑	*e*P	Pn	00 52 40.8	+4.8
PB18				*e*S	Sn	00 53 25.7	+15
AP01	Chacalluta	3.24	162	*e*P	Pn	00 52 41.6	+2.0
AP01				*e*S	Sn	00 53 24.6	+7.7
LPAZ	La Paz	3.29	108	P	Pn	00 52 44.7	+3.8
	28nm,0.5s,baz=279,slow=14,SNR=40						
LPAZ	La Paz	3.29	108	*e*P	Pn	00 52 44.5	+3.6
LPAZ	La Paz	3.29	108	*e*P	Pn	00 52 43.6	+2.8
PB12	IPOC Station P	3.47	163⇓	*e*P	Pn	00 52 43.9	+1.0
PB12				*e*S	Sn	00 53 28.6	+5.8
NNA	Nana	6.24	301	P	Pn	00 53 21.1	+0.2
	1.6nm,0.3s,baz=135,slow=11,SNR=2.2						
NNA				LR	LR	00 55 38.1	
	comp=Z,302nm,19.8s,baz=137,slow=36						
	4.1nm,0.3s						
ETMB	Extrema	7.40	44	*e*P	Pn	00 53 39.8	+2.9
CZSB	Cruzeiro do Su	7.61	350	*e*P	Pn	00 53 40.6	+0.9
LVC	Limon Verde	7.66	163	P	Pn	00 53 39.2	-1.5
	1.2nm,0.3s,baz=338,slow=5.3,SNR=14						
LVC				S	Sn	00 55 05.5	-1.1
	12nm,0.7s,baz=240,slow=22,SNR=2.1						
LVC				LR	LR	00 56 56.6	
	comp=Z,174nm,20.9s,baz=340,slow=40						
	8.1nm,0.6s						
LVC	Limon Verde	7.66	163	*e*P	Pn	00 53 39.0	-1.7
SIV	San Ignacio	9.96	95	P	Pn	00 54 11.5	-0.4
	baz=284,slow=9.8,SNR=10						
SIV				S	Sn	00 56 00.9	-1.6
	2.1nm,0.8s,baz=192,slow=16,SNR=1.3						
	1.4nm,0.5s						
ATAH	Atahualpa	10.62	319	P	Pn	00 54 22.5	+1.2
	0.1nm,0.3s,baz=124,slow=18,SNR=1.4						
ATAH				LR	LR	00 59 07.8	
	comp=Z,336nm,20.2s,baz=118,slow=41						
	1.9nm,0.6s						
VILB	Vilhena	11.09	79	*e*P	Pn	00 54 32.4	+4.9
TBTG	Tabatinga, AM	11.11	8	*e*P	Pn	00 54 30.1	+2.3
MURT	Porto Murtinho	14.52	118	*e*P	Pn	00 55 14.1	-0.2
SALV	Santo Antonio	15.12	94	*e*P	P	00 55 24.9	-2.3
MACA	Manacapuru-AM	16.00	42	*e*P	P	00 55 37.0	+0.1
CFA	Coronel Fontan	16.51	171	P	Pn	00 55 38.5	-1.7
	0.2nm,0.3s,baz=345,slow=12,SNR=8.4						
	2.9nm,0.7s						
CPUP	Villa Florida	17.12	132	LR	LR	01 03 41.0	
	comp=Z,124nm,19.3s,baz=318,slow=42						
SNDB	Serra Nova Dou	19.79	83	*e*P	Pn	00 56 22.3	+1.8
SDV	Santo Domingo	24.02	2	P	P	00 57 04.9	+1.7
	5.8nm,0.7s,baz=225,slow=7.1,SNR=3.8						
	5.8nm,0.7s						
PLCA	Paso Flores	25.38	179	P	P	00 57 15.0	-0.3

	5.5nm,0.9s,baz=351,slow=13,SNR=4.0						
	5.5nm,0.9s						
MDP	Montagnes des	27.47	44	LR	LR	01 08 07.2	
	comp=Z,77nm,18.4s,baz=184,slow=36						
TKL	Tuckaleechee C	52.00	347	LR	LR	01 25 00.5	
	comp=Z,41nm,18.5s,baz=163,slow=38						
TXAR	Lajitas Array	54.21	325	P	P	01 01 12.5	-1.2
	0.1nm,0.7s,baz=145,slow=11,SNR=1.7						
	0.1nm,0.7s						
TORD	Torodi Ar. Bea	77.61	73	P	P	01 03 41.6	-3.0
	1.2nm,0.8s,baz=273,slow=5.7,SNR=13						
	1.2nm,0.8s						
YKA	Yellowknife Ar	84.57	341	P	P	01 04 20.1	-0.4
	0.2nm,0.6s,baz=134,slow=4.8,SNR=4.2						
	0.2nm,0.6s						
ZALV	Zalesovo Beam	137.15	21	PKP	PKPdf	01 11 10.2	-0.4
	0.7nm,0.5s,baz=337,slow=2.3,SNR=5.5						
SONM	Songino Array	147.48	3	PKPbc	PKPbc	01 11 32.0	+0.2
	0.8nm,0.5s,baz=310,slow=1.3,SNR=7.4						

IDC 09 01:13:05.0±2.2**, 8.°25S**×**129.°72E, h0**km**, mb3.3**/1**,**
mbtmp3.3/3**, ML3.3**/2**, Error ellipse: s-maj=99.1km**
s-min=27.3km az=68.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	12.45	159	Pn	Pn	01 16 02.3	-1.4
	0.2nm,0.3s,baz=346,slow=13,SNR=3.1						
WRA				Sn	Sn	01 18 26.3	+3.1
	0.6nm,0.3s,baz=331,slow=22,SNR=12						
	0.2nm,0.3s						
ASAR	Alice Springs	15.85	166	Pn	Pn	01 16 49.2	-0.3
	0.2nm,0.3s,baz=342,slow=9.9,SNR=10						
ASAR				Sn	Sn	01 19 49.9	+3.8
	0.3nm,0.3s,baz=343,slow=24,SNR=6.2						
	0.5nm,0.6s						
MKAR	Makanchi Array	69.12	327	P	P	01 24 13.2	+0.2
	0.3nm,0.9s,baz=116,slow=6.7,SNR=2.0						
	0.3nm,0.9s						

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*NOU **09** 01:15:52.5, 37.°08S×178.°61E, h152km, mb4.7/13, Off E. Coast of N. Island, N.Z.*

*WEL **09** 01:16:00, 37.°32S×177.°78E, h64km, ML4.5, Mw4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15} Nm; M_{rr}6.15; $M_{\theta\theta}$-0.98; $M_{\phi\phi}$-5.17; $M_{r\theta}$-0.98; $M_{\theta\phi}$-1.77; $M_{\phi r}$2.41; Fault plane solution: $M_0 6.50000\times10^{15}$ NP1: ϕ_s213.00000°, δ37.00000°, λ111.00000°. NP2: ϕ_s6.00000°, δ56.00000°, λ74.00000°. Principal axes: T -613.6900, Plg74.0000°, Azm233.0000°; N -73.4000, Plg13.0000°, Azm15.0000°; P 687.0900, Plg10.0000°, Azm107.0000°;*

*IDC **09** 01:16:03.5±2.1, 37.°30S×177.°74E, h65km±16km, mb4.2/10, mbtmp4.5/11, MS3.3/5 Error ellipse: s-maj=25.5km s-min=15.4km az=57.0*

*NEIC **09** 01:16:03.5±1.7, 37.°44S±0.°04×177.°72E±0.°07, h54km±7km, mb4.9/24, Error ellipse: s-maj=9.5km s-min=2.1km az=121.0*

*WEL **09** 01:16:04.2±0.7, 37°S±5°×17°8E±°, h28km±3km, M4.5/49, ML4.8/49, MLv4.5/49, Error ellipse: s-maj=0.0km s-min=0.0km az=30.0, confirmed*

ISC 09 01:16:03.6±0.6**, 37.°39S**±0.°04×**177.°74E**±0.°04**, h65**km±4km**,**
n216, σ1.s84/223**, mb4.8**/19**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	0.36	175	P	Pn	01 16 14.6	-0.2
HAZ				S	Sn	01 16 22.8	-0.2
WIZ	White Island	0.46	253	P	Pn	01 16 15.9	+0.3
WIZ				S	Sn	01 16 24.7	+0.3
WSRZ	White Island S	0.47	254	P	Pn	01 16 16.0	+0.3
WSRZ				S	Sn	01 16 24.9	+0.3
MXZ	Matakaoa Point	0.48	111		Pn	01 16 14.9	-0.9
MXZ				Sn	Sn	01 16 23.0	-1.8
MXZ	Matakaoa Point	0.48	111	P	Pn	01 16 15.1	-0.7
MXZ	Matakaoa Point	0.48	111	P	Pn	01 16 14.9	-0.9
PKGZ	Pakihiroa	0.56	152	P	Pn	01 16 16.9	+0.2
RUGZ	Raukumara Rang	0.57	185	P	Pn	01 16 17.0	0.0
RUGZ				S	Sn	01 16 26.4	-0.3
WMGZ	Waiomatatini S	0.68	129	P	Pn	01 16 19.4	+1.4
WMGZ				S	Sn	01 16 31.8	+3.2
WHRZ	Whale Island	0.77	233	P	Pn	01 16 20.1	+1.1
WHRZ				S	Sn	01 16 31.7	+1.3
PUZ	Puketiti	0.79	149	P	Pn	01 16 20.5	+1.2
TWGZ	Tauwhareparae	0.81	167	P	Pn	01 16 21.1	+1.6
MWZ	Matawai	0.95	190	P	Pn	01 16 22.2	+0.8
URZ	Urewera	1.00	210	P	Pn	01 16 22.8	+0.9
	2μm,0.3s,baz=355,slow=5.1,SNR=3021						
URZ				S	Sn	01 16 37.0	+1.5
	baz=246,slow=20						
URZ	Urewera	1.00	210	P	Pn	01 16 22.8	+0.9
URZ	Urewera	1.00	210	P	Pn	01 16 22.8	+0.9
OPRZ	Ohinepanea	1.04	244	P	Pn	01 16 23.3	+0.8
TKGZ	Te Karaka	1.05	175	P	Pn	01 16 24.5	+2.0
EDRZ	Edgecumbe	1.07	228	P	Pn	01 16 24.0	+1.2
RAGZ	Rawiri	1.13	193	P	Pn	01 16 25.1	+1.5
CNGZ	Carnagh Statio	1.15	161	P	Pn	01 16 25.4	+1.6
MYRZ	Mayor Island	1.20	275	P	Pn	01 16 25.2	+0.7
TGRZ	Tauranga	1.22	254	P	Pn	01 16 25.8	+1.0
LIRZ	Lichensteins R	1.24	240	P	Pn	01 16 26.6	+1.6
MKRZ	Makatiti	1.25	233	P	Pn	01 16 27.6	+2.3
TARZ	Mount Tarawera	1.29	229	P	Pn	01 16 27.7	+1.9
OMRZ	Omania	1.30	236	P	Pn	01 16 27.3	+1.5
RIGZ	Rimuhau	1.31	179	P	Pn	01 16 27.7	+1.7
MUGZ	Murupara	1.33	215	P	Pn	01 16 27.3	+1.1
KARZ	Kaharoa	1.34	242	P	Pn	01 16 27.8	+1.4
RRRZ	Republican Roa	1.35	225	P	Pn	01 16 28.2	+1.6
RTZ	Ruatahuna	1.36	206	Pn	Pn	01 16 26.6	-0.1
RTZ				Sn	Sn	01 16 41.8	-2.2
RTZ	Ruatahuna	1.36	206	P	Pn	01 16 27.6	+0.9
HLRZ	Highlands Stat	1.40	232	P	Pn	01 16 29.0	+1.9
NGRZ	Ngongotaha	1.42	240	P	Pn	01 16 29.2	+1.7
SNGZ	Shannon Statio	1.42	193	P	Pn	01 16 29.7	+2.3
UTU	Utuhina	1.46	237	P	Pn	01 16 30.1	+2.3
HSRZ	Hossack Road	1.50	232	P	Pn	01 16 30.5	+2.1
KMRZ	Kaimai	1.50	252	P	Pn	01 16 29.5	+1.1
HRRZ	Handcock Road	1.52	229	P	Pn	01 16 30.6	+1.8
PRRZ	Plateau Road	1.54	224	P	Pn	01 16 30.5	+1.5
GRRZ	Galatos Road	1.61	233	P	Pn	01 16 31.9	+2.0
RAHZ	Arahi	1.61	199	P	Pn	01 16 31.7	+1.8
ALRZ	Allen Road	1.61	223	P	Pn	01 16 31.7	+1.8
MTHZ	Maungataniwha	1.62	206	P	Pn	01 16 31.3	+1.1
KNZ	Kokohu	1.63	182	P	Pn	01 16 31.1	+0.9
WPRZ	Whakapapatarin	1.68	228	P	Pn	01 16 32.9	+2.0
WHHZ	Waihua	1.73	193	P	Pn	01 16 33.5	+2.0
KUZ	Kuaotunu	1.74	291	P	Pn	01 16 32.0	+0.3
KUZ	Kuaotunu	1.74	291	P	Pn	01 16 32.0	+0.3
MHGZ	Mahia Peninsul	1.76	176	P	Pn	01 16 32.9	+1.0
MRHZ	Matea Rd	1.78	216	P	Pn	01 16 33.7	+1.4
TOZ	Tahuroa Road	1.81	259	P	Pn	01 16 32.9	+0.3
NMHZ	Naumai	1.85	203	P	Pn	01 16 35.3	+2.0
KUTZ	Kaahu Road	1.87	234	P	Pn	01 16 35.4	+2.0
WHTZ	Whakaora	1.90	227	P	Pn	01 16 36.3	+2.5
ARHZ	Aropaoanui	1.96	197	P	Pn	01 16 36.5	+1.9
TLZ	Tolley Road	1.98	241	P	Pn	01 16 36.4	+1.5
BKZ	Black Stump Fm	2.02	209	Pn	Pn	01 16 35.2	-0.4
BKZ				Sn	Sn	01 16 58.1	-1.8
BKZ	Black Stump Fm	2.02	209	P	Pn	01 16 37.4	+1.8
BKZ	Black Stump Fm	2.02	209	P	Pn	01 16 36.9	+1.3
WATZ	Wairara	2.06	230	P	Pn	01 16 38.1	+2.1
RATZ	Rangitukua	2.14	226	P	Pn	01 16 39.5	+2.4
GRZ	Great Barrier	2.16	301	P	Pn	01 16 37.7	+0.4
RITZ	Rihia Road	2.17	223	P	Pn	01 16 40.1	+2.6
WIAZ	Waiheke Island	2.17	285	P	Pn	01 16 38.1	+0.6
MCHZ	McNeill Hill	2.21	202	P	Pn	01 16 39.7	+1.7
KATZ	Kakaramea	2.26	225	P	Pn	01 16 41.9	+3.1
KWHZ	Kaweka Forest	2.28	207	P	Pn	01 16 40.6	+1.6
ETAZ	East Tamaki Re	2.29	280	P	Pn	01 16 40.5	+1.4
CKHZ	Cape Kidnapper	2.32	193	P	Pn	01 16 40.3	+0.8
TMVZ	Te Maari	2.35	222	P	Pn	01 16 42.2	+2.1
NTVZ	North Tongarir	2.35	223	P	Pn	01 16 42.5	+2.4
MBAZ	Motutapu North	2.36	284	P	Pn	01 16 41.3	+1.3
ETVZ	East Tongariro	2.36	222	P	Pn	01 16 42.3	+2.0
KRVZ	Karewarewa	2.37	224	P	Pn	01 16 43.5	+3.2
OTVZ	Oturere	2.41	222	P	Pn	01 16 42.9	+2.1
NNVZ	North Ngauruho	2.41	223	P	Pn	01 16 43.3	+2.4
WTVZ	West Tongariro	2.41	224	P	Pn	01 16 43.4	+2.5
SNVZ	South Ngauruho	2.44	222	P	Pn	01 16 43.4	+2.2
NGZ	Ngauruhoe	2.45	223	P	Pn	01 16 43.7	+2.2
EPAZ	Eden Park BICE	2.45	281	P	Pn	01 16 43.1	+1.8
HBAZ	Herne Bay Bore	2.47	282	P	Pn	01 16 43.3	+1.8
TWVZ	Taurewa	2.47	227	P	Pn	01 16 44.2	+2.5
BHHZ	Black Hill Sta	2.47	212	P	Pn	01 16 43.3	+1.6
TUVZ	Tukino	2.49	221	P	Pn	01 16 44.4	+2.4
TUVZ				P	Pn	01 16 44.4	+2.4
KAHZ	Kahuranaki	2.49	196	P	Pn	01 16 42.6	+0.7
AWAZ	Awhitu Peninsu	2.50	277	P	Pn	01 16 43.4	+1.5
FWVZ	Far West T-bar	2.53	222	P	Pn	01 16 44.9	+2.2
WHVZ	Whangaehu Hut	2.54	221	P	Pn	01 16 45.0	+2.3
HIZ	Hauiti	2.54	243	Pn	Pn	01 16 44.3	+1.8
HIZ	Hauiti	2.54	243	P	Pn	01 16 44.6	+2.1
HIZ	Hauiti	2.54	243	P	Pn	01 16 44.7	+2.2
DRZ	Dome Shelter	2.54	222	P	Pn	01 16 45.3	+2.5
MOVZ	Moawhango	2.55	217	P	Pn	01 16 44.2	+1.5
WNVZ	Wahianoa	2.56	220	P	Pn	01 16 44.8	+1.8
TRVZ	Turoa	2.57	222	P	Pn	01 16 45.4	+2.3
WTAZ	Waiatarua	2.57	279	P	Pn	01 16 44.8	+1.8
RVAZ	Riverhead Bore	2.60	283	P	Pn	01 16 45.0	+1.6
PKVZ	Pokaka	2.67	224	P	Pn	01 16 47.2	+2.8
MTVZ	Mangateitei	2.67	221	P	Pn	01 16 46.7	+2.4
PXZ	Pawanui	2.72	194	P	Pn	01 16 44.8	-0.2
PNHZ	Pukenui	2.79	205	P	Pn	01 16 46.2	+0.2
WPHZ	Waipukurau	2.85	200	P	Pn	01 16 46.9	+0.1
VRZ	Vera Road	2.92	233	P	Pn	01 16 50.7	+3.1
PRHZ	Porangahau	3.00	196	P	Pn	01 16 48.4	-0.3
TSZ	Takapari Road	3.00	207	P	Pn	01 16 49.0	+0.1
BFZ	Birch Farm	3.48	199		Pn	01 16 54.2	-1.2
BFZ	Birch Farm	3.48	199	P	Pn	01 16 54.2	-1.2
MRZ	Mangatainoka R	3.67	207	Pn	Pn	01 16 57.0	-1.0
SNZO	South Karori	4.57	210		Pn	01 17 08.3	-1.8
SNZO	South Karori	4.57	210	P	Pn	01 17 08.1	-2.0
BHW	Baring Head	4.58	208		Pn	01 17 08.1	-2.3
PLWZ	Palliser	4.59	204		Pn	01 17 07.9	-2.6
TCW	Tory Channel	4.67	214		Pn	01 17 09.7	-1.8
TUWZ	Tuamarina	4.99	215		Pn	01 17 13.8	-2.1
NNZ	Nelson	5.10	220	Pn	Pn	01 17 15.6	-1.9
CMWZ	Cape Campbell	5.13	211		Pn	01 17 16.0	-1.9
TKNZ	Takaka Hill	5.20	224		Pn	01 17 17.5	-1.3
BSWZ	Blackbirch Sta	5.25	213		Pn	01 17 17.1	-2.4
QRZ	Quartz Range	5.31	228	Pn	Pn	01 17 19.2	-1.1
QRZ	Quartz Range	5.31	228	P	Pn	01 17 19.1	-1.2
MRNZ	Matariki Terra	5.56	222	Pn	Pn	01 17 22.0	-1.8
THZ	Tophouse	5.74	219		Pn	01 17 24.2	-2.1
KHZ	Kahutara	5.97	211		Pn	01 17 25.9	-3.3
DSZ	Denniston Nort	6.32	225	Pn	Pn	01 17 31.3	-2.9
GVZ	Greta Valley S	6.63	211	Pn	Pn	01 17 34.6	-3.9
LTZ	Lake Taylor	6.82	216	Pn	Pn	01 17 37.2	-3.8
INZ	Inchbonnie	7.19	220	Pn	Pn	01 17 42.1	-3.9
RPZ	Rata Peaks	8.11	217	P	Pn	01 17 55.5	-3.1
	36nm,0.4s,baz=228,slow=1.6,SNR=36						
RPZ				S	Sn	01 19 21.3	-7.5
	48nm,0.5s,baz=128,slow=22,SNR=17						
RPZ				LR	LR	01 21 35.3	
	comp=Z,267nm,19.3s,baz=84,slow=41						
RPZ	Rata Peaks	8.11	217	P	Pn	01 17 55.6	-3.1
ODZ	Otahua Downs	9.32	213	P	Pn	01 18 11.0	-4.2
JCZ	Jackson Bay	9.52	223	P	Pn	01 18 13.4	-4.6
SYZ	Scrubby Hill	11.15	212	P	Pn	01 18 36.6	-3.5
PYZ	Puysegur Point	12.03	220	P	Pn	01 18 49.2	-2.9
DZM	Mont Dzumac	18.12	324	*e*S	S	01 23 49.2	+15
	46nm,19.5s						
DZM				*e*LR	LR	01 24 46.6	
	comp=Z,243nm,24.8s						
MSVF	Nonsavu	19.59	1	P	Pn	01 20 27.1	-1.3
	2.7nm,0.3s,baz=318,slow=21,SNR=6.0						
MSVF	Nonsavu	19.59	1	P	Pn	01 20 27.9	-0.6
RAR	Rarotonga	25.29	57	LR	LR	01 31 37.2	
	comp=Z,30nm,19.1s,baz=144,slow=37						
STKA	Stephens Creek	30.12	270	P	P	01 22 08.2	+1.1
	4.2nm,0.9s,baz=96,slow=10,SNR=8.1						
STKA				PcP	PcP	01 25 05.6	-1.7
	1.3nm,0.6s,baz=51,slow=4.0,SNR=3.7						
STKA				LR	LR	01 32 40.1	
	comp=Z,64nm,21.8s,baz=196,slow=33						
	4.2nm,0.9s						
TBI	Tubuai	31.39	73	*e*LR	LR	01 30 15.2	
	comp=Z,629nm,31.0s						
TBI				*e*LR	LR	01 30 15.3	
	comp=Z,2μm,27.0s						
TBI	Tubuai	31.39	73	*e*T	T	01 55 38.0	
	19nm,0.3s						
CTA	Charters Tower	32.35	293	P	P	01 22 28.1	+1.3
	2.5nm,0.4s,baz=118,slow=11,SNR=9.5						
	2.5nm,0.4s						
CTAO	Charters Tower	32.35	293	P	P	01 22 28.1	+1.2
CTAO				IAmb	IAmb	01 22 52.2	
	comp=Z,19nm,1.4s						
CTAO	Charters Tower	32.35	293	P	P	01 22 28.8	+2.0
BBOO	Buckleboo	34.21	265	P	P	01 22 43.0	0.0
BBOO				IAmb	IAmb	01 23 40.8	
	comp=Z,23nm,1.6s						
PPT2	Papeete2	34.81	64	*e*LR	LR	01 31 51.5	
	comp=Z,161nm,31.8s						
PPT2				*e*LR	LR	01 31 51.6	
	comp=Z,108nm,30.0s						
DRV	Dumont d'Urvil	36.34	204	P	P	01 23 01.9	+1.1
DRV				pP	pP	01 23 16.6	-0.2
VAH	Vaihoa	37.77	64	*e*T	T	02 03 44.9	
	comp=Z,11nm,0.2s						
COEN	Coen	38.59	298	P	P	01 23 21.6	+1.2
COEN				IAmb	IAmb	01 23 22.4	
	comp=Z,28nm,1.6s						
AS31	Alice Springs	39.82	277	P	P	01 23 31.0	+0.4
ASAR	Alice Springs	39.82	277	P	P	01 23 30.9	+0.3
	comp=Z,4.5nm,0.6s,baz=125,slow=8.1,SNR=32						
ASAR				PcP	PcP	01 25 33.9	-1.7
	comp=Z,2.3nm,0.5s,baz=118,slow=4.0,SNR=10						
	comp=Z,4.5nm,0.6s						
ASAR	Alice Springs	39.82	277	P	P	01 23 30.8	+0.2
VNDA	Vanda	40.81	185	P	P	01 23 39.2	+1.1
	comp=Z,1.0nm,0.8s,baz=6.3,slow=9.4,SNR=2.2						
	comp=Z,1.0nm,0.8s						
FORT	Forrest	41.29	264	P	P	01 23 42.5	-0.2
FORT				IAmb	IAmb	01 23 46.6	
	comp=Z,14nm,0.6s						
WR0	Warramunga Arr	41.30	283	P	P	01 23 42.4	-0.4
WB2	Warramunga Arr	41.45	283	P	P	01 23 44.2	0.0
WB2				IAmb	IAmb	01 23 50.5	
	comp=Z,8.8nm,0.5s						
WRAB	Tennant Creek	41.46	283	P	P	01 23 44.1	-0.1
WRA	Warramunga Arr	41.46	282	P	P	01 23 44.4	+0.2
	comp=Z,5.1nm,0.5s,baz=122,slow=7.2,SNR=63						
WRA				PcP	PcP	01 25 39.9	-1.0
	comp=Z,0.6nm,0.7s,baz=130,slow=3.4,SNR=2.9						
	comp=Z,5.1nm,0.5s						
WRA	Warramunga Arr	41.46	282	P	P	01 23 44.1	-0.1
WB0	Warramunga Arr	41.52	283	P	P	01 23 44.7	+0.1
CCD	Concordia, Ant	45.26	197	P	P	01 24 15.9	+1.4
CCD				pP	pP	01 24 31.9	+0.9
CASY	Casey	47.33	210	P	P	01 24 30.9	+0.6
CASY	Casey	47.33	210	P	P	01 24 30.8	+0.4
CASY				pP	pP	01 24 45.9	-1.0
KNRA	Kununurra	48.25	283	P	P	01 24 38.6	+0.5
MORW	Morawa	51.48	260	P	P	01 25 01.7	-0.9
MBWA	Marble Bar	52.35	271	P	P	01 25 08.2	-0.9
QSPA	South Pole Qui	52.73	180	P	P	01 25 13.6	+2.2
	comp=Z,4.6nm,0.7s,baz=40,slow=0.8,SNR=29						
	comp=Z,4.6nm,0.7s						
QSPA	South Pole Qui	52.73	180	P	P	01 25 13.5	+2.0
QSPA				IAmb	IAmb	01 25 15.2	
	comp=Z,13nm,1.4s						
QSPA	South Pole Qui	52.73	180	P	P	01 25 14.0	+2.5
SIJI	Sorong	56.12	299	LR	LR	01 50 15.7	
	comp=Z,35nm,18.1s,baz=228,slow=37						
KAPI	Kappang	61.77	286	LR	LR	01 55 21.5	
	comp=Z,40nm,18.5s,baz=184,slow=38						
BELA	Belgrano 2	63.33	173	P	P	01 26 26.1	+0.9
BELA				IAmb	IAmb	01 26 27.2	
	comp=Z,7.9nm,0.7s						
TROLL	Troll, Antarti	70.85	182	P	P	01 27 14.0	+1.0
SNAA	Sanae	71.24	180	P	P	01 27 16.4	+1.1
SNAA	Sanae	71.24	180	P	P	01 27 15.6	+0.3
SNAA				IAmb	IAmb	01 29 11.5	
	comp=Z,26nm,1.8s						
VNA3	Neumayer Olymp	71.54	177	P	P	01 27 17.9	+0.8
VNA2	Neumayer--Watz	71.92	178	P	P	01 27 20.5	+1.1
	baz=181,slow=6.0						
H03N3	Juan Fernandez	79.73	124	T	T	02 54 47.7	
	baz=234,slow=72,SNR=24						
H03N2	Juan Fernandez	79.74	124	T	T	02 54 46.4	
	baz=234,slow=72,SNR=16						
H03N1	Juan Fernandez	79.75	124	T	T	02 54 48.3	
	baz=234,slow=72,SNR=19						
PLCA	Paso Flores	80.26	134	P	P	01 28 09.4	+2.0
	comp=Z,3.9nm,0.7s,baz=234,slow=3.7,SNR=10						
	comp=Z,3.9nm,0.7s						
PLCA	Paso Flores	80.26	134	P	P	01 28 09.0	+1.6
PLCA				IAmb	IAmb	01 28 45.8	
	comp=Z,41nm,1.9s						
GO06	Curarrehue	80.48	133	P	P	01 28 07.2	-1.4
JNU	Nakatsue	82.64	322	P	P	01 28 18.5	-1.2
	comp=Z,5.7nm,0.7s,baz=140,slow=7.9,SNR=1.6						
	comp=Z,5.7nm,0.7s						
GSI	Gunungsitoli	82.97	277	P	P	01 28 21.3	-0.6
GSI				IAmb	IAmb	01 28 23.0	
	comp=Z,21nm,0.8s						
BO02	Sierra Bellavi	84.06	130	P	P	01 28 28.6	+1.2
BO02				IAmb	IAmb	01 28 29.3	
	comp=Z,6.8nm,0.8s						
MT01	Popeta	84.39	129	P	P	01 28 30.0	+1.1
KSRS	Korea Array	87.55	323	P	P	01 28 43.8	-0.3
	comp=Z,1.5nm,0.5s,baz=135,slow=3.4,SNR=3.0						
	comp=Z,1.5nm,0.5s						
AC05	El Transito	88.36	126	P	P	01 28 50.8	+2.1
AC05				IAmb	IAmb	01 31 49.0	
	comp=Z,15nm,1.4s						
CMAR	Chiang Mai Arr	92.49	291	P	P	01 29 07.8	0.0
	comp=Z,1.2nm,0.3s,baz=152,slow=3.3,SNR=7.4						
	comp=Z,1.2nm,0.3s						
GO01	Chusmiza	95.26	119	P	P	01 29 20.2	-1.0
YKA	Yellowknife Ar	113.26	28	PKiKP	PKiKP	01 34 31.2	-1.5
	comp=Z,0.4nm,0.6s,baz=258,slow=1.7,SNR=8.3						
MKAR	Makanchi Array	119.43	308	PKP	PKPdf	01 34 44.3	-0.9
	comp=Z,0.2nm,0.5s,baz=196,slow=1.6,SNR=3.2						
BJO1	Bjornoya	141.44	351	*e*PKPdf	PKiKP	01 35 30.7	+2.1
ARA0	ARCESS Array S	144.48	344	*e*	PKPab	01 35 29.2	-0.7
ARCES	ARCESS Array B	144.48	344	PKP	PKPab	01 35 29.4	-0.4
	comp=Z,4.6nm,0.5s,baz=46,slow=2.5,SNR=35						
KTK1	Kautokeino	145.40	344	*e*	PKPdf	01 35 30.9	-2.0
KBZ	Khabaz	145.46	295	PKPbc	PKPdf	01 35 32.1	-1.6
	comp=Z,1.7nm,0.8s,baz=179,slow=4.1,SNR=5.0						
JETT	Jettan, Norway	145.53	346	*e*	PKPab	01 35 35.1	+1.3
TRO	Tromso	145.73	347	*e*	PKPdf	01 35 32.6	-0.9
JMIC	Jan Mayen	146.18	4	*e*	PKPbc	01 35 35.1	-0.2
STEI	Steigen	147.88	348	*e*PKPdf	PKPbc	01 35 38.9	-1.3
LOF	Lofoten	147.97	349	*e*PKPdf	PKiKP	01 35 41.5	-0.7
FAUS	Fauske	148.36	347	*e*PKPdf	PKPbc	01 35 39.6	-1.8
DBIC	Dimbokro	149.33	175	PKPbc	PKPbc	01 35 43.9	-1.7
	comp=Z,4.9nm,0.9s,baz=71,slow=3.0,SNR=3.6						
KONS	Konsvik	149.53	348	*e*PKPdf	PKPbc	01 35 42.2	-2.2
MOR8	Moi Rana	149.60	347	*e*PKPdf	PKPbc	01 35 42.6	-2.0
FINES	FINESS Array B	150.13	333	PKPbc	PKPbc	01 35 44.4	-1.7
	comp=Z,5.3nm,0.6s,baz=42,slow=4.0,SNR=32						
NSS	Namsos	151.53	347	*e*PKPdf	PKPbc	01 35 47.2	-2.0
BRTR	Keskin Array B	151.95	286	PKPbc	PKPbc	01 35 50.0	-1.2
	comp=Z,2.1nm,0.7s,baz=137,slow=4.3,SNR=18						
AKASG	Malin Array Be	153.98	311	PKPab	PKPab	01 36 07.4	-1.3
	comp=Z,4.2nm,0.6s,baz=57,slow=4.5,SNR=15						
DOMB	Dombas	154.34	348	*e*PKPdf	PKPbc	01 35 53.9	-1.7
NC602	NORSAR Array S	155.06	344	*e*PKPdf	PKPdf	01 35 53.8	+5.6
TORD	Torodi Ar. Bea	155.60	189	PKP	PKPdf	01 35 49.4	-1.0
	comp=Z,1.4nm,0.9s,baz=214,slow=0.6,SNR=7.2						
TORD				PKPab	PKPab	01 36 15.9	-0.5
	comp=Z,2.1nm,0.5s,baz=164,slow=3.6,SNR=16						
HOMB	Homborsund	157.95	345	*e*PKPdf	PKPdf	01 35 57.5	+5.5

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*MDD **09** 01:38:47.1±0.4, 36.°18N×1.°55W, h5km±3km, mb_Lg2.5/17, Error ellipse: s-maj=2.9km s-min=2.8km az=63.0*

*CNRM **09** 01:38:48.6, 36.°30N×1.°59W, h30km, ml2.1*

*SFS **09** 01:38:50.5, 36.°24N×1.°53W, h30km, ML2.6/10, MLv2.6/10*

ISC 09 01:38:47.7±1.3**, 36.°23N**±0.°02×**1.°52W**±0.°03**, h21**km±4km**,**
n38, σ1.s18/74**, 1D, Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENIJ	Nijar	0.92	323	S	Sb	01 39 17.0	+0.3
ENIJ				P	Pn	01 39 06.0	+0.6
ENIJ	Nijar	0.92	323	⇓Pg	Pn	01 39 06.0	+0.6
ENIJ				Sg	Sb	01 39 16.9	+0.1
EALB	Alboran	1.26	257	P	Pb	01 39 10.6	-0.1
EALB	Alboran	1.26	257	Pg	Pb	01 39 10.6	-0.1
EALB				Sg	Sb	01 39 26.6	+0.1
EALB				*i* Vmb_Lg		01 39 28.4	
CHAS	Isla Isabel II	1.28	216	S	Sn	01 39 26.4	-0.5
CHAS				P	Pb	01 39 11.2	+0.1
EBER	Berja	1.29	301	Sg	Sb	01 39 29.3	+1.9
EBER				P	Pb	01 39 11.5	+0.2
EBER	Berja	1.29	301	Pg	Pb	01 39 11.3	0.0
EBER				Sg	Sb	01 39 29.4	+2.0
CART	Cartagena	1.41	17	P	Pn	01 39 11.9	-0.3
CART				S	Sn	01 39 28.5	-1.6
CART	Cartagena	1.41	17	S	Sn	01 39 28.2	-2.0
CART				P	Pn	01 39 12.4	+0.3
TLOR	Lorca, Murcia	1.43	355	P	Pb	01 39 13.9	+0.3
TLOR				S	Sn	01 39 30.8	+0.3
WMELI	Melilla	1.48	232	S	Sn	01 39 31.9	+0.1
WMELI				P	Pb	01 39 14.1	-0.4
EMEL	Melilla	1.49	232	Pg	Pn	01 39 13.6	+0.4
EMEL				Sg	Sn	01 39 31.4	-0.7
TAF	Taforalt	1.59	207	P	Pn	01 39 15.4	+0.7
TAF				S	Sb	01 39 36.0	-0.1
EMUR	La Murta	1.62	8	P	Pb	01 39 16.1	-0.8
EMUR				S	Sn	01 39 34.7	-0.7
EMUR	La Murta	1.62	8	Pn	Pn	01 39 15.9	+0.8
EMUR				Sn	Sn	01 39 35.0	-0.3
EMUR				*i* Vmb_Lg		01 39 39.0	
EZAR	Zarzadilla de	1.65	355	Pn	Pb	01 39 16.9	-0.5
EZAR				Sn	Sn	01 39 36.4	+0.3
EZAR				*i* Vmb_Lg		01 39 42.6	
ELGU	Los Guajares,	1.81	291	P	Pn	01 39 18.2	+0.5
ELGU				S	Sn	01 39 39.0	-1.1
ELGU	Los Guajares,	1.81	291	Pn	Pn	01 39 18.1	+0.4
ELGU				Sn	Sn	01 39 38.7	-1.4
ELGU				*i* Vmb_Lg		01 39 45.1	
EQUE	Quentar	1.82	303	Pg	Pb	01 39 20.4	0.0
EQUE				Sn	Sn	01 39 39.8	-0.6
EQUE				*i* Vmb_Lg		01 39 51.7	
ETRV	Los Montesinos	1.88	19	Pn	Pn	01 39 19.7	+1.1
ETRV				Sn	Sn	01 39 41.7	-0.1
ETRV				*i* Vmb_Lg		01 39 44.4	
EQES	Quesada	2.00	322	Pg	Pb	01 39 23.4	0.0
EQES				Sn	Sn	01 39 46.3	+1.5
EQES				*i* Vmb_Lg		01 39 50.3	
JBK	JBK	2.08	205	P	Pb	01 39 23.6	-1.2
JBK				S	Sb	01 39 48.7	-1.5
ETOB	Tobarra	2.41	360	P	Pb	01 39 28.5	-1.9
ETOB				S	Sn	01 39 54.1	-0.7
ETOB	Tobarra	2.41	360	Pn	Pb	01 39 28.2	-2.2
ETOB				Sn	Sn	01 39 56.3	+1.5
ETOB				*i* Vmb_Lg		01 39 58.8	
AFON	Font Roja	2.55	18	Pn	Pn	01 39 28.6	+0.6
AFON				Sn	Sn	01 39 60.0	+1.6
AFON				*i* Vmb_Lg		01 40 04.0	
AKLM	AKL	2.57	229	P	Pn	01 39 29.8	+1.6
AKLM				S	Sn	01 39 58.9	0.0
EMIJ	Mijas	2.64	278	S	Sn	01 39 58.4	-2.2
EMIJ				P	Pn	01 39 28.7	-0.5
EMIJ	Mijas	2.64	278	Pn	Pn	01 39 29.1	-0.1
EMIJ				Sn	Sn	01 39 57.8	-2.8
EMIJ				*i* Vmb_Lg		01 40 01.1	
EBEN2	Beniarda presa	2.66	23	Pn	Pn	01 39 30.4	+1.1
EBEN2				Sn	Sn	01 39 59.2	-1.7
EBEN2				*i* Vmb_Lg		01 40 03.8	
EVIV	Cofrentes, Val	3.04	6	Pn	Pn	01 39 36.4	+1.7
EVIV				Sn	Sn	01 40 11.9	+1.4
EVIV				*i* Vmb_Lg		01 40 19.8	
EADA	Adamuz	3.11	309	S	Sn	01 40 10.3	-1.8
EADA	Adamuz	3.11	309	Pn	Pn	01 39 35.8	+0.3
EADA				Sn	Sn	01 40 12.3	+0.1
EADA				*i* Vmb_Lg		01 40 28.6	
EIBI	Ibiza	3.60	38	Pn	Pn	01 39 43.8	+1.6
EIBI				Sn	Sn	01 40 21.8	-2.3
EIBI				*i* Vmb_Lg		01 40 24.9	
ECAB	El Cabril	3.62	302	Pn	Pn	01 39 42.8	+0.3
ECAB				Sn	Sn	01 40 23.6	-0.9
ECAB				*i* Vmb_Lg		01 40 37.0	
MDT	Midelt	4.26	218	P	Pn	01 39 52.5	+1.1
MDT				S	Sn	01 40 41.5	+1.0
MD31	MD31	4.29	219	P	Pn	01 39 53.6	+1.7
MD31				S	Sn	01 40 41.7	+0.4
EBAD	Badajoz	5.04	302	Pn	Pn	01 40 03.2	+1.1
EBAD				Sn	Sn	01 40 57.3	-2.3
EBAD				*i* Vmb_Lg		01 41 04.0	
PVAQ	Vaqueiros	5.11	285	P	Pn	01 40 02.1	-0.9

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PVAQ                                  S       Sn       01 40 59.6  -1.7
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*IDC **09** 01:45:47.5±1.9, 8°.04S×125°.35E, h0km, mb3.4/1, mbtmp3.5/3, ML3.4/2, Error ellipse: s-maj=186.2km s-min=32.0km az=60.0*

*DJA **09** 01:45:49.2±1.9, 8°S±8°×12°5E±1°3, h10km, M3.3/3, MLv3.3/3*

ISC 09 01:45:48.9±1.6**, 8°.4S**±0°.2×**125°.3E**±0°.2**, h10**km**, n4,** σ**2ˢ93**/6**,** **Timor region**

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Code  Station Name          Δ°    AZ°  Phase ID         Time        Res
                                       Op      ISC      h  m  s     ISC
SOEI  Soe                    1.70 215  P       Pn       01 46 18.5  -0.3
WRA   Warramunga Arr        14.50 144  Pn      Pn       01 49 16.5  +2.2
      0.2nm,0.3s,baz=318,slow=13,SNR=12
WRA                                    Sn      Sn       01 51 51.3  -4.0
      0.1nm,0.3s,baz=321,slow=24,SNR=2.1
      1.1nm,0.7s
ASAR  Alice Springs         17.34 152  P       P        01 49 54.3  +1.7
      0.1nm,0.3s,baz=332,slow=12,SNR=8.2
ASAR                                   S       Sn       01 53 03.7  -0.7
      0.5nm,0.8s,baz=320,slow=23,SNR=2.9
      0.8nm,0.9s
MKAR  Makanchi Array        66.88 329  P       P        01 56 40.1  -1.1
      0.2nm,0.5s,baz=120,slow=7.3,SNR=4.6
      0.2nm,0.5s
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*BUC **09** 01:50:05.7±0.2, 45°.67N×26°.59E, h140km±2km, ml3.5/46, Error ellipse: s-maj=1.6km s-min=1.5km az=165.0*

*SOF **09** 01:50:05.9, 45°.79N×26°.51E, h80km, MD3.2*

*MCSM **09** 01:50:05.2±0.8, 46°N±8°×2°7E±°, h142km±5km, ML3.6*

ISC 09 01:50:04.8±1.3**, 45°.68N**±0°.03×**26°.59E**±0°.03**, h149**km±6km**,** **n90,** σ**0ˢ63**/142**, 66C-45D, Romania**

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Code  Station Name          Δ°    AZ°  Phase ID         Time        Res
                                       Op      ISC      h  m  s     ISC
BISRR Bisoca                 0.16 148  ⇑P      Pn       01 50 25.2  +0.1
BISRR                                  ⇓S      Sn       01 50 40.4   0.0
PLOR  Plostina               0.18  13  ⇑P      Pn       01 50 25.1  +0.1
PLOR                                   ⇑S      Sn       01 50 39.6  -0.9
PLOR  Plostina               0.18  13  P       Pn       01 50 25.1  +0.1
VRI   Vrincioaia             0.21  27  ⇑P      Pn       01 50 25.3  +0.2
VRI                                    ⇓S      Sn       01 50 40.2  -0.4
VRI   Vrincioaia             0.21  27  P       Pn       01 50 25.2  +0.2
VRI                                    S       Sn       01 50 41.0  +0.4
COVR  Voineasa-Covas         0.32 301  ⇑P      Pn       01 50 25.6  +0.2
COVR                                   ⇑S      Sn       01 50 39.7  -1.3
NEHR  Nehoiu                 0.33 220  ⇑P      Pn       01 50 26.0  +0.6
NEHR                                   ⇑S      Sn       01 50 40.9  -0.2
ODBI  Odobesti               0.34  75  ⇑P      Pn       01 50 26.5  +1.1
ODBI                                   ⇓S      Sn       01 50 41.1  +0.1
GRER                         0.40 138  ⇓P      Pn       01 50 25.5  -0.2
GRER                                   ⇓S      Sn       01 50 41.7  +0.3
PANC  Panciu                 0.43  64  ⇓P      Pn       01 50 26.4  +0.6
PANC                                   ⇑S      Sn       01 50 41.8  +0.1
MLR   Muntele Rosu           0.49 248  ⇑P      Pn       01 50 26.5  +0.3
MLR                                    ⇑S      Sn       01 50 42.2  -0.3
MLR   Muntele Rosu           0.49 248  P       Pn       01 50 26.4  +0.2
MLR                                    S       Sn       01 50 43.0  +0.5
ISR   Istrita                0.56 184  ⇓P      Pn       01 50 25.2  -1.3
ISR                                    ⇑S      Sn       01 50 41.9  -1.1
OZUR                         0.70 307  ⇑P      Pn       01 50 27.1  -0.2
OZUR                                   ⇑S      Sn       01 50 43.4  -1.0
TUDR                         0.76  96  ⇑P      Pn       01 50 28.3  +0.6
TUDR                                   ⇓S      Sn       01 50 44.8  -0.1
PGOR  Pogoanele              0.82 160  ⇓S      Sn       01 50 45.7  -0.1
SLCR  Slobozia Conac         0.83  96  ⇑P      Pn       01 50 28.5  +0.3
SLCR                                   ⇓S      Sn       01 50 45.4  -0.5
TESR  Tescani                0.83   3  ⇑P      Pn       01 50 28.0  -0.2
TESR                                   ⇑S      Sn       01 50 44.8  -1.3
IZVR  Izvoarele              0.84  99  ⇑P      Pn       01 50 28.5  +0.3
IZVR                                   ⇓S      Sn       01 50 45.1  -0.8
PLAR  PLOIESTI               0.86 208  ⇑S      Sn       01 50 46.8  +0.4
SCHL  Schela                 0.89 101  ⇑P      Pn       01 50 29.1  +0.5
SCHL                                   ⇑S      Sn       01 50 46.5  -0.1
DOPR  Dopca                  0.89 289  ⇑P      Pn       01 50 28.9  +0.2
BIR   Birlad                 0.93  51  ⇑P      Pn       01 50 29.4  +0.5
BIR                                    ⇓S      Sn       01 50 46.2  -1.1
SCTR  Scanteiesti            0.98  90  ⇓P      Pn       01 50 30.0  +0.7
SCTR                                   ⇑S      Sn       01 50 47.9  -0.2
TATR  Tatarca                1.03  94  ⇓P      Pn       01 50 30.3  +0.6
TATR                                   ⇓S      Sn       01 50 48.6  -0.1
SULR                         1.03 194  ⇓P      Pn       01 50 30.5  +0.7
SULR                                   ⇓S      Sn       01 50 48.7   0.0
VOIR                         1.11 258  ⇑P      Pn       01 50 30.5  -0.1
VOIR                                   ⇓S      Sn       01 50 50.8  +0.6
VOIR                         1.11 258  P       Pn       01 50 30.5  -0.1
VOIR                                   S       Sn       01 50 49.5  -0.7
GIUM  Giurgiulesti           1.15  99  ⇑P      Pn       01 50 31.7  +0.9
GIUM                                   ⇑S      Sn       01 50 50.4  -0.3
AMRR  Amara                  1.19 154  ⇑P      Pn       01 50 31.7  +0.4
AMRR                                   ⇑S      Sn       01 50 51.6  +0.3
CFR   Carcaliu               1.20 114  ⇑P      Pn       01 50 31.5  +0.2
CFR                                    ⇓S      Sn       01 50 51.9  +0.5
LEHL  Lehliu                 1.22 172  ⇑P      Pn       01 50 32.2  +0.7
LEHL                                   ⇓S      Sn       01 50 52.1  +0.3
VASR  Vaslui                 1.27  40  ⇑P      Pn       01 50 32.5  +0.5
VASR                                   ⇓S      Sn       01 50 52.0  -0.8
INCR  INCERC-Sediu C         1.28 194  ⇑P      Pn       01 50 32.5  +0.4
INCR                                   ⇓S      Sn       01 50 53.0  +0.2
GIRR  Girov                  1.28 357  ⇓P      Pn       01 50 32.2  +0.2
BIZ   Bicaz                  1.30 345  ⇑P      Pn       01 50 32.9  +0.6
BIZ                                    ⇓S      Sn       01 50 53.6  +0.1
HARR  Harsova                1.37 136  ⇓P      Pn       01 50 33.4  +0.4
BUC1  Bucharest              1.39 197  ⇑P      Pn       01 50 33.2   0.0
BUC1                                   ⇑S      Sn       01 50 54.6  -0.3
LEOM  Leova                  1.40  55  ⇑P      Pn       01 50 33.8  +0.6
LEOM                                   ⇓S      Sn       01 50 54.5  -0.5
ARR   Arges                  1.41 258  ⇑P      Pn       01 50 34.5  +1.0
ARR                                    ⇑S      Sn       01 50 55.1  -0.3
STFAR Stefanesti-Arg         1.41 235  ⇑P      Pn       01 50 34.4  +0.9
RASA  Rasa                   1.52 165  ⇓P      Pn       01 50 34.9  +0.4
RASA                                   ⇑S      Sn       01 50 57.4  +0.2
SGRR  Singureni              1.52 197  ⇓P      Pn       01 50 35.1  +0.5
SGRR                                   ⇓S      Sn       01 50 57.1  -0.1
TPGR  Topolog                1.53 122  ⇑P      Pn       01 50 34.9  +0.2
TPGR                                   ⇑S      Sn       01 50 56.4  -1.1
TLBR  Topalu                 1.53 137  ⇓P      Pn       01 50 35.2  +0.5
TLBR                                   ⇓S      Sn       01 50 56.6  -0.8
HUMR  Humele                 1.62 225  ⇑P      Pn       01 50 35.7   0.0
HUMR                                   ⇑S      Sn       01 50 57.9  -1.3
HUMR  Humele                 1.62 225  P       Pn       01 50 35.7   0.0
TLCR                         1.64 107  ⇓P      Pn       01 50 36.5  +0.7
TLCR                                   ⇓S      Sn       01 50 59.0  -0.6
CVDA  Cernavoda              1.69 142  ⇓P      Pn       01 50 37.0  +0.6
CVDA                                   ⇑S      Sn       01 50 59.5  -1.0
TIRR  Tirgusor               1.78 133  ⇓P      Pn       01 50 37.8  +0.4
TIRR                                   ⇓S      Sn       01 51 01.0  -1.2
ICOR  Ion Corvin             1.78 151  ⇑P      Pn       01 50 38.2  +0.7
ICOR                                   ⇑S      Sn       01 51 01.4  -1.0
COPA  Copaceanca             1.83 213  ⇑P      Pn       01 50 37.8  -0.2
COPA                                   ⇓S      Sn       01 51 02.4  -0.9
MILM  Milestii Mici          1.98  50  ⇑iP     Pn       01 50 40.0  +0.4
      4.0nm,0.1s
MILM                                   eS      Sn       01 51 05.0  -1.3
      20nm,0.1s
MFTR  Murfatlar              1.99 138  ⇓P      Pn       01 50 40.2  +0.5
MFTR                                   ⇓S      Sn       01 51 05.3  -1.2
LOT   Lotru                  2.00 264  ⇑P      Pn       01 50 40.5  +0.5
LOT                                    ⇑S      Sn       01 51 06.5  -0.4
KIS   Kishinev               2.03  49  eS      Sn       01 51 06.0  -1.4
      30nm,0.2s
KIS   Kishinev               2.03  49  ⇑S      Sn       01 51 06.5  -0.9
RAZG  Razgrad                2.12 182  ⇑P      Pn       01 50 41.5  +0.2
RAZG                                   ⇓S      Sn       01 51 08.1  -1.2
BURAR Bucovina Array         2.15 334  ⇑P      Pn       01 50 43.7  +1.9
BURAR                                  ⇑S      Sn       01 51 11.5  +1.2
VLAD  Vladila                2.29 224  ⇓P      Pn       01 50 43.3   0.0
VLAD                                   ⇓S      Sn       01 51 11.8  -1.1
PSN   Preselentsi            2.30 150  i P     Pn       01 50 44.3  +0.9
MANR  Mangalia               2.34 142  ⇑P      Pn       01 50 44.7  +0.7
PURM  Purcari                2.44  68  ⇑P      Pn       01 50 45.9  +0.8
PURM                                   ⇓S      Sn       01 51 16.0  -0.1
SZH   Strazhica              2.46 191  i P     Pn       01 50 45.6  +0.2
PRD   Provadia               2.55 167  i P     Pn       01 50 47.6  +1.1
MARR  Marisel-Cluj           2.61 294  ⇑P      Pn       01 50 48.2  +0.8
PLVB  Pleven                 2.69 212  ⇑P      Pn       01 50 48.6  +0.3
GZR   Gura Zlata             2.70 265  ⇑P      Pn       01 50 48.0  -0.4
GZR                                    ⇑S      Sn       01 51 21.3  -0.7
SORM  Soroca                 2.74  26  ⇓P      Pn       01 50 48.9  +0.1
SORM  Soroca                 2.74  26  P       Pn       01 50 48.7  -0.1
KMPD  K-Podol'skiy           2.89 358  P       Pn       01 50 50.5  -0.1
DRGR                         2.91 294  ⇑P      Pn       01 50 51.3  +0.2
BZS   Buzias                 3.49 271  ⇑P      Pn       01 50 58.9  +0.5
MDVR  Moldovita              3.56 257  ⇓P      Pn       01 50 59.8  +0.4
MDVR  Moldovita              3.56 257  P       Pn       01 50 59.7  +0.4
LUBAR Lubar, Ukraine         4.32  10  P       Pn       01 51 09.4  +0.3
AK05  Malin Array Si         5.24  19  P       Pn       01 51 21.5  +0.2
AK09  Malin Array Si         5.26  19  P       Pn       01 51 21.7  +0.2
AK08  Malin Array Si         5.27  19  P       Pn       01 51 22.1  +0.5
AK16  Malin Array Si         5.27  18  P       Pn       01 51 21.8  +0.1
AK17  Malin Array Si         5.27  17  P       Pn       01 51 21.7   0.0
AK11  Malin Array Si         5.29  18  P       Pn       01 51 22.1  +0.2
AK18  Malin Array Si         5.31  17  P       Pn       01 51 22.1  -0.1
AK20  Malin Array Si         5.32  17  P       Pn       01 51 22.4  +0.1
AKBB  Malin Array Si         5.32  18  P       Pn       01 51 22.5  +0.1
AK04  Malin Array Si         5.33  18  P       Pn       01 51 22.9  +0.4
AK22  Malin Array Si         5.35  17  P       Pn       01 51 22.6  -0.1
AK21  Malin Array Si         5.36  17  P       Pn       01 51 22.9  +0.1
AK23  Malin Array Si         5.36  17  P       Pn       01 51 22.9   0.0
NACGM Naroch                 9.23   1  eP      Pn       01 52 15.3  +0.8
      comp=Z,5.0nm,0.7s,baz=181
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*TIR **09** 01:53:25.6, 42°.08N×20°.66E, h6km±2km, Md2.5, Ml1.9*

*SKO **09** 01:53:26.7, 42°.11N×20°.56E, h16km*

*BEO **09** 01:53:27.8±0.5, 42°.00N×20°.53E, h0km, ML1.9/8*

*PDG **09** 01:53:27.2±0.1, 42°.12N×20°.59E, h7km, ML2.4/10, Error ellipse: s-maj=0.5km s-min=0.3km az=90.0*

ISC 09 01:53:27.2±1.2**, 42°.08N**±0°.02×**20°.55E**±0°.02**, h1**km±10km**,** **n39,** σ**1ˢ44**/71**, 7C-4D, Northwestern Balkan Peninsula**

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Code  Station Name          Δ°    AZ°  Phase ID         Time        Res
                                       Op      ISC      h  m  s     ISC
PHP   Peshkopia              0.40 192  P       Pg       01 53 34.0  -0.8
      baz=203
PHP                                    S       Sg       01 53 39.8  -0.3
      baz=203
PHP                                    AMP
      comp=E,0.5nm,0.2s,baz=203
BCI   Bajram Curri           0.46 309  P       Pg       01 53 36.2  +0.2
      baz=304
BCI                                    S       Sb       01 53 44.2  -1.3
      baz=304
BCI                                    AMP
      comp=E,2.3nm,0.2s,baz=304
SKO   Skopje                 0.67  99  i Pg    Pg       01 53 39.7  -0.3
SKO                                    i Sg    Sb       01 53 50.6  -0.9
SKO                                    eLg     Lg       01 53 51.4
      comp=N,12nm,0.3s
PVY   Plav                   0.68 320  ⇑iPg    Pg       01 53 39.6  -0.6
PVY                                    i Sg    Sg       01 53 49.7  +0.7
TIR   Tirane                 0.89 215  P       Pg       01 53 44.5  +0.2
      baz=220
TIR                                    S       Sb       01 53 58.0  +0.2
      baz=220
TIR                                    AMP
      comp=N,0.1nm,0.4s,baz=220
TIR   Tirane                 0.89 215  i Pg    Pg       01 53 45.2  +0.9
TIR                                    i Sg    Sb       01 53 58.9  +1.0
IVA   Berane                 0.93 329  ⇑iPg    Pg       01 53 44.4  -0.6
IVA                                    i Sg    Sb       01 53 58.2  -0.9
ULC   Ulcinj                 0.98 264  i Pg    Pg       01 53 45.9   0.0
DRME  Dracevica, Mon         1.02 277  ⇓iPg    Pg       01 53 46.5  -0.3
DRME                                   i Sg    Sn       01 54 02.9  -0.7
PDG   Podgorica              1.02 291  ePg     Pg       01 53 45.8  -1.0
PDG                                    eSg     Sg       01 53 59.6  -0.5
PDG   Podgorica              1.02 291  i Pg    Pg       01 53 46.1  -0.7
PDG                                    i Sg    Sn       01 54 02.6  -1.0
PDG   Podgorica              1.02 291  ⇑iPg    Pg       01 53 45.9  -0.9
PDG                                    i Sg    Sn       01 54 02.8  -0.9
KOME  Kolasin                1.09 316  ⇑iPg    Pg       01 53 47.5  -0.5
KOME                                   i Sg    Sn       01 54 04.0  -1.4
BARS  Barje                  1.19  51  ePg     Pn       01 53 51.8  +0.8
BARS                                   eSg     Sn       01 54 07.4  -0.5
BARS  Barje                  1.19  51  i Pg    Pn       01 53 50.6  -0.4
BARS                                   i Sg    Sn       01 54 08.2  +0.4
PRVS  Prvonek                1.21  69  ePg     Pn       01 53 50.2  -1.1
PRVS                                   eSg     Sn       01 54 07.0  -1.3
SELS  Selova                 1.22  20  ePg     Pn       01 53 50.7  -0.7
SELS                                   eSg     Sn       01 54 09.6  +1.1
SJES  Sjenica                1.26 340  ePg     Pn       01 53 52.3  +0.3
SJES                                   eSg     Sn       01 54 10.6  +1.0
STIP  Stip                   1.28 107  i Pg    Pg       01 53 53.4  +1.7
STIP                                   i Sg    Sn       01 54 14.0  +4.0
STIP                                   eLg     Lg       01 54 16.8
      comp=N,7.0nm,0.4s
CEME  Cevo                   1.30 292  ⇓iPg    Pn       01 53 51.4  -1.1
CEME                                   i Sg    Sn       01 54 11.9  +1.3
NKME  Niksic                 1.37 301  ⇑iPg    Pn       01 53 52.7  -0.8
NKME                                   i Sg    Sg       01 54 14.2  +3.0
FNA   Florina                1.43 154  P       Pn       01 53 52.7  -1.6
      baz=156
FNA                                    S       Sb       01 54 13.3  -0.2
      baz=156
FNA   Florina                1.43 154  i Pg    Pn       01 53 53.5  -0.8
PLE   Pljevlja               1.52 326  ⇑iPg    Pn       01 53 53.1  -2.5
PLE                                    i Sg    Sg       01 54 17.9  +2.0
IVAS  Ivanjica               1.53 349  ePg     Pb       01 53 55.2  -1.1
IVAS                                   eSg     Sg       01 54 17.9  +1.7
HCY   Herceg Novi            1.57 284  ⇑iPn    Pn       01 53 56.2   0.0
HCY                                    i Sn    Sg       01 54 20.5  +2.9
UPM   Unac-Piva              1.66 313  ⇓iPn    Pb       01 53 57.7  -0.9
BRY   Bratogost              1.70 300  ⇓iPn    Pn       01 53 58.3  +0.2
BRY                                    i Sn    Sg       01 54 23.3  +1.5
TREB  Trebinje               1.75 292  eSg     Sb       01 54 22.8  +0.2
RUDO  Rudo                   1.77 331  eSg     Sg       01 54 25.9  +1.9
DBRK  Dubrovnik              1.88 289  ePn     Pb       01 54 01.1  -1.2
DBRK                                   Sn      Sg       01 54 29.6  +2.2
LSK   Leskovik               1.93 179  P       Pb       01 54 02.2  -0.9
      baz=182
LSK                                    S       Sg       01 54 29.4  +0.4
      baz=182
STON  Ston                   2.25 292  ePn     Pb       01 54 08.0  -0.7
STON                                   Sn      Sg       01 54 38.6  -0.9
IGT   Igoumenitsa            2.55 184  P       Pb       01 54 11.9  -1.8
      baz=186
LSTV  Lastovo                2.80 286  Sn      Sb       01 54 50.6  -2.0
MAKA  Makarska               2.87 296  ePn     Pn       01 54 15.6  +1.6
MAKA                                   Sn      Sb       01 54 52.9  -1.8
RICI  Ricice                 2.89 301  ePn     Pb       01 54 17.7  -1.8
RICI                                   Sn      Sb       01 54 54.9  -0.4
HVAR  Hvar                   3.22 291  ePn     Pn       01 54 20.4  +1.6
HVAR                                   Sn      Sn       01 54 59.9  +2.1
DUGI  Dugi Otok              4.46 297  ePn     Pn       01 54 38.3  +2.5
DUGI                                   Sn      Sn       01 55 32.4  +4.0
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*SOME **09** 02:00:01.9, 40°.38N×76°.33E, h10km*

*IDC **09** 02:00:02.3±1.5, 40°.43N×76°.60E, h0km, mb3.4/4, mbtmp3.5/7, ML3.1/3, Error ellipse: s-maj=21.7km s-min=18.1km az=175.0*

*KRNET **09** 02:00:02.5±0.1, 40°.37N×76°.49E, h18km, mb3.8*

*NNC **09** 02:00:05.4±0.6, 40°.46N×76°.39E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=4.7km s-min=3.1km az=161.0*

*MOS **09** 02:00:06.0±1.8, 40°.40N×76°.24E, h15km, mb4.8/1, Error ellipse: s-maj=10.5km s-min=4.6km az=88.6*

ISC 09 02:00:05.0±1.6**, 40°.44N**±0°.04×**76°.37E**±0°.03**, h2**km±11km**,** **n140,** σ**1ˢ40**/180**, mb3.5**/4**, 33C-27D, Kyrgyzstan-Xinjiang border region**

```
Code  Station Name          Δ°    AZ°  Phase ID         Time        Res
                                       Op      ISC      h  m  s     ISC
KSH   Kashi                  0.97 198  Pg      Pn       02 00 26.0  +0.2
KSH                                    Sg      Sn       02 00 44.1  +3.8
KSH                                    pmax    pmax
      comp=Z,460nm,0.7s
KSH                                    smax    smax
      comp=N,720nm,1.1s
KSH                                    smax    smax
      comp=E,890nm,0.7s
NRN   Naryn                  1.03 344  ⇓eP     Pb       02 00 23.9  -1.9
      baz=39
NRN                                    ⇓iS     Sb       02 00 39.3  -0.5
      baz=39
NRN   Naryn                  1.03 344  i PG    Pb       02 00 23.9  -1.9
NRN                                    i S     Sb       02 00 39.3  -0.5
KDJ   Kajisay                1.79  20  ⇑iP     Pn       02 00 36.1  -1.0
      baz=17
KDJ                                    ⇑iS     Sn       02 01 01.1  +0.5
      baz=17
KDJ   Kajisay                1.79  20  i PN    Pn       02 00 36.1  -1.0
KDJ                                    i S     Sn       02 01 01.1  +0.5
ULHL  Ulahol                 1.80 357  P       Pn       02 00 38.0  +0.7
      SNR=127
ULHL  Ulahol                 1.80 357  ⇑eP     Pn       02 00 37.5  +0.2
      baz=54
ULHL                                   ⇑iS     Sb       02 01 02.7  +0.7
      baz=54
ULHL  Ulahol                 1.80 357  ePN     Pn       02 00 37.5  +0.2
ULHL                                   i S     Sb       02 01 02.7  +0.7
BOOM  Boomskoye usch         2.07 351  ⇑iP     Pn       02 00 41.5  +0.5
      baz=49
BOOM                                   ⇑iS     Sb       02 01 09.8  +0.1
      baz=49
BOOM  Boomskoye usch         2.07 351  i PN    Pn       02 00 41.5  +0.5
BOOM                                   i S     Sb       02 01 09.8  +0.1
ARLS  Aral                   2.10 313  ⇓iP     Pn       02 00 42.1  +0.8
      baz=13
ARLS                                   ⇓iS     Sb       02 01 11.2  +0.8
      baz=13
ARLS  Aral                   2.10 313  i PN    Pn       02 00 42.1  +0.8
ARLS                                   i S     Sb       02 01 11.2  +0.8
UCH   Uchtor                 2.27 322  P       Pn       02 00 46.4  +2.5
      SNR=34
UCH   Uchtor                 2.27 322  ⇑iP     Pn       02 00 44.7  +0.8
      baz=22
UCH                                    ⇑iS     Sb       02 01 15.2  -0.4
      baz=22
UCH   Uchtor                 2.27 322  i PN    Pn       02 00 44.7  +0.8
UCH                                    i S     Sb       02 01 15.2  -0.4
KBK   Karagaybulak           2.46 335  P       Pb       02 00 50.2  +0.2
      SNR=110
KBK   Karagaybulak           2.46 335  ⇓iP     Pn       02 00 47.0  +0.7
      baz=34
KBK                                    ⇓iS     Sn       02 01 19.5  +2.6
      baz=34
KBK   Karagaybulak           2.46 335  i PN    Pn       02 00 47.0  +0.7
KBK                                    i S     Sn       02 01 19.5  +2.6
ANVS  Anan'yevo              2.53  22  ⇑iP     Pn       02 00 47.4  +0.1
      baz=20
ANVS                                   ⇑iS     Sn       02 01 19.7  +0.9
      baz=20
TKM2  Tokmak 2               2.54 347  P       Pn       02 00 49.5  +1.9
      SNR=83
TKM2  Tokmak 2               2.54 347  ⇓Pn     Pn       02 00 49.4  +1.9
      comp=E,39nm,0.4s
TKM2                                   ⇓Lg     Lg       02 01 26.2
      comp=E,166nm,0.6s
TKM2  Tokmak 2               2.54 347  ⇑iP     Pn       02 00 48.0  +0.5
      baz=45
TKM2                                   ⇑iS     Sn       02 01 21.5  +2.4
      baz=45
TKM2  Tokmak 2               2.54 347  i PN    Pn       02 00 48.0  +0.5
TKM2                                   i S     Sn       02 01 21.5  +2.4
PRZ   Przheval'sk            2.54  36  ⇑iP     Pn       02 00 47.4  -0.1
      baz=33
PRZ                                    ⇑iS     Sn       02 01 19.4  +0.3
      baz=33
IZV   Izvestkoviy            2.60   4  Pg      Pb       02 00 52.1  -0.3
      comp=E,38nm,0.6s
IZV                                    Lg      Lg       02 01 28.9
      comp=E,204nm,0.8s
IZV   Izvestkoviy            2.60   4  ePg     Pb       02 00 52.3  -0.1
      comp=E,38nm,0.2s
IZV                                    eLg     Lg       02 01 28.8
      comp=E,204nm,0.8s
AAK   Ala-Archa              2.61 328  P       Pb       02 00 52.5   0.0
      SNR=74
AAK   Ala-Archa              2.61 328  Pn      Pn       02 00 50.1  +1.8
      comp=E,5.5nm,0.3s,baz=147,slow=11,SNR=93
AAK                                    Lg      Lg       02 01 27.5
      comp=E,7.4nm,0.3s,baz=5.6,slow=23,SNR=8.4
      comp=E,52nm,0.6s
AAK   Ala-Archa              2.61 328  ⇑iP     Pn       02 00 49.0  +0.7
      baz=27
AAK                                    ⇑iS     Sn       02 01 23.4  +2.8
      baz=27
AAK   Ala-Archa              2.61 328  i PN    Pn       02 00 49.0  +0.7
AAK                                    i S     Sn       02 01 23.4  +2.8
TNSS  Tian-Shan              2.63   9  Pg      Pb       02 00 52.8  -0.3
      comp=E,50nm,0.3s
TNSS                                   Lg      Lg       02 01 29.8
      comp=E,76nm,0.6s
TNSS  Tian-Shan              2.63   9  i Pn    Pn       02 00 50.1  +1.3
      baz=7.3
TNSS                                   i Pg    Pb       02 00 53.5  +0.4
      baz=7.3
TNSS  Tian-Shan              2.63   9  ePg     Pb       02 00 52.8  -0.3
      comp=E,50nm,0.2s
TNSS                                   eLg     Lg       02 01 29.8
      comp=E,70nm,0.3s
TNSS  Tian-Shan              2.63   9  i PN    Pn       02 00 50.1  +1.3
AML   Almayashu              2.63 311  P       Pn       02 00 49.8  +0.9
      SNR=24
AML   Almayashu              2.63 311  ⇑Pn     Pn       02 00 49.2  +0.4
      comp=E,9.0nm,0.7s
AML                                    ⇑Lg     Lg       02 01 28.9
      comp=E,18nm,0.7s
AML   Almayashu              2.63 311  ⇓iP     Pn       02 00 49.5  +0.7
      baz=11
AML                                    ⇓iS     Sn       02 01 24.3  +2.8
      baz=11
AML   Almayashu              2.63 311  i PN    Pn       02 00 49.5  +0.7
AML                                    i S     Sn       02 01 24.3  +2.8
MTBS  Maitube                2.69   1  Pg      Pb       02 00 53.6  -0.3
      comp=E,43nm,0.6s
MTBS                                   Lg      Lg       02 01 30.4
      comp=E,74nm,0.5s
MTBS  Maitube                2.69   1  ePg     Pb       02 00 53.3  -0.6
      comp=E,16nm,0.2s
MTBS                                   eLg     Lg       02 01 30.4
      comp=E,110nm,0.2s
FRU1  Bishkek                2.70 332  ⇓iP     Pn       02 00 50.8  +1.3
      baz=31
FRU1                                   ⇓iS     Sn       02 01 25.8  +3.0
      baz=31
FRU1  Bishkek                2.70 332  i PN    Pn       02 00 50.8  +1.3
FRU1                                   i S     Sn       02 01 25.8  +3.0
OHH   Osh                    2.74 273  ⇑iP     Pn       02 00 50.6  +0.6
      baz=74
OHH                                    ⇑iS     Sn       02 01 25.9  +2.2
      baz=74
MDOK  Medeo                  2.77  10  ⇑Pn     Pn       02 00 51.9  +1.4
      comp=E,76nm,0.5s
MDOK                                   Pg      Pb       02 00 55.5  +0.2
      comp=E,65nm,0.4s
MDOK                                   Lg      Lg       02 01 32.9
      comp=E,140nm,0.5s
MDOK                                   ⇑Lg     Lg       02 01 33.2
      comp=E,155nm,0.6s
MDOK  Medeo                  2.77  10  i Pn    Pn       02 00 52.0  +1.5
      baz=8.4
MDOK                                   i Pg    Pb       02 00 55.9  +0.6
      baz=8.4
MDOK  Medeo                  2.77  10  ePg     Pb       02 00 54.7  -0.5
      comp=E,66nm,0.2s
MDOK                                   eLg     Lg       02 01 32.9
      comp=E,198nm,0.3s
MDOK  Medeo                  2.77  10  PN      Pn       02 00 51.9  +1.4
MDOK                                   LG      Lg       02 01 33.2
AAA   Alma-Ata               2.79   8  Pg      Pb       02 00 56.3  +0.6
      comp=E,73nm,0.4s
AAA                                    Lg      Lg       02 01 35.6
      comp=E,328nm,0.6s
AAA   Alma-Ata               2.79   8  ePg     Pb       02 00 56.3  +0.6
      comp=E,34nm,0.1s
AAA                                    eLg     Lg       02 01 35.6
      comp=E,327nm,0.3s
KNDC  Almaty                 2.81   9  ⇑Pg     Pb       02 00 56.8  +0.9
      comp=E,232nm,1.1s
KNDC                                   ⇑Lg     Lg       02 01 33.8
      comp=E,448nm,0.6s
KNDC  Almaty                 2.81   9  PN      Pb       02 00 56.8  +0.9
KNDC                                   LG      Lg       02 01 33.8
CHMS  Chumysh                2.83 335  P       Pn       02 00 53.1  +1.9
      SNR=23
DGS   Degeres                2.83 351  Pg      Pb       02 00 57.0  +0.7
      comp=E,117nm,0.5s
DGS                                    Lg      Lg       02 01 36.7
      comp=E,174nm,0.6s
DGS   Degeres                2.83 351  ePg     Pb       02 00 56.8  +0.4
      comp=E,53nm,0.3s
DGS                                    eLg     Lg       02 01 36.7
      comp=E,181nm,0.3s
KOTS  Kotyrbulak             2.84  11  Pg      Pb       02 00 57.3  +0.7
```

	comp=E,89nm,0.4s						
KOTS				Lg	Lg	02 01 37.1	
	comp=E,321nm,0.3s						
KOTS	**Kotyrbulak**	**2.84**	**11**	*e*Pg	**Pb**	**02 00 57.3**	**+0.7**
	comp=E,89nm,0.3s						
KOTS				*e*Lg	Lg	02 01 37.1	
	comp=E,321nm,0.3s						
EKS2	**Erkin-Say**	**2.95**	**320**	P	**Pn**	**02 00 54.9**	**+1.9**
	SNR=11						
SATY	**Saty**	**3.02**	**30**	Pg	**Pb**	**02 01 00.9**	**+1.3**
	comp=E,239nm,0.8s						
SATY				Lg	Lg	02 01 42.6	
	comp=E,113nm,0.6s						
SATY	**Saty**	**3.02**	**30**	*i* Pn	**Pn**	**02 00 55.3**	**+1.2**
	baz=28						
SATY				*e*Pg	**Pb**	**02 00 59.7**	**0.0**
	baz=28						
SATY	**Saty**	**3.02**	**30**	*e*Pg	**Pb**	**02 01 00.4**	**+0.8**
	comp=E,117nm,0.3s						
SATY				*e*Lg	Lg	02 01 42.6	
	comp=E,150nm,0.3s						
SATY	**Saty**	**3.02**	**30**	*i* PN	**Pn**	**02 00 55.2**	**+1.2**
ZHN	**Zhinishke**	**3.13**	**29**	Pg	**Pb**	**02 01 01.7**	**+0.3**
	comp=E,56nm,0.8s						
ZHN				Lg	Lg	02 01 44.3	
	comp=E,141nm,0.6s						
ZHN	**Zhinishke**	**3.13**	**29**	*e*Pg	**Pb**	**02 01 02.8**	**+1.4**
	baz=27						
ZHN	**Zhinishke**	**3.13**	**29**	*e*Pg	**Pb**	**02 01 01.6**	**+0.2**
	comp=E,17nm,0.1s						
ZHN				*e*Lg	Lg	02 01 44.3	
	comp=E,142nm,0.3s						
ZHN	**Zhinishke**	**3.13**	**29**	*e*PN	**Pb**	**02 01 02.8**	**+1.4**
USP	**Ospenovka**	**3.15**	**334**	P	**Pn**	**02 00 58.1**	**+2.4**
	SNR=6.9						
KTBS	**Karatobe**	**3.27**	**4**	Pg	**Pb**	**02 01 04.5**	**+0.7**
	comp=E,31nm,0.4s						
KTBS				Lg	Lg	02 01 49.5	
	comp=E,116nm,0.4s						
KTBS	**Karatobe**	**3.27**	**4**	*e*Pg	**Pb**	**02 01 04.5**	**+0.7**
	comp=E,34nm,0.3s						
KTBS				*e*Lg	Lg	02 01 49.5	
	comp=E,116nm,0.4s						
SGDS	**Sogindy**	**3.27**	**337**	Pg	**Pb**	**02 01 04.2**	**+0.4**
	comp=E,28nm,0.6s						
SGDS				Lg	Lg	02 01 48.7	
	comp=E,48nm,0.5s						
SGDS	**Sogindy**	**3.27**	**337**	*e*Pn	**Pn**	**02 00 58.8**	**+1.3**
	baz=336						
SGDS				*i* Pg	**Pb**	**02 01 04.3**	**+0.4**
	baz=336						
SGDS	**Sogindy**	**3.27**	**337**	*e*PN	**Pn**	**02 00 58.7**	**+1.3**
SGDS				*i*		02 01 04.3	
KRBS	**Karabastau**	**3.29**	**351**	Pg	**Pb**	**02 01 04.9**	**+0.8**
	comp=E,22nm,0.6s						
KRBS				Lg	Lg	02 01 50.6	
	comp=E,146nm,0.6s						
KRBS	**Karabastau**	**3.29**	**351**	*e*Pg	**Pb**	**02 01 04.9**	**+0.8**
	comp=E,18nm,0.2s						
KRBS				*e*Lg	Lg	02 01 50.6	
	comp=E,146nm,0.3s						
MRKS	**Merke**	**3.29**	**315**	Pg	**Pb**	**02 01 04.0**	**-0.3**
	comp=E,24nm,0.6s						
MRKS				Lg	Lg	02 01 49.1	
	comp=E,67nm,0.5s						
MRKS	**Merke**	**3.29**	**315**	*e*Pg	**Pb**	**02 01 04.4**	**+0.1**
	comp=E,8.1nm,0.4s						
MRKS				*e*Lg	Lg	02 01 49.1	
	comp=E,72nm,0.3s						
KURS	**Kuram**	**3.33**	**23**	Pg	**Pb**	**02 01 05.0**	**+0.3**
	comp=E,45nm,0.4s						
KURS				Lg	Lg	02 01 50.4	
	comp=E,88nm,0.7s						
KURS	**Kuram**	**3.33**	**23**	*e*Pg	**Pb**	**02 01 05.0**	**+0.3**
	comp=E,48nm,0.3s						
KURS				*e*Lg	Lg	02 01 50.4	
	comp=E,88nm,0.7s						
UZB	**Uzynbulak**	**3.35**	**35**	Pg	**Pb**	**02 01 05.8**	**+0.6**
	comp=E,120nm,0.7s						
UZB				Lg	Lg	02 01 51.3	
	comp=E,74nm,0.7s						
UZB	**Uzynbulak**	**3.35**	**35**	*i* Pg	**Pb**	**02 01 06.2**	**+1.0**
	baz=34						
UZB	**Uzynbulak**	**3.35**	**35**	*e*Pg	**Pb**	**02 01 05.5**	**+0.3**
	comp=E,18nm,0.3s						
UZB				*e*Lg	Lg	02 01 51.3	
	comp=E,74nm,0.3s						
UZB	**Uzynbulak**	**3.35**	**35**	*e*PN	**Pb**	**02 01 05.4**	**+0.2**
CHKK	**Chushkaly**	**3.44**	**7**	Pg	**Pb**	**02 01 06.8**	**+0.2**
	comp=E,38nm,0.5s						
CHKK				Lg	Lg	02 01 53.4	
	comp=E,81nm,0.6s						
CHKK	**Chushkaly**	**3.44**	**7**	*e*Pn	**Pn**	**02 01 00.9**	**+1.3**
	baz=6.1						
CHKK				*e*Pg	**Pb**	**02 01 07.9**	**+1.2**
	baz=6.1						
CHKK	**Chushkaly**	**3.44**	**7**	*e*Pg	**Pb**	**02 01 06.8**	**+0.2**
	comp=E,38nm,0.5s						
CHKK				*e*Lg	Lg	02 01 53.4	
	comp=E,70nm,0.3s						
CHKK	**Chushkaly**	**3.44**	**7**	*e*PN	**Pn**	**02 01 00.9**	**+1.3**
CHKK				*e*		02 01 07.8	
KUU	**Kurty**	**3.45**	**360**	Pg	**Pb**	**02 01 07.7**	**+0.9**
	comp=E,58nm,0.8s						
KUU				Lg	Lg	02 01 54.4	
	comp=E,140nm,0.8s						
KUU	**Kurty**	**3.45**	**360**	*i* Pg	**Pb**	**02 01 08.1**	**+1.2**
	baz=358						
KUU	**Kurty**	**3.45**	**360**	*e*Pg	**Pb**	**02 01 07.7**	**+0.9**
	comp=E,59nm,0.3s						
KUU				*e*Lg	Lg	02 01 54.5	
	comp=E,173nm,0.4s						
KUU	**Kurty**	**3.45**	**360**	*i* PN	**Pb**	**02 01 08.0**	**+1.2**
KPKS	**Kokpek**	**3.48**	**29**	Pg	**Pb**	**02 01 07.3**	**-0.1**
	comp=E,116nm,0.4s						
KPKS				Lg	Lg	02 01 54.2	
	comp=E,202nm,0.5s						
KPKS	**Kokpek**	**3.48**	**29**	*e*Pn	**Pn**	**02 01 01.8**	**+1.5**
	baz=28						
KPKS				*e*Pg	**Pb**	**02 01 08.3**	**+0.9**
	baz=28						
KPKS	**Kokpek**	**3.48**	**29**	*e*Pg	**Pb**	**02 01 07.3**	**-0.1**
	comp=E,18nm,0.2s						
KPKS				*e*Lg	Lg	02 01 54.2	
	comp=E,341nm,0.3s						
KPKS	**Kokpek**	**3.48**	**29**	*e*PN	**Pn**	**02 01 01.7**	**+1.5**
MNAS	**Manas**	**3.55**	**306**	⇑*i*P	**Pn**	**02 01 02.6**	**+1.3**
	baz=6.0						
MNAS				⇑*i*S	**Sn**	**02 01 46.2**	**+2.3**
	baz=6.0						
SHLS	**Shalkode**	**3.56**	**39**	Pg	**Pg**	**02 01 14.7**	**+1.5**
	comp=E,112nm,0.5s						
SHLS				Lg	Lg	02 02 06.7	
	comp=E,39nm,0.5s						
SHLS	**Shalkode**	**3.56**	**39**	*e*Pg	**Pg**	**02 01 14.8**	**+1.5**
	baz=42						
SHLS	**Shalkode**	**3.56**	**39**	*e*Pg	**Pg**	**02 01 14.3**	**+1.1**
	comp=E,39nm,0.3s						
SHLS				*e*Lg	Lg	02 02 06.7	
	comp=E,96nm,0.4s						
SHLS	**Shalkode**	**3.56**	**39**	*e*PN	**Pb**	**02 01 11.9**	**+3.1**
ARK	**Arkit**	**3.59**	**294**	⇓*i*P	**Pn**	**02 01 02.6**	**+0.7**
	baz=94						
ARK				⇓*i*S	**Sn**	**02 01 46.5**	**+1.6**
	baz=94						
DRK	**Karamyk**	**3.64**	**256**	⇑*i*P	**Pn**	**02 01 03.2**	**+0.5**
	baz=58						
DRK				⇑*i*S	**Sn**	**02 01 48.0**	**+1.6**
	baz=58						
PDGK	**Podgornoye**	**3.71**	**38**	Pg	**Pb**	**02 01 12.1**	**+0.8**
	comp=E,16nm,0.4s						
PDGK				Lg	Lg	02 02 02.1	
	comp=E,42nm,0.8s						
PDGK	**Podgornoye**	**3.71**	**38**	⇓Pn	**Pn**	**02 01 03.5**	**+0.1**
	comp=E,2.9nm,0.4s						
PDGK				⇓Pg	**Pb**	**02 01 12.7**	**+1.4**
	comp=E,40nm,0.7s						
PDGK				⇓Sn	**Sn**	**02 01 50.0**	**+2.3**
	comp=E,132nm,1.1s						
PDGK				⇓Lg	Lg	02 02 01.3	
	comp=E,129nm,0.8s						
PDGK	**Podgornoye**	**3.71**	**38**	PN	**Pn**	**02 01 03.5**	**+0.1**
PDGK				SN	**Sn**	**02 01 49.9**	**+2.3**
PDGK				LG	Lg	02 02 01.3	
ARXS	**Arharly**	**3.92**	**15**	Pg	**Pb**	**02 01 15.5**	**+0.6**
	comp=E,54nm,0.4s						
ARXS				Lg	Lg	02 02 08.6	
	comp=E,44nm,0.5s						
ARXS	**Arharly**	**3.92**	**15**	*e*PN	**Pb**	**02 01 12.3**	**-2.6**
BLB	**Baldybastay**	**3.97**	**22**	Pg	**Pb**	**02 01 16.3**	**+0.5**
	comp=E,119nm,0.5s						
BLB				Lg	Lg	02 02 09.9	
	comp=E,82nm,0.4s						
TRKS	**Terek-Say**	**4.11**	**287**	⇑*i*P	**Pn**	**02 01 09.5**	**+0.6**
	baz=87						
TRKS				⇑*i*S	**Sn**	**02 01 58.5**	**+0.9**
	baz=87						
BTK	**Batken**	**4.27**	**267**	⇓*i*P	**Pn**	**02 01 11.7**	**+0.6**
	baz=68						
BTK				⇓*i*S	**Sn**	**02 02 02.9**	**+1.4**
	baz=68						
DJR	**Jarkent**	**4.64**	**32**	Pg	**Pb**	**02 01 28.3**	**+1.2**
	comp=E,14nm,0.5s						
DJR				Lg	Lg	02 02 30.4	
	comp=E,24nm,0.3s						
DJR	**Jarkent**	**4.64**	**32**	*e*Pg	**Pb**	**02 01 28.4**	**+1.2**
	comp=E,3.4nm,0.2s						
DJR				*e*Lg	Lg	02 02 30.4	
	comp=E,28nm,0.2s						
TDK	**Taldyqorghan**	**4.80**	**18**	Pg	**Pb**	**02 01 31.9**	**+2.1**
	comp=E,81nm,1.0s						
TDK				Lg	Lg	02 02 36.0	
	comp=E,92nm,0.7s						
TDK	**Taldyqorghan**	**4.80**	**18**	*e*Pg	**Pb**	**02 01 31.9**	**+2.1**
	comp=E,22nm,0.1s						
TDK				*e*Lg	Lg	02 02 36.0	
	comp=E,92nm,0.7s						
BTLS	**Baital**	**4.90**	**340**	Pg	**Pb**	**02 01 33.5**	**+1.9**
	comp=E,7.3nm,0.7s						
BTLS				Lg	Lg	02 02 39.4	
	comp=E,32nm,0.4s						
BTLS	**Baital**	**4.90**	**340**	*e*Pg	**Pb**	**02 01 33.7**	**+2.1**
	baz=340						
BTLS	**Baital**	**4.90**	**340**	*e*Pg	**Pb**	**02 01 33.5**	**+1.9**
	comp=E,7.2nm,0.4s						
BTLS				*e*Lg	Lg	02 02 39.4	
	comp=E,36nm,0.3s						
BTLS	**Baital**	**4.90**	**340**	*e*PN	**Pb**	**02 01 31.7**	**+0.1**
IUG	**Iuzhnay**	**5.07**	**292**	Pg	**Pb**	**02 01 38.2**	**+3.7**
	comp=E,18nm,0.8s						
IUG				Lg	Lg	02 02 47.2	
	comp=E,66nm,1.4s						
IUG	**Iuzhnay**	**5.07**	**292**	*e*Pn	**Pn**	**02 01 21.9**	**-0.3**
	baz=292						
IUG				*e*Pg	Pb	02 01 39.9	+5.4
	baz=292						
IUG	**Iuzhnay**	**5.07**	**292**	*e*Pg	**Pb**	**02 01 34.1**	**-0.4**
	comp=E,8.2nm,0.2s						
IUG				*e*Lg	Lg	02 02 40.8	
	comp=E,27nm,0.5s						
IUG	**Iuzhnay**	**5.07**	**292**	*e*PN	**Pn**	**02 01 21.8**	**-0.3**
IUG				*e*		02 01 39.9	
KK31	**Karatay Array**	**5.12**	**303**	⇓Pn	**Pn**	**02 01 25.2**	**+2.4**
	comp=E,1.1nm,0.6s,baz=143,slow=17,SNR=44						
KK31				⇑Pg	**Pg**	**02 01 41.5**	**-1.7**
	comp=E,6.7nm,0.6s,baz=126,slow=15,SNR=11						
KK31				⇓Lg	Lg	02 02 45.6	
	comp=E,15nm,0.8s,baz=344,slow=32,SNR=4.0						
KK31	**Karatay Array**	**5.12**	**303**	PN	**Pn**	**02 01 25.2**	**+2.4**
KK31				PG	**Pg**	**02 01 41.5**	**-1.7**
MAKZ	**Makanchi**	**7.55**	**31**	⇑Pn	**Pn**	**02 01 56.9**	**+0.9**
	comp=E,2.5nm,1.0s						
MAKZ				⇓Pg	Pb	02 02 24.7	+8.1
	comp=E,5.4nm,1.0s						
MAKZ				⇓Lg	Lg	02 04 04.5	
	comp=E,5.9nm,0.9s						
MAKZ	**Makanchi**	**7.55**	**31**	P	**Pn**	**02 01 56.9**	**+0.9**
MK31	**Makanchi Array**	**7.66**	**32**	Pn	**Pn**	**02 01 57.5**	**-0.1**
	comp=E,1.5nm,0.6s,baz=211,slow=11,SNR=15						
MK31				⇓Pg	Pb	02 02 25.1	+6.6
	comp=E,3.8nm,0.8s,baz=207,slow=14,SNR=5.5						
MK31				⇓Lg	Lg	02 04 07.8	
	comp=E,5.5nm,0.8s,baz=208,slow=15,SNR=4.2						
MK31	**Makanchi Array**	**7.66**	**32**	P	**Pn**	**02 01 57.5**	**-0.1**
MKAR	**Makanchi Array**	**7.66**	**32**	Pn	**Pn**	**02 01 56.0**	**-1.6**
	comp=E,0.3nm,0.3s,baz=202,slow=11,SNR=18						
MKAR				Lg	Lg	02 04 02.7	
	comp=E,0.3nm,0.3s,baz=266,slow=12,SNR=1.9						
	comp=E,1.2nm,0.6s						
OTUK	**Ortayu**	**8.32**	**341**	⇓Lg	Lg	02 04 27.4	
	comp=E,25nm,0.8s						
BRZS	**Berezniki**	**9.89**	**346**	*e*Pn	**Pn**	**02 02 27.4**	**-0.7**
	baz=346						
BRZS	**Berezniki**	**9.89**	**346**	*e*P	**Pn**	**02 02 27.3**	**-0.7**
KURBB	**Kurchatov Arra**	**10.29**	**8**	Lg	Lg	02 05 29.1	
	comp=E,0.1nm,0.3s,baz=193,slow=31,SNR=6.9						
KURBB	**Kurchatov Arra**	**10.29**	**8**	⇑Lg	Lg	02 05 30.5	
	comp=E,28nm,0.8s						
BVAR	**Borovoye Array**	**13.23**	**344**	Pn	**Pn**	**02 03 13.6**	**-0.1**
	baz=174,slow=18,SNR=5.9						
BVAR				Lg	Lg	02 07 03.9	
	baz=137,slow=24,SNR=5.3						
ZALV	**Zalesovo Beam**	**14.66**	**20**	Pn	**Pn**	**02 03 31.5**	**-1.8**
	comp=E,0.2nm,0.3s,baz=210,slow=13,SNR=3.1						
	comp=E,0.5nm,0.4s						
SONM	**Songino Array**	**22.68**	**61**	P	**P**	**02 05 03.7**	**-4.0**
	comp=E,0.8nm,0.9s,baz=256,slow=6.0,SNR=7.2						
	comp=E,0.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**29.28**	**132**	*i* P	**P**	**02 06 09.8**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BRTR	**Keskin Array B**	**32.47**	**283**	P	**P**	**02 06 36.8**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=98,slow=8.9,SNR=2.5						
	comp=Z,0.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**69.97**	**270**	P	**P**	**02 11 17.4**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=40,slow=4.9,SNR=5.4						
	comp=Z,0.4nm,0.6s						
YKA	**Yellowknife Ar**	**77.03**	**5**	P	**P**	**02 11 54.8**	**-4.2**
	comp=Z,0.5nm,0.8s,baz=348,slow=5.5,SNR=9.6						
	comp=Z,0.5nm,0.8s						
YKA	**Yellowknife Ar**	**77.03**	**5**	*e*P	**P**	**02 11 59.4**	**+0.4**

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*TAP **09** 02:10:37.0, 24°.23N×122°.37E, h67^{km}±1^{km}, ML3.0, C*
*JMA **09** 02:10:37.2±0.1, 24°N±2°×122°.4E±0°.7, h60^{km}, MV2.0/7,*
TAIWAN REGION
ISC 09 02:10:37.4±1.3, **24°.25N**±0°.03×**122°.39E**±0°.02, **h65**^{km}±8^{km},
n54, σ0^{s}.73/108, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	**EOS4**	**0.14**	**206**	*i* P	**Pn**	**02 10 46.9**	**+0.2**
	baz=205						
EOS4				S	**Sn**	**02 10 54.4**	**+0.9**
	baz=205						
EOS2	**EOS2**	**0.22**	**320**	*e*P	**Pn**	**02 10 48.0**	**+0.6**
	baz=325						
EOS2				*e*S	**Sn**	**02 10 56.4**	**+1.7**
	baz=325						
JYNG	**Yonagunijimaku**	**0.55**	**68**	P	**Pn**	**02 10 50.4**	**+0.1**
JYNG				*e*S	**Sn**	**02 10 59.4**	**-0.2**
EWUT	**Wuta**	**0.59**	**289**	*i* P	**Pn**	**02 10 50.5**	**-0.1**
	baz=291						
EWUT				S	**Sn**	**02 11 00.0**	**-0.4**
	baz=291						
TWC	**Suao**	**0.61**	**306**	*i* P	**Pn**	**02 10 50.7**	**-0.2**
	baz=308						
TWC				*e*S	**Sn**	**02 10 59.9**	**-0.9**
	baz=308						
YOJ	**Yonaguni jima**	**0.61**	**69**	P	**Pn**	**02 10 51.0**	**0.0**
YOJ				S	**Sn**	**02 11 00.8**	**+0.1**
YOJ	**Yonaguni jima**	**0.61**	**69**	P	**Pn**	**02 10 50.9**	**0.0**
	baz=67						
YOJ				*e*S	**Sn**	**02 11 00.7**	**-0.1**
	baz=67						
ENA	**Nanau**	**0.62**	**287**	*i* P	**Pn**	**02 10 50.8**	**-0.2**
	baz=289						
ENA				S	**Sn**	**02 11 01.0**	**0.0**
	baz=289						
ETL	**Fush Village**	**0.70**	**263**	*i* P	**Pn**	**02 10 51.7**	**-0.4**
	baz=264						
ETL				S	**Sn**	**02 11 02.6**	**-0.2**
	baz=264						
NACB	**Ninganchiao**	**0.73**	**264**	P	**Pn**	**02 10 51.8**	**-0.5**
	baz=265						
NACB				S	**Sn**	**02 11 02.5**	**-0.7**
	baz=265						
TWD	**Chiawan**	**0.74**	**257**	*i* P	**Pn**	**02 10 52.1**	**-0.3**
	baz=258						
TWD				S	**Sn**	**02 11 02.8**	**-0.8**
	baz=258						
TWE	**Neicheng**	**0.81**	**306**	*e*P	**Pn**	**02 10 53.7**	**+0.5**
	baz=307						
TWE				S	**Sn**	**02 11 05.2**	**+0.3**
	baz=307						
TEYL	**Yanliau Villag**	**0.81**	**242**	P	**Pn**	**02 10 53.1**	**-0.2**
	baz=245						
TEYL				*e*S	**Sn**	**02 11 05.4**	**+0.3**
	baz=245						
ETLH	**Xiulin Townshi**	**0.83**	**267**	P	**Pn**	**02 10 53.2**	**-0.4**
	baz=268						
ETLH				S	**Sn**	**02 11 04.8**	**-0.7**
	baz=268						
LATG	**Datong**	**0.83**	**290**	*i* P	**Pn**	**02 10 53.6**	**-0.1**
	baz=291						
LATG				S	**Sn**	**02 11 05.8**	**+0.1**
	baz=291						
TWB1	**Santiao Chiao**	**0.84**	**334**	*e*P	**Pn**	**02 10 52.8**	**-0.8**
	baz=336						
TWB1				*e*S	**Sn**	**02 11 04.2**	**-1.4**
	baz=336						
ENTT	**Nioudou**	**0.84**	**298**	P	**Pn**	**02 10 53.8**	**+0.1**
	baz=299						
ENTT				S	**Sn**	**02 11 05.6**	**-0.2**
	baz=299						
ETM	**Tongmen**	**0.86**	**251**	P	**Pn**	**02 10 53.5**	**-0.5**
	baz=251						
ETM				S	**Sn**	**02 11 05.5**	**-0.7**
	baz=251						
TIPB	**Shuangxi**	**0.88**	**325**	P	**Pn**	**02 10 53.6**	**-0.6**
	baz=326						
TIPB				*e*S	**Sn**	**02 11 05.2**	**-1.4**
	baz=326						
FUSB	**Fushanzhiwuyua**	**0.89**	**305**	P	**Pn**	**02 10 54.6**	**+0.3**
	baz=306						
FUSB				*i* S	**Sn**	**02 11 06.9**	**+0.1**
	baz=306						
NNSB	**Datong**	**0.93**	**281**	*i* P	**Pn**	**02 10 54.8**	**-0.2**
	baz=282						
NNSB				S	**Sn**	**02 11 07.4**	**-0.5**
	baz=282						
NNSH	**Datong**	**0.93**	**281**	*i* P	**Pn**	**02 10 54.8**	**-0.1**
	baz=282						
NNSH				S	**Sn**	**02 11 07.3**	**-0.6**
	baz=282						
NNS	**Nan Shan**	**0.94**	**282**	P	**Pn**	**02 10 54.2**	**-0.9**
	baz=282						
NNS				S	**Sn**	**02 11 08.0**	**-0.1**
	baz=282						
SXI1	**Grass Mountain**	**0.96**	**331**	*e*P	**Pn**	**02 10 54.6**	**-0.7**
	baz=332						
SXI1				*e*S	**Sn**	**02 11 07.2**	**-1.2**
	baz=332						
NWLT	**Wulai**	**0.96**	**303**	*e*P	**Pn**	**02 10 56.0**	**+0.8**
	baz=304						
NWLT				S	**Sn**	**02 11 08.3**	**-0.1**
	baz=304						
YHNB	**Yeheng**	**1.01**	**295**	*e*P	**Pn**	**02 10 56.3**	**+0.4**
	baz=295						
YHNB				*e*S	**Sn**	**02 11 08.9**	**-0.7**
	baz=295						
NSK	**Sanguang**	**1.03**	**295**	P	**Pn**	**02 10 56.2**	**+0.1**
	baz=295						
NSK				*i* S	**Sn**	**02 11 09.9**	**-0.1**
	baz=295						
WHF	**Hehuan Shan**	**1.03**	**264**	P	**Pn**	**02 10 56.2**	**-0.3**
	baz=265						
WHF				S	**Sn**	**02 11 09.9**	**-0.6**
	baz=265						
EGFH	**Guangfu**	**1.05**	**237**	P	**Pn**	**02 10 55.9**	**-0.4**
	baz=237						
EGFH				*i* S	**Sn**	**02 11 10.2**	**-0.1**
	baz=237						
TWT	**Tachien**	**1.11**	**270**	P	**Pn**	**02 10 57.8**	**+0.6**
	baz=271						
TWT				S	**Sn**	**02 11 12.1**	**+0.1**
	baz=271						
TDCB	**Techi**	**1.12**	**270**	P	**Pn**	**02 10 57.8**	**+0.5**
	baz=271						
TDCB				S	**Sn**	**02 11 12.1**	**-0.1**
	baz=271						
CHGB	**Renai**	**1.12**	**261**	P	**Pn**	**02 10 57.5**	**0.0**
	baz=261						
CHGB				*e*S	**Sn**	**02 11 12.7**	**+0.3**
	baz=261						
OWD	**Renai**	**1.15**	**255**	P	**Pn**	**02 10 57.8**	**+0.1**
	baz=256						
OWD				S	**Sn**	**02 11 11.8**	**-1.0**
	baz=256						
HGSD	**Ruisui**	**1.16**	**230**	P	**Pn**	**02 10 57.3**	**-0.4**
	baz=229						
HGSD				S	**Sn**	**02 11 12.5**	**-0.4**
	baz=229						
WUSB	**Renai**	**1.19**	**258**	P	**Pn**	**02 10 58.3**	**+0.1**
	baz=258						
WUSB				S	**Sn**	**02 11 13.2**	**-0.6**
	baz=258						
NFF	**Wufeng Townshi**	**1.22**	**288**	*e*P	**Pn**	**02 10 59.4**	**+0.9**
	baz=289						
NFF				S	**Sn**	**02 11 14.1**	**-0.2**
	baz=289						
VWDT	**VWDT**	**1.24**	**247**	P	**Pn**	**02 10 59.1**	**+0.4**
	baz=247						
VWDT				S	**Sn**	**02 11 14.6**	**-0.2**
	baz=247						
LIOB	**Emei**	**1.31**	**288**	*e*P	**Pn**	**02 11 01.4**	**+1.7**
	baz=288						
LIOB				*e*S	**Sn**	**02 11 17.4**	**+1.0**
	baz=288						
YULB	**Yu-li**	**1.31**	**230**	P	**Pn**	**02 10 59.3**	**-0.5**
	baz=229						
YULB				*e*S	**Sn**	**02 11 15.4**	**-1.1**
	baz=229						
WHP	**Taichung City**	**1.32**	**272**	*e*P	**Pn**	**02 11 01.1**	**+1.3**
	baz=272						
WHP				*e*S	**Sn**	**02 11 17.5**	**+0.9**
	baz=272						
EYUL	**Yuli**	**1.33**	**228**	P	**Pn**	**02 10 60.0**	**0.0**
	baz=227						
EYUL				S	**Sn**	**02 11 16.4**	**-0.4**
	baz=227						
TWF1	**Yuli**	**1.34**	**228**	*i* P	**Pn**	**02 10 59.9**	**-0.2**
	baz=228						
TWF1				S	**Sn**	**02 11 16.0**	**-1.1**
	baz=228						
SSLB	**Suanglung**	**1.39**	**251**	P	**Pn**	**02 11 00.4**	**-0.3**
	baz=251						
SSLB				S	**Sn**	**02 11 17.5**	**-0.8**
	baz=251						
SMLT	**Sun Moon Lake**	**1.41**	**255**	*e*P	**Pn**	**02 11 01.8**	**+0.7**
	baz=255						
SMLT				*e*S	**Sn**	**02 11 19.7**	**+0.9**
	baz=255						
TYC	**Yuchr**	**1.44**	**256**	P	**Pn**	**02 11 01.9**	**+0.6**
	baz=256						
TYC				S	**Sn**	**02 11 19.7**	**+0.3**
	baz=256						
FULB	**Fuli**	**1.45**	**224**	*i* P	**Pn**	**02 11 01.5**	**0.0**
	baz=223						
FULB				*e*S	**Sn**	**02 11 18.9**	**-0.8**
	baz=223						
JKRS	**Kuro-shima**	**1.48**	**90**	*e*P	**Pn**	**02 11 02.6**	**+0.7**
JKRS				S	**Sn**	**02 11 21.2**	**+0.8**
EHD	**Haiduan**	**1.54**	**225**	P	**Pn**	**02 11 02.1**	**-0.7**
	baz=224						
EHD				*e*S	**Sn**	**02 11 20.3**	**-1.6**
	baz=224						
JIJ	**Ishigaki jima**	**1.61**	**86**	P	**Pn**	**02 11 04.0**	**+0.3**
JIJ				S	**Sn**	**02 11 22.6**	**-0.8**
EDH	**Donghe**	**1.61**	**218**	*e*P	**Pn**	**02 11 03.0**	**-0.8**
	baz=218						
EDH				*e*S	**Sn**	**02 11 21.9**	**-1.8**
	baz=218						
ALS	**Alishan**	**1.62**	**243**	*e*P	**Pn**	**02 11 05.1**	**+0.9**
	baz=243						
ALS				*e*S	**Sn**	**02 11 24.6**	**+0.3**
	baz=243						
JISG	**Ishigakijimahi**	**1.79**	**79**	P	**Pn**	**02 11 06.2**	**+0.1**
JISG				*e*S	**Sn**	**02 11 26.8**	**-0.9**
STYH	**Taoyuan**	**1.83**	**234**	*e*P	**Pn**	**02 11 07.7**	**+1.2**
	baz=234						
STYH				S	**Sn**	**02 11 28.8**	**0.0**
	baz=234						
TPUB	**Ta-pu**	**1.87**	**240**	*e*P	**Pn**	**02 11 09.0**	**+1.9**
	baz=239						
TPUB				*e*S	**Sn**	**02 11 32.2**	**+2.5**
	baz=239						

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*NIED **09** 02:25:23.5, 34°.56N×140°.66E, h52^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.73; $M_{\theta\theta}$0.23; $M_{\phi\phi}$-0.96; $M_{r\theta}$0.80; $M_{\theta\phi}$-0.51; $M_{\phi r}$1.16; Fault plane solution: $M_0$1.71000×10^{15} NP1:ϕ_s35.00000°,* *δ74.00000°,λ102.00000°. NP2:φ$_s$177.00000°,δ20.00000°, λ54.00000°.*

*JMA **09** 02:25:23.5±0.2,34°.6N±0°.6×140°.7E±0°.7,h52^{km}±2^{km}, MV3.8/34,SE OFF BOSO PENINSULA*

*NEIC **09** 02:25:25.8±1.8,34°.55N±0°.06×140°.5E±0°.1,h55^{km}±4^{km}, mb4.8/16,Error ellipse: s-maj=13.2km s-min=8.2km az=97.0*

*IDC **09** 02:25:27.7±1.8,34°.43N×140°.10E,h62^{km}±13^{km},mb3.8/13, mbtmp4.1/16,MS3.5/4,Error ellipse: s-maj=30.8km s-min=7.8km az=75.0*

ISC 09 02:25:24.8±0.6,**34°.57N**±0°.04×**140°.60E**±0°.05,**h48**^{km}±5^{km}, **n72,**σ1^s**37**/74,**mb4.3**/22,**5D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO3	Boso 3	0.25	342	⇓*i*P	Pn	02 25 32.5	-0.5
BSO1	Boso 1	0.32	74	*i* P	Pn	02 25 32.5	-0.9
BSO4	Boso 4	0.48	333	⇓*i*P	Pn	02 25 35.4	-0.2
KTR	Katsuura	0.63	338	P	Pn	02 25 37.0	-0.6
KTR				S	Sn	02 25 45.9	-0.9
JKUC	kamogawauchiur	0.68	331	⇓*i*P	Pn	02 25 37.6	-0.7
JKUC				⇓S	Sn	02 25 47.4	-0.6
TATJ	Tateyama 2	0.75	309	⇓*i*P	Pn	02 25 39.1	-0.1
JIM2	Oshima 3	0.98	279	P	Pn	02 25 41.5	-0.7
JMYK	Miyake Tsubota	1.01	240	P	Pn	02 25 42.9	+0.3
JMYK				*e*S	Sn	02 25 56.1	+0.4
JMKN	Mikurajimanish	1.07	232	S	Sn	02 25 57.2	-0.1
JSMT	Sammumatsuo	1.08	353	P	Pn	02 25 42.9	-0.8
JSMT				S	Sn	02 25 56.7	-0.8
JTHY	Toshimahigashi	1.09	268	P	Pn	02 25 43.6	0.0
JKO	Kozu shima	1.27	253	P	Pn	02 25 46.5	+0.3
JKO				S	Sn	02 26 03.2	+1.1
JHJ2	Mitsune	1.59	205	Pn	Pn	02 25 51.0	+0.4
JHJ2					Sn	02 26 09.0	-1.0
JHJ	Hachijo jima 2	1.60	206	P	Pn	02 25 51.1	+0.4
	102nm,0.3s,baz=332,slow=16,SNR=8.6						
JHJ				S	Sn	02 26 06.8	-3.3
	703nm,0.3s,baz=246,slow=22,SNR=7.6						
JSG	Sagara	2.00	274		Pn	02 25 56.6	+0.5
MJAR	Matsushiro Arr	2.77	316	P	Pn	02 26 07.0	+0.2
	48nm,0.5s,baz=150,slow=13,SNR=96						
MJAR				S	Sn	02 26 37.5	-1.6
	30nm,0.5s,baz=146,slow=15,SNR=3.0						
MJAR				LR	LR	02 26 46.0	
	comp=Z,106nm,21.4s,baz=148,slow=30						
MAJO	Matsushiro	2.78	316		Pn	02 26 07.4	+0.6
MJB9	Matsu-Tunnel	2.78	316		Pn	02 26 08.3	+1.4
JGF	Kuroka	2.86	292		Pn	02 26 09.6	+1.6
INU	Inuyama	3.05	286		Pn	02 26 11.5	+1.0
JMM	Marumori	3.30	3		Pn	02 26 14.7	+0.8
JSD	Sado	3.95	332	Pn	Pn	02 26 22.6	-0.3
JTM	Tenmabayashi	6.22	3	Pn	Pn	02 26 53.4	-0.6
JNU	Nakatsue	8.22	263	P	Pn	02 27 18.9	-2.6
	15nm,1.0s,baz=120,slow=8.1,SNR=2.6						
JNU				LR	LR	02 30 14.3	
	comp=Z,86nm,19.4s,baz=63,slow=37						
KSRS	Korea Array	10.67	289	LR	LR	02 31 52.7	
	comp=Z,78nm,19.3s,baz=95,slow=37						
KLR	Kul'dur	16.05	339	P	P	02 29 10.1	+0.3
	1.7nm,0.6s,baz=164,slow=4.3,SNR=7.9						
H11N2	WAKE ISLAND Hy	27.56	116	T	T	03 00 25.0	
	baz=309,slow=75,SNR=21						
H11N1	WAKE ISLAND Hy	27.57	116	T	T	03 00 30.7	
	baz=309,slow=75,SNR=27						
H11N3	WAKE ISLAND Hy	27.58	116	T	T	03 00 30.7	
	baz=309,slow=75,SNR=18						
H11S3	WAKE ISLAND Hy	28.18	118	T	T	03 01 16.3	
	baz=311,slow=75,SNR=4.7						
H11S1	WAKE ISLAND Hy	28.18	118	T	T	03 01 17.5	
	baz=311,slow=75,SNR=13						
H11S2	WAKE ISLAND Hy	28.20	118	T	T	03 01 16.5	
	baz=311,slow=75,SNR=7.2						
SONM	Songino Array	28.70	308	P	P	02 31 17.8	+0.4
	1.7nm,0.7s,baz=116,slow=8.8,SNR=14						
	1.7nm,0.7s						
CMAR	Chiang Mai Arr	40.28	257	P	P	02 32 53.8	-3.6
	2.0nm,0.3s,baz=58,slow=7.6,SNR=3.7						
	2.0nm,0.3s						
ZAA0	Zalesovo Array	43.13	314	P	P	02 33 19.0	-1.3
ZALV	Zalesovo Beam	43.13	314	P	P	02 33 20.5	+0.3
	5.1nm,0.9s,baz=89,slow=6.1,SNR=14						
	5.1nm,0.9s						
ZALV	Zalesovo Beam	43.13	314	P	P	02 33 20.7	+0.5
MK31	Makanchi Array	44.91	304	P	P	02 33 33.6	-1.2
MKAR	Makanchi Array	44.91	304	P	P	02 33 35.1	+0.3
	1.1nm,0.5s,baz=90,slow=10,SNR=19						
	1.1nm,0.5s						
MKAR	Makanchi Array	44.91	304	P	P	02 33 34.0	-0.8
KURK	Kurchatov	46.97	310	P	P	02 33 49.3	-1.5
KURK				IAmb	IAmb	02 33 52.3	
	comp=Z,7.3nm,0.8s						
KURK	Kurchatov	46.97	310	P	P	02 33 51.3	+0.5
KURK				pP	pwP	02 34 05.2	-1.2
KURK				sP	sP	02 34 10.9	+2.5
KNK	Knik Glacier	51.33	36	P	P	02 34 20.6	-3.5
KNK				IAmb	IAmb	02 34 36.5	
	comp=Z,42nm,1.0s						
BRVK	Borovoye	51.83	314	P	P	02 34 27.1	-0.7
BRVK				IAmb	IAmb	02 34 29.4	
	comp=Z,2.4nm,0.6s						
Q23K	Middleton Isla	52.52	38	P	P	02 34 36.1	+3.2
MID	Middleton Isla	52.53	38	P	P	02 34 35.9	+3.0
WB0	Warramunga Arr	54.35	187	P	P	02 34 46.0	-0.7
WB0				IAmb	IAmb	02 34 49.8	
	comp=Z,6.4nm,1.3s						
WRA	Warramunga Arr	54.53	187	P	P	02 34 47.4	-0.6
	comp=Z,0.7nm,0.4s,baz=2.6,slow=7.5,SNR=7.3						
	comp=Z,0.7nm,0.4s						
WRA	Warramunga Arr	54.53	187	P	P	02 34 48.1	+0.1
YKU2	Yakutat	55.88	37	P	P	02 34 59.8	+2.5
CHGR	Chuyangaron	56.16	297	P	P	02 34 57.3	-2.5
CHGR				IAmb	IAmb	02 35 01.5	
	comp=Z,10nm,1.0s						
ARU	Arti	57.79	319	P	P	02 35 10.4	-0.5
ARU				IAmb	IAmb	02 35 11.9	
	comp=Z,6.6nm,0.8s						
ARU	Arti	57.79	319	P	P	02 35 11.0	+0.2
ASAR	Alice Springs	58.26	187	P	P	02 35 15.2	+0.7
	comp=Z,0.5nm,0.7s,baz=17,slow=12,SNR=7.0						
	comp=Z,0.5nm,0.7s						
ABKAR	Akbulak array	59.04	311	P	P	02 35 18.7	-1.0
ABKAR	Akbulak array	59.04	311	P	P	02 35 20.3	+0.5
ABKAR				IAmb	IAmb	02 35 20.9	
	comp=Z,5.3nm,0.9s						
LVZ	Lovozero	64.09	336	P	P	02 35 53.0	-0.5
LVZ	Lovozero	64.09	336	pP	pP	02 36 07.1	+0.6
LVZ				sP	sP	02 36 13.5	+1.8
FIA1	FINESS Array S	70.69	332	P	P	02 36 35.5	+0.3
FIA1				IAmb	IAmb	02 36 43.0	
	comp=Z,21nm,1.2s						
FINES	FINESS Array B	70.69	332	P	P	02 36 35.5	+0.3
	comp=Z,2.8nm,0.8s,baz=79,slow=4.1,SNR=5.7						
	comp=Z,2.8nm,0.8s						
FINES	FINESS Array B	70.69	332	P	P	02 36 35.2	-0.1
KBZ	Khabaz	72.01	311	P	P	02 36 44.0	+0.5
	comp=Z,5.0nm,0.9s,baz=12,slow=2.0,SNR=10.0						
	comp=Z,5.0nm,0.9s						
KIV	Kislovodsk	72.03	311	P	P	02 36 45.3	+1.5
KIV				pP	pwP	02 36 60.0	+0.4
AKASG	Malin Array Be	75.84	322	P	P	02 37 05.9	+0.1
	comp=Z,2.7nm,0.7s,baz=47,slow=5.9,SNR=18						
	comp=Z,2.7nm,0.7s						
AKBB	Malin Array Si	75.84	322	P	P	02 37 06.0	+0.2
NOA	NORSAR Array B	76.20	337	P	P	02 37 07.3	-0.5
	comp=Z,2.9nm,0.8s,baz=39,slow=5.8,SNR=7.2						
	comp=Z,2.9nm,0.8s						
PDAR	Pinedale Array	79.87	45	P	P	02 37 32.8	+4.1
	comp=Z,1.5nm,0.7s,baz=302,slow=5.2,SNR=2.1						
	comp=Z,1.5nm,0.7s						
BRTR	Keskin Array B	79.99	311	P	P	02 37 30.0	+0.8
	comp=Z,0.8nm,0.8s,baz=67,slow=1.9,SNR=6.1						
	comp=Z,0.8nm,0.8s						
MLR	Muntele Rosu	80.84	320	LR	LR	03 14 38.2	
	comp=Z,117nm,20.5s,baz=20,slow=37						
CLL	Collm	82.90	330	*i* P	P	02 37 44.5	+0.3
	comp=Z,4.0nm,0.8s						
GERES	GERESS Array B	84.45	328	P	P	02 37 52.1	-0.2
	comp=Z,0.7nm,0.8s,baz=41,slow=4.3,SNR=4.5						
	comp=Z,0.7nm,0.8s						
EKA	Eskdalemuir Ar	85.23	340	LR	LR	03 19 22.4	
	comp=Z,45nm,19.1s,baz=356,slow=38						

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*BJI **09** 02:26:16.9±0.0,52°.26N×178°.23E,h121^{km},mb5.3/80, mB5.0/48*

*NEIC **09** 02:26:18.9,51°.70N×178°.87E,h120^{km},Moment Tensor Solution. Duration: 2^{s}0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.96; M$_{\theta\theta}$-2.97; M$_{\phi\phi}$7.93; M$_{r\theta}$4.16; M$_{\theta\phi}$-2.11; M$_{\phi r}$-0.59; Fault plane solution: M$_0$8.38000×10^{16} NP1: φ$_s$317.24000°,δ61.92000°,λ-134.73000°. NP2: φ$_s$201.83000°,δ51.18000°,λ-37.16000°. Principal axes: T 8.4714, Plg6.0000°, Azm77.0000°; N -0.1892, Plg38.0000°, Azm342.0000°; P -8.2823, Plg51.0000°, Azm175.0000°;*

*MOS **09** 02:26:18.2±1.1,52°.10N×178°.42E,h133^{km},mb5.1/77 Error ellipse: s-maj=6.8km s-min=4.5km az=109.3*

*NEIC **09** 02:26:18.7,52°.10N×178°.38E,h119^{km}*

*NEIC **09** 02:26:18.9,52°.10N×178°.38E,h120^{km}*

*AEIC **09** 02:26:18.4±2.1,51°.99N±0°.08×178°.34E±0°.09, h129^{km}±3^{km},Error ellipse: s-maj=11.9km s-min=8.4km az=180.0*

*IDC **09** 02:26:18.4±0.5,52°.10N×178°.39E,h120^{km}±3^{km},mb4.7/35, mbtmp5.1/40,MS3.8/39,Error ellipse: s-maj=9.1km s-min=6.2km az=165.0*

*NEIC **09** 02:26:18.4±1.6,52°.05N±0°.08×178°.40E±0°.10, h119^{km}±4^{km},mb5.3/544,Mwb5.2/20,Mww5.2/25, ML5.1(AEIC),Error ellipse: s-maj=11.8km s-min=8.5km az=182.0,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.26; M$_{\theta\theta}$-2.37; M$_{\phi\phi}$5.63; M$_{r\theta}$2.25; M$_{\theta\phi}$0.66; M$_{\phi r}$-6.23; Fault plane solution: M$_0$8.26000×10^{16} NP1:φ$_s$340.81000°,δ75.54000°,λ-110.95000°. NP2: φ$_s$217.70000°,δ25.27000°,λ-35.80000°. Principal axes: T 8.8527, Plg28.0000°, Azm87.0000°; N -1.3525, Plg20.0000°, Azm346.0000°; P -7.5002, Plg55.0000°, Azm225.0000°;*

*GCMT **09** 02:26:19.4±0.1,52°.02N±0°.01×178°.47E±0°.01, h116^{km}±1^{km},MW5.2/150,Moment Tensor Solution. s102,c148; s150,c268; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.43±.01; M$_{\theta\theta}$-0.34±.02; M$_{\phi\phi}$0.77±.01; M$_{r\theta}$0.37±.01; M$_{\theta\phi}$0.21±.01; M$_{\phi r}$-0.34±.01; Best double couple: M$_0$0.86400×10^{17} NP1:φ$_s$336.00000°,δ69.00000°, λ-133.00000°. NP2:φ$_s$225.00000°,δ47.00000°, λ-30.00000°. Principal axes: T 0.8740, Plg13.0000°, Azm96.0000°; N -0.0190, Plg39.0000°, Azm355.0000°; P -0.8550, Plg48.0000°, Azm201.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **09** 02:26:41.6,51°.61N×179°.06E,h33^{km},mb5.1,Ms4.0*

ISC 09 02:26:18.2±0.2,**52°.06N**±0°.04×**178°.35E**±0°.03,**h121**^{km}±1^{km}, **h121**^{km}**:pP-P,n1500,**σ1^s**18**/1542,**mb5.3**/458,**22C-52D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHEM	Shemya Is, Ala	2.69	286	P	Pn	02 26 59.7	-0.7
	2μm,0.4s,baz=49,slow=4.4,SNR=209						
SHEM				S	Sn	02 27 32.4	-0.5
	1μm,0.3s,baz=90,slow=20,SNR=8.6						
SHEM				LR	LR	02 28 03.6	
	comp=Z,3μm,19.0s,baz=26,slow=39						
SMY	Shemya	2.69	286	Pn	Pn	02 26 60.0	-0.4
SMY	Shemya	2.69	286	P	Pn	02 26 59.8	-0.6
SMY	Shemya	2.69	286	P	Pn	02 27 00.0	-0.4
KIWB	Kanaga Island	2.79	92	Pn	Pn	02 27 01.2	-0.6
ADK	Adak	3.08	91		Pn	02 27 04.5	-1.0
ADK	Adak	3.08	91	P	Pn	02 27 04.7	-0.8
ADK	Adak	3.08	91	P	Pn	02 27 04.5	-1.0
ADK				S	Sn	02 27 42.2	+0.3
CLES	Cleveland East	7.23	79		Pn	02 28 01.3	+0.2
NIKH	Nikolski High	7.86	78	P	Pn	02 28 10.3	+0.6
NIKH	Nikolski High	7.86	78	P	Pn	02 28 09.8	+0.2
	baz=268,SNR=26						
SPIA	Saint Paul Isl	8.37	48		Pn	02 28 15.8	-0.6
SPIA	Saint Paul Isl	8.37	48	P	Pn	02 28 18.9	+2.5
	baz=237,SNR=17						
UNV	Unalaska Valle	9.32	73		Pn	02 28 29.6	+0.3
UNV	Unalaska Valle	9.32	73	P	Pn	02 28 29.8	+0.5
	baz=265,SNR=43						
AKUT	Akutan	9.78	71	Pn	Pn	02 28 36.2	+0.8
AKUT	Akutan	9.78	71	P	Pn	02 28 36.9	+1.5
FALS	False Pass	11.22	68		Pn	02 28 55.4	+0.5
FALS	False Pass	11.22	68	P	Pn	02 28 54.2	-0.6
	baz=263						
PET	Petropavlovsk	12.03	282		Pn	02 29 05.3	-0.3
PET	Petropavlovsk	12.03	282	P	Pn	02 29 06.8	+1.3
	907nm,1.7s						
PET	Petropavlovsk	12.03	282	*e*P	Pn	02 29 05.9	+0.4
PET				*e*S	Sn	02 31 11.6	-6.2
PET				pmax	pmax		
	comp=Z,298nm,1.3s						
PET				pmax	pmax		
	comp=Z,300nm,16.2s						
PET				MLR	MLR		
	comp=Z,200nm,18.0s						
S12K	Black Hills	12.11	65	P	Pn	02 29 07.7	+1.1
	baz=260,SNR=15						
PEA0B	Petropavlovsk-	12.60	283	Pn	Pn	02 29 12.7	-0.3
PEA0B	Petropavlovsk-	12.60	283	*ce*P	Pn	02 29 13.5	+0.5
PETK	Petropavlovsk-	12.60	283	P	Pn	02 29 14.0	+1.0
	comp=Z,247nm,0.9s,baz=96,slow=14,SNR=117						
PETK				S	Sn	02 31 27.2	-4.5
	comp=Z,15nm,0.8s,baz=76,slow=40,SNR=2.4						
PETK				LR	LR	02 33 43.4	
	comp=Z,266nm,21.2s,baz=101,slow=35						
PETK				ScP	ScP	02 38 02.3	+0.2
	comp=Z,7.7nm,0.8s,baz=108,slow=4.7,SNR=5.3						
PETK	Petropavlovsk-	12.60	283	Pn	Pn	02 29 12.8	-0.2
PETK	Petropavlovsk-	12.60	283	P	Pn	02 29 14.0	+1.0
SDPT	Sand Point	12.96	67		Pn	02 29 15.8	-1.8
SDPT	Sand Point	12.96	67	P	Pn	02 29 16.8	-0.8
SDPT	Sand Point	12.96	67	P	Pn	02 29 16.1	-1.4
	baz=264,SNR=11						
SKR	Severo-Kuril's	13.95	273	*e*P	P	02 29 33.2	-1.3
SKR				*e*S	Sn	02 31 56.3	-7.9
SKR				pmax	pmax		
	comp=Z,1μm,0.6s						
SKR				smax	smax		
	comp=N,337nm,0.7s						
SKR				smax	smax		
	comp=E,702nm,0.9s						
CHGN	Chignik	14.23	63		Pn	02 29 32.5	-1.3
CHGN	Chignik	14.23	63	P	Pn	02 29 33.3	-0.6
	baz=262,SNR=11						
R16K	Pilot Point	14.89	59	P	P	02 29 44.0	-0.9
	baz=258,SNR=59						
P16K	Nushagak River	15.04	53	P	P	02 29 45.8	-0.8
	baz=253,SNR=90						
ANM	Nome	15.11	28	Pn	Pn	02 29 44.2	-0.7
ANM				ScP	ScP	02 38 05.8	-0.3
ANM	Nome	15.11	28	P	Pn	02 29 44.2	-0.7
ANM	Nome	15.11	28	P	Pn	02 29 46.0	+1.1
	baz=222,SNR=49						
O16K	Kokwok River B	15.17	51	P	Pn	02 29 46.7	+1.0
	baz=250,SNR=61						
N16K	Nishlik Lake	15.18	47	P	P	02 29 47.1	-1.0
	baz=246						
TNA	Tin City	15.23	22	Pn	Pn	02 29 46.7	+0.2
TNA	Tin City	15.23	22	P	P	02 29 48.6	0.0
	baz=214,SNR=35						
R17K	Ugashik Creek	15.53	59	P	P	02 29 51.3	-0.7
	baz=260						
Q16K	King Salmon	15.61	55	P	P	02 29 53.1	+0.2
	baz=256,SNR=73						
O17K	Koliganek Bris	15.71	51	P	P	02 29 53.6	-0.3
	baz=251,SNR=83						
Q17K	Contact Creek	15.91	57	P	Pn	02 29 54.8	-0.4
	baz=258,SNR=52						
Q18K	Katmai Hardscr	16.45	56	P	Pn	02 30 01.7	0.0
	baz=258,SNR=99						
O18K	Koktuh Hills	16.64	52	P	P	02 30 04.6	+0.3
O18K	Koktuh Hills	16.64	52	P	P	02 30 05.7	+1.4
	baz=254,SNR=142						
SVW2	Sparrevohn	16.86	47	P	Pn	02 30 06.6	-0.1
SVW2					ScP	02 38 09.4	-0.1
SVW2	Sparrevohn	16.86	47	P	P	02 30 08.4	+1.7
BILL	Bilibino	17.07	344		Pn	02 30 09.3	+0.3
BILL	Bilibino	17.07	344	⇑*e*P	Pn	02 30 11.1	+2.0
BILL				pmax	pmax		
	comp=Z,44nm,1.3s						
BILL				MLR	MLR		
	comp=Z,264nm,17.0s						
MA2	Magadan	17.13	307	P	Pn	02 30 11.1	+1.2
	comp=Z,36nm,0.9s,baz=82,slow=10.0,SNR=22						
MA2				PcP	PcP	02 34 46.9	+0.2
	comp=Z,4.3nm,0.3s,baz=124,slow=7.3,SNR=4.4						
MA2	Magadan	17.13	307		Pn	02 30 10.6	+0.7
MA2	Magadan	17.13	307	P	Pn	02 30 11.6	+1.7
OHAK	Old Harbor	17.14	61	P	P	02 30 06.8	-3.0
OHAK	Old Harbor	17.14	61	P	P	02 30 08.0	-1.7
OHAK	Old Harbor	17.14	61	P	P	02 30 07.6	-2.1
	baz=264,SNR=14						
O19K	Port Alsworth	17.17	51		Pn	02 30 11.0	+0.7
O19K					ScP	02 38 09.2	-1.0
O19K	Port Alsworth	17.17	51	P	Pn	02 30 11.7	+1.4
	baz=254,SNR=202						
Q19K	Cape Douglas,	17.20	55	P	P	02 30 10.3	-0.1
Q19K	Cape Douglas,	17.20	55	P	Pn	02 30 11.0	+0.2
	baz=259,SNR=28						
N19K	Bonanza Creek	17.27	49	P	Pn	02 30 13.0	+1.3
N19K					ScP	02 38 10.7	+0.2
N19K	Bonanza Creek	17.27	49	P	Pn	02 30 13.2	+1.5
	baz=252						
TTA	Tatalina	17.42	41		Pn	02 30 14.2	+0.7
TTA					ScP	02 38 10.3	-0.4
TTA	Tatalina	17.42	41	P	Pn	02 30 15.0	+1.6
TTA	Tatalina	17.42	41	P	Pn	02 30 14.2	+0.7
TTA	Tatalina	17.42	41	P	Pn	02 30 14.7	+1.3
	baz=243,SNR=121						
SEY	Seymchan	17.56	318	P	Pn	02 30 15.7	+0.7
	comp=Z,9.6nm,0.9s,baz=122,slow=12,SNR=20						
SEY				PcP	PcP	02 34 47.6	+0.3
	comp=Z,11nm,0.9s,baz=147,slow=4.8,SNR=6.5						
SEY	Seymchan	17.56	318	*ce*P	Pn	02 30 14.8	-0.2
SEY				pmax	pmax		
	comp=Z,12nm,0.9s						
KDAK	Kodiak Island	17.57	60	P	P	02 30 12.5	-2.0
	comp=Z,98nm,0.4s,baz=261,slow=4.0,SNR=144						
KDAK				ScP	ScP	02 38 11.1	0.0
	comp=Z,15nm,0.8s,baz=290,slow=4.8,SNR=4.0						
KDAK	Kodiak Island	17.57	60	P	P	02 30 12.1	-2.4
L19K	White Mountain	17.59	44	P	Pn	02 30 15.8	+0.3
L19K					ScP	02 38 10.2	-0.8
L19K	White Mountain	17.59	44	P	Pn	02 30 16.3	+0.8
	baz=247						
ILSW	Iliamna Southw	17.68	52	P	P	02 30 14.6	-1.3
M19K	Big River Lodg	17.69	46	P	Pn	02 30 17.3	+0.7
M19K					ScP	02 38 11.0	-0.3
M19K	Big River Lodg	17.69	46	P	Pn	02 30 17.5	+0.9
	baz=248						
Q20K	Shuyak Island	17.78	57	P	P	02 30 16.1	-0.7
	baz=261,SNR=11						
O20K	Slope Mountain	17.96	52	P	Pn	02 30 20.5	+0.6
	baz=256,SNR=59						
RSO	Redoubt South	17.99	51	P	P	02 30 19.5	+0.2
RSO					ScP	02 38 13.6	+1.4
GCSA	Galena City Sc	18.00	36	P	Pn	02 30 20.8	+0.5
	baz=237						
L20K	Farewell, AK	18.12	44	P	Pn	02 30 22.3	+0.5
	baz=248						
M20K	Styx River	18.24	46	P	P	02 30 20.8	-1.1
M20K					ScP	02 38 12.1	-0.5
M20K	Styx River	18.24	46	P	Pn	02 30 23.4	+0.1
	baz=250						
HOM	Homer	18.35	54	P	P	02 30 23.4	+0.4
HOM	Homer	18.35	54	P	P	02 30 23.5	+0.4
	baz=259,SNR=8.7						
K20K	Telida	18.40	41	P	P	02 30 22.9	-0.7
K20K					ScP	02 38 12.2	-0.6
K20K	Telida	18.40	41	P	Pn	02 30 25.3	+0.2
	baz=245						
RDOG	Red Dog Mine	18.43	22	P	Pn	02 30 25.6	+0.2
RDOG	Red Dog Mine	18.43	22	P	Pn	02 30 25.8	+0.5
	baz=219,SNR=19						
SPCR	Spurr Chakacha	18.45	49	P	Pn	02 30 26.1	+0.4
	baz=254,SNR=96						
SPU	Mount Spurr	18.51	49	P	Pn	02 30 26.7	+0.3
CNPM	China Poot	18.53	54	P	P	02 30 25.4	+0.5
BRLK	Bradley Lake	18.75	54	P	P	02 30 27.1	-0.2
BRLK					ScP	02 38 13.5	-0.1
BRSE	Bradley Lake S	18.81	54	P	P	02 30 27.8	-0.3
	baz=260,SNR=54						
CAPN	Captain Cook N	18.83	51	P	Pn	02 30 30.9	+0.8
CAPN	Captain Cook N	18.83	51	P	Pn	02 30 30.7	+0.6
	baz=256,SNR=5.5						
SKT	Skwentna	18.99	47		Pn	02 30 31.4	-0.6
SKT	Skwentna	18.99	47	P	Pn	02 30 32.0	0.0
	baz=252,SNR=253						
PPLA	Purkeypile	19.00	44	P	Pn	02 30 32.1	-0.3
PPLA					ScP	02 38 13.8	-0.4
PPLA	Purkeypile	19.00	44	P	Pn	02 30 32.4	+0.1
	baz=249						
SUA	Susitna One	19.20	49	P	P	02 30 32.9	+0.5
SUA					ScP	02 38 13.3	-1.3
SUA	Susitna One	19.20	49	P	P	02 30 32.9	+0.5
	baz=255						
CAST	Castle Rocks	19.24	42	P	Pn	02 30 34.0	-1.0
CAST					ScP	02 38 13.0	-1.6
CAST	Castle Rocks	19.24	42	P	Pn	02 30 34.5	-0.5
	baz=248						
CHUM	Lake Minchumin	19.33	41	P	Pn	02 30 35.8	-0.1
	baz=246,SNR=371						
O22K	Cooper Landing	19.45	52	P	P	02 30 35.4	+0.4
O22K	Cooper Landing	19.45	52	P	P	02 30 34.7	-0.3
	baz=258,SNR=98						
SEW	Seward	19.52	53	P	P	02 30 34.7	-0.9
SEW	Seward	19.52	53	P	P	02 30 35.0	-0.7
	baz=260,SNR=77						
M22K	Willow	19.56	48	P	P	02 30 36.4	+0.2
M22K					ScP	02 38 15.3	0.0
M22K	Willow	19.56	48	P	P	02 30 36.1	-0.1
	baz=255,SNR=36						
RC01	Rabbit Creek A	19.58	50	P	P	02 30 37.1	+0.7
RC01					ScP	02 38 15.2	-0.2
RC01	Rabbit Creek A	19.58	50	P	P	02 30 36.1	-0.2
	baz=257,SNR=66						
CUT	Chulitna	19.68	46	P	P	02 30 37.9	+0.5
CUT					ScP	02 38 14.9	-0.6
CUT	Chulitna	19.68	46	P	P	02 30 37.8	+0.3
	baz=253,SNR=32						
IMAR	Indian Mountai	19.77	34	P	P	02 30 39.4	+1.0
IMAR					ScP	02 38 14.0	-1.8
KTH	Kantishna Hill	19.78	43	P	P	02 30 39.9	+1.3
BPAW	Bear Paw Mtn.	19.95	41		ScP	02 38 14.6	-1.6
BPAW	Bear Paw Mtn.	19.95	41	P	Pn	02 30 42.1	-1.2
	baz=247,SNR=111						
PMR	Palmer	19.98	49	P	P	02 30 40.2	-0.4
PMR					ScP	02 38 15.7	-0.6
PMR	Palmer	19.98	49	P	P	02 30 41.1	+0.5
PMR	Palmer	19.98	49	P	P	02 30 40.1	-0.6
	baz=256,SNR=24						
I21K	Tanana	20.02	38		ScP	02 38 15.7	-0.6
I21K	Tanana	20.02	38	P	P	02 30 42.5	+1.4
	baz=243						
GHO	Glory Hole Cre	20.12	48	P	Pn	02 30 44.2	-1.0
G21K	Allakaket	20.14	33	P	P	02 30 43.7	+1.4
	baz=238						
PWL	Port Wells	20.20	51		ScP	02 38 17.1	+0.2
PWL	Port Wells	20.20	51	P	P	02 30 42.4	-0.7
	baz=259,SNR=25						
KNK	Knik Glacier	20.25	50		ScP	02 38 16.1	-0.9
KNK	Knik Glacier	20.25	50	P	P	02 30 43.5	-0.2
	baz=258,SNR=80						
SML	Sawmill	20.40	48		ScP	02 38 17.0	-0.4
SML	Sawmill	20.40	48	P	P	02 30 45.1	-0.1
	baz=257,SNR=79						
MLY	Manley	20.43	39		ScP	02 38 15.8	-1.6
MLY	Manley	20.43	39	P	P	02 30 47.0	+1.5
	baz=245,SNR=137						
P23K	Montague Islan	20.52	54	P	P	02 30 46.0	-0.5
	baz=262,SNR=41						
F21K	Alatna River	20.53	32	P	P	02 30 48.1	+1.5
	baz=236,SNR=179						
H22K	Ishtalitna Cre	20.57	36	P	P	02 30 48.7	+1.7
	baz=242,SNR=63						
RND	Reindeer	20.60	44	P	P	02 30 47.9	+0.5
RND					ScP	02 38 16.8	-1.1
MCK	McKinley	20.67	43		ScP	02 38 17.2	-0.8
MCK	McKinley	20.67	43	P	P	02 30 47.6	-0.5
	baz=251,SNR=87						
M23K	Glacier View	20.68	49	P	P	02 30 47.9	-0.3
	baz=257,SNR=70						
SCM	Sheep Creek Mo	20.87	49		ScP	02 38 18.1	-0.5
SCM	Sheep Creek Mo	20.87	49	P	P	02 30 50.1	-0.2
	baz=258,SNR=51						
NEA2	Nenana	20.91	41		ScP	02 38 16.2	-2.3
NEA2	Nenana	20.91	41	P	P	02 30 51.7	+0.9
	baz=249,SNR=160						

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Q23K  Middleton Isla    20.98  56   P      P       02 30 51.8 +0.3
      baz=265,SNR=8.4
MID   Middleton Isla    20.99  56   P      P       02 30 52.2 +0.7
MID   Middleton Isla    20.99  56   P      P       02 30 52.5 +1.0
MID   Middleton Isla    20.99  56   P      P       02 30 52.2 +0.7
I23K  Minto, Yukon-K    21.01  39          ScP     02 38 18.5 -0.2
I23K  Minto, Yukon-K    21.01  39   P      P       02 30 52.7 +1.0
      baz=247,SNR=65
G22K  Bettles           21.03  33   P      P       02 30 52.6 +0.8
      baz=240
F22K  John River        21.11  32   P      P       02 30 54.1 +1.3
      baz=237
H23K  Yukon River       21.22  37          ScP     02 38 18.6 -0.7
H23K  Yukon River       21.22  37   P      P       02 30 55.0 +1.0
      baz=245
WRH   Wood River Hil    21.27  41          ScP     02 38 17.2 -2.2
MDM   Murphy Dome       21.38  40          ScP     02 38 19.3 -0.4
EYAK  Cordova Ski Ar    21.41  53   P      P       02 30 55.9 -0.1
EYAK  Cordova Ski Ar    21.41  53   P      P       02 30 55.0 -1.0
      baz=263,SNR=19
G23K  Bananza Creek     21.44  35   P      P       02 30 57.6 +1.2
      baz=242
CCB   Clear Creek Bu    21.44  41          ScP     02 38 17.7 -2.1
M24K  Tolsona, Glenn    21.46  48   P      P       02 30 57.2 +0.6
      baz=258,SNR=70
KLU   Klutina           21.46  50   P      P       02 30 56.0 -0.6
      baz=260,SNR=80
TCOL  CIGO, UAF Yank    21.50  40          ScP     02 38 19.5 -0.4
TCOL  CIGO, UAF Yank    21.50  40   P      P       02 30 57.2 +0.2
      baz=249,SNR=26
COLA  College           21.50  40   P      P       02 30 56.6 -0.4
COLA                                       ScP     02 38 19.5 -0.4
COLA  College           21.50  40   P      P       02 30 57.8 +0.8
COLA  College           21.50  40 i P      P       02 30 57.2 +0.2
COLA                                pmax   pmax
      comp=Z,142nm,1.0s
COLA  College           21.50  40   P      P       02 30 57.0  0.0
      baz=249
COLD  Coldfoot          21.62  33   P      P       02 30 58.9 +0.7
      baz=241,SNR=28
HDA   Harding Lake      21.72  42          ScP     02 38 19.9 -0.7
HDA   Harding Lake      21.72  42   P      P       02 30 57.9 -1.3
      baz=252,SNR=68
POKR  Poker Plat Res    21.76  40   P      P       02 30 59.5 -0.2
      baz=249,SNR=58
H24K  Noodor Dome       21.85  38          ScP     02 38 20.4 -0.5
H24K  Noodor Dome       21.85  38   P      P       02 31 01.4 +0.7
      baz=247
IL31                    21.86  41          ScP     02 38 18.8 -2.0
ILAR  Eielson Array     21.86  41   P      P       02 30 59.0 -1.8
      comp=Z,12nm,0.7s,baz=242,slow=8.6,SNR=100
ILAR                                PcP    PcP     02 34 54.2 -0.9
      comp=Z,2.2nm,0.8s,baz=266,slow=3.2,SNR=3.4
ILAR                                ScP    ScP     02 38 18.7 -2.1
      comp=Z,7.6nm,0.7s,baz=281,slow=3.5,SNR=30
ILAR                                LR     LR      02 40 25.7
      comp=Z,292nm,18.0s,baz=253,slow=39
      comp=Z,12nm,0.7s
ILAR  Eielson Array     21.86  41          ScP     02 38 17.6 -3.3
PAX   Paxson            21.96  46          ScP     02 38 20.4 -0.9
PAX   Paxson            21.96  46   P      P       02 31 01.7 -0.3
      baz=257,SNR=163
HARP  HAARP             21.98  48   P      P       02 31 02.4 +0.2
      baz=259,SNR=28
K24K  Donnelly Dome     22.03  44   P      P       02 31 02.0 -0.7
      baz=255,SNR=76
N25K  Chitina, Valde    22.11  50   P      P       02 31 03.5  0.0
      baz=261,SNR=74
TYV   Tymovskoe         22.14 281  eP      P       02 31 05.5 +1.7
TYV                                eS      S       02 35 04.9 +5.6
TYV                                 pmax   pmax
      comp=Z,31nm,0.8s
TYV                                 pmax   pmax
      comp=Z,300nm,3.0s
E23K  Chandalar         22.23  32   P      P       02 31 05.6 +0.9
      baz=240,SNR=99
A21K  Barrow            22.34  21   P      P       02 31 05.7 +0.1
      baz=223,SNR=10
G24K  Hadweenzic Riv    22.34  36   P      P       02 31 06.9 +1.1
      baz=246,SNR=265
D23K  Nanushuk River    22.38  29   P      P       02 31 06.8 +0.8
      baz=236,SNR=118
RIDG  Independent Ri    22.42  44          ScP     02 38 21.5 -0.9
RIDG  Independent Ri    22.42  44   P      P       02 31 05.4 -1.1
      baz=256,SNR=49
GLB   Gilahina Butte    22.46  51          ScP     02 38 21.9 -0.6
TOLK  Toolik Lake Re    22.54  30   P      P       02 31 08.4 +0.7
      baz=239,SNR=84
F24K  Squaw Lake        22.55  34   P      P       02 31 08.6 +0.8
      baz=243
VRDI  Verde Repeater    22.60  51          ScP     02 38 22.8 -0.3
E24K  Your Creek        22.61  32   P      P       02 31 09.3 +0.9
      baz=241
PRP   Porcupine Dome    22.65  40   P      P       02 31 07.4 -1.5
PRP                                        ScP     02 38 22.0 -1.1
PRP   Porcupine Dome    22.65  40   P      P       02 31 07.8 -1.1
      baz=251,SNR=96
DOT   Dot Lake          22.74  45          ScP     02 38 22.2 -1.0
NKL   Nikolayevsk       22.74 288  eP      P       02 31 04.4 -5.3
NKL                                eS      S       02 35 13.3 +4.4
NKL                                 pmax   pmax
      comp=E,105nm,1.3s
NKL                                 pmax   pmax
      comp=N,511nm,1.0s
NKL                                 pmax   pmax
      comp=Z,191nm,1.6s
NKL                                 smax   smax
      comp=E,1µm,3.2s
NKL                                 smax   smax
      comp=N,359nm,4.8s
MENT  Mentasta          22.74  47   P      P       02 31 11.1 +1.4
MCARA McCarthy VSAT     22.82  51          ScP     02 38 24.5 +1.1
MCARA McCarthy VSAT     22.82  51   P      P       02 31 10.8 +0.3
      baz=263,SNR=64
SCRK  Sand Creek        22.84  44   P      P       02 31 10.0 -0.8
SCRK                                       ScP     02 38 22.5 -1.1
SCRK  Sand Creek        22.84  44   P      P       02 31 09.9 -1.0
      baz=256,SNR=102
G25K  Bearman Lake      22.87  36   P      P       02 31 11.8 +1.0
      baz=247
L26K  Log Cabin Wild    22.92  47          ScP     02 38 23.6 -0.1
L26K  Log Cabin Wild    22.92  47   P      P       02 31 12.2 +0.7
      baz=259,SNR=149
M26K  Nabesna, AK       22.98  48          ScP     02 38 23.3 -0.6
M26K  Nabesna, AK       22.98  48   P      P       02 31 12.1 +0.1
      baz=261,SNR=44
UGL   Uglegorsk         23.09 277  eP      P       02 31 15.1 +2.0
UGL                                e               02 31 37.7
UGL                                eS      S       02 35 18.4 +3.9
UGL                                 pmax   pmax
      comp=Z,90nm,0.9s
UGL                                 smax   smax
      comp=E,2µm,8.0s
UGL                                 smax   smax
      comp=N,410nm,5.5s
J26L  Joseph Creek      23.15  43          ScP     02 38 23.3 -1.0
J26L  Joseph Creek      23.15  43   P      P       02 31 13.0 -0.7
      baz=256
F25K  Christian Rive    23.36  35   P      P       02 31 16.7 +1.1
      baz=246
C24K  Franklin Bluff    23.38  29   P      P       02 31 16.5 +1.0
      baz=238
M27K  Edge Creek, AK    23.48  48   P      P       02 31 17.2 +0.4
      baz=262
YSS   Yuzh-Sakhalins    23.51 272   P      P       02 31 17.8 +0.9
YSS   Yuzh-Sakhalins    23.51 272   P      P       02 31 18.4 +1.4
YSS   Yuzh-Sakhalins    23.51 272⇓eP      P       02 31 18.3 +1.3
YSS                                e*PP    pP      02 31 41.4 +0.5
YSS                                e*SP    sP      02 31 56.7 +0.6
YSS                                eS      S       02 35 22.6 +1.2
YSS                                 pmax   pmax
      comp=Z,200nm,3.5s
YSS                                 pmax   pmax
      comp=Z,70nm,0.6s
YSS                                 smax   smax
      comp=N,600nm,6.7s
YSS                                 smax   smax
      comp=E,400nm,5.7s
YSS                                 MLR    MLR
      comp=Z,300nm,14.0s
I26K  Coal Creek Min    23.53  41   P      P       02 31 15.5 -1.5
      baz=254
CTG   Chitna Glacier    23.60  52   P      P       02 31 18.2 +0.3
      baz=266
E25K  Arctic Village    23.61  33   P      P       02 31 19.1 +1.3
      baz=245,SNR=98
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L27K  Beaver Creek,     23.61  47   P      P       02 31 18.2 +0.4
      baz=261
BMAR  Burnt Mountain    23.68  35   P      P       02 31 19.1 +0.7
G26K  Porcupine Rive    23.79  37   P      P       02 31 20.6 +1.2
      baz=250,SNR=204
D25K  Kavik River       23.88  30   P      P       02 31 21.2 +1.0
      baz=242
F26K  Sheenjek River    23.93  35   P      P       02 31 22.0 +1.4
      baz=248
BVCY  Beaver Creek      23.96  48   P      P       02 31 21.3 +0.3
      baz=263,SNR=124
MIDW  Midway            24.03 171   P      P       02 31 22.2 +0.4
MIDW  Midway            24.03 171   P      P       02 31 22.8 +1.0
YUK3  Moose Creek       24.09  50   P      P       02 31 22.4 +0.1
      baz=265,SNR=291
PINM  Pinnacle          24.10  54   P      P       02 31 22.3  0.0
      baz=269,SNR=33
O28M  Mount Upton       24.15  53   P      P       02 31 23.1 +0.1
      baz=268
EGAK  Eagle             24.22  43   P      P       02 31 23.5 +0.2
      baz=258,SNR=307
I27K  Kandik River      24.23  41   P      P       02 31 22.3 -1.1
      baz=255
YUK8  Steele Glacier    24.38  51   P      P       02 31 25.3 +0.2
      baz=267,SNR=156
H27K  Steamboat Moun    24.43  39   P      P       02 31 24.1 -1.0
      baz=254
PNL   Peninsula         24.53  55   P      P       02 31 26.8 +0.7
PNL   Peninsula         24.53  55   P      P       02 31 25.1 -1.0
      baz=271,SNR=15
G27K  Doyon Strip       24.54  38   P      P       02 31 25.9 -0.3
      baz=253
C26K  Camden Bay        24.62  30   P      P       02 31 28.8 +2.0
      baz=242
DAWY  Dawson            24.85  45   P      P       02 31 29.1 +0.2
DAWY  Dawson            24.85  45   P      P       02 31 29.7 +0.7
      baz=261,SNR=187
C27K  Jago River        24.86  31   P      P       02 31 29.9 +0.9
      baz=244
YUK4  Talbot Arm        24.93  51   P      P       02 31 30.5 +0.6
      baz=268,SNR=391
O29M  Mount Kennedy     24.94  54   P      P       02 31 30.0  0.0
      baz=270,SNR=82
JKA   Kamikawa-asahi    24.96 266   P      P       02 31 30.9 +0.7
ASAJ  Asahikawa         24.96 266   P      P       02 31 31.2 +1.0
      comp=Z,44nm,0.9s,baz=51,slow=6.4,SNR=16
      comp=Z,44nm,0.9s
ASAJ  Asahikawa         24.96 266   P      P       02 31 30.9 +0.7
ASAJ                                pmax   pmax
      comp=Z,77nm,1.1s
E27K  Coleen River      25.01  35   P      P       02 31 31.8 +1.4
      baz=250
YUK6  Outpost Mounta    25.05  52   P      P       02 31 31.0 -0.1
      baz=269,SNR=72
M29M  Somme Creek       25.08  49   P      P       02 31 31.4 +0.3
      baz=266,SNR=180
L29M  L29M              25.29  47   P      P       02 31 33.3 +0.3
      baz=264
J29M  Klondike Camp     25.41  44   IAmb   IAmb    02 31 51.1
      comp=Z,57nm,0.7s
J29M  Klondike Camp     25.41  44   P      P       02 31 34.7 +0.6
      baz=262,SNR=5.8
HYT   Haines Junctio    25.47  53   P      P       02 31 35.0 +0.2
HYT   Haines Junctio    25.47  53   P      P       02 31 34.9 +0.1
      baz=270,SNR=133
I29M  Ogilvie Camp,     25.52  42   IAmb   IAmb    02 31 38.7
      comp=Z,108nm,0.8s
I29M  Ogilvie Camp,     25.52  42   P      P       02 31 35.0 -0.1
      baz=260,SNR=65
K29M  Barlow Dome       25.64  46   P      P       02 31 36.8 +0.6
      baz=264
N30M  Aishikik Lake     25.68  51   P      P       02 31 36.4 -0.2
      baz=269,SNR=272
P30M  Million Dollar    25.75  54   P      P       02 31 37.3 +0.1
      baz=272
ERM   Erimo             25.77 261   P      P       02 31 38.7 +1.2
ERM                                 IAmb   IAmb    02 31 39.8
      comp=Z,51nm,0.8s
ERM   Erimo             25.77 261   P      P       02 31 38.7 +1.2
ERM                                 pmax   pmax
      comp=Z,51nm,0.8s
M30M  Minto, Yukon      25.86  48   P      P       02 31 38.1  0.0
      baz=267,SNR=153
GRNR  Gornyy            25.93 284⇓iP      P       02 31 39.8 +1.0
GRNR                               eS      S       02 36 04.7 +4.8
GRNR                                pmax   pmax
      comp=E,5.0nm,1.0s
GRNR                                pmax   pmax
      comp=N,5.0nm,0.7s
GRNR                                pmax   pmax
      comp=Z,10.0nm,0.7s
GRNR                                smax   smax
      comp=N,4.0nm,0.6s
PLBC  Pleasant Camp     26.08  56   P      P       02 31 39.9 -0.2
      baz=274,SNR=8.9
O30N  Mendenhall        26.16  53   P      P       02 31 41.1 +0.2
      baz=271,SNR=22
S31K  Pelican           26.29  59   P      P       02 31 41.8 -0.1
      baz=277
N31M  Braeburn, Yuko    26.31  51   P      P       02 31 42.3 +0.1
      baz=270
MAYO  Mayo, Yukon       26.33  46   P      P       02 31 42.9 +0.5
MAYO                                IAmb   IAmb    02 32 14.8
      comp=Z,103nm,0.8s
MAYO  Mayo, Yukon       26.33  46   P      P       02 31 42.7 +0.3
      baz=266,SNR=5.9
EPYK  Eagle Plains      26.35  40   P      P       02 31 42.7 +0.1
EPYK                                IAmb   IAmb    02 31 44.1
      comp=Z,106nm,0.8s
EPYK  Eagle Plains      26.35  40   P      P       02 31 42.7 +0.1
      baz=259,SNR=24
R31K  City Hall, Gus    26.50  58   P      P       02 31 43.8 -0.1
      baz=276
SKAG  Skagway           26.61  56   P      P       02 31 45.1 +0.3
SKAG  Skagway           26.61  56   P      P       02 31 46.1 +1.3
SKAG  Skagway           26.61  56   P      P       02 31 45.0 +0.2
      baz=274
G30M  tAoh Zraii Nji    26.66  39   P      P       02 31 45.5 +0.1
      baz=258,SNR=28
SIT   Sitka             26.90  61   IAmb   IAmb    02 31 49.4
      comp=Z,146nm,1.3s
SIT   Sitka             26.90  61   P      P       02 31 48.6 +1.1
SIT   Sitka             26.90  61   P      P       02 31 47.7 +0.2
      baz=279,SNR=8.9
BESE  Bessie Mountai    26.94  57   IAmb   IAmb    02 32 39.3
      comp=Z,83nm,1.2s
M31M  Drury Creek, Y    26.97  49   IAmb   IAmb    02 31 54.7
      comp=Z,84nm,0.7s
M31M  Drury Creek, Y    26.97  49   P      P       02 31 48.6 +0.5
      baz=270,SNR=86
R32K  Eaglecrest        27.15  58   P      P       02 31 49.7 -0.1
      baz=277
JIS   Juneau Island     27.22  58   IAmb   IAmb    02 31 51.8
      comp=Z,60nm,0.9s
JIS   Juneau Island     27.22  58   P      P       02 31 51.2 +0.9
      comp=Z,76nm,1.0s
S32K  Killisnoo         27.24  60   P      P       02 31 51.0 +0.5
      baz=279
P32M  Atlin             27.42  55   P      P       02 31 52.6 +0.5
      baz=275,SNR=15
FARO  Faro, Yukon       27.45  49   P      P       02 31 53.0 +0.5
      baz=271,SNR=18
N32M  Quiet Lake        27.62  52   P      P       02 31 54.4 +0.5
      baz=273,SNR=24
YAK   Yakutsk           27.63 310  eP      P       02 31 51.1 -2.8
YAK                                e*PP    pwP     02 32 22.7 -1.4
YAK                                e               02 32 45.9
YAK                                e               02 35 07.5
YAK                                eS      S       02 36 22.1 -4.3
YAK                                e*SS    sS      02 37 08.0 -4.2
YAK                                e               02 42 25.0
YAK                                 pmax   pmax
      comp=Z,16nm,1.0s
YAK                                 pmax   pmax
      comp=E,13nm,1.5s
YAK                                 pmax   pmax
      comp=N,6.0nm,1.3s
YAK                                 pmax   pmax
      comp=Z,146nm,1.9s
YAK                                 pmax   pmax
      comp=N,75nm,2.0s
YAK                                 pmax   pmax
      comp=E,135nm,2.4s
YAK                                 smax   smax
      comp=N,92nm,2.5s
YAK                                 smax   smax
      comp=E,51nm,2.1s
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F31M  Tsiigehtchic      27.70  38   P      P       02 31 55.0 +0.5
      baz=260,SNR=60
P33M  Teslin, Yukon     27.81  54   IAmb   IAmb    02 32 27.4
      comp=Z,92nm,1.1s
P33M  Teslin, Yukon     27.81  54   P      P       02 31 56.5 +0.8
      baz=275,SNR=21
INK   Inuvik            27.94  36   P      P       02 31 57.5 +0.9
      comp=Z,19nm,0.6s,baz=248,slow=8.0,SNR=100
INK                                 ScP    ScP     02 38 36.8 -1.1
      comp=Z,30nm,1.0s,baz=230,slow=2.5,SNR=24
      comp=Z,19nm,0.6s
INK   Inuvik            27.94  36   P      P       02 31 57.2 +0.7
INK   Inuvik            27.94  36   P      P       02 31 57.0 +0.5
      baz=259,SNR=60
T33K  Petersburg        28.22  61   P      P       02 31 60.0 +0.7
      baz=281
Q32M  Nakina River      28.23  56   P      P       02 32 00.9 +1.3
      baz=278
U33K  Whale Pass        28.27  62   P      P       02 32 00.2 +0.5
      baz=282
MMPY  Sheldon Lake,     28.42  48   P      P       02 32 02.3 +1.3
      baz=272,SNR=41
CRAG  Craig             28.42  64   P      P       02 32 01.5 +0.5
CRAG                                IAmb   IAmb    02 32 36.8
      comp=Z,72nm,1.4s
CRAG  Craig             28.42  64   P      P       02 32 02.2 +1.2
CRAG  Craig             28.42  64   P      P       02 32 01.8 +0.8
      baz=284
WRAK  Wrangell Islan    28.63  62   IAmb   IAmb    02 32 04.8
      comp=Z,37nm,0.8s
WRAK  Wrangell Islan    28.63  62   P      P       02 32 03.7 +0.8
      baz=282,SNR=5.5
S34M  Telegraph Cree    28.98  58   P      P       02 32 07.0 +1.0
      baz=280,SNR=14
TIXI  Tiksi             29.17 330   P      P       02 32 07.4  0.0
      comp=Z,0.8nm,0.3s,baz=90,slow=20,SNR=6.8
TIXI                                LR     LR      02 43 19.7
      comp=Z,197nm,21.8s,baz=148,slow=35
TIXI  Tiksi             29.17 330   P      P       02 32 07.0 -0.5
TIXI  Tiksi             29.17 330ceP      P       02 32 07.5  0.0
TIXI                                pmax   pmax
      comp=Z,3.0nm,1.0s
V35K  Ketchikan         29.29  64   P      P       02 32 09.1 +0.4
      baz=285
KLR   Kul'dur           29.29 283   P      P       02 32 09.5 +0.7
      comp=Z,37nm,0.7s,baz=65,slow=8.7,SNR=117
KLR                                 PcP    PcP     02 35 12.8 +0.4
      comp=Z,4.7nm,0.8s,baz=49,slow=3.5,SNR=3.5
      comp=Z,37nm,0.7s
KLR   Kul'dur           29.29 283ceP      P       02 32 09.3 +0.5
KLR                                 pmax   pmax
      comp=Z,41nm,0.8s
DIB   Dawson Inlet,     29.40  68   P      P       02 32 09.5 -0.2
DLBC  Dease Lake        29.47  57   P      P       02 32 11.4 +1.1
      comp=Z,26nm,0.7s,baz=282,slow=8.6,SNR=48
DLBC                                LR     LR      02 44 37.0
      comp=Z,450nm,18.5s,baz=280,slow=37
      comp=Z,26nm,0.7s
DLBC  Dease Lake        29.47  57   P      P       02 32 11.5 +1.1
DLBC  Dease Lake        29.47  57   P      P       02 32 11.6 +1.2
      baz=280,SNR=17
T35M  Bob Quinn         29.64  60   P      P       02 32 13.0 +1.1
      baz=283,SNR=28
MOBC  Moresby Island    29.71  68   P      P       02 32 12.1 -0.5
WTLY  Watson Lake, Y    29.82  53   P      P       02 32 14.0 +0.6
      baz=278,SNR=11
ZEA   Zeya              30.33 294  eP      P       02 32 17.8 -0.2
ZEA                                e               02 32 48.2
ZEA                                 pmax   pmax
      comp=Z,10.0nm,0.6s
LIRD  Liard River Hi    31.29  54   P      P       02 32 27.2 +0.9
      baz=281,SNR=9.6
A36M  Sachs Harbour     31.36  30   P      P       02 32 28.6 +1.8
      baz=261,SNR=136
USA0B Ussuriysk Arra    31.46 274   P      P       02 32 28.3 +0.3
USA0B Ussuriysk Arra    31.46 274   P      P       02 32 28.3 +0.3
USA0B                               pmax   pmax
      comp=Z,18nm,0.8s
USRK  Ussuriysk Ar.     31.46 274   P      P       02 32 28.4 +0.4
      comp=Z,19nm,0.7s,baz=56,slow=7.7,SNR=38
USRK                                PcP    PcP     02 35 18.9 +0.8
      comp=Z,23nm,0.7s,baz=68,slow=1.6,SNR=26
USRK                                ScP    ScP     02 38 50.2 +0.5
      comp=Z,8.5nm,0.9s,baz=55,slow=7.2,SNR=10
      comp=Z,19nm,0.7s
USRK  Ussuriysk Ar.     31.46 274   P      P       02 32 28.1 +0.2
HEH   HeiHe             31.47 287  eP      P       02 32 27.7 -0.3
HEH                                 pP     pwP     02 32 56.2 -0.5
HEH                                 PcP    PcP     02 35 18.1 +0.1
HEH                                 S      S       02 37 24.0 -2.8
HEH                                 ScP    ScP     02 38 49.4 -0.3
HEH                                 pmax   pmax
      comp=Z,32nm,0.8s
HEH                                 pmax   pmax
      comp=Z,120nm,5.1s
C36M  Paulatuk          31.47  35   IAmb   IAmb    02 32 29.7
      comp=Z,64nm,0.8s
C36M  Paulatuk          31.47  35   P      P       02 32 28.6 +0.8
      baz=267,SNR=73
WRGLY Wrigley           31.93  47   P      P       02 32 33.2 +1.4
      baz=277,SNR=13
VLA   Vladivostok       32.10 273 i P      P       02 32 34.3 +0.8
KOTAN Kotaneelee Air    32.16  53   P      P       02 32 35.3 +1.4
      baz=282,SNR=78
MJAR  Matsushiro Arr    32.17 257   P      P       02 32 35.4 +1.1
      comp=Z,13nm,0.7s,baz=51,slow=7.1,SNR=32
MJAR                                PcP    PcP     02 35 20.0 -0.2
      comp=Z,7.1nm,0.6s,baz=58,slow=3.2,SNR=9.3
MJAR                                ScP    ScP     02 38 52.8 +0.4
      comp=Z,1.1nm,0.3s,baz=64,slow=2.9,SNR=4.9
MJAR                                LR     LR      02 44 47.3
      comp=Z,48nm,22.0s,baz=50,slow=34
      comp=Z,13nm,0.7s
MJB9  Matsu-Tunnel      32.17 257   P      P       02 32 36.1 +1.8
MJB9                                IAmb   IAmb    02 32 37.6
      comp=Z,59nm,1.0s
MAJO  Matsushiro        32.17 257   P      P       02 32 35.2 +0.9
MAJO                                IAmb   IAmb    02 32 36.6
      comp=Z,57nm,0.9s
MAJO  Matsushiro        32.17 257   P      P       02 32 35.7 +1.4
MAJO  Matsushiro        32.17 257   P      P       02 32 35.2 +0.9
MAJO                                pmax   pmax
      comp=Z,57nm,1.0s
MAJO  Matsushiro        32.17 257   P      P       02 32 35.4 +1.0
MAJO                                pP     pP      02 33 02.8 +2.3
MAJO                                PcP    PcP     02 35 20.4 +0.2
BBB   Bella Bella       32.24  68   LR     LR      02 43 31.3
      comp=Z,176nm,20.6s,baz=288,slow=32
MDJ   Mudanjiang        32.72 277   P      P       02 32 39.0  0.0
MDJ                                 pP     pP      02 33 03.8 -1.5
MDJ                                 PcP    PcP     02 35 22.1 +0.6
MDJ                                 S      S       02 37 46.6 +0.2
MDJ                                 ScP    ScP     02 38 52.4 -1.6
MDJ                                 PcS    PcS     02 39 01.1 -5.7
MDJ                                 pmax   pmax
      comp=Z,16nm,1.0s
MDJ                                 pmax   pmax
      comp=Z,89nm,6.2s
MDJ   Mudanjiang        32.72 277   P      P       02 32 40.0 +1.0
      comp=Z,12nm,0.8s
JGF   Kuroka            33.31 257   IAmb   IAmb    02 32 46.7
      comp=Z,52nm,0.8s
JGF   Kuroka            33.31 257   P      P       02 32 45.8 +1.5
H11N2 WAKE ISLAND Hy    33.48 200   T      T       03 08 10.1
      baz=11,slow=76,SNR=54
BNX   BinXian           33.49 280 ⇓P      P       02 32 44.9 -0.8
BNX                                 pP     pP      02 33 12.3 +0.6
BNX                                 sP     sP      02 33 26.5 +1.1
BNX                                 PP     PnPn    02 33 56.3 -5.0
BNX                                 S      S       02 37 54.8 -3.5
BNX                                 pmax   pmax
      comp=Z,43nm,0.7s
BNX                                 pmax   pmax
      comp=Z,63nm,3.9s
BNX                                 LR     LR
      comp=Z,350nm,20.8s
BNX                                 LR     LR
      comp=Z,370nm,14.3s
BNX                                 LR     LR
      comp=Z,240nm,16.7s
H11N3 WAKE ISLAND Hy    33.49 200   T      T       03 08 10.9
      baz=11,slow=76,SNR=39
H11N1 WAKE ISLAND Hy    33.50 200   T      T       03 08 11.5
      baz=11,slow=76,SNR=54
H11S1 WAKE ISLAND Hy    34.71 200   T      T       03 09 41.9
      baz=11,slow=76,SNR=31
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H11S3 WAKE ISLAND Hy 34.73 200    T      T      03 09 50.8
      baz=11,slow=76,SNR=30
H11S2 WAKE ISLAND Hy 34.73 200    T      T      03 09 59.0
      baz=11,slow=76,SNR=24
CLRS  Cowichan Lake  35.95  72    IAmb   IAmb   02 33 07.9
      comp=Z,41nm,0.9s
YKA   Yellowknife Ar 36.05  47    P      P      02 33 08.1 +0.6
      comp=Z,51nm,0.9s,baz=282,slow=8.3,SNR=315
YKA                               pP     pwP    02 33 35.1  -1.1
      comp=Z,13nm,0.8s,baz=282,slow=8.4,SNR=4.3
YKA                               ScP    ScP    02 39 03.8  -1.8
      comp=Z,8.9nm,0.9s,baz=286,slow=3.2,SNR=25
YKA                               PKiKP  PKiKP  02 42 48.0  -1.7
      comp=Z,0.7nm,0.8s,baz=295,slow=1.2,SNR=5.6
YKA                               LR     LR     02 49 02.6
      comp=Z,300nm,18.1s,baz=277,slow=38
YKA                               P3KPbc        03 03 43.4
      comp=Z,0.4nm,0.8s,baz=109,slow=5.2,SNR=5.2
      comp=Z,51nm,0.9s
BOD   Bodaibo        36.14 305  eP      P      02 33 08.2  -0.1
BOD                               pmax   pmax
      comp=Z,14nm,1.2s
HIA   Hailar         36.39 290    P      P      02 33 11.1 +0.6
LLLB  Lillooet       36.45  68    IAmb   IAmb   02 33 12.3
      comp=Z,43nm,1.0s
NLWA  Neilton Lookou 36.79  74    IAmb   IAmb   02 33 15.6
      comp=Z,75nm,1.1s
JCJ   Chichijima     36.80 241    LR     LR     02 46 06.7
      comp=Z,54nm,21.4s,baz=48,slow=32
KSRS  Korea Array    37.87 268    P      P      02 33 24.9 +1.7
      comp=Z,25nm,0.9s,baz=59,slow=8.1,SNR=43
KSRS                              PcP    PcP    02 35 37.4 +0.6
      comp=Z,13nm,0.8s,baz=53,slow=2.9,SNR=21
KSRS                              ScP    ScP    02 39 13.4 +0.6
      comp=Z,3.1nm,1.0s,baz=66,slow=3.0,SNR=5.5
      comp=Z,25nm,0.9s
KS19  Wonju Array Si 37.88 268    P      P      02 33 24.2 +1.0
KS19                              IAmb   IAmb   02 33 25.9
      comp=Z,48nm,1.0s
KSAR  Wonju Array Be 37.91 268    P      P      02 33 23.9 +0.5
KSAR  Wonju Array Be 37.91 268    P      P      02 33 23.9 +0.5
SNY   Shenyang       37.92 277  ⇓P      P      02 33 24.3 +0.8
SNY                               pmax   pmax
      comp=Z,49nm,0.9s
COR   Corvallis      38.57  77    P      P      02 33 29.3 +0.4
COR   Corvallis      38.57  77    P      P      02 33 29.3 +0.4
COR                               pmax   pmax
      comp=Z,92nm,0.9s
COR   Corvallis      38.57  77    P      P      02 33 30.0 +1.1
COR                               pP     pP     02 33 56.1 +0.2
INCN  Inchon         38.65 269    P      P      02 33 30.6 +0.9
INCN  Inchon         38.65 269    P      P      02 33 32.2 +2.5
INCN  Inchon         38.65 269    P      P      02 33 30.6 +0.9
INCN                              pmax   pmax
      comp=Z,70nm,0.8s
INCN  Inchon         38.65 269    P      P      02 33 29.9 +0.2
TJN   Taejon         38.91 267    P      P      02 33 33.9 +2.1
TJN   Taejon         38.91 267ceP      P      02 33 33.5 +1.7
JNU   Nakatsue       38.92 260    LR     LR     02 51 09.2
      comp=Z,31nm,19.6s,baz=46,slow=38
JNU   Nakatsue       38.92 260    P      P      02 33 34.0 +2.0
B08A  Colville Reser 38.97  70    IAmb   IAmb   02 33 32.9
      comp=Z,46nm,0.8s
HOOD  Mount Hood Mea 39.17  75    IAmb   IAmb   02 33 35.2
      comp=Z,73nm,1.1s
H04A  Detroit Lake   39.19  76    IAmb   IAmb   02 33 35.3
      comp=Z,69nm,0.8s
K02D  Willamette Mer 39.39  80    P      P      02 33 36.2 +0.3
G05A  Wamic          39.41  75    IAmb   IAmb   02 33 42.5
      comp=Z,66nm,0.8s
L02F  Cave Junction  39.78  81    P      P      02 33 40.0 +1.0
L02F                              IAmb   IAmb   02 33 41.1
      comp=Z,52nm,0.8s
RES   Resolute Bay   39.86  24    LR     LR     02 51 34.5
      comp=Z,132nm,21.1s,baz=236,slow=38
RES   Resolute Bay   39.86  24    IAmb   IAmb   02 34 11.6
      comp=Z,43nm,1.1s
C09A  Chrisman Ranch 39.87  70    IAmb   IAmb   02 33 39.9
      comp=Z,50nm,0.8s
D08A  Wollman Farm,  39.87  71    IAmb   IAmb   02 33 40.0
      comp=Z,37nm,0.9s
I05D  Terrebonne, OR 39.89  76    IAmb   IAmb   02 33 41.1
      comp=Z,41nm,0.8s
E08A  Dider Farm, El 40.09  72    IAmb   IAmb   02 33 42.0
      comp=Z,51nm,0.8s
NEW   Newport        40.30  69    IAmb   IAmb   02 33 43.5
      comp=Z,66nm,0.8s
NEW   Newport        40.30  69    P      P      02 33 42.7  -0.6
NEW                               pmax   pmax
      comp=Z,117nm,0.8s
NEW   Newport        40.30  69    P      P      02 33 42.5  -0.8
      baz=300,SNR=59
YBH   Yreka Blue Hor 40.53  81    LR     LR     02 48 08.4
      comp=Z,143nm,20.0s,baz=294,slow=32
YBH   Yreka Blue Hor 40.53  81    IAmb   IAmb   02 33 47.6
      comp=Z,61nm,0.8s
J05D  Fort Rock, OR  40.53  78    P      P      02 33 45.7 +0.3
E09A  Wood Farm, Sta 40.61  72    IAmb   IAmb   02 33 46.8
      comp=Z,68nm,1.2s
DL2   Dalian         40.86 274    P      P      02 33 48.4 +0.5
DL2                               pmax   pmax
      comp=Z,53nm,0.8s
K05A  Summer Lake    41.06  78    IAmb   IAmb   02 33 51.2
      comp=Z,46nm,0.7s
I07A  Izee           41.13  76    IAmb   IAmb   02 33 51.2
      comp=Z,57nm,0.8s
KCPM  Cahto Peak     41.21  84    IAmb   IAmb   02 33 53.1
      comp=Z,56nm,0.7s
XLT   XiLinHaoTe     41.30 284⇓iP      P      02 33 52.6 +1.0
XLT                               pP     pP     02 34 18.7 +0.2
XLT                               sP     sP     02 34 35.3 +3.3
XLT                               PcP    PcP    02 35 48.6 +0.8
XLT                               S      S      02 40 03.3 +6.6
XLT                               sS     sS     02 40 49.7 +5.8
XLT                               ScS    ScS    02 43 34.9  -7.6
XLT                               pmax   pmax
      comp=Z,45nm,0.9s
XLT                               pmax   pmax
      comp=Z,120nm,6.2s
XLT                               LR     LR
      comp=Z,250nm,16.9s
XLT                               LR     LR
      comp=Z,200nm,19.7s
BMO   Blue Mountains 42.01  73    IAmb   IAmb   02 33 57.9
      comp=Z,44nm,0.8s
GDXM  Geysers        42.23  84    IAmb   IAmb   02 34 01.6
      comp=Z,87nm,1.0s
ALE   Alert          42.26  10  ⇓P      P      02 33 59.9 +1.1
ALE                               pP     pwP    02 34 27.9  -1.6
ALE                               ScP    ScP    02 39 27.7  -1.6
ORV   Oroville       42.56  82    P      P      02 34 01.5  -0.3
ORV                               IAmb   IAmb   02 34 02.7
      comp=Z,54nm,0.8s
ORV   Oroville       42.56  82    P      P      02 34 01.5  -0.3
ORV                               pmax   pmax
      comp=Z,54nm,0.9s
WVOR  Wild Horse Val 42.59  77    IAmb   IAmb   02 34 03.1
      comp=Z,41nm,0.8s
MSO   Missoula       42.89  69    IAmb   IAmb   02 34 04.5
      comp=Z,49nm,0.8s
MSO   Missoula       42.89  69    P      P      02 34 03.5  -0.9
      baz=303,SNR=55
NRIK  Noril'sk       42.91 329    P      P      02 34 04.8 +0.6
      comp=Z,18nm,0.8s,baz=74,slow=7.8,SNR=22
NRIK                              ScP    ScP    02 39 32.2 +0.1
      comp=Z,8.5nm,0.9s,baz=58,slow=3.6,SNR=7.1
      comp=Z,18nm,0.8s
NRIK  Noril'sk       42.91 329    P      P      02 34 04.5 +0.3
NRIK  Noril'sk       42.91 329ceP      P      02 34 04.4 +0.2
NRIK                              pmax   pmax
      comp=Z,19nm,0.8s
BJI   Beijing        43.51 280    P      P      02 34 10.6 +1.3
BJI                               PcP    PcP    02 35 55.7 +0.7
BJI                               S      S      02 40 31.6 +2.8
BJI                               pmax   pmax
      comp=Z,17nm,1.0s
BJT   Baijiatuau     43.52 279    P      P      02 34 11.2 +1.7
BJT   Baijiatuau     43.52 279    P      P      02 34 10.1 +0.6
BJT                               pP     pP     02 34 37.8 +1.4
BJT                               PcP    PcP    02 35 55.2 +0.1
PAHR  Pah Rah Range  43.76  81    IAmb   IAmb   02 34 13.0
      comp=Z,95nm,1.2s
CMB   Columbia Colle 44.19  83    IAmb   IAmb   02 34 16.7
      comp=Z,48nm,1.1s
YERR  Yerington      44.30  82    IAmb   IAmb   02 34 17.5
      comp=Z,76nm,1.1s
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SAO   San Andreas Ge 44.34  86    P      P      02 34 16.1   0.0
SAO   San Andreas Ge 44.34  86    P      P      02 34 16.1   0.0
SAO                               pmax   pmax
      comp=Z,28nm,0.9s
ULN   Ulaanbaatar    44.37 294    P      P      02 34 16.5 +0.2
ULN   Ulaanbaatar    44.37 294ceP      P      02 34 16.9 +0.6
ULN                               pmax   pmax
      comp=Z,20nm,1.0s
ULN   Ulaanbaatar    44.37 294    P      P      02 34 17.1 +0.8
ULN   Ulaanbaatar    44.37 294    P      P      02 34 17.1 +0.8
ULN                               pP     pwP    02 34 45.9  -1.1
ULN                               PcP    PcP    02 35 58.6 +0.5
ULN                               ScP    ScP    02 39 38.9 +0.3
HLID  Hailey         44.45  73    IAmb   IAmb   02 34 17.7
      comp=Z,44nm,1.0s
HLID  Hailey         44.45  73    P      P      02 34 16.6  -0.5
      baz=306,SNR=76
EGMT  Eagleton       44.62  65    IAmb   IAmb   02 34 18.1
      comp=Z,46nm,0.9s
EGMT  Eagleton       44.62  65    P      P      02 34 16.9  -1.3
      baz=303,SNR=17
SONM  Songino Array  44.75 295    P      P      02 34 20.3 +0.9
      comp=Z,11nm,0.7s,baz=61,slow=8.6,SNR=85
SONM                              PcP    PcP    02 35 59.8 +0.4
      comp=Z,11nm,0.7s,baz=77,slow=2.5,SNR=12
SONM                              ScP    ScP    02 39 40.6 +0.4
      comp=Z,14nm,0.9s,baz=66,slow=2.3,SNR=31
      comp=Z,11nm,0.7s
SONM  Songino Array  44.75 295    P      P      02 34 19.2  -0.2
SONM  Songino Array  44.75 295    P      P      02 34 19.2  -0.2
SONM                              pmax   pmax
      comp=Z,13nm,0.8s
TULEG Thule          44.88  18    P      P      02 34 20.0 +0.2
TULEG Thule          44.88  18  i P      P      02 34 19.8   0.0
TULEG                             IAmb   IAmb   02 34 21.3
      comp=Z,8.4nm,0.5s
BOZ   Bozeman (W)    44.91  69    IAmb   IAmb   02 34 20.7
      comp=Z,63nm,0.8s
BOZ   Bozeman (W)    44.91  69    P      P      02 34 19.8  -0.9
      baz=305,SNR=117
KVN   Kaiserville    44.95  81    IAmb   IAmb   02 34 22.6
      comp=Z,96nm,1.4s
JOW   Kunigami       44.99 256    LR     LR     02 56 33.3
      comp=Z,25nm,18.0s,baz=306,slow=40
JOW   Kunigami       44.99 256    P      P      02 34 21.5 +0.2
JOW   Kunigami       44.99 256    P      P      02 34 23.0 +1.7
ZAK   Zakamensk      45.08 299  eP      P      02 34 21.9   0.0
ZAK                               pmax   pmax
      comp=Z,15nm,1.3s
PMPB  Monarch Peak   45.09  86    IAmb   IAmb   02 34 23.8
      comp=Z,51nm,0.7s
FFC   Flin Flon      45.17  54    P      P      02 34 21.9  -0.6
FFC   Flin Flon      45.17  54    P      P      02 34 21.9  -0.6
FFC                               pmax   pmax
      comp=Z,16nm,0.9s
FFC   Flin Flon      45.17  54    P      P      02 34 21.8  -0.6
FFC                               pP     pP     02 34 50.0 +0.3
FFC                               ScP    ScP    02 39 41.2  -0.3
LHV   Little Huntoon 45.20  82    IAmb   IAmb   02 34 25.1
      comp=Z,97nm,1.3s
NVAR  Mina Array Bea 45.21  81    P      P      02 34 23.6 +0.4
      comp=Z,26nm,0.5s,baz=293,slow=7.6,SNR=342
NVAR                              ScP    ScP    02 39 42.3  -0.1
      comp=Z,3.9nm,0.8s,baz=305,slow=4.5,SNR=11
NVAR                              PKiKP  PKiKP  02 42 58.5  -0.2
      comp=Z,0.7nm,0.7s,baz=258,slow=4.7,SNR=4.0
      comp=Z,26nm,0.5s
MDPB  Devils Postpil 45.24  83    IAmb   IAmb   02 34 25.4
      comp=Z,75nm,0.8s
NV11  Mina Array Sit 45.30  81    IAmb   IAmb   02 34 25.3
      comp=Z,47nm,1.1s
OMMB  Old Mammoth Mi 45.30  83    IAmb   IAmb   02 34 25.9
      comp=Z,69nm,1.2s
TIA   Tai'an         45.33 275  ⇓P      P      02 34 24.7 +0.8
TIA                               S      S      02 40 56.2 +0.9
TIA                               pmax   pmax
      comp=Z,120nm,0.7s
MOY   Mondy          45.60 302  eP      P      02 34 26.7 +0.7
MOY                               pmax   pmax
      comp=Z,17nm,1.0s
ELK   Elko           45.64  77    LR     LR     02 52 01.4
      comp=Z,174nm,18.5s,baz=338,slow=34
ELK   Elko           45.64  77    IAmb   IAmb   02 34 27.5
      comp=Z,35nm,0.7s
HHC   Hu-ho-hao-te   45.80 283  eP      P      02 34 29.1 +1.4
HHC                               sP     sP     02 35 06.1  -2.2
HHC                               S      S      02 41 02.3 +0.1
HHC                               pmax   pmax
      comp=Z,70nm,1.2s
HHC                               pmax   pmax
      comp=Z,330nm,4.8s
HHC                               LR     LR
      comp=Z,430nm,17.1s
HHC                               LR     LR
      comp=Z,340nm,17.1s
HHC                               LR     LR
      comp=Z,210nm,17.1s
YMR   Madison River  45.83  70    IAmb   IAmb   02 34 28.3
      comp=Z,64nm,0.9s
VOG   Valley Oaks Go 45.90  85    P      P      02 34 28.2  -0.1
      baz=311
YNR   Norris Junctio 45.96  70    IAmb   IAmb   02 34 30.5
      comp=Z,49nm,0.9s
YFT   Old Faithful   46.03  70    IAmb   IAmb   02 34 31.3
      comp=Z,54nm,0.8s
HNS   HongShan       46.05 278  ⇓P      P      02 34 31.0 +1.5
HNS                               pP     pP     02 35 02.6 +5.4
HNS                               PcP    PcP    02 36 04.6 +0.7
HNS                               PP     PP     02 36 24.1 +4.6
HNS                               S      S      02 41 06.9 +1.4
HNS                               pmax   pmax
      comp=Z,67nm,1.0s
HNS                               LR     LR
      comp=Z,500nm,23.1s
HNS                               LR     LR
      comp=Z,250nm,14.7s
DSP   Deep Springs   46.09  82    IAmb   IAmb   02 34 31.9
      comp=Z,57nm,1.1s
TIN   Tinemaha, Big  46.13  83    P      P      02 34 31.0 +0.7
      baz=310,SNR=12
SMMC  Simmler        46.18  86    P      P      02 34 31.6 +0.9
      baz=311,SNR=6.5
H17A  Grant Village  46.21  70    IAmb   IAmb   02 34 32.7
      comp=Z,58nm,0.9s
H17A  Grant Village  46.21  70    P      P      02 34 31.6 +0.5
      baz=306,SNR=26
FLWY  Flagg Ranch    46.32  70    IAmb   IAmb   02 34 32.8
      comp=Z,46nm,0.8s
NOR   Nord           46.34   3  i P      P      02 34 30.8  -0.5
NOR                               IAmb   IAmb   02 34 32.0
      comp=Z,3.4nm,0.8s
LCH   Last Change Ra 46.38  82    IAmb   IAmb   02 34 33.8
      comp=Z,64nm,1.3s
VES   Vestal, Richgr 46.39  85    P      P      02 34 32.0  -0.2
      baz=311,SNR=20
HVU   Hansel Valley  46.48  74    IAmb   IAmb   02 34 33.8
      comp=Z,50nm,0.7s
RLMT  Red Lodge      46.54  68    IAmb   IAmb   02 34 34.7
      comp=Z,65nm,1.0s
RLMT  Red Lodge      46.54  68    P      P      02 34 33.1  -0.5
      baz=306,SNR=67
PKM   Mcpherson Peak 46.57  86    P      P      02 34 34.6 +0.7
      baz=312,SNR=14
CWC   Cottonwood Cre 46.62  83    P      P      02 34 34.6 +0.4
      baz=311
GRAC  Grapevine Rang 46.70  82    IAmb   IAmb   02 34 36.6
      comp=Z,96nm,1.4s
GRAC  Grapevine Rang 46.70  82    P      P      02 34 35.4 +0.7
      baz=310,SNR=19
FCC   Fort Churchill 46.76  46    IAmb   IAmb   02 34 35.9
      comp=Z,32nm,0.8s
BCW   Bitter Crk WRg 46.78  86    IAmb   IAmb   02 34 37.5
      comp=Z,82nm,0.8s
GUMO  Guam           46.81 227    P      P      02 34 34.5  -1.1
      comp=Z,79nm,0.5s,baz=326,slow=17,SNR=5.4
GUMO                              LR     LR     02 51 46.0
      comp=Z,104nm,21.7s,baz=52,slow=33
      comp=Z,79nm,0.5s
GUMO  Guam           46.81 227    P      P      02 34 34.2  -1.5
GUMO  Guam           46.81 227    P      P      02 34 34.2  -1.5
GUMO                              pmax   pmax
      comp=Z,242nm,1.1s
GUMO  Guam           46.81 227    P      P      02 34 34.4  -1.3
GUMO                              pP     pP     02 35 02.0  -0.9
BTO   Baotou         46.88 284⇓iP      P      02 34 37.8 +1.7
BTO                               PP     PP     02 36 29.1 +1.7
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BTO                               S      S      02 41 21.6 +4.1
BTO                               pmax   pmax
      comp=Z,210nm,0.9s
BTO                               pmax   pmax
      comp=Z,910nm,5.8s
BTO                               LR     LR
      comp=Z,880nm,14.1s
BTO                               LR     LR
      comp=Z,790nm,7.5s
BTO                               LR     LR
      comp=Z,830nm,13.2s
ISA   Isabella, Lake 46.88  85    P      P      02 34 35.5  -0.7
ISA                               IAmb   IAmb   02 34 36.9
      comp=Z,49nm,1.2s
ISA                               pP     pP     02 35 01.4  -2.6
ISA   Isabella, Lake 46.88  85    P      P      02 34 35.8  -0.4
      baz=311,SNR=7.2
R11A  Troy Canyon, C 46.92  80    IAmb   IAmb   02 34 37.4
      comp=Z,33nm,0.6s
R11A  Troy Canyon, C 46.92  80    P      P      02 34 36.4  -0.2
      baz=310,SNR=106
SBC   Santa Barbara  46.93  87    P      P      02 34 37.0 +0.6
      baz=312
Q12A  Willow Creek R 46.94  78    IAmb   IAmb   02 34 37.7
      comp=Z,29nm,0.6s
ARVC  Arvin          47.02  85    P      P      02 34 36.9  -0.2
      baz=312,SNR=5.3
NJ2   Nanjing        47.03 269⇓iP      P      02 34 37.8 +0.5
NJ2                               pP     pP     02 35 04.5  -0.6
NJ2                               pmax   pmax
      comp=Z,48nm,0.9s
NEEM  North Greenlan 47.18  13  i P      P      02 34 37.8  -0.4
NEEM                              IAmb   IAmb   02 34 39.3
      comp=Z,54nm,0.6s
MPMC  Manual Prospec 47.23  83    P      P      02 34 39.1 +0.1
      baz=311,SNR=56
TIY   Taiyuan        47.24 280  ⇑P      P      02 34 41.0 +2.1
TIY                               sP     sP     02 35 21.0 +1.8
TIY                               S      S      02 41 22.9 +0.2
TIY                               sS     sS     02 42 11.0 +0.2
TIY                               pmax   pmax
      comp=Z,37nm,0.6s
TIY                               LR     LR
      comp=Z,160nm,9.6s
TIY                               LR     LR
      comp=Z,190nm,6.2s
TIY                               LR     LR
      comp=Z,110nm,9.6s
SPR3  Spring Creek 3 47.27  78    IAmb   IAmb   02 34 41.3
      comp=Z,31nm,0.6s
S11A  Rachel         47.27  81    IAmb   IAmb   02 34 40.7
      comp=Z,76nm,1.3s
SCZ2  Santa Cruz Isl 47.27  87    P      P      02 34 39.3 +0.2
      baz=312
FURC  Furnace Creek, 47.35  83    P      P      02 34 40.1 +0.5
      baz=311,SNR=35
LAO   LASA Array     47.35  65    IAmb   IAmb   02 34 40.2
      comp=Z,40nm,0.8s
LAO   LASA Array     47.35  65    P      P      02 34 39.3  -0.3
      baz=306,SNR=13
LAO   LASA Array     47.35  65    P      P      02 34 39.1  -0.5
      baz=306,SNR=13
TPNV  Topopah Spring 47.41  82    P      P      02 34 40.7 +0.3
      baz=310,SNR=102
OSI   Osito Audit: C 47.42  86    P      P      02 34 40.5 +0.2
      baz=312
DUG   Dugway, Tooele 47.43  76    IAmb   IAmb   02 34 41.4
      comp=Z,56nm,0.8s
DUG   Dugway, Tooele 47.43  76    P      P      02 34 40.5   0.0
      baz=309,SNR=83
DGMT  Dagmar         47.44  62    P      P      02 34 39.1  -1.2
      baz=305,SNR=5.7
DGMT  Dagmar         47.44  62    P      P      02 34 39.5  -0.8
      baz=305,SNR=5.7
LRMC  Laurel Mtn Rad 47.49  84    P      P      02 34 40.8  -0.2
      baz=311,SNR=48
GWY   Greenwater Val 47.65  83    IAmb   IAmb   02 34 43.3
      comp=Z,48nm,0.8s
QSM   Queen of Sheba 47.67  83    IAmb   IAmb   02 34 43.4
      comp=Z,70nm,1.2s
EDW2  Edwards Air Fo 47.70  85    P      P      02 34 42.3  -0.1
      baz=312,SNR=28
TCUT  Toone Canyon   47.70  74    IAmb   IAmb   02 34 43.3
      comp=Z,35nm,0.9s
BW06  Boulder Array  47.78  71    IAmb   IAmb   02 34 43.4
      comp=Z,46nm,0.8s
BW06  Boulder Array  47.78  71    P      P      02 34 42.4  -0.8
      baz=308,SNR=62
PD31  Pinedale Array 47.78  71    IAmb   IAmb   02 34 43.4
      comp=Z,43nm,0.9s
PDAR  Pinedale Array 47.78  71    P      P      02 34 42.2  -1.0
      comp=Z,34nm,0.8s,baz=307,slow=3.7,SNR=293
PDAR                              ScP    ScP    02 39 50.9  -2.1
      comp=Z,3.6nm,0.9s,baz=0.0,slow=0.6,SNR=7.7
PDAR                              LR     LR     02 55 54.2
      comp=Z,76nm,18.2s,baz=338,slow=37
      comp=Z,34nm,0.8s
SNCC  San Nicolas Is 47.84  88    P      P      02 34 43.9 +0.3
      baz=313
PRN   Pahroc Range   47.85  80    IAmb   IAmb   02 34 45.0
      comp=Z,47nm,0.7s
DECC  Green Verdugo  47.90  86    P      P      02 34 44.1 +0.1
      baz=312
PASC  Pasadena Art C 48.05  86    IAmb   IAmb   02 34 46.2
      comp=Z,47nm,0.8s
SHOC  Shoshone, Teco 48.08  83    P      P      02 34 45.5 +0.2
      baz=311,SNR=56
GSC   Goldstone, Bar 48.15  84    P      P      02 34 46.1 +0.1
      baz=312,SNR=123
FMP   Fort Macarthur 48.29  86    P      P      02 34 46.9  -0.1
      baz=312
RRX   Edison Barstow 48.31  84    P      P      02 34 47.3 +0.2
      baz=312
BFSC  Mount Baldy Ra 48.33  85    P      P      02 34 47.5 +0.1
      baz=312,SNR=22
KULLO Kullorsuaq     48.35  17  i P      P      02 34 46.9   0.0
KULLO                             IAmb   IAmb   02 34 47.6
      comp=Z,17nm,0.6s
CIS   Catalina Islan 48.42  87    P      P      02 34 48.0   0.0
      baz=313,SNR=5.2
TUQ   Turquoise Moun 48.60  83    P      P      02 34 49.5   0.0
      baz=312,SNR=55
TCRU  Three Creeks R 48.65  77    IAmb   IAmb   02 34 51.2
      comp=Z,33nm,0.7s
HEC   Hector,Ludlow  48.75  84    P      P      02 34 50.6 +0.1
      baz=312,SNR=33
BBRC  Big Bear Solar 48.77  85    P      P      02 34 51.2 +0.3
      baz=312,SNR=19
ELS   Elsinore Mount 48.87  86    IAmb   IAmb   02 34 52.6
      comp=Z,70nm,1.3s
TMUT  Trail Mountain 48.96  76    IAmb   IAmb   02 34 53.7
      comp=Z,61nm,0.8s
KBS   Kingsbay       49.02 357  eP      P      02 34 53.0 +1.1
KBS                               IAmb   IAmb   02 34 53.5
      comp=Z,22nm,0.9s
MURC  Murrieta       49.04  86    P      P      02 34 52.8 +0.1
      baz=313,SNR=21
V12A  Nelson         49.06  82    IAmb   IAmb   02 34 54.2
      comp=Z,86nm,1.7s
P17A  Butcher Ranch, 49.13  75    IAmb   IAmb   02 34 54.4
      comp=Z,29nm,0.8s
GMRC  Granite Mounta 49.19  83    P      P      02 34 54.0  -0.1
      baz=312,SNR=68
LCMT  Little Creek M 49.20  79    IAmb   IAmb   02 34 55.4
      comp=Z,32nm,0.8s
Q16A  Castle Valley  49.22  76    IAmb   IAmb   02 34 55.2
      comp=Z,29nm,0.8s
LYN   LuoYang        49.28 276⇓iP      P      02 34 55.5 +1.0
LYN                               pP     pP     02 35 26.8 +4.4
LYN                               sP     sP     02 35 41.5 +5.5
LYN                               S      S      02 41 52.4 +1.1
LYN                               sS     sS     02 42 41.0 +1.2
LYN                               pmax   pmax
      comp=Z,88nm,0.8s
LYN                               pmax   pmax
      comp=Z,190nm,3.8s
P18A  Preston Nutter 49.32  75    IAmb   IAmb   02 34 56.0
      comp=Z,26nm,0.8s
PKCU  Pink Cliffs    49.49  78    IAmb   IAmb   02 34 57.9
      comp=Z,34nm,0.8s
PFO   Pinyon Flats O 49.49  85    LR     LR     02 52 35.4
      comp=Z,67nm,20.1s,baz=292,slow=32
PFO   Pinyon Flats O 49.49  85    P      P      02 34 55.6  -0.7
PFO   Pinyon Flats O 49.49  85    P      P      02 34 55.6  -0.7
PFO                               pmax   pmax
      comp=Z,19nm,0.7s
PFO   Pinyon Flats O 49.49  85    P      P      02 34 56.0  -0.2
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	baz=313,SNR=16						
PFO	**Pinyon Flats O**	**49.49**	**85**	P	**P**	**02 34 56.1**	**-0.2**
PFO				pP	**pP**	**02 35 24.2**	**-0.2**
PFO				ScP	**ScP**	**02 40 00.6**	**+0.3**
SRU	**San Rafael Swe**	**49.49**	**76**	IAmb	IAmb	02 34 57.6	
	comp=Z,44nm,0.8s						
TPFO	**Pinon Flats**	**49.49**	**85**	P	**P**	**02 34 56.0**	**-0.3**
	baz=313,SNR=17						
BELC	**Belle Mtn. Jos**	**49.51**	**84**	P	**P**	**02 34 56.1**	**-0.4**
	baz=312,SNR=52						
PMD	**Palm Desert**	**49.51**	**85**	IAmb	IAmb	02 34 57.0	
	comp=Z,27nm,0.8s						
SPA0	**Spitsbergen Ar**	**49.56**	**355**	*e*P	**P**	**02 34 56.4**	**+0.3**
SPA0				IAmb	IAmb	02 34 56.9	
	comp=Z,32nm,0.8s						
SPITS	**Spitsbergen Ar**	**49.56**	**355**	LR	LR	02 58 35.7	
	comp=Z,76nm,18.2s,baz=348,slow=39						
SPITS	**Spitsbergen Ar**	**49.56**	**355**	P	**P**	**02 34 56.4**	**+0.3**
SPITS				*PP	**pP**	**02 35 24.4**	**+1.3**
SPITS				pmax	pmax		
	comp=Z,85nm,1.3s						
109C	**Camp Elliot, M**	**49.58**	**86**	P	**P**	**02 34 57.1**	**+0.3**
	baz=313,SNR=8.2						
K22A	**Casper**	**49.61**	**69**	IAmb	IAmb	02 34 56.9	
	comp=Z,27nm,0.8s						
K22A	**Casper**	**49.61**	**69**	P	**P**	**02 34 55.4**	**-1.7**
	baz=308,SNR=12						
K22A	**Casper**	**49.61**	**69**	P	**P**	**02 34 56.1**	**-1.1**
	baz=308,SNR=12						
NEE2	**Needles Airpor**	**49.84**	**83**	P	**P**	**02 34 58.3**	**-0.5**
	baz=312,SNR=5.1						
UPNV	**Upernavik**	**49.90**	**18**	*i* P	**P**	**02 34 58.4**	**-0.3**
UPNV				IAmb	IAmb	02 34 59.3	
	comp=Z,24nm,0.6s						
IRM	**Iron Mountain**	**49.93**	**84**	P	**P**	**02 34 59.5**	**0.0**
	baz=312,SNR=49						
MONP2	**Monument Peak**	**50.00**	**86**	P	**P**	**02 35 00.3**	**0.0**
	baz=313,SNR=18						
W13A	**Hualapai Mount**	**50.07**	**82**	IAmb	IAmb	02 35 01.6	
	comp=Z,26nm,0.8s						
BC3	**Big Chuckawall**	**50.08**	**84**	P	**P**	**02 35 00.3**	**-0.4**
	baz=313,SNR=28						
TKX	**Tecate**	**50.10**	**86**	IAmb	IAmb	02 35 02.0	
	comp=Z,71nm,1.3s						
RSSD	**Black Hills**	**50.12**	**66**	P	**P**	**02 34 59.6**	**-1.4**
RSSD	**Black Hills**	**50.12**	**66**	P	**P**	**02 34 59.6**	**-1.4**
RSSD				pmax	pmax		
	comp=Z,14nm,0.8s						
RSSD	**Black Hills**	**50.12**	**66**	P	**P**	**02 34 59.7**	**-1.4**
	baz=308						
RSSD	**Black Hills**	**50.12**	**66**	P	**P**	**02 34 59.5**	**-1.4**
	baz=308,SNR=13						
RSSD	**Black Hills**	**50.12**	**66**	P	**P**	**02 34 59.7**	**-1.4**
RSSD				pP	**pP**	**02 35 27.8**	**-1.4**
RSSD				ScP	**ScP**	**02 40 00.6**	**-2.4**
U15A	**North Rim**	**50.16**	**79**	IAmb	IAmb	02 35 02.8	
	comp=Z,50nm,0.9s						
O20A	**White River Ci**	**50.19**	**73**	IAmb	IAmb	02 35 01.7	
	comp=Z,47nm,0.8s						
O20A	**White River Ci**	**50.19**	**73**	P	**P**	**02 35 00.7**	**-0.9**
	baz=310,SNR=33						
MDND	**Maddock**	**50.29**	**60**	P	**P**	**02 35 01.5**	**-0.5**
	baz=307,SNR=17						
MDND	**Maddock**	**50.29**	**60**	P	**P**	**02 35 01.5**	**-0.5**
	baz=307,SNR=17						
SWSC	**Sam W. Stewart**	**50.34**	**85**	P	**P**	**02 35 02.2**	**-0.3**
	baz=313,SNR=6.7						
IKP	**In-Ko-Pah, Jac**	**50.35**	**86**	P	**P**	**02 35 02.8**	**0.0**
	baz=313,SNR=15						
PDMCI	**Parker Dam,Lak**	**50.44**	**83**	P	**P**	**02 35 03.2**	**-0.1**
	baz=312,SNR=26						
TATO	**Taipei**	**50.46**	**260**	P	**P**	**02 35 01.9**	**-1.6**
E28A	**Huff**	**50.47**	**62**	IAmb	IAmb	02 35 03.7	
	comp=Z,35nm,1.0s						
E28A	**Huff**	**50.47**	**62**	P	**P**	**02 35 02.9**	**-0.5**
	baz=308,SNR=7.2						
HOPEN	**Hopen**	**50.57**	**352**	*e*P	**P**	**02 35 04.0**	**+0.3**
BLYC	**Blythe**	**50.58**	**84**	IAmb	IAmb	02 35 05.4	
	comp=Z,52nm,0.9s						
YHNB	**Yeheng**	**50.75**	**260**	P	**P**	**02 35 06.0**	**+0.1**
ULM	**Lac du Bonnet**	**50.78**	**56**	P	**P**	**02 35 04.8**	**-0.8**
	comp=Z,29nm,0.7s,baz=306,slow=7.8,SNR=45						
ULM				LR	LR	02 57 48.5	
	comp=Z,170nm,19.0s,baz=240,slow=37						
	comp=Z,29nm,0.7s						
ULM	**Lac du Bonnet**	**50.78**	**56**	IAmb	IAmb	02 35 05.8	
	comp=Z,34nm,0.8s						
PV23	**Carpenter Ridg**	**50.82**	**75**	IAmb	IAmb	02 35 12.5	
	comp=Z,24nm,0.7s						
WHN	**Wuhan**	**50.86**	**271**	⇓*i*P	**P**	**02 35 07.0**	**+0.6**
WHN				sP	**sP**	**02 35 46.5**	**-1.6**
WHN				PcP	**PcP**	**02 36 22.0**	**+0.7**
WHN				S	**S**	**02 42 14.1**	**+0.9**
WHN				pmax	pmax		
	comp=Z,800nm,2.3s						
GLA	**Glamis**	**50.87**	**84**	P	**P**	**02 35 06.7**	**+0.1**
	baz=313,SNR=39						
ESJX	**Sierra Juarez**	**50.90**	**86**	IAmb	IAmb	02 35 08.3	
	comp=Z,25nm,0.8s						
DAG	**Danmarks Havn**	**50.99**	**5**	*i* P	**P**	**02 35 05.3**	**-1.5**
DAG				IAmb	IAmb	02 35 07.0	
	comp=Z,4.8nm,0.7s						
NACB	**Ninganchiao**	**50.99**	**259**	P	**P**	**02 35 08.3**	**+0.8**
PV07	**Paradox Valley**	**51.04**	**75**	IAmb	IAmb	02 35 08.3	
	comp=Z,26nm,0.8s						
N23A	**Red Feather La**	**51.05**	**71**	IAmb	IAmb	02 35 08.8	
	comp=Z,63nm,1.8s						
N23A	**Red Feather La**	**51.05**	**71**	P	**P**	**02 35 07.5**	**-0.6**
	baz=310,SNR=5.8						
PV15	**Paradox Valley**	**51.20**	**75**	IAmb	IAmb	02 35 12.1	
	comp=Z,30nm,0.7s						
WUAZ	**Wupatki**	**51.32**	**80**	IAmb	IAmb	02 35 10.9	
	comp=Z,26nm,0.7s						
WUAZ	**Wupatki**	**51.32**	**80**	P	**P**	**02 35 10.3**	**+0.2**
	baz=312,SNR=28						
NUUG	**Nuugaatsiaq**	**51.44**	**19**	*i* P	**P**	**02 35 09.7**	**-0.5**
SSLB	**Suanglung**	**51.67**	**260**	P	**P**	**02 35 13.1**	**+0.5**
SSLB	**Suanglung**	**51.67**	**260**	P	**P**	**02 35 13.6**	**+1.0**
YULB	**Yu-li**	**51.75**	**259**	P	**P**	**02 35 14.1**	**+0.9**
XAN	**Xi'an**	**51.80**	**278**	⇓P	**P**	**02 35 13.7**	**+0.2**
XAN				pP	pP	02 35 42.6	+0.8
XAN				PcP	**PcP**	**02 36 25.3**	**+0.4**
XAN				PP	**PP**	**02 37 15.2**	**+3.1**
XAN				S	**S**	**02 42 26.8**	**+0.6**
XAN				sS	sS	02 43 18.3	+3.1
XAN				pmax	pmax		
	comp=Z,34nm,1.0s						
XAN				pmax	pmax		
	comp=Z,68nm,3.6s						
XAN				LR	LR		
	comp=Z,130nm,19.6s						
XAN				LR	LR		
	comp=Z,110nm,19.6s						
XAN				LR	LR		
	comp=Z,230nm,18.0s						
MVCO	**Mesa Verde**	**51.94**	**76**	IAmb	IAmb	02 35 15.3	
	comp=Z,31nm,1.1s						
MVCO	**Mesa Verde**	**51.94**	**76**	P	**P**	**02 35 14.1**	**-0.6**
	baz=312,SNR=19						
ISCO	**Idaho Springs**	**51.95**	**72**	P	**P**	**02 35 14.5**	**-0.4**
	baz=311,SNR=17						
ISCO	**Idaho Springs**	**51.95**	**72**	P	**P**	**02 35 14.8**	**-0.1**
	baz=311,SNR=17						
AGMN	**Agassiz Nation**	**51.99**	**58**	IAmb	IAmb	02 35 14.6	
	comp=Z,46nm,0.9s						
AGMN	**Agassiz Nation**	**51.99**	**58**	P	**P**	**02 35 13.6**	**-1.0**
	baz=309,SNR=14						
AGMN	**Agassiz Nation**	**51.99**	**58**	P	**P**	**02 35 13.8**	**-0.9**
	baz=309,SNR=14						
D32A	**Dogwood Acres,**	**52.11**	**59**	IAmb	IAmb	02 35 15.1	
	comp=Z,37nm,1.0s						
BRIGG	**Briggsdale**	**52.20**	**70**	IAmb	IAmb	02 35 17.4	
	comp=Z,31nm,1.0s						
TPUB	**Ta-pu**	**52.23**	**260**	P	**P**	**02 35 17.0**	**+0.3**
ZAA0	**Zalesovo Array**	**52.27**	**312**	IAmb	IAmb	02 36 27.9	
	comp=Z,26nm,0.8s						
ZALV	**Zalesovo Beam**	**52.27**	**312**	P	**P**	**02 35 16.2**	**-0.4**
	comp=Z,3.0nm,0.8s,baz=68,slow=5.1,SNR=9.1						
ZALV				PcP	**PcP**	**02 36 27.1**	**+0.9**
	comp=Z,24nm,0.7s,baz=32,slow=4.0,SNR=25						
ZALV				ScP	**ScP**	**02 40 12.6**	**+0.8**
	comp=Z,5.6nm,0.8s,baz=46,slow=5.0,SNR=11						
	comp=Z,3.0nm,0.8s						
ZALV	**Zalesovo Beam**	**52.27**	**312**	*i* P	**P**	**02 35 18.7**	**+2.1**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
S22A	**4UR Ranch, Cre**	**52.58**	**74**	IAmb	IAmb	02 35 20.8	
	comp=Z,24nm,0.9s						
S22A	**4UR Ranch, Cre**	**52.58**	**74**	P	**P**	**02 35 19.7**	**+0.2**
	baz=312,SNR=31						
W18A	**Petrified Fore**	**52.58**	**79**	P	**P**	**02 35 19.6**	**+0.1**
	baz=312,SNR=5.4						
SUSD	**Miller**	**52.76**	**63**	P	**P**	**02 35 19.2**	**-1.2**
	baz=310,SNR=5.9						
SUSD	**Miller**	**52.76**	**63**	P	**P**	**02 35 19.2**	**-1.2**
	baz=310,SNR=5.9						
Q24A	**Divide**	**52.77**	**72**	P	**P**	**02 35 20.4**	**-0.5**
	baz=311,SNR=9.5						
X18A	**Snowflake**	**52.85**	**80**	P	**P**	**02 35 22.0**	**+0.6**
X18A				IAmb	IAmb	02 35 22.7	
	comp=Z,33nm,0.6s						
X18A					**pP**	**02 35 49.4**	**-0.5**
214A	**Organ Pipe Nat**	**52.86**	**84**	IAmb	IAmb	02 35 22.4	
	comp=Z,41nm,0.9s						
214A	**Organ Pipe Nat**	**52.86**	**84**	P	**P**	**02 35 21.3**	**0.0**
	baz=314,SNR=29						
BJO1	**Bjornoya**	**52.96**	**353**	*e*P	**P**	**02 35 21.7**	**+0.3**
SUMG	**Summit**	**53.05**	**13**	*i* P	**P**	**02 35 21.4**	**-1.2**
SUMG				IAmb	IAmb	02 35 23.8	
	comp=Z,17nm,0.8s						
B35A	**Bob, Littlefor**	**53.05**	**57**	IAmb	IAmb	02 35 22.5	
	comp=Z,39nm,0.8s						
B35A	**Bob, Littlefor**	**53.05**	**57**	P	**P**	**02 35 21.6**	**-0.9**
	baz=310,SNR=8.8						
OGNE	**Ogallala**	**53.28**	**68**	IAmb	IAmb	02 35 25.9	
	comp=Z,46nm,0.9s						
OGNE	**Ogallala**	**53.28**	**68**	P	**P**	**02 35 24.1**	**-0.3**
	baz=311,SNR=11						
OGNE	**Ogallala**	**53.28**	**68**	P	**P**	**02 35 24.2**	**-0.3**
	baz=311,SNR=11						
DBG	**Daneborg**	**53.30**	**6**	*i* P	**P**	**02 35 22.5**	**-1.4**
DBG				IAmb	IAmb	02 35 23.9	
	comp=Z,8.2nm,0.7s						
F33A	**5 Mile Ranch,**	**53.31**	**60**	P	**P**	**02 35 23.2**	**-1.2**
	baz=310,SNR=8.3						
FRB	**Frobisher Bay**	**53.36**	**31**	LR	LR	03 01 54.4	
	comp=Z,216nm,18.7s,baz=331,slow=40						
SDCO	**Great Sand Dun**	**53.37**	**74**	IAmb	IAmb	02 35 26.2	
	comp=Z,40nm,1.2s						
SDCO	**Great Sand Dun**	**53.37**	**74**	P	**P**	**02 35 25.2**	**-0.1**
	baz=312,SNR=41						
SDCO	**Great Sand Dun**	**53.37**	**74**	P	**P**	**02 35 25.1**	**-0.2**
	baz=312,SNR=41						
LZH	**Lanzhou**	**53.49**	**284**	⇓P	**P**	**02 35 27.3**	**+1.2**
LZH				pP	pP	02 35 55.0	+0.9
LZH				sP	sP	02 36 07.3	-0.2
LZH				PcP	**PcP**	**02 36 32.7**	**+1.3**
LZH				S	**S**	**02 42 51.5**	**+2.0**
LZH				sS	sS	02 43 34.3	-4.3
LZH				pmax	pmax		
	comp=Z,69nm,1.0s						
LZH				pmax	pmax		
	comp=Z,130nm,4.6s						
LZH				LR	LR		
	comp=Z,260nm,15.2s						
LZH				LR	LR		
	comp=Z,270nm,15.9s						
LZH				LR	LR		
	comp=Z,250nm,17.5s						
GTA	**Gaotai**	**53.67**	**290**	⇓P	**P**	**02 35 28.2**	**+0.9**
GTA				PcP	**PcP**	**02 36 33.0**	**+1.0**
GTA				S	**S**	**02 42 49.9**	**-1.8**
GTA				sS	sS	02 43 38.8	-1.9
GTA				ScS	**ScS**	**02 45 04.0**	**-0.5**
GTA				pmax	pmax		
	comp=Z,50nm,0.9s						
GTA				pmax	pmax		
	comp=Z,150nm,7.6s						
GTA				LR	LR		
	comp=Z,160nm,14.7s						
GTA				LR	LR		
	comp=Z,130nm,15.5s						
GTA				LR	LR		
	comp=Z,190nm,17.5s						
DGZ	**Jazzator, Alta**	**53.71**	**306**	*i* P	**P**	**02 35 28.0**	**+0.5**
DGZ				pmax	pmax		
	comp=Z,18nm,0.9s						
ILULI	**Ilulissat**	**53.73**	**20**	P	**P**	**02 35 27.6**	**+0.4**
ILULI				pP	**pP**	**02 35 56.5**	**+1.7**
ILULI				IAmb	IAmb	02 35 59.4	
	comp=Z,25nm,0.9s						
ILULI	**Ilulissat**	**53.73**	**20**	*i* P	**P**	**02 35 26.5**	**-0.6**
ILULI				IAmb	IAmb	02 35 27.5	
	comp=Z,16nm,0.6s						
TUC	**Tucson**	**53.86**	**82**	P	**P**	**02 35 28.8**	**+0.1**
TUC				IAmb	IAmb	02 35 30.0	
	comp=Z,37nm,1.1s						
TUC	**Tucson**	**53.86**	**82**	P	**P**	**02 35 28.8**	**+0.1**
TUC				pmax	pmax		
	comp=Z,37nm,1.1s						
TUC	**Tucson**	**53.86**	**82**	P	**P**	**02 35 28.8**	**+0.1**
	baz=314						
TUC	**Tucson**	**53.86**	**82**	P	**P**	**02 35 28.6**	**-0.1**
TUC				pP	**pP**	**02 35 57.2**	**0.0**
TUC				PcP	**PcP**	**02 36 32.0**	**-0.8**
TUC				ScP	**ScP**	**02 40 18.9**	**-0.3**
ENH	**Enshi**	**54.04**	**275**	P	**P**	**02 35 29.9**	**-0.1**
	comp=Z,75nm,0.9s						
ENH	**Enshi**	**54.04**	**275**	P	**P**	**02 35 30.0**	**0.0**
ENH				PcP	**PcP**	**02 36 33.4**	**-0.1**
KSCO	**Kaye Shedlock'**	**54.21**	**71**	IAmb	IAmb	02 35 32.2	
	comp=Z,47nm,0.8s						
KSCO	**Kaye Shedlock'**	**54.21**	**71**	P	**P**	**02 35 31.2**	**-0.1**
	baz=312,SNR=9.2						
KSCO	**Kaye Shedlock'**	**54.21**	**71**	P	**P**	**02 35 31.1**	**-0.1**
	baz=312,SNR=9.2						
T25A	**Trinidad**	**54.42**	**73**	IAmb	IAmb	02 35 33.9	
	comp=Z,62nm,1.1s						
T25A	**Trinidad**	**54.42**	**73**	P	**P**	**02 35 32.8**	**-0.1**
	baz=312,SNR=36						
EYMN	**Ely**	**54.47**	**56**	IAmb	IAmb	02 35 33.2	
	comp=Z,46nm,0.8s						
EYMN	**Ely**	**54.47**	**56**	P	**P**	**02 35 32.1**	**-0.6**
	baz=311,SNR=6.0						
EYMN	**Ely**	**54.47**	**56**	P	**P**	**02 35 32.2**	**-0.6**
	baz=311,SNR=6.0						
ECSD	**EROS Data Cent**	**54.51**	**62**	P	**P**	**02 35 31.5**	**-1.6**
	baz=311,SNR=11						
ECSD	**EROS Data Cent**	**54.51**	**62**	P	**P**	**02 35 31.6**	**-1.6**
	baz=311,SNR=11						
ANMO	**Albuquerque**	**54.68**	**77**	LR	LR	02 57 25.6	
	comp=Z,89nm,18.8s,baz=40,slow=34						
ANMO	**Albuquerque**	**54.68**	**77**	P	**P**	**02 35 34.8**	**0.0**
ANMO	**Albuquerque**	**54.68**	**77**	P	**P**	**02 35 34.8**	**0.0**
ANMO				pmax	pmax		
	comp=Z,14nm,1.1s						
ANMO	**Albuquerque**	**54.68**	**77**	P	**P**	**02 35 34.5**	**-0.2**
	baz=313						
ANMO	**Albuquerque**	**54.68**	**77**	P	**P**	**02 35 34.1**	**-0.6**
	baz=313,SNR=18						
ANMO	**Albuquerque**	**54.68**	**77**	P	**P**	**02 35 34.3**	**-0.5**
ANMO				PcP	**PcP**	**02 36 33.4**	**-2.6**
ANMO				ScP	**ScP**	**02 40 21.8**	**-1.1**
DUN6	**Lazy B Ranch**	**54.72**	**81**	IAmb	IAmb	02 35 36.4	
	comp=Z,81nm,1.4s						
F36A	**Milaca**	**54.77**	**59**	P	**P**	**02 35 33.7**	**-1.4**
	baz=311,SNR=6.7						
Y22D	**IRIS PASSCAL I**	**54.99**	**78**	P	**P**	**02 35 37.7**	**+0.7**
	baz=314						
Y22F	**Passcal Instru**	**54.99**	**78**	P	**P**	**02 35 37.8**	**+0.8**
	baz=314						
Y22A	**Socorro**	**55.06**	**78**	P	**P**	**02 35 37.5**	**0.0**
	baz=314,SNR=33						
BGNE	**Belgrade**	**55.19**	**66**	P	**P**	**02 35 37.2**	**-0.9**
	baz=312						
E38A	**The Farm, Brul**	**55.31**	**57**	P	**P**	**02 35 38.0**	**-0.9**
	baz=311,SNR=6.2						
319A	**Douglas**	**55.42**	**82**	IAmb	IAmb	02 35 41.4	
	comp=Z,45nm,1.0s						
121A	**Cookes Peak, D**	**55.53**	**80**	IAmb	IAmb	02 35 42.1	
	comp=Z,19nm,0.7s						
121A	**Cookes Peak, D**	**55.53**	**80**	P	**P**	**02 35 41.0**	**+0.2**
	baz=314,SNR=18						
121A	**Cookes Peak, D**	**55.53**	**80**	P	**P**	**02 35 41.2**	**+0.3**
	baz=314,SNR=18						
SPMN	**Marine on St.**	**55.57**	**59**	IAmb	IAmb	02 35 41.1	
	comp=Z,56nm,1.2s						
SPMN	**Marine on St.**	**55.57**	**59**	P	**P**	**02 35 40.0**	**-0.8**
	baz=312,SNR=7.6						
SPMN	**Marine on St.**	**55.57**	**59**	P	**P**	**02 35 39.9**	**-0.8**
	baz=312,SNR=7.6						
SFJD	**Kangerlussuaq**	**55.66**	**21**	LR	LR	02 59 16.3	
	comp=Z,50nm,21.7s,baz=336,slow=36						
SFJD	**Kangerlussuaq**	**55.66**	**21**	P	**P**	**02 35 41.2**	**+0.2**
SFJD	**Kangerlussuaq**	**55.66**	**21**	P	**P**	**02 35 41.2**	**+0.2**
SFJD				pmax	pmax		
	comp=Z,16nm,1.1s						
SFJD	**Kangerlussuaq**	**55.66**	**21**	*i* P	**P**	**02 35 39.2**	**-1.8**
SFJD				IAmb	IAmb	02 35 41.1	
	comp=Z,5.2nm,0.5s						
ICESG	**Greenland Ices**	**55.98**	**15**	*i* P	**P**	**02 35 42.4**	**-1.3**
ICESG				IAmb	IAmb	02 35 44.0	
	comp=Z,17nm,0.7s						
CBKS	**Cedar Bluff**	**56.02**	**69**	P	**P**	**02 35 43.7**	**-0.4**
	baz=313,SNR=17						
CBKS	**Cedar Bluff**	**56.02**	**69**	P	**P**	**02 35 43.7**	**-0.4**
	baz=313,SNR=17						
HSIG		**56.06**	**85**	IAmb	IAmb	02 35 45.5	
	comp=Z,36nm,0.8s						
I37B	**Waseca**	**56.06**	**60**	P	**P**	**02 35 43.8**	**-0.5**
	baz=312,SNR=10						
VADS	**Vadso**	**56.07**	**348**	*e*P	**P**	**02 35 44.1**	**+0.2**
ZSN	**Zaisan**	**56.48**	**306**	*e*P	**P**	**02 35 47.6**	**+0.4**
	baz=306						
ZSN	**Zaisan**	**56.48**	**306**	*e*P	**P**	**02 35 47.6**	**+0.4**
KIDD	**KIDD Seismic O**	**56.84**	**80**	P	**P**	**02 35 50.3**	**+0.2**
	baz=315,SNR=8.7						
R32A	**Long Quarter,**	**56.88**	**69**	P	**P**	**02 35 49.1**	**-1.0**
	baz=313,SNR=13						
SCO	**Scoresbysund**	**56.89**	**8**	*i* P	**P**	**02 35 47.6**	**-2.1**
SCO				IAmb	IAmb	02 35 51.0	
	comp=Z,4.0nm,0.7s						
G40A	**Rib Lake**	**56.91**	**57**	IAmb	IAmb	02 35 50.6	
	comp=Z,37nm,1.1s						
N35A	**Tabor**	**56.96**	**65**	P	**P**	**02 35 50.2**	**-0.4**
	baz=313,SNR=36						
DY2G	**Dye2**	**57.04**	**20**	*i* P	**P**	**02 35 49.9**	**-1.2**
DY2G				IAmb	IAmb	02 35 52.2	
	comp=Z,17nm,0.6s						
ARA0	**ARCESS Array S**	**57.10**	**349**	*e*P	**P**	**02 35 51.4**	**+0.2**
ARA0				IAmb	IAmb	02 35 54.3	
	comp=Z,86nm,1.8s						
ARCES	**ARCESS Array B**	**57.10**	**349**	P	**P**	**02 35 50.7**	**-0.6**
	comp=Z,5.9nm,0.8s,baz=27,slow=7.6,SNR=17						
ARCES				pP	**pP**	**02 36 19.9**	**+0.9**
	comp=Z,10nm,0.8s,baz=18,slow=8.1,SNR=6.3						
ARCES				LR	LR	03 02 50.7	
	comp=Z,62nm,18.8s,baz=44,slow=38						
	comp=Z,5.9nm,0.8s						
ARCES	**ARCESS Array B**	**57.10**	**349**	P	**P**	**02 35 50.6**	**-0.6**
ARCES				pP	**pP**	**02 36 19.7**	**+0.8**
CD2	**Chengdu**	**57.11**	**279**	P	**P**	**02 35 52.3**	**+0.4**
CD2				sP	sP	02 36 33.9	-0.1
CD2				S	**S**	**02 43 36.9**	**-0.6**
CD2				pmax	pmax		
	comp=Z,50nm,0.8s						
KURK	**Kurchatov**	**57.26**	**312**	P	**P**	**02 35 53.2**	**+0.6**
KURK				IAmb	IAmb	02 35 55.2	
	comp=Z,39nm,0.8s						
KURK	**Kurchatov**	**57.26**	**312**	P	**P**	**02 35 53.2**	**+0.6**
KURK				pmax	pmax		
	comp=Z,39nm,0.9s						
KURK	**Kurchatov**	**57.26**	**312**	P	**P**	**02 35 52.9**	**+0.3**
KURK	**Kurchatov**	**57.26**	**312**	⇓P	**P**	**02 35 52.9**	**+0.3**
KURK				PcP	**PcP**	**02 36 45.4**	**-0.1**
KURK				ScP	**ScP**	**02 40 34.1**	**+0.4**
K38A	**Parkersburg**	**57.32**	**61**	IAmb	IAmb	02 35 53.3	
	comp=Z,49nm,1.1s						
LVZ	**Lovozero**	**57.33**	**345**	P	**P**	**02 35 52.5**	**-0.4**
LVZ				IAmb	IAmb	02 36 26.5	
	comp=Z,60nm,0.9s						
LVZ	**Lovozero**	**57.33**	**345**	P	**P**	**02 35 52.1**	**-0.8**
LVZ				pP	**pP**	**02 36 20.2**	**-0.4**
LVZ				pwP	**pwP**	**02 36 24.7**	**-0.8**
LVZ				sP	**sP**	**02 36 34.6**	**+1.1**
WMQ	**Urumqi**	**57.48**	**301**	⇓P	**P**	**02 35 55.2**	**+0.8**
WMQ				pP	pP	02 36 23.6	+1.1
WMQ				sP	PcP	02 36 41.1	-5.5
WMQ				PcP	sP	02 36 47.5	+12
WMQ				ScP	**ScP**	**02 40 35.4**	**+0.5**
WMQ				S	**S**	**02 43 42.5**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,19nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.5s						
WMQ				LR	LR		
	comp=Z,290nm,20.9s						
WMQ				LR	LR		
	comp=Z,83nm,24.1s						
MSTX	**Muleshoe**	**57.55**	**75**	P	**P**	**02 35 54.4**	**-0.7**
	baz=314,SNR=18						
MSTX	**Muleshoe**	**57.55**	**75**	P	**P**	**02 35 54.6**	**-0.5**
	baz=314,SNR=18						
AMTX	**Amarillo**	**57.57**	**74**	IAmb	IAmb	02 35 55.7	
	comp=Z,28nm,1.0s						
AMTX	**Amarillo**	**57.57**	**74**	P	**P**	**02 35 54.7**	**-0.4**
	baz=314						
AMTX	**Amarillo**	**57.57**	**74**	P	**P**	**02 35 54.6**	**-0.6**
	baz=314,SNR=11						
MNTX	**Cornudas Mount**	**57.57**	**79**	P	**P**	**02 35 55.2**	**+0.2**
	baz=315,SNR=71						
MNTX	**Cornudas Mount**	**57.57**	**79**	P	**P**	**02 35 55.3**	**+0.2**
	baz=315,SNR=71						
SCIA	**State Center**	**57.59**	**62**	P	**P**	**02 35 54.4**	**-0.7**
	baz=313,SNR=9.2						
SCIA	**State Center**	**57.59**	**62**	P	**P**	**02 35 54.6**	**-0.4**
	baz=313,SNR=9.2						
KSU1	**Kansas State U**	**57.61**	**67**	IAmb	IAmb	02 35 54.9	
	comp=Z,43nm,0.9s						
KSU1	**Kansas State U**	**57.61**	**67**	P	**P**	**02 35 54.0**	**-1.3**
	baz=313,SNR=7.2						
KSU1	**Kansas State U**	**57.61**	**67**	P	**P**	**02 35 54.2**	**-1.1**
	baz=313,SNR=7.2						
I40A	**Norwalk**	**57.63**	**59**	IAmb	IAmb	02 35 55.6	
	comp=Z,76nm,1.4s						
I40A	**Norwalk**	**57.63**	**59**	P	**P**	**02 35 54.4**	**-0.9**
	baz=313,SNR=5.8						
JETT	**Jettan, Norway**	**57.63**	**351**	*e*P	**P**	**02 35 55.2**	**+0.2**
JETT				IAmb	IAmb	02 35 58.0	
	comp=Z,24nm,0.9s						
TRO	**Tromso**	**57.69**	**352**	*e*P	**P**	**02 35 55.0**	**-0.4**
E43A	**Lone Tree Farm**	**57.80**	**55**	P	**P**	**02 35 56.4**	**-0.1**
	baz=313,SNR=5.5						
APA	**Apatity**	**57.83**	**345**	⇓*i*P	**P**	**02 35 54.6**	**-1.7**
APA				*i*		02 36 27.7	
APA				MLR	MLR		
	comp=Z,700nm,18.0s						
KTK1	**Kautokeino**	**57.86**	**350**	*e*P	**P**	**02 35 56.9**	**+0.4**
KTK1				IAmb	IAmb	02 35 58.4	
	comp=Z,21nm,1.0s						
OK035	**E0210 Rd and N**	**58.05**	**70**	IAmb	IAmb	02 35 58.3	
	comp=Z,43nm,0.8s						
ELIS	**Ellis County**	**58.08**	**71**	IAmb	IAmb	02 35 59.0	
	comp=Z,41nm,1.2s						
U32A	**Winter Ranch,**	**58.11**	**71**	P	**P**	**02 35 58.1**	**-0.7**
	baz=314						
KAN06	**Argonia West S**	**58.17**	**69**	IAmb	IAmb	02 35 58.3	
	comp=Z,14nm,0.6s						
OK038	**West end E0370**	**58.19**	**70**	IAmb	IAmb	02 35 58.5	
	comp=Z,38nm,0.9s						
MK31	**Makanchi Array**	**58.21**	**307**	*i* P	**P**	**02 35 58.6**	**-0.8**
MKAR	**Makanchi Array**	**58.21**	**307**	P	**P**	**02 35 59.1**	**-0.3**
	comp=Z,14nm,0.7s,baz=51,slow=7.3,SNR=103						
MKAR				ScP	**ScP**	**02 40 38.8**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=57,slow=3.3,SNR=4.3						
	comp=Z,14nm,0.7s						
MKAR	**Makanchi Array**	**58.21**	**307**	*i* P	**P**	**02 35 59.0**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,15nm,0.7s						
KAN05	**Bluff City Nor**	**58.26**	**69**	IAmb	IAmb	02 35 59.0	
	comp=Z,25nm,0.6s						
OK032	**Salt Plains WL**	**58.27**	**70**	IAmb	IAmb	02 35 59.8	
	comp=Z,24nm,1.0s						
N38A	**Joes South For**	**58.34**	**63**	P	**P**	**02 35 59.4**	**-0.9**
	baz=314						
MAKZ	**Makanchi**	**58.36**	**307**	P	**P**	**02 36 00.4**	**0.0**
MAKZ				IAmb	IAmb	02 36 01.1	
	comp=Z,19nm,0.8s						
MAKZ	**Makanchi**	**58.36**	**307**	P	**P**	**02 36 00.4**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,19nm,0.8s						
MAKZ	**Makanchi**	**58.36**	**307**	P	**P**	**02 36 00.0**	**-0.4**
KS20	**Mayfield South**	**58.36**	**69**	IAmb	IAmb	02 36 00.2	
	comp=Z,49nm,0.9s						
JFWS	**Jewell Farm**	**58.49**	**59**	P	**P**	**02 36 00.0**	**-1.4**
	baz=314,SNR=5.0						
JFWS	**Jewell Farm**	**58.49**	**59**	P	**P**	**02 36 00.3**	**-1.0**
	baz=314,SNR=5.0						
GYA	**Guiyang**	**58.50**	**273**	⇑*i*P	**P**	**02 36 02.3**	**+0.5**
GYA				pP	pP	02 36 34.5	+3.9

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GYA                              PcP     PcP     02 36 51.7 +0.7
GYA                              S       S       02 43 53.5 -2.3
GYA                              pmax    pmax
      comp=Z,40nm,0.8s
I42A  Draeger Farm,     58.52  58   P       P       02 36 00.5 -1.0
      baz=314,SNR=6.8
L40A  Anamosa           58.56  61   IAmb    IAmb    02 36 01.5
      comp=Z,39nm,0.8s
L40A  Anamosa           58.56  61   P       P       02 36 00.7 -1.1
      baz=314,SNR=5.4
GOMU  GeErMu            58.75 290   P       P       02 36 04.0 +0.3
GOMU                                pmax    pmax
      comp=Z,30nm,0.9s
GOMU                                pmax    pmax
      comp=Z,84nm,6.6s
GOMU                                LR      LR
      comp=Z,98nm,15.2s
GOMU                                LR      LR
      comp=Z,75nm,15.3s
GOMU                                LR      LR
      comp=Z,110nm,13.9s
BLOK  Blackwell         58.88  69   IAmb    IAmb    02 36 04.1
      comp=Z,31nm,1.1s
POST  Post              58.94  75   P       P       02 36 04.5 -0.2
POST                                IAmb    IAmb    02 36 05.2
      comp=Z,46nm,0.8s
POST                                pP      pP      02 36 33.2 -0.4
P38A  Dawn              58.98  64   P       P       02 36 03.4 -1.4
      baz=314,SNR=22
E46A  Sault Ste Mari    59.15  53   P       P       02 36 05.9 +0.1
      baz=315,SNR=7.4
T35A  Sooner Cattle     59.18  68   IAmb    IAmb    02 36 05.8
      comp=Z,32nm,1.1s
T35B  Sooner Cattle     59.18  68   P       P       02 36 04.6 -1.6
      baz=314,SNR=9.0
BVAR  Borovoye Array    59.21 318   LR      LR      03 03 39.7
      comp=Z,148nm,19.7s,baz=45,slow=38
BRVK  Borovoye          59.23 318   P       P       02 36 07.1 +0.8
BRVK                                IAmb    IAmb    02 36 08.0
      comp=Z,26nm,0.8s
BRVK  Borovoye          59.23 318   P       P       02 36 07.1 +0.8
BRVK                                pmax    pmax
      comp=Z,26nm,0.8s
BRVK  Borovoye          59.23 318   P       P       02 36 07.0 +0.7
BRVK  Borovoye          59.23 318 ⇓P       P       02 36 07.1 +0.8
BRVK                                pP      pwP     02 36 37.2 -2.0
BRVK                                PcP     PcP     02 36 53.5 +0.2
BRVK                                ScP     ScP     02 40 43.2 +0.8
OK045 Pawnee Station    59.27  69   IAmb    IAmb    02 36 06.6
      comp=Z,38nm,1.2s
OK050 Pawnee Station    59.27  69   IAmb    IAmb    02 36 06.7
      comp=Z,29nm,0.9s
ISOG  Isortoq, Green    59.28  17 i P       P       02 36 03.9 -2.5
ISOG                                IAmb    IAmb    02 36 06.1
      comp=Z,28nm,0.7s
OK046 Pawnee Station    59.31  69   IAmb    IAmb    02 36 06.9
      comp=Z,36nm,1.0s
WMOK  Wichita Mounta    59.38  72   IAmb    IAmb    02 36 08.2
      comp=Z,20nm,0.8s
WMOK  Wichita Mounta    59.38  72   P       P       02 36 07.2 -0.4
      baz=315,SNR=23
WMOK  Wichita Mounta    59.38  72   P       P       02 36 07.3 -0.4
      baz=315,SNR=23
OK044 Pawnee Station    59.39  69   IAmb    IAmb    02 36 07.4
      comp=Z,26nm,0.8s
L42A  Oliver, Polo      59.43  60   P       P       02 36 06.7 -1.2
      baz=314
ANGG  Ammassalik, Gr    59.45  16   IAmb    IAmb    02 36 07.5
      comp=Z,26nm,0.8s
ANGG  Ammassalik, Gr    59.45  16 i P       P       02 36 04.4 -3.2
ANGG                                IAmb    IAmb    02 36 07.1
      comp=Z,18nm,0.6s
QUOK  Quay              59.58  69   IAmb    IAmb    02 36 08.8
      comp=Z,27nm,0.9s
STEI  Steigen           59.67 353 eP       P       02 36 09.8 +0.8
OK034 N. Norfolk Rd.    59.69  69   IAmb    IAmb    02 36 09.6
      comp=Z,40nm,1.1s
P40A  Paris             59.87  63   P       P       02 36 09.6 -1.2
      baz=314,SNR=19
LPIG  La Paz            60.00  89   LR      LR      02 57 23.0
      comp=Z,46nm,20.4s,baz=286,slow=31
X34A  Smith Ranch, M    60.03  71   IAmb    IAmb    02 36 13.2
      comp=Z,24nm,0.8s
SVE   Sverdlovsk        60.05 326ceP       P       02 36 13.4 +1.6
SVE                                 pmax    pmax
      comp=Z,75nm,1.2s
GLMI  Grayling          60.08  55   P       P       02 36 11.8 -0.4
      baz=315
GLMI  Grayling          60.08  55   P       P       02 36 11.8 -0.4
      baz=315
FAUS  Fauske            60.20 353 eP       P       02 36 13.0 +0.3
ADZR  Andozero          60.23 341 eP       P       02 36 11.8 -1.1
ADZR                              e*PP     pP      02 36 40.5 -0.4
ADZR                                pmax    pmax
      comp=Z,29nm,0.7s
L44A  Lake County Fo    60.24  59   P       P       02 36 12.3 -1.1
      baz=315
WTFS  Witchita Falls    60.25  72   IAmb    IAmb    02 36 13.9
      comp=Z,25nm,0.7s
TX31  Lajitas Ar. Si    60.29  80   P       P       02 36 13.8 -0.1
      baz=316,SNR=82
TX32  Lajitas Array     60.29  80   IAmb    IAmb    02 36 14.8
      comp=Z,25nm,0.8s
TXAR  Lajitas Array     60.29  80   P       P       02 36 13.8 -0.2
      comp=Z,22nm,0.7s,baz=298,slow=4.8,SNR=246
TXAR                                ScP     ScP     02 40 47.5 -0.1
      comp=Z,2.7nm,0.7s,baz=286,slow=3.1,SNR=7.0
      comp=Z,22nm,0.7s
TUL1  Leonard           60.29  69   IAmb    IAmb    02 36 13.9
      comp=Z,32nm,0.9s
TUL1  Leonard           60.29  69   P       P       02 36 12.9 -1.0
      baz=315,SNR=9.9
TUL1  Leonard           60.29  69   P       P       02 36 12.9 -1.0
      baz=315,SNR=9.9
ABTX  Abilene, Hawle    60.36  74   P       P       02 36 14.1 -0.2
      baz=315,SNR=15
ABTX  Abilene, Hawle    60.36  74   P       P       02 36 13.5 -0.9
      baz=315,SNR=15
BRZS  Berezniki         60.46 314 eP       P       02 36 14.8  0.0
      baz=314
BRZS  Berezniki         60.46 314 eP       P       02 36 14.7  0.0
SLBS  Sierra La Lagu    60.53  89   P       P       02 36 16.1 +0.4
SLBS                                IAmb    IAmb    02 36 17.4
      comp=Z,40nm,0.9s
SLBS  Sierra La Lagu    60.53  89   P       P       02 36 15.9 +0.2
SLBS                                pP      pP      02 36 45.1 +0.3
SCHQ  Schefferville     60.55  37   P       P       02 36 15.6 +0.4
      comp=Z,19nm,0.8s,baz=326,slow=5.8,SNR=27
SCHQ                                pP      pP      02 36 43.9 +0.2
      comp=Z,17nm,0.9s,baz=353,slow=7.2,SNR=5.1
SCHQ                                LR      LR      03 03 39.1
      comp=Z,145nm,19.8s,baz=6.5,slow=37
      comp=Z,19nm,0.8s
SCHQ  Schefferville     60.55  37   P       P       02 36 15.7 +0.4
SCHQ                                IAmb    IAmb    02 36 47.9
      comp=Z,47nm,1.1s
RLO   Rose Lookout      60.56  68   IAmb    IAmb    02 36 14.8
      comp=Z,13nm,0.7s
R40A  Maddies Statio    60.62  65   IAmb    IAmb    02 36 15.0
      comp=Z,31nm,1.2s
R40A  Maddies Statio    60.62  65   P       P       02 36 14.0 -2.0
      baz=315,SNR=8.3
HDIL  Hopedale          60.65  61   P       P       02 36 14.9 -1.2
      baz=315,SNR=8.9
HDIL  Hopedale          60.65  61   P       P       02 36 15.5 -0.7
      baz=315,SNR=8.9
U38A  Gravette          60.73  67   IAmb    IAmb    02 36 16.1
      comp=Z,25nm,1.1s
U38A  Gravette          60.73  67   P       P       02 36 15.2 -1.6
      baz=315,SNR=9.1
M44A  Midewin, Midew    60.73  59   P       P       02 36 16.0 -0.7
      baz=315
HPIG                    60.80  83   P       P       02 36 17.1 -0.5
HPIG                                IAmb    IAmb    02 36 18.6
      comp=Z,20nm,0.9s
FW03  Perrin-Whitt E    61.00  73   IAmb    IAmb    02 36 19.1
      comp=Z,62nm,1.4s
ARU   Arti              61.08 327   P       P       02 36 19.6 +0.8
ARU   Arti              61.08 327ceP       P       02 36 19.7 +0.9
ARU                                 pmax    pmax
      comp=Z,139nm,1.3s
ARU   Arti              61.08 327   P       P       02 36 19.8 +1.0
ARU                                 pP      pwP     02 36 50.0 -1.5
IVI   Ivigtut           61.14  24 i P       P       02 36 18.6 -0.5
IVI                                 IAmb    IAmb    02 36 19.5
      comp=Z,17nm,0.6s
IVI   Ivigtut           61.14  24   P       P       02 36 19.0 -0.1
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IVI                                 pP      pP      02 36 48.0 +0.6
P43A  Skaggs, Pawnee    61.17  62   IAmb    IAmb    02 36 20.4
      comp=Z,32nm,1.1s
P43A  Skaggs, Pawnee    61.17  62   P       P       02 36 18.8 -0.9
      baz=315,SNR=5.2
Z35A  Perchaven, San    61.27  72   IAmb    IAmb    02 36 20.8
      comp=Z,40nm,0.9s
Z35A  Perchaven, San    61.27  72   P       P       02 36 19.3 -1.2
      baz=316,SNR=5.6
FW06  Azle              61.35  72   IAmb    IAmb    02 36 21.5
      comp=Z,29nm,0.8s
CCM   Cathedral Cave    61.35  64   P       P       02 36 19.5 -1.5
CCM   Cathedral Cave    61.35  64   P       P       02 36 19.5 -1.5
CCM                                 pmax    pmax
      comp=Z,9.0nm,0.6s
CCM   Cathedral Cave    61.35  64   P       P       02 36 19.1 -1.8
      baz=315
CCM   Cathedral Cave    61.35  64   P       P       02 36 19.3 -1.7
      baz=315,SNR=5.8
CCM   Cathedral Cave    61.35  64   P       P       02 36 19.0 -2.0
O44A  Mansfield         61.38  61   IAmb    IAmb    02 36 20.3
      comp=Z,98nm,1.8s
O44A  Mansfield         61.38  61   P       P       02 36 20.3 -0.8
      baz=316
TDK   Taldyqorghan      61.40 307 eP       P       02 36 21.5 +0.3
      comp=Z,23nm,0.8s,baz=307
TDK   Taldyqorghan      61.40 307 eP       P       02 36 21.5 +0.3
TDK                                 pmax    pmax
      comp=Z,23nm,0.8s
FW07  Weatherford       61.40  73   IAmb    IAmb    02 36 22.1
      comp=Z,30nm,0.7s
MOR8  Moi Rana          61.46 353 eP       P       02 36 20.8 -0.4
X37A  Clayton           61.47  70   IAmb    IAmb    02 36 22.3
      comp=Z,27nm,0.9s
X37A  Clayton           61.47  70   P       P       02 36 21.2 -0.6
      baz=316,SNR=9.5
PZH   PanZhiHua         61.49 277   P       P       02 36 22.5 +0.3
PZH                                 sP      PcP     02 37 01.8 -1.2
PZH                                 S       S       02 44 33.3 -0.8
PZH                                 ScS     SKKSac  02 46 00.0 -2.1
PZH                                 pmax    pmax
      comp=Z,60nm,1.1s
PZH                                 pmax    pmax
      comp=Z,150nm,3.5s
U40A  Yellville         61.66  66   P       P       02 36 22.1 -0.9
      baz=316,SNR=19
U40A                                P       P       02 36 22.1 -0.9
      baz=316,SNR=19
JCT   Junction City     61.80  76   IAmb    IAmb    02 36 24.9
      comp=Z,25nm,0.9s
JCT   Junction City     61.80  76   P       P       02 36 23.1 -1.0
      baz=316,SNR=9.5
JCT   Junction City     61.80  76   P       P       02 36 23.3 -0.8
      baz=316,SNR=9.5
FVM   French Village    61.86  64   P       P       02 36 23.1 -1.2
      baz=316,SNR=5.5
FW13  Cleburne          61.86  73   IAmb    IAmb    02 36 25.1
      comp=Z,34nm,0.7s
KMI   Kunming           61.89 275 ⇓P       P       02 36 25.3 +0.3
KMI                                 sP      PcP     02 37 05.8 +1.1
KMI                                 pmax    pmax
      comp=Z,22nm,0.8s
SFIN  Lafayette         61.95  60   P       P       02 36 24.2 -0.7
      baz=316,SNR=7.1
SFIN  Lafayette         61.95  60   P       P       02 36 24.1 -0.8
      baz=316,SNR=7.1
QIZ   Qiongzhong        62.03 265   P       P       02 36 27.4 +1.6
QIZ                                 sP      sP      02 37 07.1 -1.1
QIZ                                 S       S       02 44 40.4 -0.5
QIZ                                 sS      sS      02 45 28.1 -1.5
QIZ                                 pmax    pmax
      comp=Z,42nm,1.0s
WHTX  Lake Whitney,     62.11  73   P       P       02 36 25.8 -0.3
      baz=316,SNR=7.7
WHTX  Lake Whitney,     62.11  73   P       P       02 36 25.6 -0.5
      baz=316,SNR=7.7
T42A  Van Buren         62.17  65   P       P       02 36 24.3 -2.1
      baz=316,SNR=5.7
KIRV  Kirov             62.17 333ceP       P       02 36 27.6 +1.6
SHLS  Shalkode          62.20 305 eP       P       02 36 25.9 -0.9
      comp=Z,23nm,0.7s,baz=305
SHLS  Shalkode          62.20 305 eP       P       02 36 25.8 -0.9
SHLS                                pmax    pmax
      comp=Z,23nm,0.7s
KPKS  Kokpek            62.37 306 eP       P       02 36 28.4 +0.6
      comp=Z,14nm,0.7s,baz=306
KPKS  Kokpek            62.37 306 eP       P       02 36 28.4 +0.6
KPKS                                pmax    pmax
      comp=Z,14nm,0.7s
UZB   Uzynbulak         62.43 305 eP       P       02 36 28.7 +0.4
      baz=306
UZB   Uzynbulak         62.43 305 eP       P       02 36 28.7 +0.4
P46A  Rosedale          62.44  60   IAmb    IAmb    02 36 28.4
      comp=Z,53nm,1.2s
P46A  Rosedale          62.44  60   P       P       02 36 27.6 -0.6
      baz=316
BORG  Borgarnes         62.53   9   LR      LR      03 03 05.6
      comp=Z,64nm,21.6s,baz=351,slow=35
MIAR  Mount Ida         62.54  68   P       P       02 36 28.3 -0.6
      baz=316,SNR=19
MIAR  Mount Ida         62.54  68   P       P       02 36 28.4 -0.5
      baz=316,SNR=19
OLIL  Olney             62.59  62   IAmb    IAmb    02 36 29.2
      comp=Z,58nm,1.3s
OLIL  Olney             62.59  62   P       P       02 36 28.3 -0.9
      baz=316
Z38A  Mt. Pleasant      62.65  70   P       P       02 36 29.1 -0.6
      baz=316,SNR=8.5
S44A  Carbondale        62.71  63   P       P       02 36 28.9 -1.1
      baz=316,SNR=5.3
ZHN   Zhinishke         62.71 306 eP       P       02 36 30.5 +0.4
      baz=306
ZHN   Zhinishke         62.71 306 eP       P       02 36 30.5 +0.4
KLMR  Klimovskoe        62.72 339 eP       P       02 36 29.0 -0.7
KLMR                                AMP             02 36 33.2
      comp=Z,20nm,1.2s
KLMR                              epP      pP      02 36 58.4 +0.6
KLMR                              ePP      PP      02 38 46.8 -1.6
KLMR  Klimovskoe        62.72 339 eP       P       02 36 29.0 -0.7
KLMR                              e*PP     pP      02 36 58.4 +0.6
KLMR                              e                02 38 46.8
KLMR                                pmax    pmax
      comp=Z,20nm,1.2s
WHAR  Wooly Hollow      62.74  67   IAmb    IAmb    02 36 29.9
      comp=Z,43nm,1.3s
SATY  Saty              62.81 306⇓iP       P       02 36 31.5 +0.7
      baz=306
SATY  Saty              62.81 306d iP      P       02 36 31.4 +0.7
SADO  Sadowa            62.81  51   LR      LR      03 04 09.6
      comp=Z,208nm,20.6s,baz=310,slow=36
LCAR  Lake Charles      62.82  66   P       P       02 36 29.9 -0.9
      baz=316,SNR=5.5
435B  Jarrell           62.90  74   IAmb    IAmb    02 36 32.3
      comp=Z,50nm,1.1s
435B  Jarrell           62.90  74   P       P       02 36 31.3 -0.1
      baz=316
435B  Jarrell           62.90  74   P       P       02 36 31.4  0.0
      baz=316,SNR=5.9
CHKK  Chushkaly         62.93 307 i P       P       02 36 31.0 -0.4
      baz=307
CHKK  Chushkaly         62.93 307 i P       P       02 36 31.0 -0.4
X40A  Basin Creek Fa    63.00  68   P       P       02 36 30.7 -1.3
      baz=316,SNR=8.5
X40A                                P       P       02 36 30.7 -1.3
      baz=316,SNR=8.5
237A  Washetta, Mont    63.07  72   IAmb    IAmb    02 36 33.0
      comp=Z,26nm,0.8s
237A  Washetta, Mont    63.07  72   P       P       02 36 32.2 -0.3
      baz=316,SNR=5.7
O48B  Farmland          63.07  59   P       P       02 36 30.9 -1.5
      baz=317,SNR=5.2
O48B  Farmland          63.07  59   P       P       02 36 30.9 -1.5
      baz=317,SNR=5.2
N49A  Columbus Grove    63.10  57   IAmb    IAmb    02 36 32.6
      comp=Z,48nm,1.1s
PARMO Parma             63.18  64   IAmb    IAmb    02 36 32.9
      comp=Z,42nm,0.8s
KUU   Kurty             63.22 308⇓iP       P       02 36 32.8 -0.5
      comp=Z,14nm,0.9s,baz=308
KUU   Kurty             63.22 308d iP      P       02 36 32.8 -0.5
KUU                                 pmax    pmax
      comp=Z,14nm,0.9s
GENI  Genyem            63.29 224   P       P       02 36 35.6 +1.6
GENI  Genyem            63.29 224   P       P       02 36 35.1 +1.1
      comp=Z,280nm,0.8s,comp=Z,3µm
SMPI  Sarmi             63.38 225   P       P       02 36 35.9 +1.3
      comp=Z,83nm,1.3s
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MDOK  Medeo             63.41 307 i P       P       02 36 35.3 +0.5
      baz=307
MDOK  Medeo             63.41 307 i P       P       02 36 35.2 +0.5
WLAR  White Oak Lake    63.42  69   IAmb    IAmb    02 36 35.2
      comp=Z,84nm,1.3s
BTLS  Baital            63.47 310⇓iP       P       02 36 35.4 +0.4
      baz=310
BTLS  Baital            63.47 310d iP      P       02 36 35.3 +0.4
P48A  Milroy            63.51  59   IAmb    IAmb    02 36 34.9
      comp=Z,68nm,1.2s
P48A  Milroy            63.51  59   P       P       02 36 34.0 -1.2
      baz=317,SNR=8.1
P48A                                P       P       02 36 34.0 -1.2
      baz=317,SNR=8.1
833A  Chaparral WMA,    63.60  77   P       P       02 36 35.8 -0.2
      baz=317
WUS   Wushi             63.76 304   P       P       02 36 37.7 +0.7
LATQ  La Tuque          63.81  46   IAmb    IAmb    02 36 36.9
      comp=Z,46nm,0.7s
P49A  Miami Univ. Ec    63.83  59   P       P       02 36 36.0 -1.3
      baz=317
P49A  Miami Univ. Ec    63.83  59   P       P       02 36 36.2 -1.2
      baz=317
TRQ   Mont Tremblant    63.89  48   IAmb    IAmb    02 36 37.6
      comp=Z,29nm,1.0s
NATX  Nacogdoches       63.92  71   IAmb    IAmb    02 36 38.8
      comp=Z,72nm,1.3s
NATX  Nacogdoches       63.92  71   P       P       02 36 37.6 -0.5
      baz=317
WCI   Wyandotte Cave    63.94  61   P       P       02 36 37.0 -1.0
WCI   Wyandotte Cave    63.94  61   P       P       02 36 37.1 -1.0
WCI                                 pmax    pmax
      comp=Z,24nm,1.1s
WCI   Wyandotte Cave    63.94  61   P       P       02 36 36.9 -1.2
      baz=317
WCI   Wyandotte Cave    63.94  61   P       P       02 36 37.4 -0.7
      baz=317
CCAR  Cane Creek        64.02  68   IAmb    IAmb    02 36 39.6
      comp=Z,89nm,1.6s
ACSO  Alum Creek Sta    64.22  57   P       P       02 36 38.9 -1.0
      baz=317
TKM2  Tokmak 2          64.30 307   P       P       02 36 41.6 +0.9
      SNR=17
ERPA  Erie              64.36  54   P       P       02 36 39.8 -0.9
      baz=318
SGDS  Sogindy           64.38 308 eP       P       02 36 41.9 +0.9
      baz=308
SGDS  Sogindy           64.38 308 eP       P       02 36 41.9 +0.9
T47A  Sharon Grove      64.40  62   IAmb    IAmb    02 36 41.5
      comp=Z,33nm,0.7s
T47A  Sharon Grove      64.40  62   P       P       02 36 40.6 -0.6
      baz=317,SNR=14
M53A  WI Miller and     64.52  55   P       P       02 36 41.1 -0.7
      baz=318
TNCH  TengChong         64.54 279 ⇓P       P       02 36 43.7 +1.2
TNCH                                pP      pP      02 37 09.8 -2.1
TNCH                                sP      sP      02 37 25.1 +0.1
TNCH                                PP      PP      02 39 03.2 -2.4
TNCH                                S       S       02 45 14.9 +2.6
TNCH                                sS      sS      02 46 05.9 +3.1
TNCH                                pmax    pmax
      comp=Z,44nm,0.9s
TNCH                                pmax    pmax
      comp=Z,200nm,2.9s
HKT   Hockley           64.54  73   P       P       02 36 42.0 -0.1
HKT                                 IAmb    IAmb    02 36 43.4
      comp=Z,83nm,1.9s
HKT   Hockley           64.54  73   P       P       02 36 42.0 -0.1
HKT                                 pmax    pmax
      comp=Z,83nm,1.9s
USP   Ospenovka         64.58 308   P       P       02 36 43.4 +1.1
      SNR=29
W45A  Hickory Valley    64.58  65   IAmb    IAmb    02 36 42.2
      comp=Z,28nm,0.6s
WVT   Waverly           64.63  63   P       P       02 36 42.0 -0.7
WVT   Waverly           64.63  63   P       P       02 36 42.0 -0.7
WVT                                 pmax    pmax
      comp=Z,35nm,1.4s
WVT   Waverly           64.63  63   P       P       02 36 41.2 -1.4
      baz=317
WVT   Waverly           64.63  63   P       P       02 36 41.2 -1.4
      baz=317,SNR=8.5
WVT   Waverly           64.63  63   P       P       02 36 41.1 -1.5
WVT                                 pP      pP      02 37 11.0 -0.8
WVT                                 sP      sP      02 37 24.8  0.0
TBLU  Trondheim         64.65 354 eP       P       02 36 40.6 -1.7
CHMS  Chumysh           64.66 308   P       P       02 36 43.8 +1.1
      SNR=6.1
FINES FINESS Array B    64.71 346   P       P       02 36 42.8 +0.1
      comp=Z,6.2nm,0.8s,baz=21,slow=7.2,SNR=16
FINES                               pP      pP      02 37 10.6 -0.4
      comp=Z,6.1nm,0.8s,baz=26,slow=7.7,SNR=2.7
FINES                               PKPPKP  P'P'df  03 05 27.8 -2.4
      comp=Z,5.0nm,0.9s,baz=179,slow=7.0,SNR=6.7
FINES                               LR      LR      03 09 27.3
      comp=Z,82nm,18.4s,baz=46,slow=40
      comp=Z,6.2nm,0.8s
LMQ   La Malbaie        64.75  44   IAmb    IAmb    02 36 43.3
      comp=Z,26nm,1.0s
KBK   Karagaybulak      64.82 308   P       P       02 36 45.0 +1.0
      SNR=14
WVNY  West Valley, N    64.83  53   P       P       02 36 43.3 -0.6
      baz=318,SNR=6.6
O52A  Adamsville        64.90  57   P       P       02 36 43.5 -0.8
O52A                                IAmb    IAmb    02 36 44.5
      comp=Z,46nm,0.9s
O52A  Adamsville        64.90  57   P       P       02 36 43.5 -0.8
      baz=318,SNR=6.7
O52A                                P       P       02 36 43.5 -0.8
      baz=318,SNR=6.7
Q51A  Peebles           64.92  58   IAmb    IAmb    02 36 44.8
      comp=Z,62nm,1.2s
Q51A  Peebles           64.92  58   P       P       02 36 43.5 -1.0
      baz=318,SNR=8.2
Q51A                                P       P       02 36 43.5 -1.0
      baz=318,SNR=8.2
OXF   Oxford            64.93  66   P       P       02 36 43.6 -1.0
      baz=317,SNR=14
OXF   Oxford            64.93  66   P       P       02 36 43.7 -0.9
      baz=317,SNR=14
R50A  Paris             64.95  59   P       P       02 36 44.0 -0.7
      baz=318
R50A                                P       P       02 36 44.0 -0.7
      baz=318
AAK   Ala-Archa         65.05 308   P       P       02 36 46.5 +1.1
      SNR=19
AAK   Ala-Archa         65.05 308   P       P       02 36 45.7 +0.1
AAK                                 IAmb    IAmb    02 36 47.4
      comp=Z,20nm,0.8s
AAK   Ala-Archa         65.05 308ceP       P       02 36 46.6 +1.1
AAK                                 pmax    pmax
      comp=Z,44nm,1.7s
AAK   Ala-Archa         65.05 308 i P       P       02 36 46.3 +0.8
      SNR=23
AAK   Ala-Archa         65.05 308   P       P       02 36 46.3 +0.8
AAK   Ala-Archa         65.05 308 ⇓P       P       02 36 46.4 +0.8
AAK                                 pP      pwP     02 37 16.6 -0.3
LONY  Lake Ozonia       65.09  49   P       P       02 36 43.5 -2.0
      baz=320
P52A  Corning           65.11  57   P       P       02 36 44.1 -1.6
      baz=318
O53A  New Philadelph    65.12  56   P       P       02 36 44.6 -1.2
      baz=318
Y45A  Yeager Farm, C    65.33  66   IAmb    IAmb    02 36 47.4
      comp=Z,31nm,0.8s
Y45A  Yeager Farm, C    65.33  66   P       P       02 36 46.5 -0.6
      baz=317,SNR=6.5
UCH   Uchtor            65.35 307   P       P       02 36 48.9 +1.1
      SNR=9.9
EKS2  Erkin-Say         65.38 308   P       P       02 36 48.6 +1.0
      SNR=20
M55A  Ridgway           65.45  54   IAmb    IAmb    02 36 48.1
      comp=Z,32nm,1.0s
M55A  Ridgway           65.45  54   P       P       02 36 47.6 -0.3
      baz=319,SNR=5.3
M55A                                P       P       02 36 47.6 -0.3
      baz=319,SNR=5.3
V48A  Smith Brothers    65.47  63   P       P       02 36 47.1 -1.0
      baz=318,SNR=7.8
U49A  Red Boiling Sp    65.47  62   P       P       02 36 47.2 -0.9
      baz=318,SNR=8.9
CLTN  Cedars of Leba    65.48  62   IAmb    IAmb    02 36 48.5
      comp=Z,34nm,0.9s
LSA   Lhasa             65.54 287   IAmb    IAmb    02 36 52.0
      comp=Z,42nm,0.8s
LSA   Lhasa             65.54 287   P       P       02 36 51.2 +2.0
LSA   Lhasa             65.54 287   P       P       02 36 51.0 +1.8
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LSA                                 pP     PcP    02 37 19.6  -0.4
L56A   Greenwood        65.54  52   P      P      02 36 48.2  -0.3
       baz=319,SNR=25
L56A                                P      P      02 36 48.2  -0.3
       baz=319,SNR=25
K57A   Scipio Center    65.60  51   IAmb   IAmb   02 36 49.0
       comp=Z,38nm,0.8s
T50A   Nancy            65.61  61   IAmb   IAmb   02 36 49.1
       comp=Z,56nm,1.5s
T50A   Nancy            65.61  61   P      P      02 36 47.9  -1.0
       baz=318
T50A                                P      P      02 36 47.9  -1.0
       baz=318
D62A   Allapoint, All   65.66  44   IAmb   IAmb   02 36 60.0
       comp=Z,45nm,1.4s
D62A   Allapoint, All   65.66  44   P      P      02 36 48.4  -0.7
       baz=321
D62A                                P      P      02 36 48.4  -0.7
       baz=321
J58A   Remsen           65.71  50   IAmb   IAmb   02 36 50.1
       comp=Z,28nm,1.0s
RAF    Rauma            65.72 348  eP      P      02 36 49.2  -0.1
ZAIG   Zacatecas        65.75  84   P      P      02 36 50.0  -0.4
ZAIG                                IAmb   IAmb   02 36 51.9
       comp=Z,25nm,0.9s
S51A   Beattyville      65.82  60   P      P      02 36 49.5  -0.8
       baz=318
S51A                                P      P      02 36 49.5  -0.8
       baz=318
E62A   Clayton Lake     65.82  44   IAmb   IAmb   02 36 50.8
       comp=Z,29nm,1.1s
E62A   Clayton Lake     65.82  44   P      P      02 36 49.0  -1.2
       baz=321
E62A                                P      P      02 36 49.0  -1.2
       baz=321
AML    Almayashu        65.82 308   P      P      02 36 52.2  +1.4
       SNR=14
SIJI   Sorong           65.89 233   P      P      02 36 51.4  +0.5
       comp=Z,291nm,0.7s,baz=19,slow=6.4,SNR=104
VBMS   Vicksburg        65.98  68   P      P      02 36 50.8  -0.6
       baz=318
J59A   Piesco           66.00  50   P      P      02 36 50.3  -1.2
       baz=320
J59A                                P      P      02 36 50.3  -1.2
       baz=320
MEF    Metsahovi        66.13 346  eP      P      02 36 48.7  -3.1
FUTU   Fugatoga         66.16 176   P      P      02 36 55.1  +2.6
       comp=Z,119nm,1.1s
R53A   Hurricane        66.17  58   IAmb   IAmb   02 36 53.1
       comp=Z,52nm,1.1s
R53A   Hurricane        66.17  58   P      P      02 36 52.3  -0.3
       baz=318,SNR=6.3
R53A                                P      P      02 36 52.3  -0.3
       baz=318,SNR=6.3
BINY   Binghamton       66.26  51   IAmb   IAmb   02 36 54.1
       comp=Z,61nm,1.2s
BINY   Binghamton       66.26  51   P      P      02 36 52.4  -0.7
       baz=320,SNR=7.6
BINY   Binghamton       66.26  51   P      P      02 36 52.2  -0.9
       baz=320,SNR=7.6
X48A   Hartselle        66.30  64   P      P      02 36 51.7  -1.7
       baz=318,SNR=5.4
ABKAR  Akbulak array    66.31 321   P      P      02 36 54.0  +0.7
ABKAR                               IAmb   IAmb   02 36 55.4
       comp=Z,52nm,1.2s
M57A   Sunshine Farm,   66.36  53   IAmb   IAmb   02 36 54.8
       comp=Z,44nm,0.8s
M57A   Sunshine Farm,   66.36  53   P      P      02 36 52.7  -1.0
       baz=319,SNR=13
M57A                                P      P      02 36 52.7  -1.0
       baz=319,SNR=13
DZA    Taraz            66.38 310  eP      P      02 36 54.3  +0.4
       baz=310
DZA    Taraz            66.38 310  eP      P      02 36 54.2  +0.4
PQI    Presque Isle     66.42  43   IAmb   IAmb   02 37 04.8
       comp=Z,114nm,1.9s
E63A   Oxbow            66.45  44   P      P      02 36 53.0  -1.2
       baz=322
E63A                                P      P      02 36 53.0  -1.2
       baz=322
ACCN   Adirondack Com   66.46  49   IAmb   IAmb   02 36 54.2
       comp=Z,30nm,0.9s
ACCN   Adirondack Com   66.46  49   P      P      02 36 53.3  -0.9
       baz=320,SNR=8.1
G62A   West of Eustis   66.47  46   P      P      02 36 53.1  -1.2
       baz=321
G62A                                P      P      02 36 53.1  -1.2
       baz=321
146A   Union            66.51  67   P      P      02 36 54.3  -0.5
       baz=318,SNR=7.8
SSPA   Standing Stone   66.51  54   P      P      02 36 54.0  -0.7
SSPA                                IAmb   IAmb   02 38 34.2
       comp=Z,42nm,0.8s
SSPA   Standing Stone   66.51  54   P      P      02 36 54.1  -0.6
       baz=319
SSPA   Standing Stone   66.51  54   P      P      02 36 54.0  -0.7
       baz=319,SNR=6.6
SSPA   Standing Stone   66.51  54   P      P      02 36 53.9  -0.7
SSPA                                pP     pP     02 37 23.6  -0.2
NC303  NORSAR Array S   66.59 353   IAmb   IAmb   02 36 58.0
       comp=Z,62nm,1.3s
LBNH   Lisbon           66.60  47   P      P      02 36 54.1  -1.1
       baz=321
KK31   Karatay Array    66.61 311   IAmb   IAmb   02 36 58.1
       comp=Z,22nm,0.7s
KKAR   Karatay Array    66.61 311   IAmb   IAmb   02 36 58.1
       comp=Z,22nm,0.7s
HCNY   Howe Caverns     66.64  50   P      P      02 36 54.7  -0.7
       baz=320
Z47A   Carrollton       66.65  66   P      P      02 36 54.5  -1.1
       baz=318,SNR=12
TZTN   Tazewell         66.65  60   P      P      02 36 54.4  -1.2
       baz=318
KSH    Kashi            66.66 305   P      P      02 37 00.1  +4.3
KSH                                 pP     sP     02 37 32.9  -4.9
KSH                                 sP     pwP    02 37 46.1  +19
KSH                                 S      S      02 45 45.1  +7.5
KSH                                 pmax   pmax
       comp=Z,34nm,0.9s
NC405  NORSAR Array S   66.67 353   P      P      02 36 55.5  +0.1
NC405                               pP     pP     02 37 25.3  +1.5
H62A   Milan            66.69  47   IAmb   IAmb   02 36 55.9
       comp=Z,49nm,0.9s
H62A   Milan            66.69  47   P      P      02 36 55.1  -0.6
       baz=321,SNR=8.7
H62A                                P      P      02 36 55.1  -0.6
       baz=321,SNR=8.7
W50A   Signal Mountai   66.70  62   IAmb   IAmb   02 36 56.1
       comp=Z,40nm,1.4s
W50A   Signal Mountai   66.70  62   P      P      02 36 54.8  -1.2
       baz=318,SNR=6.2
L59A   Walton           66.72  51   IAmb   IAmb   02 36 56.4
       comp=Z,27nm,0.9s
NB201  NORSAR Array S   66.77 353   P      P      02 36 56.1  +0.1
V51A   Loudon           66.77  61   P      P      02 36 55.7  -0.7
       baz=318
NB2    NORSAR Subarra   66.78 353   P      P      02 36 55.4  -0.7
       comp=Z,22nm,0.9s,baz=8.1,slow=6.2
NB2    NORSAR Subarra   66.78 353   P      P      02 36 55.4  -0.7
       baz=8.1,slow=6.2
NOA    NORSAR Array B   66.78 353   P      P      02 36 55.8  -0.3
       comp=Z,5.2nm,0.9s,baz=9.4,slow=6.4,SNR=11
NOA                                 pP     pP     02 37 25.6  +1.0
       comp=Z,11nm,0.8s,baz=8.3,slow=6.4,SNR=10
       comp=Z,5.2nm,0.9s
PMG    Port Moresby     66.83 214   P      P      02 36 57.2  +0.4
       comp=Z,33nm,0.9s,baz=354,slow=8.6,SNR=7.1
       comp=Z,33nm,0.9s
PMG    Port Moresby     66.83 214   P      P      02 36 56.3  -0.5
PMG                                 IAmb   IAmb   02 36 58.4
       comp=Z,44nm,1.1s
PMG    Port Moresby     66.83 214   P      P      02 36 58.4  +1.5
PMG    Port Moresby     66.83 214ceP      P      02 36 57.6  +0.7
PMG                                 pmax   pmax
       comp=Z,49nm,1.3s
PMG    Port Moresby     66.83 214   P      P      02 36 57.4  +0.5
KSPA   Keystone Colle   66.86  52   P      P      02 36 56.1  -0.8
       baz=320,SNR=5.3
NONG   Nongkai          66.89 270   P      P      02 36 58.1  +0.7
       comp=Z,44nm,1.1s
F64A   Sherman          66.92  44   IAmb   IAmb   02 36 57.3
       comp=Z,32nm,0.8s
F64A   Sherman          66.92  44   P      P      02 36 56.3  -0.8
       baz=322,SNR=5.4
F64A                                P      P      02 36 56.3  -0.8
       baz=322,SNR=5.4
N58A   Sunbury          66.94  53   P      P      02 36 56.6  -0.8
N58A                                IAmb   IAmb   02 36 57.9
       comp=Z,59nm,1.0s
N58A                                pP     pP     02 37 26.9  +0.4
N58A   Sunbury          66.94  53   P      P      02 36 57.1  -0.3
       baz=320,SNR=10
N58A                                P      P      02 36 57.1  -0.3
       baz=320,SNR=10
HYA    Hoyanger         66.95 356  eP      P      02 36 56.5  -0.5
CRAI   Chiangrai        66.97 274   P      P      02 36 58.1  +0.2
CRAI                                IAmb   IAmb   02 36 59.8
       comp=Z,59nm,1.1s
PKME   Peaks-Kenny Pk   66.98  45   P      P      02 36 56.3  -1.2
       baz=322
J61A   Chester          67.00  48   IAmb   IAmb   02 36 57.9
       comp=Z,26nm,0.9s
NC602  NORSAR Array S   67.06 353  eP      P      02 36 56.3  -1.5
Y49A   Blount Mountai   67.09  64   P      P      02 36 57.0  -1.5
       baz=318
FAKI   Fak Fak          67.18 231   P      P      02 36 59.5  +0.3
FAKI   Fak Fak          67.18 231   P      P      02 37 00.0  +0.8
FAKI   Fak Fak          67.18 231   P      P      02 36 58.6  -0.6
       comp=Z,162nm,0.8s,comp=Z,1µm
TKL    Tuckaleechee C   67.19  61   LR     LR     03 06 44.4
       comp=Z,181nm,20.4s,baz=330,slow=36
SKAR   Skarslia         67.33 355  eP      P      02 36 59.0  -0.6
I63A   Otisfield        67.36  47   P      P      02 36 59.4  -0.5
       baz=321
I63A                                P      P      02 36 59.4  -0.5
       baz=321
UPP    Uppsala          67.36 350  eP      P      02 36 59.7  +0.1
LRAL   Lakeview Retre   67.37  65   P      P      02 36 59.1  -1.2
       baz=318
VSU    Vasula           67.44 344  eP      P      02 37 00.1  -0.1
W52A   Murphy           67.53  62   IAmb   IAmb   02 37 01.4
       comp=Z,52nm,1.6s
W52A   Murphy           67.53  62   P      P      02 37 00.4  -0.9
       baz=319
IUG    Iuzhnay          67.57 310⇓iP      P      02 37 02.7  +1.2
       comp=Z,18nm,0.7s,baz=310
IUG    Iuzhnay          67.57 310d iP     P      02 37 02.6  +1.2
IUG                                 pmax   pmax
       comp=Z,18nm,0.7s
U54A   Nelsons Funny    67.59  59   IAmb   IAmb   02 37 02.4
       comp=Z,40nm,1.4s
CHM    Chimkent         67.64 311  eP      P      02 37 02.8  +0.9
       baz=311
CHM    Chimkent         67.64 311  eP      P      02 37 02.7  +0.9
L61B   Northampton      67.64  49   P      P      02 37 00.5  -1.2
       baz=321
V53A   Saluda           67.70  60   P      P      02 37 01.8  -0.5
       baz=319,SNR=5.0
V53A                                P      P      02 37 01.8  -0.5
       baz=319,SNR=5.0
MOS    Moscow           67.76 337  eP      P      02 37 01.6  -0.7
MOS                                e*PP    pP     02 37 32.8  +1.7
MOS                                e              02 37 44.3
MOS                                eS      S      02 45 49.9  -0.1
MOS                                 pmax   pmax
       comp=Z,26nm,0.7s
MOS                                 pmax   pmax
       comp=Z,100nm,1.1s
G65A   Princeton        67.78  44   P      P      02 37 02.0  -0.6
       baz=323
G65A                                P      P      02 37 02.0  -0.6
       baz=323
LUPA   Lehigh Univers   67.78  52   P      P      02 37 02.6  -0.1
LUPA                                IAmb   IAmb   02 37 03.6
       comp=Z,46nm,0.8s
LUPA                                       pP     02 37 32.6  +0.7
BLA    Blacksburg       67.81  58   P      P      02 37 01.9  -1.1
       baz=319
OSL    Oslo             67.91 353  eP      P      02 37 03.4  +0.3
SDMD   Soldier's Deli   67.97  54   P      P      02 37 04.8  +0.9
       baz=320,SNR=5.1
BELG   Belogornoye      67.99 330  i P     P      02 37 04.8  +1.1
BELG                                pmax   pmax
       comp=Z,16nm,0.9s
HRV    Adam Dziewonsk   68.12  48   P      P      02 37 03.3  -1.4
       baz=321
BG3    Lake Jocassee    68.15  61   P      P      02 37 04.9  -0.1
BG3                                        pP     02 37 34.5  -0.1
CASEE  Lake Jocassee    68.15  61   P      P      02 37 04.6  -0.5
       baz=319,SNR=6.2
SHL    Shillong         68.16 284   P      P      02 37 05.7  +0.2
       SNR=28
PAL    Palisades        68.17  51   P      P      02 37 04.2  -0.9
       baz=321
Z51A   Franklin         68.18  64   IAmb   IAmb   02 38 03.9
       comp=Z,54nm,1.9s
Z51A   Franklin         68.18  64   P      P      02 37 03.7  -1.6
       baz=319
ODD1   Odda             68.18 356  eP      P      02 37 05.6  +0.7
TUPA   Temple Univers   68.20  52   P      P      02 37 04.7  -0.6
       baz=320,SNR=10
MND    Mandalay         68.25 278   P      P      02 37 05.9  +0.1
       comp=Z,34nm,1.0s
KONO   Kongsberg        68.28 354  eP      P      02 37 05.6  +0.2
CPNY   Central Park     68.32  51   IAmb   IAmb   02 37 06.4
       comp=Z,54nm,1.1s
WES    Weston           68.32  48   IAmb   IAmb   02 37 06.1
       comp=Z,31nm,1.0s
Y52A   Lilburn          68.38  63   IAmb   IAmb   02 37 06.5
       comp=Z,46nm,1.5s
Y52A   Lilburn          68.38  63   P      P      02 37 05.8  -0.7
       baz=319,SNR=6.2
Y52A                                P      P      02 37 05.8  -0.7
       baz=319,SNR=6.2
YSA    Yasawairara      68.47 181   P      P      02 37 08.3  +1.3
U56A   King             68.48  58   IAmb   IAmb   02 37 38.5
       comp=Z,71nm,1.7s
TAVE   Taveuni          68.49 178   P      P      02 37 09.2  +2.0
       comp=Z,85nm,1.2s
250A   Grady            68.57  65   IAmb   IAmb   02 37 07.2
       comp=Z,23nm,0.7s
250A   Grady            68.57  65   P      P      02 37 07.0  -0.7
       baz=319
T57A   Hurt             68.58  57   P      P      02 37 06.9  -0.8
       baz=320,SNR=5.1
T57A                                P      P      02 37 06.9  -0.8
       baz=320,SNR=5.1
OBN    Obninsk          68.58 338   P      P      02 37 07.7  +0.3
OBN                                 IAmb   IAmb   02 37 42.8
       comp=Z,50nm,1.2s
OBN    Obninsk          68.58 338⇑eP      P      02 37 07.4   0.0
OBN                                i              02 37 41.6
OBN                                e              02 39 42.6
OBN                                 pmax   pmax
       comp=Z,27nm,1.0s
OBN                                 MLR    MLR
       comp=Z,99nm,15.0s
CBN    Corbin Frederi   68.62  55   P      P      02 37 06.8  -1.2
       baz=320
M63A   Gales Ferry      68.75  49   IAmb   IAmb   02 37 09.1
       comp=Z,56nm,0.8s
KMSC   Kings Mountain   68.89  60   IAmb   IAmb   02 37 10.0
       comp=Z,55nm,1.4s
KMSC   Kings Mountain   68.89  60   P      P      02 37 08.3  -1.4
       baz=320,SNR=7.7
KMSC   Kings Mountain   68.89  60   P      P      02 37 08.9  -0.8
       baz=320,SNR=7.7
CHTO   Chiang Mai       68.92 274   P      P      02 37 10.3  +0.2
CHTO   Chiang Mai       68.92 274   P      P      02 37 10.3  +0.2
HODGE  Hodges           69.08  61   P      P      02 37 10.6  -0.3
       baz=319,SNR=7.6
CMAR   Chiang Mai Arr   69.19 273   P      P      02 37 12.3  +0.6
       comp=Z,19nm,0.8s,baz=25,slow=7.2,SNR=85
       comp=Z,19nm,0.8s
CMAR   Chiang Mai Arr   69.19 273  i P     P      02 37 12.3  +0.6
CMAR                                pmax   pmax
       comp=Z,20nm,0.8s
TAPN   Taplejung        69.31 288  eP      P      02 37 13.7  +1.0
       comp=Z,483nm,1.2s
T59A   Double "B" Far   69.47  56   P      P      02 37 12.8  -0.4
       baz=320,SNR=5.1
T59A                                P      P      02 37 12.8  -0.4
       baz=320,SNR=5.1
MSVF   Nonsavu          69.49 180   P      P      02 37 13.3  -0.2
       comp=Z,24nm,0.9s,baz=18,slow=2.8,SNR=10
MSVF                                LR     LR     03 04 47.9
       comp=Z,69nm,18.4s,baz=178,slow=33
       comp=Z,24nm,0.9s
MSVF   Nonsavu          69.49 180   P      P      02 37 15.1  +1.7
MSVF                                IAmb   IAmb   02 37 16.6
       comp=Z,62nm,1.2s
MSVF   Nonsavu          69.49 180   P      P      02 37 14.8  +1.3
MSVF   Nonsavu          69.49 180   P      P      02 37 15.1  +1.7
MSVF                                pmax   pmax
       comp=Z,62nm,1.3s
MSVF   Nonsavu          69.49 180   P      P      02 37 15.2  +1.7
JSC    Jenkinsville     69.58  60   P      P      02 37 13.5  -0.5
       baz=320,SNR=6.8
SANI   Sanana           69.58 238   P      P      02 37 13.6  -0.5
       comp=Z,103nm,1.0s
SANI   Sanana           69.58 238   P      P      02 37 12.6  -1.5
       comp=Z,103nm,1.0s,comp=Z,1µm
W57A   Gilead           69.59  59   P      P      02 37 13.0  -1.0
       baz=320
W57A                                P      P      02 37 13.0  -1.0
       baz=320
MRSI   Marisa           69.63 243   P      P      02 37 14.2  -0.2
       comp=Z,208nm,1.1s,comp=Z,2µm
TOLI2  Tolitoli         69.75 244   P      P      02 37 14.6  -0.6
TOLI2  Tolitoli         69.75 244   P      P      02 37 14.7  -0.4
154A   Montrose         69.85  63   P      P      02 37 14.5  -1.1
       baz=320
AAI    Ambon            69.85 235   P      P      02 37 16.7  +1.0
       comp=Z,181nm,1.0s
ODAN   Odare            69.86 288  eP      P      02 37 16.9  +0.8
GUN    Gumba            69.96 290  eP      P      02 37 17.9  +1.1
       comp=Z,408nm,0.8s
JIRN   Jiri             69.97 289  eP      P      02 37 18.0  +1.1
       comp=Z,359nm,0.9s
NLAI   Namlea           70.02 236   P      P      02 37 17.7  +0.9
       comp=Z,22nm,0.8s
LKBA   Tubou, Lakemba   70.03 177   P      P      02 37 18.3  +1.6
       comp=Z,2.4nm,1.1s
RAMN   Ramite           70.26 289  eP      P      02 37 19.3  +0.8
       comp=Z,394nm,0.9s
LPSR   Galich'ya Gora   70.28 335  eP      P      02 37 18.6  +0.7
LPSR                               e*PP    pwP    02 37 50.6  -0.7
LPSR                                pmax   pmax
       comp=Z,10.0nm,0.7s
TAOE   Nuku Hiva Isla   70.33 136  eLR     LR     02 58 55.0
       comp=Z,145nm,24.5s
KKN    Kakani           70.40 290  eP      P      02 37 20.3  +1.0
       comp=Z,176nm,0.9s
IDID   Didziasalis      70.43 343  eP      P      02 37 11.0  -7.8
LUWI   Luwuk            70.44 241   P      P      02 37 20.3  +0.9
LUWI   Luwuk            70.44 241   P      P      02 37 18.7  -0.7
       comp=Z,275nm,1.0s,comp=Z,11µm
PKI    Pulchoki         70.49 290  eP      P      02 37 20.7  +0.7
       comp=Z,221nm,0.8s
PKIN   Phulchoki        70.49 290  eP      P      02 37 20.7  +0.8
       comp=Z,181nm,0.8s
IIGN   Ignalina         70.49 344  eP      P      02 37 11.2  -7.9
GKN    Gorkha           70.61 291  eP      P      02 37 21.3  +0.8
       comp=Z,292nm,0.9s
CNNC   Cliffs of the    70.63  57   P      P      02 37 19.6  -0.8
       baz=321
DMN    Daman            70.63 290  eP      P      02 37 21.7  +0.9
       comp=Z,192nm,0.9s
CHGR   Chuyangaron      70.70 308   P      P      02 37 21.7  +0.8
PABE   Paberze          70.72 345   IAmb   IAmb   02 37 55.6
       comp=Z,34nm,0.7s
PABE   Paberze          70.72 345  eP      P      02 37 20.0  -0.5
VRH    Novokhopyorsk    70.79 333  eP      P      02 37 20.2  -0.8
VRH                                e*PP    pwP    02 37 52.7  -1.9
VRH                                 pmax   pmax
       comp=Z,27nm,1.5s
NACGM  Naroch           70.82 343  eP      P      02 37 20.6  -0.5
       comp=Z,11nm,0.8s,baz=18
DANN   Dangsing         70.85 292  eP      P      02 37 23.1  +1.0
       comp=Z,338nm,0.8s
MPSI   Mapaga           70.88 244   P      P      02 37 21.7  -0.3
       comp=Z,138nm,0.9s,comp=Z,1µm
NAYO   Nakonayok        70.88 269   P      P      02 37 24.0  +2.0
MNK    Minsk            71.00 342  i P     P      02 37 21.1  -1.1
       comp=E,1.0nm,1.1s
MNK                                i P     P      02 37 21.1  -1.1
       comp=N,43nm,0.9s
MNK                                i P     P      02 37 21.1  -1.1
       comp=Z,15nm,1.1s,baz=19
MNK                                i pP    pP     02 37 50.5  -0.8
MNK                                i PP    PP     02 39 59.6  -0.7
MNK                                i PPP   PPP    02 41 43.4
MNK                                i S     S      02 46 28.3  +0.4
MNK                                i sS    sS     02 47 20.3  +2.9
MNK                                i SS    SS     02 51 05.8  +3.8
MNK                                i SSS   SSS    02 54 23.5
MNK                                i LRM   MLR    03 11 08.0
       comp=N,411nm,17.4s
MNK                                i LRM   MLR    03 11 14.4
       comp=E,5.0nm,8.4s
MNK                                i LRM   MLR    03 11 49.9
       comp=Z,71nm,14.2s
MNK    Minsk            71.00 342  i P     P      02 37 21.1  -1.1
MNK                                i *PP   pP     02 37 50.4  -0.8
MNK                                i              02 39 59.6
MNK                                i PPP   PPP    02 41 43.3
MNK                                i S     S      02 46 28.3  +0.4
MNK                                i *SS   sS     02 47 20.3  +2.9
MNK                                i SS    SS     02 51 05.7  +3.8
MNK                                 pmax   pmax
       comp=Z,15nm,1.1s
MNK                                 pmax   pmax
       comp=N,43nm,0.9s
MNK                                 pmax   pmax
       comp=E,1.0nm,1.1s
MNK                                 MLR    MLR
       comp=N,411nm,17.0s
MNK                                 MLR    MLR
       comp=E,5.0nm,8.0s
MNK                                 MLR    MLR
       comp=Z,71nm,14.0s
VORR   Voronezh         71.05 334  eP      P      02 37 22.3  -0.3
VORR                               e*PP    pwP    02 37 54.3  -1.8
VORR                                pmax   pmax
       comp=Z,10.0nm,1.5s
NHSC   New Hope         71.06  60   P      P      02 37 22.4  -0.6
       baz=320
KOLN   Koldanda         71.38 291  eP      P      02 37 26.5  +1.3
       comp=Z,103nm,0.7s
VSR    Storozhevoye     71.48 334  eP      P      02 37 25.1   0.0
VSR                                e*PP    pwP    02 37 56.6  -2.2
VSR                                 pmax   pmax
       comp=Z,20nm,0.9s
PYUN   Piuthan          71.48 292  eP      P      02 37 26.5  +0.7
       comp=Z,277nm,0.9s
VORD   Divnogorie       71.67 334  eP      P      02 37 26.4  +0.1
VORD                               e*PP    pP     02 37 56.7  +1.6
VORD                                pmax   pmax
       comp=Z,20nm,0.7s
SAUI   Saumlaki         72.05 230   P      P      02 37 30.8  +1.8
SAUI   Saumlaki         72.05 230   P      P      02 37 30.1  +1.1
       comp=Z,501nm,1.0s
COEN   Coen             72.46 216   IAmb   IAmb   02 37 32.6
       comp=Z,42nm,0.9s
COEN   Coen             72.46 216   P      P      02 37 32.0  +0.6
NIL    Nilore           72.56 302   P      P      02 37 32.8  +0.8
NIL                                 IAmb   IAmb   02 37 34.2
       comp=Z,85nm,1.1s
NIL    Nilore           72.56 302   P      P      02 37 32.8  +0.8
NIL                                 pmax   pmax
       comp=Z,85nm,1.1s
NIL    Nilore           72.56 302   P      P      02 37 33.0  +1.0
PMOR   Pomariorio Ree   72.92 146  eP      P      02 37 34.5  +0.5
       comp=Z,64nm,1.0s
VAH    Vaihoa           73.23 146  eP      P      02 37 36.8  +0.9
       comp=Z,54nm,0.9s
KOUNC  Koumac, New Ca   73.34 194   P      P      02 37 36.7  +0.3
KOUNC                               IAmb   IAmb   02 37 39.3
       comp=Z,59nm,1.0s
SBUM   Sibu             73.56 252   P      P      02 37 37.8  -0.2
SBUM                                IAmb   IAmb   02 37 39.3
       comp=Z,26nm,0.7s
KBL    Kabul            74.01 306   P      P      02 37 40.1  -0.6
KBL                                 IAmb   IAmb   02 37 43.0
       comp=Z,70nm,0.8s
KBL    Kabul            74.01 306   P      P      02 37 40.1  -0.6
KBL                                 pmax   pmax
       comp=Z,70nm,0.9s
KBL    Kabul            74.01 306   P      P      02 37 40.4  -0.3
       SNR=39
AKASG  Malin Array Be   74.33 340   P      P      02 37 41.6  -0.4
       comp=Z,8.3nm,0.5s,baz=23,slow=6.0,SNR=30
AKASG                               pP     pP     02 38 11.2  +0.1
       comp=Z,10nm,0.8s,baz=22,slow=6.0,SNR=4.7
       comp=Z,8.3nm,0.5s
AKASG  Malin Array Be   74.33 340   P      P      02 37 41.6  -0.4
AKASG                               pP     pP     02 38 09.0  -2.1
AKASG                               IAmb   IAmb   02 38 17.5
       comp=Z,31nm,0.7s
AKBB   Malin Array Si   74.33 340   P      P      02 37 41.6  -0.3
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AKBB				pP	pP	02 38 10.1	-1.0
AKBB				IAmb	IAmb	02 38 17.5	
	comp=Z,40nm,0.7s						
AKBB	Malin Array Si	74.33	340	ceP	P	02 37 41.5	-0.5
AKBB				pmax	pmax		
	comp=Z,18nm,0.7s						
YATNC	Mamie plateau,	74.48	191	P	P	02 37 45.9	+2.9
SPSI	Sidrap Palu	74.51	242	P	P	02 37 42.5	-1.0
	comp=Z,58nm,1.1s						
DZM	Mont Dzumac	74.54	191	eP	P	02 37 43.5	0.0
	comp=Z,156nm,1.2s						
DZM	Mont Dzumac	74.54	191	P	P	02 37 44.9	+1.3
	comp=Z,47nm,1.0s,baz=337,slow=16,SNR=14						
DZM				LR	LR	03 03 04.7	
	comp=Z,80nm,21.7s,baz=202,slow=30						
	comp=Z,47nm,1.0s						
DZM	Mont Dzumac	74.54	191	P	P	02 37 44.8	+1.3
DZM				IAmb	IAmb	02 37 46.7	
	comp=Z,62nm,1.0s						
DZM	Mont Dzumac	74.54	191	P	P	02 37 44.7	+1.2
NOUC	Port Laguerre	74.59	192	P	P	02 37 45.5	+1.8
CMIG	Matias Romero	74.75	82	LR	LR	03 08 37.7	
	comp=Z,44nm,19.9s,baz=336,slow=34						
TIAR	Tiarei	74.81	148	eP	P	02 37 46.0	+0.9
	comp=Z,8.4nm,0.8s						
RETH	Rethem/Aller,	75.17	353	eP	pP	02 38 21.7	+5.5
	comp=Z,38nm,1.4s,baz=12,slow=4.9						
KAPI	Kappang	75.39	241	P	P	02 37 49.2	+0.6
KAPI				IAmb	IAmb	02 37 49.7	
	comp=Z,35nm,0.8s						
KAPI	Kappang	75.39	241	P	P	02 37 49.2	+0.6
KAPI				pmax	pmax		
	comp=Z,35nm,0.9s						
KAPI	Kappang	75.39	241	P	P	02 37 49.3	+0.7
RAR	Rarotonga	75.42	159	LR	LR	03 06 28.6	
	comp=Z,47nm,18.6s,baz=242,slow=32						
BKSI	Bulukumba	75.45	241	P	P	02 37 48.2	-0.7
	comp=Z,109nm,1.0s,comp=Z,1µm						
KSM	Kuching	75.47	253	P	P	02 37 49.4	+0.4
	comp=Z,88nm,0.8s						
KDU	Kakadu	75.65	226	P	P	02 37 50.3	+0.4
IBBN	Ibbenburen	75.71	354	eP	pP	02 38 24.9	+5.6
	comp=Z,45nm,0.9s,baz=12,slow=4.9						
SURA	Surathani	75.89	267	P	P	02 37 53.5	+2.0
MTSU	Mount Surprise	75.92	213	P	P	02 37 52.5	+1.1
TV1H	Townsville Har	76.17	211	P	P	02 37 53.6	+0.9
	comp=Z,66nm,1.0s						
LVV	L'vov	76.18	343	eP	P	02 37 52.3	-0.3
MAK	Makhachkala	76.25	325	eP	P	02 37 52.0	-1.1
MAK				e*PP	pP	02 38 21.2	-1.4
MAK				e*SP	sP	02 38 34.9	-0.5
MAK				eS	S	02 47 26.6	-0.7
MAK				e*SS	sS	02 48 19.2	+1.8
MAK				pmax	pmax		
	comp=Z,174nm,1.0s						
MAK				MLR	MLR		
	comp=Z,137nm,18.0s						
CLL	Collm	76.27	351	i pP	pP	02 38 24.1	+1.7
	comp=Z,31nm,1.8s						
CLL				AMS	AMS	03 12 00.0	
	comp=Z,100nm,21.4s						
CLL	Collm	76.27	351	eL	L	03 12 42.9	
	comp=Z,98nm,21.4s						
SRIT	Nakonsritamara	76.35	266	P	P	02 37 55.1	+1.0
SRIT				IAmb	IAmb	02 37 55.7	
	comp=Z,39nm,0.9s						
SRIT	Nakonsritamara	76.35	266	P	P	02 37 54.9	+0.8
GEYT	Alibeck	76.37	315	P	P	02 37 54.6	+0.6
	comp=Z,22nm,1.0s,baz=19,slow=9.2,SNR=40						
GEYT				pP	pwP	02 38 25.8	-0.2
	comp=Z,4.8nm,0.7s,baz=42,slow=6.9,SNR=2.5						
	comp=Z,22nm,1.0s						
MTN	Manton Dam	76.39	227	P	P	02 37 54.5	+0.3
MTN	Manton Dam	76.39	227	P	P	02 37 54.8	+0.7
OJC	Ojcow	76.48	346	P	P	02 37 53.8	-0.5
OJC				pP	pP	02 38 24.2	+0.5
OJC	Ojcow	76.48	346	P	P	02 37 53.8	-0.5
OJC				*PP	pP	02 38 24.2	+0.5
BRG	Berggiesshubel	76.60	350	eP	pP	02 38 28.5	+4.2
	comp=Z,17nm,1.6s,baz=12,slow=4.9						
GROC	Groznyy	76.63	326	eP	P	02 37 55.4	+0.2
GROC				e		02 38 07.1	
GROC				e*SP	sP	02 38 38.2	+0.6
GROC				pmax	pmax		
	comp=Z,94nm,1.2s						
DPC	Dobruska-Polom	76.83	348	eP	P	02 37 56.3	0.0
DPC				epP	pwP	02 38 31.3	+1.4
DPC	Dobruska-Polom	76.83	348	eP	P	02 37 56.3	0.0
DPC				e*PP	pwP	02 38 31.3	+1.4
BBKI	Banjar Baru	76.84	247	P	P	02 37 57.4	+0.6
SORM	Soroca	76.94	340	P	P	02 37 56.7	-0.2
KIV	Kislovodsk	76.99	329	⇓P	P	02 37 58.5	+1.1
KIV	Kislovodsk	76.99	329	P	P	02 37 57.6	+0.3
KIV	Kislovodsk	76.99	329	eP	P	02 37 59.3	+1.9
KIV				e		02 40 54.6	
KIV				eS	S	02 47 38.5	+2.9
KIV				eSS	SS	02 52 39.1	+5.5
KIV				pmax	pmax		
	comp=Z,25nm,1.0s						
KIV	Kislovodsk	76.99	329	i P	P	02 37 58.2	+0.8
	SNR=14						
KIV	Kislovodsk	76.99	329	P	P	02 37 58.5	+1.1
SOEI	Soe	77.02	235	P	P	02 37 57.5	-0.4
SOEI				IAmb	IAmb	02 38 06.2	
	comp=Z,66nm,0.8s						
SOEI	Soe	77.02	235	P	P	02 37 59.0	+1.1
SOEI	Soe	77.02	235	P	P	02 37 57.9	0.0
	comp=Z,90nm,0.8s						
STHS	Stebnicka Huta	77.04	345	eP	P	02 37 57.6	+0.1
STHS				e		02 38 28.1	
STHS	Stebnicka Huta	77.04	345	eP	P	02 37 57.6	+0.1
STHS				epP	pP	02 38 28.1	+1.4
KRLC	Kraliky	77.05	348	eP	P	02 37 57.6	+0.1
KRLC	Kraliky	77.05	348	eP	P	02 37 57.6	+0.1
MOX	Moxa	77.06	351	eL	L	03 13 19.4	
	comp=Z,59nm,22.0s						
NCK	Nalchik	77.11	328	i P	P	02 37 59.1	+1.1
NCK				pmax	pmax		
	comp=Z,56nm,0.9s						
CTA	Charters Tower	77.11	211	P	P	02 37 58.5	+0.4
	comp=Z,44nm,1.0s,baz=15,slow=6.4,SNR=31						
	comp=Z,44nm,1.0s						
CTAO	Charters Tower	77.11	211	P	P	02 37 58.2	+0.1
CTAO				IAmb	IAmb	02 37 59.6	
	comp=Z,42nm,0.9s						
CTAO	Charters Tower	77.11	211	P	P	02 37 59.0	+0.9
CTAO	Charters Tower	77.11	211	P	P	02 37 58.2	+0.1
CTAO				pmax	pmax		
	comp=Z,42nm,0.9s						
KBZ	Khabaz	77.12	329	P	P	02 37 58.9	+0.9
	comp=Z,17nm,0.8s,baz=23,slow=8.4,SNR=31						
	comp=Z,17nm,0.8s						
SHA1	Shidzhatmaz	77.19	329	i P	P	02 37 59.5	+0.8
MORC	Moravsky Berou	77.24	347	eP	P	02 37 58.7	+0.1
MORC				e		02 38 33.1	
WERN	Wernitzgruen	77.34	351	eP	pP	02 38 34.1	+5.6
	comp=Z,64nm,2.1s,baz=12,slow=4.9						
NKC	Novy Kostel	77.38	351	eP	P	02 37 59.6	+0.2
NKC				epP	pwP	02 38 34.3	+1.3
NKC	Novy Kostel	77.38	351	eP	P	02 37 59.6	+0.2
NKC				e*PP	pwP	02 38 34.3	+1.3
AKT	Akhty	77.47	324	eP	P	02 38 01.6	+1.5
AKT				e		02 38 10.6	
AKT				e*PP	pwP	02 38 33.9	+0.6
AKT				pmax	pmax		
	comp=Z,54nm,0.9s						
MEM	Membach	77.50	355	dP	P	02 38 00.3	+0.3
BTNL	Ternell	77.52	355	dP	P	02 38 00.0	-0.1
BTNL				dpP	pP	02 38 31.0	+1.4
BSTI	Sart Tilman	77.55	355	dP	P	02 38 01.1	+0.8
BSTI				dpP	pwP	02 38 33.4	-0.2
LANS	Liptovska Anna	77.58	346	eP	P	02 38 02.1	+1.6
LANS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LANS	Liptovska Anna	77.58	346	eP	P	02 38 02.1	+1.6
LANS				epP	pwP	02 38 32.1	-2.1
ZEI	Tsey	77.64	327	eP	P	02 37 59.6	-1.6
ZEI				pmax	pmax		
	comp=Z,38nm,0.6s						
MANZ	Manzenberg	77.66	351	eP	pP	02 38 35.6	+5.3
	comp=Z,3.4nm,1.4s,baz=12,slow=4.9						
ZKTA	Zakatala	77.72	325	P	P	02 38 00.0	-1.4
BCLA	Clavier	77.73	355	dP	P	02 38 01.1	-0.1
BCLA				dpP	pwP	02 38 34.2	-0.5
BGES	Gesves	77.77	356	dP	P	02 38 00.1	-1.4
BGES				dpP	pwP	02 38 33.8	-1.2
ANN	Anapa	77.81	333	eP	P	02 37 59.4	-2.4
ANN				e		02 38 10.4	
ANN				e*PP	pP	02 38 30.5	-1.1
ANN				eS	S	02 47 41.6	-2.5
ANN				pmax	pmax		
	comp=Z,23nm,0.9s						
VRAC	Vranov	77.82	348	eP	P	02 38 01.2	-0.6
VRAC				e		02 38 36.7	
BMRD	Maredsous	77.87	356	dP	P	02 38 02.0	0.0
BMRD				dpP	pP	02 38 33.4	+1.9
SEKA	Sheki	77.89	324	P	P	02 38 00.8	-1.6
ONI	Oni	77.96	328	P	P	02 38 03.8	+1.0
ONI	Oni	77.96	328	P	P	02 38 03.8	+1.0
ONI				pmax	pmax		
	comp=Z,17nm,1.0s						
GRF	Grafenberg Arr	78.04	351	eP	pP	02 38 38.0	+5.6
	comp=Z,109nm,2.0s,baz=12,slow=4.9						
GRF				eL	L	03 13 27.3	
	comp=Z,88nm,20.1s						
BUR08	Bucovina Ar. S	78.05	342	P	P	02 38 03.8	+0.5
TRPA	Tarpa	78.07	344	⇓P	P	02 38 04.0	+0.8
BURAR	Bucovina Array	78.08	342	P	P	02 38 03.5	+0.1
BURAR				pP	pP	02 38 33.4	+0.2
BURAR				IAmb	IAmb	02 38 40.4	
	comp=Z,35nm,0.8s						
BURAR	Bucovina Array	78.08	342	P	P	02 38 03.8	+0.4
DOU	Dourbes	78.08	356	dP	P	02 38 02.5	-0.8
DOU				dpP	pwP	02 38 38.5	+1.8
KRUC	Moravsky	78.09	348	eP	P	02 38 03.3	0.0
KRUC				e		02 38 37.8	
JAVC	Velka Javorina	78.12	347	eP	P	02 38 04.7	+1.2
JAVC				e		02 38 36.4	
SOC	Sochi	78.25	331	eP	P	02 38 04.5	+0.3
SOC				e		02 41 01.4	
SOC				ePPP	PPP	02 42 51.5	
SOC				eS	S	02 47 52.7	+3.7
SOC				eSS	SS	02 52 48.0	-4.3
SOC				pmax	pmax		
	comp=Z,15nm,0.8s						
KULM	Kulim	78.29	264	P	P	02 38 05.0	+0.2
VYHS	Vyhne	78.31	346	eP	P	02 38 05.0	+0.5
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.1s						
VYHS	Vyhne	78.31	346	eP	P	02 38 05.0	+0.5
VYHS				epP	pwP	02 38 37.1	+0.3
MNGR	Mingechevir, A	78.32	324	P	P	02 38 03.2	-1.5
KHC	Kasperske Hory	78.36	350	eP	P	02 38 04.7	-0.1
KHC				epP	pwP	02 38 40.1	+1.5
KHC	Kasperske Hory	78.36	350	eP	P	02 38 04.7	-0.1
KHC				e*PP	pwP	02 38 40.1	+1.5
WLF	Walferdange	78.44	355	dpP	pP	02 38 39.2	+4.5
SMOL	Smolenice	78.49	347	eP	P	02 38 06.5	+1.0
SMOL				pmax	pmax		
	comp=Z,5.0nm,1.3s						
CKRC	Cesky Krumlov	78.58	349	eP	P	02 38 07.6	+1.6
CKRC	Cesky Krumlov	78.58	349	eP	P	02 38 07.6	+1.6
GERES	GERESS Array B	78.62	350	P	P	02 38 07.0	+0.6
	comp=Z,1.1nm,0.8s,baz=18,slow=3.4,SNR=6.4						
GERES				pP	pP	02 38 37.1	+1.3
	comp=Z,1.4nm,0.7s,baz=350,slow=4.1,SNR=3.2						
GERES				LR	LR	03 17 47.4	
	comp=Z,72nm,18.8s,baz=58,slow=39						
MODS	Modra-Piesok	78.65	347	eP	P	02 38 08.2	+1.8
MODS				pmax	pmax		
	comp=Z,15nm,1.0s						
MODS	Modra-Piesok	78.65	347	eP	P	02 38 08.2	+1.8
MODS				epP	pwP	02 38 39.6	+1.0
MODS				e		02 41 38.1	
IPM	Ipoh	78.69	263	P	P	02 38 06.1	-1.0
IPM				IAmb	IAmb	02 38 07.6	
	comp=Z,29nm,0.8s						
IPM	Ipoh	78.69	263	P	P	02 38 07.3	+0.2
GANJ	Ganja	78.70	325	P	P	02 38 05.4	-1.5
PSZ	Piszkesteto	78.71	345	P	P	02 38 07.3	+0.5
PSZ				pP	pP	02 38 36.0	-0.7
PSZ	Piszkesteto	78.71	345	P	P	02 38 07.3	+0.5
PSZ				*PP	pP	02 38 36.1	-0.7
ARCR	ARCALIA	78.75	342	⇑P	P	02 38 08.5	+1.6
AKH	Akhalkalaki	79.00	327	P	P	02 38 09.0	+0.3
AKH				IAmb	IAmb	02 38 11.4	
	comp=Z,64nm,0.9s						
AKH	Akhalkalaki	79.00	327	P	P	02 38 09.0	+0.3
AKH				pmax	pmax		
	comp=Z,64nm,0.9s						
SRO	Srobarova	79.05	346	eP	P	02 38 09.5	+1.0
SRO	Srobarova	79.05	346	eP	P	02 38 09.5	+1.0
VLDR	Vladesti	79.18	339	⇓P	P	02 38 09.7	+0.4
CJR	Cluj-Napoca	79.25	343	⇑P	P	02 38 10.8	+1.1
CJR	Cluj-Napoca	79.25	343	P	P	02 38 10.8	+1.1
CONA	Conrad Observa	79.27	348	ePcP	P	02 38 10.2	+0.3
	comp=Z,7.3nm,1.4s						
CONA				epP	pwP	02 38 43.0	+0.9
	comp=Z,6.8nm,1.0s						
RONA	Rosalia, Austr	79.44	348	ePcP	P	02 38 14.4	+3.6
	comp=Z,7.0nm,1.2s						
RONA				epP	pP	02 38 40.9	+0.2
	comp=Z,8.1nm,1.2s						
VRI	Vrincioaia	79.45	340	P	P	02 38 10.6	-0.2
LKRN	Lenkeran, Azer	79.50	322	P	P	02 38 09.8	-1.4
BFO	Black Forest	79.63	353	eP	pP	02 38 46.6	+4.9
	comp=Z,18nm,1.4s,baz=12,slow=4.9						
PLAI	Plampang	79.64	241	P	P	02 38 11.3	-0.8
PLAI	Plampang	79.64	241	P	P	02 38 09.6	-2.5
	comp=Z,110nm,0.8s						
GNI	Garni	79.70	326	P	P	02 38 13.3	+0.9
GNI	Garni	79.70	326	ceP	P	02 38 14.8	+2.3
GNI				pmax	pmax		
	comp=Z,47nm,1.7s						
GNI	Garni	79.70	326	P	P	02 38 14.5	+2.0
GNI	Garni	79.70	326	P	P	02 38 14.5	+2.0
BIOA	Bad Ischl, Aus	79.77	350	ePcP	P	02 38 13.4	+0.8
	comp=Z,3.7nm,0.8s						
BIOA				epP	pP	02 38 42.1	-0.4
	comp=Z,16nm,1.7s						
CFR	Carcaliu	79.80	339	P	P	02 38 14.2	+1.6
QIS	Mount Isa	79.83	217	P	P	02 38 12.6	-0.4
KARS	Kars	79.84	327	P	P	02 38 13.4	+0.2
KARS				IAmb	IAmb	02 38 16.2	
	comp=Z,66nm,1.2s						
KARS	Kars	79.84	327	P	P	02 38 13.4	+0.2
KARS				pmax	pmax		
	comp=Z,66nm,1.2s						
KNRA	Kununurra	79.96	228	P	P	02 38 13.9	+0.2
KNRA	Kununurra	79.96	228	P	P	02 38 14.6	+0.8
MLR	Muntele Rosu	79.97	341	P	P	02 38 14.6	+0.8
MLR	Muntele Rosu	79.97	341	P	P	02 38 14.6	+0.8
MLR				pmax	pmax		
	comp=Z,21nm,0.9s						
ARSA	Arzberg	79.98	348	ePcP	P	02 38 15.9	+2.2
	comp=Z,4.6nm,0.8s						
ARSA				epP	pwP	02 38 45.6	-0.5
	comp=Z,5.7nm,1.1s						
SIRR	Siria	80.03	344	⇓P	P	02 38 14.3	+0.4
TBI	Tubuai	80.20	150	eP	P	02 38 16.4	+1.5
	comp=Z,88nm,0.9s						
VOIR		80.20	341	P	P	02 38 15.8	+0.9
RETA	Reutte	80.27	351	epP	pP	02 38 50.6	+5.3
	comp=Z,8.3nm,1.4s						
NAX	Nakhchivan	80.30	325	P	P	02 38 14.1	-1.5
WATA	Walderalm	80.34	351	ePcP	P	02 38 15.6	-0.1
	comp=Z,13nm,1.2s						
WATA				epP	pwP	02 38 48.3	+0.2
	comp=Z,12nm,0.9s						
MOTA	Moosalm	80.37	351	ePcP	P	02 38 16.4	+0.5
	comp=Z,13nm,1.4s						
MOTA				epP	pwP	02 38 48.6	+0.3
	comp=Z,14nm,1.2s						
WTTA	Wattenberg	80.40	351	ePcP	P	02 38 15.8	-0.3
	comp=Z,6.4nm,0.7s						
WTTA				epP	pwP	02 38 49.0	+0.5
	comp=Z,30nm,1.5s						
KBA	Koelnbreinsper	80.41	350	ePcP	P	02 38 16.7	+0.5
	comp=Z,15nm,0.8s						
KBA				epP	pwP	02 38 48.8	+0.3
	comp=Z,35nm,1.1s						
SQTA	Sankt Quirin	80.49	351	ePcP	P	02 38 16.9	+0.4
	comp=Z,8.4nm,1.0s						
SQTA				epP	pwP	02 38 49.2	+0.3
	comp=Z,24nm,1.8s						
DAVA	Damuels	80.54	352	eP	P	02 38 11.4	-5.4
	comp=Z,4.6nm,0.9s						
KTUT	Trabzon	80.59	329	⇓P	P	02 38 17.7	+0.7
SOKA	Soboth	80.61	348	ePcP	P	02 38 17.5	+0.4
	comp=Z,13nm,1.2s						
SOKA				epP	pwP	02 38 50.0	+0.5
	comp=Z,28nm,1.3s						
LHMI	Lhok Sumawe	80.61	266	P	P	02 38 17.7	+0.2
LHMI	Lhok Sumawe	80.61	266	P	P	02 38 18.7	+1.3
LHMI	Lhok Sumawe	80.61	266	P	P	02 38 17.8	+0.4
	comp=Z,346nm,0.8s,comp=Z,3µm						
GZR	Gura Zlata	80.67	343	P	P	02 38 18.0	+0.6
EIDS	Eidsvold	80.72	205	P	P	02 38 18.6	+1.0
EIDS				IAmb	IAmb	02 38 19.8	
	comp=Z,62nm,1.4s						
EIDS	Eidsvold	80.72	205	P	P	02 38 19.0	+1.4
	comp=Z,34nm,1.6s						
FETA	Feichten	80.73	351	ePcP	P	02 38 17.9	+0.1
	comp=Z,6.4nm,1.0s						
FETA				epP	pwP	02 38 49.6	-0.6
ABTA	Abfaltersbach	80.83	350	ePcP	P	02 38 18.5	+0.3
	comp=Z,10.0nm,1.4s						
ABTA				epP	pwP	02 38 50.8	+0.1
	comp=Z,17nm,1.0s						
OBKA	Obir	80.83	349	ePcP	P	02 38 20.9	+2.6
	comp=Z,12nm,0.9s						
OBKA				epP	pwP	02 38 51.1	+0.3
	comp=Z,22nm,1.3s						
PPBI	Pangkal Pinang	80.85	255	P	P	02 38 18.9	+0.2
PRED	Cave del Predi	81.01	349	P	P	02 38 19.4	+0.2
WB0	Warramunga Arr	81.13	221	P	P	02 38 19.8	-0.2
WB0				IAmb	IAmb	02 38 20.8	
	comp=Z,66nm,0.8s						
FUORN	Ofenpass-Fuorn	81.17	352	P	P	02 38 20.7	+0.4
KOPT	Kop Dagi	81.24	329	P	P	02 38 21.3	+0.4
WR0	Warramunga Arr	81.25	221	P	P	02 38 20.2	-0.3
PSI	Prapat	81.30	263	P	P	02 38 22.2	+1.0
PSI	Prapat	81.30	263	P	P	02 38 21.0	-0.2
PSI				pmax	pmax		
	comp=Z,58nm,0.9s						
WRAB	Tennant Creek	81.30	221	P	P	02 38 20.9	0.0
WRAB	Tennant Creek	81.30	221	ceP	P	02 38 20.6	-0.3
WRAB				pmax	pmax		
	comp=Z,155nm,1.7s						
WB2	Warramunga Arr	81.31	221	P	P	02 38 20.0	-0.9
WRA	Warramunga Arr	81.31	221	P	P	02 38 20.7	-0.3
	comp=Z,48nm,0.7s,baz=34,slow=6.2,SNR=214						
WRA				PKKPbc	PKKPbc	02 56 53.8	0.0
	comp=Z,0.7nm,0.8s,baz=227,slow=1.5,SNR=5.8						
	comp=Z,48nm,0.7s						
WRA	Warramunga Arr	81.31	221	i P	P	02 38 19.2	-1.7
WRA				pmax	pmax		
	comp=Z,55nm,0.7s						
RPSI	Rantau Prapat	81.38	263	P	P	02 38 21.0	-0.5
RPSI				IAmb	IAmb	02 38 22.2	
	comp=Z,58nm,0.9s						
FRGS	Fruska Gora	81.41	345	⇑P	P	02 38 21.5	+0.2
CTI	Castel Tesino	81.61	351	P	P	02 38 22.6	+0.2
CTI	Castel Tesino	81.61	351	P	P	02 38 22.6	+0.2
CTI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BKNI	Bangkinang	81.95	260	P	P	02 38 24.7	+0.2
BKNI	Bangkinang	81.95	260	P	P	02 38 25.8	+1.3
	comp=Z,137nm,0.8s						
PWJI	Pagerwojo	82.28	246	P	P	02 38 24.2	-1.9
	comp=Z,66nm,1.4s						
TEOL	Teolo	82.28	351	P	P	02 38 24.8	-1.1
TEOL				IAmb	IAmb	02 39 02.7	
	comp=Z,42nm,0.8s						
ILGA	Ilgaz	82.31	334	P	P	02 38 26.2	-0.2
ILGA				IAmb	IAmb	02 39 12.7	
	comp=Z,28nm,0.8s						
HYB	Hyderabad	82.32	288	eP	P	02 38 26.3	-0.2
HYB				IVmB_BB		02 38 26.9	
	comp=Z,457nm,0.7s						
HYB				ePcP	PcP	02 38 31.0	-0.4
RMQ	Roma	82.40	207	P	P	02 38 27.6	+1.1
DIVS	Divibare	82.41	344	P	P	02 38 26.8	+0.1
BOVS	Bovan	82.57	343	⇓P	P	02 38 26.6	-0.7
SDSI	Sungai Dareh	82.70	259	P	P	02 38 28.1	-0.3
	comp=Z,29nm,1.4s						
BNI	Bardonecchia	83.00	354	P	P	02 38 30.2	+0.4
BNI	Bardonecchia	83.00	354	P	P	02 38 30.2	+0.4
BNI				pmax	pmax		
	comp=Z,28nm,1.2s						
SNSI	Sinabang, Aceh	83.20	265	P	P	02 38 31.7	+0.7
	comp=Z,71nm,1.1s						
VTS	Vitosha	83.27	342	P	P	02 38 30.9	-0.2
VTS	Vitosha	83.27	342	P	P	02 38 30.9	-0.2
VTS				pmax	pmax		
	comp=Z,13nm,0.9s						
GSI	Gunungsitoli	83.30	264	P	P	02 38 30.3	-1.2
GSI	Gunungsitoli	83.30	264	P	P	02 38 31.7	+0.2
	comp=Z,73nm,1.3s						
GSI	Gunungsitoli	83.30	264	P	P	02 38 31.4	-0.1
	comp=Z,73nm,1.3s,comp=Z,2µm						
ZCCA	Zocca	83.35	351	P	P	02 38 33.3	+1.9
ZCCA				IAmb	IAmb	02 39 09.5	
	comp=Z,38nm,1.0s						
KPJI	Karang Pucung	83.36	249	P	P	02 38 30.0	-1.8
	comp=Z,77nm,0.9s,comp=Z,8µm						
BR131	Keskin Array S	83.57	333	P	P	02 38 33.6	+0.9
BR131	Keskin Array S	83.57	333	P	P	02 38 33.6	+0.9
BR131				pmax	pmax		
	comp=Z,26nm,1.6s						
BR131	Keskin Array S	83.57	333	P	P	02 38 33.6	+0.9
BRTR	Keskin Array B	83.57	333	P	P	02 38 33.0	+0.3
	comp=Z,2.5nm,0.6s,baz=48,slow=2.5,SNR=20						
BRTR				pP	pP	02 39 04.1	+1.3
	comp=Z,2.9nm,0.8s,baz=35,slow=1.6,SNR=4.2						
BRTR				PKKPbc	PKKPbc	02 56 47.9	+0.5
	comp=Z,0.6nm,0.5s,baz=168,slow=4.6,SNR=4.7						
	comp=Z,2.5nm,0.6s						
BRTR	Keskin Array B	83.57	333	P	P	02 38 33.6	+0.9
BRTR				pP	pP	02 39 03.5	+0.7
ANTO	Ankara	83.66	334	P	P	02 38 33.4	+0.2
BNN	Bunyan	83.75	331	P	P	02 38 34.3	+0.6
BNN				IAmb	IAmb	02 38 36.0	
	comp=Z,42nm,0.8s						
QLP	Quilpie	83.82	210	P	P	02 38 35.3	+1.5
MDSI	Maura Dua	83.87	255	P	P	02 38 32.2	-2.2
	comp=Z,25nm,1.3s						
PDG	Podgorica	84.16	345	⇓P	P	02 38 36.0	+0.5
BBJI	Bungbulang	84.21	250	P	P	02 38 35.0	-1.2
RDO	Rodhopi	84.21	340	P	P	02 38 36.3	+0.5
RDO				pP	pP	02 39 07.0	+1.1
BORA	Eskisehir	84.27	336	P	P	02 38 36.3	+0.1
BORA				pP	pP	02 39 07.4	+1.1
MURB	Monte Urbino	84.27	350	P	P	02 38 36.9	+0.7
MURB				IAmb	IAmb	02 38 38.6	
	comp=Z,35nm,1.1s						
KASI	Kota Agung	84.51	254	P	P	02 38 34.6	-3.0
	comp=Z,32nm,1.2s						
CGJI	Cibinong	84.67	252	P	P	02 38 37.1	-1.3
	comp=Z,50nm,0.8s						
AS01	Alice Springs	84.81	220	P	P	02 38 39.1	+0.2
	comp=Z,57nm,0.9s						
AS31	Alice Springs	84.83	220	P	P	02 38 39.4	+0.4
ASAR	Alice Springs	84.83	220	P	P	02 38 39.4	+0.4
	comp=Z,29nm,0.8s,baz=25,slow=5.0,SNR=240						
ASAR				PKiKP	PKiKP	02 43 50.4	-0.4
	comp=Z,0.8nm,0.8s,baz=18,slow=1.3,SNR=5.6						
ASAR				LR	LR	03 15 02.7	
	comp=Z,34nm,19.0s,baz=160,slow=34						
	comp=Z,29nm,0.8s						
GAZ	Gaziantep	84.88	330	P	P	02 38 40.2	+0.8
GAZ				pP	pP	02 39 09.6	-0.2
LATE	Laterza	84.99	350	P	P	02 38 39.5	-0.2
LATE				IAmb	IAmb	02 38 41.6	
	comp=Z,36nm,1.0s						
AULRC	Lightning Ridg	85.40	206	P	P	02 38 43.0	+1.4
	comp=Z,65nm,1.1s						
ARMA	Armidale	85.41	203	P	P	02 38 43.2	+1.5
ARMA				IAmb	IAmb	02 38 44.1	
	comp=Z,34nm,0.8s						
ARMA	Armidale	85.41	203	P	P	02 38 44.5	+2.7
NGCH	Negor - Chabah	85.44	306	P	P	02 38 40.4	-1.8
INKA	Innaminka	86.03	213	P	P	02 38 46.0	+1.3
JASK	Jask - Hormozg	86.61	309	P	P	02 38 48.6	+0.7
SHME	Shamm	87.28	310	P	P	02 38 50.2	-0.9
BANOM	Banah	87.31	310	P	P	02 38 51.0	-0.4
BANOM	Banah	87.31	310	P	P	02 38 51.7	+0.3
MDH	Madha	87.84	310	P	P	02 38 52.8	-1.1
MASF	Masafi	87.84	310	P	P	02 38 53.7	-0.2
MSFE	Esma-Masafi	87.85	310	P	P	02 38 51.9	-2.1
OOD	Oodnadatta	87.86	217	P	P	02 38 54.3	+0.7
AUDCS	Dubbo College	87.88	205	P	P	02 38 56.4	+2.8
UMQ	Umm Al-Quwin	87.95	310	P	P	02 38 54.5	+0.1

CMSA	Cobar Meteorol	88.03	207	P	P	02 38 56.2	+1.9
UOSS	Minazif	88.18	310	P	P	02 38 54.8	-0.7
UOSS	Minazif	88.18	310	*i* P	P	02 38 54.9	-0.7
	SNR=7.8						
UOSS	Minazif	88.18	310	P	P	02 38 54.8	-0.7
HATD	Hatta, Dubai	88.32	310	*i* P	P	02 38 56.0	-0.2
	SNR=6.7						
HATD	Hatta, Dubai	88.32	310	P	P	02 38 55.8	-0.4
WRKA	Warakurna	88.36	224	P	P	02 38 57.2	+1.1
NAZ	Nazwa, Dubai	88.40	310	P	P	02 38 56.1	-0.4
WSAR	Wadi Sarin	88.45	307	P	P	02 38 57.2	+0.5
BIDO	Bidbid	88.46	307	P	P	02 38 57.2	+0.4
ASHO	Ashiyiah	88.47	310	*i* P	P	02 38 57.0	0.0
	SNR=9.5						
ASHO	Ashiyiah	88.47	310	P	P	02 38 56.3	-0.6
	SNR=5.4						
ESDC	Sonseca Array	88.62	2	P	P	02 38 56.1	-1.2
	comp=Z,1.2nm,0.8s,baz=352,slow=4.0,SNR=11						
ESDC				pP	pwP	02 39 29.7	-0.9
	comp=Z,6.1nm,1.1s,baz=350,slow=4.5,SNR=12						
ESDC				PKKPbc	PKKPbc	02 56 36.4	+1.0
	comp=Z,1.3nm,0.8s,baz=202,slow=1.2,SNR=9.2						
	comp=Z,1.2nm,0.8s						
ESDC	Sonseca Array	88.62	2	P	P	02 38 56.2	-1.2
ESDC				pP	pwP	02 39 29.4	-1.1
FAQ	Al Faqa, Dubai	88.64	310	P	P	02 38 57.0	-0.6
SOHO	SOHO	88.71	309	P	P	02 38 57.3	-0.7
HOQ	Hoqain	88.81	308	P	P	02 38 58.4	-0.1
WBK	Wadi Bani Khal	88.81	306	P	P	02 38 58.9	+0.3
ASUD	Al Ashush, Dub	88.87	310	P	P	02 38 58.8	0.0
ASUD	Al Ashush, Dub	88.87	310	P	P	02 38 58.7	0.0
SMDO	Samad	88.89	307	P	P	02 38 59.6	+0.6
JLN	Jalan Bani Buh	88.97	306	P	P	02 38 59.7	+0.4
MBWA	Marble Bar	88.98	233	P	P	02 38 58.5	-0.5
MBWA	Marble Bar	88.98	233	P	P	02 38 59.2	+0.1
MBWA	Marble Bar	88.98	233	P	P	02 38 58.9	-0.2
PALK	Pallekele	89.00	280	P	P	02 39 00.0	+0.5
PALK				IAmb	IAmb	02 39 01.0	
	comp=Z,28nm,1.1s						
PALK	Pallekele	89.00	280	P	P	02 39 00.0	+0.5
PALK				pmax	pmax		
	comp=Z,28nm,1.1s						
AJN	Ajban	89.08	310	P	P	02 38 59.1	-0.6
ALNE	Al Ain	89.15	310	P	P	02 39 00.3	+0.3
	SNR=6.5						
PSA00	Pilbara Seismi	89.27	233	P	P	02 38 59.6	-0.8
PSA00	Pilbara Seismi	89.27	233	P	P	02 39 00.0	-0.4
LCRK	Leigh Creek	89.37	214	P	P	02 39 02.2	+1.6
ARQ	Araqi	89.39	309	P	P	02 39 01.8	+0.6
	SNR=5.6						
JMDO	Jabal Madar	89.44	307	P	P	02 39 01.3	-0.1
BSY	Bisya	89.57	308	P	P	02 39 01.9	-0.2
STKA	Stephens Creek	89.57	211	P	P	02 39 02.7	+1.1
	comp=Z,49nm,0.6s,baz=1.2,slow=7.0,SNR=142						
	comp=Z,49nm,0.6s						
STKA	Stephens Creek	89.57	211	P	P	02 39 02.9	+1.3
STKA				IAmb	IAmb	02 39 03.8	
	comp=Z,49nm,1.5s						
STKA	Stephens Creek	89.57	211	P	P	02 39 02.9	+1.3
STKA	Stephens Creek	89.57	211	P	P	02 39 02.9	+1.3
STKA				pmax	pmax		
	comp=Z,49nm,1.5s						
JRN	Qarnain Island	89.75	312	P	P	02 39 02.6	-0.3
SHMA	Al-Shehemyia	89.81	314	P	P	02 39 03.2	+0.1
SAKB	Bahrain	89.89	315	P	P	02 39 03.3	-0.2
YNG	Young	89.91	204	P	P	02 39 05.1	+2.0
MZWR	Madinat Zayed	90.29	311	P	P	02 39 05.2	-0.1
SJG	San Juan	90.56	59	LR	LR	03 20 11.7	
	comp=Z,54nm,21.8s,baz=302,slow=36						
GHWR	Ruwais	90.58	312	P	P	02 39 06.4	-0.3
UMZA	Um Al Zommool	90.58	309	P	P	02 39 06.3	-0.4
MHTO	MHTO	90.67	306	P	P	02 39 07.0	-0.2
	SNR=5.5						
MULG	Mulgathing	90.71	217	P	P	02 39 07.3	+0.4
SMRA	Abu-Samra	90.83	314	P	P	02 39 07.4	-0.5
BKZ	Black Stump Fm	90.86	181	P	P	02 39 06.2	-1.3
BKZ	Black Stump Fm	90.86	181	P	P	02 39 08.3	+0.8
SLWR	Sila	91.03	313	P	P	02 39 08.3	-0.4
MZR	Muzera	91.12	311	*i* P	P	02 39 09.0	-0.3
	SNR=11						
MZR	Muzera	91.12	311	P	P	02 39 09.1	-0.2
DQM	DQM	91.78	306	P	P	02 39 11.8	-0.5
HTT	Hallett	91.86	212	P	P	02 39 13.2	+0.9
WHYH	Whyalla	91.95	213	P	P	02 39 14.7	+2.1
	comp=Z,20nm,1.1s						
BBOO	Buckleboo	92.27	215	P	P	02 39 14.1	0.0
BBOO				IAmb	IAmb	02 39 16.3	
	comp=Z,19nm,1.2s						
BBOO	Buckleboo	92.27	215	P	P	02 39 15.1	+1.0
FORT	Forrest	93.50	222	P	P	02 39 20.3	+0.5
FORT	Forrest	93.50	222	P	P	02 39 20.9	+1.1
ARPS	Mount Arapiles	94.04	209	P	P	02 39 24.1	+2.0
	comp=Z,16nm,1.0s						
MEEK	Meekatharra	94.14	231	P	P	02 39 23.4	+0.5
RAYN	Ar Rayn	94.20	318	P	P	02 39 22.8	-0.7
RAYN				IAmb	IAmb	02 39 24.4	
	comp=Z,16nm,0.9s						
RAYN	Ar Rayn	94.20	318	P	P	02 39 22.8	-0.7
RAYN				pmax	pmax		
	comp=Z,16nm,1.0s						
RAYN	Ar Rayn	94.20	318	*i* P	P	02 39 23.5	0.0
	SNR=14						
DMTO	DMTO	94.94	307	P	P	02 39 25.4	-1.5
WHFO	Wadi Hawf	95.34	308	P	P	02 39 27.6	-1.2
RPZ	Rata Peaks	95.60	185	LR	LR	03 18 26.2	
	comp=Z,66nm,18.4s,baz=241,slow=33						
SDV	Santo Domingo	95.63	68	LR	LR	03 24 29.4	
	comp=Z,64nm,20.3s,baz=302,slow=36						
TORD	Torodi Ar. Bea	115.00	356	PKP	PKiKP	02 44 43.9	-1.1
	comp=Z,4.0nm,0.5s,baz=348,slow=2.4,SNR=67						
TORD				SKP		02 48 08.0	
	comp=Z,0.3nm,0.7s,baz=315,slow=1.6,SNR=4.2						
TORD				PKKPbc	PKKPbc	02 55 19.3	+0.3
	comp=Z,2.7nm,0.6s,baz=183,slow=2.0,SNR=19						
TORD				PKKPab	PKKPab	02 55 26.7	-3.3
	comp=Z,4.4nm,0.7s,baz=184,slow=4.0,SNR=16						
LPAZ	La Paz	117.12	82	PKP	PKPdf	02 44 49.2	-0.5
	comp=Z,1.4nm,0.8s,baz=315,slow=1.4,SNR=5.2						
LPAZ				pP	pPKPdf	02 45 22.2	-0.1
	comp=Z,1.4nm,0.7s,baz=307,slow=5.1,SNR=3.8						
LPAZ				PKKPbc	PKKPbc	02 55 11.4	-0.8
	comp=Z,1.7nm,0.8s,baz=151,slow=4.5,SNR=6.2						
VILB	Vilhena	119.29	72		PKPdf	02 44 52.9	-0.3
KMBO	Kilima Mbogo	119.72	314	PKPdf	PKPdf	02 44 54.3	-0.1
KMBO	Kilima Mbogo	119.72	314	PKIKP	PKPdf	02 44 54.3	-0.1
KMBO	Kilima Mbogo	119.72	314	*i* P	PKiKP	02 44 55.4	+1.0
	SNR=10						
SIV	San Ignacio	121.16	75	PKKPbc	PKKPbc	02 55 00.1	+3.2
	comp=Z,1.8nm,0.9s,baz=121,slow=7.5,SNR=7.3						
DBIC	Dimbokro	121.44	4	PKP	PKPdf	02 44 56.7	-0.6
	comp=Z,7.6nm,0.6s,baz=14,slow=2.5,SNR=15						
DBIC				PKKPbc	PKKPbc	02 54 58.4	+2.4
	comp=Z,3.3nm,0.9s,baz=280,slow=5.7,SNR=3.5						
H03N2	Juan Fernandez	123.03	103	T	T	05 00 03.3	
	baz=318,slow=78,SNR=4.8						
H03N1	Juan Fernandez	123.05	103	T	T	05 00 04.9	
	baz=318,slow=78,SNR=6.5						
H03N3	Juan Fernandez	123.05	103	T	T	05 00 01.7	
	baz=318,slow=78,SNR=6.4						
LCO	Las Campanas	124.95	94		PKPdf	02 45 03.7	-0.2
LCO	Las Campanas	124.95	94	PKIKP	PKPdf	02 45 03.7	-0.2
BDFB	Brasilia	128.41	63	PKP	PKPdf	02 45 10.2	-0.5
	comp=Z,3.8nm,0.7s,baz=231,slow=5.0,SNR=6.7						
VNDA	Vanda	129.72	185	PKP	PKiKP	02 45 12.4	+0.4
	comp=Z,4.0nm,0.9s,baz=6.8,slow=9.0,SNR=10						
VNDA	Vanda	129.72	185	PKPdf	PKiKP	02 45 12.1	+0.1
CPUP	Villa Florida	131.26	80	PKP	PKPdf	02 45 15.5	-0.2
	comp=Z,5.8nm,0.9s,baz=239,slow=2.9,SNR=8.9						
CPUP				SKPbc	SKPbc	02 48 27.7	-1.5
	comp=Z,18nm,0.7s,baz=327,slow=3.8,SNR=37						
PLCA	Paso Flores	132.86	105	PKP	PKPdf	02 45 18.9	+0.5
	comp=Z,9.2nm,0.7s,baz=324,slow=1.6,SNR=23						
PLCA				SKPbc	SKPbc	02 48 35.1	+0.5
	comp=Z,19nm,0.9s,baz=306,slow=4.7,SNR=20						
PLCA	Paso Flores	132.86	105	PKPdf	PKiKP	02 45 19.0	-0.5
TRQA	Tornquist	136.40	96	PKPdf	PKPdf	02 45 25.2	+0.2
TRQA	Tornquist	136.40	96	PKIKP	PKPdf	02 45 25.2	+0.2
QSPA	South Pole Qui	141.81	180	SKPbc	SKPbc	02 49 00.4	+0.5
	comp=Z,6.4nm,0.7s,baz=270,slow=0.8,SNR=5.4						
QSPA	South Pole Qui	141.81	180	PKPpre	PKPpre	02 45 29.5	
TSUM	Tsumeb	143.91	328	PKPdf	PKPdf	02 45 38.4	-0.9
MAW	Mawson	145.93	218	PKPbc	PKPab	02 45 42.5	-0.2
	comp=Z,86nm,0.8s,baz=91,slow=6.6,SNR=12						
LBTB	Lobatse	145.98	312	PKPdf	PKPdf	02 45 42.8	+0.1
LBTB	Lobatse	145.98	312	PKP2	PKPdf	02 45 42.8	+0.1
BOSA	Boshof	149.19	309	PKPbc	PKPbc	02 45 52.8	+0.6
	comp=Z,50nm,0.6s,baz=35,slow=2.2,SNR=137						
BOSA	Boshof	149.19	309		PKiKP	02 45 53.1	-0.3
BELA	Belgrano 2	151.44	166		PKPbc	02 45 55.7	-0.4
TROLL	Troll, Antarti	159.89	184	P	PKPab	02 46 40.4	-1.0
NVL	N'lazarevskaya	160.25	193	⇓*i*PKP2	PKPab	02 46 42.3	-0.5
NVL				pmax	pmax		
	comp=Z,18nm,0.8s						
SNAA	Sanae	160.31	179	P	PKPab	02 46 42.2	-0.9
SNAA	Sanae	160.31	179		PKPab	02 46 42.6	-0.5
SNAA	Sanae	160.31	179	PKP2	PKPab	02 46 42.7	-0.5
VNA3	Neumayer Olymp	160.41	172	P	PKPab	02 46 42.1	-1.4
VNA2	Neumayer--Watz	160.89	174	P	PKPab	02 46 44.8	-0.9
	baz=179,slow=3.0						

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*IDC **09** 02:39:25.5±1.6, 34°.32N×140°.32E, h0^{km}, mb3.4/5, mbtmp3.3/6, ML2.5/1, MS3.5/2, Error ellipse: s-maj=44.0km s-min=26.1km az=62.0*

*JMA **09** 02:39:29.2±0.2, 34°.6N±0°.7×140°.7E±0°.8, h54^{km}±2^{km}, MV3.0/31, SE OFF BOSO PENINSULA*

ISC 09 02:39:31.7±1.0**, 34°.58N**±0°.06×**140°.63E**±0°.07**, h59**^{km}**, n25,** σ**$2^{s}.22$**/20**, mb3.3**/5**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO3	Boso 3	0.24	337	*i* P	Pn	02 39 38.4	-2.6
BSO1	Boso 1	0.30	76	*i* P	Pn	02 39 38.4	-2.7
BSO4	Boso 4	0.47	330	*i* P	Pn	02 39 41.3	-1.9
KTR	Katsuura	0.62	336	*e*P	Pn	02 39 42.8	-2.1
KTR				S	Sn	02 39 52.2	-2.4
JKUC	kamogawauchiur	0.68	329	*i* P	Pn	02 39 43.4	-2.2
TATJ	Tateyama 2	0.75	307	P	Pn	02 39 45.0	-1.6
JIM2	Oshima 3	0.99	278	*e*P	Pn	02 39 47.6	-2.1
JMYK	Miyake Tsubota	1.03	240	*e*P	Pn	02 39 48.7	-1.4
JSMT	Sammumatsuo	1.07	352	P	Pn	02 39 48.6	-2.0
JSMT				S	Sn	02 40 02.4	-2.2
JMKN	Mikurajimanish	1.10	232	S	Sn	02 40 03.2	-2.1
JTHY	Toshimahigashi	1.11	267	*e*P	Pn	02 39 49.3	-1.8
MJAR	Matsushiro Arr	2.78	315	Pn	Pn	02 40 11.6	-2.2
	0.8nm,0.3s,baz=150,slow=13,SNR=15						
MJAR				Sn	Sn	02 40 47.4	+1.2
	0.8nm,0.3s,baz=162,slow=7.0,SNR=6.6						
	6.6nm,0.4s						
H11N2	WAKE ISLAND Hy	27.55	116	T	T	03 14 29.6	
	baz=309						
H11N1	WAKE ISLAND Hy	27.56	116	T	T	03 14 29.6	
	baz=309						
H11N3	WAKE ISLAND Hy	27.57	116	T	T	03 14 29.6	
	baz=309						
H11S3	WAKE ISLAND Hy	28.17	118	T	T	03 15 27.5	
	baz=311						
H11S1	WAKE ISLAND Hy	28.17	118	T	T	03 15 20.3	
	baz=311						
H11S2	WAKE ISLAND Hy	28.19	118	T	T	03 15 23.8	
	baz=311						
SONM	Songino Array	28.70	308	P	P	02 45 23.5	+0.1
	0.3nm,0.6s,baz=97,slow=12,SNR=2.5						
	0.3nm,0.6s						
ZALV	Zalesovo Beam	43.13	314	P	P	02 47 27.1	+1.0
	0.9nm,0.8s,baz=91,slow=7.2,SNR=2.2						
	0.9nm,0.8s						
KAPI	Kappang	44.03	211	LR	LR	03 05 35.3	
	comp=Z,38nm,19.4s,baz=19,slow=36						
MKAR	Makanchi Array	44.92	304	P	P	02 47 41.7	+1.1
	0.4nm,0.8s,baz=83,slow=10,SNR=4.2						
	0.4nm,0.8s						
ILAR	Eielson Array	51.91	31	P	P	02 48 38.1	+4.1
	0.2nm,0.6s,baz=262,slow=6.3,SNR=1.3						
	0.2nm,0.6s						
WRA	Warramunga Arr	54.55	187	P	P	02 48 53.3	-0.5
	0.2nm,0.6s,baz=3.0,slow=7.6,SNR=1.9						
	0.2nm,0.6s						
PALK	Pallekele	61.23	258	LR	LR	03 15 36.1	
	comp=Z,76nm,21.8s,baz=163,slow=36						

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*BGR **09** 02:50:17.5, 46°.07N×152°.94E, h33^{km}, mb4.9, Ms3.9*

*BJI **09** 02:50:31.7±0.0, 45°.51N×148°.11E, h140^{km}, mb5.1/55, mB5.0/29*

*SKHL **09** 02:50:33.5±0.3, 45°.20N×148°.30E, h141^{km}±6^{km}, mb5.5/12, mbv5.2/2, msh5.6/4, msha6.2/7*

*MOS **09** 02:50:33.7±1.1, 45°.34N×147°.98E, h151^{km}, mb4.7/42, Error ellipse: s-maj=5.9km s-min=4.6km az=103.5*

*NEIC **09** 02:50:34.7±1.2, 45°.37N±0°.07×147°.9E±0°.1, h136^{km}±5^{km}, mb4.7/202, Error ellipse: s-maj=12.0km s-min=10.1km az=121.0*

*NIED **09** 02:50:34.5, 44°.97N×148°.20E, h164^{km}, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.44; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$0.51; $M_{r\theta}$0.83; $M_{\theta\phi}$0.21; $M_{\phi r}$-1.13; Fault plane solution: $M_0$1.48000×10^{16} NP1: ϕ_s330.00000°, δ84.00000°, λ-105.00000°. NP2: ϕ_s216.00000°, δ16.00000°, λ-24.00000°.*

*JMA **09** 02:50:34.5±0.5, 45°N±2°×14°8E±°, h164^{km}, MD4.7/38, MW5.0/38, NEAR ETOROFU ISLAND*

*IDC **09** 02:50:35.5±0.4, 45°.56N×147°.90E, h147^{km}±2^{km}, mb4.1/36, mbtmp4.6/46, MS3.6/33, Error ellipse: s-maj=9.2km s-min=6.3km az=154.0*

*GCMT **09** 02:50:37.7±0.3, 45°.40N±0°.02×148°.03E±0°.02, h145^{km}±3^{km}, MW5.0/115, Moment Tensor Solution. s28,c30; s115,c167; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.91±.13; $M_{\theta\theta}$1.44±.21; $M_{\phi\phi}$-0.53±.20; $M_{r\theta}$-2.36±.10; $M_{\theta\phi}$0.15±.19; $M_{\phi r}$-3.21±.10; Best double couple: $M_0$4.15800×10^{16} NP1: ϕ_s40.00000°, δ85.00000°, λ-104.00000°. NP2: ϕ_s291.00000°, δ15.00000°, λ-19.00000°. Principal axes: T 3.8990, Plg38.0000°, Azm143.0000°; N 0.5130, Plg14.0000°, Azm41.0000°; P -4.4170, Plg48.0000°, Azm295.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 02:50:34.6±0.3**, 45°.37N**±0°.03×**148°.07E**±0°.04**, h145**^{km}±2^{km}**, h144**^{km}**:pP-P, n628,** σ**$1^{s}.41$**/670**, mb4.7**/210**, 39C-22D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.20	227	⇓*i*PN	Pn	02 50 52.7	-1.4
KUR				*e*S	Sn	02 51 07.7	-1.3
KUR				pmax	pmax		
	comp=Z,9µm,0.5s						
KUR				pmax	pmax		
	comp=N,2µm,0.3s						
KUR				pmax	pmax		
	comp=E,2µm,0.3s						
KUR				smax	smax		
	comp=E,11µm,1.3s						
KUR				smax	smax		
	comp=N,6µm,1.1s						
KUR				smax	smax		
	comp=E,170µm,2.0s						
KUR				smax	smax		
	comp=N,86µm,2.1s						
KUR	Kuril'sk	0.20	227	*i* P	Pn	02 50 52.9	-1.2
KUR				AMB	AMB	02 50 56.5	
	comp=N,2µm,0.5s						
KUR				AMB	AMB	02 50 56.5	
	comp=N,2µm,0.5s						
KUR				AMB	AMB	02 50 56.5	
	comp=N,9µm,0.5s						
KUR				*e*S	Sn	02 51 07.7	-1.3
KUR				A	A	02 51 08.9	
	comp=N,86µm,2.1s						
KUR				A	A	02 51 08.9	
	comp=N,170µm,2.1s						
KUR				A	A	02 51 09.0	
	comp=N,4µm,0.5s						
KUR				A	A	02 51 09.0	
	comp=N,9µm,0.5s						
SHO	Shikotan	1.74	211	*d* *i*PN	Pn	02 51 04.0	-2.3
SHO				*e*S	Sn	02 51 26.3	-4.3
SHO				pmax	pmax		
	comp=N,326nm,0.2s						
SHO				pmax	pmax		
	comp=E,304nm,0.2s						
SHO				pmax	pmax		
	comp=Z,601nm,0.2s						
SHO				smax	smax		
	comp=E,568nm,0.5s						
SHO				smax	smax		
	comp=N,4µm,0.2s						
SHO	Shikotan	1.74	211	*i* P	Pn	02 51 04.0	-2.3
SHO				AMB	AMB	02 51 04.8	
	comp=N,600nm,0.2s						
SHO				*e*S	Sn	02 51 26.8	-3.8
SHO				A	A	02 51 27.4	
	comp=N,4µm,0.5s						
SHO				A	A	02 51 27.4	
	comp=N,570nm,0.5s						
YUK	Yuzh-Kuril'sk	2.06	231	*c* *i*PN	Pn	02 51 09.5	-0.6
YUK				*e*S	Sn	02 51 37.0	-0.3
YUK				pmax	pmax		
	comp=E,521nm,0.5s						
YUK				pmax	pmax		
	comp=Z,2µm,0.5s						
YUK				pmax	pmax		
	comp=N,617nm,0.3s						
YUK				smax	smax		
	comp=N,2µm,0.2s						
YUK				smax	smax		
	comp=E,4µm,0.3s						
YUK	Yuzh-Kuril'sk	2.06	231	*i* P	Pn	02 51 09.5	-0.6
YUK				AMB	AMB	02 51 17.7	
	comp=E,2µm,0.5s						
YUK				*e*S	Sn	02 51 36.3	-1.0
YUK				A	A	02 51 42.0	
	comp=E,10µm,2.0s						
YUK				A	A	02 51 42.0	
	comp=E,11µm,2.0s						
YUK				A	A	02 51 43.2	
	comp=E,2µm,0.3s						
YUK				A	A	02 51 43.2	
	comp=E,4µm,0.3s						
RUSJ	Misakicho	2.38	239	⇑*i*PN	Pn	02 51 13.4	-0.4
JRA	Rausu	2.54	237	*e*P	Pn	02 51 15.5	-0.4
JRA	Rausu	2.54	237	A	A	02 51 15.5	
	comp=E,4.0nm,3.1s,comp=E,4.0nm,2.9s						
NEM2	Nemuro 2	2.61	221	*e*P	Pn	02 51 14.6	-2.1
NEM2				*e*S	Sn	02 51 45.1	-4.1
NMR	Nemuro--Hokkai	2.61	221	⇓*i*PN	Pn	02 51 14.6	-2.2
NMR				*i* S	Sn	02 51 45.1	-4.1
NMR	Nemuro--Hokkai	2.61	221	*i* P	Pn	02 51 14.8	-2.0
NMR				*i* S	Sn	02 51 45.3	-3.9
JNSB	Nemuroshibetsu	2.71	235	*e*P	Pn	02 51 18.1	+0.1
JNSB	Nemuroshibetsu	2.71	235	A	A	02 51 18.1	
	comp=E,7.0nm,3.4s,comp=E,11nm,2.6s						
JNK	Nakash	2.99	235	*e*P	Pn	02 51 21.2	-0.3
JNK				*e*S	Sn	02 51 58.2	+0.4
JKHN	Kushirohamanak	3.10	223	*e*P	Pn	02 51 21.2	-1.7
JKHN				*e*S	Sn	02 51 56.6	-3.7
JTKR	Abashiri--Toko	3.28	246	*e*P	Pn	02 51 25.2	-0.1
JTKR				*e*S	Sn	02 52 04.8	+0.3
JTKR	Abashiri--Toko	3.28	246	A	A	02 51 25.2	
	comp=E,2.0nm,2.2s,comp=E,3.0nm,2.1s						
AKK	Akkeshi	3.30	226	*e*P	Pn	02 51 23.6	-2.0
JAK	Akkeshi	3.39	227	*e*P	Pn	02 51 25.1	-1.6
JAK				*e*S	Sn	02 52 03.7	-3.4
JAK	Akkeshi	3.39	227	A	A	02 51 25.1	
	comp=E,4.0nm,2.8s,comp=E,4.0nm,5.3s						
JMP	Maruseppu	3.62	250	A	A	02 51 30.4	
	comp=E,3.0nm,2.4s,comp=E,6.0nm,2.1s						
JAR	Ashorobuto	3.72	238	*e*P	Pn	02 51 31.1	+0.2
JAR				*e*S	Sn	02 52 14.5	-0.1
JAR	Ashorobuto	3.72	238	A	A	02 51 31.1	
	comp=E,4.0nm,2.3s,comp=E,5.0nm,1.9s						
JSE	Soyaes	3.90	266	*e*P	Pn	02 51 34.2	+0.9
JSE				*e*S	Sn	02 52 19.4	+0.5
YSS	Yuzh-Sakhalins	4.02	295	Pn	Pn	02 51 34.5	-0.3
YSS				Sn	Sn	02 52 22.8	+1.2
YSS	Yuzh-Sakhalins	4.02	295	α*e*PN	Pn	02 51 36.0	+1.2
YSS				*e*S	Sn	02 52 20.7	-1.0
YSS				pmax	pmax		
	comp=Z,310nm,0.8s						
YSS				smax	smax		
	comp=N,320nm,1.0s						
YSS				smax	smax		
	comp=E,630nm,1.3s						
YSS				smax	smax		
	comp=N,2µm,2.8s						
YSS				smax	smax		
	comp=E,4µm,2.7s						
YSS				MLR	MLR		
	comp=Z,900nm,17.0s						
YSS	Yuzh-Sakhalins	4.02	295	*e*P	Pn	02 51 36.2	+1.4
YSS				AMB	AMB	02 51 42.8	
	comp=Z,290nm,0.7s						
YSS				*e*S	Sn	02 52 23.6	+1.9
YSS				A	A	02 52 27.5	
	comp=Z,390nm,0.8s						
YSS				A	A	02 52 27.5	
	comp=Z,220nm,0.8s						
YSS				A	A	02 52 28.3	
	comp=Z,2µm,2.8s						
YSS				A	A	02 52 28.3	
	comp=Z,4µm,2.8s						
YSS				AMS	AMS	02 54 01.0	
	comp=Z,900nm,17.0s						
JKK2	Kamakawa 2	4.08	250	*e*P	Pn	02 51 36.5	+0.8
JKK2				*e*S	Sn	02 52 24.9	+1.7
JKA	Kamikawa-asahi	4.09	254	Pn	Pn	02 51 36.2	+0.4
ASAJ	Asahikawa	4.10	254	P	Pn	02 51 36.6	+0.7
	comp=Z,229nm,0.7s,baz=81,slow=14,SNR=175						
ASAJ				S	Sn	02 52 25.6	+2.1
	comp=Z,69nm,0.4s,baz=333,slow=28,SNR=7.2						
JWK2	Keihoku	4.35	272	*e*S	Sn	02 52 34.6	+5.1
JWK2	Keihoku	4.35	272	A	A	02 52 34.6	
	comp=Z,9.0nm,3.6s,comp=Z,5.0nm,5.3s						
JCH	Churui	4.37	233	*e*P	Pn	02 51 38.3	-1.2
JCH				*e*S	Sn	02 52 25.3	-4.8
JCH	Churui	4.37	233	A	A	02 51 38.3	
	comp=Z,4.0nm,2.3s,comp=Z,2.0nm,1.5s						
JSS	Shosan	4.52	260	A	A	02 51 43.0	
	comp=Z,6.0nm,4.0s,comp=Z,3.0nm,3.9s						
JAB	Ashibetsu	4.58	248	A	A	02 51 42.7	
	comp=Z,4.0nm,3.7s,comp=Z,4.0nm,2.5s						
JRR	Rishiri	4.78	270	A	A	02 51 47.3	
	comp=Z,13nm,4.5s,comp=Z,13nm,3.2s						
JHR	Hokuryu	4.82	253	*e*P	Pn	02 51 46.7	+1.3
ERM	Erimo	4.89	228	Pn	Pn	02 51 45.2	-1.2
ERM	Erimo	4.89	228	*c* *e*PN	Pn	02 51 45.4	-1.0
ERM				pmax	pmax		
	comp=Z,289nm,0.6s						
JNBK	Urakawa-nobuka	4.93	233	*e*P	Pn	02 51 44.8	-2.2
JNBK				*e*S	Sn	02 52 38.4	-4.9
JNBK	Urakawa-nobuka	4.93	233	A	A	02 51 44.8	
	comp=Z,3.0nm,2.9s,comp=Z,3.0nm,2.6s						
JRBN	Rebuntou	4.94	273	*e*P	Pn	02 51 49.1	+2.2
JEW	Eniwo	5.40	244	*e*P	Pn	02 51 53.9	+0.8
UGL	Uglegorsk	5.52	314	*e*PN	Pn	02 51 56.4	+1.7
UGL				*e*S	Sn	02 53 02.1	+4.8
UGL				pmax	pmax		
	comp=Z,349nm,0.8s						
UGL				smax	smax		
	comp=E,6µm,3.6s						
UGL				smax	smax		
	comp=N,6µm,4.3s						
UGL				smax	smax		
	comp=Z,5µm,4.2s						
UGL	Uglegorsk	5.52	314	*e*P	Pn	02 51 56.7	+2.0
UGL				AMB	AMB	02 52 07.0	
	comp=Z,350nm,0.8s						
UGL				*e*S	Sn	02 52 59.8	+2.5
UGL				A	A	02 53 06.0	
	comp=Z,6µm,4.0s						
UGL				A	A	02 53 06.0	
	comp=Z,6µm,4.0s						
JAHD	Aomorihigashid	6.40	232	A	A	02 52 05.2	
	comp=Z,5.0nm,0.5s,comp=Z,4.0nm,0.5s						
JOT	Ohata	6.48	235	*e*P	Pn	02 52 04.6	-3.0
JOT				*e*S	Sn	02 53 11.4	-9.1
TYV	Tymovskoe	6.58	329	*e*PN	Pn	02 52 10.4	+1.5
TYV				*e*S	Sn	02 53 23.1	+0.4
TYV				pmax	pmax		
	comp=Z,300nm,2.3s						
TYV				pmax	pmax		
	comp=Z,64nm,0.8s						
TYV				smax	smax		
	comp=N,40nm,1.3s						
TYV				smax	smax		
	comp=E,39nm,1.3s						
TYV				smax	smax		
	comp=N,300nm,3.5s						
TYV				smax	smax		
	comp=E,500nm,3.5s						
TYV	Tymovskoe	6.58	329	*e*P	Pn	02 52 10.7	+1.8
TYV				AMB	AMB	02 52 11.1	
	comp=E,300nm,2.3s						

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TYV                                AMB    AMB    02 52 15.1
      comp=E,60nm,0.8s
TYV                               eS      Sn     02 53 25.7 +3.0
TYV                                A      A      02 53 30.8
      comp=E,300nm,3.5s
TYV                                A      A      02 53 30.8
      comp=E,500nm,3.5s
JTM    Tenmabayashi     6.87 231   Pn     Pn     02 52 09.4  -3.4
JANG   Nango            6.93 226  eP      Pn     02 52 09.2  -4.5
JANG                              eS      Sn     02 53 20.5   -11
JOSM   Okushiri--Mats   7.04 245  eP      Pn     02 52 14.0  -1.1
JOSM                              eS      Sn     02 53 30.5  -3.3
SKR    Severo-Kuril's   7.57  43  ePN     Pn     02 52 22.0  -0.1
SKR                               eS      Sn     02 53 48.0 +1.6
SKR                                pmax   pmax
      comp=Z,229nm,0.6s
SKR                                smax   smax
      comp=E,265nm,0.9s
SKR                                smax   smax
      comp=N,209nm,0.5s
SKR    Severo-Kuril's   7.57  43  eP      Pn     02 52 21.6  -0.5
SKR                                AMB    AMB    02 52 23.6
      comp=N,230nm,0.6s
SKR                               eS      Sn     02 53 44.1  -2.3
SKR                                A      A      02 53 51.8
      comp=N,210nm,0.7s
SKR                                A      A      02 53 51.8
      comp=N,270nm,0.7s
TEY    Ternei           8.11 272⇑ePN     Pn     02 52 30.9 +1.6
TEY                               e              02 54 01.0
TEY                                pmax   pmax
      comp=E,130nm,1.0s
TEY                                pmax   pmax
      comp=Z,120nm,1.1s
TEY                                pmax   pmax
      comp=E,300nm,2.4s
TEY                                pmax   pmax
      comp=Z,200nm,3.0s
TEY    Ternei           8.11 272  eP      Pn     02 52 30.6 +1.3
TEY                                AMB    AMB    02 52 31.7
      comp=Z,130nm,0.8s
TEY                                AMB    AMB    02 52 31.7
      comp=Z,120nm,0.8s
TEY                                AMB    AMB    02 52 32.0
      comp=Z,200nm,2.7s
TEY                               eS      Sn     02 53 58.3  -1.1
JMK    Ichinoseki       8.18 221  eP      Pn     02 52 26.1  -4.2
JMK                               eS      Sn     02 53 51.9  -9.4
PAU    Pauzhetka        8.42  40  eP      Pn     02 52 33.5   0.0
PAU                               eS      Sn     02 54 04.5  -2.5
PAU                                A      A      02 54 09.1
      comp=Z,80nm,0.2s
PAU                                A      A      02 54 09.1
      comp=Z,80nm,0.2s
OKH    Okha             8.84 340dePN     Pn     02 52 51.1   +12
OKH                                MLR    MLR
      comp=N,300nm,15.0s
OKH                                MLR    MLR
      comp=Z,200nm,13.0s
OKH    Okha             8.84 340  eP      Pn     02 52 41.3 +2.3
OKH                                AMB    AMB    02 52 43.5
      comp=Z,100nm,0.7s
OKH                               eS      Sn     02 54 18.6 +1.6
OKH                                AMS    AMS    02 57 09.2
      comp=Z,200nm,13.0s
JMM    Marumori         9.26 219          Pn     02 52 40.7  -4.1
KHBR   Khabarovsk       9.43 294  eP      Pn     02 52 48.2 +1.3
GRNR   Gornyy           9.48 309⇑iPN     Pn     02 52 47.9 +0.3
GRNR                              eS      Sn     02 54 35.0 +2.4
GRNR                               pmax   pmax
      comp=N,4.0nm,0.3s
GRNR                               pmax   pmax
      comp=E,8.0nm,0.3s
GRNR                               pmax   pmax
      comp=Z,3.0nm,0.4s
GRNR                               smax   smax
      comp=N,1.0nm,0.3s
GRNR                               MLR    MLR
      comp=E,230nm,17.0s
GRNR                               MLR    MLR
      comp=N,180nm,13.0s
GRNR                               MLR    MLR
      comp=Z,200nm,15.0s
GRNR   Gornyy           9.48 309  eP      Pn     02 52 49.3 +1.7
GRNR                               AMB    AMB    02 52 49.9
      comp=Z,10.0nm,0.4s
GRNR                               AMB    AMB    02 52 49.9
      comp=Z,10.0nm,0.4s
GRNR                              eS      Sn     02 54 32.0  -0.6
GRNR                               AMS    AMS    02 58 13.7
      comp=Z,200nm,16.0s
GRNR                               AMS    AMS    02 58 13.7
      comp=Z,200nm,16.0s
GRNR                               AMS    AMS    02 58 13.7
      comp=Z,200nm,16.0s
PEA0B  Petropavlovsk-   9.97  36ceePN    Pn     02 52 54.7 +0.6
PETK   Petropavlovsk-   9.97  36   P      Pn     02 52 54.1   0.0
      comp=Z,11nm,0.8s,baz=193,slow=14,SNR=28
PET    Petropavlovsk   10.32  38  eS      Sn     02 54 48.8  -3.8
PET                                AMS    AMS    02 57 32.0
      comp=Z,300nm,17.0s
GRTR   Gornotajezhnoj  11.48 267  eP      Pn     02 53 13.9  -0.2
GRTR                               AMB    AMB    02 53 14.8
      comp=Z,30nm,0.8s
USA0B  Ussuriysk Arra  11.49 270          Pn     02 53 13.3  -1.0
USA0B  Ussuriysk Arra  11.49 270   PN     Pn     02 53 13.3  -1.0
USRK   Ussuriysk Ar.   11.49 270   P      Pn     02 53 13.9  -0.4
      comp=Z,53nm,0.8s,baz=87,slow=12,SNR=58
USRK                               LR     LR     02 57 44.2
      comp=Z,240nm,20.3s,baz=80,slow=38
USRK   Ussuriysk Ar.   11.49 270   Pn     Pn     02 53 13.6  -0.6
MJAR   Matsushiro Arr  11.54 224   P      Pn     02 53 17.0 +2.1
      comp=Z,3.3nm,0.4s,baz=18,slow=12,SNR=7.4
MJAR                               LR     LR     02 58 49.0
      comp=Z,80nm,18.9s,baz=58,slow=42
MJB9   Matsu-Tunnel    11.54 224   Pn     Pn     02 53 14.0  -0.9
MAJO   Matsushiro      11.54 224   Pn     Pn     02 53 14.0  -0.9
MAJO   Matsushiro      11.54 224   PN     Pn     02 53 14.0  -0.9
KLR    Kul'dur         11.73 295   P      Pn     02 53 16.5  -0.8
      comp=Z,32nm,1.0s,baz=102,slow=15,SNR=50
KLR                                LR     LR     02 57 24.4
      comp=Z,455nm,21.5s,baz=120,slow=35
KLR                                ScP    ScP    03 02 13.8 +1.6
      comp=Z,2.1nm,0.8s,baz=49,slow=4.3,SNR=5.1
KLR    Kul'dur         11.73 295ceePN    Pn     02 53 18.9 +1.6
KLR                                pmax   pmax
      comp=Z,92nm,1.7s
KLR    Kul'dur         11.73 295  eP      Pn     02 53 18.9 +1.6
INU    Inuyama         13.07 224   P      Pn     02 53 34.6  -0.1
MDJ    Mudanjiang      13.11 273   Pn     Pn     02 53 33.6  -1.6
MA2    Magadan         14.32   6   P      Pn     02 53 50.1  -0.4
      comp=Z,36nm,0.8s,baz=169,slow=7.3,SNR=17
MA2                                LR     LR     02 59 06.2
      comp=Z,102nm,19.5s,baz=162,slow=36
MA2    Magadan         14.32   6   Pn     Pn     02 53 50.8 +0.4
MA2    Magadan         14.32   6ceeP      P      02 53 52.4  -0.9
MA2                                pmax   pmax
      comp=Z,54nm,0.9s
MA2    Magadan         14.32   6  eP      P      02 53 52.4  -0.9
BNX    BinXian         14.48 279 ⇑P      Pn     02 53 52.5  -0.1
BNX                                sP     sPn    02 54 29.6 +0.3
BNX                                S      Sn     02 56 29.5  -3.6
BNX                                pmax   pmax
      comp=Z,18nm,1.3s
BNX                                pmax   pmax
      comp=Z,220nm,4.0s
BNX                                LR     LR
      comp=Z,290nm,7.1s
BNX                                LR     LR
      comp=Z,200nm,5.7s
BNX                                LR     LR
      comp=Z,220nm,10.2s
HEH    HeiHe           14.70 297  eP      Pn     02 53 55.3   0.0
HEH                                sP     sPn    02 54 31.4  -1.0
HEH                                S      Sn     02 56 39.7 +1.6
HEH                                ScS    ScS    03 05 53.8  -0.8
HEH                                pmax   pmax
      comp=Z,110nm,0.9s
HEH                                pmax   pmax
      comp=Z,650nm,6.0s
ZEA    Zeya            15.85 309deP      P      02 54 10.3   0.0
ZEA                                pmax   pmax
      comp=E,40nm,1.0s
ZEA                                pmax   pmax
      comp=N,50nm,0.9s
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ZEA                                pmax   pmax
      comp=Z,80nm,0.9s
ZEA    Zeya            15.85 309  eP      Pn     02 54 09.8 +0.3
ZEA                                AMB    AMB    02 54 11.1
      comp=Z,50nm,0.9s
ZEA                                AMB    AMB    02 54 11.1
      comp=Z,40nm,0.9s
ZEA                                AMB    AMB    02 54 11.1
      comp=Z,80nm,0.9s
ZEA                                AMS    AMS    02 58 08.0
      comp=Z,300nm,12.0s
KSRS   Korea Array     17.03 249   P      P      02 54 22.6  -0.7
      comp=Z,26nm,0.8s,baz=58,slow=12,SNR=33
KSRS                               LR     LR     03 00 12.1
      comp=Z,98nm,19.0s,baz=55,slow=34
KSRS                               ScP    ScP    03 02 23.7 +2.1
      comp=Z,2.5nm,0.9s,baz=48,slow=1.9,SNR=6.0
KS19   Wonju Array Si  17.04 250   P      P      02 54 22.4  -1.2
KS19                               IAmb   IAmb   02 54 26.5
      comp=Z,47nm,1.0s
KSAR   Wonju Array Be  17.06 249   P      P      02 54 21.7  -2.1
KSAR   Wonju Array Be  17.06 249   P      P      02 54 21.7  -2.1
SEY    Seymchan        17.77   6   P      P      02 54 31.1  -0.3
      comp=Z,10nm,0.7s,baz=191,slow=9.0,SNR=25
SEY    Seymchan        17.77   6ceeP      Pn     02 54 33.2 +0.6
SEY                                pmax   pmax
      comp=Z,46nm,1.7s
SEY    Seymchan        17.77   6  eP      Pn     02 54 33.2 +0.6
INCN   Inchon          17.87 251   P      P      02 54 32.1  -0.6
INCN   Inchon          17.87 251   P      P      02 54 32.1  -0.6
INCN                               pmax   pmax
      comp=Z,81nm,0.9s
INCN   Inchon          17.87 251   P      P      02 54 31.1  -1.6
INCN   Inchon          17.87 251  eP      P      02 54 32.1  -0.6
JNU    Nakatsue        18.03 233   P      Pn     02 54 36.9 +0.9
      comp=Z,50nm,0.9s,baz=40,slow=7.6,SNR=14
JNU    Nakatsue        18.03 233          P      02 54 34.2  -0.3
SNY    Shenyang        18.07 267 ⇓P      P      02 54 35.0 +0.2
SNY                                pmax   pmax
      comp=Z,110nm,1.0s
SHEM   Shemya Is, Ala  18.51  57   LR     LR     03 03 31.3
      comp=Z,83nm,18.9s,baz=81,slow=42
HIA    Hailar          19.54 292   P      P      02 54 47.5  -3.2
HIA                                IAmb   IAmb   02 55 21.4
      comp=Z,40nm,1.2s
HIA    Hailar          19.54 292   P      P      02 54 47.6  -3.2
HIA                                pmax   pmax
      comp=Z,40nm,1.2s
YAK    Yakutsk         19.80 334   P      P      02 54 51.8  -1.5
      comp=Z,38nm,0.6s,baz=142,slow=1.8,SNR=15
YAK                                LR     LR     03 03 15.3
      comp=Z,140nm,18.8s,baz=94,slow=39
YAK    Yakutsk         19.80 334   P      P      02 54 52.0  -1.4
YAK    Yakutsk         19.80 334  eP      P      02 54 52.4  -1.0
YAK                               eS      S      02 58 25.7  -2.5
YAK                                pmax   pmax
      comp=Z,119nm,1.0s
YAK                                pmax   pmax
      comp=N,28nm,2.2s
YAK                                pmax   pmax
      comp=E,36nm,1.4s
YAK                                smax   smax
      comp=E,251nm,3.0s
YAK                                smax   smax
      comp=N,132nm,2.6s
DL2    Dalian          20.59 261 ⇑P      P      02 55 02.3 +0.3
DL2                                pmax   pmax
      comp=N,90nm,1.0s
XLT    XiLinHaoTe      22.74 278⇓iP      P      02 55 23.8  -0.5
XLT                                pmax   pmax
      comp=N,62nm,1.1s
XLT                                pmax   pmax
      comp=N,300nm,7.6s
BJI    Beijing         23.94 269   P      P      02 55 35.4 +0.2
BJT    Baijiatuau      23.95 268   P      P      02 55 34.9  -0.4
BJT                                IAmb   IAmb   02 55 36.1
      comp=Z,30nm,1.0s
BJT    Baijiatuau      23.95 268   P      P      02 55 34.9  -0.4
BJT                                pmax   pmax
      comp=Z,30nm,1.0s
BOD    Bodaibo         24.26 313  eP      P      02 55 34.4  -3.5
BOD                                pmax   pmax
      comp=Z,136nm,1.6s
JOW    Kunigami        24.34 227   P      P      02 55 39.8 +0.8
      comp=Z,30nm,0.5s,baz=18,slow=9.8,SNR=7.6
      comp=Z,30nm,0.5s
JOW    Kunigami        24.34 227   P      P      02 55 38.6  -0.4
BILL   Bilibino        24.62  16   P      P      02 55 39.6  -1.5
BILL                               IAmb   IAmb   02 55 42.4
      comp=Z,28nm,1.4s
BILL   Bilibino        24.62  16⇓eP      P      02 55 39.5  -1.6
BILL                              eS      S      02 59 52.4 +1.0
BILL                               pmax   pmax
      comp=Z,21nm,1.3s
TIA    Tai'an          25.02 259 ⇓P      P      02 55 45.4 +0.3
TIA                                pmax   pmax
      comp=Z,38nm,1.2s
HNS    HongShan        26.12 264 ⇓P      P      02 55 55.5 +0.6
HNS                                pP     pwP    02 56 29.1 +1.1
HNS                                PcP    PcP    02 59 20.4 +2.0
HNS                                ScP    ScP    03 02 47.6 +3.2
HNS                                pmax   pmax
      comp=Z,61nm,1.3s
TIY    Taiyuan         27.57 267   P      P      02 56 09.6 +1.6
TIY                                sS     sS     03 01 34.6 +2.1
TIY                                pmax   pmax
      comp=Z,36nm,0.5s
TIXI   Tiksi           27.92 347   P      P      02 56 07.8  -2.8
      comp=Z,2.7nm,0.4s,baz=270,slow=24,SNR=12
TIXI                               pP     pP     02 56 41.9 +1.8
      comp=Z,3.7nm,0.8s,baz=270,slow=23,SNR=2.4
TIXI                               ScP    ScP    03 02 48.8  -0.4
      comp=Z,1.4nm,0.4s,baz=90,slow=23,SNR=7.8
      comp=Z,2.7nm,0.4s
TIXI   Tiksi           27.92 347   P      P      02 56 07.7  -2.8
TIXI   Tiksi           27.92 347 i P      P      02 56 07.5  -3.1
TIXI                               pmax   pmax
      comp=Z,6.0nm,0.9s
ULN    Ulaanbaatar     28.05 290   P      P      02 56 11.3  -1.0
ULN                                IAmb   IAmb   02 56 48.2
      comp=Z,23nm,1.3s
ULN    Ulaanbaatar     28.05 290   P      P      02 56 11.3  -1.0
ULN                                pmax   pmax
      comp=Z,23nm,1.3s
ULN    Ulaanbaatar     28.05 290   P      P      02 56 12.2  -0.1
ULN    Ulaanbaatar     28.05 290  eP      P      02 56 11.3  -1.0
BTO    Baotou          28.06 274⇑iP      P      02 56 13.6 +1.3
BTO                                pP     pP     02 56 39.6  -2.3
BTO                                sP     sP     02 56 56.6  -1.6
BTO                                S      S      03 00 46.2  -0.1
BTO                                pmax   pmax
      comp=Z,97nm,1.3s
BTO                                pmax   pmax
      comp=Z,1µm,4.1s
BTO                                LR     LR
      comp=Z,1µm,6.9s
BTO                                LR     LR
      comp=Z,610nm,8.8s
SONM   Songino Array   28.49 290   P      P      02 56 13.9  -2.3
      comp=Z,2.0nm,0.4s,baz=72,slow=7.0,SNR=15
SONM                               pP     pP     02 56 47.5 +1.8
      comp=Z,7.1nm,1.0s,baz=81,slow=8.2,SNR=5.4
SONM                               PcP    PcP    02 59 24.7 +0.5
      comp=Z,1.6nm,0.7s,baz=70,slow=4.8,SNR=3.3
SONM                               ScP    ScP    03 02 52.9 +1.3
      comp=Z,2.3nm,1.0s,baz=79,slow=3.1,SNR=7.7
SONM                               LR     LR     03 07 57.9
      comp=Z,162nm,20.7s,baz=76,slow=37
      comp=Z,2.0nm,0.4s
SONM   Songino Array   28.49 290   P      P      02 56 17.2 +1.0
SONM                               IAmb   IAmb   02 56 51.6
      comp=Z,20nm,1.3s
SONM   Songino Array   28.49 290   P      P      02 56 17.2 +1.0
SONM                               pmax   pmax
      comp=Z,20nm,1.3s
LYN    LuoYang         29.13 261 ⇓P      P      02 56 22.5 +0.7
LYN                                pP     pwP    02 56 53.6  -1.7
LYN                                S      S      03 01 07.0 +4.0
LYN                                pmax   pmax
      comp=Z,29nm,1.2s
LYN                                pmax   pmax
      comp=Z,220nm,4.6s
H11N2  WAKE ISLAND Hy  29.94 142   T      T      03 27 44.0
      baz=333,slow=75,SNR=342
H11N1  WAKE ISLAND Hy  29.95 143   T      T      03 27 46.9
      baz=333,slow=75,SNR=347
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H11N3  WAKE ISLAND Hy  29.96 142   T      T      03 27 47.3
      baz=333,slow=75,SNR=426
WHN    Wuhan           30.18 252⇑iP      P      02 56 31.8 +0.8
WHN                                pmax   pmax
      comp=Z,110nm,0.6s
H11S1  WAKE ISLAND Hy  30.94 144   T      T      03 28 56.4
      baz=334,slow=76,SNR=234
H11S3  WAKE ISLAND Hy  30.95 144   T      T      03 28 59.5
      baz=334,slow=76,SNR=196
H11S2  WAKE ISLAND Hy  30.96 144   T      T      03 28 58.1
      baz=334,slow=76,SNR=153
TNA    Tin City        31.14  34   P      P      02 56 40.1 +1.0
TNA                                IAmb   IAmb   02 56 40.9
      comp=Z,16nm,0.9s
TPUB   Ta-pu           31.33 235   P      P      02 56 42.4 +1.1
XAN    Xi'an           31.88 263   P      P      02 56 46.2 +0.2
XAN                                pP     pwP    02 57 19.1  -0.5
XAN                                pmax   pmax
      comp=Z,50nm,1.1s
XAN                                pmax   pmax
      comp=Z,150nm,4.8s
ANM    Nome            31.89  36   P      P      02 56 47.3 +1.6
ANM                                IAmb   IAmb   02 57 01.9
      comp=Z,13nm,1.4s
ANM    Nome            31.89  36   P      P      02 56 47.3 +1.6
ANM                                pmax   pmax
      comp=Z,13nm,1.4s
ENH    Enshi           33.65 257   P      P      02 57 00.8  -0.6
RDOG   Red Dog Mine    33.80  31   IAmb   IAmb   02 57 03.4
      comp=Z,20nm,1.2s
LZH    Lanzhou         34.40 270 ⇓P      P      02 57 09.0 +1.0
LZH                                pmax   pmax
      comp=Z,110nm,1.3s
GTA    Gaotai          35.70 278 ⇓P      P      02 57 19.6 +0.5
GTA                                pP     pwP    02 57 54.0 +0.4
GTA                                sP     sP     02 58 06.0 +0.6
GTA                                PcP    PcP    02 59 45.5 +1.5
GTA                                ScP    ScP    03 03 18.3 +2.0
GTA                                pmax   pmax
      comp=Z,34nm,1.2s
TTA    Tatalina        35.77  40   P      P      02 57 20.1 +0.8
TTA    Tatalina        35.77  40   P      P      02 57 20.1 +0.8
TTA                                pmax   pmax
      comp=Z,5.0nm,0.9s
K20K   Telida          36.66  40   IAmb   IAmb   02 57 33.8
      comp=Z,16nm,1.4s
CD2    Chengdu         37.24 263   P      P      02 57 32.4 +0.3
CD2                                pmax   pmax
      comp=Z,170nm,0.8s
H21K   Melozitna Rive  37.30  36   IAmb   IAmb   02 57 34.2
      comp=Z,12nm,0.8s
PPLA   Purkeypile      37.51  41   P      P      02 57 35.4 +1.3
PPLA                               IAmb   IAmb   02 57 38.4
      comp=Z,30nm,1.3s
CAST   Castle Rocks    37.56  40   IAmb   IAmb   02 58 10.5
      comp=Z,9.6nm,0.9s
I21K   Tanana          37.63  37   IAmb   IAmb   02 57 37.3
      comp=Z,21nm,1.3s
KDAK   Kodiak Island   37.68  49   P      P      02 57 35.4   0.0
      comp=Z,14nm,1.1s,baz=282,slow=13,SNR=16
      comp=Z,14nm,1.1s
MLY    Manley          38.15  37   P      P      02 57 41.0 +1.7
MLY                                IAmb   IAmb   02 57 41.8
      comp=Z,19nm,1.4s
NRIK   Noril'sk        38.16 330   P      P      02 57 37.4  -2.0
      comp=Z,1.6nm,0.5s,baz=125,slow=6.9,SNR=6.2
NRIK                               pP     pP     02 58 11.9 +2.1
      comp=Z,6.7nm,0.9s,baz=111,slow=5.3,SNR=4.2
NRIK                               PcP    PcP    02 59 51.6 +0.8
      comp=Z,6.5nm,0.4s,baz=118,slow=2.6,SNR=7.2
NRIK                               ScP    ScP    03 03 25.4 +0.5
      comp=Z,5.3nm,0.9s,baz=149,slow=4.4,SNR=4.2
NRIK                               LR     LR     03 14 38.7
      comp=Z,126nm,19.1s,baz=171,slow=38
      comp=Z,1.6nm,0.5s
NRIK   Noril'sk        38.16 330ceP      P      02 57 37.3  -2.0
NRIK                               pmax   pmax
      comp=Z,10.0nm,1.3s
COLD   Coldfoot        38.44  33   IAmb   IAmb   02 57 46.7
      comp=Z,12nm,0.9s
H23K   Yukon River     38.66  36   IAmb   IAmb   02 57 46.1
      comp=Z,16nm,0.8s
I23K   Minto, Yukon-K  38.73  37   IAmb   IAmb   02 57 47.2
      comp=Z,19nm,1.2s
TOLK   Toolik Lake Re  38.76  31   IAmb   IAmb   02 57 45.3
      comp=Z,14nm,1.1s
NEA2   Nenana          38.87  38   IAmb   IAmb   02 58 21.1
      comp=Z,9.9nm,0.8s
MCK    McKinley        38.96  39   P      P      02 57 47.0 +0.9
MCK                                IAmb   IAmb   02 58 00.1
      comp=Z,14nm,1.2s
MCK    McKinley        38.96  39   P      P      02 57 47.0 +0.9
MCK                                pmax   pmax
      comp=Z,14nm,1.2s
MDM    Murphy Dome     39.22  37   IAmb   IAmb   02 57 50.5
      comp=Z,17nm,1.2s
WRH    Wood River Hil  39.29  38   IAmb   IAmb   02 57 56.8
      comp=Z,8.1nm,0.9s
H24K   Noodor Dome     39.34  36   IAmb   IAmb   02 57 51.9
      comp=Z,20nm,1.1s
SML    Sawmill         39.37  42   P      P      02 57 50.1 +0.6
TCOL   CIGO, UAF Yank  39.38  37   P      P      02 57 50.2 +0.8
TCOL                               pP     pP     02 58 19.8  -0.5
COLA   College         39.38  37   P      P      02 57 51.0 +1.5
COLA   College         39.38  37   P      P      02 57 51.0 +1.5
COLA                               pmax   pmax
      comp=Z,49nm,1.4s
POKR   Poker Plat Res  39.55  37   P      P      02 57 51.8 +0.8
POKR                               IAmb   IAmb   02 57 53.5
      comp=Z,25nm,1.1s
HDA    Harding Lake    39.79  38   IAmb   IAmb   02 57 57.8
      comp=Z,12nm,1.1s
IL31                   39.80  37   IAmb   IAmb   02 57 55.8
      comp=Z,19nm,1.2s
ILAR   Eielson Array   39.80  37   P      P      02 57 53.4 +0.4
      comp=Z,13nm,1.1s,baz=272,slow=6.6,SNR=50
ILAR                               pP     pwP    02 58 26.7  -1.0
      comp=Z,6.0nm,1.0s,baz=270,slow=8.0,SNR=4.6
ILAR                               ScP    ScP    03 03 31.6 +0.4
      comp=Z,0.9nm,1.0s,baz=265,slow=3.2,SNR=5.6
ILAR                               LR     LR     03 14 19.2
      comp=Z,54nm,20.4s,baz=254,slow=36
      comp=Z,13nm,1.1s
DGZ    Jazzator, Alta  40.20 299 i P      P      02 57 55.8  -0.9
DGZ                                pmax   pmax
      comp=Z,8.0nm,1.8s
PRP    Porcupine Dome  40.33  36   IAmb   IAmb   02 57 59.8
      comp=Z,18nm,1.0s
KLU    Klutina         40.55  42   P      P      02 58 00.2 +0.9
KLU                                IAmb   IAmb   02 58 35.0
      comp=Z,12nm,1.0s
ZALV   Zalesovo Beam   40.57 306   P      P      02 57 57.6  -1.8
      comp=Z,0.7nm,0.4s,baz=79,slow=7.5,SNR=4.8
ZALV                               pP     pP     02 58 32.1 +1.8
      comp=Z,2.7nm,0.8s,baz=69,slow=7.9,SNR=4.0
ZALV                               PcP    PcP    02 59 58.7   0.0
      comp=Z,10nm,0.6s,baz=75,slow=3.1,SNR=23
ZALV                               ScP    ScP    03 03 34.8 +0.4
      comp=Z,4.7nm,0.9s,baz=68,slow=4.0,SNR=12
ZALV                               LR     LR     03 14 47.2
      comp=Z,104nm,21.6s,baz=81,slow=36
      comp=Z,0.7nm,0.4s
ZALV   Zalesovo Beam   40.57 306 i P      P      02 58 00.9 +1.5
ZALV                               pmax   pmax
      comp=Z,1.0nm,0.3s
BMAR   Burnt Mountain  40.62  33   P      P      02 58 01.2 +1.5
GOMU   GeErMu          40.70 276   P      P      02 58 01.0  -0.2
GOMU                               pmax   pmax
      comp=Z,60nm,0.9s
GOMU                               pmax   pmax
      comp=Z,58nm,4.5s
SCRK   Sand Creek      41.12  38   P      P      02 58 04.3 +0.3
SCRK                               IAmb   IAmb   02 58 09.3
      comp=Z,13nm,1.1s
M26K   Nabesna, AK     41.78  41   IAmb   IAmb   02 58 46.0
      comp=Z,12nm,0.8s
L27K   Beaver Creek,   42.21  40   IAmb   IAmb   02 58 50.5
      comp=Z,8.9nm,0.9s
EGAK   Eagle           42.24  37   IAmb   IAmb   02 58 15.2
      comp=Z,28nm,1.2s
M27K   Edge Creek, AK  42.30  41   IAmb   IAmb   02 58 50.2
      comp=Z,11nm,0.9s
DAWY   Dawson          43.11  38   P      P      02 58 21.4 +1.3
I29M   Ogilvie Camp,   43.34  36   IAmb   IAmb   02 58 24.1
      comp=Z,22nm,0.9s
EPYK   Eagle Plains    43.81  34   IAmb   IAmb   02 58 27.9
      comp=Z,21nm,0.8s
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MK31	Makanchi Array	44.44	296	i P	P	02 58 29.1	-1.7
MKAR	Makanchi Array	44.44	296	P	P	02 58 29.3	-1.5
	comp=Z,6.5nm,0.9s,baz=71,slow=8.4,SNR=39						
MKAR				PcP	PcP	03 00 12.6	+0.7
	comp=Z,6.5nm,0.7s,baz=61,slow=4.0,SNR=12						
MKAR				ScP	ScP	03 03 50.0	-0.2
	comp=Z,1.2nm,0.7s,baz=46,slow=4.2,SNR=5.7						
MKAR				LR	LR	03 17 30.4	
	comp=Z,124nm,21.1s,baz=148,slow=36						
	comp=Z,6.5nm,0.9s						
MKAR	Makanchi Array	44.44	296	P	P	02 58 29.9	-1.0
MKAR	Makanchi Array	44.44	296	i P	P	02 58 29.7	-1.1
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TNCH	TengChong	44.49	260	P	P	02 58 32.4	+0.7
TNCH				pP	pP	02 59 01.3	-1.9
TNCH				PP	PP	03 00 21.0	+2.7
TNCH				S	S	03 04 55.5	-0.7
TNCH				sS	sS	03 05 50.4	-1.9
TNCH				SS	ScS	03 08 11.8	-2.9
TNCH				pmax	pmax		
	comp=Z,58nm,1.3s						
TNCH				pmax	pmax		
	comp=Z,170nm,4.1s						
MAKZ	Makanchi	44.63	297	P	P	02 58 32.1	-0.2
MAKZ	Makanchi	44.63	297	P	P	02 58 32.1	-0.2
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
INK	Inuvik	44.67	31	P	P	02 58 32.4	+0.1
	comp=Z,4.6nm,0.3s,baz=300,slow=9.5,SNR=128						
INK				pP	pP	02 59 05.0	+1.2
	comp=Z,7.9nm,1.1s,baz=262,slow=9.4,SNR=2.8						
	comp=Z,4.6nm,0.3s						
INK	Inuvik	44.67	31	IAmb	IAmb	02 58 34.0	
	comp=Z,27nm,1.4s						
HYT	Haines Junctio	44.68	42	P	P	02 58 35.1	+2.5
HYT				IAmb	IAmb	02 58 36.0	
	comp=Z,16nm,0.8s						
KURK	Kurchatov	45.19	303	P	P	02 58 35.4	-1.2
KURK				IAmb	IAmb	02 59 12.2	
	comp=Z,9.7nm,0.9s						
KURK	Kurchatov	45.19	303	P	P	02 58 35.4	-1.2
KURK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KURK	Kurchatov	45.19	303	P	P	02 58 34.8	-1.9
KURBB	Kurchatov Arra	45.27	303	P	P	02 58 35.7	-1.6
	comp=Z,6.5nm,0.8s,baz=68,slow=8.5,SNR=23						
KURBB				pP	pP	02 59 10.5	+1.8
	comp=Z,4.3nm,0.8s,baz=70,slow=8.2,SNR=2.9						
KURBB				PcP	PcP	03 00 14.6	+0.1
	comp=Z,7.3nm,0.7s,baz=71,slow=3.3,SNR=11						
KURBB				ScP	ScP	03 03 54.0	+0.5
	comp=Z,1.2nm,0.3s,baz=71,slow=3.4,SNR=9.2						
	comp=Z,6.5nm,0.8s						
CRAI	Chiangrai	46.42	253	P	P	02 58 47.0	+0.3
A36M	Sachs Harbour	46.62	25	IAmb	IAmb	02 58 48.7	
	comp=Z,12nm,0.8s						
P33M	Teslin, Yukon	47.08	42	P	P	02 58 52.9	+1.5
TDK	Taldyqorghan	47.65	296	eP	P	02 58 55.4	-0.6
	baz=296						
TDK	Taldyqorghan	47.65	296	eP	P	02 58 55.4	-0.6
SHLS	Shalkode	47.81	293	eP	P	02 58 54.6	-2.9
	baz=293						
SHLS	Shalkode	47.81	293	eP	P	02 58 54.5	-2.9
UZB	Uzynbulak	48.10	293	eP	P	02 58 59.0	-0.7
	baz=293						
UZB	Uzynbulak	48.10	293	eP	P	02 58 59.0	-0.7
KPKS	Kokpek	48.17	294	eP	P	02 58 59.6	-0.5
	baz=294						
KPKS	Kokpek	48.17	294	eP	P	02 58 59.6	-0.5
SATY	Saty	48.54	294	⇓iP	P	02 59 02.8	-0.2
	baz=294						
SATY	Saty	48.54	294	d iP	P	02 59 02.8	-0.2
CMAR	Chiang Mai Arr	48.62	253	P	P	02 59 03.6	-0.1
	comp=Z,11nm,0.9s,baz=25,slow=8.2,SNR=12						
CMAR				PcP	PcP	03 00 27.7	+0.7
	comp=Z,3.2nm,0.5s,baz=24,slow=1.1,SNR=2.1						
CMAR				ScP	ScP	03 04 08.8	+0.8
	comp=Z,3.6nm,0.7s,baz=16,slow=4.0,SNR=21						
CMAR				LR	LR	03 19 36.9	
	comp=Z,39nm,19.6s,baz=95,slow=36						
	comp=Z,11nm,0.9s						
CMAR	Chiang Mai Arr	48.62	253	P	P	02 59 03.9	+0.2
CMAR	Chiang Mai Arr	48.62	253	i P	P	02 59 05.4	+1.7
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SHL	Shillong	48.80	266	P	P	02 59 05.0	-0.2
BRZS	Berezniki	48.97	304	eP	P	02 59 06.1	+0.1
	baz=304						
BRZS	Berezniki	48.97	304	eP	P	02 59 06.1	+0.1
BVAR	Borovoye Array	49.00	309	P	P	02 59 04.8	-1.4
	comp=Z,2.3nm,0.6s,baz=66,slow=8.3,SNR=14						
BVAR				pP	pP	02 59 39.9	+1.9
	comp=Z,2.2nm,0.7s,baz=62,slow=7.2,SNR=2.3						
BVAR				PcP	PcP	03 00 28.3	+0.5
	comp=Z,6.8nm,0.4s,baz=78,slow=3.4,SNR=18						
BVAR				ScP	ScP	03 04 08.0	-1.1
	comp=Z,2.2nm,0.9s,baz=56,slow=9.1,SNR=5.5						
BVAR				LR	LR	03 19 57.5	
	comp=Z,55nm,20.3s,baz=56,slow=36						
	comp=Z,2.3nm,0.6s						
BRVK	Borovoye	49.04	309	P	P	02 59 05.5	-1.0
BRVK				IAmb	IAmb	02 59 43.6	
	comp=Z,14nm,1.2s						
BRVK	Borovoye	49.04	309	P	P	02 59 05.5	-1.0
BRVK				pmax	pmax		
	comp=Z,14nm,1.3s						
BRVK	Borovoye	49.04	309	P	P	02 59 05.1	-1.4
BRVK	Borovoye	49.04	309	eP	P	02 59 05.5	-1.0
CHKK	Chushkaly	49.08	295	eP	P	02 59 05.9	-1.1
	baz=295						
CHKK	Chushkaly	49.08	295	eP	P	02 59 05.8	-1.1
MDOK	Medeo	49.37	294	eP	P	02 59 08.7	-0.6
	baz=294						
MDOK	Medeo	49.37	294	eP	P	02 59 08.6	-0.7
KUU	Kurty	49.48	295	eP	P	02 59 08.6	-1.3
	baz=295						
KUU	Kurty	49.48	295	eP	P	02 59 08.6	-1.3
TARG	Taragay, Kyrgy	49.57	292	IAmb	IAmb	02 59 12.9	
	comp=Z,14nm,1.1s						
MRSI	Marisa	50.30	215	P	P	02 59 16.9	+0.5
	comp=Z,36nm,1.1s						
BTLS	Baital	50.38	298	eP	P	02 59 16.3	-0.4
	baz=298						
BTLS	Baital	50.38	298	eP	P	02 59 16.3	-0.4
TKM2	Tokmak 2	50.42	295	P	P	02 59 17.7	+0.4
	SNR=9.1						
SGDS	Sogindy	50.77	296	i P	P	02 59 19.3	-0.6
	baz=296						
SGDS	Sogindy	50.77	296	i P	P	02 59 19.2	-0.6
USP	Ospenovka	50.95	296	P	P	02 59 21.4	+0.3
	SNR=8.5						
KBK	Karagaybulak	50.96	295	P	P	02 59 21.9	+0.6
	SNR=7.2						
AAK	Ala-Archa	51.26	295	P	P	02 59 23.5	0.0
	SNR=5.5						
AAK	Ala-Archa	51.26	295	P	P	02 59 22.7	-0.8
	comp=Z,4.1nm,0.8s,baz=108,slow=4.0,SNR=11						
AAK				PcP	PcP	03 00 37.5	+0.9
	comp=Z,4.2nm,0.8s,baz=81,slow=7.6,SNR=3.9						
	comp=Z,4.1nm,0.8s						
AAK	Ala-Archa	51.26	295	P	P	02 59 23.6	0.0
AAK				IAmb	IAmb	02 59 24.7	
	comp=Z,14nm,1.3s						
AAK	Ala-Archa	51.26	295	P	P	02 59 23.6	0.0
AAK				pmax	pmax		
	comp=Z,15nm,1.3s						
AAK	Ala-Archa	51.26	295	i P	P	02 59 23.8	+0.2
	SNR=6.9						
AAK	Ala-Archa	51.26	295	P	P	02 59 23.8	+0.2
AAK	Ala-Archa	51.26	295	eP	P	02 59 23.6	0.0
KSH	Kashi	51.89	291	P	P	02 59 32.2	+4.0
KSH				sP	sP	03 00 18.2	+2.1
KSH				pmax	pmax		
	comp=Z,14nm,1.3s						
AML	Almayashu	52.03	295	P	P	02 59 30.2	+0.7
	SNR=6.1						
DZA	Taraz	53.14	297	eP	P	02 59 37.0	-0.3
	baz=297						
DZA	Taraz	53.14	297	eP	P	02 59 37.0	-0.3
RES	Resolute Bay	53.23	17	P	P	02 59 36.0	-1.3
	comp=Z,2.5nm,0.3s,baz=317,slow=8.6,SNR=11						
RES				pP	pwP	03 00 12.5	-1.6
	comp=Z,1.8nm,0.6s,baz=318,slow=8.2,SNR=2.2						
RES				PcP	PcP	03 00 43.5	+0.4
	comp=Z,4.8nm,0.8s,baz=335,slow=4.4,SNR=5.3						
RES				ScP	ScP	03 04 26.3	-0.7
	comp=Z,1.0nm,0.3s,baz=157,slow=0.1,SNR=7.9						
RES				LR	LR	03 26 25.6	
	comp=Z,46nm,18.0s,baz=38,slow=40						
	comp=Z,2.5nm,0.3s						
KK31	Karatay Array	53.55	297	IAmb	IAmb	02 59 41.8	
	comp=Z,10nm,1.4s						
KKAR	Karatay Array	53.55	297	IAmb	IAmb	02 59 41.8	
	comp=Z,10nm,1.4s						
ARU	Arti	53.62	316	LR	LR	03 23 04.3	
	comp=Z,66nm,18.8s,baz=42,slow=36						
ARU	Arti	53.62	316	P	P	02 59 41.0	+0.5
ARU				IAmb	IAmb	02 59 42.3	
	comp=Z,10nm,0.8s						
ARU	Arti	53.62	316	d iP	P	02 59 38.3	-2.2
ARU				*PP	pP	03 00 13.0	+0.1
ARU						03 00 41.4	
ARU				S	S	03 06 59.7	-2.8
ARU				SS	SKiKP	03 10 38.4	-0.8
ARU				pmax	pmax		
	comp=Z,11nm,0.9s						
YKA	Yellowknife Ar	54.09	35	P	P	02 59 44.5	+0.7
	comp=Z,7.4nm,0.9s,baz=302,slow=7.0,SNR=61						
YKA				pP	pwP	03 00 18.2	-1.4
	comp=Z,2.0nm,0.6s,baz=298,slow=6.8,SNR=4.7						
YKA				PcP	PcP	03 00 48.0	+1.3
	comp=Z,1.5nm,1.0s,baz=307,slow=4.5,SNR=2.2						
YKA				ScP	ScP	03 04 31.6	+0.6
	comp=Z,0.6nm,0.8s,baz=299,slow=4.2,SNR=6.1						
	comp=Z,7.4nm,0.9s						
YKA	Yellowknife Ar	54.09	35	P	P	02 59 45.0	+1.2
YKA				pP	pP	03 00 16.5	0.0
IUG	Iuzhnay	54.35	296	eP	P	02 59 46.3	+0.2
	comp=Z,22nm,1.4s,baz=296						
IUG	Iuzhnay	54.35	296	eP	P	02 59 46.3	+0.2
IUG				pmax	pmax		
	comp=Z,22nm,1.4s						
CHM	Chimkent	54.53	297	eP	P	02 59 47.1	-0.2
	baz=297						
CHM	Chimkent	54.53	297	eP	P	02 59 47.1	-0.2
SPSI	Sidrap Palu	55.22	215	P	P	02 59 54.9	+2.4
	comp=Z,23nm,1.4s						
HNR	Honiara	55.59	166	LR	LR	03 21 32.5	
	comp=Z,712nm,21.0s,baz=334,slow=33						
TULEG	Thule	56.12	10	i P	P	02 59 49.8	-8.4
TULEG				IAmb	IAmb	02 59 57.9	
	comp=Z,7.6nm,0.7s						
KAPI	Kappang	56.18	215	P	P	03 00 00.8	+1.5
ABKAR	Akbulak array	56.57	308	IAmb	IAmb	03 00 03.6	
	comp=Z,12nm,1.1s						
KIRV	Kirov	56.73	322	i P	P	03 00 03.4	+0.7
CHGR	Chuyangaron	56.81	293	P	P	03 00 03.6	-0.2
CHGR				pmax	pmax		
	comp=Z,122nm,1.0s						
NEEM	North Greenlan	56.88	5	i P	P	03 00 01.3	-2.6
NIL	Nilore	56.96	286	P	P	03 00 05.0	+0.2
NIL	Nilore	56.96	286	P	P	03 00 05.0	+0.2
NIL				pmax	pmax		
	comp=Z,99nm,1.1s						
NIL	Nilore	56.96	286	P	P	03 00 05.8	+1.0
AKTO	Aktyubinsk	56.98	310	P	P	03 00 03.4	-1.3
	comp=Z,2.0nm,0.5s,baz=77,slow=5.8,SNR=12						
AKTO				PcP	PcP	03 00 57.8	-0.4
	comp=Z,4.0nm,0.7s,baz=52,slow=19,SNR=5.9						
AKTO				LR	LR	03 26 34.0	
	comp=Z,91nm,18.2s,baz=76,slow=38						
	comp=Z,2.0nm,0.5s						
BRLDA	Berland Lookou	57.29	44	P	P	03 00 08.3	+1.4
BRLDA				pP	pP	03 00 41.2	+1.1
PBA	Port Blair	57.64	253	P	P	03 00 11.0	+1.4
DAG	Danmarks Havn	57.84	356	i P	P	03 00 07.3	-2.9
DAG				IAmb	IAmb	03 00 08.8	
	comp=Z,1.1nm,0.9s						
ARCES	ARCESS Array B	57.96	340	P	P	03 00 08.6	-2.6
	comp=Z,5.0nm,0.9s,baz=57,slow=7.8,SNR=10						
ARCES				PcP	sP	03 00 59.1	-0.5
	comp=Z,1.9nm,0.5s,baz=56,slow=5.6,SNR=6.9						
ARCES				LR	LR	03 27 47.8	
	comp=Z,51nm,19.8s,baz=62,slow=39						
	comp=Z,5.0nm,0.9s						
KULLO	Kullorsuaq	59.14	8	i P	P	03 00 12.2	-7.0
KULLO				IAmb	IAmb	03 00 19.2	
	comp=Z,9.4nm,0.5s						
JETT	Jettan, Norway	59.16	341	eP	P	03 00 17.8	-1.7
COEN	Coen	59.21	186	P	P	03 00 21.5	+1.1
KLMR	Klimovskoe	59.42	327	eP	P	03 00 18.1	-3.3
KLMR				AMP		03 00 20.6	
	comp=Z,25nm,1.3s						
KLMR				epP	pwP	03 00 57.0	-1.8
KLMR				ePcP	PcP	03 01 06.4	-1.2
KLMR				e		03 02 58.7	
KLMR	Klimovskoe	59.42	327	eP	P	03 00 18.1	-3.3
KLMR				e*PP	pwP	03 00 57.0	-1.8
KLMR				e		03 01 06.4	
KLMR				pmax	pmax		
	comp=Z,25nm,1.3s						
MTN	Manton Dam	59.93	199	P	P	03 00 25.0	-0.4
PPBI	Pangkal Pinang	60.17	230	P	P	03 00 28.3	+1.2
PSI	Prapat	60.33	240	P	P	03 00 28.3	-0.1
PSI				pmax	pmax		
	comp=Z,12nm,1.0s						
RPSI	Rantau Prapat	60.41	240	P	P	03 00 28.3	-0.5
RPSI				IAmb	IAmb	03 00 31.4	
	comp=Z,12nm,1.0s						
UPNV	Upernavik	60.95	8	i P	P	03 00 29.0	-2.6
UPNV				IAmb	IAmb	03 00 31.8	
	comp=Z,6.7nm,0.6s						
PINE	Pine Mountain	61.29	56	IAmb	IAmb	03 00 38.1	
	comp=Z,14nm,1.2s						
STEI	Steigen	61.60	342	eP	P	03 00 34.2	-1.9
SDSI	Sungai Dareh	61.81	236	P	P	03 00 38.7	+0.6
	comp=Z,19nm,1.4s						
FAUS	Fauske	62.04	341	eP	P	03 00 37.2	-1.7
SUMG	Summit	62.27	2	i P	P	03 00 39.3	-1.7
SUMG				IAmb	IAmb	03 00 42.3	
	comp=Z,4.1nm,0.9s						
PWJI	Pagerwojo	62.32	221	P	P	03 00 41.7	+0.2
	comp=Z,62nm,0.9s						
MDSI	Maura Dua	63.17	231	P	P	03 00 46.9	-0.3
	comp=Z,4.4nm,1.1s						
MOR8	Moi Rana	63.23	341	eP	P	03 00 44.0	-2.9
PLID	Pearl Lake	63.32	52	P	P	03 00 49.4	+1.2
PLID				IAmb	IAmb	03 01 22.9	
	comp=Z,10nm,1.2s						
MSO	Missoula	63.36	50	P	P	03 00 49.1	+0.8
MSO				IAmb	IAmb	03 01 23.3	
	comp=Z,9.3nm,1.1s						
WVOR	Wild Horse Val	63.46	56	P	P	03 00 50.4	+1.4
WVOR				IAmb	IAmb	03 01 24.1	
	comp=Z,10nm,1.2s						
WVOR	Wild Horse Val	63.46	56	P	P	03 00 50.4	+1.4
WVOR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
HYB	Hyderabad	63.48	268	eP	P	03 00 49.5	+0.2
HYB				IVmB_BB		03 00 49.8	
	comp=Z,245nm,1.0s						
FIA1	FINESS Array S	63.73	333	P	P	03 00 48.8	-1.5
FINES	FINESS Array B	63.73	333	P	P	03 00 48.4	-1.9
	comp=Z,14nm,0.8s,baz=39,slow=7.5,SNR=52						
FINES				pP	PcP	03 01 25.1	+0.1
	comp=Z,6.5nm,0.7s,baz=75,slow=4.3,SNR=3.5						
FINES				LR	LR	03 30 42.6	
	comp=Z,66nm,20.1s,baz=66,slow=38						
	comp=Z,14nm,0.8s						
FINES	FINESS Array B	63.73	333	P	P	03 00 48.4	-1.9
FINES				pP	pP	03 01 23.9	+0.2
FFC	Flin Flon	64.01	37	P	P	03 00 53.4	+1.2
FFC				IAmb	IAmb	03 00 54.1	
	comp=Z,5.0nm,0.8s						
FFC	Flin Flon	64.01	37	P	P	03 00 53.4	+1.2
FFC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GEYT	Alibeck	64.24	299	P	P	03 00 53.7	-0.3
	comp=Z,18nm,0.9s,baz=39,slow=5.5,SNR=32						
	comp=Z,18nm,0.9s						
FCC	Fort Churchill	64.29	31	P	P	03 00 54.8	+0.9
FCC				IAmb	IAmb	03 00 54.9	
	comp=Z,14nm,0.9s						
FCC	Fort Churchill	64.29	31	P	P	03 00 54.8	+0.9
FCC				pmax	pmax		
	comp=Z,15nm,1.0s						
OBN	Obninsk	64.40	324	⇑eP	P	03 00 53.4	-1.3
OBN				pmax	pmax		
	comp=Z,28nm,1.4s						
OBN	Obninsk	64.40	324	eP	P	03 00 53.4	-1.3
MPK	Martis Peak	64.58	59	P	P	03 00 57.7	+1.2
MPK				IAmb	IAmb	03 01 31.6	
	comp=Z,10nm,1.1s						
EGMT	Eagleton	64.79	46	P	P	03 00 59.0	+1.5
EGMT				IAmb	IAmb	03 00 59.8	
	comp=Z,16nm,1.2s						
LRM	Limekiln Ridge	64.80	50	P	P	03 00 59.2	+1.4
ILULI	Ilulissat	64.86	7	i P	P	03 00 54.7	-2.8
CTA	Charters Tower	65.16	182	LR	LR	03 28 55.4	
	comp=Z,79nm,19.8s,baz=334,slow=35						
HLID	Hailey	65.16	53	P	P	03 01 00.9	+0.7
YERR	Yerington	65.25	59	IAmb	IAmb	03 01 35.9	
	comp=Z,5.9nm,0.9s						
BOZ	Bozeman (W)	65.38	49	P	P	03 01 02.9	+1.4
BOZ				IAmb	IAmb	03 01 04.0	
	comp=Z,19nm,1.5s						
BOZ	Bozeman (W)	65.38	49	P	P	03 01 02.9	+1.4
BOZ				pmax	pmax		
	comp=Z,19nm,1.5s						
ICESG	Greenland Ices	65.72	3	i P	P	03 01 02.1	-1.3
ICESG				IAmb	IAmb	03 01 04.4	
	comp=Z,12nm,0.8s						
KVN	Kaiserville	65.90	58	P	P	03 01 06.2	+1.3
KVN					pP	03 01 39.1	-0.1
KVN	Kaiserville	65.90	58	P	P	03 01 06.2	+1.3
KVN				*PP	pP	03 01 39.1	-0.1
WB0	Warramunga Arr	66.01	194	P	P	03 01 05.4	0.0
WB0				IAmb	IAmb	03 01 39.2	
	comp=Z,13nm,1.2s						
LHV	Little Huntoon	66.16	59	P	P	03 01 07.6	+1.2
LHV					pP	03 01 40.6	-0.1
LHV				IAmb	IAmb	03 01 43.6	
	comp=Z,10nm,1.0s						
NVAR	Mina Array Bea	66.17	59	P	P	03 01 07.8	+1.1
	comp=Z,2.3nm,0.9s,baz=300,slow=7.5,SNR=13						
NVAR				pP	pP	03 01 42.1	+1.0
	comp=Z,2.3nm,0.6s,baz=293,slow=6.5,SNR=8.7						
	comp=Z,2.3nm,0.9s						
NVAR	Mina Array Bea	66.17	59	P	P	03 01 08.0	+1.3
NVAR					pP	03 01 40.9	-0.1
WR0	Warramunga Arr	66.17	194	P	P	03 01 06.3	-0.2
WRAB	Tennant Creek	66.18	194	ceP	P	03 01 07.8	+1.3
WRAB				pmax	pmax		
	comp=Z,12nm,1.3s						
WB2	Warramunga Arr	66.19	194	P	P	03 01 06.8	+0.2
WB2				IAmb	IAmb	03 01 09.5	
	comp=Z,5.9nm,0.8s						
WB2					PcP	03 01 36.6	+0.9
WRA	Warramunga Arr	66.19	194	P	P	03 01 07.1	+0.6
	comp=Z,2.0nm,0.4s,baz=8.7,slow=6.7,SNR=32						
	comp=Z,2.0nm,0.4s						
WRA	Warramunga Arr	66.19	194	P	P	03 01 07.0	+0.4
WRA					PcP	03 01 36.9	+1.3
WRA	Warramunga Arr	66.19	194	i P	P	03 01 07.0	+0.4
WRA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
RLMT	Red Lodge	66.95	49	IAmb	IAmb	03 01 48.2	
	comp=Z,13nm,1.4s						
FXWY	Fox Creek	66.99	51	IAmb	IAmb	03 01 48.0	
	comp=Z,9.7nm,1.2s						
SFJD	Kangerlussuaq	67.06	8	LR	LR	03 32 34.3	
	comp=Z,35nm,18.0s,baz=352,slow=38						
DGMT	Dagmar	67.26	43	IAmb	IAmb	03 01 15.2	
	comp=Z,12nm,0.6s						
REDW	Red Top Meadow	67.26	51	IAmb	IAmb	03 01 50.9	
	comp=Z,11nm,1.0s						
FRB	Frobisher Bay	67.44	17	LR	LR	03 32 01.4	
	comp=Z,40nm,19.7s,baz=20,slow=37						
SPUT	South Promonto	67.73	53	IAmb	IAmb	03 01 52.1	
	comp=Z,8.3nm,1.1s						
DY2G	Dye2	67.95	6	i P	P	03 01 16.0	-1.5
DY2G				IAmb	IAmb	03 01 16.8	
	comp=Z,2.6nm,0.8s						
AKT	Akhty	68.10	307	eP	P	03 01 18.6	-0.1
AKT				e		03 01 42.5	
AKT				e*PP	pP	03 01 53.7	+1.2
AKT				e*SP	sP	03 02 10.6	+2.9
AKT				pmax	pmax		
	comp=Z,32nm,1.0s						
MNK	Minsk	68.32	327	i P	P	03 01 18.0	-1.7
	comp=E,3.0nm,1.4s						
MNK				i P	P	03 01 18.0	-1.7
	comp=N,45nm,1.0s						
MNK				i P	P	03 01 18.0	-1.7
	comp=Z,24nm,1.0s,baz=41						
MNK				i pP	pP	03 01 53.1	-0.4
MNK				i PP	PP	03 03 50.1	-1.5
MNK				i PPP	PPP	03 05 31.0	
MNK				i S	S	03 10 07.7	-0.9
MNK				i sS	sS	03 11 09.1	+1.9
MNK				i SS	SS	03 14 33.5	-0.2
MNK				i SSS	SSS	03 17 52.5	
MNK				i LRM	MLR	03 34 16.3	
	comp=Z,66nm,13.5s						
MNK				i LRM	MLR	03 34 40.8	
	comp=N,517nm,20.0s						
MNK				i LRM	MLR	03 35 18.2	
	comp=E,19nm,12.2s						
MNK	Minsk	68.32	327	i P	P	03 01 17.9	-1.7
MNK				i *PP	pP	03 01 53.1	-0.4
MNK				i		03 03 50.1	
MNK				i PPP	PPP	03 05 30.9	
MNK				i S	S	03 10 07.7	-0.9
MNK				i *SS	sS	03 11 09.0	+1.9
MNK				i SS	SS	03 14 33.4	-0.2
MNK				pmax	pmax		
	comp=N,45nm,1.0s						
MNK				pmax	pmax		
	comp=Z,24nm,1.0s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.4s						
MNK				MLR	MLR		
	comp=N,517nm,20.0s						
MNK				MLR	MLR		
	comp=E,19nm,12.0s						
NB2	NORSAR Subarra	68.33	339	P	P	03 01 18.3	-1.4
	comp=Z,3.2nm,0.9s,baz=30,slow=6.5						
NB2	NORSAR Subarra	68.33	339	P	P	03 01 18.3	-1.4
	slow=6.5						
NOA	NORSAR Array B	68.33	339	P	P	03 01 17.7	-2.0
	comp=Z,4.3nm,0.9s,baz=30,slow=6.7,SNR=26						
NOA				LR	LR	03 35 57.2	
	comp=Z,33nm,19.2s,baz=40,slow=40						
	comp=Z,4.3nm,0.9s						
PDAR	Pinedale Array	68.37	51	P	P	03 01 21.2	+0.7
	comp=Z,1.8nm,0.7s,baz=297,slow=2.3,SNR=20						
PDAR				pP	pP	03 01 55.9	+1.0
	comp=Z,2.3nm,0.6s,baz=270,slow=2.2,SNR=7.0						
	comp=Z,1.8nm,0.7s						
PDAR	Pinedale Array	68.37	51	P	P	03 01 21.7	+1.2
PDAR				pP	pP	03 01 54.6	-0.3
NACGM	Naroch	68.43	328	eP	P	03 01 19.4	-1.0
	comp=Z,25nm,0.9s,baz=40						
HFS	Hagfors	68.45	337	LR	LR	03 34 09.6	
	comp=Z,50nm,21.9s,baz=52,slow=38						
NC602	NORSAR Array S	68.51	339	eP	P	03 01 19.0	-1.7
SEKA	Sheki	68.58	307	P	P	03 01 19.0	-2.6
GWY	Greenwater Val	68.61	60	IAmb	IAmb	03 01 58.4	
	comp=Z,6.5nm,0.8s						
ZKTA	Zakatala	68.62	308	P	P	03 01 19.6	-2.2
PALK	Pallekele	69.00	259	P	P	03 01 24.8	+0.3
	comp=Z,18nm,0.9s,baz=156,slow=6.2,SNR=13						
	comp=Z,18nm,0.9s						
PALK	Pallekele	69.00	259	P	P	03 01 24.9	+0.3
PALK	Pallekele	69.00	259	P	P	03 01 24.9	+0.3
PALK				pmax	pmax		
	comp=Z,25nm,1.0s						
KVAR	Kislovodsk Arr	69.17	312	P	P	03 01 26.0	+0.7
	comp=Z,5.6nm,0.8s,baz=96,slow=18,SNR=4.6						
	comp=Z,5.6nm,0.8s						
KIV	Kislovodsk	69.17	312	⇓P	P	03 01 26.6	+1.3
KIV	Kislovodsk	69.17	312	P	P	03 01 25.9	+0.7
KIV	Kislovodsk	69.17	312	eP	P	03 01 25.6	+0.3
KIV				pmax	pmax		
	comp=Z,24nm,1.1s						
KIV				MLR	MLR		
	comp=Z,74nm,17.0s						
KIV	Kislovodsk	69.17	312	i P	P	03 01 26.1	+0.8
	SNR=7.7						
KIV	Kislovodsk	69.17	312	P	P	03 01 26.6	+1.3
KIV	Kislovodsk	69.17	312	eP	P	03 01 25.6	+0.3
KBZ	Khabaz	69.22	312	P	P	03 01 25.6	+0.2
	comp=Z,15nm,0.9s,baz=57,slow=5.7,SNR=18						
KBZ				LR	LR	03 36 17.0	
	comp=Z,107nm,18.3s,baz=42,slow=40						
	comp=Z,15nm,0.9s						
KBZ	Khabaz	69.22	312	ceP	P	03 01 25.3	-0.1

KBZ				pmax	pmax		
	comp=Z,19nm,0.9s						
KBZ	Khabaz	69.22	312	eP	P	03 01 25.3	-0.1
ZEI	Tsey	69.33	310	eP	P	03 01 24.7	-1.7
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SHA1	Shidzhatmaz	69.34	312	i P	P	03 01 25.6	-0.9
LKRN	Lenkeran, Azer	69.35	304	P	P	03 01 24.2	-2.1
GANJ	Ganja	69.45	307	P	P	03 01 24.8	-2.2
NEY	Neytrino	69.64	311	i P	P	03 01 28.9	+0.6
NEY				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ONI	Oni	69.70	310	IAmb	IAmb	03 01 30.6	
	comp=Z,24nm,1.2s						
MSU	Marysvale	69.75	56	P	P	03 01 30.3	+1.2
MSU	Marysvale	69.75	56	P	P	03 01 30.3	+1.2
ULM	Lac du Bonnet	69.81	38	P	P	03 01 28.9	-0.1
	comp=Z,2.7nm,0.7s,baz=306,slow=8.2,SNR=4.8						
	comp=Z,2.7nm,0.7s						
RDMU	Red Mountain	69.84	52	IAmb	IAmb	03 02 05.8	
	comp=Z,16nm,0.9s						
ASAR	Alice Springs	69.91	194	P	P	03 01 31.0	+1.2
	comp=Z,2.2nm,0.6s,baz=8.3,slow=5.3,SNR=28						
	comp=Z,2.2nm,0.6s						
ASAR	Alice Springs	69.91	194	P	P	03 01 31.4	+1.6
ASAR	Alice Springs	69.91	194	P	P	03 01 31.4	+1.6
BORG	Borgarnes	69.91	355	LR	LR	03 31 45.4	
	comp=Z,27nm,18.6s,baz=41,slow=35						
P17A	Butcher Ranch,	69.93	54	IAmb	IAmb	03 02 05.6	
	comp=Z,12nm,1.1s						
MTPU	Mount Pierson	70.06	56	P	P	03 01 32.0	+0.8
SRU	San Rafael Swe	70.30	54	IAmb	IAmb	03 02 07.6	
	comp=Z,10nm,0.9s						
NGCH	Negor - Chabah	70.35	286	P	P	03 01 34.8	+2.1
RSSD	Black Hills	70.36	47	P	P	03 01 33.2	+0.5
RSSD				pP	pP	03 02 07.3	0.0
RSSD				IAmb	IAmb	03 02 07.9	
	comp=Z,8.8nm,1.1s						
RSSD	Black Hills	70.36	47	P	P	03 01 33.2	+0.5
RSSD				*PP	pP	03 02 07.4	0.0
AKASG	Malin Array Be	70.66	324	P	P	03 01 32.7	-1.4
	comp=Z,1.9nm,0.4s,baz=37,slow=6.3,SNR=39						
AKASG				LR	LR	03 33 34.9	
	comp=Z,32nm,19.2s,baz=8.5,slow=37						
	comp=Z,1.9nm,0.4s						
AKBB	Malin Array Si	70.66	324	IAmb	IAmb	03 01 33.8	
	comp=Z,14nm,0.9s						
AKBB	Malin Array Si	70.66	324	ceP	P	03 01 32.4	-1.7
AKBB				pmax	pmax		
	comp=Z,16nm,0.9s						
GNI	Garni	70.67	308	P	P	03 01 34.6	0.0
GNI	Garni	70.67	308	ceP	P	03 01 36.3	+1.7
GNI				pmax	pmax		
	comp=Z,42nm,1.7s						
GNI	Garni	70.67	308	P	P	03 01 35.6	+1.0
GNI	Garni	70.67	308	P	P	03 01 36.2	+1.7
HMU	Henry Mountain	70.97	55	IAmb	IAmb	03 02 11.9	
	comp=Z,10nm,0.9s						
MBWA	Marble Bar	71.06	208	P	P	03 01 38.1	+1.4
U15A	North Rim	71.08	57	P	P	03 01 38.4	+1.1
U15A				pP	pP	03 02 11.9	-0.2
KARS	Kars	71.26	309	P	P	03 01 38.9	+0.8
KARS	Kars	71.26	309	P	P	03 01 38.9	+0.8
KARS				pmax	pmax		
	comp=Z,80nm,1.0s						
ANN	Anapa	71.26	315	eP	P	03 01 32.4	-5.4
ANN				e*PP	pP	03 02 10.1	-1.8
ANN				e		03 04 14.8	
ANN				eS	S	03 10 35.4	-7.9
ANN				eSS	SS	03 15 17.1	-2.1
ANN				pmax	pmax		
	comp=Z,24nm,1.4s						
PV11	David Mesa, Pa	71.79	54	IAmb	IAmb	03 02 17.5	
	comp=Z,32nm,1.4s						
PV13	Radium Mtn., P	71.92	54	P	P	03 01 43.7	+1.5
PV13					pP	03 02 16.4	-0.7
PV13				IAmb	IAmb	03 02 19.0	
	comp=Z,8.5nm,0.7s						
JASK	Jask - Hormozg	72.21	289	P	P	03 01 45.6	+1.7
MVCO	Mesa Verde	72.76	54	P	P	03 01 47.5	+0.3
MVCO				pP	pP	03 02 21.2	-1.0
KOPT	Kop Dagi	73.09	310	IAmb	IAmb	03 01 51.8	
	comp=Z,21nm,1.2s						
BANOM	Banah	73.22	290	i P	P	03 01 50.0	+0.2
	SNR=21						
BANOM	Banah	73.22	290	P	P	03 01 50.4	+0.6
	SNR=7.8						
SHME	Shamm	73.23	290	i P	P	03 01 50.2	+0.3
	SNR=6.9						
SHME	Shamm	73.23	290	P	P	03 01 50.2	+0.3
S22A	4UR Ranch, Cre	73.33	53	P	P	03 01 52.3	+1.7
LVV	L'vov	73.45	326	eP	P	03 01 49.7	-1.1
WSAR	Wadi Sarin	73.47	286	P	P	03 01 51.8	+0.5
	comp=Z,11nm,0.9s,baz=69,slow=4.5,SNR=6.7						
	comp=Z,11nm,0.9s						
WSAR	Wadi Sarin	73.47	286	P	P	03 01 52.4	+1.1
BIDO	Bidbid	73.61	287	P	P	03 01 53.5	+1.3
	SNR=7.4						
MDH	Madha	73.64	289	P	P	03 01 53.0	+0.8
WBK	Wadi Bani Khal	73.66	286	P	P	03 01 53.9	+1.5
WBK				P	P	03 01 55.0	+2.5
	SNR=6.6						
JLN	Jalan Bani Buh	73.67	285	P	P	03 01 53.9	+1.5
MASF	Masafi	73.68	290	P	P	03 01 53.2	+0.6
MSFE	Esma-Masafi	73.69	290	i P	P	03 01 53.0	+0.4
	SNR=5.6						
MILM	Milestii Mici	73.72	321	eP	P	03 01 50.0	-2.4
	comp=Z,30nm,1.4s						
UOSS	Minazif	73.94	289	P	P	03 01 54.6	+0.6
UOSS	Minazif	73.94	289	i P	P	03 01 53.9	-0.1
	SNR=6.2						
UOSS	Minazif	73.94	289	P	P	03 01 54.4	+0.4
SMDO	Samad	73.98	287	P	P	03 01 55.3	+0.9
HATD	Hatta, Dubai	74.07	289	i P	P	03 01 55.1	+0.4
	SNR=20						
HATD	Hatta, Dubai	74.07	289	P	P	03 01 55.4	+0.7
HOQ	Hoqain	74.12	287	P	P	03 01 56.0	+0.9
	SNR=9.5						
ASHO	Ashiyiah	74.21	289	i P	P	03 01 56.0	+0.4
	SNR=20						
ASHO	Ashiyiah	74.21	289	P	P	03 01 56.3	+0.6
	SNR=14						
SOHO	SOHO	74.27	288	i P	P	03 01 56.0	+0.1
	SNR=12						
SOHO	SOHO	74.27	288	P	P	03 01 56.4	+0.5
NAZ	Nazwa, Dubai	74.27	290	i P	P	03 01 56.1	+0.2
	SNR=10						
NAZ	Nazwa, Dubai	74.27	290	P	P	03 01 56.5	+0.5
	SNR=5.4						
JMDO	Jabal Madar	74.41	286	P	P	03 01 57.9	+1.1
	SNR=9.3						
FAQ	Al Faqa, Dubai	74.48	289	i P	P	03 01 57.3	+0.1
	SNR=14						
FAQ	Al Faqa, Dubai	74.48	289	P	P	03 01 57.5	+0.4
	SNR=5.3						
HMDM	Hanimaadhoo	74.60	264	P	P	03 01 58.5	+0.7
BURAR	Bucovina Array	74.72	324	⇑P	P	03 01 58.0	-0.3
BURAR	Bucovina Array	74.72	324	⇑P	P	03 01 58.0	-0.3
ASUD	Al Ashush, Dub	74.74	290	i P	P	03 01 59.1	+0.5
	SNR=12						
ASUD	Al Ashush, Dub	74.74	290	P	P	03 01 59.4	+0.8
	SNR=6.2						
OJC	Ojcow	74.75	328	eP	P	03 01 58.2	0.0
OJC	Ojcow	74.75	328	IAmb	IAmb	03 01 59.1	
	comp=Z,14nm,1.1s						
BSY	Bisya	74.77	287	P	P	03 01 59.9	+1.0
	SNR=11						
ARQ	Araqi	74.82	288	P	P	03 01 60.0	+0.8
	SNR=6.8						
ALNE	Al Ain	74.85	289	i P	P	03 01 59.8	+0.6
	SNR=8.0						
ALNE	Al Ain	74.85	289	P	P	03 01 59.9	+0.6
	SNR=13						
STHS	Stebnicka Huta	74.86	327	eP	P	03 01 59.2	+0.3
STHS				pmax	pmax		
	comp=Z,11nm,1.0s						
STHS	Stebnicka Huta	74.86	327	eP	P	03 01 59.2	+0.3
TESR	Tescani	74.98	322	⇓P	P	03 01 59.0	-0.6
AJN	Ajban	75.01	290	P	P	03 02 00.7	+0.6
T25A	Trinidad	75.12	52	P	P	03 02 02.2	+1.3
T25A				pP	pP	03 02 35.7	-0.6
T25A				IAmb	IAmb	03 02 36.5	
	comp=Z,8.7nm,1.0s						
NIE	Niedzica	75.22	328	eP	P	03 02 02.0	+1.0
PETR	Petresti	75.34	322	⇑P	P	03 02 01.7	0.0
CFR	Carcaliu	75.37	321	⇑P	P	03 02 01.8	-0.1
CFR	Carcaliu	75.37	321	⇑P	P	03 02 01.8	-0.1
TRPA	Tarpa	75.40	326	⇓P	P	03 02 02.0	0.0
MHTO	MHTO	75.44	285	P	P	03 02 04.0	+1.4
	SNR=27						
KSP	Ksiaz	75.48	331	eP	P	03 02 02.9	+0.4
LANS	Liptovska Anna	75.75	328	eP	P	03 02 04.5	+0.5
LANS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
LANS	Liptovska Anna	75.75	328	eP	P	03 02 04.5	+0.5
SCHQ	Schefferville	75.88	20	P	P	03 02 04.9	+0.3
	comp=Z,11nm,0.7s,baz=324,slow=5.1,SNR=40						
SCHQ				LR	LR	03 38 26.1	
	comp=Z,32nm,19.0s,baz=69,slow=38						
	comp=Z,11nm,0.7s						
DPC	Dobruska-Polom	75.88	330	eP	P	03 02 05.0	+0.2
DPC	Dobruska-Polom	75.88	330	eP	P	03 02 05.0	+0.2
MORC	Moravsky Berou	75.93	329	⇑P	P	03 02 05.4	+0.3
MORC	Moravsky Berou	75.93	329	IAmb	IAmb	03 02 06.1	
	comp=Z,12nm,1.0s						
MORC	Moravsky Berou	75.93	329	eP	P	03 02 05.2	+0.1
MORC	Moravsky Berou	75.93	329	⇑P	P	03 02 05.4	+0.3
KRLC	Kraliky	75.95	330	eP	P	03 02 05.0	-0.2
KRLC	Kraliky	75.95	330	eP	P	03 02 05.0	-0.2
MLR	Muntele Rosu	76.09	322	⇑P	P	03 02 02.7	-3.5
MLR	Muntele Rosu	76.09	322	IAmb	IAmb	03 02 07.5	
	comp=Z,20nm,1.3s						
MLR	Muntele Rosu	76.09	322	⇑P	P	03 02 02.7	-3.5
UMZA	Um Al Zommool	76.16	288	P	P	03 02 07.0	+0.3
JRN	Qarnain Island	76.16	291	P	P	03 02 07.1	+0.4
CLL	Collm	76.18	333	IAmb	IAmb	03 02 07.0	
	comp=Z,10nm,0.8s						
CLL	Collm	76.18	333	i P	P	03 02 05.6	-0.8
	comp=Z,14nm,1.0s						
CLL				i PcP	PcP	03 02 17.7	-0.1
	comp=Z,8.0nm,0.9s						
CLL				esP	sP	03 02 56.0	0.0
CLL	Collm	76.18	333	i P	P	03 02 05.1	-1.3
CLL				e*SP	sP	03 02 56.0	0.0
CLL				pmax	pmax		
	comp=Z,14nm,1.0s						
CLL	Collm	76.18	333	eP	P	03 02 05.7	-0.7
	comp=Z,14nm,1.0s,baz=27,slow=4.8						
BRG	Berggiesshubel	76.25	332	eP	P	03 02 06.3	-0.5
BRG				Amp		03 02 07.3	
	comp=Z,5.8nm,1.1s						
BRG	Berggiesshubel	76.25	332	eP	P	03 02 06.2	-0.5
BRG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
DQM	DQM	76.46	285	P	P	03 02 09.0	+0.6
VOIR		76.52	323	⇑P	P	03 02 09.0	+0.5
VOIR		76.52	323	⇑P	P	03 02 09.0	+0.5
VYHS	Vyhne	76.53	328	eP	P	03 02 08.4	0.0
VYHS				pmax	pmax		
	comp=Z,9.0nm,1.2s						
VYHS	Vyhne	76.53	328	eP	P	03 02 08.4	0.0
CLZ	Clausthal	76.54	335	eP	P	03 02 08.8	+0.3
	comp=Z,14nm,1.0s,baz=27,slow=4.8						
JAVC	Velka Javorina	76.65	329	eP	P	03 02 09.9	+0.7
VRAC	Vranov	76.66	330	eP	P	03 02 09.1	-0.1
ARR	Arges	76.75	323	⇓P	P	03 02 12.0	+2.2
SHMA	Al-Shehemyia	76.76	293	P	P	03 02 10.6	+0.5
EKA	Eskdalemuir Ar	76.76	344	LR	LR	03 41 38.4	
	comp=Z,27nm,18.2s,baz=170,slow=40						
EKA	Eskdalemuir Ar	76.76	344	P	P	03 02 09.3	-0.3
PRU	Pruhonice	76.80	331	eP	P	03 02 09.8	-0.1
PRU	Pruhonice	76.80	331	eP	P	03 02 09.8	-0.1
GHWR	Ruwais	76.82	291	P	P	03 02 10.8	+0.4
BR131	Keskin Array S	76.90	314	i P	P	03 02 11.1	+0.3
BR131	Keskin Array S	76.90	314	P	P	03 02 11.4	+0.6
	SNR=7.9						
BRTR	Keskin Array B	76.90	314	P	P	03 02 10.8	-0.1
	comp=Z,9.1nm,0.9s,baz=74,slow=4.0,SNR=45						
	comp=Z,9.1nm,0.9s						
BRTR	Keskin Array B	76.90	314	P	P	03 02 11.2	+0.4
BRTR	Keskin Array B	76.90	314	P	P	03 02 11.2	+0.4
GAZ	Gaziantep	76.92	310	IAmb	IAmb	03 02 12.7	
	comp=Z,13nm,1.0s						
KRUC	Moravsky	76.94	330	eP	P	03 02 10.4	-0.3
SAKB	Bahrain	76.95	294	P	P	03 02 11.7	+0.6
SMOL	Smolenice	77.03	329	eP	P	03 02 11.8	+0.6
SMOL				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MZR	Muzera	77.08	290	i P	P	03 02 11.9	0.0
	SNR=7.2						
MZR	Muzera	77.08	290	P	P	03 02 12.2	+0.3
	SNR=13						
STKA	Stephens Creek	77.11	186	P	P	03 02 13.8	+2.2
	comp=Z,1.0nm,0.4s,baz=0.9,slow=6.4,SNR=4.7						
STKA				LR	LR	03 35 19.0	
	comp=Z,66nm,20.7s,baz=216,slow=35						
	comp=Z,1.0nm,0.4s						
MOX	Moxa	77.19	333	eL	L	03 31 10.4	
	comp=Z,45nm,20.8s						
MODS	Modra-Piesok	77.20	329	eP	P	03 02 12.9	+0.7
MODS	Modra-Piesok	77.20	329	eP	P	03 02 12.9	+0.7
ANTO	Ankara	77.22	314	P	P	03 02 12.7	+0.2
SRO	Srobarova	77.29	328	eP	P	03 02 13.1	+0.5
SRO				pmax	pmax		
	comp=Z,27nm,1.6s						
SRO	Srobarova	77.29	328	eP	P	03 02 13.1	+0.5
GZR	Gura Zlata	77.51	324	⇑P	P	03 02 13.9	-0.1
GZR	Gura Zlata	77.51	324	⇑P	P	03 02 13.9	-0.1
SLWR	Sila	77.52	292	P	P	03 02 14.5	+0.1
SMRA	Abu-Samra	77.62	293	P	P	03 02 14.8	-0.1
BZS	Buzias	77.80	325	⇑P	P	03 02 15.2	-0.3
BZS	Buzias	77.80	325	⇑P	P	03 02 15.2	-0.3
KHC	Kasperske Hory	77.86	331	IAmb	IAmb	03 02 17.1	
	comp=Z,11nm,1.1s						
KHC	Kasperske Hory	77.86	331	eP	P	03 02 15.9	0.0
KHC	Kasperske Hory	77.86	331	i P	P	03 02 15.9	0.0
KHC				pmax	pmax		
	comp=Z,25nm,1.1s						
CKRC	Cesky Krumlov	77.88	331	eP	P	03 02 15.5	-0.5
CKRC	Cesky Krumlov	77.88	331	eP	P	03 02 15.5	-0.5
FORT	Forrest	77.94	198	IAmb	IAmb	03 02 52.2	
	comp=Z,18nm,1.0s						
GEC2	GERESS Array S	78.06	331	eP	P	03 02 16.0	-1.0
	comp=Z,5.6nm,1.2s,baz=27,slow=4.8						
GERES	GERESS Array B	78.06	331	P	P	03 02 16.5	-0.6
	comp=Z,0.9nm,0.3s,baz=35,slow=5.6,SNR=14						
	comp=Z,0.9nm,0.3s						
GERES	GERESS Array B	78.06	331	P	P	03 02 17.2	+0.2
GERES	GERESS Array B	78.06	331	P	P	03 02 17.3	+0.2
CONA	Conrad Observa	78.09	329	i P	P	03 02 17.9	+0.7
	comp=Z,12nm,1.1s,SNR=5.2						
RONA	Rosalia, Austr	78.12	329	eP	P	03 02 17.3	0.0
	comp=Z,11nm,1.1s						
GRF	Grafenberg Arr	78.15	333	eP	P	03 02 16.6	-0.8
	comp=Z,18nm,1.2s,baz=27,slow=4.8						
GRF				eL	L	03 37 55.8	
	comp=Z,71nm,18.1s						
BORA	Eskisehir	78.37	316	IAmb	IAmb	03 02 21.4	
	comp=Z,18nm,1.1s						
MOA	Molln	78.72	330	eP	P	03 02 20.9	+0.3
	comp=Z,4.6nm,0.9s						
ARSA	Arzberg	78.78	329	eP	P	03 02 21.7	+0.7
	comp=Z,8.6nm,1.2s						
FRGS	Fruska Gora	78.91	326	⇑P	P	03 02 22.0	+0.3
P38A	Dawn	78.95	44	IAmb	IAmb	03 02 57.4	
	comp=Z,19nm,1.4s						
BIOA	Bad Ischl, Aus	79.08	331	eP	P	03 02 23.0	+0.4
	comp=Z,13nm,1.2s						
SHAO	Shalim	79.08	284	i P	P	03 02 23.3	+0.3
	SNR=8.9						
SHAO	Shalim	79.08	284	P	P	03 02 23.6	+0.6
	SNR=7.0						
BOVS	Bovan	79.38	323	⇓P	P	03 02 23.3	-0.9
SOKA	Soboth	79.45	329	i P	P	03 02 25.0	+0.3
	comp=Z,15nm,1.1s,SNR=5.9						
VTS	Vitosha	79.56	322	⇑P	P	03 02 27.2	+1.8
VTS	Vitosha	79.56	322	⇑P	P	03 02 27.2	+1.8
KBA	Koelnbreinsper	79.70	330	i P	P	03 02 26.7	+0.5
	comp=Z,23nm,1.1s,SNR=8.3						
DMTO	DMTO	79.75	285	P	P	03 02 26.9	+0.2
	SNR=6.1						
WMOK	Wichita Mounta	79.97	50	P	P	03 02 28.7	+1.1
WMOK	Wichita Mounta	79.97	50	P	P	03 02 28.7	+1.1
WMOK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MYKA	Terra Mystica	79.99	330	eP	P	03 02 27.7	+0.1
	comp=Z,7.8nm,1.0s						
WATA	Walderalm	80.08	332	i P	P	03 02 28.1	-0.1
	comp=Z,20nm,1.1s,SNR=10						
WTTA	Wattenberg	80.13	332	i P	P	03 02 28.7	+0.3
	comp=Z,24nm,1.3s,SNR=6.5						
PRED	Cave del Predi	80.17	330	P	P	03 02 28.2	-0.4
RETA	Reutte	80.22	332	eP	P	03 02 29.1	+0.3
	comp=Z,12nm,1.0s						
MOTA	Moosalm	80.23	332	i P	P	03 02 29.2	+0.2
	comp=Z,27nm,1.1s,SNR=12						
BFO	Black Forest	80.26	334	eP	P	03 02 28.9	0.0
	comp=Z,8.9nm,1.0s,baz=27,slow=4.8						
ABTA	Abfaltersbach	80.28	331	eP	P	03 02 28.5	-0.6
	comp=Z,10nm,1.3s						
SQTA	Sankt Quirin	80.31	332	i P	P	03 02 29.5	+0.2
	comp=Z,15nm,0.9s,SNR=6.3						
RBK	Rabkut	80.41	285	P	P	03 02 30.2	0.0
	SNR=7.7						
WHFO	Wadi Hawf	80.41	286	P	P	03 02 30.3	0.0
	SNR=11						
FETA	Feichten	80.64	332	eP	P	03 02 30.8	-0.4
	comp=Z,10.0nm,1.1s						
DAVA	Damuels	80.69	333	eP	P	03 02 31.7	+0.3
	comp=Z,14nm,1.2s						
ECH	Echery	80.72	335	IAmb	IAmb	03 02 32.0	
	comp=Z,12nm,1.2s						
ABTO	Aybut	81.13	286	P	P	03 02 34.3	+0.2
	SNR=12						
FUORN	Ofenpass-Fuorn	81.15	332	IAmb	IAmb	03 02 35.4	
	comp=Z,16nm,1.1s						
TX31	Lajitas Ar. Si	81.21	57	P	P	03 02 35.5	+1.1
TX31				IAmb	IAmb	03 03 09.8	
	comp=Z,32nm,1.4s						
TX32	Lajitas Array	81.21	57	P	P	03 02 35.5	+1.1
TXAR	Lajitas Array	81.21	57	P	P	03 02 35.8	+1.4
	comp=Z,2.5nm,0.6s,baz=297,slow=4.1,SNR=34						
TXAR				pP	pP	03 03 09.6	-0.8
	comp=Z,2.8nm,0.6s,baz=297,slow=4.3,SNR=7.1						
TXAR				PKKPbc	PKKPbc	03 21 09.8	+3.1
	comp=Z,0.4nm,0.8s,baz=134,slow=3.6,SNR=3.4						
	comp=Z,2.5nm,0.6s						
TXAR	Lajitas Array	81.21	57	P	P	03 02 35.8	+1.4
TXAR				pP	pP	03 03 09.2	-1.1
CCM	Cathedral Cave	81.29	43	P	P	03 02 35.5	+1.0
CCM				IAmb	IAmb	03 02 36.0	
	comp=Z,9.1nm,0.8s						
CCM	Cathedral Cave	81.29	43	P	P	03 02 35.5	+1.0
CCM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PDG	Podgorica	81.39	324	⇓P	P	03 02 35.2	+0.3
TEOL	Teolo	81.77	331	IAmb	IAmb	03 02 38.6	
	comp=Z,14nm,0.9s						
RAYN	Ar Rayn	81.91	295	P	P	03 02 38.7	+0.6
RAYN				IAmb	IAmb	03 02 40.0	
	comp=Z,27nm,1.1s						
RAYN	Ar Rayn	81.91	295	P	P	03 02 38.7	+0.6
RAYN				pmax	pmax		
	comp=Z,27nm,1.1s						
RAYN	Ar Rayn	81.91	295	i P	P	03 02 38.6	+0.6
	SNR=17						
S44A	Carbondale	82.53	42	IAmb	IAmb	03 02 42.7	
	comp=Z,9.8nm,0.7s						
FCAR	Ozark Folk Cen	82.56	45	IAmb	IAmb	03 02 42.0	
	comp=Z,7.3nm,0.9s						
SSF	Saint Saulge	82.82	336	eP	P	03 02 43.4	+1.0
SSF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LPL	La Plagne	83.26	334	eP	P	03 02 44.6	-0.4
LPL				pmax	pmax		
	comp=Z,18nm,1.2s						
OSSC	Osservatorio P	83.53	330	IAmb	IAmb	03 02 46.5	
	comp=Z,16nm,1.1s						
BNI	Bardonecchia	83.69	334	P	P	03 02 47.8	+0.7
BNI				IAmb	IAmb	03 02 52.1	
	comp=Z,9.4nm,0.9s						
BNI	Bardonecchia	83.69	334	P	P	03 02 47.8	+0.7
BNI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
INTR	Introdacqua	83.86	327	IAmb	IAmb	03 02 49.8	
	comp=Z,15nm,0.9s						
SSB	Saint Sauveur	84.14	335	IAmb	IAmb	03 02 51.4	
	comp=Z,11nm,1.0s						
MFF	Saint Martin d	84.23	339	eP	P	03 02 50.1	+0.5
MFF				pmax	pmax		
	comp=Z,55nm,1.5s						
PPT	Papeete	84.30	122	LR	LR	03 33 48.8	
	comp=Z,69nm,21.4s,baz=283,slow=31						
T50A	Nancy	85.13	40	P	P	03 02 55.5	+1.2
T50A				IAmb	IAmb	03 02 55.8	
	comp=Z,9.5nm,0.8s						
CAF	Calviac	85.18	337	eP	P	03 02 55.0	+0.6
CAF				pmax	pmax		
	comp=Z,54nm,1.4s						
CLTN	Cedars of Leba	85.20	41	IAmb	IAmb	03 03 31.2	
	comp=Z,6.0nm,0.9s						
LFF	La Frestale	85.53	337	eP	P	03 02 56.9	+0.8
LFF				pmax	pmax		
	comp=Z,40nm,1.4s						
ESDC	Sonseca Array	91.69	339	P	P	03 03 24.4	-1.0
	comp=Z,2.0nm,0.9s,baz=12,slow=3.4,SNR=15						
ESDC				LR	LR	03 49 41.0	
	comp=Z,46nm,19.3s,baz=16,slow=39						
	comp=Z,2.0nm,0.9s						
MDT	Midelt	98.33	337	LR	LR	03 54 31.2	
	comp=Z,34nm,19.1s,baz=117,slow=39						
TORD	Torodi Ar. Bea	114.30	324	PKP	PKiKP	03 08 56.9	-0.4
	comp=Z,0.4nm,0.3s,baz=30,slow=2.1,SNR=14						
TORD				pPKP	pPKiKP	03 09 34.9	-0.1
	comp=Z,0.4nm,0.5s,baz=20,slow=1.9,SNR=2.2						
TORD				PKKPab	PKKPab	03 19 45.1	-1.3
	comp=Z,0.3nm,0.8s,baz=201,slow=5.3,SNR=4.1						
DBIC	Dimbokro	122.80	327	PKP	PKPdf	03 09 13.2	-0.4
	comp=Z,2.6nm,0.7s,baz=41,slow=6.9,SNR=3.9						
H03N2	Juan Fernandez	142.28	88	T	T	05 49 00.6	
	baz=304,slow=77,SNR=17						
H03N3	Juan Fernandez	142.29	88	T	T	05 49 03.9	
	baz=304,slow=77,SNR=15						
H03N1	Juan Fernandez	142.29	88	T	T	05 49 02.0	
	baz=304,slow=77,SNR=16						
PTLB	Pontes e Lacer	142.40	46	eP	PKiKP	03 09 56.4	+3.1
PANT	Pantanal (Braz	146.67	46	eP	PKPab	03 10 00.8	0.0
NVL	N'lazarevskaya	146.92	205	ePKP2	PKPbc	03 09 59.4	+0.9
NVL				pmax	pmax		
	comp=Z,15nm,0.8s						
BDFB	Brasilia	147.42	30	PKPbc	PKPbc	03 10 02.3	+0.6
	comp=Z,5.0nm,0.7s,baz=333,slow=4.5,SNR=9.8						
BDFB				pPKPbc	pPKPbc	03 10 39.0	-0.4
	comp=Z,3.1nm,0.8s,baz=315,slow=4.3,SNR=2.3						
BDFB	Brasilia	147.42	30	eP	PKPbc	03 10 02.7	+1.0
AQDB	Aquidauana	148.38	46	eP	PKiKP	03 10 05.0	-0.5
CFA	Coronel Fontan	148.71	77	PKPbc	PKPbc	03 10 05.1	+0.5
	comp=Z,6.2nm,0.7s,baz=287,slow=3.1,SNR=17						
CFA				pPKPbc	pPKPbc	03 10 42.4	-0.1
	comp=Z,15nm,0.7s,baz=293,slow=3.5,SNR=13						
TROLL	Troll, Antarti	148.74	200	PKPdf	PKiKP	03 10 04.7	-0.2
CMC01	Camacan, BA	149.41	14	eP	PKiKP	03 10 07.6	-0.1
IPMB	Ipameri, GO	149.50	32	eP	PKiKP	03 10 07.6	-0.4
SNAA	Sanae	150.20	198	PKPdf	PKiKP	03 10 07.7	-0.1
GUA01	Guaratinga, BA	150.55	16	eP	PKiKP	03 10 09.8	-0.3
AMBA	Amambai (Brazi	150.77	48	eP	PKiKP	03 10 10.4	0.0
PLCA	Paso Flores	151.59	94	PKPbc	PKiKP	03 10 12.4	+0.8
	comp=Z,2.3nm,0.6s,baz=292,slow=6.0,SNR=9.8						
PLCA				pPKPbc	pPKPbc	03 10 49.3	-0.1
	comp=Z,11nm,0.8s,baz=265,slow=5.0,SNR=9.8						
NAN01	Guarapari, ES	151.72	17	eP	PKPbc	03 10 11.8	-0.2
VNA2	Neumayer--Watz	151.72	197	PKPdf	PKiKP	03 10 11.4	+0.5
	baz=153,slow=2.0						
VNA3	Neumayer Olymp	151.91	195	PKPdf	PKiKP	03 10 11.5	+0.2
CPUP	Villa Florida	152.18	56	PKPbc	PKiKP	03 10 13.4	+0.3
	comp=Z,1.1nm,0.7s,baz=346,slow=4.2,SNR=3.3						

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*NOU **09** 02:50:47.0, 41.°29S×172.°76E, h144^{km}, MLv3.8/8, South Island, New Zealand*

*WEL **09** 02:50:49.3±0.9, 41˚S±6˚×17˚3E±˚, h119^{km}±6^{km}, M2.9/7, MLv2.9/7, Error ellipse: s-maj=0.0km s-min=0.0km az=141.2, confirmed*

ISC 09 02:50:46.5±1.5**, 41.°32S**±0.°04×**172.°75E**±0.°05**, h148**^{km}±8^{km}**,**
n79, σ0.s93/88**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRNZ	Matariki Terra	0.08	177	P	Pn	02 51 07.0	+0.6
MRNZ				S	Sn	02 51 20.4	-1.2
TKNZ	Takaka Hill	0.32	29	P	Pn	02 51 07.3	+0.4
TKNZ				S	Sn	02 51 21.3	-1.1
THZ	Tophouse	0.46	166	P	Pn	02 51 08.6	+1.1
THZ				S	Sn	02 51 23.1	-0.4
NNZ	Nelson	0.48	78	P	Pn	02 51 08.1	+0.6
NNZ				S	Sn	02 51 23.1	-0.3

QRZ	Quartz Range	0.52	341	P	Pn	02 51 08.0	+0.3
QRZ	Quartz Range	0.52	341	P	Pn	02 51 08.2	+0.4
QRZ				S	Sn	02 51 22.0	-1.8
DSZ	Denniston Nort	0.83	239	P	Pn	02 51 10.3	+0.6
DSZ				S	Sn	02 51 25.5	-1.9
TUWZ	Tuamarina	0.90	98	P	Pn	02 51 11.4	+1.2
TUWZ				S	Sn	02 51 28.0	-0.3
BSWZ	Blackbirch Sta	0.93	116	P	Pn	02 51 11.6	+1.1
DUWZ	D'Urville Isla	1.02	60	P	Pn	02 51 12.4	+1.1
DUWZ				S	Sn	02 51 30.7	+0.5
TCW	Tory Channel	1.15	85	P	Pn	02 51 13.5	+1.1
KHZ	Kahutara	1.25	152	P	Pn	02 51 14.5	+1.2
KHZ	Kahutara	1.25	152	P	Pn	02 51 14.6	+1.4
KHZ				S	Sn	02 51 33.0	-0.8
LTZ	Lake Taylor	1.51	194	P	Pn	02 51 17.3	+1.3
WEL	Wellington	1.52	89	P	Pn	02 51 16.9	+0.8
GVZ	Greta Valley S	1.66	173	P	Pn	02 51 19.2	+1.5
KIW	Kapiti Island	1.69	75	P	Pn	02 51 18.6	+0.6
INZ	Inchbonnie	1.71	214	P	Pn	02 51 19.2	+1.0
CAW	Cannon Point	1.76	84	P	Pn	02 51 19.1	+0.3
AMCZ	Amberley	1.86	182	P	Pn	02 51 21.5	+1.6
OGWZ	Otaki Gorge	1.90	75	P	Pn	02 51 20.8	+0.5
PLWZ	Palliser	1.90	98	P	Pn	02 51 20.8	+0.4
OXZ	Oxford	2.08	195	P	Pn	02 51 23.0	+0.6
MTW	Mount Morrison	2.08	87	P	Pn	02 51 22.9	+0.4
NMEZ	Namu Road	2.09	25	P	Pn	02 51 24.1	+1.5
HOWZ	Holdsworth Sta	2.13	80	P	Pn	02 51 23.2	+0.2
MRZ	Mangatainoka R	2.24	74	P	Pn	02 51 24.3	0.0
KHEZ	Kahui Hut	2.24	26	P	Pn	02 51 25.2	+0.7
KHEZ	Kahui Hut	2.24	26	P	Pn	02 51 25.7	+1.2
NEZ	North Egmont	2.29	27	P	Pn	02 51 26.6	+1.5
WVZ	Waitaha Valley	2.31	220	P	Pn	02 51 26.4	+1.3
WAZ	Wanganui	2.31	48	P	Pn	02 51 27.0	+1.8
PKE	Pukeiti	2.32	24	P	Pn	02 51 26.9	+1.5
TMWZ	Te Maipa	2.38	86	P	Pn	02 51 26.4	+0.3
MHCZ	Mount Hutt	2.38	201	P	Pn	02 51 26.6	+0.5
MQZ	McQueen's Vall	2.39	182	P	Pn	02 51 26.7	+0.6
TIWZ	Tintock	2.43	78	P	Pn	02 51 26.8	+0.1
RACZ	Rakaia	2.45	190	P	Pn	02 51 27.6	+0.7
PRWZ	Pori Road	2.56	74	P	Pn	02 51 28.4	+0.2
AKCZ	Akaroa Harbour	2.56	177	P	Pn	02 51 29.3	+1.1
GCSZ	Gaunt Creek Bo	2.69	221	P	Pn	02 51 30.5	+0.7
WACZ	Wakanui South	2.71	194	P	Pn	02 51 31.0	+0.9
BFZ	Birch Farm	2.72	78	P	Pn	02 51 30.0	-0.2
BFZ	Birch Farm	2.72	78	P	Pn	02 51 30.2	-0.1
MTVZ	Mangateitei	2.84	48	P	Pn	02 51 32.5	+0.7
ARCZ	Arundel	2.87	203	P	Pn	02 51 32.4	+0.2
TRVZ	Turoa	2.94	48	P	Pn	02 51 33.9	+0.7
WNVZ	Wahianoa	2.95	49	P	Pn	02 51 33.9	+0.6
FWVZ	Far West T-bar	2.97	47	P	Pn	02 51 34.4	+0.7
PNHZ	Pukenui	2.98	63	P	Pn	02 51 33.2	-0.3
MOVZ	Moawhango	2.98	51	P	Pn	02 51 33.8	+0.2
TUVZ	Tukino	3.02	48	P	Pn	02 51 35.1	+0.9
NGZ	Ngauruhoe	3.06	46	P	Pn	02 51 35.9	+1.2
SNVZ	South Ngauruho	3.07	47	P	Pn	02 51 35.5	+0.7
WTVZ	West Tongariro	3.09	46	P	Pn	02 51 35.4	+0.4
OTVZ	Oturere	3.10	47	P	Pn	02 51 35.8	+0.6
FOZ	Fox Glacier	3.10	224	P	Pn	02 51 35.5	+0.5
BHHZ	Black Hill Sta	3.12	55	P	Pn	02 51 35.4	0.0
PRHZ	Porangahau	3.13	72	P	Pn	02 51 35.8	+0.4
ETVZ	East Tongariro	3.14	47	P	Pn	02 51 36.2	+0.4
NTVZ	North Tongarir	3.15	46	P	Pn	02 51 37.0	+1.1
TMVZ	Te Maari	3.15	47	P	Pn	02 51 36.4	+0.5
HIZ	Hauiti	3.23	31	P	Pn	02 51 37.3	+0.5
HIZ	Hauiti	3.23	31	P	Pn	02 51 37.6	+0.8
TMZ	Timaru	3.32	202	P	Pn	02 51 38.5	+0.6
KWHZ	Kaweka Forest	3.38	57	P	Pn	02 51 39.2	+0.4
KAHZ	Kahuranaki	3.49	66	P	Pn	02 51 39.9	-0.2
BKZ	Black Stump Fm	3.58	54	P	Pn	02 51 40.3	-1.0
BKZ	Black Stump Fm	3.58	54	P	Pn	02 51 39.7	-1.6
LBZ	Lake Benmore	3.60	211	P	Pn	02 51 41.9	+0.4
TLZ	Tolley Road	3.67	37	P	Pn	02 51 43.9	+1.4
JCZ	Jackson Bay	4.02	225	P	Pn	02 51 47.4	+0.5
JCZ	Jackson Bay	4.02	225	P	Pn	02 51 47.5	+0.5
ODZ	Otahua Downs	4.03	202	P	Pn	02 51 47.9	+0.8
ODZ	Otahua Downs	4.03	202	P	Pn	02 51 47.8	+0.7
WKZ	Wanaka	4.45	217	P	Pn	02 51 52.5	0.0
MWZ	Matawai	4.73	53	P	Pn	02 51 56.8	+0.5
WIAZ	Waiheke Island	4.88	23	P	Pn	02 52 00.7	+2.3
PKGZ	Pakihiroa	5.35	52	P	Pn	02 52 03.3	-1.3

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*IDC **09** 02:55:11.4±2.4, 24°.63N×94°.61E, h80^{km}±26^{km}, mb3.7/15, mbtmp4.0/17, Error ellipse: s-maj=18.4km s-min=13.0km az=45.0*

*NDI **09** 02:55:11.6±4.3, 24°.71N×94°.62E, h36^{km}±14^{km}, ML4.1, mb4.7(NEIC)*

*NEIC **09** 02:55:11.4±1.5, 24°.71N±0°.07×94°.57E±0°.07, h70^{km}±3^{km}, mb4.7/15, Error ellipse: s-maj=10.3km s-min=9.2km az=187.0*

ISC 09 02:55:11.2±0.8**, 24°.71N**±0°.04×**94°.50E**±0°.05**, h73**^{km}±8^{km}**, n74, σ1^{s}.56**/95**, mb4.3**/25**, 1C, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMP	Imphal	0.51	284	*e*P	Pn	02 55 25.0	+0.4
IMP				*e*S	Sn	02 55 34.9	+0.5
IMP				IAML		02 55 36.1	
	comp=N,5µm,0.2s						
IMP				IAML		02 55 37.4	
	comp=E,2µm,0.4s						
KOHI	KOHIMA	1.06	341	*e*P	Pn	02 55 30.9	0.0
KOHI				*e*S	Sn	02 55 46.2	+0.6
KOHI				IAML		02 55 50.0	
	comp=N,5µm,0.5s						
KOHI				IAML		02 55 53.5	
	comp=E,5µm,0.6s						
SILR	SILCHAR	1.54	273	*e*P	Pn	02 55 38.9	+2.0
SILR				*e*S	Sn	02 55 59.8	+3.6
SILR				IAML		02 56 03.9	
	comp=E,4µm,0.4s						
MOKO	MOKOCHONG	1.60	1	*e*P	Pn	02 55 37.3	-0.5
MOKO				*e*S	Sn	02 55 58.0	0.0
MOKO				IAML		02 56 03.5	
	comp=E,4µm,0.3s						
JORH	JORHAT	2.04	354	*e*P	Pn	02 55 46.2	+2.7
JORH				*e*S	Sn	02 56 08.0	0.0
JORH				IAML		02 56 15.8	
	comp=N,7µm,0.2s						
TEZP	TEZPUR	2.44	321	*e*P	Pn	02 55 47.6	-1.3
TEZP				*e*S	Sn	02 56 15.4	-2.4
TEZP				IAML		02 56 17.6	
	comp=E,3µm,0.2s						
SHL	Shillong	2.52	290		Pn	02 55 50.1	0.0
SHL	Shillong	2.52	290	*e*P	Pn	02 55 50.4	+0.3
SHL				*e*PN		02 55 53.0	
SHL				*e*S	Sn	02 56 18.6	-1.3
SHL				IAML		02 56 20.0	
	comp=E,2µm,0.3s						
SHL				IAML		02 56 21.4	
	comp=N,2µm,0.2s						
ITAN	ITANAGAR	2.52	344	*e*P	Pn	02 55 49.1	-1.0
ITAN				*e*S	Sn	02 56 21.2	+1.4
ITAN				IAML		02 56 30.5	
	comp=E,2µm,0.2s						
SAIH	SAIHA	2.61	212	*e*P	Pn	02 55 52.3	+1.0
SAIH				*e*S	Sn	02 56 23.6	+1.6
SAIH				IAML		02 56 31.2	
	comp=N,655nm,0.3s						
SAIH				IAML		02 56 31.4	
	comp=E,935nm,1.0s						
ZIRO	ZIRO	2.86	348	*e*P	Pn	02 55 53.4	-1.4
ZIRO				*e*S	Sn	02 56 27.4	-1.0
ZIRO				IAML		02 56 41.4	
	comp=E,3µm,0.5s						
MND	Mandalay	3.07	151	Pn	Pn	02 55 56.1	-1.4
BRDH	Bariadhala	3.31	233	P	Pn	02 56 01.1	+0.4
	comp=E,90nm,0.3s,baz=270,slow=12,SNR=1.2						
BRDH				S	Sn	02 56 40.5	+1.6
	comp=E,464nm,0.4s,baz=270,slow=19,SNR=15						
TNCH	TengChong	3.67	84	Pn	Pn	02 56 04.3	-1.5
TNCH				Pg		02 56 14.1	
TNCH				Sn	Sn	02 56 42.6	-5.3
TNCH				Sg		02 56 59.6	
TNCH				smax	smax		
	comp=N,220nm,1.3s						
TNCH				smax	smax		
	comp=E,160nm,0.9s						
TNCH				LR	LR		
	comp=N,580nm,3.2s						
TNCH				LR	LR		
	comp=E,850nm,2.0s						
LSA	Lhasa	5.79	330	P	Pn	02 56 36.2	+1.1
LSA				pmax	pmax		
	comp=Z,19nm,0.4s						
LSA	Lhasa	5.79	330	Pn	Pn	02 56 35.6	+0.5
GTK	Tadong	5.91	297	*e*S	Sn	02 57 42.5	-0.1
TAPN	Taplejung	6.65	295	*e*Pn	Pn	02 56 47.9	+1.3
TAPN				*e*Sn	Sn	02 58 01.4	+0.4
	comp=Z,106nm,0.3s						
ODAN	Odare	6.75	290	*e*Pn	Pn	02 56 48.2	+0.2
ODAN				*e*Sn	Sn	02 58 01.6	-2.0
	comp=Z,582nm,0.3s						
CRAI	Chiangrai	7.03	128		Pn	02 56 52.1	+0.5
CHTO	Chiang Mai	7.18	144	Pn	Pn	02 56 53.2	-0.3
RAMN	Ramite	7.46	289	*e*Pn	Pn	02 56 58.0	+0.4
RAMN				*e*Sn	Sn	02 58 17.2	-3.6
	comp=Z,150nm,0.3s						
CMAR	Chiang Mai Arr	7.47	146	P	Pn	02 56 57.1	-0.5
	comp=Z,7.8nm,0.6s,baz=322,slow=14,SNR=47						
KMI	Kunming	7.50	85	⇑P	Pn	02 57 01.2	+3.1
KMI				pmax	pmax		
	comp=Z,28nm,1.0s						
BOK	Bokaro	7.91	265	*e*P	Pn	02 57 03.0	-0.6
BOK				*e*S	Sn	02 58 27.3	-4.3
JIRN	Jiri	8.02	293	*e*Pn	Pn	02 57 05.8	+0.4
JIRN				*e*Sn	Sn	02 58 32.8	-1.9
	comp=Z,137nm,0.3s						
PHRA	Phrae	8.16	138	Pn	Pn	02 57 05.6	-1.4
GUN	Gumba	8.36	294	*e*Pn	Pn	02 57 10.2	+0.1
GUN				*e*Sn	Sn	02 58 41.8	-1.3
	comp=Z,148nm,0.4s						
PKI	Pulchoki	8.65	291	*e*Pn	Pn	02 57 13.4	-0.5
PKI				*e*Sn	Sn	02 58 46.4	-3.7
	comp=Z,43nm,0.3s						
PKIN	Phulchoki	8.66	291	*e*Pn	Pn	02 57 13.6	-0.5
PKIN				*e*Sn	Sn	02 58 46.7	-3.6
	comp=Z,89nm,0.3s						
KKN	Kakani	8.82	292	*e*Sn	Sn	02 58 51.9	-2.3
	comp=Z,157nm,0.2s						
DMN	Daman	8.92	291	*e*Pn	Pn	02 57 17.5	0.0
DMN				*e*Sn	Sn	02 58 53.6	-2.9
	comp=Z,104nm,0.5s						
GKN	Gorkha	9.43	292	*e*Pn	Pn	02 57 24.0	-0.5
GKN				*e*Sn	Sn	02 59 05.1	-3.9
	comp=Z,142nm,0.3s						
DANN	Dangsing	10.27	293	*e*Pn	Pn	02 57 36.2	+0.1
PYUN	Piuthan	10.85	291	*e*Pn	Pn	02 57 43.7	-0.2
NIL	Nilore	20.55	301	P	P	02 59 45.0	+1.1
MK31	Makanchi Array	24.10	339	P	P	03 00 21.1	+1.2
MKAR	Makanchi Array	24.10	339	P	P	03 00 20.7	+0.7
	comp=Z,3.6nm,0.5s,baz=149,slow=10,SNR=16						
	comp=Z,3.6nm,0.5s						
MKAR	Makanchi Array	24.10	339	P	P	03 00 20.4	+0.5
KBL	Kabul	24.14	300	P	P	03 00 20.4	-0.2
KBL				IAmb	IAmb	03 00 21.2	
	comp=Z,30nm,0.8s						
KBL	Kabul	24.14	300	P	P	03 00 20.3	-0.7
	SNR=16						
MAKZ	Makanchi	24.22	339	P	P	03 00 21.2	+0.2
AAK	Ala-Archa	24.33	322	P	P	03 00 23.6	+1.4
	comp=Z,3.1nm,0.8s,baz=127,slow=5.1,SNR=4.2						
	comp=Z,3.1nm,0.8s						
GAR	Garm	24.90	311	P	P	03 00 28.1	+0.7
GAR				IAmb	IAmb	03 00 30.3	
	comp=Z,22nm,0.8s						
SONM	Songino Array	24.93	19	P	P	03 00 28.3	+0.7
	comp=Z,1.7nm,0.5s,baz=196,slow=9.1,SNR=6.4						
	comp=Z,1.7nm,0.5s						
KKAR	Karatay Array	26.92	319	P	P	03 00 45.4	-0.2
KURBB	Kurchatov Arra	28.66	339	P	P	03 01 01.3	+0.4
	comp=Z,1.8nm,0.2s,baz=147,slow=9.8,SNR=2.0						
	comp=Z,1.8nm,0.2s						
ZALV	Zalesovo Beam	30.09	349	P	P	03 01 13.4	-0.1
	comp=Z,1.1nm,0.3s,baz=157,slow=7.5,SNR=5.5						
	comp=Z,1.1nm,0.3s						
HEH	HeiHe	36.02	36	*e*P	P	03 02 18.1	+13
HEH				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ABKAR	Akbulak array	36.41	321	P	P	03 02 09.9	+1.4
ABKAR				IAmb	IAmb	03 02 10.8	
	comp=Z,4.5nm,1.0s						
ABKAR	Akbulak array	36.41	321	P	P	03 02 09.7	+1.2
AKTO	Aktyubinsk	38.07	322	P	P	03 02 23.1	+0.4
	comp=Z,1.5nm,0.3s,baz=118,slow=6.7,SNR=5.9						
	comp=Z,1.5nm,0.3s						
MJAR	Matsushiro Arr	39.12	62	P	P	03 02 29.9	-1.6
	comp=Z,1.2nm,0.6s,baz=247,slow=9.0,SNR=2.0						
	comp=Z,1.2nm,0.6s						
TIXI	Tiksi	50.80	13	P	P	03 04 03.2	-0.5
	comp=Z,2.4nm,0.3s,baz=90,slow=8.7,SNR=13						
	comp=Z,2.4nm,0.3s						
TIXI	Tiksi	50.80	13	P	P	03 04 03.1	-0.5
TIXI				IAmb	IAmb	03 04 06.8	
	comp=Z,3.4nm,0.5s						
BRTR	Keskin Array B	52.68	302	P	P	03 04 19.6	+1.2
	comp=Z,0.6nm,0.6s,baz=70,slow=9.3,SNR=4.1						
	comp=Z,0.6nm,0.6s						
AKASG	Malin Array Be	55.75	316	P	P	03 04 40.2	-0.2
	comp=Z,0.3nm,0.3s,baz=82,slow=6.0,SNR=4.1						
	comp=Z,0.3nm,0.3s						
ELL	Elmali	55.87	299	P	P	03 04 42.3	+0.7
MLR	Muntele Rosu	58.03	309	P	P	03 04 57.7	+0.9
MLR				IAmb	IAmb	03 05 23.8	
	comp=Z,6.1nm,1.1s						
FIA1	FINESS Array S	58.31	328	P	P	03 04 58.5	+0.3
FIA1				IAmb	IAmb	03 05 29.8	
	comp=Z,10.0nm,0.9s						
FINES	FINESS Array B	58.31	328	P	P	03 04 58.3	+0.1
	comp=Z,1.0nm,0.6s,baz=91,slow=5.1,SNR=5.8						
	comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	58.31	328	P	P	03 04 59.2	+1.0
WB0	Warramunga Arr	58.84	135	P	P	03 05 01.0	-1.5
WB0				IAmb	IAmb	03 05 02.1	
	comp=Z,5.3nm,1.4s						
WRA	Warramunga Arr	58.94	135	P	P	03 05 01.3	-1.9
	comp=Z,0.2nm,0.3s,baz=321,slow=7.4,SNR=12						
	comp=Z,0.2nm,0.3s						
PABE	Paberze	59.05	321	P	P	03 05 04.0	+0.6
ASAR	Alice Springs	61.42	138	P	P	03 05 19.2	-0.9
	comp=Z,0.4nm,0.3s,baz=315,slow=6.5,SNR=9.4						
	comp=Z,0.4nm,0.3s						
SPITS	Spitsbergen Ar	63.55	347	P	P	03 05 34.1	+0.6
	comp=Z,16nm,1.0s,baz=92,slow=15,SNR=2.3						
NOA	NORSAR Array B	65.48	328	P	P	03 05 46.2	-0.2
	comp=Z,0.2nm,0.4s,baz=94,slow=5.4,SNR=1.2						
	comp=Z,0.2nm,0.4s						
GERES	GERESS Array B	65.91	314	P	P	03 05 50.3	+0.8
	comp=Z,0.4nm,0.4s,baz=64,slow=2.3,SNR=4.0						
	comp=Z,0.4nm,0.4s						
GERES	GERESS Array B	65.91	314	P	P	03 05 49.6	+0.2
SVW2	Sparrevohn	77.71	28	P	P	03 07 00.0	+0.2
SVW2				IAmb	IAmb	03 07 06.9	
	comp=Z,15nm,1.3s						
BMAR	Burnt Mountain	78.28	20	P	P	03 07 03.4	+0.4
PRP	Porcupine Dome	79.13	22	P	P	03 07 07.1	-0.7
A36M	Sachs Harbour	79.78	12	P	P	03 07 11.2	+0.3
A36M				IAmb	IAmb	03 07 14.3	
	comp=Z,6.2nm,0.8s						

ROM 09 03:07:25.4±0.0**, 42°.859N**±0°.002×**13°.227E**±0°.003**, h10**^{km}**, ML2.5**/53**, 29C-14D, Error ellipse: s-maj=0.2km s-min=0.2km az=266.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1245	Castelsantange	0.03	264	⇓P	Pg	03 07 27.7	+0.1
T1245				S	Sg	03 07 29.0	-0.1
T1245				AML	AML		
	comp=E,76050µm,1.5s						
T1245				AML	AML		
	comp=N,73500µm,1.1s						
T1245				AML	AML		
	comp=E,76050µm,1.5s						
T1245				AML	AML		
	comp=N,73500µm,1.1s						
T1245				AML	AML		
	comp=E,76900µm,1.5s						
T1245				AML	AML		
	comp=N,68500µm,1.1s						
T1245				AML	AML		
	comp=E,76900µm,0.5s						
T1245				AML	AML		
	comp=E,76050µm,0.5s						
MC2	Monte Cornacci	0.06	333	P	Pg	03 07 28.1	+0.2
MC2				S	Sg	03 07 29.7	+0.1
MMO1	Montemonaco	0.08	61	⇓P	Pg	03 07 28.3	+0.3
MMO1				S	Sg	03 07 29.9	+0.1
T1214	Arquata del Tr	0.10	188	⇓P	Pg	03 07 28.7	+0.4
T1214				S	Sg	03 07 30.7	+0.5
T1214				AML	AML		
	comp=N,14500µm,0.3s						
T1214				AML	AML		
	comp=E,9595µm,0.2s						
T1214				AML	AML		
	comp=N,14400µm,0.3s						
T1214				AML	AML		
	comp=N,14500µm,0.3s						
T1214				AML	AML		
	comp=E,9590µm,0.2s						
T1214				AML	AML		
	comp=E,9855µm,0.2s						
T1214				AML	AML		
	comp=N,14400µm,0.3s						
T1256	Bolognola (MC)	0.15	360	P	Pg	03 07 29.3	+0.4
T1256				S	Sg	03 07 31.9	+0.5
T1256				AML	AML		
	comp=E,2620µm,1.0s						
T1256				AML	AML		
	comp=N,2650µm,1.3s						
T1256				AML	AML		
	comp=E,2620µm,1.0s						
T1256				AML	AML		
	comp=E,2620µm,1.0s						
T1256				AML	AML		
	comp=N,2335µm,0.5s						
T1256				AML	AML		
	comp=E,2695µm,0.4s						
T1256				AML	AML		
	comp=N,2650µm,0.7s						
T1241	Roccafluvione,	0.15	91	P	Pg	03 07 29.4	+0.6
T1241				S	Sg	03 07 32.2	+0.9
T1241				AML	AML		
	comp=E,4975µm,0.2s						
T1241				AML	AML		
	comp=E,5140µm,0.2s						
T1241				AML	AML		
	comp=N,3225µm,0.3s						
T1241				AML	AML		
	comp=N,3085µm,0.3s						
T1216	Preci, Frazion	0.16	282	⇑P	Pg	03 07 29.5	+0.6
T1216				S	Sg	03 07 32.3	+0.9
T1216				AML	AML		
	comp=N,7260µm,0.2s						
T1216				AML	AML		
	comp=E,4995µm,1.4s						
T1216				AML	AML		
	comp=N,7260µm,0.2s						
T1216				AML	AML		
	comp=E,4995µm,0.6s						
FEMA	Monte Fema	0.17	308	⇑P	Pg	03 07 29.8	+0.6
FEMA				S	Sg	03 07 32.8	+1.0
FEMA				AML	AML		
	comp=E,5080µm,0.2s						
FEMA				AML	AML		
	comp=N,3615µm,0.6s						
FEMA				AML	AML		
	comp=E,5080µm,0.2s						
FEMA				AML	AML		
	comp=N,3615µm,0.6s						
FEMA				AML	AML		
	comp=E,5080µm,1.8s						
T1212	Cascia, Frazio	0.17	231	⇑P	Pg	03 07 29.9	+0.6
T1212				S	Sg	03 07 32.8	+1.0
T1212				AML	AML		
	comp=N,4715µm,0.5s						
T1212				AML	AML		
	comp=E,6260µm,0.2s						
T1212				AML	AML		
	comp=N,4700µm,0.5s						
T1212				AML	AML		
	comp=E,6145µm,0.2s						
T1212				AML	AML		
	comp=N,4715µm,0.6s						
T1212				AML	AML		
	comp=E,6145µm,1.8s						
T1212				AML	AML		
	comp=E,6260µm,1.8s						
T1218	Civita (PG)	0.21	204	P	Pg	03 07 30.5	+0.7
T1218				S	Sg	03 07 34.2	+1.4
T1218				AML	AML		
	comp=N,5735µm,0.2s						
T1218				AML	AML		
	comp=E,5225µm,0.5s						
T1218				AML	AML		
	comp=N,5735µm,0.2s						
T1218				AML	AML		
	comp=E,5000µm,0.5s						
T1218				AML	AML		
	comp=N,5710µm,0.2s						
GUMA	Gualdo di Mace	0.22	21	P	Pb	03 07 30.9	-0.6
GUMA				S	Sg	03 07 34.9	+1.8
GUMA				AML	AML		
	comp=E,3500µm,0.4s						
GUMA				AML	AML		
	comp=N,4305µm,0.8s						
GUMA				AML	AML		
	comp=N,4400µm,0.8s						
GUMA				AML	AML		
	comp=E,3500µm,0.4s						
GUMA				AML	AML		
	comp=E,4080µm,0.3s						
CSP1	Cessapalombo	0.23	356	P	Pg	03 07 30.9	+0.5
CSP1				S	Sg	03 07 34.9	+1.2
CSP1				AML	AML		
	comp=N,2780µm,0.3s						
CSP1				AML	AML		
	comp=E,1670µm,0.3s						
CSP1				AML	AML		
	comp=N,2780µm,1.7s						
SMA1	SAN MARTINO	0.24	161	P	Pg	03 07 30.9	+0.5
SMA1				S	Sg	03 07 34.8	+1.0
SMA1				AML	AML		
	comp=E,2485µm,0.6s						
SMA1				AML	AML		
	comp=N,2860µm,0.4s						
SMA1				AML	AML		
	comp=E,2485µm,1.4s						
SMA1				AML	AML		
	comp=N,2860µm,1.6s						
T1219	Muccia, Frazio	0.25	321	P	Pg	03 07 31.2	+0.5
T1219				S	Sb	03 07 35.5	-1.1
T1219				AML	AML		
	comp=E,1500µm,0.6s						
T1219				AML	AML		
	comp=E,1465µm,0.6s						
T1219				AML	AML		
	comp=N,2075µm,0.2s						
T1219				AML	AML		
	comp=N,2055µm,0.2s						
T1219				AML	AML		
	comp=E,1500µm,0.6s						
T1219				AML	AML		
	comp=E,1465µm,0.6s						
T1219				AML	AML		
	comp=E,1500µm,1.4s						
T1219				AML	AML		
	comp=E,1465µm,1.4s						
T1217	Poggiodomo (PG	0.26	236	AML	AML		
	comp=N,801µm,1.2s						
T1217				AML	AML		
	comp=E,670µm,0.3s						
T1217				AML	AML		
	comp=N,841µm,1.2s						
T1217				AML	AML		
	comp=E,616µm,0.4s						
T1217				AML	AML		
	comp=E,670µm,0.3s						
T1217				AML	AML		
	comp=E,616µm,0.4s						
T1217				AML	AML		
	comp=E,670µm,1.7s						
T1217				AML	AML		
	comp=N,841µm,0.8s						
T1217				AML	AML		
	comp=N,801µm,0.8s						
T1215	Vallo di Nera,	0.27	258	AML	AML		
	comp=E,508µm,1.5s						
T1215				AML	AML		
	comp=E,508µm,0.5s						
T1215				AML	AML		
	comp=N,680µm,0.3s						
T1215				AML	AML		

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       comp=E,484µm,0.5s
T1215                              AML    AML
       comp=N,695µm,0.3s
T1215                              AML    AML
       comp=N,680µm,1.7s
T1215                              AML    AML
       comp=E,484µm,1.5s
T1215                              AML    AML
       comp=N,695µm,1.7s
T1220  Camerino, Fraz     0.27 338 ⇑P     Pg       03 07 31.5 +0.5
T1220                              AML    AML
       comp=E,6325µm,0.3s
T1220                              AML    AML
       comp=E,6325µm,0.3s
T1220                              AML    AML
       comp=E,6325µm,1.7s
T1220                              AML    AML
       comp=N,8470µm,0.2s
CESI   CESI - Serrava     0.28 302 AML    AML
       comp=E,1985µm,0.4s
CESI                               AML    AML
       comp=N,2810µm,0.2s
OFFI   Offida             0.34  77 ⇓P     Pb       03 07 33.7 +0.1
OFFI                               AML    AML
       comp=E,1330µm,0.7s
OFFI                               AML    AML
       comp=N,2020µm,0.6s
CAMP   Campotosto         0.35 157 ⇑P     Pg       03 07 32.7 +0.3
CAMP                               AML    AML
       comp=N,1070µm,0.2s
CAMP                               AML    AML
       comp=E,794µm,0.9s
CAMP                               AML    AML
       comp=E,794µm,1.1s
RM33   Pellescritta (     0.35 182 ⇑P     Pg       03 07 32.9 +0.4
RM33                               AML    AML
       comp=N,890µm,1.1s
RM33                               AML    AML
       comp=E,1024µm,1.6s
RM33                               AML    AML
       comp=E,1099µm,1.6s
RM33                               AML    AML
       comp=N,888µm,1.5s
RM33                               AML    AML
       comp=E,1024µm,0.4s
RM33                               AML    AML
       comp=E,1099µm,0.4s
RM33                               AML    AML
       comp=N,890µm,0.9s
RM33                               AML    AML
       comp=N,888µm,0.5s
TERO   Teramo             0.36 130 AML    AML
       comp=E,1900µm,0.2s
TERO                               AML    AML
       comp=N,1910µm,0.6s
TERO                               AML    AML
       comp=N,1775µm,0.6s
TERO                               AML    AML
       comp=E,1715µm,0.2s
GAG1   Gagliole           0.40 343 ⇑P     Pb       03 07 34.0 -0.5
T1247  Pizzolo (AQ)       0.42 173 ⇑P     Pg       03 07 34.1 +0.3
T1247                              AML    AML
       comp=E,1220µm,0.3s
T1247                              AML    AML
       comp=N,1525µm,0.2s
T1211  Morro Reatino      0.43 220 ⇑P     Pg       03 07 34.2 +0.4
T1211                              AML    AML
       comp=E,592µm,1.4s
T1211                              AML    AML
       comp=E,584µm,1.2s
T1211                              AML    AML
       comp=N,708µm,1.1s
T1211                              AML    AML
       comp=N,696µm,0.4s
T1211                              AML    AML
       comp=N,708µm,1.1s
T1211                              AML    AML
       comp=N,696µm,1.6s
ARRO   Arrone             0.44 231 ⇓P     Pg       03 07 34.6 +0.5
ARRO                               AML    AML
       comp=N,311µm,1.2s
ARRO                               AML    AML
       comp=E,337µm,1.1s
ARRO                               AML    AML
       comp=N,311µm,0.8s
SNTG   Esanatoglia        0.45 332 ⇑P     Pg       03 07 34.5 +0.2
SNTG                               AML    AML
       comp=E,382µm,0.5s
SNTG                               AML    AML
       comp=N,441µm,0.9s
SNTG                               AML    AML
       comp=E,328µm,0.8s
SNTG                               AML    AML
       comp=E,382µm,1.5s
SNTG                               AML    AML
       comp=E,328µm,1.2s
SNTG                               AML    AML
       comp=N,384µm,0.6s
ASSB   Assisi San Ben     0.46 294 ⇑P     Pg       03 07 34.7 +0.3
ASSB                               AML    AML
       comp=E,872µm,0.3s
ASSB                               AML    AML
       comp=N,825µm,0.7s
EL6    Elcito             0.48 349 ⇑P     Pg       03 07 35.2 +0.3
EL6                                AML    AML
       comp=E,658µm,0.3s
EL6                                AML    AML
       comp=N,675µm,0.4s
EL6                                AML    AML
       comp=E,659µm,0.3s
T1222  Castel Sant'An     0.48 197 ⇑P     Pg       03 07 34.9 +0.1
T1222                              AML    AML
       comp=E,561µm,1.5s
T1222                              AML    AML
       comp=E,470µm,1.5s
T1222                              AML    AML
       comp=N,418µm,0.8s
T1222                              AML    AML
       comp=E,470µm,0.5s
T1222                              AML    AML
       comp=N,444µm,1.1s
T1222                              AML    AML
       comp=E,561µm,0.5s
GIGS   Gran Sasso         0.48 148  P     Pg       03 07 34.8  0.0
GIGS                               AML    AML
       comp=N,182µm,0.3s
GIGS                               AML    AML
       comp=E,169µm,0.5s
GIGS                               AML    AML
       comp=E,169µm,1.5s
MOMA   Monte Martano      0.49 264 ⇓P     Pg       03 07 35.5 +0.6
MOMA                                S     Sb       03 07 43.5 +0.2
MOMA                               AML    AML
       comp=E,649µm,1.5s
MOMA                               AML    AML
       comp=N,465µm,1.1s
MOMA                               AML    AML
       comp=E,649µm,1.5s
MOMA                               AML    AML
       comp=E,533µm,0.2s
MOMA                               AML    AML
       comp=N,465µm,0.9s
MOMA                               AML    AML
       comp=N,430µm,0.4s
MOMA                               AML    AML
       comp=E,649µm,0.5s
CING   Cingoli            0.52 357 ⇑P     Pg       03 07 35.8 +0.3
CING                               AML    AML
       comp=E,638µm,0.6s
CING                               AML    AML
       comp=N,525µm,0.2s
AQU    L'Aquila           0.52 166 ⇑P     Pg       03 07 35.7 +0.1
AQU                                 S     Sb       03 07 43.7 -0.6
AQU                                AML    AML
       comp=E,347µm,0.3s
AQU                                AML    AML
       comp=N,312µm,0.7s
AQU                                AML    AML
       comp=N,312µm,1.3s
CESX   Cesi               0.54 243 ⇑P     Pg       03 07 36.0 +0.1
CESX                               AML    AML
       comp=E,231µm,1.3s
CESX                               AML    AML
       comp=N,274µm,0.4s
ATCC   AVT- Casa Cast     0.54 307 ⇑P     Pg       03 07 36.3 +0.4
ATCC                               AML    AML
       comp=E,462µm,1.5s
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ATCC                               AML    AML
       comp=N,546µm,0.6s
ATCC                               AML    AML
       comp=E,462µm,0.5s
ATCC                               AML    AML
       comp=N,546µm,1.4s
FOSV   Fossato di Vic     0.55 322 ⇑P     Pg       03 07 36.5 +0.3
FOSV                                S     Sb       03 07 45.3 +0.1
FOSV                               AML    AML
       comp=N,758µm,0.2s
FOSV                               AML    AML
       comp=E,961µm,0.3s
PP3    Marolino           0.59  28 ⇑P     Pb       03 07 38.5 +0.7
PP3                                AML    AML
       comp=E,1350µm,1.6s
PP3                                AML    AML
       comp=N,1955µm,1.3s
PP3                                AML    AML
       comp=E,1330µm,0.4s
PP3                                AML    AML
       comp=N,2055µm,1.3s
PP3                                AML    AML
       comp=N,2055µm,0.7s
PP3                                AML    AML
       comp=E,1350µm,0.4s
PP3                                AML    AML
       comp=N,1955µm,0.7s
FIAM   Fiamignano         0.60 188 ⇑P     Pg       03 07 37.0  0.0
FIAM                                S     Sb       03 07 46.2 -0.3
FIAM                               AML    AML
       comp=N,187µm,1.5s
FIAM                               AML    AML
       comp=N,187µm,0.5s
FIAM                               AML    AML
       comp=E,197µm,0.6s
FAGN   Fagnano            0.65 156 ⇓P     Pg       03 07 37.9 -0.1
FAGN                               AML    AML
       comp=N,628µm,0.3s
FAGN                               AML    AML
       comp=E,548µm,0.2s
FAGN                               AML    AML
       comp=E,548µm,1.8s
FAGN                               AML    AML
       comp=N,628µm,1.7s
VCEL   Villa Celiera      0.65 136 ⇓P     Pg       03 07 38.4 +0.4
VCEL                               AML    AML
       comp=E,438µm,1.3s
VCEL                               AML    AML
       comp=N,366µm,1.5s
VCEL                               AML    AML
       comp=E,438µm,0.7s
VCEL                               AML    AML
       comp=N,366µm,0.5s
MURB   Monte Urbino       0.65 308  P     Pg       03 07 38.4 +0.2
MURB                               AML    AML
       comp=E,707µm,0.3s
MURB                               AML    AML
       comp=N,1007µm,0.2s
MURB                               AML    AML
       comp=N,900µm,0.2s
MURB                               AML    AML
       comp=N,1008µm,0.2s
MURB                               AML    AML
       comp=E,802µm,0.3s
SSFR   Montelago di S     0.66 331 ⇑P     Pg       03 07 38.6 +0.3
SSFR                               AML    AML
       comp=E,690µm,1.0s
SSFR                               AML    AML
       comp=N,887µm,0.3s
SSFR                               AML    AML
       comp=E,591µm,1.0s
SSFR                               AML    AML
       comp=N,872µm,0.3s
SSFR                               AML    AML
       comp=E,690µm,1.0s
SSFR                               AML    AML
       comp=N,872µm,1.7s
ARVD   Arcevia            0.67 342 ⇑P     Pg       03 07 38.6 +0.1
ARVD                                S     Sb       03 07 49.7 +1.1
ARVD                               AML    AML
       comp=E,260µm,0.7s
ARVD                               AML    AML
       comp=N,187µm,0.7s
T0110  Collepietro        0.75 147 ⇑P     Pg       03 07 39.7 -0.3
T0110                              AML    AML
       comp=E,344µm,0.9s
T0110                              AML    AML
       comp=N,500µm,0.4s
T0110                              AML    AML
       comp=E,344µm,1.1s
FRON   Frontone           0.75 331 ⇑P     Pg       03 07 40.0 -0.1
FRON                               AML    AML
       comp=E,177µm,0.9s
FRON                               AML    AML
       comp=N,299µm,0.4s
COR1   Corinaldo          0.79 348  P     Pb       03 07 41.8 +0.5
ATVO   AVT- Monte Val     0.80 311 ⇑P     Pg       03 07 40.7 -0.1
ATVO                               AML    AML
       comp=E,186µm,1.0s
ATVO                               AML    AML
       comp=N,128µm,0.4s
ATVO                               AML    AML
       comp=E,186µm,1.0s
MGAB   Montegabbione      0.82 274  P     Pn       03 07 43.9 +0.8
MPAG   Monte Paganucc     0.84 336 ⇓P     Pb       03 07 42.0 -0.2
MPAG                               AML    AML
       comp=E,176µm,0.9s
MPAG                               AML    AML
       comp=N,142µm,0.7s
MPAG                               AML    AML
       comp=E,176µm,1.1s
ATPI   Pietralunga -      0.84 315 ⇑P     Pg       03 07 41.7  0.0
ATPI                               AML    AML
       comp=N,113µm,0.4s
ATPI                               AML    AML
       comp=E,147µm,0.7s
PIEI   Pieia              0.84 323 ⇓P     Pg       03 07 41.5 -0.2
PIEI                               AML    AML
       comp=N,142µm,1.5s
PIEI                               AML    AML
       comp=N,142µm,0.5s
PIEI                               AML    AML
       comp=E,160µm,1.0s
ATMI   Monte Miggiano     0.85 304  P     Pb       03 07 42.7 +0.4
ATMI                               AML    AML
       comp=E,374µm,1.0s
ATMI                               AML    AML
       comp=N,456µm,0.5s
ATMI                               AML    AML
       comp=E,374µm,1.0s
ATMI                               AML    AML
       comp=N,456µm,1.5s
FSSB   Fossombrone        0.90 339 ⇓P     Pb       03 07 43.0 -0.1
FSSB                               AML    AML
       comp=N,616µm,0.3s
FSSB                               AML    AML
       comp=E,584µm,0.3s
APEC   Apecchio           0.92 320 ⇑P     Pb       03 07 43.4 -0.1
APEC                               AML    AML
       comp=N,174µm,1.2s
APEC                               AML    AML
       comp=E,186µm,0.6s
APEC                               AML    AML
       comp=N,174µm,0.8s
CERT   Cerreto            0.93 191 ⇑P     Pn       03 07 44.3 -0.3
CERT                               AML    AML
       comp=N,115µm,1.0s
CERT                               AML    AML
       comp=E,214µm,0.5s
BADI   Badiali            0.97 312  P     Pg       03 07 44.1  0.0
INTR   Introdacqua        0.98 149 ⇓P     Pg       03 07 43.4 -1.0
INTR                               AML    AML
       comp=E,96µm,0.8s
INTR                               AML    AML
       comp=N,156µm,1.6s
INTR                               AML    AML
       comp=N,156µm,0.4s
PE3    Peglio             0.99 328 ⇓P     Pg       03 07 44.6 +0.1
CAFI   Castiglion Fio     1.04 297 ⇑P     Pg       03 07 45.3 -0.1
CAFI                               AML    AML
       comp=E,72µm,1.6s
CAFI                               AML    AML
       comp=E,72µm,0.4s
CAFI                               AML    AML
       comp=N,75µm,1.0s
LPEL   Lama dei Pelig     1.08 139 ⇓P     Pg       03 07 45.9 -0.3
DUGI   Dugi Otok          1.75  49  Sn    Sb       03 08 19.8 +0.2
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VIRC   Vir                1.95  42  Sn    Sn       03 08 24.1 +1.0
NVLJ   Novalja            2.08  34  Sn    Sb       03 08 28.3 -0.7
BRJN   Brijuni            2.08  10 ePn    Pn       03 08 00.5 +0.1
RABC   Rab                2.20  30  Sn    Sn       03 08 30.3 +1.1
MSAG   Monte S. Angel     2.30 119  P     Pb       03 08 05.7 -1.3
UDBI   Udbina             2.48  47  Sn    Sb       03 08 39.2 -1.6
UDBI   Udbina             2.48  47 ePn    Pn       03 08 07.7 +1.7
ABTA   Abfaltersbach      3.92 353 ePn    Pn       03 08 27.8 +2.0
       comp=N,0.9nm,0.3s
KBA    Koelnbreinsper     4.22   1 ePn    Pn       03 08 31.7 +1.8
       comp=N,0.7nm,0.3s
MOTA   Moosalm            4.73 342  Pn    Pn       03 08 42.5 +5.5
       comp=N,0.7nm,0.3s
```

ROM 09 03:08:15.4±0.0,**42°.777N**±0°.002×**13°.127E**±0°.003,
h11$^{\text{km}}$,ML2.0/19,**12C-7D,Error ellipse: s-maj=0.2km**
s-min=0.2km az=328.0,Central Italy

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Code   Station Name        Δ°  AZ°  Phase ID          Time     Res
                                    Op    ISC       h  m  s    ISC
T1214  Arquata del Tr     0.06 106  P     Pg       03 08 18.0 +0.2
T1214                               S     Sg       03 08 19.7 +0.1
T1214                              AML    AML
       comp=E,3210µm,0.5s
T1214                              AML    AML
       comp=E,3210µm,0.4s
T1214                              AML    AML
       comp=E,3140µm,0.1s
T1214                              AML    AML
       comp=N,4295µm,0.6s
T1214                              AML    AML
       comp=N,4535µm,0.6s
T1214                              AML    AML
       comp=N,4290µm,0.6s
T1214                              AML    AML
       comp=N,4290µm,1.4s
T1214                              AML    AML
       comp=N,4535µm,1.4s
T1214                              AML    AML
       comp=E,3140µm,0.1s
T1214                              AML    AML
       comp=E,3210µm,1.5s
T1212  Cascia, Frazio     0.07 247  P     Pg       03 08 18.1 +0.3
T1212                               S     Sg       03 08 19.7 +0.2
T1212                              AML    AML
       comp=E,3350µm,0.2s
T1212                              AML    AML
       comp=N,4185µm,0.6s
T1212                              AML    AML
       comp=E,3475µm,0.2s
T1212                              AML    AML
       comp=E,3480µm,0.2s
T1212                              AML    AML
       comp=N,4090µm,0.6s
T1212                              AML    AML
       comp=N,4090µm,1.4s
T1212                              AML    AML
       comp=N,4185µm,1.4s
T1245  Castelsantange     0.09  29  P     Pg       03 08 18.4 +0.3
T1245                               S     Sg       03 08 20.3 +0.1
T1245                              AML    AML
       comp=N,2645µm,0.3s
T1245                              AML    AML
       comp=N,2490µm,0.3s
T1245                              AML    AML
       comp=E,1790µm,0.6s
T1245                              AML    AML
       comp=E,1820µm,0.6s
T1218  Civita (PG)        0.11 185 ⇓P     Pg       03 08 18.6 +0.4
T1218                              AML    AML
       comp=E,1910µm,0.1s
T1218                              AML    AML
       comp=N,1645µm,1.4s
T1218                              AML    AML
       comp=E,1835µm,0.9s
T1218                              AML    AML
       comp=N,1645µm,0.8s
T1218                              AML    AML
       comp=E,1910µm,0.1s
T1218                              AML    AML
       comp=E,1835µm,0.9s
T1218                              AML    AML
       comp=N,1650µm,0.9s
T1218                              AML    AML
       comp=N,1645µm,1.4s
T1218                              AML    AML
       comp=E,1830µm,0.9s
T1218                              AML    AML
       comp=N,1650µm,0.8s
T1218                              AML    AML
       comp=N,1645µm,0.6s
T1218                              AML    AML
       comp=N,1650µm,1.2s
T1216  Preci, Frazion     0.14 325 ⇑P     Pg       03 08 19.1 +0.4
T1216                              AML    AML
       comp=E,736µm,1.3s
T1216                              AML    AML
       comp=N,816µm,0.4s
T1216                              AML    AML
       comp=E,735µm,1.3s
T1216                              AML    AML
       comp=N,816µm,0.4s
MC2    Monte Cornacci     0.14  19  P     Pg       03 08 19.3 +0.4
MC2                                 S     Sg       03 08 22.3 +0.9
T1217  Poggiodomo (PG     0.16 246 ⇑P     Pg       03 08 19.5 +0.5
T1217                               S     Sg       03 08 22.4 +0.9
T1217                              AML    AML
       comp=N,506µm,0.3s
T1217                              AML    AML
       comp=E,368µm,0.5s
T1217                              AML    AML
       comp=N,505µm,0.3s
MMO1   Montemonaco        0.19  50 ⇓P     Pg       03 08 20.0 +0.4
MMO1                                S     Sg       03 08 23.5 +1.1
T1215  Vallo di Nera,     0.19 278 ⇑P     Pg       03 08 20.0 +0.5
T1215                              AML    AML
       comp=E,260µm,0.8s
T1215                              AML    AML
       comp=N,319µm,0.2s
T1215                              AML    AML
       comp=E,252µm,0.1s
T1215                              AML    AML
       comp=N,306µm,0.2s
T1215                              AML    AML
       comp=E,260µm,0.8s
T1215                              AML    AML
       comp=E,252µm,0.1s
T1215                              AML    AML
       comp=N,306µm,0.2s
T1215                              AML    AML
       comp=E,260µm,1.2s
SMA1   SAN MARTINO        0.21 134 AML    AML
       comp=E,652µm,0.1s
SMA1                               AML    AML
       comp=N,560µm,0.2s
T1241  Roccafluvione,     0.24  70  P     Pg       03 08 20.7 +0.4
T1241                               S     Sg       03 08 24.6 +0.9
T1241                              AML    AML
       comp=E,347µm,0.2s
T1241                              AML    AML
       comp=N,395µm,0.4s
T1241                              AML    AML
       comp=N,395µm,1.6s
T1256  Bolognola (MC)     0.24  18 AML    AML
       comp=N,418µm,0.2s
T1256                              AML    AML
       comp=E,488µm,0.2s
RM33   Pellescritta (     0.28 166 ⇑P     Pg       03 08 21.3 +0.3
RM33                               AML    AML
       comp=N,318µm,0.3s
RM33                               AML    AML
       comp=E,290µm,0.3s
CESI   CESI - Serrava     0.28 324 ⇑P     Pg       03 08 21.6 +0.5
CESI                                S     Sb       03 08 26.2 -1.0
CESI                               AML    AML
       comp=E,532µm,0.1s
CESI                               AML    AML
       comp=N,660µm,0.3s
T1219  Muccia, Frazio     0.29 342 AML    AML
       comp=N,574µm,1.4s
T1219                              AML    AML
       comp=E,461µm,1.3s
T1219                              AML    AML
       comp=E,424µm,0.1s
T1219                              AML    AML
       comp=N,574µm,1.4s
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T1219				AML	AML		
	comp=N,578µm,1.4s						
T1219				AML	AML		
	comp=N,578µm,0.6s						
T1219				AML	AML		
	comp=E,461µm,0.7s						
T1219				AML	AML		
	comp=N,574µm,0.6s						
CSP1	Cessapalombo	0.32	10	AML	AML		
	comp=E,312µm,1.0s						
CSP1				AML	AML		
	comp=N,327µm,0.3s						
T1220	Camerino, Fraz	0.33	355	AML	AML		
	comp=E,924µm,1.4s						
T1220				AML	AML		
	comp=E,924µm,1.4s						
T1220				AML	AML		
	comp=N,870µm,0.2s						
T1220				AML	AML		
	comp=N,875µm,0.2s						
T1220				AML	AML		
	comp=N,875µm,1.8s						
T1247	Pizzolo (AQ)	0.36	159	⇑P	Pg	03 08 22.7	+0.2
T1222	Castel Sant'An	0.38	190	⇓P	Pg	03 08 23.1	+0.1
TERO	Teramo	0.38	114	⇑P	Pg	03 08 23.0	0.0
MOMA	Monte Martano	0.41	274	⇓P	Pg	03 08 24.1	+0.6
MOMA				AML	AML		
	comp=N,202µm,0.2s						
MOMA				AML	AML		
	comp=E,186µm,0.2s						
MOMA				AML	AML		
	comp=N,202µm,1.8s						
ASSB	Assisi San Ben	0.43	308	⇑P	Pg	03 08 24.1	+0.2
ASSB				AML	AML		
	comp=E,200µm,1.4s						
ASSB				AML	AML		
	comp=N,150µm,0.5s						
ASSB				AML	AML		
	comp=E,200µm,0.6s						
CESX	Cesi	0.44	248	⇑P	Pb	03 08 25.3	+0.2
OFFI	Offida	0.44	69	⇓P	Pb	03 08 25.2	+0.1
GIGS	Gran Sasso	0.46	135	P	Pg	03 08 24.4	-0.1
SNTG	Esanatoglia	0.50	344	⇓P	Pg	03 08 25.3	+0.2
SNTG				S	Sb	03 08 33.7	+0.2
FIAM	Fiamignano	0.51	181	S	Sb	03 08 33.1	-0.7
ATCC	AVT- Casa Cast	0.54	319	⇑P	Pg	03 08 26.1	+0.2
EL6	Elcito	0.55	358	⇓P	Pg	03 08 26.4	+0.2
EL6				S	Sb	03 08 35.5	+0.4
CING	Cingoli	0.60	5	⇑P	Pg	03 08 27.2	+0.2
CING				AML	AML		
	comp=E,90µm,1.4s						
CING				AML	AML		
	comp=N,73µm,0.3s						
MURB	Monte Urbino	0.66	318	S	Sb	03 08 39.3	+1.2
ARVD	Arcevia	0.73	349	⇑P	Pg	03 08 29.6	0.0
ARVD				S	Sb	03 08 41.3	+1.0

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*DDA **09** 03:10:53.2±0.0, 39°.53N×26°.07E, h15^{km}±1^{km}, ML2.7*
*ISK **09** 03:10:53.8, 39°.56N×26°.05E, h8^{km}, ML2.8/24*
*THE **09** 03:10:54.3, 39°.56N×26°.05E, h3^{km}±3^{km}, ML2.5/6, Error ellipse: s-maj=3.8km s-min=0.7km az=147.0*
*ATH **09** 03:10:54.6, 39°.56N×26°.05E, h9^{km}±5^{km}, ML2.8/3, Error ellipse: s-maj=5.4km s-min=1.0km az=220.0*
ISC 09 03:10:54.3±0.8**, 39°.56N**±0°.02×**26°.07E**±0°.02**, h11**^{km}±6^{km}**, n61, σ0^{s}.51**/84**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	Canakkale, Ayv	0.07	135	P	Pg	03 10 56.4	-0.4
GPNR	Gulpinar-Canak	0.11	153	Pg	Pg	03 10 56.9	-0.3
GPNR				Sg	Sg	03 10 59.4	+0.2
BOZC	Bozcaada	0.29	357	Pg	Pg	03 11 00.3	+0.1
BOZC				Sg	Sg	03 11 04.8	+0.7
BOZC	Bozcaada	0.29	357	P	Pg	03 11 00.1	0.0
BOZC				P	Pg	03 11 00.1	0.0
BOZC				S	Sg	03 11 04.3	+0.2
BOZC				*i* AML	AML	03 11 05.0	
	comp=N,928nm,0.2s						
BOZC				*i* AML	AML	03 11 05.0	
	comp=N,1µm,0.3s						
BOZC				*i* AML	AML	03 11 05.0	
	comp=E,1µm,0.3s						
EZN	Ezine	0.34	36	P	Pg	03 11 01.1	0.0
EZN				S	Sg	03 11 05.4	-0.1
	858nm,0.1s						
EZN	Ezine	0.34	36	Pg	Pg	03 11 01.0	0.0
EZN				Sg	Sg	03 11 06.2	+0.7
PRK	Paraskevi	0.35	153	P	Pg	03 11 01.4	+0.2
PRK				S	Sg	03 11 06.4	+0.5
	2µm,0.4s						
PRK	Paraskevi	0.35	153	P	Pg	03 11 01.4	+0.2
PRK				S	Sg	03 11 06.3	+0.5
PRK				AML	AML	03 11 07.1	
	comp=N,4197µm,0.3s						
PRK				AML	AML	03 11 08.3	
	comp=E,5289µm,0.5s						
SIGR	SIGRI	0.38	206	P	Pg	03 11 01.8	0.0
SIGR				S	Sg	03 11 06.9	+0.1
	comp=E,1µm,0.2s						
SIGR	SIGRI	0.38	206	Pg	Pg	03 11 01.9	0.0
SIGR				Sg	Sg	03 11 07.0	+0.1
SIGR	SIGRI	0.38	206	P	Pg	03 11 01.9	0.0
SIGR				S	Sg	03 11 07.0	+0.1
SIGR				AML	AML	03 11 09.1	
	comp=E,2400µm,0.2s						
SIGR				AML	AML	03 11 09.9	
	comp=N,2631µm,0.3s						
BAYC	CANAKKALE_Bayr	0.41	63	P	Pg	03 11 02.1	-0.3
ECEA	Canakkale, Ece	0.50	9	P	Pb	03 11 04.8	-0.2
ECEA				S	Sg	03 11 10.8	+0.3
ECEA				*i* AML	AML	03 11 12.0	
	comp=N,431nm,0.3s						
COMU	Canakkale	0.63	30	Pg	Pg	03 11 06.5	0.0
GOKA	anakkale-Gk	0.65	349	P	Pg	03 11 06.4	-0.4
GADA	Gvkgeada	0.65	348	Pg	Pg	03 11 06.6	-0.3
LIA	Limnos Island	0.76	297	P	Pg	03 11 09.1	0.0
LIA				S	Sg	03 11 19.2	+0.1
	comp=N,852nm,0.4s						
LIA	Limnos Island	0.76	297	P	Pg	03 11 09.0	0.0
LIA				S	Sg	03 11 18.9	-0.1
LIA				AML	AML	03 11 22.3	
	comp=N,1628µm,0.4s						
LIA				AML	AML	03 11 23.0	
	comp=E,1766µm,0.3s						
BUHA	Balikesir, Bur	0.78	94	P	Pg	03 11 08.4	-0.9
BUHA				S	Sg	03 11 19.7	+0.1
DKL	Dikili	0.81	126	Pg	Pg	03 11 10.2	+0.3
CANM	Can-anakkale	0.89	59	Pg	Pg	03 11 11.7	+0.4
GELI	Tayfur-Gelibol	0.90	20	Pg	Pg	03 11 11.4	-0.2
KARB	zmir-Karabur	0.93	163	P	Pb	03 11 12.5	+0.2
KARB				S	Sg	03 11 23.5	-0.8
LPK	Lapseki	0.97	33	Pg	Pg	03 11 12.9	-0.2
ZEDA	zmir-Bergama	0.98	127	P	Pg	03 11 13.1	0.0
ZEDA				S	Sg	03 11 24.9	-0.9
ZEDA				*i* AML	AML	03 11 28.0	
	comp=E,219nm,0.4s						
SMTH	Samothraki Isl	1.00	336	P	Pg	03 11 13.2	-0.4
SMTH				S	Sg	03 11 26.6	-0.1
	comp=E,152nm,0.2s						
SMTH	Samothraki Isl	1.00	336	P	Pg	03 11 13.2	-0.4
PSRA	Psara	1.09	201	P	Pb	03 11 15.2	+0.2
CAVK	Edirne/Enez-Ca	1.14	4	P	Pg	03 11 14.5	-1.7
ERIK	Erikli-Kesan	1.17	17	Pn	Pb	03 11 15.9	-0.5
ENEZ	Enez	1.18	3	P	Pb	03 11 16.5	-0.1
ENEZ				S	Sn	03 11 34.1	+1.4
	comp=E,208nm,0.3s						
ENEZ	Enez	1.18	3	Pn	Pb	03 11 16.6	-0.1
BALY	Balya	1.21	81	P	Pb	03 11 16.1	-1.1
BALY				S	Sb	03 11 32.9	0.0
KRBG	Karabiga-Canak	1.26	48	Pn	Pn	03 11 17.9	+0.1
URLA	Izmir	1.26	161	Pn	Pn	03 11 18.3	+0.5
URLA	Izmir	1.26	161	P	Pn	03 11 17.4	-0.5
URLA				S	Sb	03 11 32.6	-1.7
STEP	BALIKESIR_Sava	1.29	97	P	Pn	03 11 17.9	-0.3
KNL	Balıkesir	1.33	57	P	Pn	03 11 18.8	0.0
KNL				S	Sg	03 11 37.4	+0.3
KNL				*i* AML	AML	03 11 38.0	
	comp=E,313nm,0.7s						
KNL				*i* AML	AML	03 11 39.0	
	comp=E,312nm,0.8s						
GONE	Gonen-Balikesi	1.34	68	Pn	Pn	03 11 19.2	+0.3
ALN	Alexandroupoli	1.34	359	P	Pn	03 11 18.8	-0.1
ALN	Alexandroupoli	1.34	359	Pn	Pn	03 11 19.2	+0.3
ALN	Alexandroupoli	1.34	359	P	Pn	03 11 18.5	-0.4
KESN	Edirne-Kesan	1.35	20	P	Pn	03 11 19.1	-0.3
ZEYE	Izmir, Urla-Ze	1.36	165	P	Pn	03 11 19.4	+0.3
BLCB	Balcova	1.39	147	Pn	Pb	03 11 20.7	+0.4
BALB	Balikesir	1.40	86	Pn	Pn	03 11 19.9	+0.2
RKY	Sarkoy-Tekirda	1.42	37	Pn	Pn	03 11 20.3	+0.3
BKES	Balkesir-Mer	1.45	82	P	Pn	03 11 21.1	+0.7
BKES				S	Sn	03 11 39.6	+0.3
THAS	Thassos island	1.48	316	P	Pn	03 11 20.4	-0.3
EDC	Edincik	1.59	60	Pn	Pn	03 11 22.7	+0.4
UKOP	Uzunkopru-Edir	1.63	15	Pn	Pb	03 11 24.3	0.0
RDO	Rodhopi	1.64	346	P	Pn	03 11 23.0	0.0
RDO	Rodhopi	1.64	346	Pn	Pn	03 11 22.8	-0.2
BAND	Balkesir-Ban	1.75	62	P	Pb	03 11 27.4	+1.0
OUR	Ouranopolis	1.78	297	Pn	Pn	03 11 25.5	+0.5
TKR	Tekirdag	1.82	38	Pn	Pn	03 11 26.5	+1.0
DURS	Dursunbey	1.86	88	P	Pn	03 11 25.7	-0.4
KCTX	Karacabey (Bur	1.90	67	Pn	Pn	03 11 27.0	+0.4
CRLT	Corlu	2.02	38	Pn	Pn	03 11 29.1	+0.8
DEMI	Demirci	2.12	103	P	Pn	03 11 29.5	-0.1
SIMA	Simav-Kutahya	2.31	101	Pn	Pn	03 11 32.0	-0.3

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*IDC **09** 03:13:12.6±1.0, 2°.71S×138°.82E, h0^{km}, mb4.1/9, mbtmp4.1/10, ML3.8/1, MS3.2/8, Error ellipse: s-maj=40.6km s-min=13.9km az=88.0*
*DJA **09** 03:13:14.2±0.4, 3°S±4°×13°9E±°, h10^{km}, M4.4/9, mB5.6/3, mb4.3/9, MLv4.3/4, Mw(mB)5.2/3*
*NEIC **09** 03:13:19.4±2.0, 2°.84S±0°.04×138°.82E±0°.09, h49^{km}±8^{km}, mb4.4/18, Error ellipse: s-maj=14.0km s-min=2.9km az=108.0*
ISC 09 03:13:17.8±0.6**, 2°.72S**±0°.07×**138°.95E**±0°.06**, h37**^{km}**, n52, σ1^{s}.26**/46**, mb4.3**/15**, MS3.1**/5**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.77	341	P	Pn	03 13 26.1	-5.9
GENI	Genyem	1.22	84	P	Pn	03 13 36.1	-2.2
SRPI	Serui, Papua	2.84	287	P	Pn	03 14 00.2	-0.4
FAKI	Fak Fak	6.70	268	Pn	Pn	03 14 53.0	-0.6
FAKI				Sn	Sn	03 16 06.8	-1.9
FAKI	Fak Fak	6.70	268	P	Pn	03 14 54.1	+0.4
	22nm,1.2s,0.1nm						
SIJI	Sorong	7.90	283	LR	LR	03 18 44.6	
	comp=Z,167nm,20.0s,baz=22,slow=43						
NLAI	Namlea	11.85	267	P	Pn	03 16 05.1	+0.8
	9.5nm,0.9s,6µm						
COEN	Coen	11.92	160		Pn	03 16 07.2	+2.0
MTN	Manton Dam	12.69	217		Pn	03 16 13.3	-2.5
SOEI	Soe	16.18	244	P	Pn	03 17 00.6	-2.0
SOEI				IAmb	IAmb	03 17 26.0	
	comp=Z,37nm,0.9s						
SOEI	Soe	16.18	244	P	P	03 17 04.4	-1.0
	comp=Z,46nm,1.2s						
GTOI	Gorontalo	16.28	282	P	P	03 17 07.1	+0.7
	comp=Z,12nm,1.1s						
KNRA	Kununurra	16.33	217	P	Pn	03 17 03.7	-0.6
KNRA				IAmb	IAmb	03 17 17.1	
	comp=Z,39nm,1.2s						
DAV	Davao City (W)	16.52	306	LR	LR	03 22 58.3	
	comp=Z,71nm,20.2s,baz=142,slow=36						
WB0	Warramunga Arr	17.52	194	Pn	Pn	03 17 17.0	-2.3
WR0	Warramunga Arr	17.67	194	P	Pn	03 17 18.6	-2.5
WB2	Warramunga Arr	17.70	194		Pn	03 17 19.2	-2.3
WB2				IAmb	IAmb	03 17 31.6	
	comp=Z,10.0nm,0.8s						
WRA	Warramunga Arr	17.70	194	P	Pn	03 17 20.4	-1.1
	comp=Z,0.3nm,0.3s,baz=16,slow=12,SNR=18						
WRA				S	Sn	03 20 36.7	-1.1
	comp=Z,2.0nm,0.8s,baz=10,slow=22,SNR=5.1						
	comp=Z,2.8nm,0.7s						
WRA	Warramunga Arr	17.70	194	P	Pn	03 17 19.2	-2.4
KAPI	Kappang	19.29	263	LR	LR	03 25 36.8	
	comp=Z,62nm,21.1s,baz=115,slow=39						
AS31	Alice Springs	21.39	193	P	P	03 18 01.7	-0.7
ASAR	Alice Springs	21.39	193	P	P	03 18 02.5	+0.2
	comp=Z,3.3nm,0.6s,baz=19,slow=10,SNR=32						
	comp=Z,3.3nm,0.6s						
ASAR	Alice Springs	21.39	193	P	P	03 18 01.9	-0.5
STKA	Stephens Creek	29.11	175	P	P	03 19 17.0	+1.9
	comp=Z,0.6nm,0.5s,baz=182,slow=20,SNR=3.2						
	comp=Z,0.6nm,0.5s						
DZM	Mont Dzumac	32.91	128	LR	LR	03 32 42.7	
	comp=Z,100nm,21.4s,baz=192,slow=35						
JNU	Nakatsue	36.46	349	LR	LR	03 33 40.6	
	comp=Z,26nm,20.3s,baz=148,slow=34						
KSRS	Korea Array	41.26	347	LR	LR	03 35 23.1	
	comp=Z,24nm,21.8s,baz=280,slow=32						
PHRA	Phrae	43.56	301	P	P	03 21 17.7	-0.7
CMAR	Chiang Mai Arr	44.65	300	P	P	03 21 27.2	0.0
	comp=Z,2.4nm,0.3s,baz=112,slow=6.9,SNR=7.3						
	comp=Z,2.4nm,0.3s						
ASAJ	Asahikawa	46.74	4	LR	LR	03 42 00.7	
	comp=Z,20nm,19.4s,baz=110,slow=37						
SONM	Songino Array	57.83	335	P	P	03 23 06.0	+0.3
	comp=Z,0.3nm,0.6s,baz=135,slow=6.7,SNR=2.0						
	comp=Z,0.3nm,0.6s						
MK31	Makanchi Array	69.94	322	P	P	03 24 25.8	+0.4
MK31				IAmb	IAmb	03 24 26.5	
	comp=Z,2.8nm,0.8s						
MKAR	Makanchi Array	69.94	322	P	P	03 24 24.9	-0.4
	comp=Z,4.6nm,0.8s,baz=112,slow=7.9,SNR=46						
	comp=Z,4.6nm,0.8s						
MKAR	Makanchi Array	69.94	322	P	P	03 24 25.6	+0.2
MAKZ	Makanchi	70.14	322	P	P	03 24 26.9	+0.3
ZALV	Zalesovo Beam	72.07	330	P	P	03 24 37.5	-0.5
	comp=Z,0.6nm,0.4s,baz=117,slow=5.2,SNR=4.0						
ZALV				LR	LR	03 54 51.3	
	comp=Z,17nm,21.6s,baz=147,slow=35						
	comp=Z,0.6nm,0.4s						
KURK	Kurchatov	73.86	325	P	P	03 24 48.7	0.0
KURK				IAmb	IAmb	03 24 51.5	
	comp=Z,6.5nm,1.1s						
VNDA	Vanda	75.75	175	P	P	03 25 00.9	+1.7
	comp=Z,2.4nm,1.0s,baz=326,slow=5.7,SNR=7.4						
	comp=Z,2.4nm,1.0s						
VNDA	Vanda	75.75	175	P	P	03 25 00.8	+1.7
VNDA				IAmb	IAmb	03 25 30.0	
	comp=Z,8.6nm,1.5s						
KKAR	Karatay Array	76.31	315	P	P	03 25 03.0	-0.1
BRVK	Borovoye	79.53	325	P	P	03 25 21.2	+0.5
BRVK				IAmb	IAmb	03 25 21.6	
	comp=Z,5.4nm,0.8s						
IMAR	Indian Mountai	83.41	22	P	P	03 25 40.0	-1.0
RC01	Rabbit Creek A	83.43	28	P	P	03 25 41.0	-0.2
MLY	Manley	84.25	24	P	P	03 25 45.8	+0.4
MLY				IAmb	IAmb	03 25 50.6	
	comp=Z,5.2nm,1.5s						
GEYT	Alibeck	84.44	308	P	P	03 25 47.1	+0.2
	comp=Z,0.8nm,0.3s,baz=186,slow=1.5,SNR=4.1						
	comp=Z,0.8nm,0.3s						
ABKAR	Akbulak array	84.89	320	P	P	03 25 48.6	-0.3
ABKAR				IAmb	IAmb	03 25 49.3	
	comp=Z,2.7nm,0.8s						
ABKAR	Akbulak array	84.89	320	P	P	03 25 48.2	-0.6
ILAR	Eielson Array	85.74	24	P	P	03 25 51.9	-0.9
	comp=Z,0.7nm,0.7s,baz=262,slow=4.6,SNR=7.0						
	comp=Z,0.7nm,0.7s						
J26L	Joseph Creek	87.06	25	P	P	03 26 00.1	+0.7
J26L				IAmb	IAmb	03 26 20.1	
	comp=Z,2.8nm,1.2s						
QSPA	South Pole Qui	87.23	180	P	P	03 26 01.3	+1.1
BMAR	Burnt Mountain	87.32	22	P	P	03 26 01.9	+1.4
TORD	Torodi Ar. Bea	136.49	286	PKP	PKPdf	03 32 37.3	+0.4
	comp=Z,0.6nm,0.7s,baz=68,slow=1.5,SNR=4.5						

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*IDC **09** 03:13:19.4±2.1, 31°.48S×69°.20W, h99^{km}±14^{km}, mb3.4/1, mbtmp3.7/5, Error ellipse: s-maj=37.5km s-min=20.9km az=83.0*
*SJA **09** 03:13:20.1±0.8, 31°.58S×68°.96W, h121^{km}±4^{km}, ML3.5, MW3.6, Hypocentre not reviewed by the ISC*
ISC 09 03:13:19.4±1.3**, 31°.49S**±0°.08×**69°.2W**±0°.1**, h110**^{km}**, n6, σ0^{s}.96**/8**, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJA	San Juan	0.56	94	*e*P		03 13 37.8	
SJA				*e*S		03 13 50.8	
SJA				IAML		03 13 51.5	
	comp=Z,563nm,0.2s						
CFA	Coronel Fontan	0.84	98	P	Pn	03 13 38.9	-0.2
	comp=Z,788nm,0.3s,baz=276,slow=9.5,SNR=857						
CFA				S	Sn	03 13 52.8	-1.1
	comp=Z,825nm,0.3s,baz=167,slow=21,SNR=93						
ASAL	Salagasta	1.14	164	*e*P		03 13 43.3	
ASAL				*e*S		03 14 00.4	
ARCO	CERRO ARCO	1.37	170	*e*P		03 13 46.2	
ARCO				*e*S		03 14 05.2	
CO02	Combarbal	1.55	280	*e*P		03 13 51.9	
CO02				*e*S		03 14 15.9	
AAGR	Agrelo	1.62	168	*e*P		03 13 48.8	
AAGR				*e*S		03 14 09.7	
CO01	Juntas del Tor	1.69	333	*e*P		03 13 48.8	
CO01				*e*P		03 13 54.2	
VA03	San Esteban	1.70	221	*e*P		03 13 52.3	
VA03				*e*S		03 14 14.3	
VA03				IAML		03 14 25.7	
	comp=Z,249nm,0.3s						
GO04	Tololo Observa	1.89	314	*e*P		03 13 56.1	
GO04				*e*S		03 14 23.1	
PEL	Peldehue	2.06	217	*e*P		03 13 56.1	
PEL				*e*S		03 14 23.6	
MT03	Universidad Ad	2.28	208	*e*P		03 13 59.1	
MT03				*e*S		03 14 29.2	
MT03				IAML		03 14 30.5	
	comp=Z,349nm,0.2s						
MT05	Renca	2.29	214	*e*P		03 13 59.0	
MT05				*e*S		03 14 29.2	
MT05				IAML		03 14 31.1	
	comp=Z,331nm,0.2s						
MT02	Curacav	2.40	222	*e*P		03 13 59.9	
MT02				*e*S		03 14 30.5	
MT02				IAML		03 14 34.0	
	comp=Z,79nm,0.3s						
AC05	El Transito	2.80	341	*e*P		03 14 07.9	
AC05				*e*S		03 14 44.2	
AC05				IAML		03 14 46.6	
	comp=Z,133nm,0.5s						
ACLC	CERRO LA CRUZ	2.84	44	*e*P		03 14 04.4	
ACLC				*e*S		03 14 37.8	
ACLC				IAML		03 14 39.1	
	comp=Z,260nm,0.3s						
MT01	Popeta	2.92	215	*e*P		03 14 05.8	
MT01				*e*S		03 14 41.6	
MT01				IAML		03 14 43.2	
	comp=Z,102nm,0.3s						
MRA	San Martin	3.11	108	*e*P		03 14 06.2	
MRA				*e*S		03 14 28.3	
BO01	Tunca	3.29	208	*e*P		03 14 10.4	
BO01				*e*S		03 14 49.8	
BO01				IAML		03 14 52.4	
	comp=Z,84nm,0.8s						
LVC	Limon Verde	8.85	2	P	Pn	03 15 24.5	-0.2
	comp=Z,2.0nm,0.4s,baz=199,slow=11,SNR=12						
LVC				S	Sn	03 17 01.9	-1.1
	comp=Z,1.1nm,0.4s,baz=97,slow=17,SNR=1.0						
PLCA	Paso Flores	9.28	186	P	Pn	03 15 29.8	-0.5
	comp=Z,1.5nm,0.8s,baz=17,slow=14,SNR=1.4						
CPUP	Villa Florida	11.61	67	P	Pn	03 16 01.7	+0.1
	comp=Z,0.9nm,0.6s,baz=225,slow=10.0,SNR=3.8						
LPAZ	La Paz	15.17	4	P	Pn	03 16 49.2	+0.8
	comp=Z,1.5nm,0.5s,baz=185,slow=12,SNR=9.9						
TORD	Torodi Ar. Bea	81.10	69	P	P	03 25 23.9	+1.1
	comp=Z,0.7nm,1.0s,baz=235,slow=5.1,SNR=3.6						
	comp=Z,0.7nm,1.0s						

ROM 09 03:13:48.2±0.1**, 42°.858N**±0°.004×**13°.229E**±0°.005**, h9**^{km}**, ML1.0**/2**, 1C-2D, Error ellipse: s-maj=0.4km s-min=0.2km az=125.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1245	Castelsantange	0.03	268	P	Pg	03 13 50.2	+0.1
T1245				AML	AML		
	comp=E,664µm,0.2s						
T1245				AML	AML		
	comp=N,637µm,0.6s						
T1245				AML	AML		
	comp=E,663µm,0.2s						
T1245				AML	AML		
	comp=E,568µm,0.2s						
T1245				AML	AML		
	comp=N,574µm,0.6s						
MC2	Monte Cornacci	0.06	333	⇓P	Pg	03 13 50.6	+0.2
MC2				S	Sg	03 13 52.2	+0.1
MMO1	Montemonaco	0.08	60	P	Pg	03 13 50.8	+0.3
MMO1				S	Sg	03 13 52.5	+0.2
T1214	Arquata del Tr	0.10	189	P	Pg	03 13 51.2	+0.4
T1256	Bolognola (MC)	0.15	359	AML	AML		
	comp=E,91µm,1.1s						
T1256				AML	AML		
	comp=N,64µm,0.4s						
T1256				AML	AML		
	comp=E,91µm,0.9s						
T1256				AML	AML		
	comp=N,64µm,1.6s						
T1216	Preci, Frazion	0.16	282	P	Pg	03 13 52.0	+0.4
T1212	Cascia, Frazio	0.17	232	⇑P	Pg	03 13 52.5	+0.6
T1212				S	Sg	03 13 55.4	+1.0
T1218	Civita (PG)	0.21	204	P	Pg	03 13 53.1	+0.6
T1218				S	Sg	03 13 56.8	+1.4
MCRV	Calabrutti - M	2.53	144	⇓P	Pn	03 14 25.1	-4.5

ROM 09 03:14:21.9±0.0**, 42°.862N**±0°.003×**13°.233E**±0°.005**, h10**^{km}**, ML1.5**/1**, Error ellipse: s-maj=0.4km s-min=0.2km az=288.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1245	Castelsantange	0.03	261	P	Pg	03 14 24.2	+0.1
T1245				S	Sg	03 14 25.4	-0.1
T1245				AML	AML		
	comp=E,664µm,0.2s						
T1245				AML	AML		
	comp=N,637µm,0.6s						
T1245				AML	AML		
	comp=E,568µm,0.2s						
T1245				AML	AML		
	comp=E,664µm,0.2s						
T1245				AML	AML		
	comp=N,574µm,0.6s						
MC2	Monte Cornacci	0.06	329	P	Pg	03 14 24.5	+0.2
MC2				S	Sg	03 14 26.1	0.0
MMO1	Montemonaco	0.08	62	P	Pg	03 14 24.7	+0.4
MMO1				S	Sg	03 14 26.4	+0.2
T1214	Arquata del Tr	0.10	190	P	Pg	03 14 25.1	+0.4
T1216	Preci, Frazion	0.16	280	P	Pg	03 14 26.0	+0.5
T1212	Cascia, Frazio	0.18	232	P	Pg	03 14 26.4	+0.6
T1212				S	Sg	03 14 29.4	+1.0
T1218	Civita (PG)	0.21	204	P	Pg	03 14 27.0	+0.6
T1218				S	Sg	03 14 30.8	+1.4
CSP1	Cessapalombo	0.23	355	P	Pg	03 14 27.3	+0.6
CSP1				S	Sg	03 14 31.3	+1.2
SMA1	SAN MARTINO	0.24	162	P	Pg	03 14 27.4	+0.5
T1220	Camerino, Fraz	0.27	337	P	Pg	03 14 27.9	+0.5

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*FUNV **09** 03:14:47.9, 8°.07N×71°.72W, h5^{km}, MW2.7*
ISC 09 03:14:46.7±1.7**, 8°.38N**±0°.06×**71°.79W**±0°.05**, h8**^{km}±13^{km}**, n12, σ1^{s}.33**/24**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	Capacho	0.73	226	*e*P	Pb	03 14 59.7	-2.1
CAPV				*e*S	Sb	03 15 09.1	-2.9
SOCV	Socops	0.93	96	*e*P	Pg	03 15 04.5	0.0
SOCV				*e*S	Sg	03 15 15.8	-0.7
PAMC	Pamplona, Colo	1.37	221	*e*P	Pn	03 15 12.0	-0.6
PAMC				*e*S	Sn	03 15 30.0	-1.2
PAMC				*i*		03 15 33.2	
	comp=Z,25nm,0.4s						
TAMC	Tame, Arauca	1.93	180	*e*P	Pn	03 15 19.4	-0.4
TAMC				*e*S	Sg	03 15 49.2	+0.5
BARC	Barichara	2.25	218	*e*P	Pb	03 15 27.5	-0.2
BARC				*e*S	Sb	03 15 56.2	+0.4
BARC				*i*		03 15 58.5	
	comp=Z,17nm,0.5s						
BRRC	Barranca, Sant	2.29	237	*e*P	Pb	03 15 28.4	+0.2
BRRC				*e*S	Sb	03 15 58.7	+2.0
CURV	Curarigua	2.43	48	*e*P	Pb	03 15 30.0	-0.7
CURV				*e*S	Sb	03 16 00.7	-0.2
RUSC	La Rusia	2.78	208	*e*P	Pb	03 15 38.7	+1.7
RUSC				*e*S	Sb	03 16 12.8	+1.4
RUSC				*i*		03 16 18.3	

	comp=Z,3.6nm,0.4s						
ZARC	**Zaragoza, Cauc**	3.17	254	*e*P	Pb	03 15 43.1	-0.2
ZARC				*e*S	Sb	03 16 22.9	+0.8
ZARC				*i*		03 16 23.8	
	comp=Z,5.0nm,0.4s						
PTBC	**PUERTO BERRIO,**	3.22	236	*e*P	Pb	03 15 44.5	+0.4
PTBC				*e*S	Sb	03 16 25.9	+2.4
PTBC				*i*		03 16 27.1	
	comp=Z,3.3nm,0.4s						
MAPV	**Macapo**	3.59	66	*e*P	Pn	03 15 43.9	+1.2
MAPV				*e*S	Sn	03 16 26.2	+0.8
BAUV	**El Baul**	3.75	81	*e*P	Pn	03 15 45.3	+0.5
BAUV				*e*S	Sn	03 16 27.9	-1.3

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*IDC **09** 03:16:48.8±1.4, 2°.62S×139°.20E, h0^{km}, mb3.8/6, mbtmp3.8/7, ML3.6/1, Error ellipse: s-maj=69.4km s-min=22.3km az=86.0*

ISC 09 03:16:54.4±1.1**, 2°.7S**±0°.1×**139°.1E**±0°.4**, h37^{km}, n7, σ0ˢ.98**/7**, mb3.8**/6**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	17.77	195	P	Pn	03 20 58.1	-1.0
	0.2nm,0.3s,baz=20,slow=12,SNR=4.9						
	1.3nm,0.6s						
ASAR	**Alice Springs**	21.46	193	P	P	03 21 40.0	+0.2
	3.2nm,0.8s,baz=20,slow=10.0,SNR=9.5						
	3.2nm,0.8s						
SONM	**Songino Array**	57.84	335	P	P	03 26 41.9	-0.6
	0.2nm,0.6s,baz=134,slow=6.2,SNR=1.8						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	69.98	322	P	P	03 28 02.5	+0.3
	3.4nm,1.0s,baz=109,slow=8.1,SNR=14						
	3.4nm,1.0s						
ZALV	**Zalesovo Beam**	72.08	330	P	P	03 28 15.9	+1.1
	0.8nm,0.6s,baz=121,slow=5.6,SNR=2.1						
	0.8nm,0.6s						
VNDA	**Vanda**	75.78	175	P	P	03 28 36.9	+0.9
	0.6nm,0.6s,baz=4.8,slow=12,SNR=1.7						
	0.6nm,0.6s						
ILAR	**Eielson Array**	85.65	24	P	P	03 29 28.3	-0.7
	0.6nm,0.9s,baz=257,slow=4.2,SNR=2.5						
	0.6nm,0.9s						

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*IDC **09** 03:25:08.9±3.6, 31°.29N×140°.92E, h0^{km}, mb3.4/4, mbtmp3.3/6, ML2.7/2, MS3.2/1, Error ellipse: s-maj=141.8km s-min=19.4km az=72.0*

ISC 09 03:25:13.3±2.2**, 31°.6N**±0°.2×**141°.5E**±0°.4**, h50^{km}, n6, σ1ˢ.38**/7**, mb3.4**/4**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	2.10	318	Pn	Pn	03 25 44.5	-1.5
	12nm,0.3s,baz=255,slow=23,SNR=1.4						
JHJ				Sn	Sn	03 26 11.0	+0.2
	11nm,0.3s,baz=230,slow=22,SNR=3.0						
	46nm,0.4s						
MJAR	**Matsushiro Arr**	5.64	332	Pn	Pn	03 26 33.9	-0.7
	0.1nm,0.3s,baz=160,slow=13,SNR=5.2						
	1.1nm,0.5s						
SONM	**Songino Array**	31.16	312	P	P	03 31 28.4	+0.9
	0.4nm,0.6s,baz=116,slow=8.3,SNR=2.2						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	47.22	307	P	P	03 33 42.3	+1.1
	0.3nm,0.7s,baz=86,slow=8.1,SNR=5.1						
MKAR				LR	LR	03 52 55.6	
	comp=Z,28nm,20.6s,baz=214,slow=35						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	51.67	189	P	P	03 34 16.0	+0.7
	0.4nm,0.7s,baz=4.7,slow=7.6,SNR=6.7						
	0.4nm,0.7s						
ASAR	**Alice Springs**	55.40	188	P	P	03 34 41.0	-1.6
	0.1nm,0.3s,baz=0.0,slow=4.6,SNR=1.2						
	0.1nm,0.3s						

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*KRNET **09** 03:42:03.5±0.1, 41°.80N×71°.71E, h26^{km}, mb2.0*

*SOME **09** 03:42:04.2, 41°.77N×71°.80E, h15^{km}*

*NNC **09** 03:42:05.0±3.5, 41°.77N×71°.72E, h11^{km}±46^{km}, mb2.7, mpv2.5, Error ellipse: s-maj=39.4km s-min=12.3km az=166.0*

ISC 09 03:42:04.5±1.0**, 41°.79N**±0°.05×**71°.74E**±0°.03**, h11^{km}**±8^{km}**, n18, σ0ˢ.65**/34**, 15C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	**Arkit**	0.16	89	⇑*i*P	Pb	03 42 08.6	-1.0
	baz=90						
ARK				⇑*i*S	Sg	03 42 12.3	+1.4
	baz=90						
TRKS	**Terek-Say**	0.52	240	⇓*i*P	Pg	03 42 13.9	-0.8
	baz=30						
TRKS				⇓*i*S	Sg	03 42 21.4	-0.3
	baz=30						
MNAS	**Manas**	0.89	39	⇑*i*P	Pg	03 42 20.6	-1.2
	baz=40						
MNAS				⇑*i*S	Sg	03 42 33.1	-0.3
	baz=40						
IUG	**Iuzhnay**	1.32	286	P	Pg	03 42 29.7	-0.3
	3.0nm,0.1s						
IUG				S	Sg	03 42 48.5	+1.3
	3.7nm,0.1s						
IUG	**Iuzhnay**	1.32	286	*e*P	Pg	03 42 29.5	-0.4
	3.0nm,0.1s						
IUG				*e*S	Sg	03 42 48.5	+1.3
	11nm,0.2s						
MRKS	**Merke**	1.45	49	P	Pb	03 42 31.4	-0.2
	1.1nm,0.2s						
MRKS				S	Sg	03 42 51.5	+0.2
	7.6nm,0.2s						
MRKS	**Merke**	1.45	49	*e*P	Pb	03 42 31.4	-0.2
	1.2nm,0.1s						
MRKS				*e*S	Sg	03 42 51.5	+0.2
	7.7nm,0.1s						
AML	**Almayashu**	1.49	76	⇓*i*P	Pn	03 42 31.4	-0.2
	baz=77						
AML				⇓*i*S	Sn	03 42 51.3	0.0
	baz=77						
KK31	**Karatay Array**	1.59	326	P	Pb	03 42 33.7	-0.2
	0.1nm,0.2s,baz=151,slow=18,SNR=6.7						
KK31				⇑S	Sb	03 42 53.9	-0.2
	1.5nm,0.3s,baz=150,slow=31,SNR=12						
KKAR	**Karatay Array**	1.59	326	⇑*i*P	Pn	03 42 32.4	-0.3
	baz=26						
KKAR				⇑*i*S	Sn	03 42 52.9	-0.4
	baz=26						
EKS2	**Erkin-Say**	1.74	59	⇓*i*P	Pn	03 42 35.2	+0.4
	baz=60						
EKS2				⇓*i*S	Sn	03 42 57.6	+0.6
	baz=60						
ARLS	**Aral**	1.93	87	⇑*e*P	Pn	03 42 37.6	+0.2
	baz=88						
ARLS				⇑*i*S	Sn	03 43 02.4	+0.7
	baz=88						
UCH	**Uchtor**	2.11	77	⇑*e*P	Pn	03 42 40.4	+0.3
	baz=77						
UCH				⇑*i*S	Sn	03 43 07.2	+0.6
	baz=77						
USP	**Ospenovka**	2.51	53	⇑*i*P	Pn	03 42 45.6	+0.3
	baz=54						
USP				⇑*i*S	Sn	03 43 16.0	+0.1
	baz=54						
KBK	**Karagaybulak**	2.53	69	⇓*i*P	Pn	03 42 46.1	+0.4
	baz=69						
KBK				⇓*i*S	Sn	03 43 16.8	+0.2
	baz=69						
SGDS	**Sogindy**	2.70	51	Pg	Pb	03 42 53.1	+0.2
	0.7nm,0.2s						
SGDS				Lg	Lg	03 43 28.5	
	3.9nm,0.2s						
TKM2	**Tokmak 2**	3.07	67	⇑*i*P	Pn	03 42 53.6	+0.5
	baz=67						
TKM2				⇑*i*S	Sn	03 43 29.9	0.0
	baz=67						
KRBS	**Karabastau**	3.46	55	*e*Pg	Pb	03 43 06.8	+1.0
	0.2nm,0.1s						
KRBS				*e*Lg	Lg	03 43 52.1	
	1.8nm,0.2s						

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*ROM **09** 03:50:20.7±0.1, 39°.030N±0°.005×15°.454E±0°.008, h19^{km}±1^{km}, ML3.5/32, Error ellipse: s-maj=0.8km s-min=0.2km az=296.0*

ISC 09 03:50:20.8±1.1**, 39°.02N**±0°.02×**15°.46E**±0°.03**, h17^{km}**±9^{km}**, n71, σ1ˢ.03**/82**, 4C-3D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IST3	**Stromboli F**	0.28	218	⇑P	Pb	03 50 27.9	+0.6
IST3				S	Sb	03 50 32.8	+1.0
IST3				AML	AML		
	comp=E,28400µm,0.5s						
IST3				AML	AML		
	comp=N,21500µm,0.3s						
ISTR	**Stromboli Gino**	0.31	221	P	Pb	03 50 28.3	+0.4
ISTR				S	Sb	03 50 33.1	+0.5
ISTR				AML	AML		
	comp=E,19100µm,0.6s						
ISTR				AML	AML		
	comp=N,24100µm,0.5s						
ISTR				AML	AML		
	comp=E,19100µm,1.4s						
CAR1	**CAROLEI**	0.63	68	⇑P	Pb	03 50 32.8	-0.6
CAR1				S	Sb	03 50 41.5	-0.4
CAR1				AML	AML		
	comp=E,11850µm,0.7s						
CAR1				AML	AML		
	comp=N,11650µm,0.4s						
CAR1				AML	AML		
	comp=E,10975µm,0.5s						
CAR1				AML	AML		
	comp=N,12250µm,0.5s						
CAR1				AML	AML		
	comp=E,10975µm,0.5s						
CAR1				AML	AML		
	comp=N,12250µm,0.5s						
CAR1				AML	AML		
	comp=E,11850µm,1.3s						
LLI	**Lipari**	0.70	215	P	Pg	03 50 35.1	+0.6
SPS2	**Spezzano della**	0.74	68	⇑P	Pb	03 50 34.7	-0.4
SPS2				S	Sb	03 50 44.7	-0.2
SPS2				AML	AML		
	comp=E,3555µm,0.4s						
SPS2				AML	AML		
	comp=N,4040µm,0.3s						
GRI	**Girifalco**	0.78	105	⇓P	Pb	03 50 35.6	-0.2
GRI				S	Sg	03 50 46.7	+0.4
GRI				AML	AML		
	comp=N,7275µm,0.4s						
GRI				AML	AML		
	comp=E,8695µm,0.7s						
GRI				AML	AML		
	comp=N,7275µm,1.6s						
IFIL	**Filicudi I Eol**	0.83	237	P	Pb	03 50 36.3	-0.4
IFIL				S	Sb	03 50 47.2	-0.4
IFIL				AML	AML		
	comp=E,11800µm,0.6s						
IFIL				AML	AML		
	comp=N,4985µm,0.5s						
IFIL				AML	AML		
	comp=E,11800µm,1.4s						
IFIL				AML	AML		
	comp=N,4985µm,1.5s						
CEL	**Celeste**	0.83	156	⇓P	Pb	03 50 36.3	-0.5
CEL				S	Sn	03 50 49.0	-0.7
CEL				AML	AML		
	comp=E,3185µm,0.4s						
CEL				AML	AML		
	comp=E,2635µm,0.4s						
CEL				AML	AML		
	comp=N,2815µm,0.9s						
CEL				AML	AML		
	comp=N,2330µm,0.9s						
CEL				AML	AML		
	comp=E,3185µm,1.6s						
CEL				AML	AML		
	comp=E,2635µm,1.6s						
TDS	**Terranova Siba**	0.93	47	P	Pb	03 50 38.1	-0.3
TDS				S	Sg	03 50 50.7	-0.5
TDS				AML	AML		
	comp=E,2940µm,0.7s						
TDS				AML	AML		
	comp=E,2940µm,1.3s						
TDS				AML	AML		
	comp=N,2130µm,1.0s						
PLAC	**Placanica**	0.96	126	P	Pb	03 50 38.5	-0.4
PLAC				AML	AML		
	comp=E,5580µm,0.8s						
PLAC				AML	AML		
	comp=N,3230µm,1.6s						
PLAC				AML	AML		
	comp=E,3265µm,1.6s						
PLAC				AML	AML		
	comp=N,5655µm,0.8s						
PLAC				AML	AML		
	comp=E,3265µm,0.4s						
PLAC				AML	AML		
	comp=E,5580µm,1.2s						
PLAC				AML	AML		
	comp=N,5655µm,1.2s						
PLAC				AML	AML		
	comp=N,3230µm,0.4s						
MMN	**Mormanno**	0.96	25	P	Pb	03 50 38.6	-0.3
MMN				S	Sn	03 50 52.8	+0.2
MMN				AML	AML		
	comp=N,4270µm,0.3s						
MMN				AML	AML		
	comp=E,3610µm,0.3s						
IACL	**Alicudi**	0.99	241	P	Pb	03 50 38.5	-0.8
IACL				AML	AML		
	comp=N,2180µm,0.5s						
IACL				AML	AML		
	comp=E,2760µm,0.6s						
CUC	**Castrocucco**	1.01	16	P	Pn	03 50 39.9	-0.2
CUC				S	Sg	03 50 53.5	-0.1
CUC				AML	AML		
	comp=E,4645µm,0.4s						
CUC				AML	AML		
	comp=E,5735µm,0.4s						
CUC				AML	AML		
	comp=N,5650µm,0.4s						
CUC				AML	AML		
	comp=N,4665µm,0.5s						
NOV	**Novara**	1.02	194	P	Pb	03 50 39.1	-0.9
NOV				AML	AML		
	comp=E,3650µm,1.2s						
NOV				AML	AML		
	comp=N,1795µm,0.5s						
NOV				AML	AML		
	comp=N,1795µm,1.5s						
TIP	**Timpagrande**	1.02	81	⇑P	Pb	03 50 39.9	-0.2
TIP				AML	AML		
	comp=E,1078µm,0.9s						
TIP				AML	AML		
	comp=E,1275µm,0.9s						
TIP				AML	AML		
	comp=N,1096µm,0.5s						
TIP				AML	AML		
	comp=N,857µm,0.5s						
TIP				AML	AML		
	comp=E,1275µm,1.1s						
TIP				AML	AML		
	comp=E,1078µm,1.1s						
SOI	**Samo**	1.06	153	⇓P	Pb	03 50 39.6	-1.0
SOI				S	Sn	03 50 54.9	-0.2
SOI				AML	AML		
	comp=E,2650µm,0.7s						
SOI				AML	AML		
	comp=N,2935µm,0.9s						
AIO	**Antillo**	1.06	190	P	Pb	03 50 39.7	-1.0
AIO				S	Sg	03 50 55.9	+0.6
AIO				AML	AML		
	comp=E,1045µm,0.8s						
AIO				AML	AML		
	comp=N,1050µm,1.6s						
AIO				AML	AML		
	comp=N,1050µm,0.4s						
MUCR	**Ucria**	1.08	205	P	Pb	03 50 40.3	-0.7
MUCR				AML	AML		
	comp=E,2540µm,0.8s						
MUCR				AML	AML		
	comp=N,5880µm,0.6s						
MUCR				AML	AML		
	comp=N,5880µm,1.4s						
MGR	**Morigerati**	1.12	4	P	Pn	03 50 40.4	-1.2
MGR				AML	AML		
	comp=E,1540µm,0.3s						
MGR				AML	AML		
	comp=N,1325µm,0.7s						
MGR				AML	AML		
	comp=N,1395µm,0.7s						
MGR				AML	AML		
	comp=N,1320µm,0.7s						
MGR				AML	AML		
	comp=E,1455µm,0.3s						
MGR				AML	AML		
	comp=N,1320µm,1.3s						
PIPA	**Pietrapaola**	1.15	66	P	Pb	03 50 42.1	-0.1
PIPA				AML	AML		
	comp=E,2855µm,0.4s						
PIPA				AML	AML		
	comp=N,2870µm,0.6s						
PIPA				AML	AML		
	comp=N,2925µm,0.6s						
PIPA				AML	AML		
	comp=E,2855µm,0.4s						
PIPA				AML	AML		
	comp=E,2810µm,0.4s						
PIPA				AML	AML		
	comp=N,2870µm,0.6s						
SIRI	**Monte Sirino -**	1.20	15	P	Pn	03 50 42.5	-0.3
SIRI				AML	AML		
	comp=E,3010µm,0.4s						
SIRI				AML	AML		
	comp=N,3555µm,1.2s						
SIRI				AML	AML		
	comp=E,3025µm,0.4s						
SIRI				AML	AML		
	comp=N,3570µm,1.2s						
SIRI				AML	AML		
	comp=N,3555µm,0.8s						
SIRI				AML	AML		
	comp=E,3025µm,1.6s						
SIRI				AML	AML		
	comp=E,3010µm,1.6s						
SIRI				AML	AML		
	comp=N,3570µm,0.8s						
LADO	**San Nicola del**	1.21	77	P	Pn	03 50 42.7	-0.2
MTSN	**Montesano sull**	1.26	10	P	Pn	03 50 43.4	-0.3
MTSN				AML	AML		
	comp=N,2390µm,0.8s						
MTSN				AML	AML		
	comp=N,2390µm,1.2s						
MTSN				AML	AML		
	comp=E,2255µm,0.8s						
EMSG	**Monte Spagnolo**	1.26	199	P	Pb	03 50 44.1	-0.1
SCHR	**S. Chirico Rap**	1.27	22	P	Pb	03 50 44.1	-0.1
EPZF	**Pizzo Felice**	1.29	202	P	Pb	03 50 44.3	-0.2
CMPR	**Campora**	1.30	355	P	Pn	03 50 43.1	-1.0
CMPR				AML	AML		
	comp=E,3720µm,0.4s						
CMPR				AML	AML		
	comp=N,1775µm,0.4s						
MCEL	**Monticello**	1.33	11	P	Pn	03 50 44.6	0.0
MCEL				AML	AML		
	comp=E,1950µm,0.6s						
MCEL				AML	AML		
	comp=N,1395µm,0.5s						
MCEL				AML	AML		
	comp=E,1945µm,0.6s						
MCEL				AML	AML		
	comp=N,1405µm,0.6s						
MCEL				AML	AML		
	comp=E,1955µm,0.6s						
MCEL				AML	AML		
	comp=E,1945µm,1.4s						
MCEL				AML	AML		
	comp=N,1405µm,1.4s						
MCEL				AML	AML		
	comp=N,1395µm,1.5s						
MCEL				AML	AML		
	comp=E,1955µm,1.4s						
AG11	**Viggiano (PZ)**	1.36	16	P	Pb	03 50 46.0	+0.1
SLCN	**Sala Consilina**	1.37	6	P	Pn	03 50 45.2	+0.1
PLLN	**Pollina**	1.46	225	P	Pn	03 50 46.0	-0.3
CDRU	**Civita di Ruta**	1.47	355	P	Pn	03 50 45.7	-0.8
CDRU				AML	AML		
	comp=E,1285µm,1.0s						
CDRU				AML	AML		
	comp=N,786µm,0.4s						
CDRU				AML	AML		
	comp=N,786µm,1.6s						
ESML	**S. M. di Licod**	1.47	198	P	Pb	03 50 47.9	+0.3
ESML				AML	AML		
	comp=E,1305µm,0.9s						
ESML				AML	AML		
	comp=N,1280µm,0.9s						
ESML				AML	AML		
	comp=N,1280µm,1.1s						
GALF	**Gagliano Caste**	1.48	208	P	Pb	03 50 48.4	+0.5
GALF				AML	AML		
	comp=E,1046µm,0.8s						
GALF				AML	AML		
	comp=N,870µm,0.8s						
GALF				AML	AML		
	comp=E,1046µm,1.2s						
GIB	**Gibilmanna**	1.52	228	P	Pn	03 50 46.4	-0.9
CRAC	**Craco**	1.54	29	P	Pg	03 50 50.1	-0.3
CSLB	**Castelbuono**	1.54	226	P	Pn	03 50 46.9	-0.6
CSLB				AML	AML		
	comp=E,242µm,0.8s						
CSLB				AML	AML		
	comp=E,242µm,1.2s						
CSLB				AML	AML		
	comp=N,240µm,0.7s						
PTRP	**Pietrapertosa**	1.57	17	P	Pb	03 50 49.8	+0.5
PETRA	**Petralia Sopra**	1.59	222	AML	AML		
	comp=N,821µm,0.7s						
PETRA				AML	AML		
	comp=E,733µm,1.2s						
PETRA				AML	AML		
	comp=E,733µm,0.8s						
CAGR	**Agira**	1.59	209	P	Pg	03 50 50.6	-0.7
MRLC	**Muro Lucano**	1.73	1	P	Pb	03 50 51.1	-1.0
MRLC				AML	AML		
	comp=N,457µm,1.1s						
MRLC				AML	AML		
	comp=N,400µm,0.7s						
MRLC				AML	AML		
	comp=N,456µm,1.1s						
MRLC				AML	AML		
	comp=E,442µm,0.6s						
MRLC				AML	AML		
	comp=E,442µm,1.4s						
MRLC				AML	AML		
	comp=E,438µm,1.0s						
MRLC				AML	AML		
	comp=N,400µm,1.3s						
HLNI	**Lentini**	1.73	196	P	Pn	03 50 50.2	+0.2
HLNI				AML	AML		
	comp=E,330µm,1.1s						
HLNI				AML	AML		
	comp=N,330µm,1.2s						
HLNI				AML	AML		
	comp=N,330µm,0.8s						
HLNI				AML	AML		
	comp=E,330µm,0.9s						
HAGA	**Augusta**	1.75	188	P	Pn	03 50 50.6	+0.3
HAGA				S	Sb	03 51 13.1	-1.0
RESU	**Resuttano**	1.76	219	P	Pb	03 50 52.5	-0.1
MATE	**Matera**	1.89	30	P	Pn	03 50 52.9	+0.8
LTRZ	**Laterza**	1.90	33	P	Pn	03 50 52.7	+0.4
LTRZ				AML	AML		
	comp=E,626µm,1.1s						
LTRZ				AML	AML		
	comp=E,626µm,0.9s						
LTRZ				AML	AML		
	comp=N,544µm,0.9s						
SNAL	**S. Angelo Dei**	1.91	354	P	Pb	03 50 53.7	-1.5
HVZN	**Vizzini**	1.93	198	P	Pn	03 50 53.4	+0.6
RAFF	**Raffo Rosso**	1.99	206	P	Pb	03 50 55.0	-1.6
CAFE	**Carife**	2.01	355	P	Pn	03 50 54.8	+0.8
CORL	**Corleone**	2.03	237	P	Pn	03 50 54.9	+0.7
TAR1	**Taranto**	2.06	43	P	Pn	03 50 54.9	+0.4
TAR1				AML	AML		
	comp=N,486µm,0.5s						
TAR1				AML	AML		
	comp=E,434µm,0.4s						
TAR1				AML	AML		
	comp=N,486µm,1.5s						
AMUR	**Altamura**	2.08	25	P	Pn	03 50 55.4	+0.6
MRVN	**Minervino Murg**	2.11	15	P	Pn	03 50 55.9	+0.6
HMDC	**Modica**	2.13	195	P	Pn	03 50 56.0	+0.5
NOCI	**Noci**	2.15	35	P	Pn	03 50 56.0	+0.2
NOCI				AML	AML		
	comp=E,388µm,0.7s						
NOCI				AML	AML		

	comp=N,467µm,0.5s						
HPAC	**Pachino**	**2.34**	**187**	P	**Pn**	**03 50 58.9**	**+0.5**
APRC	**Apricena**	**2.73**	**1**	P	**Pn**	**03 51 04.4**	**+0.5**
STON	**Ston**	**4.20**	**23**	*e*Pn	**Pn**	**03 51 25.9**	**+1.9**
DRME	**Dracevica, Mon**	**4.25**	**41**	*e*Pn	**Pn**	**03 51 24.5**	**-0.1**
TREB	**Trebinje**	**4.29**	**30**	*e*Pn	**Pn**	**03 51 22.9**	**-2.3**
VSL	**Villasalto**	**4.74**	**278**	P	**Pn**	**03 51 30.0**	**-1.4**
SRKY	**Kupres RS**	**5.20**	**14**	*e*Pn	**Pn**	**03 51 41.1**	**+3.3**
SJES	**Sjenica**	**5.44**	**37**	*e*Pn	**Pn**	**03 51 41.6**	**+0.6**
RUDO	**Rudo**	**5.46**	**31**	*e*Pn	**Pn**	**03 51 40.2**	**-1.0**
HAPS	**Han Pijesak,Bl**	**5.70**	**26**	*e*Pn	Pn	03 51 37.4	-7.2
STIP	**Stip**	**5.79**	**60**	*i* Pn	**Pn**	**03 51 49.0**	**+3.2**
BLY	**Banja Luka**	**5.87**	**12**	*e*Pn	**Pn**	**03 51 51.1**	**+4.3**
A051A	**Mrakovica**	**6.08**	**10**	*e*Pn	**Pn**	**03 51 51.7**	**+1.8**
DIVS	**Divibare**	**6.11**	**32**	*e*Pn	**Pn**	**03 51 50.4**	**+0.2**
BOJS	**Bojanci**	**6.48**	**359**	*e*Pn	**Pn**	**03 51 56.7**	**+1.5**

NNC 09 04:08:18.3±2.9**, 37°.20N×71°.06E, h0^{km}, mb3.6, mpv3.3, 2C-1D, Error ellipse: s-maj=26.1km s-min=22.9km az=109.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.33**	**22**	⇑P	Pn	04 09 39.6	+0.1
	0.3nm,0.3s						
AML				⇑S	Sn	04 10 43.2	+1.4
	1.4nm,0.6s						
KK31	**Karatay Array**	**5.92**	**356**	P	Pn	04 09 48.2	+1.0
	1.7nm,0.3s,baz=166,slow=11,SNR=39						
KK31				S	Sn	04 10 56.5	+0.9
	1.1nm,0.5s,baz=182,slow=22,SNR=8.3						
TKM2	**Tokmak 2**	**6.69**	**30**	⇓P	Pn	04 09 57.2	-0.8
	2.9nm,0.5s						
AB31	**Akbulak array**	**14.50**	**330**	P	Pn	04 11 43.8	-0.9
	0.4nm,0.7s,baz=161,slow=12,SNR=7.6						

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*MDD **09** 04:13:12.0±0.6, 38°.26N×11°.92W, h0^{km}, Mb4.2/27, M_mb3.6/27, Error ellipse: s-maj=4.4km s-min=3.4km az=74.0*
*CNRM **09** 04:13:13.7, 37°.60N×11°.97W, h30^{km}*
*IGIL **09** 04:13:13.7, 38°.30N×11°.97W, h14^{km}, ML3.0*
*LDG **09** 04:13:13.0±0.2, 38°.32N×12°.06W, h10^{km}, Ml3.2/3, Error ellipse: s-maj=3.9km s-min=2.8km az=72.0*
*INMG **09** 04:13:14.1±1.3, 38°.26N×12°.34W, h19^{km}, ML2.9, Error ellipse: s-maj=5.4km s-min=3.1km az=86.0*
ISC 09 04:13:07.1±2.5**, 38°.31N**±0°.05×**12°.2W**±0°.1**, h10^{km}, n93, σ2^{s}.98**/152**, 26C, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**2.35**	**73**	S	**Sn**	**04 14 14.6**	**+0.1**
PMAFR				P	**Pn**	**04 13 49.2**	**+3.6**
PMAFR	**Mafra**	**2.35**	**73**	*e*P	**Pn**	**04 13 49.3**	**+3.6**
PMAFR				*e*S	**Sn**	**04 14 15.0**	**+0.5**
PMAFR				A	A	04 14 18.2	
	74nm,0.2s						
PTEO	**Sao Teotonio**	**2.82**	**105**	*e*P	**Pn**	**04 13 54.6**	**+2.4**
PTEO				*e*S	**Sn**	**04 14 23.7**	**-2.6**
PTEO				A	A	04 14 28.3	
	23nm,0.3s						
PNCL	**Nicolau / Gran**	**2.87**	**93**	*e*P	**Pn**	**04 13 55.5**	**+2.7**
PNCL				*e*S	**Sn**	**04 14 25.2**	**-2.2**
PNCL				A	A	04 14 29.3	
	24nm,0.1s						
PSBE	**So Bento**	**2.89**	**64**	*e*P	**Pn**	**04 13 56.7**	**+3.5**
PSBE				*e*S	**Sn**	**04 14 29.1**	**+1.1**
PSBE				A	A	04 14 31.7	
	12nm,0.2s						
PFVI	**Vila Bisbo**	**2.89**	**113**	P	Pn	04 13 53.8	+0.6
PFVI				S	**Sn**	**04 14 25.3**	**-2.8**
PFVI	**Vila Bisbo**	**2.89**	**113**	P	**Pn**	**04 13 55.1**	**+1.9**
PFVI	**Vila Bisbo**	**2.89**	**113**	*e*P	**Pn**	**04 13 55.2**	**+2.0**
PFVI				*e*S	**Sn**	**04 14 24.9**	**-3.1**
PFVI				A	A	04 14 30.6	
	19nm,0.1s						
MORF	**Marmelete**	**2.96**	**109**	*e*P	**Pn**	**04 13 56.3**	**+2.2**
MORF				*e*S	**Sn**	**04 14 26.4**	**-3.2**
MORF				A	A	04 14 30.1	
	50nm,0.1s						
MORF	**Marmelete**	**2.96**	**109**	*e*P	**Pn**	**04 13 56.5**	**+2.4**
MORF				*e*S	**Sn**	**04 14 28.0**	**-1.6**
MORF				IAML		04 14 28.9	
	comp=E,74nm,0.1s						
MESJ	**Messejana**	**3.15**	**97**	*e*P	**Pn**	**04 13 59.5**	**+2.8**
MESJ				*e*S	**Sn**	**04 14 32.3**	**-2.0**
MESJ				A	A	04 14 37.5	
	comp=E,14nm,0.1s						
MESJ	**Messejana**	**3.15**	**97**	*e*P	**Pn**	**04 13 59.2**	**+2.6**
MESJ				*e*S	**Sn**	**04 14 32.3**	**-2.0**
MESJ				IAML		04 14 36.9	
	comp=N,42nm,0.2s						
PMTG	**Montargil**	**3.17**	**75**	*e*P	**Pn**	**04 14 00.0**	**+3.0**
PMTG				*e*S	**Sn**	**04 14 33.8**	**-1.1**
PMTG				A	A	04 14 36.2	
	comp=N,14nm,0.2s						
EVO	**Evora**	**3.27**	**85**	S	**Sn**	**04 14 35.1**	**-2.1**
EVO				P	**Pn**	**04 14 01.2**	**+2.9**
EVO	**Evora**	**3.27**	**85**	*e*P	**Pn**	**04 14 01.2**	**+2.9**
EVO				A	A	04 14 40.7	
	comp=N,26nm,0.2s						
PCVE	**Castro Verde**	**3.33**	**100**	*e*P	**Pn**	**04 14 01.8**	**+2.6**
PCVE				*e*S	**Sn**	**04 14 37.6**	**-1.2**
PCVE				A	A	04 14 39.5	
	comp=N,13nm,0.2s						
PCAS	**Casmilo, Conde**	**3.34**	**57**	*e*P	**Pn**	**04 14 02.6**	**+3.3**
PCAS				*e*S	**Sn**	**04 14 39.3**	**+0.3**
PCAS				A	A	04 14 43.9	
	comp=N,9.6nm,0.1s						
PBEJ	**Beja**	**3.40**	**93**	*e*P	**Pn**	**04 14 03.2**	**+3.1**
PBEJ				*e*S	**Sn**	**04 14 37.7**	**-2.8**
PBEJ				A	A	04 14 41.5	
	comp=N,19nm,0.2s						
COI	**Coimbra**	**3.47**	**56**	*e*P	**Pn**	**04 14 04.5**	**+3.3**
COI				*e*S	**Sn**	**04 14 42.6**	**+0.3**
COI				A	A	04 14 45.8	
	comp=N,22nm,0.1s						
PBDV	**Barranco-do-Ve**	**3.52**	**106**	*e*P	Pn	04 14 09.3	+7.5
PBDV				*e*S	**Sn**	**04 14 43.2**	**-0.3**
PBDV				A	A	04 14 49.1	
	comp=N,21nm,0.3s						
PESTR	**Estremoz**	**3.63**	**80**	P	**Pn**	**04 14 05.8**	**+2.6**
PESTR				S	**Sn**	**04 14 45.6**	**-0.6**
PESTR	**Estremoz**	**3.63**	**80**	P	**Pn**	**04 14 05.8**	**+2.6**
PESTR				S	**Sn**	**04 14 45.3**	**-0.9**
PESTR	**Estremoz**	**3.63**	**80**	*e*P	**Pn**	**04 14 06.0**	**+2.7**
PESTR				*e*S	**Sn**	**04 14 46.0**	**-0.1**
PESTR				A	A	04 14 50.3	
	comp=N,13nm,0.2s						
PVAQ	**Vaqueiros**	**3.63**	**103**	P	**Pn**	**04 14 06.1**	**+2.8**
PVAQ				S	**Sn**	**04 14 43.6**	**-2.6**
PVAQ	**Vaqueiros**	**3.63**	**103**	S	**Sn**	**04 14 43.1**	**-3.2**
PVAQ				P	**Pn**	**04 14 05.6**	**+2.2**
PVAQ	**Vaqueiros**	**3.63**	**103**	*e*P	**Pn**	**04 14 05.7**	**+2.4**
PVAQ				*e*S	**Sn**	**04 14 44.3**	**-2.0**
PVAQ				A	A	04 14 47.9	
	comp=N,32nm,0.1s						
EGRO	**El Granado**	**3.78**	**100**	P	**Pn**	**04 14 07.6**	**+2.2**
EGRO				S	**Sn**	**04 14 47.5**	**-2.5**
EGRO	**El Granado**	**3.78**	**100**	P	**Pn**	**04 14 07.8**	**+2.4**
EGRO				⇑*i*Vmb_V		04 14 08.6	
	comp=N,710nm,SNR=6.7						
EGRO				S	**Sn**	**04 14 47.4**	**-2.5**
PMRV	**Marv??o**	**3.89**	**72**	*e*P	**Pn**	**04 14 09.7**	**+2.8**
PMRV				*e*S	**Sn**	**04 14 51.6**	**-1.0**
PMRV				A	A	04 14 54.3	
	comp=N,27nm,0.4s						
PTO	**Porto**	**3.94**	**43**	*e*S	**Sn**	**04 14 52.4**	**-1.4**
PTO				A	A	04 14 54.4	
	comp=N,79nm,0.1s						
PCBR	**Castelo Branco**	**3.95**	**66**	*e*P	**Pn**	**04 14 10.8**	**+3.0**
PCBR				*e*S	**Sn**	**04 14 54.0**	**-0.2**
PCBR				A	A	04 14 56.5	
	comp=N,12nm,0.4s						
PBAR	**Barrancos**	**4.04**	**90**	P	**Pn**	**04 14 11.7**	**+2.8**
PBAR	**Barrancos**	**4.04**	**90**	*e*P	**Pn**	**04 14 11.8**	**+2.9**
PBAR				*e*S	**Sn**	**04 14 53.8**	**-2.4**
PBAR				A	A	04 15 00.8	
	comp=N,13nm,0.1s						
EBAD	**Badajoz**	**4.06**	**82**	P	**Pn**	**04 14 12.0**	**+2.7**
EBAD				S	**Sn**	**04 14 54.9**	**-2.0**
EBAD	**Badajoz**	**4.06**	**82**	P	**Pn**	**04 14 12.0**	**+2.7**
EBAD				⇑*i*Vmb_V		04 14 13.2	
	comp=N,399nm,SNR=7.8						
EBAD				S	**Sn**	**04 14 55.2**	**-1.7**
PVIS	**Viseu**	**4.08**	**53**	*e*P	**Pn**	**04 14 12.6**	**+3.0**
PVIS				*e*S	**Sn**	**04 14 56.4**	**-1.1**
PVIS				A	A	04 14 59.3	
	comp=N,19nm,0.3s						
MTE	**Manteigas**	**4.14**	**58**	*e*P	**Pn**	**04 14 13.6**	**+3.1**
MTE				*e*S	**Sn**	**04 14 58.5**	**-0.5**
MTE				A	A	04 15 00.1	
	comp=N,12nm,0.3s						
EMIN	**Mina Concepcio**	**4.37**	**95**	P	**Pn**	**04 14 16.2**	**+2.8**
EMIN				S	**Sn**	**04 15 01.5**	**-2.9**
EMIN	**Mina Concepcio**	**4.37**	**95**	P	**Pn**	**04 14 16.4**	**+3.0**
EMIN				⇑*i*Vmb_V		04 14 18.8	
	comp=N,178nm,SNR=3.1						
EMIN				S	**Sn**	**04 15 01.2**	**-3.2**
PVRL	**Vila Real**	**4.53**	**48**	*e*P	**Pn**	**04 14 18.3**	**+2.6**
PVRL				*e*S	**Sn**	**04 15 06.5**	**-1.9**
PVRL				A	A	04 15 09.3	
	comp=N,18nm,0.1s						
POLO	**Lamas de Olo**	**4.55**	**46**	*e*P	**Pn**	**04 14 18.7**	**+2.7**
POLO				*e*S	**Sn**	**04 15 07.0**	**-2.0**
POLO				A	A	04 15 09.6	
	comp=N,4.5nm,0.2s						
PCAB	**Cabril**	**4.65**	**42**	*e*P	**Pn**	**04 14 20.2**	**+2.8**
PCAB				*e*S	**Sn**	**04 15 08.7**	**-2.7**
PCAB				A	A	04 15 13.6	
	comp=N,20nm,0.3s						
PGAV	**Gavieira, Arco**	**4.72**	**38**	*e*P	**Pn**	**04 14 21.1**	**+2.8**
PGAV				*e*S	**Sn**	**04 15 10.7**	**-2.4**
PGAV				A	A	04 15 13.1	
	comp=N,18nm,0.3s						
ELOB	**Lobios**	**4.75**	**40**	P	**Pn**	**04 14 20.9**	**+2.2**
ELOB				⇑*i*Vmb_V		04 14 22.4	
	comp=N,253nm,SNR=2.5						
ELOB				S	**Sn**	**04 15 11.3**	**-2.6**
MVO	**Moncorvo**	**4.88**	**53**	*e*P	**Pn**	**04 14 23.2**	**+2.7**
MVO				*e*S	**Sn**	**04 15 14.6**	**-2.5**
MVO				A	A	04 15 16.7	
	comp=N,15nm,0.2s						
EPLA	**Plasencia**	**5.04**	**68**	P	**Pn**	**04 14 26.1**	**+3.4**
EPLA				⇑*i*Vmb_V		04 14 27.8	
	comp=N,247nm,SNR=3.5						
EPLA				S	**Sn**	**04 15 19.5**	**-1.6**
ESPR	**Espera**	**5.21**	**104**	P	**Pn**	**04 14 28.3**	**+3.2**
ESPR				S	**Sn**	**04 15 22.8**	**-2.4**
ESPR	**Espera**	**5.21**	**104**	P	**Pn**	**04 14 27.9**	**+2.9**
ESPR				⇑*i*Vmb_V		04 14 29.5	
	comp=N,391nm,SNR=5.6						
ESPR				S	**Sn**	**04 15 23.3**	**-1.8**
EMAZ	**Mazaricos**	**5.23**	**27**	P	**Pn**	**04 14 27.3**	**+1.9**
EMAZ				⇑*i*Vmb_V		04 14 30.1	
	comp=N,254nm,SNR=1.3						
EMAZ				S	**Sn**	**04 15 20.0**	**-5.7**
ECAB	**El Cabril**	**5.32**	**90**	P	**Pn**	**04 14 29.6**	**+3.1**
ECAB				S	**Sn**	**04 15 24.0**	**-3.9**
ECAB	**El Cabril**	**5.32**	**90**	P	**Pn**	**04 14 29.6**	**+3.1**
ECAB				⇑*i*Vmb_V		04 14 31.8	
	comp=N,109nm,SNR=1.8						
ECAB				S	**Sn**	**04 15 24.2**	**-3.7**
PBRG	**Braganca**	**5.43**	**48**	*e*P	**Pn**	**04 14 31.1**	**+3.0**
PBRG				*e*S	**Sn**	**04 15 28.1**	**-2.6**
PBRG				A	A	04 15 31.2	
	comp=N,6.7nm,0.2s						
EAGO	**Agolada(Pontev**	**5.46**	**33**	P	**Pn**	**04 14 30.4**	**+2.0**
EAGO				⇑*i*Vmb_V		04 14 31.0	
	comp=N,386nm,SNR=3.2						
EAGO				S	**Sn**	**04 15 25.9**	**-5.3**
ECAL	**Calabor**	**5.52**	**47**	P	**Pn**	**04 14 32.1**	**+2.7**
ECAL				⇑*i*Vmb_V		04 14 33.5	
	comp=N,250nm,SNR=2.4						
ECAL				S	**Sn**	**04 15 30.0**	**-2.9**
EJIF	**Jimena Fronter**	**5.64**	**107**	P	**Pn**	**04 14 34.6**	**+3.6**
EADA	**Adamuz**	**5.97**	**89**	P	**Pn**	**04 14 38.5**	**+2.9**
EADA				S	**Sn**	**04 15 41.1**	**-3.0**
EADA	**Adamuz**	**5.97**	**89**	P	**Pn**	**04 14 38.5**	**+2.9**
EADA				⇑*i*Vmb_V		04 14 39.7	
	comp=N,142nm,SNR=3.5						
EADA				S	**Sn**	**04 15 40.6**	**-3.5**
EMIJ	**Mijas**	**6.13**	**104**	P	**Pn**	**04 14 40.7**	**+3.0**
EMIJ				S	**Sn**	**04 15 42.0**	**-5.9**
EMIJ	**Mijas**	**6.13**	**104**	P	**Pn**	**04 14 40.7**	**+3.0**
EMIJ				⇑*i*Vmb_V		04 14 43.7	
	comp=N,68nm,SNR=0.9						
EMIJ				S	**Sn**	**04 15 43.3**	**-4.6**
PAB	**San Pablo**	**6.22**	**76**	P	**Pn**	**04 14 41.6**	**+2.7**
PAB	**San Pablo**	**6.22**	**76**	P	**Pn**	**04 14 41.4**	**+2.4**
PAB				⇑*i*Vmb_V		04 14 44.8	
	comp=N,99nm,SNR=2.0						
PAB				S	**Sn**	**04 15 45.5**	**-4.6**
EPON	**Pontenova**	**6.29**	**36**	P	**Pn**	**04 14 42.1**	**+2.2**
EPON				⇑*i*Vmb_V		04 14 43.5	
	comp=N,108nm,SNR=0.7						
EPON				S	**Sn**	**04 15 46.4**	**-5.5**
AVE	**Averroes**	**6.31**	**141**	S	Sn	04 15 46.8	-5.6
ESDC	**Sonseca Array**	**6.53**	**75**	P	**Pn**	**04 14 46.3**	**+3.1**
ESDC				⇑*i*Vmb_V		04 14 47.7	
	comp=N,160nm,SNR=3.6						
ESDC				S	**Sn**	**04 15 54.2**	**-3.6**
PSIM	**Granatula de C**	**6.61**	**83**	P	**Pn**	**04 14 47.2**	**+2.9**
PSIM				S	**Sn**	**04 15 56.2**	**-3.5**
GUD	**Guadarrama**	**6.62**	**67**	P	**Pn**	**04 14 47.4**	**+2.9**
GUD				⇑*i*Vmb_V		04 14 48.1	
	comp=N,91nm,SNR=2.4						
GUD				S	**Sn**	**04 15 57.7**	**-2.4**
PMAR	**Madeira**	**6.79**	**216**	P	Pn	04 14 43.6	-3.3
PMAR				S	Sn	04 15 52.8	-11
ELGU	**Los Guajares,**	**6.93**	**99**	P	**Pn**	**04 14 53.2**	**+4.5**
ELGU				⇑*i*Vmb_V		04 14 55.8	
	comp=N,98nm,SNR=2.0						
ELGU				S	**Sn**	**04 16 04.8**	**-2.8**
EQUE	**Quentar**	**7.00**	**96**	P	**Pn**	**04 14 52.4**	**+2.7**
EQUE				⇑*i*Vmb_V		04 14 53.7	
	comp=N,46nm,SNR=1.3						
EQUE				S	**Sn**	**04 16 05.7**	**-3.7**
EQES	**Quesada**	**7.19**	**91**	P	**Pn**	**04 14 55.0**	**+2.6**
EQES				⇑*i*Vmb_V		04 14 58.3	
	comp=N,81nm,SNR=1.5						
EQES				S	**Sn**	**04 16 10.6**	**-3.5**
UCM	**Universidad Co**	**7.20**	**71**	P	**Pn**	**04 14 55.8**	**+3.4**
UCM				S	**Sn**	**04 16 11.0**	**-3.2**
EARI	**Arriondas**	**7.26**	**44**	P	**Pn**	**04 14 55.9**	**+2.7**
EARI				⇑*i*Vmb_V		04 14 59.6	
	comp=N,65nm,SNR=0.4						
EARI				S	**Sn**	**04 16 12.5**	**-3.1**
IFR	**Ifrane**	**7.44**	**128**	P	Pn	04 14 56.3	+0.4
IFR				S	Sn	04 16 11.8	-8.7
AKLM	**AKL**	**7.69**	**117**	P	Pn	04 14 59.0	-0.2
AKLM				S	Sn	04 16 16.1	-10
OUK	**Oukaimeden**	**7.92**	**152**	P	Pn	04 15 00.6	-1.9
OUK				S	Sn	04 16 18.6	-14
MD31	**MD31**	**8.11**	**130**	P	Pn	04 15 05.6	+0.6
MD31				S	Sn	04 16 22.7	-14
ETOR	**Torete**	**8.20**	**69**	P	**Pn**	**04 15 09.5**	**+3.4**
ETOR				⇑*i*Vmb_V		04 15 09.6	
	comp=N,95nm,SNR=1.4						
ETOR				S	**Sn**	**04 16 35.2**	**-3.7**
MDT	**Midelt**	**8.24**	**129**	P	Pn	04 15 08.3	+1.6
MDT				S	Sn	04 16 29.6	-10
ELAN	**Lanestosa**	**8.25**	**51**	P	**Pn**	**04 15 10.5**	**+3.7**
ELAN				⇑*i*Vmb_V		04 15 14.6	
	comp=N,129nm,SNR=1.5						
ELAN				S	**Sn**	**04 16 36.2**	**-3.8**
EZAR	**Zarzadilla de**	**8.27**	**90**	P	**Pn**	**04 15 10.0**	**+2.9**
EZAR				⇑*i*Vmb_V		04 15 11.6	
	comp=N,57nm,SNR=1.0						
EZAR				S	**Sn**	**04 16 36.3**	**-4.3**
TTIG	**Tnine Tigouga,**	**8.33**	**157**	P	Pn	04 15 04.4	-3.6
TTIG				S	Sn	04 16 26.7	-15
ETOB	**Tobarra**	**8.33**	**84**	P	**Pn**	**04 15 10.3**	**+2.3**
ETOB	**Tobarra**	**8.33**	**84**	P	**Pn**	**04 15 10.4**	**+2.5**
ETOB				⇑*i*Vmb_V		04 15 12.9	
	comp=N,45nm,SNR=1.0						
ETOB				S	**Sn**	**04 16 38.3**	**-3.9**
OUZM	**OUZ**	**8.62**	**147**	P	Pn	04 15 11.2	-0.8
OUZM				S	Sn	04 16 38.2	-11
JBK	**JBK**	**8.70**	**114**	P	Pn	04 15 11.9	-1.2
JBK				S	Sn	04 16 42.1	-9.3
ECHE	**Chera**	**8.82**	**78**	P	**Pn**	**04 15 18.1**	**+3.5**
ECHE	**Chera**	**8.82**	**78**	P	**Pn**	**04 15 17.6**	**+3.1**
ECHE				⇑*i*Vmb_V		04 15 19.9	
	comp=N,89nm,SNR=1.3						
ECHE				S	**Sn**	**04 16 50.1**	**-3.9**
TZRR	**Tazzarine**	**9.27**	**142**	P	Pn	04 15 17.7	-3.1
TZRR				S	Sn	04 16 52.9	-12
EMOS	**Mosqueruela**	**9.29**	**74**	P	**Pn**	**04 15 24.3**	**+3.1**
EMOS				⇑*i*Vmb_V		04 15 29.3	
	comp=N,54nm,SNR=1.0						
EMOS				S	**Sn**	**04 17 00.1**	**-5.6**
SJPF	**Ste Jean**	**9.59**	**57**	*e*Pn	**Pn**	**04 15 28.6**	**+3.5**
SJPF				*e*Sn	**Sn**	**04 17 08.5**	**-4.4**
	comp=N,1.1nm,0.3s						
ZGR	**Zagora**	**9.80**	**145**	P	Pn	04 15 26.8	-1.3
ZGR				S	Sn	04 17 05.7	-13
ETSF	**Etsaut**	**9.94**	**59**	*e*Pn	**Pn**	**04 15 32.8**	**+2.8**
ETSF				*e*Sn	**Sn**	**04 17 17.2**	**-4.4**
	comp=N,0.9nm,0.3s						
EPF	**Esparros**	**10.60**	**60**	*e*Pn	**Pn**	**04 15 42.9**	**+3.9**
EPF				*e*Sn	**Sn**	**04 17 32.8**	**-5.0**
	comp=N,0.5nm,0.3s						

IDC 09 04:25:13.5±263.0**, 39°.90N×15°.59W, h0^{km}, Error ellipse: s-maj=185.3km s-min=101.3km az=108.0, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**22.66**	**57**	I	I	06 42 10.0	
	baz=258,slow=315,SNR=1.1						
I11CV	**MAIO ISLAND IN**	**25.43**	**197**	I	I	07 00 50.0	
	baz=15,slow=314,SNR=1.3						
I37NO	**I37NO**	**34.43**	**21**	I	I	07 52 50.0	
	0.1nm,0.9s,baz=231,slow=331,SNR=2.6						
I17CI	**DIMBOKRO INFRA**	**34.46**	**161**	I	I	07 56 10.0	
	baz=345,slow=324,SNR=0.8						
I43RU	**DUBNA INFRASON**	**37.87**	**46**	I	I	08 16 10.0	
	0.1nm,1.3s,baz=268,slow=322,SNR=5.3						
I18DK	**QAANAAQ INFRAS**	**43.70**	**345**	I	I	08 54 30.0	
	baz=119,slow=339,SNR=2.2						
I31KZ	**AKTYUBINSK INF**	**50.97**	**52**	I	I	09 40 10.0	
	0.1nm,1.3s,baz=287,slow=333,SNR=5.6						
I46RU	**ZALESOVO INFRA**	**64.33**	**40**	I	I	11 03 00.0	
	baz=302,slow=330,SNR=3.2						

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*TIR **09** 04:25:34.7, 40°.09N×19°.77E, h0^{km}±1^{km}, Md2.7, Ml2.0*
*ATH **09** 04:25:35.5, 40°.21N×19°.77E, h6^{km}±4^{km}, ML1.8/3, Error ellipse: s-maj=4.5km s-min=1.3km az=205.0*
ISC 09 04:25:35.8±1.2**, 40°.15N**±0°.03×**19°.78E**±0°.03**, h3^{km}**±12^{km}**, n18, σ1^{s}.52**/29**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRN	**Sarande**	**0.32**	**147**	P	**Pg**	**04 25 41.1**	**-0.8**
	baz=139						
SRN				S	**Sg**	**04 25 46.2**	**+0.1**
	baz=139						
SRN				AMP			
	comp=N,0.9nm,0.5s,baz=139						
KASA	**Kassiopi**	**0.42**	**163**	P	**Pg**	**04 25 43.8**	**0.0**
KASA				S	**Sg**	**04 25 51.2**	**+1.9**
KEK	**Kerkira**	**0.43**	**178**	P	**Pg**	**04 25 45.0**	**+0.9**
KEK				S	**Sg**	**04 25 52.2**	**+2.4**
KEK				AML	AML	04 25 56.4	
	comp=N,237µm,0.4s						
KEK				AML	AML	04 25 59.7	
	comp=E,235µm,0.4s						
LSK	**Leskovik**	**0.63**	**90**	P	**Pg**	**04 25 47.8**	**-0.1**
	baz=84						
LSK				S	**Sb**	**04 25 58.6**	**-0.1**
	baz=84						
LSK				AMP			
	comp=E,0.3nm,0.5s,baz=84						
IGT	**Igoumenitsa**	**0.75**	**145**	P	**Pg**	**04 25 49.4**	**-0.7**
	baz=141						
IGT				S	**Sg**	**04 26 00.3**	**+0.5**
	baz=141						
IGT	**Igoumenitsa**	**0.75**	**145**	P	**Pg**	**04 25 50.2**	**0.0**
IGT				S	**Sg**	**04 26 01.9**	**+2.0**
IGT				AML	AML	04 26 08.0	
	comp=N,149µm,0.5s						
IGT				AML	AML	04 26 08.8	
	comp=E,151µm,0.5s						
JAN	**Janina**	**0.96**	**120**	P	**Pg**	**04 25 53.8**	**-0.4**
SCTE	**Santa Cesarea**	**1.01**	**266**	P	**Pb**	**04 25 55.4**	**-0.5**
	baz=270						
SCTE				S	**Sn**	**04 26 09.9**	**-1.5**
	baz=270						
SCTE				AMP			
	comp=N,0.2nm,0.8s,baz=270						
SCTE	**Santa Cesarea**	**1.01**	**266**	P	**Pg**	**04 25 54.7**	**-0.4**
SCTE				S	**Sg**	**04 26 07.9**	**-0.3**
PENT	**Pentalofos**	**1.04**	**87**	P	**Pb**	**04 25 55.9**	**-0.7**
TIR	**Tirane**	**1.20**	**3**	P	**Pn**	**04 26 00.9**	**+1.4**
	baz=3.0						
TIR				S	**Sn**	**04 26 19.1**	**+2.8**
	baz=3.0						
TIR				AMP			
	comp=E,0.1nm,0.7s,baz=3.0						
KPRO	**Kipourio**	**1.23**	**98**	P	**Pg**	**04 25 58.7**	**-0.7**
FNA	**Florina**	**1.38**	**62**	P	**Pg**	**04 26 01.8**	**-0.4**
	baz=60						
FNA				S	**Sn**	**04 26 24.5**	**+3.9**
	baz=60						
FNA	**Florina**	**1.38**	**62**	P	**Pn**	**04 26 00.4**	**-1.5**
FNA				S	**Sb**	**04 26 18.2**	**-2.0**
FNA				AML	AML	04 26 27.2	
	comp=N,132µm,0.7s						
FNA				AML	AML	04 26 29.4	
	comp=E,113µm,0.5s						
KZN	**Kozani**	**1.54**	**83**	P	**Pn**	**04 26 01.5**	**-2.6**
PHP	**Peshkopia**	**1.62**	**18**	P	**Pg**	**04 26 06.7**	**-0.1**
	baz=17						
EVGI	**Lefkada island**	**1.67**	**156**	P	**Pn**	**04 26 05.6**	**-0.4**
PVO	**Paravola**	**2.04**	**138**	P	**Pn**	**04 26 10.6**	**-0.5**

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*IDC **09** 04:57:43.0±1.6, 2°.69S×139°.20E, h0^{km}, mb3.8/5, mbtmp3.8/6, ML4.0/1, MS3.8/4, Error ellipse: s-maj=57.2km s-min=24.8km az=88.0*
*NEIC **09** 04:57:51.1±1.2, 2°.8S±0°.1×138°.9E±0°.1, h47^{km}±8^{km}, mb4.2/12, Error ellipse: s-maj=18.5km s-min=15.6km az=56.0*
ISC 09 04:57:49.5±0.7**, 2°.71S**±0°.08×**138°.9E**±0°.1**, h37^{km}, n31, σ0^{s}.93**/27**, mb4.1**/8**, MS3.8**/4**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**6.68**	**268**	Pn	**Pn**	**04 59 25.8**	**+0.7**
COEN	**Coen**	**11.94**	**160**	Pn	**Pn**	**05 00 38.0**	**+0.7**
MTN	**Manton Dam**	**12.69**	**217**	Pn	**Pn**	**05 00 47.3**	**-0.2**
KNRA	**Kununurra**	**16.32**	**217**	Pn	**Pn**	**05 01 35.2**	**-0.9**
KNRA				IAmb	IAmb	05 01 52.0	
	comp=Z,44nm,1.5s						
WB0	**Warramunga Arr**	**17.52**	**194**	Pn	**Pn**	**05 01 49.4**	**-1.7**
WR0	**Warramunga Arr**	**17.68**	**194**	P	**Pn**	**05 01 52.5**	**-0.5**
WR0				IAmb	IAmb	05 02 11.3	
	comp=Z,10nm,1.2s						
WB2	**Warramunga Arr**	**17.70**	**194**		**Pn**	**05 01 52.2**	**-1.1**
WB2				IAmb	IAmb	05 02 13.5	
	comp=Z,5.4nm,0.7s						
WRA	**Warramunga Arr**	**17.71**	**194**	P	**Pn**	**05 01 51.4**	**-1.9**
	comp=Z,0.5nm,0.3s,baz=16,slow=12,SNR=11						
	comp=Z,1.6nm,0.5s						
WRA	**Warramunga Arr**	**17.71**	**194**		**Pn**	**05 01 52.5**	**-0.8**
AS31	**Alice Springs**	**21.39**	**193**	P	**P**	**05 02 35.0**	**+0.9**
ASAR	**Alice Springs**	**21.39**	**193**	P	**P**	**05 02 34.0**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=18,slow=10,SNR=18						
	comp=Z,2.0nm,0.8s						
ASAR	**Alice Springs**	**21.39**	**193**	P	**P**	**05 02 34.2**	**0.0**
DZM	**Mont Dzumac**	**32.93**	**128**	LR	LR	05 17 05.5	
	comp=Z,176nm,18.1s,baz=234,slow=36						
KSAR	**Wonju Array Be**	**41.25**	**347**	P	**P**	**05 05 30.9**	**-0.1**
CMAR	**Chiang Mai Arr**	**44.63**	**300**	P	**P**	**05 05 58.9**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=119,slow=5.2,SNR=5.4						
	comp=Z,0.8nm,0.4s						
URZ	**Urewera**	**49.67**	**140**	LR	LR	05 28 44.1	
	comp=Z,106nm,18.1s,baz=316,slow=38						
SONM	**Songino Array**	**57.81**	**335**	P	**P**	**05 07 37.6**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=148,slow=8.5,SNR=2.1						
	comp=Z,0.3nm,0.6s						
MK31	**Makanchi Array**	**69.93**	**322**	P	**P**	**05 08 57.1**	**+0.1**
MK31				IAmb	IAmb	05 08 58.6	
	comp=Z,4.4nm,1.2s						
MKAR	**Makanchi Array**	**69.93**	**322**	P	**P**	**05 08 57.1**	**+0.1**

	comp=Z,1.6nm,0.5s,baz=97,slow=8.9,SNR=42						
	comp=Z,1.6nm,0.5s						
MKAR	Makanchi Array	69.93	322	P	P	05 08 57.3	+0.3
MAKZ	Makanchi	70.12	322	P	P	05 08 58.3	+0.1
P18K	Big Mountain,	80.28	28	P	P	05 09 57.2	+0.8
ILSW	Iliamna Southw	81.48	28	P	P	05 10 03.7	+0.8
ABKAR	Akbulak array	84.87	320	P	P	05 10 19.7	-0.7
ABKAR				IAmb	IAmb	05 10 22.6	
	comp=Z,1.3nm,0.7s						
ABKAR	Akbulak array	84.87	320	P	P	05 10 19.1	-1.3
ILAR	Eielson Array	85.74	24	P	P	05 10 22.7	-1.8
	comp=Z,0.5nm,0.9s,baz=257,slow=4.8,SNR=3.2						
	comp=Z,0.5nm,0.9s						
QSPA	South Pole Qui	87.24	180	P	P	05 10 32.6	+0.6
QSPA				IAmb	IAmb	05 10 38.9	
	comp=Z,3.3nm,1.1s						
BMAR	Burnt Mountain	87.32	22	P	P	05 10 33.5	+1.2
BBB	Bella Bella	93.94	38	LR	LR	05 48 18.1	
	comp=Z,27nm,18.8s,baz=242,slow=32						
YKA	Yellowknife Ar	99.96	27	LR	LR	05 54 01.3	
	comp=Z,29nm,19.8s,baz=306,slow=34						
TORD	Torodi Ar. Bea	136.47	286	PKP	PKPdf	05 17 07.8	-0.7
	comp=Z,0.4nm,0.8s,baz=62,slow=0.7,SNR=2.2						

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*IDC **09** 05:00:40.9±1.3, 3°.28S×143°.95E, h0^{km}, mb3.5/5, mbtmp3.6/7, ML3.9/1, MS3.4/6, Error ellipse: s-maj=50.6km s-min=22.9km az=91.0*

*NEIC **09** 05:00:50.0±0.9, 3°.9S±0°.1×144°.1E±0°.2, h34^{km}±4^{km}, mb4.1/13, Error ellipse: s-maj=23.1km s-min=14.6km az=78.0*

ISC 09 05:00:46.5±0.9, **3°.32S**±0°.10×**144°.0E**±0°.1, **h35^{km}, n28, σ1^{s}52**/20, **mb3.6**/8, **MS3.2**/4, **Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.80	153	Pn	Pn	05 02 24.4	+0.6
	7.2nm,0.4s,baz=310,slow=8.4,SNR=1.5						
PMG				Sn	Sn	05 03 39.4	-0.6
	2.9nm,0.3s,baz=143,slow=20,SNR=1.4						
PMG				LR	LR	05 05 47.6	
	comp=Z,522nm,18.3s,baz=8.5,slow=45						
PMG	Port Moresby	6.80	153	Pn	Pn	05 02 15.4	-8.3
COEN	Coen	10.61	185	Pn	Pn	05 03 10.8	-5.3
MTN	Manton Dam	15.89	233	Pn	Pn	05 04 27.9	+0.2
MTN				IAmb	IAmb	05 04 46.2	
	comp=Z,9.6nm,0.8s						
WB0	Warramunga Arr	18.87	209	P	P	05 05 01.6	-2.2
WB0				IAmb	IAmb	05 05 27.4	
	comp=Z,9.0nm,0.9s						
WR0	Warramunga Arr	18.96	209	P	P	05 05 03.3	-1.6
WR0				IAmb	IAmb	05 05 12.7	
	comp=Z,9.9nm,0.9s						
WB2	Warramunga Arr	19.04	209	P	P	05 05 04.0	-1.8
WB2				IAmb	IAmb	05 05 18.7	
	comp=Z,8.1nm,0.8s						
WRA	Warramunga Arr	19.05	209	P	P	05 05 04.2	-1.6
	comp=Z,0.3nm,0.3s,baz=29,slow=12,SNR=9.6						
WRA				LR	LR	05 12 57.4	
	comp=Z,147nm,19.2s,baz=40,slow=39						
	comp=Z,1.1nm,0.5s						
WRA	Warramunga Arr	19.05	209	P	P	05 05 03.8	-2.0
KNRA	Kununurra	19.42	230	P	P	05 05 09.6	-0.3
SOEI	Soe	20.65	251	P	P	05 05 25.1	+1.6
DAV	Davao City (W)	21.12	299	LR	LR	05 14 00.7	
	comp=Z,63nm,18.5s,baz=152,slow=38						
AS31	Alice Springs	22.48	205	P	P	05 05 40.6	-2.4
ASAR	Alice Springs	22.48	205	P	P	05 05 41.8	-1.2
	comp=Z,0.8nm,0.5s,baz=34,slow=10,SNR=5.8						
	comp=Z,0.8nm,0.5s						
ASAR	Alice Springs	22.48	205	P	P	05 05 41.0	-2.0
FITZ	Fitzroy Crossi	23.25	230	P	P	05 05 51.4	+0.4
JOW	Kunigami	33.62	334	LR	LR	05 17 26.2	
	comp=Z,99nm,21.5s,baz=324,slow=30						
JNU	Nakatsue	38.32	342	LR	LR	05 22 15.2	
	comp=Z,39nm,19.7s,baz=186,slow=34						
KSRS	Korea Array	43.24	341	LR	LR	05 23 26.5	
	comp=Z,36nm,21.7s,baz=195,slow=32						
ULN	Ulaanbaatar	60.36	332	P	P	05 10 59.0	+6.8
ULN				IAmb	IAmb	05 11 01.7	
	comp=Z,1.6nm,0.9s						
SONM	Songino Array	60.65	332	P	P	05 10 54.6	+0.4
	comp=Z,0.2nm,0.4s,baz=154,slow=8.0,SNR=1.8						
	comp=Z,0.2nm,0.4s						
MKAR	Makanchi Array	73.56	321	P	P	05 12 15.8	-0.3
	comp=Z,0.2nm,0.6s,baz=106,slow=9.2,SNR=2.3						
	comp=Z,0.2nm,0.6s						
MKAR	Makanchi Array	73.56	321	P	P	05 12 22.4	+6.3
MAKZ	Makanchi	73.77	321	P	P	05 12 23.8	+6.5
MAKZ				IAmb	IAmb	05 12 27.5	
	comp=Z,3.4nm,0.9s						
VNDA	Vanda	74.76	176	P	P	05 12 23.1	+0.7
VNDA				IAmb	IAmb	05 12 27.2	
	comp=Z,2.2nm,1.1s						
ZALV	Zalesovo Beam	75.19	328	P	P	05 12 23.9	-1.4
	comp=Z,0.3nm,0.4s,baz=141,slow=7.1,SNR=2.1						
	comp=Z,0.3nm,0.4s						
ILAR	Eielson Array	84.21	24	P	P	05 13 13.2	-0.8
	comp=Z,0.4nm,0.8s,baz=249,slow=5.2,SNR=4.4						
	comp=Z,0.4nm,0.8s						
QSPA	South Pole Qui	86.63	180	P	P	05 13 28.2	+1.9

IDC 09 05:12:25.1±9.6, **2°.62S**×**139°.07E, h0^{km}, mb3.1**/2, **mbtmp3.2**/3, **ML4.6**/1, **Error ellipse: s-maj=397.4km s-min=33.7km az=86.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.83	195	P	Pn	05 16 34.9	+0.1
	2.2nm,0.3s,baz=13,slow=12,SNR=7.2						
	0.3nm,0.5s						
ASAR	Alice Springs	21.52	193	P	P	05 17 15.8	0.0
	0.3nm,0.7s,baz=22,slow=10,SNR=3.1						
	0.3nm,0.7s						
MKAR	Makanchi Array	69.94	322	P	P	05 23 38.4	0.0
	0.2nm,0.6s,baz=100,slow=6.2,SNR=2.4						
	0.2nm,0.6s						

IDC 09 05:30:36.9±3.7, **2°.98S**×**137°.47E, h0^{km}, mb3.4**/2, **mbtmp3.5**/3, **ML3.5**/1, **MS3.2**/1, **Error ellipse: s-maj=146.2km s-min=22.5km az=87.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.14	190	P	P	05 34 39.9	+0.2
	0.2nm,0.3s,baz=17,slow=13,SNR=9.7						
WRA				S	Sn	05 37 46.9	-2.4
	0.3nm,0.8s,baz=7.0,slow=22,SNR=2.4						
	0.9nm,0.6s						
CTA	Charters Tower	19.05	154	LR	LR	05 42 35.6	
	comp=Z,70nm,18.7s,baz=88,slow=38						
ASAR	Alice Springs	20.86	189	P	Pn	05 35 21.9	-1.0
	0.5nm,0.7s,baz=16,slow=11,SNR=12						
	0.5nm,0.7s						
MKAR	Makanchi Array	69.25	323	P	P	05 41 45.5	-0.4
	0.8nm,0.6s,baz=107,slow=8.0,SNR=11						
	0.8nm,0.6s						

ROM 09 05:34:52.3±0.0, **43°.013N**±0°.002×**13°.040E**±0°.003, **h10^{km}, ML1.5**/10, **3C-6D, Error ellipse: s-maj=0.2km s-min=0.2km az=339.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1219	Muccia, Frazio	0.05	331	AML	AML		
	comp=N,1850μm,0.3s						
T1219				AML	AML		
	comp=E,1130μm,0.3s						
T1219				AML	AML		
	comp=N,1765μm,0.3s						
T1219				AML	AML		
	comp=E,1260μm,0.3s						
CESI	CESI - Serrava	0.10	266	⇑P	Pg	05 34 55.4	+0.4
CESI				S	Sg	05 34 57.5	+0.6
CESI				AML	AML		
	comp=E,279μm,0.8s						
CESI				AML	AML		
	comp=N,338μm,0.3s						
CESI				AML	AML		
	comp=E,278μm,0.8s						
CESI				AML	AML		
	comp=E,278μm,1.2s						
T1220	Camerino, Fraz	0.10	20	⇑P	Pg	05 34 55.5	+0.4
T1220				S	Sg	05 34 57.6	+0.6
T1220				AML	AML		
	comp=E,37850μm,1.6s						
T1220				AML	AML		
	comp=N,567μm,0.6s						
T1220				AML	AML		
	comp=E,37900μm,1.6s						
T1220				AML	AML		
	comp=N,566μm,0.6s						
T1220				AML	AML		
	comp=N,566μm,1.4s						
T1220				AML	AML		
	comp=E,37900μm,0.4s						
T1216	Preci, Frazion	0.12	187	P	Pg	05 34 55.7	+0.4
T1216				S	Sg	05 34 58.2	+0.8
T1216				AML	AML		
	comp=N,202μm,1.5s						
T1216				AML	AML		
	comp=E,220μm,1.4s						
T1216				AML	AML		
	comp=E,220μm,0.6s						
T1216				AML	AML		
	comp=N,202μm,0.5s						
T1256	Bolognola (MC)	0.14	93	P	Pg	05 34 56.0	+0.4
T1256				S	Sg	05 34 58.6	+0.7
T1256				AML	AML		
	comp=N,130μm,1.3s						
T1256				AML	AML		
	comp=N,129μm,1.3s						
T1256				AML	AML		
	comp=N,129μm,0.7s						
T1256				AML	AML		
	comp=E,136μm,0.7s						
MC2	Monte Cornacci	0.15	132	⇓P	Pb	05 34 56.7	-0.7
T1215	Vallo di Nera,	0.25	211	P	Pg	05 34 58.0	+0.6
SNTG	Esanatoglia	0.25	343	⇓P	Pb	05 34 58.3	-0.7
T1212	Cascia, Frazio	0.26	179	P	Pg	05 34 58.3	+0.6
T1212				S	Sb	05 35 02.9	-0.9
T1212				AML	AML		
	comp=E,144μm,0.3s						
T1212				AML	AML		
	comp=N,104μm,0.1s						
T1212				AML	AML		
	comp=E,144μm,1.7s						
ASSB	Assisi San Ben	0.28	276	⇑P	Pg	05 34 58.6	+0.5
ASSB				AML	AML		
	comp=N,103μm,0.4s						
ASSB				AML	AML		
	comp=E,74μm,0.3s						
EL6	Elcito	0.32	8	⇓P	Pg	05 34 59.4	+0.6
EL6				AML	AML		
	comp=E,232μm,0.2s						
EL6				AML	AML		
	comp=E,232μm,1.8s						
EL6				AML	AML		
	comp=N,274μm,0.2s						
ATCC	AVT- Casa Cast	0.34	301	⇓P	Pb	05 34 59.9	-0.6
CING	Cingoli	0.38	17	⇓P	Pb	05 35 00.6	-0.6
CING				AML	AML		
	comp=N,66μm,0.6s						
CING				AML	AML		
	comp=E,66μm,0.1s						
MURB	Monte Urbino	0.45	304	P	Pg	05 35 01.8	+0.6
ARVD	Arcevia	0.49	352	S	Sg	05 35 08.7	+0.2
ATFO	Monte Foce - G	0.49	316	P	Pg	05 35 00.3	-1.7
T1211	Morro Reatino	0.50	196	⇓P	Pg	05 35 02.5	+0.5
T1211				AML	AML		
	comp=E,56μm,1.2s						
T1211				AML	AML		
	comp=N,70μm,1.4s						
T1211				AML	AML		
	comp=N,70μm,0.6s						
T1211				AML	AML		
	comp=E,56μm,0.8s						

ROM 09 05:35:16.9±0.2, **42°.786N**±0°.004×**13°.126E**±0°.005, **h9^{km}**±1^{km}, **ML1.4**/2, **2C-1D, Error ellipse: s-maj=0.4km s-min=0.3km az=341.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1214	Arquata del Tr	0.07	114	P	Pg	05 35 19.2	+0.1
T1214				S	Sg	05 35 20.7	0.0
T1214				AML	AML		
	comp=E,540μm,0.2s						
T1214				AML	AML		
	comp=N,809μm,0.1s						
T1214				AML	AML		
	comp=N,780μm,0.1s						
T1214				AML	AML		
	comp=N,809μm,0.1s						
T1214				AML	AML		
	comp=N,780μm,0.1s						
T1214				AML	AML		
	comp=E,525μm,0.2s						
T1212	Cascia, Frazio	0.07	240	⇓P	Pg	05 35 19.3	+0.3
T1212				S	Sg	05 35 20.9	+0.3
T1218	Civita (PG)	0.12	184	P	Pg	05 35 20.2	+0.5
T1218				S	Sg	05 35 22.4	+0.8
T1216	Preci, Frazion	0.13	323	P	Pg	05 35 20.1	+0.2
T1216				AML	AML		
	comp=E,311μm,0.2s						
T1216				AML	AML		
	comp=N,281μm,0.3s						
MC2	Monte Cornacci	0.14	21	⇑P	Pg	05 35 20.4	+0.3
MC2				S	Sg	05 35 23.3	+1.0
T1217	Poggiodomo (PG	0.16	243	P	Pg	05 35 21.0	+0.6
MMO1	Montemonaco	0.19	53	P	Pg	05 35 21.2	+0.3
T1215	Vallo di Nera,	0.19	275	⇑P	Pg	05 35 21.4	+0.5
T1215				S	Sg	05 35 24.8	+1.2
RM33	Pellescritta (	0.28	167	AML	AML		
	comp=E,77μm,1.2s						
RM33				AML	AML		
	comp=E,77μm,1.2s						
RM33				AML	AML		
	comp=N,62μm,1.2s						
RM33				AML	AML		
	comp=E,77μm,0.8s						
RM33				AML	AML		
	comp=N,62μm,0.8s						
TERO	Teramo	0.39	115	AML	AML		
	comp=N,13500μm,0.4s						
TERO				AML	AML		
	comp=E,87000μm,1.6s						
TERO				AML	AML		
	comp=N,13500μm,1.6s						
TERO				AML	AML		
	comp=E,50μm,1.5s						
TERO				AML	AML		
	comp=N,57μm,1.5s						
TERO				AML	AML		
	comp=E,87000μm,0.4s						

IDC 09 05:46:45.4±31.0, **25°.36N**×**94°.97E, h0^{km}, mb3.4**/3, **mbtmp3.4**/3, **Error ellipse: s-maj=518.3km s-min=84.4km az=2.0, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	23.65	338	P	P	05 51 58.2	-0.2
	0.2nm,0.5s,baz=154,slow=9.2,SNR=3.3						
	0.2nm,0.5s						
SONM	Songino Array	24.18	19	P	P	05 52 03.6	0.0
	0.4nm,0.3s,baz=196,slow=10.0,SNR=5.0						
	0.4nm,0.3s						
ZALV	Zalesovo Beam	29.54	348	P	P	05 52 51.6	+0.1
	0.8nm,0.5s,baz=147,slow=8.2,SNR=4.3						
	0.8nm,0.5s						

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*NEIC **09** 06:08:07.8±0.3, 18°.8N±0°.2×145°.6E±0°.7, h177^{km}±17^{km}, mb4.6/4, Error ellipse: s-maj=99.8km s-min=16.6km az=103.0*

*IDC **09** 06:08:12.2±10.0, 19°.02N×145°.76E, h188^{km}±101^{km}, mb3.3/7, mbtmp3.8/7, MS2.9/2, Error ellipse: s-maj=88.9km s-min=24.2km az=85.0*

ISC 09 06:08:09.5±1.3, **18°.6N**±0°.1×**145°.7E**±0°.3, **h200^{km}, n20, σ1^{s}71**/8, **mb3.8**/8, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.07	189	Pn	Pn	06 09 24.4	-0.5
JGF	Kuroka	18.44	338	P	P	06 12 07.7	-2.4
JGF				IAmb	IAmb	06 12 34.6	
	comp=Z,37nm,1.4s						
H11S3	WAKE ISLAND Hy	19.92	87	T	T	06 33 24.7	
	baz=275,slow=75						
H11S1	WAKE ISLAND Hy	19.93	87	T	T	06 33 13.3	
	baz=275,slow=75						
H11S2	WAKE ISLAND Hy	19.94	87	T	T	06 33 15.0	
	baz=275,slow=75						
H11N1	WAKE ISLAND Hy	20.07	83	T	T	06 33 54.3	
	baz=274						
H11N2	WAKE ISLAND Hy	20.08	83	T	T	06 33 45.9	
	baz=274						
H11N3	WAKE ISLAND Hy	20.09	83	T	T	06 33 53.1	
	baz=274						
KLR	Kul'dur	32.53	343	P	P	06 14 21.9	+0.5
	comp=Z,2.2nm,0.5s,baz=158,slow=5.1,SNR=10						
	comp=Z,2.2nm,0.5s						
PETK	Petropavlovsk-	35.66	12	P	P	06 14 47.2	-1.1
KNRA	Kununurra	37.94	207	P	P	06 15 08.2	+0.3
KNRA				IAmb	IAmb	06 15 29.4	
	comp=Z,19nm,1.4s						
KSM	Kuching	38.63	248	P	P	06 15 12.9	-1.0
WRA	Warramunga Arr	39.91	197	P	P	06 15 31.1	+6.9
	comp=Z,0.2nm,0.3s,baz=17,slow=8.6,SNR=2.7						
WRA				LR	LR	06 32 38.0	
	comp=Z,51nm,18.4s,baz=110,slow=36						
	comp=Z,0.2nm,0.3s						
SONM	Songino Array	43.18	321	P	P	06 15 52.7	+2.0
	comp=Z,0.8nm,0.7s,baz=137,slow=8.5,SNR=5.2						
	comp=Z,0.8nm,0.7s						
CMAR	Chiang Mai Arr	44.20	278	LR	LR	06 37 08.8	
	comp=Z,4.0nm,18.2s,baz=155,slow=39						
MKAR	Makanchi Array	58.49	314	P	P	06 17 46.0	+1.3
	comp=Z,0.2nm,0.5s,baz=96,slow=6.5,SNR=1.9						
	comp=Z,0.2nm,0.5s						
KURBB	Kurchatov Arra	61.36	318	P	P	06 18 06.5	+2.4
	comp=Z,0.7nm,0.4s,baz=92,slow=7.8,SNR=6.6						
	comp=Z,0.7nm,0.4s						
BVAR	Borovoye Array	66.51	320	P	P	06 18 40.8	+3.1
	comp=Z,0.7nm,0.3s,baz=96,slow=7.1,SNR=4.4						
	comp=Z,0.7nm,0.3s						
ABKAR	Akbulak array	73.38	317	P	P	06 19 23.2	+3.7
FINES	FINESS Array B	86.94	335	P	P	06 20 33.7	+2.1
	comp=Z,0.6nm,0.4s,baz=76,slow=5.9,SNR=8.4						
	comp=Z,0.6nm,0.4s						

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*IDC **09** 06:18:41.2±2.8, 36°.19N×71°.44E, h83^{km}±24^{km}, mb3.8/19, mbtmp4.2/25, Error ellipse: s-maj=18.3km s-min=13.5km az=174.0*

*MOS **09** 06:18:41.8±1.2, 36°.34N×71°.38E, h90^{km}, mb4.4/24, Error ellipse: s-maj=7.9km s-min=4.7km az=91.1*

*BJI **09** 06:18:43.3±0.0, 36°.56N×71°.33E, h99^{km}, mb4.6/22, mB4.4/12*

*NEIC **09** 06:18:45.3±1.5, 36°.42N±0°.05×71°.33E±0°.09, h113^{km}±2^{km}, mb4.4/27, Error ellipse: s-maj=10.3km s-min=7.1km az=74.0*

*NNC **09** 06:18:46.6±1.6, 36°.65N×71°.05E, h124^{km}±25^{km}, mb3.6, mpv4.2, Error ellipse: s-maj=14.3km s-min=10.1km az=169.0*

ISC 09 06:18:44.3±0.4, **36°.37N**±0°.04×**71°.34E**±0°.04, **h114^{km}, n189, σ2^{s}54**/210, **mb4.3**/40, **18C-6D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.58	169	P	Pn	06 19 27.5	+2.4
CEP				S	Sn	06 19 59.0	+2.7
KBL	Kabul	2.61	226	Pn	Pn	06 19 26.9	+1.3
KBL	Kabul	2.61	226	PN	Pn	06 19 26.9	+1.3
GAR	Garm	2.75	343		Pn	06 19 27.6	+0.3
CHGR	Chuyangaron	2.87	324		Pn	06 19 28.6	-0.2
CHGR	Chuyangaron	2.87	324	PN	Pn	06 19 28.6	-0.2
CHCP	Chirah Chowk	3.13	149	P	Pn	06 19 34.0	+1.8
NIL	Nilore	3.13	149	Pn	Pn	06 19 33.7	+1.5
NIL	Nilore	3.13	149	PN	Pn	06 19 33.7	+1.5
THW	Thamme Wali	3.58	175	P	Pn	06 19 39.0	+0.8
SARP	Sargodha	4.57	166	P	Pn	06 19 51.2	-0.2
JMU	Jammu	4.68	140	*e*P	Pn	06 19 53.3	+0.4
JMU				*e*S	Sn	06 20 43.0	-3.0
KSH	Kashi	4.83	48	P	Pn	06 19 50.4	-4.6
KSH				S	Sn	06 20 37.3	-13
KSH				smax	smax		
	comp=N,1μm,0.4s						
KSH				smax	smax		
	comp=E,640nm,0.5s						
TAS	Tashkent	5.20	343	Pn	Pn	06 20 00.3	+0.4
TAS	Tashkent	5.20	343	PN	Pn	06 20 00.3	+0.4
THN	Thein Dam	5.34	136	*e*P	Pn	06 20 02.0	+0.3
THN				*e*S	Sn	06 21 00.0	-2.0
THN				IAML		06 21 03.8	
	comp=N,574nm,0.3s						
THN				IAML		06 21 04.1	
	comp=E,654nm,0.3s						
DHRM	DHARAMSHALA	5.80	134	*e*P	Pn	06 20 08.0	-0.3
DHRM				*e*S	Sn	06 21 09.2	-4.5
DHRM				IAML		06 21 13.0	
	comp=E,897nm,0.3s						
DHRM				IAML		06 21 14.5	
	comp=N,1μm,0.2s						
AML	Almayashu	6.04	17	P	Pn	06 20 12.3	+0.6
	SNR=71						
AML	Almayashu	6.04	17	⇑P	Pn	06 20 12.2	+0.6
	comp=N,3.1nm,0.5s						
AML				⇓S	Sn	06 21 17.9	-1.7
	comp=N,24nm,0.6s						
AML	Almayashu	6.04	17	PN	Pn	06 20 12.2	+0.6
UCH	Uchtor	6.35	22	P	Pn	06 20 17.0	+1.1
	SNR=18						
BHK	Bhakra	6.49	138	*e*P	Pn	06 20 17.1	-0.3
BHK				*e*S	Sn	06 21 25.5	-4.6
BHK				IAML		06 21 32.9	
	comp=N,259nm,0.3s						
EKS2	Erkin-Say	6.56	16	P	Pn	06 20 19.5	+1.1
	SNR=13						
AAK	Ala-Archa	6.72	20	P	Pn	06 20 21.4	+0.8
	SNR=17						
AAK	Ala-Archa	6.72	20	P	Pn	06 20 20.8	+0.3
	comp=N,16nm,0.3s,baz=184,slow=5.6,SNR=35						
AAK				S	Sn	06 21 34.5	-1.3
	comp=N,13nm,0.5s,baz=123,slow=23,SNR=9.0						
AAK	Ala-Archa	6.72	20	Pn	Pn	06 20 20.7	+0.1
KK31	Karatay Array	6.76	355	Pn	Pn	06 20 21.3	+0.3
KK31	Karatay Array	6.76	355	P	Pn	06 20 19.9	-1.1
	comp=N,13nm,0.2s,baz=185,slow=15,SNR=523						
KK31				⇓S	Sn	06 21 32.0	-4.4
	comp=N,41nm,0.5s,baz=190,slow=27,SNR=8.1						
KK31	Karatay Array	6.76	355	PN	Pn	06 20 19.9	-1.1
KKAR	Karatay Array	6.76	355	Pn	Pn	06 20 21.1	+0.2
KKAR	Karatay Array	6.76	355		Pn	06 20 21.1	+0.2
KKAR	Karatay Array	6.76	355	PN	Pn	06 20 21.1	+0.2
CHMS	Chumysh	7.13	21	P	Pn	06 20 26.8	+0.9
	SNR=9.4						
SMLA	Simla	7.13	135	*e*P	Pn	06 20 25.2	-0.7
SMLA				*e*S	Sn	06 21 38.9	-6.5
SMLA				IAML		06 21 43.6	
	comp=E,267nm,0.4s						
SMLA				IAML		06 21 44.4	
	comp=N,333nm,0.2s						
USP	Ospenovka	7.31	18	P	Pn	06 20 29.0	+0.6
	SNR=7.9						
TKM2	Tokmak 2	7.33	25	P	Pn	06 20 30.1	+1.4
	SNR=6.4						
TKM2	Tokmak 2	7.33	25	⇑P	Pn	06 20 29.3	+0.5
	comp=N,13nm,0.6s						
TKM2	Tokmak 2	7.33	25	PN	Pn	06 20 29.3	+0.5
TARG	Taragay, Kyrgy	7.35	41		Pn	06 20 28.4	-0.9
TARG	Taragay, Kyrgy	7.35	41	PN	Pn	06 20 28.4	-0.9
DDI	Dehra Dun	8.24	135	*e*P	Pn	06 20 40.5	-0.5
DDI				*e*S	Sn	06 22 02.1	-10
KHET	Khetri	9.09	154	*e*P	Pn	06 20 49.7	-2.9
KHET				*e*S	Sn	06 22 23.8	-9.4
NDI	New Delhi	9.12	145	*e*P	Pn	06 20 51.5	-1.6
NDI				*e*P		06 20 51.7	
NDI				*e*S	Sn	06 22 26.1	-7.9
NDI				*e*S		06 22 26.5	
KUDL	Kundal	9.28	151	*e*P	Pn	06 20 52.6	-2.6
KUDL				*e*S	Sn	06 22 28.3	-10
PDGK	Podgornoye	9.36	40	⇑P	Pn	06 20 55.3	-0.9
	comp=N,5.2nm,0.8s						
PDGK	Podgornoye	9.36	40	P	Pn	06 20 55.3	-0.9
SONA	Sohna	9.44	147	*e*P	Pn	06 20 54.5	-2.7
SONA				*e*S	Sn	06 22 34.4	-7.1
PTH	Pithoragarh	10.09	130	*e*P	Pn	06 21 04.7	-1.6

LGTI	**Lohaghat**	**10.18**	**130**	*e*P	**Pn**	**06 21 02.9**	**-4.3**
LGTI				*e*S	Sn	06 22 47.1	-12
AJM	**Ajmer**	**10.25**	**163**	*e*P	**Pn**	**06 21 07.0**	**-1.4**
AJM				*e*S	Sn	06 22 49.9	-11
GEYT	**Alibeck**	**10.67**	**282**	P	**Pn**	**06 21 10.8**	**-3.1**
	comp=N,6.9nm,0.3s,baz=80,slow=8.9,SNR=27						
GEYT				S	**Sn**	**06 23 06.0**	**-5.4**
	comp=N,8.1nm,0.3s,baz=121,slow=27,SNR=7.4						
GYA0	**ALIBECK ARRAY**	**10.67**	**282**	P	**Pn**	**06 21 12.5**	**-1.4**
GYA0				S	**Sn**	**06 23 06.7**	**-4.7**
GYA0B	**ALIBECK ARRAY**	**10.67**	**282**	⇑P	**Pn**	**06 21 12.1**	**-1.9**
GYA0B				⇑S	**Sn**	**06 23 06.1**	**-5.3**
JHNI	**Jhansi**	**12.49**	**148**	*e*P	**Pn**	**06 21 35.2**	**-3.0**
JHNI				*e*S	Sn	06 23 44.0	-12
PYUN	**Piuthan**	**12.84**	**127**	*e*P	**Pn**	**06 21 38.7**	**-4.2**
PYUN				*e*S	Sn	06 23 50.6	-14
	comp=N,174nm,0.5s						
MAKZ	**Makanchi**	**13.11**	**34**	Pn	**Pn**	**06 21 44.6**	**-1.5**
MAKZ	**Makanchi**	**13.11**	**34**	⇑P	**Pn**	**06 21 46.4**	**+0.3**
	comp=N,6.7nm,1.1s						
MAKZ	**Makanchi**	**13.11**	**34**	P	**Pn**	**06 21 44.6**	**-1.5**
DANN	**Dangsing**	**13.19**	**124**	*e*P	**Pn**	**06 21 43.3**	**-4.2**
MK31	**Makanchi Array**	**13.24**	**35**		**Pn**	**06 21 47.4**	**-0.5**
MK31	**Makanchi Array**	**13.24**	**35**	P	**Pn**	**06 21 47.8**	**0.0**
	comp=N,0.7nm,0.3s,baz=161,slow=43,SNR=13						
MK31	**Makanchi Array**	**13.24**	**35**	⇑*e*P	**Pn**	**06 21 47.1**	**-0.7**
MKAR	**Makanchi Array**	**13.24**	**35**	P	**Pn**	**06 21 46.8**	**-1.1**
	comp=N,1.6nm,0.8s,baz=220,slow=11,SNR=12						
MKAR	**Makanchi Array**	**13.24**	**35**		**Pn**	**06 21 47.9**	**+0.1**
KOLN	**Koldanda**	**13.46**	**126**	*e*P	**Pn**	**06 21 47.7**	**-3.3**
	comp=N,49nm,0.3s						
GKN	**Gorkha**	**14.00**	**123**	*e*P	**Pn**	**06 21 54.0**	**-3.9**
	comp=N,187nm,0.4s						
BHPL	**Bhopal**	**14.10**	**156**	*e*P	**Pn**	**06 21 57.7**	**-1.3**
BHPL				*e*S	Sn	06 24 19.7	-15
WMQ	**Urumqi**	**14.55**	**54**	*e*P	**Pn**	**06 22 05.3**	**+0.6**
WMQ				pmax	pmax		
	comp=N,19nm,0.7s						
DMN	**Daman**	**14.57**	**123**	*e*P	**Pn**	**06 22 01.1**	**-4.2**
	comp=N,64nm,0.3s						
KKN	**Kakani**	**14.57**	**122**	*e*P	**Pn**	**06 22 01.3**	**-4.0**
PKIN	**Phulchoki**	**14.79**	**122**	*e*P	**Pn**	**06 22 04.3**	**-3.7**
	comp=N,107nm,0.5s						
PKI	**Pulchoki**	**14.80**	**122**	*e*P	**Pn**	**06 22 03.9**	**-4.4**
	comp=N,58nm,0.4s						
GUN	**Gumba**	**14.91**	**120**	*e*P	Pn	06 22 04.9	-4.8
	comp=N,75nm,0.3s						
KURBB	**Kurchatov Arra**	**15.17**	**18**	P	**Pn**	**06 22 12.0**	**-0.3**
	comp=N,2.8nm,0.8s,baz=207,slow=10,SNR=24						
KURK	**Kurchatov**	**15.27**	**18**	Pn	**Pn**	**06 22 12.8**	**-0.9**
KURK	**Kurchatov**	**15.27**	**18**	P	**Pn**	**06 22 12.8**	**-0.9**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
JIRN	**Jiri**	**15.28**	**120**	*e*P	**Pn**	**06 22 10.3**	**-4.1**
	comp=Z,185nm,0.4s						
AB31	**Akbulak array**	**15.33**	**331**	⇑P	**Pn**	**06 22 12.9**	**-1.5**
	comp=Z,2.7nm,0.3s,baz=137,slow=11,SNR=321						
AB31				S	**Sn**	**06 24 55.4**	**-8.5**
	comp=Z,7.6nm,0.5s,baz=145,slow=22,SNR=11						
AB31	**Akbulak array**	**15.33**	**331**	P	**Pn**	**06 22 12.9**	**-1.5**
AB31				S	**Sn**	**06 24 55.4**	**-8.5**
ABKAR	**Akbulak array**	**15.33**	**331**		**Pn**	**06 22 13.5**	**-0.9**
ABKAR				IAmb	IAmb	06 22 20.4	
	comp=Z,13nm,0.6s						
ABKAR	**Akbulak array**	**15.33**	**331**		**Pn**	**06 22 13.4**	**-1.0**
RAMN	**Ramite**	**16.01**	**122**	*e*P	**Pn**	**06 22 19.2**	**-4.1**
	comp=Z,53nm,0.3s						
TAPN	**Taplejung**	**16.54**	**118**	*e*P	**Pn**	**06 22 25.9**	**-4.0**
	comp=Z,61nm,0.3s						
ODAN	**Odare**	**16.62**	**120**	*e*P	**Pn**	**06 22 26.9**	**-3.8**
	comp=Z,86nm,0.5s						
BVA0	**Borovoye Array**	**16.67**	**358**	P	**Pn**	**06 22 30.4**	**-0.5**
	comp=Z,4.9nm,0.8s,baz=163,slow=10,SNR=20						
BVA0	**Borovoye Array**	**16.67**	**358**	P	**Pn**	**06 22 30.4**	**-0.5**
BVAR	**Borovoye Array**	**16.67**	**358**	P	**Pn**	**06 22 30.1**	**-0.9**
	comp=Z,3.3nm,0.6s,baz=165,slow=11,SNR=21						
BRVK	**Borovoye**	**16.71**	**358**	P	**Pn**	**06 22 30.3**	**-1.1**
BRVK	**Borovoye**	**16.71**	**358**	⇑P	**Pn**	**06 22 30.4**	**-1.0**
	comp=Z,6.7nm,1.1s						
BRVK	**Borovoye**	**16.71**	**358**	P	**Pn**	**06 22 30.3**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKTO	**Aktyubinsk**	**17.03**	**330**	P	**Pn**	**06 22 37.0**	**+1.6**
	comp=Z,34nm,0.6s,baz=136,slow=10.0,SNR=85						
AKTO				S	**Sn**	**06 25 36.7**	**-8.1**
	comp=Z,9.5nm,0.8s,baz=18,slow=21,SNR=6.5						
AKTO	**Aktyubinsk**	**17.03**	**330**	⇑P	**P**	**06 22 32.8**	**-2.6**
	comp=Z,18nm,0.7s						
AKTO				⇑S	**Sn**	**06 25 37.8**	**-7.1**
	comp=Z,11nm,0.8s						
AKTO	**Aktyubinsk**	**17.03**	**330**	P	**P**	**06 22 32.8**	**-2.6**
AKTO				S	**Sn**	**06 25 37.8**	**-7.1**
DGZ	**Jazzator, Alta**	**17.73**	**36**	*ce*P	**Pn**	**06 22 46.1**	**+2.2**
LSA	**Lhasa**	**17.88**	**106**	P	**P**	**06 22 44.9**	**-0.4**
LSA				IAmb	IAmb	06 22 46.9	
	comp=Z,16nm,0.9s						
LSA	**Lhasa**	**17.88**	**106**	P	**P**	**06 22 44.9**	**-0.4**
LSA				pmax	pmax		
	comp=Z,16nm,0.9s						
GOMU	**GeErMu**	**18.92**	**84**	P	**Pn**	**06 22 58.6**	**+0.1**
GOMU				pmax	pmax		
	comp=Z,17nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,73nm,4.2s						
SEKA	**Sheki**	**19.41**	**292**	P	**Pn**	**06 23 05.0**	**+1.2**
ZAA0	**Zalesovo Array**	**19.93**	**24**	P	**P**	**06 23 06.5**	**-0.4**
ZAA0				IAmb	IAmb	06 23 08.1	
	comp=Z,17nm,1.0s						
ZALV	**Zalesovo Beam**	**19.93**	**24**	P	**P**	**06 23 07.4**	**+0.5**
	comp=Z,15nm,0.5s,baz=210,slow=11,SNR=59						
	comp=Z,15nm,0.5s						
ZALV	**Zalesovo Beam**	**19.93**	**24**	P	**P**	**06 23 06.7**	**-0.2**
ZALV	**Zalesovo Beam**	**19.93**	**24**	P	**P**	**06 23 06.7**	**-0.2**
GROC	**Groznyy**	**20.74**	**297**	*e*P	**P**	**06 23 16.2**	**+0.5**
GROC				*e**PP	**pP**	**06 23 37.7**	**+0.5**
GROC				*e*S	**S**	**06 27 03.7**	**+2.9**
GROC				pmax	pmax		
	comp=Z,123nm,1.5s						
GNI	**Garni**	**21.19**	**288**	P	**P**	**06 23 22.2**	**+1.4**
	comp=Z,5.5nm,0.5s,baz=11,slow=10,SNR=2.2						
	comp=Z,5.5nm,0.5s						
GNI	**Garni**	**21.19**	**288**	P	**P**	**06 23 21.2**	**+0.3**
GNI				IAmb	IAmb	06 23 31.3	
	comp=Z,19nm,0.8s						
GNI	**Garni**	**21.19**	**288**	P	**P**	**06 23 21.2**	**+0.3**
GNI				pmax	pmax		
	comp=Z,19nm,0.8s						
ZEI	**Tsey**	**22.04**	**295**	*e*P	**P**	**06 23 36.0**	**+6.1**
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ONI	**Oni**	**22.35**	**295**	P	**P**	**06 23 32.7**	**-0.1**
ONI	**Oni**	**22.35**	**295**	P	**P**	**06 23 32.7**	**-0.1**
ONI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NCK	**Nalchik**	**22.37**	**297**	⇑*e*P	**P**	**06 23 36.5**	**+3.5**
NCK				pmax	pmax		
	comp=Z,10.0nm,0.3s						
GTA	**Gaotai**	**22.64**	**74**	*e*P	**P**	**06 23 38.9**	**+3.0**
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KBZ	**Khabaz**	**22.91**	**297**	P	**P**	**06 23 39.3**	**+1.1**
	comp=Z,3.9nm,0.9s,baz=132,slow=8.4,SNR=7.2						
	comp=Z,3.9nm,0.9s						
KBZ	**Khabaz**	**22.91**	**297**	⇓*e*P	**P**	**06 23 40.1**	**+1.8**
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KIV	**Kislovodsk**	**23.09**	**298**	P	**P**	**06 23 38.5**	**-1.7**
KIV				IAmb	IAmb	06 24 07.9	
	comp=Z,15nm,0.9s						
KIV	**Kislovodsk**	**23.09**	**298**	*e*P	**P**	**06 23 42.0**	**+1.8**
KIV				*e*S	**S**	**06 27 45.8**	**+3.3**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BELG	**Belogornoye**	**23.16**	**321**	P	**P**	**06 23 41.5**	**+0.9**
	comp=Z,9.9nm,0.6s,baz=14,slow=3.6,SNR=5.8						
	comp=Z,9.9nm,0.6s						
BELG	**Belogornoye**	**23.16**	**321**	*c i*P	**P**	**06 23 42.9**	**+2.3**
BELG				pmax	pmax		
	comp=Z,7.0nm,1.4s						
RAYN	**Ar Rayn**	**25.70**	**247**	P	**P**	**06 24 02.8**	**-1.1**
RAYN	**Ar Rayn**	**25.70**	**247**	P	**P**	**06 24 02.8**	**-1.1**
RAYN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TNCH	**TengChong**	**25.88**	**108**	P	**P**	**06 24 07.1**	**+1.4**
TNCH				pmax	pmax		
	comp=Z,110nm,4.4s						
KIRV	**Kirov**	**26.48**	**334**	⇓*e*P	**P**	**06 24 12.9**	**+2.4**
PZH	**PanZhiHua**	**27.64**	**102**	P	**P**	**06 24 25.0**	**+3.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,4.8s						
SONM	**Songino Array**	**28.19**	**55**	P	**P**	**06 24 26.2**	**0.0**
	comp=Z,0.4nm,0.5s,baz=242,slow=9.2,SNR=4.0						
	comp=Z,0.4nm,0.5s						
BRTR	**Keskin Array B**	**29.73**	**288**	P	**P**	**06 24 41.3**	**+1.3**
	comp=Z,0.4nm,0.4s,baz=106,slow=7.8,SNR=3.6						
	comp=Z,0.4nm,0.4s						
BRTR	**Keskin Array B**	**29.73**	**288**	*i* P	**P**	**06 24 43.0**	**+3.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**31.55**	**69**	*e*P	**P**	**06 24 57.4**	**+1.5**
HHC				pmax	pmax		
	comp=Z,24nm,0.8s						
HHC				pmax	pmax		
	comp=Z,190nm,4.2s						
KLMR	**Klimovskoe**	**31.73**	**331**	*e*P	**P**	**06 24 57.3**	**+0.2**
KLMR				AMP		06 25 00.8	
	comp=Z,19nm,1.6s						
KLMR	**Klimovskoe**	**31.73**	**331**	*e*P	**P**	**06 24 57.3**	**+0.2**
KLMR				pmax	pmax		
	comp=Z,19nm,1.6s						
AKASG	**Malin Array Be**	**33.24**	**309**	P	**P**	**06 25 12.2**	**+1.8**
	comp=Z,3.0nm,0.7s,baz=80,slow=7.2,SNR=23						
	comp=Z,3.0nm,0.7s						
AKASG	**Malin Array Be**	**33.24**	**309**	P	**P**	**06 25 09.8**	**-0.6**
AKASG	**Malin Array Be**	**33.24**	**309**	*i* P	**P**	**06 25 12.6**	**+2.2**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKBB	**Malin Array Si**	**33.24**	**309**	⇓*e*P	**P**	**06 25 11.3**	**+0.9**
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NRIK	**Noril'sk**	**34.21**	**10**	⇑*e*P	**P**	**06 25 21.3**	**+2.8**
NRIK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
FINES	**FINESS Array B**	**37.75**	**326**	P	**P**	**06 25 50.9**	**+2.2**
	comp=Z,2.8nm,0.4s,baz=117,slow=9.7,SNR=36						
	comp=Z,2.8nm,0.4s						
FINES	**FINESS Array B**	**37.75**	**326**	*i* P	**P**	**06 25 51.2**	**+2.5**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.4s						
PSZ	**Piszkesteto**	**39.17**	**304**	P	**P**	**06 25 58.4**	**-2.6**
PSZ				IAmb	IAmb	06 26 07.4	
	comp=Z,13nm,1.1s						
PSZ	**Piszkesteto**	**39.17**	**304**	P	**P**	**06 25 58.4**	**-2.6**
PSZ				pmax	pmax		
	comp=Z,13nm,1.1s						
VADS	**Vadso**	**40.54**	**339**	*e*P	**P**	**06 26 14.0**	**+2.2**
KEV	**Kevo**	**41.03**	**338**	P	**P**	**06 26 18.2**	**+2.4**
KEV				IAmb	IAmb	06 26 19.4	
	comp=Z,7.0nm,0.9s						
KEV	**Kevo**	**41.03**	**338**	P	**P**	**06 26 18.2**	**+2.4**
KEV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ARA0	**ARCESS Array S**	**41.37**	**338**	*e*P	**P**	**06 26 21.5**	**+2.8**
ARCES	**ARCESS Array B**	**41.37**	**338**	P	**P**	**06 26 21.0**	**+2.3**
	comp=Z,2.9nm,0.4s,baz=119,slow=9.1,SNR=42						
	comp=Z,2.9nm,0.4s						
ARCES	**ARCESS Array B**	**41.37**	**338**	P	**P**	**06 26 21.4**	**+2.7**
ARCES				IAmb	IAmb	06 26 25.2	
	comp=Z,5.5nm,0.9s						
ARCES	**ARCESS Array B**	**41.37**	**338**	P	**P**	**06 26 21.5**	**+2.7**
ARCES				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KTK1	**Kautokeino**	**41.85**	**336**	*e*P	**P**	**06 26 25.0**	**+2.4**
KTK1				IAmb	IAmb	06 26 25.7	
	comp=Z,9.4nm,0.8s						
HAMF	**Hammerfest**	**42.45**	**339**	*e*P	**P**	**06 26 30.1**	**+2.7**
HAMF				IAmb	IAmb	06 26 30.5	
	comp=Z,16nm,0.7s						
GERES	**GERESS Array B**	**43.23**	**305**	P	**P**	**06 26 36.2**	**+2.0**
	comp=Z,0.5nm,0.5s,baz=82,slow=9.6,SNR=3.8						
	comp=Z,0.5nm,0.5s						
CLL	**Collm**	**43.49**	**309**	*e*P	**P**	**06 26 39.0**	**+2.9**
	comp=Z,4.0nm,0.6s						
CLL	**Collm**	**43.49**	**309**	*e*P	**P**	**06 26 39.0**	**+2.9**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MOR8	**Moi Rana**	**44.07**	**331**	*e*P	**P**	**06 26 42.2**	**+1.7**
MOR8				IAmb	IAmb	06 26 42.9	
	comp=Z,10nm,0.6s						
STEI	**Steigen**	**44.22**	**333**	*e*P	**P**	**06 26 43.6**	**+2.0**
STEI				IAML		06 26 45.3	
	comp=Z,1.9nm,0.4s						
NC602	**NORSAR Array S**	**44.47**	**323**	*e*P	**P**	**06 26 45.4**	**+1.6**
NC303	**NORSAR Array S**	**44.59**	**323**	P	**P**	**06 26 46.8**	**+2.0**
NB201	**NORSAR Array S**	**44.61**	**323**	P	**P**	**06 26 46.8**	**+1.8**
NB2	**NORSAR Subarra**	**44.65**	**323**	P	**P**	**06 26 46.8**	**+1.5**
	comp=Z,4.5nm,0.6s,baz=96,slow=7.9						
NB2	**NORSAR Subarra**	**44.65**	**323**	P	**P**	**06 26 46.8**	**+1.5**
	slow=7.9						
NOA	**NORSAR Array B**	**44.65**	**323**	P	**P**	**06 26 46.7**	**+1.4**
	comp=Z,4.0nm,0.5s,baz=96,slow=7.8,SNR=29						
	comp=Z,4.0nm,0.5s						
KONS	**Konsvik**	**44.66**	**331**	*e*P	**P**	**06 26 47.4**	**+2.2**
LOF	**Lofoten**	**44.89**	**333**	*e*P	**P**	**06 26 48.7**	**+1.7**
KONO	**Kongsberg**	**45.36**	**321**	*e*P	**P**	**06 26 52.7**	**+1.8**
BJO1	**Bjornoya**	**45.48**	**343**	*e*P	**P**	**06 26 53.9**	**+2.4**
DOMB	**Dombas**	**45.76**	**324**	*e*P	**P**	**06 26 55.5**	**+1.5**
TIXI	**Tiksi**	**45.80**	**22**	P	**P**	**06 26 55.1**	**+1.0**
TIXI				IAmb	IAmb	06 26 56.1	
	comp=Z,3.9nm,0.4s						
TIXI	**Tiksi**	**45.80**	**22**	⇑*i*P	**P**	**06 26 55.1**	**+1.0**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SKAR	**Skarslia**	**46.05**	**322**	*e*P	**P**	**06 26 58.5**	**+2.2**
EKA	**Eskdalemuir Ar**	**52.57**	**316**	P	**P**	**06 27 47.5**	**+1.6**
ESDC	**Sonseca Array**	**57.76**	**298**	P	**P**	**06 28 24.5**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=52,slow=6.7,SNR=6.3						
	comp=Z,0.4nm,0.5s						
BILL	**Bilibino**	**58.61**	**26**	⇑*e*P	**P**	**06 28 30.7**	**+1.8**
BILL				pmax	pmax		
	comp=Z,9.0nm,2.5s						
SUMG	**Summit**	**61.28**	**341**	*i* P	**P**	**06 28 49.0**	**+1.5**
TORD	**Torodi Ar. Bea**	**65.99**	**269**	P	**P**	**06 29 18.1**	**-0.7**
	comp=Z,1.9nm,0.4s,baz=49,slow=5.9,SNR=53						
	comp=Z,1.9nm,0.4s						
TORD	**Torodi Ar. Bea**	**65.99**	**269**	P	**P**	**06 29 18.7**	**-0.2**
TORD				IAmb	IAmb	06 29 19.3	
	comp=Z,1.6nm,0.6s						
IMAR	**Indian Mountai**	**72.22**	**18**	P	**P**	**06 29 57.4**	**+0.8**
C36M	**Paulatuk**	**73.99**	**6**	P	**P**	**06 30 08.0**	**+1.2**
INK	**Inuvik**	**73.99**	**9**	P	**P**	**06 30 08.2**	**+1.3**
	comp=Z,1.4nm,0.4s,baz=338,slow=5.5,SNR=14						
	comp=Z,1.4nm,0.4s						
COLA	**College**	**74.53**	**16**	⇓*e*P	**P**	**06 30 11.5**	**+1.5**
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LBTB	**Lobatse**	**74.76**	**222**	P	**P**	**06 30 14.4**	**+2.4**
LBTB				IAmb	IAmb	06 30 14.9	
	comp=Z,11nm,1.3s						
LBTB	**Lobatse**	**74.76**	**222**	P	**P**	**06 30 14.4**	**+2.4**
LBTB				pmax	pmax		
	comp=Z,11nm,1.3s						
ILAR	**Eielson Array**	**74.83**	**16**	P	**P**	**06 30 12.3**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=321,slow=5.3,SNR=9.3						
	comp=Z,0.8nm,0.8s						
DAWY	**Dawson**	**76.99**	**13**	P	**P**	**06 30 25.5**	**+1.3**
DAWY				IAmb	IAmb	06 30 43.9	
	comp=Z,7.5nm,1.4s						
BOSA	**Boshof**	**77.82**	**220**	P	**P**	**06 30 30.5**	**+1.2**
	comp=Z,6.0nm,0.8s,baz=34,slow=4.1,SNR=8.9						
	comp=Z,6.0nm,0.8s						
BOSA	**Boshof**	**77.82**	**220**	P	**P**	**06 30 30.8**	**+1.5**
BOSA				IAmb	IAmb	06 30 31.2	
	comp=Z,5.0nm,0.7s						
BOSA	**Boshof**	**77.82**	**220**	P	**P**	**06 30 30.8**	**+1.5**
BOSA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
YKA	**Yellowknife Ar**	**81.37**	**3**	P	**P**	**06 30 49.0**	**+1.1**
	comp=Z,1.8nm,0.8s,baz=349,slow=5.1,SNR=36						
	comp=Z,1.8nm,0.8s						
YKA	**Yellowknife Ar**	**81.37**	**3**	*i* P	**P**	**06 30 49.4**	**+1.5**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**81.69**	**122**	P	**P**	**06 30 50.2**	**0.0**
	comp=Z,0.7nm,0.7s,baz=322,slow=5.1,SNR=8.5						
	comp=Z,0.7nm,0.7s						
WRA	**Warramunga Arr**	**81.69**	**122**	*i* P	**P**	**06 30 50.7**	**+0.5**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRAB	**Tennant Creek**	**81.69**	**122**	⇑*e*P	**P**	**06 30 51.2**	**+1.0**
WRAB				pmax	pmax		
	comp=Z,22nm,4.5s						
WB2	**Warramunga Arr**	**81.70**	**122**	P	**P**	**06 30 50.5**	**+0.3**
ASAR	**Alice Springs**	**83.95**	**125**	P	**P**	**06 31 01.2**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=304,slow=4.9,SNR=11						
	comp=Z,0.7nm,0.6s						

IDC 09 06:27:21.7±8.3**, 17°.98S**×**178°.24W, h554**^{km}±30^{km}**,**
mb2.8/3**, mbtmp3.6**/4**, Error ellipse: s-maj=275.3km**
s-min=32.0km az=142.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.54**	**273**	P	P	06 28 40.7	0.0
	2.8nm,0.5s,baz=111,slow=7.5,SNR=4.3						
WRA	**Warramunga Arr**	**44.78**	**260**	P	P	06 34 46.0	-0.8
	0.1nm,0.3s,baz=84,slow=7.4,SNR=6.5						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**44.93**	**254**	P	P	06 34 48.2	+0.2
	1.6nm,0.4s,baz=88,slow=8.1,SNR=37						
	1.6nm,0.4s						
ILAR	**Eielson Array**	**85.92**	**13**	P	P	06 39 02.9	-0.1
	0.2nm,0.4s,baz=226,slow=5.0,SNR=5.0						
	0.2nm,0.4s						

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*NEIC **09** 06:45:28.3±0.6, 18°.8N±0°.2×63°.45W±0°.03, h115^{km}±21^{km},*
ML3.0/22, Md3.9/16(RSPR), Error ellipse: s-maj=34.2km
s-min=3.8km az=181.0
*TRN **09** 06:45:28.4, 18°.11N×63°.52W, h124^{km}, MD3.6*
*RSPR **09** 06:45:29.6, 18°.74N×63°.59W, h126^{km}±5^{km}, MD3.9/8*
ISC 09 06:45:31.9±1.2**, 18°.0N**±0°.1×**63°.59W**±0°.04**, h100**^{km}**, n33,**
σ**1^{s}.22**/44**, 13C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMRT	**St. Maarten**	**0.50**	**80**	Pn	**Pn**	**06 45 48.1**	**+0.5**
SMRT				Sn	**Sn**	**06 46 02.7**	**+3.2**
STVI	**Saint Thomas**	**1.36**	**287**	⇑*e*P	**Pn**	**06 45 56.4**	**0.0**
STVI	**Saint Thomas**	**1.36**	**287**		**Pn**	**06 45 56.2**	**0.0**
STVI				Sn	**Sn**	**06 46 15.9**	**+1.0**
STVI	**Saint Thomas**	**1.36**	**287**	⇑*e*P	**Pn**	**06 45 56.4**	**0.0**
STVI				*e*S	**Sn**	**06 46 15.7**	**+0.8**
ANWB	**Willy Bob**	**1.74**	**99**	Pn	**Pn**	**06 46 00.1**	**-1.0**
ANWB				IAML		06 46 20.5	
	155nm,1.9s						
ANWB				IAML		06 46 23.9	
	154nm,1.2s						
ANWB	**Willy Bob**	**1.74**	**99**	*e*P	**Pn**	**06 45 60.0**	**-1.2**
ANWB				*e*S	**Sn**	**06 46 23.5**	**+0.1**
MBFL	**Flemmings, Mon**	**1.78**	**132**	*e*P	**Pn**	**06 46 01.6**	**-0.1**
MTP	**Monte Pirata**	**1.88**	**274**	⇑*e*P	**Pn**	**06 46 02.1**	**-0.7**
MTP	**Monte Pirata**	**1.88**	**274**	Pn	**Pn**	**06 46 02.2**	**-0.6**
MTP	**Monte Pirata**	**1.88**	**274**	⇑*e*P	**Pn**	**06 46 02.1**	**-0.7**
MTP				*e*S	**Sn**	**06 46 29.1**	**+2.6**
ANBD	**Bethesda, Anti**	**1.96**	**117**	*e*P	**Pn**	**06 46 02.9**	**-1.1**
ANBD				*e*S	**Sn**	**06 46 27.3**	**-1.1**
HUMP	**Col San Antoni**	**2.16**	**275**	⇑*e*P	**Pn**	**06 46 05.7**	**-0.8**
HUMP	**Col San Antoni**	**2.16**	**275**		**Pn**	**06 46 05.8**	**-0.8**
HUMP				IAML		06 46 59.8	
	comp=N,45nm,3.5s						
HUMP	**Col San Antoni**	**2.16**	**275**	⇑*e*P	**Pn**	**06 46 05.7**	**-0.8**
HUMP				*e*S	**Sn**	**06 46 33.7**	**+0.7**
CBYP	**Canovanas**	**2.18**	**278**	⇑*e*P	**Pn**	**06 46 05.9**	**-0.9**
CBYP	**Canovanas**	**2.18**	**278**		**Pn**	**06 46 05.9**	**-0.9**
CBYP				IAML		06 46 36.2	
	comp=E,84nm,0.2s						
CBYP				IAML		06 46 37.2	
	comp=N,97nm,0.2s						
CBYP	**Canovanas**	**2.18**	**278**	⇑*e*P	**Pn**	**06 46 05.9**	**-0.9**
CBYP				*e*S	**Sn**	**06 46 34.2**	**+0.6**
IGPR	**InterUniversit**	**2.40**	**270**	⇑*e*P	**Pn**	**06 46 09.4**	**-0.2**
IGPR	**InterUniversit**	**2.40**	**270**	*e*S	**Sn**	**06 46 41.8**	**+3.2**
GCPR	**Guaynabo City**	**2.40**	**279**	⇑*e*P	**Pn**	**06 46 08.3**	**-1.3**
GCPR	**Guaynabo City**	**2.40**	**279**	*e*S	**Sn**	**06 46 38.2**	**-0.4**
GCPR	**Guaynabo City**	**2.40**	**279**		**Pn**	**06 46 08.4**	**-1.3**
GCPR				Sn	**Sn**	**06 46 38.0**	**-0.6**
GCPR				IAML		06 47 34.5	
	comp=E,35nm,3.0s						
GCPR				IAML		06 47 55.0	
	comp=N,34nm,3.7s						
SJG	**San Juan**	**2.44**	**274**	Pn	**Pn**	**06 46 09.6**	**-0.6**
SJG				IAML		06 46 53.2	
	comp=N,28nm,3.0s						
SJG				IAML		06 47 36.2	
	comp=N,29nm,3.5s						
EMPR	**Esperanza - Ma**	**2.84**	**281**	Pn	**Pn**	**06 46 13.0**	**-2.5**
CELP	**Cerrillos**	**2.85**	**273**	⇑*e*P	**Pn**	**06 46 15.3**	**-0.3**
CELP	**Cerrillos**	**2.85**	**273**		**Pn**	**06 46 14.9**	**-0.7**
CELP				IAML		06 47 59.8	
	comp=N,42nm,2.9s						
CELP				IAML		06 48 02.4	
	comp=E,32nm,3.4s						
CELP	**Cerrillos**	**2.85**	**273**	⇑*e*P	**Pn**	**06 46 15.3**	**-0.3**
CELP				*e*S	**Sn**	**06 46 51.1**	**+1.7**
MAGL	**Barre de l'ile**	**2.98**	**132**	*e*P	**Pn**	**06 46 17.5**	**+0.1**
UUPR	**Utuado, UPR, P**	**2.99**	**276**	Pn	**Pn**	**06 46 16.9**	**-0.7**
AOPR	**Arecibo Observ**	**3.04**	**278**	⇑*e*P	**Pn**	**06 46 16.9**	**-1.2**
AOPR	**Arecibo Observ**	**3.04**	**278**	*e*S	**Sn**	**06 46 53.2**	**-0.6**
AOPR	**Arecibo Observ**	**3.04**	**278**	Pn	**Pn**	**06 46 16.6**	**-1.5**
AOPR				IAML		06 47 12.2	
	comp=N,56nm,2.5s						
AOPR	**Arecibo Observ**	**3.04**	**278**	*e*P	**Pn**	**06 46 17.1**	**-1.0**
AOPR				*e*S	**Sn**	**06 46 53.0**	**-0.8**

IDC 09 06:48:43.0±302.0**, 36°.46N**×**116°.34W, h0**^{km}**, Error**
ellipse: s-maj=142.1km s-min=61.5km az=1.0,
California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I57US	**PINON FLAT INF**	**2.85**	**182**	I	I	07 06 50.0	
	0.1nm,0.5s,baz=0.4,slow=320,SNR=5.9						
I56US	**NEWPORT INFRAS**	**11.81**	**357**	I	I	08 05 20.0	
	baz=173,slow=324						
I10CA	**LAC DU BONNET**	**20.08**	**41**	I	I	08 53 10.0	
	baz=231,slow=334,SNR=0.5						

MAN 09 07:00:02.5, 9°.83N×**122°.33E, h35**^{km}**, mb3.6, ML2.3, MS1.7,**
2D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNOP	**Candoni, Negro**	**0.31**	**91**	⇓*i*P	Pn	07 00 11.9	+1.4
CNOP				*i* S	Sn	07 00 18.9	+2.9
RCP	**Roxas**	**1.77**	**13**	⇓*e*P	Pn	07 00 34.5	+3.9
RCP				*e*S	Sn	07 00 57.7	+5.9

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*FUNV **09** 07:00:23.6, 10°.89N×61°.80W, h33^{km}, MW3.4*
*TRN **09** 07:00:24.2, 10°.96N×62°.06W, h54^{km}, MD3.7*
ISC 09 07:00:24.0±1.3**, 10°.95N**±0°.04×**62°.02W**±0°.04**, h69**^{km}±18^{km}**,**
n24, σ**1^{s}.00**/45**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.68**	**117**	*e*P	**Pn**	**07 00 38.4**	**-0.2**
TRN				*e*S	**Sn**	**07 00 48.1**	**-1.2**
TPP	**Pointe-a-Pierr**	**0.85**	**138**	*e*P	**Pn**	**07 00 41.1**	**+0.6**
TBH	**Brigand Hill**	**1.05**	**116**	*e*P	**Pn**	**07 00 44.0**	**+0.9**
TBH				*e*S	**Sn**	**07 00 57.8**	**+0.5**
CRUV	**Carupano**	**1.23**	**257**	*e*P	**Pn**	**07 00 45.5**	**+0.2**
CRUV				*e*S	**Sn**	**07 01 02.4**	**+1.1**
GRGR	**Grenville**	**1.23**	**17**	*e*P	**Pn**	**07 00 45.2**	**-0.2**
GRGR				*e*S	**Sn**	**07 01 01.0**	**-0.3**
GRHS	**Sauteurs**	**1.32**	**16**	*e*P	**Pn**	**07 00 46.2**	**-0.3**
GRHS				*e*S	**Sn**	**07 01 02.9**	**-0.5**
GRSS	**Sisters**	**1.40**	**17**	*e*P	**Pn**	**07 00 47.7**	**+0.1**
GRSS				*e*S	**Sn**	**07 01 05.2**	**0.0**
TOSP	**Speyside**	**1.50**	**77**	*e*P	**Pn**	**07 00 48.3**	**-0.6**
TOSP				*e*S	**Sn**	**07 01 07.9**	**+0.2**
GCMP	**Grenada, Carri**	**1.63**	**21**	*e*P	**Pn**	**07 00 50.7**	**0.0**
GCMP				*e*S	**Sn**	**07 01 10.6**	**-0.2**
SVOC	**Richmond Hill,**	**2.32**	**20**	*e*P	**Pn**	**07 01 00.1**	**+0.1**
SVOC				*e*S	**Sn**	**07 01 28.1**	**+0.6**
SVB	**Belmont**	**2.42**	**18**	*e*P	**Pn**	**07 01 02.4**	**+1.0**
SVB				*e*S	**Sn**	**07 01 30.0**	**0.0**
SVV	**Soufriere Volc**	**2.48**	**18**	*e*P	**Pn**	**07 01 03.2**	**+1.1**
SVV				*e*S	**Sn**	**07 01 31.6**	**+0.2**
MCLT	**Moule a Chique**	**2.94**	**21**	*e*P	**Pn**	**07 01 09.1**	**+0.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MCLT				*e*S	Sn	07 01 42.5	0.0
SLBI	Saint Lucia, B	3.22	18	*e*P	Pn	07 01 12.8	+0.6
SLBI				*e*S	Sn	07 01 48.8	-0.5
PRGV	PARIAGUAN	3.38	230	*e*P	Pn	07 01 14.8	+0.4
PRGV				*e*S	Sn	07 01 53.3	-0.1
MPOM	Morne Pois Mar	3.65	18	*e*P	Pn	07 01 19.1	+1.0
MPOM				*e*S	Sn	07 01 58.5	-1.4
BIM	Bigot	3.66	15	*e*P	Pn	07 01 18.6	+0.4
BIM				*e*S	Sn	07 01 58.5	-1.8
BIRV	Birongo	4.20	264	*e*P	Pn	07 01 27.5	+1.9
BIRV				*e*S	Sn	07 02 13.1	-0.4
MERV	Las Mercedes	4.54	248	*e*P	Pn	07 01 30.7	+0.5
MERV				*e*S	Sn	07 02 21.1	-0.6
TACV	Tcata	4.99	261	*e*P	Pn	07 01 38.0	+1.6
TACV				*e*S	Sn	07 02 32.2	-0.6
BENV	Beln	5.57	260	*e*P	Pn	07 01 46.1	+1.7
BENV				*e*S	Sn	07 02 45.5	-1.8
CACV	CAICARA DEL OR	5.59	233	*e*P	Pn	07 01 38.5	-6.0
CACV				*e*S	Sn	07 02 34.9	-13
BAUV	El Baul	6.26	252	*e*P	Pn	07 01 53.6	-0.1
BAUV				*e*S	Sn	07 03 01.3	-2.6
MAPV	Macapo	6.43	261	*e*P	Pn	07 01 56.8	+0.7
MAPV				*e*S	Sn	07 03 06.0	-2.2

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*NNC **09** 07:06:28.9±0.3, 50°.01N×78°.72E, h0^{km}, mb3.3, mpv3.1, Error ellipse: s-maj=4.7km s-min=1.5km az=79.0, Suspected Mining explosion.*

*IDC **09** 07:06:30.5±0.8, 50°.08N×78°.89E, h0^{km}, mbtmp2.7/3, ML2.1/3, Error ellipse: s-maj=13.5km s-min=5.8km az=57.0*

ISC 09 07:06:29.6±0.8**, 49°.97N**±0°.03×**78°.67E**±0°.04**, h0^{km}, n27, σ1^{s}28**/40**, 20C-8D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.62	351	⇓P	Pg	07 06 40.6	-1.0
KUR07				⇓S	Sg	07 06 49.4	-0.3
KUR06	Kurchatov Arra	0.64	351	⇑P	Pg	07 06 41.0	-0.9
KUR06				⇑S	Sg	07 06 49.7	-0.6
KUR14	Kurchatov Arra	0.65	355	⇑P	Pg	07 06 40.9	-1.2
KUR14				⇑S	Sg	07 06 49.7	-0.8
KUR15	Kurchatov Arra	0.66	354	⇑P	Pg	07 06 41.0	-1.2
KUR15				⇑S	Sg	07 06 50.1	-0.6
KURBB	Kurchatov Arra	0.66	352	Pg	Pg	07 06 41.2	-1.1
	1.5nm,0.3s,baz=158,slow=20,SNR=59						
KURBB				Lg	Lg	07 06 50.9	
	2.8nm,0.3s,baz=176,slow=32,SNR=24						
KUR16	Kurchatov Arra	0.67	350	⇓P	Pg	07 06 41.2	-1.3
KUR16				⇓S	Sg	07 06 50.5	-0.7
KUR17	Kurchatov Arra	0.68	349	⇑P	Pg	07 06 41.5	-1.2
KUR17				⇑S	Sg	07 06 50.8	-0.6
KUR05	Kurchatov Arra	0.68	353	⇓P	Pg	07 06 41.4	-1.3
KUR05				⇑S	Sg	07 06 50.6	-0.9
KUR04	Kurchatov Arra	0.70	353	⇑P	Pg	07 06 41.9	-1.1
KUR04				⇓S	Sg	07 06 51.1	-1.0
KURK	Kurchatov	0.75	357	⇑P	Pg	07 06 42.5	-1.5
	4.5nm,0.4s						
KURK				⇑S	Sg	07 06 52.4	-1.3
	63nm,1.0s						
SEM	Semipalatinsk	1.10	66	P	Pn	07 06 57.1	+4.5
	8.1nm,0.1s						
SEM				S	Sn	07 07 10.8	+2.1
	21nm,0.1s						
MAKZ	Makanchi	3.85	144	⇑Pn	Pn	07 07 30.6	+0.4
	0.2nm,0.3s						
MAKZ				⇑Pg	Pb	07 07 39.9	+1.4
	0.8nm,0.5s						
MAKZ				⇓Lg	Lg	07 08 31.1	
	6.2nm,0.7s						
BRZS	Berezniki	3.87	273	Pg	Pg	07 07 44.5	+0.7
	1.2nm,0.1s						
BRZS				Lg	Lg	07 08 31.8	
	7.2nm,0.3s						
MK31	Makanchi Array	3.99	141	⇑Pn	Pn	07 07 32.4	+0.4
	0.1nm,0.1s,baz=322,slow=10,SNR=20						
MK31				⇑Pg	Pb	07 07 42.0	+1.3
	0.1nm,0.2s,baz=322,slow=13,SNR=9.0						
MK31				⇑Lg	Lg	07 08 35.3	
	2.9nm,0.5s,baz=336,slow=26,SNR=21						
MKAR	Makanchi Array	3.99	141	Pn	Pn	07 07 33.1	+1.1
	0.2nm,0.3s,baz=325,slow=10,SNR=22						
MKAR				Pg	Pb	07 07 40.3	-0.4
	0.4nm,0.3s,baz=314,slow=14,SNR=12						
MKAR				Sn	Sn	07 08 20.6	+1.2
	0.2nm,0.3s,baz=315,slow=14,SNR=2.5						
MKAR				Lg	Lg	07 08 33.8	
	0.8nm,0.3s,baz=338,slow=25,SNR=21						
	0.3nm,0.4s						
OTUK	Ortayu	4.50	250	⇑Pn	Pn	07 07 39.8	+0.7
	0.6nm,0.2s						
OTUK				⇑Lg	Lg	07 08 53.4	
	4.7nm,0.7s						
ZSN	Zaisan	4.81	119	Pg	Pg	07 08 01.2	-0.6
	3.1nm,0.3s						
ZSN				Lg	Lg	07 09 01.2	
	7.3nm,0.5s						
ZALV	Zalesovo Beam	5.51	41	Pn	Pn	07 07 52.3	-0.5
	0.4nm,0.3s,baz=226,slow=13,SNR=6.4						
ZALV				Sn	Sn	07 08 56.1	-0.7
	0.2nm,0.3s,baz=230,slow=22,SNR=1.8						
ZALV				Lg	Lg	07 09 19.6	
	0.2nm,0.3s,baz=233,slow=27,SNR=2.8						
	1.2nm,0.3s						
I46RU	ZALESOVO INFRA	5.51	41	I	I	07 38 20.0	
	baz=224,slow=340,SNR=9.8						
BLB	Baldybastay	5.87	181	Pg	Pg	07 08 18.9	-3.2
	4.7nm,0.3s						
BLB				Lg	Lg	07 09 34.0	
	4.8nm,0.7s						
BVA0	Borovoye Array	6.01	304	⇓Sn	Sn	07 09 09.0	-0.2
	1.3nm,0.5s,baz=122,slow=24,SNR=8.4						
BVA0				⇑Lg	Lg	07 09 39.3	
	1.8nm,0.6s						
BVAR	Borovoye Array	6.01	304	Pn	Pn	07 08 00.9	+1.2
	baz=117,slow=15,SNR=2.1						
BVAR				Sn	Sn	07 09 09.9	+0.6
	0.1nm,0.3s,baz=114,slow=24,SNR=13						
BVAR				Lg	Lg	07 09 41.6	
	0.1nm,0.3s,baz=115,slow=27,SNR=5.2						
	0.3nm,0.4s						
KTBS	Karatobe	6.40	193	Pg	Pg	07 08 30.3	-1.9
	1.6nm,0.7s						
KTBS				Lg	Lg	07 09 51.8	
	8.9nm,0.6s						
KPKS	Kokpek	6.50	180	Pg	Pg	07 08 34.1	0.0
	1.4nm,0.1s						
KPKS				Lg	Lg	07 09 58.2	
	6.0nm,0.4s						
KRBS	Karabastau	6.60	199	Pg	Pg	07 08 32.9	-3.1
	0.9nm,0.4s						
KRBS				Lg	Lg	07 09 58.2	
	1.8nm,0.5s						
PDGK	Podgornoye	6.66	175	Pg	Pg	07 08 36.3	-1.0
	0.5nm,0.3s						
PDGK				Lg	Lg	07 10 01.9	
	1.1nm,0.6s						
DGS	Degeres	7.02	198	Pg	Pg	07 08 39.1	-4.9
	1.2nm,0.3s						
DGS				Lg	Lg	07 10 09.8	
	3.6nm,0.6s						

ASRS 09 07:11:41.2±0.4**, 52°N**±2°×**9°6E**±°**, h0^{km}, MLh3.5**/7**, Error ellipse: s-maj=5.3km s-min=3.2km az=171.8, confirmed, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJOS	Djoyskaya Sosn	2.90	294	Pg	Pg	07 12 43.8	+7.1
DJOS				Sg	Sg	07 13 20.2	+5.8
CERR	Cheremushki	2.91	295	Pg	Pg	07 12 42.9	+5.9
CERR				Sg	Sg	07 13 19.2	+4.4
MOY	Mondy	3.25	89	Pg	Pg	07 12 44.4	+1.0
MOY				Sg	Sg	07 13 25.1	-0.3
MINR	Mina	3.33	344	Pg	Pg	07 12 49.9	+4.9
MINR				Sg	Sg	07 13 31.5	+3.3
LUZB	Luzhba, Kemero	4.62	298	Sg	Sg	07 14 10.6	+1.2
GZLN	Zheleznogorsk	4.83	347	Pg	Pg	07 13 12.7	-0.9
GZLN				Sg	Sg	07 14 13.3	-2.8
TASR	Tashtagol	4.97	285	Pg	Pg	07 13 16.6	+0.3
TASR				Sg	Sg	07 14 23.9	+3.3
CUR	Chagan-Uzun	4.97	254	Pg	Pg	07 13 19.1	+2.7
CUR				Sg	Sg	07 14 22.4	+1.6
ULGR	Ulagan, Altay	5.04	261	Pg	Pg	07 13 22.1	+4.4
ULGR				Sg	Sg	07 14 26.3	+3.4
ARTR	Artybash	5.28	274	Pg	Pg	07 13 25.7	+3.4
ARTR				Sg	Sg	07 14 35.0	+4.3
DGZ	Jazzator, Alta	5.67	252	Pg	Pg	07 13 31.7	+1.8
DGZ				Sg	Sg	07 14 44.9	+1.6

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*DJA **09** 07:17:08.9±0.3, 3°S±3°×13°0E±°, h10^{km}, M3.7/12, mb3.9/3, MLv3.6/12*

*IDC **09** 07:17:15.9±3.9, 3°.35S×130°.49E, h86^{km}±44^{km}, mb3.5/3, mbtmp3.8/5, Error ellipse: s-maj=67.7km s-min=14.1km az=78.0*

ISC 09 07:17:11.6±0.9**, 3°.46S**±0°.06×**129°.98E**±0°.06**, h35^{km}, n15, σ1^{s}33**/17**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.05	276	P	Pn	07 17 27.2	-2.7
BNDI	Bandanaira	1.06	184	P	Pn	07 17 29.5	-0.5
AAI	Ambon	1.79	263	P	Pn	07 17 38.6	-1.5
FAKI	Fak Fak	2.33	77	P	Pn	07 17 47.5	+0.1
SIJI	Sorong	2.88	27	P	Pn	07 17 54.1	-0.9
	19nm,0.3s,baz=238,slow=22,SNR=28						
SIJI				S	Sn	07 18 27.2	-1.2
	26nm,0.4s,baz=93,slow=21,SNR=6.7						
SWI	Sorong	2.88	26	P	Pn	07 17 54.6	-0.4
NLAI	Namlea	2.88	274	P	Pn	07 17 54.3	-0.7
LBMI	Labuha	3.74	318	P	Pn	07 18 06.7	-0.2
SANI	Sanana	4.22	289	P	Pn	07 18 14.1	+0.6
RKPI	Ransiki, Papua	4.62	65	P	Pn	07 18 19.0	0.0
GTOI	Gorontalo	8.06	300	P	Pn	07 19 08.9	+2.6
	6.3nm,1.1s						
WRA	Warramunga Arr	16.93	166	P	Pn	07 21 07.0	+1.1
	0.9nm,0.5s,baz=345,slow=12,SNR=12						
WRA				S	Sn	07 24 04.6	-8.5
	0.2nm,0.5s,baz=4.0,slow=23,SNR=1.6						
ASAR	Alice Springs	20.44	170	P	P	07 21 46.9	+0.7
	3.1nm,0.5s,baz=348,slow=10,SNR=80						
ASAR				S	S	07 25 31.7	-1.7
	0.6nm,0.7s,baz=352,slow=20,SNR=5.2						
	3.1nm,0.5s						
MKAR	Makanchi Array	65.28	326	P	P	07 27 50.4	+0.4
	0.2nm,0.5s,baz=118,slow=8.2,SNR=4.4						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	69.51	328	P	P	07 28 17.1	+0.5
	0.7nm,0.2s,baz=124,slow=5.3,SNR=1.9						
	0.7nm,0.2s						

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*IDC **09** 07:34:58.6±5.4, 1°.89N×127°.18E, h147^{km}±57^{km}, mb3.6/5, mbtmp4.0/6, Error ellipse: s-maj=85.3km s-min=17.7km az=69.0*

*DJA **09** 07:35:06.8±0.7, 2°N±6°×12°8E±°, h219^{km}±8^{km}, M4.4/9, mb4.4/6, mB4.8/5, MLv4.5/9, Mw(mB)4.1/5*

ISC 09 07:35:04.6±1.0**, 2°.4N**±0°.1×**128°.5E**±0°.1**, h200^{km}, n17, σ2^{s}59**/19**, mb4.2**/5**, 1C, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.98	214	P	Pn	07 35 45.8	+2.8
LBMI	Labuha	3.19	198	P	Pn	07 35 58.5	+1.9
SGSI	Sangihe	3.21	293	P	Pn	07 35 59.5	+2.8
SGSI				S	Sn	07 36 40.4	+3.0
SIJI	Sorong	4.29	140	P	Pn	07 36 12.8	+2.7
	20nm,0.5s,baz=340,slow=15,SNR=6.0						
SIJI				S	Sn	07 37 06.8	+5.1
	12nm,0.7s,baz=211,slow=19,SNR=1.6						
SANI	Sanana	5.09	209	P	Pn	07 36 20.6	+0.4
GTOI	Gorontalo	5.75	252	P	Pn	07 36 31.6	+2.9
	41nm,0.7s,699nm0.2nm						
BUKP	Musuan	6.40	328	⇑*e*P	Pn	07 36 39.6	+2.4
FAKI	Fak Fak	6.51	145	P	Pn	07 36 40.3	+1.8
	37nm,0.8s,0.1nm						
LUWI	Luwuk	6.67	239	P	Pn	07 36 41.6	+1.1
	75nm,0.8s,3μm0.9nm						
MRSI	Marisa	6.82	254	P	Pn	07 36 43.8	+1.3
	102nm,0.5s,1μm0.4nm						
MPSI	Mapaga	8.83	257	P	Pn	07 37 10.2	+1.5
	12nm,0.7s						
SAUI	Saumlaki	10.71	165	P	Pn	07 37 33.3	+0.2
WRA	Warramunga Arr	22.96	166	P	P	07 39 49.5	-2.2
	3.2nm,0.3s,baz=335,slow=11,SNR=9.2						
	3.2nm,0.3s						
ASAR	Alice Springs	26.46	169	P	P	07 40 21.2	-2.2
	3.1nm,0.6s,baz=356,slow=8.2,SNR=93						
ASAR				PcP	PcP	07 43 40.8	-2.4
	0.2nm,0.4s,baz=344,slow=2.1,SNR=2.1						
	3.1nm,0.6s						
STKA	Stephens Creek	36.31	161	P	P	07 41 47.0	-2.3
	3.4nm,0.3s,baz=340,slow=8.1,SNR=21						
	3.4nm,0.3s						
MKAR	Makanchi Array	59.62	325	P	P	07 44 46.0	-1.6
	0.2nm,0.4s,baz=110,slow=8.1,SNR=5.7						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	63.78	327	P	P	07 45 12.4	-2.9
	0.3nm,0.5s,baz=127,slow=5.9,SNR=4.4						
	0.3nm,0.5s						

WEL 09 08:10:46.9±0.4**, 42°S**±3°×**17°4E**±°**, h5^{km}, M2.9**/16**, ML2.6**/16**, MLv2.9**/16**, Error ellipse: s-maj=0.0km s-min=0.0km az=156.5, confirmed, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.24	215	P	Pg	08 10 52.3	+0.8
CMWZ				S	Sg	08 10 56.7	+2.1
TCW	Tory Channel	0.35	346	P	Pb	08 10 54.8	-0.9
TCW				S	Sb	08 11 00.3	-1.3
TUWZ	Tuamarina	0.36	290	P	Pg	08 10 54.5	+0.6
TUWZ				S	Sg	08 10 60.0	+1.3
WEL	Wellington	0.39	46	P	Pg	08 10 53.9	-0.6
BSWZ	Blackbirch Sta	0.42	247	P	Pg	08 10 55.3	+0.3
BSWZ				S	Sg	08 11 01.7	+1.2
PLWZ	Palliser	0.65	92	P	Pb	08 11 00.0	-0.6
CAW	Cannon Point	0.68	49	P	Pg	08 11 00.5	+0.6
CAW				S	Sb	08 11 10.3	-0.5
KIW	Kapiti Island	0.80	29	P	Pg	08 11 02.6	+0.5
DUWZ	D'Urville Isla	0.83	334	P	Pg	08 11 03.3	+0.5
NNZ	Nelson	0.83	293	P	Pg	08 11 02.9	0.0
MTW	Mount Morrison	0.92	65	P	Pb	08 11 05.0	-0.4
OGWZ	Otaki Gorge	0.94	39	P	Pg	08 11 05.0	+0.1
HOWZ	Holdsworth Sta	1.07	53	P	Pg	08 11 07.3	-0.2
KHZ	Kahutara	1.07	216	P	Pg	08 11 06.3	-1.1
THZ	Tophouse	1.14	259	P	Pg	08 11 07.9	-0.8
TKNZ	Takaka Hill	1.20	295	P	Pg	08 11 09.2	-0.7
TMWZ	Te Maipa	1.21	69	P	Pg	08 11 08.8	-1.3
MRNZ	Matariki Terra	1.24	277	P	Pg	08 11 09.8	-0.8
MRZ	Mangatainoka R	1.26	45	P	Pg	08 11 10.2	-1.0
TIWZ	Tintock	1.37	56	P	Pn	08 11 11.1	-1.6
QRZ	Quartz Range	1.58	297	P	Pn	08 11 15.4	-0.2
DSZ	Denniston Nort	1.95	264	P	Pn	08 11 20.0	-0.7
LTZ	Lake Taylor	2.00	231	P	Pn	08 11 19.1	-2.3
WNVZ	Wahianoa	2.41	23	P	Pg	08 11 32.9	-0.1
OXZ	Oxford	2.48	224	P	Pn	08 11 28.7	+0.7
AKCZ	Akaroa Harbour	2.56	205	P	Pn	08 11 30.2	+1.1
OTVZ	Oturere	2.58	23	P	Pb	08 11 34.1	+0.4
ETVZ	East Tongariro	2.62	23	P	Pb	08 11 35.1	+0.7
TMVZ	Te Maari	2.63	23	P	Pb	08 11 34.6	-0.1
NTVZ	North Tongarir	2.64	22	P	Pb	08 11 34.3	-0.4

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*WEL **09** 08:11:00, 42°.97S×173°.10E, h7^{km}, ML4.0, Mw4.0, Moment Tensor Solution. s6 Moment tensor: Scale 10^{15} Nm; M_{rr}0.89; $M_{\theta\theta}$-0.34; $M_{\phi\phi}$-0.55; $M_{r\theta}$0.29; $M_{\theta\phi}$-0.46; $M_{\phi r}$0.49; Fault plane solution: $M_0$1.07000×10^{15} NP1: ϕ_s223.00000°, δ29.00000°, λ98.00000°. NP2: ϕ_s34.00000°, δ61.00000°, λ86.00000°. Principal axes: T -108.0000, Plg73.0000°, Azm294.0000°; N 2.4800, Plg4.0000°, Azm36.0000°; P 105.5300, Plg16.0000°, Azm127.0000°;*

*IDC **09** 08:11:43.0±1.2, 42°.92S×173°.13E, h0^{km}, mb3.7/2, mbtmp3.8/3, ML3.3/1 Error ellipse: s-maj=43.7km s-min=26.0km az=154.0*

*NOU **09** 08:11:44.6, 43°.06S×173°.21E, h7^{km}, MLv4.4/14, Off E. Coast of S. Island, N.Z.*

*WEL **09** 08:11:45.3±0.4, 43°S±3°×17°3E±°, h12^{km}±3^{km}, M4.0/23, ML4.3/23, MLv4.0/23, Error ellipse: s-maj=0.0km s-min=0.0km az=125.3, confirmed*

ISC 09 08:11:43.8±1.1**, 43°.01S**±0°.03×**173°.23E**±0°.04**, h11^{km}**±7^{km}**, n126, σ1^{s}62**/132**, Off east coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	Greta Valley S	0.15	285	P	Pg	08 11 47.6	+0.3
GVZ				S	Sg	08 11 49.1	-0.5
AMCZ	Amberley	0.46	248	P	Pb	08 11 54.6	+0.7
AMCZ				S	Sb	08 12 01.1	+0.4
KHZ	Kahutara	0.63	21	P	Pn	08 11 58.2	-0.5
KHZ	Kahutara	0.63	21	P	Pn	08 11 58.1	-0.5
KHZ				S	Sn	08 12 07.4	-1.4
LTZ	Lake Taylor	0.74	287	P	Pg	08 11 58.2	+0.1
LTZ				S	Sg	08 12 07.1	-0.8
MQZ	McQueen's Vall	0.82	211	P	Pb	08 12 01.0	+0.9
MQZ				S	Sn	08 12 13.1	-0.2
AKCZ	Akaroa Harbour	0.90	195	P	Pn	08 12 03.4	+1.0
OXZ	Oxford	0.93	250	P	Pb	08 12 02.4	+0.5
OXZ				S	Sn	08 12 15.3	-0.9
RACZ	Rakaia	1.07	228	P	Pb	08 12 04.4	0.0
THZ	Tophouse	1.27	349	P	Pb	08 12 07.9	+0.2
MHCZ	Mount Hutt	1.32	246	P	Pn	08 12 07.9	-0.4
INZ	Inchbonnie	1.34	282	P	Pn	08 12 08.4	-0.1
BSWZ	Blackbirch Sta	1.38	20	P	Pg	08 12 10.6	+0.4
WACZ	Wakanui South	1.38	227	P	Pn	08 12 08.3	-0.7
CMWZ	Cape Campbell	1.45	30	P	Pg	08 12 12.2	+0.5
MRNZ	Matariki Terra	1.65	347	P	Pb	08 12 14.2	0.0
DSZ	Denniston Nort	1.65	320	P	Pn	08 12 13.1	+0.4
TUWZ	Tuamarina	1.66	19	P	Pn	08 12 13.7	+0.9
RPZ	Rata Peaks	1.74	245	Pn	Pn	08 12 13.4	-0.5
	39nm,0.3s,baz=93,slow=5.7,SNR=86						
RPZ				Sn	Sn	08 12 35.0	-1.1
	53nm,0.3s,baz=18,slow=20,SNR=22						
RPZ	Rata Peaks	1.74	245	P	Pn	08 12 13.8	-0.2
RPZ	Rata Peaks	1.74	245	P	Pn	08 12 13.3	-0.7
ARCZ	Arundel	1.77	237	P	Pn	08 12 13.4	-0.9
NNZ	Nelson	1.79	4	P	Pb	08 12 15.7	-0.9
WVZ	Waitaha Valley	1.83	267	P	Pn	08 12 15.0	-0.1
TCW	Tory Channel	1.96	24	P	Pn	08 12 17.9	+1.0
TKNZ	Takaka Hill	1.98	354	P	Pb	08 12 18.8	-1.1
SNZO	South Karori	2.02	33	P	Pn	08 12 19.1	+1.4
WEL	Wellington	2.07	34	P	Pn	08 12 19.6	+1.2
PLWZ	Palliser	2.08	47	P	Pn	08 12 19.7	+1.1
TMZ	Timaru	2.12	229	P	Pn	08 12 18.9	-0.3
GCSZ	Gaunt Creek Bo	2.15	261	P	Pn	08 12 19.7	+0.1
QRZ	Quartz Range	2.24	346	P	Pb	08 12 23.0	-1.3
QRZ	Quartz Range	2.24	346	P	Pn	08 12 21.9	+1.0
DUWZ	D'Urville Isla	2.26	13	P	Pn	08 12 22.5	+1.3
CAW	Cannon Point	2.34	36	P	Pn	08 12 22.1	-0.1
TRWZ	Traveller	2.43	49	P	Pn	08 12 24.5	+1.0
KIW	Kapiti Island	2.48	31	P	Pn	08 12 25.2	+1.0
MTW	Mount Morrison	2.50	43	P	Pn	08 12 25.5	+1.1
FOZ	Fox Glacier	2.55	257	P	Pn	08 12 25.8	+0.7
LBZ	Lake Benmore	2.60	237	P	Pn	08 12 26.1	+0.2
OGWZ	Otaki Gorge	2.62	34	P	Pn	08 12 26.9	+0.8
HOWZ	Holdsworth Sta	2.71	40	P	Pn	08 12 28.4	+1.1
TMWZ	Te Maipa	2.74	47	P	Pn	08 12 30.1	+2.3
ODZ	Otahua Downs	2.76	222	P	Pn	08 12 28.3	+0.3
ODZ	Otahua Downs	2.76	222	P	Pn	08 12 27.5	-0.5
MRZ	Mangatainoka R	2.93	38	P	Pn	08 12 30.7	+0.4
TIWZ	Tintock	2.98	43	P	Pn	08 12 32.8	+1.7
PRWZ	Pori Road	3.19	41	P	Pn	08 12 36.2	+2.3
BFZ	Birch Farm	3.23	45	P	Pn	08 12 36.1	+1.6
BFZ	Birch Farm	3.23	45	P	Pn	08 12 35.7	+1.2
JCZ	Jackson Bay	3.41	250	P	Pn	08 12 36.9	0.0
JCZ	Jackson Bay	3.41	250	P	Pn	08 12 36.7	-0.2
HHSZ	Highcliff Hill	3.44	212	P	Pn	08 12 37.5	+0.2
DVHZ	Dannevirke	3.49	40	P	Pn	08 12 39.5	+1.5
WAZ	Wanganui	3.51	23	P	Pn	08 12 40.8	+2.6
WKZ	Wanaka	3.55	238	P	Pn	08 12 38.8	-0.1
EAZ	Earnscleugh	3.60	230	P	Pn	08 12 38.7	-0.8
NMEZ	Namu Road	3.62	8	P	Pn	08 12 43.3	+3.4
LREZ	Lake Rotokare	3.65	14	P	Pn	08 12 43.3	+3.0
PREZ	Palmer Road	3.73	11	P	Pn	08 12 44.8	+3.5
KHEZ	Kahui Hut	3.76	9	P	Pn	08 12 45.0	+3.3
KHEZ	Kahui Hut	3.76	9	P	Pn	08 12 45.0	+3.3
NBEZ	Newall Road No	3.77	8	P	Pn	08 12 44.2	+2.4
NEZ	North Egmont	3.79	10	P	Pn	08 12 45.9	+3.7
WPHZ	Waipukurau	3.80	40	P	Pb	08 12 47.2	-3.6
PNHZ	Pukenui	3.81	37	P	Pn	08 12 42.2	-0.3
PKE	Pukeiti	3.85	9	P	Pn	08 12 45.7	+2.7
DREZ	Durham Road	3.88	11	P	Pn	08 12 46.0	+2.6
PKVZ	Pokaka	4.04	24	P	Pn	08 12 47.6	+1.9
VRZ	Vera Road	4.05	17	P	Pn	08 12 48.0	+2.3
MOVZ	Moawhango	4.07	29	P	Pn	08 12 47.4	+1.4
WNVZ	Wahianoa	4.09	27	P	Pn	08 12 48.1	+1.7
TRVZ	Turoa	4.10	26	P	Pn	08 12 48.1	+1.5
BHHZ	Black Hill Sta	4.11	32	P	Pn	08 12 47.5	+0.9
DRZ	Dome Shelter	4.12	26	P	Pn	08 12 51.8	+4.8
WHVZ	Whangaehu Hut	4.12	26	P	Pn	08 12 48.8	+1.9
FWVZ	Far West T-bar	4.14	26	P	Pn	08 12 48.8	+1.6
TUVZ	Tukino	4.16	27	P	Pn	08 12 47.0	-0.4
MSZ	Milford Sound	4.18	245	P	Pn	08 12 46.9	-0.6
NGZ	Ngauruhoe	4.22	26	P	Pn	08 12 49.9	+1.7
SNVZ	South Ngauruho	4.23	26	P	Pn	08 12 50.5	+2.1
OTVZ	Oturere	4.26	26	P	Pn	08 12 50.6	+1.9
NNVZ	North Ngauruho	4.27	26	P	Pn	08 12 50.9	+2.0
WTVZ	West Tongariro	4.28	25	P	Pn	08 12 52.2	+3.2
ETVZ	East Tongariro	4.30	27	P	Pn	08 12 51.1	+1.9
KWHZ	Kaweka Forest	4.31	35	P	Pn	08 12 52.6	+3.2
TMVZ	Te Maari	4.31	26	P	Pn	08 12 50.6	+1.2
NTVZ	North Tongarir	4.32	26	P	Pn	08 12 51.2	+1.7
MLZ	Mavora Lakes	4.37	236	P	Pn	08 12 49.7	-0.4
MCHZ	McNeill Hill	4.42	37	P	Pn	08 12 56.1	+5.4
BKZ	Black Stump Fm	4.56	34	P	Pn	08 12 55.1	+2.3
BKZ	Black Stump Fm	4.56	34	P	Pn	08 12 52.1	-0.7
SYZ	Scrubby Hill	4.58	218	P	Pn	08 12 53.6	+0.7
SYZ	Scrubby Hill	4.58	218	P	Pn	08 12 53.8	+0.9
HIZ	Hauiti	4.66	16	P	Pn	08 12 55.8	+1.8
HIZ	Hauiti	4.66	16	P	Pn	08 12 56.0	+1.9
WATZ	Wairara	4.69	25	P	Pn	08 12 59.8	+5.2
NMHZ	Naumai	4.75	36	P	Pn	08 12 58.9	+3.5
WHZ	Wether Hill Ro	4.76	231	P	Pn	08 12 54.2	-1.3
MTHZ	Maungataniwha	4.97	35	P	Pn	08 13 00.5	+2.1
TLZ	Tolley Road	4.99	21	P	Pn	08 13 01.8	+3.1
DCZ	Deep Cove	5.01	239	P	Pn	08 12 58.2	-0.7
RAHZ	Arahi	5.02	37	P	Pn	08 13 01.2	+2.1
SNGZ	Shannon Statio	5.24	38	P	Pn	08 13 04.7	+2.6
APZ	The Paps	5.34	222	P	Pn	08 13 03.4	0.0
TOZ	Tahuroa Road	5.55	19	P	Pn	08 13 07.6	+1.4
URZ	Urewera	5.58	33	Pn	Pn	08 13 06.5	-0.3
	0.9nm,0.3s,baz=14,slow=19,SNR=1.7						
URZ				Sn	Sn	08 14 07.5	-3.4
	7.1nm,0.3s,baz=124,slow=9.1,SNR=13						
	15nm,1.0s						
URZ	Urewera	5.58	33	P	Pn	08 13 07.8	+1.0
URZ	Urewera	5.58	33	P	Pn	08 13 06.8	+0.1
PYZ	Puysegur Point	5.64	234	P	Pn	08 13 09.4	+1.8
PYZ	Puysegur Point	5.64	234	P	Pn	08 13 09.4	+1.8
TKGZ	Te Karaka	5.75	39	P	Pn	08 13 10.6	+1.5
TWGZ	Tauwhareparae	6.03	38	P	Pn	08 13 15.0	+2.0
AWAZ	Awhitu Peninsu	6.03	11	P	Pn	08 13 14.8	+1.8
RUGZ	Raukumara Rang	6.07	35	P	Pn	08 13 14.8	+1.2
WTAZ	Waiatarua	6.15	10	P	Pn	08 13 16.9	+2.3
ETAZ	East Tamaki Re	6.18	13	P	Pn	08 13 16.7	+1.6
RVAZ	Riverhead Bore	6.32	10	P	Pn	08 13 20.2	+3.4
CTZ	Chatham Island	7.43	99	P	Pn	08 13 33.9	+1.8
ASAR	Alice Springs	37.67	288	P	P	08 18 59.1	0.0
	0.8nm,0.5s,baz=127,slow=7.3,SNR=20						
ASAR				PcP	PcP	08 21 16.8	+0.4
	0.3nm,0.7s,baz=131,slow=4.2,SNR=2.3						
	0.8nm,0.5s						
WRA	Warramunga Arr	39.87	293	P	P	08 19 17.8	+0.3
	0.6nm,0.6s,baz=130,slow=7.9,SNR=8.7						
	0.6nm,0.6s						
YKA	Yellowknife Ar	119.84	31	PKP	PKiKP	08 30 33.2	+0.2
	0.2nm,0.7s,baz=229,slow=1.9,SNR=4.0						
ARCES	ARCESS Array B	148.69	339	PKPbc	PKPbc	08 31 30.2	+0.4
	3.1nm,0.9s,baz=34,slow=1.9,SNR=12						
TORD	Torodi Ar. Bea	149.36	196	PKPbc	PKiKP	08 31 34.3	+0.1
	0.6nm,0.7s,baz=175,slow=2.6,SNR=6.6						
BRTR	Keskin Array B	149.70	278	PKPbc	PKiKP	08 31 34.4	-0.1
	1.4nm,0.7s,baz=133,slow=3.7,SNR=7.3						
FINES	FINESS Array B	153.15	325	PKPbc	PKPbc	08 31 40.6	+0.2
	1.1nm,0.8s,baz=102,slow=4.6,SNR=1.5						

ROM 09 08:14:50.3±0.1**, 42°.649N**±0°.004×**13°.330E**±0°.006**, h14^{km}**±1^{km}**, ML1.0**/6**, Error ellipse: s-maj=0.5km s-min=0.1km az=61.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	SAN MARTINO	0.02	167	P	Pg	08 14 53.2	+0.2

SMA1				S	Sg	08 14 54.7	+0.1
T1246	**Crognaleto (TE**	**0.14**	**118**	P	Pb	08 14 54.4	-0.4
T1246				S	Sg	08 14 57.0	+0.5
T1214	**Arquata del Tr**	**0.14**	**321**	P	Pb	08 14 54.5	-0.4
T1214				S	Sg	08 14 57.2	+0.5
T1214				AML	AML		
	comp=N,27µm,0.5s						
T1214				AML	AML		
	comp=N,106µm,0.6s						
T1214				AML	AML		
	comp=E,41µm,1.1s						
T1214				AML	AML		
	comp=E,65µm,0.9s						
T1218	**Civita (PG)**	**0.16**	**278**	P	Pg	08 14 54.6	+0.3
T1218				S	Sg	08 14 57.4	+0.3
T1218				AML	AML		
	comp=E,97µm,0.1s						
T1218				AML	AML		
	comp=E,79µm,0.2s						
T1218				AML	AML		
	comp=N,109µm,0.2s						
T1218				AML	AML		
	comp=N,97µm,0.2s						
RM33	**Pellescritta (**	**0.16**	**211**	P	Pg	08 14 54.7	+0.4
RM33				S	Sg	08 14 57.6	+0.5
RM33				AML	AML		
	comp=E,50µm,0.1s						
RM33				AML	AML		
	comp=E,492µm,0.8s						
RM33				AML	AML		
	comp=N,49µm,0.2s						
RM33				AML	AML		
	comp=N,443µm,0.4s						
TERO	**Teramo**	**0.20**	**97**	P	Pg	08 14 55.3	+0.4
TERO				S	Sg	08 14 58.8	+0.7
TERO				AML	AML		
	comp=N,68µm,0.1s						
TERO				AML	AML		
	comp=N,63µm,0.1s						
TERO				AML	AML		
	comp=E,70µm,0.1s						
TERO				AML	AML		
	comp=E,64µm,0.1s						
T1241	**Roccafluvione,**	**0.22**	**20**	P	Pg	08 14 54.9	-0.3
T1241				S	Sb	08 14 59.7	-0.4
MMO1	**Montemonaco**	**0.25**	**359**	P	Pg	08 14 55.7	-0.1
MMO1				S	Sb	08 15 00.6	-0.4
GIGS	**Gran Sasso**	**0.27**	**138**	P	Pg	08 14 56.4	+0.4
GIGS				S	Sg	08 15 00.5	+0.7
GIGS				AML	AML		
	comp=N,22µm,2.0s						
GIGS				AML	AML		
	comp=E,28µm,1.4s						
T1215	**Vallo di Nera,**	**0.37**	**294**	P	Pg	08 14 58.2	+0.3
T1215				S	Sb	08 15 03.8	-0.6

ROM 09 08:15:30.5±0.1**, 42°.934N**±0°.003×**13°.132E**±0°.004**, h12^{km}, ML0.8**/4**, Error ellipse: s-maj=0.4km s-min=0.1km az=236.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.05**	**116**	P	Pg	08 15 32.9	-0.2
MC2				S	Sg	08 15 35.2	+0.2
T1216	**Preci, Frazion**	**0.09**	**243**	P	Pg	08 15 33.7	+0.4
T1216				S	Sg	08 15 35.9	+0.5
T1216				AML	AML		
	comp=N,50µm,0.2s						
T1216				AML	AML		
	comp=E,45µm,0.1s						
MMO1	**Montemonaco**	**0.15**	**103**	P	Pg	08 15 34.5	+0.4
MMO1				S	Sg	08 15 37.2	+0.6
T1219	**Muccia, Frazio**	**0.15**	**323**	P	Pg	08 15 34.6	+0.4
T1219				S	Sg	08 15 37.5	+0.7
T1219				AML	AML		
	comp=E,51µm,0.2s						
T1219				AML	AML		
	comp=E,81µm,0.7s						
T1219				AML	AML		
	comp=N,47µm,0.3s						
T1220	**Camerino, Fraz**	**0.18**	**350**	P	Pg	08 15 35.0	+0.4
T1220				AML	AML		
	comp=N,63µm,0.3s						
T1220				AML	AML		
	comp=E,69µm,0.3s						
T1220				AML	AML		
	comp=N,148µm,0.5s						
T1214	**Arquata del Tr**	**0.18**	**162**	P	Pg	08 15 35.1	+0.4
T1214				S	Sg	08 15 38.4	+0.8
T1214				AML	AML		
	comp=E,29µm,0.5s						
T1214				AML	AML		
	comp=E,72µm,0.8s						
T1214				AML	AML		
	comp=N,24µm,0.2s						

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*HVO **09** 08:31:02.5±0.8, 19°.414N±0°.004×155°.62W±0°.01, h3^{km}±6^{km}, ML3.2/43, ML3.1/48(NEIC), Error ellipse: s-maj=1.5km s-min=0.6km az=85.0*

NEIC 09 08:31:03.1±0.6**, 19°.408N**±0°.007×**155°.614W**±0°.009**, h4^{km}**±6^{km}**, Error ellipse: s-maj=1.2km s-min=1.1km az=74.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MWH	**Moku'aweowe**	**0.08**	**12**	Pg	Pg	08 31 04.9	-0.3
MLOA	**Mauna Loa Obse**	**0.13**	**16**		Pg	08 31 05.9	0.0
MLOA					Sg	08 31 08.7	+0.8
MLOA	**Mauna Loa Obse**	**0.13**	**16**	IAML		08 31 09.2	
	comp=N,8µm,0.3s						
MLOA				IAML		08 31 09.3	
	comp=E,11µm,0.6s						
ALEP	**Alea Permanent**	**0.14**	**348**		Pg	08 31 06.0	0.0
ALEP					Sg	08 31 08.5	+0.6
AIN	**Ainahou**	**0.15**	**104**		Pg	08 31 06.7	+0.5
AIN	**Ainahou**	**0.15**	**104**	IAML		08 31 11.2	
	comp=E,13µm,0.5s						
AIN				IAML		08 31 11.3	
	comp=N,16µm,0.3s						
KHU	**Kahuku**	**0.16**	**180**		Pg	08 31 06.4	0.0
KHU	**Kahuku**	**0.16**	**180**	IAML		08 31 09.5	
	comp=E,2µm,1.1s						
KHU				IAML		08 31 10.8	
	comp=N,3µm,0.6s						
HMH	**Humu'ula Sheep**	**0.23**	**33**		Pg	08 31 07.8	+0.1
HMH					Sg	08 31 11.5	+0.8
HMH	**Humu'ula Sheep**	**0.23**	**33**	IAML		08 31 11.9	
	comp=E,2µm,0.7s						
HMH				IAML		08 31 14.8	
	comp=N,2µm,0.7s						
MLH	**Mauna Loa**	**0.23**	**68**		Pg	08 31 07.9	+0.2
MLH					Sg	08 31 10.5	-0.2
MLH	**Mauna Loa**	**0.23**	**68**	IAML		08 31 12.4	
	comp=N,3µm,0.8s						
HTC	**Hot Caves**	**0.27**	**130**		Pg	08 31 08.2	-0.1
WRMHI	**West Rim**	**0.30**	**90**		Pg	08 31 08.9	0.0
CPH	**Captain Cook**	**0.30**	**286**		Pg	08 31 09.2	+0.2
SDHHI	**Sand Hill**	**0.30**	**93**		Pg	08 31 08.9	-0.1
SDHHI	**Sand Hill**	**0.30**	**93**	IAML		08 31 14.7	
	comp=N,4µm,0.4s						
SDHHI				IAML		08 31 19.1	
	comp=E,4µm,0.3s						
UWE	**Uwekahuna**	**0.30**	**87**		Pg	08 31 09.0	0.0
UWE	**Uwekahuna**	**0.30**	**87**	IAML		08 31 17.8	
	comp=N,6µm,0.6s						
UWE				IAML		08 31 19.0	
	comp=E,6µm,0.4s						
HLP	**Hilina Pali**	**0.31**	**111**		Pg	08 31 09.1	0.0
HLP					Sg	08 31 14.9	+1.7
HLP	**Hilina Pali**	**0.31**	**111**	IAML		08 31 16.3	
	comp=E,3µm,0.9s						
HLP				IAML		08 31 17.7	
	comp=N,2µm,0.6s						
OBL	**Observatory Le**	**0.31**	**88**	Pg	Pg	08 31 09.3	+0.1
NPH	**North Pit**	**0.31**	**89**		Sg	08 31 13.3	-0.1
UWB	**Uwekahuna B**	**0.32**	**87**		Pg	08 31 09.2	-0.1
UWB	**Uwekahuna B**	**0.32**	**87**	IAML		08 31 19.7	
	comp=N,2µm,0.6s						
KHLU	**Kahalu`u**	**0.32**	**305**		Pg	08 31 09.7	+0.3
KHLU	**Kahalu`u**	**0.32**	**305**	IAML		08 31 17.5	
	comp=E,4µm,0.3s						
KHLU				IAML		08 31 19.3	
	comp=N,4µm,0.3s						
RSD	**Rainshed**	**0.32**	**80**		Pg	08 31 09.4	0.0
RSD	**Rainshed**	**0.32**	**80**	IAML		08 31 19.4	
	comp=N,2µm,0.7s						
RSD				IAML		08 31 19.8	
	comp=E,2µm,0.8s						
SBLHI	**Steaming Bluff**	**0.33**	**87**	Pg	Pg	08 31 10.1	+0.6
SBLHI				IAML		08 31 20.9	
	comp=E,3µm,0.5s						
SBLHI				IAML		08 31 20.9	
	comp=N,3µm,0.4s						
KKO	**Keanakako`i**	**0.33**	**92**		Pg	08 31 09.4	-0.1
KKO	**Keanakako`i**	**0.33**	**92**	IAML		08 31 16.8	
	comp=E,2µm,0.5s						
KKO				IAML		08 31 19.6	
	comp=N,5µm,0.6s						
HATHI	**Halema'uma'u T**	**0.33**	**87**		Pg	08 31 09.5	-0.1
HATHI	**Halema'uma'u T**	**0.33**	**87**	IAML		08 31 19.1	
	comp=N,3µm,0.7s						
BYL	**Byron's Ledge**	**0.33**	**89**		Pg	08 31 10.0	+0.4
BYL	**Byron's Ledge**	**0.33**	**89**	IAML		08 31 19.2	
	comp=N,3µm,0.8s						
BYL				IAML		08 31 20.5	
	comp=E,2µm,0.8s						
HUH	**Hualalai**	**0.35**	**323**		Pg	08 31 10.7	+0.8
HUH	**Hualalai**	**0.35**	**323**	IAML		08 31 19.8	
	comp=E,4µm,0.5s						
HUH				IAML		08 31 20.0	
	comp=N,3µm,0.4s						
POHA	**Pohakuloa**	**0.36**	**12**		Pg	08 31 10.0	-0.1
POHA	**Pohakuloa**	**0.36**	**12**	IAML		08 31 19.8	
	comp=N,2µm,0.5s						
POHA				IAML		08 31 21.7	
	comp=N,2µm,0.9s						
PUH	**Pauahi**	**0.38**	**95**		Pg	08 31 10.3	-0.1
PUH				IAML		08 31 17.4	
	comp=E,2µm,0.5s						
PUH				IAML		08 31 20.4	
	comp=N,2µm,0.5s						
KNHH	**Kane Nui o Ham**	**0.42**	**94**		Pg	08 31 11.2	-0.1
STCH	**Steam Cracks**	**0.46**	**93**		Pg	08 31 11.5	-0.6
STCH					Sg	08 31 19.0	+1.0
STCH	**Steam Cracks**	**0.46**	**93**	IAML		08 31 19.4	
	comp=N,2µm,0.5s						
STCH				IAML		08 31 20.1	
	comp=E,2µm,0.6s						
NPOC	**North of Pu'u**	**0.48**	**92**		Pg	08 31 12.1	-0.2
NPOC					Sg	08 31 19.2	+0.7
NPOC	**North of Pu'u**	**0.48**	**92**	IAML		08 31 19.9	
	comp=E,2µm,0.6s						
NPOC				IAML		08 31 19.9	
	comp=N,2µm,0.6s						
JCUZ	**Jacuzzi**	**0.48**	**93**		Pg	08 31 12.3	-0.2
JCUZ	**Jacuzzi**	**0.48**	**93**	IAML		08 31 20.7	
	comp=N,1µm,0.8s						
JCUZ				IAML		08 31 23.1	
	comp=E,1µm,0.6s						
JOKA	**Jonika Flow**	**0.58**	**87**		Pg	08 31 13.3	-0.9
HPAH	**Hawaii Prepara**	**0.62**	**353**		Pg	08 31 13.8	-1.3

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*IDC **09** 08:35:23.7±1.1, 35°.21N×76°.62E, h0^{km}, mb3.6/6, mbtmp3.6/9, ML2.7/3, MS3.6/1, Error ellipse: s-maj=29.5km s-min=21.2km az=63.0*

ISC 09 08:35:31.7±0.7**, 35°.62N**±0°.06×**76°.4E**±0°.1**, h35^{km}, n16, σ2^{s}60**/20**, mb3.5**/6**, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMU	**Jammu**	**3.15**	**204**	*e*P	**Pn**	**08 36 17.5**	**-1.3**
JMU				*e*S	**Sn**	**08 36 58.7**	**+3.5**
THN	**Thein Dam**	**3.23**	**190**	*e*P	**Pn**	**08 36 19.4**	**-0.5**
THN				*e*S	**Sn**	**08 36 57.1**	**+0.1**
THN				IAML		08 36 59.1	
	comp=N,224nm,0.6s						
THN				IAML		08 37 00.1	
	comp=E,284nm,0.7s						
DHRM	**DHARAMSHALA**	**3.36**	**181**	*e*P	**Pn**	**08 36 21.0**	**-0.9**
DHRM				*e*S	**Sn**	**08 37 01.4**	**+0.7**
DHRM				IAML		08 37 08.1	
	comp=E,487nm,0.8s						
DHRM				IAML		08 37 08.9	
	comp=N,265nm,0.5s						
BHK	**Bhakra**	**4.19**	**180**	*e*P	**Pn**	**08 36 32.7**	**-0.4**
BHK				*e*S	**Sn**	**08 37 25.3**	**+4.4**
BHK				IAML		08 37 27.1	
	comp=E,160nm,0.5s						
SMLA	**Simla**	**4.52**	**172**	*e*P	**Pn**	**08 36 39.7**	**+2.0**
SMLA				*e*S	**Sn**	**08 37 33.0**	**+3.9**
SMLA				IAML		08 37 37.6	
	comp=E,172nm,0.6s						
SMLA				IAML		08 37 39.7	
	comp=N,195nm,0.6s						
MKAR	**Makanchi Array**	**12.01**	**20**	Pn	**Pn**	**08 38 21.2**	**+0.8**
	baz=205,slow=14,SNR=2.8						
MKAR				Sn	**Sn**	**08 40 36.5**	**+3.4**
	baz=190,slow=20,SNR=4.0 comp=N,0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**15.08**	**5**	Pn	**P**	**08 39 04.9**	**-1.9**
	baz=197,slow=10,SNR=5.4						
BVAR	**Borovoye Array**	**17.92**	**348**	P	**P**	**08 39 41.0**	**+2.6**
	baz=160,slow=9.1,SNR=9.9 comp=N,2.7nm,0.8s						
ZALV	**Zalesovo Beam**	**19.25**	**15**	P	**P**	**08 39 52.7**	**-0.2**
	comp=N,0.1nm,0.3s,baz=218,slow=16,SNR=2.0 comp=N,0.4nm,0.4s						
SONM	**Songino Array**	**25.33**	**52**	P	**P**	**08 40 53.3**	**-2.0**
	comp=N,0.2nm,0.3s,baz=254,slow=7.7,SNR=3.1 comp=N,0.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**26.27**	**125**	P	**P**	**08 40 58.5**	**-5.4**
	comp=N,2.9nm,0.5s,baz=310,slow=11,SNR=17 comp=N,2.9nm,0.5s						
FINES	**FINESS Array B**	**40.68**	**325**	P	**P**	**08 43 09.0**	**+0.7**
	comp=N,2.1nm,1.0s,baz=106,slow=13,SNR=3.7 comp=N,2.1nm,1.0s						
HFS	**Hagfors**	**46.45**	**322**	LR	LR	09 04 18.3	
	comp=N,71nm,19.3s,baz=103,slow=37						
TORD	**Torodi Ar. Bea**	**70.10**	**272**	P	**P**	**08 46 39.0**	**-1.8**
	comp=N,0.4nm,0.6s,baz=56,slow=5.0,SNR=3.1 comp=N,0.4nm,0.6s						
WRA	**Warramunga Arr**	**77.86**	**125**	P	P	08 47 19.7	-6.2
	comp=N,0.2nm,0.7s,baz=320,slow=5.9,SNR=2.0 comp=N,0.2nm,0.7s						
YKA	**Yellowknife Ar**	**81.83**	**5**	P	**P**	**08 47 47.3**	**+0.5**
	comp=N,0.1nm,0.5s,baz=350,slow=5.3,SNR=2.7 comp=N,0.1nm,0.5s						

NDI 09 08:39:54.8±2.3**, 32°.69N**×**76°.73E, h5^{km}, ML3.3, Kashmir-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHRM	**DHARAMSHALA**	**0.57**	**219**	*e*P	Pg	08 40 04.6	-1.2
DHRM				*e*S	Sg	08 40 12.2	-1.0
DHRM				IAML		08 40 15.1	
	comp=E,2µm,0.4s						
DHRM				IAML		08 40 15.6	
	comp=N,1µm,0.3s						
THN	**Thein Dam**	**0.89**	**253**	*e*P	Pg	08 40 11.8	-0.1
THN				*e*S	Sg	08 40 23.7	+0.2
THN				*e*S	Sb	08 40 24.1	-0.8
THN				IAML		08 40 27.9	
	comp=E,935nm,0.9s						
THN				IAML		08 40 29.1	
	comp=N,508nm,0.6s						
BHK	**Bhakra**	**1.30**	**192**	*e*P	Pb	08 40 20.3	+0.6
BHK				*e*S	Sn	08 40 40.6	+3.3
BHK				IAML		08 40 41.7	
	comp=E,2µm,0.3s						
JMU	**Jammu**	**1.54**	**271**	*e*P	Pb	08 40 23.4	-0.4
JMU				*e*S	Sg	08 40 47.0	+2.7
SMLA	**Simla**	**1.60**	**166**	*e*P	Pn	08 40 24.1	+0.3
SMLA				*e*S	Sg	08 40 46.4	+0.1
SMLA				*e*S	Sb	08 40 46.6	+1.3
SMLA				IAML		08 40 48.9	
	comp=N,324nm,0.4s						
SMLA				IAML		08 40 50.9	
	comp=E,327nm,0.4s						

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*NNC **09** 08:53:47.9±1.7, 46°.96N×89°.76E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=15.9km s-min=12.1km az=49.0*

*ASRS **09** 08:53:52.9±0.8, 47°N±4°×8°9E±°, h9^{km}, MLh3.1/5, Error ellipse: s-maj=15.9km s-min=7.2km az=76.6, confirmed*

ISC 09 08:53:51.1±2.4**, 46°.86N**±0°.08×**89°.6E**±0°.1**, h10^{km}, n13, σ1^{s}67**/29**, 5C-7D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGZ	**Jazzator, Alta**	**3.17**	**334**	Pn	**Pn**	**08 54 39.9**	**-1.3**
DGZ				Sg	**Sg**	**08 55 32.4**	**-0.5**
CUR	**Chagan-Uzun**	**3.34**	**347**	Pg	**Pg**	**08 54 53.4**	**-1.6**
CUR				Sg	**Sg**	**08 55 38.8**	**+0.6**
CHBI	**Chibit, Altay**	**3.71**	**339**	Pn	**Pn**	**08 54 46.8**	**-1.7**
CHBI				Pg	**Pg**	**08 55 00.8**	**-1.3**
CHBI				Sg	**Sg**	**08 55 51.5**	**+1.3**
ULGR	**Ulagan, Altay**	**3.91**	**345**	Pn	**Pn**	**08 54 50.2**	**-1.1**
ULGR				Pg	**Pg**	**08 55 06.6**	**+0.7**
ULGR				S	**Sn**	**08 55 35.6**	**-1.6**
ULGR				Sg	**Sg**	**08 55 57.6**	**+1.1**
MK31	**Makanchi Array**	**4.98**	**272**	⇓Pn	**Pn**	**08 55 06.1**	**+0.1**
	0.4nm,0.4s,baz=188,slow=40,SNR=9.0						
MK31				⇓Pg	**Pb**	**08 55 21.5**	**+3.1**
	0.5nm,0.3s,baz=82,slow=17,SNR=3.6						
MK31				⇓Lg	Lg	08 56 30.9	
	8.7nm,0.7s,baz=86,slow=31,SNR=7.4						
MKAR	**Makanchi Array**	**4.98**	**272**	Pn	**Pn**	**08 55 06.4**	**+0.5**
MKAR				Pg	**Pg**	**08 55 23.6**	**-2.9**
MKAR				Sg	**Sg**	**08 56 30.0**	**-1.0**
UKR	**Ust'-Kan**	**5.15**	**324**	Pn	**Pn**	**08 55 10.8**	**+2.5**
UKR				Pg	**Pg**	**08 55 26.1**	**-3.6**
UKR				Sg	**Sg**	**08 56 36.0**	**-0.4**
ARTR	**Artybash**	**5.16**	**344**	Pg	**Pg**	**08 55 28.7**	**-1.1**
ARTR				Sg	**Sg**	**08 56 38.3**	**+1.7**
MAKZ	**Makanchi**	**5.20**	**272**	⇑Pn	**Pn**	**08 55 09.1**	**+0.3**
	0.5nm,0.5s						
MAKZ				⇓Pg	**Pb**	**08 55 23.7**	**+1.6**
	1.1nm,0.5s						
MAKZ				⇓Lg	Lg	08 56 38.6	
	3.4nm,0.4s						
TASR	**Tashtagol**	**6.00**	**350**	Sg	**Sg**	**08 57 04.2**	**+0.6**
LUZB	**Luzhba, Kemero**	**6.82**	**357**	Sg	**Sg**	**08 57 28.3**	**-1.5**
KURK	**Kurchatov**	**8.18**	**302**	⇓Pn	**Pn**	**08 55 48.1**	**-1.7**
	2.1nm,1.0s						
KURK				⇑Sn	**Sn**	**08 57 23.0**	**+0.9**
	1.8nm,0.6s						
KURK				⇑Lg	Lg	08 58 10.7	
	4.6nm,0.6s						
KURBB	**Kurchatov Arra**	**8.20**	**301**	⇑Pn	**Pn**	**08 55 49.8**	**-0.2**
	2.4nm,0.8s						
KURBB				⇑Sn	**Sn**	**08 57 24.6**	**+2.0**
	2.5nm,0.5s						
KURBB				⇓Lg	Lg	08 58 13.1	
	10nm,0.7s						

DJA 09 08:56:02.8±1.1**, 5°S**±7°×**9°4E**±°**, h13^{km}**±10^{km}**, M5.1**/11**, mb4.9**/11**, mB5.8**/6**, MLv5.2**/6**, Mw(mB)5.3**/6**, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBSI	**Pulau Batu**	**6.33**	**44**	P	Pn	08 57 36.1	+0.2
	1µm,0.5s,27µm7.4nm						
PPSI	**Pulau Pagai**	**6.39**	**73**	P	Pn	08 57 36.7	0.0
	225nm,0.8s,3µm1.0nm						
GSI	**Gunungsitoli**	**6.97**	**32**	P	Pn	08 57 44.2	-0.5
	49nm,0.6s,5µm0.2nm						
SNSI	**Sinabang, Aceh**	**7.42**	**19**	P	Pn	08 57 50.7	-0.2
	20nm,0.7s,0.2nm						
PDSI	**Padang**	**7.54**	**61**	P	Pn	08 57 52.2	-0.4
	205nm,0.6s,5µm0.8nm						
SDSI	**Sungai Dareh**	**8.38**	**64**	P	Pn	08 58 04.2	+0.1
	105nm,0.9s,11µm						
MASI	**Maura Aman, Be**	**8.46**	**80**	P	Pn	08 58 05.8	+0.5
	20nm,0.6s						
KCSI	**Kotacane, Aceh**	**9.00**	**26**	P	Pn	08 58 13.1	+0.6
	14nm,0.7s						
MDSI	**Maura Dua**	**10.26**	**90**	P	Pn	08 58 29.6	-0.2

IDC 09 09:03:07.9±644.0**, 53°.34N**×**1°.22E, h0^{km}, Error ellipse: s-maj=350.4km s-min=177.3km az=105.0, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**9.05**	**115**	I	I	09 56 00.0	
	baz=305,slow=323,SNR=0.6						
I43RU	**DUBNA INFRASON**	**20.76**	**66**	I	I	11 11 00.0	
	baz=277,slow=318,SNR=1.5						
I31KZ	**AKTYUBINSK INF**	**34.41**	**71**	I	I	12 35 40.0	
	0.1nm,1.8s,baz=299,slow=378,SNR=3.9						

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*NNC **09** 09:06:38.8±2.1, 54°.40N×86°.88E, h0^{km}, mb3.2, mpv3.0, Error ellipse: s-maj=19.9km s-min=12.7km az=1.0, Suspected Mining explosion.*

*IDC **09** 09:06:40.9±2.5, 54°.30N×86°.84E, h0^{km}, mbtmp3.4/3, ML3.0/3, Error ellipse: s-maj=21.8km s-min=14.0km az=64.0*

ISC 09 09:06:41.3±4.0**, 54°.4N**±0°.2×**86°.6E**±0°.2**, h0^{km}, n10, σ0^{s}93**/16**, 7C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.14**	**248**	I	I	09 13 38.5	
	baz=74,slow=334,SNR=22						
ZAA0	**Zalesovo Array**	**1.14**	**248**	⇓P	**Pg**	**09 07 02.8**	**-0.3**
	1.4nm,0.5s						
ZAA0				⇑S	**Sn**	**09 07 21.4**	**+0.7**
	5.6nm,0.8s						
ZALV	**Zalesovo Beam**	**1.14**	**248**	Pg	**Pb**	**09 07 03.1**	**-0.7**
	5.7nm,0.3s,baz=72,slow=17,SNR=66						
ZALV				Lg	Lg	09 07 21.7	
	4.9nm,0.3s,baz=68,slow=31,SNR=6.0						
KURK	**Kurchatov**	**6.10**	**236**	⇑Pn	**Pn**	**09 08 12.7**	**+0.1**
	1.8nm,0.8s						
KURK				⇑Sn	**Sn**	**09 09 23.4**	**+0.4**
	1.1nm,0.5s						
KURK				⇑Lg	Lg	09 09 57.3	
	6.0nm,1.3s						
KURBB	**Kurchatov Arra**	**6.20**	**236**	Pn	**Pn**	**09 08 15.2**	**+1.1**
	0.3nm,0.3s,baz=52,slow=14,SNR=26						
KURBB				Sn	**Sn**	**09 09 25.2**	**-0.4**
	baz=58,slow=26,SNR=1.4						
KURBB				Lg	Lg	09 09 59.7	
	0.1nm,0.3s,baz=63,slow=30,SNR=4.4 2.3nm,0.4s						
KURBB	**Kurchatov Arra**	**6.20**	**236**	⇑Pn	**Pn**	**09 08 14.6**	**+0.6**
	2.3nm,0.3s						
KURBB				⇓Sn	**Sn**	**09 09 25.1**	**-0.4**
	5.1nm,0.7s						
KURBB				⇑Lg	Lg	09 09 59.6	
	6.2nm,0.8s						
MK31	**Makanchi Array**	**8.08**	**202**	Pn	**Pn**	**09 08 38.4**	**-1.5**
	0.1nm,0.2s,baz=26,slow=13,SNR=16						
MK31				⇑Sn	**Sn**	**09 10 13.6**	**+1.7**
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**8.08**	**202**	Pn	**Pn**	**09 08 39.9**	**0.0**
	0.4nm,0.3s,baz=26,slow=14,SNR=15						
MKAR				Sn	**Sn**	**09 10 12.0**	**+0.2**
	0.2nm,0.3s,baz=30,slow=28,SNR=4.1						
MKAR				Lg	Lg	09 10 55.8	
	0.1nm,0.3s,baz=24,slow=28,SNR=5.7 0.4nm,0.3s						
MAKZ	**Makanchi**	**8.13**	**203**	⇓Pn	**Pn**	**09 08 39.7**	**-0.9**
	0.7nm,0.5s						
MAKZ				⇓Sn	**Sn**	**09 10 14.2**	**+1.0**
	2.0nm,1.0s						
BVAR	**Borovoye Array**	**9.71**	**269**	Pn	**Pn**	**09 09 03.3**	**+1.1**
	0.1nm,0.3s,baz=68,slow=16,SNR=4.7 0.8nm,0.4s						

WEL 09 09:26:59.5±0.9**, 42°S**±5°×**17°4E**±°**, h4^{km}**±5^{km}**, M2.0**/1**, ML2.2**/4**, MLv2.0**/1**, Error ellipse: s-maj=0.0km s-min=0.0km az=141.8, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.03**	**194**	P	Pg	09 27 00.1	-0.4
KHZ				S	Sg	09 27 01.0	-0.1
GVZ	**Greta Valley S**	**0.69**	**213**	P	Pg	09 27 13.3	+0.5
GVZ				S	Sb	09 27 24.1	+0.1
BSWZ	**Blackbirch Sta**	**0.72**	**20**	P	Pg	09 27 13.6	+0.4
THZ	**Tophouse**	**0.79**	**322**	P	Pg	09 27 14.7	+0.1
TUWZ	**Tuamarina**	**1.00**	**17**	P	Pb	09 27 19.2	-0.2
LTZ	**Lake Taylor**	**1.02**	**247**	P	Pg	09 27 18.5	-0.6
MRNZ	**Matariki Terra**	**1.15**	**329**	P	Pb	09 27 22.1	+0.2
TKNZ	**Takaka Hill**	**1.42**	**342**	P	Pb	09 27 26.5	-0.1
DSZ	**Denniston Nort**	**1.45**	**296**	P	Pn	09 27 26.6	+0.1
OXZ	**Oxford**	**1.45**	**229**	P	Pn	09 27 24.0	-2.6

MQZ	**McQueen's Vall**	**1.47**	**206**	P	Pn	09 27 23.7	-3.1
QRZ	**Quartz Range**	**1.74**	**334**	P	Pn	09 27 31.2	+0.7

ROM 09 09:42:23.1±0.1**,43°.069N**±0°.004×**13°.068E**±0°.006**, h9^{km},ML1.3**/4**,1C-4D,Error ellipse: s-maj=0.5km s-min=0.4km az=110.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1220	**Camerino, Fraz**	**0.04**	**20**	P	Pg	09 42 25.5	+0.4
T1220				S	Sg	09 42 26.8	+0.4
T1220				AML	AML		
	comp=E,2982µm,0.2s						
T1220				AML	AML		
	comp=N,1631µm,0.1s						
T1220				AML	AML		
	comp=N,1616µm,0.1s						
T1219	**Muccia, Frazio**	**0.05**	**254**	P	Pg	09 42 25.4	+0.4
T1219				S	Sg	09 42 26.6	+0.1
T1219				AML	AML		
	comp=E,530µm,0.1s						
T1219				AML	AML		
	comp=E,542µm,0.1s						
T1219				AML	AML		
	comp=N,882µm,0.1s						
T1219				AML	AML		
	comp=N,899µm,0.1s						
CSP1	**Cessapalombo**	**0.10**	**77**	P	Pg	09 42 26.1	+0.3
CSP1				S	Sg	09 42 28.2	+0.5
CSP1				AML	AML		
	comp=E,345µm,0.7s						
CSP1				AML	AML		
	comp=N,426µm,0.2s						
CSP1				AML	AML		
	comp=E,335µm,0.2s						
CSP1				AML	AML		
	comp=N,425µm,0.2s						
T1256	**Bolognola (MC)**	**0.13**	**118**	⇓P	Pg	09 42 26.5	+0.3
T1256				S	Sg	09 42 28.7	+0.3
T1256				AML	AML		
	comp=N,104µm,0.3s						
T1256				AML	AML		
	comp=E,123µm,0.3s						
MC2	**Monte Cornacci**	**0.18**	**150**	P	Pg	09 42 27.4	+0.4
MC2				S	Sg	09 42 31.1	+1.4
T1216	**Preci, Frazion**	**0.18**	**191**	P	Pg	09 42 27.6	+0.6
T1216				S	Sg	09 42 31.0	+1.4
T1216				AML	AML		
	comp=E,104µm,0.3s						
T1216				AML	AML		
	comp=N,88µm,0.3s						
T1216				AML	AML		
	comp=N,88µm,0.3s						
T1216				AML	AML		
	comp=E,75µm,0.2s						
EL6	**Elcito**	**0.26**	**5**	⇓P	Pb	09 42 29.6	-0.5
T1215	**Vallo di Nera,**	**0.30**	**209**	P	Pg	09 42 30.0	+0.8
T1215				S	Sb	09 42 34.9	-1.0
T1215				AML	AML		
	comp=E,32µm,1.6s						
T1215				AML	AML		
	comp=N,31µm,1.6s						
T1215				AML	AML		
	comp=N,60µm,0.9s						
T1215				AML	AML		
	comp=N,12µm,0.2s						
T1218	**Civita (PG)**	**0.40**	**175**	P	Pg	09 42 27.0	-4.0
T1218				S	Sb	09 42 42.8	+4.1
TERO	**Teramo**	**0.59**	**138**	S	Sg	09 42 32.5	-10
FIAM	**Fiamignano**	**0.80**	**177**	P	Pg	09 42 29.5	-9.1
TOLF	**Tolfa**	**1.28**	**219**	S	Sn	09 43 15.1	+11
OSSC	**Osservatorio P**	**1.41**	**289**	S	Sg	09 43 16.1	+7.8
CASP	**Castiglione de**	**1.64**	**261**	⇑P	Pn	09 42 52.4	+0.2
NDIM	**Novi di Modena**	**2.40**	**320**	S	Sg	09 43 45.8	+5.6
VOBA	**Vobarno**	**3.16**	**325**	P	Pn	09 43 12.5	-0.6
VOBA				S	Sn	09 43 49.5	-1.4
LEOD	**Capriano del C**	**3.19**	**319**	⇓P	Pg	09 43 22.4	-1.9
ZAG	**Zagreb**	**3.46**	**36**	S	Sn	09 43 33.3	-25
EUCT	**Pavia**	**3.54**	**308**	P	Pb	09 43 28.2	+2.3
MUGIO	**Muggio**	**4.05**	**316**	P	Pn	09 43 25.6	+0.2
TDS	**Terranova Siba**	**4.20**	**143**	P	Pn	09 43 13.6	-14
LLI	**Lipari**	**4.83**	**162**	S	Sn	09 43 59.9	-32
DIX	**Grande Dixence**	**5.04**	**309**	⇓P	Pg	09 44 00.4	+0.8
PETRA	**Petralia Sopra**	**5.29**	**171**	P	Pn	09 43 36.3	-6.2

ROM 09 09:43:21.8±0.1**,42°.801N**±0°.005×**13°.183E**±0°.007**, h12^{km}**±1^{km}**,ML0.5**/4**,1C-4D,Error ellipse: s-maj=0.6km s-min=0.3km az=304.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.05**	**156**	⇓P	Pg	09 43 24.6	+0.3
T1214				S	Sg	09 43 26.2	+0.2
T1214				AML	AML		
	comp=N,28µm,0.1s						
T1214				AML	AML		
	comp=E,52µm,0.4s						
T1214				AML	AML		
	comp=E,37µm,0.3s						
MC2	**Monte Cornacci**	**0.11**	**3**	⇓P	Pg	09 43 25.3	+0.3
MC2				S	Sg	09 43 27.8	+0.4
T1212	**Cascia, Frazio**	**0.11**	**244**	⇑P	Pg	09 43 25.4	+0.5
T1212				S	Sg	09 43 27.7	+0.6
T1212				AML	AML		
	comp=N,102µm,0.7s						
T1212				AML	AML		
	comp=N,25µm,0.1s						
T1212				AML	AML		
	comp=E,27µm,0.2s						
MMO1	**Montemonaco**	**0.14**	**47**	⇓P	Pg	09 43 25.8	+0.5
MMO1				S	Sg	09 43 28.4	+0.5
T1216	**Preci, Frazion**	**0.15**	**307**	⇓P	Pg	09 43 25.9	+0.5
T1216				S	Sg	09 43 28.4	+0.5
T1216				AML	AML		
	comp=N,44µm,0.1s						
T1216				AML	AML		
	comp=E,37µm,0.1s						
T1241	**Roccafluvione,**	**0.19**	**73**	P	Pg	09 43 26.5	+0.5
T1217	**Poggiodomo (PG**	**0.21**	**244**	P	Pg	09 43 26.3	0.0
T1217				S	Sg	09 43 30.5	+1.1
T1217				AML	AML		
	comp=E,12µm,0.1s						
T1215	**Vallo di Nera,**	**0.23**	**270**	P	Pg	09 43 27.2	+0.4
FAGN	**Fagnano**	**0.61**	**151**	S	Sb	09 43 42.8	-0.3

ROM 09 09:43:51.2±0.2**,42°.80N**±0°.01×**13°.23E**±0°.02**,h10^{km}**±1^{km}**, ML0.7**/3**,1C-1D,Error ellipse: s-maj=1.7km s-min=0.4km az=134.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.04**	**200**	⇓P	Pg	09 43 53.8	+0.4
T1214				S	Sg	09 43 55.4	+0.4
T1214				AML	AML		
	comp=E,92µm,1.3s						
T1214				AML	AML		
	comp=E,41µm,0.2s						
T1214				AML	AML		
	comp=N,28µm,0.4s						
MC2	**Monte Cornacci**	**0.12**	**347**	P	Pg	09 43 54.9	+0.5
MMO1	**Montemonaco**	**0.13**	**36**	⇑P	Pg	09 43 54.7	+0.3
MMO1				S	Sg	09 43 57.0	+0.5
T1212	**Cascia, Frazio**	**0.14**	**252**	P	Pg	09 43 55.1	+0.6
T1212				S	Sg	09 43 57.6	+0.7
T1212				AML	AML		
	comp=N,88µm,1.2s						
T1218	**Civita (PG)**	**0.15**	**213**	P	Pg	09 43 54.8	+0.1
GUMA	**Gualdo di Mace**	**0.28**	**17**	P	Pb	09 43 57.7	-0.7

*IDC **09** 09:45:30.0±1.4,7°.81S×122°.48E,h0^{km},mb3.8/4, mbtmp3.7/7,ML3.4/3,Error ellipse: s-maj=115.7km s-min=23.2km az=54.0*

*DJA **09** 09:45:32.1±0.3,8°S±4°×12°2E±°,h10^{km},M4.0/7,mb4.4/1, MLv3.7/7*

ISC 09 09:45:34.9±0.7**,8°.20S**±0°.06×**121°.93E**±0°.08**,h35^{km},n22, σ1ˢ53**/24**,mb3.9**/4**,Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.53**	**145**	P	**Pn**	**09 45 44.1**	**-1.9**
MMRI	**Maumere**	**0.53**	**145**	P	**Pn**	**09 45 44.1**	**-1.9**
MMRI				S	**Sn**	**09 45 51.9**	**-1.8**
BASI	**Baing, Sumba**	**2.41**	**214**	P	**Pn**	**09 46 12.2**	**+0.3**
BSSI	**Bau Bau, Buton**	**2.49**	**325**	P	**Pn**	**09 46 12.0**	**-1.0**
SOEI	**Soe**	**2.78**	**124**	P	**Pn**	**09 46 19.8**	**+2.8**
SOEI	**Soe**	**2.78**	**124**	P	**Pn**	**09 46 18.6**	**+1.6**
BKSI	**Bulukumba**	**3.38**	**328**	P	**Pn**	**09 46 24.0**	**-1.2**
KAPI	**Kappang**	**3.83**	**325**	Pn	**Pn**	**09 46 31.2**	**-0.3**
	3.2nm,0.3s,baz=90,slow=21,SNR=5.2						
KAPI				Sn	**Sn**	**09 47 15.1**	**-0.2**
	3.2nm,0.3s,baz=222,slow=20,SNR=5.8						
	8.2nm,0.3s						
PLAI	**Plampang**	**4.16**	**261**	P	**Pn**	**09 46 35.8**	**-0.1**
PLAI	**Plampang**	**4.16**	**261**	P	**Pn**	**09 46 35.6**	**-0.3**
KNRA	**Kununurra**	**9.99**	**139**	P	**Pn**	**09 47 56.1**	**0.0**
MTN	**Manton Dam**	**10.15**	**118**	P	**Pn**	**09 48 00.6**	**+2.3**
WRA	**Warramunga Arr**	**16.75**	**135**	Pn	**Pn**	**09 49 23.3**	**-3.7**
	0.1nm,0.3s,baz=306,slow=14,SNR=3.9						
WRA				Sn	Sn	09 52 22.8	-9.4
	0.1nm,0.3s,baz=299,slow=23,SNR=4.0						
	0.4nm,0.6s						
WRKA	**Warakurna**	**17.81**	**161**	P	**P**	**09 49 41.3**	**+0.6**
ASAR	**Alice Springs**	**19.19**	**145**	P	**P**	**09 49 56.6**	**+0.8**
	0.2nm,0.3s,baz=320,slow=11,SNR=15						
	0.9nm,0.7s						
AS01	**Alice Springs**	**19.21**	**145**	P	**Pn**	**09 49 58.6**	**+1.4**
QIS	**Mount Isa**	**21.04**	**128**	P	**P**	**09 50 17.0**	**+1.0**
MULG	**Mulgathing**	**24.73**	**154**	P	**P**	**09 50 53.9**	**+0.8**
CMAR	**Chiang Mai Arr**	**34.88**	**320**	P	**P**	**09 52 24.3**	**+1.1**
	0.7nm,0.3s,baz=149,slow=7.2,SNR=2.4						
	0.7nm,0.3s						
SONM	**Songino Array**	**57.46**	**348**	P	**P**	**09 55 19.7**	**-0.7**
	0.2nm,0.4s,baz=169,slow=8.8,SNR=3.7						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**65.11**	**331**	P	**P**	**09 56 11.3**	**-0.8**
	1.1nm,0.6s,baz=138,slow=7.6,SNR=12						
	1.1nm,0.6s						
ZALV	**Zalesovo Beam**	**69.37**	**338**	P	**P**	**09 56 38.7**	**-0.2**
	0.5nm,0.5s,baz=149,slow=3.4,SNR=1.8						
	0.5nm,0.5s						

*IDC **09** 09:49:56.7±2.5,54°.26N×86°.15E,h0^{km},mbtmp3.3/2, ML3.0/2,Error ellipse: s-maj=19.7km s-min=11.8km az=52.0*

NNC 09 09:49:53.2±1.0**,54°.39N**×**86°.26E,h0^{km},mb3.3,mpv2.5, 3C-2D,Error ellipse: s-maj=13.5km s-min=6.2km az=161.0,Suspected Mining explosion.,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.96**	**243**	I	I	09 54 40.7	
	baz=68,slow=334,SNR=6.6						
ZAA0	**Zalesovo Array**	**0.96**	**243**	⇑P	Pg	09 50 11.6	+0.1
	0.3nm,0.3s						
ZAA0				⇓S	Sb	09 50 24.9	-0.9
	1.9nm,0.5s						
ZALV	**Zalesovo Beam**	**0.96**	**243**	Pg	Pg	09 50 12.1	+0.5
	1.6nm,0.3s,baz=67,slow=16,SNR=11						
ZALV				Lg	Lg	09 50 24.8	
	5.3nm,0.3s,baz=66,slow=28,SNR=11						
KURBB	**Kurchatov Arra**	**6.04**	**234**	Pn	Pn	09 51 27.4	+3.6
	0.2nm,0.3s,baz=51,slow=13,SNR=5.6						
	1.3nm,0.4s						
KUR17	**Kurchatov Arra**	**6.06**	**235**	⇑Pn	Pn	09 51 24.2	+0.1
	0.4nm,0.5s						
KUR17				Lg	Lg	09 53 05.1	
MK31	**Makanchi Array**	**8.01**	**200**	Pn	Pn	09 51 50.5	-0.3
	0.4nm,0.3s,baz=26,slow=13,SNR=23						
MK31				⇑Sn	Sn	09 53 23.6	+1.5
	0.2nm,0.5s						
MK31				⇓Lg	Lg	09 54 08.2	
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**8.01**	**200**	Pn	Pn	09 51 52.7	+1.8
	0.4nm,0.3s,baz=18,slow=12,SNR=16						
	1.0nm,0.5s						

WEL 09 09:51:23.6±0.7**,42°S**±3°×**17°4E**±°**,h5^{km},M1.8**/1**,ML2.0**/4**, MLv1.8**/1**,Error ellipse: s-maj=0.0km s-min=0.0km az=94.2,confirmed,South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.30**	**212**	P	Pg	09 51 29.5	+0.1
KHZ				S	Sg	09 51 32.7	-0.7
BSWZ	**Blackbirch Sta**	**0.46**	**12**	P	Pg	09 51 32.7	+0.3
BSWZ				S	Sg	09 51 38.2	-0.1
CMWZ	**Cape Campbell**	**0.54**	**40**	P	Pg	09 51 31.9	-2.0
TUWZ	**Tuamarina**	**0.75**	**11**	P	Pg	09 51 34.0	-4.0
THZ	**Tophouse**	**0.75**	**302**	P	Pb	09 51 39.1	-0.1
THZ				S	Sb	09 51 49.1	-0.6
GVZ	**Greta Valley S**	**0.96**	**213**	P	Pg	09 51 41.3	-0.8
GVZ				S	Sg	09 51 53.7	-0.9
TCW	**Tory Channel**	**1.03**	**23**	P	Pg	09 51 35.8	-7.6
MRNZ	**Matariki Terra**	**1.07**	**315**	P	Pn	09 51 45.4	+0.2
LTZ	**Lake Taylor**	**1.26**	**240**	P	Pg	09 51 45.6	-2.1
DSZ	**Denniston Nort**	**1.51**	**285**	P	Pn	09 51 51.3	-0.1
MQZ	**McQueen's Vall**	**1.74**	**207**	P	Pn	09 51 50.5	-3.9

ROM 09 09:57:28.0±0.1**,42°.786N**±0°.002×**13°.089E**±0°.003**, h9^{km},ML0.6**/5**,1C-4D,Error ellipse: s-maj=0.2km s-min=0.1km az=59.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.05**	**224**	⇑P	Pg	09 57 30.2	+0.3
T1212				S	Sg	09 57 31.7	+0.4
T1212				AML	AML		
	comp=E,95µm,0.1s						
T1212				AML	AML		
	comp=E,109µm,0.1s						
T1212				AML	AML		
	comp=N,17µm,44.4s						
T1214	**Arquata del Tr**	**0.09**	**107**	P	Pg	09 57 30.7	+0.2
T1214				S	Sg	09 57 32.6	+0.3
T1214				AML	AML		
	comp=E,44µm,0.2s						
T1214				AML	AML		
	comp=N,44µm,0.1s						
T1214				AML	AML		
	comp=N,100µm,0.4s						
T1216	**Preci, Frazion**	**0.12**	**334**	⇓P	Pg	09 57 31.2	+0.4
T1216				S	Sg	09 57 33.4	+0.6
T1216				AML	AML		
	comp=E,30µm,0.1s						
T1216				AML	AML		
	comp=N,52µm,0.2s						
T1218	**Civita (PG)**	**0.12**	**171**	⇓P	Pg	09 57 31.1	+0.3
T1218				S	Sg	09 57 33.6	+0.8
T1218				AML	AML		
	comp=N,63µm,0.4s						
T1218				AML	AML		
	comp=N,54µm,0.1s						
T1218				AML	AML		
	comp=E,37µm,0.1s						
MC2	**Monte Cornacci**	**0.15**	**30**	⇓P	Pg	09 57 31.7	+0.4
MC2				S	Sg	09 57 34.6	+0.8
T1215	**Vallo di Nera,**	**0.16**	**276**	⇓P	Pg	09 57 32.0	+0.5
T1215				S	Sg	09 57 34.9	+1.0
T1215				AML	AML		
	comp=N,9µm,0.1s						
T1215				AML	AML		
	comp=E,97µm,0.9s						

ROM 09 09:57:41.4±0.0**,42°.819N**±0°.003×**13°.081E**±0°.004**, h10^{km},ML1.4**/9**,4C-3D,Error ellipse: s-maj=0.3km s-min=0.3km az=148.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.07**	**202**	P	Pg	09 57 44.2	+0.4
T1212				S	Sg	09 57 45.9	+0.4
T1212				AML	AML		
	comp=E,1058µm,0.2s						
T1212				AML	AML		
	comp=N,830µm,0.2s						
T1212				AML	AML		
	comp=E,1015µm,0.2s						
T1212				AML	AML		
	comp=N,890µm,0.2s						
T1212				AML	AML		
	comp=N,832µm,0.2s						
T1212				AML	AML		
	comp=N,890µm,0.2s						
T1212				AML	AML		
	comp=E,1020µm,0.2s						
T1216	**Preci, Frazion**	**0.09**	**328**	⇓P	Pg	09 57 44.4	+0.5
T1216				S	Sg	09 57 46.3	+0.6
T1216				AML	AML		
	comp=E,664µm,0.2s						
T1216				AML	AML		
	comp=N,576µm,0.2s						
T1216				AML	AML		
	comp=N,577µm,0.2s						
T1214	**Arquata del Tr**	**0.11**	**122**	⇑P	Pg	09 57 44.8	+0.4
T1214				S	Sg	09 57 46.9	+0.4
T1214				AML	AML		
	comp=E,425µm,0.5s						
T1214				AML	AML		
	comp=N,540µm,0.3s						
T1214				AML	AML		
	comp=N,530µm,0.3s						
T1214				AML	AML		
	comp=E,425µm,0.6s						
T1214				AML	AML		
	comp=N,540µm,0.3s						
T1214				AML	AML		
	comp=N,530µm,0.3s						
T1214				AML	AML		
	comp=E,410µm,0.6s						
T1214				AML	AML		
	comp=N,530µm,1.7s						
T1214				AML	AML		
	comp=N,540µm,1.7s						
T1214				AML	AML		
	comp=E,425µm,1.4s						
MC2	**Monte Cornacci**	**0.12**	**41**	P	Pg	09 57 45.1	+0.5
MC2				S	Sg	09 57 47.5	+0.7
T1218	**Civita (PG)**	**0.15**	**170**	P	Pg	09 57 45.4	+0.5
T1218				S	Sg	09 57 48.0	+0.7
T1218				AML	AML		
	comp=E,166µm,1.4s						
T1218				AML	AML		
	comp=E,128µm,0.7s						
T1218				AML	AML		
	comp=N,130µm,0.4s						
T1218				AML	AML		
	comp=E,166µm,1.4s						
T1218				AML	AML		
	comp=E,166µm,0.6s						
T1218				AML	AML		
	comp=E,128µm,0.7s						
T1218				AML	AML		
	comp=N,199µm,0.8s						
T1218				AML	AML		
	comp=N,130µm,0.4s						
T1217	**Poggiodomo (PG**	**0.15**	**226**	P	Pg	09 57 45.4	+0.5
T1217				S	Sg	09 57 48.2	+0.8
T1217				AML	AML		
	comp=E,114µm,0.9s						
T1217				AML	AML		
	comp=N,131µm,0.2s						
T1217				AML	AML		
	comp=E,114µm,0.9s						
T1217				AML	AML		
	comp=N,131µm,0.2s						
T1215	**Vallo di Nera,**	**0.16**	**264**	P	Pg	09 57 45.5	+0.6
T1215				S	Sg	09 57 48.2	+0.8
T1215				AML	AML		
	comp=E,114µm,0.6s						
T1215				AML	AML		
	comp=N,109µm,0.6s						
T1215				AML	AML		
	comp=E,114µm,0.6s						
T1215				AML	AML		
	comp=N,110µm,0.6s						
T1215				AML	AML		
	comp=N,110µm,1.4s						
T1215				AML	AML		
	comp=E,114µm,1.4s						
MMO1	**Montemonaco**	**0.20**	**66**	P	Pg	09 57 46.1	+0.4
MMO1				S	Sg	09 57 49.5	+0.9
T1256	**Bolognola (MC)**	**0.22**	**30**	P	Pg	09 57 46.6	+0.6
T1256				S	Sg	09 57 50.2	+1.1
T1256				AML	AML		
	comp=N,92µm,1.0s						
T1256				AML	AML		
	comp=N,92µm,1.0s						
T1256				AML	AML		
	comp=N,92µm,1.0s						
T1256				AML	AML		
	comp=E,119µm,0.4s						
T1219	**Muccia, Frazio**	**0.24**	**347**	P	Pb	09 57 47.4	-0.5
T1219				S	Sg	09 57 51.0	+1.1
T1241	**Roccafluvione,**	**0.26**	**82**	P	Pg	09 57 47.1	+0.4
T1241				S	Sb	09 57 51.6	-1.1
T1241				AML	AML		
	comp=N,65µm,0.9s						
T1241				AML	AML		
	comp=E,93µm,0.4s						
CSP1	**Cessapalombo**	**0.29**	**18**	P	Pg	09 57 47.9	+0.6
CSP1				AML	AML		
	comp=E,89µm,0.7s						
CSP1				AML	AML		
	comp=N,82µm,0.4s						
CSP1				AML	AML		
	comp=E,88µm,0.7s						
CSP1				AML	AML		
	comp=E,88µm,1.3s						
CSP1				AML	AML		
	comp=N,82µm,0.4s						
T1220	**Camerino, Fraz**	**0.29**	**1**	⇑P	Pg	09 57 47.9	+0.6
T1220				AML	AML		
	comp=E,33300µm,1.6s						
T1220				AML	AML		
	comp=E,155µm,0.3s						
T1220				AML	AML		
	comp=N,185µm,1.5s						
T1220				AML	AML		
	comp=E,33350µm,1.6s						
T1220				AML	AML		
	comp=N,176µm,1.5s						
T1220				AML	AML		
	comp=E,154µm,0.3s						
T1220				AML	AML		
	comp=N,184µm,1.5s						
T1220				AML	AML		
	comp=N,184µm,0.5s						
T1220				AML	AML		
	comp=N,176µm,0.5s						
T1220				AML	AML		
	comp=E,33350µm,0.4s						
RM33	**Pellescritta (**	**0.33**	**162**	⇓P	Pg	09 57 48.3	+0.4
T1211	**Morro Reatino**	**0.33**	**210**	⇑P	Pb	09 57 48.7	-0.7
ASSB	**Assisi San Ben**	**0.38**	**306**	P	Pg	09 57 49.4	+0.4
ASSB				AML	AML		
	comp=E,40µm,1.6s						
ASSB				AML	AML		
	comp=N,38µm,1.5s						
TERO	**Teramo**	**0.43**	**117**	⇓P	Pg	09 57 50.0	+0.1
PP3	**Marolino**	**0.68**	**35**	⇑P	Pg	09 57 54.8	+0.2

ROM 09 10:03:46.2±0.1**,42°.802N**±0°.003×**12°.760E**±0°.004**, h9^{km},ML1.4**/5**,1C-3D,Error ellipse: s-maj=0.3km s-min=0.2km az=267.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1215	**Vallo di Nera,**	**0.08**	**90**	⇓P	Pg	10 03 48.6	+0.2
T1215				S	Sg	10 03 50.2	+0.2
T1215				AML	AML		
	comp=E,482µm,0.3s						
T1215				AML	AML		
	comp=E,496µm,0.3s						
T1215				AML	AML		
	comp=N,350µm,0.3s						
T1215				AML	AML		
	comp=E,496µm,0.3s						
T1215				AML	AML		
	comp=E,482µm,0.3s						
T1215				AML	AML		
	comp=N,350µm,0.3s						
T1215				AML	AML		
	comp=N,374µm,0.3s						
MOMA	**Monte Martano**	**0.14**	**271**	⇑P	Pg	10 03 49.7	+0.3
MOMA				S	Sg	10 03 52.4	+0.9
MOMA				AML	AML		
	comp=E,166µm,1.3s						

MOMA				AML	AML		
	comp=N,119µm,0.5s						
MOMA				AML	AML		
	comp=E,166µm,0.7s						
T1217	**Poggiodomo (PG**	**0.15**	**125**	P	Pg	10 03 50.2	+0.6
T1217				S	Sg	10 03 52.9	+1.0
T1217				AML	AML		
	comp=N,227µm,0.2s						
T1217				AML	AML		
	comp=N,228µm,0.2s						
T1217				AML	AML		
	comp=E,271µm,0.1s						
T1216	**Preci, Frazion**	**0.21**	**65**	⇓P	Pg	10 03 51.1	+0.6
T1216				S	Sg	10 03 55.0	+1.5
T1216				AML	AML		
	comp=E,226µm,0.1s						
T1216				AML	AML		
	comp=N,267µm,0.2s						
T1216				AML	AML		
	comp=E,226µm,0.1s						
T1216				AML	AML		
	comp=N,268µm,0.2s						
T1212	**Cascia, Frazio**	**0.21**	**103**	⇓P	Pg	10 03 51.2	+0.6
T1212				S	Sg	10 03 55.1	+1.5
ARRO	**Arrone**	**0.22**	**179**	P	Pg	10 03 51.5	+0.7
CESI	**CESI - Serrava**	**0.23**	**28**	P	Pg	10 03 51.5	+0.6
CESI				S	Sg	10 03 55.5	+1.5
CESX	**Cesi**	**0.23**	**215**	P	Pg	10 03 52.2	+1.3
ASSB	**Assisi San Ben**	**0.25**	**343**	P	Pb	10 03 52.3	-0.7
ASSB				AML	AML		
	comp=E,45µm,1.6s						
ASSB				AML	AML		
	comp=N,55µm,1.2s						
ASSB				AML	AML		
	comp=E,45µm,0.4s						
FEMA	**Monte Fema**	**0.27**	**53**	P	Pb	10 03 52.6	-0.8
FEMA				S	Sb	10 03 56.9	-1.1
T1211	**Morro Reatino**	**0.28**	**165**	P	Pb	10 03 52.9	-0.6
T1211				S	Sb	10 03 57.5	-0.8
T1218	**Civita (PG)**	**0.29**	**117**	P	Pg	10 03 52.6	+0.5
T1218				S	Sb	10 03 57.7	-1.0
T1214	**Arquata del Tr**	**0.33**	**97**	P	Pg	10 03 53.4	+0.5
T1214				S	Sb	10 03 59.2	-0.7
MC2	**Monte Cornacci**	**0.34**	**71**	P	Pg	10 03 53.4	+0.5
MC2				S	Sb	10 03 59.6	-0.4
CSP1	**Cessapalombo**	**0.44**	**48**	P	Pg	10 03 55.1	+0.4
CSP1				S	Sb	10 04 02.3	-0.6
RM33	**Pellescritta (**	**0.45**	**131**	P	Pg	10 03 55.2	+0.3
RM33				S	Sb	10 04 02.5	-0.6
EL6	**Elcito**	**0.58**	**25**	P	Pg	10 03 58.0	+0.4
EL6				S	Sb	10 04 06.5	-0.7

ROM 09 10:04:19.9±0.0, 42°.812N±0°.002×13°.126E±0°.003, h10^{km}, ML1.0/12, 6C-2D, Error ellipse: s-maj=0.2km s-min=0.2km az=299.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1214	**Arquata del Tr**	**0.08**	**130**	P	Pg	10 04 22.8	+0.3
T1214				S	Sg	10 04 24.5	+0.2
T1214				AML	AML		
	comp=E,320µm,0.8s						
T1214				AML	AML		
	comp=N,294µm,0.2s						
T1214				AML	AML		
	comp=E,209µm,0.2s						
T1214				AML	AML		
	comp=N,266µm,0.2s						
T1214				AML	AML		
	comp=E,209µm,0.2s						
T1214				AML	AML		
	comp=N,196µm,0.1s						
T1214				AML	AML		
	comp=N,170µm,0.1s						
T1214				AML	AML		
	comp=E,229µm,0.2s						
T1212	**Cascia, Frazio**	**0.09**	**225**	⇑P	Pg	10 04 22.9	+0.5
T1212				S	Sg	10 04 24.6	+0.4
T1212				AML	AML		
	comp=N,194µm,0.9s						
T1212				AML	AML		
	comp=E,216µm,0.2s						
T1212				AML	AML		
	comp=N,194µm,1.0s						
T1212				AML	AML		
	comp=E,184µm,0.1s						
T1212				AML	AML		
	comp=N,181µm,0.1s						
T1212				AML	AML		
	comp=N,191µm,0.1s						
T1212				AML	AML		
	comp=E,181µm,0.1s						
T1216	**Preci, Frazion**	**0.11**	**315**	⇑P	Pg	10 04 23.3	+0.5
T1216				S	Sg	10 04 25.4	+0.6
T1216				AML	AML		
	comp=E,158µm,1.0s						
T1216				AML	AML		
	comp=E,158µm,1.0s						
T1216				AML	AML		
	comp=N,209µm,0.2s						
T1216				AML	AML		
	comp=N,166µm,0.1s						
T1216				AML	AML		
	comp=E,122µm,0.1s						
MC2	**Monte Cornacci**	**0.11**	**25**	P	Pg	10 04 23.4	+0.5
MC2				S	Sg	10 04 25.8	+0.7
T1218	**Civita (PG)**	**0.14**	**183**	P	Pg	10 04 23.9	+0.6
T1218				S	Sg	10 04 26.4	+0.8
T1218				AML	AML		
	comp=N,81µm,0.1s						
T1218				AML	AML		
	comp=N,102µm,0.2s						
T1218				AML	AML		
	comp=E,58µm,0.1s						
MMO1	**Montemonaco**	**0.17**	**59**	⇑P	Pg	10 04 24.3	+0.5
MMO1				S	Sg	10 04 27.3	+1.0
T1217	**Poggiodomo (PG**	**0.17**	**235**	P	Pg	10 04 24.3	+0.6
T1217				S	Sg	10 04 27.4	+1.0
T1217				AML	AML		
	comp=N,35µm,0.2s						
T1217				AML	AML		
	comp=E,27µm,0.1s						
T1215	**Vallo di Nera,**	**0.19**	**267**	⇑P	Pg	10 04 24.6	+0.6
T1215				S	Sg	10 04 28.0	+1.2
T1215				AML	AML		
	comp=E,98µm,0.8s						
T1215				AML	AML		
	comp=N,30µm,0.3s						
T1215				AML	AML		
	comp=E,84µm,0.7s						
T1256	**Bolognola (MC)**	**0.21**	**21**	P	Pg	10 04 25.1	+0.7
T1256				S	Sg	10 04 28.2	+0.8
T1256				AML	AML		
	comp=E,35µm,0.3s						
T1256				AML	AML		
	comp=E,102µm,0.7s						
T1256				AML	AML		
	comp=N,40µm,0.2s						
T1256				AML	AML		
	comp=N,129µm,0.8s						
T1241	**Roccafluvione,**	**0.23**	**79**	⇑P	Pg	10 04 25.3	+0.6
T1241				S	Sg	10 04 29.3	+1.4
T1241				AML	AML		
	comp=E,52µm,0.1s						
T1241				AML	AML		
	comp=N,37µm,0.3s						
T1219	**Muccia, Frazio**	**0.26**	**340**	⇑P	Pg	10 04 25.9	+0.7
T1219				S	Sb	10 04 30.1	-1.2
T1219				AML	AML		
	comp=N,44µm,0.2s						
T1219				AML	AML		
	comp=E,36µm,0.1s						
CSP1	**Cessapalombo**	**0.29**	**12**	P	Pb	10 04 26.6	-0.7
CSP1				S	Sb	10 04 31.2	-0.9
CSP1				AML	AML		
	comp=E,21µm,0.2s						
T1220	**Camerino, Fraz**	**0.30**	**355**	⇓P	Pg	10 04 26.7	+0.7
RM33	**Pellescritta (**	**0.31**	**168**	P	Pb	10 04 26.9	-0.7
RM33				AML	AML		
	comp=E,19µm,0.3s						
RM33				AML	AML		
	comp=N,16µm,0.6s						
TERO	**Teramo**	**0.40**	**118**	⇓P	Pg	10 04 28.1	+0.3
TERO				AML	AML		
	comp=N,18µm,0.1s						
TERO				AML	AML		
	comp=E,22µm,0.2s						
EL6	**Elcito**	**0.52**	**358**	S	Sb	10 04 38.9	+0.2
FOSV	**Fossato di Vic**	**0.55**	**331**	S	Sg	10 04 36.8	-1.2

*NNC **09** 10:05:45.3±0.8, 51°.71N×75°.47E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=17.8km s-min=5.1km az=26.0, Suspected Mining explosion.*

*IDC **09** 10:05:48.8±0.9, 51°.67N×75°.41E, h0^{km}, mbtmp2.7/4, ML2.0/4, Error ellipse: s-maj=23.2km s-min=7.5km az=29.0*

ISC 09 10:05:45.7±1.0, 51°.6N±0°.1×75°.07E±0°.10, h0^{km}, n11, σ0^s.89/10, 6C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.39**	**113**	Pn	**Pn**	**10 06 27.3**	**+1.3**
	0.6nm,0.3s,baz=296,slow=19,SNR=11						
KURBB				Lg	Lg	10 06 58.2	
	0.7nm,0.3s,baz=299,slow=28,SNR=5.5						
	1.9nm,0.4s						
KURK	**Kurchatov**	**2.40**	**110**	⇑Pg	**Pn**	**10 06 26.1**	**-0.1**
	1.5nm,0.4s						
KURK				⇑Lg	Lg	10 06 54.4	
	9.7nm,0.5s						
BVA0	**Borovoye Array**	**3.21**	**298**	Pg	**Pg**	**10 06 47.9**	**+0.7**
	4.0nm,0.9s,baz=116,slow=17,SNR=11						
BVA0				⇑Lg	Lg	10 07 30.9	
	8.0nm,0.8s,baz=116,slow=29,SNR=6.3						
BVAR	**Borovoye Array**	**3.21**	**298**	Pn	**Pb**	**10 06 43.1**	**-0.5**
	baz=106,slow=14,SNR=2.5						
BVAR				Pg	**Pg**	**10 06 48.0**	**+0.7**
	0.1nm,0.3s,baz=116,slow=16,SNR=9.9						
BVAR				Lg	Lg	10 07 33.2	
	0.3nm,0.3s,baz=110,slow=28,SNR=9.7						
	1.6nm,0.8s						
BRVK	**Borovoye**	**3.28**	**298**	⇓Pg	**Pg**	**10 06 48.0**	**-0.6**
	3.8nm,0.9s						
BRVK				⇓Lg	Lg	10 07 32.9	
	10nm,0.7s						
OTUK	**Ortayu**	**3.79**	**209**	⇑Lg	Lg	10 07 53.4	
	8.7nm,1.1s						
I46RU	**ZALESOVO INFRA**	**6.37**	**64**	I	I	10 43 20.0	
	baz=250,slow=325,SNR=2.0						
ZALV	**Zalesovo Beam**	**6.37**	**64**	Pn	**Pn**	**10 07 21.0**	**+0.3**
	0.4nm,0.3s,baz=257,slow=15,SNR=8.1						
ZALV				Lg	Lg	10 09 01.9	
	0.1nm,0.3s,baz=248,slow=23,SNR=1.7						
	1.1nm,0.4s						
MAKZ	**Makanchi**	**6.59**	**134**	⇑Lg	Lg	10 09 10.8	
	6.2nm,1.1s						
MK31	**Makanchi Array**	**6.74**	**133**	⇑Sn	**Sn**	**10 08 41.9**	**-1.4**
	0.1nm,0.3s,baz=23,slow=8.8,SNR=5.6						
MK31				⇓Lg	Lg	10 09 16.2	
	2.8nm,0.6s,baz=327,slow=26,SNR=7.4						
MKAR	**Makanchi Array**	**6.74**	**133**	Pn	**Pn**	**10 07 26.5**	**+0.6**
	0.1nm,0.3s,baz=317,slow=12,SNR=5.8						
MKAR				Sn	**Sn**	**10 08 43.2**	**-0.1**
	0.1nm,0.3s,baz=313,slow=23,SNR=5.3						
MKAR				Lg	Lg	10 09 17.4	
	0.4nm,0.3s,baz=320,slow=28,SNR=9.2						
	0.3nm,0.6s						

IDC 09 10:14:01.1±5.1, 49°.76S×118°.30E, h0^{km}, mb3.9/3, mbtmp3.9/3, MS3.6/3, Error ellipse: s-maj=373.0km s-min=28.4km az=106.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**15.16**	**347**	T	T	10 32 50.6	
	baz=171,slow=74,SNR=9.8						
H01W1	**Cape Leeuwin H**	**15.16**	**347**	T	T	10 32 52.0	
	baz=171,slow=74,SNR=8.6						
H01W3	**Cape Leeuwin H**	**15.18**	**347**	T	T	10 32 52.9	
	baz=171,slow=74,SNR=10.0						
ASAR	**Alice Springs**	**28.77**	**31**	P	P	10 20 00.8	+0.2
	1.3nm,0.8s,baz=206,slow=7.8,SNR=13						
ASAR				LR	LR	10 30 24.4	
	comp=Z,64nm,19.9s,baz=187,slow=34						
	1.3nm,0.8s						
WRA	**Warramunga Arr**	**32.39**	**29**	P	P	10 20 32.1	-0.3
	1.4nm,0.8s,baz=200,slow=8.8,SNR=6.8						
	1.4nm,0.8s						
QSPA	**South Pole Qui**	**40.37**	**180**	P	P	10 21 40.2	-0.1
	2.1nm,1.1s,baz=5.4,slow=4.3,SNR=2.7						
	2.1nm,1.1s						
CMAR	**Chiang Mai Arr**	**70.05**	**340**	LR	LR	10 54 38.5	
	comp=Z,13nm,19.1s,baz=85,slow=35						
MBAR	**Mbarara**	**87.96**	**271**	LR	LR	10 58 44.5	
	comp=Z,115nm,18.6s,baz=162,slow=30						
YKA	**Yellowknife Ar**	**148.85**	**46**	PKPbc	PKPbc	10 33 48.9	-0.5
	0.9nm,0.8s,baz=271,slow=2.3,SNR=12						

*NNC **09** 10:17:43.6±1.3, 51°.71N×75°.42E, h0^{km}, mb3.1, mpv2.6, Error ellipse: s-maj=21.5km s-min=7.9km az=22.0, Suspected Mining explosion.*

*IDC **09** 10:17:48.3±1.1, 51°.53N×75°.51E, h0^{km}, mbtmp2.5/4, ML1.6/3, Error ellipse: s-maj=25.7km s-min=8.9km az=30.0*

ISC 09 10:17:41.4±1.2, 52°.59N±0°.08×76°.68E±0°.07, h0^{km}, n11, σ1^s.73/7, 5C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**2.23**	**146**	⇓Pg	**Pg**	**10 18 25.1**	**+1.1**
	5.7nm,1.2s						
KURK				⇑Lg	Lg	10 18 53.1	
	16nm,0.9s						
KURBB	**Kurchatov Arra**	**2.28**	**149**	Pn	**Pg**	**10 18 26.1**	**+1.0**
	0.2nm,0.3s,baz=304,slow=19,SNR=15						
KURBB				Lg	Lg	10 18 55.0	
	0.3nm,0.3s,baz=126,slow=30,SNR=4.3						
	1.6nm,0.5s						
BVA0	**Borovoye Array**	**3.84**	**279**	⇑Lg	Lg	10 19 29.5	
	4.9nm,1.0s,baz=115,slow=26,SNR=4.7						
BVAR	**Borovoye Array**	**3.84**	**279**	Pn	**Pn**	**10 18 41.8**	**+0.1**
	baz=115,slow=18,SNR=3.4						
BVAR				Sn	**Sn**	**10 19 26.8**	**-0.7**
	0.1nm,0.3s,baz=116,slow=28,SNR=4.3						
	0.9nm,0.6s						
BRVK	**Borovoye**	**3.91**	**279**	⇑Lg	Lg	10 19 32.1	
	5.9nm,1.0s						
I46RU	**ZALESOVO INFRA**	**5.08**	**71**	I	I	10 55 40.0	
	baz=249,slow=322,SNR=1.4						
ZALV	**Zalesovo Beam**	**5.08**	**71**	Pn	**Pg**	**10 19 19.0**	**+0.4**
	0.8nm,0.6s,baz=253,slow=15,SNR=4.8						
ZALV				Lg	Lg	10 20 60.0	
	0.2nm,0.3s,baz=247,slow=25,SNR=1.9						
OTUK	**Ortayu**	**5.16**	**214**	⇑Lg	Lg	10 19 50.3	
	4.0nm,0.9s						
MAKZ	**Makanchi**	**6.73**	**147**	⇑Lg	Lg	10 21 11.6	
	7.4nm,1.1s						
MK31	**Makanchi Array**	**6.84**	**146**	⇓Lg	Lg	10 21 17.1	
	2.6nm,0.8s,baz=331,slow=25,SNR=4.0						
MKAR	**Makanchi Array**	**6.84**	**146**	Pn	**Pn**	**10 19 23.6**	**+0.6**
	baz=316,slow=10.0,SNR=3.7						
MKAR				Sn	**Sn**	**10 20 38.6**	**-3.0**
	baz=310,slow=21,SNR=2.0						
MKAR				Lg	Lg	10 21 11.5	
	0.1nm,0.3s,baz=313,slow=20,SNR=7.9						
	0.3nm,0.7s						

*BER **09** 10:21:36.6±0.9, 67°.57N×34°.47E, h0^{km}, ML1.7, Suspected explosion*

*KOLA **09** 10:21:37.2, 67°.69N×34°.22E, h0^{km}, ML2.0, Error ellipse: s-maj=7.0km s-min=2.2km az=140.0, Khibiny Mines*

HEL 09 10:21:36.8±0.4, 67°.72N×34°.20E, h0^{km}, ML1.8, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.25**	**43**	P	Pg	10 21 41.9	+0.3
LVZ				S	Sg	10 21 45.6	+0.8
LVZ	**Lovozero**	**0.25**	**43**	PG	Pg	10 21 42.0	+0.4
	baz=225						
LVZ				SG	Sg	10 21 43.2	-1.6
APA	**Apatity**	**0.34**	**245**	P	Pg	10 21 43.2	-0.1
APA				S	Sg	10 21 47.5	-0.1
APA0	**Apatity Array**	**0.48**	**257**	P	Pg	10 21 45.1	-0.8
APA0				S	Sg	10 21 51.9	-0.2
TERR	**Teriberka**	**1.53**	**12**	P	Pn	10 22 04.8	-0.5
TERR				S	Sn	10 22 24.9	-0.9
VRF	**Varrio**	**1.75**	**273**	PG	Pn	10 22 08.1	-0.3
VRF				MSG		10 22 29.1	
	comp=Z,6.3nm,0.2s						
VRF				SG	Sn	10 22 30.2	-1.2
OLKF	**Oulanka, Finla**	**2.35**	**236**	PG	Pn	10 22 17.3	+0.7
	baz=55						
OLKF				MSG		10 22 46.2	
	comp=Z,4.6nm,0.2s						
OLKF				SG	Sb	10 22 48.4	-1.0
KU6	**Riekki**	**2.40**	**227**	PG	Pn	10 22 18.7	+1.3
	baz=47						
KU6				MSG		10 22 47.8	
	comp=Z,2.5nm,0.2s						
KU6				SG	Sb	10 22 49.9	-1.1
MSF	**Maaselka**	**2.73**	**231**	PG	Pn	10 22 23.7	+1.9
	baz=47						
MSF				SG	Sb	10 22 58.4	-2.0
SGF	**Sodankyl**	**2.96**	**268**	PG	Pb	10 22 29.0	-1.3
SGF				SB	Sb	10 23 05.9	-0.9
VADS	**Vadso**	**2.98**	**326**	S	Sn	10 23 01.2	-0.4
VADS	**Vadso**	**2.98**	**326**	*e*P	Pn	10 22 25.5	+0.2
VADS				*e*S	Sn	10 23 02.5	+0.8
VADS				IAML		10 23 16.1	
	comp=Z,4.1nm,0.3s						
KEV	**Kevo**	**3.33**	**311**	*e*P	Pn	10 22 30.6	+0.6
KEV				*e*S	Sn	10 23 09.7	-0.4
KEV	**Kevo**	**3.33**	**311**	PN	Pn	10 22 30.9	+0.9
KEV				SN	Sn	10 23 10.0	-0.2
RNF	**Rovaniemi**	**3.38**	**255**	PN	Pn	10 22 30.8	+0.1
	baz=66						
ARA0	**ARCESS Array S**	**3.67**	**304**	*e*P	Pn	10 22 34.8	0.0
ARA0				IAML		10 23 33.6	
	comp=Z,3.4nm,0.5s						
ARA0	**ARCESS Array S**	**3.67**	**304**	PN	Pn	10 22 34.6	-0.1
ARA0				SN	Sn	10 23 17.7	-1.0
ARCES	**ARCESS Array B**	**3.67**	**304**	P	Pn	10 22 34.6	-0.1
ARCES				S	Sn	10 23 18.1	-0.5
RMF	**Romuvaara**	**3.92**	**208**	PN	Pn	10 22 38.1	-0.1
KLF	**Kolari**	**3.97**	**268**	PG	Pb	10 22 48.7	+1.2
	baz=81						
HEF	**Hetta**	**4.02**	**285**	*e*P	Pn	10 22 38.8	-0.7
HEF				*e*S	Sn	10 23 25.8	-1.4
HEF	**Hetta**	**4.02**	**285**	PN	Pn	10 22 40.1	+0.6
	baz=100						
KTK1	**Kautokeino**	**4.26**	**293**	*e*P	Pn	10 22 43.6	+0.7
KTK1				*e*S	Sn	10 23 32.1	-1.2
KTK1				IAML		10 23 51.5	
	comp=Z,4.4nm,0.2s						
KTK1	**Kautokeino**	**4.26**	**293**	PG	Pb	10 22 52.6	+0.1
PAJU	**Pajala**	**4.34**	**266**	PG	Pb	10 22 54.6	+0.7
PAJU				SN	Sn	10 23 34.6	-0.6
LANU	**Lannavaara**	**4.63**	**280**	PN	Pn	10 22 47.8	-0.1
OBF4	**Vikkela, Lumij**	**4.69**	**236**	PG	Pb	10 22 58.0	-1.7
HAMF	**Hammerfest**	**4.76**	**313**	*e*S	Sn	10 23 43.8	-1.8
FAUS	**Fauske**	**7.25**	**276**	S	Sn	10 24 43.0	-3.5

HEL 09 10:22:52.9±0.3, 67°.83N×20°.22E, h0^{km}, ML1.3, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LANU	**Lannavaara**	**0.71**	**71**	SG	Sg	10 23 15.0	-0.6
KIF	**Kilpisjarvi**	**1.21**	**10**	PG	Pg	10 23 15.1	-0.8
KIF				SG	Sg	10 23 29.6	-1.9
KIF				MSG		10 23 30.5	
	comp=Z,3.2nm,0.2s						
PAJU	**Pajala**	**1.38**	**124**	PG	Pg	10 23 17.3	-1.9
	baz=307						
HEF	**Hetta**	**1.42**	**64**	MSG		10 23 35.7	
	comp=Z,2.5nm,0.2s						
HEF				SN	Sn	10 23 40.6	+1.3
ERTU	**Ertsjaerv**	**1.49**	**148**	PN	Pn	10 23 20.4	-0.5
ERTU				SG	Sg	10 23 39.1	-1.6
KLF	**Kolari**	**1.56**	**111**	PG	Pn	10 23 20.4	-1.5
	baz=291						
KLF				MSG		10 23 39.6	
	comp=Z,1.6nm,0.2s						
KLF				SN	Sg	10 23 43.0	+0.2
KTK1	**Kautokeino**	**1.63**	**42**	SN	Sg	10 23 46.0	+0.6
KALU	**Kalix**	**2.33**	**146**	SG	Sb	10 24 04.8	-0.2
TOF	**Tornio**	**2.38**	**135**	MSG		10 24 03.4	
	comp=Z,0.9nm,0.2s						
TOF				SG	Sb	10 24 06.9	+0.4
RNF	**Rovaniemi**	**2.57**	**116**	SG	Sb	10 24 11.6	-0.1

ROM 09 10:35:27.1±0.0, 42°.810N±0°.002×13°.137E±0°.003, h11^{km}, ML1.5/11, Error ellipse: s-maj=0.2km s-min=0.2km az=287.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1214	**Arquata del Tr**	**0.07**	**134**	P	Pg	10 35 30.0	+0.3
T1214				S	Sg	10 35 31.7	+0.2
T1214				AML	AML		
	comp=E,298µm,0.2s						
T1214				AML	AML		
	comp=N,307µm,0.7s						
T1214				AML	AML		
	comp=N,322µm,0.1s						
T1214				AML	AML		
	comp=N,294µm,0.1s						
T1214				AML	AML		
	comp=E,346µm,0.2s						
T1214				AML	AML		
	comp=E,299µm,0.2s						
T1212	**Cascia, Frazio**	**0.09**	**229**	P	Pg	10 35 30.2	+0.5
T1212				S	Sg	10 35 32.1	+0.4
T1212				AML	AML		
	comp=E,736µm,0.3s						
T1212				AML	AML		
	comp=N,586µm,1.3s						
T1212				AML	AML		
	comp=N,511µm,0.2s						
T1212				AML	AML		
	comp=E,672µm,0.1s						
T1212				AML	AML		
	comp=N,493µm,0.2s						
T1212				AML	AML		
	comp=E,709µm,0.1s						
MC2	**Monte Cornacci**	**0.11**	**21**	P	Pg	10 35 29.9	-0.2
MC2				S	Sg	10 35 33.0	+0.6
T1216	**Preci, Frazion**	**0.12**	**313**	P	Pg	10 35 30.5	+0.4
T1216				S	Sg	10 35 33.0	+0.7
T1216				AML	AML		
	comp=E,585µm,0.2s						
T1216				AML	AML		
	comp=N,606µm,0.1s						
T1216				AML	AML		
	comp=N,606µm,0.1s						
T1216				AML	AML		
	comp=E,480µm,0.1s						
T1218	**Civita (PG)**	**0.14**	**186**	P	Pg	10 35 31.1	+0.6
T1218				S	Sg	10 35 33.7	+0.8
T1218				AML	AML		
	comp=E,165µm,1.5s						
T1218				AML	AML		
	comp=N,162µm,0.9s						
T1218				AML	AML		
	comp=N,140µm,0.1s						
T1218				AML	AML		
	comp=N,138µm,0.2s						
T1218				AML	AML		
	comp=E,121µm,0.1s						
T1218				AML	AML		
	comp=E,132µm,0.1s						
MMO1	**Montemonaco**	**0.17**	**57**	P	Pg	10 35 31.4	+0.5
MMO1				S	Sg	10 35 34.4	+0.9
T1215	**Vallo di Nera,**	**0.20**	**268**	P	Pg	10 35 31.9	+0.6
T1215				S	Sg	10 35 35.4	+1.1
T1215				AML	AML		
	comp=E,192µm,1.0s						
T1215				AML	AML		
	comp=N,220µm,0.9s						
T1215				AML	AML		
	comp=E,163µm,0.1s						
T1215				AML	AML		
	comp=N,169µm,0.1s						
T1215				AML	AML		
	comp=N,164µm,0.1s						
T1215				AML	AML		
	comp=E,156µm,0.1s						

T1241	**Roccafluvione,**	**0.22**	**78**	P	Pg	10 35 32.3	+0.5
T1241				S	Sg	10 35 36.2	+1.2
T1241				AML	AML		
	comp=E,210µm,0.7s						
T1241				AML	AML		
	comp=N,260µm,0.6s						
T1241				AML	AML		
	comp=N,261µm,0.2s						
T1241				AML	AML		
	comp=E,149µm,0.1s						
T1241				AML	AML		
	comp=E,194µm,0.2s						
T1241				AML	AML		
	comp=N,246µm,0.1s						
T1219	**Muccia, Frazio**	**0.26**	**339**	P	Pg	10 35 33.0	+0.5
T1219				S	Sb	10 35 37.4	-1.1
T1219				AML	AML		
	comp=E,291µm,1.0s						
T1219				AML	AML		
	comp=N,335µm,0.1s						
T1219				AML	AML		
	comp=E,312µm,1.0s						
T1219				AML	AML		
	comp=N,324µm,0.1s						
T1219				AML	AML		
	comp=N,325µm,0.1s						
T1219				AML	AML		
	comp=N,335µm,0.1s						
T1219				AML	AML		
	comp=E,253µm,0.1s						
T1219				AML	AML		
	comp=E,273µm,0.1s						
CSP1	**Cessapalombo**	**0.29**	**10**	P	Pg	10 35 33.5	+0.5
CSP1				S	Sb	10 35 38.1	-1.1
CSP1				AML	AML		
	comp=E,180µm,1.0s						
CSP1				AML	AML		
	comp=N,222µm,1.2s						
CSP1				AML	AML		
	comp=E,175µm,0.1s						
CSP1				AML	AML		
	comp=N,216µm,0.2s						
TERO	**Teramo**	**0.39**	**118**	P	Pg	10 35 35.4	+0.5
TERO				S	Sg	10 35 41.1	+1.0
TERO				AML	AML		
	comp=E,79µm,0.5s						
TERO				AML	AML		
	comp=N,92µm,1.1s						
TERO				AML	AML		
	comp=N,67µm,0.2s						
TERO				AML	AML		
	comp=E,66µm,1.2s						
TERO				AML	AML		
	comp=E,71µm,0.1s						
TERO				AML	AML		
	comp=N,77µm,0.1s						

ROM 09 10:35:50.0±0.0**, 42°.882N**±0°.002×**13°.107E**±0°.003**, h13km, ML1.6**/17**, 7C-8D, Error ellipse: s-maj=0.2km s-min=0.1km az=260.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.07**	**278**	P	Pg	10 35 52.9	+0.2
T1216				S	Sg	10 35 54.8	+0.3
T1216				AML	AML		
	comp=E,585µm,0.2s						
T1216				AML	AML		
	comp=N,606µm,0.1s						
T1216				AML	AML		
	comp=E,585µm,0.2s						
MC2	**Monte Cornacci**	**0.07**	**63**	⇑P	Pg	10 35 53.1	+0.2
MC2				S	Sg	10 35 55.1	+0.2
FEMA	**Monte Fema**	**0.09**	**332**	⇓P	Pg	10 35 53.3	+0.3
FEMA				S	Sg	10 35 55.6	+0.4
T1212	**Cascia, Frazio**	**0.14**	**200**	⇓P	Pg	10 35 53.9	+0.4
T1212				S	Sg	10 35 56.5	+0.5
T1212				AML	AML		
	comp=E,776µm,0.3s						
T1212				AML	AML		
	comp=N,606µm,1.3s						
T1212				AML	AML		
	comp=E,736µm,0.3s						
T1212				AML	AML		
	comp=N,586µm,1.3s						
T1212				AML	AML		
	comp=N,586µm,0.7s						
T1212				AML	AML		
	comp=N,606µm,0.7s						
T1214	**Arquata del Tr**	**0.14**	**149**	P	Pg	10 35 54.0	+0.3
T1214				S	Sg	10 35 56.7	+0.5
T1214				AML	AML		
	comp=E,352µm,0.8s						
T1214				AML	AML		
	comp=E,299µm,0.2s						
T1214				AML	AML		
	comp=N,308µm,0.7s						
T1214				AML	AML		
	comp=N,308µm,1.3s						
T1214				AML	AML		
	comp=N,322µm,0.2s						
T1214				AML	AML		
	comp=E,352µm,1.2s						
MMO1	**Montemonaco**	**0.16**	**84**	P	Pg	10 35 54.2	+0.3
MMO1				S	Sg	10 35 57.1	+0.5
T1219	**Muccia, Frazio**	**0.19**	**337**	⇓P	Pg	10 35 54.7	+0.4
T1219				S	Sg	10 35 57.9	+0.7
T1219				AML	AML		
	comp=E,290µm,1.0s						
T1219				AML	AML		
	comp=N,336µm,0.1s						
T1219				AML	AML		
	comp=E,312µm,1.0s						
T1219				AML	AML		
	comp=N,324µm,0.1s						
T1219				AML	AML		
	comp=E,290µm,1.0s						
T1219				AML	AML		
	comp=N,335µm,0.1s						
T1219				AML	AML		
	comp=E,311µm,1.0s						
CESI	**CESI - Serrava**	**0.19**	**310**	P	Pg	10 35 54.8	+0.4
CESI				S	Sg	10 35 58.2	+0.8
CESI				AML	AML		
	comp=N,440µm,0.3s						
CESI				AML	AML		
	comp=E,294µm,0.1s						
T1215	**Vallo di Nera,**	**0.19**	**246**	⇓P	Pg	10 35 54.7	+0.4
T1215				S	Sg	10 35 58.1	+0.7
T1215				AML	AML		
	comp=E,192µm,1.0s						
T1215				AML	AML		
	comp=N,220µm,0.8s						
T1215				AML	AML		
	comp=N,220µm,0.9s						
T1218	**Civita (PG)**	**0.21**	**178**	P	Pg	10 35 55.0	+0.3
T1218				S	Sg	10 35 58.6	+0.7
T1218				AML	AML		
	comp=N,176µm,1.4s						
T1218				AML	AML		
	comp=E,196µm,1.5s						
T1218				AML	AML		
	comp=E,165µm,1.5s						
T1218				AML	AML		
	comp=N,176µm,0.6s						
T1218				AML	AML		
	comp=N,159µm,0.4s						
T1217	**Poggiodomo (PG**	**0.21**	**217**	⇓P	Pg	10 35 55.1	+0.3
T1217				S	Sg	10 35 58.7	+0.8
CSP1	**Cessapalombo**	**0.22**	**19**	⇑P	Pg	10 35 55.2	+0.4
CSP1				S	Sg	10 35 59.0	+0.8
CSP1				AML	AML		
	comp=E,180µm,1.0s						
CSP1				AML	AML		
	comp=N,222µm,1.2s						
T1220	**Camerino, Fraz**	**0.23**	**357**	P	Pg	10 35 55.4	+0.4
T1220				AML	AML		
	comp=E,546µm,0.7s						
T1220				AML	AML		
	comp=N,596µm,0.2s						
T1241	**Roccafluvione,**	**0.24**	**96**	⇑P	Pg	10 35 55.4	+0.3
T1241				S	Sb	10 35 59.6	-0.9
T1241				AML	AML		
	comp=E,210µm,0.7s						
T1241				AML	AML		
	comp=N,260µm,0.6s						
T1241				AML	AML		
	comp=N,260µm,0.6s						
T1241				AML	AML		
	comp=N,260µm,1.4s						
T1241				AML	AML		
	comp=E,210µm,1.3s						
SMA1	**SAN MARTINO**	**0.30**	**146**	⇓P	Pg	10 35 56.5	+0.3
SMA1				S	Sb	10 36 01.4	-0.9
SMA1				AML	AML		
	comp=E,93µm,1.4s						
SMA1				AML	AML		
	comp=N,124µm,0.2s						
ASSB	**Assisi San Ben**	**0.37**	**296**	⇑P	Pg	10 35 57.7	+0.2
ASSB				AML	AML		
	comp=E,119µm,0.2s						
ASSB				AML	AML		
	comp=N,81µm,1.0s						
ASSB				AML	AML		
	comp=N,81µm,1.0s						
RM33	**Pellescritta (**	**0.38**	**168**	P	Pg	10 35 57.9	+0.3
RM33				S	Sb	10 36 04.2	-0.3
RM33				AML	AML		
	comp=E,67µm,1.4s						
RM33				AML	AML		
	comp=E,67µm,0.6s						
RM33				AML	AML		
	comp=N,65µm,0.8s						
SNTG	**Esanatoglia**	**0.39**	**342**	P	Pb	10 35 58.4	-0.5
SNTG				AML	AML		
	comp=E,44µm,1.3s						
SNTG				AML	AML		
	comp=N,35µm,0.2s						
T1211	**Morro Reatino**	**0.40**	**208**	⇑P	Pg	10 35 58.4	+0.5
T1211				S	Sb	10 36 04.5	-0.4
MOMA	**Monte Martano**	**0.40**	**259**	⇓P	Pb	10 35 58.6	-0.4
MOMA				AML	AML		
	comp=E,145µm,0.4s						
MOMA				AML	AML		
	comp=N,82µm,1.0s						
MOMA				AML	AML		
	comp=E,145µm,1.6s						
EL6	**Elcito**	**0.45**	**359**	⇑P	Pg	10 35 59.2	+0.3
TERO	**Teramo**	**0.45**	**125**	⇓P	Pg	10 35 58.9	0.0
TERO				AML	AML		
	comp=N,92µm,1.1s						
TERO				AML	AML		
	comp=E,79µm,0.5s						
T1222	**Castel Sant'An**	**0.48**	**186**	S	Sb	10 36 07.4	0.0
MURB	**Monte Urbino**	**0.57**	**312**	⇑P	Pg	10 36 01.6	+0.4
MURB				AML	AML		
	comp=E,80µm,0.3s						
MURB				AML	AML		
	comp=N,93µm,0.3s						

KRSZO 09 10:57:58.6±1.1**, 47°.10N×17°.97E, h0km, ML1.4**/6**, Error ellipse: s-maj=6.1km s-min=4.0km az=91.0, Explosion., Hungary**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIH	**Tihany**	**0.20**	**195**	Pg	Pg	10 58 03.4	+0.9
	comp=Z,51nm,SNR=3.7						
TIH				Lg	Lg	10 58 08.0	
MPLH	**Magyarpolny**	**0.30**	**285**	Pg	Pg	10 58 05.3	+0.9
	comp=Z,9.4nm,SNR=3.8						
MPLH				Lg	Lg	10 58 10.5	
CSKK	**Cskako**	**0.33**	**36**	Pg	Pg	10 58 05.4	+0.4
	comp=Z,121nm,SNR=4.4						
CSKK				Lg	Lg	10 58 11.1	
A268A	**Rede**	**0.34**	**355**	Pg	Pg	10 58 06.3	+1.2
	comp=Z,9.7nm,SNR=3.3						
A268A				Lg	Lg	10 58 11.6	
MORH	**Mrgy, Hungar**	**1.00**	**152**	Pg	Pb	10 58 18.8	+0.1
	comp=Z,1.2nm,SNR=1.3						
MORH				Lg	Lg	10 58 33.2	
KOVH	**Kovagotottos**	**1.01**	**175**	Pn	Pn	10 58 19.6	-0.4
	comp=Z,3.9nm,SNR=1.9						
KOVH				Lg	Lg	10 58 34.0	

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*IDC **09** 10:59:40.2±3.2, 10°.85S×165°.06E, h68km±28km, mb3.6/10, mbtmp3.9/11, ML4.4/1, MS3.3/6, Error ellipse: s-maj=22.7km s-min=18.6km az=56.0*

ISC 09 10:59:35.8±0.9**, 10°.8S**±0°.1×**165°.2E**±0°.1**, h31km, n28, σ0ˢ.99**/13**, mb3.9**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.39**	**284**	P	**Pn**	**11 00 55.8**	**+1.6**
	8µm,0.5s,baz=165,slow=2.1,SNR=19						
HNR				S	**Sn**	**11 01 55.1**	**-0.2**
	999nm,0.3s,baz=192,slow=20,SNR=1.4						
LIFNC	**LIFOU**	**10.08**	**169**	P	Pn	11 02 04.3	+5.9
DZM	**Mont Dzumac**	**11.24**	**174**	P	Pn	11 02 19.5	+5.1
	2.5nm,0.3s,baz=103,slow=22,SNR=38						
DZM				S	**Sn**	**11 04 19.8**	**+0.7**
	2.4nm,0.5s,baz=118,slow=15,SNR=1.5						
DZM				LR	LR	11 06 14.2	
	comp=Z,157nm,18.4s,baz=30,slow=35 5.3nm,0.3s						
DZM	**Mont Dzumac**	**11.24**	**174**	P	Pn	11 02 20.6	+6.1
YATNC	**Mamie plateau,**	**11.28**	**172**	P	Pn	11 02 21.4	+6.5
ONTNC	**Ouen Toro**	**11.47**	**174**	P	Pn	11 02 26.0	+8.4
OUENC	**Ouen Island, N**	**11.62**	**173**	P	Pn	11 02 27.6	+7.9
MSVF	**Nonsavu**	**14.18**	**120**	LR	LR	11 07 10.6	
	comp=Z,57nm,18.2s,baz=335,slow=31						
KRVT	**Keravat (AS076**	**14.61**	**295**	LR	LR	11 08 43.9	
	comp=Z,144nm,18.3s,baz=254,slow=38						
PMG	**Port Moresby**	**17.86**	**273**	LR	LR	11 09 48.1	
	comp=Z,177nm,18.4s,baz=101,slow=34						
CTA	**Charters Tower**	**20.47**	**241**	P	**P**	**11 04 11.3**	**+0.2**
	1.6nm,0.5s,baz=37,slow=10,SNR=1.3 1.6nm,0.5s						
AFI	**Afiamalu**	**22.65**	**100**	LR	LR	11 11 38.1	
	comp=Z,122nm,18.9s,baz=8.0,slow=32						
H11S2	**WAKE ISLAND Hy**	**29.17**	**3**	T	T	11 36 02.6	
	baz=183,slow=76,SNR=121						
H11S3	**WAKE ISLAND Hy**	**29.17**	**3**	T	T	11 36 06.6	
	baz=183,slow=76,SNR=88						
H11S1	**WAKE ISLAND Hy**	**29.19**	**3**	T	T	11 36 14.4	
	baz=183,slow=76,SNR=87						
STKA	**Stephens Creek**	**30.26**	**223**	P	**P**	**11 05 44.5**	**+0.4**
	3.0nm,0.8s,baz=26,slow=11,SNR=6.1 3.0nm,0.8s						
H11N1	**WAKE ISLAND Hy**	**30.39**	**3**	T	T	11 37 23.6	
	baz=182,slow=76,SNR=128						
H11N3	**WAKE ISLAND Hy**	**30.40**	**3**	T	T	11 37 45.2	
	baz=182,slow=76,SNR=73						
H11N2	**WAKE ISLAND Hy**	**30.41**	**3**	T	T	11 37 47.8	
	baz=182,slow=76,SNR=77						
WRA	**Warramunga Arr**	**31.09**	**249**	P	**P**	**11 05 49.8**	**-1.9**
	0.2nm,0.4s,baz=81,slow=9.1,SNR=3.4 0.2nm,0.4s						
GUMO	**Guam**	**31.58**	**320**	LR	LR	11 19 01.3	
	comp=Z,22nm,18.1s,baz=149,slow=37						
ASAR	**Alice Springs**	**32.45**	**243**	P	**P**	**11 06 02.0**	**-1.5**
	0.5nm,0.5s,baz=65,slow=10,SNR=14 0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**71.57**	**294**	P	**P**	**11 10 54.7**	**+0.1**
	0.7nm,0.5s,baz=126,slow=4.6,SNR=1.9 0.7nm,0.5s						
SONM	**Songino Array**	**78.20**	**324**	P	**P**	**11 11 32.3**	**-0.2**
	1.2nm,0.9s,baz=140,slow=7.3,SNR=10 1.2nm,0.9s						
ILAR	**Eielson Array**	**83.47**	**19**	P	**P**	**11 12 00.2**	**+0.2**
	0.8nm,0.7s,baz=242,slow=5.3,SNR=10 0.8nm,0.7s						
NVAR	**Mina Array Bea**	**86.26**	**50**	P	**P**	**11 12 15.4**	**+0.4**
	0.6nm,0.8s,baz=230,slow=8.2,SNR=4.6 0.6nm,0.8s						
MKAR	**Makanchi Array**	**93.03**	**317**	P	**P**	**11 12 45.8**	**-0.7**
	1.3nm,0.9s,baz=93,slow=8.7,SNR=3.9 1.3nm,0.9s						
PDAR	**Pinedale Array**	**93.77**	**47**	P	**P**	**11 12 50.4**	**+0.2**
	0.1nm,0.3s,baz=227,slow=2.1,SNR=2.8 0.1nm,0.3s						

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*IDC **09** 11:03:02.4±1.4, 3°.52S×130°.78E, h0km, mb3.7/2, mbtmp3.7/4, ML3.4/2, Error ellipse: s-maj=69.7km s-min=15.4km az=81.0*

*DJA **09** 11:03:06.5±0.3, 3°S±4°×13°1E±°, h10km, M4.0/10, mb4.3/1, MLv3.8/10*

ISC 09 11:03:07.2±0.8**, 3°.41S**±0°.06×**130°.78E**±0°.05**, h30km, n22, σ2ˢ.06**/26**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.41**	**218**	P	**Pb**	**11 03 33.4**	**+0.6**
BNDI				S	**Sb**	**11 03 53.8**	**+3.4**
FAKI	**Fak Fak**	**1.55**	**72**	P	**Pn**	**11 03 33.9**	**+1.1**
FAKI	**Fak Fak**	**1.55**	**72**	P	**Pn**	**11 03 33.5**	**+0.7**
MSAI	**Masohi**	**1.84**	**272**	P	**Pn**	**11 03 38.0**	**+1.2**
SIJI	**Sorong**	**2.57**	**11**	Pn	**Pn**	**11 03 46.5**	**-0.3**
	3.5nm,0.3s,baz=194,slow=23,SNR=25						
SIJI				Sn	**Sn**	**11 04 16.8**	**-0.4**
	7.7nm,0.3s,baz=227,slow=22,SNR=9.1 10nm,0.2s						
AAI	**Ambon**	**2.59**	**264**	P	**Pn**	**11 03 47.1**	**0.0**
NLAI	**Namlea**	**3.67**	**273**	P	**Pn**	**11 04 03.0**	**+1.0**
RKPI	**Ransiki, Papua**	**3.89**	**61**	P	**Pn**	**11 04 05.8**	**+0.8**
LBMI	**Labuha**	**4.28**	**310**	P	**Pn**	**11 04 09.5**	**-0.8**
SANI	**Sanana**	**4.97**	**286**	P	**Pn**	**11 04 19.3**	**-0.5**
SANI	**Sanana**	**4.97**	**286**	P	**Pn**	**11 04 19.1**	**-0.7**
KDU	**Kakadu**	**9.37**	**170**	P	**Pn**	**11 05 20.9**	**+0.6**
KNRA	**Kununurra**	**12.35**	**189**	P	**Pn**	**11 05 59.7**	**-1.4**
WRAB	**Tennant Creek**	**16.79**	**168**	P	**Pn**	**11 06 59.3**	**-1.0**
WRA	**Warramunga Arr**	**16.80**	**168**	Pn	**Pn**	**11 06 57.5**	**-2.9**
	0.2nm,0.3s,baz=351,slow=12,SNR=3.7						
WRA				Sn	**Sn**	**11 09 58.2**	**-8.0**
	0.2nm,0.3s,baz=355,slow=23,SNR=5.1 1.0nm,0.8s						
QIS	**Mount Isa**	**19.09**	**154**	P	**Pn**	**11 07 29.7**	**+1.1**
ASAR	**Alice Springs**	**20.36**	**172**	P	**P**	**11 07 41.5**	**0.0**
	2.0nm,0.3s,baz=350,slow=11,SNR=39						
ASAR				S	**S**	**11 11 28.3**	**0.0**
	1.0nm,1.0s,baz=356,slow=23,SNR=5.1 2.0nm,0.3s						
AS01	**Alice Springs**	**20.37**	**172**	P	**P**	**11 07 41.6**	**0.0**
WRKA	**Warakurna**	**21.63**	**186**	P	**P**	**11 07 54.6**	**-0.6**
OOD	**Oodnadatta**	**24.70**	**170**	P	**P**	**11 08 26.5**	**+0.7**
MULG	**Mulgathing**	**26.91**	**174**	P	**P**	**11 08 47.0**	**+1.2**
MKAR	**Makanchi Array**	**65.69**	**326**	P	**P**	**11 13 49.2**	**+0.2**
	0.3nm,0.4s,baz=114,slow=7.9,SNR=5.1 0.3nm,0.4s						

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*TRN **09** 11:10:53.4, 10°.83N×62°.27W, h73km, MD2.8*

*FUNV **09** 11:10:57.4, 10°.60N×62°.53W, h28km, MW3.0*

ISC 09 11:10:50.0±1.6**, 10°.74N**±0°.07×**62°.38W**±0°.05**, h93km**±16km**, n8, σ1ˢ.99**/14**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.85**	**266**	*e*P	**Pn**	**11 11 10.7**	**+2.4**
CRUV				*e*S	**Sn**	**11 11 19.0**	**-3.0**
TRN	**Trinidad (W)**	**0.96**	**95**	*e*P	**Pn**	**11 11 10.9**	**+1.4**
TRN				*e*S	**Sn**	**11 11 22.9**	**-1.2**
GRGR	**Grenville**	**1.56**	**27**	*e*P	**Pn**	**11 11 17.7**	**+1.0**
GRGR				*e*S	**Sn**	**11 11 35.7**	**-1.2**
TOSP	**Speyside**	**1.89**	**73**	*e*P	**Pn**	**11 11 22.1**	**+1.2**
TOSP				*e*S	**Sn**	**11 11 43.3**	**-1.2**
GCMP	**Grenada, Carri**	**1.97**	**28**	*e*P	**Pn**	**11 11 22.9**	**+0.9**
GCMP				*e*S	**Sn**	**11 11 44.9**	**-1.4**
PRGV	**PARIAGUAN**	**2.98**	**229**	*e*S	**Sn**	**11 12 10.6**	**+0.3**
CACV	**CAICARA DEL OR**	**5.18**	**233**	*e*P	**Pn**	**11 12 03.9**	**-1.3**
CACV				*e*S	Sn	11 12 51.8	-12
BAUV	**El Baul**	**5.86**	**253**	*e*P	**Pn**	**11 12 17.1**	**+2.7**
BAUV				*e*S	**Sn**	**11 13 18.2**	**-2.1**

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*IDC **09** 11:14:23.9±0.4, 60°.13S×150°.54E, h0km, mb4.8/18, mbtmp4.8/18, MS5.5/39, Error ellipse: s-maj=19.9km s-min=12.1km az=87.0*

*NEIC **09** 11:14:26.4±2.0, 60°.15S±0°.07×150°.30E±0°.09, h10km±1km, mb5.6/82, Ms_20 5.8/388, Mwb5.9/27, Mww5.9/12, Error ellipse: s-maj=13.2km s-min=6.4km az=203.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-2.09; $M_{\theta\theta}$4.95; $M_{\phi\phi}$-2.86; $M_{r\theta}$-0.39; $M_{\theta\phi}$-5.65; $M_{\phi r}$-2.75; Fault plane solution: $M_0$7.62000×10^{17} NP1: ϕ_s339.15000°, δ75.06000°, λ-24.05000°. NP2: ϕ_s75.71000°, δ66.81000°, λ-163.72000°. Principal axes: T 8.0015, Plg6.0000°, Azm29.0000°; N -0.8203, Plg62.0000°, Azm129.0000°; P -7.1812, Plg27.0000°, Azm296.0000°;*

*MOS **09** 11:14:26.0±1.1, 59°.95S×150°.39E, h10km, mb5.7/15, MS5.4/21 Error ellipse: s-maj=27.8km s-min=8.7km az=93.5*

*NEIC **09** 11:14:26.9, 60°.14S×150°.44E, h10km*

*NEIC **09** 11:14:26.9, 60°.14S×150°.44E, h12km, Moment Tensor Solution. Duration: 4ˢ.4 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.10; $M_{\theta\theta}$5.28; $M_{\phi\phi}$-4.18; $M_{r\theta}$-1.28; $M_{\theta\phi}$-5.57; $M_{\phi r}$-1.31; Fault plane solution: $M_0$7.57000×10^{17} NP1: ϕ_s70.93000°, δ81.77000°, λ-165.86000°. NP2: ϕ_s338.86000°, δ76.01000°, λ-8.48000°. Principal axes: T 7.9007, Plg4.0000°, Azm204.0000°; N -0.6562, Plg74.0000°, Azm101.0000°; P -7.2445, Plg16.0000°, Azm295.0000°;*

*NEIC **09** 11:14:27, 60°.14S×150°.54E, h10km*

*GCMT **09** 11:14:29.4±0.1, 60°.02S×150°.16E, h12km, MW5.9/158, Moment Tensor Solution. s154,c310; s158,c495; Duration: 2ˢ.2 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.03±.01; $M_{\theta\theta}$0.54±.01; $M_{\phi\phi}$-0.51±.01; $M_{r\theta}$-0.23±.01; $M_{\theta\phi}$-0.68±.01; $M_{\phi r}$0.02±.01; Best double couple: $M_0$0.89000×10^{18} NP1: ϕ_s251.00000°, δ85.00000°, λ166.00000°. NP2: ϕ_s342.00000°, δ76.00000°, λ5.00000°. Principal axes: T 0.9250, Plg13.0000°, Azm206.0000°; N -0.0690, Plg76.0000°, Azm52.0000°; P -0.8560, Plg6.0000°, Azm297.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 09 11:14:27.1±0.5**, 60°.22S**±0°.04×**150°.37E**±0°.05**, h14km**±2km**, h14km:pP-P, n782, σ1ˢ.63**/618**, mb5.5**/120**, MS5.7**/274**, 23C-41D, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**7.38**	**43**	P	**Pn**	**11 16 11.6**	**-2.6**
	baz=7.3,SNR=4.3						
MCQ	**Macquarie Isla**	**7.38**	**43**	Pn	**Pn**	**11 16 12.5**	**-1.7**
MCQ	**Macquarie Isla**	**7.38**	**43**	P	**Pn**	**11 16 13.2**	**-1.1**
MCQ	**Macquarie Isla**	**7.38**	**43**	P	**Pn**	**11 16 12.5**	**-1.7**
AUTAR	**Taroona High S**	**17.41**	**353**	P	**P**	**11 18 31.2**	**+0.7**
TAU	**Tasmania Unive**	**17.44**	**353**	P	**Pn**	**11 18 29.7**	**0.0**
TAU				IAmb	IAmb	11 18 36.6	
	comp=Z,408nm,1.2s						
TAU	**Tasmania Unive**	**17.44**	**353**	P	**P**	**11 18 30.7**	**-0.2**
TAU	**Tasmania Unive**	**17.44**	**353**	P	**Pn**	**11 18 29.7**	**0.0**
TAU				pmax	pmax		
	comp=Z,408nm,1.3s						
SYZ	**Scrubby Hill**	**17.60**	**47**	P	**Pn**	**11 18 31.6**	**-0.1**
WHZ	**Wether Hill Ro**	**17.73**	**44**		**Pn**	**11 18 33.6**	**+0.2**
WHZ				IAmb	IAmb	11 18 35.1	
	comp=Z,655nm,1.7s						
VNDA	**Vanda**	**17.79**	**172**	P	**Pn**	**11 18 27.3**	**-6.6**
	comp=Z,0.6nm,0.8s,baz=8.3,slow=15,SNR=1.1						
VNDA				S	**Sn**	**11 21 53.5**	**+1.9**
	comp=Z,3.2nm,0.9s,baz=261,slow=19,SNR=1.0						
VNDA				LR	LR	11 24 56.0	
	comp=Z,42µm,18.9s,baz=352,slow=35						
VNDA	**Vanda**	**17.79**	**172**	Pn	**Pn**	**11 18 31.5**	**-2.3**
VNDA	**Vanda**	**17.79**	**172**	P	**Pn**	**11 18 31.5**	**-2.3**
VNDA				pmax	pmax		
	comp=Z,88nm,1.6s						
DCZ	**Deep Cove**	**17.84**	**42**	P	**Pn**	**11 18 33.9**	**-0.8**
MOO	**Moorlands**	**17.91**	**352**	P	**Pn**	**11 18 33.8**	**-1.7**
	baz=18,SNR=21						
MOO	**Moorlands**	**17.91**	**352**	P	**Pn**	**11 18 35.2**	**-0.4**
MLZ	**Mavora Lakes**	**18.25**	**43**		**Pn**	**11 18 39.4**	**-0.3**
MLZ				IAmb	IAmb	11 18 42.1	
	comp=Z,705nm,1.6s						
SBA	**Scott Base**	**18.51**	**169**	P	**P**	**11 18 40.9**	**-1.5**
SBA	**Scott Base**	**18.51**	**169**	P	**P**	**11 18 40.9**	**-1.5**
SBA				pmax	pmax		
	comp=Z,230nm,1.8s						
CASY	**Casey**	**18.64**	**234**		**P**	**11 18 44.4**	**+0.4**
CORO	**Coronation Par**	**18.90**	**353**	P	**P**	**11 18 46.7**	**-0.3**
	comp=Z,92nm,1.2s						
WKZ	**Wanaka**	**19.03**	**44**		**P**	**11 18 48.8**	**+0.4**
AULHS	**Lilydale High**	**19.10**	**353**	P	**P**	**11 18 48.1**	**-1.1**
GLAD	**Gladstone**	**19.32**	**355**	P	**Pn**	**11 18 52.5**	**-0.1**
	comp=Z,111nm,1.2s						
ODZ	**Otahua Downs**	**19.43**	**48**	P	**P**	**11 18 52.5**	**-0.2**
JCZ	**Jackson Bay**	**19.61**	**43**	P	**Pn**	**11 18 58.4**	**+2.1**

LBZ	Lake Benmore	19.83	46	P	P	11 18 57.1	0.0
FOZ	Fox Glacier	20.44	44	P	P	11 19 03.3	-0.5
FOZ				IAMs_20	IAMs_20	11 25 05.3	
	comp=Z,38µm,20.0s						
RPZ	Rata Peaks	20.72	46	P	P	11 19 02.9	-3.9
	comp=Z,9.3nm,0.9s,baz=195,slow=11,SNR=2.8						
RPZ				LR	LR	11 25 31.3	
	comp=Z,30µm,19.9s,baz=194,slow=32						
	comp=Z,9.3nm,0.9s						
RPZ	Rata Peaks	20.72	46	P	P	11 19 06.8	-0.1
RPZ				IAmb	IAmb	11 19 19.5	
	comp=Z,294nm,1.7s						
RPZ				IAMs_20	IAMs_20	11 25 19.7	
	comp=Z,30µm,19.0s						
MQZ	McQueen's Vall	21.32	49	IAMs_20	IAMs_20	11 26 05.7	
	comp=Z,39µm,18.0s						
OXZ	Oxford	21.42	48	P	P	11 19 13.7	-0.6
OXZ				IAmb	IAmb	11 19 24.4	
	comp=Z,333nm,1.8s						
OXZ				IAMs_20	IAMs_20	11 25 32.2	
	comp=Z,31µm,21.0s						
INZ	Inchbonnie	21.72	46	P	P	11 19 16.6	-1.0
INZ				IAmb	IAmb	11 19 24.8	
	comp=Z,383nm,1.6s						
LTZ	Lake Taylor	21.97	47	P	P	11 19 19.9	-0.4
LTZ				IAmb	IAmb	11 19 40.7	
	comp=Z,439nm,1.9s						
LTZ				IAMs_20	IAMs_20	11 26 19.9	
	comp=Z,37µm,18.0s						
GVZ	Greta Valley S	22.10	49	IAMs_20	IAMs_20	11 26 03.2	
	comp=Z,37µm,19.0s						
AUSSC	Sale College,	22.24	353	P	P	11 19 24.3	+1.1
GEXS	Deakin Univers	22.38	347	P	P	11 19 25.4	+0.8
	comp=Z,207nm,0.9s						
MLBS	Spotswood, Mel	22.68	349	P	P	11 19 30.1	+2.2
DSZ	Denniston Nort	22.71	45	IAMs_20	IAMs_20	11 26 24.4	
	comp=Z,39µm,20.0s						
AUHPC	Hawkesdale P12	22.72	343	P	P	11 19 29.3	+1.1
KHZ	Kahutara	22.76	49	P	P	11 19 27.8	-0.9
KHZ				IAmb	IAmb	11 19 38.9	
	comp=Z,211nm,1.7s						
KHZ				IAMs_20	IAMs_20	11 26 22.8	
	comp=Z,40µm,20.0s						
TOO	Toolangi	22.88	350	P	P	11 19 28.8	-1.3
	baz=23,SNR=15						
TOO	Toolangi	22.88	350	P	P	11 19 29.5	-0.6
TOO	Toolangi	22.88	350	P	P	11 19 30.0	-0.1
TOO	Toolangi	22.88	350	P	P	11 19 29.5	-0.6
TOO				pmax	pmax		
	comp=Z,887nm,1.8s						
THZ	Tophouse	23.09	47	P	P	11 19 31.8	-0.4
MILA	Mila	23.20	358	P	P	11 19 32.2	-1.2
	baz=23,SNR=11						
MILA	Mila	23.20	358	P	P	11 19 32.6	-0.8
MRNZ	Matariki Terra	23.36	46	P	P	11 19 34.3	-0.5
QRZ	Quartz Range	23.78	45	P	P	11 19 37.6	-1.4
QRZ				IAMs_20	IAMs_20	11 26 55.6	
	comp=Z,40µm,20.0s						
ARPS	Mount Arapiles	24.10	343	P	P	11 19 39.9	-2.1
	baz=24,SNR=19						
ARPS	Mount Arapiles	24.10	343	P	P	11 19 42.6	+0.6
BHW	Baring Head	24.13	50	IAMs_20	IAMs_20	11 28 37.1	
	comp=Z,31µm,18.0s						
SNZO	South Karori	24.15	49	IAMs_20	IAMs_20	11 27 38.7	
	comp=Z,33µm,19.0s						
CNB	Canberra Magne	24.93	358	P	P	11 19 49.5	-0.2
CAN	Canberra	24.93	357	IAmb	IAmb	11 20 06.3	
	comp=Z,289nm,1.7s						
MRZ	Mangatainoka R	25.05	50	P	P	11 19 49.5	-1.1
MRZ				IAmb	IAmb	11 20 10.7	
	comp=Z,342nm,2.0s						
MRZ				IAMs_20	IAMs_20	11 27 33.3	
	comp=Z,26µm,22.0s						
BFZ	Birch Farm	25.29	51	IAMs_20	IAMs_20	11 28 34.7	
	comp=Z,29µm,18.0s						
YNG	Young	25.97	356	P	P	11 19 58.6	-0.4
SYDH	Sydney Hard Ro	26.47	1	P	P	11 20 04.7	+1.2
HIZ	Hauiti	26.66	46	IAMs_20	IAMs_20	11 28 47.9	
	comp=Z,30µm,20.0s						
BKZ	Black Stump Fm	26.69	50	P	P	11 20 05.0	-0.6
BKZ				IAmb	IAmb	11 20 24.5	
	comp=Z,130nm,1.7s						
BKZ	Black Stump Fm	26.69	50	P	P	11 20 07.9	+2.3
RTZ	Ruatahuna	27.36	50	P	P	11 20 11.6	0.0
RTZ				IAMs_20	IAMs_20	11 30 20.5	
	comp=Z,25µm,18.0s						
URZ	Urewera	27.72	50	P	P	11 20 11.3	-3.4
	comp=Z,9.5nm,0.8s,baz=209,slow=9.7,SNR=1.7						
URZ				LR	LR	11 30 32.8	
	comp=Z,27µm,18.7s,baz=293,slow=35						
	comp=Z,9.5nm,0.8s						
HTT	Hallett	27.84	339	P	P	11 20 14.3	-1.6
	baz=28,SNR=5.7						
HTT	Hallett	27.84	339	P	P	11 20 17.5	+1.6
AUDCS	Dubbo College	28.02	357	P	P	11 20 18.1	+0.6
MXZ	Matakaoa Point	28.79	51	IAMs_20	IAMs_20	11 30 05.3	
	comp=Z,21µm,22.0s						
CMSA	Cobar Meteorol	28.86	352	P	P	11 20 23.4	-1.6
	baz=29,SNR=14						
CMSA	Cobar Meteorol	28.86	352	P	P	11 20 25.3	+0.4
STKA	Stephens Creek	28.95	344	P	P	11 20 23.6	-2.1
	comp=Z,14nm,1.0s,baz=160,slow=11,SNR=14						
STKA				S	S	11 25 16.6	+0.9
	comp=Z,0.5nm,0.3s,baz=112,slow=16,SNR=1.0						
STKA				LR	LR	11 29 57.2	
	comp=Z,10µm,19.7s,baz=170,slow=32						
	comp=Z,14nm,1.0s						
STKA	Stephens Creek	28.95	344	P	P	11 20 24.6	-1.2
	baz=29,SNR=8.0						
STKA	Stephens Creek	28.95	344	P	P	11 20 24.5	-1.2
STKA	Stephens Creek	28.95	344	P	P	11 20 26.5	+0.8
BBOO	Buckleboo	29.00	335	P	P	11 20 24.7	-1.5
	baz=29,SNR=7.1						
BBOO	Buckleboo	29.00	335	P	P	11 20 24.8	-1.4
BBOO				IAmb	IAmb	11 20 40.5	
	comp=Z,225nm,2.0s						
BBOO	Buckleboo	29.00	335	P	P	11 20 27.8	+1.6
QSPA	South Pole Qui	29.87	180	P	P	11 20 32.1	-1.8
	comp=Z,6.8nm,1.0s,baz=3.9,slow=4.6,SNR=11						
QSPA				LR	LR	11 32 21.6	
	comp=Z,17µm,20.7s,baz=14,slow=36						
	comp=Z,6.8nm,1.0s						
QSPA	South Pole Qui	29.87	180	P	P	11 20 33.6	-0.2
QSPA				IAmb	IAmb	11 21 28.2	
	comp=Z,86nm,1.3s						
QSPA	South Pole Qui	29.87	180	IAMs_20	IAMs_20	11 32 00.2	
	comp=Z,18µm,21.0s						
AULRC	Lightning Ridg	30.83	356	P	P	11 20 44.6	+2.2
LCRK	Leigh Creek	30.87	339	P	P	11 20 43.4	+0.6
MULG	Mulgathing	31.88	333	P	P	11 20 50.6	-1.0
FORT	Forrest	33.00	323	P	P	11 20 59.9	-1.5
	baz=33,SNR=9.7						
FORT	Forrest	33.00	323	IAmb	IAmb	11 21 07.7	
	comp=Z,82nm,0.9s						
FORT	Forrest	33.00	323	P	P	11 21 03.1	+1.7
INKA	Innaminka	33.13	344	P	P	11 21 01.7	-0.9
RMQ	Roma	33.74	357	P	P	11 21 06.9	-1.0
	baz=34,SNR=6.4						
RMQ	Roma	33.74	357	P	P	11 21 08.7	+0.7
QLP	Quilpie	33.89	350	P	P	11 21 08.3	-0.9
	baz=34,SNR=6.2						
QLP	Quilpie	33.89	350	P	P	11 21 09.8	+0.6
OOD	Oodnadatta	33.93	336	P	P	11 21 10.0	+0.4
H01W1	Cape Leeuwin H	34.46	301	T	T	11 57 41.3	
	baz=147,slow=74,SNR=361						
H01W2	Cape Leeuwin H	34.47	301	T	T	11 57 41.4	
	baz=147,slow=74,SNR=345						
H01W3	Cape Leeuwin H	34.48	301	T	T	11 57 42.5	
	baz=147,slow=74,SNR=305						
KMBL	Kambalda	34.50	314	P	P	11 21 14.4	-0.1
	comp=Z,83nm,2.4s						
EIDS	Eidsvold	34.84	1	P	P	11 21 17.5	+0.1
	baz=35,SNR=3.5						
EIDS	Eidsvold	34.84	1	P	P	11 21 15.6	-1.8
EIDS				IAmb	IAmb	11 21 45.1	
	comp=Z,151nm,1.9s						
EIDS	Eidsvold	34.84	1	P	P	11 21 17.6	+0.1
NWAO	Narrogin (SRO)	34.88	307	P	P	11 21 15.7	-2.1
	comp=Z,20nm,1.1s,baz=12,slow=4.3,SNR=3.4						
NWAO				LR	LR	11 31 56.8	
	comp=Z,19µm,20.9s,baz=143,slow=30						
	comp=Z,20nm,1.1s						
NWAO	Narrogin (SRO)	34.88	307	P	P	11 21 15.3	-2.5
NWAO	Narrogin (SRO)	34.88	307	P	P	11 21 16.7	-1.1
NWAO				IAmb	IAmb	11 21 51.2	
	comp=Z,135nm,1.6s						
NWAO	Narrogin (SRO)	34.88	307	IAMs_20	IAMs_20	11 31 45.3	
	comp=Z,17µm,20.0s						
NWAO	Narrogin (SRO)	34.88	307	P	P	11 21 16.6	-1.1
NWAO	Narrogin (SRO)	34.88	307	P	P	11 21 16.7	-1.1
NWAO				pmax	pmax		
	comp=Z,135nm,1.7s						
KLBR	Kellerberrin	35.85	308	P	P	11 21 25.5	-0.6
	baz=36,SNR=6.8						
KLBR	Kellerberrin	35.85	308	P	P	11 21 26.3	+0.1
MAW	Mawson	36.03	221	LR	LR	11 36 17.9	
	comp=Z,9µm,18.3s,baz=114,slow=36						
MUN	Mundaring	36.13	306	P	P	11 21 27.8	-0.7
	baz=36,SNR=4.9						
MUN	Mundaring	36.13	306	P	P	11 21 28.0	-0.5
BLDU	Ballidu	37.13	308	P	P	11 21 35.3	-1.7
	baz=37,SNR=4.9						
BLDU	Ballidu	37.13	308	P	P	11 21 36.7	-0.3
RAO	Raoul Island	37.60	49	LR	LR	11 36 09.6	
	comp=Z,19µm,18.3s,baz=199,slow=35						
AS01	Alice Springs	38.29	335	P	P	11 21 45.6	-1.4
	comp=Z,28nm,0.9s						
ASAR	Alice Springs	38.30	335	P	P	11 21 44.9	-2.2
	comp=Z,16nm,0.9s,baz=163,slow=9.6,SNR=128						
ASAR				PcP	PcP	11 24 00.5	-0.3
	comp=Z,4.0nm,0.9s,baz=145,slow=2.4,SNR=4.1						
ASAR				LR	LR	11 35 06.2	
	comp=Z,9µm,21.0s,baz=167,slow=32						
	comp=Z,16nm,0.9s						
ASAR	Alice Springs	38.30	335	P	P	11 21 44.7	-2.3
AS31	Alice Springs	38.30	335	P	P	11 21 45.2	-1.8
WRKA	Warakurna	38.34	327	P	P	11 21 45.3	-2.1
	baz=38,SNR=15						
WRKA	Warakurna	38.34	327	P	P	11 21 46.0	-1.4
MORW	Morawa	38.77	308	P	P	11 21 48.3	-2.6
	baz=39,SNR=3.5						
MORW	Morawa	38.77	308	P	P	11 21 49.1	-1.8
MORW				IAmb	IAmb	11 21 53.7	
	comp=Z,225nm,1.8s						
MORW	Morawa	38.77	308	P	P	11 21 50.4	-0.5
DZM	Mont Dzumac	39.77	24	*e*P	P	11 21 57.6	-1.8
	comp=Z,116nm,1.4s						
DZM				*e*S	S	11 28 03.9	+1.0
	comp=Z,2µm,26.4s						
DZM				*e*LR	LR	11 32 50.4	
	comp=Z,45µm,25.9s						
DZM	Mont Dzumac	39.77	24	P	P	11 21 57.2	-2.2
	comp=Z,16nm,1.0s,baz=206,slow=8.6,SNR=5.9						
DZM				LR	LR	11 36 00.3	
	comp=Z,15µm,18.1s,baz=206,slow=33						
	comp=Z,16nm,1.0s						
DZM	Mont Dzumac	39.77	24	P	P	11 21 56.8	-2.6
DZM	Mont Dzumac	39.77	24	P	P	11 21 59.0	-0.4
YATNC	Mamie plateau,	39.87	24	P	P	11 21 59.8	-0.3
MEEK	Meekatharra	39.98	313	P	P	11 21 59.9	-1.1
	baz=40,SNR=7.7						
MEEK	Meekatharra	39.98	313	P	P	11 21 59.5	-1.5
CTA	Charters Tower	40.20	354	P	P	11 22 01.4	-1.5
	comp=Z,23nm,0.9s,baz=192,slow=9.1,SNR=11						
CTA				LR	LR	11 36 26.7	
	comp=Z,14µm,20.1s,baz=181,slow=33						
	comp=Z,23nm,0.9s						
CTA	Charters Tower	40.20	354	P	P	11 22 03.3	+0.4
CTAO	Charters Tower	40.20	354	P	P	11 22 00.8	-2.1
CTAO				IAmb	IAmb	11 22 23.3	
	comp=Z,304nm,2.0s						
CTAO	Charters Tower	40.20	354	IAMs_20	IAMs_20	11 36 04.3	
	comp=Z,15µm,18.0s						
CTAO	Charters Tower	40.20	354	P	P	11 22 03.6	+0.7
CTAO	Charters Tower	40.20	354	P	P	11 22 00.8	-2.1
CTAO				pmax	pmax		
	comp=Z,304nm,2.0s						
QIS	Mount Isa	40.36	344	P	P	11 22 02.3	-1.9
	baz=40,SNR=17						
QIS	Mount Isa	40.36	344	P	P	11 22 02.7	-1.5
KOUNC	Koumac, New Ca	40.85	20	P	P	11 22 06.8	-1.4
KOUNC				IAmb	IAmb	11 22 12.5	
	comp=Z,191nm,1.3s						
KOUNC	Koumac, New Ca	40.85	20	P	P	11 22 07.3	-0.9
TV1H	Townsville Har	40.99	355	P	P	11 22 10.1	+0.7
LIFNC	LIFOU	41.19	24	IAMs_20	IAMs_20	11 35 39.9	
	comp=Z,12µm,20.0s						
WRA	Warramunga Arr	41.83	337	P	P	11 22 13.6	-2.7
	comp=Z,34nm,1.1s,baz=164,slow=6.9,SNR=76						
WRA				PcP	PcP	11 24 11.9	-0.2
	comp=Z,5.7nm,0.9s,baz=181,slow=3.2,SNR=3.6						
WRA				S	S	11 28 30.4	-3.0
	comp=Z,0.2nm,0.5s,baz=179,slow=11,SNR=1.1						
WRA				LR	LR	11 37 31.3	
	comp=Z,7µm,21.1s,baz=161,slow=33						
	comp=Z,34nm,1.1s						
WRAB	Tennant Creek	41.84	337	P	P	11 22 13.7	-2.7
WRAB	Tennant Creek	41.84	337	P	P	11 22 15.0	-1.4
WRAB	Tennant Creek	41.84	337	P	P	11 22 13.7	-2.7
WRAB				pmax	pmax		
	comp=Z,428nm,1.8s						
BELA	Belgrano 2	42.11	178	P	P	11 22 19.5	+1.5
MTSU	Mount Surprise	42.26	351	P	P	11 22 18.7	-1.1
	baz=42,SNR=19						
MTSU	Mount Surprise	42.26	351	P	P	11 22 20.0	+0.1
PSA00	Pilbara Seismi	44.19	317	P	P	11 22 33.6	-1.9
PSA00				IAmb	IAmb	11 22 37.7	
	comp=Z,149nm,1.3s						
PSA00	Pilbara Seismi	44.19	317	P	P	11 22 33.4	-2.0
PSA00				IAmb	IAmb	11 22 37.7	
	comp=Z,98nm,1.3s						
PSA00	Pilbara Seismi	44.19	317	P	P	11 22 34.3	-1.1
MBWA	Marble Bar	44.62	317	P	P	11 22 37.4	-1.5
MBWA				IAmb	IAmb	11 22 41.0	
	comp=Z,168nm,1.5s						
MBWA	Marble Bar	44.62	317	P	P	11 22 37.8	-1.0
NVL	N'lazarevskaya	46.08	198	*e*P	P	11 22 50.8	+0.9
NVL				*e*		11 24 37.1	
NVL				*e*PPP	PPP	11 25 25.9	
NVL				*e*S	S	11 29 34.4	0.0
NVL				*e*SS	SS	11 33 03.9	+5.2
NVL				*e*SSS	SSS	11 34 06.9	
NVL				pmax	pmax		
	comp=Z,53nm,1.1s						
NVL				MLR	MLR		
	comp=Z,15µm,16.0s						
TROLL	Troll, Antarti	46.19	193	P	P	11 22 50.7	-0.2
COEN	Coen	46.49	350	P	P	11 22 54.2	+0.5
	baz=46,SNR=14						
COEN	Coen	46.49	350	P	P	11 22 51.8	-1.9
COEN	Coen	46.49	350	P	P	11 22 55.5	+1.8
MSVF	Nonsavu	46.88	37	P	P	11 22 56.1	-0.7
	comp=Z,1.2nm,0.3s,baz=96,slow=19,SNR=1.9						
MSVF				LR	LR	11 39 22.5	
	comp=Z,13µm,18.1s,baz=221,slow=32						
	comp=Z,1.2nm,0.3s						
SNAA	Sanae	47.08	191	P	P	11 22 57.5	-0.2
SNAA	Sanae	47.08	191	LR	LR	11 43 07.6	
	comp=Z,11µm,19.1s,baz=163,slow=36						
SNAA	Sanae	47.08	191	P	P	11 22 57.0	-0.7
SNAA				IAmb	IAmb	11 23 02.6	
	comp=Z,62nm,1.3s						
SNAA	Sanae	47.08	191	P	P	11 22 57.1	-0.7
SNAA				pmax	pmax		
	comp=Z,62nm,1.3s						
SNAA				MLR	MLR		
	comp=Z,13µm,18.0s						
KNRA	Kununurra	47.18	331	P	P	11 22 57.8	-1.2
	baz=47,SNR=17						
KNRA	Kununurra	47.18	331	P	P	11 22 56.8	-2.2
KNRA	Kununurra	47.18	331	P	P	11 22 58.0	-1.0
VNA3	Neumayer Olymp	48.08	189	P	P	11 23 05.2	-0.2
VNA2	Neumayer--Watz	48.21	190	P	P	11 23 07.0	+0.5
	baz=154,slow=7.0						
VNA1	Neumayer--Stat	48.55	189	P	P	11 23 09.5	+0.5
KDU	Kakadu	49.26	337	P	P	11 23 13.7	-1.4
	baz=49,SNR=21						
KDU	Kakadu	49.26	337	P	P	11 23 13.8	-1.3
MTN	Manton Dam	49.38	335	P	P	11 23 14.6	-1.4
	baz=49,SNR=25						
MTN	Manton Dam	49.38	335	IAmb	IAmb	11 23 17.9	
	comp=Z,101nm,1.1s						
MTN	Manton Dam	49.38	335	P	P	11 23 14.8	-1.2
PMG	Port Moresby	50.77	356	P	P	11 23 25.4	-1.1
	comp=Z,22nm,0.9s,baz=189,slow=4.1,SNR=6.1						
PMG				S	S	11 30 43.4	+1.8
	comp=Z,3.2nm,0.4s,baz=318,slow=17,SNR=1.3						
PMG				LR	LR	11 41 09.7	
	comp=Z,8µm,21.1s,baz=183,slow=32						
	comp=Z,22nm,0.9s						
PMG	Port Moresby	50.77	356	P	P	11 23 25.8	-0.8
PMG				IAmb	IAmb	11 23 47.5	
	comp=Z,183nm,1.8s						
PMG	Port Moresby	50.77	356	IAMs_20	IAMs_20	11 40 57.8	
	comp=Z,8µm,20.0s						
PMG	Port Moresby	50.77	356	P	P	11 23 27.5	+0.9
PMG	Port Moresby	50.77	356	P	P	11 23 27.4	+0.9
PMG	Port Moresby	50.77	356	P	P	11 23 25.8	-0.8
PMG				pmax	pmax		
	comp=Z,183nm,1.8s						
HNR	Honiara	51.19	12	P	P	11 23 29.4	-0.3
	comp=Z,499nm,0.4s,baz=195,slow=16,SNR=1.6						
RAR	Rarotonga	52.27	64	LR	LR	11 43 07.3	
	comp=Z,4µm,18.4s,baz=209,slow=33						
AFI	Afiamalu	53.87	48	LR	LR	11 44 28.5	
	comp=Z,3µm,20.8s,baz=202,slow=34						
SOEI	Soe	54.00	328	P	P	11 23 51.2	+0.5
SOEI	Soe	54.00	328	P	P	11 23 50.9	+0.2
	comp=Z,90nm,2.0s,comp=Z,4µmcomp=Z,3µm						
SAUI	Saumlaki	54.07	336	P	P	11 23 51.4	+0.3
	comp=Z,143nm,1.6s,comp=Z,6µm						
BASI	Baing, Sumba	54.61	323	P	P	11 23 55.1	+0.1
	comp=Z,237nm,1.7s,comp=Z,4µmcomp=Z,2µm						
TBI	Tubuai	55.27	76	*e*P	P	11 24 02.0	+2.3
	comp=Z,326nm,24.5s						
TBI				*e*S	S	11 31 44.2	+1.3
	comp=Z,3µm,27.2s						
TBI				*e*SS	SS	11 35 30.3	+3.4
	comp=Z,3µm,28.8s						
TBI				*e*LR	LR	11 40 02.5	
	comp=Z,11µm,22.2s						
TBI				*e*LR	LR	11 40 02.8	
	comp=Z,63µm,21.8s						
TBI	Tubuai	55.27	76	*e*T	T	12 23 17.4	
	comp=Z,12nm,0.4s						
MMRI	Maumere	55.63	326	IAMs_20	IAMs_20	11 46 23.0	
	comp=Z,9µm,20.0s						
MMRI	Maumere	55.63	326	P	P	11 24 01.2	-1.2
	comp=Z,139nm,1.3s,comp=Z,4µmcomp=Z,2µm						
KRVT	Keravat (AS076	55.79	2	P	P	11 24 00.8	-2.7
	comp=Z,9.5nm,0.5s,baz=180,slow=19,SNR=1.5						
KRVT				LR	LR	11 45 59.2	
	comp=Z,3µm,20.3s,baz=303,slow=34						
	comp=Z,9.5nm,0.5s						
PLAI	Plampang	56.79	320	P	P	11 24 11.0	+0.4
	comp=Z,64nm,1.9s,comp=Z,2µmcomp=Z,2µm						
TWSI	Taliwang, Sumb	57.16	320	P	P	11 24 13.1	-0.2
	comp=Z,66nm,1.5s,comp=Z,3µm						
IGBI	Denpasar	57.66	318	P	P	11 24 15.9	-0.9
	comp=Z,76nm,1.2s,comp=Z,2µm						
BNDI	Bandanaira	57.72	336	P	P	11 24 18.3	+1.1
	comp=Z,268nm,1.8s						
GENI	Genyem	58.02	348	P	P	11 24 19.7	+0.4
	comp=Z,58nm,0.8s						
JAGI	Jajag, Banyuwa	58.32	317	P	P	11 24 22.9	+1.5
	comp=Z,39nm,0.9s,comp=Z,2µmcomp=Z,2µm						
SRBI	Singaraja	58.32	318	P	P	11 24 21.1	-0.3
	comp=Z,64nm,2.7s,comp=Z,3µmcomp=Z,3µm						
BSSI	Bau Bau, Buton	58.50	324	P	P	11 24 23.5	+0.8
	comp=Z,98nm,2.0s,comp=Z,3µm						
GMJI	Gumukmas	58.75	316	P	P	11 24 23.6	-0.8
	comp=Z,49nm,1.9s,comp=Z,2µm						
SMPI	Sarmi	58.77	346	P	P	11 24 25.4	+0.9
	comp=Z,79nm,2.0s,comp=Z,3µm						
FAKI	Fak Fak	58.83	339	P	P	11 24 27.6	+2.7
FAKI	Fak Fak	58.83	339	P	P	11 24 24.2	-0.7
	comp=Z,146nm,1.0s,comp=Z,3µmcomp=Z,2µm						
AAI	Ambon	58.89	334	P	P	11 24 25.4	0.0
	comp=Z,53nm,0.6s,comp=Z,2µm						
ABJI	Asem Bagus	58.92	317	P	P	11 24 26.4	+0.8
	comp=Z,102nm,2.0s,comp=Z,4µmcomp=Z,4µm						
MSAI	Masohi	59.06	335	P	P	11 24 24.2	-2.4
	comp=Z,3.7nm,0.9s,comp=Z,616nm						
BLJI	Banyuglugur	59.19	316	P	P	11 24 27.8	+0.4
	comp=Z,48nm,1.7s,comp=Z,5µm						
SRPI	Serui, Papua	59.21	344	P	P	11 24 27.8	+0.2
BKSI	Bulukumba	59.39	324	P	P	11 24 26.9	-1.9
	comp=Z,33nm,1.9s,comp=Z,2µm						
PWJI	Pagerwojo	59.56	314	P	P	11 24 29.1	-0.9
	comp=Z,49nm,2.3s,comp=Z,2µm						
NLAI	Namlea	59.57	333	P	P	11 24 28.6	-1.5
	comp=Z,90nm,2.1s,comp=Z,3µm						
KAPI	Kappang	59.79	324	P	P	11 24 30.2	-1.4
	comp=Z,28nm,0.9s,baz=145,slow=18,SNR=11						
KAPI				S	S	11 32 38.8	-3.5
	comp=Z,1.6nm,0.3s,baz=245,slow=14,SNR=1.4						
KAPI				LR	LR	11 47 28.0	
	comp=Z,6µm,21.9s,baz=176,slow=33						
	comp=Z,28nm,0.9s						
KAPI	Kappang	59.79	324	P	P	11 24 31.3	-0.3
KAPI	Kappang	59.79	324	IAMs_20	IAMs_20	11 46 54.2	
	comp=Z,6µm,22.0s						
KAPI	Kappang	59.79	324	P	P	11 24 32.2	+0.6
KAPI	Kappang	59.79	324	P	P	11 24 31.3	-0.3
KAPI				pmax	pmax		
	comp=Z,141nm,1.5s						
RKPI	Ransiki, Papua	59.88	341	P	P	11 24 31.7	-0.5
	comp=Z,57nm,1.6s,comp=Z,10µm						
UGM	Wanagama	60.12	313	IAMs_20	IAMs_20	11 48 10.0	
	comp=Z,6µm,19.0s						
PPT2	Papeete2	60.14	72	*e*P	P	11 24 36.2	+2.1
	comp=Z,79nm,24.2s						
PPT2				*e*S	S	11 32 48.4	+1.4
	comp=Z,459nm,28.8s						
PPT2				*e*SS	SS	11 36 46.9	+3.2
	comp=Z,750nm,26.5s						
PPT2				*e*LR	LR	11 42 18.3	
	comp=Z,3µm,29.0s						
PPT2				*e*LR	LR	11 42 18.5	
	comp=Z,5µm,28.5s						
NGJI	Ngawi	60.29	314	P	P	11 24 36.2	+1.2
	comp=Z,129nm,2.0s,comp=Z,3µm						
GRJI	Gresik	60.35	315	P	P	11 24 37.8	+2.4
	comp=Z,89nm,1.1s,comp=Z,3µmcomp=Z,2µm						
SPSI	Sidrap Palu	60.78	324	P	P	11 24 37.8	-0.6
	comp=Z,68nm,0.9s,comp=Z,3µm						
SMRI	Semarang	60.95	313	IAMs_20	IAMs_20	11 48 49.0	
	comp=Z,6µm,19.0s						
SMRI	Semarang	60.95	313	P	P	11 24 42.2	+2.6
	comp=Z,119nm,2.0s,comp=Z,4µm						
SANI	Sanana	60.98	332	P	P	11 24 40.4	+0.7
SANI	Sanana	60.98	332	P	P	11 24 36.9	-2.8
	comp=Z,52nm,1.1s,comp=Z,1µm						
CMJI	Cimerak	61.01	311	P	P	11 24 41.8	+1.8
	comp=Z,45nm,2.2s,comp=Z,2µmcomp=Z,2µm						
KPJI	Karang Pucung	61.24	312	P	P	11 24 41.9	+0.4
	comp=Z,94nm,2.1s,comp=Z,2µm						
BWJI	Bawean	61.27	316	P	P	11 24 44.5	+2.8
	comp=Z,268nm,1.2s,comp=Z,13µm						
UWJI	Ujung Watu	61.35	314	P	P	11 24 42.3	0.0
	comp=Z,48nm,1.2s,comp=Z,10µm						
BBJI	Bungbulang	61.61	310	P	P	11 24 43.4	-0.7
COCO	West Island	61.84	297	IAMs_20	IAMs_20	11 44 29.7	
	comp=Z,6µm,22.0s						
CNJI	Cibinong	61.95	310	P	P	11 24 46.1	-0.2
	comp=Z,21nm,1.1s,comp=Z,856nm						
LBMI	Labuha	62.00	334	P	P	11 24 49.0	+2.4
	comp=Z,131nm,2.1s,comp=Z,4µm						
LUWI	Luwuk	62.74	329	P	P	11 24 51.9	+0.3
	comp=Z,70nm,1.8s,comp=Z,2µm						
BBKI	Banjar Baru	62.77	319	P	P	11 24 51.7	-0.1
VAH	Vaihoa	63.10	73	*e*T	T	12 33 09.2	
	comp=Z,18nm,0.4s						
CGJI	Cibinong	63.14	308	P	P	11 24 54.3	0.0
	comp=Z,59nm,1.4s,comp=Z,3µm						
SBJI	Serang	63.42	309	P	P	11 24 56.1	0.0
	comp=Z,109nm,1.3s						
BKB	Balikpapan	64.20	322	IAMs_20	IAMs_20	11 55 39.9	
	comp=Z,4µm,18.0s						
BKB	Balikpapan	64.20	322	P	P	11 25 03.1	+1.9
MRSI	Marisa	64.42	328	P	P	11 25 03.1	+0.5
	comp=Z,48nm,1.7s,comp=Z,2µm						
BLSI	Bandar Lampung	64.46	309	P	P	11 25 02.5	-0.4
PBKI	Pangkalan Bun	64.55	316	P	P	11 25 03.2	-0.3
	comp=Z,106nm,1.1s,comp=Z,30µm						
KASI	Kota Agung	64.61	308	P	P	11 25 02.8	-1.1
	comp=Z,49nm,1.3s,comp=Z,2µm						
MPSI	Mapaga	64.84	326	P	P	11 25 04.6	-0.8
	comp=Z,48nm,1.7s,comp=Z,2µm						
KLI	Kotabumi	65.07	308	P	P	11 25 06.6	-0.3
	comp=Z,111nm,0.4s						
MTKI	Muara Teweh, K	65.13	320	P	P	11 25 07.3	0.0
	comp=Z,139nm,2.1s,comp=Z,8µm						
LWLI	Liwa	65.24	308	P	P	11 25 07.1	-1.1
	comp=Z,119nm,1.8s,comp=Z,2µm						
TOLI2	Tolitoli	65.34	327	P	P	11 25 06.5	-2.2
TOLI2				IAmb	IAmb	11 25 23.5	
	comp=Z,93nm,1.6s						
TOLI2				IAMs_20	IAMs_20	11 52 20.2	
	comp=Z,7µm,20.0s						

MDSI	**Maura Dua**	**65.68**	**308**	P	**P**	**11 25 10.1**	**-0.8**
	comp=Z,32nm,2.5s,comp=Z,2µmcomp=Z,2µm						
HOPE	**Hope Point**	**65.71**	**176**	IAMs_20	IAMs_20	11 58 39.4	
	comp=Z,4µm,18.0s						
EFI	**East Falkland**	**66.13**	**161**	⇑*e*P	**P**	**11 25 09.8**	**-3.5**
EFI				pmax	pmax		
	comp=Z,78nm,1.3s						
EFI				MLR	MLR		
	comp=Z,998nm,16.0s						
PMBI	**Palembang**	**66.87**	**309**	IAMs_20	IAMs_20	11 49 29.3	
	comp=Z,5µm,21.0s						
PMBI	**Palembang**	**66.87**	**309**	P	**P**	**11 25 18.4**	**-0.1**
	comp=Z,294nm,0.5s						
PPBI	**Pangkal Pinang**	**67.05**	**311**	P	**P**	**11 25 18.2**	**-1.5**
KSI	**Kapahiang**	**67.07**	**307**	P	**P**	**11 25 20.1**	**+0.2**
	comp=Z,101nm,2.0s						
MASI	**Maura Aman, Be**	**67.68**	**307**	P	**P**	**11 25 25.2**	**+1.5**
	comp=Z,49nm,1.1s,comp=Z,2µm						
JMBI	**JAMBI**	**68.50**	**309**	P	**P**	**11 25 28.7**	**-0.1**
KSM	**Kuching**	**68.91**	**316**	P	**P**	**11 25 32.7**	**+1.4**
PPSI	**Pulau Pagai**	**68.92**	**304**	P	**P**	**11 25 34.4**	**+3.0**
	comp=Z,96nm,1.8s,comp=Z,3µm						
SBUM	**Sibu**	**69.18**	**319**	P	**P**	**11 25 32.1**	**-0.9**
DAV	**Davao City (W)**	**69.89**	**334**	LR	LR	11 57 33.7	
	comp=Z,829nm,18.4s,baz=155,slow=37						
SDSI	**Sungai Dareh**	**70.01**	**307**	P	**P**	**11 25 36.3**	**-1.8**
	comp=Z,32nm,0.5s,comp=Z,9µmcomp=Z,2µm						
KWAJ	**Kwajalein Atol**	**70.16**	**18**	IAMs_20	IAMs_20	11 49 37.1	
	comp=Z,6µm,22.0s						
PDSI	**Padang**	**70.42**	**306**	P	**P**	**11 25 39.7**	**-1.0**
	comp=Z,29nm,1.4s						
TPRI	**Tanjung Pinang**	**70.49**	**310**	P	**P**	**11 25 43.0**	**+1.9**
	comp=Z,45nm,0.6s						
BKNI	**Bangkinang**	**71.31**	**307**	P	**P**	**11 25 45.4**	**-0.7**
	comp=Z,67nm,0.5s,comp=Z,5µm						
RPN	**Rapa Nui**	**71.73**	**113**	LR	LR	11 49 02.8	
	comp=Z,2µm,21.9s,baz=204,slow=29						
PBSI	**Pulau Batu**	**72.09**	**304**	P	**P**	**11 25 51.0**	**+0.3**
	comp=Z,70nm,1.3s,comp=Z,3µm						
TAOE	**Nuku Hiva Isla**	**72.22**	**76**	*e*S	**S**	**11 35 14.8**	**+0.9**
	comp=Z,168nm,21.8s						
TAOE				*e*SS	**SS**	**11 39 53.2**	**+1.8**
	comp=Z,255nm,24.0s						
TAOE				*e*LR	LR	11 47 54.0	
	comp=Z,2µm,24.1s						
GSI	**Gunungsitoli**	**73.61**	**304**	P	**P**	**11 25 59.9**	**+0.1**
GSI	**Gunungsitoli**	**73.61**	**304**	P	**P**	**11 26 01.7**	**+1.9**
	comp=Z,58nm,1.9s						
GSI	**Gunungsitoli**	**73.61**	**304**	P	**P**	**11 25 59.7**	**-0.1**
	comp=Z,58nm,1.8s,comp=Z,2µm						
GUMO	**Guam**	**73.69**	**354**	LR	LR	11 59 08.4	
	comp=Z,2µm,18.2s,baz=184,slow=36						
PLCA	**Paso Flores**	**73.94**	**149**	P	**P**	**11 25 59.9**	**-1.7**
	comp=Z,6.3nm,1.0s,baz=243,slow=6.5,SNR=6.7						
PLCA				LR	LR	11 53 31.5	
	comp=Z,2µm,18.3s,baz=204,slow=32						
	comp=Z,6.3nm,1.0s						
PLCA	**Paso Flores**	**73.94**	**149**	P	**P**	**11 26 02.2**	**+0.6**
PLCA				IAmb	IAmb	11 26 23.5	
	comp=Z,67nm,1.5s						
PLCA	**Paso Flores**	**73.94**	**149**	P	**P**	**11 26 02.2**	**+0.6**
PLCA				pmax	pmax		
	comp=Z,67nm,1.5s						
RPSI	**Rantau Prapat**	**74.32**	**306**	IAmb	IAmb	11 26 19.7	
	comp=Z,117nm,1.9s						
PSI	**Prapat**	**74.41**	**306**	P	**P**	**11 26 02.9**	**-1.7**
GO06	**Curarrehue**	**74.78**	**148**	P	**P**	**11 26 08.7**	**+2.2**
GO06				IAmb	IAmb	11 26 36.8	
	comp=Z,74nm,1.8s						
IPM	**Ipoh**	**75.11**	**309**	P	**P**	**11 26 07.2**	**-1.3**
IPM	**Ipoh**	**75.11**	**309**	P	**P**	**11 26 09.4**	**+0.9**
	comp=Z,27nm,1.2s						
SNSI	**Sinabang, Aceh**	**75.13**	**303**	P	**P**	**11 26 10.7**	**+2.1**
	comp=Z,54nm,1.0s,comp=Z,2µmcomp=Z,2µm						
KCSI	**Kotacane, Aceh**	**75.54**	**305**	P	**P**	**11 26 09.5**	**-1.5**
	comp=Z,41nm,1.3s,comp=Z,1µm						
KULM	**Kulim**	**75.99**	**308**	IAMs_20	IAMs_20	11 53 35.7	
	comp=Z,4µm,22.0s						
MLSI	**Meulaboh, Aceh**	**76.77**	**304**	P	**P**	**11 26 18.2**	**+0.2**
	comp=Z,56nm,1.1s						
SOE	**Somerset East**	**76.95**	**225**	P	**P**	**11 26 20.5**	**+1.6**
SOE				IAmb	IAmb	11 26 36.1	
	comp=Z,96nm,1.3s						
H08S2	**Diego Garcia H**	**77.38**	**277**	T	T	12 51 41.7	
	baz=149,slow=76,SNR=103						
H08S1	**Diego Carcia H**	**77.39**	**277**	T	T	12 51 41.5	
	baz=149,slow=76,SNR=107						
H08S3	**Diego Garcia H**	**77.40**	**277**	T	T	12 51 42.3	
	baz=149,slow=76,SNR=108						
LHMI	**Lhok Sumawe**	**77.42**	**305**	IAMs_20	IAMs_20	11 55 51.5	
	comp=Z,4µm,20.0s						
DGAR	**Diego Garcia**	**77.60**	**277**	IAMs_20	IAMs_20	11 55 02.3	
	comp=Z,3µm,18.0s						
H03S2	**Juan Fernandez**	**77.92**	**140**	T	T	12 52 50.2	
	baz=201,slow=74,SNR=103						
H03S1	**Juan Fernandez**	**77.92**	**140**	T	T	12 52 51.4	
	baz=201,slow=74,SNR=77						
H03S3	**Juan Fernandez**	**77.93**	**140**	T	T	12 52 46.4	
	baz=201,slow=74,SNR=72						
SUR	**Sutherland**	**78.88**	**222**	LR	LR	11 56 17.9	
	comp=Z,3µm,21.4s,baz=156,slow=32						
SUR	**Sutherland**	**78.88**	**222**	P	**P**	**11 26 32.4**	**+2.5**
SUR	**Sutherland**	**78.88**	**222**	IAMs_20	IAMs_20	11 55 46.9	
	comp=Z,5µm,20.0s						
SRIT	**Nakonsritamara**	**79.42**	**309**	IAmb	IAmb	11 29 17.9	
	comp=Z,32nm,0.4s						
SRIT	**Nakonsritamara**	**79.42**	**309**	P	**P**	**11 26 33.8**	**+1.2**
	comp=Z,43nm,1.5s						
BO02	**Sierra Bellavi**	**79.46**	**147**	IAmb	IAmb	11 26 40.0	
	comp=Z,39nm,1.1s						
BO01	**Tunca**	**79.76**	**146**	P	**P**	**11 26 33.5**	**-0.9**
BO01				IAmb	IAmb	11 27 03.2	
	comp=Z,84nm,1.6s						
MT09	**Talagante**	**80.36**	**146**	IAmb	IAmb	11 27 07.5	
	comp=Z,151nm,1.9s						
BOSA	**Boshof**	**80.77**	**227**	P	**P**	**11 26 39.0**	**-1.1**
	comp=Z,10nm,0.9s,baz=155,slow=6.8,SNR=8.1						
BOSA				LR	LR	11 58 11.0	
	comp=Z,2µm,20.3s,baz=166,slow=32						
	comp=Z,10nm,0.9s						
BOSA	**Boshof**	**80.77**	**227**	P	**P**	**11 26 40.5**	**+0.5**
BOSA				IAmb	IAmb	11 26 58.4	
	comp=Z,104nm,1.6s						
BOSA	**Boshof**	**80.77**	**227**	P	**P**	**11 26 40.6**	**+0.5**
BOSA				pmax	pmax		
	comp=Z,104nm,1.6s						
H11N1	**WAKE ISLAND Hy**	**80.78**	**16**	T	T	12 55 09.2	
	baz=188,slow=76,SNR=4.9						
H11N3	**WAKE ISLAND Hy**	**80.78**	**16**	T	T	12 55 09.7	
	baz=188,slow=76,SNR=8.4						
H11N2	**WAKE ISLAND Hy**	**80.80**	**16**	T	T	12 55 10.6	
	baz=188,slow=76,SNR=4.8						
VA03	**San Esteban**	**81.44**	**146**	IAmb	IAmb	11 27 26.1	
	comp=Z,32nm,0.4s						
LPA	**La Plata**	**82.39**	**157**	*e*P	P	11 26 39.0	-9.3
LPA				pP	pP	11 26 50.1	-2.0
LPA				sP	pwP	11 26 56.1	+0.3
LPA				PP	PP	11 30 04.9	+8.5
LPA				pPP		11 30 16.5	
LPA				PPP	PPP	11 32 02.4	
LPA				PKIKP	**PKiKP**	**11 32 12.8**	**+3.5**
LPA				SKIKP		11 35 42.6	
LPA				PKIKS		11 35 48.8	
LPA				S	**S**	**11 36 59.2**	**-4.5**
LPA				sS	**ScS**	**11 37 16.4**	**-2.9**
LPA				PS	**PnS**	**11 37 57.6**	**+4.9**
LPA				PPS	PPS	11 38 20.0	
LPA				SKIKS		11 39 22.3	
LPA				SS	**SS**	**11 42 21.1**	**-1.8**
LPA				SSS	SSS	11 46 00.1	
CO02	**Combarbal**	**82.78**	**145**	IAmb	IAmb	11 26 59.2	
	comp=Z,41nm,1.0s						
LBTB	**Lobatse**	**83.91**	**229**	LR	LR	12 00 06.1	
	comp=Z,2µm,20.0s,baz=143,slow=33						
LBTB	**Lobatse**	**83.91**	**229**	IAmb	IAmb	11 27 15.5	
	comp=Z,57nm,1.4s						
KAAM	**Kaadhehdhoo**	**84.16**	**281**	IAMs_20	IAMs_20	11 55 50.2	
	comp=Z,3µm,20.0s						
QIZ	**Qiongzhong**	**85.52**	**322**	P	**P**	**11 27 04.7**	**+0.4**
QIZ				PP	**PP**	**11 30 19.6**	**-3.6**
QIZ				S	**S**	**11 37 35.2**	**0.0**
QIZ				SS	**SS**	**11 43 15.2**	**+3.8**
QIZ				pmax	pmax		
	comp=Z,28nm,2.2s						
QIZ				pmax	pmax		
	comp=Z,740nm,3.6s						
QIZ				LR	LR		
	comp=Z,2µm,20.7s						
QIZ				LR	LR		
	comp=Z,2µm,23.9s						
QIZ				LR	LR		
	comp=Z,1µm,30.3s						
PALK	**Pallekele**	**86.38**	**291**	P	**P**	**11 27 07.0**	**-1.8**
	comp=Z,9.2nm,1.0s,baz=185,slow=11,SNR=3.7						
PALK				LR	LR	11 59 35.0	
	comp=Z,2µm,19.5s,baz=251,slow=31						
	comp=Z,9.2nm,1.0s						
PALK	**Pallekele**	**86.38**	**291**	P	**P**	**11 27 08.5**	**-0.3**
PALK				IAmb	IAmb	11 27 19.0	
	comp=Z,32nm,1.1s						
PALK	**Pallekele**	**86.38**	**291**	P	**P**	**11 27 08.5**	**-0.3**
PALK				pmax	pmax		
	comp=Z,32nm,1.2s						
NONG	**Nongkai**	**86.82**	**316**	P	**P**	**11 27 11.4**	**+0.7**
	comp=Z,40nm,1.4s						
JCJ	**Chichijima**	**87.26**	**353**	LR	LR	12 05 23.6	
	comp=Z,676nm,19.5s,baz=174,slow=35						
MSEY	**Mahe Island**	**88.41**	**263**	IAMs_20	IAMs_20	11 58 42.7	
	comp=Z,3µm,19.0s						
JOW	**Kunigami**	**88.61**	**340**	LR	LR	12 04 19.2	
	comp=Z,2µm,21.8s,baz=130,slow=34						
CMAR	**Chiang Mai Arr**	**88.70**	**312**	P	**P**	**11 27 18.4**	**-1.4**
	comp=Z,4.7nm,1.0s,baz=185,slow=4.3,SNR=21						
CMAR				PP	**PP**	**11 30 49.3**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=168,slow=6.9,SNR=4.8						
CMAR				LR	LR	12 05 47.3	
	comp=Z,2µm,18.4s,baz=160,slow=35						
	comp=Z,4.7nm,1.0s						
CMAR	**Chiang Mai Arr**	**88.70**	**312**	*i* P	**P**	**11 27 19.6**	**-0.1**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CHTO	**Chiang Mai**	**89.02**	**312**	P	**P**	**11 27 20.7**	**-0.5**
CHTO	**Chiang Mai**	**89.02**	**312**	P	**P**	**11 27 20.7**	**-0.5**
PB14	**IPOC Station P**	**89.14**	**144**	IAmb	IAmb	11 28 11.0	
	comp=Z,49nm,1.6s						
WIN	**Windhoek**	**89.17**	**222**	IAMs_20	IAMs_20	12 01 46.6	
	comp=Z,4µm,22.0s						
HMDM	**Hanimaadhoo**	**89.52**	**284**	IAMs_20	IAMs_20	11 58 39.1	
	comp=Z,4µm,20.0s						
PCHI	**Peechi**	**91.27**	**289**	*e*P	**P**	**11 27 29.2**	**-2.7**
PCHI				*e*S	**SKSac**	**11 38 04.1**	**+0.6**
LVC	**Limon Verde**	**91.48**	**144**	LR	LR	12 01 05.3	
	comp=Z,2µm,18.9s,baz=200,slow=31						
LSZ	**Lusaka**	**91.70**	**235**	P	**P**	**11 27 34.0**	**-0.2**
LSZ				IAmb	IAmb	11 27 52.7	
	comp=Z,49nm,1.8s						
LSZ	**Lusaka**	**91.70**	**235**	IAMs_20	IAMs_20	12 02 21.6	
	comp=Z,2µm,20.0s						
LSZ	**Lusaka**	**91.70**	**235**	P	**P**	**11 27 34.0**	**-0.2**
LSZ				pmax	pmax		
	comp=Z,49nm,1.8s						
TSUM	**Tsumeb**	**92.13**	**224**	IAMs_20	IAMs_20	12 06 03.8	
	comp=Z,3µm,20.0s						
JHJ	**Hachijo jima 2**	**93.41**	**351**	LR	LR	12 06 12.2	
	comp=Z,2µm,21.2s,baz=136,slow=33						
GYA	**Guiyang**	**93.47**	**322**	⇓*i*P	**P**	**11 27 41.2**	**-0.7**
GYA				PP	**PP**	**11 31 26.3**	**-0.4**
GYA				SKS	**SKSac**	**11 38 17.3**	**+1.8**
GYA				S	**S**	**11 38 49.2**	**-0.1**
GYA				SS	**SS**	**11 45 09.4**	**+2.4**
GYA				pmax	pmax		
	comp=Z,450nm,4.0s						
GYA				LR	LR		
	comp=Z,2µm,21.7s						
GYA				LR	LR		
	comp=Z,760nm,16.9s						
GYA				LR	LR		
	comp=Z,3µm,22.5s						
KMI	**Kunming**	**93.49**	**318**	⇓P	**P**	**11 27 42.1**	**-0.1**
KMI				SKS	**SKSac**	**11 38 19.0**	**+3.1**
KMI				S	**ScS**	**11 38 55.5**	**+4.1**
KMI				pmax	pmax		
	comp=Z,260nm,4.2s						
KMI				LR	LR		
	comp=Z,1µm,20.3s						
KMI				LR	LR		
	comp=Z,890nm,21.9s						
KMI				LR	LR		
	comp=Z,3µm,28.3s						
SSE	**Sheshan**	**94.10**	**335**	P	**P**	**11 27 43.2**	**-1.3**
SSE				S	**S**	**11 38 53.6**	**-0.7**
SSE				SS	**SS**	**11 45 17.5**	**+1.9**
SSE				pmax	pmax		
	comp=Z,17nm,0.7s						
SSE				pmax	pmax		
	comp=Z,120nm,3.5s						
SSE				LR	LR		
	comp=Z,480nm,20.2s						
JNU	**Nakatsue**	**94.38**	**344**	LR	LR	12 09 30.3	
	comp=Z,1µm,20.4s,baz=160,slow=35						
TNCH	**TengChong**	**94.87**	**314**	P	**P**	**11 27 49.3**	**+0.9**
TNCH				sP	pwP	11 28 02.2	+6.3
TNCH				PP	**PP**	**11 31 37.4**	**-0.3**
TNCH				SKS	**SKSac**	**11 38 25.5**	**+2.2**
TNCH				S	**S**	**11 39 00.9**	**-0.8**
TNCH				sS	sS	11 39 10.0	+1.9
TNCH				SS	**SS**	**11 45 32.2**	**+5.1**
TNCH				pmax	pmax		
	comp=Z,72nm,0.7s						
TNCH				pmax	pmax		
	comp=Z,250nm,3.5s						
TNCH				LR	LR		
	comp=Z,920nm,19.2s						
TNCH				LR	LR		
	comp=Z,650nm,17.7s						
TNCH				LR	LR		
	comp=Z,2µm,19.7s						
PZH	**PanZhiHua**	**95.10**	**318**	P	**P**	**11 27 49.9**	**+0.5**
PZH				sP	**pwP**	**11 28 03.3**	**+6.4**
PZH				SKS	**SKSac**	**11 38 23.6**	**-0.8**
PZH				S	**ScS**	**11 39 06.6**	**+2.0**
PZH				SS	**SS**	**11 45 32.6**	**+2.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.5s						
PZH				pmax	pmax		
	comp=Z,150nm,5.3s						
PZH				LR	LR		
	comp=Z,2µm,22.7s						
PZH				LR	LR		
	comp=Z,970nm,21.2s						
PZH				LR	LR		
	comp=Z,2µm,22.5s						
WHN	**Wuhan**	**95.16**	**329**	P	**P**	**11 27 48.7**	**-0.6**
WHN				PP	**PP**	**11 31 39.4**	**-0.3**
WHN				SKS	**SKSac**	**11 38 27.4**	**+3.3**
WHN				S	**ScS**	**11 39 03.9**	**-0.6**
WHN				LR	LR		
	comp=Z,4µm,19.6s						
WHN				LR	LR		
	comp=Z,2µm,19.4s						
WHN				LR	LR		
	comp=Z,4µm,21.1s						
BRDH	**Bariadhala**	**95.33**	**308**	LR	LR	12 09 05.3	
	comp=Z,2µm,19.4s,baz=20,slow=34						
NJ2	**Nanjing**	**95.53**	**334**	⇑P	**P**	**11 27 50.8**	**-0.2**
NJ2				pP	**pP**	**11 27 54.4**	**-0.5**
NJ2				sP	**sP**	**11 27 56.1**	**-0.2**
NJ2				PP	**PP**	**11 31 41.4**	**-1.1**
NJ2				SKS	**SKSac**	**11 38 29.5**	**+3.5**
NJ2				S	**ScS**	**11 39 10.2**	**+2.7**
NJ2				SS	**SS**	**11 45 39.5**	**+3.6**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,170nm,3.6s						
NJ2				LR	LR		
	comp=Z,1µm,19.0s						
NJ2				LR	LR		
	comp=Z,750nm,16.9s						
NJ2				LR	LR		
	comp=Z,2µm,19.9s						
HYB	**Hyderabad**	**96.26**	**294**	*e*P	**P**	**11 27 54.8**	**0.0**
HYB				*e*PP	**PP**	**11 31 46.2**	**-2.2**
HYB				*e*SKSac	**SKSac**	**11 38 30.0**	**-0.7**
HYB				IVMs_BB	IVMs_BB	12 01 26.2	
	comp=Z,604nm,21.3s						
MJAR	**Matsushiro Arr**	**96.93**	**350**	LR	LR	12 08 58.1	
	comp=Z,1µm,20.9s,baz=164,slow=34						
LPAZ	**La Paz**	**97.68**	**143**	P	Pdif	11 28 02.4	+0.3
	comp=Z,0.6nm,0.5s,baz=163,slow=3.9,SNR=3.6						
LPAZ				LR	LR	12 02 38.1	
	comp=Z,2µm,21.6s,baz=162,slow=30						
	comp=Z,0.6nm,0.5s						
LPAZ	**La Paz**	**97.68**	**143**	IAmb	IAmb	11 28 32.4	
	comp=Z,14nm,1.6s						
CD2	**Chengdu**	**98.52**	**321**	P	**P**	**11 28 04.0**	**-0.7**
CD2				SKS	**SKSac**	**11 38 39.4**	**-2.3**
CD2				S	**S**	**11 39 32.2**	**-0.4**
CD2				SS	**SS**	**11 46 18.2**	**-0.2**
CD2				pmax	pmax		
	comp=Z,150nm,4.5s						
CD2				LR	LR		
	comp=Z,350nm,17.0s						
CD2				LR	LR		
	comp=Z,400nm,13.6s						
CD2				LR	LR		
	comp=Z,2µm,21.6s						
NNA	**Nana**	**98.80**	**133**	LR	LR	12 03 52.8	
	comp=Z,2µm,18.1s,baz=190,slow=30						
KSRS	**Korea Array**	**99.07**	**342**	LR	LR	12 10 10.1	
	comp=Z,948nm,21.5s,baz=150,slow=34						
LYN	**LuoYang**	**99.44**	**329**	*e*P	**Pdif**	**11 28 08.1**	**-0.5**
LYN				PP	**PP**	**11 32 09.1**	**-3.6**
LYN				SKS	**SKSac**	**11 38 49.4**	**+3.4**
LYN				S	**ScS**	**11 39 42.8**	**+2.7**
LYN				pmax	pmax		
	comp=Z,190nm,4.8s						
LYN				LR	LR		
	comp=Z,1µm,22.2s						
LYN				LR	LR		
	comp=Z,720nm,20.2s						
LYN				LR	LR		
	comp=Z,1µm,28.8s						
XAN	**Xi'an**	**99.91**	**326**	P	**Pdif**	**11 28 10.8**	**0.0**
XAN				sP	sP	11 28 17.5	+1.3
XAN				PP	**PP**	**11 32 19.1**	**+2.8**
XAN				SKS	**SKSac**	**11 38 47.6**	**-0.9**
XAN				S	**ScS**	**11 39 41.3**	**-2.9**
XAN				sS	pS	11 39 49.2	+0.1
XAN				SS	**SS**	**11 46 36.1**	**-1.7**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
XAN				pmax	pmax		
	comp=Z,160nm,4.0s						
XAN				LR	LR		
	comp=Z,1µm,20.3s						
XAN				LR	LR		
	comp=Z,850nm,20.6s						
XAN				LR	LR		
	comp=Z,2µm,23.7s						
SIV	**San Ignacio**	**99.92**	**149**	LR	LR	12 11 57.2	
	comp=Z,938nm,18.0s,baz=186,slow=34						
DL2	**Dalian**	**101.57**	**337**	*e*P	**Pdif**	**11 28 18.6**	**+0.7**
DL2				SKS		11 38 58.0	
DL2				S	**Sdif**	**11 39 58.8**	**+1.2**
DL2				SS	**SS**	**11 46 58.9**	**-1.7**
DL2				pmax	pmax		
	comp=Z,26nm,0.8s						
DL2				pmax	pmax		
	comp=Z,190nm,6.2s						
DL2				LR	LR		
	comp=Z,1µm,19.6s						
DL2				LR	LR		
	comp=Z,490nm,19.9s						
DL2				LR	LR		
	comp=Z,2µm,22.8s						
HNS	**HongShan**	**101.60**	**332**	*e*P	**Pdif**	**11 28 19.9**	**+1.8**
HNS				PP	**PP**	**11 32 28.2**	**-0.8**
HNS				SKS		11 38 59.1	
HNS				S	**Sdif**	**11 39 58.3**	**+0.4**
HNS				LR	LR		
	comp=Z,950nm,22.0s						
HNS				LR	LR		
	comp=Z,890nm,22.4s						
HNS				LR	LR		
	comp=Z,1µm,22.0s						
ERM	**Erimo**	**102.05**	**355**	IAMs_20	IAMs_20	12 08 42.1	
	comp=Z,2µm,20.0s						
BJI	**Beijing**	**103.78**	**334**	P	**Pdif**	**11 28 30.6**	**+2.8**
BJI				PP	**PP**	**11 32 45.4**	**+0.1**
BJI				SKS		11 39 12.4	
BJI				S	**Sdif**	**11 40 20.1**	**+4.1**
BJI				SS	**SS**	**11 47 36.2**	**+5.0**
BJI				LR	LR		
	comp=Z,670nm,22.2s						
BJI				LR	LR		
	comp=Z,610nm,23.5s						
BJI				LR	LR		
	comp=Z,1µm,22.2s						
SNY	**Shenyang**	**104.05**	**340**	⇓PKP	**PP**	**11 32 47.4**	**+0.2**
SNY	**Shenyang**	**104.05**	**340**	SS	SS	11 47 35.8	+1.0
SNY				AMB	AMB		
	comp=Z,220nm,6.0s						
SNY				LR	LR		
	comp=N,1µm,25.0s						
SNY				LR	LR		
	comp=E,1µm,23.9s						
SNY				LR	LR		
	comp=Z,3µm,24.1s						
BTO	**Baotou**	**105.79**	**329**	*e*PKP	**PKiKP**	**11 32 53.5**	**+4.1**
BTO				PP	**PP**	**11 33 04.7**	**+4.3**
BTO	**Baotou**	**105.79**	**329**	SS	SS	11 48 10.4	+11
BTO				LR	LR		
	comp=N,5µm,25.9s						
BTO				LR	LR		
	comp=E,6µm,24.1s						
GOMU	**GeErMu**	**106.33**	**316**	Pdif	**Pdif**	**11 28 45.0**	**+5.3**
GOMU				AMB	AMB		
	comp=E,50nm,4.4s						
GOMU				LR	LR		
	comp=E,600nm,21.1s						
GOMU				LR	LR		
	comp=E,770nm,21.4s						
GOMU				LR	LR		
	comp=E,590nm,20.8s						
YSS	**Yuzh-Sakhalins**	**107.00**	**355**	IAMs_20	IAMs_20	12 17 39.6	
	comp=Z,3µm,19.0s						
XLT	**XiLinHaoTe**	**107.50**	**335**	*e*Pdif	**Pdif**	**11 28 48.2**	**+3.9**
XLT				PP	**PP**	**11 33 14.7**	**+1.9**
XLT				S	**Sdif**	**11 40 47.5**	**+0.5**
XLT				SS	**SS**	**11 48 20.8**	**-1.2**
XLT				LR	LR		
	comp=Z,110nm,19.4s						
XLT				LR	LR		
	comp=Z,1µm,22.2s						
XLT				LR	LR		
	comp=Z,2µm,19.2s						
NIL	**Nilore**	**112.65**	**298**	IAMs_20	IAMs_20	12 13 13.7	
	comp=Z,2µm,22.0s						
ULN	**Ulaanbaatar**	**113.33**	**330**	⇓*i*PKIKP	**PKiKP**	**11 33 02.7**	**-0.7**
ULN				MLR	MLR		
	comp=Z,1µm,21.0s						
UOSS	**Minazif**	**113.35**	**280**	IAMs_20	IAMs_20	12 10 19.6	
	comp=Z,2µm,21.0s						
RCBR	**Riachuelo**	**113.97**	**173**	IAMs_20	IAMs_20	12 18 35.3	
	comp=Z,2µm,20.0s						
SLBS	**Sierra La Lagu**	**115.03**	**86**	IAMs_20	IAMs_20	12 14 49.1	
	comp=Z,2µm,21.0s						
WMQ	**Urumqi**	**115.59**	**315**	*e*PKP	**PKPdf**	**11 33 06.8**	**-0.9**
WMQ				PP	**PP**	**11 34 14.2**	**+3.2**
WMQ				SKKS		11 41 09.4	
WMQ				SS	**SS**	**11 50 04.7**	**-5.3**
WMQ				AMB	AMB		
	comp=Z,430nm,3.7s						
WMQ				LR	LR		
	comp=Z,1µm,18.5s						
WMQ				LR	LR		
	comp=Z,910nm,18.5s						
WMQ				LR	LR		
	comp=Z,1µm,21.9s						
JTS	**Las Juntas de**	**115.68**	**116**	IAMs_20	IAMs_20	12 10 54.8	
	comp=Z,2µm,20.0s						
HDC	**Heredia**	**115.80**	**117**	IAMs_20	IAMs_20	12 10 11.9	
	comp=Z,3µm,22.0s						
KSH	**Kashi**	**116.44**	**304**	PKP	**PKiKP**	**11 33 12.0**	**+2.4**
KSH				PP	**PP**	**11 34 15.2**	**-1.8**
KSH				SKKS		11 41 12.8	
KSH				SS	**SS**	**11 50 18.2**	**-3.1**
KSH				LR	LR		
	comp=Z,1µm,23.4s						
KSH				LR	LR		
	comp=Z,940nm,20.6s						
KSH				LR	LR		
	comp=Z,2µm,20.6s						
SNET	**Serv Nac Est T**	**116.70**	**110**	IAMs_20	IAMs_20	12 11 16.9	
	comp=Z,2µm,21.0s						
UNM	**Universidad Na**	**116.73**	**98**	IAMs_20	IAMs_20	12 13 40.1	
	comp=Z,2µm,19.0s						

RAYN	Ar Rayn	117.48	270	IAMs_20	IAMs_20	12 16 58.0	
	comp=Z,2µm,19.0s						
SHLS	Shalkode	118.10	308	ePKP	PKPdf	11 33 12.5	-0.2
	baz=309						
SHLS				ePP	PP	11 34 25.2	-3.4
	baz=309						
SHLS	Shalkode	118.10	308	ePKIKP	PKPdf	11 33 12.4	-0.2
SHLS				e		11 34 25.1	
UZB	Uzynbulak	118.27	308	ePKP	PKiKP	11 33 13.3	+0.3
	baz=308						
UZB				ePP	PP	11 34 27.1	-2.6
	baz=308						
UZB	Uzynbulak	118.27	308	ePKIKP	PKiKP	11 33 13.3	+0.3
UZB				e		11 34 27.1	
SATY	Saty	118.44	308	ePKP	PKPdf	11 33 13.3	0.0
	baz=308						
SATY	Saty	118.44	308	ePKIKP	PKPdf	11 33 13.3	0.0
KPKS	Kokpek	118.67	308	ePKP	PKPdf	11 33 12.5	-1.3
	baz=308						
KPKS	Kokpek	118.67	308	ePKIKP	PKPdf	11 33 12.4	-1.3
MDOK	Medeo	119.06	307	ePKP	PKPdf	11 33 13.9	-0.7
	baz=307						
MDOK	Medeo	119.06	307	ePKIKP	PKPdf	11 33 13.8	-0.7
AAA	Alma-Ata	119.16	307	ePKP	PKiKP	11 33 14.9	+0.2
	baz=307						
AAA				ePP	PP	11 34 33.8	-2.0
	baz=307						
AAA	Alma-Ata	119.16	307	ePKIKP	PKiKP	11 33 14.9	+0.2
AAA				e		11 34 33.7	
MA2	Magadan	119.46	0	IAMs_20	IAMs_20	12 19 48.7	
	comp=Z,2µm,20.0s						
PASC	Pasadena Art C	119.67	73	IAMs_20	IAMs_20	12 16 29.5	
	comp=Z,2µm,19.0s						
CHKK	Chushkaly	119.67	307	ePKP	PKPdf	11 33 15.4	-0.1
	baz=307						
CHKK	Chushkaly	119.67	307	ePKIKP	PKPdf	11 33 15.4	-0.1
ZSN	Zaisan	119.73	315	ePKP	PKPdf	11 33 15.6	+0.1
	baz=315						
ZSN	Zaisan	119.73	315	ePKIKP	PKPdf	11 33 15.6	+0.1
KUU	Kurty	119.96	307	ePKP	PKPdf	11 33 15.4	-0.7
	baz=307						
KUU	Kurty	119.96	307	ePKIKP	PKPdf	11 33 15.4	-0.7
TDK	Taldyqorghan	120.07	309	ePKP	PKPdf	11 33 16.3	+0.1
	baz=309						
TDK				ePP	PP	11 34 38.8	-3.1
	baz=309						
TDK				LR	LR	12 22 17.0	
	comp=Z,401nm,16.6s,baz=309						
TDK	Taldyqorghan	120.07	309	ePKIKP	PKPdf	11 33 16.3	+0.1
TDK				e		11 34 38.8	
TDK				MLR	MLR		
	comp=Z,401nm,17.0s						
MK31	Makanchi Array	120.10	313	⇓iPKIKP	PKPdf	11 33 15.5	-0.8
MKAR	Makanchi Array	120.10	313	PKP	PKPdf	11 33 14.6	-1.7
	comp=Z,1.4nm,1.1s,baz=120,slow=5.2,SNR=6.4						
MKAR	Makanchi Array	120.10	313	PKPdf	PKPdf	11 33 15.3	-1.0
MKAR	Makanchi Array	120.10	313	PKIKP	PKPdf	11 33 15.3	-1.0
MAKZ	Makanchi	120.23	312		PKPdf	11 33 16.3	-0.2
MAKZ	Makanchi	120.23	312	PKIKP	PKPdf	11 33 16.3	-0.2
MAKZ				MLR	MLR		
	comp=Z,1µm,22.0s						
SAO	San Andreas Ge	120.25	68	IAMs_20	IAMs_20	12 21 00.7	
	comp=Z,2µm,19.0s						
SGDS	Sogindy	120.28	305	ePKP	PKiKP	11 33 17.6	+0.7
	baz=305						
SGDS	Sogindy	120.28	305	ePKIKP	PKiKP	11 33 17.6	+0.7
SDV	Santo Domingo	120.35	131	IAMs_20	IAMs_20	12 15 22.0	
	comp=Z,2µm,22.0s						
DGZ	Jazzator, Alta	120.77	318	⇓iPKIKP	PKiKP	11 33 18.0	+0.3
DGZ				MLR	MLR		
	comp=Z,2µm,19.0s						
IUG	Iuzhnay	121.13	301	ePKP	PKPdf	11 33 17.9	-0.7
	baz=301						
IUG	Iuzhnay	121.13	301	ePKIKP	PKPdf	11 33 17.8	-0.7
TUC	Tucson	121.73	80	IAMs_20	IAMs_20	12 19 53.4	
	comp=Z,1µm,18.0s						
CMB	Columbia Colle	121.77	68	IAMs_20	IAMs_20	12 19 50.1	
	comp=Z,2µm,18.0s						
BTLS	Baital	121.83	306	ePKP	PKPdf	11 33 19.0	-0.7
	baz=306						
BTLS	Baital	121.83	306	ePKIKP	PKPdf	11 33 18.9	-0.7
JCC	Jacoby Creek,	122.36	64	IAMs_20	IAMs_20	12 22 45.5	
	comp=Z,3µm,19.0s						
ORV	Oroville	122.48	66	IAMs_20	IAMs_20	12 23 53.9	
	comp=Z,1µm,18.0s						
TPNV	Topopah Spring	122.84	72	IAMs_20	IAMs_20	12 20 10.4	
	comp=Z,2µm,19.0s						
TXAR	Lajitas Array	122.84	88	PKP	PKPdf	11 33 21.1	-1.1
	comp=Z,0.5nm,0.9s,baz=199,slow=1.9,SNR=4.3						
SEY	Seymchan	122.84	1	⇓iPKIKP	PKPdf	11 33 20.0	-0.9
SEY				MLR	MLR		
	comp=Z,1µm,19.0s						
YAK	Yakutsk	122.96	349	⇓iPKIKP	PKPdf	11 33 20.5	-0.7
YAK				MLR	MLR		
	comp=Z,1µm,21.0s						
NVAR	Mina Array Bea	123.06	70	PKP	PKPdf	11 33 21.7	-0.8
	comp=Z,0.5nm,0.6s,baz=190,slow=4.3,SNR=4.5						
GEYT	Alibeck	123.09	289	PKP	PKiKP	11 33 22.7	+0.1
	comp=Z,0.8nm,0.3s,baz=256,slow=41,SNR=1.9						
DBIC	Dimbokro	123.38	210	PKP	PKPdf	11 33 22.6	-1.0
	comp=Z,4.7nm,0.8s,baz=108,slow=9.6,SNR=4.5						
SEM	Semipalatinsk	123.87	314	ePKP	PKPdf	11 33 23.4	-0.2
	baz=314						
SEM				ePP	PP	11 35 07.2	-0.7
	baz=314						
SEM				eSP	SP	11 45 03.7	+0.5
	baz=314						
SEM				LR	LR	12 27 06.3	
	comp=Z,330nm,19.0s,baz=314						
SEM	Semipalatinsk	123.87	314	ePKIKP	PKPdf	11 33 23.4	-0.2
SEM				e		11 35 07.2	
SEM				eSP	SP	11 45 03.6	+0.4
MNTX	Cornudas Mount	123.91	85	P	PKPdf	11 33 24.2	+0.1
	baz=216						
WUAZ	Wupatki	124.03	77	IAMs_20	IAMs_20	12 16 16.2	
	comp=Z,2µm,20.0s						
HUMO	Hull Mountain	124.27	63	IAMs_20	IAMs_20	12 24 40.1	
	comp=Z,2µm,18.0s						
KURBB	Kurchatov Arra	124.67	313	PKP	PKPdf	11 33 23.4	-1.5
	comp=Z,0.1nm,0.3s,baz=149,slow=1.5,SNR=12						
KURK	Kurchatov	124.72	313	PKPdf	PKPdf	11 33 21.9	-3.0
KURK	Kurchatov	124.72	313	⇓iPKIKP	PKiKP	11 33 25.3	+0.1
MOD	Modoc Plateau	124.91	66	IAMs_20	IAMs_20	12 23 16.0	
	comp=Z,2µm,19.0s						
ZALV	Zalesovo Beam	125.23	319	PKP	PKPdf	11 33 23.4	-2.4
	comp=Z,0.5nm,0.4s,baz=93,slow=7.2,SNR=4.1						
SPR3	Spring Creek 3	125.38	72	PKPdf	PKPdf	11 33 27.2	+0.1
JCT	Junction City	125.70	90	IAMs_20	IAMs_20	12 22 06.6	
	comp=Z,1µm,18.0s						
ANMO	Albuquerque	125.98	81	IAMs_20	IAMs_20	12 22 55.0	
	comp=Z,1µm,19.0s						
WVOR	Wild Horse Val	126.08	66	IAMs_20	IAMs_20	12 26 19.2	
	comp=Z,2µm,18.0s						
ELK	Elko	126.33	70	IAMs_20	IAMs_20	12 23 00.9	
	comp=Z,2µm,18.0s						
BRZS	Berezniki	126.37	308	ePKP	PKPdf	11 33 27.7	-0.5
	baz=309						
BRZS	Berezniki	126.37	308	ePKIKP	PKPdf	11 33 27.6	-0.5
MVCO	Mesa Verde	126.78	78	PKPdf	PKPdf	11 33 29.0	-0.7
MVCO				IAMs_20	IAMs_20	12 17 45.9	
	comp=Z,2µm,21.0s						
O18K	Koktuh Hills	126.98	31	IAMs_20	IAMs_20	12 18 22.3	
	comp=Z,2µm,21.0s						
MSTX	Muleshoe	127.03	85	P	PKiKP	11 33 30.6	-0.1
	baz=217						
DUG	Dugway, Tooele	127.05	72	PKPdf	PKPdf	11 33 29.2	-0.8
DUG				IAMs_20	IAMs_20	12 22 54.9	
	comp=Z,2µm,19.0s						
DUG	Dugway, Tooele	127.05	72	PKIKP	PKPdf	11 33 29.2	-0.8
HKT	Hockley	127.25	94	IAMs_20	IAMs_20	12 24 39.8	
	comp=Z,1µm,18.0s						
NLWA	Neilton Lookou	127.64	59	IAMs_20	IAMs_20	12 19 00.2	
	comp=Z,2µm,21.0s						
TORD	Torodi Ar. Bea	127.67	220	PKP	PKPdf	11 33 30.9	-0.8
	comp=Z,4.9nm,0.9s,baz=184,slow=0.4,SNR=17						
TORD	Torodi Ar. Bea	127.67	220		PKPdf	11 33 31.3	-0.4
BRLK	Bradley Lake	128.05	33	IAMs_20	IAMs_20	12 19 07.2	
	comp=Z,3µm,22.0s						
MFID	Camas Ranch	128.14	68	IAMs_20	IAMs_20	12 26 53.6	
	comp=Z,1µm,18.0s						
AMTX	Amarillo	128.30	85	IAMs_20	IAMs_20	12 20 27.5	
	comp=Z,1µm,19.0s						
BILL	Bilibino	128.49	8	PKPdf	PKiKP	11 33 34.6	+2.3
BILL				IAMs_20	IAMs_20	12 22 57.2	
	comp=Z,2µm,21.0s						
BILL	Bilibino	128.49	8	⇓iPKIKP	PKiKP	11 33 35.2	+2.9
BILL				e		11 35 42.4	
BILL				eSS	SS	11 52 56.1	+2.6
BILL				pmax	pmax		
	comp=Z,12nm,1.7s						
BILL				MLR	MLR		
	comp=Z,776nm,19.0s						
SDCO	Great Sand Dun	128.67	80	IAMs_20	IAMs_20	12 28 17.1	
	comp=Z,1µm,18.0s						
HWUT	Hardware Ranch	128.74	72	IAMs_20	IAMs_20	12 19 42.6	
	comp=Z,2µm,21.0s						
HAWA	Hanford	128.76	63	IAMs_20	IAMs_20	12 19 40.8	
	comp=Z,2µm,21.0s						
GHAJ	Ghor Haditha	128.84	266	IAMs_20	IAMs_20	12 24 18.1	
	comp=Z,1µm,18.0s						
HLID	Hailey	128.91	68	IAMs_20	IAMs_20	12 26 27.0	
	comp=Z,2µm,18.0s						
O22K	Cooper Landing	128.97	33	IAMs_20	IAMs_20	12 24 40.0	
	comp=Z,2µm,20.0s						
SMCO	Snowmass	129.07	78	IAMs_20	IAMs_20	12 19 40.5	
	comp=Z,2µm,21.0s						
PLID	Pearl Lake	129.35	66	IAMs_20	IAMs_20	12 26 00.5	
	comp=Z,2µm,19.0s						
RC01	Rabbit Creek A	129.47	33	IAMs_20	IAMs_20	12 19 53.3	
	comp=Z,3µm,22.0s						
WMOK	Wichita Mounta	129.63	88	IAMs_20	IAMs_20	12 19 14.7	
	comp=Z,1µm,21.0s						
WMOK	Wichita Mounta	129.63	88	P	PKiKP	11 33 35.6	0.0
	baz=217						
PWL	Port Wells	129.67	34	IAMs_20	IAMs_20	12 24 48.5	
	comp=Z,1µm,20.0s						
BRVK	Borovoye	129.72	309	IAMs_20	IAMs_20	12 27 59.3	
	comp=Z,2µm,20.0s						
BRVK	Borovoye	129.72	309	⇑ePKIKP	PKPdf	11 33 34.9	+0.5
BRVK				MLR	MLR		
	comp=Z,925nm,19.0s						
SKT	Skwentna	129.74	31	IAMs_20	IAMs_20	12 20 10.2	
	comp=Z,2µm,22.0s						
AHID	Auburn Hatcher	129.85	72	IAMs_20	IAMs_20	12 25 09.0	
	comp=Z,2µm,18.0s						
KNK	Knik Glacier	130.09	33	IAMs_20	IAMs_20	12 25 23.6	
	comp=Z,2µm,20.0s						
ISCO	Idaho Springs	130.21	78	IAMs_20	IAMs_20	12 20 31.9	
	comp=Z,2µm,20.0s						
PPLA	Purkeypile	130.34	30	P	PKiKP	11 33 36.3	0.0
	baz=214						
SML	Sawmill	130.45	33	IAMs_20	IAMs_20	12 20 22.1	
	comp=Z,2µm,22.0s						
BW06	Boulder Array	130.58	73	IAMs_20	IAMs_20	12 20 54.5	
	comp=Z,2µm,20.0s						
PDAR	Pinedale Array	130.58	73	PKP	PKPdf	11 33 34.8	-2.0
	comp=Z,0.3nm,0.7s,baz=224,slow=2.5,SNR=2.1						
SCM	Sheep Creek Mo	130.74	34	IAMs_20	IAMs_20	12 25 42.9	
	comp=Z,2µm,21.0s						
MOOW	Moose Ponds	130.77	71	IAMs_20	IAMs_20	12 25 38.3	
	comp=Z,2µm,19.0s						
KLU	Klutina	130.86	35	IAMs_20	IAMs_20	12 21 06.1	
	comp=Z,2µm,22.0s						
RWWY	Rawlins	130.89	75	IAMs_20	IAMs_20	12 21 36.6	
	comp=Z,2µm,20.0s						
OK025	Westminster Rd	131.02	88	IAMs_20	IAMs_20	12 22 30.4	
	comp=Z,1µm,20.0s						
OK038	West end E0370	131.03	86	IAMs_20	IAMs_20	12 23 43.5	
	comp=Z,2µm,19.0s						
FLWY	Flagg Ranch	131.04	71	IAMs_20	IAMs_20	12 21 53.6	
	comp=Z,2µm,20.0s						
DLMT	Dillon	131.12	68	IAMs_20	IAMs_20	12 28 50.6	
	comp=Z,2µm,18.0s						
CHUM	Lake Minchumin	131.13	30	P	PKPdf	11 33 36.7	0.0
	baz=214						
OK029	Liberty Lake	131.13	88	IAMs_20	IAMs_20	12 24 02.4	
	comp=Z,2µm,21.0s						
TGL	Tana Glacier	131.17	37	IAMs_20	IAMs_20	12 27 35.4	
	comp=Z,2µm,19.0s						
OK035	E0210 Rd and N	131.22	86	IAMs_20	IAMs_20	12 23 59.7	
	comp=Z,2µm,18.0s						
NEW	Newport	131.25	63	IAMs_20	IAMs_20	12 20 53.7	
	comp=Z,2µm,20.0s						
GNI	Garni	131.27	281	dePKIKP	PKPdf	11 33 37.2	-0.8
GNI				MLR	MLR		
	comp=Z,609nm,17.0s						
TRF	Thorofare Moun	131.28	31	P	PKPdf	11 33 37.3	0.0
	baz=215						
M24K	Tolsona, Glenn	131.29	34	IAMs_20	IAMs_20	12 31 41.3	
	comp=Z,1µm,20.0s						
N25K	Chitina, Valde	131.33	35	IAMs_20	IAMs_20	12 18 58.6	
	comp=Z,2µm,22.0s						
VRDI	Verde Repeater	131.36	36	IAMs_20	IAMs_20	12 26 24.4	
	comp=Z,1µm,20.0s						
GLB	Gilahina Butte	131.43	36	IAMs_20	IAMs_20	12 22 33.2	
	comp=Z,2µm,21.0s						
PHWY	Pilot Hill	131.44	77	IAMs_20	IAMs_20	12 21 26.3	
	comp=Z,2µm,20.0s						
BRIGG	Briggsdale	131.45	79	IAMs_20	IAMs_20	12 21 20.5	
	comp=Z,2µm,20.0s						
BCPM	Bancas Point	131.52	39	IAMs_20	IAMs_20	12 22 39.8	
	comp=Z,2µm,21.0s						
SMRT	St. Maarten	131.54	136	IAMs_20	IAMs_20	12 25 10.5	
	comp=Z,2µm,21.0s						
OK032	Salt Plains WL	131.54	87	IAMs_20	IAMs_20	12 24 09.3	
	comp=Z,2µm,19.0s						
OK031	S. Brethren Rd	131.56	89	IAMs_20	IAMs_20	12 26 14.8	
	comp=Z,1µm,18.0s						
OK030	Cody Creek RV	131.57	89	IAMs_20	IAMs_20	12 26 15.0	
	comp=Z,1µm,18.0s						
OK033	Mehan	131.58	88	IAMs_20	IAMs_20	12 31 46.4	
	comp=Z,1µm,18.0s						
MCARA	McCarthy VSAT	131.61	36	IAMs_20	IAMs_20	12 29 40.1	
	comp=Z,1µm,19.0s						
OK053	SW of W Deep R	131.63	89	IAMs_20	IAMs_20	12 28 45.7	
	comp=Z,1µm,19.0s						
BPAW	Bear Paw Mtn.	131.64	30	P	PKPdf	11 33 37.4	-0.4
	baz=215						
BOZ	Bozeman (W)	131.75	69	IAMs_20	IAMs_20	12 29 04.1	
	comp=Z,2µm,18.0s						
BARN	Barnard Glacie	131.76	37	IAMs_20	IAMs_20	12 20 52.1	
	comp=Z,2µm,20.0s						
LOGN	Logan Glacier	131.78	38	IAMs_20	IAMs_20	12 19 50.5	
	comp=Z,2µm,22.0s						
CTGM	Chitina Glacie	131.79	37	IAMs_20	IAMs_20	12 19 58.7	
	comp=Z,2µm,22.0s						
OK050	Pawnee Station	131.84	88	IAMs_20	IAMs_20	12 27 30.1	
	comp=Z,2µm,18.0s						
MCK	McKinley	131.86	31		PKPdf	11 33 37.5	-0.7
MCK	McKinley	131.86	31	PKIKP	PKPdf	11 33 37.5	-0.7
MCK	McKinley	131.86	31	P	PKPdf	11 33 38.2	0.0
	baz=216						
OK046	Pawnee Station	131.88	88	IAMs_20	IAMs_20	12 27 32.1	
	comp=Z,2µm,18.0s						
MAK	Makhachkala	132.06	285	i P	Pdif	11 30 34.1	+0.6
MAK				i		11 33 38.0	
MAK				e		11 35 59.6	
MAK				e		11 40 42.4	
MAK				eSS	SS	11 53 33.5	-4.6
MAK				pmax	pmax		
	comp=Z,216nm,0.9s						
MAK				MLR	MLR		
	comp=Z,967nm,17.0s						
I21K	Tanana	132.28	29	P	PKPdf	11 33 39.5	+0.6
	baz=215						
CBKS	Cedar Bluff	132.35	84	IAMs_20	IAMs_20	12 25 09.5	
	comp=Z,2µm,18.0s						
M26K	Nabesna, AK	132.43	35	IAMs_20	IAMs_20	12 19 33.7	
	comp=Z,2µm,22.0s						
TIXI	Tiksi	132.44	351	PKP	PKPdf	11 33 37.5	-1.5
	comp=Z,1.0nm,0.4s,baz=270,slow=23,SNR=6.0						
TIXI	Tiksi	132.44	351	PKPdf	PKPdf	11 33 38.4	-0.6
TIXI	Tiksi	132.44	351	⇓iPKIKP	PKPdf	11 33 39.3	+0.3
TIXI				MLR	MLR		
	comp=Z,715nm,19.0s						
RLMT	Red Lodge	132.50	71	IAMs_20	IAMs_20	12 26 35.1	
	comp=Z,2µm,19.0s						
IMAR	Indian Mountai	132.53	27	PKPdf	PKPdf	11 33 38.9	-0.4
M27K	Edge Creek, AK	132.72	36	IAMs_20	IAMs_20	12 23 24.2	
	comp=Z,2µm,20.0s						
K24K	Donnelly Dome	132.76	33	P	PKiKP	11 33 40.8	-0.2
	baz=218						
L26K	Log Cabin Wild	132.81	35	IAMs_20	IAMs_20	12 22 07.8	
	comp=Z,2µm,22.0s						
OGNE	Ogallala	132.84	80	IAMs_20	IAMs_20	12 22 22.6	
	comp=Z,2µm,20.0s						
HDA	Harding Lake	132.93	32	P	PKPdf	11 33 39.8	-0.4
	baz=217						
RIDG	Independent Ri	132.96	33	IAMs_20	IAMs_20	12 27 38.5	
	comp=Z,2µm,20.0s						
G21K	Allakaket	133.03	27	P	PKiKP	11 33 41.6	+0.1
	baz=215						
COLA	College	133.06	31	⇑ePKIKP	PKPdf	11 33 40.6	+0.3
U38A	Gravette	133.17	90		PKPdf	11 33 40.0	-1.5
ILAR	Eielson Array	133.23	32	PKP	PKPdf	11 33 39.0	-1.7
	comp=Z,1.8nm,0.9s,baz=285,slow=4.1,SNR=13						
L27K	Beaver Creek,	133.28	35	IAMs_20	IAMs_20	12 23 44.1	
	comp=Z,2µm,22.0s						
L27K	Beaver Creek,	133.28	35	P	PKiKP	11 33 42.1	-0.1
	baz=220						
SCRK	Sand Creek	133.38	34	PKPdf	PKPdf	11 33 41.5	+0.4
SCRK				IAMs_20	IAMs_20	12 28 00.7	
	comp=Z,2µm,20.0s						
SCRK	Sand Creek	133.38	34	P	PKPdf	11 33 41.9	+0.7
	baz=219						
J26L	Joseph Creek	133.91	33	IAMs_20	IAMs_20	12 23 59.6	
	comp=Z,2µm,22.0s						
N31M	Braeburn, Yuko	133.92	40	IAMs_20	IAMs_20	12 28 28.2	
	comp=Z,2µm,19.0s						
KSU1	Kansas State U	134.12	86	IAMs_20	IAMs_20	12 26 39.5	
	comp=Z,1µm,19.0s						
F22K	John River	134.15	27	P	PKiKP	11 33 45.1	+1.3
	baz=216						
EGMT	Eagleton	134.41	68	IAMs_20	IAMs_20	12 35 39.5	
	comp=Z,1µm,18.0s						
M30M	Minto, Yukon	134.42	38	IAMs_20	IAMs_20	12 25 03.3	
	comp=Z,2µm,20.0s						
I26K	Coal Creek Min	134.64	33	IAMs_20	IAMs_20	12 28 22.0	
	comp=Z,2µm,20.0s						
EGAK	Eagle	134.79	34	IAMs_20	IAMs_20	12 25 17.9	
	comp=Z,2µm,21.0s						
KBZ	Khabaz	134.87	283	PKP	PKPdf	11 33 45.2	+0.8
	comp=Z,3.3nm,0.9s,baz=165,slow=4.6,SNR=5.1						
KBZ	Khabaz	134.87	283	d iPKIKP	PKiKP	11 33 46.1	+0.2
KBZ				MLR	MLR		
	comp=Z,762nm,17.0s						
LAO	LASA Array	135.09	72	IAMs_20	IAMs_20	12 27 59.7	
	comp=Z,2µm,19.0s						
KIV	Kislovodsk	135.14	283	i PKIKP	PKiKP	11 33 46.1	-0.5
KIV				e		11 36 19.8	
KIV				eSS	SS	11 54 15.6	+0.1
KIV				eSSS	SSS	11 59 15.8	
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,637nm,24.0s						
F24K	Squaw Lake	135.15	29	P	PKiKP	11 33 45.3	-0.6
	baz=219						
PLAL	Pickwick Lake	135.16	97	PKPdf	PKPdf	11 33 44.7	-0.6
TAM	Tamanrasset	135.26	229	IAMs_20	IAMs_20	12 34 20.0	
	comp=Z,1µm,18.0s						
J29M	Klondike Camp	135.39	36	IAMs_20	IAMs_20	12 25 37.8	
	comp=Z,2µm,21.0s						
I29M	Ogilvie Camp,	136.03	35	IAMs_20	IAMs_20	12 24 16.8	
	comp=Z,2µm,22.0s						
WVT	Waverly	136.19	96	P	PKPdf	11 33 46.8	-0.3
	baz=218						
A21K	Barrow	136.35	22	IAMs_20	IAMs_20	12 25 02.8	
	comp=Z,2µm,22.0s						
BR131	Keskin Array S	136.45	271	⇑iPKIKP	PKiKP	11 33 49.1	-0.4
BRTR	Keskin Array B	136.45	271	PKP	PKPdf	11 33 48.5	+0.8
	comp=Z,2.5nm,1.0s,baz=179,slow=6.2,SNR=8.1						
NRIK	Noril'sk	136.82	333	PKP	PKPdf	11 33 45.3	-1.9
	comp=Z,2.9nm,0.8s,baz=153,slow=6.8,SNR=5.3						
NRIK	Noril'sk	136.82	333	ePKIKP	PKiKP	11 33 48.4	-0.7
ARU	Arti	136.82	306	IAMs_20	IAMs_20	12 42 49.3	
	comp=Z,1µm,21.0s						
ARU	Arti	136.82	306	i PKIKP	PKiKP	11 33 53.7	+4.3
EPYK	Eagle Plains	137.21	35	IAMs_20	IAMs_20	12 22 58.0	
	comp=Z,2µm,22.0s						
DGMT	Dagmar	137.32	71	IAMs_20	IAMs_20	12 26 02.8	
	comp=Z,2µm,20.0s						
SCIA	State Center	137.94	86	IAMs_20	IAMs_20	12 33 54.4	
	comp=Z,1µm,18.0s						
WCI	Wyandotte Cave	138.59	96	IAMs_20	IAMs_20	12 32 40.0	
	comp=Z,1µm,18.0s						
BELG	Belogornoye	138.78	295	⇓ePKIKP	PKiKP	11 33 52.8	-0.7
BELG				MLR	MLR		
	comp=Z,124nm,18.0s						
HDIL	Hopedale	138.88	91	IAMs_20	IAMs_20	12 37 02.5	
	comp=Z,1µm,18.0s						
INK	Inuvik	139.45	34	PKP	PKPdf	11 33 49.8	-2.3
	comp=Z,4.7nm,1.1s,baz=178,slow=2.4,SNR=7.8						
JFWS	Jewell Farm	140.16	88	IAMs_20	IAMs_20	12 28 47.3	
	comp=Z,2µm,20.0s						
P49A	Miami Univ. Ec	140.38	96	IAMs_20	IAMs_20	12 32 21.4	
	comp=Z,1µm,20.0s						
VRH	Novokhopyorsk	140.71	290	ePKIKP	PKPdf	11 33 51.8	-3.1
VRH				e		11 36 54.0	
VRH				pmax	pmax		
	comp=Z,12nm,1.6s						
YKA	Yellowknife Ar	141.98	49	PKhKP	PKPpre	11 33 51.0	
	comp=Z,1.4nm,0.9s,baz=230,slow=2.8,SNR=9.2						
KIRV	Kirov	141.98	303	⇓ePKIKP	PKPdf	11 33 55.9	-1.0
VORR	Voronezh	142.20	289	ePKIKP	PKPdf	11 33 56.5	-1.1
VORR				e		11 37 04.4	
VORR				pmax	pmax		
	comp=Z,18nm,1.5s						
ULM	Lac du Bonnet	142.51	75	PKP	PKPdf	11 33 54.8	-3.4
	comp=Z,1.2nm,0.4s,baz=204,slow=2.6,SNR=2.9						
C36M	Paulatuk	142.79	36	IAMs_20	IAMs_20	12 33 29.6	
	comp=Z,1µm,18.0s						
MCWV	Mont Chateau	142.88	101	IAMs_20	IAMs_20	12 51 12.6	
	comp=Z,1µm,19.0s						
STIP	Stip	143.64	263	i P	PKPbc	11 33 58.0	0.0
VTS	Vitosha	143.80	265	⇓P	PKPdf	11 34 00.0	-1.0
VTS	Vitosha	143.80	265	⇓PKIKP	PKPdf	11 34 00.0	-1.0
OHR	Ohrid	143.88	261	i P	PKPdf	11 34 00.5	-0.5
A36M	Sachs Harbour	143.93	32	P	PKPab	11 33 57.3	0.0
	baz=238						
CEL	Celeste	144.06	253	IAMs_20	IAMs_20	12 48 48.1	
	comp=Z,1µm,18.0s						
MILM	Milestii Mici	144.09	275	ePKP	PKPab	11 33 57.0	-1.7
	comp=Z,300nm,3.0s						
MILM				eL	L	12 23 55.0	
MILM				LRM	MLR	12 33 37.0	
	comp=Z,600nm,20.0s						
MILM	Milestii Mici	144.09	275	ePKHKP	PKPpre	11 33 57.0	
MILM				pmax	pmax		
	comp=Z,300nm,3.0s						
KIS	Kishinev	144.14	275	ePKP	PKPdf	11 34 03.0	+1.8
KIS				eL	L	12 26 35.0	
KIS				LQM		12 31 18.0	
	comp=Z,500nm,24.0s						
KIS				LRM	MLR	12 51 27.0	
	comp=Z,250nm,20.0s						
KIS	Kishinev	144.14	275	ePKIKP	PKPdf	11 34 03.0	+1.8
PANC	Panciu	144.19	272	⇓P	PKPdf	11 34 01.0	-0.3
GHRR		144.19	273	⇓P	PKPdf	11 34 01.6	+0.3
SKO	Skopje	144.22	263	i P	PKPbc	11 34 00.8	+1.0
NEHR	Nehoiu	144.31	271	⇑P	PKPdf	11 34 01.2	-0.4
GLMI	Grayling	144.35	90	IAMs_20	IAMs_20	12 37 45.3	
	comp=Z,1µm,21.0s						
VRI	Vrincioaia	144.40	272	⇓P	PKPbc	11 34 00.3	0.0
VRI	Vrincioaia	144.40	272	⇓PKIKP	PKPbc	11 34 00.3	+0.1
PLOR	Plostina	144.43	272	⇓P	PKPdf	11 34 01.8	0.0
PLOR	Plostina	144.43	272	⇓PKIKP	PKPdf	11 34 01.8	0.0
TIR	Tirane	144.52	261	IAMs_20	IAMs_20	12 49 15.3	
	comp=Z,1µm,20.0s						
MLR	Muntele Rosu	144.53	271	⇓P	PKPab	11 34 00.7	+0.1
MLR	Muntele Rosu	144.53	271	⇓PKIKP	PKPab	11 34 00.7	+0.1
SSPA	Standing Stone	144.59	101		PKPab	11 34 00.5	-0.4
SSPA	Standing Stone	144.59	101	IAMs_20	IAMs_20	12 44 12.8	
	comp=Z,1µm,22.0s						
SSPA	Standing Stone	144.59	101	P	PKPab	11 34 00.7	-0.1
	baz=220						
COVR	Voineasa-Covas	144.65	272	⇓P	PKPab	11 34 00.6	-0.3
ERPA	Erie	144.68	98	IAMs_20	IAMs_20	12 50 26.1	
	comp=Z,1µm,20.0s						
TESR	Tescani	144.89	273	⇓P	PKPab	11 34 01.4	-0.3
VOIR		144.93	270	⇓P	PKPdf	11 34 02.7	-0.1
VOIR		144.93	270	⇓PKIKP	PKPdf	11 34 02.7	-0.1
OZUR		145.03	272	⇑P	PKPab	11 34 02.4	+0.1
KEST	Kesra	145.03	243	PKPbc	PKPdf	11 34 03.2	0.0
	comp=Z,88nm,1.0s,baz=275,slow=3.9,SNR=20						
ARR	Arges	145.09	270	⇑P	PKPbc	11 34 02.3	-0.2
DOPR	Dopca	145.14	271	⇑P	PKPdf	11 34 03.1	+0.1
SORM	Soroca	145.15	276	⇓P	PKPbc	11 34 01.9	-0.6
SORM	Soroca	145.15	276	⇓PKP2	PKPbc	11 34 01.9	-0.6
SRE	Strehaia	145.30	268	⇓P	PKPab	11 34 03.7	+0.4
SRE	Strehaia	145.30	268	⇓PKIKP	PKPab	11 34 03.7	+0.4
N58A	Sunbury	145.32	102		PKPbc	11 34 02.8	-0.6
MOS	Moscow	145.46	293	ePKP2	PKPdf	11 34 02.2	-1.0
MOS				e		11 37 35.0	
MOS				pmax	pmax		
	comp=Z,219nm,1.9s						
MOS				pmax	pmax		
	comp=Z,800nm,2.6s						
MOS				MLR	MLR		
	comp=Z,1µm,21.0s						

M57A	**Sunshine Farm,**	**145.50**	**101**	PKPdf	**PKPdf**	**11 34 03.3**	**-0.5**
LOT	**Lotru**	**145.58**	**269**	⇑P	**PKPab**	**11 34 04.6**	**+0.2**
OBN	**Obninsk**	**145.58**	**292**		**PKPdf**	**11 34 03.0**	**-0.4**
OBN				IAMs_20	IAMs_20	12 34 16.5	
	comp=Z,1µm,22.0s						
OBN	**Obninsk**	**145.58**	**292**	*ce*PKIKP	**PKPdf**	**11 34 03.2**	**-0.2**
OBN				*e*		11 37 30.8	
OBN				pmax	pmax		
	comp=Z,202nm,1.2s						
HERR	**Herculane**	**145.85**	**267**	⇓P	**PKPbc**	**11 34 04.7**	**-0.2**
MDVR	**Moldovita**	**146.13**	**266**	⇑P	**PKPab**	**11 34 07.0**	**+0.5**
BUR01	**Bucovina Ar. S**	**146.36**	**273**	⇑P	**PKPdf**	**11 34 05.3**	**+0.2**
AKASG	**Malin Array Be**	**146.40**	**280**	PKPbc	**PKPdf**	**11 34 05.3**	**+0.4**
	comp=Z,22nm,1.1s,baz=102,slow=2.4,SNR=29						
AKBB	**Malin Array Si**	**146.40**	**280**	*c i*PKP2	**PKPbc**	**11 34 06.6**	**+0.3**
ARCR	**ARCALIA**	**146.43**	**272**	⇑P	**PKPab**	**11 34 08.3**	**+0.8**
SURR	**Surduc**	**146.62**	**268**	⇓P	**PKPab**	**11 34 07.8**	**-0.4**
ARF	**Arif**	**146.62**	**222**	P	**PKiKP**	**11 34 11.0**	**+0.4**
BINY	**Binghamton**	**146.71**	**102**	IAMs_20	IAMs_20	12 44 57.9	
	comp=Z,1µm,20.0s						
BINY	**Binghamton**	**146.71**	**102**	P	**PKPdf**	**11 34 06.8**	**+1.0**
	baz=221						
MARR	**Marisel-Cluj**	**146.76**	**270**	⇓P	**PKPdf**	**11 34 06.7**	**+0.8**
BZS	**Buzias**	**146.77**	**267**	⇑P	**PKPdf**	**11 34 06.4**	**+0.6**
BZS	**Buzias**	**146.77**	**267**	⇑PKIKP	**PKPdf**	**11 34 06.4**	**+0.6**
PAL	**Palisades**	**146.81**	**105**	IAMs_20	IAMs_20	12 43 12.5	
	comp=Z,2µm,20.0s						
OUZM	**OUZ**	**146.95**	**218**	P	**PKiKP**	**11 34 13.0**	**+1.7**
DRGR		**147.04**	**270**	⇑P	**PKPbc**	**11 34 08.8**	**+0.4**
DRGR		**147.04**	**270**	⇑PKP2	**PKPbc**	**11 34 08.8**	**+0.4**
TTIG	**Tnine Tigouga,**	**147.11**	**215**	P	**PKiKP**	**11 34 13.0**	**+1.4**
GOLM	**Goulmima**	**147.11**	**221**	P	**PKiKP**	**11 34 12.1**	**+0.5**
SIRR	**Siria**	**147.21**	**268**	⇓P	**PKPbc**	**11 34 09.6**	**+0.8**
WSPT	**Westport, CT**	**147.22**	**106**	IAMs_20	IAMs_20	12 37 22.3	
	comp=Z,2µm,19.0s						
KLMR	**Klimovskoe**	**147.41**	**302**	*e*PKPdf	**PKPdf**	**11 34 07.0**	**+0.7**
KLMR				AMP		11 34 16.1	
	comp=Z,138nm,1.3s						
KLMR				LQ	LQ	12 24 26.3	
KLMR				LQ	LQ	12 24 26.3	
KLMR				LR	LR	12 28 10.2	
KLMR				AMP		12 47 53.7	
	comp=Z,1µm,20.2s						
KLMR	**Klimovskoe**	**147.41**	**302**	*e*PKIKP	**PKPdf**	**11 34 06.9**	**+0.7**
KLMR				pmax	pmax		
	comp=Z,138nm,1.3s						
YLE	**Yale**	**147.51**	**106**	IAMs_20	IAMs_20	12 43 36.5	
	comp=Z,1µm,21.0s						
OUK	**Oukaimeden**	**147.56**	**216**	P	**PKPab**	**11 34 13.0**	**+0.2**
MDT	**Midelt**	**148.02**	**222**	P	**PKPab**	**11 34 14.0**	**-0.2**
FCC	**Fort Churchill**	**148.40**	**64**	PKPdf	**PKPdf**	**11 34 09.2**	**+1.3**
FCC	**Fort Churchill**	**148.40**	**64**	PKIKP	**PKPdf**	**11 34 09.3**	**+1.3**
LVV	**L'vov**	**148.40**	**275**	*e*PKP2	**PKPbc**	**11 34 12.7**	**+0.8**
LVV				*e*		11 41 12.8	
AQU	**L'Aquila**	**148.44**	**255**	IAMs_20	IAMs_20	12 51 16.9	
	comp=Z,1µm,20.0s						
L61B	**Northampton**	**148.51**	**105**	IAMs_20	IAMs_20	12 49 51.4	
	comp=Z,2µm,20.0s						
MORH	**Mrgy, Hungar**	**148.67**	**265**	⇓P	**PKiKP**	**11 34 13.7**	**-0.4**
JBK	**JBK**	**148.68**	**226**	P	**PKiKP**	**11 34 15.0**	**+0.2**
HRV	**Adam Dziewonsk**	**149.09**	**106**	IAMs_20	IAMs_20	12 46 39.8	
	comp=Z,1µm,18.0s						
BCX	**Boston College**	**149.14**	**107**	IAMs_20	IAMs_20	12 45 31.3	
	comp=Z,2µm,19.0s						
LONY	**Lake Ozonia**	**149.19**	**100**	IAMs_20	IAMs_20	12 49 05.4	
	comp=Z,1µm,21.0s						
AKLM	**AKL**	**149.30**	**225**	P	**PKiKP**	**11 34 17.0**	**+1.0**
MNK	**Minsk**	**149.34**	**285**	*i* PKP	**PKPdf**	**11 34 11.1**	**+1.5**
	comp=E,3.0nm,0.9s						
MNK				*i* PKP	**PKPdf**	**11 34 11.1**	**+1.5**
	comp=N,37nm,0.8s						
MNK				*i* PKP	**PKPdf**	**11 34 11.1**	**+1.5**
	comp=Z,48nm,0.9s,baz=125						
MNK				*i* PP	**PP**	**11 37 48.2**	**+1.0**
MNK				*i* PPP	PPP	11 41 06.6	
MNK				*i* SKS	**SKSdf**	**11 41 19.8**	**+3.1**
MNK				*i* SS	**SS**	**11 56 58.9**	**-0.8**
MNK				*i* SSS	SSS	12 02 37.1	
MNK				*i* LQ	LQ	12 33 29.4	
MNK				*i* LR	LR	12 39 21.8	
MNK				*i* LRM	MLR	12 41 58.7	
	comp=Z,464nm,21.2s						
MNK				*i* LRM	MLR	12 42 13.1	
	comp=E,85nm,20.4s						
MNK				*i* LRM	MLR	12 42 27.6	
	comp=N,499nm,14.4s						
MNK	**Minsk**	**149.34**	**285**	*i* PKIKP	**PKPdf**	**11 34 11.1**	**+1.5**
MNK				*i*		11 37 48.2	
MNK				*i* PPP	PPP	11 41 06.6	
MNK				*i*		11 41 19.7	
MNK				*i* SS	SS	11 56 58.9	-0.9
MNK				*i* SSS	SSS	12 02 37.0	
MNK				pmax	pmax		
	comp=N,37nm,0.8s						
MNK				pmax	pmax		
	comp=Z,48nm,0.9s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				MLR	MLR		
	comp=Z,464nm,21.0s						
MNK				MLR	MLR		
	comp=E,85nm,20.0s						
MNK				MLR	MLR		
	comp=N,499nm,14.0s						
STHS	**Stebnicka Huta**	**149.53**	**272**	*e*PKP2	**PKPab**	**11 34 20.8**	**+0.9**
STHS	**Stebnicka Huta**	**149.53**	**272**	*e*PKP	**PKPab**	**11 34 20.8**	**+0.9**
HNH	**Hanover**	**149.64**	**104**	IAMs_20	IAMs_20	12 50 33.4	
	comp=Z,2µm,19.0s						
VT1	**Waterbury**	**149.87**	**102**	IAMs_20	IAMs_20	12 51 12.4	
	comp=Z,2µm,19.0s						
NIE	**Niedzica**	**150.00**	**272**	*e*P	**PKiKP**	**11 34 18.3**	**+1.5**
NACGM	**Naroch**	**150.09**	**285**	*e*PKP	**PKPbc**	**11 34 15.1**	**-0.8**
	comp=Z,80nm,1.0s,baz=124						
VYHS	**Vyhne**	**150.13**	**269**	*e*PKIKP	**PKiKP**	**11 34 17.4**	**+0.3**
VYHS	**Vyhne**	**150.13**	**269**	*e*PKP	**PKiKP**	**11 34 17.4**	**+0.3**
LBNH	**Lisbon**	**150.21**	**103**	P	**PKPbc**	**11 34 16.9**	**+0.3**
	baz=223						
LANS	**Liptovska Anna**	**150.24**	**270**	*e*PKIKP	**PKiKP**	**11 34 17.9**	**+0.6**
LANS	**Liptovska Anna**	**150.24**	**270**	*e*PKP	**PKiKP**	**11 34 17.9**	**+0.6**
MAHO	**Mahon**	**150.73**	**241**	IAMs_20	IAMs_20	12 44 24.6	
	comp=Z,1µm,20.0s						
OJC	**Ojcow**	**150.76**	**272**	*e*P	**PKiKP**	**11 34 18.6**	**+0.3**
SOKA	**Soboth**	**150.79**	**263**	*e*PKP	**PKiKP**	**11 34 18.5**	**-0.1**
	comp=Z,7.8nm,0.7s						
MODS	**Modra-Piesok**	**150.83**	**267**	*e*PKIKP	**PKiKP**	**11 34 20.8**	**+2.3**
MODS	**Modra-Piesok**	**150.83**	**267**	*e*PKP	**PKiKP**	**11 34 20.8**	**+2.3**
RONA	**Rosalia, Austr**	**150.86**	**265**	*e*PKP	**PKiKP**	**11 34 19.3**	**+0.6**
	comp=Z,3.1nm,0.6s						
OBKA	**Obir**	**150.91**	**262**	*e*PKP	**PKiKP**	**11 34 18.7**	**-0.2**
	comp=Z,3.5nm,0.7s						
ARSA	**Arzberg**	**150.94**	**264**	*e*PKP	**PKiKP**	**11 34 19.2**	**+0.4**
	comp=Z,10.0nm,0.9s						
JAVC	**Velka Javorina**	**150.95**	**268**	*e*PKP	**PKiKP**	**11 34 19.9**	**+1.1**
CART	**Cartagena**	**150.97**	**232**	IAMs_20	IAMs_20	12 41 41.9	
	comp=Z,2µm,21.0s						
CART	**Cartagena**	**150.97**	**232**	P	**PKiKP**	**11 34 20.1**	**+1.0**
CONA	**Conrad Observa**	**151.23**	**265**	*e*PKP	**PKPbc**	**11 34 19.3**	**+0.3**
	comp=Z,2.8nm,0.6s						
OKC	**Ostrava-Krasne**	**151.34**	**270**	AMS	AMS	12 53 10.0	
	comp=Z,1µm,22.5s						
PMOZ	**Porto Moniz, M**	**151.39**	**202**	*e*LR	LR	12 25 26.5	
PMOZ				A	A	12 36 03.5	
	comp=Z,2µm,20.0s						
MYKA	**Terra Mystica**	**151.44**	**261**	*e*PKiKP	**PKiKP**	**11 34 20.9**	**+1.0**
	comp=Z,3.4nm,0.5s						
WVL	**Waterville**	**151.55**	**105**	IAMs_20	IAMs_20	12 50 52.8	
	comp=Z,1µm,20.0s						
MORC	**Moravsky Berou**	**151.61**	**270**	⇓P	**PKPbc**	**11 34 18.9**	**-0.8**
MORC	**Moravsky Berou**	**151.61**	**270**	*e*PKP	**PKiKP**	**11 34 20.2**	**+0.1**
MORC	**Moravsky Berou**	**151.61**	**270**	⇓PKIKP	**PKPbc**	**11 34 18.9**	**-0.8**
KRUC	**Moravsky**	**151.72**	**268**	*e*PKP	**PKPbc**	**11 34 20.2**	**+0.3**
PABE	**Paberze**	**151.78**	**284**		**PKPbc**	**11 34 18.2**	**-1.6**
PABE				IAMs_20	IAMs_20	12 51 11.6	
	comp=Z,1µm,21.0s						
VRAC	**Vranov**	**151.78**	**268**	*e*PKP	**PKPbc**	**11 34 20.2**	**+0.1**
KBA	**Koelnbreinsper**	**151.90**	**262**	*e*PKP	**PKiKP**	**11 34 21.4**	**+0.4**
	comp=Z,9.2nm,0.8s						
VSU	**Vasula**	**151.94**	**291**	⇑*i*PKIKP	**PKiKP**	**11 34 22.5**	**+2.1**
MOA	**Molln**	**151.97**	**264**	*e*PKP	**PKiKP**	**11 34 21.4**	**+0.4**
	comp=Z,3.9nm,0.7s						
ABTA	**Abfaltersbach**	**152.08**	**260**	*e*PKP	**PKPbc**	**11 34 21.1**	**+0.2**
	comp=Z,8.1nm,0.7s						
LVZ	**Lovozero**	**152.13**	**313**	IAMs_20	IAMs_20	12 41 29.8	
	comp=Z,2µm,20.0s						
KRLC	**Kraliky**	**152.18**	**270**	AMS	AMS	12 54 40.0	
	comp=Z,1µm,21.6s						
PKME	**Peaks-Kenny Pk**	**152.24**	**105**	IAMs_20	IAMs_20	12 54 38.1	
	comp=Z,2µm,19.0s						
APA	**Apatity**	**152.50**	**312**	⇓*i*PKIKP	**PKPbc**	**11 34 18.9**	**-2.2**
APA				*i*		11 38 09.0	
APA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
DPC	**Dobruska-Polom**	**152.58**	**270**	⇑*e*PKP	**PKiKP**	**11 34 22.4**	**+0.3**
DPC				AMS	AMS	12 53 50.0	
	comp=Z,2µm,21.9s						
DPC	**Dobruska-Polom**	**152.58**	**270**	*e*PKIKP	**PKiKP**	**11 34 22.4**	**+0.3**
DPC				MLR	MLR		
	comp=Z,2µm,21.9s						
CKRC	**Cesky Krumlov**	**152.60**	**265**	*e*SS	SS	11 57 37.3	+1.3
CKRC				AMS	AMS	13 04 00.0	
	comp=Z,1µm,20.0s						
EMMW	**East Machias**	**152.71**	**108**	IAMs_20	IAMs_20	12 36 43.5	
	comp=Z,2µm,22.0s						
OSTC	**Ostas**	**152.76**	**270**	⇑*e*PKP	**PKiKP**	**11 34 23.0**	**+0.5**
OSTC				AMS	AMS	12 54 00.0	
	comp=Z,2µm,23.6s						
OSTC	**Ostas**	**152.76**	**270**	*e*PKIKP	**PKiKP**	**11 34 23.0**	**+0.5**
OSTC				MLR	MLR		
	comp=Z,2µm,23.6s						
UPC	**Upice**	**152.83**	**270**	AMS	AMS	12 53 50.0	
	comp=Z,2µm,19.9s						
KSP	**Ksiaz**	**152.90**	**270**	*e*P	**PKiKP**	**11 34 23.9**	**+1.2**
GEC2	**GERESS Array S**	**152.92**	**265**	*e*L	L	12 55 50.4	
	comp=Z,2µm,21.2s						
GERES	**GERESS Array B**	**152.92**	**265**	PKP	**PKPdf**	**11 34 14.5**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=112,slow=4.4,SNR=4.2						
GERES				PKPbc	**sPKPdf**	**11 34 22.0**	**+1.1**
	comp=Z,3.9nm,0.8s,baz=150,slow=2.9,SNR=24						
RES	**Resolute Bay**	**152.98**	**32**	PKP	**PKPdf**	**11 34 13.8**	**-0.9**
	comp=Z,2.0nm,0.8s,baz=232,slow=4.4,SNR=4.4						
RES				PKPbc	**sPKPdf**	**11 34 21.3**	**+1.2**
	comp=Z,4.1nm,0.8s,baz=226,slow=3.2,SNR=14						
RES	**Resolute Bay**	**152.98**	**32**	PKPdf	**PKPdf**	**11 34 15.5**	**+0.8**
SQTA	**Sankt Quirin**	**153.05**	**260**	*e*PKP	**PKiKP**	**11 34 24.1**	**+0.8**
	comp=Z,12nm,0.8s						
GOPC	**GO Pecny, Ondr**	**153.07**	**268**	AMS	AMS	12 55 30.0	
	comp=Z,1µm,19.4s						
FUORN	**Ofenpass-Fuorn**	**153.09**	**258**	IAMs_20	IAMs_20	12 59 12.1	
	comp=Z,1µm,20.0s						
FETA	**Feichten**	**153.15**	**259**	*e*PKP	**PKiKP**	**11 34 24.2**	**+0.6**
	comp=Z,5.8nm,0.9s						
KHC	**Kasperske Hory**	**153.17**	**265**		**PKiKP**	**11 34 23.5**	**+0.1**
KHC					**PKPab**	**11 34 34.7**	**-0.4**
KHC	**Kasperske Hory**	**153.17**	**265**	⇑*e*PKP	**PKiKP**	**11 34 23.8**	**+0.4**
KHC				*e*PKPAB	**PKPab**	**11 34 35.7**	**+0.6**
KHC				*e*SS	SS	11 57 44.1	+1.8
KHC				AMS	AMS	12 55 10.0	
	comp=Z,2µm,19.6s						
KHC	**Kasperske Hory**	**153.17**	**265**	*e*PKIKP	**PKiKP**	**11 34 23.8**	**+0.4**
KHC				*e*		11 34 35.7	
KHC				*e*SS	SS	11 57 44.1	+1.8
KHC				MLR	MLR		
	comp=Z,2µm,19.6s						
MOTA	**Moosalm**	**153.19**	**260**	*e*PKP	**PKiKP**	**11 34 24.6**	**+0.9**
	comp=Z,5.4nm,0.6s						
PVAQ	**Vaqueiros**	**153.24**	**221**	*e*SS	SS	11 57 51.3	+9.1
PVAQ	**Vaqueiros**	**153.24**	**221**	*e*LR	LR	12 26 32.0	
PVAQ				A	A	12 44 21.4	
	comp=Z,2µm,18.0s						
PRU	**Pruhonice**	**153.24**	**267**	*e*SS	SS	11 57 40.4	-2.6
PRU				AMS	AMS	12 54 50.0	
	comp=Z,1µm,19.9s						
TUE	**Stuetta**	**153.43**	**256**	IAMs_20	IAMs_20	12 58 43.1	
	comp=Z,2µm,21.0s						
MORF	**Marmelete**	**153.45**	**220**	*e*PKIKP	**PKPdf**	**11 34 17.4**	**+0.8**
MORF				*e*SS	SS	11 57 48.4	+3.8
MORF	**Marmelete**	**153.45**	**220**	*e*PKPdf	**PKPdf**	**11 34 17.4**	**+0.8**
MORF				*e*SS	SS	11 57 48.4	+3.8
MORF				IAMs_20	IAMs_20	12 44 46.2	
	comp=Z,4µm,12.5s						
FINES	**FINESS Array B**	**153.51**	**297**	PKPbc	**PKPbc**	**11 34 22.6**	**-0.8**
	comp=Z,4.8nm,0.8s,baz=103,slow=4.1,SNR=11						
PVCC	**Panska Ves**	**153.57**	**268**	AMS	AMS	12 55 00.0	
	comp=Z,2µm,18.6s						
FUR	**Furstenfeldbru**	**153.67**	**261**	*e*L	L	13 02 33.2	
	comp=Z,1µm,20.1s						
PBAR	**Barrancos**	**153.71**	**223**	*e*PKPab	**PKPab**	**11 34 39.9**	**+2.4**
PBAR	**Barrancos**	**153.71**	**223**	*e*LR	LR	12 32 51.6	
PBAR				A	A	12 42 25.6	
	comp=Z,2µm,20.0s						
MESJ	**Messejana**	**153.80**	**221**	*e*PKIKP	**PKPdf**	**11 34 17.8**	**+0.8**
MESJ				*e*SS	SS	11 57 52.1	+3.8
MESJ	**Messejana**	**153.80**	**221**	*e*PKPdf	**PKPdf**	**11 34 17.8**	**+0.8**
MESJ				*e*SS	SS	11 57 52.1	+3.8
MESJ				IAMs_20	IAMs_20	12 44 53.2	
	comp=Z,3µm,12.0s						
ESBB	**Sonseca Array**	**153.92**	**230**	PKPdf	**PKPdf**	**11 34 15.3**	**-1.9**
ESBB					**PKiKP**	**11 34 26.5**	**+1.2**
ESDC	**Sonseca Array**	**153.92**	**230**	PKP	**PKPdf**	**11 34 17.1**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=207,slow=0.7,SNR=5.0						
ESDC				PKPbc	**PKiKP**	**11 34 25.8**	**+0.6**
	comp=Z,3.3nm,0.8s,baz=149,slow=1.0,SNR=18						
ESDC				PKPab	**PKPab**	**11 34 39.1**	**+0.6**
	comp=Z,3.7nm,0.8s,baz=161,slow=3.9,SNR=11						
ESDC	**Sonseca Array**	**153.92**	**230**	PKPdf	**PKPdf**	**11 34 16.8**	**-0.4**
PAB	**San Pablo**	**153.96**	**229**	PKPdf	**PKPdf**	**11 34 17.5**	**+0.2**
PAB					**PKiKP**	**11 34 26.8**	**+1.4**
PAB	**San Pablo**	**153.96**	**229**	IAMs_20	IAMs_20	12 43 56.0	
	comp=Z,2µm,21.0s						
PAB	**San Pablo**	**153.96**	**229**	PKIKP	**PKPdf**	**11 34 17.5**	**+0.2**
BRG	**Berggiesshubel**	**154.09**	**268**	*e*PKP	**PKiKP**	**11 34 31.8**	**+6.6**
BRG				Amp		11 34 32.2	
	comp=Z,7.3nm,1.1s						
BRG	**Berggiesshubel**	**154.09**	**268**	P	**PKPab**	**11 34 45.7**	**+6.8**
BRG				Amp		11 34 47.5	
	comp=Z,58nm,1.8s						
BRG	**Berggiesshubel**	**154.09**	**268**	*e*PKIKP	**PKiKP**	**11 34 31.7**	**+6.6**
BRG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
PNCL	**Nicolau / Gran**	**154.15**	**221**	*e*LR	LR	12 26 40.2	
PNCL				A	A	12 44 49.3	
	comp=Z,3µm,18.0s						
NKC	**Novy Kostel**	**154.44**	**266**	AMS	AMS	12 59 50.0	
	comp=Z,2µm,18.3s						
PESTR	**Estremoz**	**154.52**	**223**	*e*LR	LR	12 26 16.4	
PESTR				A	A	12 39 24.0	
	comp=Z,2µm,24.0s						
GRA1	**Grafenberg Arr**	**154.70**	**264**	IAMs_20	IAMs_20	12 56 01.5	
	comp=Z,1µm,19.0s						
GRF	**Grafenberg Arr**	**154.70**	**264**	*e*PKPdf	**PKiKP**	**11 34 31.8**	**+5.3**
	baz=130,slow=2.6						
GRF				*e*L	L	12 56 01.7	
	comp=Z,1µm,19.6s						
GRFO	**Grafenberg**	**154.70**	**264**	IAMs_20	IAMs_20	12 56 01.5	
	comp=Z,2µm,19.0s						
CLL	**Collm**	**154.83**	**268**	PKPbc	**PKPbc**	**11 34 24.0**	**-2.6**
CLL					**PKPab**	**11 34 43.3**	**+1.3**
CLL				IAMs_20	IAMs_20	12 44 46.8	
	comp=Z,1µm,22.0s						
CLL	**Collm**	**154.83**	**268**	*e*PKPdf	**PKPdf**	**11 34 21.0**	**+3.0**
CLL				*e*PKPbc	**PKiKP**	**11 34 28.0**	**+1.4**
CLL				*e*x	x	11 34 33.0	
CLL				*e*PKPab	**PKPab**	**11 34 42.0**	**0.0**
	comp=Z,168nm,2.8s						
CLL				*i* x	x	11 34 48.2	
	comp=Z,28nm,1.3s						
CLL				*i* x	x	11 34 57.7	
CLL				*e*PP	**PP**	**11 38 16.0**	**-2.5**
CLL				*e*x	x	11 38 32.0	
CLL				*e*x	x	11 38 54.0	
CLL				*e*PPP	PPP	11 41 48.0	
CLL				*e*SKKSac	SKKSac	11 45 06.0	-0.7
CLL				*e*x	x	11 46 42.0	
CLL				*e*PSKS		11 48 42.0	
CLL				*e*SKKSdf	**SKKSdf**	**11 50 00.0**	**+0.1**
CLL				*e*PPS	PPS	11 51 18.0	
CLL				*e*SS	**SS**	**11 58 04.0**	**+3.8**
CLL				*e*PSS	PSS	11 58 51.0	
CLL				*e*PSPS		11 59 24.0	
CLL				*e*SSS	SSS	12 03 42.0	
CLL				*e*x	x	12 05 00.0	
CLL				*e*SSSS		12 07 48.0	
CLL				*e*x	x	12 11 24.0	
CLL				AMS	AMS	13 01 00.0	
	comp=Z,1µm,19.3s						
CLL	**Collm**	**154.83**	**268**	*e*PKIKP	**PKPdf**	**11 34 21.0**	**+3.0**
CLL				*e*		11 34 28.0	
CLL				*e*		11 34 42.0	
CLL				pmax	pmax		
	comp=Z,168nm,2.8s						
CLL				MLR	MLR		
	comp=Z,1µm,19.3s						
CLL	**Collm**	**154.83**	**268**	*e*L	L	12 44 46.5	
	comp=Z,1µm,21.4s						
SSB	**Saint Sauveur**	**154.85**	**249**	IAMs_20	IAMs_20	12 52 52.7	
	comp=Z,1µm,20.0s						
PMTG	**Montargil**	**154.91**	**222**	*e*LR	LR	12 26 50.1	
PMTG				A	A	12 44 03.0	
	comp=Z,2µm,20.0s						
PMRV	**Marv??o**	**154.95**	**224**	*e*SS	SS	11 58 14.0	+13
PMRV	**Marv??o**	**154.95**	**224**	*e*LR	LR	12 27 14.4	
PMRV				A	A	12 46 38.2	
	comp=Z,2µm,18.0s						
STU	**Stuttgart**	**155.10**	**260**	IAMs_20	IAMs_20	12 55 37.1	
	comp=Z,1µm,19.0s						
MOX	**Moxa**	**155.11**	**266**	*e*L	L	13 00 08.8	
	comp=Z,1µm,19.0s						
PMAFR	**Mafra**	**155.16**	**220**	*e*LR	LR	12 27 03.1	
PMAFR				A	A	12 40 05.6	
	comp=Z,2µm,20.0s						
BFO	**Black Forest**	**155.22**	**258**	IAMs_20	IAMs_20	12 55 00.5	
	comp=Z,1µm,19.0s						
BFO	**Black Forest**	**155.22**	**258**	*e*L	L	12 57 03.5	
	comp=Z,1µm,19.8s						
PSBE	**So Bento**	**155.50**	**222**	*e*LR	LR	12 27 01.6	
PSBE				A	A	13 04 25.4	
	comp=Z,1µm,20.0s						
ARCES	**ARCESS Array B**	**155.71**	**315**	PKPab	**PKPab**	**11 34 45.5**	**+0.1**
	comp=Z,6.8nm,0.9s,baz=68,slow=5.0,SNR=8.0						
MTE	**Manteigas**	**155.87**	**225**	*e*LR	LR	12 27 55.6	
MTE				A	A	12 55 17.1	
	comp=Z,2µm,18.0s						
PCAS	**Casmilo, Conde**	**155.89**	**223**	*e*LR	LR	12 27 53.8	
PCAS				A	A	12 46 35.7	
	comp=Z,2µm,18.0s						
MVO	**Moncorvo**	**156.36**	**226**	*e*SS	SS	11 58 24.9	+8.5
MVO	**Moncorvo**	**156.36**	**226**	*e*LR	LR	12 28 48.4	
MVO				A	A	12 48 44.0	
	comp=Z,2µm,18.0s						
TNS	**Taunus Mts**	**156.42**	**262**	*e*L	L	12 57 16.2	
	comp=Z,1µm,21.2s						
PBRG	**Braganca**	**156.82**	**228**	*e*LR	LR	12 34 29.5	
PBRG				A	A	12 48 26.6	
	comp=Z,2µm,18.0s						
KBS	**Kingsbay**	**157.27**	**341**	IAMs_20	IAMs_20	12 51 25.9	
	comp=Z,2µm,20.0s						
PGAV	**Gavieira, Arco**	**157.51**	**225**	*e*LR	LR	12 29 11.0	
PGAV				A	A	12 47 25.5	
	comp=Z,2µm,18.0s						
BSEG	**Bad Segeberg**	**157.68**	**271**	*e*L	L	12 54 36.4	
	comp=Z,2µm,20.9s						

ROM 09 11:26:14.8±0.0, 43°.070N±0°.002×13°.043E±0°.004, h10^{km}, ML1.2/7, 1C-1D, Error ellipse: s-maj=0.3km s-min=0.1km az=78.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1219	**Muccia, Frazio**	**0.03**	**242**	P	Pg	11 26 17.0	+0.3
T1219				S	Sg	11 26 18.1	+0.1
T1219				AML	AML		
	comp=E,156µm,0.2s						
T1219				AML	AML		
	comp=N,259µm,0.2s						
T1219				AML	AML		
	comp=N,252µm,0.2s						
T1219				AML	AML		
	comp=E,165µm,0.2s						
T1220	**Camerino, Fraz**	**0.05**	**40**	P	Pg	11 26 17.1	+0.3
T1220				AML	AML		
	comp=E,1042µm,0.3s						
T1220				AML	AML		
	comp=E,1038µm,0.3s						
T1220				AML	AML		
	comp=N,513µm,1.4s						
T1220				AML	AML		
	comp=E,9603µm,1.3s						
T1220				AML	AML		
	comp=N,482µm,0.2s						
T1220				AML	AML		
	comp=E,1039µm,0.3s						
T1220				AML	AML		
	comp=N,482µm,0.2s						
CSP1	**Cessapalombo**	**0.12**	**79**	⇑P	Pg	11 26 18.2	+0.5
CSP1				S	Sg	11 26 20.4	+0.5
CSP1				AML	AML		
	comp=E,120µm,0.3s						
CSP1				AML	AML		
	comp=N,176µm,0.9s						
CSP1				AML	AML		
	comp=E,102µm,0.1s						
CSP1				AML	AML		
	comp=N,151µm,0.1s						
MC2	**Monte Cornacci**	**0.19**	**145**	P	Pg	11 26 19.6	+0.7
MC2				S	Sg	11 26 23.1	+1.3
SNTG	**Esanatoglia**	**0.20**	**338**	P	Pg	11 26 19.7	+0.7
SNTG				S	Sg	11 26 23.4	+1.4
SNTG				AML	AML		
	comp=E,33µm,0.1s						
SNTG				AML	AML		
	comp=N,34µm,0.1s						
SNTG				AML	AML		
	comp=E,116µm,0.9s						
SNTG				AML	AML		
	comp=N,162µm,1.1s						
T1245	**Castelsantange**	**0.24**	**153**	P	Pg	11 26 20.4	+0.6
T1245				S	Sg	11 26 24.6	+1.5
T1245				AML	AML		
	comp=E,37µm,0.1s						
T1245				AML	AML		
	comp=N,51µm,0.3s						
T1245				AML	AML		
	comp=E,108µm,0.7s						
EL6	**Elcito**	**0.26**	**9**	⇓P	Pg	11 26 21.0	+0.8
EL6				S	Sb	11 26 25.3	-1.1
EL6				AML	AML		
	comp=E,140µm,1.0s						
EL6				AML	AML		
	comp=N,157µm,1.1s						
EL6				AML	AML		
	comp=N,157µm,1.1s						
EL6				AML	AML		
	comp=N,145µm,0.2s						
EL6				AML	AML		
	comp=E,137µm,0.2s						
T1215	**Vallo di Nera,**	**0.30**	**206**	P	Pb	11 26 21.6	-0.7
T1215				S	Sb	11 26 26.3	-1.0
T1215				AML	AML		
	comp=E,14µm,0.1s						
T1218	**Civita (PG)**	**0.40**	**172**	P	Pg	11 26 22.3	-0.5

ROM 09 11:26:54.3±0.1, 43°.133N±0°.005×11°.49E±0°.01, h12^{km}±3^{km}, ML1.5/6, 8C-1D, Error ellipse: s-maj=0.9km s-min=0.2km az=73.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FROS	**Frosini**	**0.26**	**288**	⇑P	Pb	11 27 00.2	-0.6
FROS				S	Sg	11 27 03.5	+0.3
FROS				AML	AML		
	comp=E,286µm,0.3s						
FROS				AML	AML		
	comp=N,212µm,0.2s						
ARCI	**Arcidosso**	**0.28**	**182**	⇑P	Pb	11 27 00.8	-0.5
ARCI				S	Sg	11 27 04.7	+0.7
ARCI				AML	AML		
	comp=E,113µm,1.3s						
ARCI				AML	AML		
	comp=N,170µm,0.9s						
ARCI				AML	AML		
	comp=N,170µm,1.1s						
ARCI				AML	AML		
	comp=E,113µm,0.7s						
SF11	**Podere del Sol**	**0.30**	**152**	P	Pg	11 27 00.3	-0.1
SF11				S	Sg	11 27 05.2	+0.6
SF04	**Casetta**	**0.32**	**157**	P	Pb	11 27 01.8	-0.1
SF04				S	Sg	11 27 05.9	+0.6
SF04				AML	AML		
	comp=E,218µm,0.3s						
SF04				AML	AML		
	comp=E,218µm,1.7s						
SF04				AML	AML		
	comp=N,196µm,0.1s						

SF01	Poggio Pratacc	0.33	170	⇑P	Pb	11 27 01.7	-0.3
SF01				S	Sg	11 27 05.9	+0.6
SF01				AML	AML		
	comp=E,105µm,0.7s						
SF01				AML	AML		
	comp=N,115µm,0.3s						
SF13	Bagnolo	0.33	163	⇑P	Pb	11 27 01.9	-0.2
SF13				S	Sg	11 27 06.1	+0.6
CSNT	Castellina Chi	0.37	337	P	Pg	11 27 01.9	+0.2
CSNT				S	Sg	11 27 07.0	+0.4
CSNT				AML	AML		
	comp=E,45µm,1.1s						
CSNT				AML	AML		
	comp=N,64µm,0.7s						
CSNT				AML	AML		
	comp=E,45µm,0.9s						
CSNT				AML	AML		
	comp=N,64µm,1.3s						
MCIV	Monte Civitell	0.38	159	P	Pb	11 27 02.8	-0.1
SF14	Selvena	0.39	166	P	Pb	11 27 03.0	-0.1
SF14				S	Sg	11 27 07.7	+0.4
CAFI	Castiglion Fio	0.40	61	⇑P	Pb	11 27 03.0	-0.4
CAFI				S	Sg	11 27 08.1	+0.4
SACS	San Casciano d	0.42	132	P	Pg	11 27 02.5	-0.1
OSSC	Osservatorio P	0.43	336	⇑P	Pg	11 27 03.1	+0.3
OSSC				S	Sg	11 27 09.0	+0.5
TRIF	Trifonti	0.43	268	P	Pb	11 27 03.4	-0.4
TRIF				S	Sg	11 27 08.8	+0.2
TRIF				AML	AML		
	comp=N,69µm,0.9s						
TRIF				AML	AML		
	comp=E,58µm,0.1s						
CASP	Castiglione de	0.57	233	⇓P	Pb	11 27 06.4	+0.2
CASP				S	Sb	11 27 14.1	-0.2
CRE	Caprese Michel	0.59	35	P	Pb	11 27 06.6	0.0
CRE				AML	AML		
	comp=N,25µm,0.7s						
CRE				AML	AML		
	comp=E,30µm,1.4s						
T1216	Preci, Frazion	1.15	102	⇑P	Pg	11 27 20.8	+4.4
MNTP	Montappone	1.45	89	S	Sg	11 27 42.6	+1.6
MNTP				AML	AML		
	comp=E,30500µm,1.6s						
MNTP				AML	AML		
	comp=N,33000µm,1.6s						
AQU	L'Aquila	1.61	118	P	Pg	11 27 27.9	+2.8
FAGN	Fagnano	1.77	119	⇑P	Pb	11 27 26.5	-0.2
FAGN				AML	AML		
	comp=E,208µm,0.1s						
FAGN				AML	AML		
	comp=N,109µm,1.5s						

ROM 09 11:27:36.3±0.1**, 42°.593N**±0°.004×**13°.264E**±0°.009**,**
h12^{km}, ML1.6/2**, Error ellipse: s-maj=0.7km**
s-min=0.3km az=286.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RM33	Pellescritta (	0.09	204	P	Pg	11 27 39.5	+0.5
RM33				S	Sg	11 27 41.5	+0.4
RM33				AML	AML		
	comp=E,898µm,0.3s						
RM33				AML	AML		
	comp=N,511µm,1.0s						
RM33				AML	AML		
	comp=N,439µm,0.0s						
RM33				AML	AML		
	comp=E,898µm,0.3s						
RM33				AML	AML		
	comp=E,888µm,0.0s						
RM33				AML	AML		
	comp=N,441µm,0.0s						
T1218	Civita (PG)	0.13	305	P	Pg	11 27 40.2	+0.5
T1218				S	Sg	11 27 42.5	+0.3
T1218				AML	AML		
	comp=E,98µm,0.4s						
T1218				AML	AML		
	comp=N,184µm,1.3s						
T1214	Arquata del Tr	0.17	346	P	Pg	11 27 40.7	+0.5
T1214				S	Sg	11 27 44.0	+0.9
T1222	Castel Sant'An	0.26	221	P	Pg	11 27 42.0	+0.4
T1222				S	Sg	11 27 46.2	+1.0
T1241	Roccafluvione,	0.29	25	P	Pg	11 27 42.6	+0.3
T1241				S	Sg	11 27 47.2	+0.9
FIAM	Fiamignano	0.34	199	P	Pg	11 27 43.5	+0.3
FIAM				S	Sb	11 27 48.9	-1.0
FAGN	Fagnano	0.40	144	AML	AML		
	comp=E,208µm,0.1s						
FAGN				AML	AML		
	comp=N,109µm,1.5s						
MNTP	Montappone	0.56	15	AML	AML		
	comp=N,33000µm,1.6s						
MNTP				AML	AML		
	comp=E,30500µm,1.6s						

WEL 09 11:39:59.7±0.9**, 42°S**±4°×**17°4E**±°**, h5^{km}**±7^{km}**, M2.4**/3**,**
ML2.4/6**, MLv2.4**/3**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=89.3, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.25	207	P	Pg	11 40 04.9	+0.4
KHZ				S	Sg	11 40 09.1	+1.3
THZ	Tophouse	0.73	306	P	Pg	11 40 14.1	+0.4
THZ				S	Sb	11 40 24.5	-0.7
TUWZ	Tuamarina	0.79	14	P	Pg	11 40 15.0	+0.2
GVZ	Greta Valley S	0.91	212	P	Pb	11 40 18.1	+0.1
GVZ				S	Sn	11 40 32.2	-0.5
NNZ	Nelson	1.00	346	P	Pg	11 40 18.7	-0.2
MRNZ	Matariki Terra	1.06	318	P	Pg	11 40 19.4	-0.6
LTZ	Lake Taylor	1.20	240	P	Pg	11 40 22.5	-0.3
WEL	Wellington	1.22	42	P	Pg	11 40 22.3	-0.6
DSZ	Denniston Nort	1.48	287	P	Pg	11 40 27.9	-0.1
QRZ	Quartz Range	1.62	327	P	Pb	11 40 29.8	-0.3

WEL 09 11:41:12.3±1.0**, 42°S**±7°×**17°3E**±°**, h5^{km}**±3^{km}**, M2.3**/4**,**
ML2.4/6**, MLv2.3**/4**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=47.4, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.09	139	P	Pg	11 41 14.6	+0.4
KHZ				S	Sg	11 41 16.5	+0.9
GVZ	Greta Valley S	0.69	207	P	Pb	11 41 27.1	+0.2
GVZ				S	Sn	11 41 38.6	-1.5
BSWZ	Blackbirch Sta	0.70	26	P	Pg	11 41 25.8	0.0
THZ	Tophouse	0.71	325	P	Pg	11 41 26.4	+0.4
THZ				S	Sg	11 41 36.2	+0.9
LTZ	Lake Taylor	0.98	243	P	Pb	11 41 31.5	-0.3
TUWZ	Tuamarina	0.98	22	P	Pg	11 41 31.1	-0.1
AMCZ	Amberley	1.02	215	P	Pn	11 41 33.5	+0.2
MRNZ	Matariki Terra	1.08	331	P	Pg	11 41 33.2	+0.1
NNZ	Nelson	1.13	357	P	Pg	11 41 33.6	-0.3
TCW	Tory Channel	1.29	29	P	Pn	11 41 35.7	-1.2
TKNZ	Takaka Hill	1.36	344	P	Pg	11 41 38.6	+0.2
DSZ	Denniston Nort	1.37	295	P	Pg	11 41 38.7	+0.1
MQZ	McQueen's Vall	1.48	203	P	Pn	11 41 37.2	-2.4
DUWZ	D'Urville Isla	1.58	13	P	Pn	11 41 41.3	+0.3
QRZ	Quartz Range	1.67	335	P	Pb	11 41 43.1	-0.5
CAW	Cannon Point	1.73	45	P	Pn	11 41 41.0	-2.0
OGWZ	Otaki Gorge	2.00	41	P	Pn	11 41 44.8	-1.9

IDC 09 11:41:13.6±5.0**, 60°.00S**×**152°.87E, h0^{km}, mb4.0**/2**,**
mbtmp3.9/3**, ML3.6**/1**, Error ellipse: s-maj=363.4km**
s-min=33.6km az=75.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	17.86	174	P	Pn	11 45 22.9	-0.1
	0.2nm,0.3s,baz=346,slow=12,SNR=7.1						
	1.8nm,1.0s						
H01W1	Cape Leeuwin H	35.45	298	T	T	12 24 39.0	
	baz=146,slow=74,SNR=38						
H01W2	Cape Leeuwin H	35.45	298	T	T	12 24 37.8	
	baz=146,slow=74,SNR=39						
H01W3	Cape Leeuwin H	35.46	298	T	T	12 24 35.3	
	baz=146,slow=74,SNR=34						
ASAR	Alice Springs	38.66	332	P	P	11 48 38.5	-0.1
	1.9nm,0.9s,baz=163,slow=10,SNR=14						
	1.9nm,0.9s						
WRA	Warramunga Arr	42.15	334	P	P	11 49 07.5	-0.1
	2.9nm,1.1s,baz=165,slow=7.6,SNR=11						
	2.9nm,1.1s						
H03S2	Juan Fernandez	77.26	138	T	T	13 19 35.5	
	baz=201,slow=74,SNR=22						
H03S1	Juan Fernandez	77.27	138	T	T	13 19 36.8	
	baz=201,slow=74,SNR=17						
H03S3	Juan Fernandez	77.28	138	T	T	13 19 36.4	
	baz=201,slow=74,SNR=17						
H08S2	Diego Garcia H	78.61	274	T	T	13 18 26.4	
	baz=149,slow=76,SNR=7.5						
H08S1	Diego Carcia H	78.62	274	T	T	13 18 24.7	
	baz=149,slow=76,SNR=6.5						
H08S3	Diego Garcia H	78.63	274	T	T	13 18 29.1	
	baz=149,slow=76,SNR=12						

ROM 09 11:43:19.8±0.1**, 42°.618N**±0°.003×**13°.353E**±0°.005**,**
h8^{km}, ML1.8/14**, 1C-1D, Error ellipse: s-maj=0.4km**
s-min=0.1km az=245.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	SAN MARTINO	0.02	314	P	Pg	11 43 21.4	-0.1
SMA1				S	Sg	11 43 22.3	-0.4
CAMP	Campotosto	0.09	153	P	Pg	11 43 22.6	+0.4
CAMP				S	Sg	11 43 24.2	+0.3
CAMP				AML	AML		
	comp=E,1023µm,0.2s						
CAMP				AML	AML		
	comp=N,914µm,0.6s						
RM33	Pellescritta (	0.15	223	⇑P	Pg	11 43 23.9	+0.8
RM33				S	Sg	11 43 26.5	+1.2
RM33				AML	AML		
	comp=E,770µm,0.2s						
RM33				AML	AML		
	comp=N,391µm,1.0s						
RM33				AML	AML		
	comp=N,396µm,0.4s						
RM33				AML	AML		
	comp=E,726µm,0.2s						
T1214	Arquata del Tr	0.18	323	⇓P	Pg	11 43 24.4	+0.9
T1214				AML	AML		
	comp=N,312µm,0.9s						
T1214				AML	AML		
	comp=E,274µm,0.6s						
T1214				AML	AML		
	comp=N,288µm,0.9s						
T1214				AML	AML		
	comp=E,274µm,1.4s						
T1214				AML	AML		
	comp=E,316µm,1.1s						
T1218	Civita (PG)	0.18	287	P	Pg	11 43 24.4	+0.7
T1218				AML	AML		
	comp=E,237µm,0.6s						
T1218				AML	AML		
	comp=E,235µm,0.6s						
T1218				AML	AML		
	comp=N,481µm,0.3s						
T1218				AML	AML		
	comp=E,236µm,0.6s						
T1218				AML	AML		
	comp=N,460µm,0.3s						
T1218				AML	AML		
	comp=E,237µm,1.4s						
T1218				AML	AML		
	comp=E,236µm,1.4s						
TERO	Teramo	0.18	89	P	Pg	11 43 24.4	+0.8
TERO				S	Sg	11 43 27.7	+1.5
TERO				AML	AML		
	comp=E,1465µm,0.7s						
TERO				AML	AML		
	comp=N,2380µm,0.1s						
TERO				AML	AML		
	comp=N,2225µm,0.1s						
TERO				AML	AML		
	comp=E,1605µm,0.7s						
TERO				AML	AML		
	comp=E,1465µm,1.3s						
TERO				AML	AML		
	comp=E,1605µm,1.3s						
GIGS	Gran Sasso	0.23	136	P	Pg	11 43 25.1	+0.6
GIGS				S	Sg	11 43 28.7	+1.0
GIGS				AML	AML		
	comp=E,106µm,0.5s						
GIGS				AML	AML		
	comp=N,137µm,0.5s						
GIGS				AML	AML		
	comp=E,106µm,0.5s						
GIGS				AML	AML		
	comp=N,136µm,0.5s						
GIGS				AML	AML		
	comp=E,106µm,1.5s						
T1241	Roccafluvione,	0.24	14	P	Pg	11 43 25.5	+0.8
T1241				S	Sg	11 43 29.8	+1.7
T1212	Cascia, Frazio	0.26	300	P	Pg	11 43 25.8	+0.7
T1212				AML	AML		
	comp=E,184µm,0.5s						
T1212				AML	AML		
	comp=N,191µm,1.0s						
T1245	Castelsantange	0.27	333	P	Pb	11 43 26.2	-0.7
T1245				AML	AML		
	comp=N,282µm,0.4s						
T1245				AML	AML		
	comp=E,216µm,0.2s						
MMO1	Montemonaco	0.28	356	P	Pg	11 43 26.2	+0.8
MMO1				S	Sb	11 43 30.9	-1.1
T1222	Castel Sant'An	0.32	227	P	Pg	11 43 26.6	+0.5
T1222				AML	AML		
	comp=N,162µm,1.0s						
T1222				AML	AML		
	comp=E,176µm,0.3s						
T1217	Poggiodomo (PG	0.33	287	P	Pg	11 43 26.8	+0.6
T1217				AML	AML		
	comp=N,123µm,0.3s						
T1217				AML	AML		
	comp=E,92µm,0.3s						
T1211	Morro Reatino	0.38	257	P	Pg	11 43 27.6	+0.4
FAGN	Fagnano	0.39	154	P	Pb	11 43 28.7	-0.2
FAGN				AML	AML		
	comp=N,257µm,0.4s						
FAGN				AML	AML		
	comp=E,308µm,0.4s						
VCEL	Villa Celiera	0.42	122	P	Pb	11 43 29.3	-0.3
VCEL				AML	AML		
	comp=N,286µm,0.9s						
VCEL				AML	AML		
	comp=E,302µm,0.6s						
CSP1	Cessapalombo	0.49	347	P	Pg	11 43 29.8	+0.5
T0110	Collepietro	0.50	141	P	Pb	11 43 30.3	-0.6
T0110				AML	AML		
	comp=N,119µm,1.4s						
T0110				AML	AML		
	comp=E,144µm,0.4s						
T0110				AML	AML		
	comp=N,119µm,0.6s						
T1219	Muccia, Frazio	0.51	330	P	Pg	11 43 30.0	+0.4
T1220	Camerino, Fraz	0.53	339	P	Pg	11 43 30.6	+0.5
INTR	Introdacqua	0.73	146	P	Pg	11 43 33.9	0.0

ROM 09 11:43:49.9±0.2**, 42°.883N**±0°.004×**13°.081E**±0°.004**,**
h10^{km}, ML0.9/4**, 3C-1D, Error ellipse: s-maj=0.5km**
s-min=0.0km az=342.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1216	Preci, Frazion	0.05	280	P	Pg	11 43 52.4	+0.4
T1216				S	Sg	11 43 53.8	+0.3
T1216				AML	AML		
	comp=E,193µm,0.1s						
T1216				AML	AML		
	comp=N,191µm,0.2s						
FEMA	Monte Fema	0.08	344	P	Pg	11 43 52.8	+0.3
T1245	Castelsantange	0.08	108	⇓P	Pg	11 43 52.9	+0.4
T1245				S	Sg	11 43 54.7	+0.3
T1245				AML	AML		
	comp=E,99µm,0.2s						
T1245				AML	AML		
	comp=N,130µm,0.2s						
T1245				AML	AML		
	comp=E,121µm,0.3s						
T1245				AML	AML		
	comp=N,159µm,0.9s						
MC2	Monte Cornacci	0.09	70	⇑P	Pg	11 43 53.0	+0.4
MC2				S	Sg	11 43 54.9	+0.4
T1212	Cascia, Frazio	0.13	192	⇑P	Pg	11 43 53.7	+0.6
T1212				S	Sg	11 43 56.3	+1.0
T1212				AML	AML		
	comp=N,45µm,0.1s						
T1215	Vallo di Nera,	0.18	243	⇑P	Pg	11 43 54.3	+0.6
T1215				S	Sg	11 43 57.3	+0.9
T1215				AML	AML		
	comp=N,16µm,0.1s						
MMO1	Montemonaco	0.18	85	P	Pg	11 43 54.3	+0.5
MMO1				S	Sg	11 43 57.4	+0.8
T1219	Muccia, Frazio	0.18	343	P	Pg	11 43 54.4	+0.5

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*IDC **09** 11:53:22.6±1.5, 5°.35N×124°.39E, h0^{km}, mb3.3/3,*
mbtmp3.4/4, ML4.0/1, Error ellipse: s-maj=52.9km
s-min=25.1km az=82.0

*MAN **09** 11:53:33.5, 5°.91N×126°.20E, h113^{km}, mb4.1, ML2.9,*
MS2.6

ISC 09 11:53:34.2±1.3**, 5°.9N**±0°.1×**126°.1E**±0°.1**, h119^{km}**±13^{km}**, n9,**
σ1s17/15**, mb3.3**/3**, 2C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	1.11	279	⇑*i*P	Pn	11 53 56.7	-0.7
GSPH				*i*S	Sn	11 54 13.4	-1.5
DAV	Davao City (W)	1.24	338	Pn	Pn	11 53 59.2	+0.5
	51nm,0.3s,baz=20,slow=6.9,SNR=1.9						
DAV				Sn	Sn	11 54 19.3	+2.1
	128nm,0.3s,baz=292,slow=22,SNR=9.2						
	162nm,0.3s						
KCP	Kidapawan	1.44	319	⇓*i*P	Pn	11 54 01.4	+0.4
KCP				*i*S	Sn	11 54 22.1	+0.7
CDOP	Cateel, Davao	1.89	12	⇓*i*P	Pn	11 54 05.9	-0.4
CDOP				*i*S	Sn	11 54 29.4	-1.4
BUKP	Musuan	2.18	333	⇓*e*P	Pn	11 54 10.7	+0.7
BUKP				*e*S	Sn	11 54 36.9	-0.5
BIPH	Bislig	2.27	8	⇑*i*P	Pn	11 54 10.3	-0.7
BIPH				*i*S	Sn	11 54 39.5	+0.2
WRA	Warramunga Arr	26.96	163	P	P	11 59 05.8	+0.9
	0.1nm,0.4s,baz=339,slow=11,SNR=5.5						
	0.1nm,0.4s						
ASAR	Alice Springs	30.39	166	P	P	11 59 36.4	+1.2
	0.3nm,0.4s,baz=339,slow=6.9,SNR=6.2						
	0.3nm,0.4s						
MKAR	Makanchi Array	55.39	325	P	P	12 02 54.9	-1.1
	0.2nm,0.5s,baz=116,slow=7.1,SNR=2.6						
	0.2nm,0.5s						

IDC 09 12:08:47.8±1.7**, 3°.41S**×**130°.76E, h0^{km}, mb3.2**/2**,**
mbtmp3.3/4**, ML2.9**/2**, Error ellipse: s-maj=88.3km**
s-min=25.7km az=83.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	2.57	11	Pn	Pn	12 09 30.8	0.0
	0.9nm,0.3s,baz=200,slow=22,SNR=1.5						
SIJI				Sn	Sn	12 10 00.8	-1.9
	1.5nm,0.3s,baz=190,slow=23,SNR=2.0						
	4.0nm,0.3s						
WRA	Warramunga Arr	16.80	168	Pn	Pn	12 12 43.4	-1.2
	0.1nm,0.3s,baz=348,slow=11,SNR=3.1						
	0.9nm,1.1s						
ASAR	Alice Springs	20.37	172	P	P	12 13 26.7	+0.5
	0.6nm,0.3s,baz=352,slow=11,SNR=11						
	0.6nm,0.3s						
MKAR	Makanchi Array	65.68	326	P	P	12 19 34.1	0.0
	0.1nm,0.4s,baz=117,slow=8.4,SNR=1.9						
	0.1nm,0.4s						

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*IDC **09** 12:11:21.2±0.7, 7°.46S×147°.15E, h0^{km}, mb4.2/13,*
mbtmp4.2/16, ML4.0/3, Error ellipse: s-maj=25.6km
s-min=13.8km az=96.0

*DJA **09** 12:11:25.5±2.8, 8°S±7°×14°7E±°, h22^{km}±22^{km}, M4.4/12,*
mB5.5/1, mb4.4/12, MLv4.5/3, Mw(mB)4.9/1

*NEIC **09** 12:11:26.2±1.5, 7°.58S±0°.09×147°.0E±0°.1, h38^{km}±11^{km},*
mb4.2/10, Error ellipse: s-maj=19.7km s-min=2.6km
az=128.0

ISC 09 12:11:26.1±0.5**, 7°.54S**±0°.05×**147°.04E**±0°.09**, h32^{km}, n57,**
σ1s63/59**, mb4.4**/14**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	1.86	176	Pn	Pn	12 11 55.7	0.0
	108nm,0.3s,baz=2.4,slow=6.1,SNR=92						
PMG				Sn	Sb	12 12 23.4	+1.1
	137nm,0.3s,baz=151,slow=22,SNR=26						
PMG	Port Moresby	1.86	176		Pn	12 11 55.6	-0.2
PMG	Port Moresby	1.86	176	P	Pn	12 11 56.1	+0.3
PMG	Port Moresby	1.86	176	P	Pn	12 11 56.0	+0.3
KRVT	Keravat (AS076	5.91	57	Pn	Pn	12 12 49.0	-2.5
	1.4nm,0.3s,baz=3.0,slow=21,SNR=4.1						
	9.8nm,0.5s						
RABL	Rabaul	6.09	57		Pn	12 12 54.1	+0.1
RABL	Rabaul	6.09	57	P	Pn	12 12 56.9	+2.9
COEN	Coen	7.42	210	Pn	Pn	12 13 10.6	-1.6
COEN	Coen	7.42	210	P	Pn	12 13 11.6	-0.6
CTA	Charters Tower	12.50	183	Pn	Pn	12 14 21.1	-0.7
	0.5nm,0.3s,baz=12,slow=13,SNR=7.7						
	2.4nm,0.5s						
QIS	Mount Isa	14.81	208	P	Pn	12 14 53.4	+0.1
KDU	Kakadu	15.22	249	P	Pn	12 15 00.0	+1.2
SAUI	Saumlaki	15.60	267	P	P	12 15 08.4	+0.7
MTN	Manton Dam	16.51	250	P	P	12 15 19.4	+1.6
WB0	Warramunga Arr	17.27	224		Pn	12 15 24.2	-0.7
WB0				IAmb	IAmb	12 15 29.9	
	comp=Z,10.0nm,0.8s						
WRAB	Tennant Creek	17.41	224	P	Pn	12 15 25.2	-1.5
WRAB				IAmb	IAmb	12 15 31.0	
	comp=Z,12nm,0.8s						
WRAB	Tennant Creek	17.41	224	P	Pn	12 15 26.2	-0.5
WB2	Warramunga Arr	17.41	224		Pn	12 15 26.3	-0.4
WB2				IAmb	IAmb	12 15 32.4	
	comp=Z,13nm,0.6s						
WRA	Warramunga Arr	17.42	224	P	Pn	12 15 26.8	-0.1
	comp=Z,1.1nm,0.3s,baz=46,slow=12,SNR=36						
WRA				S	Sn	12 18 29.2	-11
	comp=Z,0.7nm,0.8s,baz=50,slow=22,SNR=3.4						
	comp=Z,5.0nm,0.5s						
WRA	Warramunga Arr	17.42	224	P	Pn	12 15 26.1	-0.8
RMQ	Roma	18.91	175	P	Pn	12 15 46.6	+1.5
QLP	Quilpie	19.12	188	P	Pn	12 15 48.6	+1.0
KNRA	Kununurra	19.63	244	P	P	12 15 50.2	-1.9
KNRA	Kununurra	19.63	244	P	Pn	12 15 55.2	+1.5
AS01	Alice Springs	20.36	217	P	P	12 16 01.4	+1.2
	comp=Z,31nm,0.8s						
AS31	Alice Springs	20.39	217	Pn	P	12 16 01.3	+0.9
AS31				IAmb	IAmb	12 16 05.6	
	comp=Z,5.3nm,0.7s						
ASAR	Alice Springs	20.39	217	P	P	12 16 01.2	+0.7
	comp=Z,12nm,0.7s,baz=42,slow=10,SNR=80						
ASAR				S	S	12 19 40.4	-7.1
	comp=Z,0.7nm,0.8s,baz=49,slow=21,SNR=4.4						
	comp=Z,12nm,0.7s						
ASAR	Alice Springs	20.39	217	P	P	12 16 00.5	0.0
INKA	Innaminka	20.96	196	P	P	12 16 08.4	+1.9
AULRC	Lightning Ridg	21.79	178	P	P	12 16 17.4	+2.0
OOD	Oodnadatta	22.83	207	P	P	12 16 26.6	0.0
FITZ	Fitzroy Crossi	23.32	241	P	P	12 16 30.3	-1.3
FITZ	Fitzroy Crossi	23.32	241	P	P	12 16 35.6	+3.9
CMSA	Cobar Meteorol	23.91	183	P	P	12 16 38.6	+1.5
LCRK	Leigh Creek	24.24	199	P	P	12 16 41.0	+0.8
STKA	Stephens Creek	24.74	191	P	P	12 16 44.3	-0.5
	comp=Z,0.8nm,0.5s,baz=355,slow=12,SNR=2.8						
	comp=Z,0.8nm,0.5s						
WRKA	Warakurna	24.96	224	P	P	12 16 47.1	+0.2
MULG	Mulgathing	25.69	207	P	P	12 16 56.7	+3.3
	comp=Z,11nm,1.3s						
BBOO	Buckleboo	27.13	201	P	P	12 17 06.0	-0.4
BBOO				IAmb	IAmb	12 17 11.7	
	comp=Z,12nm,1.0s						
KAPI	Kappang	27.23	274	P	P	12 17 09.6	+2.0
	comp=Z,6.8nm,0.6s,baz=96,slow=10.0,SNR=4.4						
	comp=Z,6.8nm,0.6s						
TPUB	Ta-pu	40.08	321	P	P	12 18 58.4	-0.4
CMWZ	Cape Campbell	41.72	149	P	P	12 19 10.4	-1.7
MJAR	Matsushiro Arr	44.62	350	P	P	12 19 34.2	-1.5
	comp=Z,2.0nm,0.9s,baz=200,slow=6.4,SNR=4.5						
	comp=Z,2.0nm,0.9s						
MAJO	Matsushiro	44.62	350	P	P	12 19 33.6	-2.0
KSRS	Korea Array	48.20	340	P	P	12 20 03.0	-0.6
	comp=Z,3.2nm,0.8s,baz=156,slow=9.6,SNR=9.3						
	comp=Z,3.2nm,0.8s						
USRK	Ussuriysk Ar.	53.27	347	P	P	12 20 42.2	+0.5
	comp=Z,1.5nm,0.6s,baz=197,slow=6.3,SNR=4.1						

	comp=Z,1.5nm,0.6s						
CMAR	Chiang Mai Arr	54.02	299	P	P	12 20 48.2	+0.5
	comp=Z,0.8nm,0.4s,baz=123,slow=5.9,SNR=6.4						
	comp=Z,0.8nm,0.4s						
PETK	Petropavlovsk-	61.09	7	P	P	12 21 37.6	+0.7
	comp=Z,6.2nm,1.1s,baz=156,slow=7.6,SNR=4.0						
	comp=Z,6.2nm,1.1s						
SONM	Songino Array	65.76	331	P	P	12 22 08.1	0.0
	comp=Z,0.3nm,0.4s,baz=124,slow=4.1,SNR=4.0						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	78.70	321	P	P	12 23 25.7	+0.4
	comp=Z,2.7nm,0.6s,baz=102,slow=6.7,SNR=43						
	comp=Z,2.7nm,0.6s						
ZALV	Zalesovo Beam	80.33	328	P	P	12 23 33.3	-0.6
	comp=Z,3.2nm,0.6s,baz=113,slow=5.8,SNR=17						
	comp=Z,3.2nm,0.6s						
NRIK	Noril'sk	86.74	342	P	P	12 24 06.0	-0.5
	comp=Z,1.6nm,0.6s,baz=168,slow=9.3,SNR=1.8						
	comp=Z,1.6nm,0.6s						
ILAR	Eielson Array	86.87	23	P	P	12 24 06.3	-1.0
	comp=Z,3.0nm,0.8s,baz=254,slow=4.8,SNR=23						
	comp=Z,3.0nm,0.8s						
YKA	Yellowknife Ar	100.51	28	P	Pdif	12 25 08.7	-1.4
	comp=Z,0.1nm,0.4s,baz=268,slow=4.8,SNR=2.7						
TORD	Torodi Ar. Bea	145.48	282	PKPbc	PKPbc	12 31 02.4	+0.3
	comp=Z,4.1nm,0.6s,baz=82,slow=4.2,SNR=21						
DBIC	Dimbokro	152.10	270	PKPbc	PKPbc	12 31 19.3	-0.1
	comp=Z,2.9nm,0.7s,baz=143,slow=4.2,SNR=4.8						
BDFB	Brasilia	152.56	147	PKPbc	PKiKP	12 31 21.9	+1.2
	comp=Z,1.5nm,0.3s,baz=290,slow=3.5,SNR=4.3						

ROM 09 12:15:02.3±0.1, 42°.799N±0°.004×13°.177E±0°.004, h13^{km}, ML1.0/10, 1C-3D, Error ellipse: s-maj=0.3km s-min=0.2km az=145.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1214	Arquata del Tr	0.05	150	P	Pg	12 15 05.1	+0.2
T1214				S	Sg	12 15 06.8	+0.1
T1214				AML	AML		
	comp=N,55μm,0.2s						
T1214				AML	AML		
	comp=N,100μm,0.5s						
T1214				AML	AML		
	comp=E,103μm,0.1s						
T1214				AML	AML		
	comp=E,110μm,0.1s						
T1245	Castelsantange	0.06	8	⇓P	Pg	12 15 05.3	+0.3
T1245				S	Sg	12 15 07.1	+0.1
T1245				AML	AML		
	comp=E,124μm,0.7s						
T1245				AML	AML		
	comp=N,196μm,0.2s						
T1245				AML	AML		
	comp=N,218μm,0.2s						
T1245				AML	AML		
	comp=E,123μm,0.1s						
T1245				AML	AML		
	comp=E,120μm,0.2s						
T1245				AML	AML		
	comp=N,195μm,0.2s						
T1212	Cascia, Frazio	0.11	244	⇑P	Pg	12 15 05.9	+0.5
T1212				S	Sg	12 15 08.2	+0.5
T1212				AML	AML		
	comp=E,87μm,0.2s						
T1212				AML	AML		
	comp=N,136μm,1.1s						
T1212				AML	AML		
	comp=E,87μm,0.2s						
T1212				AML	AML		
	comp=N,136μm,1.0s						
T1212				AML	AML		
	comp=N,129μm,0.1s						
T1212				AML	AML		
	comp=E,83μm,0.1s						
T1212				AML	AML		
	comp=N,123μm,0.1s						
T1218	Civita (PG)	0.14	200	⇓P	Pg	12 15 06.3	+0.4
T1218				S	Sg	12 15 09.0	+0.6
T1218				AML	AML		
	comp=E,64μm,0.2s						
T1218				AML	AML		
	comp=N,94μm,0.2s						
T1218				AML	AML		
	comp=N,90μm,0.2s						
T1218				AML	AML		
	comp=E,70μm,0.2s						
MMO1	Montemonaco	0.15	48	P	Pg	12 15 06.0	0.0
MMO1				S	Sg	12 15 09.3	+0.7
T1241	Roccafluvione,	0.20	73	⇓P	Pg	12 15 07.2	+0.5
T1241				S	Sg	12 15 10.5	+0.7
T1241				AML	AML		
	comp=N,204μm,0.8s						
T1241				AML	AML		
	comp=E,110μm,0.7s						
T1217	Poggiodomo (PG	0.20	244	P	Pg	12 15 07.4	+0.5
T1217				S	Sg	12 15 10.5	+0.6
T1217				AML	AML		
	comp=E,93μm,1.2s						
T1217				AML	AML		
	comp=E,13μm,0.1s						
T1215	Vallo di Nera,	0.23	271	P	Pg	12 15 07.7	+0.4
T1215				S	Sg	12 15 11.5	+0.9
T1215				AML	AML		
	comp=N,71μm,0.6s						
T1215				AML	AML		
	comp=N,12μm,0.1s						
T1215				AML	AML		
	comp=E,7μm,0.1s						
T1219	Muccia, Frazio	0.28	334	AML	AML		
	comp=E,119μm,0.1s						
T1219				AML	AML		
	comp=N,215μm,0.1s						
T1219				AML	AML		
	comp=N,215μm,0.1s						
T1219				AML	AML		
	comp=E,117μm,0.1s						
RM33	Pellescritta (	0.29	175	P	Pg	12 15 08.8	+0.4
RM33				AML	AML		
	comp=N,14μm,0.7s						
TERO	Teramo	0.36	119	P	Pg	12 15 09.9	+0.3
TERO				S	Sb	12 15 15.5	-0.7
TERO				AML	AML		
	comp=E,73μm,0.5s						
TERO				AML	AML		
	comp=N,17μm,0.1s						
TERO				AML	AML		
	comp=E,21μm,0.6s						
OFFI	Offida	0.40	70	S	Sb	12 15 19.2	+1.9

ROM 09 12:15:58.0±0.1, 42°.535N±0°.005×13°.358E±0°.007, h11^{km}, ML1.1/5, 1C-1D, Error ellipse: s-maj=0.6km s-min=0.6km az=227.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	Campotosto	0.04	88	P	Pg	12 16 00.5	+0.2
CAMP				S	Sg	12 16 01.7	-0.1
SMA1	SAN MARTINO	0.10	350	P	Pg	12 16 01.4	+0.6
SMA1				S	Sg	12 16 03.7	+0.8
T1247	Pizzolo (AQ)	0.10	205	P	Pg	12 16 01.4	+0.6
T1247				S	Sg	12 16 03.4	+0.5
T1247				AML	AML		
	comp=E,474μm,0.1s						
T1247				AML	AML		
	comp=N,532μm,0.3s						
T1247				AML	AML		
	comp=N,401μm,0.1s						
T1247				AML	AML		
	comp=E,475μm,0.1s						
RM33	Pellescritta (	0.11	256	P	Pg	12 16 01.4	+0.5
RM33				AML	AML		
	comp=E,114μm,0.8s						
RM33				AML	AML		
	comp=N,87μm,1.1s						
RM33				AML	AML		
	comp=N,87μm,1.1s						
RM33				AML	AML		
	comp=E,99μm,0.3s						
RM33				AML	AML		
	comp=N,71μm,0.2s						
RM33				AML	AML		
	comp=N,97μm,0.4s						
T1246	Crognaleto (TE	0.11	64	P	Pb	12 16 01.6	-0.6
T1246				S	Sg	12 16 03.7	+0.6
GIGS	Gran Sasso	0.18	118	P	Pb	12 16 02.7	-0.6
GIGS				S	Sg	12 16 05.7	+1.0
GIGS				AML	AML		
	comp=N,20μm,0.1s						
GIGS				AML	AML		
	comp=E,29μm,0.3s						
TERO	Teramo	0.20	64	P	Pg	12 16 03.0	+0.7
TERO				S	Sg	12 16 06.3	+1.0
TERO				AML	AML		
	comp=E,61μm,0.8s						
TERO				AML	AML		
	comp=N,79μm,0.3s						
T1241	Roccafluvione,	0.33	9	P	Pg	12 16 04.9	+0.3
T1241				S	Sg	12 16 10.0	+1.0
T1245	Castelsantange	0.34	339	⇓P	Pb	12 16 05.8	-0.5
T1245				AML	AML		
	comp=E,167μm,0.1s						
T1245				AML	AML		
	comp=N,258μm,0.2s						
T1245				AML	AML		
	comp=N,257μm,0.2s						
T1245				AML	AML		
	comp=E,167μm,0.1s						
T1245				AML	AML		
	comp=E,183μm,0.2s						
T1245				AML	AML		
	comp=N,260μm,0.2s						
MMO1	Montemonaco	0.36	356	P	Pg	12 16 04.8	-0.5
T1215	Vallo di Nera,	0.45	307	P	Pg	12 16 06.5	-0.3
T1215				AML	AML		
	comp=E,11μm,0.1s						
T1215				AML	AML		
	comp=N,15μm,0.1s						
T1220	Camerino, Fraz	0.61	341	⇑P	Pg	12 16 09.8	0.0
ARVD	Arcevia	1.01	343	S	Sg	12 16 28.3	-2.3

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*IDC **09** 12:24:19.0±0.6, 33°.25N×136°.40E, h432^{km}±9^{km}, mb3.2/11, mbtmp4.0/18, Error ellipse: s-maj=17.2km s-min=10.1km az=74.0*

*JMA **09** 12:24:18.7±0.3, 33°N±1°×136°.3E±1°.0, h430^{km}±2^{km}, MV3.3/32, SE OFF KII PENINSULA*

ISC 09 12:24:18.5±0.7, 33°.22N±0°.07×136°.38E±0°.06, h430^{km}±6^{km}, n38, σ1^{s}.20/52, mb3.5/11, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTO1	TONANKAI O.B.S	0.53	40	P	P	12 25 12.4	+1.3
JTNC	Tanabenakahech	0.88	313	P	P	12 25 12.7	+0.4
JTNC				S	S	12 25 55.1	-0.8
JWY	Kouya	1.19	327	P	P	12 25 14.1	+0.7
JWY				eS	S	12 25 56.9	-1.0
JIE	Ise	1.20	13	P	P	12 25 14.1	+0.8
JIE				eS	S	12 25 57.6	-0.1
TK02	Tokai 2	1.36	57	P	P	12 25 15.0	+1.4
JAI	Aioi	1.71	290	P	P	12 25 16.0	+0.4
JAI				eS	S	12 26 00.9	-0.9
JMN	Monobe	2.15	284	P	P	12 25 18.8	+0.7
JWT	Wachi	2.21	339	P	P	12 25 19.0	+0.7
JWT				eS	S	12 26 05.6	-1.4
JYTA	Yamagatataniai	2.39	7	P	P	12 25 20.4	+0.9
JYTA				eS	S	12 26 09.2	+0.1
JHJ	Hachijo jima 2	2.86	91	P	P	12 25 24.0	+1.2
	323nm,0.7s,baz=264,slow=4.2,SNR=9.2						
JHJ				S	S	12 26 17.1	+2.1
	170nm,0.8s,baz=264,slow=19,SNR=2.3						
JHJ2	Mitsune	2.88	91	eP	P	12 25 24.3	+1.3
JAOM	Aogashimamukai	2.95	104	eP	P	12 25 25.0	+1.5
JTO	Tosashimizu	3.03	264	P	P	12 25 24.6	+0.4
JOD2	Odawara 2	3.03	47	P	P	12 25 25.1	+1.0
JOD2				eS	S	12 26 18.0	+0.5
JKG	Kaga	3.05	359	P	P	12 25 24.8	+0.6
JHS	Saijyo	3.24	304	P	P	12 25 26.2	+0.4
JRY	Ryogami san	3.48	36	P	P	12 25 28.9	+1.2
JRY				S	S	12 26 23.4	-0.8
JHT	Toyohira	3.59	295	P	P	12 25 29.0	+0.2
MJAR	Matsushiro Arr	3.64	24	P	P	12 25 30.4	+1.3
	6.8nm,0.5s,baz=188,slow=9.8,SNR=21						
MJAR				S	S	12 26 26.1	-0.6
	8.9nm,0.7s,baz=194,slow=12,SNR=9.0						
BSO1	Boso 1	4.08	68	P	P	12 25 31.4	-1.0
BSO1				S	S	12 26 30.7	-2.0
JNU	Nakatsue	4.62	270	P	P	12 25 38.4	+0.3
	7.1nm,0.7s,baz=16,slow=4.9,SNR=8.3						
JCJ	Chichijima	7.90	139	S	S	12 27 41.1	-5.2
	104nm,0.6s,baz=289,slow=22,SNR=2.2						
KSRS	Korea Array	8.10	304	P	P	12 26 15.3	+0.6
	3.3nm,0.7s,baz=119,slow=12,SNR=10						
USRK	Ussuriysk Ar.	11.49	344	P	P	12 26 52.2	+0.5
	5.9nm,0.6s,baz=175,slow=12,SNR=15						
ASAJ	Asahikawa	11.91	22	P	P	12 26 56.9	+0.4
	3.2nm,0.5s,baz=228,slow=11,SNR=12						
ASAJ				S	S	12 29 05.2	-1.6
	6.4nm,1.0s,baz=73,slow=13,SNR=2.3						
KLR	Kul'dur	16.37	349	P	P	12 27 44.2	-0.2
	3.9nm,0.6s,baz=244,slow=3.2,SNR=15						
SONM	Songino Array	26.86	312	P	P	12 29 23.5	+0.9
	0.9nm,0.8s,baz=126,slow=7.8,SNR=7.2						
	0.9nm,0.8s						
CMAR	Chiang Mai Arr	36.55	256	P	P	12 30 46.1	0.0
	1.2nm,0.5s,baz=47,slow=7.7,SNR=9.7						
	1.2nm,0.5s						
ZALV	Zalesovo Beam	41.60	316	P	P	12 31 26.2	-0.6
	0.8nm,0.3s,baz=123,slow=5.3,SNR=3.3						
ZALV				PcP	PP	12 33 13.2	-0.9
	1.0nm,0.8s,baz=116,slow=3.4,SNR=3.8						
	0.8nm,0.3s						
MKAR	Makanchi Array	42.78	305	P	P	12 31 36.8	+0.4
	0.9nm,0.5s,baz=85,slow=10,SNR=16						
MKAR				PcP	PcP	12 33 18.6	+0.2
	0.2nm,0.4s,baz=56,slow=4.2,SNR=2.5						
	0.9nm,0.5s						
WRA	Warramunga Arr	52.90	182	P	P	12 32 53.1	+0.3
	1.4nm,0.3s,baz=360,slow=7.6,SNR=63						
	1.4nm,0.3s						
ASAR	Alice Springs	56.62	183	P	P	12 33 19.5	+0.4
	0.3nm,0.3s,baz=356,slow=4.8,SNR=18						
	0.3nm,0.3s						
ARCES	ARCESS Array B	66.09	339	P	P	12 34 21.7	+0.7
	0.6nm,0.6s,baz=60,slow=7.2,SNR=6.4						
	0.6nm,0.6s						
KBZ	Khabaz	70.20	310	P	P	12 34 47.6	+1.0
	2.5nm,0.8s,baz=73,slow=4.1,SNR=5.8						
	2.5nm,0.8s						
FINES	FINESS Array B	70.22	331	P	P	12 34 46.9	+0.5
	1.7nm,0.4s,baz=60,slow=5.9,SNR=17						
	1.7nm,0.4s						
AKASG	Malin Array Be	74.72	321	P	P	12 35 12.7	-0.1
	0.3nm,0.3s,baz=52,slow=5.5,SNR=2.3						
	0.3nm,0.3s						
NB2	NORSAR Subarra	76.03	336	P	P	12 35 20.3	+0.3
	comp=Z,0.4nm,0.5s,baz=45,slow=5.9						
NOA	NORSAR Array B	76.03	336	P	P	12 35 18.7	-1.3
	comp=Z,0.7nm,0.5s,baz=45,slow=5.5,SNR=4.9						
	comp=Z,0.7nm,0.5s						

WEL 09 12:26:41.5±0.6, 40°S±4°×17°7E±°, h17^{km}±6^{km}, M3.2/13, ML3.6/13, MLv3.2/13, Error ellipse: s-maj=0.0km s-min=0.0km az=112.1, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CKHZ	Cape Kidnapper	0.14	262	P	Pb	12 26 46.2	+0.5
CKHZ				S	Sb	12 26 50.0	+1.6
KAHZ	Kahuranaki	0.33	242	P	Pb	12 26 50.0	+1.0
ARHZ	Aropaoanui	0.43	332	P	Pb	12 26 50.8	+0.2
ARHZ				S	Sb	12 26 58.1	+1.4
MCHZ	McNeill Hill	0.47	294	P	Pb	12 26 51.5	+0.1
MCHZ				S	Sn	12 26 59.9	-1.6
PXZ	Pawanui	0.49	218	P	Pn	12 26 52.8	-1.0
WHHZ	Waihua	0.56	358	P	Pb	12 26 53.4	+0.5
NMHZ	Naumai	0.64	327	P	Pb	12 26 54.7	+0.3
NMHZ				S	Sn	12 27 04.9	-0.9
KWHZ	Kaweka Forest	0.68	288	P	Pb	12 26 55.0	+0.1
KWHZ				S	Sn	12 27 05.8	-0.8
KNZ	Kokohu	0.70	28	P	Pb	12 26 55.6	+0.4
MHGZ	Mahia Peninsul	0.70	46	P	Pn	12 26 56.0	-0.7
RAHZ	Arahi	0.73	350	P	Pb	12 26 56.2	+0.3
BKZ	Black Stump Fm	0.76	308	P	Pb	12 26 56.1	-0.2
WPHZ	Waipukurau	0.76	236	P	Pg	12 26 56.7	+0.4
PRHZ	Porangahau	0.79	217	P	Pb	12 26 56.7	-0.1
MTHZ	Maungataniwha	0.85	338	P	Pb	12 26 57.6	-0.2
PNHZ	Pukenui	0.86	251	P	Pb	12 26 57.8	-0.2
SNGZ	Shannon Statio	0.86	4	P	Pb	12 26 57.9	-0.1
BHHZ	Black Hill Sta	0.93	279	P	Pb	12 26 58.7	-0.6
RIGZ	Rimuhau	1.01	23	P	Pb	12 27 00.1	-0.5
MRHZ	Matea Rd	1.03	321	P	Pb	12 27 00.6	-0.4
RTZ	Ruatahuna	1.04	348	P	Pb	12 27 00.4	-0.7
DVHZ	Dannevirke	1.06	231	P	Pb	12 27 00.3	-1.2
TSZ	Takapari Road	1.08	247	P	Pb	12 27 00.7	-1.1
RAGZ	Rawiri	1.15	6	P	Pn	12 27 01.9	-1.0
HATZ	Hinemaiaia	1.17	309	P	Pn	12 27 03.2	0.0
MOVZ	Moawhango	1.19	281	P	Pn	12 27 02.8	-0.6
MUGZ	Murupara	1.22	342	P	Pn	12 27 03.1	-0.7
RITZ	Rihia Road	1.27	301	P	Pn	12 27 04.5	0.0
TKGZ	Te Karaka	1.28	21	P	Pn	12 27 03.5	-1.2
ALRZ	Allen Road	1.29	326	P	Pb	12 27 05.2	-0.1
TUVZ	Tukino	1.29	286	P	Pb	12 27 05.4	-0.1
BFZ	Birch Farm	1.30	216	P	Pn	12 27 03.2	-1.7
ETVZ	East Tongariro	1.30	292	P	Pn	12 27 05.1	+0.1
TMVZ	Te Maari	1.31	293	P	Pn	12 27 05.0	-0.1
WNVZ	Wahianoa	1.32	283	P	Pn	12 27 05.5	+0.2
MWZ	Matawai	1.32	9	P	Pn	12 27 03.8	-1.4
OTVZ	Oturere	1.32	291	P	Pn	12 27 05.3	0.0
PRRZ	Plateau Road	1.32	329	P	Pn	12 27 04.5	-0.7
SNVZ	South Ngauruho	1.33	289	P	Pb	12 27 05.8	-0.3
NTVZ	North Tongarir	1.34	293	P	Pn	12 27 05.4	-0.2
WHVZ	Whangaehu Hut	1.34	285	P	Pb	12 27 06.3	0.0
PRWZ	Pori Road	1.34	227	P	Pn	12 27 04.8	-0.7
DRZ	Dome Shelter	1.36	285	P	Pn	12 27 06.3	+0.3
NGZ	Ngauruhoe	1.36	289	P	Pb	12 27 06.5	-0.1
TRVZ	Turoa	1.36	284	P	Pn	12 27 06.0	0.0
POWZ	Post Office Ro	1.37	236	P	Pn	12 27 05.4	-0.5
NNVZ	North Ngauruho	1.37	291	P	Pb	12 27 06.6	-0.1
CNGZ	Carnagh Statio	1.37	33	P	Pn	12 27 04.9	-0.9
FWVZ	Far West T-bar	1.37	286	P	Pn	12 27 06.1	0.0
KATZ	Kakaramea	1.38	298	P	Pb	12 27 07.2	+0.3
URZ	Urewera	1.38	355	P	Pn	12 27 04.9	-1.1
RATZ	Rangitukua	1.39	303	P	Pb	12 27 07.0	0.0
WTVZ	West Tongariro	1.39	292	P	Pb	12 27 07.2	+0.1
WHTZ	Whakaora	1.40	314	P	Pg	12 27 07.9	-0.6
MTVZ	Mangateitei	1.40	280	P	Pn	12 27 06.8	+0.4
WPRZ	Whakapapatarin	1.41	322	P	Pb	12 27 07.2	-0.1
RRRZ	Republican Roa	1.42	336	P	Pg	12 27 08.2	-0.6
HRRZ	Handcock Road	1.46	328	P	Pb	12 27 08.5	+0.3
WATZ	Wairara	1.50	308	P	Pb	12 27 09.2	+0.2
PKVZ	Pokaka	1.52	283	P	Pb	12 27 09.3	+0.1
TARZ	Mount Tarawera	1.52	337	P	Pn	12 27 08.0	+0.1
HSRZ	Hossack Road	1.54	329	P	Pb	12 27 10.3	+0.7
TIWZ	Tintock	1.55	222	P	Pn	12 27 07.0	-1.3
HLRZ	Highlands Stat	1.55	333	P	Pg	12 27 11.1	-0.3
TWGZ	Tauwhareparae	1.57	21	P	Pn	12 27 07.9	-0.7
GRRZ	Galatos Road	1.57	325	P	Pg	12 27 11.5	-0.1
KUTZ	Kaahu Road	1.60	315	P	Pg	12 27 11.8	-0.5
MRZ	Mangatainoka R	1.64	231	P	Pn	12 27 07.9	-1.7
RUGZ	Raukumara Rang	1.70	11	P	Pn	12 27 09.2	-1.4
PUZ	Puketiti	1.75	27	P	Pn	12 27 09.3	-1.8
WAZ	Wanganui	1.75	266	P	Pb	12 27 12.2	-1.0
KARZ	Kaharoa	1.80	334	P	Pg	12 27 16.3	+0.3
HOWZ	Holdsworth Sta	1.83	226	P	Pn	12 27 10.6	-1.7
TLZ	Tolley Road	1.87	314	P	Pn	12 27 14.0	+1.2
HAZ	Te Kaha	1.93	13	P	Pn	12 27 12.2	-1.2
OGWZ	Otaki Gorge	1.98	233	P	Pn	12 27 12.7	-1.5
VRZ	Vera Road	2.00	284	P	Pb	12 27 17.4	-0.1
MTW	Mount Morrison	2.02	221	P	Pn	12 27 12.7	-2.2
WMGZ	Waiomatatini S	2.03	27	P	Pn	12 27 13.7	-1.2
KIW	Kapiti Island	2.17	235	P	Pn	12 27 15.3	-1.6
HIZ	Hauiti	2.18	300	P	Pn	12 27 17.6	+0.6
CAW	Cannon Point	2.22	228	P	Pn	12 27 15.5	-2.1
TOZ	Tahuroa Road	2.35	324	P	Pb	12 27 24.4	+1.0
NEZ	North Egmont	2.47	278	P	Pn	12 27 23.1	+2.0
TCW	Tory Channel	2.76	234	P	Pn	12 27 22.7	-2.3
QRZ	Quartz Range	3.81	250	P	Pn	12 27 36.9	-2.4
MRNZ	Matariki Terra	3.85	241	P	Pn	12 27 37.9	-2.1
LTZ	Lake Taylor	4.90	229	P	Pn	12 27 51.9	-2.5
CTZ	Chatham Island	6.15	134	P	Pn	12 28 10.9	-0.5
TMZ	Timaru	6.64	222	P	Pn	12 28 15.6	-2.7

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*IDC **09** 12:32:41.5±14.0, 26°.05S×69°.44W, h0^{km}, mb3.8/1, mbtmp3.8/1, MS4.6/2, Error ellipse: s-maj=799.3km s-min=115.8km az=7.0*

*GUC **09** 12:32:55.2±0.7, 24°.83S×69°.51W, h92^{km}±3^{km}, ML3.2*

ISC 09 12:32:55.3±1.0, 24°.82S±0°.04×69°.52W±0°.10, h91^{km}±8^{km}, n23, σ0^{s}.77/23, 1C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO02	Mina Guanaco	0.35	191	i P	Pn	12 33 09.1	-0.5
GO02				i S	Sn	12 33 19.6	-0.5
PB14	IPOC Station P	0.83	283	⇓iP	Pn	12 33 13.7	+0.2
PB14				i S	Sn	12 33 27.2	0.0
PB14				IAML		12 33 27.9	
	comp=E,584nm,0.2s						
PB15	IPOC Station P	1.60	1	⇓iP	Pn	12 33 23.3	+0.7
PB15				i S	Sn	12 33 44.2	+1.0
PB10	IPOC Station P	1.61	324	⇑iP	Pn	12 33 22.8	+0.3
PB10				i S	Sn	12 33 43.0	0.0
PB10				IAML		12 33 52.1	
	comp=N,227nm,0.1s						
AC01	Pan de Azucar	1.65	216	i P	Pn	12 33 22.9	-0.1
AC01				i S	Sn	12 33 44.4	+0.4
AC01				IAML		12 33 50.8	
	comp=E,579nm,0.1s						
PB06	IPOC Station P	2.10	359	i P	Pn	12 33 29.2	+0.2
PB06				IAML		12 34 03.9	
	comp=N,277nm,0.1s						
LVC	Limon Verde	2.27	14	i P	Pn	12 33 31.8	+0.4
PB03	IPOC Station P	2.76	355	i P	Pn	12 33 37.4	-0.4
GO03	Copiap	2.84	193	eP	Pn	12 33 38.9	+0.1
PB09	IPOC Station P	3.02	5	eP	Pn	12 33 42.3	+1.0
PB07	IPOC Station P	3.09	354	eP	Pn	12 33 41.7	-0.6
PB02	IPOC Station P	3.50	354	eP	Pn	12 33 46.9	-0.8
AC04	Llanos de Chal	3.65	202	eS	Sn	12 34 32.0	+0.3
PB01	IPOC Station P	3.75	0	eP	Pn	12 33 50.5	-0.7
PB11	IPOC Station P	5.03	358	eP	Pn	12 34 06.5	-2.1
H03N1	Juan Fernandez	11.88	222	T	T	12 47 41.6	
	baz=44,slow=72,SNR=7.6						
H03N2	Juan Fernandez	11.89	222	T	T	12 47 44.4	
	baz=44,slow=72,SNR=5.2						
H03N3	Juan Fernandez	11.90	222	T	T	12 47 38.2	
	baz=44,slow=72,SNR=9.4						
USHA	Ushuaia	29.99	179	LR	LR	12 50 31.4	
	comp=N,868nm,20.4s,baz=32,slow=37						
NVAR	Mina Array Bea	77.77	323	LR	LR	13 16 40.5	
	comp=N,419nm,20.1s,baz=28,slow=34						
TORD	Torodi Ar. Bea	79.00	70	P	P	12 44 49.8	+0.1
	comp=N,0.3nm,0.4s,baz=253,slow=4.4,SNR=5.2						
	comp=N,0.3nm,0.4s						
ZALV	Zalesovo Beam	145.17	27	PKPbc	PKPdf	12 52 22.7	+0.9
	comp=N,0.2nm,0.3s,baz=302,slow=2.7,SNR=3.8						
MKAR	Makanchi Array	148.60	39	PKPbc	PKiKP	12 52 32.2	-0.9
	comp=N,0.3nm,0.6s,baz=310,slow=3.0,SNR=5.6						

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*IDC **09** 12:42:56.1±2.1, 30°.21S×178°.11W, h0^{km}, mb3.8/3, mbtmp4.0/5, ML3.5/2, Error ellipse: s-maj=54.0km s-min=18.1km az=117.0*

ISC 09 12:42:55.5±2.2, 30°.43S±0°.08×177°.4W±0°.3, h35^{km}, n8, σ1^{s}.98/10, mb3.9/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.27	338	Pn	Pn	12 43 16.9	+0.3
	45nm,0.3s,baz=221,slow=19,SNR=1.3						
RAO				Sn	Sn	12 43 31.6	-0.9
	114nm,0.3s,baz=62,slow=24,SNR=2.8						
URZ	Urewera	9.04	209	Pn	Pn	12 45 05.4	+2.0
	0.1nm,0.3s,baz=346,slow=4.9,SNR=1.6						
URZ				Sn	Sn	12 46 40.4	-3.6
	0.6nm,0.3s,baz=270,slow=19,SNR=7.0						
	27nm,1.3s						
RPZ	Rata Peaks	16.13	212	Pn	Pn	12 46 40.8	+1.3
	1.0nm,0.3s,baz=3.1,slow=17,SNR=1.5						
	2.0nm,0.3s						
STKA	Stephens Creek	35.00	257	P	P	12 49 45.9	+1.3
	1.9nm,0.8s,baz=89,slow=8.7,SNR=4.0						
	1.9nm,0.8s						
ASAR	Alice Springs	43.65	267	P	P	12 50 57.5	+0.6
	0.5nm,0.6s,baz=101,slow=7.8,SNR=9.0						
	0.5nm,0.6s						
WRA	Warramunga Arr	44.64	272	P	P	12 51 05.1	+0.2
	0.9nm,0.5s,baz=111,slow=7.8,SNR=15						
	0.9nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
FINES	**FINESS Array B**	**145.36**	**340**	PKP	**PKiKP**	**13 02 32.2**	**-0.6**
	2.7nm,0.9s,baz=69,slow=4.6,SNR=9.5						
AKASG	**Malin Array Be**	**151.65**	**323**	PKPbc	**PKPab**	**13 02 52.1**	**-2.4**
	0.9nm,0.6s,baz=48,slow=1.8,SNR=4.5						

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*JMA **09** 12:43:02.7±0.6, 30°N±4°×13°8E±°, h521^{km}, MV3.6/17, SHIKOKU BASIN*

*IDC **09** 12:43:03.5±1.1, 30°.39N×137°.61E, h452^{km}±23^{km}, mb3.0/5, mbtmp3.9/10, Error ellipse: s-maj=35.3km s-min=15.3km az=66.0*

ISC 09 12:43:05.9±0.9, 30°.54N±0°.09×137°.7E±0°.1, h496^{km}, n22, σ1^{s}.36/26, mb3.6/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**3.12**	**34**	P	**P**	**12 44 14.7**	**-2.5**
	152nm,0.8s,baz=218,slow=12,SNR=1.6						
JHJ				S	S	12 45 08.2	-7.3
	95nm,0.6s,baz=72,slow=22,SNR=1.8						
TTO1	**TONANKAI O.B.S**	**3.17**	**346**	*e*P	**P**	**12 44 18.6**	**+1.4**
JTNC	**Tanabenakahech**	**3.73**	**332**	P	**P**	**12 44 22.1**	**+0.4**
JIE	**Ise**	**3.94**	**348**	P	**P**	**12 44 24.4**	**+1.0**
JTO	**Tosashimizu**	**4.78**	**300**	*e*P	**P**	**12 44 30.8**	**+0.2**
JOD2	**Odawara 2**	**4.85**	**13**	*e*P	**P**	**12 44 30.6**	**-0.5**
JOD2				*e*S	**S**	**12 45 40.8**	**-0.2**
BSO1	**Boso 1**	**4.94**	**33**	P	**P**	**12 44 31.4**	**+0.1**
BSO1				*e*S	**S**	**12 45 40.6**	**-0.7**
JRY	**Ryogami san**	**5.55**	**10**	P	**P**	**12 44 37.5**	**-0.1**
JRY				S	**S**	**12 45 51.0**	**-1.7**
MJAR	**Matsushiro Arr**	**6.00**	**4**	P	**P**	**12 44 40.9**	**-1.0**
	6.4nm,0.6s,baz=180,slow=10,SNR=18						
JAMN	**Amaminishikomi**	**7.79**	**255**	P	**P**	**12 44 59.3**	**-0.8**
JMK	**Ichinoseki**	**8.87**	**18**	*e*P	**P**	**12 45 11.8**	**+0.7**
JMK				S	**S**	**12 46 52.0**	**-2.0**
JOT	**Ohata**	**11.15**	**13**	*e*P	**P**	**12 45 36.8**	**+1.6**
JOSM	**Okushiri--Mats**	**11.61**	**7**	*e*P	**P**	**12 45 41.5**	**+1.5**
ASAJ	**Asahikawa**	**14.09**	**15**	P	**P**	**12 46 06.4**	**0.0**
	5.9nm,0.8s,baz=223,slow=19,SNR=6.9						
JTKR	**Abashiri--Toko**	**14.28**	**18**	*e*P	**P**	**12 46 12.2**	**+3.9**
USRK	**Ussuriysk Ar.**	**14.37**	**343**	P	**P**	**12 46 09.9**	**+0.7**
	7.2nm,0.6s,baz=146,slow=10,SNR=15						
KLR	**Kul'dur**	**19.21**	**348**	P	**P**	**12 46 58.6**	**+1.4**
	0.5nm,0.4s,baz=185,slow=11,SNR=2.3						
CMAR	**Chiang Mai Arr**	**37.10**	**260**	P	**P**	**12 49 33.1**	**-0.6**
	1.1nm,0.6s,baz=63,slow=6.2,SNR=8.2 1.1nm,0.6s						
MKAR	**Makanchi Array**	**45.27**	**307**	P	**P**	**12 50 38.4**	**0.0**
	0.5nm,0.7s,baz=90,slow=5.8,SNR=5.8 0.5nm,0.7s						
WRA	**Warramunga Arr**	**50.30**	**184**	P	**P**	**12 51 15.8**	**-0.5**
	1.6nm,0.5s,baz=0.0,slow=7.6,SNR=28 1.6nm,0.5s						
ASAR	**Alice Springs**	**54.02**	**184**	P	**P**	**12 51 43.1**	**+0.1**
	0.3nm,0.4s,baz=15,slow=13,SNR=20 0.3nm,0.4s						
STKA	**Stephens Creek**	**62.19**	**176**	P	**P**	**12 52 38.4**	**+0.1**
	1.1nm,0.6s,baz=7.4,slow=10,SNR=3.5 1.1nm,0.6s						

ROM 09 12:51:14.7±0.1, 42°.465N±0°.005×13°.332E±0°.007, h13^{km}±1^{km}, ML1.6/6, 5D, Error ellipse: s-maj=0.6km s-min=0.4km az=19.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1247	**Pizzolo (AQ)**	**0.03**	**226**	P	Pg	12 51 17.3	+0.2
T1247				S	Sg	12 51 19.0	+0.2
T1247				AML	AML		
	comp=N,626μm,0.5s						
T1247				AML	AML		
	comp=N,626μm,0.5s						
T1247				AML	AML		
	comp=E,512μm,0.1s						
RM33	**Pellescritta (**	**0.10**	**297**	⇓P	Pg	12 51 18.0	+0.3
RM33				S	Sg	12 51 20.1	+0.2
RM33				AML	AML		
	comp=E,284μm,0.3s						
RM33				AML	AML		
	comp=N,271μm,1.2s						
RM33				AML	AML		
	comp=E,284μm,1.7s						
AQU	**L'Aquila**	**0.12**	**155**	⇓P	Pg	12 51 14.7	-3.2
AQU				AML	AML		
	comp=E,330μm,0.1s						
AQU				AML	AML		
	comp=N,208μm,0.1s						
AQU				AML	AML		
	comp=N,264μm,0.3s						
AQU				AML	AML		
	comp=E,330μm,0.1s						
GIGS	**Gran Sasso**	**0.18**	**95**	P	Pg	12 51 19.0	+0.3
GIGS				S	Sg	12 51 22.1	+0.5
T1222	**Castel Sant'An**	**0.23**	**254**	⇓P	Pg	12 51 19.9	+0.3
T1222				S	Sg	12 51 23.5	+0.6
FIAM	**Fiamignano**	**0.25**	**219**	⇓P	Pg	12 51 20.4	+0.3
TERO	**Teramo**	**0.26**	**52**	P	Pg	12 51 20.2	+0.1
TERO				S	Sg	12 51 24.5	+0.8
TERO				AML	AML		
	comp=E,48μm,1.6s						
TERO				AML	AML		
	comp=N,62μm,1.3s						
TERO				AML	AML		
	comp=N,62μm,0.7s						
TERO				AML	AML		
	comp=E,48μm,0.4s						
T1218	**Civita (PG)**	**0.26**	**322**	P	Pg	12 51 20.5	+0.3
T1218				S	Sb	12 51 25.0	-0.8
FAGN	**Fagnano**	**0.27**	**137**	P	Pb	12 51 21.5	0.0
T1214	**Arquata del Tr**	**0.31**	**343**	P	Pg	12 51 21.4	+0.3
T1214				S	Sb	12 51 26.6	-0.6
T1212	**Cascia, Frazio**	**0.36**	**324**	⇓P	Pg	12 51 22.0	+0.1
T0110	**Collepietro**	**0.41**	**126**	P	Pg	12 51 22.9	+0.1
MMO1	**Montemonaco**	**0.43**	**360**	P	Pg	12 51 23.7	+0.4
MC2	**Monte Cornacci**	**0.46**	**347**	S	Sb	12 51 31.7	+0.1
T1219	**Muccia, Frazio**	**0.64**	**338**	S	Sb	12 51 37.1	+0.5
EL6	**Elcito**	**0.88**	**349**	S	Sn	12 51 46.3	+0.7

ROM 09 12:52:14.1±0.1, 42°.451N±0°.005×13°.334E±0°.006, h13^{km}, ML1.2/4, Error ellipse: s-maj=0.5km s-min=0.4km az=144.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1247	**Pizzolo (AQ)**	**0.03**	**251**	P	Pg	12 52 16.9	+0.4
T1247				S	Sg	12 52 18.6	+0.4
T1247				AML	AML		
	comp=E,336μm,0.1s						
T1247				AML	AML		
	comp=N,372μm,0.9s						
T1247				AML	AML		
	comp=N,372μm,1.1s						
CAMP	**Campotosto**	**0.10**	**33**	P	Pg	12 52 17.5	+0.3
CAMP				S	Sg	12 52 19.7	+0.2
RM33	**Pellescritta (**	**0.11**	**303**	P	Pg	12 52 17.5	+0.3
RM33				S	Sg	12 52 19.9	+0.4
RM33				AML	AML		
	comp=N,96μm,0.3s						
RM33				AML	AML		
	comp=E,102μm,1.1s						
T1246	**Crognaleto (TE**	**0.18**	**42**	P	Pg	12 52 18.5	+0.2
T1246				S	Sg	12 52 21.6	+0.4
T1222	**Castel Sant'An**	**0.23**	**257**	P	Pg	12 52 19.4	+0.4
T1222				S	Sg	12 52 22.9	+0.6
T1218	**Civita (PG)**	**0.27**	**324**	P	Pg	12 52 20.0	+0.2
T1218				S	Sg	12 52 24.4	+0.7
T1214	**Arquata del Tr**	**0.32**	**343**	P	Pg	12 52 21.0	+0.3
T1214				S	Sb	12 52 26.1	-0.8
T1211	**Morro Reatino**	**0.36**	**283**	P	Pb	12 52 22.1	-0.3
T1211				S	Sg	12 52 27.1	+0.7
T1211				AML	AML		
	comp=E,34μm,1.6s						
T1211				AML	AML		
	comp=N,48μm,1.3s						
T1211				AML	AML		
	comp=N,48μm,0.7s						
T1211				AML	AML		
	comp=E,34μm,0.4s						

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*IDC **09** 13:01:19.4±0.9, 54°.93S×31°.94W, h0^{km}, mb4.1/8, mbtmp4.1/8, Error ellipse: s-maj=34.0km s-min=20.1km az=53.0*

*NEIC **09** 13:01:21.9±2.1, 55°.3S±0°.1×32°.5W±0°.2, h10^{km}±2^{km}, mb4.5/12, Error ellipse: s-maj=28.0km s-min=14.4km az=32.0*

ISC 09 13:01:20.8±0.8, 55°.1S±0°.1×32°.3W±0°.1, h10^{km}, n27, σ1^{s}.24/25, mb4.3/11, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.57**	**287**	Pn	**Pn**	**13 02 03.0**	**+0.6**
HOPE				Sn	**Sn**	**13 02 32.7**	**-0.9**
PMSA	**Palmer Station**	**18.42**	**226**	P	**P**	**13 05 32.4**	**-3.4**
PMSA				IAmb	IAmb	13 05 32.6	
	comp=Z,49nm,1.4s						
SNAA	**Sanae**	**20.84**	**154**	P	**P**	**13 06 03.6**	**+1.4**
	comp=Z,2.0nm,0.7s,baz=308,slow=14,SNR=3.8 comp=Z,2.0nm,0.7s						
SNAA	**Sanae**	**20.84**	**154**	P	**P**	**13 06 01.4**	**-0.8**
PLCA	**Paso Flores**	**28.97**	**284**	P	**P**	**13 07 22.0**	**+1.7**
	comp=Z,2.2nm,0.9s,baz=90,slow=5.1,SNR=2.2 comp=Z,2.2nm,0.9s						
CPUP	**Villa Florida**	**34.07**	**317**	P	**P**	**13 08 04.8**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=108,slow=6.3,SNR=3.6 comp=Z,2.2nm,0.6s						
QSPA	**South Pole Qui**	**35.16**	**180**	P	**P**	**13 08 15.5**	**+1.1**
	comp=Z,2.4nm,1.0s,baz=26,slow=1.4,SNR=5.9 comp=Z,2.4nm,1.0s						
QSPA	**South Pole Qui**	**35.16**	**180**	P	**P**	**13 08 15.8**	**+1.4**
AC05	**El Transito**	**37.80**	**298**	P	**P**	**13 08 37.5**	**+0.2**
AC05				IAmb	IAmb	13 09 07.8	
	comp=Z,14nm,1.2s						
GO02	**Mina Guanaco**	**40.50**	**302**	P	**P**	**13 09 01.3**	**+1.2**
LVC	**Limon Verde**	**42.34**	**305**	P	**P**	**13 09 16.5**	**+1.2**
	comp=Z,3.3nm,0.6s,baz=239,slow=4.6,SNR=3.6 comp=Z,3.3nm,0.6s						
PB01	**IPOC Station P**	**43.96**	**306**	P	**P**	**13 09 29.4**	**+1.4**
PB01				IAmb	IAmb	13 09 32.8	
	comp=Z,12nm,1.2s						
PTLB	**Pontes e Lacer**	**44.67**	**322**	P	**P**	**13 09 34.0**	**+0.4**
PTLB				IAmb	IAmb	13 09 36.4	
	comp=Z,7.0nm,1.0s						
SIV	**San Ignacio**	**44.88**	**319**	P	**P**	**13 09 35.1**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=131,slow=9.7,SNR=5.4 comp=Z,1.3nm,0.6s						
GO01	**Chusmiza**	**45.01**	**307**	P	**P**	**13 09 36.6**	**-0.3**
GO01				IAmb	IAmb	13 09 43.2	
	comp=Z,5.7nm,0.9s						
PB11	**IPOC Station P**	**45.15**	**306**	P	**P**	**13 09 38.1**	**+0.5**
MNMC	**Minye Minye**	**45.66**	**307**	P	**P**	**13 09 42.9**	**+1.0**
LPAZ	**La Paz**	**47.50**	**310**	P	**P**	**13 09 57.5**	**+0.8**
	comp=Z,1.9nm,0.5s,baz=109,slow=5.3,SNR=8.5 comp=Z,1.9nm,0.5s						
LPAZ	**La Paz**	**47.50**	**310**	P	**P**	**13 09 54.7**	**-2.0**
LPAZ				IAmb	IAmb	13 10 00.5	
	comp=Z,3.3nm,0.8s						
H10N1	**ASCENSION HYDR**	**49.22**	**24**	T	T	14 03 30.5	
	baz=192,slow=75,SNR=7.3						
H10N3	**ASCENSION HYDR**	**49.22**	**24**	T	T	14 03 30.5	
	baz=192,slow=75,SNR=8.7						
H10N2	**ASCENSION HYDR**	**49.23**	**24**	T	T	14 03 29.0	
	baz=192,slow=75,SNR=8.2						
TORD	**Torodi Ar. Bea**	**73.78**	**35**	P	**P**	**13 12 54.0**	**-1.1**
	comp=Z,1.7nm,0.9s,baz=196,slow=6.7,SNR=8.3 comp=Z,1.7nm,0.9s						
YKA	**Yellowknife Ar**	**133.55**	**321**	PKP	**PKPdf**	**13 20 35.8**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=135,slow=2.1,SNR=4.7						
ZALV	**Zalesovo Beam**	**144.57**	**65**	PKP	**PKPab**	**13 20 54.2**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=259,slow=4.0,SNR=7.5						
ILAR	**Eielson Array**	**147.34**	**314**	PKPbc	**PKPbc**	**13 21 03.0**	**-0.2**
	comp=Z,1.9nm,1.0s,baz=128,slow=1.8,SNR=15						
SONM	**Songino Array**	**153.58**	**89**	PKPbc	**PKPbc**	**13 21 18.8**	**0.0**
	comp=Z,0.2nm,0.4s,baz=183,slow=4.1,SNR=4.0						

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*IDC **09** 13:03:33.0±1.1, 21°.80N×157°.10W, h0^{km}, mb3.8/9, mbtmp3.8/9, MS4.6/1, Error ellipse: s-maj=43.4km s-min=20.8km az=147.0*

*NEIC **09** 13:03:33.1±2.3, 21°.81N±0°.05×156°.83W±0°.04, h10^{km}±4^{km}, mb4.2/9, ML4.6/56, ML4.7/52(HVO), Error ellipse: s-maj=8.1km s-min=3.7km az=209.0*

*HVO **09** 13:03:39.1±1.3, 21°.75N±0°.08×156°.87W±0°.05, h32^{km}±6^{km}, Error ellipse: s-maj=11.9km s-min=4.2km az=204.0*

ISC 09 13:03:34.1±2.3, 21°.65N±0°.06×156°.88W±0°.04, h11^{km}±14^{km}, n77, σ1^{s}.60/74, mb4.1/16, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHLH	**Kahului Airpor**	**0.86**	**151**		**Pn**	**13 03 54.4**	**+2.2**
KHLH				Sg	**Sb**	**13 04 05.8**	**+3.2**
KHLH				IAML		13 04 06.2	
	comp=N,21μm,0.6s						
KHLH				IAML		13 04 07.5	
	comp=E,15μm,0.3s						
DHH	**Diamond Head**	**0.94**	**246**		**Sn**	**13 04 06.2**	**-0.6**
OPA	**Opana**	**1.05**	**272**		**Pn**	**13 03 55.4**	**+0.6**
OPA				IAML		13 04 08.7	
	comp=E,11μm,0.5s						
OPA	**Opana**	**1.05**	**272**		**Sn**	**13 04 07.9**	**-1.6**
HLK	**Haleakala**	**1.07**	**146**		**Pn**	**13 03 56.7**	**+1.4**
HLK				Sg	**Sg**	**13 04 09.6**	**+0.9**
HLK				IAML		13 04 18.5	
	comp=E,10μm,0.4s						
KIP	**Kipapa**	**1.08**	**258**		**Pn**	**13 03 56.1**	**+0.9**
KIP				IAML		13 04 09.9	
	comp=E,11μm,0.6s						
KIP	**Kipapa**	**1.08**	**258**		**Sn**	**13 04 09.3**	**-0.9**
HON	**Honolulu**	**1.10**	**253**		**Pn**	**13 03 56.6**	**+1.2**
HON				IAML		13 04 12.0	
	comp=E,12μm,0.6s						
HON	**Honolulu**	**1.10**	**253**		**Sn**	**13 04 10.1**	**-0.4**
MHA	**Mahukona**	**1.72**	**148**		**Pn**	**13 04 05.5**	**+1.5**
MHA	**Mahukona**	**1.72**	**148**		**Sn**	**13 04 25.7**	**-0.3**
HPAH	**Hawaii Prepara**	**1.96**	**145**		**Pn**	**13 04 07.7**	**+0.4**
HPAH				IAML		13 04 29.2	
	comp=E,3μm,0.4s						
HPAH				IAML		13 04 30.3	
	comp=N,4μm,0.4s						
HPAH	**Hawaii Prepara**	**1.96**	**145**		**Sn**	**13 04 28.6**	**-3.3**
KKH	**Kailua Kona**	**2.14**	**158**		**Pn**	**13 04 11.0**	**+1.2**
KKH					**Sn**	**13 04 34.7**	**-1.7**
HUH	**Hualalai**	**2.19**	**153**		**Pn**	**13 04 11.5**	**+0.8**
HUH	**Hualalai**	**2.19**	**153**		**Sn**	**13 04 36.3**	**-1.6**
KHLU	**Kahalu`u**	**2.25**	**156**		**Pn**	**13 04 12.0**	**+0.6**
KHLU				IAML		13 04 38.2	
	comp=N,3μm,0.2s						
KHLU				IAML		13 04 38.4	
	comp=E,3μm,0.3s						
KHLU	**Kahalu`u**	**2.25**	**156**		**Sn**	**13 04 36.1**	**-3.1**
POHA	**Pohakuloa**	**2.27**	**146**		**Pn**	**13 04 12.2**	**+0.4**
POHA				IAML		13 04 38.7	
	comp=E,5μm,0.3s						
POHA	**Pohakuloa**	**2.27**	**146**		**Sn**	**13 04 36.8**	**-3.1**
CPH	**Captain Cook**	**2.33**	**157**		**Pn**	**13 04 13.2**	**+0.8**
CPH					**Sn**	**13 04 38.4**	**-2.8**
ALEP	**Alea Permanent**	**2.40**	**151**		**Pn**	**13 04 14.7**	**+1.0**
ALEP					**Sn**	**13 04 41.1**	**-2.1**
HMH	**Humu'ula Sheep**	**2.42**	**147**		**Pn**	**13 04 14.7**	**+0.7**
HMH				IAML		13 04 47.3	
	comp=E,2μm,0.5s						
HMH	**Humu'ula Sheep**	**2.42**	**147**		**Sn**	**13 04 41.0**	**-2.8**
MLOA	**Mauna Loa Obse**	**2.44**	**150**		**Pn**	**13 04 15.0**	**+0.7**
MLOA				IAML		13 04 49.2	
	comp=N,3μm,0.4s						
MLOA				IAML		13 04 50.9	
	comp=E,2μm,0.3s						
MLOA	**Mauna Loa Obse**	**2.44**	**150**		**Sn**	**13 04 41.5**	**-2.7**
MWH	**Moku'aweowe**	**2.47**	**151**		**Pn**	**13 04 15.4**	**+0.6**
MWH				IAML		13 04 55.6	
	comp=N,4μm,0.6s						
MLH	**Mauna Loa**	**2.56**	**147**		**Pn**	**13 04 16.4**	**+0.6**
MLH				IAML		13 04 46.3	
	comp=N,2μm,0.3s						
MLH	**Mauna Loa**	**2.56**	**147**		**Sn**	**13 04 43.8**	**-3.3**
AIN	**Ainahou**	**2.63**	**149**		**Pn**	**13 04 17.5**	**+0.8**
RSD	**Rainshed**	**2.65**	**145**		**Pn**	**13 04 17.3**	**+0.4**
RSD				IAML		13 04 49.5	
	comp=N,3μm,0.3s						
KEKH	**Kekaha**	**2.65**	**278**		**Pn**	**13 04 16.4**	**-0.5**
KEKH				IAML		13 04 46.7	
	comp=N,2μm,0.6s						
KEKH				IAML		13 04 47.1	
	comp=E,2μm,0.7s						
KEKH	**Kekaha**	**2.65**	**278**		**Sn**	**13 04 43.2**	**-5.8**
KHU	**Kahuku**	**2.67**	**153**		**Pn**	**13 04 17.8**	**+0.5**
KHU				IAML		13 04 48.9	
	comp=E,2μm,0.6s						
UWE	**Uwekahuna**	**2.67**	**146**	Pn	**Pn**	**13 04 17.6**	**+0.3**
UWB	**Uwekahuna B**	**2.68**	**146**	Pn	**Pn**	**13 04 17.8**	**+0.5**
OBL	**Observatory Le**	**2.68**	**146**	Pn	**Pn**	**13 04 17.6**	**+0.2**
SBLHI	**Steaming Bluff**	**2.68**	**145**	Pn	**Pn**	**13 04 17.9**	**+0.6**
SBLHI				IAML		13 04 49.4	
	comp=N,2μm,0.3s						
SBLHI				IAML		13 04 49.4	
	comp=E,2μm,0.3s						
NPH	**North Pit**	**2.69**	**146**	Pn	**Pn**	**13 04 17.6**	**+0.2**
HATHI	**Halema'uma'u T**	**2.69**	**145**	Pn	**Pn**	**13 04 17.6**	**+0.2**
HATHI				IAML		13 04 59.8	
	comp=E,2μm,0.6s						
HATHI				IAML		13 05 05.5	
	comp=N,2μm,0.6s						
BYL	**Byron's Ledge**	**2.70**	**145**	Pn	**Pn**	**13 04 18.0**	**+0.4**
SDHHI	**Sand Hill**	**2.70**	**146**	Pn	**Pn**	**13 04 17.9**	**+0.3**
SDHHI				IAML		13 04 54.9	
	comp=N,2μm,0.5s						
SDHHI				IAML		13 05 01.4	
	comp=E,3μm,0.4s						
KKO	**Keanakako`i**	**2.71**	**146**	Pn	**Pn**	**13 04 18.3**	**+0.6**
KKO				IAML		13 05 00.2	
	comp=N,2μm,0.6s						
PUH	**Pauahi**	**2.75**	**145**		**Pn**	**13 04 18.6**	**+0.3**
HLP	**Hilina Pali**	**2.77**	**148**		**Pn**	**13 04 19.0**	**+0.5**
HLP					**Pb**	**13 04 20.3**	**-3.4**
HLP				IAML		13 04 56.7	
	comp=N,3μm,0.4s						
KNHH	**Kane Nui o Ham**	**2.77**	**144**		**Pn**	**13 04 18.9**	**+0.3**
H11N3	**WAKE ISLAND Hy**	**33.89**	**273**	T	T	13 45 11.9	
	baz=82,slow=74,SNR=12						
H11N2	**WAKE ISLAND Hy**	**33.90**	**273**	T	T	13 45 14.2	
	baz=82,slow=74,SNR=27						
H11N1	**WAKE ISLAND Hy**	**33.90**	**273**	T	T	13 45 13.6	
	baz=82,slow=74,SNR=28						
H11S2	**WAKE ISLAND Hy**	**34.30**	**271**	T	T	13 45 36.8	
	baz=79,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**34.30**	**271**	T	T	13 45 38.1	
	baz=79,slow=75,SNR=23						
H11S3	**WAKE ISLAND Hy**	**34.32**	**271**	T	T	13 45 38.0	
	baz=79,slow=75,SNR=4.0						
NVAR	**Mina Array Bea**	**37.03**	**54**	P	**P**	**13 10 45.8**	**+1.5**
	comp=N,0.8nm,0.8s,baz=243,slow=9.6,SNR=6.6 comp=N,0.8nm,0.8s						
TPNV	**Topopah Spring**	**38.26**	**57**	P	**P**	**13 10 55.5**	**+0.9**
TPNV				IAmb	IAmb	13 10 57.1	
	comp=Z,3.7nm,1.1s						
RSO	**Redoubt South**	**38.88**	**3**	P	P	13 10 55.0	-4.6
G08A	**Pilot Rock**	**38.93**	**44**	P	**P**	**13 10 59.7**	**-0.4**
HLID	**Hailey**	**41.34**	**48**	P	**P**	**13 11 19.8**	**-0.4**
DLBC	**Dease Lake**	**41.53**	**21**	P	P	13 11 15.7	-5.7
DLBC				IAmb	IAmb	13 11 33.9	
	comp=Z,6.4nm,1.3s						
HVU	**Hansel Valley**	**42.00**	**51**	P	**P**	**13 11 26.0**	**+0.3**
HVU				IAmb	IAmb	13 11 28.0	
	comp=Z,4.8nm,0.8s						
HMU	**Henry Mountain**	**42.75**	**57**	P	**P**	**13 11 32.0**	**+0.1**
HMU				IAmb	IAmb	13 11 34.0	
	comp=Z,4.5nm,0.7s						
ILAR	**Eielson Array**	**43.60**	**6**	P	**P**	**13 11 37.5**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=199,slow=7.3,SNR=6.5 comp=Z,0.5nm,0.7s						
PDAR	**Pinedale Array**	**44.55**	**51**	P	**P**	**13 11 47.1**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=214,slow=6.0,SNR=6.3 comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	**44.55**	**51**	P	P	13 11 42.5	-3.8
TX31	**Lajitas Ar. Si**	**48.30**	**69**	P	**P**	**13 12 16.2**	**+0.4**
TX32	**Lajitas Array**	**48.30**	**69**	P	**P**	**13 12 15.8**	**0.0**
TXAR	**Lajitas Array**	**48.30**	**69**	P	**P**	**13 12 17.6**	**+1.8**
	comp=Z,4.1nm,0.7s,baz=260,slow=8.2,SNR=47						
TXAR				LR	LR	13 28 35.2	
	comp=Z,676nm,20.5s,baz=20,slow=31 comp=Z,4.1nm,0.7s						
TXAR	**Lajitas Array**	**48.30**	**69**	P	**P**	**13 12 16.5**	**+0.7**
YKA	**Yellowknife Ar**	**49.87**	**24**	P	**P**	**13 12 26.9**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=237,slow=7.9,SNR=11 comp=Z,0.7nm,0.7s						
HHC	**Hu-ho-hao-te**	**77.30**	**309**	*e*P	**P**	**13 15 30.3**	**+1.3**
HHC				pmax	pmax		
	comp=Z,22nm,1.1s						
HHC				pmax	pmax		
	comp=Z,95nm,4.4s						
WRA	**Warramunga Arr**	**78.91**	**243**	P	**P**	**13 15 36.8**	**-1.3**
	comp=Z,0.3nm,0.7s,baz=63,slow=5.6,SNR=2.0 comp=Z,0.3nm,0.7s						
ASAR	**Alice Springs**	**81.01**	**240**	P	**P**	**13 15 50.3**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=64,slow=6.6,SNR=11 comp=Z,0.9nm,0.7s						
GTA	**Gaotai**	**86.21**	**311**	*e*P	**P**	**13 16 16.5**	**+0.4**
GTA				pP	pwP	13 16 27.2	+2.7
GTA				sP	PcP	13 16 30.3	+12
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ZALV	**Zalesovo Beam**	**87.98**	**329**	P	**P**	**13 16 24.4**	**+0.2**
	comp=Z,1.9nm,0.8s,baz=54,slow=7.5,SNR=9.0 comp=Z,1.9nm,0.8s						
PZH	**PanZhiHua**	**90.09**	**299**	P	**P**	**13 16 36.3**	**+1.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,4.5s						
WMQ	**Urumqi**	**92.06**	**319**	*e*P	**P**	**13 16 45.9**	**+2.3**
MKAR	**Makanchi Array**	**93.50**	**324**	P	**P**	**13 16 50.0**	**-0.1**
	comp=Z,0.4nm,0.9s,baz=69,slow=4.0,SNR=3.8 comp=Z,0.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**139.52**	**33**	PKP	**PKPdf**	**13 23 00.7**	**-2.0**
	comp=Z,1.0nm,1.1s,baz=323,slow=4.3,SNR=3.7						

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*ISK **09** 13:14:22.9, 39°.55N×26°.06E, h11^{km}, ML3.2/20*

*ATH **09** 13:14:24.0, 39°.54N×26°.05E, h8^{km}±2^{km}, ML2.8/7, Error ellipse: s-maj=2.6km s-min=0.9km az=237.0*

*THE **09** 13:14:23.3, 39°.55N×26°.04E, h7^{km}±1^{km}, ML2.9/8, Error ellipse: s-maj=1.8km s-min=0.8km az=243.0*

*DDA **09** 13:14:23.4±0.0, 39°.54N×26°.09E, h7^{km}±2^{km}, ML3.0*

ISC 09 13:14:23.5±0.8, 39°.55N±0°.01×26°.06E±0°.02, h12^{km}±6^{km}, n58, σ0^{s}.41/91, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GPNR	**Gulpinar-Canak**	**0.11**	**149**	Pg	**Pg**	**13 14 26.2**	**-0.3**
GPNR				Sg	**Sg**	**13 14 28.7**	**+0.1**
BOZC	**Bozcaada**	**0.29**	**359**	Pg	**Pg**	**13 14 29.6**	**0.0**
BOZC				Sg	**Sg**	**13 14 34.2**	**+0.6**
BOZC	**Bozcaada**	**0.29**	**359**	P	**Pg**	**13 14 29.5**	**0.0**
BOZC				*i* AML	AML	13 14 34.0	
	comp=E,2μm,0.3s						
BOZC				*i* AML	AML	13 14 34.0	
	comp=N,3μm,0.3s						
BOZC				S	**Sg**	**13 14 34.0**	**+0.4**
PRK	**Paraskevi**	**0.34**	**152**	P	**Pg**	**13 14 30.6**	**+0.2**
PRK				S	**Sg**	**13 14 34.8**	**-0.2**
	5μm,0.3s						
PRK	**Paraskevi**	**0.34**	**152**	P	**Pg**	**13 14 30.6**	**+0.2**
PRK				S	**Sg**	**13 14 35.4**	**+0.4**
PRK				AML	AML	13 14 36.3	
	comp=N,7858μm,0.3s						
PRK				AML	AML	13 14 37.5	
	comp=E,12677μm,0.4s						
EZN	**Ezine**	**0.34**	**36**	P	**Pg**	**13 14 30.4**	**0.0**
EZN				S	**Sg**	**13 14 35.2**	**+0.1**
	comp=E,2μm,0.2s						
EZN	**Ezine**	**0.34**	**36**	Pg	**Pg**	**13 14 30.4**	**0.0**
EZN				Sg	**Sg**	**13 14 35.2**	**+0.1**
SIGR	**SIGRI**	**0.37**	**206**	P	**Pg**	**13 14 31.1**	**+0.2**
SIGR				S	**Sg**	**13 14 35.1**	**-0.8**
	comp=E,2μm,0.2s						
SIGR	**SIGRI**	**0.37**	**206**	Pg	**Pg**	**13 14 31.1**	**+0.2**
SIGR				Sg	**Sg**	**13 14 36.1**	**+0.2**
SIGR	**SIGRI**	**0.37**	**206**	P	**Pg**	**13 14 31.1**	**+0.2**
SIGR				S	**Sg**	**13 14 36.3**	**+0.4**
SIGR				AML	AML	13 14 37.5	
	comp=N,4714μm,0.3s						
SIGR				AML	AML	13 14 38.4	
	comp=E,4003μm,0.5s						
BAYC	**CANAKKALE_Bayr**	**0.42**	**63**	P	**Pg**	**13 14 31.6**	**-0.2**
BAYC				*i* AML	AML	13 14 37.0	
	comp=E,943nm,0.2s						
BAYC				*i* AML	AML	13 14 37.0	
	comp=E,747nm,0.2s						
BAYC				S	**Sg**	**13 14 37.3**	**-0.2**
ECEA	**Canakkale, Ece**	**0.50**	**10**	P	**Pg**	**13 14 33.6**	**+0.2**
ECEA				*i* AML	AML	13 14 41.0	

	comp=E,772nm,0.2s						
ECEA				*i* AML	AML	13 14 41.0	
	comp=E,1µm,0.3s						
ECEA				S	Sb	13 14 41.1	-0.4
COMU	**Canakkale**	0.64	30	Pg	Pg	13 14 35.7	-0.2
COMU				Sg	Sb	13 14 45.1	-0.2
GOKA	**anakkale-Gk**	0.65	350	P	Pg	13 14 36.1	-0.1
GOKA				S	Sg	13 14 45.2	+0.4
GOKA				*i* AML	AML	13 14 49.0	
	comp=E,577nm,0.2s						
GOKA				*i* AML	AML	13 14 52.0	
	comp=E,553nm,0.6s						
GADA	**Gvkgeada**	0.66	349	Pg	Pg	13 14 35.9	-0.3
LIA	**Limnos Island**	0.76	298	P	Pg	13 14 38.4	+0.1
LIA				S	Sg	13 14 47.9	-0.4
	comp=E,2µm,0.4s						
LIA	**Limnos Island**	0.76	298	P	Pg	13 14 38.4	+0.1
LIA				S	Sb	13 14 48.7	-0.3
LIA				AML	AML	13 14 50.8	
	comp=E,5849µm,0.5s						
LIA				AML	AML	13 14 51.6	
	comp=N,3840µm,0.3s						
BUHA	**Balikesir, Bur**	0.79	93	P	Pg	13 14 38.3	-0.4
BUHA				S	Sg	13 14 48.7	-0.3
BUHA				*i* AML	AML	13 14 54.0	
	comp=N,271nm,0.7s						
DKL	**Dikili**	0.81	126	Pg	Pg	13 14 39.1	0.0
CANM	**Can-anakkale**	0.89	58	Pg	Pg	13 14 40.7	0.0
GELI	**Tayfur-Gelibol**	0.91	20	Pg	Pg	13 14 40.4	-0.6
KARB	**zmir-Karabur**	0.92	163	P	Pb	13 14 41.6	+0.2
KARB				S	Sb	13 14 53.8	+0.2
KARB				*i* AML	AML	13 14 55.0	
	comp=N,389nm,0.7s						
KARB				*i* AML	AML	13 14 55.0	
	comp=N,262nm,0.3s						
ZEDA	**zmir-Bergama**	0.98	126	P	Pg	13 14 42.0	-0.4
ZEDA				S	Sb	13 14 55.9	+0.7
ZEDA				*i* AML	AML	13 14 57.0	
	comp=N,559nm,0.4s						
LPK	**Lapseki**	0.98	33	Pg	Pg	13 14 42.2	-0.3
SMTH	**Samothraki Isl**	1.01	336	P	Pg	13 14 42.6	-0.4
SMTH				S	Sb	13 14 56.2	+0.1
	comp=N,312nm,0.2s						
SMTH	**Samothraki Isl**	1.01	336	P	Pg	13 14 42.5	-0.4
SMTH				S	Sb	13 14 56.4	+0.3
SMTH				AML	AML	13 14 57.9	
	comp=N,684µm,0.2s						
SMTH				AML	AML	13 14 59.5	
	comp=E,559µm,0.2s						
CAVK	**Edirne/Enez-Ca**	1.15	4	P	Pg	13 14 45.1	-0.4
CAVK				S	Sn	13 15 01.5	+0.7
CHOS	**Chios island**	1.16	180	P	Pg	13 14 44.8	-1.0
CHOS	**Chios island**	1.16	180	P	Pg	13 14 44.9	-1.0
ERIK	**Erikli-Kesan**	1.17	17	Pn	Pb	13 14 44.6	-1.1
ENEZ	**Enez**	1.19	3	Pn	Pb	13 14 45.7	-0.2
BALY	**Balya**	1.22	80	P	Pb	13 14 46.2	-0.3
BALY				S	Sg	13 15 02.8	0.0
BALY				*i* AML	AML	13 15 04.0	
	comp=E,267nm,0.4s						
URLA	**Izmir**	1.26	161	Pn	Pn	13 14 46.5	-0.4
URLA	**Izmir**	1.26	161	P	Pn	13 14 46.5	-0.4
URLA				S	Sb	13 15 03.2	0.0
URLA				*i* AML	AML	13 15 06.0	
	comp=E,276nm,0.4s						
URLA				*i* AML	AML	13 15 07.0	
	comp=E,259nm,0.5s						
KRBG	**Karabiga-Canak**	1.27	48	Pn	Pn	13 14 47.2	+0.2
STEP	**BALIKESIR_Sava**	1.29	97	P	Pn	13 14 47.6	+0.2
STEP				S	Sn	13 15 05.8	+1.2
KNL	**Balıkesir**	1.34	57	P	Pn	13 14 47.8	-0.1
KNL				S	Sn	13 15 06.3	+0.7
KNL				*i* AML	AML	13 15 07.0	
	comp=E,712nm,0.9s						
KNL				*i* AML	AML	13 15 08.0	
	comp=E,702nm,0.7s						
GONE	**Gonen-Balikesi**	1.35	68	Pn	Pn	13 14 48.0	0.0
ALN	**Alexandroupoli**	1.35	359	P	Pn	13 14 48.0	-0.1
ALN				S	Sb	13 15 05.0	-0.8
	comp=E,285nm,0.5s						
ALN	**Alexandroupoli**	1.35	359	Pn	Pn	13 14 48.4	+0.4
ALN	**Alexandroupoli**	1.35	359	P	Pn	13 14 48.5	+0.4
ALN				S	Sn	13 15 06.6	+0.7
ALN				AML	AML	13 15 07.7	
	comp=E,728µm,0.5s						
ALN				AML	AML	13 15 14.4	
	comp=N,411µm,0.5s						
KESN	**Edirne-Kesan**	1.36	20	P	Pn	13 14 48.6	0.0
KESN				S	Sg	13 15 07.2	-0.3
KESN				*i* AML	AML	13 15 10.0	
	comp=N,466nm,0.3s						
KESN				*i* AML	AML	13 15 10.0	
	comp=N,305nm,0.5s						
BLCB	**Balcova**	1.39	146	P	Pn	13 14 47.6	-1.0
BLCB				S	Sg	13 15 08.0	-0.2
BLCB	**Balcova**	1.39	146	Pn	Pn	13 14 48.6	0.0
BALB	**Balikesir**	1.41	86	Pn	Pn	13 14 48.9	0.0
RKY	**Sarkoy-Tekirda**	1.42	37	Pn	Pn	13 14 49.2	0.0
BKES	**Balkesir-Mer**	1.45	82	P	Pn	13 14 49.8	+0.2
BKES				S	Sg	13 15 10.2	-0.1
THAS	**Thassos island**	1.48	316	P	Pn	13 14 49.7	-0.2
AKS	**Akhisar**	1.52	116	Pn	Pn	13 14 50.6	+0.2
EDC	**Edincik**	1.60	59	Pn	Pn	13 14 51.7	+0.2
UKOP	**Uzunkopru-Edir**	1.64	15	Pn	Pn	13 14 52.4	+0.4
RDO	**Rodhopi**	1.65	346	P	Pn	13 14 52.1	-0.1
RDO				S	Sn	13 15 13.6	+0.4
	comp=N,62nm,0.3s						
RDO	**Rodhopi**	1.65	346	Pn	Pn	13 14 52.5	+0.3
RDO	**Rodhopi**	1.65	346	P	Pn	13 14 52.4	+0.3
RDO				AML	AML	13 15 18.6	
	comp=E,136µm,0.3s						
RDO				AML	AML	13 15 21.6	
	comp=N,122µm,0.2s						
KAVA	**Kavala**	1.87	321	P	Pn	13 14 55.2	-0.1
SMG	**Samos**	1.93	161	P	Pn	13 14 55.8	-0.3
SMG				S	Sn	13 15 20.9	+0.6
	comp=N,282nm,0.4s						
SMG	**Samos**	1.93	161	P	Pn	13 14 56.6	+0.5
SMG				AML	AML	13 15 28.4	
	comp=E,576µm,0.5s						
SMG				AML	AML	13 15 28.9	
	comp=N,545µm,0.4s						
KOKK	**Kokkinochori,**	2.03	309	P	Pn	13 14 57.5	+0.1

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*DDA **09** 13:16:21.4±0.0, 39°.55N×26°.10E, h11^{km}, ML2.6*
*ISK **09** 13:16:21.0, 39°.55N×26°.08E, h7^{km}, ML2.9/20*
*THE **09** 13:16:21.4, 39°.55N×26°.06E, h8^{km}±1^{km}, ML2.4/8, Error ellipse: s-maj=1.4km s-min=0.6km az=230.0*
ISC 09 13:16:21.5±0.8**, 39°.55N**±0°.02×**26°.08E**±0°.02**, h11**^{km}±5^{km}**, n52, σ0^{s}.49**/87**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	0.07	138	P	Pg	13 16 23.9	0.0
KOCA				S	Sg	13 16 25.5	-0.1
GPNR	**Gulpinar-Canak**	0.10	157	Pg	Pg	13 16 23.9	-0.4
GPNR				Sg	Sg	13 16 26.1	-0.2
BOZC	**Bozcaada**	0.29	356	Pg	Pg	13 16 27.5	+0.1
BOZC				Sg	Sg	13 16 31.8	+0.5
BOZC	**Bozcaada**	0.29	356	P	Pg	13 16 27.6	+0.2
BOZC				S	Sg	13 16 32.0	+0.6
BOZC				*i* AML	AML	13 16 32.0	
	comp=N,824nm,0.3s						
BOZC				*i* AML	AML	13 16 32.0	
	comp=E,696nm,0.2s						
EZN	**Ezine**	0.33	35	P	Pg	13 16 28.2	0.0
EZN				S	Sg	13 16 33.0	+0.4
	750nm,0.3s						
EZN	**Ezine**	0.33	35	Pg	Pg	13 16 28.2	0.0
EZN				Sg	Sg	13 16 33.2	+0.6
PRK	**Paraskevi**	0.34	154	P	Pg	13 16 28.6	+0.3
PRK				S	Sg	13 16 33.1	+0.2
	2µm,0.3s						
SIGR	**SIGRI**	0.38	207	P	Pg	13 16 29.0	-0.1
SIGR				S	Sg	13 16 34.2	0.0
	870nm,0.2s						
SIGR	**SIGRI**	0.38	207	Pg	Pg	13 16 28.9	-0.1
SIGR				Sg	Sg	13 16 34.7	+0.5
BAYC	**CANAKKALE_Bayr**	0.41	62	P	Pg	13 16 29.6	+0.1
BAYC				S	Sg	13 16 35.0	0.0
BAYC				*i* AML	AML	13 16 36.0	
	comp=E,262nm,0.1s						
ECEA	**Canakkale, Ece**	0.50	8	P	Pg	13 16 31.4	+0.2
ECEA				S	Sb	13 16 39.1	-0.4
ECEA				*i* AML	AML	13 16 41.0	
	comp=N,243nm,0.3s						
ECEA				*i* AML	AML	13 16 44.0	
	comp=E,282nm,0.4s						
COMU	**Canakkale**	0.62	29	Pg	Pg	13 16 33.7	+0.1
COMU				Sg	Sb	13 16 42.7	-0.5
GOKA	**anakkale-Gk**	0.65	348	P	Pg	13 16 34.0	-0.1
GOKA				S	Sg	13 16 43.0	+0.3
GOKA				*i* AML	AML	13 16 45.0	
	comp=N,201nm,0.3s						
GOKA				*i* AML	AML	13 16 49.0	
	comp=E,262nm,0.4s						
GADA	**Gvkgeada**	0.65	348	Pg	Pg	13 16 33.9	-0.3
GADA				Sg	Sb	13 16 43.7	-0.3
LIA	**Limnos Island**	0.77	297	P	Pg	13 16 36.4	0.0
LIA				S	Sg	13 16 46.2	-0.3
	512nm,0.4s						
BUHA	**Balikesir, Bur**	0.77	94	P	Pg	13 16 36.3	-0.1
BUHA				S	Sg	13 16 46.6	+0.1
DKL	**Dikili**	0.80	127	Pg	Pb	13 16 37.2	-0.2
CANM	**Can-anakkale**	0.88	58	Pg	Pg	13 16 37.9	-0.5
GELI	**Tayfur-Gelibol**	0.90	20	Pg	Pg	13 16 38.4	-0.4
KARB	**zmir-Karabur**	0.93	164	P	Pb	13 16 39.5	0.0
KARB				S	Sg	13 16 51.5	+0.1
KARB				*i* AML	AML	13 16 53.0	
	comp=E,269nm,0.2s						
KARB				*i* AML	AML	13 16 54.0	
	comp=N,172nm,0.4s						
ZEDA	**zmir-Bergama**	0.97	127	P	Pb	13 16 40.4	+0.1
ZEDA				S	Sb	13 16 53.4	+0.2
ZEDA				*i* AML	AML	13 16 55.0	
	comp=N,244nm,0.4s						
ZEDA				*i* AML	AML	13 16 55.0	
	comp=E,146nm,0.2s						
LPK	**Lapseki**	0.97	32	Pg	Pg	13 16 40.2	0.0
SMTH	**Samothraki Isl**	1.01	335	P	Pg	13 16 40.4	-0.5
SMTH				S	Sb	13 16 54.4	+0.1
	120nm,0.2s						
CAVK	**Edirne/Enez-Ca**	1.14	3	P	Pg	13 16 42.8	-0.6
CAVK				S	Sb	13 16 58.5	+0.5
CAVK				*i* AML	AML	13 17 06.0	
	comp=E,133nm,0.7s						
CAVK				*i* AML	AML	13 17 07.0	
	comp=N,134nm,0.9s						
ERIK	**Erikli-Kesan**	1.17	16	Pn	Pg	13 16 42.9	-1.0
ENEZ	**Enez**	1.18	3	P	Pb	13 16 42.6	-1.3
ENEZ				S	Sn	13 17 00.1	0.0
	208nm,0.4s						
ENEZ	**Enez**	1.18	3	Pn	Pb	13 16 43.7	-0.2
BALY	**Balya**	1.20	81	P	Pb	13 16 43.9	-0.4
BALY				S	Sg	13 16 59.4	-0.9
BALY				*i* AML	AML	13 17 02.0	
	comp=N,126nm,0.5s						
BALY				*i* AML	AML	13 17 02.0	
	comp=E,102nm,0.3s						
KRBG	**Karabiga-Canak**	1.26	48	Pn	Pn	13 16 45.0	0.0
URLA	**Izmir**	1.26	161	Pn	Pn	13 16 45.2	+0.2
URLA	**Izmir**	1.26	161	P	Pn	13 16 44.1	-0.9
URLA				S	Sb	13 17 01.1	-0.3
URLA				*i* AML	AML	13 17 05.0	
	comp=N,159nm,0.4s						
URLA				*i* AML	AML	13 17 05.0	
	comp=E,147nm,0.4s						
STEP	**BALIKESIR_Sava**	1.28	97	P	Pn	13 16 45.0	-0.3
STEP				S	Sn	13 17 03.4	+0.9
STEP				*i* AML	AML	13 17 08.0	
	comp=N,86nm,1.0s						
STEP				*i* AML	AML	13 17 09.0	
	comp=E,78nm,0.5s						
KNL	**Balıkesir**	1.32	57	P	Pn	13 16 46.1	+0.2
KNL				S	Sn	13 17 04.2	+0.6
KNL				*i* AML	AML	13 17 06.0	
	comp=N,316nm,0.7s						
KNL				*i* AML	AML	13 17 06.0	
	comp=E,307nm,0.6s						
GONE	**Gonen-Balikesi**	1.33	68	Pn	Pn	13 16 45.9	-0.1
ALN	**Alexandroupoli**	1.34	359	P	Pn	13 16 45.9	-0.3
ALN				S	Sb	13 17 03.9	0.0
	150nm,0.4s						
ALN	**Alexandroupoli**	1.34	359	Pn	Pb	13 16 46.8	+0.1
KESN	**Edirne-Kesan**	1.35	20	P	Pn	13 16 46.8	+0.1
KESN				S	Sn	13 17 05.4	+0.6
KESN				*i* AML	AML	13 17 06.0	
	comp=N,105nm,0.4s						
KESN				*i* AML	AML	13 17 08.0	
	comp=E,158nm,0.3s						
ZEYE	**Izmir, Urla-Ze**	1.35	166	P	Pb	13 16 47.1	+0.3
ZEYE				S	Sb	13 17 03.8	-0.3
ZEYE				*i* AML	AML	13 17 08.0	
	comp=N,128nm,0.7s						
ZEYE				*i* AML	AML	13 17 08.0	
	comp=E,190nm,0.3s						
BLCB	**Balcova**	1.39	147	P	Pn	13 16 46.2	-0.5
BLCB				S	Sb	13 17 04.9	-0.2
BLCB	**Balcova**	1.39	147	Pn	Pb	13 16 47.5	+0.1
BALB	**Balikesir**	1.39	86	Pn	Pn	13 16 46.9	0.0
RKY	**Sarkoy-Tekirda**	1.41	36	Pn	Pb	13 16 47.8	-0.1
BKES	**Balkesir-Mer**	1.44	82	P	Pn	13 16 45.7	-1.8
BKES				S	Sg	13 17 08.7	+0.9
BKES				*i* AML	AML	13 17 13.0	
	comp=E,54nm,0.6s						
EDC	**Edincik**	1.58	59	Pn	Pn	13 16 50.1	+0.6
DGB	**zmir**	1.62	157	P	Pn	13 16 50.9	+0.9
DGB				S	Sg	13 17 13.8	0.0
UKOP	**Uzunkopru-Edir**	1.63	15	Pn	Pn	13 16 50.7	+0.6
RDO	**Rodhopi**	1.64	346	P	Pn	13 16 50.4	+0.1
RDO				S	Sn	13 17 11.2	-0.2
	32nm,0.3s						
RDO	**Rodhopi**	1.64	346	Pn	Pb	13 16 51.3	-0.5
DURS	**Dursunbey**	1.85	88	P	Pn	13 16 52.9	-0.3
DURS				S	Sn	13 17 16.5	-0.2
DURS				*i* AML	AML	13 17 26.0	
	comp=E,40nm,0.5s						
DEMI	**Demirci**	2.11	103	P	Pn	13 16 56.9	+0.1
KIRK	**Kırklareli**	2.36	19	P	Pn	13 17 01.4	+1.3
KIRK				S	Sb	13 17 33.9	+0.8
VIZE	**Kirklareli, Vi**	2.43	33	P	Pb	13 17 04.9	-0.3
VIZE				S	Sb	13 17 34.7	-0.4
VIZE				*i* AML	AML	13 17 41.0	
	comp=E,15nm,0.3s						
VIZE				*i* AML	AML	13 17 44.0	
	comp=N,30nm,1.0s						

IDC 09 13:25:27.5±1.9**, 7°.04S**×**124°.39E, h0**^{km}**, mb3.2**/1**, mbtmp3.1**/3**, ML3.4**/2**, Error ellipse: s-maj=335.0km s-min=31.1km az=59.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	16.05	144	Pn	Pn	13 29 15.7	+0.9
	0.1nm,0.3s,baz=323,slow=11,SNR=5.6						
	0.3nm,0.7s						
ASAR	**Alice Springs**	18.89	152	P	P	13 29 49.3	-0.4
	0.3nm,0.3s,baz=332,slow=8.3,SNR=29						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	65.32	330	P	P	13 36 11.5	0.0
	0.1nm,0.5s,baz=123,slow=5.3,SNR=2.0						
	0.1nm,0.5s						

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*IDC **09** 13:29:24.7±0.4, 11°.85N×69°.71W, h0^{km}, mb4.5/24, mbtmp4.5/25, ML4.7/1, MS3.7/6, Error ellipse: s-maj=15.4km s-min=11.5km az=66.0*
*MOS **09** 13:29:25.5±1.4, 11°.97N×69°.74W, h15^{km}, mb4.9/35, Error ellipse: s-maj=9.1km s-min=6.5km az=86.2*
*NEIC **09** 13:29:27.6±2.0, 12°.06N±0°.04×69°.60W±0°.04, h19^{km}±4^{km}, mb4.8/112, Error ellipse: s-maj=6.8km s-min=4.2km az=51.0*
*FUNV **09** 13:29:29.1, 12°.03N×69°.68W, h14^{km}, MW4.6*
*VAO **09** 13:29:33.8±0.5, 11°.96N×69°.72W, h59^{km}, mb4.8*
ISC 09 13:29:28.2±0.3**, 12°.04N**±0°.03×**69°.64W**±0°.03**, h21**^{km}±2^{km}**, n669, σ1^{s}.43**/721**, mb4.8**/110**, MS3.8**/3**, 28C-8D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUA1	**Aruba**	0.58	322		Pb	13 29 38.5	-1.4
AUA1				Sg	Sb	13 29 46.6	-1.1
AUA1	**Aruba**	0.58	322	*e*P	Pb	13 29 38.8	-1.1
AUA1				*e*S	Sb	13 29 46.4	-1.3
AUA1				*i*		13 29 53.5	
	comp=Z,15µm,0.3s						
HATO	**Hato, Curacao**	0.69	78		Pb	13 29 41.0	-0.6
HATO				Sg	Sb	13 29 49.7	-0.8
JACV	**Jacura**	1.24	140	*e*P	Pb	13 29 51.9	+1.0
JACV				*e*S	Sb	13 30 09.1	+2.6
SIQV	**Siquisique**	1.39	187	*e*P	Pb	13 29 53.5	-0.1
SIQV				*e*S	Sb	13 30 11.7	+0.8
CURV	**Curarigua**	2.04	189	*e*P	Pn	13 30 02.1	+0.7
CURV				*e*S	Sn	13 30 26.5	+0.2
URIC	**Uribia, Colomb**	2.32	262		Pn	13 30 05.5	+0.3
URIC	**Uribia, Colomb**	2.32	262	*e*P	Pn	13 30 05.9	+0.7
URIC				*e*S	Sn	13 30 34.8	+1.6
TURV	**Turiamo**	2.37	132	*e*P	Pn	13 30 06.6	+0.7
MAPV	**Macapo**	2.49	152	*e*P	Pn	13 30 07.6	+0.1
MAPV				*e*S	Sn	13 30 38.0	+0.8
BENV	**Beln**	2.88	136	*e*P	Pn	13 30 15.6	+2.6
BENV				*e*S	Sn	13 30 46.7	-0.4
CARV	**Caracas**	3.07	120	*e*P	Pn	13 30 16.0	+0.4
CARV				*e*S	Sn	13 30 51.1	-0.7
FUNV	**FUNVISIS**	3.19	119	*e*P	Pn	13 30 17.4	+0.2
FUNV				*e*S	Sn	13 30 54.5	-0.2
TACV	**Tcata**	3.19	126	*e*P	Pn	13 30 17.9	+0.7
TACV				*e*S	Sn	13 30 54.3	-0.4
SDV	**Santo Domingo**	3.28	197	Pn	Pn	13 30 20.5	+1.9
	comp=Z,55nm,0.3s,baz=41,slow=7.0,SNR=111						
SDV				Sn	Sn	13 30 56.5	-0.7
	comp=Z,231nm,0.3s,baz=288,slow=9.7,SNR=4.7						
SDV	**Santo Domingo**	3.28	197	Pn	Pn	13 30 20.0	+1.4
SDV	**Santo Domingo**	3.28	197	*e*P	Pn	13 30 19.9	+1.3
CRJC	**Cerrejon, Guaj**	3.33	253	*e*P	Pn	13 30 18.6	-0.6
CRJC				*e*S	Sn	13 30 56.6	-1.6
BAUV	**El Baul**	3.46	153	*e*P	Pn	13 30 22.0	+1.1
BAUV				*e*S	Sn	13 31 01.6	+0.4
MCQV	**Machiques**	3.46	235	*e*P	Pn	13 30 21.2	+0.3
BIRV	**Birongo**	3.66	115	*e*P	Pn	13 30 23.9	+0.3
BIRV				*e*S	Sn	13 31 04.7	-1.5
MERV	**Las Mercedes**	4.30	130	*e*P	Pn	13 30 33.5	+1.0
MERV				*e*S	Sn	13 31 20.8	-1.3
SMRC	**Santa Marta, M**	4.57	259	*e*P	Pn	13 30 36.9	+0.7
SMRC				*e*S	Sn	13 31 32.0	+3.3
LL1C	**La Loma 1 Cana**	4.58	237	*e*P	Pn	13 30 36.1	-0.1
LL1C				*e*S	Sn	13 31 26.9	-1.8
CAPV	**Capacho**	4.91	213	*e*P	Pn	13 30 41.6	+0.5
CAPV				*e*S	Sn	13 31 33.9	-3.5
ARGC	**Ariguani, Magd**	5.01	245	*e*P	Pn	13 30 43.9	+1.7
ARGC				*e*S	Sn	13 31 40.0	+0.4
ARGC				*i*		13 31 55.2	
	comp=Z,317nm,0.4s						
CACV	**CAICARA DEL OR**	5.40	145	*e*P	Pn	13 30 52.7	+5.1
CACV				*e*S	Sn	13 31 54.0	+5.0
PAMC	**Pamplona, Colo**	5.56	213	*e*P	Pn	13 30 51.0	+0.8
PAMC				*e*S	Sn	13 31 50.6	-3.1
SJCC	**San Jacinto, C**	5.84	249	*e*P	Pn	13 30 54.6	+1.0
SJCC				*e*S	Sn	13 32 00.7	+0.6
PRGV	**PARIAGUAN**	5.90	123	*e*P	Pn	13 30 55.1	+0.7
PRGV				*e*S	Sn	13 32 00.6	-0.9
TAMC	**Tame, Arauca**	5.96	201	*e*P	Pn	13 30 56.7	+1.4
TAMC				*e*S	Sn	13 32 00.1	-2.9
BRRC	**Barranca, Sant**	6.33	220	*e*P	Pn	13 31 02.5	+2.1
BRRC				*e*S	Sn	13 32 10.8	-1.4
MLPR	**Magueyes Islan**	6.41	23	Pn	Pn	13 31 00.5	-0.9
CRPR	**Cabo Rojo, PR**	6.42	22		Pn	13 31 00.2	-1.3
CRUV	**Carupano**	6.43	102	*e*P	Pn	13 31 04.0	+2.3
CRUV				*e*S	Sn	13 32 11.8	-2.6
BARC	**Barichara**	6.44	213	*e*P	Pn	13 31 03.3	+1.2
BARC				*e*S	Sn	13 32 11.1	-4.0
PCDR	**Punta Cana, DR**	6.55	11	Pn	Pn	13 31 03.8	+0.5
PRSN	**Puerto Rico Se**	6.60	21		Pn	13 31 03.6	-0.4
OBIP	**Obispado Ponce**	6.65	26	Pn	Pn	13 31 03.2	-1.5
CELP	**Cerrillos**	6.69	26		Pn	13 31 03.9	-1.4
UUPR	**Utuado, UPR, P**	6.79	24		Pn	13 31 05.9	-0.8
AGPR	**Aguadilla, PR**	6.84	21		Pn	13 31 06.9	-0.4
ZARC	**Zaragoza, Cauc**	6.84	229	*e*P	Pn	13 31 06.8	-0.7
ZARC				*e*S	Sn	13 32 20.7	-4.0
AOPR	**Arecibo Observ**	6.86	24		Pn	13 31 07.3	-0.4
SJG	**San Juan**	6.91	29	Pn	Pn	13 31 07.6	-0.7
	comp=Z,18nm,0.3s,baz=213,slow=12,SNR=15						
SJG				Sn	Sn	13 32 18.5	-7.9
	comp=Z,35nm,0.3s,baz=36,slow=23,SNR=14						
SJG				LR	LR	13 33 18.4	
	comp=Z,349nm,21.2s,baz=130,slow=33						
SJG	**San Juan**	6.91	29		Pn	13 31 07.7	-0.6
PAPH	**Port-au-Prince**	6.93	339		Pn	13 31 09.1	+0.5
RUSC	**La Rusia**	6.99	209	Pn	Pn	13 31 09.3	-0.6
RUSC	**La Rusia**	6.99	209	*e*P	Pn	13 31 11.0	+1.1
EMPR	**Esperanza - Ma**	7.07	25		Pn	13 31 08.9	-1.5
SDDR	**Presa de Saban**	7.08	347		Pn	13 31 10.4	-0.3
SDDR	**Presa de Saban**	7.08	347	*e*P	Pn	13 31 14.1	+3.4
HUMP	**Col San Antoni**	7.08	31		Pn	13 31 08.6	-2.1
GCPR	**Guaynabo City**	7.12	28		Pn	13 31 09.8	-1.3
CBYP	**Canovanas**	7.19	30		Pn	13 31 11.1	-1.1
UREC	**San Jos de Ur**	7.20	234	*e*P	Pn	13 31 14.1	+1.7
MTP	**Monte Pirata**	7.20	33	Pn	Pn	13 31 08.2	-4.1
PTBC	**PUERTO BERRIO,**	7.24	221	*e*P	Pn	13 31 14.1	+1.2
PTBC				*e*S	Sn	13 32 30.1	-4.5
SPBC	**San Pablo de B**	7.71	215	*e*P	Pn	13 31 19.9	+0.6
SPBC				*e*S	Sn	13 32 42.5	-3.7
STVI	**Saint Thomas**	7.74	35		Pn	13 31 17.7	-1.9
GRGR	**Grenville**	7.82	89	Pn	Pn	13 31 19.3	-1.5
GRGR	**Grenville**	7.82	89	*e*P	Pn	13 31 20.8	0.0
GRGR				*e*S	Sn	13 32 45.5	-3.2
GRGR	**Grenville**	7.82	89	*e*	Pn	13 31 20.7	0.0
GRSS	**Sisters**	7.86	87	*e*	Pn	13 31 21.4	+0.1
APAC	**Apartado, Choc**	7.97	240	*e*P	Pn	13 31 25.8	+2.8
APAC				*e*S	Sn	13 32 50.5	-2.1
GCMP	**Grenada, Carri**	8.04	86	*e*	Pn	13 31 22.0	-1.9
DBBC	**Dabeiba**	8.18	233	*e*P	Pn	13 31 26.6	+0.8
DBBC				*e*S	Sn	13 32 54.1	-3.5
TRN	**Trinidad (W)**	8.20	99	*e*	Pn	13 31 28.7	+2.7
HELC	**Santa Helena**	8.22	225	*e*P	Pn	13 31 29.4	+2.8
SVB	**Belmont**	8.28	81		Pn	13 31 25.5	-1.7
SVB	**Belmont**	8.28	81	*e*	Pn	13 31 26.1	-1.0
SABA	**Saba**	8.31	47	Pn	Pn	13 31 25.3	-2.3
SABA	**Saba**	8.31	47	*e*	Pn	13 31 27.1	-0.5
SFAN	**Fancy Village**	8.37	80	*e*	Pn	13 31 31.5	+3.1
CHIC	**Chingaza**	8.40	209	*e*P	Pn	13 31 29.9	+0.7
CHIC				*e*S	Sn	13 32 57.6	-6.1
ROSC	**El Rosal**	8.52	213	Pn	Pn	13 31 32.6	+1.9
	comp=Z,23nm,0.3s,baz=110,slow=14,SNR=16						
ROSC				Sn	Sn	13 33 06.0	-0.5
	comp=Z,22nm,0.3s,baz=336,slow=19,SNR=1.8						
ROSC				LR	LR	13 35 26.8	
	comp=Z,1µm,19.0s,baz=29,slow=44						
TBH	**Brigand Hill**	8.55	100	*e*	Pn	13 31 34.8	+3.8
MBFL	**Flemmings, Mon**	8.59	56	*e*	Pn	13 31 29.3	-2.1
MLYT	**Lee's Yard**	8.59	56	*e*	Pn	13 31 29.1	-2.3
MCLT	**Moule a Chique**	8.65	78	*e*	Pn	13 31 29.5	-2.7
SLBI	**Saint Lucia, B**	8.68	76	*e*	Pn	13 31 29.9	-2.7
FDF	**Fort de France**	8.69	71		Pn	13 31 29.8	-3.0
FDF	**Fort de France**	8.69	71	P	Pn	13 31 29.8	-3.0
FDF	**Fort de France**	8.69	71	*e*	Pn	13 31 29.3	-3.4
BIM	**Bigot**	8.70	73	Pn	Pn	13 31 31.1	-1.9
BIM	**Bigot**	8.70	73	*e*	Pn	13 31 31.1	-1.9
TPR	**Prospect**	8.73	95	*e*	Pn	13 31 37.3	+4.0
CBOC	**Ciudad Bolivar**	8.79	226⥣	*e*P	Pn	13 31 35.2	+1.0
CBOC				*e*S	Sn	13 33 11.5	-1.4
GUY2C	**Guyana, Caldas**	8.82	220	*e*P	Pn	13 31 36.2	+1.2
GUY2C				*e*S	Sn	13 33 09.6	-4.5
VILC	**Villavicencio,**	8.84	207	*e*P	Pn	13 31 36.2	+1.3
MPOM	**Morne Pois Mar**	8.88	73	*e*	Pn	13 31 32.8	-2.6
TOSP	**Speyside**	8.95	94	Pn	Pn	13 31 35.4	-1.0
TOSP	**Speyside**	8.95	94	*e*	Pn	13 31 38.3	+1.9
NIZA	**Niza - Manizal**	9.02	220	*e*P	Pn	13 31 28.0	-10
NIZA				*e*S	Sn	13 33 15.0	-3.6
ANBD	**Bethesda, Anti**	9.11	56	*e*	Pn	13 31 36.5	-1.9
ANIL	**Santa Ana**	9.42	218	*e*P	Pn	13 31 45.8	+2.8
ANIL				*e*S	Sn	13 33 27.8	-0.7
GTBY	**Guantanamo Bay**	9.44	327	Pn	Pn	13 31 42.6	-0.4
GRTK	**Grand Turk**	9.52	352	Pn	Pn	13 31 44.1	-0.1
PRAC	**Prado**	9.77	213		Pn	13 31 47.8	+0.2
PRAC	**Prado**	9.77	213	*e*P	Pn	13 31 47.7	+0.2
PRAC				*e*S	Sn	13 33 34.6	-2.2
ORTC	**Ortega, Tolima**	9.80	215	*e*P	Pn	13 31 47.7	-0.3
ORTC				*e*S	Sn	13 33 34.6	-3.0
PIZC	**Pizarro, Choco**	10.37	228	*e*P	Pn	13 31 57.4	+1.5
YOTC	**Yotoco, Valle**	10.39	220	*e*P	Pn	13 31 59.3	+3.0
YOTC				*e*S	Sn	13 33 49.2	-3.1
BCIP	**Isla Barro Col**	10.42	255		Pn	13 31 56.9	+0.4
BCIP	**Isla Barro Col**	10.42	255	P	Pn	13 31 56.9	+0.4
BCIP	**Isla Barro Col**	10.42	255	*e*P	Pn	13 31 57.4	+0.9

BCIP				*e*S	Sn	13 33 51.9	-0.8
MACC	Macarena, Meta	10.68	203	*e*P	Pn	13 31 59.3	-0.8
MACC				*e*S	Sn	13 33 49.0	-10
JAMC	Jamundi, Valle	11.20	219	*e*P	Pn	13 32 08.0	+0.6
AZU	Azuero	11.29	249	*e*P	Pn	13 32 08.9	+0.5
GARC	Garzon, Huila	11.38	211	*e*P	Pn	13 32 10.8	+1.0
POPC	Popayan, Colom	11.73	217	*e*P	Pn	13 32 14.7	0.0
FLOC	Florencia	11.98	210	*e*P	Pn	13 32 16.6	-1.3
GMAL	Guarumal, Vera	12.18	251	*e*P	Pn	13 32 21.4	+0.8
BBAC	Balboa, Cauca	12.49	218	*e*P	Pn	13 32 25.2	+0.2
BOAV	Boa Vista	13.18	136	Pn	Pn	13 32 32.1	-2.1
BOAV	Boa Vista	13.18	136	*e*P	Pn	13 32 33.0	-1.2
SRBA	San Rafael, Bu	13.77	260		Pn	13 32 40.0	-2.4
OTAV	Otavalo	14.63	217	Pn	Pn	13 32 53.3	-1.2
OTAV	Otavalo	14.63	217	P	Pn	13 32 53.3	-1.2
OTAV	Otavalo	14.63	217	*e*P	Pn	13 32 56.4	+1.9
MATN	Matagalpa	15.92	275		Pn	13 33 11.7	+0.5
TBTG	Tabatinga, AM	16.12	181	Pn	Pn	13 33 13.6	-0.1
TBTG				IAmb	IAmb	13 33 39.9	
	comp=Z,63nm,0.9s						
TBTG	Tabatinga, AM	16.12	181	*e*P	Pn	13 33 14.6	+0.8
PORT	Chimborazo Vol	16.20	215		Pn	13 33 15.5	+0.3
PORT				IAmb	IAmb	13 33 30.4	
	comp=Z,36nm,0.6s						
TEFE	Tefe	16.23	162	*e*P	P	13 33 17.4	-0.6
MACA	Manacapuru-AM	17.54	149	P	Pn	13 33 30.5	-1.1
MACA	Manacapuru-AM	17.54	149	*e*P	P	13 33 33.8	+1.3
MDP	Montagnes des	18.16	111	P	Pn	13 33 37.8	-1.5
	comp=Z,2.4nm,0.3s,baz=291,slow=11,SNR=12						
MDP				S	Sn	13 36 50.3	-11
	comp=Z,12nm,0.6s,baz=57,slow=16,SNR=4.4						
MDP				LR	LR	13 41 06.3	
	comp=Z,293nm,18.5s,baz=85,slow=39						
	comp=Z,38nm,0.7s						
MCRA	Macar, Loja	19.26	213	P	P	13 33 48.8	-2.7
CZSB	Cruzeiro do Su	19.88	189	P	P	13 33 57.0	-1.2
CZSB				IAmb	IAmb	13 34 05.9	
	comp=Z,54nm,0.7s						
MALB	Monte Alegre	20.59	131	*e*P	Pn	13 34 07.4	-1.0
ATAH	Atahualpa	20.94	205	P	P	13 34 08.2	-2.1
	comp=Z,2.3nm,0.7s,baz=15,slow=12,SNR=1.1						
	comp=Z,2.3nm,0.7s						
MCPB	Macapa, AP	21.37	124	*e*P	P	13 34 16.0	+1.5
ITTB	Itaituba	21.38	139	*e*P	P	13 34 15.6	+1.0
SAML	Samuel	21.82	163	P	P	13 34 17.3	-2.0
SAML	Samuel	21.82	163	P	P	13 34 17.3	-2.0
SAML				pmax	pmax		
	comp=Z,12nm,0.7s						
ETMB	Extrema	21.98	171	P	P	13 34 19.8	-1.1
ETMB	Extrema	21.98	171	*e*P	P	13 34 20.4	-0.5
NHSC	New Hope	23.08	337	P	P	13 34 33.5	+1.0
	baz=153						
TIGA	Tifton	23.20	328	P	P	13 34 35.3	+1.6
	baz=143						
NPGB	Novo Progresso	23.69	142	*e*P	P	13 34 39.0	+0.2
JSC	Jenkinsville	24.54	336	P	P	13 34 46.5	+0.1
JSC	Jenkinsville	24.54	336	P	P	13 34 46.5	+0.1
JSC				pmax	pmax		
	comp=Z,18nm,1.3s						
BIRD	Birdtown, Kers	24.56	338	P	P	13 34 46.5	-0.1
BIRD				IAmb	IAmb	13 34 48.8	
	comp=Z,15nm,0.8s						
HODGE	Hodges	24.90	335	P	P	13 34 49.5	-0.2
Y52A	Lilburn	25.40	331	P	P	13 34 51.6	-2.6
TMAB	Tom-Au,PA,Br	25.76	122	*e*P	P	13 34 59.3	+1.6
V55A	Taylorsville	25.91	338	P	P	13 34 56.9	-2.0
V55A				IAmb	IAmb	13 35 01.2	
	comp=Z,13nm,0.8s						
LRAL	Lakeview Retre	26.26	326	P	P	13 35 03.5	+1.5
	baz=139,SNR=7.1						
VILB	Vilhena	26.54	159	*e*P	P	13 35 04.2	-0.6
PRPB	Parauapebas	26.76	131	*e*P	P	13 35 07.2	+0.4
TKL	Tuckaleechee C	26.76	334	P	P	13 35 06.1	-0.5
	comp=Z,4.7nm,0.8s,baz=154,slow=9.8,SNR=6.1						
	comp=Z,4.7nm,0.8s						
PDRB	Porto dos Gac	26.77	151	*e*P	P	13 35 06.8	-0.1
BLA	Blacksburg	26.86	341	P	P	13 35 09.3	+1.8
	baz=156						
W50A	Signal Mountai	27.08	331	P	P	13 35 07.1	-2.4
W50A				IAmb	IAmb	13 35 12.6	
	comp=Z,16nm,0.9s						
TZTN	Tazewell	27.42	335	P	P	13 35 14.0	+1.4
	baz=149						
LPAZ	La Paz	28.19	177	P	P	13 35 17.3	-2.9
	comp=Z,0.6nm,0.5s,baz=13,slow=5.2,SNR=4.6						
	comp=Z,0.6nm,0.5s						
LPAZ	La Paz	28.19	177	*e*P	P	13 35 20.1	-0.1
PLAL	Pickwick Lake	28.31	327	P	P	13 35 18.6	-1.9
T50A	Nancy	28.37	334	P	P	13 35 19.8	-1.2
T50A				IAmb	IAmb	13 35 23.8	
	comp=Z,9.1nm,0.8s						
OXF	Oxford	28.70	324	P	P	13 35 25.1	+1.2
	baz=136						
WVT	Waverly	29.06	329	P	P	13 35 25.8	-1.3
WVT	Waverly	29.06	329	P	P	13 35 25.8	-1.3
WVT				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WVT	Waverly	29.06	329	P	P	13 35 28.2	+1.1
	baz=141						
SIV	San Ignacio	29.12	163	P	P	13 35 25.5	-2.2
	comp=Z,1.8nm,0.5s,baz=355,slow=8.3,SNR=11						
	comp=Z,1.8nm,0.5s						
PTLB	Pontes e Lacer	29.23	159	*e*P	P	13 35 30.5	+1.8
ROSB	Rosrio	29.39	119	*e*P	P	13 35 30.8	+0.6
SSPA	Standing Stone	29.39	347	P	P	13 35 31.7	+1.7
	baz=163						
P52A	Corning	29.62	340	P	P	13 35 33.4	+1.3
	baz=155						
O53A	New Philadelph	29.89	342	P	P	13 35 36.1	+1.7
	baz=157						
O52A	Adamsville	29.96	341	P	P	13 35 33.7	-1.4
WCI	Wyandotte Cave	30.02	333	P	P	13 35 36.9	+1.3
	baz=146						
SNDB	Serra Nova Dou	30.02	142	*e*P	P	13 35 38.0	+2.2
SMTB	Santa Maria do	30.20	132	*e*P	P	13 35 38.7	+1.2
BBSD	Serra de San D	30.38	163	*e*P	P	13 35 38.2	-0.7
HRV	Adam Dziewonsk	30.40	357	P	P	13 35 40.6	+1.8
	baz=176						
ACSO	Alum Creek Sta	30.45	340	P	P	13 35 41.0	+1.6
	baz=154						
P49A	Miami Univ. Ec	30.46	337	P	P	13 35 41.0	+1.4
	baz=150						
BINY	Binghamton	30.55	351	P	P	13 35 41.7	+1.5
	baz=168						
O49A	Covington	30.89	338	P	P	13 35 41.5	-1.7
O49A				IAmb	IAmb	13 35 45.6	
	comp=Z,16nm,0.8s						
MNMC	Minye Minye	30.98	180	P	P	13 35 40.9	-3.6
MIAR	Mount Ida	31.23	320	P	P	13 35 47.1	+0.8
	baz=130						
O48B	Farmland	31.26	337	P	P	13 35 47.6	+1.1
	baz=150						
ERPA	Erie	31.29	345	P	P	13 35 48.3	+1.6
	baz=160						
GO01	Chusmiza	31.51	179	P	P	13 35 45.9	-3.6
GO01				IAmb	IAmb	13 35 53.6	
	comp=Z,11nm,0.6s						
PB11	IPOC Station P	31.60	180	P	P	13 35 46.5	-3.4
PB11				IAmb	IAmb	13 35 59.6	
	comp=Z,32nm,1.5s						
BBRB	Robore, Bolivi	31.65	162	*e*P	P	13 35 49.0	-1.1
LBNH	Lisbon	32.14	357	P	P	13 35 56.0	+1.7
	baz=176						
SFIN	Lafayette	32.15	334	P	P	13 35 55.4	+1.1
	baz=147						
833A	Chaparral WMA,	32.15	305	P	P	13 35 53.6	-0.9
833A	Chaparral WMA,	32.15	305	P	P	13 35 55.3	+0.7
	baz=114,SNR=7.1						
CCM	Cathedral Cave	32.30	327	P	P	13 35 56.7	+1.0
	baz=138						
WHTX	Lake Whitney,	32.38	312	P	P	13 35 57.1	+0.6
	baz=122						
ARAG	Araguaiana, MT	32.73	147	*e*P	P	13 35 59.2	-0.5
LONY	Lake Ozonia	32.74	353	P	P	13 36 01.1	+1.6
	baz=171						
R40A	Maddies Statio	33.02	326	P	P	13 36 00.8	-1.2
R40A				IAmb	IAmb	13 36 03.8	
	comp=Z,16nm,0.8s						
PKME	Peaks-Kenny Pk	33.11	0	P	P	13 36 04.7	+2.0
	baz=181						
PB02	IPOC Station P	33.15	180	P	P	13 36 00.7	-2.7
PB02				IAmb	IAmb	13 36 13.2	
	comp=Z,7.2nm,0.6s						
HDIL	Hopedale	33.26	332	P	P	13 36 04.7	+0.7
	baz=143						
TUL1	Leonard	33.49	320	P	P	13 36 06.6	+0.4
	baz=129						
P40A	Paris	33.81	328	P	P	13 36 08.1	-0.8
P40A				IAmb	IAmb	13 36 10.5	
	comp=Z,18nm,0.8s						
PB03	IPOC Station P	33.88	180	P	P	13 36 06.8	-3.0
ABTX	Abilene, Hawle	34.29	312	P	P	13 36 13.7	+0.5
	baz=120						
LVC	Limon Verde	34.45	179	P	P	13 36 11.9	-3.0
LVC				IAmb	IAmb	13 36 19.6	
	comp=Z,8.5nm,0.6s						
LVC	Limon Verde	34.45	179	P	P	13 36 11.9	-3.0
LVC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
E62A	Clayton Lake	34.47	0	P	P	13 36 13.9	-0.6
E62A				IAmb	IAmb	13 36 17.8	
	comp=Z,15nm,0.8s						
SDBA	SAO DESIDERIO	34.54	134	*e*P	P	13 36 16.1	+0.6
T35A	Sooner Cattle	34.58	320		P	13 36 14.9	-0.7
T35A				IAmb	IAmb	13 36 16.6	
	comp=Z,13nm,0.8s						
WMOK	Wichita Mounta	34.78	315	P	P	13 36 16.6	-0.8
WMOK				IAmb	IAmb	13 36 18.2	
	comp=Z,7.3nm,0.6s						
WMOK	Wichita Mounta	34.78	315	P	P	13 36 16.6	-0.8
WMOK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WMOK	Wichita Mounta	34.78	315	P	P	13 36 17.2	-0.3
	baz=123,SNR=9.9						
BDFB	Brasilia	34.85	142	P	P	13 36 16.9	-1.4
	comp=Z,1.6nm,0.4s,baz=323,slow=10,SNR=3.1						
	comp=Z,1.6nm,0.4s						
BDFB	Brasilia	34.85	142	*e*P	P	13 36 19.8	+1.5
D62A	Allapoint, All	34.93	1	P	P	13 36 17.7	-0.8
LMQ	La Malbaie	35.40	359	P	P	13 36 22.2	-0.3
MURT	Porto Murtinho	35.51	160	*e*P	P	13 36 24.1	+0.4
JFWS	Jewell Farm	35.58	334	P	P	13 36 24.7	+0.6
	baz=144,SNR=9.5						
ELIS	Ellis County	35.95	317	P	P	13 36 26.4	-1.1
TXAR	Lajitas Array	36.00	304	P	P	13 36 28.8	+0.8
	comp=Z,1.5nm,0.7s,baz=131,slow=7.1,SNR=19						
TXAR				PcP	PcP	13 38 55.8	+1.3
	comp=Z,3.2nm,0.7s,baz=131,slow=5.5,SNR=17						
	comp=Z,1.5nm,0.7s						
TXAR	Lajitas Array	36.00	304	P	P	13 36 27.7	-0.4
TXAR				PcP	PcP	13 38 56.2	+1.7
KSU1	Kansas State U	36.03	323	P	P	13 36 29.0	+0.9
	baz=131						
SCIA	State Center	36.17	330	P	P	13 36 30.1	+0.9
	baz=138						
PB14	IPOC Station P	36.45	181	P	P	13 36 29.2	-2.9
PB14				IAmb	IAmb	13 36 30.8	
	comp=Z,11nm,0.5s						
IPMB	Ipameri, GO	36.57	144	*e*P	P	13 36 33.1	+0.1
JANB	Januaria	36.80	136	*e*P	P	13 36 35.3	+0.4
AMTX	Amarillo	36.89	313	P	P	13 36 36.1	+0.5
	baz=120						
MSTX	Muleshoe	37.24	311	P	P	13 36 38.7	+0.2
	baz=118						
CBKS	Cedar Bluff	37.75	320	P	P	13 36 43.1	+0.3
	baz=127						
RCBR	Riachuelo	37.96	116	*e*P	P	13 36 46.7	+1.9
PCMB	Pacaembu	38.00	152	*e*P	P	13 36 45.2	+0.3
PMNB	Patos De Minas	38.04	143	*e*P	P	13 36 46.9	+1.4
MNTX	Cornudas Mount	38.26	306	P	P	13 36 48.0	+0.9
	baz=113,SNR=14						
SPMN	Marine on St.	38.53	333	P	P	13 36 48.3	-0.9
SPMN	Marine on St.	38.53	333	P	P	13 36 49.8	+0.6
	baz=142,SNR=6.3						
ECSD	EROS Data Cent	39.21	329	P	P	13 36 55.4	+0.5
	baz=135						
F36A	Milaca	39.34	333	P	P	13 36 54.7	-1.3
KSCO	Kaye Shedlock'	39.71	318	P	P	13 36 59.8	+0.5
	baz=124						
T25A	Trinidad	39.93	315	P	P	13 37 02.0	+0.7
	baz=120						
SLBS	Sierra La Lagu	39.93	293	P	P	13 37 01.0	-0.3
SLBS				IAmb	IAmb	13 37 04.0	
	comp=Z,12nm,0.8s						
CPUP	Villa Florida	39.98	163	P	P	13 36 59.8	-1.6
	comp=Z,1.1nm,0.4s,baz=50,slow=6.5,SNR=1.8						
	comp=Z,1.1nm,0.4s						
EYMN	Ely	40.19	337	P	P	13 37 02.9	-0.1
	baz=146						
VACA	Villa Angela C	40.39	168	*e*P	P	13 37 06.2	+1.4
ANMO	Albuquerque	40.39	311⇓	*e*P	P	13 37 06.0	+0.8
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ANMO	Albuquerque	40.39	311	P	P	13 37 05.9	+0.8
	baz=115						
121A	Cookes Peak, D	40.46	306	P	P	13 37 06.1	+0.5
	baz=111						
GUA01	Guaratinga, BA	40.98	133	*e*P	P	13 37 09.9	+0.1
SDCO	Great Sand Dun	40.98	315	P	P	13 37 09.6	-0.5
SDCO				PcP	PcP	13 39 10.7	+0.6
SDCO	Great Sand Dun	40.98	315	P	P	13 37 10.9	+0.8
	baz=119,SNR=7.2						
VAO	Valinhos	41.31	147	*e*P	P	13 37 13.7	+1.1
Q24A	Divide	41.35	317	P	P	13 37 13.6	+0.5
	baz=121						
SJMB	Sao Joao De Ma	41.48	137	*e*P	P	13 37 14.6	+0.6
S22A	4UR Ranch, Cre	41.91	314	P	P	13 37 18.7	+1.0
	baz=118						
ISCO	Idaho Springs	42.09	318	P	P	13 37 19.5	+0.4
	baz=121						
AGMN	Agassiz Nation	42.24	334	P	P	13 37 20.6	+0.7
	baz=140						
SCHQ	Schefferville	42.74	2	P	P	13 37 25.6	+1.8
	comp=Z,19nm,0.7s,baz=196,slow=6.7,SNR=35						
SCHQ				PcP	PcP	13 39 15.9	+0.7
	comp=Z,2.9nm,0.8s,baz=207,slow=2.3,SNR=1.9						
	comp=Z,19nm,0.7s						
SCHQ	Schefferville	42.74	2	P	P	13 37 22.7	-1.1
SCHQ				IAmb	IAmb	13 37 26.5	
	comp=Z,21nm,0.8s						
TUC	Tucson	42.77	305	P	P	13 37 25.8	+1.3
	baz=109						
MVCO	Mesa Verde	42.86	313	P	P	13 37 26.4	+1.0
	baz=116						
W18A	Petrified Fore	42.93	309	P	P	13 37 26.4	+0.5
	baz=112						
ALF01	Guarapari-ES	43.15	139	*e*P	P	13 37 28.5	+1.0
RSSD	Black Hills	43.51	324	P	P	13 37 31.0	+0.5
	baz=127						
MDND	Maddock	43.60	331	P	P	13 37 31.7	+0.8
	baz=135						
ULM	Lac du Bonnet	43.76	336	P	P	13 37 32.0	-0.1
	comp=Z,14nm,0.7s,baz=142,slow=8.4,SNR=23						
	comp=Z,14nm,0.7s						
ULM	Lac du Bonnet	43.76	336	P	P	13 37 31.2	-0.9
ULM				IAmb	IAmb	13 37 32.6	
	comp=Z,13nm,0.7s						
ULM	Lac du Bonnet	43.76	336	P	P	13 37 31.2	-0.9
ULM				pmax	pmax		
	comp=Z,13nm,0.7s						
O20A	White River Ci	44.01	316	P	P	13 37 35.4	+0.9
	baz=119						
K22A	Casper	44.17	321	P	P	13 37 36.6	+0.8
	baz=123						
214A	Organ Pipe Nat	44.30	304	P	P	13 37 37.6	+0.8
	baz=107						
WUAZ	Wupatki	44.32	309	P	P	13 37 38.7	+1.6
	baz=111,SNR=7.2						
HMU	Henry Mountain	44.78	312	P	P	13 37 39.6	-1.2
HMU				IAmb	IAmb	13 37 43.5	
	comp=Z,8.6nm,1.0s						
SRU	San Rafael Swe	45.12	314	P	P	13 37 43.3	-0.1
SRU				IAmb	IAmb	13 37 57.0	
	comp=Z,8.9nm,0.7s						
SRU	San Rafael Swe	45.12	314	P	P	13 37 43.3	-0.1
SRU				pmax	pmax		
	comp=Z,9.0nm,0.7s						
P17A	Butcher Ranch,	45.42	314	P	P	13 37 43.4	-2.4
PDMCI	Parker Dam,Lak	46.06	306	P	P	13 37 51.4	+0.8
	baz=108						
BW06	Boulder Array	46.15	319	P	P	13 37 50.2	-1.4
BW06	Boulder Array	46.15	319	P	P	13 37 52.1	+0.6
	baz=120,SNR=5.3						
PD31	Pinedale Array	46.15	319	P	P	13 37 49.7	-1.9
PDAR	Pinedale Array	46.15	319	P	P	13 37 52.0	+0.4
	comp=Z,2.0nm,0.7s,baz=119,slow=10,SNR=22						
PDAR				PcP	PcP	13 39 27.4	-0.1
	comp=Z,2.6nm,0.7s,baz=122,slow=5.5,SNR=8.6						
	comp=Z,2.0nm,0.7s						
PDAR	Pinedale Array	46.15	319	P	P	13 37 49.3	-2.3
DGMT	Dagmar	46.30	329	P	P	13 37 53.6	+1.2
	baz=130						
BO02	Sierra Bellavi	46.59	181	P	P	13 37 52.8	-2.1
BO02				IAmb	IAmb	13 37 59.1	
	comp=Z,11nm,0.8s						
TCUT	Toone Canyon	46.60	316	IAmb	IAmb	13 37 50.9	
	comp=Z,9.7nm,0.7s						
IRM	Iron Mountain	46.81	306	P	P	13 37 58.0	+1.3
	baz=107,SNR=13						
BC3	Big Chuckawall	46.91	305	P	P	13 37 58.8	+1.2
	baz=106						
SWSC	Sam W. Stewart	47.00	304	P	P	13 37 59.5	+1.4
	baz=105						
RLMT	Red Lodge	47.17	322	P	P	13 37 59.6	+0.1
RLMT				IAmb	IAmb	13 38 00.7	
	comp=Z,5.3nm,0.8s						
RLMT	Red Lodge	47.17	322	P	P	13 38 00.3	+0.8
	baz=122,SNR=7.3						
DUG	Dugway, Tooele	47.17	314	P	P	13 38 00.9	+1.3
	baz=114,SNR=7.1						
IKP	In-Ko-Pah, Jac	47.17	304	P	P	13 38 00.9	+1.3
	baz=105						
REDW	Red Top Meadow	47.27	319	P	P	13 37 59.2	-1.1
GMRC	Granite Mounta	47.40	306	P	P	13 38 02.5	+1.1
	baz=107						
BELC	Belle Mtn. Jos	47.44	305	P	P	13 38 02.8	+1.1
	baz=106						
MONP2	Monument Peak	47.49	304	P	P	13 38 03.1	+0.9
	baz=105						
TPFO	Pinon Flats	47.70	305	P	P	13 38 04.6	+0.9
	baz=105						
PFO	Pinyon Flats O	47.71	305⇑	*e*P	P	13 38 04.7	+0.9
PFO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PFO	Pinyon Flats O	47.71	305	P	P	13 38 04.6	+0.8
	baz=105						
SPR3	Spring Creek 3	47.79	312	P	P	13 38 03.2	-1.3
SPR3				IAmb	IAmb	13 38 07.4	
	comp=Z,7.9nm,0.9s						
TUQ	Turquoise Moun	47.80	307	P	P	13 38 05.4	+0.9
	baz=107						
HEC	Hector,Ludlow	47.94	306	P	P	13 38 07.2	+1.7
	baz=106						
YHL	Hebgen Lake	48.20	321	P	P	13 38 06.7	-0.9
SHOC	Shoshone, Teco	48.21	308	P	P	13 38 09.2	+1.7
	baz=108						
BBRC	Big Bear Solar	48.25	305	P	P	13 38 09.8	+1.7
	baz=106						
MURC	Murrieta	48.30	304	P	P	13 38 09.1	+0.9
	baz=105						
GSC	Goldstone, Bar	48.45	307	P	P	13 38 10.6	+1.2
	baz=107						
R11A	Troy Canyon, C	48.47	311	P	P	13 38 09.6	-0.1
R11A				PcP	PcP	13 39 36.8	+1.1
R11A	Troy Canyon, C	48.47	311	P	P	13 38 10.8	+1.1
	baz=110,SNR=6.3						
TPNV	Topopah Spring	48.51	309	P	P	13 38 11.9	+1.9
	baz=108,SNR=8.7						
FURC	Furnace Creek,	48.83	308	P	P	13 38 14.0	+1.8
	baz=108,SNR=7.4						
BFSC	Mount Baldy Ra	48.83	305	P	P	13 38 13.2	+0.7
	baz=105						
BOZ	Bozeman (W)	48.84	321	P	P	13 38 13.4	+1.1
	baz=120,SNR=12						
EGMT	Eagleton	49.01	325	P	P	13 38 14.3	+0.7
	baz=123,SNR=7.3						
ELK	Elko	49.09	314	P	P	13 38 12.8	-1.7
ELK	Elko	49.09	314	P	P	13 38 12.8	-1.7
ELK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
LRMC	Laurel Mtn Rad	49.18	307	P	P	13 38 16.0	+0.8
	baz=106						
MPMC	Manual Prospec	49.20	307	P	P	13 38 16.3	+1.1
	baz=107						
CIS	Catalina Islan	49.24	304	P	P	13 38 16.5	+1.0
	baz=104						
EDW2	Edwards Air Fo	49.27	306	P	P	13 38 16.5	+0.8
	baz=105						
FFC	Flin Flon	49.58	336	P	P	13 38 16.5	-1.2
FFC				IAmb	IAmb	13 38 18.7	
	comp=Z,12nm,0.8s						
FFC	Flin Flon	49.58	336	P	P	13 38 16.5	-1.2
FFC				pmax	pmax		
	comp=Z,12nm,0.9s						
HLID	Hailey	49.67	318	P	P	13 38 20.0	+1.2
	baz=115,SNR=6.3						
CWC	Cottonwood Cre	49.76	308	P	P	13 38 20.9	+1.3
	baz=106						
ISA	Isabella, Lake	49.85	307	P	P	13 38 21.4	+1.2
	baz=106						
ARVC	Arvin	49.99	306	P	P	13 38 22.3	+1.1
	baz=105						
SNCC	San Nicolas Is	50.10	303	P	P	13 38 22.8	+0.7
	baz=103						
FCC	Fort Churchill	50.13	344	P	P	13 38 20.6	-1.1
FCC				IAmb	IAmb	13 38 21.7	
	comp=Z,5.8nm,0.6s						
FCC	Fort Churchill	50.13	344	P	P	13 38 20.6	-1.1
FCC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SCZ2	Santa Cruz Isl	50.36	304	P	P	13 38 25.3	+1.3
	baz=103						
VES	Vestal, Richgr	50.38	307	P	P	13 38 25.4	+1.3
	baz=105,SNR=6.0						
NV11	Mina Array Sit	50.41	310	P	P	13 38 22.9	-1.5
NVAR	Mina Array Bea	50.52	310	P	P	13 38 26.7	+1.4
	comp=Z,4.0nm,0.7s,baz=123,slow=7.5,SNR=37						
NVAR				PcP	PcP	13 39 44.7	+1.5
	comp=Z,5.0nm,0.7s,baz=140,slow=4.5,SNR=17						
	comp=Z,4.0nm,0.7s						
NVAR	Mina Array Bea	50.52	310	P	P	13 38 23.8	-1.5
NVAR				PcP	PcP	13 39 44.4	+1.2
SBC	Santa Barbara	50.53	305	P	P	13 38 25.9	+0.7
	baz=104						
MSO	Missoula	50.84	322	P	P	13 38 28.3	+0.8
	baz=118						
SMMC	Simmler	50.97	306	P	P	13 38 29.8	+1.2
	baz=104						
YERR	Yerington	51.39	311	P	P	13 38 31.6	-0.2
YERR				IAmb	IAmb	13 38 34.4	
	comp=Z,18nm,0.9s						
YERR				PcP	PcP	13 39 48.2	+1.8
WVOR	Wild Horse Val	52.08	315	P	P	13 38 36.0	-0.9
WVOR				IAmb	IAmb	13 38 39.0	
	comp=Z,14nm,1.1s						
WVOR	Wild Horse Val	52.08	315	P	P	13 38 36.0	-0.9
WVOR				pmax	pmax		
	comp=Z,14nm,1.2s						
PLCA	Paso Flores	52.51	181	P	P	13 38 38.0	-1.9
	comp=Z,7.4nm,0.6s,baz=354,slow=8.7,SNR=24						
	comp=Z,7.4nm,0.6s						
PLCA	Paso Flores	52.51	181	P	P	13 38 37.7	-2.2
PLCA				IAmb	IAmb	13 38 39.1	
	comp=Z,20nm,1.2s						
PLCA	Paso Flores	52.51	181	P	P	13 38 37.7	-2.2
PLCA				pmax	pmax		
	comp=Z,20nm,1.3s						
PLCA	Paso Flores	52.51	181	*e*P	P	13 38 38.4	-1.5
NEW	Newport	53.41	322	P	P	13 38 47.2	+0.6
	baz=116						
PINE	Pine Mountain	54.13	316	P	P	13 38 52.2	+0.1
PINE				IAmb	IAmb	13 38 54.1	
	comp=Z,8.1nm,0.8s						
L04D	Klamath Falls	54.58	314	P	P	13 38 54.3	-1.0
YKA	Yellowknife Ar	59.67	338	P	P	13 39 30.9	+0.1
	comp=Z,13nm,0.7s,baz=121,slow=7.0,SNR=31						
	comp=Z,13nm,0.7s						
YKA	Yellowknife Ar	59.67	338	P	P	13 39 30.2	-0.6
ICESG	Greenland Ices	60.16	12	*i* P	P	13 39 34.4	0.0
ICESG				IAmb	IAmb	13 39 35.1	
	comp=Z,10nm,0.6s						
MESJ	Messejana	60.19	53	*e*P	P	13 39 37.1	+2.3
MESJ				A	A	13 39 37.3	
	comp=Z,17nm,1.7s						
NUUG	Nuugaatsiaq	60.30	6	*i* P	P	13 39 33.0	-1.9
PMTG	Montargil	60.37	52	*e*P	P	13 39 37.4	+1.4
EVO	Evora	60.45	52	*e*P	P	13 39 35.7	-0.9
EVO				A	A	13 39 36.2	
	comp=Z,21nm,1.8s						
PCBR	Castelo Branco	61.06	51	*e*P	P	13 39 42.2	+1.5
PMRV	Marv??o	61.06	52	*e*P	P	13 39 41.7	+1.0
POLO	Lamas de Olo	61.06	49	*e*P	P	13 39 42.2	+1.4
POLO				*e*pP	sP	13 39 50.5	+0.5
UPNV	Upernavik	61.24	5	*i* P	P	13 39 40.6	-0.7
UPNV				IAmb	IAmb	13 39 41.8	
	comp=Z,3.8nm,0.6s						
MVO	Moncorvo	61.60	50	*e*P	P	13 39 45.1	+0.7

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KOTAN Kotaneelee Air     62.33 333   P      P      13 39 49.9 +1.1
      baz=116,SNR=11
KULLO Kullorsuaq         62.91   4 i P      P      13 39 52.3 -0.2
KULLO                              IAmb     IAmb   13 39 53.1
      comp=Z,12nm,0.6s
LIRD  Liard River Hi     62.96 331   P      P      13 39 53.9 +0.8
      baz=114
SUMG  Summit             63.27  10 i P      P      13 39 55.2 -0.2
SUMG                               IAmb     IAmb   13 39 56.8
      comp=Z,16nm,0.6s
WRGLY Wrigley            63.49 336   P      P      13 39 57.5 +1.0
      baz=118,SNR=19
ESDC  Sonseca Array      63.72  52   P      P      13 39 59.8 +1.2
      comp=Z,2.5nm,0.9s,baz=265,slow=7.1,SNR=17
      comp=Z,2.5nm,0.9s
TIC   Toumodi            63.88  88⇑iP       P      13 40 01.0 +1.0
      comp=Z,4.0nm,0.3s
LIC   Lamto              63.94  89⇓iP       P      13 40 01.2 +0.8
      comp=Z,29nm,0.5s
DBIC  Dimbokro           64.03  88   P      P      13 40 01.8 +0.9
      comp=Z,11nm,0.6s,baz=283,slow=6.3,SNR=13
      comp=Z,11nm,0.6s
DBIC  Dimbokro           64.03  88   P      P      13 39 59.6 -1.3
DBIC  Dimbokro           64.03  88   P      P      13 39 59.7 -1.3
DBIC                               pmax     pmax
      comp=Z,12nm,0.8s
KIC   Kosan Boka         64.20  89⇑iP       P      13 40 03.2 +1.1
      comp=Z,27nm,0.4s
RES   Resolute Bay       64.22 353   P      P      13 39 59.8 -1.3
RES   Resolute Bay       64.22 353   P      P      13 39 59.8 -1.3
RES                                pmax     pmax
      comp=Z,3.0nm,0.7s
V35K  Ketchikan          64.35 326   P      P      13 40 03.3 +1.0
      baz=107
TULEG Thule              64.49   0   P      P      13 40 01.9 -0.9
TULEG Thule              64.49   0 i P      P      13 40 02.7 -0.2
TULEG                              IAmb     IAmb   13 40 03.8
      comp=Z,7.4nm,0.7s
WTLY  Watson Lake, Y     64.49 332   P      P      13 40 03.8 +0.6
      baz=112
DLBC  Dease Lake         64.50 330   P      P      13 40 04.4 +1.1
      baz=110
S34M  Telegraph Cree     64.88 329   P      P      13 40 06.9 +1.1
      baz=108
U33K  Whale Pass         65.39 327   P      P      13 40 10.1 +1.1
      baz=106
NEEM  North Greenlan     66.10   4 i P      P      13 40 13.1 -0.6
NEEM                               IAmb     IAmb   13 40 14.8
      comp=Z,16nm,0.7s
P33M  Teslin, Yukon      66.42 331   P      P      13 40 17.0 +1.2
      baz=108
S32K  Killisnoo          66.52 328   P      P      13 40 17.4 +1.1
      baz=105
P32M  Atlin              66.67 330   P      P      13 40 18.5 +1.2
      baz=107
N32M  Quiet Lake         66.83 332   P      P      13 40 19.5 +1.2
      baz=108
MFF   Saint Martin d     67.27  44  eP      P      13 40 22.3 +1.0
MFF                                pmax     pmax
      comp=Z,16nm,0.8s
FARO  Faro, Yukon        67.29 333   P      P      13 40 22.5 +1.3
      baz=108
S31K  Pelican            67.51 328   P      P      13 40 24.0 +1.4
      baz=104
M31M  Drury Creek, Y     67.74 333   P      P      13 40 25.2 +1.2
      baz=107,SNR=6.4
O30N  Mendenhall         68.13 331   P      P      13 40 27.7 +1.2
      baz=105,SNR=9.4
N31M  Braeburn, Yuko     68.17 332   P      P      13 40 25.6 -1.2
N31M  Braeburn, Yuko     68.17 332   P      P      13 40 28.2 +1.4
      baz=106
A36M  Sachs Harbour      68.35 344   P      P      13 40 27.5 -0.1
      baz=120,SNR=44
P30M  Million Dollar     68.39 330   P      P      13 40 27.8 -0.4
      baz=104
CAF   Calviac            68.65  46  eP      P      13 40 30.8 +0.7
CAF                                pmax     pmax
      comp=Z,9.0nm,0.8s
N30M  Aishikik Lake      68.78 332   P      P      13 40 32.2 +1.6
      baz=104
MAYO  Mayo, Yukon        68.80 334   P      P      13 40 32.1 +1.4
      baz=106
HYT   Haines Junctio     68.82 331   P      P      13 40 32.5 +1.6
      baz=104
M30M  Minto, Yukon       68.92 333   P      P      13 40 30.4 -1.1
M30M  Minto, Yukon       68.92 333   P      P      13 40 32.4 +0.9
      baz=105,SNR=12
F31M  Tsiigehtchic       69.14 338   P      P      13 40 33.0 +0.4
      baz=110,SNR=6.8
O29M  Mount Kennedy      69.21 330   P      P      13 40 35.1 +1.7
      baz=102
YUK6  Outpost Mounta     69.25 331   P      P      13 40 35.5 +1.7
      baz=103
INK   Inuvik             69.36 339   P      P      13 40 33.8 -0.2
      baz=110,SNR=7.2
TORD  Torodi Ar. Bea     69.41  80   P      P      13 40 36.0 +0.7
      comp=Z,13nm,0.5s,baz=286,slow=7.1,SNR=98
TORD                               LR       LR     14 09 34.8
      comp=Z,61nm,19.8s,baz=216,slow=35
      comp=Z,13nm,0.5s
TORD  Torodi Ar. Bea     69.41  80   P      P      13 40 34.7 -0.5
JMIC  Jan Mayen          69.48  18   LR     LR     14 05 12.6
      comp=Z,52nm,21.4s,baz=256,slow=31
YUK4  Talbot Arm         69.48 331   P      P      13 40 36.4 +1.3
      baz=103,SNR=11
K29M  Barlow Dome        69.57 334   P      P      13 40 36.6 +1.1
      baz=105
M29M  Somme Creek        69.64 332   P      P      13 40 37.0 +1.0
      baz=103
L29M  L29M               69.65 333   P      P      13 40 36.8 +0.8
      baz=104
DAG   Danmarks Havn      69.91  11 i P      P      13 40 34.5 -2.7
DAG                                IAmb     IAmb   13 40 37.4
      comp=Z,2.6nm,0.6s
G30M  tAoh Zraii Nji     69.91 337   P      P      13 40 38.2 +0.8
      baz=107
EPYK  Eagle Plains       69.92 337   P      P      13 40 38.2 +0.6
EPYK  Eagle Plains       69.92 337   P      P      13 40 38.5 +0.9
      baz=106,SNR=15
PINM  Pinnacle           69.99 330   P      P      13 40 39.9 +1.7
      baz=101
I29M  Ogilvie Camp,      70.28 335   P      P      13 40 40.6 +0.9
      baz=104
YUK3  Moose Creek        70.42 332   P      P      13 40 41.8 +0.9
      baz=101,SNR=5.9
DAWY  Dawson             70.42 334   P      P      13 40 40.6 -0.1
DAWY                               IAmb     IAmb   13 40 42.2
      comp=Z,6.1nm,0.7s
DAWY  Dawson             70.42 334   P      P      13 40 41.4 +0.8
      baz=103,SNR=11
CTG   Chitna Glacier     70.68 331   P      P      13 40 43.7 +1.2
      baz=100
BVCY  Beaver Creek       70.72 332   P      P      13 40 43.9 +1.3
      baz=101
M27K  Edge Creek, AK     71.18 332   P      P      13 40 44.7 -0.7
M27K  Edge Creek, AK     71.18 332   P      P      13 40 46.6 +1.2
      baz=100
BCAR  Beaver Creek A     71.27 333   P      P      13 40 45.1 -0.7
L27K  Beaver Creek,      71.28 333   P      P      13 40 46.0 +0.1
L27K                               IAmb     IAmb   13 40 48.1
      comp=Z,6.9nm,0.9s
L27K  Beaver Creek,      71.28 333   P      P      13 40 47.1 +1.2
      baz=100
EGAK  Eagle              71.33 335   P      P      13 40 47.0 +0.9
      baz=102,SNR=10
MCARA McCarthy VSAT      71.56 331   P      P      13 40 49.3 +1.8
      baz=99
I27K  Kandik River       71.68 335   P      P      13 40 49.2 +0.9
      baz=102,SNR=16
M26K  Nabesna, AK        71.70 332   P      P      13 40 49.7 +1.2
      baz=99
H27K  Steamboat Moun     71.77 336   P      P      13 40 50.0 +1.1
      baz=102
G27K  Doyon Strip        71.94 337   P      P      13 40 50.2 +0.4
      baz=102
L26K  Log Cabin Wild     71.96 333   P      P      13 40 50.6 +0.6
      baz=99
LPL   La Plagne          71.98  46  eP      P      13 40 51.9 +1.2
LPL                                pmax     pmax
      comp=Z,3.0nm,0.3s
E27K  Coleen River       72.21 338   P      P      13 40 52.0 +0.6
      baz=102
I26K  Coal Creek Min     72.26 335   P      P      13 40 51.5 -0.2
I26K                               IAmb     IAmb   13 40 53.3
      comp=Z,7.7nm,1.1s
I26K  Coal Creek Min     72.26 335   P      P      13 40 52.3 +0.6
      baz=100
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J26L  Joseph Creek       72.29 334   P      P      13 40 50.7 -1.3
J26L  Joseph Creek       72.29 334   P      P      13 40 52.8 +0.7
      baz=99
N25K  Chitina, Valde     72.33 331   P      P      13 40 53.7 +1.3
      baz=97
DOT   Dot Lake           72.38 333   P      P      13 40 51.9 -0.6
DOT                                IAmb     IAmb   13 40 54.6
      comp=Z,5.6nm,0.8s
SCRK  Sand Creek         72.39 334   P      P      13 40 51.7 -1.0
SCRK                               IAmb     IAmb   13 40 54.7
      comp=Z,10nm,1.0s
SCRK  Sand Creek         72.39 334   P      P      13 40 53.5 +0.9
      baz=99,SNR=11
BLS5  Blasjo             72.64  31  eP      P      13 40 55.3 +1.1
HARP  HAARP              72.70 332   P      P      13 40 55.2 +0.8
      baz=97
RIDG  Independent Ri     72.73 333   P      P      13 40 55.9 +1.2
      baz=98,SNR=5.2
EYAK  Cordova Ski Ar     72.76 330   P      P      13 40 56.2 +1.5
      baz=96
G26K  Porcupine Rive     72.79 337   P      P      13 40 55.1 +0.2
      baz=100
PAX   Paxson             72.91 332   P      P      13 40 56.4 +0.6
      baz=97
KLU   Klutina            72.95 331   P      P      13 40 57.0 +1.0
      baz=96
NOR   Nord               73.04   7 i P      P      13 40 55.4 -0.7
NOR                                IAmb     IAmb   13 40 56.4
      comp=Z,2.5nm,0.8s
F26K  Sheenjek River     73.06 337   P      P      13 40 57.3 +0.8
      baz=100,SNR=7.7
M24K  Tolsona, Glenn     73.14 331   P      P      13 40 58.2 +1.1
      baz=96
K24K  Donnelly Dome      73.15 333   P      P      13 40 58.0 +0.9
      baz=97,SNR=8.0
BMAR  Burnt Mountain     73.18 337   P      P      13 40 56.6 -0.6
C27K  Jago River         73.25 339   P      P      13 40 58.3 +0.8
      baz=101
PRP   Porcupine Dome     73.27 335   P      P      13 40 58.4 +0.5
      baz=98,SNR=19
F25K  Christian Rive     73.61 337   P      P      13 41 01.0 +1.2
      baz=98
SCM   Sheep Creek Mo     73.65 331   P      P      13 41 01.0 +0.8
      baz=95
E25K  Arctic Village     73.66 338   P      P      13 41 00.9 +0.9
      baz=98,SNR=27
G25K  Bearman Lake       73.67 336   P      P      13 41 00.9 +0.9
      baz=98,SNR=8.9
SKAR  Skarslia           73.68  30  eP      P      13 41 00.9 +0.6
C26K  Camden Bay         73.71 340   P      P      13 41 01.0 +0.8
      baz=100
HDA   Harding Lake       73.73 334   P      P      13 41 00.7 +0.2
      baz=96,SNR=6.5
IL31                     73.75 334   P      P      13 40 58.7 -1.8
ILAR  Eielson Array      73.75 334   P      P      13 41 00.5  0.0
      comp=Z,2.7nm,0.8s,baz=107,slow=4.8,SNR=30
      comp=Z,2.7nm,0.8s
M23K  Glacier View       73.84 331   P      P      13 41 02.2 +1.1
      baz=95
POKR  Poker Plat Res     74.02 335   P      P      13 41 02.7 +0.6
      baz=96
PWL   Port Wells         74.06 330   P      P      13 41 03.3 +0.9
      baz=94
SML   Sawmill            74.12 331   P      P      13 41 03.8 +1.0
      baz=94
D25K  Kavik River        74.13 339   P      P      13 41 03.3 +0.6
      baz=98
CCB   Clear Creek Bu     74.13 334   P      P      13 41 01.6 -1.2
KNK   Knik Glacier       74.16 331   P      P      13 41 03.6 +0.6
      baz=94
COLA  College            74.17 334⇓eP       P      13 41 03.2 +0.3
COLA                               pmax     pmax
      comp=Z,17nm,2.9s
KEST  Kesra              74.19  56   P      P      13 41 04.3 +0.5
      comp=Z,3.4nm,0.7s,baz=292,slow=11,SNR=2.2
      comp=Z,3.4nm,0.7s
G24K  Hadweenzic Riv     74.20 336   P      P      13 41 04.1 +0.9
      baz=96
WRH   Wood River Hil     74.23 334   P      P      13 41 02.1 -1.3
KONO  Kongsberg          74.26  31  eP      P      13 41 04.0 +0.5
H24K  Noodor Dome        74.27 335   P      P      13 41 02.4 -1.3
H24K                               IAmb     IAmb   13 41 05.3
      comp=Z,9.8nm,1.3s
H24K  Noodor Dome        74.27 335   P      P      13 41 04.2 +0.5
      baz=96
F24K  Squaw Lake         74.45 337   P      P      13 41 05.7 +1.0
      baz=96
PMR   Palmer             74.49 331   P      P      13 41 05.7 +0.8
      baz=93
MCK   McKinley           74.54 333   P      P      13 41 04.0 -1.2
MCK                                IAmb     IAmb   13 41 06.8
      comp=Z,6.7nm,1.0s
MCK   McKinley           74.54 333   P      P      13 41 04.0 -1.2
MCK                                pmax     pmax
      comp=Z,7.0nm,1.0s
MCK   McKinley           74.54 333   P      P      13 41 05.7 +0.5
      baz=94
SEW   Seward             74.57 329   P      P      13 41 06.2 +0.8
      baz=93
NEA2  Nenana             74.67 334   P      P      13 41 06.2 +0.3
      baz=94,SNR=10
E24K  Your Creek         74.74 338   P      P      13 41 07.8 +1.4
      baz=96
FETA  Feichten           74.75  44  eP      P      13 41 07.2 +0.2
      comp=Z,5.5nm,0.6s
RC01  Rabbit Creek A     74.75 330   P      P      13 41 07.6 +1.2
      baz=93
I23K  Minto, Yukon-K     74.83 334   P      P      13 41 06.5 -0.2
I23K                               IAmb     IAmb   13 41 09.3
      comp=Z,5.5nm,0.8s
I23K  Minto, Yukon-K     74.83 334   P      P      13 41 07.2 +0.4
      baz=94,SNR=9.2
H23K  Yukon River        74.96 335   P      P      13 41 08.0 +0.4
      baz=94
M22K  Willow             74.97 331   P      P      13 41 08.4 +0.8
      baz=92
C24K  Franklin Bluff     74.99 339   P      P      13 41 08.4 +0.8
      baz=96
ZCCA  Zocca              75.00  47   P      P      13 41 07.7 -0.6
NB2   NORSAR Subarra     75.12  30   P      P      13 41 10.5 +1.8
      comp=Z,2.7nm,0.6s,baz=269,slow=6.2
NB2   NORSAR Subarra     75.12  30   P      P      13 41 10.5 +1.8
      slow=6.2
NOA   NORSAR Array B     75.12  30   P      P      13 41 10.3 +1.7
      comp=Z,3.2nm,0.7s,baz=270,slow=5.9,SNR=12
NOA                                LR       LR     14 08 57.9
      comp=Z,24nm,21.7s,baz=75,slow=32
      comp=Z,3.2nm,0.7s
TRF   Thorofare Moun     75.13 333   P      P      13 41 09.0 +0.2
TRF                                IAmb     IAmb   13 41 10.7
      comp=Z,16nm,1.0s
TRF   Thorofare Moun     75.13 333   P      P      13 41 09.8 +1.0
      baz=93
E23K  Chandalar          75.16 337   P      P      13 41 09.6 +0.8
      baz=95
BRSE  Bradley Lake S     75.20 329   P      P      13 41 10.1 +1.0
      baz=92
G23K  Bananza Creek      75.21 336   P      P      13 41 10.1 +1.0
      baz=94,SNR=15
SUA   Susitna One        75.26 331   P      P      13 41 10.0 +0.5
      baz=92
NC602 NORSAR Array S     75.27  30  eP      P      13 41 10.3 +0.8
BRLK  Bradley Lake       75.28 329   P      P      13 41 09.9 +0.4
COLD  Coldfoot           75.32 337   P      P      13 41 10.6 +1.0
      baz=94,SNR=5.0
MLY   Manley             75.41 334   P      P      13 41 10.3 +0.1
MLY   Manley             75.41 334   P      P      13 41 10.7 +0.5
      baz=93,SNR=5.8
KTH   Kantishna Hill     75.42 333   P      P      13 41 10.0 -0.3
BPAW  Bear Paw Mtn.      75.47 333   P      P      13 41 09.9 -0.7
BPAW                               IAmb     IAmb   13 41 12.3
      comp=Z,12nm,0.8s
BPAW  Bear Paw Mtn.      75.47 333   P      P      13 41 10.9 +0.3
      baz=92,SNR=12
NSS   Namsos             75.60  26  eP      P      13 41 12.3 +1.1
D23K  Nanushuk River     75.62 338   P      P      13 41 12.2 +0.9
      baz=94
SKT   Skwentna           75.65 331   P      P      13 41 11.7 +0.1
SKT                                IAmb     IAmb   13 41 13.5
      comp=Z,7.5nm,0.8s
SKT   Skwentna           75.65 331   P      P      13 41 12.2 +0.5
      baz=91
H22K  Ishtalitna Cre     75.71 335   P      P      13 41 12.9 +1.0
      baz=92
SPU   Mount Spurr        75.88 330   P      P      13 41 13.2 +0.2
CAST  Castle Rocks       75.94 333   P      P      13 41 12.8 -0.5
CAST                               IAmb     IAmb   13 41 15.0
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      comp=Z,5.8nm,0.9s
CAST  Castle Rocks       75.94 333   P      P      13 41 13.7 +0.4
      baz=91,SNR=8.1
I21K  Tanana             75.94 334   P      P      13 41 13.5 +0.4
      baz=92
CIMO  Cimolais           75.95  45   P      P      13 41 12.9 -0.8
CIMO                               IAmb     IAmb   13 41 25.4
      comp=Z,8.2nm,0.8s
SPCR  Spurr Chakacha     75.96 330   P      P      13 41 13.7 +0.2
      baz=91
PPLA  Purkeypile         75.97 332   P      P      13 41 14.2 +0.6
      baz=91
E22K  Anaktuvuk Pass     75.99 338   P      P      13 41 13.8 +0.3
      baz=93
CHUM  Lake Minchumin     76.05 333   P      P      13 41 14.4 +0.6
      baz=91,SNR=5.6
F22K  John River         76.10 337   P      P      13 41 14.5 +0.4
      baz=92
CLL   Collm              76.12  40 i P      P      13 41 15.9 +1.4
CLL                              i sP       sP     13 41 23.7  0.0
O20K  Slope Mountain     76.16 329   P      P      13 41 15.5 +0.9
      baz=90
RSO   Redoubt South      76.22 330   P      P      13 41 15.9 +0.8
H21K  Melozitna Rive     76.29 335   P      P      13 41 14.1 -1.1
H21K                               IAmb     IAmb   13 41 16.6
      comp=Z,4.9nm,0.8s
H21K  Melozitna Rive     76.29 335   P      P      13 41 15.6 +0.4
      baz=91
M20K  Styx River         76.40 331   P      P      13 41 15.9 -0.1
M20K                               IAmb     IAmb   13 41 17.8
      comp=Z,13nm,0.8s
M20K  Styx River         76.40 331   P      P      13 41 16.7 +0.7
      baz=90
ILSW  Iliamna Southw     76.42 329   P      P      13 41 15.0 -1.2
KBA   Koelnbreinsper     76.53  44  eP      P      13 41 18.0 +0.8
      comp=Z,3.4nm,0.6s
OHAK  Old Harbor         76.53 326   P      P      13 41 17.7 +1.0
      baz=89
KHC   Kasperske Hory     76.58  42  eP      P      13 41 18.7 +1.5
KHC                                ex       x      13 41 26.4
KHC   Kasperske Hory     76.58  42d iP      P      13 41 18.3 +1.1
KHC                                pmax     pmax
      comp=Z,13nm,0.7s
G21K  Allakaket          76.59 336   P      P      13 41 17.8 +0.9
      baz=91
F21K  Alatna River       76.60 337   P      P      13 41 17.6 +0.6
      baz=91
GERES GERESS Array B     76.67  42   P      P      13 41 19.1 +1.3
      comp=Z,3.4nm,0.8s,baz=270,slow=4.0,SNR=24
      comp=Z,3.4nm,0.8s
MOR8  Moi Rana           76.68  25  eP      P      13 41 19.1 +1.7
Q19K  Cape Douglas,      76.69 328   P      P      13 41 15.3 -2.3
Q19K  Cape Douglas,      76.69 328   P      P      13 41 18.3 +0.7
      baz=89
IMAR  Indian Mountai     76.69 335   P      P      13 41 17.6 +0.1
L20K  Farewell, AK       76.75 332   P      P      13 41 18.3 +0.4
      baz=89
MYKA  Terra Mystica      76.76  45  eP      P      13 41 19.4 +1.1
      comp=Z,5.2nm,0.5s
K20K  Telida             76.83 333   P      P      13 41 16.3 -2.0
K20K                               IAmb     IAmb   13 41 29.6
      comp=Z,6.8nm,1.1s
K20K  Telida             76.83 333   P      P      13 41 18.5 +0.2
      baz=89
M19K  Big River Lodg     77.00 331   P      P      13 41 19.9 +0.6
M19K                               IAmb     IAmb   13 41 21.3
      comp=Z,9.4nm,0.8s
M19K  Big River Lodg     77.00 331   P      P      13 41 20.1 +0.9
      baz=89
O19K  Port Alsworth      77.00 329   P      P      13 41 19.3 +0.1
O19K  Port Alsworth      77.00 329   P      P      13 41 20.2 +1.0
      baz=88,SNR=5.2
STEI  Steigen            77.00  23  eP      P      13 41 20.1 +1.0
FAUS  Fauske             77.02  23  eP      P      13 41 20.4 +1.1
N19K  Bonanza Creek      77.07 330   P      P      13 41 20.2 +0.4
N19K                               IAmb     IAmb   13 41 21.3
      comp=Z,8.5nm,0.7s
N19K  Bonanza Creek      77.07 330   P      P      13 41 20.2 +0.4
      baz=88
CKRC  Cesky Krumlov      77.08  42  eP      P      13 41 21.0 +1.0
CKRC                               ex       x      13 41 29.2
CKRC  Cesky Krumlov      77.08  42  eP      P      13 41 21.0 +1.0
CKRC                               e               13 41 29.2
MOA   Molln              77.11  43  eP      P      13 41 20.9 +0.7
      comp=Z,2.8nm,0.5s
PRU   Pruhonice          77.16  41  eP      P      13 41 22.1 +1.7
PRU   Pruhonice          77.16  41  eP      P      13 41 22.1 +1.7
L19K  White Mountain     77.21 331   P      P      13 41 20.9 +0.4
      baz=88
OBKA  Obir               77.39  45  eP      P      13 41 21.3 -0.6
      comp=Z,3.1nm,0.6s
Q18K  Katmai Hardscr     77.41 328   P      P      13 41 22.3 +0.6
      baz=88
O18K  Koktuh Hills       77.46 329   P      P      13 41 19.4 -2.5
O18K  Koktuh Hills       77.46 329   P      P      13 41 22.5 +0.6
      baz=88
SPA0  Spitsbergen Ar     77.48  12  eP      P      13 41 22.6 +1.0
SPA0                               IAmb     IAmb   13 41 24.1
      comp=Z,34nm,1.1s
SVW2  Sparrevohn         77.59 330   P      P      13 41 21.4 -1.2
A21K  Barrow             77.71 341   P      P      13 41 23.6 +0.6
      baz=89
TTA   Tatalina           77.72 332   P      P      13 41 22.1 -1.3
TTA                                IAmb     IAmb   13 41 32.1
      comp=Z,7.5nm,1.1s
TTA   Tatalina           77.72 332   P      P      13 41 22.1 -1.3
TTA                                pmax     pmax
      comp=Z,7.0nm,1.1s
TTA   Tatalina           77.72 332   P      P      13 41 23.7 +0.3
      baz=88
Q17K  Contact Creek      77.89 327   P      P      13 41 25.0 +0.6
      baz=87
GCSA  Galena City Sc     78.03 334   P      P      13 41 25.7 +0.9
      baz=87
R17K  Ugashik Creek      78.19 327   P      P      13 41 26.6 +0.6
      baz=86
Q16K  King Salmon        78.26 328   P      P      13 41 27.1 +0.7
      baz=86
DPC   Dobruska-Polom     78.27  41  eP      P      13 41 28.0 +1.3
DPC   Dobruska-Polom     78.27  41  eP      P      13 41 28.0 +1.3
O17K  Koliganek Bris     78.42 329   P      P      13 41 27.9 +0.7
      baz=86
JETT  Jettan, Norway     78.83  21  eP      P      13 41 31.1 +1.7
P16K  Nushagak River     78.93 328   P      P      13 41 30.7 +0.7
      baz=85,SNR=6.7
O16K  Kokwok River B     78.93 329   P      P      13 41 30.3 +0.3
      baz=85
MODS  Modra-Piesok       79.08  43  eP      P      13 41 32.9 +1.8
MODS                               e               13 41 41.2
MODS                               pmax     pmax
      comp=Z,16nm,1.0s
MODS  Modra-Piesok       79.08  43  eP      P      13 41 32.9 +1.8
MODS                               e               13 41 41.2
N16K  Nishlik Lake       79.19 330   P      P      13 41 31.9 +0.4
      baz=85
OKC   Ostrava-Krasne     79.49  41  epP     pP     13 41 41.1 +0.9
OKC   Ostrava-Krasne     79.49  41  eP      P      13 41 41.1 +7.8
HAMF  Hammerfest         79.83  20  eP      P      13 41 35.5 +0.7
KTK1  Kautokeino         79.88  21  eP      P      13 41 36.1 +1.1
KTK1                               IAmb     IAmb   13 41 36.9
      comp=Z,12nm,0.7s
VYHS  Vyhne              80.09  42  eP      P      13 41 38.3 +1.7
VYHS                               e               13 41 46.4
VYHS                               pmax     pmax
      comp=Z,4.0nm,0.9s
VYHS  Vyhne              80.09  42  eP      P      13 41 38.3 +1.7
VYHS                               e               13 41 46.4
RDOG  Red Dog Mine       80.14 338   P      P      13 41 37.3 +0.8
      baz=82
MORH  Mrgy, Hungar       80.24  45  ⇑P      P      13 41 39.4 +1.9
ARA0  ARCESS Array S     80.61  21  eP      P      13 41 39.9 +0.9
ARCES ARCESS Array B     80.61  21   P      P      13 41 39.8 +0.8
      comp=Z,3.2nm,0.7s,baz=288,slow=4.8,SNR=14
      comp=Z,3.2nm,0.7s
ARCES ARCESS Array B     80.61  21   P      P      13 41 38.1 -0.9
ARCES ARCESS Array B     80.61  21   P      P      13 41 38.1 -0.9
ARCES                              pmax     pmax
      comp=Z,5.0nm,0.9s
SDPT  Sand Point         80.67 325   P      P      13 41 39.0 -0.6
SDPT  Sand Point         80.67 325   P      P      13 41 39.7 +0.2
      baz=82
ANM   Nome               81.67 334   P      P      13 41 44.5 -0.2
ANM   Nome               81.67 334   P      P      13 41 44.5 -0.2
ANM                                pmax     pmax
      comp=Z,4.0nm,0.6s
ANM   Nome               81.67 334   P      P      13 41 45.8 +1.0
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	baz=80						
FIA1	FINESS Array S	82.25	29	P	P	13 41 46.6	-1.1
FIA1				IAmb	IAmb	13 41 57.6	
	comp=Z,8.4nm,0.8s						
FINES	FINESS Array B	82.25	29	P	P	13 41 49.0	+1.3
	comp=Z,6.6nm,0.6s,baz=256,slow=3.3,SNR=33						
	comp=Z,6.6nm,0.6s						
FINES	FINESS Array B	82.25	29	P	P	13 41 47.1	-0.6
BZS	Buzias	82.38	45	⇑P	P	13 41 51.2	+2.4
BZS	Buzias	82.38	45	⇑P	P	13 41 51.2	+2.4
FALS	False Pass	82.42	324	P	P	13 41 49.0	+0.2
	baz=80						
TNA	Tin City	82.54	335	P	P	13 41 50.6	+1.4
	baz=78						
MDVR	Moldovita	82.59	46	⇑P	P	13 41 50.2	+0.2
TRPA	Tarpa	82.59	42	⇑P	P	13 41 51.5	+1.7
DRGR		82.94	44	⇑P	P	13 41 48.7	-3.1
DRGR		82.94	44	⇑P	P	13 41 48.7	-3.1
FNA	Florina	83.01	50	P	P	13 41 50.9	-1.4
FNA				IAmb	IAmb	13 42 02.7	
	comp=Z,5.4nm,0.8s						
FNA	Florina	83.01	50	P	P	13 41 50.9	-1.4
FNA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VSU	Vasula	83.15	32	*de*P	P	13 41 53.4	+0.9
VSU				pmax	pmax		
	comp=Z,49nm,0.8s						
GZR	Gura Zlata	83.22	45	⇑P	P	13 41 54.7	+1.4
GZR	Gura Zlata	83.22	45	⇑P	P	13 41 54.7	+1.4
MARR	Marisel-Cluj	83.23	44	⇑P	P	13 41 54.8	+1.4
AKUT	Akutan	83.91	324	P	P	13 41 53.7	-2.8
VTS	Vitosha	84.06	48	⇑P	P	13 42 01.2	+3.4
VTS	Vitosha	84.06	48	⇑P	P	13 42 01.2	+3.4
LVZ	Lovozero	84.23	22	⇑P	P	13 41 58.0	0.0
UNV	Unalaska Valle	84.39	324	P	P	13 41 57.0	-1.9
UNV	Unalaska Valle	84.39	324	P	P	13 41 59.1	+0.1
	baz=77						
BURAR	Bucovina Array	84.46	43	⇑P	P	13 42 01.8	+2.2
ARR	Arges	84.52	45	⇑P	P	13 42 02.0	+2.1
VOIR		84.79	45	⇑P	P	13 42 03.1	+1.8
VOIR		84.79	45	⇑P	P	13 42 03.1	+1.8
MLR	Muntele Rosu	85.39	45	⇑P	P	13 42 06.0	+1.6
MLR	Muntele Rosu	85.39	45	⇑P	P	13 42 06.0	+1.6
COVR	Voineasa-Covas	85.50	44	⇑P	P	13 42 05.8	+1.0
AKASG	Malin Array Be	86.33	39	P	P	13 42 08.9	+0.2
	comp=Z,0.3nm,0.4s,baz=280,slow=3.7,SNR=4.7						
	comp=Z,0.3nm,0.4s						
AKASG	Malin Array Be	86.33	39	*i* P	P	13 42 10.0	+1.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KLMR	Klimovskoe	88.65	28	*e*P	P	13 42 19.6	-0.1
KLMR				AMP		13 42 29.7	
	comp=Z,19nm,1.5s						
KLMR	Klimovskoe	88.65	28	*e*P	P	13 42 19.5	-0.1
KLMR				pmax	pmax		
	comp=Z,19nm,1.5s						
OBN	Obninsk	89.27	33	⇓*i*P	P	13 42 24.6	+1.9
OBN				*i*		13 42 31.6	
OBN				*e*		13 45 54.9	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BILL	Bilibino	90.81	342	⇑*e*P	P	13 42 30.4	+0.7
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BR131	Keskin Array S	92.37	49	⇓*i*P	P	13 42 39.1	+1.4
BRTR	Keskin Array B	92.37	49	P	P	13 42 38.8	+1.0
	comp=Z,2.5nm,0.8s,baz=250,slow=3.3,SNR=12						
	comp=Z,2.5nm,0.8s						
TIXI	Tiksi	95.58	354	P	P	13 42 51.1	-0.4
TIXI				IAmb	IAmb	13 42 52.4	
	comp=Z,3.3nm,1.0s						
TIXI	Tiksi	95.58	354	⇓*e*P	P	13 42 51.2	-0.4
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BELG	Belogornoye	96.36	33	⇑*e*P	P	13 42 55.1	-0.4
BELG				pmax	pmax		
	comp=Z,2.0nm,1.9s						
NRIK	Noril'sk	97.25	8	⇑*e*P	Pdif	13 43 00.5	+1.2
NRIK				pmax	pmax		
	comp=Z,10.0nm,3.0s						
SEY	Seymchan	98.52	342	⇑*e*P	P	13 43 04.7	-0.3
SEY				pmax	pmax		
	comp=Z,9.0nm,2.3s						
MKAR	Makanchi Array	116.26	21	PKP	PKiKP	13 48 09.7	-0.7
	comp=Z,1.1nm,0.8s,baz=326,slow=1.6,SNR=4.7						
SONM	Songino Array	120.29	3	PKP	PKPdf	13 48 17.8	-0.4
	comp=Z,0.8nm,0.5s,baz=283,slow=2.7,SNR=4.3						
WMQ	Urumqi	120.69	19	*e*P	PKPdf	13 48 18.4	-0.6
MJAR	Matsushiro Arr	125.01	333	PKP	PKPdf	13 48 27.3	-0.1
	comp=Z,1.6nm,0.6s,baz=126,slow=1.7,SNR=2.6						
HHC	Hu-ho-hao-te	127.36	359	*e*P	PKPdf	13 48 28.7	-3.2
GTA	Gaotai	127.88	10	PKPbc	PKiKP	13 48 33.5	-0.1
KSRS	Korea Array	128.07	342	PKP	PKPdf	13 48 33.2	0.0
	comp=Z,2.8nm,0.7s,baz=358,slow=1.3,SNR=8.4						
NJ2	Nanjing	135.41	350	*e*P	PKPdf	13 48 45.4	-1.8
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PZH	PanZhiHua	140.78	12	PKP	PKPdf	13 48 55.7	-1.7
CTA	Charters Tower	144.65	252	PKP	PKPab	13 49 02.1	-0.7
	comp=Z,16nm,0.9s,baz=114,slow=4.1,SNR=10						
CTAO	Charters Tower	144.65	252	PKPdf	PKPab	13 49 02.2	-0.7
CTAO	Charters Tower	144.65	252	PKIKP	PKPab	13 49 02.2	-0.7
PALK	Pallekele	144.82	58	PKPdf	PKPdf	13 49 04.8	0.0
PALK	Pallekele	144.82	58	PKIKP	PKPdf	13 49 04.8	0.0
STKA	Stephens Creek	145.14	231	PKP	PKPbc	13 49 04.2	0.0
	comp=Z,4.9nm,0.6s,baz=112,slow=5.7,SNR=15						
CRAI	Chiangrai	146.46	17	PKPbc	PKPbc	13 49 09.1	+0.4
CMAR	Chiang Mai Arr	147.67	21	PKPbc	PKPbc	13 49 12.6	+0.5
	comp=Z,14nm,0.8s,baz=320,slow=3.9,SNR=70						
CMAR	Chiang Mai Arr	147.67	21	PKPbc	PKPbc	13 49 12.1	0.0
COEN	Coen	147.98	263	PKPbc	PKPbc	13 49 12.5	-0.5
PHRA	Phrae	148.05	18	PKPbc	PKPbc	13 49 13.1	0.0
ASAR	Alice Springs	154.82	239	PKP	PKPdf	13 49 20.5	+0.3
	comp=Z,1.6nm,0.9s,baz=105,slow=1.9,SNR=12						
ASAR				PKPbc	PKPbc	13 49 28.4	-0.4
	comp=Z,3.8nm,0.8s,baz=108,slow=2.4,SNR=20						
ASAR				PKPab	PKPab	13 49 43.0	-1.0
	comp=Z,1.5nm,0.5s,baz=117,slow=2.1,SNR=5.9						
WB2	Warramunga Arr	155.66	248	PKPdf	PKPdf	13 49 21.4	0.0
WRA	Warramunga Arr	155.67	248	PKP	PKPdf	13 49 21.2	-0.2
	comp=Z,3.3nm,0.9s,baz=87,slow=1.1,SNR=20						
WRA				PKPbc	sPKPdf	13 49 30.4	-0.7
	comp=Z,2.8nm,0.5s,baz=98,slow=2.8,SNR=18						

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*DDA **09** 13:30:27.8±0.0, 39°.54N×26°.09E, h7^{km}±3^{km}, ML2.5*
*THE **09** 13:30:27.8, 39°.55N×26°.06E, h8^{km}±2^{km}, ML2.4/6, Error ellipse: s-maj=2.7km s-min=1.1km az=242.0*
*ISK **09** 13:30:27.2, 39°.56N×26°.06E, h8^{km}, ML2.9/19*
*ATH **09** 13:30:28.3, 39°.56N×26°.06E, h6^{km}±3^{km}, ML2.5/5, Error ellipse: s-maj=3.4km s-min=0.8km az=229.0*
ISC 09 13:30:27.8±0.9**, 39°.56N**±0°.02×**26°.07E**±0°.02**, h11**^{km}±6^{km}**, n51, σ0^{s}43**/81**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GPNR	Gulpinar-Canak	0.11	152	Pg	Pg	13 30 30.5	-0.1
GPNR				Sg	Sg	13 30 32.5	-0.1
EZN	Ezine	0.34	37	P	Pg	13 30 34.8	+0.3
EZN				S	Sg	13 30 39.4	+0.4
	640nm,0.2s						
EZN	Ezine	0.34	37	Pg	Pg	13 30 34.6	+0.1
EZN				Sg	Sg	13 30 39.6	+0.6
PRK	Paraskevi	0.35	153	P	Pg	13 30 34.9	+0.2
PRK				S	Sg	13 30 39.0	-0.3
	2µm,0.4s						
PRK	Paraskevi	0.35	153	P	Pg	13 30 35.0	+0.2
PRK				S	Sg	13 30 39.8	+0.5
PRK				AML	AML	13 30 40.6	
	comp=N,3682µm,0.3s						
PRK				AML	AML	13 30 41.8	
	comp=E,5399µm,0.4s						
SIGR	SIGRI	0.38	205	P	Pg	13 30 35.4	+0.1
SIGR				S	Sg	13 30 39.4	-1.0
	comp=E,870nm,0.2s						
SIGR	SIGRI	0.38	205	Pg	Pg	13 30 35.3	+0.1
SIGR				Sg	Sg	13 30 40.9	+0.5
SIGR	SIGRI	0.38	205	P	Pg	13 30 35.4	+0.1
SIGR				S	Sg	13 30 40.5	+0.1
SIGR				AML	AML	13 30 41.5	
	comp=E,1590µm,0.2s						
SIGR				AML	AML	13 30 43.9	
	comp=N,2067µm,0.5s						
BAYC	CANAKKALE_Bayr	0.41	63	P	Pg	13 30 36.0	0.0
BAYC				*i* AML	AML	13 30 41.0	
	comp=N,447nm,0.2s						
BAYC				S	Sg	13 30 41.4	-0.1
BAYC				*i* AML	AML	13 30 42.0	
	comp=N,377nm,0.2s						
ECEA	Canakkale, Ece	0.50	10	P	Pg	13 30 37.9	+0.4
ECEA				S	Sb	13 30 45.5	-0.3
ECEA				*i* AML	AML	13 30 46.0	
	comp=N,287nm,0.3s						
ECEA				*i* AML	AML	13 30 49.0	
	comp=N,252nm,0.6s						
COMU	Canakkale	0.63	30	Pg	Pg	13 30 39.9	-0.1
COMU				Sg	Sb	13 30 49.1	-0.6
GOKA	anakkale-Gk	0.65	349	P	Pg	13 30 40.4	0.0
GOKA				S	Sb	13 30 49.6	-0.5
GOKA				*i* AML	AML	13 30 50.0	
	comp=N,300nm,0.3s						
GOKA				*i* AML	AML	13 30 55.0	
	comp=N,261nm,0.3s						
GADA	Gvkgeada	0.65	349	Pg	Pg	13 30 40.4	0.0
LIA	Limnos Island	0.76	297	P	Pg	13 30 42.7	+0.2
LIA				S	Sb	13 30 53.7	+0.2
	comp=N,568nm,0.3s						
LIA	Limnos Island	0.76	297	P	Pg	13 30 42.7	+0.2
LIA				S	Sg	13 30 53.0	+0.5
LIA				AML	AML	13 30 56.6	
	comp=E,1169µm,0.3s						
LIA				AML	AML	13 30 56.9	
	comp=N,1082µm,0.3s						
BUHA	Balikesir, Bur	0.78	94	P	Pg	13 30 42.7	-0.3
BUHA				S	Sg	13 30 53.3	+0.2
BUHA				*i* AML	AML	13 30 57.0	
	comp=N,98nm,0.5s						
BUHA				*i* AML	AML	13 30 58.0	
	comp=N,77nm,0.3s						
DKL	Dikili	0.81	126	Pg	Pg	13 30 43.7	+0.3
CANM	Can-anakkale	0.89	59	Pg	Pg	13 30 44.9	0.0
GELI	Tayfur-Gelibol	0.90	20	Pg	Pg	13 30 44.9	-0.2
KARB	zmir-Karabur	0.93	163	P	Pg	13 30 46.0	+0.3
KARB				S	Sb	13 30 58.4	+0.1
KARB				*i* AML	AML	13 30 59.0	
	comp=N,169nm,0.5s						
KARB				*i* AML	AML	13 31 00.0	
	comp=N,129nm,0.4s						
LPK	Lapseki	0.97	33	Pg	Pg	13 30 46.0	-0.6
ZEDA	zmir-Bergama	0.98	127	P	Pg	13 30 46.8	+0.1
ZEDA				S	Sg	13 30 59.6	+0.2
ZEDA				*i* AML	AML	13 31 02.0	
	comp=N,101nm,0.3s						
ZEDA				*i* AML	AML	13 31 02.0	
	comp=N,187nm,0.4s						
SMTH	Samothraki Isl	1.00	336	P	Pg	13 30 46.8	-0.3
SMTH				S	Sb	13 31 00.6	+0.2
	comp=N,130nm,0.2s						
SMTH	Samothraki Isl	1.00	336	P	Pg	13 30 46.7	-0.3
SMTH				S	Sb	13 31 00.7	+0.3
SMTH				AML	AML	13 31 02.1	
	comp=N,317µm,0.2s						
SMTH				AML	AML	13 31 03.8	
	comp=E,219µm,0.2s						
PSRA	Psara	1.08	201	P	Pb	13 30 48.8	+0.2
PSRA				S	Sn	13 31 04.0	0.0
ERIK	Erikli-Kesan	1.17	17	Pn	Pg	13 30 49.4	-0.8
CHOS	Chios island	1.17	180	P	Pg	13 30 50.1	-0.1
ENEZ	Enez	1.18	3	Pn	Pg	13 30 50.1	-0.4
BALY	Balya	1.21	81	P	Pb	13 30 50.3	-0.5
BALY				S	Sg	13 31 06.8	-0.1
BALY				*i* AML	AML	13 31 08.0	
	comp=E,81nm,0.3s						
BALY				*i* AML	AML	13 31 08.0	
	comp=E,130nm,0.8s						
URLA	Izmir	1.26	161	Pn	Pn	13 30 50.4	-1.0
URLA	Izmir	1.26	161	P	Pn	13 30 50.6	-0.9
URLA				S	Sb	13 31 07.3	-0.6
URLA				*i* AML	AML	13 31 11.0	
	comp=E,122nm,0.4s						
URLA				*i* AML	AML	13 31 11.0	
	comp=E,112nm,0.3s						
KRBG	Karabiga-Canak	1.26	48	Pn	Pn	13 30 51.7	+0.3
STEP	BALIKESIR_Sava	1.29	97	P	Pn	13 30 51.5	-0.3
STEP				S	Sn	13 31 09.7	+0.5
STEP				*i* AML	AML	13 31 14.0	
	comp=E,65nm,0.8s						
STEP				*i* AML	AML	13 31 17.0	
	comp=E,53nm,0.5s						
KNL	Balıkesir	1.33	57	P	Pn	13 30 52.7	+0.3
KNL				S	Sn	13 31 10.9	+0.8
KNL				*i* AML	AML	13 31 12.0	
	comp=E,283nm,0.7s						
KNL				*i* AML	AML	13 31 12.0	
	comp=E,276nm,0.3s						
ALN	Alexandroupoli	1.34	359	P	Pn	13 30 52.5	+0.1
ALN				S	Sb	13 31 08.9	-1.2
	comp=E,128nm,0.4s						
ALN	Alexandroupoli	1.34	359	Pn	Pn	13 30 52.6	+0.1
ALN	Alexandroupoli	1.34	359	P	Pn	13 30 52.5	+0.1
ALN				S	Sg	13 31 10.9	-0.1
ALN				AML	AML	13 31 12.0	
	comp=E,340µm,0.5s						
ALN				AML	AML	13 31 12.1	
	comp=N,173µm,0.4s						
GONE	Gonen-Balikesi	1.34	68	Pn	Pn	13 30 52.5	0.0
KESN	Edirne-Kesan	1.35	20	P	Pn	13 30 52.7	-0.3
KESN				S	Sb	13 31 10.9	0.0
KESN				*i* AML	AML	13 31 15.0	
	comp=N,179nm,0.3s						
KESN				*i* AML	AML	13 31 15.0	
	comp=N,117nm,0.6s						
ZEYE	Izmir, Urla-Ze	1.36	165	P	Pb	13 30 53.5	+0.2
ZEYE				S	Sb	13 31 09.6	-1.0
ZEYE				*i* AML	AML	13 31 15.0	
	comp=N,155nm,0.3s						
ZEYE				*i* AML	AML	13 31 15.0	
	comp=N,94nm,0.3s						
BLCB	Balcova	1.39	147	P	Pn	13 30 53.8	+0.6
BLCB				S	Sb	13 31 11.6	-0.1
BLCB	Balcova	1.39	147	Pn	Pn	13 30 53.8	+0.6
BALB	Balikesir	1.40	86	Pn	Pn	13 30 52.7	-0.7
RKY	Sarkoy-Tekirda	1.42	37	Pn	Pn	13 30 53.5	-0.1
BKES	Balkesir-Mer	1.45	82	P	Pn	13 30 54.1	+0.1
BKES				S	Sb	13 31 13.8	+0.5
BKES				*i* AML	AML	13 31 19.0	
	comp=N,41nm,0.6s						
THAS	Thassos island	1.47	316	P	Pn	13 30 53.8	-0.5
EDC	Edincik	1.59	60	Pn	Pn	13 30 55.9	-0.1
UKOP	Uzunkopru-Edir	1.63	15	Pn	Pn	13 30 57.2	+0.7
RDO	Rodhopi	1.64	346	Pn	Pn	13 30 56.6	0.0
RDO	Rodhopi	1.64	346	P	Pn	13 30 56.8	+0.2
DURS	Dursunbey	1.86	88	P	Pn	13 30 59.7	0.0

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*TAP **09** 13:32:12.1, 24°.89N×122°.11E, h105^{km}, ML3.8, B*
*JMA **09** 13:32:12.0±0.1, 24°.9N±0°.5×122°.1E±0°.3, h105^{km}±1^{km}, MV2.8/12, TAIWAN REGION*
ISC 09 13:32:12.6±1.3**, 24°.89N**±0°.03×**122°.08E**±0°.02**, h104**^{km}±6^{km}**, n114, σ0^{s}62**/198**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		0.14	253	*i* P	Pn	13 32 27.2	+0.1
	baz=252						
EGS				*i* S	Sn	13 32 37.8	-0.1
	baz=252						
TWB1	Santiao Chiao	0.15	327	*i* P	Pn	13 32 27.0	-0.1
	baz=320						
TWB1				*i* S	Sn	13 32 37.4	-0.6
	baz=320						
TIPB	Shuangxi	0.24	291	*i* P	Pn	13 32 27.3	-0.2
	baz=287						
TIPB				*i* S	Sn	13 32 37.9	-0.7
	baz=287						
SXI1	Grass Mountain	0.28	319	*i* P	Pn	13 32 27.2	-0.5
	baz=314						
SXI1				*i* S	Sn	13 32 38.4	-0.5
	baz=314						
ILA	Ilan	0.32	248	*i* P	Pn	13 32 27.6	-0.1
	baz=248						
ILA				*i* S	Sn	13 32 38.9	-0.1
	baz=248						
NWF	Wu-fen Shan	0.33	305	*i* P	Pn	13 32 27.6	-0.3
	baz=301						
NWF				S	Sn	13 32 38.6	-0.6
	baz=301						
WFSB	Wu-fen Shan	0.33	305	*i* P	Pn	13 32 27.6	-0.1
	baz=301						
WFSB				S	Sn	13 32 38.6	-0.5
	baz=301						
TWC	Suao	0.34	217	*i* P	Pn	13 32 27.5	-0.3
	baz=218						
TWC				*i* S	Sn	13 32 38.4	-0.8
	baz=218						
TNOU	National Taiwa	0.38	314	*i* P	Pn	13 32 27.8	-0.2
	baz=310						
TNOU				S	Sn	13 32 39.3	-0.3
	baz=310						
TWE	Neicheng	0.41	246	*i* P	Pn	13 32 28.1	-0.1
	baz=245						
TWE				*i* S	Sn	13 32 40.5	+0.6
	baz=245						
NDS	Dongshan	0.41	233	P	Pn	13 32 28.7	+0.4
	baz=234						
NDS				*i* S	Sn	13 32 41.1	+1.2
	baz=234						
TWA	Mucha	0.46	282	*i* P	Pn	13 32 28.3	-0.3
	baz=280						
TWA				*i* S	Sn	13 32 41.0	+0.5
	baz=280						
FUSB	Fushanzhiwuyua	0.46	254	*i* P	Pn	13 32 28.4	-0.3
	baz=254						
FUSB				*i* S	Sn	13 32 41.0	+0.3
	baz=254						
EOS2	EOS2	0.48	163	P	Pn	13 32 29.2	+0.6
	baz=166						
NHDH	Xindian Distri	0.51	279	*i* P	Pn	13 32 28.6	-0.3
	baz=277						
NHDH				S	Sn	13 32 42.1	+1.1
	baz=277						
EWUT	Wuta	0.52	212	*i* P	Pn	13 32 29.3	+0.4
	baz=213						
EWUT				*i* S	Sn	13 32 41.3	+0.2
	baz=213						
ENTT	Nioudou	0.52	242	*i* P	Pn	13 32 29.2	+0.2
	baz=242						
ENTT				*i* S	Sn	13 32 42.1	+0.8
	baz=242						
YM01	YM01	0.53	300	*i* P	Pn	13 32 28.8	-0.3
	baz=297						
YM01				S	Sn	13 32 42.9	+1.6
	baz=297						
NWLT	Wulai	0.53	259	*i* P	Pn	13 32 28.8	-0.2
	baz=258						
NWLT				*i* S	Sn	13 32 41.3	-0.1
	baz=258						
TAP	Taipei	0.54	287	*i* P	Pn	13 32 28.6	-0.5
	baz=285						
TAP				*i* S	Sn	13 32 41.4	0.0
	baz=285						
ENA	Nanau	0.55	214	*i* P	Pn	13 32 29.5	+0.3
	baz=215						
ENA				*i* S	Sn	13 32 42.1	+0.5
	baz=215						
TWY	Chenhua	0.58	312	*i* P	Pn	13 32 29.2	-0.2
	baz=310						
TWY				S	Sn	13 32 42.1	+0.2
	baz=310						
ANP	Anpu	0.59	301	P	Pn	13 32 29.0	-0.5
	baz=299						
LATG	Datong	0.61	235	*i* P	Pn	13 32 30.3	+0.5
	baz=236						
LATG				*i* S	Sn	13 32 43.1	+0.5
	baz=236						
NTST	Danshui	0.63	296	P	Pn	13 32 29.9	+0.1
	baz=294						
NTST				S	Sn	13 32 44.1	+1.4
	baz=294						
TWS1	Kuangyinshan	0.64	290	*i* P	Pn	13 32 29.6	-0.2
	baz=288						
TWS1				*i* S	Sn	13 32 44.2	+1.5
	baz=288						
YHNB	Yeheng	0.67	252	*i* P	Pn	13 32 30.2	0.0
	baz=251						
YHNB				*i* S	Sn	13 32 42.9	-0.6
	baz=251						
NSK	Sanguang	0.69	252	*i* P	Pn	13 32 30.4	0.0
	baz=252						
NSK				*i* S	Sn	13 32 43.0	-0.6
	baz=252						
PCYT	Pengchaiyu	0.74	360	*i* P	Pn	13 32 30.9	+0.1
	baz=358						
PCYT				S	Sn	13 32 45.0	+0.6
	baz=358						
NNSB	Datong	0.78	234	*i* P	Pn	13 32 31.6	+0.3
	baz=235						
NNSB				*i* S	Sn	13 32 44.7	-0.5
	baz=235						
NNS	Nan Shan	0.78	235	*i* P	Pn	13 32 31.5	+0.2
	baz=235						
NNS				*i* S	Sn	13 32 45.5	+0.3
	baz=235						
NCU	National Centr	0.81	276	*i* P	Pn	13 32 31.7	+0.3
	baz=275						
NCU				*i* S	Sn	13 32 46.4	+0.9
	baz=275						
NCUH	Zhongli	0.81	276	P	Pn	13 32 31.9	+0.4
	baz=275						
NCUH				S	Sn	13 32 46.6	+1.0
	baz=275						
ETL	Fush Village	0.83	210	*i* P	Pn	13 32 31.2	-0.5
	baz=211						
ETL				S	Sn	13 32 44.6	-1.4
	baz=211						
NACB	Ninganchiao	0.83	212	*i* P	Pn	13 32 31.3	-0.3
	baz=213						
NACB				*i* S	Sn	13 32 45.0	-0.9
	baz=213						
ETLH	Xiulin Townshi	0.86	219	P	Pn	13 32 31.9	-0.2
	baz=219						
ETLH				S	Sn	13 32 45.5	-1.1
	baz=219						
JYNG	Yonagunijimaku	0.90	118	P	Pn	13 32 32.2	-0.1
JYNG				S	Sn	13 32 47.3	+0.2
NFF	Wufeng Townshi	0.91	254	*e*P	Pn	13 32 32.1	-0.3
	baz=254						
NFF				*e*S	Sn	13 32 46.5	-0.9
	baz=254						
TWD	Chiawan	0.91	209	*i* P	Pn	13 32 31.8	-0.6
	baz=209						
TWD				*i* S	Sn	13 32 46.3	-1.0
	baz=209						
YOJ	Yonaguni jima	0.95	116	P	Pn	13 32 32.7	-0.1
YOJ				*e*S	Sn	13 32 47.7	-0.2
YOJ	Yonaguni jima	0.95	116	P	Pn	13 32 32.7	-0.1
	baz=117						
YOJ				S	Sn	13 32 48.1	+0.1
	baz=117						
LIOB	Emei	0.99	256	*i* P	Pn	13 32 33.4	+0.1
	baz=256						
LIOB				S	Sn	13 32 48.7	-0.1
	baz=256						
SBCB	Hsinchu	0.99	265	*i* P	Pn	13 32 33.9	+0.6
	baz=264						
SBCB				*i* S	Sn	13 32 49.2	+0.3
	baz=264						
HWA	Hwalien	1.00	206	P	Pn	13 32 33.6	+0.3
	baz=206						
HWA				S	Sn	13 32 49.2	+0.3
	baz=206						
HSN	Hsinchu	1.01	266	*i* P	Pn	13 32 33.2	-0.1
	baz=266						
HSN				*i* S	Sn	13 32 48.8	-0.3
	baz=266						
NSTT	Nanjuang	1.01	256	*i* P	Pn	13 32 33.7	+0.2
	baz=255						
NSTT				*i* S	Sn	13 32 48.7	-0.4
	baz=255						
TWT	Tachien	1.03	233	*i* P	Pn	13 32 34.5	+0.6
	baz=233						
TWT				*i* S	Sn	13 32 50.7	+0.9
	baz=233						
WHF	Hehuan Shan	1.04	225	*i* P	Pn	13 32 34.2	-0.1
	baz=225						
WHF				*i* S	Sn	13 32 50.5	0.0
	baz=225						
TDCB	Techi	1.05	233	P	Pn	13 32 34.6	+0.6
	baz=233						
TDCB				S	Sn	13 32 49.9	-0.2
	baz=233						
CHGB	Renai	1.16	225	*i* P	Pn	13 32 36.0	+0.6
	baz=225						
CHGB				*i* S	Sn	13 32 52.1	-0.4
	baz=225						
WHP	Taichung City	1.19	240	P	Pn	13 32 35.7	+0.2
	baz=239						

WHP				S	Sn	13 32 52.8	0.0
	baz=239						
ESL	Shilin	1.22	209	P	Pn	13 32 34.7	-1.1
	baz=209						
NMLH	Miaoli	1.22	254	*e*P	Pn	13 32 36.4	+0.6
	baz=253						
NMLH				*e*S	Sn	13 32 53.0	-0.3
	baz=253						
OWD	Renai	1.24	222	*e*P	Pn	13 32 36.8	+0.7
	baz=222						
OWD				*e*S	Sn	13 32 53.5	-0.4
	baz=222						
WUSB	Renai	1.25	225	P	Pn	13 32 36.7	+0.5
	baz=225						
WUSB				S	Sn	13 32 54.0	0.0
	baz=225						
NSY	Sanyi	1.28	249	*i* P	Pn	13 32 36.8	+0.3
	baz=248						
NSY				*i* S	Sn	13 32 54.9	+0.2
	baz=248						
TWQ1	Liyutan	1.30	246	P	Pn	13 32 36.6	-0.1
	baz=245						
TWQ1				S	Sn	13 32 55.0	0.0
	baz=245						
WCS	Beigang Elemen	1.34	232	P	Pn	13 32 37.9	+0.7
	baz=232						
WCS				S	Sn	13 32 56.2	+0.4
	baz=232						
EGFH	Guangfu	1.35	206	*e*P	Pn	13 32 36.9	-0.4
	baz=206						
VWDT	VWDT	1.41	217	P	Pn	13 32 38.3	+0.2
	baz=217						
VWDT				S	Sn	13 32 57.5	+0.2
	baz=217						
WDJ	Dajia District	1.41	248	P	Pn	13 32 38.2	+0.2
	baz=247						
WDJ				S	Sn	13 32 57.4	+0.1
	baz=247						
SMLT	Sun Moon Lake	1.46	227	P	Pn	13 32 39.5	+0.7
	baz=227						
SMLT				*i* S	Sn	13 33 00.2	+1.6
	baz=227						
TCU	Taichung	1.47	240	*e*P	Pn	13 32 38.3	-0.4
	baz=240						
TCU				*e*S	Sn	13 32 58.8	+0.3
	baz=240						
TYC	Yuchr	1.48	229	P	Pn	13 32 39.5	+0.7
	baz=228						
TYC				S	Sn	13 32 59.4	+0.7
	baz=228						
SSLB	Suanglung	1.50	223	P	Pn	13 32 39.6	+0.5
	baz=223						
SSLB				*e*S	Sn	13 32 59.3	+0.1
	baz=223						
HGSD	Ruisui	1.51	203	P	Pn	13 32 39.1	-0.1
	baz=204						
HGSD				S	Sn	13 32 58.8	-0.6
	baz=204						
EHY	Hungye	1.54	207	P	Pn	13 32 38.3	-1.3
	baz=207						
EHY				*e*S	Sn	13 32 58.2	-1.7
	baz=207						
WCHH	Zhanghua	1.60	240	*e*P	Pn	13 32 40.9	+0.6
	baz=240						
WCHH				*e*S	Sn	13 33 01.1	-0.2
	baz=240						
IRIF	Iriomote-Funau	1.60	110	P	Pn	13 32 40.0	-0.3
IRIF				S	Sn	13 33 01.1	-0.2
WNT	Mingjian	1.62	232	P	Pn	13 32 41.2	+0.6
	baz=231						
WNT				S	Sn	13 33 02.3	+0.6
	baz=231						
WJS	Zhushan	1.62	230	*e*P	Pn	13 32 40.9	+0.2
	baz=229						
WJS				*e*S	Sn	13 33 03.1	+1.2
	baz=229						
EYUL	Yuli	1.68	204	*e*P	Pn	13 32 41.3	-0.1
	baz=205						
EYUL				*e*S	Sn	13 33 03.7	+0.6
	baz=205						
HATJ	Hateruma jima	1.78	117	P	Pn	13 32 42.6	+0.1
HATJ				S	Sn	13 33 05.5	+0.2
ALS	Alishan	1.79	221	P	Pn	13 32 44.1	+1.1
	baz=220						
ALS				*e*S	Sn	13 33 06.9	+0.8
	baz=220						
CHN5	Tsauling	1.81	225	*e*P	Pn	13 32 42.4	-0.6
	baz=225						
CHN5				*e*S	Sn	13 33 07.9	+1.7
	baz=225						
FULB	Fuli	1.82	203	*e*P	Pn	13 32 43.3	+0.1
	baz=203						
FULB				*e*S	Sn	13 33 06.6	+0.2
	baz=203						
WRL	Guolierlin Hig	1.83	238	*e*P	Pn	13 32 43.3	+0.1
	baz=238						
WRL				*e*S	Sn	13 33 06.9	+0.4
	baz=238						
WDLH	Douliu	1.84	230	*e*P	Pn	13 32 43.7	+0.4
	baz=230						
WDLH				*e*S	Sn	13 33 06.7	0.0
	baz=230						
JKRS	Kuro-shima	1.87	110	P	Pn	13 32 43.9	+0.2
JKRS				*e*S	Sn	13 33 07.2	-0.3
CHKT	Chengkung	1.89	200	P	Pn	13 32 44.0	0.0
	baz=200						
EHD	Haiduan	1.90	205	P	Pn	13 32 44.3	+0.1
	baz=205						
EHD				S	Sn	13 33 07.6	-0.6
	baz=205						
ELDTW	Lidau	1.95	210	*e*P	Pn	13 32 44.0	-0.8
	baz=210						
ELDTW				*e*S	Sn	13 33 08.6	-0.7
	baz=210						
WTK	Tuku	1.95	233	*e*P	Pn	13 32 44.8	+0.1
	baz=232						
WTK				*e*S	Sn	13 33 09.1	0.0
	baz=232						
JIJ	Ishigaki jima	1.95	105	P	Pn	13 32 44.7	0.0
JIJ				S	Sn	13 33 08.0	-1.2
WCKO	Fanlu	1.97	223	*e*P	Pn	13 32 44.6	-0.4
	baz=223						
WCKO				*e*S	Sn	13 33 10.2	+0.5
	baz=223						
EDH	Donghe	2.03	201	*e*P	Pn	13 32 45.2	-0.6
	baz=200						
EDH				*e*S	Sn	13 33 09.8	-1.3
	baz=200						
CHN4	Tsaushan	2.04	222	*e*P	Pn	13 32 46.7	+0.8
	baz=222						
CHY	Chiayi	2.04	228	*e*P	Pn	13 32 45.9	-0.1
	baz=227						
JISG	Ishigakijimahi	2.05	98	P	Pn	13 32 46.5	+0.5
JISG				S	Sn	13 33 11.8	+0.3
TPUB	Ta-pu	2.06	220	*e*P	Pn	13 32 45.7	-0.4
	baz=220						
STYH	Taoyuan	2.08	215	*e*P	Pn	13 32 46.6	+0.2
	baz=215						
LONT	Longtian	2.15	204	*e*P	Pn	13 32 45.9	-1.5
	baz=204						
WSL	Shuilin Townsh	2.17	232	*e*P	Pn	13 32 48.5	+1.0
	baz=231						
TWK	Hsinying	2.17	222	*e*P	Pn	13 32 48.1	+0.5
	baz=222						
CHN1	Nanshi	2.21	220	*e*P	Pn	13 32 48.3	+0.2
	baz=220						
TWG	Pinlang	2.25	204	*e*P	Pn	13 32 48.8	+0.2
	baz=204						
TWGBT	Beinan	2.25	204	*e*P	Pn	13 32 48.6	0.0
	baz=204						
SGST	Jiashian	2.25	218	*e*P	Pn	13 32 47.9	-0.8
	baz=217						
MATB	Ma-tsu	2.30	304	*e*P	Pn	13 32 48.1	-1.2
	baz=302						
VWUC	VWUC	2.39	273	*e*P	Pn	13 32 49.7	-0.7
	baz=272						
JTJ	Tarama	2.40	95	P	Pn	13 32 50.7	+0.2
JTJ				S	Sn	13 33 20.4	+0.8
SCST	Cishan	2.46	216	*e*P	Pn	13 32 52.3	+1.0
	baz=216						
ECL	Taimali	2.50	205	*e*P	Pn	13 32 52.4	+0.6
	baz=204						
TSCK	Chigu Township	2.51	227	*e*P	Pn	13 32 51.8	-0.2
	baz=226						
TWM1	Shoushan	2.55	217	*e*P	Pn	13 32 54.1	+1.6
	baz=216						
MASBT	Mashibuluo	2.62	211	*e*P	Pn	13 32 53.8	+0.3
	baz=210						
XPSS	Dashiqiu	2.65	321	*e*P	Pn	13 32 52.6	-1.2
	baz=319						
PHUB	P'eng-hu	2.66	240	*e*P	Pn	13 32 53.1	-0.9
	baz=239						
LYJJ	Jianjiangzhen	2.67	309	*e*P	Pn	13 32 53.6	-0.4
	baz=308						
EAST	Anshuo	2.73	205	*e*P	Pn	13 32 55.7	+0.7
	baz=204						
WDGT	Dungji	2.74	234	*e*P	Pn	13 32 54.4	-0.6
	baz=233						
JIRB	Irabujima	2.81	90	*e*P	Pn	13 32 56.5	+0.5
JIRB				S	Sn	13 33 30.2	+0.9
SCZT	Fangliau	2.83	208	*e*P	Pn	13 32 57.0	+0.7
	baz=208						
VCHM	Qimei	2.94	236	*e*P	Pn	13 32 56.9	-0.8
	baz=235						

DJA ***09*** *13:35:17.4±0.5, 5°S±4°×15°5E±°, h96*^{km}*±5*^{km}*, M4.9/20, mB5.2/6, mb4.8/20, MLv5.2/2, Mw(mB)4.5/6*

IDC ***09*** *13:35:18.9±0.6, 5°.14S×154°.96E, h80*^{km}*±4*^{km}*, mb4.4/21, mbtmp4.8/25, MS3.8/20, Error ellipse: s-maj=9.7km s-min=9.1km az=40.0*

NEIC ***09*** *13:35:18.9±2.1, 5°.06S±0°.07×154°.94E±0°.08, h83*^{km}*±6*^{km}*, mb4.9/93, Error ellipse: s-maj=12.7km s-min=9.5km az=53.0*

MOS ***09*** *13:35:18.3±1.0, 5°.09S×154°.96E, h91*^{km}*, mb4.9/30, Error ellipse: s-maj=11.1km s-min=7.0km az=93.0*

BJI ***09*** *13:35:19.0±0.0, 4°.68S×154°.70E, h74*^{km}*, mb5.0/57, mB5.0/26, Ms4.5/5, Ms7 4.3/6*

ISC 09 13:35:18.8±0.4**, 5°.13S**±0°.05×**154°.92E**±0°.05**, h84**^{km}±3^{km}**, h84**^{km}**:pP-P, n400, σ1**^{s}**.14**/411**, mb4.9**/104**, 14C-8D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	2.90	289		Pn	13 36 02.7	-0.3
KRVT	Keravat (AS076	3.00	286	P	Pn	13 36 04.0	-0.3
	1µm,0.5s,baz=230,slow=1.5,SNR=122						
KRVT				S	Sn	13 36 41.2	+2.0
	436nm,0.4s,baz=232,slow=19,SNR=4.7						
KRVT				LR	LR	13 37 25.8	
	comp=Z,712nm,21.3s,baz=250,slow=42						
HNR	Honiara	6.57	131	P	Pn	13 36 52.6	-0.2
	1µm,0.4s,baz=194,slow=2.7,SNR=8.7						
HNR				S	Sn	13 38 04.9	-1.5
	4µm,0.5s,baz=344,slow=23,SNR=12						
HNR				LR	LR	13 39 50.6	
	comp=Z,3µm,19.4s,baz=246,slow=42						
HNR	Honiara	6.57	131	Pn	Pn	13 36 52.0	-0.8
PMG	Port Moresby	8.80	241	P	Pn	13 37 25.1	+1.8
	85nm,0.4s,baz=60,slow=9.1,SNR=55						
PMG				S	Sn	13 39 04.1	+3.4
	18nm,0.7s,baz=350,slow=14,SNR=0.8						
PMG	Port Moresby	8.80	241	Pn	Pn	13 37 24.7	+1.5
PATS	Pohnpei	12.36	16	Pn	Pn	13 38 06.2	-5.5
COEN	Coen	14.53	232	Pn	Pn	13 38 42.1	+1.8
SMPI	Sarmi	16.48	280	P	P	13 39 06.4	+0.2
	55nm,0.7s,2µm						
CTA	Charters Tower	17.10	209	P	P	13 39 14.4	+1.3
	40nm,0.9s,baz=28,slow=12,SNR=23						
CTA				LR	LR	13 45 11.3	
	comp=Z,143nm,19.8s,baz=16,slow=35						
CTAO	Charters Tower	17.10	209	P	P	13 39 15.7	+2.6
CTAO	Charters Tower	17.10	209	P	P	13 39 15.7	+2.6
DZM	Mont Dzumac	20.20	148	P	Pn	13 39 48.6	-1.2
	4.3nm,0.4s,baz=256,slow=8.6,SNR=7.1						
	4.3nm,0.4s						
DZM	Mont Dzumac	20.20	148	P	P	13 39 46.4	-0.7
EIDS	Eidsvold	20.46	190	P	P	13 39 51.2	+1.4
OUENC	Ouen Island, N	20.70	147	P	P	13 39 51.7	-0.7
GUMO	Guam	21.10	332	P	P	13 39 58.4	+1.7
	85nm,0.6s,baz=181,slow=12,SNR=7.6						
	85nm,0.6s						
GUMO	Guam	21.10	332	P	P	13 39 56.0	-0.7
MTN	Manton Dam	24.70	250	P	P	13 40 32.4	+0.1
WB0	Warramunga Arr	24.72	232	P	P	13 40 33.1	+0.6
WB0				IAmb	IAmb	13 40 53.8	
	comp=Z,38nm,1.1s						
WRAB	Tennant Creek	24.85	232	P	P	13 40 34.1	+0.4
WRAB	Tennant Creek	24.85	232	P	P	13 40 34.1	+0.4
WRAB				pmax	pmax		
	comp=Z,21nm,0.8s						
WB2	Warramunga Arr	24.85	232	P	P	13 40 34.5	+0.8
WB2				IAmb	IAmb	13 40 35.2	
	comp=Z,19nm,0.6s						
WRA	Warramunga Arr	24.86	232	P	P	13 40 34.5	+0.7
	comp=Z,16nm,0.6s,baz=56,slow=9.9,SNR=152						
WRA				LR	LR	13 49 47.1	
	comp=Z,212nm,20.9s,baz=26,slow=35						
	comp=Z,16nm,0.6s						
WRA	Warramunga Arr	24.86	232	P	P	13 40 32.1	-1.7
WRA	Warramunga Arr	24.86	232	P	P	13 40 32.1	-1.7
ARMA	Armidale	25.35	187	P	P	13 40 39.2	+1.0
ARMA				IAmb	IAmb	13 41 03.9	
	comp=Z,49nm,1.2s						
H11S3	WAKE ISLAND Hy	26.18	26	T	T	14 08 35.8	
	baz=207,slow=74,SNR=168						
H11S2	WAKE ISLAND Hy	26.18	26	T	T	14 08 26.7	
	baz=207,slow=74,SNR=205						
H11S1	WAKE ISLAND Hy	26.20	26	T	T	14 08 25.4	
	baz=207,slow=74,SNR=244						
AS31	Alice Springs	27.38	226	P	P	13 40 56.1	-0.5
ASAR	Alice Springs	27.39	226	P	P	13 40 56.6	0.0
	comp=Z,2.0nm,0.4s,baz=58,slow=8.8,SNR=22						
ASAR				S	S	13 45 30.9	+0.1
	comp=Z,1.4nm,0.8s,baz=57,slow=13,SNR=4.5						
ASAR				LR	LR	13 51 15.4	
	comp=Z,229nm,21.9s,baz=50,slow=35						
	comp=Z,2.0nm,0.4s						
ASAR	Alice Springs	27.39	226	P	P	13 40 55.3	-1.3
KNRA	Kununurra	27.75	246	P	P	13 40 57.4	-2.4
KNRA				IAmb	IAmb	13 41 50.3	
	comp=Z,18nm,0.8s						
STKA	Stephens Creek	29.40	204	P	P	13 41 14.3	0.0
	comp=Z,1.7nm,0.6s,baz=29,slow=13,SNR=6.4						
STKA				LR	LR	13 52 04.1	
	comp=Z,206nm,21.4s,baz=16,slow=34						
	comp=Z,1.7nm,0.6s						
STKA	Stephens Creek	29.40	204	P	P	13 41 14.3	0.0
FITZ	Fitzroy Crossi	31.38	243	P	P	13 41 31.4	-0.5
BBOO	Buckleboo	32.69	210	P	P	13 41 42.4	-0.9
MRSI	Marisa	33.41	279	P	P	13 41 49.1	-0.7
	comp=Z,13nm,0.8s,comp=Z,487nm						
MPSI	Mapaga	35.40	278	P	P	13 42 05.9	-1.1
	comp=Z,24nm,0.7s						
FORT	Forrest	35.91	222	P	P	13 42 09.0	-2.2
FORT				IAmb	IAmb	13 42 48.8	
	comp=Z,21nm,0.9s						
MBWA	Marble Bar	37.66	242	P	P	13 42 24.9	-1.2
PSA00	Pilbara Seismi	37.70	241	P	P	13 42 25.7	-0.8
PSA00				IAmb	IAmb	13 42 39.3	
	comp=Z,30nm,1.8s						
KKM	Kota Kinabalu	40.20	286	P	P	13 42 46.2	-1.4
KKM				IAmb	IAmb	13 42 48.8	
	comp=Z,23nm,0.9s						
LTZ	Lake Taylor	40.54	160	P	P	13 42 51.0	+1.1
RPZ	Rata Peaks	40.98	162	P	P	13 42 54.1	+0.6
	comp=Z,5.7nm,0.8s,baz=0.0,slow=6.1,SNR=2.3						
	comp=Z,5.7nm,0.8s						
YULB	Yu-li	43.36	312	P	P	13 43 11.9	-1.2
NACB	Ninganchiao	43.62	313	P	P	13 43 14.7	-0.4
NACB				IAmb	IAmb	13 43 16.4	
	comp=Z,24nm,0.8s						
TPUB	Ta-pu	43.80	312	P	P	13 43 16.1	-0.5
MJAR	Matsushiro Arr	44.30	341	P	P	13 43 19.9	-0.5
	comp=Z,3.2nm,0.8s,baz=306,slow=0.5,SNR=7.4						
	comp=Z,3.2nm,0.8s						
MAJO	Matsushiro	44.30	341	P	P	13 43 19.8	-0.6
JNU	Nakatsue	44.35	331	P	P	13 43 20.6	-0.3
	comp=Z,32nm,0.8s,baz=135,slow=3.3,SNR=12						
	comp=Z,32nm,0.8s						
JNU	Nakatsue	44.35	331	P	P	13 43 20.6	-0.3
NWAO	Narrogin (SRO)	44.69	227	LR	LR	14 01 56.8	
	comp=Z,161nm,21.6s,baz=38,slow=36						
JHS	Saijyo	44.88	334	P	P	13 43 23.9	-1.2
KNMB	Chin-men Tao	46.15	311	P	P	13 43 34.6	-0.6
JTM	Tenmabayashi	47.42	346	P	P	13 43 44.3	-0.6
TJN	Taejon	48.68	330	⇓*e*P	P	13 43 54.2	-0.5
CGJI	Cibinong	48.98	266	P	P	13 43 50.2	-7.1
KSRS	Korea Array	49.27	332	P	P	13 43 59.2	+0.1
	comp=Z,5.4nm,0.8s,baz=148,slow=8.1,SNR=13						
	comp=Z,5.4nm,0.8s						
JKA	Kamikawa-asahi	50.26	348	P	P	13 44 06.6	+0.1
ASAJ	Asahikawa	50.26	348	P	P	13 44 07.8	+1.3
	comp=Z,14nm,0.6s,baz=224,slow=12,SNR=24						
	comp=Z,14nm,0.6s						
ASAJ	Asahikawa	50.26	348	P	P	13 44 06.6	+0.1
ASAJ				pmax	pmax		
	comp=Z,15nm,0.7s						
NJ2	Nanjing	50.44	320	*e*P	P	13 44 08.4	+0.3
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MDSI	Maura Dua	50.56	268	P	P	13 44 05.6	-3.7
YSS	Yuzh-Sakhalins	52.96	350	*de*P	P	13 44 27.5	+0.9
YSS				pmax	pmax		
	comp=Z,20nm,1.3s						
YSS	Yuzh-Sakhalins	52.96	350	P	P	13 44 27.4	+0.8
USA0B	Ussuriysk Arra	53.26	340	P	P	13 44 26.9	-2.0
USA0B	Ussuriysk Arra	53.26	340	P	P	13 44 26.9	-2.0
USA0B				pmax	pmax		
	comp=Z,32nm,1.0s						
USRK	Ussuriysk Ar.	53.26	340	P	P	13 44 29.9	+1.0
	comp=Z,21nm,0.8s,baz=163,slow=8.0,SNR=26						
	comp=Z,21nm,0.8s						
USRK	Ussuriysk Ar.	53.26	340	P	P	13 44 27.3	-1.6
SDSI	Sungai Dareh	53.56	273	P	P	13 44 27.3	-4.4
MDJ	Mudanjiang	54.49	338	P	P	13 44 38.9	+1.1
MDJ				pmax	pmax		
	comp=Z,23nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,280nm,11.0s						
MDJ	Mudanjiang	54.49	338	P	P	13 44 37.3	-0.5
MDJ	Mudanjiang	54.49	338	P	P	13 44 38.6	+0.8
MDJ				pP	pP	13 44 58.8	+0.9
KULM	Kulim	55.17	280	P	P	13 44 41.8	-1.6
KULM				IAmb	IAmb	13 46 28.7	
	comp=Z,23nm,1.5s						
CN2	Changchun	55.48	334	P	P	13 44 45.6	+0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ENH	Enshi	55.93	312	P	P	13 44 48.8	+0.3
ENH				pP	pP	13 45 08.8	-0.5
GYA	Guiyang	56.28	306	⇓*i*P	P	13 44 52.7	+1.5
GYA				pmax	pmax		
	comp=Z,15nm,0.8s						
HNS	HongShan	56.49	322	⇓P	P	13 44 52.9	+0.6
HNS				pP	pP	13 45 13.0	+0.3
HNS				pmax	pmax		
	comp=Z,12nm,1.3s						
KLR	Kul'dur	57.77	342	*c i*P	P	13 45 02.1	+1.0
KLR				pmax	pmax		
	comp=Z,38nm,1.3s						
GRNR	Gornyy	57.91	346	⇑*i*P	P	13 45 03.1	+1.0
GRNR				pmax	pmax		
	comp=N,5.0nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
PET	Petropavlovsk	58.02	3	P	P	13 45 02.0	-0.7
PET	Petropavlovsk	58.02	3	⇑*e*P	P	13 45 01.7	-1.0
PET				pmax	pmax		
	comp=Z,30nm,1.3s						
PEA0B	Petropavlovsk-	58.06	2	⇓*i*P	P	13 45 04.5	+1.4
PETK	Petropavlovsk-	58.06	2	P	P	13 45 03.5	+0.4
	comp=Z,34nm,1.0s,baz=168,slow=8.4,SNR=36						
PETK				pP	pP	13 45 23.4	+0.2
	comp=Z,5.0nm,0.7s,baz=175,slow=7.0,SNR=3.2						
PETK				LR	LR	14 05 57.9	
	comp=Z,72nm,20.8s,baz=148,slow=32						
	comp=Z,34nm,1.0s						
PETK	Petropavlovsk-	58.06	2	P	P	13 45 01.7	-1.4
XAN	Xi'an	58.32	315	P	P	13 45 06.4	+1.0
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KMI	Kunming	58.92	303	⇑P	P	13 45 11.4	+1.5
KMI				pmax	pmax		
	comp=Z,16nm,1.1s						
CRAI	Chiangrai	59.20	297	P	P	13 45 10.0	-1.6
CRAI				IAmb	IAmb	13 45 13.9	
	comp=Z,7.2nm,0.8s						
SHEM	Shemya Is, Ala	59.89	13	LR	LR	14 05 07.6	
	comp=Z,109nm,21.8s,baz=312,slow=30						
CMAR	Chiang Mai Arr	59.93	295	P	P	13 45 18.0	+1.3
	comp=Z,8.1nm,0.7s,baz=116,slow=5.3,SNR=58						
CMAR				pP	pP	13 45 38.6	+0.9
	comp=Z,3.3nm,0.7s,baz=112,slow=4.8,SNR=4.2						
	comp=Z,8.1nm,0.7s						
XLT	XiLinHaoTe	60.03	328	*e*P	P	13 45 17.9	+0.9
XLT				pP	pP	13 45 36.8	-0.8
XLT				pmax	pmax		
	comp=Z,11nm,1.2s						
XLT				pmax	pmax		
	comp=Z,150nm,10.4s						
HEH	HeiHe	60.06	340	*e*P	P	13 45 17.5	+0.6
HEH				pmax	pmax		
	comp=Z,30nm,0.8s						
PZH	PanZhiHua	60.29	304	P	P	13 45 19.7	+0.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,100nm,8.1s						
HHC	Hu-ho-hao-te	60.55	323	*e*P	P	13 45 21.0	+0.3
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,300nm,6.5s						
CD2	Chengdu	60.56	310	P	P	13 45 21.4	+0.6
CD2				pmax	pmax		
	comp=Z,40nm,0.6s						
HIA	Hailar	62.21	335	*ce*P	P	13 45 32.3	+0.7
HIA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HIA	Hailar	62.21	335	P	P	13 45 32.3	+0.7
HIA				pP	pP	13 45 52.1	0.0
TNCH	TengChong	62.44	302	*e*P	P	13 45 32.5	-1.3
TNCH				pmax	pmax		
	comp=Z,160nm,4.1s						
LZH	Lanzhou	62.94	315	*e*P	P	13 45 38.8	+1.9
LZH				pP	pP	13 46 01.1	+3.0
LZH				sP	sP	13 46 10.0	+2.7
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
ZEA	Zeya	63.09	342	*e*P	P	13 45 38.4	+1.2
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
MA2	Magadan	64.58	358	LR	LR	14 16 35.5	
	comp=Z,18nm,18.1s,baz=114,slow=38						
MA2	Magadan	64.58	358	P	P	13 45 46.8	-0.2
MA2	Magadan	64.58	358	*c i*P	P	13 45 47.4	+0.4
MA2				pmax	pmax		
	comp=Z,16nm,1.0s						
MA2	Magadan	64.58	358	P	P	13 45 47.0	+0.1
MA2				pP	pP	13 46 06.2	-1.4
NIKH	Nikolski High	65.46	23	P	P	13 45 52.3	-0.5
	baz=220						
UNV	Unalaska Valle	67.05	24	P	P	13 46 02.6	-0.2
	baz=222						
GTA	Gaotai	67.34	316	*e*P	P	13 46 06.5	+1.3
GTA				pP	pP	13 46 26.6	+0.4
GTA				sP	sP	13 46 34.3	-0.9
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ULN	Ulaanbaatar	67.40	327	*c i*P	P	13 46 06.4	+0.9
ULN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ULN	Ulaanbaatar	67.40	327	P	P	13 46 06.8	+1.3
ULN				pP	pP	13 46 27.0	+0.5
SONM	Songino Array	67.74	327	P	P	13 46 09.0	+1.4
	comp=Z,3.0nm,0.7s,baz=149,slow=6.0,SNR=22						
SONM				pP	pP	13 46 28.5	0.0
	comp=Z,1.4nm,0.6s,baz=140,slow=5.1,SNR=4.0						
	comp=Z,3.0nm,0.7s						
SONM	Songino Array	67.74	327	P	P	13 46 07.7	+0.1
SONM	Songino Array	67.74	327	P	P	13 46 07.7	+0.1
SONM				pmax	pmax		
	comp=Z,14nm,1.4s						
SEY	Seymchan	67.89	359	⇑*i*P	P	13 46 08.5	+0.4
SEY				pmax	pmax		
	comp=Z,18nm,1.7s						
FALS	False Pass	69.03	24	P	P	13 46 15.0	-0.2
	baz=225						
GOMU	GeErMu	69.55	312	P	P	13 46 20.7	+1.3
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
YAK	Yakutsk	69.73	348	*e*P	P	13 46 20.4	+1.0
YAK				*e**PP	pP	13 46 38.1	-2.1
YAK				*e*S	S	13 55 22.5	+1.0

YAK				e*SS	SKiKP	13 55 58.3	-0.8
YAK				*e*SS	SS	13 59 52.3	+0.7
YAK				pmax	pmax		
	comp=Z,50nm,1.6s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,5.0nm,2.0s						
YAK				smax	smax		
	comp=E,99nm,7.3s						
YAK				smax	smax		
	comp=N,67nm,4.8s						
S12K	Black Hills	70.18	24	P	P	13 46 22.5	+0.2
	baz=226						
SDPT	Sand Point	70.60	25	P	P	13 46 24.8	0.0
	baz=228						
ZAK	Zakamensk	70.88	328	*e*P	P	13 46 27.1	+0.2
ZAK				pmax	pmax		
	comp=Z,11nm,1.3s						
MOY	Mondy	72.79	328	*e*P	P	13 46 39.4	+1.1
MOY				pmax	pmax		
	comp=Z,12nm,1.6s						
R16K	Pilot Point	73.27	25	P	P	13 46 41.1	+0.3
	baz=230						
BILL	Bilibino	73.43	4	P	P	13 46 41.6	-0.1
BILL	Bilibino	73.43	4	*de*P	P	13 46 42.6	+1.0
BILL				*i*		13 47 02.0	
BILL				pmax	pmax		
	comp=Z,32nm,1.0s						
R17K	Ugashik Creek	73.81	25	P	P	13 46 44.3	+0.3
	baz=231						
P16K	Nushagak River	74.05	23	P	P	13 46 45.4	0.0
	baz=229						
Q16K	King Salmon	74.36	24	P	P	13 46 47.3	+0.1
	baz=231						
O16K	Kokwok River B	74.38	23	P	P	13 46 47.5	+0.2
	baz=229						
Q17K	Contact Creek	74.41	25	P	P	13 46 47.6	-0.1
	baz=232						
N16K	Nishlik Lake	74.71	22	P	P	13 46 50.2	+0.9
	baz=228						
O17K	Koliganek Bris	74.88	23	P	P	13 46 50.6	+0.4
	baz=230						
OHAK	Old Harbor	74.89	26	P	P	13 46 49.9	-0.4
	baz=234						
Q18K	Katmai Hardscr	75.01	25	P	P	13 46 51.0	-0.1
	baz=232						
ANM	Nome	75.47	17	P	P	13 46 53.4	-0.1
ANM				IAmb	IAmb	13 46 55.9	
	comp=Z,26nm,1.5s						
ANM	Nome	75.47	17	P	P	13 46 53.4	-0.1
ANM				pmax	pmax		
	comp=Z,27nm,1.5s						
ANM	Nome	75.47	17	P	P	13 46 54.3	+0.8
	baz=221,SNR=9.7						
TNA	Tin City	75.55	15	P	P	13 46 54.6	+0.7
	baz=218						
O18K	Koktuh Hills	75.67	23	P	P	13 46 54.8	0.0
	baz=232						
Q19K	Cape Douglas,	75.75	25	P	P	13 46 53.6	-1.7
Q19K	Cape Douglas,	75.75	25	P	P	13 46 55.0	-0.2
	baz=233						
O19K	Port Alsworth	76.24	23	P	P	13 46 57.4	-0.5
	baz=232						
SVW2	Sparrevohn	76.31	22	P	P	13 46 57.6	-0.8
SVW2				IAmb	IAmb	13 47 01.0	
	comp=Z,52nm,1.9s						
N19K	Bonanza Creek	76.55	23	P	P	13 46 59.2	-0.6
	baz=232						
O20K	Slope Mountain	76.85	24	P	P	13 47 01.5	0.0
	baz=234						
CNPM	China Poot	77.10	25	P	P	13 47 03.2	+0.3
L19K	White Mountain	77.26	22	P	P	13 47 04.2	+0.5
L19K				IAmb	IAmb	13 47 06.2	
	comp=Z,18nm,0.8s						
L19K	White Mountain	77.26	22	P	P	13 47 04.9	+1.2
	baz=232						
M19K	Big River Lodg	77.26	22	P	P	13 47 05.1	+1.4
	baz=232						
TTA	Tatalina	77.31	21	P	P	13 47 04.8	+0.8
TTA	Tatalina	77.31	21	P	P	13 47 04.8	+0.8
TTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TTA	Tatalina	77.31	21	P	P	13 47 05.0	+1.0
	baz=230						
BRLK	Bradley Lake	77.39	25	P	P	13 47 04.1	-0.3
WMQ	Urumqi	77.42	317	*e*P	P	13 47 05.3	+0.3
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
BRSE	Bradley Lake S	77.43	25	P	P	13 47 05.1	+0.4
	baz=236						
SPCR	Spurr Chakacha	77.67	23	P	P	13 47 05.7	-0.4
	baz=234						
M20K	Styx River	77.72	22	P	P	13 47 04.6	-1.7
M20K				IAmb	IAmb	13 47 08.7	
	comp=Z,12nm,0.9s						
M20K	Styx River	77.72	22	P	P	13 47 07.2	+0.8
	baz=233						
L20K	Farewell, AK	77.80	22	P	P	13 47 07.2	+0.4
	baz=232						
CAPN	Captain Cook N	77.84	24	P	P	13 47 07.5	+0.6
	baz=235						
SEW	Seward	78.17	25	P	P	13 47 09.5	+0.8
	baz=237						
GCSA	Galena City Sc	78.19	19	P	P	13 47 09.9	+1.2
	baz=229,SNR=11						
K20K	Telida	78.27	21	P	P	13 47 09.4	+0.1
K20K	Telida	78.27	21	P	P	13 47 10.8	+1.6
	baz=232						
O22K	Cooper Landing	78.27	25	P	P	13 47 09.8	+0.5
	baz=237						
SKT	Skwentna	78.39	23	P	P	13 47 09.0	-0.9
SKT				IAmb	IAmb	13 47 40.6	
	comp=Z,30nm,2.0s						
SKT	Skwentna	78.39	23	P	P	13 47 10.2	+0.2
	baz=235						
SUA	Susitna One	78.40	23	P	P	13 47 08.8	-1.3
SUA				IAmb	IAmb	13 48 09.2	
	comp=Z,23nm,1.0s						
SUA	Susitna One	78.40	23	P	P	13 47 10.3	+0.1
	baz=236						
TIXI	Tiksi	78.50	352	P	P	13 47 11.1	+0.7
TIXI				IAmb	IAmb	13 47 12.9	
	comp=Z,22nm,1.5s						
TIXI	Tiksi	78.50	352	⇓*i*P	P	13 47 11.0	+0.6
TIXI				pmax	pmax		
	comp=Z,14nm,1.4s						
RC01	Rabbit Creek A	78.60	24	P	P	13 47 10.5	-0.6
RC01				IAmb	IAmb	13 47 12.8	
	comp=Z,18nm,1.1s						
RC01	Rabbit Creek A	78.60	24	P	P	13 47 11.7	+0.6
	baz=237						
PPLA	Purkeypile	78.67	22	P	P	13 47 10.1	-1.6
PPLA				IAmb	IAmb	13 47 16.2	
	comp=Z,20nm,1.5s						
PPLA	Purkeypile	78.67	22	P	P	13 47 11.8	+0.2
	baz=234						
RDOG	Red Dog Mine	78.74	15	P	P	13 47 11.0	-0.8
RDOG	Red Dog Mine	78.74	15	P	P	13 47 13.4	+1.6
	baz=223						
M22K	Willow	78.81	23	P	P	13 47 12.2	-0.1
	baz=236						
P23K	Montague Islan	78.99	26	P	P	13 47 13.3	+0.1
	baz=239						
CAST	Castle Rocks	79.02	21	P	P	13 47 13.1	-0.3
CAST				IAmb	IAmb	13 47 14.8	
	comp=Z,12nm,0.8s						
CAST	Castle Rocks	79.02	21	P	P	13 47 13.7	+0.3
	baz=234,SNR=11						
PWL	Port Wells	79.05	25	P	P	13 47 13.3	-0.3
PWL	Port Wells	79.05	25	P	P	13 47 14.4	+0.8
	baz=238						
CUT	Chulitna	79.12	23	P	P	13 47 13.7	-0.2
	baz=236						
PMR	Palmer	79.12	24	P	P	13 47 14.2	+0.3
	baz=237						
CHUM	Lake Minchumin	79.21	21	P	P	13 47 15.5	+1.1
	baz=234,SNR=13						
KNK	Knik Glacier	79.29	24	P	P	13 47 15.8	+0.8
	baz=238						
KTH	Kantishna Hill	79.52	22	P	P	13 47 14.0	-2.2
SML	Sawmill	79.56	24	P	P	13 47 14.9	-1.5
SML	Sawmill	79.56	24	P	P	13 47 17.3	+0.9
	baz=238						
DGZ	Jazzator, Alta	79.62	322	*ce*P	P	13 47 17.8	+0.6
DGZ				pmax	pmax		
	comp=Z,13nm,1.0s						
TRF	Thorofare Moun	79.70	22	P	P	13 47 16.9	-0.4
TRF	Thorofare Moun	79.70	22	P	P	13 47 17.3	0.0
	baz=236						
M23K	Glacier View	79.79	24	P	P	13 47 18.2	+0.5
	baz=238						
BPAW	Bear Paw Mtn.	79.81	21	P	P	13 47 17.8	+0.1
	baz=235						
SCM	Sheep Creek Mo	79.97	24	P	P	13 47 19.4	+0.7
	baz=239						
EYAK	Cordova Ski Ar	79.98	26	P	P	13 47 19.3	+0.7
	baz=240						
IMAR	Indian Mountai	79.99	19	P	P	13 47 19.3	+0.7
I21K	Tanana	80.09	20	P	P	13 47 20.6	+1.5
	baz=234						
H21K	Melozitna Rive	80.10	19	P	P	13 47 20.0	+0.8
H21K	Melozitna Rive	80.10	19	P	P	13 47 20.3	+1.1
	baz=233						
MCK	McKinley	80.36	22	P	P	13 47 20.4	-0.3
MCK	McKinley	80.36	22	P	P	13 47 20.4	-0.3
MCK				pmax	pmax		
	comp=Z,27nm,0.9s						
MCK	McKinley	80.36	22	P	P	13 47 20.8	+0.2
	baz=237,SNR=19						
KLU	Klutina	80.38	25	P	P	13 47 21.4	+0.5
KLU				IAmb	IAmb	13 47 23.8	
	comp=Z,18nm,0.9s						
KLU	Klutina	80.38	25	P	P	13 47 21.8	+0.9
	baz=240						
G21K	Allakaket	80.40	19	P	P	13 47 21.8	+1.0
	baz=232						
MLY	Manley	80.44	20	P	P	13 47 20.7	-0.4
MLY				IAmb	IAmb	13 47 22.8	
	comp=Z,11nm,0.7s						
MLY	Manley	80.44	20	P	P	13 47 21.8	+0.7
	baz=235,SNR=21						
M24K	Tolsona, Glenn	80.58	24	P	P	13 47 21.5	-0.5
M24K	Tolsona, Glenn	80.58	24	P	P	13 47 23.4	+1.5
	baz=240,SNR=6.1						
H22K	Ishtalitna Cre	80.72	20	P	P	13 47 23.6	+1.1
	baz=234						
NEA2	Nenana	80.78	21	P	P	13 47 22.0	-0.9
NEA2				IAmb	IAmb	13 47 23.8	
	comp=Z,11nm,0.7s						
NEA2	Nenana	80.78	21	P	P	13 47 22.8	-0.1
	baz=237,SNR=16						
F21K	Alatna River	80.84	18	P	P	13 47 23.9	+0.8
	baz=232						
I23K	Minto, Yukon-K	80.99	21	P	P	13 47 22.3	-1.6
I23K				IAmb	IAmb	13 50 26.3	
	comp=Z,8.5nm,0.6s						
I23K	Minto, Yukon-K	80.99	21	P	P	13 47 24.7	+0.8
	baz=236,SNR=7.7						
N25K	Chitina, Valde	80.99	25	P	P	13 47 25.3	+1.2
	baz=241						
WRH	Wood River Hil	81.07	22	P	P	13 47 24.5	+0.1
WRH				IAmb	IAmb	13 47 24.8	
	comp=Z,10.0nm,1.0s						
HARP	HAARP	81.14	24	P	P	13 47 25.9	+1.0
	baz=241						
CCB	Clear Creek Bu	81.27	21	P	P	13 47 24.3	-1.1
MDM	Murphy Dome	81.28	21	P	P	13 47 24.9	-0.6
VRDI	Verde Repeater	81.29	26	P	P	13 47 26.4	+0.5
VRDI				IAmb	IAmb	13 47 27.4	
	comp=Z,11nm,0.8s						
PAX	Paxson	81.30	23	P	P	13 47 26.1	+0.3
	baz=240						
H23K	Yukon River	81.30	20	P	P	13 47 26.3	+0.7
H23K	Yukon River	81.30	20	P	P	13 47 26.6	+1.0
	baz=236,SNR=11						
TCOL	CIGO, UAF Yank	81.37	21	P	P	13 47 25.9	0.0
	baz=238,SNR=5.7						
COLA	College	81.38	21	*c i*P	P	13 47 26.0	0.0
COLA				pmax	pmax		
	comp=Z,17nm,0.9s						
COLA	College	81.38	21	P	P	13 47 25.7	-0.2
	baz=238						
F22K	John River	81.42	18	P	P	13 47 27.2	+1.0
	baz=233						
HDA	Harding Lake	81.46	22	P	P	13 47 24.5	-2.0
HDA	Harding Lake	81.46	22	P	P	13 47 26.5	+0.1
	baz=239,SNR=6.1						
MCARA	McCarthy VSAT	81.55	25	P	P	13 47 27.5	+0.5
MCARA				IAmb	IAmb	13 47 29.8	
	comp=Z,27nm,1.1s						
MCARA	McCarthy VSAT	81.55	25	P	P	13 47 28.2	+1.2
	baz=243						
K24K	Donnelly Dome	81.59	23	P	P	13 47 28.0	+0.8
	baz=240,SNR=6.6						
G23K	Bananza Creek	81.64	19	P	P	13 47 28.6	+1.2
	baz=236,SNR=13						
POKR	Poker Plat Res	81.66	21	P	P	13 47 27.4	-0.1
	baz=238						
IL31		81.67	22	P	P	13 47 26.1	-1.4
ILAR	Eielson Array	81.67	22	P	P	13 47 27.1	-0.4
	comp=Z,4.6nm,0.8s,baz=114,slow=24,SNR=4.1						
ILAR				pP	pP	13 47 48.3	-0.6
	comp=Z,2.1nm,0.9s,baz=235,slow=5.7,SNR=3.6						
ILAR				LR	LR	14 18 29.4	
	comp=Z,89nm,21.9s,baz=216,slow=32						
	comp=Z,4.6nm,0.8s						
ILAR	Eielson Array	81.67	22	P	P	13 47 25.4	-2.2
COLD	Coldfoot	81.87	19	P	P	13 47 27.2	-1.4
COLD				IAmb	IAmb	13 47 31.4	
	comp=Z,18nm,1.4s						
COLD	Coldfoot	81.87	19	P	P	13 47 29.2	+0.7
	baz=235						
H24K	Noodor Dome	81.88	20	P	P	13 47 28.9	+0.2
	baz=238						
E22K	Anaktuvuk Pass	81.90	18	P	P	13 47 30.0	+1.2
	baz=234						
RIDG	Independent Ri	81.92	23	P	P	13 47 28.1	-0.9
RIDG				IAmb	IAmb	13 47 30.9	
	comp=Z,34nm,1.5s						
RIDG	Independent Ri	81.92	23	P	P	13 47 29.5	+0.5
	baz=241,SNR=7.4						
MK31	Makanchi Array	81.96	319	P	P	13 47 29.9	+0.3
MK31	Makanchi Array	81.96	319	P	P	13 47 29.9	+0.3
MK31				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MKAR	Makanchi Array	81.96	319	P	P	13 47 30.3	+0.8
	comp=Z,6.9nm,0.8s,baz=96,slow=6.1,SNR=64						
	comp=Z,6.9nm,0.8s						
MKAR	Makanchi Array	81.96	319	P	P	13 47 29.1	-0.5
BARN	Barnard Glacie	82.00	26	P	P	13 47 29.1	-0.5
BARN				IAmb	IAmb	13 47 32.0	
	comp=Z,13nm,0.9s						
M26K	Nabesna, AK	82.03	25	P	P	13 47 30.0	+0.4
M26K	Nabesna, AK	82.03	25	P	P	13 47 30.4	+0.9
	baz=243						
CTG	Chitna Glacier	82.09	26	P	P	13 47 31.3	+1.2
	baz=244,SNR=6.0						
CTGM	Chitina Glacie	82.10	26	P	P	13 47 30.0	-0.1
CTGM				IAmb	IAmb	13 47 32.4	
	comp=Z,17nm,0.9s						
MAKZ	Makanchi	82.17	318	P	P	13 47 29.3	-1.3
MAKZ				IAmb	IAmb	13 47 32.4	
	comp=Z,11nm,0.8s						
MAKZ	Makanchi	82.17	318	P	P	13 47 29.3	-1.3
MAKZ				pmax	pmax		
	comp=Z,11nm,0.9s						
L26K	Log Cabin Wild	82.17	24	P	P	13 47 31.3	+1.0
	baz=242,SNR=10						
LOGN	Logan Glacier	82.18	26	P	P	13 47 30.8	+0.2
LOGN				IAmb	IAmb	13 50 01.3	
	comp=Z,22nm,1.3s						
DOT	Dot Lake	82.18	23	P	P	13 47 30.8	+0.5
DOT				IAmb	IAmb	13 47 32.3	
	comp=Z,21nm,0.8s						
PINM	Pinnacle	82.21	27	P	P	13 47 31.6	+1.0
	baz=246						
SCRK	Sand Creek	82.37	23	P	P	13 47 30.6	-0.8
SCRK				IAmb	IAmb	13 47 33.4	
	comp=Z,15nm,1.1s						
SCRK	Sand Creek	82.37	23	P	P	13 47 32.1	+0.7
	baz=242,SNR=15						
PNL	Peninsula	82.43	28	P	P	13 47 32.7	+1.0
	baz=246						
M27K	Edge Creek, AK	82.47	25	P	P	13 47 33.8	+1.7
	baz=244						
G24K	Hadweenzic Riv	82.48	20	P	P	13 47 33.0	+1.2
	baz=238						
O28M	Mount Upton	82.52	27	P	P	13 47 33.7	+1.2
	baz=245						
E23K	Chandalar	82.53	18	P	P	13 47 33.8	+1.7
	baz=236						
PRP	Porcupine Dome	82.55	21	P	P	13 47 33.7	+1.3
	baz=240						
ZAA0	Zalesovo Array	82.60	326	P	P	13 47 32.0	-0.7
ZALV	Zalesovo Beam	82.60	326	P	P	13 47 32.8	+0.1
	comp=Z,2.6nm,0.5s,baz=110,slow=5.0,SNR=16						
ZALV				LR	LR	14 27 16.5	
	comp=Z,18nm,18.1s,baz=79,slow=38						
	comp=Z,2.6nm,0.5s						
ZALV	Zalesovo Beam	82.60	326	P	P	13 47 32.4	-0.3
D23K	Nanushuk River	82.73	17	P	P	13 47 34.7	+1.7
	baz=235						
F24K	Squaw Lake	82.78	19	P	P	13 47 35.0	+1.6
	baz=238						
J26L	Joseph Creek	82.78	23	P	P	13 47 33.0	-0.5
J26L	Joseph Creek	82.78	23	P	P	13 47 34.4	+0.9
	baz=242						
L27K	Beaver Creek,	82.81	24	P	P	13 47 33.2	-0.4
L27K				IAmb	IAmb	13 47 36.1	
	comp=Z,11nm,0.8s						
L27K	Beaver Creek,	82.81	24	P	P	13 47 35.2	+1.6
	baz=244						
YUK3	Moose Creek	82.83	26	P	P	13 47 35.2	+1.3
	baz=245,SNR=7.8						
BCAR	Beaver Creek A	82.83	24	P	P	13 47 33.4	-0.3
E24K	Your Creek	82.89	18	P	P	13 47 35.2	+1.3
	baz=237						
YUK8	Steele Glacier	82.92	26	P	P	13 47 36.2	+1.7
	baz=246,SNR=10						
BVCY	Beaver Creek	82.93	25	P	P	13 47 35.9	+1.7
	baz=245,SNR=5.2						
G25K	Bearman Lake	82.98	20	P	P	13 47 35.8	+1.4
	baz=239,SNR=11						
O29M	Mount Kennedy	83.06	27	P	P	13 47 36.4	+1.3
	baz=247						
FYU	Fort Yukon	83.18	20	P	P	13 47 35.9	+0.5
FYU				IAmb	IAmb	13 47 38.7	
	comp=Z,12nm,0.6s						
S31K	Pelican	83.31	30	P	P	13 47 37.5	+1.4
	baz=249						
I26K	Coal Creek Min	83.31	22	P	P	13 47 36.8	+0.7
I26K				IAmb	IAmb	13 50 47.9	
	comp=Z,9.6nm,0.6s						
I26K	Coal Creek Min	83.31	22	P	P	13 47 37.0	+0.9
	baz=242						
YUK6	Outpost Mounta	83.41	27	P	P	13 47 38.6	+1.6
	baz=247						
YUK4	Talbot Arm	83.44	26	P	P	13 47 39.0	+1.9
	baz=247,SNR=12						
F25K	Christian Rive	83.56	19	P	P	13 47 38.9	+1.5
	baz=240						
C24K	Franklin Bluff	83.73	17	P	P	13 47 39.5	+1.4
	baz=236						
P30M	Million Dollar	83.74	28	P	P	13 47 40.0	+1.5
	baz=248						
HYT	Haines Junctio	83.75	27	P	P	13 47 39.0	+0.3
HYT	Haines Junctio	83.75	27	P	P	13 47 40.3	+1.7
	baz=248,SNR=25						
PLBC	Pleasant Camp	83.78	29	P	P	13 47 39.7	+1.1
	baz=249						
BMAR	Burnt Mountain	83.83	20	P	P	13 47 39.5	+0.7
EGAK	Eagle	83.83	23	P	P	13 47 38.0	-0.7
EGAK				IAmb	IAmb	13 47 41.1	
	comp=Z,13nm,0.9s						
EGAK	Eagle	83.83	23	P	P	13 47 40.2	+1.4
	baz=244,SNR=12						
E25K	Arctic Village	83.85	19	P	P	13 47 40.4	+1.5
	baz=240						
G26K	Porcupine Rive	83.87	20	P	P	13 47 40.7	+1.8
	baz=242						
M29M	Somme Creek	83.95	25	P	P	13 47 40.9	+1.3
	baz=247						
I27K	Kandik River	84.02	22	P	P	13 47 41.0	+1.2
	baz=244,SNR=13						
F26K	Sheenjek River	84.11	20	P	P	13 47 41.7	+1.6
	baz=241						
N30M	Aishikik Lake	84.18	27	P	P	13 47 42.0	+1.4
	baz=248						
D25K	Kavik River	84.21	18	P	P	13 47 41.8	+1.2
	baz=239						
DAWY	Dawson	84.22	24	P	P	13 47 41.0	+0.1
DAWY				IAmb	IAmb	13 47 43.6	
	comp=Z,8.1nm,0.9s						
DAWY	Dawson	84.22	24	P	P	13 47 42.3	+1.5
	baz=246,SNR=7.6						
U33K	Whale Pass	84.30	32	P	P	13 47 42.7	+1.4
	baz=252						
H27K	Steamboat Moun	84.34	21	P	P	13 47 43.0	+1.6
	baz=244						
L29M	L29M	84.36	25	P	P	13 47 43.2	+1.6
	baz=247						
O30N	Mendenhall	84.38	27	P	P	13 47 43.0	+1.3
	baz=249,SNR=6.5						
G27K	Doyon Strip	84.55	21	P	P	13 47 44.2	+1.8
	baz=244						
M30M	Minto, Yukon	84.72	26	P	P	13 47 44.7	+1.4
	baz=248,SNR=6.5						
KSH	Kashi	84.75	310	P	P	13 47 44.9	+0.7
KSH				pP	pP	13 48 04.5	-1.7
KSH				sP	sP	13 48 19.8	+4.7
KSH				pmax	pmax		
	comp=Z,15nm,0.8s						
KSH				pmax	pmax		
	comp=Z,110nm,7.2s						
N31M	Braeburn, Yuko	84.77	27	P	P	13 47 45.2	+1.6
	baz=249,SNR=7.3						
QSPA	South Pole Qui	84.84	180	P	P	13 47 44.4	+0.3
K29M	Barlow Dome	84.89	24	P	P	13 47 46.0	+1.6
	baz=248						
C26K	Camden Bay	84.96	18	P	P	13 47 46.3	+2.0
	baz=240						
P32M	Atlin	85.09	29	P	P	13 47 46.4	+1.1
	baz=251						
I29M	Ogilvie Camp,	85.17	23	P	P	13 47 46.5	+0.9
	baz=247						
C27K	Jago River	85.18	18	P	P	13 47 47.1	+1.7
	baz=241						
E27K	Coleen River	85.19	20	P	P	13 47 47.2	+1.6
	baz=243						
KURK	Kurchatov	85.33	322	P	P	13 47 45.9	-0.7
KURK				IAmb	IAmb	13 47 47.9	
	comp=Z,15nm,1.0s						
KURK	Kurchatov	85.33	322	*c i*P	P	13 47 46.5	-0.1
KURK				pmax	pmax		
	comp=Z,21nm,1.3s						
Q32M	Nakina River	85.60	30	P	P	13 47 49.4	+1.4
	baz=253						
M31M	Drury Creek, Y	85.64	26	P	P	13 47 48.5	+0.5
M31M				IAmb	IAmb	13 47 50.0	
	comp=Z,8.3nm,0.8s						
M31M	Drury Creek, Y	85.64	26	P	P	13 47 48.8	+0.9
	baz=250,SNR=7.6						
TKM2	Tokmak 2	85.68	314	P	P	13 47 49.8	+1.0
	SNR=20						
P33M	Teslin, Yukon	85.72	28	P	P	13 47 49.1	+0.6
	baz=252						
S34M	Telegraph Cree	85.87	31	P	P	13 47 50.7	+1.5
	baz=254,SNR=8.6						
N32M	Quiet Lake	85.89	28	P	P	13 47 50.3	+1.0
	baz=252						
T35M	Bob Quinn	86.07	32	P	P	13 47 51.5	+1.3
	baz=254						
BBB	Bella Bella	86.08	37	LR	LR	14 19 26.8	
	comp=Z,41nm,20.2s,baz=177,slow=31						
KBK	Karagaybulak	86.10	313	P	P	13 47 52.0	+1.2
	SNR=7.4						
FARO	Faro, Yukon	86.11	26	P	P	13 47 50.5	+0.2
FARO				IAmb	IAmb	13 47 52.5	
	comp=Z,20nm,1.4s						
FARO	Faro, Yukon	86.11	26	P	P	13 47 51.3	+1.0
	baz=251,SNR=5.6						
EPYK	Eagle Plains	86.17	22	P	P	13 47 51.8	+1.3
	baz=248						
CHMS	Chumysh	86.30	314	P	P	13 47 52.5	+0.8
	SNR=6.8						
UCH	Uchtor	86.34	313	P	P	13 47 53.8	+1.4
	SNR=10						
AAK	Ala-Archa	86.42	313	P	P	13 47 53.7	+1.3
	SNR=6.9						
AAK	Ala-Archa	86.42	313	*c i*P	P	13 47 53.2	+0.8
AAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
USP	Ospenovka	86.53	314	P	P	13 47 53.4	+0.6
	SNR=11						
G30M	tAoh Zraii Nji	86.58	22	P	P	13 47 53.3	+0.9
	baz=248						
DLBC	Dease Lake	86.58	31	P	P	13 47 53.8	+1.1
	baz=255,SNR=5.2						
AML	Almayashu	86.92	313	P	P	13 47 56.5	+1.3
	SNR=10						

EKS2	**Erkin-Say**	86.95	313	P	P	13 47 56.0	+1.0
	SNR=6.1						
NRIK	**Noril'sk**	86.96	341	P	P	13 47 54.2	0.0
	comp=Z,6.2nm,0.8s,baz=115,slow=4.3,SNR=8.3						
	comp=Z,6.2nm,0.8s						
NRIK	**Noril'sk**	86.96	341	P	P	13 47 53.8	-0.5
NRIK				IAmb	IAmb	13 47 55.3	
	comp=Z,8.3nm,1.0s						
NRIK	**Noril'sk**	86.96	341	*ce*P	P	13 47 54.4	+0.2
NRIK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WTLY	**Watson Lake, Y**	87.62	29	P	P	13 47 59.1	+1.5
	baz=256						
F31M	**Tsiigehtchic**	87.64	21	P	P	13 47 58.5	+1.0
	baz=251						
YBH	**Yreka Blue Hor**	87.70	48	LR	LR	14 19 21.8	
	comp=Z,88nm,22.0s,baz=272,slow=30						
INK	**Inuvik**	88.00	21	LR	LR	14 23 40.1	
	comp=Z,77nm,19.8s,baz=240,slow=33						
INK	**Inuvik**	88.00	21	P	P	13 47 59.0	-0.2
INK				IAmb	IAmb	13 48 01.0	
	comp=Z,19nm,1.2s						
INK	**Inuvik**	88.00	21	P	P	13 47 59.0	-0.2
INK				pmax	pmax		
	comp=Z,19nm,1.2s						
INK	**Inuvik**	88.00	21	P	P	13 47 59.9	+0.7
	baz=251						
CWC	**Cottonwood Cre**	90.60	54	P	P	13 48 13.7	+1.3
	baz=264						
NVAR	**Mina Array Bea**	90.62	52	P	P	13 48 14.3	+1.8
	comp=Z,3.1nm,1.0s,baz=255,slow=7.2,SNR=16						
NVAR				pP	pP	13 48 36.0	+1.8
	comp=Z,1.2nm,0.9s,baz=241,slow=5.8,SNR=3.1						
	comp=Z,3.1nm,1.0s						
BRVK	**Borovoye**	90.83	323	P	P	13 48 10.4	-2.5
BRVK				IAmb	IAmb	13 48 13.4	
	comp=Z,9.1nm,1.0s						
BRVK	**Borovoye**	90.83	323	*c i*P	P	13 48 12.2	-0.6
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MPMC	**Manual Prospec**	91.03	54	P	P	13 48 15.6	+1.1
	baz=264						
FURC	**Furnace Creek,**	91.58	54	P	P	13 48 18.3	+1.7
	baz=265						
C36M	**Paulatuk**	91.59	21	P	P	13 48 16.4	+0.4
	baz=260						
MONP2	**Monument Peak**	91.62	57	P	P	13 48 18.4	+1.2
	baz=265						
PFO	**Pinyon Flats O**	91.65	57	LR	LR	14 22 55.9	
	comp=Z,32nm,20.0s,baz=306,slow=31						
A36M	**Sachs Harbour**	91.70	18	P	P	13 48 16.9	+0.5
	baz=259						
SHOC	**Shoshone, Teco**	92.00	54	P	P	13 48 20.2	+1.5
	baz=265						
BELC	**Belle Mtn. Jos**	92.07	56	P	P	13 48 20.6	+1.4
	baz=265						
TPNV	**Topopah Spring**	92.11	53	P	P	13 48 20.8	+1.4
	baz=265						
SWSC	**Sam W. Stewart**	92.15	57	P	P	13 48 20.4	+1.0
	baz=265						
NEW	**Newport**	92.42	42	LR	LR	14 23 39.3	
	comp=Z,59nm,20.4s,baz=262,slow=31						
NEW	**Newport**	92.42	42	P	P	13 48 21.5	+1.1
	baz=265						
BC3	**Big Chuckawall**	92.49	57	P	P	13 48 22.1	+1.0
	baz=266						
R11A	**Troy Canyon, C**	92.75	52	P	P	13 48 23.7	+1.4
	baz=266						
IRM	**Iron Mountain**	92.79	56	P	P	13 48 24.1	+1.7
	baz=266						
PLID	**Pearl Lake**	92.94	45	P	P	13 48 22.6	-0.5
PLID				IAmb	IAmb	13 48 24.3	
	comp=Z,3.1nm,0.8s						
GLA	**Glamis**	92.97	57	P	P	13 48 25.0	+1.7
	baz=266						
PDMCI	**Parker Dam,Lak**	93.63	56	P	P	13 48 28.0	+1.8
	baz=266						
HLID	**Hailey**	93.98	47	P	P	13 48 29.3	+1.4
	baz=267						
YKA	**Yellowknife Ar**	94.73	28	P	P	13 48 31.4	+0.9
	comp=Z,4.7nm,0.8s,baz=266,slow=4.6,SNR=66						
YKA				pP	pP	13 48 51.9	-0.3
	comp=Z,1.6nm,0.8s,baz=266,slow=4.5,SNR=4.9						
YKA				LR	LR	14 29 42.9	
	comp=Z,32nm,18.6s,baz=314,slow=34						
	comp=Z,4.7nm,0.8s						
YKA	**Yellowknife Ar**	94.73	28	P	P	13 48 30.0	-0.6
BOZ	**Bozeman (W)**	96.04	45	P	P	13 48 37.7	+0.5
	baz=269						
LPIG	**La Paz**	96.42	66	LR	LR	14 22 53.6	
	comp=Z,39nm,21.8s,baz=282,slow=30						
ABKAR	**Akbulak array**	97.10	319	P	P	13 48 39.2	-2.5
PDAR	**Pinedale Array**	97.50	48	P	Pdif	13 48 44.3	+0.2
	comp=Z,0.6nm,0.8s,baz=229,slow=4.0,SNR=4.4						
PDAR				LR	LR	14 26 34.2	
	comp=Z,43nm,20.3s,baz=264,slow=32						
	comp=Z,0.6nm,0.8s						
MNK	**Minsk**	114.96	329	*i* PKP	PKiKP	13 53 47.5	-2.4
	comp=E,3.0nm,0.9s						
MNK				*i* PKP	PKiKP	13 53 47.5	-2.4
	comp=N,29nm,1.1s,baz=61						
MNK				*i* PKP	PKiKP	13 53 47.5	-2.4
	comp=Z,5.0nm,0.8s						
MNK				*i* pPKP	pPKiKP	13 54 10.0	-2.6
MNK				*i* PP	PP	13 54 47.6	-2.1
MNK				*i* PPP	PPP	13 57 12.3	
MNK				*i* SKP		13 57 14.7	
MNK				*i* PKS	PKSdf	13 57 23.3	-3.1
MNK				*i* SKS	SKSdf	14 00 51.1	-3.4
MNK				*i* SS	SS	14 10 38.0	-0.7
MNK				*i* SSS	SSS	14 14 53.9	
MNK				*i* LQ	LQ	14 36 06.7	
MNK				*i* LR	LR	14 43 32.1	
MNK				*i* LRM	MLR	14 46 02.3	
	comp=Z,56nm,12.2s						
MNK				*i* LRM	MLR	14 46 17.8	
	comp=E,38nm,27.7s						
MNK				*i* LRM	MLR	14 46 46.8	
	comp=N,1µm,15.5s						
MNK	**Minsk**	114.96	329	*i* PKIKP	PKiKP	13 53 47.5	-2.4
MNK				*i*		13 54 10.0	
MNK				*i*		13 54 47.6	
MNK				*i*		13 57 23.2	
MNK				*i*		14 00 51.1	
MNK				*i* SS	SS	14 10 38.0	-0.7
MNK				*i* SSS	SSS	14 14 53.9	
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,29nm,1.1s						
AKASG	**Malin Array Be**	115.98	325	PKP	PKPdf	13 53 52.1	+0.1
	comp=N,2.2nm,0.6s,baz=64,slow=2.4,SNR=7.1						
AKBB	**Malin Array Si**	115.98	325	⇓*i*PKIKP	PKiKP	13 53 51.1	-0.9
BRG	**Berggiesshubel**	123.98	331	*e*PKP	PKiKP	13 54 08.7	+1.0
BRG				Amp		13 54 09.4	
	comp=Z,4.9nm,0.8s						
BRG	**Berggiesshubel**	123.98	331	*e*PKIKP	PKiKP	13 54 08.7	+1.0
BRG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CLL	**Collm**	124.14	332	*i* PKPdf	PKiKP	13 54 08.6	+0.6
	comp=Z,5.0nm,0.6s						
CLL	**Collm**	124.14	332	*i* PKIKP	PKiKP	13 54 08.6	+0.6
CLL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GERES	**GERESS Array B**	125.42	329	PKP	PKiKP	13 54 11.5	+0.7
	comp=Z,2.3nm,0.7s,baz=73,slow=1.8,SNR=17						
LPAZ	**La Paz**	132.40	117	PKP	PKiKP	13 54 26.4	+0.1
	comp=Z,2.2nm,0.6s,baz=262,slow=3.6,SNR=8.0						
ESDC	**Sonseca Array**	140.67	334	PKP	PKPdf	13 54 40.5	+1.3
	comp=Z,0.4nm,0.6s,baz=5.4,slow=2.7,SNR=5.1						
BDFB	**Brasilia**	149.32	133	PKPbc	PKiKP	13 55 00.1	-0.3
	comp=Z,4.4nm,0.6s,baz=225,slow=4.6,SNR=5.7						
TORD	**Torodi Ar. Bea**	152.41	289	PKPbc	PKPbc	13 55 05.6	-0.8
	comp=Z,0.9nm,0.4s,baz=42,slow=2.0,SNR=20						

ISK 09 13:40:26.5,39°.56N×26°.06E,h8km,ML2.2/14,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GPNR	**Gulpinar-Canak**	0.12	150	Pg	Pg	13 40 29.6	+0.5
GPNR				Sg	Sg	13 40 31.9	+1.0
EZN	**Ezine**	0.34	38	Pg	Pg	13 40 33.9	+0.8
EZN				Sg	Sg	13 40 38.8	+1.2
SIGR	**SIGRI**	0.38	204	Pg	Pg	13 40 34.7	+0.8
SIGR				Sg	Sg	13 40 40.2	+1.3
COMU	**Canakkale**	0.63	31	Pg	Pb	13 40 39.2	-0.6
COMU				Sg	Sb	13 40 48.5	-0.2
GADA	**Gvkgeada**	0.64	349	Pg	Pb	13 40 39.5	-0.5
DKL	**Dikili**	0.82	126	Pg	Pb	13 40 42.8	-0.2
CANM	**Can-anakkale**	0.89	59	Pg	Pb	13 40 44.3	+0.1
GELI	**Tayfur-Gelibol**	0.90	21	Pg	Pb	13 40 44.1	-0.2
GELI				Sg	Sb	13 40 57.2	+0.7
LPK	**Lapseki**	0.98	33	Pg	Pb	13 40 45.7	0.0
LPK				Sg	Sb	13 40 59.5	+0.8
ERIK	**Erikli-Kesan**	1.16	17	Pn	Pg	13 40 48.7	-0.1
ERIK				Sn	Sn	13 41 05.3	+0.1
ENEZ	**Enez**	1.18	4	Pn	Pn	13 40 49.7	+0.4
KRBG	**Karabiga-Canak**	1.27	48	Pn	Pg	13 40 50.8	0.0
URLA	**Izmir**	1.27	161	Pn	Pn	13 40 50.2	-0.4
ALN	**Alexandroupoli**	1.34	360	Pn	Pg	13 40 52.0	-0.1
GONE	**Gonen-Balikesi**	1.35	68	Pn	Pn	13 40 51.6	0.0
RKY	**Sarkoy-Tekirda**	1.42	37	Pn	Pn	13 40 52.9	+0.2
EDC	**Edincik**	1.60	60	Pn	Pn	13 40 55.2	+0.1

*MDD **09** 13:51:18.7±0.4,36°.04N×0°.70W,h28km,mb_Lg2.2/6, Error ellipse: s-maj=5.0km s-min=4.6km az=43.0*

*CRAAG **09** 13:51:20.3,35°.87N×0°.67W,Ml3.1,Algerie 18km NW Oran*

ISC 09 13:51:14.6±1.0,36°.26N±0°.04×0°.66W±0°.05,h10km,n14,σ1§09/15,Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USTO	**Oran**	0.53	171	P	Pb	13 51 26.1	+0.1
OTSS	**Djebel Tessala**	0.98	187	P	Pg	13 51 32.9	-0.6
ODJA	**Bouhanifia**	1.01	156	P	Pn	13 51 34.9	-0.1
OKGL	**Djebel Kef Gue**	1.07	102	P	Pn	13 51 37.8	+2.0
ENIJ	**Nijar**	1.44	300	Pn	Pg	13 51 42.2	0.0
ENIJ				Sn	Sb	13 51 59.8	-0.1
ENIJ				*i* Vmb_Lg		13 52 00.7	
EMUR	**La Murta**	1.65	344	Pn	Pg	13 51 47.0	+0.8
EMUR				*i* Vmb_Lg		13 52 16.3	
EZAR	**Zarzadilla de**	1.81	333	Pn	Pg	13 51 49.9	+0.4
EZAR				*i* Vmb_Lg		13 52 13.3	
EBER	**Berja**	1.91	290	Pn	Pn	13 51 47.9	+0.6
EBER				*i* Vmb_Lg		13 52 24.6	
EQUE	**Quentar**	2.43	294	Pn	Pb	13 51 57.7	-0.8
EQUE				*i* Vmb_Lg		13 52 21.7	
ELGU	**Los Guajares,**	2.47	285	Pn	Pn	13 51 54.7	-0.3
EQES	**Quesada**	2.47	309	Pn	Pb	13 51 59.5	+0.3
ETOB	**Tobarra**	2.48	344	Pn	Pg	13 52 00.8	-1.5
EIBI	**Ibiza**	3.19	29	Pn	Pb	13 52 09.6	-1.7
ECAB	**El Cabril**	4.21	297	Pn	Pn	13 52 20.6	+1.7

WEL 09 14:50:52.2±1.0,38°S±8°×18°0W±°,h33km,M3.2/8, ML3.5/12,MLv3.2/8,Error ellipse: s-maj=0.0km s-min=0.0km az=5.9,confirmed,East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	1.43	265	P	Pn	14 51 16.1	+0.3
WMGZ				S	Sn	14 51 34.1	+0.7
MXZ	**Matakaoa Point**	1.52	275	P	Pn	14 51 17.3	+0.2
MXZ				S	Sn	14 51 36.7	+1.0
PUZ	**Puketiti**	1.59	256	P	Pn	14 51 17.8	-0.2
PUZ				S	Sn	14 51 38.4	+0.9
PKGZ	**Pakihiroa**	1.70	263	P	Pn	14 51 19.5	-0.1
PKGZ				S	Sn	14 51 39.8	-0.5
CNGZ	**Carnagh Statio**	1.77	243	P	Pn	14 51 20.7	+0.3
CNGZ				S	Sn	14 51 40.9	-0.9
TWGZ	**Tauwhareparae**	1.83	254	P	Pn	14 51 21.2	-0.1
TWGZ				S	Sn	14 51 44.3	+0.9
HAZ	**Te Kaha**	1.93	268	P	Pn	14 51 22.9	+0.3
HAZ				S	Sn	14 51 46.5	+0.8
TKGZ	**Te Karaka**	2.01	248	P	Pn	14 51 23.7	0.0
TKGZ				S	Sn	14 51 48.8	+1.1
RUGZ	**Raukumara Rang**	2.02	262	P	Pn	14 51 24.0	-0.1
RIGZ	**Rimuhau**	2.18	242	P	Pn	14 51 26.0	-0.2
RIGZ				S	Sn	14 51 52.7	+0.7
MHGZ	**Mahia Peninsul**	2.32	231	P	Pn	14 51 27.6	-0.5
MHGZ				S	Sn	14 51 57.5	+2.0
RAGZ	**Rawiri**	2.34	249	P	Pn	14 51 29.4	+0.9
RAGZ				S	Sn	14 51 56.9	+0.7
SNGZ	**Shannon Statio**	2.51	244	P	Pn	14 51 30.6	-0.1
SNGZ				S	Sn	14 52 00.3	+0.2
RTZ	**Ruatahuna**	2.71	249	P	Pn	14 51 34.0	+0.5
RTZ				S	Sn	14 52 05.1	0.0
RAHZ	**Arahi**	2.74	243	P	Pn	14 51 34.2	+0.3
RAHZ				S	Sn	14 52 06.8	+0.8
MUGZ	**Murupara**	2.82	253	P	Pn	14 51 36.1	+1.1
MUGZ				S	Sn	14 52 07.9	0.0
MTHZ	**Maungataniwha**	2.89	245	P	Pn	14 51 36.0	0.0
MTHZ				S	Sn	14 52 10.1	+0.5
ARHZ	**Aropaoanui**	2.97	237	P	Pn	14 51 37.5	+0.5
ARHZ				S	Sn	14 52 11.5	+0.1
ALRZ	**Allen Road**	3.17	253	P	Pn	14 51 42.3	+2.5
MRHZ	**Matea Rd**	3.19	248	P	Pn	14 51 40.3	+0.1
MCHZ	**McNeill Hill**	3.26	237	P	Pn	14 51 41.1	+0.1
MCHZ				S	Sn	14 52 18.8	+0.2
BKZ	**Black Stump Fm**	3.27	242	P	Pn	14 51 40.8	-0.4
KAHZ	**Kahuranaki**	3.34	230	P	Pn	14 51 41.1	-1.1
KWHZ	**Kaweka Forest**	3.43	239	P	Pn	14 51 42.8	-0.7
PXZ	**Pawanui**	3.50	227	P	Pn	14 51 42.3	-2.0
KUZ	**Kuaotunu**	3.71	283	P	Pn	14 51 46.4	-0.7
BHHZ	**Black Hill Sta**	3.71	240	P	Pn	14 51 46.6	-0.6
WPHZ	**Waipukurau**	3.77	230	P	Pn	14 51 46.2	-1.8
PRHZ	**Porangahau**	3.79	226	P	Pn	14 51 46.2	-2.1
ETVZ	**East Tongariro**	3.81	247	P	Pn	14 51 51.2	+2.4
PNHZ	**Pukenui**	3.84	234	P	Pn	14 51 48.1	-0.9
MOVZ	**Moawhango**	3.89	243	P	Pn	14 51 51.1	+1.4
WNVZ	**Wahianoa**	3.97	244	P	Pn	14 51 51.8	+0.9
TRVZ	**Turoa**	3.99	245	P	Pn	14 51 52.7	+1.4
TSZ	**Takapari Road**	4.07	233	P	Pn	14 51 50.6	-1.5
MTVZ	**Mangateitei**	4.08	244	P	Pn	14 51 54.1	+1.8
DVHZ	**Dannevirke**	4.08	229	P	Pn	14 51 50.5	-1.8
BFZ	**Birch Farm**	4.29	225	P	Pn	14 51 51.8	-3.2
PRWZ	**Pori Road**	4.36	228	P	Pn	14 51 54.3	-1.8
POWZ	**Post Office Ro**	4.38	231	P	Pn	14 51 55.1	-1.3
HBAZ	**Herne Bay Bore**	4.45	279	P	Pb	14 52 06.3	-3.3
TIWZ	**Tintock**	4.55	226	S	Sn	14 52 47.1	-3.4
WAZ	**Wanganui**	4.57	242	P	Pn	14 52 01.4	+2.4
MRZ	**Mangatainoka R**	4.66	229	P	Pn	14 51 57.7	-2.6
HOWZ	**Holdsworth Sta**	4.84	227	P	Pn	14 51 59.6	-3.2
MTW	**Mount Morrison**	5.02	225	P	Pn	14 52 01.5	-3.7
CAW	**Cannon Point**	5.24	228	P	Pn	14 52 05.0	-3.2
CTZ	**Chatham Island**	6.49	159	P	Pn	14 52 25.3	-0.1
CTZ				S	Sn	14 53 31.9	-6.4
QRZ	**Quartz Range**	6.73	240	P	Pn	14 52 25.9	-2.8
LTZ	**Lake Taylor**	7.91	228	P	Pn	14 52 41.4	-3.5

DJA 09 14:55:04.0±1.1,2°N±5°×12°8E±°,h193km±9km,M3.8/7, mb3.7/4,mB4.8/1,MLv3.9/7,Mw(mB)4.1/1,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	**Labuha**	2.47	184	P	Pn	14 55 47.2	+0.1
SGSI	**Sangihe**	2.81	311	P	Pn	14 55 49.4	-1.7
SANI	**Sanana**	4.21	203	P	Pn	14 56 09.7	+1.5
SANI				S	Sn	14 56 57.4	-1.3
GTOI	**Gorontalo**	4.80	256	P	Pn	14 56 18.2	+2.5
NLAI	**Namlea**	5.08	186	P	Pn	14 56 19.5	+0.2
	11nm,0.7s,0.1nm						
LUWI	**Luwuk**	5.66	240	P	Pn	14 56 27.0	+0.1

*ISK **09** 15:10:13.9,37°.39N×36°.02E,h1km,ML3.4/26*

*DDA **09** 15:10:14.4±0.0,37°.39N×36°.02E,h1km,MW3.5*

ISC 09 15:10:15.0±1.1,37°.35N±0°.02×36°.00E±0°.02,h4km±10km, n49,σ1§20/73,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOZT	**Kozan**	0.19	312	Pg	Pg	15 10 18.7	0.0
KOZT				Sg	Sg	15 10 21.4	+0.2
ANDN	**Andirin**	0.35	50	SPECP		15 10 21.0	
ANDN				P	Pb	15 10 21.8	-2.1
ANDN				S	Sb	15 10 28.2	-1.7
CEYT	**Ceyhan**	0.40	211	Pg	Pg	15 10 22.4	-0.2
CEYT				Sg	Sb	15 10 30.9	-0.1
AKO	**Adana**	0.46	284	SPECP		15 10 23.0	
AKO				P	Pg	15 10 24.0	+0.2
AKO				S	Sb	15 10 31.6	-1.1
AKO				*i* AML	AML	15 10 32.0	
	comp=E,1µm,0.4s						
AKO				*i* AML	AML	15 10 35.0	
	comp=N,1µm,0.8s						
AKO				*i* AML	AML	15 10 41.0	
	comp=Z,776nm,0.5s						
KAMA	**Osmaniye**	0.56	107	SPECP		15 10 25.0	
KAMA				P	Pg	15 10 25.3	-0.3
KAMA				S	Sg	15 10 33.2	+0.4
KAMA				*i* AML	AML	15 10 35.0	
	comp=E,410nm,0.7s						
KAMA				*i* AML	AML	15 10 43.0	
	comp=Z,323nm,0.6s						
KAMA				*i* AML	AML	15 10 44.0	
	comp=N,350nm,0.3s						
KMRS	**Kahramanmaras**	0.73	78	Pg	Pg	15 10 28.5	-0.5
KMRS				Sg	Sb	15 10 39.5	-1.1
KARA	**Karaisali**	0.76	263	Pg	Pg	15 10 29.4	-0.2
KARA				Sg	Sb	15 10 41.6	+0.1
KAHM	**Kahramanmaras,**	0.80	78	SPECP		15 10 29.0	
KAHM				P	Pg	15 10 29.8	-0.5
KAHM				S	Sb	15 10 41.6	-1.0
KAHM				*i* AML	AML	15 10 45.0	
	comp=Z,485nm,1.1s						
KAHM				*i* AML	AML	15 10 45.0	
	comp=N,1µm,0.7s						
KAHM				*i* AML	AML	15 10 45.0	
	comp=E,604nm,0.4s						
YAHY	**KAYSERI_Yahyal**	0.90	326	SPECP		15 10 31.0	
YAHY				P	Pb	15 10 31.8	-1.4
YAHY				S	Sb	15 10 44.3	-1.3
GAZ	**Gaziantep**	0.98	100	Pg	Pb	15 10 33.7	-0.8
GAZ				Sg	Sb	15 10 48.1	+0.2
KUZU	**Kuzuini**	1.03	124	SPECP		15 10 35.0	
KUZU				P	Pb	15 10 35.2	-0.3
KUZU				S	Sn	15 10 50.6	-0.6
DED	**Mersin**	1.04	248	SPECP		15 10 34.0	
DED				P	Pg	15 10 34.0	-0.8
DED				S	Sb	15 10 49.3	-0.2
ASUZ	**Hatay-Arsuz**	1.07	190	SPECP		15 10 35.0	
ASUZ				P	Pg	15 10 35.4	-0.1
ASUZ				S	Sn	15 10 52.5	+0.4
SARI	**SarD1z-Kayseri**	1.10	17	Pg	Pb	15 10 35.1	-1.6
NIDE	**Nigde/Merkez-G**	1.17	304	SPECP		15 10 37.0	
NIDE				P	Pb	15 10 37.1	-0.7
NIDE				S	Sn	15 10 53.9	-0.8
RHAN	**Hatay/Reyhanl**	1.19	156	SPECP		15 10 38.0	
RHAN				P	Pn	15 10 38.2	-0.2
RHAN				S	Sg	15 10 53.3	+0.1
GZT	**Gaziantep**	1.24	89	SPECP		15 10 38.0	
GZT				P	Pb	15 10 38.4	-0.6
GZT				S	Sn	15 10 56.4	-0.2
ELBS	**KAHRAMANMARAS**	1.32	42	SPECP		15 10 40.0	
ELBS				P	Pn	15 10 40.5	+0.2
ELBS				S	Sn	15 11 01.9	+3.5
NZIP	**Nizip/Gaziante**	1.37	103	SPECP		15 10 40.0	
NZIP				P	Pg	15 10 40.3	-0.9
NZIP				S	Sn	15 11 00.1	+0.6
AKCA	**Adyaman/G¶l**	1.41	71	SPECP		15 10 41.0	
AKCA				P	Pb	15 10 41.2	-0.7
AKCA				S	Sn	15 11 02.9	+2.4
KERG	**Konya-Eregli**	1.50	273	SPECP		15 10 41.0	
KERG				P	Pn	15 10 41.8	-0.9
KERG				S	Sg	15 11 02.3	-0.8
BNN	**Bunyan**	1.50	355	Pn	Pb	15 10 42.5	-1.0
GUNE	**Kayseri**	1.58	349	SPECP		15 10 45.0	
GUNE				P	Pg	15 10 45.5	+0.3
GUNE				S	Sg	15 11 09.8	+4.1
DARE	**Darende-Malaty**	1.69	43	Pn	Pb	15 10 45.2	-1.4
CUGUR	**Gurin_SVAS**	1.70	36	P	Pg	15 10 47.1	-0.3
CUGUR				S	Sg	15 11 13.3	+3.9
AVNS	**Nevsehir-Avano**	1.71	328	SPECP		15 10 48.0	
AVNS				P	Pg	15 10 48.5	+0.7
AVNS				S	Sg	15 11 10.7	+0.7
GULA	**Gulagac**	1.71	306	Pn	Pb	15 10 45.9	-1.2
KIZK	**Mersin**	1.73	240	Pn	Pn	15 10 45.9	+0.2
KIZK	**Mersin**	1.73	240	SPECP		15 10 46.0	
KIZK				P	Pb	15 10 46.9	-0.3
KIZK				S	Sg	15 11 12.1	+1.7
YESY	**Yesilyurt**	1.85	284	Pn	Pn	15 10 47.8	+0.3
SILI	**Silifke-Mersin**	1.94	240	Pn	Pn	15 10 49.4	+0.8
KOZK	**Kozakli-Nevseh**	2.06	335	Pn	Pb	15 10 50.8	-2.2
SIRC	**Yozgat**	2.09	341	SPECP		15 10 53.0	
SIRC				P	Pg	15 10 53.6	-1.4
SULT	**Sultanhani-AKS**	2.15	294	Pn	Pn	15 10 52.3	+0.7
IKL	**Isikli**	2.17	240	Pn	Pn	15 10 52.6	+0.8
KRMN	**Karaman**	2.19	266	Pn	Pn	15 10 52.8	+0.5
AKSY	**AKSARAY - Alti**	2.19	307	SPECP		15 10 55.0	
AKSY				P	Pg	15 10 55.9	-1.1
URFA	**Urfa**	2.25	87	Pn	Pn	15 10 52.9	-0.1
AKKU	**Akkuyu-Mersin**	2.30	240	Pn	Pn	15 10 54.5	+0.8
EREN	**Erenkoy**	2.34	220	Pn	Pn	15 10 55.6	+1.4
YAYX	**Yaylak**	2.34	313	Pn	Pn	15 10 55.1	+0.7
YOZ	**Yozgat**	2.35	347	Pn	Pn	15 10 54.5	+0.1
BERE	**Bereket-Mersin**	2.45	247	Pn	Pn	15 10 56.2	+0.4
SERE	**Sereflikochisa**	2.50	310	Pn	Pn	15 10 56.9	+0.4
ARPR	**Arapgir-MALATY**	2.53	46	Pn	Pn	15 10 57.2	+0.3
CDAG	**Cicekdag**	2.60	331	P	Pg	15 11 04.6	-0.3
TEKE	**Tekeli-Mersin**	2.62	243	Pn	Pn	15 10 59.4	+1.4
SVSK	**Karacayir**	2.68	17	Pn	Pn	15 10 59.1	+0.3
KAMT	**Kaman**	2.70	319	Pn	Pn	15 10 59.6	+0.3

ROM 09 15:18:50.5±0.0,43°.055N±0°.002×13°.061E±0°.004, h9km,ML2.1/34,16C-7D,Error ellipse: s-maj=0.3km s-min=0.1km az=85.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	0.04	272	P	Pg	15 18 52.5	+0.2
T1219				S	Sg	15 18 53.6	-0.1
T1219				AML	AML		
	comp=E,9225µm,0.4s						
T1219				AML	AML		
	comp=N,12700µm,0.3s						
T1219				AML	AML		
	comp=E,9225µm,0.4s						
T1219				AML	AML		
	comp=E,8670µm,0.4s						
T1219				AML	AML		
	comp=E,9220µm,0.4s						
T1219				AML	AML		
	comp=N,12700µm,0.3s						
T1219				AML	AML		
	comp=N,13350µm,0.3s						
T1220	**Camerino, Fraz**	0.06	20	P	Pg	15 18 52.7	+0.2
T1220				S	Sg	15 18 54.1	+0.1
T1220				AML	AML		
	comp=E,23750µm,1.1s						
T1220				AML	AML		
	comp=N,18700µm,1.1s						
T1220				AML	AML		
	comp=E,21800µm,0.4s						
T1220				AML	AML		
	comp=N,18650µm,1.1s						
FEMA	**Monte Fema**	0.09	185	⇑P	Pg	15 18 53.5	+0.4
FEMA				S	Sg	15 18 55.5	+0.7
CSP1	**Cessapalombo**	0.11	70	P	Pg	15 18 53.6	+0.3
CSP1				S	Sg	15 18 55.7	+0.5
CSP1				AML	AML		
	comp=E,1930µm,0.1s						
CSP1				AML	AML		
	comp=N,3560µm,0.2s						
SEF1	**Sefro**	0.12	318	P	Pg	15 18 54.0	+0.5
SEF1				S	Sg	15 18 56.2	+0.8
CESI	**CESI - Serrava**	0.12	247	AML	AML		
	comp=N,1415µm,0.3s						
CESI				AML	AML		
	comp=E,1230µm,0.6s						
CESI				AML	AML		
	comp=N,1415µm,1.7s						
CESI				AML	AML		
	comp=E,1230µm,1.4s						
MDAR	**Monte D'Aria**	0.15	23	P	Pg	15 18 54.3	+0.5
MDAR				S	Sg	15 18 57.0	+0.8
T1216	**Preci, Frazion**	0.17	191	⇑P	Pg	15 18 54.7	+0.6
T1216				S	Sg	15 18 57.8	+1.3
T1216				AML	AML		
	comp=E,2225µm,0.3s						
T1216				AML	AML		
	comp=N,1805µm,0.9s						
T1216				AML	AML		
	comp=N,1805µm,0.9s						

T1216				AML	AML		
	comp=E,2225µm,0.3s						
MC2	**Monte Cornacci**	**0.17**	**146**	⇑P	Pg	15 18 54.8	+0.6
MC2				S	Sg	15 18 57.5	+0.7
GAG1	**Gagliole**	**0.18**	**2**	P	Pg	15 18 55.2	+0.8
GAG1				S	Sg	15 18 58.8	+1.7
SSM1	**San Severino M**	**0.19**	**26**	P	Pg	15 18 55.2	+0.6
SSM1				S	Sg	15 18 58.8	+1.5
GUMA	**Gualdo di Mace**	**0.20**	**88**	⇑P	Pg	15 18 55.6	+0.9
GUMA				AML	AML		
	comp=N,3700µm,0.2s						
GUMA				AML	AML		
	comp=E,2510µm,0.3s						
GUMA				AML	AML		
	comp=E,4425µm,0.3s						
GUMA				AML	AML		
	comp=N,2965µm,0.2s						
SNTG	**Esanatoglia**	**0.22**	**336**	P	Pg	15 18 55.5	+0.5
SNTG				S	Sg	15 18 59.6	+1.5
SNTG				AML	AML		
	comp=E,952µm,1.1s						
SNTG				AML	AML		
	comp=N,712µm,0.5s						
SNTG				AML	AML		
	comp=N,738µm,0.5s						
SNTG				AML	AML		
	comp=E,952µm,1.2s						
SNTG				AML	AML		
	comp=E,950µm,0.4s						
SNTG				AML	AML		
	comp=N,711µm,0.5s						
SNTG				AML	AML		
	comp=N,738µm,1.5s						
SNTG				AML	AML		
	comp=N,711µm,1.5s						
SNTG				AML	AML		
	comp=E,952µm,0.8s						
T1245	**Castelsantange**	**0.22**	**155**	⇑P	Pg	15 18 55.7	+0.6
T1245				S	Sg	15 18 59.7	+1.6
T1245				AML	AML		
	comp=N,1095µm,0.4s						
T1245				AML	AML		
	comp=E,1125µm,0.3s						
T1245				AML	AML		
	comp=N,1076µm,0.3s						
T1245				AML	AML		
	comp=E,1170µm,0.3s						
T1245				AML	AML		
	comp=N,1095µm,1.6s						
MMO1	**Montemonaco**	**0.25**	**128**	⇑P	Pg	15 18 56.2	+0.6
EL6	**Elcito**	**0.28**	**6**	⇑P	Pg	15 18 56.6	+0.5
EL6				AML	AML		
	comp=N,1580µm,0.2s						
EL6				AML	AML		
	comp=E,1450µm,0.2s						
ASSB	**Assisi San Ben**	**0.29**	**268**	P	Pg	15 18 57.0	+0.6
ASSB				AML	AML		
	comp=N,1291µm,1.1s						
ASSB				AML	AML		
	comp=E,793µm,0.4s						
T1212	**Cascia, Frazio**	**0.30**	**182**	⇑P	Pg	15 18 57.2	+0.6
T1212				S	Sb	15 19 02.3	-0.9
T1212				AML	AML		
	comp=N,959µm,0.3s						
T1212				AML	AML		
	comp=E,790µm,0.8s						
T1214	**Arquata del Tr**	**0.31**	**160**	⇓P	Pg	15 18 57.3	+0.5
T1214				S	Sb	15 19 02.8	-0.8
T1214				AML	AML		
	comp=E,388µm,0.2s						
T1214				AML	AML		
	comp=E,372µm,1.6s						
T1214				AML	AML		
	comp=E,372µm,1.6s						
T1214				AML	AML		
	comp=N,336µm,0.2s						
T1214				AML	AML		
	comp=E,388µm,0.2s						
T1214				AML	AML		
	comp=E,372µm,0.4s						
T1214				AML	AML		
	comp=N,356µm,0.2s						
FOSV	**Fossato di Vic**	**0.33**	**318**	⇓P	Pb	15 18 58.0	-0.5
FOSV				AML	AML		
	comp=E,188µm,1.1s						
FOSV				AML	AML		
	comp=N,220µm,0.2s						
FOSV				AML	AML		
	comp=E,188µm,0.9s						
FOSV				AML	AML		
	comp=N,220µm,1.8s						
T1241	**Roccafluvione,**	**0.34**	**126**	⇑P	Pg	15 18 57.8	+0.6
T1241				AML	AML		
	comp=E,231µm,1.5s						
T1241				AML	AML		
	comp=N,196µm,0.7s						
T1241				AML	AML		
	comp=E,232µm,1.5s						
T1217	**Poggiodomo (PG**	**0.35**	**196**	P	Pg	15 18 58.1	+0.6
T1217				S	Sb	15 19 04.0	-0.7
T1217				AML	AML		
	comp=N,556µm,1.3s						
T1217				AML	AML		
	comp=E,235µm,0.1s						
T1217				AML	AML		
	comp=N,556µm,1.3s						
T1217				AML	AML		
	comp=N,556µm,0.7s						
T1218	**Civita (PG)**	**0.39**	**174**	P	Pg	15 18 58.6	+0.5
T1218				S	Sb	15 19 05.0	-0.7
T1218				AML	AML		
	comp=N,620µm,0.2s						
T1218				AML	AML		
	comp=E,436µm,0.1s						
T1218				AML	AML		
	comp=N,647µm,0.2s						
T1218				AML	AML		
	comp=E,487µm,0.1s						
T1218				AML	AML		
	comp=N,620µm,0.2s						
T1218				AML	AML		
	comp=N,647µm,0.2s						
SSFR	**Montelago di S**	**0.43**	**332**	P	Pb	15 18 59.7	-0.6
SSFR				AML	AML		
	comp=E,580µm,0.2s						
SSFR				AML	AML		
	comp=N,844µm,1.2s						
SSFR				AML	AML		
	comp=E,567µm,0.2s						
SSFR				AML	AML		
	comp=N,656µm,1.2s						
SSFR				AML	AML		
	comp=N,844µm,0.8s						
SSFR				AML	AML		
	comp=N,656µm,0.8s						
MOMA	**Monte Martano**	**0.44**	**235**	⇑P	Pg	15 18 59.6	+0.5
MOMA				AML	AML		
	comp=N,318µm,0.1s						
MOMA				AML	AML		
	comp=E,281µm,1.2s						
MOMA				AML	AML		
	comp=E,281µm,0.8s						
MURB	**Monte Urbino**	**0.44**	**298**	S	Sb	15 19 07.7	+0.3
MURB				AML	AML		
	comp=E,85µm,0.4s						
MURB				AML	AML		
	comp=N,77µm,0.2s						
MURB				AML	AML		
	comp=N,376µm,0.2s						
MURB				AML	AML		
	comp=E,441µm,0.2s						
ARVD	**Arcevia**	**0.45**	**349**	⇑P	Pg	15 18 59.8	+0.4
ARVD				AML	AML		
	comp=N,371µm,0.2s						
ARVD				AML	AML		
	comp=E,436µm,1.6s						
ARVD				AML	AML		
	comp=E,436µm,0.4s						
SMA1	**SAN MARTINO**	**0.47**	**154**	⇑P	Pg	15 19 00.2	+0.5
SMA1				AML	AML		
	comp=N,224µm,0.5s						
SMA1				AML	AML		
	comp=N,224µm,1.5s						
SMA1				AML	AML		
	comp=E,197µm,1.6s						
PP3	**Marolino**	**0.52**	**51**	⇓P	Pb	15 19 02.1	+0.4
PP3				AML	AML		
	comp=E,500µm,1.2s						
PP3				AML	AML		
	comp=N,386µm,1.6s						
PP3				AML	AML		
	comp=N,370µm,0.4s						
PP3				AML	AML		
	comp=N,386µm,1.6s						
PP3				AML	AML		
	comp=N,386µm,0.4s						
PP3				AML	AML		
	comp=E,436µm,1.2s						
ARRO	**Arrone**	**0.52**	**205**	S	Sb	15 19 09.4	0.0
ARRO				AML	AML		
	comp=E,197µm,0.2s						
ARRO				AML	AML		
	comp=N,147µm,0.2s						
T1211	**Morro Reatino**	**0.54**	**196**	⇓P	Pg	15 19 01.4	+0.4
T1211				S	Sb	15 19 11.0	+0.9
T1211				AML	AML		
	comp=N,347µm,0.7s						
T1211				AML	AML		
	comp=E,201µm,0.2s						
T1211				AML	AML		
	comp=N,253µm,0.2s						
T1211				AML	AML		
	comp=E,204µm,1.1s						
T1211				AML	AML		
	comp=E,200µm,0.2s						
T1211				AML	AML		
	comp=E,204µm,0.9s						
T1211				AML	AML		
	comp=N,253µm,1.8s						
RM33	**Pellescritta (**	**0.56**	**168**	⇓P	Pg	15 19 01.6	+0.2
RM33				AML	AML		
	comp=N,112µm,0.2s						
RM33				AML	AML		
	comp=N,112µm,1.8s						
RM33				AML	AML		
	comp=E,205µm,1.5s						
CESX	**Cesi**	**0.57**	**219**	S	Sb	15 19 10.5	-0.3
CESX				AML	AML		
	comp=N,206µm,0.2s						
CESX				AML	AML		
	comp=E,224µm,0.2s						
ATVO	**AVT- Monte Val**	**0.58**	**305**	⇑P	Pg	15 19 02.2	+0.4
ATVO				AML	AML		
	comp=E,67µm,1.4s						
ATVO				AML	AML		
	comp=N,50µm,1.5s						
ATVO				AML	AML		
	comp=N,50µm,0.5s						
TERO	**Teramo**	**0.59**	**137**	⇓P	Pg	15 19 02.0	+0.1
TERO				AML	AML		
	comp=N,138µm,0.6s						
TERO				AML	AML		
	comp=E,118µm,0.5s						
TERO				AML	AML		
	comp=N,144µm,0.6s						
TERO				AML	AML		
	comp=E,130µm,1.6s						
MPAG	**Monte Paganucc**	**0.61**	**339**	⇑P	Pb	15 19 03.0	-0.5
MPAG				S	Sb	15 19 13.4	+1.2
MPAG				AML	AML		
	comp=E,132µm,0.4s						
MPAG				AML	AML		
	comp=N,186µm,0.2s						
PIEI	**Pieia**	**0.62**	**322**	⇑P	Pg	15 19 02.8	+0.4
PIEI				S	Sb	15 19 13.3	+1.1
PIEI				AML	AML		
	comp=N,69µm,0.6s						
PIEI				AML	AML		
	comp=E,111µm,0.1s						
FSSB	**Fossombrone**	**0.67**	**342**	⇑P	Pb	15 19 04.2	-0.2
FSSB				S	Sb	15 19 15.2	+1.5
FSSB				AML	AML		
	comp=E,454µm,0.3s						
FSSB				AML	AML		
	comp=E,454µm,1.7s						
FSSB				AML	AML		
	comp=N,982µm,0.3s						
APEC	**Apecchio**	**0.69**	**317**	⇓P	Pg	15 19 03.8	0.0
APEC				AML	AML		
	comp=E,58µm,0.8s						
APEC				AML	AML		
	comp=N,68µm,1.4s						
APEC				AML	AML		
	comp=E,58µm,1.2s						
APEC				AML	AML		
	comp=N,68µm,0.6s						
FIAM	**Fiamignano**	**0.79**	**177**	S	Sb	15 19 18.2	+1.0
FIAM				AML	AML		
	comp=E,45µm,0.7s						
FIAM				AML	AML		
	comp=N,40µm,1.3s						
FIAM				AML	AML		
	comp=N,40µm,0.7s						

ROM 09 15:31:50.2±0.1**,43°.460N**±0°.004×**12°.348E**±0°.005**,**
h10^{km},ML1.2/7**,12C-6D,Error ellipse: s-maj=0.4km**
s-min=0.1km az=236.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATPI	**Pietralunga -**	**0.04**	**103**	⇓P	Pg	15 31 52.1	0.0
ATPI				S	Sg	15 31 53.2	-0.3
ATVO	**AVT- Monte Val**	**0.09**	**151**	⇑P	Pg	15 31 53.0	+0.4
ATVO				S	Sg	15 31 54.9	+0.6
ATVO				AML	AML		
	comp=N,194µm,0.8s						
ATVO				AML	AML		
	comp=E,248µm,0.2s						
ATVO				AML	AML		
	comp=N,194µm,1.2s						
BADI	**Badiali**	**0.09**	**304**	⇑P	Pg	15 31 53.0	+0.4
BADI				S	Sg	15 31 54.9	+0.5
APEC	**Apecchio**	**0.11**	**28**	⇓P	Pg	15 31 53.5	+0.5
APEC				S	Sg	15 31 55.8	+0.9
APEC				AML	AML		
	comp=E,225µm,0.2s						
APEC				AML	AML		
	comp=N,142µm,0.4s						
APEC				AML	AML		
	comp=E,225µm,1.8s						
ATMI	**Monte Miggiano**	**0.14**	**205**	P	Pg	15 31 54.0	+0.6
ATMI				S	Sg	15 31 56.6	+1.1
ATMI				AML	AML		
	comp=E,133µm,0.6s						
ATMI				AML	AML		
	comp=N,126µm,0.3s						
ATMI				AML	AML		
	comp=E,133µm,1.4s						
PIEI	**Pieia**	**0.16**	**61**	⇑P	Pg	15 31 54.1	+0.5
PIEI				S	Sg	15 31 57.5	+1.4
PIEI				AML	AML		
	comp=E,181µm,0.2s						
PIEI				AML	AML		
	comp=N,140µm,0.3s						
ATFO	**Monte Foce - G**	**0.19**	**120**	P	Pg	15 31 54.8	+0.6
ATFO				S	Sg	15 31 58.1	+1.2
ATFO				AML	AML		
	comp=N,112µm,0.4s						
ATFO				AML	AML		
	comp=E,155µm,0.5s						
PARC	**Parchiule**	**0.20**	**337**	P	Pg	15 31 55.1	+0.6
PARC				S	Sg	15 31 58.8	+1.4
PARC				AML	AML		
	comp=N,51µm,1.3s						
PARC				AML	AML		
	comp=E,52µm,0.1s						
MURB	**Monte Urbino**	**0.23**	**147**	⇑P	Pg	15 31 55.7	+0.7
MURB				S	Sg	15 32 00.1	+1.8
MURB				AML	AML		
	comp=E,98µm,0.2s						
MURB				AML	AML		
	comp=N,80µm,0.2s						
MURB				AML	AML		
	comp=N,80µm,1.8s						
ATTE	**AVT- Monte Tez**	**0.26**	**179**	⇓P	Pg	15 31 56.2	+0.7
ATTE				S	Sb	15 32 00.5	-1.2
CRE	**Caprese Michel**	**0.33**	**299**	⇓P	Pb	15 31 57.6	-0.7
CRE				S	Sb	15 32 02.6	-1.1
MPAG	**Monte Paganucc**	**0.34**	**60**	⇓P	Pg	15 31 57.6	+0.6
MPAG				S	Sb	15 32 03.3	-0.8
ARVD	**Arcevia**	**0.43**	**85**	⇓P	Pg	15 31 59.1	+0.5
ARVD				S	Sg	15 32 04.7	+0.2
SNTG	**Esanatoglia**	**0.48**	**115**	P	Pb	15 32 00.3	-0.5
SNTG				S	Sb	15 32 07.9	0.0
T1245	**Castelsantange**	**0.86**	**134**	S	Sn	15 32 21.1	-0.3
T1245				AML	AML		
	comp=N,43µm,1.5s						
T1245				AML	AML		
	comp=N,43µm,0.5s						
T1245				AML	AML		
	comp=E,42µm,0.7s						
MMO1	**Montemonaco**	**0.91**	**128**	S	Sn	15 32 22.1	-0.3
SMA1	**SAN MARTINO**	**1.10**	**139**	⇑P	Pn	15 32 11.9	+0.1
SMA1				AML	AML		
	comp=E,430µm,0.5s						
SMA1				AML	AML		
	comp=N,201µm,0.7s						
SMA1				AML	AML		
	comp=E,430µm,1.5s						
CMPO	**Campotto Po**	**1.19**	**341**	S	Sb	15 32 27.4	-0.9
CAMP	**Campotosto**	**1.21**	**139**	⇑P	Pb	15 32 12.2	-1.1
CAMP				AML	AML		
	comp=E,108µm,0.2s						
CAMP				AML	AML		
	comp=N,130µm,0.5s						
T1247	**Pizzolo (AQ)**	**1.23**	**145**	P	Pg	15 32 15.0	+1.1
T1247				AML	AML		
	comp=E,454µm,0.1s						
T1247				AML	AML		
	comp=N,494µm,1.5s						
T1247				AML	AML		
	comp=N,494µm,0.5s						
TERO	**Teramo**	**1.24**	**132**	⇑P	Pg	15 32 14.5	+0.5
FIAM	**Fiamignano**	**1.32**	**154**	P	Pg	15 32 18.2	+2.7
GIGS	**Gran Sasso**	**1.35**	**138**	⇑P	Pg	15 32 16.6	+0.6
GIGS				AML	AML		
	comp=E,33µm,0.8s						
GIGS				AML	AML		
	comp=N,41µm,1.1s						
GIGS				AML	AML		
	comp=E,33µm,1.2s						
GIGS				AML	AML		
	comp=N,41µm,0.9s						
FAGN	**Fagnano**	**1.50**	**142**	⇑P	Pb	15 32 18.5	+0.3
FAGN				AML	AML		
	comp=E,128µm,0.7s						
FAGN				AML	AML		
	comp=N,115µm,1.3s						
FAGN				AML	AML		
	comp=N,115µm,0.7s						
T0110	**Collepietro**	**1.62**	**139**	⇑P	Pb	15 32 20.6	+0.3
LIK	**San Giovanni I**	**2.15**	**155**	⇑P	Pb	15 32 28.7	-0.5
LIK				AML	AML		
	comp=N,300µm,0.1s						
LIK				AML	AML		
	comp=E,370µm,0.9s						
MSSA	**Maissana**	**2.22**	**294**	P	Pg	15 32 33.4	+0.7
LEOD	**Capriano del C**	**2.56**	**322**	⇑P	Pn	15 32 31.9	+0.2
EUCT	**Pavia**	**2.89**	**308**	P	Pg	15 32 45.4	-0.2
QLNO	**Quiliano**	**3.02**	**288**	S	Sg	15 33 28.9	+1.7
MSAG	**Monte S. Angel**	**3.16**	**122**	S	Sb	15 33 22.0	-3.1
CAFE	**Carife**	**3.24**	**138**	P	Pb	15 32 47.7	-0.2
BURY	**Giardini Botan**	**3.49**	**277**	S	Sb	15 33 30.7	-3.9
PZUN	**Potenza**	**3.81**	**136**	S	Sn	15 33 35.7	+1.8
AMUR	**Altamura**	**4.06**	**127**	S	Sn	15 33 38.6	-1.5

ROM 09 15:32:39.3±0.1**,43°.029N**±0°.004×**13°.022E**±0°.009**,**
h8^{km},ML1.4/1**,2C-1D,Error ellipse: s-maj=0.7km**
s-min=0.1km az=263.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.03**	**338**	P	Pg	15 32 41.2	+0.2
T1219				S	Sg	15 32 42.0	-0.2
T1219				AML	AML		
	comp=E,620µm,0.2s						
T1219				AML	AML		
	comp=N,609µm,0.1s						
T1219				AML	AML		
	comp=E,595µm,0.2s						
T1219				AML	AML		
	comp=N,609µm,0.1s						
T1219				AML	AML		
	comp=N,611µm,0.1s						
T1219				AML	AML		
	comp=E,595µm,0.2s						
T1219				AML	AML		
	comp=E,620µm,0.2s						
FEMA	**Monte Fema**	**0.07**	**163**	P	Pg	15 32 41.9	+0.5
T1220	**Camerino, Fraz**	**0.09**	**31**	⇑P	Pg	15 32 42.3	+0.6
T1220				S	Sg	15 32 44.1	+0.7
T1220				AML	AML		
	comp=N,366µm,1.1s						
T1220				AML	AML		
	comp=E,384µm,0.4s						
T1220				AML	AML		
	comp=N,366µm,0.9s						
CSP1	**Cessapalombo**	**0.15**	**65**	⇑P	Pg	15 32 43.2	+0.7
CSP1				S	Sg	15 32 45.7	+0.9
SNTG	**Esanatoglia**	**0.23**	**345**	P	Pg	15 32 44.2	+0.2
SNTG				S	Sg	15 32 48.9	+1.7
MMO1	**Montemonaco**	**0.26**	**120**	P	Pg	15 32 45.2	+0.7
MMO1				S	Sg	15 32 49.4	+1.3
T1212	**Cascia, Frazio**	**0.28**	**177**	P	Pb	15 32 46.0	-0.6
T1212				S	Sb	15 32 50.5	-1.0
T1214	**Arquata del Tr**	**0.30**	**153**	P	Pb	15 32 46.3	-0.7
T1214				S	Sb	15 32 51.0	-1.2
EL6	**Elcito**	**0.30**	**11**	P	Pb	15 32 46.3	-0.8
EL6				S	Sb	15 32 51.4	-0.9
ARVD	**Arcevia**	**0.47**	**353**	⇓P	Pg	15 32 47.6	-0.9
ARVD				AML	AML		
	comp=N,15µm,1.5s						
ARVD				AML	AML		
	comp=N,15µm,0.5s						
ARVD				AML	AML		
	comp=E,17µm,1.6s						

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*IDC **09** 15:47:28.3±1.7, 6°.05S×129°.78E, h0^{km}, mb3.7/2,*
mbtmp3.6/4, ML3.6/2, Error ellipse: s-maj=132.9km
s-min=27.9km az=72.0

ISC 09 15:47:42.0±0.9**,6°.49S**±0°.07×**130°.3E**±0°.1**,h150^{km},n13,**
σ2^{s}.64/15**,mb3.7**/3**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.76**	**147**	P	**Pn**	**15 48 18.4**	**+3.9**
BNDI	**Bandanaira**	**2.00**	**347**	P	**Pn**	**15 48 17.6**	**+0.4**
FAKI	**Fak Fak**	**4.02**	**28**	P	**Pn**	**15 48 40.7**	**-1.9**
SANI	**Sanana**	**6.19**	**315**	P	**Pn**	**15 49 11.1**	**-0.2**
MTN	**Manton Dam**	**6.37**	**173**	P	**Pn**	**15 49 15.9**	**+2.2**
KDU	**Kakadu**	**6.51**	**161**	P	**Pn**	**15 49 17.4**	**+1.8**
SOEI	**Soe**	**6.84**	**241**	P	**Pn**	**15 49 20.6**	**+0.5**
KNRA	**Kununurra**	**9.26**	**189**	P	**Pn**	**15 49 52.8**	**+0.5**
WRA	**Warramunga Arr**	**13.93**	**164**	Pn	**Pn**	**15 50 54.1**	**+1.0**
	0.3nm,0.3s,baz=345,slow=13,SNR=13						
WRA				Sn	**Sn**	**15 53 21.8**	**-5.8**
	1.4nm,0.3s,baz=335,slow=23,SNR=12						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**17.42**	**169**	P	**Pn**	**15 51 40.0**	**+4.0**
	0.2nm,0.3s,baz=348,slow=10,SNR=25						
ASAR				S	**S**	**15 54 46.9**	**-2.1**
	0.9nm,0.5s,baz=357,slow=28,SNR=5.6						
	0.7nm,0.6s						
SONM	**Songino Array**	**58.07**	**341**	P	**P**	**15 57 20.0**	**+0.4**
	0.2nm,0.4s,baz=159,slow=5.2,SNR=2.4						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**67.99**	**327**	P	**P**	**15 58 25.7**	**+0.7**
	15nm,0.4s,baz=121,slow=7.1,SNR=7.3						
ZALV	**Zalesovo Beam**	**71.28**	**334**	P	**P**	**15 58 44.1**	**-0.8**
	0.5nm,0.4s,baz=134,slow=7.7,SNR=3.5						
	0.5nm,0.4s						

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*JMA **09** 15:48:17.4±0.4, 44°N±2°×14°7E±°, h118^{km}±4^{km}, MV2.7/34,*
NEAR ETOROFU ISLAND
*SKHL **09** 15:48:17.1±0.3, 44°.40N×146°.90E, h118^{km}±4^{km}, mb4.3/4,*
msha5.0/5

ISC 09 15:48:17.1±2.2**,44°.38N**±0°.08×**146°.95E**±0°.09**,**
h117^{km}±15^{km}**,n20,σ0^{s}.62**/32**,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.52**	**190**	*e*P	**Pn**	**15 48 34.9**	**+0.2**
SHO				AMB	AMB	15 48 35.3	
	430nm,0.5s						

SHO				eS	Sn	15 48 48.4	+0.5
SHO				A	A	15 48 49.7	
	330nm,0.3s						
SHO				A	A	15 48 49.7	
	290nm,0.3s						
YUK	Yuzh-Kuril'sk	0.86	247	eP	Pn	15 48 37.5	+0.2
YUK				AMB	AMB	15 48 38.6	
	90nm,0.3s						
YUK				eS	Sn	15 48 52.5	-0.2
YUK				A	A	15 48 56.2	
	380nm,0.3s						
YUK				A	A	15 48 56.2	
	360nm,0.3s						
KUR	Kuril'sk	1.07	37	eP	Pn	15 48 39.5	0.0
KUR				AMB	AMB	15 48 39.9	
	70nm,0.4s						
KUR				eS	Sn	15 48 56.5	0.0
KUR				A	A	15 48 59.9	
	70nm,0.2s						
KUR				A	A	15 48 59.9	
	40nm,0.2s						
NEM2	Nemuro 2	1.34	221	eP	Pn	15 48 42.3	0.0
NEM2				eS	Sn	15 49 00.8	-0.8
NMR	Nemuro--Hokkai	1.34	222	eP	Pn	15 48 42.2	-0.2
NMR				eS	Sn	15 49 00.6	-1.0
JRA	Rausu	1.39	252	eP	Pn	15 48 42.9	0.0
JRA				eS	Sn	15 49 02.5	0.0
JNSB	Nemuroshibetsu	1.53	247	eP	Pn	15 48 44.8	+0.3
JNK	Nakash	1.80	245	eP	Pn	15 48 48.0	+0.3
JKHN	Kushirohamanak	1.83	226	eP	Pn	15 48 48.6	+0.4
JKHN				eS	Sn	15 49 12.0	0.0
AKK	Akkeshi	2.05	229	eP	Pn	15 48 50.7	-0.2
AKK				eS	Sn	15 49 15.7	-1.1
JAK	Akkeshi	2.14	231	eP	Pn	15 48 52.1	0.0
JAK				S	Sn	15 49 18.7	-0.1
JTKR	Abashiri--Toko	2.23	261	eP	Pn	15 48 52.9	-0.3
JAR	Ashorobuto	2.54	246	eP	Pn	15 48 58.2	+1.0
JAR				eS	Sn	15 49 29.9	+1.8
JMP	Maruseppu	2.61	263	eP	Pn	15 48 58.0	-0.2
JOB	Onbets	2.70	238	eP	Pn	15 49 00.0	+0.8
JOB				eS	Sn	15 49 32.1	+0.4
JKK2	Kamakawa 2	3.07	262	eP	Pn	15 49 04.5	+0.4
ASAJ	Asahikawa	3.14	267	eP	Pn	15 49 05.3	+0.3
JCH	Churui	3.15	237	eP	Pn	15 49 05.7	+0.5
JCH				eS	Sn	15 49 41.3	-1.1
JSE	Soyaes	3.17	282	eP	Pn	15 49 04.8	-0.6
JNBK	Urakawa-nobuka	3.71	237	P	Pn	15 49 12.3	-0.4

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*WEL **09** 16:00:00, 42°.76S×173°.29E, h38^{km}, ML4.2, Mw4.2, Moment Tensor Solution. s5 Moment tensor: Scale 10^{15} Nm; M$_{rr}$-0.55; M$_{\theta\theta}$2.32; M$_{\phi\phi}$-1.77; M$_{r\theta}$0.83; M$_{\theta\phi}$-0.17; M$_{\phi r}$0.94; Fault plane solution: M$_0$2.45000×10^{15} NP1: φ$_s$135.00000°, δ57.00000°, λ-12.00000°. NP2: φ$_s$231.00000°, δ80.00000°, λ-147.00000°. Principal axes: T 254.6300, Plg15.0000°, Azm359.0000°; N -19.5800, Plg55.0000°, Azm245.0000°; P -235.0500, Plg30.0000°, Azm98.0000°;*

*IDC **09** 16:00:54.3±1.2, 42°.54S×173°.22E, h0^{km}, mb3.6/3, mbtmp3.6/4, ML3.7/1, MS3.4/2 Error ellipse: s-maj=32.9km s-min=26.9km az=127.0*

*NOU **09** 16:00:57.8, 42°.84S×173°.46E, h29^{km}, MLv4.5/15, South Island, New Zealand*

*WEL **09** 16:00:58.9±0.4, 43°S±4°×17°3E±°, h20^{km}±6^{km}, M4.5/91, ML4.5/11, MLv4.5/91, Error ellipse: s-maj=0.0km s-min=0.0km az=133.7, confirmed*

*NEIC **09** 16:00:58.7±1.4, 42°.77S±0°.03×173°.25E±0°.06, h35^{km}±6^{km}, mb4.3/3, Mwr4.1/35, Error ellipse: s-maj=6.7km s-min=3.2km az=121.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.66; M$_{\theta\theta}$1.09; M$_{\phi\phi}$-1.76; M$_{r\theta}$0.82; M$_{\theta\phi}$-0.67; M$_{\phi r}$0.22; Fault plane solution: M$_0$1.88000×10^{15} NP1:φ$_s$51.76000°, δ72.91000°, λ147.18000°. NP2:φ$_s$152.49000°, δ58.80000°, λ20.10000°. Principal axes: T 1.7729, Plg35.0000°, Azm8.0000°; N 0.1973, Plg53.0000°, Azm207.0000°; P -1.9702, Plg9.0000°, Azm105.0000°;*

*NEIC **09** 16:00:58.7, 42°.76S×173°.26E, h45^{km}*

ISC 09 16:00:57.8±1.0, 42°.72S±0°.03×173°.27E±0°.03, h30^{km}±8^{km}, n202, σ1^{s}28/217, mb4.1/7, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVZ	Greta Valley S	0.30	215		Pn	16 01 07.3	+1.1
GVZ					Sn	16 01 13.0	+1.3
GVZ	Greta Valley S	0.30	215	P	Pn	16 01 07.3	+1.1
GVZ				S	Sn	16 01 13.0	+1.3
KHZ	Kahutara	0.36	33		Pn	16 01 08.0	+1.0
KHZ					Sn	16 01 14.1	+1.0
KHZ	Kahutara	0.36	33	P	Pn	16 01 08.3	+1.3
KHZ	Kahutara	0.36	33	P	Pn	16 01 08.0	+1.0
KHZ				S	Sn	16 01 14.1	+1.0
AMCZ	Amberley	0.64	225		Pb	16 01 11.5	+0.9
AMCZ				Sn	Sb	16 01 20.6	+1.2
AMCZ	Amberley	0.64	225	P	Pb	16 01 11.6	+0.9
LTZ	Lake Taylor	0.74	265		Pb	16 01 12.8	+0.6
LTZ				Sn	Sb	16 01 22.1	0.0
LTZ	Lake Taylor	0.74	265	P	Pb	16 01 12.9	+0.6
LTZ				S	Sb	16 01 22.4	+0.3
THZ	Tophouse	1.00	344		Pb	16 01 16.5	0.0
THZ				Sn	Sb	16 01 28.9	-0.5
THZ	Tophouse	1.00	344	P	Pb	16 01 16.5	0.0
THZ				S	Sb	16 01 29.0	-0.3
MQZ	McQueen’s Vall	1.08	204		Pn	16 01 16.4	-0.5
MQZ				Sn	Sn	16 01 29.8	-1.1
MQZ	McQueen’s Vall	1.08	204	P	Pn	16 01 17.0	+0.1
MQZ				S	Sn	16 01 29.8	-1.1
OXZ	Oxford	1.09	236		Pn	16 01 17.1	+0.1
OXZ				Sn	Sn	16 01 28.8	-2.3
OXZ	Oxford	1.09	236	P	Pn	16 01 17.1	+0.1
BSWZ	Blackbirch Sta	1.10	24		Pb	16 01 18.9	+0.6
BSWZ				Sn	Sb	16 01 33.1	+0.8
BSWZ	Blackbirch Sta	1.10	24	P	Pb	16 01 18.9	+0.6
BSWZ				S	Sb	16 01 33.0	+0.8
AKCZ	Akaroa Harbour	1.18	193	P	Pn	16 01 18.6	+0.3
AKCZ				S	Sn	16 01 32.7	-0.7
CMWZ	Cape Campbell	1.20	36		Pb	16 01 20.2	+0.3
CMWZ				Sn	Sb	16 01 36.3	+1.2
CMWZ	Cape Campbell	1.20	36	P	Pb	16 01 20.4	+0.5
RACZ	Rakaia	1.30	219	P	Pn	16 01 20.1	+0.2
INZ	Inchbonnie	1.35	269	Pn	Pn	16 01 20.9	+0.3
INZ	Inchbonnie	1.35	269	P	Pn	16 01 21.0	+0.5
MRNZ	Matariki Terra	1.38	344		Pb	16 01 22.4	-0.5
MRNZ				Sn	Sb	16 01 38.7	-1.4
MRNZ	Matariki Terra	1.38	344	P	Pb	16 01 22.4	-0.5
TUWZ	Tuamarina	1.38	21		Pb	16 01 22.3	-0.8
TUWZ	Tuamarina	1.38	21	P	Pb	16 01 22.4	-0.7
DSZ	Denniston Nort	1.46	311		Pn	16 01 23.0	+0.8
DSZ	Denniston Nort	1.46	311	P	Pn	16 01 23.1	+1.0
MHCZ	Mount Hutt	1.49	236	P	Pn	16 01 22.6	0.0
NNZ	Nelson	1.50	3		Pn	16 01 23.9	+1.2
NNZ	Nelson	1.50	3	P	Pb	16 01 24.2	-0.9
WACZ	Wakanui South	1.61	220	P	Pn	16 01 24.3	+0.2
TCW	Tory Channel	1.69	27		Pn	16 01 26.0	+0.8
TCW	Tory Channel	1.69	27	P	Pn	16 01 26.2	+1.0
TKNZ	Takaka Hill	1.70	352		Pb	16 01 27.2	-1.3
TKNZ	Takaka Hill	1.70	352	P	Pb	16 01 27.5	-1.0
SNZO	South Karori	1.77	38		Pn	16 01 27.2	+0.9
SNZO	South Karori	1.77	38	P	Pn	16 01 27.7	+1.4
BHW	Baring Head	1.77	43		Pn	16 01 27.1	+0.7
WEL	Wellington	1.82	38	P	Pn	16 01 28.0	+1.0
PLWZ	Palliser	1.87	53		Pn	16 01 28.3	+0.5
PLWZ	Palliser	1.87	53	P	Pn	16 01 28.2	+0.5
WVZ	Waitaha Valley	1.90	258	P	Pn	16 01 28.9	+0.8
RPZ	Rata Peaks	1.90	238	Pn	Pn	16 01 28.3	+0.1
	120nm,0.3s,baz=221,slow=1.8,SNR=780						
RPZ				Sn	Sn	16 01 49.6	-1.5
	152nm,0.3s,baz=116,slow=1.1,SNR=6.6						
RPZ	Rata Peaks	1.90	238	P	Pn	16 01 28.8	+0.6
RPZ	Rata Peaks	1.90	238	P	Pn	16 01 28.4	+0.2
ARCZ	Arundel	1.96	231	P	Pn	16 01 29.1	+0.1
MSWZ	Moikau Station	1.97	49	Pn	Pn	16 01 30.4	+1.3
QRZ	Quartz Range	1.97	343		Pn	16 01 30.9	+1.7
QRZ	Quartz Range	1.97	343	P	Pb	16 01 31.4	-1.7
QRZ	Quartz Range	1.97	343	P	Pn	16 01 30.8	+1.6
DUWZ	D’Urville Isla	1.98	14	P	Pn	16 01 30.5	+1.2
CAW	Cannon Point	2.10	40	P	Pn	16 01 31.6	+0.7
KIW	Kapiti Island	2.23	34	P	Pn	16 01 33.6	+1.0
TRWZ	Traveller	2.23	55	P	Pn	16 01 33.2	+0.4
GCSZ	Gaunt Creek Bo	2.24	254	P	Pn	16 01 33.8	+1.0
MTW	Mount Morrison	2.28	48	P	Pn	16 01 33.5	+0.1
TMZ	Timaru	2.34	224	P	Pn	16 01 34.2	0.0
OGWZ	Otaki Gorge	2.37	37	P	Pn	16 01 35.3	+0.7
HOWZ	Holdsworth Sta	2.48	43	P	Pn	16 01 36.2	+0.1
TMWZ	Te Maipa	2.53	51	P	Pn	16 01 37.0	+0.1
FOZ	Fox Glacier	2.66	251	Pn	Pn	16 01 39.5	+1.0
FOZ	Fox Glacier	2.66	251	P	Pn	16 01 39.6	+1.0
MRZ	Mangatainoka R	2.69	41	Pn	Pn	16 01 39.1	+0.1
MRZ	Mangatainoka R	2.69	41	P	Pn	16 01 39.2	+0.1
TIWZ	Tintock	2.76	46	P	Pn	16 01 40.3	+0.3
LBZ	Lake Benmore	2.79	232	Pn	Pn	16 01 40.7	+0.2
LBZ	Lake Benmore	2.79	232	P	Pn	16 01 41.0	+0.5
PRWZ	Pori Road	2.96	44	P	Pn	16 01 42.7	-0.1
POWZ	Post Office Ro	2.99	40	P	Pn	16 01 43.4	+0.3
ODZ	Otahua Downs	3.00	218		Pn	16 01 43.2	-0.1
ODZ	Otahua Downs	3.00	218	P	Pn	16 01 43.6	+0.3
ODZ	Otahua Downs	3.00	218	P	Pn	16 01 43.3	-0.1
BFZ	Birch Farm	3.02	49		Pn	16 01 43.3	-0.2
BFZ	Birch Farm	3.02	49	P	Pn	16 01 43.6	+0.1
BFZ	Birch Farm	3.02	49	P	Pn	16 01 43.3	-0.2
WAZ	Wanganui	3.23	24	P	Pn	16 01 48.7	+2.2
DVHZ	Dannevirke	3.25	43	P	Pn	16 01 46.1	-0.7
NMEZ	Namu Road	3.34	8	P	Pn	16 01 50.5	+2.6
TSZ	Takapari Road	3.34	38	P	Pn	16 01 47.9	-0.1
LREZ	Lake Rotokare	3.37	15	P	Pn	16 01 51.4	+3.1
KHEZ	Kahui Hut	3.47	10	P	Pn	16 01 51.7	+1.9
KHEZ	Kahui Hut	3.47	10	P	Pn	16 01 52.6	+2.7
NBEZ	Newall Road No	3.48	8	P	Pn	16 01 52.5	+2.6
NEZ	North Egmont	3.50	11	P	Pn	16 01 53.0	+2.7
PRHZ	Porangahau	3.52	47	P	Pn	16 01 50.9	+0.5
JCZ	Jackson Bay	3.54	246	P	Pn	16 01 51.7	+0.9
JCZ	Jackson Bay	3.54	246	P	Pn	16 01 51.0	+0.3
PKE	Pukeiti	3.56	9	P	Pn	16 01 54.0	+2.9
WPHZ	Waipukurau	3.57	43	P	Pn	16 01 50.8	-0.3
PNHZ	Pukenui	3.57	39	P	Pn	16 01 50.7	-0.4
HHSZ	Highcliff Hill	3.70	210	P	Pn	16 01 52.9	0.0
MTVZ	Mangateitei	3.72	27	P	Pn	16 01 54.9	+1.5
MHEZ	Mangahewa	3.73	13	P	Pn	16 01 56.3	+3.0
WKZ	Wanaka	3.73	234	Pn	Pn	16 01 53.1	-0.3
WKZ	Wanaka	3.73	234	P	Pn	16 01 53.1	-0.3
VRZ	Vera Road	3.77	18	P	Pn	16 01 56.1	+2.3
PKVZ	Pokaka	3.77	25	P	Pn	16 01 56.0	+2.1
EAZ	Earnscleugh	3.81	227	P	Pn	16 01 54.3	-0.1
MOVZ	Moawhango	3.81	30	P	Pn	16 01 55.0	+0.6
PXZ	Pawanui	3.81	46	P	Pn	16 01 54.3	-0.1
WNVZ	Wahianoa	3.82	28	P	Pn	16 01 56.0	+1.3
TRVZ	Turoa	3.83	27	P	Pn	16 01 56.3	+1.4
DRZ	Dome Shelter	3.85	28	P	Pn	16 01 57.1	+1.7
BHHZ	Black Hill Sta	3.86	34	P	Pn	16 01 55.5	+0.4
WHVZ	Whangaehu Hut	3.86	28	P	Pn	16 01 56.8	+1.6
FWVZ	Far West T-bar	3.87	27	P	Pn	16 01 56.8	+1.4
TUVZ	Tukino	3.89	28	P	Pn	16 01 57.4	+1.7
NGZ	Ngauruhoe	3.96	27	P	Pn	16 01 58.1	+1.5
SNVZ	South Ngauruho	3.96	28	P	Pn	16 01 58.1	+1.5
OTVZ	Oturere	3.99	28	P	Pn	16 01 58.3	+1.3
KAHZ	Kahuranaki	3.99	44	P	Pn	16 01 57.1	+0.1
TWVZ	Taurewa	4.00	25	P	Pn	16 01 58.6	+1.5
NNVZ	North Ngauruho	4.00	27	P	Pn	16 01 58.6	+1.4
WTVZ	West Tongariro	4.01	27	P	Pn	16 01 58.7	+1.4
ETVZ	East Tongariro	4.03	28	P	Pn	16 01 58.8	+1.2
TMVZ	Te Maari	4.04	28	P	Pn	16 01 59.0	+1.2
NTVZ	North Tongarir	4.05	28	P	Pn	16 01 59.2	+1.3
KWHZ	Kaweka Forest	4.06	37	P	Pn	16 01 57.9	-0.1
TUZ	Tuapeka	4.16	218	P	Pn	16 01 59.2	+0.1
KATZ	Kakaramea	4.17	27	P	Pn	16 02 03.2	+3.7
MCHZ	McNeill Hill	4.17	39	P	Pn	16 01 58.8	-0.6
RITZ	Rihia Road	4.22	29	P	Pn	16 02 01.2	+1.1
RATZ	Rangitukua	4.29	27	P	Pn	16 02 04.5	+3.3
BKZ	Black Stump Fm	4.31	36	Pn	Pn	16 02 00.4	-0.9
BKZ	Black Stump Fm	4.31	36	P	Pn	16 02 01.0	-0.3
BKZ	Black Stump Fm	4.31	36	P	Pn	16 02 00.4	-0.9
MSZ	Milford Sound	4.34	241	P	Pn	16 02 00.8	-0.9
HIZ	Hauiti	4.37	17		Pn	16 02 04.1	+1.9
HIZ	Hauiti	4.37	17	P	Pn	16 02 04.4	+2.2
HIZ	Hauiti	4.37	17	P	Pn	16 02 04.0	+1.8
WATZ	Wairara	4.42	26	P	Pn	16 02 05.0	+2.1
ARHZ	Aropaoanui	4.46	40	P	Pn	16 02 05.1	+1.8
NMHZ	Naumai	4.50	38	P	Pn	16 02 03.8	-0.3
MRHZ	Matea Rd	4.56	33	P	Pn	16 02 04.0	-0.8
MLZ	Mavora Lakes	4.56	233		Pn	16 02 04.2	-0.5
MLZ	Mavora Lakes	4.56	233	P	Pn	16 02 04.3	-0.5
TLZ	Tolley Road	4.71	22	P	Pn	16 02 07.8	+0.9
MTHZ	Maungataniwha	4.72	36	P	Pn	16 02 06.5	-0.5
WPRZ	Whakapapatarin	4.74	29	P	Pn	16 02 07.5	+0.3
ALRZ	Allen Road	4.77	30	P	Pn	16 02 07.1	-0.5
RAHZ	Arahi	4.78	39	P	Pn	16 02 08.1	+0.3
SYZ	Scrubby Hill	4.82	216	P	Pn	16 02 08.4	+0.2
SYZ	Scrubby Hill	4.82	216	P	Pn	16 02 08.5	+0.2
PRRZ	Plateau Road	4.84	30	P	Pn	16 02 09.2	+0.6
WHZ	Wether Hill Ro	4.96	228		Pn	16 02 09.5	-0.8
WHZ	Wether Hill Ro	4.96	228	P	Pn	16 02 09.2	-1.1
RTZ	Ruatahuna	4.98	36	Pn	Pn	16 02 09.4	-1.1
RTZ	Ruatahuna	4.98	36	P	Pn	16 02 09.6	-0.9
MHGZ	Mahia Peninsul	5.00	46	P	Pn	16 02 11.3	+0.5
SNGZ	Shannon Statio	5.00	39	P	Pn	16 02 09.6	-1.2
MUGZ	Murupara	5.01	33	P	Pn	16 02 09.5	-1.3
OMRZ	Omania	5.18	28	P	Pn	16 02 19.8	+6.5
DCZ	Deep Cove	5.19	236	Pn	Pn	16 02 12.3	-1.1
DCZ	Deep Cove	5.19	236	P	Pn	16 02 13.9	+0.5
KARZ	Kaharoa	5.21	27	P	Pn	16 02 20.8	+7.0
RIGZ	Rimuhau	5.26	42	P	Pn	16 02 12.6	-1.9
RAGZ	Rawiri	5.27	38	P	Pn	16 02 13.4	-1.2
TOZ	Tahuroa Road	5.27	20	P	Pn	16 02 15.4	+0.9
URZ	Urewera	5.33	35	Pn	Pn	16 02 13.3	-2.0
	2.6nm,0.3s,baz=329,slow=4.4,SNR=20						
URZ				Sn	Sn	16 03 10.7	-5.0
	14nm,0.3s,baz=178,slow=17,SNR=12 6.3nm,0.3s						
URZ	Urewera	5.33	35	P	Pn	16 02 13.6	-1.7
TKGZ	Te Karaka	5.52	41	P	Pn	16 02 16.9	-1.0
APZ	The Paps	5.57	221	P	Pn	16 02 18.1	-0.5
CNGZ	Carnagh Statio	5.66	43	P	Pn	16 02 20.4	+0.6
AWAZ	Awhitu Peninsu	5.75	11	P	Pn	16 02 22.9	+1.9
TWGZ	Tauwhareparae	5.79	40	P	Pn	16 02 21.4	-0.3
RUGZ	Raukumara Rang	5.82	37	P	Pn	16 02 21.6	-0.6
PYZ	Puysegur Point	5.84	232	Pn	Pn	16 02 21.1	-1.2
PYZ	Puysegur Point	5.84	232	P	Pn	16 02 22.3	0.0
WTAZ	Waiatarua	5.87	10	P	Pn	16 02 25.0	+2.3
ETAZ	East Tamaki Re	5.90	13	P	Pn	16 02 24.9	+1.8
EPAZ	Eden Park BICE	5.95	11	P	Pn	16 02 25.9	+2.1
HBAZ	Herne Bay Bore	5.97	11	P	Pn	16 02 26.2	+2.1
PUZ	Puketiti	6.00	41	P	Pn	16 02 22.6	-2.0
RVAZ	Riverhead Bore	6.03	10	P	Pn	16 02 26.9	+2.0
HAZ	Te Kaha	6.04	36	P	Pn	16 02 23.6	-1.5
PKGZ	Pakihiroa	6.06	39	P	Pn	16 02 24.4	-1.1
MBAZ	Motutapu North	6.08	12	P	Pn	16 02 27.7	+2.2
WIAZ	Waiheke Island	6.09	14	P	Pn	16 02 27.7	+1.9
KUZ	Kuaotunu	6.26	18	P	Pn	16 02 28.3	+0.2
KUZ	Kuaotunu	6.26	18	P	Pn	16 02 28.5	+0.4
WMGZ	Waiomatatini S	6.28	40	P	Pn	16 02 28.3	0.0
MXZ	Matakaoa Point	6.43	38	Pn	Pn	16 02 30.7	+0.2
MXZ	Matakaoa Point	6.43	38	P	Pn	16 02 31.4	+0.9
WCZ	Waipu Caves	6.82	7	P	Pn	16 02 37.6	+1.8
CTZ	Chatham Island	7.46	101	P	Pn	16 02 42.4	-2.0
CTZ	Chatham Island	7.46	101	P	Pn	16 02 44.1	-0.4
DZM	Mont Dzumac	21.37	342	LR	LR	16 12 56.8	
	comp=Z,118nm,18.8s,baz=204,slow=34						
STKA	Stephens Creek	27.28	283	LR	LR	16 17 19.2	
	comp=Z,70nm,18.1s,baz=201,slow=36						
ASAR	Alice Springs	37.61	288	P	P	16 08 10.3	+0.5
	0.4nm,0.6s,baz=125,slow=7.0,SNR=18 0.4nm,0.6s						
ASAR	Alice Springs	37.61	288	P	P	16 08 08.6	-1.3
COEN	Coen	38.65	309	P	P	16 08 16.1	-2.5
COEN				IAmb	IAmb	16 08 36.9	
	comp=Z,5.2nm,1.4s						
WRA	Warramunga Arr	39.78	292	P	P	16 08 27.9	-0.2
	comp=Z,0.6nm,0.7s,baz=128,slow=8.4,SNR=3.3 comp=Z,0.6nm,0.7s						
WB0	Warramunga Arr	39.87	293	P	P	16 08 28.3	-0.5
WB0				IAmb	IAmb	16 09 02.1	
	comp=Z,6.0nm,1.3s						
MTN	Manton Dam	46.98	296	P	P	16 09 24.9	-1.3
MTN				IAmb	IAmb	16 09 46.2	
	comp=Z,7.5nm,1.1s						
QSPA	South Pole Qui	47.41	180	P	P	16 09 32.4	+3.3
	comp=Z,1.3nm,0.9s,baz=54,slow=6.2,SNR=3.2 comp=Z,1.3nm,0.9s						
PZH	PanZhiHua	95.21	301	P	P	16 14 19.1	+0.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,5.0s						
HHC	Hu-ho-hao-te	100.11	317	eP	Pdif	16 14 41.0	+0.8
ARCES	ARCESS Array B	148.43	339	PKPbc	PKPbc	16 20 40.1	0.0
	comp=Z,1.0nm,0.7s,baz=52,slow=3.5,SNR=1.3						
TORD	Torodi Ar. Bea	149.64	196	PKPbc	PKPbc	16 20 44.6	-0.1
	comp=Z,0.6nm,0.9s,baz=139,slow=3.0,SNR=2.8						
FINES	FINESS Array B	152.93	325	PKPbc	PKiKP	16 20 52.9	+1.8
	comp=Z,0.5nm,0.4s,baz=108,slow=4.5,SNR=1.8						

IDC 09 16:11:52.3±3.3, 27°.62N×141°.84E, h0^{km}, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=152.4km s-min=31.0km az=76.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	47.84	190	P	P	16 20 31.8	-0.1
	0.2nm,0.5s,baz=6.4,slow=8.4,SNR=4.7 0.2nm,0.5s						
ZALV	Zalesovo Beam	48.89	319	P	P	16 20 39.7	0.0
	0.2nm,0.3s,baz=100,slow=7.5,SNR=1.8 0.2nm,0.3s						
KURBB	Kurchatov Arra	52.45	314	P	P	16 21 06.3	-0.4
	0.4nm,0.6s,baz=84,slow=8.3,SNR=2.2 0.4nm,0.6s						
BVAR	Borovoye Array	57.45	317	P	P	16 21 43.2	+0.4
	0.5nm,0.5s,baz=75,slow=8.2,SNR=3.0 0.5nm,0.5s						
FINES	FINESS Array B	77.34	334	P	P	16 23 48.5	-0.1
	0.4nm,0.3s,baz=61,slow=6.5,SNR=5.4 0.4nm,0.3s						

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*NOU **09** 16:27:33.7, 42°.23S×173°.86E, h34^{km}, MLv3.8/8, South Island, New Zealand*

*WEL **09** 16:27:34.4±0.4, 42°S±3°×17°4E±°, h25^{km}±5^{km}, M3.0/24, ML3.3/11, MLv3.0/24, Error ellipse: s-maj=0.0km s-min=0.0km az=113.1, confirmed*

ISC 09 16:27:33.5±1.3, 42°.16S±0°.03×173°.73E±0°.04, h22^{km}±6^{km}, n71, σ0^{s}97/76, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHZ	Kahutara	0.29	209	P	Pn	16 27 43.0	+0.5
KHZ	Kahutara	0.29	209	P	Pn	16 27 43.2	+0.7
KHZ				S	Sn	16 27 49.2	+0.9
BSWZ	Blackbirch Sta	0.46	14	P	Pn	16 27 44.6	-0.2
BSWZ				S	Sn	16 27 51.7	-0.6
CMWZ	Cape Campbell	0.55	41	P	Pn	16 27 47.3	+1.3
THZ	Tophouse	0.73	302	P	Pb	16 27 46.8	-0.9
THZ				S	Sb	16 27 56.7	-0.5
TUWZ	Tuamarina	0.75	12	P	Pn	16 27 48.5	-0.3
TUWZ				S	Sb	16 27 58.2	+0.7
GVZ	Greta Valley S	0.96	212	P	Pb	16 27 52.2	+0.8
GVZ				S	Sn	16 28 05.2	+0.5
NNZ	Nelson	0.98	344	P	Pn	16 27 50.8	-1.1
TCW	Tory Channel	1.03	23	P	Pn	16 27 52.6	-0.1
MRNZ	Matariki Terra	1.05	316	P	Pn	16 27 52.1	-0.9
WEL	Wellington	1.17	42	P	Pb	16 27 55.0	0.0
LTZ	Lake Taylor	1.25	240	P	Pn	16 27 55.7	0.0
TKNZ	Takaka Hill	1.27	333	P	Pn	16 27 55.4	-0.5
PLWZ	Palliser	1.28	63	P	Pn	16 27 56.2	+0.1
AMCZ	Amberley	1.29	218	P	Pn	16 27 56.3	0.0
DUWZ	D’Urville Isla	1.36	6	P	Pn	16 27 57.0	-0.3
DSZ	Denniston Nort	1.50	285	P	Pn	16 27 59.1	0.0
KIW	Kapiti Island	1.57	35	P	Pn	16 28 00.4	+0.3
QRZ	Quartz Range	1.61	325	P	Pn	16 28 00.8	+0.1
QRZ	Quartz Range	1.61	325	P	Pn	16 28 00.7	+0.1
MTW	Mount Morrison	1.66	54	P	Pn	16 28 00.9	-0.4
OXZ	Oxford	1.71	226	P	Pn	16 28 01.0	-1.0
OGWZ	Otaki Gorge	1.72	39	P	Pn	16 28 02.2	0.0
MQZ	McQueen’s Vall	1.74	207	P	Pn	16 28 01.3	-1.1
INZ	Inchbonnie	1.79	251	P	Pn	16 28 02.9	-0.1
AKCZ	Akaroa Harbour	1.81	199	P	Pn	16 28 03.0	-0.5
HOWZ	Holdsworth Sta	1.84	47	P	Pn	16 28 03.2	-0.6
TMWZ	Te Maipa	1.93	58	P	Pn	16 28 04.3	-0.7
RACZ	Rakaia	1.96	216	P	Pn	16 28 04.3	-1.1
MRZ	Mangatainoka R	2.04	43	P	Pn	16 28 06.2	-0.4
MHCZ	Mount Hutt	2.10	229	P	Pn	16 28 06.4	-1.1
TIWZ	Tintock	2.13	50	P	Pn	16 28 07.2	-0.6
WACZ	Wakanui South	2.26	217	P	Pn	16 28 08.6	-1.0
PRWZ	Pori Road	2.33	47	P	Pn	16 28 09.7	-0.8
POWZ	Post Office Ro	2.34	42	P	Pn	16 28 10.1	-0.6
WVZ	Waitaha Valley	2.39	247	P	Pn	16 28 12.2	+0.8
BFZ	Birch Farm	2.40	53	P	Pn	16 28 10.1	-1.4
BFZ	Birch Farm	2.40	53	P	Pn	16 28 10.1	-1.4
RPZ	Rata Peaks	2.51	231	P	Pn	16 28 12.3	-0.7
RPZ	Rata Peaks	2.51	231	P	Pn	16 28 12.2	-0.7
WAZ	Wanganui	2.58	22	P	Pn	16 28 15.8	+1.7
ARCZ	Arundel	2.59	225	P	Pn	16 28 13.1	-1.0
GCSZ	Gaunt Creek Bo	2.76	244	P	Pn	16 28 17.2	+0.7
PNHZ	Pukenui	2.92	41	P	Pn	16 28 17.5	-1.2
TMZ	Timaru	2.98	221	P	Pn	16 28 18.7	-0.8
PKVZ	Pokaka	3.12	24	P	Pn	16 28 22.3	+0.9
VRZ	Vera Road	3.13	15	P	Pn	16 28 18.9	-2.6
WNVZ	Wahianoa	3.17	27	P	Pn	16 28 23.0	+0.8
TRVZ	Turoa	3.17	26	P	Pn	16 28 22.8	+0.5
FOZ	Fox Glacier	3.19	243	P	Pn	16 28 23.2	+0.9
BHHZ	Black Hill Sta	3.20	34	P	Pn	16 28 22.1	-0.5
FWVZ	Far West T-bar	3.21	26	P	Pn	16 28 23.4	+0.5
TUVZ	Tukino	3.24	27	P	Pn	16 28 23.8	+0.6
SNVZ	South Ngauruho	3.31	27	P	Pn	16 28 24.8	+0.7
OTVZ	Oturere	3.33	27	P	Pn	16 28 24.9	+0.4
ETVZ	East Tongariro	3.38	27	P	Pn	16 28 25.6	+0.6
TMVZ	Te Maari	3.39	27	P	Pn	16 28 25.7	+0.5
NTVZ	North Tongarir	3.40	26	P	Pn	16 28 25.9	+0.5
LBZ	Lake Benmore	3.42	228	P	Pn	16 28 27.2	+1.7
ODZ	Otahua Downs	3.65	217	P	Pn	16 28 27.8	-0.9
ODZ	Otahua Downs	3.65	217	P	Pn	16 28 27.3	-1.4
BKZ	Black Stump Fm	3.65	36	P	Pn	16 28 27.5	-1.3
BKZ	Black Stump Fm	3.65	36	P	Pn	16 28 27.1	-1.7
HIZ	Hauiti	3.74	14	P	Pn	16 28 30.4	+0.4
HIZ	Hauiti	3.74	14	P	Pn	16 28 31.2	+1.2
TLZ	Tolley Road	4.07	20	P	Pn	16 28 36.2	+1.8
JCZ	Jackson Bay	4.09	240	P	Pn	16 28 35.3	+0.4
JCZ	Jackson Bay	4.09	240	P	Pn	16 28 37.0	+2.1
WHRZ	Whale Island	4.97	31	P	Pn	16 28 49.3	+2.5
AWAZ	Awhitu Peninsu	5.14	8	P	Pn	16 28 50.2	+1.0
CTZ	Chatham Island	7.25	106	P	Pn	16 29 17.8	-0.4

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*BJI **09** 16:38:12.5±0.0, 4°.60S×129°.70E, h155^{km}, mb4.6/42, mB4.7/16*

*DJA **09** 16:38:14.5±0.1, 5°S±2°×13°0E±°, h159^{km}±2^{km}, M4.6/61, mb4.8/61, mB5.1/24, MLv5.0/16, Mw(mB)4.5/24, MwMwp4.8/1, Mwp5.1/1*

*NEIC **09** 16:38:14.4±1.7, 4°.63S±0°.05×129°.63E±0°.07, h149^{km}±6^{km}, mb4.9/83, Error ellipse: s-maj=9.8km s-min=7.5km az=79.0*

*IDC **09** 16:38:15.0±0.6, 4°.61S×129°.71E, h161^{km}±5^{km}, mb4.3/29, mbtmp4.7/33, MS3.2/4, Error ellipse: s-maj=14.2km s-min=8.3km az=71.0*

ISC 09 16:38:14.4±0.4, 4°.61S±0°.04×129°.68E±0°.04, h158^{km}±3^{km}, h159^{km}:pP-P, n323, σ1^{s}35/360, mb4.7/82, 1C-1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	0.24	69	P	Pn	16 38 36.8	+1.0
BNDI	Bandanaira	0.24	69	P	Pn	16 38 36.6	+0.8
BNDI				S	Sn	16 38 53.1	+1.1
MSAI	Masohi	1.46	329	P	Pn	16 38 43.7	-0.5
MSAI				S	Sn	16 39 04.2	-2.9
AAI	Ambon	1.74	302	P	Pn	16 38 47.2	0.0
AAI				S	Sn	16 39 10.9	-1.4
NLAI	Namlea	2.91	298	P	Pn	16 39 01.3	+0.3
NLAI				S	Sn	16 39 38.6	+1.5
FAKI	Fak Fak	3.06	57	Pn	Pn	16 39 02.4	-0.6
FAKI				Sn	Sn	16 39 37.6	-2.9
FAKI	Fak Fak	3.06	57	P	Pn	16 39 03.0	+0.1
FAKI	Fak Fak	3.06	57	P	Pn	16 39 02.5	-0.4
FAKI				S	Sn	16 39 37.6	-2.9
SAUI	Saumlaki	3.72	154	Pn	Pn	16 39 12.0	+0.7
SAUI				Sn	Sn	16 39 55.1	-0.4
SAUI	Saumlaki	3.72	154	P	Pn	16 39 12.8	+1.5
SAUI	Saumlaki	3.72	154	P	Pn	16 39 12.4	+1.1
SIJI	Sorong	4.04	23	P	Pn	16 39 14.4	-1.0
	540nm,0.3s,baz=229,slow=10,SNR=433						
SIJI				S	Sn	16 39 57.4	-5.6

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      425nm,0.3s,baz=192,slow=20,SNR=36
SANI  Sanana             4.48 304  P      Pn     16 39 20.6 -0.5
SANI  Sanana             4.48 304  P      Pn     16 39 20.1 -1.0
SANI                               S      Sn     16 40 07.9 -5.2
LBMI  Labuha             4.50 331  P      Pn     16 39 21.6 +0.1
LBMI                               S      Sn     16 40 10.2 -3.6
RKPI  Ransiki, Papua     5.44  56  P      Pn     16 39 33.8 -0.1
      1µm,0.7s,31µm4µm21nm
TNTI  Ternate            5.82 337  Pn     Pn     16 39 38.9 -0.1
TNTI                               Sn     Sn     16 40 42.2 -2.9
TNTI  Ternate            5.82 337  P      Pn     16 39 38.8 -0.1
TNTI  Ternate            5.82 337  P      Pn     16 39 38.8 -0.1
      103nm,0.8s,0.4nm
SRPI  Serui, Papua       7.09  68  P      Pn     16 39 55.1 -0.7
      390nm,0.8s,3µm1.9nm
BBSI  Bau Bau            7.13 263  P      Pn     16 39 58.9 +2.6
SOEI  Soe                7.41 226  Pn     Pn     16 39 59.4 -0.8
SOEI  Soe                7.41 226  P      Pn     16 40 03.0 +2.8
      174nm,0.8s,2µm0.9nm
LUWI  Luwuk              7.75 297  Pn     Pn     16 40 05.0 +0.3
LUWI  Luwuk              7.75 297  P      Pn     16 40 04.5 -0.1
LUWI  Luwuk              7.75 297  P      Pn     16 40 04.9 +0.3
      130nm,1.1s,1µm0.4nm
MTN   Manton Dam         8.31 170  P      Pn     16 40 11.2 -0.8
      baz=8.4,SNR=22
MTN   Manton Dam         8.31 170  Pn     Pn     16 40 10.1 -1.8
MTN                                Sn     Sn     16 41 39.3 -5.3
MTN   Manton Dam         8.31 170  P      Pn     16 40 11.7 -0.2
MMRI  Maumere            8.40 241  Pn     Pn     16 40 11.5 -1.7
MMRI  Maumere            8.40 241  P      Pn     16 40 16.0 +2.8
      104nm,0.9s,1µm
KDU   Kakadu             8.49 161  P      Pn     16 40 12.4 -1.9
      baz=8.5,SNR=1000
KDU   Kakadu             8.49 161  P      Pn     16 40 12.9 -1.4
MRSI  Marisa             9.23 303  P      Pn     16 40 25.0 +0.7
      45nm,0.7s,459nm
BSSI  Bau Bau, Buton     9.28 260  P      Pn     16 40 25.8 +1.0
      47nm,0.9s
SMPI  Sarmi              9.38  74  P      Pn     16 40 26.8 +0.6
      29nm,0.8s
BKSI  Bulukumba          9.55 265  P      Pn     16 40 30.1 +1.7
      31nm,0.8s,405nm
KAPI  Kappang            9.90 267  P      Pn     16 40 33.8 +0.7
      5.3nm,0.4s,baz=45,slow=16,SNR=2.0
KAPI  Kappang            9.90 267  Pn     Pn     16 40 31.6 -1.5
SPSI  Sidrap Palu        9.90 273  P      Pn     16 40 34.2 +1.1
      27nm,0.7s
TOLI2 Tolitoli          10.55 302  Pn     Pn     16 40 41.1 -0.5
TOLI2 Tolitoli          10.55 302  P      Pn     16 40 42.0 +0.4
BASI  Baing, Sumba      10.61 238  P      Pn     16 40 44.7 +2.3
      106nm,0.7s,2µm
MPSI  Mapaga            10.94 296  P      Pn     16 40 48.0 +1.3
      22nm,1.0s
KNRA  Kununurra         11.04 185  Pn     Pn     16 40 46.5 -1.5
DAV   Davao City (W)    12.30 341  P      Pn     16 41 03.3 -1.2
      62nm,0.3s,baz=228,slow=15,SNR=1.2
DAV                                LR     LR     16 46 37.4
      comp=Z,141nm,21.7s,baz=190,slow=41
DAV   Davao City (W)    12.30 341  Pn     Pn     16 41 04.8 +0.3
PLAI  Plampang          12.54 250  P      Pn     16 41 08.2 +0.7
PLAI  Plampang          12.54 250  P      Pn     16 41 08.0 +0.5
      92nm,0.7s,1µm
TWSI  Taliwang, Sumb    13.35 251  P      Pn     16 41 17.6 -0.4
      56nm,0.7s,850nm
FITZ  Fitzroy Crossi    13.98 196  Pn     Pn     16 41 24.0 -1.8
SRBI  Singaraja         14.79 256  P      Pn     16 41 35.8 -0.1
      56nm,0.7s,914nm
MYLDM Lahad Datu        14.80 311  Pn     Pn     16 41 34.8 -1.3
BBKI  Banjar Baru       14.85 274  P      P      16 41 38.2 -0.3
      58nm,0.8s
DNP   Denpasar          14.93 254  P      P      16 41 40.2 +0.8
      176nm,0.6s
IGBI  Denpasar          15.03 253  P      Pn     16 41 38.6 -0.3
      74nm,0.7s,2µm
ABJI  Asem Bagus        15.68 258  P      P      16 41 48.4 +0.7
      88nm,0.9s
WB0   Warramunga Arr    15.75 163         Pn     16 41 45.4 -2.5
JAGI  Jajag, Banyuwa    15.89 255  P      Pn     16 41 48.8 -0.8
JAGI  Jajag, Banyuwa    15.89 255  P      P      16 41 50.1  0.0
JAGI  Jajag, Banyuwa    15.89 255  P      Pn     16 41 49.5 -0.1
      49nm,0.5s
WRA   Warramunga Arr    15.90 164  P      Pn     16 41 48.3 -1.4
      62nm,0.6s,baz=342,slow=12,SNR=92
WRA                                S      S      16 44 35.0  -12
      15nm,0.3s,baz=351,slow=23,SNR=9.7
WRA   Warramunga Arr    15.90 164  P      Pn     16 41 46.4 -3.3
WB2   Warramunga Arr    15.91 164         Pn     16 41 47.6 -2.1
COEN  Coen              16.23 126  P      Pn     16 41 52.8 -0.9
      baz=16,SNR=5.9
COEN  Coen              16.23 126  Pn     Pn     16 41 50.9 -2.7
BLJI  Banyuglugur       16.29 258  P      P      16 41 56.0 +1.5
      74nm,0.8s,2µm
GMJI  Gumukmas          16.54 256  P      P      16 41 56.3 -0.9
      37nm,0.8s
KKM   Kota Kinabalu     17.11 308         P      16 42 01.9 -1.7
KKM   Kota Kinabalu     17.11 308  P      Pn     16 42 04.4  0.0
PMG   Port Moresby      17.99 106  P      Pn     16 42 16.1 +1.4
      25nm,0.9s,baz=291,slow=6.3,SNR=12
PMG                                S      S      16 45 29.0 -2.5
      2.2nm,0.4s,baz=271,slow=17,SNR=1.0
PMG   Port Moresby      17.99 106  P      P      16 42 12.8 -0.3
QIS   Mount Isa         18.56 150  P      P      16 42 19.6 +0.3
      baz=19,SNR=249
QIS   Mount Isa         18.56 150  P      Pn     16 42 21.1 -0.4
UWJI  Ujung Watu        18.73 264  P      P      16 42 21.6 +0.3
      55nm,0.7s
SBUM  Sibu              18.80 292  P      P      16 42 21.8 -0.2
MBWA  Marble Bar        19.08 210  P      P      16 42 24.6 -0.4
MBWA  Marble Bar        19.08 210  P      P      16 42 24.7 -0.3
SMRI  Semarang          19.29 262  P      P      16 42 26.3 -1.0
UGM   Wanagama          19.32 259  P      P      16 42 26.6 -1.1
PSA00 Pilbara Seismi    19.38 209         P      16 42 28.1 -0.1
PSA00 Pilbara Seismi    19.38 209  P      P      16 42 26.7 -1.5
PSA00 Pilbara Seismi    19.38 209  P      P      16 42 28.2  0.0
AS31  Alice Springs     19.38 168         Pn     16 42 29.6 -1.4
ASAR  Alice Springs     19.38 168  P      P      16 42 29.6 +1.3
      179nm,0.5s,baz=348,slow=12,SNR=3718
ASAR                               S      S      16 45 55.6 -3.5
      50nm,1.0s,baz=351,slow=20,SNR=25
ASAR                               ScP    ScP    16 50 05.5 +0.7
      1.2nm,0.7s,baz=343,slow=2.9,SNR=1.9
AS01  Alice Springs     19.39 168  P      P      16 42 29.0 +0.7
      415nm,0.8s
MTSU  Mount Surprise    19.64 134  P      P      16 42 32.1 +1.0
      baz=20,SNR=33
MTSU  Mount Surprise    19.64 134  P      Pn     16 42 33.5 -0.6
KSM   Kuching           20.27 287  P      P      16 42 36.8 -1.1
WRKA  Warakurna         20.36 184  P      P      16 42 39.6 +0.9
      baz=20,SNR=484
WRKA  Warakurna         20.36 184  P      P      16 42 39.6 +0.9
KPJI  Karang Pucung     20.81 262  P      P      16 42 43.0 -0.6
      41nm,1.0s
CMJI  Cimerak           21.34 260  P      P      16 42 46.9 -2.4
      51nm,0.6s
KRVT  Keravat (AS076    22.28  90  P      P      16 42 58.8 -0.2
      12nm,0.5s,baz=198,slow=6.4,SNR=2.0
      12nm,0.5s
CTA   Charters Tower    22.30 135  P      P      16 42 59.7 +0.6
      34nm,0.9s,baz=322,slow=11,SNR=19
      34nm,0.9s
CTA   Charters Tower    22.30 135  P      P      16 43 00.9 +1.8
CTAO  Charters Tower    22.30 135  P      P      16 42 60.0 +0.9
CTAO                               IAmb   IAmb   16 43 02.4
      comp=Z,35nm,0.9s
CTAO  Charters Tower    22.30 135  P      P      16 43 00.8 +1.7
CNJI  Cibinong          22.59 262  P      P      16 42 58.6 -3.2
      comp=Z,59nm,1.1s,comp=Z,499nm
GIRL  Giralia           23.34 218  P      P      16 43 09.6 +0.9
      baz=23,SNR=3.3
GIRL  Giralia           23.34 218  P      P      16 43 08.6  0.0
GIRL  Giralia           23.34 218  P      P      16 43 10.1 +1.5
OOD   Oodnadatta        23.76 167  P      P      16 43 13.2 +0.8
CGJI  Cibinong          23.95 264  P      P      16 43 11.3 -3.1
      comp=Z,15nm,0.5s
MEEK  Meekatharra       24.33 205  P      P      16 43 16.7 -0.9
      baz=24,SNR=6.9
MEEK  Meekatharra       24.33 205  P      P      16 43 16.5 -1.2
XMI   Christmas Isla    24.47 255  P      P      16 43 18.6 -0.5
      comp=Z,62nm,1.0s
KASI  Kota Agung        25.10 267  P      P      16 43 22.4 -2.4
      comp=Z,15nm,0.9s
INKA  Innaminka         25.31 157  P      P      16 43 28.0 +1.6
MULG  Mulgathing        25.87 171  P      P      16 43 32.2 +0.7
QLP   Quilpie           25.91 149  P      P      16 43 33.2 +1.3
      baz=26,SNR=12
QLP   Quilpie           25.91 149  P      P      16 43 33.3 +1.3
FORT  Forrest           26.08 183  P      P      16 43 33.6 +0.2
      baz=26,SNR=35
FORT  Forrest           26.08 183  P      P      16 43 33.6 +0.2
FORT  Forrest           26.08 183  P      P      16 43 34.0 +0.6
MYKOM Kota Tinggi       26.58 283  P      P      16 43 40.7 +2.6
MYKOM                              IAmb   IAmb   16 44 39.2
      comp=Z,31nm,1.4s
MNAI  Manna             26.64 269  P      P      16 43 38.5 -0.2
LCRK  Leigh Creek       26.93 164  P      P      16 43 42.7 +1.6
MORW  Morawa            27.55 207  P      P      16 43 45.8 -0.8
      baz=28,SNR=10
MORW  Morawa            27.55 207  P      P      16 43 45.9 -0.8
MORW                               IAmb   IAmb   16 44 32.6
      comp=Z,28nm,1.2s
MORW  Morawa            27.55 207  P      P      16 43 46.1 -0.5
KMBL  Kambalda          27.61 195  P      P      16 43 47.3 +0.2
      baz=28,SNR=27
KMBL  Kambalda          27.61 195  P      P      16 43 47.3 +0.2
RMQ   Roma              28.39 142  P      P      16 43 55.4 +1.2
      baz=28,SNR=4.4
SDSI  Sungai Dareh      28.45 277  P      P      16 43 53.1 -1.7
      comp=Z,8.1nm,1.2s
BLDU  Ballidu           28.61 204  P      P      16 43 56.0  0.0
      baz=29,SNR=10.0
BLDU  Ballidu           28.61 204  P      P      16 43 56.2 +0.2
BBOO  Buckleboo         28.68 169  P      P      16 43 57.2 +0.6
      baz=29,SNR=73
BBOO  Buckleboo         28.68 169  P      P      16 43 57.0 +0.3
BBOO  Buckleboo         28.68 169  P      P      16 43 57.4 +0.8
KLBR  Kellerberrin      29.09 201  P      P      16 44 00.1 -0.1
      baz=29,SNR=17
KLBR  Kellerberrin      29.09 201  P      P      16 43 59.8 -0.4
TPUB  Ta-pu             29.11 343  P      P      16 43 59.9 -0.6
EIDS  Eidsvold          29.12 137  P      P      16 43 59.7 -0.8
STKA  Stephens Creek    29.34 159  P      P      16 44 03.0 +0.6
      comp=Z,8.8nm,0.4s,baz=342,slow=8.2,SNR=37
STKA                               LR     LR     16 56 55.9
      comp=Z,94nm,20.4s,baz=26,slow=38
      comp=Z,8.8nm,0.4s
STKA  Stephens Creek    29.34 159  P      P      16 44 03.5 +1.1
      baz=30,SNR=20
STKA  Stephens Creek    29.34 159  P      P      16 44 03.3 +0.8
STKA  Stephens Creek    29.34 159  P      P      16 44 03.5 +1.1
PDSI  Padang            29.41 276  P      P      16 44 00.6 -2.7
      comp=Z,7.3nm,0.5s
HTT   Hallett           29.94 164  P      P      16 44 08.8 +1.0
      baz=30,SNR=8.2
HTT   Hallett           29.94 164  P      P      16 44 09.0 +1.2
IPM   Ipoh              30.01 287  P      P      16 44 08.2 -0.5
IPM                                IAmb   IAmb   16 44 09.3
      comp=Z,17nm,1.2s
MUN   Mundaring         30.02 203  P      P      16 44 08.6 +0.2
      baz=30,SNR=5.9
MUN   Mundaring         30.02 203  P      P      16 44 08.4  0.0
NWAO  Narrogin (SRO)    30.48 201  P      P      16 44 12.0 -0.4
      comp=Z,9.7nm,0.4s,baz=32,slow=6.9,SNR=17
      comp=Z,9.7nm,0.4s
NWAO  Narrogin (SRO)    30.48 201  P      P      16 44 12.3 -0.1
      baz=31,SNR=12
NWAO                               P      P      16 44 12.3 -0.1
      baz=31,SNR=12
NWAO  Narrogin (SRO)    30.48 201  P      P      16 44 12.6 +0.2
NWAO  Narrogin (SRO)    30.48 201  P      P      16 44 12.3 -0.1
NWAO                               IAmb   IAmb   16 44 17.8
      comp=Z,308nm,1.6s
NWAO  Narrogin (SRO)    30.48 201  P      P      16 44 12.7 +0.2
NWAO  Narrogin (SRO)    30.48 201  P      P      16 44 12.1 -0.4
NWAO  Narrogin (SRO)    30.48 201  P      P      16 44 12.2 -0.2
KULM  Kulim             30.61 288  P      P      16 44 13.6 -0.3
CMSA  Cobar Meteorol    30.72 153  P      P      16 44 16.0 +1.4
      baz=31,SNR=41
CMSA  Cobar Meteorol    30.72 153  P      P      16 44 15.8 +1.2
JOW   Kunigami          31.28 358  LR     LR     16 58 31.5
      comp=Z,35nm,18.6s,baz=108,slow=39
RPSI  Rantau Prapat     31.57 283  P      P      16 44 20.9 -1.4
RKGY  Rocky Gully       32.09 200  P      P      16 44 28.1 +1.5
      baz=32,SNR=16
RKGY  Rocky Gully       32.09 200  P      P      16 44 28.0 +1.5
GSI   Gunungsitoli      32.61 280  P      P      16 44 28.3 -3.1
GSI                                IAmb   IAmb   16 44 30.1
      comp=Z,7.2nm,0.6s
GSI                                PcP    PcP    16 47 15.0 +0.9
GSI   Gunungsitoli      32.61 280  P      P      16 44 28.9 -2.5
      comp=Z,11nm,0.6s
SRIT  Nakonsritamara    32.73 294  P      P      16 44 31.3 -1.1
SRIT                               IAmb   IAmb   16 44 33.9
      comp=Z,47nm,1.6s
ARMA  Armidale          32.98 144  P      P      16 44 32.8 -1.7
      baz=33,SNR=7.8
ARMA  Armidale          32.98 144  P      P      16 44 33.7 -0.8
ARMA                               IAmb   IAmb   16 44 38.1
      comp=Z,84nm,1.6s
ARMA  Armidale          32.98 144  P      P      16 44 36.9 +2.4
ARPS  Mount Arapiles    33.90 162  P      P      16 44 44.2 +1.9
      baz=34,SNR=18
ARPS  Mount Arapiles    33.90 162  P      P      16 44 44.0 +1.7
MGCD  Mangrove Creek    34.77 148  P      P      16 44 51.0 +1.1
      baz=35,SNR=7.9
MGCD  Mangrove Creek    34.77 148  P      P      16 44 51.4 +1.5
CAN   Canberra          35.40 152  P      P      16 44 57.1 +1.9
CNB   Canberra Magne    35.56 152  P      P      16 44 58.8 +2.1
TOO   Toolangi          35.85 158  P      P      16 45 01.2 +2.1
      baz=36,SNR=13
TOO   Toolangi          35.85 158  P      P      16 45 00.9 +1.9
TOO                                IAmb   IAmb   16 45 02.2
      comp=Z,18nm,1.0s
TOO   Toolangi          35.85 158  P      P      16 45 01.7 +2.6
JSU   Suzuyama          35.92   1  P      P      16 44 59.9 +0.3
MILA  Mila              36.90 154  P      P      16 45 10.7 +2.7
      baz=37,SNR=5.2
MILA  Mila              36.90 154  P      P      16 45 10.4 +2.4
PHRA  Phrae             37.01 309  P      P      16 45 09.9 +0.9
KOUNC Koumac, New Ca    37.18 118  P      P      16 45 09.4 -1.1
KOUNC                              IAmb   IAmb   16 45 41.2
      comp=Z,19nm,1.0s
NJ2   Nanjing           37.88 345  eP     P      16 45 19.8 +3.6
NJ2                                pmax   pmax
      comp=Z,12nm,0.6s
CRAI  Chiangrai         37.92 312  P      P      16 45 16.0 -0.7
CRAI                               PcP    PcP    16 47 30.3 +0.8
CM31  Chiang Mai Arr    37.99 308  P      P      16 45 16.7 -0.6
CM31                               IAmb   IAmb   16 45 19.3
      comp=Z,20nm,1.2s
CM31                               PcP    PcP    16 47 29.3 -0.5
CMAR  Chiang Mai Arr    37.99 308  P      P      16 45 18.1 +0.8
      comp=Z,8.3nm,0.9s,baz=135,slow=7.2,SNR=55
CMAR                               PcP    PcP    16 47 31.7 +1.9
      comp=Z,2.0nm,0.7s,baz=172,slow=2.8,SNR=11
CMAR                               ScP    ScP    16 51 03.7 +0.9
      comp=Z,1.3nm,0.7s,baz=167,slow=2.9,SNR=11
      comp=Z,8.3nm,0.9s
CMAR  Chiang Mai Arr    37.99 308  P      P      16 45 17.1 -0.2
CMAR                                      PcP    16 47 30.8 +1.0
GYA   Guiyang           38.09 325⇓iP      P      16 45 19.0 +0.9
GYA                                pmax   pmax
      comp=Z,10.0nm,0.6s
CHTO  Chiang Mai        38.19 308  P      P      16 45 19.5 +0.5
CHTO                               PcP    PcP    16 47 31.4 +1.0
JTU   Tsushima          38.92 360  P      P      16 45 25.9 +1.0
KMI   Kunming           39.48 320 ⇑P      P      16 45 31.2 +1.3
KMI                                pmax   pmax
      comp=Z,7.0nm,0.7s
DZM   Mont Dzumac       39.60 119  P      P      16 45 30.2 -0.6
DZM                                IAmb   IAmb   16 45 58.9
      comp=Z,62nm,1.8s
ENH   Enshi             39.71 332  P      P      16 45 30.9 -0.5
ENH   Enshi             39.71 332  P      P      16 45 31.5  0.0
YATNC Mamie plateau,    39.98 119  P      P      16 45 35.8 +1.9
MOO   Moorlands         40.77 160  P      P      16 45 42.6 +2.5
      baz=41,SNR=5.0
MOO   Moorlands         40.77 160  P      P      16 45 42.5 +2.5
TAU   Tasmania Unive    41.23 160  P      P      16 45 43.9 +0.1
TAU                                IAmb   IAmb   16 47 11.5
      comp=Z,61nm,1.9s
MJAR  Matsushiro Arr    41.70  10  P      P      16 45 47.1 -0.6
      comp=Z,7.7nm,0.9s,baz=184,slow=10.0,SNR=12
      comp=Z,7.7nm,0.9s
MAJO  Matsushiro        41.71  10  P      P      16 45 47.5 -0.3
MAJO                               IAmb   IAmb   16 45 48.6
      comp=Z,14nm,0.9s
MAJO  Matsushiro        41.71  10  P      P      16 45 46.7 -1.0
MAJO                               pP     pP     16 46 21.8 +0.6
MJB9  Matsu-Tunnel      41.71  10  P      P      16 45 48.6 +0.8
MJB9                               IAmb   IAmb   16 45 49.6
      comp=Z,14nm,1.0s
KSRS  Korea Array       41.88 358  P      P      16 45 49.4 +0.4
      comp=Z,2.0nm,1.1s,baz=241,slow=12,SNR=4.2
      comp=Z,2.0nm,1.1s
TNCH  TengChong         42.25 316  P      P      16 45 55.5 +3.0
TNCH                               pmax   pmax
      comp=Z,8.0nm,1.4s
XAN   Xi'an             43.15 335  P      P      16 45 59.5  0.0
XAN                                pmax   pmax
      comp=Z,7.0nm,0.7s
JMM   Marumori          43.50  13  P      P      16 46 02.5 +0.3
JMM                                IAmb   IAmb   16 46 08.9
      comp=Z,69nm,1.5s
JMM   Marumori          43.50  13  P      P      16 46 05.1 +2.9
TARA  Tarawa            43.61  83  P      P      16 46 02.4 -1.1
HHC   Hu-ho-hao-te      48.19 342  eP     P      16 46 43.0 +4.0
HHC                                pmax   pmax
      comp=Z,49nm,0.7s
HHC                                pmax   pmax
      comp=Z,88nm,5.4s
CN2   Changchun         48.34 356  P      P      16 46 38.3 -1.6
CN2                                pmax   pmax
      comp=Z,10.0nm,0.5s
USA0B Ussuriysk Arra    48.63   2  P      P      16 46 42.7 +0.5
USRK  Ussuriysk Ar.     48.63   2  P      P      16 46 43.0 +0.9
      comp=Z,2.6nm,0.7s,baz=177,slow=6.3,SNR=9.1
      comp=Z,2.6nm,0.7s
USRK  Ussuriysk Ar.     48.63   2  P      P      16 46 42.4 +0.3
ASAJ  Asahikawa         49.88  12  P      P      16 46 52.9 +1.3
      comp=Z,4.0nm,0.7s,baz=230,slow=12,SNR=2.7
ASAJ                               LR     LR     17 09 10.5
      comp=Z,17nm,18.8s,baz=182,slow=37
      comp=Z,4.0nm,0.7s
JKA   Kamikawa-asahi    49.88  12  P      P      16 46 52.2 +0.6
JKA                                IAmb   IAmb   16 48 10.1
      comp=Z,54nm,1.6s
LSA   Lhasa             50.27 315  P      P      16 46 56.0 +0.5
LSA   Lhasa             50.27 315  P      P      16 46 56.4 +0.9
ODAN  Odare             51.47 310  eP     P      16 47 03.8 -0.4
TAPN  Taplejung         51.48 311  eP     P      16 47 04.3 -0.1
      comp=Z,23nm,0.4s
GTA   Gaotai            51.74 331  eP     P      16 47 06.6 +0.8
GTA                                pP     pwP    16 47 45.5 +0.2
GTA                                sP     sP     16 48 00.1 +2.2
GTA                                pmax   pmax
      comp=Z,6.0nm,0.8s
RAMN  Ramite            52.13 309  eP     P      16 47 09.3 +0.2
      comp=Z,78nm,0.7s
DCZ   Deep Cove         52.16 147  P      P      16 47 09.5 +0.8
DCZ                                IAmb   IAmb   16 48 04.1
      comp=Z,92nm,1.9s
JCZ   Jackson Bay       52.20 145  P      P      16 47 11.2 +2.0
PYZ   Puysegur Point    52.37 148  P      P      16 47 11.9 +1.7
MLZ   Mavora Lakes      52.63 147  P      P      16 47 13.3 +1.1
JIRN  Jiri              52.80 310  eP     P      16 47 14.1 -0.1
WHZ   Wether Hill Ro    52.86 147  P      P      16 47 14.9 +1.0
WHZ                                IAmb   IAmb   16 47 15.7
      comp=Z,17nm,0.8s
GUN   Gumba             53.16 310  eP     P      16 47 16.7 -0.1
      comp=Z,50nm,0.7s
LBZ   Lake Benmore      53.20 144  P      P      16 47 17.7 +1.3
LBZ                                IAmb   IAmb   16 47 18.8
      comp=Z,38nm,1.1s
PKI   Pulchoki          53.35 309  eP     P      16 47 17.8 -0.4
PKIN  Phulchoki         53.37 309  eP     P      16 47 17.8 -0.4
      comp=Z,19nm,0.8s
KKN   Kakani            53.56 310  eP     P      16 47 19.1 -0.4
DMN   Daman             53.60 309  eP     P      16 47 19.7 -0.2
GKN   Gorkha            54.16 309  eP     P      16 47 23.3 -0.5
      comp=Z,42nm,0.7s
MQZ   McQueen’s Vall    54.28 142  P      P      16 47 25.9 +1.7
MQZ                                IAmb   IAmb   16 48 24.3
      comp=Z,40nm,1.3s
BKZ   Black Stump Fm    54.51 136  P      P      16 47 27.4 +1.3
RTZ   Ruatahuna         54.61 135  P      P      16 47 27.4 +0.6
RTZ                                IAmb   IAmb   16 48 55.9
      comp=Z,77nm,1.9s
KOLN  Koldanda          54.85 309  eP     P      16 47 28.8 -0.1
DANN  Dangsing          55.01 309  eP     P      16 47 30.0 -0.1
      comp=Z,43nm,0.7s
PCHI  Peechi            55.19 286  eP     P      16 47 31.3 +0.1
PYUN  Piuthan           55.48 309  eP     P      16 47 33.4  0.0
      comp=Z,75nm,0.9s
ULN   Ulaanbaatar       55.91 342  P      P      16 47 36.9 +1.0
ULN                                IAmb   IAmb   16 47 37.8
      comp=Z,4.3nm,0.5s
ULN   Ulaanbaatar       55.91 342  P      P      16 47 37.4 +1.4
ULN                                pP     pP     16 48 12.8 +1.3
SONM  Songino Array     56.09 341  P      P      16 47 38.2 +1.0
      comp=Z,1.7nm,0.5s,baz=166,slow=7.4,SNR=22
SONM                               pP     pP     16 48 14.0 +1.3
      comp=Z,0.3nm,0.7s,baz=166,slow=8.8,SNR=1.5
SONM                               ScP    ScP    16 52 18.5 +0.7
      comp=Z,0.2nm,0.6s,baz=163,slow=6.0,SNR=2.8
      comp=Z,1.7nm,0.5s
SONM  Songino Array     56.09 341  P      P      16 47 38.0 +0.7
SONM                               PcP    PcP    16 48 33.0 -0.4
DGAR  Diego Garcia      56.95 264  P      P      16 47 43.1 -0.6
WMQ   Urumqi            61.23 326  eP     P      16 48 13.7 +0.9
WMQ                                pmax   pmax
      comp=Z,17nm,0.7s
PEA0B Petropavlovsk-    62.17  19  P      P      16 48 20.7 +1.9
PETK  Petropavlovsk-    62.17  19  P      P      16 48 19.6 +0.8
      comp=Z,7.3nm,0.9s,baz=200,slow=5.0,SNR=8.8
      comp=Z,7.3nm,0.9s
PETK  Petropavlovsk-    62.17  19  P      P      16 48 20.5 +1.8
DRV   Dumont d’Urvil    62.37 175  P      P      16 48 20.0 +0.2
CASY  Casey             63.00 189  P      P      16 48 24.1  0.0
KSH   Kashi             66.06 317  P      P      16 48 46.1 +1.5
KSH                                pmax   pmax
      comp=Z,4.0nm,0.6s
MK31  Makanchi Array    66.06 326  P      P      16 48 45.1 +0.7
MK31                               IAmb   IAmb   16 48 45.9
      comp=Z,9.4nm,0.7s
MKAR  Makanchi Array    66.06 326  P      P      16 48 45.1 +0.7
      comp=Z,11nm,0.5s,baz=120,slow=8.4,SNR=185
MKAR                               pP     pwP    16 49 24.4 -1.3
      comp=Z,3.7nm,0.7s,baz=133,slow=7.1,SNR=3.8
      comp=Z,11nm,0.5s
MAKZ  Makanchi          66.25 326  P      P      16 48 46.3 +0.8
MAKZ                               IAmb   IAmb   16 48 46.9
      comp=Z,11nm,0.6s
MAKZ  Makanchi          66.25 326  P      P      16 48 46.1 +0.5
YAK   Yakutsk           66.45   0  P      P      16 48 47.2 +0.8
YAK   Yakutsk           66.45   0  P      P      16 48 46.5 +0.1
YAK                                pP     pP     16 49 23.3 +0.4
YAK                                sP     sP     16 49 42.0 +2.5
TKM2  Tokmak 2          67.95 320  P      P      16 48 57.5 +0.9
      SNR=8.3
UCH   Uchtor            68.32 319  P      P      16 49 00.1 +1.0
      SNR=9.5
AAK   Ala-Archa         68.53 319  P      P      16 49 01.1 +1.0
      SNR=5.5
AAK   Ala-Archa         68.53 319  P      P      16 49 00.6 +0.5
      comp=Z,2.3nm,0.3s,baz=156,slow=5.1,SNR=12
      comp=Z,2.3nm,0.3s
AAK   Ala-Archa         68.53 319  P      P      16 49 00.8 +0.7
AAK   Ala-Archa         68.53 319  P      P      16 49 01.1 +1.0
AML   Almayashu         68.81 319  P      P      16 49 03.4 +1.2
      SNR=11
USP   Ospenovka         68.82 320  P      P      16 49 02.6 +0.8
      SNR=6.6
KBL   Kabul             68.99 310  P      P      16 49 02.3 -1.0
KBL                                IAmb   IAmb   16 49 04.2
      comp=Z,8.9nm,0.8s
EKS2  Erkin-Say         69.00 319  P      P      16 49 04.2 +1.2
      SNR=7.3
ZAA0  Zalesovo Array    69.31 334  P      P      16 49 04.3 -0.2
ZAA0                               IAmb   IAmb   16 49 05.4
      comp=Z,6.9nm,0.8s
ZALV  Zalesovo Beam     69.31 334  P      P      16 49 04.3 -0.2
      comp=Z,5.9nm,0.6s,baz=118,slow=5.0,SNR=35
      comp=Z,5.9nm,0.6s
ZALV  Zalesovo Beam     69.31 334  P      P      16 49 04.0 -0.5
GAR   Garm              69.77 314  P      P      16 49 07.4 -0.4
GAR                                IAmb   IAmb   16 49 08.9
      comp=Z,17nm,0.9s
KURBB Kurchatov Arra    70.32 328  P      P      16 49 11.2 +0.5
      comp=Z,17nm,0.6s,baz=129,slow=5.3,SNR=164
KURBB                              pP     pP     16 49 49.0 +1.3
      comp=Z,2.4nm,0.7s,baz=128,slow=5.9,SNR=2.3
      comp=Z,17nm,0.6s
KURK  Kurchatov         70.33 328  P      P      16 49 11.2 +0.5
KURK                               IAmb   IAmb   16 49 12.4
      comp=Z,21nm,0.8s
KURK  Kurchatov         70.33 328  P      P      16 49 11.4 +0.7
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CHGR	**Chuyangaron**	**70.46**	**314**	P	**P**	**16 49 12.2**	**+0.2**
CHGR				IAmb	IAmb	16 49 13.1	
	comp=Z,19nm,1.1s						
CCD	**Concordia, Ant**	**70.53**	**182**	P	**P**	**16 49 12.8**	**+0.7**
CCD				PcP	**PcP**	**16 49 33.4**	**+1.1**
KK31	**Karatay Array**	**71.35**	**318**	P	**P**	**16 49 16.8**	**-0.4**
KKAR	**Karatay Array**	**71.35**	**318**	P	**P**	**16 49 16.6**	**-0.6**
KKAR	**Karatay Array**	**71.35**	**318**	P	**P**	**16 49 17.0**	**-0.1**
KKAR				IAmb	IAmb	16 49 18.4	
	comp=Z,4.5nm,1.1s						
WSAR	**Wadi Sarin**	**74.55**	**295**	P	**P**	**16 49 36.5**	**+0.2**
	comp=Z,7.7nm,0.9s,baz=136,slow=8.2,SNR=3.3						
	comp=Z,7.7nm,0.9s						
VNDA	**Vanda**	**74.84**	**173**	P	**P**	**16 49 37.1**	**+0.2**
	comp=Z,3.3nm,0.5s,baz=312,slow=8.2,SNR=35						
	comp=Z,3.3nm,0.5s						
VNDA	**Vanda**	**74.84**	**173**	P	**P**	**16 49 37.2**	**+0.2**
SBA	**Scott Base**	**75.73**	**172**	P	**P**	**16 49 42.9**	**+0.8**
BVAR	**Borovoye Array**	**75.88**	**328**	P	**P**	**16 49 43.5**	**+0.2**
	comp=Z,9.8nm,0.8s,baz=123,slow=5.5,SNR=39						
	comp=Z,9.8nm,0.8s						
BRVK	**Borovoye**	**75.95**	**328**	P	**P**	**16 49 44.5**	**+0.8**
BRVK				IAmb	IAmb	16 49 45.3	
	comp=Z,12nm,0.8s						
TIXI	**Tiksi**	**76.11**	**360**	P	**P**	**16 49 44.8**	**+0.5**
GEYT	**Alibeck**	**78.44**	**310**	P	**P**	**16 49 58.7**	**+0.7**
	comp=Z,3.5nm,0.6s,baz=159,slow=4.6,SNR=10						
	comp=Z,3.5nm,0.6s						
UNV	**Unalaska Valle**	**78.68**	**33**	P	**P**	**16 49 59.8**	**+0.9**
UNV				IAmb	IAmb	16 52 01.7	
	comp=Z,30nm,1.2s						
NRIK	**Noril'sk**	**79.18**	**346**	P	**P**	**16 50 01.7**	**+0.4**
	comp=Z,3.0nm,0.6s,baz=114,slow=6.5,SNR=11						
	comp=Z,3.0nm,0.6s						
NRIK	**Noril'sk**	**79.18**	**346**	P	**P**	**16 50 02.4**	**+1.1**
PPT	**Papeete**	**79.81**	**107**	P	**P**	**16 50 04.6**	**-1.3**
	comp=Z,25nm,0.7s,baz=235,slow=1.3,SNR=3.1						
	comp=Z,25nm,0.7s						
ABKAR	**Akbulak array**	**80.45**	**321**	P	**P**	**16 50 08.6**	**+0.1**
ABKAR	**Akbulak array**	**80.45**	**321**	P	**P**	**16 50 08.9**	**+0.4**
ABKAR				IAmb	IAmb	16 50 11.9	
	comp=Z,4.1nm,0.7s						
VOI	**Vohitsoka**	**81.71**	**249**	P	**P**	**16 50 15.2**	**-0.8**
AKTO	**Aktyubinsk**	**82.00**	**322**	P	**P**	**16 50 17.1**	**+0.4**
	comp=Z,3.8nm,0.5s,baz=109,slow=6.4,SNR=9.9						
AKTO				pP	**pwP**	**16 50 57.5**	**-1.8**
	comp=Z,3.9nm,0.9s,baz=58,slow=4.3,SNR=2.2						
	comp=Z,3.8nm,0.5s						
SDPT	**Sand Point**	**82.49**	**33**	P	**P**	**16 50 19.8**	**+0.7**
ARU	**Arti**	**83.52**	**328**	P	**P**	**16 50 23.7**	**-0.7**
	comp=Z,4.0nm,0.4s,baz=127,slow=2.1,SNR=11						
	comp=Z,4.0nm,0.4s						
ARU	**Arti**	**83.52**	**328**	P	**P**	**16 50 24.1**	**-0.3**
ARU				IAmb	IAmb	16 50 25.4	
	comp=Z,14nm,1.1s						
ANM	**Nome**	**83.67**	**23**	P	**P**	**16 50 25.9**	**+0.8**
RAYN	**Ar Rayn**	**86.49**	**294**	P	**P**	**16 50 40.6**	**+0.5**
RAYN				IAmb	IAmb	16 50 41.5	
	comp=Z,13nm,0.8s						
BELG	**Belogornoye**	**88.78**	**323**	P	**P**	**16 50 50.4**	**+0.2**
	comp=Z,6.8nm,0.6s,baz=178,slow=15,SNR=6.3						
BELG				pP	**pwP**	**16 51 32.4**	**-2.2**
	comp=Z,5.9nm,0.8s,baz=144,slow=6.7,SNR=2.9						
	comp=Z,6.8nm,0.6s						
SUA	**Susitna One**	**89.05**	**28**	P	**P**	**16 50 53.3**	**+1.8**
SUA				IAmb	IAmb	16 53 53.8	
	comp=Z,19nm,1.0s						
AKH	**Akhalkalaki**	**90.16**	**311**	P	**P**	**16 50 56.4**	**-0.8**
AKH				IAmb	IAmb	16 50 59.5	
	comp=Z,23nm,1.0s						
GEVA	**Gevas**	**90.17**	**308**	P	**P**	**16 50 58.1**	**+0.7**
GEVA				IAmb	IAmb	16 50 59.4	
	comp=Z,11nm,0.8s						
KBZ	**Khabaz**	**90.83**	**314**	P	**P**	**16 50 59.6**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=62,slow=9.4,SNR=4.8						
	comp=Z,1.4nm,0.8s						
GURO	**Guroymak-BITLI**	**91.00**	**308**	P	**P**	**16 51 01.7**	**+0.6**
GURO				IAmb	IAmb	16 51 03.3	
	comp=Z,7.0nm,0.8s						
ILAR	**Eielson Array**	**91.33**	**25**	P	**P**	**16 51 00.7**	**-1.2**
	comp=Z,0.5nm,0.5s,baz=256,slow=4.3,SNR=9.7						
	comp=Z,0.5nm,0.5s						
KMBO	**Kilima Mbogo**	**92.33**	**269**	P	**P**	**16 51 07.8**	**-0.1**
KMBO				IAmb	IAmb	16 51 09.7	
	comp=Z,5.6nm,0.9s						
DAWY	**Dawson**	**94.52**	**26**	P	**P**	**16 51 16.8**	**+0.2**
DAWY				IAmb	IAmb	16 51 19.2	
	comp=Z,4.8nm,1.1s						
INK	**Inuvik**	**96.77**	**22**	P	**P**	**16 51 25.9**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=317,slow=0.9,SNR=5.8						
	comp=Z,0.9nm,0.5s						
BRTR	**Keskin Array B**	**97.57**	**309**	P	**P**	**16 51 30.4**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=103,slow=2.7,SNR=4.1						
	comp=Z,0.8nm,0.8s						
ARCES	**ARCESS Array B**	**99.24**	**340**	P	**Pdif**	**16 51 37.1**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=82,slow=5.1,SNR=12						
	comp=Z,0.5nm,0.4s						
BOSA	**Boshof**	**100.39**	**240**	P	**Pdif**	**16 51 43.1**	**-0.9**
	comp=Z,2.6nm,0.9s,baz=73,slow=5.0,SNR=4.0						
FINES	**FINESS Array B**	**100.52**	**332**	P	**Pdif**	**16 51 42.1**	**-1.5**
	comp=Z,1.3nm,0.6s,baz=45,slow=5.7,SNR=5.7						
YKA	**Yellowknife Ar**	**105.75**	**26**	PKiKP	**PKiKP**	**16 56 19.1**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=300,slow=1.4,SNR=9.9						
YKA				PKKPbc	**PKKPbc**	**17 07 42.4**	**-3.0**
	comp=Z,0.8nm,0.9s,baz=110,slow=3.3,SNR=7.9						
NVAR	**Mina Array Bea**	**110.05**	**51**	PKKPab	PKKPab	17 07 41.1	-0.8
	comp=Z,0.1nm,0.3s,baz=110,slow=4.9,SNR=3.8						
GERES	**GERESS Array B**	**110.39**	**321**	PKiKP	**PKiKP**	**16 56 27.7**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=104,slow=4.4,SNR=4.3						
PDAR	**Pinedale Array**	**115.43**	**44**	PKP	**PKPdf**	**16 56 38.9**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=24,slow=4.0,SNR=3.8						
PDAR				PKKPbc	**PKKPbc**	**17 07 12.1**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=116,slow=6.3,SNR=6.4						
ULM	**Lac du Bonnet**	**120.62**	**32**	PKP	**PKPdf**	**16 56 47.0**	**-0.5**
	comp=Z,1.6nm,0.5s,baz=30,slow=10,SNR=2.3						
ULM				PKKPbc	**PKKPab**	**17 06 52.9**	**-2.0**
	comp=Z,0.5nm,0.3s,baz=187,slow=2.9,SNR=4.0						
TXAR	**Lajitas Array**	**123.95**	**58**	PKP	**PKiKP**	**16 56 55.4**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=169,slow=1.3,SNR=5.6						
TXAR				PKKPbc	**PKKPab**	**17 06 41.0**	**-0.1**
	comp=Z,0.9nm,1.0s,baz=78,slow=6.5,SNR=3.6						
ESDC	**Sonseca Array**	**125.57**	**317**	PKP	**PKPdf**	**16 56 55.8**	**-1.6**
	comp=Z,0.3nm,0.4s,baz=13,slow=12,SNR=4.1						
TORD	**Torodi Ar. Bea**	**128.00**	**283**	PKP	**PKPdf**	**16 57 02.7**	**+0.1**
	comp=Z,3.0nm,0.7s,baz=65,slow=2.0,SNR=19						
SCHQ	**Schefferville**	**128.17**	**12**	PKP	**PKiKP**	**16 57 02.4**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=315,slow=1.4,SNR=4.3						
PLCA	**Paso Flores**	**131.22**	**160**	PKP	**PKPdf**	**16 57 08.7**	**+0.5**
	comp=Z,2.1nm,0.8s,baz=270,slow=6.1,SNR=4.1						
CPUP	**Villa Florida**	**148.50**	**168**	PKPbc	**PKPbc**	**16 57 43.5**	**+0.3**
	comp=Z,15nm,0.8s,baz=208,slow=1.9,SNR=20						

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*IDC **09** 16:48:26.2±0.9, 1°.03S×120°.48E, h0^{km}, mb3.7/7, mbtmp3.8/8, ML4.2/1, MS3.1/4, Error ellipse: s-maj=49.4km s-min=16.7km az=66.0*

*DJA **09** 16:48:28.8±1.2, 1°S±2°×12°0E±°, h20^{km}±11^{km}, M4.2/13, mb4.2/6, MLv4.2/13*

ISC 09 16:48:32.4±0.7**, 1°.09S**±0°.06×**120°.50E**±0°.07**, h49**^{km}**, n20, σ1^{s}.60**/20**, mb3.7**/7**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPSI	**Mapaga**	**1.54**	**337**	P	Pn	16 48 51.3	-6.1
MRSI	**Marisa**	**2.12**	**43**	P	**Pn**	**16 49 03.9**	**-1.5**
MRSI				S	**Sn**	**16 49 33.1**	**+2.6**
LUWI	**Luwuk**	**2.27**	**89**	P	**Pn**	**16 49 06.1**	**-1.4**
SPSI	**Sidrap Palu**	**2.95**	**194**	P	**Pn**	**16 49 15.8**	**-1.1**
GTOI	**Gorontalo**	**3.04**	**56**	P	**Pn**	**16 49 16.2**	**-1.8**
BKB	**Balikpapan**	**3.61**	**267**	P	**Pn**	**16 49 22.9**	**-3.0**
KAPI	**Kappang**	**3.98**	**191**	Pn	**Pn**	**16 49 30.2**	**-0.7**
	16nm,0.3s,baz=3.0,slow=7.4,SNR=33						
KAPI				Sn	**Sn**	**16 50 16.8**	**+0.6**
	11nm,0.3s,baz=307,slow=20,SNR=9.3						
KAPI				LR	LR	16 51 20.4	
	comp=Z,341nm,19.8s,baz=342,slow=43						
	62nm,0.5s						
BKSI	**Bulukumba**	**4.23**	**185**	P	**Pn**	**16 49 33.9**	**-0.4**
BSSI	**Bau Bau, Buton**	**5.02**	**180**	P	**Pn**	**16 49 43.5**	**-1.8**
	66nm,0.6s,0.2nm						
SANI	**Sanana**	**5.57**	**100**	P	**Pn**	**16 49 50.4**	**-2.3**
	10nm,1.5s,0.1nm						
LBMI	**Labuha**	**7.01**	**86**	P	**Pn**	**16 50 10.5**	**-2.1**
	20nm,1.0s,0.2nm						
SIJI	**Sorong**	**10.76**	**89**	LR	LR	16 55 36.9	
	comp=Z,66nm,19.2s,baz=344,slow=40						
WRA	**Warramunga Arr**	**23.12**	**145**	P	**P**	**16 53 34.2**	**-0.2**
	1.6nm,0.8s,baz=329,slow=9.8,SNR=6.1						
	1.6nm,0.8s						
ASAR	**Alice Springs**	**25.94**	**151**	P	**P**	**16 54 02.2**	**+1.8**
	0.6nm,0.8s,baz=343,slow=14,SNR=3.5						
ASAR				PcP	**PcP**	**16 57 28.2**	**0.0**
	0.2nm,0.6s,baz=339,slow=2.2,SNR=4.8						
	0.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**28.75**	**314**	P	**P**	**16 54 26.1**	**+0.5**
	0.4nm,0.4s,baz=150,slow=7.3,SNR=1.8						
CMAR				LR	LR	17 06 42.6	
	comp=Z,25nm,18.4s,baz=110,slow=38						
	0.4nm,0.4s						
STKA	**Stephens Creek**	**36.53**	**149**	P	**P**	**16 55 34.2**	**+0.8**
	0.7nm,0.3s,baz=340,slow=9.3,SNR=1.8						
	0.7nm,0.3s						
MJAR	**Matsushiro Arr**	**40.90**	**22**	LR	LR	17 12 15.8	
	comp=Z,25nm,20.2s,baz=204,slow=35						
SONM	**Songino Array**	**50.25**	**348**	P	**P**	**16 57 24.2**	**+0.3**
	0.7nm,0.9s,baz=156,slow=5.7,SNR=3.9						
	0.7nm,0.9s						
MKAR	**Makanchi Array**	**58.26**	**330**	P	**P**	**16 58 22.5**	**+0.5**
	0.9nm,0.6s,baz=137,slow=7.7,SNR=11						
	0.9nm,0.6s						
BRTR	**Keskin Array B**	**88.27**	**310**	P	**P**	**17 01 18.0**	**-1.1**
	0.6nm,0.9s,baz=19,slow=6.1,SNR=3.7						
	0.6nm,0.9s						

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*NEIC **09** 17:01:00.2±1.1, 24°.28S±0°.06×67°.3W±0°.3, h225^{km}±22^{km}, mb4.1/1, ML3.9(GUC), Error ellipse: s-maj=36.2km s-min=7.6km az=94.0*

*IDC **09** 17:01:01.9±2.3, 24°.16S×67°.07W, h169^{km}±19^{km}, mb3.1/3, mbtmp3.7/6, Error ellipse: s-maj=32.1km s-min=27.9km az=10.0*

*SJA **09** 17:01:02.7±1.1, 24°.27S×67°.22W, h150^{km}, ML3.8, MW3.6, Hypocentre not reviewed by the ISC*

*GUC **09** 17:01:03.1±0.7, 24°.24S×67°.42W, h199^{km}±11^{km}, ML4.1*

ISC 09 17:01:01.7±1.0**, 24°.28S**±0°.04×**67°.3W**±0°.1**, h185**^{km}±11^{km}**, n53, σ1^{s}.34**/70**, mb3.2**/3**, 9C-5D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.69**	**105**	*e*P		17 01 36.4	
SLA				*e*S		17 02 02.4	
AZAP	**Zapla**	**2.04**	**89**	*e*P		17 01 39.4	
LVC	**Limon Verde**	**2.22**	**318**	P	**Pn**	**17 01 43.2**	**+1.2**
	52nm,0.4s,baz=135,slow=6.8,SNR=64						
LVC				S	**Sn**	**17 02 12.9**	**-0.3**
	123nm,0.3s,baz=274,slow=21,SNR=16						
LVC	**Limon Verde**	**2.22**	**318**		**Pn**	**17 01 43.0**	**+1.1**
LVC				Sn	**Sn**	**17 02 13.2**	**0.0**
LVC	**Limon Verde**	**2.22**	**318**	⇑*i*P	**Pn**	**17 01 43.1**	**+1.1**
LVC				*i* S	**Sn**	**17 02 13.1**	**-0.1**
LVC	**Limon Verde**	**2.22**	**318**	*e*P		17 01 43.1	
LVC				*e*S		17 02 13.7	
PB15	**IPOC Station P**	**2.26**	**298**	Pn	**Pn**	**17 01 43.4**	**+1.2**
PB15				Sn	**Sn**	**17 02 14.1**	**+0.6**
PB15	**IPOC Station P**	**2.26**	**298**	⇓*i*P	**Pn**	**17 01 43.6**	**+1.5**
PB15				*i* S	**Sn**	**17 02 13.8**	**+0.3**
PB15	**IPOC Station P**	**2.26**	**298**	*e*P		17 01 43.6	
PB15				*e*S		17 02 14.3	
PB15				IAML		17 02 16.7	
	comp=Z,1µm,0.1s						
GO02	**Mina Guanaco**	**2.26**	**247**	Pn	**Pn**	**17 01 43.8**	**+1.5**
GO02				Sn	**Sn**	**17 02 15.1**	**+1.3**
GO02	**Mina Guanaco**	**2.26**	**247**	⇑*i*P	**Pn**	**17 01 43.8**	**+1.5**
GO02				*i* S	**Sn**	**17 02 15.1**	**+1.3**
GO02				IAML		17 02 16.6	
	comp=N,527nm,0.4s						
PB06	**IPOC Station P**	**2.61**	**306**		**Pn**	**17 01 47.2**	**+1.1**
PB06				Sn	**Sn**	**17 02 20.0**	**-0.6**
PB06	**IPOC Station P**	**2.61**	**306**	⇑*i*P	**Pn**	**17 01 47.4**	**+1.3**
PB06				*i* S	**Sn**	**17 02 20.2**	**-0.5**
PB06				IAML		17 02 21.6	
	comp=E,610nm,0.1s						
PB06	**IPOC Station P**	**2.61**	**306**	*e*P		17 01 47.1	
PB06				*e*S		17 02 20.3	
PB06				IAML		17 02 23.0	
	comp=Z,342nm,0.2s						
ASTB	**Santa Barbara**	**2.62**	**83**	*e*P		17 01 45.9	
PB14	**IPOC Station P**	**2.85**	**262**	Pn	**Pn**	**17 01 49.7**	**+0.7**
PB14	**IPOC Station P**	**2.85**	**262**	*e*P		17 01 50.0	
PB14				*e*P		17 01 52.8	
PB14				*e*S		17 02 26.5	
AC02	**Maricunga**	**3.03**	**213**	Pn	**Pn**	**17 01 53.1**	**+1.6**
AC02	**Maricunga**	**3.03**	**213**	⇑*i*P	**Pn**	**17 01 53.1**	**+1.6**
PB09	**IPOC Station P**	**3.05**	**324**		**Pn**	**17 01 52.9**	**+1.5**
PB09	**IPOC Station P**	**3.05**	**324**	⇑*i*P	**Pn**	**17 01 52.7**	**+1.3**
PB09				*i* S	**Sn**	**17 02 30.0**	**-0.1**
PB09				IAML		17 02 34.7	
	comp=E,209nm,0.3s						
PB09	**IPOC Station P**	**3.05**	**324**	*e*P		17 01 52.7	
PB09				*e*S		17 02 29.6	
PB09				IAML		17 02 30.6	
	comp=Z,177nm,0.4s						
AHML	**Horco Molle**	**3.06**	**145**	*e*P		17 02 10.3	
ALOL	**LOMAS DE OLMED**	**3.07**	**82**	*e*P		17 01 50.9	
ALOL				*e*S		17 02 30.1	
PB10	**IPOC Station P**	**3.07**	**284**	Pn	**Pn**	**17 01 51.5**	**0.0**
PB10	**IPOC Station P**	**3.07**	**284**	⇓*i*P	**Pn**	**17 01 52.8**	**+1.3**
PB10				*i* S	**Sn**	**17 02 29.4**	**-0.8**
PB10	**IPOC Station P**	**3.07**	**284**	*e*P		17 01 52.8	
PB10				*e*S		17 02 30.4	
PB03	**IPOC Station P**	**3.17**	**314**		**Pn**	**17 01 53.4**	**+0.6**
PB03	**IPOC Station P**	**3.17**	**314**	⇑*i*P	**Pn**	**17 01 53.4**	**+0.6**
PB03				*i* S	**Sn**	**17 02 30.9**	**-1.7**
PB03	**IPOC Station P**	**3.17**	**314**	*e*P		17 01 53.5	
PB03				*e*S		17 02 31.7	
PB03				IAML		17 02 33.7	
	comp=Z,180nm,0.3s						
PB04	**IPOC Station P**	**3.26**	**306**	Pn	**Pn**	**17 01 54.5**	**+0.7**
PB04	**IPOC Station P**	**3.26**	**306**	⇓*i*P	**Pn**	**17 01 54.8**	**+0.9**
PB04				*i* S	**Sn**	**17 02 32.7**	**-1.9**
PB04	**IPOC Station P**	**3.26**	**306**	*e*P		17 01 54.9	
PB04				*e*S		17 02 34.4	
PB04				IAML		17 02 38.1	
	comp=Z,118nm,0.1s						
PB07	**IPOC Station P**	**3.48**	**316**		**Pn**	**17 01 57.3**	**+0.6**
PB07	**IPOC Station P**	**3.48**	**316**	⇑*i*P	**Pn**	**17 01 57.2**	**+0.5**
PB07				*i* S	**Sn**	**17 02 37.5**	**-2.2**
PB07	**IPOC Station P**	**3.48**	**316**	*e*P		17 01 57.2	
PB07				*e*S		17 02 38.5	
PB07				IAML		17 02 39.5	
	comp=Z,213nm,0.5s						
AC01	**Pan de Azucar**	**3.52**	**237**		**Pn**	**17 01 57.2**	**+0.3**
AC01	**Pan de Azucar**	**3.52**	**237**	⇓*e*P	**Pn**	**17 01 57.3**	**+0.3**
AC01				*e*S	**Sn**	**17 02 38.7**	**-1.5**
PB02	**IPOC Station P**	**3.80**	**320**		**Pn**	**17 02 00.5**	**0.0**
PB02	**IPOC Station P**	**3.80**	**320**	⇑*i*P	**Pn**	**17 02 00.5**	**0.0**
PB02	**IPOC Station P**	**3.80**	**320**	*e*P		17 02 00.5	
PB02				*e*S		17 02 44.9	
PB02				IAML		17 02 52.1	
	comp=Z,199nm,0.3s						
PB01	**IPOC Station P**	**3.80**	**327**		**Pn**	**17 02 00.2**	**-0.4**
PB01	**IPOC Station P**	**3.80**	**327**	⇑*i*P	**Pn**	**17 02 00.5**	**-0.1**
PB01	**IPOC Station P**	**3.80**	**327**	*e*P		17 02 00.6	
PB01				*e*S		17 02 45.1	
PB01				IAML		17 02 47.0	
	comp=Z,87nm,0.3s						
GO03	**Copiap**	**4.23**	**218**		**Pn**	**17 02 05.5**	**-0.3**
GO03	**Copiap**	**4.23**	**218**	*e*P	**Pn**	**17 02 05.8**	**-0.1**
GO03				*e*S	**Sn**	**17 02 55.1**	**-1.1**
GO03	**Copiap**	**4.23**	**218**	*e*P		17 02 06.0	
GO03				*e*S		17 02 54.8	
CYA	**Choya**	**4.36**	**162**	*e*P		17 02 08.5	
CYA				*e*S		17 02 59.4	
PB08	**IPOC Station P**	**4.46**	**337**		**Pn**	**17 02 09.5**	**+0.3**
PB08	**IPOC Station P**	**4.46**	**337**	⇓*i*P	**Pn**	**17 02 09.2**	**0.0**
PB08				*i* S	**Sn**	**17 03 00.4**	**-1.8**
PB08	**IPOC Station P**	**4.46**	**337**	*e*P		17 02 09.8	
PB08				*e*S		17 03 01.1	
PB08				IAML		17 03 02.4	
	comp=Z,36nm,0.5s						
TA01	**Diego Aracena**	**4.56**	**324**	Pn	**Pn**	**17 02 09.7**	**-0.3**
GO01	**Chusmiza**	**4.91**	**339**		**Pn**	**17 02 14.9**	**-0.2**
PB11	**IPOC Station P**	**5.00**	**334**	*e*P		17 02 14.8	
PB11				*e*S		17 03 10.9	
PB11				IAML		17 03 16.0	
	comp=Z,40nm,0.6s						
PB11	**IPOC Station P**	**5.00**	**334**	Pn	**Pn**	**17 02 14.5**	**-1.4**
PB11	**IPOC Station P**	**5.00**	**334**	*e*P	**Pn**	**17 02 14.8**	**-1.1**
PB11				*e*S	**Sn**	**17 03 10.1**	**-4.2**
ACLC	**CERRO LA CRUZ**	**5.13**	**177**	*e*P		17 02 18.8	
ACLC				*e*S		17 03 17.1	
PSGCX	**Pisagua**	**5.35**	**330**		**Pn**	**17 02 18.8**	**-1.6**
PSGCX	**Pisagua**	**5.35**	**330**	*e*P		17 02 19.1	
PSGCX				*e*S		17 03 12.8	
PSGCX				IAML		17 03 25.5	
	comp=Z,22nm,0.4s						
MNMC	**Minye Minye**	**5.55**	**337**		**Pn**	**17 02 22.6**	**-0.6**
MNMCX	**Minye Minye**	**5.55**	**337**	*e*P		17 02 22.9	
MNMCX				*e*S		17 03 23.1	
MNMCX				IAML		17 03 30.9	
	comp=Z,59nm,0.3s						
LCO	**Las Campanas**	**5.61**	**212**		**Pn**	**17 02 22.8**	**-1.0**
LCO	**Las Campanas**	**5.61**	**212**	*e*P		17 02 23.1	
LCO				*e*S		17 03 15.8	
LCO				IAML		17 03 32.8	
	comp=Z,82nm,0.4s						
PB16	**IPOC Station P**	**6.26**	**340**	*e*P		17 02 14.3	
PB16				*e*S		17 02 32.9	
PB16	**IPOC Station P**	**6.26**	**340**		**Pn**	**17 02 32.3**	**-0.5**
PB12	**IPOC Station P**	**6.30**	**333**	Pn	**Pn**	**17 02 31.2**	**-1.6**
PB12	**IPOC Station P**	**6.30**	**333**	*e*P		17 02 31.7	
PB12				IAML		17 03 59.5	
	comp=Z,14nm,0.9s						
GO04	**Tololo Observa**	**6.64**	**207**	Pn	**Pn**	**17 02 35.6**	**-1.8**
CFA	**Coronel Fontan**	**7.34**	**186**	S	**Sn**	**17 04 06.1**	**-3.1**
	comp=Z,4.6nm,0.3s,baz=166,slow=16,SNR=8.2						
CFA	**Coronel Fontan**	**7.34**	**186**	*e*P		17 02 45.0	
CFA				IAML		17 04 10.5	
	comp=Z,8.9nm,1.8s						
CO02	**Combarbal**	**7.64**	**205**	Pn	**Pn**	**17 02 49.4**	**-0.9**
MRA	**San Martin**	**8.23**	**171**	*e*P		17 02 57.2	
SIV	**San Ignacio**	**10.11**	**36**	P	**Pn**	**17 03 19.7**	**-3.0**
	comp=Z,3.4nm,0.4s,baz=227,slow=9.5,SNR=15						
TRQA	**Tornquist**	**14.46**	**163**		Pn	17 04 14.2	-3.7
PLCA	**Paso Flores**	**16.63**	**189**	P	**Pn**	**17 04 45.5**	**+1.2**
	comp=Z,1.6nm,0.7s,baz=24,slow=15,SNR=4.5						
PLCA	**Paso Flores**	**16.63**	**189**	P	**P**	**17 04 40.5**	**-3.0**
PLCA				IAmb	IAmb	17 05 01.3	
	comp=Z,13nm,1.5s						
TXAR	**Lajitas Array**	**63.75**	**325**	P	**P**	**17 11 15.5**	**+1.5**
	comp=Z,0.2nm,0.6s,baz=159,slow=7.7,SNR=2.1						
	comp=Z,0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**76.92**	**69**	P	**P**	**17 12 34.4**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=269,slow=6.3,SNR=4.0						
	comp=Z,0.6nm,0.8s						
YKA	**Yellowknife Ar**	**94.29**	**340**	P	**P**	**17 14 01.0**	**+1.6**
	comp=Z,0.1nm,0.5s,baz=110,slow=4.7,SNR=1.8						
	comp=Z,0.1nm,0.5s						
ZALV	**Zalesovo Beam**	**143.77**	**28**	PKP	**PKPdf**	**17 20 14.4**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=317,slow=6.3,SNR=2.3						
MKAR	**Makanchi Array**	**146.91**	**40**	PKPbc	**PKPab**	**17 20 24.1**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=295,slow=3.5,SNR=12						

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*NOU **09** 17:20:24.6, 10°.32S×161°.48E, h49^{km}, mb4.8/44, Solomon Islands*

*BJI **09** 17:20:24.4±0.0, 10°.09S×161°.42E, h50^{km}, mb4.6/33, mB4.9/18, Ms4.5/1*

*IDC **09** 17:20:26.6±1.8, 10°.45S×161°.33E, h69^{km}±14^{km}, mb4.1/21, mbtmp4.4/24, MS3.6/34, Error ellipse: s-maj=17.5km s-min=11.4km az=78.0*

*NEIC **09** 17:20:26.6±1.4, 10°.45S±0°.07×161°.32E±0°.09, h60^{km}±7^{km}, mb4.9/122, Error ellipse: s-maj=14.0km s-min=9.8km az=65.0*

ISC 09 17:20:25.6±0.3**, 10°.43S**±0°.05×**161°.36E**±0°.06**, h61**^{km}**, n407, σ1^{s}.41**/408**, mb4.9**/101**, 1D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.71**	**305**	P	**Pn**	**17 20 52.5**	**-0.7**
	41µm,0.4s,baz=163,slow=4.8,SNR=408						
HNR				S	**Sn**	**17 21 15.4**	**+1.3**
	118µm,0.4s,baz=215,slow=15,SNR=21						
HNR				LR	LR	17 21 50.7	
	comp=Z,22µm,19.8s,baz=176,slow=50						
HNR	**Honiara**	**1.71**	**305**	Pn	**Pn**	**17 20 52.4**	**-0.8**
HNR				Sn	**Sn**	**17 21 16.3**	**+2.3**
DVP	**Devils Point**	**9.82**	**138**	P	**Pn**	**17 22 43.0**	**-1.1**
KOUNC	**Koumac, New Ca**	**10.45**	**165**		**Pn**	**17 22 53.0**	**+0.3**
KOUNC	**Koumac, New Ca**	**10.45**	**165**	P	**Pn**	**17 22 53.0**	**+0.3**
LIFNC	**LIFOU**	**11.74**	**152**		**Pn**	**17 23 08.8**	**-1.5**
LIFNC	**LIFOU**	**11.74**	**152**	P	**Pn**	**17 23 09.0**	**-1.3**
NOUC	**Port Laguerre**	**12.53**	**158**	P	**Pn**	**17 23 21.8**	**+0.6**
DZM	**Mont Dzumac**	**12.56**	**158**	*e*P	**Pn**	**17 23 23.8**	**+2.2**
	56nm,29.2s						
DZM				*e*LR	LR	17 26 15.0	
	comp=Z,432nm,24.8s						
DZM	**Mont Dzumac**	**12.56**	**158**	P	**Pn**	**17 23 21.4**	**-0.2**
	7.7nm,0.4s,baz=10,slow=8.5,SNR=58						
DZM				S	**Sn**	**17 25 36.6**	**-3.3**
	5.7nm,0.6s,baz=311,slow=20,SNR=2.2						
DZM				LR	LR	17 27 42.9	
	comp=Z,237nm,18.6s,baz=26,slow=35						
DZM	**Mont Dzumac**	**12.56**	**158**		**Pn**	**17 23 21.3**	**-0.3**
DZM	**Mont Dzumac**	**12.56**	**158**	P	**Pn**	**17 23 22.1**	**+0.5**
YATNC	**Mamie plateau,**	**12.72**	**156**	P	**Pn**	**17 23 23.9**	**+0.2**
ONTNC	**Ouen Toro**	**12.78**	**158**	Pn	**Pn**	**17 23 26.2**	**+1.7**
ONTNC	**Ouen Toro**	**12.78**	**158**	P	**Pn**	**17 23 24.7**	**+0.2**
OUENC	**Ouen Island, N**	**13.02**	**157**		**Pn**	**17 23 28.6**	**+0.7**
OUENC	**Ouen Island, N**	**13.02**	**157**	P	**Pn**	**17 23 27.9**	**0.0**
PINNC	**Pines Island,**	**13.44**	**155**	Pn	**Pn**	**17 23 33.5**	**0.0**
PMG	**Port Moresby**	**14.03**	**273**	P	**Pn**	**17 23 42.8**	**+1.4**
	20nm,1.1s,baz=74,slow=15,SNR=5.8						
PMG				LR	LR	17 28 48.4	
	comp=Z,411nm,20.7s,baz=102,slow=36						
CTA	**Charters Tower**	**17.44**	**235**	P	**P**	**17 24 26.0**	**+0.7**
	24nm,0.9s,baz=69,slow=12,SNR=11						
CTA				LR	LR	17 31 09.7	
	comp=Z,150nm,18.1s,baz=65,slow=37						
CTA	**Charters Tower**	**17.44**	**235**	P	**P**	**17 24 26.9**	**+1.6**
CTAO	**Charters Tower**	**17.44**	**235**	P	**P**	**17 24 26.3**	**+1.0**
CTAO	**Charters Tower**	**17.44**	**235**	P	**P**	**17 24 26.9**	**+1.6**
MSVF	**Nonsavu**	**17.73**	**116**	LR	LR	17 30 07.1	
	comp=Z,288nm,18.8s,baz=305,slow=33						
EIDS	**Eidsvold**	**17.77**	**212**	P	**P**	**17 24 30.8**	**+1.8**
EIDS	**Eidsvold**	**17.77**	**212**	P	**P**	**17 24 31.4**	**+2.5**
MTSU	**Mount Surprise**	**18.20**	**243**	P	**Pn**	**17 24 35.3**	**+1.2**
RMQ	**Roma**	**19.92**	**215**	P	**Pn**	**17 24 55.5**	**+0.9**
ARMA	**Armidale**	**21.85**	**203**	P	**P**	**17 25 15.0**	**+1.7**
ARMA	**Armidale**	**21.85**	**203**	P	**P**	**17 25 15.2**	**+1.9**
QIS	**Mount Isa**	**23.23**	**242**	P	**P**	**17 25 29.4**	**+1.6**
SMPI	**Sarmi**	**24.01**	**289**	P	**P**	**17 25 31.7**	**-3.3**
	51nm,1.2s						
CMSA	**Cobar Meteorol**	**25.53**	**212**	P	**P**	**17 25 50.8**	**+2.2**
INKA	**Innaminka**	**25.93**	**226**	P	**P**	**17 25 54.7**	**+2.4**
AFI	**Afiamalu**	**26.48**	**100**	LR	LR	17 34 32.3	
	comp=Z,204nm,19.0s,baz=278,slow=32						
WB0	**Warramunga Arr**	**27.60**	**247**	P	**P**	**17 26 07.5**	**0.0**
WB2	**Warramunga Arr**	**27.69**	**247**	P	**P**	**17 26 08.2**	**-0.1**
WRA	**Warramunga Arr**	**27.70**	**247**	P	**P**	**17 26 08.3**	**-0.1**
	4.1nm,0.6s,baz=76,slow=8.9,SNR=36						
WRA				PcP	**PcP**	**17 29 25.0**	**+0.8**
	0.4nm,0.4s,baz=61,slow=3.0,SNR=2.8						
WRA				LR	LR	17 37 32.7	
	comp=Z,199nm,18.2s,baz=67,slow=37						
	4.1nm,0.6s						
WRA	**Warramunga Arr**	**27.70**	**247**	P	**P**	**17 26 06.5**	**-1.8**
STKA	**Stephens Creek**	**28.10**	**218**	P	**P**	**17 26 12.6**	**+0.8**
	0.9nm,0.4s,baz=0.5,slow=15,SNR=3.8						
STKA				LR	LR	17 37 27.2	
	comp=Z,216nm,18.0s,baz=33,slow=36						
	0.9nm,0.4s						
STKA	**Stephens Creek**	**28.10**	**218**	P	**P**	**17 26 12.9**	**+1.2**
GUMO	**Guam**	**28.94**	**325**	LR	LR	17 37 09.5	
	comp=Z,111nm,21.1s,baz=156,slow=35						
AS01	**Alice Springs**	**29.25**	**240**	P	**P**	**17 26 21.5**	**-0.6**
AS31	**Alice Springs**	**29.29**	**240**	P	**P**	**17 26 21.7**	**-0.8**
ASAR	**Alice Springs**	**29.29**	**240**	P	**P**	**17 26 21.3**	**-1.2**
	0.7nm,0.4s,baz=63,slow=10,SNR=41						
ASAR				ScP	**ScP**	**17 33 04.4**	**-0.4**
	0.1nm,0.5s,baz=59,slow=3.2,SNR=1.2						
ASAR				LR	LR	17 38 03.3	
	comp=Z,267nm,18.8s,baz=94,slow=36						
	0.7nm,0.4s						
LCRK	**Leigh Creek**	**29.33**	**224**	P	**P**	**17 26 23.5**	**+0.8**
OOD	**Oodnadatta**	**29.67**	**231**	P	**P**	**17 26 28.1**	**+2.4**
TOO	**Toolangi**	**30.57**	**205**	P	**P**	**17 26 33.8**	**+0.2**
TOO				IAmb	IAmb	17 26 50.1	
	comp=Z,51nm,2.0s						
TOO	**Toolangi**	**30.57**	**205**	P	**P**	**17 26 34.4**	**+0.8**

HTT	**Hallett**	**30.80**	**219**	P	**P**	**17 26 37.7**	**+2.0**
URZ	**Urewera**	**31.10**	**156**	P	**P**	**17 26 38.2**	**0.0**
	comp=Z,28nm,1.2s,baz=244,slow=15,SNR=2.0						
URZ				LR	LR	17 37 30.8	
	comp=Z,113nm,18.9s,baz=350,slow=33						
	comp=Z,28nm,1.2s						
RTZ	**Ruatahuna**	**31.36**	**156**	P	**P**	**17 26 40.4**	**-0.1**
RTZ				IAmb	IAmb	17 27 31.6	
	comp=Z,56nm,1.6s						
SIJI	**Sorong**	**31.38**	**286**	LR	LR	17 39 03.3	
	comp=Z,141nm,21.3s,baz=100,slow=36						
BKZ	**Black Stump Fm**	**31.64**	**157**	P	**P**	**17 26 42.5**	**-0.5**
BKZ	**Black Stump Fm**	**31.64**	**157**	P	**P**	**17 26 44.2**	**+1.2**
KNRA	**Kununurra**	**32.16**	**257**	P	**P**	**17 26 47.3**	**-0.5**
KNRA				IAmb	IAmb	17 26 48.7	
	comp=Z,33nm,1.4s						
MULG	**Mulgathing**	**32.18**	**228**	P	**P**	**17 26 48.0**	**+0.2**
BBOO	**Buckleboo**	**32.23**	**222**	P	**P**	**17 26 47.9**	**-0.3**
BBOO	**Buckleboo**	**32.23**	**222**	P	**P**	**17 26 49.1**	**+0.9**
RPZ	**Rata Peaks**	**34.21**	**167**	LR	LR	17 40 37.7	
	comp=Z,131nm,18.9s,baz=212,slow=35						
WRKA	**Warakurna**	**34.56**	**241**	P	**P**	**17 27 08.2**	**-0.5**
FITZ	**Fitzroy Crossi**	**35.40**	**253**	P	**P**	**17 27 15.5**	**-0.4**
FITZ	**Fitzroy Crossi**	**35.40**	**253**	P	**P**	**17 27 16.2**	**+0.3**
SANI	**Sanana**	**36.10**	**281**	P	**P**	**17 27 18.1**	**-3.9**
	comp=Z,19nm,1.1s						
GTOI	**Gorontalo**	**39.70**	**284**	P	**P**	**17 27 52.5**	**+0.2**
	comp=Z,6.5nm,0.9s						
MRSI	**Marisa**	**40.68**	**283**	P	**P**	**17 27 58.4**	**-2.0**
	comp=Z,11nm,1.2s						
MBWA	**Marble Bar**	**41.34**	**250**	P	**P**	**17 28 06.0**	**+0.2**
MBWA				IAmb	IAmb	17 28 24.5	
	comp=Z,47nm,1.6s						
MBWA	**Marble Bar**	**41.34**	**250**	P	**P**	**17 28 06.8**	**+1.0**
MBWA	**Marble Bar**	**41.34**	**250**	P	**P**	**17 28 05.7**	**-0.1**
MBWA				pP	**pP**	**17 28 15.8**	**-4.1**
PLAI	**Plampang**	**42.98**	**268**	P	**P**	**17 28 18.5**	**-0.7**
MEEK	**Meekatharra**	**43.38**	**242**	P	**P**	**17 28 25.4**	**+3.0**
BLDU	**Ballidu**	**46.02**	**237**	P	**P**	**17 28 44.0**	**+0.7**
MORW	**Morawa**	**46.17**	**240**	P	**P**	**17 28 44.3**	**-0.3**
MORW	**Morawa**	**46.17**	**240**	P	**P**	**17 28 47.0**	**+2.4**
JAGI	**Jajag, Banyuwa**	**46.58**	**268**	P	**P**	**17 28 46.4**	**-1.5**
JAGI	**Jajag, Banyuwa**	**46.58**	**268**	P	**P**	**17 28 46.6**	**-1.3**
JAGI	**Jajag, Banyuwa**	**46.58**	**268**	P	**P**	**17 28 44.4**	**-3.5**
	comp=Z,26nm,1.1s						
PPT	**Papeete**	**48.02**	**104**	LR	LR	17 45 12.2	
	comp=Z,75nm,19.2s,baz=241,slow=31						
PPT2	**Papeete2**	**48.02**	**104**	*e*LR	LR	17 42 41.9	
	comp=Z,93nm,21.5s						
TBI	**Tubuai**	**48.55**	**112**	*e*LR	LR	17 42 56.6	
	comp=Z,431nm,28.5s						
JOW	**Kunigami**	**49.03**	**320**	P	**P**	**17 29 06.7**	**+0.1**
MJAR	**Matsushiro Arr**	**51.56**	**336**	P	**P**	**17 29 24.8**	**-0.8**
	comp=Z,2.8nm,0.8s,baz=175,slow=8.6,SNR=9.3						
MJAR				LR	LR	17 52 10.4	
	comp=Z,19nm,19.8s,baz=126,slow=37						
	comp=Z,2.8nm,0.8s						
MAJO	**Matsushiro**	**51.56**	**336**	P	**P**	**17 29 25.1**	**-0.4**
MAJO				pP	**pP**	**17 29 35.8**	**-5.2**
NACB	**Ninganchiao**	**51.88**	**312**	P	**P**	**17 29 29.0**	**+0.8**
TPUB	**Ta-pu**	**52.08**	**310**	P	**P**	**17 29 29.9**	**+0.2**
TPUB	**Ta-pu**	**52.08**	**310**	P	**P**	**17 29 30.1**	**+0.4**
SSLB	**Suanglung**	**52.12**	**311**	P	**P**	**17 29 30.4**	**+0.4**
SSLB	**Suanglung**	**52.12**	**311**	P	**P**	**17 29 31.4**	**+1.4**
JNU	**Nakatsue**	**52.15**	**327**	P	**P**	**17 29 29.9**	**-0.2**
	comp=Z,11nm,0.9s,baz=214,slow=16,SNR=2.8						
JNU				LR	LR	17 49 35.7	
	comp=Z,19nm,20.3s,baz=172,slow=34						
	comp=Z,11nm,0.9s						
YHNB	**Yeheng**	**52.34**	**312**	P	**P**	**17 29 32.8**	**+1.2**
YHNB	**Yeheng**	**52.34**	**312**	P	**P**	**17 29 32.4**	**+0.7**
JTM	**Tenmabayashi**	**54.30**	**341**	P	**P**	**17 29 46.4**	**+0.7**
JTM	**Tenmabayashi**	**54.30**	**341**	P	**P**	**17 29 46.7**	**+1.0**
CGJI	**Cibinong**	**55.13**	**269**	P	**P**	**17 29 51.1**	**-1.1**
	comp=Z,26nm,0.7s						
JKA	**Kamikawa-asahi**	**56.90**	**344**	P	**P**	**17 30 05.5**	**+1.2**
ASAJ	**Asahikawa**	**56.90**	**344**	P	**P**	**17 30 05.3**	**+1.0**
	comp=Z,6.6nm,0.5s,baz=223,slow=8.3,SNR=30						
ASAJ				LR	LR	17 52 21.2	
	comp=Z,55nm,21.8s,baz=169,slow=34						
	comp=Z,6.6nm,0.5s						
MDSI	**Maura Dua**	**56.94**	**271**	P	**P**	**17 30 04.2**	**-1.0**
	comp=Z,4.1nm,1.2s						
KSRS	**Korea Array**	**57.02**	**328**	P	**P**	**17 30 05.2**	**0.0**
	comp=Z,1.2nm,0.7s,baz=142,slow=7.9,SNR=5.9						
KSRS				LR	LR	17 52 41.3	
	comp=Z,19nm,21.4s,baz=130,slow=34						
	comp=Z,1.2nm,0.7s						
TAOE	**Nuku Hiva Isla**	**57.62**	**94**	*e*LR	LR	17 47 08.3	
	comp=Z,104nm,25.8s						
NJ2	**Nanjing**	**58.62**	**318**	*e*P	**P**	**17 30 17.7**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
SDSI	**Sungai Dareh**	**60.28**	**275**	P	**P**	**17 30 26.4**	**-2.0**
	comp=Z,3.4nm,0.8s,comp=Z,9µm						
USRK	**Ussuriysk Ar.**	**60.55**	**336**	P	**P**	**17 30 29.4**	**-0.2**
	comp=Z,5.2nm,0.8s,baz=125,slow=6.4,SNR=7.4						
	comp=Z,5.2nm,0.8s						
MDJ	**Mudanjiang**	**61.88**	**335**	P	**P**	**17 30 39.6**	**+1.0**
MDJ				pP	pP	17 30 49.8	-4.6
MDJ				sP	sP	17 31 03.8	+2.7
MDJ				PcP	**PcP**	**17 31 14.2**	**-4.8**
MDJ				PP	**PP**	**17 32 58.6**	**+3.0**
MDJ				ScP	**ScP**	**17 35 10.2**	**-5.5**
MDJ				PcS	**PcS**	**17 35 23.2**	**+1.3**
MDJ				S	**S**	**17 38 54.2**	**-3.6**
MDJ				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,60nm,5.4s						
MDJ	**Mudanjiang**	**61.88**	**335**	P	**P**	**17 30 39.8**	**+1.2**
MDJ				pP	**pP**	**17 30 50.5**	**-4.0**
CN2	**Changchun**	**63.08**	**332**	P	**P**	**17 30 46.8**	**+0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PETK	**Petropavlovsk-**	**63.36**	**358**	P	**P**	**17 30 48.4**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=261,slow=14,SNR=2.1						
PETK				LR	LR	17 53 47.7	
	comp=Z,36nm,20.8s,baz=141,slow=32						
	comp=Z,2.1nm,0.7s						
SHEM	**Shemya Is, Ala**	**63.85**	**9**	LR	LR	17 52 56.0	
	comp=Z,34nm,20.9s,baz=58,slow=30						
GSI	**Gunungsitoli**	**64.51**	**276**	P	**P**	**17 30 56.2**	**-0.5**
GSI				IAmb	IAmb	17 31 07.6	
	comp=Z,9.9nm,0.9s						
GSI	**Gunungsitoli**	**64.51**	**276**	P	**P**	**17 30 54.0**	**-2.7**
	comp=Z,9.6nm,0.8s						
KIWB	**Kanaga Island**	**64.75**	**15**	P	**P**	**17 30 57.9**	**+0.5**
KLR	**Kul'dur**	**64.86**	**339**	LR	LR	17 56 33.2	
	comp=Z,35nm,21.0s,baz=149,slow=33						
CASY	**Casey**	**65.42**	**200**	P	**P**	**17 31 01.8**	**+0.1**
XAN	**Xi'an**	**66.56**	**314**	P	**P**	**17 31 09.8**	**+0.2**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VNDA	**Vanda**	**67.07**	**180**	P	**P**	**17 31 12.3**	**+0.2**
	comp=Z,4.8nm,0.7s,baz=334,slow=5.8,SNR=14						
	comp=Z,4.8nm,0.7s						
VNDA	**Vanda**	**67.07**	**180**	P	**P**	**17 31 12.7**	**+0.7**
VNDA	**Vanda**	**67.07**	**180**	P	**P**	**17 31 12.3**	**+0.2**
VNDA				sP	**pP**	**17 31 29.0**	**+1.7**
HEH	**HeiHe**	**67.30**	**337**	*e*P	**P**	**17 31 13.4**	**-0.4**
HEH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HEH				pmax	pmax		
	comp=Z,48nm,4.1s						
XLT	**XiLinHaoTe**	**67.91**	**326**	⇓*i*P	**P**	**17 31 18.6**	**+0.6**
XLT				pP	pP	17 31 30.1	-4.0
XLT				PcP	**PcP**	**17 31 43.9**	**-0.1**
XLT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,57nm,4.5s						
CMAR	**Chiang Mai Arr**	**67.93**	**295**	P	**P**	**17 31 18.5**	**0.0**
	comp=Z,0.8nm,0.8s,baz=123,slow=4.7,SNR=5.9						
CMAR				LR	LR	18 00 20.3	
	comp=Z,10nm,19.8s,baz=130,slow=35						
	comp=Z,0.8nm,0.8s						
CCD	**Concordia, Ant**	**68.03**	**190**	P	**P**	**17 31 18.5**	**-0.1**
NIKH	**Nikolski High**	**68.09**	**19**	P	**P**	**17 31 18.9**	**+0.1**
	baz=212						
PZH	**PanZhiHua**	**68.53**	**304**	P	**P**	**17 31 24.9**	**+2.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,4.7s						
HHC	**Hu-ho-hao-te**	**68.62**	**322**	*e*P	**P**	**17 31 25.6**	**+3.1**
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,5.8s						
TNCH	**TengChong**	**70.63**	**301**	P	**P**	**17 31 35.7**	**+0.4**
TNCH				pP	pP	17 31 50.3	-1.0
TNCH				S	**S**	**17 40 47.1**	**+2.0**
TNCH				sS	SKiKP	17 41 13.6	0.0
TNCH				pmax	pmax		
	comp=Z,10.0nm,2.5s						
TNCH				pmax	pmax		
	comp=Z,75nm,3.8s						
SPIA	**Saint Paul Isl**	**71.31**	**16**	P	**P**	**17 31 39.5**	**+1.1**
ULN	**Ulaanbaatar**	**75.32**	**326**	P	**P**	**17 32 02.4**	**-0.1**
GTA	**Gaotai**	**75.56**	**315**	*e*P	**P**	**17 32 05.5**	**+1.4**
GTA				pP	PcP	17 32 16.4	-0.4
GTA				sP	pP	17 32 22.0	+1.5
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
R16K	**Pilot Point**	**75.63**	**21**	P	**P**	**17 32 04.3**	**+0.5**
	baz=222						
SONM	**Songino Array**	**75.67**	**325**	P	**P**	**17 32 04.7**	**+0.2**
	comp=Z,4.7nm,0.7s,baz=141,slow=5.5,SNR=38						
	comp=Z,4.7nm,0.7s						
SONM	**Songino Array**	**75.67**	**325**	P	**P**	**17 32 04.8**	**+0.3**
BRDH	**Bariadhala**	**75.76**	**297**	LR	LR	18 07 28.8	
	comp=Z,63nm,18.3s,baz=0.5,slow=37						
YAK	**Yakutsk**	**76.35**	**345**	LR	LR	18 02 54.6	
	comp=Z,35nm,22.0s,baz=86,slow=33						
P16K	**Nushagak River**	**76.59**	**20**	P	**P**	**17 32 09.5**	**+0.3**
	baz=221						
Q17K	**Contact Creek**	**76.76**	**22**	P	**P**	**17 32 11.1**	**+0.7**
	baz=223						
Q16K	**King Salmon**	**76.78**	**21**	P	**P**	**17 32 10.8**	**+0.5**
	baz=222						
O16K	**Kokwok River B**	**76.98**	**20**	P	**P**	**17 32 11.7**	**+0.3**
	baz=221						
Q18K	**Katmai Hardscr**	**77.35**	**22**	P	**P**	**17 32 14.1**	**+0.4**
	baz=224						
N16K	**Nishlik Lake**	**77.43**	**19**	P	**P**	**17 32 15.3**	**+1.3**
	baz=220						
O17K	**Koliganek Bris**	**77.45**	**20**	P	**P**	**17 32 14.6**	**+0.5**
	baz=222						
KDAK	**Kodiak Island**	**77.66**	**23**	LR	LR	18 03 07.2	
	comp=Z,62nm,18.7s,baz=230,slow=33						
P18K	**Big Mountain,**	**77.81**	**21**	P	**P**	**17 32 16.3**	**+0.1**
	baz=224						
Q19K	**Cape Douglas,**	**78.05**	**22**	P	**P**	**17 32 18.3**	**+0.8**
Q19K	**Cape Douglas,**	**78.05**	**22**	P	**P**	**17 32 18.3**	**+0.8**
	baz=225						
O18K	**Koktuh Hills**	**78.16**	**21**	P	**P**	**17 32 18.9**	**+0.8**
	baz=224						
Q20K	**Shuyak Island**	**78.30**	**23**	P	**P**	**17 32 20.1**	**+1.3**
	baz=226						
BILL	**Bilibino**	**78.35**	**2**	P	**P**	**17 32 19.1**	**+0.2**
BILL				IAmb	IAmb	17 32 31.6	
	comp=Z,13nm,1.1s						
P19K	**Oil Pt**	**78.71**	**22**	P	**P**	**17 32 21.5**	**+0.3**
	baz=226						
ANM	**Nome**	**78.88**	**14**	P	**P**	**17 32 23.1**	**+1.2**
	baz=213						
SVW2	**Sparrevohn**	**78.93**	**20**	P	**P**	**17 32 23.6**	**+1.3**
ILSW	**Iliamna Southw**	**78.98**	**21**	P	**P**	**17 32 23.3**	**+0.6**
N19K	**Bonanza Creek**	**79.10**	**20**		**P**	**17 32 23.8**	**+0.5**
N19K	**Bonanza Creek**	**79.10**	**20**	P	**P**	**17 32 23.9**	**+0.5**
	baz=224						
TNA	**Tin City**	**79.15**	**12**	P	**P**	**17 32 24.0**	**+0.7**
	baz=211						
O20K	**Slope Mountain**	**79.23**	**22**	P	**P**	**17 32 25.0**	**+0.9**
	baz=226						
CNPM	**China Poot**	**79.36**	**22**	P	**P**	**17 32 25.6**	**+0.9**
RSO	**Redoubt South**	**79.45**	**21**	P	**P**	**17 32 25.5**	**+0.1**
BRSE	**Bradley Lake S**	**79.69**	**22**	P	**P**	**17 32 27.5**	**+1.0**
	baz=228						
M19K	**Big River Lodg**	**79.91**	**20**	P	**P**	**17 32 29.2**	**+1.6**
	baz=224						
L19K	**White Mountain**	**79.96**	**19**	P	**P**	**17 32 29.1**	**+1.2**
L19K	**White Mountain**	**79.96**	**19**	P	**P**	**17 32 29.1**	**+1.2**
	baz=224						
TTA	**Tatalina**	**80.14**	**18**	P	**P**	**17 32 30.3**	**+1.4**
TTA				IAmb	IAmb	17 32 30.9	
	comp=Z,10nm,0.8s						
TTA	**Tatalina**	**80.14**	**18**	P	**P**	**17 32 29.8**	**+0.9**
	baz=222,SNR=9.4						
M20K	**Styx River**	**80.32**	**20**	P	**P**	**17 32 30.9**	**+1.0**
	baz=225						
L20K	**Farewell, AK**	**80.49**	**19**	P	**P**	**17 32 32.1**	**+1.3**
	baz=225						
O22K	**Cooper Landing**	**80.57**	**22**	P	**P**	**17 32 30.8**	**-0.3**
	baz=229						
SUA	**Susitna One**	**80.86**	**21**	P	**P**	**17 32 33.0**	**+0.2**
SUA				IAmb	IAmb	17 32 41.5	
	comp=Z,14nm,0.8s						
SUA	**Susitna One**	**80.86**	**21**	P	**P**	**17 32 33.3**	**+0.5**
	baz=228						
SKT	**Skwentna**	**80.93**	**21**		**P**	**17 32 33.1**	**0.0**
SKT				IAmb	IAmb	17 33 00.6	
	comp=Z,45nm,1.9s						
SKT	**Skwentna**	**80.93**	**21**	P	**P**	**17 32 33.3**	**+0.2**
	baz=227						
RC01	**Rabbit Creek A**	**80.97**	**22**	P	**P**	**17 32 34.2**	**+0.9**
RC01				IAmb	IAmb	17 32 34.8	
	comp=Z,8.3nm,0.7s						
RC01	**Rabbit Creek A**	**80.97**	**22**	P	**P**	**17 32 34.1**	**+0.9**
	baz=229						
K20K	**Telida**	**81.06**	**19**	P	**P**	**17 32 35.1**	**+1.3**
K20K	**Telida**	**81.06**	**19**	P	**P**	**17 32 35.3**	**+1.5**
	baz=224,SNR=8.2						
P23K	**Montague Islan**	**81.14**	**23**	P	**P**	**17 32 35.5**	**+1.3**
	baz=231						
GCSA	**Galena City Sc**	**81.24**	**17**	P	**P**	**17 32 35.9**	**+1.3**
	baz=222						
M22K	**Willow**	**81.27**	**21**	P	**P**	**17 32 35.5**	**+0.7**
	baz=228						
PWL	**Port Wells**	**81.33**	**22**	P	**P**	**17 32 36.2**	**+0.9**
PWL	**Port Wells**	**81.33**	**22**	P	**P**	**17 32 36.2**	**+0.9**
	baz=230						
PPLA	**Purkeypile**	**81.34**	**20**	P	**P**	**17 32 35.9**	**+0.4**
PPLA				IAmb	IAmb	17 33 59.6	
	comp=Z,22nm,1.5s						
PPLA	**Purkeypile**	**81.34**	**20**	P	**P**	**17 32 35.6**	**+0.2**
	baz=226						
PMR	**Palmer**	**81.52**	**22**	P	**P**	**17 32 37.1**	**+1.0**
PMR				IAmb	IAmb	17 32 37.5	
	comp=Z,11nm,0.9s						
PMR	**Palmer**	**81.52**	**22**	P	**P**	**17 32 36.8**	**+0.6**
	baz=229						
KNK	**Knik Glacier**	**81.65**	**22**	P	**P**	**17 32 38.1**	**+1.2**
KNK				IAmb	IAmb	17 33 34.5	
	comp=Z,28nm,1.5s						
KNK	**Knik Glacier**	**81.65**	**22**	P	**P**	**17 32 38.0**	**+1.2**
	baz=230						
CUT	**Chulitna**	**81.66**	**21**	P	**P**	**17 32 37.9**	**+1.0**
CUT				IAmb	IAmb	17 32 38.1	
	comp=Z,19nm,1.0s						
CUT	**Chulitna**	**81.66**	**21**	P	**P**	**17 32 37.4**	**+0.5**
	baz=228						
CAST	**Castle Rocks**	**81.74**	**19**	P	**P**	**17 32 37.8**	**+0.4**
CAST	**Castle Rocks**	**81.74**	**19**	P	**P**	**17 32 37.7**	**+0.4**
	baz=226,SNR=29						
SML	**Sawmill**	**81.95**	**22**	P	**P**	**17 32 39.0**	**+0.5**
SML				IAmb	IAmb	17 33 51.4	
	comp=Z,32nm,1.6s						
SML	**Sawmill**	**81.95**	**22**	P	**P**	**17 32 39.2**	**+0.6**
	baz=230						
CHUM	**Lake Minchumin**	**81.99**	**19**	P	**P**	**17 32 39.5**	**+0.9**
	baz=226,SNR=7.2						
EYAK	**Cordova Ski Ar**	**82.13**	**23**	P	**P**	**17 32 40.1**	**+0.8**
	baz=232						
M23K	**Glacier View**	**82.16**	**22**	P	**P**	**17 32 40.3**	**+0.8**
	baz=230						
PALK	**Pallekele**	**82.20**	**279**	LR	LR	18 11 59.1	
	comp=Z,31nm,19.6s,baz=278,slow=38						
KTH	**Kantishna Hill**	**82.21**	**20**	P	**P**	**17 32 40.1**	**+0.2**
KTH				IAmb	IAmb	17 32 40.9	
	comp=Z,18nm,0.8s						
RDOG	**Red Dog Mine**	**82.33**	**13**	P	**P**	**17 32 41.7**	**+1.4**
RDOG				IAmb	IAmb	17 32 42.6	
	comp=Z,8.0nm,0.7s						
RDOG	**Red Dog Mine**	**82.33**	**13**	P	**P**	**17 32 41.4**	**+1.1**
	baz=215						
SCM	**Sheep Creek Mo**	**82.33**	**22**	P	**P**	**17 32 41.7**	**+1.1**
SCM				IAmb	IAmb	17 32 42.3	
	comp=Z,11nm,0.6s						
SCM	**Sheep Creek Mo**	**82.33**	**22**	P	**P**	**17 32 41.5**	**+0.9**
	baz=231						
TRF	**Thorofare Moun**	**82.35**	**20**	P	**P**	**17 32 40.7**	**-0.1**
	baz=228						
DIV	**Divide**	**82.48**	**23**	P	**P**	**17 32 42.6**	**+1.3**
DIV				IAmb	IAmb	17 32 44.8	
	comp=Z,11nm,0.8s						
BPAW	**Bear Paw Mtn.**	**82.56**	**19**	P	**P**	**17 32 41.9**	**+0.2**
	baz=227						
KLU	**Klutina**	**82.64**	**23**	P	**P**	**17 32 43.3**	**+1.1**
KLU				IAmb	IAmb	17 32 45.9	
	comp=Z,11nm,1.0s						
KLU	**Klutina**	**82.64**	**23**	P	**P**	**17 32 43.5**	**+1.3**
	baz=232						
RND	**Reindeer**	**82.81**	**20**	P	**P**	**17 32 44.2**	**+1.2**
RND				IAmb	IAmb	17 32 44.5	
	comp=Z,21nm,1.4s						
M24K	**Tolsona, Glenn**	**82.93**	**22**	P	**P**	**17 32 45.1**	**+1.5**
M24K	**Tolsona, Glenn**	**82.93**	**22**	P	**P**	**17 32 45.4**	**+1.7**
	baz=232,SNR=7.7						
MCK	**McKinley**	**82.99**	**20**	P	**P**	**17 32 44.3**	**+0.4**
MCK	**McKinley**	**82.99**	**20**	P	**P**	**17 32 44.2**	**+0.3**
	baz=229,SNR=16						
I21K	**Tanana**	**83.00**	**18**	P	**P**	**17 32 45.4**	**+1.6**
I21K				IAmb	IAmb	17 32 45.9	
	comp=Z,12nm,0.8s						
I21K	**Tanana**	**83.00**	**18**	P	**P**	**17 32 45.3**	**+1.4**
	baz=226,SNR=14						
IMAR	**Indian Mountai**	**83.04**	**17**	P	**P**	**17 32 44.8**	**+0.8**
H21K	**Melozitna Rive**	**83.09**	**17**	P	**P**	**17 32 45.6**	**+1.3**
H21K	**Melozitna Rive**	**83.09**	**17**	P	**P**	**17 32 45.4**	**+1.1**
	baz=225						
N25K	**Chitina, Valde**	**83.22**	**23**	P	**P**	**17 32 46.4**	**+1.2**
N25K				IAmb	IAmb	17 32 48.3	
	comp=Z,10nm,0.7s						
N25K	**Chitina, Valde**	**83.22**	**23**	P	**P**	**17 32 46.6**	**+1.5**
	baz=233,SNR=5.7						
MLY	**Manley**	**83.28**	**18**	P	**P**	**17 32 46.1**	**+0.8**
MLY				IAmb	IAmb	17 32 47.2	
	comp=Z,10nm,0.6s						
MLY	**Manley**	**83.28**	**18**	P	**P**	**17 32 46.2**	**+0.8**
	baz=227,SNR=15						
TGL	**Tana Glacier**	**83.41**	**24**	P	**P**	**17 32 46.7**	**+0.5**
TGL				IAmb	IAmb	17 32 48.6	
	comp=Z,11nm,0.8s						
GLB	**Gilahina Butte**	**83.42**	**23**	P	**P**	**17 32 46.8**	**+0.6**
GLB				IAmb	IAmb	17 32 48.4	
	comp=Z,9.6nm,0.9s						
VRDI	**Verde Repeater**	**83.44**	**24**	P	**P**	**17 32 47.1**	**+0.6**
VRDI				IAmb	IAmb	17 32 49.0	
	comp=Z,7.3nm,0.7s						
HARP	**HAARP**	**83.48**	**22**	P	**P**	**17 32 47.8**	**+1.4**
	baz=233						
G21K	**Allakaket**	**83.50**	**17**	P	**P**	**17 32 47.5**	**+1.1**
	baz=225						
NEA2	**Nenana**	**83.52**	**19**	P	**P**	**17 32 46.9**	**+0.3**
NEA2				IAmb	IAmb	17 32 47.7	
	comp=Z,11nm,0.8s						
NEA2	**Nenana**	**83.52**	**19**	P	**P**	**17 32 46.8**	**+0.3**
	baz=229,SNR=7.9						
H22K	**Ishtalitna Cre**	**83.67**	**18**	P	**P**	**17 32 48.4**	**+1.0**
	baz=227						
MCARA	**McCarthy VSAT**	**83.70**	**24**	P	**P**	**17 32 48.3**	**+0.8**
MCARA				IAmb	IAmb	17 33 02.2	
	comp=Z,10nm,0.8s						
MCARA	**McCarthy VSAT**	**83.70**	**24**	P	**P**	**17 32 48.9**	**+1.3**
	baz=235						
PAX	**Paxson**	**83.72**	**22**	P	**P**	**17 32 48.5**	**+0.8**
	baz=232						
WRH	**Wood River Hil**	**83.76**	**20**	P	**P**	**17 32 47.3**	**-0.5**
WRH				IAmb	IAmb	17 32 48.9	
	comp=Z,22nm,1.3s						
I23K	**Minto, Yukon-K**	**83.79**	**19**	P	**P**	**17 32 48.3**	**+0.5**
I23K	**Minto, Yukon-K**	**83.79**	**19**	P	**P**	**17 32 48.1**	**+0.3**
	baz=229,SNR=6.9						
CCB	**Clear Creek Bu**	**83.97**	**20**	P	**P**	**17 32 49.0**	**+0.2**
CCB				IAmb	IAmb	17 32 49.4	
	comp=Z,7.9nm,0.6s						
F21K	**Alatna River**	**84.01**	**16**	P	**P**	**17 32 49.7**	**+0.7**
	baz=224						
MDM	**Murphy Dome**	**84.03**	**19**	P	**P**	**17 32 49.3**	**+0.1**
MDM				IAmb	IAmb	17 32 50.3	
	comp=Z,9.6nm,0.8s						
BARN	**Barnard Glacie**	**84.06**	**24**	P	**P**	**17 32 50.1**	**+0.5**
BARN				IAmb	IAmb	17 32 52.1	
	comp=Z,12nm,0.6s						
TCOL	**CIGO, UAF Yank**	**84.09**	**19**	P	**P**	**17 32 49.6**	**+0.2**
TCOL	**CIGO, UAF Yank**	**84.09**	**19**	P	**P**	**17 32 49.9**	**+0.4**
	baz=230						
COLA	**College**	**84.10**	**19**	P	**P**	**17 32 49.6**	**+0.1**
COLA	**College**	**84.10**	**19**	P	**P**	**17 32 49.8**	**+0.3**
	baz=230						
HDA	**Harding Lake**	**84.10**	**20**	P	**P**	**17 32 50.5**	**+1.0**
HDA				IAmb	IAmb	17 32 51.1	
	comp=Z,14nm,0.8s						
HDA	**Harding Lake**	**84.10**	**20**	P	**P**	**17 32 50.2**	**+0.6**
	baz=231,SNR=12						
PINM	**Pinnacle**	**84.11**	**25**	P	**P**	**17 32 51.2**	**+1.5**
	baz=237						
K24K	**Donnelly Dome**	**84.12**	**21**	P	**P**	**17 32 50.8**	**+1.1**
	baz=232,SNR=7.8						
CTG	**Chitna Glacier**	**84.13**	**24**	P	**P**	**17 32 51.4**	**+1.5**
	baz=236,SNR=6.1						
CTGM	**Chitina Glacie**	**84.14**	**24**	P	**P**	**17 32 51.2**	**+1.2**
H23K	**Yukon River**	**84.18**	**18**	P	**P**	**17 32 50.7**	**+0.8**
H23K				IAmb	IAmb	17 32 52.1	
	comp=Z,8.7nm,0.8s						
H23K	**Yukon River**	**84.18**	**18**	P	**P**	**17 32 51.3**	**+1.3**
	baz=228						
LOGN	**Logan Glacier**	**84.19**	**25**	P	**P**	**17 32 51.9**	**+1.6**
LOGN				IAmb	IAmb	17 33 00.6	
	comp=Z,24nm,1.4s						
M26K	**Nabesna, AK**	**84.30**	**23**	P	**P**	**17 32 51.7**	**+1.1**
M26K				IAmb	IAmb	17 32 53.0	
	comp=Z,9.5nm,0.8s						
M26K	**Nabesna, AK**	**84.30**	**23**	P	**P**	**17 32 52.0**	**+1.4**
	baz=235,SNR=9.7						
MENT	**Mentasta**	**84.34**	**22**	P	**P**	**17 32 51.9**	**+1.1**
MENT				IAmb	IAmb	17 32 52.8	
	comp=Z,9.5nm,0.5s						
IL31		**84.35**	**20**	P	**P**	**17 32 50.7**	**0.0**
IL31				IAmb	IAmb	17 32 52.1	
	comp=Z,6.3nm,0.6s						
ILAR	**Eielson Array**	**84.35**	**20**	P	**P**	**17 32 50.6**	**-0.2**
	comp=Z,3.4nm,0.5s,baz=247,slow=4.8,SNR=63						
ILAR				LR	LR	18 07 05.8	
	comp=Z,44nm,19.1s,baz=257,slow=33						
	comp=Z,3.4nm,0.5s						
POKR	**Poker Plat Res**	**84.39**	**19**	P	**P**	**17 32 51.1**	**+0.2**
POKR	**Poker Plat Res**	**84.39**	**19**	P	**P**	**17 32 51.3**	**+0.3**
	baz=230						
RIDG	**Independent Ri**	**84.41**	**21**	P	**P**	**17 32 51.8**	**+0.6**
RIDG				IAmb	IAmb	17 32 52.8	
	comp=Z,12nm,1.1s						
RIDG	**Independent Ri**	**84.41**	**21**	P	**P**	**17 32 52.3**	**+1.1**
	baz=233,SNR=5.6						
O28M	**Mount Upton**	**84.50**	**25**	P	**P**	**17 32 53.7**	**+1.8**
	baz=237,SNR=5.5						
L26K	**Log Cabin Wild**	**84.53**	**22**	P	**P**	**17 32 53.1**	**+1.4**
L26K				IAmb	IAmb	17 32 53.9	
	comp=Z,7.2nm,0.8s						
L26K	**Log Cabin Wild**	**84.53**	**22**	P	**P**	**17 32 53.2**	**+1.5**
	baz=234,SNR=7.3						
F22K	**John River**	**84.57**	**16**	P	**P**	**17 32 52.9**	**+1.0**
	baz=226						
G23K	**Bananza Creek**	**84.63**	**17**	P	**P**	**17 32 53.5**	**+1.3**
	baz=228						
DOT	**Dot Lake**	**84.64**	**21**	P	**P**	**17 32 53.3**	**+1.0**
DOT				IAmb	IAmb	17 32 54.4	
	comp=Z,14nm,0.7s						
M27K	**Edge Creek, AK**	**84.70**	**23**	P	**P**	**17 32 54.3**	**+1.5**
M27K				IAmb	IAmb	17 32 55.2	
	comp=Z,11nm,0.7s						
M27K	**Edge Creek, AK**	**84.70**	**23**	P	**P**	**17 32 54.4**	**+1.6**
	baz=236						
H24K	**Noodor Dome**	**84.71**	**19**		**P**	**17 32 52.3**	**-0.3**
H24K				IAmb	IAmb	17 34 41.0	
	comp=Z,21nm,2.0s						
H24K	**Noodor Dome**	**84.71**	**19**	P	**P**	**17 32 53.2**	**+0.6**
	baz=230						
TIXI	**Tiksi**	**84.71**	**350**	LR	LR	18 12 11.0	
	comp=Z,17nm,19.1s,baz=180,slow=37						
TIXI	**Tiksi**	**84.71**	**350**	P	**P**	**17 32 52.1**	**-0.3**
SCRK	**Sand Creek**	**84.86**	**21**	P	**P**	**17 32 54.5**	**+1.0**
SCRK				IAmb	IAmb	17 32 55.4	
	comp=Z,9.1nm,0.7s						
SCRK	**Sand Creek**	**84.86**	**21**	P	**P**	**17 32 54.8**	**+1.3**
	baz=234,SNR=16						

O29M	**Mount Kennedy**	**84.93**	**26**	P	**P**	**17 32 55.2**	**+1.2**
	baz=239						
COLD	**Coldfoot**	**84.93**	**17**	P	**P**	**17 32 54.8**	**+1.2**
	baz=228						
YUK3	**Moose Creek**	**84.93**	**24**	P	**P**	**17 32 55.4**	**+1.3**
	baz=237,SNR=7.0						
YUK8	**Steele Glacier**	**84.95**	**25**	P	**P**	**17 32 56.1**	**+1.9**
	baz=238,SNR=8.2						
E22K	**Anaktuvuk Pass**	**85.11**	**16**	P	**P**	**17 32 55.4**	**+0.8**
	baz=226						
L27K	**Beaver Creek,**	**85.12**	**22**	P	**P**	**17 32 56.2**	**+1.4**
L27K	**Beaver Creek,**	**85.12**	**22**	P	**P**	**17 32 56.4**	**+1.6**
	baz=236						
BVCY	**Beaver Creek**	**85.13**	**23**	P	**P**	**17 32 56.7**	**+1.9**
	baz=237						
BCAR	**Beaver Creek A**	**85.14**	**22**	P	**P**	**17 32 56.0**	**+1.2**
PRP	**Porcupine Dome**	**85.27**	**20**	P	**P**	**17 32 55.4**	**-0.2**
PRP				IAmb	IAmb	17 33 43.9	
	comp=Z,20nm,2.0s						
PRP	**Porcupine Dome**	**85.27**	**20**	P	**P**	**17 32 56.1**	**+0.6**
	baz=232						
J26L	**Joseph Creek**	**85.32**	**21**	P	**P**	**17 32 57.0**	**+1.2**
J26L				IAmb	IAmb	17 32 58.7	
	comp=Z,24nm,1.9s						
J26L	**Joseph Creek**	**85.32**	**21**	P	**P**	**17 32 57.1**	**+1.3**
	baz=234,SNR=5.8						
YUK6	**Outpost Mounta**	**85.35**	**25**	P	**P**	**17 32 57.9**	**+1.7**
	baz=239						
G24K	**Hadweenzic Riv**	**85.39**	**18**	P	**P**	**17 32 57.4**	**+1.4**
	baz=230						
YUK4	**Talbot Arm**	**85.44**	**25**	P	**P**	**17 32 58.9**	**+2.3**
	baz=239,SNR=9.6						
PLBC	**Pleasant Camp**	**85.46**	**27**	P	**P**	**17 32 58.4**	**+2.0**
	baz=241						
P30M	**Million Dollar**	**85.53**	**26**	P	**P**	**17 32 59.0**	**+2.1**
	baz=240						
WMQ	**Urumqi**	**85.63**	**316**	*e*P	**P**	**17 32 59.0**	**+1.2**
HYT	**Haines Junctio**	**85.65**	**25**	P	**P**	**17 32 58.9**	**+1.3**
HYT	**Haines Junctio**	**85.65**	**25**	P	**P**	**17 32 59.3**	**+1.8**
	baz=240						
E23K	**Chandalar**	**85.66**	**17**	P	**P**	**17 32 58.6**	**+1.2**
	baz=228						
F24K	**Squaw Lake**	**85.80**	**17**	P	**P**	**17 32 59.7**	**+1.7**
	baz=230						
G25K	**Bearman Lake**	**85.86**	**18**	P	**P**	**17 33 00.4**	**+2.1**
	baz=232						
I26K	**Coal Creek Min**	**85.93**	**20**	P	**P**	**17 32 60.0**	**+1.3**
I26K				IAmb	IAmb	17 33 02.2	
	comp=Z,8.0nm,1.1s						
I26K	**Coal Creek Min**	**85.93**	**20**	P	**P**	**17 33 00.7**	**+2.1**
	baz=234						
D23K	**Nanushuk River**	**85.98**	**16**	P	**P**	**17 33 01.1**	**+2.2**
	baz=227						
E24K	**Your Creek**	**85.99**	**17**	P	**P**	**17 33 00.2**	**+1.2**
	baz=229						
M29M	**Somme Creek**	**86.08**	**24**	P	**P**	**17 33 01.0**	**+1.4**
	baz=239						
N30M	**Aishikik Lake**	**86.14**	**25**	P	**P**	**17 33 01.4**	**+1.5**
	baz=240						
O30N	**Mendenhall**	**86.22**	**26**	P	**P**	**17 33 01.7**	**+1.4**
	baz=241						
EGAK	**Eagle**	**86.33**	**21**	P	**P**	**17 33 02.4**	**+1.7**
EGAK	**Eagle**	**86.33**	**21**	P	**P**	**17 33 02.2**	**+1.6**
	baz=236,SNR=12						
F25K	**Christian Rive**	**86.51**	**18**	P	**P**	**17 33 03.4**	**+1.8**
	baz=232						
BBB	**Bella Bella**	**86.55**	**36**	LR	LR	18 03 18.5	
	comp=Z,25nm,20.1s,baz=205,slow=30						
L29M	**L29M**	**86.56**	**23**	P	**P**	**17 33 03.8**	**+1.9**
	baz=239,SNR=8.4						
YBH	**Yreka Blue Hor**	**86.58**	**47**	LR	LR	18 05 46.6	
	comp=Z,20nm,19.5s,baz=256,slow=31						
DAWY	**Dawson**	**86.58**	**22**	P	**P**	**17 33 03.5**	**+1.5**
DAWY				IAmb	IAmb	17 33 04.4	
	comp=Z,12nm,1.1s						
DAWY	**Dawson**	**86.58**	**22**	P	**P**	**17 33 03.6**	**+1.6**
	baz=238,SNR=9.4						
D24K	**Happy Valley**	**86.60**	**16**	P	**P**	**17 33 03.6**	**+1.7**
	baz=229						
I27K	**Kandik River**	**86.63**	**20**	P	**P**	**17 33 03.8**	**+1.6**
	baz=236						
G26K	**Porcupine Rive**	**86.70**	**19**	P	**P**	**17 33 04.1**	**+1.7**
	baz=234						
N31M	**Braeburn, Yuko**	**86.70**	**25**	P	**P**	**17 33 04.2**	**+1.6**
N31M				IAmb	IAmb	17 33 05.4	
	comp=Z,8.9nm,0.8s						
N31M	**Braeburn, Yuko**	**86.70**	**25**	P	**P**	**17 33 04.4**	**+1.8**
	baz=241						
P32M	**Atlin**	**86.72**	**27**	P	**P**	**17 33 04.0**	**+1.3**
	baz=243						
BMAR	**Burnt Mountain**	**86.74**	**18**	P	**P**	**17 33 04.6**	**+1.9**
M30M	**Minto, Yukon**	**86.82**	**24**	P	**P**	**17 33 04.3**	**+1.1**
M30M				IAmb	IAmb	17 33 05.4	
	comp=Z,8.1nm,0.6s						
M30M	**Minto, Yukon**	**86.82**	**24**	P	**P**	**17 33 04.3**	**+1.1**
	baz=240,SNR=10						
E25K	**Arctic Village**	**86.86**	**17**	P	**P**	**17 33 04.8**	**+1.6**
	baz=232						
C24K	**Franklin Bluff**	**87.01**	**15**	P	**P**	**17 33 05.6**	**+1.8**
	baz=229						
H27K	**Steamboat Moun**	**87.02**	**20**	P	**P**	**17 33 06.0**	**+2.0**
	baz=236						
F26K	**Sheenjek River**	**87.03**	**18**	P	**P**	**17 33 05.7**	**+1.7**
	baz=233						
K29M	**Barlow Dome**	**87.17**	**23**	P	**P**	**17 33 06.6**	**+1.7**
	baz=240						
S34M	**Telegraph Cree**	**87.21**	**30**	P	**P**	**17 33 06.8**	**+1.7**
	baz=246						
G27K	**Doyon Strip**	**87.30**	**19**	P	**P**	**17 33 07.2**	**+1.8**
	baz=236						
D25K	**Kavik River**	**87.38**	**16**	P	**P**	**17 33 07.3**	**+1.5**
	baz=231						
M31M	**Drury Creek, Y**	**87.62**	**25**	P	**P**	**17 33 09.0**	**+2.0**
	baz=242						
I29M	**Ogilvie Camp,**	**87.66**	**21**	P	**P**	**17 33 08.9**	**+1.7**
I29M	**Ogilvie Camp,**	**87.66**	**21**	P	**P**	**17 33 08.7**	**+1.6**
	baz=239						
FARO	**Faro, Yukon**	**88.07**	**25**	P	**P**	**17 33 10.8**	**+1.7**
	baz=243						
E27K	**Coleen River**	**88.10**	**18**	P	**P**	**17 33 11.2**	**+2.0**
	baz=236						
C26K	**Camden Bay**	**88.15**	**16**	P	**P**	**17 33 11.9**	**+2.6**
	baz=232						
C27K	**Jago River**	**88.31**	**17**	P	**P**	**17 33 12.1**	**+2.0**
	baz=234						
LRMC	**Laurel Mtn Rad**	**88.72**	**54**	P	**P**	**17 33 14.9**	**+1.9**
	baz=256						
EPYK	**Eagle Plains**	**88.74**	**21**	P	**P**	**17 33 14.1**	**+1.8**
EPYK	**Eagle Plains**	**88.74**	**21**	P	**P**	**17 33 13.9**	**+1.7**
	baz=240						
NVAR	**Mina Array Bea**	**88.95**	**51**	P	**P**	**17 33 15.1**	**+1.0**
	comp=Z,2.0nm,0.8s,baz=232,slow=7.0,SNR=13						
	comp=Z,2.0nm,0.8s						
DSP	**Deep Springs**	**88.95**	**52**	P	**P**	**17 33 14.6**	**+0.8**
DSP				IAmb	IAmb	17 33 16.4	
	comp=Z,9.3nm,1.4s						
MPMC	**Manual Prospec**	**89.01**	**53**	P	**P**	**17 33 16.8**	**+2.4**
	baz=256						
NV11	**Mina Array Sit**	**89.06**	**51**	P	**P**	**17 33 15.0**	**+0.5**
MMPY	**Sheldon Lake,**	**89.11**	**25**	P	**P**	**17 33 15.9**	**+1.8**
	baz=245						
MONP2	**Monument Peak**	**89.15**	**56**	P	**P**	**17 33 17.0**	**+1.8**
	baz=257						
G30M	**tAoh Zraii Nji**	**89.21**	**20**	P	**P**	**17 33 16.0**	**+1.5**
	baz=241						
KVN	**Kaiserville**	**89.25**	**50**	P	**P**	**17 33 16.0**	**+0.6**
PFO	**Pinyon Flats O**	**89.28**	**56**	LR	LR	18 04 55.4	
	comp=Z,70nm,20.8s,baz=263,slow=30						
PFO	**Pinyon Flats O**	**89.28**	**56**	P	**P**	**17 33 17.4**	**+1.8**
	baz=257						
TPFO	**Pinon Flats**	**89.28**	**56**	P	**P**	**17 33 17.5**	**+1.9**
	baz=257						
IKP	**In-Ko-Pah, Jac**	**89.35**	**57**	P	**P**	**17 33 16.2**	**+0.2**
	baz=257						
GSC	**Goldstone, Bar**	**89.38**	**54**	P	**P**	**17 33 17.6**	**+1.6**
	baz=257						
MZP	**Montezuma Peak**	**89.48**	**52**	P	**P**	**17 33 17.8**	**+1.1**
QSM	**Queen of Sheba**	**89.48**	**53**	P	**P**	**17 33 18.2**	**+1.8**
QSM				IAmb	IAmb	17 33 19.0	
	comp=Z,6.9nm,1.2s						
I07A	**Izee**	**89.49**	**45**	P	**P**	**17 33 18.0**	**+1.7**
HEC	**Hector,Ludlow**	**89.65**	**55**	P	**P**	**17 33 19.0**	**+1.7**
	baz=257						
SWSC	**Sam W. Stewart**	**89.67**	**57**	P	**P**	**17 33 19.5**	**+2.2**
	baz=257						
WVOR	**Wild Horse Val**	**89.69**	**47**	P	**P**	**17 33 18.4**	**+1.1**
GWY	**Greenwater Val**	**89.69**	**53**	P	**P**	**17 33 17.8**	**+0.3**
GWY				IAmb	IAmb	17 33 20.9	
	comp=Z,9.0nm,1.4s						
BELC	**Belle Mtn. Jos**	**89.74**	**55**	P	**P**	**17 33 19.7**	**+1.9**
	baz=257						
WCT	**Wildcat Mounta**	**89.86**	**53**	P	**P**	**17 33 20.0**	**+1.8**
WCT				IAmb	IAmb	17 33 21.1	
	comp=Z,9.2nm,1.4s						
SHOC	**Shoshone, Teco**	**89.94**	**54**	P	**P**	**17 33 20.6**	**+2.1**
	baz=257						
J08A	**Circle Bar Ran**	**90.03**	**46**	P	**P**	**17 33 20.3**	**+1.4**
BC3	**Big Chuckawall**	**90.11**	**56**	P	**P**	**17 33 21.4**	**+1.9**
	baz=258						
TUQ	**Turquoise Moun**	**90.11**	**54**	P	**P**	**17 33 21.6**	**+2.1**
	baz=257						
MK31	**Makanchi Array**	**90.15**	**318**	P	**P**	**17 33 18.2**	**-1.1**
MKAR	**Makanchi Array**	**90.15**	**318**	P	**P**	**17 33 17.9**	**-1.3**
	comp=Z,0.8nm,0.4s,baz=94,slow=7.5,SNR=20						
	comp=Z,0.8nm,0.4s						
MKAR	**Makanchi Array**	**90.15**	**318**	P	**P**	**17 33 18.2**	**-1.1**
GMRC	**Granite Mounta**	**90.18**	**55**	P	**P**	**17 33 21.7**	**+1.9**
	baz=258						
TPNV	**Topopah Spring**	**90.19**	**53**	P	**P**	**17 33 20.5**	**+0.6**
TPNV				IAmb	IAmb	17 34 16.6	
	comp=Z,3.6nm,0.7s						
TPNV	**Topopah Spring**	**90.19**	**53**	P	**P**	**17 33 21.6**	**+1.7**
	baz=257						
F31M	**Tsiigehtchic**	**90.28**	**20**	P	**P**	**17 33 20.6**	**+1.3**
	baz=243						
MAKZ	**Makanchi**	**90.36**	**318**	P	**P**	**17 33 20.7**	**+0.5**
IRM	**Iron Mountain**	**90.47**	**55**	P	**P**	**17 33 22.7**	**+1.7**
	baz=258						
ZALV	**Zalesovo Beam**	**90.56**	**325**	P	**P**	**17 33 19.1**	**-1.8**
	comp=Z,0.6nm,0.5s,baz=100,slow=7.7,SNR=4.0						
ZALV				LR	LR	18 14 15.3	
	comp=Z,12nm,19.0s,baz=74,slow=36						
	comp=Z,0.6nm,0.5s						
B08A	**Colville Reser**	**90.70**	**41**	P	**P**	**17 33 22.7**	**+0.9**
B08A				IAmb	IAmb	17 33 23.4	
	comp=Z,5.3nm,1.1s						
INK	**Inuvik**	**90.75**	**20**	P	**P**	**17 33 22.3**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=216,slow=4.0,SNR=5.8						
	comp=Z,0.8nm,0.4s						
INK	**Inuvik**	**90.75**	**20**	P	**P**	**17 33 23.2**	**+1.7**
	baz=243						
SHPR	**Sheep Range**	**90.95**	**53**	P	**P**	**17 33 24.3**	**+0.9**
R11A	**Troy Canyon, C**	**91.01**	**51**	P	**P**	**17 33 25.2**	**+1.6**
R11A	**Troy Canyon, C**	**91.01**	**51**	P	**P**	**17 33 25.4**	**+1.7**
	baz=258						
PRN	**Pahroc Range**	**91.22**	**52**	P	**P**	**17 33 25.3**	**+0.6**
PRN				IAmb	IAmb	17 33 27.9	
	comp=Z,9.5nm,1.1s						
ELK	**Elko**	**91.78**	**49**	LR	LR	18 07 07.4	
	comp=Z,41nm,20.5s,baz=236,slow=30						
ELK	**Elko**	**91.78**	**49**	P	**P**	**17 33 28.7**	**+1.4**
MFID	**Camas Ranch**	**91.92**	**46**	P	**P**	**17 33 29.5**	**+1.8**
MFID				IAmb	IAmb	17 33 30.1	
	comp=Z,4.8nm,0.9s						
SPR3	**Spring Creek 3**	**92.10**	**51**	P	**P**	**17 33 28.9**	**0.0**
SPR3				IAmb	IAmb	17 33 31.9	
	comp=Z,5.4nm,1.3s						
NEW	**Newport**	**92.11**	**41**	LR	LR	18 08 34.2	
	comp=Z,26nm,19.3s,baz=268,slow=31						
NEW	**Newport**	**92.11**	**41**	P	**P**	**17 33 29.6**	**+1.3**
NEW				IAmb	IAmb	17 33 30.6	
	comp=Z,7.2nm,1.2s						
NEW	**Newport**	**92.11**	**41**	P	**P**	**17 33 29.6**	**+1.3**
	baz=257						
PLID	**Pearl Lake**	**92.16**	**45**	P	**P**	**17 33 30.0**	**+1.1**
HLID	**Hailey**	**92.96**	**46**	P	**P**	**17 33 34.1**	**+1.5**
HLID				IAmb	IAmb	17 33 35.9	
	comp=Z,9.1nm,1.4s						
HLID	**Hailey**	**92.96**	**46**	P	**P**	**17 33 34.0**	**+1.4**
	baz=258						
NRIK	**Noril'sk**	**94.06**	**340**	P	**P**	**17 33 34.9**	**-1.9**
	comp=Z,1.1nm,0.6s,baz=152,slow=17,SNR=2.2						
NRIK				LR	LR	18 13 53.0	
	comp=Z,46nm,21.8s,baz=97,slow=34						
	comp=Z,1.1nm,0.6s						
C36M	**Paulatuk**	**94.32**	**20**	P	**P**	**17 33 38.8**	**+0.9**
	baz=252						
WALA	**Waterton Lakes**	**94.36**	**41**	P	**P**	**17 33 39.9**	**+1.0**
A36M	**Sachs Harbour**	**94.79**	**17**	P	**P**	**17 33 41.8**	**+1.7**
	baz=251						
BOZ	**Bozeman (W)**	**95.28**	**45**	P	**P**	**17 33 44.4**	**+1.3**
	baz=261						
BW06	**Boulder Array**	**96.32**	**48**	P	**P**	**17 33 49.7**	**+1.7**
	baz=262						
PDAR	**Pinedale Array**	**96.32**	**48**	P	**P**	**17 33 49.6**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=208,slow=2.9,SNR=3.5						
	comp=Z,0.3nm,0.6s						
YKA	**Yellowknife Ar**	**96.42**	**28**	P	**P**	**17 33 47.2**	**-0.5**
	comp=Z,2.4nm,0.6s,baz=257,slow=4.6,SNR=37						
	comp=Z,2.4nm,0.6s						
EGMT	**Eagleton**	**96.92**	**43**	P	**P**	**17 33 51.0**	**+0.5**
	baz=262						
WVT	**Waverly**	**112.86**	**55**	P	**PKiKP**	**17 38 56.8**	**+0.8**
	baz=274						
SFIN	**Lafayette**	**113.08**	**51**	P	**PKiKP**	**17 38 56.9**	**+0.6**
	baz=276						
ARCES	**ARCESS Array B**	**114.62**	**344**	PKP	**PKiKP**	**17 38 58.4**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=74,slow=1.5,SNR=6.7						
MNK	**Minsk**	**122.75**	**330**	*i* PKP	**PKPdf**	**17 39 13.3**	**-1.2**
	comp=E,2.0nm,1.0s						
MNK				*i* PKP	**PKPdf**	**17 39 13.3**	**-1.2**
	comp=N,36nm,0.9s						
MNK				*i* PKP	**PKPdf**	**17 39 13.3**	**-1.2**
	comp=Z,6.0nm,1.0s,baz=58						
MNK				*i* PP	**PP**	**17 40 52.0**	**-0.6**
MNK				*i* SKP		17 42 46.7	
MNK				*i* PPP	PPP	17 43 30.3	
MNK				*i* SKS	**SKSdf**	**17 46 22.1**	**+1.0**
MNK				*i* SKKS	**SKKSdf**	**17 56 51.2**	**-3.2**
MNK				*i* SS	**SS**	**17 57 33.7**	**+3.4**
MNK				*i* SSS	SSS	18 02 07.8	
MNK				*i* LQ	LQ	18 24 48.4	
MNK				*i* LR	LR	18 28 49.5	
MNK				*i* LRM	MLR	18 30 59.9	
	comp=Z,75nm,14.6s						
MNK				*i* LRM	MLR	18 31 05.6	
	comp=E,38nm,19.7s						
MNK				*i* LRM	MLR	18 31 47.0	
	comp=N,294nm,14.6s						
HRV	**Adam Dziewonsk**	**124.03**	**45**	P	**PKiKP**	**17 39 18.7**	**+1.1**
	baz=289						
CLL	**Collm**	**131.74**	**334**	*e*PKPdf	**PKiKP**	**17 39 34.0**	**+1.3**
ESDC	**Sonseca Array**	**148.08**	**338**	PKPbc	**PKPbc**	**17 40 04.5**	**-0.3**
	comp=N,0.7nm,0.6s,baz=28,slow=2.8,SNR=6.6						

IDC 09 17:20:30.3±4.3**, 6°.15S**×**153°.26E, h0**^{km}**, mb3.1**/3**, mbtmp3.2**/4**, ML2.9**/1**, Error ellipse: s-maj=97.8km s-min=29.5km az=95.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.20**	**326**	Pn	Pn	17 21 07.6	-0.6
	3.7nm,0.3s,baz=139,slow=20,SNR=12						
KRVT				Sn	Sn	17 21 28.5	-7.7
	5.0nm,0.3s,baz=157,slow=13,SNR=5.5						
	12nm,0.3s						
WRA	**Warramunga Arr**	**22.94**	**232**	P	P	17 25 36.1	-0.2
	0.2nm,0.4s,baz=57,slow=9.6,SNR=2.5						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**25.50**	**225**	P	P	17 26 00.3	-0.3
	0.2nm,0.4s,baz=58,slow=9.5,SNR=10						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**81.64**	**319**	P	P	17 32 51.3	+0.9
	0.2nm,0.6s,baz=94,slow=5.8,SNR=2.5						
	0.2nm,0.6s						

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*SJA **09** 17:33:59.2±0.8, 31°.79S×71°.58W, h16^{km}±2^{km}, ML4.2, MW4.0, Hypocentre not reviewed by the ISC*

*IDC **09** 17:34:01.0±0.9, 31°.70S×71°.71W, h38^{km}±6^{km}, mb4.0/4, mbtmp4.1/8, ML4.0/4, MS3.3/4, Error ellipse: s-maj=30.5km s-min=21.6km az=159.0*

*GUC **09** 17:34:01.6±0.9, 31°.80S×71°.54W, h43^{km}±3^{km}, ML4.1*

*NEIC **09** 17:34:02.6±1.4, 31°.78S±0°.03×71°.62W±0°.10, h36^{km}±12^{km}, mb4.1/2, ML4.1(GUC), Error ellipse: s-maj=12.0km s-min=4.5km az=91.0*

ISC 09 17:34:01.6±0.6**, 31°.78S**±0°.03×**71°.65W**±0°.05**, h43**^{km}±5^{km}**, n94,** σ1^{s}**19**/110**, mb4.2**/5**, 4C-11D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO02	**Combarbal**	**0.80**	**44**		**Pn**	**17 34 16.0**	**-0.6**
CO02	**Combarbal**	**0.80**	**44**	⇓*i*P	**Pn**	**17 34 16.1**	**-0.5**
CO02	**Combarbal**	**0.80**	**44**	*e*P		17 34 27.0	
VA06	**Catapilco**	**0.83**	**159**		**Pn**	**17 34 16.7**	**-0.2**
VA06	**Catapilco**	**0.83**	**159**	⇑*i*P	**Pn**	**17 34 16.7**	**-0.2**
VA06				*i* S	**Sn**	**17 34 26.5**	**-1.5**
VA06				IAML		17 34 30.5	
	comp=N,16μm,0.6s						
CO06	**Fray Jorge**	**1.10**	**0**	Pn	**Pn**	**17 34 21.2**	**+0.5**
CO06	**Fray Jorge**	**1.10**	**0**	*i* P	**Pn**	**17 34 21.4**	**+0.8**
CO06				*i* S	**Sn**	**17 34 36.0**	**+1.3**
CO06				IAML		17 34 42.3	
	comp=E,6μm,0.3s						
VA01	**Torpederas**	**1.24**	**180**	Pn	**Pn**	**17 34 23.4**	**+1.0**
VA01	**Torpederas**	**1.24**	**180**	*i* S	**Sn**	**17 34 39.5**	**+1.5**
VA01				IAML		17 34 42.5	
	comp=N,3μm,0.2s						
VA01				IAML		17 34 42.5	
	comp=E,3μm,0.4s						
VA01	**Torpederas**	**1.24**	**180**	*e*P		17 34 19.6	
VA01				*e*S		17 34 39.9	
VA01				*e*S		17 34 40.4	
CO03	**El Pedregal**	**1.25**	**41**	Pn	**Pn**	**17 34 22.5**	**-0.2**
ROCH	**El Roble**	**1.30**	**156**	⇓*i*P	**Pn**	**17 34 23.8**	**+0.2**
ROCH				*i* S	**Sn**	**17 34 40.3**	**+0.3**
ROCH				IAML		17 34 44.1	
	comp=N,8μm,0.3s						
ROC1	**El Roble**	**1.30**	**156**		**Pn**	**17 34 23.3**	**-0.4**
ROC1	**El Roble**	**1.30**	**156**	*e*P		17 34 23.8	
ROC1				*e*S		17 34 40.4	
VA03	**San Esteban**	**1.35**	**137**		**Pn**	**17 34 23.9**	**-0.1**
VA03	**San Esteban**	**1.35**	**137**	⇓*i*P	**Pn**	**17 34 24.0**	**-0.1**
VA03				*i* S	**Sn**	**17 34 40.8**	**-0.1**
VA03				IAML		17 34 43.6	
	comp=E,10μm,0.3s						
VA03	**San Esteban**	**1.35**	**137**	*e*P		17 34 24.1	
VA03				*e*S		17 34 41.9	
VA03				IAML		17 34 44.1	
	comp=Z,5μm,0.7s						
MT02	**Curacav**	**1.53**	**164**	*e*P		17 34 26.0	
MT02				*e*S		17 34 48.9	
MT02	**Curacav**	**1.54**	**164**		**Pn**	**17 34 27.0**	**+0.4**
MT02	**Curacav**	**1.54**	**164**	*i* P	**Pn**	**17 34 27.2**	**+0.6**
MT02				*i* S	**Sn**	**17 34 46.6**	**+1.3**
MT02				IAML		17 34 51.6	
	comp=E,2μm,0.5s						
PEL	**Peldehue**	**1.58**	**149**		**Pn**	**17 34 27.6**	**+0.3**
PEL	**Peldehue**	**1.58**	**149**	⇓*i*P	**Pn**	**17 34 27.8**	**+0.5**
PEL				*i* S	**Sn**	**17 34 46.8**	**+0.2**
PEL				IAML		17 34 49.6	
	comp=E,3μm,0.3s						
PEL	**Peldehue**	**1.58**	**149**	*e*P		17 34 27.9	
PEL				*e*S		17 34 49.4	
GO04	**Tololo Observa**	**1.76**	**25**		**Pn**	**17 34 30.6**	**+0.8**
GO04	**Tololo Observa**	**1.76**	**25**	⇓*i*P	**Pn**	**17 34 30.2**	**+0.4**
GO04				*i* S	**Sn**	**17 34 53.4**	**+2.2**
GO04	**Tololo Observa**	**1.76**	**25**	*e*P		17 34 25.1	
GO04				*e*P		17 34 30.8	
GO04				*e*S		17 34 54.8	
MT05	**Renca**	**1.78**	**155**	Pn	**Pn**	**17 34 30.7**	**+0.8**
MT05	**Renca**	**1.78**	**155**	⇑*i*P	**Pn**	**17 34 31.2**	**+1.2**
MT05				*i* S	**Sn**	**17 34 53.1**	**+1.7**
MT05	**Renca**	**1.78**	**155**	*e*P		17 34 30.9	
MT05				*e*S		17 34 54.6	
MT05				IAML		17 34 55.3	
	comp=Z,1μm,0.3s						
VA05	**Santo Domingo**	**1.87**	**179**		**Pn**	**17 34 32.0**	**+0.9**
VA05	**Santo Domingo**	**1.87**	**179**	*i* P	**Pn**	**17 34 32.1**	**+0.9**
VA05				*i* S	**Sn**	**17 34 56.0**	**+2.5**
VA05				IAML		17 35 01.8	
	comp=N,4μm,0.3s						
CO05	**La Serena**	**1.89**	**11**	Pn	**Pn**	**17 34 32.3**	**+0.9**
CO05	**La Serena**	**1.89**	**11**	*e*P	**Pn**	**17 34 32.5**	**+1.1**
CO05				*i* S	**Sn**	**17 34 56.1**	**+2.1**
CO05				IAML		17 35 06.2	
	comp=E,3μm,0.4s						
MT03	**Universidad Ad**	**1.96**	**151**	Pn	**Pn**	**17 34 33.5**	**+1.0**
MT03	**Universidad Ad**	**1.96**	**151**	*i* P	**Pn**	**17 34 33.2**	**+0.7**
MT03				IAML		17 35 07.8	
	comp=N,4μm,0.3s						
MT03	**Universidad Ad**	**1.96**	**151**	*e*P		17 34 33.6	
MT03				*e*S		17 35 00.4	
MT03				IAML		17 35 09.3	
	comp=Z,2μm,0.5s						
RTLS	**Leoncito**	**2.00**	**91**	*e*P		17 34 34.5	
RTLS				*e*S		17 34 45.6	
RTLS				IAML		17 34 45.7	
	comp=Z,2μm,0.3s						
MT04	**Ro Olivares**	**2.06**	**142**	⇓*i*P	**Pn**	**17 34 34.9**	**+0.9**
MT04				*i* S	**Sn**	**17 35 00.8**	**+2.2**
MT04				IAML		17 35 03.7	
	comp=N,2μm,0.2s						
MT09	**Talagante**	**2.06**	**165**		**Pn**	**17 34 35.1**	**+1.2**
MT09	**Talagante**	**2.06**	**165**	⇑*i*P	**Pn**	**17 34 35.3**	**+1.3**
MT09				*i* S	**Sn**	**17 35 00.1**	**+1.5**
MT09				IAML		17 35 06.9	
	comp=N,3μm,0.3s						
MT01	**Popeta**	**2.10**	**171**		**Pn**	**17 34 35.5**	**+1.1**
MT01	**Popeta**	**2.10**	**171**	*i* P	**Pn**	**17 34 35.0**	**+0.6**
MT01				*i* S	**Sn**	**17 35 00.9**	**+1.6**
MT01				IAML		17 35 09.2	
	comp=E,2μm,0.2s						
MT01	**Popeta**	**2.10**	**171**	*e*P		17 34 35.3	
MT01				*e*S		17 35 03.1	
MT01				IAML		17 35 08.2	
	comp=Z,1μm,0.5s						
MT08	**Bocatoma Ro**	**2.15**	**141**	Pn	**Pn**	**17 34 36.7**	**+1.4**
MT08	**Bocatoma Ro**	**2.15**	**141**	⇓*i*P	**Pn**	**17 34 36.8**	**+1.6**
MT08				IAML		17 35 07.2	
	comp=E,1μm,0.7s						
MT12	**Pirque**	**2.15**	**155**	*i* P	**Pn**	**17 34 35.8**	**+0.7**
MT12				*i* S	**Sn**	**17 35 01.1**	**+0.4**
MT12				IAML		17 35 09.2	
	comp=E,3μm,0.5s						
CO01	**Juntas del Tor**	**2.24**	**37**		**Pn**	**17 34 37.9**	**+1.5**
CO01	**Juntas del Tor**	**2.24**	**37**	⇓*i*P	**Pn**	**17 34 38.0**	**+1.5**
CO01				*i* S	**Sn**	**17 35 05.0**	**+2.0**
CO01				IAML		17 35 08.5	
	comp=E,1μm,0.3s						
CO01	**Juntas del Tor**	**2.24**	**37**	*e*P		17 34 38.1	
CO01				*e*S		17 35 06.0	
CO01				IAML		17 35 09.3	
	comp=Z,727nm,0.7s						
MT13	**San Alfonso**	**2.27**	**150**	Pn	**Pn**	**17 34 37.8**	**+1.1**
MT13	**San Alfonso**	**2.27**	**150**	*i* P	**Pn**	**17 34 37.6**	**+0.8**
MT13				*i* S	**Sn**	**17 35 04.4**	**+0.9**
MT13				IAML		17 35 17.3	
	comp=E,2μm,0.3s						
LMEL	**Las Melosas**	**2.39**	**150**		**Pn**	**17 34 39.9**	**+1.4**
LMEL	**Las Melosas**	**2.39**	**150**	⇓*i*P	**Pn**	**17 34 39.5**	**+1.0**
LMEL				*i* S	**Sn**	**17 35 08.3**	**+1.7**
LMEL				IAML		17 35 15.8	
	comp=N,2μm,0.2s						
ASAL	**Salagasta**	**2.52**	**109**	*e*P		17 34 42.0	
ASAL				*e*S		17 35 17.6	
ARCO	**CERRO ARCO**	**2.53**	**115**	*e*P		17 34 39.6	
ARCO				*e*S		17 35 21.1	
BO01	**Tunca**	**2.65**	**170**	Pn	**Pn**	**17 34 42.8**	**+1.0**
BO01	**Tunca**	**2.65**	**170**	*i* P	**Pn**	**17 34 42.9**	**+1.0**
BO01				IAML		17 35 23.0	
	comp=E,602nm,0.2s						
BO01	**Tunca**	**2.65**	**170**	*e*P		17 34 42.9	
BO01				*e*S		17 35 13.2	
BO01				IAML		17 35 26.5	
	comp=Z,504nm,0.3s						
AAGR	**Agrelo**	**2.71**	**119**	*e*P		17 34 45.0	
AAGR				*e*S		17 35 01.6	
BO03	**Pichilemu**	**2.72**	**186**	⇓*i*P	**Pn**	**17 34 43.1**	**+0.3**
LCO	**Las Campanas**	**2.88**	**17**		**Pn**	**17 34 46.2**	**+1.0**
LCO	**Las Campanas**	**2.88**	**17**	⇑*i*P	**Pn**	**17 34 46.3**	**+1.0**
LCO				*i* S	**Sn**	**17 35 20.7**	**+1.9**
LCO	**Las Campanas**	**2.88**	**17**	*e*P		17 34 45.0	
LCO				*e*P		17 34 46.5	
LCO				*e*S		17 35 17.6	
LCO				*e*S		17 35 23.1	
LCO				IAML		17 35 28.4	
	comp=Z,4μm,0.3s						
CFA	**Coronel Fontan**	**2.91**	**87**	Pn	**Pn**	**17 34 47.5**	**+2.0**
	comp=Z,67nm,0.3s,baz=274,slow=10,SNR=146						
CFA				Sn	**Sn**	**17 35 21.6**	**+2.3**
	comp=Z,48nm,0.3s,baz=288,slow=21,SNR=1.8						
	comp=Z,138nm,0.3s						
CFA	**Coronel Fontan**	**2.91**	**87**	*e*P		17 34 47.4	

CFA				*e*S		17 35 27.2	
CFA				IAML		17 35 39.0	
	comp=Z,378nm,0.4s						
BO02	**Sierra Bellavi**	**3.09**	**167**		**Pn**	**17 34 49.3**	**+1.3**
BO02	**Sierra Bellavi**	**3.09**	**167**	*i* P	**Pn**	**17 34 49.1**	**+1.1**
BO02				*i* S	**Sn**	**17 35 24.9**	**+1.2**
BO02	**Sierra Bellavi**	**3.09**	**167**	*e*P		17 34 36.5	
BO02				IAML		17 35 38.2	
	comp=Z,630nm,0.8s						
AC05	**El Transito**	**3.17**	**22**	Pn	**Pn**	**17 34 50.8**	**+1.7**
AC05	**El Transito**	**3.17**	**22**	*i* P	**Pn**	**17 34 50.8**	**+1.7**
AC05	**El Transito**	**3.17**	**22**	*e*P		17 34 48.0	
AC05				*e*S		17 35 25.1	
AC05				IAML		17 35 39.4	
	comp=Z,792nm,0.4s						
GO05	**Huala**	**3.23**	**184**	Pn	**Pn**	**17 34 50.1**	**+0.2**
GO05	**Huala**	**3.23**	**184**	⇓ *i*P	**Pn**	**17 34 50.0**	**+0.2**
AC04	**Llanos de Chal**	**3.60**	**8**		**Pn**	**17 34 55.1**	**+0.2**
AC04	**Llanos de Chal**	**3.60**	**8**	*i* P	**Pn**	**17 34 55.4**	**+0.5**
GO03	**Copiap**	**4.35**	**17**		**Pn**	**17 35 05.8**	**+0.5**
AC02	**Maricunga**	**5.40**	**25**	Pn	**Pn**	**17 35 20.8**	**+0.8**
AC01	**Pan de Azucar**	**5.69**	**10**	Pn	**Pn**	**17 35 22.2**	**-1.4**
H03N1	**Juan Fernandez**	**6.35**	**253**	Pn	**Pn**	**17 35 34.8**	**+2.3**
	baz=102,slow=16						
H03N1				T	T	17 42 16.5	
	baz=80,slow=73,SNR=2828						
H03N3	**Juan Fernandez**	**6.36**	**253**	Pn	**Pn**	**17 35 34.6**	**+2.0**
	baz=102,slow=16						
H03N3				T	T	17 42 13.7	
	baz=80,slow=73,SNR=2408						
H03N2	**Juan Fernandez**	**6.37**	**253**	Pn	**Pn**	**17 35 34.8**	**+2.2**
	baz=102,slow=16						
H03N2				T	T	17 42 14.2	
	baz=80,slow=73,SNR=2516						
H03S3	**Juan Fernandez**	**6.45**	**250**	Pn	**Pn**	**17 35 35.0**	**+1.3**
H03S3				T	T	17 42 23.3	
	baz=82,slow=75,SNR=13						
H03S1	**Juan Fernandez**	**6.45**	**249**	Pn	**Pn**	**17 35 34.7**	**+1.0**
H03S1				T	T	17 42 22.3	
	baz=82,slow=75,SNR=17						
H03S2	**Juan Fernandez**	**6.46**	**250**	Pn	**Pn**	**17 35 34.9**	**+1.0**
H03S2				T	T	17 42 17.7	
	baz=82,slow=75,SNR=19						
GO02	**Mina Guanaco**	**6.84**	**16**	Pn	**Pn**	**17 35 38.4**	**-1.3**
LR04	**Corral**	**8.21**	**190**	Pn	**Pn**	**17 35 58.3**	**+0.2**
PLCA	**Paso Flores**	**8.98**	**175**	Pn	**Pn**	**17 36 09.7**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=340,slow=11,SNR=5.9						
	comp=Z,1.3nm,0.4s						
LVC	**Limon Verde**	**9.45**	**16**	LR	LR	17 39 48.6	
	comp=Z,84nm,20.7s,baz=203,slow=37						
TRQA	**Tornquist**	**10.10**	**131**	Pn	**Pn**	**17 36 21.0**	**-3.1**
CPUP	**Villa Florida**	**13.64**	**70**	Pn	**Pn**	**17 37 11.9**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=222,slow=9.7,SNR=2.4						
CPUP				Sn	**Sn**	**17 39 44.2**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=33,slow=6.2,SNR=2.2						
CPUP				LR	LR	17 42 30.8	
	comp=Z,56nm,21.9s,baz=220,slow=37						
	comp=Z,2.4nm,0.8s						
SIV	**San Ignacio**	**18.43**	**34**	P	**P**	**17 38 12.5**	**-1.0**
	baz=203,slow=9.8,SNR=7.8						
	comp=Z,1.8nm,0.7s						
ETMB	**Extrema**	**22.43**	**14**	P	**P**	**17 38 56.1**	**-0.7**
ETMB				IAmb	IAmb	17 39 13.9	
	comp=Z,3.9nm,0.9s						
BDFB	**Brasilia**	**26.86**	**59**	P	**P**	**17 39 36.8**	**-1.7**
	comp=Z,2.9nm,0.4s,baz=232,slow=8.8,SNR=6.2						
	comp=Z,2.9nm,0.4s						
BDFB	**Brasilia**	**26.86**	**59**	P	**P**	**17 39 38.1**	**-0.4**
BDFB				IAmb	IAmb	17 39 38.6	
	comp=Z,7.3nm,1.0s						
PMSA	**Palmer Station**	**33.35**	**174**	LR	LR	17 52 47.3	
	comp=Z,95nm,18.3s,baz=128,slow=34						
TXAR	**Lajitas Array**	**67.97**	**330**	P	**P**	**17 44 56.1**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=156,slow=9.6,SNR=4.0						
	comp=Z,0.4nm,0.6s						
DBIC	**Dimbokro**	**74.16**	**72**	P	**P**	**17 45 33.5**	**-0.6**
	comp=Z,3.8nm,0.8s,baz=190,slow=6.7,SNR=3.5						
	comp=Z,3.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**83.14**	**70**	P	**P**	**17 46 22.8**	**-0.6**
	comp=Z,2.2nm,0.8s,baz=269,slow=5.2,SNR=11						
TORD				pP	**pP**	**17 46 35.2**	**-1.1**
	comp=Z,1.9nm,0.7s,baz=260,slow=5.1,SNR=7.5						
TORD				sP	**sP**	**17 46 40.4**	**-0.8**
	comp=Z,1.6nm,0.6s,baz=264,slow=5.2,SNR=6.2						
	comp=Z,2.2nm,0.8s						
SCHQ	**Schefferville**	**86.36**	**3**	LR	LR	18 29 26.0	
	comp=Z,33nm,18.2s,baz=86,slow=38						
ASAR	**Alice Springs**	**119.69**	**207**	PKP	**PKPdf**	**17 52 46.8**	**-0.7**
	comp=Z,0.2nm,0.7s,baz=113,slow=1.7,SNR=5.2						
WRA	**Warramunga Arr**	**122.85**	**209**	PKP	**PKPdf**	**17 52 52.6**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=169,slow=1.6,SNR=7.2						
WRA				pPKP	**pPKPdf**	**17 53 05.2**	**-1.5**
	comp=Z,0.4nm,0.8s,baz=162,slow=1.6,SNR=2.3						
H11S2	**WAKE ISLAND Hy**	**126.11**	**271**	T	T	20 11 51.1	
	baz=117,slow=75,SNR=138						
H11S1	**WAKE ISLAND Hy**	**126.12**	**271**	T	T	20 12 04.5	
	baz=117,slow=75,SNR=143						
H11S3	**WAKE ISLAND Hy**	**126.12**	**271**	T	T	20 11 50.6	
	baz=117,slow=75,SNR=126						
H11N3	**WAKE ISLAND Hy**	**126.47**	**272**	T	T	20 12 16.2	
	baz=116,slow=76,SNR=186						
H11N1	**WAKE ISLAND Hy**	**126.48**	**272**	T	T	20 12 18.6	
	baz=116,slow=76,SNR=49						
H11N2	**WAKE ISLAND Hy**	**126.48**	**272**	T	T	20 12 16.0	
	baz=116,slow=76,SNR=267						
GAR	**Garm**	**148.34**	**66**	PKPbc	**PKPbc**	**17 53 43.2**	**-0.2**
AAK	**Ala-Archa**	**151.11**	**58**		**PKiKP**	**17 53 50.9**	**+0.2**
ZAA0	**Zalesovo Array**	**152.16**	**30**		**PKiKP**	**17 53 52.1**	**-0.1**
ZALV	**Zalesovo Beam**	**152.16**	**30**	PKPbc	**PKiKP**	**17 53 52.5**	**+0.3**
	comp=Z,2.5nm,0.5s,baz=306,slow=2.5,SNR=13						
ZALV				PKPab	**sPKPdf**	**17 54 03.3**	**0.0**
	comp=Z,2.8nm,0.6s,baz=305,slow=2.9,SNR=9.3						
ZALV	**Zalesovo Beam**	**152.16**	**30**		**PKiKP**	**17 53 52.1**	**-0.1**
MKAR	**Makanchi Array**	**155.02**	**46**	PKPbc	PKPbc	17 53 58.1	
	comp=Z,0.3nm,0.5s,baz=313,slow=2.5,SNR=4.4						
MKAR				PKPab	**PKPab**	**17 54 13.6**	**-0.6**
	comp=Z,1.0nm,0.9s,baz=290,slow=4.0,SNR=5.4						
MKAR				pPKPab	pPKPab	17 54 26.6	-0.7
	comp=Z,0.9nm,0.8s,baz=298,slow=3.6,SNR=8.2						
PZH	**PanZhiHua**	**172.19**	**131**	PKP	**PKPdf**	**17 54 07.0**	**+0.8**

IDC ***09*** *17:38:31.2±1.3, 4°.35N×127°.38E, h0^{km}, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=82.5km s-min=20.2km az=66.0*

MAN ***09*** *17:38:38.7, 3°.66N×126°.13E, h134^{km}, mb4.5, ML3.4, MS3.2*

ISC 09 17:38:37.5±1.2, **3°.9N**±0°.1×**126°.8E**±0°.3, **h36^{km}, n11, σ1^{s}86**/10, **mb3.4**/6, **4C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**2.86**	**319**	⇑ *e*P	**Pn**	**17 39 20.9**	**+0.1**
KCP	**Kidapawan**	**3.53**	**330**	⇑ *i*P	**Pn**	**17 39 31.0**	**+1.1**
CTBH	**Cotabato--PC H**	**4.18**	**322**	⇑ *i*P	**Pn**	**17 39 39.1**	**+0.4**
BIPH	**Bislig**	**4.26**	**354**	⇓ *e*P	Pn	17 39 46.4	+6.5
BIPH				*i* S	**Sn**	**17 40 30.8**	**+2.4**
DCPH	**Dipolog City**	**5.79**	**323**	⇑ *e*P	Pn	17 39 49.1	-12
WRA	**Warramunga Arr**	**24.83**	**163**	P	**P**	**17 43 57.5**	**+0.9**
	0.2nm,0.3s,baz=342,slow=10,SNR=7.1						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**28.27**	**166**	P	**P**	**17 44 29.4**	**+1.8**
	0.2nm,0.5s,baz=346,slow=11,SNR=6.3						
	0.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**30.88**	**300**	P	**P**	**17 44 52.4**	**+1.7**
	0.4nm,0.7s,baz=123,slow=9.1,SNR=4.5						
	0.4nm,0.7s						
SONM	**Songino Array**	**47.16**	**341**	P	**P**	**17 47 04.5**	**-2.0**
	0.4nm,0.7s,baz=162,slow=7.1,SNR=2.6						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**57.47**	**325**	P	**P**	**17 48 20.7**	**-2.2**
	0.6nm,0.4s,baz=118,slow=7.3,SNR=18						
	0.6nm,0.4s						
ARCES	**ARCESS Array B**	**90.31**	**340**	P	**P**	**17 51 33.2**	**-1.2**
	2.0nm,1.0s,baz=90,slow=8.1,SNR=4.1						
	2.0nm,1.0s						

DDA ***09*** *17:59:23.9±0.0, 37°.57N×38°.49E, h5^{km}±2^{km}, MW3.7*

ISK ***09*** *17:59:24.3, 37°.50N×38°.48E, h16^{km}, ML3.7/24*

ISC 09 17:59:24.2±1.0, **37°.55N**±0°.02×**38°.47E**±0°.01, **h4^{km}**±9^{km}, **n74, σ1^{s}02**/118, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URFA	**Urfa**	**0.30**	**112**	Pg	**Pg**	**17 59 30.9**	**+0.8**
URFA				Sg	**Sg**	**17 59 35.4**	**+1.3**
AZEY	**Adyaman-Merk**	**0.31**	**326**	P	**Pg**	**17 59 30.8**	**+0.6**
AZEY				S	**Sg**	**17 59 34.7**	**+0.4**
HANM	**anlurfa/Hi**	**0.33**	**85**	SPECP		17 59 30.0	
HANM				P	**Pg**	**17 59 30.1**	**-0.5**
HANM				S	**Sg**	**17 59 34.4**	**-0.5**
NARI	**Adyaman-Kaht**	**0.41**	**35**	SPECP		17 59 31.0	
NARI				P	**Pg**	**17 59 31.4**	**-0.6**
NARI				S	**Sg**	**17 59 36.5**	**-0.9**
SANL	**SANLIURFA_Merk**	**0.56**	**132**	P	**Pg**	**17 59 35.2**	**+0.2**
SANL				S	**Sg**	**17 59 42.5**	**+0.1**
AKCA	**Adyaman/G¶l**	**0.66**	**292**	SPECP		17 59 37.0	
AKCA				P	**Pb**	**17 59 37.7**	**-0.7**
AKCA				S	**Sb**	**17 59 47.0**	**-1.0**
SURC	**SANLIURFA_SURC**	**0.68**	**170**	SPECP		17 59 38.0	
SURC				P	**Pb**	**17 59 38.1**	**-0.6**
SURC				S	**Sb**	**17 59 47.9**	**-0.6**
GZT	**Gaziantep**	**0.74**	**255**	SPECP		17 59 39.0	
GZT				P	**Pb**	**17 59 39.5**	**-0.3**
GZT				S	**Sb**	**17 59 50.1**	**-0.3**
MAYA	**Malatya/Merkez**	**0.77**	**358**	P	**Pg**	**17 59 38.0**	**-1.0**
MAYA				S	**Sg**	**17 59 49.7**	**+0.7**
NZIP	**Nizip/Gaziante**	**0.81**	**231**	SPECP		17 59 40.0	
NZIP				P	**Pb**	**17 59 41.0**	**0.0**
NZIP				S	**Sb**	**17 59 51.8**	**-0.4**
AKCD	**Akcadag**	**0.86**	**330**	P	**Pg**	**17 59 40.5**	**-0.1**
AKCD				S	**Sg**	**17 59 51.7**	**-0.1**
ELZG	**Elazig**	**1.03**	**23**	P	**Pg**	**17 59 43.0**	**-0.9**
ELZG				S	**Sg**	**17 59 57.8**	**+0.6**
GAZ	**Gaziantep**	**1.07**	**250**	Pg	**Pn**	**17 59 45.4**	**-0.7**
GAZ				Sg	**Sn**	**18 00 00.1**	**-1.4**
KAHM	**Kahramanmaras,**	**1.18**	**269**	SPECP		17 59 46.0	
KAHM				P	**Pb**	**17 59 46.6**	**-0.6**
KAHM				S	**Sb**	**18 00 02.3**	**-0.5**
KMRS	**Kahramanmaras**	**1.25**	**268**	Pn	**Pb**	**17 59 47.6**	**-0.7**
KMRS				Sn	**Sn**	**18 00 05.0**	**-0.8**
HCB	**Kahramanmara**	**1.26**	**261**	P	**Pb**	**17 59 47.9**	**-0.6**
HCB				S	**Sn**	**18 00 05.0**	**-1.1**
DARE	**Darende-Malaty**	**1.28**	**323**	Pn	**Pb**	**17 59 48.8**	**-0.1**
DARE				Sn	**Sn**	**18 00 06.9**	**+0.2**
ELBS	**KAHRAMANMARAS**	**1.30**	**307**	SPECP		17 59 49.0	
ELBS				P	**Pn**	**17 59 49.2**	**-0.1**
ELBS				S	**Sn**	**18 00 06.8**	**-0.5**
KUZU	**Kuzuini**	**1.36**	**235**	P	**Pb**	**17 59 51.1**	**+0.9**
KUZU				S	**Sn**	**18 00 09.3**	**+0.8**
HEKM	**Malatya_Hekimh**	**1.38**	**343**	SPECP		17 59 49.0	
HEKM				P	**Pn**	**17 59 49.8**	**-0.8**
HEKM				S	**Sb**	**18 00 09.3**	**+0.4**
DYBB	**Diyarbakir**	**1.39**	**73**	Pn	**Pn**	**17 59 49.3**	**-1.1**
DYBB				Sn	**Sg**	**18 00 08.7**	**0.0**
KAMA	**Osmaniye**	**1.48**	**256**	P	**Pn**	**17 59 50.9**	**-0.8**
KAMA				S	**Sg**	**18 00 10.0**	**-1.7**
CUGUR	**Gurin_SVAS**	**1.50**	**322**	P	**Pg**	**17 59 54.3**	**+1.3**
CUGUR				S	**Sn**	**18 00 13.6**	**+1.4**
ARPR	**Arapgir-MALATY**	**1.54**	**356**	Pn	**Pn**	**17 59 52.7**	**0.0**
KOVA	**Elazig, Kovanc**	**1.57**	**42**	P	**Pn**	**17 59 53.3**	**+0.4**
KOVA				S	**Sn**	**18 00 13.8**	**0.0**
ANDN	**Andirin**	**1.69**	**272**	P	**Pn**	**17 59 54.1**	**-0.4**
ANDN				S	**Sn**	**18 00 16.1**	**-0.6**
KEMA	**Kemaliye**	**1.71**	**1**	P	**Pn**	**17 59 54.8**	**-0.2**
KEMA				S	**Sb**	**18 00 18.4**	**+0.1**
HANI	**Diyarbakir_Han**	**1.75**	**60**	P	**Pn**	**17 59 54.5**	**-1.0**
HANI				S	**Sn**	**18 00 18.4**	**+0.1**
TNCL	**Tunceli-Merkez**	**1.77**	**28**	P	**Pn**	**17 59 56.1**	**+0.3**
TNCL				S	**Sn**	**18 00 19.8**	**+0.9**
SARI	**SarD1z-Kayseri**	**1.83**	**298**	Pn	**Pn**	**17 59 56.8**	**+0.2**
CUKAN	**kangal_SIVAS**	**1.93**	**336**	P	**Pn**	**17 59 58.8**	**+0.9**
CUKAN				S	**Sn**	**18 00 22.6**	**-0.2**
SAIM	**ADANA**	**1.94**	**283**	P	**Pn**	**17 59 58.3**	**+0.3**
SAIM				S	**Sg**	**18 00 27.0**	**+0.6**
RHAN	**Hatay/Reyhanl**	**1.98**	**230**	P	**Pg**	**18 00 01.9**	**-0.1**
RHAN				S	**Sg**	**18 00 27.0**	**-0.6**
KOZT	**Kozan**	**2.10**	**269**	Pn	**Pn**	**17 59 59.4**	**-0.8**
CUAYA	**Sivas-Altinyay**	**2.18**	**322**	P	**Pn**	**18 00 02.4**	**+1.0**
CUAYA				S	**Sb**	**18 00 31.1**	**-0.6**
CEYT	**Ceyhan**	**2.23**	**257**	Pn	**Pn**	**18 00 02.0**	**0.0**
SVAN	**Silvan-Diyarba**	**2.24**	**74**	Pn	**Pn**	**18 00 00.7**	**-1.5**
SVAN	**Silvan-Diyarba**	**2.24**	**74**	P	**Pn**	**18 00 00.6**	**-1.5**
SVAN				S	**Sn**	**18 00 32.0**	**+1.6**
BNGB	**Bingl**	**2.26**	**50**	Pn	**Pn**	**18 00 01.8**	**-0.7**
MIDY	**Mardin/Midyat-**	**2.34**	**93**	P	**Pn**	**18 00 04.7**	**+1.2**
MIDY				S	**Sb**	**18 00 37.6**	**+1.4**
EUZM	**Uzumlu**	**2.36**	**24**	P	**Pb**	**18 00 06.6**	**-0.7**
YURE	**YUREGIR**	**2.38**	**253**	P	**Pn**	**18 00 04.3**	**+0.3**
YURE				S	**Sg**	**18 00 46.1**	**+5.5**
CUZAR	**Zara_SIVAS**	**2.39**	**347**	P	**Pn**	**18 00 05.6**	**+1.2**
CUZAR				S	**Sg**	**18 00 42.1**	**+1.0**
AKO	**Adana**	**2.40**	**269**	P	**Pn**	**18 00 04.2**	**-0.2**
BNN	**Bunyan**	**2.44**	**303**	Pn	**Pn**	**18 00 05.2**	**+0.2**
SLHN	**Bingol, Solhan**	**2.45**	**54**	P	**Pn**	**18 00 07.2**	**+2.0**
SLHN				S	**Sb**	**18 00 39.6**	**-0.1**
ASUZ	**Hatay-Arsuz**	**2.49**	**240**	P	**Pg**	**18 00 11.1**	**-0.9**
ASUZ				S	**Sg**	**18 00 45.2**	**+1.0**
YEDI	**Yedisu-Bingol**	**2.49**	**40**	Pn	**Pn**	**18 00 06.5**	**+0.8**
YAHY	**KAYSERI_Yahyal**	**2.52**	**283**	P	**Pn**	**18 00 07.1**	**+1.1**
YAHY				S	**Sg**	**18 00 43.4**	**-1.6**
CUSAR	**Sarkisla-SIVAS**	**2.55**	**318**	P	**Pn**	**18 00 06.7**	**+0.2**
CUSAR				S	**Sg**	**18 00 45.9**	**-0.3**
CUSAR				*i* AML	AML	18 00 52.0	
	comp=N,100nm,0.5s						
GUNE	**Kayseri**	**2.61**	**302**	P	**Pn**	**18 00 08.7**	**+1.4**
GUNE				S	**Sg**	**18 00 48.0**	**-0.1**
SVSK	**Karacayir**	**2.62**	**335**	Pn	**Pn**	**18 00 08.7**	**+1.3**
SUSE	**Susehri**	**2.66**	**356**	P	**Pn**	**18 00 08.6**	**+0.6**
KELT	**Kelkit**	**2.66**	**13**	P	**Pn**	**18 00 08.2**	**+0.1**
MUSM	**Mu-Merkez**	**2.67**	**63**	P	**Pn**	**18 00 07.4**	**-0.8**
MUSM				S	**Sb**	**18 00 44.1**	**-1.8**
KARA	**Karaisali**	**2.73**	**265**	Pn	**Pn**	**18 00 08.6**	**-0.3**
ALUC	**Giresun/Alucra**	**2.80**	**5**	P	**Pn**	**18 00 08.2**	**-1.8**
VRTB	**Varto-Mus**	**2.85**	**55**	Pn	**Pn**	**18 00 11.3**	**+0.7**
VRTB	**Varto-Mus**	**2.85**	**55**	P	**Pb**	**18 00 14.6**	**-1.1**
VRTB				S	**Sg**	**18 00 54.3**	**-1.3**
NIDE	**Nigde/Merkez-G**	**2.96**	**280**	P	**Pn**	**18 00 13.1**	**+1.0**
RSDY	**Resadiye-TOKAT**	**2.98**	**343**	Pn	**Pn**	**18 00 13.0**	**+0.7**
DED	**Mersin**	**2.98**	**260**	P	**Pn**	**18 00 12.5**	**+0.1**
GURO	**Guroymak-BITLI**	**2.99**	**69**	Pn	**Pn**	**18 00 12.7**	**+0.2**
HACI	**Hacifakili, Ak**	**3.03**	**316**	P	**Pn**	**18 00 13.9**	**+0.8**
BAYT	**Aydıntepe-Bayb**	**3.12**	**24**	Pn	**Pn**	**18 00 15.9**	**+1.5**
TOKT	**Tokat**	**3.14**	**332**	Pn	**Pn**	**18 00 15.7**	**+1.1**
SIRC	**Yozgat**	**3.15**	**305**	P	**Pn**	**18 00 15.4**	**+0.6**
YOZ	**Yozgat**	**3.23**	**311**	Pn	**Pn**	**18 00 16.8**	**+1.0**
PERV	**Siirt/Pervari-**	**3.25**	**82**	P	**Pb**	**18 00 21.9**	**-0.7**
PERV				S	**Sb**	**18 01 05.2**	**+2.5**
KOZK	**Kozakli-Nevseh**	**3.28**	**301**	Pn	**Pn**	**18 00 17.4**	**+0.9**
CKRK	**Yozgat, Cekere**	**3.42**	**318**	P	**Pn**	**18 00 19.4**	**+1.0**
MLAZ	**Malazgirt-MUS**	**3.58**	**62**	Pn	**Pn**	**18 00 21.7**	**+1.0**
KOPR	**Koprukoy-ERZUR**	**3.60**	**46**	Pn	**Pn**	**18 00 21.7**	**+0.8**
AKDM	**Akdamar-Van**	**3.65**	**76**	Pn	**Pn**	**18 00 22.5**	**+0.8**

DDA ***09*** *18:16:17.6±0.0, 39°.55N×26°.07E, h13^{km}±1^{km}, ML2.3*

ISK ***09*** *18:16:17.6, 39°.57N×26°.04E, h5^{km}, ML2.5/19*

ATH ***09*** *18:16:18.5, 39°.56N×26°.07E, h6^{km}±3^{km}, ML2.2/2, Error ellipse: s-maj=4.0km s-min=0.9km az=237.0*

THE ***09*** *18:16:18.2, 39°.56N×26°.06E, h6^{km}±1^{km}, ML2.1/8, Error ellipse: s-maj=1.8km s-min=0.6km az=200.0*

ISC 09 18:16:18.1±0.8, **39°.56N**±0°.01×**26°.07E**±0°.02, **h10^{km}**±5^{km}, **n56, σ0^{s}59**/94, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	**Canakkale, Ayv**	**0.07**	**137**	P	**Pg**	**18 16 20.5**	**0.0**
KOCA				S	**Sg**	**18 16 22.4**	**+0.3**
GPNR	**Gulpinar-Canak**	**0.11**	**155**	Pg	**Pg**	**18 16 20.8**	**-0.1**
GPNR				Sg	**Sg**	**18 16 22.6**	**-0.2**
EZN	**Ezine**	**0.33**	**36**	P	**Pg**	**18 16 25.0**	**+0.3**
EZN				S	**Sg**	**18 16 29.8**	**+0.6**
	285nm,0.2s						
EZN	**Ezine**	**0.33**	**36**	Pg	**Pg**	**18 16 25.1**	**+0.3**
EZN				Sg	**Sg**	**18 16 29.9**	**+0.7**
PRK	**Paraskevi**	**0.35**	**154**	P	**Pg**	**18 16 25.3**	**+0.3**
PRK				S	**Sg**	**18 16 29.9**	**+0.3**
	905nm,0.4s						
PRK	**Paraskevi**	**0.35**	**154**	P	**Pg**	**18 16 25.3**	**+0.3**
PRK				S	**Sg**	**18 16 30.1**	**+0.5**
PRK				AML	AML	18 16 31.0	
	comp=N,1611µm,0.3s						
PRK				AML	AML	18 16 32.1	
	comp=E,1994µm,0.5s						
SIGR	**SIGRI**	**0.38**	**206**	P	**Pg**	**18 16 25.7**	**0.0**
SIGR				S	**Sg**	**18 16 30.8**	**0.0**
	comp=E,412nm,0.2s						
SIGR	**SIGRI**	**0.38**	**206**	Pg	**Pg**	**18 16 25.7**	**0.0**
SIGR				Sg	**Sg**	**18 16 31.1**	**+0.3**
SIGR	**SIGRI**	**0.38**	**206**	P	**Pg**	**18 16 25.7**	**0.0**
SIGR				S	**Sg**	**18 16 30.8**	**0.0**
SIGR				AML	AML	18 16 33.0	
	comp=E,701µm,0.2s						
SIGR				AML	AML	18 16 33.8	
	comp=N,920µm,0.3s						
BAYC	**CANAKKALE_Bayr**	**0.41**	**63**	P	**Pg**	**18 16 26.1**	**-0.1**
BAYC				S	**Sg**	**18 16 31.8**	**+0.1**
ECEA	**Canakkale, Ece**	**0.49**	**9**	P	**Pg**	**18 16 27.8**	**0.0**
ECEA				S	**Sg**	**18 16 35.4**	**+1.1**
ECEA				*i* AML	AML	18 16 36.0	
	comp=N,154nm,0.4s						
COMU	**Canakkale**	**0.62**	**30**	Pg	**Pg**	**18 16 30.4**	**+0.2**
COMU				Sg	**Sb**	**18 16 39.5**	**-0.4**
GOKA	**anakkale-Gk**	**0.65**	**349**	P	**Pg**	**18 16 30.0**	**-0.6**
GOKA				S	**Sg**	**18 16 39.1**	**0.0**
GOKA				*i* AML	AML	18 16 46.0	
	comp=N,112nm,0.3s						
GADA	**Gvkgeada**	**0.65**	**348**	Pg	**Pg**	**18 16 30.4**	**-0.3**
LIA	**Limnos Island**	**0.77**	**297**	P	**Pg**	**18 16 33.1**	**+0.2**
LIA				S	**Sb**	**18 16 44.1**	**+0.1**
	comp=N,340nm,0.3s						
LIA	**Limnos Island**	**0.77**	**297**	P	**Pg**	**18 16 33.1**	**+0.2**
LIA				S	**Sg**	**18 16 43.5**	**+0.6**
BUHA	**Balikesir, Bur**	**0.78**	**94**	P	**Pg**	**18 16 33.0**	**-0.2**
BUHA				S	**Sb**	**18 16 44.1**	**-0.2**
DKL	**Dikili**	**0.81**	**127**	Pg	**Pg**	**18 16 34.1**	**+0.4**
DKL				Sg	**Sb**	**18 16 46.3**	**+1.2**
CANM	**Can-anakkale**	**0.88**	**59**	Pg	**Pb**	**18 16 35.7**	**+0.2**
CANM				Sg	**Sb**	**18 16 47.7**	**+0.4**
GELI	**Tayfur-Gelibol**	**0.90**	**20**	Pg	**Pg**	**18 16 35.3**	**-0.1**
GELI				Sg	**Sg**	**18 16 47.2**	**+0.1**
KARB	**zmir-Karabur**	**0.93**	**163**	P	**Pg**	**18 16 36.2**	**+0.1**
KARB				S	**Sg**	**18 16 48.3**	**+0.2**
LPK	**Lapseki**	**0.97**	**33**	Pg	**Pg**	**18 16 36.8**	**0.0**
ZEDA	**zmir-Bergama**	**0.98**	**127**	P	**Pg**	**18 16 36.7**	**-0.2**
ZEDA				S	**Sb**	**18 16 50.3**	**+0.2**
SMTH	**Samothraki Isl**	**1.00**	**336**	P	**Pg**	**18 16 37.3**	**-0.2**
SMTH				S	**Sg**	**18 16 50.6**	**+0.1**
	comp=N,62nm,0.1s						
SMTH	**Samothraki Isl**	**1.00**	**336**	P	**Pg**	**18 16 37.3**	**-0.2**
SMTH				S	**Sg**	**18 16 50.9**	**+0.4**
PSRA	**Psara**	**1.09**	**202**	P	**Pb**	**18 16 38.3**	**-0.7**
PSRA				S	**Sn**	**18 16 54.5**	**+0.1**
ERIK	**Erikli-Kesan**	**1.16**	**17**	Pn	**Pb**	**18 16 39.7**	**-0.6**
ENEZ	**Enez**	**1.18**	**3**	P	**Pb**	**18 16 40.1**	**-0.5**
ENEZ				S	**Sn**	**18 16 57.3**	**+0.5**
	comp=N,108nm,0.5s						
ENEZ	**Enez**	**1.18**	**3**	Pn	**Pb**	**18 16 40.4**	**-0.2**
BALY	**Balya**	**1.21**	**81**	P	**Pn**	**18 16 40.1**	**-1.0**
BALY				S	**Sg**	**18 16 57.4**	**+0.3**
KRBG	**Karabiga-Canak**	**1.26**	**48**	Pn	**Pn**	**18 16 41.8**	**+0.1**
URLA	**Izmir**	**1.26**	**161**	Pn	**Pg**	**18 16 42.4**	**0.0**
URLA	**Izmir**	**1.26**	**161**	P	**Pn**	**18 16 40.0**	**-1.8**
URLA				S	**Sb**	**18 16 57.6**	**-0.7**
URLA				*i* AML	AML	18 17 01.0	
	comp=N,48nm,0.6s						
STEP	**BALIKESIR_Sava**	**1.29**	**98**	P	**Pn**	**18 16 40.7**	**-1.5**
STEP				S	**Sg**	**18 17 00.2**	**+0.7**
KNL	**Balıkesir**	**1.33**	**57**	P	**Pn**	**18 16 40.5**	**-2.1**
KNL				S	**Sb**	**18 17 00.1**	**0.0**
KNL				*i* AML	AML	18 17 04.0	
	comp=N,105nm,0.6s						
GONE	**Gonen-Balikesi**	**1.34**	**68**	Pn	**Pg**	**18 16 43.7**	**-0.1**
ALN	**Alexandroupoli**	**1.34**	**359**	P	**Pn**	**18 16 42.8**	**0.0**
ALN				S	**Sb**	**18 17 00.4**	**-0.1**
	comp=N,48nm,0.5s						
ALN	**Alexandroupoli**	**1.34**	**359**	Pn	**Pn**	**18 16 43.1**	**+0.2**
ALN	**Alexandroupoli**	**1.34**	**359**	P	**Pn**	**18 16 42.9**	**0.0**
ALN				S	**Sb**	**18 17 00.5**	**0.0**
KESN	**Edirne-Kesan**	**1.35**	**20**	P	**Pn**	**18 16 42.8**	**-0.5**
KESN				S	**Sg**	**18 17 01.8**	**+0.1**
KESN				*i* AML	AML	18 17 02.0	
	comp=N,48nm,0.3s						
ZEYE	**Izmir, Urla-Ze**	**1.36**	**166**	P	**Pn**	**18 16 43.4**	**+0.3**
ZEYE				S	**Sb**	**18 17 01.1**	**+0.1**
ZEYE				*i* AML	AML	18 17 05.0	
	comp=N,59nm,0.2s						
BLCB	**Balcova**	**1.39**	**147**	Pn	**Pb**	**18 16 44.5**	**+0.3**
BALB	**Balikesir**	**1.40**	**86**	Pn	**Pb**	**18 16 44.4**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.41**	**37**	Pn	**Pn**	**18 16 44.4**	**+0.5**
BKES	**Balkesir-Mer**	**1.44**	**82**	P	**Pn**	**18 16 44.4**	**+0.1**
BKES				S	**Sb**	**18 17 04.0**	**+0.5**
EDC	**Edincik**	**1.59**	**60**	Pn	**Pb**	**18 16 47.1**	**-0.4**
UKOP	**Uzunkopru-Edir**	**1.63**	**15**	Pn	**Pn**	**18 16 47.4**	**+0.6**
RDO	**Rodhopi**	**1.64**	**346**	P	**Pn**	**18 16 47.3**	**+0.3**
BAND	**Balkesir-Ban**	**1.75**	**62**	P	**Pn**	**18 16 48.6**	**+0.1**
BAND				S	**Sn**	**18 17 11.6**	**+0.7**
OUR	**Ouranopolis**	**1.79**	**296**	Pn	**Pn**	**18 16 49.2**	**+0.2**
TKR	**Tekirdag**	**1.82**	**38**	Pn	**Pn**	**18 16 50.3**	**+0.9**
DURS	**Dursunbey**	**1.86**	**88**	P	**Pn**	**18 16 48.6**	**-1.5**
DURS				S	**Sn**	**18 17 12.8**	**-0.8**
KCTX	**Karacabey (Bur**	**1.89**	**67**	Pn	**Pn**	**18 16 51.4**	**+0.9**
SMG	**Samos**	**1.94**	**162**	P	**Pn**	**18 16 51.6**	**+0.5**
SMG				S	**Sn**	**18 17 16.6**	**+1.1**
	comp=N,60nm,0.9s						
KIRK	**Kırklareli**	**2.35**	**19**	P	**Pb**	**18 17 00.2**	**-0.4**
KIRK				*i* AML	AML	18 17 29.0	
	comp=N,13nm,0.9s						
KIRK				S	**Sb**	**18 17 29.3**	**-0.5**
VIZE	**Kirklareli, Vi**	**2.43**	**33**	P	**Pb**	**18 17 00.3**	**-1.6**

ROM 09 18:24:24.6±0.0, **42°.813N**±0°.002×**13°.130E**±0°.003, **h10^{km}, ML1.9**/26, **5C-9D, Error ellipse: s-maj=0.2km s-min=0.1km az=109.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1245	**Castelsantange**	**0.06**	**44**	P	Pg	18 24 27.1	+0.2
T1245				S	Sg	18 24 28.7	0.0
T1245				AML	AML		
	comp=E,1950µm,0.5s						
T1245				AML	AML		
	comp=E,2100µm,0.2s						
T1245				AML	AML		
	comp=N,3500µm,0.2s						
T1245				AML	AML		
	comp=N,3185µm,0.2s						
T1214	**Arquata del Tr**	**0.08**	**132**	⇓P	Pg	18 24 27.4	+0.3
T1214				S	Sg	18 24 29.1	+0.2
T1214				AML	AML		
	comp=E,1265µm,0.2s						
T1214				AML	AML		
	comp=E,1205µm,0.2s						
T1214				AML	AML		
	comp=E,1205µm,0.1s						
T1214				AML	AML		
	comp=N,1012µm,0.2s						
T1214				AML	AML		
	comp=E,1260µm,0.2s						
T1214				AML	AML		
	comp=N,1020µm,0.2s						
T1212	**Cascia, Frazio**	**0.09**	**226**	⇓P	Pg	18 24 27.6	+0.5
T1212				S	Sg	18 24 29.5	+0.5
T1212				AML	AML		
	comp=E,1405µm,0.6s						
T1212				AML	AML		
	comp=N,1645µm,0.2s						
T1212				AML	AML		
	comp=E,1395µm,0.6s						
T1212				AML	AML		
	comp=N,1670µm,0.2s						
MC2	**Monte Cornacci**	**0.11**	**24**	⇑P	Pg	18 24 27.9	+0.4
MC2				S	Sg	18 24 30.3	+0.6
T1216	**Preci, Frazion**	**0.11**	**314**	P	Pg	18 24 27.9	+0.5
T1216				S	Sg	18 24 30.1	+0.6
T1216				AML	AML		
	comp=N,1330µm,0.2s						
T1216				AML	AML		
	comp=E,932µm,0.8s						
T1218	**Civita (PG)**	**0.14**	**184**	P	Pg	18 24 28.4	+0.5
T1218				S	Sg	18 24 31.1	+0.8
T1218				AML	AML		
	comp=E,514µm,0.4s						
T1218				AML	AML		
	comp=E,572µm,0.4s						
T1218				AML	AML		
	comp=N,1170µm,1.0s						

T1218				AML	AML		
	comp=N,1170µm,1.0s						
T1218				AML	AML		
	comp=N,1155µm,0.2s						
MMO1	**Montemonaco**	**0.17**	**59**	P	Pg	18 24 28.7	+0.4
MMO1				S	Sg	18 24 31.8	+0.9
T1217	**Poggiodomo (PG**	**0.18**	**235**	P	Pg	18 24 29.0	+0.6
T1217				S	Sg	18 24 32.2	+1.0
T1217				AML	AML		
	comp=E,357µm,0.5s						
T1217				AML	AML		
	comp=N,428µm,0.5s						
T1215	**Vallo di Nera,**	**0.19**	**267**	⇓P	Pg	18 24 29.2	+0.6
T1215				S	Sg	18 24 32.6	+1.1
T1215				AML	AML		
	comp=N,237µm,1.6s						
T1215				AML	AML		
	comp=N,238µm,1.6s						
T1215				AML	AML		
	comp=N,222µm,1.6s						
T1215				AML	AML		
	comp=E,324µm,0.2s						
T1215				AML	AML		
	comp=N,238µm,0.4s						
T1215				AML	AML		
	comp=N,222µm,0.4s						
T1215				AML	AML		
	comp=E,330µm,0.2s						
T1241	**Roccafluvione,**	**0.23**	**79**	⇓P	Pg	18 24 29.7	+0.4
T1241				AML	AML		
	comp=N,20000µm,1.6s						
T1241				AML	AML		
	comp=N,209µm,0.3s						
T1241				AML	AML		
	comp=E,25500µm,1.6s						
T1241				AML	AML		
	comp=E,324µm,0.2s						
T1241				AML	AML		
	comp=E,25500µm,0.4s						
T1241				AML	AML		
	comp=N,20000µm,0.4s						
SMA1	**SAN MARTINO**	**0.24**	**140**	P	Pg	18 24 30.0	+0.5
SMA1				AML	AML		
	comp=N,180µm,0.6s						
SMA1				AML	AML		
	comp=N,180µm,1.4s						
SMA1				AML	AML		
	comp=E,246µm,0.4s						
CESI	**CESI - Serrava**	**0.25**	**319**	P	Pg	18 24 30.4	+0.6
CESI				S	Sb	18 24 34.7	-1.1
CESI				AML	AML		
	comp=E,268µm,0.4s						
CESI				AML	AML		
	comp=N,398µm,0.2s						
CESI				AML	AML		
	comp=N,398µm,1.8s						
CESI				AML	AML		
	comp=E,268µm,1.6s						
T1219	**Muccia, Frazio**	**0.26**	**340**	P	Pg	18 24 30.3	+0.4
T1219				AML	AML		
	comp=N,608µm,0.3s						
T1219				AML	AML		
	comp=E,364µm,0.2s						
T1219				AML	AML		
	comp=E,358µm,0.1s						
T1219				AML	AML		
	comp=N,576µm,0.3s						
T1219				AML	AML		
	comp=E,364µm,1.8s						
T1219				AML	AML		
	comp=N,608µm,1.7s						
T1219				AML	AML		
	comp=N,576µm,1.7s						
T1219				AML	AML		
	comp=E,358µm,1.9s						
CSP1	**Cessapalombo**	**0.28**	**11**	⇓P	Pg	18 24 30.9	+0.5
CSP1				AML	AML		
	comp=E,283µm,0.3s						
CSP1				AML	AML		
	comp=N,280µm,0.3s						
CSP1				AML	AML		
	comp=N,280µm,1.7s						
CSP1				AML	AML		
	comp=E,283µm,1.7s						
GUMA	**Gualdo di Mace**	**0.29**	**31**	⇓P	Pb	18 24 31.3	-0.6
GUMA				AML	AML		
	comp=E,492µm,1.3s						
GUMA				AML	AML		
	comp=N,428µm,0.6s						
GUMA				AML	AML		
	comp=E,434µm,1.3s						
GUMA				AML	AML		
	comp=N,438µm,0.4s						
GUMA				AML	AML		
	comp=E,492µm,0.7s						
GUMA				AML	AML		
	comp=E,434µm,0.7s						
GUMA				AML	AML		
	comp=N,438µm,1.6s						
T1220	**Camerino, Fraz**	**0.30**	**354**	⇑P	Pg	18 24 30.5	-0.1
T1220				AML	AML		
	comp=E,768µm,0.2s						
T1220				AML	AML		
	comp=N,912µm,0.2s						
RM33	**Pellescritta (**	**0.31**	**168**	P	Pg	18 24 31.2	+0.4
RM33				S	Sb	18 24 36.5	-0.9
RM33				AML	AML		
	comp=E,274µm,0.3s						
RM33				AML	AML		
	comp=N,330µm,0.7s						
RM33				AML	AML		
	comp=E,414µm,0.7s						
RM33				AML	AML		
	comp=E,400µm,0.7s						
RM33				AML	AML		
	comp=N,641µm,0.3s						
RM33				AML	AML		
	comp=N,647µm,0.3s						
CAMP	**Campotosto**	**0.34**	**143**	P	Pg	18 24 31.0	-0.5
CAMP				AML	AML		
	comp=E,1720µm,0.6s						
CAMP				AML	AML		
	comp=N,1328µm,1.0s						
CAMP				AML	AML		
	comp=N,1328µm,1.0s						
T1211	**Morro Reatino**	**0.34**	**216**	⇓P	Pg	18 24 31.9	+0.4
T1211				S	Sb	18 24 37.6	-0.8
T1211				AML	AML		
	comp=E,210µm,1.2s						
T1211				AML	AML		
	comp=N,311µm,0.3s						
T1211				AML	AML		
	comp=N,317µm,0.3s						
T1211				AML	AML		
	comp=E,164µm,0.3s						
T1211				AML	AML		
	comp=N,311µm,1.7s						
T1211				AML	AML		
	comp=E,210µm,0.8s						
TERO	**Teramo**	**0.40**	**118**	⇑P	Pg	18 24 32.6	+0.2
TERO				AML	AML		
	comp=E,7555µm,0.3s						
TERO				AML	AML		
	comp=N,6195µm,0.6s						
TERO				AML	AML		
	comp=E,8175µm,0.3s						
TERO				AML	AML		
	comp=N,6665µm,0.2s						
TERO				AML	AML		
	comp=N,6195µm,1.4s						
MOMA	**Monte Martano**	**0.41**	**269**	⇑P	Pg	18 24 33.3	+0.6
MOMA				AML	AML		
	comp=E,124µm,1.2s						
MOMA				AML	AML		
	comp=N,78µm,1.2s						
MOMA				AML	AML		
	comp=N,78µm,0.8s						
MOMA				AML	AML		
	comp=E,124µm,0.8s						
ASSB	**Assisi San Ben**	**0.41**	**304**	P	Pg	18 24 33.3	+0.5
ASSB				AML	AML		
	comp=N,56µm,1.0s						
ASSB				AML	AML		
	comp=E,57µm,0.7s						
T1222	**Castel Sant'An**	**0.42**	**190**	⇓P	Pg	18 24 33.1	+0.4
T1222				AML	AML		
	comp=N,159µm,1.3s						
T1222				AML	AML		
	comp=N,159µm,0.7s						
T1222				AML	AML		
	comp=E,192µm,0.4s						
SNTG	**Esanatoglia**	**0.46**	**343**	P	Pg	18 24 34.0	+0.3
SNTG				AML	AML		
	comp=N,57µm,0.6s						
SNTG				AML	AML		
	comp=E,65µm,0.1s						
SNTG				AML	AML		
	comp=N,57µm,1.4s						
GIGS	**Gran Sasso**	**0.49**	**138**	P	Pg	18 24 34.3	+0.3
GIGS				AML	AML		
	comp=N,244µm,0.4s						
GIGS				AML	AML		
	comp=E,366µm,0.5s						
GIGS				AML	AML		
	comp=N,244µm,1.6s						
AQU	**L'Aquila**	**0.50**	**156**	⇑P	Pb	18 24 36.4	+1.0
ATCC	**AVT- Casa Cast**	**0.52**	**316**	⇓P	Pg	18 24 35.1	+0.5
EL6	**Elcito**	**0.52**	**358**	S	Sb	18 24 43.6	+0.2
EL6				AML	AML		
	comp=N,189µm,0.5s						
EL6				AML	AML		
	comp=E,150µm,0.2s						
ARVD	**Arcevia**	**0.70**	**349**	S	Sb	18 24 49.1	+0.6
ARVD				AML	AML		
	comp=N,26µm,1.3s						
ARVD				AML	AML		
	comp=N,26µm,0.7s						
ARVD				AML	AML		
	comp=E,25µm,0.9s						

ROM 09 18:24:45.0±0.1**, 42°.616N**±0°.004×**13°.340E**±0°.005**,**
h7^{km}, ML2.2/19**, 4C-2D, Error ellipse: s-maj=0.3km**
s-min=0.3km az=216.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	**0.01**	**346**	P	Pg	18 24 46.5	+0.1
SMA1				S	Sg	18 24 46.8	-0.6
SMA1				AML	AML		
	comp=E,34950µm,0.9s						
SMA1				AML	AML		
	comp=N,36250µm,0.3s						
CAMP	**Campotosto**	**0.10**	**148**	⇓P	Pg	18 24 47.8	+0.5
CAMP				S	Sg	18 24 49.4	+0.5
CAMP				AML	AML		
	comp=E,1720µm,0.6s						
CAMP				AML	AML		
	comp=N,1328µm,1.0s						
CAMP				AML	AML		
	comp=N,1328µm,1.0s						
RM33	**Pellescritta (**	**0.14**	**221**	⇑P	Pg	18 24 48.9	+0.9
RM33				S	Sg	18 24 51.6	+1.5
RM33				AML	AML		
	comp=E,3030µm,0.3s						
RM33				AML	AML		
	comp=N,2520µm,0.3s						
RM33				AML	AML		
	comp=E,2985µm,0.3s						
RM33				AML	AML		
	comp=N,2560µm,0.3s						
RM33				AML	AML		
	comp=E,2985µm,1.7s						
RM33				AML	AML		
	comp=E,3030µm,1.7s						
RM33				AML	AML		
	comp=N,2560µm,1.7s						
RM33				AML	AML		
	comp=N,2520µm,1.7s						
T1214	**Arquata del Tr**	**0.17**	**326**	P	Pg	18 24 49.5	+0.9
T1218	**Civita (PG)**	**0.17**	**288**	P	Pg	18 24 49.4	+0.8
T1218				S	Sg	18 24 52.6	+1.5
T1247	**Pizzolo (AQ)**	**0.18**	**190**	P	Pg	18 24 49.4	+0.8
T1247				S	Sg	18 24 52.5	+1.5
T1247				AML	AML		
	comp=N,2310µm,1.6s						
T1247				AML	AML		
	comp=N,2310µm,0.4s						
T1247				AML	AML		
	comp=E,1765µm,0.7s						
TERO	**Teramo**	**0.20**	**88**	P	Pg	18 24 49.5	+0.6
TERO				S	Sg	18 24 52.6	+1.0
TERO				AML	AML		
	comp=E,8175µm,0.3s						
TERO				AML	AML		
	comp=N,6665µm,0.2s						
TERO				AML	AML		
	comp=E,7555µm,0.3s						
TERO				AML	AML		
	comp=N,6195µm,0.6s						
TERO				AML	AML		
	comp=N,6195µm,1.4s						
GIGS	**Gran Sasso**	**0.24**	**134**	P	Pg	18 24 50.1	+0.4
GIGS				S	Sg	18 24 53.7	+0.8
GIGS				AML	AML		
	comp=N,244µm,0.4s						
GIGS				AML	AML		
	comp=E,366µm,0.5s						
GIGS				AML	AML		
	comp=N,244µm,1.6s						
T1241	**Roccafluvione,**	**0.25**	**16**	P	Pg	18 24 50.4	+0.5
T1241				S	Sg	18 24 54.7	+1.4
T1241				AML	AML		
	comp=N,636µm,0.3s						
T1241				AML	AML		
	comp=E,773µm,0.3s						
T1212	**Cascia, Frazio**	**0.26**	**302**	P	Pg	18 24 50.8	+0.8
T1245	**Castelsantange**	**0.27**	**335**	P	Pg	18 24 51.2	+0.9
T1222	**Castel Sant'An**	**0.31**	**226**	P	Pg	18 24 51.6	+0.5
T1222				S	Sb	18 24 56.8	-1.4
T1222				AML	AML		
	comp=E,535µm,1.3s						
T1222				AML	AML		
	comp=N,480µm,0.3s						
T1222				AML	AML		
	comp=E,535µm,1.3s						
T1222				AML	AML		
	comp=E,442µm,0.3s						
T1222				AML	AML		
	comp=N,480µm,0.3s						
T1222				AML	AML		
	comp=N,630µm,1.0s						
T1222				AML	AML		
	comp=E,535µm,0.7s						
MC2	**Monte Cornacci**	**0.32**	**340**	P	Pg	18 24 52.1	+0.9
T1217	**Poggiodomo (PG**	**0.32**	**288**	P	Pg	18 24 51.9	+0.7
T1217				S	Sb	18 24 56.9	-1.5
T1216	**Preci, Frazion**	**0.36**	**319**	P	Pg	18 24 52.8	+0.7
T1211	**Morro Reatino**	**0.37**	**257**	P	Pg	18 24 52.9	+0.7
T1211				AML	AML		
	comp=E,349µm,0.5s						
T1211				AML	AML		
	comp=N,452µm,0.9s						
T1211				AML	AML		
	comp=E,350µm,0.5s						
T1211				AML	AML		
	comp=N,452µm,0.9s						
FAGN	**Fagnano**	**0.39**	**153**	P	Pb	18 24 53.8	-0.4
FAGN				AML	AML		
	comp=N,745µm,0.4s						
FAGN				AML	AML		
	comp=E,1315µm,0.6s						
FAGN				AML	AML		
	comp=N,745µm,1.6s						
FAGN				AML	AML		
	comp=E,1315µm,1.4s						
T1215	**Vallo di Nera,**	**0.39**	**298**	P	Pg	18 24 53.2	+0.5
OFFI	**Offida**	**0.41**	**38**	P	Pb	18 24 54.3	-0.2
OFFI				S	Sb	18 25 01.4	+0.5
OFFI				AML	AML		
	comp=E,1180µm,0.5s						
OFFI				AML	AML		
	comp=E,1180µm,1.5s						
OFFI				AML	AML		
	comp=N,882µm,0.5s						
ARRO	**Arrone**	**0.43**	**265**	P	Pg	18 24 54.0	+0.8
VCEL	**Villa Celiera**	**0.43**	**121**	P	Pb	18 24 54.3	-0.7
VCEL				S	Sb	18 25 01.4	-0.2
VCEL				AML	AML		
	comp=E,586µm,0.5s						
VCEL				AML	AML		
	comp=E,586µm,1.5s						
VCEL				AML	AML		
	comp=N,564µm,0.4s						
GUMA	**Gualdo di Mace**	**0.45**	**360**	P	Pb	18 24 54.5	-0.7
GUMA				S	Sb	18 25 01.9	-0.2
GUMA				AML	AML		
	comp=E,967µm,1.2s						
GUMA				AML	AML		
	comp=N,750µm,0.3s						
CSP1	**Cessapalombo**	**0.49**	**348**	P	Pg	18 24 54.9	+0.5
T1219	**Muccia, Frazio**	**0.50**	**331**	P	Pg	18 24 55.2	+0.5
T1219				S	Sb	18 25 03.1	-0.6
T0110	**Collepietro**	**0.51**	**140**	P	Pg	18 24 55.2	+0.4
T0110				AML	AML		
	comp=E,380µm,0.4s						
T0110				AML	AML		
	comp=N,410µm,1.1s						
T0110				AML	AML		
	comp=N,410µm,0.9s						
T1220	**Camerino, Fraz**	**0.53**	**340**	P	Pg	18 24 55.8	+0.6
T1220				S	Sb	18 25 03.7	-0.7
CESX	**Cesi**	**0.56**	**270**	P	Pg	18 24 56.0	+0.2
MOMA	**Monte Martano**	**0.60**	**289**	P	Pg	18 24 56.9	+0.4
MOMA				AML	AML		
	comp=E,190µm,1.4s						
MOMA				AML	AML		
	comp=E,190µm,0.6s						
MOMA				AML	AML		
	comp=N,162µm,0.2s						
ASSB	**Assisi San Ben**	**0.66**	**311**	P	Pg	18 24 57.9	+0.2
ASSB				AML	AML		
	comp=E,108µm,0.2s						
ASSB				AML	AML		
	comp=N,101µm,1.1s						
ASSB				AML	AML		
	comp=E,108µm,1.8s						
ASSB				AML	AML		
	comp=N,101µm,0.9s						
SNTG	**Esanatoglia**	**0.70**	**335**	⇑P	Pg	18 24 58.8	+0.3
EL6	**Elcito**	**0.73**	**346**	P	Pb	18 24 59.8	-0.4
INTR	**Introdacqua**	**0.73**	**145**	⇑P	Pg	18 24 58.9	-0.2
INTR				AML	AML		
	comp=E,74µm,1.2s						
INTR				AML	AML		
	comp=E,74µm,1.2s						
INTR				AML	AML		
	comp=N,128µm,0.4s						
CING	**Cingoli**	**0.77**	**352**	⇓P	Pg	18 25 00.1	+0.4
CING				AML	AML		
	comp=E,240µm,0.2s						
CING				AML	AML		
	comp=N,148µm,0.7s						
LPEL	**Lama dei Pelig**	**0.84**	**132**	P	Pg	18 25 01.3	+0.1
LPEL				AML	AML		
	comp=E,120µm,1.1s						
LPEL				AML	AML		
	comp=N,101µm,1.4s						
MURB	**Monte Urbino**	**0.88**	**317**	S	Sn	18 25 17.0	0.0
MURB				AML	AML		
	comp=N,159µm,0.4s						
MURB				AML	AML		
	comp=E,190µm,0.3s						
MURB				AML	AML		
	comp=N,159µm,1.6s						
ATMI	**Monte Miggiano**	**1.06**	**313**	⇑P	Pn	18 25 08.1	+1.7
SACS	**San Casciano d**	**1.08**	**283**	P	Pn	18 25 07.6	+1.0
DUGI	**Dugi Otok**	**1.86**	**42**	Sn	Sb	18 25 42.3	-0.5
VIRC	**Vir**	**2.09**	**36**	*e*Pn	Pn	18 25 20.9	+0.6
VIRC				Sn	Sn	18 25 47.9	+1.3
MORI	**Morici**	**2.13**	**53**	Sn	Sn	18 25 48.5	+0.8
BRJN	**Brijuni**	**2.31**	**7**	*e*Pn	Pb	18 25 25.4	-1.5
BRJN				Sn	Sn	18 25 51.8	-0.2
KIJV	**Kijevo**	**2.63**	**57**	Sn	Sn	18 26 01.2	+1.1
RICI	**Ricice**	**2.92**	**71**	*e*Pn	Pb	18 25 35.9	-1.3
RICI				Sn	Sb	18 26 11.1	-2.0

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*SOME **09** 18:25:16.1, 39°.20N×69°.27E, h10^{km}*
*IDC **09** 18:25:18.3±1.8, 39°.18N×69°.20E, h0^{km}, mb3.6/1,*
mbtmp3.4/7, ML3.1/6, Error ellipse: s-maj=24.7km
s-min=13.5km az=165.0
*KRNET **09** 18:25:20.6±0.1, 39°.41N×69°.08E, h30^{km}, mb3.5*
*NNC **09** 18:25:20.5±2.5, 39°.45N×69°.09E, h5^{km}±9^{km}, mb4.0,*
mpv3.6, Error ellipse: s-maj=17.9km s-min=10.9km az=4.0
*ISU **09** 18:25:24.4, 39°.57N×69°.51E, h19^{km}*
ISC 09 18:25:21.2±1.1**, 39°.40N**±0°.03×**69°.09E**±0°.02**, h17^{km}**±8^{km}**,**
n59, σ1^{s}.93/83**, 24C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHGR	**Chuyangaron**	**0.74**	**176**	*i* P	**Pb**	**18 25 35.3**	**-0.5**
	baz=75						
CHGR				*i* S	**Sb**	**18 25 45.6**	**-0.1**
	baz=75						
BXML	**Bakhmal**	**0.86**	**290**	P	**Pn**	**18 25 40.7**	**+2.0**
BXML				S	**Sn**	**18 25 58.5**	**+7.5**
GAR	**Garm**	**1.04**	**112**	*i* P	**Pb**	**18 25 40.0**	**-0.8**
	baz=13						
GAR				*i* S	**Sb**	**18 25 54.4**	**+0.3**
	baz=13						
DZI	**Dzhizak**	**1.21**	**307**	P	**Pn**	**18 25 42.8**	**-0.5**
DZI				S	**Sg**	**18 26 01.1**	**+0.7**
BTK	**Batken**	**1.49**	**63**	⇑*i*P	**Pn**	**18 25 47.5**	**+0.2**
	baz=64						
BTK				⇑*i*S	**Sn**	**18 26 06.6**	**+0.2**
	baz=64						
SAM	**Samarkand**	**1.67**	**280**	P	**Pb**	**18 25 51.7**	**+0.2**
SAM				S	**Sg**	**18 26 16.4**	**+1.3**
YNGY	**Yangiyul**	**1.71**	**359**	P	**Sg**	**18 26 17.3**	**+1.1**
AGL	**Agalyk**	**1.71**	**275**	P	**Pb**	**18 25 52.4**	**+0.1**
AGL				S	**Sg**	**18 26 17.9**	**+1.5**
KTAB	**Kitab**	**1.73**	**262**	P	**Pb**	**18 25 53.2**	**+0.7**
KTAB				S	**Sg**	**18 26 19.3**	**+2.3**
KUMR	**Kumaryk**	**1.84**	**4**	P	**Sg**	**18 26 21.0**	**+0.4**
BAYS	**Baysun**	**1.89**	**232**	P	**Sg**	**18 26 22.9**	**+0.8**
TAS	**Tashkent**	**1.93**	**5**	⇑*i*P	**Pn**	**18 25 53.4**	**+0.1**
	baz=5.0						
TAS				⇑*i*S	**Sn**	**18 26 17.2**	**0.0**
	baz=5.0						
TAS	**Tashkent**	**1.93**	**5**	P	**Sg**	**18 26 23.6**	**+0.2**
CHMI	**Chimion**	**2.07**	**64**	P	**Sg**	**18 26 27.5**	**-0.3**
DRK	**Karamyk**	**2.10**	**87**	⇑*i*P	**Pn**	**18 25 56.1**	**+0.2**
	baz=87						
DRK				⇑*i*S	**Sn**	**18 26 22.0**	**+0.1**
	baz=87						
KKRN	**Kattakurgan**	**2.23**	**284**	P	**Pb**	**18 26 01.4**	**+0.4**
KKRN				S	**Sg**	**18 26 31.8**	**-1.0**
CHMG	**Chimgan**	**2.26**	**18**	P	**Sg**	**18 26 33.3**	**-0.7**
PKMR	**Pachkamar**	**2.27**	**249**	P	**Pg**	**18 26 03.7**	**-1.1**
PKMR				S	**Sg**	**18 26 35.1**	**+0.9**
FRG	**Fergana**	**2.29**	**64**	P	**Sg**	**18 26 33.7**	**-1.3**
CHRV	**Charvak**	**2.33**	**16**	P	**Sg**	**18 26 35.3**	**-1.0**
KSNS	**Kasansay**	**2.56**	**46**	P	**Pg**	**18 26 08.9**	**-1.5**
TRKS	**Terek-Say**	**2.64**	**36**	⇑*i*P	**Pn**	**18 26 02.8**	**-0.4**
	baz=37						
TRKS				⇑*i*S	**Sn**	**18 26 33.6**	**-1.4**
	baz=37						
IUG	**Iuzhnay**	**2.84**	**14**	Pg	**Pb**	**18 26 12.6**	**+1.1**
	119nm,0.3s						
IUG				Lg	Lg	18 26 51.0	
	100nm,0.4s						
IUG	**Iuzhnay**	**2.84**	**14**	*e*Pg	**Pb**	**18 26 10.9**	**-0.6**
	12nm,0.1s						
IUG				*e*Lg	Lg	18 26 50.7	
	114nm,0.2s						
ANR	**Andizhan**	**2.85**	**61**	P	**Sg**	**18 26 52.4**	**-0.6**
NUT	**Nurota**	**2.86**	**295**	P	**Sg**	**18 26 47.4**	**-5.7**
OHH	**Osh**	**3.06**	**67**	⇑*i*P	**Pn**	**18 26 09.1**	**+0.3**
	baz=68						
OHH				⇑*i*S	**Sn**	**18 26 44.3**	**-0.8**
	baz=68						
ARK	**Arkit**	**3.25**	**42**	⇑*i*P	**Pn**	**18 26 11.9**	**+0.4**
	baz=42						
ARK				⇑*i*S	**Sn**	**18 26 49.0**	**-0.8**
	baz=42						
KK31	**Karatay Array**	**3.85**	**16**	⇑Pn	**Pn**	**18 26 21.4**	**+1.6**
	1.8nm,0.2s,baz=206,slow=16,SNR=59						
KK31				⇓Pg	**Pb**	**18 26 31.0**	**+2.3**
	7.5nm,0.5s,baz=33,slow=49,SNR=3.5						
KK31				Lg	Lg	18 27 21.4	
	8.9nm,0.3s,baz=188,slow=30,SNR=9.2						
MNAS	**Manas**	**4.03**	**39**	⇑*i*P	**Pn**	**18 26 22.6**	**+0.4**
	baz=39						
MNAS				⇑*i*S	**Sn**	**18 27 07.2**	**-1.9**
	baz=39						
TMD	**Tamdy-Bulak**	**4.12**	**306**	P	**Sg**	**18 27 34.5**	**+1.0**

GZLY	**Gazly**	4.41	281	P	Sn	18 27 21.4	+3.2
AML	**Almayashu**	4.44	51	⇓Pn	Pn	18 26 29.0	+0.9
	0.7nm,0.5s						
AML				⇑Sn	Sn	18 27 20.7	+1.2
	2.9nm,0.7s						
AML				⇓Lg	Lg	18 27 41.3	
	5.4nm,0.6s						
MRKS	**Merke**	4.58	42	Pg	Pb	18 26 41.4	+0.3
	7.1nm,0.3s						
MRKS				Lg	Lg	18 27 44.0	
	40nm,0.3s						
MRKS	**Merke**	4.58	42	*e*Pg	Pb	18 26 41.4	+0.3
	4.4nm,0.2s						
MRKS				*e*Lg	Lg	18 27 43.6	
	40nm,0.2s						
DZN	**Dzhankel'dy**	4.64	290	P	Sg	18 27 50.7	+0.7
ARLS	**Aral**	4.68	57	⇑*i*P	Pn	18 26 32.1	+0.8
	baz=57						
ARLS				⇑*i*S	Sn	18 27 23.9	-1.4
	baz=57						
AAK	**Ala-Archa**	5.21	50	Pn	Pn	18 26 40.9	+2.3
	2.7nm,0.3s,baz=231,slow=13,SNR=38						
AAK				Sn	Sn	18 27 42.5	+4.1
	1.3nm,0.3s,baz=180,slow=20,SNR=1.9						
AAK				Lg	Lg	18 28 06.8	
	1.8nm,0.3s,baz=61,slow=20,SNR=4.5						
	7.4nm,0.4s						
SGDS	**Sogindy**	5.81	44	Pg	Pb	18 27 02.3	+0.2
	1.8nm,0.2s						
SGDS				Lg	Lg	18 28 23.3	
	17nm,0.5s						
TKM2	**Tokmak 2**	6.04	52	⇑Pn	Pn	18 26 51.3	+1.3
	1.7nm,0.6s						
TKM2				⇑Pg	Pb	18 27 10.3	+4.1
	2.5nm,0.5s						
TKM2				⇑Lg	Lg	18 28 32.0	
	13nm,0.7s						
DGS	**Degeres**	6.33	51	Pg	Pb	18 27 13.3	+2.3
	4.7nm,0.3s						
DGS				Lg	Lg	18 28 39.3	
	9.8nm,0.4s						
DGS	**Degeres**	6.33	51	*e*Pg	Pb	18 27 12.9	+1.9
	2.4nm,0.2s						
DGS				*e*Lg	Lg	18 28 38.1	
	8.7nm,0.3s						
KST	**Kastek**	6.33	53	Pg	Pb	18 27 14.0	+2.9
	1.6nm,0.2s						
KST				Lg	Lg	18 28 41.8	
	12nm,0.4s						
KST	**Kastek**	6.33	53	*e*Pg	Pb	18 27 15.3	+4.2
	1.3nm,0.1s						
KST				*e*Lg	Lg	18 28 41.8	
	12nm,0.3s						
KRBS	**Karabastau**	6.55	47	Pg	Pb	18 27 17.1	+2.5
	1.5nm,0.4s						
KRBS				Lg	Lg	18 28 45.7	
	6.0nm,0.6s						
KRBS	**Karabastau**	6.55	47	*e*Pg	Pb	18 27 17.4	+2.7
	1.5nm,0.2s						
KRBS				*e*Lg	Lg	18 28 45.1	
	5.2nm,0.2s						
TNSS	**Tian-Shan**	6.95	56	*e*Pg	Pb	18 27 24.5	+2.8
	1.1nm,0.2s						
TNSS				*e*Lg	Lg	18 28 57.2	
	2.8nm,0.4s						
KUU	**Kurty**	7.05	48	Pg	Pb	18 27 24.4	+1.3
	2.0nm,0.4s						
KUU				Lg	Lg	18 29 00.7	
	12nm,0.8s						
KUU	**Kurty**	7.05	48	*e*Pg	Pb	18 27 26.8	+3.6
	0.5nm,1.6s						
KUU				*e*Lg	Lg	18 29 00.7	
	6.2nm,0.4s						
MDOK	**Medeo**	7.08	55	Pn	Pn	18 27 05.5	+1.4
	2.3nm,0.7s						
MDOK				Lg	Lg	18 29 04.4	
	13nm,1.2s						
GEYT	**Alibeck**	8.71	264	Pn	Pn	18 27 27.6	+1.3
	0.2nm,0.3s,baz=74,slow=11,SNR=1.8						
GEYT				Sn	Sn	18 29 01.3	-2.8
	0.7nm,0.3s,baz=104,slow=24,SNR=2.0						
	0.6nm,0.4s						
AB31	**Akbulak array**	11.82	329	⇑Pn	Pn	18 28 07.6	-1.3
	0.5nm,0.3s,baz=148,slow=13,SNR=74						
AB31				Sn	Sn	18 30 18.3	-2.0
	1.4nm,0.5s,baz=152,slow=23,SNR=6.9						
MKAR	**Makanchi Array**	12.15	48	Pn	Pn	18 28 12.9	-0.5
	0.1nm,0.3s,baz=232,slow=12,SNR=5.1						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	13.05	28	Lg	Lg	18 32 15.4	
	baz=214,slow=30,SNR=5.3						
AKTO	**Aktyubinsk**	13.52	328	Pn	Pn	18 28 32.1	0.0
	0.2nm,0.3s,baz=151,slow=10,SNR=2.6						
AKTO				Sn	Sn	18 30 58.8	-3.1
	0.3nm,0.3s,baz=95,slow=23,SNR=2.3						
AKTO				Lg	Lg	18 32 36.0	
	0.1nm,0.3s,baz=337,slow=13,SNR=2.5						
	0.8nm,0.5s						
AKTO	**Aktyubinsk**	13.52	328	⇑Pn	Pn	18 28 31.2	-0.9
	1.1nm,0.8s						
AKTO				⇑Sn	Sn	18 30 59.8	-2.0
	1.0nm,0.7s						
BVAR	**Borovoye Array**	13.66	3	Pn	Pn	18 28 32.6	-1.4
	baz=155,slow=14,SNR=2.8						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	18.06	31	P	Pn	18 29 30.4	-0.7
	0.2nm,0.3s,baz=221,slow=11,SNR=4.1						
	0.5nm,0.3s						
TORD	**Torodi Ar. Bea**	64.34	266	P	P	18 35 56.0	-0.3
	0.3nm,0.5s,baz=48,slow=5.8,SNR=2.4						
	0.3nm,0.5s						

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*NOU **09** 18:27:23.8, 41°.85S×174°.48E, h16^{km}, MLv4.1/13, Cook Strait, New Zealand*
*WEL **09** 18:27:24.9±0.5, 42°S±4°×17°4E±°, h11^{km}±5^{km}, M3.6/53, ML3.9/12, MLv3.6/53, Error ellipse: s-maj=0.0km s-min=0.0km az=142.6, confirmed*
ISC 09 18:27:23.7±1.1, **41°.82S**±0°.04×**174°.39E**±0°.03, **h16**^{km}±8^{km}, **n109**, σ1^s.**10**/114, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	0.15	298	P	Pg	18 27 28.4	+0.8
BSWZ	**Blackbirch Sta**	0.40	285	P	Pg	18 27 31.9	+0.1
BSWZ				S	Sg	18 27 37.0	-0.2
TUWZ	**Tuamarina**	0.52	319	P	Pg	18 27 33.3	-0.6
TUWZ				S	Sg	18 27 38.9	-1.9
BHW	**Baring Head**	0.55	41	P	Pb	18 27 35.7	+0.9
SNZO	**South Karori**	0.56	25	P	Pb	18 27 35.2	+0.1
WEL	**Wellington**	0.60	28	P	Pg	18 27 36.1	+0.6
WEL				S	Sg	18 27 44.6	+1.0
TCW	**Tory Channel**	0.61	352	P	Pb	18 27 35.1	-1.0
PLWZ	**Palliser**	0.69	69	P	Pn	18 27 39.3	+0.4
MSWZ	**Moikau Station**	0.76	58	P	Pn	18 27 40.4	+0.6
MSWZ				S	Sn	18 27 51.5	+0.6
KHZ	**Kahutara**	0.87	226	P	Pn	18 27 42.2	+0.9
KHZ	**Kahutara**	0.87	226	P	Pn	18 27 42.1	+0.9
KHZ				S	Sn	18 27 54.8	+1.2
CAW	**Cannon Point**	0.87	36	P	Pb	18 27 41.0	+0.5
NNZ	**Nelson**	0.97	308	P	Pb	18 27 41.3	-0.8
KIW	**Kapiti Island**	1.03	22	P	Pb	18 27 43.1	-0.1
TRWZ	**Traveller**	1.06	67	P	Pb	18 27 44.0	+0.3
MTW	**Mount Morrison**	1.06	52	P	Pb	18 27 44.0	+0.3
DUWZ	**D'Urville Isla**	1.08	341	P	Pb	18 27 43.1	-0.9
THZ	**Tophouse**	1.11	272	P	Pn	18 27 44.7	0.0
OGWZ	**Otaki Gorge**	1.16	31	P	Pn	18 27 45.4	+0.1
HOWZ	**Holdsworth Sta**	1.25	43	P	Pn	18 27 46.5	0.0
MRNZ	**Matariki Terra**	1.29	288	P	Pn	18 27 47.5	+0.3
TKNZ	**Takaka Hill**	1.33	306	P	Pn	18 27 47.7	0.0
TMWZ	**Te Maipa**	1.33	58	P	Pn	18 27 47.5	-0.2
MRZ	**Mangatainoka R**	1.46	38	P	Pn	18 27 49.5	+0.1
GVZ	**Greta Valley S**	1.53	221	P	Pn	18 27 50.9	+0.6
TIWZ	**Tintock**	1.53	48	P	Pn	18 27 50.1	-0.4
CPWZ	**Castlepoint**	1.64	57	P	Pn	18 27 52.0	+0.2
QRZ	**Quartz Range**	1.72	305	P	Pn	18 27 53.8	+0.9
QRZ	**Quartz Range**	1.72	305	P	Pn	18 27 53.8	+0.9
PRWZ	**Pori Road**	1.74	44	P	Pn	18 27 53.0	-0.2
POWZ	**Post Office Ro**	1.77	37	P	Pn	18 27 53.5	-0.1
BFZ	**Birch Farm**	1.80	52	P	Pn	18 27 53.3	-0.8
BFZ	**Birch Farm**	1.80	52	P	Pn	18 27 53.3	-0.8
LTZ	**Lake Taylor**	1.84	238	P	Pn	18 27 55.2	+0.5
AMCZ	**Amberley**	1.87	223	P	Pn	18 27 55.3	+0.2
DSZ	**Denniston Nort**	1.94	271	P	Pn	18 27 56.7	+0.7
DVHZ	**Dannevirke**	2.03	42	P	Pn	18 27 56.3	-0.9
WAZ	**Wanganui**	2.11	13	P	Pb	18 28 00.3	-1.2
TSZ	**Takapari Road**	2.12	35	P	Pn	18 27 58.1	-0.4
MQZ	**McQueen's Vall**	2.28	214	P	Pn	18 27 59.9	-0.8
PRHZ	**Porangahau**	2.30	48	P	Pn	18 27 59.8	-1.1
OXZ	**Oxford**	2.30	228	P	Pn	18 28 00.4	-0.6
AKCZ	**Akaroa Harbour**	2.32	207	P	Pn	18 28 01.2	-0.1
WPHZ	**Waipukurau**	2.34	42	P	Pn	18 28 00.8	-0.8
PNHZ	**Pukenui**	2.35	36	P	Pn	18 28 01.0	-0.7
INZ	**Inchbonnie**	2.37	247	P	Pn	18 28 02.5	+0.7
NMEZ	**Namu Road**	2.44	351	P	Pb	18 28 06.9	-0.1
RACZ	**Rakaia**	2.53	220	P	Pn	18 28 03.4	-0.6
KHEZ	**Kahui Hut**	2.54	353	P	Pn	18 28 05.9	+1.6
KHEZ	**Kahui Hut**	2.54	353	P	Pb	18 28 07.3	-1.6
NEZ	**North Egmont**	2.56	355	P	Pb	18 28 07.6	-1.6
MTVZ	**Mangateitei**	2.57	19	P	Pn	18 28 05.6	+0.9
NBEZ	**Newall Road No**	2.58	351	P	Pb	18 28 07.8	-1.8
PXZ	**Pawanui**	2.59	47	P	Pn	18 28 03.3	-1.6
MOVZ	**Moawhango**	2.62	24	P	Pn	18 28 05.5	0.0
PKE	**Pukeiti**	2.64	353	P	Pb	18 28 09.4	-1.2
BHHZ	**Black Hill Sta**	2.65	29	P	Pn	18 28 05.7	-0.1
WNVZ	**Wahianoa**	2.65	21	P	Pn	18 28 06.6	+0.6
TRVZ	**Turoa**	2.67	20	P	Pn	18 28 07.1	+0.9
DRZ	**Dome Shelter**	2.69	20	P	Pb	18 28 10.9	-0.8
WHVZ	**Whangaehu Hut**	2.69	20	P	Pn	18 28 07.4	+0.9
MHCZ	**Mount Hutt**	2.69	230	P	Pn	18 28 05.9	-0.5
VRZ	**Vera Road**	2.71	6	P	Pn	18 28 08.3	+1.8
FWVZ	**Far West T-bar**	2.71	19	P	Pn	18 28 07.7	+0.9
TUVZ	**Tukino**	2.72	21	P	Pn	18 28 07.6	+0.7
KAHZ	**Kahuranaki**	2.77	44	P	Pn	18 28 05.9	-1.4
NGZ	**Ngauruhoe**	2.80	20	P	Pn	18 28 08.7	+0.8
SNVZ	**South Ngauruho**	2.80	20	P	Pn	18 28 08.6	+0.7
OTVZ	**Oturere**	2.83	21	P	Pn	18 28 09.0	+0.7
WACZ	**Wakanui South**	2.83	221	P	Pn	18 28 08.2	-0.1
NNVZ	**North Ngauruho**	2.84	20	P	Pn	18 28 10.0	+1.4
KWHZ	**Kaweka Forest**	2.85	34	P	Pn	18 28 07.5	-1.0
WTVZ	**West Tongariro**	2.85	19	P	Pb	18 28 15.2	+1.0
TWVZ	**Taurewa**	2.86	17	P	Pn	18 28 09.9	+1.2
ETVZ	**East Tongariro**	2.86	21	P	Pn	18 28 09.2	+0.4
TMVZ	**Te Maari**	2.88	21	P	Pn	18 28 09.4	+0.4
NTVZ	**North Tongarir**	2.89	20	P	Pn	18 28 09.7	+0.5
MCHZ	**McNeill Hill**	2.95	37	P	Pn	18 28 08.9	-1.0
WVZ	**Waitaha Valley**	2.98	244	P	Pn	18 28 11.8	+1.5
RITZ	**Rihia Road**	3.05	22	P	Pb	18 28 17.8	+0.1
BKZ	**Black Stump Fm**	3.10	32	P	Pn	18 28 10.9	-1.1
BKZ	**Black Stump Fm**	3.10	32	P	Pn	18 28 10.7	-1.2
RPZ	**Rata Peaks**	3.10	231	P	Pn	18 28 11.6	-0.4
RPZ	**Rata Peaks**	3.10	231	P	Pn	18 28 11.7	-0.3
ARCZ	**Arundel**	3.18	227	P	Pn	18 28 12.8	-0.3
NMHZ	**Naumai**	3.28	35	P	Pn	18 28 13.3	-1.3
HIZ	**Hauiti**	3.32	6	P	Pn	18 28 16.4	+1.4
HIZ	**Hauiti**	3.32	6	P	Pn	18 28 16.8	+1.8
GCSZ	**Gaunt Creek Bo**	3.35	242	P	Pn	18 28 16.3	+0.8
MTHZ	**Maungataniwha**	3.50	33	P	Pn	18 28 16.3	-1.3
TMZ	**Timaru**	3.57	223	P	Pn	18 28 17.8	-0.5
TLZ	**Tolley Road**	3.59	15	P	Pn	18 28 23.0	+4.2
RTZ	**Ruatahuna**	3.76	33	P	Pn	18 28 19.6	-1.6
SNGZ	**Shannon Statio**	3.78	38	P	Pn	18 28 19.3	-2.1
FOZ	**Fox Glacier**	3.78	242	P	Pn	18 28 22.0	+0.7
MUGZ	**Murupara**	3.80	29	P	Pn	18 28 20.8	-0.8
LBZ	**Lake Benmore**	4.01	229	P	Pn	18 28 25.4	+0.9
RIGZ	**Rimuhau**	4.04	41	P	Pn	18 28 22.5	-2.4
URZ	**Urewera**	4.12	31	P	Pn	18 28 25.3	-0.7
ODZ	**Otahua Downs**	4.22	219	P	Pn	18 28 27.5	+0.1
ODZ	**Otahua Downs**	4.22	219	P	Pn	18 28 26.6	-0.8
RUGZ	**Raukumara Rang**	4.60	34	P	Pn	18 28 30.2	-2.5
JCZ	**Jackson Bay**	4.69	239	P	Pn	18 28 34.5	+0.6
JCZ	**Jackson Bay**	4.69	239	P	Pn	18 28 34.2	+0.3
HAZ	**Te Kaha**	4.83	34	P	Pn	18 28 33.7	-1.9
SYZ	**Scrubby Hill**	6.04	217	P	Pn	18 28 52.4	+0.1
SYZ	**Scrubby Hill**	6.04	217	P	Pn	18 28 56.2	+3.9
CTZ	**Chatham Island**	6.89	109	P	Pn	18 29 04.1	+0.2
CTZ	**Chatham Island**	6.89	109	P	Pn	18 29 04.2	+0.3

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*IDC **09** 18:32:05.1±4.0, 5°.45S×152°.26E, h63^{km}±31^{km}, mb3.6/3, mbtmp3.9/4, ML1.6/1, Error ellipse: s-maj=64.4km s-min=12.3km az=116.0*
ISC 09 18:32:02.4±1.6, **5°.52S**±0°.09×**152°.5E**±0°.2, **h40**^{km}, **n6**, σ1^s.**50**/8, **mb3.9**/3, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	1.31	338	P	Pn	18 32 25.1	+0.8
	286nm,0.5s,baz=273,slow=4.3,SNR=120						
KRVT				S	Sn	18 32 40.4	-0.1
	608nm,0.3s,baz=79,slow=22,SNR=13						
PMG	**Port Moresby**	6.57	234	P	Pn	18 33 38.9	+2.3
	0.9nm,0.3s,baz=49,slow=17,SNR=2.9						
PMG				S	Sn	18 34 48.9	-1.4
	20nm,0.5s,baz=145,slow=18,SNR=11						
	2.5nm,0.3s						
WRA	**Warramunga Arr**	22.77	229	P	P	18 37 00.1	-1.5
	3.9nm,0.5s,baz=53,slow=9.9,SNR=46						
	3.9nm,0.5s						
ASAR	**Alice Springs**	25.44	223	P	P	18 37 26.1	-0.6
	1.4nm,0.4s,baz=58,slow=8.8,SNR=43						
	1.4nm,0.4s						
ILAR	**Eielson Array**	82.93	22	P	P	18 44 23.1	+0.2
	0.3nm,0.7s,baz=251,slow=5.9,SNR=5.4						
	0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	150.26	287	PKPbc	PKPbc	18 51 49.5	-0.9
	1.0nm,0.9s,baz=80,slow=2.6,SNR=5.1						

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*NIC **09** 18:41:43.1±0.0, 33°.83N×32°.36E, h29^{km}±5^{km}, Ml2.8/4*
*GII **09** 18:41:45.6±0.6, 34°.02N×32°.23E, h60^{km}, Mm2.9/4*
ISC 09 18:41:40.3±1.4, **33°.80N**±0°.03×**32°.32E**±0°.05, **h13**^{km}±11^{km}, **n21**, σ2^s.**24**/37, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OSC2	**CSNet OBS 4**	0.73	184	P	Pb	18 41 54.4	-0.4
OSC2				S	Sn	18 42 08.0	+0.8
OSC1	**CSNet OBS 1**	0.92	251	P	Pn	18 42 00.9	+2.0
OSC1				S	Sn	18 42 14.6	+2.5
NATA	**Nata**	1.00	12	P	Pg	18 42 00.4	+0.9
NATA				S	Sg	18 42 13.3	+0.7
NATA				AML	AML	18 42 14.3	
	0.9nm,0.3s						
NATA				AML	AML	18 42 14.3	
	0.9nm,0.3s						
NATA				AML	AML	18 42 17.4	
	1.5nm,0.3s						
NATA				AML	AML	18 42 17.4	
	1.5nm,0.3s						
SZAC	**Souni**	1.06	26	P	Pg	18 42 01.6	+0.8
SZAC				S	Sb	18 42 14.3	0.0
SZAC				AML	AML	18 42 16.2	
	0.7nm,0.2s						
SZAC				AML	AML	18 42 16.2	
	0.7nm,0.2s						
AKMS	**Akamas**	1.21	1	P	Pn	18 42 02.7	-0.3
AKMS				S	Sb	18 42 15.9	-2.8
AKMS				AML	AML	18 42 17.7	
	0.6nm,0.4s						
AKMS				AML	AML	18 42 17.7	
	0.6nm,0.4s						
AKMS				AML	AML	18 42 17.9	
	0.9nm,0.4s						
AKMS				AML	AML	18 42 17.9	
	0.9nm,0.4s						
ASGA	**Asgata**	1.25	38	P	Pg	18 42 04.6	+0.3
ASGA				S	Sb	18 42 19.8	+0.2
ASGA				AML	AML	18 42 22.1	
	0.2nm,0.1s						
ASGA				AML	AML	18 42 22.1	
	0.2nm,0.1s						
ALFC	**Alefka**	1.37	10	P	Pn	18 42 04.7	-0.5
ALFC				S	Sn	18 42 19.3	-3.9
CSS	**Mathiatis**	1.43	36	P	Pb	18 42 07.0	+0.2
CSS				S	Sg	18 42 26.5	+0.1
HNTI	**Hanita**	2.49	106	Sn	Sb	18 42 56.1	+0.6
MMC7	**Mount Meron ar**	2.69	106	Pn	Pb	18 42 28.6	+0.3
MMA0B	**Mount Meron ar**	2.69	106	Pn	Pb	18 42 28.4	-0.1
MMA0B				Sn	Sb	18 43 01.8	+0.3
GEM	**Giv'at Ha'Em**	2.85	101	Pn	Pb	18 42 30.3	-0.8
GEM				Sn	Sb	18 43 05.6	-0.4
MMLI	**Mount Malkishu**	2.94	117	Pn	Pb	18 42 32.3	-0.2
MMLI				Sn	Sb	18 43 08.1	-0.3
HMDT	**Nahal Hemdat**	3.10	119	Pn	Pb	18 42 34.8	-0.6
HMDT				Sn	Sb	18 43 13.4	+0.2
KZIT	**Kziot**	3.38	148	Pn	Pb	18 42 39.4	-0.7
DSI	**Dead Sea**	3.41	130	Pn	Pb	18 42 39.2	-1.4
DSI				Sn	Sb	18 43 21.1	-0.8
MSBI	**Mazada**	3.57	133	Pn	Pb	18 42 41.4	-1.9
MSBI				Sn	Sb	18 43 25.9	-0.6
PRNI	**Paran**	4.13	146	Pn	Pb	18 42 49.6	-3.2
PRNI				Sn	Sb	18 43 39.1	-3.5
KRMI	**Paran Flat**	4.20	150	Pn	Pb	18 42 51.1	-3.1
KRMI				Sn	Sb	18 43 40.4	-4.5
MBRI	**Mt Berech**	4.56	150	Pn	Pb	18 42 56.0	-4.3
MBRI				Sn	Sb	18 43 50.6	-4.7
EIL	**Elat**	4.69	151	Pn	Pb	18 42 57.1	-5.3
EIL				Sn	Sn	18 43 51.9	+6.8

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*IDC **09** 19:19:26.5±1.0, 10°.42S×66°.42E, h0^{km}, mb3.9/14, mbtmp3.9/14, MS3.4/6, Error ellipse: s-maj=31.5km s-min=19.6km az=29.0*
*NEIC **09** 19:19:27.7±1.7, 10°.5S±0°.2×66°.48E±0°.05, h10^{km}±1^{km}, mb4.5/25, Error ellipse: s-maj=26.4km s-min=7.7km az=174.0*
ISC 09 19:19:28.1±0.9, **10°.5S**±0°.2×**66°.4E**±0°.1, **h14**^{km}, **n66**, σ0^s.**89**/56, **mb4.3**/31, **MS3.4**/6, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	6.60	65	T	T	19 27 54.4	
	baz=245,slow=76,SNR=197						
H08S3	**Diego Garcia H**	6.62	65	T	T	19 27 53.8	
	baz=245,slow=76,SNR=333						
H08S2	**Diego Garcia H**	6.62	65	T	T	19 27 54.6	
	baz=245,slow=76,SNR=248						
PALK	**Pallekele**	22.66	39	LR	LR	19 31 06.6	
	comp=Z,81nm,19.6s,baz=303,slow=31						
KMBO	**Kilima Mbogo**	30.47	286	P	P	19 25 42.0	+0.9
CMAR	**Chiang Mai Arr**	43.09	48	P	P	19 27 29.6	+1.6
	1.1nm,0.8s,baz=243,slow=9.9,SNR=8.8						
CMAR				LR	LR	19 42 18.3	
	comp=Z,16nm,21.3s,baz=250,slow=32						
	1.1nm,0.8s						
H01W3	**Cape Leeuwin H**	49.65	127	T	T	20 21 28.1	
	baz=288,slow=75,SNR=9.7						
H01W2	**Cape Leeuwin H**	49.66	127	T	T	20 21 33.8	
	baz=288,slow=75,SNR=13						
H01W1	**Cape Leeuwin H**	49.67	127	T	T	20 21 28.4	
	baz=288,slow=75,SNR=11						
KAPI	**Kappang**	53.05	88	LR	LR	19 48 26.6	
	comp=Z,35nm,20.1s,baz=215,slow=33						
GURO	**Guroymak-BITLI**	53.87	336	P	P	19 28 51.0	0.0
GURO				IAmb	IAmb	19 28 58.6	
	comp=Z,4.3nm,1.2s						
GNI	**Garni**	54.27	340	P	P	19 28 53.7	-0.3
GNI				IAmb	IAmb	19 28 57.8	
	comp=Z,8.9nm,1.5s						
BRTR	**Keskin Array B**	58.53	331	P	P	19 29 24.6	+0.3
	comp=Z,0.7nm,0.8s,baz=161,slow=9.2,SNR=3.1						
	comp=Z,0.7nm,0.8s						
MK31	**Makanchi Array**	58.78	13	P	P	19 29 24.8	-1.0
MKAR	**Makanchi Array**	58.78	13	P	P	19 29 24.9	-0.9
	comp=Z,0.4nm,0.7s,baz=192,slow=7.2,SNR=6.8						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	58.78	13	P	P	19 29 24.5	-1.2
ABKAR	**Akbulak array**	59.78	355	P	P	19 29 31.7	-0.9
ABKAR	**Akbulak array**	59.78	355	P	P	19 29 31.9	-0.7
ABKAR				IAmb	IAmb	19 29 33.7	
	comp=Z,2.8nm,1.1s						
AKTO	**Aktyubinsk**	61.13	354	P	P	19 29 41.7	-0.1
	comp=Z,1.2nm,0.7s,baz=198,slow=4.5,SNR=3.7						
	comp=Z,1.2nm,0.7s						
KURK	**Kurchatov**	61.89	9	P	P	19 29 46.1	-0.8
KURK				IAmb	IAmb	19 29 47.5	
	comp=Z,2.9nm,0.9s						
BVAR	**Borovoye Array**	63.37	3	P	P	19 29 57.0	+0.2
	comp=Z,2.0nm,0.9s,baz=152,slow=6.7,SNR=8.5						
	comp=Z,2.0nm,0.9s						
BRVK	**Borovoye**	63.40	3	P	P	19 29 56.3	-0.6
BRVK				IAmb	IAmb	19 29 58.0	
	comp=Z,2.3nm,0.9s						
SAUI	**Saumlaki**	63.97	94	P	P	19 30 00.4	-1.1
ASAR	**Alice Springs**	65.29	111	P	P	19 30 10.7	+0.6
	comp=Z,0.9nm,0.8s,baz=272,slow=6.1,SNR=7.1						
	comp=Z,0.9nm,0.8s						
ASAR	**Alice Springs**	65.29	111	P	P	19 30 10.4	+0.3
WRA	**Warramunga Arr**	65.82	107	P	P	19 30 14.7	+1.1
	comp=Z,2.0nm,0.9s,baz=277,slow=6.4,SNR=12						
	comp=Z,2.0nm,0.9s						
WRA	**Warramunga Arr**	65.82	107	P	P	19 30 14.7	+1.1
WB2	**Warramunga Arr**	65.83	107	P	P	19 30 14.8	+1.2
VTS	**Vitosha**	66.00	326	P	P	19 30 13.7	-0.7
ZAA0	**Zalesovo Array**	66.08	12	P	P	19 30 13.4	-1.0
ZAA0				IAmb	IAmb	19 30 26.3	
	comp=Z,2.5nm,1.1s						
ZALV	**Zalesovo Beam**	66.08	12	P	P	19 30 13.6	-0.8
	comp=Z,1.6nm,0.9s,baz=212,slow=7.0,SNR=6.3						
	comp=Z,1.6nm,0.9s						
ZALV	**Zalesovo Beam**	66.08	12	P	P	19 30 13.3	-1.1
SONM	**Songino Array**	68.04	28	P	P	19 30 27.9	+0.7
	comp=Z,1.2nm,0.8s,baz=232,slow=5.9,SNR=9.9						
SONM				LR	LR	19 59 21.3	
	comp=Z,65nm,18.4s,baz=206,slow=35						
	comp=Z,1.2nm,0.8s						
SONM	**Songino Array**	68.04	28	P	P	19 30 27.6	+0.5
SONM				IAmb	IAmb	19 30 29.0	
	comp=Z,3.5nm,1.2s						
TORD	**Torodi Ar. Bea**	68.43	289	P	P	19 30 30.9	+0.8
	comp=Z,1.2nm,1.0s,baz=145,slow=8.8,SNR=6.7						
	comp=Z,1.2nm,1.0s						
TORD	**Torodi Ar. Bea**	68.43	289	P	P	19 30 30.0	-0.1
TORD				IAmb	IAmb	19 30 31.5	
	comp=Z,5.8nm,1.4s						
BURAR	**Bucovina Array**	68.47	331	P	P	19 30 31.0	+1.1
AKASG	**Malin Array Be**	69.02	336	P	P	19 30 32.6	-0.4
	comp=Z,0.6nm,0.5s,baz=144,slow=4.5,SNR=5.5						
	comp=Z,0.6nm,0.5s						
CONA	**Conrad Observa**	73.39	327	*e*P	P	19 31 00.2	+0.4
	comp=Z,4.4nm,1.0s						
CLUD	**Cludinico**	74.17	325	P	P	19 31 04.0	-0.2
CLUD				IAmb	IAmb	19 31 05.6	
	comp=Z,6.5nm,1.0s						
ABTA	**Abfaltersbach**	74.54	325	*e*P	P	19 31 07.2	+0.7
	comp=Z,6.0nm,1.1s						
KSRS	**Korea Array**	74.70	46	LR	LR	20 02 31.3	
	comp=Z,20nm,19.9s,baz=200,slow=35						
GERES	**GERESS Array B**	75.09	327	P	P	19 31 09.9	+0.3
	comp=Z,0.6nm,0.8s,baz=147,slow=7.9,SNR=3.9						
	comp=Z,0.6nm,0.8s						
GERES	**GERESS Array B**	75.09	327	P	P	19 31 09.1	-0.6
WTTA	**Wattenberg**	75.33	325	*e*P	P	19 31 11.4	+0.3
	comp=Z,8.4nm,0.8s						
WATA	**Walderalm**	75.40	325	*e*P	P	19 31 11.7	+0.1
	comp=Z,8.2nm,1.4s						
SQTA	**Sankt Quirin**	75.55	325	*e*P	P	19 31 12.7	+0.3
	comp=Z,5.8nm,1.0s						
HIA	**Hailar**	75.64	33	P	P	19 31 11.8	-1.0
HIA				IAmb	IAmb	19 31 26.6	
	comp=Z,4.2nm,0.9s						
MOTA	**Moosalm**	75.67	325	*e*P	P	19 31 13.4	+0.3
	comp=Z,8.6nm,1.1s						
FETA	**Feichten**	75.71	324	*e*P	P	19 31 14.0	+0.7
	comp=Z,5.2nm,1.0s						
FUORN	**Ofenpass-Fuorn**	75.76	324	P	P	19 31 13.3	-0.5
DAVA	**Damuels**	76.34	324	*e*P	P	19 31 17.3	+0.4
	comp=Z,3.0nm,0.6s						
GRA1	**Grafenberg Arr**	76.91	327	P	P	19 31 19.5	-0.4
GRFO	**Grafenberg**	76.91	327	P	P	19 31 19.5	-0.4
MJAR	**Matsushiro Arr**	81.93	51	P	P	19 31 48.4	+0.8
	comp=Z,2.0nm,0.9s,baz=262,slow=8.4,SNR=2.9						
	comp=Z,2.0nm,0.9s						
ESDC	**Sonseca Array**	82.00	313	P	P	19 31 48.7	+0.7
	comp=Z,1.7nm,1.0s,baz=100,slow=3.9,SNR=8.8						
	comp=Z,1.7nm,1.0s						
ESDC	**Sonseca Array**	82.00	313	P	P	19 31 48.4	+0.5
EKA	**Eskdalemuir Ar**	87.30	328	LR	LR	20 13 27.2	
	comp=Z,25nm,18.3s,baz=197,slow=37						
TIXI	**Tiksi**	91.59	16	P	P	19 32 33.7	-0.4
TIXI				IAmb	IAmb	19 32 35.9	
	comp=Z,3.1nm,1.2s						
PLID	**Pearl Lake**	145.48	3		PKPbc	19 39 04.9	-1.4
BCIP	**Isla Barro Col**	146.76	271		PKPdf	19 39 05.4	-3.7
PDAR	**Pinedale Array**	147.68	354	PKPbc	PKPbc	19 39 12.9	+0.1
	comp=Z,1.1nm,0.9s,baz=69,slow=2.1,SNR=7.2						
HWUT	**Hardware Ranch**	148.98	357		PKPbc	19 39 16.0	-0.2
NVAR	**Mina Array Bea**	151.88	8	PKPbc	PKPbc	19 39 23.1	-0.2
	comp=Z,1.5nm,0.8s,baz=283,slow=1.2,SNR=10						
NV11	**Mina Array Sit**	151.89	8	PKPbc	PKiKP	19 39 24.4	+0.8
TXAR	**Lajitas Array**	159.12	335	PKPab	PKPab	19 40 03.9	+0.6
	comp=Z,0.2nm,0.4s,baz=54,slow=6.4,SNR=3.7						

ROM 09 19:31:08.4±0.1**, 42°.998N**±0°.002×**13°.027E**±0°.005**, h8^{km}, ML1.2**/6**, 5C-4D, Error ellipse: s-maj=0.4km s-min=0.1km az=282.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.06**	**346**	⇓P	Pg	19 31 10.6	+0.1
T1219				S	Sg	19 31 11.8	0.0
T1219				AML	AML		
	comp=E,524µm,0.2s						
T1219				AML	AML		
	comp=E,564µm,0.3s						
T1219				AML	AML		
	comp=E,524µm,0.2s						
T1219				AML	AML		
	comp=N,542µm,0.1s						
T1219				AML	AML		
	comp=E,564µm,0.3s						
T1219				AML	AML		
	comp=N,492µm,0.1s						
T1216	**Preci, Frazion**	**0.11**	**183**	P	Pg	19 31 11.2	+0.2
T1216				S	Sg	19 31 13.7	+0.9
T1220	**Camerino, Fraz**	**0.12**	**22**	⇓P	Pg	19 31 11.7	+0.5
T1220				S	Sg	19 31 14.3	+1.1
T1220				AML	AML		
	comp=E,314µm,0.4s						
T1220				AML	AML		
	comp=N,488µm,1.0s						
T1220				AML	AML		
	comp=E,314µm,0.3s						
T1220				AML	AML		
	comp=N,488µm,1.0s						
CSP1	**Cessapalombo**	**0.16**	**54**	⇑P	Pg	19 31 12.6	+0.6
CSP1				S	Sg	19 31 15.2	+0.8
CSP1				AML	AML		
	comp=E,93µm,0.7s						
CSP1				AML	AML		
	comp=N,99µm,0.7s						
CSP1				AML	AML		
	comp=E,93µm,0.7s						
CSP1				AML	AML		
	comp=N,99µm,0.7s						
T1215	**Vallo di Nera,**	**0.23**	**211**	⇓P	Pg	19 31 13.9	+0.9
T1215				S	Sg	19 31 17.7	+1.5
T1215				AML	AML		
	comp=E,31µm,1.6s						
T1215				AML	AML		
	comp=N,30µm,1.1s						
T1215				AML	AML		
	comp=N,30µm,0.9s						
T1215				AML	AML		
	comp=E,31µm,0.4s						
MMO1	**Montemonaco**	**0.24**	**114**	⇓P	Pg	19 31 13.8	+0.5
T1212	**Cascia, Frazio**	**0.25**	**177**	⇑P	Pg	19 31 14.1	+0.7
T1212				S	Sg	19 31 18.4	+1.7
SNTG	**Esanatoglia**	**0.27**	**346**	⇑P	Pg	19 31 14.4	+0.6
SNTG				S	Sb	19 31 19.4	-0.8
SNTG				AML	AML		
	comp=E,24µm,1.1s						
SNTG				AML	AML		
	comp=N,24µm,1.0s						
SNTG				AML	AML		
	comp=N,24µm,1.0s						
SNTG				AML	AML		
	comp=E,24µm,0.9s						
ASSB	**Assisi San Ben**	**0.27**	**280**	⇑P	Pg	19 31 14.7	+0.8
ASSB				S	Sb	19 31 19.5	-0.9
ASSB				AML	AML		
	comp=E,43µm,0.2s						
ASSB				AML	AML		
	comp=N,69µm,0.3s						
EL6	**Elcito**	**0.34**	**9**	⇑P	Pg	19 31 15.7	+0.6
EL6				S	Sb	19 31 21.5	-0.8
ARVD	**Arcevia**	**0.50**	**353**	S	Sb	19 31 28.0	+1.0

ROM 09 19:31:21.7±0.1**, 42°.454N**±0°.004×**13°.367E**±0°.007**, h13^{km}, ML2.0**/23**, 10C-9D, Error ellipse: s-maj=0.6km s-min=0.2km az=76.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1247	**Pizzolo (AQ)**	**0.05**	**257**	⇑P	Pg	19 31 24.5	+0.2
T1247				S	Sg	19 31 26.4	+0.3
T1247				AML	AML		
	comp=E,13850µm,0.1s						
T1247				AML	AML		
	comp=N,11450µm,0.7s						
CAMP	**Campotosto**	**0.09**	**21**	P	Pg	19 31 24.9	+0.2
CAMP				S	Sg	19 31 27.1	+0.3
CAMP				AML	AML		
	comp=E,894µm,0.3s						
CAMP				AML	AML		
	comp=N,1420µm,0.3s						
AQU	**L'Aquila**	**0.10**	**165**	⇑P	Pg	19 31 24.9	+0.2
AQU				S	Sg	19 31 27.2	+0.2
AQU				AML	AML		
	comp=E,928µm,0.3s						
AQU				AML	AML		
	comp=N,1055µm,0.3s						
AQU				AML	AML		
	comp=E,1030µm,0.3s						
AQU				AML	AML		
	comp=N,1034µm,0.3s						
AQU				AML	AML		
	comp=N,1050µm,0.3s						
AQU				AML	AML		
	comp=N,1038µm,0.3s						
RM33	**Pellescritta (**	**0.13**	**296**	⇑P	Pg	19 31 25.4	+0.2
RM33				S	Sg	19 31 28.0	+0.5
RM33				AML	AML		
	comp=E,1775µm,0.3s						
RM33				AML	AML		
	comp=E,1775µm,0.2s						
RM33				AML	AML		
	comp=E,1750µm,0.3s						
RM33				AML	AML		
	comp=N,1058µm,0.7s						
RM33				AML	AML		
	comp=N,1085µm,0.7s						
GIGS	**Gran Sasso**	**0.15**	**91**	P	Pg	19 31 25.6	+0.1
GIGS				S	Sg	19 31 28.3	+0.2
GIGS				AML	AML		
	comp=N,382µm,0.1s						
GIGS				AML	AML		
	comp=E,246µm,0.8s						
GIGS				AML	AML		
	comp=E,246µm,1.2s						
GIGS				AML	AML		
	comp=N,382µm,1.9s						
SMA1	**SAN MARTINO**	**0.18**	**352**	⇓P	Pg	19 31 26.2	+0.3
SMA1				S	Sb	19 31 29.7	-0.8
SMA1				AML	AML		
	comp=E,804µm,0.2s						
SMA1				AML	AML		
	comp=N,1000µm,0.5s						
TERO	**Teramo**	**0.24**	**46**	⇑P	Pg	19 31 27.1	+0.1
TERO				S	Sg	19 31 31.1	+0.6
TERO				AML	AML		
	comp=E,754µm,0.3s						
TERO				AML	AML		
	comp=N,636µm,1.5s						
TERO				AML	AML		
	comp=N,706µm,1.5s						
TERO				AML	AML		
	comp=E,904µm,0.3s						
TERO				AML	AML		
	comp=N,706µm,0.5s						
TERO				AML	AML		
	comp=N,636µm,0.5s						
FAGN	**Fagnano**	**0.25**	**139**	P	Pg	19 31 27.1	+0.1
FAGN				S	Sb	19 31 33.0	+0.7
FAGN				AML	AML		
	comp=E,1195µm,1.0s						
FAGN				AML	AML		
	comp=E,1195µm,1.0s						
FAGN				AML	AML		
	comp=N,1185µm,0.4s						
T1222	**Castel Sant'An**	**0.25**	**258**	⇑P	Pg	19 31 27.2	+0.2
T1222				AML	AML		
	comp=E,283µm,0.5s						
T1222				AML	AML		
	comp=N,222µm,0.3s						
T1222				AML	AML		
	comp=E,283µm,1.5s						
T1222				AML	AML		
	comp=N,222µm,0.3s						
FIAM	**Fiamignano**	**0.26**	**225**	⇑P	Pg	19 31 27.4	+0.2
FIAM				S	Sb	19 31 32.0	-0.8
FIAM				AML	AML		
	comp=N,260µm,0.5s						
FIAM				AML	AML		
	comp=E,236µm,0.6s						
T1214	**Arquata del Tr**	**0.33**	**339**	P	Pg	19 31 28.7	+0.2
T1214				S	Sb	19 31 34.0	-0.8
T1214				AML	AML		
	comp=E,140µm,0.3s						
T1214				AML	AML		
	comp=N,158µm,0.7s						
T1214				AML	AML		
	comp=N,158µm,0.7s						
VCEL	**Villa Celiera**	**0.35**	**99**	⇓P	Pb	19 31 29.5	-0.5
VCEL				AML	AML		
	comp=E,472µm,1.4s						
VCEL				AML	AML		
	comp=N,484µm,0.4s						
VCEL				AML	AML		
	comp=E,473µm,1.4s						
VCEL				AML	AML		
	comp=E,473µm,0.6s						
T0110	**Collepietro**	**0.38**	**126**	⇑P	Pg	19 31 29.6	+0.2
T0110				S	Sb	19 31 35.7	-0.5
T0110				AML	AML		
	comp=N,553µm,0.3s						
T0110				AML	AML		
	comp=E,462µm,0.7s						
T1212	**Cascia, Frazio**	**0.38**	**321**	P	Pg	19 31 29.4	0.0
T1212				AML	AML		
	comp=E,144µm,0.6s						
T1212				AML	AML		
	comp=N,128µm,0.5s						
T1212				AML	AML		
	comp=E,144µm,0.6s						
T1212				AML	AML		
	comp=E,144µm,1.4s						
T1211	**Morro Reatino**	**0.39**	**282**	⇓P	Pg	19 31 29.8	+0.3
T1211				AML	AML		
	comp=E,124µm,0.4s						
T1211				AML	AML		
	comp=N,198µm,0.6s						
T1211				AML	AML		
	comp=E,124µm,0.5s						
T1241	**Roccafluvione,**	**0.41**	**7**	⇑P	Pg	19 31 29.8	0.0
T1241				AML	AML		
	comp=N,111µm,0.9s						
T1241				AML	AML		
	comp=E,194µm,0.8s						
T1217	**Poggiodomo (PG**	**0.41**	**309**	P	Pg	19 31 30.2	+0.2
T1217				AML	AML		
	comp=E,134µm,0.9s						
T1217				AML	AML		
	comp=N,134µm,0.4s						
T1217				AML	AML		
	comp=E,134µm,0.9s						
T1245	**Castelsantange**	**0.42**	**342**	P	Pg	19 31 30.5	+0.3
T1245				AML	AML		
	comp=E,196µm,1.3s						
T1245				AML	AML		
	comp=N,284µm,1.1s						
T1245				AML	AML		
	comp=N,284µm,0.9s						
T1245				AML	AML		
	comp=E,196µm,0.7s						
PTQR	**Pietraquaria**	**0.43**	**177**	⇓P	Pg	19 31 30.2	-0.1
PTQR				AML	AML		
	comp=E,77µm,0.3s						
PTQR				AML	AML		
	comp=N,80µm,0.5s						
PTQR				AML	AML		
	comp=N,80µm,1.5s						
MMO1	**Montemonaco**	**0.45**	**356**	⇑P	Pg	19 31 30.5	-0.1
MC2	**Monte Cornacci**	**0.48**	**344**	P	Pb	19 31 32.3	+0.2
T1215	**Vallo di Nera,**	**0.51**	**314**	P	Pg	19 31 31.6	-0.1
T1216	**Preci, Frazion**	**0.51**	**330**	P	Pg	19 31 32.1	+0.4
CERT	**Cerreto**	**0.58**	**210**	⇓P	Pg	19 31 32.7	-0.3
CERT				AML	AML		
	comp=E,121µm,1.6s						
CERT				AML	AML		
	comp=N,81µm,0.4s						
INTR	**Introdacqua**	**0.59**	**138**	⇑P	Pg	19 31 33.3	-0.1
INTR				AML	AML		
	comp=E,94µm,1.0s						
INTR				AML	AML		
	comp=E,94µm,1.0s						
INTR				AML	AML		
	comp=N,160µm,1.5s						
CSP1	**Cessapalombo**	**0.65**	**349**	⇓P	Pg	19 31 34.3	-0.1
T1219	**Muccia, Frazio**	**0.66**	**336**	⇓P	Pg	19 31 34.3	-0.3
T1219				S	Sb	19 31 44.2	0.0
T1220	**Camerino, Fraz**	**0.69**	**343**	⇓P	Pg	19 31 34.6	-0.5
LPEL	**Lama dei Pelig**	**0.73**	**124**	P	Pg	19 31 35.0	-0.9
LPEL				S	Sg	19 31 45.6	+0.2
LPEL				AML	AML		
	comp=E,146µm,1.0s						
LPEL				AML	AML		
	comp=N,124µm,0.2s						
EL6	**Elcito**	**0.90**	**348**	⇓P	Pg	19 31 39.0	0.0

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*IDC **09** 19:32:09.7±6.4, 15°.55N×93°.11W, h0^{km}, mb3.4/3, mbtmp3.3/5, ML3.5/2, MS2.9/3, Error ellipse: s-maj=173.8km s-min=45.4km az=26.0*

*MEX **09** 19:32:11.9±0.6, 14°.77N×93°.75W, h15^{km}, MD4.1*

ISC 09 19:32:07.8±2.3**, 14°.97N**±0°.08×**93°.67W**±0°.07**, h1**^{km}±13^{km}**, n13, σ0^{s}.98**/18**, mb3.5**/3**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**0.85**	**31**	*e*P	**Pn**	**19 32 28.2**	**+1.3**
PCIG				*e*S	**Sn**	**19 32 40.8**	**+0.8**
PATR	**El Naranjo**	**1.39**	**84**	*e*P	**Pg**	**19 32 34.9**	**+0.4**
PATR				*e*S	**Sn**	**19 32 52.9**	**-0.9**
PAVE	**Pavencul**	**1.46**	**81**	*e*P	**Pg**	**19 32 35.6**	**-0.1**
PAVE				*e*S	**Sn**	**19 32 55.2**	**-0.3**
CHUJ	**Union Juarez**	**1.51**	**85**	*e*P	**Pg**	**19 32 36.7**	**-0.1**
CHUJ				*e*S	**Sg**	**19 32 56.1**	**-0.3**
TGIG		**1.87**	**16**	*e*P	**Pg**	**19 32 43.9**	**+0.2**
TGIG				*e*S	**Sg**	**19 33 07.2**	**-0.7**
CCIG	**Comitan**	**1.97**	**48**	*e*P	**Pg**	**19 32 45.7**	**+0.2**
CCIG				*e*S	**Sg**	**19 33 10.0**	**-1.1**
CMIG	**Matias Romero**	**2.41**	**331**	Pn	**Pn**	**19 32 48.8**	**+0.4**
	9.2nm,0.3s,baz=158,slow=12,SNR=41						
CMIG				Sn	**Sn**	**19 33 17.1**	**-1.5**
	32nm,0.3s,baz=328,slow=23,SNR=20						
CMIG				LR	LR	19 33 46.8	
	comp=Z,69nm,21.8s,baz=177,slow=42						
	18nm,0.4s						
TXAR	**Lajitas Array**	**17.01**	**329**	Pn	**P**	**19 36 10.2**	**+0.9**
	baz=149,slow=12,SNR=2.6						
	0.2nm,0.6s						
SDV	**Santo Domingo**	**23.32**	**102**	LR	LR	19 47 23.8	
	comp=Z,50nm,18.1s,baz=330,slow=40						
NVAR	**Mina Array Bea**	**31.91**	**322**	P	**P**	**19 38 36.8**	**+1.5**
	0.6nm,0.8s,baz=137,slow=8.9,SNR=4.2						
	0.6nm,0.8s						
RPN	**Rapa Nui**	**44.53**	**200**	LR	LR	19 53 14.7	
	comp=Z,37nm,19.3s,baz=144,slow=28						
YKA	**Yellowknife Ar**	**49.72**	**347**	P	**P**	**19 41 00.1**	**-1.3**
	0.6nm,1.0s,baz=150,slow=7.6,SNR=5.6						
	0.6nm,1.0s						
ILAR	**Eielson Array**	**61.31**	**337**	P	**P**	**19 42 23.9**	**-0.9**
	0.3nm,0.8s,baz=126,slow=4.6,SNR=4.7						
	0.3nm,0.8s						

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*NEIC **09** 19:32:40.2±1.9, 7°.46S±0°.08×126°.85E±0°.07, h286^{km}±8^{km}, mb4.2/33, Error ellipse: s-maj=12.5km s-min=10.4km az=163.0*

*DJA **09** 19:32:40.0±0.1, 8°S±2°×12°7E±°, h296^{km}±3^{km}, M4.4/29, mb4.3/29, mB5.1/9, MLv4.5/17, Mw(mB)4.4/9, MwMwp6.6/1, Mwp6.5/1*

*IDC **09** 19:32:41.0±1.8, 7°.43S×126°.83E, h292^{km}±19^{km}, mb3.5/13, mbtmp4.2/16, Error ellipse: s-maj=19.1km s-min=10.1km az=57.0*

ISC 09 19:32:40.5±0.4**, 7°.54S**±0°.05×**126°.84E**±0°.05**, h300**^{km}**, n111, σ1^{s}.67**/114**, mb4.1**/25**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**3.37**	**229**	Pn	**Pn**	**19 33 39.9**	**-0.3**
SOEI				Sn	**S**	**19 34 24.2**	**-3.5**
SOEI	**Soe**	**3.37**	**229**	P	**Pn**	**19 33 40.4**	**+0.3**
SOEI	**Soe**	**3.37**	**229**	P	**Pn**	**19 33 40.4**	**+0.3**
AAI	**Ambon**	**4.05**	**20**	P	**Pn**	**19 33 45.8**	**-1.6**
BNDI	**Bandanaira**	**4.27**	**46**	P	**Pn**	**19 33 48.3**	**-1.5**
NLAI	**Namlea**	**4.28**	**3**	P	**Pn**	**19 33 51.3**	**+1.5**
SAUI	**Saumlaki**	**4.44**	**96**	Pn	**Pn**	**19 33 50.5**	**-1.1**
SAUI	**Saumlaki**	**4.44**	**96**	P	**Pn**	**19 33 50.7**	**-0.9**
SAUI	**Saumlaki**	**4.44**	**96**	P	**Pn**	**19 33 50.8**	**-0.9**
MSAI	**Masohi**	**4.65**	**27**	P	**Pn**	**19 33 54.3**	**+0.2**
MMRI	**Maumere**	**4.69**	**256**	Pn	**Pn**	**19 33 53.7**	**-0.8**
MMRI	**Maumere**	**4.69**	**256**	P	**Pn**	**19 33 53.9**	**-0.6**
MMRI	**Maumere**	**4.69**	**256**	P	**Pn**	**19 33 53.7**	**-0.8**
SANI	**Sanana**	**5.51**	**351**	P	**Pn**	**19 34 03.5**	**-0.6**
	13nm,0.9s,0.1nm						
BSSI	**Bau Bau, Buton**	**6.45**	**282**	P	**Pn**	**19 34 15.1**	**-0.2**
	43nm,0.8s,0.2nm						
BASI	**Baing, Sumba**	**6.74**	**246**	P	**Pn**	**19 34 17.9**	**-0.8**
MTN	**Manton Dam**	**6.76**	**142**	Pn	**Pn**	**19 34 18.0**	**-1.0**
MTN	**Manton Dam**	**6.76**	**142**	P	**Pn**	**19 34 18.3**	**-0.7**
LBMI	**Labuha**	**6.88**	**6**	P	**Pn**	**19 34 21.0**	**+0.4**
	42nm,0.5s,0.2nm						
BKSI	**Bulukumba**	**7.03**	**288**	P	**Pn**	**19 34 22.7**	**+0.4**
	44nm,0.8s,360nm0.1nm						
FAKI	**Fak Fak**	**7.07**	**50**	Pn	**Pn**	**19 34 20.2**	**-2.7**
FAKI	**Fak Fak**	**7.07**	**50**	P	**Pn**	**19 34 20.4**	**-2.5**
FAKI	**Fak Fak**	**7.07**	**50**	P	**Pn**	**19 34 20.3**	**-2.6**
KAPI	**Kappang**	**7.48**	**289**	P	**Pn**	**19 34 28.7**	**+0.9**
	8.9nm,0.5s,baz=67,slow=16,SNR=6.3						
KAPI	**Kappang**	**7.48**	**289**		**Pn**	**19 34 26.7**	**-1.1**
KDU	**Kakadu**	**7.55**	**133**	P	**Pn**	**19 34 27.2**	**-1.4**
SIJI	**Sorong**	**7.96**	**34**	P	**Pn**	**19 34 31.8**	**-1.9**
	116nm,0.3s,baz=217,slow=11,SNR=122						
SIJI				S	**S**	**19 35 58.4**	**-7.0**
	12nm,0.6s,baz=114,slow=19,SNR=1.9						
KNRA	**Kununurra**	**8.31**	**167**	Pn	**Pn**	**19 34 38.0**	**+0.1**
KNRA	**Kununurra**	**8.31**	**167**	P	**Pn**	**19 34 38.1**	**+0.2**
PLAI	**Plampang**	**9.06**	**261**	P	**Pn**	**19 34 44.8**	**-2.4**
	127nm,0.7s,2µm						
MRSI	**Marisa**	**9.34**	**328**	P	**P**	**19 34 52.5**	**-2.4**
	25nm,1.0s						
RKPI	**Ransiki, Papua**	**9.45**	**51**	P	**Pn**	**19 34 50.2**	**-1.8**
	225nm,0.6s,3µm						
TWSI	**Taliwang, Sumb**	**9.93**	**262**	P	**Pn**	**19 34 55.6**	**-2.3**
	32nm,0.6s						
MPSI	**Mapaga**	**10.44**	**318**	P	**P**	**19 35 05.6**	**-1.6**
	14nm,0.7s						
TOLI2	**Tolitoli**	**10.50**	**325**	P	**P**	**19 35 07.4**	**-0.4**
FITZ	**Fitzroy Crossi**	**10.56**	**186**	Pn	**Pn**	**19 35 03.4**	**-2.2**
SRPI	**Serui, Papua**	**10.93**	**59**	P	**Pn**	**19 35 09.0**	**-1.1**
	81nm,0.7s						
SRBI	**Singaraja**	**11.53**	**267**	P	**Pn**	**19 35 16.2**	**-1.3**
	18nm,0.8s						
IGBI	**Denpasar**	**11.64**	**263**	P	**Pn**	**19 35 15.7**	**-3.1**
	36nm,0.5s						
JAGI	**Jajag, Banyuwa**	**12.60**	**265**	Pn	**Pn**	**19 35 27.3**	**-3.2**
JAGI	**Jajag, Banyuwa**	**12.60**	**265**	P	**Pn**	**19 35 27.1**	**-3.3**
	31nm,0.8s						
SMPI	**Sarmi**	**13.05**	**66**	P	**P**	**19 35 37.0**	**+0.9**
	47nm,0.7s						
GMJI	**Gumukmas**	**13.29**	**266**	P	**Pn**	**19 35 37.0**	**-1.7**
	21nm,1.1s,2µm214µm						
GENI	**Genyem**	**14.15**	**70**	P	**Pn**	**19 35 50.8**	**+1.8**
GENI	**Genyem**	**14.15**	**70**	P	**Pn**	**19 35 49.8**	**+0.8**
	64nm,0.6s						
WB0	**Warramunga Arr**	**14.20**	**150**		**P**	**19 35 48.5**	**-0.3**
WRAB	**Tennant Creek**	**14.32**	**150**	P	**P**	**19 35 50.4**	**+0.3**
WRA	**Warramunga Arr**	**14.32**	**150**	P	**P**	**19 35 50.5**	**+0.4**
	3.5nm,0.6s,baz=328,slow=12,SNR=46						
WRA				S	**S**	**19 38 21.5**	**-6.1**
	1.5nm,0.4s,baz=330,slow=22,SNR=4.9						
WRA	**Warramunga Arr**	**14.32**	**150**	P	**P**	**19 35 49.3**	**-0.9**
WB2	**Warramunga Arr**	**14.32**	**150**		**P**	**19 35 49.9**	**-0.3**
MBWA	**Marble Bar**	**15.19**	**206**	P	**Pn**	**19 36 01.0**	**-0.1**
MBWA	**Marble Bar**	**15.19**	**206**		**Pn**	**19 36 01.3**	**+0.1**
MBWA				IAmb	IAmb	19 36 02.9	
	comp=Z,21nm,1.0s						
PSA00	**Pilbara Seismi**	**15.50**	**205**		**P**	**19 36 04.4**	**+1.2**
PSA00	**Pilbara Seismi**	**15.50**	**205**		**P**	**19 36 04.2**	**+1.1**
PSA00				IAmb	IAmb	19 36 07.4	
	comp=Z,22nm,1.3s						
PSA00	**Pilbara Seismi**	**15.50**	**205**	P	**Pn**	**19 36 04.7**	**-0.2**
COEN	**Coen**	**17.27**	**113**		**P**	**19 36 22.7**	**+0.3**
AS31	**Alice Springs**	**17.41**	**158**		**P**	**19 36 25.1**	**+1.1**
ASAR	**Alice Springs**	**17.41**	**158**	P	**Pn**	**19 36 26.1**	**-1.1**
	comp=Z,6.1nm,0.5s,baz=335,slow=12,SNR=51						
ASAR				S	**S**	**19 39 33.4**	**+3.8**
	comp=Z,4.0nm,0.9s,baz=335,slow=21,SNR=12						
ASAR	**Alice Springs**	**17.41**	**158**	P	**P**	**19 36 26.0**	**+2.0**
AS01	**Alice Springs**	**17.43**	**158**	P	**Pn**	**19 36 26.3**	**-1.1**
SBUM	**Sibu**	**17.64**	**304**	P	**P**	**19 36 25.2**	**-1.2**
QIS	**Mount Isa**	**17.90**	**138**	P	**P**	**19 36 30.7**	**+1.5**
KSM	**Kuching**	**18.76**	**298**	P	**P**	**19 36 38.7**	**+0.2**
KSM				IAmb	IAmb	19 36 44.6	
	comp=Z,10nm,0.7s						
KSM	**Kuching**	**18.76**	**298**	P	**P**	**19 36 41.9**	**+3.4**
PMG	**Port Moresby**	**20.18**	**97**	P	**P**	**19 36 54.6**	**+1.2**
	comp=Z,6.9nm,0.6s,baz=263,slow=12,SNR=4.7						
	comp=Z,6.9nm,0.6s						
PMG	**Port Moresby**	**20.18**	**97**	P	**P**	**19 36 54.8**	**+1.3**
PMG				IAmb	IAmb	19 37 04.3	
	comp=Z,9.9nm,0.8s						
CGJI	**Cibinong**	**21.00**	**271**	P	**P**	**19 36 59.0**	**-2.6**
	comp=Z,10nm,1.3s						
CTA	**Charters Tower**	**22.57**	**126**	P	**P**	**19 37 18.7**	**+2.8**
	comp=Z,8.9nm,0.9s,baz=294,slow=6.5,SNR=3.8						
	comp=Z,8.9nm,0.9s						
STKA	**Stephens Creek**	**27.85**	**152**	P	**P**	**19 38 04.8**	**+1.7**
	comp=Z,1.0nm,0.5s,baz=335,slow=8.2,SNR=5.0						
	comp=Z,1.0nm,0.5s						
RPSI	**Rantau Prapat**	**29.65**	**289**	P	**P**	**19 38 19.9**	**+0.7**
RPSI				IAmb	IAmb	19 38 21.1	
	comp=Z,14nm,1.4s						
GSI	**Gunungsitoli**	**30.48**	**286**	P	**P**	**19 38 26.4**	**-0.1**
CM31	**Chiang Mai Arr**	**37.74**	**313**	P	**P**	**19 39 28.9**	**+0.4**
CM31				IAmb	IAmb	19 39 31.4	
	comp=Z,4.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**37.74**	**313**	P	**P**	**19 39 28.8**	**+0.3**
	comp=Z,2.3nm,0.6s,baz=140,slow=6.8,SNR=23						
	comp=Z,2.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**37.74**	**313**	P	**P**	**19 39 29.4**	**+1.0**
CRAI	**Chiangrai**	**37.93**	**317**	P	**P**	**19 39 30.1**	**+0.1**
CHTO	**Chiang Mai**	**37.98**	**314**	P	**P**	**19 39 30.9**	**+0.5**
PZH	**PanZhiHua**	**41.69**	**325**	P	**P**	**19 40 04.0**	**+3.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,4.5s						
KSRS	**Korea Array**	**44.77**	**1**	P	**P**	**19 40 25.8**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=173,slow=10,SNR=2.8						
	comp=Z,0.6nm,0.5s						
LZH	**Lanzhou**	**48.48**	**335**	*e*P	**P**	**19 40 55.9**	**+2.1**
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
HHC	**Hu-ho-hao-te**	**50.16**	**345**	*e*P	**P**	**19 41 09.1**	**+2.9**
HHC				pmax	pmax		
	comp=Z,21nm,1.1s						
HHC				pmax	pmax		
	comp=Z,160nm,4.4s						
LSA	**Lhasa**	**50.48**	**319**	P	**P**	**19 41 09.4**	**+0.2**
LSA				IAmb	IAmb	19 41 12.2	
	comp=Z,5.2nm,0.8s						
USRK	**Ussuriysk Ar.**	**51.70**	**5**	P	**P**	**19 41 18.0**	**+0.6**
	comp=Z,1.5nm,0.5s,baz=180,slow=9.0,SNR=5.8						
	comp=Z,1.5nm,0.5s						
ULN	**Ulaanbaatar**	**57.87**	**344**	P	**P**	**19 42 02.6**	**+1.0**
SONM	**Songino Array**	**58.02**	**344**	P	**P**	**19 42 03.4**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=166,slow=7.0,SNR=9.3						
	comp=Z,0.6nm,0.5s						
SONM	**Songino Array**	**58.02**	**344**	P	**P**	**19 42 02.8**	**+0.2**
WMQ	**Urumqi**	**62.18**	**329**	*e*P	**P**	**19 42 32.6**	**+1.9**
NIL	**Nilore**	**65.22**	**312**	P	**P**	**19 42 50.6**	**0.0**
PETK	**Petropavlovsk-**	**65.85**	**20**	P	**P**	**19 42 55.1**	**+1.0**
	comp=Z,2.0nm,0.8s,baz=240,slow=2.9,SNR=5.5						
	comp=Z,2.0nm,0.8s						
MK31	**Makanchi Array**	**67.00**	**328**	P	**P**	**19 43 01.9**	**+0.4**
MKAR	**Makanchi Array**	**67.00**	**328**	P	**P**	**19 43 02.3**	**+0.8**
	comp=Z,1.5nm,0.5s,baz=125,slow=7.6,SNR=32						
	comp=Z,1.5nm,0.5s						
MKAR	**Makanchi Array**	**67.00**	**328**	P	**P**	**19 43 01.9**	**+0.4**
MAKZ	**Makanchi**	**67.17**	**328**	P	**P**	**19 43 03.0**	**+0.4**
KBL	**Kabul**	**68.74**	**311**	P	**P**	**19 43 12.8**	**0.0**
KBL				IAmb	IAmb	19 43 14.8	
	comp=Z,3.7nm,0.7s						
YAK	**Yakutsk**	**69.39**	**1**	P	**P**	**19 43 15.7**	**-0.2**

GAR	Garm	69.85	316	P	P	19 43 20.1	+0.7
GAR				IAmb	IAmb	19 43 21.4	
	comp=Z,5.1nm,0.9s						
CHGR	Chuyangaron	70.49	315	P	P	19 43 23.1	-0.2
ZAA0	Zalesovo Array	70.71	335	P	P	19 43 23.8	-0.3
ZAA0				IAmb	IAmb	19 43 24.8	
	comp=Z,4.1nm,0.8s						
ZALV	Zalesovo Beam	70.71	335	P	P	19 43 24.1	0.0
	comp=Z,3.1nm,0.5s,baz=130,slow=5.2,SNR=22						
	comp=Z,3.1nm,0.5s						
ZALV	Zalesovo Beam	70.71	335	P	P	19 43 23.4	-0.7
KURK	Kurchatov	71.37	330	P	P	19 43 28.5	+0.4
KURK				IAmb	IAmb	19 43 29.5	
	comp=Z,3.2nm,0.8s						
BRVK	Borovoye	76.94	329	P	P	19 43 59.9	-0.2
BRVK				IAmb	IAmb	19 44 01.7	
	comp=Z,3.3nm,0.7s						
GEYT	Alibeck	78.18	311	P	P	19 44 08.4	+1.0
	comp=Z,1.6nm,0.6s,baz=193,slow=6.1,SNR=5.0						
	comp=Z,1.6nm,0.6s						
TIXI	Tiksi	79.03	1	P	P	19 44 11.0	-0.1
ABKAR	Akbulak array	81.00	322	P	P	19 44 21.8	-0.3
ABKAR	Akbulak array	81.00	322	P	P	19 44 21.5	-0.6
ABKAR				IAmb	IAmb	19 44 23.2	
	comp=Z,2.9nm,0.9s						
ARU	Arti	84.52	329	P	P	19 44 40.4	+0.4
RAYN	Ar Rayn	85.10	294	P	P	19 44 44.1	+0.4
RAYN				IAmb	IAmb	19 44 45.1	
	comp=Z,4.5nm,0.8s						
ILAR	Eielson Array	95.17	25	P	P	19 45 30.0	+0.3
	comp=Z,0.1nm,0.4s,baz=238,slow=5.7,SNR=2.4						
	comp=Z,0.1nm,0.4s						
BRTR	Keskin Array B	97.22	309	P	Pdif	19 45 39.5	-0.3
	comp=Z,0.4nm,0.6s,baz=98,slow=2.2,SNR=2.7						
	comp=Z,0.4nm,0.6s						
TORD	Torodi Ar. Bea	125.83	281	PKP	PKiKP	19 51 09.1	+0.9
	comp=Z,0.4nm,0.6s,baz=17,slow=2.0,SNR=3.1						
PB06	IPOC Station P	145.92	152	PKPdf	PKPdf	19 51 44.7	-0.2

IDC 09 19:34:38.5±999.0, 48°.69N×0°.68W, h0^{km}, Error ellipse: s-maj=948.4km s-min=196.8km az=76.0, France

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I26DE	FREYUNG INFRAS	9.51	84	I	I	20 27 40.0	
	baz=275,slow=310,SNR=0.9						
I43RU	DUBNA INFRASON	24.06	56	I	I	22 01 50.0	
	baz=268,slow=316,SNR=2.0						
I31KZ	AKTYUBINSK INF	37.28	65	I	I	23 25 20.0	
	baz=290,slow=371,SNR=4.3						
I46RU	ZALESOVO INFRA	50.59	50	I	I	00 46 00.0	
	baz=302,slow=341,SNR=2.5						

IDC 09 19:58:23.1±16.0, 28°.96N×80°.12E, h0^{km}, mb3.4/3, mbtmp3.4/4, ML3.3/1, MS3.7/1, Error ellipse: s-maj=268.3km s-min=74.0km az=35.0, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	17.88	5	P	Pn	20 02 32.8	-0.4
	0.1nm,0.3s,baz=182,slow=11,SNR=4.5						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	21.67	357	P	P	20 03 15.4	+0.3
	1.0nm,0.6s,baz=177,slow=10.0,SNR=6.7						
	1.0nm,0.6s						
ZALV	Zalesovo Beam	25.20	7	P	P	20 03 50.0	-0.2
	0.8nm,0.5s,baz=197,slow=9.0,SNR=3.8						
	0.8nm,0.5s						
SONM	Songino Array	27.70	40	P	P	20 04 13.1	+0.1
	0.4nm,0.8s,baz=234,slow=8.9,SNR=4.0						
	0.4nm,0.8s						
MJAR	Matsushiro Arr	48.81	65	LR	LR	20 29 54.7	
	comp=Z,81nm,20.5s,baz=188,slow=39						

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*IDC **09** 20:07:59.7±0.8, 3°.41S×130°.71E, h0^{km}, mb4.1/12, mbtmp4.2/14, ML2.9/2, MS3.6/17, Error ellipse: s-maj=27.2km s-min=15.0km az=60.0*

*NEIC **09** 20:08:04.2±2.1, 3°.41S±0°.05×130°.84E±0°.06, h39^{km}±6^{km}, mb4.4/35, Error ellipse: s-maj=9.4km s-min=7.2km az=80.0*

*DJA **09** 20:08:04.6±0.2, 3°S±3°×13°1E±°, h65^{km}±6^{km}, M4.4/18, mB4.9/7, mb4.6/18, MLv4.4/12, Mw(mB)4.2/7*

ISC 09 20:08:03.5±0.4, 3°.49S±0°.04×130°.77E±0°.05, h35^{km}, n127, σ1^{s}.82/114, mb4.4/33, MS3.5/15, 1C, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.34	220	P	Pn	20 08 28.8	+3.0
BNDI	Bandanaira	1.34	220	P	Pn	20 08 28.7	+3.0
FAKI	Fak Fak	1.58	69	Pn	Pn	20 08 29.1	0.0
FAKI	Fak Fak	1.58	69	P	Pn	20 08 29.6	+0.5
FAKI	Fak Fak	1.58	69	P	Pn	20 08 29.6	+0.5
MSAI	Masohi	1.84	274	P	Pn	20 08 34.1	+1.5
AAI	Ambon	2.57	266	P	Pn	20 08 43.9	+1.2
SIJI	Sorong	2.65	11	Pn	Pn	20 08 42.4	-1.4
	8.0nm,0.3s,baz=336,slow=23,SNR=69						
SIJI				Sn	Sn	20 09 11.2	-3.6
	20nm,0.3s,baz=30,slow=21,SNR=11						
	22nm,0.3s						
NLAI	Namlea	3.67	274	P	Pn	20 08 59.9	+2.1
RKPI	Ransiki, Papua	3.93	60	P	Pn	20 09 02.0	+0.5
LBMI	Labuha	4.32	311	P	Pn	20 09 05.7	-1.1
SAUI	Saumlaki	4.50	173	Pn	Pn	20 09 10.7	+1.5
SAUI	Saumlaki	4.50	173	P	Pn	20 09 08.9	-0.3
SAUI	Saumlaki	4.50	173	P	Pn	20 09 11.6	+2.4
SANI	Sanana	4.98	287	P	Pn	20 09 15.0	-0.9
SANI	Sanana	4.98	287	P	Pn	20 09 14.2	-1.7
SRPI	Serui, Papua	5.70	74	P	Pn	20 09 28.2	+2.4
	47nm,0.6s,2μm1.0nm						
SMPI	Sarmi	8.07	80	P	Pn	20 10 00.1	+1.7
	42nm,1.5s						
LUWI	Luwuk	8.35	287	Pn	Pn	20 10 02.2	0.0
LUWI	Luwuk	8.35	287	P	Pn	20 10 02.7	+0.6
	42nm,1.1s						
SOEI	Soe	8.97	226	Pn	Pn	20 10 13.1	+2.4
SOEI	Soe	8.97	226	P	Pn	20 10 13.4	+2.7
SOEI	Soe	8.97	226	P	Pn	20 10 13.7	+3.0
	63nm,1.0s,1μm						
KDU	Kakadu	9.29	170	P	Pn	20 10 14.2	-0.9
MTN	Manton Dam	9.30	178	Pn	Pn	20 10 14.9	-0.4
MTN	Manton Dam	9.30	178	P	Pn	20 10 15.8	+0.6
GENI	Genyem	9.43	85	P	Pn	20 10 20.4	+3.4
	48nm,0.9s						
MRSI	Marisa	9.66	294	P	Pn	20 10 19.4	-0.7
	18nm,1.0s,326nm						
BKSI	Bulukumba	10.77	260	P	Pn	20 10 37.3	+2.0
	39nm,1.0s						
SPSI	Sidrap Palu	10.98	267	P	Pn	20 10 46.7	+8.4
KAPI	Kappang	11.09	262	LR	LR	20 16 01.4	
	comp=Z,539nm,21.6s,baz=75,slow=44						
KAPI	Kappang	11.09	262	Pn	Pn	20 10 40.6	+0.9
MPSI	Mapaga	11.51	289	P	Pn	20 10 45.7	+0.2
	8.4nm,0.9s						
KNRA	Kununurra	12.27	189	Pn	Pn	20 10 57.1	+1.3
KNRA				Sn	Sn	20 13 08.0	-3.5
PLAI	Plampang	13.96	247	P	Pn	20 11 19.0	0.0
PLAI	Plampang	13.96	247	P	Pn	20 11 18.2	-0.8
	26nm,0.8s						
FITZ	Fitzroy Crossi	15.36	199		Pn	20 11 35.6	-2.3
COEN	Coen	16.07	131	P	Pn	20 11 45.9	-1.1
WB0	Warramunga Arr	16.56	168	Pn	Pn	20 11 49.5	-3.8
WRA	Warramunga Arr	16.72	168	Pn	Pn	20 11 53.4	-1.9
	0.7nm,0.3s,baz=346,slow=12,SNR=27						
WRA				Sn	Sn	20 14 51.8	-8.2
	0.6nm,0.3s,baz=346,slow=22,SNR=6.2						
WRA	Warramunga Arr	16.72	168		Pn	20 11 51.6	-3.6
WB2	Warramunga Arr	16.72	168		Pn	20 11 50.8	-4.5
JAGI	Jajag, Banyuwa	17.24	253		P	20 12 03.0	-0.1
JAGI	Jajag, Banyuwa	17.24	253	P	P	20 12 03.2	+0.2
PMG	Port Moresby	17.31	111	P	P	20 12 04.4	+0.6
	0.5nm,0.3s,baz=307,slow=7.0,SNR=13						
PMG				LR	LR	20 21 06.8	
	comp=Z,263nm,20.5s,baz=312,slow=45						
	39nm,1.0s						
PMG	Port Moresby	17.31	111		Pn	20 11 59.4	-3.2
PMG				IAmb	IAmb	20 12 06.1	
	comp=Z,65nm,1.1s						
QIS	Mount Isa	19.03	154	P	Pn	20 12 23.4	-0.2
SBUM	Sibu	19.45	287		Pn	20 12 29.8	+1.0
MTSU	Mount Surprise	19.70	139	P	P	20 12 30.6	+0.6
AS31	Alice Springs	20.29	172	P	Pn	20 12 37.5	-1.1
AS31				IAmb	IAmb	20 12 40.7	
	comp=Z,15nm,1.1s						
ASAR	Alice Springs	20.29	172	P	Pn	20 12 37.9	-0.7
	comp=Z,32nm,0.8s,baz=351,slow=10,SNR=209						
ASAR				S	S	20 16 21.9	-0.3
	comp=Z,4.1nm,1.1s,baz=353,slow=17,SNR=7.6						
	comp=Z,32nm,0.8s						
ASAR	Alice Springs	20.29	172	P	P	20 12 37.2	+0.8
AS01	Alice Springs	20.29	172	P	P	20 12 37.4	+0.9
	comp=Z,56nm,0.9s						
PSA00	Pilbara Seismi	20.87	210	P	P	20 12 43.0	+0.2
PSA00	Pilbara Seismi	20.87	210	P	P	20 12 43.0	+0.2
PSA00				IAmb	IAmb	20 13 11.6	
	comp=Z,17nm,1.1s						
PSA00	Pilbara Seismi	20.87	210	P	P	20 12 43.1	+0.4
KSM	Kuching	21.03	283	P	P	20 12 45.9	+1.4
KSM				IAmb	IAmb	20 12 49.3	
	comp=Z,16nm,0.8s						
KRVT	Keravat (AS076	21.23	93	P	P	20 12 49.6	+2.9
	comp=Z,84nm,1.0s,baz=134,slow=3.7,SNR=11						
KRVT				LR	LR	20 23 02.2	
	comp=Z,162nm,19.6s,baz=61,slow=42						
	comp=Z,84nm,1.0s						
RABL	Rabaul	21.36	93	P	P	20 12 51.0	+2.9
WRKA	Warakurna	21.56	186	P	P	20 12 50.6	+0.5
GUMO	Guam	22.00	39	LR	LR	20 21 28.0	
	comp=Z,62nm,21.7s,baz=194,slow=37						
KPJI	Karang Pucung	22.07	259	P	P	20 12 54.8	-0.8
	comp=Z,19nm,1.1s						
CTA	Charters Tower	22.37	139	P	P	20 13 00.7	+1.8
	comp=Z,8.0nm,0.7s,baz=334,slow=15,SNR=6.9						
CTA				LR	LR	20 22 16.6	
	comp=Z,170nm,20.0s,baz=320,slow=38						
	comp=Z,8.0nm,0.7s						
CTAO	Charters Tower	22.37	139	P	P	20 12 59.5	+0.7
CTAO				IAmb	IAmb	20 13 05.5	
	comp=Z,28nm,1.2s						
OOD	Oodnadatta	24.62	169	P	P	20 13 22.1	+1.3
MEEK	Meekatharra	25.80	206	P	P	20 13 34.1	+2.6
	comp=Z,13nm,2.1s						
MULG	Mulgathing	26.83	174	P	P	20 13 42.2	+1.5
FORT	Forrest	27.27	185	P	P	20 13 46.3	+1.7
	comp=Z,25nm,1.1s						
LCRK	Leigh Creek	27.72	166	P	P	20 13 49.7	+0.9
RMQ	Roma	28.64	145	P	P	20 13 57.8	+0.8
BBOO	Buckleboo	29.59	171	P	P	20 14 06.7	+1.4
STKA	Stephens Creek	30.02	161	P	P	20 14 10.3	+1.2
	comp=Z,2.9nm,0.9s,baz=322,slow=12,SNR=4.6						
	comp=Z,2.9nm,0.9s						
JOW	Kunigami	30.24	356	LR	LR	20 24 38.1	
	comp=Z,195nm,20.8s,baz=180,slow=33						
IPM	Ipoh	30.75	285	P	P	20 14 17.1	+1.2
KULM	Kulim	31.32	286	P	P	20 14 21.7	+0.8
JCJ	Chichijima	32.34	19	LR	LR	20 25 45.9	
	comp=Z,110nm,21.5s,baz=123,slow=33						
RPSI	Rantau Prapat	32.41	281	P	P	20 14 30.4	-0.1
RPSI				IAmb	IAmb	20 14 31.1	
	comp=Z,7.2nm,1.1s						
GSI	Gunungsitoli	33.51	278	P	P	20 14 39.0	-1.2
PHRA	Phrae	37.17	307	P	P	20 15 11.6	0.0
WHN	Wuhan	37.30	336	⇑P	P	20 15 20.2	+7.8
CM31	Chiang Mai Arr	38.19	306	P	P	20 15 20.8	+0.6
CM31				IAmb	IAmb	20 15 29.0	
	comp=Z,6.2nm,1.1s						
CMAR	Chiang Mai Arr	38.19	306	P	P	20 15 21.6	+1.4
	comp=Z,0.7nm,0.8s,baz=134,slow=7.5,SNR=5.9						
	comp=Z,0.7nm,0.8s						
CMAR	Chiang Mai Arr	38.19	306	P	P	20 15 18.7	-1.4
CHTO	Chiang Mai	38.37	306	P	P	20 15 18.0	-3.6
MJAR	Matsushiro Arr	40.42	9	P	P	20 15 37.9	-0.6
	comp=Z,1.6nm,0.7s,baz=172,slow=10,SNR=4.0						
	comp=Z,1.6nm,0.7s						
KSRS	Korea Array	40.82	357	P	P	20 15 42.0	+0.2
	comp=Z,0.4nm,0.3s,baz=171,slow=10,SNR=1.8						
	comp=Z,0.4nm,0.3s						
PZH	PanZhiHua	40.95	318	P	P	20 15 44.9	+1.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
TNCH	TengChong	42.23	314	P	P	20 15 55.8	+2.0
TNCH				sP	pP	20 16 02.4	-1.7
TNCH				pmax	pmax		
	comp=Z,7.0nm,3.1s						
CN2	Changchun	47.32	355	P	P	20 16 39.5	+5.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	47.49	340	*e*P	P	20 16 37.3	+2.0
HHC				pmax	pmax		
	comp=Z,28nm,1.0s						
LSA	Lhasa	50.27	314	P	P	20 16 56.9	-0.4
LSA				IAmb	IAmb	20 17 01.2	
	comp=Z,3.4nm,1.1s						
GTA	Gaotai	51.32	329	*e*P	P	20 17 05.0	+0.4
GTA				pP	pP	20 17 11.3	-3.8
GTA				sP	sP	20 17 15.1	-4.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
RPZ	Rata Peaks	53.58	144	LR	LR	20 42 19.3	
	comp=Z,112nm,18.1s,baz=280,slow=38						
HEH	HeiHe	53.61	357	*e*P	P	20 17 21.7	+0.5
HEH				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HEH				pmax	pmax		
	comp=Z,140nm,5.4s						
URZ	Urewera	54.57	136	LR	LR	20 43 39.5	
	comp=Z,126nm,18.1s,baz=118,slow=39						
ULN	Ulaanbaatar	55.20	341	P	P	20 17 32.9	-0.1
ULN				IAmb	IAmb	20 17 55.2	
	comp=Z,4.4nm,1.1s						
SONM	Songino Array	55.39	340	P	P	20 17 35.6	+1.2
	comp=Z,1.4nm,1.0s,baz=168,slow=7.5,SNR=8.0						
SONM				LR	LR	20 43 10.3	
	comp=Z,42nm,19.5s,baz=178,slow=38						
	comp=Z,1.4nm,1.0s						
SONM	Songino Array	55.39	340	P	P	20 17 33.1	-1.3
SONM				IAmb	IAmb	20 17 42.2	
	comp=Z,4.9nm,1.4s						
PETK	Petropavlovsk-	60.77	18	LR	LR	20 42 04.3	
	comp=Z,34nm,21.7s,baz=173,slow=34						
WMQ	Urumqi	60.92	326	*e*P	P	20 18 13.6	+0.6
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
YAK	Yakutsk	65.34	359	P	P	20 18 40.1	-1.8
MK31	Makanchi Array	65.75	326	P	P	20 18 45.1	+0.2
MK31				IAmb	IAmb	20 18 52.7	
	comp=Z,2.6nm,0.9s						
MKAR	Makanchi Array	65.75	326	P	P	20 18 45.6	+0.7
	comp=Z,2.9nm,0.9s,baz=123,slow=8.0,SNR=18						
MKAR				LR	LR	20 50 50.6	
	comp=Z,46nm,18.0s,baz=80,slow=39						
	comp=Z,2.9nm,0.9s						
MKAR	Makanchi Array	65.75	326	P	P	20 18 44.9	-0.1
MAKZ	Makanchi	65.93	326	P	P	20 18 45.1	-1.0
MAKZ				IAmb	IAmb	20 18 53.8	
	comp=Z,6.3nm,1.3s						
AAK	Ala-Archa	68.40	319	LR	LR	20 51 25.7	
	comp=Z,44nm,21.5s,baz=74,slow=38						
ZAA0	Zalesovo Array	68.81	333	P	P	20 19 02.9	-1.2
ZAA0				IAmb	IAmb	20 19 12.6	
	comp=Z,3.5nm,1.1s						
ZALV	Zalesovo Beam	68.81	333	P	P	20 19 04.7	+0.5
	comp=Z,0.7nm,0.6s,baz=111,slow=3.8,SNR=6.1						
	comp=Z,0.7nm,0.6s						
ZALV	Zalesovo Beam	68.81	333	P	P	20 19 03.6	-0.5
KURK	Kurchatov	69.96	328	P	P	20 19 11.0	-0.3
KURK				IAmb	IAmb	20 19 35.0	
	comp=Z,5.5nm,1.0s						
CHGR	Chuyangaron	70.49	313	P	P	20 19 15.3	+0.3
KK31	Karatay Array	71.24	318	P	P	20 19 17.9	-1.4
KK31				IAmb	IAmb	20 19 23.1	
	comp=Z,6.3nm,1.4s						
KKAR	Karatay Array	71.24	318	P	P	20 19 19.1	-0.2
KKAR	Karatay Array	71.24	318	P	P	20 19 17.9	-1.4
KKAR				IAmb	IAmb	20 19 23.1	
	comp=Z,6.3nm,1.4s						
TIXI	Tiksi	75.01	359	LR	LR	20 53 37.0	
	comp=Z,37nm,19.2s,baz=0.0,slow=36						
BRVK	Borovoye	75.60	327	P	P	20 19 44.9	+0.1
BRVK				IAmb	IAmb	20 19 54.1	
	comp=Z,5.6nm,1.1s						
NRIK	Noril'sk	78.36	346	P	P	20 19 57.8	-2.2
NRIK				IAmb	IAmb	20 20 13.9	
	comp=Z,3.4nm,0.8s						
GEYT	Alibeck	78.56	310	P	P	20 20 03.5	+1.7
	comp=Z,1.5nm,0.7s,baz=121,slow=5.6,SNR=3.9						
	comp=Z,1.5nm,0.7s						
ABKAR	Akbulak array	80.26	321	P	P	20 20 10.4	-0.3
GNI	Garni	89.19	310	LR	LR	21 07 57.6	
	comp=Z,12nm,18.3s,baz=175,slow=40						
ILAR	Eielson Array	89.86	25	P	P	20 20 60.0	+1.4
	comp=Z,0.4nm,0.8s,baz=274,slow=6.0,SNR=2.8						
	comp=Z,0.4nm,0.8s						
BMAR	Burnt Mountain	91.14	23	P	P	20 21 05.4	+0.9
BCAR	Beaver Creek A	91.92	27	P	P	20 21 09.3	+1.0
MMAI	Mount Meron Ar	96.38	303	LR	LR	21 11 19.9	
	comp=Z,12nm,20.1s,baz=271,slow=40						
BBB	Bella Bella	99.56	38	LR	LR	20 56 47.9	
	comp=Z,100nm,21.2s,baz=26,slow=29						
TORD	Torodi Ar. Bea	128.79	284	PKP	PKiKP	20 27 09.8	+0.7
	comp=Z,0.6nm,0.9s,baz=79,slow=2.8,SNR=3.4						
PB14	IPOC Station P	145.29	145	PKPbc	PKPbc	20 27 35.2	-3.5

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*IDC **09** 20:21:05.4±2.1, 7°.43S×129°.34E, h0^{km}, mb3.5/1, mbtmp3.3/3, ML3.3/2, Error ellipse: s-maj=108.4km s-min=26.5km az=68.0*

ISC 09 20:21:12.8±1.5, 7°.3S±0°.1×129°.9E±0°.1, h50^{km}, n9, σ2^{s}.62/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.56	117	P	Pn	20 21 41.4	+3.2
MTN	Manton Dam	5.67	168	P	Pn	20 22 38.6	+4.0
KDU	Kakadu	5.95	155	P	Pn	20 22 40.0	+1.6
SOEI	Soe	6.09	246	P	Pn	20 22 41.9	+1.4
	17nm,0.9s						
KNRA	Kununurra	8.43	187	P	Pn	20 23 14.9	+2.5
	7.6nm,0.8s						
FITZ	Fitzroy Crossi	11.54	201	P	Pn	20 23 56.3	+1.4
	0.6nm,1.7s						
WRA	Warramunga Arr	13.32	162	Pn	Pn	20 24 16.4	-2.8
	0.2nm,0.3s,baz=343,slow=13,SNR=11						
WRA				Sn	Sn	20 26 45.0	-0.9
	0.8nm,0.3s,baz=333,slow=22,SNR=9.2						
	0.3nm,0.3s						
ASAR	Alice Springs	16.75	167	Pn	Pn	20 25 02.5	-1.6
	0.1nm,0.3s,baz=349,slow=9.7,SNR=2.9						
ASAR				Sn	Sn	20 28 08.0	-1.4
	0.1nm,0.3s,baz=349,slow=24,SNR=3.6						
	0.2nm,0.6s						
MKAR	Makanchi Array	68.39	327	P	P	20 32 07.8	-1.5
	0.4nm,0.6s,baz=111,slow=9.0,SNR=4.3						
	0.4nm,0.6s						

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*IDC **09** 20:21:09.1±2.1, 2°.48S×130°.30E, h0^{km}, mb3.9/2, mbtmp3.8/3, ML3.7/1, Error ellipse: s-maj=127.2km s-min=25.9km az=71.0*

*DJA **09** 20:21:22.3±0.3, 3°S±4°×13°1E±°, h10^{km}, M3.8/10, mb4.3/1, MLv3.5/10*

ISC 09 20:21:18.5±1.1, 2°.92S±0°.07×130°.66E±0°.04, h24^{km}, n12, σ2^{s}.86/11, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	1.58	90	P	Pb	20 21 49.6	+2.5
FAKI				S	Sb	20 22 11.1	+4.4
BNDI	Bandanaira	1.77	205	P	Pb	20 21 48.6	-1.7
MSAI	Masohi	1.79	256	P	Pb	20 21 53.9	+3.3
AAI	Ambon	2.58	253	P	Pb	20 22 05.0	+0.8
NLAI	Namlea	3.57	265	P	Pb	20 22 19.5	-1.6
RKPI	Ransiki, Papua	3.78	68	P	Pb	20 22 21.7	-2.8
RKPI				S	Sb	20 23 07.0	-2.9
LBMI	Labuha	3.89	306	P	Pb	20 22 25.3	-1.1
LBMI				S	Sb	20 23 17.0	+3.9
SANI	Sanana	4.75	280	P	Pb	20 22 34.7	-6.4
TNTI	Ternate	4.93	318	P	Pb	20 22 47.3	+3.2
WRA	Warramunga Arr	17.30	168	P	Pn	20 25 18.4	-0.2
	0.3nm,0.3s,baz=348,slow=11,SNR=4.9						
	0.4nm,0.4s						
ASAR	Alice Springs	20.87	172	P	P	20 25 58.2	-0.8
	4.4nm,0.9s,baz=348,slow=10,SNR=20						
	4.4nm,0.9s						
MKAR	Makanchi Array	65.22	326	P	P	20 31 48.9	-9.2
	1.0nm,0.6s,baz=123,slow=8.2,SNR=15						
	1.0nm,0.6s						

IDC 09 20:32:42.0±1.6, 3°.47S×130°.58E, h0^{km}, mb3.5/2, mbtmp3.5/4, ML3.4/2, Error ellipse: s-maj=67.2km s-min=24.7km az=85.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	2.67	15	Pn	Pn	20 33 25.1	-1.2
	2.8nm,0.3s,baz=60,slow=2.8,SNR=25						
SIJI				Sn	Sn	20 33 55.8	-3.8
	4.1nm,0.3s,baz=184,slow=18,SNR=4.6						
	8.2nm,0.2s						
WRA	Warramunga Arr	16.78	168	Pn	Pn	20 36 37.3	-1.3
	0.2nm,0.3s,baz=346,slow=12,SNR=9.3						
WRA				Sn	Sn	20 39 33.8	-12
	0.1nm,0.3s,baz=356,slow=24,SNR=2.7						
	0.4nm,0.5s						
ASAR	Alice Springs	20.33	171	P	P	20 37 20.3	+0.2
	1.4nm,0.4s,baz=350,slow=11,SNR=21						
ASAR				S	S	20 41 06.3	-2.7
	0.6nm,1.0s,baz=360,slow=28,SNR=3.2						
	1.4nm,0.4s						
MKAR	Makanchi Array	65.63	326	P	P	20 43 28.7	+0.7
	0.2nm,0.6s,baz=116,slow=8.3,SNR=3.8						
	0.2nm,0.6s						

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*MAN **09** 20:44:43.3, 8°.95N×122°.05E, h32^{km}, mb4.6, ML3.5, MS3.3*

*IDC **09** 20:44:49.6±2.0, 8°.15N×122°.98E, h0^{km}, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=335.0km s-min=28.9km az=67.0*

ISC 09 20:44:40.7±2.0, 8°.89N±0°.06×122°.09E±0°.04, h4^{km}±13^{km}, n16, σ1^{s}.27/24, mb3.7/3, 9C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNOP	Candoni, Negro	1.08	30	⇓*e*P	Pg	20 45 01.4	+0.1
CNOP				*e*S	Sg	20 45 14.8	-0.6
SNPH	Sibulan	1.22	68	⇑*i*P	Pb	20 45 04.1	-0.2
SNPH				*i* S	Sb	20 45 20.2	-0.2
DCPH	Dipolog City	1.29	104	⇑*e*P	Pn	20 45 04.0	-1.4
LSIP	Lazi, Siquijor	1.54	81	⇑*i*P	Pn	20 45 08.5	-0.4
LSIP				*e*S	Sn	20 45 28.6	-0.8
JAP	San Jose, Anti	1.85	356	⇓*e*P	Pg	20 45 24.6	+8.4
TBP	Tagbilaran	1.92	65	*e*P	Pn	20 45 14.1	0.0
TBP				*i* S	Sn	20 45 37.8	-1.0
GHBP	Garcia Hernand	2.32	71	⇓*i*P	Pn	20 45 21.1	+1.4
GHBP				*e*S	Sn	20 45 49.6	+1.0
LLP	Lapu-Lapu	2.33	52	⇑*i*P	Pn	20 45 20.2	+0.4
LLP				*i* S	Sn	20 45 47.9	-1.0
TABP	Talibon, Bohol	2.51	62	⇑*i*P	Pn	20 45 23.2	+0.9
TABP				*i* S	Sn	20 45 53.1	-0.3
CGP	Cagayan de Oro	2.61	99	⇑*e*P	Pn	20 45 24.7	+1.0
CGP				*e*S	Sn	20 45 52.3	-3.5
CTBH	Cotabato--PC H	2.71	128	⇑*e*P	Pn	20 45 26.9	+2.0
RCP	Roxas	2.73	14	⇑*e*P	Pn	20 45 26.8	+1.5
RCP				*e*S	Sn	20 45 58.0	-0.7
PPR	Puerto Princes	3.43	285	⇑*i*P	Pn	20 45 33.7	-1.1
PPR				*i* S	Sn	20 46 15.8	-0.2
WRA	Warramunga Arr	31.09	157	P	P	20 51 00.8	+0.6
	0.2nm,0.5s,baz=335,slow=9.4,SNR=5.0						
	0.2nm,0.5s						
ASAR	Alice Springs	34.36	161	P	P	20 51 29.9	+1.1
	0.6nm,0.6s,baz=340,slow=7.4,SNR=19						
	0.6nm,0.6s						
ZALV	Zalesovo Beam	53.94	334	P	P	20 54 22.4	+17
	0.4nm,0.5s,baz=134,slow=6.2,SNR=1.9						
	0.4nm,0.5s						

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*SOME **09** 20:47:30.4, 42°.08N×79°.45E, h0^{km}*

*NNC **09** 20:47:30.7±1.0, 41°.99N×79°.45E, h14^{km}±8^{km}, mb3.5, mpv3.0, Error ellipse: s-maj=8.0km s-min=5.3km az=174.0*

*KRNET **09** 20:47:31.9±0.1, 42°.06N×79°.71E, h35^{km}, mb2.2*

ISC 09 20:47:30.3±2.3, 41°.96N±0°.08×79°.67E±0°.08, h14^{km}±11^{km}, n38, σ1^{s}.20/50, 12C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	1.07	299	⇑*i*P	Pn	20 47 51.4	+0.3
	baz=95						
PRZ				⇑*e*S	Sg	20 48 06.2	+1.1

	baz=95						
SHLS	**Shalkode**	**1.20**	**353**	P	**Pg**	**20 47 53.3**	**-0.1**
	5.3nm,0.1s						
SHLS				S	**Sb**	**20 48 09.8**	**+1.4**
	4.8nm,0.2s						
SHLS	**Shalkode**	**1.20**	**353**	*e*P	**Pg**	**20 47 53.3**	**-0.1**
	5.5nm,0.1s						
SHLS				*e*S	**Sb**	**20 48 09.8**	**+1.4**
	4.7nm,0.1s						
PDGK	**Podgornoye**	**1.37**	**355**	P	**Pb**	**20 47 55.1**	**-0.7**
	0.6nm,0.1s						
PDGK				S	**Sn**	**20 48 12.8**	**-0.3**
	0.7nm,0.2s						
PDGK	**Podgornoye**	**1.37**	**355**	⇑P	**Pn**	**20 47 53.7**	**-1.4**
	1.0nm,0.4s						
PDGK				⇑S	**Sn**	**20 48 14.3**	**+1.2**
	5.9nm,1.1s						
SATY	**Saty**	**1.44**	**320**	P	**Pn**	**20 47 54.7**	**-1.3**
	2.1nm,0.2s						
SATY				S	**Sn**	**20 48 12.1**	**-2.7**
	11nm,0.2s						
SATY	**Saty**	**1.44**	**320**	*e*P	**Pn**	**20 47 54.7**	**-1.3**
	0.7nm,0.1s						
SATY				*e*S	**Sn**	**20 48 12.1**	**-2.7**
	11nm,0.1s						
ANVS	**Anan'yevo**	**1.69**	**300**	⇑*i*P	**Pb**	**20 48 00.6**	**-0.7**
	baz=96						
ANVS				⇑*i*S	**Sn**	**20 48 22.0**	**+0.9**
	baz=96						
KDJ	**Kajisay**	**1.86**	**276**	⇑*i*P	**Pb**	**20 48 03.4**	**-0.7**
	baz=73						
KDJ				⇑*i*S	**Sn**	**20 48 26.6**	**+1.4**
	baz=73						
KOTS	**Kotyrbulak**	**2.27**	**305**	Pg	**Pb**	**20 48 10.6**	**-0.6**
	2.7nm,0.2s						
KOTS				Lg	Lg	20 48 39.7	
	17nm,0.2s						
KOTS	**Kotyrbulak**	**2.27**	**305**	*e*Pg	**Pb**	**20 48 10.6**	**-0.6**
	2.8nm,0.1s						
KOTS				*e*Lg	Lg	20 48 39.7	
	17nm,0.2s						
MDOK	**Medeo**	**2.27**	**303**	Pg	**Pb**	**20 48 10.6**	**-0.6**
	3.4nm,0.5s						
MDOK				Pg	**Pb**	**20 48 10.7**	**-0.6**
	3.1nm,0.1s						
MDOK				⇑Lg	Lg	20 48 38.8	
	6.5nm,0.8s						
MDOK				Lg	Lg	20 48 39.5	
	4.4nm,0.4s						
MDOK	**Medeo**	**2.27**	**303**	*e*Pg	**Pb**	**20 48 10.6**	**-0.6**
	3.4nm,0.1s						
MDOK				*e*Lg	Lg	20 48 39.5	
	5.1nm,0.3s						
TNSS	**Tian-Shan**	**2.28**	**299**	Pg	**Pb**	**20 48 10.5**	**-0.9**
	3.8nm,0.1s						
TNSS				Lg	Lg	20 48 38.5	
	5.7nm,0.3s						
TNSS	**Tian-Shan**	**2.28**	**299**	*e*Pg	**Pb**	**20 48 10.1**	**-1.3**
	3.8nm,0.1s						
TNSS				*e*Lg	Lg	20 48 38.7	
	5.7nm,0.3s						
BLB	**Baldybastay**	**2.30**	**338**	Pg	**Pb**	**20 48 11.6**	**-0.1**
	8.5nm,0.1s						
BLB				Lg	Lg	20 48 41.9	
	30nm,0.2s						
DJR	**Jarkent**	**2.37**	**2**	Pg	**Pb**	**20 48 13.0**	**+0.2**
	1.7nm,0.1s						
DJR				Lg	Lg	20 48 43.8	
	8.3nm,0.3s						
DJR	**Jarkent**	**2.37**	**2**	*e*Pg	**Pb**	**20 48 13.0**	**+0.2**
	1.7nm,0.1s						
DJR				*e*Lg	Lg	20 48 43.8	
	8.3nm,0.1s						
IZV	**Izvestkoviy**	**2.50**	**296**	Pg	**Pb**	**20 48 14.0**	**-1.0**
	2.5nm,0.4s						
IZV				Lg	Lg	20 48 45.4	
	7.5nm,0.2s						
IZV	**Izvestkoviy**	**2.50**	**296**	*e*Pg	**Pb**	**20 48 14.0**	**-1.0**
	2.5nm,0.2s						
IZV				*e*Lg	Lg	20 48 45.4	
	7.4nm,0.1s						
MTBS	**Maitube**	**2.66**	**297**	Pg	**Pb**	**20 48 16.3**	**-1.4**
	1.3nm,0.2s						
MTBS				Lg	Lg	20 48 49.3	
	4.0nm,0.3s						
MTBS	**Maitube**	**2.66**	**297**	*e*Pg	**Pb**	**20 48 16.3**	**-1.4**
	1.7nm,0.1s						
MTBS				*e*Lg	Lg	20 48 49.3	
	5.9nm,0.2s						
CHKK	**Chushkaly**	**2.73**	**315**	Pg	**Pb**	**20 48 18.0**	**-0.8**
	0.7nm,0.1s						
CHKK				Lg	Lg	20 48 51.9	
	6.2nm,0.2s						
CHKK	**Chushkaly**	**2.73**	**315**	*e*Pg	**Pb**	**20 48 17.8**	**-1.0**
	0.7nm,0.1s						
CHKK				*e*Lg	Lg	20 48 51.9	
	7.1nm,0.1s						
NRN	**Naryn**	**2.80**	**260**	⇓*i*P	**Pb**	**20 48 17.5**	**-2.7**
	baz=58						
NRN				⇓*i*S	**Sn**	**20 48 50.1**	**+1.6**
	baz=58						
KTBS	**Karatobe**	**2.81**	**310**	Pg	**Pb**	**20 48 19.6**	**-0.5**
	1.2nm,0.2s						
KTBS				Lg	Lg	20 48 55.0	
	25nm,0.3s						
KTBS	**Karatobe**	**2.81**	**310**	*e*Pg	**Pb**	**20 48 19.6**	**-0.5**
	1.2nm,0.1s						
KTBS				*e*Lg	Lg	20 48 55.0	
	25nm,0.3s						
BOOM	**Boomskoye usch**	**2.82**	**282**	⇓*i*P	**Pn**	**20 48 16.8**	**+1.8**
	baz=80						
BOOM				⇓*i*S	**Sn**	**20 48 49.0**	**+0.2**
	baz=80						
KST	**Kastek**	**2.94**	**293**	Pg	**Pb**	**20 48 21.6**	**-0.9**
	5.0nm,0.2s						
KST				Lg	Lg	20 48 59.0	
	8.6nm,0.5s						
KST	**Kastek**	**2.94**	**293**	*e*Pg	**Pb**	**20 48 21.6**	**-0.9**
	5.2nm,0.2s						
KST				*e*Lg	Lg	20 48 58.6	
	8.9nm,0.3s						
KUU	**Kurty**	**3.11**	**309**	Pg	**Pb**	**20 48 24.1**	**-1.3**
	0.6nm,0.1s						
KUU				Lg	Lg	20 49 02.6	
	5.7nm,0.4s						
KUU	**Kurty**	**3.11**	**309**	*e*Pg	**Pb**	**20 48 24.1**	**-1.3**
	0.7nm,0.1s						
KUU				*e*Lg	Lg	20 49 02.6	
	5.7nm,0.4s						
DGS	**Degeres**	**3.15**	**295**	Pg	**Pb**	**20 48 25.2**	**-0.8**
	0.6nm,0.1s						
DGS				Lg	Lg	20 49 04.4	
	2.6nm,0.5s						
DGS	**Degeres**	**3.15**	**295**	*e*Pg	**Pb**	**20 48 25.0**	**-1.0**
	1.6nm,0.2s						
DGS				*e*Lg	Lg	20 49 04.4	
	3.0nm,0.2s						
TKM2	**Tokmak 2**	**3.16**	**289**	⇑Lg	Lg	20 49 04.0	
	2.3nm,0.8s						
TKM2	**Tokmak 2**	**3.16**	**289**	⇑*e*P	**Pn**	**20 48 20.9**	**+1.1**
	baz=87						
TKM2				⇑*i*S	**Sn**	**20 48 57.0**	**-0.3**
	baz=87						
KRBS	**Karabastau**	**3.41**	**302**	Pg	**Pb**	**20 48 29.4**	**-1.0**
	1.0nm,0.3s						
KRBS				Lg	Lg	20 49 12.4	
	4.4nm,0.4s						
KRBS	**Karabastau**	**3.41**	**302**	*e*Pg	**Pb**	**20 48 29.4**	**-1.0**
	1.1nm,0.2s						
KRBS				*e*Lg	Lg	20 49 12.4	
	4.3nm,0.8s						

ROM 09 20:58:56.2±0.0**,42°.964N**±0°.002×**13°.048E**±0°.003**,**
h11^{km},ML1.2/10**,6C-4D,Error ellipse: s-maj=0.2km**
s-min=0.1km az=248.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1216	**Preci, Frazion**	**0.08**	**196**	P	Pg	20 58 59.1	+0.4
T1216				S	Sg	20 59 01.0	+0.4
T1216				AML	AML		
	comp=E,414μm,0.2s						
T1216				AML	AML		
	comp=N,370μm,0.1s						
T1216				AML	AML		
	comp=N,370μm,0.1s						
T1216				AML	AML		
	comp=E,414μm,0.2s						
CESI	**CESI - Serrava**	**0.11**	**291**	P	Pg	20 58 59.7	+0.5
CESI				S	Sg	20 59 02.0	+0.6
CESI				AML	AML		
	comp=E,330μm,0.2s						
CESI				AML	AML		
	comp=N,470μm,0.1s						
MC2	**Monte Cornacci**	**0.12**	**116**	P	Pg	20 58 59.8	+0.4
MC2				S	Sg	20 59 02.3	+0.6
T1220	**Camerino, Fraz**	**0.15**	**12**	⇑P	Pg	20 59 00.2	+0.4
T1220				S	Sg	20 59 03.1	+0.9
T1245	**Castelsantange**	**0.15**	**136**	P	Pg	20 59 00.1	+0.3
T1245				S	Sg	20 59 03.2	+0.9
T1245				AML	AML		
	comp=N,150μm,0.8s						
T1245				AML	AML		
	comp=E,135μm,0.6s						
T1245				AML	AML		
	comp=N,150μm,1.2s						
T1245				AML	AML		
	comp=E,135μm,1.4s						
CSP1	**Cessapalombo**	**0.17**	**42**	⇑P	Pg	20 59 00.6	+0.4
CSP1				S	Sg	20 59 03.7	+0.8
CSP1				AML	AML		
	comp=N,152μm,0.4s						
CSP1				AML	AML		
	comp=E,200μm,0.4s						
T1212	**Cascia, Frazio**	**0.21**	**181**	⇑P	Pg	20 59 01.1	+0.4
T1212				S	Sg	20 59 04.9	+1.0
T1214	**Arquata del Tr**	**0.24**	**150**	⇑P	Pg	20 59 01.9	+0.6
ASSB	**Assisi San Ben**	**0.30**	**285**	⇑P	Pg	20 59 02.5	+0.2
ASSB				AML	AML		
	comp=N,53μm,1.5s						
ASSB				AML	AML		
	comp=E,44μm,0.4s						
ASSB				AML	AML		
	comp=N,53μm,0.5s						
SNTG	**Esanatoglia**	**0.30**	**345**	⇓P	Pg	20 59 02.7	+0.3
SNTG				S	Sb	20 59 07.8	-0.9
SNTG				AML	AML		
	comp=N,21μm,1.3s						
SNTG				AML	AML		
	comp=E,22μm,1.0s						
T1241	**Roccafluvione,**	**0.30**	**111**	⇑P	Pg	20 59 02.7	+0.3
T1241				AML	AML		
	comp=E,78μm,0.2s						
T1241				AML	AML		
	comp=N,57μm,0.2s						
EL6	**Elcito**	**0.37**	**6**	⇓P	Pg	20 59 04.0	+0.3
EL6				AML	AML		
	comp=E,36μm,0.8s						
EL6				AML	AML		
	comp=N,55μm,1.1s						
EL6				AML	AML		
	comp=E,36μm,1.2s						
ATCC	**AVT- Casa Cast**	**0.37**	**307**	⇓P	Pg	20 59 04.0	+0.3
MOMA	**Monte Martano**	**0.39**	**246**	P	Pg	20 59 04.3	+0.4
MOMA				AML	AML		
	comp=N,18μm,0.2s						
MOMA				AML	AML		
	comp=E,21μm,1.5s						
CING	**Cingoli**	**0.42**	**15**	P	Pg	20 59 04.9	+0.2
MURB	**Monte Urbino**	**0.49**	**308**	P	Pg	20 59 06.1	+0.3
MURB				AML	AML		
	comp=E,36μm,0.9s						
MURB				AML	AML		
	comp=N,33μm,1.2s						
MURB				AML	AML		
	comp=E,36μm,1.1s						
MURB				AML	AML		
	comp=N,33μm,0.8s						
TERO	**Teramo**	**0.53**	**130**	⇓P	Pg	20 59 06.7	0.0
PP3	**Marolino**	**0.58**	**45**	S	Sg	20 59 14.6	-0.7

ROM 09 20:59:27.4±0.1**,42°.747N**±0°.003×**13°.032E**±0°.004**,**
h11^{km},Md1.1/2**,2C-1D,Error ellipse: s-maj=0.3km**
s-min=0.3km az=92.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1212	**Cascia, Frazio**	**0.01**	**65**	P	Pg	20 59 29.7	+0.2
T1212				S	Sg	20 59 31.0	+0.1
T1212				END			
T1217	**Poggiodomo (PG**	**0.08**	**245**	P	Pg	20 59 30.5	+0.4
T1217				S	Sg	20 59 32.5	+0.6
T1217				END			
T1218	**Civita (PG)**	**0.10**	**141**	P	Pg	20 59 30.6	+0.3
T1218				S	Sg	20 59 32.8	+0.6
T1214	**Arquata del Tr**	**0.13**	**85**	P	Pg	20 59 31.2	+0.4
T1214				S	Sg	20 59 33.7	+0.6
T1215	**Vallo di Nera,**	**0.13**	**295**	P	Pg	20 59 31.1	+0.5
T1215				S	Sg	20 59 33.6	+0.6
T1216	**Preci, Frazion**	**0.14**	**356**	⇓P	Pg	20 59 31.4	+0.5
T1216				S	Sg	20 59 34.0	+0.7
T1245	**Castelsantange**	**0.16**	**46**	⇑P	Pb	20 59 32.0	-0.6
T1245				S	Sg	20 59 34.4	+0.7
T1211	**Morro Reatino**	**0.25**	**211**	P	Pg	20 59 33.2	+0.6
T1211				S	Sg	20 59 37.3	+1.1
RM33	**Pellescritta (**	**0.27**	**150**	P	Pg	20 59 33.5	+0.4
RM33				S	Sg	20 59 37.9	+1.1
T1220	**Camerino, Fraz**	**0.36**	**7**	⇑P	Pg	20 59 35.3	+0.6

*HVO **09** 21:12:35.0±1.1, 18°.92N±0°.06×155°.54W±0°.03, h39^{km}±3^{km},*
ML2.9/30, ML2.9/50(NEIC), Error ellipse: s-maj=9.2km
s-min=4.1km az=176.0
NEIC 09 21:12:33.5±1.4**,18°.92N**±0°.04×**155°.48W**±0°.04**,h40**^{km}±4^{km}**,**
Error ellipse: s-maj=6.7km s-min=5.0km az=140.0,
Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HPO	**Honuapo**	**0.18**	**339**		Pn	21 12 41.3	+0.5
HPO					Sn	21 12 46.2	+0.4
HTC	**Hot Caves**	**0.33**	**14**		Pn	21 12 42.9	+0.7
KHU	**Kahuku**	**0.35**	**339**		Pn	21 12 42.7	0.0
KHU					Sn	21 12 48.5	-0.6
KHU				IAML		21 12 48.7	
	comp=N,1μm,0.4s						
HLP	**Hilina Pali**	**0.41**	**24**		Pn	21 12 44.0	+0.7
HLP					Sn	21 12 50.5	+0.4
HLP				IAML		21 12 52.6	
	comp=E,1μm,0.4s						
HLP				IAML		21 12 54.5	
	comp=N,811nm,0.3s						
AIN	**Ainahou**	**0.46**	**3**		Pn	21 12 44.4	+0.4
AIN					Sn	21 12 51.0	-0.1
SDHHI	**Sand Hill**	**0.50**	**21**		Pn	21 12 44.7	+0.2
SDHHI					Sn	21 12 51.9	-0.3
RIM	**Rim**	**0.52**	**22**		Pn	21 12 44.8	+0.1
RIM					Sn	21 12 51.9	-0.6
RIM				IAML		21 12 52.5	
	comp=E,700nm,0.5s						
RIM				IAML		21 12 58.0	
	comp=N,858nm,1.1s						
WRMHI	**West Rim**	**0.52**	**19**		Pn	21 12 44.8	+0.1
WRMHI					Sn	21 12 52.1	-0.5
PUH	**Pauahi**	**0.52**	**29**		Pn	21 12 44.9	+0.2
PUH					Sn	21 12 52.0	-0.6
PUH				IAML		21 12 55.7	
	comp=N,481nm,0.7s						
KKO	**Keanakako`i**	**0.52**	**23**		Pn	21 12 44.9	+0.2
KKO					Sn	21 12 52.0	-0.6
KKO				IAML		21 12 52.3	
	comp=E,696nm,0.2s						
KKO				IAML		21 12 52.7	
	comp=N,1μm,0.5s						
NPH	**North Pit**	**0.53**	**21**		Pn	21 12 44.8	0.0
NPH					Sn	21 12 52.1	-0.7
OBL	**Observatory Le**	**0.53**	**21**		Sn	21 12 52.4	-0.5
UWE	**Uwekahuna**	**0.53**	**20**		Pn	21 12 45.0	+0.1
UWE	**Uwekahuna**	**0.53**	**20**		Sn	21 12 52.4	-0.5
BYL	**Byron's Ledge**	**0.54**	**23**	Sn	Sn	21 12 52.2	-0.7
BYL				IAML		21 12 52.5	
	comp=N,482nm,0.4s						
BYL				IAML		21 12 53.6	
	comp=E,551nm,0.4s						
HATHI	**Halemaʻumaʻu T**	**0.55**	**23**	IAML		21 12 52.9	
	comp=E,732nm,0.4s						
HATHI				IAML		21 12 56.8	
	comp=N,718nm,0.4s						
SBLHI	**Steaming Bluff**	**0.55**	**22**	IAML		21 12 52.9	
	comp=E,461nm,0.7s						
SBLHI				IAML		21 12 58.6	
	comp=N,760nm,0.5s						
MWH	**Mokuʻaweowe**	**0.58**	**349**		Pn	21 12 45.2	-0.6
STCH	**Steam Cracks**	**0.58**	**36**		Pn	21 12 45.5	0.0
STCH				IAML		21 12 53.6	
	comp=N,578nm,0.4s						
STCH				IAML		21 12 54.5	
	comp=E,543nm,0.1s						
RSD	**Rainshed**	**0.58**	**20**		Sn	21 12 52.8	-1.2
RSD				IAML		21 13 02.6	
	comp=N,516nm,3.2s						
MLH	**Mauna Loa**	**0.58**	**9**	IAML		21 12 53.8	
	comp=E,588nm,0.3s						
JCUZ	**Jacuzzi**	**0.59**	**38**		Pn	21 12 46.0	+0.4
JCUZ	**Jacuzzi**	**0.59**	**38**	IAML		21 12 53.9	
	comp=E,649nm,0.7s						
JCUZ				IAML		21 13 12.2	
	comp=N,496nm,0.7s						
NPOC	**North of Puʻu**	**0.59**	**37**	Sn	Sn	21 12 53.6	-0.5
NPOC				IAML		21 13 01.8	
	comp=N,404nm,0.9s						
NPOC	**North of Puʻu**	**0.59**	**37**		Pn	21 12 45.8	+0.2
MLOA	**Mauna Loa Obse**	**0.62**	**352**		Pn	21 12 45.9	-0.5
MLOA				IAML		21 12 54.1	
	comp=N,725nm,0.3s						
HMH	**Humuʻula Sheep**	**0.68**	**360**		Pn	21 12 47.1	0.0
HMH				IAML		21 12 56.0	
	comp=E,712nm,0.3s						
KHLU	**Kahalu`u**	**0.78**	**330**		Pn	21 12 47.1	-1.0
KHLU					Sn	21 12 56.4	-2.3
HUH	**Hualalai**	**0.83**	**337**		Pn	21 12 48.5	-0.6
HUH				Sn	Sn	21 12 59.1	-1.3
HUH				IAML		21 13 01.2	
	comp=E,636nm,0.1s						
POHA	**Pohakuloa**	**0.84**	**357**	Pn	Pn	21 12 48.4	-0.8
POHA				IAML		21 12 59.0	
	comp=E,371nm,0.2s						
POHA				IAML		21 13 04.0	
	comp=E,401nm,0.2s						
MHA	**Mahukona**	**1.33**	**343**	Pn	Pn	21 12 56.8	+1.2
HLK	**Haleakala**	**1.97**	**339**	Pn	Pn	21 13 06.1	+1.4
KHLH	**Kahului Airpor**	**2.16**	**336**	Pn	Pn	21 13 07.0	-0.1

*IDC **09** 21:14:22.0±1.8, 13°.57S×166°.50E, h0^{km}, mb3.8/6,*
mbtmp3.7/7, ML3.1/1, MS3.4/5, Error ellipse: s-maj=48.2km
s-min=26.9km az=100.0
ISC 09 21:14:27.9±1.6**,13°.6S**±0°.1×**166°.5E**±0°.3**,h39**^{km}**,n11,**
σ**1**^{s}.**11**/9**,mb3.6**/6**,MS3.1**/4**,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.61**	**302**	LR	LR	21 19 08.2	
	comp=Z,1μm,19.7s,baz=178,slow=38						
DZM	**Mont Dzumac**	**8.44**	**180**	Pn	**Pn**	**21 16 27.3**	**-0.5**
	0.2nm,0.3s,baz=356,slow=22,SNR=1.9						
DZM				Sn	**Sn**	**21 18 02.8**	**+0.9**
	0.3nm,0.3s,baz=16,slow=22,SNR=1.2						
	4.7nm,0.8s						
AFI	**Afiamalu**	**21.14**	**93**	LR	LR	21 24 58.4	
	comp=Z,38nm,19.3s,baz=134,slow=30						
STKA	**Stephens Creek**	**29.17**	**227**	P	**P**	**21 20 25.7**	**+0.1**
	1.1nm,0.8s,baz=62,slow=12,SNR=4.1						
	1.1nm,0.8s						
WRA	**Warramunga Arr**	**31.37**	**254**	P	**P**	**21 20 44.6**	**-0.6**
	0.5nm,0.5s,baz=85,slow=9.3,SNR=9.6						
WRA				LR	LR	21 32 20.4	
	comp=Z,44nm,18.4s,baz=172,slow=34						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**32.38**	**247**	P	**P**	**21 20 53.3**	**-0.8**
	0.6nm,0.6s,baz=72,slow=9.5,SNR=11						
ASAR				LR	LR	21 32 23.7	
	comp=Z,71nm,18.6s,baz=152,slow=33						
	0.6nm,0.6s						
GUMO	**Guam**	**34.45**	**321**	LR	LR	21 33 42.8	
	comp=Z,36nm,21.9s,baz=137,slow=34						
CMAR	**Chiang Mai Arr**	**73.78**	**294**	P	**P**	**21 26 00.1**	**+1.4**
	0.7nm,0.3s,baz=116,slow=3.8,SNR=5.9						
	0.7nm,0.3s						
SONM	**Songino Array**	**81.12**	**324**	P	**P**	**21 26 40.4**	**+1.2**
	0.3nm,0.7s,baz=133,slow=5.9,SNR=2.1						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**95.84**	**317**	P	**P**	**21 27 49.1**	**-1.2**
	0.2nm,0.6s,baz=134,slow=4.2,SNR=1.8						
	0.2nm,0.6s						
ARCES	**ARCESS Array B**	**118.95**	**345**	PKP	**PKPdf**	**21 33 10.9**	**-0.8**
	0.8nm,0.5s,baz=54,slow=2.2,SNR=7.9						

*LDG **09** 21:22:31.2±0.1, 47°.27N×3°.42W, h3^{km}, Md2.7/1, Ml2.6/24,*
Error ellipse: s-maj=1.9km s-min=1.2km az=66.0
*STR **09** 21:22:32.9±0.8, 47°N±6°×°±°, h9^{km}, MLv2.5/5, Error*
ellipse: s-maj=0.0km s-min=0.0km az=48.6, preliminary
ISC 09 21:22:30.4±1.2**,47°.24N**±0°.03×**3°.37W**±0°.04**,h15**^{km}±9^{km}**,**
n46,σ**1**^{s}.**31**/83**,1C,France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QUIF	**Quistinic**	**0.69**	**11**	*e*Pg	**Pg**	**21 22 44.1**	**+0.3**
QUIF	**Quistinic**	**0.69**	**11**	*e*Pn	**Pb**	**21 22 45.5**	**+1.4**
QUIF				*e*Sg	**Sg**	**21 22 52.2**	**-0.8**
	40nm,0.2s						
QUIF				*e*Sn	**Sb**	**21 22 56.7**	**+3.2**
	11nm,0.1s						
ROSF	**Rostrenen**	**1.10**	**3**	*e*Pg	**Pg**	**21 22 51.1**	**-0.5**
ROSF				*e*Sg	**Sg**	**21 23 05.2**	**-0.7**
	44nm,0.3s						
ROSF	**Rostrenen**	**1.10**	**3**	⇑Pg	**Pg**	**21 22 51.3**	**-0.2**
ROSF				Sg	**Sg**	**21 23 04.6**	**-1.3**
SGMF	**Saint Gilles**	**1.15**	**28**	*e*Pg	**Pg**	**21 22 52.4**	**-0.2**
SGMF	**Saint Gilles**	**1.15**	**28**	*e*P	**Pn**	**21 22 53.7**	**+1.7**
SGMF				*e*Sg	**Sb**	**21 23 07.6**	**+0.8**
	10.0nm,0.2s						
CAMF	**Camaret-sur-Me**	**1.33**	**321**	Pn	**Pn**	**21 22 54.9**	**+0.4**
CAMF				Sg	**Sb**	**21 23 10.4**	**-1.5**
GRR	**Gorron**	**2.04**	**55**	*e*Pn	**Pn**	**21 23 04.7**	**+0.5**
GRR	**Gorron**	**2.04**	**55**	*e*Pg	**Pg**	**21 23 09.1**	**-0.5**
GRR				*e*Sn	**Sn**	**21 23 29.9**	**+0.4**
GRR				*e*Sg	**Sg**	**21 23 36.2**	**+0.1**
	7.5nm,0.2s						
JSA	**Saint Aubin**	**2.11**	**22**	Pg	**Pg**	**21 23 10.8**	**0.0**
JSA	**Saint Aubin**	**2.11**	**22**	Sn	**Sn**	**21 23 30.9**	**-0.1**
JSA	**Saint Aubin**	**2.11**	**22**	Pn	**Pn**	**21 23 05.5**	**+0.4**
MFF	**Saint Martin d**	**2.30**	**105**	*e*Pn	**Pn**	**21 23 07.9**	**+0.2**
MFF	**Saint Martin d**	**2.30**	**105**	*e*Pg	**Pg**	**21 23 14.5**	**+0.1**
MFF				*e*Sg	**Sg**	**21 23 43.8**	**-0.4**
	12nm,0.3s						
MFF	**Saint Martin d**	**2.30**	**105**	Pn	**Pn**	**21 23 10.8**	**+3.0**
MFF	**Saint Martin d**	**2.30**	**105**	Pg	**Pg**	**21 23 16.7**	**+2.2**
MFF	**Saint Martin d**	**2.30**	**105**	Sn	**Sb**	**21 23 39.6**	**-0.1**
MFF				Sg	**Sg**	**21 23 46.9**	**+2.7**
CHIF	**Chize**	**2.32**	**117**	Pn	**Pn**	**21 23 11.2**	**+3.2**
CHIF				Pg	**Pg**	**21 23 17.1**	**+2.3**
FLN	**La Foliniere**	**2.46**	**51**	*e*Pn	**Pn**	**21 23 10.4**	**+0.4**
	baz=230						
FLN	**La Foliniere**	**2.46**	**51**	*e*Pg	**Pg**	**21 23 17.3**	**-0.3**
	baz=228						
FLN				*e*Sn	**Sn**	**21 23 39.5**	**-0.4**
FLN				*e*Sg	**Sg**	**21 23 48.1**	**-1.4**
	7.4nm,0.3s						
LDF	**La Druitiere**	**2.57**	**57**	*e*Pn	**Pn**	**21 23 12.0**	**+0.5**
LDF	**La Druitiere**	**2.57**	**57**	*e*Pg	**Pg**	**21 23 19.1**	**-0.5**
LDF				*e*Sn	**Sn**	**21 23 42.3**	**-0.1**
LDF				*e*Sg	**Sg**	**21 23 52.5**	**-0.4**
	5.5nm,0.2s						
LFF	**La Frestale**	**3.67**	**127**	*e*Pn	**Pn**	**21 23 26.8**	**+0.2**
LFF	**La Frestale**	**3.67**	**127**	*e*Pg	**Pg**	**21 23 40.1**	**-0.5**
LFF				*e*Sn	**Sn**	**21 24 08.4**	**-1.2**
	1.8nm,0.3s						
LFF				*e*Sg	**Sg**	**21 24 27.2**	**-0.9**
	3.5nm,0.3s						
RJF	**Les Rejaudoux**	**3.90**	**118**	*e*Pn	**Pn**	**21 23 30.4**	**+0.6**
RJF	**Les Rejaudoux**	**3.90**	**118**	*e*Pg	**Pg**	**21 23 44.6**	**-0.5**
RJF				*e*Sn	**Sn**	**21 24 14.1**	**-1.2**
	0.9nm,0.2s						
RJF				*e*Sg	**Sg**	**21 24 34.4**	**-1.2**
	2.9nm,0.3s						
TCF	**Toulx Ste Croi**	**3.95**	**102**	*e*Pn	**Pn**	**21 23 31.5**	**+1.0**
TCF	**Toulx Ste Croi**	**3.95**	**102**	*e*Pg	**Pg**	**21 23 44.7**	**-1.3**
TCF				*e*Sn	**Sn**	**21 24 15.9**	**-0.7**
TCF				*e*Sg	**Sg**	**21 24 36.1**	**-1.0**
	2.3nm,0.3s						
HYF	**Humbligny**	**4.09**	**87**	*e*Pn	**Pn**	**21 23 33.5**	**+1.1**
HYF	**Humbligny**	**4.09**	**87**	*e*Pg	**Pg**	**21 23 47.8**	**-0.9**
HYF				*e*Sn	**Sn**	**21 24 19.2**	**-0.8**

HYF				eSg	Sg	21 24 40.8	-0.9
BGF	Bois d'Agland	4.31	97	ePn	Pn	21 23 36.5	+1.0
BGF				eSn	Sn	21 24 24.9	-0.6
BGF				eSg	Sg	21 24 46.9	-1.9
	8.9nm,0.4s						
SJPF	Ste Jean	4.40	159	ePn	Pn	21 23 37.5	+0.9
SJPF	Ste Jean	4.40	159	ePg	Pb	21 23 53.0	+5.7
SJPF				eSn	Sn	21 24 25.9	-1.7
	0.9nm,0.3s						
CAF	Calviac	4.43	120	ePn	Pn	21 23 37.2	+0.1
CAF	Calviac	4.43	120	eP	Pn	21 23 40.7	+3.6
CAF	Calviac	4.43	120	ePg	Pg	21 23 55.3	+0.1
CAF				eSn	Sn	21 24 26.8	-1.7
	1.3nm,0.3s						
CAF				eSg	Sg	21 24 51.1	-1.5
	2.5nm,0.3s						
AVF	Avril sur Loir	4.62	93	ePn	Pn	21 23 40.4	+0.8
AVF				eSn	Sn	21 24 31.1	-1.9
AVF				eSg	Sg	21 24 57.4	-1.2
	1.8nm,0.3s						
SSF	Saint Saulge	4.69	90	ePn	Pn	21 23 41.3	+0.6
SSF	Saint Saulge	4.69	90	ePg	Pg	21 23 58.4	-1.8
SSF				eSn	Sn	21 24 34.0	-0.8
SSF				eSg	Sg	21 24 59.5	-1.5
	1.7nm,0.3s						
LOR	Lormes	4.92	87	ePn	Pn	21 23 44.4	+0.6
	baz=265						
LOR				eSn	Sn	21 24 38.4	-2.1
	0.7nm,0.3s						
LOR				eSg	Sg	21 25 06.4	-1.9
	1.4nm,0.3s						
EPF	Esparros	4.96	147	ePn	Pn	21 23 45.0	+0.6
EPF				eSn	Sn	21 24 40.2	-1.3
EPF				eSg	Sg	21 25 08.4	-1.1
	0.8nm,0.2s						
SMF	Signal de Mont	4.97	94	ePn	Pn	21 23 45.2	+0.7
SMF				eSn	Sn	21 24 40.3	-1.5
SMF				eSg	Sg	21 25 07.7	-2.2
	0.9nm,0.2s						
MTLF	Montolieu	5.54	133	ePn	Pn	21 23 53.5	+1.2
SFTF	Sexfontaines	5.75	77	ePn	Pn	21 23 56.1	+0.9
BAIF	Baives	5.76	58	ePn	Pn	21 23 55.6	+0.4
MEZF	Maizieres J’vi	5.80	74	ePn	Pn	21 23 55.5	-0.4

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*SOME **09** 21:24:22.9, 37°.63N×71°.40E, h0^{km}*
*NNC **09** 21:24:28.9±5.3, 36°.92N×70°.71E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=49.4km s-min=37.7km az=127.0*
ISC 09 21:24:28.2±4.1**, 36°.6N**±0°.3×**70°.8E**±0°.2**, h100^{km}, n5, σ0^{s}.96**/7**, 1C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	5.60	354	ePg	Pn	21 25 50.0	+0.9
	4.0nm,0.1s						
IUG				eLg	Lg	21 26 52.3	
	23nm,0.2s						
AML	Almayashu	5.99	21	⇓P	Pn	21 25 55.1	+0.4
	0.2nm,0.2s						
AML				⇑S	Sn	21 27 01.7	-0.4
	4.0nm,0.7s						
MRKS	Merke	6.44	16	ePg	Pn	21 26 01.0	+0.4
	3.4nm,0.2s						
MRKS				eLg	Lg	21 27 11.8	
	8.2nm,0.3s						
KK31	Karatay Array	6.53	358	P	Pn	21 26 02.9	+1.2
	3.1nm,0.3s,baz=176,slow=12,SNR=67						
KK31				⇓S	Sn	21 27 14.3	-0.3
	1.6nm,0.4s,baz=183,slow=20,SNR=8.5						
AB31	Akbulak array	14.94	331	P	Pn	21 27 53.1	-0.9
	0.4nm,0.5s,baz=149,slow=13,SNR=13						

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*DDA **09** 21:37:31.7±0.0, 35°.22N×30°.84E, h7^{km}±2^{km}, ML2.8*
*ISK **09** 21:37:32.3, 35°.03N×30°.78E, h84^{km}, ML3.1/18*
*GII **09** 21:37:33.0±0.5, 35°.11N×30°.78E, h100^{km}, Mm2.9/2*
*NIC **09** 21:37:33.8±0.0, 35°.08N×30°.95E, h9^{km}±1^{km}, Ml3.0/5*
ISC 09 21:37:35.0±1.2**, 35°.07N**±0°.03×**30°.79E**±0°.03**, h55^{km}**±34^{km}**, n58, σ1^{s}.26**/91**, 1D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKMS	Akamas	1.27	92	⇓eP	Pn	21 37 55.5	-0.9
AKMS				S	Sn	21 38 12.1	-0.5
AKMS				AML	AML	21 38 14.0	
	1.5nm,0.2s						
AKMS				AML	AML	21 38 14.0	
	0.9nm,0.2s						
AKMS				AML	AML	21 38 14.0	
	1.5nm,0.2s						
AKMS				AML	AML	21 38 14.0	
	0.9nm,0.2s						
ALFC	Alefka	1.49	86	P	Pn	21 37 58.6	-0.8
ALFC				S	Sn	21 38 18.3	+0.5
ALFC				AML	AML	21 38 20.1	
	0.7nm,0.3s						
ALFC				AML	AML	21 38 20.1	
	0.7nm,0.3s						
ALFC				AML	AML	21 38 20.2	
	0.7nm,0.3s						
ALFC				AML	AML	21 38 20.2	
	0.7nm,0.3s						
NATA	Nata	1.49	101	P	Pn	21 37 58.8	-0.7
NATA				S	Sn	21 38 17.9	0.0
NATA				AML	AML	21 38 23.2	
	1.5nm,0.3s						
NATA				AML	AML	21 38 23.2	
	1.5nm,0.3s						
NATA				AML	AML	21 38 31.5	
	1.5nm,0.4s						
NATA				AML	AML	21 38 31.5	
	1.5nm,0.4s						
AKAS	Kas	1.51	321	Pn	Pn	21 38 01.2	+1.3
OSC1	CSNet OBS 1	1.61	165	P	Pn	21 38 03.8	+2.7
OSC1				S	Sn	21 38 24.3	+3.6
GAZI	Gazipasa	1.71	46	Pn	Pn	21 38 01.5	-0.9
GAZI				Sn	Sn	21 38 23.8	+0.7
GAZI	Gazipasa	1.71	46	P	Pn	21 38 01.3	-1.1
GAZI				S	Sn	21 38 21.3	-1.8
TROD	Troodos	1.71	93	P	Pn	21 38 02.7	0.0
TROD				S	Sn	21 38 23.7	+0.2
LEF	Lefka	1.72	88	Pn	Pn	21 38 01.4	-1.2
LEF				Sn	Sn	21 38 22.9	-0.6
LEF	Lefka	1.72	88	P	Pn	21 38 01.9	-0.7
LEF				S	Sn	21 38 23.1	-0.4
SZAC	Souni	1.75	100	P	Pn	21 38 02.2	-0.8
SZAC				S	Sn	21 38 25.0	+0.9
SZAC				AML	AML	21 38 28.5	
	0.6nm,0.3s						
SZAC				AML	AML	21 38 28.5	
	0.6nm,0.3s						
SZAC				AML	AML	21 38 30.2	
	0.7nm,0.3s						
SZAC				AML	AML	21 38 30.2	
	0.7nm,0.3s						
AKDN	Akdeniz- Kıbrı	1.80	82	Pn	Pn	21 38 03.4	-0.2
ELL	Elmali	1.83	337	Pn	Pn	21 38 03.7	-0.4
KEPZ	Antalya-Kepez	1.95	20	P	Pn	21 38 06.3	+0.6
KEPZ				S	Sn	21 38 29.6	+0.5
KORT	Korkueli	1.96	350	Pn	Pn	21 38 05.9	-0.1
KORT	Korkueli	1.96	350	P	Pn	21 38 07.9	+1.8
ASGA	Asgata	2.04	97	P	Pn	21 38 06.3	-0.6
ASGA				S	Sn	21 38 31.7	+0.4
ASGA				AML	AML	21 38 36.5	
	0.3nm,0.3s						
ASGA				AML	AML	21 38 36.5	
	0.3nm,0.3s						
ASGA				AML	AML	21 38 50.1	
	0.3nm,0.6s						
ASGA				AML	AML	21 38 50.1	
	0.3nm,0.6s						
CSS	Mathiatis	2.09	92	P	Pn	21 38 07.4	-0.2
CSS				S	Sn	21 38 33.4	+0.8
CSS	Mathiatis	2.09	92	Pn	Pn	21 38 07.2	-0.4
CSS				Sn	Sn	21 38 33.3	+0.8
FETY	Fethiye	2.09	319	Pn	Pn	21 38 06.7	-1.0
FETY	Fethiye	2.09	319	P	Pn	21 38 07.9	+0.3
TEKE	Tekeli-Mersin	2.18	60	Pn	Pn	21 38 08.3	-0.5
TEKE				Sn	Sn	21 38 34.9	+0.3
CAME	Cameli-Denizli	2.23	328	Pn	Pn	21 38 08.8	-0.9
MVOU	Mavrovouni	2.33	90	P	Pn	21 38 10.4	-0.5
HDMB	Hadim	2.34	35	Pn	Pn	21 38 10.7	-0.6
BERE	Bereket-Mersin	2.36	56	Pn	Pn	21 38 11.4	0.0
BERE				Sn	Sn	21 38 38.8	-0.5
GOLH	Golhisar	2.38	336	P	Pn	21 38 11.8	+0.1
GOLH				S	Sn	21 38 40.1	+0.3
GOLH				*i* AML	AML	21 39 10.0	
	comp=Z,45nm,3.3s						
GOLH				*i* AML	AML	21 39 39.0	
	comp=N,48nm,2.6s						
SUTC	Sutluce-Ispart	2.41	4	Pn	Pn	21 38 12.3	+0.1
ARG	Arkhangelos	2.45	299	Pn	Pn	21 38 12.5	-0.1
DALY	Dalyan (Mula)	2.46	316	Pn	Pn	21 38 12.3	-0.4
SEYD	Seydisehir-KON	2.48	20	Pn	Pn	21 38 13.1	0.0
GULN	MERSIN_Gulnar	2.51	63	P	Pn	21 38 13.9	+0.6
GULN				S	Sn	21 38 41.4	-1.2
GULN				*i* AML	AML	21 38 58.0	
	comp=Z,64nm,2.0s						
GULN				*i* AML	AML	21 38 58.0	
	comp=N,42nm,1.8s						
SEDI	Konya, Seydise	2.51	18	P	Pn	21 38 15.8	+2.3
SEDI				S	Sn	21 38 45.1	+2.3
TEVE	Tevekalti-Mers	2.56	57	Pn	Pn	21 38 13.9	-0.2
TURN	Turunc	2.68	310	Pn	Pn	21 38 15.3	-0.3
APMY	Acipayam-Deniz	2.69	334	Pn	Pn	21 38 15.6	-0.3
APMY				Sn	Sn	21 38 47.3	+0.1
BRDR	BURDUR-Merkez	2.69	348	P	Pn	21 38 16.3	+0.4
BRDR				S	Sn	21 38 48.3	+1.0
KKBE	Karaman, Kazim	2.77	38	P	Pn	21 38 18.5	+1.6
KKBE				S	Sn	21 38 52.2	+2.9
TAVA	DENIZLI_Tavas	2.83	328	P	Pn	21 38 17.9	0.0
TAVA				S	Sn	21 38 47.3	-3.6
TAVA				*i* AML	AML	21 39 06.0	
	comp=Z,38nm,3.1s						
YER	Yerkesik	2.90	316	Pn	Pn	21 38 18.1	-0.6
DNIZ	Denizli-Tavas-	2.92	332	P	Pn	21 38 17.7	-1.3
DNIZ				S	Sn	21 38 50.0	-3.0
DNIZ				*i* AML	AML	21 38 56.0	
	comp=E,51nm,0.3s						
KMER	Konya-Meram	2.98	25	P	Pn	21 38 21.3	+1.3
KMER				S	Sn	21 38 56.5	+1.9
KIZK	Mersin	3.07	62	P	Pn	21 38 21.2	+0.2
KIZK				S	Sn	21 38 57.3	+0.7
KIZK				*i* AML	AML	21 39 03.0	
	comp=E,28nm,0.9s						
KIZK				*i* AML	AML	21 39 07.0	
	comp=Z,39nm,1.1s						
DOGA	KONYA_Doganhis	3.12	13	P	Pn	21 38 22.5	+0.7
KZIL	AFYON_Kizioren	3.23	351	P	Pn	21 38 23.5	+0.2
KERG	Konya-Eregli	3.57	48	P	Pn	21 38 29.4	+1.4
KERG				S	Sn	21 39 11.2	+2.1
KDHN	Kadinhani	3.61	17	P	Pn	21 38 30.1	+1.6
KDHN				S	Sn	21 39 09.5	-0.5
MMA0B	Mount Meron ar	4.34	117	Pn	Pn	21 38 37.1	-1.4
MMA0B				Sn	Sn	21 39 26.6	-1.3
GEM	Giv'at Ha'Em	4.45	113	Pn	Pn	21 38 39.1	-0.8
GEM				Sn	Sn	21 39 29.4	-0.9
MMLI	Mount Malkishu	4.66	123	Pn	Pn	21 38 42.3	-0.6
MMLI				Sn	Sn	21 39 34.9	-0.9
APE	Apeiranthos	4.71	297	Pn	Pn	21 38 40.6	-2.9
HMDT	Nahal Hemdat	4.84	124	Pn	Pn	21 38 44.6	-0.7
HMDT				Sn	Sn	21 39 40.1	0.0
KZIT	Kziot	5.14	143	Pn	Pn	21 38 48.8	-0.6
PRNI	Paran	5.89	142	Pn	Pn	21 38 59.3	-0.4
KRMI	Paran Flat	5.95	145	Pn	Pn	21 38 59.0	-1.5
HRFI	Mount Harif	6.16	143	Pn	Pn	21 39 02.4	-1.1
HRFI				Sn	Sn	21 40 09.4	-3.2
MBRI	Mt Berech	6.31	145	Pn	Pn	21 39 05.6	+0.1
EIL	Elat	6.43	146	Pn	Pn	21 39 05.9	-1.2

IDC 09 21:42:30.1±17.0**, 27°.02N**×**143°.19E, h0^{km}, mb3.5**/3**, mbtmp3.6**/4**, ML3.0**/1**, MS2.8**/1**, Error ellipse: s-maj=427.1km s-min=93.6km az=92.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	10.39	337	Pn	Pn	21 44 59.8	-0.7
	0.1nm,0.3s,baz=160,slow=12,SNR=6.0						
	2.1nm,0.5s						
KLR	Kul'dur	23.88	341	LR	LR	21 57 15.6	
	comp=Z,19nm,18.3s,baz=191,slow=37						
SONM	Songino Array	35.39	316	P	P	21 49 28.2	+0.5
	0.2nm,0.5s,baz=117,slow=9.3,SNR=2.0						
	0.2nm,0.5s						
MKAR	Makanchi Array	51.21	310	P	P	21 51 35.2	-0.1
	0.3nm,0.4s,baz=89,slow=8.2,SNR=12						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	53.73	314	P	P	21 51 53.5	-0.4
	0.6nm,0.6s,baz=90,slow=8.1,SNR=12						
	0.6nm,0.6s						

IDC 09 21:44:22.1±1.9**, 6°.66S**×**128°.52E, h0^{km}, mb3.1**/1**, mbtmp3.1**/4**, ML3.2**/3**, Error ellipse: s-maj=64.4km s-min=30.7km az=79.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.37	26	Pn	Pn	21 45 59.3	+2.0
	0.7nm,0.3s,baz=41,slow=23,SNR=1.5						
SIJI				Sn	Sn	21 46 60.0	-11
	1.4nm,0.3s,baz=196,slow=22,SNR=8.8						
	2.8nm,0.4s						
WRA	Warramunga Arr	14.37	157	Pn	Pn	21 47 46.6	-0.3
	0.1nm,0.3s,baz=340,slow=12,SNR=7.7						
WRA				Sn	Sn	21 50 15.3	-12
	0.1nm,0.3s,baz=55,slow=28,SNR=4.7						
	0.1nm,0.3s						
ASAR	Alice Springs	17.69	164	P	P	21 48 30.6	-0.4
	baz=343,slow=9.0,SNR=1.6						
	0.1nm,0.5s						
MKAR	Makanchi Array	67.14	327	P	P	21 55 17.1	-0.7
	0.1nm,0.5s,baz=116,slow=5.8,SNR=1.9						
	0.1nm,0.5s						

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*HVO **09** 22:01:02.1±0.5, 19°.4N±0°.1×155°.23W±0°.07, h31^{km}±3^{km}, ML2.5/20, ML2.7/50(NEIC), Error ellipse: s-maj=17.7km s-min=7.9km az=202.0*
NEIC 09 22:01:01.2±0.4**, 19°.4N**±0°.6×**155°.3W**±0°.4**, h33^{km}**±14^{km}**, Error ellipse: s-maj=107.8km s-min=10.4km az=211.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATHI	Halema‘uma‘u T	0.02	223		Pb	22 01 06.9	+0.2
HATHI					Sb	22 01 10.2	-0.4
SBLHI	Steaming Bluff	0.02	241		Pb	22 01 05.6	-1.1
SBLHI					Sb	22 01 10.3	-0.3
BYL	Byron's Ledge	0.03	207	IAML		22 01 10.7	
	comp=N,718nm,0.3s						
BYL				IAML		22 01 10.7	
	comp=E,808nm,0.2s						
BYL	Byron's Ledge	0.03	207		Pb	22 01 06.8	0.0
BYL					Sb	22 01 10.5	-0.1
UWB	Uwekahuna B	0.03	245		Sb	22 01 10.1	-0.6
UWB	Uwekahuna B	0.03	245		Pb	22 01 06.8	0.0
UWB	Uwekahuna B	0.03	245	IAML		22 01 09.2	
	comp=E,253nm,1.9s						
UWB				IAML		22 01 09.7	
	comp=N,408nm,2.0s						
RSD	Rainshed	0.04	308		Pb	22 01 07.1	+0.3
RSD					Sb	22 01 11.0	+0.2
RSD	Rainshed	0.04	308	IAML		22 01 12.1	
	comp=N,678nm,0.1s						
RSD				IAML		22 01 12.7	
	comp=E,824nm,0.1s						
OBL	Observatory Le	0.04	240	IAML		22 01 11.9	
	comp=E,2µm,0.7s						
OBL				IAML		22 01 15.0	
	comp=N,1µm,0.5s						
OBL	Observatory Le	0.04	240		Pb	22 01 06.9	+0.1
OBL					Sb	22 01 10.7	0.0
NPH	North Pit	0.04	231		Pb	22 01 06.8	0.0
KKO	Keanakako`i	0.04	205		Sb	22 01 10.6	-0.1
KKO	Keanakako`i	0.04	205		Pb	22 01 06.7	-0.1
KKO	Keanakako`i	0.04	205	IAML		22 01 12.1	
	comp=E,661nm,0.9s						
KKO				IAML		22 01 14.8	
	comp=N,930nm,0.7s						
UWE	Uwekahuna	0.05	248		Pb	22 01 07.0	+0.1
UWE					Sb	22 01 10.7	0.0
UWE				IAML		22 01 11.3	
	comp=N,891nm,0.4s						
UWE				IAML		22 01 12.3	
	comp=E,2µm,1.7s						
RIM	Rim	0.05	212		Pb	22 01 06.8	0.0
RIM				IAML		22 01 17.0	
	comp=N,903nm,1.1s						
RIM				IAML		22 01 17.1	
	comp=E,746nm,1.5s						
WRMHI	West Rim	0.06	238		Pb	22 01 06.9	0.0
SDHHI	Sand Hill	0.07	223	IAML		22 01 10.8	
	comp=E,1µm,0.4s						
SDHHI				IAML		22 01 13.3	
	comp=N,1µm,0.2s						
SDHHI	Sand Hill	0.07	223		Pb	22 01 06.9	0.0
SDHHI					Sb	22 01 10.6	-0.2
PUH	Pauahi	0.07	157		Pb	22 01 07.0	+0.1
PUH					Sb	22 01 10.3	-0.5
PUH				IAML		22 01 10.6	
	comp=E,2µm,0.2s						
PUH				IAML		22 01 11.4	
	comp=N,2µm,0.4s						
KNHH	Kane Nui o Ham	0.09	130		Pb	22 01 07.0	0.0
STCH	Steam Cracks	0.13	115		Pb	22 01 07.1	0.0
STCH	Steam Cracks	0.13	115		Sb	22 01 10.6	-0.6
STCH				IAML		22 01 10.9	
	comp=E,7µm,0.1s						
STCH				IAML		22 01 10.9	
	comp=N,6µm,0.1s						
NPOC	North of Pu‘u	0.14	110		Pb	22 01 07.2	0.0
NPOC					Sb	22 01 10.8	-0.6
NPOC	North of Pu‘u	0.14	110	IAML		22 01 11.2	
	comp=N,1µm,0.2s						
MLH	Mauna Loa	0.14	292		Pb	22 01 08.0	+0.5
MLH	Mauna Loa	0.14	292		Sb	22 01 12.2	+0.3
MLH				IAML		22 01 12.3	
	comp=E,1µm,0.3s						
MLH				IAML		22 01 12.8	
	comp=N,1µm,0.2s						
JCUZ	Jacuzzi	0.15	112		Pb	22 01 07.5	+0.2
JCUZ					Sb	22 01 11.0	-0.6
JCUZ				IAML		22 01 11.1	
	comp=E,1µm,0.4s						
JCUZ				IAML		22 01 11.7	
	comp=N,778nm,0.4s						
HLP	Hilina Pali	0.15	203		Pb	22 01 07.3	0.0
HLP					Sb	22 01 11.1	-0.5
HLP	Hilina Pali	0.15	203	IAML		22 01 11.3	
	comp=E,1µm,0.2s						
HLP				IAML		22 01 11.4	
	comp=N,2µm,0.2s						
AIN	Ainahou	0.21	252		Pb	22 01 08.3	+0.2
AIN					Sb	22 01 12.8	+0.1
AIN	Ainahou	0.21	252	IAML		22 01 13.4	
	comp=N,993nm,0.2s						
AIN				IAML		22 01 13.5	
	comp=E,977nm,0.2s						
JOKA	Jonika Flow	0.23	91		Pb	22 01 07.9	-0.1
JOKA					Sn	22 01 12.0	-0.1
HTC	Hot Caves	0.25	216		Pb	22 01 08.2	-0.1
HMH	Humu‘ula Sheep	0.28	306		Pn	22 01 09.6	+0.4
HMH					Sb	22 01 15.0	+0.8
HMH				IAML		22 01 15.2	
	comp=N,1µm,0.5s						
MLOA	Mauna Loa Obse	0.33	287		Pn	22 01 09.9	-0.1
MLOA					Sb	22 01 15.5	+0.1
MWH	Moku‘aweowe	0.34	278		Pb	22 01 09.8	0.0
MWH					Sb	22 01 15.7	0.0
ALEP	Alea Permanent	0.39	285		Pb	22 01 10.3	-0.1
ALEP					Pn	22 01 16.2	+5.3
KHU	Kahuku	0.40	241		Pb	22 01 09.9	-0.5
KHU					Sb	22 01 15.6	-1.2
KHU				IAML		22 01 15.6	
	comp=N,490nm,0.2s						
KHU				IAML		22 01 16.1	
	comp=E,710nm,0.3s						
POHA	Pohakuloa	0.42	320		Pn	22 01 11.0	-0.2
POHA					Sb	22 01 17.2	0.0
HUH	Hualalai	0.61	294		Pb	22 01 13.6	-0.1
KHLU	Kahalu`u	0.63	284		Pn	22 01 13.2	-0.7
KHLU					Sb	22 01 21.4	-1.2
MHA	Mahukona	0.97	320	Pn	Pn	22 01 17.8	-0.6
MHA				Sn	Sn	22 01 30.0	-1.1
HLK	Haleakala	1.62	324	Pn	Pn	22 01 28.9	+1.3

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*IDC **09** 22:14:27.8±1.6, 5°.89S×151°.02E, h61^{km}±13^{km}, mb3.4/6, mbtmp3.7/7, MS3.3/2, Error ellipse: s-maj=50.9km s-min=9.5km az=128.0*
ISC 09 22:14:26.1±1.1**, 5°.9S**±0°.2×**151°.1E**±0°.3**, h43^{km}, n11, σ1^{s}.66**/12**, mb3.6**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.84	30	P	Pn	22 14 56.0	+0.8
	1µm,0.4s,baz=266,slow=0.9,SNR=57						
KRVT				S	Sn	22 15 20.6	+3.4
	781nm,0.4s,baz=288,slow=17,SNR=4.5						
KRVT				LR	LR	22 15 47.9	
	comp=Z,606nm,18.3s,baz=3.1,slow=43						
PMG	Port Moresby	5.23	228	P	Pn	22 15 44.6	+2.7
	5.8nm,0.3s,baz=144,slow=7.5,SNR=4.0						
PMG				S	Sn	22 16 41.5	+0.5
	28nm,0.8s,baz=101,slow=18,SNR=2.2						
WRA	Warramunga Arr	21.45	228	P	P	22 19 10.2	-0.8
	0.6nm,0.5s,baz=53,slow=10,SNR=11						
WRA				PcP	PcP	22 23 12.4	-0.8
	0.4nm,0.7s,baz=47,slow=2.1,SNR=2.6						
	0.6nm,0.5s						
DZM	Mont Dzumac	21.86	139	LR	LR	22 25 54.1	
	comp=Z,80nm,18.9s,baz=220,slow=31						
ASAR	Alice Springs	24.20	221	P	P	22 19 39.0	+0.1
	1.8nm,0.8s,baz=57,slow=9.2,SNR=20						
	1.8nm,0.8s						
STKA	Stephens Creek	27.32	198	LR	LR	22 31 15.6	
	comp=Z,67nm,18.8s,baz=207,slow=37						
SONM	Songino Array	66.38	329	P	P	22 25 10.1	-0.7
	0.3nm,0.6s,baz=142,slow=6.0,SNR=4.1						
	0.3nm,0.6s						
MKAR	Makanchi Array	80.06	319	P	P	22 26 31.0	-0.5
	0.1nm,0.5s,baz=114,slow=6.4,SNR=3.1						
	0.1nm,0.5s						
ILAR	Eielson Array	83.82	22	P	P	22 26 49.5	-1.3
	0.6nm,0.7s,baz=247,slow=5.4,SNR=8.1						
	0.6nm,0.7s						
NVAR	Mina Array Bea	94.09	52	P	P	22 27 40.8	+0.1
	1.0nm,0.8s,baz=253,slow=6.6,SNR=7.6						
	1.0nm,0.8s						
TORD	Torodi Ar. Bea	149.02	286	PKPbc	PKPbc	22 34 09.3	-1.3
	4.1nm,0.7s,baz=40,slow=3.1,SNR=23						

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*FUNV **09** 22:58:27.7, 7°.57N×72°.33W, h4^{km}, MW3.4*
*RSNC **09** 22:58:31.7±1.0, 7°.48N×72°.37W, h0^{km}±6^{km}, ML2.4*
ISC 09 22:58:27.7±1.3**, 7°.63N**±0°.03×**72°.28W**±0°.03**, h4^{km}**±10^{km}**, n22, σ2^{s}.10**/40**, 1C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	0.24	351	⇑*i*P	Pg	22 58 33.1	+0.8
CAPV				eS	Sg	22 58 37.8	+2.4
PAMC	Pamplona, Colo	0.51	235	⇓*i*P	Pg	22 58 36.8	-0.7
PAMC				eS	Sg	22 58 42.9	-1.3
PAMC				*i*		22 58 53.2	
	comp=Z,106nm,0.2s						
TAMC	Tame, Arauca	1.28	158	eP	Pg	22 58 52.8	+0.5
TAMC				eS	Sb	22 59 09.8	+0.6
TAMC				*i*		22 59 14.2	
	comp=Z,48nm,0.2s						
BARC	Barichara	1.37	221	eP	Pg	22 58 53.1	-0.8
BARC				eS	Sg	22 59 09.3	-2.4
BARC				*i*		22 59 17.3	
	comp=Z,71nm,0.6s						
BRRC	Barranca, Sant	1.52	250	⇓*i*P	Pn	22 58 55.9	+0.3
BRRC				eS	Sn	22 59 15.7	0.0
BRRC				*i*		22 59 24.3	
	comp=Z,44nm,0.2s						
SOCV	Socops	1.55	65	eP	Pn	22 58 56.5	+0.4
SOCV				eS	Sn	22 59 17.9	+1.3
RUSC	La Rusia	1.90	205	eP	Pn	22 59 01.9	+0.5
RUSC				eS	Sn	22 59 25.8	-0.3
RUSC				*i*		22 59 32.0	
	comp=Z,25nm,0.4s						
MCQV	Machiques	2.42	354	eP	Pn	22 59 08.2	+0.2
MCQV				eS	Sn	22 59 37.7	-0.4
PTBC	PUERTO BERRIO,	2.42	244	eP	Pn	22 59 08.5	+0.5
PTBC				eS	Sn	22 59 39.3	+1.2
PTBC				*i*		22 59 42.9	
	comp=Z,100nm,0.6s						

ZARC	**Zaragoza, Cauc**	**2.56**	**267**	*e*P	**Pn**	**22 59 11.4**	**+1.4**
ZARC				*e*S	**Sn**	**22 59 43.8**	**+2.1**
ZARC				*i*		22 59 50.3	
	comp=Z,24nm,0.3s						
UREC	**San Jos de Ur**	**3.23**	**272**	*e*P	**Pn**	**22 59 21.8**	**+2.6**
UREC				*e*S	**Sb**	**23 00 03.7**	**-1.6**
UREC				*i*		23 00 13.3	
	comp=Z,13nm,0.3s						
CURV	**Curarigua**	**3.29**	**44**	*e*P	**Pn**	**22 59 20.7**	**+0.6**
CURV				*e*S	**Sn**	**22 59 58.9**	**-0.9**
NORC	**Norcasia**	**3.29**	**232**	*e*P	**Pn**	**22 59 20.7**	**+0.6**
NORC				*e*S	**Sn**	**23 00 02.4**	**+2.6**
NORC				*i*		23 00 12.4	
	comp=Z,11nm,0.5s						
CHIC	**Chingaza**	**3.31**	**206**	*e*P	**Pn**	**22 59 23.1**	**+2.4**
CHIC				*e*S	**Sn**	**23 00 00.9**	**+0.2**
CHIC				*i*		23 00 16.2	
	comp=Z,5.1nm,0.5s						
HELC	**Santa Helena**	**3.53**	**246**	*e*P	**Pn**	**22 59 25.5**	**+1.9**
HELC				*e*S	**Sb**	**23 00 10.8**	**-3.6**
HELC				*i*		23 00 19.6	
	comp=Z,13nm,0.5s						
SIQV	**Siquisique**	**3.87**	**39**	*e*P	Pn	22 59 27.1	-0.9
SIQV				*e*S	**Sn**	**23 00 12.4**	**-1.5**
GUY2C	**Guyana, Caldas**	**3.89**	**232**	*e*P	**Pn**	**22 59 31.0**	**+2.3**
GUY2C				IAML		23 00 44.3	
	comp=Z,11nm,0.6s						
MAPV	**Macapo**	**4.36**	**60**	*e*P	**Pn**	**22 59 34.1**	**-0.7**
MAPV				*e*S	**Sn**	**23 00 24.1**	**-2.0**
BAUV	**El Baul**	**4.39**	**72**	*e*P	**Pn**	**22 59 34.9**	**-0.3**
BAUV				*e*S	**Sn**	**23 00 24.2**	**-2.5**
BENV	**Beln**	**5.17**	**63**	*e*P	**Pn**	**22 59 45.2**	**-0.7**
BENV				*e*S	**Sn**	**23 00 43.0**	**-3.1**
CACV	**CAICARA DEL OR**	**5.69**	**90**	*e*P	Pn	22 59 59.2	+6.2
CACV				*e*S	**Sn**	**23 01 06.8**	**+8.0**
TACV	**Tcata**	**5.75**	**64**	*e*P	**Pn**	**22 59 53.4**	**-0.6**
TACV				*e*S	Sn	23 00 55.6	-4.9

IDC 09 23:18:59.5±3.0**, 34°.74S**×**179°.67W, h0^{km}, mb3.5**/2**, mbtmp3.5**/3**, ML3.4**/1**, Error ellipse: s-maj=72.0km s-min=45.6km az=123.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**4.36**	**216**	Pn	Pn	23 20 07.0	0.0
	2.0nm,0.3s,baz=30,slow=8.5,SNR=18						
URZ				Sn	Sn	23 20 54.0	-4.5
	4.0nm,0.3s,baz=67,slow=23,SNR=3.6						
	4.8nm,0.3s						
ASAR	**Alice Springs**	**41.68**	**273**	P	P	23 26 50.0	0.0
	0.2nm,0.3s,baz=119,slow=7.1,SNR=6.1						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**43.06**	**278**	P	P	23 27 01.0	-0.3
	0.3nm,0.4s,baz=118,slow=7.6,SNR=6.1						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**148.64**	**336**	PKPbc	PKPbc	23 38 47.2	-0.6
	1.6nm,0.9s,baz=56,slow=3.5,SNR=5.9						

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*IDC **09** 23:31:47.7±1.5, 33°.07N×99°.29E, h0^{km}, mb3.5/3, mbtmp3.4/6, ML3.6/3, MS3.0/6, Error ellipse: s-maj=66.8km s-min=23.4km az=64.0*

ISC 09 23:31:52.3±1.1**, 33°.1N**±0°.1×**99°.3E**±0°.3**, h35^{km}, n10, σ0^{s}.71**/6**, mb3.7**/3**, MS3.0**/4**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**14.54**	**181**	Pn	**Pn**	**23 35 15.0**	**-0.5**
	0.3nm,0.3s,baz=356,slow=12,SNR=6.1						
CMAR				LR	LR	23 41 14.7	
	comp=Z,42nm,19.6s,baz=345,slow=39						
	0.6nm,0.3s						
SONM	**Songino Array**	**15.72**	**18**	Pn	**Pn**	**23 35 30.4**	**-0.7**
	0.1nm,0.3s,baz=195,slow=10,SNR=1.7						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**18.85**	**322**	P	**P**	**23 36 09.1**	**-0.1**
	0.1nm,0.3s,baz=135,slow=13,SNR=7.0						
MKAR				LR	LR	23 44 22.4	
	comp=Z,67nm,20.8s,baz=116,slow=40						
	0.5nm,0.5s						
AAK	**Ala-Archa**	**21.70**	**303**	LR	LR	23 46 04.0	
	comp=Z,54nm,19.1s,baz=84,slow=39						
KURBB	**Kurchatov Arra**	**23.24**	**325**	P	**P**	**23 36 56.7**	**+0.4**
	1.1nm,0.3s,baz=130,slow=8.7,SNR=2.2						
	1.1nm,0.3s						
ZALV	**Zalesovo Beam**	**23.27**	**338**	P	**P**	**23 36 56.9**	**+0.4**
	0.5nm,0.5s,baz=142,slow=8.9,SNR=3.8						
	0.5nm,0.5s						
KSRS	**Korea Array**	**23.78**	**71**	LR	LR	23 46 45.8	
	comp=Z,23nm,18.1s,baz=245,slow=38						
ARU	**Arti**	**36.37**	**322**	LR	LR	23 54 56.2	
	comp=Z,35nm,19.4s,baz=130,slow=38						
NOA	**NORSAR Array B**	**60.77**	**326**	LR	LR	00 11 29.6	
	comp=Z,10nm,18.5s,baz=355,slow=39						
WRA	**Warramunga Arr**	**62.46**	**142**	P	**P**	**23 42 12.8**	**+0.7**
	0.6nm,0.9s,baz=334,slow=6.7,SNR=3.7						
	0.6nm,0.9s						

ROM 09 23:42:19.2±0.1**, 43°.012N**±0°.003×**13°.026E**±0°.004**, h8^{km}, ML1.4**/21**, 5C-2D, Error ellipse: s-maj=0.3km s-min=0.2km az=245.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1219	**Muccia, Frazio**	**0.05**	**342**	P	Pg	23 42 20.8	-0.1
T1219				S	Sg	23 42 21.6	-0.5
T1219				AML	AML		
	comp=E,944µm,0.2s						
T1219				AML	AML		
	comp=E,1052µm,0.3s						
T1219				AML	AML		
	comp=N,1415µm,0.5s						
T1219				AML	AML		
	comp=E,1052µm,0.2s						
T1219				AML	AML		
	comp=N,1370µm,0.4s						
T1219				AML	AML		
	comp=E,1052µm,1.8s						
T1219				AML	AML		
	comp=E,944µm,1.8s						
T1219				AML	AML		
	comp=N,1415µm,1.5s						
T1219				AML	AML		
	comp=N,1370µm,1.6s						
FEMA	**Monte Fema**	**0.05**	**161**	P	Pg	23 42 21.1	+0.1
FEMA				S	Sg	23 42 22.3	-0.1
CESI	**CESI - Serrava**	**0.09**	**265**	P	Pg	23 42 22.0	+0.6
CESI				S	Sg	23 42 23.9	+0.9
CESI				AML	AML		
	comp=N,704µm,1.6s						
CESI				AML	AML		
	comp=E,522µm,0.2s						
T1220	**Camerino, Fraz**	**0.11**	**25**	⇑P	Pg	23 42 22.1	+0.5
T1220				S	Sg	23 42 24.2	+0.8
T1220				AML	AML		
	comp=N,2410µm,0.2s						
T1220				AML	AML		
	comp=E,1895µm,0.7s						
T1220				AML	AML		
	comp=N,2410µm,0.2s						
T1220				AML	AML		
	comp=E,1895µm,1.3s						
T1216	**Preci, Frazion**	**0.12**	**182**	P	Pg	23 42 22.4	+0.5
T1216				S	Sg	23 42 24.9	+1.2
T1216				AML	AML		
	comp=N,508µm,0.2s						
T1216				AML	AML		
	comp=E,542µm,0.3s						
SEF1	**Sefro**	**0.15**	**337**	P	Pg	23 42 22.4	+0.1
SEF1				S	Sg	23 42 25.4	+0.9
CSP1	**Cessapalombo**	**0.15**	**59**	⇑P	Pg	23 42 23.0	+0.5
CSP1				S	Sg	23 42 25.8	+1.1
CSP1				AML	AML		
	comp=E,131µm,1.4s						
CSP1				AML	AML		
	comp=N,190µm,1.3s						
CSP1				AML	AML		
	comp=E,131µm,1.4s						
CSP1				AML	AML		
	comp=N,190µm,0.7s						
CSP1				AML	AML		
	comp=E,131µm,0.6s						
MC2	**Monte Cornacci**	**0.16**	**129**	P	Pg	23 42 23.6	+1.0
MC2				S	Sg	23 42 27.0	+2.1
T1245	**Castelsantange**	**0.20**	**143**	P	Pg	23 42 23.8	+0.6
T1245				S	Sg	23 42 27.2	+1.3
T1245				AML	AML		
	comp=E,184µm,0.6s						
T1245				AML	AML		
	comp=N,260µm,0.4s						
T1245				AML	AML		
	comp=N,324µm,0.4s						
T1245				AML	AML		
	comp=E,184µm,0.6s						
T1245				AML	AML		
	comp=E,218µm,0.7s						
GUMA	**Gualdo di Mace**	**0.23**	**77**	P	Pg	23 42 24.7	+0.9
GUMA				S	Sg	23 42 29.2	+2.2
GUMA				AML	AML		
	comp=E,330µm,0.2s						
GUMA				AML	AML		
	comp=N,268µm,0.2s						
T1215	**Vallo di Nera,**	**0.24**	**209**	⇑P	Pg	23 42 24.8	+0.8
T1215				S	Sg	23 42 28.9	+1.7
MMO1	**Montemonaco**	**0.25**	**117**	⇑P	Pg	23 42 24.7	+0.6
MMO1				S	Sg	23 42 29.0	+1.5
SNTG	**Esanatoglia**	**0.25**	**346**	P	Pg	23 42 24.7	+0.5
SNTG				S	Sb	23 42 29.2	-1.4
SNTG				AML	AML		
	comp=E,61µm,0.9s						
SNTG				AML	AML		
	comp=N,66µm,0.2s						
SNTG				AML	AML		
	comp=E,61µm,1.1s						
T1212	**Cascia, Frazio**	**0.26**	**177**	P	Pg	23 42 25.0	+0.7
T1212				S	Sb	23 42 29.7	-1.2
T1212				AML	AML		
	comp=E,118µm,0.5s						
T1212				AML	AML		
	comp=N,146µm,0.2s						
T1212				AML	AML		
	comp=N,146µm,1.8s						
T1212				AML	AML		
	comp=E,118µm,1.5s						
ASSB	**Assisi San Ben**	**0.27**	**277**	P	Pg	23 42 25.3	+0.7
ASSB				S	Sb	23 42 29.8	-1.3
ASSB				AML	AML		
	comp=E,133µm,0.3s						
ASSB				AML	AML		
	comp=N,160µm,0.3s						
T1217	**Poggiodomo (PG**	**0.31**	**193**	P	Pg	23 42 25.9	+0.7
T1217				S	Sb	23 42 31.4	-0.9
EL6	**Elcito**	**0.32**	**10**	P	Pg	23 42 26.2	+0.6
EL6				S	Sb	23 42 31.8	-0.9
EL6				AML	AML		
	comp=E,228µm,0.8s						
EL6				AML	AML		
	comp=N,209µm,1.1s						
EL6				AML	AML		
	comp=N,208µm,1.1s						
ATCC	**AVT- Casa Cast**	**0.33**	**302**	P	Pg	23 42 26.4	+0.7
ATCC				S	Sb	23 42 32.4	-0.5
ATCC				AML	AML		
	comp=E,86µm,0.6s						
ATCC				AML	AML		
	comp=N,66µm,1.3s						
ATCC				AML	AML		
	comp=E,86µm,1.4s						
ATCC				AML	AML		
	comp=N,66µm,0.7s						
T1241	**Roccafluvione,**	**0.34**	**118**	P	Pg	23 42 26.4	+0.6
T1241				AML	AML		
	comp=E,57µm,0.4s						
T1241				AML	AML		
	comp=N,47µm,1.0s						
T1218	**Civita (PG)**	**0.35**	**169**	P	Pg	23 42 26.4	+0.4
T1218				S	Sb	23 42 32.6	-0.9
CING	**Cingoli**	**0.38**	**19**	⇓P	Pg	23 42 27.3	+0.6
CING				S	Sb	23 42 33.6	-0.8
CING				AML	AML		
	comp=E,119µm,0.2s						
CING				AML	AML		
	comp=N,52µm,1.0s						
CING				AML	AML		
	comp=E,119µm,1.8s						
MOMA	**Monte Martano**	**0.40**	**238**	P	Pg	23 42 27.5	+0.6
MOMA				S	Sb	23 42 34.2	-0.5
MOMA				AML	AML		
	comp=E,51µm,1.1s						
MOMA				AML	AML		
	comp=N,52µm,0.7s						
MOMA				AML	AML		
	comp=N,52µm,1.3s						
SMA1	**SAN MARTINO**	**0.44**	**149**	P	Pg	23 42 28.3	+0.5
SMA1				S	Sb	23 42 35.6	-0.6
MURB	**Monte Urbino**	**0.45**	**304**	P	Pg	23 42 28.5	+0.7
MURB				S	Sb	23 42 36.5	+0.3
MURB				AML	AML		
	comp=N,75µm,0.3s						
MURB				AML	AML		
	comp=E,73µm,0.8s						
SSFR	**Montelago di S**	**0.46**	**337**	P	Pg	23 42 28.6	+0.4
SSFR				S	Sb	23 42 36.4	-0.3
SSFR				AML	AML		
	comp=E,87µm,0.2s						
SSFR				AML	AML		
	comp=N,74µm,0.1s						
ATFO	**Monte Foce - G**	**0.49**	**317**	⇓P	Pg	23 42 29.1	+0.5
ATFO				S	Sb	23 42 37.8	+0.4
ARVD	**Arcevia**	**0.49**	**353**	P	Pg	23 42 29.1	+0.4
ARVD				S	Sb	23 42 37.5	0.0
ARVD				AML	AML		
	comp=E,33µm,1.1s						
ARVD				AML	AML		
	comp=N,26µm,0.2s						
ARVD				AML	AML		
	comp=E,33µm,0.9s						
T1211	**Morro Reatino**	**0.49**	**195**	⇑P	Pg	23 42 29.4	+0.6
T1211				S	Sb	23 42 37.5	-0.2
T1211				AML	AML		
	comp=E,26µm,1.4s						
T1211				AML	AML		
	comp=N,45µm,1.6s						
T1211				AML	AML		
	comp=E,26µm,0.6s						
T1211				AML	AML		
	comp=N,45µm,0.4s						
FRON	**Frontone**	**0.55**	**337**	P	Pg	23 42 30.1	+0.2
FRON				AML	AML		
	comp=E,24µm,1.2s						
FRON				AML	AML		
	comp=N,31µm,1.4s						
FRON				AML	AML		
	comp=N,31µm,0.6s						
FRON				AML	AML		
	comp=E,24µm,0.8s						
PIEI	**Pieia**	**0.64**	**326**	P	Pg	23 42 31.4	-0.1
PIEI				S	Sb	23 42 41.9	+0.3
PIEI				AML	AML		
	comp=N,15µm,0.8s						
PIEI				AML	AML		
	comp=E,22µm,0.6s						

ROM 09 23:42:48.7±0.1**, 42°.794N**±0°.003×**13°.181E**±0°.004**, h10^{km}, ML1.5**/10**, 6C-3D, Error ellipse: s-maj=0.3km s-min=0.2km az=247.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1214	**Arquata del Tr**	**0.04**	**149**	P	Pg	23 42 51.2	+0.3
T1214				S	Sg	23 42 52.8	+0.3
T1245	**Castelsantange**	**0.06**	**5**	P	Pg	23 42 51.4	+0.2
T1245				S	Sg	23 42 53.0	+0.1
T1245				AML	AML		
	comp=N,2000µm,0.2s						
T1245				AML	AML		
	comp=E,2215µm,0.2s						
T1245				AML	AML		
	comp=N,2015µm,0.1s						
T1245				AML	AML		
	comp=E,2375µm,0.2s						
T1212	**Cascia, Frazio**	**0.11**	**247**	⇓P	Pg	23 42 52.1	+0.5
T1212				S	Sg	23 42 54.2	+0.6
T1212				AML	AML		
	comp=N,767µm,0.1s						
T1212				AML	AML		
	comp=E,512µm,1.1s						
T1212				AML	AML		
	comp=N,788µm,0.1s						
T1212				AML	AML		
	comp=N,768µm,0.1s						
T1212				AML	AML		
	comp=N,787µm,0.1s						
T1212				AML	AML		
	comp=E,564µm,1.1s						
T1212				AML	AML		
	comp=E,511µm,1.1s						
MC2	**Monte Cornacci**	**0.12**	**3**	P	Pg	23 42 52.2	+0.3
MC2				S	Sg	23 42 54.7	+0.6
T1218	**Civita (PG)**	**0.13**	**201**	⇑P	Pg	23 42 52.6	+0.6
T1218				S	Sg	23 42 55.4	+1.1
T1218				AML	AML		
	comp=E,276µm,0.1s						
T1218				AML	AML		
	comp=N,474µm,0.2s						
T1218				AML	AML		
	comp=N,474µm,0.2s						
T1218				AML	AML		
	comp=N,474µm,0.2s						
T1218				AML	AML		
	comp=E,246µm,0.1s						
MMO1	**Montemonaco**	**0.15**	**45**	⇑P	Pg	23 42 52.6	+0.4
T1216	**Preci, Frazion**	**0.15**	**309**	⇓P	Pg	23 42 52.6	+0.4
T1216				S	Sg	23 42 55.2	+0.6
T1216				AML	AML		
	comp=E,354µm,1.2s						
T1216				AML	AML		
	comp=N,403µm,1.3s						
T1216				AML	AML		
	comp=E,354µm,1.2s						
T1216				AML	AML		
	comp=N,402µm,1.3s						
T1216				AML	AML		
	comp=E,354µm,0.8s						
FEMA	**Monte Fema**	**0.19**	**330**	P	Pg	23 42 53.3	+0.4
FEMA				S	Sg	23 42 56.5	+0.6
T1241	**Roccafluvione,**	**0.19**	**71**	⇑P	Pg	23 42 53.4	+0.5
T1241				S	Sg	23 42 56.8	+1.1
T1241				AML	AML		
	comp=E,356µm,0.3s						
T1241				AML	AML		
	comp=N,214µm,0.2s						
T1241				AML	AML		
	comp=E,356µm,1.7s						
T1241				AML	AML		
	comp=N,214µm,1.8s						
SMA1	**SAN MARTINO**	**0.20**	**145**	⇑P	Pg	23 42 53.6	+0.6
SMA1				S	Sg	23 42 56.9	+0.9
SMA1				AML	AML		
	comp=E,95µm,0.7s						
SMA1				AML	AML		
	comp=N,74µm,0.8s						
SMA1				AML	AML		
	comp=N,74µm,1.2s						
SMA1				AML	AML		
	comp=E,95µm,1.3s						
T1217	**Poggiodomo (PG**	**0.20**	**246**	P	Pg	23 42 53.6	+0.5
T1217				S	Sg	23 42 57.1	+1.2
T1215	**Vallo di Nera,**	**0.23**	**272**	P	Pg	23 42 54.0	+0.4
T1215				S	Sg	23 42 57.7	+0.9
T1215				AML	AML		
	comp=N,76µm,1.5s						
T1215				AML	AML		
	comp=E,84µm,0.3s						
T1215				AML	AML		
	comp=N,76µm,0.5s						
RM33	**Pellescritta (**	**0.29**	**175**	P	Pg	23 42 55.1	+0.6
RM33				S	Sg	23 42 59.6	+1.2
RM33				AML	AML		
	comp=E,51µm,0.9s						
RM33				AML	AML		
	comp=N,43µm,1.5s						
RM33				AML	AML		
	comp=N,43µm,0.5s						
T1219	**Muccia, Frazio**	**0.29**	**334**	⇓P	Pg	23 42 55.0	+0.3
T1219				S	Sg	23 42 59.6	+1.0
GUMA	**Gualdo di Mace**	**0.29**	**23**	P	Pg	23 42 55.4	+0.7
GUMA				S	Sb	23 43 00.3	-0.7
CESI	**CESI - Serrava**	**0.29**	**316**	P	Pg	23 42 55.1	+0.4
CESI				S	Sg	23 42 59.5	+0.9
CSP1	**Cessapalombo**	**0.30**	**3**	P	Pg	23 42 55.2	+0.4
CSP1				S	Sg	23 42 59.9	+1.0
CAMP	**Campotosto**	**0.31**	**147**	P	Pg	23 42 55.3	+0.3
CAMP				S	Sg	23 43 00.1	+1.0
T1220	**Camerino, Fraz**	**0.32**	**348**	⇑P	Pg	23 42 55.6	+0.3
T1220				S	Sb	23 43 00.9	-1.0
T1211	**Morro Reatino**	**0.35**	**223**	P	Pg	23 42 56.3	+0.5
T1211				S	Sb	23 43 02.2	-0.7
TERO	**Teramo**	**0.35**	**119**	P	Pg	23 42 56.0	+0.2
TERO				S	Sg	23 43 01.6	+1.0
TERO				AML	AML		
	comp=N,86µm,1.0s						
TERO				AML	AML		
	comp=E,62µm,0.4s						
ARRO	**Arrone**	**0.37**	**235**	P	Pg	23 42 56.6	+0.4
OFFI	**Offida**	**0.40**	**69**	P	Pb	23 42 57.8	0.0
OFFI				S	Sb	23 43 05.6	+1.6
GIGS	**Gran Sasso**	**0.45**	**140**	P	Pg	23 42 57.4	-0.1
GIGS				S	Sg	23 43 04.3	+0.9
MOMA	**Monte Martano**	**0.45**	**272**	P	Pg	23 42 58.2	+0.6
MOMA				S	Sb	23 43 05.6	0.0
ASSB	**Assisi San Ben**	**0.46**	**303**	⇑P	Pg	23 42 57.9	+0.2
ASSB				S	Sb	23 43 04.8	-0.9
SNTG	**Esanatoglia**	**0.49**	**339**	P	Pg	23 42 58.7	+0.3
SNTG				S	Sb	23 43 06.5	-0.3
ATCC	**AVT- Casa Cast**	**0.56**	**315**	P	Pg	23 42 59.8	+0.2
ATCC				S	Sb	23 43 08.7	+0.1
CING	**Cingoli**	**0.58**	**1**	P	Pb	23 43 00.9	-0.1
CING				S	Sb	23 43 09.5	+0.1
APEC	**Apecchio**	**0.95**	**324**	S	Sb	23 43 20.6	+0.8

IDC 09 23:44:36.3±1.7**, 6°.54S**×**129°.50E, h0^{km}, mb3.7**/1**, mbtmp3.7**/4**, ML3.7**/3**, Error ellipse: s-maj=69.0km s-min=28.3km az=78.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.90**	**17**	Pn	Pn	23 46 05.0	-0.1
	4.5nm,0.3s,baz=192,slow=19,SNR=3.4						
SIJI				Sn	Sn	23 47 02.2	-11
	6.3nm,0.3s,baz=124,slow=24,SNR=14						
	10nm,0.3s						
WRA	**Warramunga Arr**	**14.13**	**161**	Pn	Pn	23 47 57.5	-0.5
	0.3nm,0.3s,baz=343,slow=13,SNR=20						
WRA				Sn	Sn	23 50 20.9	-15
	1.1nm,0.3s,baz=346,slow=20,SNR=12						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**17.55**	**166**	P	Pn	23 48 43.0	+0.4
	0.1nm,0.3s,baz=345,slow=9.9,SNR=10.0						
ASAR				S	Sn	23 51 44.6	-14
	0.5nm,0.5s,baz=356,slow=26,SNR=4.0						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**67.56**	**327**	P	P	23 55 34.7	0.0
	0.4nm,0.5s,baz=115,slow=7.1,SNR=14						
	0.4nm,0.5s						

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*ANF **09** 23:49:28.0±0.4, 37°.07N×97°.98W, h7^{km}±3^{km}, ML4.0/16, Error ellipse: s-maj=2.3km s-min=1.8km az=31.0*

*IDC **09** 23:49:27.9±1.0, 37°.10N×98°.01W, h0^{km}, mbtmp3.4/4, ML3.8/3, Error ellipse: s-maj=13.8km s-min=11.5km az=162.0*

*NEIC **09** 23:49:28.1±0.9, 37°.07N±0°.02×97°.98W±0°.02, h8^{km}±2^{km}, mb_Lg3.2/88, ML3.2/17, ML3.5/52, Error ellipse: s-maj=2.6km s-min=1.8km az=140.0*

*NEIC **09** 23:49:28.3±0.9, 37°.07N±0°.02×97°.99W±0°.02, h8^{km}±5^{km}, Error ellipse: s-maj=2.7km s-min=1.8km az=145.0*

ISC 09 23:49:28.2±0.8**, 37°.07N**±0°.02×**97°.99W**±0°.02**, h11^{km}**±5^{km}**, n127, σ0^{s}.78**/120**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN05	**Bluff City Nor**	**0.10**	**70**		**Pg**	**23 49 30.6**	**-0.4**
KAN05				Sg	**Sg**	**23 49 32.2**	**-0.7**
KAN05				IAML		23 49 32.4	
	comp=E,24µm,0.5s						
KAN14	**Manchester OK**	**0.12**	**169**		**Pg**	**23 49 31.0**	**-0.2**
KAN14				Sg	**Sg**	**23 49 32.9**	**-0.4**
KAN14				IAML		23 49 33.0	
	comp=N,19µm,0.2s						
KAN14				IAML		23 49 33.1	
	comp=E,17µm,0.2s						

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KAN08 Anthony NE Sta    0.15   6          Pg     23 49 31.6 -0.1
KAN08                              Sg     Sg     23 49 34.0 -0.2
KAN17 Caldwell West     0.18  99   Pg     Pg     23 49 32.0 -0.2
KAN17                              Sg     Sg     23 49 34.7 -0.2
KAN17                              IAML          23 49 34.9
      comp=E,10µm,0.3s
KAN01 Argonia South     0.20  67   Pg     Pg     23 49 32.4 -0.1
KAN01                              Sg     Sg     23 49 35.3 -0.2
KAN01                              IAML          23 49 35.4
      comp=E,8µm,0.2s
KAN01                              IAML          23 49 35.6
      comp=N,10µm,0.4s
KAN06 Argonia West S    0.20  31          Pg     23 49 32.5 -0.1
KAN06                              Sg     Sg     23 49 35.3 -0.2
KAN06                              IAML          23 49 35.6
      comp=E,17µm,0.4s
KAN12 Harper NE Stat    0.22 358          Pg     23 49 32.9  0.0
KAN12                              Sg     Sg     23 49 36.2 +0.1
GC02  Grant County #    0.24 155   Pg     Pg     23 49 33.2 -0.1
GC02                               Sg     Sg     23 49 36.7  0.0
KAN09 Caldwell North    0.30  78          Pg     23 49 34.2 -0.2
KAN09                              Sg     Sg     23 49 38.6 +0.1
KAN09                              IAML          23 49 43.1
      comp=N,9µm,0.3s
KAN09                              IAML          23 49 45.1
      comp=E,9µm,0.3s
OK032 Salt Plains WL    0.32 213          Pg     23 49 34.7  0.0
OK032                              Sg     Sg     23 49 39.3 +0.3
OK032                              IAML          23 49 39.6
      comp=E,9µm,0.3s
KS21  Milan North St    0.34  51          Pg     23 49 34.8 -0.2
KS21                               Sg     Sg     23 49 39.6 +0.1
KS21  Milan North St    0.34  51   IAML          23 49 39.8
      comp=E,3µm,0.2s
KS21                               IAML          23 49 39.9
      comp=E,4µm,0.1s
KS20  Mayfield South    0.38  66          Pg     23 49 35.6 -0.2
KS20                               Sg     Sg     23 49 40.9  0.0
KS20                               IAML          23 49 41.1
      comp=E,5µm,0.2s
KS20                               IAML          23 49 41.2
      comp=E,4µm,0.3s
KAN13 South Haven SW    0.41  98          Pg     23 49 36.2 -0.2
KAN13                              Sg     Sg     23 49 41.6 -0.3
CROK  Carrier           0.57 179   Pg     Pg     23 49 38.9 -0.4
CROK                                      Sg     23 49 46.9 +0.2
CROK                               IAML          23 49 52.8
      comp=E,2µm,0.2s
CROK                               IAML          23 49 56.0
      comp=N,2µm,0.3s
OK035 E0210 Rd and N    0.68 238   Pg     Pg     23 49 41.1 -0.4
OK035                              Sg     Sg     23 49 50.7 +0.3
OK035                              IAML          23 49 58.9
      comp=N,2µm,0.4s
OK035                              IAML          23 49 59.1
      comp=N,2µm,0.3s
BLOK  Blackwell         0.69 116   Pg     Pg     23 49 41.3 -0.4
BLOK                               Sg     Sg     23 49 50.8  0.0
BLOK                               IAML          23 49 52.7
      comp=E,3µm,0.2s
OK038 West end E0370    0.85 226   Pg     Pg     23 49 43.3 -1.2
NOKA  Waynoka           0.87 240          Pg     23 49 44.6 -0.5
NOKA                               IAML          23 50 04.8
      comp=E,1µm,0.2s
NOKA                               IAML          23 50 07.3
      comp=N,1µm,0.2s
OK050 Pawnee Station    1.06 130   Pg     Pg     23 49 47.9 -0.7
OK050                              IAML          23 50 06.8
      comp=N,2µm,0.2s
OK045 Pawnee Station    1.06 126          Pg     23 49 47.9 -0.7
U32A  Winter Ranch,     1.07 230   Pg     Pg     23 49 48.2 -0.5
U32A  Winter Ranch,     1.07 230   P      Pg     23 49 48.3 -0.5
      baz=49
U32A                               S      Sb     23 50 03.0 +0.2
      baz=49
OK046 Pawnee Station    1.10 127   Pg     Pg     23 49 48.6 -0.8
OK044 Pawnee Station    1.19 126          Pg     23 49 50.1 -0.9
OK044                              IAML          23 50 06.1
      comp=N,1µm,0.3s
T35A  Sooner Cattle     1.19  97          Pg     23 49 50.3 -0.9
T35A                               IAML          23 50 10.7
      comp=N,704nm,0.2s
T35B  Sooner Cattle     1.19  97   P      Pg     23 49 50.3 -0.9
      baz=278,SNR=580
T35B                               S      Sg     23 50 05.9 -0.8
      baz=278
OK029 Liberty Lake      1.35 161          Pn     23 49 52.8 -0.2
OK029                              IAML          23 50 12.1
      comp=N,656nm,0.3s
OK029                              IAML          23 50 12.7
      comp=N,1µm,0.3s
QUOK  Quay              1.37 131          Pn     23 49 53.3  0.0
OK053 SW of W Deep R    1.43 137          Pn     23 49 54.4 +0.2
OK052 Battle Ridge R    1.44 138          Pn     23 49 54.4 +0.1
OK031 S. Brethren Rd    1.45 140   Pn     Pn     23 49 54.5  0.0
R32A  Long Quarter,     1.46 337          Pn     23 49 55.1 +0.4
R32A  Long Quarter,     1.46 337   P      Pn     23 49 55.1 +0.4
      baz=157
R32A                               S      Sb     23 50 14.5 +0.3
      baz=157
OK030 Cody Creek RV     1.50 139          Pn     23 49 55.3 +0.1
ELIS  Ellis County      1.53 229          Pb     23 49 56.5 -0.1
CSTR  Hydro, Custer     1.53 202          Pn     23 49 56.3 +0.7
OK005 Luther M Schoo    1.56 155   Pn     Pn     23 49 56.3 +0.4
OK009 Oakdale Elemen    1.56 163   Pn     Pn     23 49 56.0 +0.1
OK009                                     Sn     23 50 16.5 +0.4
FNO   Franklin          1.87 165          Pn     23 50 01.4 +1.1
TUL1  Leonard           2.12 123          Pn     23 50 04.2 +0.6
TUL1  Leonard           2.12 123   P      Pn     23 50 04.3 +0.7
      baz=304,SNR=29
W35A  Tecumseh          2.12 154   Pn     Pn     23 50 04.3 +0.7
CBKS  Cedar Bluff       2.22 322          Pn     23 50 06.2 +1.1
CBKS  Cedar Bluff       2.22 322   P      Pn     23 50 06.2 +1.1
      baz=141
CBKS                               S      Sn     23 50 34.3 +1.7
      baz=141
KSU1  Kansas State U    2.30  28          Pn     23 50 07.1 +1.0
KSU1                               IAmb_Lg       23 50 41.0
      comp=Z,127nm,0.8s
KSU1  Kansas State U    2.30  28   P      Pn     23 50 07.4 +1.3
      baz=208,SNR=19
KSU1                               S      Sn     23 50 35.9 +1.4
      baz=208
WMOK  Wichita Mounta    2.42 196          Pn     23 50 08.3 +0.5
WMOK  Wichita Mounta    2.42 196   P      Pn     23 50 08.4 +0.6
      baz=15,SNR=72
X34A  Smith Ranch, M    2.47 177          Pn     23 50 10.2 +1.7
RLO   Rose Lookout      2.55 110   Pn     Pn     23 50 10.3 +0.7
U38A  Gravette          2.96 101   P      Pn     23 50 16.1 +0.8
      baz=284,SNR=38
LOOK  Love County       3.15 168          Pn     23 50 18.7 +0.9
X37A  Clayton           3.27 139   Pn     Pn     23 50 20.6 +1.2
X37A                               IAmb_Lg       23 51 16.0
      comp=Z,97nm,0.8s
X37A  Clayton           3.27 139   P      Pn     23 50 20.4 +1.0
      baz=320,SNR=29
X37A                               S      Sn     23 50 59.4 +1.1
      baz=320
WTFS  Witchita Falls    3.32 187          Pn     23 50 20.3 +0.1
WTFS                               IAmb_Lg       23 51 11.1
      comp=Z,9.3nm,0.7s
HHAR  Hobbs             3.35 102          Pn     23 50 21.1 +0.5
HHAR                               IAmb_Lg       23 51 19.6
      comp=Z,51nm,0.8s
N33B  J Bar K, Exete    3.68   6   P      Pn     23 50 25.6 +0.4
      baz=187
N33B                               S      Sn     23 51 09.0 +0.4
      baz=187
N33A  J Bar K, Exete    3.68   6   Pn     Pn     23 50 25.3 +0.1
AMTX  Amarillo          3.71 235          Pn     23 50 26.4 +0.9
AMTX                               IAmb_Lg       23 51 26.2
      comp=Z,71nm,0.8s
S39A  Bolivar           3.77  79          Pn     23 50 26.6 +0.3
S39A                               IAmb_Lg       23 51 27.0
      comp=Z,37nm,1.0s
S39A  Bolivar           3.77  79   P      Pn     23 50 26.7 +0.4
      baz=262,SNR=32
S39A                               S      Sn     23 51 11.5 +0.8
      baz=262
FW06  Azle              4.11 175          Pn     23 50 31.8 +0.8
FW06                               IAmb_Lg       23 51 46.9
      comp=Z,16nm,0.7s
KSCO  Kaye Shedlock'    4.14 299          Pn     23 50 31.2 -0.4
KSCO                               IAmb_Lg       23 51 51.7
      comp=Z,37nm,0.8s
U40A  Yellville         4.19  98   P      Pn     23 50 32.7 +0.6
      baz=281,SNR=34
U40A                               P      Pn     23 50 32.7 +0.6
      baz=281,SNR=34
N35A  Tabor             4.20  25          Pb     23 50 44.3 +2.1
N35A  Tabor             4.20  25   S      Sn     23 51 22.5 +1.1
      baz=206
BGNE  Belgrade          4.33 358   Pn     Pn     23 50 34.4 +0.3
BGNE                                      Pg     23 50 47.7 -3.5
BGNE                               IAmb_Lg       23 51 51.2
      comp=Z,36nm,0.8s
P38A  Dawn              4.33  53          Pn     23 50 34.6 +0.5
P38A                               IAmb_Lg       23 51 47.9
      comp=Z,54nm,0.7s
P38A  Dawn              4.33  53   P      Pn     23 50 34.5 +0.5
      baz=235,SNR=8.4
FW07  Weatherford       4.36 178          Pn     23 50 34.6 +0.1
FW07                               IAmb_Lg       23 51 53.3
      comp=Z,13nm,1.0s
MIAR  Mount Ida         4.38 124          Pn     23 50 35.6 +0.8
MIAR                               IAmb_Lg       23 51 50.4
      comp=Z,66nm,1.0s
MIAR  Mount Ida         4.38 124   P      Pn     23 50 35.0 +0.2
      baz=307,SNR=14
MIAR                               S      Sn     23 51 25.7 -0.1
      baz=307
Z38A  Mt. Pleasant      4.53 146   Pn     Pn     23 50 37.5 +0.7
Z38A  Mt. Pleasant      4.53 146   S      Sn     23 51 30.8 +1.3
      baz=328
ABTX  Abilene, Hawle    4.64 198          Pn     23 50 37.9 -0.5
ABTX                               IAmb_Lg       23 51 59.7
      comp=Z,39nm,1.0s
FW16  Waxahatchie       4.67 169   IAmb_Lg       23 52 07.0
      comp=Z,22nm,0.8s
R40A  Maddies Statio    4.70  73          Pn     23 50 39.4 +0.2
R40A                               IAmb_Lg       23 52 07.3
      comp=Z,40nm,0.7s
R40A  Maddies Statio    4.70  73   P      Pn     23 50 39.5 +0.4
      baz=257,SNR=15
FCAR  Ozark Folk Cen    4.87 102   Pn     Pn     23 50 41.5  0.0
FCAR                               IAmb_Lg       23 52 06.0
      comp=Z,24nm,0.8s
X40A  Basin Creek Fa    4.92 120   P      Pn     23 50 42.1 -0.1
      baz=303,SNR=5.3
X40A                               P      Pn     23 50 42.1 -0.1
      baz=303,SNR=5.3
POST  Post              4.93 217   IAmb_Lg       23 52 17.6
      comp=Z,29nm,0.9s
WHAR  Wooly Hollow      4.94 109   IAmb_Lg       23 52 07.3
      comp=Z,51nm,0.9s
OGNE  Ogallala          4.99 322   IAmb_Lg       23 52 15.7
      comp=Z,54nm,0.9s
UALR  University of     5.12 115   IAmb_Lg       23 52 22.6
      comp=Z,33nm,0.7s
T25A  Trinidad          5.13 273   IAmb_Lg       23 52 16.8
      comp=Z,32nm,0.8s
P40A  Paris             5.28  61   IAmb_Lg       23 52 17.9
      comp=Z,34nm,0.8s
237A  Washetta, Mont    5.37 160   IAmb_Lg       23 52 20.1
      comp=Z,36nm,0.8s
CCM   Cathedral Cave    5.45  78   IAmb_Lg       23 52 30.8
      comp=Z,28nm,0.9s
CCM   Cathedral Cave    5.45  78   P      Pn     23 50 49.5 +0.1
      baz=262,SNR=10.0
K31A  O'Neill           5.57 354   IAmb_Lg       23 52 34.0
      comp=Z,51nm,0.8s
Q24A  Divide            5.96 291   IAmb_Lg       23 52 42.0
      comp=Z,25nm,0.7s
NATX  Nacogdoches       5.97 152   IAmb_Lg       23 52 51.7
      comp=Z,25nm,0.8s
PBMO  Poplar Bluff      6.06  91   IAmb_Lg       23 52 43.0
      comp=Z,40nm,0.7s
SCIA  State Center      6.08  36   IAmb_Lg       23 52 52.2
      comp=Z,46nm,0.8s
FVM   French Village    6.08  79   IAmb_Lg       23 52 39.4
      comp=Z,27nm,0.8s
FVM   French Village    6.08  79   P      Pn     23 50 58.0 -0.1
      baz=264,SNR=6.2
ODSA  Odessa            6.21 219   IAmb_Lg       23 52 45.3
      comp=Z,10nm,0.7s
435B  Jarrell           6.28 177   IAmb_Lg       23 52 56.0
      comp=Z,22nm,0.8s
CGM3  Cape Girardeau    6.66  86   IAmb_Lg       23 53 08.7
      comp=Z,28nm,1.2s
JCT   Junction City     6.75 193   IAmb_Lg       23 53 12.6
      comp=Z,30nm,0.8s
143A  Socs Landing,     6.95 127   IAmb_Lg       23 53 14.5
      comp=Z,22nm,0.8s
S44A  Carbondale        6.98  82   IAmb_Lg       23 53 19.1
      comp=Z,29nm,0.7s
PHWY  Pilot Hill        7.17 308   IAmb_Lg       23 53 15.9
      comp=Z,33nm,0.9s
ANMO  Albuquerque       7.18 255   Pg     Pb     23 51 39.3 +6.2
      comp=Z,0.2nm,0.3s,baz=30,slow=15,SNR=1.3
ANMO                               Lg     Lg     23 53 12.7
      comp=Z,2.3nm,0.3s,baz=57,slow=10.0,SNR=8.6
N23A  Red Feather La    7.28 304   IAmb_Lg       23 53 21.8
      comp=Z,33nm,0.7s
W45A  Hickory Valley    7.38 102   IAmb_Lg       23 53 32.2
      comp=Z,19nm,0.7s
SUSD  Miller            7.40 355   IAmb_Lg       23 53 38.6
      comp=Z,22nm,0.8s
OXF   Oxford            7.43 108   IAmb_Lg       23 53 32.9
      comp=Z,28nm,1.0s
OXF   Oxford            7.43 108   P      Pn     23 51 16.4 -0.2
      baz=293
T45A  Paducah           7.47  88   IAmb_Lg       23 53 27.9
      comp=Z,33nm,0.7s
Y45A  Yeager Farm, C    7.60 112   IAmb_Lg       23 53 42.8
      comp=Z,24nm,0.9s
I37A  Lemond, Waseca    7.76  25   IAmb_Lg       23 53 53.6
      comp=Z,25nm,0.8s
OLIL  Olney             7.99  75   IAmb_Lg       23 54 00.8
      comp=Z,25nm,0.8s
WVT   Waverly           8.23  94   P      Pn     23 51 27.2 -0.4
      baz=280
JFWS  Jewell Farm       8.32  43   IAmb_Lg       23 54 03.1
      comp=Z,31nm,0.8s
JFWS  Jewell Farm       8.32  43   P      Pn     23 51 28.4 -0.4
      baz=228
RWWY  Rawlins           8.50 306   IAmb_Lg       23 54 04.8
      comp=Z,32nm,1.1s
K22A  Casper            8.60 313   IAmb_Lg       23 54 25.2
      comp=Z,25nm,0.9s
I40A  Norwalk           8.82  37   IAmb_Lg       23 54 13.3
      comp=Z,21nm,0.8s
TX31  Lajitas Ar. Si    9.06 213   P      Pn     23 51 39.2  0.0
      baz=30
TXAR  Lajitas Array     9.06 213   Pn     Pn     23 51 38.9 -0.2
      comp=Z,0.2nm,0.3s,baz=32,slow=10,SNR=14
TXAR                               Pg            23 52 10.3
      comp=Z,0.3nm,0.3s,baz=52,slow=16,SNR=5.1
TXAR                               Lg     Lg     23 54 08.4
      comp=Z,0.9nm,0.3s,baz=41,slow=21,SNR=5.2
      comp=Z,0.4nm,0.5s
PDAR  Pinedale Array   10.54 306   Pn     Pn     23 52 00.5 +1.0
      comp=Z,0.1nm,0.3s,baz=120,slow=15,SNR=4.5
PDAR                               Lg     Lg     23 54 56.1
      comp=Z,0.5nm,0.3s,baz=104,slow=35,SNR=4.5
      comp=Z,0.2nm,0.4s
TKL   Tuckaleechee C   11.55  93   Pn     Pn     23 52 13.0 -0.1
      comp=Z,0.5nm,0.3s,baz=258,slow=9.3,SNR=8.0
TKL                                Lg     Lg     23 55 24.2
      comp=Z,0.3nm,0.3s,baz=150,slow=12,SNR=1.9
      comp=Z,2.1nm,0.5s
TKL   Tuckaleechee C   11.55  93   P      Pn     23 52 13.1 -0.1
      baz=281
V52A  Sevierville      11.66  92   P      Pn     23 52 14.5 -0.1
      baz=280
ULM   Lac du Bonnet    13.26   6   Pn     Pn     23 52 33.0 -3.4
      comp=Z,0.7nm,0.4s,baz=184,slow=13,SNR=1.5
ULM                                Lg     Lg     23 56 18.4
      comp=Z,0.2nm,0.3s,baz=281,slow=18,SNR=3.3
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*IDC **09** 23:50:58.3±1.3, 3.°41S×130.°71E, h0^{km}, mb3.7/4, mbtmp3.8/5, ML3.2/1, MS3.2/3, Error ellipse: s-maj=57.7km s-min=21.8km az=72.0*

*DJA **09** 23:51:03.4±0.3, 3°S±4°×13°1E±°, h54^{km}±12^{km}, M3.9/12, mb4.0/4, MLv3.8/12*

ISC 09 23:51:02.2±0.8, **3.°35S**±0.°06×**130.°79E**±0.°05, **h30**^{km}**, n18,** σ**1.^{s}54**/17, **mb3.7**/3, **MS3.1**/3, **Seram**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                   Op     ISC         h  m  s     ISC
BNDI  Bandanaira        1.46 217   P      Pn     23 51 28.1 +1.6
FAKI  Fak Fak           1.52  74   P      Pn     23 51 28.3 +0.9
MSAI  Masohi            1.85 270   P      Pn     23 51 32.7 +0.8
SIJI  Sorong            2.51  11   Pn     Pn     23 51 41.1 +0.1
      4.5nm,0.3s,baz=172,slow=21,SNR=19
SIJI                               Sn     Sn     23 52 11.4 +0.8
      6.4nm,0.3s,baz=206,slow=12,SNR=4.8
      18nm,0.2s
SWI   Sorong            2.52  11   P      Pn     23 51 40.4 -0.7
AAI   Ambon             2.61 263   P      Pn     23 51 43.5 +1.2
NLAI  Namlea            3.68 272   P      Pn     23 51 58.9 +1.8
RKPI  Ransiki, Papua    3.85  62   P      Pn     23 52 00.6 +1.2
LBMI  Labuha            4.25 309   P      Pn     23 52 04.3 -0.6
SANI  Sanana            4.96 285   P      Pn     23 52 13.3 -1.4
WRA   Warramunga Arr   16.85 168   Pn     Pn     23 54 52.5 -3.6
      0.2nm,0.3s,baz=350,slow=11,SNR=4.6
WRA                                Sn     Sn     23 57 50.6  -12
      0.2nm,0.3s,baz=355,slow=23,SNR=4.9
ASAR  Alice Springs    20.42 172   P      P      23 55 36.7 -0.5
      9.2nm,0.8s,baz=348,slow=10,SNR=37
ASAR                               S      S      23 59 22.5 -1.9
      0.8nm,0.9s,baz=356,slow=25,SNR=4.5
      9.2nm,0.8s
CTA   Charters Tower   22.46 139   P      P      23 55 59.4 +0.3
      2.6nm,0.6s,baz=315,slow=14,SNR=2.1
      2.6nm,0.6s
STKA  Stephens Creek   30.14 161   LR     LR     00 12 30.3
      comp=Z,68nm,18.1s,baz=22,slow=43
ASAJ  Asahikawa        48.43  11   LR     LR     00 21 12.9
      comp=Z,18nm,18.6s,baz=358,slow=37
SONM  Songino Array    55.27 340   P      P      00 00 34.4 +1.5
      0.2nm,0.3s,baz=152,slow=6.5,SNR=2.3
      0.2nm,0.3s
MKAR  Makanchi Array   65.65 326   P      P      00 01 44.3 +0.6
      0.3nm,0.4s,baz=113,slow=7.2,SNR=11
      0.3nm,0.4s
OBN   Obninsk          95.15 325   LR     LR     00 49 08.8
      comp=Z,7.1nm,21.3s,baz=226,slow=37
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*IDC **09** 23:57:27.0±1.1, 29.°18S×61.°25E, h0^{km}, mb4.2/10, mbtmp4.2/11, ML4.7/1, MS3.6/27, Error ellipse: s-maj=42.7km s-min=20.9km az=26.0*

*NEIC **09** 23:57:28.6±1.1, 29.°1S±0.°1×61.°1E±0.°1, h10^{km}±1^{km}, mb4.6/38, Error ellipse: s-maj=19.5km s-min=14.0km az=221.0*

ISC 09 23:57:28.2±0.6, **29.°1S**±0.°1×**61.°16E**±0.°08, **h10**^{km}**, n93,** σ**0.^{s}81**/65, **mb4.5**/27, **MS3.6**/28, **Southwest Indian Ridge**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                   Op     ISC         h  m  s     ISC
RER   Riviere de l'E    9.31 327   Pn     Pn     23 59 41.8 -1.0
VOI   Vohitsoka        14.82 296   Pn     Pn     00 00 58.8 +0.8
AIS   Amsterdam Isla   16.18 127   Pn     Pn     00 01 15.6 -0.2
ABPO  Ambohimpanom     16.20 305   P      Pn     00 01 17.9 +1.7
OPO   Ambohidratompo   16.52 306   Pn     Pn     00 01 20.4 +0.1
      0.3nm,0.3s,baz=110,slow=17,SNR=7.4
OPO                                Sn     Sn     00 04 10.4  -14
      0.1nm,0.3s,baz=73,slow=10.0,SNR=1.8
      5.3nm,0.4s
H08S1 Diego Carcia H   23.87  29   T      T      00 27 24.5
      baz=204,slow=75,SNR=13
H08S2 Diego Garcia H   23.88  29   T      T      00 27 26.4
      baz=204,slow=75,SNR=11
H08S3 Diego Garcia H   23.89  29   T      T      00 27 23.5
      baz=204,slow=75,SNR=11
DGAR  Diego Garcia     24.07  28   P      P      00 02 44.0 +0.2
BOSA  Boshof           31.37 262   LR     LR     00 14 33.2
      comp=Z,106nm,19.1s,baz=152,slow=33
BOSA  Boshof           31.37 262   P      P      00 03 48.2 -1.2
BOSA                               IAmb   IAmb   00 04 26.2
      comp=Z,12nm,1.3s
LBTB  Lobatse          31.86 269   LR     LR     00 15 35.6
      comp=Z,70nm,18.1s,baz=118,slow=34
LBTB  Lobatse          31.86 269   P      P      00 03 51.3 -2.4
LBTB                               IAmb   IAmb   00 04 32.0
      comp=Z,20nm,1.4s
LSZ   Lusaka           33.36 287   LR     LR     00 16 00.4
      comp=Z,77nm,19.3s,baz=132,slow=33
LSZ   Lusaka           33.36 287   P      P      00 04 07.3 +0.3
LSZ                                IAmb   IAmb   00 04 10.8
      comp=Z,12nm,1.3s
SUR   Sutherland       34.69 254   LR     LR     00 15 46.6
      comp=Z,73nm,20.2s,baz=166,slow=32
SUR   Sutherland       34.69 254   P      P      00 04 16.8 -1.7
KMBO  Kilima Mbogo     35.98 316   P      P      00 04 29.9 +0.2
MAW   Mawson           38.53 179   LR     LR     00 17 04.5
      comp=Z,193nm,19.2s,baz=224,slow=31
MBAR  Mbarara          40.57 309   LR     LR     00 19 52.8
      comp=Z,147nm,19.6s,baz=141,slow=33
PALK  Pallekele        40.78  31   LR     LR     00 18 03.7
      comp=Z,52nm,18.6s,baz=302,slow=30
ATD   Arta Tunnel      44.11 334   LR     LR     00 20 58.5
      comp=Z,5.7nm,20.3s,baz=164,slow=32
H01W2 Cape Leeuwin H   44.86 112   T      T      00 53 17.9
      baz=261,slow=75,SNR=66
H01W3 Cape Leeuwin H   44.87 112   T      T      00 53 19.2
      baz=261,slow=75,SNR=58
H01W1 Cape Leeuwin H   44.88 112   T      T      00 53 20.2
      baz=261,slow=75,SNR=55
SMRI  Semarang         51.27  75   P      P      00 06 32.6 -0.1
WSAR  Wadi Sarin       52.11 357   LR     LR     00 23 10.4
      comp=Z,22nm,19.0s,baz=194,slow=30
RAYN  Ar Rayn          54.46 342   P      P      00 06 56.4 +0.4
CMAR  Chiang Mai Arr   59.73  42   P      P      00 07 33.8 +0.4
      comp=Z,2.1nm,0.3s,baz=232,slow=7.2,SNR=12
CMAR                               LR     LR     00 29 24.7
      comp=Z,22nm,20.8s,baz=210,slow=32
      comp=Z,2.1nm,0.3s
KAPI  Kappang          60.24  78   P      P      00 07 36.4 -0.7
KOLN  Koldanda         60.51  23   eP     P      00 07 39.0 +0.2
PYUN  Piuthan          60.61  22   eP     P      00 07 39.8 +0.3
      comp=Z,55nm,0.7s
RAMN  Ramite           60.85  26   eP     P      00 07 41.3 +0.1
DMN   Daman            60.89  24   eP     P      00 07 42.1 +0.6
PKIN  Phulchoki        60.96  25   eP     P      00 07 42.2 +0.2
QSPA  South Pole Qui   61.04 180   P      P      00 07 42.9 +1.0
QSPA                               IAmb   IAmb   00 07 53.6
      comp=Z,5.3nm,1.0s
ODAN  Odare            61.08  27   eP     P      00 07 43.1 +0.4
      comp=Z,27nm,1.0s
GKN   Gorkha           61.08  24   eP     P      00 07 42.8 +0.2
      comp=Z,34nm,0.8s
DANN  Dangsing         61.09  23   eP     P      00 07 43.1 +0.2
      comp=Z,45nm,0.8s
KKN   Kakani           61.12  24   eP     P      00 07 43.2 +0.2
      comp=Z,39nm,1.0s
JIRN  Jiri             61.33  25   eP     P      00 07 44.7 +0.1
      comp=Z,17nm,0.7s
GUN   Gumba            61.44  25   eP     P      00 07 45.7 +0.4
      comp=Z,33nm,1.0s
CRAI  Chiangrai        61.95  42   P      P      00 07 48.3 -0.1
NIL   Nilore           63.47  11   P      P      00 07 58.1 -0.3
NIL                                IAmb   IAmb   00 07 59.4
      comp=Z,6.0nm,1.0s
EIL   Elat             63.59 335   LR     LR     00 32 24.0
      comp=Z,34nm,19.7s,baz=176,slow=33
KBL   Kabul            63.75   7   P      P      00 08 00.3 -0.1
KBL                                IAmb   IAmb   00 08 05.6
      comp=Z,2.0nm,0.7s
TOLI2 Tolitoli         64.33  73   P      P      00 08 04.2 -0.3
ASAR  Alice Springs    64.45 104   P      P      00 08 05.0 -0.3
      comp=Z,2.9nm,0.8s,baz=244,slow=6.1,SNR=32
ASAR                               LR     LR     00 32 14.1
      comp=Z,50nm,19.3s,baz=202,slow=32
      comp=Z,2.9nm,0.8s
ASAR  Alice Springs    64.45 104   P      P      00 08 04.8 -0.5
AS31  Alice Springs    64.46 104   P      P      00 08 04.5 -0.8
LSA   Lhasa            65.12  29   P      P      00 08 10.2 +0.4
LSA                                IAmb   IAmb   00 08 12.2
      comp=Z,6.0nm,1.0s
WRA   Warramunga Arr   66.28 100   P      P      00 08 16.9 -0.2
      comp=Z,2.4nm,0.7s,baz=247,slow=5.7,SNR=20
WRA                                LR     LR     00 32 17.9
      comp=Z,54nm,20.6s,baz=195,slow=32
      comp=Z,2.4nm,0.7s
WRA   Warramunga Arr   66.28 100   P      P      00 08 16.6 -0.5
WB2   Warramunga Arr   66.28 100   P      P      00 08 16.4 -0.7
WB2                                IAmb   IAmb   00 08 19.7
      comp=Z,6.7nm,1.1s
WB0   Warramunga Arr   66.39 100   P      P      00 08 17.2 -0.6
WB0                                IAmb   IAmb   00 08 19.7
      comp=Z,7.2nm,1.3s
MMAI  Mount Meron Ar   66.44 337   LR     LR     00 34 01.6
      comp=Z,45nm,20.0s,baz=4.0,slow=33
GURO  Guroymak-BITLI   69.65 344   P      P      00 08 38.7 +0.8
GURO                               IAmb   IAmb   00 08 44.6
      comp=Z,6.6nm,1.5s
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GNI	Garni	70.58	347	LR	LR	00 38 01.1	
	comp=Z,63nm,19.1s,baz=140,slow=34						
GNI	Garni	70.58	347	P	P	00 08 44.4	+0.8
GNI				IAmb	IAmb	00 08 53.3	
	comp=Z,4.3nm,1.0s						
TORD	Torodi Ar. Bea	71.12	298	P	P	00 08 48.1	+0.9
	comp=Z,1.7nm,0.9s,baz=125,slow=4.9,SNR=8.1						
	comp=Z,1.7nm,0.9s						
TORD	Torodi Ar. Bea	71.12	298	P	P	00 08 47.1	-0.1
TORD				IAmb	IAmb	00 08 51.3	
	comp=Z,6.7nm,1.4s						
KARP	Karpathos	71.86	331	P	P	00 08 48.0	-3.4
KK31	Karatay Array	72.38	7	P	P	00 08 54.5	+0.2
KK31				IAmb	IAmb	00 08 58.9	
	comp=Z,4.7nm,0.9s						
KKAR	Karatay Array	72.38	7	P	P	00 08 54.6	+0.4
AAK	Ala-Archa	72.45	10	LR	LR	00 39 30.0	
	comp=Z,22nm,18.4s,baz=202,slow=35						
AAK	Ala-Archa	72.45	10	P	P	00 08 54.7	-0.1
AAK				IAmb	IAmb	00 09 00.3	
	comp=Z,4.8nm,1.0s						
BR131	Keskin Array S	73.12	338	P	P	00 08 59.0	+0.1
BR131				IAmb	IAmb	00 09 33.3	
	comp=Z,4.5nm,1.1s						
BRTR	Keskin Array B	73.12	338	P	P	00 08 59.9	+1.0
	comp=Z,0.8nm,0.9s,baz=204,slow=2.7,SNR=4.6						
	comp=Z,0.8nm,0.9s						
ONI	Oni	73.19	346	P	P	00 08 59.9	+0.8
ONI				IAmb	IAmb	00 09 13.6	
	comp=Z,5.4nm,1.2s						
KBZ	Khabaz	74.40	346	LR	LR	00 39 39.2	
	comp=Z,68nm,21.8s,baz=158,slow=34						
BALB	Balikesir	75.09	334	P	P	00 09 10.4	+0.2
BALB				IAmb	IAmb	00 09 14.5	
	comp=Z,15nm,1.0s						
LIT	Litokhoron	77.67	331	P	P	00 09 25.2	+0.3
MAKZ	Makanchi	77.88	14	P	P	00 09 26.2	+0.3
MK31	Makanchi Array	77.93	15	P	P	00 09 26.6	+0.4
MKAR	Makanchi Array	77.93	15	P	P	00 09 26.9	+0.7
	comp=Z,1.8nm,0.8s,baz=188,slow=4.9,SNR=18						
MKAR				LR	LR	00 42 36.0	
	comp=Z,22nm,18.1s,baz=220,slow=35						
	comp=Z,1.8nm,0.8s						
MKAR	Makanchi Array	77.93	15	P	P	00 09 25.8	-0.4
ABKAR	Akbulak array	78.02	359	P	P	00 09 26.6	+0.1
VAE	Valguarnera	79.42	324	LR	LR	00 44 19.9	
	comp=Z,60nm,18.8s,baz=148,slow=35						
KEST	Kesra	80.87	320	LR	LR	00 45 58.1	
	comp=Z,53nm,19.7s,baz=300,slow=36						
KURK	Kurchatov	80.97	11	P	P	00 09 42.7	+0.1
KURK				IAmb	IAmb	00 09 46.5	
	comp=Z,4.8nm,1.0s						
BVAR	Borovoye Array	82.19	6	LR	LR	00 44 07.4	
	comp=Z,35nm,19.5s,baz=180,slow=34						
BURAR	Bucovina Array	82.94	336	P	P	00 09 53.4	+0.2
ZAA0	Zalesovo Array	85.22	14	IAmb	IAmb	00 10 05.6	
	comp=Z,3.5nm,0.9s						
ZALV	Zalesovo Beam	85.22	14	P	P	00 10 05.1	+0.6
	comp=Z,1.9nm,0.7s,baz=204,slow=3.3,SNR=11						
ZALV				LR	LR	00 45 25.4	
	comp=Z,19nm,18.1s,baz=222,slow=34						
	comp=Z,1.9nm,0.7s						
ARU	Arti	85.23	359	P	P	00 10 05.1	+0.6
	comp=Z,1.8nm,0.5s,baz=129,slow=4.2,SNR=4.4						
ARU				LR	LR	00 47 11.4	
	comp=Z,24nm,18.7s,baz=215,slow=35						
	comp=Z,1.8nm,0.5s						
SONM	Songino Array	86.71	29	P	P	00 10 12.9	+0.7
	comp=Z,0.9nm,1.0s,baz=213,slow=5.1,SNR=5.1						
	comp=Z,0.9nm,1.0s						
MDT	Midelt	87.63	310	LR	LR	00 49 16.0	
	comp=Z,53nm,18.1s,baz=158,slow=35						
URZ	Urewera	90.17	135	LR	LR	00 43 43.3	
	comp=Z,101nm,18.4s,baz=286,slow=31						
ESDC	Sonseca Array	91.36	316	P	P	00 10 35.9	+1.6
	comp=Z,1.2nm,1.0s,baz=115,slow=3.5,SNR=6.2						
ESDC				LR	LR	00 52 27.3	
	comp=Z,38nm,18.0s,baz=131,slow=36						
	comp=Z,1.2nm,1.0s						
HFS	Hagfors	97.07	338	LR	LR	00 54 28.0	
	comp=Z,21nm,18.1s,baz=252,slow=35						
NOA	NORSAR Array B	98.56	338	LR	LR	00 55 33.2	
	comp=Z,11nm,19.2s,baz=135,slow=35						
YKA	Yellowknife Ar	146.50	356	PKPbc	PKPbc	00 17 09.0	0.0
	comp=Z,1.2nm,0.8s,baz=348,slow=2.5,SNR=20						
TXAR	Lajitas Array	166.75	275	PKP	PKPdf	00 17 34.8	+0.3
	comp=Z,0.4nm,0.8s,baz=123,slow=3.3,SNR=3.6						

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*IDC **10** 00:01:21.0±1.1, 43°54N×105°37W, h0^{km}, mb3.8/6, mbtmp3.7/13, ML3.1/6, MS2.6/1, Error ellipse: s-maj=30.4km s-min=7.2km az=151.0*

*NEIC **10** 00:01:24.1±1.3, 43°78N±0°05×105°37W±0°06, h0^{km}±2^{km}, ML3.3/89, Error ellipse: s-maj=10.7km s-min=3.0km az=41.0*

ISC 10 00:01:21.1±0.7, 43°61N±0°04×105°05W±0°05, h0^{km}, n44, σ1^{s}10/40, mb4.0/6, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.90	54		Pn	00 01 41.9	+0.7
K22A	Casper	1.44	229	Pn	Pb	00 01 48.8	0.0
K22A				Sn	Sn	00 02 10.4	+2.1
K22A				IAML		00 02 13.6	
	comp=N,449nm,0.4s						
K22A				IAML		00 02 14.3	
	comp=E,368nm,0.3s						
PHWY	Pilot Hill	2.32	188	Pn	Pg	00 02 05.6	0.0
PHWY				IAML		00 02 42.7	
	comp=E,117nm,0.6s						
PHWY				IAML		00 02 43.7	
	comp=E,136nm,0.4s						
RWWY	Rawlins	2.49	221		Pb	00 02 06.5	-0.4
RWWY				Sn	Sb	00 02 39.4	+1.2
RWWY				IAML		00 02 43.0	
	comp=E,185nm,0.5s						
N23A	Red Feather La	2.79	194	Pn	Pb	00 02 11.7	-0.2
N23A				IAML		00 02 59.8	
	comp=N,109nm,0.4s						
N23A				IAML		00 03 00.7	
	comp=E,98nm,0.7s						
BRIGG	Briggsdale	3.07	170		Pg	00 02 22.2	+2.3
LAO	LASA Array	3.19	345	Pn	Pn	00 02 11.2	-1.4
RLMT	Red Lodge	3.38	298		Pn	00 02 14.1	-1.3
RLMT				IAML		00 03 06.5	
	comp=E,74nm,0.7s						
RLMT				IAML		00 03 11.3	
	comp=E,80nm,0.5s						
BW06	Boulder Array	3.40	257		Pn	00 02 15.2	-0.4
PD31	Pinedale Array	3.40	257		Pn	00 02 15.8	+0.1
PDAR	Pinedale Array	3.40	257	Pn	Pn	00 02 15.8	+0.1
	comp=E,8.9nm,0.4s,baz=67,slow=17,SNR=103						
PDAR				Pg	Pb	00 02 22.1	-0.3
	comp=E,10.0nm,0.3s,baz=70,slow=18,SNR=22						
PDAR				Lg	Lg	00 02 59.4	
	comp=E,17nm,0.3s,baz=60,slow=33,SNR=13						
PDAR	Pinedale Array	3.40	257	Pn	Pn	00 02 15.9	+0.3
OGNE	Ogallala	3.47	139	Pn	Pb	00 02 22.9	-0.6
ISCO	Idaho Springs	3.83	187	Pn	Pb	00 02 26.5	-3.1
YMP	Mirror Lake Pl	3.85	289	Pn	Pn	00 02 20.9	-0.9
GCMT	Greycliff	3.95	305		Pn	00 02 21.9	-1.2
LKWY	Lake	3.97	286	Pn	Pn	00 02 22.7	-0.8
LKWY				Pg	Pb	00 02 32.9	+0.7
LKWY				IAML		00 02 55.7	
	comp=E,50nm,0.6s						
LKWY				IAML		00 03 41.4	
	comp=E,44nm,1.0s						
H17A	Grant Village	4.07	283		Pn	00 02 25.1	+0.3
H17A				IAML		00 03 26.9	
	comp=N,41nm,0.7s						
FLWY	Flagg Ranch	4.12	279		Pn	00 02 24.8	-0.6
FLWY				IAML		00 03 32.4	
	comp=N,59nm,2.1s						
FLWY				IAML		00 03 34.7	
	comp=N,36nm,1.4s						
MOOW	Moose Ponds	4.13	274		Pn	00 02 26.1	+0.4
SNOW	Snow King Moun	4.15	270	Pn	Pn	00 02 25.6	-0.4
SNOW				Pg	Pb	00 02 35.6	+0.5
SNOW				IAML		00 03 42.3	
	comp=N,52nm,1.4s						
SNOW				IAML		00 03 46.2	
	comp=N,41nm,1.2s						
YNR	Norris Junctio	4.20	287		Pn	00 02 25.0	-1.6
YNR				Pg	Pb	00 02 35.7	-0.3
REDW	Red Top Meadow	4.23	269	IAML		00 03 34.1	
	comp=N,48nm,0.8s						
REDW				IAML		00 03 42.7	
	comp=N,51nm,0.8s						
YMR	Madison River	4.39	286	IAML		00 03 57.0	
	comp=N,52nm,1.1s						
YMR				IAML		00 04 09.5	
	comp=E,43nm,1.1s						
AHID	Auburn Hatcher	4.50	261	IAML		00 03 48.2	
	comp=E,28nm,0.7s						
AHID				IAML		00 03 48.6	
	comp=E,31nm,1.3s						
RDMU	Red Mountain	4.53	230	IAML		00 03 50.1	
	comp=N,33nm,0.9s						
RDMU				IAML		00 04 04.5	
	comp=E,34nm,0.9s						
Q24A	Divide	4.64	181	IAML		00 03 58.8	
	comp=N,22nm,0.3s						
SMCO	Snowmass	4.66	199	IAML		00 03 53.9	
	comp=N,29nm,0.3s						
SMCO				IAML		00 04 02.2	
	comp=N,24nm,1.1s						
BOZ	Bozeman (W)	5.10	295	IAML		00 03 56.2	
	comp=N,17nm,1.4s						
BOZ				IAML		00 03 59.4	
	comp=N,21nm,0.9s						
BSUT	Blindstream Ca	5.24	236	IAML		00 04 10.2	
	comp=N,15nm,1.1s						
BSUT				IAML		00 04 34.7	
	comp=E,15nm,2.8s						
ELK	Elko	8.09	253	Pn	Pn	00 03 18.2	-1.7
	comp=E,0.2nm,0.3s,baz=58,slow=11,SNR=3.3						
	comp=E,0.6nm,0.4s						
ANMO	Albuquerque	8.72	188	Pn	Pn	00 03 26.4	-2.1
	comp=E,0.1nm,0.3s,baz=27,slow=14,SNR=1.7						
	comp=E,0.3nm,0.3s						
I10CA	LAC DU BONNET	9.03	40	I	I	00 58 30.0	
	baz=222,slow=327,SNR=2.0						
ULM	Lac du Bonnet	9.14	40	Pn	Pn	00 03 35.2	+1.1
	comp=E,4.1nm,0.3s,baz=227,slow=12,SNR=30						
ULM				Pg		00 04 06.2	
	comp=E,0.7nm,0.3s,baz=227,slow=19,SNR=1.6						
ULM				Lg	Lg	00 06 05.5	
	comp=E,0.5nm,0.3s,baz=138,slow=22,SNR=2.2						
	comp=E,7.6nm,0.3s						
NEW	Newport	9.61	303	Lg	Lg	00 06 08.8	
	comp=E,0.1nm,0.3s,baz=82,slow=14,SNR=2.4						
NEW				LR	LR	00 07 38.2	
	comp=E,38nm,20.3s,baz=114,slow=40						
NVAR	Mina Array Bea	11.27	247	Pn	Pn	00 04 03.1	-0.4
	comp=E,0.1nm,0.3s,baz=50,slow=12,SNR=7.2						
	comp=E,0.8nm,0.6s						
YBH	Yreka Blue Hor	13.13	268	Pn	Pn	00 04 28.4	-0.5
	comp=E,0.1nm,0.3s,baz=58,slow=9.5,SNR=1.4						
	comp=E,0.8nm,0.3s						
YKA	Yellowknife Ar	19.73	347	P	P	00 05 50.8	-1.2
	comp=E,0.1nm,0.3s,baz=158,slow=13,SNR=6.1						
	comp=E,0.3nm,0.5s						
ILAR	Eielson Array	31.47	327	P	P	00 07 43.4	-0.6
	comp=E,0.1nm,0.5s,baz=71,slow=5.8,SNR=1.6						
	comp=E,0.1nm,0.5s						
ARCES	ARCESS Array B	61.49	18	P	P	00 11 38.6	-0.4
	comp=E,1.3nm,0.8s,baz=334,slow=5.4,SNR=5.2						
	comp=E,1.3nm,0.8s						
FINES	FINESS Array B	68.09	23	P	P	00 12 22.6	+0.5
	comp=E,4.6nm,1.3s,baz=306,slow=6.6,SNR=3.7						
	comp=E,4.6nm,1.3s						
ZALV	Zalesovo Beam	82.45	354	P	P	00 13 44.6	-0.3
	comp=E,0.9nm,0.6s,baz=335,slow=4.1,SNR=4.8						
	comp=E,0.9nm,0.6s						
SONM	Songino Array	84.82	339	P	P	00 13 58.0	+0.6
	comp=E,0.3nm,0.7s,baz=11,slow=3.6,SNR=2.6						
	comp=E,0.3nm,0.7s						
MKAR	Makanchi Array	89.75	355	P	P	00 14 21.1	0.0
	comp=E,0.5nm,0.6s,baz=14,slow=4.9,SNR=7.2						
	comp=E,0.5nm,0.6s						

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*IDC **10** 00:10:06.0±9.4, 20°66S×178°61W, h522^{km}±60^{km}, mb2.6/3, mbtmp3.5/4, Error ellipse: s-maj=209.0km s-min=28.0km az=143.0*

ISC 10 00:10:02.9±1.6, 21°1S±0°3×178°3W±0°3, h500^{km}, n7, σ1^{s}59/8, mb3.1/3, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.78	313	P	P	00 11 28.4	+0.3
	6.9nm,0.3s,baz=166,slow=17,SNR=14						
ASAR	Alice Springs	44.14	257	P	P	00 17 26.6	-0.2
	0.9nm,0.9s,baz=97,slow=7.8,SNR=6.8						
ASAR				PcP	PcP	00 19 01.9	+0.8
	0.4nm,0.6s,baz=99,slow=4.9,SNR=4.1						
	0.9nm,0.9s						
WRA	Warramunga Arr	44.27	263	P	P	00 17 27.0	-0.8
	0.2nm,0.3s,baz=95,slow=7.5,SNR=12						
	0.2nm,0.3s						
ILAR	Eielson Array	88.90	13	P	P	00 22 02.7	-0.3
	0.1nm,0.4s,baz=230,slow=7.0,SNR=5.3						
	0.1nm,0.4s						
FINES	FINESS Array B	136.22	343	PKP	PKPdf	00 28 26.4	-0.1
	0.9nm,0.7s,baz=40,slow=5.3,SNR=2.0						
AKASG	Malin Array Be	143.36	331	PKP	PKPdf	00 28 37.6	-2.2
	1.8nm,0.4s,baz=44,slow=4.2,SNR=14						
BRTR	Keskin Array B	147.00	312	PKPbc	PKPdf	00 28 49.1	+2.5
	0.5nm,0.7s,baz=80,slow=1.6,SNR=2.7						

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*IDC **10** 00:28:41.0±1.9, 13°88N×89°74W, h0^{km}, mb3.4/5, mbtmp3.5/7, ML3.5/2, MS3.1/1, Error ellipse: s-maj=61.3km s-min=19.5km az=38.0*

*SNET **10** 00:28:44.4±2.4, 13°32N×90°14W, h6^{km}, ML3.8*

*GCG **10** 00:28:45.0±0.5, 13°37N×90°59W, h10^{km}±16^{km}, MD3.8*

ISC 10 00:28:38.7±1.7, 13°09N±0°06×90°31W±0°04, h16^{km}±10^{km}, n34, σ1^{s}31/41, mb3.6/4, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUBE	Las Nubes	0.95	32	*e*P	Pn	00 28 58.2	+0.6
NUBE				*e*S	Sb	00 29 09.2	-0.2
CEVE	Cerro Verde	0.99	42	*e*P	Pn	00 28 59.3	+1.2
CEVE				*e*S	Sb	00 29 11.7	+1.3
SBLS	San Blas	0.99	42	*e*P	Pn	00 28 59.2	+0.9
JAYA	Jayaque - finc	1.00	56	*e*P	Pn	00 28 59.6	+1.3
JAYA				*e*S	Sb	00 29 11.6	+0.8
RTR	El Retiro	1.02	39	*e*P	Pn	00 28 59.8	+1.2
LALI	Alcalda de L	1.03	68	*e*P	Pn	00 28 60.0	+1.4
SLOZ	Alcaldia de Sa	1.06	29	*e*P	Pn	00 28 59.6	+0.7
SLOZ				*e*S	Sb	00 29 12.8	+0.5
CEDA	San Andres	1.13	51	*e*S	Sn	00 29 15.8	+0.6
BOQS	Boqueron	1.18	57	*e*P	Pn	00 29 02.3	+1.5
LFRS	El Faro	1.32	66	*e*P	Pb	00 29 04.2	+1.0
PCG	Pacaya	1.32	347	*e*P	Pb	00 29 03.9	+0.6
SJTE	Alcalda de S	1.36	68	*e*P	Pg	00 29 05.0	0.0
FUG	Fuego 3	1.45	339	*e*P	Pb	00 29 05.4	0.0
PAVA	Las Pavas	1.47	65	*e*P	Pg	00 29 07.2	+0.2
COEG	Centro de Oper	1.48	69	*e*P	Pg	00 29 06.8	-0.4
NBG	Las Nubes	1.49	358	*e*P	Pg	00 29 07.7	+0.3
NBG				*e*S	Sg	00 29 25.7	-1.1
MTO3	Montecristo	1.59	35	*e*P	Pg	00 29 08.3	-1.0
SCLA	Alcaldia de Sa	1.65	68	*e*P	Pg	00 29 09.5	-0.9
ESQI	Esquipulas	1.73	33	*e*P	Pb	00 29 10.2	0.0
P5NO	Presa 5 de nov	1.75	59	*e*P	Pb	00 29 10.3	-0.1
P5NO				*e*S	Sn	00 29 31.3	+0.9
COEB	Comit de Eme	1.77	77	*e*P	Pb	00 29 11.5	+0.6
TECA	Tecapa	1.80	77	*e*P	Pb	00 29 11.5	+0.1
PACA	Pacayal	1.96	79	*e*P	Pb	00 29 14.9	+0.7
STG3	Santiaguito 3,	2.02	323	*e*P	Pn	00 29 14.3	+1.9
STG3				*e*S	Sn	00 29 36.6	-0.9
LCND	La Caada	2.36	84	*e*P	Pb	00 29 19.8	-1.1
CNCH	Conchagua	2.41	85	*e*P	Pb	00 29 20.6	-1.2
JTS	Las Juntas de	5.94	117	Pn	Pn	00 30 11.1	+5.1
	1.1nm,0.3s,baz=302,slow=22,SNR=1.9						
JTS				Pg	Pb	00 30 22.4	+0.5
	1.8nm,0.3s,baz=177,slow=1.9,SNR=7.7						
JTS				Sn	Sn	00 31 13.0	-0.7
	baz=310,slow=20						
JTS				Lg	Lg	00 31 46.3	
	0.6nm,0.3s,baz=267,slow=22,SNR=7.2						
	2.8nm,0.3s						
CMIG	Matias Romero	5.95	313	Pn	Pn	00 30 08.6	+2.5
	1.5nm,0.3s,baz=117,slow=8.9,SNR=14						
CMIG				Sn	Sn	00 31 10.3	-3.7
	1.7nm,0.3s,baz=54,slow=18,SNR=2.4						
	5.1nm,0.5s						
TXAR	Lajitas Array	20.37	325	P	Pn	00 33 17.3	+0.3
	0.4nm,0.5s,baz=144,slow=11,SNR=8.2						
	0.4nm,0.5s						
PDAR	Pinedale Array	33.94	334	P	P	00 35 22.4	+0.9
	0.1nm,0.4s,baz=128,slow=12,SNR=1.4						
	0.1nm,0.4s						
NVAR	Mina Array Bea	35.41	320	P	P	00 35 37.1	+2.8
	1.7nm,0.7s,baz=122,slow=9.1,SNR=17						
	1.7nm,0.7s						
NEW	Newport	41.54	333	LR	LR	00 57 55.0	
	comp=Z,27nm,20.0s,baz=189,slow=43						
SCHQ	Schefferville	45.52	19	P	P	00 36 55.1	-2.3
	1.7nm,0.7s,baz=246,slow=10.0,SNR=4.0						
	1.7nm,0.7s						
YKA	Yellowknife Ar	52.29	346	P	P	00 37 48.0	-1.2
	0.1nm,0.4s,baz=135,slow=7.7,SNR=1.7						
	0.1nm,0.4s						

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*IDC **10** 00:36:47.8±1.2, 62°29N×148°41W, h48^{km}±20^{km}, mb3.6/2, mbtmp3.6/6, ML3.3/4, Error ellipse: s-maj=23.4km s-min=10.0km az=111.0*

*NEIC **10** 00:36:49.6±0.7, 62°36N±0°02×147°85W±0°05, h24^{km}±10^{km}, Error ellipse: s-maj=3.5km s-min=3.4km az=196.0*

*AEIC **10** 00:36:51.2±0.8, 62°36N±0°03×147°82W±0°06, h44^{km}±7^{km}, ML3.2, ML3.4/154(NEIC), Error ellipse: s-maj=4.6km s-min=4.2km az=175.0*

ISC 10 00:36:50.0±0.9, 62°34N±0°03×147°86W±0°03, h58^{km}±9^{km}, n158, σ1^{s}01/164, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
M23K	Glacier View	0.55	174	P	Pn	00 37 01.8	-0.7
	baz=356						
M23K				S	Sn	00 37 11.5	0.0
	baz=356						
SCM	Sheep Creek Mo	0.57	154		Pn	00 37 02.0	-0.7
SCM					Sn	00 37 11.8	-0.1
SCM				IAML		00 37 12.9	
	comp=E,1µm,0.9s						
SCM				IAML		00 37 13.0	
	comp=N,2µm,0.8s						
SCM	Sheep Creek Mo	0.57	154	P	Pn	00 37 02.0	-0.7
	baz=337						
SML	Sawmill	0.58	203		Pn	00 37 02.6	-0.2
SML					Sn	00 37 12.2	+0.1
SML				IAML		00 37 13.9	
	comp=N,3µm,0.9s						
SML	Sawmill	0.58	203	P	Pn	00 37 02.5	-0.2
	baz=24						
SML				S	Sn	00 37 12.4	+0.3
	baz=24						
GHO	Glory Hole Cre	0.76	222		Pn	00 37 04.9	-0.1
GHO					Sn	00 37 16.4	+0.5
GHO				IAML		00 37 18.4	
	comp=N,2µm,0.5s						
M24K	Tolsona, Glenn	0.82	106		Pn	00 37 05.7	0.0
M24K					Sn	00 37 18.4	+1.1
M24K				IAML		00 37 19.2	
	comp=E,2µm,0.5s						
M24K	Tolsona, Glenn	0.82	106	P	Pn	00 37 05.8	0.0
	baz=289						
PMR	Palmer	0.96	219	Pn	Pn	00 37 07.4	-0.1
PMR					Sn	00 37 21.1	+0.8
PMR				IAML		00 37 22.0	
	comp=E,1µm,0.5s						
PMR				IAML		00 37 22.4	
	comp=N,1µm,0.4s						
PMR	Palmer	0.96	219	P	Pn	00 37 07.5	0.0
	baz=38						
PMR				S	Sn	00 37 21.0	+0.7
	baz=38						
KNK	Knik Glacier	0.97	197		Pn	00 37 08.1	+0.4
KNK					Sn	00 37 21.5	+0.8
KNK	Knik Glacier	0.97	197	P	Pn	00 37 08.0	+0.4
	baz=18						
KNK				S	Sn	00 37 21.8	+1.1
	baz=18						
CUT	Chulitna	1.13	274		Pn	00 37 09.8	+0.2
CUT				IAML		00 37 28.4	
	comp=N,1µm,0.6s						
CUT	Chulitna	1.13	274	P	Pn	00 37 10.0	+0.3
	baz=92						
RND	Reindeer	1.16	337		Pn	00 37 10.1	-0.1
RND				IAML		00 37 26.1	
	comp=E,1µm,0.8s						
RND				IAML		00 37 26.1	
	comp=N,869nm,0.5s						
RND	Reindeer	1.16	337		Sn	00 37 25.2	-0.1
M22K	Willow	1.22	242		Pn	00 37 11.5	+0.7
M22K	Willow	1.22	242	P	Pn	00 37 11.5	+0.7
	baz=60						
KLU	Klutina	1.25	132		Pn	00 37 11.2	-0.2
KLU					Sn	00 37 28.1	+0.8
KLU				IAML		00 37 29.9	
	comp=N,580nm,0.5s						
KLU				IAML		00 37 31.7	
	comp=E,552nm,0.3s						
KLU	Klutina	1.25	132	P	Pn	00 37 11.1	-0.2
	baz=315						
KLU				S	Sn	00 37 28.4	+1.1
	baz=315						
HARP	HAARP	1.26	86	P	Pn	00 37 11.6	+0.2
	baz=269						
PAX	Paxson	1.27	59		Pn	00 37 11.6	-0.1
PAX	Paxson	1.27	59	P	Pn	00 37 11.6	-0.1
	baz=241						
MCK	McKinley	1.48	341		Pn	00 37 14.9	+0.5
MCK	McKinley	1.48	341	P	Pn	00 37 14.9	+0.5
	baz=159						
PWL	Port Wells	1.50	189	Pn	Pn	00 37 15.3	+0.5
PWL	Port Wells	1.50	189		Sn	00 37 35.2	+1.9
PWL	Port Wells	1.50	189	P	Pn	00 37 15.3	+0.5
	baz=9.1						
RC01	Rabbit Creek A	1.54	216		Pn	00 37 16.2	+1.0
RC01	Rabbit Creek A	1.54	216		Sn	00 37 37.1	+2.9
RC01	Rabbit Creek A	1.54	216	P	Pn	00 37 16.2	+1.0
	baz=35						
DIV	Divide	1.57	140		Sn	00 37 34.8	-0.1
DIV	Divide	1.57	140		Pn	00 37 15.1	-0.6
TRF	Thorofare Moun	1.58	316		Pn	00 37 15.7	-0.2
SUA	Susitna One	1.63	239		Pn	00 37 17.4	+0.9
SUA				IAML		00 37 43.7	
	comp=N,578nm,0.4s						
SUA	Susitna One	1.63	239	P	Pn	00 37 17.7	+1.2
	baz=56						
FIS	Fire Island	1.65	224		Pn	00 37 18.5	+1.9
N25K	Chitina, Valde	1.71	114	Pn	Pn	00 37 17.8	+0.3
N25K				IAML		00 37 42.1	
	comp=N,452nm,0.5s						
N25K	Chitina, Valde	1.71	114	P	Pn	00 37 17.5	0.0
	baz=298						
SKT	Skwentna	1.76	260		Pn	00 37 19.2	+1.0
SKT				IAML		00 37 45.1	
	comp=E,291nm,0.2s						
SKT				IAML		00 37 47.1	
	comp=N,312nm,0.3s						
SKT	Skwentna	1.76	260	P	Pn	00 37 19.2	+1.0
	baz=76						
KTH	Kantishna Hill	1.86	312	Pn	Pn	00 37 20.0	+0.5
KTH				IAML		00 37 46.1	
	comp=N,235nm,0.6s						
KTH				IAML		00 37 57.4	
	comp=E,224nm,0.8s						
RIDG	Independent Ri	1.96	43	Pn	Pn	00 37 21.8	+0.8
RIDG	Independent Ri	1.96	43	P	Pn	00 37 21.8	+0.8
	baz=226						
BWN	Browne	1.98	339		Pn	00 37 21.1	0.0
BWN				IAML		00 38 00.8	
	comp=N,402nm,0.6s						
BWN				IAML		00 38 01.4	
	comp=E,410nm,0.9s						
MENT	Mentasta	2.00	71		Pn	00 37 21.6	+0.1
MENT				IAML		00 38 10.5	
	comp=N,209nm,0.7s						
EYAK	Cordova Ski Ar	2.06	150		Pn	00 37 22.9	+0.6
EYAK	Cordova Ski Ar	2.06	150	P	Pn	00 37 22.9	+0.6
	baz=332						
O22K	Cooper Landing	2.07	207		Pn	00 37 23.2	+0.9
PPLA	Purkeypile	2.08	287		Pn	00 37 23.3	+0.6
PPLA	Purkeypile	2.08	287	P	Pn	00 37 23.3	+0.6
	baz=103						
GLB	Gilahina Butte	2.12	113		Pn	00 37 23.2	+0.1
GLB				IAML		00 37 55.7	
	comp=N,162nm,0.5s						
HDA	Harding Lake	2.12	11		Pn	00 37 23.6	+0.5
HDA	Harding Lake	2.12	11	P	Pn	00 37 23.7	+0.7
	baz=191						
WRH	Wood River Hil	2.14	357	Pn	Pn	00 37 23.2	-0.1

WRH				IAML		00 37 50.8	
	comp=N,210nm,0.3s						
DOT	**Dot Lake**	**2.17**	**51**		**Pn**	**00 37 23.9**	**0.0**
L26K	**Log Cabin Wild**	**2.19**	**70**		**Pn**	**00 37 24.4**	**+0.4**
L26K				IAML		00 38 01.5	
	comp=E,178nm,0.4s						
L26K				IAML		00 38 07.9	
	comp=N,174nm,0.3s						
L26K	**Log Cabin Wild**	**2.19**	**70**	P	**Pn**	**00 37 24.8**	**+0.7**
	baz=254						
CAST	**Castle Rocks**	**2.22**	**301**	Pn	**Pn**	**00 37 24.7**	**+0.3**
CAST				IAML		00 37 54.5	
	comp=E,192nm,0.5s						
CAST				IAML		00 38 06.8	
	comp=N,233nm,0.8s						
CAST	**Castle Rocks**	**2.22**	**301**	P	**Pn**	**00 37 25.0**	**+0.5**
	baz=117						
CAPN	**Captain Cook N**	**2.23**	**226**		**Pn**	**00 37 26.2**	**+1.7**
BPAW	**Bear Paw Mtn.**	**2.27**	**323**	Pn	**Pn**	**00 37 25.1**	**0.0**
BPAW				IAML		00 37 44.6	
	comp=E,165nm,0.6s						
BPAW				IAML		00 37 53.7	
	comp=N,140nm,0.6s						
BPAW	**Bear Paw Mtn.**	**2.27**	**323**	P	**Pn**	**00 37 25.0**	**-0.1**
	baz=139						
M26K	**Nabesna, AK**	**2.27**	**86**	P	**Pn**	**00 37 25.0**	**-0.1**
	baz=271						
SPU	**Mount Spurr**	**2.31**	**242**		**Pn**	**00 37 26.8**	**+1.1**
CCB	**Clear Creek Bu**	**2.32**	**1**		**Pn**	**00 37 25.6**	**-0.1**
CCB				IAML		00 37 53.8	
	comp=E,215nm,0.4s						
CCB				IAML		00 37 54.7	
	comp=N,169nm,0.5s						
NEA2	**Nenana**	**2.33**	**347**	IAML		00 37 55.0	
	comp=N,183nm,0.6s						
NEA2				IAML		00 37 55.6	
	comp=E,184nm,0.6s						
NEA2	**Nenana**	**2.33**	**347**	P	**Pn**	**00 37 25.4**	**-0.5**
	baz=165						
P23K	**Montague Islan**	**2.36**	**174**	P	**Pn**	**00 37 26.8**	**+0.5**
	baz=355						
VRDI	**Verde Repeater**	**2.37**	**116**		**Pn**	**00 37 26.7**	**+0.1**
SEW	**Seward**	**2.37**	**200**	Pn	**Pn**	**00 37 27.7**	**+1.2**
SEW	**Seward**	**2.37**	**200**	P	**Pn**	**00 37 27.8**	**+1.3**
	baz=19						
SCRK	**Sand Creek**	**2.40**	**45**	Pn	**Pn**	**00 37 27.0**	**-0.1**
SCRK				IAML		00 37 56.1	
	comp=E,125nm,0.7s						
SCRK	**Sand Creek**	**2.40**	**45**	P	**Pn**	**00 37 26.9**	**-0.1**
	baz=228						
IL31		**2.48**	**10**		**Pn**	**00 37 28.1**	**+0.3**
ILAR	**Eielson Array**	**2.48**	**10**	P	**Pn**	**00 37 28.1**	**+0.2**
	comp=E,8.9nm,0.3s,baz=194,slow=14,SNR=324						
ILAR				S	**Sn**	**00 37 57.5**	**+0.5**
	comp=E,58nm,0.5s,baz=190,slow=21,SNR=7.3						
	comp=E,18nm,0.3s						
MCARA	**McCarthy VSAT**	**2.48**	**111**		**Pn**	**00 37 28.2**	**+0.2**
MCARA	**McCarthy VSAT**	**2.48**	**111**	IAML		00 38 09.4	
	comp=E,265nm,0.6s						
MCARA				IAML		00 38 12.1	
	comp=N,286nm,0.6s						
MCARA	**McCarthy VSAT**	**2.48**	**111**	P	**Pn**	**00 37 28.2**	**+0.2**
	baz=295						
M20K	**Styx River**	**2.52**	**262**		**Pn**	**00 37 29.6**	**+1.0**
M20K				IAML		00 38 05.1	
	comp=N,223nm,0.7s						
M20K				IAML		00 38 06.1	
	comp=E,213nm,0.6s						
TCOL	**CIGO, UAF Yank**	**2.54**	**360**	P	**Pn**	**00 37 29.1**	**+0.3**
	baz=180						
COLA	**College**	**2.54**	**0**		**Pn**	**00 37 29.1**	**+0.3**
CHUM	**Lake Minchumin**	**2.55**	**309**		**Pn**	**00 37 29.0**	**+0.1**
MDM	**Murphy Dome**	**2.63**	**357**		**Pn**	**00 37 30.2**	**+0.1**
MDM				IAML		00 38 01.6	
	comp=E,111nm,0.5s						
MDM				IAML		00 38 02.5	
	comp=N,198nm,0.5s						
M27K	**Edge Creek, AK**	**2.79**	**87**		**Pn**	**00 37 33.1**	**+0.8**
POKR	**Poker Plat Res**	**2.79**	**4**		**Pn**	**00 37 32.6**	**+0.4**
POKR				IAML		00 38 06.0	
	comp=N,114nm,0.5s						
POKR	**Poker Plat Res**	**2.79**	**4**	P	**Pn**	**00 37 32.6**	**+0.4**
	baz=184						
L27K	**Beaver Creek,**	**2.87**	**73**		**Pn**	**00 37 33.1**	**-0.2**
TGL	**Tana Glacier**	**2.88**	**121**		**Pn**	**00 37 32.9**	**-0.7**
BCAR	**Beaver Creek A**	**2.89**	**73**	Pn	**Pn**	**00 37 32.2**	**-1.4**
I23K	**Minto, Yukon-K**	**2.90**	**347**		**Pn**	**00 37 33.7**	**+0.1**
I23K	**Minto, Yukon-K**	**2.90**	**347**	P	**Pn**	**00 37 33.7**	**+0.1**
	baz=166						
BRSE	**Bradley Lake S**	**2.96**	**210**		**Pn**	**00 37 35.1**	**+0.5**
BRSE	**Bradley Lake S**	**2.96**	**210**	P	**Pn**	**00 37 35.5**	**+0.9**
	baz=27						
BRLK	**Bradley Lake**	**2.98**	**211**	Pn	**Pn**	**00 37 35.9**	**+1.1**
BRLK				IAML		00 38 23.6	
	comp=N,81nm,0.5s						
BRLK				IAML		00 38 28.9	
	comp=E,106nm,1.4s						
KIAG	**Kiagna River**	**2.98**	**116**		**Pn**	**00 37 34.2**	**-0.8**
MLY	**Manley**	**2.99**	**336**		**Pn**	**00 37 35.2**	**+0.3**
MLY				IAML		00 38 10.4	
	comp=E,112nm,0.6s						
MLY				IAML		00 38 10.4	
	comp=N,140nm,0.3s						
MLY	**Manley**	**2.99**	**336**	P	**Pn**	**00 37 35.2**	**+0.3**
	baz=153						
Q23K	**Middleton Isla**	**3.01**	**165**	Pn	**Pn**	**00 37 35.7**	**+0.5**
Q23K				IAML		00 38 08.6	
	comp=N,145nm,1.6s						
Q23K				IAML		00 38 29.6	
	comp=E,188nm,1.2s						
MID	**Middleton Isla**	**3.02**	**165**	Pn	**Pn**	**00 37 36.2**	**+1.0**
MID				IAML		00 39 00.3	
	comp=N,151nm,2.2s						
MID				IAML		00 39 05.4	
	comp=E,165nm,2.5s						
RSO	**Redoubt South**	**3.02**	**234**		**Pn**	**00 37 36.9**	**+1.4**
K20K	**Telida**	**3.03**	**292**	IAML		00 38 29.9	
	comp=E,68nm,0.6s						
K20K	**Telida**	**3.03**	**292**	P	**Pn**	**00 37 35.7**	**+0.3**
	baz=107						
M19K	**Big River Lodg**	**3.10**	**265**		**Pn**	**00 37 37.1**	**+0.6**
M19K				IAML		00 38 33.9	
	comp=E,76nm,0.6s						
M19K				IAML		00 38 36.7	
	comp=N,87nm,0.6s						
M19K	**Big River Lodg**	**3.10**	**265**	P	**Pn**	**00 37 37.1**	**+0.6**
	baz=79						
K27K	**Chicken**	**3.12**	**55**	P	**Pn**	**00 37 36.6**	**-0.1**
	baz=240						
BARN	**Barnard Glacie**	**3.22**	**111**		**Pn**	**00 37 38.6**	**+0.3**
BARN				IAML		00 38 27.2	
	comp=N,82nm,1.1s						
BARN				IAML		00 38 29.3	
	comp=E,79nm,0.6s						
HOM	**Homer**	**3.26**	**216**	Pn	**Pn**	**00 37 39.9**	**+1.3**
CNPM	**China Poot**	**3.27**	**212**	Pn	**Pn**	**00 37 39.7**	**+0.9**
CNPM				IAML		00 38 31.2	
	comp=N,101nm,0.4s						
CNPM				IAML		00 38 32.1	
	comp=E,104nm,0.7s						
L19K	**White Mountain**	**3.28**	**270**		**Pn**	**00 37 39.5**	**+0.6**
L19K				IAML		00 38 23.5	
	comp=E,68nm,0.4s						
L19K	**White Mountain**	**3.28**	**270**	P	**Pn**	**00 37 39.5**	**+0.6**
	baz=84						
PRP	**Porcupine Dome**	**3.35**	**17**	Pn	**Pn**	**00 37 40.4**	**+0.4**
PRP				IAML		00 38 19.9	
	comp=E,145nm,0.8s						
PRP				IAML		00 38 20.6	
	comp=N,131nm,0.3s						
PRP	**Porcupine Dome**	**3.35**	**17**	P	**Pn**	**00 37 40.3**	**+0.3**
	baz=199						
I21K	**Tanana**	**3.39**	**329**	Pn	**Pn**	**00 37 40.5**	**+0.2**
I21K				IAML		00 38 22.5	
	comp=N,61nm,0.7s						
CTG	**Chitna Glacier**	**3.40**	**111**	P	**Pn**	**00 37 40.9**	**+0.2**
	baz=297						
CTGM	**Chitina Glacie**	**3.40**	**111**		**Pn**	**00 37 41.1**	**+0.3**
CTGM				IAML		00 38 37.4	
	comp=N,68nm,1.3s						
ILSW	**Iliamna Southw**	**3.49**	**230**		**Pn**	**00 37 42.6**	**+0.8**
H24K	**Noodor Dome**	**3.51**	**360**		**Pn**	**00 37 42.2**	**+0.1**
N19K	**Bonanza Creek**	**3.52**	**247**	Pn	**Pn**	**00 37 43.1**	**+0.8**
YUK3	**Moose Creek**	**3.53**	**96**	P	**Pn**	**00 37 42.9**	**+0.4**
	baz=283						
H23K	**Yukon River**	**3.58**	**349**		**Pn**	**00 37 43.3**	**+0.3**
H23K				IAML		00 38 26.3	
	comp=N,48nm,0.9s						
LOGN	**Logan Glacier**	**3.61**	**112**	IAML		00 38 39.3	
	comp=N,78nm,0.7s						
LOGN				IAML		00 38 42.2	
	comp=E,55nm,1.1s						
I26K	**Coal Creek Min**	**3.63**	**33**	IAML		00 38 42.7	
	comp=E,96nm,1.1s						
I26K				IAML		00 38 47.4	
	comp=N,89nm,0.7s						
I26K	**Coal Creek Min**	**3.63**	**33**	P	**Pn**	**00 37 44.1**	**+0.4**
	baz=217						
P19K	**Oil Pt**	**3.76**	**227**	Pn	**Pn**	**00 37 46.4**	**+0.9**
P19K				IAML		00 38 32.1	
	comp=E,94nm,0.6s						
P19K				IAML		00 38 53.6	
	comp=N,90nm,0.7s						
O19K	**Port Alsworth**	**3.79**	**238**	Pn	**Pn**	**00 37 47.4**	**+1.6**
O19K				IAML		00 38 49.6	
	comp=E,103nm,0.5s						
TTA	**Tatalina**	**3.81**	**283**		**Pn**	**00 37 46.8**	**+0.5**
TTA	**Tatalina**	**3.81**	**283**	P	**Pn**	**00 37 46.4**	**+0.2**
	baz=95						
EGAK	**Eagle**	**3.87**	**48**		**Pn**	**00 37 47.0**	**+0.1**
EGAK				IAML		00 38 50.4	
	comp=E,75nm,0.8s						
EGAK				IAML		00 38 54.6	
	comp=E,60nm,0.7s						
SVW2	**Sparrevohn**	**3.88**	**255**		**Pn**	**00 37 47.8**	**+0.7**
SVW2				IAML		00 38 57.0	
	comp=N,34nm,0.8s						
YUK8	**Steele Glacier**	**3.98**	**102**	P	**Pn**	**00 37 49.6**	**+0.9**
	baz=289						
SAMH	**Samovar Hills**	**4.08**	**120**		**Pn**	**00 37 50.0**	**+0.2**
DAWY	**Dawson**	**4.21**	**62**	IAML		00 39 08.3	
	comp=E,30nm,0.8s						
DAWY	**Dawson**	**4.21**	**62**	P	**Pn**	**00 37 51.5**	**0.0**
	baz=250						
I27K	**Kandik River**	**4.28**	**37**	P	**Pn**	**00 37 53.4**	**+0.8**
	baz=223						
PCA	**Pinnacle**	**4.31**	**118**	Pn	**Pn**	**00 37 52.9**	**-0.1**
O18K	**Koktuh Hills**	**4.35**	**238**	Pn	**Pn**	**00 37 54.9**	**+1.3**
O18K				IAML		00 39 11.3	
	comp=N,24nm,0.8s						
O18K	**Koktuh Hills**	**4.35**	**238**	P	**Pn**	**00 37 54.7**	**+1.1**
	baz=52						
FYU	**Fort Yukon**	**4.39**	**14**		**Pn**	**00 37 54.4**	**+0.4**
FYU	**Fort Yukon**	**4.39**	**14**	IAML		00 38 57.9	
	comp=N,48nm,0.6s						
FYU				IAML		00 39 14.5	
	comp=E,61nm,0.9s						
Q19K	**Cape Douglas,**	**4.45**	**222**	Pn	**Pn**	**00 37 55.5**	**+0.6**
H27K	**Steamboat Moun**	**4.78**	**32**	P	**Pn**	**00 37 59.8**	**+0.4**
	baz=218						
COLD	**Coldfoot**	**5.01**	**349**		**Pn**	**00 38 03.1**	**+0.6**
COLD	**Coldfoot**	**5.01**	**349**	P	**Pn**	**00 38 03.5**	**+1.0**
	baz=167						
KDAK	**Kodiak Island**	**5.15**	**209**	P	**Pn**	**00 38 00.7**	**-3.7**
	comp=E,0.5nm,0.3s,baz=35,slow=16,SNR=21						
KDAK				S	**Sn**	**00 38 55.9**	**-6.5**
	comp=E,8.1nm,0.6s,baz=346,slow=19,SNR=7.1						
	comp=E,12nm,1.1s						
N30M	**Aishikik Lake**	**5.17**	**95**	P	**Pn**	**00 38 04.6**	**-0.2**
	baz=285						
O17K	**Koliganek Bris**	**5.17**	**244**	P	**Pn**	**00 38 05.3**	**+0.5**
	baz=56						
HYT	**Haines Junctio**	**5.17**	**102**	Pn	**Pn**	**00 38 05.8**	**+0.9**
I29M	**Ogilvie Camp,**	**5.20**	**50**	IAML		00 39 05.1	
	comp=N,29nm,0.4s						
I29M				IAML		00 39 21.1	
	comp=E,23nm,0.5s						
BMAR	**Burnt Mountain**	**5.30**	**14**		**Pn**	**00 38 07.0**	**+0.5**
M31M	**Drury Creek, Y**	**6.29**	**85**	Pn	**Pn**	**00 38 20.4**	**+0.3**
SKAG	**Skagway**	**6.76**	**110**	Pn	**Pn**	**00 38 27.0**	**+0.5**
G30M	**tAoh Zraii Nji**	**6.82**	**42**	P	**Pn**	**00 38 26.6**	**-0.7**
	baz=232						
F31M	**Tsiigehtchic**	**7.87**	**43**	P	**Pn**	**00 38 41.0**	**-0.7**
	baz=236						
INK	**Inuvik**	**8.45**	**39**	P	**Pn**	**00 38 49.8**	**+0.2**
	comp=E,0.5nm,0.3s,baz=237,slow=13,SNR=18						
INK				S	**Sn**	**00 40 19.1**	**-4.2**
	comp=E,4.4nm,0.6s,baz=233,slow=15,SNR=11						
	comp=E,2.0nm,0.4s						
YKA	**Yellowknife Ar**	**15.31**	**75**	P	**Pn**	**00 40 24.4**	**+2.3**
	comp=E,0.1nm,0.3s,baz=284,slow=10,SNR=8.0						
	comp=E,0.3nm,0.7s						
SEY	**Seymchan**	**26.62**	**298**	P	**P**	**00 42 19.1**	**-3.4**
	comp=E,2.9nm,0.4s,baz=84,slow=15,SNR=6.3						
	comp=E,2.9nm,0.4s						
TXAR	**Lajitas Array**	**43.68**	**118**	P	**P**	**00 44 49.8**	**+0.9**
	comp=E,0.2nm,0.7s,baz=336,slow=7.9,SNR=2.7						
	comp=E,0.2nm,0.7s						

IDC 10 00:43:56.0±2.0**, 1°.00S**×**130°.03E, h0^{km}, mb3.4**/3**, mbtmp3.3**/4**, ML3.0**/1**, Error ellipse: s-maj=164.1km s-min=23.9km az=73.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.30**	**168**	P	P	00 48 21.4	-1.3
	baz=346,slow=11,SNR=1.9						
WRA				S	Sn	00 51 46.2	-14
	0.2nm,0.6s,baz=357,slow=23,SNR=1.5						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**22.85**	**171**	P	P	00 49 01.4	+0.4
	0.7nm,0.6s,baz=350,slow=9.8,SNR=7.3						
	0.7nm,0.6s						
SONM	**Songino Array**	**52.82**	**340**	P	P	00 53 12.0	-1.3
	0.1nm,0.3s,baz=154,slow=7.5,SNR=1.6						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**63.29**	**325**	P	P	00 54 27.8	+1.0
	0.4nm,0.5s,baz=114,slow=8.1,SNR=5.3						
	0.4nm,0.5s						

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*NIED **10** 00:49:54.5, 43°.96N×145°.00E, h5^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$1.27; M$_{\theta\theta}$-0.79; M$_{\phi\phi}$-0.49; M$_{r\theta}$-0.22; M$_{\theta\phi}$-1.15; M$_{\phi r}$0.54; Fault plane solution: M$_0$1.69000×10^{14} NP1:φ$_s$24.00000°, δ55.00000°, λ55.00000°. NP2:φ$_s$254.00000°, δ48.00000°, λ129.00000°.*

*JMA **10** 00:49:54.5±0.1, 44°.0N±0°.3×145°.0E±0°.4, h5^{km}±2^{km}, MV3.5/20, SHIRETOKO PENINSULA REG*

JMA Felt II J1 at SHIRETOKO PENINSULA REG .

*SKHL **10** 00:49:54.5±0.1, 44°.00N×145°.10E, h15^{km}±2^{km}, mb4.5/4*

ISC 10 00:49:53.4±1.2**, 43°.94N**±0°.07×**145°.07E**±0°.07**, h16**^{km}±6^{km}**, n9, σ0^s.71**/17**, 2D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JRA	**Rausu**	**0.04**	**92**	*e*P	**Pg**	**00 49 56.4**	**+0.1**
JRA				*e*S	**Sg**	**00 49 58.2**	**-0.1**
JNSB	**Nemuroshibetsu**	**0.17**	**196**	*i* P	**Pb**	**00 49 58.5**	**+0.3**
JNSB				*e*S	**Sb**	**00 50 01.5**	**+0.2**
JNK	**Nakash**	**0.43**	**216**	*e*P	**Pb**	**00 50 02.4**	**-0.3**
JNK				*e*S	**Sg**	**00 50 08.1**	**0.0**
YUK	**Yuzh-Kuril'sk**	**0.58**	**80**	*e*P	**Pn**	**00 50 06.2**	**-0.8**
YUK				AMB	AMB	00 50 07.5	
	350nm,0.3s						
YUK				*e*S	**Sb**	**00 50 14.4**	**+1.2**
YUK				A	A	00 50 17.7	
	3μm,0.4s						
YUK				A	A	00 50 17.7	
	2μm,0.4s						
NMR	**Nemuro--Hokkai**	**0.74**	**140**	*i* P	**Pn**	**00 50 08.8**	**-0.4**
NMR				AMB	AMB	00 50 09.2	
	290nm,0.2s						
NMR				*i* S	**Sb**	**00 50 19.5**	**+1.6**
NMR				A	A	00 50 19.8	
	550nm,0.3s						
NMR				A	A	00 50 19.8	
	850nm,0.3s						
JKHN	**Kushirohamanak**	**0.86**	**175**	⇓*i*P	**Pn**	**00 50 10.5**	**-0.3**
JKHN				⇓*e*S	**Sn**	**00 50 22.8**	**-0.2**
AKK	**Akkeshi**	**0.94**	**190**	*e*P	**Pn**	**00 50 11.5**	**-0.4**
SHO	**Shikotan**	**1.27**	**92**	*e*P	**Pb**	**00 50 16.4**	**-0.6**
SHO				AMB	AMB	00 50 17.8	
	60nm,0.2s						
SHO				*e*S	**Sb**	**00 50 32.9**	**-0.3**
SHO				A	A	00 50 35.9	
	580nm,0.3s						
SHO				A	A	00 50 35.9	
	670nm,0.3s						
KUR	**Kuril'sk**	**2.38**	**56**	*e*P	**Pn**	**00 50 32.5**	**+0.8**
KUR				AMB	AMB	00 50 35.7	
	60nm,0.4s						
KUR				*e*S	**Sn**	**00 51 00.3**	**-0.3**
KUR				A	A	00 51 04.4	
	570nm,0.5s						
KUR				A	A	00 51 04.4	
	360nm,0.5s						

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*IDC **10** 01:03:41.1±4.2, 54°.32S×129°.93W, h0^{km}, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=310.3km s-min=43.4km az=142.0*

ISC 10 01:03:42.5±3.5**, 54°S**±1°×**13°0W**±°**, h10**^{km}**, n21, σ0^s.77**/7**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**40.87**	**81**	T	T	01 55 27.3	
	baz=221,slow=74,SNR=77						
H03S1	**Juan Fernandez**	**40.88**	**81**	T	T	01 55 28.7	
	baz=221,slow=74,SNR=66						
H03S3	**Juan Fernandez**	**40.89**	**81**	T	T	01 55 27.8	
	baz=221,slow=74,SNR=84						
H03N3	**Juan Fernandez**	**41.15**	**81**	T	T	01 55 50.6	
	baz=225,slow=72,SNR=345						
H03N2	**Juan Fernandez**	**41.15**	**81**	T	T	01 55 50.0	
	baz=225,slow=72,SNR=537						
H03N1	**Juan Fernandez**	**41.16**	**81**	T	T	01 55 45.6	
	baz=225,slow=72,SNR=433						
ASAR	**Alice Springs**	**74.59**	**251**	P	**P**	**01 15 22.6**	**+0.9**
	0.5nm,0.8s,baz=141,slow=6.6,SNR=5.5						
	0.5nm,0.8s						
H01W1	**Cape Leeuwin H**	**75.45**	**230**	T	T	02 38 23.0	
	baz=146,slow=75,SNR=24						
H01W2	**Cape Leeuwin H**	**75.46**	**230**	T	T	02 38 23.3	
	baz=146,slow=75,SNR=28						
H01W3	**Cape Leeuwin H**	**75.47**	**230**	T	T	02 38 24.2	
	baz=146,slow=75,SNR=23						
WRA	**Warramunga Arr**	**77.32**	**254**	P	**P**	**01 15 36.8**	**-0.5**
	0.4nm,0.7s,baz=144,slow=5.0,SNR=2.7						
	0.4nm,0.7s						
TXAR	**Lajitas Array**	**86.37**	**23**	P	**P**	**01 16 24.6**	**0.0**
	baz=182,slow=7.2,SNR=1.7						
H11S2	**WAKE ISLAND Hy**	**90.39**	**302**	T	T	02 56 47.0	
	baz=148,slow=75,SNR=28						
H11S3	**WAKE ISLAND Hy**	**90.40**	**302**	T	T	02 56 53.4	
	baz=148,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy**	**90.41**	**302**	T	T	02 56 56.0	
	baz=148,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy**	**91.33**	**303**	T	T	02 58 03.3	
	baz=149,slow=76,SNR=16						
H11N1	**WAKE ISLAND Hy**	**91.34**	**303**	T	T	02 58 01.3	
	baz=149,slow=76,SNR=15						
H11N2	**WAKE ISLAND Hy**	**91.35**	**303**	T	T	02 58 00.9	
	baz=149,slow=76,SNR=12						
ILAR	**Eielson Array**	**119.51**	**352**	PKP	**PKiKP**	**01 22 31.7**	**+0.8**
	0.2nm,0.7s,baz=188,slow=3.1,SNR=1.6						
SONM	**Songino Array**	**144.89**	**283**	PKP	**PKPab**	**01 23 17.7**	**-0.4**
	0.4nm,0.8s,baz=106,slow=2.4,SNR=2.8						
MKAR	**Makanchi Array**	**158.35**	**263**	PKP	**PKPdf**	**01 23 38.4**	**-0.7**
	0.1nm,0.4s,baz=113,slow=3.7,SNR=1.8						
MKAR				PKPab	**PKPab**	**01 24 13.5**	**-0.1**
	0.3nm,0.8s,baz=111,slow=4.0,SNR=2.5						

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*IDC **10** 01:08:24.3±1.2, 3°.14S×151°.59E, h0^{km}, mb3.4/4, mbtmp3.5/5, ML2.9/1, MS3.6/2, Error ellipse: s-maj=28.8km s-min=13.2km az=72.0*

ISC 10 01:08:28.6±1.1**, 3°.2S**±0°.1×**151°.7E**±0°.2**, h35**^{km}**, n15, σ1^s.23**/7**, mb3.3**/4**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.17**	**164**	Pg	**Pn**	**01 08 48.0**	**-0.5**
	85nm,0.3s,baz=253,slow=3.2,SNR=36						
KRVT				Lg	Lg	01 09 03.8	
	104nm,0.3s,baz=248,slow=19,SNR=24						
PMG	**Port Moresby**	**7.66**	**216**	Pn	**Pn**	**01 10 16.8**	**-0.9**
	11nm,0.3s,baz=329,slow=12,SNR=11						
	4.8nm,0.3s						
HNR	**Honiara**	**10.28**	**128**	LR	LR	01 15 09.5	
	comp=Z,935nm,19.3s,baz=334,slow=39						
CTA	**Charters Tower**	**17.63**	**197**	LR	LR	01 18 24.0	
	comp=Z,63nm,18.2s,baz=256,slow=34						
WRA	**Warramunga Arr**	**23.77**	**224**	P	**P**	**01 13 39.6**	**+1.5**
	0.9nm,0.6s,baz=48,slow=10,SNR=16						
	0.9nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**26.11**	**34**	T	T	01 41 42.2	
	baz=218						
H11S2	**WAKE ISLAND Hy**	**26.11**	**34**	T	T	01 41 32.1	
	baz=218,slow=74						
H11S1	**WAKE ISLAND Hy**	**26.12**	**34**	T	T	01 41 42.6	
	baz=218,slow=74						
ASAR	**Alice Springs**	**26.66**	**219**	P	**P**	**01 14 05.8**	**+1.4**
	0.3nm,0.6s,baz=54,slow=9.0,SNR=1.8						
	0.3nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**27.21**	**33**	T	T	01 42 53.2	
	baz=218,slow=76						
H11N3	**WAKE ISLAND Hy**	**27.22**	**33**	T	T	01 43 01.9	
	baz=218,slow=76						
H11N2	**WAKE ISLAND Hy**	**27.22**	**33**	T	T	01 43 05.9	
	baz=218,slow=76						
SONM	**Songino Array**	**64.38**	**328**	P	**P**	**01 19 01.0**	**-0.3**
	0.1nm,0.4s,baz=134,slow=6.2,SNR=1.7						
	0.1nm,0.4s						
ILAR	**Eielson Array**	**81.08**	**22**	P	**P**	**01 20 40.1**	**+0.2**
	0.2nm,0.6s,baz=243,slow=5.4,SNR=4.8						
	0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**148.74**	**290**	PKPbc	**PKiKP**	**01 28 14.1**	**-0.8**
	0.3nm,0.8s,baz=80,slow=1.6,SNR=4.7						

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*IDC **10** 01:42:42.4±1.0, 40°.44N×35°.83E, h0^{km}, mb3.4/3, mbtmp3.4/7, ML3.4/4, Error ellipse: s-maj=23.5km s-min=8.9km az=151.0*

*DDA **10** 01:42:42.0±0.0, 40°.45N×35°.78E, h14^{km}±3^{km}, MW3.6*

*ISK **10** 01:42:43.6, 40°.47N×35°.84E, h6^{km}, ML3.5/25*

*CFUSG **10** 01:42:47.0, 40°.70N×35°.80E, h5^{km}, mb2.6/5, Central Turkey Magtype MSH 3.2 from 4 stations*

ISC 10 01:42:44.0±0.9**, 40°.45N**±0°.01×**35°.81E**±0°.01**, h9**^{km}±7^{km}**, n111, σ1^s.19**/175**, mb3.3**/3**, 6C-3D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMSY	**Amasya-Merkez**	**0.18**	**6**	SPECP		01 42 47.0	
AMSY				P	**Pg**	**01 42 47.7**	**-0.2**
AMSY				S	**Sg**	**01 42 50.5**	**-0.2**
CKRK	**Yozgat, Cekere**	**0.45**	**212**	SPECP		01 42 52.0	
CKRK				P	**Pg**	**01 42 52.3**	**-0.5**
CKRK				S	**Sg**	**01 42 59.2**	**+0.6**
KIZO	**Buyukkizoglu-L**	**0.46**	**12**	Pg	**Pg**	**01 42 52.8**	**-0.2**
KIZO				Sg	**Sg**	**01 42 59.1**	**+0.1**
YARM	**Yarimca-Ladik(**	**0.47**	**2**	Pg	**Pg**	**01 42 53.1**	**-0.1**
YARM				Sg	**Sg**	**01 42 59.9**	**+0.5**
TOKT	**Tokat**	**0.58**	**103**	Pg	**Pg**	**01 42 54.8**	**-0.4**
TOKT				Sg	**Sg**	**01 43 03.3**	**+0.5**
HAVZ	**Havza**	**0.62**	**354**	P	**Pg**	**01 42 56.0**	**-0.1**
HAVZ				S	**Sg**	**01 43 04.4**	**+0.1**
KVT	**Kavak**	**0.65**	**16**	Pg	**Pg**	**01 42 56.5**	**-0.2**
KVT				Sg	**Sg**	**01 43 05.0**	**-0.2**
COAL	**Corum-Alaca**	**0.66**	**253**	P	**Pg**	**01 42 56.2**	**-0.6**
COAL				S	**Sg**	**01 43 06.0**	**+0.6**
HACI	**Hacifakili, Ak**	**0.75**	**185**	P	**Pg**	**01 42 58.0**	**-0.5**
HACI				S	**Sg**	**01 43 09.0**	**+0.7**
CTAK	**Corum_Osmancik**	**0.80**	**284**	P	**Pg**	**01 42 59.3**	**-0.2**
CTAK				S	**Sg**	**01 43 09.4**	**-0.5**
YOZ	**Yozgat**	**0.89**	**205**	Pg	**Pg**	**01 43 01.2**	**0.0**
CORM	**Corum**	**0.94**	**253**	Pg	**Pb**	**01 43 02.5**	**-0.1**
CORM				Sg	**Sn**	**01 43 16.5**	**-0.6**
SAMS	**Samsun-Alacam**	**0.95**	**17**	P	**Pg**	**01 43 02.1**	**-0.2**
SAMS				S	**Sb**	**01 43 15.5**	**+0.2**
SVSK	**Karacayir**	**1.06**	**120**	Pg	**Pg**	**01 43 02.9**	**-1.4**
CUSAR	**Sarkisla-SIVAS**	**1.09**	**162**	P	**Pg**	**01 43 03.9**	**-1.0**
CUSAR				S	**Sg**	**01 43 19.0**	**0.0**
RSDY	**Resadiye-TOKAT**	**1.16**	**92**	Pn	**Pb**	**01 43 05.2**	**-1.0**
RSDY				Sn	**Sn**	**01 43 21.9**	**-0.5**
SCER	**sogukcermik**	**1.17**	**120**	P	**Pb**	**01 43 05.3**	**-1.2**
SCER				S	**Sb**	**01 43 21.9**	**+0.1**
KAGI	**orum-Kargı**	**1.22**	**305**	SPECP		01 43 05.0	
KAGI				P	**Pn**	**01 43 05.9**	**-1.4**
KAGI				S	**Sg**	**01 43 23.5**	**+0.2**
SIRC	**Yozgat**	**1.23**	**205**	SPECP		01 43 06.0	
SIRC				P	**Pn**	**01 43 06.8**	**-0.6**
SIRC				S	**Sb**	**01 43 23.4**	**+0.1**
DIKM	**Dikmen**	**1.27**	**341**	⇑P	**Pg**	**01 43 08.7**	**+0.4**
DIKM	**Dikmen**	**1.27**	**341**	Pn	**Pg**	**01 43 08.3**	**0.0**

DIKM				Sn	Sn	01 43 26.1	+1.1
BOYA	Sinop/Boyabat-	1.38	322	P	Pb	01 43 10.0	+0.1
BOYA				S	Sn	01 43 27.9	+0.2
CDAG	Cicekdag	1.38	234	SPECP		01 43 09.0	
CDAG				P	Pn	01 43 09.6	+0.1
CDAG				S	Sg	01 43 28.9	+0.5
CUAYA	Sivas-Altinyay	1.39	148	P	Pb	01 43 10.1	-0.1
CUAYA				S	Sg	01 43 28.7	0.0
KOZK	Kozakli-Nevseh	1.44	211	Pn	Pg	01 43 11.4	-0.2
KOZK				Sn	Sg	01 43 31.1	+0.9
TOS	Tosya	1.48	294	Pn	Pb	01 43 11.7	0.0
DELI	KIRIKKALE	1.52	253	P	Pn	01 43 11.3	-0.1
DELI				S	Sn	01 43 31.4	+0.2
GUNE	Kayseri	1.56	185	SPECP		01 43 12.0	
GUNE				P	Pb	01 43 12.5	-0.5
GUNE				S	Sg	01 43 36.2	+2.2
BNN	Bunyan	1.60	179	Pn	Pb	01 43 13.3	-0.5
BNN				Sn	Sg	01 43 35.3	-0.1
CUZAR	Zara_SIVAS	1.61	110	P	Pb	01 43 13.8	-0.1
CUZAR				S	Sg	01 43 36.7	+1.1
SINO	SINOP_Merkez	1.63	344	P	Pb	01 43 14.3	+0.1
SINO				S	Sg	01 43 36.1	-0.3
CANT	Cankiri	1.68	276	Pn	Pb	01 43 14.5	-0.5
AKPI	Kirsehir/Akpin	1.68	236	SPECP		01 43 14.0	
AKPI				P	Pb	01 43 14.8	-0.4
AKPI				S	Sb	01 43 36.3	-0.2
ILGA	Ilgaz	1.70	291	SPECP		01 43 15.0	
ILGA				P	Pb	01 43 15.3	-0.2
ILGA				S	Sg	01 43 38.8	+0.2
CUKAN	kangal_SIVAS	1.71	131	P	Pn	01 43 14.7	+0.6
CUKAN				S	Sg	01 43 38.6	-0.3
AVNS	Nevsehir-Avano	1.80	205	P	Pn	01 43 16.1	+0.7
AVNS				S	Sg	01 43 43.0	+1.0
BR131	Keskin Array S	1.82	247	Pn	Pn	01 43 16.5	+1.0
BRTR	Keskin Array B	1.82	247	Pg	Pn	01 43 16.4	+0.8
	11nm,0.3s,baz=68,slow=14,SNR=204						
BRTR				Lg	Lg	01 43 41.9	
	19nm,0.3s,baz=94,slow=23,SNR=4.9						
ELDT	Eldivan	1.82	272	SPECP		01 43 16.0	
ELDT				P	Pb	01 43 16.9	-0.6
ELDT				S	Sg	01 43 42.0	-0.5
SUSE	Susehri	1.85	97	P	Pb	01 43 17.2	-0.8
SUSE				S	Sg	01 43 43.7	+0.3
KAMT	Kaman	1.94	237	Pn	Pb	01 43 18.5	-1.1
KIRS	Kirsehir-Merke	1.96	228	SPECP		01 43 18.0	
KIRS				P	Pb	01 43 18.9	-1.1
KIRS				S	Sg	01 43 46.1	-1.1
BZK	Bozkurt	2.03	318	⇑P	Pn	01 43 17.4	-0.9
BZK	Bozkurt	2.03	318	Pn	Pn	01 43 18.6	+0.3
CUGUR	Gurin_SVAS	2.06	146	P	Pg	01 43 22.6	-1.0
CUGUR				S	Sg	01 43 51.2	+0.9
PELI	Kastamonı-Ara	2.07	295	SPECP		01 43 20.0	
PELI				P	Pn	01 43 20.0	+1.0
PELI				S	Sg	01 43 49.6	-1.1
SARI	SarD1z-Kayseri	2.10	167	Pn	Pn	01 43 20.4	+1.0
YAYX	Yaylak	2.16	226	Pn	Pn	01 43 21.6	+1.4
BBAL	Bala	2.25	247	P	Pb	01 43 23.3	-1.6
BBAL				S	Sb	01 43 53.1	+0.1
ALUC	Giresun/Alucra	2.26	92	P	Pn	01 43 21.8	0.0
ALUC				S	Sg	01 43 56.5	-0.3
DARE	Darende-Malaty	2.28	145	Pn	Pn	01 43 22.8	+0.9
SERE	Sereflikochisa	2.29	230	Pn	Pn	01 43 23.6	+1.5
AFSR	Afar-Bala (An	2.33	245	Pn	Pn	01 43 23.8	+1.2
ARPR	Arapgir-MALATY	2.37	124	Pn	Pn	01 43 23.9	+0.7
YAHY	KAYSERI_Yahyal	2.38	188	SPECP		01 43 24.0	
YAHY				P	P	01 43 24.0	+0.7
YAHY				S	Sb	01 43 58.6	+2.0
KEMA	Kemaliye	2.38	119	P	Pn	01 43 24.7	+1.5
KEMA				S	Sb	01 43 57.7	+1.2
ANTO	Ankara	2.38	257	⇓P	Pn	01 43 24.5	+1.2
ANTO	Ankara	2.38	257	Pn	Pn	01 43 24.6	+1.3
AKSY	AKSARAY - Alti	2.40	222	P	Pb	01 43 25.6	-1.7
AKSY				S	Sg	01 43 59.8	-1.3
GULA	Gulagac	2.43	211	Pn	Pn	01 43 25.6	+1.6
SAIM	ADANA	2.48	175	P	Pn	01 43 25.5	+0.8
SAIM				S	Sb	01 43 59.8	+0.3
KBUK	KARABUK-Merkez	2.54	289	P	Pn	01 43 26.1	+0.8
KBUK				S	Sn	01 43 55.6	-0.7
CMDR	Camlidere-ANKA	2.54	272	P	Pn	01 43 26.4	+0.9
KKUL	Konya-Kulu	2.57	241	SPECP		01 43 27.0	
KKUL				P	Pn	01 43 27.8	+1.9
KKUL				S	Sg	01 44 04.9	-1.6
NIDE	Nigde/Merkez-G	2.58	198	P	Pn	01 43 27.1	+1.1
NIDE				S	Sg	01 44 05.3	-1.5
KULU	Kulu	2.58	238	Pn	Pn	01 43 27.6	+1.6
CIDE	Kastamonu/Cide	2.59	304	P	Pn	01 43 27.1	+1.1
CIDE				S	Sb	01 44 00.2	-2.2
KELT	Kelkit	2.65	95	P	Pn	01 43 28.5	+1.4
KELT				S	Sb	01 44 05.5	+1.0
AKCD	Akcadag	2.71	142	P	Pn	01 43 28.5	+0.8
AKCD				S	Sb	01 44 06.4	+0.4
BCAM	Yenicaga	2.87	278	P	Pn	01 43 31.2	+1.2
ANDN	Andirin	2.90	172	P	Pn	01 43 32.2	+1.8
ANDN				S	Sn	01 44 06.5	+1.1
MAYA	Malatya/Merkez	2.94	136	P	Pb	01 43 33.8	-2.7
MAYA				S	Sg	01 44 15.6	-2.7
BTIN	Bartın	2.94	295	P	Pn	01 43 30.9	0.0
KOZT	Kozan	2.97	180	Pn	Pn	01 43 33.0	+1.8
AKO	Adana	3.00	186	P	Pb	01 43 35.8	-1.7
AKO				S	Sg	01 44 18.6	-1.8
AKCA	Adyaman/G¶l	3.03	151	P	Pn	01 43 34.8	+2.6
AKCA				S	Sg	01 44 19.8	-1.6
KTUT	Trabzon	3.06	79	⇓P	Pb	01 43 38.2	-0.3
KTUT	Trabzon	3.06	79	Pn	Pn	01 43 33.7	+1.3
KMRS	Kahramanmaras	3.06	164	Pn	Pn	01 43 33.8	+1.2
ALIN	Konya, Altinte	3.13	227	SPECP		01 43 34.0	
ALIN				P	Pn	01 43 35.0	+1.4
TNCL	Tunceli-Merkez	3.17	114	P	Pn	01 43 35.9	+1.7
TNCL				S	Sg	01 44 25.2	-0.6
AZEY	Adyaman-Merk	3.25	143	P	Pn	01 43 37.5	+2.3
AZEY				S	Sn	01 44 14.7	+0.7
BAYT	Aydıntepe-Bayb	3.31	90	Pn	Pn	01 43 36.9	+0.8
YIGI	Dzce	3.35	280	P	Pg	01 43 46.3	-1.9
GZT	Gaziantep	3.38	156	P	Pn	01 43 39.3	+2.2
GZT				S	Sg	01 44 34.0	+1.4
NARI	Adyaman-Kaht	3.44	137	P	Pn	01 43 40.6	+2.7
NARI				S	Sn	01 44 15.0	-3.7
KDHN	Kadinhani	3.45	237	P	Pn	01 43 39.5	+1.6
KONT	Konya--Tatoy	3.67	228	P	Pb	01 43 51.0	+2.0
KONT				S	Sn	01 44 25.5	+1.3
KMER	Konya-Meram	3.79	226	P	Pb	01 43 49.3	-1.8
KMER				S	Sn	01 44 13.6	-14
KUZU	Kuzuini	3.81	164	P	Pn	01 43 43.4	+0.6
KKBE	Karaman, Kazim	3.93	216	P	Pb	01 43 55.1	+1.7
KURO	Afyon-Bolvadin	4.14	247	P	Pn	01 43 47.5	0.0
KURO				S	Sn	01 44 31.6	-4.4
YVAC	Isparta, Yalva	4.16	240	P	Pn	01 43 48.3	+0.6
YVAC				S	Pg	01 44 04.8	+1.1
YAL	Yalta	4.21	344	*e*P	Pn	01 43 49.1	+0.8
YAL				Pm		01 43 49.3	
	comp=Z,3.0nm,0.2s						
YAL				*e*S	Sn	01 44 36.3	-1.3
YAL				Sm		01 44 38.7	
	comp=N,13nm,0.5s						
YAL				Sm		01 44 38.7	
	comp=E,14nm,0.5s						
ALU	Alushta	4.35	347	*e*P	Pn	01 43 51.8	+1.6
ALU				Pm		01 43 52.8	
	comp=Z,7.0nm,0.4s						
ALU				*e*S	Sn	01 44 41.0	0.0
ALU				Sm		01 44 48.4	
	comp=N,10.0nm,0.3s						
ALU				Sm		01 44 48.4	
	comp=E,7.0nm,0.3s						
SEV	Sevastopol'	4.38	340	*e*P	Pn	01 43 51.7	+1.0
SEV				Pm		01 43 55.6	
	comp=Z,1.0nm,0.2s						
SEV				*e*S	Sn	01 44 40.7	-1.1
SEV				Sm		01 44 46.3	
	comp=N,9.0nm,0.5s						
SEV				Sm		01 44 46.3	
	comp=E,5.0nm,0.4s						
SUDU	Sudak	4.47	353	*e*P	Pn	01 43 53.2	+1.3
SUDU				Pm		01 43 54.6	
	comp=Z,36nm,0.5s						
SUDU				*e*S	Sn	01 44 43.7	-0.3
SUDU				Sm		01 44 44.5	
	comp=N,26nm,0.8s						
SUDU				Sm		01 44 44.5	
	comp=E,34nm,1.1s						
SIM	Simferopol'	4.66	345	*e*P	Pn	01 43 55.9	+1.4
SIM				Pm		01 43 57.9	
	comp=Z,9.0nm,0.3s						
SIM				*e*S	Sn	01 44 47.6	-1.1
SIM				Sm		01 44 54.3	
	comp=N,18nm,0.6s						
SIM				Sm		01 44 54.3	
	comp=E,13nm,0.5s						
KVAR	Kislovodsk Arr	6.20	53	Pn	Pn	01 44 19.5	+3.8
	baz=252,slow=20						
KVAR				Lg	Lg	01 45 52.5	
	baz=301,slow=17						
	comp=E,1.1nm,0.3s						
KBZ	Khabaz	6.21	56	Pn	Pn	01 44 16.3	+0.6
	comp=E,0.2nm,0.3s,baz=243,slow=9.0,SNR=6.2						
	comp=E,1.3nm,0.7s						
TLCR		6.99	315	⇓P	Pn	01 44 25.7	-0.6
TPGR	Topolog	7.00	311	⇑P	Pn	01 44 25.4	-1.2
CFR	Carcaliu	7.36	312	P	Pn	01 44 31.6	+0.1
MMAI	Mount Meron Ar	7.43	183	Pn	Pn	01 44 32.7	+0.1
	comp=E,1.1nm,0.3s,baz=0.0,slow=6.2,SNR=10						
	comp=E,0.8nm,0.3s						
MLR	Muntele Rosu	8.81	308	Pn	Pn	01 44 52.7	+1.1
	comp=E,0.3nm,0.3s,baz=137,slow=23,SNR=2.5						
	comp=E,1.0nm,0.4s						
TESR	Tescani	9.00	315	⇑P	Pn	01 44 53.7	-0.3
VOIR		9.33	306	⇑P	Pn	01 44 59.4	+0.8
BURAR	Bucovina Array	10.45	317	⇑P	Pn	01 45 13.4	-0.7
FINES	FINESS Array B	21.85	347	P	P	01 47 36.3	-0.2
	comp=E,2.3nm,1.1s,baz=161,slow=8.8,SNR=2.2						
	comp=E,2.3nm,1.1s						
ESDC	Sonseca Array	30.27	282	P	P	01 48 55.4	+0.1
	comp=E,0.3nm,0.8s,baz=60,slow=10.0,SNR=2.5						
	comp=E,0.3nm,0.8s						
TORD	Torodi Ar. Bea	40.40	237	P	P	01 50 22.7	+0.2
	comp=E,0.5nm,0.8s,baz=46,slow=8.3,SNR=2.7						
	comp=E,0.5nm,0.8s						

IDC 10 02:01:41.8±3.0**, 19°.31S**×**173°.36W, h0**^{km}**, mb3.9**/3**,**
mbtmp3.9/3**, Error ellipse: s-maj=295.9km**
s-min=34.9km az=159.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	49.04	255	P	P	02 10 31.1	+0.2
	3.4nm,0.5s,baz=97,slow=7.5,SNR=47						
	3.4nm,0.5s						
WRA	Warramunga Arr	49.09	260	P	P	02 10 31.0	-0.4
	1.6nm,0.6s,baz=98,slow=8.2,SNR=26						
	1.6nm,0.6s						
TXAR	Lajitas Array	82.76	56	P	P	02 14 08.1	0.0
	0.1nm,0.3s,baz=209,slow=7.2,SNR=2.2						
	0.1nm,0.3s						

IDC ***10*** *02:22:09.2*±*1.6, 60°.18N*×*151°.66W, h57*^{km}±*33*^{km}*, mb3.1/1,*
mbtmp3.3/5, ML3.0/4, Error ellipse: s-maj=44.8km
s-min=10.6km az=111.0
NEIC ***10*** *02:22:10.6*±*1.2, 60°.21N*±*0°.03*×*151°.88W*±*0°.05,*
h73^{km}±*10*^{km}*, Error ellipse: s-maj=5.9km s-min=2.1km*
az=146.0
AEIC ***10*** *02:22:11.6*±*1.3, 60°.21N*±*0°.04*×*151°.85W*±*0°.06, h67*^{km}±*7*^{km}*,*
ML3.0, ML3.2/108(NEIC), Error ellipse: s-maj=6.0km
s-min=3.1km az=214.0
ISC 10 02:22:10.7±1.0**, 60°.22N**±0°.03×**151°.86W**±0°.03**, h77**^{km}±7^{km}**,**
n145, σ0^{s}**.72**/136**, Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
O20K	Slope Mountain	0.41	251	P	Pn	02 22 22.9	-0.6
	baz=69						
RSO	Redoubt South	0.51	299		Pn	02 22 23.8	-0.7
HOM	Homer	0.57	169		Pn	02 22 24.8	0.0
HOM	Homer	0.57	169		Sn	02 22 35.8	+0.5
HOM	Homer	0.57	169	P	Pn	02 22 24.8	0.0
	baz=350						
HOM				S	Sn	02 22 35.8	+0.5
	baz=350						
CAPN	Captain Cook N	0.65	32		Pn	02 22 26.5	+0.9
BRLK	Bradley Lake	0.67	132		Pn	02 22 25.4	-0.5
ILSW	Iliamna Southw	0.68	250		Pn	02 22 25.4	-0.7
ILSW				IAML		02 22 39.2	
	comp=E,587nm,0.7s						
ILSW				IAML		02 22 39.9	
	comp=N,747nm,0.4s						
BRSE	Bradley Lake S	0.74	130		Pn	02 22 26.1	-0.5
BRSE	Bradley Lake S	0.74	130	P	Pn	02 22 26.1	-0.5
	baz=312						
CNPM	China Poot	0.76	155		Pn	02 22 26.6	-0.2
CNPM	China Poot	0.76	155		Sn	02 22 38.4	-0.4
SLKM	Skilak Lake	0.86	70		Pn	02 22 27.1	-0.9
OPT	Oil Point	0.89	231	P	Pn	02 22 28.2	-0.1
	baz=50						
P19K	Oil Pt	0.89	231		Pn	02 22 28.2	-0.1
P19K				IAML		02 22 44.3	
	comp=N,864nm,0.5s						
P19K	Oil Pt	0.89	231	P	Pn	02 22 28.3	-0.1
	baz=50						
P19K				S	Sn	02 22 41.6	+0.1
	baz=50						
SPU	Mount Spurr	0.97	354		Pn	02 22 28.8	-0.5
SPCR	Spurr Chakacha	1.00	350	P	Pn	02 22 29.3	-0.3
	baz=170						
SPCR				S	Sn	02 22 44.1	+0.3
	baz=170						
O22K	Cooper Landing	1.09	75		Pn	02 22 30.6	-0.1
O22K	Cooper Landing	1.09	75	P	Pn	02 22 30.5	-0.1
	baz=257						
SEW	Seward	1.21	94	Pn	Pn	02 22 31.5	-0.6
SEW	Seward	1.21	94	P	Pn	02 22 31.5	-0.6
	baz=277						
O19K	Port Alsworth	1.23	270	Pn	Pn	02 22 31.5	-0.8
O19K	Port Alsworth	1.23	270	P	Pn	02 22 31.7	-0.7
	baz=88						
O19K				S	Sn	02 22 47.8	-0.8
	baz=88						
RC01	Rabbit Creek A	1.36	49		Pn	02 22 34.2	+0.1
RC01				IAML		02 22 55.7	
	comp=E,512nm,0.4s						
RC01				IAML		02 22 57.0	
	comp=N,380nm,0.4s						
RC01	Rabbit Creek A	1.36	49	P	Pn	02 22 34.3	+0.1
	baz=231						
SUA	Susitna One	1.36	23		Pn	02 22 34.5	+0.3
SUA				IAML		02 22 54.0	
	comp=E,468nm,0.9s						
SUA				IAML		02 22 54.5	
	comp=N,339nm,1.0s						
SUA	Susitna One	1.36	23	P	Pn	02 22 34.5	+0.3
	baz=204						
N19K	Bonanza Creek	1.43	296		Pn	02 22 34.3	-0.8
N19K				IAML		02 22 53.7	
	comp=N,276nm,0.3s						
N19K				IAML		02 22 54.0	
	comp=E,242nm,0.4s						
N19K	Bonanza Creek	1.43	296	P	Pn	02 22 34.4	-0.6
	baz=113						
N19K				S	Sn	02 22 52.3	-1.1
	baz=113						
Q19K	Cape Douglas,	1.58	216	Pn	Pn	02 22 37.5	+0.5
Q19K				IAML		02 22 59.3	
	comp=N,402nm,0.8s						
Q19K	Cape Douglas,	1.58	216	P	Pn	02 22 37.5	+0.5
	baz=34						
Q20K	Shuyak Island	1.64	190	P	Pn	02 22 38.0	+0.4
	baz=9.4						
O18K	Koktuh Hills	1.72	259		Pn	02 22 38.2	-0.6
O18K				IAML		02 22 59.5	
	comp=N,309nm,0.6s						
O18K				IAML		02 22 59.7	
	comp=E,326nm,0.3s						
O18K	Koktuh Hills	1.72	259	P	Pn	02 22 38.1	-0.6
	baz=76						
M22K	Willow	1.76	28		Pn	02 22 40.0	+0.7
M22K	Willow	1.76	28	P	Pn	02 22 39.8	+0.6
	baz=210						
SKT	Skwentna	1.78	5		Pn	02 22 40.0	+0.5
SKT	Skwentna	1.78	5	P	Pn	02 22 39.8	+0.3
	baz=185						
M20K	Styx River	1.78	340		Pn	02 22 39.9	+0.2
PWL	Port Wells	1.86	68	Pn	Pn	02 22 40.0	-0.7
PWL	Port Wells	1.86	68	P	Pn	02 22 39.9	-0.7
	baz=252						
P18K	Big Mountain,	1.89	246	P	Pn	02 22 40.6	-0.5
	baz=62						
PMR	Palmer	1.92	43	P	Pn	02 22 40.7	-0.7
PMR	Palmer	1.92	43	P	Pn	02 22 41.3	0.0
	baz=225						
SVW2	Sparrevohn	2.03	297		Pn	02 22 41.9	-1.1
SVW2				IAML		02 23 06.3	
	comp=E,88nm,0.6s						
SVW2	Sparrevohn	2.03	297	P	Pn	02 22 42.0	-0.9
KNK	Knik Glacier	2.05	53		Pn	02 22 43.2	-0.1
KNK				IAML		02 23 08.3	
	comp=N,256nm,0.4s						
KNK	Knik Glacier	2.05	53	P	Pn	02 22 42.9	-0.3
	baz=236						
M19K	Big River Lodg	2.09	325	IAML		02 23 09.6	
	comp=N,118nm,0.5s						
M19K				IAML		02 23 09.9	
	comp=E,195nm,0.5s						
M19K	Big River Lodg	2.09	325	P	Pn	02 22 43.6	-0.1
	baz=143						
M19K				S	Sn	02 23 08.3	-0.6
	baz=143						
GHO	Glory Hole Cre	2.12	41		Pn	02 22 44.4	+0.3
P23K	Montague Islan	2.24	94	P	Pn	02 22 44.8	-1.0
	baz=278						
Q18K	Katmai Hardscr	2.25	227	P	Pn	02 22 45.7	-0.3
	baz=44						
SML	Sawmill	2.34	46		Pn	02 22 47.2	+0.1
SML				IAML		02 23 14.7	
	comp=E,142nm,0.6s						
SML				IAML		02 23 30.5	
	comp=N,139nm,0.7s						
SML	Sawmill	2.34	46	P	Pn	02 22 47.0	-0.1
	baz=229						
L19K	White Mountain	2.45	325	IAML		02 23 17.9	
	comp=N,65nm,0.7s						
KDAK	Kodiak Island	2.47	189	P	Pn	02 22 47.8	-0.9
	comp=N,1.3nm,0.3s,baz=34,slow=13,SNR=92						
KDAK				S	Sn	02 23 15.5	-2.4
	comp=N,23nm,0.5s,baz=356,slow=19,SNR=3.5						
	comp=N,8.8nm,0.4s						
KDAK	Kodiak Island	2.47	189	Pn	Pn	02 22 48.5	-0.3
KDAK				IAML		02 23 29.9	
	comp=N,72nm,0.5s						
KDAK				IAML		02 23 30.4	
	comp=N,82nm,0.6s						
M23K	Glacier View	2.56	50	P	Pn	02 22 50.0	-0.1
	baz=234						
O17K	Koliganek Bris	2.67	263	P	Pn	02 22 51.0	-0.4
	baz=78						
PPLA	Purkeypile	2.69	357		Pn	02 22 52.6	+0.6
PPLA	Purkeypile	2.69	357	P	Pn	02 22 52.9	+1.0
	baz=176						
SCM	Sheep Creek Mo	2.74	52		Pn	02 22 52.1	-0.3
SCM	Sheep Creek Mo	2.74	52	IAML		02 23 38.7	
	comp=N,90nm,0.7s						
SCM				IAML		02 23 39.2	
	comp=E,128nm,0.6s						
SCM	Sheep Creek Mo	2.74	52	P	Pn	02 22 52.5	+0.1
	baz=236						
MID	Middleton Isla	2.90	103	P	Pn	02 22 55.7	+1.2
EYAK	Cordova Ski Ar	3.05	81		Pn	02 22 55.0	-1.6
EYAK	Cordova Ski Ar	3.05	81	P	Pn	02 22 56.4	-0.2
OHAK	Old Harbor	3.10	195	Pn	Pn	02 22 57.0	-0.3
OHAK	Old Harbor	3.10	195	P	Pn	02 22 59.1	+1.9
DIV	Divide	3.13	70	Pn	Pn	02 22 57.8	0.0
KLU	Klutina	3.17	64		Pn	02 22 57.7	-0.7
KLU	Klutina	3.17	64	P	Pn	02 22 57.6	-0.7
	baz=249						
O16K	Kokwok River B	3.20	261	P	Pn	02 22 58.5	-0.1
	baz=76						
CAST	Castle Rocks	3.21	358		Pn	02 22 59.1	+0.3
CAST	Castle Rocks	3.21	358	P	Pn	02 22 58.7	-0.1
	baz=178						
K20K	Telida	3.32	343	P	Pn	02 23 00.6	+0.3
	baz=160						
TRF	Thorofare Moun	3.33	12		Pn	02 23 00.3	-0.2
TRF	Thorofare Moun	3.33	12	IAML		02 23 45.1	
	comp=N,82nm,0.4s						
TRF				IAML		02 23 46.3	
	comp=E,42nm,0.4s						
P16K	Nushagak River	3.33	252	P	Pn	02 23 01.0	+0.5
	baz=66						
M24K	Tolsona, Glenn	3.34	53	P	Pn	02 23 01.1	+0.4
	baz=238						
TTA	Tatalina	3.37	326		Pn	02 23 00.7	-0.3
TTA	Tatalina	3.37	326	P	Pn	02 23 00.4	-0.6
TTA	Tatalina	3.37	326	P	Pn	02 23 00.8	-0.3
	baz=142						
KTH	Kantishna Hill	3.38	7		Pn	02 23 01.3	+0.1
KTH	Kantishna Hill	3.38	7	IAML		02 23 45.9	
	comp=E,55nm,0.8s						
KTH				IAML		02 23 47.5	
	comp=N,76nm,0.7s						
RND	Reindeer	3.50	23	Pn	Pn	02 23 02.7	-0.1
MCK	McKinley	3.79	20		Pn	02 23 07.0	+0.4
MCK	McKinley	3.79	20	P	Pn	02 23 07.0	+0.4
	baz=203						
N25K	Chitina, Valde	3.81	65	IAML		02 23 50.4	
	comp=N,52nm,0.5s						
N25K				IAML		02 23 50.9	
	comp=E,50nm,0.6s						
N25K	Chitina, Valde	3.81	65	P	Pn	02 23 06.3	-0.7
	baz=252						
BPAW	Bear Paw Mtn.	3.92	6		Pn	02 23 07.4	-1.0
BPAW	Bear Paw Mtn.	3.92	6	P	Pn	02 23 07.4	-1.0
	baz=186						
PAX	Paxson	4.12	45		Pn	02 23 11.4	+0.3
PAX	Paxson	4.12	45	P	Pn	02 23 11.5	+0.3
	baz=231						
GLB	Gilahina Butte	4.13	69		Pn	02 23 09.9	-1.4
GLB	Gilahina Butte	4.13	69	IAML		02 23 57.7	
	comp=N,31nm,0.7s						
GLB				IAML		02 23 58.1	
	comp=E,30nm,0.4s						
VRDI	Verde Repeater	4.25	73		Pn	02 23 11.9	-1.2
VRDI	Verde Repeater	4.25	73	IAML		02 23 60.0	
	comp=E,15nm,0.5s						
VRDI				IAML		02 24 00.1	
	comp=N,24nm,0.5s						
MCARA	McCarthy VSAT	4.48	71	Pn	Pn	02 23 16.0	-0.1
MCARA				IAML		02 24 11.6	
	comp=E,36nm,0.8s						
NEA2	Nenana	4.58	15	P	Pn	02 23 17.8	+0.4
	baz=198						
WRH	Wood River Hil	4.62	21		Pn	02 23 17.2	-0.7
PTPK	Patty Peak	4.72	74		Pn	02 23 18.4	-1.0
KIAG	Kiagna River	4.74	77		Pn	02 23 18.6	-1.1
BALM	Baldy	4.76	76		Pn	02 23 18.4	-1.6
HDA	Harding Lake	4.79	26	IAML		02 24 15.4	
	comp=E,30nm,0.4s						
HDA				IAML		02 24 15.8	
	comp=N,30nm,0.4s						
M26K	Nabesna, AK	4.80	59		Pn	02 23 19.9	-0.6
M26K				IAML		02 24 40.4	
	comp=N,14nm,0.7s						
M26K				IAML		02 24 53.7	
	comp=E,12nm,0.9s						
CCB	Clear Creek Bu	4.83	21		Pn	02 23 20.5	-0.3
RIDG	Independent Ri	4.84	40		Pn	02 23 21.0	0.0
RIDG	Independent Ri	4.84	40	IAML		02 24 33.5	
	comp=N,21nm,0.8s						
RIDG	Independent Ri	4.84	40	P	Pn	02 23 21.0	0.0
	baz=226						
MLY	Manley	4.86	6		Pn	02 23 21.0	-0.3
MLY	Manley	4.86	6	P	Pn	02 23 21.0	-0.3
	baz=187						
I21K	Tanana	4.98	359	IAML		02 24 59.1	
	comp=N,12nm,4.2s						
I21K				IAML		02 25 14.1	
	comp=E,9.1nm,3.0s						
COLA	College	5.03	20	P	Pn	02 23 22.9	-0.6
DOT	Dot Lake	5.04	44	Pn	Pn	02 23 24.2	+0.5
MDM	Murphy Dome	5.05	18		Pn	02 23 23.6	-0.2
MDM	Murphy Dome	5.05	18	IAML		02 25 25.2	
	comp=E,8.2nm,3.9s						
I23K	Minto, Yukon-K	5.08	12	IAML		02 24 25.6	
	comp=N,9.9nm,2.8s						
I23K				IAML		02 26 44.3	
	comp=E,8.7nm,4.0s						
I23K	Minto, Yukon-K	5.08	12	P	Pn	02 23 23.8	-0.4
	baz=194						
BARN	Barnard Glacie	5.09	76		Pn	02 23 24.0	-0.6
BARN	Barnard Glacie	5.09	76	IAML		02 24 20.3	
	comp=N,16nm,0.6s						
BARN				IAML		02 24 21.8	
	comp=E,13nm,0.8s						
ILAR	Eielson Array	5.12	25	P	Pn	02 23 24.6	-0.1
	comp=E,1.4nm,0.3s,baz=210,slow=13,SNR=65						

ILAR				S	Sn	02 24 19.5	-2.9
	comp=E,1.7nm,0.5s,baz=195,slow=20,SNR=4.9						
	comp=E,3.1nm,0.4s						
ILAR	**Eielson Array**	5.12	25		Pn	02 23 24.5	-0.3
CTG	**Chitna Glacier**	5.24	77	P	Pn	02 23 26.3	-0.2
	baz=266						
CTGM	**Chitina Glacie**	5.24	77		Pn	02 23 26.3	-0.3
CTGM	**Chitina Glacie**	5.24	77	IAML		02 26 19.0	
	comp=E,11nm,3.5s						
CTGM				IAML		02 26 30.2	
	comp=N,16nm,3.2s						
SCRK	**Sand Creek**	5.28	41		Pn	02 23 26.8	-0.3
SCRK	**Sand Creek**	5.28	41	IAML		02 24 54.1	
	comp=E,15nm,0.8s						
SCRK				IAML		02 24 55.8	
	comp=N,9.8nm,1.0s						
SCRK	**Sand Creek**	5.28	41	P	Pn	02 23 26.9	-0.1
	baz=228						
POKR	**Poker Plat Res**	5.32	21	Pn	Pn	02 23 27.4	-0.2
POKR				IAML		02 24 38.5	
	comp=N,8.1nm,2.9s						
POKR				IAML		02 25 40.1	
	comp=E,7.4nm,2.6s						
LOGN	**Logan Glacier**	5.40	79		Pn	02 23 28.5	-0.2
LOGN	**Logan Glacier**	5.40	79	IAML		02 24 35.8	
	comp=N,18nm,2.9s						
LOGN				IAML		02 24 47.3	
	comp=E,15nm,2.8s						
L27K	**Beaver Creek,**	5.57	55	Pn	Pn	02 23 32.2	+1.3
PCA	**Pinnacle**	5.80	86		Pn	02 23 33.4	-0.7
IMAR	**Indian Mountai**	5.85	352	Pn	Pn	02 23 34.4	-0.4
PRP	**Porcupine Dome**	6.05	26		Pn	02 23 37.9	+0.3
BCPM	**Bancas Point**	6.12	87	Pn	Pn	02 23 37.9	-0.6
PNL	**Peninsula**	6.29	90		Pn	02 23 39.5	-1.2
PNL	**Peninsula**	6.29	90	P	Pn	02 23 40.5	-0.2
	baz=280						
JIS	**Juneau Island**	9.16	95	P	Pn	02 24 21.6	+1.8
	comp=E,22nm,1.1s						
INK	**Inuvik**	11.32	37	P	Pn	02 24 48.9	-0.3
	comp=E,0.1nm,0.3s,baz=250,slow=12,SNR=2.5						
	comp=E,1.0nm,0.9s						
YKA	**Yellowknife Ar**	17.84	67	P	P	02 26 13.8	+0.6
	comp=E,0.1nm,0.3s,baz=278,slow=10,SNR=7.3						
	comp=E,0.3nm,0.5s						
SONM	**Songino Array**	55.12	306	P	P	02 31 35.8	+1.1
	comp=E,0.4nm,0.7s,baz=33,slow=5.5,SNR=2.7						
	comp=E,0.4nm,0.7s						

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*IDC **10** 02:23:03.9±0.9, 43°.99N×145°.13E, h0^{km}, mb3.4/9, mbtmp3.5/11, ML2.6/1, MS2.9/1, Error ellipse: s-maj=28.2km s-min=19.9km az=130.0*

*MOS **10** 02:23:04.7±0.8, 43°.94N×145°.06E, h17^{km}, mb4.2/1, Error ellipse: s-maj=14.6km s-min=11.5km az=70.8*

*JMA **10** 02:23:05.4±0.1, 44°.0N±0°.3×145°.0E±0°.4, h6^{km}±2^{km}, MV3.4/20, SHIRETOKO PENINSULA REG*

JMA Felt III J1 at SHIRETOKO PENINSULA REG .

*SKHL **10** 02:23:05.2±0.1, 44°.00N×145°.00E, h17^{km}±3^{km}, mb4.6/3*

ISC 10 02:23:05.5±0.8**, 43°.96N**±0°.03×**145°.08E**±0°.03**, h13**^{km}±4^{km}**, n36, σ1^{s}23**/44**, mb3.5**/9**, 6D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JRA	**Rausu**	0.04	126	*e*P	Pg	02 23 07.3	-0.5
JRA				*e*S	Sg	02 23 09.0	-0.5
RUSJ	**Misakicho**	0.19	41	*e*PN	Pg	02 23 10.2	+0.5
RUSJ				*e*S	Sg	02 23 13.9	+1.2
JNSB	**Nemuroshibetsu**	0.19	195	⇓*i*P	Pg	02 23 09.3	-0.4
JNSB				⇓*e*S	Sg	02 23 12.6	-0.1
JNK	**Nakash**	0.46	214	*e*P	Pg	02 23 13.3	-1.2
JNK				*e*S	Sg	02 23 19.1	-1.5
YUK	**Yuzh-Kuril'sk**	0.57	82	*e*PN	Pb	02 23 17.0	-0.3
YUK				*e*S	Sb	02 23 25.8	+0.4
YUK				pmax	pmax		
	comp=N,127nm,0.2s						
YUK				pmax	pmax		
	comp=Z,756nm,0.2s						
YUK				pmax	pmax		
	comp=E,129nm,0.1s						
YUK				smax	smax		
	comp=N,4µm,0.4s						
YUK				smax	smax		
	comp=E,3µm,0.4s						
YUK	**Yuzh-Kuril'sk**	0.57	82	*e*P	Pb	02 23 17.0	-0.3
YUK				AMB	AMB	02 23 18.2	
	comp=E,660nm,0.4s						
YUK				*e*S	Sb	02 23 25.8	+0.4
YUK				A	A	02 23 28.2	
	comp=E,4µm,0.4s						
YUK				A	A	02 23 28.2	
	comp=E,3µm,0.4s						
NMR	**Nemuro--Hokkai**	0.76	141	*e*PN	Pg	02 23 19.5	-0.7
NMR				*e*S	Sg	02 23 30.3	+0.2
NMR	**Nemuro--Hokkai**	0.76	141	*e*P	Pg	02 23 19.5	-0.7
NMR				*e*S	Sg	02 23 30.3	+0.2
NEM2	**Nemuro 2**	0.77	141	⇓*e*P	Pg	02 23 19.5	-0.8
NEM2				⇓*e*S	Sg	02 23 30.2	-0.2
JTKR	**Abashiri--Toko**	0.84	271	*e*P	Pg	02 23 20.0	-1.8
JTKR				*e*S	Sg	02 23 30.8	-1.9
JKHN	**Kushirohamanak**	0.88	176	⇓*e*P	Pg	02 23 21.3	-1.2
JKHN				⇓*e*S	Sg	02 23 33.8	-0.2
AKK	**Akkeshi**	0.96	190	*e*P	Pg	02 23 22.4	-1.6
AKK				*e*S	Sg	02 23 35.2	-1.3
SHO	**Shikotan**	1.27	94	*e*PN	Pg	02 23 28.0	-1.9
SHO				*e*S	Sn	02 23 46.5	+0.7
SHO				smax	smax		
	comp=N,755nm,0.4s						
SHO				smax	smax		
	comp=E,1µm,0.4s						
SHO	**Shikotan**	1.27	94	*e*P	Pg	02 23 27.7	-2.2
SHO				AMB	AMB	02 23 28.9	
	comp=E,120nm,0.2s						
SHO				*e*S	Sg	02 23 44.6	-1.8
SHO				A	A	02 23 47.6	
	comp=E,660nm,0.4s						
SHO				A	A	02 23 47.6	
	comp=E,1µm,0.4s						
KUR	**Kuril'sk**	2.37	57	PN	Pb	02 23 45.4	-2.5
KUR				pmax	pmax		
	comp=E,41nm,0.5s						
KUR				pmax	pmax		
	comp=Z,63nm,0.5s						
KUR				pmax	pmax		
	comp=N,40nm,0.6s						
KUR	**Kuril'sk**	2.37	57	*e*P	Pn	02 23 43.2	-0.7
KUR				AMB	AMB	02 23 50.3	
	comp=N,70nm,0.3s						
KUR				*e*S	Sn	02 24 10.6	-2.2
KUR				A	A	02 24 15.8	
	comp=N,30nm,0.3s						
KUR				A	A	02 24 15.8	
	comp=N,60nm,0.3s						
YSS	**Yuzh-Sakhalins**	3.41	332	*e*PN	Pn	02 24 00.0	+1.8
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
YSS	**Yuzh-Sakhalins**	3.41	332	*e*P	Pn	02 23 57.5	-0.7
YSS				AMB	AMB	02 23 58.5	
	comp=Z,30nm,0.2s						
MJAR	**Matsushiro Arr**	9.08	218	Pn	Pn	02 25 18.8	+2.6
	comp=Z,0.1nm,0.3s,baz=28,slow=13,SNR=1.5						
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	12.38	38	Pn	Pn	02 25 59.8	-1.4
	comp=Z,7.5nm,1.0s,baz=263,slow=12,SNR=4.2						
YAK	**Yakutsk**	20.23	339	LR	LR	02 35 49.6	
	comp=Z,31nm,19.9s,baz=302,slow=38						
SONM	**Songino Array**	27.00	292	P	P	02 28 47.4	+0.4
	comp=Z,0.9nm,1.0s,baz=94,slow=9.9,SNR=4.4						
	comp=Z,0.9nm,1.0s						
H11N2	**WAKE ISLAND Hy**	30.27	136	T	T	03 00 18.8	
	baz=328,slow=75,SNR=52						
H11N1	**WAKE ISLAND Hy**	30.28	136	T	T	03 00 19.7	
	baz=328,slow=75,SNR=37						
H11N3	**WAKE ISLAND Hy**	30.29	136	T	T	03 00 20.1	
	baz=328,slow=75,SNR=26						
H11S1	**WAKE ISLAND Hy**	31.21	138	T	T	03 01 07.9	
	baz=329,slow=76,SNR=62						
H11S3	**WAKE ISLAND Hy**	31.21	138	T	T	03 01 22.7	
	baz=329,slow=76,SNR=67						
H11S2	**WAKE ISLAND Hy**	31.23	138	T	T	03 01 29.6	
	baz=329,slow=76,SNR=35						
ILAR	**Eielson Array**	42.20	36	P	P	02 30 58.1	+0.5
	comp=Z,0.2nm,0.6s,baz=245,slow=2.4,SNR=1.9						
	comp=Z,0.2nm,0.6s						
MKAR	**Makanchi Array**	43.15	297	P	P	02 31 06.0	+0.4
	comp=Z,0.3nm,0.6s,baz=76,slow=10,SNR=4.1						
	comp=Z,0.3nm,0.6s						
YKA	**Yellowknife Ar**	56.45	33	P	P	02 32 47.3	+0.8
	comp=Z,0.3nm,0.8s,baz=300,slow=6.5,SNR=5.2						
	comp=Z,0.3nm,0.8s						
FINES	**FINESS Array B**	63.99	332	P	P	02 33 38.4	+0.4
	comp=Z,1.7nm,1.0s,baz=66,slow=6.8,SNR=1.8						
	comp=Z,1.7nm,1.0s						
WRA	**Warramunga Arr**	64.35	191	P	P	02 33 41.2	+0.4
	comp=Z,0.2nm,0.6s,baz=7.4,slow=6.7,SNR=2.3						
	comp=Z,0.2nm,0.6s						
ASAR	**Alice Springs**	68.07	191	P	P	02 34 05.3	+0.6
	comp=Z,0.4nm,0.8s,baz=14,slow=5.7,SNR=4.2						
	comp=Z,0.4nm,0.8s						
NVAR	**Mina Array Bea**	68.73	57	P	P	02 34 08.2	-0.8
	comp=Z,0.3nm,0.6s,baz=284,slow=4.4,SNR=2.4						
	comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	83.77	55	P	P	02 35 35.8	+1.2
	comp=Z,0.3nm,0.8s,baz=324,slow=4.5,SNR=2.4						
	comp=Z,0.3nm,0.8s						

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*DDA **10** 02:27:17.7±0.0, 36°.94N×28°.73E, h7^{km}±4^{km}, ML2.1*

*ISK **10** 02:27:17.9, 36°.92N×28°.76E, h6^{km}, ML2.2/13*

ISC 10 02:27:18.5±0.8**, 36°.93N**±0°.02×**28°.74E**±0°.02**, h10**^{km}**, n27, σ1^{s}30**/44**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DALY	**Dalyan (Mula)**	0.13	212	Pg	Pg	02 27 21.1	-0.5
FETY	**Fethiye**	0.40	137	Pg	Pg	02 27 26.1	-0.4
FETY				Sg	Sg	02 27 31.7	-0.1
FETY	**Fethiye**	0.40	137	P	Pb	02 27 27.7	-0.1
FETY				S	Sb	02 27 32.8	-1.1
YER	**Yerkesik**	0.42	299	Pg	Pg	02 27 26.9	+0.1
TURN	**Turunc**	0.43	249	Pg	Pb	02 27 27.1	-1.1
TURN	**Turunc**	0.43	249	P	Pg	02 27 25.9	-1.1
TURN				S	Sb	02 27 36.3	+1.6
CAME	**Cameli-Denizli**	0.45	88	Pg	Pg	02 27 26.8	-0.6
CAME				Sg	Sb	02 27 33.8	-1.7
MULA	**Mugla, Merkez-**	0.47	314	P	Pg	02 27 26.9	-0.8
MULA				S	Sg	02 27 33.8	-0.1
CAEL	**Denizli, Camel**	0.50	67	P	Pg	02 27 26.8	-1.5
CAEL				S	Sg	02 27 34.8	-0.2
CAEL				*i* AML	AML	02 27 50.0	
	comp=E,105nm,0.6s						
TAVA	**DENIZLI_Tavas**	0.55	14	P	Pg	02 27 28.8	-0.5
TAVA				S	Sg	02 27 36.7	+0.1
IZZE	**Mula-Seydike**	0.63	142	P	Pg	02 27 30.0	-0.7
IZZE				S	Sb	02 27 40.6	+0.1
IZZE				*i* AML	AML	02 27 42.0	
	comp=E,78nm,0.4s						
APMY	**Acipayam-Deniz**	0.70	39	Pg	Pg	02 27 31.7	-0.4
APMY				Sg	Sb	02 27 42.1	-0.6
GOLH	**Golhisar**	0.72	65	P	Pg	02 27 30.9	-1.6
GOLH				S	Sb	02 27 42.1	-1.2
DNIZ	**Denizli-Tavas-**	0.73	19	P	Pg	02 27 32.0	-0.7
DNIZ				S	Sb	02 27 43.1	-0.4
DNIZ				*i* AML	AML	02 27 52.0	
	comp=E,118nm,0.5s						
MLSB	**Milas**	0.85	295	Pg	Pb	02 27 35.1	-0.4
ELL	**Elmali**	0.95	101	Pg	Pn	02 27 36.9	-1.2
DAT	**Datca**	0.96	258	Pg	Pb	02 27 36.8	-0.5
AKAS	**Kas**	0.98	135	Pg	Pb	02 27 36.9	-0.9
AKAS	**Kas**	0.98	135	P	Pn	02 27 37.6	-1.0
AKAS				S	Sn	02 27 55.3	+2.7
AKAS				*i* AML	AML	02 28 04.0	
	comp=E,69nm,1.2s						
AYDN	**Tasoluk**	1.00	317	P	Pg	02 27 36.5	-1.3
AYDN				S	Sg	02 27 50.2	-0.7
KORT	**Korkueli**	1.29	86	Pn	Pg	02 27 42.9	-0.4
KORT	**Korkueli**	1.29	86	P	Pg	02 27 42.4	-0.9
KORT				S	Sn	02 28 05.8	+5.6
KORT				*i* AML	AML	02 28 07.0	
	comp=E,29nm,1.0s						
BRDR	**BURDUR-Merkez**	1.30	54	P	Pg	02 27 43.4	-0.1
BRDR				S	Sg	02 28 02.3	+2.0
BRDR				*i* AML	AML	02 28 13.0	
	comp=E,21nm,1.1s						
BASM	**Basmaki-Afyon**	1.43	46	Pn	Pb	02 27 44.8	-0.6
PASA	**Karahalli, USA**	1.53	22	P	Pg	02 27 47.7	-0.2
PASA				S	Sg	02 28 07.6	-0.3
KULA	**Kula-Manisa**	1.58	358	Pn	Pb	02 27 47.3	-0.6
USAK	**Uak-Merkez**	1.79	7	P	Pn	02 27 50.0	+0.4
USAK				S	Sb	02 28 13.6	-0.5
USAK				*i* AML	AML	02 28 43.0	
	comp=N,32nm,1.7s						

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*NORS **10** 02:50:22.9±0.0, 43°.13N×46°.33E, h5^{km}, MPVA3.5*

*MOS **10** 02:50:23.1±0.0, 43°.16N×46°.32E, h12^{km}, MPVA3.3*

*DRS **10** 02:50:24.0±0.0, 43°.27N×46°.28E, h18^{km}*

*TIF **10** 02:50:24.6, 43°.14N×46°.23E, h11^{km}±2^{km}*

ISC 10 02:50:24.7±1.0**, 43°.15N**±0°.03×**46°.31E**±0°.02**, h15**^{km}±7^{km}**, n38, σ0^{s}90**/75**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVE	**Vedeno**	0.23	216	*e*Pg	Pg	02 50 29.6	-0.3
DVE				*e*Sg	Sg	02 50 34.2	+0.9
DLMR	**Dylym**	0.25	108	*e*Pg	Pb	02 50 30.1	-0.8
DLMR				*e*Sg	Sg	02 50 34.6	+0.9
GROC	**Groznyy**	0.38	279	*e*Pg	Pb	02 50 33.2	+0.1
GROC				*e*Sg	Sb	02 50 39.1	+0.2
DBC	**Dubki**	0.40	108	*e*Pg	Pb	02 50 32.5	-1.0
DBC				*e*Sg	Sb	02 50 39.5	0.0
BTLR	**Botlikh**	0.49	188	*i* Pg	Pg	02 50 34.1	-0.2
BTLR				*e*Sg	Sb	02 50 42.2	+0.2
KRNR	**Karanay**	0.54	126	*e*Pg	Pb	02 50 35.1	-0.9
KRNR				*e*Sg	Sb	02 50 43.5	-0.1
UNCR	**Uncukul**	0.56	140	*e*Pg	Pb	02 50 35.5	-0.8
UNCR				*e*Sg	Sb	02 50 44.7	+0.7
BUJR	**Buynaksk**	0.67	118	*e*Pg	Pb	02 50 38.2	+0.1
BUJR				*i* Sg	Sn	02 50 49.4	-0.5
XNZR	**Khunzakh**	0.67	154	*e*Pg	Pb	02 50 38.0	-0.1
	25nm,0.4s						
XNZR				*e*Sg	Sn	02 50 48.7	-1.4
	180nm,0.4s						
ARKR	**Arakani**	0.74	137	*e*Pg	Pb	02 50 39.1	-0.2
	1.0nm,0.8s						
ARKR				*e*Sg	Sb	02 50 50.3	+1.0
	298nm,0.9s						
GNBR	**Gunib**	0.90	147	*e*Pg	Pn	02 50 42.2	-0.6
GNBR				*e*Sg	Sn	02 50 56.6	+1.0
SHTL	**Shatili**	0.98	240	P	Pg	02 50 42.8	-0.9
SHTL				S	Sb	02 50 56.5	+0.2
KMGR	**Komgaron**	1.06	266	*e*Pg	Pn	02 50 45.6	+0.5
KMGR				*e*Sg	Sn	02 51 00.3	+0.7
KMKR	**Kumukh**	1.17	150	*e*Pg	Pg	02 50 47.2	0.0
	7.0nm,0.1s						
KMKR				*e*Sg	Sn	02 51 04.4	+1.9
	59nm,0.6s						
VLKR	**Vladikavkaz**	1.20	266	*e*Pg	Pg	02 50 48.1	+0.3
VLKR				*e*Sg	Sn	02 51 05.7	+2.7
SGKR	**Sergokala**	1.21	124	*e*Pg	Pg	02 50 47.3	-0.6
	2.0nm,0.6s						
SGKR				*e*Sg	Sn	02 51 04.5	+1.3
	50nm,0.4s						
TRKR	**Terskaya**	1.29	297	*e*Pg	Pb	02 50 48.4	-0.2
TRKR				*e*Sg	Sg	02 51 07.3	+1.1
BTKR	**Batakoyurt**	1.31	281	*e*Pg	Pg	02 50 49.6	-0.3
BTKR				*e*Sg	Sg	02 51 08.6	+1.6
LGD	**Lagodekhi**	1.31	182	P	Pg	02 50 49.5	-0.3
LGD				S	Sg	02 51 08.1	+1.1
PNSH	**Pansheti**	1.34	248	P	Pb	02 50 49.2	-0.5
PNSH				S	Sn	02 51 07.0	+0.1
URKR	**Urkarakh**	1.38	135	*e*Pg	Pb	02 50 49.6	-0.7
	18nm,0.4s						
URKR				*e*Sg	Sg	02 51 09.4	+0.1
	24nm,0.6s						
ARNR	**Ardon**	1.48	272	*e*Pg	Pg	02 50 52.5	-0.7
ARNR				*e*Sg	Sg	02 51 12.9	+0.5
GUDG	**Gudauri**	1.51	244	P	Pb	02 50 52.2	-0.3
GUDG				S	Sg	02 51 13.0	-0.3
LACR	**Lac**	1.51	259	*e*Pg	Pn	02 50 51.3	-0.1
LACR				*e*Sg	Sg	02 51 13.0	-0.3
PRTR	**Priterechnaya**	1.60	293	*e*Pg	Pn	02 50 51.8	-0.6
PRTR				*e*Sg	Sg	02 51 14.7	-1.4
KORR	**Kora**	1.64	269	*e*Pg	Pb	02 50 54.5	-0.2
KORR				*e*Sg	Sg	02 51 16.9	-0.6
STDR	**Stavd-Durt**	1.66	279	*e*Pg	Pb	02 50 54.6	-0.3
STDR				*e*Sg	Sg	02 51 17.9	-0.1
ZEI	**Tsey**	1.80	259	*e*Pg	Pn	02 50 55.5	+0.1
ZEI				*e*Sg	Sb	02 51 20.7	+0.7
LSNR	**Lesken**	1.82	275	*e*Pg	Pb	02 50 56.5	-1.2
LSNR				*e*Sg	Sg	02 51 22.1	-1.2
DIGR	**Digorskoe uzhe**	2.02	264	*e*Pg	Pn	02 50 58.7	+0.3
DIGR				*e*Sg	Sb	02 51 25.0	-1.1
ONI	**Oni**	2.17	256	P	Pb	02 51 02.3	-1.5
TRLG	**Trialeti**	2.29	226	P	Pb	02 51 05.0	-0.9
TRLG				S	Sg	02 51 36.9	-1.5
DMNI	**Dmanisi**	2.40	222	P	Pb	02 51 06.6	-1.1
DMNI				S	Sb	02 51 38.1	+0.9
KBZ	**Khabaz**	2.55	284	*e*Pn	Pn	02 51 06.5	+1.0
KBZ				*e*Sn	Sb	02 51 39.1	-2.2
NEY	**Neytrino**	2.62	273	*e*Pn	Pn	02 51 07.4	+0.7
NEY				*e*Sn	Sn	02 51 39.5	+1.1
BEYR	**Belyy Ugol+**	2.68	290	*e*Pn	Pn	02 51 07.4	0.0
BEYR				*e*Sn	Sn	02 51 40.9	+1.3
SHA1	**Shidzhatmaz**	2.73	284	*e*Pn	Pn	02 51 08.7	+0.6
SHA1				*e*Sn	Sn	02 51 41.9	+0.9
KIV0	**Kislovodsk Arr**	2.75	288	*e*Pn	Pn	02 51 09.1	+0.7
KIV0				*e*Sn	Sn	02 51 42.0	+0.7

IDC 10 02:51:20.1±1.3**, 7°.75S×115°.80E, h0**^{km}**, mb3.5**/5**, mbtmp3.5**/5**, Error ellipse: s-maj=62.9km s-min=21.8km az=61.0, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	21.66	126	P	P	02 56 13.1	+0.6
	0.3nm,0.3s,baz=302,slow=11,SNR=8.0						
	0.3nm,0.3s						
ASAR	**Alice Springs**	23.49	134	P	P	02 56 31.3	-0.5
	0.4nm,0.6s,baz=314,slow=8.8,SNR=8.4						
	0.4nm,0.6s						
NWAO	**Narrogin (SRO)**	25.09	177	P	P	02 56 46.5	0.0
	7.6nm,0.8s,baz=58,slow=13,SNR=3.0						
	7.6nm,0.8s						
SONM	**Songino Array**	55.97	352	P	P	03 01 00.2	-0.2
	0.2nm,0.5s,baz=156,slow=7.3,SNR=1.7						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	61.95	335	P	P	03 01 41.9	+0.1
	0.2nm,0.5s,baz=149,slow=7.0,SNR=5.1						
	0.2nm,0.5s						

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*IDC **10** 03:09:47.4±0.9, 43°.62N×84°.05E, h0^{km}, mb3.7/10, mbtmp3.7/17, ML3.3/6, MS2.7/2, Error ellipse: s-maj=18.1km s-min=11.1km az=65.0*

*NNC **10** 03:09:51.5±1.6, 43°.69N×83°.76E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=14.7km s-min=6.4km az=129.0*

*SOME **10** 03:09:53.6, 43°.70N×83°.72E, h10^{km}*

ISC 10 03:09:49.3±0.8**, 43°.63N**±0°.05×**83°.91E**±0°.05**, h10**^{km}**, n62, σ2^{s}29**/74**, mb3.6**/9**, 20C-13D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	3.06	285	*e*Pg	Pg	03 10 47.1	-0.8
	43nm,0.6s						
DJR				*e*Lg	Lg	03 11 26.1	
	295nm,0.4s						
PDGK	**Podgornoye**	3.23	266	Pg	Pb	03 10 45.0	-1.9
	9.7nm,0.5s						
PDGK				Lg	Lg	03 11 29.8	
	128nm,0.6s						
PDGK	**Podgornoye**	3.23	266	⇑Pn	Pn	03 10 43.3	+3.0
	45nm,0.7s						
PDGK				⇑Lg	Lg	03 11 30.5	
	197nm,0.6s						
SHLS	**Shalkode**	3.28	263	Pg	Pn	03 10 41.1	+0.3
	206nm,0.7s						
SHLS				Lg	Lg	03 11 23.0	
	516nm,0.5s						
SHLS	**Shalkode**	3.28	263	*e*Pg	Pb	03 10 46.6	-1.0
	108nm,0.6s						
SHLS				*e*Lg	Lg	03 11 24.8	
	516nm,0.5s						
MK31	**Makanchi Array**	3.37	341	⇓Pn	Pn	03 10 44.8	+2.8
	5.2nm,0.5s,baz=151,slow=13,SNR=688						
MK31				⇑Pg	Pg	03 10 52.8	-1.0
	18nm,0.5s,baz=153,slow=15,SNR=58						
MK31				⇑Lg	Lg	03 11 36.2	
	62nm,0.3s,baz=157,slow=29,SNR=15						
MKAR	**Makanchi Array**	3.37	341	Pn	Pn	03 10 45.0	+3.0
	4.0nm,0.3s,baz=152,slow=15,SNR=74						
MKAR				Sn	Sn	03 11 16.7	-5.4
	18nm,0.3s,baz=154,slow=16,SNR=11						
MKAR				Lg	Lg	03 11 35.9	
	96nm,0.3s,baz=154,slow=28,SNR=17						
MKAR				LR	LR	03 11 41.1	
	comp=Z,114nm,18.5s,baz=212,slow=33						
	6.4nm,0.4s						
MAKZ	**Makanchi**	3.46	337	⇑Pn	Pn	03 10 46.2	+2.9
	7.8nm,0.6s						
MAKZ				⇑Pg	Pg	03 10 54.7	-1.0
	30nm,0.4s						
MAKZ				⇑Lg	Lg	03 11 37.8	
	151nm,0.9s						
UZB	**Uzynbulak**	3.59	264	Pg	Pb	03 10 51.5	-1.6
	16nm,0.3s						
UZB				Lg	Lg	03 11 40.6	
	135nm,0.4s						
UZB	**Uzynbulak**	3.59	264	*e*Pg	Pg	03 10 57.4	-0.8
	18nm,0.4s						
UZB				*e*Lg	Lg	03 11 43.4	
	135nm,0.4s						
KPKS	**Kokpek**	3.80	269	*e*Pg	Pg	03 11 00.3	-1.9
	47nm,0.4s						
KPKS				*e*Lg	Lg	03 11 48.9	
	166nm,0.6s						
ZSN	**Zaisan**	3.88	10	Pg	Pb	03 10 57.4	-0.5
	31nm,0.4s						
ZSN				Lg	Lg	03 11 51.1	
	236nm,0.7s						
ZSN	**Zaisan**	3.88	10	*e*Pg	Pb	03 11 01.7	+3.8
	31nm,0.4s						
ZSN				*e*Lg	Lg	03 11 50.4	
	236nm,0.7s						
ZHN	**Zhinishke**	4.02	265	Pg	Pb	03 11 00.6	+0.3
	14nm,0.1s						
ZHN				Lg	Lg	03 11 57.1	
	97nm,0.5s						
ZHN	**Zhinishke**	4.02	265	*e*Pg	Pg	03 11 05.8	-0.5
	18nm,0.6s						
ZHN				*e*Lg	Lg	03 11 57.8	
	97nm,0.5s						
SATY	**Saty**	4.05	264	Pg	Pb	03 11 00.9	0.0
	13nm,0.5s						
SATY				Lg	Lg	03 11 56.8	
	124nm,0.5s						
SATY	**Saty**	4.05	264	*e*Pg	Pg	03 11 05.1	-1.9
	16nm,0.6s						
SATY				*e*Lg	Lg	03 11 56.5	
	124nm,0.5s						
KURS	**Kuram**	4.17	270	Pg	Pb	03 11 04.2	+1.3
	24nm,0.8s						
KURS				Lg	Lg	03 12 02.4	
	70nm,0.9s						
KURS	**Kuram**	4.17	270	*e*Pg	Pb	03 11 05.7	+2.8
	24nm,0.8s						
KURS				*e*Lg	Lg	03 11 57.8	
	70nm,0.9s						
TDK	**Taldyqorghan**	4.18	291	Pg	Pb	03 11 05.8	+2.8
	87nm,0.5s						
TDK				Lg	Lg	03 12 06.1	
	209nm,0.5s						
TDK	**Taldyqorghan**	4.18	291	*e*Pg	Pg	03 11 06.7	-2.7
	159nm,0.7s						
TDK				*e*Lg	Lg	03 11 59.7	
	274nm,0.6s						
ARXS	**Arharly**	4.43	280	*e*Pg	Pg	03 11 12.1	-2.1
	52nm,0.5s						
ARXS				*e*Lg	Lg	03 12 09.1	
	68nm,0.9s						
KOTS	**Kotyrbulak**	4.97	268	Pg	Pb	03 11 18.6	+2.1
	18nm,0.6s						
KOTS				Lg	Lg	03 12 27.5	
	196nm,0.6s						
KOTS	**Kotyrbulak**	4.97	268	*e*Pg	Pg	03 11 23.1	-1.4
	32nm,0.6s						
KOTS				*e*Lg	Lg	03 12 27.6	
	196nm,0.6s						
CHKK	**Chushkaly**	5.02	275	Pg	Pb	03 11 19.4	+2.1
	12nm,0.4s						
CHKK				Lg	Lg	03 12 28.8	
	58nm,0.6s						
CHKK	**Chushkaly**	5.02	275	*e*Pg	Pg	03 11 23.6	-1.9

	8.7nm,0.4s						
CHKK				*e*Lg	Lg	03 12 28.1	
	58nm,0.6s						
MDOK	**Medeo**	**5.02**	**267**	⇑Pn	**Pn**	**03 11 09.2**	**+4.3**
	14nm,0.6s						
MDOK				Pg	**Pb**	**03 11 20.4**	**+3.0**
	12nm,0.6s						
MDOK				⇑Pg	**Pg**	**03 11 21.5**	**-4.1**
	22nm,0.6s						
MDOK				Lg	Lg	03 12 30.1	
	76nm,0.6s						
MDOK				⇓Lg	Lg	03 12 30.1	
	68nm,0.6s						
MDOK	**Medeo**	**5.02**	**267**	*e*Pg	**Pg**	**03 11 24.6**	**-0.9**
	16nm,0.8s						
MDOK				*e*Lg	Lg	03 12 30.5	
	76nm,0.6s						
KNDC	**Almaty**	**5.08**	**268**	⇓Lg	Lg	03 12 30.8	
	149nm,0.6s						
TNSS	**Tian-Shan**	**5.11**	**266**	Pg	**Pb**	**03 11 21.6**	**+2.5**
	9.2nm,0.5s						
TNSS				Lg	Lg	03 12 33.0	
	25nm,0.8s						
TNSS	**Tian-Shan**	**5.11**	**266**	*e*Pg	**Pg**	**03 11 24.8**	**-2.5**
	11nm,0.6s						
TNSS				*e*Lg	Lg	03 12 30.8	
	25nm,0.8s						
MTBS	**Maitube**	**5.48**	**267**	*e*Pg	**Pg**	**03 11 32.0**	**-2.2**
	7.6nm,0.8s						
MTBS				*e*Lg	Lg	03 12 42.7	
	39nm,0.6s						
KUU	**Kurty**	**5.49**	**275**	Pg	**Pb**	**03 11 28.6**	**+3.3**
	5.3nm,0.5s						
KUU				Lg	Lg	03 12 44.1	
	56nm,0.5s						
KUU	**Kurty**	**5.49**	**275**	*e*Pg	**Pg**	**03 11 31.8**	**-2.7**
	14nm,0.8s						
KUU				*e*Lg	Lg	03 12 42.1	
	56nm,0.5s						
KST	**Kastek**	**5.83**	**267**	*e*Pg	**Pg**	**03 11 38.1**	**-2.8**
	11nm,0.8s						
KST				*e*Lg	Lg	03 12 53.5	
	66nm,0.9s						
KRBS	**Karabastau**	**5.97**	**273**	*e*Pg	**Pg**	**03 11 40.4**	**-3.3**
	6.4nm,0.5s						
KRBS				*e*Lg	Lg	03 12 56.9	
	16nm,0.5s						
TKM2	**Tokmak 2**	**6.11**	**266**	⇓Pn	Pn	03 11 24.8	+4.9
	8.0nm,0.6s						
TKM2				⇓Pg	**Pg**	**03 11 44.1**	**-2.2**
	11nm,0.7s						
TKM2				⇑Lg	Lg	03 13 02.2	
	53nm,0.9s						
AAK	**Ala-Archa**	**6.96**	**265**	Pn	**Pn**	**03 11 35.9**	**+4.4**
	0.6nm,0.3s,baz=125,slow=5.4,SNR=6.4						
AAK				Sn	**Sn**	**03 12 50.5**	**-0.3**
	1.4nm,0.3s,baz=80,slow=19,SNR=1.9						
AAK				Lg	Lg	03 13 31.8	
	1.1nm,0.3s,baz=7.5,slow=22,SNR=2.0						
	1.4nm,0.3s						
AML	**Almayashu**	**7.65**	**262**	⇓Pn	**Pn**	**03 11 45.3**	**+4.1**
	0.3nm,0.7s						
AML				⇑Pg	Pg	03 12 11.2	-4.6
	0.8nm,0.6s						
AML				⇑Lg	Lg	03 13 52.5	
	4.1nm,0.8s						
KURBB	**Kurchatov Arra**	**7.90**	**334**	Pn	**Pn**	**03 11 44.9**	**+0.7**
	0.2nm,0.3s,baz=148,slow=13,SNR=25						
KURBB				Sn	**Sn**	**03 13 12.7**	**-0.9**
	0.4nm,0.3s,baz=155,slow=20,SNR=6.2						
KURBB				Lg	Lg	03 13 59.7	
	0.8nm,0.3s,baz=86,slow=22,SNR=4.6						
	2.9nm,0.6s						
KURBB	**Kurchatov Arra**	**7.90**	**334**	⇓Pn	**Pn**	**03 11 45.7**	**+1.5**
	3.8nm,0.5s						
KURBB				⇑Sn	**Sn**	**03 13 13.5**	**-0.1**
	32nm,0.7s						
KURBB				⇓Lg	Lg	03 13 59.7	
	81nm,0.7s						
KURK	**Kurchatov**	**7.95**	**335**	⇑Pn	**Pn**	**03 11 45.7**	**+0.8**
	2.5nm,0.7s						
KURK				⇑Sn	**Sn**	**03 13 14.9**	**0.0**
	10.0nm,0.6s						
KURK				⇓Lg	Lg	03 14 01.8	
	60nm,0.7s						
OTUK	**Ortayu**	**9.29**	**304**	⇑Pn	**Pn**	**03 12 04.5**	**+1.3**
	3.9nm,0.7s						
OTUK				⇓Sn	**Sn**	**03 13 51.8**	**+4.0**
	4.3nm,0.6s						
OTUK				⇓Lg	Lg	03 14 41.9	
	40nm,1.1s						
KK31	**Karatay Array**	**9.78**	**272**	⇑Pn	**Pn**	**03 12 13.8**	**+3.8**
	2.9nm,0.9s,baz=78,slow=13,SNR=13						
KK31				⇓Lg	Lg	03 15 00.7	
	4.4nm,0.6s,baz=71,slow=24,SNR=5.0						
ZALV	**Zalesovo Beam**	**10.35**	**3**	Pn	**Pn**	**03 12 17.3**	**-0.4**
	0.6nm,0.3s,baz=172,slow=16,SNR=7.8						
ZALV				Sn	**Sn**	**03 14 09.7**	**-3.9**
	2.2nm,0.3s,baz=187,slow=22,SNR=12						
ZALV				Lg	Lg	03 15 16.5	
	0.6nm,0.3s,baz=194,slow=24,SNR=5.5						
ZALV				LR	LR	03 16 35.7	
	comp=Z,34nm,21.2s,baz=108,slow=40						
	1.4nm,0.4s						
BVA0	**Borovoye Array**	**12.99**	**321**	⇑Pn	**Pn**	**03 12 54.8**	**+0.9**
	1.5nm,0.5s,baz=139,slow=14,SNR=9.9						
BVA0				⇓Lg	Lg	03 16 38.7	
	11nm,0.9s,baz=132,slow=24,SNR=3.8						
BVAR	**Borovoye Array**	**12.99**	**321**	Pn	**Pn**	**03 12 53.7**	**-0.2**
	0.1nm,0.3s,baz=143,slow=15,SNR=12						
BVAR				Sn	**Sn**	**03 15 15.7**	**-2.7**
	0.1nm,0.3s,baz=118,slow=22,SNR=5.3						
BVAR				Lg	Lg	03 16 39.0	
	baz=130,slow=28,SNR=4.0						
	1.1nm,0.4s						
BRVK	**Borovoye**	**13.06**	**321**	⇑Pn	**Pn**	**03 12 56.4**	**+1.6**
	1.5nm,0.5s						
BRVK				⇑Lg	Lg	03 16 43.0	
	13nm,0.8s						
SONM	**Songino Array**	**16.24**	**67**	Pn	**Pn**	**03 13 37.5**	**-0.1**
	1.1nm,0.7s,baz=258,slow=7.2,SNR=2.1						
AKTO	**Aktyubinsk**	**18.86**	**300**	P	**P**	**03 14 09.1**	**-0.3**
	0.2nm,0.3s,baz=108,slow=15,SNR=3.4						
AKTO				S	**Sn**	**03 17 36.0**	**-4.8**
	0.6nm,0.4s,baz=207,slow=9.4,SNR=2.0						
	1.1nm,0.6s						
ARU	**Arti**	**20.57**	**317**	P	**P**	**03 14 28.0**	**0.0**
	2.2nm,0.3s,baz=108,slow=6.5,SNR=4.5						
	2.2nm,0.3s						
BRTR	**Keskin Array B**	**37.29**	**282**	P	**P**	**03 17 02.8**	**+1.2**
	0.9nm,0.8s,baz=96,slow=7.6,SNR=7.7						
	0.9nm,0.8s						
FINES	**FINESS Array B**	**37.93**	**319**	P	**P**	**03 17 06.8**	**+0.3**
	1.0nm,0.8s,baz=97,slow=16,SNR=5.7						
	1.0nm,0.8s						
ARCES	**ARCESS Array B**	**38.98**	**332**	P	**P**	**03 17 15.6**	**+0.3**
	2.0nm,0.9s,baz=94,slow=9.7,SNR=4.6						
	2.0nm,0.9s						
NB2	**NORSAR Subarra**	**45.11**	**319**	P	**P**	**03 18 05.5**	**0.0**
	comp=Z,1.8nm,0.8s,baz=78,slow=8.6						
NOA	**NORSAR Array B**	**45.11**	**319**	P	**P**	**03 18 05.2**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=78,slow=7.8,SNR=3.9						
	comp=Z,0.8nm,0.7s						
ESDC	**Sonseca Array**	**62.74**	**300**	P	**P**	**03 20 14.0**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=50,slow=6.9,SNR=2.3						
	comp=Z,0.2nm,0.6s						
YKA	**Yellowknife Ar**	**73.19**	**9**	P	**P**	**03 21 19.6**	**-0.2**
	comp=Z,0.1nm,0.5s,baz=342,slow=6.1,SNR=1.8						
	comp=Z,0.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**75.45**	**274**	P	**P**	**03 21 33.7**	**0.0**
	comp=Z,1.4nm,0.5s,baz=47,slow=5.0,SNR=25						
	comp=Z,1.4nm,0.5s						
WRA	**Warramunga Arr**	**78.34**	**132**	P	**P**	**03 21 48.5**	**-1.4**
	comp=Z,0.4nm,0.7s,baz=334,slow=5.2,SNR=3.0						
	comp=Z,0.4nm,0.7s						
ASAR	**Alice Springs**	**81.17**	**135**	P	**P**	**03 22 04.4**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=229,slow=37,SNR=2.3						
	comp=Z,0.2nm,0.6s						
PLCA	**Paso Flores**	**160.88**	**270**	PKP	**PKPdf**	**03 29 48.4**	**-1.0**
	comp=Z,2.2nm,0.9s,baz=56,slow=5.2,SNR=2.8						

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*IDC **10** 03:22:57.8±4.3, 7°.29S×128°.82E, h128^{km}±43^{km}, mb3.8/3, mbtmp4.6/7, MS2.5/2, Error ellipse: s-maj=57.3km s-min=16.6km az=72.0*
*DJA **10** 03:23:01.5±0.3, 7°S±2°×12°9E±°, h205^{km}±7^{km}, M4.5/14, mB5.0/7, mb4.6/12, MLv4.7/14, Mw(mB)4.3/7*
*NEIC **10** 03:23:02.9±1.4, 7°.10S±0°.08×129°.29E±0°.08, h184^{km}±9^{km}, mb4.2/15, Error ellipse: s-maj=12.4km s-min=11.0km az=161.0*
ISC 10 03:23:03.2±0.5**, 7°.14S**±0°.05×**129°.35E**±0°.06**, h200^{km}, n65, σ2^{s}.01**/67**, mb4.2**/12**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.11**	**114**	Pn	**Pn**	**03 23 41.8**	**-1.0**
SAUI	**Saumlaki**	**2.11**	**114**	P	**Pn**	**03 23 42.0**	**-0.8**
SAUI				S	**Sn**	**03 24 11.6**	**-2.0**
BNDI	**Bandanaira**	**2.65**	**12**	P	**Pn**	**03 23 48.7**	**-0.1**
BNDI	**Bandanaira**	**2.65**	**12**	P	**Pn**	**03 23 48.6**	**-0.2**
AAI	**Ambon**	**3.61**	**341**	P	**Pn**	**03 23 59.6**	**-0.6**
MSAI	**Masohi**	**3.79**	**354**	P	**Pn**	**03 24 02.5**	**+0.1**
NLAI	**Namlea**	**4.47**	**330**	P	**Pn**	**03 24 11.4**	**+0.5**
FAKI	**Fak Fak**	**5.09**	**35**	Pn	**Pn**	**03 24 16.2**	**-2.6**
FAKI	**Fak Fak**	**5.09**	**35**	P	**Pn**	**03 24 16.4**	**-2.3**
	66nm,0.8s,5µm1.4nm						
SOEI	**Soe**	**5.66**	**242**		**Pn**	**03 24 23.6**	**-2.7**
SOEI	**Soe**	**5.66**	**242**	P	**Pn**	**03 24 23.8**	**-2.5**
SOEI	**Soe**	**5.66**	**242**	P	**Pn**	**03 24 23.7**	**-2.5**
	280nm,0.6s,3µm1.8nm						
MTN	**Manton Dam**	**5.94**	**163**	Pn	**Pn**	**03 24 28.0**	**-1.7**
MTN	**Manton Dam**	**5.94**	**163**	P	**Pn**	**03 24 28.2**	**-1.4**
SANI	**Sanana**	**6.06**	**326**	P	**Pn**	**03 24 31.5**	**+0.2**
	21nm,0.9s,0.1nm						
KDU	**Kakadu**	**6.32**	**151**	P	**Pn**	**03 24 33.4**	**-1.1**
SIJI	**Sorong**	**6.51**	**17**	P	**Pn**	**03 24 35.6**	**-1.6**
	26nm,0.2s,baz=308,slow=24,SNR=29						
SIJI				S	**Sn**	**03 25 44.4**	**-7.2**
	35nm,0.3s,baz=30,slow=23,SNR=13						
SIJI				LR	LR	03 27 18.6	
	comp=Z,81nm,18.8s,baz=28,slow=38						
SWI	**Sorong**	**6.51**	**17**	P	**Pn**	**03 24 36.8**	**-0.4**
	29nm,0.7s,1µm0.4nm						
LBMI	**Labuha**	**6.71**	**344**	P	**Pn**	**03 24 40.3**	**+0.6**
	153nm,0.8s,0.6nm						
MMRI	**Maumere**	**7.20**	**258**	Pn	**Pn**	**03 24 42.4**	**-3.7**
RKPI	**Ransiki, Papua**	**7.37**	**41**	P	**Pn**	**03 24 47.8**	**-0.5**
	376nm,0.5s,27µm2.9nm						
BASI	**Baing, Sumba**	**9.20**	**250**	P	**Pn**	**03 25 10.8**	**-1.3**
	141nm,0.8s						
BKSI	**Bulukumba**	**9.35**	**281**	P	**Pn**	**03 25 12.8**	**-1.2**
	30nm,0.9s						
KAPI	**Kappang**	**9.78**	**282**	LR	LR	03 29 03.4	
	comp=Z,11nm,19.2s,baz=93,slow=39						
KAPI	**Kappang**	**9.78**	**282**	Pn	**Pn**	**03 25 15.4**	**-4.1**
FITZ	**Fitzroy Crossi**	**11.48**	**198**	Pn	**Pn**	**03 25 38.5**	**-2.9**
PLAI	**Plampang**	**11.59**	**261**	P	**Pn**	**03 25 39.0**	**-3.9**
	53nm,0.8s,827nm						
WB0	**Warramunga Arr**	**13.48**	**159**	Pn	**Pn**	**03 26 04.8**	**-1.9**
WRAB	**Tennant Creek**	**13.62**	**160**		**Pn**	**03 26 06.4**	**-2.0**
WRA	**Warramunga Arr**	**13.62**	**160**	P	**Pn**	**03 26 04.9**	**-3.6**
	13nm,0.6s,baz=337,slow=13,SNR=85						
WRA				S	S	03 28 27.8	-13
	18nm,0.5s,baz=331,slow=22,SNR=11						
WRA	**Warramunga Arr**	**13.62**	**160**		**Pn**	**03 26 07.5**	**-1.0**
JAGI	**Jajag, Banyuwa**	**15.12**	**264**	P	**P**	**03 26 27.1**	**-0.4**
	21nm,1.0s						
COEN	**Coen**	**15.18**	**118**		**P**	**03 26 29.0**	**+0.9**
COEN				IAmb	IAmb	03 26 34.6	
	comp=Z,9.5nm,0.8s						
QIS	**Mount Isa**	**16.63**	**144**	P	**Pn**	**03 26 45.9**	**+0.7**
AS31	**Alice Springs**	**17.01**	**166**		**Pn**	**03 26 49.3**	**-0.3**
ASAR	**Alice Springs**	**17.01**	**166**	P	**P**	**03 26 49.3**	**+1.0**
	comp=Z,44nm,0.7s,baz=339,slow=9.3,SNR=365						
ASAR				S	**S**	**03 29 51.8**	**-3.6**
	comp=Z,2.8nm,0.7s,baz=316,slow=15,SNR=4.8						
ASAR	**Alice Springs**	**17.01**	**166**		**Pn**	**03 26 50.0**	**+0.4**
AS01	**Alice Springs**	**17.02**	**165**	P	**Pn**	**03 26 49.9**	**+0.1**
	comp=Z,65nm,0.9s						
PMG	**Port Moresby**	**17.77**	**99**	P	**Pn**	**03 27 01.4**	**+2.8**
	comp=Z,16nm,0.8s,baz=312,slow=9.4,SNR=3.2						
WRKA	**Warakurna**	**17.83**	**183**	P	**Pn**	**03 26 58.7**	**-0.6**
SBUM	**Sibu**	**19.57**	**299**	P	**P**	**03 27 15.9**	**-0.3**
SBUM				IAmb	IAmb	03 27 19.3	
	comp=Z,8.7nm,0.8s						
OOD	**Oodnadatta**	**21.41**	**164**	P	**P**	**03 27 37.1**	**+1.6**
INKA	**Innaminka**	**23.17**	**154**	P	**P**	**03 27 54.7**	**+2.7**
FORT	**Forrest**	**23.55**	**183**	P	**P**	**03 27 57.8**	**+2.3**
BBOO	**Buckleboo**	**26.30**	**167**	P	**P**	**03 28 20.8**	**+0.4**
STKA	**Stephens Creek**	**27.14**	**157**	P	**P**	**03 28 29.6**	**+1.7**
	comp=Z,3.5nm,0.5s,baz=327,slow=9.1,SNR=12						
	comp=Z,3.5nm,0.5s						
STKA	**Stephens Creek**	**27.14**	**157**	P	**P**	**03 28 27.7**	**-0.2**
RPSI	**Rantau Prapat**	**31.90**	**287**	P	**P**	**03 29 09.9**	**-0.2**
RPSI				IAmb	IAmb	03 29 12.0	
	comp=Z,9.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**39.33**	**311**	P	**P**	**03 30 13.3**	**+0.1**
CHTO	**Chiang Mai**	**39.54**	**311**	P	**P**	**03 30 14.8**	**-0.2**
PZH	**PanZhiHua**	**42.84**	**322**	P	**P**	**03 30 44.2**	**+2.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,4.9s						
HHC	**Hu-ho-hao-te**	**50.48**	**343**	*e*P	**P**	**03 31 43.0**	**+2.1**
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,4.9s						
SONM	**Songino Array**	**58.37**	**342**	P	**P**	**03 32 40.6**	**+3.0**
	comp=Z,0.2nm,0.4s,baz=149,slow=3.4,SNR=2.0						
WMQ	**Urumqi**	**63.16**	**327**	*e*P	**P**	**03 33 12.9**	**+3.0**
NIL	**Nilore**	**66.82**	**311**	P	**P**	**03 33 34.0**	**+0.3**
NIL				IAmb	IAmb	03 33 36.2	
	comp=Z,4.2nm,0.5s						
MKAR	**Makanchi Array**	**67.99**	**327**	P	**P**	**03 33 42.2**	**+1.5**
	comp=Z,0.6nm,0.3s,baz=120,slow=7.8,SNR=11						
	comp=Z,0.6nm,0.3s						
AAK	**Ala-Archa**	**70.23**	**320**	P	**P**	**03 33 56.1**	**+1.3**
AAK				IAmb	IAmb	03 34 00.2	
	comp=Z,1.9nm,0.8s						
GAR	**Garm**	**71.31**	**315**	P	**P**	**03 34 02.0**	**+0.7**
GAR				IAmb	IAmb	03 34 04.6	
	comp=Z,8.1nm,1.1s						
ZALV	**Zalesovo Beam**	**71.42**	**334**	P	**P**	**03 34 02.2**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=126,slow=7.3,SNR=2.2						
	comp=Z,0.9nm,0.6s						
ZALV	**Zalesovo Beam**	**71.42**	**334**	P	**P**	**03 34 02.5**	**+1.1**
KURK	**Kurchatov**	**72.30**	**329**	P	**P**	**03 34 07.7**	**+1.0**
KURK				IAmb	IAmb	03 34 09.3	
	comp=Z,5.6nm,1.4s						
KK31	**Karatay Array**	**73.02**	**319**	P	**P**	**03 34 10.9**	**-0.3**
KKAR	**Karatay Array**	**73.02**	**319**	P	**P**	**03 34 10.9**	**-0.3**
KKAR				IAmb	IAmb	03 34 13.2	
	comp=Z,2.5nm,1.2s						
AKUT	**Akutan**	**81.48**	**33**	P	**P**	**03 34 57.0**	**-0.9**
TORD	**Torodi Ar. Bea**	**128.20**	**281**	PKP	**PKiKP**	**03 41 48.6**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=98,slow=1.4,SNR=2.4						

IDC 10 03:34:06.8±2.2**, 1°.87N**×**126°.08E, h0^{km}, mb3.3**/3**, mbtmp3.3**/3**, MS3.8**/1**, Error ellipse: s-maj=178.2km s-min=28.5km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.14**	**160**	P	P	03 39 15.2	+0.3
	1.0nm,0.6s,baz=339,slow=11,SNR=8.4						
	1.0nm,0.6s						
ASAR	**Alice Springs**	**26.50**	**164**	P	P	03 39 46.0	-0.2
	0.1nm,0.3s,baz=345,slow=9.6,SNR=2.6						
	0.1nm,0.3s						
KRVT	**Keravat (AS076**	**26.65**	**103**	LR	LR	03 49 13.2	
	comp=Z,176nm,19.2s,baz=14,slow=34						
MKAR	**Makanchi Array**	**58.72**	**326**	P	P	03 44 06.4	-0.1
	0.2nm,0.5s,baz=113,slow=7.6,SNR=1.7						
	0.2nm,0.5s						

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*DJA **10** 03:40:57.1±0.2, 3°S±3°×13°1E±°, h10^{km}, M4.0/13, mb4.2/4, MLv3.9/13*
*IDC **10** 03:41:00.1±2.0, 3°.20S×131°.06E, h58^{km}±24^{km}, mb3.5/4, mbtmp3.9/7, ML3.8/3, MS3.4/2, Error ellipse: s-maj=32.1km s-min=14.3km az=85.0*
ISC 10 03:40:58.9±0.8**, 3°.25S**±0°.05×**130°.75E**±0°.05**, h35^{km}, n19, σ1^{s}.41**/20**, mb3.6**/3**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.52**	**214**	P	**Pn**	**03 41 23.6**	**-0.1**
BNDI				S	**Sn**	**03 41 44.5**	**+2.2**
FAKI	**Fak Fak**	**1.53**	**78**	P	**Pn**	**03 41 24.1**	**+0.4**
FAKI				S	**Sn**	**03 41 45.3**	**+2.9**
MSAI	**Masohi**	**1.82**	**267**	P	**Pn**	**03 41 28.3**	**+0.5**
SIJI	**Sorong**	**2.42**	**12**	P	**Pn**	**03 41 36.0**	**0.0**
	5.0nm,0.3s,baz=214,slow=22,SNR=19						
SIJI				S	**Sn**	**03 42 04.0**	**-0.3**
	14nm,0.3s,baz=190,slow=13,SNR=4.7						
	16nm,0.2s						
SWI	**Sorong**	**2.42**	**12**	P	**Pn**	**03 41 37.0**	**+1.0**
AAI	**Ambon**	**2.59**	**260**	P	**Pn**	**03 41 39.5**	**+1.2**
NLAI	**Namlea**	**3.65**	**270**	P	**Pn**	**03 41 55.1**	**+2.2**
RKPI	**Ransiki, Papua**	**3.83**	**63**	P	**Pn**	**03 41 56.3**	**+0.9**
LBMI	**Labuha**	**4.16**	**308**	P	**Pn**	**03 42 00.6**	**+0.7**
SAUI	**Saumlaki**	**4.74**	**173**	P	**Pn**	**03 42 08.2**	**+0.3**
SANI	**Sanana**	**4.91**	**284**	P	**Pn**	**03 42 09.6**	**-0.6**
BKSI	**Bulukumba**	**10.80**	**259**	P	**Pn**	**03 43 33.1**	**+2.0**
KAPI	**Kappang**	**11.11**	**261**	P	Pn	03 43 42.3	+6.9
	0.8nm,0.3s,baz=97,slow=9.7,SNR=8.0						
	8.9nm,0.7s						
WRA	**Warramunga Arr**	**16.96**	**168**	P	**Pn**	**03 44 52.6**	**-1.0**
	0.7nm,0.3s,baz=349,slow=12,SNR=17						
	2.2nm,0.6s						
ASAR	**Alice Springs**	**20.53**	**172**	P	**P**	**03 45 32.3**	**-2.1**
	15nm,0.9s,baz=351,slow=11,SNR=88						
	15nm,0.9s						
CTA	**Charters Tower**	**22.56**	**139**	P	**P**	**03 45 55.6**	**-0.7**
	5.1nm,0.8s,baz=336,slow=13,SNR=4.4						
CTA				LR	LR	03 56 31.7	
	comp=Z,167nm,18.6s,baz=328,slow=42						
	5.1nm,0.8s						
KLR	**Kul'dur**	**52.27**	**1**	LR	LR	04 14 05.9	
	comp=Z,16nm,18.3s,baz=280,slow=38						
SONM	**Songino Array**	**55.16**	**340**	P	**P**	**03 50 28.3**	**+0.2**
	0.2nm,0.6s,baz=167,slow=8.4,SNR=1.8						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**65.54**	**326**	P	**P**	**03 51 37.9**	**-1.1**
	0.2nm,0.4s,baz=111,slow=8.1,SNR=3.6						
	0.2nm,0.4s						

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*DJA **10** 03:41:48.3±0.4, 2°S±5°×13°9E±°, h10^{km}, M4.7/12, mB4.9/2, mb4.7/12, MLv4.6/5, Mw(mB)4.2/2*
*IDC **10** 03:41:49.1±5.8, 2°.15S×138°.99E, h33^{km}±43^{km}, mb4.2/11, mbtmp4.4/15, ML4.5/3, MS3.6/10, Error ellipse: s-maj=29.6km s-min=14.3km az=63.0*
*NEIC **10** 03:41:52.5±1.5, 2°.3S±0°.1×138°.9E±0°.1, h58^{km}±6^{km}, mb4.6/35, Error ellipse: s-maj=17.9km s-min=13.8km az=60.0*
ISC 10 03:41:49.2±0.4**, 2°.20S**±0°.06×**138°.95E**±0°.05**, h29^{km}, n105, σ1^{s}.67**/99**, mb4.7**/32**, MS3.7**/7**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.31**	**311**	P	**Pb**	**03 41 54.7**	**-2.0**
GENI	**Genyem**	**1.28**	**108**	P	**Pn**	**03 42 11.1**	**-0.1**
GENI				S	**Sb**	**03 42 30.2**	**+1.3**
SRPI	**Serui, Papua**	**2.72**	**277**	P	**Pn**	**03 42 30.6**	**-0.4**
FAKI	**Fak Fak**	**6.73**	**264**	Pn	**Pn**	**03 43 26.9**	**+0.8**
FAKI	**Fak Fak**	**6.73**	**264**	P	**Pn**	**03 43 26.1**	**0.0**
	46nm,0.5s,0.3nm						
SIJI	**Sorong**	**7.79**	**280**	Pn	**Pn**	**03 43 41.5**	**+0.8**
	2.4nm,0.3s,baz=130,slow=23,SNR=1.1						
SIJI				Sn	**Sn**	**03 45 06.8**	**-1.2**
	1.1nm,0.3s,baz=62,slow=17,SNR=1.3						
SIJI				LR	LR	03 46 58.5	
	comp=Z,509nm,19.0s,baz=50,slow=40						
	7.0nm,0.4s						
PMG	**Port Moresby**	**10.86**	**132**	Pn	**Pn**	**03 44 24.0**	**+1.2**
	4.5nm,0.3s,baz=254,slow=12,SNR=1.7						
PMG				LR	LR	03 49 40.4	
	comp=Z,322nm,18.6s,baz=114,slow=43						
LBMI	**Labuha**	**11.54**	**278**	P	**Pn**	**03 44 34.3**	**+2.1**
	26nm,0.8s						
KDU	**Kakadu**	**12.24**	**211**	P	**Pn**	**03 44 40.1**	**-1.5**
MTN	**Manton Dam**	**13.11**	**216**	Pn	**Pn**	**03 44 52.8**	**-0.8**
MTN	**Manton Dam**	**13.11**	**216**	P	**Pn**	**03 44 54.0**	**+0.5**
GTOI	**Gorontalo**	**16.18**	**280**	P	**P**	**03 45 38.6**	**+1.0**
	4.7nm,1.1s						
SOEI	**Soe**	**16.41**	**242**	P	**P**	**03 45 41.6**	**+1.3**
	38nm,0.7s						
MTSU	**Mount Surprise**	**16.69**	**162**	P	**P**	**03 45 44.6**	**+1.3**
WB0	**Warramunga Arr**	**18.02**	**194**		**Pn**	**03 45 56.0**	**-1.7**
WB0				IAmb	IAmb	03 46 01.8	
	comp=Z,21nm,0.9s						
WRAB	**Tennant Creek**	**18.19**	**194**	P	**Pn**	**03 45 59.0**	**-0.7**
WRAB				IAmb	IAmb	03 46 10.3	
	comp=Z,29nm,0.6s						
WRAB	**Tennant Creek**	**18.19**	**194**	P	**Pn**	**03 45 58.9**	**-0.9**
WB2	**Warramunga Arr**	**18.20**	**194**	P	**Pn**	**03 45 59.3**	**-0.6**
WB2				IAmb	IAmb	03 46 10.1	
	comp=Z,26nm,0.6s						
WRA	**Warramunga Arr**	**18.20**	**194**	P	**Pn**	**03 45 58.2**	**-1.8**
	comp=Z,2.9nm,0.3s,baz=17,slow=12,SNR=23						
WRA				S	Sn	03 49 10.3	-12
	comp=Z,2.9nm,0.6s,baz=17,slow=22,SNR=2.8						
WRA				LR	LR	03 53 35.5	
	comp=Z,447nm,19.2s,baz=16,slow=39						
	comp=Z,14nm,0.7s						
WRA	**Warramunga Arr**	**18.20**	**194**	P	**Pn**	**03 45 58.0**	**-1.9**
WB1	**Warramunga Ar.**	**18.22**	**194**	P	**Pn**	**03 45 59.3**	**-0.8**
QIS	**Mount Isa**	**18.26**	**178**	P	**Pn**	**03 46 03.0**	**+2.4**
BSSI	**Bau Bau, Buton**	**18.82**	**257**	P	**Pn**	**03 46 13.6**	**+6.2**
BKSI	**Bulukumba**	**19.04**	**260**	P	**Pn**	**03 46 16.5**	**+6.4**
CTA	**Charters Tower**	**19.16**	**159**	P	**P**	**03 46 10.9**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=353,slow=10.0,SNR=8.2						
	comp=Z,2.8nm,0.5s						
CTAO	**Charters Tower**	**19.16**	**159**	P	**Pn**	**03 46 11.4**	**-0.1**
SPSI	**Sidrap Palu**	**19.23**	**264**	P	**Pn**	**03 46 13.1**	**+0.7**
	comp=Z,24nm,1.1s						
FITZ	**Fitzroy Crossi**	**20.50**	**219**	P	**P**	**03 46 23.7**	**-1.4**
AS01	**Alice Springs**	**21.88**	**192**	P	**P**	**03 46 39.9**	**-0.1**
AS31	**Alice Springs**	**21.89**	**192**	P	**P**	**03 46 39.5**	**-0.6**
AS31				IAmb	IAmb	03 46 45.9	
	comp=Z,9.8nm,0.5s						
ASAR	**Alice Springs**	**21.89**	**192**	P	**P**	**03 46 39.0**	**-1.1**
	comp=Z,8.6nm,0.6s,baz=24,slow=10,SNR=18						
ASAR				S	**S**	**03 50 38.6**	**-2.0**
	comp=Z,2.0nm,0.7s,baz=9.0,slow=24,SNR=4.6						
	comp=Z,8.6nm,0.6s						
ASAR	**Alice Springs**	**21.89**	**192**	P	**P**	**03 46 39.8**	**-0.4**
QLP	**Quilpie**	**24.77**	**169**	P	**P**	**03 47 09.5**	**+0.9**
WRKA	**Warakurna**	**24.92**	**203**	P	**P**	**03 47 10.0**	**-0.1**
INKA	**Innaminka**	**25.46**	**176**	P	**P**	**03 47 15.4**	**+0.6**
EIDS	**Eidsvold**	**25.84**	**154**	P	**P**	**03 47 19.0**	**+0.7**
EIDS				IAmb	IAmb	03 47 22.6	
	comp=Z,18nm,0.7s						
EIDS	**Eidsvold**	**25.84**	**154**	P	**P**	**03 47 20.2**	**+1.9**
RMQ	**Roma**	**25.93**	**160**	P	**P**	**03 47 21.6**	**+2.5**
MBWA	**Marble Bar**	**26.57**	**223**	P	**P**	**03 47 25.3**	**+0.4**
MBWA				IAmb	IAmb	03 47 35.6	
	comp=Z,23nm,1.2s						
PSA00	**Pilbara Seismi**	**26.77**	**223**	P	**P**	**03 47 27.3**	**+0.6**
PSA00				IAmb	IAmb	03 47 30.4	
	comp=Z,16nm,0.8s						
LCRK	**Leigh Creek**	**28.11**	**181**	P	**P**	**03 47 39.7**	**+1.1**
MULG	**Mulgathing**	**28.32**	**189**	P	**P**	**03 47 39.0**	**-1.5**
STKA	**Stephens Creek**	**29.63**	**175**	P	**P**	**03 47 51.8**	**-0.4**
	comp=Z,1.5nm,0.3s,baz=349,slow=7.8,SNR=7.3						
	comp=Z,1.5nm,0.3s						
STKA	**Stephens Creek**	**29.63**	**175**	P	**P**	**03 47 50.6**	**-1.5**
CMSA	**Cobar Meteorol**	**29.87**	**168**	P	**P**	**03 47 55.8**	**+1.5**
FORT	**Forrest**	**30.24**	**199**	P	**P**	**03 47 56.3**	**-1.3**
BBOO	**Buckleboo**	**30.57**	**185**	P	**P**	**03 47 59.5**	**-1.0**
BBOO				IAmb	IAmb	03 48 01.7	
	comp=Z,13nm,0.8s						
HTT	**Hallett**	**31.07**	**180**	P	**P**	**03 48 05.9**	**+0.9**
H11S3	**WAKE ISLAND Hy**	**34.18**	**52**	T	T	04 24 38.4	
	baz=236,slow=76,SNR=9.6						
H11S2	**WAKE ISLAND Hy**	**34.19**	**52**	T	T	04 24 38.6	
	baz=236,slow=76,SNR=8.8						
H11S1	**WAKE ISLAND Hy**	**34.20**	**52**	T	T	04 24 30.4	
	baz=236,slow=76,SNR=8.2						
MORW	**Morawa**	**34.49**	**217**	P	**P**	**03 48 33.7**	**-1.2**
ARPS	**Mount Arapiles**	**34.51**	**176**	P	**P**	**03 48 35.9**	**+1.0**
MDSI	**Maura Dua**	**34.78**	**265**	P	**P**	**03 48 37.4**	**-0.2**
KLBR	**Kellerberrin**	**35.42**	**212**	P	**P**	**03 48 43.0**	**+0.1**
NWAO	**Narrogin (SRO)**	**36.74**	**211**	LR	LR	04 04 47.6	
	comp=Z,138nm,18.2s,baz=58,slow=38						
SDSI	**Sungai Dareh**	**37.52**	**271**	P	**P**	**03 49 00.9**	**-0.2**
MJAR	**Matsushiro Arr**	**38.55**	**359**	LR	LR	04 02 56.3	
	comp=Z,50nm,19.7s,baz=164,slow=33						
NJ2	**Nanjing**	**39.03**	**332**	*e*P	**P**	**03 49 15.3**	**+1.8**
NJ2				pP	**pP**	**03 49 28.2**	**+6.1**
NJ2				sP	sP	03 49 34.3	+8.7
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,240nm,3.9s						

RPSI	Rantau Prapat	40.30	277	P	P	03 49 23.5	-0.9
GSI	Gunungsitoli	41.51	274	P	P	03 49 31.9	-2.4
CRAI	Chiangrai	43.90	302	P	P	03 49 52.6	-1.0
CRAI				IAmb	IAmb	03 49 54.4	
	comp=Z,6.5nm,1.0s						
CMAR	Chiang Mai Arr	44.39	299	P	P	03 49 57.1	-0.5
	comp=Z,3.0nm,0.7s,baz=118,slow=6.3,SNR=15						
	comp=Z,3.0nm,0.7s						
CMAR	Chiang Mai Arr	44.39	299	P	P	03 49 56.8	-0.8
CHTO	Chiang Mai	44.53	300	P	P	03 49 57.1	-1.6
PZH	PanZhiHua	45.87	311	P	P	03 50 11.5	+2.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,70nm,3.5s						
USRK	Ussuriysk Ar.	46.61	353	LR	LR	04 08 44.2	
	comp=Z,20nm,18.9s,baz=160,slow=35						
HHC	Hu-ho-hao-te	49.59	333	*e*P	P	03 50 40.6	+2.6
HHC				pmax	pmax		
	comp=Z,18nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,5.6s						
GTA	Gaotai	54.80	323	*e*P	P	03 51 17.3	+0.5
GTA				pP	sP	03 51 27.9	-1.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM	Songino Array	57.36	335	P	P	03 51 34.6	-0.3
	comp=Z,0.4nm,0.6s,baz=123,slow=5.3,SNR=2.7						
SONM				PcP	PcP	03 52 28.8	+0.1
	comp=Z,0.5nm,0.6s,baz=151,slow=4.8,SNR=2.6						
	comp=Z,0.4nm,0.6s						
WMQ	Urumqi	64.76	321	*e*P	P	03 52 24.4	-0.8
WMQ				PcP	PcP	03 52 59.2	+0.6
WMQ				pmax	pmax		
	comp=Z,32nm,0.9s						
MK31	Makanchi Array	69.53	322	IAmb	IAmb	03 52 56.5	
	comp=Z,6.8nm,1.1s						
MKAR	Makanchi Array	69.53	322	P	P	03 52 55.5	+0.1
	comp=Z,4.8nm,0.9s,baz=115,slow=8.2,SNR=20						
	comp=Z,4.8nm,0.9s						
MAKZ	Makanchi	69.73	322	P	P	03 52 56.5	-0.1
MAKZ				IAmb	IAmb	03 52 57.6	
	comp=Z,11nm,1.1s						
KSH	Kashi	70.91	313	P	P	03 53 05.9	+1.8
KSH				pP	PcP	03 53 22.0	-2.5
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NIL	Nilore	71.21	307	P	P	03 53 05.0	-0.9
ZAA0	Zalesovo Array	71.61	330	P	P	03 53 06.6	-1.3
ZALV	Zalesovo Beam	71.61	330	P	P	03 53 06.9	-0.9
	comp=Z,1.4nm,0.6s,baz=107,slow=5.1,SNR=4.7						
	comp=Z,1.4nm,0.6s						
KURK	Kurchatov	73.43	325	P	P	03 53 17.9	-0.9
KURK				IAmb	IAmb	03 53 19.6	
	comp=Z,8.9nm,1.2s						
TIXI	Tiksi	74.01	357	P	P	03 53 22.8	+1.1
TIXI				IAmb	IAmb	03 53 32.7	
	comp=Z,7.7nm,1.5s						
GAR	Garm	74.94	311	P	P	03 53 27.5	-0.5
CHGR	Chuyangaron	75.72	311	P	P	03 53 31.9	-0.6
KK31	Karatay Array	75.93	315	P	P	03 53 33.4	-0.1
KKAR	Karatay Array	75.93	315	P	P	03 53 32.6	-0.9
VNDA	Vanda	76.27	175	P	P	03 53 34.2	-0.4
	comp=Z,2.8nm,0.6s,baz=331,slow=6.8,SNR=16						
	comp=Z,2.8nm,0.6s						
BRVK	Borovoye	79.10	325	P	P	03 53 51.0	0.0
BRVK				IAmb	IAmb	03 53 51.9	
	comp=Z,9.9nm,1.1s						
NRIK	Noril'sk	79.30	344	P	P	03 53 51.1	-0.5
	comp=Z,1.3nm,0.3s,baz=154,slow=4.5,SNR=4.8						
	comp=Z,1.3nm,0.3s						
NRIK	Noril'sk	79.30	344	P	P	03 53 51.2	-0.4
NRIK				IAmb	IAmb	03 53 51.9	
	comp=Z,8.8nm,1.4s						
KDAK	Kodiak Island	80.54	30	LR	LR	04 26 00.5	
	comp=Z,54nm,21.1s,baz=235,slow=33						
WSAR	Wadi Sarin	81.97	294	LR	LR	04 35 52.8	
	comp=Z,22nm,18.3s,baz=215,slow=40						
MAW	Mawson	82.69	202	P	P	03 54 11.1	+1.4
	comp=Z,15nm,0.5s,baz=18,slow=6.4,SNR=7.8						
	comp=Z,15nm,0.5s						
GEYT	Alibeck	84.11	308	P	P	03 54 16.1	-1.7
	comp=Z,2.2nm,0.4s,baz=169,slow=2.4,SNR=7.1						
	comp=Z,2.2nm,0.4s						
ABKAR	Akbulak array	84.48	320	P	P	03 54 18.5	-0.8
ILAR	Eielson Array	85.27	24	P	P	03 54 20.2	-2.8
	comp=Z,0.8nm,0.7s,baz=273,slow=3.8,SNR=8.9						
	comp=Z,0.8nm,0.7s						
ILAR	Eielson Array	85.27	24	P	P	03 54 21.2	-1.8
ARU	Arti	86.50	327	P	P	03 54 27.7	-1.5
ARU				IAmb	IAmb	03 54 29.7	
	comp=Z,5.2nm,1.0s						
QSPA	South Pole Qui	87.75	180	P	P	03 54 33.4	-1.9
QSPA				IAmb	IAmb	03 54 35.1	
	comp=Z,3.4nm,0.6s						
DAWY	Dawson	88.31	26	P	P	03 54 38.3	+0.4
DAWY				IAmb	IAmb	03 54 39.5	
	comp=Z,4.7nm,1.1s						
RAYN	Ar Rayn	94.02	293	P	P	03 55 02.3	-3.1
RAYN				IAmb	IAmb	03 55 05.7	
	comp=Z,3.2nm,1.1s						
YBH	Yreka Blue Hor	97.69	48	LR	LR	04 32 21.1	
	comp=Z,27nm,19.6s,baz=242,slow=31						
YKA	Yellowknife Ar	99.50	27	LR	LR	04 38 12.9	
	comp=Z,31nm,20.8s,baz=314,slow=34						
TORD	Torodi Ar. Bea	136.34	287	PKP	PKPdf	04 01 07.4	-1.8
	comp=Z,0.5nm,0.7s,baz=54,slow=1.6,SNR=5.7						
DBIC	Dimbokro	143.65	278	PKP	PKPab	04 01 19.2	0.0
	comp=Z,1.7nm,0.6s,baz=84,slow=3.4,SNR=5.2						
LPAZ	La Paz	147.55	125	PKPbc	PKPbc	04 01 31.5	-1.0
	comp=Z,1.7nm,0.6s,baz=260,slow=4.6,SNR=3.4						
CPUP	Villa Florida	147.57	152	PKPbc	PKPbc	04 01 30.4	-1.2
	comp=Z,3.0nm,0.8s,baz=198,slow=3.8,SNR=4.6						

SJA ***10*** *03:48:42.3±0.7, 28°.83S×67°.56W, h135^{km}±3^{km}, ML4.1, MW3.9, Hypocentre not reviewed by the ISC*

NEIC ***10*** *03:48:42.9±1.6, 28°.87S±0°.07×67°.7W±0°.2, h171^{km}±20^{km}, mb4.1/3, Error ellipse: s-maj=21.4km s-min=10.4km az=87.0*

IDC ***10*** *03:48:42.0±1.7, 28°.74S×67°.26W, h124^{km}±15^{km}, mb3.1/3, mbtmp3.8/8, Error ellipse: s-maj=27.8km s-min=20.1km az=96.0*

ISC 10 03:48:43.0±0.7**, 28°.85S**±0°.05×**67°.6W**±0°.1**, h150**^{km}**, n39, σ1^{s}.60**/40**, mb3.1**/3**, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TINO	Tinogasta	0.78	4	*e*P		03 49 04.3	
TINO				*e*S		03 49 20.9	
ACLC	CERRO LA CRUZ	0.83	134	*e*P		03 49 04.7	
ACLC				*e*S		03 49 21.7	
ACLC				IAML		03 49 23.3	
	comp=Z,2µm,0.3s						
CYA	Choya	1.66	76	*e*P		03 49 13.0	
CYA				*e*S		03 49 34.4	
APLL	PUNTA DE LOS L	1.82	148	*e*P		03 49 15.1	
APLL				*e*S		03 49 38.4	
AC05	El Transito	2.32	270		Pn	03 49 23.4	+1.3
AC05	El Transito	2.32	270	*e*P		03 49 22.4	
AC05				*e*S		03 49 51.5	
AC05				IAML		03 49 53.6	
	comp=Z,570nm,0.2s						
AC02	Maricunga	2.40	326		Pn	03 49 24.5	+1.0
AC02	Maricunga	2.40	326	*e*P		03 49 24.5	
AC02				*e*S		03 49 57.2	
CO01	Juntas del Tor	2.43	242		Pn	03 49 25.2	+1.8
CO01	Juntas del Tor	2.43	242	*e*P		03 49 25.3	
CO01				*e*S		03 49 52.7	
GO03	Copiap	2.62	298		Pn	03 49 26.0	+0.3
GO03	Copiap	2.62	298	*e*P		03 49 25.9	
GO03				*e*S		03 49 57.8	
LCO	Las Campanas	2.70	266		Pn	03 49 27.3	+0.5
LCO	Las Campanas	2.70	266	*e*P		03 49 21.7	
LCO				*e*P		03 49 27.4	
LCO				*e*S		03 50 00.9	
LCO				IAML		03 50 02.4	
	comp=Z,2µm,0.3s						
SJA	San Juan	2.79	197	*e*P		03 49 27.8	
SJA				*e*P		03 49 28.7	
SJA				*e*S		03 50 03.9	
CFA	Coronel Fontan	2.80	191	P	Pn	03 49 27.8	0.0
	comp=Z,206nm,0.3s,baz=42,slow=19,SNR=3311						
CFA				S	Sn	03 49 59.5	-3.1
	comp=Z,304nm,0.3s,baz=9.0,slow=14,SNR=11						
CFA	Coronel Fontan	2.80	191	*e*P		03 49 27.9	
CFA				*e*S		03 50 02.0	
CFA				IAML		03 50 03.8	
	comp=Z,334nm,0.2s						
ZON	Zonda	2.84	198		Pn	03 49 28.6	+0.2
GO04	Tololo Observa	3.06	244		Pn	03 49 31.9	+0.5
GO04	Tololo Observa	3.06	244	*e*P		03 49 32.0	
GO04				*e*S		03 50 08.7	
AC04	Llanos de Chal	3.10	281	Pn	Pn	03 49 31.5	-0.1
AC04	Llanos de Chal	3.10	281	*e*P		03 49 31.4	
AC04				*e*S		03 50 02.2	
AC04				*e*S		03 50 06.1	
RTLS	Leoncito	3.28	206	*e*P		03 49 35.0	
RTLS				*e*S		03 50 15.9	
RTLS				IAML		03 50 18.9	
	comp=Z,356nm,0.2s						
CO03	El Pedregal	3.32	232		Pn	03 49 35.1	+0.6
CO03	El Pedregal	3.32	232	*e*P		03 49 35.1	
CO03				*e*S		03 50 14.0	
CO03				IAML		03 50 19.1	
	comp=Z,276nm,0.2s						
CO05	La Serena	3.33	250	Pn	Pn	03 49 34.3	-0.2
CO02	Combarbal	3.75	230		Pn	03 49 40.0	0.0
CO02	Combarbal	3.75	230	*e*P		03 49 40.1	
CO02				*e*S		03 50 24.2	
CO02				IAML		03 50 26.3	
	comp=Z,266nm,0.2s						
ASAL	Salagasta	3.87	195	*e*P		03 49 42.1	
ASAL				*e*S		03 50 28.7	
CO06	Fray Jorge	3.93	241	Pn	Pn	03 49 41.2	-1.1
GO02	Mina Guanaco	4.07	334	Pn	Pn	03 49 45.0	+0.6
GO02	Mina Guanaco	4.07	334	*e*P		03 49 45.1	
GO02				*e*S		03 50 30.4	
AAGR	Agrelo	4.35	193	*e*P		03 49 48.2	
AAGR				*e*S		03 50 40.1	
VA03	San Esteban	4.64	212		Pn	03 49 52.2	+0.4
VA03	San Esteban	4.64	212	*e*P		03 49 52.3	
VA03				IAML		03 50 50.8	
	comp=Z,106nm,0.5s						
VA06	Catapilco	4.87	220		Pn	03 49 53.4	-1.1
PB14	IPOC Station P	4.88	329	Pn	Pn	03 49 54.9	-0.3
PB14	IPOC Station P	4.88	329	*e*S		03 50 50.0	
PB14				IAML		03 50 53.5	
	comp=Z,106nm,0.6s						
PEL	Peldehue	5.02	211		Pn	03 49 56.2	-0.5
MT03	Universidad Ad	5.25	207	Pn	Pn	03 49 60.0	+0.2
MT03	Universidad Ad	5.25	207	*e*S		03 51 02.2	
MT03				IAML		03 51 03.6	
	comp=Z,91nm,0.3s						
MT05	Renca	5.26	210	Pn	Pn	03 49 59.5	-0.3
MT05	Renca	5.26	210	*e*P		03 50 00.1	
MT05				*e*S		03 51 00.4	
MT05				IAML		03 51 01.5	
	comp=Z,97nm,0.6s						
MT02	Curacav	5.33	214	*e*P		03 49 59.4	
MT02				*e*S		03 51 00.4	
MT02				IAML		03 51 07.2	
	comp=Z,36nm,0.4s						
LVC	Limon Verde	6.32	349	P	Pn	03 50 13.8	-0.5
	comp=Z,38nm,0.3s,baz=155,slow=12,SNR=79						
LVC				S	Sn	03 51 20.2	-5.5
	comp=Z,7.2nm,0.3s,baz=171,slow=12,SNR=3.6						
LVC	Limon Verde	6.32	349		Pn	03 50 13.5	-0.9
GO05	Huala	7.15	210	Pn	Pn	03 50 21.8	-3.2
CPUP	Villa Florida	9.48	77	P	Pn	03 50 49.1	-7.0
	comp=Z,2.4nm,1.0s,baz=182,slow=10,SNR=4.5						
PLCA	Paso Flores	12.10	191	P	Pn	03 51 29.2	-1.3
	comp=Z,1.3nm,0.7s,baz=18,slow=11,SNR=5.2						
LPAZ	La Paz	12.51	358	P	Pn	03 51 36.0	-0.6
	comp=Z,1.2nm,0.4s,baz=172,slow=6.7,SNR=7.2						
LPAZ	La Paz	12.51	358		Pn	03 51 36.2	-0.3
SIV	San Ignacio	14.15	27	P	Pn	03 51 54.0	-2.9
	comp=Z,1.3nm,0.9s,baz=206,slow=15,SNR=5.6						
VILB	Vilhena	17.26	25	P	P	03 52 34.2	-0.1
VILB				IAmb	IAmb	03 52 35.8	
	comp=Z,10.0nm,0.8s						
ETMB	Extrema	18.98	4	P	Pn	03 52 55.3	0.0
ETMB				IAmb	IAmb	03 52 59.6	
	comp=Z,6.3nm,0.8s						
SAML	Samuel	20.23	13	P	P	03 53 07.1	+0.6
SAML				IAmb	IAmb	03 53 09.3	
	comp=Z,4.6nm,0.7s						
TXAR	Lajitas Array	67.33	326	P	P	03 59 23.5	+1.6
	comp=Z,0.1nm,0.5s,baz=163,slow=6.6,SNR=2.1						
	comp=Z,0.1nm,0.5s						
TORD	Torodi Ar. Bea	78.86	68	P	P	04 00 31.1	+1.3
	comp=Z,0.6nm,0.7s,baz=283,slow=5.9,SNR=5.8						
	comp=Z,0.6nm,0.7s						
PDAR	Pinedale Array	81.03	330	P	P	04 00 42.8	+1.6
	comp=Z,0.2nm,0.5s,baz=124,slow=7.4,SNR=3.8						
	comp=Z,0.2nm,0.5s						
ASAR	Alice Springs	123.82	204	PKP	PKiKP	04 07 26.7	+2.7
	comp=Z,0.3nm,0.4s,baz=140,slow=1.8,SNR=2.3						
WRA	Warramunga Arr	127.06	206	PKP	PKiKP	04 07 33.3	+2.8
	comp=Z,0.3nm,0.7s,baz=167,slow=1.7,SNR=11						
ZALV	Zalesovo Beam	147.88	31	PKPbc	PKPbc	04 08 10.3	+0.4
	comp=Z,0.6nm,0.4s,baz=321,slow=4.3,SNR=3.5						
MKAR	Makanchi Array	150.50	44	PKPbc	PKPbc	04 08 16.6	-0.2
	comp=Z,0.9nm,0.8s,baz=308,slow=2.1,SNR=8.2						
PZH	PanZhiHua	170.29	101	PKP	PKPdf	04 08 33.0	-0.5

IDC ***10*** *03:57:53.8±1.2, 37°.35N×20°.48E, h0^{km}, mb3.5/8, mbtmp3.5/11, ML2.7/2, MS3.1/2, Error ellipse: s-maj=27.6km s-min=17.9km az=156.0*

ATH ***10*** *03:57:55.8, 37°.16N×20°.32E, h5^{km}±31^{km}, ML3.3/4, Error ellipse: s-maj=31.6km s-min=1.4km az=0.0*

BEO ***10*** *03:57:58.0±0.9, 37°.39N×20°.47E, h0^{km}, ML3.3/4*

THE ***10*** *03:57:58.4, 37°.28N×20°.49E, h1^{km}±2^{km}, ML3.2/6, Error ellipse: s-maj=3.1km s-min=0.9km az=229.0*

ISC 10 03:57:57.1±1.3**, 37°.28N**±0°.04×**20°.35E**±0°.04**, h26**^{km}±10^{km}**, n101, σ1^{s}.90**/123**, mb3.5**/7**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LTHK	Lithakia	0.58	42	P	Pb	03 58 08.0	-0.8
LTHK				S	Sb	03 58 16.1	-0.6
	6µm,0.2s						
LTHK	Lithakia	0.58	42	P	Pb	03 58 08.0	-0.8
LTHK				S	Sn	03 58 18.6	+0.2
LTHK				AML	AML	03 58 19.0	
	comp=N,9406µm,0.2s						
LTHK				AML	AML	03 58 21.3	
	comp=E,8856µm,0.2s						
PSDA	Pessada-Kefalo	0.86	12	P	Pn	03 58 14.1	+0.6
PSDA				S	Sn	03 58 26.1	+0.9
	comp=E,2µm,0.3s						
PSDA	Pessada-Kefalo	0.86	12	P	Pn	03 58 13.6	+0.1
PSDA				S	Sn	03 58 27.1	+1.8
VLS	Valsamata	0.92	12	P	Pb	03 58 14.5	0.0
VLS				S	Sb	03 58 26.9	+0.5
	comp=E,2µm,0.4s						
VLS	Valsamata	0.92	12	P	Pb	03 58 14.3	-0.2
VLS				S	Sn	03 58 29.7	+2.9
VLS				AML	AML	03 58 30.9	
	comp=E,3227µm,0.4s						
VLS				AML	AML	03 58 36.3	
	comp=N,3270µm,0.3s						
KEF4	Livadi, Kephal	0.98	3	P	Pn	03 58 16.5	+1.3
KEF4	Livadi, Kephal	0.98	3	P	Pn	03 58 16.6	+1.3
PYL	PYLOS	1.18	108	P	Pb	03 58 17.8	-1.0
PYL				S	Sn	03 58 33.5	+0.4
	comp=N,1µm,0.5s						
PYL	PYLOS	1.18	108	P	Pb	03 58 17.7	-1.0
PYL				S	Sn	03 58 33.1	0.0
PYL				AML	AML	03 58 34.0	
	comp=N,3571µm,0.6s						
PYL				AML	AML	03 58 40.0	
	comp=E,1499µm,0.4s						
RLS	Riolos of Patr	1.18	48	P	Pb	03 58 18.5	-0.4
RLS	Riolos of Patr	1.18	48	P	Pb	03 58 18.5	-0.4
FSK	Fiskardo	1.20	8	P	Pb	03 58 19.6	+0.4
ITM	Ithomi	1.26	94	P	Pb	03 58 19.6	-0.7
ITM				S	Sn	03 58 36.8	+1.6
	comp=E,610nm,0.7s						
ITM	Ithomi	1.26	94	P	Pb	03 58 19.6	-0.7
ITM				S	Sn	03 58 37.1	+1.9
ITM				AML	AML	03 58 44.0	
	comp=E,1150µm,0.4s						
ITM				AML	AML	03 58 46.6	
	comp=N,1245µm,0.5s						
DRO	Drossia	1.27	58	P	Pb	03 58 20.2	-0.3
DRO	Drossia	1.27	58	P	Pb	03 58 19.8	-0.8
EVGI	Lefkada island	1.37	10	P	Pb	03 58 22.7	+0.7
EVGI	Lefkada island	1.37	10	P	Pb	03 58 22.7	+0.7
DRAG	Dragano-Lefkad	1.42	7	P	Pb	03 58 24.7	+1.8
DRAG				S	Sb	03 58 44.4	+3.8
NYDR	Nydri-Lefkada	1.46	11	P	Pb	03 58 24.2	+0.5
UPR	University Cam	1.52	48	P	Pb	03 58 25.7	+1.0
TSLK	Tsoukalades, L	1.57	9	P	Pb	03 58 26.2	+0.7
LAKA	Lakka	1.61	53	P	Pb	03 58 26.0	-0.2
LAKA	Lakka	1.61	53	P	Pb	03 58 25.5	-0.7
KLV	Kalavryta, Ach	1.62	61	P	Pb	03 58 25.7	-0.8
KLV	Kalavryta, Ach	1.62	61	P	Pb	03 58 25.6	-0.8
PVO	Paravola	1.63	34	P	Pb	03 58 26.2	-0.4
PVO				S	Sb	03 58 47.5	+0.8
	comp=N,915nm,0.4s						
PVO	Paravola	1.63	34	P	Pb	03 58 26.2	-0.4
EFP	Efpalio	1.69	46	P	Pb	03 58 27.5	0.0
EFP	Efpalio	1.69	46	P	Pb	03 58 27.4	-0.1
ALIK	Aliki, Aigiali	1.71	54	P	Pb	03 58 28.2	+0.3
SERG	Sergoula	1.77	49	P	Pb	03 58 28.4	-0.5
SERG	Sergoula	1.77	49	P	Pb	03 58 28.4	-0.5
ANX	Ano Chora	1.81	43	P	Pb	03 58 29.7	0.0
ANX	Ano Chora	1.81	43	P	Pb	03 58 29.3	-0.3
THAL	Thalero	1.99	67	P	Pb	03 58 30.9	-1.7
THAL	Thalero	1.99	67	P	Pb	03 58 30.9	-1.7
EVR	Evrytania	2.00	35	P	Pb	03 58 33.5	+0.5
MAKR	Makrakomi, Fth	2.23	38	P	Pb	03 58 35.6	-1.2
MAKR	Makrakomi, Fth	2.23	38	P	Pb	03 58 35.3	-1.5
KRND	KRANIDI	2.23	86	P	Pn	03 58 33.1	+0.6
IGT	Igoumenitsa	2.25	360	P	Pn	03 58 34.8	+2.1
AGG	Agios Georgios	2.34	41	P	Pn	03 58 36.2	+2.3
AXAR	Agios Charalam	2.35	50	P	Pn	03 58 36.3	+2.2
AXAR	Agios Charalam	2.35	50	P	Pn	03 58 36.1	+1.9
JAN	Janina	2.41	9	P	Pb	03 58 38.5	-1.4
ATAL	Atalanti	2.54	55	P	Pn	03 58 38.4	+1.7
THL	Klokotos Trika	2.63	29	P	Pn	03 58 40.6	+2.7
THL	Klokotos Trika	2.63	29	P	Pn	03 58 40.7	+2.7
DION	Dionisos Attik	2.95	73	P	Pn	03 58 43.9	+1.5
PENT	Pentalofos	2.98	12	P	Pb	03 58 46.5	-3.1
KZN	Kozani	3.23	20	P	Pn	03 58 49.9	+3.8
FNA	Florina	3.59	13	P	Pn	03 58 53.7	+2.5
FNA	Florina	3.59	13	*e*Pn	Pn	03 58 53.7	+2.5
FNA				*e*Sn	Sn	03 59 33.6	+0.8
OHR	Ohrid	3.85	5	*e*Pn	Pn	03 58 58.2	+3.5
OHR				*e*Sn	Sn	03 59 41.3	+2.2
OHR	Ohrid	3.85	5	*i* Pn	Pn	03 58 58.2	+3.5
TIR	Tirane	4.08	355	*e*Pn	Pn	03 59 00.9	+3.0
SOH	Sokhos	4.24	33	P	Pn	03 59 02.2	+2.1
VAY	Valandovo	4.39	22	*e*Pn	Pn	03 59 04.2	+2.1
VAY				*e*Sn	Sn	03 59 51.5	-0.9
VAY	Valandovo	4.39	22	*i* Pn	Pn	03 59 04.3	+2.1
STIP	Stip	4.64	17	*i* Pn	Pn	03 59 09.2	+3.8
VAE	Valguarnera	4.73	274	Pn	Pn	03 59 10.3	+3.4
	comp=N,2.5nm,0.3s,baz=26,slow=4.8,SNR=10						
VAE				Sn	Sn	04 00 04.5	+3.6
	comp=N,0.9nm,0.3s,baz=108,slow=15,SNR=1.3						
	comp=N,9.0nm,0.6s						
PDG	Podgorica	5.22	351	*e*Pn	Pn	03 59 15.0	+1.6
PRVS	Prvonek	5.39	14	*e*Pn	Pn	03 59 17.5	+1.6
DBRK	Dubrovnik	5.65	343	Sn	Sn	04 00 18.5	-4.8
BARS	Barje	5.65	11	*e*Pn	Pn	03 59 20.4	+1.0
VTS	Vitosha	5.78	22	*e*Pn	Pn	03 59 24.1	+2.8
STON	Ston	5.95	341	*e*Pn	Pn	03 59 23.9	+0.5
STON				Sn	Sn	04 00 28.1	-2.6
SELS	Selova	5.97	5	*e*Pn	Pn	03 59 24.5	+0.7
SJES	Sjenica	5.99	357	*e*Pn	Pn	03 59 26.0	+1.9
SJES				*e*Sn	Sn	04 00 32.5	+0.7
LSTV	Lastovo	6.09	335	*e*Pn	Pn	03 59 26.1	+0.7
IVAS	Ivanjica	6.30	359	*e*Pn	Pn	03 59 29.2	+0.9
BOVS	Bovan	6.44	9	*e*Pn	Pn	03 59 30.6	+0.4
MAKA	Makarska	6.52	338	*e*Pn	Pn	03 59 32.6	+1.3
MAKA				Sn	Sn	04 00 42.2	-2.6
HVAR	Hvar	6.61	334	*e*Pn	Pn	03 59 35.2	+2.7
GRUS	Gruza	6.61	2	*e*Pn	Pn	03 59 33.4	+0.8
BBLS	Lazići	6.62	354	*e*Pn	Pn	03 59 34.2	+1.4
RICI	Ricice	6.68	339	*e*Pn	Pn	03 59 34.9	+1.3
RICI				Sn	Sn	04 00 46.3	-2.5
ZAGS	Zajecar	6.69	12	*e*Pn	Pn	03 59 34.2	+0.6
DIVS	Divibare	6.82	358	*e*Pn	Pn	03 59 36.0	+0.4
TRUS	Trudelj	6.94	0	*e*Pn	Pn	03 59 38.0	+0.9
ZIRJ	Zirje	7.31	332	Sn	Sn	04 01 00.1	-4.2
KIJV	Kijevo	7.36	337	*e*Pn	Pn	03 59 44.4	+1.6
KIJV				Sn	Sn	04 01 02.9	-2.6
MORI	Morici	7.47	333	*e*Pn	Pn	03 59 46.1	+1.8
MORI				Sn	Sn	04 01 04.6	-3.5
DUGI	Dugi Otok	7.82	331	Sn	Sn	04 01 12.6	-4.2
FRGS	Fruska Gora	7.89	357	*e*Pn	Pn	03 59 49.9	-0.2
VIRC	Vir	8.08	332	Sn	Sn	04 01 19.6	-3.5
NVLJ	Novalja	8.38	332	*e*Pn	Pn	03 59 58.9	+2.2
NVLJ				Sn	Sn	04 01 25.8	-4.6
MLR	Muntele Rosu	9.22	25	Pn	Pn	04 00 10.8	+2.3
	comp=N,0.3nm,0.3s,baz=122,slow=20,SNR=1.6						
MLR				LR	LR	04 04 36.5	
	comp=N,53nm,19.6s,baz=75,slow=44						
BRTR	Keskin Array B	10.70	73	Pn	Pn	04 00 27.2	-1.5
	baz=268,slow=12,SNR=1.3						
	comp=N,0.2nm,0.6s						
MMAI	Mount Meron Ar	13.03	105	Pn	Pn	04 00 57.9	-2.7
	comp=N,0.4nm,0.3s,baz=294,slow=11,SNR=1.4						
MDT	Midelt	20.89	265	P	P	04 02 37.8	+0.3
	comp=N,0.6nm,0.7s,baz=11,slow=2.7,SNR=4.0						
	comp=N,0.6nm,0.7s						
HFS	Hagfors	23.27	352	P	P	04 03 01.1	-1.3
	comp=N,3.1nm,0.9s,baz=160,slow=9.5,SNR=2.6						
	comp=N,3.1nm,0.9s						
BELG	Belogornoye	24.35	43	P	P	04 03 12.6	-0.1
	comp=N,3.6nm,0.5s,baz=233,slow=20,SNR=4.2						
	comp=N,3.6nm,0.5s						
FINES	FINESS Array B	24.46	7	P	P	04 03 13.8	+0.2
	comp=N,0.8nm,0.6s,baz=178,slow=9.7,SNR=4.3						
	comp=N,0.8nm,0.6s						
NOA	NORSAR Array B	24.48	349	P	P	04 03 13.8	0.0
	comp=N,0.2nm,0.5s,baz=162,slow=11,SNR=2.1						
	comp=N,0.2nm,0.5s						
TORD	Torodi Ar. Bea	29.25	220	P	P	04 03 59.0	+2.0
	comp=N,0.2nm,0.5s,baz=31,slow=8.7,SNR=4.4						
	comp=N,0.2nm,0.5s						
ARCES	ARCESS Array B	32.44	3	P	P	04 04 24.5	-0.2
	comp=N,0.3nm,0.4s,baz=184,slow=12,SNR=1.5						
	comp=N,0.3nm,0.4s						
MKAR	Makanchi Array	45.90	58	P	P	04 06 17.4	+0.1
	comp=N,0.2nm,0.3s,baz=276,slow=8.2,SNR=7.4						
	comp=N,0.2nm,0.3s						
NRIK	Noril'sk	47.66	26	LR	LR	04 28 45.1	
	comp=N,40nm,18.5s,baz=130,slow=39						

BUC 10 04:10:39.6±0.4**, 45°.53N**×**26°.47E, h114**^{km}±3^{km}**, ml2.4**/4**, 12C-3D, Error ellipse: s-maj=5.2km s-min=2.0km az=0.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BISRR	Bisoca	0.17	85	⇑S	Sn	04 11 07.9	+0.5
PLOR	Plostina	0.34	21	⇑P	Pn	04 10 56.3	+0.3
PLOR				⇑S	Sn	04 11 08.8	+0.4
COVR	Voineasa-Covas	0.36	329	⇑P	Pn	04 10 56.2	+0.1
COVR				⇑S	Sn	04 11 08.5	0.0
MLR	Muntele Rosu	0.37	264	⇑P	Pn	04 10 56.4	+0.2
MLR				⇑S	Sn	04 11 09.6	+0.8
VRI	Vrincioaia	0.38	28	⇑P	Pn	04 10 56.6	+0.4
VRI				⇓S	Sn	04 11 09.4	+0.7
DOPR	Dopca	0.87	300	⇑P	Pn	04 10 59.9	0.0
VOIR		1.00	265	⇑P	Pn	04 11 01.1	-0.1
VOIR				⇓S	Sn	04 11 17.5	0.0
VLDR	Vladesti	1.17	74	⇑S	Sn	04 11 20.2	-0.2
CFR	Carcaliu	1.23	106	⇑P	Pn	04 11 03.7	+0.3
CFR				⇓S	Sn	04 11 21.7	+0.2

TIR 10 04:12:28.5, 41°.48N×**19°.51E, h25**^{km}±2^{km}**, Md2.4, Ml1.6, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.30	116	P	Pb	04 12 35.5	+0.1
	baz=116						
TIR				S	Sb	04 12 40.5	+0.2
	baz=116						
TIR				AMP			
	comp=N,0.7nm,0.2s,baz=116						
PHP	Peshkopia	0.73	73	P	Pb	04 12 42.7	+0.1
	baz=73						

PHP				S	Sn	04 12 53.9	+0.3
	baz=73						
PHP				AMP			
	comp=N,0.1nm,0.2s,baz=73						
BCI	**Bajram Curri**	**0.98**	**25**	P	Pb	04 12 47.5	+0.7
	baz=25						
BCI				S	Sn	04 13 01.5	+1.8
	baz=25						
BCI				AMP			
	comp=E,0.1nm,0.3s,baz=25						
FNA	**Florina**	**1.57**	**116**	P	Pb	04 12 57.9	+1.0
	baz=115						

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*IDC **10** 04:32:58.8±2.0, 51°.54N×82°.55E, h0^{km}, mbtmp2.5/2, ML2.0/2, Error ellipse: s-maj=19.4km s-min=17.3km az=9.0*

ISC 10 04:33:03.2±1.8, 51°.59N±0°.08×82°.9E±0°.1, h35^{km}, n6, σ0^{s}.28/5, 4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**2.63**	**25**	Pn	**Pn**	**04 33 43.2**	**0.0**
	0.7nm,0.3s,baz=218,slow=15,SNR=6.9						
ZALV				Lg	Lg	04 34 30.9	
	0.3nm,0.3s,baz=225,slow=22,SNR=2.5 2.0nm,0.3s						
I46RU	**ZALESOVO INFRA**	**2.63**	**25**	I	I	04 50 20.0	
	0.1nm,0.7s,baz=208,slow=333,SNR=0.9						
KURBB	**Kurchatov Arra**	**2.93**	**252**	Pg	**Pn**	**04 33 47.2**	**0.0**
	baz=72,slow=19,SNR=1.7						
KURBB				Lg	Lg	04 34 22.5	
	0.1nm,0.3s,baz=70,slow=33,SNR=2.0						
MK31	**Makanchi Array**	**4.81**	**185**	⇓Pn	**Pn**	**04 34 13.5**	**+0.3**
	0.3nm,0.5s,baz=14,slow=12,SNR=8.0						
MK31				⇓Lg	Lg	04 35 28.1	
	0.5nm,0.5s,baz=11,slow=28,SNR=4.2						
MKAR	**Makanchi Array**	**4.81**	**185**	Pn	**Pn**	**04 34 13.2**	**0.0**
	0.1nm,0.3s,baz=6.1,slow=14,SNR=7.6						
MKAR				Lg	Lg	04 35 27.6	
	0.2nm,0.3s,baz=15,slow=28,SNR=9.9 0.3nm,0.4s						
MAKZ	**Makanchi**	**4.82**	**188**	⇓Pn	**Pn**	**04 34 13.0**	**-0.3**
	2.3nm,1.4s						
MAKZ				⇓Lg	Lg	04 35 26.6	
	1.6nm,1.4s						

IDC 10 05:06:57.2±13.0, 29°.73S×62°.60E, h0^{km}, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=814.3km s-min=60.6km az=33.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**23.85**	**25**	T	T	05 36 43.9	
	baz=204,slow=76,SNR=11						
H08S2	**Diego Garcia H**	**23.86**	**25**	T	T	05 36 44.5	
	baz=204,slow=76,SNR=9.8						
H08S3	**Diego Garcia H**	**23.87**	**25**	T	T	05 36 45.4	
	baz=204,slow=76,SNR=18						
H01W2	**Cape Leeuwin H**	**43.47**	**111**	T	T	06 02 41.3	
	baz=261,slow=75,SNR=18						
H01W3	**Cape Leeuwin H**	**43.48**	**111**	T	T	06 02 41.7	
	baz=261,slow=75,SNR=18						
H01W1	**Cape Leeuwin H**	**43.49**	**111**	T	T	06 02 42.6	
	baz=261,slow=75,SNR=21						
ASAR	**Alice Springs**	**63.09**	**103**	P	P	05 17 26.9	+0.1
	0.4nm,0.6s,baz=242,slow=6.5,SNR=5.6 0.4nm,0.6s						
WRA	**Warramunga Arr**	**64.94**	**100**	P	P	05 17 39.0	0.0
	0.2nm,0.5s,baz=248,slow=5.7,SNR=2.4 0.2nm,0.5s						
YKA	**Yellowknife Ar**	**147.18**	**358**	PKPbc	PKPbc	05 26 40.8	-0.8
	0.4nm,0.9s,baz=340,slow=3.3,SNR=2.7						

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*WEL **10** 05:07:20.0±0.5, 42°S±3°×17°4E±°, h14^{km}±4^{km}, M3.3/15, ML3.6/15, MLv3.3/15, Error ellipse: s-maj=0.0km s-min=0.0km az=144.0, confirmed*

*NOU **10** 05:07:19.2, 41°.91S×174°.40E, h20^{km}, MLv3.7/8, Cook Strait, New Zealand*

ISC 10 05:07:18.7±1.1, 41°.88S±0°.03×174°.30E±0°.03, h13^{km}±8^{km}, n75, σ0^{s}.91/83, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.15**	**334**	P	**Pg**	**05 07 23.0**	**+0.7**
CMWZ				S	**Sb**	**05 07 26.1**	**-0.3**
BSWZ	**Blackbirch Sta**	**0.36**	**297**	P	**Pg**	**05 07 25.8**	**-0.1**
TUWZ	**Tuamarina**	**0.52**	**329**	P	**Pg**	**05 07 28.6**	**-0.4**
TUWZ				S	**Sg**	**05 07 34.9**	**-1.0**
SNZO	**South Karori**	**0.65**	**28**	P	**Pb**	**05 07 31.8**	**0.0**
TCW	**Tory Channel**	**0.67**	**359**	P	**Pg**	**05 07 31.2**	**-0.5**
TCW				S	**Sg**	**05 07 40.0**	**-0.5**
WEL	**Wellington**	**0.69**	**31**	P	**Pb**	**05 07 33.0**	**+0.4**
KHZ	**Kahutara**	**0.78**	**226**	P	**Pn**	**05 07 36.0**	**+0.6**
KHZ	**Kahutara**	**0.78**	**226**	P	**Pn**	**05 07 36.0**	**+0.6**
KHZ				S	**Sn**	**05 07 48.6**	**+1.7**
PLWZ	**Palliser**	**0.78**	**67**	P	**Pn**	**05 07 35.6**	**+0.2**
NNZ	**Nelson**	**0.96**	**314**	P	**Pb**	**05 07 36.1**	**-1.0**
NNZ				S	**Sb**	**05 07 47.9**	**-1.7**
CAW	**Cannon Point**	**0.96**	**37**	P	**Pn**	**05 07 37.8**	**-0.2**
CAW				S	**Sn**	**05 07 51.9**	**+0.4**
PAWZ	**Paruwai Farm**	**0.98**	**60**	P	**Pg**	**05 07 38.2**	**+0.6**
THZ	**Tophouse**	**1.05**	**276**	P	**Pb**	**05 07 38.7**	**0.0**
DUWZ	**D'Urville Isla**	**1.11**	**345**	P	**Pb**	**05 07 38.7**	**-1.1**
DUWZ				S	**Sb**	**05 07 53.1**	**-1.1**
KIW	**Kapiti Island**	**1.12**	**24**	P	**Pb**	**05 07 39.9**	**0.0**
KIW				S	**Sg**	**05 07 55.6**	**+0.8**
TRWZ	**Traveller**	**1.15**	**66**	P	**Pn**	**05 07 40.4**	**-0.1**
MTW	**Mount Morrison**	**1.16**	**52**	P	**Pn**	**05 07 40.5**	**-0.1**
OGWZ	**Otaki Gorge**	**1.25**	**32**	P	**Pb**	**05 07 41.9**	**-0.2**
MRNZ	**Matariki Terra**	**1.25**	**292**	P	**Pn**	**05 07 42.0**	**+0.1**
TKNZ	**Takaka Hill**	**1.31**	**310**	P	**Pn**	**05 07 42.4**	**-0.4**
HOWZ	**Holdsworth Sta**	**1.34**	**43**	P	**Pn**	**05 07 43.2**	**0.0**
TMWZ	**Te Maipa**	**1.42**	**58**	P	**Pn**	**05 07 43.9**	**-0.3**
GVZ	**Greta Valley S**	**1.43**	**220**	P	**Pn**	**05 07 45.0**	**+0.6**
MRZ	**Mangatainoka R**	**1.55**	**39**	P	**Pn**	**05 07 45.9**	**-0.1**
TIWZ	**Tintock**	**1.63**	**48**	P	**Pn**	**05 07 47.1**	**0.0**
QRZ	**Quartz Range**	**1.70**	**308**	P	**Pn**	**05 07 48.9**	**+0.8**
QRZ	**Quartz Range**	**1.70**	**308**	P	**Pn**	**05 07 48.9**	**+0.8**
LTZ	**Lake Taylor**	**1.75**	**238**	P	**Pn**	**05 07 49.3**	**+0.4**
AMCZ	**Amberley**	**1.78**	**223**	P	**Pg**	**05 07 53.5**	**+0.7**
PRWZ	**Pori Road**	**1.83**	**44**	P	**Pn**	**05 07 50.0**	**+0.2**
POWZ	**Post Office Ro**	**1.85**	**37**	P	**Pn**	**05 07 50.6**	**+0.4**
DSZ	**Denniston Nort**	**1.87**	**273**	P	**Pb**	**05 07 52.1**	**-0.6**
BFZ	**Birch Farm**	**1.89**	**51**	P	**Pn**	**05 07 49.9**	**-0.8**
BFZ	**Birch Farm**	**1.89**	**51**	P	**Pn**	**05 07 49.9**	**-0.8**
DVHZ	**Dannevirke**	**2.12**	**42**	P	**Pn**	**05 07 53.2**	**-0.6**
WAZ	**Wanganui**	**2.19**	**14**	P	**Pb**	**05 07 57.8**	**-0.3**
MQZ	**McQueen's Vall**	**2.19**	**213**	P	**Pn**	**05 07 54.0**	**-0.8**
OXZ	**Oxford**	**2.21**	**228**	P	**Pn**	**05 07 54.8**	**-0.3**
TSZ	**Takapari Road**	**2.21**	**35**	P	**Pn**	**05 07 55.6**	**+0.5**
AKCZ	**Akaroa Harbour**	**2.24**	**207**	P	**Pn**	**05 07 55.3**	**-0.1**
INZ	**Inchbonnie**	**2.28**	**247**	P	**Pn**	**05 07 56.5**	**+0.4**
WPHZ	**Waipukurau**	**2.43**	**42**	P	**Pg**	**05 08 04.4**	**-0.9**
PNHZ	**Pukenui**	**2.44**	**37**	P	**Pn**	**05 07 58.2**	**0.0**
MHCZ	**Mount Hutt**	**2.60**	**230**	P	**Pn**	**05 07 59.7**	**-0.8**
NEZ	**North Egmont**	**2.61**	**357**	P	**Pb**	**05 08 04.1**	**-1.3**
MTVZ	**Mangateitei**	**2.65**	**20**	P	**Pb**	**05 08 05.8**	**-0.2**
MOVZ	**Moawhango**	**2.71**	**25**	P	**Pn**	**05 08 04.3**	**+2.3**
WNVZ	**Wahianoa**	**2.74**	**22**	P	**Pn**	**05 08 03.9**	**+1.5**
BHHZ	**Black Hill Sta**	**2.74**	**30**	P	**Pn**	**05 08 03.2**	**+0.8**
TRVZ	**Turoa**	**2.75**	**21**	P	**Pb**	**05 08 07.6**	**-0.2**
DRZ	**Dome Shelter**	**2.77**	**21**	P	**Pb**	**05 08 09.5**	**+1.2**
VRZ	**Vera Road**	**2.77**	**7**	P	**Pn**	**05 08 05.3**	**+2.5**
WHVZ	**Whangaehu Hut**	**2.77**	**21**	P	**Pb**	**05 08 07.9**	**-0.4**
FWVZ	**Far West T-bar**	**2.79**	**20**	P	**Pb**	**05 08 08.2**	**-0.3**
TUVZ	**Tukino**	**2.81**	**22**	P	**Pb**	**05 08 08.0**	**-0.8**
NGZ	**Ngauruhoe**	**2.88**	**21**	P	**Pb**	**05 08 10.0**	**0.0**
OTVZ	**Oturere**	**2.91**	**21**	P	**Pb**	**05 08 10.1**	**-0.4**
WTVZ	**West Tongariro**	**2.93**	**20**	P	**Pb**	**05 08 11.7**	**+0.8**
KWHZ	**Kaweka Forest**	**2.94**	**34**	P	**Pn**	**05 08 04.8**	**-0.3**
ETVZ	**East Tongariro**	**2.94**	**22**	P	**Pb**	**05 08 09.7**	**-1.4**
TMVZ	**Te Maari**	**2.96**	**22**	P	**Pb**	**05 08 09.9**	**-1.5**
NTVZ	**North Tongarir**	**2.97**	**21**	P	**Pb**	**05 08 11.1**	**-0.5**
RPZ	**Rata Peaks**	**3.01**	**231**	P	**Pn**	**05 08 05.9**	**-0.2**
RPZ	**Rata Peaks**	**3.01**	**231**	P	**Pn**	**05 08 05.9**	**-0.2**
RITZ	**Rihia Road**	**3.13**	**23**	P	**Pb**	**05 08 14.1**	**-0.2**
BKZ	**Black Stump Fm**	**3.19**	**32**	P	**Pn**	**05 08 08.7**	**+0.2**
BKZ	**Black Stump Fm**	**3.19**	**32**	P	**Pb**	**05 08 15.8**	**+0.6**
GCSZ	**Gaunt Creek Bo**	**3.27**	**243**	P	**Pn**	**05 08 10.7**	**+1.1**
HIZ	**Hauiti**	**3.39**	**7**	P	**Pn**	**05 08 14.4**	**+3.1**
TMZ	**Timaru**	**3.47**	**223**	P	**Pn**	**05 08 12.3**	**-0.1**
ODZ	**Otahua Downs**	**4.13**	**219**	P	**Pn**	**05 08 21.0**	**-0.5**
ODZ	**Otahua Downs**	**4.13**	**219**	P	**Pn**	**05 08 21.0**	**-0.5**
JCZ	**Jackson Bay**	**4.60**	**240**	P	**Pn**	**05 08 28.3**	**+0.3**
JCZ	**Jackson Bay**	**4.60**	**240**	P	**Pn**	**05 08 29.5**	**+1.5**
AWAZ	**Awhitu Peninsu**	**4.82**	**3**	P	**Pn**	**05 08 33.2**	**+2.3**

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*JMA **10** 05:24:49.5±0.3, 39°.9N±0°.6×14°3E±°, h16^{km}±2^{km}, MD4.6/38, MW4.4/38, FAR E OFF SANRIKU*

JMA Felt I J1 at FAR E OFF SANRIKU .

*MOS **10** 05:24:49.6±0.9, 39°.87N×143°.19E, h20^{km}, mb4.8/46, MS4.0/4, Error ellipse: s-maj=7.1km s-min=4.1km az=110.6*

*NIED **10** 05:24:49.5, 39°.94N×143°.24E, h16^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.93; $M_{\theta\theta}$0.48; $M_{\phi\phi}$-2.41; $M_{r\theta}$1.97; $M_{\theta\phi}$-1.00; $M_{\phi r}$3.73; Fault plane solution: $M_0$4.83000×10^{15} NP1:ϕ_s28.00000°, δ76.00000°, λ97.00000°. NP2:ϕ_s180.00000°, δ16.00000°, λ63.00000°.*

*BJI **10** 05:24:49.5±0.0, 39°.78N×143°.08E, h21^{km}, mb4.6/54, mB4.7/29, Ms4.2/34, Ms7 4.1/36*

*NEIC **10** 05:24:52.9±1.1, 39°.86N±0°.05×143°.08E±0°.09, h24^{km}±5^{km}, mb4.7/55, Mwr4.4/18, Error ellipse: s-maj=10.4km s-min=7.5km az=110.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.65; $M_{\theta\theta}$-2.77; $M_{\phi\phi}$2.12; $M_{r\theta}$1.43; $M_{\theta\phi}$-1.55; $M_{\phi r}$2.90; Fault plane solution: $M_0$4.38000×10^{15} NP1:ϕ_s31.94000°, δ84.21000°, λ48.59000°. NP2:ϕ_s295.41000°, δ41.74000°, λ171.28000°. Principal axes: T 4.3906, Plg37.0000°, Azm266.0000°; N -0.0309, Plg41.0000°, Azm37.0000°; P -4.3598, Plg27.0000°, Azm154.0000°;*

*IDC **10** 05:24:53.8±0.7, 39°.84N×143°.12E, h34^{km}±4^{km}, mb4.2/30, mbtmp4.4/36, ML3.7/6, MS3.8/39 Error ellipse: s-maj=14.1km s-min=11.8km az=119.0*

*NEIC **10** 05:24:54.6, 39°.88N×143°.03E, h35^{km}*

ISC 10 05:24:52.3±0.5, 39°.89N±0°.04×143°.14E±0°.05, h25^{km}±2^{km}, h25^{km}:pP-P, n351, σ1^{s}.49/335, mb4.7/111, MS4.0/52, 14C-18D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.98**	**273**	⇓*i*P	**Pn**	**05 25 09.1**	**-1.5**
JTH				⇓S	**Sb**	**05 25 23.2**	**0.0**
JTH	**Tanohata**	**0.98**	**273**	A	A	05 25 09.1	
	comp=E,9.0nm,2.7s,comp=E,7.0nm,3.9s						
MIYJ	**Miyakonagasawa**	**1.06**	**253**	⇓*i*P	**Pn**	**05 25 10.6**	**-1.1**
MIYJ	**Miyakonagasawa**	**1.06**	**253**	A	A	05 25 10.6	
	comp=E,7.0nm,1.0s,comp=E,12nm,2.9s						
JKEN	**Kujiedanarisaw**	**1.14**	**286**	⇓P	**Pn**	**05 25 11.1**	**-1.6**
JKEN	**Kujiedanarisaw**	**1.14**	**286**	A	A	05 25 11.1	
	comp=E,20nm,1.1s,comp=E,10.0nm,0.5s						
JANG	**Nango**	**1.33**	**292**	⇓*i*P	**Pn**	**05 25 14.2**	**-1.2**
OFUJ	**Ofunato**	**1.40**	**235**	A	A	05 25 15.8	
	comp=E,6.0nm,0.7s,comp=E,8.0nm,2.5s						
JOM	**Ohasama**	**1.48**	**254**	⇓*i*P	**Pn**	**05 25 17.6**	**+0.1**
JOM				⇓*e*S	**Sb**	**05 25 37.6**	**0.0**
JOM	**Ohasama**	**1.48**	**254**	A	A	05 25 17.6	
	comp=E,12nm,0.3s,comp=E,13nm,1.9s						
JSZI	**Iwateshizukuis**	**1.69**	**266**	A	A	05 25 20.6	
	comp=E,22nm,1.9s,comp=E,20nm,3.1s						
JARK	**Aomorirokkasho**	**1.75**	**310**	A	A	05 25 20.2	
	comp=E,8.0nm,0.7s,comp=E,8.0nm,1.1s						
JMK	**Ichinoseki**	**1.76**	**238**	*i* P	**Pn**	**05 25 21.4**	**+0.2**
JMK				*e*S	**Sn**	**05 25 43.9**	**+1.1**
JMK	**Ichinoseki**	**1.76**	**238**	A	A	05 25 21.4	
	comp=E,5.0nm,5.7s,comp=E,5.0nm,6.6s						
JTM	**Tenmabayashi**	**1.82**	**300**		**Pn**	**05 25 22.1**	**+0.1**
JTM				Sn	**Sn**	**05 25 41.9**	**-2.4**
JTM	**Tenmabayashi**	**1.82**	**300**	*i* P	**Pn**	**05 25 22.2**	**+0.2**
JTM	**Tenmabayashi**	**1.82**	**300**	A	A	05 25 22.2	
	comp=E,6.0nm,1.6s,comp=E,6.0nm,1.8s						
JAHD	**Aomorihigashid**	**1.94**	**316**	A	A	05 25 22.8	
	comp=E,17nm,1.2s,comp=E,20nm,0.5s						
JAH	**Hinai**	**1.94**	**280**	P	**Pn**	**05 25 24.3**	**+0.5**
JAH				S	**Sb**	**05 25 51.4**	**+0.6**
JAH	**Hinai**	**1.94**	**280**	A	A	05 25 24.3	
	comp=E,11nm,0.9s,comp=E,8.0nm,3.2s						
JRG	**Rokugo**	**2.00**	**256**	P	**Pn**	**05 25 25.2**	**+0.7**
JRG				*e*S	**Sb**	**05 25 52.6**	**+0.3**
JRG	**Rokugo**	**2.00**	**256**	A	A	05 25 25.2	
	comp=E,15nm,1.3s,comp=E,15nm,1.8s						
JIO	**Ouri**	**2.00**	**225**	P	**Pn**	**05 25 24.1**	**-0.4**
ERM	**Erimo**	**2.12**	**0**	Pn	**Pn**	**05 25 27.0**	**+0.8**
ERM	**Erimo**	**2.12**	**0**	P	**Pn**	**05 25 27.0**	**+0.8**
JEM	**Erimo**	**2.12**	**0**	P	**Pn**	**05 25 26.9**	**+0.7**
JOFO	**Osakifurukawao**	**2.16**	**234**	A	A	05 25 27.1	
	comp=E,24nm,1.6s,comp=E,26nm,2.5s						
JOT	**Ohata**	**2.18**	**314**	P	**Pn**	**05 25 27.7**	**+0.7**
JOT	**Ohata**	**2.18**	**314**	A	A	05 25 27.7	
	comp=E,4.0nm,0.8s,comp=E,5.0nm,3.3s						
JHHS	**Hirosakihyakuz**	**2.26**	**291**	A	A	05 25 27.9	
	comp=E,10.0nm,2.4s,comp=E,15nm,4.5s						
JYW	**Yuwa**	**2.29**	**262**	A	A	05 25 28.8	
	comp=E,20nm,1.4s,comp=E,21nm,2.6s						
JNTW	**Noshirotokiwa**	**2.31**	**280**	A	A	05 25 28.9	
	comp=E,19nm,3.2s,comp=E,22nm,1.4s						
JYK	**Kaneyama**	**2.36**	**247**	P	**Pn**	**05 25 30.4**	**+0.9**
JYK	**Kaneyama**	**2.36**	**247**	A	A	05 25 30.4	
	comp=E,5.0nm,3.6s,comp=E,6.0nm,2.5s						
JSI2	**Shiura 2**	**2.38**	**300**	A	A	05 25 29.6	
	comp=E,7.0nm,2.3s,comp=E,5.0nm,1.6s						
JNBK	**Urakawa-nobuka**	**2.40**	**353**	P	**Pn**	**05 25 31.1**	**+1.1**
JNBK	**Urakawa-nobuka**	**2.40**	**353**	A	A	05 25 31.1	
	comp=E,6.0nm,2.5s,comp=E,6.0nm,0.8s						
JOU	**Okura**	**2.46**	**232**	A	A	05 25 31.2	
	comp=E,6.0nm,1.1s,comp=E,7.0nm,2.6s						
JSHD	**Hidakashinhida**	**2.56**	**349**	A	A	05 25 31.1	
	comp=E,7.0nm,4.6s,comp=E,8.0nm,3.2s						
JSR	**Shiriuchi**	**2.64**	**309**	A	A	05 25 33.0	
	comp=E,3.0nm,4.1s,comp=E,3.0nm,4.7s						
JMM	**Marumori**	**2.73**	**223**		**Pn**	**05 25 33.7**	**-0.9**
JIAM	**Iburiatsuma**	**2.88**	**342**	A	A	05 25 35.8	
	comp=E,14nm,0.7s,comp=E,11nm,1.3s						
JYS	**Shirataka**	**2.92**	**236**	A	A	05 25 37.8	
	comp=E,7.0nm,2.2s,comp=E,8.0nm,1.5s						
JYA	**Atsumi**	**2.96**	**245**	A	A	05 25 38.5	
	comp=E,12nm,1.4s,comp=E,11nm,1.9s						
JEW	**Eniwo**	**3.21**	**337**	A	A	05 25 40.6	
	comp=E,8.0nm,1.2s,comp=E,5.0nm,2.1s						
JAR	**Ashorobuto**	**3.43**	**8**	A	A	05 25 43.2	
	comp=E,3.0nm,0.4s,comp=E,4.0nm,3.9s						
JAB	**Ashibetsu**	**3.67**	**350**	A	A	05 25 47.0	
	comp=E,4.0nm,4.6s,comp=E,5.0nm,3.4s						
NMR	**Nemuro--Hokkai**	**3.98**	**28**	*e*P	**Pn**	**05 25 50.5**	**-1.2**
NMR				*e*S	**Sn**	**05 26 34.5**	**-3.0**
JNSB	**Nemuroshibetsu**	**4.12**	**19**	A	A	05 25 52.8	
	comp=E,3.0nm,2.9s,comp=E,3.0nm,1.0s						
JSD	**Sado**	**4.23**	**246**	Pn	**Pn**	**05 25 54.7**	**-0.4**
JKA	**Kamikawa-asahi**	**4.24**	**355**	Pn	**Pn**	**05 25 56.5**	**+1.2**
ASAJ	**Asahikawa**	**4.24**	**355**	Pn	**Pn**	**05 25 56.8**	**+1.5**
	6.8nm,0.3s,baz=223,slow=11,SNR=16						
ASAJ				Sn	**Sn**	**05 26 47.9**	**+3.9**
	7.6nm,0.3s,baz=248,slow=27,SNR=4.0 35nm,0.7s						
RUSJ	**Misakicho**	**4.49**	**20**	*e*P	**Pn**	**05 25 58.5**	**-0.3**
RUSJ				*e*S	**Sn**	**05 26 49.4**	**-0.8**
YUK	**Yuzh-Kuril'sk**	**4.61**	**25**	*e*P	**Pn**	**05 25 59.8**	**-0.6**
YUK				*e*S	**Sn**	**05 26 49.6**	**-3.5**
YUK				pmax	pmax		
	comp=N,139nm,0.4s						
YUK				pmax	pmax		
	comp=Z,188nm,0.4s						
YUK				pmax	pmax		
	comp=E,147nm,0.3s						
YUK				smax	smax		
	comp=N,1µm,0.6s						
YUK				smax	smax		
	comp=E,1µm,0.5s						
SHO	**Shikotan**	**4.84**	**34**	*e*P	**Pn**	**05 26 01.7**	**-1.8**
SHO				*e*S	**Sn**	**05 26 52.9**	**-5.8**
SHO				pmax	pmax		
	comp=N,21nm,0.3s						
SHO				pmax	pmax		
	comp=E,26nm,0.3s						
SHO				pmax	pmax		
	comp=Z,26nm,0.3s						
SHO				smax	smax		
	comp=N,448nm,0.3s						
SHO				smax	smax		
	comp=E,535nm,0.3s						
MAJO	**Matsushiro**	**5.12**	**231**	Pn	**Pn**	**05 26 08.1**	**+0.6**
MAJO	**Matsushiro**	**5.12**	**231**	*ce*P	**Pn**	**05 26 09.2**	**+1.7**
MJAR	**Matsushiro Arr**	**5.12**	**231**	Pn	**Pn**	**05 26 09.1**	**+1.6**
	comp=E,0.6nm,0.3s,baz=40,slow=12,SNR=43						
MJAR				Sn	**Sn**	**05 27 07.5**	**+1.6**
	baz=35,slow=22						
MJAR				LR	LR	05 28 21.6	
	comp=E,598nm,19.7s,baz=110,slow=41 comp=E,22nm,0.7s						
MJB9	**Matsu-Tunnel**	**5.12**	**231**	Pn	**Pn**	**05 26 09.0**	**+1.5**
JGF	**Kuroka**	**6.27**	**229**	Pn	**Pn**	**05 26 24.0**	**+0.7**
KUR	**Kuril'sk**	**6.38**	**32**	*e*P	**Pn**	**05 26 24.6**	**0.0**
KUR				*e*S	**Sn**	**05 27 32.0**	**-4.6**
KUR				pmax	pmax		
	comp=Z,65nm,0.5s						
KUR				pmax	pmax		
	comp=N,38nm,0.3s						
KUR				pmax	pmax		
	comp=E,41nm,0.3s						
KUR				smax	smax		
	comp=N,187nm,0.3s						
KUR				smax	smax		
	comp=E,105nm,0.2s						
INU	**Inuyama**	**6.64**	**229**	Pn	**Pn**	**05 26 29.2**	**+0.8**
TEY	**Ternei**	**7.05**	**319**	*e*P	**Pn**	**05 26 36.0**	**+2.1**
TEY				pmax	pmax		
	comp=N,10.0nm,0.8s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.8s						
TEY				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS	**Yuzh-Sakhalins**	**7.06**	**358**	Pn	**Pn**	**05 26 34.4**	**+0.3**
YSS	**Yuzh-Sakhalins**	**7.06**	**358**	*e*P	**Pn**	**05 26 34.8**	**+0.7**
YSS				*e*S	**Sn**	**05 27 50.6**	**-2.9**
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS				MLR	MLR		
	comp=Z,600nm,17.0s						
JHJ	**Hachijo jima 2**	**7.28**	**203**	Pn	**Pn**	**05 26 36.0**	**-1.1**
	comp=Z,12nm,0.3s,baz=115,slow=13,SNR=1.7						
JHJ				Sn	**Sn**	**05 27 51.7**	**-7.2**
	comp=Z,21nm,0.3s,baz=254,slow=20,SNR=1.6 comp=Z,232nm,1.0s						
USA0B	**Ussuriysk Arra**	**9.34**	**301**		**Pn**	**05 27 05.8**	**+0.5**
USA0B	**Ussuriysk Arra**	**9.34**	**301**	*c* *i*P	**Pn**	**05 27 07.8**	**+2.5**
USRK	**Ussuriysk Ar.**	**9.34**	**301**	Pn	**Pn**	**05 27 07.6**	**+2.2**
	comp=Z,2.3nm,0.3s,baz=108,slow=14,SNR=16						
USRK				LR	LR	05 30 35.0	
	comp=Z,711nm,18.7s,baz=118,slow=36 comp=Z,13nm,0.6s						
USRK	**Ussuriysk Ar.**	**9.34**	**301**	Pn	**Pn**	**05 27 06.0**	**+0.7**
JHS	**Saijyo**	**9.34**	**242**	Pn	**Pn**	**05 27 05.7**	**+0.2**
TYV	**Tymovskoe**	**10.98**	**358**	*e*P	**Pn**	**05 27 29.2**	**+1.5**
TYV				*e*S	**Sn**	**05 29 35.7**	**+6.2**
TYV				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TYV				pmax	pmax		
	comp=Z,100nm,3.1s						
TYV				smax	smax		
	comp=N,300nm,6.0s						
TYV				smax	smax		
	comp=E,200nm,6.0s						
MDJ	**Mudanjiang**	**11.09**	**300**	Pn	**Pn**	**05 27 29.5**	**+0.2**
GRNR	**Gornyy**	**11.85**	**339**	⇓*i*P	**Pn**	**05 27 40.5**	**+0.8**
GRNR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,330nm,16.0s						
GRNR				MLR	MLR		
	comp=N,180nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,240nm,15.0s						
JNU	**Nakatsue**	**11.95**	**239**	Pn	**Pn**	**05 27 43.0**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=37,slow=20,SNR=2.1						
JNU				LR	LR	05 32 36.4	
	comp=Z,506nm,18.6s,baz=46,slow=39 comp=Z,6.2nm,0.9s						
KSRS	**Korea Array**	**12.14**	**263**	Pn	**Pn**	**05 27 48.3**	**+4.7**
	comp=Z,0.4nm,0.3s,baz=68,slow=14,SNR=14						
KSRS				LR	LR	05 32 08.4	
	comp=Z,520nm,18.6s,baz=70,slow=36						
KSAR	**Wonju Array Be**	**12.17**	**263**	Pn	**Pn**	**05 27 43.3**	**-0.8**
KSAR	**Wonju Array Be**	**12.17**	**263**	P	**Pn**	**05 27 43.3**	**-0.8**
KLR	**Kul'dur**	**12.36**	**323**	Pn	**Pn**	**05 27 47.6**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=129,slow=13,SNR=5.6						
KLR				LR	LR	05 32 45.1	
	comp=Z,472nm,19.4s,baz=92,slow=38 comp=Z,1.8nm,0.8s						
KLR	**Kul'dur**	**12.36**	**323**	⇓*e*P	**Pn**	**05 27 49.3**	**+2.7**
KLR				pmax	pmax		
	comp=Z,11nm,0.6s						
CN2	**Changchun**	**13.75**	**292**	P	**Pn**	**05 28 09.0**	**+3.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,300nm,15.0s						
CN2				LR	LR		
	comp=Z,400nm,15.0s						
CN2				LR	LR		
	comp=Z,500nm,18.0s						
SNY	**Shenyang**	**14.93**	**284**	⇑P	**Pn**	**05 28 23.4**	**+1.8**
SNY				pmax	pmax		
	comp=Z,24nm,1.2s						
HEH	**HeiHe**	**15.16**	**318**	*e*P	**Pn**	**05 28 21.8**	**-2.8**
HEH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HEH				pmax	pmax		
	comp=Z,110nm,4.3s						
HEH				LR	LR		
	comp=Z,240nm,16.1s						
HEH				LR	LR		
	comp=Z,500nm,18.2s						
HEH				LR	LR		
	comp=Z,630nm,16.2s						
PETK	**Petropavlovsk-**	**16.54**	**32**	LR	LR	05 34 38.2	
	comp=Z,122nm,21.3s,baz=213,slow=35						
ZEA	**Zeya**	**17.55**	**327**	*e*P	**Pn**	**05 28 55.4**	**+0.3**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=N,20nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
ZEA				MLR	MLR		
	comp=E,300nm,15.0s						
ZEA				MLR	MLR		
	comp=N,200nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,15.0s						
HIA	**Hailar**	**19.05**	**307**		**P**	**05 29 11.9**	**-0.7**
HIA	**Hailar**	**19.05**	**307**	P	**P**	**05 29 11.9**	**-0.7**
HIA				pmax	pmax		
	comp=Z,12nm,0.8s						
MA2	**Magadan**	**20.28**	**11**	P	**P**	**05 29 26.6**	**+0.7**
	comp=Z,17nm,0.8s,baz=197,slow=13,SNR=6.2						
MA2				LR	LR	05 38 42.0	
	comp=Z,92nm,18.8s,baz=146,slow=41 comp=Z,17nm,0.8s						
MA2	**Magadan**	**20.28**	**11**		**P**	**05 29 26.1**	**+0.2**
MA2				IAmb	IAmb	05 29 27.9	
	comp=Z,17nm,0.8s						
MA2	**Magadan**	**20.28**	**11**	⇓*i*P	**P**	**05 29 26.2**	**+0.2**
MA2				pmax	pmax		
	comp=Z,18nm,0.8s						
XLT	**XiLinHaoTe**	**20.50**	**290**	*e*P	**P**	**05 29 26.4**	**-2.1**
XLT				pP	pP	05 29 33.2	-1.7
XLT				sP	sP	05 29 36.1	-1.9
XLT				S	**S**	**05 33 10.6**	**-6.1**
XLT				pmax	pmax		
	comp=Z,24nm,1.1s						
XLT				pmax	pmax		
	comp=Z,110nm,7.1s						
XLT				LR	LR		
	comp=Z,310nm,18.1s						
XLT				LR	LR		
	comp=Z,270nm,18.0s						
TIA	**Tai'an**	**20.79**	**268**	⇑P	**P**	**05 29 30.4**	**-1.2**
TIA				pmax	pmax		
	comp=Z,16nm,0.8s						
TIA				pmax	pmax		
	comp=Z,60nm,3.5s						
TIA				LR	LR		
	comp=Z,210nm,15.5s						
TIA				LR	LR		
	comp=Z,500nm,15.0s						

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TIA                              LR     LR
      comp=Z,670nm,13.9s
NJ2   Nanjing           21.11 256  eP     P       05 29 34.3 -0.8
NJ2                                pP     pP      05 29 40.0 -1.5
NJ2                                sP     sP      05 29 43.0 -1.6
NJ2                                pmax   pmax
      comp=Z,9.0nm,0.6s
NJ2                                pmax   pmax
      comp=Z,130nm,4.1s
NJ2                                LR     LR
      comp=Z,590nm,20.6s
HNS   HongShan          22.31 273  eP     P       05 29 44.3 -3.6
HNS                                eS     S       05 33 43.1 -8.7
HNS                                LR     LR
      comp=Z,220nm,14.3s
HNS                                LR     LR
      comp=Z,460nm,19.1s
HNS                                LR     LR
      comp=Z,430nm,24.7s
YAK   Yakutsk           23.63 344  P      P       05 29 59.5 -1.7
      comp=Z,15nm,0.5s,baz=99,slow=0.6,SNR=8.4
YAK                                LR     LR      05 39 38.1
      comp=Z,114nm,21.7s,baz=260,slow=37
YAK   Yakutsk           23.63 344  eP     P       05 29 59.3 -1.9
YAK                                eS     S       05 34 10.2 -3.9
YAK                                pmax   pmax
      comp=N,9.0nm,0.9s
YAK                                pmax   pmax
      comp=Z,47nm,0.8s
YAK                                pmax   pmax
      comp=E,3.0nm,0.9s
YAK                                smax   smax
      comp=N,28nm,1.6s
YAK                                smax   smax
      comp=E,28nm,1.5s
YAK                                MLR    MLR
      comp=Z,116nm,21.0s
SEY   Seymchan          23.73  11  P      P       05 30 02.1  0.0
      comp=Z,16nm,0.8s,baz=198,slow=7.1,SNR=23
      comp=Z,16nm,0.8s
SEY   Seymchan          23.73  11⇑iP     P       05 30 02.3 +0.1
SEY                                pmax   pmax
      comp=Z,22nm,0.9s
HHC   Hu-ho-hao-te      24.01 283  eP     P       05 30 03.9 -1.3
HHC                                pmax   pmax
      comp=Z,21nm,0.9s
HHC                                pmax   pmax
      comp=Z,200nm,4.9s
HHC                                LR     LR
      comp=Z,270nm,9.9s
HHC                                LR     LR
      comp=Z,720nm,15.5s
HHC                                LR     LR
      comp=Z,1μm,15.1s
SHEM  Shemya Is, Ala    24.73  48  LR     LR      05 39 40.0
      comp=Z,31nm,21.6s,baz=264,slow=36
LYN   LuoYang           24.93 267⇓iP     P       05 30 14.0 +0.5
LYN                                pmax   pmax
      comp=Z,18nm,0.8s
LYN                                LR     LR
      comp=Z,240nm,16.3s
LYN                                LR     LR
      comp=Z,450nm,13.5s
LYN                                LR     LR
      comp=Z,530nm,14.7s
BOD   Bodaibo           25.94 323  eP     P       05 30 22.2 -0.2
BOD                                pmax   pmax
      comp=Z,33nm,0.9s
GUMO  Guam              26.25 176  LR     LR      05 39 58.8
      comp=Z,52nm,20.9s,baz=84,slow=34
ULN   Ulaanbaatar       27.01 299  P      P       05 30 32.1 -0.2
ULN   Ulaanbaatar       27.01 299c iP     P       05 30 32.7 +0.3
ULN                                pmax   pmax
      comp=Z,12nm,1.0s
SONM  Songino Array     27.45 299  P      P       05 30 36.6 +0.3
      comp=Z,5.9nm,0.8s,baz=95,slow=9.2,SNR=32
SONM                               LR     LR      05 42 00.7
      comp=Z,392nm,19.1s,baz=81,slow=37
      comp=Z,5.9nm,0.8s
SONM  Songino Array     27.45 299  P      P       05 30 36.3  0.0
SONM  Songino Array     27.45 299  P      P       05 30 36.3  0.0
SONM                               pmax   pmax
      comp=Z,8.0nm,1.0s
XAN   Xi'an             27.84 269  P      P       05 30 39.5 -0.4
XAN                                pP     pP      05 30 46.3 -0.5
XAN                                S      S       05 35 23.4 +1.8
XAN                                pmax   pmax
      comp=Z,8.0nm,0.8s
XAN                                pmax   pmax
      comp=Z,97nm,5.2s
XAN                                LR     LR
      comp=Z,140nm,16.0s
XAN                                LR     LR
      comp=Z,340nm,15.1s
XAN                                LR     LR
      comp=Z,380nm,15.8s
H11N2 WAKE ISLAND Hy    28.63 128  T      T       06 01 38.0
      baz=321,SNR=478
H11N1 WAKE ISLAND Hy    28.64 128  T      T       06 01 45.2
      baz=321,slow=74,SNR=516
H11N3 WAKE ISLAND Hy    28.65 128  T      T       06 01 45.7
      baz=321,slow=74,SNR=506
ENH   Enshi             29.02 261  P      P       05 30 49.4 -0.9
H11S1 WAKE ISLAND Hy    29.45 130  T      T       06 01 49.7
      baz=321,slow=76,SNR=47
H11S3 WAKE ISLAND Hy    29.46 130  T      T       06 01 50.2
      baz=321,slow=76,SNR=52
H11S2 WAKE ISLAND Hy    29.47 130  T      T       06 01 51.8
      baz=321,slow=76,SNR=46
ZAK   Zakamensk         29.68 304  eP     P       05 30 56.1 +0.1
ZAK                                pmax   pmax
      comp=Z,6.0nm,1.2s
LZH   Lanzhou           31.03 276  eP     P       05 31 07.8 -0.4
LZH                                pP     pP      05 31 15.7 +0.5
LZH                                sP     sP      05 31 18.6 +0.5
LZH                                pmax   pmax
      comp=Z,9.0nm,1.0s
LZH                                LR     LR
      comp=Z,200nm,14.3s
LZH                                LR     LR
      comp=Z,370nm,13.3s
LZH                                LR     LR
      comp=Z,350nm,14.3s
TIXI  Tiksi             32.64 352  LR     LR      05 45 59.1
      comp=Z,84nm,19.1s,baz=95,slow=39
TIXI  Tiksi             32.64 352d iP     P       05 31 20.0 -1.7
TIXI                               pmax   pmax
      comp=Z,9.0nm,2.8s
GTA   Gaotai            33.12 283  eP     P       05 31 27.1 +0.6
GTA                                sP     sP      05 31 35.3 -1.1
GTA                                pmax   pmax
      comp=Z,10.0nm,1.1s
GTA                                LR     LR
      comp=Z,130nm,19.9s
GTA                                LR     LR
      comp=Z,430nm,17.5s
GTA                                LR     LR
      comp=Z,490nm,17.1s
QIZ   Qiongzhong        35.37 244  P      P       05 31 44.2 -1.8
QIZ                                S      S       05 37 25.8 +6.6
QIZ                                LR     LR
      comp=Z,200nm,17.5s
QIZ                                LR     LR
      comp=Z,230nm,15.9s
QIZ                                LR     LR
      comp=Z,210nm,19.1s
PZH   PanZhiHua         36.80 262  P      P       05 31 58.2 -0.2
PZH                                pmax   pmax
      comp=Z,30nm,0.6s
PZH                                pmax   pmax
      comp=Z,30nm,3.5s
GOMU  GeErMu            37.87 280  P      P       05 32 08.3 +0.7
GOMU                               pP     pP      05 32 11.7 -3.0
GOMU                               pmax   pmax
      comp=Z,13nm,0.7s
GOMU                               pmax   pmax
      comp=Z,86nm,4.3s
DGZ   Jazzator, Alta    39.89 303c iP     P       05 32 25.2 +1.1
DGZ                                pmax   pmax
      comp=Z,22nm,0.8s
WMQ   Urumqi            40.83 294  eP     P       05 32 31.9  0.0
WMQ                                pP     sP      05 32 42.3 +0.4
WMQ                                pmax   pmax
      comp=Z,17nm,0.9s
WMQ                                LR     LR
      comp=Z,120nm,21.3s
CHGN  Chignik           40.99  46  P      P       05 32 33.9 +1.0
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ZAA0  Zalesovo Array    41.05 310  P      P       05 32 33.4 -0.1
ZAA0                               IAmb   IAmb    05 32 44.2
      comp=Z,11nm,0.7s
ZALV  Zalesovo Beam     41.05 310  P      P       05 32 33.7 +0.2
      comp=Z,10.0nm,0.7s,baz=89,slow=7.7,SNR=38
ZALV                               pP     sP      05 32 43.7 +0.3
      comp=Z,10nm,0.6s,baz=89,slow=7.6,SNR=18
ZALV                               PcP    PcP     05 34 33.0 +0.1
      comp=Z,2.5nm,0.7s,baz=114,slow=3.6,SNR=4.2
ZALV                               LR     LR      05 50 31.4
      comp=Z,228nm,18.1s,baz=84,slow=37
      comp=Z,10.0nm,0.7s
ZALV  Zalesovo Beam     41.05 310  P      P       05 32 33.2 -0.3
ZALV  Zalesovo Beam     41.05 310 i P     P       05 32 33.9 +0.4
ZALV                               pmax   pmax
      comp=Z,10.0nm,0.7s
NRIK  Noril'sk          41.27 334  P      P       05 32 35.5 +0.4
      comp=Z,1.9nm,0.4s,baz=111,slow=12,SNR=6.5
NRIK                               LR     LR      05 50 54.4
      comp=Z,216nm,18.9s,baz=102,slow=38
      comp=Z,1.9nm,0.4s
NRIK  Noril'sk          41.27 334  P      P       05 32 34.9 -0.2
NRIK  Noril'sk          41.27 334  P      P       05 32 34.9 -0.2
NRIK                               pmax   pmax
      comp=Z,9.0nm,1.3s
CRAI  Chiangrai         41.41 255  P      P       05 32 36.2 -0.6
CRAI                               IAmb   IAmb    05 32 43.5
      comp=Z,8.7nm,0.8s
ZSN   Zaisan            41.95 300  eP     P       05 32 41.7 +0.8
      baz=300
ZSN   Zaisan            41.95 300  eP     P       05 32 41.7 +0.8
SVW2  Sparrevohn        42.44  39  P      P       05 32 46.4 +1.6
PHRA  Phrae             42.59 253  P      P       05 32 46.7 +0.2
IMAR  Indian Mountai    43.51  32  P      P       05 32 55.1 +1.8
CMAR  Chiang Mai Arr    43.56 254  P      P       05 32 54.2 -0.1
      comp=Z,1.5nm,0.3s,baz=47,slow=6.8,SNR=14
CMAR                               LR     LR      05 52 39.7
      comp=Z,39nm,18.6s,baz=120,slow=38
      comp=Z,1.5nm,0.3s
CMAR  Chiang Mai Arr    43.56 254 i P     P       05 32 55.0 +0.7
CMAR                               pmax   pmax
      comp=Z,2.0nm,0.3s
MK31  Makanchi Array    43.81 300  P      P       05 32 56.0 -0.1
MK31                               IAmb   IAmb    05 32 57.1
      comp=Z,6.5nm,0.8s
MK31  Makanchi Array    43.81 300  P      P       05 32 56.0 -0.1
MK31                               pmax   pmax
      comp=Z,7.0nm,0.9s
MKAR  Makanchi Array    43.81 300  P      P       05 32 56.1  0.0
      comp=Z,6.9nm,0.9s,baz=82,slow=9.1,SNR=58
MKAR                               LR     LR      05 52 07.6
      comp=Z,224nm,18.6s,baz=148,slow=37
      comp=Z,6.9nm,0.9s
MKAR  Makanchi Array    43.81 300  P      P       05 32 55.9 -0.1
MAKZ  Makanchi          44.01 300  P      P       05 32 57.3 -0.4
MAKZ                               IAmb   IAmb    05 32 58.9
      comp=Z,8.0nm,0.9s
MAKZ  Makanchi          44.01 300  P      P       05 32 57.3 -0.4
MAKZ                               pmax   pmax
      comp=Z,8.0nm,1.0s
PPLA  Purkeypile        44.06  37  P      P       05 32 58.5 +0.5
PPLA                               IAmb   IAmb    05 33 38.9
      comp=Z,11nm,1.3s
CAST  Castle Rocks      44.11  36  P      P       05 32 59.7 +1.4
BPAW  Bear Paw Mtn.     44.60  35  P      P       05 33 03.1 +0.9
TRF   Thorofare Moun    44.92  36  P      P       05 33 05.7 +0.8
TRF                                IAmb   IAmb    05 33 47.0
      comp=Z,6.9nm,1.3s
H23K  Yukon River       45.23  32  P      P       05 33 09.4 +2.3
H23K                               IAmb   IAmb    05 33 18.9
      comp=Z,4.7nm,0.8s
KURK  Kurchatov         45.29 306  P      P       05 33 07.3 -0.5
KURK  Kurchatov         45.29 306  P      P       05 33 07.3 -0.5
KURK                               pmax   pmax
      comp=Z,22nm,0.8s
SML   Sawmill           45.90  38  P      P       05 33 12.5  0.0
SML                                IAmb   IAmb    05 33 48.4
      comp=Z,9.8nm,1.3s
IL31                    46.36  34  P      P       05 33 17.0 +1.0
ILAR  Eielson Array     46.36  34  P      P       05 33 16.6 +0.6
      comp=Z,0.8nm,0.8s,baz=263,slow=6.2,SNR=12
      comp=Z,0.8nm,0.8s
ILAR  Eielson Array     46.36  34  P      P       05 33 16.9 +0.8
ILAR  Eielson Array     46.36  34  P      P       05 33 16.9 +0.8
SHLS  Shalkode          46.76 296 i P     P       05 33 17.3 -2.4
      baz=296
SHLS  Shalkode          46.76 296 i P     P       05 33 17.2 -2.4
TDK   Taldyqorghan      46.91 299  eP     P       05 33 21.1 +0.4
      comp=Z,13nm,0.9s,baz=299
TDK   Taldyqorghan      46.91 299  eP     P       05 33 21.0 +0.4
TDK                                pmax   pmax
      comp=Z,13nm,0.9s
KLU   Klutina           47.08  38  P      P       05 33 23.3 +1.5
KLU                                IAmb   IAmb    05 33 36.2
      comp=Z,11nm,1.3s
TAPN  Taplejung         47.14 272  eP     P       05 33 23.9 +0.9
      comp=Z,16nm,0.8s
BMAR  Burnt Mountain    47.18  30  P      P       05 33 24.5 +2.0
KPKS  Kokpek            47.20 296  eP     P       05 33 23.0  0.0
      baz=296
KPKS  Kokpek            47.20 296  eP     P       05 33 23.0  0.0
SATY  Saty              47.52 296  eP     P       05 33 25.9 +0.2
      baz=296
SATY  Saty              47.52 296  eP     P       05 33 25.8 +0.2
ODAN  Odare             47.63 272  eP     P       05 33 26.9 +0.2
DOT   Dot Lake          47.69  35  P      P       05 33 28.1 +1.7
DOT                                IAmb   IAmb    05 34 02.7
      comp=Z,9.1nm,1.2s
L26K  Log Cabin Wild    48.08  36  P      P       05 33 31.6 +2.2
L26K                               IAmb   IAmb    05 33 56.4
      comp=Z,9.7nm,1.3s
JIRN  Jiri              48.15 274  eP     P       05 33 31.1 +0.2
RAMN  Ramite            48.19 272  eP     P       05 33 31.3 +0.2
      comp=Z,46nm,0.7s
CHKK  Chushkaly         48.23 297  eP     P       05 33 30.8 -0.2
      baz=298
CHKK  Chushkaly         48.23 297  eP     P       05 33 30.7 -0.2
GUN   Gumba             48.26 274  eP     P       05 33 31.8  0.0
      comp=Z,47nm,0.8s
MDOK  Medeo             48.42 297  eP     P       05 33 33.1 +0.5
      baz=297
MDOK  Medeo             48.42 297  eP     P       05 33 33.1 +0.5
TNSS  Tian-Shan         48.54 296  eP     P       05 33 34.1 +0.3
      baz=297
TNSS  Tian-Shan         48.54 296  eP     P       05 33 34.0 +0.3
KUU   Kurty             48.66 298⇑iP     P       05 33 33.9 -0.4
      comp=Z,12nm,0.8s,baz=298
KUU   Kurty             48.66 298c iP     P       05 33 33.8 -0.4
KUU                                pmax   pmax
      comp=Z,12nm,0.8s
L27K  Beaver Creek,     48.76  36  P      P       05 33 36.6 +1.9
L27K                               IAmb   IAmb    05 33 43.6
      comp=Z,7.2nm,1.3s
BCAR  Beaver Creek A    48.78  36  P      P       05 33 36.8 +1.8
BRZS  Berezniki         49.16 306  eP     P       05 33 37.9 -0.1
      baz=306
BRZS  Berezniki         49.16 306  eP     P       05 33 37.8 -0.1
TKM2  Tokmak 2          49.51 297  P      P       05 33 41.8 +0.8
      SNR=23
DANN  Dangsing          49.67 276  eP     P       05 33 42.9 +0.4
      comp=Z,48nm,0.7s
BVAR  Borovoye Array    49.69 311  P      P       05 33 42.0  0.0
      comp=Z,10nm,0.6s,baz=73,slow=8.3,SNR=40
BVAR                               LR     LR      05 55 49.5
      comp=Z,131nm,18.2s,baz=78,slow=37
      comp=Z,10nm,0.6s
BVAR  Borovoye Array    49.69 311  P      P       05 33 42.0  0.0
BRVK  Borovoye          49.74 311  P      P       05 33 42.5 +0.2
BRVK                               IAmb   IAmb    05 33 53.6
      comp=Z,12nm,0.8s
BRVK  Borovoye          49.74 311  P      P       05 33 42.5 +0.2
BRVK                               pmax   pmax
      comp=Z,12nm,0.9s
BTLS  Baital            49.82 300  eP     P       05 33 42.6 -0.4
      baz=300
BTLS  Baital            49.82 300  eP     P       05 33 42.6 -0.4
SGDS  Sogindy           49.98 298  eP     P       05 33 44.5 +0.1
      baz=298
SGDS  Sogindy           49.98 298  eP     P       05 33 44.4 +0.1
KBK   Karagaybulak      50.05 297  P      P       05 33 45.7 +0.7
      SNR=12
USP   Ospenovka         50.13 298  P      P       05 33 45.9 +0.4
      SNR=6.9
AAK   Ala-Archa         50.37 297  P      P       05 33 47.5 +0.1
      comp=Z,4.1nm,0.7s,baz=56,slow=13,SNR=5.1
AAK                                LR     LR      05 56 14.6
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      comp=Z,171nm,20.1s,baz=70,slow=37
      comp=Z,4.1nm,0.7s
AAK   Ala-Archa         50.37 297c iP     P       05 33 47.7 +0.3
AAK                                pmax   pmax
      comp=Z,6.0nm,0.9s
PYUN  Piuthan           50.38 276  eP     P       05 33 47.9 +0.1
      comp=Z,41nm,0.9s
EKS2  Erkin-Say         50.85 297  P      P       05 33 51.4 +0.4
      SNR=6.3
AML   Almayashu         51.10 297  P      P       05 33 54.1 +0.8
      SNR=11
HYT   Haines Junctio    51.21  38  P      P       05 33 55.8 +2.3
HYT                                IAmb   IAmb    05 34 22.0
      comp=Z,10nm,1.2s
INK   Inuvik            51.23  28  P      P       05 33 54.0 +0.7
      comp=Z,1.1nm,0.6s,baz=292,slow=7.0,SNR=5.5
      comp=Z,1.1nm,0.6s
INK   Inuvik            51.23  28  P      P       05 33 54.2 +0.9
INK   Inuvik            51.23  28  P      P       05 33 54.2 +0.9
INK                                pmax   pmax
      comp=Z,3.0nm,0.8s
DZA   Taraz             52.43 298  eP     P       05 34 02.9 +0.1
      baz=298
DZA   Taraz             52.43 298  eP     P       05 34 02.8 +0.1
KK31  Karatay Array     52.90 299  P      P       05 34 06.0 -0.2
KK31                               IAmb   IAmb    05 34 07.0
      comp=Z,6.3nm,0.9s
KK31  Karatay Array     52.90 299  P      P       05 34 06.0 -0.2
KK31                               pmax   pmax
      comp=Z,6.0nm,0.9s
KKAR  Karatay Array     52.90 299  P      P       05 34 06.1 -0.1
KKAR  Karatay Array     52.90 299  P      P       05 34 06.1 -0.1
A36M  Sachs Harbour     53.10  23  P      P       05 34 08.9 +1.8
A36M                               IAmb   IAmb    05 34 22.7
      comp=Z,5.9nm,0.9s
IUG   Iuzhnay           53.60 298  eP     P       05 34 11.7 +0.2
      baz=298
IUG   Iuzhnay           53.60 298  eP     P       05 34 11.7 +0.2
CHM   Chimkent          53.83 298  eP     P       05 34 12.9 -0.1
      baz=298
CHM   Chimkent          53.83 298  eP     P       05 34 12.8 -0.2
SVE   Sverdlovsk        53.93 318  eP     P       05 34 14.4 +0.9
SVE                                pmax   pmax
      comp=Z,23nm,0.9s
SVE                                MLR    MLR
      comp=Z,428nm,17.0s
GAR   Garm              54.73 294  P      P       05 34 19.5 -0.3
GAR                                IAmb   IAmb    05 34 30.7
      comp=Z,17nm,1.2s
NIL   Nilore            55.04 287  P      P       05 34 21.7 -0.2
NIL   Nilore            55.04 287  P      P       05 34 21.7 -0.2
NIL                                pmax   pmax
      comp=Z,11nm,0.8s
ARU   Arti              55.14 318  P      P       05 34 22.6 +0.3
      comp=Z,5.1nm,0.2s,baz=64,slow=5.7,SNR=1.7
ARU                                LR     LR      06 00 33.3
      comp=Z,272nm,18.1s,baz=88,slow=39
      comp=Z,5.1nm,0.2s
ARU   Arti              55.14 318  P      P       05 34 22.5 +0.2
ARU                                IAmb   IAmb    05 34 23.6
      comp=Z,14nm,1.0s
CHGR  Chuyangaron       55.69 294  P      P       05 34 26.6 -0.1
CHGR  Chuyangaron       55.69 294  P      P       05 34 26.6 -0.1
CHGR                               pmax   pmax
      comp=Z,28nm,0.9s
ABKAR Akbulak array     57.16 309  P      P       05 34 36.7 -0.1
ABKAR Akbulak array     57.16 309  P      P       05 34 36.7 -0.1
ABKAR                              IAmb   IAmb    05 34 37.9
      comp=Z,8.6nm,0.7s
KBL   Kabul             57.68 290  P      P       05 34 40.7 -0.3
KBL   Kabul             57.68 290  P      P       05 34 40.7 -0.3
KBL                                pmax   pmax
      comp=Z,16nm,0.9s
AKTO  Aktyubinsk        57.79 311  P      P       05 34 41.2 -0.1
      comp=Z,7.8nm,0.8s,baz=57,slow=6.1,SNR=14
AKTO                               LR     LR      06 00 48.0
      comp=Z,132nm,18.7s,baz=8.0,slow=37
      comp=Z,7.8nm,0.8s
SPITS Spitsbergen Ar    57.99 349  LR     LR      06 00 43.5
      comp=Z,61nm,20.7s,baz=24,slow=37
NOR   Nord              58.28 357 i P     P       05 34 44.2  0.0
NOR                                IAmb   IAmb    05 34 45.7
      comp=Z,1.1nm,0.8s
KIRV  Kirov             58.80 322⇑eP     P       05 34 47.8 -0.3
RES   Resolute Bay      59.49  15  P      P       05 34 53.0 +0.3
RES                                IAmb   IAmb    05 34 54.5
      comp=Z,3.2nm,0.9s
RES   Resolute Bay      59.49  15  P      P       05 34 53.0 +0.3
RES                                pmax   pmax
      comp=Z,3.0nm,0.9s
WB0   Warramunga Arr    59.91 190  P      P       05 34 55.6 -0.6
FITZ  Fitzroy Crossi    59.96 199  P      P       05 34 56.3 -0.2
LVZ   Lovozero          60.07 336⇓iP     P       05 34 56.6 -0.2
LVZ                                pmax   pmax
      comp=Z,68nm,2.0s
WRAB  Tennant Creek     60.08 190⇓eP     P       05 34 56.7 -0.6
WRAB                               pmax   pmax
      comp=Z,7.0nm,1.2s
WRA   Warramunga Arr    60.09 190  P      P       05 34 56.5 -0.9
      comp=Z,1.6nm,0.5s,baz=6.5,slow=6.9,SNR=23
      comp=Z,1.6nm,0.5s
WRA   Warramunga Arr    60.09 190  P      P       05 34 56.5 -0.9
WRA   Warramunga Arr    60.09 190 i P     P       05 34 56.2 -1.2
WRA                                pmax   pmax
      comp=Z,2.0nm,0.5s
YKA   Yellowknife Ar    60.66  31  P      P       05 35 01.1 +0.2
      comp=Z,0.3nm,0.7s,baz=295,slow=5.7,SNR=4.1
      comp=Z,0.3nm,0.7s
YKA   Yellowknife Ar    60.66  31 i P     P       05 35 01.7 +0.8
ARCES ARCESS Array B    61.80 339  P      P       05 35 10.3 +1.7
      comp=Z,1.2nm,0.6s,baz=78,slow=8.4,SNR=1.6
ARCES                              LR     LR      06 05 02.2
      comp=Z,73nm,18.1s,baz=67,slow=39
      comp=Z,1.2nm,0.6s
ARCES ARCESS Array B    61.80 339  P      P       05 35 08.5 -0.1
ARCES ARCESS Array B    61.80 339  P      P       05 35 08.5 -0.1
ARCES                              pmax   pmax
      comp=Z,27nm,1.5s
KLMR  Klimovskoe        62.07 327  eP     P       05 35 09.4 -1.1
KLMR                               AMP            05 35 21.0
      comp=Z,17nm,1.9s
KLMR  Klimovskoe        62.07 327  eP     P       05 35 09.3 -1.2
KLMR                               pmax   pmax
      comp=Z,17nm,1.9s
TULEG Thule             62.09   8  P      P       05 35 11.5 +1.1
TULEG                              IAmb   IAmb    05 35 29.4
      comp=Z,4.0nm,0.8s
BELG  Belogornoye       62.64 317  P      P       05 35 14.8 +0.4
      comp=Z,26nm,0.8s,baz=72,slow=1.0,SNR=23
BELG                               LR     LR      06 05 13.0
      comp=Z,169nm,18.0s,baz=139,slow=39
      comp=Z,26nm,0.8s
BELG  Belogornoye       62.64 317c iP     P       05 35 14.6 +0.2
BELG                               pmax   pmax
      comp=Z,6.0nm,0.9s
DAG   Danmarks Havn     63.04 355 i P     P       05 35 16.0 -0.7
DAG                                IAmb   IAmb    05 35 17.6
      comp=Z,6.2nm,1.0s
GEYT  Alibeck           63.65 298  P      P       05 35 21.6 +0.2
      comp=Z,6.4nm,0.7s,baz=16,slow=2.2,SNR=10
GEYT                               LR     LR      06 06 20.3
      comp=Z,42nm,18.3s,baz=152,slow=39
      comp=Z,6.4nm,0.7s
AS31  Alice Springs     63.81 189  P      P       05 35 21.7 -0.8
ASAR  Alice Springs     63.81 189  P      P       05 35 22.0 -0.4
      comp=Z,1.4nm,0.9s,baz=4.8,slow=5.0,SNR=11
      comp=Z,1.4nm,0.9s
ASAR  Alice Springs     63.81 189  P      P       05 35 22.2 -0.2
ASAR  Alice Springs     63.81 189  P      P       05 35 22.3 -0.2
PALK  Pallekele         64.31 257  LR     LR      06 07 06.7
      comp=Z,40nm,18.3s,baz=197,slow=39
DZM   Mont Dzumac       65.37 156  eLR    LR      05 55 11.0
      comp=Z,74nm,22.1s
DBG   Daneborg          65.54 355 i P     P       05 35 32.5 -0.6
DBG                                IAmb   IAmb    05 35 53.0
      comp=Z,1.6nm,1.0s
OBN   Obninsk           66.62 323 i P     P       05 35 37.9 -2.4
OBN                               i               05 35 50.9
OBN                               i               05 36 08.5
OBN                               i               05 38 06.6
OBN                                pmax   pmax
      comp=Z,6.0nm,1.0s
OBN                                MLR    MLR
      comp=Z,164nm,15.0s
FIA1  FINESS Array S    66.92 332  P      P       05 35 42.2 +0.1
FIA1                               IAmb   IAmb    05 35 43.2
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	comp=Z,8.2nm,0.9s						
FINES	FINESS Array B	66.92	332	P	P	05 35 42.1	0.0
	comp=Z,5.5nm,0.8s,baz=61,slow=7.4,SNR=21						
FINES				pP	sP	05 35 52.8	+0.5
	comp=Z,3.7nm,0.7s,baz=46,slow=11,SNR=7.5						
FINES				LR	LR	06 07 12.7	
	comp=Z,161nm,19.1s,baz=51,slow=38						
	comp=Z,5.5nm,0.8s						
FINES	FINESS Array B	66.92	332	P	P	05 35 41.8	-0.3
FINES	FINESS Array B	66.92	332	*i* P	P	05 35 42.5	+0.4
FINES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SUMG	Summit	67.83	1	*i* P	P	05 35 49.0	+0.8
SUMG				IAmb	IAmb	05 35 50.5	
	comp=Z,9.5nm,1.1s						
VSU	Vasula	68.68	330	⇓*e*P	P	05 35 53.9	+0.7
VSU				pmax	pmax		
	comp=Z,34nm,0.9s						
SEKA	Sheki	68.95	306	P	P	05 35 55.6	+0.2
ZKTA	Zakatala	69.06	307	P	P	05 35 56.9	+0.9
GANJ	Ganja	69.82	306	P	P	05 36 00.9	+0.2
ZEI	Tsey	70.03	309	*e*P	P	05 35 58.9	-3.3
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KVAR	Kislovodsk Arr	70.05	311	P	P	05 36 03.8	+1.6
	comp=Z,6.2nm,0.8s,baz=42,slow=12,SNR=3.0						
	comp=Z,6.2nm,0.8s						
KIV	Kislovodsk	70.06	311	P	P	05 36 03.3	+1.1
KIV	Kislovodsk	70.06	311	*e*P	P	05 36 03.7	+1.5
KIV				pmax	pmax		
	comp=Z,29nm,1.1s						
KIV				MLR	MLR		
	comp=Z,103nm,18.0s						
KBZ	Khabaz	70.07	311	P	P	05 36 02.4	+0.3
	comp=Z,9.7nm,0.9s,baz=95,slow=3.1,SNR=15						
KBZ				LR	LR	06 12 03.6	
	comp=Z,72nm,18.8s,baz=50,slow=40						
	comp=Z,9.7nm,0.9s						
KBZ	Khabaz	70.07	311	*i* P	P	05 36 02.8	+0.7
KBZ				pmax	pmax		
	comp=Z,14nm,0.9s						
ONI	Oni	70.42	309	P	P	05 36 04.8	+0.4
ONI				IAmb	IAmb	05 36 06.7	
	comp=Z,9.0nm,0.9s						
ONI	Oni	70.42	309	P	P	05 36 04.8	+0.4
ONI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NEY	Neytrino	70.46	310	⇓*e*P	P	05 36 06.2	+1.4
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MNK	Minsk	70.89	326	*i* P	P	05 36 04.8	-2.1
	comp=E,3.0nm,0.9s						
MNK				*i* P	P	05 36 04.8	-2.1
	comp=N,25nm,0.8s						
MNK				*i* P	P	05 36 04.8	-2.1
	comp=Z,8.0nm,0.7s,baz=227						
MNK				*i* PcP	PcP	05 36 24.8	-2.6
MNK				*i* PP	PP	05 38 42.0	-1.5
MNK				*i* PPP	PPP	05 40 24.9	
MNK				*i* S	S	05 45 20.4	-0.1
MNK				*i* ScS	SKKSac	05 46 07.5	0.0
MNK				*i* SS	SS	05 49 54.5	+2.3
MNK				*i* SSS	SSS	05 53 13.4	
MNK				*i* LR	LR	06 07 48.5	
MNK				*i* LRM	MLR	06 09 50.5	
MNK				*i* LRM	MLR	06 09 50.6	
	comp=Z,90nm,17.4s						
MNK				*i* LRM	MLR	06 09 57.7	
	comp=N,373nm,20.0s						
MNK	Minsk	70.89	326	*i* P	P	05 36 04.7	-2.1
MNK				*i*		05 36 24.8	
MNK				*i*		05 38 41.9	
MNK				*i* PPP	PPP	05 40 24.8	
MNK				*i* S	S	05 45 20.4	-0.1
MNK				*i*		05 46 07.5	
MNK				*i* SS	SS	05 49 54.5	+2.3
MNK				pmax	pmax		
	comp=N,25nm,0.9s						
MNK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				MLR	MLR		
	comp=Z,90nm,17.0s						
MNK				MLR	MLR		
	comp=N,373nm,20.0s						
NACGM	Naroch	71.08	327	*e*P	P	05 36 09.1	+1.0
	comp=Z,26nm,1.0s,baz=47						
GNI	Garni	71.08	307	LR	LR	06 10 16.3	
	comp=Z,71nm,18.5s,baz=92,slow=38						
GNI	Garni	71.08	307	⇓*e*P	P	05 36 06.7	-1.9
GNI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ICESG	Greenland Ices	71.31	1	*i* P	P	05 36 09.4	-0.3
ICESG				IAmb	IAmb	05 36 11.8	
	comp=Z,10nm,0.8s						
NC204	NORSAR Array S	72.01	338	P	P	05 36 14.0	+0.4
HFS	Hagfors	72.04	336	LR	LR	06 11 16.9	
	comp=Z,80nm,18.7s,baz=22,slow=39						
NB2	NORSAR Subarra	72.07	338	P	P	05 36 14.0	0.0
	comp=Z,6.5nm,0.8s,baz=37,slow=6.2						
NOA	NORSAR Array B	72.07	338	P	P	05 36 14.1	0.0
	comp=Z,4.1nm,0.8s,baz=38,slow=6.0,SNR=18						
NOA				pP	sP	05 36 24.9	+0.6
	comp=Z,2.9nm,0.7s,baz=38,slow=6.1,SNR=6.9						
NOA				LR	LR	06 11 48.5	
	comp=Z,35nm,20.8s,baz=40,slow=39						
	comp=Z,4.1nm,0.8s						
NVAR	Mina Array Bea	72.21	55	P	P	05 36 17.3	+1.8
	comp=Z,0.3nm,0.6s,baz=332,slow=3.3,SNR=2.4						
	comp=Z,0.3nm,0.6s						
AKASG	Malin Array Be	72.86	323	P	P	05 36 18.7	-0.1
	comp=Z,2.0nm,0.6s,baz=42,slow=5.7,SNR=16						
AKASG				pP	sP	05 36 29.4	+0.3
	comp=Z,2.1nm,0.7s,baz=43,slow=6.6,SNR=5.8						
AKASG				LR	LR	06 08 58.1	
	comp=Z,16nm,18.9s,baz=6.5,slow=36						
	comp=Z,2.0nm,0.6s						
AKBB	Malin Array Si	72.86	323	P	P	05 36 18.7	-0.1
AKBB				IAmb	IAmb	05 36 19.8	
	comp=Z,8.3nm,0.9s						
AKBB	Malin Array Si	72.86	323	⇓*i*P	P	05 36 18.2	-0.6
AKBB				pmax	pmax		
	comp=Z,9.0nm,0.9s						
FRB	Frobisher Bay	73.68	14	LR	LR	06 13 46.7	
	comp=Z,65nm,18.1s,baz=20,slow=40						
DY2G	Dye2	73.72	4	*i* P	P	05 36 24.5	+0.6
DY2G				IAmb	IAmb	05 36 25.8	
	comp=Z,7.6nm,0.8s						
GURO	Guroymak-BITLI	73.72	307	P	P	05 36 25.4	+1.1
GURO				IAmb	IAmb	05 36 26.6	
	comp=Z,7.2nm,0.8s						
PDAR	Pinedale Array	74.71	47	P	P	05 36 30.6	+0.5
	comp=Z,0.2nm,0.5s,baz=297,slow=4.0,SNR=2.9						
	comp=Z,0.2nm,0.5s						
BUR08	Bucovina Ar. S	76.89	322	P	P	05 36 42.7	+0.4
BURAR	Bucovina Array	76.90	322	P	P	05 36 43.0	+0.6
BURAR				IAmb	IAmb	05 36 44.2	
	comp=Z,3.4nm,0.8s						
BURAR	Bucovina Array	76.90	322	P	P	05 36 43.0	+0.6
BURAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BR131	Keskin Array S	77.96	312	⇑*e*P	P	05 36 48.8	+0.3
BRTR	Keskin Array B	77.96	312	P	P	05 36 48.5	0.0
	comp=Z,1.3nm,0.8s,baz=68,slow=4.0,SNR=7.2						
BRTR				LR	LR	06 16 22.3	
	comp=Z,46nm,18.4s,baz=53,slow=40						
	comp=Z,1.3nm,0.8s						
MLR	Muntele Rosu	78.07	320	LR	LR	06 14 50.6	
	comp=Z,112nm,18.3s,baz=70,slow=38						
LANS	Liptovska Anna	78.36	326	*e*P	P	05 36 52.3	+1.9
LANS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LANS	Liptovska Anna	78.36	326	*e*P	P	05 36 52.3	+1.9
MORC	Moravsky Berou	78.69	327	P	P	05 36 53.2	+0.9
MORC				pmax	pmax		
	comp=Z,5.0nm,1.5s						
DPC	Dobruska-Polom	78.75	328	*e*P	P	05 36 53.7	+1.2
DPC	Dobruska-Polom	78.75	328	*e*P	P	05 36 53.7	+1.2
VYHS	Vyhne	79.13	326	*e*P	P	05 36 56.1	+1.5
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VYHS	Vyhne	79.13	326	*e*P	P	05 36 56.1	+1.5
CLL	Collm	79.28	331	*e*P	P	05 36 56.0	+0.6
	comp=Z,6.0nm,1.0s						
CLL	Collm	79.28	331	*e*P	P	05 36 56.0	+0.6
CLL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CLL				MLR	MLR		
	comp=Z,400nm,19.0s						
VRAC	Vranov	79.45	328	LR	LR	06 15 19.7	
	comp=Z,132nm,18.3s,baz=38,slow=38						
PRU	Pruhonice	79.74	329	*e*P	P	05 36 59.1	+1.2
PRU	Pruhonice	79.74	329	*e*P	P	05 36 59.1	+1.2
CKRC	Cesky Krumlov	80.76	329	*e*P	P	05 37 04.2	+0.7
CKRC	Cesky Krumlov	80.76	329	*e*P	P	05 37 04.2	+0.7
KHC	Kasperske Hory	80.80	329	*e*P	P	05 37 04.7	+1.0
KHC	Kasperske Hory	80.80	329	⇑*e*P	P	05 37 04.5	+0.8
KHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
RAYN	Ar Rayn	80.81	293	P	P	05 37 03.7	-0.5
RAYN	Ar Rayn	80.81	293	P	P	05 37 03.7	-0.5
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CONA	Conrad Observa	80.83	327	*i* P	P	05 37 05.1	+1.2
	comp=Z,4.1nm,0.9s						
EKA	Eskdalemuir Ar	80.88	341	LR	LR	06 17 42.1	
	comp=Z,49nm,18.0s,baz=9.0,slow=39						
EKA	Eskdalemuir Ar	80.88	341	P	P	05 37 03.4	-0.5
GERES	GERESS Array B	80.98	329	P	P	05 37 04.9	+0.1
	comp=Z,1.0nm,0.6s,baz=32,slow=6.4,SNR=9.2						
GERES				LR	LR	06 16 07.1	
	comp=Z,56nm,18.8s,baz=12,slow=38						
	comp=Z,1.0nm,0.6s						
VTS	Vitosha	81.50	320	P	P	05 37 10.3	+2.6
SOKA	Soboth	82.16	327	*i* P	P	05 37 11.4	+0.4
	comp=Z,4.4nm,0.7s						
KBA	Koelnbreinsper	82.54	328	*i* P	P	05 37 14.3	+1.2
	comp=Z,1.2nm,0.4s						
WATA	Walderalm	83.04	329	*e*P	P	05 37 15.6	-0.1
	comp=Z,3.5nm,0.7s						
MOTA	Moosalm	83.22	329	*i* P	P	05 37 15.4	-1.2
	comp=Z,6.8nm,1.1s						
RETA	Reutte	83.24	330	*e*P	P	05 37 17.3	+0.7
	comp=Z,6.9nm,1.1s						
SQTA	Sankt Quirin	83.28	329	*i* PcP	P	05 37 18.2	+1.4
	comp=Z,5.8nm,0.9s						
FETA	Feichten	83.63	329	*i* P	P	05 37 19.1	+0.4
	comp=Z,4.1nm,1.1s						
DAVA	Damuels	83.74	330	*e*P	P	05 37 19.6	+0.3
	comp=Z,8.8nm,1.1s						
EIL	Elat	83.94	304	P	P	05 37 21.0	+0.6
	comp=Z,4.2nm,0.8s,baz=68,slow=5.4,SNR=3.9						
EIL				LR	LR	06 19 44.6	
	comp=Z,50nm,18.9s,baz=68,slow=39						
	comp=Z,4.2nm,0.8s						
PMOR	Pomariorio Ree	84.12	115	*e*T	T	07 10 04.4	
	comp=Z,4.1nm,0.2s						
FUORN	Ofenpass-Fuorn	84.14	329	P	P	05 37 21.9	+0.4
FUORN				IAmb	IAmb	05 37 23.2	
	comp=Z,8.3nm,1.1s						
DAVOX	Davos/Dischmat	84.16	330	LR	LR	06 19 08.2	
	comp=Z,43nm,18.9s,baz=78,slow=39						
PPT2	Papeete2	84.75	118	*e*LR	LR	06 04 11.0	
	comp=Z,86nm,22.5s						
PPT2				*e*LR	LR	06 04 11.2	
	comp=Z,101nm,23.5s						
TAOE	Nuku Hiva Isla	85.58	105	*e*LR	LR	06 04 34.4	
	comp=Z,125nm,25.3s						
SSF	Saint Saulge	86.25	334	P	P	05 37 31.4	-0.3
SSF				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LPL	La Plagne	86.42	331	P	P	05 37 32.7	-0.1
LPL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TXAR	Lajitas Array	87.32	53	P	P	05 37 38.0	+0.7
	comp=Z,0.1nm,0.5s,baz=294,slow=6.8,SNR=2.3						
TXAR				pP	sP	05 37 48.9	+1.2
	comp=Z,0.6nm,0.8s,baz=322,slow=3.2,SNR=5.3						
MFF	Saint Martin d	87.85	336	P	P	05 37 39.6	+0.2
TBI	Tubuai	88.86	122	*e*T	T	07 16 55.0	
	comp=Z,3.4nm,0.3s						
ESDC	Sonseca Array	95.30	335	P	P	05 38 14.2	0.0
	comp=Z,0.5nm,0.8s,baz=26,slow=5.6,SNR=2.8						
	comp=Z,0.5nm,0.8s						

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*WEL **10** 05:25:00, 41°.76S×174°.20E, h15^{km}, ML4.1, Mw3.9, Moment Tensor Solution. s7 Moment tensor: Scale 10^{14} Nm; M$_{rr}$2.67; M$_{\theta\theta}$5.16; M$_{\phi\phi}$-7.83; M$_{r\theta}$-2.50; M$_{\theta\phi}$-6.11; M$_{\phi r}$0.23; Fault plane solution: M$_0$9.44000×10^{14} NP1: ϕ_s339.00000°, δ72.00000°, λ14.00000°. NP2: ϕ_s244.00000°, δ77.00000°, λ162.00000°. Principal axes: T -102.9900, Plg22.0000°, Azm201.0000°; N 85.7600, Plg67.0000°, Azm30.0000°; P 17.2200, Plg3.0000°, Azm292.0000°;*

*IDC **10** 05:25:53.1±1.9, 41°.74S×174°.20E, h0^{km}, mb3.5/2, mbtmp3.6/4, ML3.5/2, MS3.1/2 Error ellipse: s-maj=45.6km s-min=32.1km az=138.0*

*NOU **10** 05:25:56.1, 41°.97S×174°.41E, h13^{km}, MLv4.5/14, Cook Strait, New Zealand*

*WEL **10** 05:25:57.2±0.4, 42°S±3°×17°4E±°, h12^{km}±5^{km}, M4.2/15, ML4.5/15, MLv4.2/15, Error ellipse: s-maj=0.0km s-min=0.0km az=151.7, confirmed*

ISC 10 05:25:54.9±1.2**, 41°.89S**±0°.03×**174°.31E**±0°.03**, h13**^{km}±9^{km}**, n133, σ1^{s}39**/144**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.16	331	P	Pb	05 25 60.0	+0.3
BSWZ	Blackbirch Sta	0.37	297	P	Pg	05 26 02.8	+0.5
TUWZ	Tuamarina	0.53	328	P	Pg	05 26 05.5	+0.1
TUWZ				S	Sg	05 26 11.8	-0.7
SNZO	South Karori	0.65	27	P	Pb	05 26 08.9	+0.9
TCW	Tory Channel	0.68	358	P	Pg	05 26 08.2	+0.1
TCW				S	Sg	05 26 17.1	+0.2
WEL	Wellington	0.69	30	P	Pn	05 26 09.8	-0.5
WEL				S	Sn	05 26 20.2	-0.7
PLWZ	Palliser	0.77	66	P	Pn	05 26 12.6	+1.0
KHZ	Kahutara	0.78	227	P	Pn	05 26 12.9	+1.3
KHZ	Kahutara	0.78	227	P	Pn	05 26 13.0	+1.4
KHZ				S	Sn	05 26 25.9	+2.8
MSWZ	Moikau Station	0.84	57	P	Pn	05 26 14.1	+1.6
MSWZ				S	Sn	05 26 26.8	+2.1
CAW	Cannon Point	0.96	36	P	Pn	05 26 14.7	+0.6
CAW				S	Sn	05 26 28.9	+1.3
NNZ	Nelson	0.97	313	P	Pb	05 26 13.1	-0.4
PAWZ	Paruwai Farm	0.97	59	P	Pn	05 26 15.2	+0.9
PAWZ				S	Sn	05 26 30.5	+2.6
THZ	Tophouse	1.06	276	P	Pn	05 26 15.7	+0.2
KIW	Kapiti Island	1.12	24	P	Pg	05 26 16.8	+0.3
KIW				S	Sn	05 26 32.5	+1.0
DUWZ	D’Urville Isla	1.12	345	P	Pb	05 26 15.7	-0.4
DUWZ				S	Sb	05 26 30.1	-0.6
TRWZ	Traveller	1.14	65	P	Pg	05 26 17.3	+0.4
MTW	Mount Morrison	1.15	51	P	Pg	05 26 17.4	+0.3
OGWZ	Otaki Gorge	1.25	31	P	Pg	05 26 19.0	+0.1
MRNZ	Matariki Terra	1.26	292	P	Pb	05 26 18.9	+0.3
TKNZ	Takaka Hill	1.33	309	P	Pn	05 26 19.5	+0.4
HOWZ	Holdsworth Sta	1.34	43	P	Pb	05 26 20.0	+0.2
TMWZ	Te Maipa	1.42	57	P	Pn	05 26 20.9	+0.5
GVZ	Greta Valley S	1.44	221	P	Pb	05 26 22.0	+0.4
MRZ	Mangatainoka R	1.55	38	P	Pn	05 26 23.0	+0.8
TIWZ	Tintock	1.62	47	P	Pn	05 26 23.6	+0.4
QRZ	Quartz Range	1.71	308	P	Pb	05 26 25.8	-0.4
QRZ	Quartz Range	1.71	308	P	Pb	05 26 25.6	-0.6
CPWZ	Castlepoint	1.72	56	P	Pg	05 26 29.9	+1.9
LTZ	Lake Taylor	1.76	239	P	Pb	05 26 26.3	-0.8
AMCZ	Amberley	1.78	223	P	Pn	05 26 26.3	+1.0
PRWZ	Pori Road	1.82	44	P	Pn	05 26 26.4	+0.5
POWZ	Post Office Ro	1.85	37	P	Pn	05 26 27.0	+0.7
DSZ	Denniston Nort	1.88	273	P	Pb	05 26 28.3	-0.9
BFZ	Birch Farm	1.89	51	P	Pn	05 26 27.0	+0.2
BFZ	Birch Farm	1.89	51	P	Pn	05 26 26.7	-0.1
DVHZ	Dannevirke	2.12	42	P	Pn	05 26 29.8	-0.1
WAZ	Wanganui	2.19	14	P	Pb	05 26 33.4	-0.9
MQZ	McQueen’s Vall	2.19	213	P	Pn	05 26 30.9	-0.1
TSZ	Takapari Road	2.21	35	P	Pn	05 26 31.8	+0.5
OXZ	Oxford	2.21	229	P	Pn	05 26 31.5	+0.2
AKCZ	Akaroa Harbour	2.24	207	P	Pn	05 26 32.2	+0.5
INZ	Inchbonnie	2.29	248	P	Pn	05 26 33.5	+1.1
PRHZ	Porangahau	2.39	48	P	Pn	05 26 33.6	-0.1
LREZ	Lake Rotokare	2.42	2	P	Pb	05 26 39.3	+1.0
WPHZ	Waipukurau	2.43	42	P	Pn	05 26 34.4	+0.1
PNHZ	Pukenui	2.43	37	P	Pn	05 26 34.5	+0.1
RACZ	Rakaia	2.44	220	P	Pn	05 26 34.4	0.0
NMEZ	Namu Road	2.49	352	P	Pb	05 26 39.8	+0.3
KHEZ	Kahui Hut	2.60	355	P	Pb	05 26 40.9	-0.4
KHEZ	Kahui Hut	2.60	355	P	Pb	05 26 41.0	-0.4
MHCZ	Mount Hutt	2.61	230	P	Pn	05 26 36.8	0.0
NEZ	North Egmont	2.62	356	P	Pb	05 26 40.8	-1.0
NBEZ	Newall Road No	2.64	352	P	Pb	05 26 40.9	-1.1
MTVZ	Mangateitei	2.65	20	P	Pn	05 26 39.5	+2.2
PXZ	Pawanui	2.67	47	P	Pn	05 26 36.9	-0.7
PXZ				P	Pn	05 26 37.6	0.0
DREZ	Durham Road	2.69	358	P	Pg	05 26 45.5	-1.0
PKE	Pukeiti	2.70	355	P	Pb	05 26 41.5	-1.6
MOVZ	Moawhango	2.71	24	P	Pn	05 26 39.2	+1.0
PKVZ	Pokaka	2.71	17	P	Pn	05 26 40.7	+2.5
WNVZ	Wahianoa	2.74	21	P	Pn	05 26 40.2	+1.6
BHHZ	Black Hill Sta	2.74	30	P	Pn	05 26 39.3	+0.8
WACZ	Wakanui South	2.74	221	P	Pn	05 26 38.7	+0.1
TRVZ	Turoa	2.75	20	P	Pn	05 26 40.7	+1.8
WHVZ	Whangaehu Hut	2.77	21	P	Pb	05 26 43.6	-0.9
DRZ	Dome Shelter	2.78	20	P	Pb	05 26 43.7	-0.8
VRZ	Vera Road	2.78	7	P	Pn	05 26 41.8	+2.7
FWVZ	Far West T-bar	2.79	20	P	Pb	05 26 42.4	-2.4
MHEZ	Mangahewa	2.81	0	P	Pb	05 26 43.7	-1.2
TUVZ	Tukino	2.81	22	P	Pb	05 26 45.1	+0.1
KAHZ	Kahuranaki	2.85	44	P	Pn	05 26 39.7	-0.4
NGZ	Ngauruhoe	2.88	20	P	Pb	05 26 45.9	-0.3
SNVZ	South Ngauruho	2.88	21	P	Pb	05 26 46.6	+0.4
WVZ	Waitaha Valley	2.90	245	P	Pn	05 26 41.6	+0.9
OTVZ	Oturere	2.91	21	P	Pb	05 26 44.4	-2.3
NNVZ	North Ngauruho	2.92	20	P	Pb	05 26 47.2	+0.2
WTVZ	West Tongariro	2.93	20	P	Pb	05 26 48.1	+1.0
KWHZ	Kaweka Forest	2.94	34	P	Pn	05 26 41.4	+0.1
ETVZ	East Tongariro	2.95	22	P	Pn	05 26 43.2	+1.7
TMVZ	Te Maari	2.96	21	P	Pn	05 26 43.0	+1.2
KRVZ	Karewarewa	2.97	20	P	Pb	05 26 47.9	+0.2
NTVZ	North Tongarir	2.97	21	P	Pn	05 26 43.3	+1.5
RPZ	Rata Peaks	3.02	232	Pn	Pn	05 26 42.3	-0.1
	16nm,0.3s,baz=95,slow=1.9,SNR=58						
RPZ				Sn	Sn	05 27 17.4	-0.9
	16nm,0.3s,baz=325,slow=23,SNR=38						
RPZ				LR	LR	05 28 17.3	
	comp=Z,241nm,18.7s,baz=44,slow=47						
	32nm,0.3s						
RPZ	Rata Peaks	3.02	232	P	Pn	05 26 42.9	+0.5
RPZ	Rata Peaks	3.02	232	P	Pn	05 26 42.5	+0.2
MCHZ	McNeill Hill	3.04	37	P	Pn	05 26 42.5	-0.1
ARCZ	Arundel	3.09	227	P	Pn	05 26 43.7	+0.3
RITZ	Rihia Road	3.13	23	P	Pb	05 26 50.7	+0.2
BKZ	Black Stump Fm	3.18	32	P	Pn	05 26 46.7	+2.0
BKZ	Black Stump Fm	3.18	32	P	Pn	05 26 44.5	-0.2
GCSZ	Gaunt Creek Bo	3.27	243	P	Pn	05 26 47.0	+1.1
ARHZ	Aropaoanui	3.32	39	P	Pn	05 26 47.0	+0.5
NMHZ	Naumai	3.37	35	P	Pn	05 26 47.8	+0.5
HIZ	Hauiti	3.39	7	P	Pn	05 26 50.6	+3.1
HIZ	Hauiti	3.39	7	P	Pn	05 26 50.6	+3.1
TMZ	Timaru	3.48	223	P	Pn	05 26 48.9	+0.2
ALRZ	Allen Road	3.67	26	P	Pb	05 26 58.2	-1.3
TLZ	Tolley Road	3.67	15	P	Pn	05 26 55.2	+3.8
FOZ	Fox Glacier	3.70	242	P	Pn	05 26 52.9	+1.2
PRRZ	Plateau Road	3.74	26	P	Pb	05 26 59.7	-1.1
HRRZ	Handcock Road	3.80	24	P	Pb	05 27 00.8	-1.1
LBZ	Lake Benmore	3.92	229	P	Pn	05 26 55.5	+0.7
MKRZ	Makatiti	4.09	25	P	Pb	05 27 03.3	-3.5
ODZ	Otahua Downs	4.13	219	P	Pn	05 26 58.1	+0.4
ODZ	Otahua Downs	4.13	219	P	Pn	05 26 57.6	-0.1
URZ	Urewera	4.21	32	Pn	Pn	05 26 57.3	-1.4
	0.9nm,0.3s,baz=158,slow=7.0,SNR=2.0						
URZ				Sn	Sn	05 27 44.8	-2.9
	baz=194,slow=14						
	21nm,1.2s						
URZ	Urewera	4.21	32	P	Pn	05 26 58.6	-0.2
URZ	Urewera	4.21	32	P	Pn	05 26 58.5	-0.2
TOZ	Tahuroa Road	4.25	13	P	Pn	05 27 03.5	+4.2
MWZ	Matawai	4.32	36	P	Pn	05 26 59.4	-0.9
JCZ	Jackson Bay	4.61	240	P	Pn	05 27 05.0	+0.7
JCZ	Jackson Bay	4.61	240	P	Pn	05 27 04.6	+0.3
RUGZ	Raukumara Rang	4.69	35	P	Pn	05 27 04.9	-0.6
HHSZ	Highcliff Hill	4.82	213	P	Pn	05 27 07.8	+0.7
AWAZ	Awhitu Peninsu	4.82	3	P	Pn	05 27 09.8	+2.6
WKZ	Wanaka	4.85	231	P	Pn	05 27 07.1	-0.5
HAZ	Te Kaha	4.91	34	P	Pn	05 27 08.5	+0.1
EAZ	Earnscleugh	4.94	226	P	Pn	05 27 09.3	+0.5
ETAZ	East Tamaki Re	4.95	6	P	Pn	05 27 12.7	+3.8
WTAZ	Waiatarua	4.95	2	P	Pn	05 27 13.0	+4.1
RVAZ	Riverhead Bore	5.11	2	P	Pn	05 27 15.0	+3.9
WIAZ	Waiheke Island	5.12	7	P	Pn	05 27 14.4	+3.1
KUZ	Kuaotunu	5.25	12	P	Pn	05 27 16.6	+3.6
TUZ	Tuapeka	5.29	218	P	Pn	05 27 14.4	+0.9
SYZ	Scrubby Hill	5.95	217	P	Pn	05 27 23.4	+0.7
SYZ	Scrubby Hill	5.95	217	P	Pn	05 27 23.5	+0.9
APZ	The Paps	6.71	220	P	Pn	05 27 33.5	+0.4
CTZ	Chatham Island	6.92	109	P	Pn	05 27 36.8	+0.9
CTZ	Chatham Island	6.92	109	P	Pn	05 27 36.9	+0.9
RAR	Rarotonga	30.01	55	LR	LR	05 44 56.6	
	comp=Z,31nm,18.0s,baz=252,slow=38						
ASAR	Alice Springs	38.11	286	P	P	05 33 12.9	-0.7
	0.3nm,0.4s,baz=125,slow=6.5,SNR=6.0						
	0.3nm,0.4s						
WRA	Warramunga Arr	40.20	291	P	P	05 33 30.1	-0.9
	0.4nm,0.5s,baz=127,slow=8.6,SNR=9.6						
	0.4nm,0.5s						
TORD	Torodi Ar. Bea	150.66	195	PKPbc	PKiKP	05 45 47.6	-0.1
	0.3nm,0.4s,baz=183,slow=2.0,SNR=6.1						

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*GII **10** 05:37:14.9±0.0, 24°.09N×34°.02E, h1^{km}, mb4.5/3, MD4.4/3, Mm4.5/3*

*SGS **10** 05:37:29.4, 25°.75N×37°.35E, h2^{km}, Ml3.7*

*IDC **10** 05:37:30.8±1.5, 25°.86N×37°.17E, h0^{km}, mb3.5/6, mbtmp3.4/9, ML3.2/3, MS2.5/1, Error ellipse: s-maj=27.7km s-min=19.0km az=86.0*

ISC 10 05:37:30.8±0.6**, 25°.73N**±0°.03×**37°.38E**±0°.05**, h10**^{km}**, n54, σ1^{s}76**/58**, mb3.4**/6**, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNY09	LNY09	0.42	141	S	Sg	05 37 44.3	-0.2
LNY09	LNY09	0.42	141	P	Pg	05 37 38.2	-0.8
LNY16	LNY16	0.43	152	S	Sg	05 37 44.7	-0.1
LNY16	LNY16	0.43	152	P	Pg	05 37 38.3	-0.9
UMJS	Umm Lajj	0.50	187	S	Sg	05 37 46.7	-0.4
UMJS	Umm Lajj	0.50	187	P	Pg	05 37 39.6	-0.9
LNY11	LNY11	0.55	139	P	Pg	05 37 40.3	-1.1
OLAS	OLAS	0.57	24	P	Pg	05 37 39.9	-1.9
LNY12	LNY12	0.58	142	P	Pg	05 37 41.0	-1.0
LNY14	LNY14	0.59	143	P	Pg	05 37 41.2	-1.1
LNY13	LNY13	0.60	157	P	Pg	05 37 41.2	-1.2
LNY15	LNY15	0.60	141	P	Pg	05 37 41.5	-1.0
LNY17	LNY17	0.62	141	P	Pg	05 37 41.7	-1.2
LNY07	LNY07	0.62	163	P	Pg	05 37 41.7	-1.2
LNY06	LNY06	0.63	145	P	Pg	05 37 42.0	-1.1
LNY10	LNY10	0.63	136	P	Pg	05 37 41.9	-1.2
LNY01	LNY01	0.73	134	P	Pg	05 37 43.7	-1.2
LNY05	LNY05	0.74	157	P	Pg	05 37 43.6	-1.5
LNY08	LNY08	0.81	148	P	Pg	05 37 45.0	-1.5
LNYS	LNYS	0.82	141	P	Pg	05 37 45.2	-1.5
URD03	Al Ula	0.94	4	P	Pg	05 37 46.5	-2.4
SUMJS	Umluj	0.97	179	P	Pg	05 37 48.0	-1.4
URD02	Al Ula	0.99	26	P	Pg	05 37 47.9	-2.0
BIDS	Bi'r al Bayda'	1.20	342	P	Pb	05 37 50.7	-2.9
BIDS	Bi'r al Bayda'	1.20	342	S	Sb	05 38 06.2	-2.9
URD01	URD01	1.24	12	P	Pn	05 37 52.1	-2.3
TRAS	Al Qrash	1.27	121	P	Pn	05 37 53.2	-1.5
WJHS		1.33	319	S	Sb	05 38 10.3	-2.7
WJHS		1.33	319	P	Pn	05 37 53.6	-1.9
URD04	Abu Rakah	1.35	356	P	Pn	05 37 53.4	-2.4
YNBS	Yanbu` al Bahr	1.49	158	P	Pn	05 37 56.7	-1.0
URD06	Shuwaq	1.80	342	P	Pn	05 38 01.6	-0.6
STAIM	STAIM	1.94	42	P	Pn	05 38 03.0	-0.8
QLABS	Al Qalibar	2.17	13	P	Pn	05 38 08.0	+0.8
MSTR	Mastorah	2.88	150	P	Pn	05 38 15.9	-0.8
RSHS		3.44	319	P	Pb	05 38 31.1	-0.8
EIL	Elat	4.48	332	Pn	Pn	05 38 37.9	-0.9
	0.4nm,0.3s,baz=190,slow=12,SNR=2.6						
EIL				Pg	Pb	05 38 49.3	-0.2
	4.9nm,0.3s,baz=151,slow=9.0,SNR=23						
EIL				Lg	Lg	05 39 45.4	
	14nm,0.3s,baz=338,slow=19,SNR=4.4						
	3.7nm,0.8s						
EIL	Elat	4.48	332	Pn	Pn	05 38 40.0	+1.3
EIL				Sn	Sb	05 39 45.3	+1.7
MBRI	Mt Berech	4.60	332	Pn	Pn	05 38 41.4	+0.9
MBRI				Sn	Sb	05 39 49.3	+2.1
HRFI	Mount Harif	4.76	335	Pn	Pn	05 38 45.4	+2.7

HRFI				Sn	Sb	05 39 54.9	+3.0
KRMI	Paran Flat	4.96	332	Pn	Pn	05 38 46.1	+0.7
KRMI				Sn	Sb	05 39 56.0	-1.6
PRNI	Paran	5.06	336	Pn	Pn	05 38 48.5	+1.7
PRNI				Sn	Sb	05 40 03.1	+2.7
ZFRI	Zfri	5.18	339	Sn	Sb	05 40 08.7	+4.8
MSBI	Mazada	5.84	343	Pn	Pn	05 39 03.3	+5.9
YTIR	Yattir	5.96	341	Pn	Pn	05 39 03.8	+4.7
ASF	Jabal al Asfar	6.43	356	Pn	Pn	05 39 03.8	-2.0
	0.5nm,0.3s,baz=186,slow=18,SNR=3.0						
ASF				Pg	Pb	05 39 26.6	+3.6
	2.5nm,0.3s,baz=180,slow=11,SNR=18						
ASF				Lg	Lg	05 40 49.1	
	4.0nm,0.3s,baz=328,slow=22,SNR=14						
	1.4nm,0.3s						
MMAI	Mount Meron Ar	7.46	347	Pn	Pn	05 39 19.6	-0.2
	1.4nm,0.3s,baz=161,slow=15,SNR=2.3						
MMAI				Lg	Lg	05 41 21.3	
	5.3nm,0.3s,baz=159,slow=32,SNR=4.6						
	1.0nm,0.3s						
GNI	Garni	15.64	21	LR	LR	05 47 42.9	
	comp=Z,20nm,22.0s,baz=218,slow=39						
AKASG	Malin Array Be	25.71	348	P	P	05 43 01.4	+0.3
	0.3nm,0.3s,baz=166,slow=8.1,SNR=3.1						
	0.3nm,0.3s						
GERES	GERESS Array B	29.56	327	P	P	05 43 36.5	+0.7
	0.2nm,0.3s,baz=127,slow=6.3,SNR=3.5						
	0.2nm,0.3s						
TORD	Torodi Ar. Bea	35.78	256	P	P	05 44 28.9	-1.5
	0.6nm,0.8s,baz=59,slow=8.9,SNR=3.7						
	0.6nm,0.8s						
ESDC	Sonseca Array	37.13	302	P	P	05 44 42.5	+0.7
	0.7nm,1.0s,baz=69,slow=7.0,SNR=4.9						
	0.7nm,1.0s						
MKAR	Makanchi Array	41.19	47	P	P	05 45 17.2	+1.6
	0.8nm,0.9s,baz=255,slow=7.1,SNR=6.5						
	0.8nm,0.9s						
YKA	Yellowknife Ar	89.27	347	P	P	05 50 27.7	+0.8
	0.2nm,0.8s,baz=34,slow=5.2,SNR=2.9						
	0.2nm,0.8s						

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*WEL **10** 05:42:37.2±0.6, 32°S±10°×17°9W±2°4, h347^{km}±8^{km}, M4.2/23, mB4.8/23, ML5.2/3, MLv5.0/23, Mw(mB)4.0/23, Error ellipse: s-maj=0.0km s-min=0.0km az=111.0, confirmed*

*NOU **10** 05:43:22.0, 34.°84S×178.°01E, h285^{km}, MLv4.4/6, South of Kermadec Islands*

ISC 10 05:42:36.9±1.7**, 31.°7S**±0.°1×**179.°0W**±0.°3**, h350^{km}, n59,** σ**1.^{s}45**/78**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.59	22	S	S	05 44 16.9	-0.8
MXZ	Matakaoa Point	6.26	200	P	Pn	05 44 14.1	+3.5
MXZ	Matakaoa Point	6.26	200	P	Pn	05 44 11.1	+0.5
MXZ				S	S	05 45 27.5	+0.8
WMGZ	Waiomatatini S	6.47	198	P	Pn	05 44 14.8	+1.8
PKGZ	Pakihiroa	6.63	200	P	Pn	05 44 15.8	+0.8
PKGZ				S	S	05 45 35.9	+1.3
PUZ	Puketiti	6.75	199	P	Pn	05 44 15.5	-0.8
PUZ				S	S	05 45 36.5	-0.6
RUGZ	Raukumara Rang	6.83	202	P	Pn	05 44 16.9	-0.4
RUGZ				S	S	05 45 38.1	-0.7
TWGZ	Tauwhareparae	6.93	200	P	Pn	05 44 20.0	+1.6
TWGZ				S	S	05 45 43.9	+3.0
OPRZ	Ohinepanea	7.14	209	P	Pn	05 44 22.7	+1.9
CNGZ	Carnagh Statio	7.16	198	P	Pn	05 44 21.5	+0.5
MWZ	Matawai	7.21	202	P	Pn	05 44 20.4	-1.2
MWZ				S	S	05 45 47.5	+0.6
URZ	Urewera	7.29	205	P	Pn	05 44 21.6	-0.9
URZ	Urewera	7.29	205	P	Pn	05 44 22.2	-0.2
URZ				S	S	05 45 46.6	-1.8
RAGZ	Rawiri	7.40	202	P	Pn	05 44 25.8	+1.9
RAGZ				S	S	05 45 51.7	+0.8
KARZ	Kaharoa	7.42	210	P	Pn	05 44 27.4	+3.3
RIGZ	Rimuhau	7.48	200	P	Pn	05 44 24.7	-0.2
RIGZ				S	S	05 45 55.0	+2.3
MUGZ	Murupara	7.60	206	P	Pn	05 44 26.2	-0.1
MUGZ				S	S	05 45 56.4	+1.1
RTZ	Ruatahuna	7.65	204	P	Pn	05 44 28.2	+1.3
RTZ				S	S	05 45 54.4	-2.0
HSRZ	Hossack Road	7.67	209	P	Pn	05 44 30.5	+3.5
SNGZ	Shannon Statio	7.68	202	P	Pn	05 44 25.0	-2.2
SNGZ				S	S	05 45 57.3	+0.3
HRRZ	Handcock Road	7.72	209	P	Pn	05 44 30.3	+2.7
PRRZ	Plateau Road	7.77	208	P	Pn	05 44 30.3	+2.1
KNZ	Kokohu	7.80	199	P	Pn	05 44 28.8	+0.2
KNZ				S	S	05 45 59.7	+0.2
WPRZ	Whakapapatarin	7.88	209	P	Pn	05 44 32.1	+2.6
RAHZ	Arahi	7.89	203	P	Pn	05 44 29.1	-0.5
RAHZ				S	S	05 46 00.5	-1.0
MTHZ	Maungataniwha	7.91	204	P	Pn	05 44 28.4	-1.5
MTHZ				S	S	05 45 59.3	-2.7
WHHZ	Waihua	7.98	201	P	Pn	05 44 30.4	-0.3
WHHZ				S	S	05 46 03.2	-0.4
MRHZ	Matea Rd	8.05	206	P	Pn	05 44 32.2	+0.7
MRHZ				S	S	05 46 04.5	-0.6
NMHZ	Naumai	8.14	204	P	Pn	05 44 32.9	+0.2
NMHZ				S	S	05 46 06.0	-1.1
ARHZ	Aropaoanui	8.23	202	P	Pn	05 44 34.3	+0.7
ARHZ				S	S	05 46 08.7	-0.2
BKZ	Black Stump Fm	8.31	205	P	Pn	05 44 33.2	-1.5
BKZ	Black Stump Fm	8.31	205	P	Pn	05 44 33.1	-1.5
HIZ	Hauiti	8.46	215	P	P	05 44 39.6	+0.5
MCHZ	McNeill Hill	8.49	203	P	Pn	05 44 36.1	-0.7
KWHZ	Kaweka Forest	8.57	204	P	Pn	05 44 36.8	-0.9
NTVZ	North Tongarir	8.57	209	P	Pn	05 44 38.4	+0.6
TMVZ	Te Maari	8.57	209	P	Pn	05 44 37.3	-0.5
ETVZ	East Tongariro	8.59	209	P	Pn	05 44 38.4	+0.4
OTVZ	Oturere	8.63	209	P	Pn	05 44 39.1	+0.6
FWVZ	Far West T-bar	8.75	209	P	Pn	05 44 38.9	-1.2
KAHZ	Kahuranaki	8.75	201	P	Pn	05 44 39.1	-0.8
WHVZ	Whangaehu Hut	8.76	209	P	Pn	05 44 40.3	+0.1
TRVZ	Turoa	8.79	209	P	Pn	05 44 40.2	-0.4
MOVZ	Moawhango	8.80	207	P	Pn	05 44 40.0	-0.5
MTVZ	Mangateitei	8.90	209	P	Pn	05 44 41.4	-0.2
PXZ	Pawanui	8.97	201	P	Pn	05 44 42.7	+0.3
VRZ	Vera Road	8.99	213	P	Pn	05 44 43.8	+1.1
PNHZ	Pukenui	9.08	204	P	Pn	05 44 42.0	-1.8
WPHZ	Waipukurau	9.14	202	P	Pn	05 44 44.6	+0.2
PRHZ	Porangahau	9.26	201	P	Pn	05 44 45.7	-0.1
TSZ	Takapari Road	9.29	205	P	Pn	05 44 45.5	-0.8
DVHZ	Dannevirke	9.44	203	P	Pn	05 44 47.0	-1.0
PRWZ	Pori Road	9.73	203	P	Pn	05 44 50.8	-0.7
BFZ	Birch Farm	9.76	202	P	Pn	05 44 51.1	-0.7
BFZ	Birch Farm	9.76	202	P	Pn	05 44 51.2	-0.7
TIWZ	Tintock	9.96	203	P	Pn	05 44 53.2	-1.1
TMWZ	Te Maipa	10.26	202	P	Pn	05 44 56.9	-0.8
SNZO	South Karori	10.85	206	P	Pn	05 45 02.0	-2.8
QRZ	Quartz Range	11.38	214	P	Pn	05 45 07.9	-3.3

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*SGS **10** 05:45:27.2, 25.°74N×37.°37E, h11^{km}, Ml3.3*

*GII **10** 05:45:27.1±0.0, 24.°32N×35.°01E, h20^{km}±4^{km}, MD3.6/2, Mm3.9/2*

ISC 10 05:45:26.8±0.9**, 25.°77N**±0.°02×**37.°32E**±0.°05**, h10^{km}, n32,** σ**1.^{s}64**/37**, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNY09	LNY09	0.48	140	S	Sg	05 45 41.9	-0.6
LNY09				P	Pg	05 45 35.6	-0.5
LNY16	LNY16	0.49	149	S	Sg	05 45 42.1	-0.6
LNY16	LNY16	0.49	149	P	Pg	05 45 35.8	-0.5
UMJS	Umm Lajj	0.53	181	P	Pg	05 45 37.1	-0.1
UMJS	Umm Lajj	0.53	181	S	Sg	05 45 44.3	+0.1
OLAS	OLAS	0.55	30	P	Pg	05 45 37.4	-0.2
LNY07	LNY07	0.68	160	P	Pg	05 45 38.9	-1.0
LNY07	LNY07	0.68	160	S	Sg	05 45 47.7	-1.0
LNY06	LNY06	0.69	143	S	Sg	05 45 48.2	-1.1
LNY06	LNY06	0.69	143	P	Pg	05 45 39.4	-0.8
LNY05	LNY05	0.80	154	S	Sg	05 45 51.4	-1.2
LNY05	LNY05	0.80	154	P	Pg	05 45 41.1	-1.0
LNY01	LNY01	0.80	133	P	Pg	05 45 41.3	-0.9
LNY01	LNY01	0.80	133	S	Sg	05 45 51.7	-0.9
LNY08	LNY08	0.88	147	S	Sg	05 45 53.9	-1.2
LNY08	LNY08	0.88	147	P	Pg	05 45 42.5	-1.2
URD03	Al Ula	0.91	8	S	Sg	05 45 55.9	-0.2
URD03	Al Ula	0.91	8	P	Pg	05 45 43.9	-0.4
URD02	Al Ula	0.98	30	S	Sg	05 45 58.6	+0.2
URD02	Al Ula	0.98	30	P	Pg	05 45 45.2	-0.4
SUMJS	Umluj	1.01	176	S	Sg	05 45 58.6	-0.7
SUMJS	Umluj	1.01	176	P	Pg	05 45 45.7	-0.5
BIDS	Bi'r al Bayda'	1.14	344	S	Sb	05 46 03.7	+0.2
BIDS	Bi'r al Bayda'	1.14	344	P	Pb	05 45 48.1	-0.5
WJHS		1.27	319	S	Sb	05 46 07.6	+0.5
WJHS		1.27	319	P	Pn	05 45 50.9	+0.3
EIL	Elat	4.42	332	Pn	Pb	05 46 45.9	+1.5
MBRI	Mt Berech	4.54	333	Pn	Pb	05 46 48.3	+1.7
MBRI				Sn	Sg	05 47 49.8	-2.8
HRFI	Mount Harif	4.71	335	Pn	Pb	05 46 50.6	+1.2
HRFI				Sn	Sg	05 47 55.3	-2.6
KRMI	Paran Flat	4.90	333	Pn	Pb	05 46 51.5	-1.2
KRMI				Sn	Sb	05 47 57.8	+6.0
PRNI	Paran	5.00	336	Pn	Pb	05 46 54.5	0.0
PRNI				Sn	Sg	05 48 04.9	-2.5
GHAJ	Ghor Haditha	5.73	345	Sn	Sg	05 48 27.1	-3.5

IDC 10 05:46:09.7±2.4**, 53.°62N×86.°89E, h0^{km}, mbtmp2.8**/2**, ML2.5**/2**, Error ellipse: s-maj=21.9km s-min=12.4km az=76.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.27	286	I	I	05 53 15.2	
	baz=103,slow=336,SNR=37						
ZALV	Zalesovo Beam	1.27	286	Pg	Pg	05 46 32.3	-1.7
	0.6nm,0.3s,baz=102,slow=17,SNR=14						
ZALV				Lg	Lg	05 46 51.2	
	1.2nm,0.3s,baz=108,slow=28,SNR=17						
KURBB	Kurchatov Arra	5.96	243	Pn	Pn	05 47 40.5	+1.4
	0.1nm,0.3s,baz=63,slow=14,SNR=2.6						
KURBB				Lg	Lg	05 49 17.7	
	0.1nm,0.3s,baz=63,slow=32,SNR=5.4						
	0.3nm,0.2s						
MKAR	Makanchi Array	7.44	205	Pn	Pn	05 48 00.8	+1.4
	0.1nm,0.3s,baz=27,slow=15,SNR=10						
MKAR				Sn	Sn	05 49 24.2	-0.2
	0.1nm,0.3s,baz=23,slow=26,SNR=3.6						
MKAR				Lg	Lg	05 50 05.4	
	baz=27,slow=30,SNR=5.1						
	0.2nm,0.3s						

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*OSPL **10** 06:01:14.9±4.0, 17.°86N×62.°43W, h52^{km}±62^{km}, ML4.9*

*TRN **10** 06:01:15.5, 17.°54N×62.°78W, h105^{km}, MD4.6*

*IDC **10** 06:01:16.7±0.7, 17.°44N×62.°89W, h110^{km}±6^{km}, mb4.0/18, mbtmp4.3/20, MS2.6/3, Error ellipse: s-maj=11.4km s-min=9.2km az=44.0*

*NEIC **10** 06:01:17.1±1.3, 17.°53N±0.°06×62.°81W±0.°05, h107^{km}±5^{km}, mb4.5/54, Error ellipse: s-maj=9.6km s-min=5.5km az=220.0*

ISC 10 06:01:16.6±0.4**, 17.°49N**±0.°04×**62.°83W**±0.°04**, h110^{km}**±4^{km}**, h110^{km}:pP-P, n369,** σ**0.^{s}86**/407**, mb4.4**/44**, 3C-1D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEUS	St. Eustatius	0.15	269	Pn	Pn	06 01 31.7	-0.1
SEUS				Sn	Sn	06 01 43.2	-0.1
SEUS	St. Eustatius	0.15	269	eP	Pn	06 01 31.8	-0.1
SEUS				eS	Sn	06 01 42.8	-0.4
SABA	Saba	0.42	288		Pn	06 01 33.1	+0.2
SABA				Sn	Sn	06 01 45.4	+0.2
SABA	Saba	0.42	288	eP	Pn	06 01 33.2	+0.2
SABA				eS	Sn	06 01 44.8	-0.4
SMRT	St. Maarten	0.60	337		Pn	06 01 34.0	-0.2
SMRT				Sn	Sn	06 01 46.2	-1.2
SMRT	St. Maarten	0.60	337	eP	Pn	06 01 34.0	-0.2
SMRT				eS	Sn	06 01 45.9	-1.5
MBFL	Flemmings, Mon	0.94	142	eP	Pn	06 01 37.5	+0.3
MBFL				eS	Sn	06 01 52.8	0.0
MLYT	Lee's Yard	0.98	142	eP	Pn	06 01 38.0	+0.4
MLYT				eS	Sn	06 01 53.8	+0.3
ANWB	Willy Bob	1.01	80	Pn	Pn	06 01 37.5	-0.4
ANWB				Sn	Sn	06 01 52.8	-1.1
ANWB	Willy Bob	1.01	80	⇓iP	Pn	06 01 37.5	-0.4
ANWB				eS	Sn	06 01 52.8	-1.1
ANWB	Willy Bob	1.01	80	eP	Pn	06 01 37.4	-0.5
ANWB				eS	Sn	06 01 52.7	-1.2
ANBD	Bethesda, Anti	1.11	113	iP	Pn	06 01 38.6	-0.3
ANBD				eS	Sn	06 01 54.5	-1.2
GDHS	Morne Mazeau,	1.58	140		Pn	06 01 44.6	+0.1
GDHS				Sn	Sn	06 02 05.6	-0.1
ABD	La Joyeuse, An	1.63	128		Pn	06 01 45.1	+0.1
ABD				Sn	Sn	06 02 06.0	-0.6
ABD	La Joyeuse, An	1.63	128	eP	Pn	06 01 44.8	-0.3
ABD				eS	Sn	06 02 06.3	-0.3
CBE	Ff, Capester	1.84	140		Pn	06 01 48.1	+0.5
CBE				Sn	Sn	06 02 11.9	+0.8
CBE	Ff, Capester	1.84	140	eP	Pn	06 01 48.0	+0.5
CBE				eS	Sn	06 02 12.1	+0.9
TBG	Guadaloupe-3	1.99	145	eP	Pn	06 01 49.8	+0.4
TBG				eS	Sn	06 02 15.3	+0.8
TDBA	Terre de Bas,	1.99	145	eP	Pn	06 01 50.1	+0.6
H05N1	Guadeloupe/Mar	2.06	124	P	Pn	06 01 49.8	-0.5
H05N1				S	Sn	06 02 14.4	-1.8
	SNR=1762						
MAGL	Barre de l'ile	2.13	136		Pn	06 01 51.8	+0.4
MAGL				Sn	Sn	06 02 17.4	-0.4
MAGL	Barre de l'ile	2.13	136	⇑iP	Pn	06 01 51.7	+0.4
STVI	Saint Thomas	2.20	293		Pn	06 01 51.9	-0.2
CUPR	Culebra, Puert	2.48	289	Pn	Pn	06 01 55.7	0.0
MTP	Monte Pirata	2.67	283	Pn	Pn	06 01 58.1	-0.1
HUMP	Col San Antoni	2.95	283		Pn	06 02 01.9	-0.1
CBYP	Canovanas	2.99	285		Pn	06 02 02.4	-0.2
SVN	Savane Anatole	3.08	149		Pn	06 02 03.9	+0.1
SVN	Savane Anatole	3.08	149	⇑eP	Pn	06 02 04.2	+0.4
PCM	Pelee Case Pet	3.08	150	eP	Pn	06 02 04.1	+0.4
CXM	Morne La Croix	3.11	149	eP	Pn	06 02 04.9	+0.7
BAMF	Morne Balai	3.11	149	eP	Pn	06 02 04.8	+0.5
GBMF	Grand Be	3.12	149	eP	Pn	06 02 04.6	+0.3
PML	Morne Lenard	3.12	149	eP	Pn	06 02 04.6	+0.2
FDF	Fort de France	3.18	149		Pn	06 02 05.1	0.0
FDF	Fort de France	3.18	149	eP	Pn	06 02 05.1	0.0
FDF				eS	Sn	06 02 41.8	-0.8
GCPR	Guaynabo City	3.21	285		Pn	06 02 04.8	-0.5
SJG	San Juan	3.23	281	P	Pn	06 02 06.1	+0.5
	136nm,0.3s,baz=86,slow=9.6,SNR=165						
SJG				S	Sn	06 02 42.7	-0.7
	492nm,0.5s,baz=288,slow=20,SNR=23						
SJG	San Juan	3.23	281		Pn	06 02 05.7	+0.1
ILAM	Ilet Lapin Mar	3.29	145	Pn	Pn	06 02 06.3	-0.2
ILAM	Ilet Lapin Mar	3.29	145	eP	Pn	06 02 06.2	-0.2
ILAM				eS	Sn	06 02 44.4	-0.7
ZAM	Aeronautique	3.38	149	eP	Pn	06 02 08.3	+0.6
BIM	Bigot	3.41	150		Pn	06 02 08.5	+0.4
BIM	Bigot	3.41	150	⇑iP	Pn	06 02 08.6	+0.4
BIM				eS	Sn	06 02 47.1	-0.7
LPMF	Morne Lapointe	3.41	148	eP	Pn	06 02 08.2	+0.1
MVM	Montagne Vaucl	3.46	147	eP	Pn	06 02 09.6	+0.8
MPOM	Morne Pois Mar	3.57	148	Pn	Pn	06 02 10.1	-0.2
MPOM	Morne Pois Mar	3.57	148	eP	Pn	06 02 10.1	-0.2
MPOM				eS	Sn	06 02 51.4	-0.3
H05S1	Guadeloupe/Mar	3.60	148	P	Pn	06 02 11.2	+0.5
	SNR=184						
H05S1				S	Sn	06 02 52.8	+0.3
CELP	Cerrillos	3.62	280		Pn	06 02 11.6	+0.6
OBIP	Obispado Ponce	3.64	279	Pn	Pn	06 02 10.3	-0.9
EMPR	Esperanza - Ma	3.66	286	Pn	Pn	06 02 11.3	0.0
UUPR	Utuado, UPR, P	3.79	282		Pn	06 02 13.7	+0.6
AOPR	Arecibo Observ	3.83	283		Pn	06 02 14.1	+0.3
AOPR	Arecibo Observ	3.83	283	eP	Pn	06 02 13.9	+0.1
AOPR				eS	Sn	06 02 57.4	-0.7
SLBI	Saint Lucia, B	3.88	152	eP	Pn	06 02 14.4	0.0
SLBI				eS	Sn	06 02 57.9	-1.4
SLCP	Castries, St.	3.89	153	eP	Pn	06 02 15.2	+0.7
SLCP				eS	Sn	06 02 58.3	-1.1
SLW	Petit Monier	3.90	152	eP	Pn	06 02 15.7	+0.9
SLB	Belfond	4.03	155	eP	Pn	06 02 17.8	+1.3
MLPR	Magueyes Islan	4.05	277	Pn	Pn	06 02 16.3	-0.3
CRPR	Cabo Rojo, PR	4.11	278		Pn	06 02 17.2	-0.3
CRPR	Cabo Rojo, PR	4.11	278	iP	Pn	06 02 17.5	+0.1
CRPR				eS	Sn	06 03 05.7	+1.0
CRPR				IAML		06 03 10.0	
	comp=Z,619nm,0.7s						
PRSN	Puerto Rico Se	4.18	281		Pn	06 02 18.4	+0.1
MCLT	Moule a Chique	4.18	154	Pn	Pn	06 02 20.1	+1.6
MCLT	Moule a Chique	4.18	154	eP	Pn	06 02 18.3	-0.1
AGPR	Aguadilla, PR	4.19	284		Pn	06 02 18.6	+0.1
AGPR	Aguadilla, PR	4.19	284	iP	Pn	06 02 18.4	-0.1
AGPR				eS	Sn	06 03 06.5	-0.1
AGPR				IAML		06 03 16.8	
	comp=Z,294nm,0.4s						
SVB	Belmont	4.46	160		Pn	06 02 22.7	+0.4
SVB	Belmont	4.46	160	eP	Pn	06 02 22.5	+0.3
SVB	Belmont	4.46	160	eS	Sn	06 03 11.8	-1.5
SVOC	Richmond Hill,	4.58	160	eP	Pn	06 02 24.2	+0.3
GCMP	Grenada, Carri	5.16	165	eP	Pn	06 02 31.5	-0.1
BBGH	Gun Hill	5.35	143	Pn	Pn	06 02 35.1	+0.9
BBGH	Gun Hill	5.35	143	eP	Pn	06 02 35.1	+0.9
BBGH	Gun Hill	5.35	143	eS	Sn	06 03 32.3	-2.4
PCDR	Punta Cana, DR	5.38	282	iP	Pn	06 02 35.3	+0.7
PCDR				IAML		06 03 44.4	
	comp=Z,288nm,1.0s						
GRGR	Grenville	5.45	168	Pn	Pn	06 02 36.3	+0.7
GRGR	Grenville	5.45	168	eP	Pn	06 02 36.9	+1.3
DR12	Loma Pena Alta	6.36	283		Pn	06 02 46.0	-2.0
TOSP	Speyside	6.55	160	Pn	Pn	06 02 51.3	+0.8
TOSP	Speyside	6.55	160	eP	Pn	06 02 51.7	+1.3
TRN	Trinidad (W)	6.94	168	eP	Pn	06 02 58.1	+2.3
TRN	Trinidad (W)	6.94	168	eS	Sn	06 04 10.2	-3.1
SC01	Santiago de lo	7.74	286		Pn	06 03 05.4	-1.3
SC01	Santiago de lo	7.74	286	iP	Pn	06 03 05.5	-1.1
SC01				IAML		06 04 37.2	
	comp=Z,222nm,0.7s						
PODR	Polo	8.08	276	iP	Pn	06 03 10.4	-1.0
PODR				eS	Sn	06 04 39.1	-2.1
SDDR	Presa de Saban	8.18	282		Pn	06 03 12.1	-0.4
SDDR	Presa de Saban	8.18	282	iP	Pn	06 03 11.9	-0.7
SDDR				IAML		06 04 47.0	
	comp=Z,135nm,0.6s						
LOPE2	Hotel El Peder	8.52	275	iP	Pn	06 03 17.0	-0.1
LOPE2				IAML		06 04 58.1	
	comp=Z,79nm,3.8s						
GRTK	Grand Turk	8.79	298	iP	Pn	06 03 17.3	-3.5
GRTK				eS	Sn	06 04 48.9	-9.4
GRTK				IAML		06 04 52.5	
	comp=Z,189nm,0.5s						
URIC	Uribia, Colomb	10.57	238	Pn	Pn	06 03 46.1	+1.0
SDV	Santo Domingo	11.44	223	P	Pn	06 03 57.5	+0.6
	comp=Z,3.0nm,0.6s,baz=43,slow=14,SNR=7.1						
SDV				LR	LR	06 09 18.4	
	comp=Z,18nm,18.7s,baz=77,slow=42						
SDV	Santo Domingo	11.44	223	Pn	Pn	06 03 56.8	-0.2
CRJC	Cerrejon, Guaj	11.68	238	eP	P	06 04 10.3	+1.6
PAMC	Pamplona, Colo	13.95	225	eP	Pn	06 04 30.7	+0.6
TAMC	Tame, Arauca	14.05	220	eP	Pn	06 04 34.0	+3.0
SJCC	San Jacinto, C	14.18	239	eP	P	06 04 36.9	+0.3
BRRC	Barranca, Sant	14.81	227	eP	Pn	06 04 40.4	-0.2
BARC	Barichara	14.82	224	eP	P	06 04 44.1	+0.1
BOAV	Boa Vista	15.17	171	eP	Pn	06 04 43.4	-1.8
RUSC	La Rusia	15.28	222	eP	Pn	06 04 47.3	+0.3
ZARC	Zaragoza, Cauc	15.38	231	eP	Pn	06 04 49.1	+1.3
UREC	San Jos de Ur	15.72	234	eP	Pn	06 04 52.0	-0.1
PTBC	PUERTO BERRIO,	15.73	228	eP	Pn	06 04 51.1	-1.1
MDP	Montagnes des	15.84	140	P	Pn	06 04 50.7	-2.9
	comp=Z,20nm,0.9s,baz=327,slow=15,SNR=11						
MDP				S	Sn	06 07 34.5	-15
	comp=Z,25nm,1.0s,baz=241,slow=22,SNR=8.9						
MDP				LR	LR	06 10 48.3	
	comp=Z,38nm,20.7s,baz=330,slow=36						
SPBC	San Pablo de B	16.11	224	eP	Pn	06 04 54.6	-2.3
APAC	Apartado, Choc	16.45	236	eP	Pn	06 05 01.1	+0.1
CHIC	Chingaza	16.66	221	eP	Pn	06 05 04.6	+0.6
DBBC	Dabeiba	16.70	233	eP	Pn	06 05 04.4	+0.1
NORC	Norcasia	16.71	226	eP	Pn	06 05 04.4	0.0
HELC	Santa Helena	16.74	229	eP	Pn	06 05 05.1	+0.1
ROSC	El Rosal	16.88	223	P	P	06 05 08.2	+1.2
	comp=Z,25nm,0.3s,baz=62,slow=10,SNR=16						
ROSC	El Rosal	16.88	223	eP	P	06 05 10.0	+3.1
VILC	Villavicencio,	17.04	220	eP	Pn	06 05 08.4	0.0
GUY2C	Guyana, Caldas	17.30	227	eP	P	06 05 11.8	+0.1
CBOC	Ciudad Bolivar	17.31	230	eP	P	06 05 12.2	+0.6
ANIL	Santa Ana	17.85	225	eP	Pn	06 05 19.6	+1.2
PRAC	Prado	18.09	222	eP	P	06 05 15.1	-4.9
ORTC	Ortega, Tolima	18.18	223	eP	P	06 05 19.6	-1.3
BCIP	Isla Barro Col	18.50	246	P	P	06 05 24.7	+0.4
YOTC	Yotoco, Valle	18.86	226	eP	P	06 05 28.3	-0.2
JAMC	Jamundi, Valle	19.65	225	eP	P	06 05 35.0	-2.1
GARC	Garzon, Huila	19.65	221	eP	P	06 05 35.9	-1.3
SOR	Soroa	19.66	289	P	P	06 05 36.7	-0.3
SOR				IAmb	IAmb	06 05 48.6	
	comp=Z,18nm,1.1s						
POPC	Popayan, Colom	20.14	224	eP	P	06 05 38.1	-4.4
MACA	Manacapuru-AM	20.63	174	P	P	06 05 48.0	+0.5
MACA				IAmb	IAmb	06 06 20.2	
	comp=Z,17nm,1.0s						
GR1C	Gorgona, Isla	20.83	228	eP	P	06 05 49.4	-0.2
ESPN	Las Esperanzas	21.41	259	P	P	06 05 56.6	+0.8
ESPN				IAmb	IAmb	06 05 58.5	
	comp=Z,23nm,0.7s						
PEZE	Perez Zeledon,	21.81	251	P	P	06 06 01.8	+1.6
PEZE				IAmb	IAmb	06 06 04.5	
	comp=Z,19nm,1.0s						
COVE	Coope Vega, Sa	21.97	255	P	P	06 06 02.0	+0.2
NHSC	New Hope	22.03	318	P	P	06 06 04.0	+1.8
NHSC				pP	pP	06 06 22.3	-0.6
NHSC	New Hope	22.03	318	P	P	06 06 03.9	+1.6
	baz=131						
BOAB	BOACO BROADBAN	22.62	260	P	P	06 06 08.6	+0.1
BOAB				IAmb	IAmb	06 06 28.9	
	comp=Z,39nm,1.0s						
MATN	Matagalpa	22.74	262	P	P	06 06 09.9	+0.1
OTAV	Otavalo	23.03	224	P	P	06 06 12.8	-0.2
DUNO	Dulce Nombre,	23.20	254	P	P	06 06 12.9	-1.2
V58A	Windy Hill, Pi	23.27	325	P	P	06 06 14.9	+0.5
V58A				pP	pP	06 06 37.3	+1.1
TIGA	Tifton	23.39	310	P	P	06 06 16.4	+0.6
	baz=122						
KMSC	Kings Mountain	24.10	320	P	P	06 06 22.7	+0.7
	baz=132						
TEIG	Tepich	24.23	280	P	P	06 06 23.3	-0.1
T57A	Hurt	24.24	327	P	P	06 06 24.2	+1.0
T57A				IAmb	IAmb	06 06 25.1	
	comp=Z,22nm,1.4s						
V55A	Taylorsville	24.51	322	P	P	06 06 26.6	+0.8
V55A				IAmb	IAmb	06 07 00.0	
	comp=Z,6.7nm,0.5s						
451A	Vernon	24.61	306	P	P	06 06 27.8	+1.0
BLA	Blacksburg	25.02	325	P	P	06 06 31.1	+0.6
BLA				IAmb	IAmb	06 07 05.5	
	comp=Z,16nm,0.7s						
BLA	Blacksburg	25.02	325	P	P	06 06 31.2	+0.7
	baz=137						
PETF	Flores	25.83	273	P	P	06 06 38.7	+0.7
TKL	Tuckaleechee C	25.95	318	P	P	06 06 39.2	+0.4
	comp=Z,2.3nm,0.6s,baz=138,slow=9.6,SNR=6.1						
TKL				LR	LR	06 18 27.9	
	comp=Z,12nm,18.7s,baz=232,slow=40						
	comp=Z,2.3nm,0.6s						
HRV	Adam Dziewonsk	26.02	345	P	P	06 06 40.6	+1.2
	baz=161						
L61B	Northampton	26.26	343	P	P	06 06 42.4	+0.8
	baz=158						
TZTN	Tazewell	26.37	320	P	P	06 06 43.3	+0.6
	baz=131						
LRAL	Lakeview Retre	26.69	310	P	P	06 06 46.1	+0.5
	baz=120						
CZSB	Cruzeiro do Su	26.90	202	P	P	06 06 47.2	-0.3
MCRA	Macar, Loja	27.53	219	P	P	06 06 53.4	+0.1
MCRA				IAmb	IAmb	06 06 56.0	
	comp=Z,9.1nm,0.7s						
MCRA	Macar, Loja	27.53	219	eP	P	06 06 51.9	-1.4
O53A	New Philadelph	27.70	329	P	P	06 06 55.4	+0.9
	baz=140						
P52A	Corning	27.71	327	P	P	06 06 55.4	+0.9
	baz=137						
M53A	Wl Miller and	28.36	331	P	P	06 07 01.3	+1.0
	baz=142						
ACSO	Alum Creek Sta	28.59	327	P	P	06 07 03.1	+0.8
	baz=137						
WVT	Waverly	28.89	315	P	P	06 07 05.2	+0.2
	baz=123						
ATAH	Atahualpa	28.91	213	P	P	06 07 07.2	+1.3
	comp=Z,20nm,0.8s,baz=39,slow=6.3,SNR=10						
	comp=Z,20nm,0.8s						
P49A	Miami Univ. Ec	29.05	324	P	P	06 07 07.1	+0.6
	baz=133						
WCI	Wyandotte Cave	29.13	320	P	P	06 07 07.7	+0.6
	baz=129						
OXF	Oxford	29.16	311	P	P	06 07 07.4	-0.1
	baz=119						
O48B	Farmland	29.79	324	P	P	06 07 13.8	+0.8

	baz=133						
SFIN	Lafayette baz=130	30.98	322	P	P	06 07 24.2	+0.8
FCAR	Ozark Folk Cen	31.77	311	P	P	06 07 30.4	-0.1
FCAR	comp=Z,15nm,1.3s			IAmb	IAmb	06 07 31.8	
P43A	Skaggs, Pawnee	31.98	319	P	P	06 07 31.9	-0.5
NATX	Nacogdoches baz=109	32.10	302	P	P	06 07 34.2	+0.8
CCM	Cathedral Cave	32.22	315	P	P	06 07 34.2	-0.2
CCM	Cathedral Cave baz=122	32.22	315	P	P	06 07 34.7	+0.2
MIAR	Mount Ida baz=114	32.26	308	P	P	06 07 35.6	+0.8
HDIL	Hopedale baz=128	32.39	321	P	P	06 07 35.5	-0.4
PAYG	Puerto Ayora	32.52	239	P	P	06 07 37.5	+0.2
L44A	Lake County Fo baz=131	32.62	324	P	P	06 07 37.6	-0.2
GLMI	Grayling baz=139	32.81	331	P	P	06 07 39.6	+0.1
LPAZ	La Paz comp=Z,3.8nm,0.7s,baz=90,slow=0.5,SNR=9.8 comp=Z,3.8nm,0.7s	33.97	189	P	P	06 07 49.4	-1.1
435B	Jarrell baz=105	34.22	299	P	P	06 07 51.7	-0.2
WHTX	Lake Whitney, baz=106	34.44	301	P	P	06 07 53.4	-0.4
TUL1	Leonard baz=114	34.47	309	P	P	06 07 53.9	-0.1
JCT	Junction City baz=102,SNR=5.1	36.01	298	P	P	06 08 06.8	-0.5
BDFB	Brasilia comp=Z,4.2nm,0.7s,baz=322,slow=11,SNR=8.5 comp=Z,4.2nm,0.7s	36.02	155	P	P	06 08 08.8	+1.3
WMOK	Wichita Mounta baz=109,SNR=15	36.33	305	P	P	06 08 09.3	-0.7
ABTX	Abilene, Hawle baz=105,SNR=5.5	36.39	302	P	P	06 08 09.9	-0.6
KSU1	Kansas State U baz=117,SNR=5.4	36.40	313	P	P	06 08 09.5	-1.0
SCHQ	Schefferville comp=Z,2.8nm,1.0s,baz=180,slow=8.1,SNR=1.8 comp=Z,2.8nm,1.0s	37.39	356	P	P	06 08 19.8	+1.1
CBKS	Cedar Bluff baz=113	38.50	311	P	P	06 08 28.1	-0.2
BGNE	Belgrade baz=118	38.50	316	P	P	06 08 28.2	-0.1
AMTX	Amarillo baz=106	38.64	304	P	P	06 08 29.1	-0.5
ECSD	EROS Data Cent	38.67	320	P	P	06 08 29.6	-0.1
ECSD	comp=Z,10nm,0.8s			IAmb	IAmb	06 08 30.4	
ECSD	EROS Data Cent baz=122,SNR=12	38.67	320	P	P	06 08 29.5	-0.1
TXAR	Lajitas Array comp=Z,1.5nm,0.6s,baz=119,slow=7.6,SNR=23	39.10	295	P	P	06 08 33.0	-0.5
TXAR	comp=Z,0.7nm,0.6s,baz=104,slow=11,SNR=3.3			pP	pP	06 08 58.5	+0.3
TXAR	comp=Z,0.6nm,0.5s,baz=134,slow=3.9,SNR=5.6 comp=Z,1.5nm,0.6s			PcP	PcP	06 10 42.0	+0.8
MSTX	Muleshoe baz=104,SNR=8.0	39.27	303	P	P	06 08 34.3	-0.6
LVC	Limon Verde comp=Z,9.3nm,0.4s,baz=26,slow=6.5,SNR=27 comp=Z,9.3nm,0.4s	40.30	189	P	P	06 08 41.5	-2.2
KSCO	Kaye Shedlock' baz=110	40.67	310	P	P	06 08 46.1	-0.3
MNTX	Cornudas Mount baz=100,SNR=11	40.94	298	P	P	06 08 48.4	-0.1
T25A	Trinidad baz=107,SNR=6.2	41.41	307	P	P	06 08 52.8	+0.2
ULM	Lac du Bonnet comp=Z,6.1nm,0.3s,baz=122,slow=9.0,SNR=14 comp=Z,6.1nm,0.3s	42.05	328	P	P	06 08 56.8	-0.5
SDCO	Great Sand Dun	42.41	307	P	P	06 09 00.7	-0.1
SDCO	comp=Z,4.5nm,0.6s			IAmb	IAmb	06 09 01.7	
SDCO	Great Sand Dun baz=106,SNR=13	42.41	307	P	P	06 09 00.8	-0.1
BNM	Barren Site	42.43	302	P	P	06 09 01.2	+0.3
ANMO	Albuquerque baz=103	42.46	303	P	P	06 09 01.4	+0.3
Q24A	Divide baz=108	42.51	309	P	P	06 09 01.9	+0.3
GO02	Mina Guanaco	42.91	189	P	P	06 09 03.6	-1.3
121A	Cookes Peak, D baz=99	43.09	299	P	P	06 09 06.8	+0.6
ISCO	Idaho Springs baz=108,SNR=5.6	43.11	310	P	P	06 09 06.7	+0.3
S22A	4UR Ranch, Cre baz=105	43.42	307	P	P	06 09 08.9	-0.1
RSSD	Black Hills baz=114	43.59	317	P	P	06 09 10.0	-0.1
CPUP	Villa Florida comp=Z,1.4nm,0.5s,baz=356,slow=8.2,SNR=8.5 comp=Z,1.4nm,0.5s	43.89	173	P	P	06 09 10.4	-1.9
CPUP	Villa Florida	43.89	173	P	P	06 09 10.6	-1.7
DUN6	Lazy B Ranch	44.18	299	P	P	06 09 16.1	+1.2
K22A	Casper baz=110	44.71	314	P	P	06 09 19.2	+0.2
PV03	Paradox Valley	45.10	307	P	P	06 09 23.0	+0.8
PV03	comp=Z,6.7nm,0.7s			IAmb	IAmb	06 09 23.4	
PV14	Lion Creek, Pa	45.26	307	P	P	06 09 24.1	+0.6
PV14	comp=Z,6.2nm,0.9s			IAmb	IAmb	06 09 24.6	
TUC	Tucson baz=97	45.57	298	P	P	06 09 26.3	+0.5
WUAZ	Wupatki baz=100,SNR=11	46.51	303	P	P	06 09 34.0	+0.6
PDAR	Pinedale Array comp=Z,5.4nm,0.7s,baz=116,slow=9.0,SNR=49	46.86	313	P	P	06 09 36.0	+0.1
PDAR	comp=Z,1.1nm,0.6s,baz=115,slow=9.2,SNR=3.2			pP	pP	06 10 01.9	+0.6
PDAR	comp=Z,0.7nm,0.5s,baz=111,slow=4.9,SNR=5.0 comp=Z,5.4nm,0.7s			PcP	PcP	06 11 07.0	-0.2
PDAR	Pinedale Array	46.86	313	P	P	06 09 36.2	+0.2
BW06	Boulder Array	46.86	313	P	P	06 09 36.2	+0.2
BW06	comp=Z,7.9nm,1.1s			IAmb	IAmb	06 09 37.0	
BW06	Boulder Array baz=108,SNR=13	46.86	313	P	P	06 09 36.2	+0.2
TMUT	Trail Mountain	47.13	308	P	P	06 09 39.0	+0.7
TMUT	comp=Z,4.7nm,0.8s			IAmb	IAmb	06 09 41.8	
FCC	Fort Churchill	47.15	338	P	P	06 09 37.5	-0.1
214A	Organ Pipe Nat baz=95	47.24	298	P	P	06 09 39.3	+0.4
RLMT	Red Lodge baz=110,SNR=7.3	47.42	316	P	P	06 09 40.7	+0.4
MVU	Marysvale	47.73	306	P	P	06 09 43.9	+1.1
MVU	comp=Z,17nm,1.1s			IAmb	IAmb	06 09 44.6	
MOOW	Moose Ponds	47.98	314	P	P	06 09 45.1	+0.4
SPUT	South Promonto	48.53	310	P	P	06 09 48.9	0.0
SPUT	comp=Z,6.0nm,0.7s			IAmb	IAmb	06 09 49.9	
DUG	Dugway, Tooele baz=103,SNR=8.9	48.54	308	P	P	06 09 49.2	+0.3
PDMCI	Parker Dam,Lak baz=97	48.59	301	P	P	06 09 49.8	+0.6
QLMT	Earthquake Lak	48.78	315	P	P	06 09 52.7	+2.0
BOZ	Bozeman (W) baz=108,SNR=7.6	49.15	316	P	P	06 09 54.1	+0.6
IRM	Iron Mountain baz=96,SNR=8.3	49.41	300	P	P	06 09 56.2	+0.7
BC3	Big Chuckawall baz=95	49.61	300	P	P	06 09 57.5	+0.3
VTX	Valle De La Tr	49.72	297	P	P	06 09 58.7	+0.7
VTX	comp=Z,5.1nm,1.0s			IAmb	IAmb	06 10 00.1	
GMRC	Granite Mounta baz=96	49.89	301	P	P	06 09 59.7	+0.4
YUH	Yuha Desert	49.92	298	P	P	06 10 00.2	+0.8
YUH	comp=Z,4.8nm,1.0s			IAmb	IAmb	06 10 01.1	
IKP	In-Ko-Pah, Jac baz=94	50.08	298	P	P	06 10 01.2	+0.5
BELC	Belle Mtn. Jos baz=95	50.09	300	P	P	06 10 01.2	+0.4
TUQ	Turquoise Moun baz=96,SNR=5.8	50.18	302	P	P	06 10 02.0	+0.5
R11A	Troy Canyon, C baz=99	50.30	306	P	P	06 10 02.8	+0.4
MONP2	Monument Peak baz=94	50.36	298	P	P	06 10 03.5	+0.5
TPFO	Pinon Flats baz=95	50.44	299	P	P	06 10 03.9	+0.5
HEC	Hector,Ludlow baz=96	50.45	301	P	P	06 10 04.2	+0.8
HLID	Hailey baz=104,SNR=6.9	50.49	312	P	P	06 10 04.3	+0.6
CBX	Cerro Bola	50.52	298	P	P	06 10 04.7	+0.6
CBX	comp=Z,2.1nm,0.5s			IAmb	IAmb	06 10 05.1	
TPNV	Topopah Spring	50.62	304	P	P	06 10 05.2	+0.4
TPNV	comp=Z,4.5nm,0.8s			IAmb	IAmb	06 10 06.7	
TPNV	Topopah Spring baz=98,SNR=7.0	50.62	304	P	P	06 10 05.7	+0.9
BBRC	Big Bear Solar baz=95	50.88	300	P	P	06 10 07.5	+0.6
GSC	Goldstone, Bar baz=96	50.88	301	P	P	06 10 07.1	+0.4
WCT	Wildcat Mounta	50.90	303	P	P	06 10 07.8	+1.0
WCT	comp=Z,3.5nm,0.8s			IAmb	IAmb	06 10 08.6	
QSM	Queen of Sheba	51.00	302	P	P	06 10 08.1	+0.7
QSM	comp=Z,5.4nm,1.2s			IAmb	IAmb	06 10 10.1	
FURC	Furnace Creek, baz=97	51.05	303	P	P	06 10 08.4	+0.6
MURC	Murrieta baz=94	51.05	299	P	P	06 10 08.4	+0.5
BFSC	Mount Baldy Ra baz=94	51.49	300	P	P	06 10 11.7	+0.5
MPMC	Manual Prospec baz=96	51.51	302	P	P	06 10 11.9	+0.4
GRAC	Grapevine Rang	51.52	304	P	P	06 10 12.5	+1.1
GRAC	comp=Z,5.7nm,0.7s			IAmb	IAmb	06 10 13.0	
GRAC	Grapevine Rang baz=97	51.52	304	P	P	06 10 12.0	+0.6
LRMC	Laurel Mtn Rad baz=95	51.61	302	P	P	06 10 12.6	+0.4
LCH	Last Change Ra	51.77	304	P	P	06 10 13.7	+0.3
EDW2	Edwards Air Fo baz=95	51.81	301	P	P	06 10 13.8	+0.2
CWC	Cottonwood Cre baz=96	52.03	303	P	P	06 10 15.7	+0.4
KVN	Kaiserville	52.35	306	P	P	06 10 17.9	+0.2
NVAR	Mina Array Bea comp=Z,2.1nm,0.6s,baz=90,slow=7.7,SNR=21 comp=Z,2.1nm,0.6s	52.43	305	P	P	06 10 18.6	+0.3
NVAR	Mina Array Bea	52.43	305	P	P	06 10 18.9	+0.6
VES	Vestal, Richgr baz=95	52.78	302	P	P	06 10 20.9	+0.2
OMMB	Old Mammoth Mi	52.88	304	P	P	06 10 22.2	+0.5
OMMB	comp=Z,3.6nm,0.7s			IAmb	IAmb	06 10 22.8	
SCZ2	Santa Cruz Isl baz=93	53.11	300	P	P	06 10 23.2	+0.1
NEW	Newport baz=106	53.53	318	P	P	06 10 25.9	-0.1
H10N3	ASCENSION HYDR baz=299,slow=75,SNR=12	53.97	114	T	T	07 08 07.4	
H10N2	ASCENSION HYDR baz=299,slow=75,SNR=10	53.98	114	T	T	07 08 07.9	
H10N1	ASCENSION HYDR baz=299,slow=75,SNR=13	53.99	114	T	T	07 08 09.1	
YKA	Yellowknife Ar comp=Z,2.6nm,0.6s,baz=109,slow=7.5,SNR=53	57.40	334	P	P	06 10 53.0	-0.4
YKA	comp=Z,1.2nm,0.8s,baz=111,slow=7.7,SNR=4.5 comp=Z,2.6nm,0.6s			pP	pP	06 11 20.6	+0.7
DBIC	Dimbokro comp=Z,5.0nm,0.8s,baz=311,slow=7.3,SNR=4.4 comp=Z,5.0nm,0.8s	57.50	93	P	P	06 10 56.0	+1.0
PLCA	Paso Flores comp=Z,1.9nm,0.7s,baz=322,slow=7.6,SNR=5.1 comp=Z,1.9nm,0.7s	58.37	187	P	P	06 10 59.4	-1.1
KOTAN	Kotaneelee Air baz=106	60.75	330	P	P	06 11 17.3	+0.7
TORD	Torodi Ar. Bea comp=Z,2.2nm,0.6s,baz=288,slow=6.3,SNR=16 comp=Z,2.2nm,0.6s	62.13	84	P	P	06 11 27.1	+0.5
DLBC	Dease Lake baz=100	63.34	327	P	P	06 11 34.7	+0.6
P33M	Teslin, Yukon baz=98	65.05	329	P	P	06 11 45.9	+0.8
A36M	Sachs Harbour baz=111	65.08	342	P	P	06 11 44.8	-0.2
FARO	Faro, Yukon baz=99	65.61	331	P	P	06 11 49.3	+0.6
M31M	Drury Creek, Y	66.08	331	P	P	06 11 52.8	+1.1
M31M	comp=Z,4.7nm,0.8s			IAmb	IAmb	06 11 53.4	
M31M	Drury Creek, Y baz=98,SNR=5.2	66.08	331	P	P	06 11 52.8	+1.1
N31M	Braeburn, Yuko baz=96	66.65	330	P	P	06 11 55.7	+0.4
INK	Inuvik baz=101	66.76	338	P	P	06 11 55.6	-0.1
M30M	Minto, Yukon baz=96	67.24	331	P	P	06 11 59.9	+0.9
N30M	Aishikik Lake baz=95	67.27	330	P	P	06 12 00.3	+1.0
HYT	Haines Junctio baz=94	67.42	329	P	P	06 12 00.9	+0.6
EPYK	Eagle Plains baz=98	67.66	335	P	P	06 12 01.5	-0.1
K29M	Barlow Dome baz=96	67.70	332	P	P	06 12 02.4	+0.4
L29M	L29M baz=95	67.90	332	P	P	06 12 03.7	+0.5
M29M	Somme Creek baz=94	68.00	331	P	P	06 12 04.7	+0.8
YUK4	Talbot Arm baz=94	68.01	330	P	P	06 12 04.5	+0.3
DAWY	Dawson baz=94	68.54	333	P	P	06 12 07.9	+0.7
YUK8	Steele Glacier baz=93	68.54	330	P	P	06 12 07.6	0.0
BVCY	Beaver Creek baz=92	69.11	331	P	P	06 12 10.6	-0.1
CTG	Chitna Glacier baz=91	69.30	329	P	P	06 12 12.9	+0.9
EGAK	Eagle baz=93	69.35	333	P	P	06 12 12.0	-0.1
BCAR	Beaver Creek A	69.56	332	P	P	06 12 14.0	+0.5
H27K	Steamboat Moun baz=93	69.58	335	P	P	06 12 13.5	0.0
L27K	Beaver Creek, baz=92	69.58	332	P	P	06 12 14.5	+0.8
I27K	Kandik River baz=93	69.58	334	P	P	06 12 13.7	+0.1
M27K	Edge Creek, AK baz=91	69.58	331	P	P	06 12 14.5	+0.8
G27K	Doyon Strip baz=93	69.66	336	P	P	06 12 13.7	-0.3
K27K	Chicken baz=92	69.72	333	P	P	06 12 15.5	+1.1
E27K	Coleen River baz=94	69.72	337	P	P	06 12 14.1	-0.2
M26K	Nabesna, AK baz=90	70.11	331	P	P	06 12 17.7	+0.9
MCARA	McCarthy VSAT baz=90	70.12	330	P	P	06 12 18.2	+1.3
I26K	Coal Creek Min baz=91	70.22	334	P	P	06 12 17.7	+0.3
L26K	Log Cabin Wild	70.27	331	P	P	06 12 18.9	+1.1
L26K	comp=Z,4.6nm,0.7s			IAmb	IAmb	06 12 19.8	
L26K	Log Cabin Wild baz=90	70.27	331	P	P	06 12 18.5	+0.7
J26L	Joseph Creek baz=90	70.38	333	P	P	06 12 19.2	+0.7
G26K	Porcupine Rive baz=91	70.51	336	P	P	06 12 19.4	+0.3
C27K	Jago River baz=92,SNR=5.9	70.56	338	P	P	06 12 19.6	+0.1
F26K	Sheenjek River baz=91	70.66	336	P	P	06 12 20.6	+0.5
N25K	Chitina, Valde baz=89	70.87	330	P	P	06 12 22.2	+0.6
RIDG	Independent Ri baz=89	70.94	332	P	P	06 12 22.2	+0.3
E25K	Arctic Village baz=90	71.20	337	P	P	06 12 23.4	0.0
PRP	Porcupine Dome baz=89	71.21	334	P	P	06 12 23.5	-0.1
F25K	Christian Rive baz=90	71.23	336	P	P	06 12 24.2	+0.5
PAX	Paxson baz=88	71.24	331	P	P	06 12 23.8	0.0
K24K	Donnelly Dome baz=88	71.36	332	P	P	06 12 24.9	+0.5
D25K	Kavik River baz=90	71.50	338	P	P	06 12 25.3	+0.2
KLU	Klutina baz=87	71.51	330	P	P	06 12 25.5	+0.1
ILAR	Eielson Array comp=Z,1.2nm,0.5s,baz=95,slow=4.2,SNR=42	71.80	333	P	P	06 12 26.8	-0.3
ILAR	comp=Z,0.5nm,0.7s,baz=96,slow=4.2,SNR=3.0 comp=Z,1.2nm,0.5s			pP	pP	06 12 53.6	-0.8
ILAR	Eielson Array	71.80	333	P	P	06 12 27.1	0.0
HDA	Harding Lake baz=88	71.85	333	P	P	06 12 27.9	+0.6
G24K	Hadweenzic Riv baz=88	71.97	335	P	P	06 12 28.3	+0.3
POKR	Poker Plat Res baz=87	72.02	334	P	P	06 12 28.4	+0.1
F24K	Squaw Lake baz=88	72.10	336	P	P	06 12 29.0	+0.2
SCM	Sheep Creek Mo baz=86	72.16	330	P	P	06 12 29.4	+0.2
H24K	Noodor Dome baz=87	72.17	334	P	P	06 12 29.5	+0.2
E24K	Your Creek baz=87	72.30	337	P	P	06 12 30.5	+0.5
C24K	Franklin Bluff baz=88	72.30	339	P	P	06 12 30.2	+0.3
D24K	Happy Valley baz=87	72.37	338	P	P	06 12 30.4	0.0
SML	Sawmill baz=85	72.64	330	P	P	06 12 32.0	-0.1
NEA2	Nenana baz=86,SNR=7.5	72.75	333	P	P	06 12 32.7	0.0
I23K	Minto, Yukon-K baz=86,SNR=5.6	72.83	334	P	P	06 12 33.4	+0.3
H23K	Yukon River baz=86	72.86	335	P	P	06 12 33.9	+0.6
G23K	Bananza Creek baz=85	72.98	335	P	P	06 12 34.5	+0.4
COLD	Coldfoot baz=85	73.01	336	P	P	06 12 34.1	-0.1
PMR	Palmer baz=85	73.03	330	P	P	06 12 34.5	+0.2
D23K	Nanushuk River baz=86	73.05	338	P	P	06 12 35.0	+0.7
ARCES	ARCESS Array B comp=Z,2.8nm,0.9s,baz=264,slow=6.3,SNR=1.9 comp=Z,2.8nm,0.9s	73.17	22	P	P	06 12 35.8	+0.7
TRF	Thorofare Moun baz=84,SNR=7.5	73.39	332	P	P	06 12 36.8	+0.2
MLY	Manley	73.42	334	P	P	06 12 36.7	+0.1
MLY	Manley baz=84	73.42	334	P	P	06 12 36.6	-0.1
CUT	Chulitna baz=84	73.49	331	P	P	06 12 37.0	0.0
BPAW	Bear Paw Mtn. baz=84	73.63	333	P	P	06 12 37.5	-0.3
F22K	John River baz=84	73.74	336	P	P	06 12 38.5	+0.1
SKT	Skwentna baz=83	74.12	331	P	P	06 12 40.2	-0.6
CAST	Castle Rocks baz=83	74.19	332	P	P	06 12 40.6	-0.6
H21K	Melozitna Rive baz=83	74.21	334	P	P	06 12 41.1	-0.1
CHUM	Lake Minchumin baz=82	74.24	333	P	P	06 12 40.9	-0.4
F21K	Alatna River baz=82	74.28	336	P	P	06 12 41.3	-0.3
FINES	FINESS Array B comp=Z,0.6nm,0.6s,baz=235,slow=4.6,SNR=1.9	74.29	30	P	P	06 12 42.4	+0.8
FINES	comp=Z,0.8nm,0.6s,baz=231,slow=4.4,SNR=2.3 comp=Z,0.6nm,0.6s			pP	pP	06 13 10.0	+0.6
G21K	Allakaket baz=82	74.38	335	P	P	06 12 42.4	+0.2
SPCR	Spurr Chakacha baz=82	74.55	330	P	P	06 12 43.0	-0.3
M20K	Styx River baz=81	74.89	331	P	P	06 12 45.0	-0.3
K20K	Telida baz=81	75.09	332	P	P	06 12 46.0	-0.3
L20K	Farewell, AK baz=81	75.14	331	P	P	06 12 45.9	-0.7
P19K	Oil Pt baz=81	75.29	328	P	P	06 12 46.6	-1.0
M19K	Big River Lodg baz=80	75.47	331	P	P	06 12 48.1	-0.4
Q19K	Cape Douglas, baz=80	75.62	328	P	P	06 12 49.2	-0.2
L19K	White Mountain baz=80	75.64	331	P	P	06 12 48.9	-0.6
O19K	Port Alsworth baz=80	75.74	329	P	P	06 12 50.1	+0.1
P16K	Nushagak River baz=76	77.80	328	P	P	06 13 01.7	+0.1
R16K	Pilot Point baz=76	77.93	327	P	P	06 13 01.9	-0.4
TNA	Tin City baz=69	80.31	336	P	P	06 13 15.7	+0.5
PZH	PanZhiHua	133.77	19	PKP	PKPdf	06 20 21.3	-0.2
ASAR	Alice Springs comp=Z,0.6nm,0.5s,baz=108,slow=4.3,SNR=5.9	163.18	246	PKPab	PKPab	06 21 56.9	-0.8

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*IDC **10** 06:03:16.6±3.1, 23.°95N×122.°00E, h47^{km}±32^{km}, mb3.3/9, mbtmp3.7/10, ML3.8/1, MS2.5/4, Error ellipse: s-maj=20.9km s-min=18.0km az=84.0*

*NIED **10** 06:03:16.5, 23.°87N×121.°80E, h52^{km}, MW4.0, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M$_{rr}$8.46; M$_{\theta\theta}$1.48; M$_{\phi\phi}$-9.94; M$_{r\theta}$-0.13; M$_{\theta\phi}$-3.57; M$_{\phi r}$1.76; Fault plane solution: M$_0$9.88000×10^{14} NP1:φ$_s$11.00000°, δ50.00000°, λ83.00000°. NP2:φ$_s$202.00000°, δ40.00000°, λ99.00000°.*

*JMA **10** 06:03:16.5±0.2, 23.°9N±1.°0×121.°8E±0.°7, h52^{km}±1^{km}, MV4.3/15, TAIWAN REGION*

*TAP **10** 06:03:18.1, 24.°02N×121.°77E, h52^{km}, ML4.4, B*

ISC 10 06:03:17.4±0.7, **23.°97N**±0.°02×**121.°86E**±0.°02, **h50**^{km}±4^{km}, **n197**, σ1.^{s}**50**/358, **mb3.5**/9, **16C-39D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	Hwalien baz=254	0.23	272	⇑*i*P	Pn	06 03 26.6	+0.7
HWA	baz=254			*e*S	Sn	06 03 33.4	+1.4
TEYL	Yanliau Villag baz=234	0.26	247	⇑*i*P	Pn	06 03 26.8	+0.7
TEYL	baz=234			S	Sn	06 03 33.7	+1.4
TWD	Chiawan baz=292	0.26	295	⇓*i*P	Pn	06 03 26.4	+0.2
TWD	baz=292			*i* S	Sn	06 03 32.7	+0.3
ETL	Fush Village baz=315	0.29	312	*i* P	Pn	06 03 26.6	+0.2
ETL	baz=315			S	Sn	06 03 33.2	+0.4
NACB	Ninganchiao	0.32	311	P	Pn	06 03 26.8	+0.1
NACB	Ninganchiao baz=313	0.32	311	⇓*i*P	Pn	06 03 26.8	+0.1
NACB	baz=313			S	Sn	06 03 33.6	+0.3
ETM	Tongmen baz=258	0.33	270	*i* P	Pn	06 03 27.2	+0.4
ETM	baz=258			S	Sn	06 03 34.0	+0.5
EHP	Heping Village baz=355	0.36	343	*e*P	Pn	06 03 27.4	+0.4
EHP	baz=355			*e*S	Sn	06 03 34.7	+0.8
TEGC	Jichi Village baz=214	0.39	228	P	Pn	06 03 28.0	+0.6
TEGC	baz=214			*e*S	Sn	06 03 35.9	+1.5
ESL	Shilin baz=236	0.42	249	⇓*i*P	Pn	06 03 27.8	+0.1
ESL	baz=236			S	Sn	06 03 35.1	0.0
ETLH	Xiulin Townshi baz=305	0.42	305	⇓*i*P	Pn	06 03 27.9	+0.1
ETLH	baz=305			S	Sn	06 03 35.1	-0.1

EOS4	**EOS4** baz=78	0.45	70	*i*P	Pn	06 03 28.7	+1.0
EOS4	baz=78			*i*S	Sn	06 03 36.6	+1.6
ENA	**Nanau** baz=357	0.47	347	⇑*i*P	Pn	06 03 28.6	+0.3
ENA	baz=357			S	Sn	06 03 36.5	+0.4
EWUT	**Wuta**	0.48	351	⇑*i*P	Pn	06 03 28.8	+0.4
EWUT				S	Sn	06 03 36.8	+0.5
EGFH	**Guangfu** baz=222	0.49	233	⇓*i*P	Pn	06 03 28.7	+0.2
EGFH	baz=222			S	Sn	06 03 36.6	+0.1
EOS2	**EOS2** baz=46	0.56	37	*i*P	Pn	06 03 30.8	+1.5
EOS2	baz=46			S	Sn	06 03 40.8	+3.0
WHF	**Hehuan Shan** baz=285	0.57	288	⇓*i*P	Pn	06 03 29.9	0.0
WHF	baz=285			S	Sn	06 03 38.9	0.0
HGSD	**Ruisui** baz=211	0.62	220	⇑*i*P	Pn	06 03 30.4	+0.3
HGSD	baz=211			*e*S	Sn	06 03 40.6	+1.4
OWD	**Renai** baz=263	0.62	269	*e*P	Pn	06 03 30.5	+0.2
OWD	baz=263			*e*S	Sn	06 03 39.1	-0.5
CHGB	**Renai** baz=274	0.63	279	⇓*i*P	Pn	06 03 30.9	+0.4
CHGB	baz=274			S	Sn	06 03 40.0	+0.1
NNSB	**Datong** baz=319	0.63	317	⇓*i*P	Pn	06 03 30.7	+0.3
NNSB	baz=319			*e*S	Sn	06 03 39.9	+0.1
NNSH	**Datong** baz=319	0.63	317	⇓P	Pn	06 03 30.6	+0.2
NNSH	baz=319			*e*S	Sn	06 03 39.8	0.0
TWC	**Suao** baz=8.0	0.64	359	⇑*i*P	Pn	06 03 31.1	+0.8
TWC	baz=8.0			*e*S	Sn	06 03 40.9	+1.2
LATG	**Datong** baz=336	0.64	332	⇑*i*P	Pn	06 03 30.7	+0.2
LATG	baz=336			S	Sn	06 03 40.1	+0.1
NNS	**Nan Shan** baz=319	0.65	317	⇓P	Pn	06 03 30.8	+0.3
NNS	baz=319			*e*S	Sn	06 03 40.4	+0.3
EHY	**Hungye** baz=218	0.67	227	⇑P	Pn	06 03 30.5	-0.3
EHY	baz=218			*e*S	Sn	06 03 39.8	-0.6
NDS	**Dongshan** baz=355	0.68	349	*e*P	Pn	06 03 31.4	+0.6
NDS	baz=355			*e*S	Sn	06 03 41.6	+1.0
WUSB	**Renai** baz=267	0.68	272	⇓*i*P	Pn	06 03 31.5	+0.5
WUSB	baz=267			*e*S	Sn	06 03 40.7	0.0
TWT	**Tachien** baz=292	0.68	295	⇓P	Pn	06 03 31.9	+0.8
TWT	baz=292			*e*S	Sn	06 03 41.6	+0.5
VWDT	**VWDT** baz=246	0.69	252	⇓*i*P	Pn	06 03 31.5	+0.6
VWDT	baz=246			S	Sn	06 03 41.1	+0.3
TDCB	**Techi** baz=292	0.70	294	⇓P	Pn	06 03 31.9	+0.6
TDCB	baz=292			*e*S	Sn	06 03 41.4	+0.1
ENTT	**Nioudou** baz=343	0.72	338	⇑P	Pn	06 03 31.9	+0.5
ENTT	baz=343			*e*S	Sn	06 03 42.3	+0.7
ECBN	**Changbin** baz=203	0.75	210	*e*P	Pn	06 03 32.2	+0.4
ECBN	baz=203			*e*S	Sn	06 03 42.9	+0.8
YULB	**Yu-li**	0.77	222	P	Pn	06 03 32.0	-0.1
YULB	**Yu-li** baz=215	0.77	222	P	Pn	06 03 31.8	-0.3
YULB	baz=215			*e*S	Sn	06 03 41.9	-0.8
TWE	**Neicheng** baz=353	0.77	347	⇑P	Pn	06 03 32.8	+0.8
TWE	baz=353			*e*S	Sn	06 03 43.6	+0.9
EYUL	**Yuli** baz=212	0.79	219	*e*P	Pn	06 03 32.4	0.0
EYUL	baz=212			*e*S	Sn	06 03 43.3	+0.1
TWF1	**Yuli** baz=213	0.80	220	*e*P	Pn	06 03 32.3	-0.2
TWF1	baz=213			*e*S	Sn	06 03 43.1	-0.3
ILA	**Ilan** baz=359	0.80	353	*e*P	Pn	06 03 33.4	+0.9
ILA	baz=359			*e*S	Sn	06 03 45.2	+1.8
WPL	**Puli Township** baz=270	0.82	273	*e*P	Pn	06 03 33.4	+0.6
WPL	baz=270			*e*S	Sn	06 03 45.0	+1.0
YHNB	**Yeheng**	0.82	328	P	Pn	06 03 33.5	+0.6
YHNB	**Yeheng** baz=331	0.82	328	⇓P	Pn	06 03 33.4	+0.6
YHNB	baz=331			*e*S	Sn	06 03 44.0	-0.1
FUSB	**Fushanzhiwuyua** baz=347	0.83	343	⇑*i*P	Pn	06 03 33.5	+0.6
FUSB	baz=347			S	Sn	06 03 44.6	+0.4
NSK	**Sanguang** baz=330	0.84	327	⇓P	Pn	06 03 33.5	+0.5
NSK	baz=330			*e*S	Sn	06 03 44.4	-0.1
SSLB	**Suanglung**	0.85	258	P	Pn	06 03 33.5	+0.4
SSLB	**Suanglung** baz=253	0.85	258	⇓P	Pn	06 03 33.5	+0.4
SSLB	baz=253			*e*S	Sn	06 03 44.7	+0.1
DPDB	**Guoxing** baz=271	0.85	275	⇓*e*P	Pn	06 03 34.0	+0.7
DPDB	baz=271			*e*S	Sn	06 03 46.2	+1.4
NWLT	**Wulai** baz=342	0.87	338	⇓P	Pn	06 03 34.0	+0.6
NWLT	baz=342			*e*S	Sn	06 03 45.0	-0.1
WCS	**Beigang Elemen** baz=273	0.87	276	⇓*e*P	Pn	06 03 34.1	+0.7
WCS	baz=273			*e*S	Sn	06 03 45.5	+0.5
SMLT	**Sun Moon Lake** baz=260	0.88	265	⇓P	Pn	06 03 34.1	+0.5
SMLT	baz=260			*e*S	Sn	06 03 46.5	+1.0
NTC	**Toucheng** baz=3.0	0.88	358	*e*P	Pn	06 03 34.6	+1.0
NTC	baz=3.0			*e*S	Sn	06 03 46.5	+1.2
WHP	**Taichung City** baz=289	0.89	291	⇓*e*P	Pn	06 03 34.5	+0.8
WHP	baz=289			*e*S	Sn	06 03 46.6	+1.0
TYC	**Yuchr** baz=262	0.92	266	⇓*e*P	Pn	06 03 34.5	+0.5
TYC	baz=262			*e*S	Sn	06 03 47.6	+1.5
FULB	**Fuli** baz=208	0.92	214	*e*P	Pn	06 03 34.4	+0.2
FULB	baz=208			*e*S	Sn	06 03 47.6	+1.2
NFF	**Wufeng Townshi** baz=316	0.94	315	⇓P	Pn	06 03 35.4	+0.9
NFF	baz=316			*e*S	Sn	06 03 47.4	+0.4
CHKT	**Chengkung** baz=202	0.97	208	*e*P	Pn	06 03 34.6	-0.1
CHKT	baz=202			*e*S	Sn	06 03 46.9	-0.7
TIPB	**Shuangxi** baz=3.0	1.00	358	⇑P	Pn	06 03 36.4	+1.3
TIPB	baz=3.0			*e*S	Sn	06 03 49.3	+1.1
EHD	**Haiduan** baz=211	1.01	216	⇑*e*P	Pn	06 03 34.6	-0.7
EHD	baz=211			*e*S	Sn	06 03 47.2	-1.2
LIOB	**Emei** baz=312	1.02	312	⇓P	Pn	06 03 36.8	+1.3
LIOB	baz=312			*e*S	Sn	06 03 50.5	+1.7
NSTT	**Nanjuang** baz=311	1.02	310	⇓*e*P	Pn	06 03 36.8	+1.4
NSTT	baz=311			*e*S	Sn	06 03 50.0	+1.3
NHDH	**Xindian Distri** baz=346	1.04	343	*e*P	Pn	06 03 36.5	+0.9
NHDH	baz=346			*e*S	Sn	06 03 49.9	+0.8
NJD	**Zhudong** baz=319	1.04	318	*e*P	Pn	06 03 37.5	+1.9
NJD	baz=319			*e*S	Sn	06 03 51.3	+2.2
TWA	**Mucha** baz=350	1.04	346	*e*P	Pn	06 03 36.5	+0.9
TWA	baz=350			*e*S	Sn	06 03 50.4	+1.2
TWB1	**Santiao Chiao** baz=12	1.04	7	⇑P	Pn	06 03 36.6	+0.9
TWB1	baz=12			*e*S	Sn	06 03 50.3	+1.1
WJS	**Zhushan** baz=258	1.04	262	⇓*e*P	Pn	06 03 37.1	+1.4
WJS	baz=258			*e*S	Sn	06 03 51.5	+2.3
ECS	**Chishang** baz=209	1.05	214	*e*P	Pn	06 03 36.8	+1.0
ECS	baz=209			*e*S	Sn	06 03 49.8	+0.5
TATO	**Taipei**	1.06	342	P	Pn	06 03 37.5	+1.6
TATO	**Taipei** baz=345	1.06	342	*e*P	Pn	06 03 36.7	+0.8
TATO	baz=345			*e*S	Sn	06 03 50.3	+0.7
TWQ1	**Liyutan** baz=290	1.06	291	⇓*e*P	Pn	06 03 37.1	+1.1
TWQ1	baz=290			*e*S	Sn	06 03 51.6	+2.0
WWF	**Wufeng** baz=271	1.06	274	⇓*e*P	Pn	06 03 37.9	+2.0
WWF	baz=271			*e*S	Sn	06 03 52.0	+2.4
ALS	**Alishan** baz=240	1.07	245	⇓*e*P	Pn	06 03 37.2	+0.9
ALS	baz=240			*e*S	Sn	06 03 50.8	+0.6
WNT	**Mingjian** baz=262	1.08	265	*e*P	Pn	06 03 37.8	+1.7
WNT	baz=262			*e*S	Sn	06 03 52.4	+2.4
WNT1	**Nantou City** baz=264	1.08	267	*e*P	Pn	06 03 38.1	+2.0
WNT1	baz=264			*e*S	Sn	06 03 53.0	+2.9
ELDTW	**Lidau** baz=220	1.09	225	*e*P	Pn	06 03 36.4	-0.1
ELDTW	baz=220			*e*S	Sn	06 03 49.9	-0.7
TCU	**Taichung** baz=277	1.09	280	⇓*e*P	Pn	06 03 37.9	+1.5
TCU	baz=277			*e*S	Sn	06 03 52.9	+2.4
NSY	**Sanyi** baz=293	1.10	294	⇓*e*P	Pn	06 03 37.7	+1.3
NSY	baz=293			*e*S	Sn	06 03 53.7	+3.2
NHY	**Taipei** baz=350	1.10	346	*e*P	Pn	06 03 37.4	+1.0
NWF	**Wu-fen Shan**	1.10	356	*e*P	Pn	06 03 38.0	+1.4
NWF				*e*S	Sn	06 03 52.5	+1.7
WFSB	**Wu-fen Shan**	1.10	356	*e*P	Pn	06 03 37.9	+1.4
WFSB				*e*S	Sn	06 03 52.5	+1.9
JYNG	**Yonagunijimaku**	1.10	64	*i*P	Pn	06 03 37.5	+1.0
JYNG				S	Sn	06 03 51.7	+1.0
TAP1	**Taipei** baz=347	1.11	344	*e*P	Pn	06 03 38.8	+2.2
TAP1	baz=347			*e*S	Sn	06 03 52.9	+2.1
HSN1	**Hsinchu** baz=318	1.11	317	*e*P	Pn	06 03 38.1	+1.4
EDH	**Donghe** baz=203	1.11	207	⇑*e*P	Pn	06 03 36.3	-0.3
EDH	baz=203			*e*S	Sn	06 03 50.3	-0.6
TAP	**Taipei** baz=347	1.11	343	*e*P	Pn	06 03 38.1	+1.4
TAP	baz=347			*e*S	Sn	06 03 52.0	+1.1
SXI1	**Grass Mountain** baz=5.0	1.12	1	⇑*e*P	Pn	06 03 37.9	+1.1
SXI1	baz=5.0			*e*S	Sn	06 03 52.7	+1.4
NMLH	**Miaoli** baz=300	1.13	300	*e*P	Pn	06 03 38.0	+1.1
NMLH	baz=300			*e*S	Sn	06 03 53.6	+2.3
SBCB	**Hsinchu** baz=317	1.14	316	*e*P	Pn	06 03 38.2	+1.1
SBCB	baz=317			*e*S	Sn	06 03 54.1	+2.5
NTY	**Taoyuan** baz=336	1.15	334	*e*P	Pn	06 03 38.4	+1.3
NTY	baz=336			*e*S	Sn	06 03 52.8	+1.1
NJN	**Zhunan** baz=309	1.15	309	*e*P	Pn	06 03 38.5	+1.4
NJN	baz=309			*e*S	Sn	06 03 53.8	+2.0
HSN	**Hsinchu** baz=319	1.16	316	*e*P	Pn	06 03 38.4	+1.1
HSN	baz=319			*e*S	Sn	06 03 54.1	+2.0
YOJ	**Yonaguni jima**	1.16	65	P	Pn	06 03 38.3	+1.0
YOJ	**Yonaguni jima**	1.16	65	P	Pn	06 03 38.3	+1.0
YOJ				*e*S	Sn	06 03 53.1	+1.0
YOJ	**Yonaguni jima** baz=68	1.16	65	⇓*i*P	Pn	06 03 38.2	+1.0
YOJ	baz=68			*e*S	Sn	06 03 53.5	+1.4
WYL	**Yuanlin Townsh** baz=267	1.17	270	*e*P	Pn	06 03 39.3	+1.9
WYL	baz=267			*e*S	Sn	06 03 55.4	+3.2
NCUH	**Zhongli** baz=330	1.17	329	*e*P	Pn	06 03 38.2	+0.8
NCUH	baz=330			*e*S	Sn	06 03 53.0	+0.7
NCU	**National Centr** baz=331	1.17	329	*e*P	Pn	06 03 38.4	+1.0
NCU	baz=331			*e*S	Sn	06 03 53.5	+1.2
WDJ	**Dajia District** baz=288	1.17	289	⇓*e*P	Pn	06 03 38.4	+0.9
WDJ	baz=288			*e*S	Sn	06 03 53.6	+1.2
TNOU	**National Taiwa** baz=360	1.18	356	*e*P	Pn	06 03 38.6	+1.0
TNOU	baz=360			*e*S	Sn	06 03 53.9	+1.4
WCHH	**Zhanghua** baz=273	1.19	276	⇓*e*P	Pn	06 03 39.0	+1.3
WCHH	baz=273			*e*S	Sn	06 03 55.4	+2.6
TWS1	**Kuangyinshan** baz=343	1.20	341	*e*P	Pn	06 03 38.5	+0.8
TWS1	baz=343			*e*S	Sn	06 03 53.9	+0.9
YM01	**YM01** baz=351	1.20	348	*e*P	Pn	06 03 38.5	+0.6
YM01	baz=351			*e*S	Sn	06 03 53.7	+0.5
WGK	**Gukeng** baz=253	1.22	257	*e*P	Pn	06 03 39.7	+1.6
WGK	baz=253			*e*S	Sn	06 03 56.2	+2.7
WDLH	**Douliu** baz=254	1.24	257	*e*P	Pn	06 03 39.8	+1.5
WDLH	baz=254			*e*S	Sn	06 03 56.3	+2.3
YM08	**YM08** baz=352	1.24	349	*e*P	Pn	06 03 38.6	+0.2
YM08	baz=352			*e*S	Sn	06 03 54.0	0.0
NWRT	**Kuosheng** baz=355	1.24	352	*e*P	Pn	06 03 40.2	+1.8
NWRT	baz=355			*e*S	Sn	06 03 54.3	+0.2
NTST	**Danshui** baz=345	1.25	343	*e*P	Pn	06 03 39.4	+0.9
LONT	**Longtian** baz=208	1.25	212	*e*P	Pn	06 03 37.9	-0.6
LONT	baz=208			*e*S	Sn	06 03 53.2	-1.0
ANP	**Anpu** baz=349	1.25	346	*e*P	Pn	06 03 38.7	+0.1
WCKO	**Fanlu** baz=242	1.26	246	*e*P	Pn	06 03 40.0	+1.3
WCKO	baz=242			*e*S	Sn	06 03 56.2	+1.7
NHW	**Xinwu Township** baz=326	1.27	325	*e*P	Pn	06 03 39.7	+0.9
NHW	baz=326			*e*S	Sn	06 03 55.5	+0.7
STYT	**Tauyuan** baz=227	1.29	232	*e*P	Pn	06 03 40.4	+1.3
STYT	baz=227			*e*S	Sn	06 03 56.7	+1.5
TPUB	**Ta-pu**	1.31	240	P	Pn	06 03 41.0	+1.7
TPUB	**Ta-pu** baz=236	1.31	240	*e*P	Pn	06 03 40.6	+1.3
TPUB	baz=236			*e*S	Sn	06 03 57.4	+1.7
CHN4	**Tsaushan** baz=238	1.31	242	*e*P	Pn	06 03 40.8	+1.4
CHN4	baz=238			*e*S	Sn	06 03 58.8	+3.1
TWY	**Chenhua** baz=353	1.32	350	*e*P	Pn	06 03 38.9	-0.6
LDUT	**Ludao** baz=192	1.34	196	P	Pn	06 03 38.8	-0.8
LDUT	baz=192			*e*S	Sn	06 03 54.9	-1.4
CHN2	**Minshiung** baz=248	1.34	251	*e*P	Pn	06 03 41.7	+2.1
CHN2	baz=248			*e*S	Sn	06 03 59.9	+3.5
WTP	**Ta-pu** baz=234	1.35	238	⇓*e*P	Pn	06 03 41.3	+1.4
WTP	baz=234			*e*S	Sn	06 03 59.2	+2.5
TWGBT	**Beinan**	1.35	212	P	Pn	06 03 39.7	-0.2
TWGBT	**Beinan** baz=208	1.35	212	*e*P	Pn	06 03 39.2	-0.7
TWGBT	baz=208			*e*S	Sn	06 03 54.9	-1.7
TWG	**Pinlang** baz=208	1.35	212	*e*P	Pn	06 03 39.0	-0.9
TWG	baz=208			*e*S	Sn	06 03 54.9	-1.8
WRL	**Guolierlin Hig** baz=265	1.35	268	⇓*e*P	Pn	06 03 41.0	+1.1
WRL	baz=265			*e*S	Sn	06 03 59.2	+2.4
TTN	**Taitung** baz=204	1.37	209	*e*P	Pn	06 03 40.6	+0.4
TTN	baz=204			*e*S	Sn	06 03 58.3	+1.1
WTK	**Tuku** baz=255	1.37	259	*e*P	Pn	06 03 41.7	+1.5
WTK	baz=255			*e*S	Sn	06 03 58.9	+1.7
CHY	**Chiayi** baz=247	1.39	251	*e*P	Pn	06 03 42.0	+1.5
CHY	baz=247			*e*S	Sn	06 03 59.8	+2.0
TWK	**Hsinying** baz=237	1.44	241	*e*P	Pn	06 03 42.4	+1.3
TWK	baz=237			*e*S	Sn	06 04 01.1	+2.2
WTCT	**Ta-ch'eng** baz=263	1.45	266	*e*P	Pn	06 03 42.3	+1.2
WTCT	baz=263			*e*S	Sn	06 04 01.9	+2.9
CHN1	**Nanshi** baz=234	1.45	238	*e*P	Pn	06 03 42.6	+1.4
CHN1	baz=234			*e*S	Sn	06 04 01.3	+2.2
SNST	**Tainan City** baz=236	1.45	239	*e*P	Pn	06 03 43.9	+2.7
SNST	baz=236			*e*S	Sn	06 04 03.5	+4.3
SGST	**Jiashian** baz=229	1.46	233	*e*P	Pn	06 03 42.2	+0.8
SGST	baz=229			*e*S	Sn	06 04 01.5	+2.0
SLGT	**Liugui** baz=225	1.48	229	*e*P	Pn	06 03 44.4	+2.8
SLGT	baz=225			*e*S	Sn	06 04 03.2	+3.5
WMLT	**Mailiao** baz=261	1.50	264	*e*P	Pn	06 03 43.6	+1.7
WMLT	baz=261			*e*S	Sn	06 04 03.2	+2.8
WSF	**Szhu** baz=255	1.53	258	*e*P	Pn	06 03 44.0	+1.7
WSF	baz=255			*e*S	Sn	06 04 04.1	+3.0
WSL	**Shuilin Townsh** baz=251	1.56	254	*e*P	Pn	06 03 43.9	+1.2
WSL	baz=251			*e*S	Sn	06 04 03.4	+1.7
ICHU	**Yijhu** baz=244	1.57	248	*e*P	Pn	06 03 44.5	+1.7
ECL	**Taimali** baz=208	1.60	212	*e*P	Pn	06 03 42.6	-0.7
ECL	baz=208			*e*S	Sn	06 04 02.1	-0.6
CHN8	**Yiju** baz=245	1.63	248	*e*P	Pn	06 03 45.0	+1.3
CHN8	baz=245			*e*S	Sn	06 04 05.7	+2.2
CHN3	**Shinhua** baz=234	1.63	237	*e*P	Pn	06 03 45.6	+1.9
CHN3	baz=234			*e*S	Sn	06 04 07.7	+4.1
SCST	**Cishan** baz=226	1.65	230	*e*P	Pn	06 03 46.2	+2.2
SCST	baz=226			*e*S	Sn	06 04 07.1	+3.1
SSD	**Sandimen** baz=219	1.66	223	*e*P	Pn	06 03 45.7	+1.6
SSD	baz=219			*e*S	Sn	06 04 05.8	+1.6
SSHA	**Shanhua** baz=237	1.66	240	*e*P	Pn	06 03 46.4	+2.3
SSHA	baz=237			*e*S	Sn	06 04 06.3	+2.0
PCYT	**Pengchaiyu** baz=10.0	1.67	7	*e*P	Pn	06 03 44.5	+0.3
SHHT	**Tainan City** baz=233	1.68	236	*e*P	Pn	06 03 46.8	+2.5
TWM1	**Shoushan** baz=226	1.74	229	*e*P	Pn	06 03 48.2	+3.0
TWM1	baz=226			*e*S	Sn	06 04 11.7	+5.4
IRIF	**Iriomote-Funau**	1.75	78	P	Pn	06 03 46.0	+0.7
IRIF				S	Sn	06 04 07.2	+0.7
MASBT	**Mashibuluo** baz=217	1.76	220	*e*P	Pn	06 03 46.5	+1.0
MASBT	baz=217			*e*S	Sn	06 04 09.2	+2.5
HATJ	**Hateruma jima**	1.78	87	P	Pn	06 03 47.1	+1.3
HATJ				S	Sn	06 04 08.8	+1.6
TSCK	**Chigu Township** baz=241	1.82	244	*e*P	Pn	06 03 47.5	+1.3
TSCK	baz=241			*e*S	Sn	06 04 09.8	+1.7
EAST	**Anshuo** baz=207	1.83	211	*e*P	Pn	06 03 45.8	-0.7
EAST	baz=207			*e*S	Sn	06 04 09.7	+1.2
TAW	**Tawu** baz=206	1.83	209	*e*P	Pn	06 03 48.2	+1.8
TAW				*e*S	Sn	06 04 08.4	0.0

	baz=206						
TAWH	Dawu Township	1.85	209	eP	Pn	06 03 46.3	-0.4
	baz=206						
TAWH				eS	Sn	06 04 14.6	+5.7
	baz=206						
LAY	Lan-yu	1.94	188	eP	Pn	06 03 47.2	-0.8
	baz=186						
LAY				eS	Sn	06 04 08.9	-2.3
	baz=186						
SCZT	Fangliau	1.95	216	eP	Pn	06 03 50.0	+1.9
	baz=213						
SCZT				eS	Sn	06 04 14.6	+3.1
	baz=213						
LYUB	Lan-yu	1.97	187	eP	Pn	06 03 47.1	-1.3
	baz=185						
LYUB				eS	Sn	06 04 08.8	-3.2
	baz=185						
JKRS	Kuro-shima	1.98	82	P	Pn	06 03 50.0	+1.5
JKRS				S	Sn	06 04 14.5	+2.3
TWP	Hsiaoliuchiu	2.12	221	eP	Pn	06 03 53.3	+2.9
	baz=218						
JIJ	Ishigaki jima	2.12	79	i P	Pn	06 03 51.2	+0.8
JIJ				S	Sn	06 04 15.7	0.0
WDGT	Dungji	2.13	251⇓	eP	Pn	06 03 51.1	+0.5
	baz=249						
WDGT				eS	Sn	06 04 15.5	-0.4
	baz=249						
PHUB	P'eng-hu	2.14	258	eP	Pn	06 03 50.9	+0.2
	baz=256						
PHUB				eS	Sn	06 04 15.9	-0.2
	baz=256						
PNG	Penghu	2.15	260	eP	Pn	06 03 51.0	+0.2
	baz=257						
PNG				eS	Sn	06 04 16.2	0.0
	baz=257						
SMST	Manzhou Townsh	2.15	206	eP	Pn	06 03 51.4	+0.5
	baz=203						
SMST				eS	Sn	06 04 15.9	-0.5
	baz=203						
TWKBT	Hengchun	2.23	206	eP	Pn	06 03 52.7	+0.8
	baz=203						
TWKBT				eS	Sn	06 04 20.8	+2.5
	baz=203						
TWK1	Hengchun	2.24	206	eP	Pn	06 03 52.8	+0.8
	baz=203						
TWK1				eS	Sn	06 04 20.0	+1.6
	baz=203						
TSEB	Hengchuen, Pin	2.24	203	eP	Pn	06 03 55.4	+3.4
	baz=202						
JISG	Ishigakijimahi	2.32	74	i P	Pn	06 03 53.8	+0.6
JISG				S	Sn	06 04 20.2	-0.3
VCHM	Qimei	2.35	252	eP	Pn	06 03 54.1	+0.6
	baz=249						
VCHM				eS	Sn	06 04 20.8	-0.4
	baz=249						
VWUC	VWUC	2.42	295⇓	eP	Pn	06 03 54.0	-0.5
	baz=295						
VWUC				eS	Sn	06 04 20.4	-2.5
	baz=295						
JTJ	Tarama	2.68	75	P	Pn	06 03 59.0	+1.0
JTJ				S	Sn	06 04 30.4	+1.1
MATB	Ma-tsu	2.78	322	eP	Pn	06 03 58.7	-0.7
	baz=322						
MATB				eS	Sn	06 04 29.7	-2.1
	baz=322						
MSUT	Lienchiang	2.81	322	eP	Pn	06 03 59.4	-0.4
	baz=322						
MSUT				eS	Sn	06 04 30.6	-1.8
	baz=322						
JIRB	Irabujima	3.14	74	P	Pn	06 04 05.3	+0.9
JIRB				eS	Sn	06 04 41.0	+0.3
KNM	Kinmen	3.16	279	eP	Pn	06 04 05.7	+1.1
	baz=277						
KNM				eS	Sn	06 04 41.2	+0.2
	baz=277						
LYJJ	Jianjiangzhen	3.20	324	eP	Pn	06 04 04.4	-0.7
	baz=324						
LYJJ				eS	Sn	06 04 39.3	-2.7
	baz=324						
KNMB	Chin-men Tao	3.21	280	eP	Pn	06 04 04.6	-0.7
	baz=278						
KNMB				eS	Sn	06 04 39.4	-2.8
	baz=278						
JIKM	Ikemajima	3.23	72	P	Pn	06 04 06.9	+1.3
JIKM				eS	Sn	06 04 43.5	+0.6
JMJ	Miyako jima 2	3.25	74	P	Pn	06 04 07.3	+1.5
JMJ	Miyako jima 2	3.25	74	eP	Pn	06 04 07.2	+1.4
	baz=76						
JMJ				eS	Sn	06 04 44.6	+1.4
	baz=76						
JMJ2	Miyako jima3	3.26	76	P	Pn	06 04 07.3	+1.3
JMJ2				S	Sn	06 04 44.7	+1.2
XPSS	Dashiqiu	3.31	333	eP	Pn	06 04 05.9	-0.9
	baz=334						
XPSS				eS	Sn	06 04 42.3	-2.6
	baz=334						
MHZQ	Yeshan	3.33	310	eP	Pn	06 04 06.1	-0.9
	baz=310						
MHZQ				eS	Sn	06 04 42.7	-2.6
	baz=310						
JOGS	Gusukube	3.33	76	P	Pn	06 04 09.6	+2.6
AXDP	Jialang	3.66	285	eP	Pn	06 04 11.1	-0.4
	baz=284						
AXDP				eS	Sn	06 04 50.8	-2.7
	baz=284						
ZPLA	Ao Xicun	3.76	270	eP	Pn	06 04 12.4	-0.4
	baz=269						
ZPLA				eS	Sn	06 04 52.5	-3.3
	baz=269						
JOW	Kunigami	6.47	62	P	Pn	06 04 48.5	-1.5
	4.3nm,0.3s,baz=238,slow=13,SNR=18						
JOW				S	Sn	06 05 59.2	-3.3
	6.4nm,0.2s,baz=128,slow=24,SNR=1.5						
	13nm,0.2s						
JOW	Kunigami	6.47	62	P	Pn	06 04 49.1	-0.9
JNU	Nakatsue	12.08	39	LR	LR	06 11 35.4	
	comp=Z,9.5nm,19.3s,baz=248,slow=42						
KSRS	Korea Array	14.41	20	LR	LR	06 12 17.6	
	comp=Z,19nm,20.5s,baz=245,slow=38						
MJAR	Matsushiro Arr	18.85	45	LR	LR	06 15 05.0	
	comp=Z,16nm,21.7s,baz=183,slow=38						
CMAR	Chiang Mai Arr	22.04	260	P	P	06 08 09.6	+1.6
	1.2nm,0.4s,baz=75,slow=10,SNR=4.6						
CMAR				LR	LR	06 17 02.4	
	comp=Z,21nm,18.7s,baz=65,slow=37						
	1.2nm,0.4s						
KLR	Kul'dur	26.39	15	P	P	06 08 48.5	-0.5
	0.6nm,0.5s,baz=209,slow=10,SNR=2.1						
	0.6nm,0.5s						
SONM	Songino Array	26.81	337	P	P	06 08 52.5	-0.5
	0.6nm,0.7s,baz=146,slow=8.0,SNR=2.1						
	0.6nm,0.7s						
MKAR	Makanchi Array	38.92	316	P	P	06 10 38.2	-0.1
	0.4nm,0.5s,baz=98,slow=8.9,SNR=4.2						
	0.4nm,0.5s						
KURBB	Kurchatov Arra	42.67	320	P	P	06 11 08.7	-0.4
	0.2nm,0.3s,baz=109,slow=10.0,SNR=1.6						
	0.2nm,0.3s						
WRA	Warramunga Arr	45.31	163	P	P	06 11 29.1	-1.5
	0.8nm,0.5s,baz=344,slow=8.7,SNR=12						
	0.8nm,0.5s						
ASAR	Alice Springs	48.77	165	P	P	06 11 56.8	-0.8
	0.2nm,0.4s,baz=342,slow=7.0,SNR=6.6						
	0.2nm,0.4s						
ILAR	Eielson Array	69.12	27	P	P	06 14 18.5	+0.4
	0.2nm,0.7s,baz=297,slow=6.0,SNR=2.4						
	0.2nm,0.7s						
YKA	Yellowknife Ar	82.93	23	P	P	06 15 36.1	-0.6
	0.8nm,0.7s,baz=314,slow=4.7,SNR=16						
	0.8nm,0.7s						

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*NEIC **10** 06:15:13.7±1.9, 5°.76S±0°.08×153°.97E±0°.07, h10^{km}±1^{km}, mb4.5/22, Error ellipse: s-maj=14.6km s-min=10.2km az=42.0*

*IDC **10** 06:15:15.9±4.2, 5°.64S×153°.97E, h26^{km}±27^{km}, mb4.0/11, mbtmp4.2/13, ML3.0/2, MS3.4/7, Error ellipse: s-maj=23.9km s-min=18.7km az=90.0*

*DJA **10** 06:15:21.2±0.5, 6°S±4°×15°4E±°, h97^{km}±7^{km}, M5.0/10, mB4.8/2, mb4.6/10, MLv5.1/3, Mw(mB)4.0/2*

ISC 10 06:15:16.8±0.5**, 5°.80S**±0°.06×**153°.98E**±0°.07**, h35**^{km}**, n58, σ1^{s}.23**/56**, mb4.4**/24**, MS3.4**/4**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	2.41	311		Pn	06 15 54.0	+0.2
KRVT	Keravat (AS076	2.44	307	Pn	Pn	06 15 53.9	-0.3
	22nm,0.3s,baz=341,slow=2.1,SNR=12						
KRVT				Sn	Sn	06 16 20.5	-2.3
	38nm,0.3s,baz=100,slow=23,SNR=8.3						
KRVT				LR	LR	06 17 10.1	
	comp=Z,634nm,18.5s,baz=273,slow=49						
	61nm,0.3s						
HNR	Honiara	6.94	122		Pn	06 16 56.0	0.0
PMG	Port Moresby	7.65	242	Pn	Pn	06 17 06.7	+0.8
	4.3nm,0.3s,baz=49,slow=9.6,SNR=7.4						
PMG				Sn	Sn	06 18 30.1	-1.2
	4.6nm,0.3s,baz=318,slow=22,SNR=15						
PMG				LR	LR	06 20 05.3	
	comp=Z,401nm,21.3s,baz=101,slow=38						
	17nm,0.5s						
PMG	Port Moresby	7.65	242		Pn	06 17 06.0	+0.1
PATS	Pohnpei	13.27	19	Pn	Pn	06 18 21.1	-1.8
COEN	Coen	13.37	232	Pn	Pn	06 18 22.3	-2.0
CTA	Charters Tower	16.07	207	Pn	P	06 19 04.9	+1.6
	0.3nm,0.3s,baz=19,slow=9.4,SNR=7.1						
CTA				LR	LR	06 25 37.0	
	comp=Z,121nm,18.4s,baz=64,slow=38						
CTAO	Charters Tower	16.07	207		Pn	06 18 59.0	-1.3
CTAO				IAmb	IAmb	06 19 07.6	
	comp=Z,35nm,1.2s						
EIDS	Eidsvold	19.66	188	P	P	06 19 41.2	-1.7
LIFNC	LIFOU	19.68	140	P	P	06 19 42.0	-1.1
DZM	Mont Dzumac	20.18	145	P	Pn	06 19 51.9	+1.2
	comp=Z,10nm,0.7s,baz=322,slow=17,SNR=3.6						
	comp=Z,10nm,0.7s						
OUENC	Ouen Island, N	20.68	144	P	P	06 19 53.9	0.0
OUENC				IAmb	IAmb	06 20 00.3	
	comp=Z,15nm,0.8s						
SAUI	Saumlaki	22.61	263	P	P	06 20 14.7	-0.2
WB0	Warramunga Arr	23.57	232	P	P	06 20 23.6	-0.8
WB0				IAmb	IAmb	06 20 25.8	
	comp=Z,13nm,1.2s						
WB2	Warramunga Arr	23.70	232	P	P	06 20 25.8	+0.1
WB2				IAmb	IAmb	06 20 27.7	
	comp=Z,28nm,1.4s						
WRA	Warramunga Arr	23.71	232	P	P	06 20 25.3	-0.5
	comp=Z,5.7nm,0.9s,baz=58,slow=9.8,SNR=25						
WRA				PcP	PcP	06 24 10.7	+1.2
	comp=Z,1.6nm,0.7s,baz=57,slow=2.6,SNR=7.4						
	comp=Z,5.7nm,0.9s						
WRA	Warramunga Arr	23.71	232	P	P	06 20 25.3	-0.5
LHI	Lord Howe Isla	26.03	170	P	P	06 20 47.3	+0.5
AS31	Alice Springs	26.25	225	P	P	06 20 49.9	+1.0
ASAR	Alice Springs	26.25	225	P	P	06 20 49.2	+0.3
	comp=Z,7.0nm,0.8s,baz=57,slow=9.1,SNR=57						
ASAR				PcP	PcP	06 24 16.4	+1.3
	comp=Z,1.4nm,0.6s,baz=58,slow=2.8,SNR=9.4						
ASAR				ScP	ScP	06 27 54.0	+1.5
	comp=Z,0.5nm,0.8s,baz=61,slow=3.5,SNR=4.9						
	comp=Z,7.0nm,0.8s						
ASAR	Alice Springs	26.25	225	P	P	06 20 48.8	-0.2
H11S3	WAKE ISLAND Hy	27.20	27	T	T	06 49 08.4	
	baz=207,slow=73,SNR=62						
H11S2	WAKE ISLAND Hy	27.20	27	T	T	06 49 08.0	
	baz=207,slow=73,SNR=45						
H11S1	WAKE ISLAND Hy	27.21	27	T	T	06 49 09.1	
	baz=207,slow=73,SNR=56						
FITZ	Fitzroy Crossi	30.24	244	P	P	06 21 23.6	-1.0
DAV	Davao City (W)	31.08	294	LR	LR	06 33 53.1	
	comp=Z,43nm,18.3s,baz=332,slow=36						
KAPI	Kappang	34.08	270	LR	LR	06 38 09.8	
	comp=Z,28nm,21.1s,baz=75,slow=40						
FORT	Forrest	34.79	221	P	P	06 22 03.9	-0.4
BKZ	Black Stump Fm	38.96	152	P	P	06 22 40.2	+0.5
MORW	Morawa	42.65	233	P	P	06 23 10.1	-0.2
MORW				IAmb	IAmb	06 23 47.1	
	comp=Z,13nm,1.1s						
KLR	Kul'dur	58.13	343	P	P	06 25 06.7	-0.2
	comp=Z,1.3nm,0.8s,baz=142,slow=2.5,SNR=5.7						
	comp=Z,1.3nm,0.8s						
PETK	Petropavlovsk-	58.77	3	LR	LR	06 45 00.9	
	comp=Z,47nm,22.0s,baz=153,slow=30						
CMAR	Chiang Mai Arr	59.36	295	P	P	06 25 16.4	+0.4
	comp=Z,1.9nm,0.3s,baz=108,slow=5.4,SNR=12						
	comp=Z,1.9nm,0.3s						
CHTO	Chiang Mai	59.47	296	P	P	06 25 16.8	0.0
PZH	PanZhiHua	59.90	305	P	P	06 25 22.1	+2.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,4.0s						
HHC	Hu-ho-hao-te	60.53	324	eP	P	06 25 25.6	+1.8
HHC				pmax	pmax		
	comp=Z,22nm,0.7s						
HHC				pmax	pmax		
	comp=Z,190nm,5.4s						
SHEM	Shemya Is, Ala	60.76	14	LR	LR	06 46 46.9	
	comp=Z,62nm,21.7s,baz=149,slow=31						
SONM	Songino Array	67.79	328	P	P	06 26 11.4	0.0
	comp=Z,0.3nm,0.3s,baz=122,slow=7.0,SNR=4.2						
	comp=Z,0.3nm,0.3s						
WMQ	Urumqi	77.26	317	eP	P	06 27 10.7	+2.9
WMQ				sP	PcP	06 27 17.5	-0.8
WMQ				S	S	06 36 58.1	+2.8
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
L19K	White Mountain	78.22	22	P	P	06 27 14.0	+1.3
L19K				IAmb	IAmb	06 27 45.4	
	comp=Z,7.8nm,1.1s						
CAST	Castle Rocks	79.99	22	P	P	06 27 22.0	-0.2
CAST				IAmb	IAmb	06 27 59.9	
	comp=Z,4.3nm,1.2s						
IMAR	Indian Mountai	80.93	19	P	P	06 27 27.1	-0.2
MK31	Makanchi Array	81.84	319	P	P	06 27 32.8	+0.2
MK31				IAmb	IAmb	06 27 33.5	
	comp=Z,2.5nm,0.9s						
MKAR	Makanchi Array	81.84	319	P	P	06 27 32.3	-0.3
	comp=Z,2.3nm,0.8s,baz=106,slow=5.5,SNR=23						
	comp=Z,2.3nm,0.8s						
MKAR	Makanchi Array	81.84	319	P	P	06 27 31.9	-0.6
MAKZ	Makanchi	82.05	319	P	P	06 27 33.4	-0.2
MAKZ				IAmb	IAmb	06 27 34.5	
	comp=Z,3.3nm,0.8s						
ZAA0	Zalesovo Array	82.62	326	P	P	06 27 35.5	-1.0
ZAA0				IAmb	IAmb	06 27 45.4	
	comp=Z,2.5nm,1.1s						
ZALV	Zalesovo Beam	82.62	326	P	P	06 27 36.0	-0.4
	comp=Z,1.2nm,0.7s,baz=101,slow=6.0,SNR=4.6						
	comp=Z,1.2nm,0.7s						
ZALV	Zalesovo Beam	82.62	326	P	P	06 27 35.3	-1.1
ILAR	Eielson Array	82.64	22	P	P	06 27 34.5	-1.8
	comp=Z,0.8nm,0.9s,baz=243,slow=6.1,SNR=6.4						
	comp=Z,0.8nm,0.9s						
M27K	Edge Creek, AK	83.47	25	P	P	06 27 41.1	+0.3
M27K				IAmb	IAmb	06 28 19.5	
	comp=Z,4.9nm,1.0s						
QSPA	South Pole Qui	84.17	180	P	P	06 27 45.9	+1.5
QSPA				IAmb	IAmb	06 27 47.9	
	comp=Z,3.7nm,0.8s						
KSH	Kashi	84.47	311	P	P	06 27 48.8	+2.4
KSH				pP	pP	06 27 54.9	-1.8
KSH				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BMAR	Burnt Mountain	84.78	20	P	P	06 27 46.9	-0.3
BVAR	Borovoye Array	90.73	323	P	P	06 28 14.4	-1.7
	comp=Z,2.4nm,1.0s,baz=83,slow=4.5,SNR=6.5						
	comp=Z,2.4nm,1.0s						
YKA	Yellowknife Ar	95.75	28	P	P	06 28 37.4	-1.7
	comp=Z,0.3nm,0.9s,baz=268,slow=4.7,SNR=2.4						
	comp=Z,0.3nm,0.9s						
TORD	Torodi Ar. Bea	151.72	287	PKPbc	PKiKP	06 35 08.5	-0.7
	comp=Z,7.7nm,1.0s,baz=88,slow=1.9,SNR=6.8						

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*IDC **10** 06:16:27.1±2.7, 10°.75S×161°.46E, h60^{km}±22^{km}, mb3.6/7, mbtmp3.9/8, ML4.1/1, MS3.3/2, Error ellipse: s-maj=28.6km s-min=17.9km az=59.0*

ISC 10 06:16:27.2±0.8**, 10°.7S**±0°.1×**161°.6E**±0°.1**, h61**^{km}**, n12, σ1^{s}.08**/11**, mb3.9**/7**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.03	309	P	Pn	06 16 59.1	+0.1
	4µm,0.4s,baz=173,slow=6.4,SNR=21						
HNR				S	Sn	06 17 22.7	-0.6
	22µm,0.3s,baz=345,slow=22,SNR=20						
HNR				LR	LR	06 18 00.3	
	comp=Z,8µm,19.1s,baz=134,slow=47						
DZM	Mont Dzumac	12.23	158	P	Pn	06 19 18.3	-0.5
	1.1nm,0.3s,baz=6.9,slow=9.5,SNR=18						
DZM				S	Sn	06 21 25.5	-8.1
	5.9nm,0.8s,baz=315,slow=24,SNR=1.9						
	4.7nm,0.4s						
CTA	Charters Tower	17.44	236	P	P	06 20 29.1	+2.2
	11nm,0.7s,baz=63,slow=13,SNR=8.3						
MSVF	Nonsavu	17.44	115	LR	LR	06 26 57.9	
	comp=Z,109nm,19.9s,baz=194,slow=36						
WRA	Warramunga Arr	27.77	247	P	P	06 22 10.2	-0.3
	0.5nm,0.6s,baz=77,slow=9.4,SNR=1.4						
	0.5nm,0.6s						
ASAR	Alice Springs	29.32	240	P	P	06 22 22.9	-1.4
	0.8nm,0.8s,baz=65,slow=9.3,SNR=1.1						
	0.8nm,0.8s						
KSRS	Korea Array	57.35	328	LR	LR	06 49 45.1	
	comp=Z,20nm,20.2s,baz=100,slow=35						
SONM	Songino Array	76.00	325	P	P	06 28 08.6	+0.6
	2.1nm,0.7s,baz=139,slow=6.2,SNR=10.0						
	2.1nm,0.7s						
ILAR	Eielson Array	84.54	20	P	P	06 28 53.1	-0.2
	0.3nm,0.8s,baz=230,slow=5.6,SNR=1.2						
	0.3nm,0.8s						
NVAR	Mina Array Bea	88.98	51	P	P	06 29 16.7	+0.9
	0.8nm,0.8s,baz=226,slow=5.8,SNR=4.9						
	0.8nm,0.8s						
MKAR	Makanchi Array	90.48	318	P	P	06 29 21.6	-0.7
	0.5nm,0.5s,baz=89,slow=6.0,SNR=5.6						
	0.5nm,0.5s						
YKA	Yellowknife Ar	96.58	28	P	P	06 29 49.8	-0.2
	0.3nm,0.7s,baz=256,slow=4.9,SNR=2.3						
	0.3nm,0.7s						

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*RSNC **10** 06:18:08.4±1.4, 4°.39N×77°.85W, h17^{km}±5^{km}, ML3.4, Mw3.9*

*NEIC **10** 06:18:12.2±1.8, 4°.37N±0°.07×77°.57W±0°.07, h45^{km}±12^{km}, mb4.4/15, Error ellipse: s-maj=11.1km s-min=9.3km az=127.0*

*IDC **10** 06:18:13.3±3.8, 4°.01N×77°.54W, h65^{km}±33^{km}, mb3.5/11, mbtmp3.8/12, ML2.7/1, MS3.1/2, Error ellipse: s-maj=28.8km s-min=18.4km az=56.0*

ISC 10 06:18:09.0±3.2**, 4°.38N**±0°.03×**77°.70W**±0°.04**, h24**^{km}±18^{km}**, n94, σ2^{s}.10**/111**, mb4.1**/18**, 14C-1D, Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MALC	Bahia Malaga	0.52	136⇑	iP	Pb	06 18 19.6	+0.1
MALC				eS	Sn	06 18 28.6	-0.4
MALC				i		06 18 38.3	
	comp=Z,3µm,0.5s						
PIZC	Pizarro, Choco	0.67	30⇑	iP	Pb	06 18 21.4	-0.7
PIZC				eS	Sn	06 18 33.3	+0.6
PIZC				i		06 18 38.8	
	comp=Z,2µm,0.4s						
YOTC	Yotoco, Valle	1.41	106⇑	iP	Pn	06 18 32.3	-1.0
YOTC				eS	Sb	06 18 52.1	-0.1
YOTC				i		06 18 55.5	
	comp=Z,614nm,0.8s						
GR1C	Gorgona, Isla	1.45	199	eP	Pb	06 18 36.5	+1.1
GR1C				eS	Sb	06 18 56.0	+2.6
JAMC	Jamundi, Valle	1.55	139⇑	iP	Pn	06 18 34.0	-1.4
JAMC				eS	Sb	06 18 56.6	+0.2
JAMC				i		06 19 01.4	
	comp=Z,415nm,0.6s						
POPC	Popayan, Colom	2.10	151⇑	iP	Pn	06 18 41.8	-1.1
CBOC	Ciudad Bolivar	2.23	49⇑	iP	Pn	06 18 43.1	-1.6
ANIL	Santa Ana	2.29	87⇑	iP	Pn	06 18 45.6	0.0
BBAC	Balboa, Cauca	2.39	169	eP	Pn	06 18 45.4	-1.6
BBAC				eS	Sn	06 19 14.6	-1.0
BBAC				i		06 19 27.4	
	comp=Z,138nm,0.4s						
GUY2C	Guyana, Caldas	2.47	70	eP	Pn	06 18 48.4	+0.1
GUY2C				eS	Sb	06 19 22.3	-0.9
GUY2C				IAML		06 19 24.4	
	comp=Z,154nm,0.6s						
ORTC	Ortega, Tolima	2.49	101	i P	Pn	06 18 49.4	+1.2
ORTC				eS	Sb	06 19 21.3	-2.0
ORTC				i		06 19 27.2	
	comp=Z,190nm,0.6s						
TUMC	Tumaco	2.74	202	Pn	Pb	06 18 55.6	-1.9
TUMC	Tumaco	2.74	202	eP	Pn	06 18 50.0	-1.6
HELC	Santa Helena	2.81	50		Pn	06 18 52.5	-0.4
HELC	Santa Helena	2.81	50	eP	Pn	06 18 52.6	-0.2
HELC				eS	Sn	06 19 28.3	+2.2
HELC				i		06 19 37.7	
	comp=Z,82nm,0.6s						
BETC	Betania	2.82	127	eP	Pn	06 18 54.9	+2.3
BETC				eS	Sb	06 19 30.7	-2.1
BETC				i		06 19 42.1	
	comp=Z,162nm,0.6s						
PRAC	Prado	2.88	103		Pn	06 18 53.9	+0.4
PRAC	Prado	2.88	103⇑	iP	Pn	06 18 55.0	+1.4
PRAC				eS	Sb	06 19 33.5	-1.2
PRAC				i		06 19 54.5	
	comp=Z,122nm,0.6s						
CRUC	La Cruz	2.90	165⇑	iP	Pn	06 18 54.3	+0.3
CRUC				eS	Sn	06 19 30.1	+1.8
DBBC	Dabeiba	3.00	29	eP	Pn	06 18 57.8	+2.5
NORC	Norcasia	3.05	67	eP	Pn	06 18 57.5	+1.6
NORC				eS	Sb	06 19 37.6	-2.0
NORC				i		06 19 43.6	
	comp=Z,67nm,0.8s						
GARC	Garzon, Huila	3.10	135⇑	iP	Pn	06 18 58.1	+1.4
GCUF	Volcan Galeras	3.16	174	eP	Pn	06 18 58.9	+1.1
ROSC	El Rosal	3.40	82	P	Pn	06 19 03.9	+3.0
	comp=Z,17nm,0.3s,baz=192,slow=9.3,SNR=25						
ROSC				S	Sn	06 19 44.6	+3.9
	comp=Z,27nm,0.4s,baz=252,slow=20,SNR=0.9						
	comp=Z,46nm,0.4s						
ROSC	El Rosal	3.40	82		Pn	06 19 03.0	+2.1
ROSC	El Rosal	3.40	82⇑	iP	Pn	06 19 03.9	+3.0
CMBC	Cumbal	3.42	182	eP	Pn	06 19 03.3	+1.9
FLOC	Florencia	3.45	144⇑	iP	Pn	06 19 02.7	+1.3
TULM	Tulcn-Chalpat	3.65	181		Pn	06 19 05.2	+0.8
TULM	Tulcn-Chalpat	3.65	181	eP	Pb	06 19 09.6	-3.5
APAC	Apartado, Choc	3.67	18	eP	Pn	06 19 07.9	+3.6
SPBC	San Pablo de B	3.82	71	eP	Pb	06 19 14.9	-1.1
SPBC	San Pablo de B	3.82	71	eP	Pb	06 19 14.8	-1.1
PTBC	PUERTO BERRIO,	3.87	56⇑	iP	Pn	06 19 08.0	+0.9
CHIC	Chingaza	3.96	86⇑	iP	Pn	06 19 11.3	+2.6
UREC	San Jos de Ur	3.98	33	eP	Pn	06 19 09.9	+1.3
VILC	Villavicencio,	4.00	94	eP	Pn	06 19 11.9	+2.9
IMBA	Imbabura, San	4.11	187		Pn	06 19 12.5	+1.7
CUSE	Cuicocha Este	4.11	190	eP	Pn	06 19 10.2	-0.6
CUSE				eS	Sn	06 19 54.8	-3.6
ZARC	Zaragoza, Cauc	4.18	42	eP	Pn	06 19 12.4	+0.9
ZARC				eS	Sn	06 20 03.3	+3.6
ZARC				i		06 20 13.7	
	comp=Z,28nm,0.5s						
OTAV	Otavalo	4.19	190		Pn	06 19 11.6	-0.3
OTAV	Otavalo	4.19	190	eP	Pn	06 19 10.3	-1.6
PAC1	Pacto, Paraso	4.23	195	eP	Pn	06 19 11.6	-0.6
PAC1				eS	Sn	06 19 57.0	-4.1
PAC1				i		06 20 01.3	
	comp=Z,223nm,0.3s						
AZU	Azuero	4.25	323	eP	Pn	06 19 10.5	-1.8
AZU				eS	Sn	06 19 56.6	-4.5
AZU				i		06 19 59.6	
	comp=Z,44nm,0.8s						
CACAO	El Cacao, Vera	4.31	313	eP	Pn	06 19 10.1	-3.1
CACAO				eS	Sn	06 19 56.7	-6.0
PULU	Pululahua	4.41	191		Pn	06 19 15.7	+0.8
MACC	Macarena, Meta	4.44	120	eP	Pn	06 19 16.1	+1.1
BRRC	Barranca, Sant	4.80	56	eS	Sb	06 20 23.9	-6.0
RUSC	La Rusia	4.83	72	Pn	Pn	06 19 21.5	+0.7
RUSC	La Rusia	4.83	72	eP	Pb	06 19 27.9	-5.4
BARC	Barichara	5.00	64	eP	Pn	06 19 21.4	-1.5
BARC				i		06 20 38.4	
	comp=Z,34nm,0.7s						
BARC	Barichara	5.00	64	eS	Pn	06 19 21.0	-1.9
BARC	Barichara	5.00	64	i	Pn	06 19 21.7	-1.2
	comp=Z,26nm,0.4s						
SLOR	San Lorenzo -	5.14	189	Pn	Pn	06 19 27.6	+2.6
PTGC	Puerto Gaitan,	5.55	92⇓	iP	Pn	06 19 28.8	-1.5
PORT	Chimborazo Vol	5.91	191	Pn	Pn	06 19 37.8	+2.2
CHSH	Refugio Sur-Vo	5.96	191		Pn	06 19 39.0	+2.7
TAMC	Tame, Arauca	6.22	71	eP	Pn	06 19 37.1	-2.4
SRBA	San Rafael, Bu	7.40	311	Pn	Pn	06 19 59.0	+3.2
PEZE	Perez Zeledon,	7.74	310	Pn	Pn	06 20 03.1	+2.7
RIMA	Rio Macho	8.13	311	Pn	Pn	06 20 09.2	+3.4
SDV	Santo Domingo	8.32	57	P	Pn	06 20 09.2	+0.7
	comp=Z,7.0nm,0.4s,baz=247,slow=15,SNR=8.9						
SDV				S	Sn	06 21 41.8	0.0
	comp=Z,3.6nm,0.5s,baz=253,slow=18,SNR=1.2						
SDV				LR	LR	06 24 12.6	
	comp=Z,43nm,19.6s,baz=246,slow=43						

SDV	Santo Domingo	8.32	57		Pn	06 20 08.2	-0.2
JACO	JACO, Garabito	8.67	308	Pn	Pn	06 20 16.8	+3.7
ATAH	Atahualpa	11.46	183	LR	LR	06 26 17.5	
	comp=Z,252nm,20.6s,baz=1.6,slow=44						
BOAV	Boa Vista	17.26	96	P	Pn	06 22 08.0	-0.6
AGPR	Aguadilla, PR	17.41	36	P	Pn	06 22 09.8	-0.7
HUMP	Col San Antoni	17.92	39	P	P	06 22 17.7	+0.4
HUMP				IAmb	IAmb	06 22 42.3	
	comp=Z,57nm,1.2s						
ETMB	Extrema	18.16	141	P	Pn	06 22 18.2	-1.7
SAML	Samuel	19.62	132	P	P	06 22 34.1	-1.8
SAML				IAmb	IAmb	06 22 36.8	
	comp=Z,10nm,0.6s						
LPAZ	La Paz	22.61	155	P	P	06 23 05.2	-3.7
	comp=Z,1.5nm,0.5s,baz=333,slow=9.9,SNR=8.6						
	comp=Z,1.5nm,0.5s						
LPAZ	La Paz	22.61	155	P	P	06 23 07.0	-1.9
PB16	IPOC Station P	23.98	161	P	P	06 23 20.2	-2.3
PB16				IAmb	IAmb	06 23 20.9	
	comp=Z,7.8nm,1.3s						
PB12	IPOC Station P	23.98	163	P	P	06 23 21.2	-0.8
PB12				IAmb	IAmb	06 23 35.1	
	comp=Z,19nm,1.1s						
VILB	Vilhena	24.47	135	P	P	06 23 26.1	-0.5
VILB				IAmb	IAmb	06 23 26.9	
	comp=Z,12nm,0.7s						
MNMC	Minye Minye	24.69	161	P	P	06 23 28.1	-0.6
MNMC				IAmb	IAmb	06 23 30.4	
	comp=Z,17nm,1.0s						
PSGCX	Pisagua	24.97	163	P	P	06 23 31.0	0.0
PSGCX				IAmb	IAmb	06 23 55.2	
	comp=Z,23nm,1.4s						
MDP	Montagnes des	24.98	87	P	P	06 23 28.9	-2.3
	comp=Z,12nm,0.6s,baz=257,slow=11,SNR=7.2						
	comp=Z,12nm,0.6s						
PB11	IPOC Station P	25.26	162	P	P	06 23 34.3	+0.5
GO01	Chusmiza	25.32	161	P	P	06 23 34.5	-0.2
GO01				IAmb	IAmb	06 23 36.0	
	comp=Z,4.8nm,0.8s						
PB08	IPOC Station P	25.78	161	P	P	06 23 38.8	+0.1
PB08				IAmb	IAmb	06 23 55.4	
	comp=Z,7.1nm,1.0s						
SIV	San Ignacio	26.09	141	P	P	06 23 38.2	-3.0
	comp=Z,3.4nm,1.0s,baz=301,slow=11,SNR=8.0						
	comp=Z,3.4nm,1.0s						
TXAR	Lajitas Array	34.94	318	P	P	06 25 00.5	+1.1
	comp=Z,0.2nm,0.8s,baz=144,slow=7.8,SNR=2.2						
	comp=Z,0.2nm,0.8s						
BDFB	Brasilia	35.49	125	P	P	06 25 01.3	-3.0
	comp=Z,2.2nm,0.7s,baz=294,slow=14,SNR=3.6						
	comp=Z,2.2nm,0.7s						
YKA	Yellowknife Ar	64.06	342	P	P	06 28 43.8	+3.1
	comp=Z,0.4nm,0.9s,baz=136,slow=7.0,SNR=5.1						
	comp=Z,0.4nm,0.9s						
DBIC	Dimbokro	72.48	84	P	P	06 29 33.4	-1.0
	comp=Z,2.5nm,0.7s,baz=277,slow=6.0,SNR=3.9						
	comp=Z,2.5nm,0.7s						
DBIC	Dimbokro	72.48	84	P	P	06 29 33.1	-1.3
ESDC	Sonseca Array	74.70	50	P	P	06 29 47.0	-0.1
	comp=Z,0.5nm,0.8s,baz=269,slow=6.4,SNR=2.8						
	comp=Z,0.5nm,0.8s						
ILAR	Eielson Array	77.27	336	P	P	06 30 03.3	+2.2
	comp=Z,0.3nm,0.7s,baz=102,slow=7.5,SNR=2.6						
	comp=Z,0.3nm,0.7s						
TORD	Torodi Ar. Bea	78.70	78	P	P	06 30 08.3	-1.7
	comp=Z,0.4nm,0.5s,baz=287,slow=5.4,SNR=4.3						
	comp=Z,0.4nm,0.5s						
NOA	NORSAR Array B	85.67	29	P	P	06 30 46.8	+1.1
	comp=Z,0.5nm,0.8s,baz=274,slow=6.3,SNR=3.3						
	comp=Z,0.5nm,0.8s						
ASAR	Alice Springs	144.00	235	PKP	PKPab	06 37 40.0	-0.9
	comp=Z,0.4nm,0.6s,baz=114,slow=3.7,SNR=6.7						
WRA	Warramunga Arr	145.18	241	PKPbc	PKPbc	06 37 43.6	-1.7
	comp=Z,0.7nm,0.9s,baz=105,slow=3.1,SNR=4.5						
PZH	PanZhiHua	149.29	1	PKPbc	PKPdf	06 37 51.7	-0.8

RSNC 10 06:18:45.9±0.9, 6°.81N×73°.15W, h148^{km}±5^{km}, ML2.1, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.22	188	*e*P	Pn	06 19 05.7	-0.7
BRRC	Barranca, Sant	0.63	298	*e*P	Pn	06 19 07.5	-0.3
BRRC				*e*S	Sn	06 19 24.6	+0.2
PAMC	Pamplona, Colo	0.69	40	*e*P	Pn	06 19 08.7	-0.1
PAMC				*e*S	Sn	06 19 25.7	-0.5
PAMC				*i*		06 19 27.7	
	comp=Z,19nm,0.5s						
RUSC	La Rusia	0.91	176	*e*P	Pn	06 19 10.0	-0.4
RUSC				*i*		06 19 28.6	
	comp=Z,12nm,0.4s						
RUSC				*e*S	Sn	06 19 28.8	-0.3
PTBC	PUERTO BERRIO,	1.32	258	*e*P	Pn	06 19 13.3	-0.3
TAMC	Tame, Arauca	1.40	105	*e*P	Pn	06 19 14.0	-0.3
TAMC				*e*S	Sn	06 19 35.9	-0.2
ZARC	Zaragoza, Cauc	1.83	292	*e*P	Pn	06 19 17.6	-1.3
ZARC				*e*S	Sn	06 19 43.7	-0.6
ZARC				*i*		06 20 02.5	
	comp=Z,28nm,0.4s						
NORC	Norcasia	2.11	234	*e*S	Sn	06 19 50.4	+0.1

SJA ***10*** *06:22:18.1±0.7, 30°.54S×72°.14W, h17^{km}±3^{km}, ML5.4, MW5.2, Hypocentre not reviewed by the ISC*

IDC ***10*** *06:22:18.6±0.5, 30°.63S×71°.88W, h0^{km}, mb4.7/15, mbtmp4.6/20, ML4.4/5, MS4.6/36, Error ellipse: s-maj=18.6km s-min=14.9km az=58.0*

NEIC ***10*** *06:22:20.6, 30°.57S×72°.10W, h16^{km}*

NEIC ***10*** *06:22:20.8±2.2, 30°.58S±0°.04×72°.08W±0°.06, h14^{km}±3^{km}, mb5.1/81, Ms_20 5.0/50, Mwr5.1/84, Mww5.2/26, Mwr5.1(GUC), Error ellipse: s-maj=7.0km s-min=5.3km az=105.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}3.65; $M_{\theta\theta}$1.10; $M_{\phi\phi}$-4.75; $M_{r\theta}$0.28; $M_{\theta\phi}$-0.64; $M_{\phi r}$-2.38; Fault plane solution: $M_0$4.97000×10^{16} NP1:ϕ_s17.25000°, δ31.43000°, λ106.94000°. NP2: ϕ_s177.60000°, δ60.08000°, λ79.90000°. Principal axes: T 4.3423, Plg73.0000°, Azm63.0000°; N 1.0820, Plg9.0000°, Azm183.0000°; P -5.4243, Plg15.0000°, Azm275.0000°;*

MOS ***10*** *06:22:20.1±1.5, 30°.57S×71°.91W, h15^{km}, mb5.3/18, MS4.7/4 Error ellipse: s-maj=11.8km s-min=6.9km az=93.7*

GUC ***10*** *06:22:21.7±0.7, 30°.61S×72°.02W, h24^{km}±3^{km}, ML4.5*

VAO ***10*** *06:22:21.0±0.3, 30°.66S×72°.06W, h14^{km}, mb5.1*

NEIC ***10*** *06:22:21.1, 30°.59S×72°.07W, h14^{km}, Moment Tensor Solution. Duration: 2^{s}2 Moment tensor: Scale 10^{16}Nm; M_{rr}3.18; $M_{\theta\theta}$0.49; $M_{\phi\phi}$-3.67; $M_{r\theta}$-0.01; $M_{\theta\phi}$-0.55; $M_{\phi r}$-6.58; Fault plane solution: $M_0$7.44000×10^{16} NP1: ϕ_s180.67000°, δ76.23000°, λ86.10000°. NP2:ϕ_s16.66000°, δ14.30000°, λ105.52000°. Principal axes: T 7.1854, Plg59.0000°, Azm85.0000°; N 0.5015, Plg4.0000°, Azm182.0000°; P -7.6869, Plg31.0000°, Azm274.0000°;*

NEIC ***10*** *06:22:21.1, 30°.59S×72°.07W, h14^{km}*

GCMT ***10*** *06:22:24.8±0.2, 30°.63S±0°.01×72°.14W±0°.01, h20^{km}, MW5.2/117, Moment Tensor Solution. s76,c101; s117,c169; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.26±.16; $M_{\theta\theta}$-0.02±.09; $M_{\phi\phi}$-5.24±.12; $M_{r\theta}$0.18±.17; $M_{\theta\phi}$-0.03±.07; $M_{\phi r}$-4.58±.22; Best double couple: $M_0$6.96900×10^{16} NP1:ϕ_s179.00000°, δ66.00000°, λ89.00000°. NP2:ϕ_s2.00000°, δ24.00000°, λ93.00000°. Principal axes: T 6.9810, Plg69.0000°, Azm86.0000°; N -0.0270, Plg1.0000°, Azm179.0000°; P -6.9570, Plg21.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 06:22:20.5±0.8, 30°.58S±0°.02×72°.07W±0°.03, h13^{km}±4^{km}, n595, σ1^{s}41/598, mb5.1/63, MS4.9/65, 17C-11D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.38	104		Pb	06 22 29.0	-0.1
CO06				Sg	Sg	06 22 33.8	+0.4
CO06	Fray Jorge	0.38	104	*e*P	Pb	06 22 29.1	-0.1
CO06				*i* S	Sg	06 22 34.0	+0.6
CO06				IAML		06 22 34.9	
	comp=E,90µm,0.3s						
CO05	La Serena	0.98	47	Pn	Pb	06 22 39.1	-0.2
CO05				Sg	Sg	06 22 52.1	0.0
CO05	La Serena	0.98	47	*e*P	Pb	06 22 39.3	0.0
CO05				*i* S	Sg	06 22 52.2	+0.1
CO02	Combarbal	1.10	124		Pb	06 22 40.5	-1.0
CO02				Sn	Sb	06 22 54.4	-1.5
CO02	Combarbal	1.10	124	*e*P	Pb	06 22 40.8	-0.7
CO02				*i* S	Sb	06 22 54.6	-1.3
CO02	Combarbal	1.10	124	*e*P		06 22 40.5	
CO02				*e*S		06 22 56.3	
CO02				IAML		06 22 56.8	
	comp=Z,119µm,0.6s						
GO04	Tololo Observa	1.17	70		Pb	06 22 42.0	-0.7
GO04				Sn	Sb	06 22 57.8	-0.1
GO04	Tololo Observa	1.17	70	*e*P	Pb	06 22 42.0	-0.7
GO04				*i* S	Sb	06 22 57.8	-0.1
GO04	Tololo Observa	1.17	70	*e*P		06 22 41.8	
GO04				*e*S		06 22 59.0	
CO03	El Pedregal	1.21	102		Pn	06 22 41.8	-1.4
CO03	El Pedregal	1.21	102	*e*P	Pn	06 22 42.2	-1.0
CO03				*i* S	Sb	06 22 58.4	-0.6
CO03	El Pedregal	1.21	102	*e*P		06 22 42.2	
CO03				*e*S		06 23 00.2	
CO03				IAML		06 23 03.8	
	comp=Z,42µm,0.7s						
CO01	Juntas del Tor	1.81	71		Pn	06 22 51.4	-0.2
CO01	Juntas del Tor	1.81	71	*e*P	Pb	06 22 52.6	-1.0
CO01				*i* S	Sn	06 23 15.3	+0.8
CO01	Juntas del Tor	1.81	71	*e*P		06 22 52.7	
CO01				*e*S		06 23 16.6	
LCO	Las Campanas	1.97	37		Pn	06 22 53.1	-0.7
LCO	Las Campanas	1.97	37	*e*P	Pn	06 22 53.8	0.0
LCO				*i* S	Sb	06 23 20.6	-0.2
LCO	Las Campanas	1.97	37	P	Pn	06 22 53.1	-0.7
LCO	Las Campanas	1.97	37	*e*P		06 22 53.6	
LCO				*e*S		06 23 23.6	
VA06	Catapilco	2.08	162		Pn	06 22 54.6	-0.4
VA06	Catapilco	2.08	162	*e*P	Pn	06 22 54.9	-0.1
VA06				*i* S	Sb	06 23 23.1	-0.7
AC05	El Transito	2.34	42		Pn	06 22 58.8	0.0
AC05	El Transito	2.34	42	*e*P	Pn	06 22 59.6	+0.9
AC05				*i* S	Sb	06 23 29.6	-1.8
AC05	El Transito	2.34	42	*e*P		06 22 54.1	
AC05				*e*P		06 22 58.2	
AC05				*e*S		06 23 28.1	
AC05				IAML		06 23 42.6	
	comp=Z,15µm,0.7s						
VA01	Torpederas	2.46	172		Pn	06 22 59.4	-0.9
VA01	Torpederas	2.46	172	*e*P	Pn	06 22 59.6	-0.6
VA01				*i* S	Sb	06 23 33.9	-0.8
AC04	Llanos de Chal	2.52	20		Pn	06 23 00.1	-1.1
AC04	Llanos de Chal	2.52	20	*e*P	Pn	06 23 00.5	-0.7
AC04				*i* S	Sg	06 23 40.4	-1.2
AC04	Llanos de Chal	2.52	20	*e*P		06 23 00.6	
AC04				*e*S		06 23 33.6	
VA03	San Esteban	2.53	150		Pn	06 23 01.7	+0.4
VA03	San Esteban	2.53	150	*e*P	Pn	06 23 02.4	+1.0
VA03				*i* S	Sn	06 23 33.7	+1.7
VA03	San Esteban	2.53	150	*e*P		06 23 02.1	
VA03				*e*S		06 23 34.3	
VA03				IAML		06 23 44.6	
	comp=Z,22µm,0.7s						
ROCH	El Roble	2.54	160	*e*P	Pn	06 23 01.8	+0.1
ROCH				*i* S	Sn	06 23 34.6	+1.9
ROC1	El Roble	2.55	160		Pn	06 23 01.8	0.0
MT02	Curacav	2.78	164		Pn	06 23 05.0	+0.2
MT02	Curacav	2.78	164	*e*P	Pn	06 23 04.7	-0.1
MT02				*i* S	Sb	06 23 45.6	+1.5
MT02	Curacav	2.78	164	*e*P		06 23 05.6	
MT02				IAML		06 23 53.2	
	comp=Z,7µm,0.6s						
PEL	Peldehue	2.81	156		Pn	06 23 05.8	+0.6
PEL	Peldehue	2.81	156	*e*P	Pn	06 23 05.8	+0.6
PEL				*i* S	Sb	06 23 41.9	-3.0
PEL	Peldehue	2.81	156	P	Pn	06 23 05.8	+0.6
MT10	Hacienda Santa	2.98	155	*e*P	Pn	06 23 08.4	+0.8
MT10				*i* S	Sn	06 23 45.1	+1.9
MT05	Renca	3.02	158		Pn	06 23 08.3	+0.3
MT05	Renca	3.02	158	*e*P	Pn	06 23 08.4	+0.3
MT05				*i* S	Sn	06 23 45.7	+1.6
ZON	Zonda	3.06	109		Pn	06 23 08.5	-0.1
ZON	Zonda	3.06	109	P	Pn	06 23 08.5	-0.1
VA05	Santo Domingo	3.09	173		Pn	06 23 08.2	-0.7
VA05	Santo Domingo	3.09	173	*e*P	Pn	06 23 07.9	-1.0
VA05				*i* S	Sb	06 23 53.6	+0.8
FCH	Farellones	3.12	152	*e*P	Pn	06 23 10.8	+1.0
FCH				*i* S	Sb	06 23 53.5	-0.7
MT03	Universidad Ad	3.19	156		Pn	06 23 10.8	+0.4
MT03	Universidad Ad	3.19	156	*e*P	Pn	06 23 11.2	+0.8
MT03				*i* S	Sb	06 23 55.9	+0.1
MT03	Universidad Ad	3.19	156	*e*P		06 23 10.9	
MT03				*e*S		06 23 54.1	
MT03				IAML		06 24 08.1	
	comp=Z,12µm,0.7s						
MT04	Ro Olivares	3.25	150	*e*P	Pn	06 23 12.9	+1.5
MT04				*i* S	Sn	06 23 52.9	+2.7
MT09	Talagante	3.31	164		Pn	06 23 12.2	+0.1
MT09	Talagante	3.31	164	*e*P	Pn	06 23 12.7	+0.5
MT09				*i* S	Sn	06 23 53.0	+1.5
MT08	Bocatoma Ro	3.34	149		Pn	06 23 14.3	+1.6
MT08	Bocatoma Ro	3.34	149	*e*P	Pn	06 23 15.0	+2.3
MT08				*i* S	Sn	06 23 55.5	+3.1
MT01	Popeta	3.34	168		Pn	06 23 12.1	-0.3
MT01	Popeta	3.34	168	*e*P	Pn	06 23 12.1	-0.3
MT01				*i* S	Sb	06 24 00.4	+0.2
MT01	Popeta	3.34	168	*e*P		06 23 12.3	
MT01				*e*S		06 23 56.6	
MT01				IAML		06 24 08.2	
	comp=Z,6µm,0.7s						
GO03	Copiap	3.38	29		Pn	06 23 12.4	-0.7
GO03	Copiap	3.38	29	*e*P	Pn	06 23 12.8	-0.2
GO03				*i* S	Sb	06 24 01.5	0.0
GO03	Copiap	3.38	29	*e*P		06 23 12.8	
GO03				*e*S		06 24 03.1	
ASAL	Salagasta	3.41	127	*e*P		06 23 17.7	
ASAL				*e*S		06 24 09.1	
CFA	Coronel Fontan	3.44	108	Pg	Pn	06 23 16.7	+2.9
	comp=Z,91nm,0.3s,baz=294,slow=12,SNR=581						
CFA				Lg	Lg	06 23 58.4	
	comp=Z,84nm,0.3s,baz=267,slow=19,SNR=4.9						
CFA				LR	LR	06 24 23.1	
	comp=Z,5µm,20.5s,baz=202,slow=38						
CFA	Coronel Fontan	3.44	108	*e*P		06 23 17.0	
CFA				IAML		06 24 14.3	
	comp=Z,7µm,0.7s						
MT13	San Alfonso	3.49	155		Pn	06 23 15.6	+0.9
MT13	San Alfonso	3.49	155	*e*P	Pn	06 23 16.1	+1.5
MT13				*i* S	Sn	06 23 57.3	+1.4
LMEL	Las Melosas	3.62	155		Pn	06 23 17.2	+0.9
LMEL	Las Melosas	3.62	155	*e*P	Pn	06 23 17.7	+1.3
LMEL				*i* S	Sn	06 23 59.8	+0.7
AAGR	Agrelo	3.72	133	*e*P		06 23 22.4	
AAGR				*e*S		06 24 19.4	
BO01	Tunca	3.89	168	Pn	Pn	06 23 19.6	-0.3
BO01	Tunca	3.89	168	*e*P	Pn	06 23 19.7	-0.2
BO01				*i* S	Sb	06 24 14.2	-1.6
BO01	Tunca	3.89	168	*e*P		06 23 20.1	
BO01				*e*S		06 24 08.6	
BO01				IAML		06 24 28.7	
	comp=Z,4µm,0.8s						
BO02	Sierra Bellavi	4.33	166		Pn	06 23 27.0	+0.9
BO02	Sierra Bellavi	4.33	166	*e*P	Pn	06 23 26.4	+0.3
BO02				*i* S	Sb	06 24 26.7	-2.1
BO02	Sierra Bellavi	4.33	166	*e*P		06 23 26.6	
BO02				*e*S		06 24 17.5	
BO02				IAML		06 24 42.0	
	comp=Z,5µm,0.8s						
GO05	Huala	4.42	179	Pn	Pn	06 23 26.2	-1.0
GO05	Huala	4.42	179	*e*P		06 23 26.1	
GO05				*e*S		06 24 36.6	
AC02	Maricunga	4.54	35		Pn	06 23 29.6	+0.2
GO02	Mina Guanaco	5.83	23	Pn	Pn	06 23 44.9	-2.0
PB14	IPOC Station P	6.12	14	Pn	Pn	06 23 49.0	-1.9
BI05	Punta Hualpn	6.22	188	Pn	Pn	06 23 50.5	-1.4
H03N1	Juan Fernandez	6.47	242	Pn	Pn	06 23 54.2	-1.1
	baz=113,slow=19						
H03N1				T	T	06 30 56.8	
	baz=71,slow=72,SNR=5492						
H03N2	Juan Fernandez	6.49	242	Pn	Pn	06 23 54.2	-1.2
	baz=113,slow=19						
H03N2				T	T	06 30 55.7	
	baz=71,slow=72,SNR=4372						
H03N3	Juan Fernandez	6.49	242	Pn	Pn	06 23 54.0	-1.5
	baz=113,slow=19						
H03N3				T	T	06 30 56.2	
	baz=71,slow=72,SNR=3696						
VA04	Juan Fernndez	6.50	240	Pn	Pn	06 23 54.0	-1.7
H03S3	Juan Fernandez	6.64	239	Pn	Pn	06 23 55.7	-1.8
	baz=35,slow=19						
H03S1	Juan Fernandez	6.64	239	Pn	Pn	06 23 55.7	-1.9
	baz=35,slow=19						
H03S2	Juan Fernandez	6.66	239	Pn	Pn	06 23 56.0	-1.7
	baz=35,slow=19						
PB15	IPOC Station P	7.70	18	Pn	Pn	06 24 10.9	-1.7
PB06	IPOC Station P	8.16	16		Pn	06 24 17.8	-0.9
PB04	IPOC Station P	8.39	12	Pn	Pn	06 24 19.9	-2.1
LVC	Limon Verde	8.43	20	Pn	Pn	06 24 20.5	-2.2
	comp=Z,1.0nm,0.3s,baz=183,slow=7.6,SNR=10						
	comp=Z,2.8nm,0.3s						
LVC	Limon Verde	8.43	20	Pn	Pn	06 24 21.4	-1.3
LVC	Limon Verde	8.43	20	P	Pn	06 24 21.4	-1.3
LVC	Limon Verde	8.43	20	*e*P	Pn	06 24 23.6	+1.0
PB03	IPOC Station P	8.75	14		Pn	06 24 26.1	-0.8
GO06	Curarrehue	8.99	177		Pn	06 24 29.5	-0.6
LR03	Panguipulli	9.03	181		Pn	06 24 29.8	-0.8
PB07	IPOC Station P	9.04	13	Pn	Pn	06 24 29.2	-1.7
PLCA	Paso Flores	10.20	173	Pn	Pn	06 24 46.6	0.0
	comp=Z,1.6nm,0.3s,baz=334,slow=12,SNR=28						
PLCA				Lg	Lg	06 27 25.1	
	comp=Z,0.5nm,0.3s,baz=233,slow=20,SNR=2.2						
PLCA				LR	LR	06 29 24.9	
	comp=Z,3µm,18.4s,baz=352,slow=42						
	comp=Z,8.0nm,0.7s						
PLCA	Paso Flores	10.20	173		Pn	06 24 46.2	-0.4
PLCA	Paso Flores	10.20	173	*e*P	Pn	06 24 46.7	+0.1
LL04	Puerto Octay	10.31	181		Pn	06 24 46.6	-1.4
PSGCX	Pisagua	11.08	10	Pn	Pn	06 24 56.3	-2.5
TICA	Tres Isletas	11.09	71	*e*P	Pn	06 24 59.1	+0.3
TRQA	Tornquist	11.18	135	Pn	Pn	06 24 59.9	-0.1
TRQA	Tornquist	11.18	135	P	Pn	06 24 59.9	-0.1
MECA	Mercedes	12.12	87	*e*P	Pn	06 25 11.4	-1.4
GO07	Milladeo Hill,	12.57	185		Pn	06 25 18.2	-0.8
LPA	La Plata	12.65	114	PN	Pn	06 25 16.6	-3.5
LPA				pP	P	06 25 22.6	-8.9
LPA				sP		06 25 29.1	
LPA				PPP	PPP	06 25 36.8	
LPA				PPP	PPP	06 26 05.3	
LPA				PP	PgPg	06 26 20.2	-2.7
LPA				S	Sn	06 27 32.6	-8.3
LPA	La Plata	12.65	114	SN	Sn	06 27 38.9	-2.0
LPA				sS		06 27 45.9	
LPA				SSS	SSS	06 28 14.1	
LPA				SS	SgSg	06 29 19.5	+13
LPA				PCP	PcP	06 31 01.8	+4.2
LPA				SCS	ScS	06 38 04.4	-2.3
LPA				PKIKP	PKiKP	06 38 55.9	+0.9
LPA				SKIKP		06 42 21.1	
LPA				PKIKS		06 42 27.6	
LPA				SKIKS		06 45 56.1	
PB18	Visviri	13.15	11		Pn	06 25 26.2	-1.3
ITQB	Itaqui	13.40	90	Pn	Pn	06 25 28.8	-1.5
ITQB	Itaqui	13.40	90	*e*P	Pn	06 25 28.2	-2.2
CPUP	Villa Florida	13.64	76	Pn	Pn	06 25 31.6	-2.0
	comp=Z,0.4nm,0.3s,baz=241,slow=13,SNR=6.7						
CPUP				Sn	Sn	06 28 03.3	-1.7
	baz=266,slow=19						
CPUP				LR	LR	06 31 07.8	
	comp=Z,4µm,20.1s,baz=254,slow=39						
	comp=Z,1.4nm,0.4s						
CPUP	Villa Florida	13.64	76		Pn	06 25 31.9	-1.7
CPUP	Villa Florida	13.64	76	*e*P	Pn	06 25 32.6	-1.0
AZCA	Azaras, Argent	14.25	84	*e*P	Pn	06 25 40.9	-1.1
RODS	Rosario do Sul	14.55	93	*e*P	Pn	06 25 42.9	-3.3
LPAZ	La Paz	14.68	15	Pn	Pn	06 25 49.9	+1.4
	comp=Z,0.6nm,0.3s,baz=190,slow=8.6,SNR=24						
	comp=Z,18nm,0.8s						
LPAZ	La Paz	14.68	15	*e*P	Pn	06 25 49.9	+1.4
CPSB	Cacapava Do Su	16.06	94	*e*P	Pn	06 26 04.0	-2.0
CRSM	Crissiumal (Br	16.06	83	*e*P	Pn	06 26 05.3	-0.8
BBRB	Robore, Bolivi	16.56	45	*e*P	Pn	06 26 12.4	-0.1
ALGR	Alto Alegre (B	16.64	89	*e*P	Pn	06 26 13.2	-0.3
BBSD	Serra de San D	16.94	41	*e*P	Pn	06 26 17.7	+0.4
AMBA	Amambai (Brazi	17.04	67	*e*P	P	06 26 20.3	-0.1
BDQN	Bodoquena, MS	17.10	57	*e*P	Pn	06 26 20.1	+0.8
MCR1	Marechal Candi	17.11	73	*e*P	Pn	06 26 19.0	-0.4
FRBT	Francisco Belt	17.35	79	*e*P	Pn	06 26 22.2	-0.3
SIV	San Ignacio	17.67	37	P	Pn	06 26 24.6	-1.8
	comp=Z,0.2nm,0.3s,baz=216,slow=11,SNR=119						
SIV				LR	LR	06 34 30.0	
	comp=Z,4µm,19.4s,baz=220,slow=42						
	comp=Z,95nm,0.9s						
ITAB	Concordia	17.77	84	P	Pn	06 26 27.7	+0.1
ITAB				IAmb	IAmb	06 26 37.2	
	comp=Z,190nm,1.1s						
ITAB	Concordia	17.77	84	*e*P	P	06 26 28.6	+0.2
AQDB	Aquidauana	17.85	60		Pn	06 26 27.7	-0.9
GO08	Villa O’Higgin	17.86	181	P	P	06 26 30.0	+0.8
CNLB	Canela	18.43	91	*e*P	Pn	06 26 36.4	+0.6
PTGB	Pitanga	18.65	77	*e*P	Pn	06 26 38.6	+0.1
NNA	Nana	19.03	346	P	Pn	06 26 46.3	+3.2
	comp=Z,4.2nm,0.5s,baz=180,slow=19,SNR=2.0						
NNA				LR	LR	06 32 39.5	
	comp=Z,798nm,18.7s,baz=166,slow=32						
PTLB	Pontes e Lacer	19.17	41	P	P	06 26 42.6	-1.2
PTLB	Pontes e Lacer	19.17	41	*e*P	P	06 26 43.8	0.0
PP1B	Ponte de Pedra	20.29	54	*e*P	P	06 26 55.6	-0.5
GO09	Cerro Castillo	20.67	180	P	P	06 26 59.8	-0.1
PCMB	Pacaembu	20.69	69	*e*P	P	06 26 59.6	-0.8
VILB	Vilhena	20.69	35	P	P	06 26 59.9	-0.5
VILB				IAmb	IAmb	06 27 05.3	
	comp=Z,121nm,1.0s						
VILB	Vilhena	20.69	35	*e*P	P	06 27 00.2	-0.3
SALV	Santo Antonio	20.93	49	*e*P	P	06 27 02.6	-0.5
C2SB	Chapadao do Su	21.03	60	*e*P	P	06 27 04.4	+0.3
MG05	Puerto Natales	21.08	181	P	P	06 27 04.0	-0.3
MG05				IAmb	IAmb	06 27 23.4	
	comp=Z,80nm,1.2s						
FRTB	Fartura	21.29	76	*e*P	P	06 27 05.6	-1.3
ETMB	Extrema	21.37	16	P	P	06 27 07.8	0.0
ETMB				IAmb	IAmb	06 27 13.0	
	comp=Z,156nm,1.2s						
ETMB	Extrema	21.37	16	*e*P	P	06 27 08.5	+0.8
ITRB	Iturama	22.40	66	*e*P	P	06 27 17.1	-1.7
CZSB	Cruzeiro do Su	22.75	358	*e*P	P	06 27 23.5	+1.0
PET01	Itanhaem-SP	22.85	80	*e*P	P	06 27 23.5	-0.1
SAML	Samuel	23.07	23	P	P	06 27 24.8	-1.1
SAML				IAmb	IAmb	06 27 28.3	
	comp=Z,69nm,1.2s						
SAML	Samuel	23.07	23	P	P	06 27 24.8	-1.1
SAML				pmax	pmax		
	comp=Z,69nm,1.2s						
SAML				MLR	MLR		
	comp=Z,2µm,20.0s						
SAML	Samuel	23.07	23	*e*P	P	06 27 25.6	-0.2
BB19B	Bebedouro	23.17	71	*e*P	P	06 27 26.2	-0.7
MG03	Isla Dawson	23.28	178	P	P	06 27 26.7	-1.0
MG03				IAmb	IAmb	06 27 30.3	
	comp=Z,52nm,0.9s						
RCLB	Rio Claro- Sao	23.38	76	*e*P	P	06 27 28.5	-0.6
EFI	East Falkland	23.48	158	*de*P	P	06 27 27.5	-2.2
EFI				pmax	pmax		
	comp=Z,114nm,1.1s						
VAO	Valinhos	23.61	77	*e*P	P	06 27 30.0	-1.4
PDRB	Porto dos Gac	23.64	40	*e*P	P	06 27 32.0	+0.5
ARAG	Araguaiana, MT	23.73	56	*e*P	P	06 27 32.7	+0.2
ATAH	Atahualpa	24.07	344	P	P	06 27 37.8	+1.7
	comp=Z,3.1nm,0.6s,baz=175,slow=13,SNR=2.5						
ATAH				LR	LR	06 34 56.5	
	comp=Z,622nm,20.7s,baz=184,slow=31						
	comp=Z,3.1nm,0.6s						
USHA	Ushuaia	24.37	175	P	P	06 27 38.7	+0.6
	comp=Z,42nm,0.8s,baz=18,slow=5.6,SNR=4.1						
	comp=Z,42nm,0.8s						
MG01	Puerto William	24.54	174	P	P	06 27 39.6	0.0
MG01				IAmb	IAmb	06 28 02.4	
	comp=Z,43nm,0.8s						
PARB	Paraibuna	24.61	79	*e*P	P	06 27 39.5	-1.2
CLDB	Colider	24.76	41	*e*P	P	06 27 41.8	-0.2
IPMB	Ipameri, GO	25.04	65	*e*P	P	06 27 43.3	-1.3
PMNB	Patos De Minas	26.15	69	*e*P	P	06 27 53.9	-0.8
BSCB	Bom Sucesso	26.30	75	*e*P	P	06 27 55.3	-0.8
TBTG	Tabatinga, AM	26.34	5	P	P	06 27 56.8	+0.6
TBTG	Tabatinga, AM	26.34	5	*e*P	P	06 27 57.2	+1.0
BDFB	Brasilia	26.57	61	P	P	06 27 57.6	-1.0
	comp=Z,66nm,0.8s,baz=229,slow=8.8,SNR=88						
BDFB				LR	LR	06 39 55.9	
	comp=Z,2µm,19.0s,baz=237,slow=40						

	comp=Z,66nm,0.8s						
BDFB	Brasilia	26.57	61	eP	P	06 27 57.8	-0.7
SNDB	Serra Nova Dou	26.70	51	eP	P	06 27 59.1	-0.5
VAS01	Vassouras-RJ	26.88	79	eP	P	06 28 00.5	-0.6
MCRA	Macar, Loja	27.12	343	P	P	06 28 03.5	+0.1
TEFE	Tefe	27.83	16	eP	P	06 28 10.1	+0.4
DUB01	Friburgo-RJ	27.86	79	eP	P	06 28 08.8	-1.2
NPGB	Novo Progresso	28.18	37	eP	P	06 28 11.6	-1.3
MACA	Manacapuru-AM	29.32	24	eP	P	06 28 22.8	-0.2
JANB	Januaria	29.77	65	eP	P	06 28 26.3	-0.8
ALF01	Guarapari-ES	29.87	78	eP	P	06 28 26.7	-1.1
ITTB	Itaituba	30.29	34	eP	P	06 28 30.7	-0.9
SJMB	Sao Joao De Ma	30.36	74	eP	P	06 28 31.3	-0.9
SGCB	S£o Gabriel d	30.67	10	eP	P	06 28 34.0	-0.9
SDBA	SAO DESIDERIO	30.95	60	eP	P	06 28 36.9	-0.5
OTAV	Otavalo	31.25	348	P	P	06 28 42.2	+1.7
OTAV				pmax	pmax		
	comp=Z,7.0nm,1.7s						
OTAV	Otavalo	31.25	348	eP	P	06 28 40.3	-0.2
SMTB	Santa Maria do	31.45	52	eP	P	06 28 41.9	+0.1
PRPB	Parauapebas	32.04	45	eP	P	06 28 46.5	-0.5
GUA01	Guaratinga, BA	32.55	72	eP	P	06 28 50.7	-0.9
MACC	Macarena, Meta	32.59	357	eP	P	06 28 52.6	+0.8
RPN	Rapa Nui	32.73	267	LR	LR	06 38 04.5	
	comp=Z,663nm,18.5s,baz=96,slow=29						
ABR01	Abrolhos, BA	32.78	75	eP	P	06 28 53.4	-0.1
MALB	Monte Alegre	33.18	34	eP	P	06 28 56.5	-0.5
ORTC	Ortega, Tolima	34.43	354	eP	P	06 29 11.0	+3.1
PMSA	Palmer Station	34.58	174	LR	LR	06 43 55.2	
	comp=Z,1µm,18.7s,baz=346,slow=38						
PTGC	Puerto Gaitan,	34.59	360	eP	P	06 29 09.1	-0.1
BOAV	Boa Vista	34.59	21	P	P	06 29 09.1	-0.2
BOAV				IAmb	IAmb	06 29 10.6	
	comp=Z,29nm,0.9s						
BOAV	Boa Vista	34.59	21	eP	P	06 29 09.3	0.0
CHIC	Chingaza	35.05	357	eP	P	06 29 15.8	+2.1
ROSC	El Rosal	35.29	356	P	P	06 29 18.1	+2.4
	comp=Z,17nm,0.9s,baz=121,slow=8.2,SNR=7.0						
ROSC				LR	LR	06 44 28.0	
	comp=Z,629nm,19.1s,baz=204,slow=38						
	comp=Z,17nm,0.9s						
MCPB	Macapa, AP	35.56	36	eP	P	06 29 17.6	-0.1
NORC	Norcasia	36.04	355	eP	P	06 29 21.6	-0.1
TMAB	Tom-Au,PA,Br	36.09	44	eP	P	06 29 22.3	+0.2
RUSC	La Rusia	36.28	358	P	P	06 29 25.7	+1.4
RUSC	La Rusia	36.28	358	eP	P	06 29 26.4	+2.1
CBOC	Ciudad Bolivar	36.44	353	⇑iP	P	06 29 27.1	+1.9
BARC	Barichara	36.98	358	eP	P	06 29 31.2	+1.3
BRRC	Barranca, Sant	37.51	357	eP	P	06 29 32.3	-1.9
DBBC	Dabeiba	37.60	353	eP	P	06 29 37.1	+2.1
ZARC	Zaragoza, Cauc	37.95	355	eP	P	06 29 38.9	+0.9
ROSB	Rosrio	38.16	49	eP	P	06 29 39.5	-0.2
SDV	Santo Domingo	39.27	2	P	P	06 29 49.3	+0.1
	comp=Z,9.9nm,0.8s,baz=238,slow=3.8,SNR=11						
	comp=Z,9.9nm,0.8s						
SDV	Santo Domingo	39.27	2	P	P	06 29 48.4	-0.8
SDV	Santo Domingo	39.27	2	eP	P	06 29 49.5	+0.3
MDP	Montagnes des	40.06	31	LR	LR	06 48 28.3	
	comp=Z,2µm,19.1s,baz=203,slow=39						
SRBA	San Rafael, Bu	41.05	343	P	P	06 30 05.5	+1.7
NBCL	Cascavel-CE	41.24	57	eP	P	06 30 05.5	0.0
RCBR	Riachuelo	41.95	61	IAMs_20	IAMs_20	06 48 59.2	
	comp=Z,2µm,18.0s						
RCBR	Riachuelo	41.95	61	eP	P	06 30 11.9	+0.6
TGUH	Tegucigalpa,Un	46.73	340	P	P	06 30 49.1	-0.5
TGUH				IAmb	IAmb	06 31 06.6	
	comp=Z,36nm,1.1s						
MLPR	Magueyes Islan	48.51	6	P	P	06 31 02.6	-0.6
CRPR	Cabo Rojo, PR	48.55	6	P	P	06 31 01.9	-1.5
OBIP	Obispado Ponce	48.63	7	P	P	06 31 02.8	-1.3
CELP	Cerrillos	48.66	7	P	P	06 31 03.8	-0.6
SJG	San Juan	48.75	7	P	P	06 31 04.5	-0.5
SJG	San Juan	48.75	7	P	P	06 31 04.5	-0.5
SJG				pmax	pmax		
	comp=Z,53nm,0.9s						
PRSN	Puerto Rico Se	48.75	6	P	P	06 31 04.6	-0.4
UUPR	Utuado, UPR, P	48.83	7	P	P	06 31 05.2	-0.5
CBYP	Canovanas	48.94	8	P	P	06 31 05.8	-0.8
CMIG	Matias Romero	52.24	332	LR	LR	06 49 04.1	
	comp=Z,254nm,18.7s,baz=160,slow=31						
VNA3	Neumayer Olymp	52.53	159	P	P	06 31 33.6	+0.5
VNA2	Neumayer--Watz	53.17	158	P	P	06 31 38.4	+0.6
	baz=288,slow=8.0						
SNAA	Sanae	54.76	159	P	P	06 31 50.0	+0.6
SNAA	Sanae	54.76	159	P	P	06 31 49.4	-0.1
SNAA	Sanae	54.76	159	P	P	06 31 49.4	-0.1
SNAA				pmax	pmax		
	comp=Z,63nm,1.1s						
RKT	Rikitea	56.00	261	eT	T	07 32 42.9	
	comp=Z,3.1nm,0.2s						
TROLL	Troll, Antarti	56.47	159	P	P	06 32 02.4	+0.6
ASCN	Ascension	58.28	80	P	P	06 32 15.1	-0.1
NVL	N'lazarevskaya	59.47	158	eP	P	06 32 22.8	+0.2
NVL				pmax	pmax		
	comp=Z,28nm,1.0s						
553A	Crawfordville	61.57	348	P	P	06 32 38.4	+0.9
H06E1	SOCORRO T-PHAS	61.69	318	T	T	07 40 00.1	
	SNR=18						
352A	Blakely	62.92	348	P	P	06 32 47.1	+0.7
	baz=168						
154A	Montrose	63.72	350	P	P	06 32 52.1	+0.4
	baz=169						
346A	Big Creek Wild	63.81	343	P	P	06 32 53.3	+1.0
	baz=163						
735A	Kenedy	64.00	335	P	P	06 32 54.3	+0.6
	baz=156						
152A	Waverly Hall	64.04	348	P	P	06 32 54.1	+0.3
152A				IAmb	IAmb	06 33 11.1	
	comp=Z,15nm,1.2s						
833A	Chaparral WMA,	64.12	333	P	P	06 32 55.6	+1.1
833A				IAmb	IAmb	06 33 10.6	
	comp=Z,23nm,1.1s						
833A	Chaparral WMA,	64.12	333	P	P	06 32 56.8	+2.3
	baz=154						
833A	Chaparral WMA,	64.12	333	P	P	06 32 56.3	+1.9
	baz=154						
344A	Westbrook Farm	64.19	342	P	P	06 32 56.3	+1.5
344A	Westbrook Farm	64.19	342	P	P	06 32 56.9	+2.0
	baz=162						
HKT	Hockley	64.31	337	⇓eP	P	06 32 54.8	-0.8
HKT				pmax	pmax		
	comp=Z,9.0nm,1.3s						
Y57A	Sumter	64.73	352	P	P	06 32 59.1	+0.7
Y52A	Lilburn	65.10	349	P	P	06 33 01.1	+0.4
	baz=169						
Y52A				P	P	06 33 01.1	+0.4
	baz=169						
143A	Socs Landing,	65.55	342	P	P	06 33 04.7	+1.0
143A	Socs Landing,	65.55	342	P	P	06 33 06.2	+2.5
	baz=162						
LPIG	La Paz	65.58	322	LR	LR	06 56 59.7	
	comp=Z,109nm,18.2s,baz=144,slow=32						
PAULI	Pauline	65.70	351	P	P	06 33 06.0	+1.4
	baz=171						
X51A	Calhoun	65.92	348	P	P	06 33 06.4	+0.4
	baz=168						
X51A				P	P	06 33 06.4	+0.4
	baz=168						
KMSC	Kings Mountain	65.96	352	P	P	06 33 07.1	+0.9
	baz=171						
CASEE	Lake Jocassee	66.03	350	P	P	06 33 07.4	+0.7
	baz=170						
237A	Washetta, Mont	66.19	338	P	P	06 33 08.6	+0.8
237A	Washetta, Mont	66.19	338	P	P	06 33 09.4	+1.6
	baz=158						
JCT	Junction City	66.21	334	P	P	06 33 08.8	+0.8
JCT				IAmb	IAmb	06 33 25.2	
	comp=Z,14nm,0.9s						
JCT	Junction City	66.21	334	P	P	06 33 08.8	+0.8
JCT				pmax	pmax		
	comp=Z,14nm,0.9s						
JCT	Junction City	66.21	334	P	P	06 33 10.1	+2.1
	baz=154						
JCT	Junction City	66.21	334	P	P	06 33 09.4	+1.4
	baz=154						
X48A	Hartselle	66.21	347	P	P	06 33 07.0	-0.9
X48A	Hartselle	66.21	347	P	P	06 33 08.3	+0.4
	baz=166						
W52A	Murphy	66.28	349	P	P	06 33 09.4	+1.0
	baz=169						
V58A	Windy Hill, Pi	66.36	354	P	P	06 33 08.8	0.0
	baz=173						
V58A				P	P	06 33 08.8	0.0
	baz=173						
W50A	Signal Mountai	66.61	348	P	P	06 33 11.2	+0.7
W50A				IAmb	IAmb	06 33 28.4	
	comp=Z,35nm,1.6s						
W50A	Signal Mountai	66.61	348	P	P	06 33 11.5	+1.0
	baz=168						
V55A	Taylorsville	66.64	352	P	P	06 33 11.4	+0.7
	baz=172						
V55A				P	P	06 33 11.4	+0.7
	baz=172						
V53A	Saluda	66.67	350	P	P	06 33 12.1	+1.2
	baz=170						
V53A				P	P	06 33 12.1	+1.2
	baz=170						
TAOE	Nuku Hiva Isla	66.70	273	eLR	LR	06 53 13.5	
	comp=Z,314nm,22.9s						
CPCT	Cooper Cave	66.72	349	P	P	06 33 10.8	-0.3
CPCT				IAmb	IAmb	06 33 29.7	
	comp=Z,13nm,1.0s						
WHTX	Lake Whitney,	66.73	337	P	P	06 33 11.4	+0.2
	baz=156						
SWET	Sewanee	66.74	348	P	P	06 33 11.0	-0.4
SWET				IAmb	IAmb	06 33 29.1	
	comp=Z,39nm,1.5s						
TXAR	Lajitas Array	66.76	330	P	P	06 33 13.0	+1.3
	comp=Z,1.9nm,0.8s,baz=152,slow=8.5,SNR=26						
TXAR				LR	LR	06 58 25.0	
	comp=Z,398nm,18.3s,baz=158,slow=32						
	comp=Z,1.9nm,0.8s						
TXAR	Lajitas Array	66.76	330	P	P	06 33 12.9	+1.3
TX31	Lajitas Ar. Si	66.76	330	P	P	06 33 13.0	+1.3
	baz=151,SNR=6.3						
TX32	Lajitas Array	66.76	330	P	P	06 33 11.9	+0.2
U59A	Littleton	66.80	355	P	P	06 33 13.0	+1.3
	baz=175						
U59A				P	P	06 33 13.0	+1.3
	baz=175						
TKL	Tuckaleechee C	66.81	350	P	P	06 33 12.3	+0.6
	baz=169						
V52A	Sevierville	66.96	350	P	P	06 33 12.4	-0.3
V52A				IAmb	IAmb	06 33 30.7	
	comp=Z,26nm,1.4s						
V52A	Sevierville	66.96	350	P	P	06 33 13.0	+0.3
	baz=169						
U56A	King	67.04	353	P	P	06 33 14.6	+1.4
	baz=172						
U56A				P	P	06 33 14.6	+1.4
	baz=172						
V51A	Loudon	67.04	349	P	P	06 33 13.3	+0.2
	baz=169						
U54A	Nelsons Funny	67.38	351	P	P	06 33 15.8	+0.4
	baz=171						
U54A				P	P	06 33 15.8	+0.4
	baz=171						
T59A	Double "B" Far	67.40	355	P	P	06 33 13.6	-1.8
T59A				IAmb	IAmb	06 33 17.4	
	comp=Z,26nm,1.4s						
T59A	Double "B" Far	67.40	355	P	P	06 33 16.8	+1.4
	baz=175						
T59A				P	P	06 33 16.8	+1.4
	baz=175						
V48A	Smith Brothers	67.42	347	P	P	06 33 14.1	-1.5
V48A				IAmb	IAmb	06 33 55.9	
	comp=Z,22nm,1.2s						
V48A	Smith Brothers	67.42	347	P	P	06 33 16.4	+0.8
	baz=166						
VNDA	Vanda	67.44	191	LR	LR	06 57 48.1	
	comp=Z,202nm,20.4s,baz=121,slow=32						
MIAR	Mount Ida	67.88	341	P	P	06 33 19.8	+1.2
	baz=160						
Z35A	Perchaven, San	67.89	337	P	P	06 33 19.2	+0.6
Z35A				IAmb	IAmb	06 33 21.2	
	comp=Z,20nm,0.9s						
Z35A	Perchaven, San	67.89	337	P	P	06 33 20.4	+1.8
	baz=157						
U49A	Red Boiling Sp	67.97	348	P	P	06 33 19.6	+0.6
	baz=167						
WVT	Waverly	68.00	346	P	P	06 33 19.4	+0.2
WVT				IAmb	IAmb	06 33 37.6	
	comp=Z,38nm,1.5s						
WVT	Waverly	68.00	346	P	P	06 33 19.4	+0.2
WVT				pmax	pmax		
	comp=Z,38nm,1.5s						
WVT	Waverly	68.00	346	P	P	06 33 20.4	+1.2
	baz=165						
WVT	Waverly	68.00	346	P	P	06 33 19.7	+0.5
	baz=165,SNR=6.2						
ABTX	Abilene, Hawle	68.07	335	P	P	06 33 20.8	+1.0
ABTX				IAmb	IAmb	06 33 36.2	
	comp=Z,24nm,1.2s						
ABTX	Abilene, Hawle	68.07	335	P	P	06 33 21.3	+1.4
	baz=155						
TBI	Tubuai	68.13	255	eS	S	06 42 19.4	-1.0
	comp=Z,688nm,24.0s						
TBI	Tubuai	68.13	255	eLR	LR	06 53 53.2	
	comp=Z,8µm,23.8s						
TBI				eLR	LR	06 53 53.5	
	comp=Z,2µm,26.5s						
TBI	Tubuai	68.13	255	eT	T	07 47 53.4	
	comp=Z,4.8nm,0.2s						
S54A	Dingess, Beckl	68.58	352	P	P	06 33 24.8	+1.9
	baz=172						
S54A				P	P	06 33 24.8	+1.9
	baz=172						
T47A	Sharon Grove	68.68	347	P	P	06 33 22.8	-0.7
T47A				IAmb	IAmb	06 33 42.0	
	comp=Z,23nm,1.2s						
T47A	Sharon Grove	68.68	347	P	P	06 33 24.2	+0.7
	baz=166						
LCAR	Lake Charles	68.69	343	P	P	06 33 22.7	-0.8
LCAR				IAmb	IAmb	06 34 07.0	
	comp=Z,6.8nm,0.7s						
LCAR	Lake Charles	68.69	343	P	P	06 33 24.1	+0.6
	baz=162,SNR=7.9						
WTFS	Witchita Falls	68.69	337	P	P	06 33 23.8	+0.2
WTFS				IAmb	IAmb	06 33 25.4	
	comp=Z,9.5nm,0.9s						
ODSA	Odessa	68.73	332	P	P	06 33 24.8	+0.8
ODSA				IAmb	IAmb	06 33 33.9	
	comp=Z,36nm,1.0s						
FCAR	Ozark Folk Cen	68.76	343	P	P	06 33 24.4	+0.4
T45A	Paducah	69.02	346	P	P	06 33 26.1	+0.5
U40A	Yellville	69.39	342	P	P	06 33 29.0	+1.1
	baz=161,SNR=5.3						
U40A				P	P	06 33 29.0	+1.1
	baz=161,SNR=5.3						
HTMS	Hat Mesa	69.48	332	P	P	06 33 30.0	+1.3
MNTX	Cornudas Mount	69.54	330	P	P	06 33 29.9	+1.0
	baz=150						
MNTX	Cornudas Mount	69.54	330	P	P	06 33 29.4	+0.4
	baz=150,SNR=6.6						
GDL2	Guadalupe Moun	69.54	331	P	P	06 33 30.1	+1.0
T42A	Van Buren	69.58	344	P	P	06 33 29.6	+0.5
	baz=163						
HHAR	Hobbs	69.61	341	P	P	06 33 29.3	0.0
HHAR				IAmb	IAmb	06 33 31.3	
	comp=Z,10nm,0.8s						
WMOK	Wichita Mounta	69.68	337	P	P	06 33 31.3	+1.5
	baz=156						
WMOK	Wichita Mounta	69.68	337	P	P	06 33 30.6	+0.8
	baz=156						
SDMD	Soldier’s Deli	69.78	356	P	P	06 33 30.2	0.0
	baz=176						
S44A	Carbondale	69.80	346	P	P	06 33 30.4	0.0
	baz=164						
TUL1	Leonard	69.80	340	P	P	06 33 30.2	-0.3
TUL1				IAmb	IAmb	06 33 32.7	
	comp=Z,13nm,0.9s						
TUL1	Leonard	69.80	340	P	P	06 33 32.0	+1.6
	baz=158						
TUL1	Leonard	69.80	340	P	P	06 33 31.1	+0.7
	baz=158,SNR=5.2						
BBTS	Babate	69.82	58	LR	LR	07 04 12.2	
	comp=Z,694nm,18.0s,baz=236,slow=36						
Q52A	Bidwell	69.84	352	P	P	06 33 31.0	+0.4
	baz=171						
Q52A				P	P	06 33 31.0	+0.4
	baz=171						
P57A	Homestead Farm	69.93	355	P	P	06 33 33.2	+2.0
	baz=175						
P57A				P	P	06 33 33.2	+2.0
	baz=175						
OK025	Westminster Rd	69.98	338	P	P	06 33 31.3	-0.2
OK025				IAmb	IAmb	06 33 34.5	
	comp=Z,14nm,0.8s						
EPT	El Paso	70.09	329	IAMs_20	IAMs_20	07 00 19.9	
	comp=Z,633nm,19.0s						
OK052	Battle Ridge R	70.19	339	P	P	06 33 33.1	+0.3
OK052				IAmb	IAmb	06 33 42.3	
	comp=Z,17nm,1.1s						
FVM	French Village	70.34	345	P	P	06 33 33.5	-0.1
FVM				IAmb	IAmb	06 33 51.9	
	comp=Z,29nm,1.4s						
FVM	French Village	70.34	345	P	P	06 33 33.6	-0.1
FVM				pmax	pmax		
	comp=Z,29nm,1.5s						
FVM	French Village	70.34	345	P	P	06 33 34.8	+1.1
	baz=163						
MSTX	Muleshoe	70.45	333	P	P	06 33 34.4	-0.2
MSTX				IAmb	IAmb	06 33 51.2	
	comp=Z,21nm,1.1s						
MSTX	Muleshoe	70.45	333	P	P	06 33 36.2	+1.6
	baz=152						
MSTX	Muleshoe	70.45	333	P	P	06 33 35.9	+1.2
	baz=152,SNR=9.6						
TIAR	Tiarei	70.55	261	eT	T	07 50 59.0	
	comp=Z,2.0nm,0.2s						
CCM	Cathedral Cave	70.60	344	P	P	06 33 34.2	-1.1
CCM				IAmb	IAmb	06 34 27.0	
	comp=Z,16nm,1.1s						
CCM	Cathedral Cave	70.60	344	P	P	06 33 34.2	-1.1
CCM				pmax	pmax		
	comp=Z,16nm,1.1s						
CCM	Cathedral Cave	70.60	344	P	P	06 33 36.4	+1.1
	baz=163						
CCM	Cathedral Cave	70.60	344	P	P	06 33 36.2	+1.0
	baz=163,SNR=7.0						
OK050	Pawnee Station	70.61	339	P	P	06 33 34.7	-0.8
OK050				IAmb	IAmb	06 33 38.3	
	comp=Z,19nm,0.9s						
PPT2	Papeete2	70.73	261	eS	S	06 42 50.2	-1.2
	comp=Z,246nm,25.5s						
PPT2	Papeete2	70.73	261	eLR	LR	06 55 05.3	
	comp=Z,446nm,24.8s						
PPT2				eLR	LR	06 55 05.5	
	comp=Z,588nm,24.0s						
PPT	Papeete	70.74	261	LR	LR	06 56 07.7	
	comp=Z,351nm,19.8s,baz=137,slow=29						
PABK	Blue Knob Stat	70.75	355	P	P	06 33 37.8	+1.6
	baz=174						
S39A	Bolivar	70.77	342	P	P	06 33 36.6	+0.3
S39A				IAmb	IAmb	06 33 37.9	
	comp=Z,12nm,1.1s						
S39A	Bolivar	70.77	342	P	P	06 33 37.3	+1.0
	baz=161,SNR=6.6						
AMTX	Amarillo	70.84	335	P	P	06 33 36.6	-0.4
AMTX				IAmb	IAmb	06 33 52.4	
	comp=Z,19nm,1.4s						
AMTX	Amarillo	70.84	335	P	P	06 33 38.2	+1.2
	baz=153						
O52A	Adamsville	70.92	352	P	P	06 33 40.9	+3.6
	baz=171						
O52A				P	P	06 33 40.9	+3.6
	baz=171						
BRNJ	Basking Ridge	70.95	358	P	P	06 33 39.0	+1.7
	baz=178						
T35B	Sooner Cattle	70.95	339	P	P	06 33 38.7	+1.2
	baz=158						
R40A	Maddies Statio	71.07	343	P	P	06 33 38.8	+0.6
R40A				IAmb	IAmb	06 33 40.1	
	comp=Z,14nm,0.9s						
R40A	Maddies Statio	71.07	343	P	P	06 33 39.2	+1.0
	baz=162						
U32A	Winter Ranch,	71.25	337	P	P	06 33 40.2	+0.8
	baz=156						
P46A	Rosedale	71.25	348	P	P	06 33 39.7	+0.5
	baz=166						
121A	Cookes Peak, D	71.31	329	P	P	06 33 42.4	+2.4
	baz=148						
121A	Cookes Peak, D	71.31	329	P	P	06 33 41.2	+1.2
	baz=148						
N49A	Columbus Grove	72.03	350	P	P	06 33 44.7	+0.9
	baz=169						
N49A				P	P	06 33 44.7	+0.9
	baz=169						
Y22A	Socorro	72.14	330	P	P	06 33 45.9	+1.0
	baz=149						
P40A	Paris	72.19	344	P	P	06 33 45.4	+0.5
P40A				IAmb	IAmb	06 33 46.4	
	comp=Z,16nm,0.8s						
P40A	Paris	72.19	344	P	P	06 33 45.7	+0.9
	baz=162,SNR=6.9						
Y22D	IRIS PASSCAL I	72.24	330	IAMs_20	IAMs_20	07 01 22.7	
	comp=Z,611nm,18.0s						
P38A	Dawn	72.65	343	P	P	06 33 48.4	+0.8
	baz=161						
ANMO	Albuquerque	72.79	331	LR	LR	07 01 44.9	
	comp=Z,362nm,19.2s,baz=244,slow=32						
ANMO	Albuquerque	72.79	331	⇓eP	P	06 33 51.1	+2.3
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ANMO	Albuquerque	72.79	331	P	P	06 33 49.4	+0.6
	baz=150						
WVNY	West Valley, N	72.88	355	P	P	06 33 50.7	+1.7
	baz=174						
KSU1	Kansas State U	73.00	340	P	P	06 33 50.7	+1.0
	baz=158						
214A	Organ Pipe Nat	73.22	325	P	P	06 33 53.6	+2.4
	baz=144						
LIC	Lamto	73.74	72	⇑iP	P	06 33 54.5	-0.2
	comp=Z,60nm,1.0s						
T25A	Trinidad	73.87	334	P	P	06 33 57.3	+2.1
	baz=151						
TIC	Toumodi	73.98	72	⇑iP	P	06 33 55.2	-0.9
	comp=Z,24nm,0.5s						
KIC	Kosan Boka	74.06	73	⇑iP	P	06 33 56.4	-0.1
	comp=Z,8.3nm,0.8s						
DBIC	Dimbokro	74.13	72	P	P	06 33 56.6	-0.4
	comp=Z,22nm,0.9s,baz=236,slow=5.7,SNR=18						
DBIC				LR	LR	07 04 07.6	
	comp=Z,1µm,19.3s,baz=227,slow=34						
	comp=Z,22nm,0.9s						
DBIC	Dimbokro	74.13	72	P	P	06 33 56.7	-0.3
DBIC				IAmb	IAmb	06 34 10.6	
	comp=Z,30nm,1.0s						
DBIC	Dimbokro	74.13	72	P	P	06 33 56.7	-0.3
DBIC				pmax	pmax		
	comp=Z,30nm,1.0s						
W18A	Petrified Fore	74.36	329	P	P	06 33 58.0	0.0
W18A				IAmb	IAmb	06 34 14.4	
	comp=Z,25nm,1.4s						
L40A	Anamosa	74.41	345	P	P	06 33 58.4	+0.4
	baz=163						
SDCO	Great Sand Dun	74.82	333	P	P	06 34 03.1	+2.3
	baz=151						
SDCO	Great Sand Dun	74.82	333	P	P	06 34 02.9	+2.1
	baz=151						
SADO	Sadowa	75.27	355	LR	LR	07 09 03.5	
	comp=Z,142nm,21.2s,baz=122,slow=37						
S22A	4UR Ranch, Cre	75.35	332	P	P	06 34 05.9	+2.1
	baz=150						
WUAZ	Wupatki	75.43	328	P	P	06 34 06.6	+2.4
	baz=146						
MVCO	Mesa Verde	75.58	331	P	P	06 34 07.2	+2.1
	baz=148						
Q24A	Divide	75.75	334	P	P	06 34 08.6	+2.4
	baz=151						
MAW	Mawson	76.45	164	LR	LR	07 09 02.0	
	comp=Z,539nm,19.1s,baz=232,slow=37						
SUR	Sutherland	76.52	120	LR	LR	07 06 09.0	
	comp=Z,497nm,18.2s,baz=237,slow=34						
SUR	Sutherland	76.52	120	P	P	06 34 11.6	+0.8
ISCO	Idaho Springs	76.65	334	P	P	06 34 13.0	+1.8
	baz=151						
K31A	O'Neill	76.87	340	P	P	06 34 13.5	+1.4
	baz=157						
GMRC	Granite Mounta	76.91	324	P	P	06 34 15.3	+2.8
	baz=142						
ECSD	EROS Data Cent	77.30	342	P	P	06 34 15.2	+0.8
	baz=158						
ECSD	EROS Data Cent	77.30	342	P	P	06 34 15.4	+1.0
	baz=158						
TUQ	Turquoise Moun	77.55	325	P	P	06 34 18.6	+2.4
	baz=142						
RAR	Rarotonga	77.62	253	LR	LR	06 59 55.6	
	comp=Z,269nm,21.9s,baz=110,slow=29						
N23A	Red Feather La	77.73	334	P	P	06 34 19.6	+2.4
	baz=151						
MTPU	Mount Pierson	77.88	329	P	P	06 34 17.0	-1.2
MTPU				IAmb	IAmb	06 34 33.5	
	comp=Z,28nm,1.7s						
GSC	Goldstone, Bar	77.89	324	P	P	06 34 17.7	-0.4
GSC	Goldstone, Bar	77.89	324	P	P	06 34 17.7	-0.4
GSC				pmax	pmax		
	comp=Z,10.0nm,1.5s						

GSC	Goldstone, Bar	77.89	324	P	P	06 34 20.9	+2.9
	baz=142						
PHWY	Pilot Hill	77.90	335	P	P	06 34 17.6	-0.6
O20A	White River Ci	77.96	332	P	P	06 34 20.9	+2.4
	baz=149						
SRU	San Rafael Swe	78.04	330	P	P	06 34 18.5	-0.4
SRU	San Rafael Swe	78.04	330	P	P	06 34 18.5	-0.4
SRU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WIN	Windhoek	78.18	109	IAMs_20	IAMs_20	07 07 04.1	
	comp=Z,804nm,18.0s						
PRN	Pahroc Range	78.69	326	P	P	06 34 21.8	-0.7
MPMC	Manual Prospec	78.83	324	P	P	06 34 25.3	+2.0
	baz=141						
RDMU	Red Mountain	78.86	332	P	P	06 34 24.4	+0.9
RWWY	Rawlins	78.89	334	P	P	06 34 24.4	+0.8
TPNV	Topopah Spring	78.91	325	P	P	06 34 26.5	+2.8
	baz=142						
PKM	Mcpherson Peak	79.14	322	P	P	06 34 27.9	+2.9
	baz=140						
BSUT	Blindstream Ca	79.33	331	P	P	06 34 27.2	+1.0
K22A	Casper	79.47	335	P	P	06 34 27.5	+0.9
K22A				IAmb	IAmb	06 34 43.4	
	comp=Z,56nm,1.9s						
K22A	Casper	79.47	335	P	P	06 34 28.7	+2.0
	baz=150						
K22A	Casper	79.47	335	P	P	06 34 28.0	+1.4
	baz=150						
R11A	Troy Canyon, C	79.70	327	P	P	06 34 30.6	+2.6
	baz=143						
RSSD	Black Hills	79.88	337	P	P	06 34 31.1	+2.2
	baz=152						
RSSD	Black Hills	79.88	337	P	P	06 34 30.2	+1.3
	baz=152						
DUG	Dugway, Tooele	79.92	329	IAMs_20	IAMs_20	07 06 21.1	
	comp=Z,496nm,20.0s						
DUG	Dugway, Tooele	79.92	329	P	P	06 34 31.4	+2.3
	baz=145						
PD31	Pinedale Array	80.72	333	P	P	06 34 32.4	-1.0
PDAR	Pinedale Array	80.72	333	P	P	06 34 33.1	-0.4
	comp=Z,1.0nm,0.7s,baz=151,slow=6.0,SNR=9.5						
	comp=Z,1.0nm,0.7s						
NVAR	Mina Array Bea	81.08	325	P	P	06 34 36.8	+1.3
	comp=Z,1.9nm,0.9s,baz=154,slow=5.4,SNR=12						
	comp=Z,1.9nm,0.9s						
NVAR	Mina Array Bea	81.08	325	P	P	06 34 36.5	+1.0
ELK	Elko	81.45	328	LR	LR	07 07 07.0	
	comp=Z,185nm,20.6s,baz=145,slow=33						
ELK	Elko	81.45	328	P	P	06 34 37.9	+0.5
ELK	Elko	81.45	328	P	P	06 34 37.9	+0.5
ELK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PMOZ	Porto Moniz, M	81.68	44	eLR	LR	07 08 59.1	
PMOZ				A	A	07 13 09.3	
	comp=Z,407nm,16.0s						
BOSA	Boshof	81.69	118	P	P	06 34 39.0	-0.1
	comp=Z,6.5nm,0.8s,baz=238,slow=4.7,SNR=7.4						
BOSA				LR	LR	07 06 32.7	
	comp=Z,418nm,19.4s,baz=212,slow=33						
	comp=Z,6.5nm,0.8s						
BOSA	Boshof	81.69	118	P	P	06 34 39.0	-0.1
RLMT	Red Lodge	82.60	334	P	P	06 34 45.0	+1.6
	baz=148						
TORD	Torodi Ar. Bea	83.08	70	P	P	06 34 45.8	-0.5
	comp=Z,27nm,0.8s,baz=256,slow=4.7,SNR=131						
TORD				LR	LR	07 09 41.9	
	comp=Z,995nm,19.0s,baz=230,slow=34						
	comp=Z,27nm,0.8s						
ULM	Lac du Bonnet	83.20	345	P	P	06 34 45.9	-0.1
	comp=Z,5.0nm,0.8s,baz=185,slow=6.9,SNR=6.7						
	comp=Z,5.0nm,0.8s						
HLID	Hailey	83.36	330	P	P	06 34 49.3	+2.0
	baz=144						
MCMT	McKenzie Canyo	83.75	332	P	P	06 34 50.7	+1.4
LBTB	Lobatse	83.77	115	LR	LR	07 08 40.8	
	comp=Z,824nm,18.6s,baz=192,slow=33						
SCHQ	Schefferville	85.19	3	P	P	06 34 55.5	-0.5
	comp=Z,9.6nm,1.0s,baz=196,slow=5.6,SNR=5.7						
SCHQ				LR	LR	07 14 13.0	
	comp=Z,83nm,20.8s,baz=184,slow=36						
	comp=Z,9.6nm,1.0s						
RTZ	Ruatahuna	85.81	227	IAMs_20	IAMs_20	07 00 31.6	
	comp=Z,459nm,22.0s						
NEW	Newport	88.26	332	LR	LR	07 12 10.7	
	comp=Z,312nm,18.1s,baz=152,slow=34						
MDT	Midelt	89.69	51	LR	LR	07 17 02.5	
	comp=Z,268nm,18.3s,baz=238,slow=37						
PTEO	Sao Teotonio	89.98	45	eP	P	06 35 21.1	+1.5
PBDV	Barranco-do-Ve	90.28	46	eP	P	06 35 22.2	+1.2
PNCL	Nicolau / Gran	90.46	45	eP	P	06 35 22.7	+0.9
PVAQ	Vaqueiros	90.51	46	eLQ	LQ	06 47 28.4	
PVAQ	Vaqueiros	90.51	46	eLR	LR	07 12 07.2	
PVAQ				A	A	07 16 36.3	
	comp=Z,365nm,18.0s						
PMAFR	Mafra	90.54	44	eLQ	LQ	06 47 31.3	
PBEJ	Beja	90.81	45	eP	P	06 35 24.5	+1.1
SFS	San Fernando	90.88	47	IAMs_20	IAMs_20	07 20 10.3	
	comp=Z,512nm,19.0s						
LSZ	Lusaka	90.89	108	LR	LR	07 13 27.0	
	comp=Z,588nm,18.6s,baz=192,slow=34						
AFI	Afiamalu	91.16	253	LR	LR	07 06 10.5	
	comp=Z,334nm,21.8s,baz=125,slow=29						
PSBE	So Bento	91.19	44	eLQ	LQ	06 47 08.5	
PMTG	Montargil	91.25	44	eP	P	06 35 26.2	+0.8
PMTG				A	A	06 35 27.9	
	comp=Z,24nm,1.6s						
PMTG	Montargil	91.25	44	eLQ	LQ	06 46 58.6	
TAM	Tamanrasset	91.37	64	IAMs_20	IAMs_20	07 18 16.0	
	comp=Z,608nm,18.0s						
TAM	Tamanrasset	91.37	64	P	P	06 35 27.2	+0.6
TAM				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PBAR	Barrancos	91.41	46	eP	P	06 35 26.4	+0.2
PESTR	Estremoz	91.51	45	eLQ	LQ	06 46 50.3	
PCAS	Casmilo, Conde	91.71	43	eLQ	LQ	06 46 22.2	
COI	Coimbra	91.86	43	IAMs_20	IAMs_20	07 14 54.2	
	comp=Z,684nm,20.0s						
COI	Coimbra	91.86	43	eLQ	LQ	06 46 52.6	
PMRV	Marv??o	91.98	44	eP	P	06 35 29.0	+0.2
PMRV	Marv??o	91.98	44	eLQ	LQ	06 46 35.4	
PMRV	Marv??o	91.98	44	eLR	LR	07 09 43.8	
PMRV				A	A	07 17 36.9	
	comp=Z,428nm,18.0s						
PCBR	Castelo Branco	92.19	44	eP	P	06 35 30.4	+0.7
MTE	Manteigas	92.50	44	eP	P	06 35 30.8	-0.5
MTE	Manteigas	92.50	44	eLQ	LQ	06 46 28.1	
MTE	Manteigas	92.50	44	eLR	LR	07 10 43.7	
MTE				A	A	07 15 55.4	
	comp=Z,454nm,18.0s						
POLO	Lamas de Olo	92.96	43	eLQ	LQ	06 46 13.0	
PGAV	Gavieira, Arco	93.06	42	eLQ	LQ	06 46 21.7	
PGAV	Gavieira, Arco	93.06	42	eLR	LR	07 12 42.6	
PGAV				A	A	07 15 21.9	
	comp=Z,508nm,20.0s						
MVO	Moncorvo	93.28	43	eLQ	LQ	06 46 44.4	
MVO	Moncorvo	93.28	43	eLR	LR	07 11 06.2	
MVO				A	A	07 16 28.9	
	comp=Z,433nm,18.0s						
PAB	San Pablo	93.91	46	P	P	06 35 38.1	+0.3
PAB				pmax	pmax		
	comp=Z,8.0nm,1.5s						
FRB	Frobisher Bay	94.05	2	LR	LR	07 23 01.6	
	comp=Z,142nm,18.6s,baz=179,slow=39						
ESDC	Sonseca Array	94.23	46	P	P	06 35 39.1	-0.1
	comp=Z,2.4nm,0.9s,baz=256,slow=4.1,SNR=14						
ESDC				LR	LR	07 17 14.9	
	comp=Z,307nm,18.4s,baz=230,slow=35						
	comp=Z,2.4nm,0.9s						
ESDC	Sonseca Array	94.23	46	P	P	06 35 37.9	-1.4
BBB	Bella Bella	95.88	329	LR	LR	07 14 28.1	
	comp=Z,72nm,20.2s,baz=130,slow=33						
SFJD	Kangerlussuaq	98.63	8	LR	LR	07 20 47.3	
	comp=Z,91nm,20.1s,baz=188,slow=36						
YKA	Yellowknife Ar	98.82	341	P	P	06 35 59.0	-0.4
	comp=Z,0.3nm,0.7s,baz=144,slow=5.1,SNR=6.4						
	comp=Z,0.3nm,0.7s						
SSB	Saint Sauveur	102.56	45	IAMs_20	IAMs_20	07 25 04.5	
	comp=Z,500nm,18.0s						
DZM	Mont Dzumac	103.22	234	eLR	LR	07 10 09.3	
	comp=Z,476nm,24.0s						
KIBK	Kibwezi	106.01	103	IAMs_20	IAMs_20	07 21 12.7	
	comp=Z,431nm,18.0s						
TUE	Stuetta	106.08	45	IAMs_20	IAMs_20	07 23 04.5	
	comp=Z,536nm,20.0s						
C36M	Paulatuk	106.56	343	IAMs_20	IAMs_20	07 10 55.3	
	comp=Z,214nm,19.0s						
FUORN	Ofenpass-Fuorn	106.71	45	IAMs_20	IAMs_20	07 23 57.1	
	comp=Z,533nm,20.0s						
AQU	L'Aquila	106.82	51	IAMs_20	IAMs_20	07 28 15.4	
	comp=Z,451nm,19.0s						
EPYK	Eagle Plains	108.33	337	IAMs_20	IAMs_20	07 24 38.3	
	comp=Z,269nm,19.0s						
GERES	GERESS Array B	109.76	44	PKiKP	PKiKP	06 40 51.2	+0.2
	comp=Z,0.9nm,0.8s,baz=279,slow=1.9,SNR=4.5						
CLL	Collm	110.34	42	IAMs_20	IAMs_20	07 29 11.0	
	comp=Z,425nm,19.0s						
CLL	Collm	110.34	42	ePP	PP	06 41 24.0	-3.3
	comp=Z,12nm,1.3s						
CLL				AMS	AMS	06 52 00.0	
CLL				AMS	AMS	07 28 00.0	
	comp=N,200nm,19.5s						
CLL				AMS	AMS	07 28 00.0	
	comp=E,300nm,20.0s						
CLL				AMS	AMS	07 28 00.0	
	comp=Z,400nm,19.0s						
FURI	Furi	112.31	93	IAMs_20	IAMs_20	07 26 17.5	
	comp=Z,451nm,19.0s						
A21K	Barrow	116.93	339	IAMs_20	IAMs_20	07 35 31.5	
	comp=Z,172nm,19.0s						
ATD	Arta Tunnel	117.17	92	IAMs_20	IAMs_20	07 26 50.4	
	comp=Z,320nm,22.0s						
GHAJ	Ghor Haditha	119.04	69	IAMs_20	IAMs_20	07 30 10.7	
	comp=Z,380nm,20.0s						
NACGM	Naroch	119.34	41	ePKP	PKPdf	06 41 06.9	-2.1
	comp=Z,14nm,0.8s,baz=258						
AKASG	Malin Array Be	119.87	46	PKP	PKPdf	06 41 09.1	-1.0
	comp=Z,2.1nm,0.6s,baz=270,slow=2.9,SNR=11						
MNK	Minsk	119.88	41	i PKP	PKiKP	06 41 11.0	+0.9
	comp=E,4.0nm,0.8s						
MNK				i PKP	PKiKP	06 41 11.0	+0.9
	comp=N,30nm,0.8s						
MNK				i PKP	PKiKP	06 41 11.0	+0.9
	comp=Z,20nm,0.7s,baz=78						
MNK				i PP	PP	06 42 35.9	+1.5
MNK				i PPP	PPP	06 45 08.4	
MNK				i SKS	SKSdf	06 48 23.1	+1.6
MNK				i PS	PS	06 52 26.0	+2.2
MNK				i SS	SS	06 58 58.7	-0.8
MNK				i SSS	SSS	07 03 30.4	
MNK				i LR	LR	07 30 37.5	
MNK				i LRM	MLR	07 32 23.6	
	comp=N,148nm,14.8s						
MNK				i LRM	MLR	07 32 45.1	
	comp=E,29nm,17.4s						
MNK				i LRM	MLR	07 32 58.6	
	comp=Z,223nm,18.1s						
MNK	Minsk	119.88	41	i PKIKP	PKiKP	06 41 11.0	+0.9
MNK				i		06 42 35.8	
MNK				i PPP	PPP	06 45 08.4	
MNK				i		06 48 23.0	
MNK				i PS	PS	06 52 25.9	+2.2
MNK				i SS	SS	06 58 58.7	-0.9
MNK				i SSS	SSS	07 03 30.4	
MNK				pmax	pmax		
	comp=N,30nm,0.9s						
MNK				pmax	pmax		
	comp=E,4.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,20nm,0.6s						
MNK				MLR	MLR		
	comp=N,148nm,15.0s						
MNK				MLR	MLR		
	comp=E,29nm,17.0s						
MNK				MLR	MLR		
	comp=Z,223nm,18.0s						
VSU	Vasula	120.00	37⇓	iPKIKP	PKiKP	06 41 10.5	+0.3
BRTR	Keskin Array B	120.15	59	PKP	PKiKP	06 41 11.3	0.0
	comp=Z,1.1nm,0.8s,baz=193,slow=3.8,SNR=5.6						
ASAR	Alice Springs	120.58	208	PKP	PKPdf	06 41 11.4	-1.1
	comp=Z,0.4nm,0.8s,baz=135,slow=1.4,SNR=6.0						
ASAR				PKKPbc	PKKPbc	06 51 18.7	+1.2
	comp=Z,1.1nm,0.9s,baz=333,slow=3.3,SNR=7.9						
WRA	Warramunga Arr	123.71	210	PKP	PKPdf	06 41 17.8	-0.8
	comp=Z,1.4nm,0.8s,baz=158,slow=1.6,SNR=10						
WRA				PKKPbc	PKKPbc	06 51 05.6	+0.2
	comp=Z,1.0nm,1.0s,baz=337,slow=3.8,SNR=5.7						
WRAB	Tennant Creek	123.71	210⇓	iPKIKP	PKPdf	06 41 17.5	-1.1
ANN	Anapa	124.09	54	i PKIKP	PKiKP	06 41 19.7	+1.0
ANN				pmax	pmax		
	comp=Z,14nm,0.6s						
OBN	Obninsk	124.94	42	IAMs_20	IAMs_20	07 35 54.1	
	comp=Z,246nm,20.0s						
OBN	Obninsk	124.94	42	i PKIKP	PKPdf	06 41 19.1	-0.6
OBN				pmax	pmax		
	comp=Z,12nm,0.9s						
OBN				MLR	MLR		
	comp=Z,222nm,19.0s						
H11S2	WAKE ISLAND Hy	125.72	272	T	T	09 00 17.4	
	baz=116,slow=74,SNR=211						
H11S1	WAKE ISLAND Hy	125.74	272	T	T	09 00 03.9	
	baz=116,slow=74,SNR=149						
H11S3	WAKE ISLAND Hy	125.74	272	T	T	09 00 09.1	
	baz=116,slow=74,SNR=157						
KLMR	Klimovskoe	126.64	35	ePKPdf	PKPdf	06 41 21.9	-0.9
KLMR				AMP		06 41 24.4	
	comp=Z,17nm,1.0s						
KLMR				e		06 42 16.6	
KLMR				LQ	LQ	07 30 44.3	
KLMR				LQ	LQ	07 30 44.3	
KLMR				LR	LR	07 34 09.2	
KLMR				AMP		07 40 53.6	
	comp=Z,342nm,18.3s						
KLMR	Klimovskoe	126.64	35	ePKIKP	PKPdf	06 41 21.8	-1.0
KLMR				pmax	pmax		
	comp=Z,17nm,1.0s						
KIV	Kislovodsk	127.66	56	i PKIKP	PKiKP	06 41 27.5	+1.5
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KBZ	Khabaz	127.78	56	PKP	PKPdf	06 41 25.6	0.0
	comp=Z,2.1nm,0.9s,baz=261,slow=7.3,SNR=3.5						
KBZ	Khabaz	127.78	56c	iPKIKP	PKiKP	06 41 25.9	-0.2
BILL	Bilibino	129.74	335	ePKIKP	PKiKP	06 41 29.7	+0.4
BELG	Belogornoye	131.44	45d	iPKIKP	PKiKP	06 41 32.9	-0.2
KIRV	Kirov	131.85	37⇓	iPKIKP	PKiKP	06 41 34.1	+0.3
SEY	Seymchan	137.04	332⇑	ePKIKP	PKPdf	06 41 40.9	-1.5
ARU	Arti	137.13	38	i PKIKP	PKPdf	06 41 43.3	+0.5
ARU						06 44 23.1	
ARU				MLR	MLR		
	comp=Z,301nm,20.0s						
TIXI	Tiksi	137.34	350⇓	iPKIKP	PKPdf	06 41 42.4	-0.3
GEYT	Alibeck	138.58	66	PKP	PKPdf	06 41 44.4	-1.7
	comp=Z,1.4nm,0.2s,baz=222,slow=1.9,SNR=2.1						
NRIK	Noril'sk	139.48	11	PKP	PKPdf	06 41 47.4	+0.6
	comp=Z,1.1nm,0.3s,baz=243,slow=0.8,SNR=3.6						
NRIK	Noril'sk	139.48	11d	iPKIKP	PKiKP	06 41 49.2	+0.2
PCHI	Peechi	144.52	117	eP	PKPab	06 41 54.9	-0.9
BRVK	Borovoye	144.66	40	IAMs_20	IAMs_20	07 47 47.6	
	comp=Z,251nm,19.0s						
BRVK	Borovoye	144.66	40c	iPKIKP	PKPdf	06 41 56.5	+0.1
BVAR	Borovoye Array	144.74	40	PKP	PKPdf	06 41 56.8	+0.3
	comp=Z,31nm,0.8s,baz=298,slow=3.1,SNR=88						
YAK	Yakutsk	145.50	342	ePKIKP	PKPab	06 41 58.3	+0.4
YAK				pmax	pmax		
	comp=Z,54nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
BRZS	Berezniki	147.27	44	ePKPbc	PKPbc	06 42 03.3	0.0
	baz=44						
BRZS	Berezniki	147.27	44	ePKP2	PKPbc	06 42 03.3	0.0
CHM	Chimkent	147.28	58	ePKPbc	PKPbc	06 42 03.6	0.0
	baz=59						
CHM	Chimkent	147.28	58	ePKP2	PKPbc	06 42 03.6	0.0
IUG	Iuzhnay	147.62	59	ePKPbc	PKPbc	06 42 04.7	0.0
	baz=59						
IUG	Iuzhnay	147.62	59	ePKP2	PKPbc	06 42 04.7	0.0
KKAR	Karatay Array	147.81	57	PKIKP	PKPdf	06 42 02.6	+0.5
DZA	Taraz	148.44	57	ePKPbc	PKPbc	06 42 07.2	+0.5
	baz=57						
DZA	Taraz	148.44	57	ePKP2	PKPbc	06 42 07.2	+0.5
YSS	Yuzh-Sakhalins	148.63	311⇑	iPKP2	PKPbc	06 42 06.7	-0.3
BTLS	Baital	149.84	52⇑	iPKPbc	PKiKP	06 42 11.0	-0.1
	baz=52						
BTLS				ePKPab	PKPab	06 42 16.6	+1.0
	baz=52						
BTLS	Baital	149.84	52c	iPKP2	PKiKP	06 42 10.9	-0.1
EKS2	Erkin-Say	150.25	57	P	PKiKP	06 42 12.7	+0.5
	SNR=20						
AML	Almayashu	150.30	58	P	PKiKP	06 42 12.8	+0.1
	SNR=19						
KURBB	Kurchatov Arra	150.32	39	PKP	PKPdf	06 42 06.2	+0.3
	comp=E,2.5nm,1.1s,baz=312,slow=2.9,SNR=10						
KURBB				PKPbc	PKiKP	06 42 11.7	-0.2
	comp=E,23nm,0.8s,baz=304,slow=3.1,SNR=80						
KURBB				PP	PP	06 45 48.8	+2.2
	comp=E,0.9nm,0.8s,baz=297,slow=6.1,SNR=5.0						
KURK	Kurchatov	150.32	39	PKIKP	PKPdf	06 42 06.2	+0.3
KURK						06 42 11.7	
USP	Ospenovka	150.63	55	P	PKiKP	06 42 13.1	+0.2
	SNR=32						
SGDS	Sogindy	150.67	55⇑	iPKPbc	PKiKP	06 42 12.8	-0.2
	baz=55						
SGDS	Sogindy	150.67	55c	iPKIKP	PKiKP	06 42 12.7	-0.2
AAK	Ala-Archa	150.77	56	P	PKiKP	06 42 16.0	+2.7
	SNR=6.7						
AAK	Ala-Archa	150.77	56c	iPKIKP	PKiKP	06 42 13.7	+0.4
CHMS	Chumysh	150.87	56	P	PKiKP	06 42 13.8	+0.5
	SNR=9.8						
UCH	Uchtor	150.88	57	P	PKiKP	06 42 14.7	+0.8
	SNR=26						
KSM	Kuching	150.96	185	IAMs_20	IAMs_20	07 49 16.0	
	comp=Z,212nm,18.0s						
KBK	Karagaybulak	151.09	56	P	PKiKP	06 42 15.1	+1.1
	SNR=11						
ZALV	Zalesovo Beam	151.31	29	PKP	PKPdf	06 42 07.2	-0.1
	comp=Z,3.6nm,0.8s,baz=318,slow=2.0,SNR=13						
ZALV				PKPbc	PKiKP	06 42 14.1	+0.3
	comp=Z,100nm,0.8s,baz=295,slow=3.3,SNR=196						
TKM2	Tokmak 2	151.49	55	P	PKiKP	06 42 15.1	+0.3
	SNR=15						
KUU	Kurty	151.74	53⇑	iPKPbc	PKPbc	06 42 14.9	+0.1
	baz=54						
KUU				i PKPab	PKPab	06 42 24.1	+0.5
	baz=54						
KUU	Kurty	151.74	53c	iPKIKP	PKPbc	06 42 14.8	+0.1
ULHL	Ulahol	152.12	57	P	PKiKP	06 42 17.6	+1.4
	SNR=5.1						
CHKK	Chushkaly	152.20	53	ePKPbc	PKiKP	06 42 16.0	-0.1
	baz=53						
CHKK	Chushkaly	152.20	53	ePKIKP	PKiKP	06 42 15.9	-0.1
BOD	Bodaibo	152.45	353	ePKIKP	PKPbc	06 42 14.9	-0.9
BOD				pmax	pmax		
	comp=Z,16nm,1.6s						
MDOK	Medeo	152.45	54⇓	iPKPbc	PKiKP	06 42 17.2	+0.5
	baz=55						
MDOK				ePKPab	PKPab	06 42 27.4	+0.6
	baz=55						
MDOK	Medeo	152.45	54d	iPKIKP	PKiKP	06 42 17.2	+0.5
KSH	Kashi	152.47	62	PKPbc	PKPdf	06 42 10.2	+0.5
KSH				LR	LR		
	comp=E,270nm,16.5s						
KSH				LR	LR		
	comp=Z,230nm,22.0s						
TDK	Taldyqorghan	152.77	50	ePKPbc	PKiKP	06 42 18.1	+0.9
	baz=50						
TDK				ePKPab	PKPab	06 42 28.3	+0.4
	baz=50						
TDK	Taldyqorghan	152.77	50	ePKIKP	PKiKP	06 42 18.0	+0.9
ZEA	Zeya	152.96	334	ePKIKP	PKiKP	06 42 17.8	+0.6
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.9s						
SATY	Saty	153.43	54	ePKP	PKPdf	06 42 11.4	+0.3
	baz=54						
SATY				ePKPbc	PKiKP	06 42 19.1	+0.4
	baz=54						
SATY				ePKPab	PKPab	06 42 31.1	+0.2
	baz=54						
SATY	Saty	153.43	54	ePKIKP	PKPdf	06 42 11.3	+0.3
KPKS	Kokpek	153.49	53	ePKPbc	PKiKP	06 42 19.1	+0.2
	baz=53						
KPKS				ePKPab	PKPab	06 42 31.4	+0.3
	baz=53						
KPKS	Kokpek	153.49	53	ePKIKP	PKiKP	06 42 19.0	+0.2
UZB	Uzynbulak	153.83	53	ePKPab	PKPab	06 42 32.4	-0.2
	baz=54						
UZB	Uzynbulak	153.83	53	ePKP2	PKPab	06 42 32.3	-0.3
KULM	Kulim	153.92	163	IAMs_20	IAMs_20	07 58 11.1	
	comp=Z,207nm,19.0s						
KLR	Kul'dur	154.09	323⇑	iPKIKP	PKPdf	06 42 12.4	+0.8
SHLS	Shalkode	154.13	53	ePKPab	PKPab	06 42 35.6	+1.8
	baz=53						
SHLS	Shalkode	154.13	53	ePKP2	PKPab	06 42 35.6	+1.8
MJAR	Matsushiro Arr	154.15	291	PKPab	PKPab	06 42 35.3	+1.3
	comp=Z,1.3nm,0.5s,baz=31,slow=4.2,SNR=2.3						
MAKZ	Makanchi	154.23	44	IAMs_20	IAMs_20	07 56 18.0	
	comp=Z,232nm,18.0s						
MK31	Makanchi Array	154.42	44c	ePKIKP	PKPdf	06 42 11.9	-0.3
MKAR	Makanchi Array	154.42	44	PKP	PKPdf	06 42 11.8	-0.3
	comp=Z,1.7nm,0.9s,baz=298,slow=2.6,SNR=12						
MKAR				PKPbc	PKPbc	06 42 20.5	0.0
	comp=Z,6.3nm,0.9s,baz=325,slow=1.9,SNR=27						
MKAR				PKPab	PKPab	06 42 35.8	+1.0
	comp=Z,8.1nm,0.9s,baz=286,slow=4.5,SNR=15						
HEH	HeiHe	155.52	329	eP	PKPab	06 42 35.9	-3.4
HEH				pmax	pmax		
	comp=Z,5.0nm,1.3s						
HEH				pmax	pmax		
	comp=Z,87nm,5.9s						
ZSN	Zaisan	155.55	40	ePKPab	PKPab	06 42 40.2	+0.6
	baz=40						
ZSN	Zaisan	155.55	40	ePKP2	PKPab	06 42 40.2	+0.6
MDJ	Mudanjiang	157.94	315	PKP	PKPdf	06 42 17.7	+0.9
MDJ				PP	PP	06 46 37.7	+8.1
WMQ	Urumqi	159.23	45	eP	PKPdf	06 42 17.6	-0.9
ZAK	Zakamensk	159.92	9	ePKP2	PKPab	06 42 59.5	+1.1
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SONM	Songino Array	162.73	3	PKP	PKPdf	06 42 21.1	-1.0
	comp=Z,0.3nm,0.3s,baz=52,slow=2.4,SNR=2.3						
SONM				PKPab	PKPab	06 43 11.7	+0.9
	comp=Z,3.8nm,0.9s,baz=322,slow=3.6,SNR=9.6						
XLT	XiLinHaoTe	165.22	336	eP	PKPdf	06 42 17.7	-6.8
XLT				pmax	pmax		
	comp=Z,3.0nm,0.6s						
XLT				pmax	pmax		
	comp=Z,47nm,4.4s						
CHTO	Chiang Mai	165.72	143	PKIKP	PKPdf	06 42 23.3	-2.3
GOMU	GeErMu	167.69	59	PKP	PKPdf	06 42 26.8	-0.3
GOMU				pPKP	sPKPdf	06 42 37.8	+5.9
GOMU				sPKP		06 42 43.7	
GOMU				SKS		06 51 16.4	
QIZ	Qiongzhong	168.37	189	PKP	PKPdf	06 42 28.4	+0.9
QIZ				PP	PP	06 47 29.8	+6.0
GTA	Gaotai	168.97	35	eP	PKPdf	06 42 28.7	+1.2
GTA				pP	sPKPdf	06 42 33.2	+0.9
GTA				sP	pPKPdf	06 42 37.4	+6.4
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC	Hu-ho-hao-te	169.34	345	eP	PKPdf	06 42 23.4	-4.3
TNCH	TengChong	170.00	121	eP	PKPdf	06 42 24.7	-3.9
TNCH				pmax	pmax		
	comp=Z,170nm,0.4s						
TNCH				pmax	pmax		
	comp=Z,160nm,0.7s						
NJ2	Nanjing	170.54	282	eP	PKPdf	06 42 27.9	-0.6
NJ2				pP	pPKPdf	06 42 31.3	-0.7
NJ2				sP	sPKPdf	06 42 32.2	-1.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,13nm,0.7s						
CD2	Chengdu	176.39	84	PKP	PKPdf	06 42 29.3	-1.5

MOS ***10*** *06:43:33.3±1.1, 43.°07N×1.°79W, h10km, mb4.4/18, Error ellipse: s-maj=11.6km s-min=4.1km az=50.7*

NEIC ***10*** *06:43:34.6±1.5, 42.°95N±0.°07×1.°74W±0.°09, h3km±5km, mb4.3/14, Mwr4.1/23, Error ellipse: s-maj=11.5km s-min=7.8km az=132.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.69; $M_{\theta\theta}$-1.06; $M_{\phi\phi}$0.36; $M_{r\theta}$-0.93; $M_{\theta\phi}$0.70; $M_{\phi r}$-0.20; Fault plane solution: $M_0$1.50000×10^{15} NP1:ϕ_s148.42000°, δ38.76000°, λ150.60000°. NP2:ϕ_s262.14000°, δ72.10000°, λ55.03000°. Principal axes: T 1.3385, Plg50.0000°, Azm133.0000°; N 0.2850, Plg33.0000°, Azm274.0000°; P -1.6235, Plg20.0000°, Azm18.0000°;*

IDC ***10*** *06:43:34.5±0.7, 42.°86N×1.°52W, h0km, mb3.9/13, mbtmp4.0/20, ML3.9/7, MS3.3/10 Error ellipse: s-maj=19.2km s-min=11.7km az=122.0*

NEIC ***10*** *06:43:34.3, 42.°95N×1.°75W, h1km*

STR ***10*** *06:43:34.3±0.8, 43°N±5°×°±°, h2km, MLv4.8/54, Error ellipse: s-maj=0.0km s-min=0.0km az=40.6, preliminary*

MED_RC ***10*** *06:43:34.0±0.5, 42.°97N×1.°75W, h17km±3km, MW4.1/8,* *Moment Tensor Solution.Mantle waves: s8,c12; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.18±.40; $M_{\theta\theta}$1.31±.30; $M_{\phi\phi}$-1.13±.23; $M_{r\theta}$-1.02±.54; $M_{\theta\phi}$-1.34±.23; $M_{\phi r}$-0.13±.42; Best double couple: $M_0$2.07000×10^{15} NP1:ϕ_s249.00000°,δ89.00000°,λ151.00000°. NP2: ϕ_s340.00000°,δ61.00000°,λ1.00000°. Principal axes: T 2.2300, Plg21.0000°, Azm201.0000°; N -0.3300, Plg61.0000°, Azm68.0000°; P -1.9100, Plg19.0000°, Azm298.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*SFS **10** 06:43:34.3, 43°.25N×1°.59W, h21^{km}, mB5.0/9, mb4.7/23, ML5.0/25, ML5.2/22, MLv5.1/25, Mw(mB)4.3/9*

*LDG **10** 06:43:34.1±0.1, 42°.91N×1°.65W, h12^{km}, Md4.4/6, Ml4.6/74, Error ellipse: s-maj=1.9km s-min=1.3km az=130.0*

*BGS **10** 06:43:36.4±1.3, 43°.02N×1°.66W, h10^{km}, ML4.3, ML4.3*

*INMG **10** 06:43:36.7±2.6, 42°.92N×1°.55W, h15^{km}±3^{km}, ML4.3, Error ellipse: s-maj=2.7km s-min=2.3km az=126.0*

*MDD **10** 06:43:37.6±0.1, 42°.92N×1°.57W, h12^{km}, mb_Lg4.4/38, Error ellipse: s-maj=1.0km s-min=0.8km az=135.0*

*IGIL **10** 06:43:37.7, 42°.85N×1°.61W, h1^{km}*

ISC 10 06:43:33.4±0.9, **42°.93N**±0°.02×**1°.65W**±0°.02, **h2**^{km}±5^{km}, **n532**, σ**2^{s}46**/859, **mb4.2**/36, **MS3.4**/6, **20C-36D**, **Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EORO	**Oroz-Betelu**	0.25	99	⇓Pg	Pg	06 43 39.4	+1.1
EORO				Sg	Sg	06 43 43.0	+1.4
EALK	**Alkurruntz**	0.30	20	⇑Pg	Pb	06 43 42.3	+0.6
EALK				Sg	Sb	06 43 47.2	+0.1
EALK				*i* Vmb_Lg		06 43 50.6	
EALK	**Alkurruntz**	0.30	20	Pg	Pb	06 43 41.6	-0.1
EALK				Sg	Sb	06 43 47.3	+0.1
SJPF	**Ste Jean**	0.36	60	*e*Pg	Pb	06 43 42.3	-0.3
SJPF	**Ste Jean**	0.36	60	*e*P	Pb	06 43 43.2	+0.6
SJPF				*e*Sg	Sg	06 43 47.5	+2.5
	31μm,0.6s						
ATE	**Arette**	0.71	77	Pg	Pb	06 43 48.4	-0.2
ATE				Sg	Sg	06 43 57.4	+1.1
ETSF	**Etsaut**	0.80	92	*e*Pg	Pg	06 43 49.4	+0.6
ETSF				*e*Sg	Sg	06 43 59.8	+0.6
	6μm,0.6s						
TERF	**Tercis-les-Bai**	0.84	28	⇑Pg	Pn	06 43 52.4	0.0
CANF	**Canfranc**	0.85	101	Pg	Pg	06 43 50.4	+0.7
PYLO	**Lourdes**	1.19	82	Pg	Pb	06 43 56.8	+0.1
PYLO				Sg	Sn	06 44 13.8	-0.1
VIEF	**Viey**	1.23	92	Pg	Pn	06 43 56.7	-1.1
VIEF				Sg	Sn	06 44 14.6	-0.5
ECHI	**Chisagues Biel**	1.39	101	Pg	Pb	06 43 59.7	-0.4
ECHI				Sg	Sg	06 44 18.4	+0.4
ECHI	**Chisagues Biel**	1.39	101	Pn	Pn	06 43 59.6	-0.4
ECHI				Sg	Sg	06 44 20.5	+2.5
EPF	**Esparros**	1.46	86	*e*Pg	Pb	06 44 01.5	+0.1
EPF				*e*Sg	Sb	06 44 20.3	-0.2
	5μm,0.6s						
EPF	**Esparros**	1.46	86	P	Pb	06 44 01.7	+0.3
ESAC	**San Caprasio**	1.50	144	Pg	Pg	06 44 02.2	+0.1
ESAC				Sg	Sg	06 44 23.1	+1.6
MLS	**Moulis**	2.02	88	Pn	Pb	06 44 09.8	-1.0
MLS				Pg	Pg	06 44 12.3	+0.3
MLS				Sn	Sg	06 44 38.3	+0.1
SALF	**Salau**	2.10	94	Pn	Pb	06 44 12.5	+0.3
SALF				Sn	Sg	06 44 40.5	-0.3
ETOR	**Torete**	2.13	188	Pn	Pb	06 44 11.8	-1.1
ETOR				Pg	Pg	06 44 15.5	+1.1
ETOR				Sn	Sb	06 44 38.6	-1.2
ETOR				Sg	Sg	06 44 44.2	+2.2
ETOR				*i* Vmb_Lg		06 44 44.6	
LRVF	**chteau la Riv**	2.23	25	Pn	Pb	06 44 13.8	-0.7
LRVF				Pg	Pg	06 44 17.8	+1.5
PAND	**Andorre**	2.39	99	Pn	Pb	06 44 16.3	-1.0
PAND				Sn	Sb	06 44 48.2	+0.9
ERTA	**Horta de San J**	2.47	142	Pn	Pn	06 44 15.2	+0.5
ERTA				Pg	Pg	06 44 22.9	+2.2
ERTA				Sg	Sg	06 44 51.3	-1.5
ERTA				*i* Vmb_Lg		06 45 01.5	
MONQ	**Montcuq**	2.51	54	Pn	Pn	06 44 16.2	+0.9
MONQ				Pg	Pb	06 44 18.3	-1.0
MONQ				Sn	Sn	06 44 48.1	+1.5
EMIR	**Miracle**	2.56	112	Pn	Pn	06 44 17.2	+1.1
EMIR				Pg	Pg	06 44 22.3	-0.2
EMIR				Sn	Sn	06 44 45.8	-2.1
EMIR				Sg	Sg	06 44 55.8	0.0
EMIR				*i* Vmb_Lg		06 45 10.9	
EPOB	**Poblet**	2.57	127	Pn	Pn	06 44 16.5	+0.3
EPOB				Pg	Pg	06 44 22.1	-0.6
EPOB				Sn	Sn	06 44 46.1	-2.0
EPOB				Sg	Sg	06 44 53.8	-2.3
EPOB				*i* Vmb_Lg		06 45 12.6	
EARI	**Arriondas**	2.63	279	Pn	Pb	06 44 19.9	-1.4
EARI				Pg	Pg	06 44 25.0	+1.2
EARI				Sn	Sn	06 44 50.8	+1.3
EARI				Sg	Sb	06 44 54.4	+0.3
LFF	**La Frestale**	2.65	40	*e*Pn	Pn	06 44 15.7	-1.4
LFF	**La Frestale**	2.65	40	*e*P	Pb	06 44 19.9	-1.6
LFF				*e*Sn	Sn	06 44 45.7	-4.1
	346nm,0.4s						
LFF				*e*Sg	Sg	06 44 58.6	+0.2
	2μm,0.5s						
EMOS	**Mosqueruela**	2.72	161	Pn	Pb	06 44 20.1	-2.7
EMOS				Pg	Pg	06 44 23.1	-2.4
EMOS				Sg	Sg	06 44 59.3	-1.4
EMOS				*i* Vmb_Lg		06 45 10.7	
FNEB	**Nbias**	2.76	89	Pn	Pb	06 44 22.2	-1.3
CARF	**Carcanieres**	2.77	93	Pn	Pb	06 44 22.7	-1.0
MTLF	**Montolieu**	2.86	81	*e*P	Pn	06 44 20.8	+0.7
MTLF	**Montolieu**	2.86	81	*e*Pg	Pg	06 44 27.7	-0.5
MTLF				*e*Sn	Sn	06 44 49.8	-5.3
MTLF				*e*Sg	Sg	06 45 04.1	-1.2
	797nm,0.5s						
MTLF	**Montolieu**	2.86	81	Pn	Pn	06 44 21.0	+0.9
UCM	**Universidad Co**	2.88	205	Pg	Pg	06 44 29.5	+0.8
UCM				Pn	Pn	06 44 21.8	+1.3
UCM				Sg	Sg	06 45 11.6	+5.6
GUD	**Guadarrama**	2.96	220	P	Pn	06 44 23.3	+1.8
GUD				SN	Sn	06 44 57.9	+0.2
GUD	**Guadarrama**	2.96	220	Pn	Pn	06 44 23.3	+1.8
GUD				Pg	Pg	06 44 32.0	+1.9
GUD				Sn	Sn	06 44 58.3	+0.7
GUD				Sg	Sg	06 45 08.1	-0.3
GUD				*i* Vmb_Lg		06 45 13.4	
FILF	**Fillols**	3.12	95	Pn	Pn	06 44 25.3	+1.5
RJF	**Les Rejaudoux**	3.29	43	*e*Pn	Pn	06 44 25.5	-0.5
RJF	**Les Rejaudoux**	3.29	43	*e*P	Pn	06 44 28.2	+2.2
RJF				*e*Sn	Sn	06 45 01.6	-4.1
	724nm,0.4s						
RJF				*e*Sg	Sg	06 45 19.0	-0.1
	456nm,0.4s						
CHIF	**Chize**	3.32	15	*e*P	Pn	06 44 27.4	+1.1
CHIF				IAML		06 45 27.0	
	comp=E,407nm,0.4s						
CHIF				IAML		06 45 37.5	
	comp=N,589nm,0.6s						
CHIF	**Chize**	3.32	15	Pn	Pn	06 44 28.2	+1.8
CHIF				Pg	Pg	06 44 38.0	+1.0
CHIF				Sg	Sg	06 45 22.3	+2.3
CAF	**Calviac**	3.34	52	*e*P	Pn	06 44 26.8	+0.1
CAF				*e*Sn	Sn	06 45 04.9	-2.1
	comp=N,620nm,0.4s						
CAF	**Calviac**	3.34	52	P	Pn	06 44 26.2	-0.5
SJAF	**Saint Jean de**	3.37	96	Pn	Pn	06 44 29.4	+2.3
SJAF				Pg	Pg	06 44 37.6	-0.4
ECHE	**Chera**	3.38	171	Pg	Pg	06 44 38.0	-0.2
ECHE				Pn	Pn	06 44 28.7	+1.4
ECHE	**Chera**	3.38	171	Pn	Pn	06 44 29.1	+1.8
ECHE				Pg	Pg	06 44 38.0	-0.2
ECHE				Sg	Sg	06 45 18.7	-3.3
ECHE				*i* Vmb_Lg		06 45 34.2	
EJON	**La Jonquera**	3.38	97	Pn	Pn	06 44 29.4	+2.1
EJON				Pg	Pg	06 44 38.2	0.0
EJON				Sn	Sn	06 45 06.9	-1.1
EJON				Sg	Sb	06 45 18.0	+2.3
EJON				*i* Vmb_Lg		06 45 30.1	
CLAF	**Gruissan**	3.48	85	Pn	Pn	06 44 30.8	+2.2
ECOL	**Islas Columbre**	3.50	149	Pn	Pn	06 44 29.6	+0.7
ECOL				Pg	Pg	06 44 39.7	-0.8
ECOL				Sg	Sg	06 45 25.0	-1.0
EJUZ	**Juzbado, Salam**	3.66	241	⇓Pn	Pn	06 44 32.9	+1.8
EJUZ				Sn	Sn	06 45 14.7	-0.1
EJUZ				Sg	Sg	06 45 29.3	-1.6
EVIV	**Cofrentes, Val**	3.69	174	Pn	Pn	06 44 33.2	+1.8
EVIV				Sn	Sn	06 45 13.5	-2.1
EVIV				Sg	Sg	06 45 28.2	-3.6
EVIV				*i* Vmb_Lg		06 45 38.2	
ESBB	**Sonseca Array**	3.69	209		Pn	06 44 32.5	+0.9
ESBB				Sn	Sn	06 45 16.4	+0.7
ESDC	**Sonseca Array**	3.69	209	Pn	Pn	06 44 32.5	+0.9
	comp=N,7.1nm,0.3s,baz=33,slow=13,SNR=183						
ESDC				Sn	Sn	06 45 14.0	-1.8
	comp=N,22nm,0.3s,baz=33,slow=23,SNR=4.9						
ESDC				Lg	Lg	06 45 30.9	
	comp=N,67nm,0.3s,baz=29,slow=29,SNR=17						
	comp=N,15nm,0.4s						
ESDC	**Sonseca Array**	3.69	209	Pn	Pn	06 44 31.9	+0.3
ESDC	**Sonseca Array**	3.69	209	⇑Pn	Pn	06 44 32.4	+0.8
ESDC				Pg	Pg	06 44 41.9	-2.3
ESDC				Sn	Sn	06 45 15.1	-0.6
ESDC				Sg	Sg	06 45 30.1	-2.0
ESDC				*i* Vmb_Lg		06 45 38.5	
MFF	**Saint Martin d**	3.82	16	*e*Pn	Pn	06 44 31.8	-1.5
MFF	**Saint Martin d**	3.82	16	*e*P	Pn	06 44 35.4	+2.1
MFF	**Saint Martin d**	3.82	16	*e*Pg	Pg	06 44 46.5	-0.1
MFF				*e*Sn	Sn	06 45 14.6	-4.2
	comp=N,192nm,0.3s						
MFF				*e*Sg	Sg	06 45 36.2	+0.1
	comp=N,431nm,0.5s						
MFF	**Saint Martin d**	3.82	16	P	Pn	06 44 32.6	-0.7
MFF	**Saint Martin d**	3.82	16	Pn	Pn	06 44 34.7	+1.4
MFF	**Saint Martin d**	3.82	16	Pg	Pg	06 44 47.5	+0.9
ECAL	**Calabor**	3.89	257	⇓Pn	Pn	06 44 36.5	+2.2
ECAL				Sn	Sn	06 45 23.0	+2.3
ECAL				Sg	Sg	06 45 41.9	+3.4
ECAL				*i* Vmb_Lg		06 45 47.5	
PBRG	**Braganca**	3.94	255	⇓*i*Pn	Pn	06 44 37.0	+2.1
PBRG				*e*Sg	Sg	06 45 39.4	-0.5
PBRG				A	A	06 45 46.9	
	comp=N,262nm,0.6s						
PAB	**San Pablo**	3.95	212	Pn	Pn	06 44 36.2	+1.1
PAB				Sn	Sn	06 45 21.5	-0.6
PAB	**San Pablo**	3.95	212	P	Pn	06 44 36.3	+1.1
PAB						06 45 21.5	
PAB	**San Pablo**	3.95	212	⇑Pn	Pn	06 44 36.1	+1.0
PAB				Pg	Pg	06 44 47.2	-1.9
PAB				Sn	Sn	06 45 22.3	+0.2
PAB				Sg	Sg	06 45 38.5	-1.7
PAB				*i* Vmb_Lg		06 45 52.4	
EPON	**Pontenova**	4.04	277	Pn	Pn	06 44 39.3	+2.9
EPON				Pg	Pg	06 44 49.5	-1.4
EPON				Sn	Sn	06 45 26.1	+1.8
EPON				*i* Vmb_Lg		06 45 59.8	
LASF	**Ste Croix**	4.17	72	*e*P	Pn	06 44 38.1	0.0
LASF	**Ste Croix**	4.17	72	*e*Pg	Pg	06 44 51.5	-1.8
LASF				*e*Sn	Sn	06 45 21.2	-6.1
	comp=N,426nm,0.6s						
LASF				*e*Sg	Sg	06 45 45.9	-1.3
	comp=N,504nm,0.6s						
ETOB	**Tobarra**	4.29	179	Pn	Pn	06 44 41.8	+2.0
ETOB				Pg	Pg	06 44 54.3	-1.2
ETOB	**Tobarra**	4.29	179	Pn	Pn	06 44 41.7	+1.9
ETOB				Sn	Sn	06 45 28.9	-1.5
ETOB				Sg	Sg	06 45 50.1	-1.0
ETOB				*i* Vmb_Lg		06 46 09.0	
TCF	**Toulx Ste Croi**	4.34	38	*e*Pn	Pn	06 44 39.4	-1.1
TCF	**Toulx Ste Croi**	4.34	38	*e*P	Pn	06 44 42.3	+1.8
TCF				*e*Sn	Sn	06 45 27.1	-4.6
	comp=N,418nm,0.5s						
TCF				*e*Sg	Sg	06 45 51.7	-1.1
	comp=N,466nm,0.6s						
TCF	**Toulx Ste Croi**	4.34	38	P	Pn	06 44 39.6	-0.9
AFON	**Font Roja**	4.35	168	Pn	Pn	06 44 42.8	+2.2
AFON				Sg	Sg	06 45 52.8	-0.3
AFON				*i* Vmb_Lg		06 45 58.9	
PYM	**Petit Puy Mans**	4.37	48	Pn	Pn	06 44 41.2	+0.3
PYM	**Petit Puy Mans**	4.37	48	Sn	Sn	06 45 33.4	+0.9
MVO	**Moncorvo**	4.38	248	⇓*i*Pn	Pn	06 44 43.0	+2.0
MVO				*e*Sn	Sn	06 45 33.9	+1.3
MVO				*e*Sg	Sg	06 45 51.2	-2.8
MVO				A	A	06 45 56.3	
	comp=N,671nm,0.6s						
EPLA	**Plasencia**	4.39	231	Pn	Pn	06 44 42.4	+1.2
EPLA				Sn	Sn	06 45 31.9	-1.0
EPLA				Sg	Sg	06 45 53.7	-0.8
EPLA				*i* Vmb_Lg		06 46 04.2	
EBEN2	**Beniarda presa**	4.40	165	Pn	Pn	06 44 42.7	+1.5
EBEN2				Pg	Pb	06 44 53.6	+2.2
EBEN2				Sg	Sg	06 45 52.7	-1.9
EBEN2				*i* Vmb_Lg		06 46 07.7	
PSIM	**Granatula de C**	4.41	202	Pn	Pn	06 44 41.3	-0.1
PSIM				Sn	Sn	06 45 31.7	-1.7
PSIM				Sg	Sg	06 45 52.1	-3.0
CFF	**Clermont-Ferra**	4.43	49	Pn	Pn	06 44 44.0	+2.3
EIBI	**Ibiza**	4.51	149	P	Pn	06 44 42.7	-0.2
EIBI	**Ibiza**	4.51	149	Pn	Pn	06 44 42.6	-0.2
EIBI				Sn	Sn	06 45 35.7	-0.1
ETOS	**Mallorca**	4.62	132	P	Pn	06 44 44.4	+0.2
ETOS				S	Sn	06 45 36.9	-1.6
ETOS	**Mallorca**	4.62	132	Pn	Pn	06 44 44.5	+0.2
ETOS				Sn	Sn	06 45 37.2	-1.2
EAGO	**Agolada(Pontev**	4.73	271	⇓Pn	Pn	06 44 48.0	+2.1
EAGO				Sn	Sn	06 45 44.5	+3.1
EAGO				*i* Vmb_Lg		06 46 24.3	
PVRL	**Vila Real**	4.81	252	⇓*e*Pn	Pn	06 44 48.6	+1.7
PVRL				*e*Sg	Sg	06 46 06.5	-1.3
PVRL				A	A	06 46 22.9	
	comp=N,417nm,0.5s						
POLO	**Lamas de Olo**	4.83	253	⇓*i*Pn	Pn	06 44 48.9	+1.7
POLO				*e*Sn	Sn	06 45 43.8	+0.1
POLO				*e*Sg	Sg	06 46 08.8	+0.4
POLO				A	A	06 46 25.8	
	comp=N,203nm,0.6s						
BGF	**Bois d'Agland**	4.84	40	*e*Pn	Pn	06 44 46.2	-1.0
BGF	**Bois d'Agland**	4.84	40	*e*P	Pn	06 44 49.0	+1.8
BGF				*e*Sn	Sn	06 45 38.4	-5.4
	comp=N,796nm,0.3s						
BGF				*e*Sg	Sg	06 46 07.1	-1.6
	comp=N,1μm,0.5s						
ELOB	**Lobios**	4.87	260	⇓Pn	Pn	06 44 49.3	+1.6
ELOB				Sn	Sn	06 45 45.6	+0.9
ELOB				Sg	Sg	06 46 09.6	-0.1
ELOB				*i* Vmb_Lg		06 46 15.7	
PCAB	**Cabril**	4.88	258	⇓*e*Pn	Pn	06 44 49.7	+1.8
PCAB				*e*Sg	Sg	06 46 08.8	-1.5
PCAB				A	A	06 46 19.4	
	comp=N,305nm,0.8s						
ETRV	**Los Montesinos**	4.96	172	Pn	Pn	06 44 51.1	+2.2
VIVF	**Saint-Julien-l**	4.96	65	*e*P	Pn	06 44 50.0	+1.1
VIVF				*e*Sn	Sn	06 45 40.7	-6.2
	comp=N,296nm,0.6s						
PGAV	**Gavieira, Arco**	4.99	261	⇑*e*Pn	Pn	06 44 51.4	+1.9
PGAV				*e*Sg	Sg	06 46 12.7	-1.1
PGAV				A	A	06 46 31.8	
	comp=N,230nm,0.5s						
SAUF	**chteau de Sau**	5.02	76	Pn	Pn	06 44 52.3	+2.5
SSB	**Saint Sauveur**	5.04	60	Pn	Pn	06 44 50.4	+0.3
SSB				Sn	Sn	06 45 50.9	+2.0
SSB	**Saint Sauveur**	5.04	60	P	Pn	06 44 50.4	+0.3
SSB						06 45 50.9	
SSB	**Saint Sauveur**	5.04	60	Pn	Pn	06 44 50.9	+0.8
EZAR	**Zarzadilla de**	5.05	180	Pn	Pn	06 44 52.6	+2.2
EZAR				Sg	Sg	06 46 20.1	+4.3
EZAR				*i* Vmb_Lg		06 46 27.6	
MTE	**Manteigas**	5.09	242	⇓*e*Pn	Pn	06 44 51.7	+0.9
MTE				*e*Sn	Sn	06 45 49.3	-0.8
MTE				*e*Sg	Sg	06 46 12.4	-4.5
MTE				A	A	06 46 19.0	
	comp=N,504nm,0.6s						
QUIF	**Quistinic**	5.09	348	*e*P	Pn	06 44 52.3	+1.5
QUIF				*e*Sn	Sn	06 45 45.0	-5.2
	comp=N,260nm,0.3s						
QUIF				*e*Sg	Sg	06 46 15.6	-1.4
	comp=N,130nm,0.4s						
EMUR	**La Murta**	5.10	176	Pn	Pn	06 44 52.9	+2.0
EMUR				Pg	Pg	06 45 08.3	-2.8
EMUR	**La Murta**	5.10	176	Pn	Pn	06 44 52.9	+2.0
EMUR				Sn	Sn	06 45 51.0	+0.7
EMUR				Sg	Sg	06 46 15.8	-1.3
EMUR				*i* Vmb_Lg		06 46 28.1	
PVIS	**Viseu**	5.16	247	⇑*e*Pn	Pn	06 44 53.1	+1.3
PVIS				*e*Sn	Sn	06 45 51.7	-0.3
PVIS				*e*Sg	Sg	06 46 16.6	-2.7
PVIS				A	A	06 46 32.4	
	comp=N,228nm,0.5s						
EQES	**Quesada**	5.24	192	Pn	Pn	06 44 54.7	+1.8
EQES				Pg	Pg	06 45 13.8	0.0
EQES				Sn	Sn	06 45 55.7	+1.8
EQES				Sg	Sg	06 46 20.9	-0.8
EQES				*i* Vmb_Lg		06 46 27.8	
AVF	**Avril sur Loir**	5.25	41	*e*Pn	Pn	06 44 51.6	-1.2
AVF	**Avril sur Loir**	5.25	41	*e*P	Pn	06 44 55.6	+2.8
AVF				*e*Sn	Sn	06 45 48.4	-5.5
	comp=N,212nm,0.4s						
AVF				*e*Sg	Sg	06 46 19.8	-2.0
	comp=N,638nm,0.8s						
AVF	**Avril sur Loir**	5.25	41	P	Pn	06 44 52.1	-0.7
EADA	**Adamuz**	5.26	206	S	Sn	06 45 53.0	-1.4
EADA				P	Pn	06 44 54.6	+1.5
EADA				Sg	Sg	06 46 21.5	-0.7
EADA	**Adamuz**	5.26	206	Pn	Pn	06 44 54.6	+1.5
EADA				Sn	Sn	06 45 52.9	-1.4
EADA				Sg	Sg	06 46 20.3	-1.9
EADA				*i* Vmb_Lg		06 46 30.4	
TLOR	**Lorca, Murcia**	5.27	180	P	Pn	06 44 55.1	+1.9
TLOR				Sg	Sg	06 46 21.5	-1.2
TLOR	**Lorca, Murcia**	5.27	180	Sg	Sg	06 46 15.7	-7.0
HYF	**Humbligny**	5.29	34	*e*Pn	Pn	06 44 52.1	-1.4
HYF	**Humbligny**	5.29	34	*e*P	Pn	06 44 56.1	+2.6
HYF	**Humbligny**	5.29	34	*e*Pg	Pg	06 45 13.6	-1.2
HYF				*e*Sn	Sn	06 45 49.8	-5.2
HYF				*e*Sg	Sg	06 46 21.4	-1.9
RUSF	**Rustrel**	5.29	77	Pn	Pn	06 44 54.6	+1.1
SGMF	**Saint Gilles**	5.36	354	*e*P	Pn	06 44 55.7	+1.3
SGMF	**Saint Gilles**	5.36	354	*e*Pg	Pg	06 45 14.9	-1.2
SGMF				*e*Sn	Sn	06 45 51.6	-5.1
	comp=N,113nm,0.4s						
SGMF				*e*Sg	Sg	06 46 23.7	-1.8
	comp=N,166nm,0.5s						
PCBR	**Castelo Branco**	5.36	237	⇑*e*Pn	Pn	06 44 55.4	+0.9
PCBR				*e*Sn	Sn	06 45 55.2	-1.6
PCBR				*e*Sg	Sg	06 46 22.6	-3.0
PCBR				A	A	06 46 38.9	
	comp=N,248nm,0.6s						
SMRF	**Simiane la Rot**	5.36	76	*e*P	Pn	06 44 55.7	+1.2
SMRF				*e*Sn	Sn	06 45 53.1	-3.8
	comp=N,316nm,1.1s						
SMRF				*e*Sg	Sg	06 46 23.2	-2.4
	comp=N,887nm,1.4s						
CART	**Cartagena**	5.36	174	Pn	Pn	06 44 55.0	+0.5
CART	**Cartagena**	5.36	174	P	Pn	06 44 56.2	+1.7
CART				S	Sn	06 45 55.1	-1.7
CART	**Cartagena**	5.36	174	P	Pn	06 44 55.5	+1.0
EMAZ	**Mazaricos**	5.38	273	Pn	Pn	06 44 56.5	+1.8
EMAZ				Sn	Sn	06 45 55.9	-1.3
EMAZ				*i* Vmb_Lg		06 46 45.2	
MAHO	**Mahon**	5.38	122	Pn	Pn	06 44 55.8	+1.0
MAHO	**Mahon**	5.38	122	P	Pn	06 44 55.3	+0.6
MAHO				S	Sn	06 45 53.8	-3.6
SMF	**Signal de Mont**	5.39	45	*e*Pn	Pn	06 44 53.3	-1.5
SMF	**Signal de Mont**	5.39	45	*e*P	Pn	06 44 57.2	+2.4
SMF				*e*Sn	Sn	06 45 51.7	-5.8
	comp=N,240nm,0.6s						
SMF				*e*Sg	Sg	06 46 24.3	-2.2
	comp=N,427nm,0.8s						
BSTF	**la Bastide-des**	5.40	77	Pn	Pn	06 44 57.3	+2.3
LEPF	**PUYLOUBIER**	5.41	81	Pn	Pn	06 44 55.9	+0.8
PTO	**Porto**	5.48	253	*e*Pn	Pn	06 44 57.7	+1.6
PTO				*e*Sg	Sg	06 46 27.3	-2.1
PTO				A	A	06 46 31.8	
	comp=N,271nm,0.6s						
GRR	**Gorron**	5.48	6	*e*Pn	Pn	06 44 54.7	-1.4
GRR	**Gorron**	5.48	6	*e*P	Pn	06 44 58.8	+2.7
GRR	**Gorron**	5.48	6	*e*Pg	Pg	06 45 17.2	-1.3
GRR				*e*Sn	Sn	06 45 54.2	-5.5
	comp=N,171nm,0.4s						
GRR				*e*Sg	Sg	06 46 27.6	-1.9
	comp=N,605nm,0.7s						
ARTF	**Artigues**	5.48	81	Pn	Pn	06 44 57.2	+1.1
MLYF	**Mely**	5.50	76	Pn	Pn	06 44 57.6	+1.1
SSF	**Saint Saulge**	5.51	40	*e*Pn	Pn	06 44 55.3	-1.2
SSF	**Saint Saulge**	5.51	40	*e*P	Pn	06 44 57.9	+1.4
SSF				*e*Sn	Sn	06 45 54.7	-5.8
	comp=N,221nm,0.5s						
SSF				*e*Sg	Sg	06 46 28.1	-2.3
	comp=N,275nm,0.6s						
SSF	**Saint Saulge**	5.51	40	P	Pn	06 44 55.3	-1.2
ROSF	**Rostrenen**	5.52	349	*e*P	Pn	06 44 58.2	+1.6
ROSF				*e*Sn	Sn	06 45 55.6	-5.1
	comp=N,131nm,0.4s						
ROSF				*e*Sg	Sg	06 46 29.2	-1.5
	comp=N,241nm,0.7s						
ROSF	**Rostrenen**	5.52	349	*e*P	Pn	06 44 57.7	+1.0
ROSF				*e*S	Sn	06 45 55.0	-5.7
ROSF				IAML		06 46 04.0	
	comp=N,68nm,0.4s						
ROSF				IAML		06 46 40.6	
	comp=E,151nm,0.6s						
ROSF	**Rostrenen**	5.52	349	Pn	Pn	06 44 58.0	+1.4
PMRV	**Marv??o**	5.57	233	⇓*e*Pn	Pn	06 44 58.3	+1.0
PMRV				*e*Sn	Sn	06 46 01.0	-0.9
PMRV				*e*Sg	Sg	06 46 32.0	-0.3
PMRV				A	A	06 46 41.3	
	comp=E,363nm,0.6s						
ECAB	**El Cabril**	5.64	212	S	Sn	06 46 01.3	-2.4
ECAB				P	Pn	06 44 59.5	+1.1
ECAB				Sg	Sg	06 46 32.7	-1.8
ECAB	**El Cabril**	5.64	212	Pn	Pn	06 44 59.4	+1.1
ECAB				Sn	Sn	06 46 01.4	-2.2
ECAB				Sg	Sg	06 46 35.7	+1.2
ECAB				*i* Vmb_Lg		06 46 47.1	
BLAF	**les Blancs**	5.70	77	Pn	Pn	06 44 60.0	+0.9
COI	**Coimbra**	5.76	244		Pn	06 45 00.6	+0.7
COI	**Coimbra**	5.76	244	P	Pn	06 45 00.6	+0.7
COI	**Coimbra**	5.76	244	*e*Pn	Pn	06 45 01.6	+1.7
COI				*e*Sn	Sn	06 46 04.3	-2.2
COI				*e*Sg	Sg	06 46 35.2	-3.1
COI				A	A	06 46 41.3	
	comp=E,564nm,0.6s						
LDF	**La Druitiere**	5.76	10	*e*Pn	Pn	06 44 58.7	-1.2
LDF	**La Druitiere**	5.76	10	*e*P	Pn	06 45 02.8	+2.9
LDF	**La Druitiere**	5.76	10	*e*Pg	Pg	06 45 22.2	-1.6
LDF				*e*Sn	Sn	06 46 01.1	-5.5
	comp=E,106nm,0.4s						
LDF				*e*Sg	Sg	06 46 36.1	-2.3
	comp=E,582nm,0.8s						
CLF	**Chambon-Foret**	5.79	27	Pn	Pn	06 45 01.8	+1.5
ORIF	**Oris-en-Rattie**	5.79	67	*e*P	Pn	06 45 01.8	+1.4
ORIF				*e*Sn	Sn	06 46 03.8	-3.6
	comp=E,141nm,0.6s						
ORIF	**Oris-en-Rattie**	5.79	67	Pn	Pn	06 45 01.5	+1.1
GRN	**Grenoble**	5.80	64	Pn	Pn	06 45 02.0	+1.3
EBAD	**Badajoz**	5.83	226	Sg	Sg	06 46 37.9	-2.6
EBAD				P	Pn	06 45 01.7	+0.9
EBAD	**Badajoz**	5.83	226	Pn	Pn	06 45 01.5	+0.6
EBAD				Sn	Sn	06 46 08.1	-0.2
EBAD				Sg	Sg	06 46 37.2	-3.3
EBAD				*i* Vmb_Lg		06 46 53.0	
LOR	**Lormes**	5.83	40	*e*P	Pn	06 45 02.0	+1.1
	baz=229						
LOR				*e*Sn	Sn	06 46 02.7	-5.6
	comp=E,83nm,0.3s						
LOR				*e*Sg	Sg	06 46 37.9	-2.7
	comp=E,163nm,0.6s,baz=220						
LOR	**Lormes**	5.83	40	P	Pn	06 44 59.6	-1.3
LOR	**Lormes**	5.83	40	Pn	Pn	06 44 59.5	-1.3
EQUE	**Quentar**	5.88	194	Pn	Pn	06 45 04.0	+2.2
EQUE				Sn	Sn	06 46 10.0	+0.2
EQUE				Sg	Sg	06 46 41.1	-1.4
EQUE				*i* Vmb_Lg		06 46 50.9	
FLN	**La Foliniere**	5.89	8	*e*P	Pn	06 45 03.2	+1.6
	baz=191						
FLN				*e*Sn	Sn	06 46 03.5	-6.2
	comp=E,121nm,0.5s						
FLN				*e*Sg	Sg	06 46 40.1	-2.3
	comp=E,286nm,0.6s,baz=188						
PCAS	**Casmilo, Conde**	5.89	243	*e*Pn	Pn	06 45 03.5	+1.7
PCAS				*e*Sn	Sn	06 46 08.8	-1.1
PCAS				*e*Sg	Sg	06 46 38.4	-4.2
PCAS				A	A	06 46 57.4	
	comp=E,269nm,0.6s						
OGDI	**Digne**	5.90	76	Pn	Pn	06 45 02.2	+0.3
OGSM	**Saint Maurice**	5.91	61	Pn	Pn	06 45 02.7	+0.7
ENIJ	**Nijar**	5.97	184	P	Pn	06 45 05.8	+2.9
ENIJ				S	Sn	06 46 11.9	+0.1
ENIJ	**Nijar**	5.97	184	Pn	Pn	06 45 05.8	+2.9
ENIJ				Pg	Pg	06 45 26.7	-1.1

ENIJ				Sg	Sg	06 46 43.9	-1.3
ENIJ				i Vmb_Lg		06 46 54.1	
LMR	La Mourre	5.98	83	eP	Pn	06 45 04.9	+1.9
LMR				eSn	Sn	06 46 07.4	-4.7
	comp=E,110nm,0.8s						
OG35	Corcelles	6.03	56	Pn	Pn	06 45 04.0	+0.3
GDM	Grand'Maison	6.04	65	Pn	Pn	06 45 05.0	+1.1
PESTR	Estremoz	6.06	230	Pn	Pn	06 45 05.0	+0.9
PESTR	Estremoz	6.06	230	P	Pn	06 45 05.4	+1.3
PESTR	Estremoz	6.06	230	P	Pn	06 45 05.4	+1.3
PESTR				S	Sn	06 46 11.9	-2.2
PESTR	Estremoz	6.06	230	P	Pn	06 45 05.0	+0.9
PESTR				S	Sn	06 46 12.5	-1.6
PESTR				Sg	Sg	06 46 44.0	-4.1
PESTR	Estremoz	6.06	230	ePn	Pn	06 45 05.0	+0.9
PESTR				eSn	Sn	06 46 12.9	-1.2
PESTR				eSg	Sg	06 46 48.4	+0.3
PESTR				A	A	06 46 55.3	
	comp=E,136nm,0.6s						
PLYF	Puligny Montra	6.06	46	Pn	Pn	06 45 04.6	+0.5
PLYF				Sn	Sn	06 46 13.0	-1.0
EBER	Berja	6.10	189	P	Pn	06 45 07.8	+2.9
EBER				Sg	Sg	06 46 47.3	-2.2
EBER	Berja	6.10	189	Pn	Pn	06 45 07.8	+2.9
EBER				Sn	Sn	06 46 16.4	+1.0
EBER				Sg	Sg	06 46 49.0	-0.5
EGOR	Sierra Gorda,	6.12	199	P	Pn	06 45 06.0	+1.1
EGOR				Sg	Sg	06 46 49.3	-0.5
EGOR	Sierra Gorda,	6.12	199	Pn	Pn	06 45 06.1	+1.1
EGOR				Sn	Sn	06 46 17.7	+2.2
EGOR				Sg	Sg	06 46 51.4	+1.5
EGOR				i Vmb_Lg		06 47 00.7	
OGAG	Argentiere	6.13	73	Pn	Pn	06 45 08.2	+3.1
CREF	Crivoux	6.21	72	Pn	Pn	06 45 08.0	+1.7
ENAUX	Enaux	6.24	76	Pn	Pn	06 45 08.1	+1.5
ELGU	Los Guajares,	6.25	195	P	Pn	06 45 09.0	+2.3
ELGU				Sg	Sg	06 46 51.0	-3.1
ELGU	Los Guajares,	6.25	195	Pn	Pn	06 45 08.8	+2.1
ELGU				Sn	Sn	06 46 19.9	+1.2
ELGU				Sg	Sg	06 46 54.7	+0.7
ELGU				i Vmb_Lg		06 47 03.6	
JSA	Saint Aubin	6.27	357	eP	Pn	06 45 07.4	+0.5
JSA				IAML		06 46 19.8	
	comp=N,106nm,0.6s						
JSA				IAML		06 46 25.0	
	comp=E,125nm,0.7s						
JSA	Saint Aubin	6.27	357	Pn	Pn	06 45 07.4	+0.5
JSA				Sn	Sn	06 46 15.2	-3.7
JSA				Sg	Sg	06 46 55.9	+1.4
JSA	Saint Aubin	6.27	357	Pn	Pn	06 45 07.3	+0.5
JAUF	Jausiers	6.27	73	Pn	Pn	06 45 08.8	+1.7
JQE	Queens East	6.27	358	eP	Pn	06 45 07.5	+0.5
PBAR	Barrancos	6.28	223	P	Pn	06 45 08.2	+1.1
PBAR				S	Sn	06 46 18.5	-0.8
PBAR				Sg	Sg	06 46 50.8	-4.3
PBAR	Barrancos	6.28	223	ePn	Pn	06 45 08.4	+1.3
PBAR				eSn	Sn	06 46 18.8	-0.6
PBAR				eSg	Sg	06 46 50.0	-5.0
PBAR				A	A	06 47 03.7	
	comp=E,228nm,0.6s						
PMTG	Montargil	6.29	234	ePn	Pn	06 45 08.3	+1.0
PMTG				eSn	Sn	06 46 18.7	-1.1
PMTG				eSg	Sg	06 46 54.0	-1.6
PMTG				A	A	06 47 01.7	
	comp=E,161nm,0.7s						
JVM	Valle D.L. Mar	6.30	357	eP	Pn	06 45 07.6	+0.3
CALF	Calern	6.30	80	Pn	Pn	06 45 09.4	+1.9
JLP	Les Platons	6.32	357	eP	Pn	06 45 08.6	+1.0
SURF	Saint Ours	6.33	73	Pn	Pn	06 45 09.6	+1.7
MBDF	Montbardon	6.35	71	eP	Pn	06 45 09.7	+1.5
MBDF				eSn	Sn	06 46 14.2	-7.1
	comp=E,89nm,0.6s						
BNI	Bardonecchia	6.37	68	Pn	Pn	06 45 10.0	+1.6
BNI	Bardonecchia	6.37	68	P	Pn	06 45 10.0	+1.6
BNI	Bardonecchia	6.37	68	Pn	Pn	06 45 09.9	+1.5
BNI				Sn	Sn	06 46 20.3	-1.5
PSBE	So Bento	6.38	240	ePn	Pn	06 45 09.9	+1.4
PSBE				eSg	Sg	06 46 56.8	-1.4
PSBE				A	A	06 47 03.4	
	comp=E,322nm,0.6s						
OGMO	Fort Saint-Gob	6.42	66	Pn	Pn	06 45 11.0	+1.9
EMIN	Mina Concepcio	6.43	218	P	Pn	06 45 10.1	+1.0
EMIN				Sg	Sg	06 46 56.3	-3.5
EMIN	Mina Concepcio	6.43	218	Pn	Pn	06 45 10.2	+1.0
EMIN				Sn	Sn	06 46 19.1	-4.0
EMIN				Sg	Sg	06 46 57.5	-2.4
EMIN				i Vmb_Lg		06 47 05.1	
ISO	Isola	6.44	76	Pn	Pn	06 45 11.0	+1.6
MVIF	Mont Vial	6.48	78	Pn	Pn	06 45 11.4	+1.4
EMAL	Malaga-Limoner	6.52	200	P	Pn	06 45 13.2	+2.8
EMAL				S	Sn	06 46 24.6	-0.8
EMAL				Sg	Sg	06 47 01.2	-1.8
EVO	Evora	6.53	230	P	Pn	06 45 11.7	+1.1
EVO				Sg	Sg	06 46 57.6	-5.6
EVO	Evora	6.53	230	ePn	Pn	06 45 11.6	+1.1
EVO				eSn	Sn	06 46 24.0	-1.6
EVO				eSg	Sg	06 46 59.5	-3.7
EVO				A	A	06 47 13.3	
	comp=E,162nm,0.8s						
RSL	Roselend	6.54	62	Pn	Pn	06 45 11.8	+1.0
LPL	La Plagne	6.55	64	eP	Pn	06 45 12.5	+1.5
LPL				eSn	Sn	06 46 21.4	-5.0
	comp=E,88nm,0.6s						
LPL	La Plagne	6.55	64	P	Pn	06 45 12.3	+1.3
SPIF	crte de Spivo	6.56	77	Pn	Pn	06 45 12.4	+1.3
RIVEL	MONT RIVEL	6.60	52	Pn	Pn	06 45 13.7	+2.1
CABF	La Chapelle	6.62	54	eP	Pn	06 45 12.9	+1.1
CABF				eSn	Sn	06 46 19.9	-8.0
	comp=E,43nm,0.3s						
CABF				eSg	Sg	06 47 03.1	-2.9
	comp=E,433nm,1.1s						
TURF	col de Turini	6.66	78	Pn	Pn	06 45 13.7	+1.2
MON	Monaco	6.67	80	Pg	Pb	06 45 24.0	-6.0
MON				Sn	Sn	06 46 30.0	+1.1
SBF	Sospel	6.68	79	ePn	Pn	06 45 10.2	-2.5
SBF	Sospel	6.68	79	eP	Pn	06 45 14.7	+2.0
SBF				eSn	Sn	06 46 24.7	-4.7
	comp=E,115nm,0.5s						
OGSI	Sixt	6.78	60	Pn	Pn	06 45 15.1	+1.2
SAOF	Saorge	6.78	78	Pn	Pn	06 45 15.5	+1.5
EMIJ	Mijas	6.80	202	P	Pn	06 45 16.7	+2.4
EMIJ				Sg	Sg	06 47 09.8	-2.0
EMIJ	Mijas	6.80	202	Pn	Pn	06 45 15.5	+1.2
EMIJ				Sn	Sn	06 46 32.3	0.0
EMIJ				Sg	Sg	06 47 12.3	+0.5
EMIJ				i Vmb_Lg		06 47 23.0	
PBEJ	Beja	6.82	226	ePn	Pn	06 45 16.2	+1.8
PBEJ				eSn	Sn	06 46 31.0	-1.6
PBEJ				eSg	Sg	06 47 08.4	-3.9
PBEJ				A	A	06 47 23.5	
	comp=E,139nm,0.6s						
ESPR	Espera	6.87	209	P	Pn	06 45 17.0	+1.8
ESPR	Espera	6.87	209	Pn	Pn	06 45 16.9	+1.8
ESPR				Sn	Sn	06 46 31.6	-2.2
ESPR				Sg	Sg	06 47 15.5	+1.6
ESPR				i Vmb_Lg		06 47 32.6	
EGRO	El Granado	7.00	222	P	Pn	06 45 17.8	+0.9
EGRO				S	Sn	06 46 34.0	-3.1
EGRO				Sg	Sg	06 47 15.1	-3.1
EGRO	El Granado	7.00	222	Pn	Pn	06 45 17.8	+0.9
EGRO				Sn	Sn	06 46 32.6	-4.5
EGRO				Sg	Sg	06 47 18.0	-0.1
ARNO	Arenosillo	7.01	215	P	Pn	06 45 18.2	+1.1
ARNO				S	Sn	06 46 34.9	-2.5
PMAFR	Mafra	7.01	238	P	Pn	06 45 18.4	+1.3
PMAFR				S	Sn	06 46 35.2	-2.3
PMAFR	Mafra	7.01	238	ePn	Pn	06 45 18.7	+1.6
PMAFR				eSn	Sn	06 46 35.8	-1.6
PMAFR				eSg	Sg	06 47 19.3	+0.8
PMAFR				A	A	06 47 25.8	
	comp=E,210nm,0.7s						
BRANT	Les Verrieres	7.02	52	Pn	Pn	06 45 17.8	+0.6
BRANT				Sn	Sn	06 46 39.4	+1.8
BRANT	Les Verrieres	7.02	52	Pn	Pn	06 45 17.6	+0.3
AIGLE	Aigle	7.02	58	Pn	Pn	06 45 18.7	+1.4
SFTF	Sexfontaines	7.06	39	eP	Pn	06 45 18.9	+1.2
	baz=211						
SFTF				eSn	Sn	06 46 31.8	-6.7
	comp=E,61nm,0.4s						
SFTF				eSg	Sg	06 47 16.6	-3.3
	comp=E,277nm,0.8s,baz=213						
EJIF	Jimena Fronter	7.11	206	Pn	Pn	06 45 20.7	+2.2
PNCL	Nicolau / Gran	7.12	230	P	Pn	06 45 19.5	+0.9
PNCL				S	Sn	06 46 37.8	-2.1
PNCL				Sg	Sg	06 47 17.0	-4.9
PNCL	Nicolau / Gran	7.12	230	ePn	Pn	06 45 19.5	+0.9
PNCL				eSn	Sn	06 46 38.6	-1.4
PNCL				eSg	Sg	06 47 19.6	-2.3
PNCL				A	A	06 47 26.8	
	comp=E,88nm,0.5s						
MESJ	Messejana	7.14	227		Pn	06 45 19.9	+1.0
MESJ	Messejana	7.14	227	P	Pn	06 45 19.9	+1.0
MESJ	Messejana	7.14	227	ePn	Pn	06 45 20.3	+1.4
MESJ				eSn	Sn	06 46 36.8	-3.8
MESJ				eSg	Sg	06 47 18.2	-4.5
MESJ				A	A	06 47 36.2	
	comp=E,140nm,0.7s						
MESJ	Messejana	7.14	227	eP	Pn	06 45 19.9	+1.0
DIX	Grande Dixence	7.20	61	Pn	Pn	06 45 21.2	+1.3
PCVE	Castro Verde	7.20	225	P	Pn	06 45 20.5	+0.7
PCVE				S	Sn	06 46 39.0	-3.1
PCVE	Castro Verde	7.20	225	ePn	Pn	06 45 20.6	+0.9
PCVE				eSn	Sn	06 46 40.3	-1.8
PCVE				eSg	Sg	06 47 23.0	-1.7
PCVE				A	A	06 47 37.6	
	comp=E,136nm,0.6s						
PVAQ	Vaqueiros	7.22	222	Pn	Pn	06 45 20.2	+0.3
PVAQ	Vaqueiros	7.22	222	P	Pn	06 45 20.6	+0.7
PVAQ				S	Sn	06 46 39.0	-3.5
PVAQ	Vaqueiros	7.22	222	P	Pn	06 45 20.5	+0.6
PVAQ				S	Sn	06 46 39.0	-3.5
PVAQ				Sg	Sg	06 47 20.3	-4.8
PVAQ	Vaqueiros	7.22	222	ePn	Pn	06 45 20.5	+0.6
PVAQ				eSn	Sn	06 46 39.8	-2.6
PVAQ				eSg	Sg	06 47 19.4	-5.7
PVAQ				A	A	06 47 35.8	
	comp=E,145nm,0.6s						
TORNY	Torny/Romont	7.22	55	Pn	Pn	06 45 21.8	+1.7
SENIN	Lac Senin/Sane	7.24	59	Pn	Pn	06 45 21.1	+0.6
SENIN	Lac Senin/Sane	7.24	59	Pn	Pn	06 45 21.6	+1.1
SENIN				Sn	Sn	06 46 44.0	+0.5
MEZF	Maizieres J'vi	7.28	38	eP	Pn	06 45 22.8	+2.0
	baz=218						
MEZF				eSn	Sn	06 46 37.1	-6.8
	comp=E,71nm,0.5s						
MEZF				eSg	Sg	06 47 23.1	-3.9
	comp=E,341nm,0.9s,baz=230						
SAVF	Savonnieres en	7.39	37	eP	Pn	06 45 24.9	+2.6
	baz=217						
SAVF				eSn	Sn	06 46 39.7	-7.1
	comp=E,54nm,0.4s						
SAVF				eSg	Sg	06 47 26.8	-4.0
	comp=E,467nm,1.0s						
PBDV	Barranco-do-Ve	7.45	222	ePn	Pn	06 45 23.8	+0.7
PBDV				eSn	Sn	06 46 44.0	-4.2
PBDV				eSg	Sg	06 47 26.8	-5.7
PBDV				A	A	06 47 43.4	
	comp=E,209nm,0.7s						
EMBD	Embd, Matterta	7.52	61	Pn	Pn	06 45 26.3	+2.1
RONF	Ronchamp	7.55	48	Pn	Pn	06 45 24.4	-0.1
HAU	Haudompre	7.57	45	ePn	Pn	06 45 23.3	-1.5
HAU	Haudompre	7.57	45	eP	Pn	06 45 28.0	+3.2
HAU				eSn	Sn	06 46 43.7	-7.4
	comp=E,58nm,0.5s						
HAU				eSg	Sg	06 47 32.2	-4.2
	comp=E,147nm,0.8s						
CEU	Ceuta	7.59	204	P	Pn	06 45 27.5	+2.5
ECEU	Ceuta	7.59	204	Pn	Pn	06 45 28.0	+2.9
ECEU				Sn	Sn	06 46 49.1	-2.7
PAGF	Fort de Pagny	7.63	40	ePn	Pn	06 45 23.3	-2.3
PAGF	Fort de Pagny	7.63	40	eP	Pn	06 45 28.9	+3.3
	baz=219						
PAGF				eSn	Sn	06 46 45.4	-7.1
	comp=E,78nm,0.5s						
PAGF				eSg	Sg	06 47 34.0	-4.2
PTEO	Sao Teotonio	7.63	227	ePn	Pn	06 45 26.9	+1.3
PTEO				eSn	Sn	06 46 50.2	-2.4
PTEO				eSg	Sg	06 47 37.0	-1.4
PTEO				A	A	06 47 59.8	
	comp=E,164nm,0.7s						
CCA1	Carnmenellis	7.66	342	eP	Pn	06 45 27.0	+1.0
CCA1				IAML		06 47 00.0	
	comp=N,36nm,0.5s						
CCA1				IAML		06 47 07.5	
	comp=E,28nm,0.6s						
CCA1	Carnmenellis	7.66	342	Pn	Pn	06 45 27.2	+1.2
CCA1				Sn	Sn	06 46 50.0	-3.3
CCA1	Carnmenellis	7.66	342	Pn	Pn	06 45 28.0	+2.0
DYA	Yadsworthy	7.67	349	eP	Pn	06 45 26.7	+0.7
DYA	Yadsworthy	7.67	349	Pn	Pn	06 45 27.1	+1.0
DYA				Sn	Sn	06 46 47.9	-5.5
DYA	Yadsworthy	7.67	349	Pn	Pn	06 45 27.0	+1.0
WMELI	Melilla	7.67	188	P	Pn	06 45 27.1	+0.9
BOURR	Bourrignon	7.70	52	Pn	Pn	06 45 29.7	+3.2
HINF	Hinteralfeld	7.72	48	ePn	Pn	06 45 25.7	-1.2
HINF	Hinteralfeld	7.72	48	eP	Pn	06 45 30.4	+3.5
HINF				eSn	Sn	06 46 47.0	-8.0
	comp=E,27nm,0.4s						
HINF				eSg	Sg	06 47 36.9	-4.4
	comp=E,167nm,1.0s						
CHAS	Isla Isabel II	7.76	185	P	Pn	06 45 28.9	+1.5
MORF	Marmelete	7.77	226		Pn	06 45 27.9	+0.4
MORF	Marmelete	7.77	226	P	Pn	06 45 27.9	+0.4
MORF	Marmelete	7.77	226	ePn	Pn	06 45 28.1	+0.5
MORF				eSn	Sn	06 46 54.1	-2.0
MORF				eSg	Sg	06 47 39.5	-3.4
MORF				A	A	06 47 55.8	
	comp=E,72nm,0.8s						
MORF	Marmelete	7.77	226	eP	Pn	06 45 27.9	+0.4
FIESA	Fiescheralp	7.79	60	Pn	Pn	06 45 28.9	+0.9
FIESA				Sn	Sn	06 46 56.7	-0.1
PGF	Pioggiola	7.85	89	eP	Pn	06 45 30.5	+1.8
PGF				eSn	Sn	06 46 52.3	-5.9
	comp=E,124nm,0.9s						
PGF	Pioggiola	7.85	89	Pn	Pn	06 45 28.9	+0.2
BALST	Balsthal	7.94	53	Pn	Pn	06 45 31.2	+1.4
HASLI	Hasliberg/Brie	7.94	58	Pn	Pn	06 45 31.0	+1.0
HASLI				Sn	Sn	06 47 02.0	+1.5
PFVI	Vila Bisbo	7.99	226	Pn	Pn	06 45 31.7	+1.2
PFVI	Vila Bisbo	7.99	226	P	Pn	06 45 31.4	+0.9
PFVI				S	Sn	06 46 56.9	-4.6
PFVI	Vila Bisbo	7.99	226	ePn	Pn	06 45 31.4	+0.9
PFVI				eSn	Sn	06 46 58.5	-3.0
PFVI				eSg	Sg	06 47 47.1	-2.8
PFVI				A	A	06 48 11.0	
	comp=E,84nm,0.7s						
CORF	Corte	8.00	91	Pn	Pn	06 45 31.9	+1.3
PVLZ	Peæn de	8.02	196	P	Pn	06 45 32.5	+1.6
HMNX	Herstmonceux	8.05	9	Pn	Pn	06 45 33.3	+2.0
HMNX				Sn	Sn	06 47 00.4	-2.5
MENF	Mencas	8.06	18	Pn	Pn	06 45 31.7	+0.3
MORSI	Morsiglia	8.08	86	Pn	Pn	06 45 32.9	+1.1
ECH	Echery	8.13	46		Pn	06 45 32.8	+0.4
ECH	Echery	8.13	46	P	Pn	06 45 32.8	+0.4
ECH	Echery	8.13	46	Pn	Pn	06 45 30.9	-1.5
ECH	Echery	8.13	46	ePn	Pn	06 45 31.5	-0.9
ECH				eSn	Sn	06 47 02.4	-2.4
TAF	Taforalt	8.13	184	P	Pn	06 45 35.0	+2.4
TAF	Taforalt	8.13	184	P	Pn	06 45 35.7	+3.1
TAF				S	Sn	06 47 01.8	-3.2
BAIF	Baives	8.19	28	ePn	Pn	06 45 31.4	-1.9
BAIF	Baives	8.19	28	eP	Pn	06 45 36.7	+3.5
BAIF				eSn	Sn	06 46 58.8	-7.5
	comp=E,64nm,0.5s						
BAIF				eSg	Sg	06 47 51.8	-4.5
	comp=E,150nm,0.9s						
MUGIO	Muggio	8.21	65	Pn	Pn	06 45 36.6	+3.0
MUGIO				Sn	Sn	06 47 07.1	+0.1
MSSA	Maissana	8.22	77		Pn	06 45 35.5	+1.7
HTL	Hartland	8.29	347	eP	Pn	06 45 35.5	+0.9
HTL				IAML		06 48 09.8	
	comp=N,51nm,0.6s						
HTL				IAML		06 48 24.4	
	comp=E,47nm,0.7s						
HTL	Hartland	8.29	347	Pn	Pn	06 45 35.8	+1.1
HTL				Sn	Sn	06 47 03.4	-5.5
HTL	Hartland	8.29	347	Pn	Pn	06 45 36.0	+1.3
CDF	Champ du Feu	8.31	46	ePn	Pn	06 45 32.5	-2.5
CDF	Champ du Feu	8.31	46	eP	Pn	06 45 37.6	+2.6
CDF				eSn	Sn	06 47 01.6	-7.8
	comp=E,24nm,0.4s						
CDF				eSg	Sg	06 47 55.3	-4.8
	comp=E,97nm,0.8s						
CHEFC	Chefchaouen	8.32	201	P	Pn	06 45 41.0	+5.8
WLS	Welschbruch	8.35	46	Pn	Pn	06 45 34.8	-0.7
DOU	Dourbes	8.36	29	dP	Pn	06 45 35.0	-0.5
DOU				dS	Sn	06 47 10.4	0.0
KIZ	Kirchzarten	8.39	50	Pn	Pn	06 45 36.3	+0.2
FELD	Feldberg im Sc	8.40	51	Pn	Pn	06 45 36.8	+0.5
ELSH	Elham, Standar	8.43	12	Pn	Pn	06 45 37.9	+1.3
ELSH				Sn	Sn	06 47 08.4	-3.9
ELSH	Elham, Standar	8.43	12	Pn	Pn	06 45 38.5	+2.0
GIVF	Givet	8.44	30	ePn	Pn	06 45 34.9	-1.8
GIVF	Givet	8.44	30	eP	Pn	06 45 40.2	+3.5
GIVF				eSn	Sn	06 47 05.2	-7.4
	comp=E,88nm,0.5s						
GIVF				eSg	Sg	06 48 00.3	-4.0
	comp=E,211nm,1.0s						
METMA	Mettma DE	8.45	52	ePn	Pn	06 45 37.0	0.0
METMA				eSn	Sn	06 47 12.9	0.0
BERGE	Lenzkirch (DE)	8.49	51	ePn	Pn	06 45 38.1	+0.6
AKLM	AKL	8.59	192	P	Pn	06 45 42.1	+3.3
BMRD	Maredsous	8.59	29	dP	Pn	06 45 38.8	0.0
BMRD				dS	Sn	06 47 11.2	-5.0
JBK	JBK	8.62	185	P	Pn	06 45 42.0	+2.6
CIEL	Dossenheim-sur	8.62	44	Pn	Pn	06 45 38.9	-0.2
SLE	Schleitheim	8.62	52	Pn	Pn	06 45 40.4	+1.2
SLE				Sn	Sn	06 47 16.5	-0.5
SLE	Schleitheim	8.62	52	Pn	Pn	06 45 40.1	+0.9
WLF	Walferdange	8.63	36	Pn	Pn	06 45 39.5	+0.2
WLF	Walferdange	8.63	36	P	Pn	06 45 39.5	+0.2
WLF	Walferdange	8.63	36	Pn	Pn	06 45 39.3	+0.1
WLF				Sn	Sn	06 47 11.6	-5.5
WLF	Walferdange	8.63	36	dP	Pn	06 45 39.2	-0.1
WLF				dS	Sn	06 47 15.1	-2.0
WLF	Walferdange	8.63	36	Pn	Pn	06 45 39.3	+0.1
WLF	Walferdange	8.63	36	eSn	Sn	06 47 10.1	-7.0
RCHB	Rochefort	8.64	31	dP	Pn	06 45 39.2	-0.1
RCHB				dS	Sn	06 47 13.0	-4.3
RCHB	Rochefort	8.64	31	Pn	Pn	06 45 39.1	-0.3
OLDB	Oldbury-Upon-S	8.75	356	eP	Pn	06 45 41.3	+0.4
BGES	Gesves	8.77	30	dP	Pn	06 45 41.1	-0.1
BGES				dS	Sn	06 47 19.5	-1.1
BFO	Black Forest	8.83	49	Pn	Pn	06 45 42.4	+0.4
BFO	Black Forest	8.83	49	P	Pn	06 45 42.4	+0.4
BFO	Black Forest	8.83	49	Pn	Pn	06 45 43.1	+1.0
BFO				Sn	Sn	06 47 21.1	-1.0
BFO	Black Forest	8.83	49	ePn	Pn	06 45 42.9	+0.8
BFO				eSn	Sn	06 47 21.2	-0.9
STRD	Stroud	8.85	358	eP	Pn	06 45 42.8	+0.4
BCLA	Clavier	8.88	30	dP	Pn	06 45 42.0	-0.7
BCLA				dPP	PnPn	06 45 50.0	-0.3
BCLA				dS	Sn	06 47 22.0	-1.2
EMING	Emmingen-Lipti	8.89	52	ePn	Pn	06 45 45.1	+2.2
RIVT	Riveris	8.93	38	ePn	Pn	06 45 42.2	-1.2
RIVT				eSn	Sn	06 47 18.6	-5.9
MONM	Monmouth	8.94	355	eP	Pn	06 45 43.8	+0.3
WALHA	Wallhausen, DE	8.98	54	ePn	Pn	06 45 46.2	+2.0
DAVOX	Davos/Dischmat	9.05	61	Pn	Pn	06 45 49.2	+4.0
	comp=E,2.2nm,0.3s,baz=268,slow=9.5,SNR=18						
DAVOX				Sn	Sn	06 47 29.2	+1.5
	comp=E,0.8nm,0.3s,baz=275,slow=19,SNR=1.8						
DAVOX				LR	LR	06 49 04.8	
	comp=E,161nm,20.4s,baz=67,slow=37						
BHOU	Houvegnez	9.10	33	dP	Pn	06 45 45.3	-0.4
BHOU				dS	Sn	06 47 29.2	+0.6
SALO	Salr	9.14	69		Pn	06 45 48.6	+2.3
FUORN	Ofenpass-Fuorn	9.24	62		Pn	06 45 51.0	+3.1
FUORN	Ofenpass-Fuorn	9.24	62	Pn	Pn	06 45 50.8	+2.9
FUORN				Sn	Sn	06 47 32.1	-0.4
DAVA	Damuels	9.24	58	ePn	Pn	06 45 49.7	+1.9
	comp=E,6.7nm,0.5s						
RSBS	Rosebush, Pemb	9.26	348	eP	Pn	06 45 49.1	+1.2
RSBS				IAML		06 47 28.8	
	comp=E,14nm,0.4s						
RSBS				IAML		06 47 43.8	
	comp=N,16nm,0.5s						
ZCCA	Zocca	9.27	77		Pn	06 45 51.0	+2.9
MEM	Membach	9.30	32	dP	Pn	06 45 48.1	-0.3
MEM				dPP	PnPn	06 45 56.0	0.0
MEM				dS	Sn	06 47 27.2	-6.3
OSSC	Osservatorio P	9.44	82		Pn	06 45 53.0	+2.6
HLM1	Long Mynd	9.63	356	eP	Pn	06 45 53.2	+0.3
FETA	Feichten	9.68	61	i Pn	Pn	06 45 56.3	+2.5
	comp=N,31nm,0.6s,SNR=17						
AHRW	Bad Neuenahr-A	9.68	35	ePn	Pn	06 45 52.4	-1.2
AHRW				eSn	Sn	06 47 37.6	-5.2
IFR	Ifrane	9.79	197	P	Pn	06 45 56.7	+1.3
CWF	Charnwood Fore	9.81	1	Pn	Pn	06 45 56.3	+0.8
CWF				Sn	Sn	06 47 42.2	-3.9
RETA	Reutte	9.87	58	ePn	Pn	06 45 59.8	+3.4
	comp=N,3.3nm,0.3s						
TEOL	Teolo	9.88	71		Pn	06 45 58.8	+2.3
WACR	West Acre	9.91	8	eP	Pn	06 45 57.7	+0.8
WACR	West Acre	9.91	8	Pn	Pn	06 45 57.5	+0.7
WACR				Sn	Sn	06 47 43.4	-5.2
CTI	Castel Tesino	10.00	67		Pn	06 46 00.2	+2.0
CTI	Castel Tesino	10.00	67	P	Pn	06 46 00.2	+2.0
FOEL	Foel Wylfa	10.02	355	eP	Pn	06 45 58.9	+0.7
FOEL	Foel Wylfa	10.02	355	Pn	Pn	06 45 58.8	+0.5
FOEL				Sn	Sn	06 47 45.2	-6.0
MOTA	Moosalm	10.03	60	i Pn	Pn	06 46 00.4	+1.7
	comp=N,19nm,0.4s,SNR=15						
SQTA	Sankt Quirin	10.05	60	i Pn	Pn	06 46 01.2	+2.2
	comp=N,4.6nm,0.2s,SNR=6.6						
TNS	Taunus Mts	10.07	40	eSn	Sn	06 47 48.9	-3.6
STNC	Stoke	10.17	358	Sn	Sn	06 47 48.7	-6.2
MILB	Miltenberg	10.23	44	eSn	Sn	06 47 52.4	-4.0
WATA	Walderalm	10.33	60	i Pn	Pn	06 46 05.0	+2.3
	comp=N,10nm,0.6s						
WTTA	Wattenberg	10.34	61	i Pn	Pn	06 46 05.3	+2.4
	comp=N,27nm,0.7s,SNR=14						
MD31	MD31	10.35	195	P	Pn	06 46 04.2	+1.2
MD31				S	Sn	06 47 54.2	-5.3
MDT	Midelt	10.37	194	Pn	Pn	06 46 04.8	+1.5
	comp=N,1.1nm,0.3s,baz=20,slow=13,SNR=53						
MDT				Sn	Sn	06 47 56.7	-3.4
	comp=N,0.3nm,0.3s,baz=110,slow=20,SNR=1.7						
	comp=N,13nm,0.7s						
MDT	Midelt	10.37	194	P	Pn	06 46 05.8	+2.6
MDT	Midelt	10.37	194	P	Pn	06 46 05.8	+2.6
MDT				S	Sn	06 47 55.4	-4.7
MURB	Monte Urbino	10.38	83	Pn	Pn	06 46 05.4	+2.1
LBWR	Ladybower, Pea	10.47	360	Pn	Pn	06 46 05.3	+0.7
LBWR				Sn	Sn	06 47 55.4	-7.0
WLF1	Llynfaes	10.52	351	eP	Pn	06 46 07.3	+2.2
WLF1	Llynfaes	10.52	351	Pn	Pn	06 46 07.5	+2.3
WLF1				Sn	Sn	06 47 58.0	-5.5
LMK	Market Rasen	10.57	4	Pn	Pn	06 46 08.2	+2.4
LMK				Sn	Sn	06 47 57.6	-7.0
CIMO	Cimolais	10.60	67		Pn	06 46 08.2	+2.0
WME	Myndd Eilian	10.62	351	eP	Pn	06 46 08.8	+2.3
AVE	Averroes	10.63	207	S	Sn	06 48 02.9	-3.5
VAL	Valentia	10.72	330	Pn	Pn	06 46 10.9	+3.1
VAL				Sn	Sn	06 48 06.7	-1.6
ABTA	Abfaltersbach	10.76	64	ePn	Pn	06 46 10.1	+1.6
	comp=N,0.4nm,0.1s						
STAL	STALIGIAL	10.77	67		Pn	06 46 10.1	+1.5
DSB	Dublin	10.79	345	Pn	Pn	06 46 09.2	+0.4
DSB	Dublin	10.79	345	Pn	Pn	06 46 10.9	+2.0
DSB				Sn	Sn	06 48 02.5	-7.6
CLUD	Cludinico	10.93	66		Pn	06 46 12.9	+2.1
HPK	Haverah Park	11.03	0	Pn	Pn	06 46 12.1	0.0
HPK				Sn	Sn	06 48 09.7	-6.3
KEST	Kesra	11.14	127	Pn	Pn	06 46 15.1	+1.3
	comp=N,0.2nm,0.3s,baz=329,slow=5.9,SNR=1.3						
KEST				LR	LR	06 50 23.4	
	comp=N,126nm,20.0s,baz=5.0,slow=37						
	comp=N,2.8nm,0.5s						
KEST	Kesra	11.14	127	Pn	Pn	06 46 14.7	+0.9
SABO	M.te Sabotino	11.32	69		Pn	06 46 17.3	+1.1
PRED	Cave del Predi	11.38	67	Pn	Pn	06 46 18.7	+1.6
KBA	Koelnbreinsper	11.39	64	i Pn	Pn	06 46 18.7	+1.4
	comp=N,7.1nm,0.5s						
MYKA	Terra Mystica	11.48	66	i Pn	Pn	06 46 20.4	+2.1
	comp=N,1.5nm,0.4s						
IOMK	Kirk Michael	11.50	351	Pn	Pn	06 46 19.6	+1.1
IOMK				Sn	Sn	06 48 19.3	-8.1
KESW	Keswick, Cumbr	11.70	356	Pn	Pn	06 46 21.3	0.0
KESW				Sn	Sn	06 48 26.5	-6.0
BIOA	Bad Ischl, Aus	11.76	61	i Pn	Pn	06 46 25.3	+3.0
	comp=N,5.2nm,0.3s,SNR=6.3						
EDMD	Edmundbyers	11.91	359	Pn	Pn	06 46 23.5	-0.6
EDMD				Sn	Sn	06 48 30.1	-7.5
OBKA	Obir	12.06	67	ePn	Pn	06 46 29.7	+3.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=N,8.4nm,0.9s						
GEC2	GERESS Array S	12.21	56	Pn	Pn	06 46 28.9	+0.4
GERES	GERESS Array B	12.21	56	Pn	Pn	06 46 28.7	+0.3
	comp=N,1.5nm,0.3s,baz=255,slow=12,SNR=18						
GERES				Sn	Sn	06 48 40.3	-4.9
	comp=N,0.4nm,0.3s,baz=261,slow=23,SNR=2.6						
	comp=N,3.6nm,0.5s						
GERES	GERESS Array B	12.21	56	Pn	Pn	06 46 29.0	+0.5
MOA	Molln	12.22	61	ePn	Pn	06 46 30.0	+1.6
	comp=N,2.0nm,0.4s						
KHC	Kasperske Hory	12.25	54		Pn	06 46 30.0	+1.1
KHC	Kasperske Hory	12.25	54	ePN	Pn	06 46 30.6	+1.7
KHC				eSN	Sn	06 48 44.2	-1.9
KHC				AMS	AMS	06 51 40.0	
	comp=N,500nm,9.6s						
KHC	Kasperske Hory	12.25	54	eP	Pn	06 46 30.6	+1.7
KHC				e		06 48 44.2	
KHC				MLR	MLR		
	comp=Z,500nm,9.6s						
KHC	Kasperske Hory	12.25	54	Pn	Pn	06 46 31.1	+2.1
KHC				Sn	Sn	06 48 43.5	-2.6
SOKA	Soboth	12.43	67	ePn	Pn	06 46 37.3	+6.0
	comp=Z,0.9nm,0.2s						
ESK	Eskdalemuir	12.44	356	Pn	Pn	06 46 30.9	-0.4
ESK	Eskdalemuir	12.44	356	P	Pn	06 46 30.9	-0.4
ESK	Eskdalemuir	12.44	356	Pn	Pn	06 46 31.2	-0.2
ESK				Sn	Sn	06 48 38.9	-11
EKA	Eskdalemuir Ar	12.45	356	Pn	Pn	06 46 30.5	-1.0
	baz=178,slow=14						
EKA				Sn	Sn	06 48 39.5	-11
	baz=174,slow=25						
CLGH	Cloghs, Cushen	12.50	348	Pn	Pn	06 46 33.5	+1.2
CLGH				Sn	Sn	06 48 43.2	-8.8
CKRC	Cesky Krumlov	12.57	57	ePN	Pn	06 46 34.3	+1.0
CKRC				eSN	Sn	06 48 53.7	-0.2
CKRC				AMS	AMS	06 51 50.0	
	comp=Z,300nm,10.0s						
CKRC	Cesky Krumlov	12.57	57	eP	Pn	06 46 34.3	+1.0
CKRC				e		06 48 53.7	
CKRC				MLR	MLR		
	comp=Z,300nm,10.0s						
OUZM	OUZ	12.68	200	P	Pn	06 46 36.0	+1.1
OUZM	OUZ	12.68	200	P	Pn	06 46 34.5	-0.4
OUZM				S	Sn	06 48 52.7	-4.0
OUK	Oukaimeden	12.71	205	P	Pn	06 46 35.0	-0.5
OUK				S	Sn	06 48 50.7	-7.0
IDGL	Inch Island, C	12.74	345	Pn	Pn	06 46 37.6	+2.2
IDGL				Sn	Sn	06 48 52.1	-5.6
ARSA	Arzberg	12.88	65	ePn	Pn	06 46 39.3	+1.9
	comp=Z,4.2nm,0.5s						
PRU	Pruhonice	13.19	52	AMS	AMS	06 52 00.0	
	comp=Z,700nm,8.0s						
CONA	Conrad Observa	13.27	62	ePn	Pn	06 46 44.6	+1.8
	comp=Z,0.1nm,0.2s						
GOPC	GO Pecny, Ondr	13.30	53	AMS	AMS	06 52 10.0	
	comp=Z,700nm,8.0s						
TREC	Trest	13.47	56	AMS	AMS	06 52 20.0	
	comp=Z,500nm,8.9s						
RONA	Rosalia, Austr	13.49	63	i Pn	Pn	06 46 48.4	+2.6
	comp=Z,4.8nm,0.5s						
TTIG	Tnine Tigouga,	13.50	206	P	Pn	06 46 45.1	-1.0
TTIG				S	Sn	06 49 09.3	-7.5
KRUC	Moravsky	13.95	58	ePN	Pn	06 46 54.0	+2.0
KRUC	Moravsky	13.95	58	eSN	Sn	06 49 28.8	+1.5
DRUM	Mains of Drumt	14.00	358	Pn	Pn	06 46 52.7	0.0
DRUM				Sn	Sn	06 49 18.6	-10
VRAC	Vranov	14.15	57	Sn	Sn	06 49 29.9	-2.4
	comp=Z,0.9nm,0.3s,baz=216,slow=17,SNR=2.5						
VRAC				LR	LR	06 52 16.7	
	comp=Z,142nm,19.5s,baz=214,slow=37						
VRAC	Vranov	14.15	57	ePN	Pn	06 46 56.9	+2.1
VRAC	Vranov	14.15	57	eSN	Sn	06 49 32.9	+0.5
UPC	Upice	14.27	52	AMS	AMS	06 52 40.0	
	comp=Z,600nm,8.3s						
MODS	Modra-Piesok	14.30	61	eP	P	06 47 00.3	-4.0
MODS	Modra-Piesok	14.30	61	ePN	P	06 47 00.3	-4.0
DPC	Dobruska-Polom	14.38	53	AMS	AMS	06 52 50.0	
	comp=Z,400nm,9.4s						
OSTC	Ostas	14.40	52	AMS	AMS	06 52 50.0	
	comp=Z,500nm,8.8s						
KRLC	Kraliky	14.54	54	AMS	AMS	06 53 00.0	
	comp=Z,300nm,8.5s						
KPL	Plockton	14.64	351	Pn	P	06 47 04.8	-3.2
KPL				Sn	Sn	06 49 43.0	-1.1
MORC	Moravsky Berou	14.89	56	Pn	Pn	06 47 06.0	+1.0
MORC	Moravsky Berou	14.89	56	P	Pn	06 47 06.0	+1.0
OKC	Ostrava-Krasne	15.28	56	AMS	AMS	06 53 30.0	
	comp=Z,500nm,9.2s						
VYHS	Vyhne	15.34	62	eP	P	06 47 14.1	-1.7
VYHS	Vyhne	15.34	62	ePN	P	06 47 14.1	-1.7
BIGH	Upper Bighouse	15.64	356	Pn	P	06 47 17.5	-1.5
PSZ	Piszkesteto	15.91	64	Pn	Pn	06 47 19.2	+0.9
PSZ	Piszkesteto	15.91	64	P	Pn	06 47 19.3	+0.9
PSZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SNART	Snartemo	16.39	17	i P	Pn	06 47 22.0	-2.4
DJES	Djerdap	17.52	76		P	06 47 41.2	+1.2
KONO	Kongsberg	18.11	19⇑	eP	Pn	06 47 45.1	-0.8
KONO				pmax	pmax		
	comp=Z,43nm,3.4s						
KLNR	Kaliningrad	18.46	43⇓	eP	Pn	06 47 50.3	+0.1
KLNR				pmax	pmax		
	comp=Z,18nm,1.5s						
BURAR	Bucovina Array	19.43	67	P	Pn	06 48 02.3	+0.1
HFS	Hagfors	19.60	23	P	Pn	06 48 04.9	+0.9
	comp=Z,0.3nm,0.3s,baz=233,slow=9.1,SNR=6.5						
HFS				S	S	06 51 35.5	-8.9
	comp=Z,1.4nm,0.7s,baz=214,slow=26,SNR=1.9						
HFS				LR	LR	06 57 34.0	
	comp=Z,61nm,20.0s,baz=173,slow=43						
	comp=Z,6.7nm,0.9s						
NB2	NORSAR Subarra	19.72	19	P	Pn	06 48 09.1	+3.6
	comp=Z,17nm,1.7s,baz=209,slow=11						
NOA	NORSAR Array B	19.72	19	P	Pn	06 48 07.0	+1.5
	baz=204,slow=11,SNR=4.5						
NOA				LR	LR	06 57 11.5	
	comp=Z,84nm,19.3s,baz=205,slow=41						
	comp=Z,1.3nm,0.9s						
NOA	NORSAR Array B	19.72	19	P	Pn	06 48 07.0	+1.5
MLR	Muntele Rosu	19.91	73	P	Pn	06 48 07.7	-0.2
	comp=Z,0.3nm,0.3s,baz=301,slow=18,SNR=3.0						
MLR				LR	LR	06 55 53.0	
	comp=Z,118nm,20.4s,baz=294,slow=37						
	comp=Z,4.6nm,0.9s						
APE	Apeiranthos	21.58	97⇑	eP	P	06 48 24.8	+0.4
APE				pmax	pmax		
	comp=Z,11nm,1.0s						
NACGM	Naroch	22.02	47	eP	P	06 48 31.0	+2.1
	comp=Z,31nm,0.9s,baz=247						
AKASG	Malin Array Be	22.39	59	P	P	06 48 32.1	-0.8
	comp=Z,0.2nm,0.3s,baz=253,slow=11,SNR=6.8						
	comp=Z,0.2nm,0.3s						
AKASG	Malin Array Be	22.39	59	i P	P	06 48 34.2	+1.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	22.39	59	P	P	06 48 33.8	+0.9
AKBB				IAmb	IAmb	06 48 51.5	
	comp=Z,4.4nm,0.8s						
AKBB	Malin Array Si	22.39	59	P	P	06 48 33.8	+0.9
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MNK	Minsk	22.48	49	i P	P	06 48 32.5	-1.4
	comp=E,2.0nm,0.7s						
MNK				i P	P	06 48 32.5	-1.4
	comp=N,33nm,0.8s						
MNK				i P	P	06 48 32.5	-1.4
	comp=Z,11nm,0.8s,baz=251						
MNK				i PP	PnPn	06 48 55.7	-1.0
MNK				i PPP	PPP	06 49 03.6	
MNK				i S	S	06 52 40.6	-0.6
MNK				i SS	SnSn	06 53 10.7	+1.7
MNK				i SSS	SSS	06 53 24.0	
MNK				i LR	LR	06 56 32.7	
MNK				i LRM	MLR	06 58 05.9	
	comp=N,288nm,13.8s						
MNK				i LRM	MLR	06 58 17.2	
	comp=E,42nm,13.1s						
MNK				i LRM	MLR	06 58 17.2	
	comp=Z,143nm,11.8s						
MNK	Minsk	22.48	49	i P	P	06 48 32.4	-1.4
MNK				i PPP	PPP	06 49 03.6	
MNK				i S	S	06 52 40.5	-0.6
MNK				i SS	SnSn	06 53 10.7	+1.7
MNK				i SSS	SSS	06 53 24.0	
MNK				pmax	pmax		
	comp=N,33nm,0.8s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.7s						
MNK				pmax	pmax		
	comp=Z,11nm,0.8s						
MNK				MLR	MLR		
	comp=N,288nm,14.0s						
MNK				MLR	MLR		
	comp=Z,143nm,12.0s						
MNK				MLR	MLR		
	comp=E,42nm,13.0s						
VSU	Vasula	23.51	39⇓	eP	P	06 48 46.0	+1.6
VSU				pmax	pmax		
	comp=Z,14nm,0.9s						
BORG	Borgarnes	24.53	340	LR	LR	06 57 37.8	
	comp=Z,44nm,19.9s,baz=180,slow=34						
FINES	FINESS Array B	24.83	32	P	P	06 48 58.0	+1.3
	comp=Z,7.2nm,0.7s,baz=235,slow=6.7,SNR=22						
	comp=Z,7.2nm,0.7s						
FINES	FINESS Array B	24.83	32	P	P	06 48 57.6	+0.9
FIA1	FINESS Array S	24.83	32	P	P	06 48 57.7	+0.9
FIA1				IAmb	IAmb	06 49 00.6	
	comp=Z,7.9nm,0.8s						
ILGA	Ilgaz	26.24	82	P	P	06 49 10.4	+0.4
BR131	Keskin Array S	26.57	85⇓	eP	P	06 49 14.4	+1.4
BRTR	Keskin Array B	26.57	85	P	P	06 49 13.5	+0.5
	comp=Z,0.7nm,0.6s,baz=290,slow=7.4,SNR=2.5						
	comp=Z,0.7nm,0.6s						
BRTR	Keskin Array B	26.57	85	P	P	06 49 13.2	+0.2
BRTR	Keskin Array B	26.57	85	i P	P	06 49 18.7	+5.7
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
VALR	Valaam	26.74	35⇑	eP	P	06 49 14.9	+0.8
VALR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
OBN	Obninsk	27.50	50	i P	P	06 49 22.9	+2.0
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TORD	Torodi Ar. Bea	29.82	173	P	P	06 49 41.8	-0.1
	comp=Z,0.3nm,0.4s,baz=356,slow=9.2,SNR=5.4						
	comp=Z,0.3nm,0.4s						
SOC	Sochi	29.91	74	eP	P	06 49 42.7	+0.1
SOC				e		06 50 38.4	
SOC				ePPP	PPP	06 50 49.8	
SOC				eS	S	06 54 41.8	+1.2
SOC				eSS	SnSn	06 56 14.8	+4.0
SOC				MLR	MLR		
	comp=Z,25nm,14.0s						
ARCES	ARCESS Array B	30.10	19	P	P	06 49 44.6	+0.7
	comp=Z,3.9nm,0.7s,baz=220,slow=7.9,SNR=7.8						
ARCES				LR	LR	07 03 23.3	
	comp=Z,71nm,18.1s,baz=275,slow=39						
	comp=Z,3.9nm,0.7s						
VSLR	Vesyoloye	30.17	74⇑	eP	P	06 49 48.8	+4.0
KLMR	Klimovskoe	30.41	40	eP	P	06 49 47.5	+0.7
KLMR				AMP		06 49 54.4	
	comp=Z,12nm,1.3s						
KLMR	Klimovskoe	30.41	40	eP	P	06 49 47.4	+0.7
KLMR				pmax	pmax		
	comp=Z,12nm,1.3s						
KIV	Kislovodsk	31.92	73	eP	P	06 50 02.6	+2.2
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NEY	Neytrino	32.12	74⇑	eP	P	06 50 04.8	+2.5
NEY				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KBZ	Khabaz	32.12	73⇑	eP	P	06 50 03.1	+1.1
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KIRV	Kirov	34.93	45⇓	eP	P	06 50 27.5	+1.2
DBIC	Dimbokro	36.23	185	P	P	06 50 38.5	+0.7
	comp=Z,2.8nm,0.7s,baz=18,slow=7.9,SNR=5.2						
	comp=Z,2.8nm,0.7s						
DBIC	Dimbokro	36.23	185	P	P	06 50 38.4	+0.7
DBIC	Dimbokro	36.23	185	P	P	06 50 38.4	+0.6
DBIC				pmax	pmax		
	comp=Z,21nm,1.5s						
ARU	Arti	39.91	49	P	P	06 51 09.0	+0.4
	comp=Z,2.3nm,0.3s,baz=207,slow=6.8,SNR=4.6						
	comp=Z,2.3nm,0.3s						
ARU	Arti	39.91	49c	iP	P	06 51 08.8	+0.2
ARU				S	S	06 57 15.6	+1.5
ARU				SS	SS	07 00 08.7	-1.3
ARU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKTO	Aktyubinsk	40.63	58	P	P	06 51 15.4	+0.9
	comp=Z,0.8nm,0.6s,baz=286,slow=11,SNR=1.8						
	comp=Z,0.8nm,0.6s						
ABKAR	Akbulak array	42.13	59	P	P	06 51 27.8	+0.8
SCHQ	Schefferville	42.95	310	P	P	06 51 35.8	+2.2
	comp=Z,1.5nm,0.6s,baz=75,slow=12,SNR=1.8						
	comp=Z,1.5nm,0.6s						
SCHQ	Schefferville	42.95	310	P	P	06 51 33.1	-0.5
SCHQ				IAmb	IAmb	06 51 39.9	
	comp=Z,13nm,1.5s						
BRVK	Borovoye	47.27	51⇓	eP	P	06 52 09.5	+1.6
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BVAR	Borovoye Array	47.34	51	P	P	06 52 10.1	+1.6
	comp=Z,2.1nm,0.9s,baz=285,slow=7.4,SNR=8.3						
	comp=Z,2.1nm,0.9s						
NRIK	Noril'sk	50.35	27⇑	eP	P	06 52 32.4	+1.1
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KK31	Karatay Array	51.18	63	P	P	06 52 38.5	+0.5
KK31				IAmb	IAmb	06 52 42.1	
	comp=Z,2.9nm,0.9s						
KK31	Karatay Array	51.18	63	P	P	06 52 38.5	+0.5
KK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KKAR	Karatay Array	51.18	63	P	P	06 52 39.2	+1.2
KKAR				IAmb	IAmb	06 52 42.1	
	comp=Z,2.9nm,0.9s						
KKAR	Karatay Array	51.18	63	P	P	06 52 39.2	+1.2
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CHGR	Chuyangaron	52.32	69	P	P	06 52 47.8	+1.1
CHGR				IAmb	IAmb	06 52 51.2	
	comp=Z,10.0nm,1.0s						
CHGR	Chuyangaron	52.32	69	P	P	06 52 47.8	+1.1
CHGR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KURBB	Kurchatov Arra	52.92	52	P	P	06 52 52.0	+1.3
	comp=Z,1.5nm,0.8s,baz=298,slow=8.2,SNR=10						
	comp=Z,1.5nm,0.8s						
KURK	Kurchatov	52.93	52⇓	eP	P	06 52 52.3	+1.5
KURK				pmax	pmax		
	comp=Z,5.0nm,1.6s						
KURK	Kurchatov	52.93	52	⇑Pn	P	06 52 52.1	+1.3
	comp=Z,3.6nm,1.1s						
AAK	Ala-Archa	54.00	62	P	P	06 53 00.2	+1.1
AAK				IAmb	IAmb	06 53 03.9	
	comp=Z,3.7nm,0.9s						
AAK	Ala-Archa	54.00	62⇑	eP	P	06 53 00.4	+1.3
AAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ZALV	Zalesovo Beam	54.96	46	LR	LR	07 18 02.7	
	comp=Z,33nm,19.7s,baz=330,slow=38						
KMBO	Kilima Mbogo	56.07	131⇑	eP	P	06 53 13.1	-1.3
KSH	Kashi	56.50	65	P	P	06 53 18.9	+1.8
KSH				pmax	pmax		
	comp=Z,11nm,0.7s						
MK31	Makanchi Array	56.88	55⇑	eP	P	06 53 19.4	-0.2
WMQ	Urumqi	61.68	55	eP	P	06 53 53.3	+0.4
WMQ				pP	sP	06 54 01.2	+7.1
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
YKA	Yellowknife Ar	62.09	331	P	P	06 53 57.0	+1.7
	comp=Z,0.6nm,0.8s,baz=54,slow=7.2,SNR=10						
	comp=Z,0.6nm,0.8s						
YKA	Yellowknife Ar	62.09	331c	eP	P	06 53 59.0	+3.8
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
HHC	Hu-ho-hao-te	77.14	46	eP	P	06 55 28.9	+0.3
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,4.7s						
TXAR	Lajitas Array	78.62	299	P	P	06 55 39.9	+2.9
	comp=Z,0.3nm,0.7s,baz=56,slow=5.9,SNR=2.9						
	comp=Z,0.3nm,0.7s						
PZH	PanZhiHua	81.44	62	P	P	06 55 53.5	+1.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,4.7s						
LPIG	La Paz	86.51	300	LR	LR	07 33 21.8	
	comp=Z,28nm,19.9s,baz=106,slow=34						
CTA	Charters Tower	144.74	60	PKP	PKPdf	07 03 12.4	+0.3
	comp=Z,3.0nm,0.7s,baz=281,slow=7.5,SNR=3.8						

IDC 10 06:45:08.8±2.8, 53°.95N×86°.57E, h0^{km}, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=21.7km s-min=12.1km az=68.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.03	271	I	I	06 51 04.2	
	baz=89,slow=339,SNR=7.3						
ZALV	Zalesovo Beam	1.03	271	Pg	Pg	06 45 28.4	-0.2
	0.6nm,0.3s,baz=86,slow=17,SNR=7.1						
ZALV				Lg	Lg	06 45 42.4	
	2.5nm,0.3s,baz=91,slow=30,SNR=13						
KURBB	Kurchatov Arra	5.95	239	Pn	Pn	06 46 39.4	+1.3
	0.1nm,0.3s,baz=57,slow=14,SNR=3.6						
KURBB				Lg	Lg	06 48 18.7	
	baz=49,slow=31,SNR=2.5						
	0.3nm,0.3s						
MKAR	Makanchi Array	7.67	203	Pn	Pn	06 47 02.6	+0.9
	0.1nm,0.3s,baz=24,slow=13,SNR=2.2						
MKAR				Sn	Sn	06 48 27.8	-1.4
	baz=27,slow=26,SNR=1.6						
MKAR				Lg	Lg	06 49 14.1	
	baz=24,slow=30,SNR=2.2						
	0.2nm,0.3s						

WEL ***10*** *06:45:00, 42°.45S×173°.54E, h32^{km}, ML4.5, Mw4.4, Moment Tensor Solution. s5 Moment tensor: Scale 10^{15} Nm; M_{rr}-4.42; $M_{\theta\theta}$2.17; $M_{\phi\phi}$2.25; $M_{r\theta}$1.27; $M_{\theta\phi}$1.72; $M_{\phi r}$1.43; Fault plane solution: $M_0$4.59000×10^{15} NP1: ϕ_s45.00000°, δ33.00000°, λ-88.00000°. NP2:ϕ_s223.00000°, δ57.00000°, λ-91.00000°. Principal axes: T 434.3800, Plg12.0000°, Azm314.0000°; N 49.1500, Plg1.0000°, Azm223.0000°; P -483.5300, Plg78.0000°, Azm129.0000°;*

IDC ***10*** *06:45:10.0±0.7, 42°.14S×173°.49E, h0^{km}, mb4.2/5, mbtmp4.2/7, ML4.0/2, MS3.7/5 Error ellipse: s-maj=22.5km s-min=22.0km az=114.0*

NOU ***10*** *06:45:14.0, 42°.58S×173°.78E, h23^{km}, MLv4.8/14, South Island, New Zealand*

NEIC ***10*** *06:45:14.6±1.2, 42°.47S±0°.04×173°.59E±0°.06, h27^{km}±5^{km}, mb4.5/7, Mwr4.2/49, Error ellipse: s-maj=7.2km s-min=4.1km az=122.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-2.03; $M_{\theta\theta}$0.95; $M_{\phi\phi}$1.08; $M_{r\theta}$1.49; $M_{\theta\phi}$0.69; $M_{\phi r}$1.56; Fault plane solution: $M_0$2.87000×10^{15} NP1:ϕ_s223.34000°, δ69.58000°, λ-89.39000°. NP2:ϕ_s41.59000°, δ20.42000°, λ-91.63000°. Principal axes: T 2.6936, Plg25.0000°, Azm313.0000°; N 0.3255, Plg1.0000°, Azm43.0000°; P -3.0191, Plg65.0000°, Azm134.0000°;*

WEL ***10*** *06:45:15.2±0.4, 42°S±3°×17°4E±°, h34^{km}±4^{km}, M4.5/19, ML4.8/19, MLv4.5/19 Error ellipse: s-maj=0.0km s-min=0.0km az=116.4, confirmed*

NEIC ***10*** *06:45:15, 42°.48S×173°.62E, h31^{km}*

ISC 10 06:45:15.7±0.9, 42°.47S±0°.03×173°.60E±0°.04, h34^{km}±2^{km}, n209, σ1^{s}.33/218, mb4.4/11, MS3.6/4, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.07	319		Pb	06 45 21.1	-0.2
KHZ				Sg	Sb	06 45 24.9	-0.3
KHZ	Kahutara	0.07	319	P	Pb	06 45 21.3	-0.1
KHZ	Kahutara	0.07	319	P	Pb	06 45 21.2	-0.2
KHZ				S	Sb	06 45 25.3	0.0
GVZ	Greta Valley S	0.65	220		Pb	06 45 28.9	+0.1
GVZ					Sn	06 45 38.5	+0.9
GVZ	Greta Valley S	0.65	220	P	Pb	06 45 29.0	+0.1
GVZ				S	Sn	06 45 38.9	+1.3
BSWZ	Blackbirch Sta	0.78	15		Pn	06 45 29.8	-0.6
BSWZ	Blackbirch Sta	0.78	15	P	Pn	06 45 30.2	-0.1
BSWZ				S	Sb	06 45 41.3	0.0
CMWZ	Cape Campbell	0.85	32		Pn	06 45 31.6	+0.3
CMWZ	Cape Campbell	0.85	32	P	Pb	06 45 32.1	0.0
THZ	Tophouse	0.88	323		Pn	06 45 29.7	-2.1
THZ	Tophouse	0.88	323	P	Pn	06 45 29.9	-1.9
AMCZ	Amberley	0.99	225		Pn	06 45 32.8	-0.5
AMCZ	Amberley	0.99	225	P	Pn	06 45 33.2	-0.1
LTZ	Lake Taylor	1.03	252		Pn	06 45 32.6	-1.2
LTZ	Lake Taylor	1.03	252	P	Pn	06 45 33.1	-0.7
LTZ				S	Sn	06 45 46.1	-1.1
TUWZ	Tuamarina	1.07	14		Pn	06 45 33.6	-0.7
TUWZ	Tuamarina	1.07	14	P	Pn	06 45 34.0	-0.3
TUWZ				S	Sn	06 45 48.1	+0.1
MRNZ	Matariki Terra	1.24	329	Pn	Pn	06 45 35.7	-1.0
MRNZ	Matariki Terra	1.24	329	P	Pn	06 45 36.0	-0.7
MRNZ				S	Sn	06 45 51.1	-1.2
NNZ	Nelson	1.26	352	Pn	Pn	06 45 36.0	-0.9
NNZ	Nelson	1.26	352	P	Pn	06 45 36.2	-0.8
NNZ				S	Sn	06 45 52.6	-0.2
TCW	Tory Channel	1.36	22		Pn	06 45 37.4	-0.9
TCW	Tory Channel	1.36	22	P	Pn	06 45 37.8	-0.4
MQZ	McQueen’s Vall	1.42	209		Pn	06 45 38.0	-1.0
MQZ	McQueen’s Vall	1.42	209	P	Pn	06 45 38.2	-0.9
MQZ				S	Sn	06 45 55.7	-0.8
BHW	Baring Head	1.42	42		Pn	06 45 38.8	-0.4
SNZO	South Karori	1.42	36		Pn	06 45 38.4	-0.7
SNZO	South Karori	1.42	36	P	Pn	06 45 39.2	+0.1
OXZ	Oxford	1.43	233		Pn	06 45 37.7	-1.6
OXZ	Oxford	1.43	233	P	Pn	06 45 38.2	-1.1
WEL	Wellington	1.47	37	P	Pn	06 45 39.8	0.0
AKCZ	Akaroa Harbour	1.49	200	P	Pn	06 45 39.8	-0.3
TKNZ	Takaka Hill	1.52	341		Pn	06 45 40.0	-0.5
TKNZ	Takaka Hill	1.52	341	P	Pn	06 45 40.1	-0.3
DSZ	Denniston Nort	1.52	298		Pn	06 45 39.8	-0.8
DSZ	Denniston Nort	1.52	298	P	Pn	06 45 39.5	-1.1
PLWZ	Palliser	1.52	54		Pn	06 45 40.2	-0.3
PLWZ	Palliser	1.52	54	P	Pn	06 45 40.3	-0.3
INZ	Inchbonnie	1.61	260	Pn	Pn	06 45 41.0	-0.8
INZ	Inchbonnie	1.61	260	P	Pn	06 45 40.9	-0.8
MSWZ	Moikau Station	1.62	50		Pn	06 45 41.5	-0.4
RACZ	Rakaia	1.65	220	P	Pn	06 45 41.3	-1.0
DUWZ	D’Urville Isla	1.69	8	P	Pn	06 45 42.2	-0.6
PAWZ	Paruwai Farm	1.74	52	P	Pn	06 45 43.0	-0.5
CAW	Cannon Point	1.75	39	P	Pn	06 45 43.3	-0.3
QRZ	Quartz Range	1.83	334		Pn	06 45 45.0	+0.3
QRZ	Quartz Range	1.83	334	P	Pn	06 45 45.1	+0.3
QRZ	Quartz Range	1.83	334	P	Pn	06 45 44.4	-0.4
MHCZ	Mount Hutt	1.83	234	P	Pn	06 45 43.5	-1.3
KIW	Kapiti Island	1.88	32	P	Pn	06 45 45.4	-0.1
TRWZ	Traveller	1.89	56	P	Pn	06 45 44.9	-0.7
MTW	Mount Morrison	1.93	48	P	Pn	06 45 45.4	-0.8
WACZ	Wakanui South	1.96	221	P	Pn	06 45 45.5	-1.0
OGWZ	Otaki Gorge	2.03	36	P	Pn	06 45 47.1	-0.4
HOWZ	Holdsworth Sta	2.13	43	P	Pn	06 45 48.0	-0.9
TMWZ	Te Maipa	2.19	52	P	Pn	06 45 48.7	-1.0
WVZ	Waitaha Valley	2.20	253	P	Pn	06 45 49.1	-0.6
RPZ	Rata Peaks	2.24	235	Pn	Pn	06 45 49.2	-1.2
	69nm,0.3s,baz=251,slow=1.6,SNR=213						
RPZ				Sn	Sn	06 46 14.6	-2.4
	179nm,0.3s,baz=17,slow=22,SNR=6.5						
RPZ				LR	LR	06 47 08.0	
	comp=Z,842nm,18.5s,baz=38,slow=50						
	197nm,0.4s						
RPZ	Rata Peaks	2.24	235	P	Pn	06 45 49.8	-0.7
RPZ	Rata Peaks	2.24	235	P	Pn	06 45 49.3	-1.2
ARCZ	Arundel	2.31	229	P	Pn	06 45 50.0	-1.4
MRZ	Mangatainoka R	2.34	40	Pn	Pn	06 45 50.8	-1.0
MRZ	Mangatainoka R	2.34	40	P	Pn	06 45 50.9	-0.8
TIWZ	Tintock	2.41	46	P	Pn	06 45 51.5	-1.2
CPWZ	Castlepoint	2.49	52	P	Pn	06 45 53.2	-0.7
GCSZ	Gaunt Creek Bo	2.55	250	P	Pn	06 45 54.3	-0.4
PRWZ	Pori Road	2.61	44	P	Pn	06 45 54.5	-1.1
POWZ	Post Office Ro	2.64	39	P	Pn	06 45 55.0	-0.9
BFZ	Birch Farm	2.67	49		Pn	06 45 55.2	-1.1
BFZ	Birch Farm	2.67	49	P	Pn	06 45 54.8	-1.5
BFZ	Birch Farm	2.67	49	P	Pn	06 45 54.8	-1.5
TMZ	Timaru	2.69	224	P	Pn	06 45 55.5	-1.1
DVHZ	Dannevirke	2.90	42	P	Pn	06 45 57.9	-1.6
WAZ	Wanganui	2.91	21	P	Pn	06 46 00.7	+1.1
FOZ	Fox Glacier	2.98	248	Pn	Pn	06 46 00.7	+0.3
FOZ	Fox Glacier	2.98	248	P	Pn	06 46 00.1	-0.3
TSZ	Takapari Road	2.99	37	P	Pn	06 45 59.6	-1.2
NMEZ	Namu Road	3.06	4	P	Pn	06 46 03.6	+1.9
LBZ	Lake Benmore	3.14	231	Pn	Pn	06 46 02.4	-0.4

LBZ	**Lake Benmore**	3.14	231	P	Pn	06 46 02.1	-0.7
PRHZ	**Porangahau**	3.17	47	P	Pn	06 46 02.0	-1.2
KHEZ	**Kahui Hut**	3.19	6	P	Pn	06 46 05.5	+2.0
KHEZ	**Kahui Hut**	3.19	6	P	Pn	06 46 05.3	+1.7
NBEZ	**Newall Road No**	3.21	4	P	Pn	06 46 05.0	+1.3
WPHZ	**Waipukurau**	3.22	43	P	Pn	06 46 02.7	-1.2
NEZ	**North Egmont**	3.22	7	P	Pn	06 46 05.4	+1.4
PNHZ	**Pukenui**	3.22	38	P	Pn	06 46 02.4	-1.5
PKE	**Pukeiti**	3.29	5	P	Pn	06 46 06.2	+1.3
DREZ	**Durham Road**	3.31	8	P	Pn	06 46 06.6	+1.5
ODZ	**Otahua Downs**	3.35	219		Pn	06 46 05.1	-0.5
ODZ	**Otahua Downs**	3.35	219	P	Pn	06 46 04.7	-0.9
ODZ	**Otahua Downs**	3.35	219	P	Pn	06 46 04.5	-1.1
MTVZ	**Mangateitei**	3.39	25	P	Pn	06 46 06.8	+0.5
MHEZ	**Mangahewa**	3.44	9	P	Pn	06 46 08.9	+2.1
PKVZ	**Pokaka**	3.44	23	P	Pn	06 46 07.6	+0.6
VRZ	**Vera Road**	3.46	15	P	Pn	06 46 08.1	+1.0
PXZ	**Pawanui**	3.46	46	P	Pn	06 46 05.3	-1.8
MOVZ	**Moawhango**	3.47	29	P	Pn	06 46 06.6	-0.8
TRVZ	**Turoa**	3.49	26	P	Pn	06 46 09.3	+1.4
BHHZ	**Black Hill Sta**	3.51	33	P	Pn	06 46 07.2	-0.7
DRZ	**Dome Shelter**	3.52	26	P	Pn	06 46 08.9	+0.6
WHVZ	**Whangaehu Hut**	3.52	26	P	Pn	06 46 09.0	+0.7
FWVZ	**Far West T-bar**	3.54	25	P	Pn	06 46 08.7	+0.3
TUVZ	**Tukino**	3.56	27	P	Pn	06 46 08.9	+0.2
NGZ	**Ngauruhoe**	3.62	25	P	Pn	06 46 11.7	+2.1
KAHZ	**Kahuranaki**	3.64	44	P	Pn	06 46 07.9	-1.8
OTVZ	**Oturere**	3.66	26	P	Pn	06 46 10.3	+0.3
NNVZ	**North Ngauruho**	3.67	25	P	Pn	06 46 10.7	+0.5
WTVZ	**West Tongariro**	3.67	25	P	Pn	06 46 13.2	+2.9
ETVZ	**East Tongariro**	3.69	26	P	Pn	06 46 10.6	+0.1
TMVZ	**Te Maari**	3.71	26	P	Pn	06 46 10.6	-0.1
KWHZ	**Kaweka Forest**	3.72	36	P	Pn	06 46 09.0	-1.7
NTVZ	**North Tongarir**	3.72	26	P	Pn	06 46 11.4	+0.5
MCHZ	**McNeill Hill**	3.82	39	P	Pn	06 46 10.4	-1.8
JCZ	**Jackson Bay**	3.87	244	P	Pn	06 46 13.2	+0.4
JCZ	**Jackson Bay**	3.87	244	P	Pn	06 46 11.7	-1.1
RITZ	**Rihia Road**	3.89	27	P	Pn	06 46 14.2	+1.1
BKZ	**Black Stump Fm**	3.96	35	P	Pn	06 46 12.7	-1.4
BKZ	**Black Stump Fm**	3.96	35	P	Pn	06 46 12.1	-2.0
HHSZ	**Highcliff Hill**	4.04	211	P	Pn	06 46 14.5	-0.6
HIZ	**Hauiti**	4.07	14		Pn	06 46 16.4	+0.9
HIZ	**Hauiti**	4.07	14	P	Pn	06 46 16.6	+1.1
HIZ	**Hauiti**	4.07	14	P	Pn	06 46 16.3	+0.7
WKZ	**Wanaka**	4.08	233		Pn	06 46 14.7	-1.0
WKZ	**Wanaka**	4.08	233	P	Pn	06 46 14.4	-1.3
WATZ	**Wairara**	4.09	24	P	Pn	06 46 18.3	+2.4
ARHZ	**Aropaoanui**	4.11	40	P	Pn	06 46 15.5	-0.6
EAZ	**Earnscleugh**	4.16	227	P	Pn	06 46 15.5	-1.2
NMHZ	**Naumai**	4.16	37	P	Pn	06 46 14.9	-2.0
KUTZ	**Kaahu Road**	4.32	24	P	Pb	06 46 25.1	-5.8
WHHZ	**Waihua**	4.37	40	P	Pn	06 46 20.8	+1.1
MTHZ	**Maungataniwha**	4.37	35	P	Pn	06 46 18.8	-0.9
TLZ	**Tolley Road**	4.39	20	P	Pn	06 46 19.8	-0.3
ALRZ	**Allen Road**	4.43	29	P	Pn	06 46 18.9	-1.6
RAHZ	**Arahi**	4.43	38	P	Pn	06 46 19.5	-1.0
PRRZ	**Plateau Road**	4.50	29	P	Pn	06 46 21.0	-0.5
TUZ	**Tuapeka**	4.50	218	P	Pn	06 46 20.7	-0.8
KNZ	**Kokohu**	4.63	43	P	Pn	06 46 21.3	-1.9
RTZ	**Ruatahuna**	4.63	35		Pn	06 46 22.5	-0.8
RTZ	**Ruatahuna**	4.63	35	P	Pn	06 46 22.6	-0.8
MHGZ	**Mahia Peninsul**	4.65	46	P	Pn	06 46 23.4	-0.2
SNGZ	**Shannon Statio**	4.65	39	P	Pn	06 46 22.4	-1.2
MUGZ	**Murupara**	4.66	32	P	Pn	06 46 23.5	-0.2
MSZ	**Milford Sound**	4.68	240	P	Pn	06 46 23.2	-0.6
MLZ	**Mavora Lakes**	4.91	232		Pn	06 46 26.3	-0.7
MLZ	**Mavora Lakes**	4.91	232	P	Pn	06 46 25.5	-1.5
RIGZ	**Rimuhau**	4.92	41	P	Pn	06 46 24.9	-2.3
RAGZ	**Rawiri**	4.92	37	P	Pn	06 46 25.7	-1.6
TOZ	**Tahuroa Road**	4.95	18	P	Pn	06 46 27.4	-0.3
URZ	**Urewera**	4.99	34	Pn	Pn	06 46 24.7	-3.5
	3.8nm,0.3s,baz=307,slow=3.1,SNR=33						
URZ				Sn	Sn	06 47 19.5	-5.1
	47nm,0.3s,baz=150,slow=18,SNR=19						
	9.8nm,0.4s						
URZ	**Urewera**	4.99	34	P	Pn	06 46 25.8	-2.3
URZ	**Urewera**	4.99	34	P	Pn	06 46 25.1	-3.0
MWZ	**Matawai**	5.10	37	P	Pn	06 46 26.6	-3.2
TKGZ	**Te Karaka**	5.17	40	P	Pn	06 46 28.7	-1.9
SYZ	**Scrubby Hill**	5.17	217	P	Pn	06 46 30.4	-0.2
SYZ	**Scrubby Hill**	5.17	217	P	Pn	06 46 30.3	-0.3
CNGZ	**Carnagh Statio**	5.31	43	P	Pn	06 46 32.7	+0.1
WHZ	**Wether Hill Ro**	5.32	228	P	Pn	06 46 30.6	-2.1
TWGZ	**Tauwhareparae**	5.44	39	P	Pn	06 46 34.1	-0.3
AWAZ	**Awhitu Peninsu**	5.46	9	P	Pn	06 46 35.1	+0.4
RUGZ	**Raukumara Rang**	5.47	36	P	Pn	06 46 32.4	-2.6
WTAZ	**Waiatarua**	5.58	8	P	Pn	06 46 37.4	+1.0
ETAZ	**East Tamaki Re**	5.60	11	P	Pn	06 46 36.9	+0.3
PUZ	**Puketiti**	5.65	41	P	Pn	06 46 34.7	-2.7
EPAZ	**Eden Park BICE**	5.66	9	P	Pn	06 46 38.1	+0.8
HBAZ	**Herne Bay Bore**	5.68	9	P	Pn	06 46 38.5	+0.9
HAZ	**Te Kaha**	5.69	36	P	Pn	06 46 35.6	-2.3
PKGZ	**Pakihiroa**	5.72	38	P	Pn	06 46 37.0	-1.2
RVAZ	**Riverhead Bore**	5.74	8	P	Pn	06 46 39.1	+0.5
MBAZ	**Motutapu North**	5.78	10	P	Pn	06 46 41.9	+2.8
WIAZ	**Waiheke Island**	5.79	12	P	Pn	06 46 39.5	+0.2
APZ	**The Paps**	5.92	221	P	Pn	06 46 39.3	-1.7
WMGZ	**Waiomatatini S**	5.93	40	P	Pn	06 46 38.7	-2.4
KUZ	**Kuaotunu**	5.95	17	P	Pn	06 46 41.4	+0.1
KUZ	**Kuaotunu**	5.95	17	P	Pn	06 46 40.6	-0.8
MXZ	**Matakaoa Point**	6.09	38	Pn	Pn	06 46 42.5	-0.7
MXZ	**Matakaoa Point**	6.09	38	P	Pn	06 46 44.0	+0.7
MXZ	**Matakaoa Point**	6.09	38	P	Pn	06 46 42.6	-0.7
PYZ	**Puysegur Point**	6.19	231	P	Pn	06 46 47.4	+2.7
WCZ	**Waipu Caves**	6.55	5	P	Pn	06 46 51.5	+1.9
CTZ	**Chatham Island**	7.27	103	P	Pn	06 46 58.8	-0.6
DZM	**Mont Dzumac**	21.21	341	LR	LR	06 57 29.1	
	comp=Z,210nm,19.3s,baz=210,slow=35						
KOUNC	**Koumac, New Ca**	23.22	337	P	P	06 50 19.7	-0.1
KOUNC				IAmb	IAmb	06 50 30.0	
	comp=Z,21nm,1.1s						
STKA	**Stephens Creek**	27.46	282	LR	LR	07 00 41.8	
	comp=Z,107nm,18.7s,baz=188,slow=34						
CTA	**Charters Tower**	32.07	306	LR	LR	07 04 17.4	
	comp=Z,132nm,18.8s,baz=109,slow=36						
SBA	**Scott Base**	35.60	182	P	P	06 52 10.3	+0.7
SBA				IAmb	IAmb	06 52 26.3	
	comp=Z,23nm,1.2s						
AS31	**Alice Springs**	37.77	287	P	P	06 52 26.7	-2.0
AS31				IAmb	IAmb	06 52 48.6	
	comp=Z,0.5nm,0.7s						
ASAR	**Alice Springs**	37.77	287	P	P	06 52 27.0	-1.7
	comp=Z,0.6nm,0.5s,baz=133,slow=7.6,SNR=11						
ASAR				PcP	PcP	06 54 43.1	-1.9
	comp=Z,0.7nm,0.7s,baz=125,slow=3.9,SNR=6.2						
	comp=Z,0.6nm,0.5s						
ASAR	**Alice Springs**	37.77	287	P	P	06 52 27.7	-1.0
WB2	**Warramunga Arr**	39.91	292	P	P	06 52 45.4	-1.1
WB2				IAmb	IAmb	06 52 55.1	
	comp=Z,4.0nm,0.8s						
WRA	**Warramunga Arr**	39.91	292	P	P	06 52 45.2	-1.4
	comp=Z,0.9nm,0.5s,baz=129,slow=8.3,SNR=25						
WRA				PcP	PcP	06 54 49.7	-2.1
	comp=Z,0.8nm,0.8s,baz=127,slow=2.9,SNR=5.2						
	comp=Z,0.9nm,0.5s						
WRA	**Warramunga Arr**	39.91	292	P	P	06 52 45.6	-1.0
QSPA	**South Pole Qui**	47.66	180	P	P	06 53 51.2	+2.7
	comp=Z,2.8nm,0.7s,baz=353,slow=1.3,SNR=15						
	comp=Z,2.8nm,0.7s						
BELA	**Belgrano 2**	58.69	173	P	P	06 55 10.3	+1.1
SNAA	**Sanae**	66.14	181	P	P	06 56 00.2	+1.0
SNAA				IAmb	IAmb	06 56 01.3	
	comp=Z,7.0nm,1.1s						
PLCA	**Paso Flores**	78.92	136	P	P	06 57 17.9	+2.2
	comp=Z,1.5nm,0.6s,baz=254,slow=7.9,SNR=7.1						
	comp=Z,1.5nm,0.6s						
CMAR	**Chiang Mai Arr**	91.49	294	P	P	06 58 18.8	0.0
	comp=Z,1.9nm,0.3s,baz=143,slow=3.2,SNR=4.8						
	comp=Z,1.9nm,0.3s						
PZH	**PanZhiHua**	95.29	301	P	P	06 58 38.0	+1.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,80nm,4.8s						
PALK	**Pallekele**	96.99	273	LR	LR	07 38 43.0	
	comp=Z,112nm,21.7s,baz=337,slow=33						
HHC	**Hu-ho-hao-te**	100.09	317	*e*P	Pdif	06 59 01.2	+3.7
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,4.7s						
YKA	**Yellowknife Ar**	119.24	30	PKP	PKPdf	07 03 59.2	-0.9
	comp=Z,0.7nm,0.7s,baz=250,slow=1.8,SNR=14						
MKAR	**Makanchi Array**	120.03	307	PKP	PKPdf	07 03 59.9	-2.3
	comp=Z,0.2nm,0.4s,baz=96,slow=2.9,SNR=5.7						
KURBB	**Kurchatov Arra**	124.08	310	PKP	PKPdf	07 04 07.7	-2.1
	comp=Z,0.3nm,0.4s,baz=111,slow=2.0,SNR=5.4						
DBIC	**Dimbokro**	144.32	183	PKP	PKPbc	07 04 46.9	-0.1
	comp=Z,1.9nm,0.5s,baz=203,slow=3.7,SNR=4.6						
KBZ	**Khabaz**	144.41	289	PKP	PKPab	07 04 45.5	-0.6
	comp=Z,4.0nm,0.9s,baz=196,slow=3.2,SNR=5.1						
ARCES	**ARCESS Array B**	148.28	339	PKPbc	PKPdf	07 04 55.1	+1.5
	comp=Z,4.9nm,1.1s,baz=37,slow=3.5,SNR=11						
BRTR	**Keskin Array B**	149.90	278	PKPbc	PKPbc	07 05 01.2	-1.0
	comp=Z,2.0nm,0.7s,baz=133,slow=5.6,SNR=9.2						
TORD	**Torodi Ar. Bea**	149.95	196	PKP	PKPdf	07 04 58.4	+0.5
	comp=Z,5.7nm,1.1s,baz=207,slow=1.3,SNR=10						
TORD				PKPbc	PKPbc	07 05 02.4	-0.5
	comp=Z,4.2nm,1.1s,baz=180,slow=1.5,SNR=3.6						
FINES	**FINESS Array B**	152.86	326	PKPbc	PKPbc	07 05 06.0	-2.1
	comp=Z,2.0nm,0.8s,baz=17,slow=1.5,SNR=6.6						

ROM 10 06:48:06.0±0.1**, 42°.885N**±0°.003×**13°.172E**±0°.003**, h6^{km}, ML1.3**/7**, 5C-3D, Error ellipse: s-maj=0.3km s-min=0.1km az=333.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MC2	**Monte Cornacci**	0.03	26	⇑P	Pg	06 48 07.4	0.0
MC2				S	Sg	06 48 08.2	-0.3
T1245	**Castelsantange**	0.03	158	⇓P	Pg	06 48 07.3	-0.1
T1245				S	Sg	06 48 08.1	-0.2
T1245				AML	AML		
	comp=E,1840µm,1.2s						
T1245				AML	AML		
	comp=N,2830µm,1.2s						
T1245				AML	AML		
	comp=E,1695µm,1.2s						
T1245				AML	AML		
	comp=N,2875µm,1.2s						
T1216	**Preci, Frazion**	0.11	273	⇑P	Pg	06 48 08.9	+0.5
T1216				S	Sg	06 48 11.2	+1.1
T1216				AML	AML		
	comp=N,247µm,0.3s						
T1216				AML	AML		
	comp=E,336µm,0.4s						
T1216				AML	AML		
	comp=N,247µm,0.3s						
MMO1	**Montemonaco**	0.11	83	⇑P	Pg	06 48 08.7	+0.2
MMO1				S	Sg	06 48 11.0	+0.9
T1214	**Arquata del Tr**	0.13	168	⇓P	Pg	06 48 09.3	+0.6
T1214				S	Sg	06 48 11.5	+0.9
T1214				AML	AML		
	comp=N,209µm,1.5s						
T1214				AML	AML		
	comp=E,213µm,0.2s						
T1214				AML	AML		
	comp=N,224µm,0.2s						
T1214				AML	AML		
	comp=E,221µm,0.2s						
T1214				AML	AML		
	comp=N,209µm,0.5s						
T1212	**Cascia, Frazio**	0.16	215	⇑P	Pg	06 48 09.8	+0.5
T1212				S	Sg	06 48 12.8	+1.2
T1212				AML	AML		
	comp=E,206µm,0.8s						
T1212				AML	AML		
	comp=E,168µm,0.2s						
T1212				AML	AML		
	comp=E,168µm,1.8s						
T1212				AML	AML		
	comp=N,272µm,0.2s						
T1212				AML	AML		
	comp=N,255µm,0.2s						
T1241	**Roccafluvione,**	0.19	99	P	Pg	06 48 10.7	+0.8
T1241				S	Sg	06 48 13.5	+1.1
T1241				AML	AML		
	comp=E,80µm,0.2s						
T1241				AML	AML		
	comp=N,96µm,0.6s						
T1241				AML	AML		
	comp=E,75µm,0.3s						
T1241				AML	AML		
	comp=E,75µm,1.7s						
T1241				AML	AML		
	comp=N,96µm,1.4s						
CSP1	**Cessapalombo**	0.21	7	P	Pg	06 48 10.6	+0.4
CSP1				S	Sg	06 48 14.6	+1.6
T1219	**Muccia, Frazio**	0.21	325	⇓P	Pg	06 48 10.6	+0.5
T1219				S	Sg	06 48 14.2	+1.2
T1219				AML	AML		
	comp=E,96µm,0.4s						
T1219				AML	AML		
	comp=N,114µm,0.2s						
T1215	**Vallo di Nera,**	0.24	250	P	Pg	06 48 11.2	+0.5
T1215				S	Sg	06 48 15.2	+1.4
T1217	**Poggiodomo (PG**	0.25	226	⇑P	Pg	06 48 11.5	+0.6
T1217				S	Sg	06 48 15.8	+1.7
T1217				AML	AML		
	comp=N,88µm,0.2s						
T1217				AML	AML		
	comp=E,55µm,1.2s						
TERO	**Teramo**	0.41	129	AML	AML		
	comp=N,116µm,0.1s						
TERO				AML	AML		
	comp=E,79µm,1.1s						
TERO				AML	AML		
	comp=E,79µm,0.9s						

ROM 10 06:48:16.3±0.1**, 42°.656N**±0°.004×**13°.237E**±0°.005**, h12^{km}, ML1.5**/7**, 2C-3D, Error ellipse: s-maj=0.4km s-min=0.2km az=179.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMA1	**SAN MARTINO**	0.08	110	P	Pg	06 48 19.6	+0.5
SMA1				S	Sg	06 48 21.2	+0.1
SMA1				AML	AML		
	comp=E,786µm,0.2s						
SMA1				AML	AML		
	comp=N,462µm,0.2s						
SMA1				AML	AML		
	comp=E,786µm,1.8s						
T1218	**Civita (PG)**	0.09	279	P	Pg	06 48 19.7	+0.4
T1218				S	Sg	06 48 21.3	-0.1
T1218				AML	AML		
	comp=E,884µm,0.4s						
T1218				AML	AML		
	comp=E,853µm,0.4s						
T1218				AML	AML		
	comp=N,804µm,0.2s						
T1218				AML	AML		
	comp=N,800µm,0.2s						
T1218				AML	AML		
	comp=N,800µm,1.8s						
T1218				AML	AML		
	comp=N,804µm,1.8s						
T1214	**Arquata del Tr**	0.10	349	⇓P	Pg	06 48 19.8	+0.4
T1214				S	Sg	06 48 22.0	+0.3
RM33	**Pellescritta (**	0.15	186	⇓P	Pg	06 48 20.4	+0.4
RM33				S	Sg	06 48 23.0	+0.5
RM33				AML	AML		
	comp=E,169µm,0.6s						
RM33				AML	AML		
	comp=N,158µm,0.9s						
RM33				AML	AML		
	comp=N,158µm,1.1s						
T1212	**Cascia, Frazio**	0.17	304	⇓P	Pg	06 48 20.8	+0.5
T1212				S	Sg	06 48 23.6	+0.5
T1212				AML	AML		
	comp=N,158µm,0.6s						
T1212				AML	AML		
	comp=E,214µm,2.3s						
T1217	**Poggiodomo (PG**	0.23	284	P	Pg	06 48 21.8	+0.4
T1217				S	Sg	06 48 25.8	+1.1
T1217				AML	AML		
	comp=E,69µm,2.6s						
T1241	**Roccafluvione,**	0.25	36	⇑P	Pg	06 48 21.8	+0.3
T1241				S	Sg	06 48 25.7	+0.7
T1241				AML	AML		
	comp=N,44µm,1.0s						
T1222	**Castel Sant'An**	0.29	210	⇑P	Pg	06 48 22.8	+0.4
T1222				S	Sg	06 48 27.4	+1.0
T1222				AML	AML		
	comp=E,58µm,1.3s						
T1222				AML	AML		
	comp=N,41µm,1.3s						
T1222				AML	AML		
	comp=E,58µm,0.7s						
T1222				AML	AML		
	comp=N,41µm,0.7s						

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*NNC **10** 06:50:53.2±3.4, 53°.94N×91°.08E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=25.6km s-min=19.6km az=49.0, Suspected Mining explosion.*

*IDC **10** 06:50:55.5±3.4, 53°.86N×91°.07E, h0^{km}, mbtmp3.1/3, ML3.0/2, Error ellipse: s-maj=29.7km s-min=24.1km az=35.0*

ISC 10 06:50:55.5±4.1**, 53°.9N**±0°.1×**91°.0E**±0°.2**, h0^{km}, n10, σ0^s.91**/13**, 7C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	3.67	274	I	I	07 17 50.0	
	baz=90,slow=336,SNR=6.9						
ZAA0	**Zalesovo Array**	3.67	274	⇓Pg	Pb	06 52 00.7	-0.4
	1.0nm,0.8s						
ZAA0				⇑Lg	Lg	06 52 49.5	
	3.5nm,0.7s						
ZALV	**Zalesovo Beam**	3.67	274	Pn	Pn	06 51 54.0	+0.6
	0.4nm,0.3s,baz=93,slow=15,SNR=1.5						
ZALV				Lg	Lg	06 52 50.2	
	2.6nm,0.3s,baz=88,slow=30,SNR=10						
KURK	**Kurchatov**	8.23	252	⇑Sn	Sn	06 54 30.7	+0.9
	2.7nm,0.6s						
KURK				⇓Lg	Lg	06 55 17.1	
	22nm,1.1s						
KURBB	**Kurchatov Arra**	8.33	252	Pn	Pn	06 52 57.6	+0.3
	0.2nm,0.3s,baz=66,slow=15,SNR=6.4						
KURBB				Sn	Sn	06 54 32.1	+0.1
	0.1nm,0.3s,baz=68,slow=24,SNR=9.8						
KURBB				Lg	Lg	06 55 17.2	
	0.1nm,0.3s,baz=69,slow=32,SNR=9.4						
	1.5nm,0.5s						
KURBB	**Kurchatov Arra**	8.33	252	⇑Pn	Pn	06 52 56.0	-1.4
	2.6nm,0.6s						
KURBB				⇑Sn	Sn	06 54 32.4	+0.3
	8.7nm,0.7s						
KURBB				⇑Lg	Lg	06 55 20.0	
	19nm,0.9s						
MK31	**Makanchi Array**	9.02	222	Pn	Pn	06 53 07.5	+0.5
	1.0nm,0.7s,baz=40,slow=14,SNR=13						
MK31				⇑Sn	Sn	06 54 50.9	+1.6
	0.5nm,0.6s						
MK31				⇑Lg	Lg	06 55 41.5	
	8.5nm,1.1s,baz=38,slow=30,SNR=5.6						
MKAR	**Makanchi Array**	9.02	222	Pn	Pn	06 53 07.4	+0.4
	0.2nm,0.3s,baz=40,slow=14,SNR=11						
MKAR				Sn	Sn	06 54 48.4	-0.8
	0.1nm,0.3s,baz=37,slow=22,SNR=3.7						
MKAR				Lg	Lg	06 55 34.7	
	0.2nm,0.3s,baz=35,slow=26,SNR=2.3						
	0.5nm,0.5s						
MAKZ	**Makanchi**	9.14	223	⇓Pn	Pn	06 53 08.5	0.0
	2.2nm,1.2s						
MAKZ				⇓Sn	Sn	06 54 50.9	-1.1
	3.7nm,1.4s						
MAKZ				⇓Lg	Lg	06 55 47.1	
	6.9nm,1.2s						
SONM	**Songino Array**	11.44	116	Lg	Lg	06 56 54.1	
	baz=300,slow=26,SNR=3.5						

IDC 10 06:53:28.2±2.7**, 54°.16N**×**86°.52E, h0^{km}, mbtmp3.1**/2**, ML2.9**/2**, Error ellipse: s-maj=21.6km s-min=12.7km az=62.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	1.03	259	I	I	06 59 00.0	
	0.1nm,0.7s,baz=80,slow=338,SNR=22						
ZALV	**Zalesovo Beam**	1.03	259	Pg	Pg	06 53 46.0	-1.8
	0.9nm,0.3s,baz=79,slow=16,SNR=2.1						
ZALV				Lg	Lg	06 54 02.1	
	2.1nm,0.3s,baz=79,slow=30,SNR=5.5						
KURBB	**Kurchatov Arra**	6.04	237	Pn	Pn	06 54 59.2	+0.6
	0.2nm,0.3s,baz=54,slow=13,SNR=6.9						
KURBB				Lg	Lg	06 56 42.0	
	baz=48,slow=34,SNR=1.7						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	7.85	202	Pn	Pn	06 55 24.4	+0.9
	0.3nm,0.3s,baz=26,slow=13,SNR=9.0						
MKAR				Sn	Sn	06 56 54.2	+1.2
	baz=22,slow=28,SNR=1.5						
MKAR				Lg	Lg	06 57 37.9	
	baz=18,slow=35,SNR=1.6						
	0.4nm,0.3s						

IDC 10 06:58:20.5±2.0**, 3°.86N**×**128°.05E, h0^{km}, mb3.6**/4**, mbtmp3.6**/5**, ML3.7**/1**, MS3.1**/2**, Error ellipse: s-maj=118.6km s-min=26.2km az=63.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	5.70	146	Pn	Pn	06 59 47.5	+1.0
	2.2nm,0.3s,baz=317,slow=19,SNR=16						
SIJI				Sn	Sn	07 00 47.9	-4.7
	2.9nm,0.3s,baz=279,slow=23,SNR=2.4						
	7.2nm,0.5s						
WRA	**Warramunga Arr**	24.45	166	P	P	07 03 40.5	-0.7
	1.5nm,0.7s,baz=346,slow=10,SNR=16						
	1.5nm,0.7s						
ASAR	**Alice Springs**	27.95	168	P	P	07 04 13.9	+1.1
	0.2nm,0.5s,baz=349,slow=11,SNR=5.5						
	0.2nm,0.5s						
KSRS	**Korea Array**	33.43	360	LR	LR	07 19 07.7	
	comp=Z,8.4nm,20.2s,baz=65,slow=37						
STKA	**Stephens Creek**	37.81	161	P	P	07 05 37.9	-0.8
	1.4nm,0.7s,baz=355,slow=12,SNR=3.2						
	1.4nm,0.7s						
PETK	**Petropavlovsk-**	54.82	21	LR	LR	07 30 42.5	
	comp=Z,64nm,21.4s,baz=75,slow=35						
MKAR	**Makanchi Array**	58.20	325	P	P	07 08 16.5	0.0
	0.1nm,0.3s,baz=114,slow=7.6,SNR=2.9						
	0.1nm,0.3s						

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*NNC **10** 07:08:20.8±0.5, 50°.01N×78°.67E, h0^{km}, mb3.0, mpv2.7, Error ellipse: s-maj=7.9km s-min=2.4km az=77.0, Suspected Mining explosion.*

*IDC **10** 07:08:22.2±0.9, 50°.09N×78°.89E, h0^{km}, mbtmp2.9/3, ML2.3/3, Error ellipse: s-maj=11.9km s-min=6.3km az=56.0*

ISC 10 07:08:21.4±0.9**, 50°.09N**±0°.05×**78°.78E**±0°.08**, h0^{km}, n20, σ1^s.15**/32**, 20C-11D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	0.52	341	⇑P	Pb	07 08 32.4	-1.0
KUR07				⇑S	Sb	07 08 40.8	-0.7
KUR06	**Kurchatov Arra**	0.54	342	⇑P	Pb	07 08 32.8	-0.9
KUR06				⇑S	Sb	07 08 41.1	-0.8
KUR14	**Kurchatov Arra**	0.54	347	⇓P	Pb	07 08 32.7	-1.0
KUR14				⇑S	Sb	07 08 41.1	-0.8
KUR15	**Kurchatov Arra**	0.55	345	⇑P	Pb	07 08 32.8	-1.0
KUR15				⇑S	Sb	07 08 41.3	-1.0
KURBB	**Kurchatov Arra**	0.56	343	Pg	Pb	07 08 33.0	-1.0
	1.7nm,0.3s,baz=159,slow=20,SNR=95						
KURBB				Lg	Lg	07 08 41.2	
	3.0nm,0.3s,baz=159,slow=33,SNR=21						
KURBB	**Kurchatov Arra**	0.56	343	⇓P	Pb	07 08 33.0	-1.0
	10nm,0.2s						
KURBB				⇑S	Sb	07 08 42.1	-0.4
	137nm,0.6s						
KUR16	**Kurchatov Arra**	0.56	342	⇓P	Pb	07 08 33.3	-0.9
KUR16				⇓S	Sb	07 08 42.3	-0.5
KUR05	**Kurchatov Arra**	0.57	344	⇑P	Pb	07 08 33.3	-1.0
KUR05				⇑S	Sb	07 08 41.8	-1.2
KUR17	**Kurchatov Arra**	0.58	340	⇓P	Pb	07 08 33.7	-0.7
KUR17				⇓S	Sb	07 08 43.1	0.0
KUR04	**Kurchatov Arra**	0.59	345	⇓P	Pb	07 08 33.7	-0.9
KUR04				⇑S	Sb	07 08 42.4	-1.1
KURK	**Kurchatov**	0.63	351	⇑P	Pb	07 08 34.4	-0.9
	9.7nm,0.6s						
KURK				⇓S	Sb	07 08 44.3	-0.4
	35nm,0.6s						
MAKZ	**Makanchi**	3.92	146	⇓Pg	Pb	07 09 29.8	-1.5
	2.5nm,0.7s						
MAKZ				⇑Lg	Lg	07 10 23.6	

	9.4nm,0.8s						
MK31	Makanchi Array	4.04	143	⇑Pn	Pn	07 09 25.1	+0.5
	0.1nm,0.2s,baz=129,slow=21,SNR=32						
MK31				⇑Pg	Pb	07 09 32.7	-0.8
	0.5nm,0.2s,baz=323,slow=14,SNR=22						
MK31				⇓Sn	Sn	07 10 13.8	+1.2
	0.7nm,0.3s						
MK31				⇓Lg	Lg	07 10 27.8	
	9.8nm,0.6s,baz=328,slow=27,SNR=5.0						
MKAR	Makanchi Array	4.04	143	Pn	Pn	07 09 25.2	+0.6
	0.3nm,0.3s,baz=324,slow=10.0,SNR=51						
MKAR				Pg	Pb	07 09 31.5	-2.0
	0.5nm,0.3s,baz=331,slow=14,SNR=13						
MKAR				Lg	Lg	07 10 25.2	
	1.0nm,0.3s,baz=324,slow=27,SNR=21						
	0.3nm,0.3s						
OTUK	Ortayu	4.61	249	⇑Lg	Lg	07 10 45.4	
	5.2nm,0.6s						
ZALV	Zalesovo Beam	5.37	42	Pn	Pn	07 09 44.5	+1.8
	0.5nm,0.3s,baz=230,slow=14,SNR=8.3						
ZALV				Lg	Lg	07 11 12.9	
	0.2nm,0.3s,baz=224,slow=29,SNR=3.8						
	1.6nm,0.2s						
I46RU	ZALESOVO INFRA	5.37	42	I	I	07 40 50.0	
	baz=224,slow=296,SNR=3.0						
BVA0	Borovoye Array	6.00	303	⇑Sn	Sn	07 10 59.1	-1.6
	1.7nm,0.6s						
BVA0				⇑Lg	Lg	07 11 31.1	
	2.1nm,0.6s						
BVAR	Borovoye Array	6.00	303	Pn	Pn	07 09 53.5	+2.1
	baz=123,slow=13,SNR=2.2						
BVAR				Sn	Sn	07 11 02.0	+1.3
	0.1nm,0.3s,baz=111,slow=22,SNR=8.0						
	0.8nm,0.8s						
BRVK	Borovoye	6.07	303	⇑Sn	Sn	07 11 00.9	-1.6
	2.6nm,0.6s						
BRVK				⇑Lg	Lg	07 11 31.5	
	1.6nm,0.7s						

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*JMA **10** 07:15:46.7±0.1, 38°.2N±0°.2×141°.8E±0°.4, h55^{km}, MD3.8/39, MV4.0/39, E OFF MIYAGI PREF*

JMA Felt II J1 at E OFF MIYAGI PREF .

*NIED **10** 07:15:46.7, 38°.21N×141°.76E, h55^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$3.91; M$_{\theta\theta}$-0.19; M$_{\phi\phi}$-3.72; M$_{r\theta}$1.57; M$_{\theta\phi}$-2.39; M$_{\phi r}$-2.78; Fault plane solution: M$_0$5.51000×10^{14} NP1: ϕ_s180.00000°, δ63.00000°, λ59.00000°. NP2:ϕ_s52.00000°, δ41.00000°, λ135.00000°.*

*IDC **10** 07:15:49.6±2.5, 38°.17N×141°.67E, h86^{km}±24^{km}, mb3.5/11, mbtmp3.8/15, MS2.9/2 Error ellipse: s-maj=23.9km s-min=14.6km az=99.0*

ISC 10 07:15:46.1±1.1**, 38°.18N**±0°.05×**141°.86E**±0°.08**, h51**^{km}±9^{km}**, n52, σ1^s.38**/51**, mb3.8**/11**, 6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.34	294	*i* P	Pn	07 15 56.0	+0.4
JIKH				S	Sn	07 16 02.7	+0.2
JIKH	Ishinomakikobu	0.34	294	A	A	07 15 56.0	
	comp=E,15nm,0.4s,comp=E,9.0nm,0.4s						
JIO	Ouri	0.49	305	*i* P	Pn	07 15 57.4	+0.1
JIO				S	Sn	07 16 04.8	-0.5
JKMT	Kesennumamotoy	0.70	335	*i* P	Pn	07 15 59.9	0.0
JKMT				S	Sn	07 16 09.4	-0.5
JOFO	Osakifurukawao	0.86	300	A	A	07 16 01.7	
	comp=E,15nm,1.1s,comp=E,12nm,1.9s						
JMST	Minamisoumatoc	0.89	240	A	A	07 16 02.6	
	comp=E,11nm,0.4s,comp=E,11nm,0.3s						
JMM	Marumori	0.90	250	P	Pn	07 16 02.8	+0.3
JMM	Marumori	0.90	250	*i* P	Pn	07 16 02.2	-0.3
JMM				S	Sn	07 16 13.6	-0.8
JMK	Ichinoseki	0.92	327	⇓*i*P	Pn	07 16 02.9	+0.1
JMK				⇓S	Sn	07 16 14.5	-0.6
JOU	Okura	0.96	282	⇓*i*P	Pn	07 16 03.2	-0.1
JOU				⇓S	Sn	07 16 15.3	-0.7
JOU	Okura	0.96	282	A	A	07 16 03.2	
	comp=E,11nm,0.4s,comp=E,8.0nm,0.7s						
JFK	Kawauchi	1.12	224	*i* P	Pn	07 16 05.7	+0.2
JFK				S	Sn	07 16 19.7	-0.2
JOTO	OTAMA OYAMA	1.35	243	*i* P	Pn	07 16 09.0	+0.4
JOTO				*e*S	Sn	07 16 25.6	+0.1
JOM	Ohasama	1.37	341	*i* P	Pn	07 16 09.2	+0.3
JOM				S	Sn	07 16 25.8	-0.1
JYK	Kaneyama	1.39	303	*i* P	Pn	07 16 08.9	-0.2
JYS	Shirataka	1.41	272	*i* P	Pn	07 16 09.5	+0.1
JYS				S	Sn	07 16 27.1	+0.2
JRG	Rokugo	1.55	322	⇓*i*P	Pn	07 16 11.6	+0.3
JRG	Rokugo	1.55	322	A	A	07 16 11.6	
	comp=E,3.0nm,1.9s,comp=E,2.0nm,0.3s						
JYA	Atsumi	1.73	285	⇓*i*P	Pn	07 16 13.8	0.0
JYA	Atsumi	1.73	285	A	A	07 16 13.8	
	comp=E,3.0nm,0.5s,comp=E,2.0nm,0.8s						
JTM	Tenmabayashi	2.68	347	P	Pn	07 16 27.5	+0.8
JSD	Sado	2.84	268	P	Pn	07 16 28.8	-0.2
MJAR	Matsushiro Arr	3.33	242	P	Pn	07 16 37.7	+1.9
	11nm,0.7s,baz=52,slow=10,SNR=25						
MJAR				LR	LR	07 18 03.3	
	comp=Z,60nm,21.9s,baz=58,slow=42						
MAJO	Matsushiro	3.33	242	P	Pn	07 16 38.2	+2.4
ERM	Erimo	3.96	14	P	Pn	07 16 43.8	-0.5
JEM	Erimo	3.96	14	P	Pn	07 16 44.1	-0.2
JGF	Kuroka	4.43	236	P	Pn	07 16 53.6	+2.8
INU	Inuyama	4.80	235	P	Pn	07 16 59.3	+3.4
JHJ	Hachijo jima 2	5.32	199	P	Pn	07 17 05.6	+2.6
	47nm,0.4s,baz=52,slow=18,SNR=1.1						
JHJ				S	Sn	07 17 59.1	-3.9
	66nm,0.5s,baz=275,slow=22,SNR=1.2						
ASAJ	Asahikawa	5.96	5	P	Pn	07 17 11.5	-0.2
	3.6nm,0.3s,baz=200,slow=12,SNR=2.8						
ASAJ				S	Sn	07 18 17.2	-1.5
	3.5nm,0.4s,baz=162,slow=20,SNR=1.5						
JHS	Saijyo	7.71	248	P	Pn	07 17 39.9	+4.1
USRK	Ussuriysk Ar.	9.56	312	P	Pn	07 18 02.6	+1.5
	3.2nm,0.6s,baz=123,slow=15,SNR=3.9						
KSRS	Korea Array	11.05	271	P	Pn	07 18 24.1	+2.7
	0.7nm,0.4s,baz=80,slow=14,SNR=1.9						
GUMO	Guam	24.63	173	LR	LR	07 38 49.5	
	comp=Z,83nm,18.0s,baz=110,slow=56						
SEY	Seymchan	25.60	11	P	P	07 21 11.0	+0.7
	2.7nm,0.9s,baz=270,slow=4.0,SNR=3.0						
	2.7nm,0.9s						
H11N2	WAKE ISLAND Hy	28.45	123	T	T	07 51 50.1	
	baz=316,slow=76,SNR=389						
H11N1	WAKE ISLAND Hy	28.46	123	T	T	07 51 50.7	
	baz=316,slow=76,SNR=452						
H11N3	WAKE ISLAND Hy	28.47	123	T	T	07 51 51.4	
	baz=316,slow=76,SNR=405						
H11S1	WAKE ISLAND Hy	29.21	125	T	T	07 52 48.7	
	baz=317,slow=76,SNR=112						
H11S3	WAKE ISLAND Hy	29.21	125	T	T	07 52 49.0	
	baz=317,slow=76,SNR=164						
H11S2	WAKE ISLAND Hy	29.22	125	T	T	07 52 50.7	
	baz=317,slow=76,SNR=148						
ZALV	Zalesovo Beam	41.41	311	P	P	07 23 25.7	-1.7
	0.5nm,0.4s,baz=86,slow=9.2,SNR=1.7						
	0.5nm,0.4s						
MKAR	Makanchi Array	43.82	301	P	P	07 23 46.0	-1.0
	0.7nm,0.6s,baz=78,slow=7.4,SNR=8.2						
	0.7nm,0.6s						
ILAR	Eielson Array	48.34	33	P	P	07 24 22.1	-0.2
	0.5nm,0.7s,baz=265,slow=6.2,SNR=7.6						
	0.5nm,0.7s						
INK	Inuvik	53.21	28	P	P	07 24 59.4	+0.6
	0.7nm,0.5s,baz=299,slow=3.9,SNR=4.9						
	0.7nm,0.5s						
WRA	Warramunga Arr	58.24	188	P	P	07 25 34.6	-0.8
	0.9nm,0.4s,baz=4.6,slow=7.1,SNR=20						
	0.9nm,0.4s						
ASAR	Alice Springs	61.97	188	P	P	07 26 00.3	-0.5
	0.6nm,0.7s,baz=1.8,slow=4.6,SNR=11						
	0.6nm,0.7s						
YKA	Yellowknife Ar	62.65	31	P	P	07 26 04.9	-0.1
	0.3nm,0.7s,baz=300,slow=6.8,SNR=5.3						
	0.3nm,0.7s						
HFS	Hagfors	73.19	336	P	P	07 27 10.7	-0.5
	2.3nm,0.8s,baz=33,slow=3.4,SNR=4.2						
	2.3nm,0.8s						
NVAR	Mina Array Bea	74.03	54	P	P	07 27 17.5	+0.7
	0.3nm,0.4s,baz=287,slow=4.2,SNR=3.8						
	0.3nm,0.4s						
PDAR	Pinedale Array	76.62	46	P	P	07 27 31.9	+0.3
	0.6nm,0.6s,baz=272,slow=2.5,SNR=9.1						
	0.6nm,0.6s						
LPAZ	La Paz	145.81	59	PKPbc	PKPdf	07 35 20.3	0.0
	1.1nm,0.5s,baz=355,slow=2.4,SNR=5.4						

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*IDC **10** 07:26:37.1±1.3, 60°.59S×151°.04W, h0^{km}, mb3.9/3, mbtmp3.9/3, MS4.0/37, Error ellipse: s-maj=165.5km s-min=38.0km az=3.0*

*GCMT **10** 07:26:42.0±0.3, 59°.82S±0°.02×150°.64W±0°.03, h20^{km}±2^{km}, MW4.9/81, Moment Tensor Solution. s33,c37; s81,c111; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.15±.14; M$_{\theta\theta}$2.43±.16; M$_{\phi\phi}$-2.28±.12; M$_{r\theta}$-1.33±.28; M$_{\theta\phi}$1.68±.08; M$_{\phi r}$0.03±.20; Best double couple: M$_0$3.15500×10^{16} NP1:ϕ_s298.00000°, δ83.00000°, λ21.00000°. NP2: ϕ_s206.00000°, δ69.00000°, λ173.00000°. Principal axes: T 3.4150, Plg20.0000°, Azm164.0000°; N -0.5230, Plg68.0000°, Azm314.0000°; P -2.8940, Plg10.0000°, Azm70.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 10 07:26:42.2±1.6**, 58°.7S**±0°.2×**151°.8W**±0°.3**, h10**^{km}**, n58, σ1^s.93**/9**, mb4.1**/3**, MS4.1**/40**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	24.34	202	LR	LR	07 38 01.3	
	comp=Z,294nm,20.2s,baz=74,slow=30						
RPZ	Rata Peaks	27.23	287	LR	LR	07 41 57.5	
	comp=Z,288nm,18.3s,baz=133,slow=33						
URZ	Urewera	28.61	302	LR	LR	07 42 19.4	
	comp=Z,414nm,18.5s,baz=236,slow=32						
QSPA	South Pole Qui	31.41	180	LR	LR	07 42 59.3	
	comp=Z,403nm,20.0s,baz=72,slow=33						
TBI	Tubuai	35.39	4	*e*S	S	07 39 12.2	-0.1
	369nm,29.2s						
TBI				*e*LR	LR	07 43 08.6	
	comp=Z,9µm,24.8s						
TBI				*e*LR	LR	07 43 09.0	
	comp=Z,3µm,28.5s						
TBI	Tubuai	35.39	4	*e*T	T	08 12 04.2	
	52nm,0.4s						
RKT	Rikitea	37.56	26	*e*T	T	08 14 22.3	
	3.4nm,0.3s						
RAR	Rarotonga	37.91	348	LR	LR	07 45 35.5	
	comp=Z,250nm,20.1s,baz=148,slow=29						
PMSA	Palmer Station	38.79	137	LR	LR	07 45 41.0	
	comp=Z,240nm,18.4s,baz=262,slow=31						
TVO	Taravao	40.93	4	*e*T	T	08 19 02.7	
	2.7nm,0.4s						
PPT2	Papeete2	41.11	3	*e*S	S	07 40 39.1	+0.1
	112nm,26.5s						
PPT2				*e*LR	LR	07 45 48.2	
	comp=Z,659nm,25.2s						
PPT2				*e*LR	LR	07 45 48.3	
	comp=Z,550nm,27.2s						
PPT	Papeete	41.13	3	LR	LR	07 47 21.9	
	comp=Z,209nm,21.9s,baz=168,slow=29						
RPN	Rapa Nui	43.13	62	LR	LR	07 48 10.5	
	comp=Z,240nm,20.7s,baz=204,slow=30						
VAH	Vaihoa	43.53	6	*e*T	T	08 22 15.8	
	217nm,0.3s						
MSVF	Nonsavu	46.50	319	LR	LR	07 52 01.9	
	comp=Z,72nm,21.7s,baz=165,slow=32						
AFI	Afiamalu	47.16	333	LR	LR	07 52 07.7	
	comp=Z,176nm,19.4s,baz=148,slow=31						
DZM	Mont Dzumac	47.17	303	*e*LR	LR	07 48 46.6	
	comp=Z,343nm,26.4s						
DZM	Mont Dzumac	47.17	303	LR	LR	07 53 48.6	
	comp=Z,95nm,18.3s,baz=198,slow=34						
TAOE	Nuku Hiva Isla	50.55	15	*e*LR	LR	07 50 07.0	
	comp=Z,305nm,27.9s						
STKA	Stephens Creek	51.33	271	P	P	07 35 47.9	+1.4
	2.6nm,0.9s,baz=138,slow=12,SNR=4.2						
STKA				LR	LR	07 52 55.8	
	comp=Z,181nm,21.3s,baz=179,slow=30						
	2.6nm,0.9s						
MAW	Mawson	51.42	196	LR	LR	07 53 29.9	
	comp=Z,273nm,20.7s,baz=139,slow=32						
PLCA	Paso Flores	52.07	108	LR	LR	07 52 14.6	
	comp=Z,137nm,19.8s,baz=207,slow=30						
H03S2	Juan Fernandez	53.09	96	T	T	08 32 41.2	
	baz=215,slow=74,SNR=19						
H03S1	Juan Fernandez	53.10	96	T	T	08 32 43.3	
	baz=215,slow=74,SNR=21						
H03S3	Juan Fernandez	53.11	96	T	T	08 32 44.9	
	baz=215,slow=74,SNR=28						
H03N3	Juan Fernandez	53.39	95	T	T	08 33 00.5	
	baz=218,slow=72,SNR=72						
H03N2	Juan Fernandez	53.40	95	T	T	08 32 59.0	
	baz=218,slow=72,SNR=90						
H03N1	Juan Fernandez	53.41	95	T	T	08 33 04.8	
	baz=218,slow=72,SNR=44						
CTA	Charters Tower	58.52	284	LR	LR	07 57 59.0	
	comp=Z,139nm,20.7s,baz=138,slow=32						
CFA	Coronel Fontan	60.36	103	LR	LR	07 56 10.8	
	comp=Z,83nm,19.2s,baz=115,slow=30						
ASAR	Alice Springs	61.95	270	P	P	07 37 00.6	-1.5
	1.1nm,0.7s,baz=135,slow=6.0,SNR=12						
ASAR				LR	LR	08 01 31.7	
	comp=Z,176nm,18.0s,baz=162,slow=34						
	1.1nm,0.7s						
H01W1	Cape Leeuwin H	62.88	247	T	T	08 46 14.8	
	baz=146						
H01W2	Cape Leeuwin H	62.89	247	T	T	08 46 14.5	
	baz=146						
H01W3	Cape Leeuwin H	62.90	247	T	T	08 46 14.9	
	baz=146						
NWAO	Narrogin (SRO)	62.98	251	LR	LR	07 58 30.4	
	comp=Z,178nm,21.3s,baz=331,slow=30						
WRA	Warramunga Arr	64.79	273	P	P	07 37 20.0	-0.9
	0.6nm,0.9s,baz=154,slow=5.6,SNR=3.6						
WRA				LR	LR	08 02 01.3	
	comp=Z,105nm,21.2s,baz=144,slow=32						
	0.6nm,0.9s						
PMG	Port Moresby	67.17	291	LR	LR	08 04 12.6	
	comp=Z,86nm,19.4s,baz=144,slow=33						
LVC	Limon Verde	67.32	96	LR	LR	07 58 54.2	
	comp=Z,67nm,21.9s,baz=196,slow=29						
CPUP	Villa Florida	70.14	108	LR	LR	08 04 20.3	
	comp=Z,76nm,18.1s,baz=217,slow=33						
NNA	Nana	72.04	83	LR	LR	08 01 43.3	
	comp=Z,112nm,18.4s,baz=205,slow=29						
LPAZ	La Paz	72.97	93	LR	LR	08 02 08.3	
	comp=Z,69nm,21.0s,baz=194,slow=29						
ATAH	Atahualpa	75.35	79	LR	LR	08 03 49.3	
	comp=Z,148nm,18.6s,baz=218,slow=30						
SIJI	Sorong	82.47	281	LR	LR	08 15 15.6	
	comp=Z,86nm,18.6s,baz=129,slow=35						
KAPI	Kappang	84.93	269	LR	LR	08 15 04.2	
	comp=Z,80nm,20.4s,baz=153,slow=34						
JTS	Las Juntas de	87.12	65	LR	LR	08 09 45.4	
	comp=Z,76nm,19.4s,baz=203,slow=30						
GUMO	Guam	88.35	300	LR	LR	08 14 21.2	
	comp=Z,31nm,21.6s,baz=144,slow=32						
CMIG	Matias Romero	88.69	53	LR	LR	08 10 56.6	
	comp=Z,31nm,20.9s,baz=190,slow=30						
SUR	Sutherland	89.03	174	LR	LR	08 14 33.1	
	comp=Z,83nm,20.6s,baz=162,slow=33						
LPIG	La Paz	89.40	37	LR	LR	08 11 16.3	
	comp=Z,52nm,19.1s,baz=212,slow=30						
BOSA	Boshof	92.96	177	LR	LR	08 16 05.9	
	comp=Z,297nm,21.6s,baz=192,slow=33						
SDV	Santo Domingo	92.98	78	LR	LR	08 14 48.2	
	comp=Z,57nm,20.7s,baz=111,slow=31						
LBTB	Lobatse	96.55	178	LR	LR	08 18 13.5	
	comp=Z,240nm,21.7s,baz=180,slow=33						
PFO	Pinyon Flats O	96.61	29	LR	LR	08 16 05.1	
	comp=Z,95nm,18.6s,baz=248,slow=30						
MDP	Montagnes des	99.11	95	LR	LR	08 21 35.8	
	comp=Z,33nm,18.0s,baz=138,slow=34						
ILAR	Eielson Array	123.23	3	PKP	PKPdf	07 45 37.3	-0.2
	0.4nm,0.9s,baz=204,slow=2.0,SNR=3.4						
MKAR	Makanchi Array	146.09	274	PKPbc	PKPdf	07 46 18.0	-2.5
	1.3nm,0.6s,baz=124,slow=2.9,SNR=9.7						
KURBB	Kurchatov Arra	150.42	276	PKPbc	PKPdf	07 46 30.7	+3.3
	1.9nm,1.1s,baz=128,slow=1.8,SNR=6.4						
ESDC	Sonseca Array	152.06	119	PKPbc	PKPdf	07 46 30.3	-0.1
	0.7nm,0.8s,baz=242,slow=1.8,SNR=6.2						

IDC 10 07:27:35.5±1.5**, 2°.98N×123°.42E, h0**^{km}**, mb3.6**/4**, mbtmp3.6**/4**, Error ellipse: s-maj=216.8km s-min=21.9km az=63.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.18	155	P	P	07 33 02.8	0.0
	1.4nm,0.4s,baz=333,slow=10,SNR=21						
	1.4nm,0.4s						
ASAR	Alice Springs	28.39	159	P	P	07 33 31.8	0.0
	0.2nm,0.4s,baz=341,slow=7.4,SNR=7.1						
	0.2nm,0.4s						
MKAR	Makanchi Array	56.33	327	P	P	07 37 18.8	+0.5
	0.2nm,0.4s,baz=120,slow=7.6,SNR=4.6						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	60.63	329	P	P	07 37 47.7	-0.5
	0.3nm,0.6s,baz=120,slow=7.2,SNR=4.2						
	0.3nm,0.6s						

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*JMA **10** 07:32:09.8±0.1, 23°.9N±0°.6×121°.7E±0°.6, h40^{km}, MV3.1/9, TAIWAN REGION*

*TAP **10** 07:32:11.0, 24°.02N×121°.69E, h38^{km}, ML3.6, C*

ISC 10 07:32:11.5±0.9**, 24°.02N**±0°.02×**121°.71E**±0°.02**, h34**^{km}±1^{km}**, n103, σ0^s.84**/158**, 2C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.11	246	P	Pb	07 32 17.7	+0.3
	baz=237						
HWA				S	Sb	07 32 22.6	+1.1
	baz=237						
TWD	Chiawan	0.12	299	⇑*i*P	Pb	07 32 17.4	-0.1
	baz=305						
TWD				*i* S	Sb	07 32 22.7	+1.1
	baz=305						
ETL	Fush Village	0.16	330	*i* P	Pn	07 32 17.8	+2.1
	baz=327						
ETL				*e*S	Sb	07 32 23.4	+1.2
	baz=327						
NACB	Ninganchiao	0.19	325	P	Pn	07 32 18.0	+1.4
NACB	Ninganchiao	0.19	325	*i* P	Pn	07 32 17.9	+1.4
	baz=318						
NACB				S	Sb	07 32 23.1	+0.5
	baz=318						
ETLH	Xiulin Townshi	0.28	311	*i* P	Pn	07 32 18.9	-0.1
	baz=305						
ETLH				S	Sn	07 32 24.2	+1.0
	baz=305						
EHP	Heping Village	0.29	5	*e*P	Pn	07 32 17.8	-1.4
	baz=15						
ESL	Shilin	0.33	231	*e*P	Pb	07 32 19.1	-0.6
	baz=235						
WHF	Hehuan Shan	0.43	287	*i* P	Pb	07 32 20.8	-0.6
	baz=281						
WHF				S	Sb	07 32 26.9	-1.3
	baz=281						
EWUT	Wuta	0.43	8	P	Pb	07 32 20.6	-0.4
	baz=17						
EWUT				*e*S	Sb	07 32 27.7	+0.1
	baz=17						
EGFH	Guangfu	0.44	217	*e*P	Pb	07 32 20.2	-1.0
	baz=225						
CHGB	Renai	0.49	275	*i* P	Pb	07 32 21.6	-0.6
	baz=268						
CHGB				*i* S	Sb	07 32 28.7	-0.9
	baz=268						
OWD	Renai	0.49	262	*i* P	Pn	07 32 21.7	-0.6
	baz=268						
OWD				S	Sb	07 32 28.2	-1.3
	baz=268						
NNSB	Datong	0.51	324	*i* P	Pn	07 32 21.8	-0.6
	baz=325						
NNSB				S	Sb	07 32 29.2	-0.6
	baz=325						
NNS	Nan Shan	0.52	324	*i* P	Pn	07 32 22.0	-0.6
	baz=325						
NNS				*i* S	Sb	07 32 29.5	-0.6
	baz=325						
LATG	Datong	0.54	342	*i* P	Pn	07 32 22.1	-0.7
	baz=336						
LATG				S	Sb	07 32 29.5	-1.2
	baz=336						
TWT	Tachien	0.54	295	*i* P	Pn	07 32 22.6	-0.3
	baz=292						
TWT				S	Sn	07 32 30.4	-0.6
	baz=292						
WUSB	Renai	0.54	267	*i* P	Pn	07 32 22.4	-0.5
	baz=270						
WUSB				*i* S	Sn	07 32 29.9	-1.0
	baz=270						
TDCB	Techi	0.56	295	*i* P	Pn	07 32 22.7	-0.4
	baz=292						
TDCB				*i* S	Sn	07 32 30.3	-0.9
	baz=292						
VWDT	VWDT	0.59	243	*i* P	Pn	07 32 23.0	-0.3
	baz=235						
VWDT				*i* S	Sn	07 32 31.1	-0.6
	baz=235						
HGSD	Ruisui	0.59	207	*i* P	Pn	07 32 23.1	-0.3
	baz=218						
HGSD				*e*S	Sb	07 32 32.7	+0.9
	baz=218						
TWC	Suao	0.60	12	*i* P	Pn	07 32 23.7	+0.2
	baz=20						
TWC				S	Sb	07 32 32.8	+0.7
	baz=20						
NDS	Dongshan	0.61	0	*e*P	Pn	07 32 23.5	-0.1
	baz=352						
EHY	Hungye	0.62	215	P	Pn	07 32 22.3	-1.5
	baz=213						
EHY				*e*S	Sn	07 32 30.8	-1.9
	baz=213						
ENTT	Nioudou	0.63	348	P	Pn	07 32 23.8	-0.2
	baz=350						
ENTT				S	Sn	07 32 33.0	+0.1
	baz=350						
TWE	Neicheng	0.70	357	*e*P	Pn	07 32 24.7	-0.2
	baz=349						
TWE				*e*S	Sn	07 32 34.5	0.0
	baz=349						
YHNB	Yeheng	0.71	335	P	Pn	07 32 25.1	-0.1
YHNB	Yeheng	0.71	335	*i* P	Pn	07 32 25.0	-0.3
	baz=336						
YHNB				*i* S	Sn	07 32 34.2	-0.9
	baz=336						
NSK	Sanguang	0.73	334	*i* P	Pn	07 32 25.0	-0.4
	baz=335						
NSK				*i* S	Sn	07 32 34.9	-0.5
	baz=335						
SSLB	Suanglung	0.73	252	P	Pn	07 32 24.9	-0.5
SSLB	Suanglung	0.73	252	P	Pn	07 32 24.8	-0.6
	baz=243						
WCS	Beigang Elemen	0.73	273	P	Pn	07 32 25.2	-0.1
	baz=273						
WCS				*e*S	Sn	07 32 34.8	-0.6
	baz=273						
YULB	Yu-li	0.73	211	P	Pn	07 32 24.1	-1.3
YULB	Yu-li	0.73	211	*e*P	Pn	07 32 23.8	-1.6
	baz=218						
FUSB	Fushanzhiwuyua	0.74	351	P	Pn	07 32 25.4	-0.3
	baz=353						
FUSB				*e*S	Sn	07 32 35.5	-0.3
	baz=353						
WHP	Taichung City	0.74	290	*i* P	Pn	07 32 25.6	0.0
	baz=290						
WHP				*e*S	Sn	07 32 36.3	+0.5
	baz=290						
SMLT	Sun Moon Lake	0.76	260	P	Pn	07 32 25.5	-0.3
	baz=257						
SMLT				S	Sn	07 32 35.8	-0.3
	baz=257						
EYUL	Yuli	0.76	208	*e*P	Pn	07 32 26.6	+0.8
	baz=217						
NWLT	Wulai	0.78	346	*e*P	Pn	07 32 25.8	-0.3
	baz=347						
NWLT				*e*S	Sn	07 32 35.4	-1.2
	baz=347						
TYC	Yuchr	0.79	262	*i* P	Pn	07 32 25.9	-0.3
	baz=256						
TYC				S	Sn	07 32 36.1	-0.7
	baz=256						
NFF	Wufeng Townshi	0.81	318	*i* P	Pn	07 32 26.7	+0.1
	baz=326						
EGS		0.84	14	*e*P	Pb	07 32 29.4	+1.6
	baz=16						
NSTT	Nanjuang	0.89	313	*i* P	Pn	07 32 28.4	+0.8
	baz=314						
NSTT				S	Sn	07 32 39.9	+0.7
	baz=314						
LIOB	Emei	0.89	315	*i* P	Pn	07 32 28.4	+0.9
	baz=315						
LIOB				S	Sn	07 32 40.2	+0.9
	baz=315						
FULB	Fuli	0.90	205	*e*P	Pn	07 32 27.5	-0.3

	baz=214						
TWQ1	**Liyutan**	0.92	291	P	Pn	07 32 28.4	+0.5
	baz=291						
TWQ1				*e*S	Sn	07 32 40.0	0.0
	baz=291						
WJS	**Zhushan**	0.92	258	P	Pn	07 32 28.6	+0.5
	baz=258						
WJS				*e*S	Sn	07 32 41.2	+1.1
	baz=258						
WNT	**Mingjian**	0.95	262	P	Pn	07 32 29.1	+0.7
	baz=261						
WNT				S	Sn	07 32 42.2	+1.5
	baz=261						
NHDH	**Xindian Distri**	0.95	350	P	Pn	07 32 28.6	+0.1
	baz=343						
NHDH				*e*S	Sn	07 32 40.9	+0.1
	baz=343						
NSY	**Sanyi**	0.95	295	P	Pn	07 32 29.3	+0.8
	baz=295						
TIPB	**Shuangxi**	0.95	6	*i* P	Pn	07 32 29.3	+0.8
	baz=354						
TCU	**Taichung**	0.95	278	P	Pn	07 32 29.4	+1.0
	baz=278						
TCU				*e*S	Sb	07 32 43.0	+1.0
	baz=278						
TWA	**Mucha**	0.96	353	P	Pn	07 32 28.8	+0.2
	baz=348						
TWA				S	Sn	07 32 41.3	+0.2
	baz=348						
CHKT	**Chengkung**	0.97	199	*e*P	Pn	07 32 28.5	-0.2
	baz=187						
TATO	**Taipei**	0.97	348	P	Pn	07 32 28.9	+0.2
ALS	**Alishan**	0.97	239	P	Pn	07 32 29.0	0.0
	baz=231						
ALS				*e*S	Sn	07 32 41.8	0.0
	baz=231						
EHD	**Haiduan**	0.98	208	*e*P	Pn	07 32 28.6	-0.3
	baz=216						
NMLH	**Miaoli**	0.98	302	P	Pn	07 32 29.4	+0.5
	baz=302						
NMLH				*e*S	Sn	07 32 43.1	+1.4
	baz=302						
SBCB	**Hsinchu**	1.01	319	*e*P	Pn	07 32 29.4	+0.1
	baz=327						
TWB1	**Santiao Chiao**	1.01	14	*e*P	Pb	07 32 30.6	-0.1
	baz=28						
WDJ	**Dajia District**	1.03	289	*e*P	Pn	07 32 30.2	+0.7
	baz=289						
CHN5	**Tsauling**	1.04	246	*e*P	Pn	07 32 30.3	+0.6
	baz=236						
CHN5				*e*S	Sn	07 32 44.7	+1.6
	baz=236						
NWF	**Wu-fen Shan**	1.05	3	*e*P	Pn	07 32 30.2	+0.4
	baz=353						
WCHH	**Zhanghua**	1.06	273	*e*P	Pn	07 32 30.5	+0.6
	baz=273						
WCHH				*e*S	Sn	07 32 44.9	+1.5
	baz=273						
NCUH	**Zhongli**	1.06	333	*e*P	Pn	07 32 30.3	+0.4
	baz=334						
NCUH				*e*S	Sn	07 32 44.9	+1.4
	baz=334						
NCU	**National Centr**	1.06	333	*e*P	Pn	07 32 30.1	+0.2
	baz=334						
NCU				*e*S	Sb	07 32 45.4	+0.4
	baz=334						
SXI1	**Grass Mountain**	1.08	8	P	Pn	07 32 30.9	+0.6
	baz=353						
SXI1				*e*S	Sb	07 32 46.6	+1.0
	baz=353						
TWS1	**Kuangyinshan**	1.11	346	*e*P	Pn	07 32 31.5	+0.9
	baz=348						
WDLH	**Douliu**	1.12	253	*e*P	Pn	07 32 31.5	+0.7
	baz=252						
YM01	**YM01**	1.13	353	*e*P	Pn	07 32 30.1	-0.8
	baz=354						
YM01				*e*S	Sn	07 32 44.4	-0.8
	baz=354						
WCKO	**Fanlu**	1.17	240	*e*P	Pn	07 32 32.8	+1.3
	baz=239						
JYNG	**Yonagunijimaku**	1.21	69	P	Pn	07 32 31.7	-0.2
JYNG				*e*S	Sn	07 32 47.7	+0.7
STYH	**Taoyuan**	1.21	226	P	Pn	07 32 32.2	+0.3
	baz=225						
CHN4	**Tsaushan**	1.22	237	*i* P	Pn	07 32 33.4	+1.2
	baz=227						
CHN4				S	Sb	07 32 49.9	+0.3
	baz=227						
TPUB	**Ta-pu**	1.22	234	P	Pn	07 32 32.9	+0.7
TPUB	**Ta-pu**	1.22	234	P	Pn	07 32 32.7	+0.5
	baz=227						
TPUB				S	Sn	07 32 48.8	+1.2
	baz=227						
WRL	**Guolierlin Hig**	1.23	265	P	Pn	07 32 32.8	+0.6
	baz=276						
WRL				S	Sn	07 32 49.6	+2.0
	baz=276						
CHN2	**Minshiung**	1.23	247	*e*P	Pn	07 32 34.0	+1.7
	baz=246						
WTK	**Tuku**	1.26	255	*e*P	Pn	07 32 33.5	+0.9
	baz=254						
YOJ	**Yonaguni jima**	1.27	69	P	Pn	07 32 32.9	+0.1
YOJ				*e*S	Sn	07 32 49.2	+0.7
WTP	**Ta-pu**	1.27	233	P	Pn	07 32 33.5	+0.7
	baz=233						
WTP				*e*S	Sb	07 32 50.8	-0.1
	baz=233						
CHY	**Chiayi**	1.29	246	P	Pn	07 32 34.4	+1.3
	baz=245						
TWG	**Pinlang**	1.33	206	P	Pn	07 32 34.0	+0.3
	baz=194						
TWGBT	**Beinan**	1.33	206	P	Pn	07 32 34.5	+0.8
TWGBT	**Beinan**	1.33	206	*e*P	Pn	07 32 34.7	+1.1
	baz=194						
TWK	**Hsinying**	1.35	236	P	Pn	07 32 34.7	+0.8
	baz=227						
TWK				*e*S	Sn	07 32 51.8	+1.1
	baz=227						
CHN1	**Nanshi**	1.37	233	P	Pn	07 32 35.1	+0.9
	baz=232						
SGST	**Jiashian**	1.40	228	P	Pn	07 32 34.7	+0.2
	baz=217						
WSL	**Shuilin Townsh**	1.45	250	P	Pn	07 32 36.0	+0.8
	baz=250						
WSL				S	Sn	07 32 54.7	+1.7
	baz=250						
ICHU	**Yijhu**	1.47	244	*e*P	Pn	07 32 36.7	+1.2
	baz=243						
MASBT	**Mashibuluo**	1.72	215	*e*P	Pn	07 32 40.2	+1.3
	baz=215						
IRIF	**Iriomote-Funau**	1.87	80	P	Pn	07 32 41.2	+0.1
IRIF				S	Sn	07 33 03.3	-0.2
PHUB	**P'eng-hu**	2.02	256	*e*P	Pn	07 32 43.1	-0.1
	baz=255						
PNG	**Penghu**	2.03	258	*e*P	Pn	07 32 43.0	-0.2
	baz=257						
WDGT	**Dungji**	2.03	248	*e*P	Pn	07 32 43.6	+0.3
	baz=247						
JKRS	**Kuro-shima**	2.11	84	P	Pn	07 32 45.0	+0.7
JKRS				*e*S	Sn	07 33 10.2	+0.7
VCHM	**Qimei**	2.24	249	*e*P	Pn	07 32 46.3	+0.1
	baz=237						
JIJ	**Ishigaki jima**	2.25	81	P	Pn	07 32 46.2	0.0
JIJ				*e*S	Sn	07 33 11.5	-1.3
VWUC	**VWUC**	2.28	296	*e*P	Pn	07 32 45.5	-1.1
	baz=295						
JISG	**Ishigakijimahi**	2.44	76	P	Pn	07 32 48.6	-0.3
JISG				*e*S	Sn	07 33 16.5	-1.0
MATB	**Ma-tsu**	2.66	323	*e*P	Pn	07 32 50.4	-1.5
	baz=322						
BVA0	**Borovoye Array**	48.10	321	⇑Pn	P	07 40 41.7	-6.1
	1.9nm,1.1s,baz=151,slow=16,SNR=9.7						
BVA0				Lg	Lg	07 41 10.7	
	5.1nm,1.4s,baz=146,slow=27,SNR=8.6						
BRVK	**Borovoye**	48.17	321	⇓Pn	P	07 40 43.4	-4.9
	2.3nm,1.2s						
BRVK				⇓Lg	Lg	07 41 13.6	
	4.2nm,0.8s						

ROM 10 07:33:18.5±0.1**, 42°.623N**±0°.003×**13°.350E**±0°.005**, h8**^{km}**, ML1.8**/14**, 8C-6D, Error ellipse: s-maj=0.3km s-min=0.3km az=207.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	0.01	304	P	Pg	07 33 20.1	-0.1
SMA1				S	Sg	07 33 20.8	-0.5
CAMP	**Campotosto**	0.10	153	P	Pg	07 33 21.4	+0.4
CAMP				S	Sg	07 33 23.1	+0.4
CAMP				AML	AML		
	comp=E,461µm,0.7s						
CAMP				AML	AML		
	comp=N,782µm,0.7s						
RM33	**Pellescritta (**	0.15	221	⇓P	Pg	07 33 22.6	+0.8
RM33				S	Sg	07 33 25.4	+1.3
RM33				AML	AML		
	comp=E,1565µm,0.3s						
RM33				AML	AML		
	comp=N,1460µm,1.1s						
RM33				AML	AML		
	comp=E,1560µm,0.3s						
RM33				AML	AML		
	comp=E,1530µm,0.3s						
RM33				AML	AML		
	comp=N,1480µm,1.1s						
RM33				AML	AML		
	comp=N,1455µm,1.1s						
RM33				AML	AML		
	comp=N,1480µm,0.9s						
RM33				AML	AML		
	comp=N,1455µm,0.9s						
T1214	**Arquata del Tr**	0.17	323	⇑P	Pg	07 33 23.0	+0.8
T1214				S	Sg	07 33 25.8	+1.1
T1214				AML	AML		
	comp=E,322µm,1.4s						
T1214				AML	AML		
	comp=E,322µm,1.4s						
T1214				AML	AML		
	comp=N,286µm,0.6s						
T1214				AML	AML		
	comp=E,300µm,1.2s						
T1214				AML	AML		
	comp=N,286µm,0.5s						
T1214				AML	AML		
	comp=N,287µm,0.6s						
T1214				AML	AML		
	comp=E,300µm,1.2s						
T1214				AML	AML		
	comp=N,285µm,0.5s						
T1214				AML	AML		
	comp=N,285µm,1.5s						
T1214				AML	AML		
	comp=E,277µm,1.1s						
T1214				AML	AML		
	comp=E,300µm,0.8s						
T1218	**Civita (PG)**	0.18	285	⇑P	Pg	07 33 23.0	+0.7
T1218				AML	AML		
	comp=E,206µm,0.4s						
T1218				AML	AML		
	comp=E,206µm,0.4s						
T1218				AML	AML		
	comp=N,411µm,0.3s						
T1218				AML	AML		
	comp=E,180µm,0.2s						
T1218				AML	AML		
	comp=N,422µm,0.8s						
T1218				AML	AML		
	comp=N,422µm,0.8s						
T1218				AML	AML		
	comp=E,206µm,0.4s						
T1218				AML	AML		
	comp=N,411µm,0.3s						
T1247	**Pizzolo (AQ)**	0.18	192	P	Pg	07 33 23.1	+0.7
T1247				S	Sg	07 33 26.2	+1.3
T1247				AML	AML		
	comp=N,684µm,0.6s						
T1247				AML	AML		
	comp=E,710µm,0.4s						
TERO	**Teramo**	0.19	90	⇑P	Pg	07 33 23.1	+0.7
TERO				S	Sg	07 33 26.3	+1.3
TERO				AML	AML		
	comp=N,2845µm,0.6s						
TERO				AML	AML		
	comp=N,2960µm,0.7s						
TERO				AML	AML		
	comp=E,2630µm,0.2s						
TERO				AML	AML		
	comp=E,2780µm,0.2s						
GIGS	**Gran Sasso**	0.24	137	⇓P	Pg	07 33 23.8	+0.5
GIGS				S	Sg	07 33 27.6	+1.1
GIGS				AML	AML		
	comp=E,284µm,0.2s						
GIGS				AML	AML		
	comp=N,152µm,0.2s						
T1212	**Cascia, Frazio**	0.26	300	⇓P	Pg	07 33 24.5	+0.8
T1212				S	Sg	07 33 28.3	+1.0
T1212				AML	AML		
	comp=N,164µm,0.8s						
T1212				AML	AML		
	comp=E,173µm,1.4s						
T1212				AML	AML		
	comp=N,164µm,0.8s						
T1212				AML	AML		
	comp=N,134µm,2.2s						
T1245	**Castelsantange**	0.26	333	P	Pg	07 33 24.5	+0.7
T1245				AML	AML		
	comp=E,258µm,0.2s						
T1245				AML	AML		
	comp=N,304µm,0.2s						
MMO1	**Montemonaco**	0.28	356	⇑P	Pg	07 33 24.7	+0.7
MMO1				S	Sb	07 33 29.9	-0.7
MC2	**Monte Cornacci**	0.31	338	P	Pg	07 33 25.4	+0.6
T1217	**Poggiodomo (PG**	0.32	286	P	Pg	07 33 25.6	+0.7
T1217				S	Sb	07 33 30.6	-1.2
T1216	**Preci, Frazion**	0.36	318	⇑P	Pb	07 33 26.4	-0.8
T1216				S	Sb	07 33 32.4	-0.6
T1216				AML	AML		
	comp=E,150µm,0.5s						
T1216				AML	AML		
	comp=N,124µm,0.4s						
T1216				AML	AML		
	comp=E,149µm,0.4s						
T1216				AML	AML		
	comp=N,123µm,0.4s						
T1216				AML	AML		
	comp=E,149µm,1.6s						
T1216				AML	AML		
	comp=N,123µm,1.6s						
FAGN	**Fagnano**	0.40	154	⇑P	Pb	07 33 27.4	-0.3
FAGN				AML	AML		
	comp=E,307µm,0.7s						
FAGN				AML	AML		
	comp=N,316µm,0.4s						
T1215	**Vallo di Nera,**	0.40	297	⇓P	Pg	07 33 26.9	+0.7
T1215				S	Sb	07 33 33.0	-1.0
VCEL	**Villa Celiera**	0.43	122	P	Pb	07 33 28.2	-0.1
VCEL				AML	AML		
	comp=E,404µm,0.5s						
VCEL				AML	AML		
	comp=N,372µm,0.9s						
GUMA	**Gualdo di Mace**	0.44	359	P	Pb	07 33 28.1	-0.4
GUMA				AML	AML		
	comp=N,256µm,0.4s						
GUMA				AML	AML		
	comp=E,265µm,1.1s						
GUMA				AML	AML		
	comp=N,256µm,0.4s						
GUMA				AML	AML		
	comp=E,265µm,0.9s						
CSP1	**Cessapalombo**	0.48	347	⇓P	Pg	07 33 28.4	+0.5
CSP1				S	Sb	07 33 36.1	-0.4
CSP1				AML	AML		
	comp=E,70µm,0.3s						
CSP1				AML	AML		
	comp=E,70µm,0.3s						
CSP1				AML	AML		
	comp=N,130µm,0.3s						
CSP1				AML	AML		
	comp=E,70µm,1.7s						
T1219	**Muccia, Frazio**	0.50	330	S	Sb	07 33 36.6	-0.4
T0110	**Collepietro**	0.51	141	⇑P	Pg	07 33 28.9	+0.5
T0110				S	Sb	07 33 37.1	-0.1
T0110				AML	AML		
	comp=E,226µm,1.1s						
T0110				AML	AML		
	comp=N,180µm,0.4s						
T1220	**Camerino, Fraz**	0.52	339	P	Pb	07 33 29.3	-0.6
T1220				S	Sb	07 33 37.8	+0.2
T1220				AML	AML		
	comp=E,350µm,0.4s						
T1220				AML	AML		
	comp=N,262µm,0.7s						
T1220				AML	AML		
	comp=E,350µm,0.4s						
T1220				AML	AML		
	comp=N,216µm,0.7s						
EL6	**Elcito**	0.73	346	P	Pg	07 33 32.7	+0.2
EL6				AML	AML		
	comp=E,80µm,0.4s						
EL6				AML	AML		
	comp=E,80µm,0.4s						
EL6				AML	AML		
	comp=N,81µm,1.5s						
SRES	**S.Oreste - Sor**	0.73	238	S	Sg	07 33 42.7	+0.6
MPAG	**Monte Paganucc**	1.09	337	⇑P	Pg	07 33 36.8	-2.7
NARO	**Abbazia di Nar**	1.14	331	S	Sg	07 33 54.3	-0.8
PE3	**Peglio**	1.24	330	P	Pg	07 33 43.3	+1.0
CPGN	**Carpegna, Ital**	1.40	328	S	Sg	07 34 04.9	+1.4
IFOR	**Ischia Forio P**	1.95	169	S	Sn	07 34 16.4	0.0
IMOL	**Imola, Italy**	2.09	327	⇓P	Pb	07 33 55.6	-1.1
MRLC	**Muro Lucano**	2.46	139	S	Sb	07 34 33.3	0.0
MGR	**Morigerati**	2.99	146	S	Sn	07 34 43.1	+1.1

ROM 10 07:34:05.2±0.1**, 42°.867N**±0°.003×**12°.921E**±0°.005**, h11**^{km}**, ML0.9**/10**, 4C-3D, Error ellipse: s-maj=0.3km s-min=0.3km az=249.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1215	**Vallo di Nera,**	0.07	211	⇓P	Pg	07 34 08.3	+0.6
T1215				S	Sg	07 34 09.9	+0.4
T1215				AML	AML		
	comp=E,106µm,0.5s						
T1215				AML	AML		
	comp=N,155µm,0.1s						
T1215				AML	AML		
	comp=E,106µm,0.5s						
T1215				AML	AML		
	comp=N,154µm,0.1s						
T1215				AML	AML		
	comp=E,95µm,0.1s						
T1215				AML	AML		
	comp=N,156µm,0.1s						
T1215				AML	AML		
	comp=N,155µm,0.1s						
T1215				AML	AML		
	comp=E,81µm,0.1s						
T1216	**Preci, Frazion**	0.08	72	P	Pg	07 34 08.3	+0.6
T1216				S	Sg	07 34 09.8	+0.2
T1216				AML	AML		
	comp=E,348µm,0.1s						
T1216				AML	AML		
	comp=N,274µm,0.4s						
T1216				AML	AML		
	comp=E,349µm,0.1s						
T1216				AML	AML		
	comp=N,249µm,0.1s						
T1216				AML	AML		
	comp=E,349µm,0.1s						
T1212	**Cascia, Frazio**	0.15	142	⇓P	Pg	07 34 09.2	+0.5
T1212				S	Sg	07 34 11.8	+0.7
T1212				AML	AML		
	comp=E,66µm,0.1s						
T1212				AML	AML		
	comp=N,63µm,0.1s						
T1212				AML	AML		
	comp=N,78µm,0.8s						
T1217	**Poggiodomo (PG**	0.15	177	P	Pb	07 34 09.6	-0.6
T1217				S	Sg	07 34 12.3	+1.0
T1217				AML	AML		
	comp=E,70µm,0.1s						
T1217				AML	AML		
	comp=N,83µm,0.2s						
T1217				AML	AML		
	comp=E,70µm,0.1s						
T1245	**Castelsantange**	0.20	93	P	Pg	07 34 10.1	+0.5
T1245				S	Sg	07 34 13.6	+1.0
T1245				AML	AML		
	comp=E,28µm,0.1s						
T1219	**Muccia, Frazio**	0.20	19	⇑P	Pg	07 34 10.0	+0.5
T1219				S	Sg	07 34 13.4	+0.9
T1219				AML	AML		
	comp=N,73µm,0.7s						
T1219				AML	AML		
	comp=E,25µm,0.1s						
T1219				AML	AML		
	comp=N,21µm,0.1s						
MC2	**Monte Cornacci**	0.20	77	S	Sg	07 34 12.9	+0.1
T1214	**Arquata del Tr**	0.24	117	⇑P	Pg	07 34 10.8	+0.6
T1214				AML	AML		
	comp=N,43µm,0.1s						
T1214				AML	AML		
	comp=N,84µm,0.3s						
T1214				AML	AML		
	comp=E,63µm,0.7s						
T1218	**Civita (PG)**	0.24	144	P	Pg	07 34 10.8	+0.5
T1218				S	Sg	07 34 14.9	+1.1
T1218				AML	AML		
	comp=N,55µm,0.2s						
T1218				AML	AML		
	comp=E,34µm,0.1s						
ASSB	**Assisi San Ben**	0.26	312	⇑P	Pg	07 34 11.2	+0.5
ASSB				S	Sg	07 34 15.3	+1.0
ASSB				AML	AML		
	comp=N,36µm,0.1s						
ASSB				AML	AML		
	comp=E,37µm,0.2s						
T1220	**Camerino, Fraz**	0.27	27	⇑P	Pg	07 34 11.4	+0.5
T1220				S	Sb	07 34 16.0	-0.8
CSP1	**Cessapalombo**	0.31	43	⇓P	Pg	07 34 12.0	+0.5
CSP1				S	Sb	07 34 16.8	-1.1
CSP1				AML	AML		
	comp=N,19µm,0.2s						

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*IDC **10** 07:34:01.5±8.0, 8°.56N×91°.10E, h0^{km}, mb3.8/4, mbtmp3.9/6, ML4.2/2, Error ellipse: s-maj=155.7km s-min=37.7km az=149.0*

ISC 10 07:34:07.7±4.9**, 8°.8N**±0°.6×**90°.9E**±0°.3**, h35**^{km}**, n9,** σ**1**^{s}**.76**/7**, mb3.8**/4**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	10.15	262	Pn	Pn	07 36 32.2	+1.1
	3.9nm,0.3s,baz=192,slow=14,SNR=15						
PALK				Sn	Sn	07 38 21.5	-2.4
	1.5nm,0.3s,baz=272,slow=22,SNR=3.7						
	7.2nm,0.3s						
CMAR	**Chiang Mai Arr**	12.44	38	Pn	Pn	07 37 00.9	-1.4
	0.2nm,0.3s,baz=231,slow=15,SNR=7.5						
	1.0nm,0.3s						
H08S3	**Diego Garcia H**	24.49	229	T	T	08 05 50.9	
	baz=54,slow=74						
H08S2	**Diego Garcia H**	24.50	229	T	T	08 05 40.3	
	baz=54,slow=74						
H08S1	**Diego Carcia H**	24.51	229	T	T	08 05 39.3	
	baz=54						
MKAR	**Makanchi Array**	38.60	351	P	P	07 41 28.5	+1.2
	1.0nm,0.6s,baz=169,slow=8.5,SNR=12						
	1.0nm,0.6s						
KURBB	**Kurchatov Arra**	42.96	348	P	P	07 42 04.6	+1.4
	1.0nm,0.6s,baz=170,slow=7.2,SNR=14						
	1.0nm,0.6s						
ZALV	**Zalesovo Beam**	45.32	355	P	P	07 42 21.9	-0.2
	0.8nm,0.6s,baz=157,slow=9.4,SNR=4.9						
	0.8nm,0.6s						
BVAR	**Borovoye Array**	47.15	343	P	P	07 42 37.0	+0.5
	0.7nm,0.7s,baz=153,slow=9.7,SNR=3.6						
	0.7nm,0.7s						

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*IDC **10** 07:34:35.8±5.3, 7°.48S×127°.98E, h154^{km}±48^{km}, mb3.5/4, mbtmp4.2/6, Error ellipse: s-maj=72.9km s-min=23.6km az=66.0*

*DJA **10** 07:34:36.1±0.3, 8°S±3°×12°8E±°, h170^{km}±10^{km}, M4.3/8, mB5.3/4, mb4.1/7, MLv4.3/8, Mw(mB)4.8/4*

ISC 10 07:34:34.9±0.8**, 7°.60S**±0°.06×**128°.31E**±0°.08**, h151**^{km}**, n16,** σ**2**^{s}**.27**/19**, mb3.8**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	2.98	97	P	Pn	07 35 25.6	+3.4
BNDI	**Bandanaira**	3.45	27	P	Pn	07 35 31.2	+3.1
NLAI	**Namlea**	4.50	344	P	Pn	07 35 43.2	+1.4
SOEI	**Soe**	4.53	242	P	Pn	07 35 44.2	+1.8
SOEI				S	Sn	07 36 35.5	+0.6
FAKI	**Fak Fak**	6.08	40	P	Pn	07 36 03.9	+1.0
	24nm,1.0s,0.1nm						

SIJI	**Sorong**	7.31	24	P	Pn	07 36 20.5	+1.3
	7.7nm,0.3s,baz=234,slow=23,SNR=12						
SIJI				S	Sn	07 37 39.1	-2.0
	6.7nm,0.3s,baz=107,slow=23,SNR=2.3						
RKPI	**Ransiki, Papua**	8.41	44	P	Pn	07 36 34.7	+0.7
	71nm,0.5s,32µm						
WRA	**Warramunga Arr**	13.59	155	P	Pn	07 37 40.9	-0.8
	4.6nm,0.5s,baz=325,slow=14,SNR=36						
WRA				S	Sn	07 40 03.1	-9.1
	9.0nm,0.6s,baz=333,slow=22,SNR=11						
ASAR	**Alice Springs**	16.85	162	P	Pn	07 38 24.6	+2.5
	10.0nm,0.5s,baz=340,slow=11,SNR=210						
ASAR				S	S	07 41 23.6	-5.8
	2.8nm,0.7s,baz=323,slow=20,SNR=8.5						
MKAR	**Makanchi Array**	67.83	328	P	P	07 45 15.8	-0.9
	0.2nm,0.4s,baz=117,slow=7.5,SNR=6.3						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	71.39	335	P	P	07 45 36.9	-1.6
	0.6nm,0.3s,baz=114,slow=6.5,SNR=4.1						
	0.6nm,0.3s						
KURBB	**Kurchatov Arra**	72.16	329	P	P	07 45 41.9	-1.2
	1.4nm,0.5s,baz=134,slow=4.8,SNR=22						
	1.4nm,0.5s						
BVAR	**Borovoye Array**	77.69	328	P	P	07 46 14.2	-0.6
	0.8nm,0.5s,baz=129,slow=5.9,SNR=6.9						
	0.8nm,0.5s						
TXAR	**Lajitas Array**	126.67	59	PKP	PKPdf	07 53 21.5	+0.3
	0.1nm,0.6s,baz=242,slow=1.9,SNR=1.9						
TORD	**Torodi Ar. Bea**	127.28	281	PKP	PKPdf	07 53 21.7	-0.9
	0.5nm,0.7s,baz=74,slow=2.0,SNR=2.8						
LPAZ	**La Paz**	151.22	146	PKPbc	PKPbc	07 54 13.6	+1.3
	1.1nm,0.4s,baz=153,slow=4.5,SNR=6.6						

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*INET **10** 07:43:55.4±0.9, 13°.56N×88°.37W, h15^{km}±20^{km}, MW3.4*
*SNET **10** 07:43:58.9±2.1, 13°.39N×87°.99W, h1^{km}, ML3.0*
ISC 10 07:43:60.0±0.9, **13°.4N**±0°.1×**88°.00W**±0°.05, **h10^{km}, n13, σ1^{s}07**/19, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCND	**La Caada**	0.14	127	*e*P	Pg	07 44 01.9	-1.2
LCND				*e*S	Sg	07 44 04.4	-1.0
COEB	**Comit de Eme**	0.52	282	*e*P	Pg	07 44 10.2	0.0
ALJI	**Alcalda de J**	0.56	263	*e*P	Pg	07 44 10.6	-0.2
ALJI				*e*S	Sg	07 44 17.9	-0.1
PQSS	**Presa 15 de Se**	0.59	293	*e*P	Pg	07 44 11.3	-0.1
SCLA	**Alcaldia de Sa**	0.77	294	*e*P	Pg	07 44 14.3	-0.5
COEG	**Centro de Oper**	0.88	285	*e*P	Pg	07 44 16.6	-0.4
PAVA	**Las Pavas**	0.96	290	*e*P	Pg	07 44 18.0	-0.6
SJTE	**Alcalda de S**	1.00	283	*e*P	Pg	07 44 18.5	-0.7
CRIN	**San Cristobal**	1.16	126	*e*P	Pb	07 44 21.3	-0.8
CRIN				*e*S	Sn	07 44 41.7	+3.5
JAYA	**Jayaque - finc**	1.43	281	*e*P	Pn	07 44 25.9	-0.2
JAYA				*e*S	Sg	07 44 45.7	-0.3
NUBE	**Las Nubes**	1.80	287	*e*P	Pb	07 44 32.0	-1.1
NUBE				*e*S	Sg	07 44 57.9	0.0
SLOZ	**Alcaldia de Sa**	1.84	290	*e*P	Pn	07 44 32.4	+0.7
MATN	**Matagalpa**	2.08	103	*e*P	Pn	07 44 35.4	+0.4
MATN				*e*S	Sb	07 45 04.0	+0.3

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*DJA **10** 07:44:40.4±1.1, 3°S±4°×12°9E±°, h17^{km}±11^{km}, M4.2/12, mb4.5/7, mB4.8/3, MLv4.0/12, Mw(mB)4.0/3*
*IDC **10** 07:44:43.1±2.1, 2°.84S×129°.58E, h50^{km}±21^{km}, mb3.6/5, mbtmp4.0/7, ML4.1/2, MS3.1/1, Error ellipse: s-maj=24.3km s-min=16.0km az=109.0*
ISC 10 07:44:40.3±0.7, **2°.85S**±0°.05×**129°.52E**±0°.07, **h28^{km}, n22, σ1^{s}66**/24, **mb3.9**/5, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	0.77	230	P	Pb	07 44 54.8	-0.3
AAI	**Ambon**	1.56	238	P	Pn	07 45 07.8	+1.6
BNDI	**Bandanaira**	1.71	167	P	Pn	07 45 09.9	+1.7
NLAI	**Namlea**	2.44	261	P	Pn	07 45 19.3	+0.9
SIJI	**Sorong**	2.63	42	P	Pn	07 45 21.6	+0.6
	62nm,0.3s,baz=265,slow=12,SNR=163						
SIJI				S	Sn	07 45 53.5	+1.5
	64nm,0.3s,baz=54,slow=20,SNR=9.0						
	128nm,0.3s						
SWI	**Sorong**	2.63	41	P	Pn	07 45 22.4	+1.4
FAKI	**Fak Fak**	2.73	92	P	Pn	07 45 24.0	+1.7
LBMI	**Labuha**	2.98	317	P	Pn	07 45 26.1	+0.3
LBMI				S	Sn	07 46 00.1	-0.6
SANI	**Sanana**	3.62	283	P	Pn	07 45 34.1	-0.4
LUWI	**Luwuk**	6.98	285	P	Pn	07 46 20.3	-0.4
	29nm,0.5s,0.2nm						
MRSI	**Marisa**	8.26	293	P	Pn	07 46 38.2	-0.2
	24nm,0.6s,1µm						
SOEI	**Soe**	8.62	217	P	Pn	07 46 33.6	-10
BSSI	**Bau Bau, Buton**	9.57	250	P	Pn	07 46 57.8	+1.4
	43nm,0.7s						
KAPI	**Kappang**	9.98	257	P	Pn	07 47 05.9	+4.0
	0.9nm,0.3s,baz=76,slow=16,SNR=6.4						
	9.1nm,0.7s						
MPSI	**Mapaga**	10.12	288	P	Pn	07 47 04.7	+0.8
DAV	**Davao City (W)**	10.61	338	LR	LR	07 51 14.8	
	comp=Z,85nm,18.4s,baz=154,slow=37						
WRA	**Warramunga Arr**	17.63	165	P	Pn	07 48 42.4	-1.7
	1.3nm,0.7s,baz=345,slow=12,SNR=7.3						
ASAR	**Alice Springs**	21.12	169	P	P	07 49 22.9	-0.2
	7.0nm,0.7s,baz=349,slow=11,SNR=25						
ASAR				S	S	07 53 12.4	-4.5
	0.7nm,0.7s,baz=349,slow=19,SNR=4.5						
ASAR				PcP	PcP	07 53 29.4	+0.6
	0.7nm,0.5s,baz=5.1,slow=1.3,SNR=8.3						
	7.0nm,0.7s						
STKA	**Stephens Creek**	31.03	160	P	P	07 50 56.6	+0.8
	0.7nm,0.3s,baz=339,slow=8.6,SNR=4.1						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	64.53	326	P	P	07 55 14.9	+0.1
	0.7nm,0.7s,baz=122,slow=7.9,SNR=8.5						
	0.7nm,0.7s						
KURBB	**Kurchatov Arra**	68.75	328	P	P	07 55 41.8	+0.1
	1.1nm,0.6s,baz=126,slow=5.9,SNR=14						
	1.1nm,0.6s						
ILAR	**Eielson Array**	89.82	25	P	P	07 57 35.6	-0.5
	0.2nm,0.6s,baz=244,slow=6.2,SNR=4.2						
	0.2nm,0.6s						

IDC 10 07:45:44.0±2.5, **53°.66N**×**86°.72E, h0^{km}, mbtmp2.7**/2, **ML2.5**/2, **Error ellipse: s-maj=22.0km s-min=12.1km az=73.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	1.17	285	I	I	07 52 31.8	
	baz=99,slow=336,SNR=5.7						
ZALV	**Zalesovo Beam**	1.17	285	Pg	Pg	07 46 05.7	-0.6
	1.2nm,0.3s,baz=103,slow=16,SNR=10						
ZALV				Lg	Lg	07 46 21.8	
	1.4nm,0.3s,baz=108,slow=28,SNR=7.5						
KURBB	**Kurchatov Arra**	5.89	242	Pn	Pn	07 47 14.2	+1.7
	0.1nm,0.3s,baz=58,slow=14,SNR=4.2						
KURBB				Lg	Lg	07 48 51.5	
	baz=53,slow=29,SNR=2.0						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	7.44	204	Pn	Pn	07 47 35.0	+1.2
	0.1nm,0.3s,baz=24,slow=13,SNR=6.5						
MKAR				Sn	Sn	07 48 57.3	-1.5
	0.1nm,0.3s,baz=22,slow=27,SNR=3.2						
MKAR				Lg	Lg	07 49 38.7	
	baz=21,slow=29,SNR=2.0						
	0.3nm,0.5s						

ROM 10 07:52:11.3±0.1, **42°.618N**±0°.004×**13°.227E**±0°.007, **h12^{km}**±1^{km}, **ML0.9**/3, **3C-1D, Error ellipse: s-maj=0.6km s-min=0.4km az=136.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1218	**Civita (PG)**	0.10	302	P	Pg	07 52 14.5	+0.3
T1218				S	Sg	07 52 16.4	+0.1
T1218				AML	AML		
	comp=E,136µm,0.1s						
T1218				AML	AML		
	comp=N,220µm,0.2s						
T1218				AML	AML		
	comp=N,220µm,0.2s						
T1218				AML	AML		
	comp=E,136µm,0.1s						
RM33	**Pellescritta (**	0.11	185	P	Pg	07 52 14.9	+0.6
RM33				S	Sg	07 52 16.9	+0.4
RM33				AML	AML		
	comp=N,56µm,1.0s						
RM33				AML	AML		
	comp=E,74µm,0.9s						
T1214	**Arquata del Tr**	0.14	355	P	Pg	07 52 15.3	+0.5
T1214				S	Sg	07 52 17.9	+0.5
TERO	**Teramo**	0.28	89	P	Pg	07 52 17.4	+0.4
TERO				S	Sg	07 52 21.6	+0.7
T1241	**Roccafluvione,**	0.28	32	⇑P	Pg	07 52 17.6	+0.5
T1241				S	Sg	07 52 22.0	+1.0
MMO1	**Montemonaco**	0.29	15	⇑P	Pg	07 52 17.9	+0.6
MMO1				S	Sb	07 52 22.4	-1.0
VVLD	**Villa Vallelon**	0.80	158	⇓P	Pb	07 52 27.6	+0.4
VVLD				AML	AML		
	comp=N,40µm,0.1s						
VVLD				AML	AML		
	comp=E,36µm,1.1s						
PIEI	**Pieia**	1.05	331	⇑P	Pb	07 52 31.2	-0.3
PIEI				AML	AML		
	comp=E,45µm,0.1s						
PIEI				AML	AML		
	comp=N,17µm,0.1s						

ROM 10 07:52:33.5±0.1, **42°.738N**±0°.003×**13°.245E**±0°.005, **h14^{km}, ML1.1**/6, **2C-2D, Error ellipse: s-maj=0.4km s-min=0.1km az=111.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	0.03	310	P	Pg	07 52 36.2	+0.1
T1214				S	Sg	07 52 38.2	+0.1
T1214				AML	AML		
	comp=E,355µm,0.1s						
T1214				AML	AML		
	comp=N,170µm,1.0s						
T1214				AML	AML		
	comp=E,369µm,0.1s						
T1218	**Civita (PG)**	0.12	235	⇑P	Pg	07 52 37.1	+0.3
T1218				S	Sg	07 52 39.6	+0.4
T1218				AML	AML		
	comp=N,95µm,0.4s						
T1218				AML	AML		
	comp=N,134µm,1.8s						
T1218				AML	AML		
	comp=E,151µm,0.1s						
T1218				AML	AML		
	comp=E,187µm,1.2s						
T1245	**Castelsantange**	0.13	341	⇓P	Pg	07 52 37.3	+0.3
T1245				S	Sg	07 52 39.6	0.0
T1245				AML	AML		
	comp=E,107µm,0.4s						
T1245				AML	AML		
	comp=N,132µm,0.2s						
T1245				AML	AML		
	comp=N,132µm,0.2s						
T1245				AML	AML		
	comp=N,132µm,1.8s						
T1212	**Cascia, Frazio**	0.15	276	P	Pg	07 52 37.5	+0.3
T1212				S	Sg	07 52 40.5	+0.6
MMO1	**Montemonaco**	0.17	20	P	Pg	07 52 38.0	+0.3
MMO1				S	Sg	07 52 41.1	+0.6
MC2	**Monte Cornacci**	0.18	347	P	Pg	07 52 38.2	+0.3
MC2				S	Sg	07 52 41.5	+0.6
T1241	**Roccafluvione,**	0.18	49	⇓P	Pg	07 52 38.1	+0.3
T1241				S	Sg	07 52 41.3	+0.6
T1241				AML	AML		
	comp=E,79µm,0.2s						
T1241				AML	AML		
	comp=E,79µm,0.2s						
T1241				AML	AML		
	comp=N,33µm,0.8s						
RM33	**Pellescritta (**	0.23	186	P	Pg	07 52 39.0	+0.5
RM33				S	Sg	07 52 42.4	+0.5
RM33				AML	AML		
	comp=N,37µm,1.4s						
RM33				AML	AML		
	comp=E,41µm,0.6s						
T1217	**Poggiodomo (PG**	0.23	264	AML	AML		
	comp=N,40µm,1.3s						
T1217				AML	AML		
	comp=E,86µm,0.1s						
T1217				AML	AML		
	comp=N,40µm,1.3s						
T1217				AML	AML		
	comp=N,40µm,0.7s						
T1217				AML	AML		
	comp=E,86µm,0.1s						
T1215	**Vallo di Nera,**	0.28	283	AML	AML		
	comp=N,56µm,0.1s						
T1215				AML	AML		
	comp=E,37µm,0.1s						
TERO	**Teramo**	0.29	113	⇑P	Pg	07 52 39.6	+0.1
FIAM	**Fiamignano**	0.48	191	S	Sb	07 52 50.2	-0.6

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*IDC **10** 07:57:36.6±1.0, 37°.15N×141°.31E, h0^{km}, mb3.6/9, mbtmp3.6/12, ML3.3/3, MS3.8/5, Error ellipse: s-maj=21.7km s-min=15.9km az=145.0*
*JMA **10** 07:57:38.2±0.2, 37°.2N±0°.3×141°.4E±0°.9, h27^{km}±1^{km}, MV3.9/40, E OFF FUKUSHIMA PREF*
JMA Felt I J1 at E OFF FUKUSHIMA PREF .
*NIED **10** 07:57:38.2, 37°.18N×141°.42E, h27^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.35; $M_{\theta\theta}$0.62; $M_{\phi\phi}$-0.97; $M_{r\theta}$-0.09; $M_{\theta\phi}$3.58; $M_{\phi r}$3.50; Fault plane solution: $M_0$5.06000×10^{14} NP1:ϕ_s4.00000°, δ88.00000°, λ136.00000°. NP2:ϕ_s95.00000°, δ46.00000°, λ2.00000°.*
ISC 10 07:57:37.5±1.7, **37°.18N**±0°.04×**141°.39E**±0°.06, **h7^{km}**±10^{km}, **n44, σ1^{s}31**/41, **mb3.6**/9, **MS3.9**/5, **6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	0.45	295	*i* P	Pb	07 57 47.5	-0.4
JFK				S	Sb	07 57 53.9	-0.9
ONAJ	**Iwakimizuishiy**	0.48	261	⇓*i*P	Pb	07 57 48.0	-0.3
ONAJ				⇓S	Sb	07 57 55.8	+0.3
JFFD	**Fukushimafurud**	0.67	263	⇓*i*P	Pb	07 57 51.3	-0.2
JFFD				⇓S	Sb	07 58 00.6	-0.3
JMST	**Minamisoumatoc**	0.68	324	*i* P	Pb	07 57 51.2	-0.5
JMST				S	Sb	07 58 00.8	-0.5
JMM	**Marumori**	0.84	326	P	Pb	07 57 54.0	-0.4
JMM	**Marumori**	0.84	326	*i* P	Pb	07 57 53.9	-0.5
JMM				S	Sb	07 58 05.3	-0.6
JHO	**Hitachi**	0.86	230	⇓*i*P	Pg	07 57 53.8	-0.3
JHO				⇓S	Sg	07 58 05.9	+0.6
JOTO	**OTAMA OYAMA**	0.92	295	*i* P	Pb	07 57 56.0	+0.1
JOTO				S	Sb	07 58 08.7	+0.3
JSB	**Shiboa**	1.19	260	P	Pb	07 58 00.6	+0.1
JSB				S	Sn	07 58 17.4	+0.2
JIO	**Ouri**	1.28	359	P	Pg	07 58 00.7	-1.4
JOU	**Okura**	1.32	334	*i* P	Pb	07 58 02.4	-0.3
MJAR	**Matsushiro Arr**	2.63	257	Pn	Pn	07 58 20.9	+0.5
	2.7nm,0.3s,baz=74,slow=11,SNR=80						
MJAR				Lg	Lg	07 58 56.3	
	1.2nm,0.3s,baz=77,slow=29,SNR=1.9						
	20nm,0.3s						
MAJO	**Matsushiro**	2.63	257	P	Pn	07 58 21.6	+1.2
JSD	**Sado**	2.63	290	P	Pn	07 58 22.3	+1.9
JGF	**Kuroka**	3.61	245	P	Pn	07 58 35.7	+1.7
JTM	**Tenmabayashi**	3.62	356	P	Pn	07 58 34.9	+0.9
INU	**Inuyama**	3.97	244	P	Pn	07 58 40.9	+2.0
JHJ	**Hachijo jima 2**	4.25	198	Pn	Pn	07 58 45.2	+2.5
	21nm,0.3s,baz=66,slow=12,SNR=2.3						
JHJ				Sn	Sn	07 59 28.6	-4.1
	30nm,0.3s,baz=255,slow=20,SNR=1.7						
ERM	**Erimo**	5.02	15	P	Pn	07 58 56.6	+3.3
ASAJ	**Asahikawa**	7.00	7	Pn	Pn	07 59 20.6	+0.2
	0.9nm,0.3s,baz=221,slow=9.3,SNR=1.9						
ASAJ				Sn	Sn	08 00 40.9	+0.7
	0.7nm,0.3s,baz=304,slow=31,SNR=1.6						
	2.8nm,0.2s						
JHS	**Saijyo**	7.04	254	P	Pn	07 59 23.9	+2.8
KSRS	**Korea Array**	10.73	276	Pn	Pn	08 00 11.8	+0.2
	0.2nm,0.3s,baz=94,slow=14,SNR=1.8						
	0.5nm,0.3s						
SONM	**Songino Array**	27.69	304	P	P	08 03 26.7	+0.4
	0.8nm,0.6s,baz=99,slow=9.1,SNR=4.5						
	0.8nm,0.6s						
H11N2	**WAKE ISLAND Hy**	28.24	121	T	T	08 33 01.6	
	baz=314,slow=75,SNR=295						
H11N1	**WAKE ISLAND Hy**	28.25	121	T	T	08 33 02.2	
	baz=314,slow=75,SNR=430						
H11N3	**WAKE ISLAND Hy**	28.26	121	T	T	08 33 02.9	
	baz=314,slow=75,SNR=340						
H11S1	**WAKE ISLAND Hy**	28.95	123	T	T	08 33 55.5	
	baz=316,slow=75,SNR=186						
H11S3	**WAKE ISLAND Hy**	28.95	123	T	T	08 33 55.9	
	baz=316,slow=75,SNR=132						
H11S2	**WAKE ISLAND Hy**	28.97	123	T	T	08 33 52.9	
	baz=316,slow=75,SNR=139						
ZALV	**Zalesovo Beam**	41.80	312	P	P	08 05 27.3	-0.3
	0.8nm,0.4s,baz=73,slow=6.8,SNR=3.9						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	44.03	302	P	P	08 05 44.9	-0.8
	0.8nm,0.8s,baz=92,slow=9.1,SNR=4.5						
	0.8nm,0.8s						
KDAK	**Kodiak Island**	47.01	42	LR	LR	08 24 29.4	
	comp=Z,96nm,21.9s,baz=233,slow=34						
ILAR	**Eielson Array**	49.39	32	P	P	08 06 28.4	+0.9
	0.5nm,0.7s,baz=260,slow=8.7,SNR=6.9						
ILAR				LR	LR	08 29 48.3	
	comp=Z,56nm,19.8s,baz=224,slow=39						
	0.5nm,0.7s						
INK	**Inuvik**	54.27	27	LR	LR	08 31 19.0	
	comp=Z,102nm,19.8s,baz=212,slow=37						
WRA	**Warramunga Arr**	57.20	188	P	P	08 07 25.2	-0.1
	0.2nm,0.4s,baz=2.4,slow=7.3,SNR=6.1						
	0.2nm,0.4s						
ASAR	**Alice Springs**	60.92	188	P	P	08 07 50.6	-0.5
	0.3nm,0.9s,baz=14,slow=8.5,SNR=2.0						
	0.3nm,0.9s						
YKA	**Yellowknife Ar**	63.70	30	P	P	08 08 10.0	+0.7
	0.1nm,0.6s,baz=295,slow=6.1,SNR=3.6						
	0.1nm,0.6s						
FINES	**FINESS Array B**	68.68	332	P	P	08 08 41.5	+0.2
	1.3nm,0.7s,baz=32,slow=8.2,SNR=1.9						
	1.3nm,0.7s						
AKASG	**Malin Array Be**	74.17	322	P	P	08 09 14.1	-0.6
	0.6nm,0.5s,baz=49,slow=6.2,SNR=4.1						
	0.6nm,0.5s						
SFJD	**Kangerlussuaq**	75.75	5	LR	LR	08 44 44.8	
	comp=Z,55nm,18.2s,baz=269,slow=37						
EIL	**Elat**	84.28	303	LR	LR	08 49 53.7	
	comp=Z,48nm,18.9s,baz=242,slow=37						
H03N2	**Juan Fernandez**	147.06	96	T	T	11 01 35.3	
	baz=291,slow=76,SNR=42						
H03N3	**Juan Fernandez**	147.07	96	T	T	11 01 37.3	
	baz=291,slow=76,SNR=34						
H03N1	**Juan Fernandez**	147.08	96	T	T	11 01 37.5	
	baz=291,slow=76,SNR=54						

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*IDC **10** 08:02:17.2±17.0, 36°.15N×70°.79E, h229^{km}±228^{km}, mb3.1/3, mbtmp3.7/4, ML3.4/1, MS3.4/2, Error ellipse: s-maj=179.9km s-min=62.0km az=111.0*
*NNC **10** 08:02:20.7±3.2, 37°.05N×70°.48E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=27.1km s-min=23.9km az=117.0*
ISC 10 08:02:18.7±1.8, **36°.7N**±0°.2×**70°.3E**±0°.2, **h204^{km}, n9, σ1^{s}34**/10, **4C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	6.00	25	⇑Pn	Pn	08 03 46.5	+0.2
	0.6nm,0.5s						
AML				⇑Sn	S	08 04 53.9	-1.5
	10nm,0.7s						
KK31	**Karatay Array**	6.37	1	⇑Pn	Pn	08 03 51.7	+0.9
	2.2nm,0.5s,baz=191,slow=15,SNR=18						
KK31				⇓Sn	S	08 05 02.2	-1.4
	4.3nm,0.7s,baz=201,slow=21,SNR=9.2						
TKM2	**Tokmak 2**	7.40	32	⇓Pn	Pn	08 04 04.8	+0.5
	3.9nm,0.5s						
TKM2				⇑Sn	S	08 05 26.9	-1.3
	7.8nm,0.9s						
MKAR	**Makanchi Array**	13.44	38	P	Pn	08 05 21.8	+0.3
	0.2nm,0.3s,baz=217,slow=12,SNR=10						
	0.9nm,0.6s						
WSAR	**Wadi Sarin**	16.80	220	LR	LR	08 13 19.0	
	comp=Z,76nm,18.7s,baz=94,slow=40						
ZALV	**Zalesovo Beam**	19.94	26	P	P	08 06 35.7	+0.7
	0.6nm,0.3s,baz=218,slow=10,SNR=2.0						
	0.6nm,0.3s						
ASF	**Jabal al Asfar**	27.84	271	LR	LR	08 20 46.4	
	comp=Z,150nm,20.0s,baz=289,slow=39						
ARCES	**ARCESS Array B**	40.73	338	P	P	08 09 40.5	+1.4
	3.6nm,1.0s,baz=109,slow=8.0,SNR=2.6						
	3.6nm,1.0s						
TORD	**Torodi Ar. Bea**	65.17	268	P	P	08 12 36.6	-1.7
	0.5nm,1.0s,baz=52,slow=7.2,SNR=2.0						
	0.5nm,1.0s						

ROM 10 08:03:53.5±0.0, **43°.078N**±0°.002×**13°.036E**±0°.003, **h13^{km}, ML1.5**/9, **2C-2D, Error ellipse: s-maj=0.2km s-min=0.1km az=261.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	0.03	224	P	Pg	08 03 56.1	+0.3
T1219				S	Sg	08 03 57.7	+0.2
T1219				AML	AML		
	comp=E,736µm,0.1s						
T1219				AML	AML		
	comp=N,646µm,0.2s						
T1219				AML	AML		
	comp=N,634µm,0.4s						
T1219				AML	AML		
	comp=E,718µm,0.1s						
T1220	**Camerino, Fraz**	0.05	50	⇓P	Pg	08 03 56.2	+0.3
T1220				S	Sg	08 03 58.1	+0.4
T1220				AML	AML		
	comp=E,1390µm,0.2s						
T1220				AML	AML		
	comp=N,876µm,0.1s						
CESI	**CESI - Serrava**	0.12	233	⇑P	Pg	08 03 57.2	+0.5
CESI				S	Sg	08 03 59.8	+0.7
CESI				AML	AML		
	comp=E,417µm,0.2s						
CESI				AML	AML		
	comp=N,200µm,0.1s						
CSP1	**Cessapalombo**	0.12	83	P	Pg	08 03 57.2	+0.3
CSP1				S	Sg	08 03 59.8	+0.5
CSP1				AML	AML		
	comp=E,292µm,0.7s						
CSP1				AML	AML		
	comp=N,362µm,1.1s						
CSP1				AML	AML		
	comp=N,362µm,0.9s						
T1216	**Preci, Frazion**	0.19	184	P	Pg	08 03 58.0	+0.3
T1216				S	Sg	08 04 01.3	+0.7
T1216				AML	AML		
	comp=N,180µm,0.3s						
T1216				AML	AML		
	comp=E,200µm,0.5s						
T1216				AML	AML		
	comp=N,180µm,1.7s						
SNTG	**Esanatoglia**	0.19	338	P	Pg	08 03 58.1	+0.4
SNTG				S	Sg	08 04 01.5	+0.8
SNTG				AML	AML		
	comp=E,53µm,0.3s						
SNTG				AML	AML		
	comp=N,46µm,0.5s						
SNTG				AML	AML		
	comp=E,53µm,0.3s						
SNTG				AML	AML		
	comp=N,46µm,1.5s						
MC2	**Monte Cornacci**	0.20	145	P	Pg	08 03 58.5	+0.4
MC2				S	Sg	08 04 02.0	+0.9
T1245	**Castelsantange**	0.25	153	P	Pg	08 03 59.1	+0.3
T1245				S	Sg	08 04 03.2	+0.8
T1245				AML	AML		
	comp=N,130µm,0.3s						
T1245				AML	AML		
	comp=N,130µm,0.3s						
T1245				AML	AML		
	comp=E,133µm,0.1s						
EL6	**Elcito**	0.26	11	⇑P	Pg	08 03 59.3	+0.4
EL6				S	Sb	08 04 03.7	-0.8
EL6				AML	AML		
	comp=E,186µm,0.2s						
EL6				AML	AML		
	comp=N,204µm,0.9s						
EL6				AML	AML		
	comp=E,186µm,0.2s						
MMO1	**Montemonaco**	0.28	130	P	Pg	08 03 59.5	+0.2
MMO1				S	Sg	08 04 04.1	+0.9
ASSB	**Assisi San Ben**	0.28	263	P	Pg	08 03 59.5	+0.2
ASSB				S	Sb	08 04 04.3	-0.7

ASSB				AML	AML		
	comp=E,46μm,1.5s						
ASSB				AML	AML		
	comp=N,59μm,0.3s						
ASSB				AML	AML		
	comp=N,59μm,1.7s						
ASSB				AML	AML		
	comp=E,46μm,0.5s						
T1215	**Vallo di Nera,**	**0.30**	**204**	P	Pg	08 03 59.9	+0.2
T1215				S	Sb	08 04 05.1	-0.6
T1212	**Cascia, Frazio**	**0.33**	**179**	⇓P	Pg	08 04 00.4	+0.3
T1212				S	Sb	08 04 05.7	-0.8
T1214	**Arquata del Tr**	**0.34**	**158**	P	Pg	08 04 00.8	+0.3
T1214				S	Sb	08 04 06.2	-0.8
T1241	**Roccafluvione,**	**0.36**	**127**	P	Pg	08 04 01.1	+0.3
MURB	**Monte Urbino**	**0.42**	**296**	P	Pg	08 04 01.9	+0.1
MURB				AML	AML		
	comp=E,66μm,1.1s						
MURB				AML	AML		
	comp=N,66μm,0.3s						

ROM 10 08:04:31.9±0.1, 43°.071N±0°.002×13°.044E±0°.004, h14^{km}, ML1.6/9, 6C-2D, Error ellipse: s-maj=0.3km s-min=0.0km az=281.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.03**	**240**	P	Pg	08 04 34.6	+0.1
T1219				S	Sg	08 04 36.2	0.0
T1219				AML	AML		
	comp=E,1070μm,0.1s						
T1219				AML	AML		
	comp=N,948μm,0.2s						
T1219				AML	AML		
	comp=N,914μm,0.4s						
T1219				AML	AML		
	comp=E,1050μm,0.1s						
T1220	**Camerino, Fraz**	**0.05**	**40**	P	Pg	08 04 34.7	+0.1
T1220				S	Sg	08 04 36.9	+0.5
T1220				AML	AML		
	comp=E,2130μm,0.2s						
T1220				AML	AML		
	comp=N,1355μm,0.1s						
SEF1	**Sefro**	**0.10**	**317**	⇑P	Pg	08 04 35.3	+0.2
SEF1				S	Sg	08 04 37.6	+0.3
CSP1	**Cessapalombo**	**0.12**	**80**	⇑P	Pg	08 04 35.6	+0.3
CSP1				S	Sg	08 04 38.2	+0.5
CSP1				AML	AML		
	comp=E,448μm,0.7s						
CSP1				AML	AML		
	comp=N,546μm,1.1s						
CSP1				AML	AML		
	comp=N,546μm,1.1s						
CSP1				AML	AML		
	comp=N,546μm,0.9s						
CESI	**CESI - Serrava**	**0.12**	**237**	P	Pg	08 04 35.7	+0.3
CESI				S	Sb	08 04 38.3	-0.6
CESI				AML	AML		
	comp=E,551μm,0.2s						
CESI				AML	AML		
	comp=N,382μm,0.1s						
MDAR	**Monte D'Aria**	**0.14**	**31**	P	Pg	08 04 35.9	+0.3
MDAR				S	Sg	08 04 38.6	+0.4
GAG1	**Gagliole**	**0.17**	**6**	P	Pb	08 04 36.6	-0.3
GAG1				S	Sb	08 04 39.5	-0.7
T1216	**Preci, Frazion**	**0.18**	**186**	P	Pg	08 04 36.4	+0.3
T1216				S	Sg	08 04 39.7	+0.7
T1216				AML	AML		
	comp=E,265μm,0.4s						
T1216				AML	AML		
	comp=N,268μm,0.3s						
T1216				AML	AML		
	comp=N,268μm,0.3s						
T1216				AML	AML		
	comp=E,265μm,1.6s						
MC2	**Monte Cornacci**	**0.19**	**146**	S	Sg	08 04 39.4	-0.1
SNTG	**Esanatoglia**	**0.20**	**338**	⇓P	Pg	08 04 36.7	+0.2
SNTG				S	Sg	08 04 40.1	+0.6
SNTG				AML	AML		
	comp=E,97μm,0.6s						
SNTG				AML	AML		
	comp=N,84μm,0.4s						
SNTG				AML	AML		
	comp=E,97μm,1.4s						
T1245	**Castelsantange**	**0.24**	**154**	P	Pg	08 04 36.9	-0.2
T1245				AML	AML		
	comp=E,178μm,0.2s						
T1245				AML	AML		
	comp=N,172μm,1.3s						
EL6	**Elcito**	**0.26**	**9**	⇑P	Pg	08 04 37.9	+0.3
EL6				S	Sb	08 04 42.2	-0.8
EL6				AML	AML		
	comp=E,302μm,0.9s						
EL6				AML	AML		
	comp=N,312μm,0.9s						
EL6				AML	AML		
	comp=E,302μm,1.1s						
EL6				AML	AML		
	comp=N,312μm,1.1s						
MMO1	**Montemonaco**	**0.27**	**130**	⇑P	Pg	08 04 38.0	+0.4
MMO1				S	Sb	08 04 42.7	-0.4
ASSB	**Assisi San Ben**	**0.28**	**264**	P	Pg	08 04 38.1	+0.2
ASSB				S	Sb	08 04 43.0	-0.5
ASSB				AML	AML		
	comp=N,105μm,0.3s						
ASSB				AML	AML		
	comp=E,69μm,0.5s						
T1215	**Vallo di Nera,**	**0.30**	**206**	P	Pg	08 04 38.5	+0.3
T1215				S	Sb	08 04 43.2	-0.7
FOSV	**Fossato di Vic**	**0.30**	**317**	⇑P	Pg	08 04 38.6	+0.4
FOSV				AML	AML		
	comp=E,96μm,0.2s						
FOSV				AML	AML		
	comp=N,55μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.32**	**291**	⇑P	Pg	08 04 38.9	+0.4
ATCC				S	Sb	08 04 44.1	-0.3
ATCC				AML	AML		
	comp=E,74μm,0.7s						
ATCC				AML	AML		
	comp=N,73μm,1.4s						
ATCC				AML	AML		
	comp=N,73μm,0.6s						
T1214	**Arquata del Tr**	**0.33**	**159**	⇓P	Pg	08 04 36.8	-2.0

ROM 10 08:05:25.2±0.2, 42°.803N±0°.003×12°.909E±0°.005, h9^{km}, ML0.7/5, 1D, Error ellipse: s-maj=0.4km s-min=0.3km az=139.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1215	**Vallo di Nera,**	**0.03**	**268**	P	Pg	08 05 27.3	+0.2
T1215				S	Sg	08 05 28.6	+0.3
T1215				AML	AML		
	comp=E,193μm,0.1s						
T1215				AML	AML		
	comp=N,174μm,1.5s						
T1215				AML	AML		
	comp=E,211μm,0.1s						
T1215				AML	AML		
	comp=N,154μm,0.1s						
T1215				AML	AML		
	comp=N,154μm,0.1s						
T1215				AML	AML		
	comp=N,169μm,0.1s						
T1215				AML	AML		
	comp=E,211μm,0.1s						
T1215				AML	AML		
	comp=E,193μm,0.1s						
T1217	**Poggiodomo (PG**	**0.09**	**170**	P	Pg	08 05 28.1	+0.3
T1217				S	Sg	08 05 30.1	+0.6
T1217				AML	AML		
	comp=E,53μm,0.1s						
T1217				AML	AML		
	comp=N,73μm,0.1s						
T1212	**Cascia, Frazio**	**0.11**	**117**	⇓P	Pg	08 05 28.4	+0.4
T1212				S	Sg	08 05 30.8	+0.8
T1212				AML	AML		
	comp=E,42μm,0.2s						
T1212				AML	AML		
	comp=N,29μm,0.1s						
T1216	**Preci, Frazion**	**0.12**	**43**	P	Pg	08 05 28.3	+0.2
T1216				S	Sg	08 05 31.0	+0.8
T1216				AML	AML		
	comp=E,118μm,0.9s						
T1216				AML	AML		
	comp=N,151μm,0.4s						
T1216				AML	AML		
	comp=E,115μm,0.1s						
T1216				AML	AML		
	comp=N,130μm,0.1s						
T1218	**Civita (PG)**	**0.20**	**131**	P	Pg	08 05 30.1	+0.6
T1218				S	Sg	08 05 33.4	+1.0
T1218				AML	AML		
	comp=N,25μm,0.1s						
T1218				AML	AML		
	comp=N,112μm,0.6s						
T1218				AML	AML		
	comp=E,23μm,0.1s						
T1245	**Castelsantange**	**0.21**	**75**	P	Pg	08 05 30.6	+0.9
T1245				S	Sg	08 05 34.0	+1.2

IDC 10 08:23:57.7±2.6, 54°.19N×87°.00E, h0^{km}, mbtmp3.3/3, ML2.9/3, Error ellipse: s-maj=23.2km s-min=13.5km az=64.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.31**	**260**	I	I	08 31 35.2	
	baz=78,slow=335,SNR=16						
ZALV	**Zalesovo Beam**	**1.31**	**260**	Pg	Pg	08 24 20.8	-1.9
	3.2nm,0.3s,baz=77,slow=16,SNR=21						
ZALV				Lg	Lg	08 24 40.4	
	3.0nm,0.3s,baz=78,slow=26,SNR=7.9						
KURBB	**Kurchatov Arra**	**6.29**	**239**	Pn	Pn	08 25 32.1	+0.5
	0.2nm,0.3s,baz=54,slow=13,SNR=13						
KURBB				Lg	Lg	08 27 19.4	
	baz=56,slow=32,SNR=1.9						
	1.6nm,0.5s						
MKAR	**Makanchi Array**	**7.99**	**204**	Pn	Pn	08 25 56.4	+1.4
	0.4nm,0.3s,baz=19,slow=12,SNR=4.7						
MKAR				Sn	Sn	08 27 25.1	-0.8
	baz=27,slow=29,SNR=2.2						
MKAR				Lg	Lg	08 28 09.1	
	0.1nm,0.3s,baz=24,slow=32,SNR=2.6						
	0.4nm,0.3s						
BVAR	**Borovoye Array**	**9.94**	**270**	Pn	Pn	08 26 21.5	-0.2
	0.1nm,0.3s,baz=69,slow=16,SNR=7.0						
BVAR				Sn	Sn	08 28 07.8	-6.1
	baz=79,slow=24,SNR=2.5						
	0.7nm,0.3s						

IDC 10 08:29:20.6±6.2, 4°.78S×134°.22E, h0^{km}, mb3.7/1, mbtmp3.6/3, ML3.5/2, MS3.1/6, Error ellipse: s-maj=340.8km s-min=32.2km az=78.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.88**	**323**	LR	LR	08 32 51.2	
	comp=Z,184nm,19.9s,baz=47,slow=43						
PMG	**Port Moresby**	**13.64**	**110**	LR	LR	08 39 39.9	
	comp=Z,115nm,18.9s,baz=312,slow=45						
KAPI	**Kappang**	**14.42**	**268**	LR	LR	08 38 38.5	
	comp=Z,55nm,21.0s,baz=46,slow=39						
WRA	**Warramunga Arr**	**15.07**	**180**	Pn	Pn	08 32 53.9	-1.1
	0.2nm,0.3s,baz=358,slow=13,SNR=8.5						
WRA				Sn	Sn	08 35 33.9	-8.9
	0.2nm,0.3s,baz=0.4,slow=23,SNR=5.4						
WRA				LR	LR	08 38 09.0	
	comp=Z,79nm,19.3s,baz=336,slow=35						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**18.78**	**181**	P	Pn	08 33 42.1	+0.1
	0.2nm,0.3s,baz=6.4,slow=12,SNR=25						
ASAR				S	Sn	08 37 00.0	-13
	1.1nm,0.9s,baz=0.2,slow=28,SNR=6.0						
ASAR				LR	LR	08 41 42.2	
	comp=Z,92nm,20.1s,baz=338,slow=40						
	1.8nm,0.7s						
GUMO	**Guam**	**21.09**	**30**	LR	LR	08 42 51.0	
	comp=Z,31nm,18.7s,baz=212,slow=38						
MKAR	**Makanchi Array**	**68.77**	**325**	P	P	08 40 26.6	0.0
	0.6nm,0.8s,baz=126,slow=7.3,SNR=4.2						
	0.6nm,0.8s						

IDC 10 08:29:44.8±2.9, 53°.94N×86°.52E, h0^{km}, mbtmp2.5/2, ML2.1/1, Error ellipse: s-maj=23.2km s-min=13.7km az=68.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.01**	**271**	I	I	08 35 46.4	
	baz=88,slow=335,SNR=11						
ZALV	**Zalesovo Beam**	**1.01**	**271**	Pg	Pg	08 30 02.8	-1.3
	0.5nm,0.3s,baz=90,slow=16,SNR=4.8						
ZALV				Lg	Lg	08 30 18.8	
	0.9nm,0.3s,baz=95,slow=29,SNR=5.9						
KURBB	**Kurchatov Arra**	**5.92**	**239**	Pn	Pn	08 31 14.6	+0.9
	0.3nm,0.5s,baz=56,slow=13,SNR=0.8						
MKAR	**Makanchi Array**	**7.65**	**202**	Pn	Pn	08 31 38.7	+1.2
	baz=25,slow=15,SNR=1.5						
	0.1nm,0.3s						

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*IDC **10** 08:31:34.0±2.5, 35°.89N×142°.18E, h0^{km}, mb3.4/3, mbtmp3.3/4, ML2.4/1, Error ellipse: s-maj=67.8km s-min=31.8km az=48.0*

*JMA **10** 08:31:35.2±0.2, 36°.3N±0°.4×14°2E±°, h71^{km}, MV2.8/28, FAR E OFF IBARAKI PREF*

ISC 10 08:31:37.3±1.4, 36°.29N±0°.05×142°.28E±0°.09, h35^{km}, n18, σ1^{s}18/20, mb3.3/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.29**	**243**	*e*P	**Pn**	**08 31 57.6**	**-1.2**
JHYU	**Hitachinakayam**	**1.37**	**273**	P	**Pn**	**08 31 58.8**	**-1.0**
JHYU				*e*S	**Sn**	**08 32 16.4**	**-0.3**
JHO	**Hitachi**	**1.42**	**284**	P	**Pn**	**08 31 59.3**	**-1.2**
JHO				*e*S	**Sn**	**08 32 17.1**	**-0.8**
ONAJ	**Iwakimizuishiy**	**1.44**	**305**	P	**Pn**	**08 31 59.6**	**-1.3**
BSO1	**Boso 1**	**1.95**	**213**	*e*P	**Pn**	**08 32 06.4**	**-0.9**
BSO1				*e*S	**Sn**	**08 32 30.7**	**+0.5**
JMM	**Marumori**	**1.97**	**323**	*e*P	**Pn**	**08 32 06.7**	**-1.5**
JMM				*e*S	**Sn**	**08 32 31.0**	**-0.6**
JOTO	**OTAMA OYAMA**	**2.01**	**310**	*e*P	**Pn**	**08 32 08.1**	**-0.6**
JAG	**Ashikaga**	**2.28**	**274**	P	**Pn**	**08 32 11.9**	**-0.5**
JAG				*e*S	**Sn**	**08 32 38.7**	**-0.6**
JRY	**Ryogami san**	**2.75**	**265**	*e*P	**Pn**	**08 32 17.9**	**-0.9**
JMK	**Ichinoseki**	**2.79**	**343**	*e*P	**Pn**	**08 32 18.5**	**-0.8**
JOD2	**Odawara 2**	**2.79**	**249**	*e*S	**Sn**	**08 32 50.9**	**-0.9**
MJAR	**Matsushiro Arr**	**3.29**	**276**	Pn	**Pn**	**08 32 26.9**	**+0.5**
	0.4nm,0.3s,baz=108,slow=8.8,SNR=14						
MJAR				Sn	**Sn**	**08 33 05.5**	**+1.2**
	0.1nm,0.3s,baz=85,slow=19,SNR=1.7						
	2.6nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**27.17**	**121**	T	T	09 05 44.8	
	baz=313,slow=74						
H11N1	**WAKE ISLAND Hy**	**27.18**	**121**	T	T	09 05 47.0	
	baz=313,slow=74						
H11N3	**WAKE ISLAND Hy**	**27.19**	**121**	T	T	09 05 48.2	
	baz=313						
MKAR	**Makanchi Array**	**45.10**	**303**	P	P	08 39 53.3	+3.3
	0.7nm,0.6s,baz=94,slow=8.7,SNR=6.1						
	0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**47.01**	**309**	P	**P**	**08 40 07.6**	**+2.7**
	0.2nm,0.6s,baz=88,slow=8.3,SNR=2.1						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**56.43**	**189**	P	**P**	**08 41 14.4**	**-1.0**
	0.3nm,0.9s,baz=5.6,slow=7.7,SNR=1.9						
	0.3nm,0.9s						

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*NNC **10** 08:31:58.7±2.7, 54°.34N×87°.45E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=22.6km s-min=13.6km az=13.0, Suspected Mining explosion.*

*IDC **10** 08:32:03.0±1.6, 54°.19N×87°.07E, h0^{km}, mb2.9/1, mbtmp3.1/4, ML2.6/3, Error ellipse: s-maj=15.7km s-min=12.3km az=83.0*

ISC 10 08:32:03.1±1.7, 54°.28N±0°.09×86°.9E±0°.1, h0^{km}, n11, σ2^{s}25/15, 10C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.27**	**256**	I	I	08 39 28.5	
	baz=79,slow=336,SNR=20						
ZAA0	**Zalesovo Array**	**1.27**	**256**	⇑P	**Pb**	**08 32 26.9**	**-0.9**
	0.3nm,0.3s						
ZAA0				⇑S	**Sn**	**08 32 49.7**	**+3.8**
	6.1nm,0.8s						
ZALV	**Zalesovo Beam**	**1.27**	**256**	Pg	**Pg**	**08 32 26.9**	**-0.5**
	1.7nm,0.3s,baz=83,slow=16,SNR=14						
ZALV				Lg	Lg	08 32 47.8	
	2.1nm,0.3s,baz=78,slow=28,SNR=4.7						
KURK	**Kurchatov**	**6.19**	**238**	⇑Pn	**Pn**	**08 33 37.4**	**+1.7**
	1.5nm,0.7s						
KURK				⇑Lg	Lg	08 35 24.1	
	6.6nm,1.0s						
KURBB	**Kurchatov Arra**	**6.29**	**238**	Pn	**Pn**	**08 33 38.2**	**+1.1**
	0.1nm,0.3s,baz=55,slow=14,SNR=9.9						
KURBB				Lg	Lg	08 35 23.6	
	baz=60,slow=31,SNR=4.6						
	1.4nm,0.6s						
KURBB	**Kurchatov Arra**	**6.29**	**238**	⇑Pn	**Pn**	**08 33 38.1**	**+1.1**
	2.3nm,0.8s						
KURBB				⇑Sn	**Sn**	**08 34 51.3**	**+1.7**
	5.5nm,0.7s						
KURBB				⇑Lg	Lg	08 35 29.1	
	9.8nm,0.7s						
MK31	**Makanchi Array**	**8.04**	**203**	⇑Pn	**Pn**	**08 34 01.6**	**+0.4**
	0.6nm,0.6s,baz=30,slow=13,SNR=18						
MK31				⇓Sn	**Sn**	**08 35 32.1**	**-0.7**
	1.0nm,0.5s,baz=26,slow=26,SNR=7.1						
MK31				⇑Lg	Lg	08 36 21.5	
	2.6nm,0.7s,baz=359,slow=37,SNR=6.2						
MKAR	**Makanchi Array**	**8.04**	**203**	Pn	**Pn**	**08 34 01.6**	**+0.5**
	0.2nm,0.3s,baz=25,slow=14,SNR=11						
MKAR				Sn	**Sn**	**08 35 31.9**	**-0.9**
	0.4nm,0.3s,baz=25,slow=24,SNR=12						
MKAR				Lg	Lg	08 36 13.0	
	baz=26,slow=34						
	0.6nm,0.5s						
MAKZ	**Makanchi**	**8.11**	**205**	⇓Sn	**Sn**	**08 35 37.1**	**+2.8**
	1.9nm,0.6s						
MAKZ				⇑Lg	Lg	08 36 20.6	
	5.7nm,1.1s						
BVAR	**Borovoye Array**	**9.89**	**269**	Pn	**Pn**	**08 34 28.1**	**+1.7**
	baz=71,slow=15,SNR=2.3						
BVAR				Sn	**Sn**	**08 36 13.1**	**-4.8**
	baz=73,slow=24,SNR=6.7						
	0.4nm,0.6s						
YKA	**Yellowknife Ar**	**62.35**	**11**	P	**P**	**08 42 26.9**	**+0.2**
	0.1nm,0.7s,baz=345,slow=6.4,SNR=2.2						
	0.1nm,0.7s						

ROM 10 08:40:00.2±0.0, 43°.022N±0°.002×13°.124E±0°.004, h9^{km}, ML1.6/9, 4D, Error ellipse: s-maj=0.3km s-min=0.1km az=76.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSP1	**Cessapalombo**	**0.09**	**40**	P	Pg	08 40 03.0	+0.3
CSP1				S	Sg	08 40 04.8	+0.4
CSP1				AML	AML		
	comp=E,407μm,1.1s						
CSP1				AML	AML		
	comp=N,598μm,0.4s						
T1219	**Muccia, Frazio**	**0.09**	**292**	⇓P	Pg	08 40 02.9	+0.3
T1219				S	Sg	08 40 04.9	+0.6
T1219				AML	AML		
	comp=N,871μm,0.2s						
T1219				AML	AML		
	comp=N,840μm,0.2s						
T1219				AML	AML		
	comp=N,840μm,0.2s						
T1219				AML	AML		
	comp=N,872μm,0.2s						
T1219				AML	AML		
	comp=E,436μm,0.1s						
T1219				AML	AML		
	comp=E,454μm,0.1s						
T1220	**Camerino, Fraz**	**0.09**	**344**	⇓P	Pg	08 40 03.0	+0.4
T1220				S	Sg	08 40 05.2	+0.9
T1220				AML	AML		
	comp=N,1865μm,0.5s						
T1220				AML	AML		
	comp=N,1860μm,0.5s						
T1220				AML	AML		
	comp=N,1860μm,1.5s						
T1220				AML	AML		
	comp=E,1940μm,0.6s						
MC2	**Monte Cornacci**	**0.12**	**156**	⇓P	Pg	08 40 03.5	+0.3
T1216	**Preci, Frazion**	**0.15**	**211**	P	Pg	08 40 04.4	+0.9
T1216				S	Sg	08 40 06.8	+1.0
T1216				AML	AML		
	comp=E,476μm,0.9s						
T1216				AML	AML		
	comp=N,403μm,0.4s						
T1216				AML	AML		
	comp=E,475μm,0.9s						
T1216				AML	AML		
	comp=N,403μm,1.6s						
T1245	**Castelsantange**	**0.17**	**164**	P	Pg	08 40 04.4	+0.5
T1245				S	Sg	08 40 07.7	+1.2
T1245				AML	AML		
	comp=N,334μm,1.1s						
T1245				AML	AML		
	comp=E,274μm,0.5s						
T1245				AML	AML		
	comp=E,274μm,1.5s						
T1245				AML	AML		
	comp=N,334μm,0.9s						
MMO1	**Montemonaco**	**0.19**	**129**	⇓P	Pg	08 40 04.8	+0.6
MMO1				S	Sg	08 40 08.2	+1.2
SNTG	**Esanatoglia**	**0.27**	**330**	P	Pg	08 40 06.1	+0.5
SNTG				S	Sb	08 40 11.1	-1.0
SNTG				AML	AML		
	comp=E,54μm,1.2s						
SNTG				AML	AML		
	comp=N,47μm,0.2s						
T1214	**Arquata del Tr**	**0.27**	**167**	P	Pg	08 40 06.2	+0.5
T1214				S	Sb	08 40 11.1	-1.0
T1212	**Cascia, Frazio**	**0.28**	**192**	P	Pg	08 40 06.4	+0.6
T1212				S	Sb	08 40 11.4	-0.9
T1212				AML	AML		
	comp=E,112μm,1.6s						
T1212				AML	AML		
	comp=N,104μm,0.5s						
T1212				AML	AML		
	comp=E,112μm,0.4s						
T1215	**Vallo di Nera,**	**0.29**	**221**	P	Pg	08 40 06.7	+0.7
EL6	**Elcito**	**0.31**	**357**	P	Pg	08 40 07.0	+0.6
EL6				S	Sb	08 40 12.5	-0.8
EL6				AML	AML		
	comp=E,129μm,0.2s						
EL6				AML	AML		
	comp=N,150μm,0.9s						
EL6				AML	AML		
	comp=E,129μm,0.2s						
ASSB	**Assisi San Ben**	**0.34**	**274**	P	Pg	08 40 07.8	+0.8
ASSB				S	Sb	08 40 13.4	-0.7
ASSB				AML	AML		
	comp=E,121μm,1.4s						
ASSB				AML	AML		
	comp=N,172μm,0.3s						
ASSB				AML	AML		
	comp=E,121μm,0.6s						
T1211	**Morro Reatino**	**0.53**	**202**	S	Sb	08 40 19.7	+0.2
TERO	**Teramo**	**0.53**	**138**	P	Pg	08 40 11.1	+0.5
TERO				S	Sb	08 40 19.3	-0.3

ROM 10 08:40:43.2±0.1, 43°.030N±0°.003×13°.039E±0°.004, h10^{km}, ML1.6/13, 3C-1D, Error ellipse: s-maj=0.3km s-min=0.3km az=7.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.03**	**318**	P	Pg	08 40 44.9	-0.2
T1219				AML	AML		
	comp=E,1690μm,0.3s						
T1219				AML	AML		
	comp=N,1600μm,0.1s						
T1219				AML	AML		
	comp=E,1795μm,0.3s						
T1219				AML	AML		
	comp=N,1580μm,0.1s						
T1219				AML	AML		
	comp=E,1790μm,0.3s						
T1219				AML	AML		
	comp=E,1690μm,0.3s						
T1219				AML	AML		
	comp=N,1585μm,0.1s						
T1220	**Camerino, Fraz**	**0.09**	**25**	⇑P	Pg	08 40 46.0	+0.3
T1220				S	Sg	08 40 48.0	+0.5

CESI	CESI - Serrava	0.10	256	⇑P	Pg	08 40 46.4	+0.5
CESI				S	Sg	08 40 48.4	+0.6
CESI				AML	AML		
	comp=E,463µm,0.5s						
CESI				AML	AML		
	comp=N,704µm,0.2s						
CSP1	Cessapalombo	0.14	63	⇑P	Pg	08 40 46.8	+0.4
CSP1				AML	AML		
	comp=E,334µm,1.3s						
CSP1				AML	AML		
	comp=N,201µm,0.5s						
CSP1				AML	AML		
	comp=E,334µm,0.7s						
T1216	Preci, Frazion	0.14	186	P	Pg	08 40 47.0	+0.6
T1216				AML	AML		
	comp=E,295µm,0.2s						
T1216				AML	AML		
	comp=N,328µm,0.3s						
MC2	Monte Cornacci	0.16	136	P	Pg	08 40 47.7	+0.8
T1245	Castelsantange	0.20	148	P	Pg	08 40 48.2	+0.6
T1245				S	Sg	08 40 51.7	+1.2
T1245				AML	AML		
	comp=E,245µm,1.2s						
T1245				AML	AML		
	comp=N,345µm,1.0s						
T1245				AML	AML		
	comp=E,198µm,1.3s						
T1245				AML	AML		
	comp=N,271µm,1.0s						
T1245				AML	AML		
	comp=N,345µm,1.0s						
T1245				AML	AML		
	comp=E,198µm,0.7s						
T1245				AML	AML		
	comp=N,271µm,1.0s						
SNTG	Esanatoglia	0.24	342	P	Pg	08 40 48.7	+0.6
SNTG				S	Sg	08 40 53.1	+1.7
SNTG				AML	AML		
	comp=E,54µm,0.7s						
SNTG				AML	AML		
	comp=N,65µm,0.7s						
SNTG				AML	AML		
	comp=E,54µm,0.7s						
SNTG				AML	AML		
	comp=E,54µm,1.3s						
MMO1	Montemonaco	0.25	122	P	Pg	08 40 48.7	+0.4
MMO1				S	Sg	08 40 53.0	+1.3
T1215	Vallo di Nera,	0.26	209	P	Pg	08 40 49.1	+0.6
T1215				S	Sb	08 40 53.4	-1.2
T1212	Cascia, Frazio	0.28	179	P	Pg	08 40 49.3	+0.5
T1212				S	Sb	08 40 54.0	-1.2
T1212				AML	AML		
	comp=E,202µm,0.1s						
T1212				AML	AML		
	comp=N,197µm,0.6s						
ASSB	Assisi San Ben	0.28	273	P	Pg	08 40 49.5	+0.6
ASSB				S	Sb	08 40 54.4	-0.8
ASSB				AML	AML		
	comp=E,243µm,0.5s						
ASSB				AML	AML		
	comp=N,236µm,0.4s						
T1214	Arquata del Tr	0.30	155	P	Pg	08 40 49.6	+0.3
T1214				S	Sg	08 40 54.5	+1.2
T1214				AML	AML		
	comp=E,82µm,1.3s						
T1214				AML	AML		
	comp=N,84µm,1.5s						
T1214				AML	AML		
	comp=N,84µm,0.5s						
T1217	Poggiodomo (PG	0.33	194	P	Pg	08 40 50.4	+0.6
T1217				S	Sb	08 40 55.8	-0.8
T1217				AML	AML		
	comp=N,114µm,0.2s						
T1217				AML	AML		
	comp=N,114µm,1.8s						
T1217				AML	AML		
	comp=E,96µm,0.2s						
T1241	Roccafluvione,	0.34	121	P	Pg	08 40 50.5	+0.6
T1241				S	Sb	08 40 56.1	-0.7
T1241				AML	AML		
	comp=E,84µm,1.2s						
T1241				AML	AML		
	comp=N,102µm,0.4s						
T1241				AML	AML		
	comp=N,102µm,1.6s						
T1241				AML	AML		
	comp=E,84µm,0.8s						
T1218	Civita (PG)	0.36	171	P	Pg	08 40 50.8	+0.4
T1218				S	Sb	08 40 56.9	-0.8
T1218				AML	AML		
	comp=E,103µm,0.2s						
T1218				AML	AML		
	comp=N,190µm,0.8s						
T1218				AML	AML		
	comp=N,190µm,1.2s						
MURB	Monte Urbino	0.44	302	P	Pb	08 40 52.8	-0.4
MURB				AML	AML		
	comp=E,94µm,0.3s						
MURB				AML	AML		
	comp=N,70µm,0.7s						
MURB				AML	AML		
	comp=E,94µm,1.7s						
MURB				AML	AML		
	comp=N,70µm,1.3s						
PP3	Marolino	0.54	50	⇓P	Pg	08 40 52.7	-1.0
TERO	Teramo	0.58	134	P	Pg	08 40 54.7	+0.2
TERO				S	Sb	08 41 03.7	-0.2

IDC 10 08:43:33.4±1.5**, 54°.63N**×**83°.75E, h0**^{km}**, mbtmp2.8**/3**, ML2.2**/3**, Error ellipse: s-maj=14.4km s-min=8.7km az=13.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.93	137	I	I	08 49 40.0	
	baz=317,slow=332,SNR=7.0						
ZALV	Zalesovo Beam	0.93	137	Pg	Pg	08 43 50.7	-0.4
	1.4nm,0.3s,baz=316,slow=15,SNR=15						
ZALV				Lg	Lg	08 44 04.6	
	5.9nm,0.3s,baz=319,slow=29,SNR=30						
ZALV				Rg	Rg	08 44 09.0	
	11nm,0.4s,baz=322,slow=35,SNR=14						
KURBB	Kurchatov Arra	5.12	220	Pn	Pn	08 44 52.1	+0.9
	0.1nm,0.3s,baz=42,slow=14,SNR=5.0						
KURBB				Lg	Lg	08 46 14.5	
	0.1nm,0.3s,baz=37,slow=31,SNR=5.1 0.4nm,0.6s						
MKAR	Makanchi Array	7.90	187	Pn	Pn	08 45 29.5	+0.1
	baz=9.3,slow=12,SNR=3.5						
MKAR				Lg	Lg	08 47 41.6	
	baz=14,slow=31 0.3nm,0.7s						
BVAR	Borovoye Array	8.07	264	Pn	Pn	08 45 30.4	-1.3
	baz=75,slow=14,SNR=5.5						
BVAR				Sn	Sn	08 47 00.8	-2.8
	baz=66,slow=25,SNR=4.0 0.9nm,0.5s						

IDC 10 08:47:11.7±4.8**, 4°.77S**×**133°.98E, h0**^{km}**, mb3.3**/1**, mbtmp3.4**/4**, ML3.3**/3**, Error ellipse: s-maj=226.6km s-min=28.3km az=74.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	4.72	325	Pn	Pn	08 48 24.2	-0.1
	0.8nm,0.3s,baz=180,slow=20,SNR=1.3						
SIJI				Sn	Sn	08 49 14.2	-5.6
	0.8nm,0.3s,baz=264,slow=23,SNR=2.2 3.2nm,0.5s						
WRA	Warramunga Arr	15.09	179	Pn	Pn	08 50 45.8	-0.5
	0.1nm,0.3s,baz=357,slow=13,SNR=2.5						
WRA				Sn	Sn	08 53 24.8	-10
	baz=352,slow=23 0.4nm,0.5s						
ASAR	Alice Springs	18.79	180	P	P	08 51 33.0	+0.2
	0.2nm,0.3s,baz=5.4,slow=12,SNR=13 0.9nm,0.6s						
MKAR	Makanchi Array	68.62	325	P	P	08 58 16.7	0.0
	0.2nm,0.5s,baz=124,slow=8.1,SNR=2.6 0.2nm,0.5s						

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*IDC **10** 09:00:52.9±3.3, 52°.51N×35°.49E, h0^{km}, mbtmp3.2/3, ML2.8/3, Error ellipse: s-maj=35.4km s-min=13.0km az=115.0*

ISC 10 09:00:54.4±3.3**, 52°.8N**±0°.1×**35°.1E**±0°.3**, h10**^{km}**, n7, σ1^{s}.21**/6**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OBN	Obninsk	2.52	20	Lg	Lg	09 02 21.8	
	3.3nm,0.3s,baz=352,slow=23,SNR=6.0						
I43RU	DUBNA INFRASON	4.16	16	I	I	09 25 20.0	
	0.1nm,0.9s,baz=193,slow=324,SNR=3.3						
AKASG	Malin Array Be	4.19	243	Pn	**Pn**	**09 01 58.0**	**-0.3**
	0.7nm,0.3s,baz=61,slow=15,SNR=2.4						
AKASG				Pg	**Pb**	**09 02 08.3**	**+0.2**
	2.4nm,0.3s,baz=57,slow=16,SNR=6.2						
AKASG				Sn	**Sn**	**09 02 47.5**	**+0.3**
	2.3nm,0.3s,baz=58,slow=20,SNR=4.2						
AKASG				Lg	Lg	09 03 07.0	
	2.7nm,0.3s,baz=63,slow=28,SNR=5.3 0.3nm,0.3s						
FINES	FINESS Array B	9.98	334	Pn	**Pn**	**09 03 16.3**	**-1.4**
	0.1nm,0.3s,baz=149,slow=15,SNR=1.4						
FINES				Sn	**Sn**	**09 05 10.2**	**+0.6**
	0.4nm,0.3s,baz=150,slow=23,SNR=6.6 0.3nm,0.4s						
I31KZ	AKTYUBINSK INF	14.44	90	I	I	10 29 10.0	
	0.1nm,0.8s,baz=286,slow=322,SNR=5.3						
ARCES	ARCESS Array B	17.42	349	P	**P**	**09 04 59.8**	**+1.4**
	0.1nm,0.3s,baz=170,slow=12,SNR=8.6 1.3nm,0.6s						
I46RU	ZALESOVO INFRA	29.22	68	I	I	12 03 30.5	
	baz=289,slow=317,SNR=1.6						

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*ISK **10** 09:05:01.6, 39°.51N×26°.04E, h6^{km}, ML2.4/21*

*DDA **10** 09:05:01.8±0.0, 39°.51N×26°.06E, h12^{km}, ML2.6*

ISC 10 09:05:01.9±0.9**, 39°.50N**±0°.02×**26°.05E**±0°.03**, h11**^{km}±5^{km}**, n38, σ0^{s}.43**/58**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.07	90	P	**Pg**	**09 05 04.4**	**+0.2**
KOCA				S	**Sg**	**09 05 06.1**	**+0.2**
GPNR	Gulpinar-Canak	0.08	127	Pg	**Pg**	**09 05 04.0**	**-0.3**
GPNR				Sg	**Sg**	**09 05 05.9**	**-0.1**
SIGR	SIGRI	0.33	208	Pg	**Pg**	**09 05 08.6**	**+0.1**
SIGR				Sg	**Sg**	**09 05 13.6**	**+0.7**
BOZC	Bozcaada	0.34	360	Pg	**Pg**	**09 05 08.8**	**0.0**
BOZC				Sg	**Sg**	**09 05 13.7**	**+0.4**
BOZC	Bozcaada	0.34	360	P	**Pg**	**09 05 08.8**	**0.0**
BOZC				S	**Sg**	**09 05 13.9**	**+0.6**
EZN	Ezine	0.39	33	Pg	**Pg**	**09 05 09.6**	**0.0**
BAYC	CANAKKALE_Bayr	0.45	58	P	**Pg**	**09 05 10.6**	**-0.2**
BAYC				S	**Sg**	**09 05 16.8**	**+0.1**
ECEA	Canakkale, Ece	0.55	10	P	**Pb**	**09 05 12.9**	**-0.7**
ECEA				S	**Sb**	**09 05 21.3**	**-0.2**
COMU	Canakkale	0.68	28	Pg	**Pg**	**09 05 15.1**	**0.0**
GOKA	anakkale-Gk	0.70	351	P	**Pg**	**09 05 15.1**	**-0.4**
GOKA				S	**Sg**	**09 05 24.7**	**+0.2**
GOKA				*i* AML	AML	09 05 26.0	
	comp=E,198nm,0.5s						
GADA	Gvkgeada	0.70	350	Pg	**Pg**	**09 05 15.4**	**-0.1**
DKL	Dikili	0.79	123	Pg	**Pb**	**09 05 17.6**	**-0.1**
DKL				Sg	**Sb**	**09 05 29.3**	**+0.9**
BUHA	Balikesir, Bur	0.79	90	P	**Pg**	**09 05 17.1**	**-0.1**
BUHA				S	**Sb**	**09 05 28.1**	**-0.4**
KARB	zmir-Karabur	0.88	161	P	**Pb**	**09 05 19.4**	**+0.1**
KARB				S	**Sb**	**09 05 31.3**	**+0.2**
CANM	Can-anakkale	0.92	56	Pg	**Pb**	**09 05 19.8**	**-0.2**
CANM				Sg	**Sb**	**09 05 33.1**	**+0.8**
GELI	Tayfur-Gelibol	0.95	20	Pg	**Pg**	**09 05 20.1**	**-0.2**
ZEDA	zmir-Bergama	0.96	124	P	**Pb**	**09 05 20.9**	**+0.3**
ZEDA				S	**Sn**	**09 05 35.2**	**+0.2**
LPK	Lapseki	1.02	32	Pg	**Pb**	**09 05 21.9**	**+0.2**
URLA	Izmir	1.22	159	Pn	**Pb**	**09 05 24.7**	**-0.3**
URLA	Izmir	1.22	159	P	**Pb**	**09 05 24.2**	**-0.8**
URLA				S	**Sb**	**09 05 41.0**	**+0.2**
ERIK	Erikli-Kesan	1.22	17	Pn	**Pb**	**09 05 24.5**	**-0.5**
BALY	Balya	1.23	78	P	**Pn**	**09 05 24.7**	**-0.5**
BALY				S	**Sb**	**09 05 41.2**	**-0.1**
BALY				*i* AML	AML	09 05 43.0	
	comp=N,132nm,0.4s						
ENEZ	Enez	1.23	4	Pn	**Pg**	**09 05 25.3**	**-0.4**
STEP	BALIKESIR_Sava	1.29	95	P	**Pb**	**09 05 26.3**	**-0.1**
STEP				S	**Sn**	**09 05 44.7**	**+1.2**
KRBG	Karabiga-Canak	1.31	47	Pn	**Pn**	**09 05 26.2**	**0.0**
ZEYE	Izmir, Urla-Ze	1.31	164	P	**Pn**	**09 05 25.6**	**-0.6**
ZEYE				S	**Sb**	**09 05 42.5**	**-0.8**
BLCB	Balcova	1.36	145	Pn	**Pb**	**09 05 27.4**	**0.0**
KNL	Balıkesir	1.37	55	P	**Pb**	**09 05 27.4**	**-0.2**
KNL				S	**Sg**	**09 05 46.4**	**+0.4**
GONE	Gonen-Balikesi	1.37	66	Pn	**Pg**	**09 05 27.9**	**-0.4**
ALN	Alexandroupoli	1.39	360	Pn	**Pb**	**09 05 27.8**	**-0.2**
KESN	Edirne-Kesan	1.41	20	P	**Pn**	**09 05 27.7**	**-0.2**
KESN				S	**Sg**	**09 05 47.6**	**+0.3**
BALB	Balikesir	1.42	84	Pn	**Pb**	**09 05 28.5**	**+0.1**
RKY	Sarkoy-Tekirda	1.47	36	Pn	**Pb**	**09 05 29.2**	**-0.1**
BKES	Balkesir-Mer	1.47	80	P	**Pg**	**09 05 29.9**	**-0.2**
BKES				S	**Sg**	**09 05 48.6**	**-0.6**
AKS	Akhisar	1.50	114	Pn	**Pb**	**09 05 29.6**	**-0.3**
EDC	Edincik	1.63	58	Pn	**Pb**	**09 05 31.5**	**-0.5**
UKOP	Uzunkopru-Edir	1.68	15	Pn	**Pb**	**09 05 32.4**	**-0.6**
RDO	Rodhopi	1.69	347	Pn	**Pn**	**09 05 31.8**	**+0.4**

ROM 10 09:14:30.2±0.1**, 43°.025N**±0°.004×**13°.039E**±0°.005**, h8**^{km}**, ML1.3**/6**, 2C, Error ellipse: s-maj=0.4km s-min=0.1km az=300.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1219	Muccia, Frazio	0.04	323	P	Pg	09 14 32.0	+0.1
T1219				S	Sg	09 14 33.0	-0.2
T1220	Camerino, Fraz	0.09	23	⇑P	Pg	09 14 32.9	+0.4
T1220				S	Sg	09 14 35.0	+0.7
T1220				AML	AML		
	comp=E,15140µm,1.6s						
T1220				AML	AML		
	comp=N,487µm,0.6s						
T1220				AML	AML		
	comp=E,15135µm,1.6s						
T1220				AML	AML		
	comp=E,15135µm,0.4s						
T1220				AML	AML		
	comp=N,487µm,1.4s						
CESI	CESI - Serrava	0.10	259	P	Pg	09 14 33.4	+0.7
CESI				S	Sg	09 14 35.4	+0.9
CESI				AML	AML		
	comp=E,322µm,0.1s						
CESI				AML	AML		
	comp=N,339µm,0.3s						
CSP1	Cessapalombo	0.14	61	⇑P	Pg	09 14 33.7	+0.3
CSP1				S	Sg	09 14 36.1	+0.6
CSP1				AML	AML		
	comp=E,138µm,1.5s						
CSP1				AML	AML		
	comp=N,222µm,0.4s						
CSP1				AML	AML		
	comp=E,138µm,1.5s						
CSP1				AML	AML		
	comp=N,222µm,0.4s						
CSP1				AML	AML		
	comp=E,138µm,0.5s						
MC2	Monte Cornacci	0.16	135	P	Pg	09 14 34.5	+0.8
MC2				S	Sg	09 14 37.0	+0.9
SNTG	Esanatoglia	0.24	343	P	Pg	09 14 35.7	+0.6
SNTG				S	Sg	09 14 40.2	+1.8
SNTG				AML	AML		
	comp=E,36µm,0.3s						
SNTG				AML	AML		
	comp=N,38µm,1.4s						
SNTG				AML	AML		
	comp=E,36µm,1.7s						
SNTG				AML	AML		
	comp=N,38µm,0.6s						
T1215	Vallo di Nera,	0.26	209	P	Pg	09 14 36.0	+0.7
T1215				S	Sb	09 14 40.2	-1.4
ASSB	Assisi San Ben	0.28	274	P	Pg	09 14 36.5	+0.7
ASSB				S	Sb	09 14 41.4	-1.0
ASSB				AML	AML		
	comp=E,71µm,0.3s						
ASSB				AML	AML		
	comp=N,60µm,0.8s						
ASSB				AML	AML		
	comp=N,60µm,1.2s						
EL6	Elcito	0.31	9	P	Pg	09 14 37.0	+0.6
EL6				S	Sb	09 14 42.5	-0.8
EL6				AML	AML		
	comp=N,93µm,0.7s						
EL6				AML	AML		
	comp=E,94µm,0.1s						
EL6				AML	AML		
	comp=N,93µm,0.7s						

ROM 10 09:15:00.2±0.1**, 42°.720N**±0°.002×**13°.191E**±0°.002**, h12**^{km}**, ML1.4**/8**, 4C-1D, Error ellipse: s-maj=0.2km s-min=0.2km az=50.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1214	Arquata del Tr	0.04	18	⇑P	Pg	09 15 02.9	+0.2
T1214				S	Sg	09 15 04.5	+0.1
T1214				AML	AML		
	comp=E,297µm,0.2s						
T1214				AML	AML		
	comp=N,274µm,0.3s						
T1214				AML	AML		
	comp=E,316µm,0.2s						
T1214				AML	AML		
	comp=N,308µm,0.3s						
T1218	Civita (PG)	0.07	228	P	Pg	09 15 03.3	+0.4
T1218				S	Sg	09 15 05.2	+0.4
T1218				AML	AML		
	comp=E,661µm,1.0s						
T1218				AML	AML		
	comp=N,659µm,0.2s						
T1218				AML	AML		
	comp=E,580µm,1.0s						
T1218				AML	AML		
	comp=N,670µm,0.2s						
T1218				AML	AML		
	comp=E,662µm,1.0s						
T1218				AML	AML		
	comp=E,580µm,1.0s						
T1218				AML	AML		
	comp=N,659µm,0.2s						
T1218				AML	AML		
	comp=N,671µm,0.2s						
T1212	Cascia, Frazio	0.11	286	⇑P	Pg	09 15 03.7	+0.4
T1212				S	Sg	09 15 05.8	+0.3
T1212				AML	AML		
	comp=E,127µm,1.2s						
T1212				AML	AML		
	comp=N,118µm,0.2s						
T1212				AML	AML		
	comp=E,128µm,1.2s						
T1212				AML	AML		
	comp=N,118µm,0.2s						
T1212				AML	AML		
	comp=E,128µm,0.8s						
T1245	Castelsantange	0.14	359	P	Pg	09 15 04.0	+0.3
T1245				S	Sg	09 15 06.6	+0.4
T1245				AML	AML		
	comp=E,459µm,1.1s						
T1245				AML	AML		
	comp=N,722µm,0.3s						
T1245				AML	AML		
	comp=E,470µm,1.1s						
T1245				AML	AML		
	comp=N,652µm,0.5s						
T1245				AML	AML		
	comp=E,458µm,1.1s						
T1245				AML	AML		
	comp=N,721µm,0.3s						
T1245				AML	AML		
	comp=N,652µm,0.5s						
T1245				AML	AML		
	comp=N,652µm,1.5s						
T1245				AML	AML		
	comp=E,470µm,0.9s						
T1245				AML	AML		
	comp=E,458µm,0.9s						
SMA1	SAN MARTINO	0.14	130	P	Pg	09 15 04.2	+0.5
SMA1				S	Sg	09 15 07.0	+0.8
SMA1				AML	AML		
	comp=E,142µm,0.4s						
SMA1				AML	AML		
	comp=E,142µm,1.6s						
SMA1				AML	AML		
	comp=N,103µm,0.3s						
T1217	Poggiodomo (PG	0.19	268	⇑P	Pg	09 15 04.9	+0.5
T1217				S	Sg	09 15 08.2	+0.8
MC2	Monte Cornacci	0.19	360	⇓P	Pg	09 15 05.0	+0.4
MC2				S	Sg	09 15 08.6	+0.9
T1216	Preci, Frazion	0.21	323	P	Pg	09 15 05.3	+0.5
T1216				S	Sg	09 15 08.7	+0.7
T1216				AML	AML		
	comp=E,132µm,1.1s						
T1216				AML	AML		
	comp=N,146µm,1.6s						
T1216				AML	AML		
	comp=N,146µm,1.6s						
T1216				AML	AML		
	comp=E,132µm,0.8s						
T1216				AML	AML		
	comp=N,146µm,0.4s						
T1241	Roccafluvione,	0.22	52	P	Pg	09 15 05.5	+0.5
T1241				S	Sg	09 15 09.0	+0.8
T1215	Vallo di Nera,	0.25	289	P	Pg	09 15 05.8	+0.3
T1215				S	Sg	09 15 09.9	+0.9
TERO	Teramo	0.32	108	P	Pg	09 15 06.8	+0.2
TERO				S	Sg	09 15 11.9	+0.9
TERO				AML	AML		
	comp=E,63µm,0.8s						
TERO				AML	AML		
	comp=N,102µm,0.5s						
T1219	Muccia, Frazio	0.36	338	⇑P	Pg	09 15 07.8	+0.3
T1219				S	Sb	09 15 13.4	-0.8
CSP1	Cessapalombo	0.37	2	P	Pg	09 15 07.9	+0.2
CSP1				S	Sb	09 15 13.8	-0.8
GIGS	Gran Sasso	0.39	134	P	Pg	09 15 08.3	+0.4
GIGS				S	Sg	09 15 14.0	+0.8
T1220	Camerino, Fraz	0.40	349	P	Pg	09 15 08.3	+0.2
T1220				S	Sb	09 15 14.5	-0.7

IDC 10 09:22:51.0±716.0**, 52°.56N**×**33°.11E, h0**^{km}**, Error ellipse: s-maj=289.5km s-min=105.0km az=31.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	4.80	28	I	I	09 48 10.0	
	0.1nm,0.7s,baz=210,slow=306,SNR=2.0						
I31KZ	AKTYUBINSK INF	15.65	88	I	I	10 57 00.0	
	baz=287,slow=321,SNR=2.1						
I37NO	I37NO	17.92	343	I	I	11 19 18.1	
	baz=153,slow=335,SNR=1.3						
I46RU	ZALESOVO INFRA	30.40	66	I	I	12 34 00.0	
	baz=291,slow=332,SNR=1.6						

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*NEIC **10** 09:29:52.7±0.2, 58°.7S±0°.3×150°.0W±0°.3, h10^{km}±2^{km}, mb4.6/6, Error ellipse: s-maj=44.7km s-min=23.7km az=352.0*

*IDC **10** 09:29:57.1±4.2, 59°.31S×150°.25W, h0^{km}, mb4.0/3, mbtmp4.0/3, MS4.0/38, Error ellipse: s-maj=127.8km s-min=37.8km az=55.0*

*GCMT **10** 09:30:03.7±0.3, 59°.70S±0°.02×150°.47W±0°.03, h12^{km}, MW4.9/79, Moment Tensor Solution. s22,c23; s79,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.60±.11; $M_{\theta\theta}$2.69±.10; $M_{\phi\phi}$-2.09±.09; $M_{r\theta}$0.23±.26; $M_{\theta\phi}$1.18±.09; $M_{\phi r}$0.38±.29; Best double couple: $M_0$2.70600×10^{16} NP1:ϕ_s212.00000°, δ86.00000°, λ-169.00000°. NP2: ϕ_s122.00000°, δ79.00000°, λ-4.00000°. Principal axes: T 2.9920, Plg5.0000°, Azm347.0000°; N -0.5720, Plg79.0000°, Azm231.0000°; P -2.4210, Plg10.0000°, Azm77.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 09:29:54.5±0.9**, 59°.0S**±0°.1×**149°.9W**±0°.2**, h10**^{km}**, n66, σ2^{s}.09**/13**, mb4.5**/6**, MS4.1**/41**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	Vanda	24.50	203	LR	LR	09 42 11.3	
	comp=Z,176nm,18.6s,baz=80,slow=30						
MQZ	McQueen's Vall	27.46	287	P	**P**	**09 35 37.3**	**-3.1**

MQZ				IAmb	IAmb	09 36 04.5	
	comp=Z,14nm,1.0s						
RPZ	**Rata Peaks**	**28.25**	**285**	LR	LR	09 45 20.6	
	comp=Z,232nm,18.2s,baz=132,slow=33						
URZ	**Urewera**	**29.59**	**300**	LR	LR	09 45 13.8	
	comp=Z,373nm,21.0s,baz=236,slow=31						
QSPA	**South Pole Qui**	**31.17**	**180**	P	**P**	**09 36 14.4**	**+1.1**
	comp=Z,5.3nm,1.0s,baz=70,slow=5.3,SNR=8.0						
QSPA				LR	LR	09 46 10.8	
	comp=Z,383nm,21.9s,baz=56,slow=32						
	comp=Z,5.3nm,1.0s						
QSPA	**South Pole Qui**	**31.17**	**180**	P	**P**	**09 36 13.5**	**+0.1**
QSPA				IAmb	IAmb	09 36 16.1	
	comp=Z,11nm,1.2s						
TBI	**Tubuai**	**35.59**	**1**	*e*S	**S**	**09 42 28.0**	**+0.4**
	comp=Z,361nm,27.2s						
TBI				*e*LR	LR	09 46 30.3	
	comp=Z,9µm,24.8s						
TBI				*e*LR	LR	09 46 30.6	
	comp=Z,3µm,27.8s						
TBI	**Tubuai**	**35.59**	**1**	*e*T	T	10 15 25.7	
	comp=Z,20nm,0.3s						
RKT	**Rikitea**	**37.37**	**23**	*e*T	T	10 17 45.0	
	comp=Z,2.9nm,0.2s						
PMSA	**Palmer Station**	**37.93**	**136**	LR	LR	09 49 13.7	
	comp=Z,267nm,20.1s,baz=236,slow=31						
RAR	**Rarotonga**	**38.38**	**345**	LR	LR	09 49 08.8	
	comp=Z,390nm,18.9s,baz=148,slow=30						
PPT2	**Papeete2**	**41.32**	**0**	*e*S	**S**	**09 43 54.6**	**+0.2**
	comp=Z,100nm,24.5s						
PPT2				*e*LR	LR	09 49 09.6	
	comp=Z,710nm,25.5s						
PPT2				*e*LR	LR	09 49 10.0	
	comp=Z,529nm,27.5s						
PPT2	**Papeete2**	**41.32**	**0**	*e*T	T	10 22 40.1	
	comp=Z,2.4nm,0.3s						
MG01	**Puerto William**	**42.39**	**122**	P	**P**	**09 37 46.7**	**-1.8**
RPN	**Rapa Nui**	**42.39**	**59**	LR	LR	09 51 33.0	
	comp=Z,266nm,20.6s,baz=209,slow=30						
VAH	**Vaihoa**	**43.69**	**3**	*e*T	T	10 25 37.6	
	comp=Z,48nm,0.2s						
GO08	**Villa O'Higgin**	**44.46**	**112**	P	**P**	**09 38 05.5**	**+0.2**
GO08				IAmb	IAmb	09 38 29.8	
	comp=Z,12nm,1.4s						
MSVF	**Nonsavu**	**47.35**	**317**	LR	LR	09 55 35.2	
	comp=Z,102nm,20.5s,baz=139,slow=32						
SNAA	**Sanae**	**47.64**	**167**	LR	LR	09 57 42.0	
	comp=Z,208nm,18.3s,baz=264,slow=35						
AFI	**Afiamalu**	**47.84**	**331**	LR	LR	09 55 31.8	
	comp=Z,190nm,19.5s,baz=174,slow=32						
DZM	**Mont Dzumac**	**48.14**	**301**	*e*LR	LR	09 52 02.0	
	comp=Z,330nm,26.7s						
DZM	**Mont Dzumac**	**48.14**	**301**	LR	LR	09 54 56.6	
	comp=Z,104nm,21.6s,baz=214,slow=31						
TAOE	**Nuku Hiva Isla**	**50.55**	**13**	*e*LR	LR	09 53 28.0	
	comp=Z,294nm,25.2s						
PLCA	**Paso Flores**	**51.05**	**106**	LR	LR	09 55 36.7	
	comp=Z,141nm,19.1s,baz=218,slow=30						
MAW	**Mawson**	**51.45**	**195**	LR	LR	09 58 05.7	
	comp=Z,250nm,18.3s,baz=167,slow=33						
MAW	**Mawson**	**51.45**	**195**	P	**P**	**09 38 59.0**	**-0.1**
MAW				IAmb	IAmb	09 39 27.0	
	comp=Z,13nm,1.4s						
H03S2	**Juan Fernandez**	**52.08**	**94**	T	T	10 36 00.4	
	baz=215,slow=74,SNR=24						
H03S1	**Juan Fernandez**	**52.09**	**94**	T	T	10 36 01.6	
	baz=215,slow=74,SNR=29						
H03S3	**Juan Fernandez**	**52.10**	**94**	T	T	10 36 02.9	
	baz=215,slow=74,SNR=28						
STKA	**Stephens Creek**	**52.33**	**270**	LR	LR	09 56 41.2	
	comp=Z,164nm,21.6s,baz=182,slow=31						
H03N3	**Juan Fernandez**	**52.38**	**94**	T	T	10 36 20.8	
	baz=218,slow=72,SNR=88						
H03N2	**Juan Fernandez**	**52.39**	**94**	T	T	10 36 19.8	
	baz=218,slow=72,SNR=106						
H03N1	**Juan Fernandez**	**52.40**	**94**	T	T	10 36 19.1	
	baz=218,slow=72,SNR=50						
CFA	**Coronel Fontan**	**59.34**	**101**	LR	LR	10 01 14.0	
	comp=Z,45nm,18.2s,baz=157,slow=32						
CTA	**Charters Tower**	**59.55**	**282**	LR	LR	10 00 41.0	
	comp=Z,108nm,21.9s,baz=116,slow=31						
ASAR	**Alice Springs**	**62.94**	**269**	P	**P**	**09 40 23.8**	**+2.8**
	comp=Z,1.5nm,1.0s,baz=141,slow=6.2,SNR=9.3						
ASAR				LR	LR	10 03 07.9	
	comp=Z,216nm,21.5s,baz=150,slow=32						
	comp=Z,1.5nm,1.0s						
ASAR	**Alice Springs**	**62.94**	**269**	P	**P**	**09 40 18.6**	**-2.4**
AS31	**Alice Springs**	**62.94**	**269**	P	**P**	**09 40 19.5**	**-1.5**
H01W1	**Cape Leeuwin H**	**63.70**	**246**	T	T	10 49 38.1	
	baz=144						
H01W2	**Cape Leeuwin H**	**63.70**	**246**	T	T	10 49 34.5	
	baz=144						
H01W3	**Cape Leeuwin H**	**63.71**	**246**	T	T	10 49 37.8	
	baz=144						
NWAO	**Narrogin (SRO)**	**63.83**	**249**	LR	LR	10 02 11.7	
	comp=Z,190nm,20.0s,baz=42,slow=30						
WRA	**Warramunga Arr**	**65.79**	**271**	P	**P**	**09 40 43.1**	**+3.4**
	comp=Z,0.9nm,1.0s,baz=150,slow=5.7,SNR=4.9						
WRA				LR	LR	10 05 55.6	
	comp=Z,96nm,19.7s,baz=146,slow=33						
	comp=Z,0.9nm,1.0s						
LVC	**Limon Verde**	**66.31**	**95**	LR	LR	10 01 58.1	
	comp=Z,60nm,21.4s,baz=204,slow=29						
PMG	**Port Moresby**	**68.19**	**289**	LR	LR	10 05 32.4	
	comp=Z,92nm,21.9s,baz=142,slow=31						
CPUP	**Villa Florida**	**69.13**	**106**	LR	LR	10 07 06.4	
	comp=Z,76nm,19.2s,baz=207,slow=32						
NNA	**Nana**	**71.09**	**82**	LR	LR	10 05 24.8	
	comp=Z,102nm,19.2s,baz=204,slow=30						
LPAZ	**La Paz**	**71.97**	**92**	LR	LR	10 05 29.6	
	comp=Z,87nm,19.6s,baz=162,slow=30						
ATAH	**Atahualpa**	**74.43**	**78**	LR	LR	10 06 43.1	
	comp=Z,166nm,19.9s,baz=229,slow=30						
SIJI	**Sorong**	**83.49**	**279**	LR	LR	10 16 30.1	
	comp=Z,95nm,22.0s,baz=150,slow=34						
KAPI	**Kappang**	**85.91**	**267**	LR	LR	10 18 48.1	
	comp=Z,85nm,20.2s,baz=144,slow=34						
JTS	**Las Juntas de**	**86.33**	**63**	LR	LR	10 13 16.8	
	comp=Z,69nm,18.7s,baz=201,slow=30						
ROSC	**El Rosal**	**86.75**	**75**	LR	LR	10 14 23.0	
	comp=Z,108nm,19.7s,baz=240,slow=31						
SUR	**Sutherland**	**88.67**	**172**	LR	LR	10 19 47.3	
	comp=Z,131nm,18.1s,baz=164,slow=34						
LPIG	**La Paz**	**89.00**	**36**	LR	LR	10 14 20.9	
	comp=Z,47nm,19.4s,baz=210,slow=30						
GUMO	**Guam**	**89.34**	**298**	LR	LR	10 21 52.2	
	comp=Z,23nm,18.6s,baz=148,slow=35						
SDV	**Santo Domingo**	**92.07**	**76**	LR	LR	10 18 10.0	
	comp=Z,69nm,20.8s,baz=166,slow=31						
BOSA	**Boshof**	**92.66**	**176**	LR	LR	10 19 50.2	
	comp=Z,232nm,21.6s,baz=188,slow=32						
DAV	**Davao City (W)**	**93.17**	**278**	LR	LR	10 26 22.7	
	comp=Z,25nm,18.0s,baz=175,slow=36						
LBTB	**Lobatse**	**96.25**	**176**	LR	LR	10 22 19.0	
	comp=Z,243nm,20.7s,baz=181,slow=33						
PFO	**Pinyon Flats O**	**96.35**	**28**	LR	LR	10 19 28.1	
	comp=Z,66nm,18.0s,baz=228,slow=31						
MDP	**Montagnes des**	**98.10**	**94**	LR	LR	10 21 27.0	
	comp=Z,39nm,20.6s,baz=92,slow=31						
H10N3	**ASCENSION HYDR**	**104.46**	**134**	T	T	11 41 05.0	
	baz=202						
H10N1	**ASCENSION HYDR**	**104.46**	**134**	T	T	11 41 05.9	
	baz=202						
H10N2	**ASCENSION HYDR**	**104.48**	**134**	T	T	11 41 06.8	
	baz=202						
MKAR	**Makanchi Array**	**147.10**	**272**	PKPbc	**PKPab**	**09 49 39.7**	**+1.5**
	comp=Z,1.3nm,0.9s,baz=121,slow=3.9,SNR=11						

IDC 10 09:31:27.8±2.3**, 54°.31N×86°.08E, h0**^{km}**, mbtmp3.2**/3**,**
ML2.7/3**, Error ellipse: s-maj=18.6km s-min=11.7km**
az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.83**	**244**	I	I	09 36 13.1	
	baz=66,slow=334,SNR=8.3						
ZALV	**Zalesovo Beam**	**0.83**	**244**	Pg	Pg	09 31 43.0	-0.7
	3.2nm,0.3s,baz=61,slow=18,SNR=7.0						
ZALV				Lg	Lg	09 31 55.5	
	6.3nm,0.3s,baz=62,slow=27,SNR=9.4						
KURBB	**Kurchatov Arra**	**5.91**	**234**	Pn	Pn	09 32 57.9	+1.3
	0.2nm,0.3s,baz=54,slow=13,SNR=4.1						
KURBB				Lg	Lg	09 34 36.4	
	baz=49,slow=29,SNR=1.1						
	0.8nm,0.3s						
MKAR	**Makanchi Array**	**7.90**	**199**	Pn	Pn	09 33 24.8	+0.8
	0.4nm,0.3s,baz=22,slow=12,SNR=9.1						
	0.5nm,0.3s						
BVAR	**Borovoye Array**	**9.41**	**269**	Pn	Pn	09 33 43.1	-1.5
	baz=76,slow=19,SNR=1.6						
	0.4nm,0.4s						

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*IDC **10** 10:01:39.3±0.6, 13°.16N×144°.72E, h97^{km}±14^{km}, mb3.6/5,*
mbtmp3.9/5, Error ellipse: s-maj=45.7km s-min=21.4km
az=62.0
*NEIC **10** 10:01:39.9±2.1, 13°.3N±0°.1×144°.8E±0°.1, h111^{km}±4^{km},*
mb4.3/15, Error ellipse: s-maj=16.8km s-min=15.1km
az=104.0
ISC 10 10:01:38.8±0.6**, 13°.15N**±0°.08×**144°.8E**±0°.1**, h100**^{km}**, n32,**
σ1^{s}.22/31**, mb4.2**/13**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.45**	**14**	P	**Pn**	**10 01 54.8**	**+0.6**
	874nm,0.3s,baz=198,slow=3.2,SNR=262						
GUMO				S	**Sn**	**10 02 07.7**	**+1.9**
	502nm,0.3s,baz=141,slow=21,SNR=17						
GUMO	**Guam**	**0.45**	**14**	Pn	**Pn**	**10 01 54.9**	**+0.6**
GUMO				Sn	**Sn**	**10 02 08.1**	**+2.3**
PATS	**Pohnpei**	**14.75**	**114**	Pn	**Pn**	**10 05 02.5**	**+0.1**
FAKI	**Fak Fak**	**20.23**	**219**	P	**P**	**10 06 06.4**	**+0.3**
FAKI				IAmb	IAmb	10 06 13.6	
	comp=Z,10nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**21.75**	**73**	T	T	10 27 37.5	
	baz=263,slow=75,SNR=9.6						
H11S1	**WAKE ISLAND Hy**	**21.77**	**73**	T	T	10 27 37.5	
	baz=263,slow=75,SNR=11						
H11S2	**WAKE ISLAND Hy**	**21.77**	**73**	T	T	10 27 38.7	
	baz=263,slow=75,SNR=7.3						
WB0	**Warramunga Arr**	**34.27**	**198**	P	**P**	**10 08 16.3**	**+0.9**
WB0				IAmb	IAmb	10 08 26.9	
	comp=Z,3.2nm,1.1s						
WRAB	**Tennant Creek**	**34.44**	**197**	P	**P**	**10 08 18.1**	**+1.2**
WRAB				IAmb	IAmb	10 08 45.5	
	comp=Z,5.2nm,1.3s						
WB2	**Warramunga Arr**	**34.44**	**197**	P	**P**	**10 08 18.0**	**+1.0**
WB2				IAmb	IAmb	10 08 19.2	
	comp=Z,3.2nm,0.9s						
WRA	**Warramunga Arr**	**34.45**	**197**	P	**P**	**10 08 18.3**	**+1.3**
	comp=Z,0.9nm,0.5s,baz=18,slow=8.9,SNR=11						
	comp=Z,0.9nm,0.5s						
WRA	**Warramunga Arr**	**34.45**	**197**	P	**P**	**10 08 16.8**	**-0.3**
AS31	**Alice Springs**	**38.10**	**196**	P	**P**	**10 08 48.0**	**-0.1**
ASAR	**Alice Springs**	**38.10**	**196**	P	**P**	**10 08 48.4**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=20,slow=6.5,SNR=13						
	comp=Z,0.2nm,0.3s						
ASAR	**Alice Springs**	**38.10**	**196**	P	**P**	**10 08 46.1**	**-2.0**
EIDS	**Eidsvold**	**38.78**	**171**	P	**P**	**10 08 52.5**	**-1.2**
EIDS				IAmb	IAmb	10 08 55.2	
	comp=Z,10.0nm,1.4s						
DZM	**Mont Dzumac**	**40.96**	**148**	P	**P**	**10 09 12.9**	**+1.0**
	comp=Z,6.3nm,0.6s,baz=320,slow=7.9,SNR=9.6						
	comp=Z,6.3nm,0.6s						
DZM	**Mont Dzumac**	**40.96**	**148**	P	**P**	**10 09 13.1**	**+1.2**
CMAR	**Chiang Mai Arr**	**44.31**	**283**	P	**P**	**10 09 39.7**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=83,slow=8.3,SNR=1.2						
	comp=Z,1.0nm,0.3s						
BBOO	**Buckleboo**	**46.45**	**190**	P	**P**	**10 09 56.0**	**+0.3**
BBOO				IAmb	IAmb	10 10 11.3	
	comp=Z,22nm,1.5s						
FORT	**Forrest**	**46.54**	**200**	P	**P**	**10 09 57.0**	**+0.6**
MA2	**Magadan**	**46.55**	**4**	P	**P**	**10 09 56.0**	**-0.1**
TCW	**Tory Channel**	**60.58**	**155**	P	**P**	**10 11 37.9**	**-0.9**
MK31	**Makanchi Array**	**61.73**	**316**	P	**P**	**10 11 46.0**	**-0.7**
MKAR	**Makanchi Array**	**61.73**	**316**	P	**P**	**10 11 47.3**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=92,slow=8.3,SNR=4.6						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**61.73**	**316**	P	**P**	**10 11 46.0**	**-0.6**
SUA	**Susitna One**	**66.44**	**28**	P	**P**	**10 12 14.7**	**-2.6**
SUA				IAmb	IAmb	10 12 25.4	
	comp=Z,9.5nm,1.3s						
KKAR	**Karatay Array**	**69.66**	**311**	P	**P**	**10 12 36.4**	**-1.3**
BMAR	**Burnt Mountain**	**70.54**	**23**	P	**P**	**10 12 42.1**	**-0.5**
BARN	**Barnard Glacie**	**70.64**	**30**	P	**P**	**10 12 41.7**	**-1.8**
BARN				IAmb	IAmb	10 13 08.4	
	comp=Z,3.8nm,1.0s						
BCAR	**Beaver Creek A**	**70.88**	**28**	P	**P**	**10 12 43.2**	**-1.5**
INK	**Inuvik**	**74.81**	**22**	P	**P**	**10 13 08.7**	**+0.9**
INK				IAmb	IAmb	10 13 17.2	
	comp=Z,3.9nm,1.5s						

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*IDC **10** 10:11:23.7±429.0, 60°.99N×29°.68E, h0^{km}, Error ellipse:*
s-maj=160.7km s-min=104.7km az=139.0
*HEL **10** 10:11:28.1±0.3, 60°.95N×29°.07E, h0^{km}, ML1.7, Explosion*
ISC 10 10:11:25.2±1.4**, 60°.92N**±0°.05×**29°.20E**±0°.07**, h0**^{km}**, n13,**
σ0^{s}.43/18**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUF	**Ruokolahti**	**0.52**	**347**	PG	**Pb**	**10 11 36.9**	**-0.3**
RUF				SG	**Sg**	**10 11 42.5**	**+0.7**
RUF				MSG		10 11 43.7	
	comp=Z,6.1nm,0.2s						
VJF	**Virojoki**	**0.90**	**245**	PG	**Pb**	**10 11 43.7**	**+0.2**
VJF				MSG		10 11 54.6	
	comp=Z,8.2nm,0.2s						
VJF				SB	**Sb**	**10 11 55.4**	**-0.6**
FIA0	**FINESS Array S**	**1.60**	**290**	PG	**Pn**	**10 11 55.0**	**+0.3**
FIA0				MSG		10 12 14.0	
	comp=Z,6.9nm,0.2s						
PVF	**Pernaja**	**1.68**	**258**	PG	**Pb**	**10 11 56.7**	**-0.3**
PVF				MSG		10 12 16.8	
	comp=Z,5.1nm,0.2s						
PVF				SN	**Sg**	**10 12 19.8**	**+0.7**
KAF	**Kangasniemi**	**1.83**	**312**	PG	**Pg**	**10 12 00.3**	**+0.1**
KAF				MSG		10 12 20.7	
	comp=Z,7.4nm,0.2s						
KAF				SG	**Sb**	**10 12 22.7**	**-0.2**
ARBE	**Arbavere**	**2.19**	**229**	PG	**Pg**	**10 12 07.0**	**-0.1**
JOF	**Joensuu**	**2.24**	**26**	PG	**Pg**	**10 12 08.0**	**0.0**
JOF				SG	**Sg**	**10 12 36.9**	**-0.1**
NUR	**Nurmijrvi**	**2.27**	**262**	PG	**Pb**	**10 12 07.4**	**+0.4**
	baz=76						
NUR				MSG		10 12 33.7	
	comp=Z,2.4nm,0.2s						
NUR				SG	**Sg**	**10 12 37.4**	**-0.8**
KEF	**Keuruu**	**2.42**	**303**	PB	**Pb**	**10 12 09.3**	**-0.2**
KEF				MSG		10 12 37.5	
	comp=Z,1.8nm,0.2s						
KEF				SB	**Sb**	**10 12 39.5**	**-0.4**
MEF	**Metsahovi**	**2.48**	**256**	PG	**Pb**	**10 12 10.6**	**+0.1**
MEF				MSG		10 12 39.6	
	comp=Z,2.1nm,0.2s						
MEF				SB	**Sb**	**10 12 41.2**	**-0.3**
I43RU	**DUBNA INFRASON**	**5.92**	**132**	I	I	10 48 00.0	
	baz=322,slow=327,SNR=0.5						
I37NO	**I37NO**	**9.31**	**336**	I	I	11 12 10.0	
	baz=149,slow=331,SNR=1.1						
I31KZ	**AKTYUBINSK INF**	**19.20**	**110**	I	I	12 10 00.0	
	baz=317,slow=329,SNR=0.7						

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*MCSM **10** 10:48:03.3±1.0, 46°N±10°×2°7E±°, h135^{km}±6^{km}, ML3.7*
*BUC **10** 10:48:03.7±0.2, 45°.66N×26°.56E, h135^{km}±1^{km}, ml3.8/51,*
Error ellipse: s-maj=1.6km s-min=1.2km az=167.0
*SOF **10** 10:48:06.6, 45°.50N×26°.44E, h100^{km}, MD3.3*
ISC 10 10:48:02.6±1.3**, 45°.69N**±0°.03×**26°.57E**±0°.03**, h144**^{km}±6^{km}**,**
n98, σ0^{s}.53/140**, 68C-33D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.17**	**21**	⇑P	**Pn**	**10 48 22.4**	**+0.2**
PLOR				⇑S	**Sn**	**10 48 36.6**	**-0.5**
PLOR	**Plostina**	**0.17**	**21**	P	**Pn**	**10 48 22.3**	**+0.1**
BISRR	**Bisoca**	**0.18**	**145**	⇑P	**Pn**	**10 48 23.0**	**+0.7**
VRI	**Vrincioaia**	**0.21**	**33**	⇑P	**Pn**	**10 48 22.6**	**+0.4**
VRI				⇑S	**Sn**	**10 48 36.8**	**-0.5**
VRI	**Vrincioaia**	**0.21**	**33**	P	**Pn**	**10 48 22.5**	**+0.3**
VRI				S	**Sn**	**10 48 36.7**	**-0.5**
COVR	**Voineasa-Covas**	**0.29**	**301**	⇑P	**Pn**	**10 48 22.6**	**+0.1**
COVR				⇓S	**Sn**	**10 48 37.2**	**-0.4**
NEHR	**Nehoiu**	**0.33**	**215**	⇑P	**Pn**	**10 48 23.2**	**+0.6**
NEHR				⇑S	**Sn**	**10 48 37.6**	**-0.2**
ODBI	**Odobesti**	**0.35**	**78**	⇑P	**Pn**	**10 48 23.4**	**+0.8**
GRER		**0.43**	**137**	⇑P	**Pn**	**10 48 23.8**	**+0.9**
PANC	**Panciu**	**0.45**	**66**	⇑P	**Pn**	**10 48 23.7**	**+0.7**
PANC				⇑S	**Sn**	**10 48 38.5**	**-0.1**
MLR	**Muntele Rosu**	**0.48**	**245**	⇑P	**Pn**	**10 48 23.8**	**+0.4**
MLR				⇑S	**Sn**	**10 48 38.5**	**-0.6**
MLR	**Muntele Rosu**	**0.48**	**245**	P	**Pn**	**10 48 23.7**	**+0.3**
ISR	**Istrita**	**0.58**	**182**	⇑P	**Pn**	**10 48 24.3**	**+0.5**
ISR				⇓S	**Sn**	**10 48 39.0**	**-0.9**
OZUR		**0.68**	**307**	⇓P	**Pn**	**10 48 24.4**	**0.0**
OZUR				⇓S	**Sn**	**10 48 40.0**	**-1.0**
GHRR		**0.69**	**58**	⇑P	**Pn**	**10 48 25.2**	**+0.8**
GHRR				⇑S	**Sn**	**10 48 41.4**	**+0.4**
SECR		**0.75**	**208**	⇑P	**Pn**	**10 48 25.3**	**+0.5**
SECR				⇓S	**Sn**	**10 48 41.9**	**+0.1**
TUDR		**0.78**	**97**	⇓P	**Pn**	**10 48 25.3**	**+0.3**
TUDR				⇓S	**Sn**	**10 48 41.9**	**-0.1**
TESR	**Tescani**	**0.82**	**4**	⇑P	**Pn**	**10 48 25.4**	**0.0**
TESR				⇑S	**Sn**	**10 48 41.8**	**-1.0**
PGOR	**Pogoanele**	**0.84**	**159**	⇑P	**Pn**	**10 48 25.7**	**+0.2**
SLCR	**Slobozia Conac**	**0.85**	**97**	⇓P	**Pn**	**10 48 26.0**	**+0.4**
SLCR				⇑S	**Sn**	**10 48 42.6**	**-0.4**
IZVR	**Izvoarele**	**0.86**	**100**	⇑P	**Pn**	**10 48 25.3**	**-0.3**
IZVR				⇑S	**Sn**	**10 48 42.2**	**-0.8**
DOPR	**Dopca**	**0.87**	**289**	⇑P	**Pn**	**10 48 26.1**	**+0.4**
DOPR				⇑S	**Sn**	**10 48 43.0**	**-0.4**
PLAR	**PLOIESTI**	**0.87**	**206**	⇓P	**Pn**	**10 48 26.2**	**+0.5**
SCHL	**Schela**	**0.91**	**102**	⇑P	**Pn**	**10 48 26.4**	**+0.4**
SCHL				⇑S	**Sn**	**10 48 43.4**	**-0.4**
BIR	**Birlad**	**0.94**	**52**	⇑P	**Pn**	**10 48 27.1**	**+0.9**
BIR				⇓S	**Sn**	**10 48 44.2**	**-0.1**
SCTR	**Scanteiesti**	**1.00**	**91**	⇑P	**Pn**	**10 48 27.5**	**+0.7**
SCTR				⇓S	**Sn**	**10 48 44.9**	**-0.4**
SULR		**1.04**	**192**	⇑P	**Pn**	**10 48 27.8**	**+0.7**
SULR				⇑S	**Sn**	**10 48 45.2**	**-0.7**
TATR	**Tatarca**	**1.05**	**95**	⇑P	**Pn**	**10 48 27.8**	**+0.6**
TATR				⇑S	**Sn**	**10 48 45.4**	**-0.5**
VLDR	**Vladesti**	**1.07**	**81**	⇑P	**Pn**	**10 48 28.0**	**+0.6**
VLDR				⇑S	**Sn**	**10 48 46.0**	**-0.4**
GISR	**Galati**	**1.08**	**103**	⇑P	**Pn**	**10 48 26.8**	**-0.7**
GISR				⇓S	**Sn**	**10 48 46.4**	**0.0**
VOIR		**1.09**	**257**	⇑P	**Pn**	**10 48 27.9**	**+0.2**
VOIR				⇑S	**Sn**	**10 48 46.2**	**-0.7**
VOIR		**1.09**	**257**	P	**Pn**	**10 48 27.9**	**+0.2**
MTUR	**Matau**	**1.16**	**247**	⇑P	**Pn**	**10 48 29.0**	**+0.7**
GIUM	**Giurgiulesti**	**1.17**	**100**	⇑P	**Pn**	**10 48 28.4**	**+0.1**
GIUM				⇓S	**Sn**	**10 48 47.8**	**-0.2**
AMRR	**Amara**	**1.21**	**153**	⇑P	**Pn**	**10 48 29.3**	**+0.6**
AMRR				⇑S	**Sn**	**10 48 48.9**	**+0.2**
CFR	**Carcaliu**	**1.22**	**114**	⇓P	**Pn**	**10 48 29.0**	**+0.2**
CFR				⇓S	**Sn**	**10 48 47.8**	**-1.0**
LEHL	**Lehliu**	**1.23**	**172**	⇑P	**Pn**	**10 48 29.6**	**+0.6**
LEHL				⇑S	**Sn**	**10 48 49.3**	**+0.2**
VASR	**Vaslui**	**1.27**	**42**	⇓P	**Pn**	**10 48 30.0**	**+0.6**
VASR				⇓S	**Sn**	**10 48 49.5**	**-0.3**
BIZ	**Bicaz**	**1.29**	**346**	⇑S	**Sn**	**10 48 51.1**	**+1.0**
HARR	**Harsova**	**1.39**	**136**	⇑P	**Pn**	**10 48 30.9**	**+0.3**
ARR	**Arges**	**1.40**	**257**	⇑P	**Pn**	**10 48 31.3**	**+0.6**
ARR				⇑S	**Sn**	**10 48 51.4**	**-0.8**
ARR	**Arges**	**1.40**	**257**	P	**Pn**	**10 48 31.1**	**+0.4**
ARR				S	**Sn**	**10 48 52.7**	**+0.6**
BUC1	**Bucharest**	**1.40**	**196**	⇑P	**Pn**	**10 48 31.0**	**+0.3**
BUC1				⇑S	**Sn**	**10 48 51.7**	**-0.3**
STFAR	**Stefanesti-Arg**	**1.41**	**234**	⇑P	**Pn**	**10 48 31.5**	**+0.7**
STFAR				⇓S	**Sn**	**10 48 52.5**	**+0.3**
LEOM	**Leova**	**1.41**	**56**	⇓P	**Pn**	**10 48 31.4**	**+0.7**
LEOM				⇓S	**Sn**	**10 48 52.1**	**-0.1**
SGRR	**Singureni**	**1.53**	**196**	⇑P	**Pn**	**10 48 31.6**	**-0.4**
SGRR				⇓S	**Sn**	**10 48 53.7**	**-0.8**
RASA	**Rasa**	**1.54**	**164**	⇑P	**Pn**	**10 48 32.4**	**+0.3**
RASA				⇑S	**Sn**	**10 48 54.4**	**-0.2**
TPGR	**Topolog**	**1.55**	**122**	⇓P	**Pn**	**10 48 32.4**	**+0.1**
TLBR	**Topalu**	**1.56**	**137**	⇑P	**Pn**	**10 48 32.7**	**+0.4**
TLBR				⇓S	**Sn**	**10 48 54.0**	**-1.0**
HUMR	**Humele**	**1.62**	**224**	⇓P	**Pn**	**10 48 33.0**	**0.0**
HUMR				⇓S	**Sn**	**10 48 55.4**	**-0.9**
TLCR		**1.66**	**107**	⇑P	**Pn**	**10 48 34.1**	**+0.7**
TLCR				⇑S	**Sn**	**10 48 56.6**	**-0.5**
ICOR	**Ion Corvin**	**1.81**	**150**	⇑P	**Pn**	**10 48 35.6**	**+0.5**
ICOR				⇓S	**Sn**	**10 48 59.1**	**-0.9**
COPA	**Copaceanca**	**1.83**	**212**	⇓P	**Pn**	**10 48 35.4**	**+0.1**
COPA				⇑S	**Sn**	**10 48 59.6**	**-0.9**
LOT	**Lotru**	**1.98**	**264**	⇓P	**Pn**	**10 48 37.8**	**+0.5**
LOT				⇓S	**Sn**	**10 49 03.6**	**-0.2**
MFTR	**Murfatlar**	**2.01**	**138**	⇑P	**Pn**	**10 48 37.7**	**+0.2**
KIS	**Kishinev**	**2.03**	**49**	⇓P	**Pn**	**10 48 38.3**	**+0.6**
RAZG	**Razgrad**	**2.13**	**181**	⇑P	**Pn**	**10 48 38.0**	**-0.9**
VLAD	**Vladila**	**2.29**	**223**	⇑P	**Pn**	**10 48 40.3**	**-0.5**
PSN	**Preselentsi**	**2.32**	**150**	*i* P	**Pn**	**10 48 42.0**	**+0.8**
MANR	**Mangalia**	**2.37**	**142**	⇑P	**Pn**	**10 48 42.1**	**+0.4**
SZH	**Strazhica**	**2.47**	**191**	*i* P	**Pn**	**10 48 43.5**	**+0.4**
PRD	**Provadia**	**2.56**	**166**	*i* P	**Pn**	**10 48 45.2**	**+1.0**
SRE	**Strehaia**	**2.59**	**248**	⇑P	**Pn**	**10 48 44.8**	**+0.2**
PVL	**Pavlikeni**	**2.63**	**200**	*i* P	**Pn**	**10 48 46.5**	**+1.5**
ROIA	**ROIAK**	**2.67**	**167**	*i* P	**Pn**	**10 48 46.3**	**+0.8**
GZR	**Gura Zlata**	**2.68**	**265**	⇑P	**Pn**	**10 48 46.4**	**+0.7**
GZR				⇑S	**Sn**	**10 49 19.6**	**+0.6**
PLVB	**Pleven**	**2.69**	**212**	⇓P	**Pn**	**10 48 45.9**	**+0.1**
SORM	**Soroca**	**2.73**	**26**	P	**Pn**	**10 48 46.2**	**0.0**
KMPD	**K-Podol'skiy**	**2.87**	**359**	P	**Pn**	**10 48 47.5**	**-0.5**
PUNG	**Punghina**	**2.94**	**243**	⇓P	**Pn**	**10 48 48.3**	**-0.6**
NDNU	**Novodnistrovsk**	**2.95**	**10**	P	**Pn**	**10 48 49.1**	**0.0**
HERR	**Herculane**	**3.04**	**256**	⇑P	**Pn**	**10 48 50.0**	**-0.2**
BZS	**Buzias**	**3.47**	**270**	⇓P	**Pn**	**10 48 56.6**	**+0.8**
MDVR	**Moldovita**	**3.55**	**257**	P	**Pn**	**10 48 57.0**	**+0.2**
PGB	**Panagyurishte**	**3.59**	**210**	*i* P	**Pn**	**10 48 58.4**	**+1.1**
LUBAR	**Lubar, Ukraine**	**4.30**	**10**	P	**Pn**	**10 49 06.4**	**-0.2**
AK07	**Malin Array Si**	**5.17**	**19**	P	**Pn**	**10 49 18.5**	**+0.5**
AK13	**Malin Array Si**	**5.20**	**18**	P	**Pn**	**10 49 18.5**	**+0.1**
AK06	**Malin Array Si**	**5.20**	**19**	P	**Pn**	**10 49 18.6**	**+0.1**
AK14	**Malin Array Si**	**5.22**	**18**	P	**Pn**	**10 49 18.9**	**+0.1**
AK10	**Malin Array Si**	**5.23**	**19**	P	**Pn**	**10 49 18.6**	**-0.2**
AK05	**Malin Array Si**	**5.24**	**19**	P	**Pn**	**10 49 19.0**	**+0.1**
AK09	**Malin Array Si**	**5.25**	**19**	P	**Pn**	**10 49 19.2**	**+0.1**
AK08	**Malin Array Si**	**5.26**	**19**	P	**Pn**	**10 49 19.5**	**+0.3**
AK16	**Malin Array Si**	**5.26**	**18**	P	**Pn**	**10 49 19.3**	**+0.1**
AK17	**Malin Array Si**	**5.26**	**18**	P	**Pn**	**10 49 19.3**	**0.0**
AK02	**Malin Array Si**	**5.27**	**19**	P	**Pn**	**10 49 19.6**	**+0.2**
AK11	**Malin Array Si**	**5.28**	**18**	P	**Pn**	**10 49 19.8**	**+0.3**
AK15	**Malin Array Si**	**5.29**	**18**	P	**Pn**	**10 49 19.9**	**+0.3**
AK19	**Malin Array Si**	**5.29**	**17**	P	**Pn**	**10 49 19.5**	**-0.1**
MI28	**Mi28,Pidlybu**	**5.29**	**8**	P	**Pn**	**10 49 20.0**	**+0.3**
AK18	**Malin Array Si**	**5.30**	**17**	P	**Pn**	**10 49 19.8**	**0.0**
AK01	**Malin Array Si**	**5.30**	**19**	P	**Pn**	**10 49 20.1**	**+0.3**
AK20	**Malin Array Si**	**5.31**	**17**	P	**Pn**	**10 49 19.8**	**-0.1**
AKBB	**Malin Array Si**	**5.32**	**19**	P	**Pn**	**10 49 20.3**	**+0.3**
AK22	**Malin Array Si**	**5.34**	**17**	P	**Pn**	**10 49 20.2**	**-0.1**
AK21	**Malin Array Si**	**5.35**	**17**	P	**Pn**	**10 49 20.2**	**-0.2**
NACGM	**Naroch**	**9.22**	**1**	*e*P	Pn	10 50 07.0	-5.1
	comp=Z,9.0nm,1.1s,baz=179						

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*TIF **10** 10:52:51.3, 42°.76N×44°.20E, h8^{km}±1^{km}*
*NORS **10** 10:52:52.2±0.0, 42°.70N×44°.07E, h13^{km}, MPVA3.9*
*DDA **10** 10:52:53.0±0.0, 42°.82N×44°.32E, h52^{km}, ML2.2*
*MOS **10** 10:52:53.1±0.0, 42°.72N×44°.03E, h16^{km}, MPVA3.5*
ISC 10 10:52:52.6±1.0**, 42°.73N**±0°.02×**44°.11E**±0°.02**, h5**^{km}±9^{km}**,**
n44, σ0^{s}.84/83**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZEI	**Tsey**	**0.17**	**292**	*e*Pg	**Pg**	**10 52 56.0**	**0.0**
ZEI				*i* Sg	**Sg**	**10 52 58.9**	**+0.6**
KORR	**Kora**	**0.36**	**355**	*i* Pg	**Pg**	**10 53 00.2**	**+0.6**
KORR				*e*Sg	**Sb**	**10 53 07.1**	**-0.4**
GUDG	**Gudauri**	**0.37**	**134**	P	**Pg**	**10 52 59.3**	**-0.6**
GUDG				S	**Sg**	**10 53 04.5**	**-0.4**
PNSH	**Pansheti**	**0.38**	**104**	P	**Pg**	**10 52 58.9**	**-1.1**
PNSH				S	**Sg**	**10 53 03.7**	**-1.4**
DIGR	**Digorskoe uzhe**	**0.43**	**294**	*i* Pg	**Pg**	**10 53 00.7**	**-0.2**
DIGR				*i* Sg	**Sg**	**10 53 06.7**	**+0.1**
ARNR	**Ardon**	**0.47**	**15**	*e*Pg	**Pb**	**10 53 02.6**	**-0.7**
ARNR				*i* Sg	**Sb**	**10 53 10.9**	**+0.2**
ONI	**Oni**	**0.51**	**255**	P	**Pg**	**10 53 03.0**	**+0.7**
ONI				S	**Sb**	**10 53 11.4**	**-0.3**
VLKR	**Vladikavkaz**	**0.52**	**52**	*e*Pg	**Pg**	**10 53 03.5**	**+0.8**
VLKR				*i* Sg	**Sb**	**10 53 11.6**	**-0.7**
LSNR	**Lesken**	**0.59**	**339**	*e*Pg	**Pg**	**10 53 04.6**	**+0.6**
LSNR				*e*Sg	**Sg**	**10 53 12.3**	**+0.6**
KMGR	**Komgaron**	**0.64**	**59**	*e*Pg	**Pg**	**10 53 05.5**	**+0.6**
KMGR				*e*Sg	**Sb**	**10 53 15.8**	**+0.1**
STDR	**Stavd-Durt**	**0.64**	**357**	*e*Pg	**Pb**	**10 53 06.4**	**0.0**
STDR				*e*Sg	**Sb**	**10 53 15.6**	**0.0**
BTKR	**Batakoyurt**	**0.72**	**26**	*e*Pg	**Pb**	**10 53 08.2**	**+0.5**
BTKR				*e*Sg	**Sg**	**10 53 16.3**	**+0.5**

SHTL	Shatili	0.77	95	P	Pg	10 53 05.7	-1.7
SHTL				S	Sg	10 53 15.4	-1.9
TKB	Tkibuli	0.91	246	P	Pb	10 53 11.2	+0.4
TKB				S	Sn	10 53 24.8	-0.7
PRTR	Priterechnaya	1.03	7	*e*Pg	Pg	10 53 11.8	-0.5
PRTR				*e*Sg	Sb	10 53 26.8	0.0
BRNG	Burnasheti	1.12	191	P	Pb	10 53 14.7	+0.1
NEY	Neytrino	1.15	298	*e*Pg	Pg	10 53 13.7	-0.9
NEY				*e*Sg	Sg	10 53 29.2	-0.3
TRLG	Trialeti	1.19	180	P	Pb	10 53 15.4	-0.2
TRLG				S	Sn	10 53 32.7	+0.2
GROC	Groznyy	1.32	68	*e*Pg	Pg	10 53 18.1	+0.1
GROC				*e*Sg	Sn	10 53 36.4	+0.7
KBZ	Khabaz	1.34	319	*i* Pg	Pn	10 53 16.9	-1.0
KBZ				*e*Sg	Sb	10 53 34.9	-0.7
KZRT	Kazreti	1.35	171	P	Pn	10 53 17.8	-0.4
KZRT				S	Sn	10 53 36.7	+0.2
ABS	Abastumani	1.37	225	P	Pg	10 53 18.7	-0.1
AKH	Akhalkalaki	1.39	200	*e*Pg	Pn	10 53 18.9	0.0
AKH				*e*Sg	Sn	10 53 37.5	-0.2
AKH	Akhalkalaki	1.39	200	P	Pg	10 53 19.2	-0.1
DMNI	Dmanisi	1.40	178	P	Pn	10 53 18.5	-0.3
SHA1	Shidzhatmaz	1.47	314	*e*Pg	Pn	10 53 19.6	-0.3
SHA1				*e*Sg	Sb	10 53 39.2	-0.4
DVE	Vedeno	1.50	80	*e*Pg	Pn	10 53 20.4	+0.2
DVE				*e*Sg	Sg	10 53 42.6	+1.9
BGD	Bogdanovka	1.51	195	P	Pg	10 53 21.3	-0.2
BGD				S	Sg	10 53 42.4	+1.3
PYA1	Pyatigorsk	1.53	331	*e*Pg	Pb	10 53 21.1	-0.4
PYA1				*e*Sg	Sg	10 53 41.5	-0.2
BTLR	Botlikh	1.56	92	*e*Pg	Pn	10 53 20.9	-0.1
BTLR				*e*Sg	Sg	10 53 43.5	+0.9
DGRG	David-gareji	1.58	143	P	Pg	10 53 23.7	+0.8
DGRG				S	Sg	10 53 47.4	+4.0
BEYR	Belyy Ugol+	1.60	324	*e*Pg	Pb	10 53 22.7	+0.1
BEYR				*e*Sg	Sb	10 53 42.9	-0.2
KIV0	Kislovodsk Arr	1.61	320	*e*Pg	Pn	10 53 22.1	+0.4
KIV0				*e*Sg	Sb	10 53 43.3	-0.2
LGD	Lagodekhi	1.81	119	P	Pb	10 53 26.6	+0.4
LGD				S	Sg	10 53 52.4	+1.6
AHAN	Ardahan-Merkez	1.92	216	P	Pb	10 53 28.0	-0.1
AHAN				S	Sg	10 53 54.6	+0.5
AHAN				*i* AML	AML	10 53 58.0	
	comp=N,19nm,0.4s						
XNZR	Khunzakh	1.92	95	*e*Pg	Pb	10 53 27.6	-0.6
XNZR				*e*Sg	Sb	10 53 52.5	0.0
UNCR	Uncukul	1.98	89	*e*Pg	Pb	10 53 28.6	-0.4
UNCR				*e*Sg	Sb	10 53 53.9	-0.1
DBC	Dubki	2.02	81	*e*Pg	Pb	10 53 28.8	-1.0
DBC				*e*Sg	Sb	10 53 55.9	+0.6
KRNR	Karanay	2.06	86	*e*Pg	Pn	10 53 29.1	+1.2
KRNR				*e*Sg	Sb	10 53 55.9	-0.5
ARKR	Arakani	2.13	92	*e*Pg	Pb	10 53 30.6	-1.1
ARKR				*e*Sg	Sb	10 53 58.3	-0.1
GNBR	Gunib	2.13	98	*e*Pg	Pb	10 53 30.4	-1.4
GNBR				*e*Sg	Sb	10 53 57.4	-1.1
ALER	Alexandrovskoy	2.21	337	*e*Pg	Pn	10 53 29.8	-0.2
ALER				*e*Sg	Sn	10 53 58.5	+0.7
DBOC	Borcka	2.29	234	P	Pb	10 53 34.3	0.0
DAGI	Agillar	2.33	226	P	Pb	10 53 34.6	-0.4
DAGI				S	Sg	10 54 07.0	-0.3

IDC 10 10:53:52.2±338.0**, 54°.19N**×**42°.54E, h0^{km}, Error ellipse: s-maj=148.3km s-min=82.7km az=139.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	3.95	312	I	I	11 18 30.0	
	0.1nm,1.0s,baz=128,slow=323,SNR=2.5						
I31KZ	AKTYUBINSK INF	10.22	105	I	I	11 51 30.0	
	0.1nm,0.7s,baz=299,slow=317,SNR=1.2						
I46RU	ZALESOVO INFRA	24.55	73	I	I	13 26 40.0	
	baz=289,slow=322,SNR=1.0						

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*FUNV **10** 10:55:10.7, 8°.50N×71°.29W, h4^{km}, MW3.0*

ISC 10 10:55:09.8±1.6**, 8°.57N**±0°.06×**71°.27W**±0°.04**, h2**^{km}±13^{km}**, n15, σ1^{s}.47**/24**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.50	125	⇓*i*P	Pg	10 55 19.9	+0.5
SOCV				*e*S	Sg	10 55 27.0	+1.2
CAPV	Capacho	1.25	236	*e*P	Pb	10 55 32.9	-1.2
CAPV				*e*S	Sg	10 55 49.7	-0.2
PAMC	Pamplona, Colo	1.87	229	*e*P	Pb	10 55 44.1	-0.9
PAMC				*e*S	Sg	10 56 10.3	+0.4
PAMC				*i*		10 56 13.0	
	comp=Z,24nm,0.3s						
CURV	Curarigua	1.93	42	*e*P	Pn	10 55 44.9	+1.2
CURV				*e*S	Sn	10 56 09.7	+1.1
TAMC	Tame, Arauca	2.18	194	*e*P	Pb	10 55 48.5	-1.5
TAMC				*e*S	Sg	10 56 20.5	+0.5
TAMC				*i*		10 56 25.0	
	comp=Z,15nm,0.4s						
BARC	Barichara	2.73	224	*e*P	Pb	10 56 00.3	+0.8
BARC				*e*S	Sg	10 56 36.0	-1.6
BARC				*i*		10 56 39.2	
	comp=Z,18nm,0.4s						
CRJC	Cerrejon, Guaj	2.91	327	*e*P	Pn	10 55 58.3	+1.2
MAPV	Macapo	3.05	66	*e*P	Pn	10 55 59.1	+0.1
RUSC	La Rusia	3.21	214	*e*P	Pn	10 56 02.9	+1.2
BAUV	El Baul	3.21	83	*e*P	Pn	10 56 01.4	+0.1
BAUV				*e*S	Sn	10 56 38.5	-1.7
ZARC	Zaragoza, Cauc	3.71	253	*e*S	Sb	10 56 58.3	-3.2
ZARC				*i*		10 57 08.6	
	comp=Z,5.4nm,0.4s						
PTBC	PUERTO BERRIO,	3.75	238	*e*P	Pn	10 56 09.0	+0.4
PTBC				*e*S	Sb	10 57 01.2	-1.4
PTBC				*i*		10 57 08.9	
	comp=Z,3.5nm,0.4s						
CHIC	Chingaza	4.62	212	*e*P	Pn	10 56 21.6	+0.6
CHIC				*e*S	Sn	10 57 16.0	+0.6
CACV	CAICARA DEL OR	4.79	102	*e*P	Pb	10 56 29.8	-4.7
GUY2C	Guyana, Caldas	5.25	231	*e*P	Pn	10 56 31.9	+2.2
GUY2C				*e*S	Sn	10 57 33.8	+2.7

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*AEIC **10** 11:11:05.0±3.0, 51°.11N±0°.06×177°.3W±0°.1, h26^{km}±2^{km}, Error ellipse: s-maj=9.6km s-min=7.8km az=123.0*

*MOS **10** 11:11:06.6±1.0, 51°.42N×177°.29W, h61^{km}, mb4.8/49, Error ellipse: s-maj=8.2km s-min=5.9km az=84.9*

*BJI **10** 11:11:06.1±0.0, 51°.50N×177°.49W, h54^{km}, mb4.6/29, mB4.9/17, Ms4.5/4, Ms7 4.3/4*

*NEIC **10** 11:11:08.1±1.9, 51°.40N±0°.04×177°.38W±0°.10, h61^{km}±6^{km}, mb4.6/261, ML4.4(AEIC), Error ellipse: s-maj=8.7km s-min=6.1km az=95.0*

*IDC **10** 11:11:09.7±2.3, 51°.34N×177°.43W, h75^{km}±20^{km}, mb4.0/27, mbtmp4.3/30, MS3.5/48, Error ellipse: s-maj=15.0km s-min=10.0km az=176.0*

ISC 10 11:11:06.1±0.4**, 51°.29N**±0°.06×**177°.31W**±0°.04**, h45**^{km}**, n713, σ0^{s}.99**/656**, mb4.6**/186**, MS3.4**/48**, 14C-12D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIWB	Kanaga Island	0.57	10		Pn	11 11 19.6	+1.6
ADK	Adak	0.71	33		Pn	11 11 20.8	+1.0
ADK				Sn	Sn	11 11 32.7	+3.0
ADK	Adak	0.71	33	P	Pn	11 11 21.1	+1.3
ADK	Adak	0.71	33	P	Pn	11 11 20.8	+1.0
ADK				S	Sn	11 11 32.9	+3.2
GSTR	Great Sitkin T	1.12	44		Pn	11 11 27.2	+1.8
CLES	Cleveland East	4.83	69	Pn	Pn	11 12 18.0	+1.8
NIKH	Nikolski High	5.47	69	Pn	Pn	11 12 26.8	+1.8
NIKH	Nikolski High	5.47	69	P	Pn	11 12 27.2	+2.1
NIKH	Nikolski High	5.47	69	P	Pn	11 12 26.8	+1.8
	baz=258,SNR=14						
SHEM	Shemya Is, Ala	5.50	289	P	Pn	11 12 27.1	+1.8
	33nm,0.5s,baz=85,slow=21,SNR=1.9						
SHEM				S	Sn	11 13 30.0	+2.8
	50nm,0.8s,baz=66,slow=21,SNR=1.3						
SHEM				LR	LR	11 14 36.3	
	comp=Z,662nm,20.4s,baz=77,slow=38						
SMY	Shemya	5.50	289	Pn	Pn	11 12 27.0	+1.6
SMY	Shemya	5.50	289	P	Pn	11 12 28.5	+3.2
SMY	Shemya	5.50	289	P	Pn	11 12 27.0	+1.6
UNV	Unalaska Valle	7.07	65	Pn	Pn	11 12 48.0	+1.1
UNV	Unalaska Valle	7.07	65	P	Pn	11 12 48.6	+1.8
	baz=255						
SPIA	Saint Paul Isl	7.20	32		Pn	11 12 50.4	+1.7
SPIA	Saint Paul Isl	7.20	32	P	Pn	11 12 51.2	+2.5
	baz=219						
AKUT	Akutan	7.56	63	Pn	Pn	11 12 56.0	+2.3
AKUT	Akutan	7.56	63	P	Pn	11 12 56.6	+2.9
FALS	False Pass	9.09	61		Pn	11 13 16.9	+2.3
FALS	False Pass	9.09	61	P	Pn	11 13 16.6	+2.0
	baz=254						
S12K	Black Hills	10.10	58	P	Pn	11 13 30.3	+1.9
	baz=252						
SDPT	Sand Point	10.85	61	Pn	Pn	11 13 38.8	+0.1
SDPT	Sand Point	10.85	61	P	Pn	11 13 39.4	+0.7
SDPT	Sand Point	10.85	61	P	Pn	11 13 39.3	+0.7
	baz=256						
CHGN	Chignik	12.23	58	Pn	Pn	11 13 57.3	-0.1
CHGN	Chignik	12.23	58	P	Pn	11 13 59.1	+1.7
	baz=255						
GAMB	Gambell	12.87	11		Pn	11 14 04.1	-2.0
GAMB	Gambell	12.87	11	P	Pn	11 14 06.5	+0.5
	baz=196						
R16K	Pilot Point	13.07	54	P	Pn	11 14 09.8	+0.9
	baz=250						
P16K	Nushagak River	13.45	47	P	Pn	11 14 15.2	+1.1
	baz=244						
O16K	Kokwok River B	13.67	45	P	Pn	11 14 17.8	+0.7
	baz=242						
R17K	Ugashik Creek	13.69	54	P	Pn	11 14 18.7	+1.3
	baz=252						
N16K	Nishlik Lake	13.84	41	P	Pn	11 14 19.8	+0.4
	baz=237,SNR=14						
Q16K	King Salmon	13.93	50	P	Pn	11 14 22.0	+1.4
	baz=248						
Q17K	Contact Creek	14.15	52	P	Pn	11 14 24.4	+0.6
	baz=250						
O17K	Koliganek Bris	14.20	45	P	Pn	11 14 24.5	+0.2
	baz=243						
ANM	Nome	14.70	21	Pn	Pn	11 14 31.1	+0.3
ANM	Nome	14.70	21	P	Pn	11 14 31.2	+0.3
ANM	Nome	14.70	21	P	Pn	11 14 30.8	0.0
	baz=211,SNR=16						
Q18K	Katmai Hardscr	14.72	51	P	Pn	11 14 31.2	-0.2
	baz=250						
PET	Petropavlovsk	14.84	286	Pn	Pn	11 14 33.6	+0.8
PET	Petropavlovsk	14.84	286	⇑*e*P	P	11 14 36.1	-1.7
PET				pmax	pmax		
	comp=Z,93nm,3.6s						
P18K	Big Mountain,	14.89	48	Pn	Pn	11 14 34.0	+0.5
P18K	Big Mountain,	14.89	48	P	Pn	11 14 33.8	+0.3
	baz=247						
O18K	Koktuh Hills	15.09	47	Pn	Pn	11 14 36.8	+0.7
O18K	Koktuh Hills	15.09	47	P	Pn	11 14 36.1	0.0
	baz=246						
TNA	Tin City	15.10	15	Pn	Pn	11 14 33.4	-2.8
TNA	Tin City	15.10	15	P	Pn	11 14 35.1	-1.0
	baz=203						
OHAK	Old Harbor	15.20	58	Pn	Pn	11 14 36.8	-0.6
OHAK				IAmb	IAmb	11 14 49.5	
	comp=Z,22nm,0.6s						
OHAK	Old Harbor	15.20	58	P	P	11 14 41.3	-0.4
OHAK	Old Harbor	15.20	58	P	Pn	11 14 38.7	+1.2
	baz=258						
PETK	Petropavlovsk-	15.41	287	P	P	11 14 42.8	-1.4
	comp=Z,2.5nm,0.5s,baz=103,slow=17,SNR=9.8						
PETK	Petropavlovsk-	15.41	287	Pn	Pn	11 14 39.5	-0.7
Q19K	Cape Douglas,	15.48	51	Pn	Pn	11 14 40.7	-0.5
Q19K				IAmb	IAmb	11 15 15.9	
	comp=Z,44nm,0.9s						
Q19K	Cape Douglas,	15.48	51	P	Pn	11 14 42.6	+1.3
	baz=251						
SVW2	Sparrevohn	15.50	42		Pn	11 14 40.7	-0.7
SVW2				IAmb	IAmb	11 14 48.2	
	comp=Z,20nm,0.7s						
SVW2	Sparrevohn	15.50	42	P	P	11 14 45.1	0.0
O19K	Port Alsworth	15.64	46	Pn	Pn	11 14 41.1	-2.0
O19K	Port Alsworth	15.64	46	P	Pn	11 14 43.0	-0.2
	baz=246,SNR=9.5						
KDAK	Kodiak Island	15.69	56	P	Pn	11 14 41.5	-2.3
	comp=Z,3.4nm,0.4s,baz=301,slow=2.2,SNR=45						
KDAK	Kodiak Island	15.69	56	Pn	Pn	11 14 42.4	-1.5
KDAK				IAmb	IAmb	11 14 47.3	
	comp=Z,41nm,0.9s						
KDAK	Kodiak Island	15.69	56	P	Pn	11 14 42.4	-1.5
KDAK				pmax	pmax		
	comp=Z,41nm,1.0s						
N19K	Bonanza Creek	15.83	44	P	Pn	11 14 47.1	+1.3
	baz=244						
P19K	Oil Pt	15.93	49	P	Pn	11 14 48.4	+1.4
	baz=250						
Q20K	Shuyak Island	16.01	53	P	Pn	11 14 48.9	+1.0
	baz=254						
ILSW	Iliamna Southw	16.10	48	Pn	Pn	11 14 49.5	+0.4
TTA	Tatalina	16.32	36	Pn	Pn	11 14 52.6	+0.7
TTA	Tatalina	16.32	36	P	P	11 14 55.7	+1.4
TTA	Tatalina	16.32	36	P	Pn	11 14 52.6	+0.7
TTA				pmax	pmax		
	comp=Z,18nm,1.0s						
TTA	Tatalina	16.32	36	P	Pn	11 14 52.5	+0.6
	baz=235,SNR=20						
L19K	White Mountain	16.35	40	Pn	Pn	11 14 51.8	-0.4
L19K				IAmb	IAmb	11 14 59.6	
	comp=Z,43nm,1.0s						
L19K	White Mountain	16.35	40	P	Pn	11 14 53.1	+0.8
	baz=239,SNR=27						
O20K	Slope Mountain	16.38	48	P	Pn	11 14 53.3	+0.7
	baz=249						
M19K	Big River Lodg	16.39	41	Pn	Pn	11 14 52.5	-0.3
M19K	Big River Lodg	16.39	41	P	P	11 14 54.5	-0.6
	baz=241						
RSO	Redoubt South	16.46	47		Pn	11 14 54.7	+0.9
HOM	Homer	16.69	50	Pn	Pn	11 14 56.7	+0.2
HOM	Homer	16.69	50	P	P	11 14 57.5	-0.8
	baz=252						
SKR	Severo-Kuril’s	16.71	278	⇑*e*P	P	11 14 58.2	-0.4
CNPM	China Poot	16.85	51		P	11 15 00.3	+0.3
CNPM				IAmb	IAmb	11 15 12.1	
	comp=Z,25nm,0.9s						
L20K	Farewell, AK	16.89	39	P	P	11 15 00.6	+0.1
	baz=240						
M20K	Styx River	16.91	42		P	11 15 00.8	0.0
M20K	Styx River	16.91	42	P	Pn	11 14 59.9	+0.7
	baz=243						
SPCR	Spurr Chakacha	17.00	45	P	P	11 15 01.6	-0.3
	baz=246,SNR=14						
SPU	Mount Spurr	17.06	45	Pn	Pn	11 15 00.9	-0.3
BRLK	Bradley Lake	17.09	50		P	11 15 02.5	-0.3
BRSE	Bradley Lake S	17.15	50	P	P	11 15 03.0	-0.5
	baz=253						
GCSA	Galena City Sc	17.16	30	P	P	11 15 04.3	+0.8
	baz=228,SNR=18						
K20K	Telida	17.29	37		P	11 15 05.1	+0.2
K20K				IAmb	IAmb	11 15 08.6	
	comp=Z,24nm,0.9s						
K20K	Telida	17.29	37	P	P	11 15 05.9	+1.0
	baz=237,SNR=26						
CAPN	Captain Cook N	17.31	47	Pn	Pn	11 15 02.6	-1.5
CAPN	Captain Cook N	17.31	47	P	Pn	11 15 04.4	+0.2
	baz=249						
SKT	Skwentna	17.63	43		P	11 15 09.1	+0.5
SKT				IAmb	IAmb	11 15 14.3	
	comp=Z,32nm,0.9s						
SKT	Skwentna	17.63	43	P	Pn	11 15 07.7	-0.5
	baz=245,SNR=27						
SUA	Susitna One	17.75	45	P	Pn	11 15 09.8	0.0
SUA	Susitna One	17.75	45	P	Pn	11 15 09.7	0.0
	baz=248,SNR=8.5						
PPLA	Purkeypile	17.78	40	P	P	11 15 12.8	+2.3
PPLA				IAmb	IAmb	11 15 28.4	
	comp=Z,29nm,1.0s						
PPLA	Purkeypile	17.78	40	P	Pn	11 15 10.2	+0.1
	baz=241						
O22K	Cooper Landing	17.87	48	P	Pn	11 15 10.5	-0.6
O22K	Cooper Landing	17.87	48	P	P	11 15 12.0	+0.7
	baz=252,SNR=6.7						
SEW	Seward	17.88	50		Pn	11 15 09.8	-1.4
SEW	Seward	17.88	50	P	P	11 15 11.6	+0.2
	baz=253						
RC01	Rabbit Creek A	18.07	46	P	P	11 15 09.9	-3.6
RC01	Rabbit Creek A	18.07	46	P	Pn	11 15 13.6	+0.1
	baz=250						
CAST	Castle Rocks	18.08	38	P	Pn	11 15 13.7	+0.1
CAST	Castle Rocks	18.08	38	P	P	11 15 13.6	0.0
	baz=240,SNR=19						
M22K	Willow	18.14	44	P	Pn	11 15 14.6	+0.2
M22K				IAmb	IAmb	11 15 22.5	
	comp=Z,33nm,0.9s						
M22K	Willow	18.14	44	P	P	11 15 13.6	-0.7
	baz=248						
RDOG	Red Dog Mine	18.23	17	P	P	11 15 14.7	-0.5
RDOG	Red Dog Mine	18.23	17	P	P	11 15 14.0	-1.2
	baz=210						
CHUM	Lake Minchumin	18.23	37	P	P	11 15 14.0	-1.2
	baz=238,SNR=5.2						
CUT	Chulitna	18.34	42	P	Pn	11 15 16.7	-0.1
	baz=246						
PMR	Palmer	18.52	45	P	P	11 15 17.5	-0.9
PMR	Palmer	18.52	45	P	P	11 15 17.5	-0.9
PMR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PMR	Palmer	18.52	45	P	Pn	11 15 18.8	-0.2
	baz=250						
KTH	Kantishna Hill	18.60	39	P	Pn	11 15 20.0	0.0
KTH				IAmb	IAmb	11 15 22.0	
	comp=Z,49nm,0.9s						
BILL	Bilibino	18.61	341	P	P	11 15 18.0	-1.4
BILL	Bilibino	18.61	341	*e*P	P	11 15 19.7	+0.3
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PWL	Port Wells	18.64	48	P	P	11 15 18.8	-0.9
PWL	Port Wells	18.64	48	P	P	11 15 20.0	+0.3
	baz=253						
GHO	Glory Hole Cre	18.68	45	P	P	11 15 20.5	+0.2
KNK	Knik Glacier	18.76	46	P	P	11 15 20.7	-0.4
KNK	Knik Glacier	18.76	46	P	Pn	11 15 21.5	-0.4
	baz=251,SNR=6.9						
TRF	Thorofare Moun	18.80	39	P	P	11 15 21.8	+0.1
TRF	Thorofare Moun	18.80	39	P	P	11 15 22.0	+0.3
	baz=243						
P23K	Montague Islan	18.84	51	P	Pn	11 15 22.7	-0.2
	baz=256						
BPAW	Bear Paw Mtn.	18.85	37	P	P	11 15 22.2	+0.2
BPAW	Bear Paw Mtn.	18.85	37	P	Pn	11 15 22.9	0.0
	baz=240,SNR=14						
SML	Sawmill	18.95	45	P	P	11 15 22.3	-1.0
SML	Sawmill	18.95	45	P	P	11 15 22.3	-1.0
SML	Sawmill	18.95	45	P	Pn	11 15 23.8	-0.4
	baz=250						
IMAR	Indian Mountai	18.97	30	P	P	11 15 23.1	-0.3
I21K	Tanana	19.07	34	P	P	11 15 22.7	-1.7
I21K				IAmb	IAmb	11 15 27.7	
	comp=Z,23nm,0.9s						
I21K	Tanana	19.07	34	P	Pn	11 15 25.0	-0.5
	baz=236						
H21K	Melozitna Rive	19.07	32	P	P	11 15 24.1	-0.4
H21K				IAmb	IAmb	11 15 31.4	
	comp=Z,23nm,1.0s						
H21K	Melozitna Rive	19.07	32	P	P	11 15 24.9	+0.4
	baz=233						
M23K	Glacier View	19.22	45	P	P	11 15 26.7	+0.6
	baz=251,SNR=8.4						
RND	Reindeer	19.36	40	P	P	11 15 26.7	-1.0
RND	Reindeer	19.36	40	P	P	11 15 26.7	-1.0
RND				pmax	pmax		
	comp=Z,9.0nm,0.8s						
G21K	Allakaket	19.39	29	P	P	11 15 27.4	-0.5
	baz=230						
SCM	Sheep Creek Mo	19.41	46	P	P	11 15 27.9	-0.3
SCM				IAmb	IAmb	11 15 33.9	
	comp=Z,24nm,0.9s						
SCM	Sheep Creek Mo	19.41	46	P	P	11 15 28.0	-0.3
SCM				pmax	pmax		
	comp=Z,24nm,0.9s						
SCM	Sheep Creek Mo	19.41	46	P	P	11 15 28.9	+0.6
	baz=251						
MLY	Manley	19.43	35	P	P	11 15 27.3	-1.1
MLY	Manley	19.43	35	P	P	11 15 28.4	0.0
	baz=238,SNR=22						
BWN	Browne	19.46	38	P	P	11 15 29.2	+0.4
BWN				IAmb	IAmb	11 16 05.3	
	comp=Z,31nm,0.9s						
MCK	McKinley	19.47	39	P	P	11 15 28.6	-0.3
MCK	McKinley	19.47	39	P	P	11 15 28.6	-0.3
MCK				pmax	pmax		
	comp=Z,12nm,0.8s						
MCK	McKinley	19.47	39	P	P	11 15 29.0	+0.1
	baz=244,SNR=8.8						
H22K	Ishtalitna Cre	19.69	32	P	Pn	11 15 32.5	-0.4
	baz=235						
MA2	Magadan	19.75	307	LR	LR	11 22 53.6	
	comp=Z,116nm,19.5s,baz=100,slow=36						
EYAK	Cordova Ski Ar	19.78	50	P	Pn	11 15 33.3	-0.7
	baz=257						
NEA2	Nenana	19.82	37	P	P	11 15 32.3	-0.3
NEA2	Nenana	19.82	37	P	P	11 15 32.6	0.0
	baz=242,SNR=6.5						
F21K	Alatna River	19.86	28	P	P	11 15 33.9	+0.8
	baz=229,SNR=17						
SEY	Seymchan	19.94	317	P	Pn	11 15 35.0	-0.9
	comp=Z,3.3nm,0.8s,baz=110,slow=11,SNR=6.3						
SEY				LR	LR	11 23 06.4	
	comp=Z,165nm,21.9s,baz=150,slow=36						
SEY	Seymchan	19.94	317	⇑*e*P	Pn	11 15 35.1	-0.7
SEY				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KLU	Klutina	19.94	47	P	P	11 15 34.3	+0.2
	baz=254,SNR=6.9						
I23K	Minto, Yukon-K	19.98	35	P	P	11 15 34.2	-0.1
I23K	Minto, Yukon-K	19.98	35	P	P	11 15 35.2	+0.8
	baz=240,SNR=14						
M24K	Tolsona, Glenn	20.01	45	IAmb	IAmb	11 15 40.1	
	comp=Z,23nm,0.6s						
M24K	Tolsona, Glenn	20.01	45	P	P	11 15 33.1	-1.7
	baz=252,SNR=7.4						
WRH	Wood River Hil	20.13	38	P	P	11 15 34.0	-2.0
G22K	Bettles	20.26	30	P	P	11 15 37.7	+0.4
	baz=232						
H23K	Yukon River	20.27	34	P	P	11 15 38.2	+0.6
	baz=238,SNR=17						
MDM	Murphy Dome	20.31	37	P	P	11 15 37.6	-0.3
CCB	Clear Creek Bu	20.32	38	P	P	11 15 38.0	-0.1
TCOL	CIGO, UAF Yank	20.41	37	P	P	11 15 39.2	+0.3
	baz=243						
COLA	College	20.41	37	⇓*e*P	Pn	11 15 40.5	-0.9
COLA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
COLA	College	20.41	37	P	P	11 15 38.8	-0.2
	baz=243						
F22K	John River	20.43	28	P	P	11 15 40.2	+0.9
	baz=230						
HDA	Harding Lake	20.55	39	P	P	11 15 39.5	-1.1
HDA	Harding Lake	20.55	39	P	P	11 15 41.8	+1.2
	baz=245,SNR=12						
HARP	HAARP	20.56	45	P	P	11 15 41.0	+0.3
	baz=253,SNR=6.1						
N25K	Chitina, Valde	20.58	47		P	11 15 41.0	0.0
N25K	Chitina, Valde	20.58	47	P	P	11 15 41.4	+0.4
	baz=255,SNR=8.2						
PAX	Paxson	20.61	43	P	P	11 15 40.9	-0.4
PAX	Paxson	20.61	43	P	P	11 15 40.9	-0.4
PAX				pmax	pmax		
	comp=Z,11nm,0.7s						
PAX	Paxson	20.61	43	P	P	11 15 41.7	+0.4
	baz=251,SNR=11						
G23K	Bananza Creek	20.61	31	P	P	11 15 41.8	+0.6
	baz=235,SNR=20						
POKR	Poker Plat Res	20.68	37	P	P	11 15 40.7	-1.3
POKR	Poker Plat Res	20.68	37	P	P	11 15 41.6	-0.4
	baz=243						
IL31		20.73	38	P	P	11 15 40.8	-1.7
ILAR	Eielson Array	20.73	38	P	P	11 15 40.9	-1.6
	comp=Z,3.3nm,0.8s,baz=235,slow=9.0,SNR=28						
ILAR				LR	LR	11 24 54.2	
	comp=Z,96nm,20.1s,baz=216,slow=40						
ILAR	Eielson Array	20.73	38	P	P	11 15 39.9	-2.6
ILAR	Eielson Array	20.73	38	P	P	11 15 39.9	-2.6
IL03	Eielson Array	20.75	38	P	P	11 15 40.1	-2.6
K24K	Donnelly Dome	20.78	41	P	P	11 15 43.0	-0.1
	baz=248,SNR=16						
COLD	Coldfoot	20.86	30	P	P	11 15 42.7	-1.1
COLD				IAmb	IAmb	11 15 51.3	
	comp=Z,17nm,1.0s						
COLD	Coldfoot	20.86	30	P	P	11 15 44.0	+0.2
	baz=234,SNR=16						
H24K	Noodor Dome	20.87	35	P	Pn	11 15 45.8	-1.1
H24K	Noodor Dome	20.87	35	P	P	11 15 44.3	+0.2
	baz=240						
GLB	Gilahina Butte	20.91	48	P	Pn	11 15 46.4	-1.0
E22K	Anaktuvuk Pass	20.94	27	P	P	11 15 44.8	0.0
	baz=229						
VRDI	Verde Repeater	21.03	49	P	P	11 15 49.0	+3.0
RIDG	Independent Ri	21.14	41	P	P	11 15 46.4	-0.5
RIDG				IAmb	IAmb	11 16 02.3	

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      comp=Z,15nm,0.8s
RIDG  Independent Ri   21.14  41  P     P     11 15 47.3 +0.4
      baz=250,SNR=6.6
MCARA McCarthy VSAT    21.26  48        P     11 15 51.4 +3.1
MCARA                             IAmb  IAmb  11 16 13.4
      comp=Z,17nm,0.8s
MCARA McCarthy VSAT    21.26  48  P     P     11 15 49.2 +1.0
      baz=258,SNR=5.6
MENT  Mentasta         21.35  44  P     P     11 15 48.4 -0.8
DOT   Dot Lake         21.43  42  P     P     11 15 48.5 -1.6
DOT                               IAmb  IAmb  11 15 53.1
      comp=Z,28nm,0.7s
G24K  Hadweenzic Riv   21.45  33  P     P     11 15 50.7 +0.5
      baz=239
M26K  Nabesna, AK      21.52  46  P     P     11 15 50.9 -0.2
M26K  Nabesna, AK      21.52  46  P     P     11 15 51.5 +0.4
      baz=255,SNR=5.7
E23K  Chandalar        21.54  28  P     P     11 15 51.5 +0.3
      baz=233
L26K  Log Cabin Wild   21.54  44  P     P     11 15 51.8 +0.5
L26K                              IAmb  IAmb  11 15 54.7
      comp=Z,22nm,1.1s
L26K  Log Cabin Wild   21.54  44  P     P     11 15 51.5 +0.2
      baz=253,SNR=19
PRP   Porcupine Dome   21.58  37  P     P     11 15 52.0 +0.2
PRP   Porcupine Dome   21.58  37  P     P     11 15 51.6 -0.2
      baz=244
SCRK  Sand Creek       21.58  41  P     P     11 15 51.1 -0.6
SCRK                              IAmb  IAmb  11 16 11.1
      comp=Z,14nm,0.9s
SCRK  Sand Creek       21.58  41  P     P     11 15 51.1 -0.6
      baz=250,SNR=18
F24K  Squaw Lake       21.76  31  P     P     11 15 53.5  0.0
      baz=237
D23K  Nanushuk River   21.80  26  P     P     11 15 54.2 +0.2
      baz=230
E24K  Your Creek       21.89  29  P     P     11 15 53.8 -1.1
      baz=235
J26L  Joseph Creek     21.94  40  P     P     11 15 54.1 -1.4
J26L  Joseph Creek     21.94  40  P     P     11 15 54.8 -0.7
      baz=249
G25K  Bearman Lake     21.95  33  P     P     11 15 55.8 +0.3
      baz=241
CTG   Chitna Glacier   21.98  50  P     P     11 15 56.3 +0.3
      baz=261
M27K  Edge Creek, AK   22.02  46  P     P     11 15 56.2 -0.3
M27K  Edge Creek, AK   22.02  46  P     P     11 15 57.2 +0.7
      baz=257
FYU   Fort Yukon       22.16  34  P     P     11 15 58.5 +0.7
FYU                               IAmb  IAmb  11 16 00.2
      comp=Z,27nm,1.4s
A21K  Barrow           22.17  18  P     P     11 15 57.4 -0.4
A21K                              IAmb  IAmb  11 15 58.9
      comp=Z,19nm,0.6s
A21K  Barrow           22.17  18  P     P     11 15 57.6 -0.2
      baz=216,SNR=8.5
L27K  Beaver Creek,    22.22  44  P     P     11 15 59.0 +0.5
      baz=255
BCAR  Beaver Creek A   22.24  44  P     P     11 15 58.9 +0.2
PINM  Pinnacle         22.39  52  P     P     11 16 00.6 +0.2
      baz=264
K27K  Chicken          22.39  42  P     P     11 15 59.6 -0.7
      baz=252
I26K  Coal Creek Min   22.40  38  P     P     11 16 00.4  0.0
      baz=248
D24K  Happy Valley     22.44  27  P     P     11 16 00.9 +0.1
      baz=232
BVCY  Beaver Creek     22.49  46  P     P     11 16 01.6 +0.2
      baz=258,SNR=6.4
O28M  Mount Upton      22.51  51  P     P     11 16 01.2 -0.7
      baz=262
F25K  Christian Rive   22.52  32  P     P     11 16 01.6 -0.2
      baz=240
YUK3  Moose Creek      22.55  48  P     P     11 16 01.4 -0.8
      baz=260,SNR=7.0
PNL   Peninsula        22.78  54  P     P     11 16 04.7 +0.3
      baz=266
YUK8  Steele Glacier   22.79  49  P     P     11 16 03.9 -0.9
      baz=262
BMAR  Burnt Mountain   22.80  33  P     P     11 16 05.5 +0.8
E25K  Arctic Village   22.82  31  P     P     11 16 05.2 +0.3
      baz=239,SNR=27
C24K  Franklin Bluff   22.83  25  P     P     11 16 03.9 -1.0
      baz=231
G26K  Porcupine Rive   22.85  34  P     P     11 16 04.2 -0.8
      baz=244
EGAK  Eagle            23.00  40  P     P     11 16 06.7  0.0
      baz=252,SNR=7.3
F26K  Sheenjek River   23.07  32  P     P     11 16 06.8 -0.6
      baz=242
I27K  Kandik River     23.11  38  P     P     11 16 06.5 -1.3
      baz=249
D25K  Kavik River      23.24  28  P     P     11 16 08.9 -0.2
      baz=235
O29M  Mount Kennedy    23.24  52  P     P     11 16 08.5 -0.8
      baz=265
YUK4  Talbot Arm       23.33  50  P     P     11 16 10.2 -0.1
      baz=262
H27K  Steamboat Moun   23.37  37  P     P     11 16 08.3 -2.1
      baz=248
DAWY  Dawson           23.53  43  P     P     11 16 11.7 -0.3
DAWY  Dawson           23.53  43  P     P     11 16 11.3 -0.7
      baz=256,SNR=13
G27K  Doyon Strip      23.55  35  P     P     11 16 10.9 -1.1
      baz=247
M29M  Somme Creek      23.59  47  P     P     11 16 12.1 -0.4
      baz=260
HYT   Haines Junctio   23.82  51  P     P     11 16 14.3 -0.4
      baz=265
L29M  L29M             23.87  45  P     P     11 16 15.4 +0.3
      baz=259
C26K  Camden Bay       24.00  27  P     P     11 16 16.1  0.0
      baz=236
N30M  Aishikik Lake    24.09  49  P     P     11 16 17.0 -0.2
      baz=264
J29M  Klondike Camp    24.13  42  P     P     11 16 16.6 -0.9
J29M  Klondike Camp    24.13  42  P     P     11 16 17.5  0.0
      baz=256
E27K  Coleen River     24.16  32  P     P     11 16 17.3 -0.4
      baz=244
C27K  Jago River       24.19  28  P     P     11 16 17.5 -0.4
      baz=238
K29M  Barlow Dome      24.28  44  P     P     11 16 18.7 -0.3
      baz=258
I29M  Ogilvie Camp,    24.33  40  P     P     11 16 18.5 -0.8
I29M                              IAmb  IAmb  11 16 20.2
      comp=Z,18nm,0.8s
I29M  Ogilvie Camp,    24.33  40  P     P     11 16 18.5 -0.8
      baz=254,SNR=22
M30M  Minto, Yukon     24.38  47  P     P     11 16 20.3 +0.6
      baz=262
MAYO  Mayo, Yukon      24.95  45  P     P     11 16 24.3 -0.6
      baz=260
EPYK  Eagle Plains     25.25  38  P     P     11 16 27.0 -0.6
      baz=254,SNR=5.7
G30M  tAoh Zraii Nji   25.62  37  P     P     11 16 29.2 -1.7
      baz=253
N32M  Quiet Lake       25.99  51  P     P     11 16 34.7 +0.3
      baz=268
P33M  Teslin, Yukon    26.11  53  P     P     11 16 34.4 -1.1
      baz=270
YSS   Yuzh-Sakhalins   26.26 276 eP     P     11 16 38.6 +1.8
YSS                               pmax  pmax
      comp=Z,10.0nm,1.1s
YSS                               MLR   MLR
      comp=Z,100nm,17.0s
WRAK  Wrangell Islan   26.63  61  P     P     11 16 40.4 +0.3
      baz=279
F31M  Tsiigehtchic     26.68  36  P     P     11 16 39.9 -0.5
      baz=255
INK   Inuvik           27.00  35  P     P     11 16 42.6 -0.7
      comp=Z,1.3nm,0.4s,baz=238,slow=8.9,SNR=26
INK                               PcP   PcP   11 20 04.0 +0.5
      comp=Z,2.2nm,0.9s,baz=318,slow=4.4,SNR=4.5
      comp=Z,1.3nm,0.4s
INK   Inuvik           27.00  35  P     P     11 16 43.0 -0.2
      baz=254
S34M  Telegraph Cree   27.10  58  P     P     11 16 43.7 -0.6
      baz=276
V35K  Ketchikan        27.21  63  P     P     11 16 45.8 +0.5
      baz=281
DLBC  Dease Lake       27.63  56  LR    LR    11 27 26.1
      comp=Z,71nm,21.8s,baz=278,slow=35
ASAJ  Asahikawa        27.64 271  LR    LR    11 26 29.4
      comp=Z,64nm,21.9s,baz=76,slow=33
BBB   Bella Bella      30.01  69  LR    LR    11 29 29.9
      comp=Z,52nm,18.1s,baz=254,slow=37
YAK   Yakutsk          30.17 311  LR    LR    11 29 16.0
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      comp=Z,73nm,19.3s,baz=92,slow=36
KOTAN Kotaneelee Air   30.48  52  P     P     11 17 13.3 -1.0
      baz=278
WRGLY Wrigley          30.50  46  P     P     11 17 13.6 -0.8
      baz=273,SNR=38
C36M  Paulatuk         30.57  34  P     P     11 17 13.1 -1.9
C36M  Paulatuk         30.57  34  P     P     11 17 13.5 -1.5
      baz=262
A36M  Sachs Harbour    30.71  29  P     P     11 17 14.2 -2.0
A36M                              IAmb  IAmb  11 17 18.3
      comp=Z,13nm,0.8s
A36M  Sachs Harbour    30.71  29  P     P     11 17 16.2  0.0
      baz=256,SNR=20
TIXI  Tiksi            31.17 330  PcP   PcP   11 20 13.4 -0.6
      comp=Z,2.8nm,0.5s,baz=90,slow=24,SNR=3.9
TIXI                              LR    LR    11 30 55.2
      comp=Z,58nm,18.3s,baz=136,slow=38
KLR   Kul'dur          32.10 287  P     P     11 17 28.5 -0.2
      comp=Z,14nm,0.5s,baz=68,slow=7.4,SNR=86
KLR                               LR    LR    11 30 21.5
      comp=Z,119nm,21.4s,baz=77,slow=36
      comp=Z,14nm,0.5s
KLR   Kul'dur          32.10 287ceP     P     11 17 28.4 -0.2
KLR                               pmax  pmax
      comp=Z,6.0nm,0.8s
H11N2 WAKE ISLAND Hy   33.87 207  T     T     11 54 07.9
      baz=18,slow=76,SNR=741
H11N3 WAKE ISLAND Hy   33.87 207  T     T     11 54 17.2
      baz=18,slow=76,SNR=810
H11N1 WAKE ISLAND Hy   33.88 207  T     T     11 54 09.3
      baz=18,slow=76,SNR=719
WAPA  Wapiti River     34.10  60  P     P     11 17 46.0 -0.2
WAPA                              IAmb  IAmb  11 17 49.1
      comp=Z,8.9nm,0.8s
LLLB  Lillooet         34.22  69  IAmb  IAmb  11 17 51.0
      comp=Z,14nm,1.2s
HEH   HeiHe            34.27 290 eP     P     11 17 46.9 -0.7
HEH                               pmax  pmax
      comp=Z,5.0nm,0.7s
HEH                               pmax  pmax
      comp=Z,78nm,5.1s
YKA   Yellowknife Ar   34.61  47  P     P     11 17 50.4  0.0
      comp=Z,5.6nm,0.9s,baz=282,slow=8.0,SNR=54
YKA                               PcP   PcP   11 20 24.6 +0.9
      comp=Z,1.9nm,0.9s,baz=281,slow=2.8,SNR=9.7
YKA                               S     S     11 23 15.4 -0.9
      baz=213,slow=7.5,SNR=3.8
      comp=Z,5.6nm,0.9s
YKA   Yellowknife Ar   34.61  47  P     P     11 17 50.1 -0.3
MJAR  Matsushiro Arr   34.70 262  LR    LR    11 30 08.0
      comp=Z,110nm,20.6s,baz=77,slow=33
H11S1 WAKE ISLAND Hy   35.08 207  T     T     11 55 48.8
      baz=18,slow=76,SNR=471
H11S2 WAKE ISLAND Hy   35.10 207  T     T     11 55 50.2
      baz=18,slow=76,SNR=222
H11S3 WAKE ISLAND Hy   35.10 207  T     T     11 55 50.2
      baz=18,slow=76,SNR=157
BRLDA Berland Lookou   35.47  61  P     P     11 17 59.3 +1.2
BRLDA                             IAmb  IAmb  11 18 00.9
      comp=Z,9.3nm,0.8s
B08A  Colville Reser   36.68  71  IAmb  IAmb  11 18 31.2
      comp=Z,10nm,0.8s
D08A  Wollman Farm,    37.54  73  IAmb  IAmb  11 18 18.2
      comp=Z,13nm,1.0s
C09A  Chrisman Ranch   37.57  71  P     P     11 18 17.9 +2.0
C09A                              IAmb  IAmb  11 18 18.4
      comp=Z,10nm,0.9s
YBH   Yreka Blue Hor   37.97  83  P     P     11 18 22.0 +2.6
      comp=Z,3.6nm,1.0s,baz=346,slow=8.0,SNR=5.9
YBH                               LR    LR    11 31 13.4
      comp=Z,55nm,19.5s,baz=305,slow=32
      comp=Z,3.6nm,1.0s
NEW   Newport          38.04  70  LR    LR    11 31 36.1
      comp=Z,58nm,21.6s,baz=314,slow=32
NEW   Newport          38.04  70  P     P     11 18 20.9 +1.1
NEW                               IAmb  IAmb  11 18 23.5
      comp=Z,12nm,0.9s
NEW   Newport          38.04  70  P     P     11 18 20.9 +1.1
NEW                               pmax  pmax
      comp=Z,12nm,0.9s
NEW   Newport          38.04  70  P     P     11 18 20.9 +1.1
      baz=298,SNR=11
G08A  Pilot Rock       38.39  75  IAmb  IAmb  11 18 25.4
      comp=Z,11nm,1.2s
I07A  Izee             38.68  77  IAmb  IAmb  11 18 28.5
      comp=Z,17nm,1.1s
JCJ   Chichijima       38.90 247  LR    LR    11 31 06.4
      comp=Z,104nm,20.9s,baz=53,slow=31
MOD   Modoc Plateau    39.37  81  P     P     11 18 31.1 -0.1
MOD                               IAmb  IAmb  11 18 34.2
      comp=Z,8.3nm,0.8s
RES   Resolute Bay     39.43  25  LR    LR    11 39 24.9
      comp=Z,45nm,18.0s,baz=9.0,slow=43
WALA  Waterton Lakes   39.54  67  P     P     11 18 33.3 +0.8
BMO   Blue Mountains   39.62  75  P     P     11 18 33.3 +0.1
BMO                               IAmb  IAmb  11 18 36.5
      comp=Z,15nm,1.4s
BMO   Blue Mountains   39.62  75  P     P     11 18 33.3 +0.1
BMO                               pmax  pmax
      comp=Z,15nm,1.4s
J08A  Circle Bar Ran   39.70  78  P     P     11 18 35.9 +2.0
J08A                              IAmb  IAmb  11 18 37.3
      comp=Z,15nm,1.0s
WVOR  Wild Horse Val   40.10  79  P     P     11 18 37.4 +0.1
WVOR                              IAmb  IAmb  11 18 40.2
      comp=Z,15nm,0.9s
WVOR  Wild Horse Val   40.10  79  P     P     11 18 37.4 +0.1
WVOR                              pmax  pmax
      comp=Z,15nm,1.0s
PLID  Pearl Lake       40.28  74  P     P     11 18 39.9 +1.1
KSRS  Korea Array      40.57 272  LR    LR    11 34 39.7
      comp=Z,31nm,21.5s,baz=65,slow=35
MSO   Missoula         40.62  71  IAmb  IAmb  11 18 51.4
      comp=Z,7.3nm,0.9s
MSO   Missoula         40.62  71  P     P     11 18 42.0 +0.5
      baz=301,SNR=7.6
MPK   Martis Peak      41.04  84  IAmb  IAmb  11 18 48.0
      comp=Z,16nm,1.1s
PAHR  Pah Rah Range    41.20  83  IAmb  IAmb  11 18 49.0
      comp=Z,10nm,1.0s
MFID  Camas Ranch      41.28  76  P     P     11 18 47.3 +0.3
MFID                              IAmb  IAmb  11 18 49.5
      comp=Z,8.3nm,1.1s
JNU   Nakatsue         41.49 265  LR    LR    11 34 35.4
      comp=Z,91nm,21.6s,baz=73,slow=34
YERR  Yerington        41.72  84  IAmb  IAmb  11 18 53.4
      comp=Z,6.9nm,0.9s
HLID  Hailey           42.06  75  P     P     11 18 53.8 +0.4
HLID                              IAmb  IAmb  11 18 56.2
      comp=Z,12nm,1.1s
HLID  Hailey           42.06  75  P     P     11 18 55.0 +1.6
      baz=304,SNR=21
MCMT  McKenzie Canyo   42.32  73  P     P     11 18 56.4 +0.9
EGMT  Eagleton         42.46  67  P     P     11 18 57.3 +0.8
      baz=301
LHV   Little Huntoon   42.62  84  IAmb  IAmb  11 19 01.8
      comp=Z,12nm,1.3s
BOZ   Bozeman (W)      42.63  71  IAmb  IAmb  11 19 20.5
      comp=Z,8.5nm,0.7s
BOZ   Bozeman (W)      42.63  71  P     P     11 18 59.2 +1.2
      baz=303,SNR=10
NVAR  Mina Array Bea   42.63  84  P     P     11 19 00.1 +1.9
      comp=Z,3.3nm,0.8s,baz=292,slow=8.5,SNR=25
NVAR                              LR    LR    11 32 56.0
      comp=Z,50nm,21.3s,baz=322,slow=30
      comp=Z,3.3nm,0.8s
NVAR  Mina Array Bea   42.63  84  P     P     11 18 58.6 +0.4
MDPB  Devils Postpil   42.64  85  P     P     11 18 57.2 -1.0
MDPB                              IAmb  IAmb  11 19 01.2
      comp=Z,7.1nm,1.0s
OMMB  Old Mammoth Mi   42.70  85  P     P     11 18 59.2 +0.4
NV11  Mina Array Sit   42.73  84  P     P     11 19 00.2 +1.4
ELK   Elko             43.16  79  LR    LR    11 34 34.6
      comp=Z,58nm,19.3s,baz=298,slow=32
ELK   Elko             43.16  79  IAmb  IAmb  11 19 05.0
      comp=Z,7.3nm,0.9s
DSP   Deep Springs     43.49  85  P     P     11 19 06.6 +1.7
TIN   Tinemaha, Big    43.52  85  P     P     11 19 06.9 +1.7
      baz=309
TPH   Tonopah          43.52  83  P     P     11 19 06.7 +1.3
TPH   Tonopah          43.52  83  P     P     11 19 06.7 +1.3
TPH                               pmax  pmax
      comp=Z,32nm,0.9s
YMR   Madison River    43.53  72  IAmb  IAmb  11 19 07.8
      comp=Z,13nm,1.0s
YNR   Norris Junctio   43.67  71  P     P     11 19 08.1 +1.5
YNR                               IAmb  IAmb  11 19 29.9
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      comp=Z,12nm,0.8s
GCMT  Greycliff        43.68  70  P     P     11 19 07.8 +1.3
VES   Vestal, Richgr   43.75  87  P     P     11 19 07.6 +0.7
      baz=310
LCH   Last Change Ra   43.78  85  IAmb  IAmb  11 19 10.0
      comp=Z,8.0nm,1.1s
H17A  Grant Village    43.91  72  IAmb  IAmb  11 19 12.3
      comp=Z,18nm,1.2s
H17A  Grant Village    43.91  72  P     P     11 19 10.0 +1.5
      baz=304,SNR=9.3
LKWY  Lake             43.92  71  IAmb  IAmb  11 19 32.9
      comp=Z,8.0nm,0.8s
CWC   Cottonwood Cre   44.00  86  P     P     11 19 09.7 +0.5
      baz=310
FLWY  Flagg Ranch      44.01  72  P     P     11 19 08.9 -0.3
FLWY                              IAmb  IAmb  11 19 33.1
      comp=Z,10nm,0.9s
HVU   Hansel Valley    44.07  76  P     P     11 19 10.3 +0.7
HVU                               IAmb  IAmb  11 19 12.7
      comp=Z,10nm,0.9s
HVU   Hansel Valley    44.07  76  P     P     11 19 10.3 +0.7
HVU                               pmax  pmax
      comp=Z,10.0nm,0.9s
MOOW  Moose Ponds      44.17  73  P     P     11 19 10.4 -0.1
RLMT  Red Lodge        44.29  70  IAmb  IAmb  11 19 14.1
      comp=Z,11nm,1.0s
RLMT  Red Lodge        44.29  70  P     P     11 19 12.0 +0.6
      baz=304,SNR=8.7
REDW  Red Top Meadow   44.33  73  IAmb  IAmb  11 19 14.7
      comp=Z,8.7nm,1.2s
R11A  Troy Canyon, C   44.38  82  P     P     11 19 13.1 +0.9
      baz=308
Q12A  Willow Creek R   44.43  81  P     P     11 19 11.9 -0.6
Q12A                              IAmb  IAmb  11 19 42.5
      comp=Z,8.5nm,0.9s
AHID  Auburn Hatcher   44.52  74  P     P     11 19 13.5 +0.3
AHID                              IAmb  IAmb  11 19 15.9
      comp=Z,13nm,1.3s
SPUT  South Promonto   44.54  76  P     P     11 19 14.1 +0.6
SPUT                              IAmb  IAmb  11 19 16.1
      comp=Z,10nm,1.1s
MPMC  Manual Prospec   44.62  86  P     P     11 19 14.9 +0.8
      baz=310,SNR=7.3
S11A  Rachel           44.71  83  IAmb  IAmb  11 19 19.4
      comp=Z,13nm,1.1s
FURC  Furnace Creek,   44.75  85  P     P     11 19 16.0 +1.1
      baz=310,SNR=7.6
TPNV  Topopah Spring   44.83  84  P     P     11 19 16.9 +1.1
TPNV                              IAmb  IAmb  11 19 18.2
      comp=Z,11nm,0.8s
TPNV  Topopah Spring   44.83  84  P     P     11 19 16.9 +1.1
TPNV                              pmax  pmax
      comp=Z,11nm,0.9s
TPNV  Topopah Spring   44.83  84  P     P     11 19 16.5 +0.7
      baz=309,SNR=16
LRMC  Laurel Mtn Rad   44.86  87  P     P     11 19 16.3 +0.3
      baz=310
HWUT  Hardware Ranch   44.91  76  P     P     11 19 17.5 +1.1
HWUT                              IAmb  IAmb  11 19 18.9
      comp=Z,9.1nm,1.1s
NRIK  Noril'sk         44.95 330  P     P     11 19 16.2 +0.1
      comp=Z,4.9nm,0.7s,baz=72,slow=7.7,SNR=6.7
      comp=Z,4.9nm,0.7s
NRIK  Noril'sk         44.95 330  P     P     11 19 15.3 -0.8
NRIK                              IAmb  IAmb  11 19 18.0
      comp=Z,4.6nm,0.8s
NRIK  Noril'sk         44.95 330deP     P     11 19 15.9 -0.2
NRIK                              pmax  pmax
      comp=Z,6.0nm,0.8s
DUG   Dugway, Tooele   44.98  78  P     P     11 19 18.4 +1.6
DUG                               IAmb  IAmb  11 19 19.6
      comp=Z,18nm,1.1s
DUG   Dugway, Tooele   44.98  78  P     P     11 19 18.5 +1.6
DUG                               pmax  pmax
      comp=Z,18nm,1.1s
DUG   Dugway, Tooele   44.98  78  P     P     11 19 17.4 +0.6
      baz=307,SNR=20
GWY   Greenwater Val   45.05  85  IAmb  IAmb  11 19 19.6
      comp=Z,7.4nm,1.1s
EDW2  Edwards Air Fo   45.05  87  P     P     11 19 18.2 +0.8
      baz=311
QSM   Queen of Sheba   45.06  85  IAmb  IAmb  11 19 20.2
      comp=Z,11nm,1.3s
LAO   LASA Array       45.20  67  P     P     11 19 18.7 +0.2
      baz=304
TCUT  Toone Canyon     45.29  76  IAmb  IAmb  11 19 22.0
      comp=Z,10nm,0.8s
PRN   Pahroc Range     45.29  83  P     P     11 19 20.0 +0.6
PRN                               IAmb  IAmb  11 19 22.0
      comp=Z,19nm,1.0s
FCC   Fort Churchill   45.34  47  IAmb  IAmb  11 19 20.4
      comp=Z,4.7nm,0.9s
DGMT  Dagmar           45.39  63  P     P     11 19 20.1 +0.2
DGMT  Dagmar           45.39  63  P     P     11 19 20.4 +0.4
      baz=303
BW06  Boulder Array    45.44  73  P     P     11 19 22.2 +1.6
BW06                              IAmb  IAmb  11 19 23.5
      comp=Z,18nm,1.0s
BW06  Boulder Array    45.44  73  P     P     11 19 21.1 +0.5
      baz=306,SNR=26
PD31  Pinedale Array   45.44  73  P     P     11 19 21.8 +1.1
PD31                              IAmb  IAmb  11 19 23.5
      comp=Z,17nm,1.0s
PDAR  Pinedale Array   45.44  73  P     P     11 19 21.8 +1.1
      comp=Z,12nm,0.8s,baz=305,slow=5.2,SNR=68
PDAR                              LR    LR    11 35 17.5
      comp=Z,54nm,21.4s,baz=303,slow=32
      comp=Z,12nm,0.8s
SHOC  Shoshone, Teco   45.48  85  P     P     11 19 21.6 +0.8
      baz=310,SNR=8.1
GSC   Goldstone, Bar   45.52  86  P     P     11 19 21.4 +0.2
GSC                               IAmb  IAmb  11 19 23.5
      comp=Z,10nm,1.0s
GSC   Goldstone, Bar   45.52  86  P     P     11 19 21.4 +0.2
GSC                               pmax  pmax
      comp=Z,10.0nm,1.0s
GSC   Goldstone, Bar   45.52  86  P     P     11 19 22.0 +0.8
      baz=310,SNR=10.0
NLU   North Lily Min   45.57  78  P     P     11 19 22.8 +1.1
NLU                               IAmb  IAmb  11 19 24.1
      comp=Z,10nm,1.0s
BFSC  Mount Baldy Ra   45.68  88  P     P     11 19 23.6 +1.1
      baz=311,SNR=6.7
MPU   Maple Canyon     45.81  77  P     P     11 19 25.0 +1.4
MPU                               IAmb  IAmb  11 19 25.9
      comp=Z,6.5nm,0.8s
TUQ   Turquoise Moun   45.99  85  P     P     11 19 25.6 +0.7
      baz=310
BSUT  Blindstream Ca   46.03  76  IAmb  IAmb  11 19 35.7
      comp=Z,7.5nm,1.0s
HEC   Hector,Ludlow    46.12  86  P     P     11 19 26.2 +0.2
      baz=311
BBRC  Big Bear Solar   46.12  87  P     P     11 19 26.5 +0.3
      baz=311
TCRU  Three Creeks R   46.16  80  P     P     11 19 28.2 +1.8
TCRU                              IAmb  IAmb  11 19 36.4
      comp=Z,10nm,1.2s
ELS   Elsinore Mount   46.21  88  P     P     11 19 27.5 +0.9
ELS                               IAmb  IAmb  11 19 28.5
      comp=Z,5.3nm,1.1s
MVU   Marysvale        46.37  79  P     P     11 19 28.6 +0.6
MURC  Murrieta         46.39  88  P     P     11 19 28.3 +0.4
      baz=312
MSU   Marysvale        46.39  79  P     P     11 19 26.9 -1.3
MSU   Marysvale        46.39  79  P     P     11 19 26.9 -1.3
V12A  Nelson           46.48  84  P     P     11 19 27.8 -0.9
V12A                              IAmb  IAmb  11 19 30.6
      comp=Z,6.8nm,1.2s
TMUT  Trail Mountain   46.50  78  P     P     11 19 30.6 +1.4
TMUT                              IAmb  IAmb  11 19 32.3
      comp=Z,14nm,1.0s
GMRC  Granite Mounta   46.58  86  P     P     11 19 29.7 +0.2
      baz=311
LCMT  Little Creek M   46.66  82  P     P     11 19 31.8 +1.6
LCMT                              IAmb  IAmb  11 19 32.8
      comp=Z,8.3nm,1.0s
MTPU  Mount Pierson    46.68  80  IAmb  IAmb  11 19 33.3
      comp=Z,5.7nm,1.0s
P17A  Butcher Ranch,   46.68  77  IAmb  IAmb  11 19 32.9
      comp=Z,10nm,0.8s
Q16A  Castle Valley    46.76  78  P     P     11 19 31.5 +0.5
Q16A                              IAmb  IAmb  11 19 33.7
      comp=Z,20nm,1.2s
PFO   Pinyon Flats O   46.84  88  P     P     11 19 32.3 +0.7
      comp=Z,2.3nm,1.0s,baz=312,slow=9.3,SNR=3.5
PFO                               LR    LR    11 35 59.1
      comp=Z,42nm,19.9s,baz=276,slow=32
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	comp=Z,2.3nm,1.0s						
PFO	Pinyon Flats O	46.84	88	P	P	11 19 32.0	+0.4
	baz=312						
TPFO	Pinon Flats	46.85	88	P	P	11 19 31.9	+0.2
	baz=312						
PMD	Palm Desert	46.87	88	P	P	11 19 31.9	+0.3
BELC	Belle Mtn. Jos	46.87	87	P	P	11 19 32.4	+0.5
	baz=311						
P18A	Preston Nutter	46.89	77	P	P	11 19 32.8	+0.6
P18A				IAmb	IAmb	11 19 34.8	
	comp=Z,16nm,0.9s						
PKCU	Pink Cliffs	46.97	81	IAmb	IAmb	11 19 35.5	
	comp=Z,5.6nm,0.9s						
SRU	San Rafael Swe	47.04	78	P	P	11 19 34.3	+1.1
SRU	San Rafael Swe	47.04	78	P	P	11 19 34.3	+1.1
SRU				pmax	pmax		
	comp=Z,22nm,1.1s						
ULN	Ulaanbaatar	47.13	297	P	P	11 19 33.4	-0.4
ULN	Ulaanbaatar	47.13	297	deP	P	11 19 33.8	0.0
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NEEM	North Greenlan	47.29	14	i P	P	11 19 33.9	-0.9
NEEM				IAmb	IAmb	11 19 36.9	
	comp=Z,6.0nm,0.5s						
IRM	Iron Mountain	47.31	86	P	P	11 19 35.6	+0.5
	baz=311						
BAR	Barrett	47.32	89	P	P	11 19 35.8	+0.5
BAR				IAmb	IAmb	11 19 37.3	
	comp=Z,7.5nm,1.1s						
K22A	Casper	47.33	71	P	P	11 19 34.8	-0.6
K22A				IAmb	IAmb	11 19 37.6	
	comp=Z,8.3nm,1.1s						
K22A	Casper	47.33	71	P	P	11 19 34.7	-0.6
	baz=307						
MONP2	Monument Peak	47.34	88	P	P	11 19 36.2	+0.6
	baz=312						
BC3	Big Chuckawall	47.44	87	P	P	11 19 36.8	+0.6
	baz=312						
RWWY	Rawlins	47.49	73	P	P	11 19 36.3	-0.4
RWWY				IAmb	IAmb	11 19 39.0	
	comp=Z,14nm,1.0s						
SONM	Songino Array	47.52	297	P	P	11 19 37.1	+0.4
	comp=Z,2.2nm,0.7s,baz=54,slow=8.4,SNR=11						
	comp=Z,2.2nm,0.7s						
U15A	North Rim	47.62	82	IAmb	IAmb	11 19 40.4	
	comp=Z,12nm,1.0s						
SWSC	Sam W. Stewart	47.69	88	P	P	11 19 38.6	+0.5
	baz=312						
IKP	In-Ko-Pah, Jac	47.70	88	P	P	11 19 38.5	+0.2
	baz=312						
ZAK	Zakamensk	47.79	302	eP	P	11 19 38.6	-0.2
ZAK				e		11 20 00.4	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
O20A	White River Ci	47.80	75	P	P	11 19 39.7	+0.6
	baz=308,SNR=20						
YUH	Yuha Desert	47.81	88	P	P	11 19 39.0	0.0
YUH				IAmb	IAmb	11 19 40.8	
	comp=Z,4.8nm,1.1s						
PDMCI	Parker Dam,Lak	47.84	85	P	P	11 19 39.4	+0.2
	baz=311						
RSSD	Black Hills	47.93	68	P	P	11 19 39.5	-0.6
RSSD				IAmb	IAmb	11 19 42.4	
	comp=Z,4.7nm,1.1s						
RSSD	Black Hills	47.93	68	P	P	11 19 39.5	-0.6
RSSD				pmax	pmax		
	comp=Z,5.0nm,1.1s						
RSSD	Black Hills	47.93	68	P	P	11 19 39.8	-0.2
	baz=306						
BLYC	Blythe	47.96	86	P	P	11 19 41.1	+0.9
BLYC				IAmb	IAmb	11 19 42.1	
	comp=Z,7.2nm,0.9s						
ESJX	Sierra Juarez	48.23	89	IAmb	IAmb	11 19 44.6	
	comp=Z,5.3nm,1.0s						
GLA	Glamis	48.23	87	P	P	11 19 43.2	+0.9
	baz=312						
MDND	Maddock	48.30	62	P	P	11 19 42.8	+0.2
MDND	Maddock	48.30	62	P	P	11 19 42.4	-0.2
	baz=305						
PV23	Carpenter Ridg	48.37	77	IAmb	IAmb	11 19 45.5	
	comp=Z,12nm,0.9s						
GUMO	Guam	48.39	233	LR	LR	11 38 30.0	
	comp=Z,24nm,20.3s,baz=86,slow=34						
PV07	Paradox Valley	48.60	77	IAmb	IAmb	11 19 47.1	
	comp=Z,14nm,1.1s						
HHC	Hu-ho-hao-te	48.61	287	eP	P	11 19 47.0	+1.8
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,5.7s						
PV13	Radium Mtn., P	48.67	78	P	P	11 19 46.8	+0.9
N23A	Red Feather La	48.73	73	P	P	11 19 46.9	+0.6
	baz=308,SNR=8.2						
PV15	Paradox Valley	48.77	77	P	P	11 19 47.4	+0.8
WUAZ	Wupatki	48.78	82	IAmb	IAmb	11 19 49.0	
	comp=Z,9.1nm,0.8s						
WUAZ	Wupatki	48.78	82	P	P	11 19 47.2	+0.6
	baz=311,SNR=7.3						
ULM	Lac du Bonnet	48.95	57	P	P	11 19 47.4	-0.1
	comp=Z,1.6nm,0.3s,baz=36,slow=21,SNR=3.0						
ULM				LR	LR	11 40 32.1	
	comp=Z,41nm,21.3s,baz=239,slow=36						
	comp=Z,1.6nm,0.3s						
MVCO	Mesa Verde	49.47	78	P	P	11 19 52.8	+0.8
MVCO				IAmb	IAmb	11 19 54.0	
	comp=Z,15nm,1.2s						
MVCO	Mesa Verde	49.47	78	P	P	11 19 52.3	+0.3
	baz=310,SNR=7.0						
ISCO	Idaho Springs	49.60	74	P	P	11 19 53.1	+0.1
ISCO				IAmb	IAmb	11 19 55.5	
	comp=Z,11nm,1.1s						
ISCO	Idaho Springs	49.60	74	P	P	11 19 53.2	+0.1
ISCO				pmax	pmax		
	comp=Z,11nm,1.1s						
ISCO	Idaho Springs	49.60	74	P	P	11 19 53.4	+0.4
	baz=309,SNR=10						
NJ2	Nanjing	49.75	273	eP	P	11 19 55.0	+1.2
NJ2				pP	sP	11 20 10.9	+0.5
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
AGMN	Agassiz Nation	50.08	59	P	P	11 19 55.6	-0.6
	baz=306						
S22A	4UR Ranch, Cre	50.15	77	IAmb	IAmb	11 20 00.1	
	comp=Z,14nm,1.1s						
S22A	4UR Ranch, Cre	50.15	77	P	P	11 19 57.7	+0.4
	baz=310,SNR=18						
214A	Organ Pipe Nat	50.23	87	IAmb	IAmb	11 19 60.0	
	comp=Z,7.3nm,1.1s						
214A	Organ Pipe Nat	50.23	87	P	P	11 19 58.2	+0.6
	baz=313						
X18A	Snowflake	50.31	82	P	P	11 19 59.6	+1.2
X18A				IAmb	IAmb	11 20 00.7	
	comp=Z,6.1nm,1.0s						
SPITS	Spitsbergen Ar	50.52	356	P	P	11 19 58.8	-0.4
	comp=Z,18nm,1.0s,baz=63,slow=6.6,SNR=2.6						
	comp=Z,18nm,1.0s						
SUSD	Miller	50.66	65	P	P	11 20 00.4	-0.3
	baz=308,SNR=6.2						
SDCO	Great Sand Dun	50.96	76	IAmb	IAmb	11 20 05.8	
	comp=Z,11nm,1.1s						
SDCO	Great Sand Dun	50.96	76	P	P	11 20 02.7	-0.7
	baz=310,SNR=12						
TUC	Tucson	51.26	85	P	P	11 20 06.2	+0.8
TUC				IAmb	IAmb	11 20 07.4	
	comp=Z,7.7nm,1.0s						
TUC	Tucson	51.26	85	P	P	11 20 06.2	+0.8
TUC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TUC	Tucson	51.26	85	P	P	11 20 06.0	+0.6
	baz=313						
NUUG	Nuugaatsiaq	51.28	20	i P	P	11 20 04.4	-0.4
NUUG				IAmb	IAmb	11 20 06.8	
	comp=Z,12nm,0.4s						
DAG	Danmarks Havn	51.49	6	i P	P	11 20 05.8	-0.6
DAG				IAmb	IAmb	11 20 06.8	
	comp=Z,1.1nm,0.8s						
KSCO	Kaye Shedlock'	51.89	73	P	P	11 20 10.9	+0.8
	baz=310						
T25A	Trinidad	52.02	76	P	P	11 20 12.4	+1.3
T25A	Trinidad	52.02	76	P	P	11 20 12.1	+0.9
	baz=311,SNR=18						
DUN6	Lazy B Ranch	52.16	83	P	P	11 20 13.2	+1.1
ANMO	Albuquerque	52.20	79	LR	LR	11 39 50.9	
	comp=Z,30nm,21.7s,baz=64,slow=33						
ANMO	Albuquerque	52.20	79	P	P	11 20 13.4	+0.9
ANMO				IAmb	IAmb	11 20 14.7	
	comp=Z,4.5nm,1.1s						
ANMO	Albuquerque	52.20	79	⇓eP	P	11 20 14.0	+1.5
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ANMO	Albuquerque	52.20	79	P	P	11 20 13.1	+0.6
	baz=312						
ECSD	EROS Data Cent	52.43	64	IAmb	IAmb	11 20 14.6	
	comp=Z,8.8nm,0.9s						
ECSD	EROS Data Cent	52.43	64	P	P	11 20 13.1	-0.8
	baz=309,SNR=7.6						
EYMN	Ely	52.63	58	P	P	11 20 14.8	-0.5
	baz=308						
319A	Douglas	52.83	85	P	P	11 20 17.4	+0.3
319A				IAmb	IAmb	11 20 19.7	
	comp=Z,8.1nm,1.1s						
121A	Cookes Peak, D	52.98	82	P	P	11 20 18.8	+0.5
	baz=313						
BGNE	Belgrade	53.01	68	P	P	11 20 18.0	-0.2
	baz=310						
SUMG	Summit	53.15	14	i P	P	11 20 18.6	-0.7
SUMG				IAmb	IAmb	11 20 20.0	
	comp=Z,2.6nm,0.8s						
SPMN	Marine on St.	53.62	61	P	P	11 20 22.6	0.0
	baz=309						
DBG	Daneborg	53.74	8	i P	P	11 20 21.7	-1.3
DBG				IAmb	IAmb	11 20 23.4	
	comp=Z,1.2nm,0.3s						
CBKS	Cedar Bluff	53.74	71	P	P	11 20 23.9	+0.2
	baz=311						
ZALV	Zalesovo Beam	54.76	314	PcP	PcP	11 21 33.2	+0.4
	comp=Z,2.2nm,0.6s,baz=48,slow=3.3,SNR=10						
ZALV				LR	LR	11 45 04.0	
	comp=Z,29nm,21.6s,baz=64,slow=37						
N35A	Tabor	54.81	67	P	P	11 20 31.7	+0.3
MNTX	Cornudas Mount	55.04	81	P	P	11 20 33.8	+0.6
	baz=314,SNR=20						
MSTX	Muleshoe	55.11	78	P	P	11 20 34.0	+0.3
MSTX	Muleshoe	55.11	78	P	P	11 20 33.7	0.0
	baz=313,SNR=8.5						
AMTX	Amarillo	55.17	76	P	P	11 20 34.1	+0.1
	baz=313						
SFJD	Kangerlussuaq	55.37	23	LR	LR	11 46 11.7	
	comp=Z,48nm,21.2s,baz=328,slow=38						
KSU1	Kansas State U	55.40	69	P	P	11 20 35.3	-0.3
	baz=312						
LZH	Lanzhou	56.30	287	eP	P	11 20 43.1	+0.8
LZH				pmax	pmax		
	comp=Z,18nm,0.7s						
GTA	Gaotai	56.46	293	eP	P	11 20 43.8	+0.5
GTA				pP	pP	11 20 54.9	-0.5
GTA				sP	sP	11 21 01.3	+0.9
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
POST	Post	56.50	77	P	P	11 20 44.3	+0.7
POST				IAmb	IAmb	11 20 45.0	
	comp=Z,16nm,0.9s						
JFWS	Jewell Farm	56.52	62	P	P	11 20 43.0	-0.6
	baz=312						
DY2G	Dye2	56.82	21	i P	P	11 20 45.7	+0.2
DY2G				IAmb	IAmb	11 20 46.9	
	comp=Z,2.2nm,0.5s						
WMOK	Wichita Mounta	57.02	74	P	P	11 20 47.8	+0.5
	baz=313						
LPIG	La Paz	57.30	92	LR	LR	11 42 43.8	
	comp=Z,22nm,18.0s,baz=300,slow=33						
OK052	Battle Ridge R	57.36	72	P	P	11 20 49.8	+0.3
OK031	S. Brethren Rd	57.37	72	P	P	11 20 49.6	0.0
TX31	Lajitas Ar. Si	57.74	82	P	P	11 20 53.1	+0.6
TX32	Lajitas Array	57.74	82	P	P	11 20 53.2	+0.7
TX32				IAmb	IAmb	11 20 54.0	
	comp=Z,11nm,1.1s						
TXAR	Lajitas Array	57.74	82	P	P	11 20 53.0	+0.6
	comp=Z,5.7nm,0.9s,baz=295,slow=4.8,SNR=54						
TXAR				LR	LR	11 45 33.3	
	comp=Z,21nm,18.9s,baz=321,slow=36						
	comp=Z,5.7nm,0.9s						
TXAR	Lajitas Array	57.74	82	P	P	11 20 52.7	+0.2
W35A	Tecumseh	57.89	73	P	P	11 20 52.9	-0.4
ABTX	Abilene, Hawle	57.94	77	P	P	11 20 54.6	+0.9
ABTX	Abilene, Hawle	57.94	77	P	P	11 20 54.2	+0.4
	baz=314,SNR=8.8						
TUL1	Leonard	58.02	71	P	P	11 20 54.9	+0.7
TUL1	Leonard	58.02	71	P	P	11 20 54.2	0.0
	baz=313,SNR=5.2						
L44A	Lake County Fo	58.30	61	P	P	11 20 55.7	-0.3
	baz=313						
ARCES	ARCESS Array B	58.33	351	P	P	11 20 55.9	0.0
	comp=Z,1.1nm,0.4s,baz=25,slow=8.2,SNR=19						
ARCES				PcP	PcP	11 21 46.4	-0.1
	comp=Z,5.1nm,0.8s,baz=26,slow=6.1,SNR=6.1						
ARCES				LR	LR	11 48 48.4	
	comp=Z,19nm,18.0s,baz=61,slow=39						
	comp=Z,1.1nm,0.4s						
U38A	Gravette	58.49	70	P	P	11 20 57.3	-0.2
LOOK	Love County	58.50	74	P	P	11 20 58.5	+1.0
HDIL	Hopedale	58.63	63	P	P	11 20 58.5	+0.1
HDIL	Hopedale	58.63	63	P	P	11 20 58.1	-0.2
	baz=313						
LVZ	Lovozero	58.74	346	⇑eP	P	11 20 56.7	-2.1
LVZ				pmax	pmax		
	comp=Z,56nm,2.5s						
X37A	Clayton	59.17	72	P	P	11 21 03.2	+0.9
CCM	Cathedral Cave	59.22	66	P	P	11 21 02.0	-0.5
CCM	Cathedral Cave	59.22	66	P	P	11 21 02.0	-0.5
CCM				pmax	pmax		
	comp=Z,14nm,1.3s						
CCM	Cathedral Cave	59.22	66	P	P	11 21 01.6	-0.9
	baz=314						
JCT	Junction City	59.33	78	P	P	11 21 02.9	-0.6
JCT				IAmb	IAmb	11 21 04.2	
	comp=Z,13nm,1.2s						
JCT	Junction City	59.33	78	P	P	11 21 02.9	-0.6
JCT				pmax	pmax		
	comp=Z,13nm,1.3s						
JCT	Junction City	59.33	78	P	P	11 21 03.5	0.0
	baz=315						
SCHQ	Schefferville	59.49	39	LR	LR	11 48 09.8	
	comp=Z,72nm,20.6s,baz=170,slow=37						
WHTX	Lake Whitney,	59.71	76	P	P	11 21 05.6	-0.4
	baz=315						
SFIN	Lafayette	59.97	62	P	P	11 21 06.7	-1.0
	baz=314						
WMQ	Urumqi	60.17	304	eP	P	11 21 11.2	+2.1
MIAR	Mount Ida	60.27	71	P	P	11 21 09.6	-0.2
	baz=314,SNR=13						
435B	Jarrell	60.48	77	P	P	11 21 11.1	-0.2
	baz=315						
AAM	Ann Arbor	60.52	58	P	P	11 21 10.3	-1.1
	baz=314						
WHAR	Wooly Hollow	60.52	69	P	P	11 21 10.6	-0.9
OLIL	Olney	60.55	64	P	P	11 21 11.8	+0.2
LCAR	Lake Charles	60.64	68	P	P	11 21 11.7	-0.6
LCAR				IAmb	IAmb	11 21 12.5	
	comp=Z,8.3nm,1.0s						
MK31	Makanchi Array	60.81	309	⇑eP	P	11 21 11.9	-1.5
MKAR	Makanchi Array	60.81	309	P	P	11 21 11.7	-1.7
	comp=Z,0.3nm,0.4s,baz=49,slow=6.2,SNR=8.4						
MKAR				LR	LR	11 47 49.2	
	comp=Z,40nm,20.7s,baz=334,slow=36						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	60.81	309	i P	P	11 21 12.1	-1.3
833A	Chaparral WMA,	61.10	80	P	P	11 21 15.8	+0.2
	baz=316						
O48B	Farmland	61.12	61	P	P	11 21 14.6	-0.9
	baz=315,SNR=7.6						
SADO	Sadowa	61.14	54	LR	LR	11 49 44.6	
	comp=Z,35nm,18.4s,baz=94,slow=38						
GOMU	GeErMu	61.54	293	P	P	11 21 18.9	0.0
GOMU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,75nm,7.4s						
BRVK	Borovoye	61.57	321	⇑eP	P	11 21 18.7	+0.4
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
P49A	Miami Univ. Ec	61.87	61	P	P	11 21 20.1	-0.5
	baz=315,SNR=5.4						
WCI	Wyandotte Cave	61.91	63	P	P	11 21 19.9	-1.0
	baz=315						
HKT	Hockley	62.14	76	P	P	11 21 22.0	-0.4
HKT				IAmb	IAmb	11 21 25.3	
	comp=Z,5.1nm,1.0s						
HKT	Hockley	62.14	76	P	P	11 21 22.0	-0.4
HKT				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ACSO	Alum Creek Sta	62.33	60	P	P	11 21 22.6	-1.0
	baz=315						
WVT	Waverly	62.52	66	P	P	11 21 24.8	-0.1
	baz=315						
ERPA	Erie	62.58	56	P	P	11 21 24.7	-0.6
	baz=316						
M53A	WI Miller and	62.70	57	P	P	11 21 25.2	-0.9
	baz=316						
OXF	Oxford	62.75	68	P	P	11 21 26.0	-0.4
	baz=316,SNR=9.8						
BORG	Borgarnes	62.80	11	LR	LR	11 49 51.1	
	comp=Z,19nm,20.3s,baz=337,slow=37						
ARU	Arti	63.16	329	LR	LR	11 50 44.7	
	comp=Z,13nm,19.8s,baz=132,slow=38						
ARU	Arti	63.16	329	c iP	P	11 21 29.6	+0.7
ARU				*PP	pwP	11 21 44.1	+0.6
ARU						11 22 00.8	
ARU						11 23 43.9	
ARU				S	S	11 29 55.8	-0.7
ARU				SS	SS	11 34 02.6	+0.6
ARU				pmax	pmax		
	comp=Z,4.0nm,0.5s						
P52A	Corning	63.21	59	P	P	11 21 29.3	-0.2
	baz=316						
O53A	New Philadelph	63.27	58	P	P	11 21 29.5	-0.4
	baz=316						
LONY	Lake Ozonia	63.51	51	P	P	11 21 30.9	-0.6
	baz=317						
VBMS	Vicksburg	63.72	71	P	P	11 21 33.0	0.0
	baz=316						
KIRV	Kirov	64.05	335	LR	LR	11 52 12.4	
	comp=Z,67nm,20.1s,baz=32,slow=38						
KIRV	Kirov	64.05	335	⇑eP	P	11 21 36.1	+1.4
PZH	PanZhiHua	64.28	281	P	P	11 21 37.6	+0.7
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,5.5s						
DAV	Davao City (W)	64.31	248	LR	LR	11 44 19.9	
	comp=Z,71nm,20.7s,baz=22,slow=31						
BINY	Binghamton	64.58	54	P	P	11 21 37.6	-0.9
	baz=317						
TZTN	Tazewell	64.64	63	P	P	11 21 39.1	+0.1
	baz=316,SNR=6.4						
SSPA	Standing Stone	64.74	56	P	P	11 21 38.9	-0.7
	baz=317						
CPCT	Cooper Cave	64.89	64	IAmb	IAmb	11 21 44.0	
	comp=Z,5.0nm,0.8s						
FPAL	Fort Paine	64.92	66	P	P	11 21 41.2	+0.3
S54A	Dingess, Beckl	64.97	60	P	P	11 21 40.1	-1.1
V52A	Sevierville	65.12	63	P	P	11 21 42.5	+0.3
TKL	Tuckaleechee C	65.16	64	LR	LR	11 48 22.5	
	comp=Z,51nm,22.0s,baz=352,slow=34						
TKL	Tuckaleechee C	65.16	64	P	P	11 21 42.7	+0.4
TKL	Tuckaleechee C	65.16	64	P	P	11 21 42.7	+0.4
TKL				pmax	pmax		
	comp=Z,15nm,1.0s						
LRAL	Lakeview Retre	65.20	68	P	P	11 21 42.1	-0.5
LRAL				IAmb	IAmb	11 21 46.1	
	comp=Z,8.5nm,1.0s						
LRAL	Lakeview Retre	65.20	68	P	P	11 21 42.5	-0.1
	baz=317						
R55A	Marlinton	65.27	59	P	P	11 21 43.9	+0.8
BLA	Blacksburg	65.89	60	P	P	11 21 46.6	-0.5
	baz=317						
FINES	FINESS Array B	66.07	348	P	P	11 21 47.3	-0.4
	comp=Z,0.4nm,0.4s,baz=20,slow=6.3,SNR=7.4						
	comp=Z,0.4nm,0.4s						
BRAL	Brewton	66.52	69	P	P	11 21 51.2	0.0
	baz=317						
KMSC	Kings Mountain	66.90	62	P	P	11 21 53.2	-0.3
	baz=318,SNR=13						
AAK	Ala-Archa	67.63	311	LR	LR	11 54 59.3	
	comp=Z,23nm,18.4s,baz=12,slow=39						
AAK	Ala-Archa	67.63	311	⇓eP	P	11 21 58.1	-0.1
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PMG	Port Moresby	67.80	218	LR	LR	11 50 12.4	
	comp=Z,47nm,18.3s,baz=360,slow=35						
NB2	NORSAR Subarra	67.81	356	P	P	11 21 59.2	+0.3
	comp=Z,0.6nm,0.4s,baz=5.0,slow=6.5						
NOA	NORSAR Array B	67.81	356	P	P	11 21 58.8	-0.1
	comp=Z,0.6nm,0.4s,baz=7.2,slow=6.8,SNR=11						
NOA				LR	LR	11 49 58.3	
	comp=Z,13nm,21.8s,baz=350,slow=34						
	comp=Z,0.6nm,0.4s						
AKTO	Aktyubinsk	68.29	326	LR	LR	11 56 39.7	
	comp=Z,48nm,18.6s,baz=60,slow=40						
TIGA	Tifton	68.34	67	P	P	11 22 02.1	-0.5
	baz=318						
ABKAR	Akbulak array	68.56	324	P	P	11 22 03.7	-0.1
NHSC	New Hope	69.04	63	P	P	11 22 06.5	-0.4
	baz=318						
KK31	Karatay Array	69.12	313	P	P	11 22 06.6	-0.8
KK31	Karatay Array	69.12	313	P	P	11 22 06.6	-0.8
KK31				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KKAR	Karatay Array	69.12	313	P	P	11 22 06.6	-0.8
KKAR	Karatay Array	69.12	313	P	P	11 22 06.6	-0.8
KSH	Kashi	69.29	308	P	P	11 22 12.1	+3.5
KSH				pP	PcP	11 22 29.9	-2.1
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KSH				LR	LR		
	comp=Z,320nm,13.7s						
KSH				LR	LR		
	comp=Z,190nm,13.1s						
KSH				LR	LR		
	comp=Z,220nm,12.2s						
BELG	Belogornoye	69.96	333	LR	LR	11 55 57.0	
	comp=Z,43nm,19.2s,baz=315,slow=38						
BELG	Belogornoye	69.96	333	⇑eP	P	11 22 12.8	+0.5
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
OBN	Obninsk	70.27	340	i P	P	11 22 13.6	-0.6
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SHL	Shillong	70.97	287	P	P	11 22 18.6	-0.5
SHL	Shillong	70.97	287	P	P	11 22 18.6	-0.5
SHL				pmax	pmax		
	comp=Z,22nm,1.1s						
CMAR	Chiang Mai Arr	71.95	277	P	P	11 22 25.4	+0.5
	comp=Z,0.5nm,0.3s,baz=33,slow=5.6,SNR=5.0						
CMAR				LR	LR	11 57 44.9	
	comp=Z,20nm,19.0s,baz=20,slow=39						
	comp=Z,0.5nm,0.3s						
CMAR	Chiang Mai Arr	71.95	277	i P	P	11 22 25.7	+0.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
DWPF	Disney Wildern	72.06	67	P	P	11 22 25.3	-0.1
	baz=319						
TAPN	Taplejung	72.11	291	eP	P	11 22 26.7	+0.6
MNK	Minsk	72.49	345	i P	P	11 22 26.2	-1.4
	comp=E,2.0nm,0.7s						
MNK				i P	P	11 22 26.2	-1.4
	comp=N,39nm,0.8s						
MNK				i P	P	11 22 26.2	-1.4
	comp=Z,33nm,0.8s,baz=196						
MNK				i pP	pwP	11 22 42.7	+0.4
MNK				i PP	PP	11 25 07.2	-1.2
MNK				i PPP	PPP	11 26 51.4	
MNK				i S	S	11 31 45.1	-2.9
MNK				i sS	sS	11 32 13.5	+3.6
MNK				i SS	SS	11 36 24.8	-1.2
MNK				i SSS	SSS	11 39 45.1	
MNK				i LR	LR	11 53 21.7	
MNK				i LRM	MLR	11 56 47.8	
	comp=E,8.0nm,18.1s						
MNK				i LRM	MLR	11 56 47.8	
	comp=N,435nm,20.6s						
MNK				i LRM	MLR	11 56 47.8	
	comp=Z,45nm,20.6s						
MNK	Minsk	72.49	345	i P	P	11 22 26.2	-1.4
MNK				i *PP	pwP	11 22 42.7	+0.4
MNK				i		11 25 07.2	
MNK				i PPP	PPP	11 26 51.4	
MNK				i S	S	11 31 45.1	-2.9
MNK				i *SS	sS	11 32 13.5	+3.6
MNK				i		11 32 27.1	
MNK				i SS	SS	11 36 24.8	-1.2
MNK				pmax	pmax		
	comp=E,2.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,39nm,0.8s						
MNK				pmax	pmax		
	comp=Z,33nm,0.8s						
MNK				MLR	MLR		
	comp=E,8.0nm,18.0s						

MNK				MLR	MLR		
	comp=N,435nm,21.0s						
MNK				MLR	MLR		
	comp=Z,45nm,21.0s						
ODAN	Odare	72.66	291	eP	P	11 22 29.7	+0.3
PPT	Papeete	72.74	152	LR	LR	11 49 06.3	
	comp=Z,54nm,19.1s,baz=52,slow=31						
GUN	Gumba	72.75	293	eP	P	11 22 30.4	+0.4
	comp=Z,73nm,0.6s						
JIRN	Jiri	72.76	293	eP	P	11 22 30.5	+0.4
	comp=Z,64nm,0.8s						
RAMN	Ramite	73.06	292	eP	P	11 22 31.9	+0.2
	comp=Z,70nm,0.9s						
CHGR	Chuyangaron	73.27	311	P	P	11 22 32.4	-0.2
CHGR	Chuyangaron	73.27	311	P	P	11 22 32.4	-0.2
CHGR				pmax	pmax		
	comp=Z,24nm,0.9s						
PKI	Pulchoki	73.28	293	eP	P	11 22 33.2	+0.1
	comp=Z,36nm,1.0s						
PKIN	Phulchoki	73.28	293	eP	P	11 22 33.2	+0.1
	comp=Z,20nm,0.7s						
GKN	Gorkha	73.39	294	eP	P	11 22 33.4	-0.2
DMN	Daman	73.42	293	eP	P	11 22 34.5	+0.6
DANN	Dangsing	73.63	295	eP	P	11 22 35.3	+0.1
	comp=Z,41nm,0.8s						
RAR	Rarotonga	73.82	163	LR	LR	11 46 13.5	
	comp=Z,80nm,21.4s,baz=312,slow=28						
PYUN	Piuthan	74.26	295	eP	P	11 22 38.5	-0.2
	comp=Z,62nm,1.0s						
AKASG	Malin Array Be	75.91	343	P	P	11 22 47.6	+0.1
	comp=Z,0.5nm,0.3s,baz=13,slow=5.6,SNR=9.4						
	comp=Z,0.5nm,0.3s						
AKASG	Malin Array Be	75.91	343	i P	P	11 22 47.2	-0.3
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKBB	Malin Array Si	75.91	343	⇑eP	P	11 22 47.6	+0.1
KBL	Kabul	76.62	309	P	P	11 22 51.2	-1.0
KBL				IAmb	IAmb	11 22 52.2	
	comp=Z,9.7nm,0.9s						
KBL	Kabul	76.62	309	P	P	11 22 51.2	-1.0
KBL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CLL	Collm	77.40	353	eP	P	11 22 55.0	-1.0
	comp=Z,5.0nm,1.3s						
CLL	Collm	77.40	353	eP	P	11 22 55.0	-1.0
CLL				pmax	pmax		
	comp=Z,5.0nm,1.3s						
CTA	Charters Tower	77.93	215	P	P	11 22 59.1	-0.1
	comp=Z,3.5nm,0.9s,baz=352,slow=12,SNR=2.3						
	comp=Z,3.5nm,0.9s						
MTN	Manton Dam	77.94	231	P	P	11 22 58.7	-0.7
MTN				IAmb	IAmb	11 22 59.5	
	comp=Z,8.1nm,1.0s						
DPC	Dobruska-Polom	78.07	351	eP	P	11 23 00.4	+0.6
DPC	Dobruska-Polom	78.07	351	eP	P	11 23 00.4	+0.6
BTNL	Ternell	78.45	358	dP	P	11 23 02.8	+1.0
SNF	Seneffe	78.56	359	dP	P	11 23 03.1	+0.7
BMRD	Maredsous	78.77	359	dP	P	11 23 04.4	+0.8
BMRD				dPcP	PcP	11 23 11.2	-1.1
GEYT	Alibeck	78.77	318	P	P	11 23 04.2	+0.3
	comp=Z,4.2nm,0.6s,baz=291,slow=4.1,SNR=7.1						
GEYT				LR	LR	12 01 47.7	
	comp=Z,55nm,19.0s,baz=43,slow=39						
	comp=Z,4.2nm,0.6s						
DOU	Dourbes	78.97	359	dP	P	11 23 04.8	+0.1
KBZ	Khabaz	79.14	332	P	P	11 23 06.4	+0.7
	comp=Z,5.8nm,0.8s,baz=46,slow=3.8,SNR=11						
	comp=Z,5.8nm,0.8s						
KBZ	Khabaz	79.14	332	deP	P	11 23 06.3	+0.6
KBZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KHC	Kasperske Hory	79.52	353	P	P	11 23 07.0	-0.8
KHC				IAmb	IAmb	11 23 09.0	
	comp=Z,4.8nm,1.0s						
KHC	Kasperske Hory	79.52	353	eP	P	11 23 08.3	+0.5
KHC	Kasperske Hory	79.52	353	⇑eP	P	11 23 07.2	-0.6
KHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BUR08	Bucovina Ar. S	79.56	345	P	P	11 23 08.8	+0.7
BUR08				IAmb	IAmb	11 23 09.2	
	comp=Z,5.2nm,0.9s						
BURAR	Bucovina Array	79.59	345	P	P	11 23 08.9	+0.7
BURAR				IAmb	IAmb	11 23 11.5	
	comp=Z,4.5nm,0.8s						
BURAR	Bucovina Array	79.59	345	P	P	11 23 08.9	+0.7
BURAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VYHS	Vyhne	79.63	349	eP	P	11 23 09.0	+0.6
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.5s						
VYHS	Vyhne	79.63	349	eP	P	11 23 09.0	+0.6
ZEI	Tsey	79.68	330	eP	P	11 23 08.1	-0.9
ZEI				pmax	pmax		
	comp=Z,13nm,0.9s						
GEC2	GERESS Array S	79.80	353	P	P	11 23 07.7	-1.6
GERES	GERESS Array B	79.80	353	P	P	11 23 09.6	+0.2
	comp=Z,0.9nm,0.8s,baz=350,slow=5.3,SNR=5.1						
	comp=Z,0.9nm,0.8s						
GERES	GERESS Array B	79.80	353	P	P	11 23 08.8	-0.5
CONA	Conrad Observa	80.51	351	i P	P	11 23 12.8	-0.4
	comp=Z,2.1nm,0.7s						
CDF	Champ du Feu	80.59	357	eP	P	11 23 12.4	-1.2
CDF				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MOA	Molln	80.74	352	i P	P	11 23 13.6	-0.7
	comp=Z,4.9nm,1.1s						
ECH	Echery	80.80	357	P	P	11 23 14.6	0.0
ECH				IAmb	IAmb	11 23 15.5	
	comp=Z,7.4nm,1.1s						
ECH	Echery	80.80	357	P	P	11 23 14.6	0.0
ECH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BIOA	Bad Ischl, Aus	80.95	353	eP	P	11 23 14.4	-1.1
	comp=Z,6.5nm,1.0s						
RETA	Reutte	81.35	354	eP	P	11 23 18.2	+0.6
	comp=Z,4.0nm,1.2s						
WATA	Walderalm	81.45	354	eP	P	11 23 18.6	+0.3
	comp=Z,7.4nm,1.0s						
MOTA	Moosalm	81.47	354	eP	P	11 23 18.8	+0.4
	comp=Z,8.0nm,1.2s						
WTTA	Wattenberg	81.52	354	eP	P	11 23 18.4	-0.3
	comp=Z,6.4nm,1.1s						
MLR	Muntele Rosu	81.52	344	P	P	11 23 17.1	-1.6
MLR				IAmb	IAmb	11 23 21.0	
	comp=Z,7.2nm,0.8s						
MLR	Muntele Rosu	81.52	344	P	P	11 23 17.1	-1.6
MLR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KBA	Koelnbreinsper	81.58	353	i PcP	P	11 23 19.7	+0.7
	comp=Z,20nm,1.1s						
SQTA	Sankt Quirin	81.59	354	eP	P	11 23 18.7	-0.3
	comp=Z,3.6nm,0.7s						
DAVA	Damuels	81.60	355	eP	P	11 23 14.7	-4.4
	comp=Z,1.8nm,0.6s						
VOIR		81.73	344	P	P	11 23 20.3	+0.6
VOIR				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GNI	Garni	81.81	329	LR	LR	12 05 46.8	
	comp=Z,37nm,18.2s,baz=27,slow=40						
GNI	Garni	81.81	329	⇑eP	P	11 23 20.7	+0.4
GNI				pmax	pmax		
	comp=Z,11nm,1.4s						
FETA	Feichten	81.82	354	eP	P	11 23 20.6	+0.3
	comp=Z,7.4nm,1.0s						
SOKA	Soboth	81.83	351	i P	P	11 23 20.8	+0.6
	comp=Z,11nm,1.1s						
ABTA	Abfaltersbach	81.97	353	i P	P	11 23 21.0	+0.1
	comp=Z,8.0nm,1.0s						
MYKA	Terra Mystica	82.00	352	i P	P	11 23 19.6	-1.5
	comp=Z,5.6nm,1.1s						
SSF	Saint Saulge	82.02	359	eP	P	11 23 21.3	+0.2
SSF				pmax	pmax		
	comp=Z,18nm,1.4s						
OBKA	Obir	82.04	352	i PcP	P	11 23 22.4	+1.1
	comp=Z,9.3nm,1.1s						
ACON	Acoyapa	82.10	81	P	P	11 23 21.7	-0.3
WRAB	Tennant Creek	82.59	225	⇑eP	P	11 23 23.5	-0.8
WRAB				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WRA	Warramunga Arr	82.61	225	P	P	11 23 23.4	-1.0
	comp=Z,1.4nm,0.8s,baz=38,slow=6.4,SNR=9.2						
	comp=Z,1.4nm,0.8s						
WRA	Warramunga Arr	82.61	225	i P	P	11 23 23.3	-1.1
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TEOL	Teolo	83.41	354	P	P	11 23 28.1	-0.3
PSI	Prapat	83.92	267	P	P	11 23 31.4	-0.1
PSI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
RPSI	Rantau Prapat	84.00	267	P	P	11 23 31.4	-0.4
RPSI				IAmb	IAmb	11 23 31.9	
	comp=Z,9.4nm,0.9s						
GEVA	Gevas	84.02	329	P	P	11 23 32.4	+0.5
ISO	Isola	84.83	357	P	P	11 23 36.4	+0.7
ISO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
OSSC	Osservatorio P	85.27	354	P	P	11 23 37.2	-0.6
BR131	Keskin Array S	85.40	337	d iP	P	11 23 38.5	-0.2
BRTR	Keskin Array B	85.40	337	P	P	11 23 38.8	0.0
	comp=Z,7.5nm,0.8s,baz=48,slow=2.7,SNR=34						
	comp=Z,7.5nm,0.8s						
BRTR	Keskin Array B	85.40	337	P	P	11 23 38.3	-0.4
ASAR	Alice Springs	86.06	224	P	P	11 23 41.4	-0.5
	comp=Z,2.4nm,0.8s,baz=22,slow=5.7,SNR=23						
ASAR				LR	LR	11 59 56.7	
	comp=Z,52nm,18.9s,baz=125,slow=34						
	comp=Z,2.4nm,0.8s						
ESDC	Sonseca Array	89.22	5	P	P	11 23 56.3	-0.7
	comp=Z,2.2nm,0.8s,baz=354,slow=4.4,SNR=16						
	comp=Z,2.2nm,0.8s						
ESDC	Sonseca Array	89.22	5	P	P	11 23 55.9	-1.2
ESDC				IAmb	IAmb	11 23 57.3	
	comp=Z,2.4nm,0.8s						
STKA	Stephens Creek	90.37	214	P	P	11 24 01.9	-0.2
	comp=Z,3.1nm,0.9s,baz=346,slow=10,SNR=5.5						
	comp=Z,3.1nm,0.9s						
RAYN	Ar Rayn	96.54	321	P	P	11 24 29.9	-1.1
RAYN				IAmb	IAmb	11 24 31.6	
	comp=Z,3.5nm,0.9s						
RAYN	Ar Rayn	96.54	321	P	P	11 24 29.9	-1.1
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TORD	Torodi Ar. Bea	115.83	1	PKP	PKiKP	11 29 43.0	-0.8
	comp=Z,0.4nm,0.4s,baz=359,slow=2.6,SNR=7.4						
H03N2	Juan Fernandez	120.23	107	T	T	13 41 38.4	
	baz=317,slow=77,SNR=46						
H03N1	Juan Fernandez	120.24	107	T	T	13 41 38.8	
	baz=317,slow=77,SNR=70						
H03N3	Juan Fernandez	120.24	107	T	T	13 41 37.4	
	baz=317,slow=77,SNR=82						

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*IDC **10** 11:13:20.1±5.1, 2°.71N×128°.35E, h234^{km}±42^{km}, mb3.4/6, mbtmp4.0/7, MS2.9/1, Error ellipse: s-maj=109.9km s-min=12.7km az=88.0*

*NEIC **10** 11:13:21.7±1.2, 2°.7N±0°.1×128°.5E±0°.1, h243^{km}±9^{km}, mb4.1/21, Error ellipse: s-maj=18.2km s-min=13.9km az=55.0*

*DJA **10** 11:13:22.0±0.7, 3°N±7°×12°8E±°, h231^{km}±5^{km}, M4.1/13, mb4.1/8, mB4.9/4, MLv4.1/13, Mw(mB)4.2/4*

ISC 10 11:13:21.7±0.6**, 2°.69N**±0°.06×**128°.50E**±0°.08**, h250^{km}, n49, σ0^s.91**/51**, mb4.0**/16**, 1C-1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.22	211	Pn	Pn	11 14 05.4	-0.9
TNTI	Ternate	2.22	211	P	Pn	11 14 05.1	-1.2
SGSI	Sangihe	3.12	288	P	Pn	11 14 14.1	-1.5
SGSI				S	S	11 14 56.3	-1.9
LBMI	Labuha	3.46	197	P	Pn	11 14 18.0	-1.3
SIJI	Sorong	4.49	142	P	Pn	11 14 30.7	-0.8
	11nm,0.6s,baz=335,slow=14,SNR=9.6						
SIJI				S	S	11 15 25.2	-1.8
	2.5nm,0.4s,baz=243,slow=22,SNR=1.3						
SANI	Sanana	5.34	208	P	Pn	11 14 40.0	-1.7
	290nm,0.7s,5μm1.2nm						
KCP	Kidapawan	5.47	322	⇓iP	Pn	11 14 41.7	-1.7
SKMP	Bagumbayan, Su	5.47	314	⇑eP	Pn	11 14 42.3	-1.1
GTOI	Gorontalo	5.85	250	P	Pn	11 14 48.9	+0.8
	25nm,0.7s,304nm0.1nm						
NLAI	Namlea	6.06	193	P	Pn	11 14 50.9	+0.3
	15nm,0.5s,4μm0.1nm						
FAKI	Fak Fak	6.72	146	Pn	Pn	11 14 58.1	-0.9
FAKI	Fak Fak	6.72	146	P	Pn	11 14 59.0	0.0
	31nm,1.0s,0.1nm						
LUWI	Luwuk	6.82	237	Pn	Pn	11 14 57.6	-2.6
LUWI	Luwuk	6.82	237	P	Pn	11 14 59.4	-0.8
	93nm,0.7s,2μm0.4nm						
MRSI	Marisa	6.91	252	P	Pn	11 15 01.3	-0.1
	36nm,0.5s,0.2nm						
TOLI2	Tolitoli	7.87	259	Pn	Pn	11 15 13.2	-0.2
MPSI	Mapaga	8.91	255	P	Pn	11 15 27.0	+0.4
	7.5nm,1.0s						
BKSI	Bulukumba	11.55	226	P	Pn	11 16 00.0	+0.2
MTN	Manton Dam	15.66	170	P	P	11 16 48.3	-0.6
MTN				IAmb	IAmb	11 16 52.6	
	comp=Z,13nm,1.3s						
KNRA	Kununurra	18.25	179	P	P	11 17 18.3	+1.1
FITZ	Fitzroy Crossi	20.85	188	P	P	11 17 45.2	+0.3
WB0	Warramunga Arr	23.06	166	P	P	11 18 05.0	-0.6
WB0				IAmb	IAmb	11 18 09.1	
	comp=Z,6.6nm,1.2s						
TATO	Taipei	23.16	344	P	P	11 18 06.6	+0.3
WRAB	Tennant Creek	23.21	166	P	P	11 18 06.1	-0.8
WRAB				IAmb	IAmb	11 18 20.4	
	comp=Z,8.9nm,1.4s						
WRA	Warramunga Arr	23.22	166	P	P	11 18 06.6	-0.4
	comp=Z,0.7nm,0.3s,baz=346,slow=10,SNR=25						
	comp=Z,0.7nm,0.3s						
WRA	Warramunga Arr	23.22	166	P	P	11 18 06.9	-0.1
WB2	Warramunga Arr	23.22	166	P	P	11 18 07.2	+0.2
WB2				IAmb	IAmb	11 18 08.1	
	comp=Z,3.0nm,0.8s						
AS31	Alice Springs	26.72	169	P	P	11 18 38.9	+0.4
ASAR	Alice Springs	26.73	169	P	P	11 18 38.6	0.0
	comp=Z,1.0nm,0.5s,baz=353,slow=7.3,SNR=55						
	comp=Z,1.0nm,0.5s						
FORT	Forrest	33.29	181	P	P	11 19 36.2	+0.1
KSRS	Korea Array	34.60	359	P	P	11 19 47.2	+0.1
	comp=Z,0.9nm,0.6s,baz=170,slow=8.5,SNR=4.8						
	comp=Z,0.9nm,0.6s						
MJAR	Matsushiro Arr	34.86	14	P	P	11 19 48.1	-1.3
	comp=Z,3.0nm,0.8s,baz=186,slow=9.8,SNR=5.8						
	comp=Z,3.0nm,0.8s						
BBOO	Buckleboo	36.03	169	P	P	11 20 00.1	+0.6
BBOO				IAmb	IAmb	11 20 04.9	
	comp=Z,14nm,1.4s						
STKA	Stephens Creek	36.56	161	P	P	11 20 04.6	+0.6
	comp=Z,2.8nm,0.8s,baz=333,slow=9.3,SNR=13						
	comp=Z,2.8nm,0.8s						
STKA	Stephens Creek	36.56	161	P	P	11 20 04.4	+0.4
JTM	Tenmabayashi	39.59	15	P	P	11 20 29.5	+0.5
PEA0B	Petropavlovsk-	55.74	21	P	P	11 22 32.7	+0.1
PETK	Petropavlovsk-	55.74	21	P	P	11 22 33.3	+0.7
	comp=Z,1.3nm,0.7s,baz=177,slow=8.3,SNR=5.6						
PETK				LR	LR	11 48 10.2	
	comp=Z,10nm,19.3s,baz=257,slow=38						
	comp=Z,1.3nm,0.7s						
PETK	Petropavlovsk-	55.74	21	P	P	11 22 33.4	+0.9
ZAA0	Zalesovo Array	62.31	333	P	P	11 23 18.4	+0.9
ZAA0				IAmb	IAmb	11 23 35.3	
	comp=Z,2.6nm,1.2s						
ZALV	Zalesovo Beam	62.31	333	P	P	11 23 18.2	+0.7
KURK	Kurchatov	63.56	327	P	P	11 23 26.5	+0.8
KURK				IAmb	IAmb	11 23 32.4	
	comp=Z,5.6nm,1.5s						
M20K	Styx River	82.16	28	P	P	11 25 14.5	-0.1
M20K				IAmb	IAmb	11 25 49.1	
	comp=Z,5.0nm,1.4s						
IMAR	Indian Mountai	82.57	24	P	P	11 25 17.2	+0.6
PPLA	Purkeypile	82.74	27	P	P	11 25 17.9	+0.2
PPLA				IAmb	IAmb	11 25 58.9	
	comp=Z,9.9nm,1.4s						
CAST	Castle Rocks	82.87	26	P	P	11 25 18.8	+0.6
BMAR	Burnt Mountain	86.34	23	P	P	11 25 35.7	+0.2
MCARA	McCarthy VSAT	86.92	29	P	P	11 25 38.3	0.0
MCARA				IAmb	IAmb	11 25 41.8	
	comp=Z,8.5nm,1.2s						
QSPA	South Pole Qui	92.61	180	P	P	11 26 05.4	+0.5
QSPA				IAmb	IAmb	11 26 13.9	
	comp=Z,4.7nm,1.4s						

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*MOS **10** 11:26:52.1±0.0, 41°.89N×48°.04E, h9^{km}, MPVA3.8*

*DRS **10** 11:26:53.1±0.0, 41°.85N×48°.30E, h18^{km}*

ISC 10 11:26:53.4±0.9**, 41°.86N**±0°.03×**48°.05E**±0°.04**, h5^{km}, n19, σ1^s.08**/37**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRN	Derbent	0.27	51	ePg	Pg	11 26 58.7	+0.1
	694nm,0.2s						
DRN				eSg	Sg	11 27 03.4	+1.3
	3μm,0.4s						
KSMR	Kasumkent	0.27	168	i Pg	Pb	11 26 59.8	-0.9
KSMR				i Sg	Sb	11 27 05.0	-0.6
URKR	Urkarakh	0.43	314	ePg	Pb	11 27 02.8	-0.9
	93nm,0.1s						
URKR				eSg	Sb	11 27 09.9	-0.7
	4μm,0.2s						
AKT	Akhty	0.45	212	i Pg	Pb	11 27 03.1	-0.8
AKT				i Sg	Sb	11 27 10.4	-0.6
SGKR	Sergokala	0.66	334	ePg	Pb	11 27 06.4	-1.1
	2.0nm,0.0s						
SGKR				eSg	Sb	11 27 16.2	-0.8
	12nm,0.3s						
GNBR	Gunib	0.96	303	ePg	Pb	11 27 12.1	-0.5
	29nm,0.1s						
GNBR				eSg	Sb	11 27 26.4	+0.7
	54nm,0.4s						
ARKR	Arakani	1.08	314	ePg	Pg	11 27 13.6	-0.5
	3.0nm,0.2s						
ARKR				eSg	Sb	11 27 28.8	-0.2
	101nm,0.4s						
BUJR	Buynaksk	1.19	324	ePg	Pg	11 27 14.7	-1.5
	67nm,0.2s						
BUJR				eSg	Sg	11 27 30.9	-0.7
	48nm,0.5s						
XNZR	Khunzakh	1.21	305	ePg	Pg	11 27 16.1	-0.5
	12nm,0.3s						
XNZR				eSg	Sg	11 27 32.9	+0.7
	59nm,0.4s						
UNCR	Uncukul	1.26	313	ePg	Pg	11 27 17.3	-0.3
	14nm,0.5s						
UNCR				eSg	Sn	11 27 34.9	-0.3
	29nm,0.2s						
KRNR	Karanay	1.28	319	ePg	Pn	11 27 17.1	-1.0
	8.0nm,0.2s						
KRNR				i Sg	Sg	11 27 34.8	+0.1
	43nm,0.4s						
LGD	Lagodekhi	1.35	269	P	Pn	11 27 18.3	-0.7
LGD				S	Sb	11 27 36.7	-0.2
DBC	Dubki	1.47	322	ePg	Pb	11 27 20.2	-1.1
	17nm,0.1s						
DBC				eSg	Sg	11 27 40.9	+0.3
	27nm,0.6s						
BTLR	Botlikh	1.58	301	ePg	Pb	11 27 22.1	-1.0
BTLR				eSg	Sg	11 27 44.7	+0.6
DLMR	Dylym	1.60	319	ePg	Pg	11 27 23.7	-0.4
	48nm,0.2s						
DLMR				i Sg	Sg	11 27 46.1	+1.3
	172nm,0.3s						
DVE	Vedeno	1.80	308	ePg	Pn	11 27 24.8	-0.4
DVE				eSg	Sb	11 27 50.4	+0.7
SHTL	Shatili	2.29	291	P	Pb	11 27 34.0	-1.3
BTKR	Batakoyurt	3.00	301	ePn	Pn	11 27 42.1	+0.5
BTKR				eSn	Sn	11 28 20.8	+2.9
ZEI	Tsey	3.21	288	ePn	Pn	11 27 46.7	+1.9
ZEI				eSn	Sn	11 28 26.1	+2.7

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*MIRAS **10** 11:34:09.0, 56°.97N×61°.45E, h0^{km}, ML2.6/11*

ISC 10 11:34:07.8±2.4**, 56°.94N**±0°.04×**61°.64E**±0°.08**, h1^{km}**±14^{km}**, n9, σ0^s.78**/34**, 5C, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAUR	Kamensk Uralsk	0.52	188	eP	Pn	11 34 20.4	-2.0
	baz=191						
KAUR				eP	Pn	11 34 20.4	-2.0
	baz=191						
KAUR				eP	Pn	11 34 20.4	-2.0
	161nm,0.3s,baz=191						
KAUR				eS	Sb	11 34 27.9	+0.2
	baz=191						
KAUR				eS	Sb	11 34 27.9	+0.2
	baz=191						
KAUR				eS	Sb	11 34 27.9	+0.2
	703nm,0.3s,baz=191						
KAUR				i AML	AML	11 34 32.0	
	646nm,0.6s						
SVE	Sverdlovsk	0.56	258	eP	Pb	11 34 19.9	-0.5
	baz=255						
SVE				eP	Pb	11 34 19.9	-0.5
	46nm,0.3s,baz=255						
SVE				eP	Pb	11 34 19.9	-0.5
	baz=255						
SVE				eS	Sg	11 34 26.5	+0.7
	137nm,0.4s,baz=255						
SVE				eS	Sg	11 34 26.5	+0.7
	baz=255						
SVE				eS	Sg	11 34 26.5	+0.7
	155nm,0.3s,baz=255						
SVE				i AML	AML	11 34 31.2	
	185nm,0.7s,baz=255						
ARU	Arti	1.77	254	eP	Pg	11 34 41.9	+0.1
	baz=254						
ARU				eP	Pg	11 34 41.9	+0.1
	30nm,0.4s,baz=254						
ARU				eP	Pg	11 34 41.9	+0.1
	baz=254						
ARU				S	Sg	11 35 04.6	-0.1
	42nm,0.3s,baz=254						
ARU				S	Sg	11 35 04.6	-0.1
	baz=254						
ARU				S	Sg	11 35 04.6	-0.1
	117nm,0.6s,baz=254						
ARU				i AML	AML	11 35 07.9	
	131nm,0.5s,baz=254						
PR7R	Sarany	2.23	317	P	Pb	11 34 48.9	0.0
	45nm,0.3s,baz=316						
PR7R				P	Pb	11 34 48.9	0.0
	baz=316						
PR7R				P	Pb	11 34 48.9	0.0
	baz=316						
PR7R				S	Sb	11 35 17.1	+0.1
	87nm,0.3s,baz=316						
PR7R				S	Sb	11 35 17.1	+0.1
	baz=316						
PR7R				S	Sb	11 35 17.1	+0.1
	90nm,0.3s,baz=316						
PR7R				i AML	AML	11 35 20.6	
	92nm,0.3s,baz=316						
PR7R				i AML	AML	11 35 20.6	
	91nm,0.3s,baz=316						
PR7R				i AML	AML	11 35 20.6	
	baz=316						
PR3R	Kungur	2.57	283	P	Pb	11 34 54.7	+0.1
	baz=282						
PR3R				P	Pb	11 34 54.7	+0.1
	baz=282						
PR3R				P	Pb	11 34 54.7	+0.1
	baz=282						
PR3R				S	Sb	11 35 26.5	-0.2
	baz=282						
PR3R				S	Sb	11 35 26.5	-0.2
	baz=282						
PR3R				S	Sb	11 35 26.5	-0.2
	baz=282						
PR0R	Verkhnechusovs	2.73	299	i S	Sb	11 35 30.7	-0.6
	baz=298						
SVUR	Severouralsk	3.38	346	i S	Sn	11 35 42.7	+0.4
	baz=345						
AKTO	Aktyubinsk	6.87	200	⇑Sn	Sn	11 37 09.7	+1.4
	1.3nm,0.9s						
AKTO				⇑Lg	Lg	11 37 49.9	
	1.9nm,1.1s						
AB31	Akbulak array	7.77	188	⇑Pn	Pn	11 36 03.2	+1.3
	0.2nm,0.3s,baz=352,slow=14,SNR=16						
AB31				⇑Sn	Sn	11 37 39.7	+9.3
	0.3nm,0.5s						
AB31				⇑Lg	Lg	11 38 23.9	
	0.8nm,0.4s,baz=358,slow=27,SNR=6.4						

IDC 10 11:40:28.7±999.0**, 56°.90N**×**35°.12E, h0^{km}, Error ellipse: s-maj=904.4km s-min=28.2km az=98.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	1.17	98	I	I	11 46 50.0	
	0.1nm,0.6s,baz=280,slow=305,SNR=0.7						
I31KZ	AKTYUBINSK INF	15.01	106	I	I	13 10 10.0	
	baz=306,slow=324,SNR=1.2						
I46RU	ZALESOVO INFRA	27.86	75	I	I	14 33 30.0	
	baz=298,slow=332,SNR=0.9						

NEIC ***10*** *11:46:01.1±2.3, 22°.64S±0°.07×67°.4W±0°.2, h184km±12km, mb4.4/4, ML3.9(GUC), Error ellipse: s-maj=21.7km s-min=10.3km az=83.0*

VAO ***10*** *11:46:03.7±0.6, 23°.02S×67°.82W, h187km, mb3.9*

SCB ***10*** *11:46:04.6±1.3, 22°.49S×67°.77W, h182km±11km, ML4.0/4, MW3.7, Error ellipse: s-maj=5.4km s-min=4.0km az=0.0*

SJA ***10*** *11:46:05.4±0.6, 22°.61S×67°.74W, h165km±6km, ML3.8, MW3.7, Hypocentre not reviewed by the ISC*

GUC ***10*** *11:46:07.6±0.8, 22°.57S×67°.87W, h166km±7km, ML4.0*

ISC 10 11:46:02.6±0.7**, 22°.65S**±0°.04×**67°.76W**±0°.05**, h189**km±8km**, n81, σ1ˢ93**/104**, 9C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.06	272		Pn	11 46 33.5	+1.4
LVC				Sn	Sn	11 46 53.6	-1.2
LVC	Limon Verde	1.06	272	*e*P	Pn	11 46 32.9	+0.8
LVC				*i* S	Sn	11 46 52.7	-2.1
LVC	Limon Verde	1.06	272	Pg	Pn	11 46 33.5	+1.4
LVC	Limon Verde	1.06	272	*e*P	Pn	11 46 33.0	+0.9
LVC	Limon Verde	1.06	272	*e*P		11 46 33.1	
LVC				*e*S		11 46 56.5	
PB09	IPOC Station P	1.62	302		Pn	11 46 38.8	+2.1
PB09				Sn	Sn	11 47 02.4	-0.6
PB09	IPOC Station P	1.62	302	⇑*i*P	Pn	11 46 38.7	+2.1
PB09				*i* S	Sn	11 47 02.2	-0.8
PB09				IAML		11 47 04.2	
	comp=N,691nm,0.8s						
PB09	IPOC Station P	1.62	302	Pg	Pn	11 46 38.1	+1.5
PB09	IPOC Station P	1.62	302	*e*P		11 46 38.9	
PB09				*e*S		11 47 02.0	
PB09				IAML		11 47 07.2	
	comp=Z,287nm,0.3s						
PB15	IPOC Station P	1.67	250		Pn	11 46 39.5	+2.3
PB15	IPOC Station P	1.67	250	⇑*i*P	Pn	11 46 39.5	+2.3
PB15				*i* S	Sn	11 47 04.1	+0.1
PB15	IPOC Station P	1.67	250	*e*P		11 46 39.5	
PB15				IAML		11 47 08.9	
	comp=Z,2μm,0.2s						
PB06	IPOC Station P	1.67	268		Pn	11 46 38.9	+1.8
PB06	IPOC Station P	1.67	268	⇑*i*P	Pn	11 46 39.0	+1.8
PB06				*i* S	Sn	11 47 03.7	-0.1
PB06				IAML		11 47 06.1	
	comp=N,512nm,0.4s						
PB06	IPOC Station P	1.67	268	Pg	Pn	11 46 39.2	+2.1
PB06	IPOC Station P	1.67	268	*e*P		11 46 39.3	
PB06				*e*S		11 47 06.1	
PB06				IAML		11 47 09.6	
	comp=Z,260nm,0.2s						
PB03	IPOC Station P	1.94	288		Pn	11 46 41.8	+1.9
PB03	IPOC Station P	1.94	288	⇑*i*P	Pn	11 46 41.7	+1.9
PB03				*i* S	Sn	11 47 07.6	-1.1
PB03				IAML		11 47 09.7	
	comp=N,2μm,0.1s						
PB03	IPOC Station P	1.94	288	Pg	Pn	11 46 41.7	+1.9
PB03	IPOC Station P	1.94	288	*e*P		11 46 41.5	
PB03				*e*S		11 47 08.4	
PB03				IAML		11 47 09.7	
	comp=Z,816nm,0.1s						
YJA	Yavi	2.13	78	Pg	Pn	11 46 44.2	+2.0
YJA	Yavi	2.13	78	*e*P		11 46 44.3	
YJA				*e*S		11 47 02.3	
PB07	IPOC Station P	2.17	295		Pn	11 46 44.3	+1.9
PB07	IPOC Station P	2.17	295	⇑*i*P	Pn	11 46 44.4	+2.0
PB07				*i* S	Sn	11 47 12.2	-1.0
PB07				IAML		11 47 12.9	
	comp=E,2μm,0.3s						
PB07	IPOC Station P	2.17	295	Pg	Pn	11 46 44.6	+2.2
PB07				Sg	Sn	11 47 12.4	-0.8
PB07				IAML		11 47 12.9	
	comp=E,2μm,0.3s						
PB07	IPOC Station P	2.17	295	*e*P		11 46 44.5	
PB07				*e*S		11 47 12.5	
PB07				IAML		11 47 13.8	
	comp=Z,957nm,0.1s						
PB04	IPOC Station P	2.23	278		Pn	11 46 45.1	+2.1
PB04	IPOC Station P	2.23	278	⇑*i*P	Pn	11 46 45.1	+2.1
PB04				*i* S	Sn	11 47 13.5	-0.9
PB04				IAML		11 47 16.0	
	comp=N,693nm,0.3s						
PB04				IAML		11 47 17.0	
	comp=E,605nm,0.1s						
PB04	IPOC Station P	2.23	278	Pg	Pn	11 46 45.1	+2.1
PB04	IPOC Station P	2.23	278	*e*P		11 46 45.2	
PB04				*e*S		11 47 14.0	
PB04				IAML		11 47 16.2	
	comp=Z,477nm,0.2s						
HJA	Humahuaca	2.24	105	*e*P		11 46 45.6	
PB01	IPOC Station P	2.27	315	*e*P		11 46 45.2	
PB01				*e*S		11 47 15.2	
PB01				IAML		11 47 15.9	
	comp=Z,1μm,0.2s						
PB01	IPOC Station P	2.27	315		Pn	11 46 45.3	+1.9
PB01	IPOC Station P	2.27	315	*e*P	Pn	11 46 45.2	+1.9
PB01				*i* S	Sn	11 47 13.8	-1.2
PB01	IPOC Station P	2.27	315	Pg	Pn	11 46 44.5	+1.2
PB01				Sg	Sn	11 47 14.4	-0.6
PB01				IAML		11 47 15.6	
	comp=Z,1μm,0.2s						
PB02	IPOC Station P	2.38	303		Pn	11 46 46.7	+2.1
PB02	IPOC Station P	2.38	303	⇑*e*P	Pn	11 46 46.5	+1.9
PB02				*i* S	Sn	11 47 15.8	-1.5
PB02				IAML		11 47 17.2	
	comp=N,2μm,0.5s						
PB02	IPOC Station P	2.38	303	Pg	Pn	11 46 45.7	+1.1
PB02				Sg	Sn	11 47 15.9	-1.4
PB02				IAML		11 47 21.9	
	comp=N,1μm,0.3s						
PB02	IPOC Station P	2.38	303	*e*P		11 46 46.7	
PB02				*e*S		11 47 16.2	
PB02				IAML		11 47 17.6	
	comp=Z,1μm,0.2s						
MOCB	Mochara	2.42	55	Pg	Pn	11 46 47.2	+1.8
MOCB				Sg	Sn	11 47 17.4	-1.1
MOCB				IAML		11 47 19.3	
	comp=Z,54nm,0.6s						
PB10	IPOC Station P	2.71	251		Pn	11 46 50.8	+2.5
PB10	IPOC Station P	2.71	251	⇑*i*P	Pn	11 46 50.7	+2.5
PB10				*i* S	Sn	11 47 23.0	-0.9
PB10				IAML		11 47 24.9	
	comp=N,158nm,0.2s						
PB10	IPOC Station P	2.71	251	*e*P		11 46 50.9	
PB10				*e*S		11 47 24.9	
PB08	IPOC Station P	2.82	332		Pn	11 46 52.6	+2.7
PB08	IPOC Station P	2.82	332	⇓*i*P	Pn	11 46 52.6	+2.7
PB08				*i* S	Sn	11 47 26.9	+0.1
PB08				IAML		11 47 29.8	
	comp=E,254nm,0.1s						
PB08	IPOC Station P	2.82	332	*e*P		11 46 52.8	
PB08				*e*S		11 47 27.6	
PB08				IAML		11 47 29.4	
	comp=Z,90nm,0.2s						
GO02	Mina Guanaco	3.01	213		Pn	11 46 55.0	+3.0
GO02	Mina Guanaco	3.01	213	⇑*i*P	Pn	11 46 55.3	+3.3
GO02				*i* S	Sn	11 47 32.0	+1.3
GO02				IAML		11 47 33.7	
	comp=N,617nm,0.4s						
GO02	Mina Guanaco	3.01	213	Pg	Pn	11 46 55.3	+3.3
GO02	Mina Guanaco	3.01	213	*e*P		11 46 55.2	
TA01	Diego Aracena	3.06	312		Pn	11 46 54.0	+1.5
TA01	Diego Aracena	3.06	312	*e*P	Pn	11 46 55.0	+2.5
TA01				*i* S	Sn	11 47 29.2	-2.2
TA01				IAML		11 47 31.4	
	comp=N,453nm,0.3s						
TA01	Diego Aracena	3.06	312	*e*P		11 46 54.0	
TA01				*e*S		11 47 30.3	
TA01				IAML		11 47 31.4	
	comp=Z,145nm,0.3s						
PB14	IPOC Station P	3.12	230		Pn	11 46 55.0	+1.6
PB14	IPOC Station P	3.12	230	*e*P	Pn	11 46 56.3	+2.9
PB14				*i* S	Sn	11 47 33.1	0.0
PB14				IAML		11 47 36.1	
	comp=N,88nm,0.1s						
PB14	IPOC Station P	3.12	230	*e*P		11 46 56.3	
PB14				*e*S		11 47 34.3	
PB14				IAML		11 47 36.2	
	comp=Z,140nm,0.3s						
TA02	Huaiquique	3.24	317		Pn	11 46 55.2	+0.6
TA02	Huaiquique	3.24	317	*e*P		11 46 57.0	
TA02				*e*S		11 47 33.4	
TA02				IAML		11 47 39.8	
	comp=Z,250nm,0.1s						
GO01	Chusmiza	3.26	336	Pn	Pn	11 46 57.1	+1.8
PB11	IPOC Station P	3.38	328		Pn	11 46 57.5	+1.0
PB11	IPOC Station P	3.38	328	⇓*i*P	Pn	11 46 57.9	+1.5
PB11				*i* S	Sn	11 47 37.1	-1.5
PB11				IAML		11 47 39.4	
	comp=E,351nm,0.2s						
PB11	IPOC Station P	3.38	328	*e*P		11 46 58.0	
PB11				IAML		11 47 43.8	
	comp=Z,112nm,0.5s						
PSGC	Pisagua	3.76	324	*e*P	Pn	11 47 01.7	+0.6
PSGC				*i* S	Sn	11 47 43.6	-3.3
PSGCX	Pisagua	3.76	324		Pn	11 47 02.1	+1.0
PSGCX	Pisagua	3.76	324	*e*P		11 47 01.9	
PSGCX				IAML		11 47 46.0	
	comp=Z,117nm,0.3s						
MNMC	Minye Minye	3.90	334		Pn	11 47 04.7	+1.6
MNMC	Minye Minye	3.90	334	*e*P	Pn	11 47 04.9	+1.7
MNMC				*i* S	Sn	11 47 48.4	-2.1
MNMCX	Minye Minye	3.90	334	*e*P		11 47 05.0	
MNMCX				IAML		11 47 51.7	
	comp=Z,141nm,0.4s						
AC02	Maricunga	4.34	196	Pn	Pn	11 47 12.0	+3.1
PB16	IPOC Station P	4.60	339	*e*P		11 47 14.6	
PB16				*e*S		11 48 07.3	
PB16	IPOC Station P	4.60	339		Pn	11 47 14.7	+2.4
PB16	IPOC Station P	4.60	339	*e*P	Pn	11 47 14.4	+2.2
PB12	IPOC Station P	4.68	329		Pn	11 47 13.6	+0.7
PB12	IPOC Station P	4.68	329	*e*P	Pn	11 47 13.4	+0.5
PB12	IPOC Station P	4.68	329	*e*P		11 47 13.9	
PB12				*e*S		11 48 05.2	
PB12				IAML		11 48 25.3	
	comp=Z,31nm,0.4s						
SOET	ToroToro	4.87	22	Pg	Pn	11 47 15.6	+0.1
GO03	Copiap	5.40	204	Pn	Pn	11 47 21.9	-0.1
SOEJ	Jacaque	5.67	356	Pg	Pn	11 47 25.4	-0.5
BBOE	La Paz, Chanca	5.81	358	Pg	Pn	11 47 27.4	-0.5
AC04	Llanos de Chal	6.29	208	Pn	Pn	11 47 33.3	-0.1
LPAZ	La Paz	6.34	357		Pn	11 47 30.2	-4.6
LPAZ	La Paz	6.34	357	Pg	Pn	11 47 34.3	-0.6
LPAZ	La Paz	6.34	357	*e*P	Pn	11 47 38.1	+3.2
AC05	El Transito	6.56	200	Pn	Pn	11 47 35.9	-1.2
LCO	Las Campanas	6.86	202	Pn	Pn	11 47 40.0	-1.2
CO01	Juntas del Tor	7.59	196	Pn	Pn	11 47 49.0	-1.6
CO05	La Serena	7.88	203	Pn	Pn	11 47 53.4	-0.9
GO04	Tololo Observa	7.97	199	Pn	Pn	11 47 54.0	-1.6
CO02	Combarbal	8.99	198	Pn	Pn	11 48 08.7	-0.3
MURT	Porto Murtinho	9.46	86	*e*P	Pn	11 48 14.2	-0.8
CPUP	Villa Florida	10.18	113	*e*P	Pn	11 48 23.1	-1.3
MT02	Curacav	10.98	195	Pn	Pn	11 48 31.8	-2.9
AMBA	Amambai (Brazi	11.79	94	*e*P	Pn	11 48 45.5	+0.4
SALV	Santo Antonio	13.22	62	*e*P	P	11 49 06.8	+0.2
ALGR	Alto Alegre (B	14.61	118	*e*P	Pn	11 49 18.7	-2.0
PDRB	Porto dos Gac	15.21	46	*e*P	P	11 49 32.1	+3.4
PLTB	Pedras Altas	15.51	129		Pn	11 49 27.1	-4.5
PLTB				IAmb	IAmb	11 50 06.1	
	comp=Z,20nm,1.4s						
TRQA	Tornquist	16.14	163		P	11 49 36.1	-2.6
TRQA				IAmb	IAmb	11 50 06.7	
	comp=Z,26nm,1.4s						
SNDB	Serra Nova Dou	18.95	59	*e*P	Pn	11 50 13.9	+1.4
ITTB	Itaituba	21.59	34	*e*P	P	11 50 40.8	+3.1
MCRA	Macar, Loja	21.67	325	P	P	11 50 38.0	-0.6
JANB	Januaria	23.42	75	*e*P	P	11 50 58.1	+3.1
GO09	Cerro Castillo	28.79	186	P	P	11 51 41.7	-1.0

IDC ***10*** *11:47:31.5±1.8, 30°.58N×67°.21E, h0km, mb3.6/3, mbtmp3.6/6, ML3.3/3, Error ellipse: s-maj=66.9km s-min=27.3km az=113.0*

ISC 10 11:47:35.8±1.1**, 30°.7N**±0°.2×**67°.0E**±0°.2**, h35**km**, n6, σ1ˢ29**/7**, mb3.4**/3**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	10.51	227	Pn	Pn	11 50 03.6	-0.4
	0.2nm,0.3s,baz=14,slow=4.6,SNR=1.4						
WSAR				Sn	Sn	11 52 00.6	0.0
	0.1nm,0.3s,baz=326,slow=17,SNR=1.4						
	2.6nm,0.8s						
AAK	Ala-Archa	13.35	25	Pn	Pn	11 50 42.1	-0.8
	0.3nm,0.3s,baz=238,slow=9.5,SNR=2.8						
	1.0nm,0.5s						
MKAR	Makanchi Array	19.97	32	P	P	11 52 04.1	-1.0
	0.1nm,0.3s,baz=209,slow=11,SNR=6.1						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	21.70	20	P	P	11 52 25.1	+1.5
	1.4nm,0.8s,baz=196,slow=12,SNR=3.6						
	1.4nm,0.8s						
ZALV	Zalesovo Beam	26.57	24	P	P	11 53 12.0	+1.6
	1.6nm,0.7s,baz=222,slow=10,SNR=7.0						
	1.6nm,0.7s						
ASAR	Alice Springs	83.87	122	P	P	12 00 02.5	+0.3
	0.3nm,0.9s,baz=311,slow=6.0,SNR=2.5						
	0.3nm,0.9s						

IDC 10 11:55:46.1±546.0**, 57°.91N×30°.00E, h0**km**, Error ellipse: s-maj=203.8km s-min=90.3km az=102.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	4.09	104	I	I	12 22 10.0	
	0.3nm,0.6s,baz=289,slow=315,SNR=0.6						
I37NO	I37NO	12.27	340	I	I	13 11 20.0	
	baz=149,slow=324,SNR=1.0						
I31KZ	AKTYUBINSK INF	17.95	103	I	I	13 47 58.2	
	baz=306,slow=322,SNR=1.4						

TRN ***10*** *12:08:48.5, 10°.70N×61°.98W, h1km, MD3.5*

FUNV ***10*** *12:08:52.9, 10°.19N×62°.73W, h5km, MW3.5*

ISC 10 12:08:47.0±1.4**, 10°.28N**±0°.07×**62°.40W**±0°.05**, h35**km**, n11, σ2ˢ02**/16**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	Carupano	0.91	296	*e*P	Pn	12 09 04.2	+0.8
TPP	Pointe-a-Pierr	0.93	87	*e*P	Pn	12 09 04.6	+0.9
TBH	Brigand Hill	1.33	81	*e*P	Pn	12 09 11.3	+2.2
TPR	Prospect	1.83	60	*e*P	Pn	12 09 16.8	+0.7
GRGR	Grenville	1.98	22	*e*P	Pn	12 09 18.8	+0.6
GRGR				*e*S	Sn	12 09 41.0	-0.8
TOSP	Speyside	2.09	61	*e*P	Pn	12 09 20.7	+1.1
TOSP				*e*S	Sn	12 09 42.9	-1.6
GCMP	Grenada, Carri	2.39	23	*e*P	Pn	12 09 23.8	0.0
GCMP				*e*S	Sn	12 09 51.7	-0.2
SVB	Belmont	3.18	21	*e*P	Pn	12 09 33.6	-1.0
SVB				*e*S	Sn	12 10 10.9	-0.5
CACV	CAICARA DEL OR	4.90	237	*e*P	Pn	12 09 55.8	-2.5
CACV				*e*S	Sn	12 10 42.6	-11
BENV	Beln	5.13	267	*e*P	Pn	12 10 05.4	+3.9
BAUV	El Baul	5.72	257	*e*P	Pn	12 10 12.6	+3.1
BAUV				*e*S	Sn	12 11 11.0	-3.1

NEIC ***10*** *12:39:35.3±2.7, 8°.38N±0°.09×91°.82E±0°.07, h32km±5km, mb4.3/23, Error ellipse: s-maj=12.7km s-min=9.8km az=194.0*

NDI ***10*** *12:39:36.1±2.0, 8°.74N×91°.72E, h10km, mb4.6, ML3.9, mb4.3(NEIC)*

IDC ***10*** *12:39:37.0±3.1, 8°.36N×91°.89E, h49km±32km, mb3.9/10, mbtmp4.1/12, ML4.2/2, MS3.1/11, Error ellipse: s-maj=30.8km s-min=16.1km az=54.0*

ISC 10 12:39:33.9±0.6**, 8°.43N**±0°.06×**91°.90E**±0°.07**, h24**km**, n76, σ1ˢ33**/66**, mb4.2**/19**, MS3.1**/9**, 1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	Port Blair	3.31	15	*e*P	Pn	12 40 24.9	+0.6
PBA				*e*S	Sn	12 41 02.0	-0.9
PBA				IAML		12 41 06.2	
	comp=E,784nm,0.4s						
PBA				IAML		12 41 06.6	
	comp=N,895nm,0.4s						
DGPR	DIGLIPUR	4.82	12	*e*P	Pn	12 40 45.2	+0.1
DGPR				*e*S	Sn	12 41 35.0	-5.3
DGPR				IAML		12 41 36.9	
	comp=E,245nm,0.2s						
DGPR				IAML		12 41 40.4	
	comp=N,279nm,0.4s						
LHMI	Lhok Sumawe	5.94	122	Pn	Pn	12 40 59.5	-1.0
SRIT	Nakonsritamara	7.62	88		Pn	12 41 26.1	+2.5
RPSI	Rantau Prapat	9.02	129	Pn	Pn	12 41 42.5	-0.3
GSI	Gunungsitoli	9.06	141	Pn	Pn	12 41 42.9	-0.4
KULM	Kulim	9.23	109	Pn	Pn	12 41 46.9	+1.2
IPM	Ipoh	9.88	113		Pn	12 41 54.7	+0.1
PALK	Pallekele	11.15	265	P	Pn	12 42 12.5	+0.4
	comp=N,1.1nm,0.3s,baz=178,slow=12,SNR=15						
PALK				S	Sn	12 44 02.1	-14
	comp=N,5.3nm,0.4s,baz=278,slow=22,SNR=2.0						
PALK				LR	LR	12 45 55.2	
	comp=N,83nm,18.8s,baz=191,slow=34						
	comp=N,4.0nm,0.4s						
PALK	Pallekele	11.15	265	Pn	Pn	12 42 10.4	-1.7
CMAR	Chiang Mai Arr	12.09	34	P	Pn	12 42 28.4	+3.5
	comp=N,0.6nm,0.3s,baz=230,slow=14,SNR=16						
CMAR				LR	LR	12 47 29.3	
	comp=N,47nm,19.8s,baz=220,slow=39						
	comp=N,1.2nm,0.6s						
CMAR	Chiang Mai Arr	12.09	34	Pn	Pn	12 42 26.4	+1.6
CHTO	Chiang Mai	12.38	33	Pn	Pn	12 42 28.6	-0.2
VIS	Vishakhapatnam	12.44	319	*e*P	Pn	12 42 29.1	-0.6
VIS				*e*S	Sn	12 44 32.5	-15
PHRA	Phrae	12.87	38	Pn	Pn	12 42 34.2	-1.3
SAIH	SAIHA	14.02	4	*e*P	Pn	12 42 51.0	-0.3
MND	Mandalay	14.10	16		Pn	12 42 50.2	-2.1
CRAI	Chiangrai	14.31	34	Pn	Pn	12 42 54.8	-0.4
PCHI	Peechi	15.48	279	*e*P	Pn	12 43 10.9	+0.1
PCHI				*e*S	Sn	12 45 46.3	-15
KOHI	KOHIMA	17.32	7	*e*P	Pn	12 43 33.3	-1.1
KOHI				IAmb	IAmb	12 43 37.2	
	comp=Z,40nm,0.8s						
MOKO	MOKOCHONG	17.96	8	*e*P	Pn	12 43 41.2	-1.1
MOKO				IAmb	IAmb	12 43 46.8	
	comp=Z,21nm,0.6s						
TEZP	TEZPUR	18.11	3	*e*P	Pn	12 43 42.9	-1.1
TEZP				IAmb	IAmb	12 43 47.6	
	comp=Z,18nm,0.5s						
JBP	Jabalpur	18.58	323	*e*P	Pn	12 43 50.4	+0.7
JBP				*e*S	Sn	12 47 02.1	-15
ODAN	Odare	18.82	347	*e*P	Pn	12 43 53.7	+0.8
GTK	Tadong	19.04	351	*e*P	Pn	12 43 57.1	+1.6
GTK				IAmb	IAmb	12 44 02.2	
	comp=Z,34nm,0.5s						
RAMN	Ramite	19.09	345	*e*P	Pn	12 43 57.3	+1.1
	comp=Z,171nm,0.4s						
DIBR	DIBRUGARH	19.15	8	⇓*e*P	Pn	12 43 57.1	+0.6
TAPN	Taplejung	19.23	349	*e*P	Pn	12 43 58.6	+0.7
	comp=Z,81nm,0.5s						
KSM	Kuching	19.59	110	P	P	12 44 00.5	-0.1
KSM				IAmb	IAmb	12 44 04.0	
	comp=Z,14nm,1.0s						
JIRN	Jiri	19.87	345	*e*P	Pn	12 44 06.0	+0.4
PKI	Pulchoki	20.00	343	*e*P	Pn	12 44 07.2	+0.1
	comp=Z,61nm,0.4s						
PKIN	Phulchoki	20.01	343	*e*P	Pn	12 44 07.0	-0.2
	comp=Z,56nm,0.3s						
GUN	Gumba	20.19	344	*e*P	Pn	12 44 08.9	-0.5
	comp=Z,51nm,0.5s						
GKN	Gorkha	20.64	342	*e*P	Pn	12 44 14.0	-0.4
	comp=Z,52nm,0.4s						
SBUM	Sibu	21.08	105	P	P	12 44 18.7	+1.9
LSA	Lhasa	21.17	358	P	P	12 44 20.1	+2.0
LSA				IAmb	IAmb	12 44 34.1	
	comp=Z,15nm,0.7s						
DANN	Dangsing	21.25	340	*e*P	P	12 44 20.2	+1.4
	comp=Z,30nm,0.4s						
PYUN	Piuthan	21.29	338	*e*P	P	12 44 20.5	+1.3
H08S3	Diego Garcia H	25.08	231	T	T	13 11 18.5	
	baz=51,slow=76,SNR=141						
H08S2	Diego Garcia H	25.08	231	T	T	13 11 22.9	
	baz=51,slow=76,SNR=116						
H08S1	Diego Carcia H	25.10	231	T	T	13 11 18.9	
	baz=51,slow=76,SNR=106						
MYLDM	Lahad Datu	26.61	95	P	P	12 45 09.5	-1.2
TARG	Taragay, Kyrgy	35.43	342	P	P	12 46 26.4	-2.3
TARG				IAmb	IAmb	12 46 30.9	
	comp=Z,2.6nm,1.0s						
AAK	Ala-Archa	37.35	339	P	P	12 46 46.8	+2.0
	comp=Z,2.5nm,0.9s,baz=158,slow=8.4,SNR=5.9						
	comp=Z,2.5nm,0.9s						
AAK	Ala-Archa	37.35	339	P	P	12 46 45.8	+0.9
AAK				IAmb	IAmb	12 46 48.3	
	comp=Z,5.8nm,1.2s						
MK31	Makanchi Array	39.10	350	P	P	12 46 59.8	+0.4
MKAR	Makanchi Array	39.10	350	P	P	12 47 00.0	+0.7
	comp=Z,2.2nm,0.5s,baz=168,slow=8.7,SNR=54						
MKAR				LR	LR	13 06 42.0	
	comp=Z,21nm,19.3s,baz=98,slow=42						
	comp=Z,2.2nm,0.5s						
MAKZ	Makanchi	39.17	349	P	P	12 47 00.4	+0.5
KK31	Karatay Array	39.30	335	P	P	12 47 02.3	+1.3
KKAR	Karatay Array	39.30	335	P	P	12 47 00.9	-0.1
SONM	Songino Array	41.15	15	P	P	12 47 16.1	-0.4
	comp=Z,1.4nm,0.7s,baz=201,slow=7.7,SNR=5.7						
SONM				LR	LR	13 07 17.4	
	comp=Z,32nm,19.9s,baz=262,slow=40						
	comp=Z,1.4nm,0.7s						
SONM	Songino Array	41.15	15	P	P	12 47 15.4	-1.0
GEYT	Alibeck	42.32	319	P	P	12 47 27.5	+1.4
	comp=Z,3.6nm,0.7s,baz=154,slow=7.4,SNR=5.2						
	comp=Z,3.6nm,0.7s						
KURBB	Kurchatov Arra	43.50	348	P	P	12 47 36.2	+0.9
	comp=Z,2.3nm,0.7s,baz=171,slow=7.3,SNR=26						
	comp=Z,2.3nm,0.7s						
KSRS	Korea Array	43.53	43	LR	LR	13 05 43.3	
	comp=Z,13nm,18.2s,baz=205,slow=36						
JNU	Nakatsue	43.56	50	LR	LR	13 08 09.1	
	comp=Z,18nm,18.3s,baz=302,slow=39						
KURK	Kurchatov	43.57	348	P	P	12 47 36.0	+0.1
KURK				IAmb	IAmb	12 47 37.6	
	comp=Z,5.3nm,1.1s						
MTN	Manton Dam	44.34	118	P	P	12 47 42.2	-0.4
MTN				IAmb	IAmb	12 48 01.0	
	comp=Z,8.1nm,1.4s						
ZAA0	Zalesovo Array	45.75	354	P	P	12 47 53.2	0.0
ZAA0				IAmb	IAmb	12 47 54.8	
	comp=Z,2.9nm,1.0s						
ZALV	Zalesovo Beam	45.75	354	P	P	12 47 53.1	-0.1
	comp=Z,2.2nm,0.9s,baz=177,slow=8.9,SNR=10.0						
ZALV				LR	LR	13 10 56.9	
	comp=Z,23nm,18.3s,baz=224,slow=41						
	comp=Z,2.2nm,0.9s						
ZALV	Zalesovo Beam	45.75	354	P	P	12 47 53.2	0.0
BVAR	Borovoye Array	47.77	343	LR	LR	13 09 54.8	
	comp=Z,26nm,20.3s,baz=157,slow=38						
ABKAR	Akbulak array	48.70	333	P	P	12 48 17.4	+1.1
ABKAR				IAmb	IAmb	12 48 17.6	
	comp=Z,1.8nm,0.6s						
WB0	Warramunga Arr	50.36	124	P	P	12 48 29.3	-0.1
WB0				IAmb	IAmb	12 48 29.7	
	comp=Z,2.6nm,0.5s						
WRA	Warramunga Arr	50.40	125	P	P	12 48 29.5	-0.3
	comp=Z,0.7nm,0.4s,baz=304,slow=8.8,SNR=14						
	comp=Z,0.7nm,0.4s						
WRA	Warramunga Arr	50.40	125	P	P	12 48 28.1	-1.6
WRAB	Tennant Creek	50.40	124	P	P	12 48 29.3	-0.5
WRAB				IAmb	IAmb	12 48 52.1	
	comp=Z,11nm,1.4s						
WB2	Warramunga Arr	50.41	125	P	P	12 48 29.3	-0.5
WB2				IAmb	IAmb	12 48 43.9	
	comp=Z,4.8nm,1.1s						
ASAR	Alice Springs	51.98	129	P	P	12 48 41.5	-0.1
	comp=Z,0.9nm,0.6s,baz=300,slow=6.9,SNR=14						
	comp=Z,0.9nm,0.6s						
GNI	Garni	52.47	315	LR	LR	13 14 23.6	
	comp=Z,18nm,18.6s,baz=120,slow=40						
ARU	Arti	54.53	338	P	P	12 49 00.1	+0.3
	comp=Z,1.9nm,0.3s,baz=44,slow=5.1,SNR=5.1						
ARU				LR	LR	13 14 15.2	
	comp=Z,36nm,19.4s,baz=149,slow=38						
	comp=Z,1.9nm,0.3s						
EIDS	Eidsvold	66.65	122	P	P	12 50 23.5	+0.5
FINES	FINESS Array B	71.19	332	P	P	12 50 50.1	-0.5
	comp=Z,1.4nm,0.8s,baz=57,slow=5.1,SNR=4.3						
	comp=Z,1.4nm,0.8s						
FINES	FINESS Array B	71.19	332	P	P	12 50 49.2	-1.4
BOSA	Boshof	74.01	237	P	P	12 51 07.8	-0.4
NOA	NORSAR Array B	78.16	331	LR	LR	13 29 13.7	
	comp=Z,22nm,18.8s,baz=315,slow=38						

IDC ***10*** *12:39:33.2±3.3, 8°.74S×117°.71E, h0km, mb3.2/2, mbtmp3.3/3, ML3.6/1, Error ellipse: s-maj=257.0km s-min=28.8km az=50.0*

DJA ***10*** *12:39:50.0±0.4, 9°S±6°×11°8E±°, h116km±6km, M4.0/12,* *mb4.1/2, MLv3.9/12*

ISC 10 12:39:49.0±0.9, **8.°68S**±0.°09×**118.°31E**±0.°05, **h150km, n14, σ1ˢ23**/17, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.54	254	P	Pn	12 40 09.3	-1.3
PLAI				S	Sn	12 40 24.0	-3.0
TWSI	Taliwang, Sumb	1.41	267	P	Pn	12 40 17.2	-0.4
BASI	Baing, Sumba	2.72	125	P	Pn	12 40 32.5	-0.3
SRBI	Singaraja	3.12	281	P	Pn	12 40 38.6	+0.8
IGBI	Denpasar	3.13	267	P	Pn	12 40 39.3	+1.3
BSSI	Bau Bau, Buton	3.32	41	P	Pn	12 40 39.6	-0.9
BKSI	Bulukumba	3.79	29	P	Pn	12 40 46.3	-0.2
MMRI	Maumere	3.89	90	P	Pn	12 40 47.5	-0.3
JAGI	Jajag, Banyuwa	4.11	273	P	Pn	12 40 50.5	-0.3
JAGI				S	Sn	12 41 38.7	-0.1
GMJI	Gumukmas	4.83	274	P	Pn	12 41 01.0	+0.9
SOEI	Soe	5.98	101	P	Pn	12 41 15.7	+0.1
	32nm,0.6s,0.1nm						
WRA	Warramunga Arr	19.13	128	P	Pn	12 44 02.2	-1.0
	0.2nm,0.3s,baz=299,slow=12,SNR=9.5						
WRA				S	S	12 47 30.1	+0.3
	0.3nm,0.6s,baz=303,slow=26,SNR=1.9						
	0.6nm,0.8s						
ASAR	Alice Springs	21.10	137	P	P	12 44 24.0	+2.1
	0.5nm,0.5s,baz=310,slow=9.3,SNR=21						
ASAR				S	S	12 48 19.1	+11
	0.4nm,0.6s,baz=306,slow=22,SNR=6.5						
	0.5nm,0.5s						
MKAR	Makanchi Array	63.86	333	P	P	12 50 06.3	+0.7
	0.2nm,0.4s,baz=149,slow=5.5,SNR=1.7						
	0.2nm,0.4s						

KRSC 10 12:40:23.2±1.4, **55.°46N**×**166.°09E, h39km**±13km, **Ml3.7, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.27	195	eP	Pn	12 40 31.4	+0.2
BKI				eS	Sn	12 40 36.9	-0.3
KBTR	Krutoberegovo	1.99	293	eP	Pn	12 40 55.1	+0.8
KLY	Klyuchi	3.18	288	eP	Pn	12 41 11.9	+1.2
TUMD	Tumrok D	3.26	268	eP	Pn	12 41 15.9	+4.1
TUMD				eS	Sn	12 41 55.4	+6.0
KMNR	Kamenistaya	3.33	278	eP	Pn	12 41 16.9	+4.0
TUMR	Tumrok	3.40	269	eP	Pn	12 41 18.0	+4.2
SRDR	Sredinnyy	3.69	286	eP	Pn	12 41 21.3	+3.5
SPN	Mys Shipunski	4.27	239	eP	Pn	12 41 29.5	+3.9
SPN				eS	Sn	12 42 17.2	+3.0
SDLR	Sedlovina	4.75	246	eP	Pn	12 41 37.0	+4.7
SMAR	Somma	4.80	246	eP	Pn	12 41 37.7	+4.6
KRER	Koryakskii	4.80	246	eP	Pn	12 41 38.2	+5.0
KRER				eS	Sn	12 42 33.8	+6.2
UGLR	Uglovaya	4.81	245	eP	Pn	12 41 38.0	+4.8
AVH	Avacha	4.83	246	eP	Pn	12 41 38.2	+4.8
AVH				eS	Sn	12 42 33.8	+5.8
KRX	Arik	4.83	247	eP	Pn	12 41 38.1	+4.7
KOK	Koryaka	4.87	247	eP	Pn	12 41 38.9	+5.0
DALK	Dalny	4.94	244	eP	Pn	12 41 39.4	+4.6
DALK				eS	Sn	12 42 35.2	+4.5
PET	Petropavlovsk	5.00	244	eP	Pn	12 41 40.5	+4.8
PET				eS	Sn	12 42 36.3	+4.3
GNL	Ganaly	5.06	253	eP	Pn	12 41 41.6	+5.0
KRMR	Karymshinskiy	5.37	244	eP	Pn	12 41 45.8	+5.1
KRMR				eS	Sn	12 42 46.1	+4.9
MTVR	Mutnovka	5.54	241	eP	Pn	12 41 47.5	+4.4
MTVR				eS	Sn	12 42 48.8	+3.2
GRL	Gorelyy	5.55	242	eP	Pn	12 41 48.4	+5.1

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*IDC **10** 12:45:48.0±4.7, 5.°54S×142.°25E, h192km±55km, mb3.2/3, mbtmp3.9/6, Error ellipse: s-maj=44.3km s-min=26.2km az=138.0*

ISC 10 12:45:48.6±1.0, **5.°6S**±0.°2×**142.°3E**±0.°1, **h200km, n6, σ0ˢ76**/7, **mb3.3**/3, **New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.16	128	P	Pn	12 47 18.1	0.0
	15nm,0.8s,baz=290,slow=12,SNR=6.6						
PMG				S	Sn	12 48 28.8	0.0
	3.0nm,0.4s,baz=343,slow=16,SNR=1.1						
WRA	Warramunga Arr	16.21	208	P	P	12 49 24.2	-0.8
	6.9nm,0.8s,baz=27,slow=12,SNR=30						
ASAR	Alice Springs	19.69	203	P	P	12 50 03.7	+0.8
	4.5nm,0.7s,baz=33,slow=11,SNR=48						
CMAR	Chiang Mai Arr	48.93	300	P	P	12 54 14.6	-0.4
	0.4nm,0.3s,baz=134,slow=6.5,SNR=4.6						
	0.4nm,0.3s						
MKAR	Makanchi Array	74.22	322	P	P	12 57 04.4	+0.8
	0.3nm,0.7s,baz=100,slow=6.8,SNR=3.5						
	0.3nm,0.7s						
ILAR	Eielson Array	86.99	24	P	P	12 58 10.6	-0.4
	0.8nm,0.7s,baz=262,slow=4.8,SNR=10						
	0.8nm,0.7s						

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*KRSC **10** 12:54:25.0±0.8, 54.°58N×160.°60E, h113km±14km, Ml3.6*

*IDC **10** 12:54:27.1±2.5, 54.°54N×160.°37E, h118km±27km, mb3.1/4, mbtmp3.5/6, Error ellipse: s-maj=48.4km s-min=21.2km az=124.0*

ISC 10 12:54:26.6±0.9, **54.°58N**±0.°04×**160.°57E**±0.°06, **h110km**±8km, **n40, σ0ˢ83**/49, **mb3.3**/4, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUMD	Tumrok D	0.64	351	eP	Pn	12 54 43.5	-0.9
TUMD				eS	Sn	12 54 56.9	-0.9
TUMR	Tumrok	0.75	341	eP	Pn	12 54 45.2	-0.3
KMNR	Kamenistaya	1.20	351	eP	Pn	12 54 49.7	-0.3
KMNR				eS	Sn	12 55 09.1	+1.4
BZMR	Bezymyannaya	1.36	358	eP	Pn	12 54 51.9	0.0
BZMR				eS	Sn	12 55 11.6	+0.5
BZGR	Bezymyannyi-Gr	1.37	3	eP	Pn	12 54 52.0	+0.1
KIRR	Kirishev	1.39	355	eP	Pn	12 54 51.7	-0.4
BZWR	Bezymyannyi-We	1.39	358	eP	Pn	12 54 52.4	+0.1
KPT	Kopyto	1.41	352	eP	Pn	12 54 51.7	-0.7
KPT				eS	Sn	12 55 12.0	+0.1
SPN	Mys Shipunski	1.51	193	eP	Pn	12 54 52.9	-0.6
KOZ	Kozyrevsk	1.54	345	eP	Pn	12 54 53.2	-0.6
KOZ				eS	Sn	12 55 14.5	0.0
NLC	Nalytchevo	1.58	208	eP	Pn	12 54 55.2	+0.9
NLC				eS	Sn	12 55 16.7	+1.3
SDLR	Sedlovina	1.64	218	eP	Pn	12 54 55.4	+0.3
KRX	Arik	1.66	224	eP	Pn	12 54 55.8	+0.3
KRER	Koryakskii	1.67	221	eP	Pn	12 54 56.1	+0.5
SMAR	Somma	1.68	219	eP	Pn	12 54 55.9	+0.1
AVH	Avacha	1.70	220	eP	Pn	12 54 56.2	+0.4
UGLR	Uglovaya	1.71	218	eP	Pn	12 54 56.4	+0.3
KOK	Koryaka	1.72	222	eP	Pn	12 54 56.4	+0.3
ESO	Esso	1.73	322	eP	Pn	12 54 56.7	+0.6
ESO				eS	Sn	12 55 18.5	0.0
KLY	Klyuchi	1.74	2	eS	Sn	12 55 21.1	+2.2
GNL	Ganaly	1.78	241	eP	Pn	12 54 56.5	-0.4
SRDR	Sredinnyy	1.81	345	eP	Pn	12 54 56.1	-1.1
DALK	Dalny	1.88	216	eP	Pn	12 54 58.1	0.0
DALK				eS	Sn	12 55 22.6	+0.6
PET	Petropavlovsk	1.92	217	eP	Pn	12 54 58.8	+0.2
PET				eS	Sn	12 55 23.6	+0.7
KBTR	Krutoberegovo	2.08	37	eP	Pn	12 55 01.9	+1.4
PETK	Petropavlovsk-	2.25	230	P	Pn	12 55 02.2	-0.4
	5.5nm,0.5s,baz=70,slow=14,SNR=19						
PETK				S	Sn	12 55 31.0	+0.6
	5.4nm,0.6s,baz=72,slow=16,SNR=6.6						
KRMR	Karymshinskiy	2.27	221	eP	Pn	12 55 02.8	-0.1
KRMR				eS	Sn	12 55 31.8	+0.9
GRL	Gorelyy	2.51	217	eP	Pn	12 55 06.9	+0.7
MTVR	Mutnovka	2.53	215	eP	Pn	12 55 07.0	+0.5
APC	Apacha	2.61	232	eP	Pn	12 55 08.1	+0.7
KDTR	Khodutka, Kamc	3.15	209	eS	Sn	12 55 49.0	-2.5
BKI	Bering	3.19	76	eP	Pn	12 55 15.1	+0.2
BKI				eS	Sn	12 55 51.0	-1.2
MA2	Magadan	7.32	317	P	Pn	12 56 10.4	-0.3
	11nm,0.7s,baz=126,slow=11,SNR=11						
ILAR	Eielson Array	27.59	47	P	P	13 00 03.4	+0.4
	0.2nm,0.6s,baz=266,slow=6.9,SNR=1.5						
	0.2nm,0.6s						
H11N2	WAKE ISLAND Hy	35.12	170	T	T	13 38 46.8	
	baz=355,slow=76,SNR=6.9						
H11N3	WAKE ISLAND Hy	35.13	170	T	T	13 38 45.2	
	baz=355,slow=76,SNR=7.5						
H11N1	WAKE ISLAND Hy	35.13	170	T	T	13 38 48.2	
	baz=355,slow=76,SNR=9.4						
TXAR	Lajitas Array	69.81	68	P	P	13 05 25.6	+0.4
	0.4nm,0.6s,baz=292,slow=4.5,SNR=7.4						
	0.4nm,0.6s						
WRA	Warramunga Arr	77.55	205	P	P	13 06 08.9	-1.2
	0.4nm,0.8s,baz=18,slow=6.0,SNR=4.8						
	0.4nm,0.8s						
ASAR	Alice Springs	81.23	205	P	P	13 06 29.4	-0.6
	0.5nm,0.9s,baz=15,slow=4.8,SNR=6.4						
	0.5nm,0.9s						

IDC 10 13:01:24.5±3.5, **31.°41S**×**176.°60W, h0km, mb3.4**/2, **mbtmp3.7**/4, **ML3.8**/2, **Error ellipse: s-maj=73.0km s-min=36.9km az=103.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.43	332	Pn	Pn	13 02 05.5	0.0
	80nm,0.3s,baz=73,slow=19,SNR=1.9						
RAO				Sn	Sn	13 02 28.9	-7.1
	78nm,0.3s,baz=90,slow=23,SNR=2.1						
	211nm,0.3s						
URZ	Urewera	8.56	215	Pn	Pn	13 03 29.0	-0.7
	0.4nm,0.3s,baz=136,slow=20,SNR=1.8						
URZ				Sn	Sn	13 05 03.5	-3.5
	0.4nm,0.3s,baz=338,slow=19,SNR=1.5						
	12nm,0.9s						
ASAR	Alice Springs	44.26	267	P	P	13 09 35.9	-0.2
	0.2nm,0.6s,baz=105,slow=7.4,SNR=5.2						
	0.2nm,0.6s						
WRA	Warramunga Arr	45.34	272	P	P	13 09 44.8	+0.1
	0.3nm,0.4s,baz=112,slow=7.8,SNR=4.9						
	0.3nm,0.4s						
FINES	FINESS Array B	146.50	340	PKPbc	PKPdf	13 21 06.1	+0.5
	0.6nm,0.7s,baz=27,slow=3.4,SNR=1.5						

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*SNET **10** 13:13:16.6±1.5, 13.°24N×90.°31W, h10km, ML4.9*

*GCG **10** 13:13:17.8±0.8, 13.°23N×90.°34W, h46km, MD4.4*

*INET **10** 13:13:19.3±1.5, 13.°25N×90.°21W, h18km±14km, MW4.9*

*IDC **10** 13:13:20.9±2.3, 13.°60N×89.°74W, h62km±19km, mb3.8/16, mbtmp4.1/18, MS3.8/31, Error ellipse: s-maj=29.2km s-min=12.4km az=46.0*

*NEIC **10** 13:13:21.3±2.2, 13.°38N±0.°08×90.°13W±0.°07, h60km±8km, mb4.6/77, Error ellipse: s-maj=13.2km s-min=7.9km az=214.0*

ISC 10 13:13:19.3±0.4, **13.°30N**±0.°05×**90.°19W**±0.°05, **h58km, n360, σ1ˢ19**/348, **mb4.5**/39, **MS3.9**/32, **2D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUBE	Las Nubes	0.72	34	eP	Pn	13 13 32.9	-1.0
NUBE				eS	Sn	13 13 44.3	-0.2
CEVE	Cerro Verde	0.76	46	eP	Pn	13 13 34.1	-0.4
SBLS	San Blas	0.77	46	eP	Pn	13 13 33.8	-0.8
RTR	El Retiro	0.80	42	eP	Pn	13 13 34.5	-0.4
LOAL	Lomas de Alarc	0.80	30	eP	Pn	13 13 34.2	-0.6
LOAL				eS	Sn	13 13 47.0	+0.9
JAYA	Jayaque - finc	0.80	64	eP	Pn	13 13 34.3	-0.7
SLOZ	Alcaldia de Sa	0.82	29	eP	Pn	13 13 34.4	-0.7
SLOZ				eS	Sn	13 13 47.4	+0.8
UNIC	Universidad Ca	0.92	43	eP	Pn	13 13 36.1	-0.2
CEDA	San Andres	0.92	57	eP	Pn	13 13 36.1	-0.2
BOQS	Boqueron	0.99	64	eP	Pn	13 13 37.3	-0.1
SNET	Serv Nac Est T	1.01	68		Pn	13 13 37.2	-0.2
SNET	Serv Nac Est T	1.01	68	eP	Pn	13 13 37.3	-0.2
PCG	Pacaya	1.16	340	eP	Pn	13 13 38.6	-1.0
LBRS	Las Brisas	1.20	69	eP	Pn	13 13 40.5	+0.5
NBG	Las Nubes	1.29	353⇓	eP	Pn	13 13 42.2	+0.8
FUG	Fuego 3	1.30	331⇓	eP	Pn	13 13 40.0	-1.6
LLGN	La Laguna	1.48	55	eP	Pn	13 13 44.3	+0.4
ESQI	Esquipulas	1.50	33		Pn	13 13 44.7	+0.6
ESQI	Esquipulas	1.50	33	eP	Pn	13 13 44.8	+0.7
P5NO	Presa 5 de nov	1.55	64	eP	Pn	13 13 45.0	+0.3
ALJI	Alcalda de J	1.58	89	eP	Pn	13 13 44.8	-0.3
COEB	Comit de Eme	1.63	83	eP	Pn	13 13 45.8	0.0
SULM	Suchitepequez,	1.67	307	eP	Pn	13 13 44.8	-1.4
PACA	Pacayal	1.83	85	eP	Pn	13 13 50.0	+1.5
RTAL	Retalhuleu	1.90	310		Pn	13 13 46.3	-3.1
STG3	Santiaguito 3,	1.94	316	eP	Pn	13 13 48.2	-1.9
LCND	La Caada	2.24	90	eP	Pn	13 13 54.5	+0.4
CNCH	Conchagua	2.30	90	eP	Pn	13 13 55.2	+0.2
HUEH	Huehuetenango	2.37	328		Pn	13 13 56.3	+0.2
HUEH	Huehuetenango	2.37	328	eP	Pn	13 13 56.7	+0.6
TGUH	Tegucigalpa,Un	2.94	75		Pn	13 14 04.3	+0.6
CRIN	San Cristobal	3.12	101		Pn	13 14 05.3	-0.8
CRIN	San Cristobal	3.12	101	eP	Pn	13 14 07.2	+1.1
CRIN				eS	Sn	13 14 43.4	+1.1
TEL3	Telica 3	3.34	102	eP	Pn	13 14 09.7	+0.6
TELN	Telica	3.35	102	eP	Pn	13 14 09.5	+0.2
CNGN	Cerro Negro	3.50	103		Pn	13 14 10.0	-1.3
CNGN	Cerro Negro	3.50	103	eP	Pn	13 14 11.4	+0.1
CNGN				eS	Sn	13 14 51.6	0.0
CCIG	Comitan	3.51	328		Pn	13 14 12.1	+0.5
PETF	Flores	3.61	5		Pn	13 14 13.5	+0.8
PETF	Flores	3.61	5	eP	Pn	13 14 14.4	+1.6
MOMN	Momotombo	3.67	104	eP	Pn	13 14 13.4	-0.3
COPN	Copaltepe	3.69	107	eP	Pn	13 14 13.0	-0.8
MATN	Matagalpa	4.17	95		Pn	13 14 20.2	-0.4
MATN	Matagalpa	4.17	95	eP	Pn	13 14 20.4	-0.2
BOAB	BOACO BROADBAN	4.49	100		Pn	13 14 25.1	+0.2
BOAB	BOACO BROADBAN	4.49	100	eP	Pn	13 14 24.8	-0.2
BOAB				eS	Sn	13 15 17.0	+1.1
ACON	Acoyapa	5.07	105	eP	Pn	13 14 33.1	+0.2
HZTE	Horizontes, Gu	5.18	119		Pn	13 14 35.9	+1.5
GBS3	Finca Las Img	5.27	118	eP	Pn	13 14 37.4	+1.9
LAPC	Finca la Perla	5.29	118	eP	Pn	13 14 37.5	+1.6
BUAI	Buenos Aires	5.33	116	eP	Pn	13 14 38.7	+2.3
GP77	Hacienda Santa	5.39	117	eP	Pn	13 14 40.0	+2.7
ORTG	Ortega, Santa	5.48	122		Pn	13 14 39.5	+1.0
CLARA	Aguas Claras	5.51	116	eP	Pn	13 14 40.1	+1.2
MESS	Mesas	5.51	117	eP	Pn	13 14 40.6	+1.7
VMAR	Armenia, Volca	5.55	116	eP	Pn	13 14 40.1	+0.6
CUI	Cuipilapa	5.58	118	eP	Pn	13 14 41.4	+1.6
CANAL	Canalete	5.59	115	eP	Pn	13 14 40.8	+0.8
DUNO	Dulce Nombre,	5.61	124		Pn	13 14 41.0	+0.8
ACAL	Aguas Claras	5.70	117	eP	Pn	13 14 41.1	-0.4
PTEN	Parque Tenorio	5.70	116	eP	Pn	13 14 42.4	+0.8
CMIG	Matias Romero	5.89	310	P	Pn	13 14 42.7	-1.4
	50nm,0.4s,baz=139,slow=12,SNR=51						
CMIG				S	Sn	13 15 47.5	-2.8
	57nm,0.5s,baz=120,slow=15,SNR=4.9						
CMIG				LR	LR	13 17 32.1	
	comp=Z,1μm,21.1s,baz=127,slow=42						
JTS	Las Juntas de	5.94	120	P	Pn	13 14 44.1	-0.7
	9.6nm,0.4s,baz=303,slow=24,SNR=11						
JTS				S	Sn	13 15 47.8	-3.7
	34nm,0.4s,baz=321,slow=16,SNR=1.1						
JTS				LR	LR	13 17 16.8	
	comp=Z,1μm,19.7s,baz=295,slow=41						
JTS	Las Juntas de	5.94	120	Pn	Pn	13 14 45.7	+0.9
TABAC	Tabacon	6.00	117	eP	Pn	13 14 44.1	-1.5
CASO	Castillo	6.05	117	eP	Pn	13 14 47.4	+1.1
CEDE	Laguna Cedeo	6.06	117	eP	Pn	13 14 48.1	+1.7
JACO	JACO, Garabito	6.52	123	Pn	Pn	13 14 53.9	+1.2
ABE2	San Pablo	7.00	120	eP	Pn	13 15 02.4	+2.9
TEIG	Tepich	7.13	15	Pn	Pn	13 15 01.6	+0.6
RIMA	Rio Macho	7.13	119		Pn	13 15 02.5	+1.3
PEZE	Perez Zeledon,	7.48	121	Pn	Pn	13 15 06.8	+0.9
SRBA	San Rafael, Bu	7.83	120		Pn	13 15 12.1	+1.4
EDP2	Potrero Grande	8.09	121	eP	Pn	13 15 18.0	+3.7
EDP2				eS	Sn	13 16 44.0	-0.5
EDAD	Golfito	8.30	123	eP	Pn	13 15 20.2	+3.1
BRU2	Volcan	8.62	121	Pn	Pn	13 15 22.4	+0.8
TLIG	Tlapa	9.12	299		Pn	13 15 30.1	+1.7
SOR	Soroa	11.65	35		Pn	13 16 03.0	+0.1
ZAIG	Zacatecas	15.06	310	Pn	Pn	13 16 50.0	+0.9
833A	Chaparral WMA,	17.23	332	P	Pn	13 17 15.6	-0.5
	baz=148						
TULM	Tulcn-Chalpat	17.53	135		Pn	13 17 19.6	-0.7
553A	Crawfordville	17.63	17	P	Pn	13 17 21.9	+0.9
553A				IAmb	IAmb	13 17 37.5	
	comp=Z,35nm,0.9s						
URIC	Uribia, Colomb	17.84	93	P	Pn	13 17 22.3	-1.4
URIC				IAmb	IAmb	13 17 42.3	
	comp=Z,45nm,0.9s						
435B	Jarrell	18.69	340	P	P	13 17 34.0	+1.1
435B				IAmb	IAmb	13 17 36.1	
	comp=Z,17nm,0.5s						
435B	Jarrell	18.69	340	P	P	13 17 33.4	+0.6
	baz=157						
NATX	Nacogdoches	18.82	348	P	P	13 17 35.2	+0.8
NATX				IAmb	IAmb	13 17 39.0	
	comp=Z,17nm,0.7s						
NATX	Nacogdoches	18.82	348	P	P	13 17 35.2	+0.8
	baz=166						
JCT	Junction City	19.26	334	P	P	13 17 40.4	+1.2
	baz=150						
237A	Washetta, Mont	19.31	345	P	P	13 17 41.0	+1.3
237A				IAmb	IAmb	13 17 53.9	
	comp=Z,22nm,0.9s						
SDV	Santo Domingo	19.68	101	P	P	13 17 42.2	-1.9
	comp=Z,4.2nm,0.6s,baz=295,slow=15,SNR=2.9						
SDV				LR	LR	13 26 09.2	
	comp=Z,155nm,19.6s,baz=274,slow=40						
SDV	Santo Domingo	19.68	101	P	P	13 17 44.1	-0.1
WHTX	Lake Whitney,	19.76	341	P	P	13 17 44.8	+0.2
WHTX				IAmb	IAmb	13 18 00.2	
	comp=Z,27nm,0.7s						
WHTX	Lake Whitney,	19.76	341	P	P	13 17 45.9	+1.3
	baz=158						
LRAL	Lakeview Retre	19.86	8	P	P	13 17 47.1	+1.5
LRAL	Lakeview Retre	19.86	8	P	P	13 17 47.2	+1.5
	baz=189						
152A	Waverly Hall	19.92	14	P	P	13 17 47.2	+0.9
152A				IAmb	IAmb	13 18 02.6	
	comp=Z,27nm,1.4s						
FW14	Alvarado	20.06	343	P	P	13 17 48.2	+0.3
FW14				IAmb	IAmb	13 18 13.5	
	comp=Z,39nm,0.9s						
FW13	Cleburne	20.09	342	P	P	13 17 48.4	+0.2
FW13				IAmb	IAmb	13 17 49.6	
	comp=Z,17nm,0.8s						
TXAR	Lajitas Array	20.27	324	P	P	13 17 52.7	+2.5
	comp=Z,3.1nm,0.6s,baz=146,slow=11,SNR=68						
TXAR				PcP	PcP	13 22 03.5	+1.2
	comp=Z,0.6nm,0.6s,baz=165,slow=3.8,SNR=5.6						
TXAR				LR	LR	13 26 46.9	
	comp=Z,88nm,20.3s,baz=125,slow=40						
	comp=Z,3.1nm,0.6s						
TXAR	Lajitas Array	20.27	324	P	P	13 17 52.5	+2.2
TX31	Lajitas Ar. Si	20.27	324	P	P	13 17 52.8	+2.6
TX31				IAmb	IAmb	13 17 56.2	
	comp=Z,39nm,1.3s						
TX32	Lajitas Array	20.27	324	P	P	13 17 52.8	+2.5
154A	Montrose	20.29	17	P	P	13 17 51.0	+0.7
154A				IAmb	IAmb	13 18 03.3	
	comp=Z,50nm,1.2s						
Z38A	Mt. Pleasant	20.34	348	P	P	13 17 51.6	+0.7
Y49A	Blount Mountai	20.75	9	P	P	13 17 57.6	+2.2
Y49A				IAmb	IAmb	13 18 11.1	
	comp=Z,29nm,1.2s						
ABTX	Abilene, Hawle	21.09	337	P	P	13 18 00.1	+1.1
	baz=154,SNR=5.9						
OXF	Oxford	21.13	2	P	P	13 18 00.4	+1.0
	baz=182						
X48A	Hartselle	21.25	7	P	P	13 18 02.3	+1.6
X48A				IAmb	IAmb	13 18 16.6	
	comp=Z,22nm,1.0s						
SLBS	Sierra La Lagu	21.36	302	P	P	13 18 03.2	+1.1
MIAR	Mount Ida	21.37	352	P	P	13 18 01.6	-0.4
MIAR				IAmb	IAmb	13 18 20.3	
	comp=Z,38nm,1.4s						
MIAR	Mount Ida	21.37	352	P	P	13 18 02.4	+0.4
	baz=171						
FPAL	Fort Paine	21.55	10	P	P	13 18 04.4	+0.5
FPAL				IAmb	IAmb	13 18 19.6	
	comp=Z,33nm,1.1s						
PLAL	Pickwick Lake	21.67	5	P	P	13 18 06.2	+1.0
X37A	Clayton	21.71	348		P	13 18 06.2	+0.6
X37A				IAmb	IAmb	13 18 20.4	
	comp=Z,42nm,1.2s						
X51A	Calhoun	21.72	12	P	P	13 18 06.6	+1.0
X51A				IAmb	IAmb	13 18 22.9	
	comp=Z,48nm,1.3s						
W45A	Hickory Valley	21.78	2	P	P	13 18 06.8	+0.5
LPIG	La Paz	21.84	302	LR	LR	13 27 36.0	
	comp=Z,197nm,18.6s,baz=112,slow=39						
ODSA	Odessa	21.89	331	P	P	13 18 07.1	-0.5
ODSA				IAmb	IAmb	13 18 21.4	
	comp=Z,13nm,1.0s						
WHAR	Wooly Hollow	21.98	355	P	P	13 18 08.6	+0.2
SWET	Sewanee	22.16	9	P	P	13 18 10.7	+0.2
SWET				IAmb	IAmb	13 18 25.9	
	comp=Z,49nm,1.4s						
POST	Post	22.22	334	P	P	13 18 11.0	-0.2
POST				IAmb	IAmb	13 18 24.4	
	comp=Z,14nm,0.9s						
W50A	Signal Mountai	22.25	11	P	P	13 18 11.6	+0.2
W50A				IAmb	IAmb	13 18 25.9	
	comp=Z,16nm,1.1s						
W35A	Tecumseh	22.58	346		P	13 18 13.8	-1.1
W35A				IAmb	IAmb	13 18 14.6	
	comp=Z,31nm,0.9s						
CPCT	Cooper Cave	22.64	12	P	P	13 18 15.9	+0.3
CLNB	Carlsbad	22.66	329	P	P	13 18 16.8	+0.9
LCAR	Lake Charles	22.69	358	P	P	13 18 16.2	+0.1
LCAR				IAmb	IAmb	13 18 36.0	
	comp=Z,42nm,1.4s						
WMOK	Wichita Mounta	22.72	341	P	P	13 18 16.5	+0.1
	baz=158						
FNO	Franklin	22.81	345		P	13 18 16.9	-0.5
WVT	Waverly	22.83	5	P	P	13 18 18.0	+0.4
WVT				IAmb	IAmb	13 18 32.9	
	comp=Z,32nm,1.1s						
WVT	Waverly	22.83	5	P	P	13 18 17.8	+0.2
	baz=186						
TKL	Tuckaleechee C	23.00	13	P	P	13 18 19.6	+0.3
	comp=Z,14nm,0.9s,baz=175,slow=11,SNR=10						
TKL				LR	LR	13 28 24.1	
	comp=Z,383nm,18.0s,baz=198,slow=40						
TKL	Tuckaleechee C	23.00	13	P	P	13 18 20.0	+0.7
TKL				IAmb	IAmb	13 18 41.6	
	comp=Z,31nm,1.1s						
MNTX	Cornudas Mount	23.02	325	P	P	13 18 19.9	+0.3
	baz=139,SNR=59						
TUL1	Leonard	23.07	348	P	P	13 18 18.9	-1.1
TUL1				IAmb	IAmb	13 18 46.0	
	comp=Z,27nm,1.1s						
TUL1	Leonard	23.07	348	P	P	13 18 20.2	+0.2
	baz=166						
OK025	Westminster Rd	23.10	345		P	13 18 19.0	-1.3
KMSC	Kings Mountain	23.17	19	P	P	13 18 20.9	-0.1
	baz=202						
OK029	Liberty Lake	23.34	345	P	P	13 18 21.1	-1.4
ATAH	Atahualpa	23.44	149	P	P	13 18 24.4	+0.2
	comp=Z,4.7nm,0.7s,baz=67,slow=4.5,SNR=3.6						
ATAH				LR	LR	13 26 26.4	
	comp=Z,292nm,18.7s,baz=329,slow=34						
	comp=Z,4.7nm,0.7s						
U49A	Red Boiling Sp	23.45	9	P	P	13 18 24.5	+0.9
MSTX	Muleshoe	23.54	333	P	P	13 18 24.8	+0.2
	baz=148						
T45A	Paducah	23.66	3	P	P	13 18 26.7	+1.2
T47A	Sharon Grove	23.75	6	P	P	13 18 26.6	+0.3
AMTX	Amarillo	23.87	336	P	P	13 18 28.3	+0.7
	baz=151						
TZTN	Tazewell	23.90	13	P	P	13 18 27.5	-0.3
	baz=196						
T50A	Nancy	24.10	11	P	P	13 18 29.9	+0.3
T35A	Sooner Cattle	24.19	348		P	13 18 30.1	-0.3
T35A				IAmb	IAmb	13 18 43.9	
	comp=Z,38nm,1.2s						
CCM	Cathedral Cave	24.67	358	P	P	13 18 34.5	-0.2
CCM				IAmb	IAmb	13 18 48.6	
	comp=Z,20nm,1.4s						
CCM	Cathedral Cave	24.67	358	P	P	13 18 34.6	-0.2
	baz=177						
S51A	Beattyville	24.94	12	P	P	13 18 36.7	-0.6
121A	Cookes Peak, D	25.01	323	P	P	13 18 40.5	+2.4
121A	Cookes Peak, D	25.01	323	P	P	13 18 40.1	+2.0
	baz=136,SNR=37						
WCI	Wyandotte Cave	25.07	7	P	P	13 18 38.9	+0.5
WCI	Wyandotte Cave	25.07	7	P	P	13 18 38.8	+0.5
	baz=189						
BNM	Barren Site	25.56	327	P	P	13 18 44.2	+1.0
ANMO	Albuquerque	26.09	328	P	P	13 18 48.0	0.0
	comp=Z,0.7nm,0.4s,baz=101,slow=16,SNR=4.5						
ANMO				LR	LR	13 32 02.8	
	comp=Z,91nm,18.9s,baz=226,slow=43						
	comp=Z,0.7nm,0.4s						
ANMO	Albuquerque	26.09	328	P	P	13 18 47.9	0.0
	baz=142						
Q51A	Peebles	26.33	12	P	P	13 18 49.2	-0.6

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TUC    Tucson            26.71 318  P      P      13 18 55.0 +1.6
TUC    Tucson            26.71 318  P      P      13 18 54.4 +1.0
       baz=130
P52A   Corning           27.18  14  P      P      13 18 57.4  0.0
       baz=197
O48B   Farmland          27.21   8  P      P      13 18 57.6 -0.2
       baz=191
ACSO   Alum Creek Sta    27.57  12  P      P      13 19 00.9  0.0
       baz=195
214A   Organ Pipe Nat    27.84 316  P      P      13 19 04.4 +0.9
       baz=127
SDCO   Great Sand Dun    27.91 333  P      P      13 19 04.7 +0.4
       baz=147
O53A   New Philadelph    27.98  15  P      P      13 19 05.8 +1.2
       baz=199
W18A   Petrified Fore    27.99 324  P      P      13 19 06.3 +1.3
       baz=136
NNA    Nana              28.40 152  LR     LR     13 28 27.1
       comp=Z,173nm,20.0s,baz=326,slow=32
S22A   4UR Ranch, Cre    28.50 332  P      P      13 19 11.3 +1.6
S22A   4UR Ranch, Cre    28.50 332  P      P      13 19 11.2 +1.6
       baz=144
MVCO   Mesa Verde        28.89 329  P      P      13 19 13.9 +0.9
       baz=141
WUAZ   Wupatki           29.22 323  P      P      13 19 17.5 +1.7
       baz=134,SNR=7.8
PV13   Radium Mtn., P    29.79 330  P      P      13 19 21.9 +1.0
PDMCI  Parker Dam,Lak    30.14 318  P      P      13 19 25.8 +1.9
       baz=128
U15A   North Rim         30.39 323  P      P      13 19 27.5 +1.1
SWSC   Sam W. Stewart    30.47 314  P      P      13 19 28.8 +2.1
       baz=124
IKP    In-Ko-Pah, Jac    30.52 313  P      P      13 19 29.3 +2.0
       baz=123
BC3    Big Chuckawall    30.63 316  P      P      13 19 30.5 +2.2
       baz=125,SNR=11
IRM    Iron Mountain     30.72 317  P      P      13 19 31.3 +2.3
       baz=126,SNR=5.8
ECSD   EROS Data Cent    30.82 351  P      P      13 19 30.0 +0.2
       baz=168
MONP2  Monument Peak     30.88 314  P      P      13 19 32.0 +1.4
       baz=123
O20A   White River Ci    31.08 333  P      P      13 19 33.9 +1.6
       baz=144
BELC   Belle Mtn. Jos    31.20 316  P      P      13 19 34.8 +1.5
       baz=125
TPFO   Pinon Flats       31.29 315  P      P      13 19 35.6 +1.5
       baz=124
PFO    Pinyon Flats O    31.30 315  LR     LR     13 33 55.4
       comp=Z,198nm,18.6s,baz=126,slow=39
PFO    Pinyon Flats O    31.30 315  P      P      13 19 35.4 +1.3
       baz=124
GMRC   Granite Mounta    31.43 317  P      P      13 19 37.4 +2.1
       baz=126,SNR=6.1
MTPU   Mount Pierson     31.46 325  P      P      13 19 37.1 +1.2
MURC   Murrieta          31.80 314  P      P      13 19 40.8 +2.2
       baz=123
TUQ    Turquoise Moun    32.00 318  P      P      13 19 41.9 +1.6
       baz=127,SNR=6.5
BFSC   Mount Baldy Ra    32.47 315  P      P      13 19 46.5 +2.0
       baz=123
GSC    Goldstone, Bar    32.49 317  P      P      13 19 46.4 +1.8
       baz=126
SHOC   Shoshone, Teco    32.50 318  P      P      13 19 46.1 +1.5
       baz=127
CIS    Catalina Islan    32.56 313  P      P      13 19 46.7 +1.5
       baz=121
SADO   Sadowa            32.75  15  LR     LR     13 34 06.4
       comp=Z,305nm,18.8s,baz=148,slow=38
EDW2   Edwards Air Fo    33.06 315  P      P      13 19 51.1 +1.5
       baz=124,SNR=5.1
E43A   Lone Tree Farm    33.08   4  P      P      13 19 48.3 -1.1
TPNV   Topopah Spring    33.13 320  P      P      13 19 52.3 +2.0
       baz=128,SNR=7.5
LRMC   Laurel Mtn Rad    33.18 317  P      P      13 19 52.5 +1.8
       baz=125,SNR=5.7
FURC   Furnace Creek,    33.22 319  P      P      13 19 53.0 +2.1
       baz=127
DUG    Dugway, Tooele    33.35 328  P      P      13 19 53.7 +1.6
       baz=137
MPMC   Manual Prospec    33.39 318  P      P      13 19 54.6 +2.1
       baz=126,SNR=10.0
MACA   Manacapuru-AM     33.55 117  P      P      13 19 54.6 +0.6
R11A   Troy Canyon, C    33.62 322  P      P      13 19 56.7 +2.1
       baz=131,SNR=11
ARVC   Arvin             33.77 315  P      P      13 19 57.6 +1.9
       baz=123
PDAR   Pinedale Array    33.80 334  P      P      13 19 56.6 +0.6
       comp=Z,0.3nm,0.5s,baz=124,slow=10,SNR=5.0
PDAR                                PcP    PcP    13 22 34.7 +0.5
       comp=Z,0.9nm,0.6s,baz=106,slow=5.8,SNR=11
PDAR                                LR     LR     13 35 41.8
       comp=Z,99nm,21.9s,baz=151,slow=40
       comp=Z,0.3nm,0.5s
PDAR   Pinedale Array    33.80 334  P      P      13 19 57.6 +1.5
PDAR                                PcP    PcP    13 22 35.5 +1.2
BW06   Boulder Array     33.80 334  P      P      13 19 57.4 +1.3
       baz=144
ISA    Isabella, Lake    33.82 316  P      P      13 19 58.4 +2.2
       baz=124
GRAC   Grapevine Rang    33.86 319  P      P      13 19 58.8 +2.2
       baz=127
CWC    Cottonwood Cre    34.00 318  P      P      13 19 59.7 +1.9
       baz=125
MZP    Montezuma Peak    34.30 320  P      P      13 20 01.8 +1.2
MZP                                 IAmb   IAmb   13 20 03.5
       comp=Z,4.5nm,0.9s
PKM    Mcpherson Peak    34.32 314  P      P      13 20 02.8 +2.1
       baz=121
VES    Vestal, Richgr    34.33 316  P      P      13 20 02.1 +1.6
       baz=123,SNR=6.9
SAML   Samuel            34.76 128  P      P      13 20 04.1 -0.3
SAML                                IAmb   IAmb   13 20 07.8
       comp=Z,7.3nm,1.0s
REDW   Red Top Meadow    34.84 333  P      P      13 20 06.5 +1.4
REDW                                IAmb   IAmb   13 20 07.6
       comp=Z,9.4nm,1.1s
ELK    Elko              35.04 326  LR     LR     13 36 50.0
       comp=Z,79nm,18.2s,baz=148,slow=40
AGMN   Agassiz Nation    35.21 353  P      P      13 20 07.3 -0.6
       baz=170
NV11   Mina Array Sit    35.23 320  P      P      13 20 10.9 +2.5
NVAR   Mina Array Bea    35.32 320  P      P      13 20 11.9 +2.6
       comp=Z,17nm,0.8s,baz=135,slow=8.1,SNR=134
NVAR                                PcP    PcP    13 22 40.9 +2.2
       comp=Z,2.3nm,0.6s,baz=125,slow=2.9,SNR=9.9
NVAR                                LR     LR     13 35 40.8
       comp=Z,141nm,21.2s,baz=138,slow=38
NVAR   Mina Array Bea    35.32 320  P      P      13 20 11.7 +2.4
MDND   Maddock           35.33 349  P      P      13 20 09.1 +0.2
       baz=164
LHV    Little Huntoon    35.34 320  P      P      13 20 12.6 +3.5
RLMT   Red Lodge         35.63 337  P      P      13 20 13.1 +1.3
       baz=147
LPAZ   La Paz            36.61 143  LR     LR     13 35 24.0
       comp=Z,251nm,21.5s,baz=316,slow=36
MCMT   McKenzie Canyo    36.88 333  P      P      13 20 24.7 +2.2
BOZ    Bozeman (W)       36.97 335  P      P      13 20 24.4 +1.3
       baz=144
ULM    Lac du Bonnet     37.14 354  P      P      13 20 22.7 -1.6
       comp=Z,4.3nm,0.6s,baz=166,slow=9.1,SNR=7.8
ULM                                 LR     LR     13 38 47.2
       comp=Z,166nm,19.1s,baz=162,slow=41
       comp=Z,4.3nm,0.6s
ULM    Lac du Bonnet     37.14 354  P      P      13 20 22.9 -1.5
ULM                                 IAmb   IAmb   13 20 23.1
       comp=Z,6.8nm,0.8s
MDP    Montagnes des     37.91  99  LR     LR     13 37 38.2
       comp=Z,138nm,18.1s,baz=274,slow=39
EGMT   Eagleton          38.26 339  P      P      13 20 34.7 +0.8
       baz=148
PLID   Pearl Lake        38.54 330  P      P      13 20 37.5 +0.9
MSO    Missoula          38.92 334  P      P      13 20 40.3 +0.7
       baz=141
KMRM   Mail Ridge        39.78 319  P      P      13 20 48.6 +1.8
YBH    Yreka Blue Hor    40.00 321  LR     LR     13 38 59.2
       comp=Z,106nm,19.0s,baz=150,slow=38
L04D   Klamath Falls     40.04 322  P      P      13 20 50.2 +1.2
KHMM   Horse Mountain    40.15 319  P      P      13 20 51.5 +1.6
SIV    San Ignacio       40.94 134  LR     LR     13 37 23.4
       comp=Z,199nm,20.8s,baz=286,slow=35
LVC    Limon Verde       41.34 149  LR     LR     13 38 29.7
       comp=Z,121nm,18.1s,baz=294,slow=36
NEW    Newport           41.41 333  LR     LR     13 43 17.1
       comp=Z,137nm,18.3s,baz=139,slow=43
FFC    Flin Flon         42.35 350  P      P      13 21 08.3 +0.7
FFC                                 IAmb   IAmb   13 21 08.5
       comp=Z,11nm,1.4s
RPN    Rapa Nui          44.28 205  LR     LR     13 35 03.8
       comp=Z,168nm,21.1s,baz=90,slow=29
SCHQ   Schefferville     45.29  19  P      P      13 21 29.8 -1.4
       comp=Z,6.9nm,0.5s,baz=213,slow=6.9,SNR=27
SCHQ                                LR     LR     13 42 16.8
       comp=Z,125nm,18.1s,baz=238,slow=39
       comp=Z,6.9nm,0.5s
SCHQ   Schefferville     45.29  19  P      P      13 21 30.0 -1.2
SCHQ                                IAmb   IAmb   13 21 31.2
       comp=Z,8.1nm,0.8s
H03N2  Juan Fernandez    47.70 167  T      T      14 12 54.9
       baz=346,slow=76,SNR=8.8
H03N1  Juan Fernandez    47.71 167  T      T      14 12 56.3
       baz=346,slow=76,SNR=7.9
H03N3  Juan Fernandez    47.72 167  T      T      14 12 55.2
       baz=346,slow=76,SNR=7.5
BBB    Bella Bella       49.23 330  LR     LR     13 46 11.4
       comp=Z,58nm,19.5s,baz=186,slow=40
CFA    Coronel Fontan    49.37 155  LR     LR     13 39 01.6
       comp=Z,73nm,20.7s,baz=314,slow=31
YKA    Yellowknife Ar    52.12 346  P      P      13 22 22.4 -1.0
       comp=Z,1.4nm,0.7s,baz=148,slow=7.7,SNR=24
YKA                                 PcP    PcP    13 23 34.6 +0.1
       comp=Z,0.1nm,0.4s,baz=157,slow=3.7,SNR=3.7
YKA                                 ScP    ScP    13 27 25.4 -1.4
       comp=Z,0.1nm,0.4s,baz=168,slow=3.5,SNR=2.3
YKA                                 LR     LR     13 48 27.0
       comp=Z,120nm,18.2s,baz=254,slow=41
       comp=Z,1.4nm,0.7s
YKA    Yellowknife Ar    52.12 346  P      P      13 22 23.0 -0.4
FRB    Frobisher Bay     52.61  12  LR     LR     13 45 38.6
       comp=Z,215nm,19.3s,baz=210,slow=37
TAOE   Nuku Hiva Isla    54.27 249  eLR    LR     13 38 30.6
       comp=Z,170nm,24.2s
PLCA   Paso Flores       56.76 162  LR     LR     13 42 03.9
       comp=Z,106nm,20.4s,baz=342,slow=30
RKT    Rikitea           56.84 231  eT     T      14 23 49.8
       comp=Z,3.3nm,0.3s
M31M   Drury Creek, Y    58.05 337  P      P      13 23 07.1 +0.8
       baz=127
SFJD   Kangerlussuaq     59.66  17  LR     LR     13 49 34.9
       comp=Z,137nm,19.6s,baz=288,slow=37
YUK8   Steele Glacier    59.66 335  P      P      13 23 18.2 +0.5
       baz=121
M29M   Somme Creek       59.75 336  P      P      13 23 18.7 +0.6
       baz=123
DAWY   Dawson            60.98 338  P      P      13 23 26.6 +0.1
DAWY   Dawson            60.98 338  P      P      13 23 27.4 +1.0
       baz=122
M27K   Edge Creek, AK    61.07 335  P      P      13 23 27.6 +0.4
       baz=119
MCARA  McCarthy VSAT     61.08 334  P      P      13 23 27.8 +0.6
       baz=118
F31M   Tsiigehtchic      61.11 342  P      P      13 23 27.0 -0.1
       baz=130
L27K   Beaver Creek,     61.40 336  P      P      13 23 29.4 +0.2
       baz=120
RES    Resolute Bay      61.43 359  P      P      13 23 27.9 -1.3
       comp=Z,1.0nm,0.3s,baz=175,slow=7.9,SNR=6.7
       comp=Z,1.0nm,0.3s
RES    Resolute Bay      61.43 359  P      P      13 23 28.1 -1.1
RES                                 IAmb   IAmb   13 23 35.7
       comp=Z,4.5nm,0.9s
M26K   Nabesna, AK       61.55 335  P      P      13 23 30.6 +0.2
       baz=118
INK    Inuvik            61.61 343  LR     LR     13 56 53.3
       comp=Z,94nm,18.4s,baz=272,slow=42
INK    Inuvik            61.61 343  P      P      13 23 30.7 +0.2
INK                                 IAmb   IAmb   13 23 30.9
       comp=Z,3.0nm,0.9s
INK    Inuvik            61.61 343  P      P      13 23 30.5  0.0
       baz=130
N25K   Chitina, Valde    61.86 334  P      P      13 23 34.0 +1.6
N25K                                IAmb   IAmb   13 23 46.4
       comp=Z,9.6nm,1.4s
N25K   Chitina, Valde    61.86 334  P      P      13 23 32.4  0.0
       baz=116
EYAK   Cordova Ski Ar    61.91 332  P      P      13 23 33.3 +0.7
       baz=114
L26K   Log Cabin Wild    61.99 336  P      P      13 23 34.0 +0.7
       baz=118
A36M   Sachs Harbour     62.28 348  P      P      13 23 33.8 -1.1
A36M                                IAmb   IAmb   13 23 34.0
       comp=Z,5.6nm,1.2s
A36M   Sachs Harbour     62.28 348  P      P      13 23 34.0 -0.9
       baz=141
KLU    Klutina           62.38 333  P      P      13 23 35.9  0.0
       baz=115
P23K   Montague Islan    62.45 332  P      P      13 23 37.4 +1.1
       baz=112
I27K   Kandik River      62.61 339  P      P      13 23 38.1 +0.7
       baz=121
M24K   Tolsona, Glenn    62.75 334  P      P      13 23 38.3  0.0
       baz=115
J26L   Joseph Creek      62.77 337  P      P      13 23 39.8 +1.2
       baz=118
H27K   Steamboat Moun    62.90 339  P      P      13 23 39.8 +0.5
       baz=121
RIDG   Independent Ri    62.92 336  P      P      13 23 39.5  0.0
       baz=117
I26K   Coal Creek Min    63.01 338  P      P      13 23 40.4 +0.5
       baz=119
G27K   Doyon Strip       63.25 340  P      P      13 23 41.3 -0.3
       baz=121
RC01   Rabbit Creek A    63.92 332  P      P      13 23 46.1  0.0
       baz=111
E27K   Coleen River      63.96 341  P      P      13 23 46.3 +0.1
       baz=122
PRP    Porcupine Dome    63.99 338  P      P      13 23 46.3 -0.3
       baz=117
HDA    Harding Lake      64.04 336  P      P      13 23 46.4 -0.4
       baz=115
ILAR   Eielson Array     64.17 337  P      P      13 23 46.6 -1.0
       comp=Z,1.5nm,1.0s,baz=132,slow=4.4,SNR=12
ILAR                                LR     LR     13 56 25.2
       comp=Z,53nm,18.6s,baz=96,slow=40
       comp=Z,1.5nm,1.0s
ILAR   Eielson Array     64.17 337  P      P      13 23 47.4 -0.2
OHAK   Old Harbor        64.44 327  P      P      13 23 49.8 +0.3
       baz=106
SUA    Susitna One       64.51 332  P      P      13 23 50.5 +0.4
       baz=110
F26K   Sheenjek River    64.53 340  P      P      13 23 50.4 +0.4
       baz=119
BMAR   Burnt Mountain    64.55 340  P      P      13 23 50.3 +0.1
MCK    McKinley          64.56 335  P      P      13 23 51.3 +1.0
       baz=113
G25K   Bearman Lake      64.77 339  P      P      13 23 51.8 +0.4
       baz=117
F25K   Christian Rive    64.99 340  P      P      13 23 53.9 +0.9
       baz=118
H24K   Noodor Dome       65.00 337  P      P      13 23 53.1  0.0
       baz=115
TRF    Thorofare Moun    65.02 335  P      P      13 23 53.0 -0.4
       baz=111
SKT    Skwentna          65.04 333  P      P      13 23 53.0 -0.4
       baz=110
Q19K   Cape Douglas,     65.09 329  P      P      13 23 54.9 +1.1
       baz=106
P19K   Oil Pt            65.10 330  P      P      13 23 54.1 +0.3
       baz=107
E25K   Arctic Village    65.21 340  P      P      13 23 54.5 +0.2
       baz=118
I23K   Minto, Yukon-K    65.29 336  P      P      13 23 54.6 -0.2
       baz=113
BPAW   Bear Paw Mtn.     65.54 335  P      P      13 23 56.2 -0.3
       baz=111
H23K   Yukon River       65.62 337  P      P      13 23 56.5 -0.6
       baz=113
CAST   Castle Rocks      65.76 334  P      P      13 23 57.1 -0.9
       baz=110
O19K   Port Alsworth     65.78 330  P      P      13 23 57.2 -0.9
       baz=106
MLY    Manley            65.78 336  P      P      13 23 58.2  0.0
MLY    Manley            65.78 336  P      P      13 23 57.8 -0.4
       baz=112
C26K   Camden Bay        65.87 342  P      P      13 23 58.7 +0.1
       baz=119
CHUM   Lake Minchumin    66.02 335  P      P      13 23 59.7 +0.2
       baz=110
N19K   Bonanza Creek     66.03 331  P      P      13 24 00.2 +0.3
N19K                                IAmb   IAmb   13 24 03.8
       comp=Z,6.3nm,1.2s
N19K   Bonanza Creek     66.03 331  P      P      13 23 59.7 -0.1
       baz=106
Q17K   Contact Creek     66.06 328  P      P      13 23 59.3 -0.8
       baz=104
O18K   Koktuh Hills      66.12 330  P      P      13 24 00.3 -0.1
       baz=105
PPT2   Papeete2          66.16 244  eLR    LR     13 44 01.0
       comp=Z,88nm,21.5s
L20K   Farewell, AK      66.24 333  P      P      13 24 00.5 -0.6
       baz=108
M19K   Big River Lodg    66.30 332  P      P      13 24 01.6 +0.1
       baz=107
I21K   Tanana            66.33 336  P      P      13 24 02.2 +0.6
       baz=110
H22K   Ishtalitna Cre    66.35 337  P      P      13 24 02.0 +0.2
       baz=111
COLD   Coldfoot          66.42 338  P      P      13 24 02.3 +0.2
       baz=113
SUMG   Summit            66.45  15  iP     P      13 24 01.0 -1.7
Q16K   King Salmon       66.55 329  P      P      13 24 03.6 +0.6
       baz=103
E23K   Chandalar         66.55 339  P      P      13 24 03.9 +0.9
       baz=114
L19K   White Mountain    66.59 332  P      P      13 24 03.5 +0.2
       baz=106
C24K   Franklin Bluff    66.95 341  P      P      13 24 05.9 +0.4
       baz=116
O17K   Koliganek Bris    67.02 330  P      P      13 24 06.7 +0.7
       baz=103
F22K   John River        67.24 338  P      P      13 24 08.2 +0.8
       baz=111
D23K   Nanushuk River    67.27 340  P      P      13 24 07.7 +0.2
       baz=113
IMAR   Indian Mountai    67.29 337  P      P      13 24 07.5 -0.2
E22K   Anaktuvuk Pass    67.34 339  P      P      13 24 08.6 +0.5
       baz=112
G21K   Allakaket         67.38 337  P      P      13 24 08.7 +0.5
       baz=110
O16K   Kokwok River B    67.47 329  P      P      13 24 09.1 +0.2
       baz=102
F21K   Alatna River      67.61 338  P      P      13 24 10.3 +0.6
       baz=110,SNR=9.1
N16K   Nishlik Lake      67.99 330  P      P      13 24 11.9 -0.3
       baz=102
TBI    Tubuai            68.46 238  eLR    LR     13 45 05.2
       comp=Z,443nm,26.5s
TBI                                 eLR    LR     13 45 05.4
       comp=Z,2μm,26.8s
UNV    Unalaska Valle    71.30 323  P      P      13 24 33.7 +1.1
UNV    Unalaska Valle    71.30 323  P      P      13 24 33.4 +0.7
       baz=93
TNA    Tin City          72.91 335  P      P      13 24 42.5 +0.5
       baz=96
DAG    Danmarks Havn     72.93  13  iP     P      13 24 40.0 -2.0
SPIA   Saint Paul Isl    73.54 326  P      P      13 24 45.8 -0.2
       baz=91
ESDC   Sonseca Array     78.77  52  P      P      13 25 13.6 -2.5
       comp=Z,1.1nm,0.8s,baz=285,slow=5.5,SNR=7.5
       comp=Z,1.1nm,0.8s
NOA    NORSAR Array B    83.92  29  P      P      13 25 42.2 -0.7
       comp=Z,0.6nm,0.7s,baz=289,slow=5.5,SNR=2.5
       comp=Z,0.6nm,0.7s
DBIC   Dimbokro          83.97  85  P      P      13 25 43.9 -0.1
       comp=Z,1.6nm,0.4s,baz=280,slow=4.6,SNR=4.2
       comp=Z,1.6nm,0.4s
DBIC   Dimbokro          83.97  85  P      P      13 25 43.6 -0.5
DBIC                                IAmb   IAmb   13 25 51.2
       comp=Z,10nm,1.4s
ARCES  ARCESS Array B    86.24  19  P      P      13 25 53.2 -1.2
       comp=Z,1.6nm,0.7s,baz=318,slow=1.6,SNR=3.9
       comp=Z,1.6nm,0.7s
TORD   Torodi Ar. Bea    88.83  77  P      P      13 26 06.2 -1.6
       comp=Z,0.4nm,0.4s,baz=296,slow=3.7,SNR=6.4
       comp=Z,0.4nm,0.4s
FINES  FINESS Array B    90.38  26  P      P      13 26 13.4 -0.7
       comp=Z,0.5nm,0.7s,baz=289,slow=4.3,SNR=1.4
       comp=Z,0.5nm,0.7s
PETK   Petropavlovsk-    92.21 326  P      P      13 26 24.0 +1.2
       comp=Z,4.2nm,1.1s,baz=46,slow=8.3,SNR=2.4
       comp=Z,4.2nm,1.1s
DZM    Mont Dzumac      107.11 251  eLR    LR     14 02 59.0
       comp=Z,55nm,23.8s
KSRS   Korea Array      118.11 326  PKP    PKPdf  13 32 01.4 +1.1
       comp=Z,1.2nm,0.6s,baz=3.2,slow=2.4,SNR=5.9
BOSA   Boshof           118.47 115  PKP    PKPdf  13 32 02.0 +0.7
       comp=Z,4.0nm,0.9s,baz=284,slow=3.6,SNR=6.5
MKAR   Makanchi Array   119.80   6  PKP    PKPdf  13 32 03.2  0.0
       comp=Z,0.5nm,0.4s,baz=304,slow=3.4,SNR=13
WRA    Warramunga Arr   136.92 255  PKP    PKPdf  13 32 37.3 +0.9
       comp=Z,3.2nm,1.1s,baz=89,slow=2.8,SNR=12
ASAR   Alice Springs    137.08 250  PKhKP  PKPpre 13 32 32.8
       comp=Z,0.2nm,0.6s,baz=113,slow=4.0,SNR=8.2
PZH    PanZhiHua        138.77 344  PKP    PKPdf  13 32 39.4 -0.5
CMAR   Chiang Mai Arr   147.18 344  PKPbc  PKPdf  13 32 57.0 +2.2
       comp=Z,4.8nm,0.6s,baz=337,slow=3.4,SNR=31
```

IDC 10 13:20:06.7±645.0**,53°.91N**×**42°.58E,h0^{km},Error ellipse: s-maj=251.5km s-min=194.6km az=90.0,Baltic States-Belarus-Northwestern Russia**

```
Code   Station Name       Δ°   AZ°   Phase ID          Time     Res
                                    Op     ISC       h  m  s    ISC
I31KZ  AKTYUBINSK INF    10.12 104  I      I      14 18 30.0
       0.1nm,0.8s,baz=298,slow=318,SNR=1.5
I37NO  I37NO             18.81 333  I      I      15 19 20.0
       baz=133,slow=328,SNR=1.0
I46RU  ZALESOVO INFRA    24.60  73  I      I      15 52 20.0
       baz=289,slow=333,SNR=1.1
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*IDC **10** 13:37:52.0±1.8, 39°.47N×14°.82E, h0^{km}, mb3.5/3, mbtmp3.4/5, ML3.0/2, MS2.6/1, Error ellipse: s-maj=47.0km s-min=24.1km az=91.0*

*ROM **10** 13:37:54.8±0.1, 39°.029N±0°.006×15°.441E±0°.008, h24^{km}±1km, ML3.6/12, Error ellipse: s-maj=0.6km s-min=0.5km az=315.0*

ISC 10 13:37:54.5±1.1**,39°.02N**±0°.03×**15°.45E**±0°.03**,h14**^{km}±9^{km}**, n56,**σ0^{s}.**84**/57**,mb3.8**/3**,1C,Southern Italy**

```
Code   Station Name       Δ°   AZ°   Phase ID          Time     Res
                                    Op     ISC       h  m  s    ISC
IST3   Stromboli F        0.28 218  P      Pb     13 38 02.4 +1.1
IST3                                S      Sb     13 38 07.2 +1.3
IST3                                AML    AML
       comp=E,31550μm,0.1s
IST3                                AML    AML
       comp=N,40550μm,0.2s
IST3                                AML    AML
       comp=N,40527μm,0.2s
IST3                                AML    AML
       comp=E,31522μm,0.1s
ISTR   Stromboli Gino     0.31 221  P      Pb     13 38 02.6 +0.8
ISTR                                S      Sb     13 38 07.7 +1.0
ISTR                                AML    AML
       comp=N,25550μm,0.5s
ISTR                                AML    AML
       comp=E,24400μm,0.5s
ISTR                                AML    AML
       comp=N,20619μm,0.2s
ISTR                                AML    AML
       comp=E,19344μm,0.1s
CAR1   CAROLEI            0.64  68  P      Pg     13 38 07.1 +0.1
CAR1                                S      Sg     13 38 15.8 +0.4
CAR1                                AML    AML
       comp=E,11800μm,0.2s
CAR1                                AML    AML
       comp=N,11900μm,0.7s
CAR1                                AML    AML
       comp=E,12750μm,1.6s
CAR1                                AML    AML
       comp=N,10570μm,0.8s
CAR1                                AML    AML
       comp=E,12750μm,0.4s
CAR1                                AML    AML
       comp=N,10570μm,1.2s
CAR1                                AML    AML
       comp=E,11786μm,0.2s
CAR1                                AML    AML
       comp=E,10735μm,0.2s
CAR1                                AML    AML
       comp=N,11878μm,0.7s
CAR1                                AML    AML
       comp=N,10493μm,0.7s
VPL    Vulcano Piano      0.74 210  P      Pb     13 38 09.3 +0.2
SPS2   Spezzano della     0.74  68  P      Pg     13 38 09.1 +0.2
SPS2                                S      Sb     13 38 19.4 +0.2
SPS2                                AML    AML
       comp=N,2970μm,0.8s
SPS2                                AML    AML
       comp=N,2970μm,1.2s
```

SPS2				AML	AML		
	comp=E,2570µm,0.4s						
SPS2				AML	AML		
	comp=N,2925µm,0.3s						
SPS2				AML	AML		
	comp=E,2570µm,0.4s						
MSRU	**Castanea**	**0.76**	**176**	P	**Pb**	**13 38 09.2**	**-0.3**
MSRU				AML	AML		
	comp=E,5175µm,0.4s						
MSRU				AML	AML		
	comp=E,5175µm,1.6s						
MSRU				AML	AML		
	comp=N,2885µm,0.5s						
MSRU				AML	AML		
	comp=N,2743µm,0.4s						
MSRU				AML	AML		
	comp=E,5175µm,0.4s						
MILZ	**Milazzo**	**0.77**	**193**	P	**Pb**	**13 38 09.4**	**-0.2**
GRI	**Girifalco**	**0.78**	**104**	P	**Pb**	**13 38 09.9**	**0.0**
GRI				S	**Sb**	**13 38 21.2**	**+0.9**
GRI				AML	AML		
	comp=N,9365µm,0.4s						
GRI				AML	AML		
	comp=E,11800µm,0.3s						
GRI				AML	AML		
	comp=E,11774µm,0.3s						
GRI				AML	AML		
	comp=N,9366µm,0.4s						
IFIL	**Filicudi I Eol**	**0.83**	**237**	P	**Pg**	**13 38 10.5**	**-0.1**
IFIL				AML	AML		
	comp=E,11699µm,0.5s						
MSCL	**Scilla**	**0.83**	**161**	P	**Pb**	**13 38 10.6**	**-0.2**
CEL	**Celeste**	**0.84**	**155**	P	**Pb**	**13 38 10.4**	**-0.4**
CELI	**Celico**	**0.91**	**65**	P	**Pg**	**13 38 11.9**	**-0.2**
CELI				S	**Sb**	**13 38 24.6**	**+0.5**
CELI				AML	AML		
	comp=E,2110µm,1.2s						
CELI				AML	AML		
	comp=N,2970µm,0.5s						
CELI				AML	AML		
	comp=E,5225µm,1.6s						
CELI				AML	AML		
	comp=N,7330µm,0.5s						
CELI				AML	AML		
	comp=E,2110µm,0.8s						
CELI				AML	AML		
	comp=N,2970µm,1.5s						
CELI				AML	AML		
	comp=N,7330µm,1.5s						
CELI				AML	AML		
	comp=E,5225µm,0.4s						
CELI				AML	AML		
	comp=N,7329µm,0.5s						
CELI				AML	AML		
	comp=N,2974µm,0.5s						
CELI				AML	AML		
	comp=E,5134µm,0.6s						
CELI				AML	AML		
	comp=E,2072µm,0.6s						
TDS	**Terranova Siba**	**0.94**	**47**	P	**Pg**	**13 38 12.2**	**-0.4**
TDS				S	**Sg**	**13 38 25.6**	**+0.7**
PLAC	**Placanica**	**0.96**	**126**	P	**Pb**	**13 38 12.7**	**-0.3**
SERS	**Sersale**	**0.96**	**89**	P	**Pg**	**13 38 13.0**	**-0.1**
SERS				S	**Sb**	**13 38 26.6**	**+0.9**
IACL	**Alicudi**	**0.98**	**241**	P	**Pg**	**13 38 12.7**	**-0.8**
IACL				AML	AML		
	comp=N,2200µm,0.6s						
IACL				AML	AML		
	comp=N,2200µm,1.4s						
IACL				AML	AML		
	comp=E,2105µm,0.5s						
IACL				AML	AML		
	comp=N,1796µm,0.7s						
IACL				AML	AML		
	comp=E,2105µm,0.5s						
CUC	**Castrocucco**	**1.01**	**16**	P	**Pg**	**13 38 13.2**	**-0.9**
CUC				S	**Sg**	**13 38 28.4**	**+1.1**
NOV	**Novara**	**1.02**	**194**	P	**Pg**	**13 38 13.0**	**-1.2**
TIP	**Timpagrande**	**1.03**	**81**	⇑P	**Pg**	**13 38 14.1**	**-0.3**
TIP				AML	AML		
	comp=N,904µm,0.7s						
TIP				AML	AML		
	comp=E,1294µm,0.7s						
TIP				AML	AML		
	comp=N,1146µm,0.7s						
TIP				AML	AML		
	comp=E,1092µm,0.7s						
TIP				AML	AML		
	comp=N,889µm,0.6s						
TIP				AML	AML		
	comp=N,1128µm,0.6s						
TIP				AML	AML		
	comp=E,1293µm,0.7s						
TIP				AML	AML		
	comp=E,1094µm,0.7s						
SOI	**Samo**	**1.06**	**153**	P	**Pg**	**13 38 13.8**	**-1.2**
SOI				S	**Sn**	**13 38 29.4**	**-0.1**
AIO	**Antillo**	**1.06**	**189**	P	**Pg**	**13 38 13.6**	**-1.4**
MUCR	**Ucria**	**1.08**	**205**	P	**Pg**	**13 38 14.3**	**-1.0**
MGR	**Morigerati**	**1.12**	**4**	P	**Pg**	**13 38 14.6**	**-1.5**
PIPA	**Pietrapaola**	**1.16**	**66**	P	**Pg**	**13 38 16.0**	**-0.8**
PIPA				AML	AML		
	comp=N,2900µm,0.5s						
PIPA				AML	AML		
	comp=N,2905µm,0.5s						
PIPA				AML	AML		
	comp=E,2740µm,0.7s						
PIPA				AML	AML		
	comp=E,2665µm,0.7s						
PIPA				AML	AML		
	comp=E,2446µm,0.3s						
PIPA				AML	AML		
	comp=E,2468µm,0.3s						
PIPA				AML	AML		
	comp=N,2908µm,0.5s						
PIPA				AML	AML		
	comp=N,2898µm,0.5s						
MSFR	**San Fratello**	**1.20**	**215**	P	**Pg**	**13 38 16.2**	**-1.3**
SIRI	**Monte Sirino -**	**1.20**	**15**	P	**Pg**	**13 38 16.2**	**-1.4**
LADO	**San Nicola del**	**1.22**	**77**	P	**Pg**	**13 38 17.1**	**-0.9**
LADO				AML	AML		
	comp=N,115µm,0.7s						
LADO				AML	AML		
	comp=E,146µm,0.9s						
LADO				AML	AML		
	comp=N,111µm,0.7s						
LADO				AML	AML		
	comp=E,117µm,0.5s						
MTSN	**Montesano sull**	**1.26**	**11**	P	**Pn**	**13 38 17.4**	**-0.4**
SCHR	**S. Chirico Rap**	**1.27**	**22**	P	**Pn**	**13 38 18.3**	**+0.4**
EPZF	**Pizzo Felice**	**1.28**	**201**	P	**Pn**	**13 38 19.2**	**+1.1**
CMPR	**Campora**	**1.30**	**355**	P	**Pn**	**13 38 17.2**	**-1.0**
MCEL	**Monticello**	**1.33**	**12**	P	**Pn**	**13 38 18.5**	**-0.2**
AG11	**Viggiano (PZ)**	**1.36**	**16**	P	**Pn**	**13 38 19.4**	**+0.2**
SLCN	**Sala Consilina**	**1.37**	**6**	P	**Pn**	**13 38 19.4**	**+0.1**
PLLN	**Pollina**	**1.45**	**225**	P	**Pn**	**13 38 20.2**	**-0.2**
CSLB	**Castelbuono**	**1.54**	**226**	P	**Pn**	**13 38 21.3**	**-0.2**
PTRP	**Pietrapertosa**	**1.57**	**17**	AML	AML		
	comp=N,805µm,0.4s						
PTRP				AML	AML		
	comp=N,805µm,0.4s						
PTRP				AML	AML		
	comp=E,731µm,1.1s						
PTRP				AML	AML		
	comp=E,731µm,1.1s						
HLNI	**Lentini**	**1.73**	**195**	P	**Pn**	**13 38 24.7**	**+0.5**
VAE	**Valguarnera**	**1.75**	**208**	Pn	**Pg**	**13 38 27.8**	**-0.2**
	comp=E,2.7nm,0.3s,baz=6.2,slow=17,SNR=2.3						
VAE				Sn	Sg	13 39 00.6	+10
	comp=E,8.7nm,0.3s,baz=3.5,slow=15,SNR=3.4						
	comp=E,23nm,0.6s						
HAGA	**Augusta**	**1.75**	**188**	P	**Pn**	**13 38 24.9**	**+0.5**
SNAL	**S. Angelo Dei**	**1.91**	**355**	P	**Pn**	**13 38 28.5**	**+1.8**
AMUR	**Altamura**	**2.08**	**25**	P	**Pn**	**13 38 29.8**	**+0.8**
SGTA	**Sant Agata di**	**2.11**	**358**	AML	AML		
	comp=E,205µm,0.9s						
SGTA				AML	AML		
	comp=N,160µm,0.6s						
SGTA				AML	AML		
	comp=N,160µm,1.4s						
MRVN	**Minervino Murg**	**2.12**	**15**	P	**Pn**	**13 38 30.0**	**+0.5**
MRVN				AML	AML		
	comp=E,164µm,0.5s						
MRVN				AML	AML		
	comp=N,140µm,1.1s						
MRVN				AML	AML		
	comp=N,140µm,0.9s						
MRVN				AML	AML		
	comp=E,285µm,0.7s						
MRVN				AML	AML		
	comp=N,217µm,0.7s						
VITU	**Vitulano (BN)**	**2.25**	**344**	P	**Pn**	**13 38 31.7**	**+0.4**
BSSO	**Busso**	**2.60**	**346**	P	**Pn**	**13 38 37.4**	**+1.1**
PP3	**Marolino**	**4.57**	**343**	AML	AML		
	comp=E,544µm,1.4s						
PP3				AML	AML		
	comp=N,752µm,0.1s						
PP3				AML	AML		
	comp=N,751µm,0.1s						
PP3				AML	AML		
	comp=E,452µm,1.5s						
PP3				AML	AML		
	comp=N,706µm,0.1s						
PP3				AML	AML		
	comp=E,452µm,1.5s						
PP3				AML	AML		
	comp=N,706µm,0.1s						
PP3				AML	AML		
	comp=E,452µm,0.5s						
PP3				AML	AML		
	comp=N,751µm,0.1s						
PP3				AML	AML		
	comp=E,544µm,0.6s						
MCIV	**Monte Civitell**	**4.72**	**324**	AML	AML		
	comp=N,316µm,1.2s						
MCIV				AML	AML		
	comp=E,258µm,0.4s						
VSL	**Villasalto**	**4.74**	**278**	AML	AML		
	comp=N,42µm,1.6s						
VSL				AML	AML		
	comp=E,37µm,1.2s						
RNCA	**Ronca, Sant'Ol**	**7.30**	**320**	AML	AML		
	comp=E,45µm,1.5s						
RNCA				AML	AML		
	comp=N,58µm,1.1s						
RNCA				AML	AML		
	comp=N,58µm,0.9s						
RNCA				AML	AML		
	comp=E,45µm,0.5s						
FVI	**Forni Avoltri**	**7.82**	**346**	AML	AML		
	comp=N,172µm,1.5s						
FVI				AML	AML		
	comp=E,148µm,1.4s						
FVI				AML	AML		
	comp=E,148µm,0.6s						
FVI				AML	AML		
	comp=N,172µm,0.5s						
GERES	**GERESS Array B**	**9.90**	**353**	Pn	Pn	13 40 08.7	-7.7
	comp=N,0.2nm,0.3s,baz=178,slow=15,SNR=1.5						
	comp=N,0.1nm,0.2s						
NOA	**NORSAR Array B**	**22.20**	**355**	LR	LR	13 52 35.8	
	comp=N,16nm,18.9s,baz=280,slow=41						
FINES	**FINESS Array B**	**23.39**	**13**	P	**P**	**13 43 00.6**	**-1.9**
	comp=N,0.5nm,0.5s,baz=200,slow=12,SNR=1.5						
	comp=N,0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**48.09**	**48**	P	**P**	**13 46 32.9**	**-0.5**
	comp=N,0.4nm,0.5s,baz=284,slow=5.8,SNR=2.1						
	comp=N,0.4nm,0.5s						
MKAR	**Makanchi Array**	**48.23**	**58**	P	**P**	**13 46 35.2**	**+0.6**
	comp=N,0.5nm,0.5s,baz=279,slow=6.6,SNR=8.4						
	comp=N,0.5nm,0.5s						

IDC 10 13:39:03.5±2.3**, 50°.30N×27°.61E, h0^{km}, mbtmp3.4**/3**, ML2.8**/3**, Error ellipse: s-maj=22.7km s-min=11.5km az=22.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKASG	**Malin Array Be**	**1.11**	**68**	Pg	Pg	13 39 24.7	0.0
	27nm,0.3s,baz=251,slow=18,SNR=50						
AKASG				Lg	Lg	13 39 40.0	
	9.7nm,0.3s,baz=250,slow=31,SNR=5.2						
FINES	**FINESS Array B**	**11.20**	**356**	Pn	Pn	13 41 39.3	-5.4
	0.2nm,0.3s,baz=167,slow=13,SNR=8.0						
	0.5nm,0.4s						
HFS	**Hagfors**	**12.62**	**327**	Pn	Pn	13 41 56.6	-7.6
	0.1nm,0.3s,baz=138,slow=13,SNR=1.2						
	0.4nm,0.4s						
ARCES	**ARCESS Array B**	**19.32**	**358**	Pn	P	13 43 24.9	-5.0
	0.1nm,0.3s,baz=181,slow=11,SNR=4.9						
	0.8nm,0.6s						

IDC 10 13:43:21.3±585.0**, 57°.03N×29°.47E, h0^{km}, Error ellipse: s-maj=227.9km s-min=93.4km az=88.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**4.26**	**91**	I	I	14 08 20.0	
	0.2nm,0.6s,baz=277,slow=314,SNR=0.5						
I37NO	**I37NO**	**13.02**	**343**	I	I	14 59 50.0	
	baz=149,slow=330,SNR=0.7						
I31KZ	**AKTYUBINSK INF**	**18.07**	**99**	I	I	15 31 20.0	
	baz=307,slow=328,SNR=1.5						
I46RU	**ZALESOVO INFRA**	**30.78**	**72**	I	I	16 57 10.0	
	baz=298,slow=332,SNR=1.1						

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*IDC **10** 13:46:37.5±0.3, 11°.91N×69°.68W, h0^{km}, mb5.1/52, mbtmp5.1/55, ML4.8/3, MS4.5/69, Error ellipse: s-maj=10.2km s-min=8.7km az=60.0*

*MOS **10** 13:46:38.0±1.1, 11°.92N×69°.74W, h12^{km}, mb5.7/72, Error ellipse: s-maj=6.5km s-min=4.7km az=73.2*

*UPA **10** 13:46:38.9±3.0, 11°.96N×69°.41W, h10^{km}±311^{km}, MW5.3*

*NEIC **10** 13:46:39.7, 12°.00N×69°.60W, h10^{km}*

*NEIC **10** 13:46:39.8, 11°.99N×69°.60W, h18^{km}*

*NEIC **10** 13:46:39.8, 11°.89N×69°.70W, h18^{km}, Moment Tensor Solution. Duration: 1^{s}9 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-5.91; M$_{\theta\theta}$0.68; M$_{\phi\phi}$5.23; M$_{r\theta}$-2.82; M$_{\theta\phi}$-3.56; M$_{\phi r}$1.36; Fault plane solution: M$_0$7.31000×10^{16} NP1: ϕ_s134.85000°, δ58.01000°, λ-109.88000°. NP2: ϕ_s349.16000°, δ37.10000°, λ-61.44000°. Principal axes: T 7.6710, Plg11.0000°, Azm239.0000°; N -0.7138, Plg17.0000°, Azm146.0000°; P -6.9573, Plg70.0000°, Azm1.0000°;*

*FUNV **10** 13:46:40.8, 12°.10N×69°.66W, h14^{km}, MW5.1*

*VAO **10** 13:46:40.3±0.2, 11°.85N×69°.74W, h10^{km}, mb5.3*

*NEIC **10** 13:46:40.4±2.2, 11°.98N±0°.04×69°.57W±0°.06, h15^{km}±1^{km}, mb5.5/185, Ms_20 4.8/170, Mwb5.1/33, Mww5.2/15, Error ellipse: s-maj=9.9km s-min=7.0km az=111.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.89; M$_{\theta\theta}$1.09; M$_{\phi\phi}$3.79; M$_{r\theta}$0.53; M$_{\theta\phi}$-2.07; M$_{\phi r}$0.87; Fault plane solution: M$_0$5.00000×10^{16} NP1: ϕ_s321.85000°, δ42.85000°, λ-104.57000°. NP2: ϕ_s161.38000°, δ48.84000°, λ-76.86000°. Principal axes: T 4.9399, Plg3.0000°, Azm242.0000°; N 0.1276, Plg10.0000°, Azm333.0000°; P -5.0676, Plg80.0000°, Azm135.0000°;*

*GCMT **10** 13:46:42.4±0.1, 12°.06N±0°.01×69°.73W±0°.01, h20^{km}, MW5.2/131, Moment Tensor Solution. s106,c161; s131,c206; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.80±.02; M$_{\theta\theta}$0.16±.01; M$_{\phi\phi}$0.64±.01; M$_{r\theta}$-0.09±.02; M$_{\theta\phi}$-0.38±.01; M$_{\phi r}$0.10±.02; Best double couple: M$_0$0.83700×10^{17} NP1: ϕ_s149.00000°, δ49.00000°, λ-93.00000°. NP2: ϕ_s333.00000°, δ41.00000°, λ-87.00000°. Principal axes: T 0.8610, Plg4.0000°, Azm241.0000°; N -0.0480, Plg2.0000°, Azm151.0000°; P -0.8140, Plg85.0000°, Azm35.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **10** 13:46:47.9, 12°.17N×68°.60W, h28^{km}, mb5.5, Ms4.4*

ISC 10 13:46:40.7±0.2**, 11°.98N**±0°.02×**69°.71W**±0°.03**, h21**^{km}±2^{km}**, h21**^{km}**:pP-P, n1569,** σ**1**^{s}**55**/1689**, mb5.5**/265**, MS4.8**/173**, 58C-67D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUA1	**Aruba**	**0.60**	**331**		**Pb**	**13 46 51.6**	**-1.0**
AUA1				Sg	**Sb**	**13 46 59.5**	**-1.3**
AUA1	**Aruba**	**0.60**	**331**	⇓*i*P	**Pb**	**13 46 51.3**	**-1.3**
AUA1				*e*S	**Sb**	**13 46 59.5**	**-1.3**
AUA1				*i*		13 47 00.2	
	comp=Z,53µm,0.4s						
HATO	**Hato, Curacao**	**0.76**	**74**		**Pb**	**13 46 54.0**	**-1.2**
HATO				Sg	**Sb**	**13 47 05.6**	**+0.5**
JACV	**Jacura**	**1.23**	**136**	⇓*e*P	**Pb**	**13 47 04.2**	**+1.0**
JACV				*e*S	**Sb**	**13 47 22.4**	**+3.7**
SIQV	**Siquisique**	**1.32**	**184**	⇓*e*P	**Pb**	**13 47 05.8**	**+0.9**
SIQV				*e*S	**Sb**	**13 47 24.7**	**+3.4**
CURV	**Curarigua**	**1.97**	**187**	⇓*e*P	**Pn**	**13 47 14.1**	**+1.2**
CURV				*e*S	**Sb**	**13 47 39.9**	**-0.1**
URIC	**Uribia, Colomb**	**2.26**	**263**		**Pn**	**13 47 17.9**	**+1.1**
URIC	**Uribia, Colomb**	**2.26**	**263**	*e*P	**Pn**	**13 47 18.3**	**+1.5**
URIC				*e*S	**Sn**	**13 47 46.3**	**+2.2**
URIC				*i*		13 47 52.0	
	comp=Z,17µm,0.6s						
TURV	**Turiamo**	**2.38**	**129**	⇓*e*P	**Pn**	**13 47 18.4**	**-0.1**
TURV				*e*S	**Sn**	**13 47 46.6**	**-0.4**
MAPV	**Macapo**	**2.46**	**150**	⇓*e*P	**Pn**	**13 47 19.8**	**+0.2**
MAPV				*e*S	**Sn**	**13 47 50.6**	**+1.5**
BENV	**Beln**	**2.88**	**134**	⇓*e*P	**Pn**	**13 47 27.9**	**+2.5**
BENV				*e*S	**Sn**	**13 48 01.3**	**+1.8**
CARV	**Caracas**	**3.09**	**118**	⇑*e*P	**Pn**	**13 47 27.9**	**-0.6**
CARV				*e*S	**Sn**	**13 48 04.1**	**-0.8**
TACV	**Tcata**	**3.20**	**125**	⇓*e*P	**Pn**	**13 47 30.1**	**+0.3**
TACV				*e*S	**Sn**	**13 48 06.6**	**-0.9**
SDV	**Santo Domingo**	**3.20**	**197**	Pn	**Pn**	**13 47 31.8**	**+1.8**
	comp=Z,193nm,0.3s,baz=40,slow=9.0,SNR=226						
SDV				Lg	Lg	13 48 11.4	
	comp=Z,803nm,0.3s,baz=302,slow=18,SNR=8.4						
SDV				LR	LR	13 48 55.6	
	comp=Z,10µm,19.4s,baz=34,slow=44						
SDV	**Santo Domingo**	**3.20**	**197**	Pn	**Pn**	**13 47 31.6**	**+1.6**
SDV	**Santo Domingo**	**3.20**	**197**	*e*P	**Pn**	**13 47 31.3**	**+1.3**
FUNV	**FUNVISIS**	**3.21**	**118**	*e*P	**Pn**	**13 47 29.4**	**-0.7**
FUNV				*e*S	**Sn**	**13 48 05.3**	**-2.5**
CRJC	**Cerrejon, Guaj**	**3.25**	**253**	⇑*i*P	**Pn**	**13 47 30.9**	**+0.3**
CRJC				*e*S	**Sn**	**13 48 10.7**	**+1.8**
CRJC				*i*		13 48 13.8	
	comp=Z,8µm,0.4s						
MCQV	**Machiques**	**3.37**	**236**	⇑*e*P	**Pn**	**13 47 33.5**	**+1.3**
BAUV	**El Baul**	**3.43**	**151**	⇓*e*P	**Pn**	**13 47 34.5**	**+1.5**
BAUV				*e*S	**Sn**	**13 48 13.6**	**+0.5**
BIRV	**Birongo**	**3.69**	**114**	⇓*e*P	**Pn**	**13 47 36.0**	**-0.5**
BIRV				*e*S	**Sn**	**13 48 17.7**	**-1.7**
SOCV	**Socops**	**3.84**	**197**	*e*P	**Pn**	**13 47 40.9**	**+2.3**
SOCV				*e*S	**Sn**	**13 48 25.0**	**+1.8**
MERV	**Las Mercedes**	**4.31**	**129**	⇓*e*P	**Pn**	**13 47 45.7**	**+0.6**
MERV				*e*S	**Sn**	**13 48 32.0**	**-2.7**
LL1C	**La Loma 1 Cana**	**4.49**	**238**	⇑*i*P	**Pn**	**13 47 48.2**	**+0.7**
LL1C				*e*S	**Sn**	**13 48 40.0**	**+0.8**
LL1C				*i*		13 48 47.4	
	comp=Z,28µm,0.5s						
SMRC	**Santa Marta, M**	**4.50**	**260**	*e*P	**Pn**	**13 47 48.3**	**+0.6**
SMRC				*e*S	**Sn**	**13 48 44.9**	**+5.4**
SMRC				*i*		13 48 53.5	
	comp=Z,3µm,0.6s						
LL5C	**La Loma 5 El P**	**4.52**	**241**	*e*P	**Pn**	**13 47 50.7**	**+2.7**
LL5C				*e*S	**Sn**	**13 48 42.6**	**+2.6**
LL5C				*i*		13 48 58.3	
	comp=Z,4µm,0.5s						
CAPV	**Capacho**	**4.83**	**212**	⇑*e*P	**Pn**	**13 47 54.1**	**+1.7**
CAPV				*e*S	**Sn**	**13 48 46.8**	**-1.0**
ARGC	**Ariguani, Magd**	**4.93**	**245**	*e*P	**Pn**	**13 47 55.3**	**+1.7**
ARGC				*e*S	**Sn**	**13 48 51.7**	**+1.6**
ARGC				*i*		13 48 59.0	
	comp=Z,1µm,0.4s						
CACV	**CAICARA DEL OR**	**5.38**	**144**	⇓*i*P	Pn	13 48 04.8	+5.0
CACV				*e*S	**Sn**	**13 49 07.2**	**+6.1**
PAMC	**Pamplona, Colo**	**5.47**	**213**	⇑*i*P	**Pn**	**13 48 03.4**	**+1.9**
PAMC				*e*S	**Sn**	**13 49 03.2**	**-0.9**
PAMC				*i*		13 49 07.2	
	comp=Z,7µm,0.4s						
SJCC	**San Jacinto, C**	**5.76**	**250**	⇑*i*P	**Pn**	**13 48 06.7**	**+1.7**
SJCC				*e*S	**Sn**	**13 49 13.5**	**+2.9**
SJCC				*i*		13 49 22.2	
	comp=Z,1µm,0.5s						
TAMC	**Tame, Arauca**	**5.88**	**201**	*e*P	**Pn**	**13 48 08.6**	**+2.0**
TAMC				*i*		13 50 07.2	
	comp=Z,1µm,0.5s						
PRGV	**PARIAGUAN**	**5.92**	**122**	⇓*e*P	**Pn**	**13 48 07.3**	**+0.1**
PRGV				*e*S	**Sn**	**13 49 10.2**	**-4.1**
BRRC	**Barranca, Sant**	**6.25**	**220**	⇑*i*P	**Pn**	**13 48 13.5**	**+1.8**
BRRC				*e*S	**Sn**	**13 49 20.8**	**-1.8**
BRRC				*i*		13 49 43.8	
	comp=Z,1µm,0.5s						
BARC	**Barichara**	**6.36**	**213**	⇑*i*P	**Pn**	**13 48 15.3**	**+1.9**
BARC				*e*S	**Sn**	**13 49 27.3**	**+1.8**
BARC				*i*		13 49 42.3	
	comp=Z,3µm,0.7s						
SDD	**Santo Domingo**	**6.45**	**358**	Pn	**Pn**	**13 48 13.9**	**-0.5**
CRUV	**Carupano**	**6.47**	**101**	*e*P	**Pn**	**13 48 14.4**	**-0.4**
CRUV				*e*S	**Sn**	**13 49 24.0**	**-4.1**
MLPR	**Magueyes Islan**	**6.49**	**23**	Pn	**Pn**	**13 48 13.3**	**-1.8**
CRPR	**Cabo Rojo, PR**	**6.50**	**22**		**Pn**	**13 48 13.1**	**-2.0**
PCDR	**Punta Cana, DR**	**6.62**	**11**	Pn	**Pn**	**13 48 16.5**	**-0.3**
PRSN	**Puerto Rico Se**	**6.68**	**21**		**Pn**	**13 48 15.6**	**-2.0**
OBIP	**Obispado Ponce**	**6.73**	**26**	Pn	**Pn**	**13 48 15.7**	**-2.7**
ZARC	**Zaragoza, Cauc**	**6.75**	**229**	⇑*i*P	**Pn**	**13 48 18.8**	**+0.1**
ZARC				*e*S	**Sn**	**13 49 36.8**	**+1.7**
ZARC				*i*		13 49 51.5	
	comp=Z,2µm,0.5s						
CELP	**Cerrillos**	**6.77**	**26**		**Pn**	**13 48 17.3**	**-1.6**
DR12	**Loma Pena Alta**	**6.78**	**3**		**Pn**	**13 48 14.6**	**-4.5**
UUPR	**Utuado, UPR, P**	**6.87**	**24**		**Pn**	**13 48 19.2**	**-1.1**
RUSC	**La Rusia**	**6.90**	**209**	Pn	**Pn**	**13 48 23.2**	**+2.1**
RUSC	**La Rusia**	**6.90**	**209**	⇑*i*P	**Pn**	**13 48 22.8**	**+1.6**
RUSC				*e*S	**Sn**	**13 49 37.8**	**-1.6**
RUSC				*i*		13 49 42.2	
	comp=Z,834nm,0.5s						
AGPR	**Aguadilla, PR**	**6.92**	**21**		**Pn**	**13 48 19.5**	**-1.5**
AOPR	**Arecibo Observ**	**6.95**	**24**		**Pn**	**13 48 20.3**	**-1.0**
PAPH	**Port-au-Prince**	**6.97**	**339**	Pn	**Pn**	**13 48 22.7**	**+1.0**
PAPH	**Port-au-Prince**	**6.97**	**339**	*e*P	**Sn**	**13 49 37.8**	**-2.6**
SJG	**San Juan**	**7.00**	**29**	Pn	**Pn**	**13 48 20.0**	**-2.0**
	comp=Z,40nm,0.3s,baz=215,slow=12,SNR=84						
SJG				Sn	Sn	13 49 31.6	-9.4
	comp=Z,78nm,0.3s,baz=343,slow=19,SNR=3.0						
SJG				LR	LR	13 51 13.6	
	comp=Z,4µm,19.7s,baz=120,slow=39						
	comp=Z,431nm,0.8s						
SJG	**San Juan**	**7.00**	**29**		**Pn**	**13 48 20.4**	**-1.7**
SJG	**San Juan**	**7.00**	**29**	P	**Pn**	**13 48 20.4**	**-1.7**
UREC	**San Jos de Ur**	**7.11**	**234**	*e*P	**Pn**	**13 48 23.3**	**-0.3**
UREC				*e*S	**Sn**	**13 49 44.7**	**+0.8**
UREC				*i*		13 49 59.4	
	comp=Z,670nm,0.6s						
SDDR	**Presa de Saban**	**7.13**	**348**		**Pn**	**13 48 25.4**	**+1.5**
SDDR	**Presa de Saban**	**7.13**	**348**	IVmB_BB		13 50 01.0	
	comp=Z,7µm,0.9s						
SDDR				IVmB_BB		13 50 01.4	
	comp=Z,5µm,0.6s						
PTBC	**PUERTO BERRIO,**	**7.15**	**221**	⇑*e*P	**Pn**	**13 48 24.1**	**-0.1**
PTBC				*i*		13 49 53.7	
	comp=Z,2µm,0.6s						
EMPR	**Esperanza - Ma**	**7.15**	**25**		**Pn**	**13 48 23.3**	**-0.9**
HUMP	**Col San Antoni**	**7.17**	**31**		**Pn**	**13 48 22.7**	**-1.7**
GCPR	**Guaynabo City**	**7.20**	**29**		**Pn**	**13 48 23.4**	**-1.4**
LCBC	**Los crdobas,**	**7.25**	**245**	*e*P	**Pn**	**13 48 26.2**	**+0.7**
LCBC				*e*S	**Sn**	**13 49 47.0**	**-0.2**
LCBC				*i*		13 49 51.0	
	comp=Z,804nm,0.5s						
CBYP	**Canovanas**	**7.28**	**30**		**Pn**	**13 48 24.3**	**-1.6**
MTP	**Monte Pirata**	**7.29**	**33**	Pn	**Pn**	**13 48 24.0**	**-2.0**
SC01	**Santiago de lo**	**7.47**	**353**		**Pn**	**13 48 30.6**	**+2.1**
CUPR	**Culebra, Puert**	**7.61**	**34**	Pn	**Pn**	**13 48 28.9**	**-1.5**
SPBC	**San Pablo de B**	**7.62**	**215**	⇑*e*P	**Pn**	**13 48 32.1**	**+1.4**
SPBC				*e*S	**Sn**	**13 49 55.0**	**-1.6**
SPBC				*i*		13 49 59.6	
	comp=Z,1µm,0.4s						
STVI	**Saint Thomas**	**7.82**	**35**		**Pn**	**13 48 30.9**	**-2.5**
GRGR	**Grenville**	**7.88**	**88**	Pn	**Pn**	**13 48 32.6**	**-1.5**
GRGR	**Grenville**	**7.88**	**88**	*e*P	**Pn**	**13 48 32.4**	**-1.7**
APAC	**Apartado, Choc**	**7.89**	**240**	*e*P	**Pn**	**13 48 34.9**	**+0.6**
APAC				*e*S	**Sn**	**13 50 06.0**	**+3.0**
APAC				*i*		13 50 12.0	
	comp=Z,343nm,0.5s						
GRHS	**Sauteurs**	**7.89**	**87**	*e*P	**Pn**	**13 48 33.1**	**-1.2**
GRSS	**Sisters**	**7.92**	**87**	*e*P	**Pn**	**13 48 34.1**	**-0.6**
DBBC	**Dabeiba**	**8.09**	**233**	*e*P	**Pn**	**13 48 38.0**	**+0.9**
DBBC				*e*S	**Sn**	**13 50 07.2**	**-0.8**
DBBC				*i*		13 50 31.4	
	comp=Z,291nm,0.6s						
PTGC	**Puerto Gaitan,**	**8.09**	**197**	*e*P	**Pn**	**13 48 37.4**	**+0.4**
GCMP	**Grenada, Carri**	**8.11**	**86**	*e*P	**Pn**	**13 48 33.8**	**-3.5**
HELC	**Santa Helena**	**8.13**	**226**		**Pn**	**13 48 40.3**	**+2.4**
HELC	**Santa Helena**	**8.13**	**226**	*e*P	**Pn**	**13 48 40.3**	**+2.4**

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HELC                            eS      Sn      13 50 08.9  -0.5
HELC                            i               13 50 18.8
      comp=Z,726nm,0.4s
NORC  Norcasia          8.16 219 eP     Pn      13 48 39.7 +1.6
TRN   Trinidad (W)      8.25  98 eP     Pn      13 48 40.5 +1.3
TPP   Pointe-a-Pierr    8.27 101 eP     Pn      13 48 42.5 +3.1
CHIC  Chingaza          8.31 209 eP     Pn      13 48 41.8 +1.3
CHIC                            eS      Sn      13 50 13.5  -0.5
CHIC                            i               13 50 31.4
      comp=Z,402nm,0.5s
SVB   Belmont           8.35  80        Pn      13 48 37.9  -2.7
SVB   Belmont           8.35  80 eP     Pn      13 48 37.4  -3.3
SABA  Saba              8.40  47 eP     Pn      13 48 38.2  -3.0
SSV   Crater Summit     8.42  80 eP     Pn      13 48 39.6  -2.0
ROSC  El Rosal          8.43 213  Pn    Pn      13 48 44.4 +2.4
      comp=Z,57nm,0.3s,baz=101,slow=14,SNR=92
ROSC                              Sn    Sn      13 50 18.1 +1.2
      comp=Z,179nm,0.3s,baz=166,slow=20,SNR=2.3
ROSC                              LR    LR      13 52 39.9
      comp=Z,13µm,19.2s,baz=17,slow=43
ROSC  El Rosal          8.43 213        Pn      13 48 43.1 +1.0
ROSC  El Rosal          8.43 213  P     Pn      13 48 43.1 +1.0
ROSC  El Rosal          8.43 213⇑eP     Pn      13 48 44.4 +2.4
ROSC                            eS      Sn      13 50 21.0 +4.1
ROSC                            i               13 50 27.9
      comp=Z,686nm,0.5s
TBH   Brigand Hill      8.60  99 eP     Pn      13 48 47.1 +3.0
SLB   Belfond           8.65  77 eP     Pn      13 48 42.6  -2.1
MBFL  Flemmings, Mon    8.67  56 eP     Pn      13 48 42.0  -3.0
MLYT  Lee's Yard        8.68  56 eP     Pn      13 48 41.8  -3.3
CBOC  Ciudad Bolivar    8.70 226 eP     Pn      13 48 46.6 +1.0
CBOC                            eS      Sn      13 50 26.1 +2.9
CBOC                            i               13 50 38.2
      comp=Z,352nm,0.6s
MCLT  Moule a Chique    8.72  78 eP     Pn      13 48 41.2  -4.5
GUY2C Guyana, Caldas    8.73 220 eP     Pn      13 48 48.6 +2.3
GUY2C                           eS      Sn      13 50 22.0  -2.5
GUY2C                             IAML          13 50 30.7
      comp=Z,1µm,0.6s
SLBI  Saint Lucia, B    8.75  76 eP     Pn      13 48 42.7  -3.4
VILC  Villavicencio,    8.75 207 eP     Pn      13 48 47.4 +1.2
FDF   Fort de France    8.77  71        Pn      13 48 42.2  -4.1
FDF   Fort de France    8.77  71  P     Pn      13 48 42.3  -4.1
FDF   Fort de France    8.77  71 eP     Pn      13 48 41.9  -4.4
BIM   Bigot             8.78  72        Pn      13 48 43.2  -3.3
BIM   Bigot             8.78  72 eP     Pn      13 48 43.1  -3.4
GDHS  Morne Mazeau,     8.81  60        Pn      13 48 43.7  -3.3
CBE   Ff, Capester      8.85  62  Pn    Pn      13 48 44.5  -3.0
CBE   Ff, Capester      8.85  62 eP     Pn      13 48 44.2  -3.3
UPD2  Meteti            8.86 248 eP     Pn      13 48 48.2 +0.6
UPD2  Meteti            8.86 248 eP     Pn      13 48 48.4 +0.9
NIZA  Niza - Manizal    8.93 220 eP     Pn      13 48 53.6 +4.8
RECRC Villamaria, Ca    8.93 219 eP     Pn      13 48 52.0 +2.9
MPOM  Morne Pois Mar    8.96  73        Pn      13 48 46.1  -2.8
MPOM  Morne Pois Mar    8.96  73 eP     Pn      13 48 44.5  -4.4
H05S1 Guadeloupe/Mar    8.97  73  Pn    Pn      13 48 46.7  -2.4
H05S1                             Sn    Sn      13 50 20.1  -9.5
TOSP  Speyside          9.01  93        Pn      13 48 47.6  -2.0
TOSP  Speyside          9.01  93 eP     Pn      13 48 50.5 +0.9
HOJ   Hope              9.07 312 i P    Pn      13 48 52.7 +2.3
MAGL  Barre de l'ile    9.08  63 eP     Pn      13 48 47.4  -3.2
GWJ   Greenwich         9.10 313⇑iP     Pn      13 48 51.9 +0.9
ABD   La Joyeuse, An    9.13  60 eP     Pn      13 48 44.3  -7.1
STH   Stony Hill        9.16 312⇑iP     Pn      13 48 52.3 +0.6
ANBD  Bethesda, Anti    9.19  56 eP     Pn      13 48 48.4  -3.7
PCJ   Portland Cotta    9.21 309⇓iP     Pn      13 48 52.6 +0.3
MASC  Masc              9.24 333⇓eP     Pn      13 48 54.4 +1.7
ANIL  Santa Ana         9.33 218⇑eP     Pn      13 48 55.7 +1.4
ANIL                            eS      Sn      13 50 36.9  -2.0
ANIL                            i               13 50 47.5
      comp=Z,2µm,0.4s
BNJ   Bonny Gate        9.42 313⇓iP     Pn      13 48 56.4 +1.2
H05N1 Guadeloupe/Mar    9.43  62  Pn    Pn      13 48 50.5  -5.0
H05N1                             Sn    Sn      13 50 27.8   -13
GTBY  Guantanamo Bay    9.46 327        Pn      13 48 55.8   0.0
GTBY  Guantanamo Bay    9.46 327 eP     Pn      13 48 57.1 +1.3
ANWB  Willy Bob         9.52  53 eP     Pn      13 48 52.9  -3.7
GRTK  Grand Turk        9.58 352  Pn    Pn      13 48 59.0 +1.5
GRTK  Grand Turk        9.58 352 eP     Pn      13 48 59.4 +1.9
PRAC  Prado             9.68 212        Pn      13 49 00.1 +1.2
PRAC  Prado             9.68 212 eP     Pn      13 48 59.7 +0.9
PRAC                            eS      Sn      13 50 46.2  -0.9
PRAC                            i               13 51 19.7
      comp=Z,290nm,0.7s
BBJ   Bamboo Saint A    9.69 312 i P    Pn      13 49 00.9 +1.9
ORTC  Ortega, Tolima    9.71 215⇑iP     Pn      13 49 00.1 +0.7
ORTC                            eS      Sn      13 50 47.6  -0.2
ORTC                            i               13 51 16.6
      comp=Z,390nm,0.7s
MCJ   Malvern           9.72 308⇓iP     Pn      13 49 03.6 +4.2
MCJ                             i S     Sn      13 50 42.6  -5.4
MTDJ  Mount Denham      9.78 310        Pn      13 49 00.9 +0.5
MTDJ  Mount Denham      9.78 310 eP     Pn      13 49 01.4 +1.0
RCC   Rio Carpintero    9.83 325 eP     Pn      13 49 02.0 +1.0
MOAC  Moa              10.00 330 eP     Pn      13 49 05.8 +2.6
ARRA3 Arraijan, Pana   10.23 254 eP     Pn      13 49 07.5 +1.1
ARRA3                           eS      Sn      13 50 58.3  -2.3
GAMB1 Gamboa           10.24 255 eP     Pn      13 49 08.1 +1.6
GAMB1                           eS      Sn      13 50 54.3  -6.4
PIZC  Pizarro, Choco   10.29 228 eP     Pn      13 49 11.0 +3.8
PIZC                            eS      Sn      13 50 59.3  -2.6
YOTC  Yotoco, Valle    10.31 220 eP     Pn      13 49 09.0 +1.4
YOTC                            eS      Sn      13 51 02.4  -0.3
YOTC                            i               13 51 09.4
      comp=Z,99nm,0.6s
BCIP  Isla Barro Col   10.34 255  Pn    Pn      13 49 08.8 +0.8
BCIP  Isla Barro Col   10.34 255 i P    Pn      13 49 09.6 +1.7
BCIP                            i S     Sn      13 51 02.7  -0.7
BCIP  Isla Barro Col   10.34 255  P     Pn      13 49 08.8 +0.8
BCIP  Isla Barro Col   10.34 255 eP     Pn      13 49 09.5 +1.6
BCIP                            eS      Sn      13 51 00.5  -2.9
BCIP                            i               13 51 08.7
      comp=Z,158nm,0.6s
MACC  Macarena, Meta   10.60 203 eP     Pn      13 49 10.3  -1.1
MACC                            eS      Sn      13 51 04.5  -5.1
HLGC  Holguin          10.76 326 eP     Pn      13 49 16.8 +3.2
VTON  El Valle, Cocl   10.77 253 eP     Pn      13 49 14.5 +0.6
VTON                            eS      Sn      13 51 07.2  -6.7
BETC  Betania          10.84 212 eP     Pn      13 49 14.9   0.0
BETC                            eS      Sn      13 51 12.2  -3.5
BETC                            i               13 51 36.6
      comp=Z,195nm,0.7s
MALC  Bahia Malaga     10.94 224 eP     Pn      13 49 17.4 +1.4
MALC                            eS      Sn      13 51 19.0 +1.1
PNME  Penonome         11.01 253 eP     Pn      13 49 17.9 +0.8
PNME                            eS      Sn      13 51 12.1  -7.7
PNME  Penonome         11.01 253 eP     Pn      13 49 15.4  -1.7
JAMC  Jamundi, Valle   11.11 219 eP     Pn      13 49 18.9 +0.2
AZU   Azuero           11.21 249 i P    Pn      13 49 20.0 +0.2
AZU                             eS      Sn      13 51 16.7  -7.9
AZU   Azuero           11.21 249 eP     Pn      13 49 20.0 +0.2
AZU                             eS      Sn      13 51 20.5  -4.1
AZU                             i               13 51 27.1
      comp=Z,98nm,0.5s
GARC  Garzon, Huila    11.29 211 eP     Pn      13 49 21.0  -0.2
GARC                            eS      Sn      13 51 20.7  -6.3
GARC                            i               13 51 31.9
      comp=Z,134nm,0.3s
PESE3 Pese, Herrera    11.48 250 eP     Pn      13 49 24.1 +0.6
PESE3                           eS      Sn      13 51 27.5  -3.7
POPC  Popayan, Colom   11.64 217 eP     Pn      13 49 25.6  -0.4
POPC                            eS      Sn      13 51 34.6  -1.0
SFRA3 San Francisco,   11.69 253 eP     Pn      13 49 27.3 +0.8
SAFE3 Santa Fe, Vera   11.71 254 eP     Pn      13 49 28.8 +2.1
STIA3 Santiago, Vera   11.74 252 eP     Pn      13 49 27.5 +0.4
FLOC  Florencia        11.89 210⇑iP     Pn      13 49 28.5  -0.7
FLOC                            eS      Sn      13 51 33.3  -8.1
FLOC                            i               13 52 22.4
      comp=Z,79nm,0.7s
MARI3 Mariato, Verag   11.92 250 eP     Pn      13 49 31.3 +1.7
CCCC  Cccc             11.99 321 eP     Pn      13 49 29.3  -1.1
GR1C  Gorgona, Isla    12.24 224 eP     Pn      13 49 34.5 +0.6
GR1C                            i               13 51 30.1
      comp=Z,301nm,0.8s
GR1C                            eS      Sn      13 51 48.0  -1.8
SGCB  S£o Gabriel d    12.31 167 eP     Pn      13 49 33.4  -1.4
BBAC  Balboa, Cauca    12.40 218 eP     Pn      13 49 37.9 +1.6
BBAC                            eS      Sn      13 51 47.9  -6.1
BBAC                            i               13 51 57.4
      comp=Z,40nm,0.6s
REME3 Remedios, Chir   12.51 254 eP     Pn      13 49 39.4 +1.9
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CRUC  La Cruz          12.59 215⇑eP     Pn      13 49 43.0 +4.0
PTAR3 Potrerillos Ar   13.00 257 eP     P       13 49 57.0 +2.2
LOCO3 Loma Colorada,   13.00 255 i P    P       13 49 52.0  -2.7
BCO2  Palmira          13.02 257 eP     Pn      13 49 45.7 +0.9
DVD   David            13.03 256 eP     Pn      13 49 43.1  -1.5
GCUF  Volcan Galeras   13.10 216 i P    Pn      13 49 47.5 +1.4
GCUF                            eS      Sn      13 52 08.9  -2.6
GCUF                            i               13 55 06.8
      comp=Z,30nm,0.8s
BRU2  Volcan           13.16 257  Pn    Pn      13 49 47.5 +0.8
BRU2  Volcan           13.16 257 eP     Pn      13 49 48.4 +1.8
BOAV  Boa Vista        13.17 136        Pn      13 49 44.3  -2.3
BOAV  Boa Vista        13.17 136 eP     Pn      13 49 44.0  -2.6
MLIR3 Monte Lirio, C   13.29 257 eP     P       13 50 12.2   +14
SRBA  San Rafael, Bu   13.70 260        Pn      13 49 54.2 +0.3
TULM  Tulcn-Chalpat    13.76 216        Pn      13 49 55.5 +0.3
TULM  Tulcn-Chalpat    13.76 216 eP     Pn      13 49 55.1   0.0
BONI  La Bonita        13.83 215 eP     Pn      13 49 56.1 +0.2
MGV   Manicaragua      14.07 317 eP     Pn      13 50 01.4 +2.6
MAPC  Malpelo          14.19 237 eP     Pn      13 49 58.6  -2.1
CUSE  Cuicocha Este    14.45 217 eP     P       13 50 11.9 +0.6
CUSE                            eS      Sn      13 52 48.5 +3.9
OTAV  Otavalo          14.54 217        Pn      13 50 05.1  -0.6
OTAV  Otavalo          14.54 217  P     Pn      13 50 05.1  -0.6
OTAV  Otavalo          14.54 217 eP     Pn      13 50 04.6  -1.1
OTAV  Otavalo          14.54 217 eP     Pn      13 50 05.2  -0.6
PAC1  Pacto, Paraso    14.72 218 eP     P       13 50 12.2  -1.7
JTS   Las Juntas de    15.05 265  Pn    Pn      13 50 13.3 +0.9
      comp=Z,0.7nm,0.3s,baz=30,slow=20,SNR=2.5
JTS                               Sn    Sn      13 52 51.4  -7.2
      comp=Z,2.5nm,0.3s,baz=315,slow=20,SNR=2.4
JTS                               LR    LR      13 56 26.2
      comp=Z,2µm,19.5s,baz=86,slow=39
      comp=Z,6.1nm,0.6s
JTS   Las Juntas de    15.05 265        Pn      13 50 13.5 +1.1
JTS   Las Juntas de    15.05 265 eP     P       13 50 17.0  -0.5
JTS   Las Juntas de    15.05 265⇑eP     Pn      13 50 14.1 +1.7
JTS                               pmax  pmax
      comp=Z,5.0nm,0.5s
JTS   Las Juntas de    15.05 265 eP     P       13 50 19.3 +1.7
ACON  Acoyapa          15.13 272 eP     Pn      13 50 11.8  -1.6
SLOR  San Lorenzo -    15.35 215  P     Pn      13 50 19.0 +2.4
PIAT  Ana Tenorio      15.44 214 eP     Pn      13 50 19.3 +1.5
ORTG  Ortega, Santa    15.54 266        Pn      13 50 19.6 +0.9
BOAB  BOACO BROADBAN15.61 273           Pn      13 50 20.2 +0.6
FLF1  Flavio Alfaro-   15.86 220⇑eP     P       13 50 28.3 +1.9
TBTG  Tabatinga, AM    16.06 181        Pn      13 50 23.0  -2.4
TBTG                              IAmb  IAmb    13 50 30.7
      comp=Z,435nm,1.1s
TBTG  Tabatinga, AM    16.06 181 eP     Pn      13 50 23.3  -2.1
PORT  Chimborazo Vol   16.11 215        Pn      13 50 26.7 +0.1
TEFE  Tefe             16.19 162 eP     Pn      13 50 26.0  -1.0
CNGN  Cerro Negro      16.62 274 eP     P       13 50 41.0 +6.0
SOR   Soroa            16.62 312        Pn      13 50 32.5  -0.1
SOR   Soroa            16.62 312  P     Pn      13 50 32.5  -0.1
SOR                               pmax  pmax
      comp=Z,103nm,1.4s
CRIN  San Cristobal    16.96 274 eP     P       13 50 44.4 +5.7
TGUH  Tegucigalpa,Un   17.24 279  P     P       13 50 41.9  -0.1
TGUH  Tegucigalpa,Un   17.24 279 eP     P       13 50 43.2 +1.3
PPLP  Puerto Lpez      17.36 220 eP     Pn      13 50 41.1  -0.8
MACA  Manacapuru-AM    17.51 149  P     Pn      13 50 43.2  -0.5
MACA  Manacapuru-AM    17.51 149 eP     Pn      13 50 42.3  -1.4
MDP   Montagnes des    18.20 111  P     Pn      13 50 51.1  -1.1
      comp=Z,9.3nm,0.3s,baz=294,slow=12,SNR=34
MDP                               Sn    Sn      13 54 01.2   -14
      comp=Z,2.2nm,0.3s,baz=46,slow=21,SNR=6.0
MDP                               LR    LR      13 58 20.0
      comp=Z,874nm,20.4s,baz=288,slow=39
      comp=Z,195nm,0.9s
MCRA  Macar, Loja      19.17 213  P     P       13 51 01.2  -2.0
MCRA  Macar, Loja      19.17 213⇑iP     P       13 51 01.5  -1.6
DWPF  Disney Wildern   19.45 327  P     Pn      13 51 07.7 +0.5
      baz=143
TEIG  Tepich           19.62 297  P     Pn      13 51 08.8  -0.6
CZSB  Cruzeiro do Su   19.80 189  P     P       13 51 09.6  -0.4
CZSB  Cruzeiro do Su   19.80 189 eP     P       13 51 09.7  -0.3
PETF  Flores           20.13 286  P     P       13 51 14.3 +0.8
MALB  Monte Alegre     20.59 131 eP     P       13 51 19.2 +0.6
BBSR  BB Station       20.82  12  P     P       13 51 20.1  -0.8
BBSR                              IAmb  IAmb    13 51 26.7
      comp=Z,235nm,1.5s
ATAH  Atahualpa        20.86 205  P     P       13 51 22.2 +0.3
      comp=Z,40nm,1.0s,baz=29,slow=6.6,SNR=9.8
ATAH                              LR    LR      14 02 15.3
      comp=Z,5µm,18.7s,baz=33,slow=45
      comp=Z,40nm,1.0s
656A  Willston         21.03 327  P     P       13 51 25.5 +2.4
      baz=142
ITTB  Itaituba         21.37 139 eP     P       13 51 27.9 +1.0
MCPB  Macapa, AP       21.38 124 eP     P       13 51 27.1   0.0
HUEH  Huehuetenango    21.44 281  P     P       13 51 28.8 +0.8
HUEH                              IAmb  IAmb    13 51 41.7
      comp=Z,206nm,0.8s
SAML  Samuel           21.77 162  P     P       13 51 30.1  -1.2
SAML  Samuel           21.77 162  P     P       13 51 30.1  -1.2
SAML                              pmax  pmax
      comp=Z,118nm,1.1s
SAML                              MLR   MLR
      comp=Z,2µm,22.0s
SAML  Samuel           21.77 162 eP     P       13 51 30.3  -1.0
ETMB  Extrema          21.93 171  P     P       13 51 32.0  -0.9
ETMB                              IAmb  IAmb    13 51 34.9
      comp=Z,125nm,0.8s
ETMB  Extrema          21.93 171 eP     P       13 51 31.7  -1.2
CCIG  Comitan          22.16 284  P     P       13 51 36.1 +0.4
NHSC  New Hope         23.12 337  P     P       13 51 47.7 +2.3
      baz=153
NHSC  New Hope         23.12 337  P     P       13 51 47.6 +2.2
      baz=153
TIGA  Tifton           23.23 329  P     P       13 51 47.9 +1.4
      baz=143,SNR=11
TIGA  Tifton           23.23 329  P     P       13 51 48.4 +1.9
      baz=143,SNR=11
NPGB  Novo Progresso   23.68 142 eP     P       13 51 51.4 +0.2
HAW   Hawthorne Fire   23.91 335  P     P       13 51 55.2 +2.0
      baz=150,SNR=18
154A  Montrose         23.95 331  P     P       13 51 56.1 +2.6
154A  Montrose         23.95 331  P     P       13 51 56.2 +2.6
      baz=146,SNR=6.1
352A  Blakely          23.96 326  P     P       13 51 55.5 +1.8
352A  Blakely          23.96 326  P     P       13 51 55.9 +2.3
      baz=141,SNR=8.4
PAYG  Puerto Ayora     23.99 240  P     P       13 51 54.6 +0.4
Y57A  Sumter           24.01 338  P     P       13 51 55.8 +1.7
      baz=153
Y57A                              P     P       13 51 55.8 +1.7
      baz=153
X58A  Rowland          24.13 340  P     P       13 51 56.3 +1.1
      baz=156,SNR=5.1
X58A                              P     P       13 51 56.3 +1.1
      baz=156,SNR=5.1
CNNC  Cliffs of the    24.32 344  P     P       13 51 58.0 +1.0
      baz=160
JSC   Jenkinsville     24.57 336  P     P       13 52 01.8 +2.5
      baz=152,SNR=9.3
BIRD  Birdtown, Kers   24.60 338  P     P       13 52 01.0 +1.5
      baz=154,SNR=7.6
152A  Waverly Hall     24.78 329  P     P       13 52 03.4 +2.2
      baz=143,SNR=33
NNA   Nana             24.84 197  P     P       13 52 00.4  -1.5
      comp=Z,21nm,0.6s,baz=6.9,slow=9.9,SNR=9.6
      comp=Z,21nm,0.6s
NNA   Nana             24.84 197  P     P       13 52 00.8  -1.1
NNA                               IAmb  IAmb    13 52 30.3
      comp=Z,123nm,1.2s
NNA   Nana             24.84 197  P     P       13 52 00.8  -1.1
NNA                               pmax  pmax
      comp=Z,123nm,1.3s
CMIG  Matias Romero    24.89 285  P     P       13 51 59.9  -2.4
      comp=Z,3.8nm,0.5s,baz=131,slow=6.9,SNR=6.3
CMIG                              LR    LR      14 02 24.0
      comp=Z,2µm,20.6s,baz=125,slow=38
W57A  Gilead           24.89 340  P     P       13 52 03.3 +1.2
      baz=155,SNR=6.2
W57A                              P     P       13 52 03.3 +1.2
      baz=155,SNR=6.2
BRAL  Brewton          24.93 323  IAMs_20 IAMs_20 14 02 30.2
      comp=Z,3µm,20.0s
BRAL  Brewton          24.93 323  P     P       13 52 04.4 +1.9
      baz=136
250A  Grady            25.08 325  P     P       13 52 06.1 +2.3
250A  Grady            25.08 325  P     P       13 52 05.9 +2.0
      baz=139,SNR=16
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V58A  Windy Hill, Pi   25.20 342  P     P       13 52 06.3 +1.4
      baz=158,SNR=7.5
V58A                              P     P       13 52 06.3 +1.4
      baz=158,SNR=7.5
PAULI Pauline          25.27 336  P     P       13 52 07.2 +1.6
      baz=151,SNR=7.2
U59A  Littleton        25.34 345  P     P       13 52 07.5 +1.2
U59A  Littleton        25.34 345  P     P       13 52 07.7 +1.4
      baz=161
U59A                              P     P       13 52 07.7 +1.4
      baz=161
KMSC  Kings Mountain   25.36 337  P     P       13 52 07.7 +1.3
      baz=152,SNR=8.6
KMSC  Kings Mountain   25.36 337  P     P       13 52 07.8 +1.3
      baz=152,SNR=8.6
Y52A  Lilburn          25.43 331  P     P       13 52 09.2 +2.2
Y52A                              IAmb  IAmb    13 52 17.5
      comp=Z,156nm,0.9s
Y52A  Lilburn          25.43 331  P     P       13 52 09.2 +2.2
      baz=145,SNR=35
Y52A                              P     P       13 52 09.2 +2.2
      baz=145,SNR=35
Z51A  Franklin         25.53 329  P     P       13 52 10.2 +2.2
      baz=143,SNR=15
TMAB  Tom-Au,PA,Br     25.78 122 eP     P       13 52 10.6 +0.2
T59A  Double "B" Far   25.87 345  P     P       13 52 12.4 +1.4
      baz=162,SNR=12
T59A                              P     P       13 52 12.4 +1.4
      baz=162,SNR=12
CASEE Lake Jocassee    25.87 335  P     P       13 52 13.6 +2.5
      baz=149,SNR=23
V55A  Taylorsville     25.95 338  P     P       13 52 13.1 +1.4
      baz=153,SNR=8.8
V55A                              P     P       13 52 13.1 +1.4
      baz=153,SNR=8.8
U56A  King             26.11 340  P     P       13 52 14.7 +1.5
      baz=156
U56A                              P     P       13 52 14.7 +1.5
      baz=156
LRAL  Lakeview Retre   26.28 326  IAMs_20 IAMs_20 14 03 11.7
      comp=Z,2µm,20.0s
LRAL  Lakeview Retre   26.28 326  P     P       13 52 16.7 +1.9
      baz=139,SNR=30
LRAL  Lakeview Retre   26.28 326  P     P       13 52 17.0 +2.3
      baz=139,SNR=30
T57A  Hurt             26.35 343  P     P       13 52 16.6 +1.2
      baz=158,SNR=6.3
T57A                              P     P       13 52 16.6 +1.2
      baz=158,SNR=6.3
X51A  Calhoun          26.38 331  P     P       13 52 17.7 +2.1
      baz=145,SNR=9.1
X51A                              P     P       13 52 17.7 +2.1
      baz=145,SNR=9.1
W52A  Murphy           26.39 333  P     P       13 52 17.9 +2.2
      baz=147,SNR=7.9
VILB  Vilhena          26.50 159  P     P       13 52 16.0  -0.9
VILB                              IAmb  IAmb    13 52 41.1
      comp=Z,102nm,0.9s
VILB  Vilhena          26.50 159 eP     P       13 52 16.3  -0.6
CLDB  Colider          26.57 148 eP     P       13 52 17.9 +0.3
Y49A  Blount Mountai   26.59 328  P     P       13 52 19.7 +2.1
      baz=141,SNR=14
FPAL  Fort Paine       26.72 330  P     P       13 52 20.7 +1.9
FPAL                              IAmb  IAmb    13 52 21.9
      comp=Z,93nm,1.1s
PRPB  Parauapebas      26.77 131 eP     P       13 52 20.0 +0.6
U54A  Nelsons Funny    26.77 338  P     P       13 52 20.5 +1.3
      baz=153,SNR=6.6
U54A                              P     P       13 52 20.5 +1.3
      baz=153,SNR=6.6
TKL   Tuckaleechee C   26.80 334  P     P       13 52 19.9 +0.5
      comp=Z,10nm,0.8s,baz=158,slow=11,SNR=10
TKL                               LR    LR      14 02 50.6
      comp=Z,1µm,21.9s,baz=142,slow=36
      comp=Z,10nm,0.8s
TKL   Tuckaleechee C   26.80 334  P     P       13 52 20.6 +1.2
TKL   Tuckaleechee C   26.80 334  P     P       13 52 20.6 +1.2
TKL                               pmax  pmax
      comp=Z,20nm,0.9s
TKL   Tuckaleechee C   26.80 334  P     P       13 52 20.6 +1.2
      baz=148,SNR=9.6
BLA   Blacksburg       26.91 341  P     P       13 52 21.3 +0.9
      baz=156,SNR=6.6
BLA   Blacksburg       26.91 341  P     P       13 52 22.1 +1.7
      baz=156,SNR=6.6
CPCT  Cooper Cave      26.95 333  P     P       13 52 22.5 +1.7
S57A  Dark Hollow, R   26.98 344  P     P       13 52 22.3 +1.2
      baz=160
S57A                              P     P       13 52 22.3 +1.2
      baz=160
Z47A  Carrollton       27.00 324  P     P       13 52 23.1 +1.9
      baz=137,SNR=7.9
W50A  Signal Mountai   27.11 331  P     P       13 52 24.6 +2.3
      baz=145,SNR=16
V51A  Loudon           27.17 333  P     P       13 52 24.4 +1.7
      baz=147,SNR=19
X48A  Hartselle        27.38 328  P     P       13 52 26.6 +1.9
      baz=140,SNR=8.3
SWET  Sewanee          27.42 330  P     P       13 52 25.6 +0.5
SWET                              IAmb  IAmb    13 52 28.2
      comp=Z,81nm,1.1s
TZTN  Tazewell         27.46 335  P     P       13 52 26.6 +1.2
      baz=149
S54A  Dingess, Beckl   27.73 340  P     P       13 52 29.7 +1.8
      baz=155
S54A                              P     P       13 52 29.7 +1.8
      baz=155
VBMS  Vicksburg        27.79 320  IAMs_20 IAMs_20 14 05 01.9
      comp=Z,2µm,19.0s
VBMS  Vicksburg        27.79 320  P     P       13 52 29.4 +1.0
      baz=132
R55A  Marlinton        27.80 342  P     P       13 52 30.4 +1.9
      baz=158
R55A                              P     P       13 52 30.4 +1.9
      baz=158
LPAZ  La Paz           28.12 177  P     P       13 52 31.7  -0.4
      comp=Z,8.6nm,0.7s,baz=321,slow=4.3,SNR=25
LPAZ                              LR    LR      14 05 15.8
      comp=Z,3µm,20.6s,baz=343,slow=40
      comp=Z,8.6nm,0.7s
LPAZ  La Paz           28.12 177 eP     P       13 52 30.9  -1.3
V48A  Smith Brothers   28.27 330  P     P       13 52 34.3 +1.6
Y45A  Yeager Farm, C   28.33 323  P     P       13 52 35.8 +2.7
      baz=136,SNR=7.1
PLAL  Pickwick Lake    28.33 327  IAMs_20 IAMs_20 14 04 15.5
      comp=Z,3µm,20.0s
P57A  Homestead Farm   28.37 346  P     P       13 52 35.7 +2.2
      baz=162,SNR=5.5
P57A                              P     P       13 52 35.7 +2.2
      baz=162,SNR=5.5
U49A  Red Boiling Sp   28.40 332  P     P       13 52 35.6 +1.8
      baz=145,SNR=13
T50A  Nancy            28.41 334  P     P       13 52 35.5 +1.7
      baz=147
T50A                              P     P       13 52 35.5 +1.7
      baz=147
S51A  Beattyville      28.42 336  P     P       13 52 35.5 +1.6
      baz=150
S51A                              P     P       13 52 35.5 +1.6
      baz=150
R53A  Hurricane        28.43 339  P     P       13 52 35.8 +1.8
      baz=154,SNR=5.0
R53A                              P     P       13 52 35.8 +1.8
      baz=154,SNR=5.0
Q54A  Coxs Mills       28.66 342  P     P       13 52 37.9 +1.8
      baz=157,SNR=9.9
Q54A                              P     P       13 52 37.9 +1.8
      baz=157,SNR=9.9
OXF   Oxford           28.72 325  IAMs_20 IAMs_20 14 04 50.3
      comp=Z,2µm,20.0s
OXF   Oxford           28.72 325  P     P       13 52 37.6 +1.0
      baz=136,SNR=6.5
OXF   Oxford           28.72 325  P     P       13 52 38.3 +1.7
      baz=136,SNR=6.5
BRNJ  Basking Ridge    28.91 352  P     P       13 52 39.9 +1.7
      baz=170
MCWV  Mont Chateau     29.00 344  P     P       13 52 42.0 +3.0
      baz=159
W45A  Hickory Valley   29.07 326  P     P       13 52 40.4 +0.7
W45A                              IAmb  IAmb    13 53 03.9
      comp=Z,73nm,1.0s
SIV   San Ignacio      29.07 163  P     P       13 52 39.2  -0.7
      comp=Z,20nm,0.9s,baz=354,slow=9.1,SNR=61
SIV                               LR    LR      14 05 06.0
      comp=Z,3µm,18.8s,baz=333,slow=38
      comp=Z,20nm,0.9s
WVT   Waverly          29.09 329  P     P       13 52 40.2 +0.3
WVT   Waverly          29.09 329  IAMs_20 IAMs_20 14 04 38.8
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	comp=Z,3µm,20.0s						
WVT	Waverly	29.09	329	P	P	13 52 40.2	+0.3
WVT				pmax	pmax		
	comp=Z,51nm,1.2s						
WVT				MLR	MLR		
	comp=Z,3µm,20.0s						
WVT	Waverly	29.09	329	P	P	13 52 40.5	+0.7
	baz=141						
WVT	Waverly	29.09	329	P	P	13 52 41.5	+1.6
	baz=141,SNR=12						
Q52A	Bidwell	29.11	340	P	P	13 52 41.6	+1.6
	baz=154,SNR=5.9						
Q52A				P	P	13 52 41.6	+1.6
	baz=154,SNR=5.9						
PAL	Palisades	29.15	353	P	P	13 52 41.7	+1.4
	baz=171						
PTLB	Pontes e Lacer	29.19	159	P	P	13 52 39.6	-1.3
PTLB	Pontes e Lacer	29.19	159	*e*P	P	13 52 40.5	-0.4
R50A	Paris	29.27	336	P	P	13 52 43.7	+2.2
	baz=150						
R50A				P	P	13 52 43.7	+2.2
	baz=150						
P53A	Whipple	29.29	341	P	P	13 52 43.2	+1.6
	baz=156,SNR=7.2						
P53A				P	P	13 52 43.2	+1.6
	baz=156,SNR=7.2						
ODNJ	Ogdensburg	29.31	352	P	P	13 52 43.5	+1.7
	baz=170,SNR=5.2						
PB18	Visviri	29.38	180	P	P	13 52 41.4	-1.8
PB18				IAmb	IAmb	13 53 43.1	
	comp=Z,159nm,1.3s						
N58A	Sunbury	29.41	349	P	P	13 52 44.3	+1.7
	baz=166						
N58A				P	P	13 52 44.3	+1.7
	baz=166						
T47A	Sharon Grove	29.41	331	P	P	13 52 44.6	+1.9
	baz=143,SNR=13						
ROSB	Rosrio	29.41	119	*e*P	P	13 52 43.5	+0.6
SSPA	Standing Stone	29.44	347	P	P	13 52 44.0	+1.0
SSPA	Standing Stone	29.44	347	P	P	13 52 44.4	+1.4
	baz=163						
SSPA	Standing Stone	29.44	347	P	P	13 52 44.8	+1.9
	baz=163,SNR=5.8						
M65A	Busby, Falmout	29.48	359	P	P	13 52 44.3	+1.0
	baz=178						
Q51A	Peebles	29.54	338	P	P	13 52 46.1	+2.1
	baz=152,SNR=14						
Q51A				P	P	13 52 46.1	+2.1
	baz=152,SNR=14						
BRNY	Black Rk. Fore	29.57	353	P	P	13 52 45.6	+1.5
	baz=171						
R49A	Shelbyville	29.62	335	P	P	13 52 46.7	+2.1
	baz=148						
R49A				P	P	13 52 46.7	+2.1
	baz=148						
O54A	Avella	29.63	343	P	P	13 52 46.7	+2.0
	baz=158						
O54A				P	P	13 52 46.7	+2.0
	baz=158						
P52A	Corning	29.67	340	P	P	13 52 46.0	+1.1
	baz=155,SNR=6.6						
P51A	Williamsport	29.84	339	P	P	13 52 48.5	+2.0
	baz=153,SNR=6.2						
P51A				P	P	13 52 48.5	+2.0
	baz=153,SNR=6.2						
O53A	New Philadelph	29.94	342	P	P	13 52 48.3	+1.0
	baz=157,SNR=7.1						
KSPA	Keystone Colle	29.94	351	P	P	13 52 49.2	+1.8
	baz=168,SNR=5.0						
M57A	Sunshine Farm,	29.96	349	P	P	13 52 49.5	+1.9
	baz=165,SNR=7.2						
M57A				P	P	13 52 49.5	+1.9
	baz=165,SNR=7.2						
SNDB	Serra Nova Dou	30.00	142	*e*P	P	13 52 49.3	+1.1
O52A	Adamsville	30.01	341	P	P	13 52 49.5	+1.5
O52A				IAmb	IAmb	13 52 50.6	
	comp=Z,80nm,0.9s						
O52A	Adamsville	30.01	341	P	P	13 52 49.9	+1.9
	baz=156,SNR=13						
O52A				P	P	13 52 49.9	+1.9
	baz=156,SNR=13						
WCI	Wyandotte Cave	30.05	333	P	P	13 52 48.9	+0.5
WCI				IAmb	IAmb	13 52 51.2	
	comp=Z,64nm,1.1s						
WCI	Wyandotte Cave	30.05	333	P	P	13 52 48.9	+0.5
WCI				pmax	pmax		
	comp=Z,65nm,1.1s						
WCI				MLR	MLR		
	comp=Z,1µm,20.0s						
WCI	Wyandotte Cave	30.05	333	P	P	13 52 49.6	+1.3
	baz=146						
WCI	Wyandotte Cave	30.05	333	P	P	13 52 50.1	+1.7
	baz=146,SNR=10						
GNAR	Gosnell	30.12	326	P	P	13 52 49.2	+0.2
PB16	IPOC Station P	30.12	180	P	P	13 52 46.9	-2.9
HKT	Hockley	30.13	310	P	P	13 52 49.8	+0.7
HKT				IAmb	IAmb	13 53 44.9	
	comp=Z,99nm,1.9s						
HKT	Hockley	30.13	310	P	P	13 52 49.8	+0.7
HKT				pmax	pmax		
	comp=Z,99nm,1.9s						
HKT				MLR	MLR		
	comp=Z,700nm,21.0s						
SMTB	Santa Maria do	30.20	132	*e*P	P	13 52 51.4	+1.4
NATX	Nacogdoches	30.27	315	P	P	13 52 50.5	+0.2
NATX				IAmb	IAmb	13 52 53.1	
	comp=Z,136nm,1.6s						
NATX	Nacogdoches	30.27	315	P	P	13 52 51.5	+1.2
	baz=125						
WES	Weston	30.33	358	P	P	13 52 53.1	+2.4
	baz=177,SNR=5.6						
BBSD	Serra de San D	30.34	163	*e*P	P	13 52 50.3	-0.8
N53A	Lisbon	30.34	343	P	P	13 52 53.1	+2.1
	baz=158						
N53A				P	P	13 52 53.1	+2.1
	baz=158						
WLAR	White Oak Lake	30.39	319	P	P	13 52 50.5	-0.9
WLAR				IAmb	IAmb	13 52 54.5	
	comp=Z,166nm,1.5s						
M55A	Ridgway	30.43	346	P	P	13 52 53.3	+1.5
	baz=162,SNR=6.3						
M55A				P	P	13 52 53.3	+1.5
	baz=162,SNR=6.3						
USIN	University of	30.46	331	P	P	13 52 50.0	-2.0
USIN				IAmb	IAmb	13 53 03.9	
	comp=Z,55nm,1.1s						
HRV	Adam Dziewonsk	30.46	357	P	P	13 52 51.3	-0.6
HRV	Adam Dziewonsk	30.46	357	P	P	13 52 51.3	-0.6
HRV				pmax	pmax		
	comp=Z,239nm,1.7s						
HRV	Adam Dziewonsk	30.46	357	P	P	13 52 53.3	+1.3
	baz=176						
HRV	Adam Dziewonsk	30.46	357	P	P	13 52 54.4	+2.5
	baz=176,SNR=6.1						
L61B	Northampton	30.47	356	P	P	13 52 53.4	+1.3
	baz=174						
L61B	Northampton	30.47	356	P	P	13 52 54.3	+2.3
	baz=174						
ACSO	Alum Creek Sta	30.49	340	P	P	13 52 53.5	+1.3
	baz=154,SNR=7.1						
ACSO	Alum Creek Sta	30.49	340	P	P	13 52 53.9	+1.7
	baz=154,SNR=7.1						
P49A	Miami Univ. Ec	30.50	337	P	P	13 52 53.4	+1.1
	baz=150,SNR=6.6						
P49A	Miami Univ. Ec	30.50	337	P	P	13 52 54.1	+1.7
	baz=150,SNR=6.6						
BINY	Binghamton	30.61	351	P	P	13 52 55.2	+1.9
	baz=168,SNR=5.2						
BINY	Binghamton	30.61	351	P	P	13 52 55.5	+2.2
	baz=168,SNR=5.2						
K62A	Royalston	30.66	356	P	P	13 52 55.9	+2.2
	baz=175,SNR=8.1						
K62A				P	P	13 52 55.9	+2.2
	baz=175,SNR=8.1						
P48A	Milroy	30.72	336	P	P	13 52 55.6	+1.4
	baz=149,SNR=8.4						
P48A				P	P	13 52 55.6	+1.4
	baz=149,SNR=8.4						
L56A	Greenwood	30.82	349	P	P	13 52 56.9	+1.7
	baz=165,SNR=9.3						
L56A				P	P	13 52 56.9	+1.7
	baz=165,SNR=9.3						
HCNY	Howe Caverns	30.88	353	P	P	13 52 57.7	+2.0
	baz=171,SNR=7.1						
M53A	WI Miller and	30.89	344	P	P	13 52 57.1	+1.4
	baz=158						
N51A	Ashland	30.91	341	P	P	13 52 57.7	+1.8
	baz=155						
N51A				P	P	13 52 57.7	+1.8
	baz=155						
MNMC	Minye Minye	30.91	180	P	P	13 52 53.4	-3.0
MNMC				IAmb	IAmb	13 53 27.0	
	comp=Z,34nm,0.7s						
O49A	Covington	30.93	338	P	P	13 52 57.9	+1.8
	baz=151,SNR=5.6						
O49A				P	P	13 52 57.9	+1.8
	baz=151,SNR=5.6						
BLO	Bloomington	30.93	334	P	P	13 52 57.8	+1.7
BLO				IAmb	IAmb	13 52 59.0	
	comp=Z,85nm,1.0s						
BLO	Bloomington	30.93	334	P	P	13 52 57.8	+1.7
BLO				pmax	pmax		
	comp=Z,85nm,1.0s						
WHAR	Wooly Hollow	30.94	322	P	P	13 52 58.1	+1.8
WHAR				IAmb	IAmb	13 52 58.9	
	comp=Z,102nm,1.2s						
SALV	Santo Antonio	30.97	153	*e*P	P	13 52 56.4	-0.3
S44A	Carbondale	31.02	329	P	P	13 52 58.7	+1.8
	baz=140,SNR=14						
UNH	University of	31.02	358	P	P	13 52 58.7	+1.9
	baz=178,SNR=6.2						
237A	Washetta, Mont	31.21	314	P	P	13 53 00.7	+2.0
	baz=124,SNR=6.7						
MIAR	Mount Ida	31.24	320	P	P	13 52 58.0	-1.0
MIAR	Mount Ida	31.24	320	P	P	13 52 58.0	-1.0
MIAR				pmax	pmax		
	comp=Z,36nm,1.1s						
MIAR				MLR	MLR		
	comp=Z,1µm,19.0s						
MIAR	Mount Ida	31.24	320	P	P	13 52 59.6	+0.7
	baz=130,SNR=5.1						
MIAR	Mount Ida	31.24	320	P	P	13 53 00.3	+1.3
	baz=130,SNR=5.1						
FCAR	Ozark Folk Cen	31.26	323	P	P	13 53 00.2	+1.1
FCAR				IAmb	IAmb	13 53 01.1	
	comp=Z,63nm,1.1s						
OLIL	Olney	31.28	332	P	P	13 53 00.8	+1.6
	baz=143,SNR=12						
WVNY	West Valley, N	31.29	347	P	P	13 53 01.0	+1.7
	baz=163,SNR=5.1						
O48B	Farmland	31.30	337	P	P	13 53 00.1	+0.7
	baz=150,SNR=6.9						
O48B	Farmland	31.30	337	P	P	13 53 00.9	+1.5
	baz=150,SNR=6.9						
ERPA	Erie	31.34	345	P	P	13 53 00.8	+1.1
	baz=160						
J61A	Chester	31.35	356	P	P	13 53 02.0	+2.2
	baz=174,SNR=6.7						
J61A				P	P	13 53 02.0	+2.2
	baz=174,SNR=6.7						
FFD	Franklin Falls	31.43	357	P	P	13 53 03.2	+2.8
	baz=176,SNR=5.7						
ACCN	Adirondack Com	31.48	354	P	P	13 53 03.1	+2.1
	baz=172,SNR=7.2						
T42A	Van Buren	31.49	326	P	P	13 53 02.7	+1.6
	baz=137						
N49A	Columbus Grove	31.52	339	P	P	13 53 02.7	+1.4
	baz=152						
N49A				P	P	13 53 02.7	+1.4
	baz=152						
M50A	Fremont	31.56	341	P	P	13 53 03.7	+2.1
	baz=154						
M50A				P	P	13 53 03.7	+2.1
	baz=154						
P46A	Rosedale	31.59	334	P	P	13 53 03.7	+1.7
P46A	Rosedale	31.59	334	P	P	13 53 04.0	+2.0
	baz=146,SNR=18						
BBRB	Robore, Bolivi	31.61	162	*e*P	P	13 53 01.5	-0.8
J58A	Remsen	31.64	352	P	P	13 53 04.7	+2.3
	baz=169,SNR=7.4						
J58A				P	P	13 53 04.7	+2.3
	baz=169,SNR=7.4						
J59A	Piesco	31.65	353	P	P	13 53 04.1	+1.6
	baz=171,SNR=8.8						
J59A				P	P	13 53 04.1	+1.6
	baz=171,SNR=8.8						
J57A	Williamstown	31.79	351	P	P	13 53 05.1	+1.5
	baz=168,SNR=12						
J57A				P	P	13 53 05.1	+1.5
	baz=168,SNR=12						
Q44A	Meyer Farm, Va	31.84	331	P	P	13 53 05.9	+1.7
	baz=142,SNR=13						
435B	Jarrell	31.86	310	P	P	13 53 05.0	+0.6
	baz=120						
I63A	Otisfield	31.97	359	P	P	13 53 07.6	+2.4
	baz=178,SNR=5.8						
I63A				P	P	13 53 07.6	+2.4
	baz=178,SNR=5.8						
MCVT	Middlebury Col	31.99	356	P	P	13 53 07.8	+2.3
	baz=174,SNR=11						
U40A	Yellville	32.01	323	P	P	13 53 07.4	+1.7
	baz=133,SNR=6.2						
U40A				P	P	13 53 07.4	+1.7
	baz=133,SNR=6.2						
NCB	Newcomb	32.12	354	P	P	13 53 08.6	+2.0
	baz=171,SNR=8.6						
833A	Chaparral WMA,	32.14	305	P	P	13 53 08.4	+1.5
833A	Chaparral WMA,	32.14	305	P	P	13 53 07.5	+0.5
	baz=114,SNR=19						
833A	Chaparral WMA,	32.14	305	P	P	13 53 08.5	+1.5
	baz=114,SNR=19						
SFIN	Lafayette	32.18	335	P	P	13 53 08.4	+1.3
	baz=147,SNR=5.8						
SFIN	Lafayette	32.18	335	P	P	13 53 08.9	+1.7
	baz=147,SNR=5.8						
LBNH	Lisbon	32.21	357	P	P	13 53 09.0	+1.6
	baz=176						
LBNH	Lisbon	32.21	357	P	P	13 53 09.5	+2.2
	baz=176						
CCM	Cathedral Cave	32.32	327	IAMs_20	IAMs_20	14 07 39.1	
	comp=Z,2µm,18.0s						
CCM	Cathedral Cave	32.32	327	P	P	13 53 09.3	+0.9
	baz=138						
CCM	Cathedral Cave	32.32	327	P	P	13 53 09.9	+1.5
	baz=138						
WHTX	Lake Whitney,	32.38	312	P	P	13 53 09.2	+0.2
WHTX				IAmb	IAmb	13 53 11.3	
	comp=Z,67nm,1.2s						
WHTX	Lake Whitney,	32.38	312	P	P	13 53 09.7	+0.7
	baz=122,SNR=7.0						
WHTX	Lake Whitney,	32.38	312	P	P	13 53 10.3	+1.3
	baz=122,SNR=7.0						
FW14	Alvarado	32.41	313	P	P	13 53 09.9	+0.7
FW14				IAmb	IAmb	13 53 11.7	
	comp=Z,103nm,1.3s						
H62A	Milan	32.51	358	P	P	13 53 12.4	+2.4
	baz=177,SNR=6.4						
H62A				P	P	13 53 12.4	+2.4
	baz=177,SNR=6.4						
L48A	N Adams	32.51	339	P	P	13 53 11.5	+1.5
	baz=152						
L48A				P	P	13 53 11.5	+1.5
	baz=152						
AAM	Ann Arbor	32.57	341	P	P	13 53 12.0	+1.5
	baz=154						
O44A	Mansfield	32.59	333	P	P	13 53 12.5	+1.7
	baz=144,SNR=7.5						
HHAR	Hobbs	32.60	322	P	P	13 53 11.2	+0.3
P43A	Skaggs, Pawnee	32.67	331	P	P	13 53 13.1	+1.7
	baz=142,SNR=11						
ARAG	Araguaiana, MT	32.71	147	*e*P	P	13 53 12.1	+0.1
LONY	Lake Ozonia	32.80	354	P	P	13 53 13.9	+1.4
	baz=171,SNR=5.4						
PP1B	Ponte de Pedra	32.83	153	*e*P	P	13 53 13.1	0.0
FRNY	Flat Rock	32.91	355	P	P	13 53 15.6	+2.1
	baz=173,SNR=7.7						
U38A	Gravette	32.98	322	P	P	13 53 15.4	+1.2
	baz=131						
BMNY	Brushton-Moira	33.01	354	P	P	13 53 15.9	+1.6
	baz=171,SNR=5.8						
R40A	Maddies Statio	33.04	326	P	P	13 53 16.0	+1.3
	baz=136,SNR=9.2						
ZAIG	Zacatecas	33.07	293	P	P	13 53 16.5	+1.0
ZAIG				IAmb	IAmb	13 53 27.6	
	comp=Z,69nm,1.3s						
G62A	West of Eustis	33.14	359	P	P	13 53 17.8	+2.4
	baz=178,SNR=16						
G62A				P	P	13 53 17.8	+2.4
	baz=178,SNR=16						
G65A	Princeton	33.16	3	P	P	13 53 17.9	+2.3
	baz=184,SNR=7.9						
G65A				P	P	13 53 17.9	+2.3
	baz=184,SNR=7.9						
PKME	Peaks-Kenny Pk	33.18	1	P	P	13 53 17.1	+1.4
	baz=180,SNR=10						
PKME	Peaks-Kenny Pk	33.18	1	P	P	13 53 18.1	+2.3
	baz=180,SNR=10						
RLO	Rose Lookout	33.19	321		P	13 53 16.6	+0.5
RLO				IAmb	IAmb	13 53 17.7	
	comp=Z,62nm,0.9s						
S39A	Bolivar	33.20	325	P	P	13 53 17.6	+1.4
	baz=134,SNR=5.9						
L46A	Eue Claire	33.24	337	P	P	13 53 18.0	+1.6
	baz=149						
L46A				P	P	13 53 18.0	+1.6
	baz=149						
HDIL	Hopedale	33.29	332	P	P	13 53 17.3	+0.4
	baz=143,SNR=6.6						
HDIL	Hopedale	33.29	332	P	P	13 53 18.0	+1.2
	baz=143,SNR=6.6						
PANT	Pantanal (Braz	33.37	157	*e*P	P	13 53 17.7	0.0
JCT	Junction City	33.39	308	P	P	13 53 18.1	+0.1
	baz=117						
M44A	Midewin, Midew	33.42	335	P	P	13 53 19.6	+1.6
	baz=146,SNR=6.2						
TUL1	Leonard	33.51	320	P	P	13 53 19.2	+0.4
	baz=129,SNR=9.6						
TUL1	Leonard	33.51	320	P	P	13 53 19.9	+1.0
	baz=129,SNR=9.6						
F63A	Nahmakanta, Br	33.62	1	P	P	13 53 21.5	+1.8
	baz=181,SNR=7.3						
F63A				P	P	13 53 21.5	+1.8
	baz=181,SNR=7.3						
SADO	Sadowa	33.67	348	P	P	13 53 20.6	+0.5
	comp=Z,23nm,0.8s,baz=186,slow=7.6,SNR=9.4						
SADO				LR	LR	14 06 08.6	
	comp=Z,926nm,21.8s,baz=138,slow=35						
	comp=Z,23nm,0.8s						
F64A	Sherman	33.79	2	P	P	13 53 23.0	+1.9
	baz=182						
F64A				P	P	13 53 23.0	+1.9
	baz=182						
F62A	Pittston Farm,	33.81	360	P	P	13 53 22.9	+1.7
	baz=179,SNR=8.1						
F62A				P	P	13 53 22.9	+1.7
	baz=179,SNR=8.1						
P40A	Paris	33.83	328	P	P	13 53 22.9	+1.3
	baz=138,SNR=6.7						
L44A	Lake County Fo	34.02	335	P	P	13 53 23.6	+0.4
	baz=147						
WTFS	Witchita Falls	34.04	314	P	P	13 53 23.4	-0.1
WTFS				IAmb	IAmb	13 53 26.1	
	comp=Z,86nm,1.2s						
RVDE	Rio Verde (Bra	34.07	155	*e*P	P	13 53 23.6	-0.3
N41A	Harden Midland	34.14	331	P	P	13 53 25.0	+0.8
	baz=141						
OK030	Cody Creek RV	34.15	319	P	P	13 53 24.3	-0.1
OK030				IAmb	IAmb	13 53 25.9	
	comp=Z,103nm,1.2s						
OK034	N. Norfolk Rd.	34.16	319	IAMs_20	IAMs_20	14 08 07.5	
	comp=Z,1µm,19.0s						
ABTX	Abilene, Hawle	34.29	312	P	P	13 53 26.3	+0.5
	baz=120,SNR=15						
ABTX	Abilene, Hawle	34.29	312	P	P	13 53 26.8	+1.1
	baz=120,SNR=15						
OK025	Westminster Rd	34.30	318	IAMs_20	IAMs_20	14 08 51.4	
	comp=Z,1µm,20.0s						
E63A	Oxbow	34.35	2	P	P	13 53 28.0	+2.1
	baz=182,SNR=8.6						
E63A				P	P	13 53 28.0	+2.1
	baz=182,SNR=8.6						
LVC	Limon Verde	34.38	179	LR	LR	14 08 42.7	
	comp=Z,2µm,19.8s,baz=338,slow=39						
LVC	Limon Verde	34.38	179	P	P	13 53 25.2	-1.7
LVC				IAmb	IAmb	13 53 27.1	
	comp=Z,36nm,0.7s						
LVC	Limon Verde	34.38	179	IAMs_20	IAMs_20	14 08 32.4	
	comp=Z,3µm,19.0s						
LVC	Limon Verde	34.38	179	P	P	13 53 25.2	-1.7
LVC				pmax	pmax		
	comp=Z,36nm,0.7s						
LVC				MLR	MLR		
	comp=Z,2µm,19.0s						
LVC	Limon Verde	34.38	179	*e*P	P	13 53 25.2	-1.7
OK029	Liberty Lake	34.51	318	P	P	13 53 27.7	+0.2
OK029				IAMs_20	IAMs_20	14 08 55.8	
	comp=Z,1µm,20.0s						
OK046	Pawnee Station	34.52	319	IAMs_20	IAMs_20	14 10 13.0	
	comp=Z,1µm,18.0s						
E62A	Clayton Lake	34.53	0	P	P	13 53 27.7	+0.2
E62A				IAmb	IAmb	13 53 30.8	
	comp=Z,41nm,0.8s						
E62A	Clayton Lake	34.53	0	P	P	13 53 29.5	+1.9
	baz=180,SNR=9.0						
E62A				P	P	13 53 29.5	+1.9
	baz=180,SNR=9.0						
SDBA	SAO DESIDERIO	34.54	134	*e*P	P	13 53 28.3	+0.3
T35B	Sooner Cattle	34.59	320	P	P	13 53 28.8	+0.5
	baz=129,SNR=11						
L42A	Oliver, Polo	34.62	333	P	P	13 53 29.2	+0.8
	baz=144,SNR=10						
BDQN	Bodoquena, MS	34.65	158	*e*P	P	13 53 28.1	-0.8
P38A	Dawn	34.69	327	P	P	13 53 30.2	+1.2
	baz=136,SNR=11						
C2SB	Chapadao do Su	34.78	151	*e*P	P	13 53 31.1	+1.1
WMOK	Wichita Mounta	34.79	315	P	P	13 53 29.7	-0.3
	baz=124,SNR=7.5						
BDFB	Brasilia	34.84	141	P	P	13 53 31.1	+0.4
	comp=Z,13nm,0.8s,baz=320,slow=10,SNR=16						
BDFB				PcP	PcP	13 56 04.4	+0.6
	comp=Z,21nm,0.9s,baz=344,slow=3.4,SNR=4.5						
BDFB				LR	LR	14 08 23.2	
	comp=Z,3µm,18.5s,baz=321,slow=38						
	comp=Z,13nm,0.8s						
BDFB	Brasilia	34.84	141	P	P	13 53 29.9	-0.8
BDFB	Brasilia	34.84	141	P	P	13 53 29.9	-0.8
BDFB				pmax	pmax		
	comp=Z,36nm,1.1s						
BDFB	Brasilia	34.84	141	*e*P	P	13 53 31.7	+1.1
D62A	Allapoint, All	35.00	1	P	P	13 53 31.5	0.0
D62A				IAmb	IAmb	13 53 41.9	
	comp=Z,88nm,1.0s						
D62A	Allapoint, All	35.00	1	P	P	13 53 33.2	+1.7
	baz=181,SNR=12						
D62A				P	P	13 53 33.2	+1.7
	baz=181,SNR=12						
AQDB	Aquidauana	35.07	157	P	P	13 53 31.9	-0.5
AQDB	Aquidauana	35.07	157	*e*P	P	13 53 31.9	-0.5
NBCL	Cascavel-CE	35.14	115	*e*P	P	13 53 33.7	+0.5
GLMI	Grayling	35.14	341	P	P	13 53 33.6	+0.8
	baz=154						
L40A	Anamosa	35.37	332	P	P	13 53 35.8	+0.9
L40A				IAmb	IAmb	13 53 36.3	
	comp=Z,85nm,0.9s						
L40A	Anamosa	35.37	332	P	P	13 53 35.7	+0.9
	baz=142,SNR=10						
N38A	Joes South For	35.38	328	P	P	13 53 36.2	+1.3
	baz=138,SNR=5.0						
MURT	Porto Murtinho	35.47	160	*e*P	P	13 53 34.8	-1.1
JFWS	Jewell Farm	35.61	334	P	P	13 53 37.6	+0.7
JFWS	Jewell Farm	35.61	334	IAMs_20	IAMs_20	14 09 52.7	
	comp=Z,1µm,18.0s						
JFWS	Jewell Farm	35.61	334	P	P	13 53 37.6	+0.7
JFWS				pmax	pmax		
	comp=Z,162nm,0.9s						
JFWS				MLR	MLR		
	comp=Z,1µm,18.0s						
JFWS	Jewell Farm	35.61	334	P	P	13 53 37.1	+0.2
	baz=144,SNR=23						
JFWS	Jewell Farm	35.61	334	P	P	13 53 37.7	+0.7
	baz=144,SNR=23						
OK038	West end E0370	35.75	318	IAMs_20	IAMs_20	14 09 35.3	
	comp=Z,1µm,20.0s						
OK035	E0210 Rd and N	35.86	318	IAMs_20	IAMs_20	14 09 45.7	
	comp=Z,1µm,21.0s						
POST	Post	35.87	311	P	P	13 53 39.8	+0.4
POST				IAmb	IAmb	13 53 41.6	
	comp=Z,139nm,1.1s						
TXAR	Lajitas Array	35.99	304	P	P	13 53 41.2	+0.7
	comp=Z,2.5nm,0.6s,baz=134,slow=8.3,SNR=27						
TXAR				PcP	PcP	13 56 08.7	+1.6
	comp=Z,15nm,0.8s,baz=134,slow=6.0,SNR=15						
TXAR				LR	LR	14 10 11.5	
	comp=Z,137nm,21.7s,baz=110,slow=39						
TXAR				P3KPbc		14 24 21.4	
	comp=Z,0.2nm,0.5s,baz=275,slow=3.1,SNR=3.8						
	comp=Z,2.5nm,0.6s						
TXAR	Lajitas Array	35.99	304	P	P	13 53 41.4	+0.9
TX31	Lajitas Ar. Si	35.99	304	P	P	13 53 40.9	+0.4
TX31	Lajitas Ar. Si	35.99	304	P	P	13 53 42.0	+1.6
	baz=112,SNR=7.5						
TX32	Lajitas Array	35.99	304	P	P	13 53 42.1	+1.6

TX32				IAmb	IAmb	13 53 43.3	
	comp=Z,89nm,1.9s						
KSU1	**Kansas State U**	**36.05**	**323**	P	**P**	**13 53 40.8**	**0.0**
	baz=131,SNR=6.2						
KSU1	**Kansas State U**	**36.05**	**323**	P	**P**	**13 53 41.4**	**+0.7**
	baz=131,SNR=6.2						
SCIA	**State Center**	**36.20**	**330**	IAMs_20	IAMs_20	14 08 48.6	
	comp=Z,2µm,20.0s						
SCIA	**State Center**	**36.20**	**330**	P	**P**	**13 53 42.3**	**+0.3**
	baz=138						
SCIA	**State Center**	**36.20**	**330**	P	**P**	**13 53 43.7**	**+1.7**
	baz=138						
E46A	**Sault Ste Mari**	**36.44**	**343**	P	**P**	**13 53 45.4**	**+1.4**
	baz=155,SNR=7.7						
K38A	**Parkersburg**	**36.54**	**331**	P	**P**	**13 53 46.0**	**+1.1**
	baz=140,SNR=14						
I40A	**Norwalk**	**36.56**	**334**	P	**P**	**13 53 45.7**	**+0.7**
	baz=144,SNR=12						
IPMB	**Ipameri, GO**	**36.56**	**144**	*e*P	**P**	**13 53 45.3**	**0.0**
N35A	**Tabor**	**36.70**	**326**	P	**P**	**13 53 46.9**	**+0.6**
	baz=134						
JANB	**Januaria**	**36.80**	**136**	*e*P	**P**	**13 53 47.8**	**+0.4**
ITRB	**Iturama**	**36.80**	**149**	*e*P	**P**	**13 53 47.3**	**-0.1**
R32A	**Long Quarter,**	**36.89**	**321**	P	**P**	**13 53 49.1**	**+1.1**
	baz=128						
AMTX	**Amarillo**	**36.89**	**314**	P	**P**	**13 53 48.0**	**-0.1**
AMTX				IAmb	IAmb	13 53 49.8	
	comp=Z,72nm,0.9s						
AMTX	**Amarillo**	**36.89**	**314**	P	**P**	**13 53 48.2**	**+0.1**
	baz=120						
AMTX	**Amarillo**	**36.89**	**314**	P	**P**	**13 53 49.1**	**+0.9**
	baz=120,SNR=15						
MSTX	**Muleshoe**	**37.23**	**311**	P	**P**	**13 53 51.2**	**+0.1**
	baz=118,SNR=9.4						
MSTX	**Muleshoe**	**37.23**	**311**	P	**P**	**13 53 51.9**	**+0.8**
	baz=118,SNR=9.4						
G40A	**Rib Lake**	**37.51**	**336**	P	**P**	**13 53 54.1**	**+1.0**
	baz=146,SNR=6.5						
AMBA	**Amambai (Brazi**	**37.56**	**157**	*e*P	**P**	**13 53 53.0**	**-0.8**
CBKS	**Cedar Bluff**	**37.77**	**320**	IAMs_20	IAMs_20	14 11 02.4	
	comp=Z,1µm,18.0s						
CBKS	**Cedar Bluff**	**37.77**	**320**	P	**P**	**13 53 55.8**	**+0.3**
	baz=127,SNR=11						
CBKS	**Cedar Bluff**	**37.77**	**320**	P	**P**	**13 53 56.3**	**+0.9**
	baz=127,SNR=11						
I37B	**Waseca**	**37.89**	**332**	P	**P**	**13 53 57.4**	**+1.1**
	baz=140,SNR=17						
PCMB	**Pacaembu**	**37.97**	**151**	*e*P	**P**	**13 53 56.6**	**-0.6**
RCBR	**Riachuelo**	**37.99**	**116**	IAMs_20	IAMs_20	14 10 58.3	
	comp=Z,2µm,19.0s						
RCBR	**Riachuelo**	**37.99**	**116**	*e*P	**P**	**13 53 58.5**	**+0.9**
PMNB	**Patos De Minas**	**38.03**	**143**	*e*P	**P**	**13 53 57.8**	**-0.1**
MNTX	**Cornudas Mount**	**38.25**	**307**	P	**P**	**13 54 00.7**	**+1.1**
	baz=113,SNR=34						
MNTX	**Cornudas Mount**	**38.25**	**307**	P	**P**	**13 54 01.3**	**+1.7**
	baz=113,SNR=34						
ESFA	**Espinillo Form**	**38.30**	**163**	*e*P	**P**	**13 53 59.1**	**-0.9**
BGNE	**Belgrade**	**38.46**	**325**	P	**P**	**13 54 00.8**	**-0.4**
	baz=131						
SPMN	**Marine on St.**	**38.56**	**334**	P	**P**	**13 54 02.5**	**+0.6**
	baz=142,SNR=20						
SPMN	**Marine on St.**	**38.56**	**334**	P	**P**	**13 54 02.8**	**+0.9**
	baz=142,SNR=20						
BB19B	**Bebedouro**	**38.88**	**147**	*e*P	**P**	**13 54 04.9**	**0.0**
E38A	**The Farm, Brul**	**39.15**	**336**	P	**P**	**13 54 07.8**	**+0.9**
	baz=145,SNR=6.1						
TICA	**Tres Isletas**	**39.20**	**167**	*e*P	**P**	**13 54 06.6**	**-0.8**
ECSD	**EROS Data Cent**	**39.24**	**329**	IAMs_20	IAMs_20	14 10 44.0	
	comp=Z,2µm,20.0s						
ECSD	**EROS Data Cent**	**39.24**	**329**	P	**P**	**13 54 06.8**	**-0.9**
	baz=136,SNR=5.5						
ECSD	**EROS Data Cent**	**39.24**	**329**	P	**P**	**13 54 07.5**	**-0.1**
	baz=136,SNR=5.5						
MCR1	**Marechal Candi**	**39.31**	**157**	*e*P	**P**	**13 54 08.7**	**+0.2**
F36A	**Milaca**	**39.37**	**334**	P	**P**	**13 54 09.1**	**+0.3**
	baz=141,SNR=22						
K31A	**O'Neill**	**39.60**	**326**	P	**P**	**13 54 11.5**	**+0.7**
	baz=132,SNR=9.8						
KSCO	**Kaye Shedlock’**	**39.72**	**319**	P	**P**	**13 54 11.8**	**-0.2**
	baz=124						
KSCO	**Kaye Shedlock’**	**39.72**	**319**	P	**P**	**13 54 12.5**	**+0.6**
	baz=124						
SLBS	**Sierra La Lagu**	**39.90**	**293**	P	**P**	**13 54 14.7**	**+1.1**
SLBS				IAmb	IAmb	13 54 26.1	
	comp=Z,103nm,1.1s						
CPUP	**Villa Florida**	**39.93**	**163**	P	**P**	**13 54 11.2**	**-2.3**
	comp=Z,15nm,0.9s,baz=344,slow=7.7,SNR=18						
CPUP				PcP	**PcP**	**13 56 19.8**	**+0.8**
	comp=Z,14nm,0.9s,baz=320,slow=2.8,SNR=3.9						
	comp=Z,15nm,0.9s						
CPUP	**Villa Florida**	**39.93**	**163**	P	**P**	**13 54 11.6**	**-2.0**
CPUP	**Villa Florida**	**39.93**	**163**	P	**P**	**13 54 11.6**	**-2.0**
CPUP				pmax	pmax		
	comp=Z,34nm,1.2s						
CPUP	**Villa Florida**	**39.93**	**163**	*e*P	**P**	**13 54 11.8**	**-1.8**
T25A	**Trinidad**	**39.94**	**315**	P	**P**	**13 54 15.1**	**+1.2**
	baz=120,SNR=6.0						
EYMN	**Ely**	**40.23**	**337**	P	**P**	**13 54 16.0**	**+0.1**
EYMN	**Ely**	**40.23**	**337**	P	**P**	**13 54 15.2**	**-0.7**
	baz=146						
FRTB	**Fartura**	**40.26**	**151**	*e*P	**P**	**13 54 16.0**	**-0.4**
LPIG	**La Paz**	**40.30**	**293**	P	**P**	**13 54 17.7**	**+0.9**
	comp=Z,26nm,0.5s,baz=198,slow=2.1,SNR=6.9						
LPIG				LR	LR	14 12 18.7	
	comp=Z,656nm,20.4s,baz=111,slow=38						
	comp=Z,26nm,0.5s						
PTGB	**Pitanga**	**40.33**	**155**	*e*P	**P**	**13 54 17.1**	**0.0**
Y22D	**IRIS PASSCAL I**	**40.38**	**309**	P	**P**	**13 54 19.1**	**+1.7**
	baz=114						
Y22F	**Passcal Instru**	**40.38**	**309**	P	**P**	**13 54 18.9**	**+1.4**
	baz=114						
ANMO	**Albuquerque**	**40.39**	**311**	P	**P**	**13 54 18.6**	**+1.0**
	comp=Z,16nm,1.0s,baz=213,slow=8.0,SNR=34						
ANMO				PcP	**PcP**	**13 56 22.2**	**+1.5**
	comp=Z,14nm,1.0s,baz=234,slow=7.1,SNR=6.3						
ANMO				LR	LR	14 14 29.4	
	comp=Z,468nm,18.3s,baz=212,slow=41						
	comp=Z,16nm,1.0s						
ANMO	**Albuquerque**	**40.39**	**311**	P	**P**	**13 54 18.5**	**+0.9**
ANMO	**Albuquerque**	**40.39**	**311**	*de*P	**P**	**13 54 19.1**	**+1.4**
ANMO				pmax	pmax		
	comp=Z,56nm,1.7s						
ANMO	**Albuquerque**	**40.39**	**311**	P	**P**	**13 54 18.7**	**+1.0**
	baz=115						
ANMO	**Albuquerque**	**40.39**	**311**	P	**P**	**13 54 19.4**	**+1.7**
	baz=115,SNR=11						
121A	**Cookes Peak, D**	**40.45**	**307**	P	**P**	**13 54 20.2**	**+2.0**
	baz=112,SNR=24						
121A	**Cookes Peak, D**	**40.45**	**307**	P	**P**	**13 54 20.7**	**+2.5**
	baz=112,SNR=24						
OGNE	**Ogallala**	**40.45**	**321**	P	**P**	**13 54 18.6**	**+0.6**
OGNE				IAmb	IAmb	13 54 19.7	
	comp=Z,123nm,1.2s						
OGNE				IAMs_20	IAMs_20	14 12 43.5	
	comp=Z,2µm,19.0s						
OGNE	**Ogallala**	**40.45**	**321**	P	**P**	**13 54 17.8**	**-0.1**
	baz=126,SNR=5.1						
OGNE	**Ogallala**	**40.45**	**321**	P	**P**	**13 54 19.1**	**+1.1**
	baz=126,SNR=5.1						
RCLB	**Rio Claro- Sao**	**40.51**	**147**	*e*P	**P**	**13 54 18.5**	**0.0**
F33A	**5 Mile Ranch,**	**40.61**	**331**	P	**P**	**13 54 19.2**	**+0.2**
F33A				IAmb	IAmb	13 54 20.7	
	comp=Z,126nm,1.4s						
F33A	**5 Mile Ranch,**	**40.61**	**331**	P	**P**	**13 54 20.0**	**+0.9**
	baz=138,SNR=18						
BSCB	**Bom Sucesso**	**40.92**	**143**	*e*P	**P**	**13 54 22.3**	**+0.4**
SUSD	**Miller**	**40.94**	**328**	P	**P**	**13 54 21.4**	**-0.4**
	baz=133						
GUA01	**Guaratinga, BA**	**40.98**	**133**	*e*P	**P**	**13 54 22.1**	**-0.3**
SDCO	**Great Sand Dun**	**40.99**	**315**	P	**P**	**13 54 22.9**	**+0.3**
SDCO				IAMs_20	IAMs_20	14 13 39.1	
	comp=Z,940nm,18.0s						
SDCO	**Great Sand Dun**	**40.99**	**315**	P	**P**	**13 54 23.7**	**+1.0**
	baz=119,SNR=14						
FRBT	**Francisco Belt**	**41.05**	**157**	*e*P	**P**	**13 54 22.1**	**-0.8**
VAO	**Valinhos**	**41.28**	**147**	*e*P	**P**	**13 54 25.0**	**+0.1**
Q24A	**Divide**	**41.36**	**317**	P	**P**	**13 54 26.0**	**+0.3**
	baz=121						
B35A	**Bob, Littlefor**	**41.44**	**336**	P	**P**	**13 54 25.9**	**+0.1**
B35A				IAmb	IAmb	13 54 27.0	
	comp=Z,66nm,1.0s						
B35A	**Bob, Littlefor**	**41.44**	**336**	P	**P**	**13 54 25.9**	**+0.1**
	baz=143,SNR=19						
SJMB	**Sao Joao De Ma**	**41.48**	**137**	*e*P	**P**	**13 54 26.8**	**+0.4**
SPB	**Sao Paulo**	**41.52**	**148**	IAMs_20	IAMs_20	14 12 57.1	
	comp=Z,1µm,20.0s						
BRIGG	**Briggsdale**	**41.67**	**319**	IAMs_20	IAMs_20	14 13 51.4	
	comp=Z,1µm,18.0s						
D32A	**Dogwood Acres,**	**41.91**	**332**	P	**P**	**13 54 30.1**	**+0.5**
D32A				IAmb	IAmb	13 54 31.2	
	comp=Z,159nm,1.1s						
S22A	**4UR Ranch, Cre**	**41.91**	**314**	P	**P**	**13 54 31.5**	**+1.2**
	baz=118,SNR=12						
AZCA	**Azaras, Argent**	**41.98**	**162**	*e*P	**P**	**13 54 28.7**	**-1.8**
CRSM	**Crissiumal (Br**	**42.07**	**159**	*e*P	**P**	**13 54 28.9**	**-2.4**
ISCO	**Idaho Springs**	**42.10**	**318**	P	**P**	**13 54 32.1**	**+0.3**
	baz=121						
PET01	**Itanhaem-SP**	**42.18**	**149**	*e*P	**P**	**13 54 31.7**	**-0.4**
TIJ01	**Guaruva-PR**	**42.21**	**152**	*e*P	**P**	**13 54 32.3**	**-0.2**
AGMN	**Agassiz Nation**	**42.27**	**334**	P	**P**	**13 54 33.0**	**+0.4**
	baz=140						
AGMN	**Agassiz Nation**	**42.27**	**334**	P	**P**	**13 54 33.2**	**+0.6**
	baz=140						
PARB	**Paraibuna**	**42.28**	**146**	*e*P	**P**	**13 54 34.2**	**+1.1**
MECA	**Mercedes**	**42.52**	**165**	*e*P	**P**	**13 54 32.5**	**-2.2**
ITAB	**Concordia**	**42.55**	**157**	*e*P	**P**	**13 54 33.1**	**-1.9**
ABR01	**Abrolhos, BA**	**42.69**	**134**	*e*P	**P**	**13 54 37.0**	**+0.7**
VAS01	**Vassouras-RJ**	**42.69**	**143**	*e*P	**P**	**13 54 36.0**	**-0.3**
SMCO	**Snowmass**	**42.70**	**316**	IAMs_20	IAMs_20	14 14 00.7	
	comp=Z,1µm,21.0s						
TUC	**Tucson**	**42.76**	**305**	P	**P**	**13 54 37.0**	**+0.1**
TUC	**Tucson**	**42.76**	**305**	P	**P**	**13 54 37.0**	**+0.1**
TUC				pmax	pmax		
	comp=Z,36nm,1.2s						
TUC	**Tucson**	**42.76**	**305**	P	**P**	**13 54 38.2**	**+1.3**
	baz=109						
PHWY	**Pilot Hill**	**42.79**	**320**	IAMs_20	IAMs_20	14 14 30.9	
	comp=Z,1µm,18.0s						
SCHQ	**Schefferville**	**42.81**	**2**	P	**P**	**13 54 38.0**	**+1.1**
	comp=Z,66nm,0.8s,baz=183,slow=6.4,SNR=49						
SCHQ				LR	LR	14 11 13.4	
	comp=Z,609nm,19.8s,baz=205,slow=34						
	comp=Z,66nm,0.8s						
SCHQ	**Schefferville**	**42.81**	**2**	P	**P**	**13 54 37.2**	**+0.3**
SCHQ				IAmb	IAmb	13 54 46.8	
	comp=Z,133nm,1.0s						
MVCO	**Mesa Verde**	**42.86**	**313**	P	**P**	**13 54 39.4**	**+1.5**
	baz=116,SNR=16						
N23A	**Red Feather La**	**42.88**	**319**	P	**P**	**13 54 38.5**	**+0.4**
	baz=122						
W18A	**Petrified Fore**	**42.92**	**309**	P	**P**	**13 54 40.1**	**+1.7**
	baz=112,SNR=17						
ALF01	**Guarapari-ES**	**43.14**	**138**	*e*P	**P**	**13 54 39.9**	**-0.1**
DUB01	**Friburgo-RJ**	**43.18**	**142**	*e*P	**P**	**13 54 40.3**	**-0.1**
ITQB	**Itaqui**	**43.28**	**163**	P	**P**	**13 54 39.8**	**-1.2**
ITQB	**Itaqui**	**43.28**	**163**	*e*P	**P**	**13 54 38.6**	**-2.3**
PV15	**Paradox Valley**	**43.34**	**314**	P	**P**	**13 54 43.9**	**+2.1**
CFA	**Coronel Fontan**	**43.35**	**178**	LR	LR	14 14 49.7	
	comp=Z,980nm,18.4s,baz=344,slow=39						
RSSD	**Black Hills**	**43.53**	**324**	P	**P**	**13 54 43.4**	**+0.2**
RSSD	**Black Hills**	**43.53**	**324**	P	**P**	**13 54 43.4**	**+0.2**
RSSD				pmax	pmax		
	comp=Z,12nm,1.0s						
RSSD				MLR	MLR		
	comp=Z,2µm,19.0s						
RSSD	**Black Hills**	**43.53**	**324**	P	**P**	**13 54 43.2**	**0.0**
	baz=127						
ALGR	**Alto Alegre (B**	**43.62**	**159**	*e*P	**P**	**13 54 41.9**	**-1.9**
MDND	**Maddock**	**43.63**	**331**	P	**P**	**13 54 44.0**	**+0.3**
	baz=135,SNR=19						
MDND	**Maddock**	**43.63**	**331**	P	**P**	**13 54 44.8**	**+1.1**
	baz=135,SNR=19						
ULM	**Lac du Bonnet**	**43.79**	**336**	P	**P**	**13 54 44.6**	**-0.3**
	comp=Z,40nm,0.8s,baz=140,slow=8.1,SNR=60						
ULM				LR	LR	14 14 25.7	
	comp=Z,484nm,18.4s,baz=137,slow=38						
	comp=Z,40nm,0.8s						
ULM	**Lac du Bonnet**	**43.79**	**336**	P	**P**	**13 54 44.4**	**-0.5**
ULM				IAmb	IAmb	13 54 45.5	
	comp=Z,50nm,0.9s						
ULM	**Lac du Bonnet**	**43.79**	**336**	P	**P**	**13 54 44.4**	**-0.5**
ULM				pmax	pmax		
	comp=Z,50nm,0.9s						
O20A	**White River Ci**	**44.01**	**317**	P	**P**	**13 54 48.1**	**+1.0**
	baz=119,SNR=9.9						
K22A	**Casper**	**44.19**	**321**	P	**P**	**13 54 49.2**	**+0.8**
	baz=123,SNR=21						
K22A	**Casper**	**44.19**	**321**	P	**P**	**13 54 49.2**	**+0.8**
	baz=123,SNR=21						
214A	**Organ Pipe Nat**	**44.29**	**304**	P	**P**	**13 54 50.7**	**+1.5**
	baz=107,SNR=16						
WUAZ	**Wupatki**	**44.31**	**309**	P	**P**	**13 54 51.2**	**+1.7**
	baz=111,SNR=27						
RODS	**Rosario do Sul**	**44.34**	**162**	*e*P	**P**	**13 54 47.4**	**-2.1**
PIX	**Pinacate**	**44.70**	**303**	P	**P**	**13 54 53.3**	**+0.8**
CNLB	**Canela**	**44.90**	**156**	*e*P	**P**	**13 54 55.1**	**+1.1**
Y14A	**Wickenburg**	**45.04**	**306**	P	**P**	**13 54 57.4**	**+2.1**
U15A	**North Rim**	**45.34**	**310**	P	**P**	**13 54 59.7**	**+1.9**
U15A				IAmb	IAmb	13 55 01.4	
	comp=Z,71nm,1.2s						
PDMCI	**Parker Dam,Lak**	**46.05**	**306**	P	**P**	**13 55 04.2**	**+1.0**
	baz=108,SNR=8.4						
MVU	**Marysvale**	**46.07**	**313**	P	**P**	**13 55 05.9**	**+2.3**
W13A	**Hualapai Mount**	**46.10**	**308**	P	**P**	**13 55 05.8**	**+2.0**
BO01	**Tunca**	**46.13**	**182**	P	**P**	**13 55 02.7**	**-0.9**
BO01				IAmb	IAmb	13 55 03.0	
	comp=Z,57nm,0.9s						
PLTB	**Pedras Altas**	**46.15**	**161**	*e*P	**P**	**13 55 01.9**	**-2.0**
BW06	**Boulder Array**	**46.16**	**319**	P	**P**	**13 55 04.6**	**+0.4**
BW06				IAmb	IAmb	13 55 06.2	
	comp=Z,93nm,1.6s						
BW06				IAMs_20	IAMs_20	14 16 22.2	
	comp=Z,1µm,19.0s						
BW06	**Boulder Array**	**46.16**	**319**	P	**P**	**13 55 04.7**	**+0.4**
	baz=120,SNR=33						
PD31	**Pinedale Array**	**46.16**	**319**	P	**P**	**13 55 04.6**	**+0.4**
PD31				IAmb	IAmb	13 55 06.2	
	comp=Z,84nm,1.6s						
PDAR	**Pinedale Array**	**46.16**	**319**	P	**P**	**13 55 04.5**	**+0.3**
	comp=Z,9.3nm,0.9s,baz=117,slow=8.8,SNR=62						
PDAR				PcP	**PcP**	**13 56 39.8**	**-0.2**
	comp=Z,11nm,0.8s,baz=120,slow=4.9,SNR=8.5						
PDAR				LR	LR	14 16 41.6	
	comp=Z,1µm,18.1s,baz=112,slow=39						
PDAR				P4KPbc		14 32 50.9	
	comp=Z,0.2nm,0.5s,baz=128,slow=7.0,SNR=3.7						
	comp=Z,9.3nm,0.9s						
BLYC	**Blythe**	**46.19**	**306**	P	**P**	**13 55 06.3**	**+2.1**
BLYC				IAmb	IAmb	13 55 07.1	
	comp=Z,43nm,1.2s						
GLA	**Glamis**	**46.23**	**304**	P	**P**	**13 55 06.2**	**+1.6**
GLA				IAmb	IAmb	13 55 07.7	
	comp=Z,69nm,1.2s						
GLA	**Glamis**	**46.23**	**304**	P	**P**	**13 55 06.2**	**+1.6**
GLA				pmax	pmax		
	comp=Z,69nm,1.2s						
GLA	**Glamis**	**46.23**	**304**	P	**P**	**13 55 06.4**	**+1.7**
	baz=106,SNR=16						
LCMT	**Little Creek M**	**46.26**	**310**	P	**P**	**13 55 06.8**	**+1.8**
LCMT				IAmb	IAmb	13 55 08.3	
	comp=Z,69nm,1.3s						
LAO	**LASA Array**	**46.30**	**325**	IAMs_20	IAMs_20	14 15 17.4	
	comp=Z,2µm,20.0s						
LAO	**LASA Array**	**46.30**	**325**	P	**P**	**13 55 05.2**	**+0.2**
	baz=126						
DGMT	**Dagmar**	**46.32**	**329**	P	**P**	**13 55 06.2**	**+1.1**
DGMT	**Dagmar**	**46.32**	**329**	IAMs_20	IAMs_20	14 14 44.8	
	comp=Z,2µm,21.0s						
DGMT	**Dagmar**	**46.32**	**329**	P	**P**	**13 55 05.9**	**+0.8**
	baz=130,SNR=13						
DGMT	**Dagmar**	**46.32**	**329**	P	**P**	**13 55 06.5**	**+1.4**
	baz=130,SNR=13						
NEE2	**Needles Airpor**	**46.57**	**307**	P	**P**	**13 55 08.8**	**+1.6**
	baz=108						
IRM	**Iron Mountain**	**46.80**	**306**	P	**P**	**13 55 10.9**	**+1.8**
	baz=107,SNR=79						
BC3	**Big Chuckawall**	**46.90**	**305**	P	**P**	**13 55 11.3**	**+1.3**
	baz=106,SNR=30						
HWUT	**Hardware Ranch**	**46.93**	**317**	IAMs_20	IAMs_20	14 17 23.7	
	comp=Z,760nm,18.0s						
SWSC	**Sam W. Stewart**	**46.99**	**304**	P	**P**	**13 55 11.7**	**+1.2**
	baz=105,SNR=15						
AHID	**Auburn Hatcher**	**47.15**	**318**	IAMs_20	IAMs_20	14 17 58.5	
	comp=Z,955nm,18.0s						
IKP	**In-Ko-Pah, Jac**	**47.16**	**304**	P	**P**	**13 55 12.7**	**+0.7**
	baz=105,SNR=5.8						
DUG	**Dugway, Tooele**	**47.18**	**314**	IAMs_20	IAMs_20	14 17 04.4	
	comp=Z,733nm,19.0s						
DUG	**Dugway, Tooele**	**47.18**	**314**	P	**P**	**13 55 13.5**	**+1.4**
	baz=114,SNR=34						
RLMT	**Red Lodge**	**47.18**	**322**	P	**P**	**13 55 12.7**	**+0.6**
	baz=122,SNR=16						
REDW	**Red Top Meadow**	**47.28**	**319**	P	**P**	**13 55 13.7**	**+0.8**
REDW				IAMs_20	IAMs_20	14 17 17.8	
	comp=Z,979nm,18.0s						
GMRC	**Granite Mounta**	**47.39**	**306**	P	**P**	**13 55 15.4**	**+1.6**
	baz=107,SNR=14						
BELC	**Belle Mtn. Jos**	**47.43**	**305**	P	**P**	**13 55 15.8**	**+1.6**
	baz=106,SNR=24						
MONP2	**Monument Peak**	**47.48**	**304**	P	**P**	**13 55 16.3**	**+1.7**
	baz=105,SNR=16						
H17A	**Grant Village**	**47.61**	**321**	P	**P**	**13 55 16.6**	**+1.0**
	baz=120,SNR=11						
TPFO	**Pinon Flats**	**47.69**	**305**	P	**P**	**13 55 17.5**	**+1.4**
	baz=105,SNR=20						
PFO	**Pinyon Flats O**	**47.70**	**305**	P	**P**	**13 55 17.6**	**+1.4**
	comp=Z,20nm,1.0s,baz=98,slow=7.0,SNR=21						
PFO				PcP	**PcP**	**13 56 45.8**	**+0.4**
	comp=Z,12nm,1.0s,baz=157,slow=2.0,SNR=4.2						
PFO				LR	LR	14 18 22.2	
	comp=Z,316nm,19.6s,baz=147,slow=40						
	comp=Z,20nm,1.0s						
PFO	**Pinyon Flats O**	**47.70**	**305**	P	**P**	**13 55 16.9**	**+0.7**
PFO				IAmb	IAmb	13 55 18.9	
	comp=Z,41nm,1.2s						
PFO	**Pinyon Flats O**	**47.70**	**305**	P	**P**	**13 55 16.9**	**+0.7**
PFO				pmax	pmax		
	comp=Z,41nm,1.3s						
PFO	**Pinyon Flats O**	**47.70**	**305**	P	**P**	**13 55 17.5**	**+1.2**
	baz=105,SNR=20						
TUQ	**Turquoise Moun**	**47.79**	**307**	P	**P**	**13 55 18.3**	**+1.4**
	baz=107,SNR=31						
HEC	**Hector,Ludlow**	**47.93**	**306**	P	**P**	**13 55 19.6**	**+1.7**
	baz=107,SNR=23						
109C	**Camp Elliot, M**	**48.03**	**304**	P	**P**	**13 55 19.9**	**+1.3**
	baz=104						
SHOC	**Shoshone, Teco**	**48.20**	**308**	P	**P**	**13 55 21.4**	**+1.4**
	baz=108,SNR=22						
BBRC	**Big Bear Solar**	**48.24**	**305**	P	**P**	**13 55 22.4**	**+1.8**
	baz=106,SNR=9.8						
MURC	**Murrieta**	**48.29**	**304**	P	**P**	**13 55 22.0**	**+1.3**
	baz=105,SNR=15						
QLMT	**Earthquake Lak**	**48.35**	**321**	P	**P**	**13 55 23.4**	**+2.1**
GSC	**Goldstone, Bar**	**48.44**	**307**	P	**P**	**13 55 23.3**	**+1.4**
	baz=107,SNR=20						
RRX	**Edison Barstow**	**48.47**	**306**	P	**P**	**13 55 24.0**	**+2.0**
	baz=106						
R11A	**Troy Canyon, C**	**48.47**	**311**	P	**P**	**13 55 24.0**	**+1.8**
	baz=110,SNR=43						
ELS	**Elsinore Mount**	**48.48**	**304**	P	**P**	**13 55 23.5**	**+1.2**
ELS				IAmb	IAmb	13 55 24.9	
	comp=Z,46nm,1.4s						
TPNV	**Topopah Spring**	**48.51**	**309**	P	**P**	**13 55 24.3**	**+1.8**
	baz=108,SNR=38						
BFSC	**Mount Baldy Ra**	**48.82**	**305**	P	**P**	**13 55 26.1**	**+1.2**
	baz=105,SNR=8.4						
FURC	**Furnace Creek,**	**48.83**	**308**	P	**P**	**13 55 26.8**	**+2.1**
	baz=108,SNR=30						
BOZ	**Bozeman (W)**	**48.85**	**321**	P	**P**	**13 55 26.1**	**+1.1**
	baz=120,SNR=59						
EGMT	**Eagleton**	**49.03**	**325**	P	**P**	**13 55 27.2**	**+1.0**
	baz=123,SNR=30						
ELK	**Elko**	**49.09**	**314**	P	**P**	**13 55 28.3**	**+1.3**
	comp=Z,15nm,1.1s,baz=119,slow=4.8,SNR=36						
ELK				PcP	**PcP**	**13 56 52.1**	**+1.6**
	comp=Z,16nm,1.0s,baz=121,slow=3.1,SNR=8.0						
ELK				LR	LR	14 18 25.5	
	comp=Z,639nm,19.9s,baz=109,slow=39						
	comp=Z,15nm,1.1s						
LRMC	**Laurel Mtn Rad**	**49.17**	**307**	P	**P**	**13 55 29.2**	**+1.6**
	baz=106,SNR=33						
MPMC	**Manual Prospec**	**49.19**	**308**	P	**P**	**13 55 29.1**	**+1.3**
	baz=107,SNR=26						
FMP	**Fort Macarthur**	**49.20**	**304**	P	**P**	**13 55 29.3**	**+1.6**
	baz=104						
CIS	**Catalina Islan**	**49.22**	**304**	P	**P**	**13 55 29.3**	**+1.4**
	baz=104,SNR=14						
MCMT	**McKenzie Canyo**	**49.24**	**320**	P	**P**	**13 55 29.7**	**+1.7**
EDW2	**Edwards Air Fo**	**49.26**	**306**	P	**P**	**13 55 29.4**	**+1.2**
	baz=105,SNR=17						
DLMT	**Dillon**	**49.34**	**321**	P	**P**	**13 55 30.0**	**+1.3**
DLMT				IAMs_20	IAMs_20	14 17 55.1	
	comp=Z,1µm,20.0s						
DECC	**Green Verdugo**	**49.37**	**305**	P	**P**	**13 55 30.1**	**+1.1**
	baz=105						
GRAC	**Grapevine Rang**	**49.37**	**309**	P	**P**	**13 55 30.1**	**+1.2**
	baz=108						
FFC	**Flin Flon**	**49.62**	**336**	P	**P**	**13 55 30.2**	**-0.3**
FFC				IAmb	IAmb	13 55 31.6	
	comp=Z,56nm,1.0s						
FFC	**Flin Flon**	**49.62**	**336**	P	**P**	**13 55 30.2**	**-0.3**
FFC				pmax	pmax		
	comp=Z,56nm,1.0s						
FFC				MLR	MLR		
	comp=Z,700nm,21.0s						
LCH	**Last Change Ra**	**49.65**	**309**	P	**P**	**13 55 32.8**	**+1.6**
HLID	**Hailey**	**49.68**	**318**	P	**P**	**13 55 32.5**	**+1.2**
	baz=115,SNR=35						
CWC	**Cottonwood Cre**	**49.76**	**308**	P	**P**	**13 55 33.8**	**+1.8**
	baz=107						
OSI	**Osito Audit: C**	**49.77**	**305**	P	**P**	**13 55 32.9**	**+0.9**
	baz=105						
ISA	**Isabella, Lake**	**49.85**	**307**	P	**P**	**13 55 33.8**	**+1.2**
	baz=106						
ARVC	**Arvin**	**49.98**	**306**	P	**P**	**13 55 35.2**	**+1.6**
	baz=105,SNR=7.7						
TIN	**Tinemaha, Big**	**50.05**	**309**	P	**P**	**13 55 36.0**	**+1.7**
	baz=107						
SNCC	**San Nicolas Is**	**50.09**	**303**	P	**P**	**13 55 34.8**	**+0.3**
	baz=103						
FCC	**Fort Churchill**	**50.18**	**344**	P	**P**	**13 55 34.3**	**-0.3**
FCC				IAmb	IAmb	13 55 35.1	
	comp=Z,130nm,1.9s						
FCC	**Fort Churchill**	**50.18**	**344**	P	**P**	**13 55 34.3**	**-0.3**
FCC				pmax	pmax		
	comp=Z,130nm,1.9s						
SCZ2	**Santa Cruz Isl**	**50.35**	**304**	P	**P**	**13 55 37.4**	**+1.0**
	baz=103,SNR=6.9						
VES	**Vestal, Richgr**	**50.37**	**307**	P	**P**	**13 55 38.2**	**+1.6**
	baz=105,SNR=27						
NV11	**Mina Array Sit**	**50.41**	**310**	P	**P**	**13 55 38.4**	**+1.4**
NVAR	**Mina Array Bea**	**50.52**	**310**	P	**P**	**13 55 39.1**	**+1.3**
	comp=Z,17nm,0.9s,baz=118,slow=7.0,SNR=111						
NVAR				PcP	**PcP**	**13 56 57.1**	**+1.3**
	comp=Z,24nm,0.8s,baz=134,slow=4.2,SNR=13						
NVAR				LR	LR	14 20 34.9	
	comp=Z,681nm,18.1s,baz=117,slow=40						
	comp=Z,17nm,0.9s						
SBC	**Santa Barbara**	**50.52**	**305**	P	**P**	**13 55 38.3**	**+0.6**
	baz=104						
MFID	**Camas Ranch**	**50.55**	**317**	IAMs_20	IAMs_20	14 19 38.5	
	comp=Z,1µm,18.0s						
PKM	**Mcpherson Peak**	**50.71**	**305**	P	**P**	**13 55 39.2**	**-0.1**
	baz=104,SNR=7.6						
VOG	**Valley Oaks Go**	**50.73**	**307**	P	**P**	**13 55 39.5**	**+0.3**
	baz=106						
MSO	**Missoula**	**50.86**	**322**	P	**P**	**13 55 40.7**	**+0.5**
	baz=118,SNR=14						
SMMC	**Simmler**	**50.96**	**306**	P	**P**	**13 55 42.2**	**+1.2**
	baz=104,SNR=8.0						
PLID	**Pearl Lake**	**51.36**	**319**	IAMs_20	IAMs_20	14 19 52.7	
	comp=Z,1µm,18.0s						
FRB	**Frobisher Bay**	**51.70**	**1**	P	**P**	**13 55 46.4**	**+0.3**
	comp=Z,50nm,0.8s,baz=186,slow=7.6,SNR=79						
FRB				LR	LR	14 16 35.7	
	comp=Z,850nm,19.8s,baz=187,slow=35						
	comp=Z,50nm,0.8s						
BBTS	**Babate**	**51.72**	**81**	LR	LR	14 13 33.6	
	comp=Z,629nm,21.9s,baz=242,slow=31						
PMOZ	**Porto Moniz, M**	**52.22**	**58**	*i* LQ	LQ	13 55 59.6	
PLCA	**Paso Flores**	**52.45**	**181**	P	**P**	**13 55 50.4**	**-1.6**
	comp=Z,61nm,0.8s,baz=357,slow=8.3,SNR=162						
PLCA				LR	LR	14 21 37.5	
	comp=Z,514nm,19.2s,baz=13,slow=40						
	comp=Z,61nm,0.8s						
PLCA	**Paso Flores**	**52.45**	**181**	P	**P**	**13 55 50.0**	**-2.0**
PLCA				IAmb	IAmb	13 55 51.4	
	comp=Z,78nm,0.8s						
PLCA	**Paso Flores**	**52.45**	**181**	P	**P**	**13 55 50.0**	**-2.0**
PLCA				pmax	pmax		
	comp=Z,78nm,0.8s						
PLCA	**Paso Flores**	**52.45**	**181**	*e*P	**P**	**13 55 50.5**	**-1.4**
MOD	**Modoc Plateau**	**53.07**	**314**	P	**P**	**13 55 57.7**	**+0.9**
NEW	**Newport**	**53.43**	**322**	P	**P**	**13 55 59.1**	**-0.1**
	comp=Z,19nm,0.9s,baz=135,slow=4.7,SNR=20						
NEW				LR	LR	14 20 38.1	
	comp=Z,2µm,18.4s,baz=112,slow=38						
	comp=Z,19nm,0.9s						
NEW	**Newport**	**53.43**	**322**	P	**P**	**13 55 59.1**	**-0.1**
	baz=116,SNR=25						
C09A	**Chrisman Ranch**	**53.93**	**321**	P	**P**	**13 56 03.6**	**+0.7**

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C09A                                 IAmb     IAmb     13 56 04.0
      comp=Z,38nm,1.2s
J05D  Fort Rock, OR     54.17 315    P        P        13 56 06.7 +1.8
RPN   Rapa Nui          54.68 224    LR       LR       14 16 48.2
      comp=Z,246nm,18.4s,baz=78,slow=33
YBH   Yreka Blue Hor    54.73 313    P        P        13 56 08.4  -0.5
      comp=Z,16nm,0.7s,baz=99,slow=3.9,SNR=33
YBH                                  LR       LR       14 21 19.6
      comp=Z,311nm,21.3s,baz=130,slow=38
      comp=Z,16nm,0.7s
BRLDA Berland Lookou    56.32 328    P        P        13 56 20.7 +0.6
SFJD  Kangerlussuaq     56.43   9    P        P        13 56 21.3 +0.9
      comp=Z,12nm,0.8s,baz=205,slow=9.0,SNR=5.9
SFJD                                 LR       LR       14 18 01.0
      comp=Z,615nm,21.8s,baz=198,slow=33
      comp=Z,12nm,0.8s
SFJD  Kangerlussuaq     56.43   9    P        P        13 56 20.0  -0.5
SFJD                                 IAmb     IAmb     13 56 22.1
      comp=Z,41nm,1.2s
SFJD  Kangerlussuaq     56.43   9    P        P        13 56 20.0  -0.5
SFJD                                 pmax     pmax
      comp=Z,41nm,1.2s
DY2G  Dye2              56.69  11  i P        P        13 56 22.9 +0.3
DY2G                                 IAmb     IAmb     13 56 25.0
      comp=Z,252nm,1.5s
ANGG  Ammassalik, Gr    57.87  15  i P        P        13 56 31.2 +0.5
ANGG                                 IAmb     IAmb     13 56 32.3
      comp=Z,38nm,0.9s
ILULI Ilulissat         58.42   8    P        P        13 56 34.0  -0.5
ILULI                                IAmb     IAmb     13 56 43.3
      comp=Z,63nm,0.9s
ILULI Ilulissat         58.42   8    P        P        13 56 34.0  -0.5
ILULI                                pmax     pmax
      comp=Z,63nm,0.9s
ILULI Ilulissat         58.42   8  i P        P        13 56 34.4  -0.1
ILULI                                IAmb     IAmb     13 56 36.2
      comp=Z,76nm,1.0s
ASCN  Ascension         58.47 107    P        P        13 56 35.0  -0.8
PFVI  Vila Bisbo        59.70  54    P        P        13 56 42.9  -1.1
PFVI                                 IAmb     IAmb     13 56 54.5
      comp=Z,52nm,0.9s
PFVI  Vila Bisbo        59.70  54  eP         P        13 56 46.3 +2.3
PFVI                               i LQ       LQ       13 56 54.0
PFVI                                 A        A        13 56 57.9
      comp=Z,75nm,1.5s
YKA   Yellowknife Ar    59.71 338    P        P        13 56 43.0  -0.5
      comp=Z,32nm,0.7s,baz=120,slow=7.3,SNR=418
YKA                                  LR       LR       14 22 55.4
      comp=Z,730nm,20.1s,baz=130,slow=36
YKA                                  PKP2bc   P'P'bc   14 26 19.6  -4.7
      comp=Z,0.5nm,0.8s,baz=314,slow=1.8,SNR=3.7
      comp=Z,32nm,0.7s
PTEO  Sao Teotonio      59.84  54  eP         P        13 56 47.1 +2.2
PTEO                               i LQ       LQ       13 56 54.8
PTEO                                 A        A        13 56 57.1
      comp=Z,92nm,1.5s
MORF  Marmelete         59.86  54    P        P        13 56 43.8  -1.3
MORF  Marmelete         59.86  54    P        P        13 56 43.8  -1.3
MORF                                 pmax     pmax
      comp=Z,79nm,1.0s
MORF  Marmelete         59.86  54  eP         P        13 56 47.5 +2.4
MORF                               i LQ       LQ       13 56 55.1
MORF                                 A        A        13 56 59.0
      comp=Z,119nm,1.6s
MORF  Marmelete         59.86  54  eP         P        13 56 46.7 +1.6
MORF                                 IAmb     IAmb     13 56 48.5
      comp=Z,48nm,1.0s
PNCL  Nicolau / Gran    60.08  53  eP         P        13 56 48.9 +2.4
PNCL                               i LQ       LQ       13 56 56.3
PNCL                                 A        A        13 57 00.0
      comp=Z,94nm,1.9s
PSBE  So Bento          60.09  51  i LQ       LQ       13 56 56.2
GO08  Villa O'Higgin    60.23 182    P        P        13 56 46.8  -0.4
GO08                                 IAmb     IAmb     13 56 52.1
      comp=Z,28nm,1.1s
ICESG Greenland Ices    60.23  12  i P        P        13 56 46.8  -0.6
ICESG                                IAmb     IAmb     13 56 49.2
      comp=Z,123nm,1.2s
MESJ  Messejana         60.28  53  eP         P        13 56 49.4 +1.5
MESJ                               eS         S        14 05 04.3 +3.0
MESJ  Messejana         60.28  53  eP         P        13 56 49.9 +2.0
MESJ                               i LQ       LQ       13 56 57.4
MESJ                                 A        A        13 57 00.8
      comp=Z,98nm,1.8s
MESJ  Messejana         60.28  53  eP         P        13 56 49.4 +1.5
MESJ                                 IAmb     IAmb     13 56 50.5
      comp=Z,32nm,0.9s
MESJ                               eS         S        14 05 04.3 +3.0
NUUG  Nuugaatsiaq       60.38   6  i P        P        13 56 47.9  -0.1
NUUG                                 IAmb     IAmb     13 56 49.8
      comp=Z,29nm,1.0s
PCVE  Castro Verde      60.39  53  eP         P        13 56 50.6 +1.9
PCVE                               i LQ       LQ       13 56 58.6
PCVE                                 A        A        13 57 02.7
      comp=Z,77nm,1.8s
PCAS  Casmilo, Conde    60.40  51  eP         P        13 56 50.5 +1.8
PCAS                               i LQ       LQ       13 56 58.3
PCAS                                 A        A        13 57 00.1
      comp=Z,37nm,1.1s
PMTG  Montargil         60.45  52  eP         P        13 56 50.6 +1.5
PMTG                               i LQ       LQ       13 56 58.2
PMTG                                 A        A        13 57 00.0
      comp=Z,22nm,0.9s
COI   Coimbra           60.49  51  eP         P        13 56 51.3 +2.0
COI                                i LQ       LQ       13 56 59.0
COI                                  A        A        13 56 59.5
      comp=Z,148nm,1.0s
PTO   Porto             60.51  49  i LQ       LQ       13 56 58.7
EVO   Evora             60.54  52  eP         P        13 56 51.3 +1.6
EVO                                i LQ       LQ       13 56 59.1
EVO                                  A        A        13 56 59.8
      comp=Z,88nm,1.1s
PBEJ  Beja              60.58  53  eP         P        13 56 51.8 +1.8
PBEJ                               i LQ       LQ       13 56 59.7
PBEJ                                 A        A        13 57 00.3
      comp=Z,58nm,1.2s
PVAQ  Vaqueiros         60.62  54  eP         P        13 56 52.4 +2.2
PVAQ                               i LQ       LQ       13 57 00.4
PVAQ                                 A        A        13 57 08.4
      comp=Z,61nm,1.5s
PVAQ                               eS         S        14 05 15.9  +10
PVAQ  Vaqueiros         60.62  54  eLR        LR       14 15 57.8
PVAQ                                 A        A        14 18 12.1
      comp=Z,293nm,20.0s
PGAV  Gavieira, Arco    60.90  49  eP         P        13 56 53.5 +1.3
PGAV                               i LQ       LQ       13 57 01.3
PGAV                                 A        A        13 57 01.9
      comp=Z,67nm,1.1s
PGAV  Gavieira, Arco    60.90  49  eLR        LR       14 15 01.0
PGAV                                 A        A        14 19 58.5
      comp=Z,245nm,20.0s
PESTR Estremoz          60.91  52    P        P        13 56 51.4  -0.9
PESTR                                IAmb     IAmb     13 57 02.3
      comp=Z,31nm,1.0s
PESTR Estremoz          60.91  52  eP         P        13 56 53.8 +1.5
PESTR                              i LQ       LQ       13 57 01.6
PESTR                                A        A        13 57 02.4
      comp=Z,81nm,1.2s
PVIS  Viseu             60.97  50  eP         P        13 56 54.0 +1.4
PVIS                               i LQ       LQ       13 57 01.8
PVIS                                 A        A        13 57 04.8
      comp=Z,60nm,1.3s
PCAB  Cabril            61.04  49  eP         P        13 56 54.4 +1.3
PCAB                               i LQ       LQ       13 57 02.2
PCAB                                 A        A        13 57 03.2
      comp=Z,67nm,1.3s
PCBR  Castelo Branco    61.14  51  eP         P        13 56 55.0 +1.2
PCBR                               i LQ       LQ       13 57 03.0
PCBR                                 A        A        13 57 04.1
      comp=Z,74nm,1.2s
PMRV  Marv??o           61.15  52  eP         P        13 56 54.8 +0.9
PMRV                               i LQ       LQ       13 57 02.8
PMRV                                 A        A        13 57 06.8
      comp=Z,57nm,1.5s
PMRV                               eS         S        14 05 22.3  +10
PMRV                               eLR        LR       14 15 01.5
PMRV                                 A        A        14 18 19.2
      comp=Z,262nm,22.0s
POLO  Lamas de Olo      61.15  49  eP         P        13 56 54.9 +1.0
POLO                               i LQ       LQ       13 57 03.1
POLO                                 A        A        13 57 03.7
      comp=Z,62nm,1.1s
MTE   Manteigas         61.18  50  eP         P        13 56 55.4 +1.3
MTE                                i LQ       LQ       13 57 03.2
MTE                                  A        A        13 57 07.2
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      comp=Z,96nm,1.4s
MTE   Manteigas         61.18  50  eLR        LR       14 15 12.5
MTE                                  A        A        14 19 30.3
      comp=Z,301nm,20.0s
PVRL  Vila Real         61.19  49  eP         P        13 56 55.5 +1.3
PVRL                               i LQ       LQ       13 57 03.2
PVRL                                 A        A        13 57 03.9
      comp=Z,121nm,1.2s
PBAR  Barrancos         61.25  53  eP         P        13 56 56.0 +1.5
PBAR                               i LQ       LQ       13 57 03.9
PBAR                                 A        A        13 57 07.1
      comp=Z,54nm,1.8s
UPNV  Upernavik         61.31   5  i P        P        13 56 53.7  -0.6
UPNV                                 IAmb     IAmb     13 56 55.5
      comp=Z,42nm,1.2s
BBB   Bella Bella       61.44 323    P        P        13 56 56.5 +0.9
      comp=Z,37nm,1.2s,baz=154,slow=12,SNR=4.6
BBB                                  LR       LR       14 25 29.0
      comp=Z,1µm,18.0s,baz=116,slow=38
      comp=Z,37nm,1.2s
MVO   Moncorvo          61.69  50  eP         P        13 56 58.6 +1.1
MVO                                i LQ       LQ       13 57 06.7
MVO                                  A        A        13 57 07.2
      comp=Z,80nm,1.2s
MVO   Moncorvo          61.69  50  eLR        LR       14 14 56.4
MVO                                  A        A        14 19 54.8
      comp=Z,301nm,20.0s
PBRG  Braganca          62.00  49  eP         P        13 56 57.7  -1.9
PBRG                               i LQ       LQ       13 57 08.6
PBRG                                 A        A        13 57 11.7
      comp=Z,43nm,1.9s
BORG  Borgarnes         62.29  21    LR       LR       14 21 32.4
      comp=Z,101nm,20.4s,baz=240,slow=34
KOTAN Kotaneelee Air    62.36 333    P        P        13 57 02.4 +0.8
      baz=116,SNR=55
MDT   Midelt            62.73  59    P        P        13 57 06.6 +1.8
      comp=Z,30nm,0.9s,baz=281,slow=6.8,SNR=55
MDT                                  LR       LR       14 21 54.9
      comp=Z,146nm,19.0s,baz=324,slow=34
      comp=Z,30nm,0.9s
KULLO Kullorsuaq        62.98   4  i P        P        13 57 04.6  -0.9
KULLO                                IAmb     IAmb     13 57 06.8
      comp=Z,64nm,1.0s
LIRD  Liard River Hi    62.99 331    P        P        13 57 06.2 +0.3
      baz=114,SNR=25
SUMG  Summit            63.35  10  i P        P        13 57 08.0  -0.4
SUMG                                 IAmb     IAmb     13 57 10.5
      comp=Z,96nm,1.0s
PAB   San Pablo         63.50  52    P        P        13 57 09.1  -0.6
PAB                                  IAmb     IAmb     13 57 19.3
      comp=Z,36nm,1.0s
PAB   San Pablo         63.50  52    P        P        13 57 09.1  -0.6
PAB                                  pmax     pmax
      comp=Z,36nm,1.0s
WRGLY Wrigley           63.52 336    P        P        13 57 10.0 +0.8
      baz=118,SNR=45
ESDC  Sonseca Array     63.81  52    P        P        13 57 12.6 +0.9
      comp=Z,15nm,1.0s,baz=267,slow=7.2,SNR=69
ESDC                                 LR       LR       14 20 38.8
      comp=Z,248nm,20.7s,baz=249,slow=32
ESDC                                 PKP2bc   P'P'bc   14 26 11.9  -3.0
      comp=Z,2.6nm,1.0s,baz=67,slow=2.6,SNR=11
      comp=Z,15nm,1.0s
ESBB  Sonseca Array     63.81  52    P        P        13 57 12.9 +1.3
ESBB                                 IAmb     IAmb     13 57 21.4
      comp=Z,33nm,1.1s
TIC   Toumodi           63.94  88⇑iP          P        13 57 13.5 +0.6
      comp=Z,9.6nm,0.3s
LIC   Lamto             64.00  89⇓iP          P        13 57 13.6 +0.3
      comp=Z,225nm,0.9s
DBIC  Dimbokro          64.09  88    P        P        13 57 14.2 +0.3
      comp=Z,59nm,1.0s,baz=290,slow=6.8,SNR=41
DBIC                                 LR       LR       14 23 21.5
      comp=Z,271nm,19.6s,baz=252,slow=34
DBIC                                 PKP2bc   P'P'bc   14 26 10.6  -3.2
      comp=Z,9.7nm,1.2s,baz=137,slow=2.9,SNR=4.0
      comp=Z,59nm,1.0s
DBIC  Dimbokro          64.09  88    P        P        13 57 12.7  -1.2
DBIC  Dimbokro          64.09  88    P        P        13 57 12.7  -1.2
DBIC                                 pmax     pmax
      comp=Z,85nm,1.0s
T35M  Bob Quinn         64.15 328    P        P        13 57 13.9 +0.4
      baz=109,SNR=9.9
KIC   Kosan Boka        64.26  89⇓iP          P        13 57 15.4 +0.4
      comp=Z,31nm,0.5s
RES   Resolute Bay      64.28 353    P        P        13 57 13.8  -0.2
      comp=Z,7.9nm,0.8s,baz=170,slow=9.4,SNR=25
      comp=Z,7.9nm,0.8s
RES   Resolute Bay      64.28 353    P        P        13 57 13.8  -0.2
RES   Resolute Bay      64.28 353    P        P        13 57 13.8  -0.2
RES                                  pmax     pmax
      comp=Z,22nm,1.2s
V35K  Ketchikan         64.38 326    P        P        13 57 15.6 +0.6
      baz=107
DLBC  Dease Lake        64.52 330    P        P        13 57 16.9 +0.9
      comp=Z,37nm,0.9s,baz=110,slow=4.1,SNR=42
DLBC                                 LR       LR       14 28 21.4
      comp=Z,705nm,18.5s,baz=104,slow=39
      comp=Z,37nm,0.9s
DLBC  Dease Lake        64.52 330    P        P        13 57 17.2 +1.1
DLBC  Dease Lake        64.52 330    P        P        13 57 16.8 +0.8
      baz=110,SNR=20
WTLY  Watson Lake, Y    64.52 332    P        P        13 57 17.1 +1.2
      baz=112
TULEG Thule             64.55   0    P        P        13 57 15.6  -0.2
TULEG                                IAmb     IAmb     13 57 17.3
      comp=Z,57nm,1.0s
TULEG Thule             64.55   0  i P        P        13 57 14.5  -1.3
TULEG                                IAmb     IAmb     13 57 17.5
      comp=Z,59nm,1.0s
ILTH  Belurgan, Co L    64.83  36  eP         P        13 57 17.6  -0.4
S34M  Telegraph Cree    64.90 329    P        P        13 57 19.5 +1.1
      baz=108,SNR=12
WRAK  Wrangell Islan    65.08 327    P        P        13 57 20.8 +1.2
      baz=106
HTL   Hartland          65.23  39  eP         P        13 57 21.7 +1.0
HTL                                  IAmb     IAmb     13 57 22.6
      comp=Z,69nm,0.9s
CRAG  Craig             65.24 326    P        P        13 57 21.4 +0.7
      baz=105
RSBS  Rosebush, Pemb    65.28  38  eP         P        13 57 21.8 +0.9
RSBS                                 IAmb     IAmb     13 57 22.3
      comp=Z,43nm,0.9s
U33K  Whale Pass        65.41 327    P        P        13 57 22.6 +0.9
      baz=106
SCO   Scoresbysund      65.46  16  i P        P        13 57 21.0  -0.8
T33K  Petersburg        65.52 327    P        P        13 57 23.1 +0.8
      baz=106
MG03  Isla Dawson       65.56 180    P        P        13 57 22.1  -0.5
MG03                                 IAmb     IAmb     13 57 22.9
      comp=Z,55nm,1.0s
LPW   Lampeter          65.72  38  eP         P        13 57 24.5 +0.7
LPW                                  IAmb     IAmb     13 57 25.4
      comp=Z,47nm,1.0s
WLF1  Llynfaes          65.78  37  eP         P        13 57 25.5 +1.3
WLF1                                 IAmb     IAmb     13 57 26.4
      comp=Z,99nm,1.0s
Q32M  Nakina River      65.80 330    P        P        13 57 25.3 +0.8
      baz=108,SNR=8.9
LLW   Llanuwychllyn     66.11  37  eP         P        13 57 27.1 +0.8
LLW                                  IAmb     IAmb     13 57 27.7
      comp=Z,26nm,1.1s
NEEM  North Greenlan    66.17   4  i P        P        13 57 26.3  -0.3
NEEM                                 IAmb     IAmb     13 57 28.4
      comp=Z,90nm,0.9s
NEWG  New Galloway      66.29  35  eP         P        13 57 28.0 +0.6
NEWG                                 IAmb     IAmb     13 57 28.9
      comp=Z,45nm,0.9s
PGBU  Glenifferbraes    66.32  34  eP         P        13 57 29.0 +1.4
PGBU                                 IAmb     IAmb     13 57 29.9
      comp=Z,67nm,1.0s
JSA   Saint Aubin       66.36  41  eP         P        13 57 28.6 +0.6
FOEL  Foel Wylfa        66.40  37  eP         P        13 57 29.0 +0.8
FOEL                                 IAmb     IAmb     13 57 29.4
      comp=Z,39nm,0.9s
MONM  Monmouth          66.43  39  eP         P        13 57 29.5 +1.1
MONM                                 IAmb     IAmb     13 57 29.8
      comp=Z,62nm,0.9s
P33M  Teslin, Yukon     66.45 331    P        P        13 57 29.7 +1.2
      baz=108,SNR=24
HLM1  Long Mynd         66.52  38  eP         P        13 57 29.3 +0.4
HLM1                                 IAmb     IAmb     13 57 30.3
      comp=Z,89nm,1.2s
S32K  Killisnoo         66.55 328    P        P        13 57 30.2 +1.2
      baz=105
P32M  Atlin             66.69 330    P        P        13 57 31.0 +1.0
      baz=107,SNR=15
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R32K  Eaglecrest        66.73 329    P        P        13 57 30.1  -0.1
      baz=105
C36M  Paulatuk          66.73 342    IAMs_20  IAMs_20  14 31 48.1
      comp=Z,660nm,18.0s
C36M  Paulatuk          66.73 342    P        P        13 57 31.2 +1.2
      baz=120
KESW  Keswick, Cumbr    66.81  36  eP         P        13 57 31.2 +0.5
KESW                                 IAmb     IAmb     13 57 32.2
      comp=Z,57nm,1.1s
SIT   Sitka             66.84 327    P        P        13 57 31.2 +0.4
      baz=104
N32M  Quiet Lake        66.86 332    P        P        13 57 31.9 +0.9
      baz=108
ESK   Eskdalemuir       66.91  35  eP         P        13 57 31.1  -0.2
ESK                                  IAmb     IAmb     13 57 32.0
      comp=Z,30nm,1.1s
ESK   Eskdalemuir       66.91  35    P        P        13 57 30.9  -0.5
ESK                                  IAmb     IAmb     13 57 40.9
      comp=Z,42nm,0.9s
ESK   Eskdalemuir       66.91  35    P        P        13 57 30.9  -0.5
ESK                                  pmax     pmax
      comp=Z,42nm,0.9s
EKA   Eskdalemuir Ar    66.94  35    P        P        13 57 31.9 +0.3
      comp=Z,20nm,0.9s,baz=264,slow=4.4,SNR=36
EKA                                  LR       LR       14 20 26.2
      comp=Z,207nm,21.9s,baz=258,slow=30
      comp=Z,20nm,0.9s
FARO  Faro, Yukon       67.32 333    P        P        13 57 34.4 +0.4
      baz=108,SNR=13
MFF   Saint Martin d    67.36  44  eP         P        13 57 34.7 +0.3
MFF                                  pmax     pmax
      comp=Z,116nm,0.9s
LBWR  Ladybower, Pea    67.37  37  eP         P        13 57 34.5 +0.1
LBWR                                 IAmb     IAmb     13 57 36.1
      comp=Z,88nm,1.0s
R31K  City Hall, Gus    67.39 329    P        P        13 57 36.0 +1.6
      baz=104
MCD   Coleburn Disti    67.40  32  eP         P        13 57 34.8 +0.3
SKAG  Skagway           67.45 330    P        P        13 57 35.9 +1.2
      baz=105
S31K  Pelican           67.53 328    P        P        13 57 36.8 +1.5
      baz=104,SNR=6.2
HPK   Haverah Park      67.53  36  eP         P        13 57 36.0 +0.6
HPK                                  IAmb     IAmb     13 57 36.8
      comp=Z,55nm,1.1s
M31M  Drury Creek, Y    67.77 333    P        P        13 57 37.7 +1.0
M31M                                 IAMs_20  IAMs_20  14 28 41.3
      comp=Z,730nm,19.0s
M31M  Drury Creek, Y    67.77 333    P        P        13 57 37.8 +1.0
      baz=107,SNR=41
LFF   La Frestale       67.81  46  eP         P        13 57 37.3   0.0
LFF                                  pmax     pmax
      comp=Z,36nm,0.8s
PLBC  Pleasant Camp     67.96 330    P        P        13 57 39.7 +1.7
      baz=104
GDLE  Glaisdale, N Y    68.08  36  eP         P        13 57 39.8 +1.0
O30N  Mendenhall        68.16 331    P        P        13 57 40.7 +1.4
      baz=105,SNR=46
DBG   Daneborg          68.20  13  i P        P        13 57 38.8  -0.4
DBG                                  IAmb     IAmb     13 57 41.4
      comp=Z,26nm,1.1s
N31M  Braeburn, Yuko    68.20 332    P        P        13 57 40.8 +1.3
      baz=106,SNR=21
A36M  Sachs Harbour     68.40 344    IAMs_20  IAMs_20  14 27 20.9
      comp=Z,712nm,20.0s
A36M  Sachs Harbour     68.40 344    P        P        13 57 40.1  -0.3
      baz=120,SNR=143
P30M  Million Dollar    68.42 330    P        P        13 57 42.8 +2.0
      baz=104
CAF   Calviac           68.74  46  eP         P        13 57 43.1  -0.1
CAF                                  pmax     pmax
      comp=Z,67nm,0.9s
N30M  Aishikik Lake     68.80 332    P        P        13 57 44.4 +1.0
      baz=104,SNR=26
MAYO  Mayo, Yukon       68.83 334    P        P        13 57 44.6 +1.3
      baz=106,SNR=15
HYT   Haines Junctio    68.84 331    P        P        13 57 45.6 +1.9
HYT   Haines Junctio    68.84 331    P        P        13 57 45.3 +1.6
      baz=104,SNR=24
M30M  Minto, Yukon      68.95 333    IAMs_20  IAMs_20  14 29 27.5
      comp=Z,837nm,20.0s
M30M  Minto, Yukon      68.95 333    P        P        13 57 44.6 +0.4
      baz=105,SNR=62
SHEL  Horse Pasture     69.09 112    P        P        13 57 44.4  -1.4
SHEL  Horse Pasture     69.09 112    P        P        13 57 44.4  -1.4
SHEL                                 pmax     pmax
      comp=Z,108nm,0.9s
F31M  Tsiigehtchic      69.18 338    P        P        13 57 45.5 +0.1
      baz=110,SNR=39
O29M  Mount Kennedy     69.24 330    P        P        13 57 47.9 +1.7
      baz=102
YUK6  Outpost Mounta    69.28 331    P        P        13 57 48.3 +1.8
      baz=103,SNR=22
INK   Inuvik            69.40 339    P        P        13 57 46.4  -0.3
      comp=Z,36nm,1.1s,baz=104,slow=7.3,SNR=69
INK                                  LR       LR       14 28 20.7
      comp=Z,863nm,20.9s,baz=118,slow=36
      comp=Z,36nm,1.1s
INK   Inuvik            69.40 339    P        P        13 57 46.8 +0.1
INK                                  IAmb     IAmb     13 57 47.9
      comp=Z,64nm,1.2s
INK   Inuvik            69.40 339    P        P        13 57 46.8 +0.1
INK                                  pmax     pmax
      comp=Z,64nm,1.2s
INK   Inuvik            69.40 339    P        P        13 57 46.5  -0.3
      baz=110,SNR=38
TORD  Torodi Ar. Bea    69.47  80    P        P        13 57 48.1  -0.1
      comp=Z,36nm,0.8s,baz=285,slow=5.8,SNR=136
TORD                                 PKP2bc   P'P'bc   14 25 54.6  -3.8
      comp=Z,2.1nm,1.1s,baz=84,slow=2.5,SNR=6.4
TORD                                 LR       LR       14 26 44.9
      comp=Z,337nm,20.0s,baz=245,slow=35
      comp=Z,36nm,0.8s
YUK4  Talbot Arm        69.50 331    P        P        13 57 49.4 +1.5
      baz=103,SNR=41
PNL   Peninsula         69.51 329    P        P        13 57 49.3 +1.6
      baz=102
JMIC  Jan Mayen         69.56  18    LR       LR       14 23 07.6
      comp=Z,349nm,21.9s,baz=226,slow=32
K29M  Barlow Dome       69.60 334    P        P        13 57 49.1 +0.8
      baz=105,SNR=48
M29M  Somme Creek       69.67 332    P        P        13 57 49.2 +0.5
      baz=103
L29M  L29M              69.68 333    P        P        13 57 49.1 +0.4
      baz=104,SNR=9.2
SSF   Saint Saulge      69.90  44  eP         P        13 57 49.9  -0.4
SSF                                  pmax     pmax
      comp=Z,53nm,1.1s
G30M  tAoh Zraii Nji    69.95 337    P        P        13 57 50.4 +0.2
      baz=107
EPYK  Eagle Plains      69.96 337    P        P        13 57 51.1 +0.7
EPYK                                 IAMs_20  IAMs_20  14 32 13.7
      comp=Z,695nm,18.0s
EPYK  Eagle Plains      69.96 337    P        P        13 57 50.6 +0.3
      baz=106,SNR=76
DAG   Danmarks Havn     69.98  11  i P        P        13 57 49.0  -1.2
DAG                                  IAmb     IAmb     13 57 51.5
      comp=Z,42nm,1.2s
PINM  Pinnacle          70.02 330    P        P        13 57 52.4 +1.6
      baz=101,SNR=8.8
YUK8  Steele Glacier    70.02 331    P        P        13 57 52.4 +1.3
      baz=102,SNR=13
J29M  Klondike Camp     70.05 335    IAMs_20  IAMs_20  14 30 48.3
      comp=Z,857nm,20.0s
J29M  Klondike Camp     70.05 335    P        P        13 57 52.6 +1.6
      baz=104,SNR=33
O28M  Mount Upton       70.12 331    P        P        13 57 53.4 +1.6
      baz=101
I29M  Ogilvie Camp,     70.31 336    P        P        13 57 53.2 +0.6
      baz=104,SNR=7.1
YUK3  Moose Creek       70.44 332    P        P        13 57 54.5 +0.9
      baz=101,SNR=33
DAWY  Dawson            70.45 334    P        P        13 57 53.2  -0.2
DAWY                                 IAmb     IAmb     13 57 55.1
      comp=Z,93nm,1.7s
DAWY  Dawson            70.45 334    P        P        13 57 53.4   0.0
      baz=103,SNR=26
LOGN  Logan Glacier     70.52 331    IAMs_20  IAMs_20  14 30 19.1
      comp=Z,616nm,20.0s
SNF   Seneffe           70.67  41  dP         P        13 57 55.3 +0.5
SNF                                dx         x        13 58 03.2
CTG   Chitna Glacier    70.71 331    P        P        13 57 56.7 +1.6
      baz=100,SNR=19
BVCY  Beaver Creek      70.76 332    P        P        13 57 56.2 +0.9
      baz=101,SNR=16
DOU   Dourbes           70.84  41  dP         P        13 57 56.7 +0.8
DOU                                dx         x        13 58 03.9
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BMRD  Maredsous        70.96  41 dP       P        13 57 57.2 +0.5
BMRD                             dx       x        13 58 04.6
BGES  Gesves           71.17  41 dP       P        13 57 58.6 +0.6
BGES                             dx       x        13 58 06.4
M27K  Edge Creek, AK   71.21 332  IAMs_20 IAMs_20  14 28 45.7
      comp=Z,404nm,19.0s
M27K  Edge Creek, AK   71.21 332  P       P        13 57 59.5 +1.4
      baz=100,SNR=48
RCHB  Rochefort        71.25  41 dP       P        13 57 59.0 +0.6
RCHB                             dx       x        13 58 06.7
BCAR  Beaver Creek A   71.30 333  P       P        13 57 59.1 +0.5
BCLA  Clavier          71.31  41 dP       P        13 57 59.7 +0.9
L27K  Beaver Creek,    71.32 333  P       P        13 57 59.6 +1.0
      baz=100,SNR=43
EGAK  Eagle            71.36 335  P       P        13 57 59.6 +0.8
EGAK                              IAMs_20 IAMs_20  14 31 47.9
      comp=Z,584nm,20.0s
EGAK  Eagle            71.36 335  P       P        13 57 59.1 +0.3
      baz=102,SNR=59
TGL   Tana Glacier     71.39 330  IAMs_20 IAMs_20  14 32 20.1
      comp=Z,789nm,19.0s
BSTI  Sart Tilman      71.49  41 dP       P        13 58 01.0 +1.1
BSTI                             dx       x        13 58 08.6
BEBN  Eben Emael       71.58  40 dP       P        13 58 01.0 +0.6
BEBN                             dx       x        13 58 09.2
MCARA McCarthy VSAT    71.58 331  P       P        13 58 01.7 +1.4
MCARA                             IAMs_20 IAMs_20  14 31 17.1
      comp=Z,631nm,19.0s
MCARA McCarthy VSAT    71.58 331  P       P        13 58 02.2 +2.0
      baz=99,SNR=19
K27K  Chicken          71.60 334  P       P        13 58 01.0 +0.6
      baz=100
I27K  Kandik River     71.72 335  P       P        13 58 01.8 +0.8
      baz=102
M26K  Nabesna, AK      71.73 332  IAMs_20 IAMs_20  14 30 57.5
      comp=Z,412nm,19.0s
M26K  Nabesna, AK      71.73 332  P       P        13 58 02.1 +0.9
      baz=99
BHOU  Houvegnez        71.76  41 dP       P        13 58 02.7 +1.2
BHOU                             dx       x        13 58 10.1
HOPE  Hope Point       71.76 160  P       P        13 58 01.3 +0.1
HOPE  Hope Point       71.76 160  P       P        13 58 01.3 +0.1
HOPE                              pmax    pmax
      comp=Z,92nm,1.1s
VRDI  Verde Repeater   71.76 331  IAMs_20 IAMs_20  14 31 13.0
      comp=Z,602nm,21.0s
MEM   Membach          71.77  41 dP       P        13 58 02.4 +0.8
MEM                              dx       x        13 58 10.2
H27K  Steamboat Moun   71.81 336  P       P        13 58 01.9 +0.4
      baz=102
WLF   Walferdange      71.82  42  P       P        13 58 01.5 -0.4
WLF   Walferdange      71.82  42  P       P        13 58 01.5 -0.4
WLF                               pmax    pmax
      comp=Z,105nm,1.0s
WLF   Walferdange      71.82  42 dP       P        13 58 03.0 +1.1
WLF                              dx       x        13 58 10.7
WLF   Walferdange      71.82  42 eP       P        13 58 02.3 +0.4
      comp=Z,80nm,1.1s,baz=269,slow=5.9
WLF                              epP      pP       13 58 10.2 +1.8
      baz=270,slow=5.9
BTNL  Ternell          71.85  41 dP       P        13 58 03.2 +1.1
BTNL                             dx       x        13 58 09.3
TAM   Tamanrasset      71.96  70  P       P        13 58 03.9 +0.4
TAM                               IAmb    IAmb     13 58 14.5
      comp=Z,74nm,1.1s
TAM   Tamanrasset      71.96  70  P       P        13 58 03.9 +0.4
TAM                               pmax    pmax
      comp=Z,74nm,1.1s
GLB   Gilahina Butte   71.97 331  IAMs_20 IAMs_20  14 31 30.3
      comp=Z,792nm,19.0s
G27K  Doyon Strip      71.98 337  P       P        13 58 02.6  0.0
      baz=102
L26K  Log Cabin Wild   71.99 333  P       P        13 58 03.9 +1.2
L26K                              IAmb    IAmb     13 58 05.3
      comp=Z,58nm,1.0s
L26K  Log Cabin Wild   71.99 333  P       P        13 58 03.6 +0.9
      baz=99,SNR=37
BNI   Bardonecchia     72.02  46  P       P        13 58 05.3 +1.9
BNI                               pmax    pmax
      comp=Z,227nm,0.9s
LPL   La Plagne        72.06  46 eP       P        13 58 04.3 +0.6
LPL                               pmax    pmax
      comp=Z,40nm,0.9s
E27K  Coleen River     72.25 338  P       P        13 58 04.3 +0.1
      baz=102
I26K  Coal Creek Min   72.29 335  IAMs_20 IAMs_20  14 32 19.0
      comp=Z,697nm,19.0s
I26K  Coal Creek Min   72.29 335  P       P        13 58 04.6 +0.2
      baz=100
J26L  Joseph Creek     72.33 334  IAMs_20 IAMs_20  14 32 07.7
      comp=Z,483nm,22.0s
J26L  Joseph Creek     72.33 334  P       P        13 58 05.3 +0.5
      baz=99
N25K  Chitina, Valde   72.36 331  P       P        13 58 06.5 +1.5
      baz=97,SNR=13
SCRK  Sand Creek       72.42 334  IAMs_20 IAMs_20  14 31 26.2
      comp=Z,568nm,19.0s
SCRK  Sand Creek       72.42 334  P       P        13 58 06.3 +0.9
      baz=99,SNR=66
AHRW  Bad Neuenahr-A   72.45  41 eP       P        13 58 06.5 +0.8
      comp=Z,133nm,1.4s,baz=269,slow=5.9
AHRW                             epP      pP       13 58 14.4 +2.1
      baz=270,slow=5.9
SENIN Lac Senin/Sane   72.48  45  P       P        13 58 07.4 +1.2
BUG   Bochum--Univer   72.61  40 eP       P        13 58 06.9 +0.3
      comp=Z,93nm,1.2s,baz=269,slow=5.9
BUG                              epP      pP       13 58 14.8 +1.5
      baz=270,slow=5.9
HARP  HAARP            72.73 332  P       P        13 58 08.1 +1.0
      baz=97,SNR=5.0
BLS5  Blasjo           72.73  31 eP       P        13 58 08.4 +1.2
BLS5                              IAmb    IAmb     13 58 09.3
      comp=Z,52nm,1.0s
RIDG  Independent Ri   72.77 333  IAMs_20 IAMs_20  14 31 45.2
      comp=Z,738nm,21.0s
RIDG  Independent Ri   72.77 333  P       P        13 58 08.1 +0.7
      baz=98,SNR=28
HYA   Hoyanger         72.79  29 eP       P        13 58 08.5 +1.1
HYA                               IAmb    IAmb     13 58 09.2
      comp=Z,37nm,1.0s
EYAK  Cordova Ski Ar   72.79 330  P       P        13 58 08.8 +1.4
      baz=96,SNR=8.0
G26K  Porcupine Rive   72.83 337  P       P        13 58 07.8 +0.2
      baz=100
ODD1  Odda             72.87  31 eP       P        13 58 09.1 +1.0
ODD1                              IAmb    IAmb     13 58 10.1
      comp=Z,62nm,1.2s
PAX   Paxson           72.94 332  P       P        13 58 08.7 +0.2
      baz=97,SNR=18
IBBN  Ibbenburen       72.95  39 eP       P        13 58 09.0 +0.4
      comp=Z,70nm,1.0s,baz=269,slow=5.9
IBBN                             epP      pP       13 58 16.9 +1.6
      baz=270,slow=5.9
KLU   Klutina          72.98 331  IAMs_20 IAMs_20  14 33 12.0
      comp=Z,569nm,19.0s
KLU   Klutina          72.98 331  P       P        13 58 09.8 +1.1
      baz=96,SNR=14
TAOE  Nuku Hiva Isla   73.01 257 eLR      LR       14 20 31.3
      comp=Z,250nm,24.3s
SNART Snartemo         73.02  32 eP       P        13 58 10.1 +1.2
SNART                             IAmb    IAmb     13 58 11.1
      comp=Z,84nm,1.1s
F26K  Sheenjek River   73.10 337  P       P        13 58 09.9 +0.7
      baz=100
NOR   Nord             73.11   7 i P      P        13 58 08.3 -0.8
NOR                               IAmb    IAmb     13 58 10.6
      comp=Z,52nm,1.3s
M24K  Tolsona, Glenn   73.17 331  P       P        13 58 10.6 +0.8
      baz=96,SNR=11
K24K  Donnelly Dome    73.19 333  P       P        13 58 10.0 +0.2
      baz=97,SNR=35
BFO   Black Forest     73.21  43  P       P        13 58 09.2 -1.0
BFO   Black Forest     73.21  43  P       P        13 58 09.2 -1.0
BFO                               pmax    pmax
      comp=Z,28nm,1.1s
BFO   Black Forest     73.21  43 eP       P        13 58 10.0 -0.3
      comp=Z,31nm,1.5s,baz=269,slow=5.9
BFO                              epP      pP       13 58 17.9 +1.0
      baz=270,slow=5.9
BMAR  Burnt Mountain   73.22 337  P       P        13 58 09.7 -0.3
AKN   Aaknes           73.28  28 eP       P        13 58 12.2 +1.8
AKN                               IAmb    IAmb     13 58 12.4
      comp=Z,50nm,1.0s
C27K  Jago River       73.29 339  P       P        13 58 10.8 +0.5
      baz=101
PRP   Porcupine Dome   73.30 335  IAMs_20 IAMs_20  14 32 51.2
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      comp=Z,580nm,19.0s
PRP   Porcupine Dome   73.30 335  P       P        13 58 10.5 -0.2
      baz=98,SNR=56
TNS   Taunus Mts       73.32  41 eP       P        13 58 11.3 +0.4
      comp=Z,60nm,1.1s,baz=269,slow=5.9
TNS                              epP      pP       13 58 19.2 +1.6
      baz=270,slow=5.9
KASTN Kahler Asten     73.32  40 eP       P        13 58 11.0 +0.1
      comp=Z,86nm,1.9s,baz=269,slow=5.9
KASTN                            epP      pP       13 58 18.9 +1.3
      baz=270,slow=5.9
FYU   Fort Yukon       73.33 336  IAMs_20 IAMs_20  14 31 28.0
      comp=Z,369nm,20.0s
P23K  Montague Islan   73.56 329  P       P        13 58 12.5 +0.4
      baz=94
F25K  Christian Rive   73.65 337  P       P        13 58 13.5 +1.0
      baz=98
SCM   Sheep Creek Mo   73.68 331  IAMs_20 IAMs_20  14 34 22.6
      comp=Z,689nm,18.0s
SCM   Sheep Creek Mo   73.68 331  P       P        13 58 13.7 +0.9
      baz=95,SNR=21
E25K  Arctic Village   73.70 338  P       P        13 58 13.6 +0.8
      baz=98,SNR=80
HOMB  Homborsund       73.70  33 eP       P        13 58 14.6 +1.7
HOMB                              IAmb    IAmb     13 58 15.1
      comp=Z,45nm,1.1s
G25K  Bearman Lake     73.71 336  P       P        13 58 13.6 +0.9
      baz=98
C26K  Camden Bay       73.75 340  P       P        13 58 13.3 +0.3
      baz=100
HDA   Harding Lake     73.77 334  IAMs_20 IAMs_20  14 31 32.6
      comp=Z,503nm,18.0s
HDA   Harding Lake     73.77 334  P       P        13 58 12.7 -0.5
      baz=96,SNR=21
SKAR  Skarslia         73.77  30 eP       P        13 58 14.9 +1.5
SKAR                              IAmb    IAmb     13 58 15.4
      comp=Z,32nm,1.0s
IL31                   73.78 334  P       P        13 58 13.0 -0.2
ILAR  Eielson Array    73.78 334  P       P        13 58 13.0 -0.3
      comp=Z,9.3nm,0.9s,baz=109,slow=3.9,SNR=94
ILAR                              PP      PP       14 00 58.1 +0.4
      comp=Z,2.9nm,1.0s,baz=100,slow=6.8,SNR=5.6
ILAR                              LR      LR       14 33 25.0
      comp=Z,422nm,20.7s,baz=90,slow=38
      comp=Z,9.3nm,0.9s
ILAR  Eielson Array    73.78 334  P       P        13 58 12.8 -0.5
STU   Stuttgart        73.79  43  P       P        13 58 14.4 +0.8
STU                               IAmb    IAmb     13 58 23.2
      comp=Z,87nm,1.1s
STU   Stuttgart        73.79  43  P       P        13 58 14.4 +0.8
STU                               pmax    pmax
      comp=Z,87nm,1.1s
STU   Stuttgart        73.79  43 eP       P        13 58 13.5 -0.1
      comp=Z,154nm,1.1s,baz=269,slow=5.9
STU                              epP      pP       13 58 21.4 +1.2
      baz=270,slow=5.9
M23K  Glacier View     73.86 331  P       P        13 58 14.3 +0.5
      baz=95,SNR=20
RETH  Rethem/Aller,    73.95  38 eP       P        13 58 15.2 +0.8
      comp=Z,114nm,1.5s,baz=269,slow=5.9
RETH                             epP      pP       13 58 23.1 +1.9
      baz=270,slow=5.9
MUD   Monsted U'grnd   73.96  35 i P      P        13 58 14.0 -0.4
POKR  Poker Plat Res   74.05 335  P       P        13 58 15.6 +0.7
POKR                              IAmb    IAmb     13 58 16.5
      comp=Z,56nm,1.1s
POKR                              IAMs_20 IAMs_20  14 33 35.0
      comp=Z,501nm,20.0s
POKR  Poker Plat Res   74.05 335  P       P        13 58 14.8  0.0
      baz=96,SNR=18
PWL   Port Wells       74.08 330  P       P        13 58 15.9 +0.7
      baz=94,SNR=12
SML   Sawmill          74.15 331  P       P        13 58 16.6 +1.0
      baz=94,SNR=15
CCB   Clear Creek Bu   74.16 334  IAMs_20 IAMs_20  14 32 52.0
      comp=Z,511nm,20.0s
D25K  Kavik River      74.17 339  P       P        13 58 15.6 +0.1
      baz=98
KNK   Knik Glacier     74.18 331  P       P        13 58 16.6 +0.8
      baz=94,SNR=19
COLA  College          74.20 334  P       P        13 58 15.7  0.0
COLA  College          74.20 334  IAMs_20 IAMs_20  14 33 26.2
      comp=Z,436nm,20.0s
COLA  College          74.20 334  P       P        13 58 15.7  0.0
COLA                              pmax    pmax
      comp=Z,44nm,1.4s
COLA                              MLR     MLR
      comp=Z,400nm,20.0s
COLA  College          74.20 334  P       P        13 58 15.7  0.0
      baz=96
TCOL  CIGO, UAF Yank   74.21 334  IAMs_20 IAMs_20  14 33 26.2
      comp=Z,454nm,20.0s
TCOL  CIGO, UAF Yank   74.21 334  P       P        13 58 15.9 +0.1
      baz=96
DOMB  Dombas           74.24  29 eP       P        13 58 17.8 +1.8
DOMB                              IAmb    IAmb     13 58 18.1
      comp=Z,38nm,1.3s
G24K  Hadweenzic Riv   74.24 336  P       P        13 58 16.3 +0.3
      baz=96,SNR=45
DAVA  Damuels          74.25  44 i P      P        13 58 17.4 +0.9
      comp=Z,46nm,1.0s,SNR=15
DAVOX Davos/Dischmat   74.26  45  P       P        13 58 17.1 +0.5
      comp=Z,5.4nm,0.6s,baz=263,slow=3.3,SNR=12
DAVOX                             LR      LR       14 25 43.2
      comp=Z,163nm,21.2s,baz=260,slow=32
      comp=Z,5.4nm,0.6s
WRH   Wood River Hil   74.27 334  IAMs_20 IAMs_20  14 31 47.8
      comp=Z,446nm,20.0s
KEST  Kesra            74.27  56  P       P        13 58 17.7 +0.9
      comp=Z,32nm,1.1s,baz=239,slow=2.0,SNR=8.7
      comp=Z,32nm,1.1s
GTTG  Gottingen        74.30  40 eP       P        13 58 17.1 +0.5
      comp=Z,63nm,1.3s,baz=269,slow=5.9
GTTG                             epP      pP       13 58 25.0 +1.8
      baz=270,slow=5.9
H24K  Noodor Dome      74.31 335  P       P        13 58 16.6 +0.3
H24K                              IAmb    IAmb     13 58 18.2
      comp=Z,49nm,1.2s
H24K                              IAMs_20 IAMs_20  14 33 32.3
      comp=Z,728nm,20.0s
H24K  Noodor Dome      74.31 335  P       P        13 58 16.9 +0.5
      baz=96
UBBA  Unterbreizbach   74.32  40 eP       P        13 58 15.8 -0.8
      comp=Z,62nm,1.7s,baz=269,slow=5.9
UBBA                             epP      pP       13 58 23.8 +0.5
      baz=270,slow=5.9
KONO  Kongsberg        74.35  31  P       P        13 58 16.9 +0.3
KONO                              IAmb    IAmb     13 58 26.5
      comp=Z,55nm,1.2s
KONO  Kongsberg        74.35  31  P       P        13 58 16.9 +0.3
KONO                              pmax    pmax
      comp=Z,55nm,1.2s
KONO  Kongsberg        74.35  31 eP       P        13 58 17.6 +1.0
MDM   Murphy Dome      74.37 334  IAMs_20 IAMs_20  14 30 50.5
      comp=Z,499nm,20.0s
NRDL  Niedersach Rie   74.40  39 eP       P        13 58 17.8 +0.8
      comp=Z,91nm,1.4s,baz=269,slow=5.9
NRDL                             epP      pP       13 58 25.7 +2.0
      baz=270,slow=5.9
UBR   Ueberruh         74.40  44 eP       P        13 58 17.6 +0.3
      comp=Z,30nm,1.2s,baz=269,slow=5.9
UBR                              epP      pP       13 58 25.6 +1.6
      baz=270,slow=5.9
F24K  Squaw Lake       74.49 337  P       P        13 58 18.2 +0.8
      baz=96,SNR=61
RND   Reindeer         74.51 333  IAMs_20 IAMs_20  14 35 24.5
      comp=Z,683nm,19.0s
PMR   Palmer           74.52 331  P       P        13 58 18.1 +0.6
      baz=93,SNR=21
BSEG  Bad Segeberg     74.54  37 eP       P        13 58 18.3 +0.5
      comp=Z,66nm,1.5s,baz=269,slow=5.9
BSEG                             epP      pP       13 58 26.2 +1.6
      baz=270,slow=5.9
CLZ   Clausthal        74.56  39 eP       P        13 58 18.6 +0.5
      comp=Z,81nm,1.5s,baz=269,slow=5.9
CLZ                              epP      pP       13 58 26.6 +1.8
      baz=270,slow=5.9
MCK   McKinley         74.57 333  P       P        13 58 18.3 +0.4
      baz=94,SNR=23
SEW   Seward           74.59 329  P       P        13 58 19.5 +1.4
SEW                               IAmb    IAmb     13 58 20.2
      comp=Z,74nm,1.0s
SEW   Seward           74.59 329  P       P        13 58 18.8 +0.8
      baz=93,SNR=14
NEA2  Nenana           74.70 334  IAMs_20 IAMs_20  14 32 47.2
      comp=Z,508nm,20.0s
NEA2  Nenana           74.70 334  P       P        13 58 18.8 +0.1
      baz=94,SNR=62
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ASSE  Asse, Remlinge   74.74  39 eP       P        13 58 19.9 +0.9
      comp=Z,70nm,1.5s,baz=269,slow=5.9
ASSE                             epP      pP       13 58 27.8 +2.1
      baz=270,slow=5.9
O22K  Cooper Landing   74.75 330  IAMs_20 IAMs_20  14 32 59.9
      comp=Z,785nm,20.0s
O22K  Cooper Landing   74.75 330  P       P        13 58 19.6 +0.7
      baz=93,SNR=6.3
E24K  Your Creek       74.78 338  P       P        13 58 19.9 +0.8
      baz=96
RC01  Rabbit Creek A   74.78 330  P       P        13 58 20.4 +1.2
      baz=93,SNR=13
FETA  Feichten         74.83  44 i P      P        13 58 20.8 +0.8
      comp=Z,61nm,1.5s,SNR=20
RETA  Reutte           74.85  44 i P      P        13 58 20.8 +0.9
      comp=Z,34nm,1.0s,SNR=13
I23K  Minto, Yukon-K   74.86 334  IAMs_20 IAMs_20  14 34 17.6
      comp=Z,510nm,20.0s
I23K  Minto, Yukon-K   74.86 334  P       P        13 58 20.0 +0.5
      baz=94,SNR=33
TBLU  Trondheim        74.87  27 eP       P        13 58 22.1 +2.5
TBLU                              IAmb    IAmb     13 58 22.3
      comp=Z,43nm,0.9s
H23K  Yukon River      74.99 335  IAMs_20 IAMs_20  14 33 53.3
      comp=Z,643nm,19.0s
H23K  Yukon River      74.99 335  P       P        13 58 20.7 +0.4
      baz=94
M22K  Willow           75.00 331  P       P        13 58 21.7 +1.3
M22K  Willow           75.00 331  P       P        13 58 21.1 +0.8
      baz=93,SNR=20
NC204 NORSAR Array S   75.00  30  P       P        13 58 21.4 +0.9
D24K  Happy Valley     75.01 339  P       P        13 58 20.3  0.0
      baz=96
C24K  Franklin Bluff   75.03 339  P       P        13 58 20.9 +0.5
      baz=96,SNR=102
MOTA  Moosalm          75.08  44 i P      P        13 58 21.9 +0.5
      comp=Z,26nm,1.0s,SNR=11
FLTG  Flechtingen      75.09  39 eP       P        13 58 21.2 +0.1
      comp=Z,57nm,1.3s,baz=269,slow=5.9
FLTG                             epP      pP       13 58 29.1 +1.3
      baz=270,slow=5.9
CUT   Chulitna         75.10 332  P       P        13 58 21.7 +0.8
      baz=93,SNR=12
GRF   Grafenberg Arr   75.11  42 eP       P        13 58 21.8 +0.5
      comp=Z,109nm,1.9s,baz=269,slow=5.9
GRF                              epP      pP       13 58 29.8 +1.7
      baz=270,slow=5.9
GRF                              eL       L        14 25 46.2
      comp=Z,199nm,22.0s
SQTA  Sankt Quirin     75.16  44 i P      P        13 58 22.4 +0.7
      comp=Z,34nm,1.1s,SNR=12
TRF   Thorofare Moun   75.16 333  P       P        13 58 22.2 +0.7
      baz=93,SNR=42
FUR   Furstenfeldbru   75.18  43 eP       P        13 58 22.1 +0.3
      comp=Z,77nm,1.4s,baz=269,slow=5.9
FUR                              epP      pP       13 58 30.0 +1.6
      baz=270,slow=5.9
E23K  Chandalar        75.20 337  P       P        13 58 21.8 +0.2
      baz=95
NB2   NORSAR Subarra   75.21  30  P       P        13 58 22.7 +1.0
      comp=Z,62nm,1.1s,baz=269,slow=6.2
NB2   NORSAR Subarra   75.21  30  P       P        13 58 22.7 +1.0
      slow=6.2
NOA   NORSAR Array B   75.21  30  P       P        13 58 22.6 +0.9
      comp=Z,19nm,0.9s,baz=269,slow=5.9,SNR=41
NOA                               LR      LR       14 25 38.8
      comp=Z,200nm,21.7s,baz=270,slow=31
      comp=Z,19nm,0.9s
BRSE  Bradley Lake S   75.23 329  P       P        13 58 22.2 +0.5
      baz=92,SNR=12
G23K  Bananza Creek    75.25 336  P       P        13 58 22.8 +1.0
      baz=94
NB201 NORSAR Array S   75.25  30  P       P        13 58 23.0 +1.1
SUA   Susitna One      75.28 331  P       P        13 58 23.5 +1.3
      baz=92,SNR=18
MOX   Moxa             75.35  41  P       P        13 58 23.0 +0.3
MOX                               pmax    pmax
      comp=Z,13nm,1.1s
MOX   Moxa             75.35  41 eP       P        13 58 22.9 +0.3
      comp=Z,45nm,1.8s,baz=269,slow=5.9
MOX                              epP      pP       13 58 30.9 +1.6
      baz=270,slow=5.9
MOX                              eL       L        14 25 56.4
      comp=Z,274nm,21.5s
COLD  Coldfoot         75.36 337  P       P        13 58 22.8 +0.5
      baz=94,SNR=24
NC602 NORSAR Array S   75.36  30 eP       P        13 58 23.9 +1.5
NC602                             IAmb    IAmb     13 58 24.9
      comp=Z,54nm,1.1s
WATA  Walderalm        75.40  44 i P      P        13 58 23.6 +0.4
      comp=Z,22nm,1.1s,SNR=6.5
NEUB  Neuenburg        75.44  40 eP       P        13 58 23.6 +0.5
      comp=Z,84nm,1.3s,baz=269,slow=5.9
NEUB                             epP      pP       13 58 31.5 +1.7
      baz=270,slow=5.9
MLY   Manley           75.44 334  IAMs_20 IAMs_20  14 33 29.8
      comp=Z,511nm,19.0s
MLY   Manley           75.44 334  P       P        13 58 22.5 -0.4
      baz=93,SNR=31
WTTA  Wattenberg       75.45  44 i P      P        13 58 24.1 +0.6
      comp=Z,24nm,1.0s,SNR=8.8
CAPN  Captain Cook N   75.46 330  P       P        13 58 25.0 +2.0
      baz=91,SNR=8.8
CNPM  China Poot       75.47 329  IAMs_20 IAMs_20  14 32 29.8
      comp=Z,804nm,21.0s
BPAW  Bear Paw Mtn.    75.50 333  P       P        13 58 23.4 +0.1
BPAW                              IAmb    IAmb     13 58 24.9
      comp=Z,56nm,0.9s
BPAW                              IAMs_20 IAMs_20  14 35 14.5
      comp=Z,545nm,18.0s
BPAW  Bear Paw Mtn.    75.50 333  P       P        13 58 23.4 +0.1
      baz=92,SNR=62
TEOL  Teolo            75.54  46  P       P        13 58 24.4 +0.5
D23K  Nanushuk River   75.66 338  P       P        13 58 25.0 +0.9
      baz=94
SKT   Skwentna         75.67 331  P       P        13 58 25.1 +0.8
      baz=91,SNR=16
MANZ  Manzenberg       75.68  41 eP       P        13 58 25.2 +0.6
      comp=Z,16nm,1.0s,baz=269,slow=5.9
MANZ                             epP      pP       13 58 33.1 +1.8
      baz=270,slow=5.9
HOM   Homer            75.68 329  P       P        13 58 25.9 +1.6
      baz=91
NSS   Namsos           75.69  26 eP       P        13 58 25.5 +1.2
NSS                               IAmb    IAmb     13 58 25.6
      comp=Z,32nm,1.2s
PLN   Plauen           75.69  41 eP       P        13 58 25.0 +0.4
      comp=Z,33nm,1.2s,baz=269,slow=5.9
PLN                              epP      pP       13 58 32.9 +1.6
      baz=270,slow=5.9
ROTZ  Rotzenmuhle      75.75  41 eP       P        13 58 25.5 +0.6
      comp=Z,24nm,1.9s,baz=269,slow=5.9
ROTZ                             epP      pP       13 58 33.5 +1.8
      baz=270,slow=5.9
H22K  Ishtalitna Cre   75.75 335  P       P        13 58 24.8 +0.2
      baz=92,SNR=10
WERD  Werda            75.79  41 eP       P        13 58 25.6 +0.3
      comp=Z,50nm,1.5s,baz=269,slow=5.9
WERD                             epP      pP       13 58 33.5 +1.6
      baz=270,slow=5.9
GUNZ  Gunzen           75.81  41 eP       P        13 58 25.8 +0.5
      comp=Z,55nm,1.7s,baz=269,slow=5.9
GUNZ                             epP      pP       13 58 33.8 +1.7
      baz=270,slow=5.9
WERN  Wernitzgruen     75.84  41 eP       P        13 58 26.2 +0.7
      comp=Z,44nm,1.4s,baz=269,slow=5.9
WERN                             epP      pP       13 58 34.1 +1.9
      baz=270,slow=5.9
NKC   Novy Kostel      75.89  41 eP       P        13 58 27.1 +1.3
NKC                              epP      pP       13 58 34.6 +2.1
NKC   Novy Kostel      75.89  41 eP       P        13 58 27.1 +1.3
NKC                              e*PP     pP       13 58 34.6 +2.1
TANN  Tannenbergstha   75.89  41 eP       P        13 58 26.3 +0.5
      comp=Z,63nm,1.4s,baz=269,slow=5.9
TANN                             epP      pP       13 58 34.2 +1.7
      baz=270,slow=5.9
CAST  Castle Rocks     75.97 333  P       P        13 58 26.1 +0.1
      baz=91,SNR=37
I21K  Tanana           75.97 334  IAMs_20 IAMs_20  14 34 33.3
      comp=Z,520nm,20.0s
I21K  Tanana           75.97 334  P       P        13 58 26.0 +0.1
      baz=92
SPCR  Spurr Chakacha   75.98 330  P       P        13 58 26.9 +0.7
      baz=91,SNR=14
PPLA  Purkeypile       76.00 332  P       P        13 58 26.7 +0.4
      baz=91,SNR=21
E22K  Anaktuvuk Pass   76.03 338  P       P        13 58 26.6 +0.4
      baz=93
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CIMO	Cimolais	76.04	45	P	P	13 58 26.8	+0.1
CIMO				IAmb	IAmb	13 58 36.3	
	comp=Z,69nm,1.0s						
Q20K	Shuyak Island	76.06	328	P	P	13 58 27.8	+1.3
	baz=90						
ABTA	Abfaltersbach	76.07	45	*i* P	P	13 58 27.4	+0.5
	comp=Z,60nm,1.1s,SNR=24						
CHUM	Lake Minchumin	76.08	333	P	P	13 58 26.8	+0.3
	baz=91,SNR=38						
F22K	John River	76.14	337	P	P	13 58 26.9	+0.1
	baz=92						
KDAK	Kodiak Island	76.17	327	LR	LR	14 33 33.6	
	comp=Z,1µm,19.1s,baz=96,slow=37						
KDAK	Kodiak Island	76.17	327	P	P	13 58 27.4	+0.3
KDAK				IAmb	IAmb	13 58 29.2	
	comp=Z,32nm,0.9s						
KDAK	Kodiak Island	76.17	327	P	P	13 58 27.4	+0.3
KDAK				pmax	pmax		
	comp=Z,32nm,0.9s						
KDAK				MLR	MLR		
	comp=Z,1µm,20.0s						
O20K	Slope Mountain	76.18	329	P	P	13 58 28.2	+1.0
	baz=90,SNR=12						
CLL	Collm	76.20	40	P	P	13 58 27.6	+0.1
CLL				IAmb	IAmb	13 58 37.1	
	comp=Z,44nm,1.1s						
CLL	Collm	76.20	40	⇓*i*P	P	13 58 28.1	+0.6
	comp=Z,62nm,1.4s						
CLL				*i* sP	pP	13 58 35.5	+1.3
	comp=Z,51nm,1.2s						
CLL				*i* PcP	PcP	13 58 39.3	-0.2
CLL				*e*PP	PP	14 01 24.0	+5.5
CLL				*e*PS	PnS	14 08 48.0	-1.1
CLL				*e*SS	SS	14 13 18.0	+14
CLL				AMS	AMS	14 29 00.0	
	comp=Z,200nm,20.2s						
CLL	Collm	76.20	40	P	P	13 58 27.6	+0.1
CLL				pmax	pmax		
	comp=Z,45nm,1.1s						
CLL				MLR	MLR		
	comp=Z,300nm,18.0s						
CLL	Collm	76.20	40	*e*P	P	13 58 27.9	+0.4
	comp=Z,62nm,1.4s,baz=269,slow=5.9						
CLL				*e*pP	pP	13 58 35.8	+1.6
	baz=270,slow=5.9						
MURB	Monte Urbino	76.27	48	P	P	13 58 27.3	-0.8
RGN	Rugen	76.30	37	*e*P	P	13 58 29.7	+1.8
	comp=Z,73nm,0.9s,baz=269,slow=5.9						
H21K	Melozitna Rive	76.33	335	IAMs_20	IAMs_20	14 35 03.5	
	comp=Z,712nm,18.0s						
H21K	Melozitna Rive	76.33	335	P	P	13 58 28.0	0.0
	baz=91						
CLUD	Cludinico	76.33	45	P	P	13 58 29.1	+0.7
HFS	Hagfors	76.42	31	P	P	13 58 29.2	+0.6
	comp=Z,15nm,1.0s,baz=255,slow=2.9,SNR=12						
HFS				LR	LR	14 26 14.5	
	comp=Z,336nm,21.9s,baz=274,slow=31						
	comp=Z,15nm,1.0s						
M20K	Styx River	76.43	331	P	P	13 58 29.2	+0.5
	baz=90						
FBE	Freiberg	76.44	40	*e*P	P	13 58 29.6	+0.8
	comp=Z,77nm,1.5s,baz=269,slow=5.9						
FBE				*e*pP	pP	13 58 37.5	+2.0
	baz=270,slow=5.9						
P19K	Oil Pt	76.49	329	P	P	13 58 29.9	+0.9
	baz=89						
OHAK	Old Harbor	76.56	326	P	P	13 58 29.8	+0.5
	baz=89,SNR=5.8						
DEL	Delary	76.57	35	*e*P	P	13 58 30.8	+1.3
KBA	Koelnbreinsper	76.62	44	*i* P	P	13 58 30.6	+0.4
	comp=Z,59nm,1.1s,SNR=18						
KBA				*i* PcP	sP	13 58 39.3	0.0
	comp=Z,87nm,1.0s						
G21K	Allakaket	76.63	336	P	P	13 58 30.3	+0.6
	baz=91						
F21K	Alatna River	76.63	337	P	P	13 58 29.8	+0.1
	baz=91						
RUE	Ruedersdorf	76.64	39	*e*P	P	13 58 31.0	+1.1
RUE	Ruedersdorf	76.64	39	*e*P	P	13 58 30.4	+0.4
	comp=Z,45nm,1.0s,baz=269,slow=5.9						
RUE				*e*pP	pP	13 58 38.3	+1.7
	baz=270,slow=5.9						
KHC	Kasperske Hory	76.67	42	P	P	13 58 31.0	+0.7
KHC				IAmb	IAmb	13 58 40.0	
	comp=Z,63nm,1.0s						
KHC	Kasperske Hory	76.67	42	*e*P	P	13 58 31.1	+0.9
KHC				*e*pP	pP	13 58 39.1	+2.1
KHC				AMS	AMS	14 27 50.0	
	comp=Z,200nm,19.5s						
KHC	Kasperske Hory	76.67	42	P	P	13 58 31.0	+0.7
KHC				pmax	pmax		
	comp=Z,63nm,1.0s						
Q19K	Cape Douglas,	76.71	328	P	P	13 58 31.0	+0.7
	baz=89						
KBS	Kingsbay	76.72	11	*ce*P	P	13 58 31.6	+1.7
KBS				pmax	pmax		
	comp=Z,62nm,1.7s						
IMAR	Indian Mountai	76.72	335	P	P	13 58 30.2	0.0
GEC2	GERESS Array S	76.76	42	P	P	13 58 31.4	+0.6
GEC2				IAmb	IAmb	13 58 40.2	
	comp=Z,54nm,0.9s						
GEC2	GERESS Array S	76.76	42	*e*P	P	13 58 31.1	+0.2
	comp=Z,47nm,1.1s,baz=269,slow=5.9						
GEC2				*e*pP	pP	13 58 39.0	+1.4
	baz=270,slow=5.9						
GERES	GERESS Array B	76.76	42	P	P	13 58 31.3	+0.4
	comp=Z,16nm,0.9s,baz=266,slow=4.0,SNR=65						
GERES				LR	LR	14 28 07.9	
	comp=Z,194nm,20.8s,baz=264,slow=32						
	comp=Z,16nm,0.9s						
GERES	GERESS Array B	76.76	42	P	P	13 58 28.6	-2.3
MOR8	Moi Rana	76.77	25	*e*P	P	13 58 32.3	+1.9
L20K	Farewell, AK	76.78	332	P	P	13 58 31.0	+0.4
	baz=89						
BIOA	Bad Ischl, Aus	76.78	44	*i* P	P	13 58 31.2	+0.3
	comp=Z,50nm,1.2s,SNR=15						
BIOA				*i* PcP	sP	13 58 39.9	-0.1
	comp=Z,44nm,1.2s						
PRED	Cave del Predi	76.81	45	P	P	13 58 30.6	-0.5
BRG	Berggiesshubel	76.81	40	*i* P	P	13 58 32.3	+1.3
BRG				Amp		13 58 33.2	
	comp=Z,43nm,1.2s						
BRG	Berggiesshubel	76.81	40	P	P	13 58 40.1	+9.1
BRG				Amp		13 58 40.8	
	comp=Z,48nm,1.0s						
BRG	Berggiesshubel	76.81	40	P	P	13 58 43.3	+12
BRG				Amp		13 58 44.1	
	comp=Z,27nm,1.1s						
BRG				Amp		14 26 27.0	
	comp=Z,0.3nm,18.9s						
BRG	Berggiesshubel	76.81	40	*i* P	P	13 58 32.2	+1.3
BRG						13 58 40.1	
BRG						13 58 43.2	
BRG				pmax	pmax		
	comp=Z,43nm,1.2s						
BRG	Berggiesshubel	76.81	40	*e*P	P	13 58 31.6	+0.6
	comp=Z,43nm,1.2s,baz=269,slow=5.9						
BRG				*e*pP	pP	13 58 39.5	+1.8
	baz=270,slow=5.9						
MYKA	Terra Mystica	76.85	45	*i* P	P	13 58 31.8	+0.4
	comp=Z,28nm,0.8s,SNR=9.9						
K20K	Telida	76.86	333	P	P	13 58 31.4	+0.4
K20K				IAmb	IAmb	13 58 32.7	
	comp=Z,69nm,1.3s						
K20K	Telida	76.86	333	P	P	13 58 31.2	+0.2
	baz=89						
CADS	Cadrg	76.94	45	*i* P	P	13 58 32.5	+0.6
AQU	L'Aquila	76.97	49	P	P	13 58 34.6	+2.5
AQU				pmax	pmax		
	comp=Z,75nm,0.9s						
M19K	Big River Lodg	77.03	331	P	P	13 58 32.9	+0.9
	baz=89						
O19K	Port Alsworth	77.03	329	IAMs_20	IAMs_20	14 32 52.2	
	comp=Z,632nm,20.0s						
O19K	Port Alsworth	77.03	329	P	P	13 58 32.3	+0.4
	baz=88,SNR=19						
STEI	Steigen	77.09	23	*e*P	P	13 58 33.4	+1.3
STEI				IAmb	IAmb	13 58 34.1	
	comp=Z,30nm,0.9s						
N19K	Bonanza Creek	77.09	330	P	P	13 58 32.8	+0.3
	baz=88						
FAUS	Fauske	77.11	23	*e*P	P	13 58 33.8	+1.5
FAUS				IAmb	IAmb	13 58 34.4	
	comp=Z,51nm,1.1s						
MOA	Molln	77.20	43	*i* P	P	13 58 33.5	+0.3
	comp=Z,22nm,0.9s						
MOA				*i* PcP	sP	13 58 42.2	-0.1
	comp=Z,39nm,0.9s						
BSD	Bornholm Skovb	77.21	36	*e*P	P	13 58 36.4	+3.3
PVCC	Panska Ves	77.23	41	*e*P	P	13 58 34.9	+1.6
PVCC	Panska Ves	77.23	41	*e*P	P	13 58 34.9	+1.6
L19K	White Mountain	77.24	331	P	P	13 58 33.8	+0.6
L19K				IAmb	IAmb	13 58 35.2	
	comp=Z,78nm,1.1s						
L19K	White Mountain	77.24	331	P	P	13 58 33.8	+0.6
	baz=88						
PRU	Pruhonice	77.25	41	*e*P	P	13 58 34.6	+1.2
PRU				*e*pP	sP	13 58 42.4	-0.1
PRU				AMS	AMS	14 25 40.0	
	comp=Z,200nm,22.3s						
PRU	Pruhonice	77.25	41	*e*P	P	13 58 34.6	+1.2
PRU				*e**PP	sP	13 58 42.4	-0.1
PRU				MLR	MLR		
	comp=Z,200nm,22.3s						
GOPC	GO Pecny, Ondr	77.41	41	*e*P	P	13 58 35.6	+1.2
GOPC				*e*pP	pP	13 58 43.1	+2.0
GOPC	GO Pecny, Ondr	77.41	41	*e*P	P	13 58 35.6	+1.2
GOPC				*e**PP	pP	13 58 43.1	+2.0
Q18K	Katmai Hardscr	77.43	328	P	P	13 58 34.9	+0.5
	baz=88,SNR=18						
CEY	Cerknica	77.45	46	*e*P	P	13 58 35.2	+0.5
CEY	Cerknica	77.45	46	*e*P	P	13 58 35.0	+0.3
OBKA	Obir	77.48	45	*i* P	P	13 58 35.5	+0.5
	comp=Z,17nm,1.1s						
OBKA				*i* PcP	sP	13 58 44.0	0.0
	comp=Z,32nm,0.8s						
OBKA	Obir	77.48	45	*e*P	P	13 58 34.0	-0.9
O18K	Koktuh Hills	77.48	329	P	P	13 58 35.0	+0.4
	baz=88,SNR=22						
LJU	Ljubljana	77.50	45	*i* P	P	13 58 35.8	+0.8
LJU				*e*PcP	pP	13 58 43.5	+1.8
P18K	Big Mountain,	77.51	328	IAMs_20	IAMs_20	14 33 00.7	
	comp=Z,639nm,20.0s						
P18K	Big Mountain,	77.51	328	P	P	13 58 35.0	+0.3
	baz=88						
SPITS	Spitsbergen Ar	77.55	12	P	P	13 58 35.2	+0.6
	comp=Z,16nm,0.7s,baz=116,slow=3.9,SNR=16						
SPITS				LR	LR	14 31 12.9	
	comp=Z,256nm,20.9s,baz=232,slow=34						
	comp=Z,16nm,0.7s						
GBRS	Gornja Briga	77.74	46	*e*P	P	13 58 35.9	-0.4
A21K	Barrow	77.75	341	IAMs_20	IAMs_20	14 34 04.3	
	comp=Z,404nm,20.0s						
A21K	Barrow	77.75	341	P	P	13 58 36.0	+0.2
	baz=89,SNR=6.9						
TTA	Tatalina	77.75	332	P	P	13 58 36.3	+0.2
	baz=88,SNR=25						
SOKA	Soboth	77.80	45	*i* P	P	13 58 36.8	0.0
	comp=Z,18nm,1.1s						
Q17K	Contact Creek	77.91	327	P	P	13 58 37.6	+0.5
	baz=87,SNR=11						
VIKU	Vikbolandet	78.01	32	*e*P	P	13 58 38.8	+1.4
BOJS	Bojanci	78.05	46	*e*P	P	13 58 37.8	-0.2
GCSA	Galena City Sc	78.06	334	P	P	13 58 38.2	+0.6
	baz=87,SNR=9.0						
ARSA	Arzberg	78.09	44	*i* P	P	13 58 38.5	+0.2
	comp=Z,19nm,1.0s,SNR=7.0						
ARSA				*i* PcP	PcP	13 58 47.2	-0.6
	comp=Z,28nm,0.9s						
UPC	Upice	78.15	41	*e*P	P	13 58 39.8	+1.3
UPC				*e*pP	PcP	13 58 47.2	-0.8
UPC	Upice	78.15	41	*e*P	P	13 58 39.8	+1.3
UPC				*e**PP	PcP	13 58 47.2	-0.8
VAE	Valguarnera	78.19	54	LR	LR	14 29 30.6	
	comp=Z,274nm,18.7s,baz=325,slow=33						
R17K	Ugashik Creek	78.21	327	P	P	13 58 39.6	+1.0
	baz=86						
CONA	Conrad Observa	78.26	43	*i* P	P	13 58 39.9	+0.6
	comp=Z,50nm,1.6s,SNR=20						
CONA				*i* PcP	PcP	13 58 48.6	0.0
	comp=Z,60nm,1.4s						
OSTC	Ostas	78.28	41	*e*P	P	13 58 40.6	+1.4
OSTC				*e*pP	pP	13 58 47.6	+1.7
OSTC				AMS	AMS	14 35 40.0	
	comp=Z,300nm,16.3s						
OSTC	Ostas	78.28	41	*e*P	P	13 58 40.6	+1.4
OSTC				*e**PP	pP	13 58 47.6	+1.7
OSTC				MLR	MLR		
	comp=Z,300nm,16.3s						
Q16K	King Salmon	78.29	328	P	P	13 58 39.6	+0.6
	baz=86,SNR=17						
KSP	Ksiaz	78.30	40	*e*P	P	13 58 40.1	+0.8
KSP				*e*PcP	PcP	13 58 47.9	-0.8
DPC	Dobruska-Polom	78.36	41	*e*P	P	13 58 41.1	+1.4
DPC				*e*pP	PcP	13 58 48.4	-0.6
DPC				AMS	AMS	14 32 10.0	
	comp=Z,200nm,16.8s						
DPC	Dobruska-Polom	78.36	41	*e*P	P	13 58 41.1	+1.4
DPC				*e**PP	PcP	13 58 48.4	-0.6
DPC				MLR	MLR		
	comp=Z,200nm,16.8s						
TRO	Tromso	78.39	21	*e*P	P	13 58 40.8	+1.5
TRO				IAmb	IAmb	13 58 41.3	
	comp=Z,195nm,1.6s						
UPP	Uppsala	78.40	31	*e*P	P	13 58 40.4	+0.7
O17K	Koliganek Bris	78.44	329	P	P	13 58 40.5	+0.7
	baz=86,SNR=34						
KRUC	Moravsky	78.52	42	*e*P	P	13 58 41.0	+0.5
RONA	Rosalia, Austr	78.57	43	*i* P	P	13 58 41.6	+0.7
	comp=Z,44nm,1.2s,SNR=9.9						
RONA				*i* PcP	PcP	13 58 50.4	+0.4
	comp=Z,67nm,1.2s						
VRAC	Vranov	78.63	42	⇓P	P	13 58 42.7	+1.5
VRAC	Vranov	78.63	42	P	P	13 58 41.5	+0.4
	comp=Z,9.3nm,0.8s,baz=281,slow=7.1,SNR=18						
VRAC				LR	LR	14 29 45.3	
	comp=Z,152nm,20.7s,baz=266,slow=33						
	comp=Z,9.3nm,0.8s						
VRAC	Vranov	78.63	42	*e*P	P	13 58 41.8	+0.7
VRAC	Vranov	78.63	42	P	P	13 58 42.6	+1.5
KRLC	Kraliky	78.68	41	*e*P	P	13 58 42.9	+1.4
KRLC				*e*pP	PcP	13 58 50.4	+0.1
KRLC	Kraliky	78.68	41	*e*P	P	13 58 42.9	+1.4
KRLC				*e**PP	PcP	13 58 50.4	+0.1
GKP	Gorka Klasztor	78.69	38	*e*P	P	13 58 44.4	+3.1
R16K	Pilot Point	78.86	327	P	P	13 58 42.9	+0.8
	baz=85,SNR=5.4						
JETT	Jettan, Norway	78.91	21	*e*P	P	13 58 43.8	+1.5
JETT				IAmb	IAmb	13 58 44.2	
	comp=Z,56nm,0.9s						
P16K	Nushagak River	78.95	328	P	P	13 58 43.2	+0.6
	baz=85,SNR=49						
O16K	Kokwok River B	78.96	329	P	P	13 58 42.8	+0.1
	baz=85						
MODS	Modra-Piesok	79.16	43	*e*P	P	13 58 45.4	+1.3
MODS				*e*		13 58 53.0	
MODS				pmax	pmax		
	comp=Z,137nm,1.2s						
MODS	Modra-Piesok	79.16	43	*e*P	P	13 58 45.4	+1.3
MODS				*e*		13 58 53.0	
MORC	Moravsky Berou	79.20	41	⇓P	P	13 58 45.5	+1.2
MORC	Moravsky Berou	79.20	41	P	P	13 58 45.0	+0.8
MORC				IAmb	IAmb	13 58 54.4	
	comp=Z,39nm,1.1s						
MORC	Moravsky Berou	79.20	41	*e*P	P	13 58 45.2	+0.9
MORC	Moravsky Berou	79.20	41	P	P	13 58 45.1	+0.8
MORC				pmax	pmax		
	comp=Z,39nm,1.1s						
N16K	Nishlik Lake	79.22	330	P	P	13 58 44.6	+0.5
	baz=85						
SMOL	Smolenice	79.25	43	*e*P	P	13 58 46.4	+1.8
SMOL				*e*		13 58 53.7	
SMOL				pmax	pmax		
	comp=Z,17nm,1.3s						
A051A	Mrakovica	79.26	46	*e*P	P	13 58 44.8	0.0
JAVC	Velka Javorina	79.37	42	*e*P	P	13 58 47.0	+1.7
CHGN	Chignik	79.43	325	P	P	13 58 45.4	+0.1
	baz=84,SNR=6.2						
MGRS	Mrkonjic Grad	79.45	47	*e*P	P	13 58 46.6	+0.8
BLY	Banja Luka	79.49	46	*e*P	P	13 58 46.0	+0.1
AAL	Aland	79.56	31	*e*P	P	13 58 46.7	+0.7
OKC	Ostrava-Krasne	79.58	41	*e*P	P	13 58 48.2	+1.9
OKC				*e*pP	PcP	13 58 55.3	+1.1
OKC	Ostrava-Krasne	79.58	41	*e*P	P	13 58 48.2	+1.9
OKC				*e**PP	PcP	13 58 55.3	+1.1
KTK1	Kautokeino	79.97	21	*e*P	P	13 58 49.3	+1.2
KTK1				IAmb	IAmb	13 58 49.8	
	comp=Z,49nm,0.9s						
RDOG	Red Dog Mine	80.18	338	P	P	13 58 50.3	+1.0
RDOG				IAMs_20	IAMs_20	14 35 01.9	
	comp=Z,596nm,20.0s						
RDOG	Red Dog Mine	80.18	338	P	P	13 58 49.6	+0.4
	baz=82,SNR=11						
VYHS	Vyhne	80.18	42	*e*P	P	13 58 50.8	+1.2
VYHS				*e*		13 58 58.4	
VYHS				pmax	pmax		
	comp=Z,174nm,2.5s						
VYHS	Vyhne	80.18	42	*e*P	P	13 58 50.8	+1.2
VYHS				*e*		13 58 58.4	
KLNR	Kaliningrad	80.30	36	*ce*P	P	13 58 51.4	+1.3
KLNR				pmax	pmax		
	comp=Z,29nm,0.8s						
MORH	Mrgy, Hungar	80.33	45	⇑P	P	13 58 51.8	+1.4
RAF	Rauma	80.34	30	*e*P	P	13 58 51.2	+1.1
LANS	Liptovska Anna	80.52	42	*e*P	P	13 58 53.8	+2.3
LANS				*e*		13 59 01.1	
LANS				pmax	pmax		
	comp=Z,14nm,1.4s						
LANS	Liptovska Anna	80.52	42	*e*P	P	13 58 53.8	+2.3
LANS				*e*		13 59 01.1	
OJC	Ojcow	80.59	41	*e*P	P	13 58 52.8	+1.0
OJC				*e*PcP	sP	13 59 00.8	-0.2
ARA0	ARCESS Array S	80.69	21	*e*P	P	13 58 53.1	+1.1
ARCES	ARCESS Array B	80.69	21	P	P	13 58 52.2	+0.3
	comp=Z,15nm,0.9s,baz=292,slow=3.8,SNR=17						
ARCES				LR	LR	14 29 16.6	
	comp=Z,175nm,21.9s,baz=283,slow=32						
	comp=Z,15nm,0.9s						
ARCES	ARCESS Array B	80.69	21	P	P	13 58 52.3	+0.3
ARCES				IAmb	IAmb	13 59 01.1	
	comp=Z,54nm,1.1s						
ARCES	ARCESS Array B	80.69	21	P	P	13 58 52.3	+0.3
ARCES				pmax	pmax		
	comp=Z,54nm,1.1s						
SDPT	Sand Point	80.69	325	P	P	13 58 52.4	+0.2
	baz=82						
HAPS	Han Pijesak,Bl	80.82	47	*e*P	P	13 58 54.3	+1.0
PSZ	Piszkesteto	80.96	43	P	P	13 58 54.3	+0.4
PSZ	Piszkesteto	80.96	43	P	P	13 58 54.3	+0.4
PSZ				pmax	pmax		
	comp=Z,26nm,1.1s						
NIE	Niedzica	81.02	41	*e*P	P	13 58 56.8	+2.6
NIE				*e*PcP	sP	13 59 04.5	+1.2
SLIT	Slitere, Latvi	81.06	33	*e*P	P	13 58 54.2	+0.2
TEKS	Tekeris	81.17	46	*e*P	P	13 58 55.2	+0.2
BBLS	Lazići	81.18	47	*e*P	P	13 58 53.9	-1.3
RUDO	Rudo	81.19	47	*e*P	P	13 58 55.7	+0.6
DRME	Dracevica, Mon	81.25	49	*e*P	P	13 58 55.4	-0.1
PDG	Podgorica	81.27	48	⇓P	P	13 58 56.3	+0.7
FRGS	Fruska Gora	81.28	46	⇑P	P	13 58 56.9	+1.3
FRGS	Fruska Gora	81.28	46	*e*P	P	13 58 55.6	0.0
S12K	Black Hills	81.54	325	P	P	13 58 57.0	+0.3
	baz=81						
DIVS	Divibare	81.56	47	*e*P	P	13 58 57.6	+0.4
STHS	Stebnicka Huta	81.63	41	*e*P	P	13 58 59.1	+1.7
STHS				*e*		13 59 06.7	
STHS				pmax	pmax		
	comp=Z,16nm,1.0s						
STHS	Stebnicka Huta	81.63	41	*e*P	P	13 58 59.1	+1.7
STHS				*e*		13 59 06.7	
SJES	Sjenica	81.67	48	*e*P	P	13 58 58.4	+0.6
MTSE	Matsula	81.69	32	*e*P	P	13 58 58.5	+1.1
ANM	Nome	81.71	334	P	P	13 58 58.6	+1.2
ANM				IAmb	IAmb	13 59 00.1	
	comp=Z,56nm,1.3s						
ANM				IAMs_20	IAMs_20	14 38 07.5	
	comp=Z,580nm,20.0s						
ANM	Nome	81.71	334	P	P	13 58 58.6	+1.2
ANM				pmax	pmax		
	comp=Z,56nm,1.3s						
ANM				MLR	MLR		
	comp=Z,600nm,20.0s						
ANM	Nome	81.71	334	P	P	13 58 58.8	+1.3
	baz=80,SNR=26						
VAH	Vaihoa	81.73	253	*e*P	P	13 58 59.6	+1.2
	comp=Z,106nm,1.3s						
MEF	Metsahovi	81.74	30	*e*P	P	13 58 57.5	-0.1
PMOR	Pomariorio Ree	81.92	253	*e*P	P	13 59 00.5	+1.1
	comp=Z,70nm,0.8s						
PHP	Peshkopia	82.26	49	P	P	13 59 02.5	+1.6
PABE	Paberze	82.31	35	P	P	13 59 01.6	+0.9
PABE	Paberze	82.31	35	*e*P	P	13 59 01.5	+0.9
FINES	FINESS Array B	82.33	29	P	P	13 59 01.2	+0.4
	comp=Z,20nm,0.8s,baz=280,slow=3.5,SNR=60						
FINES				LR	LR	14 29 51.2	
	comp=Z,243nm,21.9s,baz=270,slow=32						
	comp=Z,20nm,0.8s						
FIA1	FINESS Array S	82.33	29	P	P	13 59 01.4	+0.7
SIRR	Siria	82.40	44	⇑P	P	13 59 02.8	+1.4
FALS	False Pass	82.44	324	P	P	13 59 01.1	-0.3
	baz=80						
BZS	Buzias	82.47	45	⇓P	P	13 59 03.2	+1.3
BZS	Buzias	82.47	45	P	P	13 59 03.1	+1.3
TNA	Tin City	82.57	335	P	P	13 59 03.0	+1.1
TNA				IAmb	IAmb	13 59 04.9	
	comp=Z,45nm,1.0s						
TNA	Tin City	82.57	335	P	P	13 59 03.3	+1.4
	baz=78,SNR=18						
OHR	Ohrid	82.61	50	*i* P	P	13 59 05.6	+2.8
MDVR	Moldovita	82.68	46	⇓P	P	13 59 04.1	+1.2
TRPA	Tarpa	82.68	42	⇑P	P	13 59 03.1	+0.2
SURR	Surduc	82.80	45	⇑P	P	13 59 04.9	+1.4
SKO	Skopje	82.95	49	*i* P	P	13 59 06.0	+1.6
DRGR		83.03	44	⇓P	P	13 59 06.6	+1.8
DRGR		83.03	44	P	P	13 59 06.6	+1.8
FNA	Florina	83.10	50	P	P	13 59 06.5	+1.2
HERR	Herculane	83.15	46	⇑P	P	13 59 06.4	+1.0
VSU	Vasula	83.24	32	*d i*P	P	13 59 05.7	+0.2
VSU				pmax	pmax		
	comp=Z,180nm,1.0s						
VSU	Vasula	83.24	32	*e*P	P	13 59 06.3	+0.8
DJES	Djerdap	83.26	46	⇑P	P	13 59 08.1	+2.1
GZR	Gura Zlata	83.31	45	⇓P	P	13 59 07.7	+1.3
GZR	Gura Zlata	83.31	45	P	P	13 59 07.6	+1.3
MARR	Marisel-Cluj	83.32	44	⇓P	P	13 59 08.1	+1.7
LVV	L'vov	83.35	41	*e*P	P	13 59 07.6	+1.3
BMR	Baia Mare	83.39	43	⇑P	P	13 59 08.7	+2.1
BMR	Baia Mare	83.39	43	P	P	13 59 08.6	+2.1
KZN	Kozani	83.48	50	P	P	13 59 09.5	+2.2
ISAL	Salakas	83.50	35	*e*P	P	13 59 08.3	+1.4
STIP	Stip	83.55	49	*i* P	P	13 59 09.7	+2.2
IIGN	Ignalina	83.60	35	*e*P	P	13 58 58.5	-8.9
THL	Klokotos Trika	83.80	51	P	P	13 59 09.9	+1.1
GRG	Griva	83.84	50	P	P	13 59 10.5	+1.5
DRO	Drossia	83.85	53	P	P	13 59 10.8	+1.7
IDID	Didziasalis	83.89	35	*e*P	P	13 59 01.8	-7.2
VAY	Valandovo	83.89	49	*i* P	P	13 59 10.6	+1.3
ANX	Ano Chora	83.90	52	P	P	13 59 11.4	+1.9
TIAR	Tiarei	83.91	251	*e*P	P	13 59 10.8	+1.0
	comp=Z,7.6nm,0.9s						
LOT	Lotru	83.99	45	⇑P	P	13 59 11.0	+1.2
LAKA	Lakka	84.00	52	P	P	13 59 11.6	+1.7
NACGM	Naroch	84.00	35	⇑*i*P	P	13 59 18.0	+8.5
	comp=Z,144nm,1.1s,baz=282						
SERG	Sergoula	84.03	52	P	P	13 59 11.8	+1.7
ARCR	ARCALIA	84.08	43	⇓P	P	13 59 11.6	+1.5
PPT	Papeete	84.13	251	LR	LR	14 30 43.6	
	comp=Z,134nm,21.3s,baz=52,slow=32						
PPT2	Papeete2	84.13	251	*e*P	P	13 59 12.2	+1.3
	comp=Z,43nm,23.2s						
PPT2	Papeete2	84.13	251	*e*S	S	14 09 35.9	+0.6
	comp=Z,80nm,28.2s						
PPT2	Papeete2	84.13	251	*e*LR	LR	14 25 40.2	
	comp=Z,201nm,25.0s						
PPT2				*e*LR	LR	14 25 40.4	
	comp=Z,323nm,24.2s						
PPT2				*e*LR	LR	14 25 40.4	
	comp=Z,246nm,23.5s						
AGG	Agios Georgios	84.13	51	P	P	13 59 12.3	+1.7
AGG	Agios Georgios	84.13	51	P	P	13 59 12.5	+1.9
AGG				pmax	pmax		
	comp=Z,23nm,1.0s						
VTS	Vitosha	84.14	48	⇑P	P	13 59 12.9	+2.1
VTS	Vitosha	84.14	48	P	P	13 59 12.8	+2.1
VTS	Vitosha	84.14	48	*i* P	P	13 59 13.3	+2.6
KNT	Kendrikon	84.17	49	P	P	13 59 11.5	+0.8
KKB	Krupnik	84.17	49	*i* P	P	13 59 12.4	+1.7
LVZ	Lovozero	84.32	22	P	P	13 59 10.5	-0.4
LVZ	Lovozero	84.32	22	*de*P	P	13 59 11.3	+0.4
LVZ				pmax	pmax		
	comp=Z,46nm,1.7s						
UNV	Unalaska Valle	84.41	324	P	P	13 59 11.8	+0.2
	baz=77,SNR=8.7						
AXAR	Agios Charalam	84.43	52	P	P	13 59 13.1	+1.0
BUR08	Bucovina Ar. S	84.53	43	P	P	13 59 13.2	+0.6

BUR08				IAmb	IAmb	13 59 23.1	
	comp=Z,42nm,1.0s						
BURAR	Bucovina Array	84.55	43	⇑P	P	13 59 14.7	+2.0
BURAR	Bucovina Array	84.55	43	P	P	13 59 13.5	+0.9
BURAR				IAmb	IAmb	13 59 23.4	
	comp=Z,34nm,0.9s						
BURAR	Bucovina Array	84.55	43	P	P	13 59 14.6	+2.0
SOH	Sokhos	84.57	50	P	P	13 59 14.2	+1.4
GAMB	Gambell	84.59	334	P	P	13 59 12.9	+0.6
	baz=74						
ARR	Arges	84.60	45	⇓P	P	13 59 14.2	+1.3
SRS	Serrai	84.69	49	P	P	13 59 14.4	+1.1
MMB	Musomiste	84.70	49	*i* P	P	13 59 14.8	+1.4
MNK	Minsk	84.72	35	*i* P	P	13 59 11.7	-1.4
	comp=E,6.0nm,1.0s						
MNK				*i* P	P	13 59 11.7	-1.4
	comp=N,30nm,0.8s						
MNK				*i* P	P	13 59 11.7	-1.4
	comp=Z,55nm,0.9s,baz=283						
MNK				*i* PP	PP	14 02 27.1	-1.8
MNK				*i* PPP	PPP	14 04 19.7	
MNK				*i* S	S	14 09 34.9	-4.8
MNK				*i* SS	SS	14 15 11.8	+0.7
MNK				*i* SSS	SSS	14 18 42.1	
MNK				*i* LQ	LQ	14 31 27.0	
MNK				*i* LR	LR	14 37 41.4	
MNK				*i* LRM	MLR	14 38 17.9	
	comp=N,418nm,17.8s						
MNK				*i* LRM	MLR	14 38 27.5	
	comp=E,20nm,19.5s						
MNK				*i* LRM	MLR	14 38 40.0	
	comp=Z,174nm,19.5s						
MNK	Minsk	84.72	35	*i* P	P	13 59 11.7	-1.4
MNK				*i*		14 02 27.1	
MNK				*i* PPP	PPP	14 04 19.7	
MNK				*i* S	S	14 09 34.9	-4.8
MNK				*i* SS	SS	14 15 11.7	+0.7
MNK				*i* SSS	SSS	14 18 42.0	
MNK				pmax	pmax		
	comp=N,30nm,0.8s						
MNK				pmax	pmax		
	comp=Z,55nm,0.9s						
MNK				pmax	pmax		
	comp=E,6.0nm,1.0s						
MNK				MLR	MLR		
	comp=N,418nm,18.0s						
MNK				MLR	MLR		
	comp=E,20nm,20.0s						
MNK				MLR	MLR		
	comp=Z,174nm,20.0s						
PGB	Panagyurishte	84.83	48	*i* P	P	13 59 15.4	+1.3
NVR	Nevrokopi	84.84	49	P	P	13 59 16.3	+2.1
VOIR		84.88	45	⇑P	P	13 59 15.5	+1.2
VOIR		84.88	45	P	P	13 59 15.4	+1.2
PLVB	Pleven	84.99	47	⇑P	P	13 59 16.1	+1.3
DOPR	Dopca	85.00	44	⇑P	P	13 59 15.6	+0.8
HUMR	Humele	85.01	46	⇑P	P	13 59 16.8	+1.9
OZUR		85.25	44	⇓P	P	13 59 16.8	+0.8
RZN	Rozhen	85.41	49	*i* P	P	13 59 18.2	+1.1
ATHU	Athens Univers	85.46	52	P	P	13 59 18.1	+0.9
MLR	Muntele Rosu	85.48	45	⇓P	P	13 59 18.9	+1.6
MLR	Muntele Rosu	85.48	45	P	P	13 59 18.7	+1.3
	comp=Z,64nm,1.0s,baz=321,slow=3.2,SNR=48						
MLR				LR	LR	14 33 03.7	
	comp=Z,115nm,21.9s,baz=274,slow=33						
MLR	Muntele Rosu	85.48	45	P	P	13 59 18.6	+1.3
MLR	Muntele Rosu	85.48	45	P	P	13 59 18.6	+1.3
MLR				pmax	pmax		
	comp=Z,183nm,1.1s						
TBI	Tubuai	85.49	245	*e*P	P	13 59 18.8	+1.2
	comp=Z,320nm,35.8s						
TBI	Tubuai	85.49	245	*e*S	S	14 09 49.6	+1.2
	comp=Z,431nm,27.5s						
TBI	Tubuai	85.49	245	*e*LR	LR	14 26 18.0	
	comp=Z,1µm,40.8s						
VLY	Voula,Athens	85.49	52	P	P	13 59 18.3	+0.9
PTL	Penteli	85.50	52	P	P	13 59 19.6	+2.1
COVR	Voineasa-Covas	85.58	44	⇓P	P	13 59 19.6	+1.9
SPIA	Saint Paul Isl	85.68	328	P	P	13 59 19.4	+1.6
	baz=75						
NEHR	Nehoiu	85.74	45	⇓P	P	13 59 20.2	+1.7
PLOR	Plostina	85.89	44	⇑P	P	13 59 20.9	+1.6
PLOR	Plostina	85.89	44	P	P	13 59 20.9	+1.6
KDZ	Kurdzhali	85.93	48	*i* P	P	13 59 20.1	+0.6
VRI	Vrincioaia	85.94	44	⇓P	P	13 59 19.7	+0.2
VRI	Vrincioaia	85.94	44	P	P	13 59 19.6	+0.2
SZH	Strazhica	85.95	47	*i* P	P	13 59 20.8	+1.2
NIKH	Nikolski High	85.98	323	P	P	13 59 19.7	+0.2
	baz=75						
RDO	Rodhopi	86.12	49	P	P	13 59 21.3	+0.9
RAZG	Razgrad	86.30	46	⇓P	P	13 59 22.8	+1.5
AKASG	Malin Array Be	86.42	39	P	P	13 59 22.4	+0.8
	comp=Z,4.0nm,0.7s,baz=272,slow=5.1,SNR=25						
AKASG				LR	LR	14 33 16.9	
	comp=Z,286nm,21.6s,baz=292,slow=32						
	comp=Z,4.0nm,0.7s						
AKASG	Malin Array Be	86.42	39	P	P	13 59 22.2	+0.5
AKBB	Malin Array Si	86.42	39	P	P	13 59 22.2	+0.5
AKBB	Malin Array Si	86.42	39	P	P	13 59 22.2	+0.5
AKBB				pmax	pmax		
	comp=Z,20nm,1.0s						
SORM	Soroca	86.49	42	⇑P	P	13 59 22.7	+0.6
SORM	Soroca	86.49	42	P	P	13 59 22.7	+0.6
ALN	Alexandroupoli	86.55	49	P	P	13 59 23.4	+0.8
ALN	Alexandroupoli	86.55	49	P	P	13 59 24.1	+1.5
ALN				pmax	pmax		
	comp=Z,75nm,1.1s						
JMB	Yambol	86.60	47	*i* P	P	13 59 23.6	+0.8
EDRB	Edirne	86.85	48	P	P	13 59 25.0	+1.0
EZN	Ezine	87.00	50	P	P	13 59 25.3	+0.5
PRD	Provadia	87.01	47	*i* P	P	13 59 25.2	+0.4
ADZR	Andozero	87.05	25	*e*P	P	13 59 23.7	-0.8
ADZR				pmax	pmax		
	comp=Z,42nm,0.9s						
ICOR	Ion Corvin	87.08	46	⇓P	P	13 59 27.0	+1.9
SANT	Santorini	87.10	54	⇓P	P	13 59 26.0	+0.6
TLBR	Topalu	87.15	45	⇑P	P	13 59 26.9	+1.5
TPGR	Topolog	87.33	45	⇑P	P	13 59 26.8	+0.5
KLMR	Klimovskoe	88.74	28	*e*P	P	13 59 30.4	-2.2
KLMR				AMP		13 59 34.3	
	comp=Z,102nm,1.4s						
KLMR				*e*		13 59 39.4	
KLMR				*e*PP	PP	14 02 58.3	-2.8
KLMR				LR	LR	14 30 27.5	
KLMR				AMP		14 42 35.0	
	comp=Z,267nm,21.2s						
KLMR	Klimovskoe	88.74	28	*e*P	P	13 59 30.3	-2.3
KLMR				*e*		13 59 39.3	
KLMR				*e*		14 02 58.3	
KLMR				pmax	pmax		
	comp=Z,102nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,267nm,21.0s						
OBN	Obninsk	89.36	33	P	P	13 59 36.5	+0.8
	comp=Z,3.6nm,0.4s,baz=282,slow=4.8,SNR=15						
OBN				LR	LR	14 34 34.5	
	comp=Z,55nm,21.5s,baz=288,slow=32						
	comp=Z,3.6nm,0.4s						
OBN	Obninsk	89.36	33	*d* *i*P	P	13 59 35.9	+0.3
OBN				*i*		13 59 42.8	
OBN				*i*		14 03 07.5	
OBN				pmax	pmax		
	comp=Z,46nm,1.3s						
MOS	Moscow	89.70	33	*e*P	P	13 59 35.9	-1.3
MOS				*e*		13 59 44.9	
MOS				pmax	pmax		
	comp=Z,68nm,1.1s						
BILL	Bilibino	90.86	342	P	P	13 59 42.5	+0.1
BILL	Bilibino	90.86	342	P	P	13 59 42.9	+0.5
SIM	Simferopol'	91.19	44	*e*P	P	13 59 45.1	+0.6
SIM						13 59 46.4	
TSUM	Tsumeb	91.36	109	P	P	13 59 44.3	-1.6
TSUM				IAmb	IAmb	13 59 48.1	
	comp=Z,32nm,1.1s						
LPSR	Galich'ya Gora	91.57	35	*e*P	P	13 59 46.7	+0.7
LPSR				*e*		13 59 54.7	
LPSR				pmax	pmax		
	comp=Z,40nm,1.1s						
ANTO	Ankara	91.80	49	⇑P	P	13 59 49.1	+1.6
ANTO	Ankara	91.80	49	P	P	13 59 46.6	-0.9
ANTO	Ankara	91.80	49	P	P	13 59 46.6	-0.9
ANTO				pmax	pmax		
	comp=Z,43nm,1.1s						
VORR	Voronezh	92.08	36	P	P	13 59 48.3	-0.1
VORR				pmax	pmax		
	comp=Z,54nm,0.6s						
VNA3	Neumayer Olymp	92.12	164	P	P	13 59 49.0	+0.9
VSR	Storozhevoye	92.22	37	*e*P	P	13 59 49.0	-0.1
VSR				*e*		13 59 57.2	
VSR				pmax	pmax		
	comp=Z,20nm,0.9s						
BR131	Keskin Array S	92.46	49	P	P	13 59 51.0	+0.4
BR131	Keskin Array S	92.46	49	P	P	13 59 51.1	+0.5
BR131				pmax	pmax		
	comp=Z,33nm,1.0s						
BRTR	Keskin Array B	92.46	49	P	P	13 59 51.5	+0.8
	comp=Z,12nm,0.9s,baz=262,slow=3.7,SNR=47						
BRTR				LR	LR	14 38 34.0	
	comp=Z,178nm,21.2s,baz=302,slow=34						
	comp=Z,12nm,0.9s						
BRTR	Keskin Array B	92.46	49	P	P	13 59 51.0	+0.3
VNA2	Neumayer--Watz	92.59	163	P	P	13 59 50.4	+0.1
	baz=299,slow=7.0						
VRH	Novokhopyorsk	93.71	36	*e*P	P	13 59 56.1	+0.2
VRH				pmax	pmax		
	comp=Z,55nm,1.4s						
KIRV	Kirov	94.23	27	P	P	13 59 58.2	0.0
	comp=Z,9.2nm,0.5s,baz=304,slow=4.0,SNR=4.4						
KIRV				LR	LR	14 38 08.8	
	comp=Z,104nm,21.8s,baz=306,slow=33						
	comp=Z,9.2nm,0.5s						
KIRV	Kirov	94.23	27	⇑*e*P	P	13 59 58.7	+0.6
SNAA	Sanae	94.24	163	P	P	13 59 58.7	+0.7
SNAA	Sanae	94.24	163	P	P	13 59 57.5	-0.4
SNAA	Sanae	94.24	163	P	P	13 59 57.5	-0.4
SNAA				pmax	pmax		
	comp=Z,70nm,1.8s						
SOC	Sochi	95.44	44	*e*P	P	14 00 03.2	-0.8
SOC				*e*		14 03 54.6	
SOC				*e*PPP	PPP	14 05 58.1	
SOC				*e*S	SKSac	14 10 39.1	-0.1
SOC				*e*SS	SS	14 17 46.6	-0.1
SOC				*e*SSS	SSS	14 21 30.1	
TIXI	Tiksi	95.64	354	P	P	14 00 04.5	+0.2
	comp=Z,3.3nm,0.4s,baz=270,slow=24,SNR=8.7						
TIXI				LR	LR	14 45 44.3	
	comp=Z,156nm,19.6s,baz=96,slow=37						
	comp=Z,3.3nm,0.4s						
TIXI	Tiksi	95.64	354	P	P	14 00 04.0	-0.4
TIXI				IAmb	IAmb	14 00 05.3	
	comp=Z,15nm,1.1s						
TIXI				IAMs_20	IAMs_20	14 41 04.5	
	comp=Z,292nm,22.0s						
TIXI	Tiksi	95.64	354	⇓*e*P	P	14 00 03.9	-0.4
TIXI				pmax	pmax		
	comp=Z,13nm,1.0s						
TIXI				MLR	MLR		
	comp=Z,261nm,21.0s						
SHEM	Shemya Is, Ala	95.68	327	LR	LR	14 43 37.9	
	comp=Z,265nm,21.7s,baz=92,slow=36						
TROLL	Troll, Antarti	95.92	163	P	P	14 00 06.6	+0.9
BELG	Belogornoye	96.45	33	P	P	14 00 08.2	-0.2
	comp=Z,14nm,0.9s,baz=9.0,slow=19,SNR=6.1						
BELG				LR	LR	14 41 30.7	
	comp=Z,100nm,19.6s,baz=316,slow=34						
	comp=Z,14nm,0.9s						
BELG	Belogornoye	96.45	33	*c* *e*P	P	14 00 09.1	+0.7
BELG				pmax	pmax		
	comp=Z,3.0nm,1.1s						
EIL	Elat	96.54	58	P	P	14 00 09.6	+0.2
	comp=Z,5.8nm,0.9s,baz=331,slow=8.0,SNR=4.3						
EIL				LR	LR	14 43 49.7	
	comp=Z,136nm,19.2s,baz=250,slow=36						
	comp=Z,5.8nm,0.9s						
SUR	Sutherland	96.74	122	LR	LR	14 42 57.6	
	comp=Z,267nm,18.2s,baz=274,slow=35						
KIV	Kislovodsk	97.27	42	*e*P	Pdif	14 00 12.8	+0.2
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,56nm,20.0s						
NRIK	Noril'sk	97.33	8	P	Pdif	14 00 12.8	+0.7
	comp=Z,9.2nm,1.1s,baz=6.1,slow=1.9,SNR=13						
NRIK				LR	LR	14 44 13.3	
	comp=Z,308nm,21.3s,baz=328,slow=36						
	comp=Z,9.2nm,1.1s						
NRIK	Noril'sk	97.33	8	P	Pdif	14 00 12.4	+0.3
NRIK				IAmb	IAmb	14 00 21.6	
	comp=Z,19nm,1.1s						
NRIK	Noril'sk	97.33	8	P	Pdif	14 00 12.4	+0.3
NRIK				pmax	pmax		
	comp=Z,19nm,1.1s						
KBZ	Khabaz	97.51	42	P	Pdif	14 00 14.4	+1.0
	comp=Z,3.8nm,1.0s,baz=231,slow=4.0,SNR=3.8						
KBZ				LR	LR	14 39 59.1	
	comp=Z,80nm,21.8s,baz=312,slow=33						
	comp=Z,3.8nm,1.0s						
NVL	N'lazarevskaya	98.44	161	*e*P	Pdif	14 00 20.0	+3.1
NVL				pmax	pmax		
	comp=Z,15nm,0.9s						
SEY	Seymchan	98.56	342	LR	LR	14 49 39.9	
	comp=Z,308nm,18.0s,baz=81,slow=38						
SEY	Seymchan	98.56	342	⇑*e*P	Pdif	14 00 18.8	+1.1
SEY				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ARU	Arti	99.51	26	P	Pdif	14 00 22.5	+0.4
	comp=Z,0.9nm,0.3s,baz=39,slow=5.7,SNR=3.5						
ARU				LR	LR	14 41 34.0	
	comp=Z,253nm,21.7s,baz=302,slow=33						
	comp=Z,0.9nm,0.3s						
ARU	Arti	99.51	26	P	Pdif	14 00 23.0	+0.9
ARU						14 04 26.4	
ARU				S	SKSac	14 11 01.4	+1.9
ARU				SP	SP	14 13 27.7	+7.9
ARU				SS	SS	14 18 43.8	+0.8
LBTB	Lobatse	99.71	114	LR	LR	14 39 57.3	
	comp=Z,222nm,19.6s,baz=248,slow=32						
BOSA	Boshof	99.94	117	LR	LR	14 43 32.9	
	comp=Z,266nm,18.6s,baz=268,slow=34						
BRVK	Borovoye	106.74	24	IAMs_20	IAMs_20	14 43 57.5	
	comp=Z,260nm,22.0s						
GEYT	Alibeck	110.38	42	PKKPbc	PKKPbc	14 16 19.0	+6.0
	comp=Z,4.4nm,1.0s,baz=160,slow=4.7,SNR=4.0						
ZALV	Zalesovo Beam	110.85	16	PKiKP	PKiKP	14 05 10.8	-1.4
	comp=Z,2.8nm,0.7s,baz=308,slow=1.9,SNR=13						
ZALV				PKKPbc	PKKPbc	14 16 15.1	+3.1
	comp=Z,0.8nm,0.5s,baz=142,slow=5.1,SNR=6.0						
KURK	Kurchatov	111.73	21	⇑*i*PKIKP	PKiKP	14 05 14.0	0.0
KURK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
KURBB	Kurchatov Arra	111.78	21	PKiKP	PKiKP	14 05 13.7	-0.4
	comp=Z,1.1nm,0.2s,baz=326,slow=2.7,SNR=7.9						
ZEA	Zeya	112.97	349	*e*P	Pdif	14 01 39.7	+18
ZEA				*e*		14 22 04.5	
KLR	Kul'dur	116.19	345	PKP	PKiKP	14 05 21.5	-1.1
	comp=Z,1.7nm,0.9s,baz=358,slow=5.8,SNR=5.0						
KLR	Kul'dur	116.19	345	⇑*i*PKIKP	PKiKP	14 05 22.3	-0.3
KLR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MAKZ	Makanchi	116.22	21		PKiKP	14 05 21.6	-1.2
MAKZ	Makanchi	116.22	21	PKIKP	PKiKP	14 05 21.6	-1.2
HEH	HeiHe	116.25	348	PKP	PKiKP	14 05 22.2	-0.4
HEH				LR	LR		
	comp=Z,270nm,16.5s						
HEH				LR	LR		
	comp=Z,130nm,17.8s						
HEH				LR	LR		
	comp=Z,470nm,19.8s						
MK31	Makanchi Array	116.35	21		PKiKP	14 05 21.9	-1.1
MK31	Makanchi Array	116.35	21	PKIKP	PKiKP	14 05 21.9	-1.1
MKAR	Makanchi Array	116.35	21	PKP	PKiKP	14 05 21.8	-1.2
	comp=Z,1.7nm,0.7s,baz=330,slow=2.1,SNR=15						
MKAR				PKKPbc	PKKPbc	14 15 51.1	-2.2
	comp=Z,1.4nm,0.9s,baz=138,slow=5.8,SNR=9.4						
MKAR	Makanchi Array	116.35	21	PKPdf	PKiKP	14 05 22.5	-0.5
MKAR	Makanchi Array	116.35	21	PKIKP	PKiKP	14 05 22.5	-0.5
AAK	Ala-Archa	116.52	29		PKPdf	14 05 22.9	-0.7
AAK	Ala-Archa	116.52	29	*d* *i*PKIKP	PKiKP	14 05 24.0	+0.3
AAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GAR	Garm	117.07	34		PKiKP	14 05 24.8	0.0
HIA	Hailar	118.46	353	IAMs_20	IAMs_20	15 05 44.4	
	comp=Z,332nm,20.0s						
KSH	Kashi	119.64	30	PKP	PKiKP	14 05 31.0	+1.2
KSH				PP	PP	14 06 57.3	+6.0
SONM	Songino Array	120.36	3	PKP	PKiKP	14 05 31.0	+0.1
	comp=Z,2.5nm,0.7s,baz=322,slow=0.9,SNR=11						
SONM				PKKPbc	PKKPbc	14 15 36.2	-2.8
	comp=Z,1.7nm,0.8s,baz=165,slow=3.9,SNR=7.1						
SONM	Songino Array	120.36	3	PKIKP	PKiKP	14 05 31.0	+0.1
ULN	Ulaanbaatar	120.36	3		PKPdf	14 05 30.4	-0.5
ULN	Ulaanbaatar	120.36	3	*c* *i*PKIKP	PKiKP	14 05 31.1	+0.1
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
USA0B	Ussuriysk Arra	120.71	342	⇑*i*PKIKP	PKiKP	14 05 31.5	0.0
USRK	Ussuriysk Ar.	120.71	342	PKP	PKiKP	14 05 31.5	0.0
	comp=Z,6.0nm,0.9s,baz=346,slow=2.1,SNR=10.0						
USRK	Ussuriysk Ar.	120.71	342	PKPdf	PKPdf	14 05 31.0	-0.4
WMQ	Urumqi	120.77	19	*e*PKP	PKiKP	14 05 32.7	+0.9
WMQ				LR	LR		
	comp=Z,130nm,25.3s						
MDJ	Mudanjiang	121.02	344	Pdif	Pdif	14 01 57.0	-1.1
MDJ				SS	SS	14 23 35.0	+4.4
MDJ				AMB	AMB		
	comp=Z,130nm,5.6s						
MDJ				LR	LR		
	comp=Z,260nm,14.7s						
MDJ				LR	LR		
	comp=Z,290nm,16.4s						
MDJ				LR	LR		
	comp=Z,650nm,18.4s						
XLT	XiLinHaoTe	124.14	355	⇑*i*PKP	PKPdf	14 05 38.2	0.0
XLT				AMB	AMB		
	comp=Z,170nm,4.7s						
XLT				LR	LR		
	comp=Z,14nm,22.6s						
XLT				LR	LR		
	comp=Z,120nm,19.6s						
XLT				LR	LR		
	comp=Z,200nm,23.5s						
MJAR	Matsushiro Arr	125.04	333	PKP	PKPdf	14 05 40.1	+0.1
	comp=Z,6.4nm,0.8s,baz=55,slow=1.0,SNR=14						
DZM	Mont Dzumac	125.64	251	*e*LR	LR	14 44 54.6	
	comp=Z,89nm,26.3s						
HHC	Hu-ho-hao-te	127.43	359	*e*PKP	PKiKP	14 05 45.7	+0.6
HHC				LR	LR		
	comp=Z,350nm,20.2s						
HHC				LR	LR		
	comp=Z,290nm,17.8s						
HHC				LR	LR		
	comp=Z,390nm,17.3s						
GTA	Gaotai	127.96	10	PKP	PKPdf	14 05 45.5	-0.2
GTA				LR	LR		
	comp=Z,160nm,18.7s						
GTA				LR	LR		
	comp=Z,130nm,20.7s						
GTA				LR	LR		
	comp=Z,250nm,22.3s						
BJT	Baijiatuau	127.99	354		PKPdf	14 05 45.3	-0.2
BJT	Baijiatuau	127.99	354	IAMs_20	IAMs_20	15 03 35.6	
	comp=Z,213nm,21.0s						
BJT	Baijiatuau	127.99	354	PKIKP	PKPdf	14 05 45.3	-0.2
BJT				MLR	MLR		
	comp=Z,200nm,21.0s						
KS19	Wonju Array Si	128.09	342		PKPdf	14 05 45.7	-0.1
KSRS	Korea Array	128.12	342	PKP	PKPdf	14 05 45.5	-0.4
	comp=Z,14nm,0.9s,baz=16,slow=1.3,SNR=48						
KSAR	Wonju Array Be	128.14	342	PKPdf	PKPdf	14 05 45.9	0.0
KSAR	Wonju Array Be	128.14	342	PKIKP	PKPdf	14 05 45.9	0.0
GOMU	GeErMu	129.91	16	PKP	PKiKP	14 05 50.8	+0.2
GOMU				AMB	AMB		
	comp=Z,49nm,3.8s						
HNS	HongShan	130.71	355	⇑PKP	PKiKP	14 05 51.3	-0.3
HNS				PP	PP	14 08 05.8	+1.3
HNS				LR	LR		
	comp=Z,250nm,19.1s						
HNS				LR	LR		
	comp=Z,290nm,22.1s						
LZH	Lanzhou	131.81	7	⇑PKP	PKiKP	14 05 54.3	+0.2
LZH				LR	LR		
	comp=Z,420nm,17.1s						
LZH				LR	LR		
	comp=Z,230nm,17.8s						
LZH				LR	LR		
	comp=Z,280nm,16.2s						
LYN	LuoYang	133.69	358	*e*PKP	PKPdf	14 05 56.6	+0.1
XAN	Xi'an	134.22	2	PKP	PKPdf	14 05 57.6	0.0
XAN				sPKP		14 06 06.0	
NJ2	Nanjing	135.46	350	*e*PKP	PKPdf	14 05 58.9	-0.9
NJ2				sPKP		14 06 03.0	
CD2	Chengdu	136.90	8	PKP	PKPdf	14 06 03.2	+0.6
ENH	Enshi	137.99	1		PKPdf	14 06 04.5	-0.2
TNCH	TengChong	141.47	17	*e*PKP	PKPdf	14 06 09.6	-1.7
GYA	Guiyang	141.63	5	PKP	PKPdf	14 06 09.1	-2.4
KMI	Kunming	142.40	11	⇑PKP	PKPdf	14 06 13.6	+0.6
MND	Mandalay	143.47	22	PKPdf	PKPbc	14 06 12.9	+1.1
PMG	Port Moresby	143.70	270	PKPdf	PKPbc	14 06 13.7	+0.9
PMG	Port Moresby	143.70	270	PKIKP	PKPbc	14 06 13.7	+0.9
CTAO	Charters Tower	144.57	252	PKPdf	PKPab	14 06 14.3	-0.8
CTAO	Charters Tower	144.57	252	PKIKP	PKPab	14 06 14.3	-0.8
PALK	Pallekele	144.91	58	PKP	PKPdf	14 06 17.2	-0.3
	comp=Z,50nm,0.9s,baz=27,slow=4.3,SNR=24						
PALK	Pallekele	144.91	58	PKPdf	PKPab	14 06 16.1	-0.5
STKA	Stephens Creek	145.05	230	PKPbc	PKPab	14 06 16.6	0.0
	comp=Z,53nm,0.9s,baz=112,slow=5.3,SNR=69						
STKA	Stephens Creek	145.05	230		PKPdf	14 06 16.9	-0.3
STKA	Stephens Creek	145.05	230	PKIKP	PKPdf	14 06 16.9	-0.3
CRAI	Chiangrai	146.54	17	PKPdf	PKPdf	14 06 18.9	-1.1
CRAI				PKPbc	PKPbc	14 06 21.6	+0.1
CHTO	Chiang Mai	147.42	20	PKPdf	PKPdf	14 06 21.0	-0.5
CHTO	Chiang Mai	147.42	20	PKIKP	PKPdf	14 06 21.0	-0.5
CM31	Chiang Mai Arr	147.75	20		PKPbc	14 06 25.5	+0.6
CMAR	Chiang Mai Arr	147.75	20	PKP	PKPdf	14 06 23.0	+0.9
	comp=Z,73nm,0.9s,baz=309,slow=2.6,SNR=94						
CMAR				PKPbc	PKPbc	14 06 24.9	0.0
	comp=Z,73nm,0.9s,baz=323,slow=4.2,SNR=75						
CMAR	Chiang Mai Arr	147.75	20		PKPbc	14 06 25.6	+0.7
COEN	Coen	147.91	263		PKPbc	14 06 26.1	+0.7
PHRA	Phrae	148.13	18		PKPdf	14 06 23.2	+0.5
BBOO	Buckleboo	148.57	225	PKPdf	PKPdf	14 06 23.6	+0.6
BBOO				PKPbc	PKPbc	14 06 27.1	+0.4
QIZ	Qiongzhong	149.19	1	PKPbc	PKPdf	14 06 23.2	-1.2
QIZ				PP	PP	14 09 58.2	+0.1
QIZ				SS	SS	14 29 08.6	0.0
QIZ				LR	LR		
	comp=Z,210nm,23.1s						
QIZ				LR	LR		
	comp=Z,170nm,19.1s						
QIZ				LR	LR		
	comp=Z,250nm,18.3s						
AS31	Alice Springs	154.74	239	PKPdf	PKPdf	14 06 29.5	-3.1
AS31				PKPbc	PKPbc	14 06 41.1	-0.1
ASAR	Alice Springs	154.74	239	PKP	PKPdf	14 06 32.6	0.0
	comp=Z,10nm,0.9s,baz=125,slow=1.8,SNR=63						
ASAR				PKPbc	PKiKP	14 06 41.3	0.0
	comp=Z,16nm,0.8s,baz=108,slow=2.4,SNR=29						
ASAR				PKPab	PKPab	14 06 56.0	-0.2
	comp=Z,10nm,0.7s,baz=120,slow=4.4,SNR=5.5						
ASAR	Alice Springs	154.74	239	PKPdf	PKPdf	14 06 29.7	-3.0
ASAR				PKPbc	PKiKP	14 06 41.3	0.0
WB2	Warramunga Arr	155.57	248	PKPdf	PKPdf	14 06 33.8	0.0
WB2				PKPab	PKPab	14 07 00.1	+0.3
WB0	Warramunga Arr	155.58	248	PKPdf	PKPdf	14 06 31.9	-1.9
WB0				PKPab	PKPab	14 07 00.8	+1.0
WRA	Warramunga Arr	155.59	248	PKP	PKPdf	14 06 33.8	-0.1
	comp=Z,20nm,1.0s,baz=87,slow=1.2,SNR=107						
WRA				PKPab	PKPab	14 06 59.7	-0.2
	comp=Z,22nm,0.8s,baz=101,slow=4.2,SNR=6.5						
WRA	Warramunga Arr	155.59	248		PKPdf	14 06 33.6	-0.2
WRA				PKPab	PKPab	14 07 00.1	+0.2

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*ASRS **10** 13:49:31.1, 53˚N±1˚×8˚7E±˚, h1km, ML3.4/13, confirmed*
*NNC **10** 13:49:33.2±2.0, 53˚.33N×87˚.28E, h0km, mb4.2, mpv3.9,*
Error ellipse: s-maj=16.8km s-min=6.6km az=61.0,
Suspected Mining explosion.

ISC 10 13:49:31.5±0.7**, 53˚.40N**±0˚.02×**87˚.49E**±0˚.02**, h0km, n26,**
σ**0s.99**/51**, 8C-8D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MALIN	Malinovka, Kuz	0.13	280	Pg	Pg	13 49 34.5	+0.5
MALIN				Sg	Sg	13 49 35.8	+0.2
TAIL	Tailep, Kuzbas	0.18	286	Pg	Pg	13 49 35.4	+0.4
TAIL				Sg	Sg	13 49 38.1	+0.8
TASR	Tashtagol	0.68	159	P	Pg	13 49 45.0	+0.4
TASR				S	Sg	13 49 54.5	+1.1
ERU	Erunakovo, Kuz	0.74	355	⇓P	Pb	13 49 46.9	-0.5
ERU				S	Sb	13 49 57.9	-0.2
ELT	Eltsovka	0.76	260	⇓P	Pg	13 49 45.2	-0.9
ELT				S	Sg	13 49 54.8	-1.1
KOTO	Kotino, Kuzbas	0.86	337	Pg	Pg	13 49 47.7	-0.2
KOTO				Sg	Sg	13 49 59.0	-0.1
LUZB	Luzhba, Kemero	0.89	72	Pg	Pg	13 49 48.4	-0.1

LUZB				Sg	**Sb**	**13 50 01.3**	**-0.8**
BJR3	**Bachatsky-3 (S**	**1.14**	**317**	Pg	**Pg**	**13 49 53.4**	**0.0**
BJR3				Sg	**Sg**	**13 50 08.6**	**+0.4**
POMOR	**Pomortsevo, Ku**	**1.16**	**331**	Pg	**Pn**	**13 49 55.3**	**+0.3**
POMOR				Sg	**Sb**	**13 50 10.0**	**0.0**
BJR2	**Bachatsky-2, K**	**1.20**	**318**	Pg	**Pg**	**13 49 53.5**	**-1.0**
BJR2				Sg	**Sg**	**13 50 10.1**	**+0.2**
BJR1	**Bachatsky 1, K**	**1.20**	**315**	Pg	**Pg**	**13 49 53.0**	**-1.5**
BJR1				Sg	**Sg**	**13 50 10.8**	**+0.7**
SALR	**Pechorkino, Sa**	**1.47**	**315**	Pg	**Pn**	**13 49 59.0**	**-0.2**
SALR				Sg	**Sn**	**13 50 19.3**	**+0.2**
ARTR	**Artybash**	**1.61**	**185**	⇑P	**Pn**	**13 50 01.1**	**-0.1**
ARTR				Sg	**Sn**	**13 50 21.9**	**-0.7**
ZAA0	**Zalesovo Array**	**1.68**	**290**	⇑P	**Pn**	**13 50 01.4**	**-0.8**
	4.0nm,0.6s						
ZAA0				⇓S	**Sn**	**13 50 24.1**	**-0.3**
	12nm,0.8s						
GALT	**Gorno-Altaysk,**	**1.72**	**214**	Pg	**Pn**	**13 50 02.7**	**0.0**
GALT				Sg	**Sn**	**13 50 25.8**	**+0.4**
KEM	**Kemerovo**	**2.11**	**338**	Pg	**Pn**	**13 50 08.9**	**+0.8**
KEM				S	**Sb**	**13 50 37.9**	**+0.5**
BRCR	**Berchikul'**	**2.30**	**12**	Pg	**Pn**	**13 50 11.9**	**+1.3**
BRCR				Sg	**Sb**	**13 50 42.5**	**-0.3**
CERR	**Cheremushki**	**2.43**	**101**	P	**Pb**	**13 50 15.4**	**-0.7**
CERR				Sg	**Sg**	**13 50 48.8**	**-0.7**
DJOS	**Djoyskaya Sosn**	**2.44**	**103**	Pg	**Pg**	**13 50 17.9**	**-0.3**
DJOS				Sg	**Sg**	**13 50 51.6**	**+1.8**
ULGR	**Ulagan, Altay**	**2.79**	**174**	Pg	**Pb**	**13 50 22.6**	**+0.2**
ULGR				S	**Sg**	**13 51 00.5**	**-0.7**
NVSII	**Novosibirsk**	**2.89**	**302**	Pg	**Pn**	**13 50 20.9**	**+2.2**
NVSII				S	**Sb**	**13 50 59.6**	**-0.1**
NVS	**Novosibirsk**	**2.89**	**302**	Pg	**Pn**	**13 50 21.5**	**+2.8**
NVS				S	**Sb**	**13 50 60.0**	**+0.3**
KURK	**Kurchatov**	**6.09**	**247**	⇑Pn	**Pn**	**13 51 03.5**	**+0.8**
	11nm,0.7s						
KURK				⇑Lg	Lg	13 52 44.8	
	30nm,0.9s						
KURBB	**Kurchatov Arra**	**6.19**	**247**	⇓Pn	**Pn**	**13 51 05.3**	**+1.2**
	19nm,0.6s						
KURBB				⇑Sn	**Sn**	**13 52 13.4**	**-2.0**
	17nm,0.6s						
KURBB				⇓Lg	Lg	13 52 44.9	
	58nm,0.9s						
MK31	**Makanchi Array**	**7.41**	**209**	⇑Pn	**Pn**	**13 51 22.7**	**+1.9**
	7.4nm,0.6s,baz=26,slow=12,SNR=168						
MK31				⇓Sn	**Sn**	**13 52 44.9**	**-0.6**
	1.7nm,0.6s,baz=28,slow=25,SNR=5.3						
MK31				⇑Lg	Lg	13 53 25.4	
	16nm,0.9s,baz=40,slow=28,SNR=8.3						
MAKZ	**Makanchi**	**7.49**	**210**	⇓Pn	**Pn**	**13 51 23.6**	**+1.7**
	9.8nm,0.6s						
MAKZ				⇑Sn	**Sn**	**13 52 45.9**	**-1.5**
	3.0nm,0.7s						
MAKZ				⇓Lg	Lg	13 53 27.9	
	9.5nm,0.9s						

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*NEIC **10** 13:49:55.6±0.6, 36°.284N±0°.010×97°.524W±0°.008, h5^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=1.9km az=184.0*

*TUL **10** 13:49:55.7±0.7, 36°.28N±0°.01×97°.511W±0°.009, h7^{km}±6^{km}, ML2.9, mb_Lg3.0/73(NEIC), ML2.9/64(NEIC), Error ellipse: s-maj=1.7km s-min=1.0km az=191.0*

*ANF **10** 13:49:55.2±0.6, 36°.29N×97°.52W, h5^{km}±6^{km}, ML3.0/7, Error ellipse: s-maj=7.2km s-min=3.0km az=167.0*

ISC 10 13:49:55.6±1.1**, 36°.28N**±0°.02×**97°.52W**±0°.02**, h6**^{km}±10^{km}**, n83,** σ0^{s}.**48**/53**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.43**	**301**		**Pg**	**13 50 04.4**	**+0.3**
CROK				Sg	**Sg**	**13 50 10.6**	**+0.9**
CROK				IAML		13 50 10.8	
	comp=E,843nm,0.3s						
OK050	**Pawnee Station**	**0.45**	**75**		**Pg**	**13 50 04.5**	**+0.1**
OK050				IAML		13 50 13.3	
	comp=E,629nm,0.3s						
OK029	**Liberty Lake**	**0.48**	**173**		**Pg**	**13 50 05.2**	**+0.2**
OK046	**Pawnee Station**	**0.51**	**77**		**Pg**	**13 50 05.5**	**+0.1**
OK033	**Mehan**	**0.53**	**116**	Pg	**Pg**	**13 50 06.0**	**+0.1**
OK033				Sg	**Sg**	**13 50 13.1**	**+0.4**
OK033				IAML		13 50 13.4	
	comp=E,586nm,0.4s						
BLOK	**Blackwell**	**0.54**	**27**	Pg	**Pg**	**13 50 06.2**	**+0.1**
BLOK				IAML		13 50 16.5	
	comp=N,1µm,0.2s						
BLOK				IAML		13 50 18.1	
	comp=E,1µm,0.2s						
GC02	**Grant County #**	**0.63**	**335**		**Pg**	**13 50 07.9**	**+0.1**
OK031	**S. Brethren Rd**	**0.64**	**120**		**Pg**	**13 50 08.0**	**0.0**
OK031				IAML		13 50 16.9	
	comp=E,487nm,0.2s						
OK052	**Battle Ridge R**	**0.65**	**116**		**Pg**	**13 50 08.1**	**0.0**
OK052				IAML		13 50 17.1	
	comp=E,402nm,0.4s						
OK053	**SW of W Deep R**	**0.65**	**114**		**Pg**	**13 50 08.1**	**0.0**
QUOK	**Quay**	**0.67**	**99**		**Pg**	**13 50 08.4**	**0.0**
OK030	**Cody Creek RV**	**0.69**	**120**		**Pg**	**13 50 09.0**	**0.0**
OK030				IAML		13 50 18.9	
	comp=E,587nm,0.2s						
OK030				IAML		13 50 29.6	
	comp=E,386nm,0.2s						
OK034	**N. Norfolk Rd.**	**0.71**	**112**	Pg	**Pg**	**13 50 09.2**	**-0.1**
OK025	**Westminster Rd**	**0.71**	**168**		**Pg**	**13 50 09.4**	**+0.1**
OK025				IAML		13 50 21.9	
	comp=E,606nm,0.5s						
KAN13	**South Haven SW**	**0.73**	**3**		**Pg**	**13 50 09.7**	**0.0**
KAN13				IAML		13 50 23.5	
	comp=E,676nm,0.3s						
KAN13				IAML		13 50 25.0	
	comp=N,610nm,0.3s						
OK032	**Salt Plains WL**	**0.76**	**314**	Pg	**Pg**	**13 50 09.9**	**-0.4**
OK032				IAML		13 50 21.2	
	comp=N,711nm,0.2s						
KAN14	**Manchester OK**	**0.76**	**332**	Pg	**Pg**	**13 50 09.8**	**-0.5**
KAN14				IAML		13 50 21.7	
	comp=N,677nm,0.1s						
KAN09	**Caldwell North**	**0.86**	**355**		**Pg**	**13 50 12.0**	**-0.2**
OKCSW	**OKLAHOMA CITY**	**0.88**	**175**	Pg	**Pg**	**13 50 12.0**	**-0.4**
OKCSW				IAML		13 50 29.3	
	comp=N,315nm,0.4s						
OKCSW				IAML		13 50 31.4	
	comp=E,421nm,0.5s						
DEOK	**Depew**	**0.94**	**117**		**Pg**	**13 50 13.1**	**-0.5**
DEOK				IAML		13 50 27.7	
	comp=E,287nm,0.2s						
DEOK				IAML		13 50 28.1	
	comp=N,341nm,0.2s						
KS20	**Mayfield South**	**0.95**	**358**	Pg	**Pg**	**13 50 13.6**	**-0.3**
KAN06	**Argonia West S**	**1.00**	**345**	Pg	**Pg**	**13 50 14.6**	**-0.3**
OK038	**West end E0370**	**1.00**	**282**		**Pg**	**13 50 13.6**	**-1.3**
KS21	**Milan North St**	**1.01**	**354**	IAML		13 50 29.0	
	comp=N,431nm,0.1s						
KS21				IAML		13 50 30.3	
	comp=N,296nm,0.1s						
KS21	**Milan North St**	**1.01**	**354**	Pg	**Pg**	**13 50 14.8**	**-0.3**
FNO	**Franklin**	**1.02**	**174**		**Pg**	**13 50 14.9**	**-0.4**
FNO				IAML		13 50 31.6	
	comp=E,225nm,0.3s						
FNO				IAML		13 50 32.2	
	comp=N,261nm,0.2s						
T35A	**Sooner Cattle**	**1.03**	**52**		**Pg**	**13 50 14.9**	**-0.5**
T35A				IAML		13 50 29.6	
	comp=N,332nm,0.3s						
T35A				IAML		13 50 29.6	
	comp=E,285nm,0.3s						
T35B	**Sooner Cattle**	**1.03**	**52**	P	**Pg**	**13 50 15.2**	**-0.3**
	baz=232						
T35B				S	**Sg**	**13 50 28.5**	**-0.4**
	baz=232						
OK035	**E0210 Rd and N**	**1.05**	**294**	Pg	**Pg**	**13 50 15.6**	**-0.1**
OK035				IAML		13 50 37.6	
	comp=E,441nm,0.3s						
KAN12	**Harper NE Stat**	**1.08**	**340**	Pg	**Pg**	**13 50 16.4**	**-0.1**
NOKA	**Waynoka**	**1.19**	**288**		**Pg**	**13 50 17.9**	**-0.6**
NOKA				IAML		13 50 37.2	
	comp=E,360nm,0.3s						
NOKA				IAML		13 50 39.8	
	comp=N,322nm,0.2s						
U32A	**Winter Ranch,**	**1.20**	**275**		**Pg**	**13 50 17.9**	**-0.8**
U32A				IAML		13 50 36.3	
	comp=N,194nm,0.2s						
U32A				IAML		13 50 39.0	
	comp=E,282nm,0.1s						
U32A	**Winter Ranch,**	**1.20**	**275**	P	**Pg**	**13 50 18.1**	**-0.5**
	baz=94						
U32A				S	**Sg**	**13 50 34.1**	**0.0**
	baz=94						
W35A	**Tecumseh**	**1.24**	**155**	Pn	**Pg**	**13 50 18.3**	**-1.2**
W35A				IAML		13 50 37.1	
	comp=N,188nm,0.2s						
TUL1	**Leonard**	**1.45**	**104**	Pn	**Pn**	**13 50 21.7**	**-0.7**
TUL1	**Leonard**	**1.45**	**104**	P	**Pn**	**13 50 21.7**	**-0.7**
	baz=286						
TUL1				S	**Sb**	**13 50 41.5**	**-0.2**
	baz=286						
X34A	**Smith Ranch, M**	**1.69**	**189**		**Pb**	**13 50 26.9**	**-0.3**
WMOK	**Wichita Mounta**	**1.85**	**214**		**Pn**	**13 50 28.6**	**+0.6**
WMOK	**Wichita Mounta**	**1.85**	**214**	P	**Pn**	**13 50 28.2**	**+0.2**
	baz=33						
WMOK				S	**Sn**	**13 50 52.6**	**+1.0**
	baz=33						
RLO	**Rose Lookout**	**2.02**	**93**	Pn	**Pn**	**13 50 30.9**	**+0.6**
LOOK	**Love County**	**2.30**	**173**	Pn	**Pn**	**13 50 34.3**	**+0.2**
R32A	**Long Quarter,**	**2.34**	**336**	P	**Pn**	**13 50 34.7**	**0.0**
	baz=156						
R32A				S	**Sn**	**13 51 04.4**	**+0.6**
	baz=156						
X37A	**Clayton**	**2.44**	**133**	P	**Pn**	**13 50 36.5**	**+0.5**
	baz=315						
X37A				S	**Sn**	**13 51 06.3**	**+0.3**
	baz=315						
U38A	**Gravette**	**2.54**	**85**	P	**Pn**	**13 50 36.9**	**-0.5**
	baz=267						
WTFS	**Witchita Falls**	**2.62**	**197**	IAmb_Lg		13 51 25.8	
	comp=Z,9.6nm,0.8s						
HHAR	**Hobbs**	**2.90**	**89**	P	**Pn**	**13 50 42.1**	**-0.2**
	baz=271						
MIAR	**Mount Ida**	**3.66**	**117**	Pn	**Pn**	**13 50 53.1**	**+0.3**
MIAR				IAmb_Lg		13 51 58.7	
	comp=Z,19nm,1.1s						
Z38A	**Mt. Pleasant**	**3.67**	**145**	IAmb_Lg		13 51 58.8	
	comp=Z,43nm,0.8s						
UALR	**University of**	**4.48**	**108**	IAmb_Lg		13 52 20.3	
	comp=Z,17nm,1.0s						
POST	**Post**	**4.58**	**227**	IAmb_Lg		13 52 23.8	
	comp=Z,12nm,0.8s						
P38A	**Dawn**	**4.59**	**42**	IAmb_Lg		13 52 22.4	
	comp=Z,14nm,0.7s						
R40A	**Maddies Statio**	**4.65**	**63**	IAmb_Lg		13 52 22.8	
	comp=Z,48nm,1.0s						
N35A	**Tabor**	**4.81**	**17**	IAmb_Lg		13 52 39.8	
	comp=Z,28nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.88**	**305**	IAmb_Lg		13 52 33.7	
	comp=Z,14nm,0.9s						
T42A	**Van Buren**	**5.22**	**80**	IAmb_Lg		13 52 43.1	
	comp=Z,14nm,1.1s						
CCM	**Cathedral Cave**	**5.32**	**69**	IAmb_Lg		13 52 42.7	
	comp=Z,14nm,0.8s						
P40A	**Paris**	**5.41**	**52**	IAmb_Lg		13 52 51.0	
	comp=Z,28nm,1.0s						
N38A	**Joes South For**	**5.62**	**35**	IAmb_Lg		13 53 05.4	
	comp=Z,25nm,0.7s						
PBMO	**Poplar Bluff**	**5.73**	**83**	IAmb_Lg		13 53 12.6	
	comp=Z,32nm,0.8s						
L34A	**Svendsen Farm,**	**5.75**	**9**	IAmb_Lg		13 53 09.8	
	comp=Z,26nm,0.7s						
OGNE	**Ogallala**	**5.84**	**324**	IAmb_Lg		13 53 16.2	
	comp=Z,14nm,0.7s						
JCT	**Junction City**	**6.09**	**199**	IAmb_Lg		13 53 26.1	
	comp=Z,23nm,1.2s						
143A	**Socs Landing,**	**6.18**	**123**	IAmb_Lg		13 53 21.2	
	comp=Z,46nm,1.2s						
SLM	**Saint Louis**	**6.25**	**66**	IAmb_Lg		13 53 12.5	
	comp=Z,41nm,0.9s						
CGM3	**Cape Girardeau**	**6.39**	**79**	IAmb_Lg		13 53 14.6	
	comp=Z,20nm,1.0s						
K31A	**O'Neill**	**6.41**	**352**	IAmb_Lg		13 53 24.5	
	comp=Z,24nm,0.9s						
HKT	**Hockley**	**6.47**	**167**	IAmb_Lg		13 53 28.2	
	comp=Z,12nm,1.2s						
Q24A	**Divide**	**6.62**	**296**	IAmb_Lg		13 53 34.2	
	comp=Z,8.6nm,1.0s						
P43A	**Skaggs, Pawnee**	**7.16**	**60**	IAmb_Lg		13 53 53.5	
	comp=Z,33nm,1.0s						
T45A	**Paducah**	**7.18**	**81**	IAmb_Lg		13 53 54.3	
	comp=Z,38nm,0.8s						
ECSD	**EROS Data Cent**	**7.48**	**5**	IAmb_Lg		13 54 13.2	
	comp=Z,13nm,1.3s						
L40A	**Anamosa**	**7.57**	**38**	IAmb_Lg		13 53 56.5	
	comp=Z,31nm,0.8s						
HDIL	**Hopedale**	**7.74**	**54**	IAmb_Lg		13 54 06.6	
	comp=Z,24nm,0.8s						
PLAL	**Pickwick Lake**	**7.80**	**97**	IAmb_Lg		13 54 04.8	
	comp=Z,31nm,1.3s						
WVT	**Waverly**	**7.84**	**88**	IAmb_Lg		13 54 20.5	
	comp=Z,16nm,1.2s						
OLIL	**Olney**	**7.88**	**69**	IAmb_Lg		13 54 06.3	
	comp=Z,32nm,1.1s						
N23A	**Red Feather La**	**8.04**	**307**	IAmb_Lg		13 54 18.2	
	comp=Z,7.2nm,0.7s						
833A	**Chaparral WMA,**	**8.09**	**192**	IAmb_Lg		13 54 07.7	
	comp=Z,23nm,0.9s						
Z47A	**Carrollton**	**8.37**	**109**	IAmb_Lg		13 54 30.1	
	comp=Z,23nm,1.1s						
JFWS	**Jewell Farm**	**8.68**	**38**	IAmb_Lg		13 54 41.9	
	comp=Z,25nm,0.8s						
RWWY	**Rawlins**	**9.27**	**309**	IAmb_Lg		13 54 56.7	
	comp=Z,26nm,1.1s						
RSSD	**Black Hills**	**9.28**	**330**	IAmb_Lg		13 55 10.3	
	comp=Z,8.2nm,0.8s						
SPMN	**Marine on St.**	**9.62**	**20**	IAmb_Lg		13 54 57.9	
	comp=Z,23nm,1.2s						

IDC 10 14:34:52.2±396.0**, 67°.00N**×**39°.42E, h0**^{km}**, Error ellipse: s-maj=158.4km s-min=144.9km az=83.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I37NO	**I37NO**	**8.06**	**294**	I	I	15 25 30.0	
	baz=94,slow=326,SNR=1.1						
I31KZ	**AKTYUBINSK INF**	**19.10**	**141**	I	I	16 33 30.0	
	baz=338,slow=332,SNR=1.9						
I46RU	**ZALESOVO INFRA**	**25.20**	**99**	I	I	17 10 50.0	
	baz=320,slow=329,SNR=1.1						

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*IDC **10** 14:41:53.5±0.8, 64°.34S×174°.22E, h0^{km}, mb4.5/4, mbtmp4.5/5, ML4.4/1, MS4.1/26, Error ellipse: s-maj=42.3km s-min=20.8km az=60.0*

*GCMT **10** 14:41:53.6±0.3, 64°.18S±0°.01×175°.44E±0°.05, h13^{km}±2^{km}, MW5.0/76, Moment Tensor Solution. s22,c25; s76,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.02±.19; $M_{\theta\theta}$3.04±.15; $M_{\phi\phi}$-2.01±.13; $M_{r\theta}$-3.40±.72; $M_{\theta\phi}$-0.54±.12; $M_{\phi r}$1.24±.46; Best double couple: $M_0$4.29500×10^{16} NP1:ϕ_s119.00000°, δ79.00000°, λ-66.00000°. NP2: ϕ_s233.00000°, δ26.00000°, λ-154.00000°. Principal axes: T 5.1350, Plg30.0000°, Azm190.0000°; N -1.6700, Plg23.0000°, Azm294.0000°; P -3.4550, Plg50.0000°, Azm56.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **10** 14:41:54.6±2.0, 64°.39S±0°.09×174°.8E±0°.7, h11^{km}±6^{km}, mb4.6/10 Error ellipse: s-maj=42.6km s-min=6.9km az=75.0*

ISC 10 14:41:54.5±0.7**, 64°.37S**±0°.09×**174°.7E**±0°.2**, h10**^{km}**, n70,** σ1^{s}.**02**/27**, mb4.7**/7**, MS4.1**/28**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**12.68**	**314**	Pn	**Pn**	**14 44 56.5**	**+1.8**
SBA	**Scott Base**	**13.77**	**187**	Pn	**Pn**	**14 45 09.0**	**-0.4**
VNDA	**Vanda**	**13.80**	**192**	Pn	**Pn**	**14 45 09.5**	**-0.4**
	1.8nm,0.3s,baz=40,slow=19,SNR=69						
VNDA				LR	LR	14 49 19.4	
	comp=Z,1µm,18.7s,baz=54,slow=32						
	12nm,0.7s						
VNDA	**Vanda**	**13.80**	**192**		**Pn**	**14 45 09.7**	**-0.2**
WHZ	**Wether Hill Ro**	**18.89**	**345**	P	**Pn**	**14 46 15.3**	**-0.1**
WHZ				IAmb	IAmb	14 46 15.6	
	comp=Z,35nm,1.4s						
ODZ	**Otahua Downs**	**19.49**	**351**	P	**Pn**	**14 46 22.4**	**-0.3**
ODZ				IAmb	IAmb	14 46 51.0	
	comp=Z,35nm,1.4s						
RPZ	**Rata Peaks**	**20.79**	**353**	LR	LR	14 53 02.1	
	comp=Z,695nm,19.7s,baz=185,slow=32						
QSPA	**South Pole Qui**	**25.72**	**180**	P	**P**	**14 47 24.8**	**0.0**
	comp=Z,22nm,1.0s,baz=33,slow=4.6,SNR=29						
QSPA				LR	LR	14 56 23.4	
	comp=Z,842nm,18.6s,baz=72,slow=34						
	comp=Z,22nm,1.0s						
QSPA	**South Pole Qui**	**25.72**	**180**	P	**P**	**14 47 25.0**	**+0.2**
URZ	**Urewera**	**26.18**	**4**	LR	LR	14 55 48.3	
	comp=Z,528nm,21.2s,baz=240,slow=32						
STKA	**Stephens Creek**	**38.44**	**312**	LR	LR	15 02 17.2	
	comp=Z,150nm,20.1s,baz=157,slow=32						
MAW	**Mawson**	**39.67**	**214**	LR	LR	15 05 47.5	
	comp=Z,640nm,18.4s,baz=172,slow=36						
DZM	**Mont Dzumac**	**42.63**	**349**	*e*LR	LR	15 01 21.6	
	comp=Z,638nm,26.4s						
DZM	**Mont Dzumac**	**42.63**	**349**	LR	LR	15 06 31.5	
	comp=Z,313nm,18.2s,baz=204,slow=35						
PMSA	**Palmer Station**	**44.21**	**148**	LR	LR	15 04 59.0	
	comp=Z,156nm,19.8s,baz=196,slow=31						
SNAA	**Sanae**	**44.22**	**181**	LR	LR	15 07 32.5	
	comp=Z,286nm,18.6s,baz=184,slow=35						
SNAA	**Sanae**	**44.22**	**181**	P	**P**	**14 50 02.1**	**-1.1**
SNAA				IAmb	IAmb	14 50 10.9	
	comp=Z,13nm,1.2s						
KOUNC	**Koumac, New Ca**	**44.34**	**346**	P	**P**	**14 50 03.5**	**-1.1**
RAR	**Rarotonga**	**46.36**	**34**	LR	LR	15 05 10.0	
	comp=Z,225nm,19.5s,baz=194,slow=30						
H01W1	**Cape Leeuwin H**	**46.47**	**279**	T	T	15 40 56.1	
	baz=148,slow=76,SNR=47						
H01W2	**Cape Leeuwin H**	**46.48**	**279**	T	T	15 40 57.3	
	baz=148,slow=76,SNR=44						
H01W3	**Cape Leeuwin H**	**46.49**	**279**	T	T	15 40 57.0	
	baz=148,slow=76,SNR=43						
MSVF	**Nonsavu**	**46.65**	**4**	LR	LR	15 06 09.7	
	comp=Z,203nm,20.9s,baz=154,slow=31						
NWAO	**Narrogin (SRO)**	**46.84**	**284**	LR	LR	15 05 22.9	
	comp=Z,209nm,19.8s,baz=244,slow=30						
TBI	**Tubuai**	**47.24**	**47**	*e*LR	LR	15 03 19.7	
	comp=Z,2µm,28.5s						
TBI				*e*LR	LR	15 03 20.0	
	comp=Z,5µm,25.0s						
TBI	**Tubuai**	**47.24**	**47**	*e*T	T	15 40 23.0	
	comp=Z,38nm,0.3s						
CTA	**Charters Tower**	**48.16**	**323**	LR	LR	15 07 59.0	
	comp=Z,123nm,19.8s,baz=143,slow=33						
AS31	**Alice Springs**	**48.59**	**307**	P	**P**	**14 50 39.0**	**+1.0**
ASAR	**Alice Springs**	**48.59**	**307**	P	**P**	**14 50 38.0**	**0.0**
	comp=Z,4.7nm,1.1s,baz=154,slow=7.5,SNR=20						
ASAR				PcP	**PcP**	**14 52 01.8**	**-1.7**
	comp=Z,0.5nm,0.9s,baz=145,slow=4.1,SNR=1.5						
	comp=Z,4.7nm,1.1s						
ASAR	**Alice Springs**	**48.59**	**307**	P	**P**	**14 50 38.5**	**+0.5**
AFI	**Afiamalu**	**51.26**	**17**	LR	LR	15 08 18.4	
	comp=Z,66nm,21.8s,baz=164,slow=31						
WRA	**Warramunga Arr**	**51.88**	**309**	P	**P**	**14 51 02.4**	**-0.6**
	comp=Z,4.8nm,1.1s,baz=163,slow=6.3,SNR=18						
	comp=Z,4.8nm,1.1s						
WRA	**Warramunga Arr**	**51.88**	**309**	P	**P**	**14 51 03.0**	**0.0**
WRAB	**Tennant Creek**	**51.89**	**309**	P	**P**	**14 51 02.5**	**-0.5**
WRAB				IAmb	IAmb	14 51 04.1	
	comp=Z,11nm,1.2s						
WB0	**Warramunga Arr**	**52.03**	**309**	P	**P**	**14 51 03.5**	**-0.5**
WB0				IAmb	IAmb	14 51 04.4	
	comp=Z,12nm,1.2s						
TVO	**Taravao**	**52.53**	**45**	*e*T	T	15 47 08.8	
	comp=Z,8.8nm,0.3s						
PPT2	**Papeete2**	**52.61**	**45**	*e*S	S	14 58 17.3	-18
	comp=Z,70nm,25.0s						
PPT2				*e*LR	LR	15 05 48.8	
	comp=Z,223nm,29.8s						
PPT2				*e*LR	LR	15 05 49.5	
	comp=Z,321nm,26.0s						
PPT2	**Papeete2**	**52.61**	**45**	*e*T	T	15 47 06.2	
	comp=Z,7.7nm,0.3s						
RKT	**Rikitea**	**52.62**	**63**	*e*T	T	15 46 55.5	
	comp=Z,10nm,0.2s						
PPT	**Papeete**	**52.63**	**45**	LR	LR	15 07 23.9	
	comp=Z,88nm,18.9s,baz=196,slow=29						
MEH	**Mehetia**	**52.81**	**46**	*e*T	T	15 47 14.8	
	comp=Z,13nm,0.2s						
VAH	**Vaihoa**	**55.43**	**46**	*e*T	T	15 50 35.8	
	comp=Z,155nm,0.3s						
HNR	**Honiara**	**55.83**	**342**	LR	LR	15 11 07.2	
	comp=Z,4µm,21.4s,baz=180,slow=32						
PMG	**Port Moresby**	**58.20**	**328**	LR	LR	15 11 38.9	
	comp=Z,157nm,21.9s,baz=150,slow=31						
RPN	**Rapa Nui**	**59.85**	**90**	LR	LR	15 11 09.3	
	comp=Z,194nm,19.9s,baz=156,slow=29						
PLCA	**Paso Flores**	**63.46**	**130**	P	**P**	**14 52 26.6**	**+2.3**
	comp=Z,3.3nm,0.9s,baz=255,slow=6.4,SNR=3.8						
PLCA				LR	LR	15 13 34.6	
	comp=Z,59nm,19.0s,baz=189,slow=30						
	comp=Z,3.3nm,0.9s						
H03S2	**Juan Fernandez**	**66.62**	**120**	T	T	16 05 27.5	
	baz=204,slow=74,SNR=44						
H03S1	**Juan Fernandez**	**66.62**	**120**	T	T	16 05 29.9	
	baz=204,slow=74,SNR=52						
H03S3	**Juan Fernandez**	**66.64**	**120**	T	T	16 05 27.9	
	baz=204,slow=74,SNR=39						
LVC	**Limon Verde**	**80.48**	**123**	LR	LR	15 22 28.5	
	comp=Z,45nm,19.6s,baz=194,slow=30						
CPUP	**Villa Florida**	**80.97**	**134**	LR	LR	15 26 20.4	
	comp=Z,49nm,19.9s,baz=206,slow=33						
SUR	**Sutherland**	**81.41**	**202**	LR	LR	15 26 44.9	
	comp=Z,364nm,22.0s,baz=166,slow=33						
BOSA	**Boshof**	**84.28**	**207**	LR	LR	15 28 33.0	
	comp=Z,198nm,21.7s,baz=176,slow=33						
LPAZ	**La Paz**	**86.56**	**121**	LR	LR	15 24 01.6	
	comp=Z,36nm,21.6s,baz=178,slow=29						
NNA	**Nana**	**87.08**	**112**	LR	LR	15 23 53.7	
	comp=Z,27nm,20.4s,baz=175,slow=29						
LBTB	**Lobatse**	**87.70**	**208**	LR	LR	15 31 34.1	
	comp=Z,156nm,18.3s,baz=180,slow=34						
H08S2	**Diego Garcia H**	**88.39**	**256**	T	T	16 33 44.2	
	baz=154,slow=76,SNR=55						
H08S1	**Diego Carcia H**	**88.40**	**256**	T	T	16 33 46.3	
	baz=154,slow=76,SNR=41						
H08S3	**Diego Garcia H**	**88.42**	**256**	T	T	16 33 45.8	
	baz=154,slow=76,SNR=46						
ATAH	**Atahualpa**	**90.84**	**108**	LR	LR	15 26 06.0	
	comp=Z,63nm,19.7s,baz=180,slow=29						
H06S1	**SOCORRO T**	**100.16**	**68**	T	T	16 46 51.9	
	SNR=13						
H02S1	**DAWSON INLET T**	**124.14**	**35**	T	T	17 17 01.6	
	SNR=64						
MKAR	**Makanchi Array**	**131.81**	**293**	PKP	**PKPdf**	**15 01 05.5**	**-1.1**
	comp=Z,0.5nm,1.0s,baz=126,slow=2.5,SNR=2.8						
ILAR	**Eielson Array**	**131.88**	**21**	PKP	**PKPdf**	**15 01 05.0**	**-1.2**
	comp=Z,1.2nm,0.9s,baz=235,slow=2.9,SNR=9.3						
YKA	**Yellowknife Ar**	**136.95**	**40**	PKP	**PKPdf**	**15 01 14.9**	**-0.8**
	comp=Z,0.7nm,0.9s,baz=206,slow=2.6,SNR=6.8						
KBZ	**Khabaz**	**146.13**	**256**	PKPbc	**PKPbc**	**15 01 33.2**	**-0.5**
	comp=Z,4.2nm,0.9s,baz=216,slow=5.1,SNR=5.9						
BRTR	**Keskin Array B**	**146.52**	**242**	PKPbc	**PKPdf**	**15 01 34.4**	**+0.6**
	comp=Z,2.3nm,0.8s,baz=137,slow=5.3,SNR=13						
NRIK	**Noril'sk**	**146.52**	**320**	PKPbc	**PKPdf**	**15 01 32.7**	**+0.1**
	comp=Z,1.6nm,0.4s,baz=256,slow=2.5,SNR=4.4						
SCHQ	**Schefferville**	**148.70**	**78**	PKPbc	**PKiKP**	**15 01 42.2**	**+0.3**
	comp=Z,7.3nm,1.0s,baz=230,slow=16,SNR=2.5						
ESDC	**Sonseca Array**	**155.26**	**183**	PKPab	**PKPab**	**15 02 14.2**	**+2.1**
	comp=Z,0.6nm,0.9s,baz=179,slow=3.3,SNR=4.2						

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*JMA **10** 14:43:22.7±1.0, 47°N±7°×15°3E±1°0, h30^{km}, MV4.3/14, KURILE ISLANDS REGION*

*SKHL **10** 14:43:24.1±0.6, 46°.50N×153°.50E, h54^{km}±4^{km}, mb4.9/5*

*MOS **10** 14:43:24.8±1.5, 46°.71N×153°.13E, h58^{km}, mb4.3/1, Error ellipse: s-maj=15.6km s-min=9.1km az=45.2*

*IDC **10** 14:43:28.0±2.7, 46°.80N×152°.98E, h65^{km}±24^{km}, mb3.4/12, mbtmp3.7/17, Error ellipse: s-maj=26.7km s-min=14.9km az=142.0*

ISC 10 14:43:24.4±0.7**, 46°.44N**±0°.09×**153°.38E**±0°.08**, h50**^{km}**, n53,** σ1^{s}.**97**/63**, mb3.8**/11**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**4.04**	**255**	*e*PN	**Pn**	**14 44 24.4**	**+0.7**
KUR				*e*S	**Sn**	**14 45 10.2**	**+0.5**
KUR				pmax	pmax		
	comp=E,45nm,0.2s						
KUR				pmax	pmax		
	comp=Z,106nm,0.2s						
KUR				pmax	pmax		
	comp=N,41nm,0.3s						
KUR				smax	smax		
	comp=E,197nm,0.6s						
KUR				smax	smax		
	comp=N,127nm,0.4s						
KUR	**Kuril'sk**	**4.04**	**255**	*e*P	**Pn**	**14 44 24.6**	**+0.9**

KUR				AMB	AMB	14 44 27.2	
	comp=N,110nm,0.3s						
KUR				*e*S	**Sn**	**14 45 10.2**	**+0.5**
KUR				A	A	14 45 29.9	
	comp=N,130nm,0.5s						
KUR				A	A	14 45 29.9	
	comp=N,200nm,0.5s						
SKR	**Severo-Kuril's**	**4.62**	**22**	*e*P	**Pn**	**14 44 31.0**	**-0.5**
SKR				AMB	AMB	14 44 32.3	
	comp=N,20nm,0.5s						
SKR				*e*S	**Sn**	**14 45 20.6**	**-3.2**
SKR				A	A	14 45 30.1	
	comp=N,60nm,0.5s						
SKR				A	A	14 45 30.1	
	comp=N,10.0nm,0.5s						
SHO	**Shikotan**	**5.30**	**243**	*e*PN	**Pn**	**14 44 40.6**	**-0.3**
SHO				pmax	pmax		
	comp=E,31nm,0.4s						
SHO				pmax	pmax		
	comp=Z,36nm,0.4s						
SHO				pmax	pmax		
	comp=N,28nm,0.3s						
SHO	**Shikotan**	**5.30**	**243**	*e*P	**Pn**	**14 44 40.8**	**-0.1**
SHO				AMB	AMB	14 44 44.0	
	comp=N,40nm,0.3s						
SHO				*e*S	**Sn**	**14 45 38.7**	**-2.0**
SHO				A	A	14 46 04.6	
	comp=N,80nm,0.4s						
SHO				A	A	14 46 04.6	
	comp=N,120nm,0.4s						
PAU	**Pauzhetka**	**5.51**	**23**	*e*P	**Pn**	**14 44 44.2**	**+0.4**
PAU				AMB	AMB	14 44 44.8	
	comp=N,40nm,0.3s						
PAU				*e*S	**Sn**	**14 45 43.4**	**-2.4**
PAU				A	A	14 45 47.7	
	comp=N,40nm,0.2s						
PAU				A	A	14 45 47.7	
	comp=N,80nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**5.83**	**248**	*e*PN	**Pn**	**14 44 50.1**	**+1.9**
YUK				*e*S	**Sn**	**14 45 56.3**	**+2.6**
YUK				pmax	pmax		
	comp=Z,123nm,0.2s						
YUK				pmax	pmax		
	comp=N,47nm,0.4s						
YUK				pmax	pmax		
	comp=E,55nm,0.3s						
YUK				smax	smax		
	comp=E,311nm,0.6s						
YUK				smax	smax		
	comp=N,273nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.83**	**248**	*e*P	**Pn**	**14 44 49.4**	**+1.2**
YUK				AMB	AMB	14 44 54.1	
	comp=N,120nm,0.4s						
YUK				*e*S	**Sn**	**14 45 54.4**	**+0.7**
YUK				A	A	14 46 21.6	
	comp=N,270nm,0.6s						
YUK				A	A	14 46 21.6	
	comp=N,310nm,0.6s						
RUSJ	**Misakicho**	**6.20**	**251**	*e*PN	**Pn**	**14 44 56.3**	**+3.0**
RUSJ				*e*S	**Sn**	**14 46 07.0**	**+4.2**
NEM2	**Nemuro 2**	**6.24**	**243**	*e*P	**Pn**	**14 44 53.4**	**-0.3**
NEM2				*e*S	**Sn**	**14 46 00.8**	**-2.9**
NMR	**Nemuro--Hokkai**	**6.24**	**243**	*e*PN	**Pn**	**14 44 53.7**	**-0.2**
NMR	**Nemuro--Hokkai**	**6.24**	**243**	*e*P	**Pn**	**14 44 53.9**	**0.0**
NMR				*e*S	**Sn**	**14 46 02.3**	**-1.6**
JRA	**Rausu**	**6.35**	**250**	*e*P	**Pn**	**14 44 57.6**	**+2.2**
JNK	**Nakash**	**6.77**	**248**	*e*P	**Pn**	**14 45 02.5**	**+1.4**
AKK	**Akkeshi**	**6.98**	**244**	*e*P	**Pn**	**14 45 04.3**	**+0.3**
JAK	**Akkeshi**	**7.08**	**244**	*e*P	**Pn**	**14 45 05.1**	**-0.3**
JAK				*e*S	**Sn**	**14 46 20.8**	**-3.7**
JTKR	**Abashiri--Toko**	**7.13**	**253**	*e*P	**Pn**	**14 45 07.9**	**+1.8**
PETK	**Petropavlovsk-**	**7.23**	**21**	P	**Pn**	**14 45 06.5**	**-1.0**
	comp=N,0.9nm,0.7s,baz=178,slow=12,SNR=19						
YSS	**Yuzh-Sakhalins**	**7.33**	**278**	*e*PN	**Pn**	**14 45 11.7**	**+3.0**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YSS	**Yuzh-Sakhalins**	**7.33**	**278**	*e*P	**Pn**	**14 45 11.2**	**+2.5**
YSS				AMB	AMB	14 45 15.4	
	comp=Z,10.0nm,0.6s						
PET	**Petropavlovsk**	**7.42**	**25**	*e*P	**Pn**	**14 45 09.6**	**-0.3**
PET				AMB	AMB	14 45 13.1	
	comp=Z,10.0nm,0.8s						
PET				*e*S	**Sn**	**14 46 28.8**	**-3.8**
JAR	**Ashorobuto**	**7.52**	**249**	*e*P	**Pn**	**14 45 12.8**	**+1.5**
JOB	**Onbets**	**7.67**	**246**	*e*P	**Pn**	**14 45 14.0**	**+0.5**
JOB				*e*S	**Sn**	**14 46 35.4**	**-3.5**
JKK2	**Kamakawa 2**	**7.94**	**255**	*e*P	**Pn**	**14 45 19.6**	**+2.4**
JKA	**Kamikawa-asahi**	**7.95**	**257**	*e*P	**Pn**	**14 45 19.8**	**+2.5**
ASAJ	**Asahikawa**	**7.96**	**257**	P	**Pn**	**14 45 19.8**	**+2.4**
	comp=Z,6.7nm,0.5s,baz=73,slow=19,SNR=23						
JCH	**Churui**	**8.12**	**245**	*e*P	**Pn**	**14 45 19.7**	**+0.2**
JCH				*e*S	**Sn**	**14 46 46.1**	**-3.7**
TYV	**Tymovskoe**	**8.37**	**306**	*e*P	**Pn**	**14 45 24.8**	**+1.9**
TYV				AMB	AMB	14 45 26.2	
	comp=Z,20nm,0.7s						
JNBK	**Urakawa-nobuka**	**8.68**	**245**	*e*P	**Pn**	**14 45 26.6**	**-0.6**
JNBK				*e*S	**Sn**	**14 46 59.4**	**-4.2**
JANG	**Nango**	**10.55**	**239**	*e*P	**Pn**	**14 45 50.7**	**-2.1**
JANG				*e*S	Sn	14 47 40.4	-9.0
MJAR	**Matsushiro Arr**	**15.05**	**234**	P	**P**	**14 46 57.2**	**-1.0**
	comp=Z,1.4nm,0.6s,baz=42,slow=8.8,SNR=7.7						
USRK	**Ussuriysk Ar.**	**15.21**	**269**	P	**Pn**	**14 46 55.6**	**-0.2**
	comp=Z,4.9nm,0.6s,baz=67,slow=11,SNR=2.6						
SEY	**Seymchan**	**16.54**	**358**	P	**Pn**	**14 47 11.1**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=162,slow=14,SNR=5.6						
KSRS	**Korea Array**	**20.89**	**254**	P	**P**	**14 48 03.0**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=61,slow=9.5,SNR=5.6						
	comp=Z,1.2nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**28.86**	**153**	T	T	15 20 43.3	
	baz=340,slow=76,SNR=134						
H11N1	**WAKE ISLAND Hy**	**28.87**	**153**	T	T	15 20 42.7	
	baz=340,slow=76,SNR=139						
H11N3	**WAKE ISLAND Hy**	**28.88**	**153**	T	T	15 20 45.0	
	baz=340,slow=76,SNR=109						
H11S1	**WAKE ISLAND Hy**	**29.95**	**154**	T	T	15 22 03.1	
	baz=341,slow=76,SNR=182						
H11S3	**WAKE ISLAND Hy**	**29.96**	**154**	T	T	15 22 05.9	
	baz=341,slow=76,SNR=224						
H11S2	**WAKE ISLAND Hy**	**29.97**	**154**	T	T	15 22 03.9	
	baz=341,slow=76,SNR=193						
INK	**Inuvik**	**41.81**	**32**	P	**P**	**14 51 10.2**	**+1.6**
	comp=Z,0.7nm,0.5s,baz=297,slow=6.3,SNR=6.4						
	comp=Z,0.7nm,0.5s						
MKAR	**Makanchi Array**	**47.25**	**298**	P	**P**	**14 51 50.9**	**-1.4**
	comp=Z,0.3nm,0.5s,baz=73,slow=6.9,SNR=5.4						
MKAR				PcP	**PcP**	**14 53 23.2**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=81,slow=2.0,SNR=2.3						
	comp=Z,0.3nm,0.5s						
YKA	**Yellowknife Ar**	**51.06**	**37**	P	**P**	**14 52 22.3**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=299,slow=7.2,SNR=4.0						
	comp=Z,0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**52.48**	**257**	P	**P**	**14 52 32.3**	**0.0**
	comp=Z,0.4nm,0.3s,baz=36,slow=7.2,SNR=4.7						
	comp=Z,0.4nm,0.3s						
SUMG	**Summit**	**60.99**	**4**	*i* P	**P**	**14 53 32.0**	**-0.4**
FINES	**FINESS Array B**	**64.40**	**335**	P	**P**	**14 53 53.4**	**-1.3**
	comp=Z,1.1nm,0.4s,baz=28,slow=6.8,SNR=15						
	comp=Z,1.1nm,0.4s						
PDAR	**Pinedale Array**	**64.78**	**54**	P	**P**	**14 53 59.6**	**+1.7**
	comp=Z,0.2nm,0.4s,baz=286,slow=6.5,SNR=2.5						
	comp=Z,0.2nm,0.4s						
NB2	**NORSAR Subarra**	**68.58**	**341**	P	**P**	**14 54 20.4**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=26,slow=6.5						
NOA	**NORSAR Array B**	**68.58**	**341**	P	**P**	**14 54 21.1**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=29,slow=6.6,SNR=8.6						
	comp=Z,1.1nm,0.6s						
AKASG	**Malin Array Be**	**71.91**	**326**	P	**P**	**14 54 40.6**	**-1.4**
	comp=Z,0.9nm,0.5s,baz=27,slow=5.9,SNR=2.7						
	comp=Z,0.9nm,0.5s						
ASAR	**Alice Springs**	**71.97**	**199**	P	**P**	**14 54 45.7**	**+3.1**
	comp=Z,0.4nm,0.8s,baz=11,slow=5.1,SNR=4.5						
	comp=Z,0.4nm,0.8s						
TXAR	**Lajitas Array**	**77.48**	**61**	P	**P**	**14 55 17.1**	**+2.3**
	comp=Z,0.4nm,0.4s,baz=303,slow=4.6,SNR=8.2						
	comp=Z,0.4nm,0.4s						
BRTR	**Keskin Array B**	**78.74**	**317**	P	**P**	**14 55 21.6**	**0.0**
	comp=Z,0.9nm,0.8s,baz=61,slow=5.8,SNR=4.4						
	comp=Z,0.9nm,0.8s						

SKHL 10 14:45:12.2±0.2**, 44°.70N**×**149°.20E, h35**^{km}±2^{km}**, mb4.0**/4**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.09**	**300**	*e*P	Pn	14 45 30.6	-0.3
KUR				AMB	AMB	14 45 30.9	
	40nm,0.4s						
KUR				*i* S	Sn	14 45 44.5	-0.2
KUR				A	A	14 45 48.4	
	210nm,0.4s						
KUR				A	A	14 45 48.4	
	90nm,0.4s						
SHO	**Shikotan**	**1.89**	**245**	*e*P	Pn	14 45 41.9	-0.1
SHO				AMB	AMB	14 45 42.2	
	60nm,0.5s						
SHO				*e*S	Sn	14 46 03.2	-1.4
SHO				A	A	14 46 10.5	
	110nm,0.5s						
SHO				A	A	14 46 10.5	
	170nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.48**	**256**	*e*P	Pn	14 45 50.7	+0.6
YUK				*e*S	Sn	14 46 18.9	-0.3
NMR	**Nemuro--Hokkai**	**2.83**	**243**	*e*S	Sn	14 46 28.3	+0.5
AKK	**Akkeshi**	**3.57**	**243**	*e*S	Sn	14 46 46.2	+0.2

WEL 10 14:46:38.8, 42°S±8°×**17°4E**±1°1**, h9**^{km}±19^{km}**, M2.1**/4**, ML2.4**/8**, MLv2.1**/4**, Error ellipse: s-maj=0.0km s-min=0.0km az=99.2, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHZ	**Kahutara**	**0.04**	**158**	P	Pg	14 46 40.9	+0.4
GVZ	**Greta Valley S**	**0.69**	**211**	P	Pb	14 46 53.7	+0.8
BSWZ	**Blackbirch Sta**	**0.72**	**22**	P	Pb	14 46 53.3	-0.1
THZ	**Tophouse**	**0.77**	**323**	P	Pb	14 46 54.0	-0.4
THZ	**Tophouse**	**0.77**	**323**	P	Pg	14 46 53.6	0.0
TUWZ	**Tuamarina**	**1.00**	**18**	P	Pn	14 46 58.7	-0.3
LTZ	**Lake Taylor**	**1.01**	**246**	P	Pn	14 46 58.9	-0.1
MRNZ	**Matariki Terra**	**1.14**	**330**	P	Pn	14 47 00.8	-0.1
MRNZ	**Matariki Terra**	**1.14**	**330**	P	Pn	14 47 01.1	+0.3
TKNZ	**Takaka Hill**	**1.41**	**343**	P	Pg	14 47 05.9	+0.1
DSZ	**Denniston Nort**	**1.43**	**296**	P	Pg	14 47 06.2	0.0
CAW	**Cannon Point**	**1.72**	**43**	P	Pn	14 47 08.5	-0.3
MRZ	**Mangatainoka R**	**2.31**	**43**	P	Pn	14 47 16.5	-0.5
CPWZ	**Castlepoint**	**2.49**	**55**	P	Pg	14 47 26.0	-0.5

IDC ***10*** *14:54:30.4±2.5, 10°.55N×125°.86E, h0^{km}, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=109.9km s-min=25.2km az=58.0*

MAN ***10*** *14:54:44.1, 10°.46N×125°.51E, h57^{km}, mb4.6, ML3.4, MS3.3*

ISC 10 14:54:42.8±1.0**, 10°.49N**±0°.05×**125°.54E**±0°.05**, h90**^{km}±8^{km}**, n20, σ2^{s}04**/33**, mb3.1**/4**, 9C-7D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.70**	**184**	⇑*e*P	**Pn**	**14 54 59.0**	**-0.4**
SCPH				*e*S	**Sn**	**14 55 11.2**	**-0.5**
MSLP	**Maasin**	**0.76**	**242**	⇑*i*P	**Pn**	**14 54 59.4**	**-0.5**
MSLP				*i* S	**Sn**	**14 55 14.4**	**+1.8**
GLSP	**General Luna,**	**0.91**	**140**	⇑*e*P	**Pn**	**14 55 00.9**	**-0.6**
GLSP				*e*S	**Sn**	**14 55 15.9**	**+0.4**
TABP	**Talibon, Bohol**	**1.25**	**252**	⇑*i*P	**Pn**	**14 55 05.9**	**+0.4**
TABP				*i* S	**Sn**	**14 55 20.1**	**-2.5**
GHBP	**Garcia Hernand**	**1.47**	**235**	⇑*i*P	**Pn**	**14 55 08.5**	**+0.3**
GHBP				*i* S	**Sn**	**14 55 29.1**	**+1.7**
BUTP	**Butuan**	**1.51**	**177**	⇓*e*P	**Pn**	**14 55 10.0**	**+1.3**
BUTP				*e*S	**Sn**	**14 55 32.0**	**+3.7**
LLP	**Lapu-Lapu**	**1.56**	**264**	⇑*e*P	**Pn**	**14 55 10.1**	**+0.8**
LLP				*e*S	**Sn**	**14 55 30.0**	**+0.6**
TBP	**Tagbilaran**	**1.83**	**245**	⇑*e*P	**Pn**	**14 55 13.8**	**+0.9**
TASP	**Talacogon, Agu**	**2.04**	**173**	⇓*i*P	**Pn**	**14 55 18.3**	**+2.7**
TASP				*i* S	**Sn**	**14 55 47.6**	**+7.1**
CGP	**Cagayan de Oro**	**2.19**	**203**	⇓*e*P	**Pn**	**14 55 20.1**	**+2.6**
CGP				*e*S	**Sn**	**14 55 42.8**	**-1.2**
CNP	**Catarman**	**2.19**	**337**	⇓*e*P	**Pn**	**14 55 19.0**	**+1.5**
CNP				*e*S	**Sn**	**14 55 46.3**	**+2.3**
LSIP	**Lazi, Siquijor**	**2.31**	**235**	⇓*i*P	**Pn**	**14 55 19.4**	**+0.2**
LSIP				*e*S	**Sn**	**14 55 46.9**	**-0.2**
BIPH	**Bislig**	**2.43**	**160**	⇓*i*P	**Pn**	**14 55 20.2**	**-0.5**
BIPH				*i* S	**Sn**	**14 55 50.3**	**+0.6**
CDOP	**Cateel, Davao**	**2.83**	**162**	⇓*i*P	Pn	14 55 21.7	-4.4
CDOP				*i* S	**Sn**	**14 55 59.2**	**-0.1**
CNOP	**Candoni, Negro**	**2.93**	**257**	⇑*e*P	**Pn**	**14 55 28.4**	**+1.0**
CNOP				*e*S	**Sn**	**14 56 03.5**	**+1.7**
RCP	**Roxas**	**2.94**	**291**	⇑*e*P	**Pn**	**14 55 29.1**	**+1.4**
CMAR	**Chiang Mai Arr**	**26.92**	**290**	P	**P**	**15 00 16.1**	**+0.3**
	0.2nm,0.3s,baz=118,slow=9.3,SNR=1.2						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**31.45**	**164**	P	**P**	**15 00 53.4**	**-2.6**
	0.3nm,0.8s,baz=346,slow=8.7,SNR=2.3						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**34.91**	**167**	P	**P**	**15 01 24.2**	**-1.9**
	0.1nm,0.7s,baz=346,slow=6.8,SNR=5.9						
	0.1nm,0.7s						
MKAR	**Makanchi Array**	**51.42**	**323**	P	**P**	**15 03 38.3**	**-0.5**
	0.3nm,0.6s,baz=101,slow=7.5,SNR=3.9						
	0.3nm,0.6s						

IDC 10 14:55:49.6±999.0**, 57°.53N**×**32°.07E, h0**^{km}**, Error ellipse: s-maj=1052.0km s-min=75.1km az=103.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**2.92**	**104**	I	I	15 12 50.0	
	0.1nm,0.7s,baz=288,slow=310,SNR=0.6						
I31KZ	**AKTYUBINSK INF**	**16.78**	**104**	I	I	16 40 20.0	
	baz=306,slow=325,SNR=3.1						
I46RU	**ZALESOVO INFRA**	**29.28**	**74**	I	I	17 57 20.0	
	baz=300,slow=330,SNR=1.2						

JMA ***10*** *14:58:12.7±0.2, 36°N±2°×13°5E±°, h352^{km}±1^{km}, MV2.6/10, NW OFF KINKI DISTRICT*

IDC ***10*** *14:58:12.1±1.4, 35°.91N×135°.56E, h369^{km}±24^{km}, mb2.4/2, mbtmp3.0/4, Error ellipse: s-maj=54.4km s-min=24.4km az=40.0*

ISC 10 14:58:12.1±1.1**, 35°.8N**±0°.2×**135°.5E**±0°.1**, h350**^{km}**, n6, σ1^{s}46**/8**, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKY	**Yasaka**	**0.32**	**245**	*e*P	**Pn**	**14 58 57.3**	**+1.2**
JKY				*e*S	**S**	**14 59 32.2**	**+0.9**
JWT	**Wachi**	**0.48**	**185**	*e*P	**Pn**	**14 58 57.6**	**+1.2**
JWT				*e*S	**S**	**14 59 32.5**	**+0.7**
MJAR	**Matsushiro Arr**	**2.36**	**70**	P	**Pn**	**14 59 07.0**	**+0.9**
	1.1nm,0.4s,baz=266,slow=11,SNR=12						
KSRS	**Korea Array**	**6.29**	**288**	P	**Pn**	**14 59 47.5**	**+1.4**
	1.4nm,0.6s,baz=109,slow=12,SNR=7.3						
MKAR	**Makanchi Array**	**40.73**	**303**	P	**P**	**15 05 18.2**	**-1.7**
	0.1nm,0.6s,baz=83,slow=6.2,SNR=1.3						
	0.1nm,0.6s						
WRA	**Warramunga Arr**	**55.41**	**181**	P	**P**	**15 07 10.4**	**-0.9**
	0.1nm,0.3s,baz=0.3,slow=7.6,SNR=6.5						
	0.1nm,0.3s						

IDC 10 15:18:01.3±57.0**, 20°.62S**×**177°.44W, h0**^{km}**, mb3.7**/3**, mbtmp3.7**/3**, Error ellipse: s-maj=1040.0km s-min=168.4km az=83.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.21**	**244**	P	P	15 25 22.8	-0.1
	0.7nm,0.4s,baz=90,slow=12,SNR=3.6						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**45.00**	**257**	P	P	15 26 18.4	-0.4
	0.9nm,0.6s,baz=101,slow=7.7,SNR=15						
	0.9nm,0.6s						
WRA	**Warramunga Arr**	**45.10**	**262**	P	P	15 26 19.8	+0.2
	0.2nm,0.3s,baz=95,slow=8.2,SNR=15						
	0.2nm,0.3s						

SFS ***10*** *15:21:19.6, 43°.43N×1°.65W, h22^{km}, mb3.9/8, ML4.2/12, ML4.4/11, MLv4.3/12*

LDG ***10*** *15:21:22.4±0.1, 42°.94N×1°.63W, h11^{km}, Md3.7/2, Ml3.7/59, Error ellipse: s-maj=2.2km s-min=1.6km az=129.0*

INMG ***10*** *15:21:23.9±1.8, 42°.91N×1°.62W, h7^{km}±3^{km}, ML3.4, Error ellipse: s-maj=2.4km s-min=2.0km az=96.0*

STR ***10*** *15:21:24.0±1.1, 43°N±5°×°±°, h5^{km}, MLv3.7/13, Error ellipse: s-maj=0.0km s-min=0.0km az=55.0, preliminary*

MDD ***10*** *15:21:24.9±0.1, 42°.94N×1°.61W, h12^{km}, mb_Lg3.6/39, Error ellipse: s-maj=1.2km s-min=0.8km az=156.0*

IGIL ***10*** *15:21:25.5, 42°.94N×1°.61W, h12^{km}*

ISC 10 15:21:21.5±0.9**, 42°.96N**±0°.02×**1°.60W**±0°.02**, h11**^{km}±6^{km}**, n169, σ2^{s}38**/360**, 3C-7D, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EORO	**Oroz-Betelu**	**0.22**	**107**	Pg	**Pg**	**15 21 26.8**	**+0.6**
EORO				Sg	**Sg**	**15 21 29.8**	**+0.3**
EORO				*i* Vmb_Lg		15 21 32.4	
EALK	**Alkurruntz**	**0.27**	**14**	Pg	**Pb**	**15 21 29.6**	**+1.2**
EALK				Sg	**Sb**	**15 21 34.7**	**+1.7**
EALK				*i* Vmb_Lg		15 21 36.8	
EALK	**Alkurruntz**	**0.27**	**14**	⇑Pg	**Pb**	**15 21 29.7**	**+1.2**
EALK				Sg	**Sb**	**15 21 35.2**	**+2.1**
SJPF	**Ste Jean**	**0.31**	**60**	*e*Pg	**Pb**	**15 21 29.7**	**+0.6**
SJPF				*e*Sg	**Sb**	**15 21 34.5**	**+0.2**
	3µm,0.4s						
OSSF	**Osses**	**0.39**	**40**	⇓Pg	**Pb**	**15 21 31.2**	**+0.9**
OSSF				Sg	**Sb**	**15 21 38.0**	**+1.7**
ATE	**Arette**	**0.67**	**79**	⇑Pg	**Pg**	**15 21 35.7**	**+1.2**
ATE				Sg	**Sg**	**15 21 44.7**	**+1.4**
ETSF	**Etsaut**	**0.77**	**94**	*e*Pg	**Pg**	**15 21 36.8**	**+0.5**
ETSF				*e*Sg	**Sg**	**15 21 47.5**	**+1.2**
	1µm,0.6s						
TERF	**Tercis-les-Bai**	**0.80**	**26**	⇑Pg	**Pn**	**15 21 39.7**	**+1.0**
CANF	**Canfranc**	**0.82**	**103**	⇓Pg	**Pg**	**15 21 37.6**	**+0.3**
CANF				Sg	**Sb**	**15 21 49.2**	**+0.3**
PYLO	**Lourdes**	**1.15**	**82**	Pg	**Pg**	**15 21 45.2**	**+1.7**
PYLO				Sg	**Sn**	**15 21 59.9**	**+0.8**
VIEF	**Viey**	**1.19**	**93**	Pg	**Pn**	**15 21 44.8**	**+0.6**
VIEF				Sg	**Sn**	**15 22 02.4**	**+2.0**
ECHI	**Chisagues Biel**	**1.35**	**102**	Pg	**Pb**	**15 21 47.7**	**+0.8**
ECHI				Sg	**Sg**	**15 22 05.7**	**+0.6**
ECHI				*i* Vmb_Lg		15 22 10.6	
ECHI	**Chisagues Biel**	**1.35**	**102**	Pg	**Pb**	**15 21 47.5**	**+0.6**
ECHI				Sg	**Sg**	**15 22 08.1**	**+3.1**
ELAN	**Lanestosa**	**1.37**	**282**	Pg	**Pg**	**15 21 49.3**	**+1.5**
ELAN				Sg	**Sg**	**15 22 07.4**	**+1.7**
ELAN				*i* Vmb_Lg		15 22 15.3	
EPF	**Esparros**	**1.42**	**86**	*e*Pg	**Pb**	**15 21 48.8**	**+0.7**
EPF				*e*Sg	**Sg**	**15 22 08.2**	**+0.9**
	569nm,0.4s						
ESAC	**San Caprasio**	**1.49**	**146**	Pg	**Pb**	**15 21 50.2**	**+1.0**
ESAC				Sg	**Sg**	**15 22 10.2**	**+0.7**
MLS	**Moulis**	**1.98**	**89**	Pn	**Pb**	**15 21 57.3**	**-0.2**
MLS				Pg	**Pg**	**15 22 00.4**	**+1.0**
SALF	**Salau**	**2.06**	**95**	Pn	**Pb**	**15 21 59.9**	**+1.0**
SALF				Sg	**Sg**	**15 22 28.6**	**+0.9**
ETOR	**Torete**	**2.17**	**189**	Pn	**Pn**	**15 21 59.4**	**+1.8**
ETOR				Sn	**Sn**	**15 22 24.8**	**+0.4**
ETOR				Sg	**Sg**	**15 22 31.6**	**+0.6**
LRVF	**chteau la Riv**	**2.19**	**25**	Pn	**Pb**	**15 22 03.1**	**+1.9**
ERTA	**Horta de San J**	**2.46**	**144**	Pn	**Pn**	**15 22 03.0**	**+1.4**
ERTA				Sn	**Sn**	**15 22 32.4**	**+0.6**
ERTA				Sg	**Sg**	**15 22 41.2**	**+0.5**
ERTA				*i* Vmb_Lg		15 22 49.2	
EMIR	**Miracle**	**2.54**	**113**	Pn	**Pn**	**15 22 04.6**	**+1.9**
EMIR				Sn	**Sn**	**15 22 33.5**	**0.0**
EMIR				Sg	**Sg**	**15 22 43.4**	**+0.4**
EMIR				*i* Vmb_Lg		15 22 58.6	
EPOB	**Poblet**	**2.56**	**128**	Pn	**Pn**	**15 22 04.0**	**+1.1**
EPOB				Sn	**Sn**	**15 22 34.7**	**+0.7**
EPOB				Sg	**Sg**	**15 22 42.0**	**-1.6**
EPOB				*i* Vmb_Lg		15 22 58.1	
LFF	**La Frestale**	**2.60**	**40**	*e*P	**Pb**	**15 22 07.2**	**-0.9**
LFF				*e*Sn	**Sn**	**15 22 32.4**	**-2.6**
	134nm,0.3s						
LFF				*e*Sg	**Sg**	**15 22 46.0**	**+0.9**
	71nm,0.2s						
EARI	**Arriondas**	**2.67**	**279**	Pn	**Pn**	**15 22 07.4**	**+3.0**
EARI				Sn	**Sn**	**15 22 37.2**	**+0.6**
EARI				Sg	**Sg**	**15 22 47.2**	**0.0**
EARI				*i* Vmb_Lg		15 22 57.4	
EMOS	**Mosqueruela**	**2.73**	**162**	Pn	**Pn**	**15 22 07.6**	**+2.2**
EMOS				Sn	**Sn**	**15 22 38.1**	**-0.2**
EMOS				Sg	**Sg**	**15 22 49.6**	**+0.5**
EMOS				*i* Vmb_Lg		15 22 58.3	
MTLF	**Montolieu**	**2.82**	**81**	*e*P	**Pn**	**15 22 08.5**	**+2.1**
MTLF				*e*Sn	**Sn**	**15 22 37.0**	**-3.4**
	127nm,0.5s						
MTLF	**Montolieu**	**2.82**	**81**	Pn	**Pn**	**15 22 08.9**	**+2.5**
MTLF				Sn	**Sb**	**15 22 44.7**	**-1.6**
UCM	**Universidad Co**	**2.92**	**206**	S	**Sb**	**15 22 51.0**	**+1.7**
UCM				Pn	**Pn**	**15 22 09.3**	**+1.4**
UCM				Pg	**Pg**	**15 22 17.5**	**0.0**
GUD	**Guadarrama**	**3.00**	**220**	Pn	**Pn**	**15 22 10.9**	**+1.8**
GUD				Sn	**Sn**	**15 22 44.9**	**-0.1**
GUD				Sg	**Sg**	**15 22 56.2**	**-1.6**
GUD				*i* Vmb_Lg		15 22 58.7	
RJF	**Les Rejaudoux**	**3.24**	**43**	*e*Pn	**Pn**	**15 22 12.8**	**+0.5**
RJF	**Les Rejaudoux**	**3.24**	**43**	*e*P	**Pn**	**15 22 15.6**	**+3.3**
RJF				*e*Sn	**Sn**	**15 22 48.9**	**-2.0**
	142nm,0.5s						
CHIF	**Chize**	**3.29**	**15**	Pn	**Pn**	**15 22 15.7**	**+2.9**
CHIF				Pg	**Pg**	**15 22 25.4**	**+1.0**
CAF	**Calviac**	**3.30**	**52**	*e*P	**Pn**	**15 22 14.3**	**+1.3**
CAF				*e*Sn	**Sn**	**15 22 52.6**	**+0.4**
	99nm,0.4s						
SJAF	**Saint Jean de**	**3.33**	**97**	Pn	**Pn**	**15 22 16.7**	**+3.1**
SJAF				Sn	**Sg**	**15 23 08.0**	**-0.6**
EJON	**La Jonquera**	**3.35**	**97**	Pn	**Pn**	**15 22 16.3**	**+2.6**
EJON				Sn	**Sn**	**15 22 54.4**	**+0.9**
EJON				Sg	**Sg**	**15 23 08.4**	**-0.5**
EJON				*i* Vmb_Lg		15 23 11.8	
ECHE	**Chera**	**3.40**	**172**	Pn	**Pn**	**15 22 17.3**	**+2.8**
ECHE				Pg	**Pg**	**15 22 25.6**	**-1.0**
ECHE				S	**Sb**	**15 23 04.3**	**+1.3**
ECHE	**Chera**	**3.40**	**172**	Pn	**Pn**	**15 22 16.9**	**+2.4**
ECHE				Sn	**Sn**	**15 22 55.3**	**+0.5**
ECHE				Sg	**Sg**	**15 23 09.1**	**-1.5**
ECHE				*i* Vmb_Lg		15 23 22.1	
CLAF	**Gruissan**	**3.44**	**85**	Pn	**Pn**	**15 22 18.0**	**+3.0**
ECOL	**Islas Columbre**	**3.51**	**150**	Pn	**Pn**	**15 22 17.4**	**+1.5**
ECOL				Sn	**Sn**	**15 22 57.9**	**+0.6**
ECOL				Sg	**Sg**	**15 23 13.6**	**-0.4**
EJUZ	**Juzbado, Salam**	**3.70**	**241**	Pn	**Pn**	**15 22 20.4**	**+1.7**
EJUZ				Sn	**Sn**	**15 23 02.4**	**+0.1**
EJUZ				Sg	**Sg**	**15 23 17.4**	**-3.0**
EVIV	**Cofrentes, Val**	**3.71**	**174**	Pn	**Pn**	**15 22 20.7**	**+2.0**
EVIV				Sn	**Sn**	**15 23 02.4**	**0.0**
EVIV				Sg	**Sg**	**15 23 18.4**	**-2.1**
EVIV				*i* Vmb_Lg		15 23 30.4	
ESDC	**Sonseca Array**	**3.73**	**209**	Pn	**Pn**	**15 22 19.8**	**+0.8**
ESDC				Sn	**Sn**	**15 23 01.9**	**-1.1**
ESDC				Sg	**Sg**	**15 23 19.2**	**-2.1**
MFF	**Saint Martin d**	**3.79**	**15**	*e*P	**Pn**	**15 22 22.6**	**+2.9**
MFF	**Saint Martin d**	**3.79**	**15**	*e*Pg	**Pg**	**15 22 33.8**	**-0.2**
MFF				*e*Sn	**Sn**	**15 23 02.3**	**-2.0**
	31nm,0.3s						
MFF				*e*Sg	**Sg**	**15 23 23.7**	**+0.6**
	64nm,0.4s						
ECAL	**Calabor**	**3.94**	**257**	Pn	**Pn**	**15 22 23.9**	**+2.0**
ECAL				Sn	**Sn**	**15 23 08.0**	**0.0**
ECAL				Sg	**Sg**	**15 23 25.0**	**-2.9**
ECAL				*i* Vmb_Lg		15 23 35.0	
PBRG	**Braganca**	**3.98**	**255**	*e*Pn	**Pn**	**15 22 24.6**	**+2.1**
PBRG				*e*Sg	**Sg**	**15 23 26.9**	**-2.4**
PBRG				A	A	15 23 34.2	
	36nm,0.4s						
PAB	**San Pablo**	**3.99**	**212**	Pn	**Pn**	**15 22 23.4**	**+0.8**
PAB				Sn	**Sn**	**15 23 09.7**	**+0.3**
PAB				Sg	**Sg**	**15 23 26.7**	**-3.0**
PAB				*i* Vmb_Lg		15 23 32.5	
EPON	**Pontenova**	**4.08**	**277**	Pn	**Pn**	**15 22 27.1**	**+3.3**
EPON				Sn	**Sn**	**15 23 11.2**	**-0.2**
EPON				Sg	**Sg**	**15 23 30.8**	**-1.6**
EPON				*i* Vmb_Lg		15 23 52.8	
LASF	**Ste Croix**	**4.12**	**72**	*e*P	**Pn**	**15 22 26.2**	**+1.8**
LASF				*e*Sn	**Sn**	**15 23 08.9**	**-3.7**
	202nm,0.7s						
TCF	**Toulx Ste Croi**	**4.30**	**38**	*e*Pn	**Pn**	**15 22 26.7**	**-0.1**
TCF	**Toulx Ste Croi**	**4.30**	**38**	*e*P	**Pn**	**15 22 29.4**	**+2.6**
TCF				*e*Sn	**Sn**	**15 23 14.8**	**-2.1**
	31nm,0.2s						
ETOB	**Tobarra**	**4.31**	**179**	P	**Pn**	**15 22 29.8**	**+2.8**
ETOB	**Tobarra**	**4.31**	**179**	Pn	**Pn**	**15 22 29.7**	**+2.6**
ETOB				Sn	**Sn**	**15 23 16.8**	**-0.5**
ETOB				Sg	**Sg**	**15 23 37.2**	**-2.6**
ETOB				*i* Vmb_Lg		15 23 50.4	
AFON	**Font Roja**	**4.36**	**169**	Pn	**Pn**	**15 22 30.1**	**+2.4**

AFON				Sn	Sn	15 23 19.0	+0.4
AFON				Sg	Sg	15 23 39.1	-2.5
AFON				*i* Vmb_Lg		15 23 46.2	
EBEN2	**Beniarda presa**	4.41	166	Pn	Pn	15 22 30.0	+1.6
EBEN2				Sn	Sn	15 23 19.6	0.0
EBEN2				*i* Vmb_Lg		15 23 52.1	
MVO	**Moncorvo**	4.42	248⇓	*e*Pn	Pn	15 22 30.4	+1.8
MVO				*e*Sn	Sn	15 23 21.2	+1.1
MVO				*e*Sg	Sb	15 23 37.5	+5.0
MVO				A	A	15 23 44.4	
	92nm,0.4s						
EPLA	**Plasencia**	4.44	231	Pn	Pn	15 22 30.0	+1.2
EPLA				Sn	Sn	15 23 19.4	-0.9
EPLA				Sg	Sg	15 23 41.0	-2.9
EPLA				*i* Vmb_Lg		15 23 47.7	
PSIM	**Granatula de C**	4.45	202	Pn	Pn	15 22 29.4	+0.5
PSIM				Sn	Sn	15 23 19.2	-1.4
PSIM				Sg	Sg	15 23 41.0	-3.2
EIBI	**Ibiza**	4.51	149	P	Pn	15 22 30.4	+0.6
EIBI				S	Sn	15 23 20.5	-1.8
EIBI	**Ibiza**	4.51	149	Pn	Pn	15 22 30.3	+0.6
EIBI				Sn	Sn	15 23 21.4	-0.8
EIBI				*i* Vmb_Lg		15 24 09.7	
ETOS	**Mallorca**	4.60	132	P	Pn	15 22 31.8	+0.8
ETOS	**Mallorca**	4.60	132	Pn	Pn	15 22 31.6	+0.6
ETOS				Sn	Sn	15 23 22.7	-1.7
ETOS				*i* Vmb_Lg		15 24 02.5	
EAGO	**Agolada(Pontev**	4.77	270	Pn	Pn	15 22 35.8	+2.5
EAGO				Sn	Sn	15 23 28.5	-0.1
EAGO				Sg	Sg	15 23 52.0	-2.7
BGF	**Bois d'Agland**	4.79	40	*e*Pn	Pn	15 22 33.3	-0.3
BGF	**Bois d'Agland**	4.79	40	*e*P	Pn	15 22 35.9	+2.3
BGF				*e*Sn	Sn	15 23 26.5	-2.5
	122nm,0.4s						
PVRL	**Vila Real**	4.85	252	*e*Pn	Pn	15 22 36.3	+1.9
PVRL				*e*Sg	Sg	15 23 54.4	-2.8
PVRL				A	A	15 24 02.5	
	50nm,0.5s						
POLO	**Lamas de Olo**	4.87	253	*e*Pn	Pn	15 22 36.4	+1.7
POLO				*e*Sn	Sn	15 23 30.9	-0.2
POLO				*e*Sg	Sg	15 23 56.5	-1.3
POLO				A	A	15 23 59.4	
	26nm,0.4s						
ELOB	**Lobios**	4.91	259	Pn	Pn	15 22 36.5	+1.2
ELOB				Sn	Sn	15 23 31.0	-1.0
ELOB				Sg	Sg	15 23 55.2	-3.8
ELOB				*i* Vmb_Lg		15 24 02.9	
VIVF	**Saint-Julien-l**	4.91	65	*e*P	Pn	15 22 37.1	+1.9
VIVF				*e*Sn	Sn	15 23 28.0	-4.1
	23nm,0.3s						
VIVF				*e*Sg	Sg	15 23 58.4	-0.7
	13nm,0.4s						
PCAB	**Cabril**	4.93	258	*e*Pn	Pn	15 22 37.6	+2.2
PCAB				*e*Sg	Sg	15 23 55.2	-4.4
PCAB				A	A	15 24 06.6	
	50nm,0.4s						
PGAV	**Gavieira, Arco**	5.03	261	*e*Pn	Pn	15 22 38.9	+1.9
PGAV				*e*Sg	Sg	15 24 01.3	-1.8
PGAV				A	A	15 24 15.1	
	28nm,0.4s						
EZAR	**Zarzadilla de**	5.08	181	Pn	Pn	15 22 39.7	+2.1
EZAR				Sn	Sn	15 23 35.3	-0.9
EZAR				Sg	Sg	15 24 01.6	-2.9
EZAR				*i* Vmb_Lg		15 24 13.8	
QUIF	**Quistinic**	5.08	348	*e*P	Pn	15 22 39.9	+2.4
QUIF				*e*Sn	Sn	15 23 32.7	-3.4
	21nm,0.3s						
QUIF				*e*Sg	Sg	15 24 03.4	-1.1
	22nm,0.5s						
EMUR	**La Murta**	5.12	177	P	Pn	15 22 39.9	+1.8
EMUR	**La Murta**	5.12	177	Pn	Pn	15 22 40.0	+1.8
EMUR				Sn	Sn	15 23 37.4	+0.2
EMUR				Sg	Sg	15 24 02.4	-3.4
EMUR				*i* Vmb_Lg		15 24 19.0	
MTE	**Manteigas**	5.13	242	*e*Pn	Pn	15 22 39.3	+1.0
MTE				*e*Sg	Sg	15 24 01.6	-4.7
MTE				A	A	15 24 06.0	
	55nm,0.5s						
AVF	**Avril sur Loir**	5.20	41	*e*Pn	Pn	15 22 38.2	-1.0
AVF	**Avril sur Loir**	5.20	41	*e*P	Pn	15 22 42.1	+2.9
AVF				*e*Sn	Sn	15 23 36.1	-3.0
	38nm,0.6s						
PVIS	**Viseu**	5.21	247	*e*Pn	Pn	15 22 40.6	+1.2
PVIS				*e*Sn	Sn	15 23 38.9	-0.5
PVIS				*e*Sg	Sg	15 24 04.1	-4.6
PVIS				A	A	15 24 15.8	
	31nm,0.5s						
HYF	**Humbligny**	5.25	33	*e*Pn	Pn	15 22 38.2	-1.7
HYF	**Humbligny**	5.25	33	*e*P	Pn	15 22 42.7	+2.8
HYF				*e*Sn	Sn	15 23 37.0	-3.3
EQES	**Quesada**	5.27	193	Pn	Pn	15 22 42.1	+1.8
EQES				Sn	Sn	15 23 39.8	-1.3
EQES				Sg	Sg	15 24 07.3	-3.5
EQES				*i* Vmb_Lg		15 24 11.4	
EADA	**Adamuz**	5.30	206	S	Sn	15 23 38.7	-2.8
EADA				P	Pn	15 22 41.9	+1.3
EADA	**Adamuz**	5.30	206	Pn	Pn	15 22 42.0	+1.5
EADA				Sn	Sn	15 23 41.1	-0.4
EADA				Sg	Sg	15 24 06.6	-4.9
EADA				*i* Vmb_Lg		15 24 16.8	
SMRF	**Simiane la Rot**	5.32	77	*e*P	Pn	15 22 42.7	+1.9
SMRF				*e*Sn	Sn	15 23 40.3	-1.8
	24nm,0.7s						
SMRF				*e*Sg	Sg	15 24 10.6	-1.6
	4.5nm,0.3s						
SGMF	**Saint Gilles**	5.34	353	*e*P	Pn	15 22 43.5	+2.5
SGMF	**Saint Gilles**	5.34	353	*e*Pg	Pg	15 23 02.5	-1.2
SGMF				*e*Sn	Sn	15 23 39.5	-3.0
	9.5nm,0.2s						
SGMF				*e*Sg	Sg	15 24 11.7	-1.1
	8.3nm,0.3s						
SMF	**Signal de Mont**	5.34	45	*e*Pn	Pn	15 22 40.0	-1.2
SMF	**Signal de Mont**	5.34	45	*e*P	Pn	15 22 44.2	+3.0
SMF				*e*Sn	Sn	15 23 39.2	-3.5
	10nm,0.2s						
SMF				*e*Sg	Sg	15 24 11.9	-1.1
	9.7nm,0.4s						
PCBR	**Castelo Branco**	5.41	237	*e*Pn	Pn	15 22 43.0	+1.0
PCBR				*e*Sg	Sg	15 24 10.5	-4.6
PCBR				A	A	15 24 16.3	
	28nm,0.6s						
EMAZ	**Mazaricos**	5.42	272	Pn	Pn	15 22 44.1	+2.0
EMAZ				Sn	Sn	15 23 44.1	-0.3
EMAZ				*i* Vmb_Lg		15 24 34.1	
GRR	**Gorron**	5.46	5	*e*Pn	Pn	15 22 41.8	-0.8
GRR	**Gorron**	5.46	5	*e*P	Pn	15 22 46.0	+3.4
GRR	**Gorron**	5.46	5	*e*Pg	Pg	15 23 04.8	-1.1
GRR				*e*Sn	Sn	15 23 42.1	-3.2
GRR				*e*Sg	Sg	15 24 15.5	-1.0
	25nm,0.5s						
SSF	**Saint Saulge**	5.47	40	*e*P	Pn	15 22 45.3	+2.4
SSF				*e*Sn	Sn	15 23 42.5	-3.2
	36nm,0.5s						
ROSF	**Rostrenen**	5.50	348	*e*P	Pn	15 22 45.8	+2.5
ROSF				*e*Sn	Sn	15 23 42.9	-3.7
	28nm,0.5s						
ROSF				*e*Sg	Sg	15 24 16.6	-1.5
	7.3nm,0.3s						
PMRV	**Marv??o**	5.62	233	*e*Pn	Pn	15 22 46.0	+1.1
PMRV				*e*Sn	Sn	15 23 48.2	-1.2
PMRV				*e*Sg	Sg	15 24 18.8	-2.9
PMRV				A	A	15 24 28.7	
	51nm,0.6s						
ECAB	**El Cabril**	5.68	212	S	Sn	15 23 48.0	-3.0
ECAB				P	Pn	15 22 46.5	+0.7
ECAB	**El Cabril**	5.68	212	Pn	Pn	15 22 46.5	+0.7
ECAB				Sn	Sn	15 23 48.5	-2.5
ECAB				Sg	Sg	15 24 20.1	-3.7
ECAB				*i* Vmb_Lg		15 24 32.3	
LDF	**La Druitiere**	5.73	10	*e*Pn	Pn	15 22 45.3	-1.1
LDF	**La Druitiere**	5.73	10	*e*P	Pn	15 22 49.4	+3.0
LDF	**La Druitiere**	5.73	10	*e*Pg	Pg	15 23 09.2	-2.0
LDF				*e*Sn	Sn	15 23 49.3	-2.8
LDF				*e*Sg	Sg	15 24 23.3	-2.0
	14nm,0.4s						
ORIF	**Oris-en-Rattie**	5.74	68	*e*P	Pn	15 22 48.1	+1.4
ORIF				*e*Sn	Sn	15 23 51.2	-1.4
	29nm,0.6s						
LOR	**Lormes**	5.79	40	*e*P	Pn	15 22 49.0	+1.8
	baz=225						
LOR				*e*Sn	Sn	15 23 50.1	-3.4
	14nm,0.3s,baz=225						
COI	**Coimbra**	5.80	244	*e*Sg	Sg	15 24 22.6	-5.1
FLN	**La Foliniere**	5.86	7	*e*P	Pn	15 22 50.2	+2.0
	baz=187						
FLN				*e*Sn	Sn	15 23 50.9	-4.3
	5.3nm,0.2s						
FLN				*e*Sg	Sg	15 24 27.3	-2.1
	8.1nm,0.3s						
EBAD	**Badajoz**	5.87	226	P	Pn	15 22 49.0	+0.6
EBAD	**Badajoz**	5.87	226	Pn	Pn	15 22 49.2	+0.8
EBAD				Sn	Sn	15 23 54.8	-0.8
EBAD				Sg	Sg	15 24 26.1	-3.8
EBAD				*i* Vmb_Lg		15 24 38.1	
EQUE	**Quentar**	5.92	194	Pn	Pn	15 22 51.5	+2.4
EQUE				Sn	Sn	15 23 55.3	-1.7
EQUE				Sg	Sg	15 24 27.9	-3.6
EQUE				*i* Vmb_Lg		15 24 36.5	
PCAS	**Casmilo, Conde**	5.94	243	*e*Pn	Pn	15 22 51.6	+2.3
PCAS				*e*Sn	Sn	15 23 57.0	-0.3
PCAS				*e*Sg	Sg	15 24 26.5	-5.5
PCAS				A	A	15 24 29.9	
	26nm,0.6s						
LMR	**La Mourre**	5.94	84	*e*P	Pn	15 22 52.0	+2.6
LMR				*e*Sn	Sn	15 23 55.1	-2.3
	4.3nm,0.2s						
LMR				*e*Sg	Sg	15 24 30.6	-1.6
	2.8nm,0.3s						
PESTR	**Estremoz**	6.11	230	P	Pn	15 22 52.9	+1.3
PESTR				S	Sn	15 24 01.0	-0.4
PESTR	**Estremoz**	6.11	230	P	Pn	15 22 52.8	+1.3
PESTR				S	Sn	15 23 57.2	-4.3
PESTR	**Estremoz**	6.11	230	*e*Pn	Pn	15 22 53.0	+1.3
PESTR				*e*Sn	Sn	15 24 00.1	-1.4
PESTR				*e*Sg	Sg	15 24 34.7	-2.8
PESTR				A	A	15 24 42.8	
	20nm,0.7s						
EBER	**Berja**	6.13	190	P	Pn	15 22 55.2	+3.0
EBER	**Berja**	6.13	190	Pn	Pn	15 22 55.0	+2.8
EBER				Sn	Sn	15 24 00.8	-1.7
EBER				Sg	Sg	15 24 35.7	-2.6
EBER				*i* Vmb_Lg		15 24 47.8	
EGOR	**Sierra Gorda,**	6.15	199	P	Pn	15 22 54.3	+2.0
EGOR	**Sierra Gorda,**	6.15	199	Pn	Pn	15 22 54.2	+1.8
EGOR				Sn	Sn	15 24 00.4	-2.4
EGOR				Sg	Sg	15 24 36.3	-2.6
EGOR				*i* Vmb_Lg		15 24 52.8	
ELGU	**Los Guajares,**	6.28	195	Pn	Pn	15 22 56.6	+2.5
ELGU				Sn	Sn	15 24 04.0	-1.8
ELGU				*i* Vmb_Lg		15 24 50.4	
MBDF	**Montbardon**	6.30	71	*e*P	Pn	15 22 57.1	+2.6
MBDF				*e*Sn	Sn	15 24 01.9	-4.6
	10nm,0.5s						
PBAR	**Barrancos**	6.32	223	P	Pn	15 22 55.4	+0.9
PBAR	**Barrancos**	6.32	223	*e*Pn	Pn	15 22 56.0	+1.4
PBAR				*e*Sn	Sn	15 24 07.1	+0.3
PBAR				*e*Sg	Sg	15 24 38.9	-5.5
PBAR				A	A	15 24 50.2	
	29nm,0.6s						
BNI	**Bardonecchia**	6.33	68	Pn	Pn	15 22 58.0	+3.2
BNI				Sn	Sn	15 24 06.4	-0.6
PMTG	**Montargil**	6.34	234	*e*Pn	Pn	15 22 56.4	+1.6
PMTG				*e*Sn	Sn	15 24 04.0	-3.2
PMTG				*e*Sg	Sg	15 24 41.0	-4.0
PMTG				A	A	15 24 47.9	
	23nm,0.5s						
PSBE	**So Bento**	6.42	240	*e*Pn	Pn	15 22 59.0	+3.0
PSBE				*e*Sg	Sg	15 24 47.8	+0.2
PSBE				A	A	15 25 03.2	
	35nm,0.5s						
EMIN	**Mina Concepcio**	6.47	218	Pn	Pn	15 22 57.7	+1.0
EMIN				Sn	Sn	15 24 07.7	-2.7
EMIN				Sg	Sg	15 24 43.6	-5.6
EMIN				*i* Vmb_Lg		15 24 52.4	
LPL	**La Plagne**	6.51	64	*e*P	Pn	15 22 59.8	+2.5
LPL				*e*Sn	Sn	15 24 08.9	-2.7
	9.5nm,0.5s						
CABF	**La Chapelle**	6.58	54	*e*P	Pn	15 22 59.9	+1.8
CABF				*e*Sn	Sn	15 24 06.3	-6.8
	5.3nm,0.4s						
SBF	**Sospel**	6.64	79	*e*Pn	Pn	15 22 57.0	-2.0
SBF	**Sospel**	6.64	79	*e*P	Pn	15 23 01.5	+2.5
SBF				*e*Sn	Sn	15 24 12.2	-2.5
	8.2nm,0.4s						
EMIJ	**Mijas**	6.84	202	Pn	Pn	15 23 04.2	+2.5
EMIJ				Sn	Sn	15 24 18.4	-1.1
EMIJ				*i* Vmb_Lg		15 25 08.4	
PBEJ	**Beja**	6.86	226	*e*Pn	Pn	15 23 03.9	+1.9
PBEJ				*e*Sn	Sn	15 24 18.8	-1.2
PBEJ				*e*Sg	Sg	15 24 55.6	-6.0
PBEJ				A	A	15 25 07.8	
	17nm,0.6s						
SFTF	**Sexfontaines**	7.01	39	*e*P	Pn	15 23 06.2	+2.2
SFTF				*e*Sn	Sn	15 24 19.1	-4.6
	9.7nm,0.3s						
SFTF				*e*Sg	Sg	15 25 04.1	-2.3
	80nm,1.2s						
PMAFR	**Mafra**	7.06	238	*e*Pn	Pn	15 23 06.5	+1.8
PMAFR				*e*Sg	Sg	15 25 06.4	-1.5
PNCL	**Nicolau / Gran**	7.16	230	*e*Pn	Pn	15 23 07.5	+1.4
PNCL				*e*Sn	Sn	15 24 26.6	-0.8
PNCL				*e*Sg	Sg	15 25 07.2	-4.1
PNCL				A	A	15 25 32.0	
	12nm,0.6s						
MESJ	**Messejana**	7.19	227	*e*Pn	Pn	15 23 08.5	+2.0
MESJ	**Messejana**	7.19	227	*e*P	Pn	15 23 07.0	+0.6
SENIN	**Lac Senin/Sane**	7.20	59	Pn	Pn	15 23 09.2	+2.4
SENIN				Sn	Sn	15 24 26.4	-2.2
MEZF	**Maizieres J'vi**	7.24	38	*e*P	Pn	15 23 09.6	+2.5
MEZF				*e*Sn	Sn	15 24 25.0	-4.2
	11nm,0.3s						
PCVE	**Castro Verde**	7.25	225	P	Pn	15 23 07.8	+0.5
PCVE	**Castro Verde**	7.25	225	*e*Pn	Pn	15 23 08.3	+1.0
PCVE				*e*Sn	Sn	15 24 27.2	-2.3
PCVE				*e*Sg	Sg	15 25 11.1	-2.9
PCVE				A	A	15 25 23.3	
	14nm,0.6s						
PVAQ	**Vaqueiros**	7.26	222	P	Pn	15 23 08.5	+1.1
PVAQ				S	Sn	15 24 25.7	-4.1
PVAQ	**Vaqueiros**	7.26	222	P	Pn	15 23 08.1	+0.6
PVAQ				S	Sn	15 24 27.3	-2.6
PVAQ	**Vaqueiros**	7.26	222	*e*Pn	Pn	15 23 08.2	+0.7
PVAQ				*e*Sn	Sn	15 24 27.4	-2.4
PVAQ				A	A	15 25 23.0	
	14nm,0.5s						
SAVF	**Savonnieres en**	7.35	37	*e*P	Pn	15 23 12.2	+3.5
SAVF				*e*Sn	Sn	15 24 27.6	-4.4
	7.3nm,0.3s						
SAVF				*e*Sg	Sg	15 25 14.7	-2.6
	20nm,0.5s						
PBDV	**Barranco-do-Ve**	7.49	222	*e*Pn	Pn	15 23 12.0	+1.3
PBDV				*e*Sn	Sn	15 24 32.3	-3.3
PBDV				*e*Sg	Sg	15 25 19.5	-2.4
PBDV				A	A	15 25 30.6	
	21nm,0.6s						
HAU	**Haudompre**	7.53	45	*e*Sn	Sn	15 24 31.9	-4.5
	7.4nm,0.3s						
PAGF	**Fort de Pagny**	7.58	40	*e*Pn	Pn	15 23 10.4	-1.5
PAGF	**Fort de Pagny**	7.58	40	*e*P	Pn	15 23 16.2	+4.3
PAGF				*e*Sn	Sn	15 24 32.7	-5.1
	6.7nm,0.3s						
PAGF				*e*Sg	Sg	15 25 21.4	-3.3
	2.8nm,0.1s						
PTEO	**Sao Teotonio**	7.67	228	*e*Sg	Sg	15 25 24.4	-3.3
PTEO				A	A	15 25 42.0	
	19nm,0.8s						
HINF	**Hinteralfeld**	7.68	48	*e*P	Pn	15 23 17.6	+4.4
HINF				*e*Sn	Sn	15 24 35.4	-4.8
	3.8nm,0.3s						
PGF	**Pioggiola**	7.81	89	*e*P	Pn	15 23 17.2	+2.1
PGF				*e*Sn	Sn	15 24 40.1	-3.5
	7.2nm,0.4s						
MORF	**Marmelete**	7.81	226	*e*Pn	Pn	15 23 15.7	+0.6
MORF				*e*Sn	Sn	15 24 40.4	-3.1
MORF				A	A	15 25 42.9	
	6.1nm,0.9s						
MORF	**Marmelete**	7.81	226	*e*P	Pn	15 23 15.5	+0.4
PFVI	**Vila Bisbo**	8.04	226	P	Pn	15 23 18.8	+0.7
PFVI				S	Sn	15 24 44.9	-4.0
PFVI	**Vila Bisbo**	8.04	226	*e*Pn	Pn	15 23 19.8	+1.7
PFVI				*e*Sg	Sg	15 25 36.9	-2.4
BAIF	**Baives**	8.15	27	*e*Pn	Pn	15 23 18.4	-1.2
BAIF	**Baives**	8.15	27	*e*P	Pn	15 23 24.1	+4.5
BAIF				*e*Sn	Sn	15 24 46.4	-5.3
	4.1nm,0.3s						
BAIF				*e*Sg	Sg	15 25 39.5	-3.4
	26nm,0.9s						
CDF	**Champ du Feu**	8.26	46	*e*Pn	Pn	15 23 19.9	-1.4
CDF	**Champ du Feu**	8.26	46	*e*P	Pn	15 23 24.9	+3.6
CDF				*e*Sn	Sn	15 24 49.2	-5.4
	3.6nm,0.4s						
GIVF	**Givet**	8.40	30	*e*Pn	Pn	15 23 21.8	-1.3
GIVF	**Givet**	8.40	30	*e*P	Pn	15 23 27.3	+4.2
GIVF				*e*Sn	Sn	15 24 53.1	-4.8
	9.4nm,0.4s						
GIVF				*e*Sg	Sg	15 25 48.4	-2.5
	16nm,0.7s						
BMRD	**Maredsous**	8.55	29	*d*P	Pn	15 23 26.8	+1.7
BMRD				*d*S	Sn	15 24 59.9	-1.6
BGES	**Gesves**	8.73	29	*d*P	Pn	15 23 29.0	+1.4
BGES				*d*S	Sn	15 25 05.4	-0.5
FETA	**Feichten**	9.63	61	*i* Pn	Pn	15 23 45.3	+5.2
	1.1nm,0.2s						
MOTA	**Moosalm**	9.98	60	*i* Pn	Pn	15 23 49.7	+4.7
	0.4nm,0.1s						
SQTA	**Sankt Quirin**	10.01	60	*i* Pn	Pn	15 23 49.9	+4.7
	0.6nm,0.2s						
WTTA	**Wattenberg**	10.30	61	*i* Pn	Pn	15 23 54.0	+4.8
	0.7nm,0.2s						

IDC 10 15:31:54.6±385.0**,67°.41N**×**39°.35E,h0^{km},Error ellipse: s-maj=154.1km s-min=143.0km az=86.0,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I37NO	**I37NO**	7.87	292	I	I	16 21 30.0	
	baz=91,slow=329,SNR=1.0						
I31KZ	**AKTYUBINSK INF**	19.44	142	I	I	17 31 40.0	
	baz=338,slow=334,SNR=1.9						
I46RU	**ZALESOVO INFRA**	25.30	100	I	I	18 10 00.0	
	baz=322,slow=327,SNR=1.0						

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*IDC **10** 15:35:19.7±2.2,72°.73N×4°.87E,h0^{km},mb3.4/1, mbtmp3.6/5,ML2.9/4,MS2.8/2,Error ellipse: s-maj=35.2km s-min=24.2km az=93.0*

*BER **10** 15:35:21.1±2.2,72°.90N×4°.28E,h10^{km},ML2.0,Confirmed Earthquake*

ISC 10 15:35:17.6±0.9**,72°.82N**±0°.09×**4°.22E**±0°.08**,h10^{km},n31,** σ**2^{s}.08**/33**,Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSPB	**Hornsund (broa**	5.13	30	*e*P	Pn	15 36 34.8	+0.5
HSPB				IAML		15 37 30.1	
	comp=Z,4.6nm,0.8s						
LOF	**Lofoten**	5.64	142	*e*P	Pn	15 36 42.2	+0.8
LOF				IAML		15 37 47.8	
	comp=Z,4.3nm,0.6s						
TRO	**Tromso**	5.71	117	*e*P	Pn	15 36 42.5	+0.1
TRO				*e*		15 37 33.4	
TRO				IAML		15 37 51.9	
	comp=Z,3.1nm,0.9s						
BRBA	**Barentsburg A**	5.83	21	*e*P	Pn	15 36 44.0	+0.1
BRBB	**Barentsburg B**	5.86	21	*e*P	Pn	15 36 45.7	+1.3
STEI	**Steigen**	6.14	138	*e*P	Pn	15 36 49.7	+1.4
STEI				*e*S	Sn	15 37 53.9	-4.5
STEI				IAML		15 38 02.1	
	comp=Z,2.0nm,0.9s						
JETT	**Jettan, Norway**	6.16	114	*e*P	Pn	15 36 49.7	+1.1
SPA0	**Spitsbergen Ar**	6.17	24	*e*P	Pn	15 36 49.4	+0.7
SPITS	**Spitsbergen Ar**	6.17	24	Pn	Pn	15 36 49.9	+1.2
	baz=210,slow=17						
	comp=Z,9.0nm,0.8s						
HAMF	**Hammerfest**	6.48	100	*e*P	Pn	15 36 52.4	-0.5
HOPEN	**Hopen**	6.61	46	*e*P	Pn	15 36 54.7	+0.1
FAUS	**Fauske**	6.63	140	*e*P	Pn	15 36 55.8	+0.9
FAUS				*e*S	Sn	15 38 05.1	-5.2
FAUS				IAML		15 38 20.7	
	comp=Z,2.4nm,0.9s						
KIF	**Kilpisjarvi**	6.63	117	*e*P	Pn	15 36 55.6	+0.7
KONS	**Konsvik**	7.05	150	*e*P	Pn	15 37 02.4	+1.7
KONS				IAML		15 38 17.9	
	comp=Z,3.6nm,0.6s						
DBG	**Daneborg**	7.07	294	*e*P	Pn	15 37 03.2	+2.3
DBG				*e*S	Sn	15 38 15.1	-6.0
DAG	**Danmarks Havn**	7.16	314	*e*P	Pn	15 37 02.1	0.0
DAG				*e*S	Sn	15 38 14.8	-8.6
STOK	**Stokkvaagen**	7.19	150	*e*P	Pn	15 37 04.2	+1.6
KTK1	**Kautokeino**	7.28	112	*e*P	Pn	15 37 04.3	+0.3
SALU	**Saltoluokta**	7.30	131	*e*P	Pn	15 37 05.3	+1.2
MOR8	**Moi Rana**	7.56	147	*e*P	Pn	15 37 09.5	+1.7
MOR8				IAML		15 38 24.7	
	comp=Z,3.9nm,0.8s						
ARA0	**ARCESS Array S**	7.60	105	*e*P	Pn	15 37 09.1	+0.8
ARCES	**ARCESS Array B**	7.60	105	Pn	Pn	15 37 08.7	+0.4
	comp=Z,0.2nm,0.3s,baz=311,slow=11,SNR=21						
	comp=Z,1.9nm,0.6s						
HEF	**Hetta**	7.80	115	*e*P	Pn	15 37 12.8	+1.7
KEV	**Kevo**	7.91	102	*e*P	Pn	15 37 11.7	-0.7
VADS	**Vadso**	8.41	96	*e*P	Pn	15 37 19.6	+0.3
NSS	**Namsos**	8.78	158	*e*P	Pn	15 37 25.9	+1.5
NOA	**NORSAR Array B**	12.13	164	Pn	Pn	15 38 10.3	0.0
	baz=347,slow=13,SNR=1.8						
NOA				LR	LR	15 42 38.7	
	comp=Z,18nm,19.1s,baz=80,slow=37						
HFS	**Hagfors**	13.26	159	Pn	Pn	15 38 26.8	+1.2
	comp=Z,0.3nm,0.3s,baz=354,slow=14,SNR=14						
	comp=Z,0.8nm,0.3s						
FINES	**FINESS Array B**	14.09	133	Pn	Pn	15 38 37.5	+0.5
	comp=Z,0.1nm,0.3s,baz=335,slow=13,SNR=3.7						
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	24.74	140	LR	LR	15 50 04.6	
	comp=Z,54nm,18.7s,baz=6.5,slow=36						
TORD	**Torodi Ar. Bea**	59.66	183	P	P	15 45 25.4	+3.7
	comp=Z,0.3nm,0.7s,baz=7.9,slow=6.1,SNR=1.7						
	comp=Z,0.3nm,0.7s						

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*IDC **10** 15:47:50.2±0.8,1°.06S×123°.47E,h0^{km},mb3.9/10, mbtmp3.9/12,ML3.8/2,Error ellipse: s-maj=26.5km s-min=15.8km az=83.0*

*DJA **10** 15:47:54.8±0.2,1°S±2°×12°4E±°,h10^{km},M4.3/18,mb4.5/8, mB4.8/3,MLv4.2/18,Mw(mB)4.0/3*

ISC 10 15:47:56.1±0.7**,1°.16S**±0°.06×**123°.57E**±0°.05**,h40^{km},n26,** σ**1^{s}.64**/32**,mb4.0**/10**,Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	0.81	278	P	Pn	15 48 10.2	-0.9
LUWI				S	Sn	15 48 21.5	-0.4
MRSI	**Marisa**	2.30	315	P	Pn	15 48 33.1	+1.5
MRSI				S	Sn	15 49 02.9	+4.2
SANI	**Sanana**	2.57	110	P	Pn	15 48 33.2	-2.1
MPSI	**Mapaga**	3.96	292	P	Pn	15 48 56.6	+2.2
LBMI	**Labuha**	3.96	83	P	Pn	15 48 54.5	0.0
NLAI	**Namlea**	4.09	120	P	Pn	15 48 56.6	+0.4
TNTI	**Ternate**	4.25	63	P	Pn	15 49 00.9	+2.5
SPSI	**Sidrap Palu**	4.71	234	P	Pn	15 49 05.9	+1.2
AAI	**Ambon**	5.26	119	P	Pn	15 49 14.5	+2.2
	35nm,0.6s,0.2nm						
BKSI	**Bulukumba**	5.38	220	P	Pn	15 49 15.0	+1.0
	29nm,0.5s,0.1nm						
KAPI	**Kappang**	5.41	225	Pn	Pn	15 49 13.2	-1.0
	2.5nm,0.3s,baz=58,slow=15,SNR=2.5						
KAPI				Sn	Sn	15 50 16.4	+1.1
	3.6nm,0.3s,baz=43,slow=16,SNR=1.6						
	5.5nm,0.3s						
BSSI	**Bau Bau, Buton**	5.83	212	P	Pn	15 49 21.3	+1.2
	55nm,0.6s,1µm0.2nm						
MMRI	**Maumere**	7.55	190	P	Pn	15 49 44.6	+0.9
SIJI	**Sorong**	7.70	88	Pn	Pn	15 49 46.2	+0.4
	2.0nm,0.3s,baz=69,slow=23,SNR=12						
SIJI				Sn	Sn	15 51 12.3	+0.5
	0.4nm,0.3s,baz=72,slow=23,SNR=1.5						
	4.2nm,0.3s						
SOEI	**Soe**	8.57	175	P	Pn	15 49 59.5	+1.6
WRA	**Warramunga Arr**	21.44	151	P	P	15 52 40.7	-0.4
	1.7nm,0.8s,baz=327,slow=11,SNR=13						
	1.7nm,0.8s						
ASAR	**Alice Springs**	24.52	157	P	P	15 53 12.2	+0.2
	0.6nm,0.6s,baz=334,slow=7.6,SNR=21						
ASAR				PcP	PcP	15 56 51.4	+1.5
	0.6nm,0.6s,baz=344,slow=1.6,SNR=13						
	0.6nm,0.6s						
JSG	**Sagara**	38.19	20	P	P	15 55 15.3	+3.3
KSRS	**Korea Array**	38.63	6	P	P	15 55 13.8	-1.8
	0.9nm,0.6s,baz=187,slow=10.0,SNR=6.0						

	0.9nm,0.6s						
MJAR	**Matsushiro Arr**	**39.90**	**18**	P	**P**	**15 55 24.7**	**-1.6**
	1.3nm,0.5s,baz=192,slow=8.4,SNR=4.6						
	1.3nm,0.5s						
USRK	**Ussuriysk Ar.**	**45.78**	**8**	P	**P**	**15 56 13.6**	**-0.2**
	1.8nm,0.5s,baz=180,slow=6.9,SNR=6.4						
	1.8nm,0.5s						
ASAJ	**Asahikawa**	**48.18**	**18**	P	**P**	**15 56 32.3**	**-0.2**
	3.7nm,0.8s,baz=321,slow=21,SNR=1.7						
	3.7nm,0.8s						
KLR	**Kul'dur**	**50.69**	**7**	P	**P**	**15 56 50.3**	**-1.3**
	0.6nm,0.3s,baz=209,slow=10,SNR=4.3						
	0.6nm,0.3s						
SONM	**Songino Array**	**51.04**	**345**	P	**P**	**15 56 53.3**	**-1.1**
	1.2nm,0.7s,baz=163,slow=9.9,SNR=7.5						
	1.2nm,0.7s						
MKAR	**Makanchi Array**	**59.89**	**328**	P	**P**	**15 57 57.0**	**-1.1**
	0.5nm,0.4s,baz=126,slow=8.5,SNR=18						
MKAR				PcP	**PcP**	**15 58 43.8**	**-0.4**
	0.5nm,0.6s,baz=129,slow=4.8,SNR=5.5						
	0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**63.60**	**336**	P	**P**	**15 58 20.9**	**-1.9**
	0.5nm,0.5s,baz=86,slow=30,SNR=1.5						
	0.5nm,0.5s						

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*BGR **10** 15:53:43.2, 29°.26N×140°.89E, h33^{km}, mb4.8*

*BJI **10** 15:53:48.4±0.0, 29°.56N×141°.36E, h126^{km}, mb4.8/70, mB4.9/35*

*MOS **10** 15:53:51.1±1.0, 29°.61N×140°.61E, h102^{km}, mb5.0/49, Error ellipse: s-maj=8.7km s-min=3.9km az=115.0*

*JMA **10** 15:53:53.0±0.1, 30°N±2°×14°1E±°, h122^{km}, MD4.8/30, MW4.9/30, NEAR TORISHIMA IS*

*NEIC **10** 15:53:52.9±2.4, 29°.69N±0°.06×141°.0E±0°.1, h110^{km}±5^{km}, mb5.0/86, Error ellipse: s-maj=13.7km s-min=9.1km az=78.0*

*NIED **10** 15:53:53.0, 29°.69N×141°.24E, h122^{km}, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.34; $M_{\theta\theta}$-0.33; $M_{\phi\phi}$-0.01; $M_{r\theta}$0.14; $M_{\theta\phi}$-0.87; $M_{\phi r}$0.75; Fault plane solution: $M_0$1.20000×10^{16} NP1:ϕ_s12.00000°, δ80.00000°, λ45.00000°. NP2:ϕ_s272.00000°, δ46.00000°, λ165.00000°.*

*IDC **10** 15:53:53.6±0.6, 29°.59N×140°.78E, h114^{km}±5^{km}, mb4.4/35, mbtmp4.8/40, MS3.5/15 Error ellipse: s-maj=12.5km s-min=6.8km az=71.0*

*GCMT **10** 15:53:55.9±0.3, 29°.72N±0°.02×140°.96E±0°.02, h123^{km}±3^{km}, MW4.8/86, Moment Tensor Solution. s20,c23; s86,c130; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.80±.09; $M_{\theta\theta}$-0.74±.09; $M_{\phi\phi}$-0.06±.10; $M_{r\theta}$-0.19±.06; $M_{\theta\phi}$-1.64±.08; $M_{\phi r}$1.45±.06; Best double couple: $M_0$2.32900×10^{16} NP1:ϕ_s13.00000°, δ75.00000°, λ43.00000°. NP2:ϕ_s269.00000°, δ49.00000°, λ159.00000°. Principal axes: T 2.3600, Plg41.0000°, Azm239.0000°; N -0.0630, Plg45.0000°, Azm29.0000°; P -2.2970, Plg16.0000°, Azm135.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 15:53:53.6±0.3**, 29°.68N**±0°.03×**140°.85E**±0°.04**, h116**^{km}±2^{km}**, h117**^{km}**:pP-P, n676,** σ**1**^{s}**.51**/737**, mb4.9**/182**, 39C-34D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.83**	**155**	P	**Pn**	**15 54 36.3**	**-1.2**
CBIJ				*e*S	**Sn**	**15 55 07.8**	**-3.6**
CBIJ	**Chichi jima**	**2.83**	**155**	A	A	15 54 36.3	
	comp=E,15nm,1.4s,comp=E,10.0nm,1.5s						
JCJ	**Chichijima**	**2.83**	**155**	P	**Pn**	**15 54 38.5**	**+0.9**
	966nm,0.5s,baz=292,slow=23,SNR=82						
JCJ				S	**Sn**	**15 55 09.8**	**-1.6**
	2µm,0.5s,baz=288,slow=21,SNR=11						
JCJ	**Chichijima**	**2.83**	**155**	Pn	**Pn**	**15 54 34.8**	**-2.8**
JCJ	**Chichijima**	**2.83**	**155**	P	**Pn**	**15 54 36.6**	**-1.0**
JAOM	**Aogashimamukai**	**2.93**	**342**	P	**Pn**	**15 54 41.4**	**+2.6**
JAOM				S	**Sn**	**15 55 16.9**	**+3.2**
JAOM	**Aogashimamukai**	**2.93**	**342**	A	A	15 54 41.4	
	comp=E,19nm,2.6s,comp=E,15nm,0.9s						
JHH2	**Haha-jima-NKT2**	**3.25**	**159**	P	**Pn**	**15 54 42.1**	**-1.0**
JHH2				S	**Sn**	**15 55 19.7**	**-1.7**
JHH2	**Haha-jima-NKT2**	**3.25**	**159**	A	A	15 54 42.1	
	comp=E,7.0nm,0.7s,comp=E,8.0nm,1.1s						
JHCJ	**Hachijojimakas**	**3.50**	**345**	P	**Pn**	**15 54 47.6**	**+1.2**
JHCJ				*e*S	**Sn**	**15 55 25.1**	**-2.1**
JHJ2	**Mitsune**	**3.53**	**346**	Pn	**Pn**	**15 54 45.7**	**-1.1**
JHJ2	**Mitsune**	**3.53**	**346**	P	**Pn**	**15 54 48.3**	**+1.5**
JHJ2	**Mitsune**	**3.53**	**346**	P	**Pn**	**15 54 47.9**	**+1.1**
JHJ2	**Mitsune**	**3.53**	**346**	A	A	15 54 47.9	
	comp=E,8.0nm,4.0s,comp=E,7.0nm,4.1s						
JHJ	**Hachijo jima 2**	**3.55**	**345**	P	**Pn**	**15 54 48.0**	**+1.0**
	346nm,0.3s,baz=78,slow=22,SNR=40						
JHJ				S	**Sn**	**15 55 24.6**	**-3.7**
	658nm,0.3s,baz=222,slow=23,SNR=8.8						
JMKN	**Mikurajimanish**	**4.33**	**346**	*e*P	**Pn**	**15 54 58.9**	**+1.4**
JMKN				S	**Sn**	**15 55 45.4**	**-1.8**
JMKN	**Mikurajimanish**	**4.33**	**346**	A	A	15 54 58.9	
	comp=E,6.0nm,2.4s,comp=E,7.0nm,6.1s						
JMYK	**Miyake Tsubota**	**4.51**	**346**	P	**Pn**	**15 55 01.4**	**+1.6**
JMYK				*e*S	**Sn**	**15 55 50.6**	**-0.6**
BSO1	**Boso 1**	**4.96**	**1**	P	**Pn**	**15 55 05.8**	**+0.4**
BSO1				*e*S	**Sn**	**15 55 57.7**	**-3.7**
TTO1	**TONANKAI O.B.S**	**5.24**	**320**	P	**Pn**	**15 55 12.3**	**+2.9**
JOD2	**Odawara 2**	**5.76**	**345**	P	**Pn**	**15 55 17.8**	**+1.0**
JOD2				S	**Sn**	**15 56 22.5**	**+0.9**
JIE	**Ise**	**5.87**	**324**	P	**Pn**	**15 55 20.9**	**+2.7**
JTNC	**Tanabenakahech**	**6.08**	**314**	P	**Pn**	**15 55 23.7**	**+2.7**
INU	**Inuyama**	**6.51**	**331**		**Pn**	**15 55 26.3**	**-0.6**
INU	**Inuyama**	**6.51**	**331**	P	**Pn**	**15 55 29.4**	**+2.5**
JRY	**Ryogami san**	**6.53**	**346**	P	**Pn**	**15 55 27.9**	**+0.7**
JRY				*e*S	**Sn**	**15 56 37.8**	**-2.4**
JGF	**Kuroka**	**6.60**	**334**		**Pn**	**15 55 28.2**	**+0.1**
JGF	**Kuroka**	**6.60**	**334**	P	**Pn**	**15 55 30.3**	**+2.2**
JMN	**Monobe**	**7.18**	**306**		**Pn**	**15 55 36.5**	**+0.5**
JMN	**Monobe**	**7.18**	**306**	P	**Pn**	**15 55 39.7**	**+3.7**
MJAR	**Matsushiro Arr**	**7.19**	**343**	P	**Pn**	**15 55 37.0**	**+0.9**
	64nm,0.6s,baz=162,slow=11,SNR=122						
MJAR				S	**Sn**	**15 56 54.3**	**-2.0**
	49nm,0.9s,baz=154,slow=12,SNR=5.9						
MAJO	**Matsushiro**	**7.19**	**343**		**Pn**	**15 55 35.3**	**-0.9**
MAJO	**Matsushiro**	**7.19**	**343**	P	**Pn**	**15 55 37.6**	**+1.5**
MAJO	**Matsushiro**	**7.19**	**343**	*d i*P	**Pn**	**15 55 36.9**	**+0.8**
MJB9	**Matsu-Tunnel**	**7.20**	**343**		**Pn**	**15 55 36.1**	**-0.1**
JSB	**Shiboa**	**7.31**	**354**	A	A	15 55 38.8	
	comp=E,3.0nm,4.7s,comp=E,3.0nm,3.0s						
JTO	**Tosashimizu**	**7.58**	**297**	P	**Pn**	**15 55 45.0**	**+3.6**
JMST	**Minamisoumatoc**	**8.02**	**0**	A	A	15 55 47.9	
	comp=E,2.0nm,6.0s,comp=E,2.0nm,2.4s						
JMM	**Marumori**	**8.16**	**360**		**Pn**	**15 55 47.1**	**-2.1**
JMM	**Marumori**	**8.16**	**360**	P	**Pn**	**15 55 48.2**	**-1.0**
JHS	**Saijyo**	**8.42**	**311**		**Pn**	**15 55 54.5**	**+1.7**
JHS	**Saijyo**	**8.42**	**311**	P	**Pn**	**15 55 56.3**	**+3.5**
JYS	**Shirataka**	**8.54**	**356**	A	A	15 55 55.3	
	comp=E,4.0nm,2.9s,comp=E,4.0nm,1.3s						
JSD	**Sado**	**8.61**	**346**	Pn	**Pn**	**15 55 53.4**	**-1.8**
JSD	**Sado**	**8.61**	**346**	P	**Pn**	**15 55 54.7**	**-0.5**
JOU	**Okura**	**8.66**	**359**	A	A	15 55 56.6	
	comp=E,3.0nm,2.7s,comp=E,3.0nm,1.4s						
JNU	**Nakatsue**	**9.19**	**294**	P	**Pn**	**15 56 07.5**	**+4.3**
	145nm,1.0s,baz=90,slow=5.7,SNR=55						
JNU				S	**Sn**	**15 57 44.1**	**-0.6**
	7.2nm,0.7s,baz=170,slow=8.8,SNR=1.0						
JNU	**Nakatsue**	**9.19**	**294**	Pn	**Pn**	**15 56 04.9**	**+1.7**
JNU	**Nakatsue**	**9.19**	**294**	P	Pn	15 56 08.1	+4.9
JMK	**Ichinoseki**	**9.25**	**2**	P	**Pn**	**15 56 02.5**	**-1.4**
JMK				S	**Sn**	**15 57 38.1**	**-8.0**
JTU	**Tsushima**	**10.84**	**299**	Pn	**Pn**	**15 56 24.3**	**-1.2**
JTM	**Tenmabayashi**	**11.08**	**1**	Pn	**Pn**	**15 56 26.4**	**-2.3**
JTM	**Tenmabayashi**	**11.08**	**1**	P	**Pn**	**15 56 27.6**	**-1.0**
JOT	**Ohata**	**11.68**	**1**	P	**Pn**	**15 56 34.9**	**-1.6**
ERM	**Erimo**	**12.45**	**8**		**Pn**	**15 56 44.3**	**-2.4**
ERM	**Erimo**	**12.45**	**8**	P	**Pn**	**15 56 44.3**	**-2.4**
TJN	**Taejon**	**13.13**	**304**	⇑*e*P	**Pn**	**15 56 58.3**	**+2.7**
KSRS	**Korea Array**	**13.27**	**309**	P	**Pn**	**15 56 59.5**	**+2.2**
	5.6nm,0.7s,baz=117,slow=14,SNR=14						
KSRS				LR	LR	16 01 39.0	
	comp=Z,125nm,21.8s,baz=120,slow=35						
KSRS				PcP	**PcP**	**16 02 19.4**	**+1.5**
	2.2nm,0.8s,baz=196,slow=0.3,SNR=6.3						
KSAR	**Wonju Array Be**	**13.29**	**309**	Pn	**Pn**	**15 56 52.9**	**-4.7**
KSAR	**Wonju Array Be**	**13.29**	**309**	P	**Pn**	**15 56 52.9**	**-4.7**
JNSB	**Nemuroshibetsu**	**14.45**	**12**	A	A	15 57 11.5	
	comp=E,2.0nm,6.0s,comp=E,2.0nm,7.2s						
ASAJ	**Asahikawa**	**14.48**	**5**	P	**Pn**	**15 57 12.2**	**-0.6**
	39nm,0.6s,baz=224,slow=11,SNR=67						
ASAJ				S	Sn	15 59 38.9	-14
	14nm,0.8s,baz=230,slow=32,SNR=2.5						
JKA	**Kamikawa-asahi**	**14.48**	**5**	Pn	**Pn**	**15 57 11.7**	**-1.2**
YUK	**Yuzh-Kuril'sk**	**14.87**	**14**	⇑*e*P	**Pn**	**15 57 16.9**	**-0.9**
VLA	**Vladivostok**	**15.22**	**334**	*d i*P	**Pn**	**15 57 22.7**	**+0.5**
VLA				pmax	pmax		
	comp=Z,33nm,0.9s						
TEY	**Ternei**	**15.69**	**349**	*e*P	**Pn**	**15 57 26.9**	**-1.2**
TEY				pmax	pmax		
	comp=N,30nm,0.9s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.9s						
TEY				pmax	pmax		
	comp=Z,40nm,0.9s						
USA0B	**Ussuriysk Arra**	**16.11**	**336**	Pn	**Pn**	**15 57 30.8**	**-2.6**
USA0B	**Ussuriysk Arra**	**16.11**	**336**	*d i*P	**Pn**	**15 57 31.7**	**-1.6**
USRK	**Ussuriysk Ar.**	**16.11**	**336**	P	**Pn**	**15 57 32.2**	**-1.2**
	comp=Z,44nm,0.7s,baz=150,slow=12,SNR=70						
USRK				S	**Sn**	**16 00 30.4**	**-1.7**
	comp=Z,1.4nm,0.5s,baz=203,slow=33,SNR=1.2						
USRK	**Ussuriysk Ar.**	**16.11**	**336**	Pn	**Pn**	**15 57 31.9**	**-1.5**
GUMO	**Guam**	**16.44**	**166**	P	**P**	**15 57 40.4**	**+2.2**
	comp=Z,226nm,0.5s,baz=178,slow=3.6,SNR=29						
GUMO	**Guam**	**16.44**	**166**	P	**P**	**15 57 38.7**	**+0.5**
GUMO	**Guam**	**16.44**	**166**	P	**P**	**15 57 38.7**	**+0.5**
KUR	**Kuril'sk**	**16.48**	**18**	*e*P	**P**	**15 57 41.2**	**+2.8**
KUR				*e*S	Sn	16 00 29.8	-11
KUR				smax	smax		
	comp=E,71nm,0.8s						
KUR				smax	smax		
	comp=N,39nm,0.6s						
YSS	**Yuzh-Sakhalins**	**17.31**	**4**		**Pn**	**15 57 48.2**	**+0.3**
YSS	**Yuzh-Sakhalins**	**17.31**	**4**	*e*P	**Pn**	**15 57 48.9**	**+1.0**
YSS				*e*S	**Sn**	**16 00 56.2**	**-4.5**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				pmax	pmax		
	comp=N,150µm,0.8s						
MDJ	**Mudanjiang**	**17.38**	**332**	P	**P**	**15 57 47.9**	**-0.4**
MDJ				S	**Sn**	**16 00 59.2**	**-3.2**
MDJ				PcS	**PcS**	**16 05 59.0**	**-0.9**
MDJ				pmax	pmax		
	comp=N,23nm,1.1s						
MDJ				pmax	pmax		
	comp=N,87nm,3.5s						
MDJ	**Mudanjiang**	**17.38**	**332**	P	**P**	**15 57 47.7**	**-0.6**
MDJ	**Mudanjiang**	**17.38**	**332**	P	**Pn**	**15 57 48.8**	**+0.1**
TATO	**Taipei**	**17.83**	**259**	P	**Pn**	**15 57 56.0**	**+1.7**
TATO	**Taipei**	**17.83**	**259**	P	**Pn**	**15 57 56.9**	**+2.5**
NACB	**Ninganchiao**	**18.02**	**257**	P	**Pn**	**15 57 58.9**	**+2.2**
YHNB	**Yeheng**	**18.03**	**259**	P	**Pn**	**15 57 57.6**	**+0.8**
YHNB	**Yeheng**	**18.03**	**259**	P	**Pn**	**15 57 59.0**	**+2.2**
YULB	**Yu-li**	**18.57**	**255**	P	**Pn**	**15 58 04.0**	**+0.7**
YULB	**Yu-li**	**18.57**	**255**	P	**Pn**	**15 58 04.5**	**+1.2**
CN2	**Changchun**	**18.69**	**323**	P	**Pn**	**15 58 04.9**	**+0.4**
CN2				pmax	pmax		
	comp=N,10.0nm,0.7s						
SSLB	**Suanglung**	**18.71**	**256**	P	**Pn**	**15 58 06.0**	**+1.1**
SSLB	**Suanglung**	**18.71**	**256**	P	**Pn**	**15 58 06.3**	**+1.4**
TWGBT	**Beinan**	**18.99**	**254**	P	**Pn**	**15 58 09.2**	**+1.0**
TWG	**Pinlang**	**19.00**	**254**	P	**Pn**	**15 58 08.4**	**+0.1**
NJ2	**Nanjing**	**19.03**	**283**	⇑P	**Pn**	**15 58 08.0**	**-0.5**
NJ2				pP	**pP**	**15 58 26.1**	**-1.0**
NJ2				S	**Sn**	**16 01 40.1**	**-2.1**
NJ2				PcS	**PcS**	**16 06 03.4**	**-0.4**
NJ2				pmax	pmax		
	comp=N,27nm,0.8s						
TPUB	**Ta-pu**	**19.17**	**255**	P	**Pn**	**15 58 10.4**	**+0.1**
TPUB	**Ta-pu**	**19.17**	**255**	P	**Pn**	**15 58 11.4**	**+1.1**
BNX	**BinXian**	**19.20**	**330**	⇓P	**P**	**15 58 08.3**	**+0.1**
BNX				S	**Sn**	**16 01 43.3**	**-2.7**
BNX				pmax	pmax		
	comp=N,7.0nm,0.6s						
BNX				pmax	pmax		
	comp=N,42nm,3.5s						
UGL	**Uglegorsk**	**19.39**	**2**	*e*P	**Pn**	**15 58 12.6**	**0.0**
UGL				S	**S**	**16 01 46.4**	**+3.2**
UGL				pmax	pmax		
	comp=Z,76nm,1.2s						
UGL				smax	smax		
	comp=N,28nm,0.8s						
UGL				smax	smax		
	comp=E,21nm,0.6s						
KLR	**Kul'dur**	**20.72**	**343**	P	**P**	**15 58 24.5**	**-0.1**
	comp=E,21nm,0.7s,baz=144,slow=9.9,SNR=58						
KLR				S	**S**	**16 02 03.9**	**-5.6**
	comp=E,0.7nm,0.6s,baz=162,slow=19,SNR=0.9						
	comp=E,21nm,0.7s						
KLR	**Kul'dur**	**20.72**	**343**	*d i*P	**P**	**15 58 24.3**	**-0.3**
KLR				pmax	pmax		
	comp=Z,19nm,0.7s						
TIA	**Tai'an**	**20.92**	**294**	⇓P	**P**	**15 58 27.5**	**+0.5**
TIA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TYV	**Tymovskoe**	**21.20**	**3**	*e*P	**P**	**15 58 32.8**	**+3.0**
TYV				*e*S	Sn	16 02 26.6	-7.1
TYV				pmax	pmax		
	comp=Z,400nm,4.7s						
TYV				pmax	pmax		
	comp=Z,34nm,1.0s						
GRNR	**Gornyy**	**21.33**	**352**	⇑*i*P	**P**	**15 58 32.8**	**+1.7**
GRNR				*e*		15 59 10.2	
GRNR				*e*S	**S**	**16 02 27.4**	**+6.2**
GRNR				pmax	pmax		
	comp=N,6.0nm,0.7s						
GRNR				pmax	pmax		
	comp=E,1.0nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
GRNR				smax	smax		
	comp=N,1.0nm,0.6s						
GRNR				MLR	MLR		
	comp=E,170nm,18.0s						
GRNR				MLR	MLR		
	comp=Z,100nm,17.0s						
HEH	**HeiHe**	**22.92**	**337**	*e*P	**P**	**15 58 46.6**	**-0.8**
HEH				PcP	**PcP**	**16 02 34.6**	**+0.7**
HEH				S	**S**	**16 02 44.5**	**-3.8**
HEH				ScP	**ScP**	**16 05 59.7**	**-1.3**
HEH				ScS	**ScS**	**16 09 45.1**	**-1.6**
HEH				pmax	pmax		
	comp=Z,32nm,0.8s						
WHN	**Wuhan**	**22.93**	**279**	P	**P**	**15 58 48.0**	**+0.2**
WHN				pmax	pmax		
	comp=Z,96nm,0.8s						
HNS	**HongShan**	**23.06**	**296**	⇑P	**P**	**15 58 48.1**	**-0.9**
HNS				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LYN	**LuoYang**	**24.49**	**289**	*e*P	**P**	**15 59 01.3**	**-0.7**
HIA	**Hailar**	**25.31**	**327**	P	**P**	**15 59 09.2**	**-0.1**
H11N2	**WAKE ISLAND Hy**	**25.60**	**107**	T	T	16 26 53.3	
	baz=300,slow=75,SNR=19						
H11N1	**WAKE ISLAND Hy**	**25.60**	**107**	T	T	16 26 55.6	
	baz=300,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy**	**25.61**	**107**	T	T	16 26 56.7	
	baz=300,slow=75,SNR=17						
ZEA	**Zeya**	**26.00**	**341**	*e*P	**P**	**15 59 17.0**	**+1.5**
ZEA				*e**SP	**sP**	**15 59 50.9**	**-2.7**
ZEA				*e*S	**S**	**16 03 36.6**	**-0.9**
ZEA				pmax	pmax		
	comp=Z,100nm,2.1s						
ZEA				pmax	pmax		
	comp=E,20nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,80nm,0.7s						
ZEA				pmax	pmax		
	comp=N,40nm,0.8s						
ZEA				smax	smax		
	comp=N,10.0nm,0.9s						
ZEA				smax	smax		
	comp=E,10.0nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**26.02**	**109**	T	T	16 27 28.7	
	baz=302,slow=75,SNR=4.6						
H11S1	**WAKE ISLAND Hy**	**26.02**	**109**	T	T	16 27 31.6	
	baz=302,slow=75,SNR=8.1						
H11S2	**WAKE ISLAND Hy**	**26.04**	**109**	T	T	16 27 31.4	
	baz=302,slow=75,SNR=3.7						
HHC	**Hu-ho-hao-te**	**26.27**	**303**	*e*P	**P**	**15 59 20.4**	**+2.3**
HHC				pmax	pmax		
	comp=E,53nm,0.9s						
HHC				pmax	pmax		
	comp=E,220nm,5.1s						
PETK	**Petropavlovsk-**	**26.47**	**23**	LR	LR	16 12 37.7	
	comp=E,18nm,18.6s,baz=211,slow=42						
ENH	**Enshi**	**27.14**	**279**	P	**P**	**15 59 24.5**	**-1.5**
ENH				IAmb	IAmb	15 59 27.7	
	comp=Z,20nm,0.6s						
XAN	**Xi'an**	**27.40**	**287**	P	**P**	**15 59 27.4**	**-0.9**
XAN				pP	pwP	15 59 54.7	-1.8
XAN				sP	sP	16 00 10.8	+5.0
XAN				pmax	pmax		
	comp=Z,26nm,0.7s						
XAN				pmax	pmax		
	comp=Z,150nm,5.5s						
QIZ	**Qiongzhong**	**30.09**	**256**	P	**P**	**15 59 53.6**	**+1.4**
QIZ				S	**S**	**16 04 48.7**	**+6.3**
QIZ				sS	**sS**	**16 05 26.7**	**+1.8**
QIZ				pmax	pmax		
	comp=Z,110nm,3.6s						
QIZ				LR	LR		
	comp=Z,190nm,15.5s						
QIZ				LR	LR		
	comp=Z,160nm,36.4s						
GYA	**Guiyang**	**30.27**	**272**	⇓*i*P	**P**	**15 59 54.0**	**+0.1**
GYA				pmax	pmax		
	comp=Z,28nm,0.8s						
GYA				pmax	pmax		
	comp=Z,210nm,4.4s						
TNTI	**Ternate**	**31.49**	**207**	P	**P**	**16 00 04.0**	**-0.5**
TNTI				IAmb	IAmb	16 00 05.8	
	comp=Z,46nm,1.0s						
TNTI	**Ternate**	**31.49**	**207**	P	**P**	**16 00 06.1**	**+1.6**
TNTI	**Ternate**	**31.49**	**207**	P	**P**	**16 00 04.9**	**+0.4**
LZH	**Lanzhou**	**31.59**	**291**	*e*P	**P**	**16 00 03.1**	**-2.4**
LZH				pmax	pmax		
	comp=Z,24nm,0.9s						
ULN	**Ulaanbaatar**	**31.66**	**314**	P	**P**	**16 00 05.0**	**-0.9**
ULN				PcP	**PcP**	**16 02 55.9**	**+0.8**
ULN	**Ulaanbaatar**	**31.66**	**314**	P	**P**	**16 00 05.0**	**-0.9**
ULN						16 02 55.9	
ULN				pmax	pmax		
	comp=Z,11nm,1.3s						
CD2	**Chengdu**	**31.96**	**282**	*e*P	**P**	**16 00 08.5**	**-0.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SONM	**Songino Array**	**32.06**	**314**	P	**P**	**16 00 09.8**	**+0.4**
	comp=Z,1.7nm,0.5s,baz=124,slow=8.5,SNR=14						
SONM				PcP	**PcP**	**16 02 57.2**	**+0.9**
	comp=Z,4.1nm,0.7s,baz=133,slow=2.8,SNR=8.1						
SONM				ScP	**ScP**	**16 06 29.3**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=144,slow=3.3,SNR=3.4						
SONM				ScS	**ScS**	**16 10 26.4**	**-1.6**
	comp=Z,0.2nm,0.4s,baz=235,slow=44,SNR=1.8						
SONM				LR	LR	16 13 44.0	
	comp=Z,62nm,18.4s,baz=186,slow=37						
	comp=Z,1.7nm,0.5s						
SONM	**Songino Array**	**32.06**	**314**	P	**P**	**16 00 09.9**	**+0.4**
SONM				PcP	**PcP**	**16 02 57.1**	**+0.9**
SONM	**Songino Array**	**32.06**	**314**	P	**P**	**16 00 09.9**	**+0.4**
SONM						16 02 57.1	
SONM				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MYLDM	**Lahad Datu**	**32.24**	**225**	P	**P**	**16 00 11.7**	**+0.5**
MYLDM				IAmb	IAmb	16 00 14.8	
	comp=Z,41nm,1.0s						
LBMI	**Labuha**	**32.73**	**205**	P	**P**	**16 00 16.0**	**+0.6**
	comp=Z,115nm,1.0s,comp=Z,1µm						
YAK	**Yakutsk**	**33.18**	**350**	P	**P**	**16 00 16.7**	**-2.1**
YAK				IAmb	IAmb	16 01 05.3	
	comp=Z,13nm,0.8s						
YAK	**Yakutsk**	**33.18**	**350**	*e*P	**P**	**16 00 19.1**	**+0.3**
YAK				*e**PP	**pP**	**16 00 41.8**	**-2.0**
YAK				*e*S	**S**	**16 05 29.4**	**-0.2**
YAK				*e**SS	**sS**	**16 06 12.9**	**+0.6**
YAK				*e*SS	**SnSn**	**16 07 44.0**	**+1.9**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.8s						
YAK				smax	smax		
	comp=N,68nm,2.0s						
YAK				smax	smax		
	comp=E,22nm,2.2s						
FAKI	**Fak Fak**	**33.45**	**196**	P	**P**	**16 00 21.2**	**-0.4**
	comp=E,29nm,1.4s						
GTOI	**Gorontalo**	**33.51**	**214**	P	**P**	**16 00 22.2**	**0.0**
	comp=E,18nm,0.8s						
SHEM	**Shemya Is, Ala**	**33.52**	**37**	LR	LR	16 14 36.8	
	comp=E,26nm,18.6s,baz=234,slow=37						
KMI	**Kunming**	**34.04**	**272**	⇓P	**P**	**16 00 27.4**	**+0.4**
KMI				pmax	pmax		
	comp=E,13nm,0.7s						
SEY	**Seymchan**	**34.09**	**9**	P	**P**	**16 00 28.0**	**+1.3**
	comp=E,1.6nm,0.9s,baz=75,slow=20,SNR=2.2						
	comp=E,1.6nm,0.9s						
MRSI	**Marisa**	**34.18**	**215**	P	**P**	**16 00 29.1**	**+1.1**
	comp=E,55nm,1.7s						
PZH	**PanZhiHua**	**34.54**	**274**	P	**P**	**16 00 30.7**	**-0.5**
PZH				pmax	pmax		
	comp=E,20nm,1.1s						
PZH				pmax	pmax		
	comp=E,130nm,4.5s						
SANI	**Sanana**	**34.61**	**207**	P	**P**	**16 00 31.0**	**-0.6**
SANI	**Sanana**	**34.61**	**207**	P	**P**	**16 00 30.7**	**-0.9**
	comp=E,99nm,0.8s,comp=E,792nm						
MSAI	**Masohi**	**34.77**	**201**	P	**P**	**16 00 33.3**	**+0.3**
	comp=E,12nm,0.6s						
ZAK	**Zakamensk**	**34.91**	**317**	*e*P	**P**	**16 00 33.6**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GTA	**Gaotai**	**34.91**	**297**	*e*P	**P**	**16 00 33.2**	**-1.1**
GTA				PcP	**PcP**	**16 03 05.6**	**+1.1**
GTA				pmax	pmax		
	comp=Z,11nm,1.0s						
GTA				LR	LR		
	comp=Z,140nm,19.3s						
GTA				LR	LR		
	comp=Z,100nm,18.2s						
GTA				LR	LR		
	comp=Z,100nm,15.6s						
LUWI	**Luwuk**	**35.09**	**213**	P	**P**	**16 00 35.3**	**-0.5**
	comp=Z,51nm,0.6s						
NLAI	**Namlea**	**35.28**	**204**	P	**P**	**16 00 38.7**	**+1.2**
	comp=Z,27nm,0.9s,comp=Z,3µm						
AAI	**Ambon**	**35.33**	**202**	P	**P**	**16 00 39.0**	**+1.2**
	comp=Z,56nm,0.8s						
MPSI	**Mapaga**	**35.36**	**218**	P	**P**	**16 00 38.1**	**0.0**
	comp=Z,11nm,0.9s						
MPSI				pP	**pwP**	**16 01 06.3**	**-0.4**
	comp=Z,11nm,0.9s						
BNDI	**Bandanaira**	**35.59**	**199**	P	**P**	**16 00 40.0**	**-0.1**
	comp=Z,96nm,0.7s						
NONG	**Nongkai**	**36.22**	**260**	P	**P**	**16 00 46.3**	**+0.8**
	comp=Z,171nm,0.9s						
CRAI	**Chiangrai**	**37.73**	**265**	P	**P**	**16 00 59.0**	**+0.8**
TNCH	**TengChong**	**37.73**	**273**	⇑P	**P**	**16 00 58.0**	**-0.5**
TNCH				pP	pwP	16 01 26.4	-0.6
TNCH				sP	sP	16 01 37.4	+0.8
TNCH				PP	**PP**	**16 02 28.2**	**+1.4**
TNCH				S	**S**	**16 06 36.8**	**-3.8**
TNCH				sS	sS	16 07 28.4	+4.6
TNCH				pmax	pmax		
	comp=Z,37nm,0.6s						
TNCH				pmax	pmax		
	comp=Z,87nm,5.1s						
TNCH				LR	LR		
	comp=Z,130nm,7.7s						
TNCH				LR	LR		
	comp=Z,160nm,5.1s						
TNCH				LR	LR		
	comp=Z,86nm,6.5s						
PHRA	**Phrae**	**38.54**	**263**	P	**P**	**16 01 05.4**	**+0.3**
SAUI	**Saumlaki**	**38.56**	**195**	P	**P**	**16 01 05.5**	**+0.3**
GOMU	**GeErMu**	**38.89**	**292**	P	**P**	**16 01 07.0**	**-1.3**
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,130nm,6.1s						
SPSI	**Sidrap Palu**	**39.08**	**215**	P	**P**	**16 01 09.0**	**-0.6**
	comp=Z,22nm,0.7s						
CHTO	**Chiang Mai**	**39.52**	**264**	P	**P**	**16 01 13.1**	**-0.2**
CHTO	**Chiang Mai**	**39.52**	**264**	P	**P**	**16 01 13.1**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CM31	**Chiang Mai Arr**	**39.67**	**263**	P	**P**	**16 01 14.9**	**+0.4**
CM31				IAmb	IAmb	16 01 17.3	

	comp=Z,26nm,0.7s						
CMAR	Chiang Mai Arr	39.67	263	P	P	16 01 14.9	+0.5
	comp=Z,15nm,0.7s,baz=66,slow=5.6,SNR=176						
CMAR				PcP	PcP	16 03 19.6	+0.5
	comp=Z,1.7nm,0.9s,baz=36,slow=1.1,SNR=4.8						
CMAR				ScP	ScP	16 06 57.2	0.0
	comp=Z,0.6nm,0.5s,baz=58,slow=1.8,SNR=8.1						
	comp=Z,15nm,0.7s						
CMAR	Chiang Mai Arr	39.67	263	P	P	16 01 15.0	+0.5
CMAR				ScP	ScP	16 06 59.0	+1.7
CMAR	Chiang Mai Arr	39.67	263	P	P	16 01 15.0	+0.5
CMAR						16 06 59.0	
KAPI	Kappang	40.00	214	P	P	16 01 16.1	-1.1
KAPI				IAmb	IAmb	16 01 20.2	
	comp=Z,18nm,1.0s						
KAPI	Kappang	40.00	214	P	P	16 01 18.9	+1.7
KAPI	Kappang	40.00	214	*ce*P	P	16 01 16.9	-0.3
KAPI				pmax	pmax		
	comp=Z,18nm,1.0s						
BSSI	Bau Bau, Buton	40.64	212	P	P	16 01 22.2	-0.2
	comp=Z,37nm,0.9s						
MND	Mandalay	40.78	270	P	P	16 01 24.7	+1.1
BILL	Bilibino	41.23	14	P	P	16 01 27.0	+0.4
BILL	Bilibino	41.23	14	*e*P	P	16 01 26.6	-0.1
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BILL	Bilibino	41.23	14	P	P	16 01 27.6	+1.0
MMRI	Maumere	42.10	208	P	P	16 01 33.7	-0.7
MMRI	Maumere	42.10	208	P	P	16 01 35.0	+0.6
MMRI	Maumere	42.10	208	P	P	16 01 33.9	-0.5
	comp=Z,134nm,1.0s,comp=Z,1µm						
SOEI	Soe	42.34	205	P	P	16 01 35.8	-0.6
SOEI	Soe	42.34	205	P	P	16 01 36.7	+0.3
SOEI	Soe	42.34	205	P	P	16 01 35.5	-0.9
	comp=Z,117nm,1.0s,comp=Z,908nm						
KDU	Kakadu	42.89	192	P	P	16 01 40.5	-0.2
MTN	Manton Dam	43.30	194	P	P	16 01 43.2	-0.9
MTN				ScP	ScP	16 07 09.9	-1.6
MTN	Manton Dam	43.30	194	P	P	16 01 43.3	-0.7
SURA	Surathani	43.59	251	P	P	16 01 48.5	+2.0
	comp=Z,21nm,1.2s						
SRIT	Nakonsritamara	43.93	250	P	P	16 01 50.0	+0.8
SRIT				IAmb	IAmb	16 01 51.3	
	comp=Z,32nm,0.9s						
SRIT	Nakonsritamara	43.93	250	P	P	16 01 50.5	+1.3
	comp=Z,38nm,0.8s						
WMQ	Urumqi	44.14	304	*e*P	P	16 01 50.5	-0.2
WMQ				PcP	PP	16 03 35.1	-0.5
WMQ				S	S	16 08 12.9	-2.0
WMQ				pmax	pmax		
	comp=Z,20nm,1.3s						
PLAI	Plampang	44.26	214	P	P	16 01 51.1	-0.7
PLAI	Plampang	44.26	214	P	P	16 01 50.9	-0.9
	comp=Z,65nm,1.1s						
TWSI	Taliwang, Sumb	44.62	215	P	P	16 01 53.9	-0.7
	comp=Z,52nm,0.9s						
DGZ	Jazzator, Alta	44.65	312	*d i*P	P	16 01 55.5	+0.8
DGZ				pmax	pmax		
	comp=Z,13nm,0.9s						
UNV	Unalaska Valle	44.79	42	P	P	16 01 53.4	-2.0
	baz=259						
SRBI	Singaraja	44.93	217	P	P	16 01 57.6	+0.6
	comp=Z,38nm,0.9s						
KULM	Kulim	45.01	245	P	P	16 01 58.1	+0.3
KULM				IAmb	IAmb	16 01 59.5	
	comp=Z,31nm,0.9s						
IPM	Ipoh	45.21	244	P	P	16 01 59.1	-0.3
IPM				IAmb	IAmb	16 01 60.0	
	comp=Z,17nm,0.7s						
IPM	Ipoh	45.21	244	P	P	16 01 59.6	+0.2
JAGI	Jajag, Banyuwa	45.81	218	P	P	16 02 03.5	-0.6
JAGI	Jajag, Banyuwa	45.81	218	P	P	16 02 04.8	+0.7
JAGI	Jajag, Banyuwa	45.81	218	P	P	16 02 03.6	-0.5
	comp=Z,45nm,1.1s,comp=Z,898nm						
ZSN	Zaisan	46.20	309	*e*P	P	16 02 07.1	+0.4
	comp=Z,13nm,0.9s,baz=309						
ZSN	Zaisan	46.20	309	*e*P	P	16 02 07.1	+0.4
ZSN				pmax	pmax		
	comp=Z,13nm,0.9s						
TAPN	Taplejung	46.41	281	*e*P	P	16 02 08.4	-0.7
KNRA	Kununurra	46.58	196	P	P	16 02 09.9	0.0
KNRA				IAmb	IAmb	16 02 10.7	
	comp=Z,19nm,0.8s						
KNRA	Kununurra	46.58	196	P	P	16 02 10.7	+0.8
PWJI	Pagerwojo	46.76	221	P	P	16 02 10.0	-1.4
	comp=Z,45nm,0.8s						
ZAA0	Zalesovo Array	46.78	318	P	P	16 02 11.0	-0.2
ZAA0				PcP	PcP	16 03 42.6	+0.1
ZAA0				IAmb	IAmb	16 03 43.6	
	comp=Z,13nm,0.8s						
ZALV	Zalesovo Beam	46.78	318	P	P	16 02 11.1	-0.1
	comp=Z,5.2nm,0.5s,baz=98,slow=7.8,SNR=23						
ZALV				PcP	PcP	16 03 42.8	+0.2
	comp=Z,12nm,0.6s,baz=112,slow=3.6,SNR=24						
ZALV				ScP	ScP	16 07 23.8	-1.6
	comp=Z,2.1nm,0.8s,baz=125,slow=4.2,SNR=5.7						
ZALV				S	S	16 08 48.2	-4.1
	comp=Z,0.3nm,0.4s,baz=203,slow=34,SNR=2.4						
ZALV				ScS	ScS	16 11 50.8	-3.0
	comp=Z,0.3nm,0.3s,baz=336,slow=39,SNR=2.0						
ZALV				LR	LR	16 21 59.0	
	comp=Z,49nm,18.4s,baz=87,slow=36						
	comp=Z,5.2nm,0.5s						
ODAN	Odare	46.83	280	*e*P	P	16 02 12.0	-0.2
RAMN	Ramite	47.48	281	*e*P	P	16 02 16.6	-0.7
	comp=Z,40nm,0.7s						
TNA	Tin City	47.57	26	P	P	16 02 14.8	-2.3
	baz=247						
JIRN	Jiri	47.63	282	*e*P	P	16 02 18.4	-0.2
	comp=Z,25nm,0.6s						
S12K	Black Hills	47.64	40	P	P	16 02 13.6	-4.2
	baz=261						
GUN	Gumba	47.82	282	*e*P	P	16 02 19.6	-0.5
	comp=Z,18nm,0.5s						
PSI	Prapat	47.89	244	P	P	16 02 21.2	+0.8
	comp=Z,27nm,1.1s						
PSI	Prapat	47.89	244	P	P	16 02 20.8	+0.4
PSI				pmax	pmax		
	comp=Z,29nm,1.1s						
KPJI	Karang Pucung	47.92	225	P	P	16 02 20.4	0.0
	comp=Z,55nm,1.0s						
MK31	Makanchi Array	47.95	308	P	P	16 02 20.3	-0.1
MK31				IAmb	IAmb	16 02 21.3	
	comp=Z,12nm,0.8s						
MK31				PcP	PcP	16 03 47.5	+0.6
MK31	Makanchi Array	47.95	308	*d i*P	P	16 02 20.2	-0.1
MKAR	Makanchi Array	47.95	308	P	P	16 02 20.1	-0.2
	comp=Z,13nm,0.7s,baz=91,slow=9.6,SNR=187						
MKAR				PcP	PcP	16 03 47.6	+0.7
	comp=Z,11nm,0.8s,baz=85,slow=5.4,SNR=14						
MKAR				ScP	ScP	16 07 29.5	-1.1
	comp=Z,1.7nm,0.6s,baz=87,slow=4.6,SNR=9.1						
MKAR				S	S	16 09 04.2	-5.0
	comp=Z,1.9nm,1.1s,baz=92,slow=17,SNR=5.7						
MKAR				ScS	ScS	16 11 57.3	-4.6
	comp=Z,0.1nm,0.7s,baz=331,slow=20,SNR=3.2						
MKAR				LR	LR	16 22 56.5	
	comp=Z,61nm,21.4s,baz=67,slow=36						
	comp=Z,13nm,0.7s						
MKAR	Makanchi Array	47.95	308	P	P	16 02 19.4	-0.9
MKAR				PcP	PcP	16 03 47.8	+0.9
MKAR				ScP	ScP	16 07 29.4	-1.2
RPSI	Rantau Prapat	47.95	244	P	P	16 02 20.8	0.0
RPSI				IAmb	IAmb	16 02 22.3	
	comp=Z,28nm,1.1s						
MAKZ	Makanchi	48.16	308	P	P	16 02 21.5	-0.5
MAKZ				IAmb	IAmb	16 02 22.6	
	comp=Z,13nm,0.6s						
MAKZ				PcP	PcP	16 03 48.6	+1.0
MAKZ	Makanchi	48.16	308	P	P	16 02 21.5	-0.5
MAKZ						16 03 48.6	
MAKZ				pmax	pmax		
	comp=Z,13nm,0.6s						
MAKZ	Makanchi	48.16	308	P	P	16 02 21.8	-0.3
MAKZ				pP	pP	16 02 47.6	-0.9
ANM	Nome	48.21	28	P	P	16 02 22.0	-0.1
	baz=250						
PKI	Pulchoki	48.32	282	*e*P	P	16 02 22.8	-1.1
SDSI	Sungai Dareh	48.38	238	P	P	16 02 24.5	+0.5
	comp=Z,17nm,1.0s						
BBJI	Bungbulang	48.81	226	P	P	16 02 27.6	+0.2
	comp=Z,23nm,0.7s						
GKN	Gorkha	48.85	283	*e*P	P	16 02 26.7	-1.1
	comp=Z,8.8nm,0.6s						
MDSI	Maura Dua	48.88	232	P	P	16 02 27.9	0.0
	comp=Z,66nm,0.8s,comp=Z,719nm						
PDSI	Padang	49.09	239	P	P	16 02 29.4	-0.1
	comp=Z,11nm,1.0s						
MASI	Maura Aman, Be	49.30	235	P	P	16 02 31.7	+0.6
	comp=Z,45nm,1.0s						
LWLI	Liwa	49.35	232	P	P	16 02 30.7	-0.9
	comp=Z,46nm,0.7s						
KSI	Kapahiang	49.40	234	P	P	16 02 31.6	-0.3
	comp=Z,33nm,0.9s						
DANN	Dangsing	49.50	283	*e*P	P	16 02 32.5	-0.4
WB0	Warramunga Arr	49.55	188	P	P	16 02 31.1	-1.7
WB0				IAmb	IAmb	16 02 36.2	
	comp=Z,9.7nm,0.9s						
FITZ	Fitzroy Crossi	49.72	199	P	P	16 02 34.8	+0.7
WRAB	Tennant Creek	49.72	188	P	P	16 02 33.3	-0.8
WRAB	Tennant Creek	49.72	188	⇓*e*P	P	16 02 32.7	-1.4
WRAB				pmax	pmax		
	comp=Z,11nm,1.0s						
WRAB	Tennant Creek	49.72	188	P	P	16 02 32.8	-1.3
WRAB				sP	sP	16 03 12.0	-0.7
WB2	Warramunga Arr	49.73	188	P	P	16 02 32.9	-1.3
WRA	Warramunga Arr	49.73	188	P	P	16 02 32.8	-1.4
	comp=Z,5.6nm,0.7s,baz=6.1,slow=7.6,SNR=38						
WRA				ScP	ScP	16 07 36.5	-1.9
	comp=Z,7.3nm,1.1s,baz=4.6,slow=4.5,SNR=12						
WRA				S	S	16 09 25.3	-9.2
	comp=Z,1.8nm,0.8s,baz=5.6,slow=14,SNR=5.1						
	comp=Z,5.6nm,0.7s						
WRA	Warramunga Arr	49.73	188	P	P	16 02 33.0	-1.1
KOLN	Koldanda	49.80	283	*e*P	P	16 02 34.4	-0.6
NRIK	Noril'sk	49.82	338	P	P	16 02 34.2	-0.1
	comp=Z,6.1nm,0.7s,baz=105,slow=8.6,SNR=12						
NRIK				S	S	16 09 34.0	-0.8
	comp=Z,0.8nm,0.2s,baz=197,slow=21,SNR=8.0						
	comp=Z,6.1nm,0.7s						
NRIK	Noril'sk	49.82	338	P	P	16 02 34.7	+0.4
NRIK				IAmb	IAmb	16 02 44.0	
	comp=Z,8.0nm,0.8s						
NRIK	Noril'sk	49.82	338	P	P	16 02 34.7	+0.4
NRIK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GSI	Gunungsitoli	49.87	244	P	P	16 02 35.1	-0.3
GSI	Gunungsitoli	49.87	244	P	P	16 02 36.1	+0.7
GSI	Gunungsitoli	49.87	244	P	P	16 02 35.5	+0.1
	comp=Z,127nm,1.1s,comp=Z,1µm						
N16K	Nishlik Lake	50.13	34	P	P	16 02 35.1	-1.7
	baz=260						
SHLS	Shalkode	50.16	303	*e*P	P	16 02 34.0	-3.4
	baz=303						
SHLS	Shalkode	50.16	303	*e*P	P	16 02 34.0	-3.4
PYUN	Piuthan	50.22	283	*e*P	P	16 02 37.8	-0.4
	comp=Z,46nm,0.5s						
P16K	Nushagak River	50.30	36	P	P	16 02 36.1	-1.9
	baz=262						
O16K	Kokwok River B	50.33	35	P	P	16 02 36.0	-2.3
	baz=262						
R16K	Pilot Point	50.34	38	P	P	16 02 36.1	-2.2
	baz=264						
KURK	Kurchatov	50.35	313	P	P	16 02 38.4	-0.2
KURK				IAmb	IAmb	16 02 39.1	
	comp=Z,23nm,0.9s						
KURK	Kurchatov	50.35	313	*c i*P	P	16 02 38.1	-0.5
KURK				pmax	pmax		
	comp=Z,36nm,1.3s						
KURK	Kurchatov	50.35	313	P	P	16 02 38.0	-0.5
UZB	Uzynbulak	50.48	303	*e*P	P	16 02 39.4	-0.5
	baz=303						
UZB	Uzynbulak	50.48	303	*e*P	P	16 02 39.4	-0.5
KPKS	Kokpek	50.69	304	*e*P	P	16 02 41.1	-0.3
	baz=304						
KPKS	Kokpek	50.69	304	*e*P	P	16 02 41.1	-0.3
TDK	Taldyqorghan	50.74	306	*e*P	P	16 02 41.2	-0.5
	baz=306						
TDK	Taldyqorghan	50.74	306	*e*P	P	16 02 41.1	-0.5
ZHN	Zhinishke	50.90	303	*e*P	P	16 02 42.2	-0.9
	baz=303						
ZHN	Zhinishke	50.90	303	*e*P	P	16 02 42.1	-0.9
SATY	Saty	50.94	303	*e*P	P	16 02 43.1	-0.2
	baz=303						
SATY	Saty	50.94	303	*e*P	P	16 02 43.0	-0.2
TARG	Taragay, Kyrgy	51.54	302	P	P	16 02 46.7	-1.5
TARG				IAmb	IAmb	16 02 49.9	
	comp=Z,13nm,1.1s						
TARG	Taragay, Kyrgy	51.54	302	P	P	16 02 46.7	-1.5
TARG				pmax	pmax		
	comp=Z,13nm,1.1s						
Q18K	Katmai Hardscr	51.80	37	P	P	16 02 48.1	-1.3
	baz=265						
O18K	Koktuh Hills	51.81	35	P	P	16 02 49.6	+0.2
	baz=264						
TTA	Tatalina	51.83	31	P	P	16 02 49.4	-0.2
	baz=261						
CHKK	Chushkaly	51.87	304	*e*P	P	16 02 49.6	-0.5
	baz=304						
CHKK	Chushkaly	51.87	304	*e*P	P	16 02 49.6	-0.5
MDOK	Medeo	51.91	303	*e*P	P	16 02 50.5	0.0
	baz=304						
MDOK	Medeo	51.91	303	*e*P	P	16 02 50.5	0.0
TNSS	Tian-Shan	52.00	303	*e*P	P	16 02 51.6	0.0
	baz=303						
TNSS	Tian-Shan	52.00	303	*e*P	P	16 02 51.5	0.0
AAA	Alma-Ata	52.00	304	*e*P	P	16 02 51.2	+0.1
	baz=304						
AAA	Alma-Ata	52.00	304	*e*P	P	16 02 51.2	+0.1
KUU	Kurty	52.33	304	*e*P	P	16 02 53.1	-0.4
	comp=Z,12nm,0.6s,baz=304						
KUU	Kurty	52.33	304	*e*P	P	16 02 53.1	-0.4
KUU				pmax	pmax		
	comp=Z,12nm,0.6s						
Q19K	Cape Douglas,	52.53	36	P	P	16 02 53.5	-1.2
	baz=266						
TKM2	Tokmak 2	53.00	303	P	P	16 02 59.2	+0.5
	SNR=5.2						
KDAK	Kodiak Island	53.03	38	LR	LR	16 23 41.7	
	comp=Z,57nm,21.9s,baz=274,slow=34						
KSH	Kashi	53.27	299	P	P	16 03 04.5	+3.9
KSH				pmax	pmax		
	comp=Z,9.0nm,0.6s						
IMAR	Indian Mountai	53.29	28	P	P	16 02 59.6	-0.6
AS31	Alice Springs	53.46	188	P	P	16 03 00.0	-1.8
ASAR	Alice Springs	53.46	188	P	P	16 03 00.5	-1.4
	comp=Z,3.0nm,0.7s,baz=359,slow=5.3,SNR=80						
ASAR				PcP	PcP	16 04 08.4	+0.9
	comp=Z,2.4nm,0.8s,baz=5.3,slow=4.3,SNR=5.1						
ASAR				ScP	ScP	16 07 52.8	-1.6
	comp=Z,0.6nm,0.7s,baz=5.0,slow=4.4,SNR=5.1						
ASAR				S	S	16 10 19.0	-6.6
	comp=Z,0.6nm,0.8s,baz=14,slow=19,SNR=6.6						
	comp=Z,3.0nm,0.7s						
ASAR	Alice Springs	53.46	188	P	P	16 02 59.9	-2.0
G21K	Allakaket	53.47	27	P	P	16 03 02.1	+0.6
	baz=260						
KBK	Karagaybulak	53.51	303	P	P	16 03 02.7	+0.3
	SNR=17						
PPLA	Purkeypile	53.56	32	P	P	16 03 03.8	+1.5
	baz=264						
F21K	Alatna River	53.60	26	P	P	16 03 04.1	+1.7
	baz=260						
CHUM	Lake Minchumin	53.61	30	P	P	16 03 03.7	+1.2
	baz=264						
SGDS	Sogindy	53.62	304	*e*P	P	16 03 02.5	-0.5
	baz=304						
SGDS	Sogindy	53.62	304	*e*P	P	16 03 02.5	-0.5
H21K	Melozitna Rive	53.62	28	P	P	16 03 03.6	+1.0
H21K	Melozitna Rive	53.62	28	P	P	16 03 04.3	+1.6
	baz=262						
CAST	Castle Rocks	53.66	31	P	P	16 03 05.0	+2.0
	baz=264						
USP	Ospenovka	53.74	304	P	P	16 03 03.8	0.0
	SNR=7.0						
SKT	Skwentna	53.79	33	P	P	16 03 03.7	-0.2
	baz=266						
BTLS	Baital	53.81	306	*e*P	P	16 03 03.9	-0.4
	comp=Z,5.0nm,0.7s,baz=306						
BTLS	Baital	53.81	306	*e*P	P	16 03 03.9	-0.4
BTLS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AAK	Ala-Archa	53.84	303	P	P	16 03 04.8	0.0
	SNR=8.7						
AAK	Ala-Archa	53.84	303	LR	LR	16 27 19.1	
	comp=Z,35nm,19.8s,baz=74,slow=37						
AAK	Ala-Archa	53.84	303	P	P	16 03 04.3	-0.5
AAK	Ala-Archa	53.84	303	*d i*P	P	16 03 04.7	0.0
AAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AAK	Ala-Archa	53.84	303	P	P	16 03 04.3	-0.5
AAK				pP	pP	16 03 29.5	-2.1
AAK				PcP	PcP	16 04 09.8	+0.7
UCH	Uchtor	53.89	303	P	P	16 03 05.9	+0.3
	SNR=13						
I21K	Tanana	53.90	29	P	P	16 03 06.5	+1.9
	baz=263						
SUA	Susitna One	54.13	33	P	P	16 03 06.9	+0.5
	baz=267						
F22K	John River	54.15	26	P	P	16 03 08.1	+1.7
	baz=261						
BRZS	Berezniki	54.19	312	*e*P	P	16 03 06.7	-0.3
	comp=Z,6.4nm,0.7s,baz=312						
BRZS	Berezniki	54.19	312	*e*P	P	16 03 06.6	-0.3
BRZS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BPAW	Bear Paw Mtn.	54.21	30	P	P	16 03 08.6	+1.6
	baz=265						
H22K	Ishtalitna Cre	54.24	28	P	P	16 03 08.5	+1.4
	baz=263						
E22K	Anaktuvuk Pass	54.38	25	P	P	16 03 08.7	+0.6
	baz=261						
MLY	Manley	54.41	29	P	P	16 03 09.2	+0.9
	baz=264,SNR=6.2						
MBWA	Marble Bar	54.49	204	P	P	16 03 08.7	-0.7
AML	Almayashu	54.51	303	P	P	16 03 10.3	+0.4
	SNR=22						
RC01	Rabbit Creek A	54.60	34	P	P	16 03 10.0	+0.3
	baz=268						
SEW	Seward	54.71	35	P	P	16 03 12.1	+1.6
	baz=269						
PSA00	Pilbara Seismi	54.83	204	P	P	16 03 11.0	-0.8
PSA00				IAmb	IAmb	16 03 12.5	
	comp=Z,11nm,0.8s						
COLD	Coldfoot	54.87	26	P	P	16 03 12.6	+1.0
	baz=263						
G23K	Bananza Creek	54.88	27	P	P	16 03 13.6	+1.9
	baz=264						
PMR	Palmer	54.91	33	P	P	16 03 11.8	-0.1
	baz=268						
D23K	Nanushuk River	54.92	24	P	P	16 03 13.7	+1.8
	baz=261						
H23K	Yukon River	54.98	28	P	P	16 03 14.1	+1.6
	baz=265						
I23K	Minto, Yukon-K	55.00	29	P	P	16 03 13.1	+0.6
	baz=265						
NEA2	Nenana	55.08	30	P	P	16 03 14.2	+1.0
NEA2				IAmb	IAmb	16 03 47.8	
	comp=Z,14nm,1.1s						
NEA2	Nenana	55.08	30	P	P	16 03 14.9	+1.7
	baz=266,SNR=8.8						
MCK	McKinley	55.09	31	P	P	16 03 14.9	+1.6
	baz=267						
E23K	Chandalar	55.19	25	P	P	16 03 16.1	+2.1
	baz=263						
KNK	Knik Glacier	55.23	34	P	P	16 03 14.5	+0.2
	baz=269						
SML	Sawmill	55.30	33	P	P	16 03 14.2	-0.7
	baz=269						
BVAR	Borovoye Array	55.36	316	PcP	PcP	16 04 15.1	+0.6
	comp=Z,7.1nm,0.5s,baz=100,slow=2.7,SNR=4.5						
BVAR				S	S	16 10 45.0	-5.6
	comp=Z,1.2nm,0.7s,baz=83,slow=15,SNR=7.8						
BVAR				ScS	ScS	16 12 50.1	-2.9
	comp=Z,0.2nm,0.5s,baz=224,slow=41,SNR=2.2						
BVAR				LR	LR	16 27 06.8	
	comp=Z,63nm,19.7s,baz=73,slow=36						
BRVK	Borovoye	55.42	316	P	P	16 03 15.7	-0.1
BRVK	Borovoye	55.42	316	*c i*P	P	16 03 16.0	+0.2
BRVK				pmax	pmax		
	comp=Z,49nm,1.0s						
BRVK	Borovoye	55.42	316	P	P	16 03 16.0	+0.2
BRVK				pP	pP	16 03 42.0	-0.8
BRVK				sP	sP	16 03 54.0	-1.4
BRVK				PcP	PcP	16 04 15.2	+0.6
D24K	Happy Valley	55.60	24	P	P	16 03 19.1	+2.3
	baz=263						
E24K	Your Creek	55.61	25	P	P	16 03 18.9	+1.9
	baz=264						
COLA	College	55.62	29	*i* P	P	16 03 19.7	+2.7
COLA	College	55.62	29	P	P	16 03 18.7	+1.8
H24K	Noodor Dome	55.67	28	P	P	16 03 19.2	+1.8
	baz=266						
C24K	Franklin Bluff	55.72	23	P	P	16 03 19.4	+1.8
	baz=263						
SCM	Sheep Creek Mo	55.77	33	P	P	16 03 18.8	+0.6
	baz=270						
F24K	Squaw Lake	55.79	26	P	P	16 03 19.9	+1.7
	baz=265						
POKR	Poker Plat Res	55.81	29	P	P	16 03 20.1	+1.7
	baz=267,SNR=5.3						
G24K	Hadweenzic Riv	55.88	27	P	P	16 03 21.2	+2.3
	baz=266						
HDA	Harding Lake	55.99	30	P	P	16 03 20.2	+0.5
HDA				IAmb	IAmb	16 03 54.3	
	comp=Z,36nm,2.0s						
HDA	Harding Lake	55.99	30	P	P	16 03 19.2	-0.5
	baz=268						
IL31		56.03	29	P	P	16 03 20.0	+0.2
ILAR	Eielson Array	56.03	29	P	P	16 03 20.2	+0.3
	comp=Z,1.7nm,0.8s,baz=267,slow=5.9,SNR=23						
	comp=Z,1.7nm,0.8s						
ILAR	Eielson Array	56.03	29	P	P	16 03 20.3	+0.4
DZA	Taraz	56.09	304	*e*P	P	16 03 20.3	-0.5
	baz=304						
DZA	Taraz	56.09	304	*e*P	P	16 03 20.3	-0.5
G25K	Bearman Lake	56.43	27	P	P	16 03 24.9	+2.2
	baz=267						
KLU	Klutina	56.44	33	P	P	16 03 23.6	+0.6
	baz=271						
D25K	Kavik River	56.49	24	P	P	16 03 24.9	+1.7
	baz=265						
K24K	Donnelly Dome	56.49	31	P	P	16 03 24.5	+1.1
	baz=270						
EYAK	Cordova Ski Ar	56.55	35	P	P	16 03 23.1	-0.6
	baz=272						
PRP	Porcupine Dome	56.63	29	P	P	16 03 25.4	+1.1
	baz=269						
PAX	Paxson	56.63	32	P	P	16 03 25.0	+0.6
	baz=270						
KK31	Karatay Array	56.64	304	P	P	16 03 24.4	-0.3
KK31	Karatay Array	56.64	304	P	P	16 03 24.4	-0.3
KK31				pmax	pmax		
	comp=Z,18nm,0.7s						
KKAR	Karatay Array	56.64	304	P	P	16 03 24.4	-0.3
KKAR	Karatay Array	56.64	304	P	P	16 03 24.4	-0.3
F25K	Christian Rive	56.65	26	P	P	16 03 26.0	+1.6
	baz=267						
E25K	Arctic Village	56.71	25	P	P	16 03 26.1	+1.3
	baz=267						
NIL	Nilore	56.75	293	P	P	16 03 25.2	-0.4
NIL				IAmb	IAmb	16 04 22.0	
	comp=Z,9.9nm,0.7s						
NIL	Nilore	56.75	293	P	P	16 03 25.2	-0.4
NIL				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NIL	Nilore	56.75	293	P	P	16 03 25.4	-0.1
NIL				sP	sP	16 04 02.4	-3.1
NIL				PcP	PcP	16 04 19.7	-0.6
HARP	HAARP	56.79	32	P	P	16 03 26.2	+0.8
	baz=271						
RIDG	Independent Ri	56.91	31	P	P	16 03 27.8	+1.5
	baz=270						
C26K	Camden Bay	57.04	23	P	P	16 03 29.3	+2.3
	baz=266						
DZM	Mont Dzumac	57.05	151	*e*LR	LR	16 20 14.9	
	comp=Z,61nm,23.4s						
BMAR	Burnt Mountain	57.05	26	P	P	16 03 28.5	+1.3
IUG	Iuzhnay	57.18	303	⇑*i*P	P	16 03 28.6	0.0
	comp=Z,15nm,0.7s,baz=303						
IUG	Iuzhnay	57.18	303	*c i*P	P	16 03 28.6	0.0
IUG				pmax	pmax		
	comp=Z,15nm,0.7s						
F26K	Sheenjek River	57.23	26	P	P	16 03 30.5	+2.1
	baz=268						
DOT	Dot Lake	57.26	31	P	P	16 03 29.6	+0.9
SCRK	Sand Creek	57.29	30	P	P	16 03 30.4	+1.4
SCRK	Sand Creek	57.29	30	P	P	16 03 29.9	+0.9
	baz=271,SNR=5.4						
G26K	Porcupine Rive	57.35	27	P	P	16 03 30.9	+1.7
	baz=269						
C27K	Jago River	57.45	24	P	P	16 03 31.9	+2.0
	baz=268						
CHM	Chimkent	57.46	304	*e*P	P	16 03 29.9	-0.6
	baz=304						
CHM	Chimkent	57.46	304	*e*P	P	16 03 29.8	-0.6
J26L	Joseph Creek	57.46	30	P	P	16 03 30.0	-0.2
J26L	Joseph Creek	57.46	30	P	P	16 03 31.2	+1.1
	baz=271,SNR=5.3						

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L26K  Log Cabin Wild    57.60  32      P      P      16 03 32.6 +1.5
      baz=272,SNR=5.3
GAR   Garm              57.67 300      P      P      16 03 31.1 -1.0
GAR                                    IAmb   IAmb   16 03 33.3
      comp=Z,19nm,1.0s
M26K  Nabesna, AK       57.79  32      P      P      16 03 33.7 +1.2
      baz=273
MCARA McCarthy VSAT     57.84  34      P      P      16 03 33.9 +1.1
      baz=274
K27K  Chicken           58.13  30      P      P      16 03 37.0 +2.3
      baz=273
E27K  Coleen River      58.19  25      P      P      16 03 36.8 +1.6
      baz=271
G27K  Doyon Strip       58.20  27      P      P      16 03 36.8 +1.6
      baz=271
I27K  Kandik River      58.25  28      P      P      16 03 37.2 +1.5
      baz=272
L27K  Beaver Creek,     58.29  31      P      P      16 03 37.8 +1.9
L27K  Beaver Creek,     58.29  31      P      P      16 03 37.9 +1.9
      baz=274
BCAR  Beaver Creek A    58.31  31      P      P      16 03 36.9 +0.8
M27K  Edge Creek, AK    58.32  32      P      P      16 03 37.6 +1.3
      baz=274
CHGR  Chuyangaron       58.63 299      P      P      16 03 38.3 -0.5
CHGR  Chuyangaron       58.63 299      P      P      16 03 38.3 -0.5
CHGR                                   pmax   pmax
      comp=Z,34nm,0.7s
BVCY  Beaver Creek      58.78  32      P      P      16 03 40.1 +0.8
      baz=275
YUK3  Moose Creek       59.03  33      P      P      16 03 42.1 +0.8
      baz=276
MSVF  Nonsavu           59.24 138      LR     LR     16 27 05.3
      comp=Z,27nm,18.1s,baz=105,slow=34
DAWY  Dawson            59.30  30      P      P      16 03 44.9 +2.0
      baz=275
I29M  Ogilvie Camp,     59.65  29      P      P      16 03 47.3 +2.1
      baz=275
J29M  Klondike Camp     59.77  30      P      P      16 03 47.9 +1.7
      baz=276
M29M  Somme Creek       59.89  32      P      P      16 03 49.4 +2.3
      baz=277
YUK4  Talbot Arm        59.94  33      P      P      16 03 48.9 +1.4
      baz=277
L29M  L29M              59.96  31      P      P      16 03 50.5 +3.0
      baz=277,SNR=9.0
O29M  Mount Kennedy     60.12  35      P      P      16 03 51.1 +2.5
      baz=278
YUK6  Outpost Mounta    60.13  34      P      P      16 03 50.1 +1.2
      baz=278
K29M  Barlow Dome       60.15  30      P      P      16 03 51.1 +2.4
      baz=277
EPYK  Eagle Plains      60.19  27      P      P      16 03 49.7 +0.7
EPYK                                   IAmb   IAmb   16 03 51.7
      comp=Z,17nm,0.8s
EPYK  Eagle Plains      60.19  27      P      P      16 03 51.0 +2.1
      baz=276
G30M  tAoh Zraii Nji    60.32  27      P      P      16 03 51.4 +1.6
      baz=276
SVE   Sverdlovsk        60.47 321 deP     P      16 03 51.8 +0.9
SVE                                    pmax   pmax
      comp=Z,43nm,0.9s
HYT   Haines Junctio    60.56  34      P      P      16 03 53.5 +1.8
      baz=279
M30M  Minto, Yukon      60.64  32      P      P      16 03 52.4 +0.3
M30M                                   IAmb   IAmb   16 04 05.5
      comp=Z,13nm,1.5s
M30M  Minto, Yukon      60.64  32      P      P      16 03 54.9 +2.8
      baz=278
P30M  Million Dollar    60.94  35      P      P      16 03 56.0 +1.8
      baz=279
INK   Inuvik            61.18  25      P      P      16 03 56.2 +0.7
      comp=Z,3.4nm,0.9s,baz=280,slow=5.5,SNR=11
      comp=Z,3.4nm,0.9s
INK   Inuvik            61.18  25      P      P      16 03 55.8 +0.3
      baz=278
F31M  Tsiigehtchic      61.22  26      P      P      16 03 55.9 +0.1
      baz=278
STKA  Stephens Creek    61.22 179      P      P      16 03 55.5 -0.7
      comp=Z,3.5nm,0.6s,baz=312,slow=4.3,SNR=9.1
      comp=Z,3.5nm,0.6s
N31M  Braeburn, Yuko    61.28  33      P      P      16 03 57.2 +0.7
      baz=280
FORT  Forrest           61.35 193      P      P      16 03 56.3 -0.8
PLBC  Pleasant Camp     61.35  35      P      P      16 03 57.9 +1.1
      baz=280
ARU   Arti              61.67 321      P      P      16 03 59.4 +0.3
      comp=Z,40nm,0.6s,baz=91,slow=3.9,SNR=42
ARU                                    S      S      16 12 11.0 -1.3
      comp=Z,0.8nm,0.3s,baz=195,slow=22,SNR=1.7
      comp=Z,40nm,0.6s
ARU   Arti              61.67 321      P      P      16 03 59.2 +0.1
ARU   Arti              61.67 321c iP     P      16 03 59.1 +0.1
ARU                                    pmax   pmax
      comp=Z,77nm,1.0s
ARU   Arti              61.67 321      P      P      16 03 59.3 +0.3
S31K  Pelican           61.70  37      P      P      16 04 00.3 +1.1
      baz=281
M31M  Drury Creek, Y    61.81  32      P      P      16 04 01.4 +1.5
M31M                                   IAmb   IAmb   16 04 02.6
      comp=Z,8.0nm,0.7s
M31M  Drury Creek, Y    61.81  32      P      P      16 04 01.9 +2.0
      baz=280,SNR=8.5
FARO  Faro, Yukon       62.28  32      P      P      16 04 04.6 +1.5
      baz=281,SNR=6.2
ABKAR Akbulak array     62.47 313      P      P      16 04 04.5 +0.1
P32M  Atlin             62.65  35      P      P      16 04 07.5 +1.9
      baz=282
PCHI  Peechi            62.76 267⇑eP     P      16 04 07.1 +0.2
A36M  Sachs Harbour     63.27  20      P      P      16 04 08.0 -1.4
A36M  Sachs Harbour     63.27  20      P      P      16 04 10.4 +1.0
      baz=284
AKTO  Aktyubinsk        63.38 315      P      P      16 04 10.4  0.0
      comp=Z,22nm,0.7s,baz=78,slow=5.2,SNR=32
      comp=Z,22nm,0.7s
C36M  Paulatuk          64.32  23      P      P      16 04 17.0 +0.7
      baz=286
KIRV  Kirov             65.91 325      P      P      16 04 27.5 +0.8
      comp=Z,15nm,0.5s,baz=87,slow=2.9,SNR=13
KIRV                                   S      S      16 13 03.8 -0.7
      comp=Z,5.1nm,0.6s,baz=302,slow=22,SNR=5.5
      comp=Z,15nm,0.5s
KIRV  Kirov             65.91 325c iP     P      16 04 27.3 +0.6
LIRD  Liard River Hi    66.44  34      P      P      16 04 31.7 +1.5
      baz=288
GEYT  Alibeck           67.13 302      P      P      16 04 34.7 -0.3
      comp=Z,3.3nm,0.8s,baz=354,slow=1.5,SNR=7.6
      comp=Z,3.3nm,0.8s
ALE   Alert             67.46   3      P      P      16 04 38.2 +1.9
SPITS Spitsbergen Ar    67.64 349      P      P      16 04 39.0 +1.5
      comp=Z,15nm,0.9s,baz=96,slow=6.8,SNR=5.3
      comp=Z,15nm,0.9s
NOR   Nord              68.34 357  i P      P      16 04 41.3 -0.5
NOR                                    IAmb   IAmb   16 04 43.1
      comp=Z,1.7nm,0.8s
BELG  Belogornoye       68.94 319      P      P      16 04 46.5 +0.6
      comp=Z,100nm,0.7s,baz=347,slow=0.6,SNR=21
BELG  Belogornoye       68.94 319c iP     P      16 04 46.2 +0.2
BELG                                   pmax   pmax
      comp=Z,15nm,0.9s
ADZR  Andozero          69.00 332  eP     P      16 04 46.1  0.0
ADZR                                   pmax   pmax
      comp=Z,18nm,0.6s
KLMR  Klimovskoe        69.77 329  eP     P      16 04 47.9 -3.0
KLMR                                   AMP           16 04 51.8
      comp=Z,14nm,0.8s
KLMR  Klimovskoe        69.77 329  eP     P      16 04 47.8 -3.1
KLMR                                   pmax   pmax
      comp=Z,14nm,0.8s
RES   Resolute Bay      69.83  14      P      P      16 04 52.0 +1.0
      comp=Z,2.8nm,0.2s,baz=350,slow=23,SNR=74
RES                                    pP     pP     16 05 20.2 +1.4
      comp=Z,3.7nm,1.0s,baz=324,slow=5.3,SNR=1.5
      comp=Z,2.8nm,0.2s
YKA   Yellowknife Ar    70.44  28      P      P      16 04 55.6 +0.7
      comp=Z,2.6nm,0.7s,baz=293,slow=6.0,SNR=35
YKA                                    pP     pP     16 05 24.4 +1.7
      comp=Z,2.8nm,0.9s,baz=289,slow=6.1,SNR=3.0
      comp=Z,2.6nm,0.7s
YKA   Yellowknife Ar    70.44  28      P      P      16 04 54.8 -0.1
ARCES ARCESS Array B    70.72 340      P      P      16 04 57.5 +0.9
      comp=Z,8.6nm,0.8s,baz=75,slow=6.4,SNR=13
      comp=Z,8.6nm,0.8s
VRH   Novokhopyorsk     72.78 319  eP     P      16 05 09.3 +0.1
VRH                                    pmax   pmax
      comp=Z,60nm,0.6s
DAG   Danmarks Havn     73.04 355  i P      P      16 05 11.2 +0.8
DAG                                    IAmb   IAmb   16 05 11.9
      comp=Z,9.5nm,1.1s
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AKT   Akhty             73.17 308  eP     P      16 05 11.8 -0.1
AKT                                e             16 05 27.3
AKT                                e*PP   pP     16 05 40.4 +0.3
AKT                                e*SP   sP     16 05 52.3 -0.1
AKT                                 pmax  pmax
      comp=Z,35nm,0.7s
LPSR  Galich'ya Gora    73.70 322  eP     P      16 05 14.7 +0.1
LPSR                                pmax  pmax
      comp=Z,30nm,0.8s
OBN   Obninsk           73.75 325   P     P      16 05 15.0 +0.2
      comp=Z,2.6nm,0.5s,baz=41,slow=22,SNR=6.0
      comp=Z,2.6nm,0.5s
OBN   Obninsk           73.75 325  i P    P      16 05 14.2 -0.6
OBN                                i             16 05 23.6
OBN                                i *PP  pP     16 05 40.0 -3.1
OBN                                 pmax  pmax
      comp=Z,23nm,1.1s
VORR  Voronezh          73.97 321   P     P      16 05 17.8 +1.6
VORR                                pmax  pmax
      comp=Z,60nm,1.3s
VSR   Storozhevoye      74.21 320  eP     P      16 05 17.6  0.0
VSR                                 pmax  pmax
      comp=Z,40nm,0.7s
VORD  Divnogorie        74.25 320  eP     P      16 05 17.9 +0.1
VORD                                pmax  pmax
      comp=Z,20nm,0.6s
FIA1  FINESS Array S    75.12 333   P     P      16 05 22.9 +0.3
FIA1                                IAmb  IAmb   16 05 23.6
      comp=Z,12nm,0.8s
FINES FINESS Array B    75.12 333   P     P      16 05 23.1 +0.4
      comp=Z,12nm,0.8s,baz=74,slow=5.4,SNR=44
      comp=Z,12nm,0.8s
FINES FINESS Array B    75.12 333   P     P      16 05 22.8 +0.1
ZEI   Tsey              75.17 311  eP     P      16 05 22.8 -0.8
ZEI                                 pmax  pmax
      comp=Z,14nm,0.8s
YBH   Yreka Blue Hor    75.31  50   LR    LR     16 33 03.6
      comp=Z,63nm,19.2s,baz=309,slow=31
KBZ   Khabaz            75.40 312   P     P      16 05 25.4 +0.8
      comp=Z,28nm,0.8s,baz=80,slow=3.8,SNR=49
      comp=Z,28nm,0.8s
KBZ   Khabaz            75.40 312c iP     P      16 05 25.3 +0.7
KBZ                                 pmax  pmax
      comp=Z,34nm,0.9s
KVAR  Kislovodsk Arr    75.43 312   P     P      16 05 25.1 +0.1
      comp=Z,8.8nm,0.7s,baz=141,slow=8.1,SNR=3.9
      comp=Z,8.8nm,0.7s
KIV   Kislovodsk        75.43 312   P     P      16 05 25.8 +0.8
KIV                                 IAmb  IAmb   16 05 27.6
      comp=Z,25nm,0.9s
KIV   Kislovodsk        75.43 312  eP     P      16 05 25.7 +0.8
KIV                                 pmax  pmax
      comp=Z,29nm,1.0s
DBG   Daneborg          75.52 355  i P    P      16 05 25.3 +0.6
ONI   Oni               75.56 311   P     P      16 05 26.8 +1.2
ONI                                 IAmb  IAmb   16 05 27.8
      comp=Z,15nm,0.9s
ONI   Oni               75.56 311   P     P      16 05 26.8 +1.2
ONI                                 pmax  pmax
      comp=Z,15nm,0.9s
GNI   Garni             75.79 308   P     P      16 05 27.9 +0.7
GNI                                 IAmb  IAmb   16 05 35.2
      comp=Z,35nm,1.4s
GNI   Garni             75.79 308deP      P      16 05 28.5 +1.4
GNI                                 pmax  pmax
      comp=Z,17nm,1.3s
AKH   Akhalkalaki       76.07 310   P     P      16 05 28.6 -0.1
AKH                                 IAmb  IAmb   16 05 30.9
      comp=Z,25nm,0.9s
AKH   Akhalkalaki       76.07 310   P     P      16 05 28.6 -0.1
AKH                                 pmax  pmax
      comp=Z,25nm,0.9s
RAR   Rarotonga         76.33 124   LR    LR     16 30 07.6
      comp=Z,38nm,21.9s,baz=336,slow=28
MEF   Metsahovi         76.51 333  eP     P      16 05 31.4 +0.9
VSU   Vasula            76.57 330d iP     P      16 05 31.8 +0.9
VSU                                 pmax  pmax
      comp=Z,33nm,0.9s
VSU   Vasula            76.57 330  eP     P      16 05 32.1 +1.2
RAF   Rauma             77.04 334  eP     P      16 05 34.2 +0.7
SOC   Sochi             77.51 313  eP     P      16 05 35.2 -1.3
SOC                                e             16 08 29.2
SOC                                ePPP   PPP    16 10 22.0
SOC                                eS     S      16 15 18.6 +0.5
SOC                                eSS    SS     16 20 21.6 +2.8
SOC                                eSSS   SSS    16 23 45.3
SOC                                 pmax  pmax
      comp=Z,23nm,0.7s
MTSE  Matsula           77.65 332  eP     P      16 05 38.0 +1.0
SUMG  Summit            78.02 360  i P    P      16 05 40.5 +1.2
SUMG                                IAmb  IAmb   16 05 44.0
      comp=Z,8.4nm,1.2s
ANN   Anapa             78.33 315  eP     P      16 05 40.2 -0.8
ANN                                e*PP   pP     16 06 07.4 -2.1
ANN                                eS     S      16 15 26.2 -0.7
ANN                                 pmax  pmax
      comp=Z,62nm,0.9s
MNK   Minsk             78.34 327  i P    P      16 05 42.2 +1.3
      comp=E,4.0nm,0.8s
MNK                                i P    P      16 05 42.2 +1.3
      comp=N,35nm,0.7s
MNK                                i P    P      16 05 42.2 +1.3
      comp=Z,23nm,0.8s,baz=235
MNK                                i pP   pP     16 06 10.2 +0.7
MNK                                i PP   PP     16 08 41.2 +2.4
MNK                                i PPP  PPP    16 10 29.9
MNK                                i S    S      16 15 30.7 +4.0
MNK                                i sS   sS     16 16 19.5 +3.2
MNK                                i SS   SS     16 20 37.8 +7.1
MNK                                i SSS  SSS    16 24 03.4
MNK                                i LRM  MLR    16 42 41.5
MNK                                i LRM  MLR    16 42 41.5
MNK                                i LRM  MLR    16 42 41.5
MNK   Minsk             78.34 327  i P    P      16 05 42.1 +1.3
MNK                                i             16 05 50.4
MNK                                i *PP  pP     16 06 10.2 +0.7
MNK                                i             16 08 41.2
MNK                                i PPP  PPP    16 10 29.9
MNK                                i S    S      16 15 30.6 +4.0
MNK                                i             16 15 53.1
MNK                                i *SS  sS     16 16 19.5 +3.2
MNK                                i SS   SS     16 20 37.8 +7.1
MNK                                 pmax  pmax
      comp=N,35nm,0.7s
MNK                                 pmax  pmax
      comp=E,4.0nm,0.9s
MNK                                 pmax  pmax
      comp=Z,23nm,0.8s
ISAL  Salakas           78.54 328  eP     P      16 05 43.8 +1.9
NACGM Naroch            78.63 327⇑iP      P      16 05 43.4 +1.0
KOPT  Kop Dagi          78.73 310   P     P      16 05 43.8 +0.1
PABE  Paberze           79.56 329   P     P      16 05 48.2 +0.8
PABE  Paberze           79.56 329  eP     P      16 05 48.7 +1.2
HRY   Holter Researc    79.67  42   P     P      16 05 48.0 -0.5
HLID  Hailey            79.78  46   P     P      16 05 50.2 +1.0
      baz=301
NVAR  Mina Array Bea    79.84  52   P     P      16 05 51.1 +1.4
      comp=Z,2.0nm,0.7s,baz=291,slow=5.4,SNR=16
NVAR                                pP    pP     16 06 19.9 +1.9
      comp=Z,1.0nm,0.7s,baz=297,slow=4.0,SNR=2.5
NVAR                                LR    LR     16 36 06.7
      comp=Z,44nm,19.9s,baz=237,slow=32
      comp=Z,2.0nm,0.7s
AKASG Malin Array Be    79.85 323   P     P      16 05 49.3 +0.1
      comp=Z,8.3nm,0.6s,baz=45,slow=5.5,SNR=63
      comp=Z,8.3nm,0.6s
AKASG Malin Array Be    79.85 323   P     P      16 05 48.5 -0.6
AKASG Malin Array Be    79.85 323   P     P      16 05 48.5 -0.6
AKASG                               pmax  pmax
      comp=Z,14nm,1.5s
AKBB  Malin Array Si    79.85 323   P     P      16 05 48.8 -0.4
AKBB                                IAmb  IAmb   16 05 50.9
      comp=Z,19nm,0.8s
AKBB  Malin Array Si    79.85 323   P     P      16 05 48.8 -0.4
AKBB                                pmax  pmax
      comp=Z,19nm,0.8s
AK05  Malin Array Si    79.91 323   P     P      16 05 48.8 -0.7
AK05                                IAmb  IAmb   16 05 50.8
      comp=Z,32nm,1.4s
EGMT  Eagleton          80.14  40   P     P      16 05 52.6 +1.6
      baz=304
SIM   Simferopol'       80.27 316  eP     P      16 05 52.4 +0.8
SIM                                 pmax  pmax
      comp=Z,46nm,0.9s
BOZ   Bozeman (W)       80.39  43   P     P      16 05 54.4 +2.0
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      baz=303
PKM   Mcpherson Peak    80.53  55   P     P      16 05 53.5 +0.1
      baz=300
NC405 NORSAR Array S    80.56 338   P     P      16 05 52.6 -0.3
NC405                               IAmb  IAmb   16 05 54.2
      comp=Z,28nm,0.8s
HFS   Hagfors           80.59 336   P     P      16 05 53.2 +0.2
      comp=Z,12nm,0.7s,baz=90,slow=4.7,SNR=40
      comp=Z,12nm,0.7s
VIKU  Vikbolandet       80.63 334  eP     P      16 05 53.7 +0.5
NB2   NORSAR Subarra    80.78 338   P     P      16 05 54.4 +0.4
      comp=Z,4.3nm,0.7s,baz=43,slow=5.3
NOA   NORSAR Array B    80.78 338   P     P      16 05 54.2 +0.2
      comp=Z,7.0nm,0.8s,baz=42,slow=5.3,SNR=41
      comp=Z,7.0nm,0.8s
GRAC  Grapevine Rang    81.20  52   P     P      16 05 59.2 +2.4
      baz=300,SNR=5.4
ICESG Greenland Ices    81.52   0  i P    P      16 05 58.4 +0.2
ICESG                               IAmb  IAmb   16 06 00.2
      comp=Z,13nm,1.0s
MPMC  Manual Prospec    81.59  53   P     P      16 05 59.6 +0.5
      baz=301,SNR=8.0
H17A  Grant Village     81.67  43   P     P      16 05 59.6 +0.2
      baz=304
R11A  Troy Canyon, C    81.72  51   P     P      16 06 00.3 +0.6
      baz=301,SNR=6.5
LRMC  Laurel Mtn Rad    81.75  54   P     P      16 06 00.4 +0.6
      baz=300,SNR=7.4
SORM  Soroca            81.80 321  ⇑P     P      16 05 59.5 -0.1
SORM  Soroca            81.80 321  ⇑P     P      16 05 59.5 -0.1
EDW2  Edwards Air Fo    81.83  55   P     P      16 06 00.1  0.0
      baz=300,SNR=9.5
PPT   Papeete           81.84 115   LR    LR     16 33 49.9
      comp=Z,47nm,21.7s,baz=64,slow=29
PPT2  Papeete2          81.85 115  eLR    LR     16 31 43.5
      comp=Z,54nm,24.0s
PURM  Purcari           81.88 319  ⇓P     P      16 06 00.6 +0.6
TPNV  Topopah Spring    82.00  52   P     P      16 06 01.7 +0.6
      baz=301,SNR=8.9
MILM  Milestii Mici     82.25 320⇑iP      P      16 06 02.0  0.0
      comp=Z,20nm,0.7s
MILM  Milestii Mici     82.25 320  i P    P      16 06 02.0  0.0
MILM                                pmax  pmax
      comp=Z,20nm,0.7s
BNN   Bunyan            82.42 310   P     P      16 06 03.2  0.0
TUQ   Turquoise Moun    83.00  53   P     P      16 06 06.9 +0.6
      baz=302
RAYN  Ar Rayn           83.05 293   P     P      16 06 05.5 -1.1
RAYN                                IAmb  IAmb   16 06 07.8
      comp=Z,23nm,0.8s
RAYN  Ar Rayn           83.05 293   P     P      16 06 05.5 -1.1
RAYN                                pmax  pmax
      comp=Z,23nm,0.8s
LVV   L'vov             83.05 324  eP     P      16 06 06.9 +0.8
PDAR  Pinedale Array    83.20  44   P     P      16 06 08.1 +0.8
      comp=Z,0.4nm,0.6s,baz=242,slow=1.7,SNR=4.8
PDAR  Pinedale Array    83.20  44   P     P      16 06 07.4 +0.1
TLCR                    83.26 319  ⇓P     P      16 06 08.1 +0.9
TLCR                    83.26 319  ⇓P     P      16 06 08.1 +0.9
VLDR  Vladesti          83.29 320  ⇓P     P      16 06 08.3 +1.0
BIR   Birlad            83.30 320  ⇑P     P      16 06 09.1 +1.7
BIR   Birlad            83.30 320  ⇑P     P      16 06 09.1 +1.7
BR131 Keskin Array S    83.40 312   P     P      16 06 07.3 -1.0
BR131 Keskin Array S    83.40 312   P     P      16 06 07.3 -1.0
BR131                               pmax  pmax
      comp=Z,62nm,0.9s
BRTR  Keskin Array B    83.40 312   P     P      16 06 08.8 +0.6
      comp=Z,32nm,0.8s,baz=96,slow=3.9,SNR=147
      comp=Z,32nm,0.8s
BRTR  Keskin Array B    83.40 312   P     P      16 06 07.1 -1.1
BRTR  Keskin Array B    83.40 312  i P    P      16 06 08.8 +0.6
BRTR                                pmax  pmax
      comp=Z,33nm,0.8s
PFO   Pinyon Flats O    83.57  55   LR    LR     16 37 31.8
      comp=Z,33nm,19.4s,baz=286,slow=31
TPFO  Pinon Flats       83.58  55   P     P      16 06 08.2 -1.1
      baz=301
CFR   Carcaliu          83.65 319  ⇓P     P      16 06 09.9 +0.7
CFR   Carcaliu          83.65 319  ⇓P     P      16 06 09.9 +0.7
TPGR  Topolog           83.68 319  ⇑P     P      16 06 10.4 +1.0
TESR  Tescani           83.69 321  ⇓P     P      16 06 09.7 +0.3
BUR08 Bucovina Ar. S    83.79 322   P     P      16 06 10.8 +0.8
BUR08                               IAmb  IAmb   16 06 11.7
      comp=Z,11nm,0.7s
BURAR Bucovina Array    83.80 322  ⇑P     P      16 06 10.8 +0.7
BURAR Bucovina Array    83.80 322  ⇑P     P      16 06 10.8 +0.7
ANTO  Ankara            83.86 313  ⇑P     P      16 06 11.4 +0.9
ANTO  Ankara            83.86 313   P     P      16 06 11.4 +0.9
ANTO  Ankara            83.86 313   P     P      16 06 11.4 +0.9
ANTO                                pmax  pmax
      comp=Z,36nm,0.8s
TIRR  Tirgusor          83.92 318  ⇑P     P      16 06 11.8 +1.2
TIRR  Tirgusor          83.92 318  ⇑P     P      16 06 11.8 +1.2
VRI   Vrincioaia        84.04 320  ⇑P     P      16 06 12.2 +1.0
VRI   Vrincioaia        84.04 320  ⇑P     P      16 06 12.2 +1.0
TLBR  Topalu            84.08 318  ⇑P     P      16 06 12.4 +1.0
PLOR  Plostina          84.09 320  ⇑P     P      16 06 12.4 +0.9
PLOR  Plostina          84.09 320  ⇑P     P      16 06 12.4 +0.9
YUH   Yuha Desert       84.46  56         sP     16 06 49.3 -4.6
ICOR  Ion Corvin        84.47 318  ⇓P     P      16 06 15.1 +1.7
MLR   Muntele Rosu      84.70 320   P     P      16 06 14.6 -0.1
      comp=Z,3.8nm,0.5s,baz=345,slow=8.7,SNR=6.1
      comp=Z,3.8nm,0.5s
STHS  Stebnicka Huta    84.70 325  eP     P      16 06 15.2 +0.7
STHS                                pmax  pmax
      comp=Z,6.0nm,0.8s
STHS  Stebnicka Huta    84.70 325  eP     P      16 06 15.2 +0.7
DOPR  Dopca             84.72 321  ⇑P     P      16 06 15.5 +0.8
BLYC  Blythe            84.87  54         sP     16 06 52.1 -3.9
OJC   Ojcow             84.88 326  eP     P      16 06 15.8 +0.4
OJC   Ojcow             84.88 326   IAmb  IAmb   16 06 16.8
      comp=Z,15nm,1.0s
TAOE  Nuku Hiva Isla    84.91 103  eLR    LR     16 33 07.9
      comp=Z,215nm,32.1s
U15A  North Rim         84.97  51         pwP    16 06 46.2 -3.8
GLA   Glamis            85.03  55   P     P      16 06 16.8 +0.3
      baz=302
K22A  Casper            85.09  43   P     P      16 06 15.7 -1.1
      baz=306
VOIR                    85.23 320  ⇓P     P      16 06 17.5 +0.2
VOIR                    85.23 320  ⇓P     P      16 06 17.5 +0.2
BORA  Eskisehir         85.34 314   IAmb  IAmb   16 06 19.7
      comp=Z,22nm,0.9s
ARR   Arges             85.50 321  ⇓P     P      16 06 19.7 +1.0
O20A  White River Ci    85.51  46         pwP    16 06 49.8 -2.8
O20A  White River Ci    85.51  46   P     P      16 06 17.0 -2.0
      baz=305
RSSD  Black Hills       85.65  41   P     P      16 06 18.9 -0.7
      baz=308
OKC   Ostrava-Krasne    85.93 327  eP     P      16 06 20.8 +0.2
OKC   Ostrava-Krasne    85.93 327  eP     P      16 06 20.8 +0.2
SFX   San Felipe        86.08  56         sP     16 06 57.8 -4.3
KSP   Ksiaz             86.10 328  eP     P      16 06 21.7 +0.3
MORC  Moravsky Berou    86.26 327  ⇑P     P      16 06 22.7 +0.4
MORC  Moravsky Berou    86.26 327  eP     P      16 06 22.3  0.0
MORC  Moravsky Berou    86.26 327  ⇑P     P      16 06 22.7 +0.4
OSTC  Ostas             86.33 328  eP     P      16 06 23.1 +0.5
OSTC  Ostas             86.33 328  eP     P      16 06 23.1 +0.5
KRLC  Kraliky           86.41 328  eP     P      16 06 23.1 +0.1
KRLC  Kraliky           86.41 328  eP     P      16 06 23.1 +0.1
DPC   Dobruska-Polom    86.43 328  eP     P      16 06 23.7 +0.6
DPC   Dobruska-Polom    86.43 328  eP     P      16 06 23.7 +0.6
VYHS  Vyhne             86.50 326  eP     P      16 06 23.8 +0.3
VYHS                                pmax  pmax
      comp=Z,8.0nm,0.9s
VYHS  Vyhne             86.50 326  eP     P      16 06 23.8 +0.3
SURR  Surduc            86.62 322  ⇓P     P      16 06 24.2 +0.2
SRE   Strehaia          86.73 321  ⇓P     P      16 06 14.2  -10
SRE   Strehaia          86.73 321  ⇓P     P      16 06 14.2  -10
PLVB  Pleven            86.74 319  ⇓P     P      16 06 25.6 +0.9
PIX   Pinacate          86.81  55         sP     16 07 01.3 -4.3
JAVC  Velka Javorina    86.82 326  eP     P      16 06 26.4 +1.3
HERR  Herculane         87.03 321  ⇓P     P      16 06 26.0 -0.1
VRAC  Vranov            87.03 327   P     P      16 06 25.8 -0.2
      comp=Z,6.8nm,0.9s,baz=27,slow=4.6,SNR=6.5
      comp=Z,6.8nm,0.9s
VRAC  Vranov            87.03 327  eP     P      16 06 26.1 +0.1
214A  Organ Pipe Nat    87.05  55         pwP    16 06 57.1 -3.2
SMOL  Smolenice         87.18 326  eP     P      16 06 27.2 +0.5
SMOL                                pmax  pmax
      comp=Z,6.0nm,0.9s
CLL   Collm             87.23 330  eP     P      16 06 26.0 -0.9
      comp=Z,7.0nm,0.7s
CLL   Collm             87.23 330  eP     P      16 06 26.0 -0.9
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CLL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KRUC	Moravsky	87.29	327	eP	P	16 06 27.3	+0.1
GOPC	GO Pecny, Ondr	87.44	328	eP	P	16 06 27.2	-0.8
GOPC	GO Pecny, Ondr	87.44	328	eP	P	16 06 27.2	-0.8
MDVR	Moldovita	87.47	321	⇑P	P	16 06 28.1	-0.2
S22A	4UR Ranch, Cre	87.80	47		pwP	16 07 02.0	-1.8
VTS	Vitosha	88.02	319	⇑P	P	16 06 32.9	+1.9
VTS	Vitosha	88.02	319	⇑P	P	16 06 32.9	+1.9
MORH	Mrgy, Hungar	88.14	324	⇓P	P	16 06 31.3	0.0
BOVS	Bovan	88.22	321	⇓P	P	16 06 31.4	-0.4
FRGS	Fruska Gora	88.24	323	⇓P	P	16 06 32.1	+0.2
CONA	Conrad Observa	88.34	327	i PcP	P	16 06 32.9	+0.6
	comp=Z,7.4nm,0.8s						
CKRC	Cesky Krumlov	88.44	328	eP	P	16 06 32.2	-0.5
CKRC	Cesky Krumlov	88.44	328	eP	P	16 06 32.2	-0.5
KHC	Kasperske Hory	88.55	328	IAmb	IAmb	16 06 34.2	
	comp=Z,6.7nm,0.8s						
KHC	Kasperske Hory	88.55	328	eP	P	16 06 33.2	-0.1
KHC	Kasperske Hory	88.55	328	eP	P	16 06 33.2	-0.1
GERES	GERESS Array B	88.70	328	P	P	16 06 33.9	-0.1
	comp=Z,5.1nm,0.8s,baz=44,slow=5.9,SNR=22						
	comp=Z,5.1nm,0.8s						
ARSA	Arzberg	88.98	326	i PcP	P	16 06 35.1	-0.2
	comp=Z,2.5nm,0.8s						
MOA	Molln	89.15	327	i PcP	P	16 06 36.2	+0.1
	comp=Z,5.4nm,0.9s						
GRF	Grafenberg Arr	89.19	330	eP	P	16 06 36.4	+0.2
	comp=Z,6.5nm,0.9s,baz=48,slow=4.2						
BIOA	Bad Ischl, Aus	89.56	327	i PcP	P	16 06 38.2	+0.2
	comp=Z,13nm,1.2s						
PERS	Pernice	89.61	326	i P	P	16 06 38.0	-0.3
SOKA	Soboth	89.62	326	i PcP	P	16 06 38.1	-0.2
	comp=Z,9.2nm,0.8s						
EKA	Eskdalemuir Ar	89.89	340	P	P	16 06 39.3	0.0
	comp=Z,6.0nm,1.0s,baz=37,slow=5.7,SNR=6.1						
	comp=Z,6.0nm,1.0s						
KBA	Koelnbreinsper	90.14	327	ePcP	P	16 06 40.5	-0.4
	comp=Z,5.4nm,0.7s,SNR=7.6						
LJU	Ljubljana	90.32	326	i P	P	16 06 41.2	-0.4
MYKA	Terra Mystica	90.33	327	eP	P	16 06 40.6	-1.1
	comp=Z,7.0nm,0.7s						
CEY	Cerknica	90.58	326	i P	P	16 06 42.1	-0.7
ABTA	Abfaltersbach	90.78	327	i P	P	16 06 42.3	-1.4
	comp=Z,12nm,0.8s,SNR=10						
WATA	Walderalm	90.78	328	i PcP	P	16 06 43.3	-0.5
	comp=Z,4.3nm,0.5s						
WTTA	Wattenberg	90.80	328	i PcP	P	16 06 43.4	-0.5
	comp=Z,5.1nm,0.6s						
MOTA	Moosalm	90.99	328	i PcP	P	16 06 44.4	-0.4
	comp=Z,8.0nm,1.1s						
SQTA	Sankt Quirin	91.03	328	i PcP	P	16 06 44.8	-0.2
	comp=Z,4.1nm,0.6s						
RETA	Reutte	91.03	329	i PcP	P	16 06 44.8	-0.1
	comp=Z,5.9nm,0.8s						
CIMO	Cimolais	91.13	327	IAmb	IAmb	16 06 47.5	
	comp=Z,6.3nm,0.8s						
FETA	Feichten	91.40	328	i PcP	P	16 06 46.4	-0.3
	comp=Z,9.7nm,0.9s						
BFO	Black Forest	91.47	331	P	P	16 06 46.6	-0.3
BFO				IAmb	IAmb	16 06 47.6	
	comp=Z,15nm,1.2s						
BFO	Black Forest	91.47	331	P	P	16 06 46.6	-0.3
BFO				pmax	pmax		
	comp=Z,15nm,1.2s						
DAVA	Damuels	91.58	329	i PcP	P	16 06 47.2	-0.3
	comp=Z,19nm,1.1s						
DAVOX	Davos/Dischmat	91.96	329	P	P	16 06 49.5	+0.1
	comp=Z,9.1nm,0.8s,baz=43,slow=3.6,SNR=14						
	comp=Z,9.1nm,0.8s						
MNTX	Cornudas Mount	92.37	51	P	P	16 06 53.9	+2.6
	baz=307						
TX31	Lajitas Ar. Si	94.98	52	P	P	16 07 05.0	+1.5
TXAR	Lajitas Array	94.98	52	P	P	16 07 04.9	+1.4
	comp=Z,1.0nm,0.6s,baz=299,slow=2.6,SNR=15						
TXAR				pP	pP	16 07 34.0	+1.7
	comp=Z,5.3nm,1.0s,baz=306,slow=3.0,SNR=7.8						
	comp=Z,1.0nm,0.6s						
TXAR	Lajitas Array	94.98	52		pwP	16 07 34.8	-2.7
TORD	Torodi Ar. Bea	122.00	311	PKP	PKPdf	16 12 34.9	-0.3
	comp=Z,2.8nm,0.7s,baz=26,slow=1.5,SNR=20						
TORD				PP	PP	16 14 11.6	+1.6
	comp=Z,1.5nm,1.0s,baz=28,slow=6.5,SNR=3.9						
DBIC	Dimbokro	131.10	312	PKP	PKPdf	16 12 52.9	+0.4
	comp=Z,2.0nm,0.5s,baz=69,slow=3.0,SNR=4.2						
H03N2	Juan Fernandez	146.03	107	T	T	18 58 05.5	
	baz=275						
H03N3	Juan Fernandez	146.04	107	T	T	18 58 06.0	
	baz=275						
H03N1	Juan Fernandez	146.05	107	T	T	18 58 06.9	
	baz=275						
ETMB	Extrema	147.91	58	eP	PKPab	16 13 29.6	+0.8
SAML	Samuel	149.47	52	eP	PKiKP	16 13 32.6	+1.6
LPAZ	La Paz	150.27	70	PKP	PKPdf	16 13 27.7	+0.4
	comp=Z,2.3nm,0.8s,baz=289,slow=4.6,SNR=4.0						
LPAZ				PKPbc	PKiKP	16 13 33.5	+0.2
	comp=Z,2.1nm,0.7s,baz=23,slow=4.8,SNR=7.8						
LPAZ	La Paz	150.27	70	eP	PKiKP	16 13 33.4	+0.2
ITTB	Itaituba	150.33	35	eP	PKPbc	16 13 32.2	+0.2
PLCA	Paso Flores	152.21	122	PKPbc	PKiKP	16 13 36.5	+0.5
	comp=Z,3.5nm,0.8s,baz=252,slow=3.1,SNR=6.3						

JMA 10 15:54:07.7±0.1, 39°.7N±0°.3×141°.8E±0°.6, h56^{km}, MV0.4/19, NORTHERN IWATE PREF, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	Miyakonagasawa	0.17	182	eP	Pn	15 54 16.7	+0.2
MIYJ				S	Sn	15 54 22.9	+0.1
JTH	Tanohata	0.20	9	eS	Sn	15 54 23.3	+0.2
JKZ	Kuzumaki	0.45	302	P	Pn	15 54 18.9	0.0
JKZ				eS	Sn	15 54 26.7	-0.2
JOM	Ohasama	0.49	237	eP	Pn	15 54 19.0	-0.3
JOM				eS	Sn	15 54 27.5	-0.1
JMK	Ichinoseki	0.92	211	eS	Sn	15 54 36.6	-0.3

ISK 10 16:04:00.7, 39°.50N×26°.11E, h8^{km}, ML1.7/5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GPNR	Gulpinar-Canak	0.05	161	Pg	Pg	16 04 02.7	+0.3
GPNR				Sg	Sg	16 04 04.2	+0.5
BOZC	Bozcaada	0.34	352	Pg	Pg	16 04 07.9	+0.4
BOZC				Sg	Sg	16 04 13.1	+1.1
SIGR	SIGRI	0.35	215	Pg	Pg	16 04 08.1	+0.5
EZN	Ezine	0.36	27	Pg	Pg	16 04 08.4	+0.6
EZN				Sg	Sb	16 04 13.9	-1.3
DKL	Dikili	0.75	125	Pg	Pb	16 04 15.8	-0.2
DKL				Sg	Sb	16 04 26.3	0.0

IDC 10 16:09:05.7±860.0, 53°.12N×33°.47E, h0^{km}, Error ellipse: s-maj=346.2km s-min=100.6km az=34.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	4.20	29	I	I	16 32 40.0	
	0.2nm,0.7s,baz=212,slow=306,SNR=1.5						
I31KZ	AKTYUBINSK INF	15.43	90	I	I	17 41 30.0	
	0.1nm,0.6s,baz=289,slow=322,SNR=1.7						
I46RU	ZALESOVO INFRA	29.98	67	I	I	19 16 50.0	
	baz=290,slow=330,SNR=1.6						

IDC ***10*** *16:13:35.0±1.7, 6°.46S×105°.25E, h42^{km}±13^{km}, mb4.3/22, mbtmp4.5/22, MS3.6/16, Error ellipse: s-maj=18.7km s-min=11.0km az=48.0*

DJA ***10*** *16:13:35.9±0.2, 7°S±2°×10°5E±°, h52^{km}±3^{km}, M4.8/57, mB5.3/18, mb4.7/57, MLv4.9/26, Mw(mB)4.7/18*

NEIC ***10*** *16:13:37.7±1.7, 6°.58S±0°.08×105°.15E±0°.08, h76^{km}±3^{km}, mb4.7/58, Error ellipse: s-maj=13.1km s-min=9.4km az=48.0*

ISC 10 16:13:35.0±0.6, 6°.73S±0°.05×105°.02E±0°.05, h54^{km}±4^{km}, n231, σ1^{s}.66/242, mb4.7/65, MS3.8/19, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CGJI	Cibinong	0.68	80	P	Pn	16 13 47.1	-1.5
SBJI	Serang	1.26	61	P	Pn	16 13 56.1	-0.2
KASI	Kota Agung	1.31	337	P	Pn	16 13 58.8	+1.9
BLSI	Bandar Lampung	1.37	9	P	Pn	16 13 59.3	+1.5
SKJI	Sukabumi	1.55	100	P	Pn	16 14 00.1	-0.1
SKJI				S	Sn	16 14 20.9	+1.6
CBJI	Citeko	1.85	80	P	Pn	16 14 05.6	+1.4
KLI	Kotabumi	1.86	355	P	Pn	16 14 07.2	+2.7
KLI				S	Sn	16 14 31.0	+4.1
LWLI	Liwa	1.95	331	P	Pn	16 14 08.1	+2.3
MDSI	Maura Dua	2.38	339	P	Pn	16 14 14.6	+3.0
MDSI				S	Sn	16 14 44.3	+4.7
BBJI	Bungbulang	2.71	106	P	Pn	16 14 17.1	+0.9
MNAI	Manna	3.12	319	Pn	Pn	16 14 24.4	+2.6
MNAI	Manna	3.12	319	P	Pn	16 14 24.9	+3.1
MNAI	Manna	3.12	319	P	Pn	16 14 24.0	+2.2
CMJI	Cimerak	3.56	107	P	Pn	16 14 27.4	-0.3
XMI	Christmas Isla	3.75	170	P	Pn	16 14 26.5	-3.9
PMBI	Palembang	3.79	356	Pn	Pn	16 14 32.0	+1.2
PMBI	Palembang	3.79	356	P	Pn	16 14 35.4	+4.5
PMBI	Palembang	3.79	356	P	Pn	16 14 33.2	+2.3
KSI	Kapahiang	3.90	322	P	Pn	16 14 35.8	+3.4
KPJI	Karang Pucung	3.93	99	P	Pn	16 14 34.4	+1.6
MASI	Maura Aman, Be	4.51	322	P	Pn	16 14 44.5	+3.6
PPBI	Pangkal Pinang	4.67	14	P	Pn	16 14 46.0	+3.0
YOGI	Yogyakarta	5.34	102	P	Pn	16 14 52.5	+0.3
	81nm,0.9s,0.6nm						
SMRI	Semarang	5.39	94	Pn	Pn	16 14 55.0	+2.0
UGM	Wanagama	5.58	102	Pn	Pn	16 14 57.0	+1.5
UGM	Wanagama	5.58	102	P	Pn	16 14 55.0	-0.6
UGM	Wanagama	5.58	102	P	Pn	16 14 55.7	+0.1
	126nm,1.0s,0.9nm						
UWJI	Ujung Watu	5.90	87	P	Pn	16 14 59.2	-0.6
	73nm,0.7s,0.5nm						
DSRI	Dabo	6.22	356	P	Pn	16 15 07.7	+3.4
PPSI	Pulau Pagai	6.36	308	P	Pn	16 15 08.2	+2.0
	346nm,0.6s,5µm1.9nm						
SDSI	Sungai Dareh	6.78	328	P	Pn	16 15 13.5	+1.5
	43nm,0.8s,0.1nm						
PWJI	Pagerwojo	6.85	101	P	Pn	16 15 12.4	-0.5
	82nm,0.5s,2µm0.6nm						
PDSI	Padang	7.35	322	P	Pn	16 15 20.5	+0.7
	37nm,0.5s,866nm0.2nm						
TPRI	Tanjung Pinang	7.61	356	P	Pn	16 15 25.6	+2.2
	80nm,0.8s,0.3nm						
PBKI	Pangkalan Bun	7.74	59	P	Pn	16 15 26.8	+1.7
	90nm,0.9s,0.3nm						
BKNI	Bangkinang	8.06	330	P	Pn	16 15 32.1	+2.7
	62nm,0.8s						
BTDF	Bukit Timah Da	8.13	351	P	Pn	16 15 35.1	+4.6
GMJI	Gumukmas	8.49	101	P	Pn	16 15 36.6	+1.2
	37nm,0.7s,1µm						
MYKOM	Kota Tinggi	8.54	352		Pn	16 15 37.0	+0.9
BLJI	Banyuglugur	8.57	97	P	Pn	16 15 38.5	+2.1
ABJI	Asem Bagus	9.20	97	P	Pn	16 15 45.1	0.0
	543nm,0.7s,5µm						
JAGI	Jajag, Banyuwa	9.22	101	Pn	Pn	16 15 45.9	+0.6
JAGI	Jajag, Banyuwa	9.22	101	P	Pn	16 15 45.9	+0.6
JAGI	Jajag, Banyuwa	9.22	101	P	Pn	16 15 45.3	0.0
PBSI	Pulau Batu	9.44	314	P	Pn	16 15 48.4	0.0
	176nm,1.4s						
SRBI	Singaraja	10.20	98	P	Pn	16 15 59.1	+0.3
	73nm,0.7s,1µm						
IGBI	Denpasar	10.25	102	P	Pn	16 15 59.4	0.0
	81nm,0.8s,2µm						
GSI	Gunungsitoli	10.90	317	Pn	Pn	16 16 06.6	-1.8
GSI	Gunungsitoli	10.90	317	P	Pn	16 16 10.2	+1.8
SBUM	Sibu	11.61	38	Pn	Pn	16 16 18.1	0.0
IPM	Ipoh	11.83	340	Pn	Pn	16 16 19.9	-1.2
TWSI	Taliwang, Sumb	11.92	100	P	Pn	16 16 21.4	-1.0
	20nm,0.7s,749nm						
KULM	Kulim	12.71	340	Pn	Pn	16 16 31.0	-2.1
PLAI	Plampang	12.81	100	P	Pn	16 16 33.8	-0.7
PLAI	Plampang	12.81	100	P	Pn	16 16 32.2	-2.3
	26nm,0.8s						
KAPI	Kappang	14.76	84	LR	LR	16 23 20.6	
	comp=Z,110nm,20.4s,baz=259,slow=40						
BKSI	Bulukumba	15.09	86	P	Pn	16 17 06.1	+1.2
	13nm,0.9s,348nm						
BSSI	Bau Bau, Buton	15.39	89	P	Pn	16 17 09.3	+0.5
MPSI	Mapaga	16.42	65	P	P	16 17 23.0	-1.0
	16nm,0.7s						
MMRI	Maumere	17.17	97		Pn	16 17 29.3	-2.0
MMRI				IAmb	IAmb	16 17 36.5	
	comp=Z,33nm,0.5s						
MMRI	Maumere	17.17	97	P	P	16 17 35.1	+2.8
MMRI	Maumere	17.17	97	P	Pn	16 17 29.6	-1.7
	comp=Z,42nm,0.7s,comp=Z,1µm						
GIRL	Giralia	18.14	152	P	P	16 17 41.1	-1.8
GIRL	Giralia	18.14	152	P	P	16 17 41.4	-1.5
	comp=Z,146nm,1.2s						
MRSI	Marisa	18.34	68	P	Pn	16 17 46.3	+0.6
	comp=Z,35nm,0.6s						
LUWI	Luwuk	18.59	73	P	Pn	16 17 49.3	+0.7
	comp=Z,32nm,1.2s,comp=Z,1µm						
SOEI	Soe	19.28	100	P	P	16 17 55.3	-0.4
SOEI				IAmb	IAmb	16 18 12.5	
	comp=Z,60nm,0.5s						
SOEI	Soe	19.28	100	P	Pn	16 17 56.6	-0.5
SOEI	Soe	19.28	100	P	P	16 17 55.6	-0.1
	comp=Z,76nm,1.0s						
GTOI	Gorontalo	19.39	68	P	P	16 17 56.0	-0.7
	comp=Z,9.2nm,0.6s						
MBWA	Marble Bar	20.21	137	P	P	16 18 05.5	-0.1
MBWA	Marble Bar	20.21	137	P	Pn	16 18 07.1	-0.8
PSA00	Pilbara Seismi	20.57	137	P	P	16 18 09.1	-0.4
PSA00				IAmb	IAmb	16 18 14.3	
	comp=Z,17nm,0.7s						
PSA00	Pilbara Seismi	20.57	137	P	P	16 18 09.4	-0.1
PSA00				IAmb	IAmb	16 18 13.5	
	comp=Z,9.5nm,1.1s						
PSA00	Pilbara Seismi	20.57	137	P	P	16 18 10.7	+1.2
	comp=Z,28nm,1.5s						
SANI	Sanana	21.41	78	P	P	16 18 17.3	-1.3
	comp=Z,6.7nm,0.8s						
NLAI	Namlea	22.27	82	P	P	16 18 27.8	0.0
	comp=Z,10nm,0.8s						
FITZ	Fitzroy Crossi	23.06	121	P	P	16 18 35.7	-0.4
FITZ	Fitzroy Crossi	23.06	121	P	P	16 18 36.5	+0.4
LBMI	Labuha	23.23	76	P	P	16 18 37.9	+0.1
	comp=Z,41nm,0.7s						
AAI	Ambon	23.27	84	P	P	16 18 37.6	-0.6
	comp=Z,16nm,0.9s						
TNTI	Ternate	23.52	72	P	P	16 18 41.0	+0.5
	comp=Z,30nm,0.7s						
DAV	Davao City (W)	24.67	57	LR	LR	16 28 53.2	
	comp=Z,52nm,20.8s,baz=266,slow=38						
KNRA	Kununurra	24.91	113	P	P	16 18 52.9	-0.3
KNRA				IAmb	IAmb	16 18 54.6	
	comp=Z,31nm,0.7s						
KNRA	Kununurra	24.91	113	P	P	16 18 53.4	+0.2
PHRA	Phrae	25.51	349	P	P	16 18 58.5	-0.1
CM31	Chiang Mai Arr	25.74	347	P	P	16 18 59.3	-1.3
CMAR	Chiang Mai Arr	25.74	347	P	P	16 18 59.1	-1.5
	comp=Z,3.3nm,0.6s,baz=181,slow=9.0,SNR=29						
CMAR				LR	LR	16 30 55.3	
	comp=Z,94nm,18.8s,baz=170,slow=41						
	comp=Z,3.3nm,0.6s						
CMAR	Chiang Mai Arr	25.74	347	P	P	16 18 59.7	-1.0
QIZ	Qiongzhong	26.04	10	P	P	16 19 00.9	-2.4
QIZ				S	S	16 23 29.7	-1.0
QIZ				pmax	pmax		
	comp=Z,180nm,7.2s						
QIZ				LR	LR		
	comp=Z,210nm,13.5s						
QIZ				LR	LR		
	comp=Z,190nm,16.3s						
QIZ				LR	LR		
	comp=Z,280nm,18.3s						
CHTO	Chiang Mai	26.08	347	P	P	16 19 02.2	-1.6
MTN	Manton Dam	26.43	105	P	P	16 19 06.2	-0.8
MTN	Manton Dam	26.43	105	P	P	16 19 09.1	+2.1
SIJI	Sorong	26.82	79	P	P	16 19 08.5	-2.0
	comp=Z,4.4nm,0.7s,baz=298,slow=23,SNR=2.9						
	comp=Z,4.4nm,0.7s						
CRAI	Chiangrai	27.18	350	P	P	16 19 12.2	-1.4
FAKI	Fak Fak	27.39	83	P	P	16 19 19.1	+3.4
	comp=Z,34nm,1.4s						
KDU	Kakadu	27.69	104	P	P	16 19 18.6	+0.3
PALK	Pallekele	27.96	299	LR	LR	16 29 27.8	
	comp=Z,108nm,18.8s,baz=218,slow=34						
WRKA	Warakurna	28.76	132	P	P	16 19 27.2	-0.7
KMBL	Kambalda	29.15	149	P	P	16 19 32.0	+0.8
	comp=Z,29nm,0.8s						
H01W3	Cape Leeuwin H	29.25	165	T	T	16 50 00.1	
	baz=344,slow=76,SNR=208						
H01W1	Cape Leeuwin H	29.26	165	T	T	16 49 59.9	
	baz=344,slow=76,SNR=241						
H01W2	Cape Leeuwin H	29.26	165	T	T	16 50 00.1	
	baz=344,slow=76,SNR=178						
WB0	Warramunga Arr	31.32	117	P	P	16 19 49.1	-1.4
WRA	Warramunga Arr	31.34	118	P	P	16 19 50.9	+0.2
	comp=Z,1.4nm,0.4s,baz=329,slow=22,SNR=48						
WRA				PcP	PcP	16 22 45.2	+1.5
	comp=Z,0.2nm,0.3s,baz=327,slow=2.0,SNR=1.7						
WRA				S	S	16 24 56.2	+1.9
	comp=Z,0.4nm,0.9s,baz=303,slow=15,SNR=2.4						
WRA				LR	LR	16 33 28.8	
	comp=Z,72nm,20.0s,baz=232,slow=38						
	comp=Z,1.4nm,0.4s						
WRA	Warramunga Arr	31.34	118	P	P	16 19 50.0	-0.7
WRAB	Tennant Creek	31.34	118	P	P	16 19 49.1	-1.6
WRAB				IAmb	IAmb	16 20 07.1	
	comp=Z,5.5nm,0.6s						
WRAB	Tennant Creek	31.34	118	P	P	16 19 50.0	-0.7
WB2	Warramunga Arr	31.35	118	P	P	16 19 49.6	-1.1
WB2				IAmb	IAmb	16 20 08.6	
	comp=Z,7.7nm,1.1s						
FORT	Forrest	32.23	141	P	P	16 19 57.4	-0.9
FORT				IAmb	IAmb	16 20 05.2	
	comp=Z,14nm,0.8s						
FORT	Forrest	32.23	141	P	P	16 19 59.0	+0.7
	comp=Z,26nm,0.6s						
H08S2	Diego Garcia H	32.28	266	T	T	16 54 15.9	
	baz=90,slow=76,SNR=173						
H08S3	Diego Garcia H	32.29	266	T	T	16 54 11.2	
	baz=90,slow=76,SNR=142						
H08S1	Diego Carcia H	32.30	266	T	T	16 54 18.4	
	baz=90,slow=76,SNR=193						
ASAR	Alice Springs	32.45	124	P	P	16 20 00.9	+0.4
	comp=Z,2.5nm,0.8s,baz=286,slow=7.5,SNR=28						
ASAR				PcP	PcP	16 22 48.2	+1.4
	comp=Z,0.3nm,0.5s,baz=302,slow=2.2,SNR=2.6						
ASAR				S	S	16 25 09.3	-2.3
	comp=Z,0.8nm,0.8s,baz=292,slow=16,SNR=5.7						
ASAR				ScP	ScP	16 26 27.9	+1.6
	comp=Z,0.4nm,0.8s,baz=323,slow=2.3,SNR=3.4						
ASAR				LR	LR	16 33 08.0	
	comp=Z,91nm,21.5s,baz=291,slow=36						
	comp=Z,2.5nm,0.8s						
ASAR	Alice Springs	32.45	124	P	P	16 20 00.2	-0.3
AS31	Alice Springs	32.45	124	P	P	16 20 00.5	0.0
AS01	Alice Springs	32.49	124	P	P	16 20 01.1	+0.3
	comp=Z,4.8nm,0.8s						
PZH	PanZhiHua	33.19	355	P	P	16 20 08.4	+1.6
PZH				S	S	16 25 24.6	+1.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,110nm,4.7s						
PZH				LR	LR		
	comp=Z,560nm,19.1s						
PZH				LR	LR		
	comp=Z,380nm,20.1s						
PZH				LR	LR		
	comp=Z,550nm,20.6s						
OOD	Oodnadatta	35.82	129	P	P	16 20 29.7	+0.2
	comp=Z,27nm,1.1s						
MULG	Mulgathing	35.95	134	P	P	16 20 31.0	+0.4
	comp=Z,26nm,0.8s						
QIS	Mount Isa	36.21	116	P	P	16 20 36.0	+3.0
	comp=Z,4.7nm,0.8s						
ODAN	Odare	37.51	334	eP	P	16 20 44.5	+0.4
	comp=Z,37nm,0.4s						
TAPN	Taplejung	37.80	334	eP	P	16 20 46.6	0.0
	comp=Z,34nm,0.6s						
RAMN	Ramite	37.94	333	eP	P	16 20 47.8	0.0
	comp=Z,23nm,0.4s						
COEN	Coen	38.18	104	P	P	16 20 47.3	-2.4
COEN				IAmb	IAmb	16 21 19.5	
	comp=Z,7.1nm,0.8s						
LSA	Lhasa	38.60	340	P	P	16 20 52.0	-1.5
LSA				IAmb	IAmb	16 20 55.5	
	comp=Z,8.2nm,0.7s						
JIRN	Jiri	38.73	333	eP	P	16 20 54.5	-0.1
	comp=Z,20nm,0.3s						
BBOO	Buckleboo	38.79	136	P	P	16 20 55.2	+0.5
BBOO				IAmb	IAmb	16 21 10.8	
	comp=Z,22nm,1.2s						
BBOO	Buckleboo	38.79	136	P	P	16 20 54.6	-0.1
	comp=Z,15nm,1.5s						
PKI	Pulchoki	39.02	332	eP	P	16 20 56.9	0.0
PKIN	Phulchoki	39.03	332	eP	P	16 20 57.0	0.0
	comp=Z,8.1nm,0.3s						
LCRK	Leigh Creek	39.07	131	P	P	16 20 58.1	+1.1
	comp=Z,19nm,1.5s						
GUN	Gumba	39.09	333	eP	P	16 20 57.5	0.0
	comp=Z,42nm,0.4s						
KKN	Kakani	39.27	332	eP	P	16 20 59.3	+0.4
	comp=Z,43nm,0.9s						
GKN	Gorkha	39.75	331	eP	P	16 21 02.5	-0.3
	comp=Z,24nm,0.3s						
MTSU	Mount Surprise	39.92	110	P	P	16 21 06.3	+2.0
KOLN	Koldanda	40.06	330	eP	P	16 21 06.3	+0.8
	comp=Z,94nm,0.6s						
JOW	Kunigami	40.26	33	LR	LR	16 40 08.2	
	comp=Z,27nm,18.2s,baz=84,slow=40						
DANN	Dangsing	40.46	330	eP	P	16 21 09.4	+0.5
	comp=Z,103nm,0.6s						
PYUN	Piuthan	40.64	329	eP	P	16 21 10.6	+0.3
	comp=Z,53nm,0.5s						
NJ2	Nanjing	40.76	18	eP	P	16 21 11.5	+0.6
NJ2				pP	sP	16 21 30.2	-0.8
NJ2				sP	pP	16 21 39.0	+14
NJ2				pmax	pmax		
	comp=Z,17nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,280nm,3.9s						
HTT	Hallett	41.13	135	P	P	16 21 15.6	+1.5
PMG	Port Moresby	41.79	97	P	P	16 21 16.7	-3.0
PMG				IAmb	IAmb	16 21 24.7	
	comp=Z,25nm,0.8s						
PMG	Port Moresby	41.79	97	P	P	16 21 19.4	-0.3
	comp=Z,34nm,1.0s						
CTA	Charters Tower	42.12	113	LR	LR	16 39 12.4	
	comp=Z,56nm,20.5s,baz=271,slow=37						
STKA	Stephens Creek	42.29	131	P	P	16 21 25.0	+1.4
	comp=Z,35nm,0.6s,baz=302,slow=8.3,SNR=92						
STKA				LR	LR	16 39 37.8	
	comp=Z,116nm,20.4s,baz=289,slow=37						
	comp=Z,35nm,0.6s						
STKA	Stephens Creek	42.29	131	P	P	16 21 24.1	+0.5
STKA				IAmb	IAmb	16 21 25.9	
	comp=Z,7.4nm,0.6s						
STKA	Stephens Creek	42.29	131	P	P	16 21 25.4	+1.9
GOMU	GeErMu	43.76	348	P	P	16 21 35.4	-0.4
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,72nm,5.7s						
ARPS	Mount Arapiles	44.94	137	P	P	16 21 47.5	+2.7
JSU	Suzuyama	45.13	31	P	P	16 21 44.5	-1.8
CMSA	Cobar Meteorol	45.27	128	P	P	16 21 49.8	+2.3
GTA	Gaotai	46.16	354	eP	P	16 21 56.8	+2.3
GTA				PcP	PcP	16 23 30.5	+0.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				LR	LR		
	comp=Z,96nm,18.5s						
GTA				LR	LR		
	comp=Z,71nm,17.8s						
JNU	Nakatsue	46.63	30	P	P	16 21 56.8	-1.4
JNU				IAmb	IAmb	16 21 59.6	
	comp=Z,26nm,1.3s						
BJI	Beijing	47.66	12	P	P	16 22 06.4	+0.4
BJI				pP	sP	16 22 25.0	-1.1
BJI				PcP	PcP	16 23 35.9	+1.1
BJI				pmax	pmax		
	comp=Z,56nm,4.5s						
HHC	Hu-ho-hao-te	47.73	7	eP	P	16 22 08.0	+1.4
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.8s						
YNG	Young	48.48	131	P	P	16 22 15.1	+2.6
KSRS	Korea Array	48.88	24	P	P	16 22 15.8	+0.3
	comp=Z,0.7nm,0.4s,baz=218,slow=8.1,SNR=9.1						
	comp=Z,0.7nm,0.4s						
JCJ	Chichijima	49.24	45	LR	LR	16 42 59.1	
	comp=Z,21nm,21.7s,baz=110,slow=36						
JHS	Saijyo	49.25	31	P	P	16 22 17.8	-0.5
ARMA	Armidale	49.61	124	P	P	16 22 24.4	+3.0
	comp=Z,17nm,2.0s						
NIL	Nilore	50.20	325	P	P	16 22 25.5	-0.1
MOO	Moorlands	51.45	141	P	P	16 22 39.0	+4.1
WMQ	Urumqi	52.70	344	eP	P	16 22 45.7	+1.5

MJAR	Matsushiro Arr	53.11	33	P	P	16 22 44.9	-2.4
	comp=Z,1.4nm,0.6s,baz=197,slow=8.9,SNR=4.7						
	comp=Z,1.4nm,0.6s						
KSH	Kashi	53.28	332	P	P	16 22 47.6	-1.0
KSH				pP	pwP	16 23 05.1	+0.3
KSH				sP	sP	16 23 18.7	+10
KSH				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KBL	Kabul	53.29	323	P	P	16 22 48.2	-0.7
KBL				IAmb	IAmb	16 22 51.1	
	comp=Z,7.9nm,0.8s						
CN2	Changchun	53.59	18	P	P	16 22 49.4	-1.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WSAR	Wadi Sarin	54.23	305	LR	LR	16 43 41.7	
	comp=Z,71nm,21.2s,baz=148,slow=33						
SONM	Songino Array	54.34	1	P	P	16 22 56.0	-0.2
	comp=Z,2.6nm,0.5s,baz=174,slow=8.8,SNR=23						
SONM				PcP	PcP	16 24 00.3	+0.7
	comp=Z,2.2nm,0.5s,baz=176,slow=4.2,SNR=7.7						
SONM				ScP	ScP	16 27 52.5	-1.0
	comp=Z,0.5nm,0.6s,baz=175,slow=4.0,SNR=4.2						
	comp=Z,2.6nm,0.5s						
SONM	Songino Array	54.34	1	P	P	16 22 56.3	+0.1
MDJ	Mudanjiang	55.70	21	P	P	16 23 04.7	-1.2
MDJ				pP	sP	16 23 29.6	+3.1
MDJ				sP	pP	16 23 31.0	+11
MDJ				PcP	PcP	16 24 03.4	-1.3
MDJ				PcS	PcS	16 28 05.9	+1.1
MDJ				S	S	16 30 45.6	-2.8
MDJ				sS	sS	16 31 19.0	+6.2
MDJ				ScS	ScS	16 32 45.7	-4.7
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,89nm,4.2s						
MDJ				LR	LR		
	comp=Z,67nm,6.3s						
MDJ				LR	LR		
	comp=Z,120nm,5.2s						
MDJ				LR	LR		
	comp=Z,110nm,7.4s						
MDJ	Mudanjiang	55.70	21	P	P	16 23 03.7	-2.2
MDJ				IAmb	IAmb	16 23 07.9	
	comp=Z,4.0nm,0.7s						
GAR	Garm	55.72	328	P	P	16 23 05.6	-0.7
CHGR	Chuyangaron	56.10	326	P	P	16 23 07.9	-1.1
USA0B	Ussuriysk Arra	56.24	23	P	P	16 23 08.6	-1.1
USRK	Ussuriysk Ar.	56.24	23	P	P	16 23 09.0	-0.7
	comp=Z,16nm,0.6s,baz=201,slow=6.3,SNR=148						
	comp=Z,16nm,0.6s						
MK31	Makanchi Array	56.99	342	P	P	16 23 14.4	-0.7
MK31				IAmb	IAmb	16 23 15.7	
	comp=Z,1.9nm,0.5s						
MKAR	Makanchi Array	56.99	342	P	P	16 23 14.4	-0.6
	comp=Z,2.4nm,0.4s,baz=154,slow=8.8,SNR=99						
	comp=Z,2.4nm,0.4s						
MKAR	Makanchi Array	56.99	342	P	P	16 23 14.2	-0.9
MAKZ	Makanchi	57.10	341	P	P	16 23 15.0	-0.9
JTM	Tenmabayashi	57.73	32	P	P	16 23 18.1	-2.2
KK31	Karatay Array	58.66	331	P	P	16 23 24.2	-2.6
KKAR	Karatay Array	58.66	331	P	P	16 23 26.4	-0.5
KKAR	Karatay Array	58.66	331	P	P	16 23 24.9	-1.9
KKAR				IAmb	IAmb	16 23 39.4	
	comp=Z,1.9nm,0.8s						
HEH	HeiHe	59.99	16	*e*P	P	16 23 34.5	-1.3
HEH				pmax	pmax		
	comp=Z,12nm,0.6s						
JKA	Kamikawa-asahi	60.91	30	P	P	16 23 41.1	-1.2
JKA				IAmb	IAmb	16 24 11.4	
	comp=Z,13nm,1.2s						
KURK	Kurchatov	61.60	341	P	P	16 23 45.7	-1.1
KURK				IAmb	IAmb	16 23 49.4	
	comp=Z,4.1nm,1.1s						
GEYT	Alibeck	62.27	319	P	P	16 23 53.0	+1.3
	comp=Z,9.2nm,0.6s,baz=162,slow=5.8,SNR=18						
	comp=Z,9.2nm,0.6s						
ZAA0	Zalesovo Array	62.80	347	P	P	16 23 53.0	-1.8
ZAA0				IAmb	IAmb	16 23 54.8	
	comp=Z,3.4nm,0.8s						
ZALV	Zalesovo Beam	62.80	347	P	P	16 23 53.8	-1.0
	comp=Z,2.5nm,0.3s,baz=154,slow=5.9,SNR=23						
	comp=Z,2.5nm,0.3s						
ZALV	Zalesovo Beam	62.80	347	P	P	16 23 53.5	-1.3
YSS	Yuzh-Sakhalins	63.05	28	P	P	16 23 54.2	-2.3
YSS				IAmb	IAmb	16 23 56.5	
	comp=Z,11nm,0.9s						
BRVK	Borovoye	66.43	338	P	P	16 24 17.8	-0.7
RPZ	Rata Peaks	68.12	134	LR	LR	16 54 09.9	
	comp=Z,125nm,19.2s,baz=266,slow=36						
ABKAR	Akbulak array	68.19	330	P	P	16 24 29.5	-0.2
BKZ	Black Stump Fm	71.42	129	P	P	16 24 49.9	-0.1
BKZ				IAmb	IAmb	16 25 21.9	
	comp=Z,24nm,1.2s						
URZ	Urewera	71.81	128	LR	LR	16 57 48.6	
	comp=Z,59nm,19.4s,baz=53,slow=37						
ARU	Arti	73.54	335	P	P	16 25 02.3	+0.3
ARU				IAmb	IAmb	16 25 03.3	
	comp=Z,11nm,0.7s						
GURO	Guroymak-BITLI	73.65	313	P	P	16 25 04.9	+1.6
GURO				IAmb	IAmb	16 25 06.4	
	comp=Z,8.4nm,1.0s						
KARS	Kars	73.73	316	P	P	16 25 03.7	0.0
PETK	Petropavlovsk-	74.33	30	P	P	16 25 05.1	-1.6
	comp=Z,3.0nm,0.6s,baz=180,slow=3.3,SNR=24						
	comp=Z,3.0nm,0.6s						
PETK	Petropavlovsk-	74.33	30	P	P	16 25 04.9	-1.8
KBZ	Khabaz	75.14	318	P	P	16 25 13.2	+1.7
	comp=Z,8.0nm,0.9s,baz=130,slow=6.6,SNR=13						
	comp=Z,8.0nm,0.9s						
VNDA	Vanda	76.59	169	P	P	16 25 21.5	+2.2
	comp=Z,2.7nm,1.0s,baz=321,slow=5.3,SNR=1.7						
VNDA				LR	LR	16 55 35.1	
	comp=Z,62nm,21.4s,baz=269,slow=33						
	comp=Z,2.7nm,1.0s						
NRIK	Noril'sk	76.86	354	P	P	16 25 20.5	-0.3
	comp=Z,3.7nm,0.4s,baz=164,slow=6.0,SNR=10						
	comp=Z,3.7nm,0.4s						
NRIK	Noril'sk	76.86	354	P	P	16 25 19.0	-1.8
NRIK				IAmb	IAmb	16 25 21.6	
	comp=Z,10nm,1.1s						
BOSA	Boshof	77.84	242	P	P	16 25 29.6	+2.2
	comp=Z,2.2nm,0.5s,baz=98,slow=4.8,SNR=8.2						
	comp=Z,2.2nm,0.5s						
BOSA	Boshof	77.84	242	P	P	16 25 27.5	+0.1
BOSA				IAmb	IAmb	16 25 32.5	
	comp=Z,6.9nm,1.1s						
BR131	Keskin Array S	80.19	312	P	P	16 25 41.3	+1.3
BR131				IAmb	IAmb	16 25 41.8	
	comp=Z,6.0nm,0.8s						
BRTR	Keskin Array B	80.19	312	P	P	16 25 41.4	+1.3
	comp=Z,2.7nm,0.6s,baz=140,slow=7.0,SNR=23						
	comp=Z,2.7nm,0.6s						
BRTR	Keskin Array B	80.19	312	P	P	16 25 40.8	+0.7
SUR	Sutherland	81.55	238	LR	LR	16 59 10.4	
	comp=Z,73nm,19.1s,baz=127,slow=33						
QSPA	South Pole Qui	83.26	180	LR	LR	17 01 22.3	
	comp=Z,92nm,18.5s,baz=250,slow=34						
KLMR	Klimovskoe	84.25	333	*e*P	P	16 26 00.4	-0.2
KLMR				AMP		16 26 03.6	
	comp=Z,15nm,1.3s						
AKASG	Malin Array Be	86.27	322	P	P	16 26 11.6	+0.7
	comp=Z,0.2nm,0.3s,baz=78,slow=3.7,SNR=10						
	comp=Z,0.2nm,0.3s						
MNK	Minsk	88.03	325	*i* P	P	16 26 17.5	-1.8
	comp=E,1.0nm,0.5s						
MNK				*i* P	P	16 26 17.5	-1.8
	comp=N,7.0nm,0.5s						
MNK				*i* P	P	16 26 17.5	-1.8
	comp=Z,31nm,0.6s,baz=284						
MNK				*i* pP	pwP	16 26 36.8	+0.4
MNK				*i* PP	PP	16 29 44.4	-2.1
MNK				*i* PPP	PPP	16 31 39.9	
MNK				*i* S	SKSac	16 36 38.9	-4.4
MNK				*i* sS	pS	16 37 13.5	-4.4
MNK				*i* SS	SS	16 42 45.7	-2.2
MNK				*i* SSS	SSS	16 46 19.9	
MNK				*i* LRM	MLR	17 06 38.9	
	comp=N,375nm,14.9s						
MNK				*i* LRM	MLR	17 07 00.5	
	comp=Z,56nm,11.8s						
MNK				*i* LRM	MLR	17 07 08.7	
	comp=E,7.0nm,12.7s						
BURAR	Bucovina Array	88.09	318		P	16 26 22.7	+2.7
BURAR				IAmb	IAmb	16 26 35.9	
	comp=Z,4.8nm,0.8s						
BUR08	Bucovina Ar. S	88.11	318	P	P	16 26 22.0	+1.9
BUR08				IAmb	IAmb	16 26 36.6	
	comp=Z,4.9nm,0.9s						
NACGM	Naroch	88.75	326	*e*P	P	16 26 22.6	-0.1
	comp=Z,7.0nm,1.1s,baz=103						
FINES	FINESS Array B	90.61	332	P	P	16 26 32.9	+1.6
	comp=Z,2.4nm,0.5s,baz=113,slow=4.8,SNR=26						
	comp=Z,2.4nm,0.5s						
ARCES	ARCESS Array B	92.60	340	P	P	16 26 40.9	+0.5
	comp=Z,1.9nm,0.6s,baz=102,slow=7.3,SNR=11						
	comp=Z,1.9nm,0.6s						
NOA	NORSAR Array B	97.69	331	P	Pdif	16 27 05.8	+1.9
	comp=Z,0.5nm,0.8s,baz=103,slow=5.7,SNR=2.4						
	comp=Z,0.5nm,0.8s						
YKA	Yellowknife Ar	117.28	19	PKP	PKiKP	16 32 14.5	+0.4
	comp=Z,0.2nm,0.6s,baz=2.9,slow=1.9,SNR=4.3						
YKA				PKKPbc	PKKPbc	16 42 40.9	+0.6
	comp=Z,0.2nm,0.5s,baz=116,slow=5.1,SNR=3.6						
NVAR	Mina Array Bea	129.76	45	PKP	PKPdf	16 32 39.3	+0.2
	comp=Z,0.3nm,0.5s,baz=325,slow=1.4,SNR=2.7						
NVAR				SKPbc	SKPbc	16 35 57.9	+0.9
	comp=Z,0.3nm,0.7s,baz=323,slow=2.2,SNR=3.5						
PDAR	Pinedale Array	132.92	35	PKP	PKiKP	16 32 46.0	-0.1
	comp=Z,0.4nm,0.6s,baz=58,slow=1.1,SNR=4.1						
PDAR				SKPbc	SKPbc	16 36 08.7	+0.5
	comp=Z,1.0nm,0.9s,baz=304,slow=3.4,SNR=6.3						
ULM	Lac du Bonnet	133.23	18	SKPbc	SKPbc	16 36 09.3	+0.7
	comp=Z,13nm,1.2s,baz=348,slow=2.7,SNR=6.3						
TXAR	Lajitas Array	144.84	47	PKP	PKPdf	16 33 07.3	+0.4
	comp=Z,4.3nm,0.5s,baz=278,slow=1.1,SNR=58						
TXAR				SKPbc	SKiKP	16 36 43.4	+0.9
	comp=Z,1.1nm,1.1s,baz=305,slow=3.2,SNR=3.7						
BDFB	Brasilia	145.25	230	PKPbc	PKiKP	16 33 11.4	-0.4
	comp=Z,1.8nm,0.5s,baz=59,slow=10,SNR=2.0						
TKL	Tuckaleechee C	150.10	14	PKPbc	PKiKP	16 33 20.8	-0.3
	comp=Z,3.3nm,0.4s,baz=154,slow=6.1,SNR=4.1						

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*IDC **10** 16:27:14.4±2.8, 10°.31S×161°.46E, h79km±22km, mb3.3/6, mbtmp3.7/7, MS3.3/1, Error ellipse: s-maj=27.7km s-min=20.7km az=74.0*

ISC 10 16:27:12.5±0.9**, 10°.3S**±0°.1×**161°.6E**±0°.1**, h61km, n9, σ1ˢ51**/10**, mb3.6**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.84	298	P	Pn	16 27 42.4	+0.7
	5μm,0.4s,baz=173,slow=7.1,SNR=69						
HNR				S	Sn	16 28 04.3	+0.3
	7μm,0.3s,baz=24,slow=7.7,SNR=5.2						
DZM	Mont Dzumac	12.60	159	P	Pn	16 30 11.7	+2.7
	6.1nm,0.9s,baz=17,slow=12,SNR=11						
DZM				S	Sn	16 32 25.5	-2.2
	2.6nm,0.9s,baz=138,slow=23,SNR=1.1						
WRA	Warramunga Arr	27.96	247	P	P	16 32 56.9	-0.7
	0.9nm,0.6s,baz=76,slow=9.0,SNR=13						
	0.9nm,0.6s						
ASAR	Alice Springs	29.56	240	P	P	16 33 10.4	-1.3
	0.2nm,0.6s,baz=63,slow=10,SNR=6.2						
	0.2nm,0.6s						
DAV	Davao City (W)	39.80	294	LR	LR	16 50 38.0	
	comp=Z,40nm,19.5s,baz=218,slow=35						
USRK	Ussuriysk Ar.	60.53	336	P	P	16 37 16.6	+0.3
	0.8nm,0.6s,baz=147,slow=8.2,SNR=5.1						
	0.8nm,0.6s						
SONM	Songino Array	75.69	325	P	P	16 38 51.0	-0.5
	0.6nm,0.6s,baz=140,slow=5.7,SNR=4.3						
	0.6nm,0.6s						
ILAR	Eielson Array	84.15	20	P	P	16 39 36.3	-0.3
	0.2nm,0.8s,baz=231,slow=5.7,SNR=1.7						
	0.2nm,0.8s						
YKA	Yellowknife Ar	96.20	28	P	P	16 40 33.0	-0.6
	0.2nm,0.6s,baz=263,slow=2.5,SNR=1.6						
	0.2nm,0.6s						

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*IDC **10** 16:32:29.7±1.2, 72°.77N×4°.83E, h0km, mb3.4/8, mbtmp3.5/13, ML2.8/5, MS2.8/2, Error ellipse: s-maj=21.4km s-min=16.6km az=73.0*

*BER **10** 16:32:35.3±1.9, 72°.88N×5°.24E, h18km±20km, ML2.3, MW4.8(CSEM), Confirmed Earthquake*

*KOLA **10** 16:32:35.1, 72°.45N×5°.05E, h0km, ML2.4, Norwegian sea*

ISC 10 16:32:31.3±0.8**, 72°.74N**±0°.07×**5°.19E**±0°.07**, h10km, n42, σ1ˢ89**/47**, mb3.5**/8**, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIC	Jan Mayen	4.62	254	LR	LR	16 35 00.6	
	comp=Z,92nm,18.5s,baz=30,slow=33						
HSPB	Hornsund (broa	5.06	27	*e*P	Pn	16 33 46.1	-1.0
LOF	Lofoten	5.41	145	*e*P	Pn	16 33 54.1	+2.3
TRO	Tromso	5.42	118	*e*P	Pn	16 33 53.2	+1.2
JETT	Jettan, Norway	5.87	116	*e*P	Pn	16 33 59.8	+1.6
STEI	Steigen	5.89	140	*e*P	Pn	16 33 59.7	+1.2
STEI				*e*S	Sn	16 35 03.4	-2.5
STEI				IAML		16 35 08.7	
	comp=Z,4.2nm,0.6s						
SPA0	Spitsbergen Ar	6.14	22	*e*P	Pn	16 34 00.7	-1.1
SPITS	Spitsbergen Ar	6.14	22	Pn	Pn	16 33 59.8	-2.1
	baz=198,slow=15						
	comp=Z,1.3nm,0.4s						
HAMF	Hammerfest	6.18	101	*e*P	Pn	16 34 02.4	0.0
KIF	Kilpisjarvi	6.34	119	*e*P	Pn	16 34 06.1	+1.5
FAUS	Fauske	6.38	142	P	Pn	16 34 06.9	+1.8
FAUS				S	Sn	16 35 12.4	-5.6
FAUS	Fauske	6.38	142	*e*P	Pn	16 34 06.4	+1.2
FAUS				*e*S	Sn	16 35 15.4	-2.5
HOPEN	Hopen	6.46	45	*e*P	Pn	16 34 04.8	-1.5
KONS	Konsvik	6.84	152	*e*P	Pn	16 34 13.2	+1.7
KONS				IAML		16 35 28.2	
	comp=Z,5.3nm,0.6s						
STOK	Stokkvaagen	6.99	153	*e*P	Pn	16 34 15.4	+1.9
KTK1	Kautokeino	6.99	113	*e*P	Pn	16 34 15.7	+2.2
SALU	Saltoluokta	7.03	133	*e*P	Pn	16 34 16.1	+2.0
ARA0	ARCESS Array S	7.30	106	*e*P	Pn	16 34 19.4	+1.5
ARCES	ARCESS Array B	7.30	106	Pn	Pn	16 34 18.9	+1.1
	comp=Z,0.4nm,0.3s,baz=319,slow=12,SNR=31						
ARCES				Sn	Sn	16 35 40.9	+0.3
	comp=Z,0.1nm,0.3s,baz=313,slow=20,SNR=0.9						
ARCES				LR	LR	16 37 01.5	
	comp=Z,69nm,21.4s,baz=322,slow=37						
	comp=Z,1.6nm,0.5s						
ARCES	ARCESS Array B	7.30	106	P	Pn	16 34 19.7	+1.9
ARCES				S	Sn	16 35 40.7	+0.1
MOR8	Moi Rana	7.34	149	*e*P	Pn	16 34 19.9	+1.5
MOR8				*e*S	Sn	16 35 36.7	-4.9
MOR8				IAML		16 35 49.4	
	comp=Z,4.0nm,0.6s						
DBG	Daneborg	7.36	294	*i* P	Pn	16 34 11.1	-7.6
DBG				*i* S	Sn	16 35 21.8	-20
DBG	Daneborg	7.36	294	*e*P	Pn	16 34 18.5	-0.1
HEF	Hetta	7.51	116	*e*P	Pn	16 34 22.1	+1.4
KEV	Kevo	7.61	102	*e*P	Pn	16 34 22.0	0.0
VADS	Vadso	8.11	97	P	Pn	16 34 29.6	+0.7
VADS				S	Sn	16 35 57.4	-3.1
VADS	Vadso	8.11	97	*e*P	Pn	16 34 30.0	+1.1
NSS	Namsos	8.60	160	*e*P	Pn	16 34 36.7	+1.1
SCO	Scoresbysund	8.82	268	*i* P	Pn	16 34 31.3	-7.4
APA0	Apatity Array	10.66	105	P	Pn	16 35 05.8	+2.0
APA0				S	Sn	16 37 00.1	-2.8
NOA	NORSAR Array B	11.97	166	Pn	Pn	16 35 22.4	+0.6
	baz=348,slow=12,SNR=3.3						
	comp=Z,0.4nm,0.6s						
HFS	Hagfors	13.08	161	Pn	Pn	16 35 37.0	+0.1
	comp=Z,0.3nm,0.3s,baz=354,slow=12,SNR=12						
	comp=Z,1.1nm,0.4s						
FINES	FINESS Array B	13.82	134	Pn	Pn	16 35 47.8	+0.9
	comp=Z,0.1nm,0.3s,baz=353,slow=9.6,SNR=5.8						
	comp=Z,1.8nm,0.7s						
KLMR	Klimovskoe	17.65	114	*e*	P	16 36 39.0	+1.2
KLMR				AMP		16 36 51.3	
	comp=Z,21nm,1.4s						
KIRV	Kirov	22.32	106	P	P	16 37 29.6	+1.1
	comp=Z,2.7nm,0.5s,baz=258,slow=16,SNR=1.8						
	comp=Z,2.7nm,0.5s						
GERES	GERESS Array B	24.27	166	P	P	16 37 50.4	+1.9
	comp=Z,0.6nm,0.6s,baz=334,slow=8.9,SNR=5.2						
	comp=Z,0.6nm,0.6s						
AKASG	Malin Array Be	24.50	141	P	P	16 37 51.4	+1.2
	comp=Z,0.2nm,0.3s,baz=343,slow=8.9,SNR=2.0						
	comp=Z,0.2nm,0.3s						
BRTR	Keskin Array B	35.90	141	P	P	16 39 31.7	+0.3
	comp=Z,0.6nm,0.7s,baz=359,slow=5.8,SNR=4.1						
	comp=Z,0.6nm,0.7s						
ZALV	Zalesovo Beam	36.72	77	P	P	16 39 39.1	+1.1
	comp=Z,0.4nm,0.4s,baz=284,slow=40,SNR=1.9						
	comp=Z,0.4nm,0.4s						
ILAR	Eielson Array	41.48	342	P	P	16 40 16.7	-1.0
	comp=Z,0.3nm,0.9s,baz=14,slow=7.6,SNR=4.4						
	comp=Z,0.3nm,0.9s						
MKAR	Makanchi Array	42.33	84	P	P	16 40 25.1	+0.2
	comp=Z,0.2nm,0.8s,baz=350,slow=7.5,SNR=2.0						
	comp=Z,0.2nm,0.8s						
TORD	Torodi Ar. Bea	59.60	184	P	P	16 42 35.4	+0.4
	comp=Z,0.7nm,0.8s,baz=347,slow=6.4,SNR=4.7						
	comp=Z,0.7nm,0.8s						

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*IDC **10** 16:33:09.8±0.6, 6°.90S×105°.48E, h0km, mb4.5/30, mbtmp4.5/31, ML4.3/1, MS3.5/6, Error ellipse: s-maj=19.4km s-min=11.7km az=43.0*

*NEIC **10** 16:33:15.0±1.2, 7°.22S±0°.07×105°.28E±0°.04, h46km±9km, mb4.9/40, Error ellipse: s-maj=10.4km s-min=4.6km az=155.0*

*DJA **10** 16:33:15.3±0.3, 7°S±3°×10°5E±°, h46km±3km, M4.6/43, mB5.2/20, mb4.8/43, MLv4.7/25, Mw(mB)4.6/20*

ISC 10 16:33:15.3±0.4**, 7°.16S**±0°.05×**105°.35E**±0°.05**, h44km**±3km**, h45km:pP-P, n205, σ1ˢ49**/225**, mb4.8**/60**, MS3.8**/13**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGJI	Cibinong	0.64	32	P	Pn	16 33 25.9	-2.2
SKJI	Sukabumi	1.21	83	P	Pn	16 33 33.7	-2.1
SBJI	Serang	1.29	37	P	Pn	16 33 36.4	-0.5
SBJI				S	Sn	16 33 52.7	-0.4
CBJI	Citeko	1.67	64	P	Pn	16 33 41.1	-0.9
CNJI	Cibinong	1.78	95	P	Pn	16 33 40.8	-2.7
BLSI	Bandar Lampung	1.78	357	P	Pn	16 33 43.7	+0.1
KASI	Kota Agung	1.83	333	P	Pn	16 33 44.1	-0.2
BBJI	Bungbulang	2.31	98	P	Pn	16 33 49.0	-1.9
KLI	Kotabumi	2.33	348	P	Pn	16 33 52.3	+1.1
MDSI	Maura Dua	2.90	336	P	Pn	16 33 59.7	+0.7
JCJI	Jatiwangi	2.98	77	P	Pn	16 33 59.3	-0.8
CMJI	Cimerak	3.14	102	P	Pn	16 34 00.1	-2.1
XMI	Christmas Isla	3.29	174	P	Pn	16 34 00.2	-4.1
KPJI	Karang Pucung	3.56	93	P	Pn	16 34 08.2	+0.1
MNAI	Manna	3.66	319	Pn	Pn	16 34 10.4	+1.0
MNAI	Manna	3.66	319	P	Pn	16 34 10.5	+1.1
MNAI	Manna	3.66	319	P	Pn	16 34 10.2	+0.8
PMBI	Palembang	4.24	352	Pn	Pn	16 34 20.3	+2.9
KSI	Kapahiang	4.43	322	P	Pn	16 34 20.0	-0.1
YOGI	Yogyakarta	4.95	98	P	Pn	16 34 26.3	-0.9
PPBI	Pangkal Pinang	5.03	9	P	Pn	16 34 28.7	+0.5
	57nm,0.5s,5μm0.6nm						
MASI	Maura Aman, Be	5.05	322	P	Pn	16 34 28.3	-0.3
	116nm,0.8s,1μm0.4nm						
SMRI	Semarang	5.06	89	Pn	Pn	16 34 30.2	+1.5
SMRI	Semarang	5.06	89	P	Pn	16 34 27.9	-0.8
	193nm,0.9s,2μm0.8nm						
UGM	Wanagama	5.19	99	Pn	Pn	16 34 29.7	-0.8
UGM	Wanagama	5.19	99	P	Pn	16 34 30.0	-0.5
UGM	Wanagama	5.19	99	P	Pn	16 34 30.2	-0.3
	247nm,0.6s,3μm1.0nm						
UWJI	Ujung Watu	5.61	83	P	Pn	16 34 35.9	-0.3
	112nm,0.9s,12μm0.6nm						
NGJI	Ngawi	6.07	92	P	Pn	16 34 55.2	+13
PWJI	Pagerwojo	6.46	98	P	Pn	16 34 48.0	+0.1
	137nm,0.8s,2μm0.5nm						
DSRI	Dabo	6.68	353	P	Pn	16 34 51.1	+0.2
	51nm,0.7s,0.2nm						
PPSI	Pulau Pagai	6.88	309	P	Pn	16 34 53.5	-0.1
	215nm,0.5s,2μm0.9nm						
GRJI	Gresik	7.08	88	P	Pn	16 34 56.0	-0.5
	112nm,0.9s,0.4nm						
SDSI	Sungai Dareh	7.32	328	P	Pn	16 34 59.2	-0.4
	14nm,0.7s,777nm0.1nm						
PBKI	Pangkalan Bun	7.70	55	P	Pn	16 35 05.0	+0.1
	58nm,0.7s,0.4nm						
PDSI	Padang	7.89	322	P	Pn	16 35 06.1	-1.4
	19nm,0.8s,604nm0.1nm						
TPRI	Tanjung Pinang	8.07	354	P	Pn	16 35 10.1	+0.2
	34nm,0.6s						
GMJI	Gumukmas	8.10	98	P	Pn	16 35 10.1	-0.3
	43nm,0.5s						
BLJI	Banyuglugur	8.20	95	P	Pn	16 35 10.4	-1.4
	80nm,0.5s,2μm						
BKNI	Bangkinang	8.59	330	P	Pn	16 35 20.6	+3.5
BKNI	Bangkinang	8.59	330	P	Pn	16 35 17.9	+0.8
	133nm,0.4s,2μm						
JAGI	Jajag, Banyuwa	8.82	99	Pn	Pn	16 35 20.6	+0.3
JAGI	Jajag, Banyuwa	8.82	99	P	Pn	16 35 21.5	+1.2
JAGI	Jajag, Banyuwa	8.82	99	P	Pn	16 35 19.5	-0.8
	99nm,0.6s,2μm						
ABJI	Asem Bagus	8.84	95	P	Pn	16 35 19.6	-0.9
	430nm,0.8s,4μm						
SRBI	Singaraja	9.82	96	P	Pn	16 35 33.9	-0.1
	82nm,0.7s,1μm						
IGBI	Denpasar	9.85	100	P	Pn	16 35 34.1	-0.2
	66nm,1.1s,1μm						
DNP	Denpasar	9.89	99	P	Pn	16 35 34.5	-0.4
	232nm,0.7s,10μm						
BBKI	Banjar Baru	10.14	69	P	Pn	16 35 49.8	+11
GSI	Gunungsitoli	11.44	317	Pn	Pn	16 35 53.0	-3.1
GSI	Gunungsitoli	11.44	317	P	Pn	16 35 54.8	-1.3
	80nm,0.5s						
TWSI	Taliwang, Sumb	11.53	99	P	Pn	16 35 56.1	-1.4
	63nm,0.9s,717nm						
PLAI	Plampang	12.42	98	P	Pn	16 36 08.1	-1.5
PLAI	Plampang	12.42	98	P	Pn	16 36 07.5	-2.1
	48nm,0.7s						
KAPI	Kappang	14.48	82	Pn	Pn	16 36 35.4	-2.2
	1.4nm,0.3s,baz=206,slow=5.6,SNR=2.0						
KAPI				LR	LR	16 43 09.3	
	comp=Z,160nm,19.3s,baz=264,slow=42						
	2.7nm,0.3s						
SPSI	Sidrap Palu	14.70	78	P	Pn	16 36 39.2	-1.3
	18nm,1.1s						
BKSI	Bulukumba	14.80	84	P	Pn	16 36 43.3	+1.4
	52nm,0.9s						
LHMI	Lhok Sumawe	14.89	326	P	Pn	16 36 45.4	+2.4
BSSI	Bau Bau, Buton	15.08	87	P	Pn	16 36 45.2	-0.3
	39nm,1.1s						
MPSI	Mapaga	16.32	63	P	Pn	16 37 00.8	-0.6
	28nm,0.9s						
MMRI	Maumere	16.80	96	Pn	Pn	16 37 05.5	-2.0
MMRI				IAmb	IAmb	16 37 12.2	
	comp=Z,136nm,1.3s						
MMRI	Maumere	16.80	96	P	Pn	16 37 08.3	+0.8
KKM	Kota Kinabalu	17.02	40		Pn	16 37 10.6	+0.2
KKM	Kota Kinabalu	17.02	40	P	P	16 37 13.2	+1.5
TOLI2	Tolitoli	17.46	63	P	Pn	16 37 15.5	-0.2
TOLI2	Tolitoli	17.46	63	P	P	16 37 17.7	+1.2
MRSI	Marisa	18.21	66	P	P	16 37 24.0	-0.8
	comp=Z,51nm,0.6s,comp=Z,495nm						
SOEI	Soe	18.89	99	P	P	16 37 32.0	-0.4
SOEI				IAmb	IAmb	16 37 45.5	
	comp=Z,83nm,1.0s						
SOEI	Soe	18.89	99	P	P	16 37 32.6	+0.2
SOEI	Soe	18.89	99	P	P	16 37 32.0	-0.4
	comp=Z,93nm,0.8s,comp=Z,906nm						
GTOI	Gorontalo	19.25	67	P	P	16 37 34.3	-1.9
	comp=Z,18nm,0.7s						
MBWA	Marble Bar	19.68	136	P	P	16 37 40.1	-0.8
MBWA				IAmb	IAmb	16 37 47.1	
	comp=Z,16nm,0.6s						
MBWA	Marble Bar	19.68	136	P	Pn	16 37 42.4	-0.1
PSA00	Pilbara Seismi	20.04	137	P	P	16 37 43.2	-1.5
PSA00	Pilbara Seismi	20.04	137	P	P	16 37 45.7	+1.0
SANI	Sanana	21.19	77	P	P	16 37 55.7	-1.5
	comp=Z,23nm,1.1s						
NLAI	Namlea	22.01	81	P	P	16 38 05.0	-1.0
	comp=Z,20nm,0.7s						
FITZ	Fitzroy Crossi	22.56	121	P	P	16 38 11.2	-0.7
FITZ	Fitzroy Crossi	22.56	121	P	P	16 38 11.9	-0.1
AAI	Ambon	23.00	83	P	P	16 38 15.0	-1.6
	comp=Z,38nm,0.7s						
LBMI	Labuha	23.02	75	P	P	16 38 15.3	-1.5
	comp=Z,60nm,1.0s,comp=Z,914nm						
LBMI				pP	pP	16 38 29.2	+1.6
	comp=Z,60nm,1.0s,comp=Z,914nm						
TNTI	Ternate	23.34	71	P	P	16 38 19.3	-0.6
	comp=Z,21nm,0.5s						
KNRA	Kununurra	24.44	112	P	P	16 38 29.5	-0.7
KNRA				IAmb	IAmb	16 38 31.8	
	comp=Z,43nm,0.7s						
KNRA	Kununurra	24.44	112	P	P	16 38 30.3	+0.1
PHRA	Phrae	25.99	349	P	P	16 38 42.9	-1.2
PHRA				IAmb	IAmb	16 38 46.0	
	comp=Z,30nm,0.7s						
MTN	Manton Dam	26.00	105	P	P	16 38 43.3	-1.0
MTN				IAmb	IAmb	16 39 14.6	

	comp=Z,22nm,0.5s						
MTN	**Manton Dam**	**26.00**	**105**	P	**P**	**16 38 44.8**	**+0.4**
CMAR	**Chiang Mai Arr**	**26.23**	**346**	P	**P**	**16 38 44.3**	**-2.0**
	comp=Z,2.5nm,0.7s,baz=177,slow=8.2,SNR=32						
CMAR				LR	LR	16 51 21.8	
	comp=Z,104nm,18.6s,baz=185,slow=42						
	comp=Z,2.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**26.23**	**346**	P	**P**	**16 38 45.3**	**-0.9**
QIZ	**Qiongzhong**	**26.40**	**10**	P	**P**	**16 38 50.3**	**+2.5**
QIZ				S	**S**	**16 43 21.4**	**+3.0**
QIZ				pmax	pmax		
	comp=Z,140nm,8.0s						
QIZ				LR	LR		
	comp=Z,230nm,11.9s						
QIZ				LR	LR		
	comp=Z,240nm,15.9s						
QIZ				LR	LR		
	comp=Z,190nm,17.5s						
CHTO	**Chiang Mai**	**26.57**	**346**	P	**P**	**16 38 47.2**	**-2.1**
SIJI	**Sorong**	**26.59**	**78**	P	**P**	**16 38 48.0**	**-1.7**
	comp=Z,12nm,0.7s,baz=288,slow=5.2,SNR=14						
	comp=Z,12nm,0.7s						
FAKI	**Fak Fak**	**27.12**	**82**	P	**P**	**16 38 53.6**	**-0.9**
FAKI				IAmb	IAmb	16 38 56.8	
	comp=Z,54nm,1.3s						
FAKI	**Fak Fak**	**27.12**	**82**	P	**P**	**16 38 54.8**	**+0.3**
KDU	**Kakadu**	**27.27**	**104**	P	**P**	**16 38 54.9**	**-0.8**
PALK	**Pallekele**	**28.45**	**300**	LR	LR	16 49 28.0	
	comp=Z,77nm,19.9s,baz=240,slow=34						
H01W3	**Cape Leeuwin H**	**28.75**	**165**	T	T	17 09 23.2	
	baz=344,slow=76,SNR=276						
H01W1	**Cape Leeuwin H**	**28.77**	**165**	T	T	17 09 27.4	
	baz=344,slow=76,SNR=217						
H01W2	**Cape Leeuwin H**	**28.77**	**165**	T	T	17 09 24.2	
	baz=344,slow=76,SNR=284						
WB0	**Warramunga Arr**	**30.84**	**117**	P	**P**	**16 39 25.9**	**-1.6**
WRA	**Warramunga Arr**	**30.85**	**117**	P	**P**	**16 39 27.7**	**+0.1**
	comp=Z,3.9nm,1.0s,baz=290,slow=10,SNR=45						
WRA				PcP	**PcP**	**16 42 25.3**	**+1.4**
	comp=Z,0.5nm,0.5s,baz=307,slow=1.7,SNR=2.8						
	comp=Z,3.9nm,1.0s						
WRA	**Warramunga Arr**	**30.85**	**117**	P	**P**	**16 39 26.6**	**-0.9**
WRAB	**Tennant Creek**	**30.86**	**117**	P	**P**	**16 39 26.1**	**-1.5**
WRAB				IAmb	IAmb	16 39 32.4	
	comp=Z,14nm,1.2s						
WRAB	**Tennant Creek**	**30.86**	**117**	P	**P**	**16 39 28.2**	**+0.6**
WRAB	**Tennant Creek**	**30.86**	**117**	P	**P**	**16 39 27.9**	**+0.2**
WB2	**Warramunga Arr**	**30.86**	**117**	P	**P**	**16 39 25.7**	**-2.0**
WB2				IAmb	IAmb	16 39 32.3	
	comp=Z,11nm,1.1s						
FORT	**Forrest**	**31.70**	**141**	P	**P**	**16 39 33.2**	**-1.6**
FORT				IAmb	IAmb	16 40 29.3	
	comp=Z,20nm,1.1s						
FORT	**Forrest**	**31.70**	**141**	P	**P**	**16 39 36.8**	**+1.9**
	comp=Z,23nm,1.1s						
ASAR	**Alice Springs**	**31.95**	**124**	P	**P**	**16 39 37.6**	**+0.4**
	comp=Z,2.7nm,0.4s,baz=301,slow=8.4,SNR=115						
ASAR				PcP	**PcP**	**16 42 27.9**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=296,slow=2.2,SNR=2.8						
ASAR				LR	LR	16 53 08.8	
	comp=Z,89nm,21.2s,baz=300,slow=38						
	comp=Z,2.7nm,0.4s						
ASAR	**Alice Springs**	**31.95**	**124**	P	**P**	**16 39 34.9**	**-2.4**
AS31	**Alice Springs**	**31.95**	**124**	P	**P**	**16 39 36.2**	**-1.0**
AS01	**Alice Springs**	**31.98**	**124**	P	**P**	**16 39 38.7**	**+1.2**
BRDH	**Bariadhala**	**32.55**	**336**	LR	LR	16 55 46.8	
	comp=Z,152nm,18.9s,baz=88,slow=42						
H08S2	**Diego Garcia H**	**32.58**	**267**	T	T	17 13 59.2	
	baz=91,slow=76,SNR=553						
H08S3	**Diego Garcia H**	**32.59**	**267**	T	T	17 13 58.4	
	baz=91,slow=76,SNR=331						
H08S1	**Diego Carcia H**	**32.60**	**267**	T	T	17 14 00.5	
	baz=91,slow=76,SNR=287						
TNCH	**TengChong**	**32.68**	**348**	P	**P**	**16 39 40.0**	**-3.7**
TNCH				pP	pP	16 39 55.3	0.0
TNCH				S	**S**	**16 44 52.6**	**-4.6**
TNCH				sS	sS	16 45 22.0	+5.4
TNCH				pmax	pmax		
	comp=Z,11nm,0.5s						
TNCH				pmax	pmax		
	comp=Z,79nm,4.3s						
TNCH				LR	LR		
	comp=N,130nm,4.8s						
TNCH				LR	LR		
	comp=E,170nm,4.1s						
TNCH				LR	LR		
	comp=Z,79nm,8.4s						
PZH	**PanZhiHua**	**33.65**	**354**	P	**P**	**16 39 55.1**	**+3.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,70nm,4.7s						
YULB	**Yu-li**	**34.13**	**27**	P	**P**	**16 39 55.2**	**-1.0**
SSLB	**Suanglung**	**34.33**	**26**	P	**P**	**16 39 58.6**	**+0.7**
OOD	**Oodnadatta**	**35.30**	**129**	P	**P**	**16 40 07.3**	**+1.0**
MULG	**Mulgathing**	**35.42**	**134**	P	**P**	**16 40 08.2**	**+0.9**
QIS	**Mount Isa**	**35.73**	**115**	P	**P**	**16 40 11.0**	**+0.9**
COEN	**Coen**	**37.76**	**103**	P	**P**	**16 40 26.8**	**-0.7**
COEN				IAmb	IAmb	16 40 32.3	
	comp=Z,7.3nm,0.8s						
BBOO	**Buckleboo**	**38.26**	**136**	P	**P**	**16 40 32.4**	**+0.9**
BBOO				IAmb	IAmb	16 40 50.0	
	comp=Z,49nm,1.7s						
TAPN	**Taplejung**	**38.32**	**334**	*e*P	**P**	**16 40 32.4**	**+0.1**
	comp=Z,18nm,0.7s						
RAMN	**Ramite**	**38.47**	**333**	*e*P	**P**	**16 40 33.8**	**+0.3**
	comp=Z,16nm,0.6s						
LCRK	**Leigh Creek**	**38.54**	**131**	P	**P**	**16 40 34.7**	**+0.9**
JIRN	**Jiri**	**39.26**	**333**	*e*P	**P**	**16 40 40.1**	**-0.2**
	comp=Z,12nm,0.4s						
INKA	**Innaminka**	**39.26**	**126**	P	**P**	**16 40 41.4**	**+1.5**
MTSU	**Mount Surprise**	**39.47**	**110**	P	**P**	**16 40 43.0**	**+1.2**
PKI	**Pulchoki**	**39.55**	**332**	*e*P	**P**	**16 40 42.3**	**-0.3**
GUN	**Gumba**	**39.62**	**332**	*e*P	**P**	**16 40 43.1**	**-0.1**
	comp=Z,24nm,0.5s						
GKN	**Gorkha**	**40.28**	**331**	*e*P	**P**	**16 40 47.9**	**-0.6**
	comp=Z,13nm,0.3s						
KOLN	**Koldanda**	**40.59**	**330**	*e*P	**P**	**16 40 51.2**	**+0.1**
DANN	**Dangsing**	**40.99**	**330**	*e*P	**P**	**16 40 53.9**	**-0.6**
	comp=Z,43nm,0.7s						
NJ2	**Nanjing**	**41.07**	**18**	*e*P	**P**	**16 40 56.2**	**+1.5**
NJ2				pP	**pP**	**16 41 07.7**	**+1.0**
NJ2				sP	**sP**	**16 41 13.1**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,130nm,3.7s						
NJ2				LR	LR		
	comp=Z,590nm,16.2s						
NJ2				LR	LR		
	comp=Z,600nm,18.6s						
NJ2				LR	LR		
	comp=Z,710nm,17.8s						
PYUN	**Piuthan**	**41.17**	**329**	*e*P	**P**	**16 40 56.1**	**+0.2**
PMG	**Port Moresby**	**41.42**	**96**	P	**P**	**16 40 58.3**	**+0.3**
	comp=Z,11nm,0.6s,baz=196,slow=6.9,SNR=5.8						
	comp=Z,11nm,0.6s						
PMG	**Port Moresby**	**41.42**	**96**	P	**P**	**16 40 56.8**	**-1.2**
PMG				IAmb	IAmb	16 40 59.6	
	comp=Z,14nm,0.8s						
PMG	**Port Moresby**	**41.42**	**96**	P	**P**	**16 40 58.2**	**+0.3**
PMG				pP	**pP**	**16 41 08.6**	**-0.9**
PMG				sP	**sP**	**16 41 12.4**	**-2.0**
QLP	**Quilpie**	**41.69**	**122**	P	**P**	**16 41 02.1**	**+2.1**
STKA	**Stephens Creek**	**41.77**	**131**	P	**P**	**16 41 01.9**	**+1.3**
	comp=Z,23nm,0.5s,baz=306,slow=7.9,SNR=73						
STKA				LR	LR	17 00 17.5	
	comp=Z,72nm,18.9s,baz=262,slow=39						
	comp=Z,23nm,0.5s						
STKA	**Stephens Creek**	**41.77**	**131**	P	**P**	**16 40 59.1**	**-1.4**
STKA	**Stephens Creek**	**41.77**	**131**	P	**P**	**16 41 01.7**	**+1.2**
GOMU	**GeErMu**	**44.25**	**348**	P	**P**	**16 41 21.8**	**+0.9**
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,110nm,5.6s						
CMSA	**Cobar Meteorol**	**44.75**	**128**	P	**P**	**16 41 26.3**	**+1.7**
RMQ	**Roma**	**45.50**	**120**	P	**P**	**16 41 32.8**	**+2.1**
KRVT	**Keravat (AS076**	**46.52**	**89**	P	**P**	**16 41 38.6**	**-0.2**
	comp=Z,6.9nm,0.4s,baz=260,slow=10,SNR=1.7						
	comp=Z,6.9nm,0.4s						
GTA	**Gaotai**	**46.62**	**354**	*e*P	**P**	**16 41 40.7**	**+1.4**
GTA				PcP	**PcP**	**16 43 14.1**	**+1.3**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA				LR	LR		
	comp=Z,93nm,14.5s						
GTA				LR	LR		
	comp=Z,110nm,14.2s						
GTA				LR	LR		
	comp=Z,95nm,15.6s						
HHC	**Hu-ho-hao-te**	**48.11**	**6**	*e*P	**P**	**16 41 54.5**	**+3.6**
HHC				pmax	pmax		
	comp=Z,35nm,0.8s						
HHC				pmax	pmax		
	comp=Z,230nm,4.9s						
HHC				LR	LR		
	comp=Z,380nm,12.4s						
HHC				LR	LR		
	comp=Z,470nm,12.5s						
CAN	**Canberra**	**48.82**	**131**	P	**P**	**16 41 55.1**	**-1.4**
CAN				IAmb	IAmb	16 42 18.7	
	comp=Z,30nm,1.3s						
CAN	**Canberra**	**48.82**	**131**	P	**P**	**16 41 58.4**	**+1.9**
CAN				pP	**pP**	**16 42 09.1**	**+0.9**
CAN				sP	**sP**	**16 42 12.9**	**-0.2**
JMN	**Monobe**	**48.84**	**32**	P	**P**	**16 41 54.8**	**-1.7**
KSRS	**Korea Array**	**49.14**	**24**	P	**P**	**16 41 58.8**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=210,slow=6.4,SNR=8.2						
	comp=Z,1.0nm,0.6s						
JHS	**Saijyo**	**49.45**	**30**	P	**P**	**16 42 00.5**	**-0.7**
NIL	**Nilore**	**50.73**	**325**	P	**P**	**16 42 08.8**	**-2.1**
NIL	**Nilore**	**50.73**	**325**	P	**P**	**16 42 10.4**	**-0.5**
WMQ	**Urumqi**	**53.20**	**344**	*e*P	**P**	**16 42 30.5**	**+1.3**
WMQ				pP	pP	16 42 41.5	0.0
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMQ				LR	LR		
	comp=Z,100nm,24.9s						
MJAR	**Matsushiro Arr**	**53.28**	**33**	P	**P**	**16 42 27.2**	**-2.6**
	comp=Z,2.5nm,0.9s,baz=196,slow=9.4,SNR=5.2						
	comp=Z,2.5nm,0.9s						
KBL	**Kabul**	**53.82**	**323**	P	**P**	**16 42 33.3**	**-0.8**
KBL				IAmb	IAmb	16 42 35.0	
	comp=Z,9.4nm,0.8s						
CN2	**Changchun**	**53.89**	**18**	P	**P**	**16 42 32.9**	**-1.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=Z,200nm,15.0s						
CN2				LR	LR		
	comp=Z,200nm,15.0s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
SONM	**Songino Array**	**54.76**	**1**	P	**P**	**16 42 40.0**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=181,slow=10.0,SNR=12						
SONM				PcP	**PcP**	**16 43 43.7**	**+1.1**
	comp=Z,2.4nm,0.6s,baz=179,slow=3.9,SNR=10						
SONM				ScP	**ScP**	**16 47 42.0**	**+4.2**
	comp=Z,0.5nm,0.7s,baz=177,slow=3.7,SNR=3.6						
	comp=Z,0.9nm,0.5s						
MDJ	**Mudanjiang**	**55.98**	**21**	P	**P**	**16 42 48.1**	**-1.1**
MDJ				pP	pP	16 43 01.1	-0.6
MDJ				sP	sP	16 43 10.0	+3.2
MDJ				PP	**PP**	**16 44 53.8**	**-0.7**
MDJ				ScP	**ScP**	**16 47 36.7**	**-6.3**
MDJ				PcS	**PcS**	**16 47 45.9**	**-1.6**
MDJ				S	**S**	**16 50 36.2**	**+2.0**
MDJ				sS	sS	16 51 00.5	+5.3
MDJ				ScS	**ScS**	**16 52 31.8**	**-3.0**
MDJ				pmax	pmax		
	comp=Z,4.0nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,120nm,4.1s						
MDJ				LR	LR		
	comp=Z,190nm,6.1s						
MDJ				LR	LR		
	comp=Z,190nm,7.4s						
MDJ				LR	LR		
	comp=Z,270nm,10.7s						
GAR	**Garm**	**56.25**	**327**	P	**P**	**16 42 50.8**	**-0.7**
USA0B	**Ussuriysk Arra**	**56.50**	**23**	P	**P**	**16 42 51.6**	**-1.3**
USA0B				IAmb	IAmb	16 43 01.6	
	comp=Z,4.9nm,1.0s						
USRK	**Ussuriysk Ar.**	**56.50**	**23**	P	**P**	**16 42 52.2**	**-0.8**
	comp=Z,3.1nm,0.7s,baz=208,slow=6.8,SNR=19						
	comp=Z,3.1nm,0.7s						
USRK	**Ussuriysk Ar.**	**56.50**	**23**	P	**P**	**16 42 51.8**	**-1.1**
CHGR	**Chuyangaron**	**56.63**	**326**	P	**P**	**16 42 53.2**	**-0.9**
AAK	**Ala-Archa**	**56.97**	**333**	P	**P**	**16 42 57.7**	**+1.1**
MK31	**Makanchi Array**	**57.50**	**341**	P	**P**	**16 42 59.4**	**-0.6**
MKAR	**Makanchi Array**	**57.50**	**341**	P	**P**	**16 42 59.1**	**-0.8**
	comp=Z,2.6nm,0.5s,baz=151,slow=7.9,SNR=32						
	comp=Z,2.6nm,0.5s						
MKAR	**Makanchi Array**	**57.50**	**341**	P	**P**	**16 42 59.0**	**-1.0**
HEH	**HeiHe**	**60.30**	**16**	*e*P	**P**	**16 43 18.5**	**-0.8**
HEH				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KURK	**Kurchatov**	**62.10**	**341**	P	**P**	**16 43 31.0**	**-0.5**
GEYT	**Alibeck**	**62.80**	**319**	P	**P**	**16 43 36.9**	**+0.3**
	comp=Z,7.0nm,0.7s,baz=152,slow=6.7,SNR=14						
	comp=Z,7.0nm,0.7s						
ZAA0	**Zalesovo Array**	**63.29**	**347**	P	**P**	**16 43 38.5**	**-0.9**
ZAA0				IAmb	IAmb	16 43 40.2	
	comp=Z,6.8nm,0.7s						
ZALV	**Zalesovo Beam**	**63.29**	**347**	P	**P**	**16 43 38.0**	**-1.4**
	comp=Z,5.5nm,0.4s,baz=143,slow=4.3,SNR=32						
	comp=Z,5.5nm,0.4s						
ZALV	**Zalesovo Beam**	**63.29**	**347**	P	**P**	**16 43 38.1**	**-1.3**
DRV	**Dumont d'Urvil**	**63.98**	**165**	P	**P**	**16 43 40.6**	**-3.2**
DRV				sP	**pP**	**16 43 54.6**	**-1.2**
RAYN	**Ar Rayn**	**65.89**	**300**	P	**P**	**16 43 59.1**	**+2.0**
RAYN				pP	**pP**	**16 44 08.6**	**-0.8**
BRVK	**Borovoye**	**66.95**	**338**	P	**P**	**16 44 02.8**	**-0.3**
BRVK				IAmb	IAmb	16 44 04.0	
	comp=Z,6.5nm,0.6s						
BRVK	**Borovoye**	**66.95**	**338**	P	**P**	**16 44 03.1**	**0.0**
CCD	**Concordia, Ant**	**68.67**	**175**	P	**P**	**16 44 16.6**	**+2.4**
CCD				pP	**pP**	**16 44 26.8**	**+0.4**
ABKAR	**Akbulak array**	**68.72**	**330**	P	**P**	**16 44 14.6**	**+0.3**
ABKAR	**Akbulak array**	**68.72**	**330**	P	**P**	**16 44 14.9**	**+0.5**
ABKAR				IAmb	IAmb	16 44 15.7	
	comp=Z,34nm,0.7s						
ARU	**Arti**	**74.07**	**335**	P	**P**	**16 44 46.9**	**+0.4**
	comp=Z,4.5nm,0.5s,baz=160,slow=3.7,SNR=13						
	comp=Z,4.5nm,0.5s						
PETK	**Petropavlovsk-**	**74.54**	**30**	P	**P**	**16 44 48.2**	**-1.1**
	comp=Z,2.2nm,0.8s,baz=203,slow=2.6,SNR=6.0						
	comp=Z,2.2nm,0.8s						
MA2	**Magadan**	**75.65**	**22**	P	**P**	**16 44 54.2**	**-1.4**
	comp=Z,4.9nm,0.8s,baz=223,slow=4.8,SNR=3.7						
	comp=Z,4.9nm,0.8s						
KBZ	**Khabaz**	**75.67**	**318**	P	**P**	**16 44 56.8**	**+0.7**
	comp=Z,2.6nm,0.8s,baz=178,slow=6.5,SNR=4.1						
	comp=Z,2.6nm,0.8s						
BELG	**Belogornoye**	**76.89**	**328**	P	**P**	**16 45 02.9**	**+0.2**
	comp=Z,7.4nm,0.8s,baz=131,slow=3.1,SNR=6.0						
	comp=Z,7.4nm,0.8s						
NRIK	**Noril'sk**	**77.32**	**354**	P	**P**	**16 45 03.7**	**-1.1**
	comp=Z,6.1nm,0.4s,baz=149,slow=4.6,SNR=16						
	comp=Z,6.1nm,0.4s						
BOSA	**Boshof**	**77.93**	**242**	P	**P**	**16 45 11.9**	**+2.6**
	comp=Z,1.7nm,0.7s,baz=84,slow=4.7,SNR=1.5						
	comp=Z,1.7nm,0.7s						
SEY	**Seymchan**	**78.51**	**20**	P	**P**	**16 45 11.1**	**-0.4**
	comp=Z,2.3nm,0.8s,baz=199,slow=9.6,SNR=6.9						
	comp=Z,2.3nm,0.8s						
KIRV	**Kirov**	**79.30**	**334**	P	**P**	**16 45 16.8**	**+0.9**
	comp=Z,14nm,0.7s,baz=354,slow=2.1,SNR=9.6						
	comp=Z,14nm,0.7s						
TIXI	**Tiksi**	**80.17**	**7**	P	**P**	**16 45 19.2**	**-1.2**
	comp=Z,11nm,0.8s,baz=90,slow=23,SNR=11						
	comp=Z,11nm,0.8s						
BRTR	**Keskin Array B**	**80.71**	**312**	P	**P**	**16 45 25.4**	**+1.2**
	comp=Z,3.7nm,0.7s,baz=135,slow=6.7,SNR=25						
	comp=Z,3.7nm,0.7s						
QSPA	**South Pole Qui**	**82.83**	**180**	P	**P**	**16 45 36.3**	**+1.5**
	comp=Z,1.6nm,0.9s,baz=158,slow=1.0,SNR=7.9						
	comp=Z,1.6nm,0.9s						
AKASG	**Malin Array Be**	**86.80**	**322**	P	**P**	**16 45 55.5**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=76,slow=3.6,SNR=10						
	comp=Z,0.2nm,0.3s						
MLR	**Muntele Rosu**	**87.69**	**316**	P	**P**	**16 46 01.6**	**+2.1**
	comp=Z,4.1nm,0.6s,baz=174,slow=5.0,SNR=6.2						
	comp=Z,4.1nm,0.6s						
MNK	**Minsk**	**88.56**	**325**	*i* P	**P**	**16 46 01.8**	**-1.4**
	comp=E,7.0nm,0.9s						
MNK				*i* P	**P**	**16 46 01.8**	**-1.4**
	comp=N,116nm,1.1s						
MNK				*i* P	**P**	**16 46 01.8**	**-1.4**
	comp=Z,76nm,0.8s,baz=284						
MNK				*i* pP	**pP**	**16 46 16.5**	**+0.2**
MNK				*i* PP	**PP**	**16 49 30.1**	**-1.9**
MNK				*i* PPP	PPP	16 51 26.0	
MNK				*i* S	**SKSac**	**16 56 25.9**	**-2.9**
MNK				*i* sS	**ScS**	**16 56 51.9**	**+0.2**
MNK				*i* SS	**SS**	**17 02 36.4**	**-1.3**
MNK				*i* SSS	SSS	17 06 11.1	
MNK				*i* LR	LR	17 26 18.4	
MNK				*i* LRM	MLR	17 27 13.7	
	comp=N,197nm,13.4s						
MNK				*i* LRM	MLR	17 27 21.4	
	comp=Z,47nm,14.7s						
FINES	**FINESS Array B**	**91.13**	**332**	P	**P**	**16 46 16.2**	**+1.0**
	comp=Z,2.8nm,0.7s,baz=36,slow=7.5,SNR=3.5						
	comp=Z,2.8nm,0.7s						
ARCES	**ARCESS Array B**	**93.11**	**340**	P	**P**	**16 46 23.6**	**-0.6**
	comp=Z,2.3nm,0.6s,baz=96,slow=6.4,SNR=2.3						
	comp=Z,2.3nm,0.6s						
PDAR	**Pinedale Array**	**133.08**	**35**	PKP	**PKiKP**	**16 52 29.0**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=259,slow=1.8,SNR=1.5						
TXAR	**Lajitas Array**	**144.89**	**47**	PKP	**PKPdf**	**16 52 49.4**	**+1.0**
	comp=Z,2.9nm,0.6s,baz=310,slow=1.6,SNR=32						

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*SJA **10** 16:35:49.2±1.1, 24°.33S×67°.14W, h150^{km}, ML3.9, MW3.6, Hypocentre not reviewed by the ISC*

GUC 10 16:35:51.4±0.6**, 24°.19S×67°.59W, h215**^{km}±8^{km}**, ML3.9, 5C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**1.99**	**299**	⇑*i*P	Pn	16 36 31.0	-0.2
PB15				*i* S	S	16 37 01.2	-0.6
PB15	**IPOC Station P**	**1.99**	**299**	*e*P		16 36 31.0	
PB15				*e*S		16 37 01.9	
PB15				IAML		16 37 05.1	
	comp=Z,2µm,0.2s						
LVC	**Limon Verde**	**1.99**	**322**	*i* P	Pn	16 36 30.8	-0.6
LVC				*i* S	S	16 37 01.0	-1.2
LVC	**Limon Verde**	**1.99**	**322**	*e*P		16 36 31.1	
LVC				*e*S		16 37 02.0	
GO02	**Mina Guanaco**	**2.06**	**242**	⇑*i*P	Pn	16 36 30.4	-1.7
GO02	**Mina Guanaco**	**2.06**	**242**	*e*P		16 36 30.0	
GO02				*e*S		16 37 01.2	
HJA	**Humahuaca**	**2.22**	**64**	*e*P		16 36 28.0	
PB06	**IPOC Station P**	**2.35**	**309**	⇑*i*P	Pn	16 36 34.9	+0.1
PB06				*i* S	S	16 37 07.9	-0.5
PB06				IAML		16 37 10.7	
	comp=E,395nm,0.1s						
PB06	**IPOC Station P**	**2.35**	**309**	*e*P		16 36 34.7	
PB06				*e*S		16 37 08.6	
PB06				IAML		16 37 12.7	
	comp=Z,207nm,0.2s						
PB14	**IPOC Station P**	**2.61**	**260**	*e*P	Pn	16 36 36.8	-0.9
PB14				*i* S	S	16 37 10.9	-2.7
PB14	**IPOC Station P**	**2.61**	**260**	*e*P		16 36 37.0	
PB14				*e*S		16 37 13.1	
YJA	**Yavi**	**2.77**	**44**	*e*P		16 36 35.7	
YJA				*e*S		16 37 09.7	
PB10	**IPOC Station P**	**2.80**	**283**	*i* P	Pn	16 36 39.9	+0.3
PB10				*i* S	S	16 37 16.1	-0.8
PB10				IAML		16 37 22.1	
	comp=E,81nm,0.4s						
PB10	**IPOC Station P**	**2.80**	**283**	*e*P		16 36 40.0	
PB10				*e*S		16 37 18.1	
PB09	**IPOC Station P**	**2.83**	**327**	*i* P	Pn	16 36 40.8	+0.6
PB09				*i* S	S	16 37 18.2	+0.3
PB09				IAML		16 37 19.7	
	comp=N,118nm,0.1s						
PB09	**IPOC Station P**	**2.83**	**327**	*e*P		16 36 40.9	
PB09				*e*S		16 37 18.9	
PB09				IAML		16 37 19.4	
	comp=Z,108nm,0.2s						
PB03	**IPOC Station P**	**2.92**	**316**	⇑*i*P	Pn	16 36 41.2	+0.1
PB03				*i* S	S	16 37 19.2	-0.5
PB03				IAML		16 37 22.0	
	comp=N,229nm,0.2s						
PB03	**IPOC Station P**	**2.92**	**316**	*e*P		16 36 41.2	
PB03				*e*S		16 37 19.6	
PB03				IAML		16 37 24.0	
	comp=Z,198nm,0.2s						
AC02	**Maricunga**	**2.98**	**208**	*e*P	Pn	16 36 39.2	-2.9
AC02	**Maricunga**	**2.98**	**208**	*e*P		16 36 39.5	
PB04	**IPOC Station P**	**3.00**	**308**	⇓*i*P	Pn	16 36 42.4	+0.4
PB04				*i* S	S	16 37 20.8	-0.5
PB04				IAML		16 37 23.6	
	comp=N,239nm,0.3s						
PB04	**IPOC Station P**	**3.00**	**308**	*e*P		16 36 42.4	
PB04				*e*S		16 37 21.4	
PB04				IAML		16 37 23.9	
	comp=Z,151nm,0.2s						
PB07	**IPOC Station P**	**3.24**	**319**	⇑*i*P	Pn	16 36 45.0	+0.2
PB07				*i* S	S	16 37 25.7	-0.7
PB07	**IPOC Station P**	**3.24**	**319**	*e*P		16 36 45.1	
PB07				*e*S		16 37 26.4	
PB07				IAML		16 37 27.4	
	comp=Z,168nm,0.4s						
PB02	**IPOC Station P**	**3.57**	**323**	*i* P	Pn	16 36 48.6	0.0
PB02				*i* S	S	16 37 32.3	-1.0
PB02	**IPOC Station P**	**3.57**	**323**	*e*P		16 36 48.9	
PB02				*e*S		16 37 33.6	
PB01	**IPOC Station P**	**3.59**	**330**	*i* P	Pn	16 36 49.1	+0.2
PB01				*i* S	S	16 37 33.3	-0.5
PB01	**IPOC Station P**	**3.59**	**330**	*e*P		16 36 49.2	
PB01				*e*S		16 37 33.9	
GO03	**Copiap**	**4.14**	**215**	*e*P		16 36 52.3	
GO03				*e*S		16 37 41.0	
GO03	**Copiap**	**4.14**	**215**	*i* P	Pn	16 36 52.0	-3.6
GO03				*i* S	S	16 37 40.5	-5.3
PB08	**IPOC Station P**	**4.29**	**340**	*e*P	Pn	16 36 58.0	+0.3
PB08	**IPOC Station P**	**4.29**	**340**	*e*P		16 36 58.3	
PB08				*e*S		16 37 50.6	
GO01	**Chusmiza**	**4.74**	**341**	*e*P		16 36 59.5	
GO01				*e*S		16 37 56.9	
PB11	**IPOC Station P**	**4.81**	**336**	*e*P	Pn	16 37 03.0	-1.0
PB11	**IPOC Station P**	**4.81**	**336**	*e*P		16 37 03.4	
PSGC	**Pisagua**	**5.14**	**332**	*e*P	Pn	16 37 07.7	-0.5
LCO	**Las Campanas**	**5.55**	**209**	*e*P	Pn	16 37 09.1	-4.2

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*IDC **10** 16:37:15.1±2.0, 31°.31S×179°.75E, h430^{km}±17^{km}, mb3.5/6, mbtmp4.3/10, Error ellipse: s-maj=24.0km s-min=18.7km az=69.0*

*WEL **10** 16:37:20.9±0.9, 32°S±13°×18°0W±3°3, h371^{km}±14^{km}, M4.6/13, mB4.8/7, ML4.9/13, MLv5.2/13, Mw(mB)4.0/7, Error ellipse: s-maj=0.0km s-min=0.0km az=111.4, confirmed*

ISC 10 16:37:14.7±0.6**, 31°.31S**±0°.06×**179°.45E**±0°.10**, h400**^{km}**, n62,** σ**2**^{s}**.46**/75**, mb3.9**/7**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.05**	**49**	P	**Pn**	**16 38 18.5**	**+0.1**
GLKZ				S	**S**	**16 39 10.1**	**+0.2**
RAO	**Raoul Island**	**3.06**	**49**	S	**S**	**16 39 08.3**	**-1.7**
	392nm,0.2s,baz=78,slow=22,SNR=4.0						
WMGZ	**Waiomatatini S**	**6.55**	**187**	P	**P**	**16 38 56.7**	**+2.8**
WMGZ				S	**S**	**16 40 15.9**	**+2.2**
HAZ	**Te Kaha**	**6.58**	**192**	P	**P**	**16 38 57.6**	**+3.4**
HAZ				S	**S**	**16 40 14.7**	**+0.5**
RUGZ	**Raukumara Rang**	**6.80**	**192**	P	**P**	**16 38 59.8**	**+3.0**
RUGZ				S	**S**	**16 40 20.2**	**+1.2**
PUZ	**Puketiti**	**6.82**	**188**	P	**P**	**16 38 59.0**	**+2.1**
PUZ				S	**S**	**16 40 16.0**	**-3.2**
OPRZ	**Ohinepanea**	**6.95**	**199**	P	P	16 39 03.0	+4.8
OPRZ				S	**S**	**16 40 27.3**	**+5.5**
TWGZ	**Tauwhareparae**	**6.96**	**190**	P	**P**	**16 39 00.5**	**+2.1**
TWGZ				S	**S**	**16 40 22.4**	**+0.3**
MWZ	**Matawai**	**7.19**	**192**	P	**P**	**16 39 03.4**	**+2.4**
MWZ				S	**S**	**16 40 26.2**	**-0.6**
URZ	**Urewera**	**7.20**	**195**	P	**Pn**	**16 39 01.4**	**+0.9**
	33nm,0.3s,baz=342,slow=4.1,SNR=66						
URZ				S	**S**	**16 40 25.8**	**-1.2**
	97nm,0.6s,baz=145,slow=22,SNR=23						
URZ	**Urewera**	**7.20**	**195**	P	**P**	**16 39 02.0**	**+1.0**
URZ				S	**S**	**16 40 25.2**	**-1.7**
CNGZ	**Carnagh Statio**	**7.23**	**188**	P	**P**	**16 39 03.6**	**+2.1**
TKGZ	**Te Karaka**	**7.24**	**190**	P	**P**	**16 39 03.2**	**+1.8**
TKGZ				S	**S**	**16 40 26.5**	**-1.2**
OMRZ	**Omania**	**7.24**	**200**	P	P	16 39 06.9	+5.3
RAGZ	**Rawiri**	**7.36**	**193**	P	**P**	**16 39 06.6**	**+3.6**
RAGZ				S	**S**	**16 40 30.8**	**+0.3**
MUGZ	**Murupara**	**7.48**	**196**	P	**P**	**16 39 06.6**	**+2.4**
MUGZ				S	**S**	**16 40 33.5**	**+0.5**

RIGZ	**Rimuhau**	**7.51**	**190**	P	**P**	**16 39 06.1**	**+1.5**
RIGZ				S	**S**	**16 40 33.5**	**0.0**
SNGZ	**Shannon Statio**	**7.66**	**192**	P	**P**	**16 39 08.1**	**+2.0**
SNGZ				S	**S**	**16 40 37.3**	**+0.8**
POWZ	**Post Office Ro**	**9.54**	**197**	P	**S**	**16 41 13.1**	**-3.0**
PRWZ	**Pori Road**	**9.65**	**196**	P	**S**	**16 41 15.7**	**-2.6**
MRZ	**Mangatainoka R**	**9.85**	**197**	P	S	16 41 15.2	-7.1
TIWZ	**Tintock**	**9.88**	**196**	P	**S**	**16 41 19.2**	**-3.8**
CPWZ	**Castlepoint**	**9.94**	**194**	P	**S**	**16 41 23.6**	**-0.5**
HOWZ	**Holdsworth Sta**	**10.09**	**197**	P	**S**	**16 41 23.2**	**-4.0**
OGWZ	**Otaki Gorge**	**10.10**	**199**	P	**S**	**16 41 24.5**	**-3.0**
TMWZ	**Te Maipa**	**10.19**	**195**	P	**S**	**16 41 23.7**	**-5.7**
KIW	**Kapiti Island**	**10.21**	**200**	P	**S**	**16 41 28.5**	**-1.3**
MTW	**Mount Morrison**	**10.33**	**197**	P	**S**	**16 41 28.3**	**-3.9**
CAW	**Cannon Point**	**10.40**	**199**	P	**S**	**16 41 30.0**	**-3.5**
DUWZ	**D'Urville Isla**	**10.47**	**204**	P	**S**	**16 41 33.6**	**-1.5**
TRWZ	**Traveller**	**10.52**	**196**	P	**S**	**16 41 34.1**	**-1.9**
PAWZ	**Paruwai Farm**	**10.56**	**197**	P	**S**	**16 41 34.8**	**-2.2**
WEL	**Wellington**	**10.65**	**199**	P	S	16 41 31.3	-7.3
TCW	**Tory Channel**	**10.73**	**201**	P	**S**	**16 41 37.9**	**-2.4**
PLWZ	**Palliser**	**10.78**	**197**	P	**S**	**16 41 38.7**	**-2.8**
TKNZ	**Takaka Hill**	**11.03**	**207**	P	**S**	**16 41 44.8**	**-1.6**
TUWZ	**Tuamarina**	**11.03**	**202**	P	**S**	**16 41 42.5**	**-3.9**
NNZ	**Nelson**	**11.03**	**205**	P	**S**	**16 41 44.4**	**-2.1**
MRNZ	**Matariki Terra**	**11.42**	**206**	P	**S**	**16 41 54.6**	**+0.2**
THZ	**Tophouse**	**11.68**	**205**	P	**S**	**16 41 56.5**	**-3.3**
MSVF	**Nonsavu**	**13.57**	**354**	P	**P**	**16 40 11.9**	**0.0**
	3.1nm,0.4s,baz=243,slow=3.3,SNR=6.2						
RPZ	**Rata Peaks**	**14.05**	**206**	P	**P**	**16 40 18.1**	**+1.3**
	4.6nm,0.8s,baz=246,slow=22,SNR=1.7						
DZM	**Mont Dzumac**	**14.81**	**305**	P	**P**	**16 40 28.6**	**+3.2**
	4.2nm,0.9s,baz=79,slow=19,SNR=1.5						
STKA	**Stephens Creek**	**32.14**	**259**	P	**P**	**16 43 07.1**	**0.0**
	4.4nm,0.6s,baz=104,slow=14,SNR=4.3						
	4.4nm,0.6s						
KRVT	**Keravat (AS076**	**37.23**	**311**	P	**P**	**16 43 50.1**	**-0.1**
	58nm,0.8s,baz=178,slow=2.8,SNR=10						
ASAR	**Alice Springs**	**40.88**	**269**	P	**P**	**16 44 20.1**	**+0.1**
	4.0nm,0.6s,baz=105,slow=7.5,SNR=43						
ASAR				pP	**pwP**	**16 45 42.1**	**+1.5**
	0.5nm,0.7s,baz=106,slow=7.0,SNR=3.2						
ASAR				ScP	**ScP**	**16 49 17.7**	**-5.0**
	0.3nm,0.6s,baz=121,slow=4.2,SNR=5.1						
	4.0nm,0.6s						
WRA	**Warramunga Arr**	**41.96**	**275**	P	**P**	**16 44 28.6**	**-0.1**
	11nm,0.8s,baz=112,slow=7.7,SNR=44						
WRA				pP	**pwP**	**16 45 50.9**	**+0.8**
	0.4nm,0.7s,baz=114,slow=7.1,SNR=1.8						
WRA				ScP	**ScP**	**16 49 22.4**	**-4.6**
	0.3nm,0.7s,baz=109,slow=3.5,SNR=2.5						
	11nm,0.8s						
SIJI	**Sorong**	**54.66**	**294**	P	**P**	**16 46 03.5**	**-0.9**
	2.4nm,0.6s,baz=228,slow=23,SNR=2.3						
	2.4nm,0.6s						
QSPA	**South Pole Qui**	**58.80**	**180**	P	**P**	**16 46 31.3**	**-1.2**
	1.5nm,0.8s,baz=59,slow=5.9,SNR=2.6						
	1.5nm,0.8s						
KSRS	**Korea Array**	**83.64**	**321**	P	**P**	**16 48 58.7**	**-0.8**
	0.5nm,0.6s,baz=136,slow=6.1,SNR=2.0						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**120.12**	**314**	PKP	**PKPdf**	**16 55 14.8**	**-3.5**
	0.6nm,0.5s,baz=118,slow=1.9,SNR=5.1						
BVAR	**Borovoye Array**	**125.52**	**315**	PKP	**PKPdf**	**16 55 25.4**	**-3.2**
	0.7nm,0.4s,baz=141,slow=1.3,SNR=7.3						
BELG	**Belogornoye**	**139.32**	**316**	PKhKP	PKPpre	16 55 48.1	
	3.5nm,0.7s,baz=22,slow=3.5,SNR=2.8						
KBZ	**Khabaz**	**143.77**	**302**	PKP	PKPbc	16 55 59.7	-1.5
	2.2nm,0.9s,baz=243,slow=2.3,SNR=2.7						
FINES	**FINESS Array B**	**145.20**	**338**	PKPbc	**PKPdf**	**16 56 02.1**	**-2.5**
	4.6nm,0.5s,baz=44,slow=3.9,SNR=46						
ASF	**Jabal al Asfar**	**148.24**	**282**	PKPbc	**PKPdf**	**16 56 11.6**	**+0.8**
	1.3nm,0.5s,baz=134,slow=6.2,SNR=4.1						
NB2	**NORSAR Subarra**	**149.26**	**349**	PKP	**PKPdf**	**16 56 13.0**	**+1.5**
	comp=Z,0.5nm,0.5s,baz=14,slow=2.6						
NOA	**NORSAR Array B**	**149.26**	**349**	PKPbc	**PKPdf**	**16 56 13.0**	**+1.5**
	comp=Z,0.8nm,0.7s,baz=16,slow=4.2,SNR=4.6						
EIL	**Elat**	**149.44**	**276**	PKPbc	**PKPdf**	**16 56 15.3**	**+2.6**
	comp=Z,4.6nm,0.8s,baz=121,slow=5.9,SNR=3.9						
MMAI	**Mount Meron Ar**	**149.60**	**283**	PKPbc	**PKPbc**	**16 56 16.6**	**-1.4**
	comp=Z,2.6nm,0.4s,baz=82,slow=7.7,SNR=16						
AKASG	**Malin Array Be**	**150.63**	**320**	PKPbc	**PKPdf**	**16 56 16.6**	**+2.7**
	comp=Z,1.4nm,0.6s,baz=45,slow=1.8,SNR=7.0						
BRTR	**Keskin Array B**	**151.07**	**296**	PKPbc	**PKPdf**	**16 56 18.4**	**+3.3**
	comp=Z,1.1nm,0.5s,baz=147,slow=3.6,SNR=9.7						

NAO ***10*** *16:41:09.0±1.4, 72°.78N×4°.32E, ML4.6*
IEPN ***10*** *16:41:10.0, 72°.85N×3°.89E, h10^{km}*
IDC ***10*** *16:41:10.4±0.4, 72°.83N×4°.49E, h0^{km}, mb4.4/38, mbtmp4.4/45, ML3.8/7, MS4.1/80, Error ellipse: s-maj=10.3km s-min=8.0km az=46.0*
MOS ***10*** *16:41:11.0±1.1, 72°.87N×4°.81E, h11^{km}, mb5.0/63, MS4.3/21, Error ellipse: s-maj=15.7km s-min=3.5km az=94.9*
NEIC ***10*** *16:41:12.1±1.5, 72°.83N±0°.07×4°.7E±0°.2, h10^{km}±1^{km}, mb5.0/105, Error ellipse: s-maj=12.0km s-min=9.0km az=356.0*
BER ***10*** *16:41:13.3±2.4, 72°.90N×4°.55E, h10^{km}, ML3.0, MS3.8, MW4.8(CSEM), Confirmed Earthquake*
GCMT ***10*** *16:41:13.1±0.2, 72°.80N±0°.02×4°.21E±0°.05, h12^{km}, MW4.9/122, Moment Tensor Solution. s30,c32; s122,c180; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.64±.06; $M_{\theta\theta}$1.22±.06; $M_{\phi\phi}$1.42±.05; $M_{r\theta}$-1.18±.27; $M_{\theta\phi}$1.26±.04; $M_{\phi r}$-0.33±.23; Best double couple: $M_0$2.88100×10^{16} NP1:ϕ_s55.00000°,δ57.00000°, λ-77.00000°. NP2:ϕ_s211.00000°,δ35.00000°, λ-110.00000°. Principal axes: T 2.7890, Plg11.0000°, Azm135.0000°; N 0.1830, Plg11.0000°, Azm228.0000°; P -2.9720, Plg74.0000°, Azm1.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BGR ***10*** *16:41:15.2, 72°.60N×3°.59E, h10^{km}, mb4.9*
DNK ***10*** *16:41:16.2±3.9, 73°.05N×3°.34E, h18^{km}±80^{km}, ML2.2*
ISC 10 16:41:12.3±0.6, **72°.83N**±0°.03×**4°.48E**±0°.03, **h15**^{km}±3^{km}, **h15**^{km}**:pP-P, n896,** σ**1**^{s}**.52**/892, **mb4.9**/185, **MS4.2**/109, **42C-46D, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	**4.42**	**61**	Pn	**Pn**	**16 42 16.7**	**-1.9**
BJO1	**Bjornoya**	**4.42**	**61**	*e*P	**Pn**	**16 42 16.8**	**-1.9**
BJO1				S	**Sn**	**16 43 07.9**	**-1.9**
BJO1	**Bjornoya**	**4.42**	**61**	*e*P	**Pn**	**16 42 17.4**	**-1.3**
JMIC	**Jan Mayen**	**4.45**	**252**	Pn	**Pn**	**16 42 17.7**	**-1.3**
	12nm,0.3s,baz=144,slow=15,SNR=2.4						
JMIC				LR	LR	16 43 43.1	
	comp=Z,2μm,18.3s,baz=46,slow=34						
	72nm,0.7s						
HSPB	**Hornsund (broa**	**5.08**	**29**	Pn	**Pn**	**16 42 26.4**	**-1.3**
HSPB	**Hornsund (broa**	**5.08**	**29**	*e*P	**Pn**	**16 42 25.5**	**-2.1**
HSPB	**Hornsund (broa**	**5.08**	**29**	*e*P	**Pn**	**16 42 25.7**	**-1.9**
HSPB				S	**Sn**	**16 43 21.9**	**-4.0**
HSPB	**Hornsund (broa**	**5.08**	**29**	*e*P	**Pn**	**16 42 26.4**	**-1.3**
LOF	**Lofoten**	**5.61**	**143**	*e*P	**Pn**	**16 42 34.0**	**-0.9**
LOF				*e*S	**Sn**	**16 43 34.1**	**-4.8**
LOF				IAML		16 43 39.2	
	comp=Z,38nm,0.5s						
LOF				IVMs_BB	IVMs_BB	16 44 09.0	
	comp=Z,1μm,8.3s						
LOF				*e*T	T	16 47 26.0	
TRO	**Tromso**	**5.65**	**118**	Pn	**Pn**	**16 42 34.6**	**-0.9**
TRO	**Tromso**	**5.65**	**118**	*e*P	**Pn**	**16 42 34.2**	**-1.3**
TRO				*e*S	Sn	16 43 25.6	-14
TRO				IAML		16 43 41.1	
	comp=Z,22nm,0.7s						
TRO				*e*T	T	16 47 24.2	
BRBA	**Barentsburg A**	**5.79**	**20**	Pn	**Pn**	**16 42 38.6**	**+1.2**
BRBB	**Barentsburg B**	**5.82**	**20**	Pn	**Pn**	**16 42 38.1**	**+0.3**
BRBB	**Barentsburg B**	**5.82**	**20**	*e*P	**Pn**	**16 42 38.1**	**+0.3**
JETT	**Jettan, Norway**	**6.10**	**115**	Pn	**Pn**	**16 42 40.8**	**-0.9**
JETT	**Jettan, Norway**	**6.10**	**115**	Pn	**Pn**	**16 42 40.8**	**-0.9**
JETT				*e*T	T	16 47 30.1	
STEI	**Steigen**	**6.10**	**138**	*e*P	**Pn**	**16 42 40.8**	**-0.9**
STEI				*e*S	**Sn**	**16 43 44.3**	**-6.8**
STEI				IAML		16 43 51.2	
	comp=Z,18nm,0.7s						
STEI				*e*T	T	16 47 30.5	
SPB2	**Spitsbergen Ar**	**6.13**	**23**		**Pn**	**16 42 41.9**	**-0.2**
SPA0	**Spitsbergen Ar**	**6.13**	**23**	Pn	**Pn**	**16 42 41.5**	**-0.6**
	baz=208,slow=16						
SPA0	**Spitsbergen Ar**	**6.13**	**23**	*e*P	**Pn**	**16 42 41.5**	**-0.6**
SPA0				S	**Sn**	**16 43 48.9**	**-2.9**
SPA0	**Spitsbergen Ar**	**6.13**	**23**	Pn	**Pn**	**16 42 41.5**	**-0.6**
	baz=208,slow=16						
SPITS	**Spitsbergen Ar**	**6.13**	**23**	Pn	**Pn**	**16 42 41.3**	**-0.8**
	baz=204,slow=16						
	comp=Z,9.8nm,0.4s						
KBS	**Kingsbay**	**6.39**	**13**	Pn	**Pn**	**16 42 44.9**	**-0.7**
KBS	**Kingsbay**	**6.39**	**13**		**Pn**	**16 42 44.9**	**-0.7**
KBS	**Kingsbay**	**6.39**	**13**	*e*P	**Pn**	**16 42 44.2**	**-1.4**
KBS				*e*S	**Sn**	**16 43 53.7**	**-4.4**
KBS	**Kingsbay**	**6.39**	**13**	⇑*e*P	**Pn**	**16 42 45.7**	**+0.1**
KBS	**Kingsbay**	**6.39**	**13**	*i* P	**Pn**	**16 42 44.7**	**-0.9**
KBS				*i* S	**Sn**	**16 43 53.8**	**-4.2**
KBS	**Kingsbay**	**6.39**	**13**	*e*P	**Pn**	**16 42 45.0**	**-0.5**
HAMF	**Hammerfest**	**6.41**	**101**	Pn	**Pn**	**16 42 44.0**	**-1.9**
HAMF	**Hammerfest**	**6.41**	**101**	*e*P	**Pn**	**16 42 44.0**	**-1.9**
HOPEN	**Hopen**	**6.54**	**46**	Pn	**Pn**	**16 42 46.0**	**-1.7**
HOPEN	**Hopen**	**6.54**	**46**	*e*P	**Pn**	**16 42 45.6**	**-2.1**
HOPEN				S	**Sn**	**16 43 58.0**	**-3.8**
HOPEN	**Hopen**	**6.54**	**46**	*e*P	**Pn**	**16 42 46.5**	**-1.2**
KIF	**Kilpisjarvi**	**6.57**	**118**	Pn	**Pn**	**16 42 47.3**	**-0.8**
KIF	**Kilpisjarvi**	**6.57**	**118**	*e*P	**Pn**	**16 42 47.4**	**-0.8**
KIF				*e*T	T	16 47 44.7	
FAUS	**Fauske**	**6.59**	**141**	*e*P	**Pn**	**16 42 47.0**	**-1.3**
FAUS				IAML		16 44 00.9	
	comp=Z,18nm,0.5s						
FAUS				*e*T	T	16 47 48.2	
KONS	**Konsvik**	**7.03**	**151**	*e*P	**Pn**	**16 42 54.0**	**-0.4**
KONS				IAML		16 44 11.1	
	comp=Z,33nm,0.5s						
KONS				*e*T	T	16 47 55.5	
DBG	**Daneborg**	**7.13**	**294**	Pn	**Pn**	**16 42 51.5**	**-4.3**
DBG	**Daneborg**	**7.13**	**294**	*i* P	**Pn**	**16 42 52.2**	**-3.6**
DBG				*e*S	Sn	16 44 05.0	-11
DBG				IAML		16 44 20.5	
	comp=Z,2.7nm,0.4s						
DBG	**Daneborg**	**7.13**	**294**	*e*P	**Pn**	**16 42 51.6**	**-4.2**
DBG				*e*S	**Sn**	**16 44 08.4**	**-7.9**
STOK	**Stokkvaagen**	**7.17**	**151**	*e*P	**Pn**	**16 42 56.0**	**-0.4**
STOK				*e*S	**Sn**	**16 44 10.0**	**-7.3**
DAG	**Danmarks Havn**	**7.20**	**314**	*e*	Pn	16 42 51.7	-5.0
	baz=126,slow=16						
DAG				*i* P	**Pn**	**16 42 53.0**	**-3.8**
DAG				*i* S	Sn	16 44 04.4	-14
DAG				IAML		16 44 07.7	
	comp=Z,22nm,0.4s						
DAG	**Danmarks Havn**	**7.20**	**314**	*e*P	**Pn**	**16 42 52.9**	**-3.8**
DAG				*e*S	Sn	16 44 05.2	-13
KTK1	**Kautokeino**	**7.22**	**113**	*e*P	**Pn**	**16 42 56.9**	**-0.1**
KTK1				IAML		16 44 29.5	
	comp=Z,7.3nm,0.6s						
KTK1				IVMs_BB	IVMs_BB	16 45 23.2	
	comp=Z,550nm,5.0s						
KTK1				*e*T	T	16 48 00.4	
SALU	**Saltoluokta**	**7.25**	**132**	*e*P	**Pn**	**16 42 57.2**	**-0.3**
SALU				*e*T	T	16 48 03.4	
ARA0	**ARCESS Array S**	**7.53**	**106**	Pn	**Pn**	**16 43 00.3**	**-1.0**
	baz=309,slow=12						
ARA0	**ARCESS Array S**	**7.53**	**106**	Pn	**Pn**	**16 43 00.3**	**-1.0**
	baz=309,slow=12						
ARA0				*e*T	T	16 48 06.8	
ARCES	**ARCESS Array B**	**7.53**	**106**	Pn	**Pn**	**16 43 00.1**	**-1.2**
	comp=Z,1.2nm,0.3s,baz=310,slow=12,SNR=81						
	comp=Z,8.1nm,0.6s						
ARCES	**ARCESS Array B**	**7.53**	**106**	Pn	**Pn**	**16 43 00.6**	**-0.7**
ARCES	**ARCESS Array B**	**7.53**	**106**	P	**Pn**	**16 43 00.6**	**-0.7**
MOR8	**Moi Rana**	**7.53**	**148**	*e*P	**Pn**	**16 43 00.0**	**-1.4**
MOR8				IAML		16 44 25.1	
	comp=Z,30nm,0.6s						
MOR8				*e*T	T	16 48 03.8	
HEF	**Hetta**	**7.74**	**115**	*e*P	**Pn**	**16 43 02.6**	**-1.5**
HEF				*e*T	T	16 47 57.5	
KEV	**Kevo**	**7.84**	**102**	Pn	**Pn**	**16 43 03.7**	**-1.8**
KEV	**Kevo**	**7.84**	**102**		**Pn**	**16 43 04.0**	**-1.5**
KEV	**Kevo**	**7.84**	**102**	P	**Pn**	**16 43 04.0**	**-1.5**
KEV	**Kevo**	**7.84**	**102**	*e*P	**Pn**	**16 43 03.3**	**-2.1**
VADS	**Vadso**	**8.33**	**97**	*e*P	**Pn**	**16 43 11.1**	**-1.2**
SCO	**Scoresbysund**	**8.62**	**267**	Pn	**Pn**	**16 43 14.6**	**-1.5**
SCO	**Scoresbysund**	**8.62**	**267**	P	**Pn**	**16 43 14.6**	**-1.5**
SCO	**Scoresbysund**	**8.62**	**267**	*i* P	**Pn**	**16 43 14.8**	**-1.3**
NSS	**Namsos**	**8.76**	**158**	*e*P	**Pn**	**16 43 18.1**	**-0.1**
NSS				*e*S	**Sn**	**16 44 49.5**	**-7.0**
NSS				IAML		16 44 58.7	
	comp=Z,15nm,0.4s						
TBLU	**Trondheim**	**9.86**	**165**	*e*P	**Pn**	**16 43 30.7**	**-2.5**
NOR	**Nord**	**9.86**	**342**	*e*P	**Pn**	**16 43 30.9**	**-2.3**
NOR				*e*S	Sn	16 45 10.2	-13
NOR	**Nord**	**9.86**	**342**	*e*P	**Pn**	**16 43 29.0**	**-4.1**
NOD	**Norderasen**	**10.17**	**153**	*e*P	**Pn**	**16 43 37.5**	**+0.1**
MOL	**Molde**	**10.37**	**172**	*e*P	**Pn**	**16 43 39.1**	**-1.0**
MOL	**Molde**	**10.37**	**172**	*e*P	**Pn**	**16 43 38.3**	**-1.9**
AKN	**Aaknes**	**10.74**	**174**	Pn	**Pn**	**16 43 44.0**	**-1.3**
AKN	**Aaknes**	**10.74**	**174**	Pn	**Pn**	**16 43 44.0**	**-1.3**
APA0	**Apatity Array**	**10.89**	**104**	Pn	**Pn**	**16 43 45.3**	**-1.9**
	baz=324,slow=11						
APA0	**Apatity Array**	**10.89**	**104**	Pn	**Pn**	**16 43 45.3**	**-1.9**
	baz=324,slow=11						
DOMB	**Dombas**	**10.97**	**169**	*e*P	**Pn**	**16 43 47.4**	**-1.1**
DOMB				*e*S	Sn	16 45 35.9	-15
DOMB				IAML		16 45 50.0	
	comp=Z,7.5nm,0.5s						
APA	**Apatity**	**11.03**	**104**	⇓*i*P	**Pn**	**16 43 46.5**	**-2.7**
APA				pmax	pmax		
	comp=Z,13nm,1.0s						
LVZ	**Lovozero**	**11.18**	**101**		**Pn**	**16 43 47.9**	**-3.4**
LVZ	**Lovozero**	**11.18**	**101**	*ce*P	**Pn**	**16 43 49.0**	**-2.2**
LVZ				pmax	pmax		
	comp=Z,82nm,0.8s						
FOO	**Floro**	**11.29**	**179**	*e*P	**Pn**	**16 43 51.9**	**-0.8**
FOO				*e*S	Sn	16 45 45.8	-13
FOO				IAML		16 45 58.0	
	comp=Z,8.2nm,0.6s						
HYA	**Hoyanger**	**11.74**	**176**	*e*P	**Pn**	**16 43 58.2**	**-0.6**
HYA				*e*S	Sn	16 45 53.9	-15
HYA				IAML		16 46 16.1	
	comp=Z,7.0nm,0.6s						
SUE	**Sulen**	**11.83**	**179**	*e*P	**Pn**	**16 43 57.1**	**-3.0**
NC204	**NORSAR Array S**	**11.85**	**165**		**Pn**	**16 43 59.9**	**-0.6**
NC204	**NORSAR Array S**	**11.85**	**165**	*e*P	**Pn**	**16 44 00.2**	**-0.3**
NC303	**NORSAR Array S**	**11.95**	**164**		**Pn**	**16 44 01.5**	**-0.3**
NC303	**NORSAR Array S**	**11.95**	**164**	*e*P	**Pn**	**16 44 01.2**	**-0.6**
NC405	**NORSAR Array S**	**12.09**	**163**	Pn	**Pn**	**16 44 03.5**	**-0.3**
NBO00	**NORSAR Array S**	**12.10**	**165**	*e*P	**Pn**	**16 44 02.5**	**-1.3**
NB201	**NORSAR Array S**	**12.12**	**164**		**Pn**	**16 44 04.0**	**-0.1**
NB2	**NORSAR Subarra**	**12.12**	**164**	Pn	**Pn**	**16 44 02.8**	**-1.4**
	baz=345,slow=14						
NB2	**NORSAR Subarra**	**12.12**	**164**	Pn	**Pn**	**16 44 03.0**	**-1.2**
	comp=Z,54nm,1.4s,baz=351,slow=14						
NB2	**NORSAR Subarra**	**12.12**	**164**	Pn	**Pn**	**16 44 02.8**	**-1.4**
	baz=345,slow=14						
NOA	**NORSAR Array B**	**12.12**	**164**	Pn	**Pn**	**16 44 03.0**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=347,slow=13,SNR=14						
NOA				LR	LR	16 48 38.6	
	comp=Z,1μm,18.4s,baz=345,slow=37						
NOA	**NORSAR Array B**	**12.12**	**164**	P	**Pn**	**16 44 03.0**	**-1.2**
ZFI	**Zemlya Franca-**	**12.24**	**31**	*e*P	**Pn**	**16 44 04.8**	**-0.8**
OMEGA	**Omega**	**12.24**	**31**	*e*P	**Pn**	**16 44 04.6**	**-1.0**
BORG	**Borgarnes**	**12.24**	**242**	Pn	**P**	**16 44 13.7**	**-4.4**
	comp=Z,0.8nm,0.3s,baz=60,slow=9.0,SNR=2.9						
BORG				LR	LR	16 47 32.5	
	comp=Z,590nm,20.7s,baz=15,slow=31						
NAO01	**NORSAR Array S**	**12.29**	**165**		**Pn**	**16 44 05.1**	**-1.3**
NAO01	**NORSAR Array S**	**12.29**	**165**	*e*P	**Pn**	**16 44 05.2**	**-1.3**
SKAR	**Skarslia**	**12.29**	**171**	*e*P	**Pn**	**16 44 05.6**	**-0.9**
SKAR				IAML		16 46 22.2	
	comp=Z,3.3nm,0.6s						
ASK	**Askoy**	**12.41**	**178**	*e*P	**Pn**	**16 44 07.1**	**-0.9**
NC602	**NORSAR Array S**	**12.45**	**164**		**Pn**	**16 44 07.5**	**-1.1**
NRA0	**NORESS Array S**	**12.45**	**164**	Pn	**Pn**	**16 44 07.5**	**-1.1**
	slow=10						
NRA0	**NORESS Array S**	**12.45**	**164**	Pn	**Pn**	**16 44 07.5**	**-1.1**
	slow=10						
SUMG	**Summit**	**12.57**	**289**	*e*P	**Pn**	**16 44 09.6**	**-1.0**
LRW	**Lerwick**	**12.94**	**193**	*e*P	**Pn**	**16 44 15.5**	**+0.3**
ODD1	**Odda**	**13.00**	**175**	*e*P	**Pn**	**16 44 15.3**	**-0.9**
HFS	**Hagfors**	**13.24**	**160**	Pn	**Pn**	**16 44 18.1**	**-1.4**
	baz=354,slow=18						
HFS	**Hagfors**	**13.24**	**160**	Pn	**Pn**	**16 44 18.3**	**-1.1**
	comp=Z,1.5nm,0.3s,baz=358,slow=13,SNR=45						
HFS				LR	LR	16 49 04.2	
	comp=Z,2μm,19.5s,baz=348,slow=36						
	comp=Z,5.2nm,0.4s						
HFS	**Hagfors**	**13.24**	**160**	Pn	**Pn**	**16 44 18.1**	**-1.4**
	baz=354,slow=18						
KONO	**Kongsberg**	**13.39**	**169**	⇑*e*P	**Pn**	**16 44 20.5**	**-0.9**
BLS5	**Blasjo**	**13.49**	**176**	*e*P	**Pn**	**16 44 22.5**	**-0.3**
RAF	**Rauma**	**13.56**	**142**	*e*P	**Pn**	**16 44 22.2**	**-1.5**
FIA1	**FINESS Array S**	**14.04**	**133**	Pn	**Pn**	**16 44 28.3**	**-2.0**
FIA0	**FINESS Array S**	**14.04**	**133**	Pn	**Pn**	**16 44 28.6**	**-1.6**
	baz=336,slow=12						
FIA0	**FINESS Array S**	**14.04**	**133**	Pn	**Pn**	**16 44 28.6**	**-1.6**
	baz=336,slow=12						
FINES	**FINESS Array B**	**14.04**	**133**	Pn	**Pn**	**16 44 29.0**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=342,slow=12,SNR=44						
FINES				LR	LR	16 49 31.5	
	comp=Z,3μm,19.1s,baz=334,slow=36						
	comp=Z,14nm,0.7s						
FINES	**FINESS Array B**	**14.04**	**133**	Pn	**Pn**	**16 44 28.4**	**-1.9**
AAL	**Aland**	**14.05**	**147**	*e*P	**Pn**	**16 44 29.2**	**-1.1**
MEF	**Metsahovi**	**14.81**	**138**	*e*P	**Pn**	**16 44 38.9**	**-1.9**
ADZR	**Andozero**	**15.06**	**109**	*e*P	**Pn**	**16 44 41.9**	**-2.1**
	comp=Z,22nm,0.8s						
ADZR	**Andozero**	**15.06**	**109**	*e*P	**Pn**	**16 44 42.0**	**-2.1**
ADZR				pmax	pmax		
	comp=Z,22nm,0.9s						
VIKU	**Vikbolandet**	**15.19**	**155**	*e*P	**P**	**16 44 51.4**	**+0.7**
MCD	**Coleburn Disti**	**15.63**	**196**	*e*P	**Pn**	**16 44 52.8**	**+1.2**
MTSE	**Matsula**	**16.10**	**141**	*e*P	**Pn**	**16 44 55.5**	**-2.1**
DRUM	**Mains of Drumt**	**16.23**	**194**	*e*P	**P**	**16 45 03.2**	**+0.8**
LSH	**Leshukonskoye**	**16.50**	**98**	*e*P	**Pn**	**16 44 55.7**	**-7.0**
	comp=Z,87nm,1.2s						
INVG	**Invergeldie, C**	**16.84**	**197**	*e*P	**Pn**	**16 45 08.1**	**+1.0**
SLIT	**Slitere, Latvi**	**16.85**	**145**	*e*P	**P**	**16 45 09.1**	**-0.1**
DEL	**Delary**	**16.87**	**162**	*e*P	**P**	**16 45 11.3**	**+1.8**
VSU	**Vasula**	**16.90**	**137**	*de*P	**Pn**	**16 45 04.8**	**-3.0**
VSU				pmax	pmax		
	comp=Z,58nm,0.9s						
VSU	**Vasula**	**16.90**	**137**	*e*P	**Pn**	**16 45 04.8**	**-3.0**
ILULI	**Ilulissat**	**17.85**	**286**		**P**	**16 45 22.4**	**+2.3**
ILULI	**Ilulissat**	**17.85**	**286**	P	**P**	**16 45 22.4**	**+2.3**
ILULI				pmax	pmax		
	comp=Z,43nm,1.2s						
EKA	**Eskdalemuir Ar**	**17.85**	**194**	P	**Pn**	**16 45 19.3**	**-0.4**
EKA	**Eskdalemuir Ar**	**17.85**	**194**	P	**Pn**	**16 45 19.2**	**-0.4**
	baz=14,slow=11						
EKA				LR	LR	16 50 59.4	
	comp=Z,372nm,19.9s,baz=14,slow=33						
	comp=Z,4.4nm,0.7s						
EKA	**Eskdalemuir Ar**	**17.85**	**194**	P	**Pn**	**16 45 19.3**	**-0.4**
ESK	**Eskdalemuir**	**17.87**	**194**	*e*P	**P**	**16 45 20.9**	**+0.3**
KLMR	**Klimovskoe**	**17.88**	**114**	*e*P	**Pn**	**16 45 17.1**	**-2.9**
	comp=Z,280nm,2.0s						
KLMR	**Klimovskoe**	**17.88**	**114**	*e*Pn	**Pn**	**16 45 17.1**	**-2.9**
KLMR				AMP		16 45 33.3	
	comp=Z,275nm,1.6s						
KLMR				⇓Lg	Lg	16 49 49.9	
KLMR				⇓Lg	Lg	16 49 49.9	
KLMR				⇓Rg	Rg	16 50 32.1	
KLMR				AMP		16 51 32.8	
	comp=Z,245nm,9.9s						
KLMR	**Klimovskoe**	**17.88**	**114**	*e*P	**Pn**	**16 45 17.1**	**-2.9**
KLMR				pmax	pmax		
	comp=Z,275nm,1.6s						
EDMD	**Edmundbyers**	**18.27**	**192**	*e*P	**P**	**16 45 25.8**	**+0.9**
PBUR	**Paburge**	**18.33**	**148**	*e*P	**Pn**	**16 45 25.5**	**0.0**
TULEG	**Thule**	**18.51**	**315**	P	**P**	**16 45 23.0**	**-4.4**
KESW	**Keswick, Cumbr**	**18.59**	**194**	*e*P	**Pn**	**16 45 29.8**	**+1.1**
VSVD	**Vaisvydziai**	**18.70**	**144**	*e*P	**Pn**	**16 45 30.0**	**-0.1**
SFJD	**Kangerlussuaq**	**19.12**	**280**	P	**P**	**16 45 33.8**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=32,slow=18,SNR=1.5						
SFJD				LR	LR	16 52 03.7	
	comp=Z,2μm,18.0s,baz=43,slow=34						
	comp=Z,3.9nm,0.8s						
SFJD	**Kangerlussuaq**	**19.12**	**280**	P	**Pn**	**16 45 38.8**	**+3.7**
SFJD	**Kangerlussuaq**	**19.12**	**280**	P	**Pn**	**16 45 38.8**	**+3.7**
SFJD				pmax	pmax		
	comp=Z,107nm,1.8s						
BSEG	**Bad Segeberg**	**19.13**	**169**	*e*P	**Pn**	**16 45 39.3**	**+4.1**
	comp=Z,30nm,1.0s,baz=354,slow=10						
PABE	**Paberze**	**19.16**	**145**	P	**P**	**16 45 35.0**	**+0.3**
PABE				IAmb	IAmb	16 45 42.5	
	comp=Z,184nm,1.3s						
PABE	**Paberze**	**19.16**	**145**	*e*P	**P**	**16 45 34.0**	**-0.7**
KLNR	**Kaliningrad**	**19.45**	**152**	*ce*P	**Pn**	**16 45 38.9**	**-0.1**
KLNR				pmax	pmax		
	comp=Z,81nm,0.8s						
ISAL	**Salakas**	**19.49**	**141**	*e*P	**Pn**	**16 45 39.4**	**-0.1**
LBWR	**Ladybower, Pea**	**19.68**	**191**	*e*P	**P**	**16 45 41.2**	**+0.8**
STNC	**Stoke**	**20.02**	**192**	*e*P	Pn	16 45 45.7	-0.2
STNC				IAmb	IAmb	16 45 49.6	
	comp=Z,446nm,2.0s						
NACGM	**Naroch**	**20.24**	**141**	⇑*i*P	Pn	16 45 47.8	-0.7
	comp=Z,56nm,0.8s,baz=341						
RETH	**Rethem/Aller,**	**20.28**	**171**	*e*P	Pn	16 45 49.6	+0.7
	comp=Z,172nm,1.6s,baz=354,slow=10						
FOEL	**Foel Wylfa**	**20.29**	**194**	*e*P	Pn	16 45 48.8	-0.2
FOEL				IAmb	IAmb	16 45 53.5	
	comp=Z,53nm,1.3s						
GKP	**Gorka Klasztor**	**20.37**	**158**	*e*P	Pn	16 45 49.1	-0.9
NRDL	**Niedersach Rie**	**20.56**	**170**	*e*P	Pn	16 45 52.7	+0.6
	comp=Z,104nm,1.4s,baz=354,slow=10						
HLM1	**Long Mynd**	**20.63**	**193**	*e*P	**P**	**16 45 51.0**	**+0.2**
HLM1				IAmb	IAmb	16 46 06.2	
	comp=Z,95nm,1.0s						
IBBN	**Ibbenburen**	**20.65**	**174**	*e*P	**P**	**16 45 51.4**	**+0.6**
	comp=Z,162nm,1.6s,baz=354,slow=10						
FLTG	**Flechtingen**	**20.78**	**168**	*e*P	Pn	16 45 54.4	-0.3
	comp=Z,73nm,1.5s,baz=354,slow=10						
RUE	**Ruedersdorf**	**20.82**	**164**	*e*P	Pn	16 45 55.4	+0.2
	comp=Z,45nm,0.9s,baz=354,slow=10						
MNK	**Minsk**	**20.83**	**139**	*i* P	**P**	**16 45 50.7**	**-2.2**
	comp=E,3.0nm,0.9s						
MNK				*i* P	**P**	**16 45 50.7**	**-2.2**
	comp=N,51nm,0.8s						
MNK				*i* P	**P**	**16 45 50.7**	**-2.2**
	comp=Z,89nm,0.9s,baz=161						
MNK				*i* PP	**PnPn**	**16 46 08.8**	**-2.2**
MNK				*i* S	**S**	**16 49 43.5**	**-1.0**
MNK				*i* SS	**SnSn**	**16 50 04.7**	**+0.3**
MNK				*i* SSS	SSS	16 50 17.8	
MNK				*i* LQ	LQ	16 51 51.0	
MNK				*i* LR	LR	16 53 44.2	
MNK				*i* LRM	MLR	16 55 04.2	
	comp=Z,320nm,11.8s						
MNK				*i* LRM	MLR	16 55 14.5	
	comp=N,291nm,11.2s						
MNK				*i* LRM	MLR	16 55 15.8	
	comp=E,38nm,13.4s						
MNK	**Minsk**	**20.83**	**139**	*i* P	**P**	**16 45 50.6**	**-2.2**
MNK				*i* S	**S**	**16 49 43.4**	**-1.0**
MNK				*i* SS	**SnSn**	**16 50 04.6**	**+0.3**
MNK				*i* SSS	SSS	16 50 17.7	
MNK				pmax	pmax		
	comp=Z,89nm,0.9s						
MNK				pmax	pmax		
	comp=N,51nm,0.8s						
MNK				MLR	MLR		
	comp=Z,320nm,12.0s						
MNK				MLR	MLR		
	comp=N,291nm,11.0s						
MNK				MLR	MLR		
	comp=E,38nm,13.0s						
ASSE	**Asse, Remlinge**	**20.95**	**169**	*e*P	**P**	**16 45 54.5**	**+0.4**
	comp=E,21nm,1.0s,baz=354,slow=10						
CLZ	**Clausthal**	**21.22**	**170**	*e*P	**P**	**16 45 57.8**	**+0.7**
	comp=E,133nm,1.3s,baz=354,slow=10						
STRD	**Stroud**	**21.33**	**191**	*e*P	**P**	**16 46 00.0**	**+1.8**
STRD				IAmb	IAmb	16 46 05.3	
	comp=Z,139nm,1.2s						
SVZ	**Severnaya Zeml**	**21.40**	**31**	*e*P	**P**	**16 45 57.7**	**-1.2**
	comp=Z,185nm,1.6s						
GTTG	**Gottingen**	**21.50**	**171**	*e*P	**P**	**16 46 00.9**	**+0.9**
	comp=Z,122nm,1.1s,baz=354,slow=10						
BUG	**Bochum--Univer**	**21.50**	**175**	*e*P	**P**	**16 46 00.6**	**+0.5**
	comp=Z,158nm,1.8s,baz=354,slow=10						
KASTN	**Kahler Asten**	**21.77**	**173**	*e*P	**P**	**16 46 04.1**	**+1.0**
	comp=Z,44nm,1.1s,baz=354,slow=10						
MOS	**Moscow**	**21.85**	**124**	*e*P	**P**	**16 46 02.8**	**-1.0**
MOS				*e*S	**S**	**16 50 06.2**	**+1.7**
MOS				pmax	pmax		
	comp=Z,300nm,1.9s						
MOS				pmax	pmax		
	comp=Z,151nm,1.3s						
MOS				MLR	MLR		
	comp=Z,500nm,15.0s						
CLL	**Collm**	**21.92**	**166**	P	**P**	**16 46 05.1**	**+0.6**
CLL				IAmb	IAmb	16 46 21.2	
	comp=Z,123nm,1.7s						

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CLL   Collm             21.92 166  eP      P      16 46 05.0 +0.4
      comp=Z,109nm,2.2s
CLL                                esP     sP     16 46 09.0 -0.9
CLL                                ePmax          16 46 13.0
CLL                                i x     x      16 46 17.8
CLL                                i (PP)         16 46 30.5
CLL                                ex      x      16 46 48.0
CLL                                eS      S      16 50 03.0 -2.8
CLL                                 AMS    AMS    16 55 00.0
CLL   Collm             21.92 166  eP      P      16 46 05.0 +0.4
CLL                                eS      S      16 50 03.0 -2.8
CLL                                 pmax   pmax
      comp=Z,109nm,2.2s
CLL   Collm             21.92 166  eP      P      16 46 05.1 +0.6
      comp=Z,133nm,1.8s,baz=354,slow=10
NEUB  Neuenburg         21.93 168  eP      P      16 46 07.2 +2.5
      comp=Z,84nm,1.1s,baz=354,slow=10
HGN   Heimansgroeve     22.16 178  eP      P      16 46 07.6 +0.5
OBN   Obninsk           22.16 126   P      P      16 46 06.5 -0.6
      comp=Z,4.4nm,0.4s,baz=21,slow=2.0,SNR=22
OBN                                 LR     LR     16 54 25.5
      comp=Z,456nm,19.9s,baz=348,slow=36
      comp=Z,4.4nm,0.4s
OBN   Obninsk           22.16 126   P      P      16 46 06.2 -0.9
OBN   Obninsk           22.16 126c iP      P      16 46 07.4 +0.3
OBN                                i              16 46 27.1
OBN                                 pmax   pmax
      comp=Z,64nm,1.0s
OBN                                 MLR    MLR
      comp=Z,2µm,19.0s
UBBA  Unterbreizbach    22.22 171  eP      P      16 46 08.8 +1.1
      comp=Z,185nm,1.7s,baz=354,slow=10
BEL   Belsk             22.23 153  eP      P      16 46 08.8 +1.0
MEM   Membach           22.31 177  dP      P      16 46 09.9 +1.1
FBE   Freiberg          22.33 165  eP      P      16 46 10.7 +1.7
      comp=Z,42nm,0.8s,baz=354,slow=10
BSTI  Sart Tilman       22.33 178  dP      P      16 46 10.3 +1.4
BTNL  Ternell           22.34 177  dP      P      16 46 10.0 +0.9
BTNL                               dx      x      16 46 21.9
AHRW  Bad Neuenahr-A    22.40 176  eP      P      16 46 09.9 +0.2
      comp=Z,128nm,1.2s,baz=354,slow=10
SNF   Seneffe           22.40 180  dP      P      16 46 09.9 +0.2
BRG   Berggiesshubel    22.43 164  eP      P      16 46 11.1 +1.1
BRG                                 Amp           16 46 13.3
      comp=Z,23nm,1.2s
BRG   Berggiesshubel    22.43 164   P      P      16 46 21.8  +12
BRG                                 Amp           16 46 24.9
      comp=Z,52nm,1.4s
BRG   Berggiesshubel    22.43 164   S      S      16 50 21.0 +5.6
BRG                                 Amp           16 55 19.0
      comp=Z,0.9nm,15.9s
BRG                                 Amp           16 55 23.0
      comp=N,0.6nm,15.7s
BRG                                 Amp           16 55 33.0
      comp=E,0.1nm,14.3s
BRG   Berggiesshubel    22.43 164  eP      P      16 46 11.1 +1.1
BRG                                               16 46 51.5
BRG                                 S      S      16 50 21.0 +5.6
BRG                                 pmax   pmax
      comp=Z,23nm,1.2s
BRG                                 MLR    MLR
      comp=Z,917nm,15.9s
BRG                                 MLR    MLR
      comp=N,606nm,15.7s
BRG                                 MLR    MLR
      comp=E,111nm,14.3s
BRG   Berggiesshubel    22.43 164  eP      P      16 46 11.4 +1.4
      comp=E,52nm,1.4s,baz=354,slow=10
BRG   Berggiesshubel    22.43 164   P      P      16 46 51.5  +42
MOX   Moxa              22.49 168   P      P      16 46 11.9 +1.2
MOX                                 pmax   pmax
      comp=Z,60nm,1.2s
MOX   Moxa              22.49 168  eP      P      16 46 12.6 +1.9
      comp=Z,110nm,1.4s,baz=354,slow=10
BCLA  Clavier           22.49 179  dP      P      16 46 11.7 +1.0
BGES  Gesves            22.53 179  dP      P      16 46 11.6 +0.5
KIRV  Kirov             22.55 105   P      P      16 46 11.2  0.0
      comp=Z,40nm,0.9s,baz=326,slow=8.9,SNR=31
KIRV                                LR     LR     16 55 08.4
      comp=Z,769nm,19.5s,baz=331,slow=37
      comp=Z,40nm,0.9s
KIRV  Kirov             22.55 105deP       P      16 46 10.7 -0.5
BHOU  Houvegnez         22.57 177  dP      P      16 46 13.3 +1.8
BHOU                               dx      x      16 46 27.6
BMRD  Maredsous         22.61 180  dP      P      16 46 11.4 -0.6
KSP   Ksiaz             22.67 160  eP      P      16 46 13.2 +0.6
PLN   Plauen            22.68 167  eP      P      16 46 14.4 +1.7
      comp=Z,78nm,1.3s,baz=354,slow=10
WERD  Werda             22.73 167  eP      P      16 46 14.9 +1.7
      comp=Z,59nm,1.2s,baz=354,slow=10
TNS   Taunus Mts        22.76 173  eP      P      16 46 13.7 +0.1
      comp=Z,41nm,1.3s,baz=354,slow=10
RCHB  Rochefort         22.76 179  dP      P      16 46 14.4 +0.9
RCHB                               dx      x      16 46 29.1
TANN  Tannenbergstha    22.77 167  eP      P      16 46 15.5 +1.8
      comp=Z,69nm,1.2s,baz=354,slow=10
GUNZ  Gunzen            22.81 167  eP      P      16 46 15.9 +1.7
      comp=Z,83nm,1.4s,baz=354,slow=10
DOU   Dourbes           22.82 180  dP      P      16 46 14.6 +0.5
PVCC  Panska Ves        22.82 163   AMS    AMS    16 55 20.0
      comp=Z,900nm,14.8s
WERN  Wernitzgruen      22.89 167  eP      P      16 46 16.7 +1.8
      comp=Z,142nm,1.4s,baz=354,slow=10
OSTC  Ostas             22.94 161  eP      P      16 46 17.0 +1.5
OSTC                               epP     pwP    16 46 24.3 +2.1
OSTC                                AMS    AMS    16 55 00.0
      comp=Z,1µm,17.0s
OSTC  Ostas             22.94 161  eP      P      16 46 17.0 +1.5
OSTC                               e*PP    pwP    16 46 24.3 +2.1
OSTC                                MLR    MLR
      comp=Z,1µm,17.0s
NKC   Novy Kostel       22.95 167  eP      P      16 46 17.8 +2.2
NKC                                epP     pwP    16 46 24.1 +1.9
NKC                                 AMS    AMS    16 55 40.0
      comp=Z,800nm,14.6s
NKC   Novy Kostel       22.95 167  eP      P      16 46 17.8 +2.2
NKC                                e*PP    pwP    16 46 24.1 +1.9
NKC                                 MLR    MLR
      comp=Z,800nm,14.6s
UPC   Upice             22.97 161  eP      P      16 46 18.3 +2.5
UPC                                 AMS    AMS    16 55 10.0
      comp=Z,1µm,16.9s
UPC   Upice             22.97 161  eP      P      16 46 18.3 +2.5
UPC                                 MLR    MLR
      comp=Z,1µm,16.9s
DPC   Dobruska-Polom    23.16 160  eP      P      16 46 18.3 +0.6
DPC                                epP     pwP    16 46 24.7 +0.3
DPC                                eS      S      16 50 30.0 +1.5
DPC                                 AMS    AMS    16 55 20.0
      comp=Z,1µm,16.8s
DPC   Dobruska-Polom    23.16 160  eP      P      16 46 18.3 +0.6
DPC                                e*PP    pwP    16 46 24.7 +0.3
DPC                                eS      S      16 50 30.0 +1.5
DPC                                 MLR    MLR
      comp=Z,1µm,16.8s
MANZ  Manzenberg        23.17 167  eP      P      16 46 19.2 +1.4
      comp=Z,5.9nm,1.1s,baz=354,slow=10
WLF   Walferdange       23.26 177   P      P      16 46 17.6 -1.1
WLF                                 IAmb   IAmb   16 46 37.0
      comp=Z,94nm,1.7s
WLF   Walferdange       23.26 177   P      P      16 46 17.6 -1.1
WLF                                 pmax   pmax
      comp=Z,94nm,1.7s
WLF   Walferdange       23.26 177  dP      P      16 46 20.1 +1.4
WLF                                dx      x      16 46 32.4
WLF   Walferdange       23.26 177  eP      P      16 46 19.8 +1.1
      comp=Z,82nm,1.7s,baz=354,slow=10
PRU   Pruhonice         23.35 163  eP      P      16 46 21.8 +2.2
PRU                                epP     pwP    16 46 28.1 +0.9
PRU                                eS      S      16 50 33.5 +1.9
PRU                                 AMS    AMS    16 55 30.0
      comp=Z,1µm,16.0s
PRU   Pruhonice         23.35 163  eP      P      16 46 21.8 +2.2
PRU                                e*PP    pwP    16 46 28.1 +0.9
PRU                                eS      S      16 50 33.5 +1.9
PRU                                 MLR    MLR
      comp=Z,1µm,16.0s
ROTZ  Rotzenmuhle       23.40 167  eP      P      16 46 21.3 +1.2
      comp=Z,14nm,1.2s,baz=354,slow=10
GRA1  Grafenberg Arr    23.41 169   P      P      16 46 20.9 +0.6
GRA1                                IAmb   IAmb   16 46 37.9
      comp=Z,51nm,1.1s
GRF   Grafenberg Arr    23.41 169   P      P      16 46 20.9 +0.6
GRF                                 pmax   pmax
      comp=Z,51nm,1.1s
GRF   Grafenberg Arr    23.41 169  eP      P      16 46 21.9 +1.7
      comp=Z,61nm,1.1s,baz=354,slow=10
GRFO  Grafenberg        23.41 169   P      P      16 46 21.3 +1.0
GRFO                                IAmb   IAmb   16 46 37.9
      comp=Z,54nm,1.2s
GRFO  Grafenberg        23.41 169   P      P      16 46 21.3 +1.0
GRFO                                pmax   pmax
      comp=Z,54nm,1.2s
GOPC  GO Pecny, Ondr    23.45 163  eP      P      16 46 22.1 +1.5
GOPC                                AMS    AMS    16 55 40.0
      comp=Z,1µm,14.7s
GOPC  GO Pecny, Ondr    23.45 163  eP      P      16 46 22.1 +1.5
GOPC                                MLR    MLR
      comp=Z,1µm,14.7s
KRLC  Kraliky           23.48 160  eP      P      16 46 21.5 +0.6
KRLC                               epP     sP     16 46 26.6 +0.6
KRLC                                AMS    AMS    16 55 30.0
      comp=Z,1µm,17.7s
KRLC  Kraliky           23.48 160  eP      P      16 46 21.5 +0.6
KRLC                               e*PP    sP     16 46 26.6 +0.6
KRLC                                MLR    MLR
      comp=Z,1µm,17.7s
OJC   Ojcow             23.68 155  eP      P      16 46 23.9 +1.0
OJC   Ojcow             23.68 155          P      16 46 23.6 +0.8
OJC                                 IAmb   IAmb   16 46 41.8
      comp=Z,34nm,1.0s
OJC   Ojcow             23.68 155   P      P      16 46 23.6 +0.8
OJC                                 pmax   pmax
      comp=Z,34nm,1.0s
MORC  Moravsky Berou    23.85 159 ⇓P       P      16 46 25.5 +1.0
MORC  Moravsky Berou    23.85 159   P      P      16 46 24.6  0.0
MORC                                IAmb   IAmb   16 46 37.7
      comp=Z,69nm,1.5s
MORC  Moravsky Berou    23.85 159  eP      P      16 46 25.3 +0.8
MORC  Moravsky Berou    23.85 159   P      P      16 46 24.6  0.0
MORC                                pmax   pmax
      comp=Z,69nm,1.5s
OKC   Ostrava-Krasne    23.86 158   AMS    AMS    16 55 50.0
      comp=Z,1µm,16.8s
OKC   Ostrava-Krasne    23.86 158   P      P      16 46 28.6 +4.1
KHC   Kasperske Hory    24.13 165   P      P      16 46 28.2 +1.1
KHC   Kasperske Hory    24.13 165  eP      P      16 46 29.2 +2.1
KHC                                epP     pwP    16 46 35.5 +0.7
KHC                                 AMS    AMS    16 56 20.0
      comp=Z,800nm,15.3s
KHC   Kasperske Hory    24.13 165   P      P      16 46 28.2 +1.1
KHC                                 pmax   pmax
      comp=Z,22nm,1.0s
VRAC  Vranov            24.22 160 ⇓P       P      16 46 28.7 +0.8
VRAC  Vranov            24.22 160   P      P      16 46 29.0 +1.1
      comp=Z,17nm,0.8s,baz=354,slow=10,SNR=22
VRAC                                LR     LR     16 56 13.1
      comp=Z,951nm,18.4s,baz=346,slow=37
      comp=Z,17nm,0.8s
VRAC  Vranov            24.22 160  eP      P      16 46 29.6 +1.7
STU   Stuttgart         24.23 172  eP      P      16 46 29.0 +0.9
      comp=Z,149nm,1.4s,baz=354,slow=10
GEC2  GERESS Array S    24.42 165   P      P      16 46 31.4 +1.5
GEC2                                IAmb   IAmb   16 46 43.0
      comp=Z,37nm,0.9s
GEC2  GERESS Array S    24.42 165  eP      P      16 46 31.9 +2.0
      comp=Z,50nm,1.1s,baz=354,slow=10
GERES GERESS Array B    24.42 165   P      P      16 46 31.3 +1.4
      comp=Z,7.3nm,0.8s,baz=358,slow=8.0,SNR=43
GERES                               PcP    PcP    16 50 08.5 +0.3
      comp=Z,0.2nm,0.4s,baz=328,slow=4.6,SNR=1.8
      comp=Z,7.3nm,0.8s
GERES GERESS Array B    24.42 165   P      P      16 46 31.0 +1.1
KRUC  Moravsky          24.44 161  eP      P      16 46 31.1 +1.1
CKRC  Cesky Krumlov     24.49 164  eP      P      16 46 32.3 +1.8
CKRC                                AMS    AMS    16 56 30.0
      comp=Z,900nm,16.8s
CKRC  Cesky Krumlov     24.49 164  eP      P      16 46 32.3 +1.8
CKRC                                MLR    MLR
      comp=Z,900nm,16.8s
NIE   Niedzica          24.53 155  eP      P      16 46 33.6 +2.8
BFO   Black Forest      24.64 174   P      P      16 46 32.4 +0.6
BFO   Black Forest      24.64 174   P      P      16 46 32.4 +0.6
BFO                                 pmax   pmax
      comp=Z,25nm,1.0s
BFO   Black Forest      24.64 174  eP      P      16 46 33.5 +1.6
      comp=Z,39nm,1.3s,baz=354,slow=10
STHS  Stebnicka Huta    24.65 153  eP      P      16 46 33.7 +1.8
STHS                                pmax   pmax
      comp=Z,16nm,1.0s
STHS  Stebnicka Huta    24.65 153  eP      P      16 46 33.7 +1.8
LVV   L'vov             24.66 149⇑iP       P      16 46 33.0 +1.0
LVV                                eS      S      16 50 51.0 -1.6
LVV                                 pmax   pmax
      comp=Z,70nm,1.6s
LVV                                 MLR    MLR
      comp=N,1µm,15.0s
LVV                                 MLR    MLR
      comp=E,300nm,15.0s
LVV                                 MLR    MLR
      comp=Z,1µm,15.0s
LANS  Liptovska Anna    24.69 156  eP      P      16 46 35.3 +3.0
LANS                                pmax   pmax
      comp=Z,12nm,0.9s
LANS  Liptovska Anna    24.69 156  eP      P      16 46 35.3 +3.0
AKASG Malin Array Be    24.70 140   P      P      16 46 32.7 +0.4
      comp=Z,17nm,1.0s,baz=344,slow=9.5,SNR=36
AKASG                               PcP    PcP    16 50 08.5 -0.2
      comp=Z,0.2nm,0.3s,baz=352,slow=2.0,SNR=2.4
AKASG                               LR     LR     16 55 55.9
      comp=Z,2µm,19.3s,baz=349,slow=36
      comp=Z,17nm,1.0s
AKASG Malin Array Be    24.70 140   P      P      16 46 33.6 +1.3
AKASG                               IAmb   IAmb   16 46 45.1
      comp=Z,40nm,1.0s
AKASG Malin Array Be    24.70 140   P      P      16 46 33.6 +1.3
AKASG                               pmax   pmax
      comp=Z,40nm,1.0s
AKBB  Malin Array Si    24.70 140   P      P      16 46 32.5 +0.2
AKBB  Malin Array Si    24.70 140   P      P      16 46 32.5 +0.2
AKBB                                pmax   pmax
      comp=Z,113nm,1.6s
ECH   Echery            24.73 176   P      P      16 46 33.5 +0.9
ECH   Echery            24.73 176   P      P      16 46 33.5 +0.9
ECH                                 pmax   pmax
      comp=Z,26nm,1.0s
JAVC  Velka Javorina    24.77 159  eP      P      16 46 35.1 +2.1
RES   Resolute Bay      24.81 321   P      P      16 46 35.1 +2.0
      comp=Z,4.8nm,1.1s,baz=35,slow=11,SNR=5.9
RES                                 LR     LR     16 56 23.6
      comp=Z,1µm,18.6s,baz=20,slow=37
      comp=Z,4.8nm,1.1s
FUR   Furstenfeldbru    24.94 169  eP      P      16 46 36.6 +2.1
      comp=Z,61nm,1.2s,baz=354,slow=10
SMOL  Smolenice         25.09 159  eP      P      16 46 38.3 +2.5
SMOL                                pmax   pmax
      comp=Z,37nm,1.8s
NRIK  Noril'sk          25.12  56   P      P      16 46 36.9 +1.0
      comp=Z,23nm,0.9s,baz=312,slow=5.4,SNR=27
NRIK                                LR     LR     16 59 40.0
      comp=Z,146nm,18.1s,baz=328,slow=44
      comp=Z,23nm,0.9s
NRIK  Noril'sk          25.12  56   P      P      16 46 36.5 +0.6
NRIK                                IAmb   IAmb   16 46 39.5
      comp=Z,53nm,1.1s
NRIK  Noril'sk          25.12  56ceP       P      16 46 37.2 +1.3
NRIK                                pmax   pmax
      comp=Z,43nm,1.1s
MODS  Modra-Piesok      25.21 160  eP      P      16 46 39.0 +2.1
MODS                                pmax   pmax
      comp=Z,51nm,1.2s
MODS  Modra-Piesok      25.21 160  eP      P      16 46 39.0 +2.1
VYHS  Vyhne             25.26 157  eP      P      16 46 38.9 +1.5
VYHS                                pmax   pmax
      comp=Z,107nm,2.0s
VYHS  Vyhne             25.26 157  eP      P      16 46 38.8 +1.4
UBR   Ueberruh          25.36 171  eP      P      16 46 39.7 +1.4
      comp=Z,43nm,1.3s,baz=354,slow=10
MOA   Molln             25.45 165  i P     P      16 46 39.8 +0.6
      comp=Z,37nm,1.2s
KECS  Kecovo            25.47 155  eP      P      16 46 41.3 +2.0
KECS  Kecovo            25.47 155  eP      P      16 46 41.3 +2.0
CONA  Conrad Observa    25.51 162  i P     P      16 46 41.8 +2.1
      comp=Z,42nm,1.2s,SNR=15
BIOA  Bad Ischl, Aus    25.56 166  i P     P      16 46 40.5 +0.4
      comp=Z,22nm,1.3s
UZH   Uzhgorod          25.57 152   P      P      16 46 41.7 +1.6
RETA  Reutte            25.59 170  i P     P      16 46 42.3 +1.9
      comp=Z,36nm,1.3s
HORU  Horodok           25.64 146   P      P      16 46 42.4 +1.6
DAVA  Damuels           25.75 172  eP      P      16 46 44.2 +2.3
      comp=Z,52nm,1.4s,SNR=12
MOTA  Moosalm           25.75 170  eP      P      16 46 44.1 +2.1
      comp=Z,52nm,1.3s,SNR=7.3
RONA  Rosalia, Austr    25.78 161  i P     P      16 46 44.3 +2.2
      comp=Z,33nm,0.8s,SNR=7.3
WATA  Walderalm         25.78 169  eP      P      16 46 44.4 +2.2
      comp=Z,28nm,0.9s,SNR=8.4
SSF   Saint Saulge      25.86 182  eP      P      16 46 43.3 +0.5
SSF                                 pmax   pmax
      comp=Z,21nm,1.0s
WTTA  Wattenberg        25.86 169  eP      P      16 46 45.4 +2.4
      comp=Z,38nm,1.2s
SQTA  Sankt Quirin      25.88 169  eP      P      16 46 45.2 +2.1
      comp=Z,37nm,1.2s,SNR=8.9
PSZ   Piszkesteto       25.95 156   P      P      16 46 45.0 +1.3
PSZ   Piszkesteto       25.95 156   P      P      16 46 45.0 +1.3
PSZ                                 pmax   pmax
      comp=Z,164nm,1.9s
FETA  Feichten          26.05 170  i P     P      16 46 47.0 +2.2
      comp=Z,11nm,1.1s
TRPA  Tarpa             26.09 152 ⇓P       P      16 46 46.4 +1.6
KBA   Koelnbreinsper    26.15 166  eP      P      16 46 46.0 +0.3
      comp=Z,17nm,1.2s
ARSA  Arzberg           26.15 163  i P     P      16 46 45.5  0.0
      comp=Z,14nm,0.9s
TRSU  Trosnyk           26.18 151   P      P      16 46 48.1 +2.4
DAVOX Davos/Dischmat    26.25 172   P      P      16 46 47.0 +0.5
      comp=Z,2.4nm,0.8s,baz=354,slow=4.1,SNR=4.2
DAVOX                               LR     LR     16 57 08.2
      comp=Z,695nm,21.4s,baz=340,slow=36
      comp=Z,2.4nm,0.8s
KSV   Kosov             26.29 148   P      P      16 46 46.7  0.0
NDNU  Novodnistrovsk    26.39 144   P      P      16 46 48.5 +0.9
ABTA  Abfaltersbach     26.43 168  epP     pP     16 46 50.4 -1.4
      comp=Z,14nm,1.8s
MYKA  Terra Mystica     26.62 166  eP      P      16 46 50.8 +1.0
      comp=Z,19nm,1.7s
FRB   Frobisher Bay     26.64 288   P      P      16 46 49.6 -0.1
      comp=Z,1.7nm,0.5s,baz=216,slow=5.0,SNR=2.5
FRB                                 LR     LR     16 56 51.9
      comp=Z,422nm,18.8s,baz=30,slow=35
      comp=Z,1.7nm,0.5s
BMR   Baia Mare         26.67 151 ⇓P       P      16 46 52.4 +2.3
BMR   Baia Mare         26.67 151   P      P      16 46 52.4 +2.3
SOKA  Soboth            26.68 164  eP      P      16 46 51.0 +0.7
      comp=Z,27nm,1.7s
OBKA  Obir              26.81 164  i P     P      16 46 52.6 +1.1
      comp=Z,17nm,1.2s
CIMO  Cimolais          26.86 168   P      P      16 46 53.4 +1.5
CIMO                                IAmb   IAmb   16 47 05.3
      comp=Z,42nm,1.7s
BUR08 Bucovina Ar. S    26.96 148   P      P      16 46 53.9 +1.1
BUR08                               IAmb   IAmb   16 47 06.2
      comp=Z,34nm,1.1s
BURAR Bucovina Array    26.99 148 ⇓P       P      16 46 54.3 +1.1
BURAR Bucovina Array    26.99 148   P      P      16 46 53.1  0.0
BURAR                               IAmb   IAmb   16 47 06.8
      comp=Z,27nm,0.9s
BURAR Bucovina Array    26.99 148   P      P      16 46 54.2 +1.1
SORM  Soroca            27.01 143 ⇓P       P      16 46 54.1 +0.9
SORM  Soroca            27.01 143   P      P      16 46 54.0 +0.9
ARU   Arti              27.03  98   P      P      16 46 53.9 +0.6
      comp=Z,13nm,0.8s,baz=338,slow=7.0,SNR=16
ARU                                 LR     LR     16 58 04.0
      comp=Z,461nm,18.7s,baz=320,slow=38
      comp=Z,13nm,0.8s
ARU   Arti              27.03  98   P      P      16 46 54.2 +0.9
ARU                                 IAmb   IAmb   16 47 13.1
      comp=Z,40nm,0.9s
ARU   Arti              27.03  98d iP      P      16 46 54.1 +0.9
ARU                                 pmax   pmax
      comp=Z,65nm,1.7s
CTI   Castel Tesino     27.07 169   P      P      16 46 55.1 +1.2
CTI                                 IAmb   IAmb   16 47 07.4
      comp=Z,62nm,1.3s
CTI   Castel Tesino     27.07 169   P      P      16 46 55.1 +1.2
CTI                                 pmax   pmax
      comp=Z,62nm,1.3s
SVE   Sverdlovsk        27.30  96  eP      P      16 46 56.3 +0.5
SVE                                 pmax   pmax
      comp=Z,42nm,1.3s
SVE                                 MLR    MLR
      comp=Z,391nm,16.0s
DRGR                    27.43 152 ⇑P       P      16 46 58.5 +1.5
DRGR                    27.43 152   P      P      16 46 58.5 +1.5
BELG  Belogornoye       27.45 115   P      P      16 46 57.0  0.0
      comp=Z,16nm,0.9s,baz=304,slow=0.9,SNR=11
BELG                                LR     LR     16 57 56.4
      comp=Z,770nm,18.9s,baz=322,slow=37
      comp=Z,16nm,0.9s
BELG  Belogornoye       27.45 115d iP      P      16 46 56.8 -0.3
BELG                                pmax   pmax
      comp=Z,4.0nm,0.9s
MORH  Mrgy, Hungar      27.49 158 ⇑P       P      16 46 59.1 +1.7
MARR  Marisel-Cluj      27.59 152 ⇑P       P      16 47 00.2 +1.7
SIRR  Siria             27.80 154 ⇓P       P      16 47 02.5 +2.3
TESR  Tescani           28.29 147 ⇑P       P      16 47 05.9 +1.2
SURR  Surduc            28.36 153 ⇓P       P      16 47 06.9 +1.6
BZS   Buzias            28.43 154 ⇓P       P      16 47 08.0 +2.1
BZS   Buzias            28.43 154   P      P      16 47 08.0 +2.1
DOPR  Dopca             28.62 149 ⇓P       P      16 47 09.7 +2.1
FRGS  Fruska Gora       28.66 157 ⇑P       P      16 47 09.0 +1.0
GZR   Gura Zlata        28.80 153 ⇓P       P      16 47 11.5 +2.2
GZR   Gura Zlata        28.80 153   P      P      16 47 11.5 +2.2
LOT   Lotru             28.89 151 ⇓P       P      16 47 11.7 +1.5
VRI   Vrincioaia        28.93 147 ⇑P       P      16 47 11.1 +0.7
VRI   Vrincioaia        28.93 147   P      P      16 47 11.1 +0.7
PLOR  Plostina          28.94 147 ⇑P       P      16 47 12.0 +1.6
PLOR  Plostina          28.94 147   P      P      16 47 12.0 +1.6
VOIR                    29.09 149 ⇑P       P      16 47 13.5 +1.7
VOIR                    29.09 149   P      P      16 47 13.5 +1.7
ARR   Arges             29.09 150 ⇓P       P      16 47 14.5 +2.6
MLR   Muntele Rosu      29.17 148   P      P      16 47 12.5 -0.1
      comp=Z,1.4nm,0.5s,baz=347,slow=14,SNR=5.2
MLR                                 LR     LR     16 59 05.0
      comp=Z,2µm,18.6s,baz=334,slow=37
      comp=Z,1.4nm,0.5s
HERR  Herculane         29.26 153 ⇑P       P      16 47 15.2 +2.0
MDVR  Moldovita         29.27 154 ⇓P       P      16 47 15.5 +2.1
CFR   Carcaliu          29.84 145 ⇑P       P      16 47 19.4 +1.0
CFR   Carcaliu          29.84 145   P      P      16 47 19.3 +1.0
MURB  Monte Urbino      29.90 168   P      P      16 47 18.1 -0.9
GUMA  Gualdo di Mace    30.15 167   P      P      16 47 21.7 +0.5
GUMA                                IAmb   IAmb   16 47 36.7
      comp=Z,66nm,1.3s
TPGR  Topolog           30.20 145 ⇓P       P      16 47 22.6 +1.0
HARR  Harsova           30.28 146 ⇓P       P      16 47 23.6 +1.4
HARR  Harsova           30.28 146   P      P      16 47 23.6 +1.4
COPA  Copaceanca        30.39 150 ⇑P       P      16 47 24.9 +1.6
BOVS  Bovan             30.39 155 ⇑P       P      16 47 24.3 +1.0
TIRR  Tirgusor          30.58 145 ⇓P       P      16 47 26.6 +1.7
TIRR  Tirgusor          30.58 145   P      P      16 47 26.6 +1.7
AQU   L'Aquila          30.86 167   P      P      16 47 27.3 -0.2
AQU   L'Aquila          30.86 167   P      P      16 47 27.3 -0.2
AQU                                 pmax   pmax
      comp=Z,63nm,1.2s
TIXI  Tiksi             31.51  30   P      P      16 47 35.0 +2.1
      comp=Z,10nm,0.8s,baz=90,slow=23,SNR=18
      comp=Z,10nm,0.8s
TIXI  Tiksi             31.51  30   P      P      16 47 33.2 +0.4
TIXI                                IAmb   IAmb   16 47 36.2
      comp=Z,27nm,1.1s
TIXI  Tiksi             31.51  30ceP       P      16 47 35.5 +2.7
TIXI                                pmax   pmax
      comp=Z,20nm,1.1s
VTS   Vitosha           31.59 153 ⇓P       P      16 47 36.1 +2.0
VTS   Vitosha           31.59 153   P      P      16 47 33.7 -0.4
VTS                                 IAmb   IAmb   16 47 49.1
      comp=Z,20nm,1.0s
VTS   Vitosha           31.59 153   P      P      16 47 33.7 -0.4
VTS                                 pmax   pmax
      comp=Z,20nm,1.0s
A36M  Sachs Harbour     31.96 333   P      P      16 47 37.4 +0.6
A36M                                IAmb   IAmb   16 48 03.9
      comp=Z,15nm,0.9s
A36M  Sachs Harbour     31.96 333   P      P      16 47 36.3 -0.5
      baz=26,SNR=10
ANN   Anapa             32.01 133  eP      P      16 47 34.7 -2.8
ANN                                e*PP    pP     16 47 38.1 -3.1
ANN                                eS      S      16 52 46.6 -1.5
ANN                                 pmax   pmax
      comp=Z,18nm,1.1s
ANN                                 MLR    MLR
      comp=Z,2µm,15.0s
POLO  Lamas de Olo      32.09 198  eP      P      16 47 38.5 +0.1
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POLO                                   A      A      16 47 52.6
      comp=Z,21nm,1.8s
AKTO  Aktyubinsk        32.11 105      LR     LR     17 01 11.2
      comp=Z,800nm,19.3s,baz=10,slow=37
MVO   Moncorvo          32.24 196    eP       P      16 47 41.1 +1.5
MVO                                    A      A      16 47 43.9
      comp=Z,27nm,1.7s
PVIS  Viseu             32.76 198    eP       P      16 47 45.2 +1.0
PVIS                                   A      A      16 48 14.5
      comp=Z,28nm,1.8s
MTE   Manteigas         33.04 197    eP       P      16 47 52.6 +5.9
MTE                                    A      A      16 47 56.4
      comp=Z,36nm,2.0s
FNA   Florina           33.16 156      P      P      16 47 48.2 +0.5
FNA                                    IAmb   IAmb   16 47 59.8
      comp=Z,15nm,0.8s
FNA   Florina           33.16 156      P      P      16 47 48.2 +0.5
FNA                                    pmax   pmax
      comp=Z,15nm,0.8s
BRVK  Borovoye          33.40  90      P      P      16 47 49.3 -0.4
BRVK  Borovoye          33.40  90 de   P      P      16 47 50.8 +1.2
BRVK                                   pmax   pmax
      comp=Z,20nm,1.7s
BVAR  Borovoye Array    33.47  90      LR     LR     17 02 32.5
      comp=Z,259nm,21.3s,baz=328,slow=38
ESDC  Sonseca Array     33.49 192      P      P      16 47 51.9 +1.3
      comp=Z,1.6nm,0.8s,baz=0.8,slow=8.6,SNR=14
ESDC                                   PcP    PcP    16 50 31.7 +0.6
      comp=Z,0.6nm,0.7s,baz=11,slow=2.6,SNR=2.7
      comp=Z,1.6nm,0.8s
SCHQ  Schefferville     33.50 277      LR     LR     17 00 06.3
      comp=Z,575nm,20.4s,baz=69,slow=34
PAB   San Pablo         33.65 192      P      P      16 47 52.8 +0.8
SOC   Sochi             33.67 131    eP       P      16 47 49.9 -2.1
SOC                                  e               16 49 02.8
SOC                                  eS       S      16 53 13.1 -0.9
SOC                                  eSS      SnSn   16 55 23.6 +6.0
SOC                                  eSSS     SSS    16 55 39.4
SOC                                    MLR    MLR
      comp=Z,970nm,19.0s
ABKAR Akbulak array     33.73 104      P      P      16 47 52.1 -0.3
PMRV  Marv??o           33.99 197    eP       P      16 47 55.7 +0.8
PMRV                                   A      A      16 48 14.5
      comp=Z,34nm,2.1s
KIV   Kislovodsk        34.00 127      P      P      16 47 53.7 -1.3
KIV                                    IAmb   IAmb   16 49 06.6
      comp=Z,22nm,1.1s
KIV   Kislovodsk        34.00 127    eP       P      16 47 57.5 +2.5
KIV                                    pmax   pmax
      comp=Z,8.0nm,1.0s
KIV                                    MLR    MLR
      comp=Z,695nm,15.0s
KVAR  Kislovodsk Arr    34.00 127      LR     LR     17 01 52.6
      comp=Z,954nm,18.9s,baz=250,slow=36
C36M  Paulatuk          34.20 330      P      P      16 47 55.9 -0.4
      baz=24
SHA1  Shidzhatmaz       34.20 127 ceP         P      16 47 58.7 +1.8
KBZ   Khabaz            34.27 127      P      P      16 47 58.4 +1.2
      comp=Z,4.8nm,0.9s,baz=324,slow=8.4,SNR=10
KBZ                                    LR     LR     17 02 06.4
      comp=Z,1μm,18.5s,baz=340,slow=37
      comp=Z,4.8nm,0.9s
PMTG  Montargil         34.42 198    eP       P      16 47 59.3 +0.7
PMTG                                   A      A      16 48 16.9
      comp=Z,21nm,1.7s
PESTR Estremoz          34.56 197    eP       P      16 48 05.9 +6.0
PESTR                                  A      A      16 48 14.5
      comp=Z,32nm,1.8s
AGG   Agios Georgios    35.02 155      P      P      16 48 04.0 +0.2
BALB  Balikesir         35.19 148      P      P      16 48 05.8 +0.6
PBAR  Barrancos         35.20 196    eP       P      16 48 06.5 +1.1
PBAR                                   A      A      16 48 20.2
      comp=Z,30nm,1.8s
ZEI   Tsey              35.39 126    eP       P      16 48 07.0 -0.2
ZEI                                    pmax   pmax
      comp=Z,13nm,1.1s
GROC  Groznyy           35.46 124    eP       P      16 48 00.4 -7.1
GROC                                   pmax   pmax
      comp=Z,344nm,1.8s
ONI   Oni               35.47 127      P      P      16 48 08.0 +0.3
ONI                                    IAmb   IAmb   16 49 12.2
      comp=Z,27nm,1.3s
ONI   Oni               35.47 127      P      P      16 48 08.0 +0.3
ONI                                    pmax   pmax
      comp=Z,27nm,1.3s
A21K  Barrow            35.57 350      P      P      16 48 08.0 -0.1
      baz=9.4
VAE   Valguarnera       35.78 166      LR     LR     17 04 27.9
      comp=Z,261nm,18.2s,baz=345,slow=39
BR131 Keskin Array S    36.11 140      P      P      16 48 14.1 +0.8
BR131                                  IAmb   IAmb   16 48 26.8
      comp=Z,30nm,1.0s
BR131 Keskin Array S    36.11 140      P      P      16 48 14.1 +0.8
BR131                                  pmax   pmax
      comp=Z,30nm,1.0s
BRTR  Keskin Array B    36.11 140      P      P      16 48 15.2 +1.9
      comp=Z,5.8nm,0.8s,baz=341,slow=6.1,SNR=28
BRTR                                   LR     LR     17 03 55.4
      comp=Z,538nm,20.8s,baz=7.0,slow=38
      comp=Z,5.8nm,0.8s
BRTR  Keskin Array B    36.11 140      P      P      16 48 14.4 +1.1
BRTR  Keskin Array B    36.11 140  i   P      P      16 48 15.8 +2.5
BRTR                                   pmax   pmax
      comp=Z,6.0nm,0.8s
C26K  Camden Bay        36.12 343      P      P      16 48 13.3 +0.5
      baz=15
MAK   Makhachkala       36.12 122    eP       P      16 48 09.3 -3.8
MAK                                  eS       S      16 53 45.3 -6.4
MAK                                    MLR    MLR
      comp=Z,1μm,19.0s
C27K  Jago River        36.29 342      P      P      16 48 15.0 +0.6
      baz=15
INK   Inuvik            36.45 335      P      P      16 48 16.2 +0.5
      comp=Z,5.8nm,1.1s,baz=6.3,slow=9.3,SNR=7.8
INK                                    LR     LR     17 05 04.8
      comp=Z,255nm,20.2s,baz=28,slow=39
      comp=Z,5.8nm,1.1s
INK   Inuvik            36.45 335      P      P      16 48 16.1 +0.3
      baz=19,SNR=13
AKH   Akhalkalaki       36.60 127      P      P      16 48 16.9 -0.6
AKH   Akhalkalaki       36.60 127      P      P      16 48 16.9 -0.6
AKH                                    pmax   pmax
      comp=Z,56nm,1.1s
C24K  Franklin Bluff    36.63 345      P      P      16 48 18.1 +0.9
      baz=13
D25K  Kavik River       36.83 343      P      P      16 48 19.7 +0.7
      baz=14
ZAA0  Zalesovo Array    36.90  76      P      P      16 48 19.0 -0.8
ZALV  Zalesovo Beam     36.90  76      P      P      16 48 20.0 +0.3
      comp=Z,2.4nm,0.8s,baz=323,slow=9.3,SNR=10
ZALV                                   PP     PP     16 49 45.3 +1.7
      comp=Z,1.2nm,0.7s,baz=319,slow=15,SNR=2.0
ZALV                                   PcP    PcP    16 50 40.6 -0.1
      comp=Z,1.2nm,0.7s,baz=328,slow=5.1,SNR=2.1
ZALV                                   LR     LR     17 07 38.4
      comp=Z,208nm,18.9s,baz=328,slow=43
      comp=Z,2.4nm,0.8s
ZALV  Zalesovo Beam     36.90  76  i   P      P      16 48 21.0 +1.3
ZALV                                   pmax   pmax
      comp=Z,2.0nm,0.8s
D24K  Happy Valley      37.19 345      P      P      16 48 22.3 +0.3
      baz=13
KEST  Kesra             37.26 173      LR     LR     17 04 25.1
      comp=Z,223nm,19.3s,baz=340,slow=37
F31M  Tsiigehtchic      37.30 335      P      P      16 48 22.9  0.0
      baz=19,SNR=13
E27K  Coleen River      37.48 340      P      P      16 48 24.4 -0.2
      baz=16
D23K  Nanushuk River    37.52 346      P      P      16 48 25.9 +1.0
      baz=12
AKT   Akhty             37.57 122    eP       P      16 48 29.1 +3.5
AKT                                  e               16 49 54.8
AKT                                    pmax   pmax
      comp=Z,34nm,1.2s
E25K  Arctic Village    37.93 342      P      P      16 48 28.5 +0.2
      baz=14,SNR=17
KURK  Kurchatov         37.94  84      P      P      16 48 29.1 +0.6
KURK  Kurchatov         37.94  84 deP         P      16 48 29.3 +0.8
KURK                                   pmax   pmax
      comp=Z,27nm,2.5s
G30M  tAoh Zraii Nji    38.04 336      P      P      16 48 30.2 +0.9
      baz=18
GNI   Garni             38.09 127      LR     LR     17 04 27.6
      comp=Z,683nm,18.8s,baz=357,slow=37
GNI   Garni             38.09 127      P      P      16 48 31.3 +1.1
GNI                                    IAmb   IAmb   16 48 55.4
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      comp=Z,55nm,1.3s
GNI   Garni             38.09 127 d iP        P      16 48 31.8 +1.6
GNI                                    pmax   pmax
      comp=Z,18nm,1.2s
F26K  Sheenjek River    38.21 341      P      P      16 48 31.5 +0.8
      baz=14
E24K  Your Creek        38.22 344      P      P      16 48 31.1 +0.3
      baz=12
E23K  Chandalar         38.33 345      P      P      16 48 32.3 +0.6
      baz=12
E22K  Anaktuvuk Pass    38.42 346      P      P      16 48 32.9 +0.4
      baz=11
F25K  Christian Rive    38.45 342      P      P      16 48 33.7 +1.0
      baz=14
BMAR  Burnt Mountain    38.51 341      P      P      16 48 34.6 +1.4
EPYK  Eagle Plains      38.69 336      P      P      16 48 35.2 +0.5
      baz=17,SNR=5.3
F24K  Squaw Lake        38.72 343      P      P      16 48 36.0 +1.0
      baz=13
G27K  Doyon Strip       38.82 339      P      P      16 48 36.8 +0.9
      baz=15
YKA   Yellowknife Ar    38.86 320      P      P      16 48 35.6 -0.6
      comp=Z,0.7nm,0.6s,baz=157,slow=16,SNR=5.6
YKA                                    PcP    PcP    16 50 47.1 +0.4
      comp=Z,2.7nm,0.8s,baz=19,slow=3.0,SNR=18
YKA                                    LR     LR     17 04 22.8
      comp=Z,607nm,20.0s,baz=30,slow=36
      comp=Z,0.7nm,0.6s
YKA   Yellowknife Ar    38.86 320      PcP    PcP    16 50 47.4 +0.7
YKA   Yellowknife Ar    38.86 320  i   P      P      16 48 41.5 +5.3
YKA                                    pmax   pmax
      comp=Z,1.0nm,0.7s
BILL  Bilibino          38.87  11      P      P      16 48 36.6 +0.5
BILL                                   IAmb   IAmb   16 48 50.7
      comp=Z,36nm,1.0s
BILL  Bilibino          38.87  11      P      P      16 48 36.4 +0.3
G26K  Porcupine Rive    38.90 341      P      P      16 48 37.2 +0.7
      baz=14
F22K  John River        39.06 346      P      P      16 48 38.2 +0.4
      baz=11
RDOG  Red Dog Mine      39.11 353      P      P      16 48 39.8 +1.6
RDOG                                   IAmb   IAmb   16 48 52.5
      comp=Z,64nm,1.5s
RDOG  Red Dog Mine      39.11 353      P      P      16 48 39.1 +0.9
      baz=5.8
COLD  Coldfoot          39.19 345      P      P      16 48 39.6 +0.7
      baz=12
G25K  Bearman Lake      39.30 342      P      P      16 48 40.2 +0.5
      baz=13
FYU   Fort Yukon        39.41 341      P      P      16 48 43.2 +2.5
FYU                                    IAmb   IAmb   16 48 55.9
      comp=Z,109nm,2.0s
F21K  Alatna River      39.44 347      P      P      16 48 41.8 +0.8
      baz=10.0
G24K  Hadweenzic Riv    39.48 343      P      P      16 48 42.4 +1.0
      baz=13
G23K  Bananza Creek     39.69 344      P      P      16 48 43.2 +0.1
      baz=12
WRGLY Wrigley           39.77 326      P      P      16 48 43.9 +0.2
      baz=21
I29M  Ogilvie Camp,     39.85 337      P      P      16 48 44.5 +0.1
      baz=16
I27K  Kandik River      39.98 339      P      P      16 48 46.6 +1.0
      baz=15,SNR=17
G21K  Allakaket         40.14 347      P      P      16 48 47.7 +0.9
      baz=9.9
MDT   Midelt            40.36 192      LR     LR     17 06 21.8
      comp=Z,88nm,18.5s,baz=80,slow=37
H24K  Noodor Dome       40.37 343      P      P      16 48 49.9 +1.2
      baz=12
YAK   Yakutsk           40.41  36      LR     LR     17 08 53.5
      comp=Z,114nm,18.9s,baz=4.5,slow=41
YAK   Yakutsk           40.41  36      P      P      16 48 47.9 -1.2
YAK                                    IAmb   IAmb   16 48 50.1
      comp=Z,45nm,1.4s
YAK   Yakutsk           40.41  36    eP       P      16 48 48.7 -0.4
YAK                                    pmax   pmax
      comp=Z,16nm,1.0s
YAK                                    pmax   pmax
      comp=N,13nm,1.1s
YAK                                    pmax   pmax
      comp=E,3.0nm,0.9s
I26K  Coal Creek Min    40.44 340      P      P      16 48 50.2 +0.9
      baz=14
PRP   Porcupine Dome    40.46 341      P      P      16 48 51.3 +1.6
PRP   Porcupine Dome    40.46 341      P      P      16 48 50.4 +0.7
      baz=13,SNR=17
H23K  Yukon River       40.52 344      P      P      16 48 50.6 +0.6
      baz=12
H22K  Ishtalitna Cre    40.60 345      P      P      16 48 51.1 +0.5
      baz=11
IMAR  Indian Mountai    40.68 347      P      P      16 48 52.3 +1.0
IMAR                                   PcP    PcP    16 50 54.0 +1.6
J29M  Klondike Camp     40.71 336      P      P      16 48 52.3 +0.6
      baz=16
EGAK  Eagle             40.74 338      P      P      16 48 52.1 +0.4
      baz=15,SNR=5.2
H21K  Melozitna Rive    40.94 346      P      P      16 48 54.2 +0.8
      baz=10.0
POKR  Poker Plat Res    41.03 342      P      P      16 48 54.7 +0.5
      baz=12
BOD   Bodaibo           41.10  50    eP       P      16 48 53.6 -1.2
BOD                                    pmax   pmax
      comp=Z,36nm,1.7s
I23K  Minto, Yukon-K    41.17 344      P      P      16 48 57.0 +1.8
I23K  Minto, Yukon-K    41.17 344      P      P      16 48 55.7 +0.4
      baz=11,SNR=12
K29M  Barlow Dome       41.22 336      P      P      16 48 56.4 +0.6
      baz=16
DAWY  Dawson            41.23 337      P      P      16 48 56.3 +0.4
      baz=15
J26L  Joseph Creek      41.26 340      P      P      16 48 55.6 -0.6
      baz=14
COLA  College           41.31 343 ⇑eP         P      16 48 58.2 +1.8
COLA                                   pmax   pmax
      comp=Z,12nm,1.3s
COLA  College           41.31 343      P      P      16 48 55.7 -0.7
      baz=12
TCOL  CIGO, UAF Yank    41.31 343      P      P      16 48 56.3 -0.1
      baz=12
IL31                    41.32 342      P      P      16 48 57.9 +1.4
ILAR  Eielson Array     41.32 342      P      P      16 48 58.5 +1.9
      comp=Z,6.2nm,1.1s,baz=3.0,slow=7.2,SNR=34
ILAR                                   PcP    PcP    16 50 55.0 +0.5
      comp=Z,2.4nm,1.1s,baz=352,slow=4.6,SNR=4.3
      comp=Z,6.2nm,1.1s
ILAR  Eielson Array     41.32 342      P      P      16 48 57.6 +1.1
I21K  Tanana            41.35 345      P      P      16 48 57.0 +0.3
      baz=10
MLY   Manley            41.40 344      P      P      16 48 58.5 +1.2
      baz=11,SNR=13
DGZ   Jazzator, Alta    41.42  77 ceP         P      16 48 59.9 +2.2
DGZ                                    pmax   pmax
      comp=Z,4.0nm,1.1s
K27K  Chicken           41.56 339      P      P      16 48 59.3 +0.8
      baz=14
HDA   Harding Lake      41.68 342      P      P      16 48 59.2 -0.3
      baz=12,SNR=11
NEA2  Nenana            41.69 343      P      P      16 48 58.6 -1.0
      baz=11
TNA   Tin City          41.77 355      P      P      16 49 00.1 -0.1
TNA   Tin City          41.77 355      P      P      16 49 00.6 +0.4
      baz=3.3
SCRK  Sand Creek        41.82 340      P      P      16 49 01.7 +1.0
      baz=13,SNR=5.4
L29M  L29M              42.00 336      P      P      16 49 03.1 +0.9
      baz=16
GCSA  Galena City Sc    42.11 348      P      P      16 49 03.8 +0.8
      baz=8.1,SNR=11
RIDG  Independent Ri    42.14 340      P      P      16 49 05.1 +1.8
      baz=13
K24K  Donnelly Dome     42.17 341      P      P      16 49 04.4 +0.9
      baz=13
FARO  Faro, Yukon       42.22 332      P      P      16 49 04.3 +0.4
      baz=17,SNR=18
BPAW  Bear Paw Mtn.     42.34 344      P      P      16 49 05.3 +0.4
BPAW                                   IAmb   IAmb   16 49 20.3
      comp=Z,70nm,1.9s
BPAW  Bear Paw Mtn.     42.34 344      P      P      16 49 05.7 +0.8
      baz=10,SNR=11
M30M  Minto, Yukon      42.35 335      P      P      16 49 04.8 -0.2
M30M                                   IAmb   IAmb   16 49 12.8
      comp=Z,39nm,1.4s
M30M  Minto, Yukon      42.35 335      P      P      16 49 05.9 +0.9
      baz=16,SNR=13
M31M  Drury Creek, Y    42.39 333      P      P      16 49 06.5 +1.2
      baz=17
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KK31  Karatay Array     42.40  97      P      P      16 49 06.0 +0.5
KK31  Karatay Array     42.40  97      P      P      16 49 06.1 +0.5
KK31                                   pmax   pmax
      comp=Z,23nm,1.5s
KKAR  Karatay Array     42.40  97      P      P      16 49 05.6  0.0
KKAR  Karatay Array     42.40  97      P      P      16 49 05.6  0.0
MAKZ  Makanchi          42.43  84      P      P      16 49 06.4 +0.6
MAKZ  Makanchi          42.43  84      P      P      16 49 06.4 +0.6
MAKZ                                   pmax   pmax
      comp=Z,14nm,1.4s
BCAR  Beaver Creek A    42.47 338      P      P      16 49 07.6 +1.6
L27K  Beaver Creek,     42.48 338      P      P      16 49 07.2 +1.2
      baz=14
MCK   McKinley          42.53 343      P      P      16 49 06.1 -0.3
      baz=11
MK31  Makanchi Array    42.53  83      P      P      16 49 07.1 +0.4
MK31  Makanchi Array    42.53  83      P      P      16 49 07.1 +0.4
MK31                                   pmax   pmax
      comp=Z,15nm,1.4s
MKAR  Makanchi Array    42.53  83      P      P      16 49 07.9 +1.2
      comp=Z,3.6nm,1.1s,baz=338,slow=5.6,SNR=20
MKAR                                   PP     PP     16 50 49.0 +4.0
      comp=Z,2.0nm,0.9s,baz=323,slow=7.6,SNR=4.0
      comp=Z,3.6nm,1.1s
MKAR  Makanchi Array    42.53  83      P      P      16 49 07.2 +0.5
CHUM  Lake Minchumin    42.66 345      P      P      16 49 08.5 +1.1
      baz=9.9,SNR=23
L26K  Log Cabin Wild    42.68 339      P      P      16 49 09.1 +1.4
      baz=13
M29M  Somme Creek       42.69 336      P      P      16 49 08.5 +0.7
      baz=15
ANM   Nome              42.69 354      P      P      16 49 09.7 +1.9
ANM                                    IAmb   IAmb   16 49 22.4
      comp=Z,42nm,1.4s
ANM   Nome              42.69 354      P      P      16 49 09.7 +1.9
ANM                                    pmax   pmax
      comp=Z,42nm,1.4s
ANM   Nome              42.69 354      P      P      16 49 08.8 +1.0
      baz=4.3,SNR=14
PKME  Peaks-Kenny Pk    42.72 272      P      P      16 49 10.1 +1.9
      baz=25
KOTAN Kotaneelee Air    42.77 325      P      P      16 49 08.7 +0.3
      baz=20
SEY   Seymchan          42.78  21 ⇑iP         P      16 49 10.1 +1.7
SEY                                    pmax   pmax
      comp=Z,21nm,1.5s
KTH   Kantishna Hill    42.87 344      P      P      16 49 10.5 +1.2
TRF   Thorofare Moun    42.92 344      P      P      16 49 10.2 +0.4
      baz=11
PAX   Paxson            42.95 340      P      P      16 49 10.0 +0.1
      baz=12,SNR=5.0
MMAI  Mount Meron Ar    42.95 141      LR     LR     17 09 45.2
      comp=Z,218nm,18.0s,baz=318,slow=40
BVCY  Beaver Creek      43.00 337      P      P      16 49 09.5 -0.7
      baz=14
CAST  Castle Rocks      43.10 345      P      P      16 49 12.7 +1.6
CAST  Castle Rocks      43.10 345      P      P      16 49 11.2 +0.2
      baz=9.9,SNR=16
M27K  Edge Creek, AK    43.17 338      P      P      16 49 12.0 +0.2
      baz=14
N32M  Quiet Lake        43.22 331      P      P      16 49 10.5 -1.6
      baz=17
M26K  Nabesna, AK       43.25 339      P      P      16 49 11.3 -1.1
      baz=13
N31M  Braeburn, Yuko    43.27 333      P      P      16 49 12.4 -0.1
      baz=16,SNR=5.9
K20K  Telida            43.31 346      P      P      16 49 14.7 +2.0
K20K                                   IAmb   IAmb   16 49 31.5
      comp=Z,44nm,1.4s
K20K  Telida            43.31 346      P      P      16 49 13.0 +0.3
      baz=9.0
MOY   Mondy             43.44  64    eP       P      16 49 16.1 +2.0
MOY                                    pmax   pmax
      comp=Z,134nm,1.7s
N30M  Aishikik Lake     43.46 334      P      P      16 49 13.6 -0.5
      baz=16
HARP  HAARP             43.48 340      P      P      16 49 13.1 -1.0
      baz=12
YUK3  Moose Creek       43.57 337      P      P      16 49 15.3 +0.2
      baz=14
PPLA  Purkeypile        43.62 345      P      P      16 49 15.3 -0.2
      baz=9.7
GAMB  Gambell           43.63 358      P      P      16 49 15.3  0.0
      baz=1.6
GEYT  Alibeck           43.63 113      P      P      16 49 17.2 +1.5
      comp=Z,6.2nm,1.0s,baz=304,slow=11,SNR=13
GEYT                                   PcP    PcP    16 51 03.0 +0.3
      comp=Z,4.4nm,0.8s,baz=273,slow=5.3,SNR=3.8
GEYT                                   LR     LR     17 09 15.2
      comp=Z,576nm,21.0s,baz=344,slow=39
      comp=Z,6.2nm,1.0s
YUK4  Talbot Arm        43.77 335      P      P      16 49 15.6 -1.2
      baz=15
IRK   Irkutsk           43.78  61    eP       P      16 49 17.0 +0.3
IRK                                    pmax   pmax
      comp=Z,78nm,1.5s
LIRD  Liard River Hi    43.80 326      P      P      16 49 16.9 +0.1
      baz=19
TTA   Tatalina          43.86 347      P      P      16 49 16.8 -0.5
      baz=8.2
M24K  Tolsona, Glenn    43.87 341      P      P      16 49 17.6 +0.3
      baz=12
CUT   Chulitna          43.95 343      P      P      16 49 17.9  0.0
      baz=10
YUK8  Steele Glacier    43.97 336      P      P      16 49 18.5 +0.1
      baz=14
AAK   Ala-Archa         44.00  93      PcP    PcP    16 51 05.3 +1.2
      comp=Z,4.6nm,1.1s,baz=320,slow=3.4,SNR=4.9
AAK   Ala-Archa         44.00  93 ⇑eP         P      16 49 15.8 -2.9
AAK                                    pmax   pmax
      comp=Z,6.0nm,1.7s
O30N  Mendenhall        44.00 333      P      P      16 49 17.8 -0.6
      baz=16
ASF   Jabal al Asfar    44.06 139      LR     LR     17 08 33.5
      comp=Z,391nm,21.4s,baz=291,slow=37
P33M  Teslin, Yukon     44.08 331      P      P      16 49 19.0 -0.1
      baz=17,SNR=5.7
YUK6  Outpost Mounta    44.13 335      P      P      16 49 19.6 -0.1
      baz=15
HYT   Haines Junctio    44.13 334      P      P      16 49 18.3 -1.3
      baz=15
L20K  Farewell, AK      44.16 346      P      P      16 49 19.9 +0.3
      baz=9.0
N25K  Chitina, Valde    44.20 339      P      P      16 49 20.0 -0.1
      baz=13
MCARA McCarthy VSAT     44.25 338      P      P      16 49 20.2 -0.1
      baz=13
SCM   Sheep Creek Mo    44.25 341      P      P      16 49 20.3 -0.1
      baz=12
M23K  Glacier View      44.33 342      P      P      16 49 21.2 +0.2
      baz=11
SML   Sawmill           44.37 342      P      P      16 49 22.4 +1.1
SML                                    IAmb   IAmb   16 49 28.1
      comp=Z,28nm,1.1s
SML   Sawmill           44.37 342      P      P      16 49 22.5 +1.1
SML                                    pmax   pmax
      comp=Z,28nm,1.1s
SML   Sawmill           44.37 342      P      P      16 49 20.5 -0.8
      baz=11
KLU   Klutina           44.45 340      P      P      16 49 20.8 -1.2
      baz=12
GHO   Glory Hole Cre    44.46 342      P      P      16 49 23.2 +1.1
CTG   Chitna Glacier    44.47 337      P      P      16 49 20.8 -1.5
      baz=14
SKT   Skwentna          44.48 344             P      16 49 22.3 +0.2
SKT                                    IAmb   IAmb   16 49 28.1
      comp=Z,22nm,1.0s
SKT   Skwentna          44.48 344      P      P      16 49 21.5 -0.6
      baz=9.8,SNR=16
O28M  Mount Upton       44.52 336      P      P      16 49 22.6 -0.2
      baz=14
L19K  White Mountain    44.53 346      P      P      16 49 23.5 +0.9
L19K                                   IAmb   IAmb   16 49 30.3
      comp=Z,19nm,1.0s
L19K  White Mountain    44.53 346      P      P      16 49 22.2 -0.4
      baz=8.5
M22K  Willow            44.58 343      P      P      16 49 21.4 -1.5
      baz=10
PMR   Palmer            44.65 342      P      P      16 49 22.2 -1.3
      baz=11
M20K  Styx River        44.70 345      P      P      16 49 24.8 +0.8
M20K  Styx River        44.70 345      P      P      16 49 23.7 -0.3
      baz=9.2
P30M  Million Dollar    44.74 334      P      P      16 49 24.0 -0.3
      baz=15
KNK   Knik Glacier      44.77 342      P      P      16 49 23.1 -1.4
      baz=11
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M19K  Big River Lodg    44.77 346   P      P      16 49 23.9 -0.6
      baz=8.7
O29M  Mount Kennedy     44.77 335   P      P      16 49 23.3 -1.4
      baz=15
P32M  Atlin             44.81 331   P      P      16 49 23.2 -1.6
      baz=16
LONY  Lake Ozonia       44.88 276   P      P      16 49 25.7 +0.2
      baz=24
SUA   Susitna One       44.92 343   P      P      16 49 26.8 +1.0
SUA   Susitna One       44.92 343   P      P      16 49 24.4 -1.4
      baz=10,SNR=23
SKAG  Skagway           45.16 332   P      P      16 49 28.0 +0.4
      baz=16
PINM  Pinnacle          45.18 336   P      P      16 49 27.3 -0.5
      baz=14
RC01  Rabbit Creek A    45.20 343   P      P      16 49 28.2 +0.3
      baz=10
Q32M  Nakina River      45.20 330   P      P      16 49 28.3 +0.1
      baz=17
ZAK   Zakamensk         45.22  63  eP      P      16 49 29.6 +1.3
ZAK                                e              16 51 18.4
ZAK                                 pmax   pmax
      comp=Z,13nm,1.4s
ZAK                                 pmax   pmax
      comp=Z,6.0nm,1.4s
SPCR  Spurr Chakacha    45.30 344   P      P      16 49 28.8 +0.1
      baz=9.4
PWL   Port Wells        45.30 342   P      P      16 49 28.1 -0.6
      baz=11
PLBC  Pleasant Camp     45.31 333   P      P      16 49 28.3 -0.4
      baz=15
EYAK  Cordova Ski Ar    45.35 340   P      P      16 49 28.8 -0.3
      baz=12
DLBC  Dease Lake        45.36 328   LR     LR     17 09 09.1
      comp=Z,823nm,20.0s,baz=72,slow=37
DLBC  Dease Lake        45.36 328   P      P      16 49 28.9 -0.4
      baz=17
PNL   Peninsula         45.49 335   P      P      16 49 29.6 -0.6
      baz=14
CAPN  Captain Cook N    45.64 344   P      P      16 49 31.0 -0.3
      baz=9.8
SVW2  Sparrevohn        45.66 347   P      P      16 49 32.0 +0.5
SVW2                                IAmb   IAmb   16 49 39.7
      comp=Z,33nm,1.1s
ULM   Lac du Bonnet     45.75 298   P      P      16 49 34.1 +1.8
      comp=Z,4.8nm,1.0s,baz=32,slow=11,SNR=4.6
ULM                                 LR     LR     17 08 34.3
      comp=Z,811nm,18.2s,baz=360,slow=36
      comp=Z,4.8nm,1.0s
N19K  Bonanza Creek     45.86 346   P      P      16 49 33.6 +0.4
N19K                                IAmb   IAmb   16 49 40.8
      comp=Z,14nm,0.9s
N19K  Bonanza Creek     45.86 346   P      P      16 49 32.4 -0.8
      baz=8.5
MA2   Magadan           45.88  23   LR     LR     17 08 55.3
      comp=Z,96nm,18.2s,baz=327,slow=36
MA2   Magadan           45.88  23⇑eP      P      16 49 34.6 +1.4
MA2                                 pmax   pmax
      comp=Z,9.0nm,1.2s
HRV   Adam Dziewonsk    45.91 272   P      P      16 49 34.3 +0.6
      baz=24
S34M  Telegraph Cree    46.04 329   P      P      16 49 33.2 -1.3
      baz=17
P23K  Montague Islan    46.06 341   P      P      16 49 34.4 -0.3
      baz=11
RSO   Redoubt South     46.08 345   P      P      16 49 36.2 +1.1
SADO  Sadowa            46.08 281   LR     LR     17 07 47.6
      comp=Z,306nm,19.6s,baz=103,slow=35
CHGR  Chuyangaron       46.09 101   P      P      16 49 32.8 -2.5
EIL   Elat              46.13 142   LR     LR     17 09 31.2
      comp=Z,148nm,21.6s,baz=343,slow=37
SEW   Seward            46.15 342   P      P      16 49 34.6 -0.8
      baz=10
R32K  Eaglecrest        46.19 331   P      P      16 49 35.5 -0.2
      baz=16
L61B  Northampton       46.29 273   P      P      16 49 36.9 +0.2
      baz=24
O20K  Slope Mountain    46.44 344   P      P      16 49 36.6 -1.1
      baz=9.1
O19K  Port Alsworth     46.46 346   P      P      16 49 37.9 +0.1
      baz=8.4
N16K  Nishlik Lake      46.48 349   P      P      16 49 37.9 -0.1
      baz=6.7
Q23K  Middleton Isla    46.52 340   P      P      16 49 38.5 +0.2
      baz=11
ILSW  Iliamna Southw    46.58 345   P      P      16 49 39.1 +0.1
ILSW                                IAmb   IAmb   16 49 53.4
      comp=Z,23nm,1.2s
BRSE  Bradley Lake S    46.62 343   P      P      16 49 38.3 -0.8
      baz=9.8
EYMN  Ely               46.68 293   P      P      16 49 38.2 -1.5
      baz=24
S31K  Pelican           46.74 332   P      P      16 49 39.8 -0.2
      baz=15
HOM   Homer             46.78 344   P      P      16 49 39.3 -1.0
      baz=9.4
T35M  Bob Quinn         46.80 328   P      P      16 49 39.4 -1.1
      baz=17
WMQ   Urumqi            46.82  80  eP      P      16 49 43.0 +2.0
WMQ                                 pP     pwP    16 49 47.8 -1.2
WMQ                                 PP     PP     16 51 28.5 -2.3
WMQ                                 pmax   pmax
      comp=Z,13nm,1.5s
WMQ                                 pmax   pmax
      comp=Z,190nm,5.3s
WMQ                                 LR     LR
      comp=Z,240nm,17.3s
WMQ                                 LR     LR
      comp=Z,360nm,20.1s
WMQ                                 LR     LR
      comp=Z,200nm,24.5s
O18K  Koktuh Hills      46.86 346   P      P      16 49 39.5 -1.6
      baz=8.0
P19K  Oil Pt            46.92 345   P      P      16 49 40.7 -0.8
      baz=8.8
S32K  Killisnoo         46.98 331   P      P      16 49 40.8 -1.1
      baz=15
O17K  Koliganek Bris    47.07 347   P      P      16 49 41.8 -0.8
      baz=7.3
KSH   Kashi             47.30  94   P      P      16 49 47.6 +2.8
KSH                                 pP     pwP    16 49 53.9 +2.0
KSH                                 pmax   pmax
      comp=Z,9.0nm,1.7s
KSH                                 LR     LR
      comp=Z,280nm,17.9s
KSH                                 LR     LR
      comp=Z,210nm,16.5s
KSH                                 LR     LR
      comp=Z,340nm,17.9s
O16K  Kokwok River B    47.31 348   P      P      16 49 43.2 -1.3
      baz=6.9,SNR=5.5
P18K  Big Mountain,     47.32 346   P      P      16 49 45.9 +1.3
P18K  Big Mountain,     47.32 346   P      P      16 49 42.4 -2.3
      baz=8.0
BINY  Binghamton        47.50 276   P      P      16 49 46.7 +0.5
      baz=23
AGMN  Agassiz Nation    47.53 297   P      P      16 49 46.2 -0.2
      baz=23
WRAK  Wrangell Islan    47.66 329   P      P      16 49 46.2 -1.0
      baz=16
Q19K  Cape Douglas,     47.67 345   P      P      16 49 46.0 -1.3
      baz=8.5
ZEA   Zeya              47.73  42  eP      P      16 49 49.6 +1.8
ZEA                                 pmax   pmax
      comp=Z,10.0nm,1.5s
ZEA                                 MLR    MLR
      comp=Z,100nm,16.0s
P16K  Nushagak River    47.87 348   P      P      16 49 49.0 +0.2
      baz=6.8
Q20K  Shuyak Island     47.88 344   P      P      16 49 48.8 -0.1
      baz=9.0
PAL   Palisades         47.98 274   P      P      16 49 50.3 +0.4
      baz=23
Q18K  Katmai Hardscr    48.05 346   P      P      16 49 49.8 -0.5
      baz=8.0
U33K  Whale Pass        48.07 329   P      P      16 49 49.8 -0.6
      baz=16
SONM  Songino Array     48.37  62   P      P      16 49 54.5 +1.5
      comp=Z,6.2nm,1.1s,baz=318,slow=6.4,SNR=31
SONM                                PcP    PcP    16 51 19.8 +0.6
      comp=Z,1.3nm,0.8s,baz=344,slow=2.5,SNR=4.0
SONM                                LR     LR     17 16 18.6
      comp=Z,99nm,18.6s,baz=356,slow=44
      comp=Z,6.2nm,1.1s
SONM  Songino Array     48.37  62   P      P      16 49 53.8 +0.8
SONM                                IAmb   IAmb   16 49 55.8
      comp=Z,27nm,1.5s
SONM  Songino Array     48.37  62   P      P      16 49 53.8 +0.8
SONM                                pmax   pmax
      comp=Z,27nm,1.5s
ULN   Ulaanbaatar       48.51  61   P      P      16 49 55.4 +1.3
ULN   Ulaanbaatar       48.51  61deP      P      16 49 55.5 +1.3
ULN                                 pmax   pmax
      comp=Z,50nm,2.5s
V35K  Ketchikan         48.60 328   P      P      16 49 52.6 -1.9
      baz=16
KDAK  Kodiak Island     48.72 344⇑eP      P      16 49 56.5 +1.2
KDAK                                pmax   pmax
      comp=Z,20nm,1.0s
R17K  Ugashik Creek     49.15 347   P      P      16 49 57.0 -1.6
      baz=7.3
R16K  Pilot Point       49.30 347   P      P      16 49 59.8  0.0
      baz=6.9
OHAK  Old Harbor        49.33 344   P      P      16 49 58.9 -1.2
      baz=8.4
M53A  WI Miller and     49.58 280   P      P      16 50 01.9 -0.3
      baz=23
TAM   Tamanrasset       50.07 179   P      P      16 50 06.3 +0.1
TAM   Tamanrasset       50.07 179   P      P      16 50 06.3 +0.1
TAM                                 pmax   pmax
      comp=Z,15nm,1.2s
HIA   Hailar            50.32  50c iP      P      16 50 09.0 +1.2
HIA                                 pmax   pmax
      comp=Z,18nm,1.1s
O53A  New Philadelph    50.83 280   P      P      16 50 10.9 -0.8
      baz=22
JFWS  Jewell Farm       50.96 290   P      P      16 50 11.9 -0.7
      baz=22
BBB   Bella Bella       51.05 324   LR     LR     17 12 29.4
      comp=Z,464nm,19.5s,baz=24,slow=37
HEH   HeiHe             51.06  44  eP      P      16 50 14.0 +0.8
HEH                                 pmax   pmax
      comp=Z,15nm,1.5s
EGMT  Eagleton          51.25 308   P      P      16 50 14.9 +0.1
      baz=20
S12K  Black Hills       51.42 350   P      P      16 50 14.5 -1.4
      baz=5.0
LAO   LASA Array        51.66 305   P      P      16 50 16.6 -1.3
      baz=21
P52A  Corning           51.67 281   P      P      16 50 17.1 -0.9
      baz=22
SDPT  Sand Point        51.69 349   P      P      16 50 15.8 -2.0
      baz=5.6
SUSD  Miller            51.91 298   P      P      16 50 18.6 -1.1
      baz=21
ECSD  EROS Data Cent    51.95 295   P      P      16 50 20.1 +0.1
      baz=22
O48B  Farmland          51.97 284   P      P      16 50 20.0 -0.2
      baz=22
GRNR  Gornyy            52.29  37⇑iP      P      16 50 23.2 +0.7
GRNR                                pmax   pmax
      comp=E,2.0nm,1.1s
GRNR                                pmax   pmax
      comp=N,4.0nm,1.2s
GRNR                                pmax   pmax
      comp=Z,10.0nm,1.0s
GRNR                                MLR    MLR
      comp=N,90nm,15.0s
GRNR                                MLR    MLR
      comp=Z,100nm,14.0s
FALS  False Pass        52.33 351   P      P      16 50 21.1 -1.5
      baz=4.4
SFIN  Lafayette         52.41 285   P      P      16 50 22.2 -1.3
      baz=22
P49A  Miami Univ. Ec    52.51 283   P      P      16 50 22.6 -1.6
      baz=22
NEW   Newport           52.67 314   LR     LR     17 12 58.7
      comp=Z,566nm,18.4s,baz=22,slow=36
NEW   Newport           52.67 314   P      P      16 50 23.9 -1.4
      baz=18
SCIA  State Center      52.72 292   P      P      16 50 24.7 -1.0
      baz=22
HDIL  Hopedale          52.88 288   P      P      16 50 27.1 +0.2
      baz=22
KLR   Kul'dur           52.90  41   P      P      16 50 27.2 +0.2
      comp=Z,1.1nm,0.7s,baz=318,slow=8.8,SNR=4.2
KLR                                 LR     LR     17 14 32.5
      comp=Z,163nm,19.6s,baz=335,slow=38
      comp=Z,1.1nm,0.7s
PETK  Petropavlovsk-    52.99  20   P      P      16 50 28.5 +0.9
      comp=Z,4.0nm,1.0s,baz=313,slow=5.5,SNR=3.7
      comp=Z,4.0nm,1.0s
TYV   Tymovskoe         53.24  32  eP      P      16 50 30.6 +1.1
TYV                                 pmax   pmax
      comp=Z,14nm,1.3s
TYV                                 pmax   pmax
      comp=Z,100nm,3.6s
MSO   Missoula          53.33 311   P      P      16 50 29.2 -1.2
      baz=19
BLA   Blacksburg        53.41 278   P      P      16 50 30.4 -0.6
      baz=22
UNV   Unalaska Valle    53.46 353   P      P      16 50 28.5 -2.5
      baz=3.2
RSSD  Black Hills       53.52 302   P      P      16 50 31.0 -0.9
      baz=20
RLMT  Red Lodge         53.87 307   P      P      16 50 34.5 +0.1
      baz=20
BOZ   Bozeman (W)       53.97 309   P      P      16 50 34.3 -0.8
      baz=19
RAYN  Ar Rayn           54.22 132   P      P      16 50 38.4 +1.4
RAYN  Ar Rayn           54.22 132   P      P      16 50 38.4 +1.4
RAYN                                pmax   pmax
      comp=Z,13nm,1.2s
GTA   Gaotai            54.38  72  eP      P      16 50 39.5 +1.4
GTA                                 pP     pwP    16 50 45.1 -1.0
GTA                                 pmax   pmax
      comp=Z,17nm,1.4s
GTA                                 LR     LR
      comp=Z,120nm,18.9s
GTA                                 LR     LR
      comp=Z,96nm,16.4s
GTA                                 LR     LR
      comp=Z,200nm,15.3s
NIKH  Nikolski High     54.41 355   P      P      16 50 36.6 -1.4
      baz=2.4
XLT   XiLinHaoTe        54.50  56⇑iP      P      16 50 40.1 +1.3
XLT                                 pP     sP     16 50 43.9 -0.2
XLT                                 sP     pwP    16 50 47.6 +0.8
XLT                                 pmax   pmax
      comp=Z,15nm,1.1s
XLT                                 pmax   pmax
      comp=Z,110nm,4.4s
SHEM  Shemya Is, Ala    54.53   8   LR     LR     17 12 51.5
      comp=Z,45nm,20.9s,baz=24,slow=35
H17A  Grant Village     54.86 307   P      P      16 50 40.6 -1.1
      baz=19,SNR=5.2
TZTN  Tazewell          54.95 281   P      P      16 50 41.2 -0.9
      baz=21
MCMT  McKenzie Canyo    54.98 309   P      P      16 50 44.6 +2.1
BNX   BinXian           55.35  46 ⇑P      P      16 50 45.1 +0.2
BNX                                 pmax   pmax
      comp=Z,4.0nm,0.7s
BNX                                 pmax   pmax
      comp=Z,81nm,3.5s
KMSC  Kings Mountain    55.60 278   P      P      16 50 47.0 +0.2
      baz=21
CCM   Cathedral Cave    55.75 288   P      P      16 50 48.4 +0.5
      baz=21
TKL   Tuckaleechee C    55.84 280   LR     LR     17 13 40.8
      comp=Z,176nm,19.8s,baz=4.5,slow=35
GOMU  GeErMu            55.94  78   P      P      16 50 52.0 +2.3
GOMU                                pP     sP     16 50 56.1 +1.1
GOMU                                sP     pwP    16 50 57.3 -0.4
GOMU                                pmax   pmax
      comp=Z,8.0nm,1.5s
GOMU                                pmax   pmax
      comp=Z,120nm,6.7s
BW06  Boulder Array     56.16 306   P      P      16 50 50.7 -0.3
      baz=19
PDAR  Pinedale Array    56.16 306   P      P      16 50 51.0  0.0
      comp=Z,0.8nm,0.9s,baz=25,slow=8.2,SNR=6.1
PDAR                                LR     LR     17 16 56.5
      comp=Z,176nm,20.7s,baz=16,slow=38
      comp=Z,0.8nm,0.9s
HHC   Hu-ho-hao-te      56.22  61  eP      P      16 50 51.0 -0.3
HHC                                 pmax   pmax
      comp=Z,28nm,0.7s
HHC                                 pmax   pmax
      comp=Z,160nm,5.4s
KSU1  Kansas State U    56.27 293   P      P      16 50 50.9 -0.6
      baz=20
HLID  Hailey            56.54 310   P      P      16 50 54.1 +0.5
HLID                                IAmb   IAmb   16 51 11.0
      comp=Z,15nm,1.2s
HLID  Hailey            56.54 310   P      P      16 50 53.8 +0.1
      baz=18
WVT   Waverly           56.58 284   P      P      16 50 54.9 +1.1
      baz=21
MDJ   Mudanjiang        56.88  44   P      P      16 50 56.3 +0.5
MDJ                                 PcP    PcP    16 51 51.7 +0.5
MDJ                                 S      S      16 58 46.0 -2.4
MDJ                                 sS     sS     16 58 55.8 +0.8
MDJ                                 pmax   pmax
      comp=Z,12nm,1.4s
MDJ                                 pmax   pmax
      comp=Z,92nm,4.0s
MDJ                                 LR     LR
      comp=Z,190nm,6.2s
MDJ                                 LR     LR
      comp=Z,190nm,7.0s
MDJ                                 LR     LR
      comp=Z,210nm,10.3s
N23A  Red Feather La    57.03 302   P      P      16 50 57.0 -0.3
      baz=19
YSS   Yuzh-Sakhalins    57.06  33   P      P      16 50 57.3 +0.3
YSS   Yuzh-Sakhalins    57.06  33  eP      P      16 50 57.4 +0.4
YSS                                 pmax   pmax
      comp=Z,30nm,1.3s
YSS                                 MLR    MLR
      comp=Z,200nm,16.0s
CBKS  Cedar Bluff       57.38 296   P      P      16 51 00.1 +0.6
      baz=20
USA0B Ussuriysk Arra    57.77  42deP      P      16 51 02.2 +0.1
USRK  Ussuriysk Ar.     57.77  42   P      P      16 51 02.2 +0.2
      comp=Z,2.1nm,0.8s,baz=348,slow=8.4,SNR=10.0
USRK                                LR     LR     17 19 00.9
      comp=Z,112nm,18.2s,baz=336,slow=39
      comp=Z,2.1nm,0.8s
KSCO  Kaye Shedlock’    57.96 299   P      P      16 51 03.6  0.0
      baz=20
ISCO  Idaho Springs     57.98 301   P      P      16 51 02.8 -1.2
      baz=19
BJI   Beijing           58.16  57   P      P      16 51 06.2 +1.4
BJI                                 S      S      16 59 05.1 -0.1
BJI                                 pmax   pmax
      comp=Z,8.0nm,1.3s
BJI                                 pmax   pmax
      comp=Z,72nm,3.8s
O20A  White River Ci    58.32 304   P      P      16 51 05.2 -1.1
      baz=19
OXF   Oxford            58.54 285   P      P      16 51 06.6 -1.0
      baz=20
LZH   Lanzhou           58.61  69  eP      P      16 51 10.2 +1.9
LZH                                 pP     pwP    16 51 17.4 +1.1
LZH                                 sP     sP     16 51 21.6 +8.0
LZH                                 pmax   pmax
      comp=Z,17nm,1.4s
Q24A  Divide            58.65 301   P      P      16 51 08.3 -0.4
      baz=19
VLA   Vladivostok       58.79  43⇑eP      P      16 51 10.6 +1.4
VLA                                 pmax   pmax
      comp=Z,24nm,1.4s
LRAL  Lakeview Retre    59.23 282   P      P      16 51 10.8 -1.6
      baz=20
DUG   Dugway, Tooele    59.37 308   P      P      16 51 10.5 -3.0
      baz=18,SNR=7.0
ELK   Elko              59.41 310   LR     LR     17 17 51.3
      comp=Z,241nm,18.3s,baz=12,slow=37
BBTS  Babate            59.44 204   LR     LR     17 13 37.7
      comp=Z,90nm,19.9s,baz=30,slow=33
TORD  Torodi Ar. Bea    59.68 183   P      P      16 51 16.2 +0.6
      comp=Z,5.0nm,0.8s,baz=355,slow=6.6,SNR=34
TORD                                LR     LR     17 17 14.0
      comp=Z,105nm,19.7s,baz=10,slow=36
      comp=Z,5.0nm,0.8s
MIAR  Mount Ida         59.69 289   P      P      16 51 16.2 +0.6
      baz=20
TIGA  Tifton            59.72 278   P      P      16 51 16.3 +0.4
      baz=20
ASAJ  Asahikawa         59.79  34   P      P      16 51 15.5 -0.6
      comp=Z,10nm,1.1s,baz=295,slow=14,SNR=4.0
ASAJ                                LR     LR     17 18 21.7
      comp=Z,96nm,19.6s,baz=348,slow=37
      comp=Z,10nm,1.1s
SDCO  Great Sand Dun    59.89 301   P      P      16 51 18.0 +0.7
      baz=19
YBH   Yreka Blue Hor    60.08 317   LR     LR     17 17 39.0
      comp=Z,466nm,18.8s,baz=11,slow=36
PV23  Carpenter Ridg    60.11 304   P      P      16 51 18.7  0.0
PV23                                IAmb   IAmb   16 51 49.6
      comp=Z,20nm,1.2s
T25A  Trinidad          60.19 299   P      P      16 51 19.2 -0.1
      baz=19
S22A  4UR Ranch, Cre    60.23 302   P      P      16 51 20.1 +0.4
      baz=18,SNR=6.9
HNS   HongShan          60.28  59 ⇑P      P      16 51 20.6 +1.0
HNS                                 PcP    PcP    16 52 07.1 +2.4
HNS                                 pmax   pmax
      comp=Z,14nm,1.3s
WMOK  Wichita Mounta    60.95 294   P      P      16 51 25.0 +0.7
      baz=19,SNR=6.7
VBMS  Vicksburg         61.01 285   P      P      16 51 26.4 +1.8
      baz=20
MVCO  Mesa Verde        61.16 303   P      P      16 51 28.1 +2.2
MVCO  Mesa Verde        61.16 303   P      P      16 51 25.2 -0.7
      baz=18
Z38A  Mt. Pleasant      61.30 290   P      P      16 51 27.8 +1.3
PAHR  Pah Rah Range     61.32 313   P      P      16 51 28.1 +1.2
AMTX  Amarillo          61.60 296   P      P      16 51 28.5 -0.2
      baz=19
R11A  Troy Canyon, C    61.77 309   P      P      16 51 30.9 +1.0
R11A                                IAmb   IAmb   16 51 44.5
      comp=Z,20nm,1.4s
R11A  Troy Canyon, C    61.77 309   P      P      16 51 29.6 -0.3
      baz=17,SNR=16
XAN   Xi'an             61.93  66 ⇑P      P      16 51 31.8 +0.9
XAN                                 pP     sP     16 51 36.2  0.0
XAN                                 S      S      16 59 59.4 +5.4
XAN                                 pmax   pmax
      comp=Z,14nm,1.2s
XAN                                 pmax   pmax
      comp=Z,140nm,3.6s
XAN                                 LR     LR
      comp=Z,370nm,16.5s
XAN                                 LR     LR
      comp=Z,160nm,16.7s
XAN                                 LR     LR
      comp=Z,400nm,17.9s
TIA   Tai'an            62.02  58 ⇑P      P      16 51 32.5 +1.1
TIA                                 pmax   pmax
      comp=Z,19nm,1.1s
TIA                                 LR     LR
      comp=Z,150nm,6.5s
TIA                                 LR     LR
      comp=Z,290nm,11.4s
TIA                                 LR     LR
      comp=Z,250nm,12.4s
DWPF  Disney Wildern    62.21 275   P      P      16 51 32.7  0.0
      baz=20
NVAR  Mina Array Bea    62.31 312   P      P      16 51 34.2 +0.7
      comp=Z,3.4nm,1.0s,baz=32,slow=5.7,SNR=9.1
NVAR                                LR     LR     17 19 14.8
      comp=Z,328nm,19.6s,baz=6.5,slow=37
      comp=Z,3.4nm,1.0s
NVAR  Mina Array Bea    62.31 312   P      P      16 51 33.8 +0.2
LYN   LuoYang           62.40  62  eP      P      16 51 33.9  0.0
TPH   Tonopah           62.41 311   P      P      16 51 34.6 +0.4
TPH   Tonopah           62.41 311   P      P      16 51 34.6 +0.4
TPH                                 pmax   pmax
      comp=Z,41nm,1.1s
NATX  Nacogdoches       62.62 289   P      P      16 51 36.1 +0.7
      baz=19
MSTX  Muleshoe          62.75 297   P      P      16 51 36.6 +0.2
      baz=18
ANMO  Albuquerque       62.79 300   P      P      16 51 35.9 -0.9
      comp=Z,0.6nm,0.5s,baz=55,slow=3.7,SNR=2.0
ANMO                                LR     LR     17 19 06.9
      comp=Z,605nm,18.1s,baz=124,slow=36
      comp=Z,0.6nm,0.5s
ANMO  Albuquerque       62.79 300ceP      P      16 51 42.5 +5.7
ANMO                                pmax   pmax
      comp=Z,6.0nm,1.1s
ANMO  Albuquerque       62.79 300   P      P      16 51 36.8  0.0
      baz=18
U15A  North Rim         62.83 306   P      P      16 51 36.5 -0.7
U15A                                IAmb   IAmb   16 51 43.9
      comp=Z,11nm,1.2s
WHTX  Lake Whitney,     63.18 291   P      P      16 51 39.3 +0.2
      baz=19
ABTX  Abilene, Hawle    63.18 294   P      P      16 51 40.0 +0.8
ABTX  Abilene, Hawle    63.18 294   P      P      16 51 39.5 +0.3
      baz=19
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MDPB	Devils Postpil	63.24	312	P	P	16 51 40.0	+0.2
MDPB				IAmb	IAmb	16 52 13.1	
	comp=Z,13nm,1.2s						
TPNV	Topopah Spring	63.26	310	P	P	16 51 40.6	+0.7
TPNV				IAmb	IAmb	16 52 09.7	
	comp=Z,15nm,1.1s						
TPNV	Topopah Spring	63.26	310	P	P	16 51 40.6	+0.7
TPNV				pmax	pmax		
	comp=Z,15nm,1.1s						
TPNV	Topopah Spring	63.26	310	P	P	16 51 40.8	+0.9
	baz=16,SNR=11						
KSRS	Korea Array	63.39	48	P	P	16 51 40.1	-0.4
	comp=Z,1.0nm,0.9s,baz=351,slow=6.6,SNR=5.2						
KSRS				LR	LR	17 21 60.0	
	comp=Z,63nm,19.9s,baz=355,slow=39						
	comp=Z,1.0nm,0.9s						
SHPR	Sheep Range	63.43	308	P	P	16 51 42.3	+1.2
SHPR				IAmb	IAmb	16 51 56.4	
	comp=Z,14nm,1.4s						
W18A	Petrified Fore	63.45	303	P	P	16 51 40.5	-0.7
	baz=18						
CD2	Chengdu	63.45	71	*e*P	P	16 51 40.0	-1.1
GRAC	Grapevine Rang	63.47	311	P	P	16 51 40.9	-0.2
	baz=16						
WUAZ	Wupatki	63.48	305	P	P	16 51 42.0	+0.7
WUAZ				IAmb	IAmb	16 51 48.5	
	comp=Z,16nm,1.3s						
WUAZ	Wupatki	63.48	305	P	P	16 51 40.9	-0.4
	baz=17						
FURC	Furnace Creek,	63.86	310	P	P	16 51 43.1	-0.5
	baz=16						
GWY	Greenwater Val	64.09	310	P	P	16 51 46.3	+0.9
CWC	Cottonwood Cre	64.16	311	P	P	16 51 45.2	-0.6
	baz=16						
TJN	Taejon	64.30	49	⇑*e*P	P	16 51 47.1	+0.6
QSM	Queen of Sheba	64.34	310	P	P	16 51 48.6	+1.8
QSM				IAmb	IAmb	16 51 55.0	
	comp=Z,22nm,1.3s						
MPMC	Manual Prospec	64.40	310	P	P	16 51 46.2	-1.2
	baz=16,SNR=6.5						
TUQ	Turquoise Moun	64.63	309	P	P	16 51 48.8	-0.1
	baz=16						
HKT	Hockley	64.65	289	*ce*P	P	16 51 50.4	+1.6
HKT				pmax	pmax		
	comp=Z,13nm,2.0s						
GSC	Goldstone, Bar	64.97	310	P	P	16 51 51.4	+0.4
	baz=16						
LRMC	Laurel Mtn Rad	64.99	310	P	P	16 51 50.7	-0.5
	baz=16,SNR=5.2						
ISA	Isabella, Lake	65.00	311	P	P	16 51 52.0	+0.8
	baz=16						
GMRC	Granite Mounta	65.20	308	P	P	16 51 53.0	+0.4
	baz=16,SNR=6.5						
JCT	Junction City	65.25	293	P	P	16 51 53.6	+0.7
JCT				IAmb	IAmb	16 52 59.1	
	comp=Z,17nm,0.9s						
JCT	Junction City	65.25	293	P	P	16 51 53.6	+0.7
JCT				pmax	pmax		
	comp=Z,17nm,1.0s						
JCT	Junction City	65.25	293	P	P	16 51 52.8	-0.1
	baz=18						
PDMCI	Parker Dam,Lak	65.30	307	P	P	16 51 53.7	+0.6
	baz=17						
ATD	Arta Tunnel	65.30	138	LR	LR	17 20 45.9	
	comp=Z,5.6nm,19.3s,baz=30,slow=36						
HEC	Hector,Ludlow	65.31	309	P	P	16 51 53.0	-0.2
	baz=16						
121A	Cookes Peak, D	65.42	301	P	P	16 51 54.4	+0.3
	baz=18						
MNTX	Cornudas Mount	65.59	298	P	P	16 51 55.3	+0.3
	baz=18						
EDW2	Edwards Air Fo	65.64	310	P	P	16 51 54.4	-1.0
	baz=16						
SMMC	Simmler	65.67	312	P	P	16 51 54.0	-1.5
	baz=16						
IRM	Iron Mountain	65.67	308	P	P	16 51 55.2	-0.3
	baz=16						
DUN6	Lazy B Ranch	65.73	302	P	P	16 51 56.6	+0.6
BELC	Belle Mtn. Jos	66.03	308	P	P	16 51 57.2	-0.7
	baz=16						
PKM	Mcpherson Peak	66.04	312	P	P	16 51 57.1	-0.9
	baz=16						
BFSC	Mount Baldy Ra	66.18	310	P	P	16 51 58.9	0.0
	baz=16						
BC3	Big Chuckawall	66.23	308	P	P	16 51 57.8	-1.4
	baz=16						
DBIC	Dimbokro	66.34	190	LR	LR	17 21 58.6	
	comp=Z,65nm,18.4s,baz=20,slow=37						
MJAR	Matsushiro Arr	66.38	39	P	P	16 52 00.3	+0.3
	comp=Z,13nm,1.0s,baz=334,slow=6.6,SNR=15						
MJAR				LR	LR	17 22 25.8	
	comp=Z,80nm,19.0s,baz=330,slow=37						
	comp=Z,13nm,1.0s						
TUC	Tucson	66.39	303	P	P	16 52 01.8	+1.6
TUC	Tucson	66.39	303	P	P	16 52 01.8	+1.6
TUC				pmax	pmax		
	comp=Z,41nm,1.9s						
TUC	Tucson	66.39	303	P	P	16 51 59.2	-1.0
	baz=17						
NJ2	Nanjing	66.41	58	*e*P	P	16 51 59.4	-0.8
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,450nm,3.7s						
PFO	Pinyon Flats O	66.50	309	LR	LR	17 21 07.3	
	comp=Z,249nm,21.6s,baz=14,slow=36						
PFO	Pinyon Flats O	66.50	309	P	P	16 52 01.4	+0.4
	baz=16						
TPFO	Pinon Flats	66.51	309	P	P	16 52 01.9	+0.9
	baz=16						
GLA	Glamis	66.66	307	P	P	16 52 02.9	+1.0
	baz=16						
MURC	Murrieta	66.69	309	P	P	16 52 01.8	-0.2
	baz=16						
WHN	Wuhan	66.69	62	P	P	16 52 16.7	+15
WHN				pmax	pmax		
	comp=Z,60nm,1.0s						
SCZ2	Santa Cruz Isl	66.86	312	P	P	16 52 03.1	0.0
	baz=15						
SWSC	Sam W. Stewart	66.99	308	P	P	16 52 04.3	+0.4
	baz=16						
PZH	PanZhiHua	67.03	75	P	P	16 52 04.9	+0.5
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,150nm,4.7s						
SJG	San Juan	67.12	257	LR	LR	17 15 49.0	
	comp=Z,78nm,21.9s,baz=134,slow=31						
833A	Chaparral WMA,	67.18	292	P	P	16 52 05.4	+0.3
	baz=18						
MONP2	Monument Peak	67.19	308	P	P	16 52 07.0	+1.6
	baz=16						
214A	Organ Pipe Nat	67.22	305	P	P	16 52 07.5	+2.0
	baz=16						
IKP	In-Ko-Pah, Jac	67.34	308	P	P	16 52 05.7	-0.6
	baz=16						
TX31	Lajitas Ar. Si	67.38	296	P	P	16 52 05.8	-0.7
TX32	Lajitas Array	67.38	296	P	P	16 52 06.0	-0.6
TX32				IAmb	IAmb	16 52 41.6	
	comp=Z,12nm,1.3s						
TXAR	Lajitas Array	67.38	296	P	P	16 52 06.6	+0.1
	comp=Z,1.2nm,0.7s,baz=57,slow=4.6,SNR=11						
TXAR				LR	LR	17 21 33.4	
	comp=Z,312nm,18.4s,baz=10,slow=36						
	comp=Z,1.2nm,0.7s						
TXAR	Lajitas Array	67.38	296	P	P	16 52 07.1	+0.5
TXAR	Lajitas Array	67.38	296	P	P	16 52 07.1	+0.5
RMX	La Rumorosa	67.38	308	P	P	16 52 07.0	+0.3
RMX				IAmb	IAmb	16 52 15.1	
	comp=Z,23nm,1.5s						
SNCC	San Nicolas Is	67.55	311	P	P	16 52 07.9	+0.4
	baz=15						
BRDH	Bariadhala	67.69	86	LR	LR	17 27 28.1	
	comp=Z,190nm,19.4s,baz=270,slow=41						
JNU	Nakatsue	68.20	47	P	P	16 52 10.7	-0.9
	comp=Z,3.3nm,0.8s,baz=46,slow=15,SNR=1.8						
JNU				LR	LR	17 25 35.9	
	comp=Z,45nm,19.0s,baz=322,slow=39						
	comp=Z,3.3nm,0.8s						
GYA	Guiyang	68.47	70	⇑*i*P	P	16 52 14.7	+1.2
GYA				sP	sP	16 52 19.7	+0.9
GYA				pmax	pmax		
	comp=Z,19nm,0.8s						
KMI	Kunming	68.62	74	⇑P	P	16 52 15.2	+0.6
KMI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LODK	Lodwar	71.88	147	P	P	16 52 34.4	0.0
LODK				IAmb	IAmb	16 52 37.6	
	comp=Z,35nm,1.9s						
CHTO	Chiang Mai	73.49	80	P	P	16 52 43.4	-0.5
CHTO	Chiang Mai	73.49	80	P	P	16 52 43.4	-0.5
CM31	Chiang Mai Arr	73.83	80	P	P	16 52 46.2	+0.4
CMAR	Chiang Mai Arr	73.83	80	P	P	16 52 46.5	+0.7
	comp=Z,2.8nm,1.0s,baz=323,slow=6.7,SNR=25						
CMAR				LR	LR	17 32 30.8	
	comp=Z,50nm,19.4s,baz=325,slow=42						
	comp=Z,2.8nm,1.0s						
CMAR	Chiang Mai Arr	73.83	80	*i* P	P	16 52 47.0	+1.1
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LPIG	La Paz	74.10	300	LR	LR	17 25 37.4	
	comp=Z,90nm,19.3s,baz=28,slow=36						
PHRA	Phrae	74.16	79	P	P	16 52 47.4	-0.4
MBAR	Mbarara	75.14	153	LR	LR	17 27 09.8	
	comp=Z,53nm,20.4s,baz=354,slow=37						
MDP	Montagnes des	75.82	240	LR	LR	17 19 17.8	
	comp=Z,53nm,21.4s,baz=126,slow=30						
JCJ	Chichijima	76.31	38	LR	LR	17 29 04.8	
	comp=Z,39nm,18.5s,baz=12,slow=38						
QIZ	Qiongzhong	76.41	70	P	P	16 53 03.3	+2.6
QIZ				S	S	17 02 43.4	-1.8
QIZ				LR	LR		
	comp=Z,180nm,12.7s						
QIZ				LR	LR		
	comp=Z,150nm,12.7s						
QIZ				LR	LR		
	comp=Z,210nm,27.1s						
CMIG	Matias Romero	76.55	284	LR	LR	17 29 04.6	
	comp=Z,68nm,19.5s,baz=18,slow=38						
SDV	Santo Domingo	77.18	258	LR	LR	17 21 40.8	
	comp=Z,73nm,21.7s,baz=44,slow=32						
PALK	Pallekele	79.03	101	LR	LR	17 31 06.0	
	comp=Z,127nm,19.1s,baz=83,slow=38						
BRRC	Barranca, Sant	79.77	261	*e*P	P	16 53 20.0	+0.7
JTS	Las Juntas de	80.08	273	LR	LR	17 29 28.6	
	comp=Z,51nm,18.2s,baz=76,slow=36						
PTBC	PUERTO BERRIO,	80.52	261	*e*P	P	16 53 24.9	+1.4
RUSC	La Rusia	80.73	260	P	P	16 53 25.8	+0.6
RUSC	La Rusia	80.73	260	*e*P	P	16 53 25.3	+0.1
NORC	Norcasia	81.57	261	*e*P	P	16 53 30.3	+1.2
GUY2C	Guyana, Caldas	82.04	262	*e*P	P	16 53 33.8	+1.7
ROSC	El Rosal	82.10	261	P	P	16 53 34.7	+2.4
	comp=Z,9.2nm,0.5s,baz=110,slow=23,SNR=1.8						
ROSC				LR	LR	17 26 11.8	
	comp=Z,63nm,21.2s,baz=7.5,slow=33						
	comp=Z,9.2nm,0.5s						
CHIC	Chingaza	82.12	260	*e*P	P	16 53 33.6	+1.1
ORTC	Ortega, Tolima	83.25	261	*e*P	P	16 53 39.3	+1.4
PRAC	Prado	83.33	261	*e*P	P	16 53 39.4	+1.1
GUMO	Guam	89.97	38	LR	LR	17 35 59.4	
	comp=Z,26nm,20.7s,baz=2.5,slow=37						
DAV	Davao City (W)	92.03	58	LR	LR	17 43 39.0	
	comp=Z,44nm,19.1s,baz=348,slow=41						
ATAH	Atahualpa	94.66	261	LR	LR	17 37 58.0	
	comp=Z,13nm,18.0s,baz=30,slow=36						
OPO	Ambohidratompo	95.47	140	LR	LR	17 38 19.5	
	comp=Z,59nm,18.4s,baz=180,slow=36						
SIV	San Ignacio	98.23	242	LR	LR	17 33 58.3	
	comp=Z,64nm,18.7s,baz=103,slow=32						
LBTB	Lobatse	98.64	161	LR	LR	17 42 36.8	
	comp=Z,75nm,18.4s,baz=2.5,slow=37						
NNA	Nana	98.81	258	LR	LR	17 33 17.0	
	comp=Z,25nm,21.3s,baz=354,slow=32						
SIJI	Sorong	101.08	55	P	Pdif	16 55 00.5	-0.8
	comp=Z,5.2nm,0.9s,baz=215,slow=2.5,SNR=3.6						
KAPI	Kappang	102.08	67	P	Pdif	16 55 05.1	-0.5
	comp=Z,2.5nm,0.3s,baz=98,slow=3.3,SNR=5.3						
KAPI	Kappang	102.08	67	*ce*P	Pdif	16 55 05.4	-0.2
KAPI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TAOE	Nuku Hiva Isla	112.67	322	*e*LR	LR	17 33 25.3	
	comp=Z,575nm,29.5s						
WRA	Warramunga Arr	120.19	57	PKP	PKPdf	17 00 01.1	-0.8
	comp=Z,0.7nm,1.1s,baz=330,slow=2.1,SNR=3.0						
PPT2	Papeete2	122.79	330	*e*LR	LR	17 38 06.0	
	comp=Z,242nm,33.2s						
PPT2				*e*LR	LR	17 38 06.3	
	comp=Z,216nm,33.5s						
ASAR	Alice Springs	123.65	58	PKP	PKPdf	17 00 08.1	-0.4
	comp=Z,0.6nm,0.6s,baz=355,slow=1.8,SNR=11						
RKT	Rikitea	125.49	313	*e*LR	LR	17 39 21.7	
	comp=Z,83µm,35.2s						
DZM	Mont Dzumac	128.22	21	*e*LR	LR	17 40 35.2	
	comp=Z,81nm,23.9s						
TBI	Tubuai	128.43	329	*e*LR	LR	17 40 42.7	
	comp=Z,954nm,33.0s						
TBI				*e*LR	LR	17 40 42.8	
	comp=Z,2µm,24.8s						
SNAA	Sanae	144.35	184	PKPdf	PKPdf	17 00 45.4	-0.2
SNAA	Sanae	144.35	184	PKIKP	PKPdf	17 00 45.4	-0.2
BKZ	Black Stump Fm	146.03	11	PKPdf	PKPbc	17 00 50.2	-0.1
BELA	Belgrano 2	152.20	197	PKPbc	PKiKP	17 01 05.5	+0.3

NIED **10** *16:48:50.0, 24°.70N×122°.25E, h39^{km}, MW4.0, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-5.41; M$_{\theta\theta}$9.53; M$_{\phi\phi}$-4.12; M$_{r\theta}$4.93; M$_{\theta\phi}$3.04; M$_{\phi r}$-0.66; Fault plane solution: M$_0$9.55000×10^{14} NP1: φ$_s$282.00000°, δ66.00000°, λ-59.00000°. NP2: φ$_s$46.00000°, δ38.00000°, λ-139.00000°.*

TAP **10** *16:48:49.5, 24°.77N×122°.21E, h12^{km}, ML4.2, C*

JMA **10** *16:48:50.0±0.1, 24°.7N±0°.5×122°.3E±0°.2, h39^{km}±3^{km}, MV3.5/7, TAIWAN REGION*

IDC **10** *16:48:55.9±3.7, 24°.72N×122°.44E, h69^{km}±37^{km}, mb3.4/11, mbtmp3.7/13, ML3.1/2, MS3.0/5, Error ellipse: s-maj=23.2km s-min=14.4km az=68.0*

ISC 10 16:48:48.5±1.0, **24°.79N**±0°.02×**122°.30E**±0°.02, **h11**^{km}±7^{km}, **n172**, σ1^s.**04**/282, **mb3.7**/11, **12C-6D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		0.34	280	P	Pg	16 48 55.4	+0.1
	baz=287						
EGS				*e*S	Sg	16 49 00.1	+0.3
	baz=287						
TWB1	Santiao Chiao	0.36	308	⇑*i*P	Pg	16 48 56.3	+0.7
	baz=321						
TWB1				*i* S	Sg	16 49 00.5	+0.1
	baz=321						
EOS2	EOS2	0.37	190	*i* P	Pb	16 48 56.8	-0.2
	baz=176						
EOS2				*i* S	Sg	16 49 01.6	+0.9
	baz=176						
NTC	Toucheng	0.43	279	P	Pg	16 48 57.3	+0.3
	baz=284						
NTC				*e*S	Sg	16 49 03.0	+0.3
	baz=284						
TWC	Suao	0.45	247	⇑*i*P	Pg	16 48 56.6	-0.6
	baz=243						
TWC				S	Sg	16 49 01.8	-1.3
	baz=243						
TIPB	Shuangxi	0.47	293	*i* P	Pg	16 48 58.3	+0.6
	baz=300						
TIPB				*e*S	Sg	16 49 03.7	-0.2
	baz=300						
SXI1	Grass Mountain	0.49	309	⇑*i*P	Pb	16 48 59.2	-0.1
	baz=317						
SXI1				*i* S	Sb	16 49 06.7	+0.2
	baz=317						
ILA	Ilan	0.50	268	*e*P	Pg	16 48 58.5	+0.3
	baz=269						
ILA				*e*S	Sg	16 49 05.4	+0.5
	baz=269						
NWF	Wu-fen Shan	0.55	301	*e*P	Pb	16 49 01.2	+1.0
	baz=308						
NWF				*e*S	Sb	16 49 08.7	+0.6
	baz=308						
WFSB	Wu-fen Shan	0.55	301	*e*P	Pb	16 49 01.1	+0.9
	baz=308						
WFSB				*e*S	Sb	16 49 08.7	+0.7
	baz=308						
NDS	Dongshan	0.55	254	P	Pg	16 48 59.0	-0.2
	baz=253						
NDS				*e*S	Sg	16 49 05.7	-0.8
	baz=253						
TWE	Neicheng	0.58	264	*i* P	Pg	16 48 59.3	-0.4
	baz=264						
TWE				*e*S	Sg	16 49 07.6	+0.2
	baz=264						
EWUT	Wuta	0.58	235	*i* P	Pg	16 48 59.1	-0.7
	baz=231						
EWUT				*e*S	Sg	16 49 06.5	-1.0
	baz=231						
TNOU	National Taiwa	0.60	307	*i* P	Pb	16 49 01.4	+0.4
	baz=314						
TNOU				*e*S	Sb	16 49 09.9	+0.4
	baz=314						
ENA	Nanau	0.62	235	*i* P	Pg	16 48 59.9	-0.7
	baz=231						
ENA				*e*S	Sg	16 49 08.1	-0.6
	baz=231						
FUSB	Fushanzhiwuyua	0.65	268	*i* P	Pg	16 49 01.0	-0.1
	baz=269						
FUSB				*e*S	Sg	16 49 09.1	-0.5
	baz=269						
EOS4	EOS4	0.66	179	*i* P	Pb	16 49 02.2	+0.4
	baz=171						
EOS4				*e*S	Sb	16 49 11.9	+1.1
	baz=171						
JYNG	Yonagunijimaku	0.68	119	*i* P	Pb	16 49 03.0	+0.7
JYNG				S	Sb	16 49 12.6	+1.0
TWA	Mucha	0.68	287	P	Pb	16 49 03.1	+0.8
	baz=291						
TWA				*e*S	Sb	16 49 12.3	+0.5
	baz=291						
ENTT	Nioudou	0.68	258	P	Pg	16 49 01.2	-0.5
	baz=257						
ENTT				*e*S	Sg	16 49 10.7	0.0
	baz=257						
EHP	Heping Village	0.69	227	*e*P	Pg	16 49 01.9	0.0
	baz=222						
EHP				*e*S	Sg	16 49 11.0	0.0
	baz=222						
NHY	Taipei	0.71	291	*e*P	Pn	16 49 04.1	-0.4
	baz=295						
NHY				*e*S	Sb	16 49 13.8	+1.2
	baz=295						
NWRT	Kuosheng	0.71	306	*e*P	Pb	16 49 03.5	+0.5
	baz=311						
NWRT				*e*S	Sb	16 49 12.9	+0.2
	baz=311						
YOJ	Yonaguni jima	0.72	116	P	Pb	16 49 03.7	+0.7
YOJ	Yonaguni jima	0.72	116	P	Pb	16 49 03.8	+0.7
YOJ				S	Sb	16 49 14.0	+0.9
YOJ	Yonaguni jima	0.72	116	*i* P	Pb	16 49 03.8	+0.7
	baz=112						
YOJ				S	Sb	16 49 14.2	+1.2
	baz=112						
NWLT	Wulai	0.72	269	P	Pg	16 49 02.4	-0.1
	baz=271						
NWLT				*e*S	Sg	16 49 11.1	-0.9
	baz=271						
NHDH	Xindian Distri	0.72	284	*e*P	Pn	16 49 04.0	-0.7
	baz=287						
NHDH				*e*S	Sb	16 49 13.6	+0.5
	baz=287						
LATG	Datong	0.75	251	⇑*i*P	Pg	16 49 02.4	-0.5
	baz=250						
LATG				*e*S	Sg	16 49 12.5	-0.2
	baz=250						
TAP1	Taipei	0.75	290	*e*P	Pn	16 49 05.6	+0.6
	baz=293						
TAP1				*e*S	Sn	16 49 15.8	-0.6
	baz=293						
YM01	YM01	0.75	299	⇑*i*P	Pb	16 49 04.3	+0.6
	baz=303						
YM01				*e*S	Sb	16 49 14.5	+0.5
	baz=303						
YM08	YM08	0.76	302	⇑P	Pb	16 49 04.1	+0.4
	baz=307						
YM08				*e*S	Sb	16 49 14.0	-0.1
	baz=307						
TATO	Taipei	0.76	285	P	Pb	16 49 04.4	+0.7
TATO	Taipei	0.76	285	⇓*e*P	Pn	16 49 04.5	-0.6
	baz=288						
TATO				*e*S	Sb	16 49 14.3	+0.2
	baz=288						
TAP	Taipei	0.76	289	*e*P	Pn	16 49 04.8	-0.4
	baz=293						
TAP				*e*S	Sb	16 49 14.9	+0.7
	baz=293						
TWY	Chenhua	0.80	308	P	Pb	16 49 05.1	+0.7
	baz=313						
TWY				*e*S	Sb	16 49 16.1	+0.9
	baz=313						
BACT	New Taipei Cit	0.81	285	*e*P	Pn	16 49 05.7	-0.1
	baz=288						
BACT				*e*S	Sn	16 49 16.6	-1.1
	baz=288						
ANP	Anpu	0.81	300	⇑P	Pb	16 49 04.9	+0.2
	baz=304						
ANP				*e*S	Sb	16 49 15.6	-0.1
	baz=304						
NSM	Shimen	0.82	308	*e*P	Pn	16 49 05.7	-0.2
	baz=313						
NSM				*e*S	Sn	16 49 17.7	-0.3
	baz=313						
YHNB	Yeheng	0.85	262	P	Pg	16 49 05.1	+0.2
YHNB	Yeheng	0.85	262	P	Pg	16 49 04.4	-0.4
	baz=263						
YHNB				*e*S	Sg	16 49 15.8	-0.1
	baz=263						
NTST	Danshui	0.86	296	*e*P	Pn	16 49 06.1	-0.4
	baz=300						
NTST				*e*S	Sb	16 49 18.0	+1.1
	baz=300						
TWS1	Kuangyinshan	0.86	292	*e*P	Pn	16 49 06.2	-0.4
	baz=295						
TWS1				*e*S	Sn	16 49 18.3	-0.8
	baz=295						
NSK	Sanguang	0.86	263	*e*P	Pg	16 49 04.4	-0.8
	baz=263						
NSK				*e*S	Sg	16 49 15.9	-0.6
	baz=263						
PCYT	Pengchaiyu	0.86	346	*i* P	Pb	16 49 05.7	+0.2
	baz=352						
PCYT				*e*S	Sb	16 49 17.9	+0.8
	baz=352						
ETL	Fush Village	0.88	225	*e*P	Pg	16 49 04.9	-0.5
	baz=221						
ETL				*e*S	Sg	16 49 16.1	-0.7
	baz=221						
NACB	Ninganchiao	0.89	227	P	Pg	16 49 05.0	-0.5
NACB	Ninganchiao	0.89	227	⇑*i*P	Pg	16 49 04.7	-0.8
	baz=223						
NACB				S	Sg	16 49 15.9	-1.2
	baz=223						
NNSB	Datong	0.91	247	*e*P	Pg	16 49 05.3	-0.7
	baz=246						
NNSB				*e*S	Sg	16 49 17.7	-0.1
	baz=246						
NNSH	Datong	0.91	247	*e*P	Pg	16 49 05.7	-0.3
	baz=246						
NNSH				*e*S	Sg	16 49 17.8	-0.1
	baz=246						
NNS	Nan Shan	0.91	248	*e*P	Pg	16 49 05.5	-0.6
	baz=246						
NNS				*e*S	Sg	16 49 18.0	+0.1
	baz=246						
NTY	Taoyuan	0.93	283	*e*P	Pn	16 49 07.4	-0.1
	baz=286						
NTY				*e*S	Sn	16 49 20.5	-0.4
	baz=286						
ETLH	Xiulin Townshi	0.94	232	⇑*e*P	Pg	16 49 05.7	-0.9
	baz=230						
ETLH				*e*S	Sg	16 49 18.4	-0.5
	baz=230						
TWD	Chiawan	0.95	223	*e*P	Pg	16 49 05.8	-1.0
	baz=219						
TWD				*e*S	Sb	16 49 19.5	-0.1
	baz=219						
HWA	Hwalien	1.02	218	*e*P	Pn	16 49 09.1	+0.3
	baz=214						
HWA				*e*S	Sn	16 49 26.3	+3.2
	baz=214						
NCU	National Centr	1.03	281	*e*P	Pn	16 49 08.7	-0.1
	baz=282						
NCU				*e*S	Sn	16 49 24.1	+0.9
	baz=282						
NCUH	Zhongli	1.03	280	*e*P	Pn	16 49 09.2	+0.4
	baz=282						
NFF	Wufeng Townshi	1.09	262	*e*P	Pg	16 49 09.6	+0.2
	baz=262						
NFF				*e*S	Sn	16 49 24.4	-0.4
	baz=262						
ETM	Tongmen	1.10	222	*e*P	Pb	16 49 08.8	-0.7
	baz=219						
ETM				*e*S	Sb	16 49 22.7	-1.1
	baz=219						
NJD	Zhudong	1.10	268	*e*P	Pn	16 49 10.3	+0.5

	baz=268						
TEYL	Yanliau Villag	1.11	215	eP	Pn	16 49 11.1	+1.0
	baz=213						
TEYL				eS	Sn	16 49 28.0	+2.6
	baz=213						
WHF	Hehuan Shan	1.14	236	eP	Pb	16 49 09.1	-1.3
	baz=234						
WHF				eS	Sb	16 49 24.4	-1.0
	baz=234						
TWT	Tachien	1.15	243	eP	Pb	16 49 10.4	-0.1
	baz=242						
TWT				eS	Sb	16 49 25.3	-0.3
	baz=242						
NHW	Xinwu Township	1.16	281	eP	Pb	16 49 10.6	+0.1
	baz=283						
NHW				eS	Sg	16 49 25.9	+0.1
	baz=283						
HSN1	Hsinchu	1.17	270	eP	Pg	16 49 11.0	+0.1
	baz=271						
TDCB	Techi	1.17	243	eP	Pb	16 49 10.7	-0.1
	baz=242						
TDCB				eS	Sb	16 49 25.5	-0.4
	baz=242						
LIOB	Emei	1.18	263	eP	Pg	16 49 11.2	+0.1
	baz=264						
LIOB				eS	Sn	16 49 27.4	+0.4
	baz=264						
NSTT	Nanjuang	1.19	263	eP	Pb	16 49 11.2	+0.2
	baz=263						
NSTT				eS	Sn	16 49 27.1	-0.2
	baz=263						
SBCB	Hsinchu	1.19	271	eP	Pb	16 49 11.2	0.0
	baz=271						
SBCB				eS	Sn	16 49 27.7	+0.4
	baz=271						
HSN	Hsinchu	1.21	271	eP	Pn	16 49 11.0	-0.3
	baz=273						
HSN				eS	Sn	16 49 27.9	+0.2
	baz=273						
ESL	Shilin	1.25	219	eP	Pn	16 49 11.6	-0.3
	baz=216						
ESL				eS	Sg	16 49 29.5	+0.8
	baz=216						
CHGB	Renai	1.25	235⇓	eP	Pn	16 49 12.1	-0.1
	baz=233						
CHGB				eS	Sb	16 49 28.1	-0.5
	baz=233						
TEGC	Jichi Village	1.28	213	eP	Pg	16 49 13.4	+0.4
	baz=210						
TEGC				eS	Sg	16 49 31.7	+2.1
	baz=210						
NJN	Zhunan	1.30	266	eP	Pg	16 49 14.4	+0.9
	baz=266						
NJN				eS	Sg	16 49 30.4	-0.1
	baz=266						
OWD	Renai	1.32	231	eP	Pb	16 49 13.2	-0.2
	baz=229						
OWD				eS	Sb	16 49 30.1	-0.1
	baz=229						
WHP	Taichung City	1.33	248	eP	Pg	16 49 14.0	-0.1
	baz=247						
WHP				eS	Sb	16 49 29.2	-1.5
	baz=247						
WUSB	Renai	1.34	234	eP	Pn	16 49 13.3	+0.1
	baz=232						
WUSB				eS	Sb	16 49 30.3	-0.5
	baz=232						
EGFH	Guangfu	1.37	216	eP	Pb	16 49 13.9	-0.2
	baz=213						
EGFH				eS	Sg	16 49 33.3	+0.8
	baz=213						
NMLH	Miaoli	1.40	260⇓	eP	Pg	16 49 16.4	+1.2
	baz=260						
NMLH				eS	Sg	16 49 34.8	+1.5
	baz=260						
WPL	Puli Township	1.45	238	eP	Pg	16 49 15.9	-0.3
	baz=237						
WPL				eS	Sn	16 49 33.5	-0.1
	baz=237						
NSY	Sanyi	1.45	256	eP	Pg	16 49 16.0	-0.3
	baz=255						
NSY				eS	Sg	16 49 37.0	+1.9
	baz=255						
TWQ1	Liyutan	1.46	253	eP	Pg	16 49 16.6	+0.2
	baz=252						
TWQ1				eS	Sg	16 49 36.1	+0.7
	baz=252						
WCS	Beigang Elemen	1.46	240	eP	Pb	16 49 16.0	+0.4
	baz=239						
WCS				eS	Sg	16 49 34.9	-0.5
	baz=239						
DPDB	Guoxing	1.46	239	eP	Pb	16 49 16.0	+0.3
	baz=238						
DPDB				eS	Sn	16 49 33.9	-0.1
	baz=238						
VWDT	VWDT	1.47	226⇓	eP	Pb	16 49 16.0	+0.1
	baz=224						
VWDT				eS	Sb	16 49 34.3	-0.3
	baz=224						
HGSD	Ruisui	1.52	212	eP	Pn	16 49 15.8	+0.2
	baz=209						
HGSD				eS	Sg	16 49 39.1	+1.8
	baz=209						
EHY	Hungye	1.56	215	eP	Pn	16 49 15.9	-0.2
	baz=213						
EHY				eS	Sn	16 49 36.5	+0.2
	baz=213						
SMLT	Sun Moon Lake	1.56	235	eP	Pb	16 49 17.7	+0.2
	baz=233						
SMLT				eS	Sg	16 49 39.4	+0.6
	baz=233						
WDJ	Dajia District	1.57	254	eP	Pg	16 49 19.5	+0.8
	baz=254						
SSLB	Suanglung	1.58	231	P	Pb	16 49 17.9	+0.2
SSLB	Suanglung	1.58	231⇓	eP	Pb	16 49 17.8	+0.1
	baz=230						
SSLB				eS	Sb	16 49 38.3	+0.5
	baz=230						
TYC	Yuchr	1.58	237	eP	Pb	16 49 17.9	+0.1
	baz=235						
TYC				eS	Sg	16 49 38.6	-0.8
	baz=235						
TCU	Taichung	1.61	247	eP	Pg	16 49 20.1	+0.7
	baz=246						
TCU				eS	Sg	16 49 41.9	+1.7
	baz=246						
WWF	Wufeng	1.64	243	eP	Pg	16 49 19.8	-0.1
	baz=242						
JKRS	Kuro-shima	1.65	109	P	Pn	16 49 17.8	+0.4
JKRS				eS	Sn	16 49 38.1	-0.5
YULB	Yu-li	1.66	214	P	Pn	16 49 17.7	+0.1
YULB	Yu-li	1.66	214	eP	Pn	16 49 17.3	-0.3
	baz=211						
EYUL	Yuli	1.69	212	eP	Pn	16 49 18.3	+0.4
	baz=210						
TWF1	Yuli	1.70	213	eP	Pn	16 49 17.9	-0.2
	baz=210						
TWF1				eS	Sb	16 49 41.4	+0.3
	baz=210						
WJS	Zhushan	1.73	237	eP	Pg	16 49 21.2	-0.4
	baz=235						
WJS				eS	Sg	16 49 45.4	+1.4
	baz=235						
WNT	Mingjian	1.73	239	eP	Pb	16 49 20.8	+0.6
	baz=237						
WNT				eS	Sg	16 49 45.7	+1.6
	baz=237						
JIJ	Ishigaki jima	1.73	104	P	Pb	16 49 19.6	-0.6
WCHH	Zhanghua	1.74	246	eP	Pg	16 49 21.7	-0.1
	baz=246						
FULB	Fuli	1.83	210	eP	Pn	16 49 20.0	+0.1
	baz=208						
FULB				eS	Sb	16 49 44.3	-0.6
	baz=208						
ALS	Alishan	1.86	227	eP	Pb	16 49 22.4	-0.3
	baz=225						
ALS				eS	Sb	16 49 46.8	+0.6
	baz=225						
CHKT	Chengkung	1.88	207	eP	Pn	16 49 20.1	-0.5
	baz=205						
CHN5	Tsauling	1.90	232	eP	Pb	16 49 23.7	+0.5
	baz=230						
CHN5				eS	Sg	16 49 49.4	0.0
	baz=230						
EHD	Haiduan	1.91	212	eP	Pn	16 49 20.6	-0.5
	baz=210						
WGK	Gukeng	1.93	236	eP	Pb	16 49 23.6	0.0
	baz=234						
WGK				eS	Sg	16 49 50.7	+0.3
	baz=234						
WDLH	Douliu	1.94	236	eP	Pb	16 49 23.5	-0.4
	baz=235						
WDLH				eS	Sg	16 49 50.5	-0.4
	baz=235						
ECS	Chishang	1.95	211	eP	Pn	16 49 22.5	+1.0
	baz=209						
WRL	Guolierlin Hig	1.96	244	eP	Pb	16 49 23.6	-0.6
	baz=243						
ELDTW	Lidau	1.98	217	eP	Pn	16 49 21.8	-0.2
	baz=215						
ELDTW				eS	Sb	16 49 49.1	-0.1
	baz=215						
EDH	Donghe	2.02	207	eP	Pn	16 49 22.2	-0.3
	baz=205						
WCKO	Fanlu	2.05	229	eP	Pb	16 49 26.0	+0.3
	baz=228						
WCKO				eS	Sb	16 49 50.7	-0.6
	baz=228						
WTK	Tuku	2.06	238	eP	Pb	16 49 25.1	-0.7
	baz=237						
CHN2	Minshiung	2.08	234	eP	Pb	16 49 26.4	+0.1
	baz=232						
CHN2				eS	Sg	16 49 55.6	+0.1
	baz=232						
CHN4	Tsaushan	2.12	228⇑	eP	Pb	16 49 26.9	+0.1
	baz=226						
CHN4				eS	Sg	16 49 55.8	-0.6
	baz=226						
TPUB	Ta-pu	2.12	226	P	Pb	16 49 26.1	-0.9
TPUB	Ta-pu	2.12	226	eP	Pb	16 49 26.8	-0.3
	baz=225						
TPUB				eS	Sb	16 49 54.4	+1.0
	baz=225						
STYH	Taoyuan	2.13	221	eP	Pb	16 49 25.6	-1.4
	baz=220						
CHY	Chiayi	2.14	234	eP	Pb	16 49 26.9	-0.4
	baz=232						
STYT	Tauyuan	2.15	221	eP	Pb	16 49 26.1	-1.3
	baz=220						
LONT	Longtian	2.16	210	eP	Pn	16 49 24.6	+0.2
	baz=208						
WTP	Ta-pu	2.17	226	eP	Pb	16 49 27.4	-0.5
	baz=224						
WTP				eS	Sb	16 49 55.5	+0.6
	baz=224						
WSF	Szhu	2.21	239	eP	Pb	16 49 26.9	-1.6
	baz=238						
WSF				eS	Sn	16 49 52.7	+0.2
	baz=238						
LDUT	Ludao	2.24	200	eP	Pn	16 49 25.0	-0.5
	baz=198						
TWK	Hsinying	2.24	228	eP	Pb	16 49 28.3	-0.8
	baz=226						
TWK				eS	Sb	16 49 56.0	-0.8
	baz=226						
TWGBT	Beinan	2.25	210	P	Pn	16 49 26.3	+0.6
TWGBT	Beinan	2.25	210	eP	Pn	16 49 25.1	-0.7
	baz=208						
TWG	Pinlang	2.26	210	eP	Pn	16 49 26.0	+0.2
	baz=208						
SNST	Tainan City	2.27	227	eP	Pb	16 49 30.5	+1.0
	baz=225						
SNST				eS	Sg	16 50 01.2	-0.2
	baz=225						
CHN1	Nanshi	2.27	226	eP	Pb	16 49 28.5	-1.1
	baz=224						
CHN1				eS	Sb	16 49 58.3	+0.7
	baz=224						
WSL	Shuilin Townsh	2.27	237	eP	Pb	16 49 27.9	-1.6
	baz=236						
WSL				eS	Sb	16 49 59.3	+1.7
	baz=236						
SGST	Jiashian	2.31	223	eP	Pn	16 49 27.9	+1.4
	baz=221						
SGST				eS	Sb	16 49 59.1	+0.3
	baz=221						
ICHU	Yijhu	2.33	233	eP	Pb	16 49 29.7	-0.8
	baz=232						
SLGT	Liugui	2.34	221	eP	Pn	16 49 28.3	+1.4
	baz=219						
CHN8	Yiju	2.39	234	eP	Pb	16 49 30.2	-1.3
	baz=232						
ECL	Taimali	2.50	210	eP	Pn	16 49 29.2	+0.1
	baz=208						
SCST	Cishan	2.51	222	eP	Pb	16 49 33.5	-0.1
	baz=220						
MATB	Ma-tsu	2.52	303	eP	Pn	16 49 28.9	-0.6
	baz=304						
MATB				eS	Sn	16 49 57.5	-2.8
	baz=304						
SSD	Sandimen	2.54	217	eP	Pb	16 49 31.9	-2.2
	baz=215						
SSD				eS	Sn	16 50 02.6	+2.0
	baz=215						
VWUC	VWUC	2.60	275	eP	Pn	16 49 29.7	-0.7
	baz=275						
TWM1	Shoushan	2.60	222	eP	Pb	16 49 34.6	-0.6
	baz=220						
MASBT	Mashibuluo	2.65	216	eP	Pn	16 49 33.2	+2.0
	baz=214						
EAST	Anshuo	2.74	209	eP	Pn	16 49 32.7	+0.3
	baz=208						
EAST				eS	Sn	16 50 07.4	+1.9
	baz=208						
TAWH	Dawu Township	2.76	208	eP	Pn	16 49 33.1	+0.5
	baz=207						
PHUB	P'eng-hu	2.79	244	eP	Pn	16 49 33.9	+0.7
	baz=242						
PHUB				eS	Sn	16 50 08.0	+1.1
	baz=242						
LAY	Lan-yu	2.82	194	eP	Pn	16 49 32.8	-0.7
	baz=192						
XPSS	Dashiqiu	2.86	319	eP	Pn	16 49 33.5	-0.5
	baz=320						
XPSS				eS	Sn	16 50 06.5	-1.9
	baz=320						
LYJJ	Jianjiangzhen	2.89	308	eP	Pn	16 49 33.7	-0.7
	baz=309						
LYJJ				eS	Sn	16 50 06.8	-2.4
	baz=309						
BBP	Basco	4.33	184⇓	eP	Pn	16 49 53.7	-0.7
BBP				eS	Sn	16 50 40.6	-4.3
CICP	Calayan Island	5.55	188⇑	eP	Pn	16 50 11.9	+0.9
CICP				iS	Sn	16 51 13.3	-1.4
JOW	Kunigami	5.76	68	P	Pn	16 50 17.5	+3.6
	0.9nm,0.3s,baz=38,slow=26,SNR=0.7						
JOW				S	Sn	16 51 13.1	-6.9
	22nm,0.9s,baz=203,slow=16,SNR=2.2						
	9.2nm,0.6s						
ABRA	Dolores	7.25	192⇑	eP	Pn	16 50 37.1	+2.6
JNU	Nakatsue	11.19	40	LR	LR	16 56 51.0	
	comp=Z,83nm,18.8s,baz=316,slow=42						
KSRS	Korea Array	13.51	19	P	P	16 52 05.5	-3.8
	0.1nm,0.3s,baz=206,slow=15,SNR=2.2						
KSRS				LR	LR	16 58 03.7	
	comp=Z,106nm,18.1s,baz=200,slow=40						
	0.5nm,0.5s						
DAV	Davao City (W)	17.89	169	LR	LR	17 00 13.2	
	comp=Z,31nm,19.4s,baz=228,slow=38						
MJAR	Matsushiro Arr	17.99	46	LR	LR	17 00 48.0	
	comp=Z,50nm,20.7s,baz=222,slow=40						
USRK	Ussuriysk Ar.	20.92	20	P	P	16 53 32.4	+1.4
	1.1nm,0.7s,baz=198,slow=8.7,SNR=1.9						
	1.1nm,0.7s						
CMAR	Chiang Mai Arr	22.59	258	P	P	16 53 50.9	+1.7
	0.8nm,0.8s,baz=57,slow=8.3,SNR=5.8						
	0.8nm,0.8s						
GUMO	Guam	24.01	113	LR	LR	17 04 25.8	
	comp=Z,26nm,18.2s,baz=252,slow=39						
ASAJ	Asahikawa	25.41	36	P	P	16 54 16.9	+0.9
	3.0nm,0.9s,baz=316,slow=29,SNR=1.2						
	3.0nm,0.9s						
SONM	Songino Array	26.23	335	P	P	16 54 25.2	+1.7
	2.4nm,0.8s,baz=150,slow=8.9,SNR=12						
	2.4nm,0.8s						
MKAR	Makanchi Array	38.62	315	P	P	16 56 12.6	+0.8
	0.1nm,0.5s,baz=115,slow=10,SNR=2.2						
	0.1nm,0.5s						
ZALV	Zalesovo Beam	40.30	326	P	P	16 56 26.6	+1.0
	0.8nm,0.6s,baz=119,slow=11,SNR=4.1						
	0.8nm,0.6s						
KURBB	Kurchatov Arra	42.31	319	P	P	16 56 45.3	+3.1
	0.2nm,0.4s,baz=116,slow=7.8,SNR=1.8						
	0.2nm,0.4s						
WRA	Warramunga Arr	45.98	164	P	P	16 57 11.8	0.0
	21nm,0.8s,baz=346,slow=8.7,SNR=119						
BVAR	Borovoye Array	47.86	320	P	P	16 57 29.3	+3.0
	0.4nm,0.5s,baz=108,slow=9.4,SNR=3.7						
	0.4nm,0.5s						
ASAR	Alice Springs	49.46	166	P	P	16 57 39.1	+0.2
	5.5nm,0.8s,baz=342,slow=8.3,SNR=69						
	5.5nm,0.8s						
STKA	Stephens Creek	59.28	161	P	P	16 58 48.5	-1.8
	1.9nm,0.8s,baz=315,slow=13,SNR=3.5						
	1.9nm,0.8s						
YKA	Yellowknife Ar	82.02	23	P	P	17 01 07.1	-1.3
	0.1nm,0.4s,baz=308,slow=4.1,SNR=1.6						
	0.1nm,0.4s						

WEL 10 16:54:56.3±0.5**, 40˚S**±4˚×**17˚7E**±˚**, h33^{km}, M3.3**/12**, ML3.6**/13**, MLv3.3**/12**, Error ellipse: s-maj=0.0km s-min=0.0km az=38.6, confirmed, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRHZ	Porangahau	0.50	290	P	Pn	16 55 08.6	+1.4
PRHZ				S	Sn	16 55 16.1	+1.4
PXZ	Pawanui	0.50	323	P	Pn	16 55 08.5	+1.3
PXZ				S	Sn	16 55 16.6	+1.9
KAHZ	Kahuranaki	0.70	336	P	Pb	16 55 11.1	+0.9
WPHZ	Waipukurau	0.72	301	P	Pb	16 55 11.1	+0.5
WPHZ				S	Sb	16 55 20.7	+0.4
CKHZ	Cape Kidnapper	0.79	350	P	Pb	16 55 12.2	+0.5
CKHZ				S	Sb	16 55 22.5	+0.5
BFZ	Birch Farm	0.81	252	P	Pb	16 55 12.2	+0.3
BFZ				S	Sb	16 55 22.9	+0.4
DVHZ	Dannevirke	0.84	279	P	Pb	16 55 12.5	0.0
DVHZ				S	Sn	16 55 22.8	-0.3
CPWZ	Castlepoint	0.93	239	P	Pb	16 55 14.1	+0.1
CPWZ				S	Sb	16 55 26.9	+0.9
PNHZ	Pukenui	0.96	303	P	Pn	16 55 14.0	+0.5
PNHZ				S	Sn	16 55 25.7	-0.4
PRWZ	Pori Road	0.98	263	P	Pb	16 55 14.8	-0.1
TSZ	Takapari Road	1.06	290	P	Pn	16 55 15.2	+0.3
TSZ				S	Sn	16 55 27.3	-1.2
MCHZ	McNeill Hill	1.08	336	P	Pb	16 55 16.1	-0.4
TIWZ	Tintock	1.09	251	P	Pn	16 55 15.9	+0.5
POWZ	Post Office Ro	1.13	272	P	Pb	16 55 16.7	-0.8
ARHZ	Aropaoanui	1.19	350	P	Pb	16 55 17.6	-0.8
KWHZ	Kaweka Forest	1.20	327	P	Pn	16 55 17.2	+0.4
TMWZ	Te Maipa	1.23	237	P	Pn	16 55 17.4	+0.1
MRZ	Mangatainoka R	1.29	260	P	Pn	16 55 18.4	+0.3
BHHZ	Black Hill Sta	1.32	316	P	Pn	16 55 18.9	+0.5
WHHZ	Waihua	1.36	359	P	Pn	16 55 19.9	+0.9
MHGZ	Mahia Peninsul	1.38	22	P	Pn	16 55 19.9	+0.6
NMHZ	Naumai	1.38	345	P	Pn	16 55 20.2	+0.8
BKZ	Black Stump Fm	1.40	335	P	Pn	16 55 20.0	+0.5
HOWZ	Holdsworth Sta	1.40	250	P	Pn	16 55 19.6	0.0
KNZ	Kokohu	1.45	13	P	Pn	16 55 20.6	+0.4
MTW	Mount Morrison	1.51	241	P	Pn	16 55 20.9	-0.2
RAHZ	Arahi	1.52	355	P	Pn	16 55 22.0	+0.7
MOVZ	Moawhango	1.54	311	P	Pn	16 55 22.4	+0.8
MTHZ	Maungataniwha	1.61	349	P	Pn	16 55 23.0	+0.5
OGWZ	Otaki Gorge	1.63	256	P	Pn	16 55 22.8	+0.1
SNGZ	Shannon Statio	1.65	2	P	Pn	16 55 23.6	+0.5
PAWZ	Paruwai Farm	1.68	235	P	Pn	16 55 23.0	-0.3
WNVZ	Wahianoa	1.69	310	P	Pn	16 55 24.8	+1.2
TUVZ	Tukino	1.70	313	P	Pn	16 55 25.0	+1.3
WHVZ	Whangaehu Hut	1.72	311	P	Pn	16 55 25.3	+1.1
MRHZ	Matea Rd	1.73	338	P	Pn	16 55 24.9	+0.8
MTVZ	Mangateitei	1.73	307	P	Pn	16 55 25.3	+1.2
ETVZ	East Tongariro	1.76	317	P	Pn	16 55 25.6	+1.0
SNVZ	South Ngauruho	1.76	315	P	Pn	16 55 25.6	+0.9
FWVZ	Far West T-bar	1.76	311	P	Pn	16 55 25.7	+1.0
OTVZ	Oturere	1.76	316	P	Pn	16 55 25.6	+0.9
RIGZ	Rimuhau	1.77	13	P	Pn	16 55 25.1	+0.4
TMVZ	Te Maari	1.78	317	P	Pn	16 55 25.8	+1.0
CAW	Cannon Point	1.79	247	P	Pn	16 55 24.7	-0.2
NGZ	Ngauruhoe	1.79	314	P	Pn	16 55 26.0	+1.0
NTVZ	North Tongarir	1.81	317	P	Pn	16 55 26.1	+0.9
RITZ	Rihia Road	1.81	323	P	Pn	16 55 26.3	+1.1
NNVZ	North Ngauruho	1.81	315	P	Pn	16 55 26.3	+0.9
KRVZ	Karewarewa	1.83	317	P	Pn	16 55 26.5	+1.0
RTZ	Ruatahuna	1.83	353	P	Pn	16 55 26.2	+0.7
KIW	Kapiti Island	1.83	256	P	Pn	16 55 25.7	+0.2
WTVZ	West Tongariro	1.84	315	P	Pn	16 55 26.6	+0.9
PKVZ	Pokaka	1.86	307	P	Pn	16 55 26.9	+1.0
WAZ	Wanganui	1.87	291	P	Pn	16 55 27.5	+1.5
PLWZ	Palliser	1.89	233	P	Pn	16 55 25.5	-0.8
KATZ	Kakaramea	1.89	320	P	Pn	16 55 27.2	+0.8
RATZ	Rangitukua	1.94	323	P	Pn	16 55 27.9	+0.9
RAGZ	Rawiri	1.94	4	P	Pn	16 55 27.3	+0.2
TWVZ	Taurewa	1.95	314	P	Pn	16 55 27.9	+0.6
MUGZ	Murupara	1.99	349	P	Pn	16 55 28.0	+0.4
ALRZ	Allen Road	2.00	339	P	Pn	16 55 28.4	+0.6
WHTZ	Whakaora	2.03	330	P	Pb	16 55 30.6	-2.1
PRRZ	Plateau Road	2.05	341	P	Pn	16 55 28.9	+0.5
TKGZ	Te Karaka	2.05	13	P	Pn	16 55 28.5	+0.1
CNGZ	Carnagh Statio	2.08	21	P	Pn	16 55 29.3	+0.3
WPRZ	Whakapapatarin	2.09	336	P	Pn	16 55 29.5	+0.4
MWZ	Matawai	2.11	6	P	Pn	16 55 29.3	-0.1
RRRZ	Republican Roa	2.17	344	P	Pn	16 55 30.5	+0.3
HRRZ	Handcock Road	2.18	340	P	Pn	16 55 30.9	+0.7
URZ	Urewera	2.18	357	P	Pn	16 55 30.2	0.0
HSRZ	Hossack Road	2.26	339	P	Pn	16 55 31.9	+0.5
TARZ	Mount Tarawera	2.27	345	P	Pn	16 55 32.3	+0.6
TWGZ	Tauwhareparae	2.33	14	P	Pn	16 55 32.5	+0.2
VRZ	Vera Road	2.33	303	P	Pn	16 55 32.9	+0.6
TCW	Tory Channel	2.39	250	P	Pn	16 55 33.4	+0.3
LREZ	Lake Rotokare	2.40	293	P	Pn	16 55 34.9	+1.6
PUZ	Puketiti	2.49	19	P	Pn	16 55 34.0	-0.5
TLZ	Tolley Road	2.49	327	P	Pn	16 55 35.0	+0.5
RUGZ	Raukumara Rang	2.49	8	P	Pn	16 55 34.2	-0.5
PKGZ	Pakihiroa	2.62	14	P	Pn	16 55 36.4	0.0
OPRZ	Ohinepanea	2.65	348	P	Pn	16 55 37.2	+0.5
HIZ	Hauiti	2.67	315	P	Pn	16 55 37.3	+0.3
NEZ	North Egmont	2.69	295	P	Pn	16 55 39.4	+2.0
TUWZ	Tuamarina	2.70	247	P	Pn	16 55 37.9	+0.5
HAZ	Te Kaha	2.71	9	P	Pn	16 55 37.7	+0.2
WMGZ	Waiomatatini S	2.77	19	P	Pn	16 55 38.1	-0.2
PKE	Pukeiti	2.81	295	P	Pn	16 55 40.6	+1.7
BSWZ	Blackbirch Sta	2.85	242	P	Pn	16 55 38.9	-0.6
TOZ	Tahuroa Road	3.03	333	P	Pn	16 55 42.1	+0.2
MRNZ	Matariki Terra	3.54	253	P	Pn	16 55 48.9	-0.1
QRZ	Quartz Range	3.62	262	P	Pn	16 55 49.3	-0.7
ETAZ	East Tamaki Re	3.92	332	P	Pn	16 55 54.8	+0.5
AWAZ	Awhitu Peninsu	3.94	328	P	Pn	16 55 55.3	+0.9
WTAZ	Waiatarua	4.08	328	P	Pn	16 55 57.1	+0.7
LTZ	Lake Taylor	4.41	236	P	Pn	16 56 00.9	0.0
AKCZ	Akaroa Harbour	4.71	222	P	Pn	16 56 04.3	-0.7
MQZ	McQueen's Vall	4.73	225	P	Pn	16 56 03.4	-1.9
MHCZ	Mount Hutt	5.25	232	P	Pn	16 56 11.8	-0.6
CTZ	Chatham Island	5.63	128	P	Pn	16 56 20.2	+2.6
CTZ				S	Sn	16 57 17.9	-3.1
TMZ	Timaru	6.08	227	P	Pn	16 56 23.0	-0.8

IDC ***10*** *16:55:22.9±3.6, 14˚52N×93˚54W, h0^{km}, mb3.6/3, mbtmp3.4/5, ML3.3/2, MS2.2/1, Error ellipse: s-maj=113.6km s-min=45.9km az=41.0*

ISC 10 16:55:28.8±2.0**, 14˚6N**±0˚3×**93˚7W**±0˚5**, h36^{km}, n6, σ0ˢ68**/7**, mb3.8**/3**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	2.73	334	Pn	Pn	16 56 09.8	-0.3
	2.2nm,0.3s,baz=182,slow=13,SNR=20						
CMIG				Sn	Sn	16 56 42.1	+0.2
	4.7nm,0.3s,baz=82,slow=12,SNR=5.7						
CMIG				LR	LR	16 57 00.8	
	comp=Z,43nm,19.4s,baz=228,slow=34						
	5.4nm,0.3s						
TXAR	Lajitas Array	17.33	329	P	P	16 59 28.3	-0.8
	baz=145,slow=13,SNR=2.8						
	0.5nm,0.9s						
NVAR	Mina Array Bea	32.20	322	P	P	17 01 54.5	+0.8
	0.2nm,0.6s,baz=139,slow=8.4,SNR=1.6						
	0.2nm,0.6s						
YKA	Yellowknife Ar	50.07	347	P	P	17 04 19.9	+0.1
	0.7nm,0.7s,baz=154,slow=7.7,SNR=10						
	0.7nm,0.7s						
NOA	NORSAR Array B	84.36	28	P	P	17 07 57.4	+0.2
	0.6nm,0.8s,baz=291,slow=4.8,SNR=3.4						
	0.6nm,0.8s						
CMAR	Chiang Mai Arr	144.87	339	PKPbc	PKPab	17 15 01.3	-0.6
	0.3nm,0.4s,baz=343,slow=2.8,SNR=2.5						

*FUNV **10** 17:01:56.5, 6°.25N×72°.72W, h5^{km}, MW3.5*
*RSNC **10** 17:02:00.5±0.8, 6°.80N×73°.14W, h142^{km}±3^{km}, ML3.0, Mw3.4*
ISC 10 17:01:57.7±1.3**, 6°.89N**±0°.03×**73°.08W**±0°.03**, h157**^{km}±8^{km}**, n29,** σ**1^{s}.53**/57**, 5C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.32	199	⇑*i*P	Pn	17 02 19.7	+0.2
BARC				*e*S	Sn	17 02 34.9	-1.2
BARC				*i*		17 02 36.3	
	comp=Z,244nm,0.5s						
PAMC	Pamplona, Colo	0.58	40	⇑*i*P	Pn	17 02 22.4	+1.5
PAMC				*e*S	Sn	17 02 39.0	+0.5
PAMC				*i*		17 02 41.5	
	comp=Z,296nm,0.5s						
BRRC	Barranca, Sant	0.67	289	⇑*i*P	Pn	17 02 21.4	+0.7
BRRC				*e*S	Sn	17 02 38.4	+0.1
BRRC				*i*		17 02 41.6	
	comp=Z,220nm,0.2s						
RUSC	La Rusia	0.99	180	*e*P	Pn	17 02 23.6	-0.2
RUSC				*e*S	Sn	17 02 42.0	-1.6
RUSC				*i*		17 02 44.2	
	comp=Z,227nm,0.3s						
CAPV	Capacho	1.23	38	⇑*i*P	Pn	17 02 27.5	+2.0
CAPV				*e*S	Sn	17 02 47.3	+0.7
TAMC	Tame, Arauca	1.35	110	⇑*i*P	Pn	17 02 28.0	+1.6
TAMC				*i*		17 02 48.6	
	comp=Z,48nm,0.4s						
TAMC				*e*S	Sn	17 02 49.4	+1.0
PTBC	PUERTO BERRIO,	1.42	256	*e*P	Pn	17 02 26.6	-0.3
PTBC				*e*S	Sn	17 02 47.4	-2.1
PTBC				*i*		17 02 49.6	
	comp=Z,183nm,0.3s						
SPBC	San Pablo de B	1.58	219	*e*P	Pn	17 02 28.7	-0.1
SPBC				*e*S	Sn	17 02 50.9	-1.8
SPBC				*i*		17 02 55.8	
	comp=Z,206nm,0.2s						
ZARC	Zaragoza, Cauc	1.86	289	*e*P	Pn	17 02 32.5	+0.8
ZARC				*e*S	Sn	17 02 58.1	+0.1
ZARC				*i*		17 03 03.0	
	comp=Z,164nm,0.3s						
NORC	Norcasia	2.22	234	*e*P	Pn	17 02 35.8	-0.1
NORC				*e*S	Sn	17 03 03.8	-1.5
NORC				*i*		17 03 09.9	
	comp=Z,72nm,0.2s						
CHIC	Chingaza	2.34	196	*e*P	Pn	17 02 38.2	+0.4
CHIC				*e*S	Sn	17 03 06.8	-1.8
CHIC				*i*		17 03 14.6	
	comp=Z,41nm,0.5s						
ROSC	El Rosal	2.39	211	*e*P	Pn	17 02 40.3	+2.0
ROSC				*e*S	Sn	17 03 09.9	+0.4
ROSC				*i*		17 03 16.6	
	comp=Z,84nm,0.4s						
HELC	Santa Helena	2.54	254	*e*P	Pn	17 02 42.1	+2.1
HELC				*e*S	Sn	17 03 12.0	-0.6
HELC				*i*		17 03 17.9	
	comp=Z,70nm,0.4s						
UREC	San Jos de Ur	2.58	289	*e*P	Pn	17 02 39.7	-0.5
UREC				*e*S	Sn	17 03 11.2	-1.8
UREC				*i*		17 03 22.7	
	comp=Z,96nm,0.2s						
SOCV	Socops	2.60	58	*e*P	Pn	17 02 39.3	-1.1
SOCV				*e*S	Sn	17 03 13.1	-0.3
GUY2C	Guyana, Caldas	2.82	234	*e*P	Pn	17 02 45.5	+1.9
GUY2C				*e*S	Sn	17 03 18.7	-0.3
GUY2C				IAML		17 03 25.0	
	comp=Z,38nm,0.2s						
PTGC	Puerto Gaitan,	2.84	161	*e*P	Pn	17 02 43.1	-0.3
PTGC				*e*S	Sn	17 03 16.4	-2.3
PTGC				*i*		17 03 23.4	
	comp=Z,54nm,0.3s						
CBOC	Ciudad Bolivar	3.09	251	*e*P	Pn	17 02 48.7	+2.0
CBOC				*e*S	Sn	17 03 23.1	-1.6
CBOC				*i*		17 03 33.1	
	comp=Z,20nm,0.4s						
DBBC	Dabeiba	3.11	272	*e*P	Pn	17 02 47.5	+0.6
DBBC				*e*S	Sn	17 03 23.4	-1.5
DBBC				*i*		17 03 28.1	
	comp=Z,37nm,0.3s						
ANIL	Santa Ana	3.33	224	*e*P	Pn	17 02 52.1	+2.3
ANIL				*e*S	Sn	17 03 30.9	+0.7
ANIL				*i*		17 03 39.2	
	comp=Z,79nm,0.4s						
PRAC	Prado	3.64	210	*e*P	Pn	17 02 53.8	+0.2
PRAC				*e*S	Sn	17 03 35.6	-1.4
PRAC				*i*		17 03 39.4	
	comp=Z,39nm,0.2s						
SJCC	San Jacinto, C	3.64	325	*e*P	Pn	17 02 53.6	0.0
SJCC				*e*S	Sn	17 03 35.1	-1.9
SJCC				*i*		17 03 39.3	
	comp=Z,23nm,0.5s						
ORTC	Ortega, Tolima	3.67	216	*e*P	Pn	17 02 54.6	+0.6
ORTC				*e*S	Sn	17 03 38.7	+1.0
ORTC				*i*		17 03 42.0	
	comp=Z,21nm,0.4s						
CRJC	Cerrejon, Guaj	4.10	3	*e*P	Pn	17 03 00.1	+0.4
CRJC				*e*S	Sn	17 03 46.2	-1.7
CRJC				*i*		17 03 52.9	
	comp=Z,14nm,0.2s						
YOTC	Yotoco, Valle	4.35	229	*e*P	Pn	17 03 03.9	+0.9
YOTC				*e*S	Sn	17 03 52.3	-1.4
CURV	Curarigua	4.37	45	*e*P	Pn	17 03 04.7	+1.5
SMRC	Santa Marta, M	4.39	345	*e*P	Pn	17 03 05.9	+2.6
SMRC				*e*S	Sn	17 03 52.7	-1.7
SMRC				*i*		17 03 54.0	
	comp=Z,9.1nm,0.4s						
BAUV	El Baul	5.39	67	*e*P	Pn	17 03 15.8	-0.7
BAUV				*e*S	Sn	17 04 13.9	-4.0
POPC	Popayan, Colom	5.62	220	*e*P	Pn	17 03 23.7	+3.9
POPC				*e*S	Sn	17 04 23.9	+0.1

IDC 10 17:17:38.8±4.7**, 15°.36S**×**173°.45W, h0**^{km}**, mb3.6**/3**, mbtmp3.6**/4**, ML3.3**/1**, Error ellipse: s-maj=248.5km s-min=24.8km az=145.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.16	49	Pn	Pn	17 18 15.8	-0.4
	9.2nm,0.3s,baz=231,slow=6.5,SNR=10						
AFI				Sn	Sn	17 18 37.4	-6.3
	18nm,0.3s,baz=227,slow=23,SNR=10.0						
	23nm,0.4s						
H11S2	WAKE ISLAND Hy	38.90	329	T	T	18 05 39.9	
	baz=149,slow=76,SNR=47						
H11S3	WAKE ISLAND Hy	38.91	329	T	T	18 05 41.3	
	baz=149,slow=76,SNR=25						
H11S1	WAKE ISLAND Hy	38.92	329	T	T	18 05 40.1	
	baz=149,slow=76,SNR=30						
H11N3	WAKE ISLAND Hy	39.85	330	T	T	18 06 49.3	
	baz=150,slow=76,SNR=24						
H11N1	WAKE ISLAND Hy	39.86	330	T	T	18 06 51.3	
	baz=150,slow=76,SNR=26						
H11N2	WAKE ISLAND Hy	39.87	330	T	T	18 06 50.5	
	baz=150,slow=76,SNR=23						
WRA	Warramunga Arr	49.81	257	P	P	17 26 33.1	-0.8
	0.5nm,0.8s,baz=89,slow=6.7,SNR=5.3						
	0.5nm,0.8s						
ASAR	Alice Springs	50.08	252	P	P	17 26 36.2	+0.3
	1.4nm,0.6s,baz=85,slow=7.9,SNR=56						
	1.4nm,0.6s						
ILAR	Eielson Array	82.41	11	P	P	17 30 02.8	+0.4
	0.1nm,0.5s,baz=212,slow=5.0,SNR=1.4						
	0.1nm,0.5s						

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*IDC **10** 17:18:04.4±2.0, 72°.67N×4°.92E, h0^{km}, mb3.4/1, mbtmp3.4/6, ML2.6/5, MS3.0/1, Error ellipse: s-maj=26.6km s-min=22.6km az=96.0*
*BER **10** 17:18:05.2±2.1, 72°.89N×4°.11E, h10^{km}, ML2.1, Confirmed Earthquake*
ISC 10 17:18:05.0±1.4**, 72°.84N**±0°.09×**5°.2E**±0°.1**, h10**^{km}**, n31,** σ**1^{s}.24**/29**, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSPB	Hornsund (broa	4.97	28	*e*P	Pn	17 19 19.1	-0.4
TRO	Tromso	5.46	119	*e*P	Pn	17 19 27.8	+1.6
TRO				IAML		17 20 30.7	
	comp=Z,3.3nm,0.5s						
LOF	Lofoten	5.49	145	*e*P	Pn	17 19 27.9	+1.3
LOF				IAML		17 20 47.1	
	comp=Z,5.1nm,0.9s						
BRBA	Barentsburg A	5.71	19	*e*P	Pn	17 19 28.4	-1.3
JETT	Jettan, Norway	5.91	116	*e*P	Pn	17 19 33.9	+1.5
JETT				*e*S	Sn	17 20 38.8	-1.2
JETT				IAML		17 20 45.6	
	comp=Z,4.1nm,0.8s						
STEI	Steigen	5.97	141	*e*P	Pn	17 19 33.9	+0.8
STEI				*e*S	Sn	17 20 40.2	-1.2
STEI				IAML		17 20 41.7	
	comp=Z,3.0nm,1.2s						
SPA0	Spitsbergen Ar	6.04	22	*e*P	Pn	17 19 35.7	+1.6
SPITS	Spitsbergen Ar	6.04	22	Pn	Pn	17 19 35.6	+1.4
	baz=209,slow=16						
	comp=Z,0.7nm,0.3s						
HAMF	Hammerfest	6.20	102	*e*P	Pn	17 19 37.1	+0.8
HAMF				*e*S	Sn	17 20 46.4	-0.7
HAMF				IAML		17 21 11.2	
	comp=Z,4.8nm,0.8s						
KIF	Kilpisjarvi	6.38	119	*e*P	Pn	17 19 40.4	+1.6
FAUS	Fauske	6.46	143	*e*P	Pn	17 19 40.6	+0.7
KONS	Konsvik	6.93	153	*e*P	Pn	17 19 47.1	+0.7
KTK1	Kautokeino	7.02	114	*e*P	Pn	17 19 50.0	+2.3
STOK	Stokkvaagen	7.07	154	*e*P	Pn	17 19 48.7	+0.3
SALU	Saltoluokta	7.09	134	*e*P	Pn	17 19 49.7	+1.1
ARA0	ARCESS Array S	7.33	107	*e*P	Pn	17 19 53.6	+1.8
ARCES	ARCESS Array B	7.33	107	Pn	Pn	17 19 53.1	+1.3
	comp=Z,0.2nm,0.3s,baz=310,slow=12,SNR=20						
ARCES				Sn	Sn	17 21 13.8	-1.1
	comp=Z,0.1nm,0.3s,baz=311,slow=23,SNR=1.7						
	comp=Z,1.4nm,0.5s						
DBG	Daneborg	7.33	294	*i* P	Pn	17 19 44.3	-7.4
DBG				*i* S	Sn	17 20 56.8	-18
DBG	Daneborg	7.33	294	*e*P	Pn	17 19 45.1	-6.7
DAG	Danmarks Havn	7.36	313	*i* P	Pn	17 19 45.5	-6.7
DAG				*e*S	Sn	17 20 56.9	-19
DAG				IAML		17 21 00.8	
	comp=Z,3.5nm,0.3s						
DAG	Danmarks Havn	7.36	313	*e*P	Pn	17 19 46.4	-5.8
DAG				*e*S	Sn	17 20 58.7	-17
MOR8	Moi Rana	7.43	150	*e*P	Pn	17 19 54.5	+1.3
HEF	Hetta	7.55	117	*e*P	Pn	17 19 56.6	+1.8
KEV	Kevo	7.63	103	*e*P	Pn	17 19 56.3	+0.4
VADS	Vadso	8.12	98	*e*P	Pn	17 20 03.5	+0.8
NOR	Nord	9.93	341	*i* P	Pn	17 20 18.2	-9.1
NOA	NORSAR Array B	12.07	166	Pn	Pn	17 20 57.1	+0.3
	baz=346,slow=13,SNR=1.9						
	comp=Z,0.3nm,0.8s						
HFS	Hagfors	13.18	161	Pn	Pn	17 21 11.2	-0.6
	comp=Z,0.2nm,0.3s,baz=346,slow=11,SNR=8.1						
	comp=Z,0.5nm,0.3s						
FINES	FINESS Array B	13.89	135	Pn	Pn	17 21 22.1	+0.6
	comp=Z,0.1nm,0.3s,baz=340,slow=12,SNR=4.0						
	comp=Z,1.3nm,0.7s						
KIRV	Kirov	22.34	106	LR	LR	17 31 04.1	
	comp=Z,38nm,21.4s,baz=130,slow=35						
TORD	Torodi Ar. Bea	59.70	184	P	P	17 28 09.3	-0.1
	comp=Z,0.3nm,0.8s,baz=12,slow=7.4,SNR=2.3						
	comp=Z,0.3nm,0.8s						

DJA 10 17:31:51.9±0.3**, 8°S**±4°×**11°8E**±°**, h10**^{km}**, M3.7**/10**, mb4.1**/1**, MLv3.5**/10**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	1.00	225	P	Pg	17 32 10.9	-0.2
PLAI				S	Sg	17 32 24.1	0.0
TWSI	Taliwang, Sumb	1.71	249	P	Pn	17 32 22.0	+0.3
BSSI	Bau Bau, Buton	2.79	45	P	Pn	17 32 36.7	0.0
BASI	Baing, Sumba	2.93	135	P	Pn	17 32 38.7	+0.1
BKSI	Bulukumba	3.22	30	P	Pn	17 32 42.4	-0.1
SRBI	Singaraja	3.25	270	P	Pn	17 32 43.4	+0.5
IGBI	Denpasar	3.38	258	P	Pn	17 32 44.7	-0.1
MMRI	Maumere	3.74	98	P	Pn	17 32 49.7	-0.1
JAGI	Jajag, Banyuwa	4.31	265	P	Pn	17 32 57.8	+0.3
SPSI	Sidrap Palu	4.32	17	P	Pn	17 32 56.9	-0.8
SOEI	Soe	5.93	106	P	Pn	17 33 20.2	+0.2

ROM 10 17:35:05.1±0.1**, 42°.620N**±0°.006×**13°.340E**±0°.006**, h8**^{km}**, ML1.1**/5**, 2C-1D, Error ellipse: s-maj=0.7km s-min=0.2km az=210.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMA1	SAN MARTINO	0.01	343	P	Pg	17 35 06.7	0.0
SMA1				S	Sg	17 35 07.4	-0.4
SMA1				AML	AML		
	comp=N,1635µm,0.2s						
SMA1				AML	AML		
	comp=E,2640µm,0.2s						
CAMP	Campotosto	0.10	149	⇓P	Pg	17 35 08.0	+0.5
CAMP				S	Sg	17 35 09.8	+0.6
T1246	Crognaleto (TE	0.12	108	⇑P	Pg	17 35 08.5	+0.7
T1246				S	Sg	17 35 10.5	+0.8
RM33	Pellescritta (	0.14	220	AML	AML		
	comp=E,157µm,0.4s						
RM33				AML	AML		
	comp=N,180µm,1.1s						
TERO	Teramo	0.20	89	⇑P	Pg	17 35 09.8	+0.7
TERO				S	Sg	17 35 13.0	+1.2
TERO				AML	AML		
	comp=E,496µm,0.1s						
TERO				AML	AML		
	comp=N,426µm,0.1s						
GIGS	Gran Sasso	0.24	135	P	Pg	17 35 10.5	+0.6
GIGS				S	Sg	17 35 14.3	+1.2
T1241	Roccafluvione,	0.25	16	P	Pg	17 35 10.8	+0.7
T1212	Cascia, Frazio	0.25	301	P	Pg	17 35 10.9	+0.7
T1212				S	Sb	17 35 15.3	-1.3
T1212				AML	AML		
	comp=E,58µm,1.6s						
T1212				AML	AML		
	comp=N,42µm,1.3s						
T1212				AML	AML		
	comp=E,58µm,0.4s						
T1212				AML	AML		
	comp=N,42µm,0.7s						
T1245	Castelsantange	0.26	335	AML	AML		
	comp=E,50µm,1.5s						
T1245				AML	AML		
	comp=E,50µm,0.5s						
T1245				AML	AML		
	comp=N,57µm,0.2s						
T1215	Vallo di Nera,	0.39	298	P	Pg	17 35 13.3	+0.6
T1215				AML	AML		
	comp=N,28µm,1.6s						
T1215				AML	AML		
	comp=N,28µm,0.4s						
T1215				AML	AML		
	comp=E,28µm,1.5s						

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*STR **10** 17:38:20.1±1.7, 43°N±6°×°±°, h5^{km}, MLv2.2/7, Error ellipse: s-maj=0.0km s-min=0.0km az=63.2, preliminary*
*LDG **10** 17:38:21.5±0.2, 43°.00N×1°.52W, h10^{km}, Md2.5/2, Ml2.5/18, Error ellipse: s-maj=4.3km s-min=3.4km az=127.0*
*MDD **10** 17:38:23.1±0.2, 43°.00N×1°.67W, h12^{km}, mb_Lg2.4/15, Error ellipse: s-maj=2.5km s-min=1.6km az=166.0*
ISC 10 17:38:21.6±0.9**, 43°.04N**±0°.02×**1°.54W**±0°.02**, h20**^{km}±3^{km}**, n44,** σ**1^{s}.54**/82**, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EALK	Alkurruntz	0.18	7	Pg	Pb	17 38 26.8	+0.9
EALK				Sg	Sg	17 38 31.4	+1.4
EALK				*i* Vmb_Lg		17 38 34.0	
EALK	Alkurruntz	0.18	7	Pg	Pg	17 38 27.1	+0.5
EALK				Sg	Sg	17 38 32.5	+2.5
SJPF	Ste Jean	0.24	72	*e*Pg	Pb	17 38 26.8	-0.4
SJPF				*e*Sg	Sg	17 38 31.8	+0.5
	81nm,0.3s						
OSSF	Osses	0.29	43	Pg	Pg	17 38 28.6	+0.4
OSSF				Sg	Sg	17 38 35.4	+2.6
ATE	Arette	0.61	85	Pg	Pb	17 38 33.3	-0.4
TERF	Tercis-les-Bai	0.71	26	Pg	Pn	17 38 37.5	+0.9
ETSF	Etsaut	0.73	101	*e*Pg	Pb	17 38 33.8	-2.0
ETSF				*e*Sg	Sb	17 38 44.3	-1.1
	34nm,0.3s						
CANF	Canfranc	0.80	110	Pg	Pb	17 38 36.0	-1.0
CANF				Sg	Sg	17 38 48.8	+0.8
VIEF	Viey	1.16	97	Pn	Pn	17 38 42.7	-0.1
VIEF				Sg	Sg	17 38 59.7	+0.4
ECHI	Chisagues Biel	1.33	106	Pn	Pn	17 38 45.8	+0.6
ECHI				Sn	Sg	17 39 04.6	-0.2
ECHI				*i* Vmb_Lg		17 39 07.4	
ECHI	Chisagues Biel	1.33	106	Pg	Pn	17 38 46.0	+0.7
ECHI				Sn	Sg	17 39 04.5	-0.2
EPF	Esparros	1.38	90	*e*Pg	Pn	17 38 46.0	+0.2
EPF				*e*Sg	Sb	17 39 05.0	+1.1
	17nm,0.2s						
ELAN	Lanestosa	1.40	279	Pg	Pn	17 38 46.5	+0.4
ELAN				Sg	Sn	17 39 04.3	+0.2
ELAN				*i* Vmb_Lg		17 39 09.9	
ESAC	San Caprasio	1.54	149	Pn	Pn	17 38 47.7	-0.3
ESAC				Sn	Sn	17 39 07.6	+0.1
ESAC				*i* Vmb_Lg		17 39 13.4	
ETOR	Torete	2.25	190	Pn	Pn	17 38 57.5	-0.4
ETOR				Sn	Sn	17 39 25.0	-0.1
ETOR				*i* Vmb_Lg		17 39 31.8	
ERTA	Horta de San J	2.50	146	Pn	Pn	17 39 02.9	+1.5
ERTA				Sn	Sn	17 39 33.0	+1.7
ERTA				*i* Vmb_Lg		17 39 44.1	
LFF	La Frestale	2.51	40	*e*P	Pb	17 39 04.4	-1.7
LFF				*e*Sn	Sn	17 39 31.3	-0.1
	8.9nm,0.3s						
EPOB	Poblet	2.57	130	Pn	Pn	17 39 03.4	+1.1
EPOB				Sn	Sn	17 39 35.6	+2.6
EPOB				*i* Vmb_Lg		17 39 50.4	
EARI	Arriondas	2.70	277	Pn	Pn	17 39 05.0	+1.0
EARI				Sn	Sn	17 39 36.2	+0.1
EARI				*i* Vmb_Lg		17 39 51.7	
MTLF	Montolieu	2.76	82	*e*P	Pn	17 39 05.2	+0.4
MTLF				*e*Sn	Sn	17 39 34.8	-2.8
	3.4nm,0.3s						
EMOS	Mosqueruela	2.79	163	Pg	Pb	17 39 12.1	+1.2
EMOS				Sn	Sn	17 39 38.7	+0.1
EMOS				Sg	Sb	17 39 46.3	+1.5
EMOS				*i* Vmb_Lg		17 39 56.1	
GUD	Guadarrama	3.09	220	Pn	Pn	17 39 08.7	-0.8
GUD				Sn	Sn	17 39 45.1	-0.9
GUD				*i* Vmb_Lg		17 39 56.1	
RJF	Les Rejaudoux	3.15	43	*e*Pn	Pn	17 39 10.0	-0.2
RJF	Les Rejaudoux	3.15	43	*e*P	Pn	17 39 12.9	+2.7
RJF				*e*Sn	Sn	17 39 46.3	-1.0
	2.9nm,0.2s						
RJF				*e*Sg	Sg	17 40 03.4	+0.4
	1.9nm,0.2s						
CAF	Calviac	3.21	53	*e*P	Pn	17 39 11.7	+0.7
CAF				*e*Sn	Sn	17 39 49.4	+0.7
	2.3nm,0.1s						
CAF				*e*Sg	Sg	17 40 04.1	-0.7
	1.6nm,0.2s						
MFF	Saint Martin d	3.70	15	*e*P	Pn	17 39 20.1	+2.4
MFF	Saint Martin d	3.70	15	*e*Pg	Pg	17 39 30.8	-1.7
MFF				*e*Sn	Sn	17 39 59.0	-1.7
MFF				*e*Sg	Sg	17 40 20.6	+0.3
	1.3nm,0.2s						
ESDC	Sonseca Array	3.83	209	*i* Vmb_Lg		17 39 57.1	
ESDC				Sg	Sb	17 40 16.3	+1.8
ECAL	Calabor	4.00	256	Pn	Pn	17 39 19.9	-2.0
ECAL				Sn	Sn	17 40 05.4	-2.9
ECAL				*i* Vmb_Lg		17 40 13.0	
ECAL				Sg	Sg	17 40 26.3	-3.8
LASF	Ste Croix	4.05	73	*e*P	Pn	17 39 22.6	0.0
LASF				*e*Sn	Sn	17 40 05.9	-3.6
	1.0nm,0.2s						
PAB	San Pablo	4.08	212	Pn	Pn	17 39 21.5	-1.5
PAB				Sn	Sn	17 40 09.0	-1.4
PAB				Sg	Sb	17 40 24.5	+2.6
TCF	Toulx Ste Croi	4.21	38	*e*Pn	Pn	17 39 23.9	-0.8
TCF	Toulx Ste Croi	4.21	38	*e*P	Pn	17 39 27.0	+2.3
TCF				*e*Sn	Sn	17 40 13.8	+0.5
	2.1nm,0.3s						
BGF	Bois d'Agland	4.70	40	*e*Pn	Pn	17 39 30.6	-0.9
BGF	Bois d'Agland	4.70	40	*e*P	Pn	17 39 33.4	+1.9
BGF				*e*Sn	Sn	17 40 24.4	-1.0
	4.1nm,0.3s						
VIVF	Saint-Julien-l	4.84	66	*e*P	Pn	17 39 34.4	+1.0
VIVF				*e*Sn	Sn	17 40 25.8	-3.0
	1.3nm,0.3s						
QUIF	Quistinic	5.01	347	*e*P	Pn	17 39 36.6	+0.9
QUIF				*e*Sn	Sn	17 40 30.0	-3.0
	0.7nm,0.2s						
AVF	Avril sur Loir	5.11	41	*e*Pn	Pn	17 39 36.0	-1.1
AVF	Avril sur Loir	5.11	41	*e*P	Pn	17 39 40.0	+2.9
AVF				*e*Sn	Sn	17 40 34.8	-0.7
	1.0nm,0.3s						
SSF	Saint Saulge	5.38	40	*e*Pn	Pn	17 39 39.7	-1.1
SSF	Saint Saulge	5.38	40	*e*P	Pn	17 39 42.7	+1.9
SSF				*e*Sn	Sn	17 40 41.6	-0.5
	1.4nm,0.4s						
ORIF	Oris-en-Rattie	5.67	68	*e*P	Pn	17 39 49.7	+4.8
ORIF				*e*Sn	Sn	17 40 47.9	-1.6
	0.9nm,0.3s						
LOR	Lormes	5.69	40	*e*P	Pn	17 39 46.4	+1.3
	baz=220						
CABF	La Chapelle	6.49	54	*e*P	Pn	17 39 57.3	+1.2

IDC 10 18:10:10.2±4.2**, 5°.01S**×**147°.17E, h184**^{km}±50^{km}**, mb3.0**/2**, mbtmp3.6**/4**, Error ellipse: s-maj=93.1km s-min=32.6km az=108.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.36	180	P	Pn	18 11 16.3	+0.3
	4.5nm,0.8s,baz=2.4,slow=18,SNR=1.8						
PMG				S	Sn	18 12 01.4	-6.4
	9.3nm,0.3s,baz=66,slow=19,SNR=15						
WRA	Warramunga Arr	19.40	219	P	P	18 14 22.2	-0.2
	1.7nm,0.5s,baz=45,slow=11,SNR=18						
ASAR	Alice Springs	22.53	213	P	P	18 14 54.8	0.0
	1.6nm,0.8s,baz=48,slow=8.5,SNR=28						
	1.6nm,0.8s						
SONM	Songino Array	63.63	331	P	P	18 20 20.8	-0.9
	0.2nm,0.4s,baz=145,slow=5.3,SNR=2.7						
	0.2nm,0.4s						
TORD	Torodi Ar. Bea	145.00	286	PKPbc	PKPdf	18 29 26.8	+0.2
	0.2nm,0.4s,baz=72,slow=4.7,SNR=1.8						

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*ISN **10** 18:11:31.8±1.4, 32°.99N×45°.99E, h5^{km}±47^{km}, ML2.5*
*TEH **10** 18:11:34.9, 33°.13N×46°.05E, h10^{km}±187^{km}, ML2.5*
ISC 10 18:11:34.2±1.1**, 33°.13N**±0°.05×**45°.98E**±0°.07**, h6**^{km}±9^{km}**, n6,** σ**0^{s}.75**/10**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBDR	Badra	0.05	243	*e*Pg	Pg	18 11 35.0	-0.6
	baz=160						
IBDR				*e*Sg	Sg	18 11 37.0	+0.5
IBDR				AML	AML	18 11 39.4	
	comp=N,668nm,0.4s						
IBDR				AML	AML	18 11 39.7	
	comp=E,1µm,0.4s						
ILBA	Ilam Banvizeh	0.53	21	Pg	Pg	18 11 44.1	-0.3
ILBA				Sg	Sb	18 11 53.5	-0.4
RAFI	Al-Rafai	1.41	175	*e*Pg	Pg	18 12 01.0	-0.2
RAFI				*e*Sg	Sn	18 12 19.0	-0.3
IDHR	Dehrash	1.60	12	Pg	Pb	18 12 04.8	+0.5
IKFM	Kafar-mosalman	1.61	75	Pg	Pg	18 12 04.3	-0.7
IKFM				Sg	Sg	18 12 27.0	+1.0
IKOM	Komasi	1.65	50	Pg	Pg	18 12 05.0	-0.7

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*VIE **10** 18:22:27.3, 49°.71N×18°.61E, h0^{km}, mb2.8/1, ml2.2/1 29 km ESE of Ostrava Suspected Mining induced.*
*PRU **10** 18:22:28.7±0.0, 49°.82N×18°.48E, h0^{km}, Mining Induced Event Csm, E=8.6e+04*
*IPEC **10** 18:22:28.1±0.2, 49°.82N×18°.57E, h0^{km}, ML2.1/4, Error ellipse: s-maj=1.7km s-min=1.1km az=163.0*
ISC 10 18:22:28.2±0.8**, 49°.79N**±0°.03×**18°.51E**±0°.02**, h0**^{km}**, n25,** σ**0^{s}.87**/46**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.24	282	*e*PG	Pg	18 22 33.8	+1.1
OKC				*e*SG	Sg	18 22 37.5	+1.7
	comp=Z,193nm,0.8s						
MORC	Moravsky Berou	0.63	269	*e*Pg	Pg	18 22 40.5	+0.3
	baz=86						
MORC				*e*Sg	Sg	18 22 48.6	+0.3
	38nm,0.6s,baz=86						
LANS	Liptovska Anna	0.89	135	*e*PG	Pg	18 22 45.4	+0.1
LANS				*e*SG	Sb	18 22 58.5	-0.5
LANS				*e*LG	Lg	18 23 00.1	

OJC	**Ojcow**	0.94	62	ePg	Pg	18 22 45.1	-1.0
OJC				eSg	Sg	18 22 57.1	-1.2
JAVC	**Velka Javorina**	1.08	211	ePg	Pn	18 22 50.1	-0.5
	baz=31						
KRLC	**Kraliky**	1.15	285	ePG	Pg	18 22 49.4	-0.8
KRLC				eSG	Sg	18 23 05.7	+0.5
	comp=Z,27nm,0.5s						
NIE	**Niedzica**	1.22	107	ePg	Pn	18 22 52.5	0.0
NIE				eSg	Sn	18 23 10.7	+0.9
VYHS	**Vyhne**	1.31	170	ePG	Pg	18 22 52.9	-0.4
VYHS				eSG	Sn	18 23 12.4	+0.4
VRAC	**Vranov**	1.34	250	ePg	Pg	18 22 53.6	-0.2
	baz=67						
VRAC				eSg	Sb	18 23 11.6	-0.1
	19nm,0.4s,baz=67						
DPC	**Dobruska-Polom**	1.52	293	ePG	Pn	18 22 56.2	-0.4
DPC				eSG	Sg	18 23 16.6	-0.3
	comp=Z,11nm,0.5s						
KRUC	**Moravsky**	1.56	243	ePG	Pn	18 22 57.3	+0.1
KRUC				eSG	Sg	18 23 18.6	+0.3
KRUC	**Moravsky**	1.56	243	ePg	Pn	18 22 57.2	+0.1
	baz=61						
KRUC				eSg	Sg	18 23 18.5	+0.3
	23nm,0.5s,baz=61						
MODS	**Modra-Piesok**	1.63	210	ePG	Pn	18 22 57.9	-0.2
MODS				eSG	Sg	18 23 20.5	0.0
MODS				eLG	Lg	18 23 23.2	
OSTC	**Ostas**	1.66	298	ePG	Pn	18 22 58.7	+0.1
OSTC				eSG	Sg	18 23 21.7	+0.1
	comp=Z,23nm,0.9s						
UPC	**Upice**	1.76	295	ePG	Pn	18 23 00.3	+0.4
UPC				eSG	Sb	18 23 23.9	-0.1
KSP	**Ksiaz**	1.77	308	ePg	Pn	18 22 59.9	-0.2
KSP				eSg	Sn	18 23 23.4	+0.2
STHS	**Stebnicka Huta**	1.82	101	ePN	Pn	18 23 01.5	+0.8
STHS				eSN	Sg	18 23 27.4	+0.9
STHS				eLG	Lg	18 23 31.2	
GOPC	**GO Pecny, Ondr**	2.41	274	ePG	Pb	18 23 12.3	-0.1
GOPC				eSG	Sg	18 23 44.7	-0.9
	comp=Z,14nm,0.8s						
CONA	**Conrad Observa**	2.55	224	ePn	Pn	18 23 10.0	-0.9
	1.0nm,0.2s						
CONA				eSn	Sn	18 23 41.2	-1.4
	1.8nm,0.3s						
PRU	**Pruhonice**	2.57	276	eSG	Sg	18 23 49.7	-1.1
	comp=Z,6.6nm,0.6s						
PVCC	**Panska Ves**	2.64	288	eSG	Sg	18 23 53.0	+0.1
	comp=Z,12nm,0.4s						
CKRC	**Cesky Krumlov**	2.91	252	eSG	Sg	18 24 00.0	-1.7
	comp=Z,6.4nm,0.7s						
BRG	**Berggiesshubel**	3.12	292	Pg	Pb	18 23 25.4	+0.9
BRG				Sg	Sg	18 24 06.3	-2.1
BRG				Amp		18 24 09.5	
	comp=Z,3.7nm,0.5s						
KHC	**Kasperske Hory**	3.28	260	ePN	Pn	18 23 21.0	+0.1
KHC				ePG	Pb	18 23 29.0	+1.7
KHC				eSG	Sg	18 24 11.6	-2.0
	comp=Z,5.8nm,0.6s						
CLL	**Collm**	3.83	296	eSg	Sg	18 24 30.0	-1.0

DJA 10 18:27:30.2±0.8, 2°S±10°×13°9E±°, h84km±6km, M4.1/11, mb4.0/11, MLv4.2/7

IDC 10 18:27:31.7±1.2, 2°.66S×138°.86E, h0km, mb3.8/5, mbtmp3.8/8, ML3.6/2, MS3.0/13, Error ellipse: s-maj=34.5km s-min=22.8km az=71.0

NEIC 10 18:27:38.5±1.4, 2°.8S±0°.1×138°.8E±0°.1, h44km±10km, mb4.2/17, Error ellipse: s-maj=19.4km s-min=14.2km az=205.0

ISC 10 18:27:33.5±0.6,**2°.70S**±0°.06×**138°.73E**±0°.08,**h10km,n56,** σ**1ˢ.64**/45,**mb4.2**/14,**MS3.1**/9,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	**Sarmi**	0.71	359	P	Pg	18 27 44.5	-2.7
GENI	**Genyem**	1.44	86	P	Pn	18 27 54.6	-5.1
SRPI	**Serui, Papua**	2.62	288	P	Pn	18 28 14.2	-1.7
RKPI	**Ransiki, Papua**	4.70	285	P	Pn	18 28 42.0	-2.5
MMPI	**Merauke**	5.96	164	P	Pn	18 29 07.1	+5.3
	12nm,1.0s,0.1nm						
FAKI	**Fak Fak**	6.47	268	Pn	Pn	18 29 12.3	+3.4
FAKI				Sn	Sn	18 30 23.6	+0.7
FAKI	**Fak Fak**	6.47	268	P	Pn	18 29 09.2	+0.3
	17nm,1.2s,0.1nm						
SIJI	**Sorong**	7.68	284	Pn	Pn	18 29 27.4	+1.9
	0.4nm,0.3s,baz=147,slow=22,SNR=2.5						
SIJI				LR	LR	18 33 20.8	
	comp=Z,97nm,18.6s,baz=122,slow=45						
	1.5nm,0.4s						
SAUI	**Saumlaki**	9.06	234	P	Pn	18 29 51.1	+6.6
	17nm,0.6s						
PMG	**Port Moresby**	10.70	129	Pn	Pn	18 30 06.7	-0.3
	5.2nm,0.8s,baz=316,slow=16,SNR=2.5						
COEN	**Coen**	12.02	159	Pn	Pn	18 30 25.6	+0.6
MTN	**Manton Dam**	12.57	216	Pn	Pn	18 30 33.2	+0.7
SANI	**Sanana**	12.74	273	P	Pn	18 30 33.6	-1.3
	7.3nm,0.8s						
SOEI	**Soe**	15.98	243	Pn	Pn	18 31 17.3	-1.4
SOEI				IAmb	IAmb	18 31 52.6	
	comp=Z,23nm,0.9s						
SOEI	**Soe**	15.98	243	P	Pn	18 31 19.3	+0.5
	comp=Z,21nm,1.3s						
KNRA	**Kununurra**	16.20	217	Pn	Pn	18 31 19.2	-2.2
KNRA				IAmb	IAmb	18 31 34.7	
	comp=Z,8.2nm,0.8s						
DAV	**Davao City (W)**	16.32	307	LR	LR	18 37 04.8	
	comp=Z,34nm,21.4s,baz=116,slow=35						
WB0	**Warramunga Arr**	17.48	194		Pn	18 31 37.6	0.0
WRAB	**Tennant Creek**	17.65	194	P	Pn	18 31 40.1	+0.5
WB2	**Warramunga Arr**	17.66	194	P	Pn	18 31 40.3	+0.5
WRA	**Warramunga Arr**	17.66	194	P	Pn	18 31 38.9	-1.0
	comp=Z,0.3nm,0.3s,baz=18,slow=12,SNR=19						
WRA				S	Sn	18 34 54.0	-2.8
	comp=Z,0.4nm,0.5s,baz=18,slow=25,SNR=3.0						
WRA				LR	LR	18 37 53.7	
	comp=Z,35nm,21.5s,baz=344,slow=35						
	comp=Z,1.8nm,0.6s						
BSSI	**Bau Bau, Buton**	18.50	259	P	P	18 31 45.8	-4.2
	comp=Z,8.0nm,1.9s						
CTA	**Charters Tower**	18.78	158	LR	LR	18 39 21.3	
	comp=Z,133nm,21.0s,baz=349,slow=38						
KAPI	**Kappang**	19.07	263	LR	LR	18 40 25.8	
	comp=Z,31nm,18.2s,baz=95,slow=40						
AS31	**Alice Springs**	21.36	192	P	P	18 32 21.1	-0.1
ASAR	**Alice Springs**	21.36	192	P	P	18 32 21.7	+0.5
	comp=Z,2.3nm,0.7s,baz=19,slow=11,SNR=25						
ASAR				LR	LR	18 40 40.1	
	comp=Z,28nm,21.1s,baz=43,slow=37						
	comp=Z,2.3nm,0.7s						
ASAR	**Alice Springs**	21.36	192	P	P	18 32 20.0	-1.1
HNR	**Honiara**	22.12	109	LR	LR	18 39 53.8	
	comp=Z,565nm,21.7s,baz=325,slow=34						
EIDS	**Eidsvold**	25.48	153	P	P	18 33 02.8	+0.7
PSA00	**Pilbara Seismi**	26.25	223	P	P	18 33 08.9	-0.1
PSA00				IAmb	IAmb	18 33 39.0	
	comp=Z,4.0nm,0.9s						
STKA	**Stephens Creek**	29.14	175	LR	LR	18 45 27.8	
	comp=Z,72nm,19.3s,baz=24,slow=37						
JOW	**Kunigami**	31.05	342	LR	LR	18 43 43.0	
	comp=Z,41nm,20.5s,baz=145,slow=31						
DZM	**Mont Dzumac**	33.10	128	LR	LR	18 46 49.6	
	comp=Z,64nm,21.3s,baz=10,slow=35						
JNU	**Nakatsue**	36.40	349	LR	LR	18 46 40.1	
	comp=Z,20nm,20.2s,baz=143,slow=32						
KSRS	**Korea Array**	41.20	347	LR	LR	18 50 40.0	
	comp=Z,13nm,20.5s,baz=180,slow=34						
PHRA	**Phrae**	43.36	301	P	P	18 35 36.9	+0.6
CM31	**Chiang Mai Arr**	44.45	300	P	P	18 35 46.9	+1.7
CM31				IAmb	IAmb	18 35 49.0	
	comp=Z,4.0nm,1.1s						
CMAR	**Chiang Mai Arr**	44.45	300	P	P	18 35 46.0	+0.8
	comp=Z,1.7nm,1.0s,baz=127,slow=6.1,SNR=8.2						
CMAR				LR	LR	18 56 51.1	
	comp=Z,4.7nm,18.3s,baz=180,slow=40						
	comp=Z,1.7nm,1.0s						
CMAR	**Chiang Mai Arr**	44.45	300	P	P	18 35 46.6	+1.5
PZH	**PanZhiHua**	46.03	311	P	P	18 36 00.5	+2.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
HHC	**Hu-ho-hao-te**	49.93	333	eP	P	18 36 31.5	+3.8
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,250nm,4.9s						
WMQ	**Urumqi**	65.02	322	eP	P	18 38 17.4	+3.4
MK31	**Makanchi Array**	69.79	322	P	P	18 38 44.5	+0.2
MK31				IAmb	IAmb	18 38 48.0	
	comp=Z,1.9nm,0.9s						
MKAR	**Makanchi Array**	69.79	322	P	P	18 38 44.5	+0.3
	comp=Z,1.5nm,0.5s,baz=102,slow=8.5,SNR=27						
	comp=Z,1.5nm,0.5s						
MKAR	**Makanchi Array**	69.79	322	P	P	18 38 44.4	+0.2
MAKZ	**Makanchi**	69.99	322	P	P	18 38 45.5	+0.1
MAKZ				IAmb	IAmb	18 38 49.1	
	comp=Z,3.5nm,0.8s						
PPT	**Papeete**	71.74	108	LR	LR	19 08 01.1	
	comp=Z,22nm,18.2s,baz=158,slow=34						
ZALV	**Zalesovo Beam**	71.94	330	P	P	18 38 56.2	-0.8
	comp=Z,0.2nm,0.3s,baz=139,slow=6.8,SNR=1.8						
	comp=Z,0.2nm,0.3s						
KURK	**Kurchatov**	73.72	325	P	P	18 39 08.1	+0.4
KURK				IAmb	IAmb	18 39 09.0	
	comp=Z,6.4nm,1.4s						
GAR	**Garm**	75.11	311	P	P	18 39 16.6	+0.4
CHGR	**Chuyangaron**	75.89	311	P	P	18 39 20.9	+0.2
KKAR	**Karatay Array**	76.14	316	P	P	18 39 21.7	-0.2
BRVK	**Borovoye**	79.39	325	P	P	18 39 39.2	-0.5
BRVK				IAmb	IAmb	18 39 42.7	
	comp=Z,2.2nm,0.9s						
ABKAR	**Akbulak array**	84.73	320	P	P	18 40 07.2	-0.7
ABKAR				IAmb	IAmb	18 40 11.2	
	comp=Z,1.2nm,0.8s						
ABKAR	**Akbulak array**	84.73	320	P	P	18 40 07.6	-0.2
ILAR	**Eielson Array**	85.82	24	P	P	18 40 12.4	-0.6
	comp=Z,0.5nm,0.9s,baz=272,slow=3.6,SNR=6.4						
	comp=Z,0.5nm,0.9s						

IDC 10 18:42:57.5±1.8, 15°.55S×167°.27E, h0km, mb3.5/4, mbtmp3.6/5, ML3.9/1, Error ellipse: s-maj=53.1km s-min=30.9km az=121.0

NOU 10 18:43:02.2, 15°.70S×167°.21E, h17km, MLv4.4/12, Vanuatu Islands

ISC 10 18:42:59.3±1.3,**15°.68S**±0°.10×**167°.3E**±0°.2,**h10km,n12,** σ**2ˢ.08**/13,**mb3.7**/4,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	5.07	180	P	Pn	18 44 17.6	+2.3
KOUNC	**Koumac, New Ca**	5.61	210	P	Pn	18 44 24.3	+1.5
YATNC	**Mamie plateau,**	6.35	183	P	Pn	18 44 33.1	+0.1
DZM	**Mont Dzumac**	6.40	187	Pn	Pn	18 44 35.0	+1.2
	2.5nm,0.3s,baz=15,slow=20,SNR=109						
DZM				Sn	Sn	18 45 43.7	-3.3
	1.7nm,0.3s,baz=330,slow=23,SNR=9.1						
	4.3nm,0.3s						
DZM	**Mont Dzumac**	6.40	187	P	Pn	18 44 35.5	+1.7
NOUC	**Port Laguerre**	6.45	188	P	Pn	18 44 35.7	+1.4
ONTNC	**Ouen Toro**	6.63	186	P	Pn	18 44 40.1	+3.2
OUENC	**Ouen Island, N**	6.71	183	P	Pn	18 44 40.2	+2.3
WRA	**Warramunga Arr**	31.60	257	P	P	18 49 21.7	-0.8
	0.4nm,0.9s,baz=86,slow=9.2,SNR=2.2						
	0.4nm,0.9s						
ASAR	**Alice Springs**	32.34	250	P	P	18 49 29.4	+0.4
	0.5nm,0.6s,baz=76,slow=9.3,SNR=14						
	0.5nm,0.6s						
SONM	**Songino Array**	83.25	324	P	P	18 55 26.7	+0.5
	0.5nm,0.8s,baz=138,slow=7.0,SNR=2.7						
	0.5nm,0.8s						
ILAR	**Eielson Array**	87.43	18	P	P	18 55 45.2	-1.3
	0.3nm,0.6s,baz=236,slow=4.8,SNR=5.5						
	0.3nm,0.6s						

IDC 10 19:08:07.8±0.9, 39°.52N×54°.03E, h0km, mb3.8/15, mbtmp4.0/26, ML3.6/11, MS3.0/12, Error ellipse: s-maj=17.4km s-min=8.1km az=2.0

MOS 10 19:08:10.7±1.1, 39°.86N×54°.21E, h24km, mb4.2/10, Error ellipse: s-maj=6.0km s-min=4.5km az=41.2

TEH 10 19:08:12.3, 39°.68N×54°.10E, h30km, ML4.0

NEIC 10 19:08:12.5±1.7, 39°.7N±0°.1×54°.15E±0°.10, h28km±6km, mb4.4/51, Error ellipse: s-maj=15.1km s-min=10.8km az=176.0

NNC 10 19:08:14.8±1.8, 40°.10N×54°.93E, h0km, mb4.0, Error ellipse: s-maj=20.4km s-min=8.4km az=78.0

AZER 10 19:08:16.3±0.1, 39°.46N×53°.42E, h11km±5km, Error ellipse: s-maj=9.3km s-min=1.0km az=275.0

ISC 10 19:08:12.8±0.4,**39°.76N**±0°.04×**54°.16E**±0°.03,**h35km,n300,** σ**2ˢ.19**/374,**mb4.2**/47,**MS2.9**/7,**21C-5D,Turkmenistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRVT	**Maraveh tapeh**	2.58	144	Pn	Pn	19 08 53.2	+1.0
IMND	**Minoodasht**	2.68	158	Pn	Pn	19 08 54.3	+0.9
IGLO	**Ghaloghah**	3.26	185	Pn	Pn	19 09 01.4	-0.2
BJRD	**Bojnurd**	3.27	128	Pn	Pn	19 09 02.8	+1.2
NDR	**Nardaran**	3.30	286	P	Pn	19 09 05.3	+3.3
NDR				S	Sn	19 09 42.5	+2.6
NDR	**Nardaran**	3.30	286	Pn	Pn	19 09 05.2	+3.3
GEYT	**Alibeck**	3.59	119	Pn	Pn	19 09 06.3	+0.3
	9.1nm,0.3s,baz=302,slow=15,SNR=56						
GEYT				Sn	Sn	19 09 47.2	0.0
	8.7nm,0.3s,baz=344,slow=14,SNR=4.5						
GEYT				Lg	Lg	19 10 01.9	
	8.7nm,0.3s,baz=344,slow=20,SNR=3.9						
GEYT				LR	LR	19 11 05.2	
	comp=Z,87nm,21.2s,baz=325,slow=50						
	23nm,0.4s						
GYA0	**ALIBECK ARRAY**	3.59	119	P	Pn	19 09 06.7	+0.7
GYA0B	**ALIBECK ARRAY**	3.59	119	⇑Pn	Pn	19 09 06.7	+0.7
GYA0B				⇑Lg	Lg	19 10 01.5	
IPRN	**Peran**	3.79	203	Pn	Pn	19 09 08.3	-0.6
ALIB	**Äli-Bayra**	3.97	275	P	Pn	19 09 13.6	+2.4
ALIB				S	Sn	19 09 52.5	-4.0
ALIB	**Äli-Bayra**	3.97	275	Pn	Pn	19 09 13.5	+2.4
ISHM	**Shahmirzad**	4.00	190	Pn	Pn	19 09 12.5	+0.6
SHRO	**Shahrood**	4.04	158	Pn	Pn	19 09 13.3	+1.1
ISFR	**Sfrayin**	4.05	131	Pn	Pn	19 09 13.8	+1.3
GBS	**Qobustan**	4.07	283	P	Pn	19 09 14.1	+1.4
GBS				S	Sn	19 09 57.3	-1.8
GBS	**Qobustan**	4.07	283	Pn	Pn	19 09 14.0	+1.4
ATGJ	**Altiaghaj**	4.14	287	P	Pn	19 09 17.1	+3.5
ATGJ				S	Sn	19 10 02.6	+1.8
ATGJ	**Altiaghaj**	4.14	287	Pn	Pn	19 09 17.1	+3.5
SIZA	**Siyzn**	4.22	290	P	Pn	19 09 17.5	+2.8
	SNR=8.4						
SIZA				S	Sn	19 10 05.9	+3.0
SIZA	**Siyzn**	4.22	290	Pn	Pn	19 09 17.5	+2.8
IEMG	**Emamgholi**	4.23	122	Pn	Pn	19 09 15.7	+0.7
IFIR	**Firoozkooh**	4.26	196	Pn	Pn	19 09 16.2	+0.8
IANJ	**Anjilo**	4.29	183	Pn	Pn	19 09 17.1	+1.4
LKRN	**Lenkeran, Azer**	4.31	258	P	Pn	19 09 16.1	+0.3
LKRN				S	Sn	19 10 01.6	-3.2
LKRN	**Lenkeran, Azer**	4.31	258	P	Pn	19 09 16.0	+0.3
LKRN	**Lenkeran, Azer**	4.31	258	Pn	Pn	19 09 16.0	+0.3
QALM	**Alamut, Qazvin**	4.33	221	Pn	Pn	19 09 15.0	-1.2
ASTR	**Astara**	4.34	256	P	Pn	19 09 15.7	-0.6
	SNR=7.0						
ASTR				S	Sn	19 10 02.0	-3.6
ASTR	**Astara**	4.34	256	Pn	Pn	19 09 15.6	-0.6
GAS1	**Astara - Iran**	4.36	253	Pn	Pn	19 09 15.6	-0.9
PQL	**Pirkuli**	4.38	285	P	Pn	19 09 19.1	+2.2
PQL				S	Sn	19 10 10.2	+3.4
PQL	**Pirkuli**	4.38	285	Pn	Pn	19 09 19.1	+2.2
SAAT	**Saatly**	4.42	273	S	Sn	19 10 10.4	+2.9
DAMV	**Damavand**	4.47	204	Pn	Pn	19 09 19.1	+0.8
ILAS	**Lasjerd**	4.47	193	Pn	Pn	19 09 19.0	+0.7
GLBA	**Clilabad**	4.49	265	P	Pn	19 09 18.9	+0.5
	SNR=4.6						
GLBA				S	Sn	19 10 07.9	-1.4
GLBA	**Clilabad**	4.49	265	Pn	Pn	19 09 18.8	+0.5
IDMV	**Damavand**	4.50	203	Pn	Pn	19 09 19.6	+0.9
CSN1	**Caspian**	4.53	243	Pn	Pn	19 09 19.8	+0.9
CHTH	**Charan**	4.53	213	Pn	Pn	19 09 19.5	+0.4
IGZV	**Ghazvin**	4.58	224	Pn	Pn	19 09 19.7	-0.1
QUBA	**Quba, Azerbaij**	4.60	292	P	Pn	19 09 22.4	+2.5
QUBA				S	Sn	19 10 14.4	+2.3
KDMR	**Kurdemir**	4.63	280	P	Pn	19 09 22.5	+2.3
KDMR				S	Sn	19 10 13.6	+1.0
THKV	**Tehran--Karaj**	4.63	215	Pn	Pn	19 09 20.9	+0.4
LRK	**Lerik**	4.66	258	P	Pn	19 09 20.5	-0.2
	SNR=30						
LRK				S	Sn	19 10 09.8	-3.8
LRK	**Lerik**	4.66	258	Pn	Pn	19 09 20.5	-0.2
YRD	**Yardimli**	4.67	261	P	Pn	19 09 21.0	0.0
	SNR=186						
YRD				S	Sn	19 10 10.2	-3.7
YRD	**Yardimli**	4.67	261	Pn	Pn	19 09 20.9	0.0
IML	**Ismayilli**	4.69	285	P	Pn	19 09 23.5	+2.4
IML				S	Sn	19 10 15.0	+0.8
QUB	**Quba**	4.70	292	Pn	Pn	19 09 22.4	+1.1
IAKL	**Akhelmad**	4.80	130	Pn	Pn	19 09 24.4	+1.6
XNQ	**Khinaliq**	4.80	289	P	Pn	19 09 25.0	+2.2
	SNR=11						
XNQ				S	Sn	19 10 17.8	+0.5
QSAR	**Qusar**	4.82	293	P	Pn	19 09 26.7	+3.9
	SNR=12						
QSAR				S	Sn	19 10 19.2	+1.8
IHSB	**Hasanabad**	4.88	209	Pn	Pn	19 09 24.9	+1.0
QBL	**Gabala**	4.97	286	P	Pn	19 09 27.2	+2.2
	SNR=5.0						
QBL				S	Sn	19 10 21.4	+0.2
ZRD	**Zardab**	5.00	278	P	Pn	19 09 26.6	+1.4
ZRD				S	Sn	19 10 22.4	+0.6
IPAY	**Payeh**	5.04	129	Pn	Pn	19 09 27.7	+1.6
BLQ	**Beylaqan**	5.09	272	P	Pn	19 09 27.8	+1.2
BLQ				S	Sn	19 10 21.9	-2.1
IVRN	**Varamin**	5.13	203	Pn	Pn	19 09 27.9	+0.6
IKRD	**Kardeh**	5.16	124	Pn	Pn	19 09 29.2	+1.5
AKT	**Akhty**	5.19	291	eP	Pn	19 09 28.9	+0.9
AKT				eS	Sn	19 10 26.9	+0.3
AKT				pmax	pmax		
	comp=Z,28nm,0.3s						
AKT				smax	smax		
	comp=N,205nm,0.4s						
AKT				smax	smax		
	comp=E,211nm,0.4s						
AKT				smax	smax		
	comp=E,172nm,0.3s						
AKT				MLR	MLR		
	comp=Z,17nm,4.0s						
QRD	**Qoradiz**	5.29	269	P	Pn	19 09 30.6	+1.3
QRD				S	Sn	19 10 26.2	-2.8
ZNJK	**Zanjan**	5.30	236	Pn	Pn	19 09 29.9	+0.2
BRDA	**Brd**	5.38	278	P	Pn	19 09 32.3	+1.8
BRDA				S	Sn	19 10 32.0	+0.7
ISRB	**Sarab**	5.43	251	Pn	Pn	19 09 31.1	-0.3
AGDM	**Agdam**	5.43	276	P	Pn	19 09 32.5	+1.3
	SNR=7.3						
AGDM				S	Sn	19 10 30.9	-1.7
IMOG	**Moghan**	5.48	130	Pn	Pn	19 09 33.7	+1.5
IQOM	**Qom**	5.49	208	Pn	Pn	19 09 32.9	+0.6
IRAZ	**Razeghan**	5.49	219	Pn	Pn	19 09 32.7	+0.4
SEKA	**Sheki**	5.50	288	P	Pn	19 09 34.2	+1.9
	SNR=4.9						
SEKA				S	Sn	19 10 34.8	+0.5
SEKA	**Sheki**	5.50	288	P	Pn	19 09 34.1	+1.9
MNGR	**Mingechevir, A**	5.50	283	P	Pn	19 09 33.9	+1.6
MNGR				S	Sn	19 10 34.8	+0.5
MNGR	**Mingechevir, A**	5.50	283	P	Pn	19 09 33.8	+1.6
ISFB	**Sefidab**	5.61	196	Pn	Pn	19 09 34.6	+0.8
IHRS	**Heris**	5.72	258	Pn	Pn	19 09 36.1	+0.6
GHVR	**GHOM**	5.74	204	Pn	Pn	19 09 36.7	+1.1
IMYA	**Miami**	5.80	124	Pn	Pn	19 09 38.1	+1.6
IHSH	**Hashtrud**	5.94	248	Pn	Pn	19 09 38.5	0.0
TVRZ	**Varzaqan**	5.96	260	Pn	Pn	19 09 39.9	+1.3
KRSH	**Karshahi**	6.00	196	Pn	Pn	19 09 39.5	+0.2
ZKTA	**Zakatala**	6.03	291	P	Pn	19 09 42.5	+3.0
ZKTA				S	Sn	19 10 47.0	-0.2
ZKTA	**Zakatala**	6.03	291	P	Pn	19 09 42.4	+3.0
GANJ	**Ganja**	6.07	281	P	Pn	19 09 41.0	+1.0
GANJ				S	Sn	19 10 45.5	-2.7
GANJ	**Ganja**	6.07	281	P	Pn	19 09 41.0	+1.0
GANJ	**Ganja**	6.07	281	Pn	Pn	19 09 41.0	+1.0
TNSJ	**Nastanj**	6.11	160	Pn	Pn	19 09 41.5	+0.9
ASAO	**Ashtian**	6.16	214	Pn	Pn	19 09 42.0	+0.6
DDFL	**Dedoflistskaro**	6.35	288	eP	Pn	19 09 47.3	+3.4
DDFL				eS	Sn	19 10 55.9	+0.8
DDFL	**Dedoflistskaro**	6.35	288	P	Pn	19 09 47.3	+3.4
DDFL				S	Sn	19 10 55.9	+0.8
LGD	**Lagodekhi**	6.36	292	eP	Pn	19 09 46.8	+2.9
LGD				eS	Sn	19 10 55.1	-0.1
LGD	**Lagodekhi**	6.36	292	P	Pn	19 09 46.9	+2.9
LGD				S	Sn	19 10 55.1	-0.1
ORD	**Ordubad**	6.38	265	P	Pn	19 09 45.0	+0.6
	SNR=5.5						
ORD				S	Sn	19 10 52.7	-3.4
ORD	**Ordubad**	6.38	265	Pn	Pn	19 09 45.0	+0.6
QAMS	**Qamsar**	6.41	201	Pn	Pn	19 09 45.1	+0.2
ITBZ	**Tabriz**	6.42	259	Pn	Pn	19 09 45.6	+0.6
GDB	**GEDABAY**	6.50	281	P	Pn	19 09 47.7	+1.6
	SNR=16						
GDB				S	Sn	19 10 56.0	-3.1
TABS	**Tabas**	6.54	158	Pn	Pn	19 09 48.1	+1.5
ANAR	**Anarak**	6.56	183	Pn	Pn	19 09 47.7	+0.8
TKDS	**Koohdasht(Taba**	6.58	158	Pn	Pn	19 09 48.5	+1.4
TBJM	**Torbat-e-JAM**	6.64	131	Pn	Pn	19 09 48.9	+0.8
IMRD	**Marand**	6.65	264	Pn	Pn	19 09 49.2	+1.1
SBZ	**Shahbuz**	6.66	270	P	Pn	19 09 49.9	+1.7
	SNR=5.1						
SBZ				S	Sn	19 11 00.5	-2.4
NAX	**Nakhchivan**	6.73	268	P	Pn	19 09 50.8	+1.6
NAX				S	Sn	19 11 02.8	-1.8
NAX	**Nakhchivan**	6.73	268	P	Pn	19 09 50.7	+1.6
IKLH	**Kolahrood**	6.75	199	Pn	Pn	19 09 50.5	+0.8
ISHB	**Shabestar**	6.81	260	Pn	Pn	19 09 51.1	+0.7
QZX	**Qazax, Azerbai**	6.83	284	P	Pn	19 09 51.7	+1.2
	SNR=9.8						
KHMZ	**Khomeyn**	6.89	211	Pn	Pn	19 09 52.2	+0.8
IZEF	**Zefreh**	7.01	193	Pn	Pn	19 09 53.6	+0.5
TPRV	**Parvadeh(Tabas**	7.02	162	Pn	Pn	19 09 54.3	+1.1
NASN	**Na'in**	7.03	189	Pn	Pn	19 09 54.4	+0.8
HSAM	**Samen**	7.10	220	Pn	Pn	19 09 55.7	+1.3
SNGE	**Sanandaj**	7.14	231	Pn	Pn	19 09 55.4	+0.4
GROC	**Groznyy**	7.16	301	eP	Pn	19 09 55.8	+0.9
GROC				eS	Sn	19 11 17.1	+2.1
HYR	**Heyderabad**	7.17	273	S	Sn	19 11 11.6	-3.9
GNI	**Garni**	7.25	276	Pn	Pn	19 09 57.0	+0.7
	comp=Z,0.8nm,0.3s,baz=3.2,slow=20,SNR=1.7						
GNI				Sn	Sn	19 11 19.0	+1.6
	comp=Z,1.5nm,0.3s,baz=356,slow=19,SNR=1.8						
	comp=Z,3.6nm,0.5s						
GNI	**Garni**	7.25	276	Pn	Pn	19 09 54.5	-1.8
MAKU	**Maku**	7.33	270	Pn	Pn	19 09 58.7	+1.1
YZKH	**Yazd**	7.36	177	Pn	Pn	19 09 59.1	+1.3
SHTL	**Shatili**	7.38	296	eP	Pn	19 10 01.1	+3.0
SHTL				eS	Sn	19 11 17.8	-2.9
SHTL	**Shatili**	7.38	296	P	Pn	19 10 01.1	+3.0
SHTL				S	Sn	19 11 17.9	-2.9
AFRZ	**Afriz**	7.43	147	Pn	Pn	19 10 00.7	+1.9
ICHK	**Chekchek**	7.50	178	Pn	Pn	19 10 01.0	+1.1
IPIR	**Pirpir**	7.54	201	Pn	Pn	19 10 02.4	+2.0
PNSH	**Pansheti**	7.75	295	eP	Pn	19 10 05.8	+2.6
PNSH				eS	Sn	19 11 24.5	-5.2
PNSH	**Pansheti**	7.75	295	P	Pn	19 10 05.8	+2.6
PNSH				S	Sn	19 11 24.6	-5.2
ITEG	**Tejag**	7.78	150	Pn	Pn	19 10 05.2	+1.5
ISAD	**Sadrabad**	7.84	183	Pn	Pn	19 10 05.2	+0.7
SHRT	**Shahrakht**	7.84	139	Pn	Pn	19 10 05.6	+1.2
TRLG	**Trialeti**	7.85	286	eP	Pn	19 10 06.1	+1.5
TRLG				eS	Sn	19 11 27.9	-4.4
TRLG	**Trialeti**	7.85	286	P	Pn	19 10 06.1	+1.5
TRLG				S	Sn	19 11 27.9	-4.4
IKFM	**Kafar-mosalman**	8.03	221	Pn	Pn	19 10 07.5	+0.7
IRAM	**Ramesheh**	8.06	191	Pn	Pn	19 10 08.4	+0.8
BRNG	**Burnasheti**	8.07	287	eP	Pn	19 10 09.6	+2.0
BRNG				eS	Sn	19 11 37.0	-0.6
BRNG	**Burnasheti**	8.07	287	P	Pn	19 10 09.7	+2.0
BRNG				S	Sn	19 11 37.1	-0.6
IBAF	**Bafgh**	8.23	172	Pn	Pn	19 10 11.1	+1.2
AKH	**Akhalkalaki**	8.28	285	Pn	Pn	19 10 10.4	-0.2
AKH	**Akhalkalaki**	8.28	285	P	Pn	19 10 10.4	-0.2
IKOO	**Kooshah**	8.30	150	Pn	Pn	19 10 12.3	+1.4
IMEH	**Mehriz**	8.36	177	Pn	Pn	19 10 12.7	+1.0
ONI	**Oni**	8.56	293	Pn	Pn	19 10 14.8	+0.6
ONI	**Oni**	8.56	293	eP	Pn	19 10 16.8	+2.6
ONI				eS	Sn	19 11 51.7	+2.3
ONI	**Oni**	8.56	293	P	Pn	19 10 16.8	+2.6
ONI				S	Sn	19 11 51.8	+2.3
BSRN	**Basiran**	8.76	151	Pn	Pn	19 10 18.3	+1.2
ILBA	**Ilam Banvizeh**	8.84	229	Pn	Pn	19 10 18.7	+0.5
KBZ	**Khabaz**	9.30	299	Pn	Pn	19 10 23.9	-0.4
	comp=Z,0.5nm,0.3s,baz=107,slow=6.0,SNR=18						
KBZ				Sn	Sn	19 12 04.6	-3.1
	comp=Z,0.9nm,0.3s,baz=180,slow=20,SNR=1.6						
	comp=Z,1.4nm,0.2s						

KBZ	**Khabaz**	9.30	299	ceP	Pn	19 10 24.5	+0.2
SHA1	**Shidzhatmaz**	9.47	299	ceP	Pn	19 10 27.1	+0.3
KVAR	**Kislovodsk Arr**	9.52	300	Pn	Pn	19 10 27.8	+0.3
	baz=94,slow=22						
KVAR				Sn	Sn	19 12 09.3	-4.0
	baz=210,slow=9.3						
	comp=Z,3.8nm,0.4s						
KIV	**Kislovodsk**	9.53	300	Pn	Pn	19 10 27.5	0.0
KIV	**Kislovodsk**	9.53	300	eP	Pn	19 10 28.8	+1.3
KIV				eS	Sn	19 12 15.4	+2.0
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
AB31	**Akbulak array**	10.35	22	⇓Pn	Pn	19 10 37.2	-1.4
	comp=Z,2.5nm,0.4s,baz=192,slow=13,SNR=78						
AB31				⇑Sn	Sn	19 12 27.8	-5.5
	comp=Z,8.7nm,0.5s,baz=187,slow=24,SNR=13						
AB31	**Akbulak array**	10.35	22	P	Pn	19 10 37.2	-1.4
AB31				SN	Sn	19 12 27.8	-5.5
ABKAR	**Akbulak array**	10.35	22	Pn	Pn	19 10 39.6	+0.9
ABKAR	**Akbulak array**	10.35	22	Pn	Pn	19 10 39.3	+0.6
AKTO	**Aktyubinsk**	11.02	13	Pn	Pn	19 10 49.0	+1.2
	comp=Z,1.0nm,0.3s,baz=208,slow=7.1,SNR=14						
AKTO				Sn	Sn	19 12 44.2	-5.5
	comp=Z,7.0nm,0.3s,baz=207,slow=22,SNR=13						
AKTO				LR	LR	19 16 17.5	
	comp=Z,96nm,20.1s,baz=65,slow=43						
	comp=Z,2.4nm,0.3s						
AKTO	**Aktyubinsk**	11.02	13	⇑Pn	Pn	19 10 48.6	+0.8
	comp=Z,6.1nm,0.8s						
AKTO				⇑Sn	Sn	19 12 47.0	-2.6
	comp=Z,16nm,0.6s						
AKTO	**Aktyubinsk**	11.02	13	P	Pn	19 10 48.6	+0.8
AKTO				SN	Sn	19 12 47.2	-2.4
CHGR	**Chuyangaron**	11.69	91	Pn	Pn	19 10 56.7	-0.5
CHGR	**Chuyangaron**	11.69	91	P	Pn	19 10 56.7	-0.5
GAR	**Garm**	12.53	88		Pn	19 11 07.7	-0.9
KK31	**Karatay Array**	12.72	69		Pn	19 11 10.7	-0.4
KK31	**Karatay Array**	12.72	69	Pn	Pn	19 11 09.7	-1.4
	comp=Z,1.1nm,0.3s,baz=253,slow=16,SNR=20						
KK31				⇑Sn	Sn	19 13 24.8	-6.6
	comp=Z,4.1nm,0.7s,baz=271,slow=21,SNR=4.4						
KK31	**Karatay Array**	12.72	69	P	Pn	19 11 09.7	-1.4
KK31				SN	Sn	19 13 24.8	-6.6
KKAR	**Karatay Array**	12.72	69		Pn	19 11 10.6	-0.5
KKAR	**Karatay Array**	12.72	69		Pn	19 11 10.2	-1.0
KKAR	**Karatay Array**	12.72	69	P	Pn	19 11 10.6	-0.5
BELG	**Belogornoye**	13.42	343	Pn	Pn	19 11 20.0	-0.5
	comp=Z,1.3nm,0.3s,baz=90,slow=20,SNR=10.0						
BELG				Sn	Sn	19 13 42.0	-6.2
	comp=Z,3.9nm,0.3s,baz=72,slow=21,SNR=11						
	comp=Z,5.8nm,0.5s						
BELG	**Belogornoye**	13.42	343	P	Pn	19 11 20.0	-0.5
VRH	**Novokhopyorsk**	14.37	327	P	Pn	19 11 31.9	-1.5
VRH				eS	Sn	19 14 05.2	-6.2
VRH				pmax	pmax		
	comp=Z,18nm,0.6s						
AML	**Almayashu**	14.95	75	⇑Pn	Pn	19 11 38.2	-3.6
	comp=Z,0.5nm,0.9s						
AML				⇓Sn	Sn	19 14 17.6	-8.8
	comp=Z,1.1nm,0.7s						
AML	**Almayashu**	14.95	75	P	Pn	19 11 38.2	-3.6
AML				SN	Sn	19 14 17.6	-8.8
VSR	**Storozhevoye**	15.51	323	eP	Pn	19 11 46.0	-2.7
VSR				eS	Sn	19 14 34.4	-4.9
VSR				pmax	pmax		
	comp=Z,20nm,1.0s						
VSR				smax	smax		
	comp=E,50nm,0.9s						
OTUK	**Ortayu**	15.56	51	⇑Pn	Pn	19 11 46.2	-3.2
	comp=E,3.4nm,0.7s						
OTUK				⇓Sn	Sn	19 14 33.2	-7.4
	comp=E,13nm,0.7s						
OTUK	**Ortayu**	15.56	51	P	Pn	19 11 46.2	-3.2
OTUK				SN	Sn	19 14 33.2	-7.4
AAK	**Ala-Archa**	15.57	73	Pn	Pn	19 11 49.0	-0.7
	comp=E,0.2nm,0.3s,baz=220,slow=5.7,SNR=5.4						
AAK				Sn	Sn	19 14 36.6	-4.5
	comp=E,0.1nm,0.3s,baz=258,slow=15,SNR=1.6						
AAK				LR	LR	19 18 07.6	
	comp=E,31nm,20.7s,baz=238,slow=38						
	comp=E,0.9nm,0.5s						
AAK	**Ala-Archa**	15.57	73		Pn	19 11 50.1	+0.3
BRTR	**Keskin Array B**	15.79	276	Pn	P	19 11 57.5	+1.5
	baz=121,slow=11,SNR=2.5						
VORR	**Voronezh**	15.80	324	eP	Pn	19 11 50.7	-1.8
VORR				eS	Sn	19 14 42.9	-3.4
VORR				pmax	pmax		
	comp=Z,50nm,0.4s						
MMAI	**Mount Meron Ar**	16.52	252	Pn	Pn	19 12 00.3	-1.6
	comp=Z,0.2nm,0.3s,baz=31,slow=20,SNR=1.4						
	comp=Z,1.0nm,0.7s						
LPSR	**Galich'ya Gora**	16.57	326	eP	Pn	19 12 01.9	-0.3
LPSR				eS	Sn	19 14 59.4	-5.6
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LPSR				smax	smax		
	comp=E,10.0nm,0.6s						
KSH	**Kashi**	16.80	84	P	Pn	19 12 04.7	-0.7
KSH				pP	P	19 12 11.0	+3.7
KSH				sP	pP	19 12 16.1	-0.5
KSH				S	Sn	19 15 01.5	-10
KSH				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARU	**Arti**	16.93	8	Pn	Pn	19 12 05.9	-0.9
	baz=153,slow=9.0,SNR=5.7						
ARU				Sn	Sn	19 15 04.3	-9.4
	baz=107,slow=20,SNR=1.8						
ARU				LR	LR	19 19 45.9	
	comp=Z,74nm,19.9s,baz=204,slow=41						
	comp=Z,2.5nm,0.5s						
ARU	**Arti**	16.93	8	Pn	Pn	19 12 06.6	-0.2
ARU				IAmb	IAmb	19 12 24.5	
	comp=Z,18nm,0.9s						
ARU	**Arti**	16.93	8	d iP	Pn	19 12 06.5	-0.2
ARU				S	Sn	19 15 15.0	+1.3
ARU				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BRVK	**Borovoye**	17.28	34	Pn	Pn	19 12 11.2	+0.1
BRVK	**Borovoye**	17.28	34	⇑Pn	Pn	19 12 11.0	-0.2
	comp=Z,6.3nm,0.9s						
BRVK				⇑Sn	Sn	19 15 15.5	-6.7
	comp=Z,16nm,1.0s						
BRVK	**Borovoye**	17.28	34	P	Pn	19 12 10.9	-0.2
BRVK				SN	Sn	19 15 15.5	-6.7
BVA0	**Borovoye Array**	17.30	35	⇑Pn	Pn	19 12 10.1	-1.3
	comp=Z,4.8nm,0.7s,baz=259,slow=36,SNR=32						
BVA0				⇑Sn	Sn	19 15 15.5	-7.2
	comp=Z,8.2nm,0.6s,baz=229,slow=26,SNR=9.8						
BVA0	**Borovoye Array**	17.30	35	P	Pn	19 12 10.1	-1.3
BVA0				SN	Sn	19 15 15.5	-7.2
BVAR	**Borovoye Array**	17.30	35	P	Pn	19 12 12.4	+0.9
	comp=Z,0.1nm,0.3s,baz=222,slow=14,SNR=14						
BVAR				Sn	Sn	19 15 12.6	-10
	comp=Z,0.1nm,0.3s,baz=225,slow=21,SNR=5.2						
BVAR				LR	LR	19 20 08.7	
	comp=Z,49nm,18.0s,baz=211,slow=41						
	comp=Z,3.9nm,0.6s						
RAYN	**Ar Rayn**	17.77	207	P	Pn	19 12 15.3	-2.1
RAYN	**Ar Rayn**	17.77	207	P	Pn	19 12 15.3	-2.1
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIRV	**Kirov**	19.09	352	P	P	19 12 32.8	+0.7
	comp=Z,1.6nm,0.3s,baz=166,slow=11,SNR=4.6						
	comp=Z,9.3nm,0.5s						
KIRV	**Kirov**	19.09	352	⇑eP	P	19 12 32.7	+0.6
OBN	**Obninsk**	19.34	328	i P	P	19 12 36.5	+1.6
OBN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,25nm,15.0s						
KURBB	**Kurchatov Arra**	20.23	49	P	P	19 12 46.1	+1.5
	comp=Z,4.0nm,0.2s,baz=250,slow=14,SNR=5.1						
	comp=Z,4.0nm,0.2s						
KURK	**Kurchatov**	20.32	49		P	19 12 46.2	+0.6
KURK	**Kurchatov**	20.32	49	⇓eP	P	19 12 47.5	+1.9
KURK				pmax	pmax		
	comp=Z,7.0nm,1.6s						
AK05	**Malin Array Si**	20.57	310	P	P	19 12 49.2	+0.8
AK05				IAmb	IAmb	19 12 49.8	
	comp=Z,9.9nm,0.7s						
AKASG	**Malin Array Be**	20.59	310	P	P	19 12 49.2	+0.7
	comp=Z,8.6nm,0.4s,baz=110,slow=11,SNR=96						
AKASG				S	S	19 16 34.1	-2.6
	comp=Z,0.2nm,0.3s,baz=110,slow=22,SNR=1.4						
	comp=Z,8.6nm,0.4s						
AKASG	**Malin Array Be**	20.59	310	P	P	19 12 49.4	+0.9
AKASG				IAmb	IAmb	19 12 50.0	
	comp=Z,14nm,0.5s						
AKASG	**Malin Array Be**	20.59	310	P	P	19 12 49.4	+0.9
AKASG				pmax	pmax		
	comp=Z,14nm,0.5s						
AKBB	**Malin Array Si**	20.59	310	P	P	19 12 49.4	+0.8
AKBB	**Malin Array Si**	20.59	310	P	P	19 12 49.4	+0.8
AKBB				pmax	pmax		
	comp=Z,39nm,0.5s						
MAKZ	**Makanchi**	21.37	62	P	P	19 12 57.9	+0.8
MAKZ	**Makanchi**	21.37	62	⇑Pn	P	19 12 59.0	+1.9
	comp=Z,8.1nm,1.3s						
MAKZ	**Makanchi**	21.37	62	P	P	19 12 57.9	+0.8
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MLR	**Muntele Rosu**	21.47	295	P	P	19 12 59.2	+0.9
	comp=Z,2.2nm,0.6s,baz=166,slow=17,SNR=2.6						
	comp=Z,2.2nm,0.6s						
MLR	**Muntele Rosu**	21.47	295	P	P	19 12 59.4	+1.1
MLR	**Muntele Rosu**	21.47	295	P	P	19 12 59.4	+1.1
MLR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MK31	**Makanchi Array**	21.58	62	P	P	19 13 00.8	+1.5
MK31	**Makanchi Array**	21.58	62	⇑Pn	P	19 13 01.3	+2.0
	comp=Z,1.7nm,0.7s,baz=248,slow=10,SNR=24						
MK31	**Makanchi Array**	21.58	62	P	P	19 13 00.8	+1.5
MK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	21.58	62	P	P	19 13 00.8	+1.5
	comp=Z,0.9nm,0.5s,baz=250,slow=13,SNR=19						
MKAR				LR	LR	19 22 10.6	
	comp=Z,34nm,18.6s,baz=326,slow=39						
	comp=Z,0.9nm,0.5s						
MKAR	**Makanchi Array**	21.58	62	P	P	19 12 59.8	+0.5
KARP	**Karpathos**	21.75	267	P	P	19 13 00.6	-0.7
RDO	**Rodhopi**	21.79	283	P	P	19 13 03.6	+2.1
RDO				IAmb	IAmb	19 13 09.0	
	comp=Z,8.6nm,0.9s						
BURAR	**Bucovina Array**	22.26	300	P	P	19 13 07.3	+0.7
BURAR				IAmb	IAmb	19 13 12.1	
	comp=Z,6.2nm,0.6s						
BURAR	**Bucovina Array**	22.26	300	P	P	19 13 07.3	+0.7
BURAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BUR08	**Bucovina Ar. S**	22.27	300	P	P	19 13 08.3	+1.5
KLMR	**Klimovskoe**	22.99	342	eP	P	19 13 14.9	+0.8
KLMR				eP	P	19 13 14.9	+0.8
KLMR				eP	P	19 13 14.9	+0.8
KLMR				AMP		19 13 16.4	
	comp=Z,5.0nm,0.5s						
KLMR				epP	pP	19 13 18.2	-5.3
KLMR				S	S	19 17 25.9	+4.0
KLMR				S	S	19 17 25.9	+4.0
KLMR	**Klimovskoe**	22.99	342	eP	P	19 13 14.8	+0.7
KLMR				e*PP	pP	19 13 18.1	-5.4
KLMR				S	S	19 17 25.9	+4.0
KLMR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
NACGM	**Naroch**	23.74	319	eP	P	19 13 21.9	+0.3
	comp=Z,5.0nm,0.6s,baz=119						
AGG	**Agios Georgios**	24.55	279	P	P	19 13 29.5	+0.3
AGG	**Agios Georgios**	24.55	279	P	P	19 13 29.5	+0.3
AGG				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ZAA0	**Zalesovo Array**	25.07	45	P	P	19 13 34.7	+1.0
ZALV	**Zalesovo Beam**	25.07	45	P	P	19 13 34.9	+1.2
	comp=Z,1.7nm,0.5s,baz=260,slow=9.2,SNR=12						
ZALV				LR	LR	19 24 36.4	
	comp=Z,52nm,18.3s,baz=285,slow=39						
	comp=Z,1.7nm,0.5s						
ZALV	**Zalesovo Beam**	25.07	45	P	P	19 13 34.4	+0.7
WMQ	**Urumqi**	25.23	70	eP	P	19 13 38.8	+3.5
WMQ				pP	pP	19 13 43.8	-1.6
WMQ				sP	sP	19 13 50.1	+0.4
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						
ITM	**Ithomi**	25.30	274	P	P	19 13 35.4	-0.6
VSU	**Vasula**	25.64	326	ceP	P	19 13 40.6	+1.9
VSU				pmax	pmax		
	comp=Z,18nm,0.8s						
FIA0	**FINESS Array S**	27.69	331	P	P	19 13 57.5	+0.2
FIA0	**FINESS Array S**	27.69	331	P	P	19 13 57.5	+0.2
FIA1	**FINESS Array S**	27.69	331	P	P	19 13 57.7	+0.5
FIA1				IAmb	IAmb	19 14 17.5	
	comp=Z,12nm,1.4s						
FINES	**FINESS Array B**	27.69	331	P	P	19 13 58.1	+0.9
	comp=Z,0.6nm,0.5s,baz=133,slow=11,SNR=7.4						
	comp=Z,0.6nm,0.5s						
FINES	**FINESS Array B**	27.69	331	P	P	19 13 57.4	+0.1
FINES	**FINESS Array B**	27.69	331	i P	P	19 13 58.5	+1.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
VRAC	**Vranov**	28.17	302	LR	LR	19 28 04.4	
	comp=Z,21nm,18.9s,baz=216,slow=42						
GERES	**GERESS Array B**	30.04	301	P	P	19 14 19.6	+1.2
	comp=Z,0.6nm,0.6s,baz=90,slow=8.5,SNR=4.3						
	comp=Z,0.6nm,0.6s						
GERES	**GERESS Array B**	30.04	301	P	P	19 14 19.1	+0.7
HFS	**Hagfors**	32.33	323	LR	LR	19 28 02.1	
	comp=Z,21nm,18.0s,baz=72,slow=37						
MSSA	**Maissana**	33.15	293	P	P	19 14 46.6	+0.8
KEV	**Kevo**	33.29	343	P	P	19 14 48.3	+1.8
KEV	**Kevo**	33.29	343	P	P	19 14 48.3	+1.8
KEV				pmax	pmax		
	comp=Z,34nm,1.3s						
ARCES	**ARCESS Array B**	33.47	342	P	P	19 14 49.7	+1.6
	comp=Z,0.7nm,0.4s,baz=140,slow=9.4,SNR=14						
ARCES				LR	LR	19 30 04.5	
	comp=Z,29nm,18.0s,baz=330,slow=39						
	comp=Z,0.7nm,0.4s						
ARCES	**ARCESS Array B**	33.47	342	P	P	19 14 49.4	+1.2
ARCES	**ARCESS Array B**	33.47	342	P	P	19 14 49.4	+1.2
ARCES				pmax	pmax		
	comp=Z,23nm,1.4s						
NC405	**NORSAR Array S**	33.58	324	P	P	19 14 50.4	+1.1
NB2	**NORSAR Subarra**	33.79	323	P	P	19 14 51.5	+0.4
	comp=Z,4.5nm,1.1s,baz=109,slow=9.3						
NOA	**NORSAR Array B**	33.79	323	P	P	19 14 51.8	+0.7
	comp=Z,1.4nm,0.8s,baz=109,slow=8.3,SNR=7.4						
NOA				LR	LR	19 30 08.9	
	comp=Z,20nm,18.1s,baz=330,slow=39						
	comp=Z,1.4nm,0.8s						
BNI	**Bardonecchia**	35.05	295	P	P	19 15 04.2	+1.9
BNI				IAmb	IAmb	19 15 07.6	
	comp=Z,5.6nm,1.4s						
BNI	**Bardonecchia**	35.05	295	P	P	19 15 04.2	+1.9
BNI				pmax	pmax		
	comp=Z,6.0nm,1.4s						
SONM	**Songino Array**	37.93	60	P	P	19 15 28.1	+1.2
	comp=Z,0.4nm,0.6s,baz=279,slow=8.8,SNR=3.8						
	comp=Z,0.4nm,0.6s						
ULN	**Ulaanbaatar**	38.36	60	P	P	19 15 31.3	+0.8
ULN	**Ulaanbaatar**	38.36	60	⇑eP	P	19 15 33.2	+2.7
ULN				pmax	pmax		
	comp=Z,4.0nm,1.7s						
SPB2	**Spitsbergen Ar**	41.50	349	P	P	19 15 57.8	+1.9
SPITS	**Spitsbergen Ar**	41.50	349	P	P	19 15 58.5	+2.5
PZH	**PanZhiHua**	41.52	94	P	P	19 15 58.0	+1.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,90nm,4.9s						
HHC	**Hu-ho-hao-te**	43.11	69	eP	P	19 16 08.3	-1.4
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
HHC				pmax	pmax		
	comp=Z,250nm,6.0s						
ESDC	**Sonseca Array**	44.01	289	P	P	19 16 17.1	+0.2
	comp=Z,1.5nm,0.8s,baz=64,slow=8.2,SNR=15						
	comp=Z,1.5nm,0.8s						
YAK	**Yakutsk**	49.26	37	⇑eP	P	19 16 59.8	+2.3
YAK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HEH	**HeiHe**	50.88	52	eP	P	19 17 12.4	+2.4
TORD	**Torodi Ar. Bea**	53.02	255	P	P	19 17 25.2	-1.2
	comp=Z,0.2nm,0.5s,baz=38,slow=6.0,SNR=1.9						
	comp=Z,0.2nm,0.5s						
KSRS	**Korea Array**	56.13	67	P	P	19 17 50.2	+1.4
	comp=Z,1.3nm,0.7s,baz=293,slow=6.0,SNR=5.1						
	comp=Z,1.3nm,0.7s						
DAV	**Davao City (W)**	71.24	96	LR	LR	19 50 55.2	
	comp=Z,24nm,21.3s,baz=96,slow=36						
COLD	**Coldfoot**	71.74	10	P	P	19 19 32.6	+1.7
COLD				IAmb	IAmb	19 19 34.3	
	comp=Z,3.4nm,0.8s						
BMAR	**Burnt Mountain**	72.19	7	P	P	19 19 35.5	+1.8
IMAR	**Indian Mountai**	72.40	12	P	P	19 19 36.1	+1.3
H21K	**Melozitna Rive**	72.85	11	P	P	19 19 38.6	+1.1
H21K				IAmb	IAmb	19 19 40.4	
	comp=Z,7.2nm,1.4s						
H23K	**Yukon River**	73.15	10	P	P	19 19 41.4	+2.0
H23K				IAmb	IAmb	19 19 43.3	
	comp=Z,3.5nm,0.8s						
H24K	**Noodor Dome**	73.36	9	P	P	19 19 43.0	+2.5
H24K				IAmb	IAmb	19 19 44.3	
	comp=Z,2.6nm,0.9s						
MLY	**Manley**	73.74	11	P	P	19 19 45.0	+2.2
MLY				IAmb	IAmb	19 19 46.1	
	comp=Z,2.1nm,0.8s						
MDM	**Murphy Dome**	74.15	10	P	P	19 19 47.7	+2.5
MDM				IAmb	IAmb	19 19 48.6	
	comp=Z,6.0nm,1.4s						
ILAR	**Eielson Array**	74.50	9	P	P	19 19 48.8	+1.6
	comp=Z,1.0nm,0.7s,baz=335,slow=4.9,SNR=12						
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	74.50	9	P	P	19 19 48.9	+1.7
IL03	**Eielson Array**	74.51	9	P	P	19 19 48.2	+1.0
BPAW	**Bear Paw Mtn.**	74.58	11	P	P	19 19 49.5	+1.8
BPAW				IAmb	IAmb	19 19 50.9	
	comp=Z,2.1nm,0.8s						
WRH	**Wood River Hil**	74.64	10	P	P	19 19 50.0	+2.0
WRH				IAmb	IAmb	19 20 10.0	
	comp=Z,5.0nm,1.4s						
K20K	**Telida**	74.79	13	P	P	19 19 51.1	+2.2
K20K				IAmb	IAmb	19 19 52.0	
	comp=Z,2.2nm,0.8s						
CAST	**Castle Rocks**	75.06	12	P	P	19 19 52.5	+2.0
KTH	**Kantishna Hill**	75.11	11	P	P	19 19 52.1	+1.2
KTH				IAmb	IAmb	19 19 59.0	
	comp=Z,3.2nm,0.9s						
J26L	**Joseph Creek**	75.14	8	P	P	19 19 52.5	+1.5
J26L				IAmb	IAmb	19 20 12.4	
	comp=Z,5.0nm,1.5s						
PPLA	**Purkeypile**	75.53	12	P	P	19 19 54.6	+1.3
SCRK	**Sand Creek**	75.61	8	P	P	19 19 55.2	+1.4
SCRK				IAmb	IAmb	19 20 05.9	
	comp=Z,5.2nm,1.5s						
RIDG	**Independent Ri**	75.74	9	P	P	19 19 56.2	+1.7
RIDG				IAmb	IAmb	19 20 03.8	
	comp=Z,6.1nm,1.4s						
DOT	**Dot Lake**	75.92	8	P	P	19 19 57.8	+2.4
DOT				IAmb	IAmb	19 19 59.0	
	comp=Z,3.2nm,0.9s						
SKT	**Skwentna**	76.50	12	P	P	19 20 00.1	+1.4
SKT				IAmb	IAmb	19 20 00.9	
	comp=Z,3.3nm,0.8s						
BCAR	**Beaver Creek A**	76.73	7	P	P	19 20 02.5	+2.4
GRHM	**Grahamstown, E**	77.09	204	P	P	19 20 02.5	+0.2
SUA	**Susitna One**	77.11	12	P	P	19 20 04.0	+1.6
SUA				IAmb	IAmb	19 20 05.0	
	comp=Z,8.3nm,1.2s						
RC01	**Rabbit Creek A**	77.63	12	P	P	19 20 06.2	+1.2
RC01				IAmb	IAmb	19 20 11.2	
	comp=Z,8.1nm,1.2s						
YKA	**Yellowknife Ar**	77.69	355	P	P	19 20 05.4	0.0
	comp=Z,0.3nm,0.7s,baz=11,slow=5.7,SNR=5.1						
	comp=Z,0.3nm,0.7s						
YKA	**Yellowknife Ar**	77.69	355	ceP	P	19 20 06.1	+0.7
BRLK	**Bradley Lake**	78.70	13	P	P	19 20 12.2	+1.1
CTGM	**Chitina Glacie**	78.83	8	P	P	19 20 14.1	+2.2
LOGN	**Logan Glacier**	79.00	8	P	P	19 20 14.8	+1.9
LOGN				IAmb	IAmb	19 20 56.5	
	comp=Z,8.8nm,1.2s						
KDAK	**Kodiak Island**	80.26	14	P	P	19 20 19.9	+0.4
KDAK	**Kodiak Island**	80.26	14	P	P	19 20 19.9	+0.4

IDC 10 19:42:07.1±1.5**, 3°.46S**×**130°.50E, h0^{km}, mb3.4**/3**,**
mbtmp3.4/5**, ML3.2**/2**, MS3.0**/1**, Error ellipse:**
s-maj=63.9km s-min=24.2km az=83.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	2.68	17	Pn	Pn	19 42 50.0	-1.6
	2.2nm,0.3s,baz=196,slow=19,SNR=21						
SIJI				Sn	Sn	19 43 17.4	-7.5
	1.7nm,0.3s,baz=237,slow=22,SNR=5.8						
	5.7nm,0.2s						
KAPI	**Kappang**	10.83	261	LR	LR	19 49 57.8	
	comp=Z,75nm,19.8s,baz=78,slow=44						
WRA	**Warramunga Arr**	16.81	167	Pn	Pn	19 46 03.0	-1.1
	0.1nm,0.3s,baz=344,slow=12,SNR=3.4						
WRA				Sn	Sn	19 48 59.2	-12
	0.2nm,0.3s,baz=347,slow=24,SNR=6.5						
	0.2nm,0.3s						
ASAR	**Alice Springs**	20.36	171	P	P	19 46 45.4	0.0
	1.2nm,0.3s,baz=348,slow=10,SNR=21						
ASAR				S	S	19 50 24.4	-10
	0.2nm,0.5s,baz=355,slow=27,SNR=1.4						
	1.2nm,0.3s						
MKAR	**Makanchi Array**	65.58	326	P	P	19 52 52.7	-0.1
	0.1nm,0.6s,baz=126,slow=7.3,SNR=1.7						
	0.1nm,0.6s						
KURBB	**Kurchatov Arra**	69.79	328	P	P	19 53 20.4	+1.1
	0.3nm,0.6s,baz=120,slow=5.4,SNR=1.9						
	0.3nm,0.6s						

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*IPEC **10** 19:50:27.4±0.4, 51°.52N×16°.16E, h0^{km}±1^{km}, ML2.1/4,*
Error ellipse: s-maj=2.6km s-min=1.2km az=31.0
*PRU **10** 19:50:28.8±0.0, 51°.47N×16°.07E, h0^{km}*
*VIE **10** 19:50:29.7, 51°.35N×15°.85E, h0^{km}, mb2.1/1, ml2.6/1 81*
km NE of Liberec Suspected Mining induced.
ISC 10 19:50:27.7±1.2**, 51°.52N**±0°.05×**16°.05E**±0°.03**, h0^{km}, n23,**
σ0^{s}.67/47**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	0.69	167	i Pg	Pg	19 50 41.0	+0.1
KSP				eSg	Sg	19 50 49.8	0.0
CHVC	**Chvalec**	0.93	180	ePG	Pb	19 50 45.8	-0.8
CHVC				eSG	Sg	19 50 57.8	+0.4
OSTC	**Ostas**	0.96	174	ePG	Pb	19 50 46.4	-0.9
OSTC				eSG	Sg	19 50 58.1	-0.5
	comp=Z,23nm,0.3s						
UPC	**Upice**	1.01	182	ePG	Pg	19 50 47.0	0.0
UPC				eSG	Sg	19 51 00.0	0.0
	comp=Z,46nm,0.3s						
DPC	**Dobruska-Polom**	1.18	172	ePG	Pg	19 50 49.8	-0.4
DPC				eSG	Sg	19 51 04.6	-0.9
PVCC	**Panska Ves**	1.36	224	ePG	Pb	19 50 53.7	-0.3
PVCC				eSG	Sn	19 51 12.5	-0.2
	comp=Z,55nm,0.2s						
BRG	**Berggiesshubel**	1.48	245	Pg	Pb	19 50 56.3	+0.3
BRG				Sg	Sn	19 51 16.2	+0.7
BRG				Amp		19 51 17.6	
	comp=Z,34nm,0.4s						
KRLC	**Kraliky**	1.51	162	ePG	Pn	19 50 55.4	-0.6
KRLC				eSG	Sg	19 51 15.3	-0.9
	comp=Z,15nm,0.4s						
GOPC	**GO Pecny, Ondr**	1.79	207	ePG	Pb	19 51 01.3	-0.1
PRU	**Pruhonice**	1.81	213	ePN	Pn	19 50 59.4	-0.6
PRU				ePG	Pb	19 51 01.5	-0.1
PRU				eSG	Sb	19 51 24.9	+0.2
	comp=Z,8.9nm,0.2s						
CLL	**Collm**	1.92	265	ePn	Pn	19 51 01.0	-0.6
CLL				ePg	Pg	19 51 04.0	-0.5
CLL				i x	x	19 51 08.3	
CLL				eSg	Sg	19 51 29.0	-0.4
	comp=Z,11nm,0.5s						
MORC	**Moravsky Berou**	1.98	151	ePn	Pn	19 51 01.7	-0.8
	baz=334						
MORC				eSg	Sn	19 51 28.5	+0.5
	comp=Z,12nm,0.3s,baz=334						
VRAC	**Vranov**	2.24	171	ePN	Pn	19 51 05.9	0.0
VRAC				eSG	Sb	19 51 37.5	+0.3
VRAC	**Vranov**	2.24	171	ePn	Pn	19 51 05.8	-0.1
	baz=353						
VRAC				eSg	Sb	19 51 37.4	+0.3
	comp=Z,12nm,0.4s,baz=353						
KRUC	**Moravsky**	2.47	175	ePn	Pn	19 51 08.6	-0.5
	baz=357						
KRUC				eSg	Sb	19 51 44.8	+1.1
	comp=Z,11nm,0.6s,baz=357						
NKC	**Novy Kostel**	2.62	242	ePN	Pn	19 51 11.5	+0.3
NKC				ePG	Pg	19 51 17.1	-0.7
NKC				eSG	Sg	19 51 53.0	+1.2
	comp=Z,15nm,0.3s						
OJC	**Ojcow**	2.70	117	ePg	Pg	19 51 18.7	-0.8
OJC				eSg	Sg	19 51 54.1	-0.4
KHC	**Kasperske Hory**	2.87	215	ePN	Pn	19 51 14.4	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KHC				ePG	Pb	19 51 20.5	+0.8
KHC				eSN	Sn	19 51 50.0	+0.2
KHC				eSG	Sg	19 52 00.5	+0.8
	comp=Z,5.5nm,0.3s						
CKRC	Cesky Krumlov	2.92	203	eSG	Sg	19 51 59.9	-1.6
	comp=Z,7.7nm,0.6s						
LANS	Liptovska Anna	3.22	136	ePG	Pg	19 51 31.0	+1.6
LANS				eSG	Sg	19 52 11.1	0.0
MODS	Modra-Piesok	3.24	165	eSG	Sg	19 52 11.5	-0.3
CONA	Conrad Observa	3.59	182	i Pn	Pn	19 51 25.4	+0.7
	comp=Z,0.5nm,0.2s						
CONA				eSg	Sg	19 52 22.5	-0.5
	comp=Z,2.1nm,0.2s						
STHS	Stebnicka Huta	3.92	120	eSG	Sg	19 52 34.6	+0.9

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*FUNV **10** 20:19:30.0, 11°.09N×60°.86W, h5^{km}, MW4.1*
*IDC **10** 20:19:31.4±0.7, 11°.26N×61°.01W, h48^{km}±5^{km}, mb3.8/19, mbtmp4.0/20, MS3.2/10, Error ellipse: s-maj=14.7km s-min=13.1km az=102.0*
*NEIC **10** 20:19:31.1±2.0, 11°.16N±0°.06×60°.74W±0°.03, h39^{km}±8^{km}, mb4.4/42, Error ellipse: s-maj=8.9km s-min=4.3km az=189.0*
*TRN **10** 20:19:31.7, 11°.26N×60°.82W, h41^{km}, MD4.0*
TRN Felt MMI IV, Tobago.
ISC 10 20:19:31.4±0.5, **11°.20N**±0°.03×**60°.89W**±0°.04, **h48^{km}**±4^{km}, **n170**, σ1^{s}.57/191, **mb4.3**/39, **MS3.3**/6, **Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPR	Prospect	0.11	97	eP	Pn	20 19 39.7	+0.6
TPR				eS	Sn	20 19 45.4	+0.9
BOT	Bacolet	0.17	101	eP	Pn	20 19 39.8	+0.5
TOSP	Speyside	0.36	74		Pn	20 19 39.6	-1.3
TOSP	Speyside	0.36	74	eP	Pn	20 19 40.1	-0.8
TOSP				eS	Sn	20 19 47.4	-0.3
TBH	Brigand Hill	0.73	194	eP	Pn	20 19 48.4	+2.9
TRN	Trinidad (W)	0.75	223	eP	Pn	20 19 47.7	+2.0
TRN				eS	Sn	20 19 59.3	+3.3
TPP	Pointe-a-Pierr	1.04	212	eP	Pn	20 19 53.1	+3.5
GRGR	Grenville	1.20	321		Pn	20 19 52.7	+1.0
GRGR				Sn	Sn	20 20 08.4	+1.5
GRGR	Grenville	1.20	321	eP	Pn	20 19 52.9	+1.1
GRGR				eS	Sn	20 20 08.9	+2.0
GRHS	Sauteurs	1.26	324	eP	Pn	20 19 53.7	+1.0
GRHS				eS	Sn	20 20 10.8	+2.3
GRSS	Sisters	1.30	327	eP	Pn	20 19 54.6	+1.4
GCMP	Grenada, Carri	1.39	338	eP	Pn	20 19 54.7	+0.4
GCMP				eS	Sn	20 20 12.4	+0.9
SVB	Belmont	2.09	350		Pn	20 20 04.7	+0.6
SVB	Belmont	2.09	350	eP	Pn	20 20 05.2	+1.1
SVB				eS	Sn	20 20 29.8	+0.9
SSV	Crater Summit	2.14	352	eP	Pn	20 20 06.0	+1.3
BCHC	Barbados, Cave	2.28	32	eP	Pn	20 20 06.6	-0.1
BCHC				eS	Sn	20 20 32.9	-0.6
BBGH	Gun Hill	2.33	34	Pn	Pn	20 20 06.4	-0.9
BBGH				Sn	Sn	20 20 30.8	-3.9
BBGH	Gun Hill	2.33	34	eP	Pn	20 20 08.6	+1.4
CRUV	Carupano	2.37	258	eP	Pn	20 20 09.0	+1.2
CRUV				eS	Sn	20 20 36.8	+1.1
MCLT	Moule a Chique	2.50	359	Pn	Pn	20 20 10.1	+0.5
MCLT	Moule a Chique	2.50	359	eP	Pn	20 20 10.8	+1.2
MCLT				eS	Sn	20 20 38.8	-0.1
SLB	Belfond	2.62	357	eP	Pn	20 20 12.4	+1.1
SLB				eS	Sn	20 20 43.0	+1.1
SLW	Petit Monier	2.81	359	e	Pn	20 20 16.6	+2.7
SLBI	Saint Lucia, B	2.81	358	eP	Pn	20 20 14.8	+0.9
SLBI				eS	Sn	20 20 46.4	-0.1
H05S1	Guadeloupe/Mar	3.21	1	P	Pn	20 20 18.9	-0.4
	SNR=40						
H05S1				S	Sn	20 20 54.7	-1.6
MPOM	Morne Pois Mar	3.23	0	Pn	Pn	20 20 20.4	+0.8
MPOM				Sn	Sn	20 20 54.3	-2.5
MPOM	Morne Pois Mar	3.23	0	eP	Pn	20 20 20.2	+0.6
MPOM				eS	Sn	20 20 57.4	+0.6
BIM	Bigot	3.30	357	Pn	Pn	20 20 21.7	+1.0
BIM				Sn	Sn	20 20 58.5	-0.3
BIM	Bigot	3.30	357	eP	Pn	20 20 22.0	+1.3
TRMF	Trois Ilets	3.32	357	eP	Pn	20 20 21.7	+0.8
MVM	Montagne Vaucl	3.34	360	eP	Pn	20 20 22.8	+1.6
LPMF	Morne Lapointe	3.36	359	eP	Pn	20 20 22.4	+1.0
ZAM	Aeronautique	3.36	358	eP	Pn	20 20 22.3	+0.9
FDF	Fort de France	3.52	356		Pn	20 20 24.6	+0.9
FDF	Fort de France	3.52	356	eP	Pn	20 20 24.8	+1.1
FDF				eS	Sn	20 21 04.0	-0.2
ILAM	Ilet Lapin Mar	3.56	0		Pn	20 20 24.4	+0.3
PML	Morne Lenard	3.57	355	eP	Pn	20 20 25.5	+1.1
GBMF	Grand Be	3.59	356	eP	Pn	20 20 26.6	+2.0
BAMF	Morne Balai	3.60	356	eP	Pn	20 20 27.3	+2.4
PCM	Pelee Case Pet	3.61	355	eP	Pn	20 20 25.9	+1.1
SVN	Savane Anatole	3.63	356		Pn	20 20 26.1	+0.8
SVN	Savane Anatole	3.63	356	eP	Pn	20 20 27.3	+2.1
DLPL	La Plaine	4.12	355	Pn	Pn	20 20 32.3	+0.4
PRGV	PARIAGUAN	4.43	237	eP	Pn	20 20 36.2	+0.1
PRGV				eS	Sn	20 21 24.5	-1.9
MAGL	Barre de l’ile	4.74	355	Pn	Pn	20 20 41.1	+0.7
MAGL	Barre de l’ile	4.74	355	eP	Pn	20 20 41.4	+1.1
MAGL	Barre de l’ile	4.74	355	eS	Sn	20 21 32.9	-1.2
CBE	Ff, Capester	4.89	352	eP	Pn	20 20 43.2	+0.7
GDHS	Morne Mazeau,	5.12	350	Pn	Pn	20 20 46.2	+0.6
ABD	La Joyeuse, An	5.28	354	Pn	Pn	20 20 48.6	+0.9
BIRV	Birongo	5.34	263	eP	Pn	20 20 48.6	0.0
BIRV				eS	Sn	20 21 46.6	-2.3
MERV	Las Mercedes	5.67	251	eP	Pn	20 20 52.6	-0.5
MERV				eS	Sn	20 21 54.0	-2.9
ANBD	Bethesda, Anti	5.88	352	eP	Pn	20 20 57.7	+1.7
ANBD	Bethesda, Anti	5.88	352	eS	Sn	20 22 00.1	-2.0
TACV	Tcata	6.13	261	eP	Pn	20 20 58.9	-0.6
TACV				eS	Sn	20 22 06.6	-1.8
ANWB	Willy Bob	6.49	352	Pn	Pn	20 21 05.3	+0.9
ANWB	Willy Bob	6.49	352	eP	Pn	20 21 07.3	+2.9
CACV	CAICARA DEL OR	6.65	238	eP	Pn	20 21 00.2	-6.3
CACV				eS	Sn	20 22 06.9	-14
BENV	Beln	6.71	260	eP	Pn	20 21 07.4	-0.1
BENV				eS	Sn	20 22 20.3	-2.5
SMRT	St. Maarten	7.13	343		Pn	20 21 13.7	+0.4
BAUV	El Baul	7.39	253	eP	Pn	20 21 15.7	-1.1
BAUV				eS	Sn	20 22 34.0	-5.5
MAPV	Macapo	7.57	260	eP	Pn	20 21 17.8	-1.5
MAPV				eS	Sn	20 22 38.2	-5.6
STVI	Saint Thomas	8.13	332	Pn	Pn	20 21 28.6	+1.7
MTP	Monte Pirata	8.21	327	Pn	Pn	20 21 28.9	+0.9
CUPR	Culebra, Puert	8.25	329	Pn	Pn	20 21 30.2	+1.7
HUMP	Col San Antoni	8.41	326	Pn	Pn	20 21 32.1	+1.4
CBYP	Canovanas	8.52	326	Pn	Pn	20 21 32.5	+0.2
SJG	San Juan	8.55	324	LR	LR	20 25 32.9	
	comp=Z,62nm,19.0s,baz=238,slow=43						
GCPR	Guaynabo City	8.67	325	Pn	Pn	20 21 36.6	+2.3
BOAV	Boa Vista	8.75	178		Pn	20 21 33.2	-2.2
CELP	Cerrillos	8.78	322	Pn	Pn	20 21 35.7	-0.1
CRPR	Cabo Rojo, PR	9.06	319	Pn	Pn	20 21 40.6	+1.0
AOPR	Arecibo Observ	9.09	322	Pn	Pn	20 21 40.9	+0.8
AGPR	Aguadilla, PR	9.40	321	Pn	Pn	20 21 43.2	-1.2
SDV	Santo Domingo	9.87	257	P	Pn	20 21 50.3	-0.7
	1.4nm,0.3s,baz=216,slow=12,SNR=1.4						
SDV				S	Sn	20 23 32.7	-7.9
	5.9nm,0.4s,baz=45,slow=18,SNR=2.6						
SDV				LR	LR	20 26 21.9	
	comp=Z,132nm,20.1s,baz=64,slow=42						
SDV	Santo Domingo	9.87	257	Pn	Pn	20 21 52.7	+1.7
MDP	Montagnes des	10.16	126	P	Pn	20 21 49.2	-5.5
	14nm,0.4s,baz=311,slow=15,SNR=31						
MDP				LR	LR	20 26 30.0	
	comp=Z,88nm,19.1s,baz=69,slow=41						
SOCV	Socops	10.24	254	eP	Pn	20 21 54.9	-1.1
SOCV				eS	Sn	20 23 40.6	-8.9
PCDR	Punta Cana, DR	10.26	316	Pn	Pn	20 21 54.5	-1.6
URIC	Uribia, Colomb	10.90	274	Pn	Pn	20 22 08.4	+3.5
DR12	Loma Pena Alta	11.14	314	Pn	Pn	20 22 05.6	-2.6
SDDR	Presa de Saban	12.68	309	Pn	Pn	20 22 30.8	+1.7
RUSC	La Rusia	13.16	247	Pn	Pn	20 22 34.9	-1.3
MACA	Manacapuru-AM	14.27	179	Pn	Pn	20 22 46.8	-4.0
ROSC	El Rosal	14.72	246	LR	LR	20 30 00.0	
	comp=Z,219nm,21.3s,baz=90,slow=43						
ROSC	El Rosal	14.72	246	Pn	Pn	20 22 56.8	-0.4
MTDJ	Mount Denham	17.55	295	Pn	Pn	20 23 31.7	-1.1
SAML	Samuel	20.15	187	P	P	20 24 01.2	-0.5
OTAV	Otavalo	20.57	239	P	P	20 24 07.1	+0.2
SLOR	San Lorenzo -	21.14	237	P	P	20 24 13.7	+0.6
SLOR				IAmb	IAmb	20 24 32.1	
	comp=Z,11nm,0.8s						
RGM0	Gandoca	21.43	268	P	P	20 24 17.2	+1.6
PORT	Chimborazo Vol	21.79	236	P	P	20 24 21.6	+1.5
PORT				IAmb	IAmb	20 24 36.8	
	comp=Z,17nm,0.7s						
CHSH	Refugio Sur-Vo	21.88	236	P	P	20 24 21.5	+0.4
CHSH				IAmb	IAmb	20 24 50.1	
	comp=Z,19nm,0.8s						
BATAN	Batan	22.13	269	P	P	20 24 24.2	+1.0
CZSB	Cruzeiro do Su	22.18	213	P	P	20 24 24.4	+0.7
CZSB				IAmb	IAmb	20 24 44.9	
	comp=Z,18nm,1.2s						
MCRA	Macar, Loja	24.48	232	P	P	20 24 46.3	0.0
MCRA				IAmb	IAmb	20 25 01.8	
	comp=Z,16nm,1.1s						
SIV	San Ignacio	27.02	180	P	P	20 25 09.3	+0.1
	comp=Z,1.3nm,0.6s,baz=1.1,slow=18,SNR=5.3						
SIV				LR	LR	20 36 24.0	
	comp=Z,75nm,18.4s,baz=332,slow=37						
	comp=Z,1.3nm,0.6s						
Y60A	Bolivia	27.68	328	P	P	20 25 16.6	+1.6
MTO3	Montecristo	27.94	280	P	P	20 25 17.1	-0.6
LPAZ	La Paz	28.23	195	LR	LR	20 38 13.8	
	comp=Z,67nm,18.1s,baz=50,slow=40						
BDFB	Brasilia	29.56	154	P	P	20 25 32.0	+0.1
BDFB				IAmb	IAmb	20 26 11.8	
	comp=Z,11nm,1.5s						
PB16	IPOC Station P	30.55	196	P	P	20 25 45.5	+4.3
CMIG	Matias Romero	33.45	284	LR	LR	20 41 50.0	
	comp=Z,18nm,20.3s,baz=132,slow=40						
LVC	Limon Verde	34.51	193	LR	LR	20 41 22.5	
	comp=Z,67nm,18.8s,baz=344,slow=38						
SADO	Sadowa	36.95	338	LR	LR	20 40 39.0	
	comp=Z,28nm,21.6s,baz=178,slow=34						
CPUP	Villa Florida	37.46	175	P	P	20 26 40.0	-0.4
	comp=Z,2.6nm,0.5s,baz=358,slow=6.8,SNR=6.2						
	comp=Z,2.6nm,0.5s						
CFA	Coronel Fontan	43.14	189	P	P	20 27 27.6	+0.3
	comp=Z,2.2nm,0.5s,baz=356,slow=6.6,SNR=4.6						
	comp=Z,2.2nm,0.5s						
TXAR	Lajitas Array	43.71	301	P	P	20 27 30.0	-2.2
	comp=Z,0.2nm,0.5s,baz=114,slow=9.0,SNR=5.5						
TXAR				PcP	PcP	20 29 19.5	+0.8
	comp=Z,1.4nm,0.6s,baz=119,slow=5.6,SNR=17						
TXAR				ScP	ScP	20 33 06.2	-0.3
	comp=Z,0.3nm,0.8s,baz=104,slow=6.6,SNR=3.9						
	comp=Z,0.2nm,0.5s						
SCHQ	Schefferville	43.78	355	P	P	20 27 30.5	-1.7
	comp=Z,1.1nm,0.6s,baz=192,slow=19,SNR=1.1						
	comp=Z,1.1nm,0.6s						
ULM	Lac du Bonnet	48.39	331	P	P	20 28 06.5	-2.1
	comp=Z,1.2nm,0.4s,baz=136,slow=8.3,SNR=3.0						
	comp=Z,1.2nm,0.4s						
H10N3	ASCENSION HYDR	49.87	110	T	T	21 21 45.3	
	baz=291,slow=75,SNR=127						
H10N2	ASCENSION HYDR	49.88	110	T	T	21 21 44.6	
	baz=291,slow=75,SNR=108						
H10N1	ASCENSION HYDR	49.90	110	T	T	21 21 45.7	
	baz=291,slow=75,SNR=134						
H10S3	ASCENSION HYDR	50.14	112	T	T	21 22 08.1	
	baz=291,slow=74,SNR=65						
H10S2	ASCENSION HYDR	50.16	112	T	T	21 22 03.7	
	baz=289,slow=74,SNR=19						
PLCA	Paso Flores	52.44	189	P	P	20 28 39.8	+0.5
	comp=Z,2.2nm,0.9s,baz=10,slow=9.7,SNR=3.1						
	comp=Z,2.2nm,0.9s						
PDAR	Pinedale Array	52.58	316	P	P	20 28 38.4	-2.2
	comp=Z,0.3nm,0.5s,baz=128,slow=12,SNR=2.7						
	comp=Z,0.3nm,0.5s						
DBIC	Dimbokro	55.47	90	P	P	20 29 02.0	+0.2
	comp=Z,3.6nm,0.4s,baz=284,slow=6.2,SNR=9.3						
	comp=Z,3.6nm,0.4s						
ELK	Elko	55.95	312	LR	LR	20 55 44.0	
	comp=Z,22nm,18.4s,baz=66,slow=39						
PAB	San Pablo	57.27	50	P	P	20 29 16.1	+1.7
PAB				IAmb	IAmb	20 29 40.8	
	comp=Z,8.6nm,1.4s						
ESDC	Sonseca Array	57.59	50	P	P	20 29 18.3	+1.7
	comp=Z,2.6nm,0.7s,baz=264,slow=7.6,SNR=26						
ESDC				pP	pP	20 29 30.4	+0.3
	comp=Z,1.0nm,0.9s,baz=257,slow=7.7,SNR=4.2						
	comp=Z,2.6nm,0.7s						
ESDC	Sonseca Array	57.59	50	P	P	20 29 17.5	+0.9
ESBB	Sonseca Array	57.59	50	P	P	20 29 17.4	+0.8
ESBB				IAmb	IAmb	20 29 19.2	
	comp=Z,4.0nm,0.9s						
NVAR	Mina Array Bea	57.70	308	P	P	20 29 17.5	-0.1
	comp=Z,0.2nm,0.5s,baz=127,slow=5.7,SNR=2.1						
	comp=Z,0.2nm,0.5s						
TORD	Torodi Ar. Bea	61.07	81	P	P	20 29 40.9	-0.1
	comp=Z,1.9nm,0.5s,baz=283,slow=6.1,SNR=29						
	comp=Z,1.9nm,0.5s						
TORD	Torodi Ar. Bea	61.07	81	P	P	20 29 40.5	-0.5
TORD				IAmb	IAmb	20 29 41.7	
	comp=Z,2.3nm,0.8s						
YKA	Yellowknife Ar	63.87	335	P	P	20 29 57.2	-1.6
	comp=Z,0.7nm,0.6s,baz=109,slow=7.7,SNR=16						
YKA				pP	pP	20 30 11.8	-0.6
	comp=Z,0.8nm,0.5s,baz=109,slow=7.6,SNR=5.7						
	comp=Z,0.7nm,0.6s						
YKA	Yellowknife Ar	63.87	335	P	P	20 29 57.7	-1.1
DLBC	Dease Lake	69.64	328	P	P	20 30 37.1	+1.3
PRED	Cave del Predi	71.26	45	P	P	20 30 46.6	+0.7
PRED				IAmb	IAmb	20 31 27.6	
	comp=Z,5.8nm,1.1s						
NAO01	NORSAR Array S	71.42	29	P	P	20 30 48.2	+1.7
GEC2	GERESS Array S	71.51	42	P	P	20 30 47.3	-0.1
GEC2				IAmb	IAmb	20 30 49.1	
	comp=Z,3.5nm,1.0s						
GERES	GERESS Array B	71.51	42	P	P	20 30 46.7	-0.7
	comp=Z,1.6nm,0.8s,baz=262,slow=3.6,SNR=12						
	comp=Z,1.6nm,0.8s						
GERES	GERESS Array B	71.51	42	P	P	20 30 47.7	+0.3
NB2	NORSAR Subarra	71.62	29	P	P	20 30 49.6	+1.9
	comp=Z,0.6nm,0.7s,baz=260,slow=6.5						
NOA	NORSAR Array B	71.62	29	P	P	20 30 49.1	+1.4
	comp=Z,1.4nm,0.8s,baz=262,slow=6.3,SNR=6.9						
	comp=Z,1.4nm,0.8s						
NC405	NORSAR Array S	71.87	29	P	P	20 30 51.3	+2.1
DAWY	Dawson	74.97	334	P	P	20 31 07.6	+0.1
BCAR	Beaver Creek A	75.97	332	P	P	20 31 14.3	+1.1
SCRK	Sand Creek	76.99	333	P	P	20 31 19.6	+0.5
N25K	Chitina, Valde	77.24	331	P	P	20 31 21.0	+0.5
N25K				IAmb	IAmb	20 31 25.0	
	comp=Z,7.6nm,1.4s						
BMAR	Burnt Mountain	77.31	337	P	P	20 31 21.0	+0.3
PRP	Porcupine Dome	77.67	335	P	P	20 31 23.0	+0.2
PRP				IAmb	IAmb	20 31 40.2	
	comp=Z,6.4nm,1.4s						
IL03	Eielson Array	78.23	334	P	P	20 31 25.6	-0.2
ILAR	Eielson Array	78.25	334	P	P	20 31 25.4	-0.4
	comp=Z,0.6nm,0.5s,baz=97,slow=4.9,SNR=15						
	comp=Z,0.6nm,0.5s						
ILAR	Eielson Array	78.25	334	P	P	20 31 25.9	0.0
ARCES	ARCESS Array B	78.33	21	P	P	20 31 26.5	+0.2
	comp=Z,6.5nm,1.0s,baz=264,slow=6.1,SNR=3.9						
	comp=Z,6.5nm,1.0s						
ARCES	ARCESS Array B	78.33	21	P	P	20 31 25.5	-0.7
H24K	Noodor Dome	78.64	335	P	P	20 31 28.8	+0.7
H24K				IAmb	IAmb	20 32 08.8	
	comp=Z,5.1nm,1.4s						
FINES	FINESS Array B	78.80	29	P	P	20 31 30.1	+1.2
	comp=Z,2.8nm,0.9s,baz=256,slow=4.1,SNR=7.5						
	comp=Z,2.8nm,0.9s						
FINES	FINESS Array B	78.80	29	P	P	20 31 29.5	+0.5
MDM	Murphy Dome	78.82	334	P	P	20 31 29.4	+0.4
MDM				IAmb	IAmb	20 31 54.2	
	comp=Z,4.0nm,1.2s						
NEA2	Nenana	79.19	334	P	P	20 31 30.8	-0.3
BUR08	Bucovina Ar. S	79.20	43	P	P	20 31 33.1	+1.5
BUR08				IAmb	IAmb	20 31 34.6	
	comp=Z,3.5nm,0.8s						
BURAR	Bucovina Array	79.21	43	P	P	20 31 33.6	+1.9
BURAR				IAmb	IAmb	20 31 35.0	
	comp=Z,3.8nm,0.8s						
I23K	Minto, Yukon-K	79.28	335	P	P	20 31 32.0	+0.4
I23K				IAmb	IAmb	20 32 00.4	
	comp=Z,5.0nm,1.4s						
TRF	Thorofare Moun	79.81	333	P	P	20 31 35.4	+0.7
TRF				IAmb	IAmb	20 31 57.8	
	comp=Z,5.9nm,1.2s						
MLY	Manley	79.88	334	P	P	20 31 35.6	+0.7
CNPM	China Poot	80.62	329	P	P	20 31 39.8	+0.9
IMAR	Indian Mountai	81.03	336	P	P	20 31 41.4	+0.4
K20K	Telida	81.51	333	P	P	20 31 44.4	+0.8
K20K				IAmb	IAmb	20 32 28.4	
	comp=Z,7.8nm,1.4s						
M19K	Big River Lodg	81.86	331	P	P	20 31 46.5	+1.0
M19K				IAmb	IAmb	20 32 17.1	
	comp=Z,5.8nm,1.4s						
O18K	Koktuh Hills	82.57	329	P	P	20 31 49.9	+0.7
O18K				IAmb	IAmb	20 32 12.4	
	comp=Z,4.8nm,1.0s						
BRTR	Keskin Array B	86.38	50	P	P	20 32 09.3	+0.3
	comp=Z,1.5nm,0.7s,baz=274,slow=4.2,SNR=9.8						
BRTR				pP	pP	20 32 23.4	+0.2
	comp=Z,1.1nm,0.8s,baz=295,slow=3.8,SNR=6.1						
	comp=Z,1.5nm,0.7s						
SONM	Songino Array	120.15	10	PKP	PKPdf	20 38 15.4	-1.9
	comp=Z,0.2nm,0.5s,baz=329,slow=1.7,SNR=2.8						
PZH	PanZhiHua	138.90	24	PKP	PKPdf	20 38 53.0	-0.5
CMAR	Chiang Mai Arr	144.44	34	PKP	PKPab	20 39 02.7	+1.0
	comp=Z,1.4nm,0.6s,baz=315,slow=4.8,SNR=14						
STKA	Stephens Creek	150.78	222	PKPbc	PKPbc	20 39 19.7	+0.6
	comp=Z,4.0nm,0.7s,baz=111,slow=4.5,SNR=10.0						
ASAR	Alice Springs	161.24	227	PKP	PKPdf	20 39 27.8	+0.2
	comp=Z,0.2nm,0.8s,baz=126,slow=1.3,SNR=4.7						
ASAR				pPKP	pPKPdf	20 39 41.9	-0.4
	comp=Z,0.4nm,0.8s,baz=96,slow=2.5,SNR=3.6						
ASAR				PKPab	PKPab	20 40 10.7	-0.6
	comp=Z,0.6nm,0.7s,baz=128,slow=3.6,SNR=7.3						
WRA	Warramunga Arr	162.96	237	PKP	PKPdf	20 39 28.7	-0.6
	comp=Z,0.6nm,1.0s,baz=69,slow=0.8,SNR=5.4						
WRA				pPKP	pPKPdf	20 39 43.1	-1.0
	comp=Z,0.8nm,0.9s,baz=90,slow=1.0,SNR=4.0						
WRA				PKPab	PKPab	20 40 17.9	-1.1
	comp=Z,0.4nm,0.7s,baz=108,slow=4.1,SNR=3.0						

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*NEIC **10** 20:20:50.9±2.1, 12°.2N±0°.1×141°.7E±0°.1, h118^{km}±15^{km}, mb4.1/7, Error ellipse: s-maj=19.0km s-min=14.6km az=166.0*
*IDC **10** 20:20:52.5±3.1, 12°.29N×141°.82E, h150^{km}±40^{km}, mb3.4/8, mbtmp3.8/9, MS2.4/1, Error ellipse: s-maj=39.1km s-min=16.4km az=82.0*
ISC 10 20:20:49.0±0.8, **12°.16N**±0°.10×**141°.50E**±0°.10, **h100^{km}, n22**, σ0^{s}.98/19, **mb4.0**/12, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.58	66	P	Pn	20 21 43.9	+1.4
	22nm,0.3s,baz=244,slow=2.7,SNR=6.5						
GUMO				S	Sn	20 22 22.1	-1.8
	48nm,0.3s,baz=210,slow=20,SNR=5.8						
GUMO				LR	LR	20 23 05.4	
	comp=Z,54nm,18.6s,baz=269,slow=41						
JCJ	Chichijima	14.87	2	Pn	Pn	20 24 15.0	+0.9
H11S3	WAKE ISLAND Hy	25.08	72	T	T	20 50 09.9	
	baz=255						
H11S1	WAKE ISLAND Hy	25.09	72	T	T	20 50 14.8	
	baz=255						
H11S2	WAKE ISLAND Hy	25.09	72	T	T	20 50 28.1	
	baz=255						
WB0	Warramunga Arr	32.49	193	P	P	20 27 08.7	-1.6
WB0				IAmb	IAmb	20 27 17.0	
	comp=Z,6.2nm,1.4s						
WRAB	Tennant Creek	32.66	193	P	P	20 27 11.7	-0.1
WRAB				IAmb	IAmb	20 27 12.4	
	comp=Z,2.4nm,1.0s						
WRA	Warramunga Arr	32.67	193	P	P	20 27 11.4	-0.5
	comp=Z,0.7nm,0.8s,baz=11,slow=9.6,SNR=4.9						
	comp=Z,0.7nm,0.8s						
USRK	Ussuriysk Ar.	32.96	347	P	P	20 27 14.5	+0.5
ASAR	Alice Springs	36.38	192	P	P	20 27 43.8	0.0
	comp=Z,0.1nm,0.4s,baz=23,slow=11,SNR=5.5						
	comp=Z,0.1nm,0.4s						
HEH	HeiHe	39.70	346	eP	P	20 28 10.4	-1.0
CMAR	Chiang Mai Arr	41.45	284	P	P	20 28 26.6	+0.3
	comp=Z,3.6nm,0.6s,baz=85,slow=6.7,SNR=36						
	comp=Z,3.6nm,0.6s						
CMAR	Chiang Mai Arr	41.45	284	P	P	20 28 26.9	+0.6
STKA	Stephens Creek	43.79	180	P	P	20 28 45.6	+0.8
	comp=Z,0.8nm,0.6s,baz=5.7,slow=10,SNR=2.9						
	comp=Z,0.8nm,0.6s						
SONM	Songino Array	46.08	327	P	P	20 29 02.7	-0.4
	comp=Z,0.4nm,0.5s,baz=143,slow=7.7,SNR=5.3						
	comp=Z,0.4nm,0.5s						
SONM	Songino Array	46.08	327	P	P	20 29 03.0	0.0
MK31	Makanchi Array	60.26	317	P	P	20 30 46.5	-0.5
MK31				IAmb	IAmb	20 31 18.8	
	comp=Z,2.1nm,1.4s						
MKAR	Makanchi Array	60.26	317	P	P	20 30 46.1	-0.9
	comp=Z,0.8nm,0.9s,baz=97,slow=8.4,SNR=6.6						
	comp=Z,0.8nm,0.9s						
MKAR	Makanchi Array	60.26	317	P	P	20 30 46.3	-0.7
MAKZ	Makanchi	60.48	317	P	P	20 30 48.5	+0.1
MAKZ				IAmb	IAmb	20 30 48.8	
	comp=Z,2.1nm,1.1s						
ZALV	Zalesovo Beam	60.90	326	P	P	20 30 49.5	-1.7
	comp=Z,0.6nm,0.4s,baz=110,slow=7.0,SNR=3.0						
	comp=Z,0.6nm,0.4s						
FINES	FINESS Array B	91.04	334	P	P	20 33 38.7	-3.3
	comp=Z,1.3nm,0.9s,baz=60,slow=3.4,SNR=4.6						
	comp=Z,1.3nm,0.9s						

WEL 10 21:05:19.1±0.4, **41°S**±3°×**17°5E**±°, **h22^{km}**±3^{km}, **M2.2**/11, **ML2.5**/13, **MLv2.2**/11, **Error ellipse: s-maj=0.0km s-min=0.0km az=162.1, confirmed, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WEL	Wellington	0.14	32	P	Pb	21 05 25.9	+1.1
WEL				S	Sb	21 05 30.5	+1.7
TCW	Tory Channel	0.35	303	P	Pn	21 05 28.1	-0.8
TCW				S	Sn	21 05 34.3	-1.0
CAW	Cannon Point	0.42	45	P	Pn	21 05 29.5	-0.4
CAW				S	Sn	21 05 36.5	-0.4
PLWZ	Palliser	0.47	111	P	Pn	21 05 29.6	-0.9
PLWZ				S	Sn	21 05 37.5	-0.7
CMWZ	Cape Campbell	0.49	225	S	Sn	21 05 39.3	+0.7
TUWZ	Tuamarina	0.55	267	P	Pb	21 05 30.5	+0.4
TUWZ				S	Sb	21 05 37.9	+0.4
PAWZ	Paruwai Farm	0.57	88	P	Pb	21 05 31.1	+0.7
PAWZ				S	Sn	21 05 40.2	-0.5
KIW	Kapiti Island	0.57	19	P	Pn	21 05 31.8	-0.1
KIW				S	Sn	21 05 40.8	+0.1
BSWZ	Blackbirch Sta	0.67	242	P	Pn	21 05 32.9	-0.5
BSWZ				S	Sn	21 05 42.5	-0.7
MTW	Mount Morrison	0.67	69	P	Pb	21 05 32.7	+0.5
MTW				S	Sn	21 05 43.1	-0.1
OGWZ	Otaki Gorge	0.70	33	P	Pn	21 05 33.7	+0.1
OGWZ				S	Sn	21 05 43.9	+0.1
TRWZ	Traveller	0.77	90	P	Pb	21 05 33.7	0.0
HOWZ	Holdsworth Sta	0.81	52	P	Pn	21 05 35.3	0.0
DUWZ	D’Urville Isla	0.83	316	P	Pn	21 05 35.8	+0.4
DUWZ				S	Sn	21 05 47.3	+0.3
NNZ	Nelson	0.99	280	P	Pn	21 05 37.6	0.0
MRZ	Mangatainoka R	1.01	43	P	Pb	21 05 37.8	0.0
MRZ				S	Sb	21 05 50.2	-0.5
TIWZ	Tintock	1.11	56	P	Pn	21 05 39.4	0.0
TIWZ				S	Sb	21 05 53.6	0.0
TKNZ	Takaka Hill	1.34	285	P	Pn	21 05 42.9	+0.4
MRNZ	Matariki Terra	1.44	270	P	Pn	21 05 43.9	0.0
QRZ	Quartz Range	1.72	289	P	Pn	21 05 48.5	+0.9

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*BJI **10** 21:20:49.3±0.0, 2°.01S×133°.61E, h19^{km}, mb4.7/61, mB5.0/32, Ms4.7/7, Ms7 4.4/6*
*MOS **10** 21:20:52.6±0.8, 1°.87S×133°.38E, h29^{km}, mb5.0/50, Error ellipse: s-maj=9.9km s-min=5.0km az=115.1*
*DJA **10** 21:20:53.0±0.2, 2°S±3°×13°3E±°, h10^{km}, M4.7/26, mB5.2/12, mb4.8/26, MLv4.9/14, Mw(mB)4.6/12*
*NEIC **10** 21:20:54.0±1.0, 1°.87S±0°.07×133°.47E±0°.06, h25^{km}±5^{km}, mb4.9/125, Error ellipse: s-maj=11.2km s-min=7.8km az=205.0*
*IDC **10** 21:20:55.9±2.5, 1°.88S×133°.26E, h38^{km}±21^{km}, mb4.5/22, mbtmp4.7/27, ML4.2/2, MS3.4/23, Error ellipse: s-maj=17.0km s-min=8.7km az=76.0*
ISC 10 21:20:55.2±0.6, **1°.88S**±0°.03×**133°.40E**±0°.03, **h33^{km}**±2^{km}, **h33^{km}:pP-P, n464**, σ1^{s}.18/486, **mb4.9**/127, **MS3.4**/21, **17C-9D, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKPI	Ransiki, Papua	0.86	64	P	Pn	21 21 09.4	-1.5
RKPI				S	Sn	21 21 21.1	-1.1
FAKI	Fak Fak	1.55	228		Pn	21 21 20.1	-0.3
FAKI	Fak Fak	1.55	228	P	Pn	21 21 21.2	+0.8
FAKI	Fak Fak	1.55	228	P	Pn	21 21 20.6	+0.2

FAKI				S	**Sn**	**21 21 40.7**	**+1.4**
SIJI	**Sorong**	**2.36**	**295**	Pn	**Pn**	**21 21 28.8**	**-2.8**
	115nm,0.3s,baz=113,slow=15,SNR=269						
SIJI				Sn	**Sn**	**21 21 57.5**	**-2.0**
	174nm,0.3s,baz=229,slow=22,SNR=9.3						
	360nm,0.4s						
SRPI	**Serui, Papua**	**2.83**	**90**	P	**Pn**	**21 21 38.6**	**+0.5**
BNDI	**Bandanaira**	**4.37**	**233**	P	**Pn**	**21 21 59.7**	**+0.5**
BNDI	**Bandanaira**	**4.37**	**233**	P	**Pn**	**21 21 59.9**	**+0.7**
MSAI	**Masohi**	**4.70**	**252**	P	**Pn**	**21 22 02.9**	**-0.9**
SMPI	**Sarmi**	**5.30**	**91**	P	**Pn**	**21 22 13.3**	**+1.2**
	95nm,0.8s,4µm0.4nm						
AAI	**Ambon**	**5.50**	**251**	P	**Pn**	**21 22 14.9**	**+0.1**
	212nm,0.7s,3µm1.0nm						
LBMI	**Labuha**	**6.03**	**282**	P	**Pn**	**21 22 20.2**	**-1.9**
	184nm,1.1s,2µm0.6nm						
SAUI	**Saumlaki**	**6.41**	**199**		**Pn**	**21 22 28.9**	**+1.5**
SAUI	**Saumlaki**	**6.41**	**199**	P	**Pn**	**21 22 28.0**	**+0.7**
	158nm,0.8s,1.6nm						
NLAI	**Namlea**	**6.44**	**258**	P	**Pn**	**21 22 27.6**	**-0.1**
	67nm,0.5s,3µm0.4nm						
TNTI	**Ternate**	**6.59**	**294**	Pn	**Pn**	**21 22 28.9**	**-0.9**
TNTI	**Ternate**	**6.59**	**294**	P	**Pn**	**21 22 32.2**	**+2.5**
TNTI	**Ternate**	**6.59**	**294**	P	**Pn**	**21 22 31.7**	**+2.0**
	28nm,0.8s,0.1nm						
GENI	**Genyem**	**6.79**	**96**	P	**Pn**	**21 22 36.6**	**+4.0**
GENI	**Genyem**	**6.79**	**96**	P	**Pn**	**21 22 33.4**	**+0.8**
	222nm,0.9s,0.8nm						
SANI	**Sanana**	**7.41**	**269**	P	**Pn**	**21 22 40.1**	**-1.0**
	38nm,1.0s,633nm0.2nm						
LUWI	**Luwuk**	**10.66**	**274**		**Pn**	**21 23 26.4**	**+0.7**
LUWI	**Luwuk**	**10.66**	**274**	P	**Pn**	**21 23 29.1**	**+3.4**
KDU	**Kakadu**	**10.77**	**185**	P	**Pn**	**21 23 26.8**	**-0.4**
MTN	**Manton Dam**	**11.12**	**192**	Pn	**Pn**	**21 23 30.9**	**-1.0**
MTN	**Manton Dam**	**11.12**	**192**	P	**Pn**	**21 23 31.3**	**-0.6**
MRSI	**Marisa**	**11.70**	**281**	P	**Pn**	**21 23 42.0**	**+2.1**
	25nm,1.4s						
SOEI	**Soe**	**11.99**	**229**		**Pn**	**21 23 44.9**	**+1.0**
SOEI	**Soe**	**11.99**	**229**	P	**Pn**	**21 23 44.0**	**+0.1**
	71nm,1.1s						
TOLI2	**Tolitoli**	**12.97**	**283**	Pn	**Pn**	**21 23 55.7**	**-1.5**
MMRI	**Maumere**	**12.98**	**238**		**Pn**	**21 23 57.6**	**+0.2**
MMRI	**Maumere**	**12.98**	**238**	P	**Pn**	**21 23 58.4**	**+1.0**
MMRI	**Maumere**	**12.98**	**238**	P	**Pn**	**21 23 57.9**	**+0.5**
	38nm,1.4s						
BSSI	**Bau Bau, Buton**	**13.56**	**251**	P	**Pn**	**21 24 05.7**	**+0.4**
	30nm,0.9s,2µm						
BKSI	**Bulukumba**	**13.69**	**255**	P	**Pn**	**21 24 06.3**	**-0.7**
	47nm,1.2s,381nm						
SPSI	**Sidrap Palu**	**13.77**	**261**	P	**Pn**	**21 24 10.1**	**+1.9**
	20nm,1.1s						
KAPI	**Kappang**	**13.98**	**257**	Pn	**Pn**	**21 24 10.1**	**-0.9**
	6.8nm,0.5s,baz=77,slow=14,SNR=10						
KAPI				LR	LR	21 30 05.2	
	comp=Z,175nm,19.8s,baz=83,slow=40						
KAPI	**Kappang**	**13.98**	**257**		**Pn**	**21 24 11.1**	**+0.1**
KAPI	**Kappang**	**13.98**	**257**	P	**Pn**	**21 24 13.3**	**+2.3**
KAPI	**Kappang**	**13.98**	**257**	P	**Pn**	**21 24 11.1**	**+0.1**
KNRA	**Kununurra**	**14.45**	**198**		**Pn**	**21 24 15.1**	**-2.4**
KNRA	**Kununurra**	**14.45**	**198**	P	**Pn**	**21 24 19.1**	**+1.7**
COEN	**Coen**	**15.40**	**142**	Pn	**Pn**	**21 24 23.9**	**-6.3**
PMG	**Port Moresby**	**15.59**	**119**	Pn	**P**	**21 24 36.3**	**-0.1**
	38nm,1.0s,baz=296,slow=9.8,SNR=10						
PMG				Sn	**Sn**	**21 27 29.8**	**+5.5**
	1.1nm,0.3s,baz=260,slow=13,SNR=1.9						
PMG	**Port Moresby**	**15.59**	**119**		**Pn**	**21 24 33.7**	**+1.1**
PMG				IAmb	IAmb	21 24 37.8	
	comp=Z,57nm,1.1s						
PMG	**Port Moresby**	**15.59**	**119**	P	**P**	**21 24 36.9**	**+0.4**
PMG	**Port Moresby**	**15.59**	**119**	P	**P**	**21 24 36.8**	**+0.3**
PMG	**Port Moresby**	**15.59**	**119**	P	**Pn**	**21 24 33.7**	**+1.1**
PMG				pmax	pmax		
	comp=Z,57nm,1.1s						
MYLDM	**Lahad Datu**	**16.46**	**295**		**Pn**	**21 24 43.6**	**-0.1**
PLAI	**Plampang**	**17.01**	**246**	P	**Pn**	**21 24 50.6**	**-0.1**
TWSI	**Taliwang, Sumb**	**17.80**	**247**	P	**P**	**21 25 01.4**	**+0.4**
	comp=Z,29nm,0.9s						
WB0	**Warramunga Arr**	**17.80**	**177**		**Pn**	**21 24 59.5**	**-1.0**
FITZ	**Fitzroy Crossi**	**17.82**	**205**		**Pn**	**21 25 00.2**	**-0.5**
WRAB	**Tennant Creek**	**17.96**	**177**	P	**Pn**	**21 25 01.7**	**-0.7**
WRAB				IAmb	IAmb	21 25 07.0	
	comp=Z,48nm,0.7s						
WRAB	**Tennant Creek**	**17.96**	**177**	P	**P**	**21 25 04.2**	**+1.4**
WRAB	**Tennant Creek**	**17.96**	**177**	*de*P	**Pn**	**21 25 02.1**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,46nm,0.7s						
WRA	**Warramunga Arr**	**17.97**	**177**	P	**Pn**	**21 25 02.0**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=356,slow=11,SNR=27						
WRA				S	**Sn**	**21 28 14.3**	**-7.9**
	comp=Z,22nm,0.9s,baz=356,slow=23,SNR=7.5						
WRA				LR	LR	21 32 27.8	
	comp=Z,86nm,21.2s,baz=341,slow=38						
	comp=Z,46nm,0.7s						
WRA	**Warramunga Arr**	**17.97**	**177**	P	**Pn**	**21 25 01.8**	**-0.8**
WB2	**Warramunga Arr**	**17.97**	**177**		**Pn**	**21 25 02.0**	**-0.6**
WB1	**Warramunga Ar.**	**17.99**	**177**	P	**Pn**	**21 25 02.3**	**-0.5**
	comp=Z,106nm,0.8s						
BBKI	**Banjar Baru**	**18.61**	**265**	P	**Pn**	**21 25 11.9**	**+1.5**
	comp=Z,41nm,1.2s,comp=Z,1µm						
KRVT	**Keravat (AS076**	**18.75**	**98**	P	**Pn**	**21 25 14.6**	**+2.5**
	comp=Z,32nm,0.5s,baz=199,slow=21,SNR=6.2						
RABL	**Rabaul**	**18.87**	**97**	P	**P**	**21 25 11.4**	**-1.5**
RABL				IAmb	IAmb	21 25 28.7	
	comp=Z,68nm,1.1s						
RABL	**Rabaul**	**18.87**	**97**	P	**Pn**	**21 25 16.3**	**+2.7**
KKM	**Kota Kinabalu**	**18.89**	**295**	P	**P**	**21 25 11.4**	**-1.7**
GUMO	**Guam**	**19.12**	**36**	LR	LR	21 33 24.6	
	comp=Z,59nm,18.5s,baz=203,slow=39						
SRBI	**Singaraja**	**19.13**	**251**	P	**Pn**	**21 25 16.8**	**+0.1**
	comp=Z,34nm,1.3s						
MTSU	**Mount Surprise**	**19.38**	**147**	P	**Pn**	**21 25 20.6**	**+1.0**
QIS	**Mount Isa**	**19.52**	**162**	P	**Pn**	**21 25 21.1**	**-0.2**
JAGI	**Jajag, Banyuwa**	**20.25**	**250**		**P**	**21 25 27.5**	**-0.4**
SBUM	**Sibu**	**21.61**	**281**	P	**P**	**21 25 43.1**	**+0.5**
AS01	**Alice Springs**	**21.66**	**179**	P	**P**	**21 25 44.3**	**+1.3**
	comp=Z,200nm,0.8s						
AS31	**Alice Springs**	**21.66**	**179**	P	**P**	**21 25 43.6**	**+0.6**
AS31				IAmb	IAmb	21 25 48.2	
	comp=Z,32nm,0.7s						
ASAR	**Alice Springs**	**21.66**	**179**	P	**P**	**21 25 44.1**	**+1.1**
	comp=Z,111nm,0.8s,baz=1.6,slow=11,SNR=523						
ASAR				S	**S**	**21 29 40.3**	**-1.0**
	comp=Z,9.0nm,0.9s,baz=0.0,slow=26,SNR=6.8						
	comp=Z,111nm,0.8s						
TV1H	**Townsville Har**	**21.68**	**144**	P	**P**	**21 25 45.7**	**+2.4**
CTA	**Charters Tower**	**22.02**	**146**	P	**P**	**21 25 48.6**	**+1.6**
	comp=Z,11nm,0.8s,baz=314,slow=10.0,SNR=8.5						
	comp=Z,11nm,0.8s						
CTA	**Charters Tower**	**22.02**	**146**	P	**P**	**21 25 47.9**	**+1.0**
CTAO	**Charters Tower**	**22.02**	**146**		**P**	**21 25 44.7**	**-2.2**
CTAO	**Charters Tower**	**22.02**	**146**	P	**P**	**21 25 48.0**	**+1.0**
CTAO	**Charters Tower**	**22.02**	**146**	P	**P**	**21 25 44.7**	**-2.2**
CTAO				pmax	pmax		
	comp=Z,28nm,1.0s						
KSM	**Kuching**	**23.33**	**278**	P	**P**	**21 25 59.4**	**-1.4**
KSM				IAmb	IAmb	21 26 03.0	
	comp=Z,40nm,1.1s						
KSM	**Kuching**	**23.33**	**278**	P	**P**	**21 26 03.3**	**+2.6**
	comp=Z,41nm,1.5s						
MBWA	**Marble Bar**	**23.34**	**214**	P	**P**	**21 26 00.3**	**-0.3**
SMRI	**Semarang**	**23.45**	**257**	P	**P**	**21 26 01.8**	**-0.1**
WRKA	**Warakurna**	**23.54**	**192**	P	**P**	**21 26 03.3**	**+0.6**
PSA00	**Pilbara Seismi**	**23.61**	**213**	P	**P**	**21 26 02.8**	**-0.5**
PSA00				IAmb	IAmb	21 26 11.8	
	comp=Z,53nm,1.1s						
PSA00	**Pilbara Seismi**	**23.61**	**213**	P	**P**	**21 26 03.4**	**+0.1**
PSA00				IAmb	IAmb	21 26 08.3	
	comp=Z,27nm,1.1s						
PSA00	**Pilbara Seismi**	**23.61**	**213**	P	**P**	**21 26 04.0**	**+0.7**
OOD	**Oodnadatta**	**25.86**	**175**	P	**P**	**21 26 25.3**	**+1.5**
BBJI	**Bungbulang**	**26.25**	**257**	P	**P**	**21 26 28.5**	**+0.9**
INKA	**Innaminka**	**26.66**	**165**	P	**P**	**21 26 33.1**	**+2.1**
QLP	**Quilpie**	**26.67**	**158**	P	**P**	**21 26 32.0**	**+0.8**
HNR	**Honiara**	**27.44**	**107**	LR	LR	21 37 12.5	
	comp=Z,523nm,20.4s,baz=212,slow=35						
DLV	**T Lat**	**28.32**	**300**	P	**P**	**21 26 49.6**	**+3.3**
	comp=Z,15nm,2.0s						
EIDS	**Eidsvold**	**28.91**	**145**	P	**P**	**21 26 50.1**	**-1.1**
EIDS				IAmb	IAmb	21 26 55.5	
	comp=Z,19nm,0.8s						
EIDS	**Eidsvold**	**28.91**	**145**	P	**P**	**21 26 52.2**	**+1.0**
JOW	**Kunigami**	**28.97**	**351**	LR	LR	21 36 55.9	
	comp=Z,30nm,21.5s,baz=188,slow=33						
JCJ	**Chichijima**	**30.03**	**16**	LR	LR	21 36 17.4	
	comp=Z,27nm,19.7s,baz=192,slow=31						
AULRC	**Lightning Ridg**	**30.71**	**155**	P	**P**	**21 27 07.5**	**+0.4**
STKA	**Stephens Creek**	**30.82**	**166**	P	**P**	**21 27 08.1**	**+0.1**
	comp=Z,13nm,0.8s,baz=340,slow=8.6,SNR=18						
STKA				LR	LR	21 40 29.1	
	comp=Z,208nm,18.4s,baz=0.7,slow=38						
	comp=Z,13nm,0.8s						
STKA	**Stephens Creek**	**30.82**	**166**	P	**P**	**21 27 07.4**	**-0.7**
STKA	**Stephens Creek**	**30.82**	**166**	P	**P**	**21 27 08.4**	**+0.3**
STKA	**Stephens Creek**	**30.82**	**166**	P	**P**	**21 27 07.4**	**-0.7**
STKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KMBL	**Kambalda**	**31.28**	**199**	P	**P**	**21 27 13.2**	**+1.0**
CMSA	**Cobar Meteorol**	**31.70**	**160**	P	**P**	**21 27 16.3**	**+0.5**
BKNI	**Bangkinang**	**32.43**	**274**	P	**P**	**21 27 23.0**	**+0.4**
IPM	**Ipoh**	**32.97**	**281**	P	**P**	**21 27 26.1**	**-1.1**
IPM				IAmb	IAmb	21 27 33.1	
	comp=Z,14nm,1.1s						
ARMA	**Armidale**	**33.23**	**150**	P	**P**	**21 27 30.7**	**+1.3**
KULM	**Kulim**	**33.48**	**282**	P	**P**	**21 27 30.9**	**-0.8**
KULM				IAmb	IAmb	21 27 35.1	
	comp=Z,15nm,1.0s						
NWAO	**Narrogin (SRO)**	**34.41**	**204**	LR	LR	21 42 57.3	
	comp=Z,122nm,18.4s,baz=78,slow=38						
RPSI	**Rantau Prapat**	**34.77**	**277**	P	**P**	**21 27 42.0**	**-0.9**
RPSI				IAmb	IAmb	21 27 46.6	
	comp=Z,14nm,1.1s						
PSI	**Prapat**	**34.78**	**278**	P	**P**	**21 27 44.0**	**+0.9**
	comp=Z,12nm,1.1s						
PSI	**Prapat**	**34.78**	**278**	P	**P**	**21 27 42.0**	**-1.1**
PSI				pmax	pmax		
	comp=Z,14nm,1.1s						
JNU	**Nakatsue**	**34.90**	**356**	LR	LR	21 40 22.3	
	comp=Z,37nm,19.6s,baz=146,slow=33						
JNU	**Nakatsue**	**34.90**	**356**	P	**P**	**21 27 42.9**	**-0.9**
JNU				IAmb	IAmb	21 27 46.7	
	comp=Z,22nm,1.3s						
SRIT	**Nakonsritamara**	**35.27**	**288**	P	**P**	**21 27 46.7**	**-0.5**
SRIT				IAmb	IAmb	21 27 53.2	
	comp=Z,23nm,1.3s						
KOUNC	**Koumac, New Ca**	**35.39**	**124**	P	**P**	**21 27 46.8**	**-1.3**
KOUNC				IAmb	IAmb	21 27 53.3	
	comp=Z,18nm,1.0s						
ARPS	**Mount Arapiles**	**35.58**	**168**	P	**P**	**21 27 51.5**	**+2.0**
NJ2	**Nanjing**	**36.46**	**339**	*e*P	**P**	**21 27 58.1**	**+1.0**
NJ2				pP	**pP**	**21 28 06.5**	**-0.4**
NJ2				sP	**sP**	**21 28 09.2**	**-1.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,250nm,3.9s						
LHMI	**Lhok Sumawe**	**37.10**	**281**	P	**P**	**21 28 02.4**	**-0.4**
TOO	**Toolangi**	**37.22**	**164**	P	**P**	**21 28 02.2**	**-1.3**
TOO				IAmb	IAmb	21 28 08.8	
	comp=Z,11nm,0.9s						
TOO	**Toolangi**	**37.22**	**164**	P	**P**	**21 28 05.2**	**+1.7**
TOO	**Toolangi**	**37.22**	**164**	P	**P**	**21 28 02.2**	**-1.3**
TOO				pmax	pmax		
	comp=Z,11nm,0.9s						
DZM	**Mont Dzumac**	**37.87**	**125**	P	**P**	**21 28 07.5**	**-1.9**
DZM				IAmb	IAmb	21 28 10.6	
	comp=Z,23nm,1.1s						
OUENC	**Ouen Island, N**	**38.36**	**125**	P	**P**	**21 28 12.1**	**-1.3**
OUENC				IAmb	IAmb	21 28 14.7	
	comp=Z,27nm,1.1s						
PHRA	**Phrae**	**38.41**	**303**	P	**P**	**21 28 13.2**	**-0.7**
CRAI	**Chiangrai**	**39.14**	**306**	P	**P**	**21 28 18.7**	**-1.3**
ENH	**Enshi**	**39.28**	**326**	P	**P**	**21 28 19.7**	**-1.3**
ENH				IAmb	IAmb	21 28 21.3	
	comp=Z,20nm,1.2s						
KSAR	**Wonju Array Be**	**39.46**	**353**	P	**P**	**21 28 20.9**	**-1.4**
KSAR	**Wonju Array Be**	**39.46**	**353**	P	**P**	**21 28 20.9**	**-1.4**
KSRS	**Korea Array**	**39.47**	**353**	P	**P**	**21 28 21.9**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=172,slow=9.9,SNR=4.6						
KSRS				LR	LR	21 44 07.5	
	comp=Z,26nm,20.8s,baz=180,slow=35						
KSRS	**Korea Array**	**39.47**	**353**	P	**P**	**21 28 22.0**	**-0.4**
CM31	**Chiang Mai Arr**	**39.47**	**302**	P	**P**	**21 28 22.4**	**-0.4**
CMAR	**Chiang Mai Arr**	**39.47**	**302**	P	**P**	**21 28 22.5**	**-0.3**
	comp=Z,2.5nm,1.0s,baz=122,slow=6.4,SNR=17						
CMAR				PcP	**PcP**	**21 30 31.3**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=145,slow=1.9,SNR=2.8						
	comp=Z,2.5nm,1.0s						
CMAR	**Chiang Mai Arr**	**39.47**	**302**	P	**P**	**21 28 22.2**	**-0.5**
CHTO	**Chiang Mai**	**39.63**	**303**	P	**P**	**21 28 22.1**	**-2.0**
CHTO	**Chiang Mai**	**39.63**	**303**	P	**P**	**21 28 22.1**	**-2.0**
KMI	**Kunming**	**40.05**	**314**	⇓P	**P**	**21 28 28.3**	**+0.6**
KMI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LYN	**LuoYang**	**41.23**	**333**	⇑*i*P	**P**	**21 28 35.5**	**-1.6**
PZH	**PanZhiHua**	**41.60**	**315**	P	**P**	**21 28 39.4**	**-1.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=Z,50nm,3.5s						
XAN	**Xi'an**	**42.51**	**329**	P	**P**	**21 28 46.5**	**-1.1**
XAN				pP	pP	21 28 55.3	-2.2
XAN				pmax	pmax		
	comp=Z,13nm,1.0s						
XAN				pmax	pmax		
	comp=Z,93nm,4.3s						
HNS	**HongShan**	**42.76**	**338**	⇑P	**P**	**21 28 49.3**	**-0.2**
HNS				pmax	pmax		
	comp=Z,16nm,1.2s						
TNCH	**TengChong**	**43.11**	**311**	P	**P**	**21 28 52.2**	**-0.6**
TNCH				pP	pP	21 28 58.2	-4.5
TNCH				sP	sP	21 28 59.8	-6.9
TNCH				S	**S**	**21 35 22.3**	**+5.1**
TNCH				sS	pS	21 35 26.9	-1.7
TNCH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TNCH				pmax	pmax		
	comp=Z,140nm,4.3s						
TNCH				LR	LR		
	comp=Z,140nm,4.7s						
TNCH				LR	LR		
	comp=Z,200nm,4.6s						
TNCH				LR	LR		
	comp=Z,100nm,5.2s						
BJT	**Baijiatuau**	**44.59**	**341**	P	**P**	**21 29 03.6**	**-0.6**
BJT				IAmb	IAmb	21 29 05.2	
	comp=Z,15nm,1.0s						
BJT	**Baijiatuau**	**44.59**	**341**	P	**P**	**21 29 03.6**	**-0.6**
BJT				pmax	pmax		
	comp=Z,15nm,1.0s						
BJI	**Beijing**	**44.61**	**341**	P	**P**	**21 29 04.2**	**-0.1**
BJI				pP	**pP**	**21 29 14.2**	**-0.1**
BJI				PcP	**PP**	**21 30 48.6**	**-0.3**
BJI				S	**S**	**21 35 37.1**	**-1.0**
BJI				sS	**sS**	**21 35 57.2**	**+2.3**
BJI				pmax	pmax		
	comp=Z,11nm,1.0s						
USA0B	**Ussuriysk Arra**	**45.90**	**359**	⇓*e*P	**P**	**21 29 14.2**	**-0.3**
USRK	**Ussuriysk Ar.**	**45.90**	**359**	P	**P**	**21 29 14.2**	**-0.2**
	comp=Z,3.0nm,0.8s,baz=157,slow=7.8,SNR=6.0						
	comp=Z,3.0nm,0.8s						
CN2	**Changchun**	**46.04**	**352**	P	**P**	**21 29 16.1**	**+0.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MDJ	**Mudanjiang**	**46.42**	**356**	P	**P**	**21 29 18.6**	**0.0**
MDJ				pP	pP	21 29 26.2	-2.4
MDJ				PcS	**PcS**	**21 34 46.5**	**-1.1**
MDJ				S	**S**	**21 36 08.4**	**+4.2**
MDJ				sS	sS	21 36 21.9	+0.7
MDJ				ScS	**ScS**	**21 39 05.6**	**-5.6**
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,110nm,4.8s						
MDJ				LR	LR		
	comp=Z,90nm,5.3s						
MDJ				LR	LR		
	comp=Z,130nm,5.4s						
MDJ				LR	LR		
	comp=Z,150nm,5.5s						
MDJ	**Mudanjiang**	**46.42**	**356**	P	**P**	**21 29 17.6**	**-1.0**
ASAJ	**Asahikawa**	**46.53**	**9**	LR	LR	21 48 26.3	
	comp=Z,17nm,20.1s,baz=172,slow=36						
MSVF	**Nonsavu**	**46.56**	**113**	P	**P**	**21 29 18.5**	**-1.8**
MSVF	**Nonsavu**	**46.56**	**113**	P	**P**	**21 29 18.5**	**-1.8**
MSVF				pmax	pmax		
	comp=Z,28nm,1.2s						
LZH	**Lanzhou**	**46.76**	**327**	⇓P	**P**	**21 29 22.4**	**+0.8**
LZH				pP	pP	21 29 28.3	-3.4
LZH				sP	sP	21 29 31.5	-4.1
LZH				pmax	pmax		
	comp=Z,27nm,0.9s						
HHC	**Hu-ho-hao-te**	**46.96**	**337**	*e*P	**P**	**21 29 23.8**	**+0.8**
HHC				pmax	pmax		
	comp=Z,42nm,0.7s						
HHC				pmax	pmax		
	comp=Z,170nm,4.5s						
XLT	**XiLinHaoTe**	**48.15**	**343**	*e*P	**P**	**21 29 32.3**	**+0.1**
XLT				pP	pP	21 29 39.7	-2.6
XLT				sP	sP	21 29 42.4	-3.8
XLT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,54nm,4.1s						
YSS	**Yuzh-Sakhalins**	**49.32**	**8**	P	**P**	**21 29 39.5**	**-1.5**
YSS				IAmb	IAmb	21 29 42.0	
	comp=Z,8.7nm,0.8s						
YSS	**Yuzh-Sakhalins**	**49.32**	**8**	⇓*e*P	**P**	**21 29 40.6**	**-0.4**
YSS				pmax	pmax		
	comp=Z,16nm,1.3s						
KLR	**Kul'dur**	**50.93**	**359**	P	**P**	**21 29 52.8**	**-0.4**
	comp=Z,4.5nm,0.8s,baz=190,slow=4.9,SNR=23						
KLR				PcP	**PcP**	**21 31 08.9**	**-0.3**
	comp=Z,1.9nm,0.9s,baz=236,slow=3.6,SNR=2.9						
KLR				LR	LR	21 51 33.7	
	comp=Z,12nm,19.0s,baz=182,slow=36						
	comp=Z,4.5nm,0.8s						
KLR	**Kul'dur**	**50.93**	**359**	*ce*P	**P**	**21 29 53.1**	**-0.1**
KLR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LSA	**Lhasa**	**51.13**	**311**	P	**P**	**21 29 55.5**	**-0.1**
LSA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LSA	**Lhasa**	**51.13**	**311**	P	**P**	**21 29 54.7**	**-0.9**
LSA				IAmb	IAmb	21 29 59.5	
	comp=Z,12nm,1.1s						
LSA	**Lhasa**	**51.13**	**311**	P	**P**	**21 29 54.7**	**-0.9**
LSA				pmax	pmax		
	comp=Z,12nm,1.1s						
GTA	**Gaotai**	**51.37**	**327**	*e*P	**P**	**21 29 56.9**	**+0.1**
GTA				pP	pP	21 30 04.0	-2.9
GTA				PcP	**PcP**	**21 31 15.0**	**+3.7**
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
HEH	**HeiHe**	**52.19**	**355**	*e*P	**P**	**21 30 01.5**	**-1.1**
HEH				PcP	**PcP**	**21 31 14.2**	**+0.3**
HEH				pmax	pmax		
	comp=Z,9.0nm,1.2s						
HIA	**Hailar**	**52.30**	**349**	P	**P**	**21 30 03.2**	**-0.3**
HIA	**Hailar**	**52.30**	**349**	P	**P**	**21 30 03.2**	**-0.3**
HIA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
DCZ	**Deep Cove**	**52.55**	**150**	P	**P**	**21 30 04.8**	**-0.5**
TYV	**Tymovskoe**	**53.14**	**7**	*e*P	**P**	**21 30 09.9**	**+0.3**
TYV				*e*S	**S**	**21 37 41.4**	**+3.6**
TYV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TYV				pmax	pmax		
	comp=Z,100nm,3.4s						
TYV				smax	smax		
	comp=N,300nm,6.0s						
TYV				smax	smax		
	comp=E,200nm,6.0s						
PALK	**Pallekele**	**53.36**	**280**	LR	LR	21 54 04.2	
	comp=E,43nm,19.5s,baz=241,slow=37						
RPZ	**Rata Peaks**	**53.40**	**147**	LR	LR	21 53 11.6	
	comp=E,113nm,18.5s,baz=282,slow=36						
ULN	**Ulaanbaatar**	**54.62**	**338**	P	**P**	**21 30 20.2**	**-0.6**
ULN				IAmb	IAmb	21 30 25.0	
	comp=Z,11nm,1.1s						
ULN	**Ulaanbaatar**	**54.62**	**338**	*c i*P	**P**	**21 30 21.0**	**+0.3**
ULN				pmax	pmax		
	comp=Z,18nm,1.7s						
SONM	**Songino Array**	**54.84**	**338**	P	**P**	**21 30 22.2**	**-0.1**
	comp=Z,2.6nm,1.0s,baz=152,slow=7.2,SNR=14						
SONM				PcP	**PcP**	**21 31 24.5**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=161,slow=2.7,SNR=4.7						
SONM				LR	LR	21 54 43.2	
	comp=Z,30nm,18.4s,baz=170,slow=37						
	comp=Z,2.6nm,1.0s						
SONM	**Songino Array**	**54.84**	**338**	P	**P**	**21 30 22.1**	**-0.2**
SONM	**Songino Array**	**54.84**	**338**	P	**P**	**21 30 22.1**	**-0.2**
SONM				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ZEA	**Zeya**	**55.66**	**356**	*e*P	**P**	**21 30 28.6**	**+0.7**
ZAK	**Zakamensk**	**58.10**	**338**	*e*P	**P**	**21 30 45.1**	**-0.3**
ZAK				*e*		21 31 35.8	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
PETK	**Petropavlovsk-**	**58.46**	**17**	P	**P**	**21 30 47.7**	**0.0**
	comp=Z,7.3nm,1.0s,baz=210,slow=8.6,SNR=7.9						
PETK				LR	LR	21 54 57.1	
	comp=Z,12nm,20.4s,baz=203,slow=35						
	comp=Z,7.3nm,1.0s						
PETK	**Petropavlovsk-**	**58.46**	**17**	P	**P**	**21 30 47.0**	**-0.7**
MOY	**Mondy**	**60.00**	**337**	*e*P	**P**	**21 30 59.2**	**+0.6**
MOY				pmax	pmax		
	comp=Z,20nm,1.5s						
WMQ	**Urumqi**	**61.14**	**324**	⇑P	**P**	**21 31 07.1**	**+0.7**
WMQ				PcP	**PcP**	**21 31 52.5**	**+3.4**
WMQ				pmax	pmax		
	comp=Z,18nm,1.1s						
BOD	**Bodaibo**	**61.52**	**348**	*e*P	**P**	**21 31 08.5**	**-0.1**
BOD				pmax	pmax		
	comp=Z,18nm,1.1s						
MA2	**Magadan**	**62.78**	**10**	⇓*e*P	**P**	**21 31 18.9**	**+1.9**
MA2				pmax	pmax		
	comp=Z,22nm,1.9s						
YAK	**Yakutsk**	**63.81**	**358**	P	**P**	**21 31 23.9**	**+0.1**
	comp=Z,27nm,0.7s,baz=176,slow=1.7,SNR=27						
YAK				LR	LR	21 59 20.2	
	comp=Z,15nm,19.3s,baz=320,slow=36						
	comp=Z,27nm,0.7s						
YAK	**Yakutsk**	**63.81**	**358**	P	**P**	**21 31 23.6**	**-0.1**
YAK	**Yakutsk**	**63.81**	**358**	*c i*P	**P**	**21 31 23.8**	**+0.1**
YAK				*e*S	**S**	**21 39 57.5**	**+1.2**
YAK				*e**SS	**pS**	**21 40 09.5**	**+0.5**
YAK				pmax	pmax		
	comp=Z,46nm,0.8s						
YAK				pmax	pmax		
	comp=N,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.8s						
YAK				smax	smax		
	comp=N,38nm,3.5s						
YAK				smax	smax		
	comp=E,42nm,3.0s						
SHEM	**Shemya Is, Ala**	**64.22**	**26**	P	**P**	**21 31 27.4**	**+0.8**
	comp=E,67nm,0.9s,baz=197,slow=9.7,SNR=1.9						
	comp=E,67nm,0.9s						
DGZ	**Jazzator, Alta**	**64.77**	**329**	*de*P	**P**	**21 31 31.1**	**+0.5**
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ZSN	**Zaisan**	**64.84**	**326**	*e*P	**P**	**21 31 31.0**	**+0.1**
	baz=326						
ZSN	**Zaisan**	**64.84**	**326**	*e*P	**P**	**21 31 31.0**	**+0.1**
SHLS	**Shalkode**	**65.91**	**320**	⇑*i*P	**P**	**21 31 36.7**	**-1.4**
	comp=Z,7.8nm,0.9s,baz=320						
SHLS	**Shalkode**	**65.91**	**320**	*c i*P	**P**	**21 31 36.6**	**-1.4**
SHLS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MK31	**Makanchi Array**	**65.96**	**324**	P	**P**	**21 31 37.8**	**-0.4**
MK31				IAmb	IAmb	21 31 42.0	
	comp=Z,8.4nm,0.9s						
MK31	**Makanchi Array**	**65.96**	**324**	P	**P**	**21 31 37.8**	**-0.4**
MK31				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MKAR	**Makanchi Array**	**65.96**	**324**	P	**P**	**21 31 38.4**	**+0.2**
	comp=Z,7.7nm,0.8s,baz=118,slow=8.2,SNR=80						
	comp=Z,7.7nm,0.8s						
MKAR	**Makanchi Array**	**65.96**	**324**	P	**P**	**21 31 38.0**	**-0.2**
MAKZ	**Makanchi**	**66.15**	**324**	P	**P**	**21 31 39.3**	**-0.1**
MAKZ	**Makanchi**	**66.15**	**324**	P	**P**	**21 31 39.3**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,15nm,0.9s						
UZB	**Uzynbulak**	**66.19**	**319**	*e*P	**P**	**21 31 40.1**	**+0.2**
	comp=Z,15nm,1.5s,baz=319						
UZB	**Uzynbulak**	**66.19**	**319**	*e*P	**P**	**21 31 40.1**	**+0.2**
UZB				pmax	pmax		
	comp=Z,15nm,1.5s						
SEY	**Seymchan**	**66.21**	**9**	P	**P**	**21 31 39.7**	**+0.2**
	comp=Z,9.5nm,0.9s,baz=178,slow=4.3,SNR=23						
	comp=Z,9.5nm,0.9s						
SEY	**Seymchan**	**66.21**	**9**	⇑*e*P	**P**	**21 31 39.6**	**+0.2**
SEY				pmax	pmax		
	comp=Z,14nm,0.9s						
TARG	**Taragay, Kyrgy**	**66.36**	**318**	P	**P**	**21 31 40.9**	**-0.4**

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TARG  Taragay, Kyrgy   66.36 318   P      P      21 31 40.9  -0.4
TARG                               pmax   pmax
      comp=Z,5.0nm,0.9s
SATY  Saty             66.55 319⇑ iP      P      21 31 42.6  +0.5
      comp=Z,9.3nm,1.1s,baz=319
SATY  Saty             66.55 319c iP      P      21 31 42.6  +0.5
SATY                               pmax   pmax
      comp=Z,9.0nm,1.1s
KPKS  Kokpek           66.55 320  eP      P      21 31 42.4  +0.2
      baz=320
KPKS  Kokpek           66.55 320  eP      P      21 31 42.3  +0.2
ZHN   Zhinishke        66.58 319  eP      P      21 31 42.9  +0.5
      baz=319
ZHN   Zhinishke        66.58 319  eP      P      21 31 42.8  +0.5
NIL   Nilore           66.61 308   P      P      21 31 42.0  -0.6
NIL                                IAmb   IAmb   21 31 52.5
      comp=Z,9.6nm,1.0s
NIL   Nilore           66.61 308   P      P      21 31 42.0  -0.6
NIL                                pmax   pmax
      comp=Z,10.0nm,1.0s
KSH   Kashi            66.70 315   P      P      21 31 45.1  +1.9
KSH                                pP     pP     21 31 52.9  -0.7
KSH                                PcP    PcP    21 32 16.0  +3.9
KSH                                pmax   pmax
      comp=Z,8.0nm,1.4s
TDK   Taldyqorghan     67.44 321  eP      P      21 31 47.8  +0.2
      comp=Z,9.3nm,1.2s,baz=321
TDK   Taldyqorghan     67.44 321  eP      P      21 31 47.8  +0.2
TDK                                pmax   pmax
      comp=Z,9.0nm,1.2s
MDOK  Medeo            67.49 319  eP      P      21 31 48.5  +0.3
      baz=319
MDOK  Medeo            67.49 319  eP      P      21 31 48.5  +0.3
TNSS  Tian-Shan        67.50 319  eP      P      21 31 49.2  +0.6
      baz=319
TNSS  Tian-Shan        67.50 319  eP      P      21 31 49.1  +0.6
AAA   Alma-Ata         67.59 319  eP      P      21 31 49.0  +0.3
      comp=Z,12nm,1.0s,baz=319
AAA   Alma-Ata         67.59 319  eP      P      21 31 49.0  +0.3
AAA                                pmax   pmax
      comp=Z,12nm,1.0s
CHKK  Chushkaly        67.83 319  eP      P      21 31 49.8  -0.3
      baz=319
CHKK  Chushkaly        67.83 319  eP      P      21 31 49.8  -0.3
KUU   Kurty            68.27 319  eP      P      21 31 53.0  +0.1
      comp=Z,15nm,1.1s,baz=319
KUU   Kurty            68.27 319  eP      P      21 31 53.0  +0.1
KUU                                pmax   pmax
      comp=Z,15nm,1.1s
ZAA0  Zalesovo Array   68.62 332   P      P      21 31 53.5  -1.4
ZAA0                               IAmb   IAmb   21 31 55.1
      comp=Z,7.2nm,1.1s
ZALV  Zalesovo Beam    68.62 332   P      P      21 31 53.8  -1.0
      comp=Z,2.7nm,0.8s,baz=119,slow=7.6,SNR=12
      comp=Z,2.7nm,0.8s
AAK   Ala-Archa        68.97 317   P      P      21 31 57.0  -0.4
AAK   Ala-Archa        68.97 317⇑ eP      P      21 31 57.7  +0.2
AAK                                pmax   pmax
      comp=Z,8.0nm,1.7s
SEM   Semipalatinsk    69.00 327  eP      P      21 31 58.1  +0.5
      baz=327
SEM   Semipalatinsk    69.00 327  eP      P      21 31 58.0  +0.5
SGDS  Sogindy          69.21 318  eP      P      21 31 59.8  +0.9
      baz=318
SGDS  Sogindy          69.21 318  eP      P      21 31 59.7  +0.9
KURK  Kurchatov        70.05 326   P      P      21 32 03.7   0.0
KURK  Kurchatov        70.05 326   P      P      21 32 03.7   0.0
KURK                               pmax   pmax
      comp=Z,14nm,0.9s
KBL   Kabul            70.21 308   P      P      21 32 05.5  +0.1
KBL                                IAmb   IAmb   21 32 08.6
      comp=Z,9.1nm,0.9s
KBL   Kabul            70.21 308   P      P      21 32 05.5  +0.1
KBL                                pmax   pmax
      comp=Z,9.0nm,1.0s
BTLS  Baital           70.24 320  eP      P      21 32 05.0   0.0
      baz=320
BTLS  Baital           70.24 320  eP      P      21 32 05.0   0.0
GAR   Garm             70.61 313   P      P      21 32 07.4  -0.2
KIP   Kipapa           70.84  67⇑ eP      P      21 32 08.8  -0.3
KIP                                pmax   pmax
      comp=Z,28nm,0.9s
DZA   Taraz            71.22 317  eP      P      21 32 11.3  +0.2
      baz=317
DZA   Taraz            71.22 317  eP      P      21 32 11.3  +0.2
CHGR  Chuyangaron      71.36 312   P      P      21 32 11.8  -0.3
CHGR                               IAmb   IAmb   21 32 15.6
      comp=Z,20nm,1.4s
CHGR  Chuyangaron      71.36 312   P      P      21 32 11.8  -0.3
CHGR                               pmax   pmax
      comp=Z,20nm,1.4s
KK31  Karatay Array    71.86 317   P      P      21 32 13.7  -1.3
KK31                               IAmb   IAmb   21 32 19.2
      comp=Z,13nm,1.2s
KK31  Karatay Array    71.86 317   P      P      21 32 13.7  -1.3
KK31                               pmax   pmax
      comp=Z,13nm,1.3s
KKAR  Karatay Array    71.86 317   P      P      21 32 14.5  -0.4
KKAR  Karatay Array    71.86 317   P      P      21 32 14.7  -0.2
KKAR                               IAmb   IAmb   21 32 19.2
      comp=Z,13nm,1.2s
KKAR  Karatay Array    71.86 317   P      P      21 32 14.5  -0.4
KKAR                               pmax   pmax
      comp=Z,13nm,1.3s
IUG   Iuzhnay          71.86 316  eP      P      21 32 15.3  +0.2
      comp=Z,11nm,1.3s,baz=316
IUG   Iuzhnay          71.86 316  eP      P      21 32 15.3  +0.2
IUG                                pmax   pmax
      comp=Z,11nm,1.3s
BRZS  Berezniki        73.11 324  eP      P      21 32 22.6  +0.4
      baz=324
BRZS  Berezniki        73.11 324  eP      P      21 32 22.6  +0.4
TIXI  Tiksi            73.46 359   P      P      21 32 23.5  -0.4
      comp=Z,7.9nm,0.7s,baz=268,slow=7.6,SNR=14
      comp=Z,7.9nm,0.7s
TIXI  Tiksi            73.46 359   P      P      21 32 22.9  -0.9
TIXI                               IAmb   IAmb   21 32 24.7
      comp=Z,8.4nm,0.9s
TIXI  Tiksi            73.46 359deP      P      21 32 23.8   0.0
TIXI                               pmax   pmax
      comp=Z,7.0nm,0.7s
BRVK  Borovoye         75.72 326   P      P      21 32 37.3   0.0
BRVK                               IAmb   IAmb   21 32 41.4
      comp=Z,13nm,1.1s
BRVK  Borovoye         75.72 326   P      P      21 32 37.3   0.0
BRVK                               pmax   pmax
      comp=Z,13nm,1.1s
VNDA  Vanda            77.11 174   P      P      21 32 45.8  +1.0
      comp=Z,14nm,0.8s,baz=336,slow=6.2,SNR=13
VNDA                               LR     LR     22 05 30.6
      comp=Z,93nm,19.3s,baz=268,slow=35
      comp=Z,14nm,0.8s
NRIK  Noril'sk         77.49 345   P      P      21 32 46.6  -0.5
      comp=Z,2.2nm,0.4s,baz=148,slow=6.9,SNR=6.2
      comp=Z,2.2nm,0.4s
NRIK  Noril'sk         77.49 345   P      P      21 32 46.5  -0.5
NRIK  Noril'sk         77.49 345   P      P      21 32 46.5  -0.5
NRIK                               pmax   pmax
      comp=Z,6.0nm,1.0s
S12K  Black Hills      77.50  32   P      P      21 32 47.8  +0.4
      baz=248
UOSS  Minazif          79.20 296   P      P      21 32 56.8  -0.6
UOSS                               IAmb   IAmb   21 33 01.5
      comp=Z,18nm,1.3s
TNA   Tin City         79.25  21   P      P      21 32 55.9  -0.9
TNA   Tin City         79.25  21   P      P      21 32 57.6  +0.9
      baz=240
GEYT  Alibeck          79.59 309   P      P      21 32 59.5  +0.3
      comp=Z,5.3nm,1.0s,baz=139,slow=3.3,SNR=10
      comp=Z,5.3nm,1.0s
ANM   Nome             79.73  23   P      P      21 32 58.8  -0.6
ANM   Nome             79.73  23   P      P      21 32 58.8  -0.6
ANM                                pmax   pmax
      comp=Z,2.0nm,0.8s
ANM   Nome             79.73  23   P      P      21 32 59.6  +0.2
      baz=243
R16K  Pilot Point      80.48  31   P      P      21 33 04.0  +0.4
      baz=251
P16K  Nushagak River   80.76  29   P      P      21 33 05.5  +0.5
      baz=250
N16K  Nishlik Lake     80.88  28   P      P      21 33 07.1  +1.3
      baz=250
O16K  Kokwok River B   80.90  29   P      P      21 33 06.5  +0.7
      baz=250
R17K  Ugashik Creek    81.11  31   P      P      21 33 08.4  +1.4
      baz=252
O17K  Koliganek Bris   81.44  29   P      P      21 33 08.6   0.0
      baz=251
Q17K  Contact Creek    81.56  30   P      P      21 33 09.0  -0.5
      baz=252
P17K  Kvichak River    81.57  29   P      P      21 33 10.0  +0.7
      baz=252
Q18K  Katmai Hardscr   82.11  30   P      P      21 33 12.4   0.0
      baz=253
RDOG  Red Dog Mine     82.17  20   P      P      21 33 12.4   0.0
RDOG                               IAmb   IAmb   21 33 18.0
      comp=Z,14nm,1.1s
RDOG  Red Dog Mine     82.17  20   P      P      21 33 13.8  +1.4
      baz=245
SVW2  Sparrevohn       82.56  28   P      P      21 33 14.2  -0.4
SVW2                               IAmb   IAmb   21 33 22.6
      comp=Z,8.9nm,1.2s
OHAK  Old Harbor       82.60  32   P      P      21 33 14.6  -0.2
      baz=255
TTA   Tatalina         82.94  26   P      P      21 33 16.3  -0.3
TTA                                IAmb   IAmb   21 33 18.5
      comp=Z,7.7nm,1.1s
TTA   Tatalina         82.94  26   P      P      21 33 16.3  -0.3
TTA                                pmax   pmax
      comp=Z,8.0nm,1.1s
TTA   Tatalina         82.94  26   P      P      21 33 16.1  -0.4
      baz=252
N19K  Bonanza Creek    82.99  28   P      P      21 33 15.4  -1.5
N19K                               IAmb   IAmb   21 33 20.4
      comp=Z,12nm,1.1s
N19K  Bonanza Creek    82.99  28   P      P      21 33 16.6  -0.3
      baz=253
KDAK  Kodiak Island    83.11  31   P      P      21 33 18.0  +0.5
      comp=Z,9.9nm,0.9s,baz=259,slow=5.2,SNR=3.1
KDAK                               LR     LR     22 04 11.9
      comp=Z,36nm,21.5s,baz=254,slow=31
      comp=Z,9.9nm,0.9s
KDAK  Kodiak Island    83.11  31   P      P      21 33 18.0  +0.5
L19K  White Mountain   83.22  27   P      P      21 33 18.4  +0.4
L19K                               IAmb   IAmb   21 33 20.2
      comp=Z,12nm,1.1s
L19K  White Mountain   83.22  27   P      P      21 33 18.6  +0.6
      baz=253
ARU   Arti             83.22 327   P      P      21 33 17.4  -0.7
ARU   Arti             83.22 327c iP      P      21 33 17.6  -0.5
ARU                                S      S      21 43 36.5  +0.5
ARU                                SS     SS     21 48 57.5  -3.5
ARU                                pmax   pmax
      comp=Z,19nm,1.1s
M19K  Big River Lodg   83.35  27   P      P      21 33 19.2  +0.6
M19K  Big River Lodg   83.35  27   P      P      21 33 18.9  +0.3
      baz=253
Q20K  Shuyak Island    83.42  30   P      P      21 33 19.5  +0.4
      baz=255
L20K  Farewell, AK     83.74  27   P      P      21 33 21.1  +0.5
      baz=254
K20K  Telida           83.91  26   P      P      21 33 21.7  +0.2
K20K                               IAmb   IAmb   21 33 24.9
      comp=Z,8.9nm,1.1s
K20K  Telida           83.91  26   P      P      21 33 22.0  +0.5
      baz=253,SNR=6.5
M20K  Styx River       83.91  27   P      P      21 33 21.4  -0.2
M20K                               IAmb   IAmb   21 33 47.0
      comp=Z,12nm,1.4s
M20K  Styx River       83.91  27   P      P      21 33 22.2  +0.6
      baz=254
PPLA  Purkeypile       84.60  26   P      P      21 33 25.0  -0.2
PPLA  Purkeypile       84.60  26   P      P      21 33 25.5  +0.3
      baz=255
SKT   Skwentna         84.67  27   P      P      21 33 25.4   0.0
SKT                                IAmb   IAmb   21 33 26.7
      comp=Z,15nm,1.2s
SKT   Skwentna         84.67  27   P      P      21 33 24.9  -0.5
      baz=256,SNR=5.2
CAST  Castle Rocks     84.78  26   P      P      21 33 25.9  -0.1
CAST                               IAmb   IAmb   21 33 31.6
      comp=Z,7.9nm,1.3s
CAST  Castle Rocks     84.78  26   P      P      21 33 25.8  -0.1
      baz=255
IMAR  Indian Mountai   84.79  23   P      P      21 33 25.9   0.0
CHUM  Lake Minchumin   84.80  25   P      P      21 33 26.4  +0.4
      baz=255
SUA   Susitna One      84.91  28   P      P      21 33 26.5  -0.2
SUA                                IAmb   IAmb   21 33 28.5
      comp=Z,11nm,1.0s
SUA   Susitna One      84.91  28   P      P      21 33 26.7  -0.1
      baz=257
G21K  Allakaket        85.03  23   P      P      21 33 27.3  +0.2
      baz=254
H21K  Melozitna Rive   85.07  24   P      P      21 33 27.0  -0.3
H21K                               IAmb   IAmb   21 33 29.3
      comp=Z,11nm,1.1s
H21K  Melozitna Rive   85.07  24   P      P      21 33 27.7  +0.4
      baz=254
SEW   Seward           85.23  29   P      P      21 33 28.2  +0.1
      baz=258
F21K  Alatna River     85.24  22   P      P      21 33 28.3  +0.1
      baz=254
M22K  Willow           85.27  28   P      P      21 33 28.5  +0.1
      baz=257
I21K  Tanana           85.28  24   P      P      21 33 27.8  -0.5
I21K                               IAmb   IAmb   21 33 30.5
      comp=Z,13nm,1.2s
I21K  Tanana           85.28  24   P      P      21 33 28.4  +0.1
      baz=255
RC01  Rabbit Creek A   85.30  28   P      P      21 33 28.6  +0.1
      baz=258
KTH   Kantishna Hill   85.32  26   P      P      21 33 27.8  -0.9
CUT   Chulitna         85.35  27   P      P      21 33 29.1  +0.4
      baz=257
BPAW  Bear Paw Mtn.    85.42  25   P      P      21 33 28.5  -0.6
BPAW                               IAmb   IAmb   21 33 32.4
      comp=Z,10.0nm,1.2s
BPAW  Bear Paw Mtn.    85.42  25   P      P      21 33 29.6  +0.5
      baz=256,SNR=5.7
TRF   Thorofare Moun   85.57  26   P      P      21 33 29.8  -0.2
TRF                                IAmb   IAmb   21 33 33.6
      comp=Z,15nm,1.3s
TRF   Thorofare Moun   85.57  26   P      P      21 33 29.6  -0.4
      baz=257,SNR=6.0
PMR   Palmer           85.69  28   P      P      21 33 30.3  -0.1
      baz=258
H22K  Ishtalitna Cre   85.70  23   P      P      21 33 31.1  +0.6
      baz=256
MLY   Manley           85.75  24   P      P      21 33 30.9  +0.1
MLY                                IAmb   IAmb   21 33 34.9
      comp=Z,6.7nm,0.9s
MLY   Manley           85.75  24   P      P      21 33 31.4  +0.7
      baz=256,SNR=10
F22K  John River       85.80  22   P      P      21 33 31.0  +0.1
      baz=255
PWL   Port Wells       85.92  29   P      P      21 33 32.0  +0.3
PWL   Port Wells       85.92  29   P      P      21 33 31.5  -0.2
      baz=259
KNK   Knik Glacier     85.97  28   P      P      21 33 32.2  +0.3
KNK   Knik Glacier     85.97  28   P      P      21 33 31.7  -0.2
      baz=259
BWN   Browne           86.09  25   P      P      21 33 32.6  +0.2
E22K  Anaktuvuk Pass   86.10  21   P      P      21 33 32.5  +0.1
      baz=255
SML   Sawmill          86.11  28   P      P      21 33 31.9  -0.7
SML   Sawmill          86.11  28   P      P      21 33 31.9  -0.7
SML                                pmax   pmax
      comp=Z,23nm,1.0s
SML   Sawmill          86.11  28   P      P      21 33 32.6   0.0
      baz=259,SNR=7.5
RND   Reindeer         86.20  26   P      P      21 33 32.2  -0.8
RND   Reindeer         86.20  26   P      P      21 33 32.2  -0.8
RND                                pmax   pmax
      comp=Z,19nm,1.2s
P23K  Montague Islan   86.22  30   P      P      21 33 33.2  +0.1
      baz=260
MCK   McKinley         86.23  26   P      P      21 33 32.9  -0.2
MCK   McKinley         86.23  26   P      P      21 33 32.9  -0.2
MCK                                pmax   pmax
      comp=Z,37nm,1.4s
MCK   McKinley         86.23  26   P      P      21 33 33.1   0.0
      baz=258,SNR=7.6
I23K  Minto, Yukon-K   86.35  24   P      P      21 33 32.6  -1.0
I23K  Minto, Yukon-K   86.35  24   P      P      21 33 34.1  +0.5
      baz=258,SNR=12
NEA2  Nenana           86.35  25   P      P      21 33 33.0  -0.7
NEA2                               IAmb   IAmb   21 33 35.3
      comp=Z,7.6nm,1.4s
NEA2  Nenana           86.35  25   P      P      21 33 33.7   0.0
      baz=258
M23K  Glacier View     86.39  28   P      P      21 33 34.4  +0.5
      baz=259
H23K  Yukon River      86.42  24   P      P      21 33 33.9  -0.2
H23K                               IAmb   IAmb   21 33 36.0
      comp=Z,7.1nm,0.9s
H23K  Yukon River      86.42  24   P      P      21 33 34.4  +0.4
      baz=257,SNR=6.6
G23K  Bananza Creek    86.43  23   P      P      21 33 34.2  +0.1
      baz=257
SCM   Sheep Creek Mo   86.58  28   P      P      21 33 34.2  -0.8
SCM   Sheep Creek Mo   86.58  28   P      P      21 33 34.2  -0.8
SCM                                pmax   pmax
      comp=Z,26nm,1.2s
SCM   Sheep Creek Mo   86.58  28   P      P      21 33 34.8  -0.2
      baz=260,SNR=6.3
Q23K  Middleton Isla   86.65  30   P      P      21 33 35.1  -0.1
      baz=261
D23K  Nanushuk River   86.71  21   P      P      21 33 36.3  +0.9
      baz=256
WRH   Wood River Hil   86.74  25   P      P      21 33 34.9  -0.6
E23K  Chandalar        86.88  22   P      P      21 33 36.9  +0.5
      baz=257
CCB   Clear Creek Bu   86.89  25   P      P      21 33 35.7  -0.6
CCB                                IAmb   IAmb   21 33 36.8
      comp=Z,8.5nm,0.9s
COLA  College          86.92  25⇑ eP      P      21 33 36.6  +0.2
COLA                               pmax   pmax
      comp=Z,8.0nm,1.0s
H24K  Noodor Dome      87.09  24   P      P      21 33 37.1  -0.2
H24K                               IAmb   IAmb   21 33 40.0
      comp=Z,17nm,1.4s
H24K  Noodor Dome      87.09  24   P      P      21 33 37.6  +0.3
      baz=259,SNR=8.3
EYAK  Cordova Ski Ar   87.12  29   P      P      21 33 37.7  +0.3
      baz=261
M24K  Tolsona, Glenn   87.17  28   P      P      21 33 37.4  -0.4
M24K  Tolsona, Glenn   87.17  28   P      P      21 33 37.9  +0.1
      baz=261
KLU   Klutina          87.19  28   P      P      21 33 37.6  -0.3
KLU   Klutina          87.19  28   P      P      21 33 37.9   0.0
      baz=261
DIV   Divide           87.20  29   P      P      21 33 38.2  +0.2
HDA   Harding Lake     87.21  25   P      P      21 33 37.4  -0.5
HDA                                IAmb   IAmb   21 33 41.3
      comp=Z,8.4nm,1.0s
HDA   Harding Lake     87.21  25   P      P      21 33 37.8  -0.1
      baz=260
E24K  Your Creek       87.30  22   P      P      21 33 38.2  -0.1
      baz=258
IL31                   87.30  25   P      P      21 33 35.8  -2.5
ILAR  Eielson Array    87.30  25   P      P      21 33 37.4  -1.0
      comp=Z,1.4nm,0.7s,baz=267,slow=4.4,SNR=15
ILAR                               LR     LR     22 09 06.9
      comp=Z,14nm,19.7s,baz=284,slow=33
      comp=Z,1.4nm,0.7s
F24K  Squaw Lake       87.41  22   P      P      21 33 39.1  +0.2
      baz=259
G24K  Hadweenzic Riv   87.42  23   P      P      21 33 38.8  -0.1
      baz=259
C24K  Franklin Bluff   87.56  20   P      P      21 33 39.5   0.0
      baz=258
K24K  Donnelly Dome    87.62  26   P      P      21 33 39.8  -0.1
      baz=261
PAX   Paxson           87.63  27   P      P      21 33 39.4  -0.6
PAX                                IAmb   IAmb   21 33 42.5
      comp=Z,9.6nm,1.3s
PAX   Paxson           87.63  27   P      P      21 33 39.4  -0.6
PAX                                pmax   pmax
      comp=Z,10.0nm,1.3s
PAX   Paxson           87.63  27   P      P      21 33 40.3  +0.3
      baz=261
HARP  HAARP            87.68  27   P      P      21 33 40.7  +0.4
      baz=262
N25K  Chitina, Valde   87.83  28   P      P      21 33 40.5  -0.5
N25K  Chitina, Valde   87.83  28   P      P      21 33 41.1  +0.1
      baz=262
G25K  Bearman Lake     87.96  23   P      P      21 33 41.1  -0.3
      baz=260
RIDG  Independent Ri   88.02  26   P      P      21 33 41.3  -0.5
RIDG                               IAmb   IAmb   21 33 43.2
      comp=Z,6.8nm,1.0s
RIDG  Independent Ri   88.02  26   P      P      21 33 41.7  -0.2
      baz=262
QSPA  South Pole Qui   88.06 180   LR     LR     22 13 14.5
      comp=Z,119nm,19.3s,baz=332,slow=36
QSPA  South Pole Qui   88.06 180   P      P      21 33 41.6  -0.5
QSPA                               IAmb   IAmb   21 33 46.1
      comp=Z,7.6nm,0.8s
GLB   Gilahina Butte   88.18  28   P      P      21 33 42.2  -0.5
GLB                                IAmb   IAmb   21 33 44.3
      comp=Z,7.2nm,1.0s
F25K  Christian Rive   88.28  22   P      P      21 33 43.4  +0.4
      baz=261
DOT   Dot Lake         88.35  26   P      P      21 33 43.2  -0.2
DOT                                IAmb   IAmb   21 33 49.3
      comp=Z,5.1nm,1.0s
E25K  Arctic Village   88.39  22   P      P      21 33 43.8  +0.3
      baz=261
SCRK  Sand Creek       88.43  26   P      P      21 33 43.1  -0.8
SCRK  Sand Creek       88.43  26   P      P      21 33 43.5  -0.4
      baz=262
KIRV  Kirov            88.45 329⇑ eP      P      21 33 44.7  +0.8
TGL   Tana Glacier     88.58  29   P      P      21 33 44.9  +0.3
BMAR  Burnt Mountain   88.65  22   P      P      21 33 44.4  -0.3
J26L  Joseph Creek     88.68  25   P      P      21 33 44.7  -0.3
J26L  Joseph Creek     88.68  25   P      P      21 33 45.1  +0.1
      baz=263
M26K  Nabesna, AK      88.68  28   P      P      21 33 45.4  +0.3
      baz=263
RAYN  Ar Rayn          88.82 293   P      P      21 33 46.3  -0.2
RAYN                               IAmb   IAmb   21 33 47.3
      comp=Z,5.5nm,0.9s
RAYN  Ar Rayn          88.82 293   P      P      21 33 46.3  -0.2
RAYN                               pmax   pmax
      comp=Z,6.0nm,0.9s
F26K  Sheenjek River   88.86  22   P      P      21 33 46.0  +0.3
      baz=262
BELG  Belogornoye      88.89 322ceP      P      21 33 45.1  -1.0
BELG                               pmax   pmax
      comp=Z,3.0nm,1.0s
G26K  Porcupine Rive   88.90  23   P      P      21 33 45.7  -0.1
      baz=263
BARN  Barnard Glacie   89.17  29   P      P      21 33 47.4  -0.1
M27K  Edge Creek, AK   89.20  28   P      P      21 33 47.3  -0.2
      baz=264
C27K  Jago River       89.27  20   P      P      21 33 47.6   0.0
      baz=263
K27K  Chicken          89.27  26   P      P      21 33 48.5  +0.8
K27K                               IAmb   IAmb   21 33 52.4
      comp=Z,7.7nm,1.1s
K27K  Chicken          89.27  26   P      P      21 33 47.9  +0.2
      baz=264
L27K  Beaver Creek,    89.29  27   P      P      21 33 48.5  +0.7
L27K  Beaver Creek,    89.29  27   P      P      21 33 47.8   0.0
      baz=264
CTG   Chitna Glacier   89.32  29   P      P      21 33 48.0  -0.2
      baz=265
CTGM  Chitina Glacie   89.33  29   P      P      21 33 49.3  +1.1
I27K  Kandik River     89.62  24   P      P      21 33 49.6  +0.3
      baz=265
EGAK  Eagle            89.74  25   P      P      21 33 49.5  -0.3
      baz=265
YUK3  Moose Creek      89.81  28   P      P      21 33 49.9  -0.6
      baz=266
E27K  Coleen River     89.87  22   P      P      21 33 50.3  -0.2
      baz=265
DAWY  Dawson           90.45  26   IAmb   IAmb   21 33 57.9
      comp=Z,8.2nm,1.1s
DAWY  Dawson           90.45  26   P      P      21 33 52.9  -0.3
      baz=267
M29M  Somme Creek      90.79  28   P      P      21 33 54.7  -0.2
      baz=267
L29M  L29M             90.97  27   P      P      21 33 56.0  +0.3
      baz=268
I29M  Ogilvie Camp,    90.98  25   P      P      21 33 55.0  -0.7
I29M                               IAmb   IAmb   21 33 57.4
      comp=Z,10.0nm,1.1s
I29M  Ogilvie Camp,    90.98  25   P      P      21 33 56.1  +0.4
      baz=268
HYT   Haines Junctio   91.19  29   P      P      21 33 56.7  -0.1
      baz=268
K29M  Barlow Dome      91.27  26   P      P      21 33 57.1   0.0
      baz=268
N30M  Aishikik Lake    91.40  29   P      P      21 33 58.0  +0.2
      baz=269
M30M  Minto, Yukon     91.57  28   P      P      21 33 59.0  +0.5
      baz=269
EPYK  Eagle Plains     91.66  24   P      P      21 33 59.2  +0.4
```

	baz=269						
G30M	**tAoh Zraii Nji**	**91.87**	**23**	P	**P**	**21 34 00.0**	**+0.3**
	baz=270						
F31M	**Tsiigehtchic**	**92.83**	**23**	P	**P**	**21 34 04.0**	**-0.1**
	baz=272						
INK	**Inuvik**	**92.88**	**22**	P	**P**	**21 34 03.0**	**-1.2**
	comp=Z,4.1nm,1.1s,baz=287,slow=2.8,SNR=8.0						
INK				LR	LR	22 10 45.9	
	comp=Z,21nm,20.1s,baz=302,slow=32						
	comp=Z,4.1nm,1.1s						
INK	**Inuvik**	**92.88**	**22**	P	**P**	**21 34 03.1**	**-1.2**
INK				IAmb	IAmb	21 34 07.5	
	comp=Z,9.0nm,1.2s						
INK	**Inuvik**	**92.88**	**22**	P	**P**	**21 34 03.1**	**-1.2**
INK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
INK	**Inuvik**	**92.88**	**22**	P	**P**	**21 34 04.3**	**0.0**
	baz=272						
FARO	**Faro, Yukon**	**93.17**	**28**	P	**P**	**21 34 05.7**	**-0.2**
	baz=272						
KLMR	**Klimovskoe**	**93.53**	**331**	*e*P	**P**	**21 34 03.5**	**-4.0**
KLMR				AMP		21 34 09.2	
	comp=Z,22nm,1.6s						
KLMR	**Klimovskoe**	**93.53**	**331**	*e*P	**P**	**21 34 03.4**	**-4.0**
KLMR				pmax	pmax		
	comp=Z,22nm,1.6s						
MMPY	**Sheldon Lake,**	**94.12**	**27**	P	**P**	**21 34 10.9**	**+0.6**
	baz=274						
A36M	**Sachs Harbour**	**95.29**	**18**	P	**P**	**21 34 14.7**	**-0.6**
OBN	**Obninsk**	**95.45**	**325**	*i* P	**P**	**21 34 14.3**	**-2.1**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARCES	**ARCESS Array B**	**97.97**	**340**	P	**P**	**21 34 27.5**	**0.0**
	comp=Z,6.6nm,1.0s,baz=68,slow=5.1,SNR=5.2						
ARCES				LR	LR	22 24 49.1	
	comp=Z,8.0nm,19.1s,baz=120,slow=39						
	comp=Z,6.6nm,1.0s						
BRTR	**Keskin Array B**	**98.72**	**310**	P	**P**	**21 34 30.4**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=87,slow=3.0,SNR=3.3						
	comp=Z,0.5nm,0.8s						
AKASG	**Malin Array Be**	**100.42**	**321**	P	**Pdif**	**21 34 36.8**	**-2.1**
	comp=Z,0.3nm,0.3s,baz=52,slow=4.5,SNR=4.9						
AKASG	**Malin Array Be**	**100.42**	**321**	*i* P	**Pdif**	**21 34 40.4**	**+1.5**
MNK	**Minsk**	**100.52**	**325**	*i* P	**Pdif**	**21 34 39.2**	**0.0**
	comp=E,3.0nm,1.1s						
MNK				*i* P	**Pdif**	**21 34 39.2**	**0.0**
	comp=N,19nm,0.7s						
MNK				*i* P	**Pdif**	**21 34 39.2**	**0.0**
	comp=Z,6.0nm,0.6s,baz=258						
MNK				*i* PP	**PP**	**21 38 46.4**	**+0.4**
MNK				*i* PPP	PPP	21 40 54.4	
MNK				*i* S	**SKSac**	**21 45 15.4**	**-0.3**
MNK				*i* SS	SS	21 53 21.4	+12
MNK				*i* SSS	SSS	21 57 03.2	
MNK				*i* LQ	LQ	22 14 33.7	
MNK				*i* LR	LR	22 20 57.8	
MNK				*i* LRM	MLR	22 21 42.9	
	comp=E,9.0nm,20.6s						
MNK				*i* LRM	MLR	22 22 19.0	
	comp=N,416nm,18.1s						
MNK				*i* LRM	MLR	22 22 35.8	
	comp=Z,92nm,23.2s						
MNK	**Minsk**	**100.52**	**325**	*i* P	**Pdif**	**21 34 39.1**	**0.0**
MNK				*i*		21 38 46.4	
MNK				*i* PPP	PPP	21 40 54.4	
MNK				*i* S	**SKSac**	**21 45 15.4**	**-0.3**
MNK				*i* SS	SS	21 53 21.4	+12
MNK				*i* SSS	SSS	21 57 03.2	
MNK				pmax	pmax		
	comp=E,3.0nm,1.1s						
MNK				pmax	pmax		
	comp=N,19nm,0.7s						
MNK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MNK				MLR	MLR		
	comp=E,9.0nm,21.0s						
MNK				MLR	MLR		
	comp=N,416nm,18.0s						
MNK				MLR	MLR		
	comp=Z,92nm,23.0s						
YKA	**Yellowknife Ar**	**101.69**	**26**	P	**Pdif**	**21 34 43.9**	**-0.4**
	comp=Z,0.7nm,0.9s,baz=289,slow=4.6,SNR=6.0						
DOU	**Dourbes**	**115.37**	**326**	*d*PKiKP	**PKiKP**	**21 39 32.8**	**-0.8**
TXAR	**Lajitas Array**	**119.36**	**57**	PKP	**PKiKP**	**21 39 42.2**	**+0.1**
	comp=Z,0.1nm,0.4s,baz=250,slow=3.6,SNR=3.9						
SCHQ	**Schefferville**	**124.69**	**14**	PKP	**PKiKP**	**21 39 51.6**	**0.0**
	comp=Z,1.9nm,0.7s,baz=284,slow=11,SNR=1.6						
ESDC	**Sonseca Array**	**126.03**	**320**	PKP	**PKiKP**	**21 39 54.9**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=66,slow=1.6,SNR=3.6						
TORD	**Torodi Ar. Bea**	**130.93**	**286**	PKP	**PKPdf**	**21 40 03.8**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=99,slow=1.7,SNR=6.2						
LVC	**Limon Verde**	**147.34**	**139**	PKPbc	**PKPab**	**21 40 37.8**	**-0.8**
	comp=Z,6.0nm,0.8s,baz=222,slow=15,SNR=4.2						
CPUP	**Villa Florida**	**150.09**	**160**	PKPbc	**PKPbc**	**21 40 42.5**	**-0.8**
	comp=Z,3.6nm,0.8s,baz=266,slow=17,SNR=4.9						
LPAZ	**La Paz**	**152.10**	**131**	PKPbc	**PKiKP**	**21 40 50.2**	**+0.9**
	comp=Z,6.2nm,0.8s,baz=254,slow=1.6,SNR=5.7						
SIV	**San Ignacio**	**157.19**	**142**	PKPab	**PKPab**	**21 41 20.0**	**+0.6**
	comp=Z,2.5nm,0.9s,baz=243,slow=14,SNR=5.6						

IDC 10 21:37:35.1±2.2**, 1°.80S×133°.24E, h0^{km}, mb3.5**/2**,**
mbtmp3.6/4**, ML3.5**/2**, Error ellipse: s-maj=56.3km**
s-min=22.3km az=57.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.18**	**295**	Pn	Pn	21 38 12.6	0.0
	7.4nm,0.3s,baz=218,slow=22,SNR=31						
SIJI				Sn	Sn	21 38 40.8	+0.4
	8.4nm,0.3s,baz=235,slow=23,SNR=7.7						
	17nm,0.3s						
WRA	**Warramunga Arr**	**18.07**	**177**	P	Pn	21 41 47.7	0.0
	0.2nm,0.3s,baz=356,slow=12,SNR=13						
WRA				S	Sn	21 44 58.4	-12
	0.2nm,0.6s,baz=350,slow=24,SNR=1.4						
	1.0nm,0.7s						
ASAR	**Alice Springs**	**21.75**	**178**	P	P	21 42 28.4	0.0
	2.2nm,0.8s,baz=0.1,slow=11,SNR=19						
	2.2nm,0.8s						
MKAR	**Makanchi Array**	**65.80**	**324**	P	P	21 48 22.3	+0.1
	0.3nm,0.5s,baz=115,slow=7.6,SNR=4.1						
	0.3nm,0.5s						

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*IDC **10** 22:04:29.6±0.8, 37°.08N×141°.39E, h0^{km}, mb3.6/12, mbtmp3.5/16, ML2.7/3, MS2.4/4, Error ellipse: s-maj=18.9km s-min=16.0km az=106.0*
*JMA **10** 22:04:32.0±0.2, 37°.2N±0°.3×141°.3E±0°.8, h26^{km}±1^{km}, MV3.9/36, E OFF FUKUSHIMA PREF*
JMA Felt I J1 at E OFF FUKUSHIMA PREF .
*NIED **10** 22:04:32.0, 37°.16N×141°.35E, h26^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.81; $M_{\theta\theta}$0.26; $M_{\phi\phi}$2.56; $M_{r\theta}$0.35; $M_{\theta\phi}$1.78; $M_{\phi r}$2.06; Fault plane solution: $M_0$3.82000×10^{14} NP1: ϕ_s196.00000°, δ62.00000°, λ-104.00000°. NP2: ϕ_s44.00000°, δ31.00000°, λ-66.00000°.*
ISC 10 22:04:30.7±1.7**, 37°.11N**±0°.03×**141°.36E**±0°.06**, h6**^{km}±10^{km}**,**
n41, σ1^s.38/44**, mb3.6**/12**, 2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.45**	**269**	P	**Pb**	**22 04 41.0**	**-0.2**
ONAJ				S	**Sb**	**22 04 47.4**	**-0.7**
JFK	**Kawauchi**	**0.47**	**303**	P	**Pb**	**22 04 40.7**	**-0.6**
JFK				S	**Sb**	**22 04 46.9**	**-1.6**
JFFD	**Fukushimafurud**	**0.64**	**268**	*i* P	**Pb**	**22 04 44.3**	**-0.1**
JFFD				S	**Sb**	**22 04 52.9**	**-0.7**
JMST	**Minamisoumatoc**	**0.72**	**328**	P	**Pg**	**22 04 44.8**	**+0.2**
JMST				S	**Sb**	**22 04 54.3**	**-1.5**
JHO	**Hitachi**	**0.81**	**232**	P	**Pg**	**22 04 46.5**	**+0.2**
JHO				S	**Sb**	**22 04 58.1**	**-0.3**
JMM	**Marumori**	**0.88**	**329**	P	**Pg**	**22 04 47.6**	**0.0**
JMM	**Marumori**	**0.88**	**329**	*i* P	**Pg**	**22 04 47.4**	**-0.1**
JMM				S	**Sg**	**22 04 58.9**	**-0.1**
JOTO	**OTAMA OYAMA**	**0.93**	**299**	*i* P	**Pb**	**22 04 49.2**	**-0.1**
JOTO				S	**Sb**	**22 05 01.5**	**-0.5**
JIO	**Ouri**	**1.34**	**360**	⇓*i*P	**Pn**	**22 04 54.5**	**-1.5**
JIO				⇓S	**Sb**	**22 05 10.6**	**-3.0**
MJAR	**Matsushiro Arr**	**2.59**	**258**	Pn	**Pn**	**22 05 14.0**	**+0.8**
	0.6nm,0.3s,baz=89,slow=15,SNR=20						
MJAR				Sn	**Sb**	**22 05 47.6**	**-2.2**
	1.6nm,0.3s,baz=300,slow=32,SNR=6.1						
MJAR				LR	LR	22 05 52.2	
	comp=Z,34nm,19.9s,baz=59,slow=32						
	3.4nm,0.3s						
MAJO	**Matsushiro**	**2.60**	**258**	P	**Pb**	**22 05 15.8**	**-1.9**
JSD	**Sado**	**2.63**	**291**	P	**Pn**	**22 05 14.2**	**+0.5**
JSG	**Sagara**	**3.55**	**228**	P	**Pb**	**22 05 36.2**	**+2.3**
JTM	**Tenmabayashi**	**3.67**	**356**	P	**Pn**	**22 05 28.5**	**+0.5**
JHJ	**Hachijo jima 2**	**4.19**	**198**	Pn	**Pn**	**22 05 31.1**	**-4.0**
	5.3nm,0.3s,baz=88,slow=17,SNR=1.0						
JHJ				Sn	**Sn**	**22 06 23.6**	**-0.8**
	6.1nm,0.3s,baz=139,slow=23,SNR=1.9						
JHS	**Saijyo**	**7.00**	**255**	P	**Pn**	**22 06 17.5**	**+3.6**
ASAJ	**Asahikawa**	**7.06**	**7**	Pn	**Pn**	**22 06 13.8**	**-0.8**
	0.4nm,0.3s,baz=199,slow=18,SNR=2.5						
ASAJ				Sn	**Sn**	**22 07 36.5**	**+1.5**
	baz=248,slow=19						
	1.6nm,0.4s						
USRK	**Ussuriysk Ar.**	**10.04**	**318**	Pn	**Pn**	**22 06 57.1**	**+1.7**
	baz=132,slow=14,SNR=2.9						
USRK				Sn	**Sn**	**22 08 49.2**	**+1.0**
	baz=158,slow=19						
USRK				LR	LR	22 09 52.8	
	comp=Z,32nm,21.5s,baz=82,slow=32						
	1.2nm,0.6s						
KSRS	**Korea Array**	**10.72**	**276**	Pn	**Pn**	**22 07 06.5**	**+1.9**
	0.3nm,0.3s,baz=92,slow=14,SNR=1.2						
KSRS				LR	LR	22 11 28.9	
	comp=Z,19nm,19.1s,baz=95,slow=39						
KLR	**Kul'dur**	**13.98**	**333**	LR	LR	22 12 53.6	
	comp=Z,31nm,18.7s,baz=144,slow=36						
SEY	**Seymchan**	**26.72**	**11**	P	**P**	**22 10 11.3**	**+0.8**
	1.9nm,0.9s,baz=181,slow=8.9,SNR=3.8						
	1.9nm,0.9s						
SONM	**Songino Array**	**27.71**	**304**	P	**P**	**22 10 19.5**	**-0.3**
	0.4nm,0.8s,baz=96,slow=8.5,SNR=2.2						
	0.4nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**28.22**	**121**	T	T	22 39 56.3	
	baz=314,slow=75,SNR=128						
H11N1	**WAKE ISLAND Hy**	**28.23**	**121**	T	T	22 39 56.0	
	baz=314,slow=75,SNR=132						
H11N3	**WAKE ISLAND Hy**	**28.24**	**121**	T	T	22 39 57.7	
	baz=314,slow=75,SNR=135						
H11S1	**WAKE ISLAND Hy**	**28.94**	**123**	T	T	22 40 45.7	
	baz=316,slow=74						
H11S3	**WAKE ISLAND Hy**	**28.94**	**123**	T	T	22 40 51.9	
	baz=316,slow=74						
H11S2	**WAKE ISLAND Hy**	**28.95**	**123**	T	T	22 40 54.2	
	baz=316						
ZALV	**Zalesovo Beam**	**41.83**	**312**	P	**P**	**22 12 20.8**	**-0.3**
	0.3nm,0.3s,baz=88,slow=7.8,SNR=2.1						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**44.04**	**302**	P	**P**	**22 12 39.1**	**0.0**
	0.6nm,0.7s,baz=92,slow=8.9,SNR=4.5						
	0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**45.92**	**308**	P	**P**	**22 12 53.0**	**-1.0**
	0.3nm,0.5s,baz=81,slow=7.6,SNR=4.0						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**49.45**	**32**	P	**P**	**22 13 21.6**	**+0.4**
	0.8nm,0.8s,baz=274,slow=6.2,SNR=10						
	0.8nm,0.8s						
WRA	**Warramunga Arr**	**57.13**	**188**	P	**P**	**22 14 17.2**	**-0.9**
	0.6nm,0.5s,baz=5.5,slow=7.4,SNR=17						
WRA				PcP	**PcP**	**22 15 12.3**	**-0.6**
	0.3nm,0.7s,baz=358,slow=4.4,SNR=2.1						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**60.86**	**188**	P	**P**	**22 14 44.1**	**0.0**
	0.3nm,0.6s,baz=13,slow=9.5,SNR=5.3						
	0.3nm,0.6s						
YKA	**Yellowknife Ar**	**63.76**	**30**	P	**P**	**22 15 03.1**	**+0.1**
	0.2nm,0.6s,baz=304,slow=6.5,SNR=2.8						
	0.2nm,0.6s						
FINES	**FINESS Array B**	**68.72**	**332**	P	**P**	**22 15 34.7**	**-0.2**
	0.4nm,0.6s,baz=52,slow=9.0,SNR=1.2						
	0.4nm,0.6s						
NOA	**NORSAR Array B**	**74.10**	**337**	P	**P**	**22 16 07.2**	**-0.2**
	0.6nm,0.9s,baz=39,slow=5.8,SNR=2.7						
	0.6nm,0.9s						
PDAR	**Pinedale Array**	**77.64**	**45**	P	**P**	**22 16 29.0**	**+0.7**
	0.3nm,0.6s,baz=306,slow=9.9,SNR=1.9						
	0.3nm,0.6s						
H03N2	**Juan Fernandez**	**147.07**	**96**	T	T	01 08 36.1	
	baz=292						
H03N3	**Juan Fernandez**	**147.08**	**96**	T	T	01 08 32.6	
	baz=292						
H03N1	**Juan Fernandez**	**147.09**	**96**	T	T	01 08 39.8	
	baz=292						

IDC 10 22:09:22.8±1.6**, 29°.53N×102°.72E, h0^{km}, mb3.3**/4**,**
mbtmp3.3/5**, ML3.9**/1**, Error ellipse: s-maj=82.3km**
s-min=25.2km az=59.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**18.50**	**8**	P	P	22 13 40.3	-0.3
	0.4nm,0.3s,baz=189,slow=13,SNR=2.1						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**23.45**	**323**	P	P	22 14 34.3	+0.5
	0.6nm,0.5s,baz=134,slow=11,SNR=10						
	0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**27.66**	**337**	P	P	22 15 11.8	-0.4
	0.6nm,0.5s,baz=140,slow=8.6,SNR=3.0						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**27.82**	**326**	P	P	22 15 13.5	-0.2
	0.2nm,0.6s,baz=142,slow=9.1,SNR=1.9						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**57.86**	**144**	P	P	22 19 16.6	-0.1
	0.2nm,0.8s,baz=324,slow=8.4,SNR=4.6						
	0.2nm,0.8s						

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*IDC **10** 22:13:46.0±1.4, 1°.58S×133°.49E, h0^{km}, mb3.3/3, mbtmp3.3/5, ML3.2/2, Error ellipse: s-maj=34.7km s-min=21.3km az=47.0*
ISC 10 22:13:50.9±1.2**, 1°.6S**±0°.2×**133°.5E**±0°.1**, h35^{km}, n6, σ0^s.41**/7**,**
mb3.3/3**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.36**	**289**	Pn	**Pn**	**22 14 27.0**	**-0.3**
	3.7nm,0.3s,baz=157,slow=3.4,SNR=12						
SIJI				Sn	**Sn**	**22 14 55.5**	**+0.4**
	3.6nm,0.3s,baz=176,slow=23,SNR=6.9						
	8.6nm,0.3s						
WRA	**Warramunga Arr**	**18.22**	**177**	P	**Pn**	**22 18 00.9**	**-0.3**
	0.1nm,0.3s,baz=356,slow=12,SNR=7.3						
	0.4nm,0.5s						
KRVT	**Keravat (AS076**	**18.69**	**99**	P	**P**	**22 18 06.6**	**+0.3**
	18nm,0.5s,baz=282,slow=9.3,SNR=1.6						
ASAR	**Alice Springs**	**21.91**	**179**	P	**P**	**22 18 41.6**	**+0.3**
	0.9nm,0.7s,baz=358,slow=12,SNR=8.6						
	0.9nm,0.7s						
MKAR	**Makanchi Array**	**65.81**	**324**	P	**P**	**22 24 33.0**	**+0.2**
	0.1nm,0.5s,baz=123,slow=5.3,SNR=1.9						
	0.1nm,0.5s						
ZALV	**Zalesovo Beam**	**68.45**	**331**	P	**P**	**22 24 48.9**	**-0.4**
	0.2nm,0.4s,baz=111,slow=7.9,SNR=1.6						
	0.2nm,0.4s						

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*SJA **10** 22:15:48.6±0.9, 30°.58S×72°.17W, h13^{km}±4^{km}, ML3.8, MW3.8, Hypocentre not reviewed by the ISC*
*IDC **10** 22:15:50.3±2.2, 30°.61S×71°.82W, h0^{km}, mb3.9/1, mbtmp3.7/2, ML3.3/1, MS2.8/2, Error ellipse: s-maj=116.2km s-min=47.7km az=94.0*
*GUC **10** 22:15:52.7±0.7, 30°.61S×71°.98W, h31^{km}±3^{km}, ML3.9*
ISC 10 22:15:51.3±2.0**, 30°.57S**±0°.04×**72°.07W**±0°.08**, h13**^{km}±10^{km}**,**
n39, σ1^s.21/35**, 3C-4D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.39**	**105**	⇓*i*P	**Pg**	**22 15 59.6**	**+0.6**
CO06				*i* S	**Sg**	**22 16 04.2**	**-0.1**
CO05	**La Serena**	**0.97**	**48**	⇓*i*P	**Pb**	**22 16 09.6**	**-0.3**
CO05				*i* S	**Sb**	**22 16 22.4**	**-0.2**
CO05				IAML		22 16 24.1	
	comp=E,4μm,0.3s						
CO02	**Combarbal**	**1.11**	**125**	⇓*i*P	**Pb**	**22 16 11.4**	**-1.1**
CO02				*i* S	**Sb**	**22 16 25.3**	**-1.7**
CO02				IAML		22 16 28.9	
	comp=N,8μm,0.2s						
CO02	**Combarbal**	**1.11**	**125**	*e*P		22 16 12.5	
CO02				*e*P		22 16 12.6	
CO02				*e*S		22 16 20.3	
CO02				IAML		22 16 27.4	
	comp=Z,3μm,0.4s						
GO04	**Tololo Observa**	**1.17**	**70**	*i* P	**Pn**	**22 16 12.5**	**-1.0**
GO04				*i* S	**Sb**	**22 16 27.6**	**-1.0**
GO04				IAML		22 16 33.2	
	comp=N,9μm,0.3s						
GO04	**Tololo Observa**	**1.17**	**70**	*e*P		22 16 12.5	
GO04				*e*P		22 16 12.6	
GO04				*e*S		22 16 20.3	
GO04				*e*S		22 16 29.9	
CO03	**El Pedregal**	**1.22**	**103**	⇓*i*P	**Pn**	**22 16 12.8**	**-1.4**
CO03				*i* S	**Sb**	**22 16 28.0**	**-1.9**
CO03				IAML		22 16 36.4	
	comp=E,2μm,0.3s						
CO03	**El Pedregal**	**1.22**	**103**	*e*P		22 16 12.8	
CO03				*e*S		22 16 31.2	
CO03				IAML		22 16 38.5	
	comp=Z,787nm,0.6s						
CO01	**Juntas del Tor**	**1.81**	**71**	*i* P	**Pn**	**22 16 22.9**	**+0.6**
CO01	**Juntas del Tor**	**1.81**	**71**	*e*P		22 16 23.4	
CO01				*e*S		22 16 43.3	
CO01				IAML		22 16 50.3	
	comp=Z,416nm,0.5s						
LCO	**Las Campanas**	**1.96**	**38**	⇑*i*P	**Pn**	**22 16 24.1**	**-0.4**
LCO	**Las Campanas**	**1.96**	**38**	*e*P		22 16 24.2	
LCO				*e*S		22 16 49.3	
LCO				IAML		22 16 54.7	
	comp=Z,2μm,0.7s						
VA06	**Catapilco**	**2.09**	**162**	*i* P	**Pn**	**22 16 25.7**	**-0.3**
VA06				IAML		22 17 00.9	
	comp=N,1μm,0.4s						
AC05	**El Transito**	**2.33**	**42**	*i* P	**Pn**	**22 16 29.9**	**+0.4**
AC05				*i* S	**Sn**	**22 16 59.2**	**+1.1**
AC05				IAML		22 17 12.3	
	comp=N,446nm,0.4s						
AC05	**El Transito**	**2.33**	**42**	*e*P		22 16 29.9	
AC05				*e*S		22 17 00.8	
AC05				IAML		22 17 15.4	
	comp=Z,436nm,0.7s						
AC04	**Llanos de Chal**	**2.51**	**20**	*i* P	**Pn**	**22 16 30.8**	**-1.1**
AC04	**Llanos de Chal**	**2.51**	**20**	*e*P		22 16 30.7	
AC04				*e*S		22 17 08.3	
VA03	**San Esteban**	**2.54**	**150**	*e*P	**Pn**	**22 16 33.1**	**+0.8**
VA03				*i* S	**Sn**	**22 17 03.1**	**0.0**
VA03				IAML		22 17 13.4	
	comp=E,1μm,0.7s						
VA03	**San Esteban**	**2.54**	**150**	*e*P		22 16 33.2	
VA03				*e*S		22 17 03.3	
VA03				IAML		22 17 13.0	
	comp=Z,516nm,0.5s						
ROCH	**El Roble**	**2.56**	**160**	*e*P	**Pn**	**22 16 32.8**	**+0.1**
ROCH				IAML		22 17 21.1	
	comp=N,877nm,0.4s						
ROC1	**El Roble**	**2.56**	**160**	*e*P		22 16 16.4	
RTLS	**Leoncito**	**2.67**	**118**	*e*P		22 16 37.0	
RTLS				*e*S		22 17 14.4	
RTLS				IAML		22 17 24.7	
	comp=Z,524nm,1.0s						
MT02	**Curacav**	**2.79**	**164**	*e*P	**Pn**	**22 16 36.2**	**+0.5**
MT02	**Curacav**	**2.79**	**164**	*e*P		22 16 35.9	
MT02				*e*S		22 17 03.3	
MT02				*e*S		22 17 23.3	
MT02				IAML		22 17 25.2	
	comp=Z,167nm,0.5s						
PEL	**Peldehue**	**2.82**	**156**	*e*P	**Pn**	**22 16 38.8**	**+2.6**
PEL	**Peldehue**	**2.82**	**156**	*e*P		22 16 33.8	
PEL				*e*P		22 16 37.3	
PEL				*e*S		22 17 13.8	
MT10	**Hacienda Santa**	**2.99**	**155**	*i* P	**Pn**	**22 16 39.2**	**+0.7**
MT05	**Renca**	**3.03**	**158**	*e*P		22 16 42.0	
MT05				*e*P		22 16 43.3	
MT05				*e*S		22 17 20.3	
MT05				IAML		22 17 35.5	
	comp=Z,218nm,1.3s						
FCH	**Farellones**	**3.13**	**152**	*e*P	**Pn**	**22 16 41.6**	**+0.9**
RTLL	**Cerro Villicun**	**3.18**	**105**	*e*P		22 16 28.1	
RTLL				*e*S		22 17 28.0	
MT03	**Universidad Ad**	**3.20**	**156**	*e*P		22 16 42.0	
MT03				*e*S		22 17 21.0	
MT03				IAML		22 17 35.8	
	comp=Z,253nm,1.0s						
MT04	**Ro Olivares**	**3.27**	**150**	⇑*e*P	**Pn**	**22 16 44.5**	**+2.0**
MT09	**Talagante**	**3.32**	**164**	*e*P	**Pn**	**22 16 44.0**	**+0.8**
MT08	**Bocatoma Ro**	**3.35**	**149**	*e*P	**Pn**	**22 16 46.4**	**+2.8**
MT08				IAML		22 17 39.4	
	comp=E,178nm,0.7s						
MT01	**Popeta**	**3.35**	**168**	*e*P		22 16 42.0	
MT01				*e*P		22 16 43.8	
MT01				*e*S		22 17 25.4	
MT12	**Pirque**	**3.40**	**158**	*e*P	**Pn**	**22 16 44.3**	**+0.2**
ASAL	**Salagasta**	**3.41**	**127**	*e*P		22 16 47.0	
ASAL				*e*S		22 17 33.8	
CFA	**Coronel Fontan**	**3.44**	**108**	LR	LR	22 17 55.9	
	comp=E,67nm,19.9s,baz=197,slow=39						
CFA	**Coronel Fontan**	**3.44**	**108**	*e*P		22 16 46.0	
CFA				*e*S		22 17 30.9	
LMEL	**Las Melosas**	**3.63**	**155**	*e*P	**Pn**	**22 16 48.8**	**+1.4**
AAGR	**Agrelo**	**3.73**	**133**	*e*P		22 16 52.0	
AAGR				*e*S		22 17 50.0	
BO01	**Tunca**	**3.90**	**168**	*e*P		22 16 52.0	
BO02	**Sierra Bellavi**	**4.35**	**166**	*e*P		22 16 58.0	
BO02				*e*S		22 17 57.8	
BO02				IAML		22 18 14.1	
	comp=Z,91nm,0.4s						
AC02	**Maricunga**	**4.53**	**35**	*e*P	**Pn**	**22 17 00.3**	**+0.3**
AC01	**Pan de Azucar**	**4.59**	**17**	⇑*e*P	**Pn**	**22 16 58.1**	**-2.5**
AC01	**Pan de Azucar**	**4.59**	**17**	*e*P		22 16 58.3	
H03N1	**Juan Fernandez**	**6.48**	**242**	T	T	22 24 23.4	
	baz=71,slow=72,SNR=897						
H03N2	**Juan Fernandez**	**6.49**	**242**	T	T	22 24 24.3	
	baz=71,slow=72,SNR=1310						
H03N3	**Juan Fernandez**	**6.49**	**242**	T	T	22 24 22.5	
	baz=71,slow=72,SNR=941						
PLCA	**Paso Flores**	**10.21**	**173**	Pn	**Pn**	**22 18 17.4**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=347,slow=14,SNR=1.4						
	comp=Z,1.4nm,0.8s						
CPUP	**Villa Florida**	**13.63**	**76**	LR	LR	22 24 37.8	
	comp=Z,72nm,18.2s,baz=212,slow=39						
TORD	**Torodi Ar. Bea**	**83.08**	**70**	P	**P**	**22 28 17.2**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=217,slow=4.5,SNR=4.4						
	comp=Z,0.7nm,0.7s						
H11S2	**WAKE ISLAND Hy**	**125.72**	**272**	T	T	00 53 36.4	
	baz=116,slow=75,SNR=15						
H11S1	**WAKE ISLAND Hy**	**125.74**	**272**	T	T	00 53 33.0	
	baz=116,slow=75,SNR=8.7						
H11S3	**WAKE ISLAND Hy**	**125.74**	**272**	T	T	00 53 36.8	
	baz=116,slow=75,SNR=10						
H11N3	**WAKE ISLAND Hy**	**126.05**	**273**	T	T	00 54 00.4	
	baz=116						
H11N1	**WAKE ISLAND Hy**	**126.06**	**273**	T	T	00 54 07.2	
	baz=116						
H11N2	**WAKE ISLAND Hy**	**126.07**	**273**	T	T	00 54 02.1	
	baz=116						
BVAR	**Borovoye Array**	**144.73**	**40**	PKP	**PKPdf**	**22 35 27.4**	**0.0**
	comp=Z,0.7nm,0.6s,baz=314,slow=2.3,SNR=6.0						
AAK	**Ala-Archa**	**150.77**	**56**	PKPbc	**PKiKP**	**22 35 44.7**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=273,slow=16,SNR=3.6						
ZALV	**Zalesovo Beam**	**151.29**	**29**	PKPbc	**PKiKP**	**22 35 44.8**	**+0.2**
	comp=Z,4.3nm,0.7s,baz=293,slow=3.4,SNR=19						

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*IDC **10** 22:23:41.8±0.8, 37°.70N×38°.59E, h0^{km}, mb3.3/8, mbtmp3.4/13, ML3.1/5, MS3.0/10, Error ellipse: s-maj=14.3km s-min=10.5km az=172.0*
*DDA **10** 22:23:42.3±0.0, 37°.58N×38°.51E, h9^{km}±1^{km}, MW4.0*
*ISK **10** 22:23:42.4, 37°.50N×38°.48E, h13^{km}, ML4.2/13*
*GII **10** 22:23:44.7±0.0, 37°.57N×38°.50E, h8^{km}*
ISC 10 22:23:42.9±0.9**, 37°.59N**±0°.02×**38°.51E**±0°.02**, h8**^{km}±7^{km}**,**
n97, σ1^s.41/118**, mb3.4**/10**, MS2.9**/6**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	**Bozova**	**0.21**	**234**	P	**Pg**	**22 23 47.1**	**-0.1**
ATAB				S	**Sg**	**22 23 50.3**	**+0.3**
URFA	**Urfa**	**0.29**	**121**	Pg	**Pg**	**22 23 48.7**	**0.0**
URFA				Sg	**Sg**	**22 23 52.9**	**+0.3**
HANM	**anlurfa/Hi**	**0.30**	**93**	SPECP		22 23 48.0	
HANM				P	**Pg**	**22 23 48.5**	**-0.3**
HANM				S	**Sg**	**22 23 52.8**	**+0.1**
AZEY	**Adyaman-Merk**	**0.30**	**316**	P	**Pg**	**22 23 49.0**	**+0.1**
AZEY				S	**Sg**	**22 23 53.5**	**+0.6**
NARI	**Adyaman-Kaht**	**0.35**	**35**	SPECP		22 23 49.0	
NARI				P	**Pg**	**22 23 49.8**	**0.0**
NARI				S	**Sg**	**22 23 54.9**	**+0.3**
SANL	**SANLIURFA_Merk**	**0.57**	**138**	SPECP		22 23 53.0	
SANL				P	**Pg**	**22 23 53.6**	**-0.3**
SANL				S	**Sg**	**22 24 01.4**	**0.0**
AKCA	**Adyaman/G¶l**	**0.68**	**287**	P	**Pg**	**22 23 55.9**	**-0.1**

AKCA				SPECP		22 23 56.0	
AKCA				S	**Sb**	**22 24 05.5**	**-1.3**
SURC	**SANLIURFA_SURC**	**0.72**	**173**	SPECP		22 23 56.0	
SURC				P	**Pb**	**22 23 56.5**	**-1.3**
SURC				S	**Sb**	**22 24 06.4**	**-1.3**
MAYA	**Malatya/Merkez**	**0.73**	**355**	SPECP		22 23 56.0	
MAYA				P	**Pg**	**22 23 56.7**	**-0.3**
MAYA				S	**Sb**	**22 24 07.4**	**-0.9**
GZT	**Gaziantep**	**0.79**	**253**	SPECP		22 23 57.0	
GZT				P	**Pg**	**22 23 57.9**	**-0.2**
GZT				S	**Sn**	**22 24 11.9**	**-0.7**
AKCD	**Akcadag**	**0.84**	**327**	P	**Pg**	**22 23 58.9**	**-0.2**
AKCD				SPECP		22 23 59.0	
AKCD				S	**Sb**	**22 24 10.7**	**-0.7**
NZIP	**Nizip/Gaziante**	**0.86**	**231**	SPECP		22 23 59.0	
NZIP				P	**Pb**	**22 23 59.3**	**-0.9**
NZIP				S	**Sb**	**22 24 10.9**	**-1.1**
ELZG	**Elazig**	**0.98**	**22**	P	**Pg**	**22 24 01.1**	**-0.6**
ELZG				S	**Sg**	**22 24 14.0**	**-0.4**
GAZ	**Gaziantep**	**1.12**	**248**	Pg	**Pg**	**22 24 03.4**	**-0.9**
GAZ				Sg	**Sb**	**22 24 18.6**	**-0.6**
KAHM	**Kahramanmaras,**	**1.21**	**267**	SPECP		22 24 05.0	
KAHM				P	**Pb**	**22 24 05.1**	**-1.1**
KAHM				S	**Sn**	**22 24 22.2**	**-0.6**
DARE	**Darende-Malaty**	**1.27**	**321**	Pn	**Pg**	**22 24 07.1**	**-0.1**
DARE				Sn	**Sn**	**22 24 25.3**	**+0.9**
KMRS	**Kahramanmaras**	**1.28**	**267**	Pn	**Pn**	**22 24 06.1**	**-1.1**
KMRS				Sn	**Sb**	**22 24 23.4**	**-0.6**
HCB	**Kahramanmara**	**1.30**	**259**	SPECP		22 24 06.0	
HCB				P	**Pn**	**22 24 06.2**	**-1.2**
HCB				S	**Sb**	**22 24 23.3**	**-1.2**
ELBS	**KAHRAMANMARAS**	**1.31**	**304**	SPECP		22 24 08.0	
ELBS				P	**Pg**	**22 24 08.1**	**0.0**
ELBS				S	**Sg**	**22 24 25.9**	**+0.9**
DYBB	**Diyarbakir**	**1.34**	**74**	Pn	**Pb**	**22 24 07.7**	**-0.7**
DYBB				Sn	**Sg**	**22 24 27.3**	**+1.2**
HEKM	**Malatya_Hekimh**	**1.35**	**342**	P	**Pn**	**22 24 07.8**	**-0.5**
HEKM				SPECP		22 24 08.0	
HEKM				S	**Sg**	**22 24 29.1**	**+2.6**
KUZU	**Kuzuini**	**1.41**	**235**	P	**Pn**	**22 24 08.1**	**-0.8**
KUZU				SPECP		22 24 09.0	
KUZU				S	**Sg**	**22 24 28.9**	**+0.7**
CUGUR	**Gurin_SVAS**	**1.49**	**320**	P	**Pg**	**22 24 11.2**	**-0.3**
CUGUR				S	**Sg**	**22 24 33.8**	**+3.0**
ARPR	**Arapgir-MALATY**	**1.50**	**355**	Pn	**Pb**	**22 24 10.7**	**-0.5**
KOVA	**Elazig, Kovanc**	**1.51**	**42**	SPECP		22 24 10.0	
KOVA				P	**Pb**	**22 24 10.7**	**-0.7**
KOVA				S	**Sg**	**22 24 32.6**	**+1.1**
KAMA	**Osmaniye**	**1.52**	**255**	SPECP		22 24 09.0	
KAMA				P	**Pn**	**22 24 09.3**	**-1.3**
KAMA				S	**Sn**	**22 24 29.3**	**-1.3**
KEMA	**Kemaliye**	**1.67**	**360**	P	**Pn**	**22 24 12.9**	**+0.3**
KEMA				SPECP		22 24 13.0	
KEMA				S	**Sg**	**22 24 36.9**	**+0.2**
HANI	**Diyarbakir_Han**	**1.70**	**61**	SPECP		22 24 12.0	
HANI				P	**Pn**	**22 24 12.6**	**-0.5**
HANI				S	**Sb**	**22 24 36.4**	**+0.2**
ANDN	**Andirin**	**1.72**	**270**	SPECP		22 24 12.0	
ANDN				P	**Pn**	**22 24 12.2**	**-1.0**
ANDN				S	**Sg**	**22 24 37.5**	**-0.7**
TNCL	**Tunceli-Merkez**	**1.72**	**28**	SPECP		22 24 14.0	
TNCL				P	**Pb**	**22 24 14.1**	**-0.8**
TNCL				S	**Sg**	**22 24 38.9**	**+0.6**
SARI	**SarD1z-Kayseri**	**1.84**	**297**	Pn	**Pn**	**22 24 15.3**	**+0.3**
CUKAN	**kangal_SIVAS**	**1.90**	**335**	P	**Pb**	**22 24 17.2**	**-0.9**
CUKAN				S	**Sg**	**22 24 44.2**	**0.0**
SAIM	**ADANA**	**1.96**	**282**	SPECP		22 24 16.0	
SAIM				P	**Pn**	**22 24 16.2**	**-0.4**
SAIM				S	**Sg**	**22 24 45.9**	**0.0**
RHAN	**Hatay/Reyhanl**	**2.03**	**229**	P	**Pn**	**22 24 16.2**	**-1.2**
RHAN				S	**Sg**	**22 24 47.6**	**-0.5**
KOZT	**Kozan**	**2.13**	**268**	Pn	**Pn**	**22 24 18.3**	**-0.6**
CUAYA	**Sivas-Altinyay**	**2.17**	**321**	P	**Pb**	**22 24 20.6**	**-1.9**
SVAN	**Silvan-Diyarba**	**2.20**	**75**	Pn	**Pn**	**22 24 19.1**	**-0.7**
SVAN	**Silvan-Diyarba**	**2.20**	**75**	SPECP		22 24 19.0	
SVAN				P	**Pn**	**22 24 19.1**	**-0.7**
SVAN				S	**Sg**	**22 24 52.1**	**-1.5**
BNGB	**Bingl**	**2.21**	**50**	Pn	**Pn**	**22 24 21.0**	**+1.0**
ERZN	**Erzincan**	**2.21**	**25**	Pn	**Pb**	**22 24 21.3**	**-1.8**
BTMN	**Batman**	**2.21**	**81**	SPECP		22 24 19.0	
BTMN				P	**Pn**	**22 24 19.4**	**-0.6**
CEYT	**Ceyhan**	**2.28**	**256**	Pn	**Pn**	**22 24 20.4**	**-0.4**
EUZM	**Uzumlu**	**2.31**	**23**	SPECP		22 24 22.0	
EUZM				P	**Pn**	**22 24 22.3**	**+0.9**
YEDI	**Yedisu-Bingol**	**2.44**	**40**	Pn	**Pn**	**22 24 24.4**	**+1.2**
YAYL	**Yayladag**	**2.48**	**232**	Pn	**Pn**	**22 24 22.8**	**-0.9**
VRTB	**Varto-Mus**	**2.79**	**55**	Pn	**Pn**	**22 24 29.2**	**+1.1**
BEIL	**Beino**	**3.58**	**212**	*e*P	**Pn**	**22 24 39.4**	**+0.6**
HWQ	**Hawqa**	**3.91**	**213**	*e*P	**Pn**	**22 24 43.5**	**+0.1**
BHL	**Bhannes**	**4.35**	**213**	*e*P	**Pn**	**22 24 50.2**	**+0.7**
BRTR	**Keskin Array B**	**4.37**	**301**	Pn	**Pn**	**22 24 50.3**	**+0.7**
	1.0nm,0.3s,baz=194,slow=32,SNR=24						
BRTR				Pg	**Pb**	**22 25 02.3**	**+2.4**
	1.7nm,0.3s,baz=130,slow=13,SNR=15						
BRTR				Lg	Lg	22 26 00.7	
	2.1nm,0.3s,baz=126,slow=30,SNR=5.1						
	2.0nm,0.4s						
DQRL	**Deir Qamar**	**4.56**	**213**	*e*P	**Pn**	**22 24 50.1**	**-2.2**
RCY	**Rachaya**	**4.63**	**209**	*e*P	**Pn**	**22 24 56.3**	**+2.9**
NATI	**Neve Ativ**	**4.88**	**208**	Pn	**Pn**	**22 24 58.4**	**+1.8**
NATI	**Neve Ativ**	**4.88**	**208**	P	**Pn**	**22 24 59.0**	**+2.4**
CSS	**Mathiatis**	**4.94**	**239**	Pn	**Pn**	**22 24 58.3**	**+0.8**
CSS	**Mathiatis**	**4.94**	**239**	P	**Pn**	**22 24 57.9**	**+0.4**
GEM	**Giv'at Ha'Em**	**4.95**	**209**	Pn	**Pn**	**22 24 59.4**	**+1.8**
GEM	**Giv'at Ha'Em**	**4.95**	**209**	P	**Pn**	**22 25 01.5**	**+3.9**
MMA0B	**Mount Meron ar**	**5.23**	**210**	Pn	**Pn**	**22 25 03.6**	**+2.1**
MMAI	**Mount Meron Ar**	**5.23**	**210**	Pn	**Pn**	**22 25 02.5**	**+1.0**
	1.0nm,0.3s,baz=12,slow=13,SNR=11						
MMAI				Lg	Lg	22 26 30.8	
	14nm,0.3s,baz=10.0,slow=20,SNR=6.1						
	0.8nm,0.4s						
GNI	**Garni**	**5.49**	**60**	Pn	**Pn**	**22 25 05.8**	**+0.6**
	0.9nm,0.3s,baz=303,slow=5.3,SNR=6.3						
GNI				Pg	**Pb**	**22 25 19.5**	**+0.4**
	0.9nm,0.3s,baz=192,slow=6.3,SNR=5.0						
	2.1nm,0.3s						
ASF	**Jabal al Asfar**	**5.57**	**194**	Pn	**Pn**	**22 25 07.1**	**+0.9**
	0.3nm,0.3s,baz=29,slow=13,SNR=2.2						
ASF				Sn	**Sn**	**22 26 14.6**	**+4.1**
	3.4nm,0.3s,baz=32,slow=19,SNR=4.7						
ASF				Lg	Lg	22 26 38.7	
	12nm,0.3s,baz=304,slow=20,SNR=8.5						
	1.3nm,0.3s						
QRNJ	**Al-Qirein**	**5.77**	**206**	P	Pb	22 25 15.6	-8.2
HSUJ	**Al Zarqa**	**5.80**	**200**	P	**Pb**	**22 25 20.4**	**-3.9**
HMDT	**Nahal Hemdat**	**5.86**	**206**	P	**Pn**	**22 25 12.8**	**+2.6**
SLTI	**Sal'it**	**6.05**	**209**	Pn	**Pn**	**22 25 14.4**	**+1.6**
SLTI	**Sal'it**	**6.05**	**209**	P	Pn	22 25 17.1	+4.3
UJAP	**Al Uja**	**6.16**	**205**	P	**Pb**	**22 25 25.9**	**-4.5**
WALJ	**Wala**	**6.42**	**201**	P	Pb	22 25 29.0	-5.8
DSI	**Dead Sea**	**6.54**	**204**	P	**Pb**	**22 25 33.6**	**-3.3**
SWQJ	**Swaqa**	**6.65**	**198**	P	Pb	22 25 43.6	+4.7
AMAZ	**Amatzia**	**6.73**	**207**	P	Pb	22 25 31.1	-9.2
KARJ	**KARJ**	**6.88**	**201**	P	Pn	22 25 18.5	-5.6
KZIT	**Kziot**	**7.49**	**208**	P	**Pb**	**22 25 55.3**	**+2.2**
PRNI	**Paran**	**7.79**	**203**	P	Pb	22 26 02.7	+4.5
MBRI	**Mt Berech**	**8.34**	**202**	P	**Pb**	**22 26 10.1**	**+2.5**
EIL	**Elat**	**8.44**	**202**	Pn	**Pn**	**22 25 47.6**	**+2.1**
	0.1nm,0.3s,baz=11,slow=16,SNR=1.5						
EIL				Lg	Lg	22 28 08.4	
	0.6nm,0.3s,baz=45,slow=14,SNR=1.8						
EIL				LR	LR	22 29 05.9	
	comp=Z,62nm,18.9s,baz=280,slow=38						
	2.3nm,0.7s						
AKASG	**Malin Array Be**	**14.68**	**336**	LR	LR	22 33 16.0	
	comp=Z,44nm,18.0s,baz=160,slow=39						
AKTO	**Aktyubinsk**	**18.94**	**41**	LR	LR	22 37 21.1	
	comp=Z,40nm,19.4s,baz=122,slow=44						
VRAC	**Vranov**	**19.67**	**313**	LR	LR	22 36 55.2	
	comp=Z,23nm,18.1s,baz=158,slow=40						
MOA	**Molln**	**20.47**	**308**	*e*P	**P**	**22 28 20.7**	**-0.3**
	1.0nm,0.4s						
KBA	**Koelnbreinsper**	**20.80**	**305**	*i* P	**P**	**22 28 24.6**	**-0.1**
	1.8nm,0.5s						
GERES	**GERESS Array B**	**21.19**	**310**	P	**P**	**22 28 28.4**	**-0.4**
	0.6nm,0.6s,baz=110,slow=14,SNR=5.0						
	0.6nm,0.6s						
MOTA	**Moosalm**	**22.34**	**305**	*i* P	**P**	**22 28 41.1**	**-0.1**
	3.0nm,0.8s						
WSAR	**Wadi Sarin**	**22.43**	**124**	P	**P**	**22 28 43.2**	**+1.0**
	3.0nm,0.9s,baz=358,slow=9.2,SNR=1.2						
	3.0nm,0.9s						
ARU	**Arti**	**23.12**	**29**	P	**P**	**22 28 49.2**	**-0.1**
	0.6nm,0.2s,baz=216,slow=23,SNR=1.9						
ARU				LR	LR	22 40 34.8	
	comp=Z,31nm,18.3s,baz=150,slow=44						
	0.6nm,0.2s						
DAVA	**Damuels**	**23.13**	**304**	*i* P	**P**	**22 28 48.2**	**-1.4**
	1.2nm,0.5s						
FINES	**FINESS Array B**	**25.11**	**346**	P	**P**	**22 29 08.7**	**+0.8**
	0.7nm,0.7s,baz=148,slow=11,SNR=1.5						
	0.7nm,0.7s						
BVAR	**Borovoye Array**	**26.93**	**45**	LR	LR	22 41 36.8	
	comp=Z,38nm,20.4s,baz=263,slow=40						
AAK	**Ala-Archa**	**27.84**	**68**	LR	LR	22 42 31.9	
	comp=Z,22nm,18.0s,baz=213,slow=41						
NOA	**NORSAR Array B**	**29.04**	**333**	LR	LR	22 41 51.5	
	comp=Z,13nm,19.5s,baz=275,slow=38						
ARCES	**ARCESS Array B**	**32.77**	**352**	LR	LR	22 43 39.6	
	comp=Z,28nm,19.5s,baz=134,slow=37						
ESDC	**Sonseca Array**	**33.02**	**287**	P	**P**	**22 30 18.8**	**+0.1**
	0.2nm,0.6s,baz=70,slow=10.0,SNR=2.5						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**33.34**	**60**	P	**P**	**22 30 19.5**	**-1.8**
	0.2nm,0.8s,baz=273,slow=8.9,SNR=1.4						
	0.2nm,0.8s						
ZALV	**Zalesovo Beam**	**35.48**	**47**	P	**P**	**22 30 37.6**	**-2.1**
	0.2nm,0.4s,baz=229,slow=5.5,SNR=1.7						
	0.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**40.82**	**243**	P	**P**	**22 31 27.0**	**+1.8**
	0.5nm,0.8s,baz=39,slow=9.3,SNR=2.9						
	0.5nm,0.8s						
SONM	**Songino Array**	**49.43**	**55**	LR	LR	22 56 16.0	
	comp=Z,48nm,18.8s,baz=206,slow=40						

*GUC **10** 22:28:52.2±0.8, 17°.99S×70°.94W, h71^{km}±8^{km}, ML3.3*

*IDC **10** 22:28:56.2±3.8, 18°.10S×70°.74W, h93^{km}±33^{km}, mb3.4/2, mbtmp3.8/5, MS2.8/1, Error ellipse: s-maj=52.1km s-min=18.6km az=97.0*

ISC 10 22:28:52.6±2.2, 18°.06S±0°.07×71°.1W±0°.2, h62^{km}±18^{km}, n20, σ0^{s}.88/29, 4C, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AP01	**Chacalluta**	**0.75**	**114**	*i* P	**Pn**	**22 29 07.2**	**-0.4**
AP01				*i* S	**Sn**	**22 29 18.6**	**0.0**
PB12	**IPOC Station P**	**0.89**	**128**	⇑ *i*P	**Pn**	**22 29 09.2**	**-0.2**
PB12				*i* S	**Sn**	**22 29 21.2**	**-0.6**
PB12				IAML		22 29 26.6	
	comp=E,1µm,0.3s						
PB16	**IPOC Station P**	**1.50**	**101**	⇑ *i*P	**Pn**	**22 29 17.6**	**-0.3**
PB16				*i* S	**Sn**	**22 29 36.7**	**-0.2**
PB16				IAML		22 29 40.7	
	comp=E,486nm,0.4s						
PB18	**Visviri**	**1.58**	**73**	⇑ *i*P	**Pn**	**22 29 20.1**	**+1.2**
MNMC	**Minye Minye**	**1.75**	**128**	⇑ *i*P	**Pn**	**22 29 21.4**	**+0.4**
MNMC				*i* S	**Sn**	**22 29 44.5**	**+2.0**
MNMC				IAML		22 29 52.2	
	comp=N,1µm,0.3s						
PSGC	**Pisagua**	**1.77**	**150**	*i* P	**Pn**	**22 29 21.7**	**+0.6**
PSGC				*i* S	**Sn**	**22 29 42.9**	**+0.3**
PSGC				IAML		22 29 50.5	
	comp=E,252nm,0.3s						
PB11	**IPOC Station P**	**2.15**	**142**	*i* P	**Pn**	**22 29 26.8**	**+0.5**
PB11				*i* S	**Sn**	**22 29 52.7**	**+0.7**
PB11				IAML		22 29 53.7	
	comp=N,407nm,0.5s						
TA02	**Huaiquique**	**2.37**	**158**	*e*P	**Pn**	**22 29 29.3**	**+0.2**
TA01	**Diego Aracena**	**2.63**	**162**	*e*P	**Pn**	**22 29 32.4**	**-0.3**
TA01				*e*S	**Sn**	**22 30 02.2**	**-1.2**
TA01				IAML		22 30 07.0	
	comp=E,178nm,0.5s						
PB08	**IPOC Station P**	**2.75**	**139**	*i* P	**Pn**	**22 29 35.7**	**+1.0**
PB08				*i* S	**Sn**	**22 30 07.4**	**+0.5**
PB08				IAML		22 30 09.2	
	comp=N,120nm,0.4s						
LPAZ	**La Paz**	**3.31**	**58**	P	**Pn**	**22 29 44.1**	**+1.5**
	comp=N,7.4nm,0.3s,baz=241,slow=8.5,SNR=21						
PB01	**IPOC Station P**	**3.32**	**154**	*e*P	**Pn**	**22 29 42.5**	**+0.3**
PB02	**IPOC Station P**	**3.42**	**161**	*i* P	**Pn**	**22 29 44.4**	**+0.7**
PB07	**IPOC Station P**	**3.81**	**163**	*e*P	**Pn**	**22 29 49.7**	**+0.7**
PB04	**IPOC Station P**	**4.34**	**169**	*e*P	**Pn**	**22 29 56.0**	**-0.2**
LVC	**Limon Verde**	**4.96**	**156**	P	**Pn**	**22 30 05.7**	**+0.9**
	comp=N,5.7nm,0.3s,baz=355,slow=9.4,SNR=15						
LVC				S	**Sn**	**22 31 02.0**	**+0.9**
	comp=N,19nm,0.4s,baz=278,slow=23,SNR=9.9						
SIV	**San Ignacio**	**9.78**	**79**	P	**Pn**	**22 31 09.3**	**-1.3**
	comp=N,5.6nm,0.6s,baz=261,slow=11,SNR=21						
SIV				LR	LR	22 35 54.8	
	comp=N,53nm,18.5s,baz=270,slow=44						
TORD	**Torodi Ar. Bea**	**78.17**	**72**	P	**P**	**22 40 44.3**	**-1.6**
	comp=N,0.5nm,0.7s,baz=254,slow=5.0,SNR=3.5						
	comp=N,0.5nm,0.7s						
YKA	**Yellowknife Ar**	**87.29**	**341**	P	**P**	**22 41 32.7**	**+0.6**
	comp=N,0.4nm,0.7s,baz=136,slow=4.9,SNR=8.2						
	comp=N,0.4nm,0.7s						
WRA	**Warramunga Arr**	**134.75**	**215**	PKP	**PKPdf**	**22 48 05.1**	**-0.1**
	comp=N,0.3nm,0.6s,baz=150,slow=2.0,SNR=2.4						

*FUNV **10** 22:28:57.3, 10°.71N×62°.22W, h20^{km}, MW3.8*

*TRN **10** 22:28:58.9, 10°.94N×62°.23W, h77^{km}, MD3.7*

ISC 10 22:28:56.9±1.3, 10°.89N±0°.04×62°.33W±0°.04, h81^{km}±15^{km}, n29, σ1^{s}.29/46, 1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUV	**Carupano**	**0.92**	**257**	⇓ *e*P	**Pn**	**22 29 15.6**	**+0.5**
CRUV				*e*S	**Sn**	**22 29 27.7**	**-1.0**
TRN	**Trinidad (W)**	**0.94**	**105**	*e*P	**Pn**	**22 29 15.6**	**+0.2**
TRN				*e*S	**Sn**	**22 29 28.7**	**-0.5**
TPP	**Pointe-a-Pierr**	**1.03**	**123**	*e*P	**Pn**	**22 29 18.4**	**+1.9**
TBH	**Brigand Hill**	**1.30**	**108**	*e*P	**Pn**	**22 29 21.3**	**+1.5**
TBH				*e*S	**Sn**	**22 29 36.2**	**-0.9**
GRGR	**Grenville**	**1.40**	**28**	*e*P	**Pn**	**22 29 21.3**	**+0.2**
GRGR				*e*S	**Sn**	**22 29 38.7**	**-0.6**
GRHS	**Sauteurs**	**1.49**	**27**	*e*P	**Pn**	**22 29 22.0**	**-0.2**
GRHS				*e*S	**Sn**	**22 29 40.7**	**-0.6**
TPR	**Prospect**	**1.55**	**79**	*e*P	**Pn**	**22 29 24.4**	**+1.4**
GRSS	**Sisters**	**1.57**	**27**	*e*P	**Pn**	**22 29 24.2**	**+1.0**
GRSS				*e*S	**Sn**	**22 29 43.5**	**+0.4**
BOT	**Bacolet**	**1.61**	**80**	*e*P	**Pn**	**22 29 24.2**	**+0.5**
TOSP	**Speyside**	**1.81**	**77**	*e*P	**Pn**	**22 29 26.2**	**-0.2**
TOSP				*e*S	**Sn**	**22 29 47.5**	**-1.1**
GCMP	**Grenada, Carri**	**1.82**	**29**	*e*P	**Pn**	**22 29 26.7**	**+0.2**
GCMP				*e*S	**Sn**	**22 29 48.3**	**-0.7**
SVB	**Belmont**	**2.59**	**24**	*e*P	**Pn**	**22 29 37.7**	**+0.9**
SVB				*e*S	**Sn**	**22 30 06.1**	**-1.4**
SVV	**Soufriere Volc**	**2.65**	**24**	*e*P	**Pn**	**22 29 38.2**	**+0.6**
SSV	**Crater Summit**	**2.67**	**25**	*e*P	**Pn**	**22 29 39.6**	**+1.7**
PRGV	**PARIAGUAN**	**3.11**	**227**	*e*P	**Pn**	**22 29 43.9**	**+0.1**
PRGV				*e*S	**Sn**	**22 30 18.5**	**-1.6**
MCLT	**Moule a Chique**	**3.12**	**26**	*e*P	**Pn**	**22 29 45.0**	**+1.1**
MCLT				*e*S	**Sn**	**22 30 18.3**	**-1.8**
SLB	**Belfond**	**3.18**	**23**	*e*P	**Pn**	**22 29 46.4**	**+1.6**
SLBI	**Saint Lucia, B**	**3.38**	**23**	*e*P	**Pn**	**22 29 49.4**	**+1.8**
SLBI				*e*S	**Sn**	**22 30 24.9**	**-1.8**
BBGH	**Gun Hill**	**3.52**	**50**	*e*P	**Pn**	**22 29 50.3**	**+0.9**
BIM	**Bigot**	**3.81**	**19**	*e*P	**Pn**	**22 29 53.9**	**+0.5**
BIM				*e*S	**Sn**	**22 30 35.5**	**-1.6**
MPOM	**Morne Pois Mar**	**3.81**	**22**	*e*P	**Pn**	**22 29 53.9**	**+0.5**
MPOM				*e*S	**Sn**	**22 30 35.3**	**-1.8**
BIRV	**Birongo**	**3.89**	**264**	*e*P	**Pn**	**22 29 56.8**	**+2.3**
BIRV				*e*S	**Sn**	**22 30 39.3**	**+0.2**
MERV	**Las Mercedes**	**4.23**	**248**	*e*P	**Pn**	**22 29 59.7**	**+0.6**
MERV				*e*S	**Sn**	**22 30 46.3**	**-1.0**
MAGL	**Barre de l’ile**	**5.13**	**11**	*e*P	**Pn**	**22 30 13.8**	**+2.4**
BENV	**Beln**	**5.26**	**260**	*e*P	**Pn**	**22 30 14.7**	**+1.4**
BENV				*e*S	**Sn**	**22 31 11.8**	**-0.8**
CACV	**CAICARA DEL OR**	**5.31**	**232**	*e*P	Pn	22 30 08.0	-5.8
CACV				*e*S	Sn	22 31 01.4	-12
MLYT	**Lee's Yard**	**5.80**	**1**	*e*P	**Pn**	**22 30 21.8**	**+1.4**
MBFL	**Flemmings, Mon**	**5.83**	**1**	*e*P	**Pn**	**22 30 22.4**	**+1.6**
BAUV	**El Baul**	**5.95**	**252**	*e*P	**Pn**	**22 30 22.1**	**-0.5**
BAUV				*e*S	**Sn**	**22 31 26.7**	**-2.6**

ROM 10 23:06:09.6±0.1, 42°.579N±0°.004×13°.275E±0°.006, h11^{km}, ML1.1/2, Error ellipse: s-maj=0.5km s-min=0.5km az=174.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.08**	**213**	P	Pg	23 06 12.7	+0.5
RM33				S	Sg	23 06 14.5	+0.4
RM33				AML	AML		
	comp=N,112µm,1.3s						
RM33				AML	AML		
	comp=N,112µm,1.3s						
RM33				AML	AML		
	comp=E,133µm,1.3s						
RM33				AML	AML		
	comp=N,112µm,0.7s						
T1218	**Civita (PG)**	**0.15**	**308**	P	Pg	23 06 13.7	+0.5
T1218				S	Sg	23 06 16.1	+0.5
T1214	**Arquata del Tr**	**0.19**	**345**	P	Pg	23 06 14.3	+0.5
T1214				S	Sg	23 06 17.6	+0.9
T1212	**Cascia, Frazio**	**0.24**	**316**	P	Pg	23 06 15.2	+0.5
T1212				S	Sg	23 06 19.0	+0.9
TERO	**Teramo**	**0.25**	**80**	P	Pg	23 06 15.3	+0.5
TERO				S	Sg	23 06 19.1	+0.9
T1217	**Poggiodomo (PG**	**0.29**	**298**	P	Pb	23 06 16.2	-0.7
T1217				S	Sb	23 06 20.7	-0.9
T1211	**Morro Reatino**	**0.31**	**262**	P	Pg	23 06 16.4	+0.4
T1211				S	Sg	23 06 21.2	+1.0
MC2	**Monte Cornacci**	**0.34**	**350**	P	Pg	23 06 17.1	+0.6
MC2				S	Sb	23 06 22.9	-0.4
EL6	**Elcito**	**0.76**	**350**	S	Sb	23 06 36.2	+0.8
TOLF	**Tolfa**	**1.08**	**242**	P	Pn	23 06 31.5	+0.8

ROM 10 23:07:05.9±0.1, 43°.035N±0°.004×13°.032E±0°.005, h8^{km}, ML1.0/6, 2C-3D, Error ellipse: s-maj=0.4km s-min=0.2km az=77.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1219	**Muccia, Frazio**	**0.03**	**318**	P	Pg	23 07 07.5	0.0
T1219				S	Sg	23 07 08.3	-0.3
FEMA	**Monte Fema**	**0.07**	**170**	P	Pg	23 07 08.2	+0.2
FEMA				S	Sg	23 07 09.8	+0.2
T1220	**Camerino, Fraz**	**0.09**	**29**	⇓P	Pg	23 07 08.5	+0.4
T1220				S	Sg	23 07 10.4	+0.7
T1220				AML	AML		
	comp=E,890µm,1.2s						
T1220				AML	AML		
	comp=N,516µm,0.9s						
T1220				AML	AML		
	comp=E,885µm,1.2s						
T1220				AML	AML		
	comp=N,514µm,0.9s						
T1220				AML	AML		
	comp=N,463µm,0.2s						
T1220				AML	AML		
	comp=N,474µm,0.2s						
T1220				AML	AML		
	comp=E,870µm,0.3s						
T1220				AML	AML		
	comp=E,2964µm,1.1s						
CESI	**CESI - Serrava**	**0.10**	**252**	P	Pg	23 07 08.9	+0.6
CESI				S	Sg	23 07 11.0	+0.9
CSP1	**Cessapalombo**	**0.14**	**66**	⇑P	Pg	23 07 09.6	+0.6
CSP1				S	Sg	23 07 12.1	+1.0
CSP1				AML	AML		
	comp=N,63µm,1.4s						
CSP1				AML	AML		
	comp=E,86µm,0.5s						
T1216	**Preci, Frazion**	**0.14**	**184**	P	Pg	23 07 09.7	+0.7
T1216				S	Sg	23 07 12.3	+1.2
T1216				AML	AML		
	comp=E,124µm,0.2s						
T1216				AML	AML		
	comp=N,113µm,1.2s						
T1256	**Bolognola (MC)**	**0.14**	**101**	P	Pg	23 07 09.8	+0.7
T1256				S	Sg	23 07 12.1	+0.8
MC2	**Monte Cornacci**	**0.17**	**136**	P	Pg	23 07 09.6	+0.1
MC2				S	Sg	23 07 13.3	+1.3
T1245	**Castelsantange**	**0.21**	**147**	P	Pg	23 07 10.2	0.0
T1245				S	Sg	23 07 14.8	+1.6
SNTG	**Esanatoglia**	**0.23**	**343**	⇑P	Pg	23 07 11.4	+0.9
SNTG				S	Sg	23 07 15.3	+1.6
SNTG				AML	AML		
	comp=E,19µm,0.2s						
SNTG				AML	AML		
	comp=N,29µm,0.2s						
SNTG				AML	AML		
	comp=N,155µm,0.7s						
SNTG				AML	AML		
	comp=E,104µm,2.6s						
ASSB	**Assisi San Ben**	**0.27**	**272**	⇓P	Pg	23 07 12.2	+0.8
ASSB				S	Sb	23 07 16.9	-1.1
ASSB				AML	AML		
	comp=N,30µm,0.1s						
ASSB				AML	AML		
	comp=E,31µm,0.3s						
EL6	**Elcito**	**0.30**	**10**	P	Pg	23 07 12.3	+0.5
EL6				S	Sb	23 07 17.8	-0.9
EL6				AML	AML		
	comp=E,69µm,1.4s						
EL6				AML	AML		
	comp=N,84µm,2.4s						
CING	**Cingoli**	**0.36**	**19**	⇓P	Pg	23 07 13.7	+0.7
CING				S	Sb	23 07 19.7	-0.7
CING				AML	AML		
	comp=E,40µm,1.4s						
CING				AML	AML		
	comp=N,35µm,2.6s						

*NEIC **10** 23:16:09.3±1.2, 47°.1N±0°.2×153°.2E±0°.3, h48^{km}±11^{km}, mb4.2/45, Error ellipse: s-maj=38.0km s-min=6.3km az=132.0*

*SKHL **10** 23:16:09.4±0.5, 47°.30N×153°.20E, h25^{km}±4^{km}, mb4.5/4*

*IDC **10** 23:16:11.2±4.0, 47°.31N×152°.98E, h70^{km}±33^{km}, mb3.4/10, mbtmp3.8/12, ML5.4/1, MS2.6/4, Error ellipse: s-maj=27.2km s-min=20.4km az=159.0*

ISC 10 23:16:09.5±0.7, 47°.2N±0°.1×153°.3E±0°.1, h50^{km}, n83, σ1^{s}.23/79, mb4.2/33, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril’s**	**3.91**	**27**	*e*P	**Pn**	**23 17 08.0**	**+1.0**
SKR				AMB	AMB	23 17 10.0	
	30nm,0.3s						
SKR				*e*S	**Sn**	**23 17 51.7**	**+0.1**
SKR				A	A	23 17 58.0	
	60nm,0.4s						
SKR				A	A	23 17 58.0	
	90nm,0.4s						
KUR	**Kuril'sk**	**4.27**	**244**	*e*P	**Pn**	**23 17 13.6**	**+1.7**
KUR				AMB	AMB	23 17 13.9	
	70nm,0.5s						
KUR				*e*S	**Sn**	**23 18 01.5**	**+1.1**
KUR				A	A	23 18 21.2	
	100nm,0.6s						
KUR				A	A	23 18 21.2	
	120nm,0.6s						
SHO	**Shikotan**	**5.65**	**236**	*e*P	**Pn**	**23 17 33.2**	**+2.3**
SHO				AMB	AMB	23 17 34.8	
	30nm,0.4s						
SHO				*e*S	**Sn**	**23 18 36.0**	**+1.5**
SHO				A	A	23 18 56.5	
	40nm,0.5s						
SHO				A	A	23 18 56.5	
	80nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**6.12**	**241**	*e*P	**Pn**	**23 17 39.3**	**+2.0**
YUK				AMB	AMB	23 17 40.5	
	20nm,0.6s						
YUK				*e*S	**Sn**	**23 18 47.3**	**+1.4**
YUK				A	A	23 19 05.9	
	60nm,0.5s						
YUK				A	A	23 19 05.9	
	50nm,0.5s						
PEA0B	**Petropavlovsk-**	**6.52**	**24**	Pn	**Pn**	**23 17 44.3**	**+1.5**
PETK	**Petropavlovsk-**	**6.52**	**24**	P	**Pn**	**23 17 44.3**	**+1.5**
	8.6nm,0.8s,baz=183,slow=14,SNR=12						
PETK				S	**Sn**	**23 18 58.1**	**+2.5**
	1.3nm,0.5s,baz=233,slow=35,SNR=1.4						
PETK	**Petropavlovsk-**	**6.52**	**24**	Pn	**Pn**	**23 17 42.7**	**-0.1**
NMR	**Nemuro--Hokkai**	**6.59**	**237**	*e*P	**Pn**	**23 17 45.4**	**+1.6**
NMR				*e*S	**Sn**	**23 18 58.0**	**+0.5**
AKK	**Akkeshi**	**7.32**	**238**	*e*P	**Pn**	**23 17 55.9**	**+2.2**
MA2	**Magadan**	**12.45**	**354**	P	**Pn**	**23 19 04.9**	**+1.2**
	2.1nm,0.3s,baz=165,slow=12,SNR=9.1						
MA2				LR	LR	23 23 57.8	
	comp=Z,28nm,21.8s,baz=161,slow=38						
	4.8nm,0.3s						
MA2	**Magadan**	**12.45**	**354**	Pn	**Pn**	**23 19 05.2**	**+1.4**
KLR	**Kul'dur**	**14.49**	**286**	LR	LR	23 24 42.3	

	comp=Z,14nm,19.4s,baz=91,slow=36						
H11N2	WAKE ISLAND Hy	29.60	153	T	T	23 54 00.2	
	baz=341,slow=76,SNR=126						
H11N1	WAKE ISLAND Hy	29.62	153	T	T	23 54 00.9	
	baz=341,slow=76,SNR=121						
H11N3	WAKE ISLAND Hy	29.62	153	T	T	23 54 01.2	
	baz=341,slow=76,SNR=71						
H11S1	WAKE ISLAND Hy	30.70	154	T	T	23 55 26.0	
	baz=342,slow=76,SNR=264						
H11S3	WAKE ISLAND Hy	30.70	155	T	T	23 55 27.6	
	baz=342,slow=76,SNR=286						
H11S2	WAKE ISLAND Hy	30.71	154	T	T	23 55 27.8	
	baz=342,slow=76,SNR=252						
TTA	Tatalina	31.97	42	P	P	23 22 31.3	+0.9
K20K	Telida	32.88	41	P	P	23 22 40.2	+1.8
K20K				IAmb	IAmb	23 23 15.5	
	comp=Z,7.6nm,1.5s						
IMAR	Indian Mountai	33.30	37	P	P	23 22 42.3	+0.3
A21K	Barrow	33.51	27	P	P	23 22 43.6	-0.1
H21K	Melozitna Rive	33.64	37	P	P	23 22 45.8	+0.9
CAST	Castle Rocks	33.78	41	P	P	23 22 47.4	+1.2
NACB	Ninganchiao	34.15	239	P	P	23 22 48.2	-1.5
CNPM	China Poot	34.25	48	P	P	23 22 50.0	-0.3
BPAW	Bear Paw Mtn.	34.30	40	P	P	23 22 51.4	+0.7
KTH	Kantishna Hill	34.31	41	P	P	23 22 52.0	+1.2
KTH				IAmb	IAmb	23 22 52.7	
	comp=Z,4.1nm,1.0s						
BRLK	Bradley Lake	34.41	48	P	P	23 22 51.4	-0.3
MLY	Manley	34.45	38	P	P	23 22 53.1	+1.1
MLY				IAmb	IAmb	23 22 53.2	
	comp=Z,3.6nm,1.4s						
TRF	Thorofare Moun	34.59	41	P	P	23 22 53.8	+0.4
TRF				IAmb	IAmb	23 23 29.3	
	comp=Z,4.1nm,1.2s						
COLD	Coldfoot	34.86	35	P	P	23 22 56.2	+0.8
COLD				IAmb	IAmb	23 23 02.2	
	comp=Z,2.1nm,0.8s						
RC01	Rabbit Creek A	34.90	45	P	P	23 22 55.3	-0.5
RC01				IAmb	IAmb	23 23 18.6	
	comp=Z,5.3nm,1.0s						
I23K	Minto, Yukon-K	35.04	38	P	P	23 22 58.2	+1.2
NEA2	Nenana	35.15	39	P	P	23 22 58.7	+0.7
NEA2				IAmb	IAmb	23 22 59.9	
	comp=Z,2.6nm,0.8s						
KNK	Knik Glacier	35.49	45	P	P	23 23 03.7	+2.7
KNK				IAmb	IAmb	23 23 38.8	
	comp=Z,6.1nm,1.2s						
MDM	Murphy Dome	35.51	39	P	P	23 23 02.6	+1.5
MDM				IAmb	IAmb	23 23 03.0	
	comp=Z,2.0nm,0.7s						
SML	Sawmill	35.53	44	P	P	23 23 01.7	+0.4
WRH	Wood River Hil	35.57	39	P	P	23 23 01.5	0.0
H24K	Noodor Dome	35.69	37	P	P	23 23 03.5	+0.9
H24K				IAmb	IAmb	23 23 05.3	
	comp=Z,6.1nm,1.4s						
CCB	Clear Creek Bu	35.69	39	P	P	23 23 03.4	+0.8
CCB				IAmb	IAmb	23 23 22.9	
	comp=Z,4.7nm,1.4s						
SCM	Sheep Creek Mo	36.00	44	P	P	23 23 05.6	+0.2
ILAR	Eielson Array	36.09	39	P	P	23 23 06.2	+0.2
	comp=Z,0.7nm,0.9s,baz=273,slow=7.1,SNR=8.6						
	comp=Z,0.7nm,0.9s						
ILAR	Eielson Array	36.09	39	P	P	23 23 05.5	-0.5
PRP	Porcupine Dome	36.66	38	P	P	23 23 11.8	+0.8
PRP				IAmb	IAmb	23 23 23.9	
	comp=Z,3.6nm,1.3s						
RIDG	Independent Ri	37.01	41	P	P	23 23 15.1	+1.1
RIDG				IAmb	IAmb	23 23 35.6	
	comp=Z,4.8nm,1.2s						
BMAR	Burnt Mountain	37.04	35	P	P	23 23 15.6	+1.4
N25K	Chitina, Valde	37.32	44	P	P	23 23 17.2	+0.6
DOT	Dot Lake	37.37	41	P	P	23 23 16.4	-0.5
SCRK	Sand Creek	37.38	40	P	P	23 23 17.1	-0.1
J26L	Joseph Creek	37.53	39	P	P	23 23 18.7	+0.4
J26L				IAmb	IAmb	23 24 01.1	
	comp=Z,4.9nm,1.4s						
I26K	Coal Creek Min	37.65	38	P	P	23 23 20.6	+1.3
I26K				IAmb	IAmb	23 23 35.4	
	comp=Z,4.5nm,1.4s						
VRDI	Verde Repeater	37.91	45	P	P	23 23 21.2	-0.6
VRDI				IAmb	IAmb	23 23 23.1	
	comp=Z,4.4nm,1.0s						
M26K	Nabesna, AK	37.98	43	P	P	23 23 23.5	+1.4
M26K				IAmb	IAmb	23 23 33.3	
	comp=Z,4.4nm,1.2s						
K27K	Chicken	38.21	40	P	P	23 23 24.9	+0.9
L27K	Beaver Creek,	38.43	42	P	P	23 23 27.3	+1.4
L27K				IAmb	IAmb	23 23 28.8	
	comp=Z,3.6nm,1.3s						
BCAR	Beaver Creek A	38.45	42	P	P	23 23 27.7	+1.7
M27K	Edge Creek, AK	38.50	43	P	P	23 23 28.0	+1.4
M27K				IAmb	IAmb	23 24 12.0	
	comp=Z,8.3nm,1.4s						
BARN	Barnard Glacie	38.80	45	P	P	23 23 30.5	+1.3
CTGM	Chitina Glacie	38.97	45	P	P	23 23 31.7	+1.1
CTGM				IAmb	IAmb	23 23 32.3	
	comp=Z,4.5nm,0.8s						
LOGN	Logan Glacier	39.16	45	P	P	23 23 32.9	+0.7
HYT	Haines Junctio	40.83	44	P	P	23 23 47.5	+1.5
HYT				IAmb	IAmb	23 23 53.1	
	comp=Z,7.4nm,1.3s						
INK	Inuvik	41.17	33	P	P	23 23 49.4	+1.0
	comp=Z,1.5nm,0.5s,baz=296,slow=6.5,SNR=17						
	comp=Z,1.5nm,0.5s						
INK	Inuvik	41.17	33	P	P	23 23 49.6	+1.1
M31M	Drury Creek, Y	41.96	42	P	P	23 23 56.7	+1.5
M31M				IAmb	IAmb	23 24 01.7	
	comp=Z,7.2nm,1.4s						
A36M	Sachs Harbour	43.35	27	P	P	23 24 07.3	+1.1
MKAR	Makanchi Array	46.83	297	P	P	23 24 31.2	-3.0
	comp=Z,0.2nm,0.7s,baz=64,slow=20,SNR=2.1						
MKAR				PcP	PcP	23 26 05.2	-1.3
	comp=Z,0.2nm,0.5s,baz=65,slow=5.1,SNR=4.5						
	comp=Z,0.2nm,0.7s						
YKA	Yellowknife Ar	50.45	37	P	P	23 25 02.1	+0.4
	comp=Z,1.6nm,0.7s,baz=295,slow=7.2,SNR=15						
	comp=Z,1.6nm,0.7s						
CMAR	Chiang Mai Arr	52.61	256	LR	LR	23 49 20.7	
	comp=Z,8.1nm,18.5s,baz=210,slow=38						
FCC	Fort Churchill	60.78	33	P	P	23 26 15.5	-0.3
FCC				IAmb	IAmb	23 26 51.8	
	comp=Z,2.6nm,1.3s						
NVAR	Mina Array Bea	62.10	63	P	P	23 26 25.0	-0.4
	comp=Z,0.2nm,0.3s,baz=304,slow=8.6,SNR=4.5						
	comp=Z,0.2nm,0.3s						
FINES	FINESS Array B	63.65	335	P	P	23 26 33.0	-2.0
	comp=Z,0.5nm,0.4s,baz=28,slow=7.6,SNR=16						
FINES				LR	LR	23 55 12.8	
	comp=Z,8.8nm,20.1s,baz=40,slow=37						
	comp=Z,0.5nm,0.4s						
NB2	NORSAR Subarra	67.80	341	P	P	23 27 00.2	-1.6
	comp=Z,2.2nm,0.9s,baz=26,slow=6.5						
NOA	NORSAR Array B	67.80	341	P	P	23 27 00.6	-1.2
	comp=Z,0.7nm,0.7s,baz=27,slow=6.4,SNR=6.1						
	comp=Z,0.7nm,0.7s						
ASAR	Alice Springs	72.72	199	P	P	23 27 31.8	-0.3
	comp=Z,0.4nm,0.7s,baz=9.9,slow=6.2,SNR=6.3						
	comp=Z,0.4nm,0.7s						
TX31	Lajitas Ar. Si	77.14	61	P	P	23 27 57.7	-0.2
TX32	Lajitas Array	77.14	61	P	P	23 27 58.1	+0.1
TXAR	Lajitas Array	77.14	61	P	P	23 27 58.0	+0.1
	comp=Z,0.8nm,0.6s,baz=299,slow=4.4,SNR=12						
	comp=Z,0.8nm,0.6s						
TXAR	Lajitas Array	77.14	61	P	P	23 27 58.1	+0.1
GERES	GERESS Array B	78.07	334	P	P	23 28 01.3	-1.5
	comp=Z,0.3nm,0.5s,baz=47,slow=2.7,SNR=3.8						
	comp=Z,0.3nm,0.5s						
H03N2	Juan Fernandez	138.63	90	T	T	02 10 27.4	
	baz=309,slow=77,SNR=5.1						
H03N1	Juan Fernandez	138.64	90	T	T	02 10 29.1	
	baz=309,slow=77,SNR=4.5						
H03N3	Juan Fernandez	138.64	90	T	T	02 10 27.8	
	baz=309,slow=77,SNR=5.7						

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*ISK **10** 23:31:55.0, 35°.31N×29°.50E, h11^{km}, ML2.9/23*
*NIC **10** 23:31:57.2±0.0, 35°.29N×29°.53E, h35^{km}±29^{km}, Ml3.3/5*
*THE **10** 23:31:59.2, 35°.45N×29°.20E, h0^{km}±2^{km}, ML2.4/1, Error ellipse: s-maj=7.4km s-min=0.8km az=119.0*
*GII **10** 23:32:00.4±0.0, 34°.90N×29°.83E, h10^{km}, Mm2.8/3*
ISC 10 23:31:56.7±1.0**, 35°.24N**±0°.04×**29°.52E**±0°.03**, h52**^{km}±46^{km}**, n64, σ1^{s}.33**/79**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSL	Kastellorizon	0.91	3	P	Pn	23 32 13.5	+0.3
KSL				AML	AML	23 32 23.3	
	0.3nm,0.4s						
KSL				AML	AML	23 32 23.3	
	0.3nm,0.4s						
KSL				S	Sn	23 32 25.1	-0.3
KSL				AML	AML	23 32 27.8	
	0.4nm,0.5s						
KSL				AML	AML	23 32 27.8	
	0.4nm,0.5s						
AKAS	Kas	0.99	4	Pg	Pn	23 32 13.9	-0.6
FETY	Fethiye	1.43	346	Pn	Pn	23 32 20.6	+0.2
ARG	Arkhangelos	1.49	311	Pn	Pn	23 32 21.7	+0.6
ELL	Elmali	1.54	12	Pn	Pn	23 32 22.1	+0.2
ELL	Elmali	1.54	12	P	Pn	23 32 21.0	-0.8
CAME	Cameli-Denizli	1.71	354	Pn	Pn	23 32 24.6	+0.4
DALY	Dalyan (Mula)	1.72	336	Pn	Pn	23 32 24.8	+0.6
KORT	Korkueli	1.88	21	Pn	Pn	23 32 26.9	+0.3
ANTB	Antalya	1.89	29	Pn	Pn	23 32 27.2	+0.6
KARP	Karpathos	1.95	280	P	Pn	23 32 28.1	+0.7
KARP				S	Sn	23 32 51.2	+0.5
	98nm,0.3s						
KARP	Karpathos	1.95	280	Pn	Pn	23 32 28.6	+1.2
KARP	Karpathos	1.95	280	P	Pn	23 32 27.9	+0.5
YER	Yerkesik	2.14	333	P	Pn	23 32 31.0	+1.0
YER				S	Sn	23 32 54.6	-0.8
YER	Yerkesik	2.14	333	Pn	Pn	23 32 30.4	+0.4
DAT	Datca	2.16	314	P	Pn	23 32 29.9	-0.5
DAT				S	Sn	23 32 54.4	-1.7
DAT	Datca	2.16	314	Pn	Pn	23 32 31.6	+1.2
APMY	Acipayam-Deniz	2.23	356	Pn	Pn	23 32 31.6	+0.3
OSC1	CSNet OBS 1	2.27	140	P	Pn	23 32 32.9	+1.2
OSC1				S	Sn	23 32 59.7	+1.3
AKMS	Akamas	2.32	95	P	Pn	23 32 33.6	+1.2
AKMS				AML	AML	23 33 00.2	
	0.5nm,0.5s						
AKMS				AML	AML	23 33 03.2	
	0.3nm,0.3s						
GAZI	Gazipasa	2.48	66	Pn	Pn	23 32 36.5	+1.8
MLSB	Milas	2.49	326	Pn	Pn	23 32 35.6	+0.9
NATA	Nata	2.55	100	P	Pn	23 32 36.6	+1.0
NATA				AML	AML	23 33 05.3	
	0.7nm,0.5s						
NATA				AML	AML	23 33 07.5	
	0.6nm,0.5s						
ZKR	Zakros	2.71	268	P	Pn	23 32 38.9	+1.2
ZKR				S	Sn	23 33 09.7	+0.4
ZKR	Zakros	2.71	268	Pn	Pn	23 32 39.4	+1.7
TROD	Troodos	2.76	95	S	Sn	23 33 11.9	+0.9
LEF	Lefka	2.77	92	Pn	Pn	23 32 40.5	+2.0
STIA	Sitia Lasithi	2.81	270	P	Pn	23 32 40.8	+1.7
STIA				S	Sn	23 33 12.2	+0.5
SZAC	Souni	2.81	99	P	Pn	23 32 40.2	+1.1
SZAC				AML	AML	23 33 16.7	
	0.3nm,0.5s						
SZAC				AML	AML	23 33 18.0	
	0.2nm,0.3s						
SEYD	Seydisehir-KON	2.86	40	Pn	Pn	23 32 41.1	+1.2
HDMB	Hadim	2.96	54	Pn	Pn	23 32 42.8	+1.5
TEKE	Tekeli-Mersin	3.06	72	Pn	Pn	23 32 44.5	+1.9
GCAM	G?zelcaml?	3.07	324	Pn	Pn	23 32 43.5	+0.9
ASGA	Asgata	3.10	97	P	Pn	23 32 43.6	+0.6
ASGA				AML	AML	23 33 23.1	
	0.2nm,0.5s						
ASGA				AML	AML	23 33 25.3	
	0.2nm,0.4s						
CSS	Mathiatis	3.14	94	P	Pn	23 32 44.8	+1.2
BERE	Bereket-Mersin	3.21	69	Pn	Pn	23 32 46.6	+1.9
SMG	Samos	3.27	320	P	Pn	23 32 45.6	+0.1
SMG				S	Sn	23 33 22.1	-1.1
KULA	Kula-Manisa	3.34	348	Pn	Pn	23 32 47.9	+1.4
MVOU	Mavrovouni	3.38	93	P	Pn	23 32 48.7	+1.7
TEVE	Tevekalti-Mers	3.41	68	Pn	Pn	23 32 49.6	+2.2
SHUT	Suhut-Afyon	3.41	14	Pn	Pn	23 32 48.9	+1.5
SANT	Santorini	3.48	290	P	Pn	23 32 48.7	+0.3
THT2	Imerovigli	3.53	291	P	Pn	23 32 50.0	+0.9
KONT	Konya--Tatoy	3.54	39	Pn	Pn	23 32 50.9	+1.7
THR3	Thira Island,	3.54	290	P	Pn	23 32 49.4	+0.2
CMBO	Columbo, Santo	3.56	291	P	Pn	23 32 49.7	+0.3
KRMN	Karaman	3.59	56	Pn	Pn	23 32 51.5	+1.6
BLCB	Balcova	3.71	328	P	Pn	23 32 51.2	-0.3
BLCB	Balcova	3.71	328	Pn	Pn	23 32 53.2	+1.7
HNTI	Hanita	5.16	113	Pn	Pn	23 33 12.9	+1.5
HNTI				Sn	Sn	23 34 08.4	-1.2
MMA0B	Mount Meron ar	5.36	113	Pn	Pn	23 33 15.6	+1.4
MMA0B				Sn	Sn	23 34 14.6	-0.1
GEM	Giv'at Ha'Em	5.48	110	Pn	Pn	23 33 17.6	+1.8
GEM				Sn	Sn	23 34 16.6	-0.9
SLTI	Sal'it	5.49	121	Pn	Pn	23 33 16.9	+1.0
NATI	Neve Ativ	5.52	109	Pn	Pn	23 33 17.4	+1.2
NATI				Sn	Sn	23 34 16.9	-1.4
HMDT	Nahal Hemdat	5.83	119	Pn	Pn	23 33 22.1	+1.6
HMDT				Sn	Sn	23 34 25.1	-0.9
AMAZ	Amatzia	5.84	128	Pn	Pn	23 33 22.0	+1.3
AMAZ				Sn	Sn	23 34 24.6	-1.7
UJAP	Al Uja	5.95	122	Pn	Pn	23 33 20.9	-1.2
KZIT	Kziot	5.96	135	Pn	Pn	23 33 23.1	+0.8
KZIT				Sn	Sn	23 34 27.1	-2.1
YTIR	Yattir	6.08	128	Pn	Pn	23 33 24.8	+0.8
YTIR				Sn	Sn	23 34 31.1	-1.2
MSBI	Mazada	6.27	127	Pn	Pn	23 33 27.8	+1.3
PRNI	Paran	6.72	135	Pn	Pn	23 33 33.5	+0.7
PRNI				Sn	Sn	23 34 45.9	-2.0
KRMI	Paran Flat	6.74	138	Pn	Pn	23 33 33.4	+0.4
KRMI				Sn	Sn	23 34 44.9	-3.5
HRFI	Mount Harif	6.97	137	Pn	Pn	23 33 37.9	+1.6
HRFI				Sn	Sn	23 34 52.4	-1.8
EIL	Elat	7.21	139	Pn	Pn	23 33 39.8	+0.3
EIL				Sn	Sn	23 34 56.9	-3.0

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*IDC **10** 23:51:37.0±1.2, 42°.66N×109°.88E, h0^{km}, mb3.4/3, mbtmp3.3/5, ML3.2/2, MS3.0/2, Error ellipse: s-maj=48.9km s-min=22.5km az=65.0*
ISC 10 23:51:37.9±0.7**, 42°.72N**±0°.05×**110°.17E**±0°.05**, h10**^{km}**, n17, σ1^{s}.68**/17**, mb3.5**/3**, 1D, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTO	Baotou	2.11	183	*e*Pn	Pg	23 52 17.7	-0.8
BTO				Pg	Pb	23 52 20.5	+4.1
BTO				Sg	Sg	23 52 46.9	+1.0
BTO				smax	smax		
	comp=N,7µm,0.2s						
BTO				smax	smax		
	comp=E,6µm,0.3s						
XLT	XiLinHaoTe	4.47	73	*e*Pn	Pn	23 52 43.0	-2.9
XLT				*e*Pg	Pb	23 52 57.4	+0.8
XLT				Sg	Sb	23 53 50.5	-0.1
XLT				smax	smax		
	comp=N,12nm,0.6s						
XLT				smax	smax		
	comp=E,170nm,0.7s						
SONM	Songino Array	5.77	334	Pn	Pn	23 53 01.4	-2.2
	comp=E,1.3nm,0.3s,baz=153,slow=13,SNR=13						
SONM				Pg	Pb	23 53 19.9	+1.3
	comp=E,1.4nm,0.3s,baz=152,slow=14,SNR=8.3						
SONM				Lg	Lg	23 54 33.5	
	comp=E,28nm,0.3s,baz=132,slow=26,SNR=15						
	comp=E,2.2nm,0.3s						
HNS	HongShan	6.35	145	⇓Pg	Pg	23 53 37.7	-1.8
HNS				Sg	Sg	23 54 59.3	-2.5
HNS				smax	smax		
	comp=N,120nm,0.6s						
HNS				smax	smax		
	comp=E,190nm,0.8s						
LZH	Lanzhou	8.23	219	Pg	Pg	23 54 19.0	+3.5
LZH				Sg	Sg	23 56 06.8	+4.7
LZH				smax	smax		
	comp=N,87nm,1.3s						
LZH				smax	smax		
	comp=E,94nm,1.1s						
LZH				LR	LR		
	comp=N,210nm,7.9s						
LYN	LuoYang	8.35	167	*e*P	Pn	23 53 41.7	+2.7
GTA	Gaotai	8.49	251	*e*P	Pn	23 53 45.1	+4.1
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
XAN	Xi'an	8.72	187	Pn	Pn	23 53 48.0	+3.9
XAN				Pg	Pg	23 54 23.6	-1.2
XAN				Sn	Sn	23 55 39.6	+17
XAN				Sg	Sg	23 56 17.4	-0.3
XAN				smax	smax		
	comp=N,41nm,1.0s						
XAN				smax	smax		
	comp=E,25nm,0.9s						
XAN				LR	LR		
	comp=N,190nm,4.3s						
XAN				LR	LR		
	comp=E,200nm,4.3s						
XAN				LR	LR		
	comp=Z,120nm,5.5s						
GOMU	GeErMu	13.52	246	P	P	23 54 59.3	-0.1
GOMU				pP	P	23 55 02.5	+3.1
GOMU				sP	P	23 55 04.1	+4.7
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,140nm,4.8s						
WMQ	Urumqi	16.40	282	*e*P	P	23 55 29.8	-1.2
PZH	PanZhiHua	17.58	206	P	P	23 55 50.1	+5.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,140nm,5.3s						
MKAR	Makanchi Array	20.16	291	P	Pn	23 56 12.2	-2.0
	baz=93,slow=12,SNR=3.5						
	comp=Z,0.4nm,0.7s						
CMAR	Chiang Mai Arr	25.99	205	LR	LR	00 07 35.4	
	comp=Z,10nm,19.3s,baz=180,slow=37						
ILAR	Eielson Array	57.32	30	LR	LR	00 26 11.6	
	comp=Z,40nm,18.0s,baz=266,slow=36						
WRA	Warramunga Arr	66.21	155	P	P	00 02 26.5	+0.6
	comp=Z,0.2nm,0.7s,baz=342,slow=5.2,SNR=1.6						
	comp=Z,0.2nm,0.7s						
YKA	Yellowknife Ar	69.16	20	P	P	00 02 46.5	+2.4
	comp=Z,0.4nm,0.8s,baz=321,slow=5.6,SNR=6.2						
	comp=Z,0.4nm,0.8s						
ASAR	Alice Springs	69.59	157	P	P	00 02 47.7	+0.5
	comp=Z,0.2nm,0.6s,baz=344,slow=6.1,SNR=4.3						
	comp=Z,0.2nm,0.6s						

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*DDA **10** 23:57:45.2±0.0, 37°.64N×38°.46E, h7^{km}±1^{km}, ML2.7*
*ISK **10** 23:57:45.9, 37°.52N×38°.47E, h15^{km}, ML3.1/8*
ISC 10 23:57:45.1±1.2**, 37°.59N**±0°.04×**38°.45E**±0°.03**, h5**^{km}±11^{km}**, n16, σ0^{s}.84**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AZEY	Adyaman-Merk	0.27	325	P	Pg	23 57 50.3	-0.2
AZEY				S	Sg	23 57 54.2	+0.1
AZEY				*i* AML	AML	23 57 55.0	
	comp=E,762nm,0.5s						
AZEY				*i* AML	AML	23 57 59.0	
	comp=N,645nm,0.9s						
URFA	Urfa	0.33	116	Pg	Pg	23 57 52.6	+1.0
URFA				Sg	Sb	23 57 57.4	-1.8
HANM	anlurfa/Hi	0.34	91	P	Pg	23 57 52.0	+0.2
HANM				S	Sg	23 57 57.0	+0.7
HANM				*i* AML	AML	23 57 59.0	
	comp=N,4µm,0.4s						
HANM				*i* AML	AML	23 57 59.0	
	comp=E,2µm,0.3s						
NARI	Adyaman-Kaht	0.39	40	P	Pg	23 57 52.1	-0.6
NARI				S	Sg	23 57 57.2	-0.5
NARI				*i* AML	AML	23 58 05.0	
	comp=E,1µm,0.6s						
NARI				*i* AML	AML	23 58 06.0	
	comp=N,1µm,0.7s						
SANL	SANLIURFA_Merk	0.60	134	P	Pb	23 57 57.5	-0.6
SANL				S	Sb	23 58 06.1	-0.8
SANL				*i* AML	AML	23 58 08.0	
	comp=N,1µm,0.3s						
SANL				*i* AML	AML	23 58 08.0	
	comp=E,1µm,0.3s						
AKCA	Adyaman/G¶l	0.64	289	P	Pg	23 57 57.7	+0.3
AKCA				*i* AML	AML	23 58 11.0	
	comp=N,765nm,0.6s						
AKCA				*i* AML	AML	23 58 11.0	
	comp=E,322nm,0.6s						
MAYA	Malatya/Merkez	0.74	359	P	Pg	23 57 58.5	-0.8
MAYA				*i* AML	AML	23 58 09.0	
	comp=N,102nm,0.3s						
MAYA				*i* AML	AML	23 58 09.0	
	comp=E,211nm,0.6s						
AKCD	Akcadag	0.82	330	P	Pg	23 58 00.5	-0.4
AKCD				*i* AML	AML	23 58 17.0	
	comp=E,277nm,0.4s						
AKCD				*i* AML	AML	23 58 19.0	
	comp=N,298nm,0.7s						
GAZ	Gaziantep	1.07	248	Pg	Pn	23 58 07.2	+0.4
GAZ				Sg	Sn	23 58 21.7	-0.4
KMRS	Kahramanmaras	1.23	267	Pn	Pn	23 58 08.9	-0.2
KMRS				Sn	Sn	23 58 26.5	+0.4
DARE	Darende-Malaty	1.24	323	Pn	Pg	23 58 10.3	+1.3
DARE				Sn	Sn	23 58 28.3	+1.9
DYBB	Diyarbakir	1.39	74	Pn	Pn	23 58 11.1	-0.1
DYBB				Sn	Sg	23 58 30.2	+0.4
ARPR	Arapgir-MALATY	1.50	357	Pn	Pb	23 58 13.8	+0.1
SARI	SarD1z-Kayseri	1.80	298	Pn	Pb	23 58 18.0	-0.7
BNGB	Bingl	2.25	51	Pn	Pn	23 58 23.9	+0.8
SVAN	Silvan-Diyarba	2.25	75	Pn	Pn	23 58 23.7	+0.7

ROM 11 00:21:35.6±0.1**, 43°.029N**±0°.003×**13°.034E**±0°.004**, h10**^{km}**, ML1.9**/11**, 9C-6D, Error ellipse: s-maj=0.3km s-min=0.3km az=107.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1220	Camerino, Fraz	0.09	26	⇑P	Pg	00 21 38.2	+0.1
T1220				S	Sg	00 21 40.2	+0.3
T1220				AML	AML		
	comp=N,1690µm,1.2s						
T1220				AML	AML		
	comp=E,2045µm,0.3s						
T1220				AML	AML		
	comp=N,1766µm,1.1s						
CESI	CESI - Serrava	0.10	256	⇑P	Pg	00 21 38.6	+0.4
CESI				S	Sg	00 21 40.6	+0.6
CESI				AML	AML		
	comp=E,420µm,0.8s						
CESI				AML	AML		
	comp=N,440µm,1.2s						
CESI				AML	AML		
	comp=N,440µm,0.8s						
T1216	Preci, Frazion	0.14	185	⇓P	Pg	00 21 39.3	+0.5
T1216				S	Sg	00 21 42.2	+1.2
T1216				AML	AML		
	comp=E,424µm,0.3s						
T1216				AML	AML		
	comp=N,262µm,0.2s						
T1216				AML	AML		
	comp=E,424µm,0.3s						
T1216				AML	AML		
	comp=N,262µm,0.2s						
T1216				AML	AML		
	comp=N,262µm,1.8s						
CSP1	Cessapalombo	0.14	63	P	Pg	00 21 39.0	+0.2
CSP1				S	Sg	00 21 41.7	+0.5
CSP1				AML	AML		
	comp=E,382µm,0.3s						
CSP1				AML	AML		
	comp=N,388µm,0.4s						
CSP1				AML	AML		
	comp=E,381µm,0.3s						
CSP1				AML	AML		
	comp=N,389µm,0.4s						
T1256	Bolognola (MC)	0.14	99	⇑P	Pg	00 21 39.3	+0.4
T1256				S	Sg	00 21 42.1	+0.8
MC2	Monte Cornacci	0.16	135	⇑P	Pg	00 21 39.6	+0.3
MC2				S	Sg	00 21 43.0	+1.2
T1245	Castelsantange	0.21	147	⇓P	Pg	00 21 40.4	+0.5
T1245				S	Sg	00 21 44.3	+1.4
T1245				AML	AML		
	comp=N,1695µm,0.2s						
T1245				AML	AML		
	comp=N,1700µm,0.2s						
T1245				AML	AML		
	comp=E,1905µm,0.2s						
T1245				AML	AML		
	comp=E,1735µm,0.2s						
GUMA	Gualdo di Mace	0.22	81	⇑P	Pg	00 21 41.1	+0.9
GUMA				S	Sg	00 21 45.3	+2.0
GUMA				AML	AML		
	comp=N,774µm,0.2s						
GUMA				AML	AML		

	comp=E,1082μm,0.2s						
SNTG	**Esanatoglia**	**0.24**	**343**	⇑P	Pg	00 21 41.1	+0.6
SNTG				S	Sg	00 21 45.2	+1.5
SNTG				AML	AML		
	comp=E,67μm,0.6s						
SNTG				AML	AML		
	comp=N,92μm,0.9s						
T1215	**Vallo di Nera,**	**0.26**	**208**	P	Pg	00 21 41.5	+0.7
T1215				S	Sb	00 21 46.2	-0.7
T1215				AML	AML		
	comp=E,176μm,1.3s						
T1215				AML	AML		
	comp=N,222μm,0.7s						
ASSB	**Assisi San Ben**	**0.28**	**273**	⇑P	Pg	00 21 41.7	+0.6
ASSB				S	Sb	00 21 46.7	-0.7
ASSB				AML	AML		
	comp=N,213μm,0.2s						
ASSB				AML	AML		
	comp=E,110μm,1.3s						
T1212	**Cascia, Frazio**	**0.28**	**178**	P	Pg	00 21 41.6	+0.4
T1212				AML	AML		
	comp=E,2910μm,0.1s						
T1212				AML	AML		
	comp=N,5720μm,0.1s						
T1212				AML	AML		
	comp=E,2550μm,0.1s						
T1212				AML	AML		
	comp=N,5825μm,0.1s						
T1212				AML	AML		
	comp=E,2910μm,0.1s						
T1212				AML	AML		
	comp=E,2555μm,0.1s						
T1212				AML	AML		
	comp=N,5825μm,0.1s						
T1212				AML	AML		
	comp=N,5720μm,0.1s						
T1214	**Arquata del Tr**	**0.30**	**154**	⇑P	Pg	00 21 42.1	+0.5
T1214				AML	AML		
	comp=E,3385μm,0.2s						
T1214				AML	AML		
	comp=E,3140μm,0.2s						
T1214				AML	AML		
	comp=N,3965μm,0.2s						
T1214				AML	AML		
	comp=N,3945μm,0.1s						
EL6	**Elcito**	**0.30**	**9**	⇓P	Pb	00 21 42.7	-0.5
EL6				S	Sb	00 21 47.6	-0.7
T1217	**Poggiodomo (PG**	**0.33**	**193**	⇓P	Pb	00 21 42.9	-0.6
T1217				S	Sb	00 21 48.3	-0.5
T1217				AML	AML		
	comp=E,448μm,0.4s						
T1217				AML	AML		
	comp=N,428μm,0.4s						
T1218	**Civita (PG)**	**0.36**	**171**	⇑P	Pg	00 21 43.3	+0.5
T1218				AML	AML		
	comp=N,1235μm,0.6s						
T1218				AML	AML		
	comp=E,816μm,1.5s						
T1218				AML	AML		
	comp=N,1255μm,0.6s						
T1218				AML	AML		
	comp=E,855μm,1.5s						
CING	**Cingoli**	**0.37**	**19**	⇓P	Pg	00 21 43.3	+0.5
CING				S	Sb	00 21 49.5	-0.5
ARVD	**Arcevia**	**0.47**	**352**	⇓P	Pb	00 21 45.5	-0.5
ARVD				S	Sb	00 21 53.5	+0.4
T1211	**Morro Reatino**	**0.51**	**195**	AML	AML		
	comp=N,317μm,0.3s						
T1211				AML	AML		
	comp=N,306μm,0.4s						
T1211				AML	AML		
	comp=E,262μm,0.7s						
T1211				AML	AML		
	comp=E,260μm,0.7s						
CESX	**Cesi**	**0.54**	**219**	P	Pg	00 21 46.0	0.0
RM33	**Pellescritta (**	**0.54**	**166**	AML	AML		
	comp=E,156μm,1.6s						
RM33				AML	AML		
	comp=N,130μm,0.8s						
RM33				AML	AML		
	comp=E,156μm,0.4s						
CAMP	**Campotosto**	**0.56**	**151**	AML	AML		
	comp=N,119μm,0.3s						
CAMP				AML	AML		
	comp=N,119μm,1.7s						
CAMP				AML	AML		
	comp=E,136μm,0.3s						
TERO	**Teramo**	**0.58**	**134**	P	Pg	00 21 46.7	-0.2
TERO				AML	AML		
	comp=N,163μm,0.5s						
TERO				AML	AML		
	comp=E,152μm,1.4s						
PIEI	**Pieia**	**0.62**	**324**	S	Sb	00 21 58.7	+1.3
FSSB	**Fossombrone**	**0.69**	**344**	S	Sn	00 22 01.3	-0.9
GIGS	**Gran Sasso**	**0.70**	**146**	P	Pg	00 21 48.9	-0.2
GIGS				S	Sg	00 21 55.9	-2.4
TOLF	**Tolfa**	**1.23**	**219**	P	Pg	00 22 01.5	+2.3

ROM 11 00:21:47.1±0.0**, 42°.779N**±0°.002×**13°.137E**±0°.004**,**
h10^{km}, ML1.7/12**, 10C, Error ellipse: s-maj=0.3km**
s-min=0.2km az=251.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.06**	**111**	P	Pg	00 21 49.6	+0.2
T1214				S	Sg	00 21 51.0	-0.1
T1214				AML	AML		
	comp=E,3385μm,0.2s						
T1214				AML	AML		
	comp=N,3945μm,0.1s						
T1214				AML	AML		
	comp=E,3140μm,0.2s						
T1214				AML	AML		
	comp=N,3965μm,0.2s						
T1212	**Cascia, Frazio**	**0.07**	**248**	P	Pg	00 21 49.9	+0.4
T1212				S	Sg	00 21 51.6	+0.4
T1212				AML	AML		
	comp=E,2910μm,0.1s						
T1212				AML	AML		
	comp=N,5720μm,0.1s						
T1212				AML	AML		
	comp=E,2550μm,0.1s						
T1212				AML	AML		
	comp=N,5825μm,0.1s						
T1212				AML	AML		
	comp=E,2910μm,0.1s						
T1212				AML	AML		
	comp=N,5720μm,0.1s						
T1212				AML	AML		
	comp=E,2555μm,0.1s						
T1212				AML	AML		
	comp=N,5825μm,0.1s						
T1212				AML	AML		
	comp=E,2552μm,0.1s						
T1212				AML	AML		
	comp=E,2909μm,0.1s						
T1212				AML	AML		
	comp=N,5824μm,0.1s						
T1212				AML	AML		
	comp=N,5721μm,0.1s						
T1245	**Castelsantange**	**0.09**	**26**	⇑P	Pg	00 21 50.0	+0.2
T1245				S	Sg	00 21 51.8	+0.1
T1245				AML	AML		
	comp=E,1905μm,0.2s						
T1245				AML	AML		
	comp=N,1695μm,0.2s						
T1245				AML	AML		
	comp=E,1735μm,0.2s						
T1245				AML	AML		
	comp=N,1700μm,0.2s						
T1245				AML	AML		
	comp=E,1906μm,0.2s						
T1245				AML	AML		
	comp=E,1732μm,0.2s						
T1245				AML	AML		
	comp=N,1696μm,0.2s						
T1245				AML	AML		
	comp=N,1702μm,0.2s						
T1218	**Civita (PG)**	**0.11**	**188**	P	Pg	00 21 50.5	+0.4
T1218				S	Sg	00 21 52.8	+0.7
MC2	**Monte Cornacci**	**0.14**	**16**	⇑P	Pg	00 21 51.0	+0.5
MC2				S	Sg	00 21 53.8	+0.9
T1216	**Preci, Frazion**	**0.14**	**322**	⇑P	Pg	00 21 50.9	+0.5
T1216				S	Sg	00 21 53.3	+0.6
T1216				AML	AML		
	comp=E,517μm,0.1s						
T1216				AML	AML		
	comp=N,737μm,0.3s						
T1217	**Poggiodomo (PG**	**0.17**	**246**	⇑P	Pg	00 21 51.5	+0.7
T1217				S	Sg	00 21 54.4	+1.0
T1217				AML	AML		
	comp=E,448μm,0.4s						
T1217				AML	AML		
	comp=N,428μm,0.4s						
T1217				AML	AML		
	comp=N,342μm,0.1s						
T1217				AML	AML		
	comp=E,433μm,0.1s						
T1217				AML	AML		
	comp=N,381μm,0.1s						
T1217				AML	AML		
	comp=E,434μm,0.1s						
FEMA	**Monte Fema**	**0.19**	**341**	P	Pg	00 21 51.9	+0.6
FEMA				S	Sg	00 21 55.2	+0.9
T1215	**Vallo di Nera,**	**0.20**	**277**	⇑P	Pg	00 21 52.0	+0.6
T1215				S	Sg	00 21 55.2	+1.0
T1215				AML	AML		
	comp=E,176μm,1.3s						
T1215				AML	AML		
	comp=N,222μm,0.7s						
T1215				AML	AML		
	comp=N,173μm,0.1s						
T1215				AML	AML		
	comp=E,137μm,0.2s						
T1215				AML	AML		
	comp=E,150μm,0.1s						
T1215				AML	AML		
	comp=N,183μm,0.1s						
SMA1	**SAN MARTINO**	**0.21**	**135**	P	Pg	00 21 52.3	+0.7
SMA1				S	Sg	00 21 55.7	+1.1
T1241	**Roccafluvione,**	**0.23**	**70**	⇑P	Pg	00 21 52.4	+0.5
T1241				S	Sg	00 21 56.4	+1.3
T1241				AML	AML		
	comp=E,258μm,1.6s						
T1241				AML	AML		
	comp=N,173μm,0.3s						
T1241				AML	AML		
	comp=N,172μm,0.3s						
T1241				AML	AML		
	comp=E,255μm,0.2s						
T1241				AML	AML		
	comp=E,239μm,0.2s						
T1241				AML	AML		
	comp=N,199μm,2.6s						
T1241				AML	AML		
	comp=N,181μm,0.2s						
T1256	**Bolognola (MC)**	**0.24**	**16**	⇑P	Pg	00 21 52.6	+0.5
T1256				S	Sg	00 21 56.4	+0.9
T1256				AML	AML		
	comp=E,383μm,0.3s						
T1256				AML	AML		
	comp=N,464μm,0.1s						
T1256				AML	AML		
	comp=E,412μm,0.3s						
T1256				AML	AML		
	comp=N,512μm,0.1s						
RM33	**Pellescritta (**	**0.28**	**168**	P	Pg	00 21 53.3	+0.5
RM33				S	Sb	00 21 58.0	-1.0
CESI	**CESI - Serrava**	**0.28**	**323**	P	Pg	00 21 53.4	+0.5
CESI				S	Sb	00 21 58.1	-1.0
T1219	**Muccia, Frazio**	**0.29**	**341**	P	Pg	00 21 53.4	+0.3
T1219				S	Sb	00 21 58.2	-1.2
T1219				AML	AML		
	comp=E,208μm,0.1s						
T1219				AML	AML		
	comp=N,192μm,0.1s						
T1219				AML	AML		
	comp=E,209μm,0.1s						
T1219				AML	AML		
	comp=N,190μm,0.2s						
CAMP	**Campotosto**	**0.32**	**140**	P	Pg	00 21 53.8	+0.3
CAMP				S	Sg	00 21 58.8	+1.1
CSP1	**Cessapalombo**	**0.32**	**9**	⇑P	Pg	00 21 54.0	+0.5
CSP1				S	Sb	00 21 59.1	-1.1
CSP1				AML	AML		
	comp=N,242μm,0.3s						
CSP1				AML	AML		
	comp=E,179μm,0.1s						
T1220	**Camerino, Fraz**	**0.33**	**354**	⇑P	Pg	00 21 54.4	+0.6
T1220				S	Sb	00 21 59.6	-0.9
T1220				AML	AML		
	comp=E,443μm,0.3s						
T1220				AML	AML		
	comp=N,388μm,0.2s						
T1220				AML	AML		
	comp=N,408μm,0.2s						
FIAM	**Fiamignano**	**0.51**	**182**	⇑P	Pg	00 21 57.2	+0.2
FIAM				S	Sb	00 22 05.0	-0.7
FIAM				AML	AML		
	comp=N,50μm,0.9s						
FIAM				AML	AML		
	comp=E,51μm,0.2s						
EL6	**Elcito**	**0.55**	**357**	P	Pg	00 21 57.9	0.0
EL6				S	Sb	00 22 06.4	-0.5
EL6				AML	AML		
	comp=E,76μm,0.2s						
EL6				AML	AML		
	comp=N,76μm,0.1s						
ARVD	**Arcevia**	**0.73**	**349**	P	Pg	00 22 01.6	+0.3
ARVD				S	Sb	00 22 12.0	0.0
ARVD				AML	AML		
	comp=E,44μm,3.6s						
ARVD				AML	AML		
	comp=N,64μm,3.1s						

VIE ***11*** *00:47:48.4, 46°.15N×12°.41E, h2^{km}, mb2.0/15, ml2.4/18*
15 km E of Belluno
ROM ***11*** *00:47:48.5±0.1, 46°.179N±0°.004×12°.432E±0°.005,*
h5^{km}, ML2.0/25, Error ellipse: s-maj=0.4km s-min=0.4km
az=146.0
PRU ***11*** *00:47:50.1±0.0, 46°.18N×12°.46E, h8^{km}*
ISC 11 00:47:48.6±0.8**, 46°.15N**±0°.01×**12°.41E**±0°.01**, h11^{km}**±4^{km}**,**
n90, σ0^{s}.98/147**, 13C-2D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSO	**Casso**	**0.14**	**334**	⇑*e*Pg	**Pg**	**00 47 51.5**	**-0.5**
CSO				*e*Sg	**Sg**	**00 47 53.8**	**-0.6**
MLNI	**Malnisio**	**0.14**	**90**	⇓*e*Pg	**Pg**	**00 47 51.9**	**-0.1**
MLNI				*e*Sg	**Sg**	**00 47 54.4**	**0.0**
POLC	**Polcenigo**	**0.14**	**153**	⇑P	**Pg**	**00 47 52.4**	**+0.5**
POLC				S	**Sg**	**00 47 55.4**	**+1.2**
POLC				AML	AML		
	comp=E,3995μm,1.3s						
POLC				AML	AML		
	comp=N,5380μm,0.5s						
POLC				AML	AML		
	comp=E,3995μm,0.7s						
FRE8	**Fregona**	**0.14**	**195**	P	**Pg**	**00 47 52.1**	**+0.1**
FRE8				S	**Sg**	**00 47 55.2**	**+0.9**
CAE	**Caneva**	**0.15**	**172**	⇑*e*Pg	**Pg**	**00 47 52.3**	**+0.2**
CAE				*e*Sg	**Sg**	**00 47 55.1**	**+0.7**
CAE	**Caneva**	**0.15**	**172**	P	**Pg**	**00 47 52.3**	**+0.2**
CAE				S	**Sg**	**00 47 55.2**	**+0.7**
CIMO	**Cimolais**	**0.16**	**8**	⇓*e*Pg	**Pg**	**00 47 51.9**	**-0.4**
CIMO				*e*Sg	**Sg**	**00 47 54.2**	**-0.7**
CIMO	**Cimolais**	**0.16**	**8**	P	**Pg**	**00 47 51.9**	**-0.4**
CIMO				S	**Sg**	**00 47 54.2**	**-0.7**
CIMO				AML	AML		
	comp=E,1265μm,0.1s						
CIMO				AML	AML		
	comp=N,1499μm,0.1s						
CIMO				AML	AML		
	comp=N,1607μm,0.1s						
CIMO				AML	AML		
	comp=N,1495μm,0.1s						
CIMO				AML	AML		
	comp=E,1285μm,0.1s						
STAL	**STALIGIAL**	**0.24**	**62**	P	**Pg**	**00 47 53.1**	**-0.4**
STAL				S	**Sg**	**00 47 56.9**	**0.0**
STAL				AML	AML		
	comp=E,734μm,1.6s						
STAL				AML	AML		
	comp=N,886μm,0.5s						
STAL				AML	AML		
	comp=E,714μm,1.2s						
STAL				AML	AML		
	comp=N,942μm,0.2s						
STAL				AML	AML		
	comp=E,734μm,1.6s						
STAL				AML	AML		
	comp=N,885μm,0.5s						
STAL				AML	AML		
	comp=E,734μm,0.4s						
VARN	**Col Varnada, M**	**0.26**	**233**	⇑*e*Pg	**Pg**	**00 47 54.1**	**+0.1**
VARN				*e*Sg	**Sb**	**00 47 58.9**	**-1.1**
AGOR	**Agordo**	**0.28**	**298**	⇑*e*Pg	**Pg**	**00 47 54.1**	**-0.3**
AGOR				*e*Sg	**Sg**	**00 47 57.8**	**-0.5**
AGOR	**Agordo**	**0.28**	**298**	P	**Pg**	**00 47 54.1**	**-0.3**
AGOR				S	**Sg**	**00 47 58.4**	**+0.1**
AGOR				AML	AML		
	comp=N,334μm,1.1s						
AGOR				AML	AML		
	comp=N,334μm,1.1s						
AGOR				AML	AML		
	comp=E,158μm,1.2s						
AGOR				AML	AML		
	comp=E,157μm,1.2s						
AGOR				AML	AML		
	comp=N,334μm,0.9s						
AGOR				AML	AML		
	comp=N,207μm,0.2s						
AGOR				AML	AML		
	comp=E,257μm,1.5s						
CSMI	**Casera Mimoias**	**0.40**	**25**	*e*Pg	**Pg**	**00 47 56.0**	**-0.5**
CSMI				*e*Sg	**Sg**	**00 48 02.0**	**+0.1**
MTLO	**Montello**	**0.40**	**213**	*e*Pg	**Pg**	**00 47 57.0**	**+0.5**
MTLO				*e*Sg	**Sb**	**00 48 03.7**	**-0.2**
MPRI	**Monte Prat**	**0.41**	**77**	*e*Pg	**Pg**	**00 47 57.0**	**+0.3**
MPRI				*e*Sg	**Sg**	**00 48 03.0**	**+0.8**
MPRI	**Monte Prat**	**0.41**	**77**	P	**Pg**	**00 47 57.1**	**+0.3**
MPRI				S	**Sb**	**00 48 03.6**	**-0.7**
MPRI				AML	AML		
	comp=N,246μm,0.5s						
MPRI				AML	AML		
	comp=E,114μm,0.6s						
MPRI				AML	AML		
	comp=E,114μm,1.4s						
CLUD	**Cludinico**	**0.45**	**47**	*e*Pg	**Pg**	**00 47 57.1**	**-0.3**
CLUD				*e*Sg	**Sg**	**00 48 03.7**	**+0.3**
CLUD	**Cludinico**	**0.45**	**47**	P	**Pg**	**00 47 57.4**	**-0.1**
CLUD				S	**Sg**	**00 48 03.8**	**+0.4**
CLUD				AML	AML		
	comp=E,75μm,1.2s						
CLUD				AML	AML		
	comp=N,65μm,1.2s						
CLUD				AML	AML		
	comp=E,75μm,1.2s						
CLUD				AML	AML		
	comp=N,65μm,1.2s						
CLUD				AML	AML		
	comp=E,66μm,0.8s						
CLUD				AML	AML		
	comp=N,67μm,0.4s						
CLUD				AML	AML		
	comp=N,67μm,1.6s						
CLUD				AML	AML		
	comp=E,75μm,0.8s						
CLUD				AML	AML		
	comp=E,66μm,1.2s						
CLUD				AML	AML		
	comp=N,65μm,0.8s						
FUSE	**Fusea**	**0.49**	**57**	*e*Pg	**Pg**	**00 47 57.8**	**-0.4**
BUA	**Buia**	**0.50**	**82**	*e*Pg	**Pg**	**00 47 58.4**	**0.0**
CGRP	**Cima Grappa**	**0.50**	**238**	*e*Pg	**Pg**	**00 47 58.5**	**+0.1**
CGRP				*e*Sg	**Sb**	**00 48 06.8**	**-0.2**
BOO	**Bordano**	**0.51**	**70**	*e*Pg	**Pg**	**00 47 58.3**	**-0.2**
BOO				*e*Sg	**Sg**	**00 48 06.0**	**+0.7**
FVI	**Forni Avoltri**	**0.52**	**30**	P	**Pg**	**00 47 58.7**	**0.0**
FVI				S	**Sg**	**00 48 06.1**	**+0.6**
FVI				AML	AML		
	comp=N,149μm,1.0s						
FVI				AML	AML		
	comp=N,148μm,1.0s						
FVI				AML	AML		
	comp=N,148μm,1.0s						
FVI				AML	AML		
	comp=E,248μm,0.5s						
GEPF	**Gemona**	**0.52**	**76**	⇑P	**Pg**	**00 47 58.8**	**0.0**
GEPF				S	**Sb**	**00 48 06.9**	**-0.4**
GEPF				AML	AML		
	comp=E,114μm,0.2s						
GEPF				AML	AML		
	comp=N,212μm,0.7s						
TLI	**Talmassons**	**0.54**	**115**	Pg	**Pg**	**00 47 59.1**	**+0.1**
CTI	**Castel Tesino**	**0.54**	**259**	⇑P	**Pb**	**00 47 59.7**	**-0.4**
CTI				S	**Sb**	**00 48 08.3**	**+0.4**
CTI				AML	AML		
	comp=N,534μm,0.3s						
CTI				AML	AML		
	comp=E,328μm,0.8s						
ZOU	**Zoufplan**	**0.56**	**44**	*e*Pg	**Pg**	**00 47 59.6**	**0.0**
ZOU	**Zoufplan**	**0.56**	**44**	P	**Pg**	**00 47 59.5**	**-0.2**
ZOU				S	**Sb**	**00 48 08.4**	**-0.4**
ZOU				AML	AML		
	comp=N,68μm,1.5s						
ZOU				AML	AML		
	comp=N,68μm,0.5s						
ZOU				AML	AML		
	comp=E,108μm,0.3s						
BAD	**Bernadia**	**0.59**	**81**	*e*Pg	**Pg**	**00 47 59.4**	**-0.6**
ZIAN	**Ziano**	**0.60**	**282**	*e*Pg	**Pg**	**00 48 00.2**	**-0.1**
ABTA	**Abfaltersbach**	**0.60**	**7**	*i* Pg	**Pg**	**00 48 00.5**	**+0.2**
	comp=E,1.3nm,0.1s,SNR=11						
ABTA				*i* Sg	**Sg**	**00 48 08.4**	**+0.1**
	comp=E,4.7nm,0.1s,SNR=11						
VINO	**Villanova**	**0.61**	**80**	*e*Pg	**Pg**	**00 48 00.1**	**-0.5**
VINO	**Villanova**	**0.61**	**80**	P	**Pg**	**00 48 00.0**	**-0.5**
VINO				S	**Sb**	**00 48 10.2**	**+0.1**
VINO				AML	AML		
	comp=E,41μm,0.7s						
VINO				AML	AML		
	comp=E,41μm,1.3s						
VINO				AML	AML		
	comp=N,44μm,0.8s						
PLRO	**Paularo**	**0.65**	**52**	*e*Pg	**Pg**	**00 48 01.0**	**-0.2**
COLI	**Coloredo**	**0.67**	**91**	*e*Pg	**Pb**	**00 48 02.1**	**-0.3**
PTCC	**Patocco-Chiusa**	**0.70**	**68**	P	**Pg**	**00 48 01.5**	**-0.8**
PTCC				S	**Sg**	**00 48 11.8**	**+0.3**
PTCC				AML	AML		
	comp=E,54μm,0.7s						
PTCC				AML	AML		
	comp=N,49μm,1.3s						
PTCC				AML	AML		
	comp=E,54μm,1.3s						
PTCC				AML	AML		
	comp=N,49μm,0.7s						
BRES	**Bressanone**	**0.72**	**320**	P	**Pg**	**00 48 02.7**	**+0.1**
RISI	**Rein**	**0.83**	**344**	P	**Pb**	**00 48 04.9**	**-0.2**
RISI				S	**Sb**	**00 48 15.9**	**-0.5**
RISI				AML	AML		
	comp=N,156μm,0.4s						
RISI				AML	AML		
	comp=E,124μm,0.5s						
SABO	**M.te Sabotino**	**0.85**	**101**	*e*Pg	**Pn**	**00 48 05.9**	**-0.6**
SABO	**M.te Sabotino**	**0.85**	**101**	P	**Pb**	**00 48 05.2**	**-0.1**
SABO				AML	AML		
	comp=N,115μm,0.9s						
SABO				AML	AML		
	comp=E,564μm,1.0s						
SABO				AML	AML		
	comp=E,137μm,0.2s						
SABO				AML	AML		
	comp=N,115μm,1.1s						
SABO				AML	AML		
	comp=N,625μm,1.0s						
PRED	**Cave del Predi**	**0.85**	**70**	*e*Pg	**Pb**	**00 48 05.3**	**-0.2**
ACOM	**Acomizza, Ital**	**0.86**	**62**	⇑P	**Pb**	**00 48 05.5**	**-0.2**
ACOM				S	**Sb**	**00 48 17.5**	**+0.2**
ACOM				AML	AML		
	comp=E,134μm,0.9s						
ACOM				AML	AML		
	comp=N,160μm,0.6s						
ACOM				AML	AML		
	comp=N,176μm,0.7s						
ACOM				AML	AML		
	comp=E,119μm,1.1s						
ACOM				AML	AML		
	comp=N,176μm,1.3s						
ACOM				AML	AML		
	comp=N,160μm,1.4s						
ACOM				AML	AML		
	comp=E,119μm,0.9s						
APPI	**Appiano**	**0.88**	**292**	P	**Pb**	**00 48 05.9**	**0.0**

DOSS	Dosso del Somm	0.89	253	*e*Pg	Pb	00 48 06.2	0.0
DOSS	Dosso del Somm	0.89	253	⇑P	Pb	00 48 06.2	0.0
DOSS				S	Sb	00 48 18.8	+0.6
DOSS				AML	AML		
	comp=E,112µm,0.6s						
DOSS				AML	AML		
	comp=N,155µm,0.4s						
TEOL	Teolo	0.94	213	⇑P	Pn	00 48 08.1	+0.3
TEOL				S	Sn	00 48 21.6	+0.3
TEOL				AML	AML		
	comp=N,220µm,0.5s						
TEOL				AML	AML		
	comp=E,273µm,0.4s						
TEOL				AML	AML		
	comp=N,220µm,1.5s						
MYKA	Terra Mystica	0.98	60	*i* Pg	Pb	00 48 07.8	+0.1
	comp=N,0.9nm,0.1s,SNR=6.8						
MYKA				*i* Sg	Sb	00 48 20.9	+0.3
	comp=N,1.3nm,0.2s						
GAGG	Gaggia	1.01	267	⇑P	Pb	00 48 08.3	+0.1
GAGG				S	Sn	00 48 22.5	-0.6
GAGG				AML	AML		
	comp=N,100µm,0.6s						
GAGG				AML	AML		
	comp=E,92µm,1.0s						
LUSI	Trento, Gardas	1.04	260	P	Pn	00 48 09.0	-0.2
LUSI				S	Sn	00 48 23.1	-0.6
LUSI				AML	AML		
	comp=N,206µm,0.2s						
LUSI				AML	AML		
	comp=E,120µm,0.8s						
ROSI	Rosskopf	1.04	319	P	Pn	00 48 09.0	-0.3
ROSI				AML	AML		
	comp=E,62µm,1.4s						
ROSI				AML	AML		
	comp=N,70µm,0.9s						
ROSI				AML	AML		
	comp=E,62µm,0.6s						
KBA	Koelnbreinsper	1.13	34	*i* Pg	Pn	00 48 10.4	-0.1
	comp=E,1.2nm,0.1s						
KBA				*i* Sg	Sb	00 48 25.0	-0.1
	comp=E,3.1nm,0.2s						
WTTA	Wattenberg	1.23	335	*e*Pg	Pg	00 48 12.8	+0.4
	comp=E,5.0nm,0.2s,SNR=10						
WTTA				*i* Sg	Sn	00 48 29.0	+0.3
	comp=E,18nm,0.3s,SNR=6.4						
WTTA	Wattenberg	1.23	335	P	Pg	00 48 12.8	+0.4
WTTA				S	Sn	00 48 28.8	+0.1
WTTA				AML	AML		
	comp=N,43µm,1.5s						
WTTA				AML	AML		
	comp=E,61µm,0.4s						
WTTA				AML	AML		
	comp=N,43µm,0.5s						
MAGA	Magasa	1.30	254	P	Pg	00 48 14.0	+0.5
MAGA				S	Sn	00 48 31.7	+1.5
MAGA				AML	AML		
	comp=E,172µm,0.4s						
MAGA				AML	AML		
	comp=N,138µm,0.4s						
WATA	Walderalm	1.32	335	*e*Pg	Pg	00 48 14.3	+0.4
	comp=N,5.7nm,0.2s,SNR=9.5						
WATA				*i* Sg	Sg	00 48 31.8	+0.8
	comp=N,12nm,0.2s						
SQTA	Sankt Quirin	1.35	323	*i* Pg	Pg	00 48 14.7	+0.1
	comp=N,7.3nm,0.2s,SNR=8.2						
SQTA				*e*Sg	Sg	00 48 33.3	+1.1
	comp=N,9.4nm,0.3s						
MOSI	Grossmontoni	1.37	291	AML	AML		
	comp=E,119µm,0.8s						
MOSI				AML	AML		
	comp=E,119µm,1.2s						
MOSI				AML	AML		
	comp=N,188µm,0.5s						
SALO	Salr	1.42	249	P	Pg	00 48 16.2	+0.3
SALO				AML	AML		
	comp=E,78µm,1.2s						
SALO				AML	AML		
	comp=N,82µm,0.5s						
SALO				AML	AML		
	comp=N,82µm,1.5s						
BRMO	Bormio	1.45	284	P	Pg	00 48 16.2	-0.2
BRMO				S	Sg	00 48 35.0	-0.2
BRMO				AML	AML		
	comp=E,35µm,1.6s						
BRMO				AML	AML		
	comp=N,41µm,0.7s						
BRMO				AML	AML		
	comp=E,35µm,0.4s						
FETA	Feichten	1.45	308	*e*Pg	Pg	00 48 16.1	-0.3
	comp=E,0.9nm,0.1s,SNR=12						
FETA				*e*Sg	Sg	00 48 35.6	+0.3
	comp=E,3.4nm,0.3s,SNR=4.0						
LJU	Ljubljana	1.48	93	P	Pg	00 48 16.5	-0.4
LJU				S	Sg	00 48 36.3	+0.2
LJU				AML	AML		
	comp=E,722µm,1.5s						
LJU				AML	AML		
	comp=N,983µm,1.4s						
LJU				AML	AML		
	comp=N,983µm,0.6s						
MOTA	Moosalm	1.49	324	*e*Pg	Pg	00 48 17.4	+0.1
	comp=N,1.6nm,0.2s,SNR=6.8						
MOTA				*i* Sg	Sg	00 48 38.0	+1.4
	comp=N,6.0nm,0.3s						
OBKA	Obir	1.53	76	*i* Pg	Pb	00 48 17.3	+0.3
	comp=N,0.8nm,0.1s						
OBKA				*e*Sg	Sg	00 48 37.8	+0.1
	comp=N,6.0nm,0.2s,SNR=6.4						
BRJN	Brijuni	1.56	142	*e*Pn	Pn	00 48 16.7	+0.4
BRJN				Sn	Sg	00 48 38.6	-0.2
SMRN	Sveta Marina	1.66	132	*e*Pn	Pb	00 48 18.6	-0.5
SMRN				Sn	Sb	00 48 39.8	-0.2
RETA	Reutte	1.75	320	*e*Sn	Sg	00 48 43.8	-1.1
	comp=N,1.9nm,0.2s						
BIOA	Bad Ischl, Aus	1.76	28	*e*Pg	Pg	00 48 21.8	-0.5
	comp=N,1.6nm,0.2s						
BIOA				*e*Sg	Sg	00 48 46.3	+1.2
	comp=N,3.4nm,0.2s,SNR=4.5						
DAVOX	Davos/Dischmat	1.86	291	P	Pg	00 48 23.6	-0.6
DAVOX				AML	AML		
	comp=N,28µm,0.5s						
DAVOX				AML	AML		
	comp=E,33µm,0.4s						
SOKA	Soboth	1.89	73	*i* Pn	Pb	00 48 22.3	-0.8
	comp=E,0.8nm,0.3s						
SOKA				*e*Sn	Sb	00 48 46.4	-0.4
	comp=E,3.6nm,0.3s						
DAVA	Damuels	2.08	304	*i* Pg	Pg	00 48 28.1	-0.4
	comp=E,2.9nm,0.2s						
DAVA				*e*Sg	Sg	00 48 55.3	-0.1
	comp=E,6.0nm,0.3s						
BOJS	Bojanci	2.09	107	P	Pn	00 48 24.8	+1.3
MOA	Molln	2.12	36	*e*Pn	Pb	00 48 26.2	-0.8
	comp=E,0.5nm,0.1s						
MOA				*e*Sg	Sg	00 48 58.1	+1.3
	comp=E,2.1nm,0.3s						
OZLJ	Ozalj	2.20	103	*e*Pn	Pb	00 48 27.6	-0.8
OZLJ				Sn	Sb	00 48 57.2	+1.5
MSSA	Maissana	2.75	229	P	Pn	00 48 31.9	-0.8
PII	Pisa	2.77	210	S	Sb	00 49 10.3	-1.7
SARZ	Sarezzano	2.77	244	S	Sb	00 49 13.1	+0.9
SARZ				AML	AML		
	comp=N,132µm,0.5s						
SARZ				AML	AML		
	comp=E,92µm,1.1s						
DUGI	Dugi Otok	2.86	138	*e*Pn	Pn	00 48 35.5	+1.4
DUGI				Sn	Sn	00 49 09.6	+1.1
CKRC	Cesky Krumlov	2.96	25	*e*PN	Pn	00 48 36.6	+1.0
CKRC				*e*PG	Pg	00 48 43.5	-1.9
CKRC				*e*SN	Sn	00 49 12.5	+1.3
KHC	Kasperske Hory	3.08	14	*e*PN	Pn	00 48 38.2	+0.9
KHC				*e*PG	Pb	00 48 45.4	+1.9
KHC				*e*SN	Sn	00 49 15.1	+1.0
KHC				*e*SG	Sg	00 49 27.5	-0.1
T1216	Preci, Frazion	3.29	172	P	Pn	00 48 37.4	-2.7
T1214	Arquata del Tr	3.44	170	S	Sb	00 49 34.5	+3.1
CANO	Canova, Maglio	3.53	238	⇑P	Pn	00 48 43.7	+0.2
RM33	Pellescritta (	3.69	171	P	Pn	00 48 48.9	+3.3
INTR	Introdacqua	4.28	165	P	Pn	00 48 52.2	-1.5
MELA	Melanico ??? S	4.86	155	P	Pb	00 49 14.4	+0.7
APRC	Apricena	4.94	152	P	Pb	00 49 11.6	-3.5
PTRJ	Pietraroja	5.03	161	P	Pb	00 49 19.1	+2.5
PIGN	Pignataro Magg	5.11	165	⇑P	Pb	00 49 13.8	-4.3
VITU	Vitulano (BN)	5.22	161	P	Pb	00 49 20.2	+0.3
SGTA	Sant Agata di	5.45	156	S	Sn	00 50 08.5	-4.1

TRN 11 00:52:33.4, 18°.73N×64°.34W, h45^{km}, M3.5(RSPR)

NEIC 11 00:52:33.9±0.6, 18°.8N±0°.1×64°.28W±0°.06, h35^{km}±2^{km}, ML2.5/24, Md3.5/12(RSPR), Error ellipse: s-maj=17.7km s-min=9.0km az=5.0

RSPR 11 00:52:34.9, 18°.78N×64°.30W, h50^{km}±4^{km}, MD3.5/6

ISC 11 00:52:32.4±2.8, **18°.8N**±0°.2×**64°.28W**±0°.07, **h24**^{km}±16^{km}, **n25**, σ**0^{s}.42**/37, **11D**, **Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STVI	Saint Thomas	0.79	235	⇓*e*P	Pn	00 52 48.4	+0.4
STVI	Saint Thomas	0.79	235	Pn	Pn	00 52 47.9	-0.1
STVI				IAML		00 52 59.5	
	comp=N,210nm,0.5s						
STVI				IAML		00 52 60.0	
	comp=E,151nm,0.3s						
STVI	Saint Thomas	0.79	235	⇓*e*P	Pn	00 52 48.4	+0.4
STVI				*e*S	Sn	00 52 59.3	+0.3
CUPR	Culebra, Puert	1.08	243	⇓*e*P	Pb	00 52 52.4	0.0
CUPR	Culebra, Puert	1.08	243	*e*S	Sb	00 53 06.0	0.0
CUPR	Culebra, Puert	1.08	243	Pn	Pb	00 52 52.2	-0.2
CUPR				Sn	Sb	00 53 06.0	0.0
MTP	Monte Pirata	1.40	240	⇓*e*P	Pn	00 52 56.9	+0.4
MTP	Monte Pirata	1.40	240	Pn	Pn	00 52 56.9	+0.4
MTP					Sn	00 53 14.2	0.0
MTP				IAML		00 53 17.4	
	comp=E,66nm,0.2s						
MTP				IAML		00 53 19.1	
	comp=N,74nm,0.1s						
MTP	Monte Pirata	1.40	240	⇓*e*P	Pn	00 52 56.9	+0.4
MTP				*e*S	Sn	00 53 13.7	-0.5
CBYP	Canovanas	1.59	251	⇓*e*P	Pn	00 52 59.3	+0.2
CBYP	Canovanas	1.59	251	Pn	Pn	00 52 59.1	0.0
CBYP					Sn	00 53 18.8	-0.2
CBYP				IAML		00 53 28.1	
	comp=E,118nm,0.2s						
CBYP	Canovanas	1.59	251	⇓*e*P	Pn	00 52 59.3	+0.2
CBYP				*e*S	Sn	00 53 18.4	-0.6
HUMP	Col San Antoni	1.63	246	⇓*e*P	Pn	00 52 60.0	+0.3
HUMP	Col San Antoni	1.63	246		Pn	00 53 00.0	+0.3
HUMP	Col San Antoni	1.63	246	⇓*e*P	Pn	00 52 60.0	+0.3
HUMP				*e*S	Sn	00 53 19.7	-0.2
GCPR	Guaynabo City	1.78	254	Pn	Pn	00 53 01.9	+0.1
GCPR				Sn	Sn	00 53 22.8	-0.8
GCPR				IAML		00 53 23.3	
	comp=E,31nm,3.5s						
SEUS	St. Eustatius	1.80	137	Pn	Pn	00 53 02.0	+0.1
SJG	San Juan	1.91	249	Pn	Pn	00 53 03.0	-0.5
SJG				Sn	Sn	00 53 26.5	-0.2
SJG				IAML		00 53 35.9	
	comp=E,29nm,1.5s						
CELP	Cerrillos	2.30	252	⇓*e*P	Pn	00 53 09.6	+0.7
CELP	Cerrillos	2.30	252	Pn	Pn	00 53 09.6	+0.7
CELP					Sn	00 53 36.7	+0.1
CELP				IAML		00 53 45.4	
	comp=E,32nm,3.2s						
CELP				IAML		00 54 25.4	
	comp=N,28nm,3.3s						
CELP	Cerrillos	2.30	252	⇓*e*P	Pn	00 53 09.6	+0.7
CELP				*e*S	Sn	00 53 36.4	-0.2
OBIP	Obispado Ponce	2.34	251	Pn	Pn	00 53 09.4	0.0
OBIP				Sn	Sn	00 53 36.9	-0.5
OBIP				IAML		00 53 45.4	
	comp=E,23nm,2.4s						
OBIP				IAML		00 54 07.8	
	comp=N,32nm,4.1s						
UUPR	Utuado, UPR, P	2.38	257	Pn	Pn	00 53 10.3	+0.3
AOPR	Arecibo Observ	2.39	259	Pn	Pn	00 53 10.4	+0.3
AOPR				IAML		00 54 27.8	
	comp=N,37nm,3.1s						
CRPR	Cabo Rojo, PR	2.81	254	Pn	Pn	00 53 16.6	+0.8

SJA 11 01:04:20.6±0.6, 30°.01S×72°.39W, h30^{km}±5^{km}, ML3.4, MW3.6, Hypocentre not reviewed by the ISC

IDC 11 01:04:21.3±2.2, 30°.02S×72°.39W, h0^{km}, mb3.5/1, mbtmp3.7/4, ML3.6/3, Error ellipse: s-maj=52.7km s-min=32.8km az=64.0

GUC 11 01:04:24.7±0.7, 30°.04S×72°.07W, h35^{km}±14^{km}, ML3.2

ISC 11 01:04:22.9±2.1, **30°.03S**±0°.06×**72°.10W**±0°.08, **h11**^{km}±13^{km}, **n14**, σ**1^{s}.21**/18, **Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.76	148	*e*P	Pg	01 04 37.9	+0.3
CO06				*i* S	Sb	01 04 48.9	+0.4
CO06				IAML		01 04 50.3	
	comp=E,924nm,0.3s						
CO05	La Serena	0.76	82	*e*P	Pb	01 04 38.4	+0.2
CO05				*i* S	Sb	01 04 48.9	+0.4
CO05				IAML		01 04 50.6	
	comp=N,3µm,0.3s						
GO04	Tololo Observa	1.14	97	*e*P	Pb	01 04 44.5	-0.3
GO04				*i* S	Sb	01 04 59.2	-0.4
GO04	Tololo Observa	1.14	97	*e*P		01 04 46.4	
GO04				*e*S		01 05 01.3	
CO03	El Pedregal	1.46	124	*e*P	Pn	01 04 49.3	0.0
CO03				*i* S	Sn	01 05 08.2	-0.4
CO03				IAML		01 05 10.6	
	comp=E,668nm,0.3s						
CO03	El Pedregal	1.46	124	*e*P		01 04 49.4	
CO03				*e*S		01 05 09.6	
CO03				IAML		01 05 10.4	
	comp=Z,373nm,0.8s						
CO02	Combarbal	1.50	141	*e*P	Pn	01 04 50.4	+0.4
CO02				*i* S	Sb	01 05 10.1	0.0
CO02				IAML		01 05 15.1	
	comp=N,1µm,0.2s						
CO02	Combarbal	1.50	141	*e*P		01 04 50.4	
CO02				*e*S		01 05 12.2	
CO02				IAML		01 05 14.8	
	comp=Z,293nm,0.3s						
LCO	Las Campanas	1.59	51	*e*P		01 04 51.9	
LCO				*e*S		01 05 16.4	
LCO				IAML		01 05 22.2	
	comp=Z,1µm,0.6s						
CO01	Juntas del Tor	1.74	89	*e*P	Pb	01 04 54.5	-0.6
CO01				*i* S	Sb	01 05 16.5	-0.6
CO01				IAML		01 05 20.3	
	comp=N,154nm,0.3s						
CO01	Juntas del Tor	1.74	89	*e*P		01 04 54.7	
CO01				*e*S		01 05 17.8	
CO01				IAML		01 05 19.5	
	comp=Z,214nm,0.2s						
AC05	El Transito	1.99	54	*e*P		01 04 57.8	
AC05				*e*S		01 05 24.7	
AC05				IAML		01 05 31.4	
	comp=Z,116nm,0.8s						
AC04	Llanos de Chal	2.03	27	*e*P		01 04 56.9	
AC04				*e*S		01 05 23.1	
GO03	Copiap	2.93	34	*e*P		01 05 10.0	
GO03				*e*S		01 05 51.2	
VA03	San Esteban	3.03	154	*e*P		01 05 11.0	
VA03				*e*S		01 05 53.2	
MT02	Curacav	3.32	166	*e*P		01 05 14.9	
MT02				*e*S		01 06 03.2	
CFA	Coronel Fontan	3.67	116	Pn	Pn	01 05 23.2	+3.4
	comp=Z,1.0nm,0.3s,baz=292,slow=13,SNR=15						
CFA				Sn	Sb	01 06 10.6	-2.0
	comp=Z,2.8nm,0.3s,baz=229,slow=10.0,SNR=4.9						
	comp=Z,4.0nm,0.3s						
CFA	Coronel Fontan	3.67	116	*e*P		01 05 22.0	
CFA				*e*S		01 06 16.2	
MT03	Universidad Ad	3.71	159	*e*P		01 05 21.0	
MT03				*e*S		01 06 05.4	
MT01	Popeta	3.89	169	*e*P		01 05 22.0	
MT01				*e*P		01 05 22.6	
AC01	Pan de Azucar	4.09	19	*e*P		01 05 24.6	
AC02	Maricunga	4.12	40	*e*P		01 05 27.9	
BO01	Tunca	4.43	169	*e*P		01 05 30.2	
BO01				*e*S		01 06 22.3	
BO02	Sierra Bellavi	4.88	167	*e*P		01 05 36.8	
GO05	Huala	4.96	178	*e*P		01 05 36.6	
H03N1	Juan Fernandez	6.72	238	T	T	01 13 13.9	
	baz=65,slow=72						
H03N2	Juan Fernandez	6.74	238	T	T	01 13 18.2	
	baz=65,slow=72						
H03N3	Juan Fernandez	6.74	238	T	T	01 13 16.7	
	baz=65,slow=72						
PLCA	Paso Flores	10.75	174	Pn	Pn	01 06 55.9	-1.0
	comp=Z,0.1nm,0.3s,baz=350,slow=12,SNR=2.1						
	comp=Z,2.1nm,0.8s						
LPAZ	La Paz	14.16	16	Pn	Pn	01 07 42.9	-1.1
	comp=Z,0.4nm,0.3s,baz=195,slow=18,SNR=6.2						
	comp=Z,1.6nm,0.3s						
TORD	Torodi Ar. Bea	82.92	70	P	P	01 16 48.9	+0.6
	comp=Z,0.2nm,0.6s,baz=248,slow=6.1,SNR=1.8						
	comp=Z,0.2nm,0.6s						
ZALV	Zalesovo Beam	150.84	28	PKPbc	PKiKP	01 24 16.2	+0.6
	comp=Z,0.8nm,0.3s,baz=294,slow=1.4,SNR=3.6						

VIE 11 01:17:28.1, 49°.73N×18°.57E, h0^{km}, mb2.6/1, ml2.0/1 26 km ESE of Ostrava Suspected Mining induced.

IPEC 11 01:17:28.6±0.2, 49°.83N×18°.56E, h0^{km}, ML1.7/4, Error ellipse: s-maj=1.7km s-min=1.1km az=163.0

PRU 11 01:17:29.8±0.0, 49°.80N×18°.50E, h0^{km}, Mining Induced Event Csm, E=5.4e+04

ISC 11 01:17:28.7±0.8, **49°.79N**±0°.03×**18°.54E**±0°.02, **h0**^{km}, **n23**, σ**0^{s}.81**/43, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.26	280	*e*PG	Pg	01 17 34.2	+0.5
OKC				*e*SG	Sg	01 17 38.2	+1.1
	comp=Z,127nm,0.8s						
MORC	Moravsky Berou	0.65	269	*e*PG	Pg	01 17 41.4	+0.2
MORC				*e*SG	Sg	01 17 49.1	-0.5
MORC	Moravsky Berou	0.65	269	*e*Pg	Pg	01 17 41.3	+0.1
	baz=85						
MORC				*e*Sg	Sg	01 17 49.0	-0.5
	15nm,0.4s,baz=85						
LANS	Liptovska Anna	0.88	136	*e*PG	Pg	01 17 45.9	+0.3
LANS				*e*SG	Sb	01 17 59.2	0.0
LANS				*e*LG	Lg	01 18 03.7	
OJC	Ojcow	0.92	62	*e*Pg	Pg	01 17 45.6	-0.7
OJC				*e*Sg	Sg	01 17 57.6	-0.5
JAVC	Velka Javorina	1.09	212	*e*PG	Pb	01 17 50.6	0.0
JAVC	Velka Javorina	1.09	212	*e*Pg	Pb	01 17 50.5	0.0
	baz=31						
KRLC	Kraliky	1.17	285	*e*PG	Pg	01 17 49.6	-1.6
KRLC				*e*SG	Sg	01 18 06.3	-0.1
	comp=Z,12nm,0.6s						
NIE	Niedzica	1.20	107	*e*Pg	Pb	01 17 52.3	-0.1
NIE				*e*Sg	Sn	01 18 10.3	+0.4
VYHS	Vyhne	1.31	171	*e*PG	Pg	01 17 53.4	-0.5
VYHS				*e*SG	Sb	01 18 12.1	+0.5
VRAC	Vranov	1.36	250	*e*Pg	Pg	01 17 54.3	-0.5
	baz=67						
VRAC				*e*Sg	Sg	01 18 11.9	-0.5
	8.7nm,0.4s,baz=67						
DPC	Dobruska-Polom	1.54	292	*e*PG	Pn	01 17 56.3	-1.2
DPC				*e*SG	Sg	01 18 17.5	-0.6
	comp=Z,4.9nm,0.4s						
KRUC	Moravsky	1.58	243	*e*Pg	Pn	01 17 57.7	-0.3
	baz=61						
KRUC				*e*Sg	Sn	01 18 19.1	-0.1
	8.1nm,0.3s,baz=61						
MODS	Modra-Piesok	1.65	211	*e*PG	Pn	01 17 59.1	+0.2
MODS				*e*SG	Sn	01 18 20.8	0.0
OSTC	Ostas	1.68	298	*e*PG	Pn	01 17 59.1	-0.3
OSTC				*e*SG	Sg	01 18 22.8	+0.1
	comp=Z,15nm,0.9s						
UPC	Upice	1.78	295	*e*PG	Pn	01 18 00.8	0.0
UPC				*e*SG	Sb	01 18 24.6	-0.5
STHS	Stebnicka Huta	1.80	101	*e*PN	Pb	01 18 02.3	-0.2
STHS				*e*SN	Sg	01 18 27.9	+1.5
STHS				*e*LG	Lg	01 18 31.7	
TREC	Trest	2.05	257	*e*SG	Sb	01 18 33.5	+0.6
CONA	Conrad Observa	2.57	225	*e*Pn	Pn	01 18 10.7	-1.0
	0.8nm,0.2s						
CONA				*e*Sn	Sn	01 18 44.1	+0.4
	1.3nm,0.3s						
PRU	Pruhonice	2.59	276	*e*SG	Sg	01 18 52.2	+0.1
	comp=Z,2.8nm,0.5s						
CKRC	Cesky Krumlov	2.94	252	*e*PG	Pb	01 18 22.5	+0.6
CKRC				*e*SG	Sg	01 19 01.0	-2.0
	comp=Z,3.2nm,0.5s						
BRG	Berggiesshubel	3.14	292	Pg	Pb	01 18 25.7	+0.3
BRG				Sg	Sb	01 19 06.4	+2.1
BRG				Amp		01 19 12.5	
	comp=Z,1.8nm,0.5s						
KHC	Kasperske Hory	3.31	260	*e*PN	Pn	01 18 22.7	+0.9
KHC				*e*PG	Pb	01 18 29.3	+1.0
KHC				*e*SG	Sg	01 19 13.3	-1.6
	comp=Z,2.2nm,0.4s						

IDC 11 01:18:09.1±10.0, 23°.33S×177°.12W, h176^{km}±84^{km}, mb3.5/3, mbtmp4.1/5, Error ellipse: s-maj=71.3km s-min=51.2km az=41.0

ISC 11 01:18:11.8±2.3, **23°.7S**±0°.1×**177°.2W**±0°.3, **h200**^{km}, **n6**, σ**2^{s}.20**/9, **mb3.7**/3, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	15.19	273	P	P	01 21 36.2	-0.7
	6.5nm,1.1s,baz=109,slow=18,SNR=2.9						
URZ	Urewera	15.30	197	P	Pn	01 21 40.1	+2.6
	2.8nm,0.3s,baz=45,slow=1.4,SNR=0.9						
URZ				S	S	01 24 23.8	-3.5
	24nm,1.0s,baz=28,slow=15,SNR=2.5						
STKA	Stephens Creek	37.20	248	P	P	01 25 05.0	+1.1
	0.8nm,0.4s,baz=78,slow=11,SNR=3.9						
	0.8nm,0.4s						
ASAR	Alice Springs	44.62	260	P	P	01 26 05.2	+0.5
	0.8nm,0.6s,baz=96,slow=6.3,SNR=8.0						
ASAR				PcP	PcP	01 27 44.6	+0.7
	0.3nm,0.5s,baz=98,slow=3.8,SNR=2.5						
	0.8nm,0.6s						
WRA	Warramunga Arr	45.01	265	P	P	01 26 07.5	-0.2
	2.5nm,0.5s,baz=102,slow=8.2,SNR=36						
WRA				PcP	PcP	01 27 45.6	+0.4
	1.0nm,1.3s,baz=104,slow=3.2,SNR=1.6						
	2.5nm,0.5s						
AKASG	Malin Array Be	146.18	329	PKPbc	PKPab	01 37 26.5	-2.7
	0.3nm,0.4s,baz=33,slow=3.5,SNR=1.7						

IDC 11 01:32:58.4±6.8, **6°.38S**×**147°.64E**, **h136**^{km}±74^{km}, **mb2.9**/2, **mbtmp3.4**/4, **Error ellipse: s-maj=131.4km s-min=33.9km az=132.0**, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.04	189	P	Pn	01 33 45.8	+0.1
	29nm,0.3s,baz=18,slow=9.6,SNR=8.9						
PMG				S	Sn	01 34 23.0	+0.7
	27nm,0.3s,baz=298,slow=12,SNR=3.8						
WRA	Warramunga Arr	18.67	223	P	P	01 37 05.5	-0.6
	0.5nm,0.6s,baz=41,slow=12,SNR=16						
ASAR	Alice Springs	21.67	216	P	P	01 37 38.5	0.0
	0.4nm,0.4s,baz=52,slow=8.9,SNR=16						
	0.4nm,0.4s						
ILAR	Eielson Array	85.58	23	P	P	01 45 21.0	-0.1
	0.2nm,0.8s,baz=250,slow=6.4,SNR=2.0						
	0.2nm,0.8s						
TORD	Torodi Ar. Bea	145.80	284	PKPbc	PKPdf	01 52 22.3	+0.3
	0.5nm,0.8s,baz=65,slow=3.5,SNR=4.1						

IDC 11 01:36:25.6±0.7, 4°.56S×138°.43E, h0^{km}, mb4.1/10, mbtmp4.2/13, ML2.5/1, MS3.4/30, Error ellipse: s-maj=30.5km s-min=16.3km az=68.0

NEIC 11 01:36:31.1±2.2, 4°.73S±0°.09×138°.28E±0°.09, h43^{km}±9^{km}, mb4.4/29, Error ellipse: s-maj=14.6km s-min=11.4km az=221.0

ISC 11 01:36:29.9±0.4, **4°.81S**±0°.05×**138°.25E**±0°.07, **h35**^{km}, **n78**, σ**1^{s}.45**/65, **mb4.3**/21, **MS3.3**/22, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	6.27	287	Pn	Pn	01 38 01.3	+1.2
SAUI	Saumlaki	7.59	245	Pn	Pn	01 38 19.3	+1.2
SIJI	Sorong	8.00	299	Pn	Pn	01 38 24.1	+0.3
	7.1nm,0.3s,baz=204,slow=19,SNR=3.2						
SIJI				LR	LR	01 42 34.6	
	comp=Z,248nm,19.9s,baz=142,slow=46						
PMG	Port Moresby	9.95	118	Pn	Pn	01 38 50.9	+0.4
	1.9nm,0.3s,baz=337,slow=8.3,SNR=8.1						
PMG				Sn	Sn	01 40 38.0	-3.1
	1.5nm,0.3s,baz=192,slow=20,SNR=1.3						
PMG				LR	LR	01 44 30.9	
	comp=Z,288nm,19.5s,baz=334,slow=49						
	19nm,0.6s						
PMG	Port Moresby	9.95	118		Pn	01 38 51.4	+0.9

COEN	**Coen**	**10.30**	**152**		**Pn**	**01 38 56.4**	**+1.0**
MTN	**Manton Dam**	**10.63**	**221**		**Pn**	**01 39 00.7**	**+0.8**
KNRA	**Kununurra**	**14.27**	**220**		**Pn**	**01 39 50.0**	**+0.5**
SOEI	**Soe**	**14.71**	**250**		**Pn**	**01 39 54.2**	**-1.6**
WB0	**Warramunga Arr**	**15.33**	**194**		**Pn**	**01 40 04.4**	**+0.5**
WB0				IAmb	IAmb	01 40 14.3	
	comp=Z,29nm,1.0s						
WRAB	**Tennant Creek**	**15.50**	**194**	Pn	**Pn**	**01 40 04.9**	**-1.2**
WB2	**Warramunga Arr**	**15.51**	**194**		**Pn**	**01 40 05.8**	**-0.4**
WB2				IAmb	IAmb	01 40 22.2	
	comp=Z,32nm,0.8s						
WRA	**Warramunga Arr**	**15.52**	**194**	Pn	**Pn**	**01 40 04.9**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=19,slow=13,SNR=21						
WRA				Sn	**Sn**	**01 42 51.5**	**-5.6**
	comp=Z,0.6nm,0.3s,baz=14,slow=22,SNR=5.9						
WRA				LR	LR	01 47 23.3	
	comp=Z,152nm,20.7s,baz=26,slow=42						
WRA	**Warramunga Arr**	**15.52**	**194**		**Pn**	**01 40 06.2**	**-0.1**
CTA	**Charters Tower**	**17.07**	**154**	P	**P**	**01 40 30.6**	**+3.2**
	comp=Z,16nm,0.7s,baz=332,slow=9.5,SNR=18						
CTA				S	**Sn**	**01 43 34.6**	**-0.3**
	comp=Z,1.4nm,0.4s,baz=54,slow=19,SNR=1.7						
CTA				LR	LR	01 46 55.8	
	comp=Z,158nm,19.8s,baz=322,slow=37						
CTAO	**Charters Tower**	**17.07**	**154**		**P**	**01 40 27.8**	**+0.4**
CTAO				IAmb	IAmb	01 40 35.0	
	comp=Z,16nm,0.8s						
DAV	**Davao City (W)**	**17.30**	**313**	LR	LR	01 48 34.2	
	comp=Z,52nm,18.5s,baz=142,slow=42						
FITZ	**Fitzroy Crossi**	**18.07**	**222**	P	**P**	**01 40 37.8**	**-0.7**
KAPI	**Kappang**	**18.43**	**269**	LR	LR	01 48 55.6	
	comp=Z,50nm,19.7s,baz=104,slow=40						
AS31	**Alice Springs**	**19.21**	**192**	P	**P**	**01 40 53.0**	**+2.0**
AS31				IAmb	IAmb	01 40 56.8	
	comp=Z,12nm,0.6s						
ASAR	**Alice Springs**	**19.21**	**192**	P	**Pn**	**01 40 54.2**	**+2.0**
	comp=Z,41nm,0.9s,baz=21,slow=9.5,SNR=196						
ASAR				S	**S**	**01 44 23.7**	**-3.2**
	comp=Z,3.4nm,0.7s,baz=14,slow=29,SNR=4.6						
ASAR				LR	LR	01 48 03.3	
	comp=Z,136nm,21.6s,baz=20,slow=36						
ASAR	**Alice Springs**	**19.21**	**192**	P	**P**	**01 40 52.5**	**+1.4**
GUMO	**Guam**	**19.43**	**20**	LR	LR	01 48 20.1	
	comp=Z,59nm,18.1s,baz=172,slow=37						
HNR	**Honiara**	**22.01**	**103**	LR	LR	01 50 19.6	
	comp=Z,750nm,18.7s,baz=288,slow=38						
EIDS	**Eidsvold**	**23.86**	**150**	P	**P**	**01 41 41.1**	**+0.9**
EIDS				IAmb	IAmb	01 41 57.2	
	comp=Z,6.9nm,0.9s						
MBWA	**Marble Bar**	**24.23**	**226**	P	**P**	**01 41 43.2**	**-0.5**
PSA00	**Pilbara Seismi**	**24.41**	**225**	P	**P**	**01 41 45.1**	**-0.3**
STKA	**Stephens Creek**	**27.11**	**174**	P	**P**	**01 42 13.2**	**+3.6**
	comp=Z,1.5nm,0.4s,baz=348,slow=8.0,SNR=7.4						
STKA				LR	LR	01 53 14.9	
	comp=Z,132nm,18.5s,baz=13,slow=37						
	comp=Z,1.5nm,0.4s						
STKA	**Stephens Creek**	**27.11**	**174**	P	**P**	**01 42 11.2**	**+1.6**
MORW	**Morawa**	**32.01**	**219**	P	**P**	**01 42 54.4**	**+1.1**
JOW	**Kunigami**	**32.90**	**343**	LR	LR	01 55 08.6	
	comp=Z,60nm,19.4s,baz=168,slow=34						
JHJ	**Hachijo jima 2**	**37.75**	**2**	LR	LR	01 56 01.8	
	comp=Z,32nm,21.3s,baz=196,slow=31						
JNU	**Nakatsue**	**38.37**	**350**	LR	LR	01 59 16.2	
	comp=Z,28nm,18.7s,baz=142,slow=36						
MJAR	**Matsushiro Arr**	**41.14**	**360**	P	**P**	**01 44 11.9**	**+1.1**
	comp=Z,2.4nm,0.9s,baz=140,slow=9.4,SNR=3.0						
MJAR				LR	LR	01 58 45.4	
	comp=Z,25nm,19.3s,baz=162,slow=33						
KSRS	**Korea Array**	**43.13**	**348**	P	**P**	**01 44 25.9**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=177,slow=10,SNR=2.3						
KSRS				LR	LR	02 02 05.1	
	comp=Z,23nm,20.0s,baz=155,slow=36						
	comp=Z,0.8nm,0.6s						
CRAI	**Chiangrai**	**44.76**	**305**	P	**P**	**01 44 40.4**	**0.0**
CMAR	**Chiang Mai Arr**	**45.11**	**302**	P	**P**	**01 44 44.7**	**+1.4**
	comp=Z,0.7nm,0.3s,baz=121,slow=6.4,SNR=6.2						
CMAR				LR	LR	02 05 31.5	
	comp=Z,8.3nm,18.5s,baz=145,slow=39						
	comp=Z,0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**45.11**	**302**	P	**P**	**01 44 43.3**	**0.0**
RPZ	**Rata Peaks**	**48.34**	**148**	P	**P**	**01 45 09.8**	**+1.6**
	comp=Z,11nm,1.0s,baz=333,slow=6.8,SNR=2.6						
RPZ				LR	LR	02 05 56.2	
	comp=Z,58nm,18.1s,baz=284,slow=36						
	comp=Z,11nm,1.0s						
URZ	**Urewera**	**48.53**	**139**	LR	LR	02 05 01.8	
	comp=Z,74nm,20.1s,baz=25,slow=35						
ASAJ	**Asahikawa**	**48.86**	**4**	LR	LR	02 04 50.0	
	comp=Z,26nm,21.7s,baz=154,slow=35						
BJT	**Baijiatuau**	**49.02**	**338**	P	**P**	**01 45 12.9**	**-0.5**
BJT				IAmb	IAmb	01 45 24.4	
	comp=Z,4.3nm,0.7s						
MDJ	**Mudanjiang**	**49.81**	**352**	P	**P**	**01 45 18.7**	**-0.7**
KLR	**Kul'dur**	**54.12**	**355**	P	**P**	**01 45 50.9**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=155,slow=8.3,SNR=5.2						
KLR				LR	LR	02 07 57.0	
	comp=Z,17nm,18.9s,baz=190,slow=35						
	comp=Z,1.0nm,0.6s						
SHL	**Shillong**	**54.17**	**306**	P	**P**	**01 45 52.1**	**-0.3**
LSA	**Lhasa**	**56.69**	**310**	P	**P**	**01 46 10.5**	**-0.3**
LSA				IAmb	IAmb	01 46 13.3	
	comp=Z,3.6nm,0.6s						
PALK	**Pallekele**	**58.66**	**281**	LR	LR	02 15 47.7	
	comp=Z,24nm,18.5s,baz=265,slow=40						
ULN	**Ulaanbaatar**	**59.18**	**336**	P	**P**	**01 46 27.2**	**-0.3**
ULN				IAmb	IAmb	01 46 41.9	
	comp=Z,4.5nm,1.4s						
SONM	**Songino Array**	**59.42**	**336**	P	**P**	**01 46 29.5**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=160,slow=10,SNR=4.7						
SONM				LR	LR	02 12 25.8	
	comp=Z,32nm,20.4s,baz=348,slow=36						
	comp=Z,0.6nm,0.9s						
SONM	**Songino Array**	**59.42**	**336**	P	**P**	**01 46 28.6**	**-0.6**
SONM				IAmb	IAmb	01 46 37.0	
	comp=Z,2.7nm,1.4s						
PETK	**Petropavlovsk-**	**60.00**	**13**	P	**P**	**01 46 33.1**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=211,slow=8.1,SNR=2.6						
PETK				LR	LR	02 08 36.5	
	comp=Z,23nm,21.9s,baz=207,slow=32						
	comp=Z,2.0nm,0.8s						
SHEM	**Shemya Is, Ala**	**64.84**	**23**	LR	LR	02 13 51.3	
	comp=Z,17nm,20.6s,baz=237,slow=35						
MA2	**Magadan**	**64.95**	**7**	LR	LR	02 13 23.3	
	comp=Z,8.8nm,21.8s,baz=260,slow=34						
MK31	**Makanchi Array**	**71.17**	**323**	P	**P**	**01 47 45.3**	**+0.1**
MK31				IAmb	IAmb	01 47 52.1	
	comp=Z,3.7nm,1.2s						
MKAR	**Makanchi Array**	**71.17**	**323**	P	**P**	**01 47 45.7**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=119,slow=6.9,SNR=12						
	comp=Z,0.7nm,0.5s						
MKAR	**Makanchi Array**	**71.17**	**323**	P	**P**	**01 47 45.4**	**+0.1**
MAKZ	**Makanchi**	**71.36**	**323**	P	**P**	**01 47 47.1**	**+0.7**
MAKZ				IAmb	IAmb	01 47 48.0	
	comp=Z,5.3nm,1.3s						
NIL	**Nilore**	**72.22**	**307**	P	**P**	**01 47 52.1**	**+0.3**
NIL				IAmb	IAmb	01 48 00.6	
	comp=Z,5.4nm,0.8s						
VNDA	**Vanda**	**73.74**	**175**	LR	LR	02 20 38.2	
	comp=Z,104nm,18.5s,baz=311,slow=36						
AAK	**Ala-Archa**	**74.40**	**317**	LR	LR	02 25 29.7	
	comp=Z,14nm,18.0s,baz=101,slow=40						
KURK	**Kurchatov**	**75.17**	**325**	P	**P**	**01 48 08.7**	**0.0**
KURK				IAmb	IAmb	01 48 31.7	
	comp=Z,3.7nm,1.1s						
KBL	**Kabul**	**75.82**	**307**	P	**P**	**01 48 12.2**	**-0.9**
KBL				IAmb	IAmb	01 48 14.1	
	comp=Z,2.8nm,0.7s						
KK31	**Karatay Array**	**77.30**	**316**	P	**P**	**01 48 19.8**	**-1.3**
KKAR	**Karatay Array**	**77.30**	**316**	P	**P**	**01 48 20.1**	**-1.0**
BRVK	**Borovoye**	**80.84**	**325**	P	**P**	**01 48 37.3**	**-2.9**
BRVK				IAmb	IAmb	01 48 50.9	
	comp=Z,3.7nm,0.9s						
NRIK	**Noril'sk**	**81.60**	**344**	P	**P**	**01 48 44.1**	**+0.3**
	comp=Z,1.6nm,0.3s,baz=132,slow=8.3,SNR=5.1						
	comp=Z,1.6nm,0.3s						
NRIK	**Noril'sk**	**81.60**	**344**	P	**P**	**01 48 42.9**	**-0.9**
KDAK	**Kodiak Island**	**83.14**	**30**	LR	LR	02 21 46.6	
	comp=Z,18nm,20.6s,baz=247,slow=33						
QSPA	**South Pole Qui**	**85.15**	**180**	LR	LR	02 27 12.8	
	comp=Z,92nm,19.1s,baz=334,slow=36						
IMAR	**Indian Mountai**	**85.60**	**22**	P	**P**	**01 49 03.3**	**-1.1**
ABKAR	**Akbulak array**	**86.02**	**320**	P	**P**	**01 49 05.5**	**-1.3**
COLD	**Coldfoot**	**87.36**	**22**	P	**P**	**01 49 13.6**	**+0.5**
ILAR	**Eielson Array**	**87.92**	**24**	P	**P**	**01 49 14.6**	**-1.2**
	comp=Z,2.7nm,1.0s,baz=269,slow=4.5,SNR=15						
	comp=Z,2.7nm,1.0s						
ILAR	**Eielson Array**	**87.92**	**24**	P	**P**	**01 49 14.7**	**-1.1**
BCAR	**Beaver Creek A**	**89.72**	**27**	P	**P**	**01 49 25.0**	**+0.7**
YBH	**Yreka Blue Hor**	**99.93**	**49**	LR	LR	02 26 49.7	
	comp=Z,30nm,20.4s,baz=315,slow=30						
TORD	**Torodi Ar. Bea**	**136.35**	**284**	PKP	**PKPdf**	**01 55 48.2**	**-0.9**
	comp=Z,0.4nm,0.9s,baz=87,slow=2.2,SNR=2.4						
LPAZ	**La Paz**	**146.53**	**129**	PKPbc	**PKPbc**	**01 56 09.2**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=251,slow=1.2,SNR=6.3						

IDC 11 01:41:47.0±7.3, 17°.95S×179°.11W, h551^{km}±22^{km}, mb2.9/2, mbtmp3.8/3, Error ellipse: s-maj=297.9km s-min=45.2km az=146.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.71**	**274**	P	P	01 43 00.5	0.0
	35nm,0.6s,baz=110,slow=4.8,SNR=23						
WRA	**Warramunga Arr**	**43.97**	**260**	P	P	01 49 05.3	-0.7
	0.5nm,0.7s,baz=83,slow=6.9,SNR=1.1						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**44.13**	**254**	P	P	01 49 07.5	+0.3
	2.0nm,0.6s,baz=92,slow=7.6,SNR=5.2						
	2.0nm,0.6s						
GERES	**GERESS Array B**	**147.48**	**344**	PKPbc	PKPbc	02 00 28.7	-0.7
	0.1nm,0.3s,baz=12,slow=5.0,SNR=2.0						

HVO **11** *02:19:58.1±1.3, 19°.04N±0°.03×155°.37W±0°.03, h31^{km}±7^{km}, ML2.8/9, ML2.8/52(NEIC), Error ellipse: s-maj=5.6km s-min=3.2km az=214.0*

NEIC 11 02:19:55.9±0.9, 19°.03N±0°.04×155°.39W±0°.01, h42^{km}±3^{km}, Error ellipse: s-maj=5.9km s-min=1.8km az=173.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HPO	**Honuapo**	**0.17**	**292**		Pn	02 20 03.5	+0.4
HPO					Sn	02 20 06.3	-1.9
HTC	**Hot Caves**	**0.21**	**358**		Pn	02 20 04.0	+0.4
HLP	**Hilina Pali**	**0.28**	**16**		Pn	02 20 04.7	+0.4
HLP					Sn	02 20 09.4	-0.7
HLP	**Hilina Pali**	**0.28**	**16**	IAML		02 20 11.3	
	comp=N,1µm,0.3s						
HLP				IAML		02 20 11.3	
	comp=E,1µm,0.3s						
KHU	**Kahuku**	**0.31**	**316**		Pn	02 20 04.9	+0.3
KHU					Sn	02 20 09.9	-0.8
KHU	**Kahuku**	**0.31**	**316**	IAML		02 20 10.2	
	comp=N,2µm,0.3s						
KHU				IAML		02 20 10.3	
	comp=E,2µm,0.4s						
AIN	**Ainahou**	**0.35**	**349**		Pn	02 20 05.6	+0.5
AIN					Sn	02 20 10.9	-0.6
SDHHI	**Sand Hill**	**0.37**	**14**		Pn	02 20 05.4	+0.1
SDHHI	**Sand Hill**	**0.37**	**14**		Sn	02 20 10.6	-1.3
PUH	**Pauahi**	**0.38**	**25**		Pn	02 20 05.4	0.0
PUH	**Pauahi**	**0.38**	**25**		Sn	02 20 10.5	-1.6
RIM	**Rim**	**0.38**	**17**		Pn	02 20 05.4	0.0
RIM				IAML		02 20 17.5	
	comp=E,1µm,1.5s						
RIM	**Rim**	**0.38**	**17**		Sn	02 20 10.7	-1.4
RIM	**Rim**	**0.38**	**17**	IAML		02 20 09.6	
	comp=N,2µm,1.8s						
KKO	**Keanakako`i**	**0.39**	**18**		Sn	02 20 10.8	-1.4
KKO	**Keanakako`i**	**0.39**	**18**		Pn	02 20 05.6	+0.1
KKO	**Keanakako`i**	**0.39**	**18**	IAML		02 20 09.7	
	comp=E,1µm,1.6s						
KKO				IAML		02 20 10.7	
	comp=N,2µm,1.7s						
WRMHI	**West Rim**	**0.39**	**13**		Pn	02 20 05.5	0.0
WRMHI					Sn	02 20 10.9	-1.3
NPH	**North Pit**	**0.40**	**15**		Pn	02 20 05.5	-0.1
NPH	**North Pit**	**0.40**	**15**	IAML		02 20 09.6	
	comp=E,591nm,2.2s						
NPH				IAML		02 20 10.6	
	comp=N,724nm,1.6s						
OBL	**Observatory Le**	**0.40**	**14**		Pn	02 20 05.6	-0.1
OBL	**Observatory Le**	**0.40**	**14**	IAML		02 20 13.0	
	comp=N,2µm,0.6s						
OBL				IAML		02 20 13.5	
	comp=E,2µm,0.6s						
BYL	**Byron's Ledge**	**0.40**	**18**		Pn	02 20 05.6	0.0
BYL	**Byron's Ledge**	**0.40**	**18**	IAML		02 20 15.8	
	comp=E,982nm,1.8s						
BYL				IAML		02 20 19.2	
	comp=N,830nm,1.0s						
UWE	**Uwekahuna**	**0.40**	**13**		Pn	02 20 05.7	0.0
UWE					Sn	02 20 11.2	-1.4
KNHH	**Kane Nui o Ham**	**0.41**	**31**		Pn	02 20 05.7	0.0
UWB	**Uwekahuna B**	**0.41**	**15**		Pn	02 20 05.7	-0.1
UWB	**Uwekahuna B**	**0.41**	**15**	IAML		02 20 10.0	
	comp=N,631nm,1.7s						
UWB				IAML		02 20 11.1	
	comp=E,480nm,1.6s						
HATHI	**Halema‘uma‘u T**	**0.41**	**17**		Sn	02 20 11.3	-1.4
HATHI	**Halema‘uma‘u T**	**0.41**	**17**		Pn	02 20 05.8	0.0
HATHI	**Halema‘uma‘u T**	**0.41**	**17**	IAML		02 20 10.3	
	comp=N,962nm,1.6s						
HATHI				IAML		02 20 11.0	
	comp=E,1µm,1.6s						
SBLHI	**Steaming Bluff**	**0.42**	**16**	IAML		02 20 09.5	
	comp=E,798nm,1.3s						
SBLHI				IAML		02 20 10.2	
	comp=N,884nm,1.7s						
SBLHI	**Steaming Bluff**	**0.42**	**16**		Pn	02 20 05.7	-0.2
SBLHI	**Steaming Bluff**	**0.42**	**16**		Sn	02 20 11.0	-1.7
STCH	**Steam Cracks**	**0.44**	**35**	IAML		02 20 12.5	
	comp=N,800nm,0.5s						
STCH				IAML		02 20 13.1	
	comp=E,622nm,0.1s						
STCH	**Steam Cracks**	**0.44**	**35**		Pn	02 20 06.0	0.0
STCH					Sn	02 20 12.0	-1.1
RSD	**Rainshed**	**0.45**	**14**		Pn	02 20 06.0	-0.2
RSD					Sn	02 20 11.7	-1.8
RSD	**Rainshed**	**0.45**	**14**	IAML		02 20 12.8	
	comp=E,590nm,2.2s						
RSD				IAML		02 20 25.2	
	comp=N,544nm,4.2s						
JCUZ	**Jacuzzi**	**0.45**	**37**		Pn	02 20 06.3	+0.1
JCUZ					Sn	02 20 12.1	-1.4
JCUZ	**Jacuzzi**	**0.45**	**37**	IAML		02 20 12.4	
	comp=E,395nm,0.2s						
JCUZ				IAML		02 20 14.0	
	comp=N,479nm,0.9s						
NPOC	**North of Pu‘u**	**0.45**	**36**		Pn	02 20 06.2	0.0
NPOC	**North of Pu‘u**	**0.45**	**36**	IAML		02 20 12.3	
	comp=E,416nm,0.3s						
NPOC				IAML		02 20 12.4	
	comp=N,659nm,0.4s						
MLH	**Mauna Loa**	**0.47**	**0**		Pn	02 20 06.8	+0.2
MLH	**Mauna Loa**	**0.47**	**0**	IAML		02 20 14.7	
	comp=E,418nm,0.1s						
MLH				IAML		02 20 16.7	
	comp=N,599nm,0.1s						
MWH	**Moku‘aweowe**	**0.50**	**337**		Pn	02 20 07.2	-0.1
MWH	**Moku‘aweowe**	**0.50**	**337**	IAML		02 20 13.6	
	comp=E,302nm,1.4s						
MWH				IAML		02 20 13.8	
	comp=N,308nm,2.1s						
MLOA	**Mauna Loa Obse**	**0.54**	**341**		Pn	02 20 07.7	0.0
MLOA	**Mauna Loa Obse**	**0.54**	**341**		Sn	02 20 14.3	-1.6
MLOA	**Mauna Loa Obse**	**0.54**	**341**	IAML		02 20 14.1	
	comp=N,268nm,0.9s						
JOKA	**Jonika Flow**	**0.55**	**42**		Pn	02 20 07.3	-0.1
JOKA					Pn	02 20 10.2	+2.8
JOKA					Sn	02 20 14.2	-1.4
ALEP	**Alea Permanent**	**0.57**	**335**		Pn	02 20 07.9	-0.1
ALEP					Sn	02 20 15.6	-0.9
HMH	**Humu‘ula Sheep**	**0.58**	**351**		Pn	02 20 08.6	+0.4
HMH	**Humu‘ula Sheep**	**0.58**	**351**		Sn	02 20 15.7	-1.0
HMH	**Humu‘ula Sheep**	**0.58**	**351**	IAML		02 20 16.3	
	comp=N,861nm,0.2s						
HMH				IAML		02 20 16.7	
	comp=E,698nm,0.1s						
CPH	**Captain Cook**	**0.68**	**313**		Pn	02 20 09.2	+0.1
KHLU	**Kahalu`u**	**0.74**	**320**		Pn	02 20 10.1	+0.1
KHLU	**Kahalu`u**	**0.74**	**320**	IAML		02 20 15.6	
	comp=E,230nm,4.0s						
KHLU				IAML		02 20 28.9	
	comp=N,217nm,1.4s						
POHA	**Pohakuloa**	**0.74**	**350**		Pn	02 20 10.8	+0.6
POHA				IAML		02 20 25.1	
	comp=N,388nm,0.2s						
POHA				IAML		02 20 25.3	
	comp=N,335nm,0.2s						
HUH	**Hualalai**	**0.78**	**327**		Pn	02 20 11.2	+0.4
HUH				IAML		02 20 27.9	
	comp=N,401nm,1.6s						
HUH				IAML		02 20 37.0	
	comp=E,256nm,0.5s						
HPAH	**Hawaii Prepara**	**1.04**	**344**	IAML		02 20 26.2	
	comp=N,303nm,0.1s						
HPAH				IAML		02 20 26.3	
	comp=E,289nm,0.2s						
HPAH	**Hawaii Prepara**	**1.04**	**344**		Pn	02 20 14.0	-0.1
HPAH					Sn	02 20 25.7	-1.8

ROM 11 02:29:24.9±0.1, 42°.900N±0°.003×12°.859E±0°.005, h10^{km}, ML1.0/7, 2C-1D, Error ellipse: s-maj=0.3km s-min=0.3km az=114.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1215	**Vallo di Nera,**	**0.10**	**176**	P	Pg	02 29 28.0	+0.6
T1215				S	Sg	02 29 30.0	+0.7
T1215				AML	AML		
	comp=E,201µm,0.1s						
T1215				AML	AML		
	comp=N,112µm,0.5s						
T1215				AML	AML		
	comp=N,113µm,0.5s						
T1215				AML	AML		
	comp=E,207µm,0.1s						
T1215				AML	AML		
	comp=N,113µm,0.5s						
T1215				AML	AML		
	comp=N,101µm,0.5s						
T1216	**Preci, Frazion**	**0.12**	**94**	P	Pg	02 29 28.2	+0.5
T1216				S	Sg	02 29 30.4	+0.6
T1216				AML	AML		
	comp=N,99µm,2.1s						
T1216				AML	AML		
	comp=E,104µm,0.5s						
T1219	**Muccia, Frazio**	**0.19**	**35**	⇑P	Pg	02 29 29.6	+0.6
T1219				S	Sg	02 29 32.9	+1.2
T1219				AML	AML		
	comp=E,38µm,2.1s						
T1219				AML	AML		
	comp=N,81µm,1.9s						
T1219				AML	AML		
	comp=N,33µm,1.7s						
T1219				AML	AML		
	comp=E,90µm,1.4s						
T1217	**Poggiodomo (PG**	**0.20**	**164**	P	Pg	02 29 29.8	+0.8
T1217				S	Sg	02 29 33.0	+1.1
T1217				AML	AML		
	comp=E,97µm,0.9s						
T1217				AML	AML		
	comp=N,51µm,0.6s						
T1217				AML	AML		
	comp=N,120µm,4.0s						
T1217				AML	AML		
	comp=E,61µm,2.2s						
T1212	**Cascia, Frazio**	**0.20**	**137**	⇑P	Pg	02 29 29.7	+0.6
T1212				S	Sg	02 29 33.1	+1.1
T1212				AML	AML		
	comp=N,34µm,2.2s						
T1212				AML	AML		
	comp=E,71µm,1.6s						
T1212				AML	AML		
	comp=N,75µm,1.0s						
ASSB	**Assisi San Ben**	**0.20**	**314**	⇓P	Pg	02 29 30.0	+0.8
ASSB				S	Sg	02 29 33.4	+1.3
ASSB				AML	AML		
	comp=N,40µm,2.7s						
ASSB				AML	AML		
	comp=E,49µm,3.2s						
T1220	**Camerino, Fraz**	**0.27**	**39**	P	Pg	02 29 31.0	+0.6
T1220				S	Sb	02 29 35.6	-1.0
T1220				AML	AML		
	comp=N,100µm,2.1s						
CSP1	**Cessapalombo**	**0.32**	**53**	P	Pb	02 29 32.1	-0.7
CSP1				S	Sb	02 29 37.6	-0.5
ARRO	**Arrone**	**0.33**	**192**	P	Pg	02 29 32.1	+0.7
SNTG	**Esanatoglia**	**0.36**	**10**	P	Pg	02 29 32.4	+0.3
PIEI	**Pieia**	**0.68**	**340**	AML	AML		
	comp=N,70µm,1.0s						
PIEI				AML	AML		
	comp=E,110µm,1.0s						

ROM 11 02:30:01.7±0.0, 43°.390N±0°.003×12°.616E±0°.004, h10^{km}, ML1.2/15, 3C, Error ellipse: s-maj=0.3km s-min=0.3km az=239.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATFO	**Monte Foce - G**	**0.04**	**235**	P	Pg	02 30 04.2	+0.4
ATFO				S	Sg	02 30 05.8	+0.5
ATFO				AML	AML		
	comp=N,524µm,0.1s						
ATFO				AML	AML		
	comp=E,702µm,0.1s						
ATFO				AML	AML		
	comp=E,702µm,0.1s						
ATFO				AML	AML		
	comp=N,525µm,0.1s						
SSFR	**Montelago di S**	**0.13**	**69**	P	Pg	02 30 05.3	+0.5
SSFR				S	Sg	02 30 08.0	+0.9
FOSV	**Fossato di Vic**	**0.14**	**132**	P	Pg	02 30 05.5	+0.5
FOSV				S	Sg	02 30 08.3	+1.0
FOSV				AML	AML		
	comp=E,57µm,0.1s						
FOSV				AML	AML		
	comp=N,53µm,0.1s						
MURB	**Monte Urbino**	**0.14**	**208**	P	Pg	02 30 05.7	+0.6
MURB				S	Sg	02 30 08.6	+1.2
MURB				AML	AML		
	comp=E,386µm,0.3s						
MURB				AML	AML		
	comp=N,440µm,0.2s						
MURB				AML	AML		
	comp=E,313µm,0.3s						
MURB				AML	AML		
	comp=E,386µm,0.3s						
MURB				AML	AML		
	comp=N,440µm,0.2s						
MURB				AML	AML		
	comp=N,395µm,0.2s						
FRON	**Frontone**	**0.15**	**32**	⇑P	Pg	02 30 05.6	+0.4
FRON				S	Sg	02 30 08.5	+0.9
FRON				AML	AML		
	comp=N,90µm,0.1s						
FRON				AML	AML		
	comp=E,57µm,0.1s						
ATVO	**AVT- Monte Val**	**0.15**	**267**	⇑P	Pg	02 30 05.6	+0.4
ATVO				S	Sg	02 30 08.2	+0.6
ATVO				AML	AML		
	comp=E,78µm,0.3s						
ATVO				AML	AML		
	comp=N,56µm,0.1s						
PIEI	**Pieia**	**0.16**	**338**	P	Pg	02 30 05.6	+0.3
PIEI				S	Sg	02 30 08.4	+0.7
PIEI				AML	AML		
	comp=E,110µm,1.0s						
PIEI				AML	AML		
	comp=N,70µm,1.0s						
PIEI				AML	AML		
	comp=N,48µm,0.1s						
PIEI				AML	AML		
	comp=E,99µm,0.1s						
ATPI	**Pietralunga -**	**0.17**	**291**	P	Pg	02 30 05.9	+0.4
ATPI				S	Sg	02 30 09.1	+1.0
ATPI				AML	AML		
	comp=N,38µm,0.1s						
ATPI				AML	AML		
	comp=E,42µm,0.2s						
ATCC	**AVT- Casa Cast**	**0.20**	**175**	P	Pg	02 30 06.8	+0.7
ATCC				S	Sg	02 30 10.6	+1.6
ATCC				AML	AML		
	comp=E,281µm,0.2s						
ATCC				AML	AML		
	comp=E,280µm,0.2s						
ATCC				AML	AML		
	comp=N,224µm,0.2s						
ATCC				AML	AML		
	comp=E,281µm,0.2s						
ATCC				AML	AML		
	comp=N,223µm,0.2s						
APEC	**Apecchio**	**0.22**	**320**	P	Pg	02 30 06.9	+0.5

APEC				S	Sg	02 30 11.2	+1.7
APEC				AML	AML		
	comp=N,29µm,0.2s						
APEC				AML	AML		
	comp=N,754µm,1.0s						
APEC				AML	AML		
	comp=E,35µm,0.2s						
APEC				AML	AML		
	comp=N,754µm,1.0s						
ARVD	**Arcevia**	**0.26**	**65**	P	Pg	02 30 07.5	+0.5
ARVD				S	Sb	02 30 12.1	-1.0
ARVD				AML	AML		
	comp=N,59µm,0.1s						
ARVD				AML	AML		
	comp=E,44µm,0.1s						
SNTG	**Esanatoglia**	**0.27**	**119**	P	Pg	02 30 07.8	+0.5
SNTG				S	Sb	02 30 12.4	-1.0
SNTG				AML	AML		
	comp=E,26µm,0.3s						
SNTG				AML	AML		
	comp=N,35µm,0.2s						
PE3	**Peglio**	**0.32**	**344**	P	Pb	02 30 09.1	-0.4
PE3				S	Sb	02 30 14.5	-0.3
PE3				AML	AML		
	comp=E,106µm,1.3s						
PE3				AML	AML		
	comp=N,1µm,2.9s						
PE3				AML	AML		
	comp=N,1µm,1.1s						
FSSB	**Fossombrone**	**0.33**	**21**	⇑P	Pg	02 30 08.7	+0.4
FSSB				S	Sb	02 30 14.1	-0.9
FSSB				AML	AML		
	comp=E,135µm,0.1s						
FSSB				AML	AML		
	comp=N,111µm,0.1s						
ASSB	**Assisi San Ben**	**0.35**	**175**	P	Pg	02 30 08.8	+0.1
ASSB				S	Sb	02 30 14.6	-1.0
ASSB				AML	AML		
	comp=E,40µm,0.4s						
ASSB				AML	AML		
	comp=E,40µm,1.6s						
ASSB				AML	AML		
	comp=N,48µm,0.1s						
EL6	**Elcito**	**0.36**	**99**	P	Pg	02 30 09.2	+0.3
EL6				S	Sb	02 30 15.3	-0.7
EL6				AML	AML		
	comp=N,108µm,1.1s						
EL6				AML	AML		
	comp=N,108µm,0.9s						
EL6				AML	AML		
	comp=E,79µm,1.6s						

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*IDC **11** 02:35:35.4±1.4, 2°.13S×136°.32E, h0^{km}, mb3.8/4, mbtmp3.9/6, ML3.6/2, MS3.0/5, Error ellipse: s-maj=43.0km s-min=25.3km az=79.0*

*DJA **11** 02:35:37.5±0.3, 2°S±5°×13°6E±°, h10^{km}, M4.2/6, mb4.0/2, MLv4.3/6*

ISC 11 02:35:35.6±2.0**, 2°.14S**±0°.09×**136°.19E**±0°.08**, h8**^{km}±14^{km}**, n17, σ2^{s}.90**/16**, mb3.9**/4**, MS3.0**/3**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**0.28**	**10**	P	**Pg**	**02 35 40.5**	**-0.6**
SRPI				S	**Sg**	**02 35 43.4**	**-1.4**
RKPI	**Ransiki, Papua**	**2.11**	**287**	P	**Pn**	**02 36 12.0**	**+0.8**
SMPI	**Sarmi**	**2.52**	**87**	P	**Pb**	**02 36 19.6**	**-1.6**
GENI	**Genyem**	**4.00**	**96**	P	**Pn**	**02 36 39.3**	**+2.1**
FAKI	**Fak Fak**	**4.01**	**259**	P	**Pn**	**02 36 39.9**	**+2.4**
SIJI	**Sorong**	**5.08**	**284**	Pn	**Pn**	**02 36 53.7**	**+1.5**
	2.4nm,0.3s,baz=51,slow=18,SNR=2.8						
SIJI				Sn	**Sn**	**02 37 46.4**	**-4.8**
	3.5nm,0.3s,baz=136,slow=23,SNR=5.1						
	7.8nm,0.2s						
MSAI	**Masohi**	**7.35**	**260**	P	**Pn**	**02 37 24.7**	**+1.3**
	8.9nm,0.5s,0.1nm						
DAV	**Davao City (W)**	**14.00**	**311**	LR	LR	02 44 27.2	
	comp=Z,25nm,19.9s,baz=339,slow=38						
KAPI	**Kappang**	**16.65**	**260**	LR	LR	02 46 21.2	
	comp=Z,40nm,19.5s,baz=87,slow=38						
WRA	**Warramunga Arr**	**17.78**	**186**	P	**Pn**	**02 39 44.1**	**+0.4**
	0.2nm,0.3s,baz=7.7,slow=13,SNR=11						
WRA				S	Sn	02 42 51.6	-11
	0.9nm,0.7s,baz=9.6,slow=22,SNR=4.7						
	1.1nm,0.6s						
CTA	**Charters Tower**	**20.37**	**152**	LR	LR	02 47 50.8	
	comp=Z,64nm,19.1s,baz=274,slow=36						
ASAR	**Alice Springs**	**21.51**	**186**	P	**P**	**02 40 26.6**	**+1.4**
	1.2nm,0.5s,baz=10,slow=11,SNR=17						
ASAR				S	**S**	**02 44 17.0**	**-7.1**
	0.2nm,0.7s,baz=6.0,slow=28,SNR=1.3						
ASAR				LR	LR	02 49 30.0	
	comp=Z,71nm,18.9s,baz=14,slow=39						
	1.2nm,0.5s						
JNU	**Nakatsue**	**35.43**	**352**	LR	LR	02 56 50.0	
	comp=Z,20nm,18.4s,baz=147,slow=36						
CMAR	**Chiang Mai Arr**	**41.98**	**301**	P	**P**	**02 43 29.0**	**+1.4**
	1.4nm,0.3s,baz=113,slow=7.0,SNR=2.0						
	1.4nm,0.3s						
MKAR	**Makanchi Array**	**67.82**	**323**	P	**P**	**02 46 36.4**	**+2.0**
	0.7nm,0.6s,baz=107,slow=8.5,SNR=7.7						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**86.37**	**25**	P	**P**	**02 48 18.3**	**+0.1**
	0.5nm,0.8s,baz=253,slow=4.0,SNR=5.1						
	0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**133.68**	**286**	PKP	**PKiKP**	**02 54 56.1**	**+0.7**
	0.3nm,0.7s,baz=86,slow=2.5,SNR=1.7						

MIRAS 11 03:12:44.7, 58°.89N×59°.01E, h10^{km}**, ML2.6**/5**, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PR7R	**Sarany**	**0.37**	**201**	*e*P	Pg	03 12 50.7	-1.2
	baz=213						
PR7R				*e*P	Pg	03 12 50.7	-1.2
	baz=213						
PR7R				*e*P	Pg	03 12 50.7	-1.2
	135nm,0.1s,baz=213						
PR7R				*e*S	Sg	03 12 55.3	-1.5
	baz=213						
PR7R				*e*S	Sg	03 12 55.3	-1.5
	baz=213						
PR7R				*e*S	Sg	03 12 55.3	-1.5
	baz=213						
PR7R				*i* AML	AML	03 12 56.5	
	2µm,0.1s,baz=213						
PR7R	**Sarany**	**0.37**	**201**	*e*P	Pg	03 12 50.7	-1.2
	baz=201						
PR7R				*e*P	Pg	03 12 50.7	-1.2
	baz=201						
PR7R				*e*P	Pg	03 12 50.7	-1.2
	135nm,0.1s,baz=201						
PR7R				*e*S	Sg	03 12 55.6	-1.2
	baz=201						
PR7R				*e*S	Sg	03 12 55.6	-1.2
	2µm,0.1s,baz=201						
PR7R				*e*S	Sg	03 12 55.6	-1.2
	1µm,0.1s,baz=201						
PR7R				*i* AML	AML	03 12 56.5	
	2µm,0.1s						
PR0R	**Verkhnechusovs**	**1.20**	**235**	*i* P	Pb	03 13 05.7	-1.8
	4.6nm,0.1s,baz=239						
PR0R				*i* P	Pb	03 13 05.7	-1.8
	baz=239						
PR0R				*i* P	Pb	03 13 05.7	-1.8
	baz=239						
PR0R				S	Sb	03 13 22.3	-0.8
	baz=239						
PR0R				S	Sb	03 13 22.3	-0.8
	baz=239						
PR0R				S	Sb	03 13 22.3	-0.8
	baz=239						
PR0R				*i* AML	AML	03 13 24.9	
	41nm,0.2s,baz=239						
PR0R	**Verkhnechusovs**	**1.20**	**235**	*i* P	Pb	03 13 05.7	-1.8
	4.6nm,0.1s,baz=235						
PR0R				*i* P	Pb	03 13 05.7	-1.8
	baz=235						
PR0R				*i* P	Pb	03 13 05.7	-1.8
	baz=235						
PR0R				*e*S	Sb	03 13 22.2	-0.9
	28nm,0.2s,baz=235						
PR0R				*e*S	Sb	03 13 22.2	-0.9
	baz=235						
PR0R				*e*S	Sb	03 13 22.2	-0.9
	29nm,0.2s,baz=235						
PR0R				*i* AML	AML	03 13 24.9	
	41nm,0.2s						
PR1R	**Pomanovo**	**1.21**	**285**	*e*P	Pn	03 13 07.2	-0.5
	baz=286						
PR1R				*e*P	Pn	03 13 07.2	-0.5
	baz=286						
PR1R				*e*P	Pn	03 13 07.2	-0.5
	baz=286						
PR1R				*e*P	Pn	03 13 07.2	-0.5
	baz=286						
PR1R				*e*P	Pn	03 13 07.2	-0.5
	baz=286						
PR1R				*e*P	Pn	03 13 07.2	-0.5
	baz=286						
PR1R				*e*S	Sn	03 13 24.0	0.0
	baz=286						
PR1R				*e*S	Sn	03 13 24.0	0.0
	baz=286						
PR1R				*e*S	Sn	03 13 24.0	0.0
	baz=286						
PR1R				*e*S	Sg	03 13 24.2	+0.6
	baz=286						
PR1R				*e*S	Sg	03 13 24.2	+0.6
	baz=286						
PR1R				*e*S	Sg	03 13 24.2	+0.6
	baz=286						
PR1R				*i* AML	AML	03 13 24.3	
	360nm,0.2s,baz=286						
PR1R				*i* AML	AML	03 13 24.4	
	53nm,0.2s						
PR1R	**Pomanovo**	**1.21**	**285**	*e*P	Pn	03 13 07.1	-0.6
	baz=285						
PR1R				*e*P	Pn	03 13 07.1	-0.6
	baz=285						
PR1R				*e*P	Pn	03 13 07.1	-0.6
	0.7nm,0.2s,baz=285						
PR1R				*e*S	Sn	03 13 24.0	-0.1
	28nm,0.1s,baz=285						
PR1R				*e*S	Sn	03 13 24.0	-0.1
	baz=285						
PR1R				*e*S	Sn	03 13 24.0	-0.1
	39nm,0.2s,baz=285						
PR1R				*i* AML	AML	03 13 24.3	
	360nm,0.2s						
SVUR	**Severouralsk**	**1.40**	**20**	*e*P	Pn	03 13 08.4	-1.8
	baz=17						
SVUR				*e*P	Pn	03 13 08.4	-1.8
	7.6nm,0.4s,baz=17						
SVUR				*e*P	Pn	03 13 08.4	-1.8
	baz=17						
SVUR				*e*S	Sn	03 13 26.0	-2.8
	baz=17						
SVUR				*e*S	Sn	03 13 26.0	-2.8
	baz=17						
SVUR				*e*S	Sn	03 13 26.0	-2.8
	baz=17						
SVUR				*i* AML	AML	03 13 31.2	
	26nm,0.7s,baz=17						
SVUR	**Severouralsk**	**1.40**	**20**	*e*P	Pn	03 13 08.4	-1.8
	baz=20						
SVUR				*e*P	Pn	03 13 08.4	-1.8
	baz=20						
SVUR				*e*P	Pn	03 13 08.4	-1.8
	7.6nm,0.4s,baz=20						
SVUR				*e*S	Sn	03 13 26.1	-2.7
	21nm,0.3s,baz=20						
SVUR				*e*S	Sn	03 13 26.1	-2.7
	26nm,0.4s,baz=20						
SVUR				*e*S	Sn	03 13 26.1	-2.7
	baz=20						
SVUR				*i* AML	AML	03 13 31.2	
	26nm,0.7s						
PR3R	**Kungur**	**1.80**	**217**	S	Sn	03 13 39.1	+0.5
	baz=219						
PR3R				S	Sn	03 13 39.1	+0.5
	baz=219						
PR3R				S	Sn	03 13 39.1	+0.5
	baz=219						
SVE	**Sverdlovsk**	**2.25**	**157**	S	Sn	03 13 49.8	+0.1
	baz=158						
SVE				S	Sn	03 13 49.8	+0.1
	baz=158						
SVE				S	Sn	03 13 49.8	+0.1
	baz=158						
SVE	**Sverdlovsk**	**2.25**	**157**	*i* S	Sn	03 13 49.7	0.0
	baz=157						
SVE				*i* S	Sn	03 13 49.7	0.0
	baz=157						
SVE				*i* S	Sn	03 13 49.7	0.0
	baz=157						
ARU	**Arti**	**2.48**	**186**	*i* P	Pn	03 13 23.3	-1.9
	baz=187						
ARU				*i* P	Pn	03 13 23.3	-1.9
	baz=187						
ARU				*e*P	Pb	03 13 23.3	-6.1
	6.4nm,0.1s,baz=187						
ARU				*e*S	Sn	03 13 53.1	-2.4
	baz=187						
ARU				*e*S	Sn	03 13 53.1	-2.4
	baz=187						
ARU				*e*S	Sn	03 13 53.1	-2.4
	baz=187						
ARU				*i* AML	AML	03 13 58.0	
	52nm,0.5s,baz=187						
ARU	**Arti**	**2.48**	**186**	*i* P	Pn	03 13 23.3	-1.9
	baz=186						
ARU				*i* P	Pn	03 13 23.3	-1.9
	baz=186						
ARU				*e*P	Pb	03 13 23.3	-6.1
	6.4nm,0.1s,baz=186						
ARU				*e*S	Sn	03 13 53.0	-2.5
	20nm,0.2s,baz=186						
ARU				*e*S	Sn	03 13 53.0	-2.5
	46nm,0.2s,baz=186						
ARU				*e*S	Sn	03 13 53.0	-2.5
	baz=186						
ARU				*i* AML	AML	03 13 58.0	
	62nm,0.6s,baz=186						
KAUR	**Kamensk Uralsk**	**2.81**	**150**	*e*P	Pn	03 13 26.1	-3.5
	13nm,0.4s,baz=151						
KAUR				*e*P	Pn	03 13 26.1	-3.5
	baz=151						
KAUR				*e*P	Pn	03 13 26.1	-3.5
	baz=151						
KAUR				S	Sn	03 13 59.3	-4.2
	32nm,0.3s,baz=151						
KAUR				S	Sn	03 13 59.3	-4.2
	baz=151						
KAUR				S	Sn	03 13 59.3	-4.2
	15nm,0.1s,baz=151						
KAUR				*i* AML	AML	03 14 05.5	
	108nm,0.5s						

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*DJA **11** 03:28:08.9±0.2, 3°S±2°×12°8E±°, h50^{km}±7^{km}, M4.5/13, mB5.0/4, mb4.4/9, MLv4.5/13, Mw(mB)4.3/4*

*IDC **11** 03:28:11.9±2.1, 2°.75S×128°.20E, h74^{km}±23^{km}, mb3.3/3, mbtmp3.9/5, Error ellipse: s-maj=18.0km s-min=11.3km az=83.0*

ISC 11 03:28:08.3±0.8**, 2°.60S**±0°.05×**127°.99E**±0°.06**, h32**^{km}**, n22, σ2^{s}.22**/27**, mb3.5**/3**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLAI	**Namlea**	**1.09**	**234**	P	**Pn**	**03 28 27.0**	**-0.3**
NLAI				S	**Sn**	**03 28 41.6**	**+0.3**
AAI	**Ambon**	**1.10**	**169**	P	**Pb**	**03 28 30.3**	**+1.4**
AAI				S	**Sb**	**03 28 46.2**	**+3.3**
MSAI	**Masohi**	**1.20**	**128**	P	**Pn**	**03 28 29.1**	**+0.2**
LBMI	**Labuha**	**2.00**	**346**	P	**Pn**	**03 28 39.7**	**-0.3**
SANI	**Sanana**	**2.07**	**285**	P	**Pn**	**03 28 37.6**	**-3.2**
BNDI	**Bandanaira**	**2.71**	**135**	P	**Pn**	**03 28 51.7**	**+2.1**
TNTI	**Ternate**	**3.40**	**350**	P	**Pn**	**03 28 59.1**	**-0.1**
SWI	**Sorong**	**3.70**	**62**	P	**Pn**	**03 29 04.3**	**+1.0**
SIJI	**Sorong**	**3.70**	**62**	P	**Pn**	**03 29 04.4**	**+1.1**
	140nm,0.3s,baz=260,slow=22,SNR=72						
SIJI				S	**Sn**	**03 29 46.8**	**+0.9**
	150nm,0.3s,baz=275,slow=23,SNR=21						
FAKI	**Fak Fak**	**4.27**	**94**	P	**Pn**	**03 29 11.5**	**+0.4**
LUWI	**Luwuk**	**5.43**	**286**	P	**Pn**	**03 29 26.3**	**-0.8**
	163nm,0.5s,5µm0.9nm						
RKPI	**Ransiki, Papua**	**6.28**	**80**	P	**Pn**	**03 29 36.1**	**-2.7**
MRSI	**Marisa**	**6.77**	**297**	P	**Pn**	**03 29 43.7**	**-1.8**
	105nm,0.5s,2µm0.6nm						
BKSI	**Bulukumba**	**8.30**	**251**	P	**Pn**	**03 30 06.1**	**-0.4**
	19nm,0.8s						
SPSI	**Sidrap Palu**	**8.31**	**260**	P	**Pn**	**03 30 09.2**	**+2.5**
KAPI	**Kappang**	**8.56**	**253**	P	**Pn**	**03 30 13.5**	**+3.4**
	8.9nm,0.3s,baz=131,slow=10,SNR=7.6						
MPSI	**Mapaga**	**8.59**	**290**	P	**Pn**	**03 30 10.5**	**0.0**
	21nm,0.6s						
WRA	**Warramunga Arr**	**18.32**	**161**	P	**P**	**03 32 17.9**	**-2.1**
	1.7nm,0.4s,baz=340,slow=11,SNR=24						
WRA				S	**Sn**	**03 35 40.1**	**-3.9**
	0.7nm,0.7s,baz=333,slow=22,SNR=3.9						
KPJI	**Karang Pucung**	**19.55**	**255**	P	**P**	**03 32 32.9**	**-0.7**
ASAR	**Alice Springs**	**21.71**	**165**	P	**P**	**03 32 56.0**	**-0.9**
	2.7nm,0.3s,baz=344,slow=11,SNR=74						
ASAR				S	**S**	**03 36 50.0**	**-5.8**
	2.5nm,0.8s,baz=346,slow=19,SNR=9.9						
	2.7nm,0.3s						
SONM	**Songino Array**	**53.66**	**342**	P	**P**	**03 37 29.2**	**+2.2**
	0.5nm,0.8s,baz=158,slow=9.3,SNR=3.0						
	0.5nm,0.8s						
MKAR	**Makanchi Array**	**63.47**	**327**	P	**P**	**03 38 35.4**	**+0.2**
	0.1nm,0.4s,baz=122,slow=9.5,SNR=2.8						
	0.1nm,0.4s						

IDC 11 03:32:42.6±2.8**, 6°.65N**×**124°.11E, h0**^{km}**, mb3.3**/3**, mbtmp3.3**/3**, MS3.2**/1**, Error ellipse: s-maj=305.6km s-min=28.5km az=64.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**28.28**	**159**	P	P	03 38 37.3	-0.6
	0.1nm,0.4s,baz=339,slow=9.8,SNR=1.7						
	0.1nm,0.4s						
ASAR	**Alice Springs**	**31.62**	**163**	P	P	03 39 08.0	+0.5
	0.2nm,0.4s,baz=341,slow=6.6,SNR=4.6						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**53.68**	**325**	P	P	03 42 06.2	-0.1
	0.2nm,0.4s,baz=118,slow=7.3,SNR=4.6						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**56.82**	**333**	LR	LR	04 07 48.6	
	comp=Z,18nm,19.1s,baz=39,slow=37						

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*IDC **11** 03:36:07.1±1.2, 8°.47S×30°.04E, h0^{km}, mb3.6/4, mbtmp3.4/5, ML2.2/1, Error ellipse: s-maj=41.9km s-min=16.0km az=103.0*

ISC 11 03:36:07.7±0.9**, 8°.60S**±0°.07×**30°.2E**±0°.2**, h10**^{km}**, n9, σ2^{s}.62**/13**, mb3.7**/3**, Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**10.22**	**44**	Pn	**Pn**	**03 38 34.7**	**-0.1**
	baz=219,slow=20,SNR=6.6						
	0.1nm,0.4s						
MUSN	**Musina, Limpop**	**13.62**	**181**	*i* P	Pn	03 39 19.4	-1.7
MUSN				*i* S	**Sn**	**03 41 49.2**	**-3.4**
MOPA	**Mopani**	**14.88**	**176**	*i* P	**Pn**	**03 39 38.8**	**+0.5**
MOPA				*i* S	**Sn**	**03 42 22.8**	**-0.6**
LBTB	**Lobatse**	**16.91**	**195**	*i* P	**Pn**	**03 40 04.9**	**+0.2**
LBTB				*i* S	**Sn**	**03 43 15.9**	**+3.2**
BOSA	**Boshof**	**20.45**	**193**	P	**P**	**03 40 47.8**	**+2.1**
	2.1nm,0.8s,baz=13,slow=14,SNR=3.8						
BOSA				S	**S**	**03 44 39.4**	**+4.6**
	4.7nm,1.1s,baz=306,slow=19,SNR=2.5						
	2.1nm,0.8s						
BOSA	**Boshof**	**20.45**	**193**	*i* P	**P**	**03 40 43.7**	**-2.0**
BOSA				*i* S	**S**	**03 44 31.0**	**-3.8**
TORD	**Torodi Ar. Bea**	**35.61**	**307**	P	**P**	**03 43 05.0**	**-1.0**
	0.6nm,0.8s,baz=110,slow=9.0,SNR=3.9						
	0.6nm,0.8s						
BRTR	**Keskin Array B**	**48.18**	**4**	P	**P**	**03 44 48.0**	**-0.5**
	0.8nm,1.0s,baz=168,slow=7.4,SNR=3.1						
	0.8nm,1.0s						
MKAR	**Makanchi Array**	**71.97**	**35**	P	**P**	**03 47 33.0**	**+1.4**
	0.5nm,0.8s,baz=233,slow=5.4,SNR=5.7						
	0.5nm,0.8s						

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*NAO **11** 03:41:20.8±2.0, 71°.72N×1°.56W, ML3.9*

*IDC **11** 03:41:23.9±0.9, 71°.61N×0°.81W, h0^{km}, mb3.4/9, mbtmp3.6/15, ML3.5/6, MS3.2/30, Error ellipse: s-maj=21.6km s-min=15.6km az=67.0*

*BER **11** 03:41:25.0±2.7, 71°.89N×1°.64W, h15^{km}±42^{km}, ML2.5, ML3.9(NAO), Confirmed Earthquake*

ISC 11 03:41:22.1±0.6**, 71°.87N**±0°.08×**1°.78W**±0°.07**, h10**^{km}**, n99, σ1^{s}.55**/68**, mb3.5**/9**, MS3.1**/24**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**2.33**	**251**	LR	LR	03 42 47.1	
	comp=Z,138nm,18.6s,baz=23,slow=32						
DBG	**Daneborg**	**5.89**	**303**	Pn	**Pn**	**03 42 48.7**	**-0.6**
DBG				Sn	**Sn**	**03 43 53.3**	**-3.5**
DBG	**Daneborg**	**5.89**	**303**	*i* P	**Pn**	**03 42 48.4**	**-0.9**
DBG				*e*S	Sn	03 43 49.5	-7.3
DBG				IAML		03 43 55.2	
	comp=Z,2.8nm,0.3s						
DBG	**Daneborg**	**5.89**	**303**	*e*P	**Pn**	**03 42 48.0**	**-1.3**
DBG				*e*S	Sn	03 43 51.0	-5.8
LOF	**Lofoten**	**6.45**	**118**	*e*P	**Pn**	**03 42 55.9**	**-1.0**
LOF				*e*S	Sn	03 44 01.5	-8.8
LOF				IAML		03 44 04.5	
	comp=Z,6.0nm,0.6s						
BJO1	**Bjornoya**	**6.56**	**57**	Pn	**Pn**	**03 43 01.2**	**+2.8**
SCO	**Scoresbysund**	**6.66**	**268**	*i* P	**Pn**	**03 43 00.7**	**+0.9**
DAG	**Danmarks Havn**	**6.69**	**325**	*i* P	**Pn**	**03 42 59.0**	**-1.1**
DAG				*e*S	Sn	03 44 04.6	-12
DAG				IAML		03 44 15.1	
	comp=Z,6.4nm,0.3s						
DAG	**Danmarks Havn**	**6.69**	**325**	*e*P	**Pn**	**03 42 58.9**	**-1.3**
DAG				*e*		03 44 05.9	
HSPB	**Hornsund (broa**	**6.91**	**34**	Pn	**Pn**	**03 43 03.6**	**+0.4**
HSPB	**Hornsund (broa**	**6.91**	**34**	*e*P	**Pn**	**03 43 03.2**	**0.0**
STEI	**Steigen**	**7.05**	**116**	*e*P	**Pn**	**03 43 03.3**	**-1.9**
STEI				*e*S	Sn	03 44 17.6	-7.7
STEI				IAML		03 44 23.1	
	comp=Z,6.9nm,0.7s						
TRO	**Tromso**	**7.18**	**98**	Pn	**Pn**	**03 43 05.2**	**-1.8**
TRO	**Tromso**	**7.18**	**98**	*e*P	Pn	03 43 04.1	-2.9
TRO				*e*S	Sn	03 44 19.4	-9.1
BRBA	**Barentsburg A**	**7.44**	**26**	Pn	**Pn**	**03 43 13.2**	**+2.7**
FAUS	**Fauske**	**7.45**	**119**	*e*P	**Pn**	**03 43 08.8**	**-1.8**
FAUS				*e*S	Sn	03 44 25.9	-9.0
FAUS				IAML		03 44 32.0	
	comp=Z,4.3nm,0.5s						
BRBB	**Barentsburg B**	**7.46**	**26**	Pn	**Pn**	**03 43 12.1**	**+1.3**
BRBB	**Barentsburg B**	**7.46**	**26**	*e*P	**Pn**	**03 43 11.2**	**+0.4**
KONS	**Konsvik**	**7.54**	**128**	*e*P	**Pn**	**03 43 10.4**	**-1.5**
KONS				*e*S	Sn	03 44 28.3	-9.1
KONS				IAML		03 44 39.0	
	comp=Z,5.3nm,0.8s						
STOK	**Stokkvaagen**	**7.65**	**129**	*e*P	**Pn**	**03 43 12.2**	**-1.2**
JETT	**Jettan, Norway**	**7.68**	**97**	Pn	**Pn**	**03 43 11.8**	**-2.1**
JETT				Sn	Sn	03 44 31.2	-10
JETT	**Jettan, Norway**	**7.68**	**97**	*e*S	Sn	03 44 30.8	-10
JETT				IAML		03 44 37.5	
	comp=Z,8.4nm,0.5s						
SPA0	**Spitsbergen Ar**	**7.83**	**28**	Pn	**Pn**	**03 43 17.5**	**+1.6**
	baz=218,slow=14						
SPA0	**Spitsbergen Ar**	**7.83**	**28**	Pn	**Pn**	**03 43 17.5**	**+1.6**
	baz=218,slow=14						
SPITS	**Spitsbergen Ar**	**7.83**	**28**	Pn	**Pn**	**03 43 17.4**	**+1.6**
	baz=203,slow=14						
	comp=Z,2.1nm,0.2s						
KIF	**Kilpisjarvi**	**8.07**	**100**	Pn	**Pn**	**03 43 17.1**	**-2.1**
KIF	**Kilpisjarvi**	**8.07**	**100**	*e*P	**Pn**	**03 43 17.1**	**-2.1**
MOR8	**Moi Rana**	**8.13**	**127**	*e*P	**Pn**	**03 43 18.7**	**-1.3**
MOR8				IAML		03 44 47.2	
	comp=Z,3.7nm,0.4s						
HAMF	**Hammerfest**	**8.26**	**86**	*e*P	**Pn**	**03 43 19.4**	**-2.4**
SALU	**Saltoluokta**	**8.36**	**113**	*e*P	**Pn**	**03 43 22.0**	**-1.1**
HOPEN	**Hopen**	**8.58**	**45**	*e*P	**Pn**	**03 43 27.1**	**+1.0**
KTK1	**Kautokeino**	**8.82**	**97**	*e*P	**Pn**	**03 43 27.8**	**-1.7**
NSS	**Namsos**	**8.94**	**139**	*e*P	**Pn**	**03 43 30.2**	**-0.8**
NSS				IAML		03 45 11.6	
	comp=Z,5.2nm,0.5s						
HEF	**Hetta**	**9.28**	**100**	*e*P	**Pn**	**03 43 33.5**	**-2.1**
ARA0	**ARCESS Array S**	**9.28**	**91**	Pn	**Pn**	**03 43 34.0**	**-1.8**
	baz=294,slow=11						
ARA0	**ARCESS Array S**	**9.28**	**91**	Pn	**Pn**	**03 43 34.0**	**-1.8**
	baz=294,slow=11						
ARCES	**ARCESS Array B**	**9.28**	**91**	Pn	**Pn**	**03 43 33.5**	**-2.3**
	comp=Z,0.5nm,0.3s,baz=297,slow=12,SNR=32						
	comp=Z,2.3nm,0.5s						
KEV	**Kevo**	**9.65**	**89**	Pn	Pn	03 43 38.1	-2.7
KEV	**Kevo**	**9.65**	**89**	*e*P	Pn	03 43 38.0	-2.8

TBLU	Trondheim	9.78	146	eP	Pn	03 43 41.0	-1.5
NOR	Nord	10.30	348	eP	Pn	03 43 48.9	-0.6
AKN	Aaknes	10.30	156	Pn	Pn	03 43 48.4	-1.4
AKN	Aaknes	10.30	156	Pn	Pn	03 43 48.4	-1.4
NOD	Norderasen	10.52	135	eP	Pn	03 43 51.7	-0.9
FOO	Floro	10.65	162	eP	Pn	03 43 53.1	-1.4
DOMB	Dombas	10.72	152	eP	Pn	03 43 53.9	-1.6
DOMB				eS	Sn	03 45 41.9	-13
DOMB				IAML		03 45 52.2	
	comp=Z,2.3nm,0.4s						
SUMG	Summit	11.11	291	eP	Pn	03 44 03.3	+2.2
NC204	NORSAR Array S	11.71	149	eP	Pn	03 44 08.1	-1.0
ASK	Askoy	11.77	163	eP	Pn	03 44 07.8	-2.0
SKAR	Skarslia	11.92	155	eP	Pn	03 44 11.8	-0.1
NBO00	NORSAR Array S	11.95	149	eP	Pn	03 44 11.7	-0.5
NB2	NORSAR Subarra	12.01	148	Pn	Pn	03 44 12.1	-1.0
NB2	NORSAR Subarra	12.01	148	Pn	Pn	03 44 11.8	-1.3
	comp=Z,11nm,1.4s,baz=341,slow=14						
NB2	NORSAR Subarra	12.01	148	Pn	Pn	03 44 12.1	-1.0
NOA	NORSAR Array B	12.01	148	Pn	Pn	03 44 11.3	-1.8
	baz=339,slow=12,SNR=12						
NOA				Sn	Sn	03 46 11.2	-16
	baz=168,slow=11						
NOA				LR	LR	03 48 36.6	
	comp=Z,116nm,20.4s,baz=345,slow=37						
	comp=Z,0.5nm,0.5s						
NAO01	NORSAR Array S	12.14	149	eP	Pn	03 44 13.8	-1.1
NRA0	NORESS Array S	12.35	148	Pn	Pn	03 44 16.8	-0.9
	baz=344,slow=14						
NRA0	NORESS Array S	12.35	148	Pn	Pn	03 44 16.8	-0.9
	baz=344,slow=14						
ODD1	Odda	12.47	160	eP	Pn	03 44 19.1	-0.3
APA0	Apatity Array	12.63	93	Pn	Pn	03 44 19.1	-2.5
	baz=304,slow=12						
APA0	Apatity Array	12.63	93	Pn	Pn	03 44 19.1	-2.5
	baz=304,slow=12						
HFS	Hagfors	13.29	144	Pn	Pn	03 44 29.5	-1.0
	baz=346,slow=16						
HFS	Hagfors	13.29	144	Pn	Pn	03 44 29.2	-1.3
	comp=Z,0.8nm,0.3s,baz=345,slow=9.7,SNR=22						
HFS				Sn	Sn	03 46 42.8	-15
	comp=Z,0.1nm,0.3s,baz=352,slow=25,SNR=1.3						
HFS				LR	LR	03 49 25.5	
	comp=Z,134nm,18.8s,baz=356,slow=37						
	comp=Z,6.1nm,0.6s						
HFS	Hagfors	13.29	144	Pn	Pn	03 44 29.5	-1.0
	baz=346,slow=16						
FIA0	FINESS Array S	15.01	120	P	Pn	03 44 51.3	-2.6
	baz=328,slow=12						
FIA0	FINESS Array S	15.01	120	P	Pn	03 44 51.3	-2.6
	baz=328,slow=12						
FINES	FINESS Array B	15.01	120	Pn	Pn	03 44 51.3	-2.5
	comp=Z,0.3nm,0.3s,baz=342,slow=12,SNR=13						
FINES				LR	LR	03 50 04.6	
	comp=Z,160nm,19.4s,baz=316,slow=36						
	comp=Z,6.0nm,0.8s						
EKA	Eskdalemuir Ar	16.61	183	Pn	Pn	03 45 13.6	-1.2
	baz=358,slow=11						
EKA				LR	LR	03 50 29.0	
	comp=Z,62nm,20.7s,baz=10,slow=33						
	comp=Z,0.4nm,0.5s						
SFJD	Kangerlussuaq	17.39	278	LR	LR	03 50 43.0	
	comp=Z,67nm,20.8s,baz=60,slow=32						
LSH	Leshukonskoye	18.36	88	eP	Pn	03 45 33.7	-2.6
	comp=Z,28nm,1.5s						
KLMR	Klimovskoe	19.39	103	eP	P	03 45 46.4	-1.4
	comp=Z,30nm,1.6s						
KLMR	Klimovskoe	19.39	103	e	P	03 45 46.3	-1.4
KLMR				AMP		03 45 47.6	
	comp=Z,31nm,1.6s						
VRAC	Vranov	24.15	150	LR	LR	03 56 40.6	
	comp=Z,55nm,19.6s,baz=336,slow=39						
GERES	GERESS Array B	24.18	154	P	P	03 46 38.3	0.0
	comp=Z,0.6nm,0.7s,baz=351,slow=11,SNR=4.0						
GERES				LR	LR	03 55 25.4	
	comp=Z,71nm,21.2s,baz=334,slow=35						
	comp=Z,0.6nm,0.7s						
KIRV	Kirov	24.25	96	LR	LR	03 56 02.6	
	comp=Z,56nm,18.2s,baz=312,slow=37						
RES	Resolute Bay	24.35	320	LR	LR	03 55 50.8	
	comp=Z,89nm,20.3s,baz=19,slow=35						
FRB	Frobisher Bay	25.10	286	LR	LR	03 55 41.3	
	comp=Z,60nm,18.4s,baz=268,slow=34						
AKASG	Malin Array Be	25.36	130	P	P	03 46 48.0	-0.9
	comp=Z,0.4nm,0.4s,baz=333,slow=9.2,SNR=4.8						
AKASG				LR	LR	03 56 19.9	
	comp=Z,111nm,19.5s,baz=334,slow=36						
	comp=Z,0.4nm,0.4s						
DAVOX	Davos/Dischmat	25.76	161	LR	LR	03 57 23.7	
	comp=Z,50nm,18.4s,baz=65,slow=38						
ARU	Arti	28.87	90	LR	LR	03 58 25.7	
	comp=Z,54nm,20.3s,baz=218,slow=36						
BELG	Belogornoye	28.91	106	LR	LR	03 58 22.4	
	comp=Z,101nm,18.8s,baz=357,slow=36						
MLR	Muntele Rosu	29.54	138	LR	LR	03 59 42.5	
	comp=Z,115nm,18.4s,baz=254,slow=38						
SCHQ	Schefferville	31.68	273	LR	LR	03 58 44.5	
	comp=Z,61nm,18.8s,baz=74,slow=32						
ESDC	Sonseca Array	32.29	183	P	P	03 47 51.6	+0.9
	comp=Z,0.4nm,0.6s,baz=357,slow=8.7,SNR=8.4						
ESDC				LR	LR	04 00 16.6	
	comp=Z,27nm,18.6s,baz=236,slow=35						
	comp=Z,0.4nm,0.6s						
AKTO	Aktyubinsk	33.81	97	LR	LR	04 01 19.7	
	comp=Z,39nm,19.7s,baz=212,slow=36						
KBZ	Khabaz	35.36	118	P	P	03 48 18.3	+1.0
	comp=Z,2.0nm,1.0s,baz=309,slow=14,SNR=1.8						
KBZ				LR	LR	04 02 25.6	
	comp=Z,36nm,21.6s,baz=26,slow=36						
	comp=Z,2.0nm,1.0s						
BVAR	Borovoye Array	35.43	83	LR	LR	04 02 10.3	
	comp=Z,28nm,18.1s,baz=310,slow=35						
INK	Inuvik	36.47	332	LR	LR	04 06 47.8	
	comp=Z,22nm,18.7s,baz=297,slow=41						
BRTR	Keskin Array B	36.74	132	P	P	03 48 30.7	+1.3
	comp=Z,0.4nm,0.7s,baz=331,slow=8.3,SNR=2.6						
BRTR				LR	LR	04 02 40.6	
	comp=Z,35nm,19.5s,baz=322,slow=35						
	comp=Z,0.4nm,0.7s						
YKA	Yellowknife Ar	38.30	316	P	P	03 48 48.7	+6.6
	comp=Z,0.2nm,0.6s,baz=28,slow=7.3,SNR=3.9						
YKA				LR	LR	04 03 46.0	
	comp=Z,41nm,20.1s,baz=307,slow=35						
	comp=Z,0.2nm,0.6s						
GNI	Garni	39.19	118	LR	LR	04 06 08.8	
	comp=Z,33nm,19.0s,baz=302,slow=38						
ILAR	Eielson Array	41.58	338	P	P	03 49 15.5	+6.2
	comp=Z,0.5nm,0.9s,baz=20,slow=6.1,SNR=4.5						
	comp=Z,0.5nm,0.9s						
ULM	Lac du Bonnet	44.45	294	LR	LR	04 06 48.6	
	comp=Z,32nm,20.3s,baz=99,slow=34						
MKAR	Makanchi Array	44.58	77	P	P	03 49 36.2	+2.4
	comp=Z,0.3nm,0.5s,baz=332,slow=7.1,SNR=5.6						
	comp=Z,0.3nm,0.5s						
AAK	Ala-Archa	45.91	86	LR	LR	04 08 03.2	
	comp=Z,21nm,20.1s,baz=35,slow=35						
KDAK	Kodiak Island	49.04	340	LR	LR	04 14 56.4	
	comp=Z,27nm,18.0s,baz=69,slow=41						
NEW	Newport	51.90	310	LR	LR	04 12 27.4	
	comp=Z,44nm,19.2s,baz=46,slow=36						
KLR	Kul'dur	54.84	36	LR	LR	04 14 39.6	
	comp=Z,14nm,18.4s,baz=240,slow=36						
TORD	Torodi Ar. Bea	58.73	176	P	P	03 51 21.1	+1.3
	comp=Z,0.6nm,0.7s,baz=357,slow=7.4,SNR=6.9						
	comp=Z,0.6nm,0.7s						

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*SJA **11** 03:42:11.8±1.5, 34°.97S×72°.00W, h73^{km}±6^{km}, ML5.2, MW4.8, Hypocentre not reviewed by the ISC*

*GUC **11** 03:42:15.8±0.7, 34°.80S×71°.85W, h51^{km}±3^{km}*

*VAO **11** 03:42:15.9±0.4, 34°.82S×71°.87W, h43^{km}, mb4.9*

*NEIC **11** 03:42:16.6, 34°.79S×71°.83W, h44^{km}*

*IDC **11** 03:42:16.5±0.5, 34°.75S×71°.76W, h47^{km}±4^{km}, mb4.4/15, mbtmp4.7/20, MS3.8/30, Error ellipse: s-maj=14.9km s-min=10.4km az=99.0*

*NEIC **11** 03:42:16.7±1.3, 34°.78S±0°.05×71°.85W±0°.07, h45^{km}±4^{km}, mb4.9/119, Mwr4.7/55, Mwr5.0(GUC), Error ellipse: s-maj=8.8km s-min=6.5km az=109.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.87; $M_{\theta\theta}$0.04; $M_{\phi\phi}$-0.91; $M_{r\theta}$0.13; $M_{\theta\phi}$-0.18; $M_{\phi r}$-0.85; Fault plane solution: $M_0$1.25000×10^{16} NP1:ϕ_s177.29000°, δ66.97000°, λ78.79000°. NP2:ϕ_s24.17000°, δ25.48000°, λ114.58000°. Principal axes: T 1.2402, Plg66.0000°, Azm67.0000°; N 0.0229, Plg10.0000°, Azm182.0000°; P -1.2630, Plg21.0000°, Azm276.0000°;*

ISC 11 03:42:16.1±0.5, 34°.81S±0°.03×71°.82W±0°.04, h46^{km}±4^{km}, n456, σ0^{s}.94/440, mb4.9/71, MS3.9/30, 1C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	Huala	0.22	205		Pn	03 42 24.5	+0.3
GO05	Huala	0.22	205	eP	Pn	03 42 24.3	+0.1
GO05				i S	Sn	03 42 30.2	+0.2
GO05	Huala	0.22	205	eP		03 42 24.4	
GO05				eS		03 42 30.4	
BO03	Pichilemu	0.34	340	eP	Pn	03 42 25.3	0.0
BO03				i S	Sn	03 42 31.3	-0.4
BO01	Tunca	0.74	55		Pn	03 42 30.1	0.0
BO01	Tunca	0.74	55	eP	Pn	03 42 30.1	0.0
BO01				i S	Sn	03 42 40.0	-0.4
BO01	Tunca	0.74	55	eP		03 42 30.1	
BO01				eS		03 42 40.1	
BO01				IAML		03 42 40.5	
	comp=Z,57µm,0.4s						
BO02	Sierra Bellavi	0.85	89		Pn	03 42 32.0	+0.1
BO02	Sierra Bellavi	0.85	89	eP	Pn	03 42 31.9	+0.1
BO02	Sierra Bellavi	0.85	89	eP		03 42 31.8	
BO02				eS		03 42 43.5	
MT01	Popeta	1.06	27		Pn	03 42 34.7	+0.2
MT01	Popeta	1.06	27	eP	Pn	03 42 34.5	0.0
MT01				i S	Sn	03 42 48.4	+0.3
MT01	Popeta	1.06	27	eP		03 42 34.6	
MT01				eS		03 42 49.3	
MT01				IAML		03 42 50.5	
	comp=Z,24µm,1.3s						
VA05	Santo Domingo	1.17	8	Pn	Pn	03 42 36.0	0.0
VA05	Santo Domingo	1.17	8	eP	Pn	03 42 35.9	0.0
MT09	Talagante	1.24	34		Pn	03 42 38.0	+0.8
MT09	Talagante	1.24	34	eP	Pn	03 42 37.9	+0.7
MT09				i S	Sn	03 42 54.3	+1.5
LMEL	Las Melosas	1.65	55		Pn	03 42 43.6	+0.9
LMEL	Las Melosas	1.65	55	eP	Pn	03 42 43.4	+0.7
LMEL				i S	Sn	03 43 04.5	+1.7
MT02	Curacav	1.65	20		Pn	03 42 43.1	+0.5
MT02	Curacav	1.65	20	eP	Pn	03 42 43.0	+0.4
MT02				i S	Sn	03 43 04.1	+1.5
MT02	Curacav	1.65	20	eP		03 42 43.0	
MT02				eS		03 43 04.8	
MT02				IAML		03 43 07.8	
	comp=Z,11µm,0.4s						
MT13	San Alfonso	1.66	50		Pn	03 42 43.6	+0.8
MT13	San Alfonso	1.66	50	eP	Pn	03 42 43.5	+0.8
MT13				i S	Sn	03 43 05.0	+2.0
MT05	Renca	1.68	33		Pn	03 42 43.9	+0.8
MT05	Renca	1.68	33	eP	Pn	03 42 43.8	+0.8
MT05				i S	Sn	03 43 05.1	+1.8
MT05	Renca	1.68	33	eP		03 42 43.8	
MT05				eS		03 43 08.8	
MT05				IAML		03 43 11.2	
	comp=Z,10µm,0.9s						
MT03	Universidad Ad	1.71	40		Pn	03 42 44.1	+0.7
MT03	Universidad Ad	1.71	40	eP	Pn	03 42 44.2	+0.7
MT03				i S	Sn	03 43 05.9	+1.8
MT03	Universidad Ad	1.71	40	eP		03 42 44.4	
MT03				eS		03 43 08.8	
MT03				IAML		03 43 10.2	
	comp=Z,23µm,0.5s						
VA01	Torpederas	1.79	5		Pn	03 42 44.7	+0.1
VA01	Torpederas	1.79	5	eP	Pn	03 42 44.6	+0.1
VA01				i S	Sn	03 43 07.0	+1.0
VA01	Torpederas	1.79	5	eP		03 42 44.6	
VA01				eS		03 43 09.2	
MT10	Hacienda Santa	1.87	35	eP	Pn	03 42 46.7	+1.0
MT10				i S	Sn	03 43 10.0	+1.8
PEL	Peldehue	1.91	30		Pn	03 42 47.0	+0.7
PEL	Peldehue	1.91	30	eP	Pn	03 42 46.9	+0.7
PEL				i S	Sn	03 43 11.3	+2.1
PEL	Peldehue	1.91	30	eP		03 42 46.8	
PEL				eS		03 43 13.1	
FCH	Farellones	1.95	41	eP	Pn	03 42 47.9	+0.8
FCH				i S	Sn	03 43 12.9	+2.4
ROC1	El Roble	1.95	20		Pn	03 42 48.0	+1.1
ROC1	El Roble	1.95	20	eP		03 42 47.9	
ROC1				eS		03 43 14.3	
ROCH	El Roble	1.96	20	eP	Pn	03 42 47.7	+0.7
ROCH				i S	Sn	03 43 12.0	+1.6
MT04	Ro Olivares	1.98	45	eP	Pn	03 42 48.7	+1.3
MT04				i S	Sn	03 43 13.5	+2.5
MT08	Bocatoma Ro	2.02	48		Pn	03 42 49.4	+1.4
MT08	Bocatoma Ro	2.02	48	eP	Pn	03 42 49.3	+1.4
MT08				i S	Sn	03 43 14.1	+1.9
EDS3	Malargue	2.20	116	eP		03 42 53.0	
BI05	Punta Hualpn	2.23	210		Pn	03 42 50.4	-0.1
VA06	Catapilco	2.29	11		Pn	03 42 51.6	+0.3
VA03	San Esteban	2.30	28		Pn	03 42 52.3	+0.7
VA03	San Esteban	2.30	28	eP	Pn	03 42 52.4	+0.7
VA03				i S	Sn	03 43 23.6	+4.9
VA03	San Esteban	2.30	28	eP		03 42 52.3	
VA03				eS		03 43 22.1	
VA03				IAML		03 43 35.8	
	comp=Z,9µm,0.7s						
AAGR	Agrelo	3.02	56	eP		03 43 04.5	
ARCO	CERRO ARCO	3.10	52	i P		03 43 06.0	
ARCO				eS		03 43 57.0	
CANA	Caviahue	3.13	169	eP		03 43 07.0	
ASAL	Salagasta	3.33	49	eP		03 43 08.4	
ASAL				eS		03 43 54.9	
CO02	Combarbal	3.66	11		Pn	03 43 10.7	+0.3
CO02	Combarbal	3.66	11	eP		03 43 10.3	
CO02				eS		03 43 56.5	
CO02				IAML		03 44 11.6	
	comp=Z,3µm,0.3s						
RTLS	Leoncito	3.67	36	eP		03 43 13.1	
RTLS				eS		03 44 00.6	
RTLS				IAML		03 44 18.6	
	comp=Z,6µm,0.9s						
CO03	El Pedregal	4.08	14	eP		03 43 16.3	
CO03				eS		03 44 03.4	
CO03				IAML		03 44 25.0	
	comp=Z,2µm,1.1s						
ZON	Zonda	4.19	40		Pn	03 43 19.1	+1.6
CFA	Coronel Fontan	4.39	44	P	Pn	03 43 20.7	+0.5
	comp=Z,67nm,0.3s,baz=234,slow=12,SNR=195						
CFA				S	Sn	03 44 10.5	+0.4
	comp=Z,125nm,0.3s,baz=315,slow=18,SNR=1.6						
CFA				LR	LR	03 45 15.6	
	comp=Z,2µm,20.9s,baz=228,slow=42						
CFA	Coronel Fontan	4.39	44	eP		03 43 20.0	
CFA				eS		03 44 15.6	
CFA				IAML		03 44 33.0	
	comp=Z,8µm,0.6s						
GO04	Tololo Observa	4.71	11	eP		03 43 24.0	
GO04				eS		03 44 25.9	
GO06	Curarrehue	4.77	177		Pn	03 43 28.0	+2.5
LR04	Corral	5.22	194	Pn	Pn	03 43 30.9	-0.6
LCO	Las Campanas	5.86	10		Pn	03 43 39.4	-1.3
VA04	Juan Fernndez	5.92	279		Pn	03 43 41.8	+0.5
H03S1	Juan Fernandez	5.94	277	P	Pn	03 43 41.3	+0.1
	baz=62,slow=14,SNR=51						
H03S1				T	T	03 49 34.7	
	baz=98,slow=75						
H03S3	Juan Fernandez	5.95	278	P	Pn	03 43 41.6	+0.2
	baz=62,slow=14,SNR=78						
H03S3				T	T	03 49 37.1	
	baz=98,slow=75						
H03S2	Juan Fernandez	5.96	277	P	Pn	03 43 41.4	-0.1
	baz=62,slow=14,SNR=91						
H03S2				T	T	03 49 35.2	
	baz=98,slow=75						
PLCA	Paso Flores	5.99	171	P	Pn	03 43 44.6	+2.3
	comp=Z,28nm,0.4s,baz=334,slow=11,SNR=81						
PLCA				LR	LR	03 46 11.1	
	comp=Z,780nm,19.5s,baz=354,slow=39						
PLCA	Paso Flores	5.99	171		Pn	03 43 43.7	+1.4
PLCA	Paso Flores	5.99	171	eP	Pn	03 43 42.4	+0.1
H03N1	Juan Fernandez	6.04	281	P	Pn	03 43 43.8	+1.2
	baz=132,slow=24,SNR=182						
H03N1				T	T	03 49 47.9	
	baz=108,slow=75						
H03N3	Juan Fernandez	6.05	281	P	Pn	03 43 44.2	+1.5
	baz=132,slow=24,SNR=145						
H03N3				T	T	03 49 41.1	
	baz=108,slow=75						
H03N2	Juan Fernandez	6.06	281	P	Pn	03 43 43.8	+1.0
	baz=132,slow=24,SNR=90						
H03N2				T	T	03 49 43.7	
	baz=108,slow=75						
TRQA	Tornquist	8.56	115		Pn	03 44 18.2	+0.7
LVC	Limon Verde	12.42	13	P	Pn	03 45 10.1	-0.5
	comp=Z,6.5nm,0.5s,baz=218,slow=6.7,SNR=12						
LVC				S	Sn	03 47 27.9	+0.1
	comp=Z,18nm,0.9s,baz=342,slow=20,SNR=2.0						
LVC				LR	LR	03 49 58.3	
	comp=Z,446nm,20.9s,baz=213,slow=37						
LVC	Limon Verde	12.42	13		Pn	03 45 10.6	-0.1
LVC	Limon Verde	12.42	13	eP	Pn	03 45 10.5	-0.1
MECA	Mercedes	12.81	68	eP	Pn	03 45 15.0	-0.5
TICA	Tres Isletas	12.93	53	eP	Pn	03 45 17.0	-0.2
PB07	IPOC Station P	13.15	8		Pn	03 45 20.7	+0.3
ITQB	Itaqui	13.84	72	eP	Pn	03 45 29.3	-0.3
RODS	Rosario do Sul	14.70	77	eP	Pn	03 45 40.4	-0.8
CPUP	Villa Florida	15.06	60	P	Pn	03 45 45.7	-0.1
	comp=Z,2.2nm,0.4s,baz=233,slow=17,SNR=4.4						
CPUP				LR	LR	03 52 06.9	
	comp=Z,871nm,18.6s,baz=234,slow=39						
CPUP	Villa Florida	15.06	60	Pn	Pn	03 45 46.5	+0.6
CPUP	Villa Florida	15.06	60	eP	Pn	03 45 45.6	-0.3
AZCA	Azaras, Argent	15.08	68	eP	Pn	03 45 46.1	0.0
PB11	IPOC Station P	15.12	8	IAmb	IAmb	03 45 53.4	
	comp=Z,37nm,0.8s						
PSGCX	Pisagua	15.23	6	Pn	Pn	03 45 46.9	-1.3
PLTB	Pedras Altas	15.53	84	eP	Pn	03 45 50.4	-1.6
MNMC	Minye Minye	15.74	8	IAmb	IAmb	03 46 01.0	
	comp=Z,84nm,0.8s						
CPSB	Cacapava Do Su	16.10	79	eP	Pn	03 45 59.5	+0.3
CRSM	Crissiumal (Br	16.86	69	eP	Pn	03 46 08.7	-0.1
ALGR	Alto Alegre (B	17.05	75	eP	Pn	03 46 10.3	-1.0
MURT	Porto Murtinho	18.09	47	eP	P	03 46 23.4	-0.6
FRBT	Francisco Belt	18.40	66	eP	P	03 46 26.5	-0.9
ITAB	Concordia	18.47	71	eP	P	03 46 27.2	-0.8
MCR1	Marechal Candi	18.56	61	eP	P	03 46 28.8	-0.3
CNLB	Canela	18.59	79	eP	P	03 46 29.6	+0.1
LPAZ	La Paz	18.74	11	P	Pn	03 46 33.0	+0.5
	comp=Z,17nm,0.7s,baz=181,slow=7.3,SNR=44						
LPAZ	La Paz	18.74	11	eP	Pn	03 46 33.4	+0.9
AMBA	Amambai (Brazi	18.88	56	eP	P	03 46 32.6	+0.1
BBRB	Robore, Bolivi	19.63	36	eP	P	03 46 39.9	-1.0
PTGB	Pitanga	19.85	65	eP	P	03 46 42.4	-0.9
AQDB	Aquidauana	20.16	49	P	P	03 46 45.7	-0.8
AQDB	Aquidauana	20.16	49	eP	P	03 46 46.3	-0.2
USHA	Ushuaia	20.16	174	P	Pn	03 46 48.3	-0.2
	comp=Z,20nm,0.5s,baz=350,slow=2.1,SNR=2.3						
	comp=Z,20nm,0.5s						
BBSD	Serra de San D	20.21	33	eP	P	03 46 46.5	-0.6
PANT	Pantanal (Braz	20.75	44	eP	P	03 46 52.5	-0.5
SIV	San Ignacio	21.08	30	P	P	03 46 55.7	-0.9
	comp=Z,55nm,0.9s,baz=201,slow=8.4,SNR=172						
SIV				LR	LR	03 56 27.5	
	comp=Z,215nm,19.9s,baz=205,slow=40						
	comp=Z,55nm,0.9s						
PTLB	Pontes e Lacer	22.40	34	P	P	03 47 09.9	-0.8
PTLB				IAmb	IAmb	03 47 27.1	
	comp=Z,41nm,1.4s						
PTLB	Pontes e Lacer	22.40	34	eP	P	03 47 10.0	-0.8
FRTB	Fartura	22.51	65	eP	P	03 47 11.6	-0.3
PP1B	Ponte de Pedra	22.85	46	eP	P	03 47 14.3	-1.2
NNA	Nana	23.18	347	P	P	03 47 18.2	-0.6
	comp=Z,4.6nm,0.3s,baz=151,slow=19,SNR=1.8						
NNA				LR	LR	03 54 15.1	
	comp=Z,116nm,21.0s,baz=158,slow=31						
	comp=Z,4.6nm,0.3s						
C2SB	Chapadao do Su	23.23	51	eP	P	03 47 19.0	-0.3
SPB	Sao Paulo	23.98	69	P	P	03 47 24.9	-1.5
SPB				IAmb	IAmb	03 47 26.9	
	comp=Z,72nm,1.3s						
SPB	Sao Paulo	23.98	69	eP	P	03 47 25.7	-0.7
VILB	Vilhena	24.18	29	IAmb	IAmb	03 47 28.9	
	comp=Z,34nm,0.6s						
VILB	Vilhena	24.18	29	eP	P	03 47 27.2	-1.0
ITRB	Iturama	24.22	57	eP	P	03 47 27.9	-0.7
RCLB	Rio Claro- Sao	24.57	66	eP	P	03 47 30.6	-1.2
BB19B	Bebedouro	24.64	62	eP	P	03 47 31.6	-0.8
VAO	Valinhos	24.66	68	eP	P	03 47 32.4	-0.3
ETMB	Extrema	25.40	13	P	P	03 47 38.8	-0.4
ETMB	Extrema	25.40	13	eP	P	03 47 39.3	0.0
PARB	Paraibuna	25.52	70	eP	P	03 47 39.8	-0.6
ARAG	Araguaiana, MT	26.16	48	eP	P	03 47 46.3	+0.1
PDRB	Porto dos Gac	26.87	34	eP	P	03 47 51.9	-0.7
IPMB	Ipameri, GO	26.88	57	eP	P	03 47 52.7	0.0
SAML	Samuel	26.93	19	P	P	03 47 51.4	-1.8
SAML	Samuel	26.93	19	eP	P	03 47 52.2	-0.9
CZSB	Cruzeiro do Su	26.97	358	P	P	03 47 52.9	-0.6
CZSB				IAmb	IAmb	03 47 58.7	
	comp=Z,17nm,0.6s						
CZSB	Cruzeiro do Su	26.97	358	eP	P	03 47 54.0	+0.5
BSCB	Bom Sucesso	27.48	67	eP	P	03 47 57.1	-1.0
PMNB	Patos De Minas	27.76	61	eP	P	03 48 00.1	-0.5
VAS01	Vassouras-RJ	27.78	71	eP	P	03 48 01.7	+1.0
ATAH	Atahualpa	28.20	346	LR	LR	03 57 28.6	
	comp=Z,84nm,19.8s,baz=198,slow=32						
BDFB	Brasilia	28.65	54	P	P	03 48 07.0	-1.6
	comp=Z,8.0nm,0.5s,baz=212,slow=9.5,SNR=12						
BDFB				LR	LR	04 00 38.7	
	comp=Z,355nm,20.5s,baz=224,slow=39						
	comp=Z,8.0nm,0.5s						
BDFB	Brasilia	28.65	54	P	P	03 48 07.2	-1.4
BDFB				IAmb	IAmb	03 48 25.5	
	comp=Z,22nm,1.0s						
BDFB	Brasilia	28.65	54	eP	P	03 48 07.3	-1.3
DUB01	Friburgo-RJ	28.72	72	eP	P	03 48 08.1	-1.0
SNDB	Serra Nova Dou	29.40	44	eP	P	03 48 14.0	-1.2
PMSA	Palmer Station	30.36	173	LR	LR	04 00 22.6	
	comp=Z,267nm,18.1s,baz=324,slow=36						
TBTG	Tabatinga, AM	30.52	4	eP	P	03 48 25.6	+0.6
MCRA	Macar, Loja	31.22	344	P	P	03 48 30.6	-0.7
NPGB	Novo Progresso	31.52	33	eP	P	03 48 32.1	-1.7
SJMB	Sao Joao De Ma	31.55	67	eP	P	03 48 33.2	-0.9
JANB	Januaria	31.59	58	eP	P	03 48 33.7	-0.9
TEFE	Tefe	31.85	14	eP	P	03 48 36.4	-0.3
ARNL	Arenillas	32.04	344	P	P	03 48 38.9	+0.5
RPN	Rapa Nui	32.92	273	LR	LR	03 58 29.6	
	comp=Z,280nm,18.9s,baz=111,slow=30						
SDBA	SAO DESIDERIO	33.06	54	eP	P	03 48 46.5	-0.9
MACA	Manacapuru-AM	33.15	21	eP	P	03 48 47.8	-0.4
ITTB	Itaituba	33.77	30	eP	P	03 48 52.4	-1.1
GUA01	Guaratinga, BA	33.88	66	eP	P	03 48 53.2	-1.3
SMTB	Santa Maria do	34.06	46	eP	P	03 48 54.4	-1.7
SGCB	S£o Gabriel d	34.80	8	eP	P	03 49 01.4	-1.1
PRPB	Parauapebas	34.99	41	eP	P	03 49 02.8	-1.3
FLOC	Florencia	36.38	354	eP	P	03 49 16.9	+0.8
MALB	Monte Alegre	36.65	30	eP	P	03 49 17.4	-0.9
GR1C	Gorgona, Isla	38.09	350	eP	P	03 49 31.8	+1.4
BOAV	Boa Vista	38.50	18	P	P	03 49 33.3	-0.7
BOAV				IAmb	IAmb	03 49 33.8	
	comp=Z,14nm,0.7s						
BOAV	Boa Vista	38.50	18	eP	P	03 49 33.6	-0.4
ORTC	Ortega, Tolima	38.65	355	eP	P	03 49 37.2	+1.9
PTGC	Puerto Gaitan,	38.80	359	eP	P	03 49 36.8	+0.3
MCPB	Macapa, AP	38.93	33	eP	P	03 49 37.2	-0.4
TMAB	Tom-Au,PA,Br	39.10	40	eP	P	03 49 39.2	+0.2
CHIC	Chingaza	39.27	357	eP	P	03 49 41.9	+1.0
ROSC	El Rosal	39.51	356	P	P	03 49 46.0	+3.2
	comp=Z,14nm,0.6s,baz=121,slow=5.0,SNR=8.1						
ROSC	El Rosal	39.51	356	eP	P	03 49 46.4	+3.5
GUY2C	Guyana, Caldas	39.96	354	eP	P	03 49 48.1	+1.4
SPBC	San Pablo de B	40.30	357	eP	P	03 49 47.9	-1.2
RUSC	La Rusia	40.50	358	P	P	03 49 51.0	-0.2
RUSC	La Rusia	40.50	358	eP	P	03 49 52.1	+0.9
CBOC	Ciudad Bolivar	40.65	354	eP	P	03 49 52.9	+0.8
HELC	Santa Helena	40.93	354	eP	P	03 49 55.3	+0.7
TAMC	Tame, Arauca	41.03	0	eP	P	03 49 54.6	-0.4
BARC	Barichara	41.20	358	eP	P	03 49 58.4	+1.7
PTBC	PUERTO BERRIO,	41.20	356	eP	P	03 49 55.4	-1.0
DBBC	Dabeiba	41.81	353	eP	P	03 50 03.5	+2.0
PAMC	Pamplona, Colo	41.93	359	eP	P	03 49 55.1	-7.8
ZARC	Zaragoza, Cauc	42.17	356	eP	P	03 50 03.5	-0.9
UREC	San Jos de Ur	42.48	355	eP	P	03 50 06.4	-0.4
SDV	Santo Domingo	43.48	2	P	P	03 50 14.2	-0.9
	comp=Z,15nm,0.8s,baz=195,slow=5.5,SNR=15						
	comp=Z,15nm,0.8s						
SDV	Santo Domingo	43.48	2	P	P	03 50 14.1	-1.0
SDV				IAmb	IAmb	03 50 15.9	
	comp=Z,13nm,0.7s						
SDV	Santo Domingo	43.48	2	eP	P	03 50 15.0	-0.1
NBCL	Cascavel-CE	43.48	53	eP	P	03 50 14.2	-0.7
MDP	Montagnes des	43.62	28	LR	LR	04 10 08.3	
	comp=Z,141nm,19.5s,baz=216,slow=38						
VNA3	Neumayer Olymp	48.54	158	P	P	03 50 55.5	+1.4
VNA2	Neumayer--Watz	49.19	157	P	P	03 51 01.3	+2.2
	baz=280,slow=9.0						

SNAA	Sanae	50.77	158	P	P	03 51 11.8	+0.7
SNAA	Sanae	50.77	158	P	P	03 51 11.5	+0.4
	comp=Z,6.1nm,0.8s,baz=278,slow=8.7,SNR=7.1						
	comp=Z,6.1nm,0.8s						
TROLL	Troll, Antarti	52.47	158	P	P	03 51 24.7	+0.8
QSPA	South Pole Qui	55.42	180	P	P	03 51 46.4	+0.8
	comp=Z,8.8nm,0.8s,baz=200,slow=0.4,SNR=29						
QSPA				pP	pP	03 52 00.6	+2.0
	comp=Z,6.7nm,0.8s,baz=309,slow=1.8,SNR=6.8						
	comp=Z,8.8nm,0.8s						
QSPA	South Pole Qui	55.42	180	P	P	03 51 46.4	+0.8
QSPA				IAmb	IAmb	03 51 48.3	
	comp=Z,15nm,1.1s						
CMIG	Matias Romero	56.08	333	LR	LR	04 12 25.7	
	comp=Z,26nm,18.1s,baz=166,slow=32						
TAOE	Nuku Hiva Isla	67.22	275	eLR	LR	04 13 24.5	
	comp=Z,106nm,27.2s						
TBI	Tubuai	67.31	257	eLR	LR	04 13 26.9	
	comp=Z,1µm,28.8s						
TBI				eLR	LR	04 13 26.9	
	comp=Z,3µm,26.8s						
250A	Grady	67.81	347	P	P	03 53 09.6	+0.5
	baz=167						
346A	Big Creek Wild	67.91	344	P	P	03 53 11.5	+1.7
	baz=164						
833A	Chaparral WMA,	67.99	334	IAmb	IAmb	03 53 13.0	
	comp=Z,9.5nm,0.7s						
833A	Chaparral WMA,	67.99	334	P	P	03 53 11.1	+0.8
	baz=156						
833A	Chaparral WMA,	67.99	334	P	P	03 53 11.2	+0.9
	baz=156						
152A	Waverly Hall	68.21	348	P	P	03 53 11.2	-0.4
	baz=169						
342B	Flagon Creek P	68.61	341	P	P	03 53 16.1	+2.0
	baz=162						
MEH	Mehetia	68.92	262	eT	T	05 08 00.9	
	comp=Z,17nm,0.2s						
VBMS	Vicksburg	68.96	343	P	P	03 53 17.8	+1.6
	baz=164						
LRAL	Lakeview Retre	68.98	346	P	P	03 53 17.0	+0.6
	baz=167						
LRAL	Lakeview Retre	68.98	346	P	P	03 53 17.0	+0.6
	baz=167						
146A	Union	69.02	344	P	P	03 53 17.1	+0.4
	baz=165						
LPIG	La Paz	69.04	322	LR	LR	04 16 01.7	
	comp=Z,46nm,20.9s,baz=31,slow=29						
Y52A	Lilburn	69.28	349	P	P	03 53 18.0	-0.3
	baz=169						
Y52A				P	P	03 53 18.0	-0.3
	baz=169						
Z47A	Carrollton	69.35	345	P	P	03 53 19.3	+0.6
	baz=166						
X58A	Rowland	69.37	353	P	P	03 53 19.0	+0.3
	baz=173						
X58A				P	P	03 53 19.0	+0.3
	baz=173						
NATX	Nacogdoches	69.62	339	P	P	03 53 21.2	+0.8
NATX				IAmb	IAmb	03 53 22.6	
	comp=Z,17nm,1.0s						
NATX	Nacogdoches	69.62	339	P	P	03 53 22.4	+2.0
	baz=160						
143A	Socs Landing,	69.64	342	P	P	03 53 22.0	+1.5
	baz=163						
PAULI	Pauline	69.90	351	P	P	03 53 22.5	+0.4
	baz=171						
CNNC	Cliffs of the	69.92	355	P	P	03 53 22.9	+0.7
	baz=175						
X51A	Calhoun	70.09	349	P	P	03 53 23.7	+0.5
	baz=169						
X51A				P	P	03 53 23.7	+0.5
	baz=169						
JCT	Junction City	70.10	334	IAmb	IAmb	03 53 37.5	
	comp=Z,7.9nm,0.8s						
JCT	Junction City	70.10	334	P	P	03 53 24.9	+1.5
	baz=156						
JCT	Junction City	70.10	334	P	P	03 53 24.6	+1.2
	baz=156						
TIAR	Tiarei	70.13	262	eT	T	05 09 26.6	
	comp=Z,1.4nm,0.2s						
KMSC	Kings Mountain	70.16	352	P	P	03 53 23.6	0.0
	baz=172						
CASEE	Lake Jocassee	70.22	350	P	P	03 53 24.3	+0.3
	baz=170						
PPT2	Papeete2	70.30	262	eLR	LR	04 14 49.7	
	comp=Z,215nm,26.5s						
PPT2				eLR	LR	04 14 50.1	
	comp=Z,205nm,28.0s						
PPT	Papeete	70.31	262	LR	LR	04 18 44.7	
	comp=Z,36nm,18.1s,baz=148,slow=31						
Y45A	Yeager Farm, C	70.31	344	P	P	03 53 25.3	+0.7
	baz=165						
X48A	Hartselle	70.36	347	IAmb	IAmb	03 53 26.6	
	comp=Z,10nm,0.8s						
X48A	Hartselle	70.36	347	P	P	03 53 25.4	+0.5
	baz=167						
Z41A	Richland Creek	70.52	341	P	P	03 53 27.4	+1.5
	baz=162						
Z41A				P	P	03 53 27.4	+1.5
	baz=162						
TXAR	Lajitas Array	70.53	331	P	P	03 53 26.9	+0.7
	comp=Z,1.5nm,0.6s,baz=158,slow=8.8,SNR=43						
TXAR				pP	pP	03 53 39.5	-0.1
	comp=Z,2.0nm,0.6s,baz=156,slow=8.4,SNR=16						
	comp=Z,1.5nm,0.6s						
TXAR	Lajitas Array	70.53	331	P	P	03 53 27.1	+0.9
TX31	Lajitas Ar. Si	70.53	331	IAmb	IAmb	03 53 40.0	
	comp=Z,8.9nm,0.7s						
TX31	Lajitas Ar. Si	70.53	331	P	P	03 53 27.4	+1.2
	baz=153,SNR=8.0						
V58A	Windy Hill, Pi	70.57	354	P	P	03 53 26.1	-0.1
	baz=174						
V58A				P	P	03 53 26.1	-0.1
	baz=174						
WHTX	Lake Whitney,	70.69	337	IAmb	IAmb	03 53 28.5	
	comp=Z,14nm,0.9s						
WHTX	Lake Whitney,	70.69	337	P	P	03 53 28.0	+1.0
	baz=158						
WHTX	Lake Whitney,	70.69	337	P	P	03 53 28.0	+1.0
	baz=158						
W50A	Signal Mountai	70.78	348	P	P	03 53 27.9	+0.3
	baz=168,SNR=6.2						
V55A	Taylorsville	70.85	352	P	P	03 53 27.6	-0.2
	baz=172						
V55A				P	P	03 53 27.6	-0.2
	baz=172						
V53A	Saluda	70.87	351	P	P	03 53 28.2	+0.1
	baz=170						
V53A				P	P	03 53 28.2	+0.1
	baz=170						
CPCT	Cooper Cave	70.90	349	IAmb	IAmb	03 53 29.0	
	comp=Z,14nm,1.0s						
OXF	Oxford	70.90	345	P	P	03 53 27.2	-0.9
OXF	Oxford	70.90	345	P	P	03 53 28.3	+0.1
	baz=165						
WLAR	White Oak Lake	71.01	341	IAmb	IAmb	03 53 30.8	
	comp=Z,13nm,0.6s						
PLAL	Pickwick Lake	71.08	346	P	P	03 53 29.3	+0.1
PLAL				IAmb	IAmb	03 53 30.4	
	comp=Z,15nm,1.0s						
V48A	Smith Brothers	71.57	347	P	P	03 53 32.8	+0.5
	baz=167,SNR=11						
CLTN	Cedars of Leba	71.83	348	IAmb	IAmb	03 53 34.8	
	comp=Z,19nm,1.0s						
FW03	Perrin-Whitt E	71.85	337	IAmb	IAmb	03 53 35.5	
	comp=Z,11nm,0.9s						
Z35A	Perchaven, San	71.86	338	P	P	03 53 35.2	+1.2
	baz=158,SNR=7.9						
BBTS	Babate	71.91	57	LR	LR	04 23 38.3	
	comp=Z,111nm,21.9s,baz=224,slow=35						
MIAR	Mount Ida	71.94	341	P	P	03 53 35.3	+0.8
	baz=161						
ABTX	Abilene, Hawle	71.99	336	IAmb	IAmb	03 53 36.4	
	comp=Z,11nm,0.9s						
ABTX	Abilene, Hawle	71.99	336	P	P	03 53 35.5	+0.7
	baz=156						
ABTX	Abilene, Hawle	71.99	336	P	P	03 53 35.9	+1.0
	baz=156,SNR=6.8						
WVT	Waverly	72.14	346	P	P	03 53 35.6	0.0
	baz=166						
WVT	Waverly	72.14	346	P	P	03 53 35.8	+0.2
	baz=166,SNR=21						
U49A	Red Boiling Sp	72.14	348	IAmb	IAmb	03 53 45.9	
	comp=Z,16nm,1.4s						
U49A	Red Boiling Sp	72.14	348	P	P	03 53 35.7	+0.1
	baz=168						
MAW	Mawson	72.35	163	LR	LR	04 27 02.1	
	comp=Z,115nm,18.1s,baz=229,slow=37						
T50A	Nancy	72.49	349	P	P	03 53 37.5	-0.1
	baz=169						
T50A				P	P	03 53 37.5	-0.1
	baz=169						
S57A	Dark Hollow, R	72.51	354	P	P	03 53 37.8	0.0
	baz=174						
S57A				P	P	03 53 37.8	0.0
	baz=174						
WTFS	Witchita Falls	72.65	337	P	P	03 53 39.0	+0.3
WTFS				IAmb	IAmb	03 53 40.0	
	comp=Z,10nm,0.9s						
S54A	Dingess, Beckl	72.78	352	P	P	03 53 38.6	-0.8
	baz=172						
S54A				P	P	03 53 38.6	-0.8
	baz=172						
LCAR	Lake Charles	72.79	344	P	P	03 53 39.6	+0.2
	baz=164,SNR=16						
T47A	Sharon Grove	72.84	347	P	P	03 53 39.8	+0.1
	baz=167						
FCAR	Ozark Folk Cen	72.85	343	P	P	03 53 39.7	-0.1
FCAR				IAmb	IAmb	03 53 40.9	
	comp=Z,8.7nm,0.9s						
S51A	Beattyville	72.91	350	IAmb	IAmb	03 53 41.3	
	comp=Z,17nm,0.8s						
S51A	Beattyville	72.91	350	P	P	03 53 40.2	0.0
	baz=170						
S51A				P	P	03 53 40.2	0.0
	baz=170						
R55A	Marlinton	73.14	353	IAmb	IAmb	03 53 43.8	
	comp=Z,16nm,0.9s						
R55A	Marlinton	73.14	353	P	P	03 53 42.3	+0.7
	baz=173						
R55A				P	P	03 53 42.3	+0.7
	baz=173						
MNTX	Cornudas Mount	73.31	331	P	P	03 53 42.5	-0.2
	baz=152						
MNTX	Cornudas Mount	73.31	331	P	P	03 53 42.9	+0.3
	baz=152,SNR=8.5						
W35A	Tecumseh	73.44	339	IAmb	IAmb	03 53 43.5	
	comp=Z,8.1nm,0.7s						
U40A	Yellville	73.47	342	P	P	03 53 43.8	+0.3
	baz=162,SNR=7.6						
U40A				P	P	03 53 43.8	+0.3
	baz=162,SNR=7.6						
WMOK	Wichita Mounta	73.64	337	P	P	03 53 44.7	+0.1
	baz=157						
R50A	Paris	73.65	350	P	P	03 53 44.5	0.0
	baz=169						
R50A				P	P	03 53 44.5	0.0
	baz=169						
HHAR	Hobbs	73.68	342	P	P	03 53 44.7	0.0
HHAR				IAmb	IAmb	03 53 46.4	
	comp=Z,9.4nm,0.8s						
R49A	Shelbyville	73.78	349	P	P	03 53 45.0	-0.3
	baz=169						
R49A				P	P	03 53 45.0	-0.3
	baz=169						
Q56A	Snyder Ridge,	73.80	354	P	P	03 53 46.3	+0.9
	baz=174						
Q56A				P	P	03 53 46.3	+0.9
	baz=174						
TUL1	Leonard	73.83	340	IAmb	IAmb	03 53 46.9	
	comp=Z,16nm,0.9s						
TUL1	Leonard	73.83	340	P	P	03 53 45.9	+0.3
	baz=160						
TUL1	Leonard	73.83	340	P	P	03 53 45.9	+0.3
	baz=160						
WCI	Wyandotte Cave	73.91	348	P	P	03 53 45.7	-0.3
	baz=168						
WCI	Wyandotte Cave	73.91	348	P	P	03 53 45.3	-0.7
	baz=168						
DEOK	Depew	73.97	339	IAmb	IAmb	03 53 47.4	
	comp=Z,17nm,0.8s						
Q52A	Bidwell	74.04	352	P	P	03 53 47.1	+0.4
	baz=171						
Q52A				P	P	03 53 47.1	+0.4
	baz=171						
P57A	Homestead Farm	74.15	355	P	P	03 53 48.7	+1.3
	baz=175						
P57A				P	P	03 53 48.7	+1.3
	baz=175						
OK031	S. Brethren Rd	74.17	339	IAmb	IAmb	03 53 49.0	
	comp=Z,14nm,0.8s						
OK034	N. Norfolk Rd.	74.19	339	IAmb	IAmb	03 53 48.8	
	comp=Z,12nm,0.7s						
SUR	Sutherland	74.28	119	LR	LR	04 21 57.4	
	comp=Z,44nm,19.2s,baz=182,slow=32						
MSTX	Muleshoe	74.31	334	P	P	03 53 49.6	+1.0
	baz=154						
MSTX	Muleshoe	74.31	334	P	P	03 53 49.4	+0.7
	baz=154						
FVM	French Village	74.46	345	IAmb	IAmb	03 53 50.2	
	comp=Z,26nm,1.2s						
FVM	French Village	74.46	345	P	P	03 53 49.5	+0.3
	baz=164,SNR=6.5						
MCWV	Mont Chateau	74.47	354	P	P	03 53 50.2	+1.0
	baz=173						
P51A	Williamsport	74.65	351	P	P	03 53 50.1	-0.2
	baz=170						
P51A				P	P	03 53 50.1	-0.2
	baz=170						
CCM	Cathedral Cave	74.71	344	P	P	03 53 50.9	+0.3
CCM	Cathedral Cave	74.71	344	P	P	03 53 51.2	+0.5
	baz=164						
CCM	Cathedral Cave	74.71	344	P	P	03 53 51.1	+0.4
	baz=164,SNR=13						
OLIL	Olney	74.72	347	P	P	03 53 50.1	-0.6
	baz=166						
AMTX	Amarillo	74.75	335	P	P	03 53 51.7	+0.6
	baz=155						
S39A	Bolivar	74.85	342	P	P	03 53 51.6	+0.1
	baz=162						
LIC	Lamto	74.86	71	⇓iP	P	03 53 51.4	-0.8
	comp=Z,40nm,0.8s						
P49A	Miami Univ. Ec	74.93	350	P	P	03 53 51.6	-0.4
	baz=169						
P49A	Miami Univ. Ec	74.93	350	P	P	03 53 51.4	-0.5
	baz=169						
P48A	Milroy	74.97	349	IAmb	IAmb	03 53 52.7	
	comp=Z,24nm,1.1s						
P48A	Milroy	74.97	349	P	P	03 53 51.6	-0.5
	baz=168,SNR=6.0						
P48A				P	P	03 53 51.6	-0.5
	baz=168,SNR=6.0						
T35A	Sooner Cattle	74.97	340	IAmb	IAmb	03 53 53.7	
	comp=Z,11nm,0.8s						
T35B	Sooner Cattle	74.97	340	P	P	03 53 52.6	+0.3
	baz=159						
CROK	Carrier	75.03	338	IAmb	IAmb	03 53 53.3	
	comp=Z,14nm,0.8s						
121A	Cookes Peak, D	75.03	329	P	P	03 53 54.7	+1.8
	baz=150,SNR=5.2						
Q44A	Meyer Farm, Va	75.06	346	P	P	03 53 52.1	-0.6
	baz=166						
TIC	Toumodi	75.13	71	⇓iP	P	03 53 52.7	-1.0
	comp=Z,14nm,0.6s						
O52A	Adamsville	75.13	352	P	P	03 53 52.9	-0.2
	baz=172						
O52A				P	P	03 53 52.9	-0.2
	baz=172						
KIC	Kosan Boka	75.17	71	⇑iP	P	03 53 53.9	0.0
	comp=Z,18nm,0.6s						
R40A	Maddies Statio	75.17	343	P	P	03 53 53.5	+0.2
	baz=163,SNR=13						
U32A	Winter Ranch,	75.22	338	P	P	03 53 54.7	+0.9
	baz=157,SNR=6.4						
OK038	West end E0370	75.23	338	IAmb	IAmb	03 53 54.2	
	comp=Z,24nm,1.0s						
DBIC	Dimbokro	75.27	71	P	P	03 53 54.5	0.0
	comp=Z,18nm,0.7s,baz=231,slow=5.9,SNR=28						
DBIC				pP	PcP	03 54 07.9	+0.2
	comp=Z,6.5nm,0.6s,baz=241,slow=4.0,SNR=3.6						
DBIC				LR	LR	04 24 32.8	
	comp=Z,63nm,20.0s,baz=206,slow=34						
	comp=Z,18nm,0.7s						
DBIC	Dimbokro	75.27	71	P	P	03 53 53.5	-1.0
SSPA	Standing Stone	75.29	355	P	P	03 53 54.0	+0.1
	baz=175						
UPAO	U. Pittsburgh	75.31	354	P	P	03 53 54.3	+0.3
	baz=173						
OK032	Salt Plains WL	75.37	338	IAmb	IAmb	03 53 55.6	
	comp=Z,10nm,0.7s						
ACSO	Alum Creek Sta	75.38	351	P	P	03 53 54.5	0.0
	baz=171						
ACSO	Alum Creek Sta	75.38	351	P	P	03 53 54.5	0.0
	baz=171						
P46A	Rosedale	75.42	348	IAmb	IAmb	03 53 54.7	
	comp=Z,22nm,0.9s						
P46A	Rosedale	75.42	348	P	P	03 53 54.1	-0.6
	baz=167						
O49A	Covington	75.52	350	P	P	03 53 54.9	-0.4
	baz=169						
O49A				P	P	03 53 54.9	-0.4
	baz=169						
ODNJ	Ogdensburg	75.57	358	P	P	03 53 56.8	+1.2
	baz=178						
O48B	Farmland	75.71	350	P	P	03 53 55.7	-0.7
	baz=169						
P43A	Skaggs, Pawnee	75.87	346	P	P	03 53 57.3	0.0
	baz=165						
Y22A	Socorro	75.91	330	P	P	03 53 59.7	+1.8
	baz=151						
SFIN	Lafayette	76.14	348	P	P	03 53 58.0	-0.8
	baz=167						
TUC	Tucson	76.15	327	P	P	03 53 59.6	+0.4
O44A	Mansfield	76.16	347	P	P	03 53 58.5	-0.5
	baz=166						
M55A	Ridgway	76.18	355	P	P	03 53 59.1	0.0
	baz=174						
M55A				P	P	03 53 59.1	0.0
	baz=174						
N49A	Columbus Grove	76.22	350	P	P	03 53 59.1	-0.2
	baz=170						
N49A				P	P	03 53 59.1	-0.2
	baz=170						
NPNY	Mohonk Preserv	76.23	358	P	P	03 54 00.2	+0.9
	baz=178						
P40A	Paris	76.30	344	P	P	03 54 00.1	+0.3
	baz=163,SNR=14						
N47A	Urbana	76.40	349	P	P	03 53 59.6	-0.7
	baz=168						
N47A				P	P	03 53 59.6	-0.7
	baz=168						
ANMO	Albuquerque	76.58	331	LR	LR	04 23 15.1	
	comp=Z,52nm,19.1s,baz=226,slow=32						
ANMO	Albuquerque	76.58	331	P	P	03 54 02.4	+0.6
ANMO	Albuquerque	76.58	331	P	P	03 54 03.3	+1.5
	baz=151						
ANMO	Albuquerque	76.58	331	P	P	03 54 03.2	+1.4
	baz=151						
RAR	Rarotonga	76.59	253	LR	LR	04 22 16.1	
	comp=Z,33nm,18.7s,baz=158,slow=31						
WIN	Windhoek	76.63	108	P	P	03 54 02.9	+0.4
WIN				IAmb	IAmb	03 54 09.3	
	comp=Z,11nm,1.0s						
L59A	Walton	76.69	358	P	P	03 54 02.7	+0.7
	baz=177						
L59A				P	P	03 54 02.7	+0.7
	baz=177						
HDIL	Hopedale	76.71	346	P	P	03 54 02.2	+0.1
	baz=165						
HDIL	Hopedale	76.71	346	P	P	03 54 01.7	-0.4
	baz=165						
P38A	Dawn	76.74	343	P	P	03 54 02.2	0.0
	baz=162,SNR=7.2						
L56A	Greenwood	76.76	356	P	P	03 54 03.2	+0.8
	baz=175						
L56A				P	P	03 54 03.2	+0.8
	baz=175						
L61B	Northampton	76.89	359	P	P	03 54 04.2	+1.1
	baz=179						
R32A	Long Quarter,	77.02	339	P	P	03 54 04.8	+0.9
	baz=158						
KSU1	Kansas State U	77.04	340	P	P	03 54 04.2	+0.3
	baz=159						
T25A	Trinidad	77.74	334	IAmb	IAmb	03 54 10.8	
	comp=Z,11nm,0.9s						
T25A	Trinidad	77.74	334	P	P	03 54 09.9	+1.7
	baz=153						
N38A	Joes South For	77.78	344	P	P	03 54 07.9	-0.1
	baz=162						
J57A	Williamstown	77.94	357	P	P	03 54 09.5	+0.7
	baz=176						
J57A				P	P	03 54 09.5	+0.7
	baz=176						
J59A	Piesco	77.94	358	P	P	03 54 08.9	-0.1
	baz=178						
J59A				P	P	03 54 08.9	-0.1
	baz=178						
L42A	Oliver, Polo	78.18	347	P	P	03 54 10.7	+0.4
	baz=165						
N35A	Tabor	78.43	342	P	P	03 54 11.8	+0.1
	baz=160,SNR=7.0						
NCB	Newcomb	78.44	358	P	P	03 54 11.6	0.0
	baz=178						
I63A	Otisfield	78.50	1	P	P	03 54 13.7	+1.8
	baz=181						
I63A				P	P	03 54 13.7	+1.8
	baz=181						
WCNY	West Carthage	78.50	357	P	P	03 54 12.7	+0.8
	baz=177						
L40A	Anamosa	78.55	345	P	P	03 54 12.0	-0.3
	baz=164						
SDCO	Great Sand Dun	78.68	333	P	P	03 54 13.5	0.0
SDCO	Great Sand Dun	78.68	333	P	P	03 54 15.0	+1.5
	baz=152						
SDCO	Great Sand Dun	78.68	333	P	P	03 54 14.5	+1.1
	baz=152						
TSUM	Tsumeb	78.82	106	P	P	03 54 14.3	-0.3
TSUM				IAmb	IAmb	03 54 16.3	
	comp=Z,11nm,1.0s						
SCIA	State Center	78.83	344	P	P	03 54 14.8	+1.0
	baz=162						
SCIA	State Center	78.83	344	P	P	03 54 14.5	+0.7
	baz=162						
JFWS	Jewell Farm	79.17	346	P	P	03 54 15.7	+0.1
	baz=165						
S22A	4UR Ranch, Cre	79.18	332	P	P	03 54 17.9	+1.7
	baz=151						
FRNY	Flat Rock	79.29	359	P	P	03 54 16.9	+0.7
	baz=178						
MVCO	Mesa Verde	79.36	331	P	P	03 54 18.8	+1.6
	baz=150						
BOSA	Boshof	79.53	117	P	P	03 54 18.4	-0.1
	comp=Z,23nm,0.8s,baz=237,slow=3.5,SNR=44						
BOSA				pP	pP	03 54 31.9	-0.1
	comp=Z,5.7nm,0.7s,baz=237,slow=5.1,SNR=3.6						
BOSA				LR	LR	04 29 45.0	
	comp=Z,33nm,18.4s,baz=192,slow=36						
	comp=Z,23nm,0.8s						
BOSA	Boshof	79.53	117	P	P	03 54 17.4	-1.0
Q24A	Divide	79.63	334	P	P	03 54 20.3	+1.6
	baz=153						
IRM	Iron Mountain	79.70	325	P	P	03 54 20.8	+1.9
	baz=145						
TPFO	Pinon Flats	79.89	323	P	P	03 54 22.5	+2.5
	baz=144						
PFO	Pinyon Flats O	79.90	323	LR	LR	04 22 22.9	
	comp=Z,38nm,18.9s,baz=156,slow=30						
GMRC	Granite Mounta	80.46	325	P	P	03 54 25.2	+2.2
	baz=145						
ISCO	Idaho Springs	80.53	334	P	P	03 54 24.4	+0.8
	baz=152						
I37B	Waseca	80.88	344	P	P	03 54 25.4	+0.6
	baz=162						
K31A	O'Neill	80.91	340	P	P	03 54 25.7	+0.6
	baz=158						
TUQ	Turquoise Moun	81.12	325	P	P	03 54 28.6	+2.1
	baz=145						
ECSD	EROS Data Cent	81.38	342	IAmb	IAmb	03 54 28.7	
	comp=Z,14nm,0.9s						
ECSD	EROS Data Cent	81.38	342	P	P	03 54 27.8	+0.2
	baz=160						
ECSD	EROS Data Cent	81.38	342	P	P	03 54 27.6	+0.1
	baz=160						
D62A	Allapoint, All	81.56	2	P	P	03 54 29.2	+0.8
	baz=182						
D62A				P	P	03 54 29.2	+0.8
	baz=182						
E46A	Sault Ste Mari	81.59	351	P	P	03 54 28.4	-0.2
	baz=170						
LBTB	Lobatse	81.80	115	LR	LR	04 28 20.9	
	comp=Z,38nm,19.4s,baz=198,slow=34						
LBTB	Lobatse	81.80	115	P	P	03 54 30.1	-0.5
LBTB				IAmb	IAmb	03 54 32.3	
	comp=Z,17nm,0.8s						
SPMN	Marine on St.	81.90	345	P	P	03 54 30.2	-0.1
	baz=163						
SPMN	Marine on St.	81.90	345	P	P	03 54 30.0	-0.3
	baz=163						
P18A	Preston Nutter	82.14	331	IAmb	IAmb	03 54 46.3	
	comp=Z,6.9nm,0.9s						
F36A	Milaca	82.66	345	IAmb	IAmb	03 54 35.2	
	comp=Z,7.2nm,0.7s						
F36A	Milaca	82.66	345	P	P	03 54 34.0	-0.2
	baz=162						

RDMU	Red Mountain	82.68	332	IAmb	IAmb	03 54 36.9	
	comp=Z,5.4nm,0.8s						
URZ	Urewera	83.25	228	LR	LR	04 22 48.8	
	comp=Z,79nm,19.7s,baz=195,slow=29						
R11A	Troy Canyon, C	83.34	327	P	P	03 54 39.9	+1.7
	baz=145						
K22A	Casper	83.37	335	P	P	03 54 38.4	+0.2
	baz=152						
DUG	Dugway, Tooele	83.66	330	P	P	03 54 39.2	-0.5
DUG	Dugway, Tooele	83.66	330	P	P	03 54 41.2	+1.5
	baz=147						
RSSD	Black Hills	83.85	337	P	P	03 54 41.2	+0.6
RSSD	Black Hills	83.85	337	P	P	03 54 41.1	+0.4
	baz=154						
TORD	Torodi Ar. Bea	84.32	70	P	P	03 54 43.2	-0.2
	comp=Z,12nm,0.8s,baz=254,slow=4.2,SNR=57						
TORD				pP	pP	03 54 56.6	-0.6
	comp=Z,9.0nm,0.8s,baz=251,slow=4.3,SNR=13						
TORD				LR	LR	04 32 29.3	
	comp=Z,58nm,18.2s,baz=178,slow=36						
	comp=Z,12nm,0.8s						
TORD	Torodi Ar. Bea	84.32	70	P	P	03 54 43.2	-0.2
TORD				IAmb	IAmb	03 54 44.4	
	comp=Z,15nm,0.9s						
HWUT	Hardware Ranch	84.35	331	IAmb	IAmb	03 54 56.9	
	comp=Z,11nm,1.3s						
PDAR	Pinedale Array	84.57	333	P	P	03 54 44.4	0.0
	comp=Z,1.2nm,0.7s,baz=150,slow=6.6,SNR=12						
PDAR				pP	pP	03 54 58.5	+0.4
	comp=Z,1.0nm,0.7s,baz=148,slow=8.7,SNR=5.0						
PDAR				PKKPbc	PKKPbc	04 12 54.5	-1.7
	comp=Z,0.4nm,0.6s,baz=35,slow=3.3,SNR=3.5						
	comp=Z,1.2nm,0.7s						
NVAR	Mina Array Bea	84.65	325	P	P	03 54 45.1	+0.3
	comp=Z,1.4nm,0.8s,baz=159,slow=6.0,SNR=12						
NVAR				pP	pP	03 54 59.1	+0.5
	comp=Z,1.1nm,0.8s,baz=144,slow=6.2,SNR=5.6						
	comp=Z,1.4nm,0.8s						
NVAR	Mina Array Bea	84.65	325	P	P	03 54 45.0	+0.1
HVU	Hansel Valley	84.98	331	IAmb	IAmb	03 54 60.0	
	comp=Z,5.4nm,1.0s						
B35A	Bob, Littlefor	85.08	346	P	P	03 54 46.2	-0.4
	baz=162						
MDND	Maddock	85.97	342	P	P	03 54 51.7	+0.8
	baz=158						
FLWY	Flagg Ranch	86.12	333	IAmb	IAmb	03 54 55.2	
	comp=Z,7.3nm,0.8s						
RLMT	Red Lodge	86.50	334	IAmb	IAmb	03 54 55.3	
	comp=Z,4.6nm,0.6s						
RLMT	Red Lodge	86.50	334	P	P	03 54 54.8	+0.9
	baz=150						
YMR	Madison River	86.72	333	P	P	03 54 56.0	+0.9
YMR				IAmb	IAmb	03 54 58.5	
	comp=Z,8.5nm,0.9s						
LAO	LASA Array	86.84	337	IAmb	IAmb	03 54 57.1	
	comp=Z,7.8nm,0.9s						
LAO	LASA Array	86.84	337	P	P	03 54 55.7	+0.4
	baz=152						
LAO	LASA Array	86.84	337	P	P	03 54 55.4	+0.1
	baz=152						
HLID	Hailey	87.13	330	P	P	03 54 57.4	+0.5
HLID	Hailey	87.13	330	P	P	03 54 58.6	+1.6
	baz=146						
ULM	Lac du Bonnet	87.33	345	P	P	03 54 57.0	-0.5
	comp=Z,3.3nm,0.8s,baz=138,slow=3.8,SNR=6.2						
	comp=Z,3.3nm,0.8s						
BOZ	Bozeman (W)	87.76	333	P	P	03 55 00.6	+0.7
	baz=148						
DGMT	Dagmar	87.81	339	P	P	03 55 01.1	+1.2
	baz=154						
DGMT	Dagmar	87.81	339	P	P	03 55 00.7	+0.8
	baz=154						
MOD	Modoc Plateau	88.34	326	IAmb	IAmb	03 55 05.8	
	comp=Z,3.8nm,0.8s						
J08A	Circle Bar Ran	88.67	328	IAmb	IAmb	03 55 07.8	
	comp=Z,9.0nm,1.1s						
PLID	Pearl Lake	89.03	330	IAmb	IAmb	03 55 08.8	
	comp=Z,3.6nm,0.8s						
AFI	Afiamalu	90.14	253	LR	LR	04 25 21.0	
	comp=Z,52nm,21.7s,baz=90,slow=29						
MDT	Midelt	92.19	51	LR	LR	04 37 18.4	
	comp=Z,48nm,18.8s,baz=226,slow=36						
TAM	Tamanrasset	93.01	64	P	P	03 55 24.5	-0.5
TAM				IAmb	IAmb	03 55 45.2	
	comp=Z,7.0nm,1.5s						
MSVF	Nonsavu	95.62	244	LR	LR	04 27 57.6	
	comp=Z,47nm,21.7s,baz=132,slow=29						
ESDC	Sonseca Array	97.01	46	P	P	03 55 41.9	-0.8
	comp=Z,0.5nm,0.9s,baz=251,slow=3.9,SNR=4.1						
ESDC				LR	LR	04 36 31.9	
	comp=Z,24nm,18.7s,baz=184,slow=34						
	comp=Z,0.5nm,0.9s						
MBAR	Mbarara	99.96	98	LR	LR	04 41 42.0	
	comp=Z,27nm,18.1s,baz=220,slow=36						
DZM	Mont Dzumac	100.90	233	*e*LR	LR	04 29 01.5	
	comp=Z,119nm,27.2s						
YKA	Yellowknife Ar	102.88	341	Pdiff	Pdif	03 56 07.7	-0.6
	comp=Z,0.3nm,0.7s,baz=146,slow=4.6,SNR=5.8						
ILAR	Eielson Array	115.00	333	PKP	PKPdf	04 00 51.0	+0.1
	comp=Z,0.3nm,0.8s,baz=169,slow=1.6,SNR=4.6						
ASAR	Alice Springs	116.92	207	PKKPbc	PKKPbc	04 11 20.5	-0.6
	comp=Z,0.3nm,0.4s,baz=340,slow=3.3,SNR=5.2						
WRA	Warramunga Arr	120.14	209	PKP	PKPdf	04 01 01.9	-0.5
	comp=Z,0.6nm,0.6s,baz=165,slow=1.7,SNR=12						
BRTR	Keskin Array B	122.07	61	PKP	PKPdf	04 01 04.8	-0.7
	comp=Z,0.9nm,0.7s,baz=212,slow=1.6,SNR=6.7						
H11S2	WAKE ISLAND Hy	125.94	268	T	T	06 19 46.8	
	baz=119,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	125.95	268	T	T	06 19 50.5	
	baz=119,slow=75,SNR=23						
H11S3	WAKE ISLAND Hy	125.95	268	T	T	06 19 54.0	
	baz=119,slow=75,SNR=18						
H11N3	WAKE ISLAND Hy	126.37	270	T	T	06 20 14.3	
	baz=116,slow=79						
H11N1	WAKE ISLAND Hy	126.38	270	T	T	06 20 15.6	
	baz=116,slow=79						
H11N2	WAKE ISLAND Hy	126.39	270	T	T	06 20 04.8	
	baz=116,slow=79						
GSI	Gunungsitoli	145.22	161	PKPbc	PKPbc	04 01 48.3	-0.6
RPSI	Rantau Prapat	146.90	163	PKPbc	PKPdf	04 01 53.3	+1.2
SBUM	Sibu	147.58	188	PKPbc	PKPbc	04 01 55.4	-0.5
BRVK	Borovoye	147.67	44	PKPbc	PKPbc	04 01 54.7	-0.3
BVAR	Borovoye Array	147.74	44	PKPbc	PKPbc	04 01 55.9	+0.7
	comp=Z,6.4nm,0.8s,baz=299,slow=3.7,SNR=23						
YAK	Yakutsk	149.56	340	PKPbc	PKPbc	04 01 58.5	-1.0
GAR	Garm	149.58	71	PKPbc	PKPbc	04 01 58.9	-1.6
KK31	Karatay Array	149.76	63	PKPbc	PKPbc	04 01 59.7	-1.0
KKAR	Karatay Array	149.76	63	PKPbc	PKPbc	04 01 59.9	-0.7
AML	Almayashu	152.17	64	P	PKiKP	04 02 07.4	+0.3
	SNR=7.1						
EKS2	Erkin-Say	152.19	63	P	PKiKP	04 02 07.4	+0.6
	SNR=7.3						
USP	Ospenovka	152.66	62	P	PKiKP	04 02 08.1	+0.4
	SNR=7.3						
AAK	Ala-Archa	152.72	63	P	PKiKP	04 02 08.7	+0.8
	SNR=11						
AAK	Ala-Archa	152.72	63	PKPbc	PKiKP	04 02 08.4	+0.5
	comp=Z,11nm,0.8s,baz=210,slow=1.8,SNR=31						
UCH	Uchtor	152.77	64	P	PKiKP	04 02 09.2	+0.8
	SNR=9.0						
KURBB	Kurchatov Arra	153.33	45	PKPbc	PKPbc	04 02 08.8	+0.2
	comp=Z,1.8nm,0.6s,baz=310,slow=3.0,SNR=19						
ZALV	Zalesovo Beam	154.81	33	PKPbc	PKPbc	04 02 11.4	-0.2
	comp=Z,1.4nm,0.5s,baz=260,slow=2.6,SNR=8.1						
ZALV				PKPab	pPKPbc	04 02 26.5	+0.6
	comp=Z,3.9nm,0.8s,baz=306,slow=5.2,SNR=8.9						
MKAR	Makanchi Array	157.15	51	PKPab	PKPab	04 02 36.2	-1.1
	comp=Z,2.8nm,0.8s,baz=293,slow=2.5,SNR=14						
PKIN	Phulchoki	159.24	104	*e*P	PKPab	04 02 47.0	-0.2
	comp=Z,7.4nm,0.5s						
PKI	Pulchoki	159.25	104	*e*P	PKPab	04 02 46.9	-0.5
	comp=Z,16nm,0.8s						
JIRN	Jiri	159.91	105	*e*P	PKPab	04 02 50.2	-0.1
	comp=Z,24nm,0.9s						
RAMN	Ramite	159.91	107	*e*P	PKPab	04 02 50.3	+0.2
SONM	Songino Array	166.92	5	PKPab	PKPab	04 03 19.5	-0.5
	comp=Z,1.1nm,0.9s,baz=0.0,slow=2.9,SNR=6.5						

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*DDA **11** 03:50:53.1±0.0, 36.°96N×36.°07E, h4^{km}±2^{km}, ML2.7*

*ISK **11** 03:50:53.5, 37.°00N×36.°09E, h9^{km}, ML2.7/19*

*GII **11** 03:50:58.1±0.0, 37.°01N×36.°04E, h25^{km}*

ISC 11 03:50:53.8±1.1**, 37.°03N**±0.°02×**36.°08E**±0.°02**, h6**^{km}±9^{km}**, n47, σ1.^{s}09**/72**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEYT	Ceyhan	0.27	266	Pg	Pg	03 50 59.4	+0.4
YURE	YUREGIR	0.41	241	P	Pg	03 51 01.2	-0.5
KOZT	Kozan	0.49	336	Pg	Pg	03 51 03.8	+0.4
KOZT				Sg	Sb	03 51 12.2	-0.2
KAMA	Osmaniye	0.50	71	P	Pg	03 51 02.7	-0.7
KAMA				S	Sg	03 51 09.3	-0.6
ANDN	Andirin	0.59	21	P	Pg	03 51 05.2	0.0
ANDN				S	Sn	03 51 17.9	-0.9
ANDN				*i* AML	AML	03 51 19.0	
	comp=N,384nm,0.4s						
ANDN				*i* AML	AML	03 51 20.0	
	comp=E,359nm,0.4s						
AKO	Adana	0.67	311	P	Pg	03 51 06.9	+0.3
AKO				S	Sn	03 51 20.3	-0.2
KMRS	Kahramanmaras	0.81	54	Pg	Pb	03 51 09.9	-0.4
KARA	Karaisali	0.85	286	Pg	Pb	03 51 10.6	-0.4
KAHM	Kahramanmaras,	0.87	56	P	Pg	03 51 11.0	+0.4
KAHM				S	Sg	03 51 22.5	+0.6
KAHM				*i* AML	AML	03 51 24.0	
	comp=E,90nm,0.2s						
KAHM				*i* AML	AML	03 51 25.0	
	comp=N,115nm,0.3s						
RHAN	Hatay/Reyhanl	0.87	151	P	Pg	03 51 09.6	-1.0
RHAN				S	Sb	03 51 21.7	-1.5
RHAN				*i* AML	AML	03 51 22.0	
	comp=N,327nm,0.4s						
RHAN				*i* AML	AML	03 51 23.0	
	comp=E,270nm,0.4s						
GAZ	Gaziantep	0.92	81	Pg	Pg	03 51 11.4	0.0
GAZ				Sg	Sb	03 51 24.5	-0.1
SAIM	ADANA	0.95	0	P	Pb	03 51 12.6	-0.1
SAIM				S	Sn	03 51 27.4	-0.1
SAIM				*i* AML	AML	03 51 33.0	
	comp=E,168nm,0.4s						
SAIM				*i* AML	AML	03 51 34.0	
	comp=N,123nm,0.5s						
YAYL	Yayladag	0.99	179	Pg	Pb	03 51 12.4	-1.0
YAYL				Sg	Sn	03 51 26.4	-2.3
DED	Mersin	1.03	267	P	Pg	03 51 11.3	-2.2
DED				S	Sb	03 51 27.3	-0.4
YAHY	KAYSERI_Yahyal	1.21	332	P	Pn	03 51 15.6	-1.7
GZT	Gaziantep	1.23	74	P	Pn	03 51 16.5	-1.1
GZT				S	Sg	03 51 33.8	+0.4
GZT				*i* AML	AML	03 51 35.0	
	comp=N,247nm,0.5s						
GZT				*i* AML	AML	03 51 35.0	
	comp=E,321nm,0.6s						
NZIP	Nizip/Gaziante	1.28	89	P	Pn	03 51 17.2	-1.0
NZIP				S	Sn	03 51 35.3	-0.4
NZIP				*i* AML	AML	03 51 37.0	
	comp=E,192nm,0.8s						
NZIP				*i* AML	AML	03 51 38.0	
	comp=N,207nm,0.7s						
SARI	SarD1z-Kayseri	1.40	11	Pn	Pb	03 51 20.3	-0.2
SARI				Sn	Sg	03 51 39.8	+0.8
NIDE	Nigde/Merkez-G	1.42	314	P	Pn	03 51 19.5	-0.8
NIDE				S	Sg	03 51 41.3	+1.9
AKCA	Adyaman/G¶l	1.49	59	P	Pb	03 51 21.9	0.0
AKCA				S	Sg	03 51 41.8	0.0
AKCA				*i* AML	AML	03 51 46.0	
	comp=E,210nm,0.4s						
AKCA				*i* AML	AML	03 51 48.0	
	comp=N,164nm,0.4s						
KERG	Konya-Eregli	1.61	285	P	Pn	03 51 21.6	-1.2
KERG				S	Sg	03 51 46.2	+0.7
KIZK	Mersin	1.65	251	Pn	Pn	03 51 23.0	-0.2
KIZK	Mersin	1.65	251	P	Pb	03 51 23.2	-1.3
KIZK				S	Sb	03 51 44.4	-1.1
BNN	Bunyan	1.83	354	Pn	Pn	03 51 26.3	+0.4
AZEY	Adyaman-Merk	1.90	65	P	Pn	03 51 26.5	-0.3
AZEY				S	Sb	03 51 53.5	+0.7
DARE	Darende-Malaty	1.90	35	Pn	Pn	03 51 26.9	+0.1
AKCD	Akcadag	1.94	49	P	Pn	03 51 27.2	-0.1
AKCD				S	Sg	03 51 55.6	-0.4
GULA	Gulagac	1.97	313	Pn	Pn	03 51 28.1	+0.4
YESY	Yesilyurt	2.01	293	Pn	Pn	03 51 28.9	+0.6
IKL	Isikli	2.08	248	Pn	Pn	03 51 29.2	0.0
EREN	Erenkoy	2.15	226	Pn	Pn	03 51 30.2	+0.1
URFA	Urfa	2.23	78	Pn	Pn	03 51 31.5	+0.2
KRMN	Karaman	2.25	275	Pn	Pn	03 51 32.1	+0.4
MAYA	Malatya/Merkez	2.27	54	P	Pn	03 51 31.4	-0.5
MAYA				S	Sg	03 52 06.5	-0.2
NARI	Adyaman-Kaht	2.30	67	P	Pb	03 51 36.6	+0.9
NARI				S	Sg	03 52 07.1	-0.6
HANM	anlurfa/Hi	2.30	75	P	Pn	03 51 30.9	-1.4
HANM				S	Sb	03 52 05.8	+1.4
SULT	Sultanhani-AKS	2.35	301	Pn	Pn	03 51 33.6	+0.7
BERE	Bereket-Mersin	2.39	254	Pn	Pn	03 51 33.9	+0.3
TEKE	Tekeli-Mersin	2.54	251	Pn	Pn	03 51 35.7	+0.1
ARPR	Arapgir-MALATY	2.73	40	Pn	Pn	03 51 38.9	+0.7
CSS	Mathiatis	3.04	228	Pn	Pn	03 51 44.3	+2.0
NATI	Neve Ativ	3.77	184	Pn	Pn	03 51 55.2	+2.8
GEM	Giv'at Ha'Em	3.82	185	Pn	Pn	03 51 55.9	+2.8
MMA0B	Mount Meron ar	4.04	188	Pn	Pn	03 51 57.7	+1.5
MMA0B				Sn	Sn	03 52 43.9	0.0
OFRI	`Ofer	4.49	192	Pn	Pn	03 52 03.8	+1.5
SLTI	Sal'it	4.85	190	Pn	Pn	03 52 09.9	+2.6
SLTI				Sn	Sn	03 53 05.2	+1.4
SALP	Salfit	5.00	189	Pn	Pn	03 52 11.3	+1.9
SALP				Sn	Sn	03 53 09.2	+1.7

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*UPA **11** 04:21:57.7±1.5, 8.°23N×82.°67W, h35^{km}±6^{km}, ML3.9, MW3.8*

*UCR **11** 04:21:57.2±2.1, 8.°19N×82.°66W, h31^{km}±4^{km}, MW3.7*

ISC 11 04:21:58.2±1.0**, 8.°23N**±0.°04×**82.°66W**±0.°03**, h32**^{km}±7^{km}**, n54, σ1.^{s}07**/79**, 6C-8D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.21	324	⇑*i*P	Pn	04 22 04.5	-0.7
LESP3				AMP		04 22 04.8	
	comp=Z,12µm,0.1s						
LESP3				*i* S	Sb	04 22 09.8	+0.6
DVD	David	0.29	46	⇑*i*P	Pb	04 22 05.1	-0.6
DVD				*i* S	Sb	04 22 11.6	+0.8
LOCO3	Loma Colorada,	0.30	54	⇓*i*P	Pb	04 22 05.3	-0.5
LOCO3				*i* S	Sn	04 22 11.3	-0.3
LPPC	Paso Canoas	0.35	330	*e*P	Pb	04 22 05.8	-0.6
LPPC				*e*S	Sn	04 22 13.0	+0.2
CCOL	Caracol de Cor	0.35	299	⇑*i*P	Pb	04 22 06.2	-0.4
CCOL				*e*S	Sn	04 22 14.3	+1.3
CDITO	Canoas	0.40	328	*e*P	Pb	04 22 06.4	-0.8
CDITO				*e*S	Sb	04 22 14.1	+0.8
PTAR3	Potrerillos Ar	0.49	20	*i* P	Pb	04 22 07.6	-1.0
PTAR3				*i* S	Sb	04 22 16.3	+0.6
BCO2	Palmira	0.50	15	⇓*i*P	Pb	04 22 07.9	-0.9
BCO2				*i* S	Sb	04 22 16.2	+0.1
BRU2	Volcan	0.56	357	⇓*i*P	Pb	04 22 08.7	-1.0
BRU2				*i* S	Sb	04 22 18.2	+0.5
BRU2	Volcan	0.56	357	⇓*i*P	Pb	04 22 08.6	-1.1
BRU2				*e*S	Sb	04 22 17.9	+0.2
MLIR3	Monte Lirio, C	0.58	344	*i* P	Pb	04 22 09.3	-0.7
MLIR3				*i* S	Sn	04 22 19.4	+0.7
BC3P	Paso Ancho	0.58	5	⇓*i*P	Pb	04 22 08.9	-1.3
BC3P				*i* S	Sb	04 22 18.6	+0.2
LNBQ3	Los Naranjos,	0.60	21	⇓*i*P	Pn	04 22 08.8	-1.8
LNBQ3				*i* S	Sb	04 22 17.2	-1.5
FITO	Golfito	0.62	309	⇑*i*P	Pn	04 22 09.0	-1.8
FITO				*e*S	Sb	04 22 18.7	-0.6
EDAD	Golfito	0.65	310	⇑*e*P	Pn	04 22 09.5	-1.7
EDAD				*e*S	Sb	04 22 19.5	-0.6
VITO	San Vito	0.66	332	*e*P	Pn	04 22 10.4	-1.0
VITO				*e*S	Sn	04 22 21.8	+1.1
EDSV	San Vito	0.66	332	*e*P	Pn	04 22 10.4	-1.0
EDSV				*e*S	Sn	04 22 21.7	+1.0
CTCR	Cotoan	0.67	352	*e*P	Pn	04 22 10.1	-1.5
JIME	Puerto Jimenez	0.72	295	*e*P	Pn	04 22 11.2	-1.0
JIME				*e*S	Sb	04 22 23.2	+1.2
REME3	Remedios, Chir	0.82	90	⇓*i*P	Pn	04 22 12.2	-1.3
POTG	Potrero Grande	0.93	331	*e*P	Pn	04 22 14.3	-0.8
EDPN	Palmar Norte	1.07	313	*e*P	Pn	04 22 16.6	-0.3
PLAN	Los Planes de	1.10	293	*e*P	Pn	04 22 15.9	-1.4
PLAN				*e*S	Sn	04 22 30.4	-1.0
CNI2	El Empalme, Bo	1.20	9	⇓*i*P	Pn	04 22 18.1	-0.6
CNI2				*i* S	Sn	04 22 34.3	+0.4
SRBA	San Rafael, Bu	1.21	325	*e*P	Pn	04 22 18.1	-0.8
BRIBI	Bribri	1.40	352	*e*P	Pn	04 22 22.4	+1.0
GMAL	Guarumal, Vera	1.49	108	*i* P	Pn	04 22 21.4	-1.4
GMAL				*i* S	Sn	04 22 40.5	-0.6
PEZE	Perez Zeledon,	1.52	319	*e*P	Pn	04 22 23.3	0.0
PEZE				*e*S	Sn	04 22 43.0	+1.0
SAFE3	Santa Fe, Vera	1.59	80	*i* P	Pn	04 22 24.1	-0.1
SFRA3	San Francisco,	1.67	89	*i* P	Pn	04 22 25.0	-0.2
MARI3	Mariato, Verag	1.75	109	*i* P	Pn	04 22 26.1	-0.3
MARI3				*i* S	Sn	04 22 49.0	+1.3
MRVA	Moravia de Chi	1.76	334	*e*P	Pn	04 22 26.7	+0.1
RIMA	Rio Macho	1.93	322	*e*P	Pn	04 22 28.9	-0.1
VERB	Verbena	1.98	329	*e*P	Pn	04 22 28.8	-0.8
RVSTA	Santa Teresita	1.99	331	*e*P	Pn	04 22 30.8	+1.1
LCR2	La Lucha 2	2.00	319	*e*P	Pn	04 22 29.6	-0.4
VTCV	VTCV, Calle Va	2.03	329	*e*P	Pn	04 22 31.4	+1.1
LCOCO	El Coco	2.04	334	*e*P	Pn	04 22 31.4	+1.1
RVLA	Villa Bonita	2.08	334	*e*P	Pn	04 22 32.3	+1.5
ICR3	Volcano Irazu	2.08	326	*e*P	Pn	04 22 32.7	+1.4
OCM	Ochomogo	2.09	322	*e*P	Pn	04 22 31.4	+0.1
VICA	Volcano Irazu	2.10	326	*e*P	Pn	04 22 32.5	+1.0
VIRE	VIRE	2.11	325	*e*P	Pn	04 22 32.5	+0.8
ACOS	Acosta	2.15	316	⇑*i*P	Pn	04 22 32.1	+0.2
ACOS				*e*S	Sn	04 22 58.4	+0.8
CVIMO	Finca Echandi	2.18	325	*e*P	Pn	04 22 33.6	+1.2
BELE	Belen	2.30	319	*e*P	Pn	04 22 34.3	+0.4
AZU	Azuero	2.41	100	*e*P	Pn	04 22 35.2	-0.1
AZU				*e*S	Sn	04 23 07.5	+3.8
SOCE	Pocosol	2.88	318	*e*P	Pn	04 22 42.6	+0.7
JTS	Las Juntas de	3.05	312	*e*P	Pn	04 22 43.4	-0.8
CMARA	Lajas Hojancha	3.25	303	*e*P	Pn	04 22 45.4	-1.6
PTEN	Parque Tenorio	3.37	317	*e*P	Pn	04 22 50.5	+1.9
CUI	Cuipilapa	3.45	315	*e*P	Pn	04 22 50.9	+1.1
CANAL	Canalete	3.50	318	*e*P	Pn	04 22 51.7	+1.3
LAPC	Finca la Perla	3.72	313	*e*P	Pn	04 22 54.8	+1.4

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*UPP **11** 04:51:55.4±0.0, 67.°17N×20.°66E, h0^{km}, ML2.5, Confirmed Induced event*

*HEL **11** 04:51:55.9±0.3, 67.°16N×20.°59E, h0^{km}, ML1.0, Explosion*

ISC 11 04:51:54.9±0.9**, 67.°18N**±0.°02×**20.°72E**±0.°03**, h0**^{km}**, n20, σ0.^{s}74**/29**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.08	225	P	Pg	04 51 56.9	+0.5
DUNU				S	Sg	04 51 58.1	+0.6
MASU	Masugnsbyn	0.57	60	P	Pg	04 52 06.6	+0.8
MASU				S	Sg	04 52 14.5	+1.4
RATU	Laukkuluspa	0.78	327	P	Pg	04 52 09.9	+0.1
RATU				S	Sg	04 52 20.2	+0.4
KUA	Kurravaara	0.79	350	P	Pg	04 52 10.4	+0.4
ERTU	Ertsjaerv	0.86	137	P	Pg	04 52 11.3	0.0
ERTU	Ertsjaerv	0.86	137	PG	Pg	04 52 11.2	0.0
ERTU				SB	Sg	04 52 23.3	+1.0
NIKU	Nikkaluokta	0.95	318	P	Pg	04 52 12.6	-0.4
PAJU	Pajala	0.95	98	P	Pb	04 52 14.0	-0.2
PAJU	Pajala	0.95	98	PG	Pb	04 52 14.0	-0.2
PAJU				SG	Sb	04 52 26.7	-0.6
LANU	Lannavaara	1.00	29	P	Pb	04 52 14.6	-0.4
LANU	Lannavaara	1.00	29	SG	Sb	04 52 28.5	-0.2
HEF	Hetta	1.67	41	PG	Pb	04 52 26.2	-0.1
	baz=222						
HEF				MSG		04 52 47.0	
	comp=Z,0.5nm,0.2s						
HEF				SG	Sg	04 52 48.5	+0.2
KALU	Kalix	1.70	140	PG	Pg	04 52 27.1	-0.2
KALU				SN	Sg	04 52 51.2	+2.0
TOF	Tornio	1.81	126	PG	Pb	04 52 28.8	0.0
	baz=306						
TOF				MSG		04 52 50.9	
	comp=Z,0.5nm,0.2s						
TOF				SG	Sg	04 52 53.2	+0.2
KIF	Kilpisjarvi	1.83	1	PG	Pg	04 52 29.9	0.0
KIF				MSG		04 52 52.4	
	comp=Z,1.4nm,0.2s						
KIF				SG	Sg	04 52 54.8	+1.2
KTK1	Kautokeino	2.07	26	SG	Sb	04 53 00.2	+0.7
RNF	Rovaniemi	2.17	103	SG	Sg	04 53 04.0	-0.4
SGF	Sodankyl	2.27	81	SG	Sg	04 53 07.4	-0.2
OBF0	Syolatti, Pyha	3.06	150	PN	Pn	04 52 43.0	-1.4
OBF0				MSG		04 53 25.8	
	comp=Z,0.3nm,0.2s						
UMAU	Umeaa	3.31	180	SN	Sn	04 53 28.7	+0.9

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*IDC **11** 05:00:43.9±1.9, 51.°42N×82.°35E, h0^{km}, mbtmp2.4/2, ML1.8/2, Error ellipse: s-maj=42.1km s-min=12.4km az=106.0*

ISC 11 05:00:44.9±1.3**, 51.°50N**±0.°09×**82.°33E**±0.°09**, h10**^{km}**, n5, σ0.^{s}77**/8**, 3C-1D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	2.46	253	⇑Pn	Pn	05 01 25.5	+0.5
	4.0nm,1.7s						
KURK				⇑Sn	Sn	05 01 56.0	+0.9
	7.8nm,0.8s						
KURBB	Kurchatov Arra	2.55	251	⇑Pn	Pn	05 01 25.7	-0.5
	8.8nm,2.1s,baz=120,slow=16						
KURBB				⇓Sn	Sn	05 01 57.3	0.0
	9.9nm,0.7s,baz=112,slow=20						
ZALV	Zalesovo Beam	2.88	31	Pn	Pn	05 01 30.9	+0.1
	0.2nm,0.3s,baz=216,slow=16,SNR=4.6						
ZALV				Pg	Pg	05 01 39.3	-0.8
	0.5nm,0.3s,baz=211,slow=15,SNR=13						
ZALV				Sn	Sn	05 02 06.6	+1.1
	0.4nm,0.3s,baz=221,slow=23,SNR=3.8						
ZALV				Lg	Lg	05 02 16.6	
	0.7nm,0.3s,baz=215,slow=25,SNR=8.4						
	2.1nm,0.8s						
I46RU	ZALESOVO INFRA	2.88	31	I	I	05 17 00.0	
	0.1nm,0.8s,baz=212,slow=338,SNR=8.1						
MKAR	Makanchi Array	4.71	180	Pn	Pn	05 01 56.0	+0.1
	0.2nm,0.3s,baz=4.0,slow=11,SNR=8.0						
MKAR				Lg	Lg	05 03 09.3	
	0.3nm,0.3s,baz=4.6,slow=32,SNR=8.6						
	0.2nm,0.3s						

IDC 11 05:00:45.7±326.0**, 28.°43N**×**60.°13W, h0**^{km}**, Error ellipse: s-maj=165.8km s-min=150.7km az=134.0, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I42PT	GRACIOSA ISLAN	28.61	60	I	I	07 52 30.0	
	baz=257,slow=316,SNR=0.9						
I10CA	LAC DU BONNET	34.78	319	I	I	08 36 30.0	
	baz=106,slow=334,SNR=1.5						
I08BO	LAS PENAS INFR	45.10	191	I	I	09 34 40.0	
	0.1nm,2.4s,baz=8.9,slow=324,SNR=12						
I18DK	QAANAAQ INFRAS	49.31	357	I	I	09 54 55.0	
	0.1nm,1.6s,baz=168,slow=327,SNR=6.1						
I48TN	KESRA INFRASON	58.19	64	I	I	10 59 10.0	
	0.2nm,0.8s,baz=282,slow=320,SNR=0.6						
I26DE	FREYUNG INFRAS	58.84	48	I	I	11 06 40.0	
	baz=277,slow=330,SNR=1.1						
I43RU	DUBNA INFRASON	70.55	35	I	I	12 15 18.9	
	0.1nm,1.8s,baz=300,slow=318,SNR=12						
I31KZ	AKTYUBINSK INF	84.38	35	I	I	13 40 10.0	
	0.1nm,2.8s,baz=316,slow=323,SNR=21						
I46RU	ZALESOVO INFRA	92.53	20	I	I	14 13 00.0	
	baz=331,slow=326,SNR=4.8						

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*DJA **11** 05:02:22.5±0.3, 9°S±4°×12°1E±°, h137^{km}±6^{km}, M3.8/9, mB4.8/1, mb3.9/4, MLv3.8/9, Mw(mB)4.1/1*

ISC 11 05:02:23.1±1.0**, 8.°79S**±0.°07×**120.°57E**±0.°06**, h150**^{km}**, n18, σ1.^{s}74**/19**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BASI	Baing, Sumba	1.42	180	P	Pn	05 02 50.2	-1.7
BASI				S	Sn	05 03 11.4	-2.6
MMRI	Maumere	1.66	85	P	Pn	05 02 52.8	-1.5
MMRI				S	Sn	05 03 17.2	-1.0
BSSI	Bau Bau, Buton	2.63	358	P	Pn	05 03 04.1	-1.8
PLAI	Plampang	2.76	269	P	Pn	05 03 06.5	-1.0
PLAI	Plampang	2.76	269	P	Pn	05 03 06.4	-1.0
BKSI	Bulukumba	3.47	353	P	Pn	05 03 15.1	-1.4
TWSI	Taliwang, Sumb	3.65	270	P	Pn	05 03 17.5	-1.3
SOEI	Soe	3.77	105	P	Pn	05 03 20.8	+0.2
SOEI	Soe	3.77	105	P	Pn	05 03 20.7	+0.2
JAGI	Jajag, Banyuwa	6.36	272	P	Pn	05 03 54.7	+0.1
GMJI	Gumukmas	7.07	274	P	Pn	05 04 04.0	-0.1
	10nm,1.1s,0.1nm						
BKB	Balikpapan	8.32	334	P	Pn	05 04 33.7	+13
PWJI	Pagerwojo	8.71	274	P	Pn	05 04 26.1	+0.1

	17nm,1.6s						
KNRA	Kununurra	10.53	131	P	Pn	05 04 48.2	-2.0
MTN	Manton Dam	11.13	112	P	Pn	05 04 58.0	-0.1
WRAB	Tennant Creek	17.33	131	P	Pn	05 06 17.7	+1.6
AS01	Alice Springs	19.57	141	P	Pn	05 06 42.5	+0.1
	3.8nm,1.4s						
MULG	Mulgathing	24.83	151	P	P	05 07 36.0	+4.5
	15nm,2.0s						

IDC **11** *05:06:58.1±2.0, 5°.61S×101°.14E, h0^{km}, mb3.7/9, mbtmp3.7/9, MS3.0/3, Error ellipse: s-maj=80.3km s-min=18.2km az=54.0*

DJA **11** *05:06:59.7±0.5, 6°S±4°×10°1E±°, h10^{km}, M4.5/14, mb4.7/7, mB5.4/2, MLv4.5/14, Mw(mB)4.9/2*

ISC 11 05:07:02.3±1.3,**5°.5S**±0°.2×**101°.3E**±0°.2,**h24**^{km}**,n33,** σ**0^s.73**/24,**mb4.0**/10,**Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNAI	Manna	1.99	55	P	Pn	05 07 35.1	+0.6
KSI	Kapahiang	2.23	35	P	Pn	05 07 38.2	+0.3
MASI	Maura Aman, Be	2.52	22	P	Pn	05 07 42.3	+0.5
LWLI	Liwa	2.77	80	P	Pn	05 07 45.4	0.0
PPSI	Pulau Pagai	3.01	334	P	Pn	05 07 47.9	-0.7
MDSI	Maura Dua	3.02	71	P	Pn	05 07 49.8	+1.0
KASI	Kota Agung	3.17	91	P	Pn	05 07 51.2	+0.5
CGJI	Cibinong	4.49	105	P	Pn	05 08 08.7	-0.3
PDSI	Padang	4.63	349	P	Pn	05 08 09.9	-1.0
CNJI	Cibinong	6.05	108	P	Pn	05 08 28.7	-1.7
	16nm,0.6s,1µm0.1nm						
PBSI	Pulau Batu	6.20	331	P	Pn	05 08 32.2	-0.2
	140nm,1.3s,0.4nm						
CMJI	Cimerak	7.44	108	P	Pn	05 08 48.1	-1.4
GSI	Gunungsitoli	7.72	331	P	Pn	05 08 52.8	-0.5
	47nm,0.7s,0.2nm						
SNSI	Sinabang, Aceh	9.30	327	P	Pn	05 09 15.1	+0.1
	51nm,1.3s						
KCSI	Kotacane, Aceh	9.63	338	P	Pn	05 09 18.4	-1.2
KAPI	Kappang	18.37	89	LR	LR	05 18 56.2	
	comp=Z,45nm,19.0s,baz=282,slow=39						
CMAR	Chiang Mai Arr	23.92	354	P	P	05 12 14.8	+0.2
	0.4nm,0.3s,baz=183,slow=8.7,SNR=4.8						
	0.4nm,0.3s						
PALK	Pallekele	24.16	301	LR	LR	05 19 37.1	
	comp=Z,24nm,20.5s,baz=264,slow=32						
H08S2	Diego Garcia H	28.71	264	T	T	05 43 04.7	
	baz=87,slow=74,SNR=23						
H08S3	Diego Garcia H	28.72	264	T	T	05 43 18.8	
	baz=87,slow=74,SNR=26						
H08S1	Diego Carcia H	28.73	264	T	T	05 43 20.2	
	baz=87,slow=74,SNR=16						
H01W3	Cape Leeuwin H	31.55	160	T	T	05 47 07.3	
	baz=334						
H01W2	Cape Leeuwin H	31.57	160	T	T	05 47 09.6	
	baz=334						
H01W1	Cape Leeuwin H	31.57	160	T	T	05 46 40.3	
	baz=334						
WRA	Warramunga Arr	35.17	117	P	P	05 13 54.6	-0.1
	0.5nm,0.8s,baz=290,slow=10,SNR=5.1						
	0.5nm,0.8s						
ASAR	Alice Springs	36.20	123	P	P	05 14 03.4	-0.1
	0.4nm,0.6s,baz=302,slow=7.3,SNR=5.3						
	0.4nm,0.6s						
STKA	Stephens Creek	45.89	130	P	P	05 15 23.4	+0.2
	2.3nm,0.5s,baz=308,slow=12,SNR=4.6						
	2.3nm,0.5s						
KSRS	Korea Array	49.41	28	P	P	05 15 51.0	+0.7
	0.5nm,0.3s,baz=231,slow=7.9,SNR=4.3						
	0.5nm,0.3s						
SONM	Songino Array	53.29	4	P	P	05 16 25.2	+5.7
	0.7nm,0.8s,baz=188,slow=10.0,SNR=5.1						
MKAR	Makanchi Array	54.73	344	P	P	05 16 30.1	+0.3
	0.7nm,0.5s,baz=152,slow=8.6,SNR=6.2						
	0.7nm,0.5s						
KURBB	Kurchatov Arra	59.25	343	P	P	05 17 01.7	0.0
	0.3nm,0.2s,baz=168,slow=6.8,SNR=6.2						
	0.3nm,0.2s						
ZALV	Zalesovo Beam	60.83	349	P	P	05 17 12.6	+0.1
	0.7nm,0.6s,baz=174,slow=5.5,SNR=4.1						
	0.7nm,0.6s						
BVAR	Borovoye Array	63.90	340	P	P	05 17 32.4	-0.6
	0.5nm,0.4s,baz=148,slow=8.5,SNR=2.8						
BVAR				LR	LR	05 48 46.7	
	comp=Z,13nm,18.0s,baz=125,slow=39						
	0.5nm,0.4s						

NNC 11 05:17:13.3±7.3,**52°.98N**×**91°.38E,h0**^{km}**,mb3.8,mpv3.4, 3C-3D,Error ellipse: s-maj=56.3km s-min=45.7km az=104.0,Suspected Mining explosion.,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	4.04	287	⇑Pn	Pn	05 18 17.5	+1.2
	0.5nm,0.4s,baz=96,slow=16						
ZAA0				⇓Sn	Sn	05 19 06.2	+2.0
	15nm,1.1s,baz=99,slow=21						
KURK	Kurchatov	8.22	259	⇑P	Pn	05 19 12.8	-0.8
	8.9nm,1.6s						
KURK				⇓S	Sn	05 20 46.7	-0.5
	7.5nm,0.9s						
KURBB	Kurchatov Arra	8.31	259	⇑P	Pn	05 19 14.0	-0.9
	4.6nm,0.8s,baz=99,slow=21						
KURBB				⇓S	Sn	05 20 48.7	-0.6
	16nm,0.8s,baz=99,slow=21						

IDC **11** *05:23:07.9±2.6, 4°.89S×106°.03W, h0^{km}, mb3.7/8, mbtmp3.7/8, MS3.7/27, Error ellipse: s-maj=126.4km s-min=22.1km az=59.0*

ISC 11 05:23:09.6±2.5,**4°.9S**±0°.4×**106°.0W**±0°.7,**h10**^{km}**,n43,** σ**0^s.89**/8,**mb3.8**/8,**MS3.7**/30,**Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	22.36	188	LR	LR	05 34 40.4	
	comp=Z,148nm,21.1s,baz=66,slow=31						
JTS	Las Juntas de	25.80	54	LR	LR	05 35 55.8	
	comp=Z,205nm,21.2s,baz=265,slow=30						
ATAH	Atahualpa	27.53	96	LR	LR	05 36 52.4	
	comp=Z,73nm,21.6s,baz=306,slow=30						
LPIG	La Paz	29.11	352	LR	LR	05 37 44.3	
	comp=Z,181nm,18.5s,baz=186,slow=30						
NNA	Nana	29.66	106	LR	LR	05 37 41.0	
	comp=Z,62nm,20.9s,baz=293,slow=29						
ROSC	El Rosal	33.07	73	LR	LR	05 40 23.2	
	comp=Z,110nm,18.0s,baz=208,slow=31						
TXAR	Lajitas Array	34.09	4	P	P	05 29 54.0	-0.6
	0.3nm,1.0s,baz=189,slow=11,SNR=2.4						
TXAR				LR	LR	05 41 15.8	
	comp=Z,78nm,20.3s,baz=178,slow=32						
	0.3nm,1.0s						
TAOE	Nuku Hiva Isla	34.14	261	*e*LR	LR	05 39 04.6	
	comp=Z,171nm,24.0s						
SDV	Santo Domingo	37.80	69	LR	LR	05 43 03.3	
	comp=Z,144nm,21.6s,baz=273,slow=32						
H03N2	Juan Fernandez	37.97	142	T	T	06 10 42.4	
	baz=316						
H03N1	Juan Fernandez	37.98	142	T	T	06 10 44.2	
	baz=316						
H03N3	Juan Fernandez	37.99	142	T	T	06 10 43.3	
	baz=316						
PFO	Pinyon Flats O	39.54	346	LR	LR	05 43 21.1	
	comp=Z,89nm,19.0s,baz=152,slow=31						
ANMO	Albuquerque	39.61	359	LR	LR	05 44 23.8	
	comp=Z,50nm,21.9s,baz=268,slow=32						
LVC	Limon Verde	39.92	120	LR	LR	05 42 35.7	
	comp=Z,87nm,21.0s,baz=283,slow=29						
CFA	Coronel Fontan	44.25	132	P	P	05 31 19.6	0.0
	4.0nm,0.9s,baz=298,slow=6.8,SNR=5.5						
CFA				LR	LR	05 45 02.3	
	comp=Z,103nm,21.1s,baz=292,slow=30						
	4.0nm,0.9s						
PPT	Papeete	44.46	250	LR	LR	05 45 10.4	
	comp=Z,38nm,19.6s,baz=186,slow=30						
PPT2	Papeete2	44.46	250	*e*LR	LR	05 43 53.9	
	comp=Z,166nm,25.5s						
NVAR	Mina Array Bea	44.58	346	P	P	05 31 23.1	+0.8
	0.8nm,0.8s,baz=179,slow=9.9,SNR=5.9						
NVAR				LR	LR	05 45 38.0	
	comp=Z,123nm,21.2s,baz=206,slow=30						
	0.8nm,0.8s						
SIV	San Ignacio	45.43	108	LR	LR	05 47 12.3	
	comp=Z,78nm,20.5s,baz=282,slow=32						
SJG	San Juan	45.44	59	LR	LR	05 46 47.2	
	comp=Z,39nm,19.8s,baz=186,slow=31						
TBI	Tubuai	45.75	242	*e*LR	LR	05 44 31.4	
	comp=Z,2µm,27.2s						
ELK	Elko	46.19	350	LR	LR	05 47 52.7	
	comp=Z,118nm,18.4s,baz=142,slow=32						
PDAR	Pinedale Array	47.53	356	P	P	05 31 46.9	+1.4
	0.2nm,0.6s,baz=164,slow=7.5,SNR=2.3						
PDAR				LR	LR	05 49 17.7	
	comp=Z,88nm,18.5s,baz=186,slow=33						
	0.2nm,0.6s						
PLCA	Paso Flores	47.79	144	LR	LR	05 46 45.8	
	comp=Z,126nm,18.7s,baz=296,slow=30						
YBH	Yreka Blue Hor	48.83	343	LR	LR	05 47 59.4	
	comp=Z,47nm,21.0s,baz=166,slow=30						
CPUP	Villa Florida	51.10	120	P	P	05 32 12.9	+0.1
	1.0nm,0.7s,baz=280,slow=12,SNR=1.6						
	1.0nm,0.7s						
NEW	Newport	53.81	351	LR	LR	05 52 44.2	
	comp=Z,103nm,18.1s,baz=169,slow=33						
MDP	Montagnes des	54.19	80	LR	LR	05 53 08.1	
	comp=Z,49nm,18.0s,baz=262,slow=33						
PMSA	Palmer Station	66.80	162	LR	LR	05 54 57.3	
	comp=Z,118nm,18.5s,baz=294,slow=29						
YKA	Yellowknife Ar	67.50	356	P	P	05 34 04.7	-0.9
	1.5nm,0.8s,baz=163,slow=6.5,SNR=20						
	1.5nm,0.8s						
KDAK	Kodiak Island	72.81	336	LR	LR	05 58 18.3	
	comp=Z,85nm,20.4s,baz=170,slow=29						
INK	Inuvik	75.52	350	P	P	05 34 54.0	+0.2
	1.6nm,0.9s,baz=146,slow=8.6,SNR=7.0						
	1.6nm,0.9s						
ILAR	Eielson Array	75.73	343	P	P	05 34 54.9	-0.3
	0.6nm,0.9s,baz=163,slow=5.2,SNR=5.4						
	0.6nm,0.9s						
RES	Resolute Bay	79.72	3	LR	LR	06 08 18.8	
	comp=Z,43nm,21.2s,baz=7.5,slow=34						
SHEM	Shemya Is, Ala	87.76	323	LR	LR	06 08 13.9	
	comp=Z,40nm,19.3s,baz=124,slow=31						
H11N3	WAKE ISLAND Hy	88.91	290	T	T	07 14 52.6	
	baz=96,slow=74,SNR=28						
H11N2	WAKE ISLAND Hy	88.92	290	T	T	07 14 53.4	
	baz=96,slow=74,SNR=36						
H11N1	WAKE ISLAND Hy	88.92	290	T	T	07 14 51.8	
	baz=96,slow=74,SNR=23						
H11S2	WAKE ISLAND Hy	88.98	289	T	T	07 14 56.8	
	baz=94,slow=74,SNR=23						
H11S1	WAKE ISLAND Hy	88.99	289	T	T	07 14 57.3	
	baz=94,slow=74,SNR=17						
H11S3	WAKE ISLAND Hy	89.00	289	T	T	07 14 59.0	
	baz=94,slow=74,SNR=14						
PETK	Petropavlovsk-	97.67	323	LR	LR	06 12 37.8	
	comp=Z,21nm,18.6s,baz=97,slow=30						

WEL **11** *05:58:00, 42°.15S×172°.84E, h50^{km}, ML4.9, Mw4.4, Moment Tensor Solution. s4 Moment tensor: Scale 10^{15} Nm; M$_{rr}$0.97; M$_{\theta\theta}$3.31; M$_{\phi\phi}$-4.28; M$_{r\theta}$2.06; M$_{\theta\phi}$3.00; M$_{\phi r}$1.26; Fault plane solution: M$_0$5.47000×10^{15} NP1: φ$_s$119.00000°, δ67.00000°, λ16.00000°. NP2: φ$_s$23.00000°, δ75.00000°, λ156.00000°. Principal axes: T 557.0700, Plg27.0000°, Azm340.0000°; N -20.3200, Plg62.0000°, Azm172.0000°; P -536.7500, Plg5.0000°, Azm72.0000°;*

IDC **11** *05:58:02.0±1.3, 42°.22S×173°.07E, h44^{km}±12^{km}, mb4.0/7, mbtmp4.3/9, ML4.3/2, MS3.2/5 Error ellipse: s-maj=26.1km s-min=8.8km az=129.0*

NOU **11** *05:58:03.9, 42°.24S×172°.98E, h62^{km}, MLv5.1/16, South Island, New Zealand*

NEIC **11** *05:58:04.7±1.6, 42°.16S±0°.03×172°.82E±0°.04, h48^{km}±6^{km}, mb4.5/18, Mwr4.4/27, Error ellipse: s-maj=5.3km s-min=4.0km az=142.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.35; M$_{\theta\theta}$2.22; M$_{\phi\phi}$-3.57; M$_{r\theta}$2.30; M$_{\theta\phi}$2.71; M$_{\phi r}$1.05; Fault plane solution: M$_0$4.85000×10^{15} NP1: φ$_s$18.00000°, δ67.52000°, λ153.05000°. NP2: φ$_s$119.00000°, δ65.25000°, λ24.90000°. Principal axes: T 5.0304, Plg35.0000°, Azm338.0000°; N -0.3822, Plg55.0000°, Azm161.0000°; P -4.6482, Plg1.0000°, Azm69.0000°;*

WEL **11** *05:58:04.7±0.4, 42°S±3°×17°3E±°, h29^{km}±5^{km}, M4.9/15, ML5.2/15, MLv4.9/15 Error ellipse: s-maj=0.0km s-min=0.0km az=117.7, confirmed*

NEIC **11** *05:58:04.9, 42°.18S×172°.84E, h51^{km}*

ISC 11 05:58:04.7±0.7,**42°.19S**±0°.03×**172°.90E**±0°.03,**h61**^{km}±5^{km}**, n230,** σ**1^s.37**/246,**mb4.5**/16,**South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THZ	Tophouse	0.43	1		Pn	05 58 15.0	-1.1
THZ				Sn	Sn	05 58 21.5	-2.9
THZ	Tophouse	0.43	1	P	Pn	05 58 15.0	-1.1
THZ				S	Sn	05 58 22.0	-2.4
KHZ	Kahutara	0.53	115		Pn	05 58 17.4	+0.4
KHZ				Sn	Sn	05 58 26.5	+0.6
KHZ	Kahutara	0.53	115	P	Pn	05 58 17.2	+0.2
KHZ	Kahutara	0.53	115	P	Pn	05 58 17.2	+0.2
KHZ				S	Sn	05 58 26.8	+0.9
LTZ	Lake Taylor	0.75	218		Pn	05 58 19.5	-0.1
LTZ				Sn	Sn	05 58 30.0	-0.6
LTZ	Lake Taylor	0.75	218	P	Pn	05 58 19.6	0.0
LTZ				S	Sn	05 58 30.9	+0.3
GVZ	Greta Valley S	0.78	173	Pn	Pn	05 58 20.1	0.0
GVZ	Greta Valley S	0.78	173	P	Pn	05 58 20.3	+0.3
GVZ				S	Sn	05 58 32.3	+1.0
MRNZ	Matariki Terra	0.80	352		Pn	05 58 19.4	-0.8
MRNZ	Matariki Terra	0.80	352	P	Pn	05 58 19.5	-0.8
MRNZ				S	Sn	05 58 30.4	-1.3
BSWZ	Blackbirch Sta	0.87	57		Pn	05 58 21.1	-0.1
BSWZ	Blackbirch Sta	0.87	57	P	Pn	05 58 21.4	+0.3
DSZ	Denniston Nort	0.93	298		Pn	05 58 20.5	-1.4
DSZ	Denniston Nort	0.93	298	P	Pn	05 58 21.0	-0.9
DSZ				S	Sn	05 58 33.1	-1.5
AMCZ	Amberley	1.00	190		Pn	05 58 22.5	-0.3
AMCZ	Amberley	1.00	190	P	Pn	05 58 22.8	+0.1
NNZ	Nelson	1.04	20		Pn	05 58 23.2	-0.1
NNZ	Nelson	1.04	20	P	Pn	05 58 23.1	-0.1
NNZ				S	Sn	05 58 36.6	-0.5
CMWZ	Cape Campbell	1.08	66		Pn	05 58 24.4	+0.6
CMWZ	Cape Campbell	1.08	66	P	Pn	05 58 24.6	+0.8
TUWZ	Tuamarina	1.09	46		Pn	05 58 24.2	+0.3
TUWZ	Tuamarina	1.09	46	P	Pn	05 58 24.2	+0.3
TUWZ				S	Sn	05 58 39.1	+0.9
TKNZ	Takaka Hill	1.16	2		Pn	05 58 24.6	-0.2
TKNZ	Takaka Hill	1.16	2	P	Pn	05 58 24.7	-0.2
TKNZ				S	Sn	05 58 39.5	-0.4
INZ	Inchbonnie	1.20	243	Pn	Pn	05 58 25.2	-0.1
INZ	Inchbonnie	1.20	243	P	Pn	05 58 25.2	-0.1
INZ				S	Sn	05 58 41.7	+0.9
OXZ	Oxford	1.30	209		Pn	05 58 26.3	-0.4
OXZ	Oxford	1.30	209	P	Pn	05 58 26.0	-0.7
QRZ	Quartz Range	1.39	348		Pn	05 58 26.5	-1.5
QRZ	Quartz Range	1.39	348	P	Pn	05 58 27.0	-1.0
QRZ	Quartz Range	1.39	348	P	Pn	05 58 27.0	-1.0
TCW	Tory Channel	1.42	47		Pn	05 58 28.1	-0.2
TCW	Tory Channel	1.42	47	P	Pn	05 58 28.3	0.0
TCW				S	Sn	05 58 47.3	+1.2
MQZ	McQueen's Vall	1.52	187		Pn	05 58 28.2	-1.5
MQZ	McQueen's Vall	1.52	187	P	Pn	05 58 28.5	-1.2
DUWZ	D'Urville Isla	1.59	29	P	Pn	05 58 30.9	+0.3
SNZO	South Karori	1.61	57		Pn	05 58 30.3	-0.6
SNZO	South Karori	1.61	57	P	Pn	05 58 30.6	-0.3
RACZ	Rakaia	1.63	200	P	Pn	05 58 30.2	-1.0
MHCZ	Mount Hutt	1.66	216	P	Pn	05 58 30.7	-0.9
WEL	Wellington	1.67	58	P	Pn	05 58 31.3	-0.3
BHW	Baring Head	1.67	63		Pn	05 58 30.5	-1.1
AKCZ	Akaroa Harbour	1.68	180	P	Pn	05 58 31.0	-0.8
WVZ	Waitaha Valley	1.82	240	P	Pn	05 58 33.4	-0.3
PLWZ	Palliser	1.87	71	P	Pn	05 58 33.1	-1.2
WACZ	Wakanui South	1.91	204	P	Pn	05 58 33.8	-1.1
MSWZ	Moikau Station	1.92	67		Pn	05 58 34.1	-1.0
MSWZ	Moikau Station	1.92	67	P	Pn	05 58 34.3	-0.8
CAW	Cannon Point	1.95	57	P	Pn	05 58 34.9	-0.6
KIW	Kapiti Island	2.01	49	P	Pn	05 58 36.2	-0.1
RPZ	Rata Peaks	2.04	221	P	Pn	05 58 35.8	-0.8
	81nm,0.3s,baz=79,slow=5.2,SNR=248						
RPZ				S	Sn	05 58 59.9	-1.1
	2µm,0.6s,baz=311,slow=20,SNR=8.2						
RPZ				LR	LR	05 59 41.0	
	comp=Z,517nm,21.5s,baz=2.0,slow=47						
	544nm,0.3s						
RPZ	Rata Peaks	2.04	221		Pn	05 58 35.7	-1.0
RPZ	Rata Peaks	2.04	221	P	Pn	05 58 36.0	-0.6
RPZ	Rata Peaks	2.04	221	P	Pn	05 58 35.9	-0.8
PAWZ	Paruwai Farm	2.06	68	P	Pn	05 58 35.5	-1.4
ARCZ	Arundel	2.16	215	P	Pn	05 58 37.4	-0.9
OGWZ	Otaki Gorge	2.19	52	P	Pn	05 58 38.2	-0.6
GCSZ	Gaunt Creek Bo	2.20	238	P	Pn	05 58 38.5	-0.4
MTW	Mount Morrison	2.21	63	P	Pn	05 58 37.5	-1.5
TRWZ	Traveller	2.23	70	P	Pn	05 58 37.7	-1.6
HOWZ	Holdsworth Sta	2.35	57	P	Pn	05 58 39.6	-1.4
TMWZ	Te Maipa	2.49	65	P	Pn	05 58 41.0	-1.8
MRZ	Mangatainoka R	2.53	54	Pn	Pn	05 58 41.9	-1.4
MRZ	Mangatainoka R	2.53	54	P	Pn	05 58 42.2	-1.2
TMZ	Timaru	2.59	212	P	Pn	05 58 43.0	-1.2
FOZ	Fox Glacier	2.63	238	Pn	Pn	05 58 43.9	-0.8
FOZ	Fox Glacier	2.63	238	P	Pn	05 58 44.1	-0.6
TIWZ	Tintock	2.65	59	P	Pn	05 58 43.3	-1.8
CPWZ	Castlepoint	2.79	64	P	Pn	05 58 45.4	-1.5
POWZ	Post Office Ro	2.81	51	P	Pn	05 58 45.7	-1.5
PRWZ	Pori Road	2.83	56	P	Pn	05 58 45.9	-1.5
NMEZ	Namu Road	2.87	15	P	Pn	05 58 49.4	+1.4
WAZ	Wanganui	2.90	34	P	Pn	05 58 49.4	+1.0
BFZ	Birch Farm	2.94	60		Pn	05 58 47.4	-1.5
BFZ	Birch Farm	2.94	60	P	Pn	05 58 46.6	-2.3
BFZ	Birch Farm	2.94	60	P	Pn	05 58 46.5	-2.3
LBZ	Lake Benmore	2.96	221	Pn	Pn	05 58 48.0	-1.2
LBZ	Lake Benmore	2.96	221	P	Pn	05 58 48.0	-1.2
LREZ	Lake Rotokare	2.96	23	P	Pn	05 58 51.4	+2.2
NBEZ	Newall Road No	3.01	14	P	Pn	05 58 51.4	+1.4
KHEZ	Kahui Hut	3.02	17	P	Pn	05 58 50.3	+0.2
KHEZ	Kahui Hut	3.02	17	P	Pn	05 58 51.4	+1.4
NEZ	North Egmont	3.06	18	P	Pn	05 58 51.8	+1.2
DVHZ	Dannevirke	3.11	54	P	Pn	05 58 49.1	-2.2
PKE	Pukeiti	3.11	16	P	Pn	05 58 52.7	+1.4
TSZ	Takapari Road	3.15	48	P	Pn	05 58 50.3	-1.5
DREZ	Durham Road	3.16	19	P	Pn	05 58 53.3	+1.3
ODZ	Otahua Downs	3.29	209		Pn	05 58 52.8	-0.9
ODZ	Otahua Downs	3.29	209	P	Pn	05 58 52.8	-0.9
ODZ	Otahua Downs	3.29	209	P	Pn	05 58 52.4	-1.3
VRZ	Vera Road	3.38	25	P	Pn	05 58 56.0	+1.2
PNHZ	Pukenui	3.38	49	P	Pn	05 58 53.1	-1.9
PRHZ	Porangahau	3.41	57	P	Pn	05 58 52.8	-2.6
MTVZ	Mangateitei	3.42	36	P	Pn	05 58 55.7	+0.2
WPHZ	Waipukurau	3.42	53	P	Pn	05 58 53.4	-2.1
PKVZ	Pokaka	3.44	33	P	Pn	05 58 55.9	0.0
WNVZ	Wahianoa	3.52	37	P	Pn	05 58 57.0	-0.1
TRVZ	Turoa	3.52	36	P	Pn	05 58 57.2	+0.1
MOVZ	Moawhango	3.53	39	P	Pn	05 58 56.0	-1.0
DRZ	Dome Shelter	3.55	36	P	Pn	05 58 57.9	+0.3
JCZ	Jackson Bay	3.55	237	P	Pn	05 58 56.2	-1.1
JCZ	Jackson Bay	3.55	237	P	Pn	05 58 55.6	-1.7
WHVZ	Whangaehu Hut	3.55	36	P	Pn	05 58 57.7	+0.1
FWVZ	Far West T-bar	3.56	35	P	Pn	05 58 57.8	+0.2
TUVZ	Tukino	3.59	37	P	Pn	05 58 58.1	+0.1
BHHZ	Black Hill Sta	3.61	43	P	Pn	05 58 56.9	-1.3
NGZ	Ngauruhoe	3.65	35	P	Pn	05 58 58.7	-0.1
SNVZ	South Ngauruho	3.66	36	P	Pn	05 58 58.8	-0.1
TWVZ	Taurewa	3.67	33	P	Pn	05 58 58.9	-0.1
OTVZ	Oturere	3.69	36	P	Pn	05 58 59.2	-0.1
NNVZ	North Ngauruho	3.69	35	P	Pn	05 58 59.2	-0.2
PXZ	Pawanui	3.69	56	P	Pn	05 58 56.3	-2.9
WTVZ	West Tongariro	3.69	35	P	Pn	05 58 59.1	-0.2
ETVZ	East Tongariro	3.73	36	P	Pn	05 58 59.8	0.0
KRVZ	Karewarewa	3.73	35	P	Pn	05 58 59.6	-0.3
TMVZ	Te Maari	3.74	36	P	Pn	05 58 59.9	-0.2
NTVZ	North Tongarir	3.74	35	P	Pn	05 59 00.1	0.0
KAHZ	Kahuranaki	3.85	53	P	Pn	05 58 58.8	-2.6
KWHZ	Kaweka Forest	3.85	45	P	Pn	05 58 59.4	-2.0
KATZ	Kakaramea	3.85	34	P	Pn	05 59 02.4	+0.8
WKZ	Wanaka	3.86	226	P	Pn	05 58 59.0	-2.5
RITZ	Rihia Road	3.92	36	P	Pn	05 59 02.0	-0.5
HIZ	Hauiti	3.97	23		Pn	05 59 03.7	+0.7
HIZ	Hauiti	3.97	23	P	Pn	05 59 04.0	+1.0
HIZ	Hauiti	3.97	23	P	Pn	05 59 03.5	+0.5
RATZ	Rangitukua	3.98	34	P	Pn	05 59 04.1	+0.9
MCHZ	McNeill Hill	3.98	48	P	Pn	05 59 01.3	-1.8
EAZ	Earnscleugh	4.00	219	P	Pn	05 59 01.5	-1.9
HHSZ	Highcliff Hill	4.05	203	P	Pn	05 59 03.0	-1.0
BKZ	Black Stump Fm	4.08	43	P	Pn	05 59 02.3	-2.2
BKZ	Black Stump Fm	4.08	43	P	Pn	05 59 02.4	-2.2
WATZ	Wairara	4.10	33	P	Pn	05 59 06.7	+1.9
WHTZ	Whakaora	4.23	35	P	Pn	05 59 09.4	+2.8
ARHZ	Aropaoanui	4.27	48	P	Pn	05 59 05.4	-1.7
NMHZ	Naumai	4.29	45	P	Pn	05 59 05.3	-2.1
KUTZ	Kaahu Road	4.32	32	P	Pn	05 59 11.1	+3.2
TLZ	Tolley Road	4.36	28	P	Pn	05 59 07.9	-0.4
MSZ	Milford Sound	4.39	234	P	Pn	05 59 06.3	-2.4
TUZ	Tuapeka	4.44	211	P	Pn	05 59 08.7	-0.6
WPRZ	Whakapapatarin	4.44	35	P	Pn	05 59 08.1	-1.3
ALRZ	Allen Road	4.48	37	P	Pn	05 59 08.1	-1.9
MTHZ	Maungataniwha	4.49	43	P	Pn	05 59 07.7	-2.5
WHHZ	Waihua	4.54	48	P	Pn	05 59 08.3	-2.4
PRRZ	Plateau Road	4.55	37	P	Pn	05 59 09.2	-1.9
GRRZ	Galatos Road	4.56	34	P	Pn	05 59 12.9	+1.8
RAHZ	Arahi	4.57	46	P	Pn	05 59 08.5	-2.8
HRRZ	Handcock Road	4.60	35	P	Pn	05 59 12.6	+1.0
HSRZ	Hossack Road	4.64	35	P	Pn	05 59 13.3	+1.0
MLZ	Mavora Lakes	4.70	226	P	Pn	05 59 10.3	-2.6
RRRZ	Republican Roa	4.74	37	P	Pn	05 59 15.1	+1.5
UTU	Utuhina	4.74	33	P	Pn	05 59 16.9	+3.3
HLRZ	Highlands Stat	4.74	35	P	Pn	05 59 15.4	+1.8
RTZ	Ruatahuna	4.74	42	P	Pn	05 59 13.6	0.0
MUGZ	Murupara	4.75	40	P	Pn	05 59 11.1	-2.6
NGRZ	Ngongotaha	4.80	33	P	Pn	05 59 16.7	+2.3
SNGZ	Shannon Statio	4.80	46	P	Pn	05 59 11.7	-2.8
TARZ	Mount Tarawera	4.82	36	P	Pn	05 59 14.5	-0.3
OMRZ	Omania	4.87	34	P	Pn	05 59 16.6	+1.2
TOZ	Tahuroa Road	4.88	25	P	Pn	05 59 16.0	+0.5
KARZ	Kaharoa	4.89	33	P	Pn	05 59 18.1	+2.4
KMRZ	Kaimai	4.93	29	P	Pn	05 59 18.2	+2.0
LIRZ	Lichensteins R	4.96	34	P	Pn	05 59 20.4	+3.8
RAGZ	Rawiri	5.05	45	P	Pn	05 59 15.8	-2.1
URZ	Urewera	5.08	41	P	Pn	05 59 14.8	-3.4
	11nm,0.3s,baz=318,slow=7.8,SNR=38						
URZ				S	Sn	06 00 11.5	-4.1
	276nm,0.4s,baz=195,slow=20,SNR=10						
	24nm,0.3s						
URZ	Urewera	5.08	41	P	Pn	05 59 16.7	-1.5
	170nm,0.7s						
SYZ	Scrubby Hill	5.11	211	P	Pn	05 59 18.1	-0.5
	95nm,0.6s						
SYZ	Scrubby Hill	5.11	211	P	Pn	05 59 17.6	-1.0
WHZ	Wether Hill Ro	5.14	222	P	Pn	05 59 16.7	-2.3
TGRZ	Tauranga	5.15	31	P	Pn	05 59 18.6	-0.6
OPRZ	Ohinepanea	5.17	34	P	Pn	05 59 20.5	+1.0
DCZ	Deep Cove	5.29	230	P	Pn	05 59 19.5	-1.5
AWAZ	Awhitu Peninsu	5.30	15	P	Pn	05 59 21.6	+0.4
WTAZ	Waiatarua	5.41	14	P	Pn	05 59 23.8	+1.0
ETAZ	East Tamaki Re	5.46	17	P	Pn	05 59 24.1	+0.7
EPAZ	Eden Park BICE	5.50	16	P	Pn	05 59 24.9	+1.0
HBAZ	Herne Bay Bore	5.52	15	P	Pn	05 59 25.2	+1.0
RVAZ	Riverhead Bore	5.57	14	P	Pn	05 59 25.6	+0.7
MBAZ	Motutapu North	5.63	17	P	Pn	05 59 26.5	+0.7
WIAZ	Waiheke Island	5.66	19	P	Pn	05 59 27.1	+0.9
APZ	The Paps	5.82	215	P	Pn	05 59 26.4	-1.9
KUZ	Kuaotunu	5.86	23	P	Pn	05 59 29.3	+0.4
	115nm,0.7s						
KUZ	Kuaotunu	5.86	23	P	Pn	05 59 29.2	+0.3
PYZ	Puysegur Point	5.98	226	P	Pn	05 59 29.7	-0.8
	108nm,1.3s						
PYZ	Puysegur Point	5.98	226	P	Pn	05 59 29.2	-1.3
MXZ	Matakaoa Point	6.22	44	P	Pn	05 59 33.1	-0.7
	159nm,0.9s						
MXZ	Matakaoa Point	6.22	44	P	Pn	05 59 32.4	-1.4
GRZ	Great Barrier	6.26	19	P	Pn	05 59 34.7	+0.4
WCZ	Waipu Caves	6.34	11	P	Pn	05 59 35.9	+0.4
CTZ	Chatham Island	7.84	105	P	Pn	05 59 54.3	-1.7
	77nm,0.6s						
CTZ	Chatham Island	7.84	105	P	Pn	05 59 53.7	-2.3
MCQ	Macquarie Isla	15.37	212	Pn	Pn	06 01 37.9	+0.3
ARMA	Armidale	20.72	298	P	P	06 02 39.8	-0.3
ARMA				IAmb	IAmb	06 03 03.7	
	comp=Z,20nm,1.3s						
DZM	Mont Dzumac	20.78	343	P	P	06 02 40.6	-0.2
	comp=Z,11nm,1.0s,baz=203,slow=15,SNR=4.7						
DZM				LR	LR	06 09 30.4	
	comp=Z,109nm,18.4s,baz=204,slow=33						
	comp=Z,11nm,1.0s						
DZM	Mont Dzumac	20.78	343	P	P	06 02 39.9	-0.8
DZM				IAmb	IAmb	06 02 44.2	
	comp=Z,18nm,1.1s						
KOUNC	Koumac, New Ca	22.77	339	P	P	06 03 02.5	+0.6
KOUNC				IAmb	IAmb	06 03 07.1	

	comp=Z,23nm,1.0s						
EIDS	**Eidsvold**	**24.60**	**306**	P	**P**	**06 03 19.6**	**+0.6**
MSVF	**Nonsavu**	**24.77**	**12**	P	**P**	**06 03 20.1**	**-0.6**
	comp=Z,7.9nm,0.8s,baz=156,slow=12,SNR=2.6						
	comp=Z,7.9nm,0.8s						
AFI	**Afiamalu**	**31.15**	**30**	LR	LR	06 15 46.9	
	comp=Z,34nm,19.5s,baz=192,slow=34						
CTA	**Charters Tower**	**31.49**	**306**	P	**P**	**06 04 21.4**	**+0.7**
	comp=Z,4.3nm,0.8s,baz=130,slow=12,SNR=6.6						
CTA				LR	LR	06 15 25.2	
	comp=Z,50nm,18.7s,baz=84,slow=33						
	comp=Z,4.3nm,0.8s						
CTAO	**Charters Tower**	**31.49**	**306**	P	**P**	**06 04 21.3**	**+0.7**
CTAO				IAmb	IAmb	06 04 23.5	
	comp=Z,6.8nm,0.9s						
HNR	**Honiara**	**34.56**	**337**	LR	LR	06 18 36.0	
	comp=Z,660nm,18.6s,baz=148,slow=36						
AS31	**Alice Springs**	**37.19**	**287**	P	**P**	**06 05 09.6**	**-0.4**
ASAR	**Alice Springs**	**37.19**	**287**	P	**P**	**06 05 09.7**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=126,slow=7.2,SNR=24						
ASAR				PcP	**PcP**	**06 07 27.9**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=122,slow=4.3,SNR=2.5						
ASAR				ScP	**ScP**	**06 11 07.8**	**-2.6**
	comp=Z,0.3nm,0.8s,baz=129,slow=3.7,SNR=2.4						
ASAR				LR	LR	06 19 23.2	
	comp=Z,40nm,21.9s,baz=134,slow=34						
	comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**37.19**	**287**	P	**P**	**06 05 09.0**	**-1.0**
COEN	**Coen**	**38.10**	**309**	P	**P**	**06 05 18.4**	**+0.7**
COEN				IAmb	IAmb	06 05 18.9	
	comp=Z,12nm,0.9s						
WB2	**Warramunga Arr**	**39.32**	**292**	P	**P**	**06 05 27.6**	**-0.3**
WB2				IAmb	IAmb	06 05 28.9	
	comp=Z,8.4nm,1.2s						
WRA	**Warramunga Arr**	**39.33**	**292**	P	**P**	**06 05 27.8**	**-0.1**
	comp=Z,2.1nm,0.6s,baz=127,slow=8.6,SNR=43						
WRA				PcP	**PcP**	**06 07 34.9**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=123,slow=3.2,SNR=2.6						
	comp=Z,2.1nm,0.6s						
WRA	**Warramunga Arr**	**39.33**	**292**	P	**P**	**06 05 27.6**	**-0.3**
KRVT	**Keravat (AS076**	**42.07**	**328**	P	**P**	**06 05 50.8**	**+0.3**
	comp=Z,96nm,0.7s,baz=207,slow=4.7,SNR=2.5						
KNRA	**Kununurra**	**46.10**	**291**	P	**P**	**06 06 24.0**	**+1.3**
KNRA				IAmb	IAmb	06 06 33.4	
	comp=Z,7.5nm,1.2s						
MTN	**Manton Dam**	**46.50**	**296**	P	**P**	**06 06 26.3**	**+0.4**
MTN				IAmb	IAmb	06 06 26.6	
	comp=Z,5.1nm,0.7s						
FITZ	**Fitzroy Crossi**	**46.66**	**286**	P	**P**	**06 06 26.7**	**-0.4**
MORW	**Morawa**	**47.23**	**267**	P	**P**	**06 06 32.1**	**+0.6**
MORW				IAmb	IAmb	06 07 14.3	
	comp=Z,23nm,1.4s						
QSPA	**South Pole Qui**	**47.94**	**180**	P	P	06 06 41.4	+4.7
QSPA				IAmb	IAmb	06 06 55.9	
	comp=Z,6.8nm,0.9s						
PSA00	**Pilbara Seismi**	**48.67**	**278**	P	**P**	**06 06 42.0**	**-0.8**
LUWI	**Luwuk**	**60.76**	**298**	P	**P**	**06 08 11.2**	**+1.0**
SMRI	**Semarang**	**65.00**	**284**	P	**P**	**06 08 40.4**	**+1.9**
KSRS	**Korea Array**	**89.25**	**326**	P	**P**	**06 10 52.6**	**-0.9**
	comp=Z,1.8nm,0.8s,baz=151,slow=5.2,SNR=6.3						
	comp=Z,1.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**90.89**	**294**	P	**P**	**06 11 02.7**	**+1.0**
	comp=Z,0.8nm,0.4s,baz=134,slow=2.6,SNR=5.2						
	comp=Z,0.8nm,0.4s						
CMAR	**Chiang Mai Arr**	**90.89**	**294**	P	**P**	**06 11 02.5**	**+0.8**
PZH	**PanZhiHua**	**94.70**	**302**	P	**P**	**06 11 21.0**	**+1.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,190nm,4.7s						
HHC	**Hu-ho-hao-te**	**99.53**	**318**	*e*P	**Pdif**	**06 11 44.8**	**+4.1**
HHC				pmax	pmax		
	comp=Z,19nm,0.9s						
HHC				pmax	pmax		
	comp=Z,190nm,5.8s						
WMQ	**Urumqi**	**114.63**	**307**	*e*P	**PKiKP**	**06 16 39.7**	**+2.2**
DBIC	**Dimbokro**	**144.57**	**184**	PKP	**PKPdf**	**06 17 34.0**	**-0.6**
	comp=Z,1.4nm,0.4s,baz=167,slow=3.4,SNR=4.7						
ARCES	**ARCESS Array B**	**147.84**	**339**	PKPbc	**PKPbc**	**06 17 39.9**	**-1.6**
	comp=Z,7.6nm,0.9s,baz=29,slow=2.8,SNR=5.8						
BRTR	**Keskin Array B**	**149.34**	**279**	PKPbc	**PKPbc**	**06 17 44.9**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=134,slow=6.3,SNR=3.5						
TORD	**Torodi Ar. Bea**	**150.07**	**197**	PKPbc	**PKiKP**	**06 17 48.6**	**-0.9**
	comp=Z,1.9nm,0.5s,baz=161,slow=2.3,SNR=16						
FINES	**FINESS Array B**	**152.34**	**326**	PKPbc	**PKPbc**	**06 17 51.2**	**-1.3**
	comp=Z,1.9nm,0.6s,baz=71,slow=3.2,SNR=16						
AKASG	**Malin Array Be**	**153.79**	**301**	PKPbc	**PKiKP**	**06 17 56.9**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=65,slow=1.9,SNR=1.7						

IDC 11 06:08:44.3±8.2, 32°.25S×179°.78W, h106^{km}±62^{km}, mb3.5/3, mbtmp3.9/4, Error ellipse: s-maj=62.4km s-min=27.4km az=50.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.51**	**202**	P	Pn	06 10 18.9	+1.4
	16nm,1.1s,baz=80,slow=17,SNR=1.9						
URZ				S	Sn	06 11 29.5	-0.8
	8.3nm,0.5s,baz=299,slow=5.7,SNR=11						
ASAR	**Alice Springs**	**41.54**	**270**	P	P	06 16 21.5	-0.1
	0.4nm,0.5s,baz=108,slow=7.6,SNR=8.8						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**42.70**	**275**	P	P	06 16 31.0	0.0
	0.8nm,0.4s,baz=113,slow=8.1,SNR=14						
	0.8nm,0.4s						
QSPA	**South Pole Qui**	**57.87**	**180**	P	P	06 18 24.9	+0.1
	2.2nm,1.0s,baz=144,slow=1.2,SNR=8.8						
	2.2nm,1.0s						
FINES	**FINESS Array B**	**146.32**	**338**	PKPbc	PKPdf	06 28 10.5	0.0
	2.6nm,1.1s,baz=21,slow=4.6,SNR=2.2						

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*IDC **11** 06:36:41.5±1.0, 39°.92N×145°.12E, h0^{km}, mb3.5/8, mbtmp3.6/11, ML3.2/3, MS2.6/2, Error ellipse: s-maj=27.0km s-min=22.1km az=2.0*

*JMA **11** 06:36:45.6±0.3, 40°.1N±0°.8×14°5E±°, h45^{km}, MV3.4/27, FAR E OFF NORTH HONSHU*

ISC 11 06:36:46.9±0.8, 40°.05N±0°.05×144°.89E±0°.07, h32^{km}, n31, σ1^{s}.37/40, mb3.5/9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**2.33**	**268**	*e*S	**Sn**	**06 37 48.3**	**-2.2**
JEM	**Erimo**	**2.36**	**327**	*e*P	**Pn**	**06 37 22.6**	**-0.7**
JEM				*e*S	**Sn**	**06 37 50.4**	**-0.8**
MIYJ	**Miyakonagasawa**	**2.41**	**260**	*e*P	**Pn**	**06 37 23.2**	**-0.8**
MIYJ				*e*S	**Sn**	**06 37 50.9**	**-1.6**
JKEN	**Kujiedanarisaw**	**2.44**	**275**	*e*P	**Pn**	**06 37 22.9**	**-1.6**
JKEN				*e*S	**Sn**	**06 37 50.9**	**-2.4**
JTHR	**Tokachihiroo**	**2.54**	**332**	P	**Pn**	**06 37 24.8**	**-1.0**
JANG	**Nango**	**2.60**	**278**	*e*P	**Pn**	**06 37 25.8**	**-0.9**
JANG				*e*S	**Sn**	**06 37 55.4**	**-1.9**
JNBK	**Urakawa-nobuka**	**2.75**	**325**	*e*P	**Pn**	**06 37 28.7**	**0.0**
JNBK				*e*S	**Sn**	**06 38 01.0**	**+0.2**
JCH	**Churui**	**2.81**	**336**	P	**Pn**	**06 37 28.4**	**-1.1**
JCH				*e*S	**Sn**	**06 38 00.2**	**-2.0**
JOM	**Ohasama**	**2.83**	**259**	P	**Pn**	**06 37 29.6**	**-0.3**
JAK	**Akkeshi**	**2.94**	**357**	*e*P	**Pn**	**06 37 30.2**	**-1.2**
JAK				*e*S	**Sn**	**06 38 04.2**	**-1.4**
JMK	**Ichinoseki**	**3.05**	**250**	P	**Pn**	**06 37 32.1**	**-0.7**
JMK				S	**Sn**	**06 38 07.0**	**-1.1**
JOT	**Ohata**	**3.21**	**296**	P	**Pn**	**06 37 34.9**	**-0.1**
JOT				*e*S	**Sn**	**06 38 11.3**	**-0.8**
JAR	**Ashorobuto**	**3.35**	**346**	*e*S	**Sn**	**06 38 13.5**	**-2.1**
JYK	**Kaneyama**	**3.69**	**254**	*e*P	**Pn**	**06 37 41.8**	**+0.2**
JEW	**Eniwo**	**3.80**	**318**	*e*P	**Pn**	**06 37 43.3**	**+0.1**
JTKR	**Abashiri--Toko**	**3.98**	**350**	*e*P	**Pn**	**06 37 44.7**	**-0.9**
JTKR				*e*S	**Sn**	**06 38 29.4**	**-1.8**
ASAJ	**Asahikawa**	**4.41**	**338**	Pn	**Pn**	**06 37 51.1**	**-0.3**
	1.0nm,0.3s,baz=207,slow=9.9,SNR=6.8						
ASAJ				Sn	**Sn**	**06 38 38.9**	**-2.7**
	0.9nm,0.3s,baz=353,slow=1.4,SNR=3.6						
	3.3nm,0.3s						
MJAR	**Matsushiro Arr**	**6.32**	**238**	Pn	**Pn**	**06 38 17.2**	**-0.6**
	0.2nm,0.3s,baz=79,slow=14,SNR=14						
	3.5nm,0.7s						
USRK	**Ussuriysk Ar.**	**10.44**	**298**	Pn	**Pn**	**06 39 15.2**	**+1.0**
	0.3nm,0.3s,baz=96,slow=13,SNR=4.9						
	2.9nm,0.6s						
KLR	**Kul'dur**	**13.09**	**319**	LR	LR	06 45 04.3	
	comp=Z,29nm,19.2s,baz=200,slow=38						
KSRS	**Korea Array**	**13.50**	**264**	LR	LR	06 44 14.0	
	comp=Z,21nm,21.5s,baz=100,slow=33						
SEY	**Seymchan**	**23.35**	**9**	P	**P**	**06 41 54.5**	**+2.4**
	2.5nm,0.8s,baz=173,slow=8.1,SNR=7.7						
SONM	**Songino Array**	**28.55**	**299**	P	**P**	**06 42 42.0**	**+2.3**
	0.3nm,0.4s,baz=79,slow=10,SNR=1.6						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**41.98**	**310**	PcP	**PcP**	**06 46 30.3**	**+0.9**
	0.9nm,0.5s,baz=69,slow=2.8,SNR=4.9						
MKAR	**Makanchi Array**	**44.90**	**300**	P	**P**	**06 44 58.9**	**+0.7**
	0.2nm,0.7s,baz=79,slow=7.5,SNR=2.8						
	0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**46.36**	**306**	P	**P**	**06 45 10.6**	**+0.9**
	0.4nm,0.3s,baz=77,slow=8.4,SNR=4.3						
	0.4nm,0.3s						
WRA	**Warramunga Arr**	**60.49**	**191**	P	**P**	**06 46 52.1**	**-1.6**
	0.4nm,0.6s,baz=6.6,slow=7.5,SNR=4.0						
	0.4nm,0.6s						
FINES	**FINESS Array B**	**67.40**	**333**	P	**P**	**06 47 39.3**	**+0.6**
	0.7nm,0.7s,baz=46,slow=8.0,SNR=6.8						
	0.7nm,0.7s						
NVAR	**Mina Array Bea**	**71.02**	**56**	P	**P**	**06 48 00.3**	**-1.5**
	0.3nm,0.7s,baz=282,slow=7.4,SNR=3.6						
	0.3nm,0.7s						
PDAR	**Pinedale Array**	**73.61**	**48**	P	**P**	**06 48 17.2**	**0.0**
	0.2nm,0.5s,baz=241,slow=1.3,SNR=6.1						
	0.2nm,0.5s						
TXAR	**Lajitas Array**	**86.14**	**55**	P	**P**	**06 49 24.9**	**-0.1**
	0.2nm,0.6s,baz=299,slow=3.7,SNR=3.7						
	0.2nm,0.6s						

IDC 11 06:43:23.9±1.5, 5°.76S×150°.23E, h0^{km}, mb3.3/2, mbtmp3.5/3, ML3.8/1, Error ellipse: s-maj=95.1km s-min=21.0km az=137.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.29**	**51**	Pn	Pn	06 44 04.0	+1.0
	27nm,0.3s,baz=178,slow=5.4,SNR=7.1						
KRVT				Sn	Sn	06 44 33.5	+1.5
	16nm,0.3s,baz=274,slow=11,SNR=2.9						
	72nm,0.4s						
PMG	**Port Moresby**	**4.74**	**220**	Sn	Sn	06 45 30.6	-1.8
	1.3nm,0.3s,baz=242,slow=20,SNR=1.6						
WRA	**Warramunga Arr**	**20.92**	**226**	P	P	06 48 07.9	-0.5
	0.9nm,0.8s,baz=53,slow=10,SNR=6.5						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**23.75**	**220**	P	P	06 48 38.6	+0.4
	1.0nm,0.8s,baz=57,slow=8.5,SNR=14						
	1.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**148.14**	**286**	PKPbc	PKPbc	07 03 11.5	-1.4
	0.7nm,0.6s,baz=50,slow=2.8,SNR=4.6						

IDC 11 06:52:12.3±7.3, 16°.08N×145°.93E, h124^{km}±98^{km}, mb3.1/3, mbtmp3.5/4, ML3.4/1, Error ellipse: s-maj=96.0km s-min=43.8km az=178.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.68**	**203**	P	Pn	06 52 55.7	+1.1
	6.3nm,0.3s,baz=6.6,slow=19,SNR=1.4						
GUMO				S	Sn	06 53 27.4	+0.3
	50nm,0.3s,baz=153,slow=23,SNR=8.8						
	19nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**19.96**	**80**	T	T	07 17 34.6	
	baz=262						
H11S1	**WAKE ISLAND Hy**	**19.98**	**80**	T	T	07 17 26.7	
	baz=262						
H11S2	**WAKE ISLAND Hy**	**19.98**	**80**	T	T	07 17 31.5	
	baz=262						
H11N1	**WAKE ISLAND Hy**	**20.27**	**77**	T	T	07 17 54.5	
	baz=266,slow=75						
H11N2	**WAKE ISLAND Hy**	**20.28**	**77**	T	T	07 17 55.3	
	baz=266						
H11N3	**WAKE ISLAND Hy**	**20.29**	**77**	T	T	07 17 55.2	
	baz=266,slow=75						
MKAR	**Makanchi Array**	**60.45**	**315**	P	P	07 02 09.6	+0.6
	0.4nm,0.5s,baz=93,slow=7.9,SNR=5.1						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**65.89**	**26**	P	P	07 02 44.0	-0.5
	0.3nm,0.5s,baz=244,slow=5.7,SNR=7.2						
	0.3nm,0.5s						
YKA	**Yellowknife Ar**	**80.19**	**28**	P	P	07 04 08.6	-0.1
	0.2nm,0.6s,baz=284,slow=5.0,SNR=4.1						
	0.2nm,0.6s						

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*ISK **11** 06:55:58.9, 39°.53N×26°.09E, h12^{km}, ML2.5/18*

*DDA **11** 06:56:00.2±0.0, 39°.55N×26°.14E, h7^{km}±1^{km}, ML2.0*

ISC 11 06:55:59.5±0.9, 39°.53N±0°.02×26°.10E±0°.03, h13^{km}±5^{km}, n26, σ0^{s}.33/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	**Canakkale, Ayv**	**0.04**	**132**	P	**Pg**	**06 56 01.9**	**+0.1**
KOCA				S	**Sg**	**06 56 03.3**	**-0.1**
GPNR	**Gulpinar-Canak**	**0.07**	**162**	Pg	**Pg**	**06 56 01.9**	**-0.2**
GPNR				Sg	**Sg**	**06 56 03.8**	**-0.2**
EZN	**Ezine**	**0.34**	**30**	Pg	**Pg**	**06 56 06.6**	**+0.2**
EZN				Sg	**Sg**	**06 56 11.6**	**+0.5**
SIGR	**SIGRI**	**0.37**	**212**	Pg	**Pg**	**06 56 06.9**	**0.0**
SIGR				Sg	**Sg**	**06 56 12.3**	**+0.5**
BAYC	**CANAKKALE_Bayr**	**0.40**	**58**	P	**Pg**	**06 56 07.7**	**+0.1**
BAYC				S	**Sg**	**06 56 12.7**	**-0.2**
COMU	**Canakkale**	**0.64**	**26**	Pg	**Pg**	**06 56 11.9**	**0.0**
COMU				Sg	**Sb**	**06 56 21.3**	**-0.1**
GADA	**Gvkgeada**	**0.68**	**347**	Pg	**Pg**	**06 56 12.6**	**-0.1**
GADA				Sg	**Sg**	**06 56 21.8**	**+0.1**
BUHA	**Balikesir, Bur**	**0.75**	**92**	P	**Pb**	**06 56 14.4**	**-0.1**
BUHA				S	**Sb**	**06 56 24.2**	**-0.4**
BUHA				*i* AML	AML	06 56 29.0	
	comp=E,32nm,0.5s						
DKL	**Dikili**	**0.77**	**126**	Pg	**Pg**	**06 56 13.9**	**-0.5**
CANM	**Can-anakkale**	**0.88**	**56**	Pg	**Pb**	**06 56 16.8**	**+0.2**
KARB	**zmir-Karabur**	**0.90**	**164**	P	**Pb**	**06 56 17.3**	**+0.4**
KARB				S	**Sg**	**06 56 28.5**	**0.0**
KARB				*i* AML	AML	06 56 33.0	
	comp=N,37nm,0.2s						
KARB				*i* AML	AML	06 56 33.0	
	comp=E,39nm,0.6s						
GELI	**Tayfur-Gelibol**	**0.92**	**18**	Pg	**Pg**	**06 56 16.6**	**-0.6**
ZEDA	**zmir-Bergama**	**0.94**	**126**	P	**Pb**	**06 56 18.2**	**+0.5**
ZEDA				*i* AML	AML	06 56 32.0	
	comp=N,92nm,0.3s						
ZEDA				S	**Sn**	**06 56 32.2**	**+0.4**
ZEDA				*i* AML	AML	06 56 33.0	
	comp=E,55nm,0.2s						
LPK	**Lapseki**	**0.98**	**31**	Pg	**Pg**	**06 56 18.2**	**-0.3**
CHOS	**Chios island**	**1.14**	**182**	Pn	**Pb**	**06 56 20.7**	**-0.4**
ERIK	**Erikli-Kesan**	**1.19**	**15**	Pn	**Pb**	**06 56 21.8**	**0.0**
BALY	**Balya**	**1.19**	**79**	P	**Pn**	**06 56 22.7**	**+0.8**
BALY				S	**Sn**	**06 56 37.9**	**-0.1**
BALY				*i* AML	AML	06 56 41.0	
	comp=E,17nm,0.2s						
BALY				*i* AML	AML	06 56 42.0	
	comp=N,28nm,0.8s						
ENEZ	**Enez**	**1.21**	**2**	Pn	**Pb**	**06 56 21.9**	**-0.3**
URLA	**Izmir**	**1.23**	**162**	Pn	**Pn**	**06 56 21.9**	**-0.5**
KRBG	**Karabiga-Canak**	**1.26**	**46**	Pn	**Pn**	**06 56 22.4**	**-0.4**
BLCB	**Balcova**	**1.35**	**147**	Pn	**Pn**	**06 56 24.1**	**0.0**
ALN	**Alexandroupoli**	**1.37**	**358**	Pn	**Pn**	**06 56 24.5**	**+0.2**
KESN	**Edirne-Kesan**	**1.37**	**19**	P	**Pg**	**06 56 25.8**	**-0.1**
KESN				S	**Sb**	**06 56 42.9**	**0.0**
KESN				*i* AML	AML	06 56 44.0	
	comp=N,50nm,0.6s						
KESN				*i* AML	AML	06 56 45.0	
	comp=E,35nm,0.2s						
RKY	**Sarkoy-Tekirda**	**1.42**	**35**	Pn	**Pn**	**06 56 25.2**	**+0.1**
RDO	**Rodhopi**	**1.68**	**345**	Pn	**Pn**	**06 56 28.7**	**+0.2**
OUR	**Ouranopolis**	**1.82**	**297**	Pn	**Pn**	**06 56 30.7**	**+0.2**

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*IDC **11** 06:57:22.7±0.7, 52°.42N×160°.65E, h0^{km}, mb3.8/15, mbtmp3.8/18, ML3.8/3, MS2.9/7, Error ellipse: s-maj=21.0km s-min=13.4km az=166.0*

*KRSC **11** 06:57:24.9±1.5, 52°.34N×160°.77E, h35^{km}±18^{km}, Mc3.5, Ml4.4*

*MOS **11** 06:57:26.1±0.8, 52°.27N×160°.76E, h37^{km}, mb4.1/1, Error ellipse: s-maj=8.7km s-min=5.0km az=106.7*

ISC 11 06:57:26.6±3.9, 52°.32N±0°.05×160°.75E±0°.05, h29^{km}±29^{km}, n93, σ1^{s}.49/102, mb3.7/15, MS2.7/4, 1C, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.90**	**331**	PN	**Pn**	**06 57 41.6**	**-1.6**
SPN				S	**Sn**	**06 57 53.2**	**-2.0**
SPN	**Mys Shipunski**	**0.90**	**331**	*e*P	**Pn**	**06 57 41.6**	**-1.6**
SPN				*e*S	**Sn**	**06 57 53.2**	**-2.0**
NLC	**Nalytchevo**	**1.21**	**316**	PN	**Pn**	**06 57 46.8**	**-0.7**
NLC				S	**Sn**	**06 58 01.8**	**-1.1**
NLC	**Nalytchevo**	**1.21**	**316**	*e*P	**Pn**	**06 57 46.8**	**-0.7**
NLC				*e*S	**Sn**	**06 58 01.8**	**-1.1**
RUS	**Russkaya**	**1.37**	**276**	PN	**Pn**	**06 57 49.4**	**-0.4**
RUS				S	**Sn**	**06 58 06.9**	**-0.1**
RUS	**Russkaya**	**1.37**	**276**	*e*P	**Pn**	**06 57 49.4**	**-0.4**
RUS				*e*S	**Sn**	**06 58 06.9**	**-0.1**
DALK	**Dalny**	**1.41**	**301**	PN	**Pn**	**06 57 49.3**	**-1.0**
DALK				S	**Sn**	**06 58 07.1**	**-0.7**
DALK	**Dalny**	**1.41**	**301**	*e*P	**Pn**	**06 57 49.3**	**-1.0**
DALK				*e*S	**Sn**	**06 58 07.1**	**-0.7**
PET	**Petropavlovsk**	**1.46**	**300**	⇑*i*PN	**Pn**	**06 57 50.0**	**-0.9**
PET				*e*S	**Sn**	**06 58 08.3**	**-0.7**
PET				pmax	pmax		
	comp=Z,229nm,0.5s						
PET				smax	smax		
	comp=N,2µm,0.5s						
PET				smax	smax		
	comp=E,3µm,0.6s						
PET	**Petropavlovsk**	**1.46**	**300**	*e*P	**Pn**	**06 57 50.3**	**-0.6**
PET				*e*S	**Sn**	**06 58 08.7**	**-0.3**
UGLR	**Uglovaya**	**1.47**	**308**	PN	**Pn**	**06 57 50.6**	**-0.6**
UGLR	**Uglovaya**	**1.47**	**308**	*e*P	**Pn**	**06 57 50.6**	**-0.6**
SDLR	**Sedlovina**	**1.48**	**311**	PN	**Pn**	**06 57 50.5**	**-1.0**
SDLR	**Sedlovina**	**1.48**	**311**	*e*P	**Pn**	**06 57 50.5**	**-1.0**
INSR	**Institute**	**1.50**	**301**	*e*P	**Pn**	**06 57 51.0**	**-0.6**
SMAR	**Somma**	**1.51**	**309**	PN	**Pn**	**06 57 51.3**	**-0.6**
SMAR	**Somma**	**1.51**	**309**	*e*P	**Pn**	**06 57 51.3**	**-0.6**
AVH	**Avacha**	**1.54**	**309**	PN	**Pn**	**06 57 51.7**	**-0.5**
AVH	**Avacha**	**1.54**	**309**	*e*P	**Pn**	**06 57 51.7**	**-0.5**
KRER	**Koryakskii**	**1.56**	**310**	PN	**Pn**	**06 57 52.0**	**-0.6**
KRER	**Koryakskii**	**1.56**	**310**	*e*P	**Pn**	**06 57 52.0**	**-0.6**
MTVR	**Mutnovka**	**1.58**	**277**	PN	**Pn**	**06 57 52.7**	**-0.1**
MTVR	**Mutnovka**	**1.58**	**277**	*e*P	**Pn**	**06 57 52.7**	**-0.1**
KOK	**Koryaka**	**1.61**	**308**	PN	**Pn**	**06 57 52.7**	**-0.5**
KOK	**Koryaka**	**1.61**	**308**	*e*P	**Pn**	**06 57 52.7**	**-0.5**
KRX	**Arik**	**1.64**	**310**	PN	**Pn**	**06 57 53.0**	**-0.7**
KRX	**Arik**	**1.64**	**310**	*e*P	**Pn**	**06 57 53.0**	**-0.7**
GRL	**Gorelyy**	**1.65**	**279**	PN	**Pn**	**06 57 54.2**	**+0.4**
GRL	**Gorelyy**	**1.65**	**279**	*e*P	**Pn**	**06 57 54.2**	**+0.4**
KRMR	**Karymshinskiy**	**1.68**	**289**	PN	**Pn**	**06 57 53.4**	**-0.6**
KRMR	**Karymshinskiy**	**1.68**	**289**	*e*P	**Pn**	**06 57 53.4**	**-0.6**
KDTR	**Khodutka, Kamc**	**1.73**	**254**	PN	**Pn**	**06 57 54.3**	**-0.3**
KDTR				S	**Sn**	**06 58 14.9**	**-0.8**
KDTR	**Khodutka, Kamc**	**1.73**	**254**	*e*P	**Pn**	**06 57 54.3**	**-0.3**
KDTR				*e*S	**Sn**	**06 58 14.9**	**-0.8**
PETK	**Petropavlovsk-**	**2.01**	**294**	Pn	**Pn**	**06 57 58.0**	**-0.6**
	comp=E,29nm,0.3s,baz=254,slow=21,SNR=105						
PETK				Sn	**Sn**	**06 58 24.3**	**+1.4**
	comp=E,63nm,0.3s,baz=85,slow=32,SNR=2.8						
GNL	**Ganaly**	**2.18**	**310**	PN	**Pn**	**06 58 01.6**	**+0.5**
GNL				S	**Sn**	**06 58 29.2**	**+2.1**
GNL	**Ganaly**	**2.18**	**310**	*e*P	**Pn**	**06 58 01.6**	**+0.5**
GNL				*e*S	**Sn**	**06 58 29.2**	**+2.1**
APC	**Apacha**	**2.27**	**287**	PN	**Pn**	**06 58 03.0**	**+0.9**
APC	**Apacha**	**2.27**	**287**	*e*P	**Pn**	**06 58 03.0**	**+0.9**
PAU	**Pauzhetka**	**2.58**	**252**	PN	**Pn**	**06 58 08.5**	**+2.1**
PAU	**Pauzhetka**	**2.58**	**252**	*e*P	**Pn**	**06 58 08.5**	**+2.1**
TUMD	**Tumrok D**	**2.90**	**356**	*e*P	**Pn**	**06 58 11.6**	**+0.8**
TUMD				*e*S	**Sn**	**06 58 44.7**	**+0.1**
TUMR	**Tumrok**	**2.99**	**353**	PN	**Pn**	**06 58 12.4**	**+0.2**
TUMR	**Tumrok**	**2.99**	**353**	*e*P	**Pn**	**06 58 12.4**	**+0.2**
SKR	**Severo-Kuril's**	**3.32**	**242**	*e*PN	**Pn**	**06 58 17.5**	**+0.9**
SKR				*e*S	**Sn**	**06 58 57.4**	**+2.3**
SKR				pmax	pmax		
	comp=Z,72nm,0.8s						
SKR				smax	smax		
	comp=N,407nm,0.9s						
SKR				smax	smax		
	comp=E,562nm,0.6s						
SKR				MLR	MLR		
	comp=Z,900nm,17.0s						
KMNR	**Kamenistaya**	**3.46**	**355**	PN	**Pn**	**06 58 20.1**	**+1.6**
KMNR				S	**Sn**	**06 58 59.6**	**+1.1**
KMNR	**Kamenistaya**	**3.46**	**355**	*e*P	**Pn**	**06 58 20.1**	**+1.6**
KMNR				*e*S	**Sn**	**06 58 59.5**	**+1.1**
BZP	**Bezymyannyi-Pe**	**3.60**	**358**	*e*P	**Pn**	**06 58 23.7**	**+3.1**
BZMR	**Bezymyannaya**	**3.63**	**358**	PN	**Pn**	**06 58 23.9**	**+3.0**
BZMR	**Bezymyannaya**	**3.63**	**358**	*e*P	**Pn**	**06 58 23.9**	**+3.0**
BZGR	**Bezymyannyi-Gr**	**3.63**	**360**	PN	**Pn**	**06 58 23.8**	**+2.9**
BZGR	**Bezymyannyi-Gr**	**3.63**	**360**	*e*P	**Pn**	**06 58 23.8**	**+2.9**
KPT	**Kopyto**	**3.67**	**355**	PN	**Pn**	**06 58 24.7**	**+3.3**
KPT	**Kopyto**	**3.67**	**355**	*e*P	**Pn**	**06 58 24.7**	**+3.3**
ESO	**Esso**	**3.81**	**342**	PN	**Pn**	**06 58 25.8**	**+2.5**
ESO	**Esso**	**3.81**	**342**	*e*P	**Pn**	**06 58 25.8**	**+2.5**
KLY	**Klyuchi**	**4.00**	**359**	PN	**Pn**	**06 58 28.4**	**+2.5**
KLY	**Klyuchi**	**4.00**	**359**	*e*P	**Pn**	**06 58 28.4**	**+2.5**
SRDR	**Sredinnyy**	**4.05**	**352**	PN	**Pn**	**06 58 28.0**	**+1.4**
SRDR	**Sredinnyy**	**4.05**	**352**	*e*P	**Pn**	**06 58 28.0**	**+1.4**
BKI	**Bering**	**4.24**	**45**	PN	**Pn**	**06 58 27.7**	**-1.4**
BKI	**Bering**	**4.24**	**45**	*e*P	**Pn**	**06 58 27.7**	**-1.4**
SRKR	**Sorokina**	**4.35**	**3**	PN	**Pn**	**06 58 33.8**	**+3.0**
SRKR	**Sorokina**	**4.35**	**3**	*e*P	**Pn**	**06 58 33.8**	**+3.0**
SHEM	**Shemya Is, Ala**	**8.16**	**82**	Pn	**Pn**	**06 59 23.2**	**+0.3**
	comp=Z,8.8nm,0.3s,baz=34,slow=3.0,SNR=7.0						
SHEM				Sn	**Sn**	**07 00 49.3**	**-4.7**
	comp=Z,3.1nm,0.3s,baz=104,slow=23,SNR=1.9						
SHEM				LR	LR	07 02 44.4	
	comp=Z,28nm,18.8s,baz=304,slow=39						
	comp=Z,26nm,0.3s						
MA2	**Magadan**	**9.17**	**326**	LR	LR	07 03 36.1	
	comp=Z,71nm,18.5s,baz=173,slow=41						
ASAJ	**Asahikawa**	**14.59**	**243**	Pn	**Pn**	**07 00 50.4**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=53,slow=10,SNR=1.8						
	comp=Z,2.4nm,0.5s						
KLR	**Kul'dur**	**18.54**	**272**	P	**P**	**07 01 40.5**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=74,slow=9.5,SNR=4.4						
KLR				LR	LR	07 09 35.9	
	comp=Z,59nm,18.2s,baz=70,slow=40						
	comp=Z,0.9nm,0.5s						
USRK	**Ussuriysk Ar.**	**20.69**	**258**	LR	LR	07 10 10.2	
	comp=Z,28nm,21.8s,baz=110,slow=37						
MJAR	**Matsushiro Arr**	**22.39**	**234**	P	**P**	**07 02 22.7**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=16,slow=11,SNR=2.0						
	comp=Z,0.9nm,0.4s						
TIXI	**Tiksi**	**23.95**	**336**	LR	LR	07 12 49.4	
	comp=Z,39nm,19.4s,baz=336,slow=39						
KDAK	**Kodiak Island**	**26.84**	**60**	P	**P**	**07 03 03.8**	**-0.4**
	comp=Z,4.4nm,0.9s,baz=293,slow=7.7,SNR=1.9						
	comp=Z,4.4nm,0.9s						
KSRS	**Korea Array**	**27.31**	**250**	LR	LR	07 14 29.1	
	comp=Z,14nm,19.4s,baz=50,slow=38						
H11N2	**WAKE ISLAND Hy**	**32.88**	**169**	T	T	07 39 47.6	
	baz=353,slow=76,SNR=91						
H11N3	**WAKE ISLAND Hy**	**32.89**	**169**	T	T	07 39 53.5	
	baz=353,slow=76,SNR=74						
H11N1	**WAKE ISLAND Hy**	**32.89**	**169**	T	T	07 39 48.9	
	baz=353,slow=76,SNR=79						
H11S1	**WAKE ISLAND Hy**	**34.06**	**170**	T	T	07 41 57.1	
	baz=351,slow=76,SNR=7.7						
H11S3	**WAKE ISLAND Hy**	**34.08**	**170**	T	T	07 41 58.2	
	baz=351,slow=76,SNR=26						
H11S2	**WAKE ISLAND Hy**	**34.08**	**170**	T	T	07 41 33.8	
	baz=351,slow=76,SNR=5.9						
INK	**Inuvik**	**34.24**	**37**	P	**P**	**07 04 09.7**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=267,slow=5.1,SNR=2.0						
	comp=Z,0.4nm,0.6s						
YKA	**Yellowknife Ar**	**43.47**	**42**	P	**P**	**07 05 26.7**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=297,slow=6.8,SNR=3.9						
	comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**48.85**	**297**	P	**P**	**07 06 07.8**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=58,slow=6.6,SNR=7.6						
	comp=Z,0.5nm,0.5s						
ARCES	**ARCESS Array B**	**54.15**	**342**	P	**P**	**07 06 46.7**	**-1.7**
	comp=Z,8.0nm,0.9s,baz=38,slow=9.2,SNR=3.4						
	comp=Z,8.0nm,0.9s						
ARU	**Arti**	**54.24**	**318**	LR	LR	07 34 45.6	
	comp=Z,20nm,19.2s,baz=156,slow=41						
NVAR	**Mina Array Bea**	**55.63**	**70**	P	**P**	**07 07 01.4**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=289,slow=5.6,SNR=3.1						
	comp=Z,0.2nm,0.5s						
PDAR	**Pinedale Array**	**57.55**	**61**	P	**P**	**07 07 14.2**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=324,slow=2.3,SNR=7.4						
	comp=Z,0.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**58.42**	**259**	P	**P**	**07 07 19.9**	**+0.4**
	comp=Z,1.5nm,0.3s,baz=31,slow=9.5,SNR=1.3						
	comp=Z,1.5nm,0.3s						
FINES	**FINESS Array B**	**60.99**	**337**	P	**P**	**07 07 36.4**	**-0.3**
	comp=Z,2.6nm,0.9s,baz=33,slow=7.8,SNR=13						
	comp=Z,2.6nm,0.9s						
NOA	**NORSAR Array B**	**64.40**	**344**	P	**P**	**07 07 59.1**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=15,slow=5.4,SNR=1.9						
	comp=Z,0.3nm,0.6s						

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AKASG Malin Array Be    69.48 329 P    P     07 08 31.7 -0.2
      comp=Z,0.3nm,0.3s,baz=27,slow=6.5,SNR=2.2
      comp=Z,0.3nm,0.3s
TXAR  Lajitas Array     70.57  67 P    P     07 08 40.0 +0.9
      comp=Z,0.5nm,0.5s,baz=298,slow=4.9,SNR=16
      comp=Z,0.5nm,0.5s
TXAR  Lajitas Array     70.57  67 P    P     07 08 40.0 +0.9
WRA   Warramunga Arr    75.55 206 P    P     07 09 08.7 +0.4
      comp=Z,0.5nm,0.9s,baz=25,slow=6.4,SNR=4.0
      comp=Z,0.5nm,0.9s
ASAR  Alice Springs     79.22 205 P    P     07 09 29.9 +1.1
      comp=Z,0.4nm,0.6s,baz=18,slow=5.7,SNR=6.5
      comp=Z,0.4nm,0.6s
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   SJA 11 07:00:31.1±1.1,29°.20S×69°.40W,h125km±6km,ML4.8,
          MW4.5,Hypocentre not reviewed by the ISC
  NEIC 11 07:00:31.2,29°.33S×69°.60W,h130km,Moment Tensor
          Solution.  Duration: 1s2  Moment tensor: Scale 10^16Nm;
          Mrr-1.49; Mθθ0.22; Mφφ1.27; Mrθ-0.10; Mθφ0.03; Mφr1.09;
           Fault plane solution: M0 1.76000×10^16  NP1:
          φs177.85000°,δ64.22000°,λ-92.91000°.  NP2:φs4.51000°,
          δ25.93000°,λ-84.00000°.  Principal axes: T 1.6521,
          Plg19.0000°, Azm270.0000°; N 0.2211, Plg3.0000°,
          Azm179.0000°; P -1.8733, Plg71.0000°, Azm82.0000°;
  NEIC 11 07:00:31.2,29°.23S×69°.26W,h130km
   VAO 11 07:00:31.7±0.3,29°.29S×69°.30W,h92km,mb4.7
  NEIC 11 07:00:31.8±2.3,29°.23S±0°.02×69°.31W±0°.08,h94km±5km,
          mb5.2/48,Mww4.8/22,Mwr4.9(GUC),Error ellipse:
          s-maj=10.2km s-min=3.1km az=85.0
   GUC 11 07:00:32.9±0.7,29°.20S×69°.50W,h130km±5km,ML4.7
   IDC 11 07:00:33.8±0.5,29°.26S×69°.24W,h115km±4km,mb4.4/17,
          mbtmp4.6/20,MS3.2/3,Error ellipse: s-maj=17.0km
          s-min=7.7km az=73.0
   ISC 11 07:00:32.6±0.4,29°.21S±0°.03×69°.32W±0°.04,h108km±3km,
          h108km:pP-P,n309,σ1s45/340,mb5.0/41,27C-6D,
          Chile-Argentina border region
Code  Station Name       Δ°  AZ°   Phase ID        Time    Res
                                  Op   ISC       h  m  s   ISC
AC05  El Transito        0.92 294      Pn    07 00 52.8 -0.1
AC05  El Transito        0.92 294⇓iP   Pn    07 00 53.3 +0.4
AC05                             iS    Sn    07 01 08.8 +0.6
AC05                              IAML       07 01 09.9
      comp=E,35µm,0.4s
AC05  El Transito        0.92 294 eP         07 00 53.3
AC05                              eS         07 01 09.0
AC05                              IAML       07 01 10.4
      comp=Z,22µm,0.6s
CO01  Juntas del Tor     1.02 221      Pn    07 00 54.6 +0.5
CO01  Juntas del Tor     1.02 221⇓eP   Pn    07 00 54.9 +0.8
CO01                             iS    Sn    07 01 11.6 +1.2
CO01                              IAML       07 01 14.6
      comp=N,11µm,0.6s
CO01  Juntas del Tor     1.02 221 eP         07 00 55.0
CO01                              eS         07 01 11.7
CO01                              IAML       07 01 16.0
      comp=Z,6µm,0.6s
LCO   Las Campanas       1.23 279      Pn    07 00 56.0 -0.4
LCO   Las Campanas       1.23 279 eP   Pn    07 00 56.2 -0.1
LCO                              iS    Sn    07 01 14.3  0.0
LCO   Las Campanas       1.23 279 eP         07 00 56.5
LCO                               eS         07 01 14.7
LCO                               IAML       07 01 15.9
      comp=Z,33µm,0.3s
GO04  Tololo Observa     1.61 233      Pn    07 01 00.5 -0.4
GO04  Tololo Observa     1.61 233⇑iP   Pn    07 01 00.7 -0.1
GO04                             iS    Sn    07 01 22.0 -0.3
GO04  Tololo Observa     1.61 233 eP         07 01 00.8
GO04                              eS         07 01 22.5
GO03  Copiap             1.80 333      Pn    07 01 02.8 -0.2
GO03  Copiap             1.80 333 eP   Pn    07 01 03.4 +0.3
GO03                             iS    Sn    07 01 26.2 -0.1
GO03                              IAML       07 01 27.6
      comp=N,4µm,0.1s
GO03  Copiap             1.80 333 eP         07 01 03.2
GO03                              eS         07 01 26.4
CO05  La Serena          1.82 247      Pn    07 01 01.6 -1.6
CO05  La Serena          1.82 247⇑iP   Pn    07 01 02.2 -0.9
CO05                             iS    Sn    07 01 25.0 -1.4
CO05                              IAML       07 01 29.0
      comp=E,11µm,0.4s
AC04  Llanos de Chal     1.84 303      Pn    07 01 03.0 -0.5
AC04  Llanos de Chal     1.84 303⇑iP   Pn    07 01 03.2 -0.2
AC04                             iS    Sn    07 01 25.5 -1.4
AC04                              IAML       07 01 29.7
      comp=E,12µm,0.8s
AC04  Llanos de Chal     1.84 303 eP         07 01 03.2
AC04                              eS         07 01 26.1
AC04                              IAML       07 01 33.8
      comp=Z,4µm,0.9s
TINO  Tinogasta          1.92  54 eP         07 01 05.8
TINO                              eS         07 01 30.6
CO03  El Pedregal        2.01 216      Pn    07 01 05.8 +0.1
CO03  El Pedregal        2.01 216⇑iP   Pn    07 01 06.0 +0.3
CO03                             iS    Sn    07 01 31.5 +0.4
CO03                              IAML       07 01 33.1
      comp=E,10µm,0.5s
CO03  El Pedregal        2.01 216 eP         07 01 06.1
CO03                              eS         07 01 31.9
CO03                              IAML       07 01 33.9
      comp=Z,6µm,0.3s
RTLL  Cerro Villicun     2.24 161 eP         07 01 09.2
RTLL                              eS         07 01 37.9
ZON   Zonda              2.39 167      Pn    07 01 10.2 -0.5
SJA   San Juan           2.40 164 eP         07 01 11.7
CO02  Combarbal          2.46 216      Pn    07 01 10.8 -0.8
CO02  Combarbal          2.46 216⇑eP   Pn    07 01 11.2 -0.4
CO02                             iS    Sn    07 01 40.2 -1.3
CO02  Combarbal          2.46 216 eP         07 01 11.2
CO02                              eS         07 01 40.4
CO02                              IAML       07 01 50.3
      comp=Z,5µm,0.3s
CO06  Fray Jorge         2.48 233      Pn    07 01 09.9 -1.8
CO06  Fray Jorge         2.48 233⇑iP   Pn    07 01 10.1 -1.6
CO06                             iS    Sn    07 01 38.5 -3.3
CO06                              IAML       07 01 52.5
      comp=N,5µm,0.3s
CFA   Coronel Fontan     2.56 159 P    Pn    07 01 13.3 +0.5
      comp=N,180nm,0.3s,baz=334,slow=12,SNR=1715
CFA                               S    Sn    07 01 43.2 -0.6
      comp=N,665nm,0.3s,baz=119,slow=23,SNR=30
CFA   Coronel Fontan     2.56 159 eP         07 01 13.2
CFA                               eS         07 01 44.8
CFA                               IAML       07 01 49.2
      comp=Z,14µm,0.2s
RTLS  Leoncito           2.58 180 eP         07 01 14.4
RTLS                              eS         07 01 44.9
RTLS                              IAML       07 01 55.6
      comp=Z,4µm,0.9s
CYA   Choya              3.18  77⇑eP   Pn    07 01 21.2 +0.3
CYA   Choya              3.18  77 eP         07 01 21.2
CYA                               eS         07 01 57.9
CYA                               IAML       07 01 59.1
      comp=Z,2µm,0.9s
AC01  Pan de Azucar      3.25 339 Pn   Pn    07 01 21.7 -0.3
AC01  Pan de Azucar      3.25 339⇑eP   Pn    07 01 21.7 -0.3
AC01  Pan de Azucar      3.25 339 eP         07 01 21.7
AC01                              eS         07 01 51.2
ASAL  Salagasta          3.40 173 eP         07 01 25.0
ASAL                              eS         07 01 56.9
VA03  San Esteban        3.70 196 eP         07 01 27.9
VA03                              eS         07 02 02.0
VA03                              IAML       07 02 18.3
      comp=Z,1µm,0.8s
VA03  San Esteban        3.70 196      Pn    07 01 28.0 +0.1
VA03  San Esteban        3.70 196⇑eP   Pn    07 01 27.8 -0.2
VA03                              eS   Sn    07 02 09.3 -1.5
VA06  Catapilco          3.75 206 Pn   Pn    07 01 26.4 -2.1
VA06  Catapilco          3.75 206⇑eP   Pn    07 01 26.7 -1.8
AAGR  Agrelo             3.89 174 eP         07 01 31.1
AAGR                              eS         07 02 18.4
ROCH  El Roble           4.02 201⇑eP   Pn    07 01 30.4 -2.0
ROCH                             ⇑eP   Pn    07 01 30.4 -2.0
ROC1  El Roble           4.03 201      Pn    07 01 30.1 -2.4
GO02  Mina Guanaco       4.04 357      Pn    07 01 32.5 -0.3
GO02  Mina Guanaco       4.04 357⇑eP   Pn    07 01 32.9 +0.2
GO02                              eS   Sn    07 02 17.8 -1.4
GO02  Mina Guanaco       4.04 357 eP         07 01 33.0
GO02                              eS         07 02 11.2
PEL   Peldehue           4.09 196      Pn    07 01 31.9 -1.3
PEL   Peldehue           4.09 196⇑eP   Pn    07 01 32.0 -1.3
MT10  Hacienda Santa     4.18 194⇓eP   Pn    07 01 33.5 -1.0
FCH   Farellones         4.19 191⇑eP   Pn    07 01 34.8 +0.1
MT04  Ro Olivares        4.24 189⇑eP   Pn    07 01 35.7 +0.3
MT08  Bocatoma Ro        4.27 188      Pn    07 01 36.0 +0.3
MT08  Bocatoma Ro        4.27 188⇑eP   Pn    07 01 36.4 +0.7
AHML  Horco Molle        4.27  57⇑eP   Sn    07 02 25.9 +1.4
VA01  Torpederas         4.29 207      Pn    07 01 33.0 -2.8
VA01  Torpederas         4.29 207 eP   Pn    07 01 33.0 -2.8
VA01  Torpederas         4.29 207 eP         07 01 33.2
VA01                              eS         07 02 13.5
VA01                              IAML       07 02 50.9
      comp=Z,419nm,0.6s
MT02  Curacav            4.33 201      Pn    07 01 34.1 -2.2
MT02  Curacav            4.33 201⇑eP   Pn    07 01 33.9 -2.4
MT02  Curacav            4.33 201 eP         07 01 34.0
MT02                              eS         07 02 22.6
MT02                              IAML       07 02 55.5
      comp=Z,684nm,0.8s
MT05  Renca              4.34 196 Pn   Pn    07 01 35.0 -1.6
MT05  Renca              4.34 196⇑eP   Pn    07 01 35.2 -1.3
MT05  Renca              4.34 196 eP         07 01 35.0
MT05                              eS         07 02 25.4
MT05                              IAML       07 02 58.9
      comp=Z,918nm,1.2s
MT03  Universidad Ad     4.39 193      Pn    07 01 36.5 -0.7
MT03  Universidad Ad     4.39 193⇑eP   Pn    07 01 36.5 -0.7
MT03  Universidad Ad     4.39 193 eP         07 01 36.6
MT03                              eS         07 02 18.6
MT03                              IAML       07 03 06.8
      comp=Z,907nm,1.1s
MT13  San Alfonso        4.60 190      Pn    07 01 39.6 -0.3
MT13  San Alfonso        4.60 190 eP   Pn    07 01 39.7 -0.3
MT12  Pirque             4.63 193 eP   Pn    07 01 39.2 -1.3
PB14  IPOC Station P     4.67 348      Pn    07 01 39.9 -1.4
PB14  IPOC Station P     4.67 348 eP   Pn    07 01 39.8 -1.4
PB14  IPOC Station P     4.67 348 eP         07 01 40.2
PB14                              eS         07 02 14.6
PB14                              IAML       07 02 46.6
      comp=Z,684nm,0.8s
LMEL  Las Melosas        4.69 189      Pn    07 01 40.6 -0.6
LMEL  Las Melosas        4.69 189⇑eP   Pn    07 01 40.9 -0.4
MT09  Talagante          4.77 197      Pn    07 01 39.9 -2.5
MT09  Talagante          4.77 197⇑eP   Pn    07 01 39.9 -2.5
VA05  Santo Domingo      4.85 203      Pn    07 01 40.0 -3.3
VA05  Santo Domingo      4.85 203⇑eP   Pn    07 01 39.8 -3.5
VA05                              eS   Sn    07 02 33.8 -4.5
MT01  Popeta             4.93 199      Pn    07 01 42.2 -2.2
MT01  Popeta             4.93 199⇑eP   Pn    07 01 41.6 -2.8
MT01  Popeta             4.93 199 eP         07 01 41.9
MT01                              eS         07 02 19.3
MT01                              IAML       07 03 11.7
      comp=Z,391nm,1.0s
BO01  Tunca              5.38 196      Pn    07 01 47.8 -2.7
BO02  Sierra Bellavi     5.70 192      Pn    07 01 52.5 -2.5
PB10  IPOC Station P     5.78 349      Pn    07 01 54.3 -1.6
PB15  IPOC Station P     5.98 359      Pn    07 01 57.3 -1.6
GO05  Huala              6.19 200      Pn    07 01 57.0 -4.5
PB06  IPOC Station P     6.48 358      Pn    07 02 04.3 -1.4
LVC   Limon Verde        6.58   3 P    Pn    07 02 05.7 -1.5
      comp=Z,16nm,0.3s,baz=190,slow=9.1,SNR=44
LVC                               S    Sn    07 03 14.7 -6.3
      comp=Z,59nm,0.7s,baz=174,slow=11,SNR=2.4
LVC   Limon Verde        6.58   3      Pn    07 02 05.2 -2.0
LVC   Limon Verde        6.58   3 eP   Pn    07 02 05.4 -1.8
PB04  IPOC Station P     6.89 354      Pn    07 02 07.8 -3.4
PB03  IPOC Station P     7.14 357      Pn    07 02 12.6 -2.1
PB09  IPOC Station P     7.38   1      Pn    07 02 16.3 -1.6
PB07  IPOC Station P     7.47 356      Pn    07 02 16.9 -2.1
VACA  Villa Angela C     7.75  80 eP   Pn    07 02 20.4 -2.3
PB02  IPOC Station P     7.87 356      Pn    07 02 21.1 -3.4
PB01  IPOC Station P     8.13 359      Pn    07 02 24.4 -3.6
BI05  Punta Hualpn       8.19 202 Pn   Pn    07 02 23.7 -4.9
TICA  Tres Isletas       8.40  73 eP   Pn    07 02 29.4 -2.1
PB08  IPOC Station P     9.03   1      Pn    07 02 37.6 -2.9
H03N1 Juan Fernandez     9.22 240 P    Pn    07 02 40.4 -2.0
      baz=116,slow=19,SNR=48
H03N2 Juan Fernandez     9.24 240 P    Pn    07 02 40.7 -1.8
      baz=116,slow=19,SNR=64
H03N3 Juan Fernandez     9.24 240 P    Pn    07 02 40.7 -1.9
      baz=116,slow=19,SNR=65
VA04  Juan Fernndez      9.25 239      Pn    07 02 39.7 -3.3
H03S3 Juan Fernandez     9.39 238 P    Pn    07 02 41.5 -3.2
      baz=25,slow=18,SNR=5.9
H03S1 Juan Fernandez     9.39 238 P    Pn    07 02 41.4 -3.3
      baz=25,slow=18,SNR=4.5
H03S2 Juan Fernandez     9.41 238 P    Pn    07 02 41.6 -3.2
      baz=25,slow=18,SNR=6.0
MECA  Mercedes           9.74  93 eP   Pn    07 02 47.1 -2.5
ESFA  Espinillo Form    10.54  69 eP   Pn    07 02 57.9 -2.7
TRQA  Tornquist         10.73 147      Pn    07 03 00.3 -2.8
CPUP  Villa Florida     11.00  78 P    Pn    07 03 02.7 -4.0
      comp=Z,5.4nm,0.4s,baz=251,slow=12,SNR=26
CPUP                              S    Sn    07 05 03.6 -4.1
      comp=Z,24nm,0.7s,baz=339,slow=14,SNR=3.0
CPUP                              LR   LR    07 08 22.7
      comp=Z,45nm,19.5s,baz=225,slow=43
CPUP  Villa Florida     11.00  78 eP   Pn    07 03 03.8 -2.9
ITQB  Itaqui            11.08  95 eP   Pn    07 03 04.5 -3.3
PLCA  Paso Flores       11.54 185 P    Pn    07 03 14.8 +0.8
      comp=Z,1.6nm,0.6s,baz=359,slow=9.8,SNR=5.6
PLCA  Paso Flores       11.54 185 eP   Pn    07 03 12.2 -1.8
AZCA  Azaras, Argent    11.77  88 eP   Pn    07 03 14.2 -2.8
RODS  Rosario do Sul    12.32  99 eP   Pn    07 03 20.7 -3.6
LPAZ  La Paz            12.91   5 P    Pn    07 03 32.5 -0.2
      comp=Z,3.6nm,0.6s,baz=187,slow=8.4,SNR=13
LPAZ  La Paz            12.91   5      Pn    07 03 31.1 -1.6
LPAZ  La Paz            12.91   5 eP   Pn    07 03 32.3 -0.4
MURT  Porto Murtinho    12.97  57 eP   Pn    07 03 30.7 -2.2
CRSM  Crissiumal (Br    13.56  86 eP   Pn    07 03 38.1 -2.5
PLTB  Pedras Altas      13.79 105 eP   Pn    07 03 41.0 -2.5
CPSB  Cacapava Do Su    13.84  99 eP   Pn    07 03 41.1 -3.0
BBRB  Robore, Bolivi    13.93  41 eP   Pn    07 03 45.4  0.0
ALGR  Alto Alegre (B    14.27  92 eP   Pn    07 03 47.0 -2.7
AMBA  Amambai (Brazi    14.31  67 eP   Pn    07 03 48.4 -1.8
BBSD  Serra de San D    14.39  36 eP   Pn    07 03 50.3 -1.0
MCR1  Marechal Candi    14.44  74 eP   P     07 03 54.4 -1.2
FRBT  Francisco Belt    14.77  81 eP   Pn    07 03 53.8 -2.4
AQDB  Aquidauana        15.10  58      Pn    07 03 57.4 -2.9
AQDB  Aquidauana        15.10  58 eP   Pn    07 03 57.5 -2.8
SIV   San Ignacio       15.19  32 P    Pn    07 03 59.0 -2.4
      comp=Z,6.2nm,0.7s,baz=210,slow=10,SNR=26
ITAB  Concordia         15.28  87 eP   Pn    07 04 01.5 -1.0
PANT  Pantanal (Braz    15.41  52 eP   Pn    07 04 03.8 -0.4
PTGB  Pitanga           16.02  78 eP   Pn    07 04 10.6 -1.2
CNLB  Canela            16.12  95 eP   Pn    07 04 12.1 -1.0
PTLB  Pontes e Lacer    16.61  37 eP   P     07 04 19.6  0.0
PP1B  Ponte de Pedra    17.56  52 eP   P     07 04 29.7 -0.5
PCMB  Pacaembu          17.97  69 eP   P     07 04 35.1 +0.4
SALV  Santo Antonio     18.25  46 eP   Pn    07 04 38.5 -0.3
VILB  Vilhena           18.26  30 P    P     07 04 38.2 +0.3
VILB  Vilhena           18.26  30 eP   Pn    07 04 38.6 -0.4
C2SB  Chapadao do Su    18.27  59 eP   P     07 04 38.4 +0.5
TIJ01 Guaruva-PR        18.47  83 eP   P     07 04 39.5 -0.7
FRTB  Fartura           18.64  76 eP   P     07 04 42.5 +0.4
GO08  Villa O'Higgin    19.39 187 P    Pn    07 04 51.3 -0.8
ETMB  Extrema           19.51   9 P    P     07 04 52.3 +0.9
ETMB  Extrema           19.51   9 eP   P     07 04 52.4 +0.9
ITRB  Iturama           19.66  65 eP   P     07 04 53.2 +0.1
PET01 Itanhaem-SP       20.28  81 eP   P     07 04 59.9 +0.2
SPB   Sao Paulo         20.38  79 eP   P     07 05 01.4 +0.6
BB19B Bebedouro         20.47  71 eP   P     07 05 02.2 +0.3
RCLB  Rio Claro- Sao    20.73  76 eP   P     07 05 05.0 +0.4
SAML  Samuel            20.96  17 P    P     07 05 07.5 +0.4
SAML  Samuel            20.96  17 eP   P     07 05 07.5 +0.4
VAO   Valinhos          20.99  78 eP   P     07 05 07.3 -0.2
ARAG  Araguaiana, MT    20.99  54 eP   P     07 05 06.7 -0.8
PDRB  Porto dos Gac     21.08  36 eP   P     07 05 07.7 -0.7
CZSB  Cruzeiro do Su    21.60 351 P    P     07 05 15.0 +1.0
CZSB  Cruzeiro do Su    21.60 351 eP   P     07 05 14.8 +0.8
PARB  Paraibuna         22.02  80 eP   P     07 05 17.4 -1.0
CLDB  Colider           22.19  37 eP   P     07 05 21.2 +1.1
IPMB  Ipameri, GO       22.30  65 eP   P     07 05 20.7 -0.6
PMNB  Patos De Minas    23.42  68 eP   P     07 05 32.0 -0.3
BSCB  Bom Sucesso       23.65  75 eP   P     07 05 34.3 -0.1
BDFB  Brasilia          23.82  60 P    P     07 05 35.5 -0.5
      comp=Z,31nm,1.0s,baz=233,slow=8.1,SNR=28
BDFB                              LR   LR    07 16 03.6
      comp=Z,84nm,20.9s,baz=13,slow=39
      comp=Z,31nm,1.0s
BDFB  Brasilia          23.82  60 P    P     07 05 35.8 -0.2
BDFB  Brasilia          23.82  60 eP   P     07 05 35.7 -0.3
EFI   East Falkland     23.97 163 P    P     07 05 36.0 -0.7
SNDB  Serra Nova Dou    24.00  48 eP   P     07 05 36.6 -0.8
VAS01 Vassouras-RJ      24.28  79 eP   P     07 05 40.4 +0.5
TBTG  Tabatinga, AM     24.89 359 eP   P     07 05 46.1 +0.7
USHA  Ushuaia           25.61 179 P    P     07 05 52.8 +1.1
      comp=Z,32nm,0.8s,baz=349,slow=1.2,SNR=2.5
      comp=Z,32nm,0.8s
NPGB  Novo Progresso    25.68  34 eP   P     07 05 52.0 -0.6
TEFE  Tefe              25.94  11 eP   P     07 05 55.3 +0.3
JANB  Januaria          27.03  64 eP   P     07 06 04.7 -0.2
SJMB  Sao Joao De Ma    27.69  74 eP   P     07 06 10.7  0.0
ITTB  Itaituba          27.86  30 eP   P     07 06 11.9 -0.3
SDBA  SAO DESIDERIO     28.19  59 eP   P     07 06 15.1 -0.1
SMTB  Santa Maria do    28.73  50 eP   P     07 06 20.1 +0.1
SGCB  S£o Gabriel d     29.01   5 eP   P     07 06 21.5 -0.8
PRPB  Parauapebas       29.40  43 eP   P     07 06 25.4 -0.5
GUA01 Guaratinga, BA    29.86  72 eP   P     07 06 29.9 -0.1
OTAV  Otavalo           30.55 342 P    P     07 06 39.4 +2.9
OTAV  Otavalo           30.55 342 eP   P     07 06 38.6 +2.1
OTAV  Otavalo           30.55 342 P    P     07 06 38.3 +1.7
MALB  Monte Alegre      30.75  31 eP   P     07 06 37.7 -0.1
BOAV  Boa Vista         32.53  17 P    P     07 06 53.8 +0.3
BOAV  Boa Vista         32.53  17 eP   P     07 06 53.6 +0.1
JAMC  Jamundi, Valle    33.00 346 eP   P     07 06 59.0 +1.2
MCPB  Macapa, AP        33.08  33 eP   P     07 06 58.2  0.0
GR1C  Gorgona, Isla     33.13 344 eP   P     07 07 00.9 +2.3
PRAC  Prado             33.17 350 eP   P     07 07 00.3 +1.4
ORTC  Ortega, Tolima    33.42 349 eP   P     07 07 03.0 +1.8
TMAB  Tom-Au,PA,Br      33.47  41 eP   P     07 07 02.7 +1.2
YOTC  Yotoco, Valle     33.68 347 eP   P     07 07 04.7 +1.1
CHIC  Chingaza          33.91 352 eP   P     07 07 06.2 +0.3
ROSC  El Rosal          34.19 351 P    P     07 07 09.8 +1.5
      comp=Z,9.8nm,0.6s,baz=143,slow=20,SNR=2.9
      comp=Z,9.8nm,0.6s
GUY2C Guyana, Caldas    34.72 349 eP   P     07 07 14.0 +1.1
SPBC  San Pablo de B    34.96 352⇓eP   P     07 07 16.3 +1.8
RUSC  La Rusia          35.09 353 P    P     07 07 17.0 +1.0
RUSC  La Rusia          35.09 353 eP   P     07 07 16.9 +0.8
CBOC  Ciudad Bolivar    35.46 348 eP   P     07 07 20.0 +1.1
ORCD  Orcadas           35.57 159 P    P     07 07 19.1  0.0
HELC  Santa Helena      35.70 349 eP   P     07 07 21.8 +0.6
PTBC  PUERTO BERRIO,    35.88 351 eP   P     07 07 20.9 -1.4
PAMC  Pamplona, Colo    36.48 354 eP   P     07 07 27.2 -0.7
DBBC  Dabeiba           36.62 348 eP   P     07 07 30.3 +1.6
ZARC  Zaragoza, Cauc    36.88 351 eP   P     07 07 30.5 -0.3
UREC  San Jos de Ur     37.23 350 eP   P     07 07 33.7 -0.1
MPGF  Montagnes des     37.70  28 P    P     07 07 37.3 -0.5
SDV   Santo Domingo     37.89 358 P    P     07 07 39.0 -0.6
      comp=Z,20nm,0.8s,baz=178,slow=7.7,SNR=20
      comp=Z,20nm,0.8s
SDV   Santo Domingo     37.89 358 P    P     07 07 38.9 -0.6
SDV                               IAmb IAmb  07 07 39.9
      comp=Z,23nm,0.8s
SDV   Santo Domingo     37.89 358 eP   P     07 07 39.4 -0.1
NBCL  Cascavel-CE       38.49  56 eP   P     07 07 44.8 +0.3
SJCC  San Jacinto, C    39.29 351 eP   P     07 07 51.3 +0.2
SRBA  San Rafael, Bu    40.55 338 P    P     07 08 03.3 +1.7
SRBA                              IAmb IAmb  07 08 04.8
      comp=Z,51nm,1.6s
OBIP  Obispado Ponce    47.05   4 P    P     07 08 51.6 -1.8
OBIP                              IAmb IAmb  07 08 53.0
      comp=Z,32nm,0.8s
CELP  Cerrillos         47.08   4 P    P     07 08 53.0 -0.6
CELP                              IAmb IAmb  07 08 54.1
      comp=Z,33nm,0.7s
SJG   San Juan          47.14   4 P    P     07 08 52.7 -1.4
SDDR  Presa de Saban    47.95 357 P    P     07 09 01.8 +1.4
SDDR                              IAmb IAmb  07 09 08.2
      comp=Z,68nm,1.9s
GTBY  Guantanamo Bay    49.17 353 P    P     07 09 08.9 -0.7
BELA  Belgrano 2        51.21 171 P    P     07 09 24.9 +0.4
BELA                              IAmb IAmb  07 09 26.2
      comp=Z,36nm,1.4s
CMIG  Matias Romero     52.23 329 P    P     07 09 33.8 +1.1
      comp=Z,6.8nm,1.0s,baz=148,slow=5.4,SNR=4.1
      comp=Z,6.8nm,1.0s
TEIG  Tepich            52.44 337 P    P     07 09 34.4 +0.2
TEIG  Tepich            52.44 337 P    P     07 09 34.6 +0.5
VNA3  Neumayer Olymp    52.97 160 P    P     07 09 38.0 +0.5
SOR   Soroa             53.35 344 P    P     07 09 40.8 -0.1
SOR                               IAmb IAmb  07 09 42.0
      comp=Z,22nm,0.8s
VNA2  Neumayer--Watz    53.58 159 P    P     07 09 42.4 +0.4
      baz=287,slow=9.0
SNAA  Sanae             55.19 159 P    P     07 09 54.0 +0.3
SNAA  Sanae             55.19 159 P    P     07 09 53.5 -0.3
SNAA                              IAmb IAmb  07 09 55.6
      comp=Z,18nm,1.2s
TROLL Troll, Antarti    56.90 159 P    P     07 10 06.5 +0.5
656A  Willston          59.60 347 P    P     07 10 25.3 +0.2
QSPA  South Pole Qui    61.02 180 P    P     07 10 35.5 +0.9
QSPA                              pP   pP    07 11 03.5 +1.5
QSPA                              sP   PcP   07 11 16.4 -0.2
344A  Westbrook Farm    63.67 340 P    P     07 10 53.7 +1.3
344A                              IAmb IAmb  07 10 55.3
      comp=Z,47nm,1.2s
833A  Chaparral WMA,    64.03 331 P    P     07 10 55.3 +0.5
HKT   Hockley           64.04 334 P    P     07 10 55.9 +1.2
X58A  Rowland           64.12 351 P    P     07 10 55.8 +0.6
Z47A  Carrollton        64.56 343 P    P     07 10 58.5 +0.4
143A  Socs Landing,     65.04 340 P    P     07 11 02.1 +0.8
V58A  Windy Hill, Pi    65.31 351 P    P     07 11 03.1 +0.2
V58A                              IAmb IAmb  07 11 32.9
      comp=Z,63nm,1.6s
X48A  Hartselle         65.50 344 P    P     07 11 04.2 +0.1
W50A  Signal Mountai    65.82 346 P    P     07 11 06.0 -0.3
237A  Washetta, Mont    65.87 335 P    P     07 11 08.2 +1.6
237A                              IAmb IAmb  07 11 09.4
      comp=Z,50nm,1.2s
JCT   Junction City     66.08 331 P    P     07 11 09.2 +1.1
JCT                               IAmb IAmb  07 11 09.9
      comp=Z,12nm,0.7s
V52A  Sevierville       66.09 347 P    P     07 11 07.3 -0.7
V52A                              IAmb IAmb  07 11 08.8
      comp=Z,34nm,1.3s
WLAR  White Oak Lake    66.49 338 P    P     07 11 12.7 +2.1
WLAR                              IAmb IAmb  07 11 13.3
      comp=Z,31nm,1.0s
TX31  Lajitas Ar. Si    66.82 328 P    P     07 11 14.3 +1.4
TX31                              IAmb IAmb  07 12 15.4
      comp=Z,73nm,1.9s
TXAR  Lajitas Array     66.82 328 P    P     07 11 14.1 +1.2
      comp=Z,2.0nm,0.7s,baz=144,slow=7.7,SNR=18
TXAR                              pP   pP    07 11 42.1 +0.8
      comp=Z,1.1nm,0.7s,baz=184,slow=4.9,SNR=4.7
      comp=Z,2.0nm,0.7s
WVT   Waverly           67.29 344 P    P     07 11 15.5  0.0
WVT                               IAmb IAmb  07 11 16.4
      comp=Z,31nm,1.1s
WVT   Waverly           67.29 344 P    P     07 11 15.2 -0.4
WVT                               pP   pP    07 11 44.8 +1.0
LCAR  Lake Charles      68.11 341 P    P     07 11 21.0 +0.3
LCAR                              IAmb IAmb  07 11 22.0
      comp=Z,34nm,1.0s
S44A  Carbondale        69.12 343 P    P     07 11 27.1 +0.2
S44A                              IAmb IAmb  07 11 27.9
      comp=Z,18nm,0.8s
VNDA  Vanda             69.23 190 P    P     07 11 28.8 +1.6
      comp=Z,3.0nm,0.9s,baz=98,slow=7.1,SNR=2.0
      comp=Z,3.0nm,0.9s
FVM   French Village    69.70 342 P    P     07 11 31.3 +0.8
FVM                               IAmb IAmb  07 11 31.9
      comp=Z,31nm,0.8s
CCM   Cathedral Cave    69.99 342 P    P     07 11 32.7 +0.4
CCM                               pP   pP    07 12 01.4 +0.6
R40A  Maddies Statio    70.50 341 P    P     07 11 35.7 +0.3
R40A                              IAmb IAmb  07 11 36.4
      comp=Z,27nm,0.6s
LIC   Lamto             71.05  71⇓iP   P     07 11 39.7 +0.4
      comp=Z,30nm,0.6s
TIC   Toumodi           71.29  71⇑iP   P     07 11 41.6 +0.8
      comp=Z,8.7nm,0.3s
KIC   Kosan Boka        71.36  71⇓iP   P     07 11 41.6 +0.4
      comp=Z,11nm,0.4s
DBIC  Dimbokro          71.44  71 P    P     07 11 42.1 +0.4
      comp=Z,13nm,0.5s,baz=238,slow=6.1,SNR=36
DBIC                              pP   pP    07 12 10.9 +0.8
      comp=Z,5.0nm,0.7s,baz=227,slow=6.6,SNR=3.0
      comp=Z,13nm,0.5s
DBIC  Dimbokro          71.44  71 P    P     07 11 41.8 +0.1
DBIC                              IAmb IAmb  07 11 42.6
      comp=Z,19nm,0.7s
DBIC  Dimbokro          71.44  71 P    P     07 11 42.2 +0.5
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DBIC				pP	pP	07 12 10.7	+0.6
YUH	Yuha Desert	75.76	321	P	P	07 12 08.2	+1.7
I37A	Lemond, Waseca	76.13	342	P	P	07 12 08.5	+0.2
U15A	North Rim	76.77	326	P	P	07 12 14.6	+2.0
PFO	Pinyon Flats O	76.78	321	P	P	07 12 13.3	+0.9
	comp=Z,8.0nm,1.2s,baz=145,slow=5.4,SNR=4.1						
	comp=Z,8.0nm,1.2s						
ECSD	EROS Data Cent	76.78	340	P	P	07 12 12.5	+0.4
ECSD				IAmb	IAmb	07 12 13.5	
	comp=Z,22nm,0.9s						
P17A	Butcher Ranch,	78.46	328	P	P	07 12 23.1	+1.3
BOSA	Boshof	80.21	117	P	P	07 12 31.7	0.0
	comp=Z,6.9nm,0.4s,baz=256,slow=3.4,SNR=37						
BOSA				pP	pP	07 13 01.4	+0.9
	comp=Z,1.5nm,0.6s,baz=267,slow=5.2,SNR=1.2						
	comp=Z,6.9nm,0.4s						
BOSA	Boshof	80.21	117	P	P	07 12 31.4	-0.3
BOSA	Boshof	80.21	117	*i* P	P	07 12 30.7	-1.0
TORD	Torodi Ar. Bea	80.37	69	P	P	07 12 32.6	+0.3
	comp=Z,15nm,0.6s,baz=275,slow=5.9,SNR=150						
TORD				pP	pP	07 13 01.9	+0.7
	comp=Z,5.6nm,0.8s,baz=250,slow=5.0,SNR=4.5						
	comp=Z,15nm,0.6s						
TORD	Torodi Ar. Bea	80.37	69	P	P	07 12 32.3	-0.1
HWUT	Hardware Ranch	80.55	329	P	P	07 12 34.0	+1.0
PDAR	Pinedale Array	80.62	331	P	P	07 12 34.1	+0.7
	comp=Z,1.4nm,0.5s,baz=128,slow=7.3,SNR=18						
	comp=Z,1.4nm,0.5s						
NVAR	Mina Array Bea	81.37	323	P	P	07 12 38.5	+1.1
	comp=Z,2.3nm,0.8s,baz=160,slow=6.3,SNR=6.6						
NVAR				LR	LR	07 44 55.1	
	comp=Z,24nm,18.1s,baz=216,slow=33						
	comp=Z,2.3nm,0.8s						
LBTB	Lobatse	82.17	114	P	P	07 12 41.9	-0.1
LBTB				IAmb	IAmb	07 12 42.6	
	comp=Z,13nm,0.6s						
LBTB	Lobatse	82.17	114	*i* P	P	07 12 41.6	-0.5
RLMT	Red Lodge	82.44	333	P	P	07 12 44.3	+1.4
ULM	Lac du Bonnet	82.54	343	P	P	07 12 42.9	-0.2
	comp=Z,8.6nm,0.8s,baz=226,slow=3.5,SNR=8.4						
	comp=Z,8.6nm,0.8s						
SCHQ	Schefferville	83.72	1	P	P	07 12 48.4	-0.6
	comp=Z,7.1nm,0.9s,baz=203,slow=5.5,SNR=7.1						
	comp=Z,7.1nm,0.9s						
PINE	Pine Mountain	86.66	325	P	P	07 13 05.7	+1.5
ESDC	Sonseca Array	91.57	45	P	P	07 13 27.4	+0.2
	comp=Z,0.6nm,0.7s,baz=249,slow=4.0,SNR=4.3						
	comp=Z,0.6nm,0.7s						
YKA	Yellowknife Ar	98.30	341	P	P	07 13 57.3	0.0
	comp=Z,1.9nm,0.9s,baz=143,slow=4.7,SNR=4.0						
	comp=Z,1.9nm,0.9s						
AKASG	Malin Array Be	117.21	45	PKP	PKPdf	07 19 03.9	-0.8
	comp=Z,0.2nm,0.4s,baz=264,slow=2.8,SNR=6.1						
BRTR	Keskin Array B	117.40	58	PKP	PKPdf	07 19 05.7	0.0
	comp=Z,1.0nm,0.8s,baz=279,slow=0.5,SNR=4.3						
FINES	FINESS Array B	117.73	33	PKP	PKPdf	07 19 04.2	-1.1
	comp=Z,0.9nm,0.9s,baz=300,slow=2.7,SNR=5.1						
ARCES	ARCESS Array B	118.71	24	PKP	PKPdf	07 19 06.9	-0.2
	comp=Z,4.6nm,1.0s,baz=261,slow=3.4,SNR=1.9						
ASAR	Alice Springs	122.88	205	PKP	PKPdf	07 19 16.1	-0.6
	comp=Z,2.1nm,0.6s,baz=132,slow=1.6,SNR=42						
ASAR				PKKPbc	PKKPbc	07 29 08.8	-0.1
	comp=Z,0.5nm,0.5s,baz=344,slow=3.9,SNR=8.8						
WRA	Warramunga Arr	126.07	208	PKP	PKPdf	07 19 22.7	-0.1
	comp=Z,4.5nm,0.5s,baz=169,slow=1.6,SNR=81						
WRA				pPKP	pPKPdf	07 19 53.8	+0.4
	comp=Z,1.1nm,0.6s,baz=166,slow=1.5,SNR=2.7						
ARU	Arti	134.58	38	PKP	PKPdf	07 19 38.3	+0.6
	comp=Z,2.4nm,0.5s,baz=288,slow=8.4,SNR=4.1						
BVAR	Borovoye Array	142.16	40	PKhKP	PKPpre	07 19 46.9	
	comp=Z,0.6nm,0.4s,baz=331,slow=5.6,SNR=4.3						
PALK	Pallekele	144.32	122	PKP	PKPbc	07 19 55.7	+0.4
	comp=Z,2.6nm,0.5s,baz=308,slow=2.8,SNR=2.2						
CHGR	Chuyangaron	144.54	63		PKPbc	07 19 55.5	+0.1
YAK	Yakutsk	144.87	345	PKP	PKPab	07 19 55.4	-0.1
	comp=Z,14nm,0.5s,baz=85,slow=1.6,SNR=9.9						
KKAR	Karatay Array	145.07	56		PKPbc	07 19 56.4	-0.4
GAR	Garm	145.42	63		PKPab	07 19 58.5	-0.1
EKS2	Erkin-Say	147.51	56	P	PKiKP	07 20 05.7	-0.5
	SNR=11						
AML	Almayashu	147.56	57	P	PKPbc	07 20 05.7	+1.0
	SNR=9.2						
KURBB	Kurchatov Arra	147.75	39	PKP	PKPdf	07 20 02.0	+0.7
	comp=Z,12nm,0.5s,baz=296,slow=3.0,SNR=35						
KURBB				PKPbc	PKPbc	07 20 05.2	+0.8
	comp=Z,12nm,0.5s,baz=303,slow=3.1,SNR=29						
KURBB				pPKPbc	pPKPbc	07 20 35.6	+0.9
	comp=Z,3.2nm,0.7s,baz=301,slow=3.2,SNR=2.4						
USP	Ospenovka	147.89	54	P	PKiKP	07 20 06.2	-0.7
	SNR=9.0						
AAK	Ala-Archa	148.03	55	P	PKiKP	07 20 07.1	-0.3
	SNR=11						
AAK	Ala-Archa	148.03	55	PKPbc	PKiKP	07 20 07.1	-0.3
	comp=Z,19nm,0.5s,baz=233,slow=3.9,SNR=19						
CHMS	Chumysh	148.13	55	P	PKiKP	07 20 06.8	-0.6
	SNR=8.9						
UCH	Uchtor	148.13	56	P	PKPbc	07 20 05.0	-1.3
	SNR=12						
HYB	Hyderabad	148.35	105	*e*PKPbc	PKPbc	07 20 06.6	-0.4
KBK	Karagaybulak	148.35	55	P	PKiKP	07 20 08.2	+0.2
	SNR=8.7						
TKM2	Tokmak 2	148.75	54	P	PKiKP	07 20 08.6	-0.3
	SNR=14						
ZALV	Zalesovo Beam	148.94	30	PKPbc	PKiKP	07 20 08.3	-0.3
	comp=Z,23nm,0.5s,baz=306,slow=3.4,SNR=104						
ZALV				pPKPbc	pPKPbc	07 20 38.9	+1.1
	comp=Z,5.2nm,0.7s,baz=293,slow=2.4,SNR=2.0						
ULHL	Ulahol	149.38	56	P	PKiKP	07 20 10.7	+0.4
	SNR=7.0						
KSH	Kashi	149.72	61	sPKP		07 20 54.1	
KSH	Kashi	149.72	61	PKPbc	PKiKP	07 20 10.7	-0.2
MKAR	Makanchi Array	151.78	44	PKPbc	PKiKP	07 20 14.9	+0.1
	comp=Z,10nm,0.6s,baz=307,slow=2.3,SNR=22						
MKAR				PKPab	PKPab	07 20 24.2	+0.4
	comp=Z,12nm,0.8s,baz=294,slow=3.6,SNR=11						
MKAR				pPKPbc	pPKPbc	07 20 45.5	+0.5
	comp=Z,3.9nm,0.7s,baz=291,slow=3.1,SNR=3.2						
MKAR				pPKPab	pPKPab	07 20 54.5	+1.1
	comp=Z,3.5nm,0.7s,baz=283,slow=2.3,SNR=2.4						
MJAR	Matsushiro Arr	155.81	295	PKP	PKPdf	07 20 14.4	+0.4
	comp=Z,0.7nm,0.5s,baz=90,slow=4.0,SNR=4.6						
WMQ	Urumqi	156.57	45	*e*P	PKPdf	07 20 15.7	+0.9
SONM	Songino Array	161.11	9	PKP	PKPdf	07 20 20.3	+0.2
	comp=Z,0.4nm,0.5s,baz=36,slow=2.8,SNR=3.5						
SONM				PKPab	PKPab	07 21 04.0	+0.2
	comp=Z,1.9nm,0.9s,baz=322,slow=3.7,SNR=8.1						
KSRS	Korea Array	163.43	304	PKP	PKPdf	07 20 22.0	-0.6
	comp=Z,0.6nm,0.4s,baz=153,slow=1.4,SNR=7.6						
CMAR	Chiang Mai Arr	164.85	132	PKP	PKPdf	07 20 24.4	-0.1
	comp=Z,0.7nm,0.3s,baz=235,slow=3.2,SNR=1.1						
CMAR				PKPab	PKPab	07 21 20.4	-0.5
	comp=Z,1.0nm,0.3s,baz=238,slow=5.0,SNR=4.9						
GTA	Gaotai	166.44	39	*e*PKPbc	PKPab	07 21 28.7	+1.1
HHC	Hu-ho-hao-te	168.36	357	*e*P	PKPdf	07 20 25.4	-1.2
TNCH	TengChong	168.40	108	PKP	PKPdf	07 20 23.7	-3.5
TNCH				pPKP	pPKPdf	07 20 49.3	-8.8
HNS	HongShan	171.16	339	⇑PKP	PKPdf	07 20 29.6	+1.4
PZH	PanZhiHua	171.64	107	PKP	PKPdf	07 20 28.5	-0.5
NJ2	Nanjing	172.41	294	*e*P	PKPdf	07 20 29.5	+0.6
CD2	Chengdu	173.76	73	PKP	PKPdf	07 20 29.0	-0.6
LYN	LuoYang	174.46	345	*e*PKP	PKPab	07 22 02.5	-0.4

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*IDC **11** 07:02:07.6±0.9, 4.°68S×105.°66W, h0^{km}, mb4.3/14, mbtmp4.3/14, MS4.4/48, Error ellipse: s-maj=31.6km s-min=15.4km az=55.0*

*NEIC **11** 07:02:10.3±1.2, 4.°8S±0.°1×105.°7W±0.°2, h10^{km}±1^{km}, mb4.9/76, Error ellipse: s-maj=27.6km s-min=19.0km az=246.0*

*GCMT **11** 07:02:12.3±0.2, 4.°51S±0.°01×105.°54W±0.°01, h16^{km}±1^{km}, MW5.0/123, Moment Tensor Solution. s70,c92; s123,c192; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.55±.11; $M_{\theta\theta}$1.15±.10; $M_{\phi\phi}$-1.71±.11; $M_{r\theta}$1.06±.27; $M_{\theta\phi}$4.01±.09; $M_{\phi r}$-0.99±.28; Best double couple: $M_0$4.45600×10^{16} NP1:ϕ_s279.00000°,δ83.00000°, λ-14.00000°. NP2:ϕ_s11.00000°,δ76.00000°, λ-173.00000°. Principal axes: T 4.0050, Plg5.0000°, Azm326.0000°; N 0.8970, Plg74.0000°, Azm75.0000°; P -4.9070, Plg15.0000°, Azm234.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 07:02:09.6±0.5**, 4.°80S**±0.°08×**105.°61W**±0.°08**, h10^{km}, n378,** σ**1.^{s}00**/327**, mb4.9**/46**, MS4.4**/52**, 1D, Central East Pacific**

Code	Rise Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	22.49	189	LR	LR	07 13 39.7	
	comp=Z,419nm,19.8s,baz=7.0,slow=31						
TLIG	Tlapa	23.28	17	P	P	07 07 16.1	-1.6
H06S1	SOCORRO T	23.97	347	T	T	07 32 05.1	
	SNR=17						
CMIG	Matias Romero	24.19	26	P	P	07 07 25.3	-1.2
	5.8nm,0.8s,baz=216,slow=7.7,SNR=7.9						
CMIG				LR	LR	07 14 41.7	
	comp=Z,881nm,21.8s,baz=202,slow=31						
	5.8nm,0.8s						
MOIG	Morelia	24.71	10	P	P	07 07 32.3	+0.9
MOIG				IAmb	IAmb	07 07 40.9	
	comp=Z,36nm,1.0s						
CCIG	Comitan	24.82	32	P	P	07 07 33.0	+0.6
JTS	Las Juntas de	25.45	54	P	P	07 07 37.6	-0.4
	comp=Z,7.5nm,0.9s,baz=230,slow=3.1,SNR=5.2						
JTS				LR	LR	07 14 54.7	
	comp=Z,2µm,20.7s,baz=232,slow=30						
	comp=Z,7.5nm,0.9s						
JTS	Las Juntas de	25.45	54	P	P	07 07 39.5	+1.5
JTS				IAmb	IAmb	07 07 45.6	
	comp=Z,24nm,1.1s						
TGUH	Tegucigalpa,Un	26.11	44	P	P	07 07 44.2	+0.1
TGUH				IAmb	IAmb	07 07 53.1	
	comp=Z,32nm,0.9s						
MATN	Matagalpa	26.31	48	P	P	07 07 46.2	+0.3
ATAH	Atahualpa	27.16	96	LR	LR	07 16 02.6	
	comp=Z,530nm,19.2s,baz=270,slow=31						
OTAV	Otavalo	27.58	80	P	P	07 07 58.2	+0.5
OTAV				IAmb	IAmb	07 08 23.6	
	comp=Z,65nm,2.0s						
LPIG	La Paz	29.09	351	LR	LR	07 16 43.0	
	comp=Z,878nm,19.9s,baz=175,slow=30						
NNA	Nana	29.32	106	LR	LR	07 16 38.9	
	comp=Z,707nm,20.4s,baz=278,slow=30						
ROSC	El Rosal	32.68	73	LR	LR	07 19 13.4	
	comp=Z,734nm,20.4s,baz=251,slow=31						
CZSB	Cruzeiro do Su	32.83	97	P	P	07 08 43.7	0.0
833A	Chaparral WMA,	33.47	10	P	P	07 08 50.0	+0.9
	baz=191						
RKT	Rikitea	33.70	234	*e*S	S	07 14 14.9	+0.4
	comp=Z,31µm,27.8s						
RKT				*e*LR	LR	07 17 45.8	
	comp=Z,323µm,28.2s						
RKT	Rikitea	33.70	234	*e*T	T	07 44 18.2	
	comp=Z,5.9nm,0.3s						
TXAR	Lajitas Array	33.99	3	LR	LR	07 20 14.5	
	comp=Z,389nm,20.7s,baz=180,slow=32						
TAOE	Nuku Hiva Isla	34.52	261	*e*LR	LR	07 18 08.1	
	comp=Z,1µm,23.8s						
JCT	Junction City	35.52	9	P	P	07 09 06.7	-0.1
JCT				IAmb	IAmb	07 09 22.6	
	comp=Z,27nm,1.4s						
JCT	Junction City	35.52	9	P	P	07 09 07.4	+0.6
	baz=190						
319A	Douglas	36.14	355	P	P	07 09 13.2	+0.9
319A				IAmb	IAmb	07 09 28.8	
	comp=Z,23nm,1.3s						
MNTX	Cornudas Mount	36.29	0	P	P	07 09 15.0	+1.6
	baz=180,SNR=5.8						
PIX	Pinacate	36.92	349	P	P	07 09 18.3	-0.5
121A	Cookes Peak, D	37.18	357	P	P	07 09 22.6	+1.4
	baz=177						
214A	Organ Pipe Nat	37.19	350	P	P	07 09 22.4	+1.3
	baz=168						
TUC	Tucson	37.23	353	P	P	07 09 23.0	+1.5
	baz=172						
DUN6	Lazy B Ranch	37.29	355	P	P	07 09 23.1	+1.0
WHTX	Lake Whitney,	37.40	11	P	P	07 09 22.9	+0.1
	baz=194						
SDV	Santo Domingo	37.42	69	P	P	07 09 22.6	-1.0
	comp=Z,8.0nm,0.8s,baz=232,slow=6.6,SNR=5.3						
SDV				LR	LR	07 22 01.4	
	comp=Z,898nm,20.2s,baz=252,slow=32						
	comp=Z,8.0nm,0.8s						
SDV	Santo Domingo	37.42	69	P	P	07 09 21.9	-1.6
ABTX	Abilene, Hawle	37.64	8	P	P	07 09 24.9	-0.1
ABTX				IAmb	IAmb	07 09 40.3	
	comp=Z,55nm,1.6s						
ABTX	Abilene, Hawle	37.64	8	P	P	07 09 25.5	+0.6
	baz=190						
H03N2	Juan Fernandez	37.80	142	T	T	07 49 29.6	
	baz=317,slow=77,SNR=22						
H03N1	Juan Fernandez	37.81	142	T	T	07 49 39.8	
	baz=317,slow=77,SNR=29						
H03N3	Juan Fernandez	37.81	142	T	T	07 49 34.4	
	baz=317,slow=77,SNR=23						
NATX	Nacogdoches	37.82	15	P	P	07 09 28.4	+1.9
NATX				IAmb	IAmb	07 09 32.5	
	comp=Z,14nm,0.7s						
NATX	Nacogdoches	37.82	15	P	P	07 09 27.3	+0.9
	baz=198						
113A	Mohawk Valley,	38.16	349	P	P	07 09 29.4	+0.2
FW03	Perrin-Whitt E	38.30	10	P	P	07 09 30.6	+0.1
FW03				IAmb	IAmb	07 09 46.2	
	comp=Z,72nm,1.7s						
LPAZ	La Paz	38.49	110	P	P	07 09 33.4	+0.4
	comp=Z,0.7nm,0.4s,baz=299,slow=13,SNR=2.7						
LPAZ				LR	LR	07 23 03.8	
	comp=Z,271nm,18.6s,baz=271,slow=33						
	comp=Z,0.7nm,0.4s						
LPAZ	La Paz	38.49	110	P	P	07 09 32.7	-0.4
IKP	In-Ko-Pah, Jac	38.56	346	P	P	07 09 33.5	+0.8
	baz=163						
GLA	Glamis	38.65	348	P	P	07 09 33.7	+0.2
	baz=165						
MSTX	Muleshoe	38.65	4	P	P	07 09 34.5	+1.0
	baz=185,SNR=11						
Y22D	IRIS PASSCAL I	38.68	358	P	P	07 09 35.2	+1.3
	baz=178						
Y22F	Passcal Instru	38.68	358	P	P	07 09 35.0	+1.2
	baz=178						
344A	Westbrook Farm	38.74	21	P	P	07 09 34.8	+0.6
SWSC	Sam W. Stewart	38.76	346	P	P	07 09 36.1	+1.8
	baz=164						
MONP2	Monument Peak	38.86	345	P	P	07 09 37.1	+1.7
	baz=163						
WTFS	Witchita Falls	38.95	9		P	07 09 35.8	0.0
WTFS				IAmb	IAmb	07 09 51.5	
	comp=Z,58nm,1.4s						
109C	Camp Elliot, M	39.04	345	P	P	07 09 38.7	+2.1
	baz=162						
X18A	Snowflake	39.33	354	P	P	07 09 38.3	-1.0
BC3	Big Chuckawall	39.36	347	P	P	07 09 40.3	+0.8
	baz=165						
ANMO	Albuquerque	39.54	359	LR	LR	07 23 10.4	
	comp=Z,228nm,21.3s,baz=274,slow=32						
ANMO	Albuquerque	39.54	359	P	P	07 09 42.5	+1.4
	baz=179						
TPFO	Pinon Flats	39.55	346	P	P	07 09 42.1	+1.0
	baz=163						
PFO	Pinyon Flats O	39.56	346	P	P	07 09 40.0	-1.2
	comp=Z,1.6nm,0.8s,baz=134,slow=6.1,SNR=2.6						
PFO				LR	LR	07 22 00.6	
	comp=Z,898nm,21.2s,baz=158,slow=30						
	comp=Z,1.6nm,0.8s						
PFO	Pinyon Flats O	39.56	346	P	P	07 09 42.2	+1.0
	baz=163						
LVC	Limon Verde	39.63	120	P	P	07 09 42.5	+0.3
	comp=Z,14nm,1.1s,baz=303,slow=6.0,SNR=5.5						
LVC				LR	LR	07 21 44.7	
	comp=Z,500nm,20.1s,baz=288,slow=30						
	comp=Z,14nm,1.1s						
LVC	Limon Verde	39.63	120	P	P	07 09 43.7	+1.4
LVC				IAmb	IAmb	07 09 59.4	
	comp=Z,27nm,1.2s						
AMTX	Amarillo	39.64	5	P	P	07 09 42.2	+0.4
	baz=186						
PDMCI	Parker Dam,Lak	39.72	349	P	P	07 09 43.2	+0.9
	baz=167						
MURC	Murrieta	39.73	345	P	P	07 09 42.8	+0.3
	baz=162						
IRM	Iron Mountain	39.78	348	P	P	07 09 43.2	+0.3
	baz=165						
BELC	Belle Mtn. Jos	39.82	346	P	P	07 09 44.6	+1.2
	baz=164						
WMOK	Wichita Mounta	39.85	9	P	P	07 09 44.5	+1.1
	baz=191						
CIS	Catalina Islan	39.88	343	P	P	07 09 44.4	+0.7
	baz=160						
GO02	Mina Guanaco	40.04	124	P	P	07 09 46.6	+1.1
GO02				IAmb	IAmb	07 09 57.3	
	comp=Z,31nm,0.9s						
X37A	Clayton	40.35	13	P	P	07 09 47.9	+0.3
X37A				IAmb	IAmb	07 10 02.3	
	comp=Z,45nm,1.5s						
W13A	Hualapai Mount	40.44	350	P	P	07 09 48.3	-0.3
BFSC	Mount Baldy Ra	40.46	345	P	P	07 09 48.7	+0.1
	baz=162						
WUAZ	Wupatki	40.47	353	P	P	07 09 49.2	+0.5
WUAZ	Wupatki	40.47	353	P	P	07 09 49.5	+0.8
	baz=171						
GMRC	Granite Mounta	40.49	347	P	P	07 09 50.1	+1.2
	baz=165						
HEC	Hector,Ludlow	40.69	346	P	P	07 09 50.8	+0.3
	baz=164						
MIAR	Mount Ida	40.74	15	P	P	07 09 51.1	+0.3
	baz=199						
250A	Grady	40.95	25	P	P	07 09 52.8	+0.3
ELIS	Ellis County	41.06	8	P	P	07 09 54.3	+0.9
EDW2	Edwards Air Fo	41.16	344	P	P	07 09 54.6	+0.3
	baz=161						
TUQ	Turquoise Moun	41.18	347	P	P	07 09 55.1	+0.5
	baz=164						
V12A	Nelson	41.23	349	P	P	07 09 55.4	+0.4
GSC	Goldstone, Bar	41.26	346	P	P	07 09 55.5	+0.3
GSC	Goldstone, Bar	41.26	346	P	P	07 09 56.1	+1.0
	baz=163						
TUL1	Leonard	41.53	12	P	P	07 09 57.6	+0.3
TUL1				IAmb	IAmb	07 10 12.3	
	comp=Z,27nm,1.2s						
TUL1	Leonard	41.53	12	P	P	07 09 57.9	+0.7
	baz=195						
LRAL	Lakeview Retre	41.56	24	P	P	07 09 57.4	-0.1
LRAL				IAmb	IAmb	07 10 06.1	
	comp=Z,56nm,1.9s						
LRAL	Lakeview Retre	41.56	24	P	P	07 09 57.6	0.0
	baz=209						
ARVC	Arvin	41.62	344	P	P	07 09 59.7	+1.7
	baz=160						
LRMC	Laurel Mtn Rad	41.64	345	P	P	07 09 59.5	+1.1
	baz=162						
PKM	Mcpherson Peak	41.68	342	P	P	07 09 59.4	+0.6
	baz=159						
T25A	Trinidad	41.73	1	P	P	07 10 00.6	+1.4
	baz=182						
WHAR	Wooly Hollow	41.80	16	P	P	07 10 01.3	+1.8
WHAR				IAmb	IAmb	07 10 15.2	
	comp=Z,52nm,1.5s						
MVCO	Mesa Verde	41.88	357	P	P	07 10 01.3	+0.9
MVCO				IAmb	IAmb	07 10 16.5	
	comp=Z,31nm,1.6s						
MVCO	Mesa Verde	41.88	357	P	P	07 10 01.9	+1.5
	baz=176						
QSM	Queen of Sheba	41.90	346	P	P	07 10 00.9	+0.6
OXF	Oxford	41.98	20	P	P	07 10 03.2	+2.2
	baz=205						
SHPR	Sheep Range	42.05	348	P	P	07 10 01.7	0.0
GWY	Greenwater Val	42.07	347	P	P	07 10 02.0	+0.1
KNB	Kanab	42.14	351	P	P	07 10 02.1	-0.3
KNB				IAmb	IAmb	07 10 15.0	
	comp=Z,22nm,1.1s						
MPMC	Manual Prospec	42.14	346	P	P	07 10 04.0	+1.5
	baz=162						
SAML	Samuel	42.30	98	P	P	07 10 01.8	-2.2
SDCO	Great Sand Dun	42.33	0	P	P	07 10 04.8	+0.7
SDCO	Great Sand Dun	42.33	0	P	P	07 10 03.6	-0.5
	baz=180						
S22A	4UR Ranch, Cre	42.34	359	P	P	07 10 04.6	+0.4
	baz=178						
VES	Vestal, Richgr	42.36	344	P	P	07 10 04.8	+0.8
	baz=160						
FURC	Furnace Creek,	42.38	346	P	P	07 10 04.9	+0.7
	baz=163,SNR=5.7						
WCT	Wildcat Mounta	42.64	347	P	P	07 10 06.6	+0.2
WCT				IAmb	IAmb	07 10 18.7	
	comp=Z,25nm,1.1s						
CWC	Cottonwood Cre	42.65	345	P	P	07 10 06.0	-0.6
	baz=162						
TPNV	Topopah Spring	42.70	347	P	P	07 10 07.1	0.0
	baz=164						
LCAR	Lake Charles	42.85	17	P	P	07 10 07.9	-0.1
GRAC	Grapevine Rang	43.00	346	P	P	07 10 09.5	+0.1
	baz=163						
CBKS	Cedar Bluff	43.73	7	P	P	07 10 15.8	+0.6
	baz=189						
T42A	Van Buren	43.76	17	P	P	07 10 15.2	-0.2
BO02	Sierra Bellavi	43.91	137	P	P	07 10 16.9	+0.2
BO02				IAmb	IAmb	07 10 23.7	
	comp=Z,23nm,0.9s						
R11A	Troy Canyon, C	43.92	349	P	P	07 10 16.9	0.0
R11A				IAmb	IAmb	07 10 34.0	
	comp=Z,18nm,1.3s						
R11A	Troy Canyon, C	43.92	349	P	P	07 10 17.7	+0.8
	baz=166,SNR=8.4						
SRU	San Rafael Swe	43.92	354	P	P	07 10 16.1	-0.9
SRU				IAmb	IAmb	07 10 33.3	
	comp=Z,32nm,1.7s						
WVT	Waverly	43.99	21	P	P	07 10 17.1	-0.2
WVT	Waverly	43.99	21	P	P	07 10 18.0	+0.7
	baz=206						
OMMB	Old Mammoth Mi	44.00	345	P	P	07 10 17.6	-0.1
TPH	Tonopah	44.00	347	P	P	07 10 17.6	+0.1
CFA	Coronel Fontan	44.02	132	P	P	07 10 17.6	-0.1
	comp=Z,15nm,1.0s,baz=310,slow=6.5,SNR=5.3						
CFA				LR	LR	07 24 01.8	
	comp=Z,701nm,21.2s,baz=302,slow=30						
	comp=Z,15nm,1.0s						
MDPB	Devils Postpil	44.04	345	P	P	07 10 16.8	-1.1
TMUT	Trail Mountain	44.18	354	P	P	07 10 19.1	0.0
TMUT				IAmb	IAmb	07 10 30.7	
	comp=Z,28nm,1.8s						
P17A	Butcher Ranch,	44.30	354	P	P	07 10 19.9	0.0
P17A				IAmb	IAmb	07 10 36.5	
	comp=Z,32nm,1.5s						
SPR3	Spring Creek 3	44.32	350	P	P	07 10 19.6	-0.6
SPR3				IAmb	IAmb	07 10 36.2	
	comp=Z,36nm,1.7s						
ISCO	Idaho Springs	44.38	360	P	P	07 10 21.6	+1.0
	baz=180						
KSU1	Kansas State U	44.47	10	P	P	07 10 21.7	+0.7
	baz=193						
NVAR	Mina Array Bea	44.59	346	P	P	07 10 21.6	-0.7
	comp=Z,1.3nm,0.8s,baz=172,slow=9.6,SNR=10						
NVAR				LR	LR	07 24 58.5	
	comp=Z,434nm,19.0s,baz=178,slow=31						
	comp=Z,1.3nm,0.8s						
CCM	Cathedral Cave	44.67	16	P	P	07 10 22.9	+0.2
	baz=201						
O20A	White River Ci	44.78	357	P	P	07 10 23.3	-0.4
O20A	White River Ci	44.78	357	P	P	07 10 24.8	+1.1
	baz=176						
PPT	Papeete	44.84	250	LR	LR	07 24 20.8	
	comp=Z,391nm,19.4s,baz=55,slow=30						
PPT2	Papeete2	44.84	250	*e*S	S	07 17 02.6	+0.2
	comp=Z,120nm,25.0s						
PPT2				*e*LR	LR	07 22 54.9	
	comp=Z,1µm,26.2s						
PPT2				*e*LR	LR	07 22 55.0	
	comp=Z,828nm,27.0s						
EMPR	Esperanza - Ma	44.92	58	P	P	07 10 27.0	+2.0
NLU	North Lily Min	44.93	353	P	P	07 10 24.6	-0.3
NLU				IAmb	IAmb	07 10 42.0	
	comp=Z,14nm,1.3s						
SJG	San Juan	45.08	59	LR	LR	07 25 26.1	
	comp=Z,351nm,21.8s,baz=236,slow=31						
SIV	San Ignacio	45.09	108	P	P	07 10 27.1	+0.7
	comp=Z,2.2nm,0.8s,baz=214,slow=9.8,SNR=3.2						
SIV				LR	LR	07 26 33.6	
	comp=Z,603nm,21.8s,baz=294,slow=32						
	comp=Z,2.2nm,0.8s						
TKL	Tuckaleechee C	45.16	25	LR	LR	07 29 29.2	
	comp=Z,245nm,18.8s,baz=213,slow=36						
DUG	Dugway, Tooele	45.26	352	P	P	07 10 28.7	+1.2
	baz=170						
N23A	Red Feather La	45.47	360	P	P	07 10 30.5	+1.1
	baz=180						
KMSC	Kings Mountain	45.82	28	P	P	07 10 32.1	+0.3
	baz=215						
MPK	Martis Peak	45.85	344	P	P	07 10 31.9	-0.4
TZTN	Tazewell	46.01	25	P	P	07 10 33.9	+0.5
	baz=211						
Q44A	Meyer Farm, Va	46.11	18	P	P	07 10 33.9	-0.2
TBI	Tubuai	46.12	242	*e*S	S	07 17 20.6	+0.1
	comp=Z,635nm,26.0s						
TBI				*e*LR	LR	07 23 30.9	
	comp=Z,14µm,24.2s						
TBI				*e*LR	LR	07 23 31.0	
	comp=Z,4µm,27.5s						
TBI	Tubuai	46.12	242	*e*T	T	07 59 53.8	
	comp=Z,4.0nm,0.3s						

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WCI   Wyandotte Cave   46.41  21  P      P       07 10 36.7 +0.3
      baz=207
BW06  Boulder Array    47.48 356  P      P       07 10 45.4 +0.3
      baz=175
PDAR  Pinedale Array   47.48 356  P      P       07 10 43.8 -1.2
      comp=Z,0.8nm,0.6s,baz=172,slow=7.9,SNR=8.8
PDAR                              LR     LR      07 28 16.8
      comp=Z,400nm,18.7s,baz=184,slow=33
      comp=Z,0.8nm,0.6s
PLCA  Paso Flores      47.63 144  P      P       07 10 46.5 +0.4
      comp=Z,14nm,1.1s,baz=294,slow=9.6,SNR=2.9
PLCA                              LR     LR      07 25 54.8
      comp=Z,745nm,19.2s,baz=323,slow=30
      comp=Z,14nm,1.1s
BLA   Blacksburg       47.94  27  P      P       07 10 50.4 +1.9
      baz=215
P49A  Miami Univ. Ec   48.14  22  P      P       07 10 51.7 +1.7
      baz=208
MOD   Modoc Plateau    48.37 345  P      P       07 10 51.8 -0.1
LL02  Futaleuf         48.50 147  P      P       07 10 52.9 +0.1
LL02                              IAmb   IAmb    07 10 54.8
      comp=Z,22nm,1.2s
RSSD  Black Hills      48.72   2  P      P       07 10 55.4 +0.9
      baz=182
HLID  Hailey           48.79 351  P      P       07 10 56.3 +1.2
      baz=168
YBH   Yreka Blue Hor   48.87 343  LR     LR      07 26 58.3
      comp=Z,365nm,21.6s,baz=166,slow=31
ECSD  EROS Data Cent   48.98   9  P      P       07 10 56.7 +0.4
      baz=192,SNR=9.2
H17A  Grant Village    49.17 355  P      P       07 10 59.2 +1.1
      baz=174
L04D  Klamath Falls    49.20 344  P      P       07 10 57.9 -0.3
P52A  Corning          49.22  24  P      P       07 10 57.1 -1.2
      baz=212
ACSO  Alum Creek Sta   49.40  23  P      P       07 10 58.3 -1.3
      baz=210
YMR   Madison River    49.48 355  P      P       07 11 00.7 +0.3
YMR                               IAmb   IAmb    07 12 47.4
      comp=Z,13nm,1.0s
J05D  Fort Rock, OR    49.91 345  P      P       07 11 04.4 +0.8
O53A  New Philadelph   50.12  24  P      P       07 11 02.9 -2.2
      baz=212
MCWV  Mont Chateau     50.21  26  P      P       07 11 04.9 -0.9
      baz=214
CPUP  Villa Florida    50.81 120  LR     LR      07 29 14.2
      comp=Z,281nm,20.6s,baz=281,slow=32
SPMN  Marine on St.    51.10  12  P      P       07 11 11.5 -0.9
      baz=196
G08A  Pilot Rock       51.27 348  P      P       07 11 13.9  0.0
G08A                              IAmb   IAmb    07 11 30.4
      comp=Z,14nm,1.2s
M53A  WI Miller and    51.34  24  P      P       07 11 13.7 -0.6
      baz=212
SSPA  Standing Stone   51.87  27  P      P       07 11 19.0 +0.8
      baz=216
EGMT  Eagleton         52.73 356  P      P       07 11 24.9 +0.3
      baz=175
DGMT  Dagmar           53.06   1  P      P       07 11 27.1 +0.1
      baz=182
NEW   Newport          53.80 350  LR     LR      07 31 33.7
      comp=Z,591nm,18.1s,baz=177,slow=33
NEW   Newport          53.80 350  P      P       07 11 32.0 -0.4
      baz=166
MDP   Montagnes des    53.80  80  LR     LR      07 31 56.4
      comp=Z,330nm,18.9s,baz=290,slow=33
EYMN  Ely              53.97  12  P      P       07 11 30.7 -2.9
      baz=198
BINY  Binghamton       53.98  27  P      P       07 11 32.9 -0.9
      baz=218
SADO  Sadowa           54.75  23  LR     LR      07 35 03.4
      comp=Z,128nm,18.7s,baz=206,slow=36
RAR   Rarotonga        54.95 248  LR     LR      07 29 53.0
      comp=Z,179nm,20.4s,baz=93,slow=30
ULM   Lac du Bonnet    55.47   8  P      P       07 11 42.5 -2.0
      comp=Z,4.8nm,0.9s,baz=186,slow=8.5,SNR=3.9
      comp=Z,4.8nm,0.9s
LONY  Lake Ozonia      56.52  26  P      P       07 11 49.9 -2.2
      baz=218
BDFB  Brasilia         57.53 105  LR     LR      07 34 47.7
      comp=Z,337nm,18.2s,baz=292,slow=34
BBB   Bella Bella      59.91 344  LR     LR      07 34 47.6
      comp=Z,206nm,18.9s,baz=164,slow=33
T35M  Bob Quinn        64.76 345  P      P       07 12 49.0 +0.8
      baz=153
AFI   Afiamalu         65.75 257  LR     LR      07 33 49.4
      comp=Z,221nm,21.7s,baz=90,slow=29
DLBC  Dease Lake       66.01 346  LR     LR      07 38 17.2
      comp=Z,199nm,19.9s,baz=136,slow=33
DLBC  Dease Lake       66.01 346  P      P       07 12 57.0 +0.8
      baz=153
KOTAN Kotaneelee Air   66.34 350  P      P       07 12 58.8 +0.5
      baz=160
PMSA  Palmer Station   66.76 162  LR     LR      07 34 50.8
      comp=Z,535nm,19.4s,baz=310,slow=29
Q32M  Nakina River     67.02 345  P      P       07 13 03.6 +0.8
      baz=151
YKA   Yellowknife Ar   67.45 355  P      P       07 13 03.5 -1.7
      comp=Z,3.9nm,0.8s,baz=164,slow=6.6,SNR=38
YKA                               LR     LR      07 40 41.1
      comp=Z,182nm,18.1s,baz=29,slow=34
      comp=Z,3.9nm,0.8s
SCHQ  Schefferville    67.56  23  LR     LR      07 41 42.2
      comp=Z,242nm,20.4s,baz=246,slow=35
P32M  Atlin            67.94 345  P      P       07 13 09.2 +0.7
      baz=150
P33M  Teslin, Yukon    68.25 346  P      P       07 13 10.7 +0.3
      baz=151
SKAG  Skagway          68.25 344  P      P       07 13 12.0 +1.6
      baz=148
PLBC  Pleasant Camp    68.54 344  P      P       07 13 13.2 +1.1
      baz=147
N32M  Quiet Lake       69.14 346  P      P       07 13 16.5 +0.6
      baz=151
WRGLY Wrigley          69.18 351  P      P       07 13 16.3 +0.3
      baz=161
P30M  Million Dollar   69.26 344  P      P       07 13 17.3 +0.6
      baz=146
O30N  Mendenhall       69.57 345  P      P       07 13 19.6 +1.0
      baz=148
PNL   Peninsula        69.59 342  P      P       07 13 20.0 +1.2
      baz=144
O29M  Mount Kennedy    69.86 343  P      P       07 13 21.3 +0.7
      baz=145
HYT   Haines Junctio   70.00 344  P      P       07 13 22.0 +0.6
      baz=146
MMPY  Sheldon Lake,    70.02 348  P      P       07 13 21.2 -0.1
      baz=153
N31M  Braeburn, Yuko   70.09 345  P      P       07 13 22.2 +0.4
      baz=148
FARO  Faro, Yukon      70.14 347  P      P       07 13 22.5 +0.4
      baz=151
PINM  Pinnacle         70.19 342  P      P       07 13 22.8 +0.3
      baz=143
YUK6  Outpost Mounta   70.33 344  P      P       07 13 24.0 +0.5
      baz=145
M31M  Drury Creek, Y   70.36 346  P      P       07 13 25.0 +1.6
      baz=150
N30M  Aishikik Lake    70.41 345  P      P       07 13 24.5 +0.7
      baz=147
O28M  Mount Upton      70.72 343  P      P       07 13 26.8 +0.8
      baz=143
YUK4  Talbot Arm       70.74 344  P      P       07 13 26.7 +0.7
      baz=145
YUK8  Steele Glacier   71.00 343  P      P       07 13 28.1 +0.4
      baz=144
CTG   Chitna Glacier   71.21 342  P      P       07 13 29.0 +0.2
      baz=142
M30M  Minto, Yukon     71.27 345  P      P       07 13 29.6 +0.6
      baz=147
M29M  Somme Creek      71.59 345  P      P       07 13 31.7 +0.6
      baz=145
YUK3  Moose Creek      71.60 343  P      P       07 13 32.1 +0.9
      baz=143
MCARA McCarthy VSAT    72.05 342  P      P       07 13 34.5 +0.8
      baz=141
L29M  L29M             72.06 345  P      P       07 13 34.8 +1.1
      baz=146
BVCY  Beaver Creek     72.22 344  P      P       07 13 36.7 +2.0
      baz=143
RAO   Raoul Island     72.24 241  LR     LR      07 38 46.8
      comp=Z,122nm,18.7s,baz=349,slow=30
EYAK  Cordova Ski Ar   72.29 340  P      P       07 13 36.8 +1.7
      baz=138
M27K  Edge Creek, AK   72.47 343  P      P       07 13 36.7 +0.4
      baz=142
K29M  Barlow Dome      72.52 346  P      P       07 13 37.2 +0.7
      baz=147
N25K  Chitina, Valde   72.71 342  P      P       07 13 38.7 +1.0
      baz=139
OHAK  Old Harbor       72.83 335  P      P       07 13 39.2 +0.9
      baz=130
M26K  Nabesna, AK      72.83 343  P      P       07 13 38.3 -0.1
M26K                              IAmb   IAmb    07 13 44.8
      comp=Z,16nm,1.2s
M26K  Nabesna, AK      72.83 343  P      P       07 13 38.5 +0.1
      baz=141
KDAK  Kodiak Island    72.90 336  LR     LR      07 38 45.2
      comp=Z,536nm,18.1s,baz=157,slow=30
BCAR  Beaver Creek A   73.00 344  P      P       07 13 39.7 +0.3
L27K  Beaver Creek,    73.01 344  P      P       07 13 39.9 +0.5
      baz=142
KLU   Klutina          73.05 341  P      P       07 13 39.8 +0.1
      baz=138
DAWY  Dawson           73.17 345  P      P       07 13 40.7 +0.4
      baz=145
J29M  Klondike Camp    73.19 346  P      P       07 13 40.2 -0.2
J29M                              IAmb   IAmb    07 13 52.0
      comp=Z,15nm,1.1s
SEW   Seward           73.25 339  P      P       07 13 41.4 +0.6
      baz=134
PWL   Port Wells       73.39 340  P      P       07 13 42.2 +0.6
      baz=135
L26K  Log Cabin Wild   73.42 343  P      P       07 13 42.5 +0.7
      baz=141
BRSE  Bradley Lake S   73.48 338  P      P       07 13 42.5 +0.4
      baz=133
HARP  HAARP            73.48 342  P      P       07 13 42.7 +0.6
      baz=139
CNPM  China Poot       73.52 338  P      P       07 13 42.8 +0.4
M24K  Tolsona, Glenn   73.58 341  P      P       07 13 43.8 +1.0
      baz=138
O22K  Cooper Landing   73.61 339  P      P       07 13 43.5 +0.6
      baz=134
SCM   Sheep Creek Mo   73.75 341  P      P       07 13 44.1 +0.2
      baz=136
FRB   Frobisher Bay    73.78  16  LR     LR      07 45 19.6
      comp=Z,141nm,19.3s,baz=198,slow=35
KNK   Knik Glacier     73.83 340  P      P       07 13 44.5 +0.3
      baz=135
K27K  Chicken          73.84 344  P      P       07 13 44.9 +0.7
      baz=142
M23K  Glacier View     73.85 341  P      P       07 13 44.2 -0.1
      baz=136
I29M  Ogilvie Camp,    73.97 346  P      P       07 13 44.5 -0.5
I29M  Ogilvie Camp,    73.97 346  P      P       07 13 45.1 +0.1
      baz=146
PAX   Paxson           74.00 342  P      P       07 13 45.4 +0.1
      baz=138
RC01  Rabbit Creek A   74.04 339  P      P       07 13 44.5 -0.9
      baz=134
SML   Sawmill          74.07 340  P      P       07 13 45.5 -0.2
      baz=135
PMR   Palmer           74.18 340  P      P       07 13 46.4 +0.2
      baz=135
EGAK  Eagle            74.20 345  P      P       07 13 45.0 -1.2
      baz=143,SNR=16
SCRK  Sand Creek       74.33 343  P      P       07 13 47.1 -0.2
      baz=140,SNR=7.0
RIDG  Independent Ri   74.40 343  P      P       07 13 47.4 -0.1
RIDG  Independent Ri   74.40 343  P      P       07 13 47.6  0.0
      baz=139,SNR=14
R17K  Ugashik Creek    74.41 334  P      P       07 13 47.6  0.0
      baz=127
O20K  Slope Mountain   74.42 338  P      P       07 13 47.9 +0.1
      baz=131
Q18K  Katmai Hardscr   74.44 336  P      P       07 13 47.7 -0.2
      baz=128
EPYK  Eagle Plains     74.46 348  P      P       07 13 47.7 -0.2
EPYK  Eagle Plains     74.46 348  P      P       07 13 48.1 +0.2
      baz=148,SNR=12
Q17K  Contact Creek    74.57 335  P      P       07 13 48.6 -0.2
      baz=128
J26L  Joseph Creek     74.62 344  P      P       07 13 48.5 -0.4
      baz=141
M22K  Willow           74.64 340  P      P       07 13 49.0 +0.2
      baz=134,SNR=5.9
SUA   Susitna One      74.65 339  P      P       07 13 48.3 -0.8
      baz=133,SNR=8.1
F31M  Tsiigehtchic     74.79 349  P      P       07 13 49.6  0.0
      baz=151
G30M  tAoh Zraii Nji   74.88 348  P      P       07 13 50.5 +0.3
      baz=148
R16K  Pilot Point      74.88 334  P      P       07 13 50.6 +0.3
      baz=126
I27K  Kandik River     74.97 345  P      P       07 13 50.6 -0.2
      baz=143,SNR=11
C36M  Paulatuk         75.07 353  P      P       07 13 51.2  0.0
      baz=161
CUT   Chulitna         75.14 340  P      P       07 13 52.4 +0.7
      baz=134
I26K  Coal Creek Min   75.14 345  P      P       07 13 51.6 -0.1
I26K                              IAmb   IAmb    07 14 07.4
      comp=Z,16nm,1.2s
I26K  Coal Creek Min   75.14 345  P      P       07 13 51.6 -0.1
      baz=141
O19K  Port Alsworth    75.14 337  P      P       07 13 51.9 +0.1
      baz=129
Q16K  King Salmon      75.14 335  P      P       07 13 51.6 -0.2
      baz=127
SKT   Skwentna         75.28 339  P      P       07 13 52.1 -0.5
      baz=132,SNR=13
H27K  Steamboat Moun   75.45 346  P      P       07 13 53.4 -0.2
      baz=143
INK   Inuvik           75.51 350  LR     LR      07 44 43.0
      comp=Z,371nm,18.3s,baz=141,slow=34
INK   Inuvik           75.51 350  P      P       07 13 54.0 +0.3
      baz=151,SNR=11
HDA   Harding Lake     75.52 343  P      P       07 13 53.6 -0.3
      baz=137
MSVF  Nonsavu          75.56 253  LR     LR      07 39 00.9
      comp=Z,144nm,19.0s,baz=109,slow=29
N19K  Bonanza Creek    75.59 338  P      P       07 13 53.0 -1.6
N19K                              IAmb   IAmb    07 13 60.0
      comp=Z,15nm,0.9s
N19K  Bonanza Creek    75.59 338  P      P       07 13 54.0 -0.6
      baz=129
MCK   McKinley         75.63 342  P      P       07 13 54.4 -0.2
MCK                               IAmb   IAmb    07 14 00.8
      comp=Z,16nm,1.0s
MCK   McKinley         75.63 342  P      P       07 13 54.1 -0.5
      baz=135
IL31                   75.77 343  P      P       07 13 55.2 -0.1
IL31                              IAmb   IAmb    07 14 10.5
      comp=Z,13nm,1.1s
ILAR  Eielson Array    75.77 343  P      P       07 13 54.2 -1.1
      comp=Z,2.8nm,0.9s,baz=155,slow=4.9,SNR=19
      comp=Z,2.8nm,0.9s
M20K  Styx River       75.78 339  P      P       07 13 55.2 -0.4
      baz=131
TRF   Thorofare Moun   75.87 341  P      P       07 13 55.2 -1.0
      baz=134
P16K  Nushagak River   75.91 335  P      P       07 13 56.4 +0.2
      baz=126
S12K  Black Hills      75.92 331  P      P       07 13 56.3 -0.2
      baz=121
PRP   Porcupine Dome   75.94 344  P      P       07 13 56.2 -0.3
      baz=139,SNR=26
G27K  Doyon Strip      75.95 346  P      P       07 13 56.1 -0.3
      baz=143
O17K  Koliganek Bris   75.98 336  P      P       07 13 57.1 +0.5
      baz=127
PPLA  Purkeypile       76.12 340  P      P       07 13 57.5 -0.1
      baz=132,SNR=12
M19K  Big River Lodg   76.25 338  P      P       07 13 58.4 +0.2
M19K  Big River Lodg   76.25 338  P      P       07 13 58.1 -0.1
      baz=130
O16K  Kokwok River B   76.28 335  P      P       07 13 58.8 +0.4
      baz=126
NEA2  Nenana           76.29 342  P      P       07 13 57.8 -0.5
      baz=135
CAST  Castle Rocks     76.44 340  P      P       07 13 58.3 -0.9
      baz=132,SNR=22
L20K  Farewell, AK     76.44 339  P      P       07 13 58.1 -1.2
      baz=130
BPAW  Bear Paw Mtn.    76.54 341  P      P       07 13 59.4 -0.4
      baz=133
G26K  Porcupine Rive   76.58 346  P      P       07 13 59.2 -0.7
      baz=141
L19K  White Mountain   76.60 339  P      P       07 14 00.2  0.0
      baz=129
I23K  Minto, Yukon-K   76.77 343  P      P       07 14 00.9 -0.1
      baz=135,SNR=11
CHUM  Lake Minchumin   76.83 341  P      P       07 14 01.0 -0.3
      baz=132
H24K  Noodor Dome      76.83 343  P      P       07 14 01.2 -0.2
      baz=137,SNR=12
G25K  Bearman Lake     77.03 345  P      P       07 14 02.2 -0.3
      baz=138
E27K  Coleen River     77.04 347  P      P       07 14 02.2 -0.3
      baz=143
URZ   Urewera          77.06 232  LR     LR      07 39 45.5
      comp=Z,266nm,21.9s,baz=184,slow=29
K20K  Telida           77.07 340  P      P       07 14 02.1 -0.7
      baz=130,SNR=11
N16K  Nishlik Lake     77.07 336  P      P       07 14 01.0 -1.9
      baz=125
MLY   Manley           77.11 342  P      P       07 14 02.5 -0.5
      baz=134,SNR=18
F26K  Sheenjek River   77.25 346  P      P       07 14 03.7 -0.1
      baz=141
G24K  Hadweenzic Riv   77.35 344  P      P       07 14 04.5 +0.2
      baz=137
F25K  Christian Rive   77.54 345  P      P       07 14 05.9 +0.5
      baz=139
I21K  Tanana           77.59 342  P      P       07 14 06.2 +0.6
      baz=132
A36M  Sachs Harbour    77.70 354  P      P       07 14 06.5 +0.4
      baz=160
H22K  Ishtalitna Cre   77.89 342  P      P       07 14 07.4 +0.1
      baz=133
E25K  Arctic Village   77.92 346  P      P       07 14 08.1 +0.6
      baz=139
F24K  Squaw Lake       78.06 345  P      P       07 14 08.7 +0.4
      baz=137
G23K  Bananza Creek    78.07 343  P      P       07 14 08.4 +0.1
      baz=135
H21K  Melozitna Rive   78.17 342  P      P       07 14 08.5 -0.4
      baz=132
COLD  Coldfoot         78.48 344  P      P       07 14 10.3 -0.2
      baz=134,SNR=5.1
E24K  Your Creek       78.62 345  P      P       07 14 11.5 +0.1
      baz=136
C27K  Jago River       78.65 347  P      P       07 14 11.6 +0.1
      baz=141
GCSA  Galena City Sc   78.91 340  P      P       07 14 13.3 +0.4
      baz=128
E23K  Chandalar        78.91 345  P      P       07 14 13.3 +0.3
      baz=135
G21K  Allakaket        78.95 342  P      P       07 14 12.1 -1.1
      baz=131,SNR=5.6
D25K  Kavik River      79.02 346  P      P       07 14 13.3 -0.3
      baz=139
C26K  Camden Bay       79.14 347  P      P       07 14 14.6 +0.5
      baz=140
F22K  John River       79.23 343  P      P       07 14 15.6 +0.9
      baz=133
F21K  Alatna River     79.41 343  P      P       07 14 15.8 +0.1
      baz=131
E22K  Anaktuvuk Pass   79.56 344  P      P       07 14 16.7 +0.2
      baz=133
D23K  Nanushuk River   79.83 345  P      P       07 14 18.9 +1.0
      baz=134
C24K  Franklin Bluff   79.87 346  P      P       07 14 18.7 +0.6
      baz=136
NRS   Narsarsuaq       80.35  25 iP      P       07 14 29.6 +8.8
SFJD  Kangerlussuaq    81.47  19  LR     LR      07 49 23.7
      comp=Z,144nm,21.9s,baz=250,slow=35
ANM   Nome             81.85 338  P      P       07 14 29.2 +0.5
      baz=120
TNA   Tin City         83.28 338  P      P       07 14 37.0 +0.8
      baz=117
UPNV  Upernavik        83.48  13 iP      P       07 14 43.0 +5.9
QSPA  South Pole Qui   85.26 180  LR     LR      07 45 49.9
      comp=Z,172nm,20.3s,baz=113,slow=31
QSPA  South Pole Qui   85.26 180  P      P       07 14 46.8 +0.3
ANGG  Ammassalik, Gr   85.43  23 eP      P       07 14 50.6 +3.6
ICESG Greenland Ices   86.09  19 iP      P       07 14 50.5 -0.2
DZM   Mont Dzumac      86.33 248 eLR     LR      07 42 08.6
      comp=Z,207nm,23.1s
DZM   Mont Dzumac      86.33 248  LR     LR      07 50 27.1
      comp=Z,88nm,18.0s,baz=108,slow=34
NEEM  North Greenlan   87.40  10 iP      P       07 14 56.2 -0.8
SUMG  Summit           87.86  16 iP      P       07 14 58.7 -0.7
SHEM  Shemya Is, Ala   87.93 323  LR     LR      07 46 02.9
      comp=Z,296nm,20.1s,baz=121,slow=30
H11N3 WAKE ISLAND Hy   89.24 290  T      T       08 53 50.0
      baz=96,slow=75,SNR=170
H11N2 WAKE ISLAND Hy   89.25 290  T      T       08 53 55.6
      baz=96,slow=75,SNR=184
H11N1 WAKE ISLAND Hy   89.25 290  T      T       08 53 53.5
      baz=96,slow=75,SNR=154
H11S2 WAKE ISLAND Hy   89.32 289  T      T       08 53 56.3
      baz=93,slow=74,SNR=82
H11S1 WAKE ISLAND Hy   89.32 289  T      T       08 53 53.4
      baz=93,slow=74,SNR=62
H11S3 WAKE ISLAND Hy   89.33 289  T      T       08 53 54.2
      baz=93,slow=74,SNR=32
SNAA  Sanae            89.48 162  LR     LR      07 46 60.0
      comp=Z,229nm,20.9s,baz=278,slow=30
BBTS  Babate           90.30  75  LR     LR      07 49 37.1
      comp=Z,118nm,20.1s,baz=258,slow=32
HNR   Honiara          93.60 260  LR     LR      07 48 01.7
      comp=Z,2μm,20.7s,baz=105,slow=29
PETK  Petropavlovsk-   97.84 323  LR     LR      07 51 57.9
      comp=Z,177nm,20.6s,baz=82,slow=31
TORD  Torodi Ar. Bea  107.91  78  PKKP   PKKPab  07 32 01.4 -3.7
      comp=Z,1.0nm,1.1s,baz=50,slow=2.3,SNR=3.9
CN2   Changchun       120.72 319 eP      PKiKP   07 21 04.1 +1.8
CN2                               pmax   pmax
      comp=Z,10.0nm,0.5s
BRTR  Keskin Array B  129.43  41  PKP    PKPdf   07 21 18.5 -0.8
      comp=Z,1.5nm,1.0s,baz=34,slow=3.1,SNR=4.4
NJ2   Nanjing         130.38 309 eP      PKPdf   07 21 20.6 -0.4
NJ2                               pmax   pmax
      comp=Z,13nm,0.5s
NJ2                               pmax   pmax
      comp=Z,15nm,0.5s
HHC   Hu-ho-hao-te    131.04 323 eP      PKPdf   07 21 18.3 -3.9
BVAR  Borovoye Array  131.81   3  PKP    PKPdf   07 21 22.0 -1.1
      comp=Z,1.2nm,0.7s,baz=29,slow=3.4,SNR=3.8
LYN   LuoYang         133.98 315 ⇓PKP    PKiKP   07 21 36.8 +7.7
WMQ   Urumqi          139.40 345 eP      PKPdf   07 21 38.8 +1.1
CD2   Chengdu         142.09 317  PKP    PKPdf   07 21 41.5 -1.4
GEYT  Alibeck         143.83  22  PKP    PKPdf   07 21 44.8 -0.9
      comp=Z,1.6nm,0.4s,baz=347,slow=5.9,SNR=1.9
PZH   PanZhiHua       146.11 312  PKPbc  PKPdf   07 21 48.3 -1.8
CMAR  Chiang Mai Arr  152.44 302  PKP    PKPdf   07 21 58.9 -1.4
      comp=Z,0.6nm,0.3s,baz=61,slow=1.1,SNR=1.3
CMAR                              PKPbc  PKPbc   07 22 06.7 -0.5
      comp=Z,1.6nm,0.6s,baz=310,slow=2.1,SNR=5.3
```

IDC 11 07:11:59.4±3.1**,24°.66N**×**97°.43E,h0^{km},mb3.5**/2**,mbtmp3.6**/3**,ML4.0**/1**,MS3.2**/4**,Error ellipse: s-maj=61.3km s-min=35.0km az=93.0,Myanmar-China border region**

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Code  Station Name        Δ°   AZ°    Phase ID           Time      Res
                                      Op     ISC        h  m  s    ISC
CMAR  Chiang Mai Arr      6.33 167    Pn     Pn       07 13 33.9  -0.2
      0.9nm,0.3s,baz=340,slow=14,SNR=6.8
CMAR                                  Pg     Pb       07 13 55.3  +4.7
      1.0nm,0.3s,baz=344,slow=16,SNR=15
CMAR                                  Lg     Lg       07 15 20.6
      1.1nm,0.3s,baz=344,slow=29,SNR=6.3
CMAR                                  LR     LR       07 16 31.0
      comp=Z,26nm,20.9s,baz=0.0,slow=43
      2.4nm,0.3s
AKTO  Aktyubinsk         39.77 321    LR     LR       07 36 56.4
      comp=Z,27nm,21.3s,baz=158,slow=38
WRA   Warramunga Arr     57.07 138    P      P        07 21 47.2  -0.4
      0.5nm,0.7s,baz=326,slow=7.8,SNR=4.1
      0.5nm,0.7s
ASAR  Alice Springs      59.66 141    P      P        07 22 05.9  +0.2
      0.3nm,0.5s,baz=319,slow=7.0,SNR=6.1
      0.3nm,0.5s
DAVOX Davos/Dischmat     70.84 313    LR     LR       07 58 36.6
      comp=Z,117nm,21.0s,baz=296,slow=40
KEST  Kesra              74.57 302    LR     LR       08 01 50.4
      comp=Z,33nm,20.3s,baz=291,slow=40
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*NNC **11** 07:17:29.1±1.2,50°.49N×77°.41E,h0^{km},mpv2.9,Error ellipse: s-maj=31.3km s-min=6.4km az=166.0,Suspected Mining explosion.*

*IDC **11** 07:17:31.8±1.0,50°.04N×78°.76E,h0^{km},mbtmp2.8/3,ML2.2/3,Error ellipse: s-maj=12.0km s-min=6.8km az=61.0*

ISC 11 07:17:25.4±1.1**,50°.39N**±0°.06×**79°.85E**±0°.05**,h0^{km},n15,** σ**0^{s}.75**/25**,16C-4D,Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR14	Kurchatov Arra	0.83	286	⇑P	Pg	07 17 42.4	+1.0
KUR14				⇑S	Sb	07 17 54.2	-0.4
KURK	Kurchatov	0.85	293	⇑P	Pn	07 17 44.8	+0.1
	4.7nm,0.3s						
KURK				⇑S	Sb	07 17 55.7	+0.6
	20nm,0.7s						
KUR15	Kurchatov Arra	0.85	286	⇓P	Pb	07 17 43.2	+0.1
KUR15				⇑S	Sg	07 17 53.2	+0.3
KUR07	Kurchatov Arra	0.87	283	⇓P	Pg	07 17 42.2	+0.1
KUR07				⇑S	Sg	07 17 51.2	-2.3
KUR06	Kurchatov Arra	0.87	285	⇑P	Pg	07 17 42.6	+0.5
KUR06				⇑S	Sg	07 17 53.8	+0.3
KURBB	Kurchatov Arra	0.88	286	Pg	Pb	07 17 43.4	-0.1
	1.5nm,0.3s,baz=165,slow=18,SNR=148						
KURBB				Lg	Lg	07 17 52.0	
	1.1nm,0.3s,baz=166,slow=32,SNR=11						
KURBB	Kurchatov Arra	0.88	286	⇑P	Pb	07 17 43.6	+0.1
	17nm,0.3s						
KURBB				⇑S	Sg	07 17 53.9	+0.4
	52nm,0.7s						
KUR05	Kurchatov Arra	0.88	287	⇑P	Pg	07 17 43.0	+0.8
KUR05				⇑S	Sg	07 17 53.6	0.0
KUR04	Kurchatov Arra	0.88	289	⇑P	Pb	07 17 43.6	+0.1
KUR04				⇓S	Sg	07 17 53.8	+0.1
KUR16	Kurchatov Arra	0.90	286	⇑P	Pg	07 17 43.0	+0.4
KUR16				⇓S	Sg	07 17 52.8	-1.3
KUR17	Kurchatov Arra	0.92	286	⇑P	Pb	07 17 44.0	-0.2
KUR17				⇑S	Sg	07 17 53.6	-1.2
MKAR	Makanchi Array	3.94	155	Pn	Pb	07 18 35.5	-0.3
	0.2nm,0.3s,baz=321,slow=10,SNR=6.7						
MKAR				Pg	Pg	07 18 41.6	+0.6
	0.6nm,0.3s,baz=323,slow=14,SNR=7.1						
MKAR				Lg	Lg	07 19 36.3	
	1.0nm,0.3s,baz=330,slow=30,SNR=12						
	0.3nm,0.3s						
ZALV	Zalesovo Beam	4.70	39	Pn	Pg	07 18 55.7	+0.3
	0.6nm,0.3s,baz=228,slow=14,SNR=7.9						
	1.1nm,0.3s						
I46RU	ZALESOVO INFRA	4.70	39	I	I	07 51 20.0	
	baz=224,slow=329,SNR=1.1						
BVAR	Borovoye Array	6.45	298	Pn	Pn	07 19 01.0	-0.5
	baz=118,slow=13,SNR=1.9						
	0.2nm,0.2s						

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*FUNV **11** 07:29:10.4, 12°03N×69°64W, h15^{km}, MW3.4*

ISC 11 07:29:08.7±1.3**, 12°03N**±0°04×**69°64W**±0°03**, h15**^{km}±10^{km}**,**
n32, σ**1**^{s}**41**/50**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUA1	Aruba	0.60	323	*e*P	Pb	07 29 20.1	-0.8
AUA1				*e*S	Sg	07 29 28.1	-0.4
AUA1				*i*		07 29 30.5	
	comp=Z,410nm,0.2s						
JACV	Jacura	1.22	140	*e*P	Pg	07 29 32.5	+0.2
JACV				*e*S	Sn	07 29 49.6	+2.0
SIQV	Siquisique	1.38	187	*e*P	Pb	07 29 34.3	+0.1
SIQV				*e*S	Sg	07 29 52.9	-0.4
CURV	Curarigua	2.03	189	*e*P	Pn	07 29 42.8	+0.4
CURV				*e*S	Sn	07 30 08.0	+0.4
URIC	Uribia, Colomb	2.33	262	*e*P	Pn	07 29 47.0	+0.5
URIC				*e*S	Sn	07 30 16.9	+2.0
URIC				*i*		07 30 24.1	
	comp=Z,49nm,0.3s						
TURV	Turiamo	2.36	131	*e*P	Pn	07 29 47.6	+0.6
TURV				*e*S	Sn	07 30 15.6	-0.1
MAPV	Macapo	2.47	152	*e*P	Pn	07 29 49.2	+0.7
MAPV				*e*S	Sn	07 30 17.8	-0.7
BENV	Beln	2.87	136	*e*P	Pn	07 29 56.1	+2.1
BENV				*e*S	Sn	07 30 28.4	0.0
FUNV	FUNVISIS	3.18	119	*e*P	Pn	07 29 58.5	+0.2
FUNV				*e*S	Sn	07 30 34.9	-1.1
TACV	Tcata	3.18	126	*e*P	Pn	07 29 58.6	+0.4
TACV				*e*S	Sn	07 30 35.0	-1.0
CRJC	Cerrejon, Guaj	3.33	253	*e*P	Pn	07 30 00.4	0.0
CRJC				*e*S	Sn	07 30 40.1	+0.2
CRJC				*i*		07 30 50.4	
	comp=Z,16nm,0.2s						
BAUV	El Baul	3.44	153	*e*P	Pn	07 30 02.6	+0.7
BAUV				*e*S	Sn	07 30 41.4	-1.0
MCQV	Machiques	3.46	236	*e*P	Pn	07 30 02.6	+0.5
MCQV				*e*S	Sn	07 30 41.6	-1.2
BIRV	Birongo	3.65	115	*e*P	Pn	07 30 04.5	-0.2
BIRV				*e*S	Sn	07 30 45.6	-1.8
SOCV	Socops	3.91	198	*e*P	Pn	07 30 10.1	+1.8
SOCV				*e*S	Sn	07 30 51.5	-2.5
MERV	Las Mercedes	4.29	130	*e*P	Pn	07 30 14.2	+0.6
MERV				*e*S	Sn	07 31 01.0	-2.4
SMRC	Santa Marta, M	4.58	260	*e*P	Pn	07 30 19.5	+2.1
SMRC				*e*S	Sn	07 31 09.9	-0.5
CAPV	Capacho	4.91	213	*e*P	Pn	07 30 22.5	+0.3
CAPV				*e*S	Sn	07 31 15.3	-3.5
ARGC	Ariguani, Magd	5.01	245	*e*P	Pn	07 30 24.8	+1.3
CACV	CAICARA DEL OR	5.38	145	*e*P	Pn	07 30 34.0	+5.4
CACV				*e*S	Sn	07 31 34.7	+4.4
PAMC	Pamplona, Colo	5.55	213	*e*P	Pn	07 30 31.6	+0.3
SJCC	San Jacinto, C	5.84	249	*e*P	Pn	07 30 35.9	+1.0
SJCC				*e*S	Sn	07 31 41.7	0.0
SJCC				*i*		07 31 57.8	
	comp=Z,3.5nm,0.5s						
TAMC	Tame, Arauca	5.95	201	*e*P	Pn	07 30 35.7	-0.7
BRRC	Barranca, Sant	6.33	220	*e*P	Pn	07 30 42.4	+0.8
ZARC	Zaragoza, Cauc	6.84	229	*e*P	Pn	07 30 48.3	-0.3
RUSC	La Rusia	6.98	209	*e*P	Pn	07 30 51.2	+0.3
UREC	San Jos de Ur	7.20	234	*e*P	Pn	07 30 46.6	-6.9
PTBC	PUERTO BERRIO,	7.24	222	*e*P	Pn	07 30 53.2	-0.8
SPBC	San Pablo de B	7.70	215	*e*P	Pn	07 31 00.1	-0.5
HELC	Santa Helena	8.21	226	*e*P	Pn	07 31 10.6	+2.8
CBOC	Ciudad Bolivar	8.78	226	*e*P	Pn	07 31 16.0	+0.6
GUY2C	Guyana, Caldas	8.82	220	*e*P	Pn	07 31 17.4	+1.2

IDC 11 07:36:40.1±1.9**, 7°10S**×**128°61E, h0**^{km}**, mb3.3**/1**,**
mbtmp3.5/4**, ML3.6**/3**, MS3.3**/2**, Error ellipse:**
s-maj=63.2km s-min=30.0km az=79.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	6.74	23	Pn	Pn	07 38 22.1	+1.7
	1.0nm,0.3s,baz=239,slow=19,SNR=1.7						
SIJI				Sn	Sn	07 39 30.0	-7.9
	1.0nm,0.3s,baz=181,slow=22,SNR=1.6						
	2.6nm,0.3s						
WRA	Warramunga Arr	13.92	157	Pn	Pn	07 39 58.0	-0.8
	0.3nm,0.3s,baz=338,slow=13,SNR=17						
WRA				Sn	Sn	07 42 21.4	-13
	0.4nm,0.3s,baz=330,slow=23,SNR=7.3						
	0.4nm,0.3s						
ASAR	Alice Springs	17.24	163	P	P	07 40 43.4	-0.7
	0.2nm,0.3s,baz=342,slow=9.7,SNR=12						
ASAR				S	Sn	07 43 43.7	-11
	0.2nm,0.7s,baz=352,slow=28,SNR=1.9						
	0.3nm,0.4s						
JNU	Nakatsue	40.06	3	LR	LR	08 00 53.7	
	comp=Z,29nm,19.5s,baz=132,slow=36						
KSRS	Korea Array	44.33	359	LR	LR	08 03 35.4	
	comp=Z,47nm,20.7s,baz=75,slow=36						
MKAR	Makanchi Array	67.56	327	P	P	07 47 37.8	-0.6
	0.1nm,0.4s,baz=111,slow=7.9,SNR=2.3						
	0.1nm,0.4s						

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*NEIC **11** 07:53:03.9±1.6, 16°24S±0°07×73°72W±0°10, h35^{km}±2^{km},*
mb4.1/10, Error ellipse: s-maj=17.1km s-min=11.1km
az=242.0

*IDC **11** 07:53:03.4±1.2, 16°16S×73°65W, h45^{km}±5^{km}, mb3.5/5,*
mbtmp3.8/8, ML4.0/3, MS3.2/3, Error ellipse: s-maj=41.9km
s-min=13.8km az=38.0

ISC 11 07:53:02.9±0.6**, 16°27S**±0°06×**73°75W**±0°09**, h35**^{km}**, n60,**
σ**1**^{s}**48**/58**, mb3.9**/6**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01	Chacalluta	3.87	123	Pn	Pn	07 54 01.7	+1.8
PB12	IPOC Station P	4.01	126	Pn	Pn	07 54 02.7	+0.6
PB16	IPOC Station P	4.54	117		Pn	07 54 12.8	+3.0
PSGCX	Pisagua	4.78	134	Pn	Pn	07 54 13.1	+0.5
MNMC	Minye Minye	4.88	126		Pn	07 54 15.8	+1.8
NNA	Nana	5.21	324	P	Pn	07 54 18.7	+0.3
	4.6nm,0.3s,baz=163,slow=13,SNR=11						
NNA				S	Sn	07 55 18.5	+1.2
	29nm,0.3s,baz=198,slow=15,SNR=2.4						
	7.2nm,0.3s						
NNA	Nana	5.21	324	Pn	Pn	07 54 20.4	+2.0
PB11	IPOC Station P	5.22	132	Pn	Pn	07 54 19.6	+1.0
TA02	Huaiquique	5.26	140		Pn	07 54 19.5	+0.5
LPAZ	La Paz	5.40	91	P	Pn	07 54 26.0	+4.4
	48nm,0.7s,baz=273,slow=9.9,SNR=106						
LPAZ				LR	LR	07 56 45.6	
	comp=Z,146nm,21.6s,baz=256,slow=42						
TA01	Diego Aracena	5.45	142	Pn	Pn	07 54 21.4	-0.3
GO01	Chusmiza	5.50	129		Pn	07 54 23.6	+0.8
PB08	IPOC Station P	5.82	132		Pn	07 54 28.5	+1.3
PB02	IPOC Station P	6.21	145		Pn	07 54 33.9	+1.7
PB01	IPOC Station P	6.24	140		Pn	07 54 33.4	+0.8
PB07	IPOC Station P	6.54	147		Pn	07 54 37.6	+0.7
PB03	IPOC Station P	6.88	147		Pn	07 54 41.7	+0.2
PB04	IPOC Station P	6.92	151	Pn	Pn	07 54 42.5	+0.4
PB09	IPOC Station P	6.96	143		Pn	07 54 44.8	+2.3
PB06	IPOC Station P	7.52	149	Pn	Pn	07 54 50.9	+0.6
LVC	Limon Verde	7.79	145	P	Pn	07 54 56.0	+1.9
	2.7nm,0.3s,baz=329,slow=7.7,SNR=21						
LVC				S	Sn	07 56 18.4	-2.9
	26nm,0.5s,baz=86,slow=23,SNR=8.5						
	7.1nm,0.4s						
LVC	Limon Verde	7.79	145		Pn	07 54 56.1	+2.0
PB10	IPOC Station P	7.81	158	Pn	Pn	07 54 53.8	-0.3
PB15	IPOC Station P	7.99	150		Pn	07 54 58.1	+1.3
CZSB	Cruzeiro do Su	8.55	7	Pn	Pn	07 55 04.4	+0.1
PB14	IPOC Station P	8.89	160	Pn	Pn	07 55 09.4	+0.2
GO02	Mina Guanaco	9.67	157	Pn	Pn	07 55 21.3	+1.5
ETMB	Extrema	9.75	50	Pn	Pn	07 55 20.2	-0.5
ATAH	Atahualpa	10.15	333	P	Pn	07 55 29.1	+2.5
	1.8nm,0.6s,baz=129,slow=6.5,SNR=1.7						
ATAH				S	Sn	07 57 17.5	-2.0
	7.2nm,0.7s,baz=24,slow=18,SNR=2.2						
SIV	San Ignacio	12.19	90	P	Pn	07 55 54.1	-0.1
	0.1nm,0.3s,baz=274,slow=11,SNR=26						
SIV				LR	LR	08 01 08.6	
	comp=Z,83nm,20.4s,baz=306,slow=40						
	2.4nm,0.4s						
SAML	Samuel	12.62	56	Pn	Pn	07 55 57.6	-2.4
PORT	Chimborazo Vol	15.52	341	P	P	07 56 43.4	-0.5
PORT				IAmb	IAmb	07 57 04.8	
	comp=Z,5.7nm,0.7s						
CHSH	Refugio Sur-Vo	15.52	341	P	P	07 56 44.2	+0.3
CHSH				IAmb	IAmb	07 57 15.3	
	comp=Z,20nm,1.4s						
CFA	Coronel Fontan	16.07	163	P	P	07 56 51.1	+1.7
	comp=Z,2.6nm,0.6s,baz=324,slow=7.8,SNR=6.3						
SLOR	San Lorenzo -	16.13	343	P	P	07 56 50.9	+0.3
MT09	Talagante	17.61	172	P	Pn	07 57 06.7	+1.0
MT09				IAmb	IAmb	07 57 13.4	
	comp=Z,21nm,1.3s						
H03N1	Juan Fernandez	17.72	194	T	T	08 15 30.4	
	baz=17,slow=74,SNR=1303						
H03N2	Juan Fernandez	17.73	194	T	T	08 15 32.7	
	baz=17,slow=74,SNR=1405						
H03N3	Juan Fernandez	17.74	194	T	T	08 15 32.6	
	baz=17,slow=74,SNR=1134						
CPUP	Villa Florida	18.27	126	P	Pn	07 57 15.0	+1.3
MACA	Manacapuru-AM	18.30	46	P	Pn	07 57 14.0	-0.2
MACA				IAmb	IAmb	07 57 34.2	
	comp=Z,28nm,1.5s						
RUSC	La Rusia	22.03	2	P	P	07 57 54.1	-0.9
RUSC				IAmb	IAmb	07 58 08.9	
	comp=Z,5.7nm,0.9s						
BDFB	Brasilia	24.75	92	P	P	07 58 20.9	-0.7
	comp=Z,1.3nm,0.6s,baz=269,slow=12,SNR=3.3						
	comp=Z,1.3nm,0.6s						
BDFB	Brasilia	24.75	92	P	P	07 58 21.3	-0.3
BDFB				IAmb	IAmb	07 58 39.7	
	comp=Z,6.3nm,0.9s						
TXAR	Lajitas Array	53.76	327	P	P	08 02 20.9	-1.2
	comp=Z,0.1nm,0.7s,baz=150,slow=6.0,SNR=1.5						
TXAR				pP	pP	08 02 33.6	+0.7
	comp=Z,0.7nm,0.6s,baz=153,slow=7.3,SNR=8.8						
TXAR				sP	sP	08 02 39.5	+2.3
	comp=Z,0.3nm,0.6s,baz=149,slow=7.7,SNR=3.4						
	comp=Z,0.1nm,0.7s						
SNAA	Sanae	68.69	161	P	P	08 04 02.4	-0.2
DBIC	Dimbokro	71.86	77	LR	LR	08 33 36.4	
	comp=Z,27nm,19.2s,baz=140,slow=34						
TORD	Torodi Ar. Bea	80.08	73	P	P	08 05 08.1	-1.6
	comp=Z,3.3nm,0.6s,baz=263,slow=5.4,SNR=21						
TORD				pP	pP	08 05 21.6	+0.6
	comp=Z,1.5nm,0.8s,baz=262,slow=4.7,SNR=4.9						
TORD				sP	sP	08 05 26.6	+1.4
	comp=Z,2.9nm,0.8s,baz=255,slow=4.9,SNR=8.1						
	comp=Z,3.3nm,0.6s						
TORD	Torodi Ar. Bea	80.08	73	P	P	08 05 08.3	-1.5
YKA	Yellowknife Ar	84.80	342	P	P	08 05 31.7	-1.5
	comp=Z,0.3nm,0.9s,baz=140,slow=5.2,SNR=4.5						
YKA				pP	pP	08 05 45.6	+1.4
	comp=Z,0.3nm,0.7s,baz=145,slow=5.3,SNR=3.4						
	comp=Z,0.3nm,0.9s						
ESDC	Sonseca Array	85.47	47	P	P	08 05 36.0	-1.3
	comp=Z,0.7nm,1.0s,baz=243,slow=2.3,SNR=2.5						
	comp=Z,0.7nm,1.0s						
H11N3	WAKE ISLAND Hy	122.46	283	T	T	10 25 53.1	
	baz=98,slow=74,SNR=4.4						
H11N2	WAKE ISLAND Hy	122.47	283	T	T	10 25 53.1	
	baz=98,slow=74,SNR=6.0						
H11N1	WAKE ISLAND Hy	122.48	283	T	T	10 25 51.8	
	baz=98,slow=74,SNR=2.8						
H11S2	WAKE ISLAND Hy	122.49	282	T	T	10 25 54.4	
	baz=98,slow=75,SNR=8.8						
H11S1	WAKE ISLAND Hy	122.50	282	T	T	10 25 59.1	
	baz=98,slow=75,SNR=8.8						
H11S3	WAKE ISLAND Hy	122.51	282	T	T	10 25 55.7	
	baz=98,slow=75,SNR=10						
ASAR	Alice Springs	131.98	215	PKP	PKPdf	08 12 12.3	-1.3
	comp=Z,0.1nm,0.5s,baz=132,slow=1.4,SNR=1.6						
WRA	Warramunga Arr	134.65	219	PKP	PKPdf	08 12 18.2	-0.4
	comp=Z,0.2nm,0.5s,baz=141,slow=1.9,SNR=1.6						
PZH	PanZhiHua	168.99	22	PKP	PKPdf	08 13 06.5	-0.7

NNC 11 08:22:11.5±6.9**, 36°92N**×**71°07E, h0**^{km}**, mb3.6, mpv3.2,**
1C-3D, Error ellipse: s-maj=65.9km s-min=49.8km
az=123.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	5.59	20	⇓P	Pn	08 23 36.7	+0.4
	0.3nm,0.6s						
AML				⇓S	Sn	08 24 41.8	+0.4
	2.1nm,0.7s						
KK31	Karatay Array	6.20	356	⇓P	Pn	08 23 45.3	+1.0
	6.2nm,0.4s,baz=180,slow=13,SNR=66						
KK31				⇑S	Sn	08 24 57.6	+1.8
	1.0nm,0.3s						
AB31	Akbulak array	14.75	330	P	Pn	08 25 38.1	-3.2
	0.6nm,0.6s,baz=160,slow=12,SNR=17						

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*MOS **11** 08:22:42.2±1.1, 64°74N×157°02E, h5^{km}, mb4.2/5, Error*
ellipse: s-maj=19.1km s-min=8.6km az=78.9

*NERS **11** 08:22:43.7±0.0, 64°74N×157°10E, h12^{km}*

*IDC **11** 08:22:43.4±0.6, 64°85N×156°87E, h0^{km}, mb3.9/20,*
mbtmp3.9/22, ML5.3/1, MS3.5/4, Error ellipse:
s-maj=16.4km s-min=9.6km az=133.0

ISC 11 08:22:44.2±0.4**, 64°73N**±0°04×**157°03E**±0°04**, h10**^{km}**, n58,**
σ**1**^{s}**99**/74**, mb3.9**/26**, MS3.4**/4**, 4C, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OMS	Omsukchan	2.29	195	*e*P	Pn	08 23 16.5	-5.5
OMS				*e*P	Pb	08 23 20.3	-5.3
OMS				Pgmax		08 23 22.5	
	820nm,0.3s						
OMS				*e*S	Sn	08 23 50.2	-0.1
OMS				Sgmax		08 23 52.1	
	2μm,0.3s						
OMS				Sgmax		08 23 52.1	
	2μm,0.2s						
OMS	Omsukchan	2.29	195	*e*P	Pn	08 23 19.2	-2.8
OMS				*e*		08 23 50.2	
OMS				pmax	pmax		
	comp=Z,580nm,0.2s						
OMS				smax	smax		
	comp=E,3μm,0.3s						
OMS				smax	smax		
	comp=N,2μm,0.2s						
SEY	Seymchan	2.74	231	Pn	Pn	08 23 29.2	+1.0
	comp=N,70nm,0.3s,baz=72,slow=9.4,SNR=42						
SEY				Pg	Pb	08 23 33.3	+0.1
	comp=N,114nm,0.3s,baz=52,slow=18,SNR=78						
SEY				Lg	Lg	08 24 10.6	
	comp=N,197nm,0.3s,baz=138,slow=17,SNR=21						
SEY	Seymchan	2.74	231	*e*P	Pn	08 23 29.1	+1.0
SEY				*e*Pg	Pb	08 23 33.5	+0.3
SEY				*e*Sg	Sg	08 24 11.1	-0.9
SEY				Sgmax		08 24 15.0	
	comp=N,1μm,0.3s						
EVEN	Evensk	3.00	160	*e*P	Pn	08 23 31.7	0.0
EVEN				*e*Pg	Pb	08 23 38.4	+0.8
EVEN				Pgmax		08 23 43.4	
	comp=N,360nm,0.3s						
EVEN				*e*Sg	Sg	08 24 18.1	-2.2
EVEN				Sgmax		08 24 20.3	
	comp=N,2μm,0.3s						
EVEN				Sgmax		08 24 20.3	
	comp=N,1μm,0.3s						
TLAR	Talaya	4.19	212	*e*P	Pn	08 23 49.6	+1.5
TLAR				Pmax		08 23 58.0	
	comp=N,50nm,0.3s						
TLAR				*e*Pg	Pg	08 24 01.1	-3.2
TLAR				Pgmax		08 24 03.2	
	comp=N,80nm,0.2s						
TLAR				*e*Sg	Sg	08 24 56.2	-2.3
TLAR				Sgmax		08 25 00.0	
	comp=N,820nm,0.2s						
TLAR				Sgmax		08 25 00.0	
	comp=N,850nm,0.3s						
SUUS	Susuman	4.39	248	*e*P	Pn	08 23 52.9	+2.0
SUUS				*e*		08 23 55.8	
SUUS				Pmax		08 23 58.0	
	comp=N,110nm,0.2s						
SUUS				*e*Sg	Sg	08 25 02.9	-2.2
SUUS				Sgmax		08 25 13.7	
	comp=N,890nm,0.8s						
SUUS				Sgmax		08 25 13.7	
	comp=N,450nm,0.7s						
SUUS	Susuman	4.39	248	*e*P	Pn	08 23 52.9	+2.0
SUUS				*e*S	Sn	08 24 45.8	+3.7
SUUS				pmax	pmax		
	comp=Z,110nm,0.2s						
SUUS				smax	smax		
	comp=E,890nm,0.8s						
SUUS				smax	smax		
	comp=N,500nm,0.7s						
BILL	Bilibino	4.98	44	*e*P	Pn	08 23 59.8	+0.8
BILL				*e*Pg	Pg	08 24 15.3	-4.2
BILL				Pgmax		08 24 19.4	
	comp=N,60nm,0.5s						
BILL				*e*S	Sn	08 24 54.5	-2.0
BILL				*e*Sg	Sg	08 25 22.8	-1.2
BILL				Sgmax		08 25 28.8	
	comp=N,300nm,0.6s						
BILL				Sgmax		08 25 28.8	
	comp=N,190nm,0.7s						
BILL	Bilibino	4.98	44*c*	*i*P	Pn	08 23 59.7	+0.8
BILL				*e*S	Sn	08 24 57.7	+1.2
BILL				pmax	pmax		
	comp=Z,23nm,1.0s						
BILL				MLR	MLR		
	comp=Z,73nm,14.0s						
MGD	Magadan 1	5.54	215	*e*P	Pn	08 24 07.8	+1.3
MGD				*e*Pg	Pg	08 24 26.7	-3.4
MGD				Pgmax		08 24 28.9	
	comp=Z,20nm,0.3s						
MGD				*e*Sg	Sg	08 25 38.2	-3.5
MGD				Sgmax		08 25 45.1	
	comp=Z,290nm,0.4s						
MA2	Magadan	5.94	212	Pn	Pn	08 24 13.0	+0.8
	comp=Z,6.9nm,0.3s,baz=45,slow=10,SNR=18						
MA2				Sn	Sn	08 25 19.0	-1.2
	comp=Z,7.6nm,0.3s,baz=309,slow=22,SNR=4.5						
MA2				Lg	Lg	08 25 54.7	
	comp=Z,13nm,0.3s,baz=100,slow=18,SNR=9.1						
	comp=Z,5.7nm,0.3s						
MA2	Magadan	5.94	212	*e*P	Pn	08 24 13.3	+1.1
MA2				*e*		08 24 35.0	
MA2				*e*S	Sn	08 25 18.3	-1.9
MA2				*e*Sg	Sg	08 25 52.0	-2.8
MA2				Sgmax		08 26 07.0	
	comp=Z,380nm,1.4s						
MA2				Sgmax		08 26 07.0	
	comp=Z,220nm,1.0s						
TLON	Talon	6.33	222	*e*	Pn	08 24 22.8	+5.3
TLON				*e*		08 24 37.5	
TLON				*e*Sg	Sg	08 26 04.7	-2.6
TLON				Sgmax		08 26 17.1	
	comp=Z,880nm,0.6s						
TLON				Sgmax		08 26 17.1	
	comp=Z,310nm,0.5s						
ANDR	Anadyr'	8.75	81	*e*	Pg	08 26 00.6	+29
ANDR				*e*S	Sg	08 27 47.7	+23
ANDR				Sgmax		08 28 08.4	
	comp=Z,110nm,0.0s						
TIXI	Tiksi	12.43	316	Pn	Pn	08 25 41.8	+0.9
	comp=Z,419nm,0.3s,baz=90,slow=22,SNR=44						
TIXI				Sn	Sn	08 27 50.8	-8.4
	comp=Z,176nm,0.3s,baz=270,slow=20,SNR=7.6						
TIXI				Lg	Lg	08 29 13.4	
	comp=Z,19nm,0.3s,baz=270,slow=24,SNR=1.3						
TIXI	Tiksi	12.43	316*c*	*e*P	Pn	08 25 42.4	+1.5
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
YAK	Yakutsk	12.51	270	*e*P	Pn	08 25 42.1	+0.2
YAK				*e*S	Sn	08 28 01.6	+0.5
YAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,1.0nm,0.9s						
YAK				smax	smax		
	comp=E,97nm,4.7s						
YAK				smax	smax		
	comp=N,40nm,4.1s						
YAK				MLR	MLR		
	comp=Z,419nm,7.0s						
YAK				MLR	MLR		
	comp=N,184nm,5.0s						
YAK				MLR	MLR		
	comp=E,174nm,6.0s						
ZEA	Zeya	18.58	248	*e*P	Pn	08 27 02.7	+1.4
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YSS	Yuzh-Sakhalins	19.45	210	*i* P	P	08 27 10.7	+0.2
KLR	Kul'dur	20.53	233	P	Pn	08 27 24.9	+0.3
	comp=Z,0.8nm,0.4s,baz=11,slow=8.2,SNR=2.7						
	comp=Z,0.8nm,0.4s						
KLR	Kul'dur	20.53	233	*i* P	Pn	08 27 24.2	-0.3
KLR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAJ	Asahikawa	22.19	208	P	P	08 27 42.8	+2.6
	comp=Z,3.3nm,0.8s,baz=68,slow=19,SNR=1.4						
	comp=Z,3.3nm,0.8s						
ILAR	Eielson Array	23.27	64	P	P	08 27 51.6	+0.2
	comp=Z,1.4nm,0.7s,baz=275,slow=6.0,SNR=23						
ILAR				LR	LR	08 37 10.4	
	comp=Z,536nm,18.6s,baz=112,slow=37						
	comp=Z,1.4nm,0.7s						
MDJ	Mudanjiang	25.27	230	P	P	08 28 12.9	+2.6
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,140nm,5.6s						
NRIK	Noril'sk	26.13	311*c*	*e*P	P	08 28 17.9	+0.1
NRIK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
INK	Inuvik	26.56	51	P	P	08 28 25.6	+3.9
	comp=Z,0.7nm,0.4s,baz=294,slow=10,SNR=2.7						
INK				PcP	PcP	08 31 45.9	+0.4
	comp=Z,0.7nm,0.6s,baz=348,slow=5.8,SNR=3.9						
ULN	Ulaanbaatar	31.39	262	*i* P	P	08 29 05.8	+0.7
ULN				pmax	pmax		
	comp=Z,5.0nm,2.6s						
SONM	Songino Array	31.69	262	P	P	08 29 10.3	+2.6
	comp=Z,0.9nm,0.8s,baz=28,slow=9.2,SNR=4.5						
SONM	Songino Array	31.69	262	*e*P	P	08 29 11.1	+3.4
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KSRS	Korea Array	32.29	226	P	P	08 29 14.2	+1.4
	comp=Z,0.9nm,0.5s,baz=28,slow=9.2,SNR=4.3						
	comp=Z,0.9nm,0.5s						
JHJ	Hachijo jima 2	33.36	207	LR	LR	08 43 18.1	
	comp=Z,42nm,18.1s,baz=312,slow=37						
SPITS	Spitsbergen Ar	35.38	347	P	P	08 29 39.5	+0.2
	comp=Z,5.4nm,0.8s,baz=55,slow=5.5,SNR=5.1						

	comp=Z,5.4nm,0.8s						
ZALV	Zalesovo Beam	36.29	288	P	P	08 29 47.0	-0.3
	comp=Z,0.5nm,0.5s,baz=32,slow=8.5,SNR=2.5						
	comp=Z,0.5nm,0.5s						
ZALV	Zalesovo Beam	36.29	288	P	P	08 29 47.0	-0.3
YKA	Yellowknife Ar	36.33	52	P	P	08 29 48.9	+1.4
	comp=Z,0.6nm,0.6s,baz=306,slow=8.2,SNR=8.7						
	comp=Z,0.6nm,0.6s						
YKA	Yellowknife Ar	36.33	52	eP	P	08 29 49.3	+1.7
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	Kurchatov	41.23	289	ceP	P	08 30 28.6	-0.2
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KURBB	Kurchatov Arra	41.34	289	P	P	08 30 29.7	0.0
	comp=Z,4.5nm,0.6s,baz=42,slow=8.0,SNR=53						
KURBB				PP	PP	08 32 05.3	+0.5
	comp=Z,0.7nm,0.5s,baz=51,slow=12,SNR=4.4						
	comp=Z,4.5nm,0.6s						
ARCES	ARCESS Array B	41.80	337	P	P	08 30 33.8	+0.5
	comp=Z,5.4nm,1.0s,baz=34,slow=9.8,SNR=1.9						
	comp=Z,5.4nm,1.0s						
BVAR	Borovoye Array	42.69	297	P	P	08 30 40.9	+0.2
	comp=Z,1.1nm,0.7s,baz=60,slow=8.8,SNR=5.1						
	comp=Z,1.1nm,0.7s						
MKAR	Makanchi Array	42.79	283	P	P	08 30 41.4	-0.2
	comp=Z,0.4nm,0.4s,baz=40,slow=5.6,SNR=4.8						
	comp=Z,0.4nm,0.4s						
GOMU	GeErMu	46.14	263	P	P	08 31 10.6	+1.7
GOMU				pP	sP	08 31 13.8	+0.4
GOMU				sP	pP	08 31 18.4	+6.3
GOMU				pmax	pmax		
	comp=Z,15nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,130nm,5.4s						
SFJD	Kangerlussuaq	47.07	14	LR	LR	08 48 49.4	
	comp=Z,59nm,21.5s,baz=302,slow=33						
FINES	FINESS Array B	48.94	331	P	P	08 31 28.9	-0.9
	comp=Z,1.7nm,0.8s,baz=38,slow=9.6,SNR=4.5						
	comp=Z,1.7nm,0.8s						
FINES	FINESS Array B	48.94	331	eP	P	08 31 30.2	+0.4
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NB2	NORSAR Subarra	51.96	340	P	P	08 31 51.5	-1.3
	comp=Z,1.7nm,0.8s,baz=18,slow=7.4						
NOA	NORSAR Array B	51.96	340	P	P	08 31 51.7	-1.1
	comp=Z,2.1nm,0.9s,baz=16,slow=7.5,SNR=5.3						
	comp=Z,2.1nm,0.9s						
NOA	NORSAR Array B	51.96	340	eP	P	08 31 51.8	-1.0
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PDAR	Pinedale Array	53.69	66	P	P	08 32 07.5	+1.5
	comp=Z,1.6nm,0.7s,baz=20,slow=2.7,SNR=10						
	comp=Z,1.6nm,0.7s						
NVAR	Mina Array Bea	53.82	76	P	P	08 32 08.4	+1.4
	comp=Z,0.8nm,0.8s,baz=317,slow=7.6,SNR=6.6						
	comp=Z,0.8nm,0.8s						
AKASG	Malin Array Be	58.01	324	P	P	08 32 35.4	-1.1
	comp=Z,0.3nm,0.3s,baz=18,slow=6.3,SNR=2.0						
	comp=Z,0.3nm,0.3s						
TXAR	Lajitas Array	67.69	69	P	P	08 33 42.1	+0.7
	comp=Z,0.2nm,0.7s,baz=283,slow=6.1,SNR=3.7						
	comp=Z,0.2nm,0.7s						
KAPI	Kappang	74.82	219	LR	LR	09 08 41.5	
	comp=Z,14nm,20.0s,baz=318,slow=37						
ESDC	Sonseca Array	74.86	345	P	P	08 34 24.1	-0.5
	comp=Z,0.8nm,0.6s,baz=360,slow=6.2,SNR=8.0						
	comp=Z,0.8nm,0.6s						
WRA	Warramunga Arr	86.20	201	P	P	08 35 25.3	-0.1
	comp=Z,2.6nm,0.8s,baz=9.7,slow=5.4,SNR=19						
	comp=Z,2.6nm,0.8s						
WRA	Warramunga Arr	86.20	201	eP	P	08 35 25.1	-0.2
WRA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ASAR	Alice Springs	89.92	201	P	P	08 35 43.0	0.0
	comp=Z,1.0nm,0.7s,baz=9.3,slow=5.0,SNR=15						
	comp=Z,1.0nm,0.7s						

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*IDC **11** 08:31:58.5±1.4, 53°.63N×163°.70W, h0km, mb3.8/20, mbtmp3.8/22, ML3.2/2, MS3.4/5, Error ellipse: s-maj=33.5km s-min=16.0km az=1.0*

*NEIC **11** 08:32:01.0±2.2, 53°.5N±0°.1×163°.62W±0°.08, h23km±11km, mb3.8/6, ML3.6/8, ML3.4(AEIC), Error ellipse: s-maj=18.0km s-min=6.1km az=171.0*

*AEIC **11** 08:32:03.5±2.3, 53°.6N±0°.1×163°.7W±0°.1, h40km±8km, Error ellipse: s-maj=18.5km s-min=8.5km az=161.0*

ISC 11 08:32:02.4±0.8**, 53°.59N**±0°.10×**163°.58W**±0°.05**, h29**km**, n91, σ1s.44**/86**, mb4.0**/19**, MS3.6**/4**, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FALS	False Pass	1.27	4		Pb	08 32 24.8	-0.9
FALS	False Pass	1.27	4	P	Pb	08 32 25.0	-0.8
	baz=187						
AKUT	Akutan	1.41	294		Pb	08 32 25.5	-2.5
UNV	Unalaska Valle	1.76	280		Pn	08 32 30.1	-0.7
UNV					Sn	08 32 51.3	-0.9
UNV	Unalaska Valle	1.76	280	P	Pn	08 32 30.1	-0.7
	baz=96						
UNV				S	Sn	08 32 51.3	-0.9
	baz=96						
S12K	Black Hills	2.29	22	P	Pb	08 32 39.3	-3.8
	baz=205						
SDPT	Sand Point	2.53	44		Pn	08 32 41.6	+0.2
SDPT				IAML		08 33 33.8	
	comp=N,264nm,1.2s						
SDPT				IAML		08 33 35.1	
	comp=E,303nm,0.8s						
SDPT	Sand Point	2.53	44	P	Pn	08 32 42.1	+0.6
	baz=229						
NIKH	Nikolski High	3.23	261		Pn	08 32 50.5	-0.6
NIKH	Nikolski High	3.23	261	P	Pn	08 32 50.5	-0.6
	baz=76						
CLES	Cleveland East	3.88	261		Pn	08 32 58.4	-1.6
CLES				IAML		08 34 03.1	
	comp=E,326nm,1.6s						
CLES				IAML		08 34 18.9	
	comp=N,366nm,1.4s						
CHGN	Chignik	4.03	46		Pn	08 33 02.7	+0.6
CHGN				IAML		08 34 09.5	
	comp=N,67nm,0.9s						
CHGN				IAML		08 34 12.5	
	comp=E,78nm,1.3s						
SPIA	Saint Paul Isl	5.23	316	Pn	Pn	08 33 20.6	+2.0
R17K	Ugashik Creek	5.75	42	P	Pn	08 33 26.6	+0.9
	baz=229						
Q17K	Contact Creek	6.37	40	P	Pn	08 33 34.8	+0.5
	baz=227						
OHAK	Old Harbor	6.90	54	Pn	Pn	08 33 41.5	+0.1
KDAK	Kodiak Island	7.50	52	Pn	Pn	08 33 48.1	-1.6
	comp=E,0.7nm,0.3s,baz=194,slow=5.1,SNR=16						
KDAK				Sn	Sn	08 35 08.3	-5.3
	baz=158,slow=18						
	comp=E,1.9nm,0.3s						
KDAK	Kodiak Island	7.50	52	Pn	Pn	08 33 50.0	+0.3
Q19K	Cape Douglas,	7.69	42	Pn	Pn	08 33 53.1	+0.7
ADK	Adak	8.14	263	Pn	Pn	08 33 57.7	-0.7
SVW2	Sparrevohn	8.68	27		Pn	08 34 07.5	+1.7
N19K	Bonanza Creek	8.76	31		Pn	08 34 09.2	+2.2
CNPM	China Poot	9.04	44	Pn	Pn	08 34 11.1	+0.3
M19K	Big River Lodg	9.66	27		Pn	08 34 20.6	+1.2
M20K	Styx River	10.00	30	Pn	Pn	08 34 26.1	+2.0
SEW	Seward	10.11	44	Pn	Pn	08 34 25.2	-0.1
TTA	Tatalina	10.17	20		Pn	08 34 27.2	+0.9
SUA	Susitna One	10.46	36		Pn	08 34 30.4	+0.1
SKT	Skwentna	10.57	33	Pn	Pn	08 34 32.5	+0.7
K20K	Telida	10.97	23		Pn	08 34 38.2	+1.0
PMR	Palmer	11.13	38	Pn	Pn	08 34 38.4	-0.9
GHO	Glory Hole Cre	11.32	38	Pn	Pn	08 34 41.1	-0.9
EYAK	Cordova Ski Ar	11.92	47	Pn	Pn	08 34 48.5	-1.7
SCM	Sheep Creek Mo	11.96	40	Pn	Pn	08 34 49.7	-1.1
KLU	Klutina	12.32	43		Pn	08 34 53.9	-1.8
BPAW	Bear Paw Mtn.	12.36	27	Pn	Pn	08 34 57.3	+1.1
N25K	Chitina, Valde	12.92	44	Pn	Pn	08 35 02.7	-1.3
I21K	Tanana	13.01	22		Pn	08 35 06.6	+1.6
MLY	Manley	13.18	24		Pn	08 35 08.2	+0.9
VRDI	Verde Repeater	13.23	47	Pn	Pn	08 35 07.1	-1.1
H21K	Melozitna Rive	13.24	20		Pn	08 35 10.7	+2.4
TGL	Tana Glacier	13.30	49	Pn	Pn	08 35 08.1	-1.1
PAX	Paxson	13.33	38		Pn	08 35 08.2	-1.3
IMAR	Indian Mountai	13.36	18	Pn	Pn	08 35 11.3	+1.6
SHEM	Shemya Is, Ala	13.41	275	LR	LR	08 40 15.6	
	comp=E,54nm,19.9s,baz=329,slow=37						
MCARA	McCarthy VSAT	13.48	46	Pn	Pn	08 35 12.2	+0.7
I23K	Minto, Yukon-K	13.62	26	Pn	Pn	08 35 12.6	-0.8
CCB	Clear Creek Bu	13.68	30	Pn	Pn	08 35 13.5	-0.6
BARN	Barnard Glacie	13.95	49	Pn	Pn	08 35 18.7	+0.6
M26K	Nabesna, AK	13.97	43		Pn	08 35 17.2	-1.0
RIDG	Independent Ri	14.02	36	Pn	Pn	08 35 19.7	+0.8
ILAR	Eielson Array	14.04	30	Pn	Pn	08 35 16.6	-2.5
	comp=E,0.1nm,0.3s,baz=219,slow=11,SNR=1.5						
	comp=E,0.2nm,0.5s						
H23K	Yukon River	14.12	24		Pn	08 35 20.1	-0.1
M27K	Edge Creek, AK	14.41	44	Pn	Pn	08 35 26.3	+2.0
J26L	Joseph Creek	14.94	35		Pn	08 35 31.8	+0.5
J26L				IAmb	IAmb	08 35 42.1	
	comp=Z,6.0nm,1.1s						
DAWY	Dawson	16.22	40	P	P	08 35 51.4	+0.6
DAWY				IAmb	IAmb	08 35 53.6	
	comp=Z,3.2nm,0.6s						
BMAR	Burnt Mountain	16.62	26	P	P	08 35 54.3	-0.9
I29M	Ogilvie Camp,	17.27	37	P	P	08 36 01.8	-0.6
I29M				IAmb	IAmb	08 36 22.7	
	comp=Z,3.8nm,0.9s						
FARO	Faro, Yukon	18.08	49	P	P	08 36 12.8	+1.4
FARO				IAmb	IAmb	08 36 15.3	
	comp=Z,17nm,1.5s						
DLBC	Dease Lake	19.24	62	P	Pn	08 36 29.1	+3.9
	comp=Z,0.8nm,0.7s,baz=12,slow=15,SNR=1.4						
INK	Inuvik	20.42	32	P	P	08 36 35.2	-1.5
	comp=Z,1.0nm,0.7s,baz=243,slow=10.0,SNR=5.1						
	comp=Z,1.0nm,0.7s						
INK	Inuvik	20.42	32	P	P	08 36 35.9	-0.9
PETK	Petropavlovsk-	22.93	285	P	P	08 37 02.0	-1.9
	comp=Z,1.4nm,0.6s,baz=80,slow=12,SNR=2.5						
	comp=Z,1.4nm,0.6s						
PETK	Petropavlovsk-	22.93	285	P	P	08 37 03.0	-0.8
SEY	Seymchan	24.50	310	P	P	08 37 17.0	-1.7
	comp=Z,0.4nm,0.3s,baz=73,slow=20,SNR=1.8						
	comp=Z,0.4nm,0.3s						
A36M	Sachs Harbour	24.70	28	P	P	08 37 20.1	-0.4
YKA	Yellowknife Ar	26.78	51	P	P	08 37 41.2	+1.9
	comp=Z,0.9nm,0.9s,baz=271,slow=8.6,SNR=8.6						
	comp=Z,0.9nm,0.9s						
YKA	Yellowknife Ar	26.78	51	P	P	08 37 41.7	+2.4
NEW	Newport	29.34	81	LR	LR	08 47 19.4	
	comp=Z,55nm,18.5s,baz=304,slow=31						
TIXI	Tiksi	33.53	328	P	P	08 38 39.6	+0.7
	comp=Z,1.4nm,0.5s,baz=90,slow=24,SNR=2.2						
	comp=Z,1.4nm,0.5s						
NVAR	Mina Array Bea	34.26	98	P	P	08 38 46.8	+0.9
	comp=Z,0.3nm,0.7s,baz=302,slow=7.4,SNR=1.9						
	comp=Z,0.3nm,0.7s						
H11N2	WAKE ISLAND Hy	40.70	225	T	T	09 23 17.0	
	baz=26,slow=75,SNR=14						
H11N3	WAKE ISLAND Hy	40.71	225	T	T	09 23 19.8	
	baz=26,slow=75,SNR=21						
H11N1	WAKE ISLAND Hy	40.72	225	T	T	09 23 19.2	
	baz=26,slow=75,SNR=20						
H11S1	WAKE ISLAND Hy	41.87	225	T	T	09 24 45.6	
	baz=25,slow=76,SNR=35						
H11S2	WAKE ISLAND Hy	41.89	225	T	T	09 24 47.9	
	baz=25,slow=76,SNR=30						
H11S3	WAKE ISLAND Hy	41.89	225	T	T	09 24 48.0	
	baz=25,slow=76,SNR=26						
NRIK	Noril'sk	46.99	333	P	P	08 40 30.4	+0.2
	comp=Z,1.1nm,0.2s,baz=50,slow=5.8,SNR=2.0						
	comp=Z,1.1nm,0.2s						
TXAR	Lajitas Array	49.28	95	P	P	08 40 48.9	+0.3
	comp=Z,0.1nm,0.5s,baz=306,slow=6.3,SNR=2.1						
	comp=Z,0.1nm,0.5s						
SONM	Songino Array	53.62	303	P	P	08 41 20.8	-0.1
	comp=Z,1.0nm,0.7s,baz=40,slow=5.0,SNR=5.5						
	comp=Z,1.0nm,0.7s						
ZALV	Zalesovo Beam	58.81	320	P	P	08 41 57.6	0.0
	comp=Z,0.7nm,0.5s,baz=45,slow=8.8,SNR=3.9						
ZALV				LR	LR	09 07 05.3	
	comp=Z,63nm,21.1s,baz=30,slow=36						
	comp=Z,0.7nm,0.5s						
KURBB	Kurchatov Arra	63.81	321	P	P	08 42 31.6	+0.1
	comp=Z,0.8nm,0.7s,baz=33,slow=7.0,SNR=7.4						
	comp=Z,0.8nm,0.7s						
BVAR	Borovoye Array	64.66	327	P	P	08 42 37.8	+0.8
	comp=Z,2.1nm,0.7s,baz=46,slow=6.4,SNR=9.5						
BVAR				LR	LR	09 14 49.3	
	comp=Z,47nm,18.6s,baz=23,slow=40						
	comp=Z,2.1nm,0.7s						
FINES	FINESS Array B	65.06	355	P	P	08 42 39.0	-0.4
	comp=Z,1.8nm,0.9s,baz=20,slow=6.1,SNR=4.2						
	comp=Z,1.8nm,0.9s						
MKAR	Makanchi Array	65.42	316	P	P	08 42 41.7	-0.4
	comp=Z,0.3nm,0.4s,baz=33,slow=7.1,SNR=4.5						
MKAR				LR	LR	09 12 44.3	
	comp=Z,29nm,19.8s,baz=228,slow=37						
	comp=Z,0.3nm,0.4s						
EKA	Eskdalemuir Ar	70.25	12	P	P	08 43 13.2	+1.0
	comp=Z,1.5nm,0.8s,baz=4.8,slow=5.0,SNR=3.7						
	comp=Z,1.5nm,0.8s						
AKTO	Aktyubinsk	70.60	333	P	P	08 43 15.3	+0.8
	comp=Z,2.9nm,0.7s,baz=18,slow=4.6,SNR=5.2						
	comp=Z,2.9nm,0.7s						
BELG	Belogornoye	71.22	340	P	P	08 43 18.6	+0.4
	comp=Z,3.2nm,0.5s,baz=14,slow=8.3,SNR=3.1						
	comp=Z,3.2nm,0.5s						
AKASG	Malin Array Be	75.53	352	P	P	08 43 42.4	-1.1
	comp=Z,0.4nm,0.3s,baz=11,slow=5.1,SNR=4.6						
	comp=Z,0.4nm,0.3s						
ESDC	Sonseca Array	85.45	16	P	P	08 44 38.7	+1.6
	comp=Z,0.2nm,0.3s,baz=328,slow=4.1,SNR=1.7						
	comp=Z,0.2nm,0.3s						
BRTR	Keskin Array B	85.88	347	P	P	08 44 40.7	+1.4
	comp=Z,0.6nm,0.6s,baz=19,slow=6.1,SNR=3.6						
	comp=Z,0.6nm,0.6s						

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*RSNC **11** 08:58:40.1±0.8, 6°.77N×73°.14W, h140km±3km, ML3.1, Mw3.4*

*IDC **11** 08:58:43.2±5.8, 6°.51N×73°.61W, h186km±34km, mb2.3/1, mbtmp2.8/1, Error ellipse: s-maj=116.9km s-min=40.4km az=72.0*

ISC 11 08:58:37.9±1.0**, 6°.83N**±0°.03×**73°.09W**±0°.04**, h150**km±6km**, n35, σ1s.44**/63**, 5C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.25	200	⇑iP	Pn	08 58 58.9	+0.3
BARC				eS	Sn	08 59 13.5	-0.8
BARC				i		08 59 14.6	
	comp=Z,667nm,0.2s						
PAMC	Pamplona, Colo	0.64	38	⇑iP	Pn	08 59 01.8	+1.2
PAMC				eS	Sn	08 59 18.6	+0.7
PAMC				i		08 59 20.8	
	comp=Z,552nm,0.6s						
BRRC	Barranca, Sant	0.67	294	⇑iP	Pn	08 59 00.8	+0.6
BRRC				eS	Sn	08 59 17.6	+0.4
BRRC				i		08 59 22.4	
	comp=Z,212nm,0.2s						
RUSC	La Rusia	0.93	179	eP	Pn	08 59 02.9	+0.2
RUSC				eS	Sn	08 59 21.0	-0.6
RUSC				i		08 59 22.2	
	comp=Z,289nm,0.2s						
TAMC	Tame, Arauca	1.35	107	⇓iP	Pn	08 59 07.2	+1.2
TAMC				eS	Sn	08 59 28.6	+1.2
TAMC				i		08 59 29.2	
	comp=Z,91nm,0.2s						
PTBC	PUERTO BERRIO,	1.38	258	eP	Pn	08 59 05.5	-0.8
PTBC				eS	Sn	08 59 26.3	-1.7
PTBC				i		08 59 28.9	
	comp=Z,263nm,0.1s						
SPBC	San Pablo de B	1.52	220	⇑iP	Pn	08 59 07.8	0.0
SPBC				eS	Sn	08 59 29.4	-1.3
SPBC				i		08 59 34.3	
	comp=Z,134nm,0.1s						
ZARC	Zaragoza, Cauc	1.87	291	eP	Pn	08 59 11.8	+0.2
ZARC				eS	Sn	08 59 38.0	+0.7
ZARC				i		08 59 46.0	
	comp=Z,226nm,0.3s						
CHIC	Chingaza	2.28	196	eP	Pn	08 59 17.4	+0.6
CHIC				eS	Sn	08 59 46.1	-0.5
CHIC				i		08 59 53.2	
	comp=Z,34nm,0.4s						
ROSC	El Rosal	2.32	212	P	Pn	08 59 18.9	+1.6
	comp=Z,20nm,0.3s,baz=72,slow=19,SNR=24						
ROSC				S	Sn	08 59 46.9	-0.7
	comp=Z,50nm,0.4s,baz=304,slow=22,SNR=12						
ROSC	El Rosal	2.32	212	eP	Pn	08 59 18.9	+1.6
ROSC				eS	Sn	08 59 49.3	+1.7
ROSC				i		08 59 52.7	
	comp=Z,51nm,0.4s						
HELC	Santa Helena	2.50	255	eP	Pn	08 59 19.5	0.0
HELC				eS	Sn	08 59 51.0	-0.3
HELC				i		08 59 57.9	
	comp=Z,74nm,0.3s						
UREC	San Jos de Ur	2.59	291	eP	Pn	08 59 19.4	-0.8
UREC				eS	Sn	08 59 51.8	-0.9
UREC				i		08 59 53.1	
	comp=Z,145nm,0.1s						
LL1C	La Loma 1 Cana	2.73	350	eS	Sn	08 59 59.2	+3.2
GUY2C	Guyana, Caldas	2.77	235	eP	Pn	08 59 23.7	+0.9
GUY2C				eS	Sn	08 59 59.6	+2.2
GUY2C				IAML		09 00 06.7	
	comp=Z,55nm,0.5s						
PTGC	Puerto Gaitan,	2.78	160	⇓iP	Pn	08 59 22.0	-0.6
PTGC				eS	Sn	08 59 55.0	-2.2
PTGC				i		08 59 57.7	
	comp=Z,83nm,0.4s						
CBOC	Ciudad Bolivar	3.06	252	eP	Pn	08 59 27.0	+0.8
CBOC				eS	Sn	09 00 03.8	+0.3
CBOC				i		09 00 07.4	
	comp=Z,18nm,0.2s						
DBBC	Dabeiba	3.10	274	⇑iP	Pn	08 59 27.1	+0.5
DBBC				eS	Sn	09 00 03.8	-0.5
DBBC				i		09 00 06.5	
	comp=Z,59nm,0.4s						
ARGC	Ariguani, Magd	3.22	339	eP	Pn	08 59 30.0	+1.9
ARGC				eS	Sn	09 00 09.6	+2.7
ANIL	Santa Ana	3.27	225	eP	Pn	08 59 31.5	+2.5
ANIL				eS	Sn	09 00 11.8	+3.2
ANIL				i		09 00 19.2	
	comp=Z,82nm,0.3s						
PRAC	Prado	3.57	210	eP	Pn	08 59 33.1	+0.3
PRAC				eS	Sn	09 00 14.9	-0.3
PRAC				i		09 00 19.6	
	comp=Z,48nm,0.3s						
ORTC	Ortega, Tolima	3.61	217	eP	Pn	08 59 34.0	+0.8
ORTC				eS	Sn	09 00 17.8	+1.8
ORTC				i		09 00 22.4	
	comp=Z,20nm,0.2s						
SJCC	San Jacinto, C	3.68	326	eP	Pn	08 59 33.4	-0.7
SJCC				eS	Sn	09 00 15.0	-2.6
SJCC				i		09 00 19.2	
	comp=Z,70nm,0.6s						
LCBC	Los crdobas,	3.82	302	eP	Pn	08 59 36.5	+0.6
LCBC				eS	Sn	09 00 22.1	+1.3
LCBC				i		09 00 24.5	
	comp=Z,44nm,0.2s						
CRJC	Cerrejon, Guaj	4.17	3	eP	Pn	08 59 39.5	-1.0
CRJC				eS	Sn	09 00 26.5	-2.7
CRJC				i		09 00 36.2	
	comp=Z,32nm,0.2s						
YOTC	Yotoco, Valle	4.30	229	eP	Pn	08 59 42.7	+0.5
YOTC				eS	Sn	09 00 32.1	-0.1
SMRC	Santa Marta, M	4.45	346	eP	Pn	08 59 44.0	-0.1
SMRC				eS	Sn	09 00 33.5	-2.2
URIC	Uribia, Colomb	4.96	13	eP	Pn	08 59 49.1	-1.8
URIC				eS	Sn	09 00 37.6	-10
POPC	Popayan, Colom	5.56	220	eP	Pn	09 00 00.1	+1.1
POPC				eS	Sn	09 01 00.0	-2.3
FLOC	Florencia	5.80	206	eP	Pn	09 00 02.3	+0.1
BBAC	Balboa, Cauca	6.32	221	eP	Pn	09 00 10.4	+1.2
BBAC				eS	Sn	09 01 18.2	-2.4
BBAC				i		09 01 24.0	
	comp=Z,2.4nm,0.4s						
GCUF	Volcan Galeras	7.00	217	eP	Pn	09 00 20.4	+1.9
TXAR	Lajitas Array	36.48	312	P	P	09 05 29.3	+0.4
	comp=Z,0.1nm,0.3s,baz=119,slow=9.4,SNR=1.7						
	comp=Z,0.1nm,0.3s						
ASAR	Alice Springs	149.14	234	PKPbc	PKPbc	09 18 08.6	-1.0
	comp=Z,0.3nm,0.6s,baz=118,slow=3.7,SNR=4.9						
WRA	Warramunga Arr	150.36	241	PKPbc	PKPbc	09 18 11.4	-1.2
	comp=Z,0.2nm,0.4s,baz=108,slow=2.6,SNR=2.0						

ROM 11 09:08:53.7±0.1**, 42°.605N**±0°.004×**13°.326E**±0°.005**, h10**km**, ML1.1**/1**, Error ellipse: s-maj=0.4km s-min=0.4km az=292.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	SAN MARTINO	0.03	15	P	Pg	09 08 55.8	+0.2
SMA1				S	Sg	09 08 57.1	+0.1
RM33	Pellescritta (	0.13	221	P	Pg	09 08 57.2	+0.5
RM33				S	Sg	09 08 59.4	+0.6
RM33				AML	AML		
	comp=E,142μm,0.3s						
RM33				AML	AML		
	comp=N,130μm,1.4s						
RM33				AML	AML		
	comp=E,142μm,0.3s						
RM33				AML	AML		
	comp=N,130μm,0.6s						
T1214	Arquata del Tr	0.18	331	P	Pg	09 08 58.2	+0.7
T1214				S	Sg	09 09 01.5	+1.2
TERO	Teramo	0.21	85	P	Pg	09 08 58.7	+0.7
TERO				S	Sg	09 09 02.2	+1.3
MMO1	Montemonaco	0.29	0	P	Pg	09 09 00.2	+0.6
MMO1				S	Sb	09 09 05.1	-1.1
MC2	Monte Cornacci	0.32	342	P	Pg	09 08 58.1	-2.1

ROM 11 09:09:32.4±0.1**, 42°.822N**±0°.003×**13°.058E**±0°.003**, h10**km**, ML0.9**/1**, Error ellipse: s-maj=0.3km s-min=0.1km az=157.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1216	Preci, Frazion	0.07	338	P	Pg	09 09 35.0	+0.3
T1216				S	Sg	09 09 36.8	+0.4
T1245	Castelsantange	0.10	70	P	Pg	09 09 35.5	+0.4
T1245				S	Sg	09 09 37.4	+0.4
T1245				AML	AML		
	comp=E,113μm,1.3s						
T1245				AML	AML		
	comp=N,91μm,0.9s						
T1245				AML	AML		
	comp=E,113μm,0.7s						
T1214	Arquata del Tr	0.13	119	P	Pg	09 09 35.8	+0.4
T1214				S	Sg	09 09 38.2	+0.6
MC2	Monte Cornacci	0.13	47	P	Pg	09 09 35.7	+0.1
MC2				S	Sg	09 09 38.6	+0.7
T1215	Vallo di Nera,	0.14	262	P	Pg	09 09 36.1	+0.5
T1215				S	Sg	09 09 38.6	+0.8
T1217	Poggiodomo (PG	0.14	220	P	Pg	09 09 36.1	+0.5
T1217				S	Sg	09 09 38.9	+0.9

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*NEIC **11** 09:27:57.7±1.3, 53°.2N±0°.1×163°.37W±0°.08, h35km±16km, Error ellipse: s-maj=16.6km s-min=6.7km az=168.0*

*IDC **11** 09:27:58.0±0.9, 53°.84N×163°.78W, h0km, mb4.0/20, mbtmp4.0/23, ML3.3/3, MS3.4/18, Error ellipse: s-maj=25.2km s-min=12.3km az=175.0*

*MOS **11** 09:27:59.7±1.4, 53°.66N×163°.32W, h31km, mb4.6/16, Error ellipse: s-maj=17.4km s-min=7.5km az=85.1*

*AEIC **11** 09:28:00.2±2.0, 53°.48N±0°.10×163°.58W±0°.08, h38km±7km, ML3.7, mb4.0/24(NEIC), ML3.8/6(NEIC), Error ellipse: s-maj=14.1km s-min=6.8km az=173.0*

ISC 11 09:28:00.3±0.6**, 53°.59N**±0°.08×**163°.35W**±0°.04**, h29**km**, n310, σ1s.67**/281**, mb4.4**/43**, MS3.4**/20**, 14C-2D, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FALS	False Pass	1.27	358		Pb	09 28 23.6	+0.1
FALS	False Pass	1.27	358	P	Pb	09 28 23.7	+0.3
	baz=184,SNR=54						
AKUT	Akutan	1.54	292	Pn	Pn	09 28 24.8	-0.9
AKUT				Sn	Sb	09 28 45.1	-2.0
AKUT				IAML		09 28 47.0	
	comp=N,984nm,0.6s						
UNV	Unalaska Valle	1.89	279	Pn	Pn	09 28 29.1	-1.4
UNV	Unalaska Valle	1.89	279	P	Pn	09 28 28.6	-2.0
	baz=101,SNR=18						
S12K	Black Hills	2.24	19	P	Pb	09 28 38.0	-2.1
	baz=202,SNR=38						
SDPT	Sand Point	2.43	42	Pn	Pb	09 28 40.8	-2.5
SDPT				Sn	Sb	09 29 09.9	-2.7
SDPT				IAML		09 29 30.8	
	comp=N,472nm,1.3s						
SDPT	Sand Point	2.43	42	P	Pb	09 28 40.4	-2.9
	baz=225,SNR=7.3						
NIKH	Nikolski High	3.37	262		Pn	09 28 47.8	-3.0
NIKH	Nikolski High	3.37	262	P	Pn	09 28 48.5	-2.4
	baz=79						
CHGN	Chignik	3.93	44		Pn	09 29 00.3	+1.8

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CHGN                                  IAML                 09 30 19.9
          comp=E,152nm,0.9s
CHGN                                  IAML                 09 30 25.9
          comp=N,114nm,1.0s
CHGN      Chignik           3.93  44  P          Pn        09 29 01.1 +2.5
          baz=228
R16K      Pilot Point       5.16  37  P          Pn        09 29 18.5 +3.1
          baz=222
R17K      Ugashik Creek     5.66  41  P          Pn        09 29 24.6 +2.3
          baz=227
P16K      Nushagak River    6.21  26  P          Pn        09 29 33.0 +3.1
          baz=212
Q17K      Contact Creek     6.28  39  P          Pn        09 29 33.5 +2.5
          baz=225
Q16K      King Salmon       6.32  34  P          Pn        09 29 34.2 +2.9
          baz=220
O16K      Kokwok River B    6.68  24  P          Pn        09 29 38.9 +2.6
          baz=209
OHAK      Old Harbor        6.78  54             Pn        09 29 39.1 +1.4
OHAK      Old Harbor        6.78  54  P          Pn        09 29 39.4 +1.7
          baz=242
Q18K      Katmai Hardscr    6.88  39  P          Pn        09 29 41.4 +2.2
          baz=226
O17K      Koliganek Bris    7.08  27  P          Pn        09 29 44.7 +2.9
          baz=212,SNR=8.6
N16K      Nishlik Lake      7.33  18  P          Pn        09 29 48.5 +3.2
          baz=203
KDAK      Kodiak Island     7.39  51  Pn         Pn        09 29 46.8 +0.8
          comp=N,1.2nm,0.3s,baz=196,slow=4.7,SNR=41
KDAK                                  Sn         Sn        09 31 05.1  -3.6
          comp=N,0.7nm,0.3s,baz=349,slow=23,SNR=6.1
          comp=N,2.9nm,0.3s
KDAK      Kodiak Island     7.39  51  Pn         Pn        09 29 46.3 +0.3
KDAK      Kodiak Island     7.39  51  P          Pn        09 29 46.3 +0.3
Q19K      Cape Douglas,     7.60  41  Pn         Pn        09 29 49.9 +1.0
Q19K      Cape Douglas,     7.60  41  P          Pn        09 29 51.4 +2.5
          baz=230
ADK       Adak              8.28 263  Pn         Pn        09 29 53.3  -4.9
ADK       Adak              8.28 263  P          Pn        09 29 53.3  -4.9
ILSW      Iliamna Southw    8.50  37  Pn         Pn        09 30 03.0 +1.6
SVW2      Sparrevohn        8.61  26             Pn        09 30 04.4 +1.6
N19K      Bonanza Creek     8.68  30             Pn        09 30 05.3 +1.4
N19K      Bonanza Creek     8.68  30  P          Pn        09 30 06.1 +2.3
          baz=218
CNPM      China Poot        8.94  43  Pn         Pn        09 30 08.5 +1.2
BRLK      Bradley Lake      9.22  43  Pn         Pn        09 30 12.5 +1.3
M19K      Big River Lodg    9.60  26  P          Pn        09 30 19.2 +2.9
          baz=214
L19K      White Mountain    9.72  24  P          Pn        09 30 19.5 +1.6
          baz=212
SPU       Mount Spurr       9.73  34  Pn         Pn        09 30 20.6 +2.4
M20K      Styx River        9.93  29  P          Pn        09 30 24.3 +3.4
          baz=218
SEW       Seward           10.01  44  Pn         Pn        09 30 23.1 +1.2
SEW       Seward           10.01  44  P          Pn        09 30 23.4 +1.5
          baz=236
TTA       Tatalina         10.12  19  Pn         Pn        09 30 25.1 +1.6
TTA       Tatalina         10.12  19  P          Pn        09 30 25.1 +1.6
TTA       Tatalina         10.12  19  P          Pn        09 30 25.3 +1.8
          baz=206,SNR=5.0
O22K      Cooper Landing   10.12  42  P          Pn        09 30 24.5 +1.1
          baz=233
L20K      Farewell, AK     10.21  26  P          Pn        09 30 26.4 +1.7
          baz=214
SUA       Susitna One      10.38  36  Pn         Pn        09 30 28.8 +1.7
SUA       Susitna One      10.38  36  P          Pn        09 30 29.5 +2.4
          baz=226,SNR=7.8
SKT       Skwentna         10.49  32  P          Pn        09 30 31.5 +3.0
          baz=222,SNR=5.1
M22K      Willow           10.80  36  P          Pn        09 30 34.3 +1.7
          baz=227
P23K      Montague Islan   10.83  47  P          Pn        09 30 34.0 +0.9
          baz=241
PWL       Port Wells       10.90  42  Pn         Pn        09 30 35.1 +1.0
PWL       Port Wells       10.90  42  P          Pn        09 30 35.2 +1.2
          baz=235
K20K      Telida           10.91  23  Pn         Pn        09 30 37.7 +3.4
K20K      Telida           10.91  23  P          Pn        09 30 36.6 +2.3
          baz=211,SNR=10
PPLA      Purkeypile       11.01  28  Pn         Pn        09 30 37.3 +1.7
PPLA      Purkeypile       11.01  28  P          Pn        09 30 39.0 +3.4
          baz=218
PMR       Palmer           11.04  38  Pn         Pn        09 30 35.4  -0.6
PMR       Palmer           11.04  38  P          Pn        09 30 35.4  -0.6
PMR       Palmer           11.04  38  P          Pn        09 30 38.2 +2.2
          baz=230
Q23K      Middleton Isla   11.04  51  P          Pn        09 30 35.5  -0.6
          baz=245
ANM       Nome             11.05 355  Pn         Pn        09 30 38.4 +2.2
ANM       Nome             11.05 355  P          Pn        09 30 38.4 +2.2
ANM       Nome             11.05 355  P          Pn        09 30 38.4 +2.2
          baz=174
KNK       Knik Glacier     11.18  40  P          Pn        09 30 39.8 +1.8
          baz=232
CUT       Chulitna         11.21  33  P          Pn        09 30 39.6 +1.3
          baz=224
GHO       Glory Hole Cre   11.23  37  Pn         Pn        09 30 39.2 +0.5
CAST      Castle Rocks     11.46  26  Pn         Pn        09 30 43.7 +2.0
CAST      Castle Rocks     11.46  26  P          Pn        09 30 43.9 +2.2
          baz=216
SML       Sawmill          11.47  38  Pn         Pn        09 30 40.6  -1.4
SML       Sawmill          11.47  38  P          Pn        09 30 43.3 +1.3
          baz=231
GCSA      Galena City Sc   11.66  14  P          Pn        09 30 48.0 +3.6
          baz=200
M23K      Glacier View     11.69  39  P          Pn        09 30 46.9 +2.0
          baz=232
CHUM      Lake Minchumin   11.78  25  P          Pn        09 30 48.9 +2.8
          baz=214
EYAK      Cordova Ski Ar   11.81  47  Pn         Pn        09 30 47.4 +0.8
EYAK      Cordova Ski Ar   11.81  47  P          Pn        09 30 47.4 +0.8
          baz=242
SCM       Sheep Creek Mo   11.87  40             Pn        09 30 46.7  -0.7
SCM       Sheep Creek Mo   11.87  40  P          Pn        09 30 46.7  -0.7
SCM       Sheep Creek Mo   11.87  40  P          Pn        09 30 47.8 +0.4
          baz=233
TRF       Thorofare Moun   11.98  29  Pn         Pn        09 30 52.4 +3.4
TRF       Thorofare Moun   11.98  29  P          Pn        09 30 50.2 +1.2
          baz=221
DIV       Divide           12.09  44  Pn         Pn        09 30 50.0  -0.5
KLU       Klutina          12.22  43             Pn        09 30 52.7 +0.4
KLU       Klutina          12.22  43  P          Pn        09 30 52.8 +0.6
          baz=238,SNR=7.6
TNA       Tin City         12.22 351  P          Pn        09 30 53.7 +1.6
          baz=168
BPAW      Bear Paw Mtn.    12.29  26  Pn         Pn        09 30 55.1 +1.9
BPAW      Bear Paw Mtn.    12.29  26  P          Pn        09 30 54.9 +1.8
          baz=217
M24K      Tolsona, Glenn   12.47  40             Pn        09 30 55.9 +0.3
M24K      Tolsona, Glenn   12.47  40  P          Pn        09 30 56.4 +0.8
          baz=235
MCK       McKinley         12.59  31  Pn         Pn        09 30 58.4 +1.2
MCK       McKinley         12.59  31  P          Pn        09 30 58.4 +1.2
MCK       McKinley         12.59  31  P          Pn        09 30 59.0 +1.8
          baz=223
N25K      Chitina, Valde   12.82  44  Pn         Pn        09 31 01.4 +1.0
N25K      Chitina, Valde   12.82  44  P          Pn        09 31 00.2  -0.2
          baz=240
I21K      Tanana           12.95  22  P          Pn        09 31 05.1 +3.0
          baz=212
HARP      HAARP            13.03  40  P          Pn        09 31 05.6 +2.5
          baz=236
GLB       Gilahina Butte   13.07  45  Pn         Pn        09 31 04.8 +1.0
MLY       Manley           13.12  24             Pn        09 31 07.4 +3.0
MLY       Manley           13.12  24  P          Pn        09 31 06.9 +2.5
          baz=215,SNR=8.0
VRDI      Verde Repeater   13.12  46  Pn         Pn        09 31 04.5  -0.2
H21K      Melozitna Rive   13.19  19  P          Pn        09 31 07.9 +2.5
          baz=209
TGL       Tana Glacier     13.20  49  Pn         Pn        09 31 07.1 +1.5
NEA2      Nenana           13.20  28  P          Pn        09 31 07.9 +2.4
          baz=220
PAX       Paxson           13.24  38  P          Pn        09 31 06.2 +0.1
          baz=233,SNR=5.9
MCARA     McCarthy VSAT    13.38  46  P          Pn        09 31 10.0 +2.1
          baz=244
I23K      Minto, Yukon-K   13.56  26             Pn        09 31 11.8 +1.5
I23K      Minto, Yukon-K   13.56  26  P          Pn        09 31 12.0 +1.7
          baz=218
K24K      Donnelly Dome    13.66  35  P          Pn        09 31 12.6 +0.8
          baz=230
HDA       Harding Lake     13.69  31  P          Pn        09 31 13.0 +0.9
          baz=226
H22K      Ishtalitna Cre   13.69  21  P          Pn        09 31 14.1 +1.9
          baz=212
TCOL      CIGO, UAF Yank   13.75  29  P          Pn        09 31 14.7 +1.7
          baz=222
G21K      Allakaket        13.83  17  P          Pn        09 31 15.1 +1.0
          baz=206
BARN      Barnard Glacie   13.84  49  Pn         Pn        09 31 17.4 +2.9
M26K      Nabesna, AK      13.88  42  P          Pn        09 31 14.8   0.0
          baz=240
RIDG      Independent Ri   13.94  36  P          Pn        09 31 16.5 +0.9
          baz=232
CTG       Chitna Glacier   13.95  49  P          Pn        09 31 15.4  -0.5
          baz=248
CTGM      Chitina Glacie   13.95  49  Pn         Pn        09 31 15.7  -0.2
IL31                       13.96  30  Pn         Pn        09 31 17.0 +1.1
ILAR      Eielson Array    13.96  30  Pn         Pn        09 31 14.7  -1.2
          comp=N,0.1nm,0.3s,baz=222,slow=11,SNR=1.9
          comp=N,0.2nm,0.4s
ILAR      Eielson Array    13.96  30  Pn         Pn        09 31 17.7 +1.8
ILAR      Eielson Array    13.96  30  P          Pn        09 31 17.7 +1.8
LOGN      Logan Glacier    14.05  50  Pn         Pn        09 31 17.4 +0.1
H23K      Yukon River      14.05  24  P          Pn        09 31 18.3 +1.2
          baz=216
L26K      Log Cabin Wild   14.07  40  P          Pn        09 31 17.3   0.0
          baz=237
PINM      Pinnacle         14.16  53  P          Pn        09 31 18.3  -0.5
          baz=253
M27K      Edge Creek, AK   14.31  44  P          Pn        09 31 21.9 +1.1
          baz=242
SCRK      Sand Creek       14.38  36  Pn         Pn        09 31 22.0 +0.2
SCRK      Sand Creek       14.38  36  P          Pn        09 31 22.3 +0.6
          baz=233,SNR=9.1
PNL       Peninsula        14.46  56  P          Pn        09 31 23.3 +0.6
          baz=256
F21K      Alatna River     14.48  15  P          P         09 31 24.9  -4.5
          baz=204
H24K      Noodor Dome      14.48  26  P          Pn        09 31 23.4 +0.4
          baz=220
RDOG      Red Dog Mine     14.51   1  P          Pn        09 31 24.8 +1.4
          baz=182,SNR=5.7
YUK3      Moose Creek      14.66  47  P          Pn        09 31 24.8  -0.8
          baz=246,SNR=7.4
L27K      Beaver Creek,    14.68  41             Pn        09 31 26.6 +0.9
L27K      Beaver Creek,    14.68  41  P          Pn        09 31 24.8  -0.9
          baz=240
G23K      Bananza Creek    14.68  21  P          Pn        09 31 27.3 +1.6
          baz=213
BCAR      Beaver Creek A   14.70  41  Pn         Pn        09 31 26.6 +0.7
BVCY      Beaver Creek     14.76  44  P          Pn        09 31 25.9  -0.9
          baz=244,SNR=5.4
YUK8      Steele Glacier   14.78  49  P          Pn        09 31 27.4 +0.1
          baz=249
J26L      Joseph Creek     14.85  35  IAmb       IAmb      09 31 38.8
          comp=Z,6.6nm,0.8s
J26L      Joseph Creek     14.85  35  P          Pn        09 31 28.1 +0.1
          baz=232
PRP       Porcupine Dome   14.90  30  P          Pn        09 31 29.4 +0.6
          baz=225
F22K      John River       14.96  17  P          Pn        09 31 30.1 +0.7
          baz=207
O29M      Mount Kennedy    15.03  54  P          Pn        09 31 29.4  -1.0
          baz=254
COLD      Coldfoot         15.08  20  Pn         Pn        09 31 32.2 +1.2
COLD                                  IAmb       IAmb      09 31 49.0
          comp=Z,14nm,1.0s
COLD      Coldfoot         15.08  20  P          Pn        09 31 31.4 +0.4
          baz=212
K27K      Chicken          15.10  38  IAmb       IAmb      09 31 41.4
          comp=Z,9.7nm,0.7s
K27K      Chicken          15.10  38  P          Pn        09 31 31.0  -0.2
          baz=236
G24K      Hadweenzic Riv   15.26  24  P          Pn        09 31 34.0 +0.7
          baz=218
YUK4      Talbot Arm       15.31  50  P          Pn        09 31 34.1  -0.1
          baz=250
YUK6      Outpost Mounta   15.31  51  P          Pn        09 31 34.0  -0.3
          baz=252
I26K      Coal Creek Min   15.49  33  IAmb       IAmb      09 31 52.4
          comp=Z,7.0nm,0.7s
I26K      Coal Creek Min   15.49  33  P          P         09 31 37.7  -2.9
          baz=230
E22K      Anaktuvuk Pass   15.58  16  P          P         09 31 38.5  -3.1
          baz=207
HYT       Haines Junctio   15.68  52  Pn         P         09 31 40.9  -1.9
HYT                                   IAmb       IAmb      09 32 07.9
          comp=Z,9.5nm,0.9s
HYT       Haines Junctio   15.68  52  P          Pn        09 31 38.9  -0.1
          baz=254
M29M      Somme Creek      15.79  46  P          Pn        09 31 41.0 +0.7
          baz=247
F24K      Squaw Lake       15.82  22  P          P         09 31 42.6  -1.7
          baz=216
EGAK      Eagle            15.85  36             Pn        09 31 41.0   0.0
EGAK      Eagle            15.85  36  P          Pn        09 31 40.9  -0.1
          baz=236
E23K      Chandalar        15.91  19  P          Pn        09 31 42.1 +0.2
          baz=211
DAWY      Dawson           16.12  40             Pn        09 31 45.0 +0.4
DAWY      Dawson           16.12  40  P          Pn        09 31 44.7 +0.1
          baz=241,SNR=9.1
E24K      Your Creek       16.15  20  P          P         09 31 45.9  -2.0
          baz=214
I27K      Kandik River     16.18  33  P          P         09 31 45.9  -2.4
          baz=232
L29M      L29M             16.19  44  P          P         09 31 47.6  -0.8
          baz=246
F25K      Christian Rive   16.41  24  P          P         09 31 49.5  -1.3
          baz=220
G26K      Porcupine Rive   16.42  28  P          P         09 31 48.7  -2.1
          baz=225
D23K      Nanushuk River   16.52  16  P          P         09 31 51.1  -0.8
          baz=208
M30M      Minto, Yukon     16.55  47  P          P         09 31 51.8  -0.6
          baz=249,SNR=7.6
H27K      Steamboat Moun   16.60  32  P          P         09 31 51.6  -1.3
          baz=231
N31M      Braeburn, Yuko   16.66  51  P          Pn        09 31 51.7 +0.2
          baz=254
R32K      Eaglecrest       16.74  62  P          Pn        09 31 50.3  -2.1
          baz=266
K29M      Barlow Dome      16.75  42  P          P         09 31 54.2  -0.5
          baz=244
J29M      Klondike Camp    16.76  40  IAmb       IAmb      09 32 06.1
          comp=Z,11nm,0.7s
J29M      Klondike Camp    16.76  40  P          P         09 31 53.4  -1.2
          baz=241
E25K      Arctic Village   16.84  23  P          P         09 31 54.0  -1.4
          baz=219
F26K      Sheenjek River   16.86  26  P          P         09 31 55.2  -0.5
          baz=223
G27K      Doyon Strip      16.94  30  P          P         09 31 55.6  -0.9
          baz=229
D24K      Happy Valley     17.01  18  P          P         09 31 56.4  -0.8
          baz=211
I29M      Ogilvie Camp,    17.18  37  P          P         09 31 59.6 +0.3
          baz=239,SNR=7.7
P32M      Atlin            17.28  58  P          Pn        09 31 58.0  -1.2
          baz=263
MAYO      Mayo, Yukon      17.31  44  P          P         09 32 01.0 +0.3
          baz=248
M31M      Drury Creek, Y   17.50  49  IAmb       IAmb      09 32 09.4
          comp=Z,15nm,1.0s
M31M      Drury Creek, Y   17.50  49  P          P         09 32 01.9  -0.9
          baz=254,SNR=12
C24K      Franklin Bluff   17.52  17  P          P         09 32 03.1 +0.2
          baz=210
D25K      Kavik River      17.62  20  P          P         09 32 04.0  -0.2
          baz=215
P33M      Teslin, Yukon    17.82  56  IAmb       IAmb      09 32 30.8
          comp=Z,10nm,0.9s
P33M      Teslin, Yukon    17.82  56  P          Pn        09 32 04.7  -1.2
          baz=262,SNR=8.5
N32M      Quiet Lake       17.85  53  P          P         09 32 07.0 +0.3
          baz=258
FARO      Faro, Yukon      17.97  49  IAmb       IAmb      09 32 14.4
          comp=Z,8.9nm,0.7s
FARO      Faro, Yukon      17.97  49  P          Pn        09 32 06.4  -1.3
          baz=255,SNR=12
EPYK      Eagle Plains     18.27  35  IAmb       IAmb      09 32 18.2
          comp=Z,15nm,1.2s
EPYK      Eagle Plains     18.27  35  P          P         09 32 11.7 +0.5
          baz=239
C26K      Camden Bay       18.41  20  P          Pn        09 32 14.2 +1.3
          baz=217,SNR=27
C27K      Jago River       18.43  22  P          Pn        09 32 12.4  -0.8
          baz=220
G30M      tAoh Zraii Nji   18.76  34  P          Pn        09 32 16.2  -1.1
          baz=238
MMPY      Sheldon Lake,    19.01  49  P          P         09 32 18.1  -1.3
          baz=256,SNR=12
DLBC      Dease Lake       19.11  62  P          Pn        09 32 22.5 +0.9
          comp=Z,0.1nm,0.3s,baz=230,slow=19,SNR=2.2
          comp=Z,2.4nm,1.1s
DLBC      Dease Lake       19.11  62  P          Pn        09 32 21.3  -0.3
          baz=270
WTLY      Watson Lake, Y   19.81  57  P          P         09 32 27.7  -0.4
WTLY                                  IAmb       IAmb      09 32 44.2
          comp=Z,9.3nm,1.1s
WTLY      Watson Lake, Y   19.81  57  P          Pn        09 32 28.6  -1.2
          baz=266
F31M      Tsiigehtchic     19.83  34  P          P         09 32 27.8  -0.4
          baz=240
INK       Inuvik           20.34  32  P          Pn        09 32 34.0  -1.9
          comp=Z,1.9nm,0.7s,baz=244,slow=11,SNR=11
          comp=Z,1.9nm,0.7s
INK       Inuvik           20.34  32  P          Pn        09 32 34.0  -1.9
INK       Inuvik           20.34  32  P          Pn        09 32 34.0  -1.9
INK                                   pmax       pmax
          comp=Z,19nm,1.5s
INK       Inuvik           20.34  32  P          Pn        09 32 34.1  -1.9
          baz=239
BILL      Bilibino         20.39 327  P          P         09 32 32.7  -1.6
BILL                                  IAmb       IAmb      09 32 39.6
          comp=Z,9.4nm,1.0s
BILL      Bilibino         20.39 327deP          Pn        09 32 36.0  -0.5
BILL                                                       09 32 52.0
BILL                                  PPP        PPP       09 32 59.0
BILL                                 e                     09 36 54.1
BILL                                  pmax       pmax
          comp=Z,10.0nm,1.0s
BILL                                  MLR        MLR
          comp=Z,248nm,16.0s
LIRD      Liard River Hi   21.15  59  P          P         09 32 40.5  -2.1
          baz=270
KOTAN     Kotaneelee Air   22.18  57  P          P         09 32 52.8  -0.9
          baz=270
WRGLY     Wrigley          22.63  49  P          P         09 32 57.5  -0.9
          baz=263
PEA0B     Petropavlovsk-   23.07 285  P          P         09 33 01.0  -2.1
PEA0B     Petropavlovsk-   23.07 285  P          P         09 33 01.0  -2.1
PEA0B                                 pmax       pmax
          comp=Z,25nm,1.1s
PETK      Petropavlovsk-   23.07 285  P          P         09 33 02.5  -0.6
          comp=Z,3.6nm,0.8s,baz=84,slow=13,SNR=13
PETK                                  LR         LR        09 41 59.2
          comp=Z,85nm,20.0s,baz=83,slow=37
          comp=Z,3.6nm,0.8s
PETK      Petropavlovsk-   23.07 285  P          P         09 33 00.8  -2.3
PETK      Petropavlovsk-   23.07 285  P          P         09 33 00.8  -2.3
A36M      Sachs Harbour    24.63  27  P          P         09 33 19.7 +2.0
A36M      Sachs Harbour    24.63  27  P          P         09 33 18.8 +1.1
          baz=242,SNR=13
MA2       Magadan          25.53 302  LR         LR        09 43 30.8
          comp=Z,41nm,18.5s,baz=118,slow=37
YKA       Yellowknife Ar   26.66  51  P          P         09 33 38.9 +2.8
          comp=Z,3.3nm,1.1s,baz=268,slow=8.0,SNR=22
          comp=Z,3.3nm,1.1s
NEW       Newport          29.20  81  LR         LR        09 43 32.3
          comp=Z,60nm,19.4s,baz=26,slow=32
TIXI      Tiksi            33.60 328  P          P         09 34 36.6  -0.7
          comp=Z,2.9nm,0.6s,baz=90,slow=20,SNR=8.2
TIXI                                  LR         LR        09 50 04.5
          comp=Z,117nm,19.0s,baz=70,slow=40
          comp=Z,2.9nm,0.6s
TIXI      Tiksi            33.60 328  P          P         09 34 36.5  -0.8
TIXI      Tiksi            33.60 328ceP          P         09 34 37.5 +0.2
TIXI                                  pmax       pmax
          comp=Z,8.0nm,1.7s
RES       Resolute Bay     33.67  26  P          P         09 34 37.2  -0.8
RES       Resolute Bay     33.67  26  P          P         09 34 37.2  -0.8
RES                                   pmax       pmax
          comp=Z,1.0nm,1.1s
NVAR      Mina Array Bea   34.13  98  P          P         09 34 47.1 +4.5
          comp=Z,0.4nm,0.7s,baz=300,slow=7.7,SNR=4.1
          comp=Z,0.4nm,0.7s
YSS       Yuzh-Sakhalins   34.36 281 eP          P         09 34 40.9  -3.3
ELK       Elko             34.47  92  LR         LR        09 46 11.2
          comp=Z,66nm,19.4s,baz=345,slow=32
YAK       Yakutsk          35.11 311  LR         LR        09 50 42.0
          comp=Z,111nm,18.7s,baz=84,slow=39
ASAJ      Asahikawa        36.00 277  LR         LR        09 47 30.2
          comp=Z,44nm,21.9s,baz=130,slow=33
MPMC      Manual Prospec   36.20 100  P          P         09 34 57.2  -3.2
          baz=314
PDAR      Pinedale Array   36.63  85  P          P         09 35 09.8 +5.8
          comp=Z,0.2nm,0.5s,baz=298,slow=6.0,SNR=1.7
          comp=Z,0.2nm,0.5s
KLR       Kul'dur          39.46 291  P          P         09 35 25.5  -2.0
          comp=Z,1.7nm,0.8s,baz=34,slow=8.3,SNR=4.6
KLR                                   LR         LR        09 51 23.5
          comp=Z,42nm,20.9s,baz=24,slow=36
          comp=Z,1.7nm,0.8s
KLR       Kul'dur          39.46 291ceP          P         09 35 26.5  -1.1
KLR                                   pmax       pmax
          comp=Z,7.0nm,2.5s
H11N2     WAKE ISLAND Hy   40.80 226  T          T         10 19 23.9
          baz=26,slow=76,SNR=31
H11N3     WAKE ISLAND Hy   40.81 226  T          T         10 19 22.9
          baz=26,slow=76,SNR=31
H11N1     WAKE ISLAND Hy   40.82 226  T          T         10 19 26.4
          baz=26,slow=76,SNR=39
H11S1     WAKE ISLAND Hy   41.98 225  T          T         10 20 48.7
          baz=25,slow=76,SNR=42
H11S2     WAKE ISLAND Hy   41.99 225  T          T         10 20 45.1
          baz=25,slow=76,SNR=63
H11S3     WAKE ISLAND Hy   41.99 225  T          T         10 20 50.2
          baz=25,slow=76,SNR=11
NEEM      North Greenlan   42.77  17 i P         P         09 35 55.6 +0.8
NEEM                                  IAmb       IAmb      09 35 58.4
          comp=Z,11nm,0.9s
MJAR      Matsushiro Arr   43.35 271  P          P         09 35 59.4  -0.2
          comp=Z,1.7nm,1.0s,baz=19,slow=9.4,SNR=6.0
MJAR                                  LR         LR        09 53 48.8
          comp=Z,38nm,19.5s,baz=45,slow=36
          comp=Z,1.7nm,1.0s
ANMO      Albuquerque      43.50  92  LR         LR        09 51 44.2
          comp=Z,42nm,18.7s,baz=110,slow=33
NOR       Nord             43.87   7 i P         P         09 36 03.7 +0.5
NOR                                   IAmb       IAmb      09 36 06.3
          comp=Z,2.0nm,0.7s
FRB       Frobisher Bay    45.82  38  LR         LR        09 58 22.3
          comp=Z,141nm,18.8s,baz=184,slow=40
NRIK      Noril'sk         47.05 333  P          P         09 36 28.8 +0.3
          comp=Z,2.7nm,0.7s,baz=54,slow=6.6,SNR=5.2
NRIK                                  LR         LR        09 59 11.3
          comp=Z,53nm,18.0s,baz=154,slow=40
          comp=Z,2.7nm,0.7s
NRIK      Noril'sk         47.05 333ceP          P         09 36 29.6 +1.1
DAG       Danmarks Havn    47.99  10 i P         P         09 36 36.8 +1.1
DAG                                   IAmb       IAmb      09 36 47.8
          comp=Z,7.6nm,1.0s
SUMG      Summit           48.48  19 i P         P         09 36 42.1 +2.0
SUMG                                  IAmb       IAmb      09 36 54.4
          comp=Z,7.7nm,0.7s
KSRS      Korea Array      48.83 280  P          P         09 36 43.0 +0.3
          comp=Z,2.5nm,0.8s,baz=51,slow=6.9,SNR=12
KSRS                                  LR         LR        09 56 55.5
          comp=Z,17nm,20.3s,baz=75,slow=36
          comp=Z,2.5nm,0.8s
TXAR      Lajitas Array    49.15  95  P          P         09 36 49.0 +3.6
          comp=Z,0.4nm,0.6s,baz=297,slow=5.3,SNR=7.7
          comp=Z,0.4nm,0.6s
HDIL      Hopedale         49.85  73  P          P         09 36 48.4  -2.0
          baz=311
TJN       Taejon           49.89 279ceP          P         09 36 52.3 +1.5
DBG       Daneborg         50.00  12 i P         P         09 36 52.4 +1.2
DBG                                   IAmb       IAmb      09 37 04.2
          comp=Z,6.2nm,0.9s
ULN       Ulaanbaatar      53.39 303ceP          P         09 37 17.2 +0.2
ULN                                   pmax       pmax
          comp=Z,6.0nm,1.0s
SONM      Songino Array    53.73 303  P          P         09 37 19.3  -0.2
          comp=Z,3.3nm,0.8s,baz=49,slow=7.2,SNR=19
          comp=Z,3.3nm,0.8s
ZALV      Zalesovo Beam    58.90 320  P          P         09 37 55.6  -0.5
          comp=Z,1.8nm,0.7s,baz=38,slow=7.5,SNR=7.4
ZALV                                  PcP        PcP       09 38 46.1 +1.0
          comp=Z,0.9nm,0.7s,baz=46,slow=4.2,SNR=2.5
          comp=Z,1.8nm,0.7s
ZALV      Zalesovo Beam    58.90 320 i P         P         09 37 56.2 +0.2
ZALV                                  pmax       pmax
          comp=Z,2.0nm,0.7s
KURK      Kurchatov        63.79 321ceP          P         09 38 30.1 +1.0
KURK                                  pmax       pmax
          comp=Z,5.0nm,1.0s
BVAR      Borovoye Array   64.73 327  LR         LR        10 10 56.5
          comp=Z,28nm,18.9s,baz=35,slow=40
BRVK      Borovoye         64.73 327ceP          P         09 38 36.7 +1.4
BRVK                                  pmax       pmax
```

	comp=Z,4.0nm,1.3s						
FINES	FINESS Array B	65.06	355	P	P	09 38 37.6	+0.3
	comp=Z,3.6nm,0.8s,baz=33,slow=7.3,SNR=7.7						
	comp=Z,3.6nm,0.8s						
FINES	FINESS Array B	65.06	355	*i* P	P	09 38 38.5	+1.2
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KIRV	Kirov	65.08	342	*ce*P	P	09 38 38.5	+1.1
ARU	Arti	65.09	336	*c i*P	P	09 38 38.5	+0.9
ARU						09 39 05.6	
ARU				S	S	09 47 21.5	+3.8
ARU				SS	SS	09 51 28.0	-1.1
ARU				pmax	pmax		
	comp=Z,9.0nm,1.3s						
MKAR	Makanchi Array	65.52	317	P	P	09 38 40.3	-0.2
	comp=Z,1.5nm,0.8s,baz=45,slow=6.8,SNR=14						
MKAR				LR	LR	10 10 37.8	
	comp=Z,37nm,18.8s,baz=47,slow=39						
	comp=Z,1.5nm,0.8s						
WMQ	Urumqi	65.56	311	*e*P	P	09 38 42.7	+1.8
NB2	NORSAR Subarra	65.63	3	P	P	09 38 42.2	+1.1
	comp=Z,3.4nm,0.9s,baz=0.2,slow=6.9						
NOA	NORSAR Array B	65.63	3	P	P	09 38 41.4	+0.3
	comp=Z,2.8nm,0.9s,baz=357,slow=6.6,SNR=7.3						
	comp=Z,2.8nm,0.9s						
OBN	Obninsk	70.42	348	⇓*e*P	P	09 39 12.7	+1.6
OBN				*SP	pP	09 39 19.0	-0.6
OBN						09 39 35.0	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,37nm,16.0s						
AKTO	Aktyubinsk	70.66	333	LR	LR	10 12 39.0	
	comp=Z,27nm,18.5s,baz=81,slow=38						
PZH	PanZhiHua	71.90	290	P	P	09 39 17.2	-3.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,150nm,5.4s						
AAK	Ala-Archa	72.08	319	*ce*P	P	09 39 24.1	+2.5
AAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KMI	Kunming	72.41	288	⇑P	P	09 39 21.5	-2.5
KMI				pmax	pmax		
	comp=Z,13nm,1.0s						
CLL	Collm	75.43	2	*e*P	P	09 39 42.0	+1.1
	comp=Z,5.0nm,1.1s						
CLL	Collm	75.43	2	*e*P	P	09 39 42.0	+1.1
CLL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
AKASG	Malin Array Be	75.54	352	P	P	09 39 41.8	+0.3
	comp=Z,1.3nm,0.5s,baz=14,slow=5.3,SNR=7.9						
	comp=Z,1.3nm,0.5s						
AKBB	Malin Array Si	75.54	352	*ce*P	P	09 39 42.9	+1.4
DPC	Dobruska-Polom	76.43	0	*e*P	P	09 39 48.6	+1.9
DPC	Dobruska-Polom	76.43	0	*e*P	P	09 39 48.6	+1.9
KHC	Kasperske Hory	77.62	2	*e*P	P	09 39 55.5	+2.1
KHC	Kasperske Hory	77.62	2	*e*P	P	09 39 55.5	+2.1
GERES	GERESS Array B	77.91	2	P	P	09 39 56.0	+0.9
	comp=Z,1.0nm,0.7s,baz=20,slow=4.4,SNR=6.7						
	comp=Z,1.0nm,0.7s						
VYHS	Vyhne	78.27	359	*e*P	P	09 39 59.4	+2.4
VYHS	Vyhne	78.27	359	*e*P	P	09 39 59.4	+2.4
RETA	Reutte	79.17	4	*i* pP	P	09 40 04.5	+2.5
	comp=Z,2.6nm,0.7s						
GUN	Gumba	79.24	303	*e*P	P	09 40 03.7	+0.7
	comp=Z,16nm,0.6s						
JIRN	Jiri	79.28	302	*e*P	P	09 40 04.2	+0.9
	comp=Z,25nm,0.7s						
MOTA	Moosalm	79.33	4	*e*pP	P	09 40 04.6	+1.6
	comp=Z,6.5nm,1.0s						
WATA	Walderalm	79.35	4	*i* P	P	09 40 03.2	+0.1
	comp=Z,4.1nm,0.8s						
WTTA	Wattenberg	79.43	3	*e*pP	P	09 40 05.5	+1.9
	comp=Z,6.2nm,0.9s						
SQTA	Sankt Quirin	79.45	4	*e*pP	P	09 40 05.5	+1.8
	comp=Z,2.9nm,0.5s						
FETA	Feichten	79.63	4	*e*pP	P	09 40 06.6	+2.0
	comp=Z,6.6nm,1.2s						
RAMN	Ramite	79.66	302	*e*P	P	09 40 05.5	+0.3
	comp=Z,19nm,0.8s						
KBA	Koelnbreinsper	79.66	2	*e*pP	P	09 40 07.2	+2.3
	comp=Z,7.4nm,1.1s						
PKI	Pulchoki	79.75	303	*e*P	P	09 40 06.1	+0.3
	comp=Z,11nm,0.7s						
PKIN	Phulchoki	79.75	303	*e*P	P	09 40 06.1	+0.3
	comp=Z,8.1nm,0.6s						
CMAR	Chiang Mai Arr	79.82	287	P	P	09 40 06.1	+0.2
	comp=Z,1.2nm,0.3s,baz=21,slow=4.7,SNR=7.5						
CMAR				LR	LR	10 17 43.8	
	comp=Z,13nm,20.1s,baz=20,slow=38						
	comp=Z,1.2nm,0.3s						
CMAR	Chiang Mai Arr	79.82	287	*c i*P	P	09 40 06.5	+0.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
DANN	Dangsing	79.93	304	*e*P	P	09 40 07.6	+0.9
	comp=Z,43nm,0.7s						
SOKA	Soboth	80.09	1	*i* P	P	09 40 07.1	+0.1
	comp=Z,4.9nm,1.1s						
KBZ	Khabaz	80.47	341	LR	LR	10 20 58.6	
	comp=Z,43nm,18.5s,baz=12,slow=40						
BRTR	Keskin Array B	85.90	347	P	P	09 40 38.0	+0.7
	comp=Z,2.4nm,0.9s,baz=30,slow=2.1,SNR=8.8						
	comp=Z,2.4nm,0.9s						
BRTR	Keskin Array B	85.90	347	*c i*P	P	09 40 39.2	+1.9
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
H03N2	Juan Fernandez	113.07	115	T	T	11 50 04.5	
	baz=319						
H03N1	Juan Fernandez	113.08	115	T	T	11 50 15.8	
	baz=319						
H03N3	Juan Fernandez	113.09	115	T	T	11 50 09.1	
	baz=319						

ROM 11 10:18:39.6±0.3, 42°.65N±0°.01×13°.20E±0°.01, h16^{km}±2^{km}, ML1.8/4, 1C-1D, Error ellipse: s-maj=1.6km s-min=0.6km az=18.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1218	Civita (PG)	0.07	286	P	Pg	10 18 43.0	+0.2
T1218				S	Sg	10 18 45.0	0.0
T1218				AML	AML		
	comp=E,318µm,0.7s						
T1218				AML	AML		
	comp=N,430µm,0.1s						
T1218				AML	AML		
	comp=E,297µm,1.2s						
T1218				AML	AML		
	comp=N,436µm,0.1s						
T1218				AML	AML		
	comp=E,318µm,0.7s						
T1218				AML	AML		
	comp=E,298µm,1.2s						
T1218				AML	AML		
	comp=N,436µm,0.1s						
T1218				AML	AML		
	comp=N,431µm,0.1s						
SMA1	SAN MARTINO	0.10	102	⇑P	Pb	10 18 43.6	+0.3
SMA1				S	Sb	10 18 46.0	+0.2
SMA1				AML	AML		
	comp=E,721µm,0.5s						
SMA1				AML	AML		
	comp=E,720µm,0.5s						
SMA1				AML	AML		
	comp=N,563µm,0.3s						
T1214	Arquata del Tr	0.11	4	P	Pb	10 18 44.1	+0.6
RM33	Pellescritta (	0.14	176	P	Pg	10 18 42.9	-0.8
RM33				AML	AML		
	comp=E,500µm,0.1s						
RM33				AML	AML		
	comp=N,520µm,0.2s						
RM33				AML	AML		
	comp=E,492µm,0.1s						
RM33				AML	AML		
	comp=N,520µm,0.2s						
RM33				AML	AML		
	comp=N,502µm,0.2s						
T1212	Cascia, Frazio	0.15	311	P	Pb	10 18 44.3	+0.1
T1212				S	Sg	10 18 46.1	-0.3
T1245	Castelsantange	0.20	358	P	Pg	10 18 43.9	-0.7
T1245				AML	AML		
	comp=E,806µm,0.5s						
T1245				AML	AML		
	comp=N,844µm,0.5s						
T1245				AML	AML		
	comp=E,212µm,0.6s						
T1245				AML	AML		
	comp=N,249µm,0.2s						
T1245				AML	AML		
	comp=E,802µm,0.5s						
T1245				AML	AML		
	comp=E,212µm,0.6s						
T1245				AML	AML		
	comp=N,250µm,0.2s						
T1245				AML	AML		
	comp=N,846µm,0.5s						
T1217	Poggiodomo (PG	0.21	287	P	Pb	10 18 45.1	0.0
T1217				S	Sb	10 18 48.8	0.0
MMO1	Montemonaco	0.26	21	P	Pg	10 18 45.5	0.0
T1215	Vallo di Nera,	0.29	302	P	Pb	10 18 46.7	+0.2
TERO	Teramo	0.30	96	P	Pg	10 18 46.3	+0.3
TERO				S	Sb	10 18 51.0	-0.4
GIGS	Gran Sasso	0.34	126	P	Pg	10 18 46.0	-0.7
FIAM	Fiamignano	0.39	189	S	Sg	10 18 46.7	-6.3
CSP1	Cessapalombo	0.44	0	⇓P	Pg	10 18 47.7	-0.8

ROM 11 10:19:12.2±0.1, 42°.780N±0°.004×13°.150E±0°.003, h12^{km}, ML1.3/2, Error ellipse: s-maj=0.5km s-min=0.2km az=160.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1214	Arquata del Tr	0.05	116	P	Pg	10 19 14.8	+0.1
T1214				S	Sg	10 19 16.6	+0.1
T1245	Castelsantange	0.08	20	P	Pg	10 19 15.2	+0.2
T1245				S	Sg	10 19 17.2	+0.2
T1245				AML	AML		
	comp=N,846µm,0.5s						
T1245				AML	AML		
	comp=E,804µm,0.5s						
T1245				AML	AML		
	comp=E,212µm,0.6s						
T1245				AML	AML		
	comp=N,250µm,0.2s						
T1212	Cascia, Frazio	0.08	250	P	Pg	10 19 15.1	+0.2
T1212				S	Sg	10 19 17.3	+0.4
T1212				AML	AML		
	comp=E,96µm,0.2s						
T1212				AML	AML		
	comp=N,139µm,0.1s						
T1217	Poggiodomo (PG	0.17	247	P	Pg	10 19 16.6	+0.4
T1217				S	Sg	10 19 19.9	+0.9
MMO1	Montemonaco	0.18	47	P	Pg	10 19 16.5	+0.3
MMO1				S	Sg	10 19 19.8	+0.8
T1215	Vallo di Nera,	0.21	276	P	Pg	10 19 17.1	+0.4
T1215				S	Sg	10 19 20.8	+0.9
CSP1	Cessapalombo	0.31	7	P	Pg	10 19 19.2	+0.6

IDC 11 10:23:23.3±3.1, 42°.17N×129°.46E, h0^{km}, mbtmp2.3/2, ML2.0/2, Error ellipse: s-maj=53.5km s-min=20.7km az=122.0, North Korea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I45RU	USSURIYSK INFR	2.74	41	I	I	10 41 50.0	
	0.1nm,0.8s,baz=222,slow=324,SNR=8.7						
USRK	Ussuriysk Ar.	2.74	42	Pn	Pn	10 24 08.1	-0.4
	0.1nm,0.3s,baz=232,slow=16,SNR=1.7						
USRK				Pg	Pb	10 24 13.5	+0.3
	0.5nm,0.3s,baz=226,slow=15,SNR=10						
USRK				Lg	Lg	10 24 50.4	
	0.9nm,0.3s,baz=239,slow=28,SNR=9.1						
	0.6nm,0.6s						
KSRS	Korea Array	4.86	195	Pn	Pn	10 24 38.1	+0.5
	0.1nm,0.3s,baz=12,slow=12,SNR=2.4						
	0.3nm,0.3s						

IPEC ***11*** *10:24:06.8±0.3, 51°.66N×16°.07E, h0^{km}±1^{km}, ML3.1/6, Error ellipse: s-maj=2.3km s-min=1.2km az=29.0*
DNK ***11*** *10:24:07.9±2.0, 51°.75N×15°.89E, h0^{km}±54^{km}, ML2.2*
IDC ***11*** *10:24:07.4±0.6, 51°.62N×15°.85E, h0^{km}, mb3.2/1, mbtmp3.3/9, ML2.8/8, Error ellipse: s-maj=11.0km s-min=6.0km az=101.0*
MCSM ***11*** *10:24:07.1±0.6, 52°N±3°×1°6E±°, h3^{km}±3^{km}, ML3.4*
LDG ***11*** *10:24:07.2±0.3, 51°.58N×15°.98E, h1^{km}, Ml3.8/11, Error ellipse: s-maj=6.7km s-min=2.3km az=16.0, Suspected Mining induced.*
BGR ***11*** *10:24:08.3±0.5, 51°.61N×16°.02E, h1^{km}, ML3.3/15, Error ellipse: s-maj=5.6km s-min=2.2km az=15.0*
PRU ***11*** *10:24:09.9±0.0, 51°.53N×15°.98E, h0^{km}*
VIE ***11*** *10:24:10.6, 51°.38N×15°.83E, h0^{km}, mb2.8/15, ml2.9/15 83 km NE of Liberec Suspected Mining induced.*
UPP ***11*** *10:24:12.4±2.8, 51°.97N×15°.63E, h0^{km}, ML2.6*

ISC 11 10:24:05.0±0.6, 51°.67N±0°.03×15°.96E±0°.02, h0^{km}, n116, σ1^{s}97/207, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.86	166	*e*Pg	Pb	10 24 22.8	+0.1
KSP				*e*Sg	Sg	10 24 33.2	+0.8
KSP	Ksiaz	0.86	166	*e*Pg	Pb	10 24 22.8	+0.1
KSP				*e*Sg	Sg	10 24 33.2	+0.8
KSP	Ksiaz	0.86	166	Pg	Pg	10 24 22.6	+1.2
KSP				Sg	Sg	10 24 33.3	+0.9
CHVC	Chvalec	1.09	177	*e*PG	Pb	10 24 27.2	+0.5
CHVC				*e*SG	Sg	10 24 40.7	+0.8
	comp=Z,177nm,0.5s						
OSTC	Ostas	1.13	172	*e*PG	Pb	10 24 28.1	+0.7
OSTC				*e*SG	Sg	10 24 42.0	+0.8
	comp=Z,154nm,0.6s						
OSTC	Ostas	1.13	172	Pg	Pb	10 24 28.1	+0.7
OSTC				Sg	Sg	10 24 42.7	+1.5
UPC	Upice	1.17	178	*e*PG	Pb	10 24 28.6	+0.5
UPC				*e*SG	Sg	10 24 42.8	+0.4
	comp=Z,325nm,0.7s						
UPC	Upice	1.17	178	Pg	Pb	10 24 28.5	+0.5
DPC	Dobruska-Polom	1.34	170	*e*PG	Pg	10 24 31.5	+0.8
DPC				*e*SG	Sg	10 24 47.8	-0.3
	comp=Z,121nm,0.6s						
DPC	Dobruska-Polom	1.34	170	*e*Pg	Pg	10 24 31.5	+0.8
DPC	Dobruska-Polom	1.34	170	Pg	Pg	10 24 31.5	+0.8
PVCC	Panska Ves	1.44	218	*e*PG	Pb	10 24 34.2	+1.5
PVCC				*e*SG	Sn	10 24 53.3	+1.3
	comp=Z,466nm,0.6s						
BRG	Berggiesshubel	1.50	239	Pg	Pg	10 24 35.8	+2.1
BRG				Sg	Sn	10 24 55.9	+2.5
BRG				Amp		10 24 58.4	
	comp=Z,180nm,0.5s						
BRG	Berggiesshubel	1.50	239	*e*Pn	Pg	10 24 34.9	+1.2
BRG				*e*Sg	Sn	10 24 55.9	+2.5
KRLC	Kraliky	1.68	162	*e*PG	Pn	10 24 36.8	+1.1
KRLC				*e*SG	Sb	10 24 59.1	+0.6
	comp=Z,169nm,0.4s						
FBE	Freiberg	1.80	246	*e*Pn	Pg	10 24 41.0	+1.5
FBE				*e*Sg	Sg	10 25 05.3	+2.4
CLL	Collm	1.89	260	*i* Pn	Pb	10 24 40.0	-0.2
	comp=Z,27nm,0.5s						
CLL				*i* Pg	Pg	10 24 43.1	+2.0
CLL				*i* x	x	10 24 47.1	
CLL				*e*x	x	10 24 59.0	
CLL				*e*Sg	Sg	10 25 09.0	+3.5
	comp=Z,61nm,0.5s						
CLL	Collm	1.89	260	*e*Pn	Pb	10 24 40.1	-0.2
CLL				*e*Sg	Sg	10 25 09.3	+3.7
PRU	Pruhonice	1.91	209	*e*PN	Pn	10 24 40.0	+1.2
PRU				*e*PG	Pg	10 24 42.1	+0.5
PRU				*e*SG	Sb	10 25 06.2	+1.1
	comp=Z,97nm,0.5s						
GOPC	GO Pecny, Ondr	1.91	203	*e*PG	Pg	10 24 41.9	+0.3
GOPC				*e*SG	Sb	10 25 06.1	+1.0
MORC	Moravsky Berou	2.15	151	*e*Pn	Pn	10 24 43.0	+0.9
MORC				*e*Sg	Sg	10 25 15.7	+1.8
MORC	Moravsky Berou	2.15	151	*e*Pn	Pn	10 24 42.8	+0.7
	baz=334						
MORC				*e*Sg	Sb	10 25 12.7	+0.8
	comp=Z,108nm,0.7s,baz=334						
OKC	Ostrava-Krasne	2.30	142	*e*PN	Pn	10 24 44.9	+0.7
OKC				*e*PG	Pg	10 24 48.9	-0.2
OKC				*e*SG	Sb	10 25 18.1	+1.8
	comp=Z,110nm,0.7s						
OKC	Ostrava-Krasne	2.30	142	*e*Pn	Pn	10 24 44.9	+0.7
OKC				*e*Sg	Sg	10 25 18.8	-0.1
TREC	Trest	2.40	187	*e*SG	Sg	10 25 21.8	-0.2
VRAC	Vranov	2.40	170	Pn	Pn	10 24 46.8	+1.2
	comp=Z,3.1nm,0.3s,baz=345,slow=16,SNR=23						
VRAC				Lg	Lg	10 25 20.6	
	comp=Z,10.0nm,0.3s,baz=85,slow=20,SNR=15						
	comp=Z,7.7nm,0.3s						
VRAC	Vranov	2.40	170	*e*PN	Pn	10 24 47.1	+1.5
VRAC				*e*SG	Sb	10 25 21.1	+1.8
VRAC	Vranov	2.40	170	*e*Pn	Pn	10 24 47.0	+1.5
	baz=352						
VRAC				*e*Sg	Sb	10 25 21.0	+1.8
	comp=Z,73nm,0.7s,baz=352						
TANN	Tannenbergstha	2.54	242	*e*Pn	Pn	10 24 49.6	+2.1
TANN				*e*Sg	Sg	10 25 28.0	+1.4
WERD	Werda	2.61	243	*e*Pn	Pn	10 24 50.4	+1.9
KRUC	Moravsky	2.63	174	*e*PN	Pn	10 24 50.2	+1.5
KRUC				*e*SG	Sg	10 25 28.5	-0.9
KRUC	Moravsky	2.63	174	*e*Pn	Pn	10 24 50.1	+1.4
	baz=356						
KRUC				*e*Sg	Sg	10 25 28.4	-0.9
	comp=Z,93nm,1.0s,baz=356						
NKC	Novy Kostel	2.65	238	*e*PN	Pn	10 24 51.0	+2.1
NKC				*e*PG	Pg	10 24 57.1	+1.4
NKC				*e*SG	Sg	10 25 31.9	+1.9
	comp=Z,143nm,0.5s						
NKC	Novy Kostel	2.65	238	Pn	Pn	10 24 51.1	+2.1
OJC	Ojcow	2.83	119	*e*Pn	Pn	10 24 51.6	+0.2
OJC				*e*Pg	Pg	10 25 00.1	+0.9
OJC				*e*Sg	Sg	10 25 36.0	+0.1
OJC	Ojcow	2.83	119	*e*Pn	Pn	10 24 51.6	+0.2
MOX	Moxa	2.92	251	*e*Pn	Pn	10 24 54.6	+1.9
MOX				*e*Sg	Sg	10 25 42.1	+3.3
KHC	Kasperske Hory	2.97	212	*e*PN	Pn	10 24 54.6	+1.3
KHC				*e*PG	Pg	10 25 01.0	-0.8
KHC				*e*SG	Sg	10 25 39.8	-0.4
	comp=Z,28nm,0.4s						
MANZ	Manzenberg	2.97	237	*e*Pn	Pn	10 24 55.3	+1.9
MANZ				*e*Sg	Sg	10 25 41.9	+1.6
JAVC	Velka Javorina	3.02	158	*e*Pn	Pn	10 24 55.4	+1.3
	baz=340						
JAVC				*e*Sg	Sb	10 25 40.3	+3.2
	comp=Z,72nm,1.1s,baz=340						
CKRC	Cesky Krumlov	3.05	201	*e*PG	Pg	10 25 02.8	-0.5
CKRC				*e*SG	Sg	10 25 42.1	-0.7
	comp=Z,45nm,0.5s						
ROTZ	Rotzenmuhle	3.06	233	*e*Pn	Pn	10 24 56.6	+2.0
GEC2	GERESS Array S	3.18	208	*e*Pn	Pn	10 24 58.4	+2.0
GERES	GERESS Array B	3.18	208	Pn	Pn	10 24 58.2	+1.9
	comp=Z,1.4nm,0.3s,baz=30,slow=13,SNR=32						
GERES				Pg	Pb	10 25 03.9	+1.5
	comp=Z,5.4nm,0.3s,baz=32,slow=15,SNR=32						
GERES				Lg	Lg	10 25 45.4	
	comp=Z,6.9nm,0.3s,baz=35,slow=33,SNR=9.3						
	comp=Z,2.4nm,0.4s						
LANS	Liptovska Anna	3.38	137	*e*PN	Pn	10 25 00.5	+1.5
LANS				*e*PG	Pg	10 25 11.8	+2.1
LANS				*e*SG	Sg	10 25 54.8	+1.4
MODS	Modra-Piesok	3.41	165	*e*PN	Pn	10 25 01.1	+1.7
MODS				*e*PG	Pg	10 25 11.6	+1.3
MODS				*e*SG	Sg	10 25 55.0	+0.5
CLZ	Clausthal	3.48	275	*e*Pn	Pn	10 25 03.5	+3.2
BSD	Bornholm Skovb	3.50	350	*i* P	Pn	10 25 02.9	+2.3
BSD				*i* S	Sn	10 25 44.0	+1.2
BSD				IAML		10 25 49.1	
	comp=Z,2.8nm,0.2s						
NIE	Niedzica	3.57	128	*e*P	Pg	10 25 14.2	+0.9
NIE				*e*S	Sg	10 26 00.4	+0.8
GRF	Grafenberg Arr	3.61	239	*e*Pn	Pn	10 25 04.9	+2.7
GRF				*e*Sg	Sg	10 26 02.8	+2.0
VYHS	Vyhne	3.68	149	*e*PN	Pn	10 25 04.1	+1.0
VYHS				*e*PG	Pg	10 25 16.8	+1.3
VYHS				*e*SG	Sg	10 26 04.8	+1.6
CONA	Conrad Observa	3.75	181	*i* Pn	Pn	10 25 05.9	+1.8
	comp=Z,2.1nm,0.2s,SNR=7.6						
CONA				*e*Sg	Sg	10 26 04.1	-1.3
	comp=Z,19nm,0.3s						
MOA	Molln	3.98	197	*i* Pn	Pn	10 25 09.1	+1.9
	comp=Z,7.9nm,0.3s						
MOA				Sg	Sg	10 26 13.2	+0.4
	comp=Z,34nm,0.5s						
RONA	Rosalia, Austr	3.98	177	*e*Pn	Pn	10 25 09.4	+2.1
	comp=Z,0.4nm,0.1s						
RONA				*e*Sg	Sg	10 26 11.5	-1.3
	comp=Z,19nm,0.4s						
STHS	Stebnicka Huta	4.05	122	*e*PN	Pn	10 25 09.7	+1.4
STHS				*e*PG	Pg	10 25 25.2	+2.5
STHS				*e*SG	Sg	10 26 20.3	+5.1
LUNU	Lund	4.24	340	*i* P	Pn	10 25 12.7	+1.9
LUNU				*i* S	Sn	10 26 01.2	+0.3
BIOA	Bad Ischl, Aus	4.26	202	*i* Pn	Pn	10 25 12.9	+1.8
	comp=Z,4.3nm,0.3s						
BIOA				Sg	Sg	10 26 22.2	+0.4
	comp=Z,54nm,0.6s						
LLD	Lille Linde	4.30	330	*i* S	Sn	10 26 02.6	+0.3
LLD				IAML		10 26 09.1	
	comp=Z,3.9nm,0.2s						
ARSA	Arzberg	4.43	184	*e*Sg	Sg	10 26 27.3	-0.1
	comp=Z,23nm,0.6s						
BLEU	Blekinge	4.64	359	P	Pn	10 25 18.6	+2.4
BLEU				S	Sn	10 26 09.4	-1.5
BLEU	Blekinge	4.64	359	P	Pn	10 25 18.6	+2.4
BLEU				*i* P	Pn	10 25 18.9	+2.6
BLEU				S	Sn	10 26 09.4	-1.5
BLEU				*i* P	Sn	10 26 11.0	+0.1
BJUU	Bjuv	4.74	340	*i* P	Pn	10 25 18.7	+1.0
BJUU				*i* S	Sn	10 26 10.3	-2.9
KBA	Koelnbreinsper	4.91	201	*i* Pn	Pn	10 25 22.3	+2.2
	comp=Z,4.9nm,0.4s,SNR=7.9						
DEL	Delary	4.96	346	P	Pn	10 25 22.3	+1.6
DEL				S	Sn	10 26 16.8	-1.9
DEL	Delary	4.96	346	*i* P	Pn	10 25 22.0	+1.3
DEL				P	Pn	10 25 22.3	+1.6
DEL				S	Sn	10 26 16.8	-1.9
DEL				IAML		10 26 22.6	
	comp=Z,1.0nm,0.2s						
WATA	Walderalm	5.20	215	*i* Pn	Pn	10 25 25.7	+1.6
	comp=Z,0.5nm,0.1s						
WTTA	Wattenberg	5.24	214	*i* Pn	Pn	10 25 26.7	+2.0
	comp=Z,1.1nm,0.2s						
WTTA				*e*Sg	Sg	10 26 54.7	+1.6
	comp=Z,9.6nm,0.5s						
OBKA	Obir	5.25	191	*i* Pn	Pn	10 25 26.6	+1.9
	comp=Z,0.4nm,0.2s						
OBKA				*e*Sg	Sg	10 26 54.1	+0.6
	comp=Z,5.9nm,0.4s						
MYKA	Terra Mystica	5.27	198	*e*Sg	Sg	10 26 55.4	+1.1
	comp=Z,5.3nm,0.4s						
VXJU	Vaexsjoe	5.29	354	P	Pn	10 25 27.7	+2.5
VXJU				S	Sn	10 26 25.0	-1.9
VXJU	Vaexsjoe	5.29	354	P	Pn	10 25 27.7	+2.5
VXJU				S	Sn	10 26 25.0	-1.9
MOTA	Moosalm	5.36	218	*i* Pn	Pn	10 25 28.2	+1.8
	comp=Z,1.5nm,0.2s						
MOTA				*e*Sg	Sg	10 26 58.3	+1.1
	comp=Z,7.3nm,0.5s						
RETA	Reutte	5.38	221	*i* Pn	Pn	10 25 28.1	+1.5
	comp=Z,0.6nm,0.2s						
RETA				*e*Sg	Sg	10 26 58.3	+0.5
	comp=Z,1.8nm,0.3s						
ABTA	Abfaltersbach	5.42	206	*i* Pn	Pn	10 25 29.7	+2.6
	comp=Z,3.2nm,0.7s						
ABTA				*e*Sg	Sg	10 26 59.0	-0.1
	comp=Z,8.1nm,0.5s						
SQTA	Sankt Quirin	5.43	217	*i* Pn	Pn	10 25 29.7	+2.5
	comp=Z,1.7nm,0.3s						
OSKU	Oskarshamn	5.54	1	P	Pn	10 25 31.2	+2.7
OSKU	Oskarshamn	5.54	1	P	Pn	10 25 31.2	+2.7
BYXU	Byxelkrok	5.66	6	P	Pn	10 25 33.1	+2.8
BYXU	Byxelkrok	5.66	6	P	Pn	10 25 33.1	+2.8
FABU	Falkenberg	5.67	342	P	Pn	10 25 32.1	+1.8
FABU	Falkenberg	5.67	342	*i* P	Pn	10 25 31.8	+1.5
FABU				P	Pn	10 25 32.1	+1.8
FABU				*i* S	Sn	10 26 34.3	-1.7
FETA	Feichten	5.78	218	*e*Pn	Pn	10 25 34.4	+2.4
	comp=Z,0.8nm,0.4s						
FETA				Sg	Sg	10 27 11.3	+0.9
	comp=Z,5.4nm,0.8s						
GNOU	Gnosjoe	5.78	348	P	Pn	10 25 34.0	+2.2
GNOU	Gnosjoe	5.78	348	P	Pn	10 25 34.0	+2.2
DAVOX	Davos/Dischmat	6.31	221	Pn	Pn	10 25 39.5	+0.1
	comp=Z,0.2nm,0.3s,baz=19,slow=22,SNR=1.8						
DAVOX				Sn	Sn	10 26 46.8	-5.5
	comp=Z,0.3nm,0.3s,baz=0.3,slow=20,SNR=1.6						
DAVOX				Lg	Lg	10 27 24.0	
	comp=Z,0.4nm,0.3s,baz=180,slow=23,SNR=2.1						
	comp=Z,1.2nm,0.5s						

CDF	**Champ du Feu**	**6.47**	**243**	*e*Pn	**Pn**	**10 25 41.1**	**-0.5**
CDF				*e*Sg	**Sg**	**10 27 29.0**	**-3.9**
	comp=Z,17nm,0.7s						
HINF	**Hinteralfeld**	**7.05**	**240**	*e*Pn	**Pn**	**10 25 49.1**	**-0.3**
HINF				*e*Sg	**Sg**	**10 27 46.8**	**-4.5**
	comp=Z,18nm,0.8s						
HAU	**Haudompre**	**7.22**	**243**	*e*Pn	**Pn**	**10 25 51.6**	**-0.1**
HAU				*e*Sg	**Sg**	**10 27 52.5**	**-4.2**
	comp=Z,15nm,0.7s						
GIVF	**Givet**	**7.22**	**262**	*e*Sg	**Sg**	**10 27 52.8**	**-3.9**
	comp=Z,32nm,1.3s						
NACGM	**Naroch**	**7.25**	**59**	*e*P	**Pn**	**10 25 51.7**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=246						
PAGF	**Fort de Pagny**	**7.28**	**249**	*e*P	**Pn**	**10 25 56.8**	**+4.2**
PAGF				*e*Sg	**Sg**	**10 27 54.8**	**-4.0**
	comp=Z,108nm,1.7s						
MI28	**Mi28,Pidlybu**	**7.38**	**91**	Pn	**Pn**	**10 25 55.0**	**+1.1**
MI28				pP	**Pn**	**10 25 56.1**	**+2.2**
SAVF	**Savonnieres en**	**7.61**	**251**	*e*Pn	**Pn**	**10 25 57.1**	**+0.1**
SAVF				*e*Sg	**Sg**	**10 28 04.6**	**-4.5**
	comp=Z,16nm,0.9s						
BAIF	**Baives**	**7.61**	**262**	*e*Sg	**Sg**	**10 28 04.8**	**-4.5**
	comp=Z,24nm,1.2s						
LUBAR	**Lubar, Ukraine**	**7.68**	**99**	Pn	**Pn**	**10 25 57.7**	**-0.3**
LUBAR				pP	**Pn**	**10 25 59.1**	**+1.1**
MEZF	**Maizieres J'vi**	**7.70**	**250**	*e*Pn	**Pn**	**10 25 58.4**	**+0.1**
MEZF				*e*Sg	**Sg**	**10 28 07.0**	**-5.1**
	comp=Z,29nm,1.1s						
CABF	**La Chapelle**	**8.22**	**236**	*e*Pn	**Pn**	**10 26 04.7**	**-0.8**
CABF				*e*Sg	**Sg**	**10 28 23.1**	**-5.6**
	comp=Z,85nm,1.7s						
AK13	**Malin Array Si**	**8.31**	**92**	Pn	**Pn**	**10 26 07.3**	**+0.7**
AK14	**Malin Array Si**	**8.33**	**92**	Pn	**Pn**	**10 26 07.2**	**+0.2**
AK11	**Malin Array Si**	**8.36**	**92**	Pn	**Pn**	**10 26 08.7**	**+1.4**
AK02	**Malin Array Si**	**8.39**	**92**	Pn	**Pn**	**10 26 08.2**	**+0.5**
AK02				pP	**Pn**	**10 26 09.2**	**+1.5**
AKASG	**Malin Array Be**	**8.39**	**91**	Pn	**Pn**	**10 26 07.6**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=277,slow=12,SNR=6.5						
AKASG				Sn	**Sn**	**10 27 39.8**	**-3.4**
	comp=Z,0.9nm,0.3s,baz=272,slow=22,SNR=3.4						
	comp=Z,1.6nm,0.7s						
AKBB	**Malin Array Si**	**8.39**	**91**	Pn	**Pn**	**10 26 08.7**	**+1.0**
AK05	**Malin Array Si**	**8.40**	**92**	Pn	**Pn**	**10 26 09.3**	**+1.5**
AK06	**Malin Array Si**	**8.40**	**92**	Pn	**Pn**	**10 26 08.5**	**+0.6**
AK06				pP	**Pn**	**10 26 09.3**	**+1.4**
AK07	**Malin Array Si**	**8.41**	**92**	Pn	**Pn**	**10 26 09.1**	**+1.1**
AK07				pP	**Pn**	**10 26 09.9**	**+1.9**
AK08	**Malin Array Si**	**8.42**	**92**	Pn	**Pn**	**10 26 09.6**	**+1.4**
AK09	**Malin Array Si**	**8.45**	**92**	Pn	**Pn**	**10 26 09.3**	**+0.8**
HFS	**Hagfors**	**8.58**	**352**	Pn	**Pn**	**10 26 11.2**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=151,slow=14,SNR=5.1						
HFS				Sn	**Sn**	**10 27 44.5**	**-3.1**
	comp=Z,0.1nm,0.3s,baz=170,slow=26,SNR=1.9						
	comp=Z,1.4nm,0.8s						
LPL	**La Plagne**	**8.68**	**228**	*e*Pn	**Pn**	**10 26 10.9**	**-1.0**
LOR	**Lormes**	**9.03**	**246**	*e*Pn	**Pn**	**10 26 15.5**	**-1.0**
LOR				*e*Sg	Sn	10 28 49.3	+50
	comp=Z,55nm,1.8s						
NOA	**NORSAR Array B**	**9.75**	**346**	Pn	**Pn**	**10 26 26.8**	**+0.4**
	baz=159,slow=20,SNR=5.0						
NOA				Sn	**Sn**	**10 28 12.9**	**-3.6**
	baz=156,slow=18,SNR=1.8						
	comp=Z,0.2nm,0.6s						
FINES	**FINESS Array B**	**11.26**	**26**	Pn	**Pn**	**10 26 46.2**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=219,slow=12,SNR=7.6						
FINES				Sn	**Sn**	**10 28 46.4**	**-6.9**
	comp=Z,0.3nm,0.3s,baz=208,slow=21,SNR=5.3						
	comp=Z,0.3nm,0.2s						
EKA	**Eskdalemuir Ar**	**11.95**	**295**	Pn	**Pn**	**10 26 55.7**	**-0.8**
	baz=103,slow=14						
ARCES	**ARCESS Array B**	**18.48**	**11**	Pn	**Pn**	**10 28 21.2**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=196,slow=15,SNR=1.8						
	comp=Z,6.5nm,1.1s						
YKA	**Yellowknife Ar**	**59.67**	**336**	P	**P**	**10 34 11.8**	**+1.4**
	comp=Z,0.2nm,0.7s,baz=31,slow=7.2,SNR=3.8						
	comp=Z,0.2nm,0.7s						

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*IDC **11** 10:33:10.9±0.9, 11°.81N×144°.74E, h0^{km}, mb3.9/16, mbtmp3.9/16, MS3.2/1, Error ellipse: s-maj=28.9km s-min=16.1km az=96.0*

*NEIC **11** 10:33:12.7±0.8, 11°.81N±0°.08×145°.0E±0°.1, h10^{km}±1^{km}, mb4.4/11, Error ellipse: s-maj=18.5km s-min=12.6km az=81.0*

ISC 11 10:33:13.3±0.7**, 11°.82N**±0°.07×**144°.8E**±0°.2**, h16**^{km}**, n38, σ0^{s}77**/33**, mb4.2**/23**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.76**	**2**	Pn	**Pb**	**10 33 44.3**	**-0.9**
	43nm,0.3s,baz=158,slow=6.7,SNR=22						
GUMO				Sn	**Sn**	**10 34 05.3**	**+0.1**
	62nm,0.3s,baz=356,slow=21,SNR=6.3						
GUMO	**Guam**	**1.76**	**2**		**Pb**	**10 33 44.3**	**-0.9**
GUMO				Sn	**Sn**	**10 34 05.6**	**+0.4**
PMG	**Port Moresby**	**21.22**	**174**	LR	LR	10 46 32.9	
	comp=Z,53nm,18.5s,baz=298,slow=38						
H11S3	**WAKE ISLAND Hy**	**22.13**	**70**	T	T	11 01 31.1	
	baz=254,slow=75,SNR=10						
H11S1	**WAKE ISLAND Hy**	**22.15**	**70**	T	T	11 01 45.9	
	baz=254,slow=75,SNR=4.5						
H11S2	**WAKE ISLAND Hy**	**22.15**	**70**	T	T	11 01 32.2	
	baz=254,slow=75,SNR=9.3						
H11N1	**WAKE ISLAND Hy**	**22.64**	**67**	T	T	11 02 50.7	
	baz=254						
H11N2	**WAKE ISLAND Hy**	**22.66**	**67**	T	T	11 02 51.4	
	baz=254						
H11N3	**WAKE ISLAND Hy**	**22.66**	**67**	T	T	11 02 50.3	
	baz=254						
JNU	**Nakatsue**	**24.75**	**331**	P	**P**	**10 38 33.4**	**-0.8**
	6.2nm,0.9s,baz=198,slow=18,SNR=2.3						
	6.2nm,0.9s						
MJAR	**Matsushiro Arr**	**25.32**	**348**	P	**P**	**10 38 38.6**	**-0.8**
	1.0nm,0.7s,baz=172,slow=9.2,SNR=4.2						
	1.0nm,0.7s						
KSRS	**Korea Array**	**29.68**	**332**	P	**P**	**10 39 17.3**	**-1.0**
	0.4nm,0.5s,baz=140,slow=11,SNR=2.8						
	0.4nm,0.5s						
CTAO	**Charters Tower**	**31.74**	**177**	P	**P**	**10 39 36.0**	**-0.7**
CTAO				IAmb	IAmb	10 39 49.9	
	comp=Z,8.1nm,1.3s						
WB0	**Warramunga Arr**	**33.02**	**198**	P	**P**	**10 39 47.9**	**-0.1**
WB0				IAmb	IAmb	10 39 58.7	
	comp=Z,6.1nm,1.4s						
WRAB	**Tennant Creek**	**33.19**	**198**	P	**P**	**10 39 49.6**	**+0.1**
WRAB				IAmb	IAmb	10 40 12.4	
	comp=Z,6.4nm,1.4s						
WRA	**Warramunga Arr**	**33.20**	**198**	P	**P**	**10 39 49.4**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=22,slow=9.7,SNR=6.0						
	comp=Z,0.6nm,0.8s						
AS31	**Alice Springs**	**36.84**	**197**	P	**P**	**10 40 20.6**	**-0.4**
ASAR	**Alice Springs**	**36.84**	**197**	P	**P**	**10 40 20.3**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=24,slow=9.4,SNR=9.5						
	comp=Z,0.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**44.66**	**284**	P	**P**	**10 41 26.7**	**+1.0**
	comp=Z,1.5nm,0.6s,baz=84,slow=6.7,SNR=1.3						
	comp=Z,1.5nm,0.6s						
SONM	**Songino Array**	**48.14**	**326**	P	**P**	**10 41 52.9**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=146,slow=8.6,SNR=5.1						
	comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**48.14**	**326**	P	**P**	**10 41 53.8**	**+1.0**
TOO	**Toolangi**	**49.13**	**179**	P	**P**	**10 41 59.9**	**-0.4**
MK31	**Makanchi Array**	**62.72**	**317**	P	**P**	**10 43 38.1**	**+0.5**
MK31				IAmb	IAmb	10 43 39.1	
	comp=Z,1.7nm,1.1s						
MKAR	**Makanchi Array**	**62.72**	**317**	P	**P**	**10 43 37.7**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=98,slow=8.7,SNR=8.9						
	comp=Z,0.7nm,0.5s						
MKAR	**Makanchi Array**	**62.72**	**317**	P	**P**	**10 43 38.4**	**+0.7**
MAKZ	**Makanchi**	**62.93**	**317**	P	**P**	**10 43 39.9**	**+0.8**
MAKZ				IAmb	IAmb	10 43 40.3	
	comp=Z,1.4nm,0.8s						
ZALV	**Zalesovo Beam**	**63.02**	**325**	P	**P**	**10 43 38.5**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=103,slow=8.1,SNR=4.2						
	comp=Z,0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**63.02**	**325**	P	**P**	**10 43 39.8**	**+0.4**
SVW2	**Sparrevohn**	**65.26**	**27**	P	**P**	**10 43 54.1**	**0.0**
KURK	**Kurchatov**	**65.89**	**320**	P	**P**	**10 43 58.9**	**+0.6**
KURK				IAmb	IAmb	10 43 59.4	
	comp=Z,3.5nm,1.0s						
KURBB	**Kurchatov Arra**	**65.93**	**320**	P	**P**	**10 43 58.7**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=103,slow=6.5,SNR=12						
	comp=Z,1.6nm,0.6s						
L19K	**White Mountain**	**65.98**	**27**	P	**P**	**10 43 57.8**	**-1.0**
L19K				IAmb	IAmb	10 44 01.1	
	comp=Z,2.3nm,0.8s						
ILAR	**Eielson Array**	**70.19**	**25**	P	**P**	**10 44 25.1**	**0.0**
	comp=Z,1.0nm,0.5s,baz=252,slow=6.0,SNR=20						
	comp=Z,1.0nm,0.5s						
BVAR	**Borovoye Array**	**71.27**	**322**	P	**P**	**10 44 32.9**	**+1.0**
	comp=Z,2.7nm,0.7s,baz=100,slow=8.5,SNR=12						
	comp=Z,2.7nm,0.7s						
AKTO	**Aktyubinsk**	**78.95**	**319**	P	**P**	**10 45 16.2**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=81,slow=3.9,SNR=3.2						
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**84.45**	**27**	P	**P**	**10 45 46.3**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=284,slow=5.3,SNR=3.7						
	comp=Z,0.2nm,0.6s						
NVAR	**Mina Array Bea**	**88.07**	**51**	P	**P**	**10 46 05.3**	**+1.6**
	comp=Z,0.2nm,0.6s,baz=284,slow=3.6,SNR=2.7						
	comp=Z,0.2nm,0.6s						
FINES	**FINESS Array B**	**92.73**	**335**	P	**P**	**10 46 23.4**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=90,slow=7.6,SNR=4.3						
	comp=Z,0.6nm,0.6s						

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*TEH **11** 10:33:40.1, 34°.95N×46°.83E, h6^{km}±31^{km}, ML4.0*

*IDC **11** 10:33:40.3±1.0, 34°.96N×46°.66E, h0^{km}, mb3.7/10, mbtmp3.8/15, ML4.0/5, MS2.9/8, Error ellipse: s-maj=19.7km s-min=14.5km az=162.0*

*NEIC **11** 10:33:41.9±2.0, 34°.81N±0°.08×46°.78E±0°.07, h10^{km}±1^{km}, mb4.1/8, Error ellipse: s-maj=15.6km s-min=7.2km az=32.0*

*ISN **11** 10:33:41.6±0.8, 34°.98N×46°.89E, h18^{km}±4^{km}, ML3.8*

*AZER **11** 10:33:49.2±4.7, 34°.97N×47°.00E, h8^{km}, Error ellipse: s-maj=30.6km s-min=19.7km az=175.0*

ISC 11 10:33:40.3±1.3**, 34°.92N**±0°.02×**46°.80E**±0°.03**, h1**^{km}±9^{km}**, n95, σ2^{s}08**/103**, mb3.8**/10**, MS2.9**/4**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILIN	**Lien**	**0.14**	**90**	Pg	**Pg**	**10 33 43.0**	**+0.1**
IDHR	**Dehrash**	**0.40**	**237**	Pg	**Pb**	**10 33 50.4**	**+0.1**
SNGE	**Sanandaj**	**0.48**	**69**	Pg	**Pg**	**10 33 48.0**	**-1.5**
KER	**Kermanshah**	**0.60**	**153**	Pg	**Pb**	**10 33 52.6**	**-1.0**
IGHG	**Ghaleghazi**	**0.62**	**198**	Pg	**Pb**	**10 33 54.4**	**+0.4**
KCHF	**Cheshme Sefid,**	**0.67**	**163**	Pg	**Pb**	**10 33 54.2**	**-0.8**
IKOM	**Komasi**	**0.95**	**141**	Pg	**Pb**	**10 33 59.3**	**-0.3**
IBZA	**Bozab**	**0.98**	**117**	Pg	**Pg**	**10 33 59.0**	**-0.1**
IBZA				Sg	**Sn**	**10 34 15.6**	**-0.6**
ILBA	**Ilam Banvizeh**	**1.38**	**201**	Pg	**Pb**	**10 34 08.7**	**+1.8**
IDOB	**Doab**	**1.60**	**134**	Pg	**Pb**	**10 34 10.9**	**+0.1**
IKFM	**Kafar-mosalman**	**1.64**	**148**	Pg	**Pg**	**10 34 12.5**	**+0.8**
HSAM	**Samen**	**1.65**	**115**	Pg	**Pn**	**10 34 10.0**	**-0.6**
HAGD	**Aghdareh**	**1.93**	**92**	Pn	**Pn**	**10 34 14.9**	**+0.5**
IBDR	**Badra**	**1.94**	**202**	*e*Pg	**Pg**	**10 34 17.0**	**-0.5**
IBDR				*e*Sg	**Sg**	**10 34 44.0**	**+1.3**
IBDR				AML	AML	10 34 57.5	
	comp=N,819nm,0.6s						
IBDR				AML	AML	10 35 03.6	
	comp=E,1µm,0.7s						
MAHB	**Mahabad**	**2.05**	**335**	Pn	**Pn**	**10 34 16.6**	**+0.7**
IKRK	**Kirkuk**	**2.07**	**284**	*e*Pn	**Pn**	**10 34 18.0**	**+1.8**
IKRK				*e*Sn	**Sb**	**10 34 45.0**	**+0.1**
IKRK				AML	AML	10 34 54.7	
	comp=E,826nm,0.6s						
IKRK				AML	AML	10 34 59.0	
	comp=N,636nm,0.6s						
ZNJK	**Zanjan**	**2.33**	**41**	Pn	**Pn**	**10 34 21.0**	**+1.1**
IHSH	**Hashtrud**	**2.41**	**9**	Pn	**Pn**	**10 34 22.1**	**+0.9**
BHD	**Baghdad**	**2.59**	**231**	*e*Pn	**Pb**	**10 34 26.0**	**-1.6**
BHD				*e*Sn	**Sb**	**10 34 58.0**	**-1.9**
BHD				AML	AML	10 35 25.1	
	comp=E,683nm,0.8s						
IRAZ	**Razeghan**	**2.61**	**78**	Pn	**Pn**	**10 34 25.2**	**+1.4**
ASAO	**Ashtian**	**2.68**	**97**	Pn	**Pn**	**10 34 26.4**	**+1.6**
KHMZ	**Khomeyn**	**2.87**	**113**	Pn	**Pn**	**10 34 30.0**	**+2.6**
ISRB	**Sarab**	**2.98**	**13**	Pn	**Pn**	**10 34 30.1**	**+1.2**
IGZV	**Ghazvin**	**3.15**	**61**	Pn	**Pn**	**10 34 33.4**	**+2.2**
RAFI	**Al-Rafai**	**3.24**	**190**	*e*Pn	**Pn**	**10 34 35.0**	**+2.8**
RAFI				*e*Sn	**Sn**	**10 35 13.0**	**+1.6**
ISHB	**Shabestar**	**3.49**	**345**	Pn	**Pn**	**10 34 37.5**	**+1.5**
IQOM	**Qom**	**3.51**	**90**	Pn	**Pn**	**10 34 37.1**	**+0.9**
CHTH	**Charan**	**3.67**	**73**	Pn	**Pn**	**10 34 39.7**	**+1.3**
GHVR	**GHOM**	**3.73**	**95**	Pn	**Pn**	**10 34 42.9**	**+3.8**
KLST	**Kelardasht - M**	**3.82**	**64**	Pn	**Pn**	**10 34 42.3**	**+1.9**
LRK	**Lerik**	**3.92**	**18**	P	**Pb**	**10 34 47.9**	**-2.3**
LRK				S	**Sb**	**10 35 35.9**	**-2.3**
ASTR	**Astara**	**3.97**	**23**	P	**Pb**	**10 34 49.3**	**-1.7**
ASTR				S	**Sn**	**10 35 35.4**	**+5.9**
QAMS	**Qamsar**	**3.98**	**106**	Pn	**Pn**	**10 34 44.1**	**+1.4**
IVRN	**Varamin**	**4.05**	**88**	Pn	**Pn**	**10 34 45.6**	**+2.1**
ORD	**Ordubad**	**4.05**	**351**	P	**Pb**	**10 34 52.2**	**-0.3**
ORD				S	**Sb**	**10 35 40.4**	**-1.6**
IPIR	**Pirpir**	**4.07**	**122**	Pn	**Pn**	**10 34 45.9**	**+1.9**
YRD	**Yardimli**	**4.15**	**16**	P	**Pb**	**10 34 51.3**	**-3.0**
YRD				S	**Sn**	**10 35 40.4**	**+6.1**
MZPU	**Pul - Mazandar**	**4.17**	**67**	Pn	**Pn**	**10 34 46.0**	**+0.7**
IKLH	**Kolahrood**	**4.28**	**111**	Pn	**Pn**	**10 34 48.5**	**+1.8**
DAMV	**Damavand**	**4.29**	**79**	Pn	**Pn**	**10 34 48.6**	**+1.6**
NAX	**Nakhchivan**	**4.37**	**347**	P	**Pb**	**10 34 56.4**	**-1.5**
NAX				S	**Sb**	**10 35 47.9**	**-3.3**
GLBA	**Clilabad**	**4.50**	**16**	P	Pb	10 34 56.2	-3.8
GLBA				S	**Sn**	**10 35 49.2**	**+6.7**
KRSH	**Karshahi**	**4.51**	**101**	Pn	**Pn**	**10 34 51.6**	**+1.7**
ISFB	**Sefidab**	**4.52**	**96**	Pn	**Pn**	**10 34 51.2**	**+1.2**
GEVA	**Gevas**	**4.53**	**319**	Pn	**Pn**	**10 34 51.9**	**+1.8**
SBZ	**Shahbuz**	**4.58**	**348**	P	**Pb**	**10 34 59.6**	**-1.8**
SBZ				S	**Sb**	**10 35 53.0**	**-4.2**
MAKU	**Maku**	**4.74**	**340**	Pn	**Pn**	**10 34 54.1**	**+1.1**
IZEF	**Zefreh**	**5.02**	**112**	Pn	**Pn**	**10 34 59.2**	**+2.2**
GURO	**Guroymak-BITLI**	**5.27**	**315**	Pn	**Pn**	**10 35 00.4**	**+0.1**
NASN	**Na'in**	**5.43**	**111**	Pn	**Pn**	**10 35 04.9**	**+2.2**
GNI	**Garni**	**5.47**	**343**	Pg	**Pb**	**10 35 19.0**	**+2.3**
	comp=E,0.7nm,0.3s,baz=68,slow=23,SNR=3.1						
GNI				Lg	Lg	10 36 30.6	
	comp=E,1.0nm,0.3s,baz=33,slow=24,SNR=2.0						
GNI				LR	LR	10 37 30.8	
	comp=E,70nm,19.3s,baz=160,slow=43						
GNI	**Garni**	**5.47**	**343**		**Pn**	**10 35 04.8**	**+1.8**
IRAM	**Ramesheh**	**5.61**	**122**	Pn	**Pn**	**10 35 06.5**	**+1.5**
KLNJ	**Kolanjah**	**5.61**	**133**	Pn	**Pn**	**10 35 06.4**	**+1.3**
YZKH	**Yazd**	**6.97**	**109**	Pn	**Pn**	**10 35 25.4**	**+1.8**
AKH	**Akhalkalaki**	**6.98**	**339**	Pn	**Pn**	**10 35 26.3**	**+2.4**
GAZ	**Gaziantep**	**8.08**	**289**	Pn	**Pn**	**10 35 37.3**	**-1.6**
ONI	**Oni**	**8.09**	**342**	Pn	**Pn**	**10 35 41.3**	**+2.3**
TPRV	**Parvadeh(Tabas**	**8.43**	**100**	Pn	**Pn**	**10 35 45.4**	**+1.8**
TABS	**Tabas**	**8.63**	**96**	Pn	**Pn**	**10 35 48.3**	**+1.8**
TKDS	**Koohdasht(Taba**	**8.64**	**96**	Pn	**Pn**	**10 35 48.7**	**+2.1**
ASF	**Jabal al Asfar**	**8.71**	**254**	Pn	**Pn**	**10 35 47.8**	**+0.4**
	comp=E,1.4nm,0.3s,baz=66,slow=5.1,SNR=7.7						
ASF				Sn	**Sn**	**10 37 24.8**	**-1.5**
	comp=E,0.4nm,0.3s,baz=299,slow=17,SNR=1.8						
ASF				Lg	Lg	10 38 13.9	
	comp=E,0.4nm,0.3s,baz=233,slow=16,SNR=2.0						
	comp=E,3.6nm,0.4s						
KBZ	**Khabaz**	**9.30**	**342**	LR	LR	10 39 41.9	
	comp=E,66nm,19.5s,baz=147,slow=39						
BNN	**Bunyan**	**9.61**	**297**	Pn	**Pn**	**10 36 00.6**	**+0.8**
MMAI	**Mount Meron Ar**	**9.65**	**262**	Pn	**Pn**	**10 36 01.0**	**+0.6**
	comp=E,0.5nm,0.3s,baz=75,slow=17,SNR=3.8						
	comp=E,5.6nm,0.6s						
EIL	**Elat**	**11.30**	**246**	LR	LR	10 41 20.0	
	comp=E,36nm,21.2s,baz=52,slow=41						
RAYN	**Ar Rayn**	**11.41**	**186**		**Pn**	**10 36 23.0**	**-1.5**
BRTR	**Keskin Array B**	**11.52**	**298**	Pn	**Pn**	**10 36 30.4**	**+4.4**
	comp=E,0.1nm,0.3s,baz=121,slow=13,SNR=6.6						
BRTR				LR	LR	10 41 30.3	
	comp=E,127nm,19.7s,baz=122,slow=41						
UOSS	**Minazif**	**12.85**	**138**	Pn	**Pn**	**10 36 42.4**	**-1.7**
WSAR	**Wadi Sarin**	**15.55**	**135**	Pn	**Pn**	**10 37 20.4**	**-0.5**
	comp=E,1.0nm,0.3s,baz=0.8,slow=7.9,SNR=12						
WSAR				Sn	**Sn**	**10 40 07.3**	**-6.5**
	comp=E,0.3nm,0.3s,baz=128,slow=18,SNR=1.5						
	comp=E,5.6nm,0.5s						
ABKAR	**Akbulak array**	**17.29**	**30**	P	**Pn**	**10 37 44.1**	**+1.3**
AKTO	**Aktyubinsk**	**17.53**	**24**	P	**P**	**10 37 47.8**	**+0.8**
	comp=E,0.2nm,0.3s,baz=220,slow=7.9,SNR=2.1						
	comp=E,1.0nm,0.5s						
MLR	**Muntele Rosu**	**19.06**	**310**	P	**P**	**10 38 04.5**	**+0.5**
	comp=E,0.2nm,0.3s,baz=72,slow=19,SNR=1.9						
	comp=E,1.3nm,0.6s						
LIT	**Litokhoron**	**19.94**	**292**	P	**P**	**10 38 13.8**	**+0.1**
LIT				IAmb	IAmb	10 38 52.3	
	comp=Z,41nm,1.4s						
AGG	**Agios Georgios**	**19.95**	**289**	P	**P**	**10 38 14.0**	**+0.2**
KKAR	**Karatay Array**	**20.11**	**59**	P	**P**	**10 38 16.9**	**+1.5**
ITM	**Ithomi**	**20.22**	**284**	P	**P**	**10 38 15.8**	**-0.9**
AK05	**Malin Array Si**	**20.24**	**326**	P	**P**	**10 38 17.2**	**+0.4**
AK05				IAmb	IAmb	10 38 18.3	
	comp=Z,5.1nm,0.9s						
AKASG	**Malin Array Be**	**20.29**	**326**	P	**P**	**10 38 15.2**	**-2.1**
	comp=Z,1.9nm,0.7s,baz=134,slow=12,SNR=8.7						
	comp=Z,1.9nm,0.7s						
BURAR	**Bucovina Array**	**20.51**	**315**	P	**P**	**10 38 21.0**	**+1.1**
BUR08	**Bucovina Ar. S**	**20.53**	**315**	P	**P**	**10 38 20.2**	**+0.1**
BUR08				IAmb	IAmb	10 38 36.9	
	comp=Z,12nm,1.5s						
AAK	**Ala-Archa**	**22.86**	**62**	LR	LR	10 50 33.7	
	comp=Z,29nm,18.4s,baz=290,slow=44						
ARU	**Arti**	**22.96**	**17**	P	**P**	**10 38 47.1**	**+1.1**
	comp=Z,1.4nm,0.4s,baz=178,slow=12,SNR=3.2						
	comp=Z,1.4nm,0.4s						
BVAR	**Borovoye Array**	**24.63**	**35**	P	**P**	**10 39 02.8**	**+0.7**
	comp=Z,2.0nm,0.7s,baz=234,slow=8.7,SNR=4.6						
	comp=Z,2.0nm,0.7s						
KURBB	**Kurchatov Arra**	**27.81**	**46**	P	**P**	**10 39 33.0**	**+2.2**
	comp=Z,0.3nm,0.8s,baz=253,slow=9.2,SNR=2.1						
	comp=Z,0.3nm,0.8s						
GEC2	**GERESS Array S**	**28.05**	**310**	P	**P**	**10 39 32.7**	**-0.4**
GEC2				IAmb	IAmb	10 39 42.8	
	comp=Z,3.3nm,1.1s						
GERES	**GERESS Array B**	**28.05**	**310**	LR	LR	10 53 09.8	
	comp=Z,18nm,20.7s,baz=222,slow=42						
MKAR	**Makanchi Array**	**29.10**	**55**	P	**P**	**10 39 41.7**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=245,slow=9.1,SNR=3.6						
	comp=Z,0.3nm,0.6s						
FINES	**FINESS Array B**	**29.65**	**340**	P	**P**	**10 39 45.1**	**-1.9**
	comp=Z,1.2nm,0.7s,baz=147,slow=8.3,SNR=1.6						
	comp=Z,1.2nm,0.7s						
SENIN	**Lac Senin/Sane**	**31.77**	**303**	P	**P**	**10 40 05.0**	**-1.2**
ZALV	**Zalesovo Beam**	**32.62**	**42**	P	**P**	**10 40 14.0**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=265,slow=10.0,SNR=1.7						
	comp=Z,0.4nm,0.3s						
NOA	**NORSAR Array B**	**34.61**	**330**	LR	LR	10 55 37.0	
	comp=Z,24nm,19.0s,baz=265,slow=38						
ESDC	**Sonseca Array**	**40.22**	**292**	P	**P**	**10 41 16.9**	**-1.6**
	comp=Z,0.5nm,0.7s,baz=64,slow=8.9,SNR=4.6						
	comp=Z,0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**46.07**	**253**	P	**P**	**10 42 04.9**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=42,slow=7.7,SNR=4.1						
	comp=Z,0.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**48.85**	**96**	P	**P**	**10 42 29.4**	**+1.7**
	comp=Z,0.5nm,0.3s,baz=304,slow=8.6,SNR=1.3						
CMAR				LR	LR	11 05 29.5	
	comp=Z,14nm,19.7s,baz=330,slow=39						
	comp=Z,0.5nm,0.3s						

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*WEL **11** 10:49:14.9±0.4, 39°S±4°×17°5E±°, h19^{km}±5^{km}, M4.0/25, ML4.3/25, MLv4.0/25, Error ellipse: s-maj=0.0km s-min=0.0km az=177.4, confirmed*

*NOU **11** 10:49:15.6, 39°.30S×174°.76E, h32^{km}, MLv4.1/13, North Island, New Zealand*

ISC 11 10:49:15.6±0.9**, 39°.34S**±0°.02×**174°.79E**±0°.02**, h31**^{km}±7^{km}**, n141, σ0^{s}94**/148**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRZ	**Vera Road**	**0.22**	**353**	P	**Pb**	**10 49 21.8**	**-0.3**
VRZ				S	**Sb**	**10 49 27.1**	**+0.5**
LREZ	**Lake Rotokare**	**0.32**	**248**	P	**Pb**	**10 49 23.2**	**-0.3**
LREZ				S	**Sn**	**10 49 29.9**	**+0.1**
PKVZ	**Pokaka**	**0.43**	**84**	P	**Pb**	**10 49 24.3**	**-0.8**
WAZ	**Wanganui**	**0.44**	**160**	P	**Pb**	**10 49 24.6**	**-0.6**
WAZ				S	**Sb**	**10 49 31.9**	**+0.1**
DREZ	**Durham Road**	**0.48**	**288**	P	**Pn**	**10 49 25.9**	**-0.5**
DREZ				S	**Sn**	**10 49 34.5**	**+0.8**
MTVZ	**Mangateitei**	**0.53**	**95**	P	**Pb**	**10 49 25.7**	**-0.9**
NEZ	**North Egmont**	**0.54**	**277**	P	**Pb**	**10 49 26.8**	**-0.1**
TWVZ	**Taurewa**	**0.57**	**62**	P	**Pb**	**10 49 26.3**	**-0.9**
TRVZ	**Turoa**	**0.59**	**86**	P	**Pb**	**10 49 26.8**	**-0.9**
FWVZ	**Far West T-bar**	**0.60**	**82**	P	**Pb**	**10 49 27.1**	**-0.7**
FWVZ				S	**Sb**	**10 49 35.7**	**-0.5**
DRZ	**Dome Shelter**	**0.60**	**84**	P	**Pb**	**10 49 27.7**	**-0.3**
KHEZ	**Kahui Hut**	**0.60**	**274**	P	**Pn**	**10 49 28.1**	**0.0**
KHEZ	**Kahui Hut**	**0.60**	**274**	P	**Pn**	**10 49 28.2**	**+0.1**
WHVZ	**Whangaehu Hut**	**0.62**	**85**	P	**Pb**	**10 49 27.5**	**-0.7**
WHVZ				S	**Sb**	**10 49 36.4**	**-0.5**
WNVZ	**Wahianoa**	**0.63**	**89**	P	**Pb**	**10 49 27.5**	**-0.7**
PKE	**Pukeiti**	**0.64**	**283**	P	**Pn**	**10 49 28.4**	**-0.1**
NGZ	**Ngauruhoe**	**0.65**	**76**	P	**Pb**	**10 49 27.9**	**-0.7**
WTVZ	**West Tongariro**	**0.66**	**70**	P	**Pb**	**10 49 28.0**	**-0.8**
WTVZ				S	**Sb**	**10 49 37.7**	**0.0**
NNVZ	**North Ngauruho**	**0.67**	**72**	P	**Pb**	**10 49 28.2**	**-0.8**
TUVZ	**Tukino**	**0.67**	**84**	P	**Pb**	**10 49 28.6**	**-0.4**
SNVZ	**South Ngauruho**	**0.68**	**77**	P	**Pb**	**10 49 28.4**	**-0.7**
OTVZ	**Oturere**	**0.70**	**76**	P	**Pb**	**10 49 28.8**	**-0.7**
KRVZ	**Karewarewa**	**0.70**	**70**	P	**Pb**	**10 49 28.7**	**-0.8**
NMEZ	**Namu Road**	**0.71**	**264**	P	**Pb**	**10 49 29.4**	**-0.2**
NBEZ	**Newall Road No**	**0.72**	**275**	P	**Pn**	**10 49 29.7**	**+0.1**
NTVZ	**North Tongarir**	**0.73**	**71**	P	**Pb**	**10 49 29.1**	**-0.8**
ETVZ	**East Tongariro**	**0.74**	**74**	P	**Pb**	**10 49 29.4**	**-0.7**
TMVZ	**Te Maari**	**0.74**	**73**	P	**Pb**	**10 49 29.4**	**-0.8**
MOVZ	**Moawhango**	**0.75**	**95**	P	**Pb**	**10 49 29.3**	**-0.9**
KATZ	**Kakaramea**	**0.79**	**63**	P	**Pb**	**10 49 30.2**	**-0.8**
HIZ	**Hauiti**	**0.83**	**4**	P	**Pb**	**10 49 30.7**	**-0.8**
HIZ	**Hauiti**	**0.83**	**4**	P	**Pb**	**10 49 30.7**	**-0.8**
RATZ	**Rangitukua**	**0.90**	**59**	P	**Pb**	**10 49 31.8**	**-0.9**
RITZ	**Rihia Road**	**0.91**	**67**	P	**Pn**	**10 49 32.3**	**+0.1**
WATZ	**Wairara**	**0.97**	**50**	P	**Pn**	**10 49 32.9**	**-0.2**
BHHZ	**Black Hill Sta**	**1.00**	**99**	P	**Pn**	**10 49 32.9**	**-0.6**
WHTZ	**Whakaora**	**1.13**	**54**	P	**Pb**	**10 49 37.0**	**+0.3**
TSZ	**Takapari Road**	**1.15**	**129**	P	**Pn**	**10 49 35.6**	**-0.1**
TLZ	**Tolley Road**	**1.17**	**30**	P	**Pn**	**10 49 35.3**	**-0.4**
KUTZ	**Kaahu Road**	**1.17**	**44**	P	**Pn**	**10 49 35.8**	**0.0**
PNHZ	**Pukenui**	**1.23**	**118**	P	**Pn**	**10 49 36.5**	**-0.1**
KWHZ	**Kaweka Forest**	**1.27**	**94**	P	**Pn**	**10 49 37.7**	**+0.5**
POWZ	**Post Office Ro**	**1.29**	**145**	P	**Pn**	**10 49 38.2**	**+0.7**
BKZ	**Black Stump Fm**	**1.33**	**83**	P	**Pn**	**10 49 38.2**	**+0.1**
BKZ	**Black Stump Fm**	**1.33**	**83**	P	**Pn**	**10 49 38.1**	**0.0**
WPRZ	**Whakapapatarin**	**1.35**	**53**	P	**Pn**	**10 49 38.1**	**-0.2**
MRHZ	**Matea Rd**	**1.36**	**69**	P	**Pn**	**10 49 38.5**	**0.0**
GRRZ	**Galatos Road**	**1.43**	**47**	P	**Pn**	**10 49 39.3**	**-0.1**
DVHZ	**Dannevirke**	**1.43**	**133**	P	**Pn**	**10 49 40.4**	**+1.0**
MRZ	**Mangatainoka R**	**1.45**	**156**	P	**Pn**	**10 49 40.3**	**+0.6**
WPHZ	**Waipukurau**	**1.46**	**120**	P	**Pb**	**10 49 41.4**	**-0.8**
MCHZ	**McNeill Hill**	**1.48**	**95**	P	**Pb**	**10 49 42.5**	**+0.1**
HRRZ	**Handcock Road**	**1.50**	**51**	P	**Pb**	**10 49 42.7**	**-0.2**
OGWZ	**Otaki Gorge**	**1.50**	**169**	P	**Pn**	**10 49 41.1**	**+0.7**
PRRZ	**Plateau Road**	**1.50**	**57**	P	**Pn**	**10 49 40.4**	**0.0**
PRWZ	**Pori Road**	**1.52**	**144**	P	**Pb**	**10 49 42.1**	**-1.0**
KIW	**Kapiti Island**	**1.52**	**177**	P	**Pn**	**10 49 41.0**	**+0.3**
HSRZ	**Hossack Road**	**1.53**	**48**	P	**Pb**	**10 49 42.9**	**-0.5**
NMHZ	**Naumai**	**1.58**	**82**	P	**Pb**	**10 49 43.2**	**-1.1**
UTU	**Utuhina**	**1.60**	**44**	P	**Pb**	**10 49 43.7**	**-0.8**
DUWZ	**D'Urville Isla**	**1.61**	**204**	P	**Pn**	**10 49 42.1**	**+0.2**
HLRZ	**Highlands Stat**	**1.63**	**49**	P	**Pb**	**10 49 45.4**	**+0.3**
NGRZ	**Ngongotaha**	**1.65**	**42**	P	**Pn**	**10 49 42.4**	**0.0**
HOWZ	**Holdsworth Sta**	**1.65**	**161**	P	**Pn**	**10 49 43.5**	**+1.0**
TIWZ	**Tintock**	**1.66**	**150**	P	**Pb**	**10 49 44.2**	**-1.4**
MTHZ	**Maungataniwha**	**1.67**	**74**	P	**Pn**	**10 49 43.1**	**+0.4**
KAHZ	**Kahuranaki**	**1.68**	**106**	P	**Pb**	**10 49 45.2**	**-0.7**
PRHZ	**Porangahau**	**1.70**	**124**	P	**Pb**	**10 49 44.8**	**-1.4**
TOZ	**Tahuroa Road**	**1.70**	**19**	P	**Pn**	**10 49 43.0**	**-0.1**
ARHZ	**Aropaoanui**	**1.71**	**88**	P	**Pb**	**10 49 46.2**	**-0.2**
KARZ	**Kaharoa**	**1.74**	**41**	P	**Pb**	**10 49 46.8**	**-0.1**
PXZ	**Pawanui**	**1.74**	**114**	P	**Pb**	**10 49 46.1**	**-0.8**
KMRZ	**Kaimai**	**1.74**	**32**	P	**Pn**	**10 49 43.7**	**0.0**
OMRZ	**Omania**	**1.75**	**46**	P	**Pb**	**10 49 47.5**	**+0.5**
BFZ	**Birch Farm**	**1.75**	**141**	P	**Pn**	**10 49 44.7**	**+1.0**
BFZ	**Birch Farm**	**1.75**	**141**	P	**Pn**	**10 49 44.5**	**+0.8**
CAW	**Cannon Point**	**1.78**	**173**	P	**Pn**	**10 49 45.0**	**+0.8**
CKHZ	**Cape Kidnapper**	**1.80**	**101**	P	**Pb**	**10 49 49.3**	**+1.4**
RAHZ	**Arahi**	**1.83**	**77**	P	**Pb**	**10 49 47.3**	**-1.2**
MTW	**Mount Morrison**	**1.90**	**164**	P	**Pn**	**10 49 47.3**	**+1.5**
CPWZ	**Castlepoint**	**1.91**	**146**	P	**Pb**	**10 49 50.1**	**+0.4**
TCW	**Tory Channel**	**1.91**	**192**	P	**Pn**	**10 49 46.2**	**+0.2**
WHHZ	**Waihua**	**1.92**	**83**	P	**Pb**	**10 49 48.3**	**-1.6**
WEL	**Wellington**	**1.94**	**181**	P	**Pn**	**10 49 47.7**	**+1.3**
TMWZ	**Te Maipa**	**1.96**	**155**	P	**Pn**	**10 49 47.6**	**+1.0**
SNZO	**South Karori**	**1.97**	**182**	P	**Pn**	**10 49 48.0**	**+1.2**
OPRZ	**Ohinepanea**	**2.03**	**43**	P	**Pn**	**10 49 47.7**	**0.0**
SNGZ	**Shannon Statio**	**2.06**	**75**	P	**Pb**	**10 49 50.2**	**-2.2**
URZ	**Urewera**	**2.11**	**60**	P	**Pn**	**10 49 49.2**	**+0.5**
URZ	**Urewera**	**2.11**	**60**	P	**Pn**	**10 49 49.0**	**+0.3**
NNZ	**Nelson**	**2.16**	**209**	P	**Pn**	**10 49 50.5**	**+1.0**
TRWZ	**Traveller**	**2.17**	**162**	P	**Pb**	**10 49 52.4**	**-1.7**
TUWZ	**Tuamarina**	**2.19**	**197**	P	**Pn**	**10 49 50.1**	**+0.4**
TKNZ	**Takaka Hill**	**2.20**	**219**	P	**Pn**	**10 49 50.8**	**+0.8**
PLWZ	**Palliser**	**2.25**	**171**	P	**Pn**	**10 49 51.8**	**+1.1**

KNZ	Kokohu	2.26	83	P	Pn	10 49 52.7	+1.9
AWAZ	Awhitu Peninsu	2.27	357	P	Pn	10 49 51.4	+0.4
QRZ	Quartz Range	2.28	229	P	Pn	10 49 51.0	-0.1
QRZ	Quartz Range	2.28	229	P	Pn	10 49 51.2	0.0
MWZ	Matawai	2.36	66	P	Pn	10 49 54.2	+2.0
ETAZ	East Tamaki Re	2.38	3	P	Pn	10 49 53.1	+0.6
RIGZ	Rimuhau	2.40	76	P	Pn	10 49 54.9	+2.2
WTAZ	Waiatarua	2.41	356	P	Pn	10 49 53.8	+0.9
CMWZ	Cape Campbell	2.45	190	P	Pb	10 49 57.7	-1.2
EPAZ	Eden Park BICE	2.46	359	P	Pn	10 49 54.9	+1.4
BSWZ	Blackbirch Sta	2.47	196	P	Pn	10 49 55.4	+1.6
TKGZ	Te Karaka	2.55	70	P	Pn	10 49 57.0	+2.2
WIAZ	Waiheke Island	2.56	6	P	Pn	10 49 55.7	+0.8
MBAZ	Motutapu North	2.57	2	P	Pn	10 49 55.7	+0.7
RVAZ	Riverhead Bore	2.57	356	P	Pn	10 49 56.0	+1.0
MRNZ	Matariki Terra	2.58	216	P	Pn	10 49 55.9	+0.7
RUGZ	Raukumara Rang	2.64	60	P	Pn	10 49 57.2	+1.0
KUZ	Kuaotunu	2.69	16	P	Pn	10 49 56.3	-0.4
KUZ	Kuaotunu	2.69	16	P	Pn	10 49 56.3	-0.4
TWGZ	Tauwhareparae	2.75	66	P	Pn	10 49 60.0	+2.4
THZ	Tophouse	2.81	210	P	Pn	10 49 59.7	+1.2
HAZ	Te Kaha	2.83	57	P	Pn	10 49 59.3	+0.7
PKGZ	Pakihiroa	2.95	62	P	Pn	10 50 03.2	+2.8
PUZ	Puketiti	2.99	66	P	Pn	10 50 02.3	+1.4
KHZ	Kahutara	3.22	197	P	Pn	10 50 04.7	+0.8
KHZ	Kahutara	3.22	197	P	Pn	10 50 04.7	+0.8
WMGZ	Waiomatatini S	3.22	63	P	Pn	10 50 05.4	+1.5
DSZ	Denniston Nort	3.31	222	P	Pn	10 50 05.8	+0.6
WCZ	Waipu Caves	3.41	354	P	Pn	10 50 06.8	+0.2
GVZ	Greta Valley S	3.86	200	P	Pn	10 50 12.9	+0.1
LTZ	Lake Taylor	3.93	208	P	Pn	10 50 14.2	+0.4
INZ	Inchbonnie	4.22	216	P	Pn	10 50 18.4	+0.6
OXZ	Oxford	4.49	207	P	Pn	10 50 20.2	-1.2
RACZ	Rakaia	4.81	204	P	Pn	10 50 24.5	-1.4
WVZ	Waitaha Valley	4.82	218	P	Pn	10 50 26.6	+0.6
MHCZ	Mount Hutt	4.84	209	P	Pn	10 50 26.7	+0.4
RPZ	Rata Peaks	5.19	211	P	Pn	10 50 31.7	+0.6
RPZ	Rata Peaks	5.19	211	P	Pn	10 50 32.4	+1.3
GCSZ	Gaunt Creek Bo	5.20	219	P	Pn	10 50 31.3	+0.1
TMZ	Timaru	5.78	208	P	Pn	10 50 37.8	-1.3
ODZ	Otahua Downs	6.48	207	P	Pn	10 50 47.8	-0.9
ODZ	Otahua Downs	6.48	207	P	Pn	10 50 48.1	-0.6
JCZ	Jackson Bay	6.52	222	P	Pn	10 50 49.7	+0.3
JCZ	Jackson Bay	6.52	222	P	Pn	10 50 49.4	-0.1
WKZ	Wanaka	6.96	216	P	Pn	10 50 59.0	+3.6
CTZ	Chatham Island	7.80	127	P	Pn	10 51 06.3	-0.5

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*IDC **11** 11:01:21.0±1.0, 35.°04N×46.°76E, h0^{km}, mb3.6/13, mbtmp3.7/18, ML3.8/5, MS2.8/8, Error ellipse: s-maj=19.4km s-min=14.9km az=173.0*

*TEH **11** 11:01:22.4, 34.°98N×46.°85E, h8^{km}±24^{km}, ML3.9*

*ISN **11** 11:01:22.6±0.8, 34.°98N×46.°89E, h18^{km}±4^{km}, ML3.8*

*AZER **11** 11:01:27.8±1.8, 34.°50N×47.°03E, h10^{km}, Error ellipse: s-maj=17.9km s-min=13.2km az=108.0*

ISC 11 11:01:23.1±0.9, **34.°97N**±0.°02×**46.°86E**±0.°03, **h9**^{km}±6^{km}, **n87**, σ**1.^{s}86**/93, **mb3.6**/12, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILIN	Lien	0.10	123	Pg	Pg	11 01 24.6	-1.2
ILIN				Sg	Sg	11 01 27.6	-0.2
SNGE	Sanandaj	0.42	73	Pg	Pg	11 01 29.7	-1.7
IDHR	Dehrash	0.47	235	Pg	Pg	11 01 31.6	-0.8
KER	Kermanshah	0.63	159	Pg	Pg	11 01 34.3	-1.1
IGHG	Ghaleghazi	0.69	200	Pg	Pg	11 01 36.3	-0.1
KCHF	Cheshme Sefid,	0.71	168	Pg	Pg	11 01 35.9	-1.0
KCHF				Sg	Sg	11 01 48.3	+2.0
IKOM	Komasi	0.96	146	Pg	Pg	11 01 41.0	-0.6
IBZA	Bozab	0.97	121	Pg	Pg	11 01 40.3	-1.5
ILBA	Ilam Banvizeh	1.45	202	Pg	Pn	11 01 50.3	+0.7
IDOB	Doab	1.61	137	Pg	Pn	11 01 53.0	+1.1
HSAM	Samen	1.63	117	Pg	Pn	11 01 53.1	+0.9
IKFM	Kafar-mosalman	1.66	150	Pg	Pb	11 01 55.2	+1.3
HAGD	Aghdareh	1.88	94	Pn	Pn	11 01 56.0	+0.3
IBDR	Badra	2.01	203	*e*Pg	Pn	11 01 58.0	+0.8
IBDR				*e*Sg	Sn	11 02 25.0	+2.5
IBDR				AML	AML	11 02 36.9	
	comp=N,895nm,0.6s						
IBDR				AML	AML	11 02 37.4	
	comp=E,987nm,0.9s						
MAHB	Mahabad	2.02	333	Pn	Pn	11 01 58.6	+1.1
IKRK	Kirkuk	2.10	282	*e*Pn	Pn	11 01 59.0	+0.4
IKRK				*e*Sn	Sn	11 02 26.0	+1.1
IKRK				AML	AML	11 02 35.1	
	comp=N,837nm,0.7s						
IKRK				AML	AML	11 02 37.1	
	comp=E,866nm,0.8s						
ZNJK	Zanjan	2.25	41	Pn	Pn	11 02 01.7	+0.9
IHSH	Hashtrud	2.35	8	Pn	Pn	11 02 03.5	+1.3
IRAZ	Razeghan	2.55	79	Pn	Pn	11 02 07.1	+2.2
ASAO	Ashtian	2.64	98	Pn	Pn	11 02 09.4	+3.2
BHD	Baghdad	2.67	231	*e*Pn	Pn	11 02 07.0	+0.8
BHD				*e*Sn	Sn	11 02 39.0	+0.3
BHD				AML	AML	11 02 51.3	
	comp=E,526nm,0.3s						
IAZR	Azarshahr	2.79	346	Pn	Pn	11 02 09.6	+1.4
KHMZ	Khomeyn	2.85	115	Pn	Pn	11 02 09.8	+0.9
ISRB	Sarab	2.92	13	Pn	Pn	11 02 11.1	+1.2
JIR1	Jirandeh	2.95	53	Pn	Pn	11 02 12.3	+2.0
IGZV	Ghazvin	3.08	62	Pn	Pn	11 02 14.8	+2.6
RAFI	Al-Rafai	3.30	191	*e*Pn	Pn	11 02 16.0	+1.0
RAFI				*e*Sn	Sn	11 02 54.0	-0.3
RAFI				AML	AML	11 02 55.4	
	comp=E,337nm,0.4s						
RAFI				AML	AML	11 03 05.0	
	comp=N,286nm,0.8s						
IHRS	Heris	3.34	2	Pn	Pn	11 02 17.3	+1.5
QALM	Alamut, Qazvin	3.41	64	Pn	Pn	11 02 18.5	+1.7
THKV	Tehran--Karaj	3.42	73	Pn	Pn	11 02 17.0	+0.3
IQOM	Qom	3.46	91	Pn	Pn	11 02 19.3	+1.8
CHTH	Charan	3.61	74	Pn	Pn	11 02 19.3	-0.2
GHVR	GHOM	3.69	96	Pn	Pn	11 02 19.8	-0.6
IMRD	Marand	3.84	346	Pn	Pn	11 02 24.5	+1.9
LRK	Lerik	3.85	18	P	Pb	11 02 33.4	+2.1
	SNR=5.4						
LRK				S	Sb	11 03 22.4	+4.3
AMIS	Naft Sefid	3.88	148	Pn	Pn	11 02 24.5	+1.5
ASTR	Astara	3.90	23	P	Pb	11 02 33.0	+1.0
	SNR=7.0						
ASTR				S	Sg	11 03 25.8	-2.6
QAMS	Qamsar	3.95	107	Pn	Pn	11 02 26.1	+1.9
IVRN	Varamin	4.00	88	Pn	Pn	11 02 26.3	+1.7
ORD	Ordubad	4.01	350	P	Pb	11 02 36.6	+2.7
	SNR=8.6						
ORD				S	Sg	11 03 30.4	-1.4
IPIR	Pirpir	4.06	123	Pn	Pn	11 02 27.4	+1.7
YRD	Yardimli	4.09	15	P	Pb	11 02 35.9	+0.6
YRD				S	Sb	11 03 29.8	+4.8
MZPU	Pul - Mazandar	4.10	68	Pn	Pn	11 02 27.8	+1.5
DAMV	Damavand	4.23	80	Pn	Pn	11 02 28.3	+0.3
IKLH	Kolahrood	4.25	112	Pn	Pn	11 02 30.4	+2.2
SHK1	Shahrekord	4.27	127	Pn	Pn	11 02 30.5	+2.0
NAX	Nakhchivan	4.33	346	P	Pb	11 02 40.9	+1.4
NAX				S	Sb	11 03 36.8	+4.9
KRSH	Karshahi	4.47	101	Pn	Pn	11 02 33.5	+2.2
ISFB	Sefidab	4.48	96	Pn	Pn	11 02 33.0	+1.7
SBZ	Shahbuz	4.54	347	P	Pb	11 02 44.1	+1.1
	SNR=9.9						
SBZ				S	Sb	11 03 42.7	+4.9
MAKU	Maku	4.71	339	Pn	Pn	11 02 36.8	+2.3
IBRJ	Brojen	4.79	128	Pn	Pn	11 02 37.5	+1.9
IFIR	Firoozkooh	4.87	80	Pn	Pn	11 02 38.3	+1.5
IZEF	Zefreh	5.00	113	Pn	Pn	11 02 40.2	+1.6
ISHM	Shahmirzad	5.32	79	Pn	Pn	11 02 45.2	+2.2
NASN	Na'in	5.40	112	Pn	Pn	11 02 44.3	+0.1
GNI	Garni	5.43	343	Pg	Pb	11 02 57.8	-0.5
	comp=N,1.5nm,0.3s,baz=64,slow=23,SNR=2.0						
GNI				Lg	Lg	11 04 12.0	
	comp=N,0.7nm,0.3s,baz=44,slow=23,SNR=1.4						
IRAM	Ramesheh	5.59	123	Pn	Pn	11 02 47.8	+1.1
KLNJ	Kolanjah	5.61	134	Pn	Pn	11 02 48.7	+1.7
ANAR	Anarak	5.97	105	Pn	Pn	11 02 54.4	+2.5
YZKH	Yazd	6.94	110	Pn	Pn	11 03 07.7	+2.5
TPRV	Parvadeh(Tabas	8.39	101	Pn	Pn	11 03 26.4	+1.4
TABS	Tabas	8.59	96	Pn	Pn	11 03 30.0	+2.2
TKDS	Koohdasht(Taba	8.60	96	Pn	Pn	11 03 29.5	+1.6
ASF	Jabal al Asfar	8.77	254	Pn	Pn	11 03 30.1	-0.1
	comp=N,1.6nm,0.3s,baz=59,slow=5.2,SNR=8.4						
ASF				Lg	Lg	11 05 56.3	
	comp=N,0.5nm,0.3s,baz=234,slow=15,SNR=3.7						
	comp=N,4.9nm,0.5s						
KBZ	Khabaz	9.26	342	LR	LR	11 06 53.3	
	comp=N,31nm,19.9s,baz=80,slow=36						
GEYT	Alibeck	9.54	69	LR	LR	11 08 17.3	
	comp=N,16nm,20.6s,baz=312,slow=43						
MMAI	Mount Meron Ar	9.71	262	Pn	Pn	11 03 43.0	-0.1
	comp=N,1.9nm,0.3s,baz=80,slow=16,SNR=12						
	comp=N,1.6nm,0.3s						
EIL	Elat	11.37	246	LR	LR	11 08 07.6	
	comp=N,25nm,20.2s,baz=108,slow=36						
BRTR	Keskin Array B	11.54	298	Pn	Pn	11 04 10.7	+2.5
	comp=N,0.1nm,0.3s,baz=103,slow=10,SNR=2.2						
BRTR				LR	LR	11 09 11.8	
	comp=N,99nm,18.6s,baz=134,slow=41						
	comp=N,1.0nm,0.7s						
WSAR	Wadi Sarin	15.56	136	Pn	Pn	11 05 01.4	-1.4
	comp=N,1.1nm,0.3s,baz=359,slow=7.7,SNR=12						
WSAR				Sn	Sn	11 07 45.1	-10
	comp=N,0.2nm,0.3s,baz=285,slow=20,SNR=2.6						
WSAR				LR	LR	11 12 54.4	
	comp=N,47nm,19.2s,baz=304,slow=44						
	comp=N,5.9nm,0.5s						
BELG	Belogornoye	17.42	2	LR	LR	11 13 31.3	
	comp=N,52nm,18.7s,baz=173,slow=42						
AKTO	Aktyubinsk	17.46	24	P	Pn	11 05 27.1	+0.4
	comp=N,0.2nm,0.3s,baz=344,slow=19,SNR=2.1						
	comp=N,0.9nm,0.5s						
AKASG	Malin Array Be	20.27	326	P	P	11 05 57.0	-1.8
	comp=N,0.6nm,0.4s,baz=133,slow=12,SNR=7.6						
	comp=N,0.6nm,0.4s						
BVAR	Borovoye Array	24.56	35	P	P	11 06 44.3	+1.2
	comp=N,2.1nm,0.6s,baz=226,slow=7.7,SNR=10						
	comp=N,2.1nm,0.6s						
GERES	GERESS Array B	28.05	310	P	P	11 07 12.5	-2.2
	comp=N,0.3nm,0.5s,baz=115,slow=9.2,SNR=1.7						
	comp=N,0.3nm,0.5s						
MKAR	Makanchi Array	29.03	55	P	P	11 07 22.3	-1.2
	comp=N,0.1nm,0.5s,baz=253,slow=9.6,SNR=1.6						
	comp=N,0.1nm,0.5s						
FINES	FINESS Array B	29.62	340	P	P	11 07 26.9	-1.5
	comp=N,1.4nm,0.9s,baz=146,slow=9.7,SNR=5.5						
	comp=N,1.4nm,0.9s						
DAVOX	Davos/Dischmat	30.07	304	P	P	11 07 31.1	-1.8
	comp=N,1.2nm,0.5s,baz=175,slow=18,SNR=2.8						
	comp=N,1.2nm,0.5s						
ZALV	Zalesovo Beam	32.54	43	P	P	11 07 52.1	-2.2
	comp=N,0.2nm,0.3s,baz=243,slow=6.3,SNR=1.7						
	comp=N,0.2nm,0.3s						
HFS	Hagfors	33.06	330	P	P	11 07 57.0	-1.7
	comp=N,1.2nm,0.5s,baz=123,slow=11,SNR=14						
	comp=N,1.2nm,0.5s						
NOA	NORSAR Array B	34.59	330	P	P	11 08 09.6	-2.4
	comp=N,0.2nm,0.6s,baz=125,slow=7.0,SNR=1.5						
NOA				LR	LR	11 23 06.1	
	comp=N,18nm,19.9s,baz=260,slow=38						
	comp=N,0.2nm,0.6s						
EKA	Eskdalemuir Ar	39.66	317	P	P	11 08 51.7	-3.4
	comp=N,0.3nm,0.5s,baz=107,slow=9.0,SNR=3.7						
	comp=N,0.3nm,0.5s						
ESDC	Sonseca Array	40.25	292	P	P	11 08 58.5	-1.8
	comp=N,0.3nm,0.5s,baz=73,slow=8.6,SNR=2.5						
	comp=N,0.3nm,0.5s						
TORD	Torodi Ar. Bea	46.13	253	P	P	11 09 46.7	-1.3
	comp=N,0.6nm,0.6s,baz=40,slow=6.8,SNR=4.7						
	comp=N,0.6nm,0.6s						
CMAR	Chiang Mai Arr	48.81	96	P	P	11 10 09.8	+0.8
	comp=N,0.5nm,0.3s,baz=284,slow=8.3,SNR=1.1						
	comp=N,0.5nm,0.3s						
BORG	Borgarnes	49.73	329	LR	LR	11 34 31.0	
	comp=N,46nm,21.0s,baz=201,slow=40						

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*WEL **11** 11:02:39.0±0.4, 39°S±4°×17°5E±°, h19^{km}±4^{km}, M3.4/24, ML3.7/26, MLv3.4/24, Error ellipse: s-maj=0.0km s-min=0.0km az=179.6, confirmed*

*NOU **11** 11:02:39.6, 39.°28S×174.°82E, h22^{km}, MLv3.5/8, North Island, New Zealand*

ISC 11 11:02:39.9±0.9, **39.°33S**±0.°02×**174.°81E**±0.°02, **h30**^{km}±7^{km}, **n98**, σ**0.^{s}82**/104, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRZ	Vera Road	0.21	348	P	Pb	11 02 46.0	-0.2
VRZ				S	Sb	11 02 51.3	+0.7
LREZ	Lake Rotokare	0.34	248	P	Pb	11 02 47.3	-0.7
LREZ				S	Sn	11 02 54.0	-0.7
PKVZ	Pokaka	0.41	84	P	Pb	11 02 48.5	-0.6
PKVZ				S	Sb	11 02 55.3	0.0
WAZ	Wanganui	0.44	163	P	Pb	11 02 48.8	-0.7
WAZ				S	Sb	11 02 56.2	+0.2
DREZ	Durham Road	0.50	286	P	Pb	11 02 50.0	-0.3
DREZ				S	Sn	11 02 58.5	0.0
MTVZ	Mangateitei	0.51	96	P	Pb	11 02 49.9	-0.7
TWVZ	Taurewa	0.55	62	P	Pb	11 02 50.5	-0.7
NEZ	North Egmont	0.56	276	P	Pb	11 02 50.9	-0.4
TRVZ	Turoa	0.57	87	P	Pb	11 02 51.0	-0.6
FWVZ	Far West T-bar	0.58	83	P	Pb	11 02 51.2	-0.6
FWVZ				S	Sb	11 02 60.0	+0.1
DRZ	Dome Shelter	0.58	85	P	Pb	11 02 51.7	-0.2
WHVZ	Whangaehu Hut	0.60	86	P	Pb	11 02 51.7	-0.4
WNVZ	Wahianoa	0.61	90	P	Pb	11 02 51.6	-0.6
KHEZ	Kahui Hut	0.62	273	P	Pn	11 02 52.4	-0.3
KHEZ	Kahui Hut	0.62	273	P	Pb	11 02 52.3	-0.1
NGZ	Ngauruhoe	0.63	76	P	Pb	11 02 52.1	-0.4
WTVZ	West Tongariro	0.64	71	P	Pb	11 02 52.3	-0.4
NNVZ	North Ngauruho	0.65	72	P	Pb	11 02 52.4	-0.5
TUVZ	Tukino	0.66	85	P	Pb	11 02 52.7	-0.2
PKE	Pukeiti	0.66	282	P	Pb	11 02 52.5	-0.5
SNVZ	South Ngauruho	0.66	78	P	Pb	11 02 52.6	-0.4
OTVZ	Oturere	0.68	76	P	Pb	11 02 53.0	-0.4
KRVZ	Karewarewa	0.69	70	P	Pb	11 02 52.9	-0.6
NTVZ	North Tongarir	0.71	71	P	Pb	11 02 53.3	-0.5
ETVZ	East Tongariro	0.72	75	P	Pb	11 02 53.7	-0.4
TMVZ	Te Maari	0.72	73	P	Pb	11 02 53.6	-0.5
NMEZ	Namu Road	0.73	263	P	Pb	11 02 53.5	-0.6
MOVZ	Moawhango	0.73	96	P	Pb	11 02 53.4	-0.7
NBEZ	Newall Road No	0.74	275	P	Pb	11 02 53.8	-0.5
KATZ	Kakaramea	0.77	63	P	Pb	11 02 54.4	-0.5
HIZ	Hauiti	0.82	2	P	Pb	11 02 55.0	-0.6
HIZ	Hauiti	0.82	2	P	Pb	11 02 54.9	-0.6
RATZ	Rangitukua	0.88	58	P	Pn	11 02 56.0	-0.2
RITZ	Rihia Road	0.89	67	P	Pn	11 02 56.5	+0.2
WATZ	Wairara	0.95	49	P	Pn	11 02 57.1	-0.1
BHHZ	Black Hill Sta	0.98	100	P	Pb	11 02 57.1	-1.3
TSZ	Takapari Road	1.15	130	P	Pn	11 02 59.7	-0.2
TLZ	Tolley Road	1.15	30	P	Pn	11 02 59.5	-0.4
KUTZ	Kaahu Road	1.15	43	P	Pn	11 03 00.0	+0.1
PNHZ	Pukenui	1.22	119	P	Pn	11 03 00.7	-0.2
KWHZ	Kaweka Forest	1.25	95	P	Pb	11 03 02.0	-0.9
POWZ	Post Office Ro	1.29	146	P	Pn	11 03 02.4	+0.6
BKZ	Black Stump Fm	1.31	83	P	Pn	11 03 02.5	+0.3
BKZ	Black Stump Fm	1.31	83	P	Pn	11 03 02.3	+0.1
WPRZ	Whakapapatarin	1.33	53	P	Pn	11 03 02.1	-0.2
DVHZ	Dannevirke	1.42	133	P	Pb	11 03 04.8	-0.9
MRZ	Mangatainoka R	1.45	156	P	Pn	11 03 04.5	+0.4
WPHZ	Waipukurau	1.45	121	P	Pb	11 03 06.1	-0.2
MCHZ	McNeill Hill	1.46	95	P	Pb	11 03 07.0	+0.5
OGWZ	Otaki Gorge	1.51	170	P	Pn	11 03 05.2	+0.4
PRWZ	Pori Road	1.51	144	P	Pb	11 03 06.4	-0.8
KIW	Kapiti Island	1.53	177	P	Pn	11 03 05.1	0.0
NMHZ	Naumai	1.56	82	P	Pb	11 03 09.0	+0.7
UTU	Utuhina	1.58	44	P	Pb	11 03 08.1	-0.3
DUWZ	D'Urville Isla	1.62	205	P	Pn	11 03 06.3	-0.1
MTHZ	Maungataniwha	1.65	74	P	Pb	11 03 08.1	-1.5
HOWZ	Holdsworth Sta	1.65	161	P	Pn	11 03 08.0	+1.2
KAHZ	Kahuranaki	1.66	107	P	Pb	11 03 09.2	-0.6
TIWZ	Tintock	1.66	151	P	Pn	11 03 08.3	+1.3
PRHZ	Porangahau	1.69	124	P	Pb	11 03 09.1	-1.1
TOZ	Tahuroa Road	1.69	19	P	Pn	11 03 07.2	0.0
ARHZ	Aropaoanui	1.69	88	P	Pb	11 03 12.5	+2.2
PXZ	Pawanui	1.73	114	P	Pb	11 03 12.1	+1.1
BFZ	Birch Farm	1.74	141	P	Pn	11 03 08.5	+0.5
BFZ	Birch Farm	1.74	141	P	Pn	11 03 08.8	+0.7
CAW	Cannon Point	1.78	174	P	Pn	11 03 09.1	+0.5
RAHZ	Arahi	1.81	78	P	Pb	11 03 11.5	-1.0
MTW	Mount Morrison	1.90	164	P	Pb	11 03 12.2	-1.7
CPWZ	Castlepoint	1.90	146	P	Pb	11 03 15.4	+1.5
TCW	Tory Channel	1.92	192	P	Pn	11 03 10.4	-0.1
WEL	Wellington	1.95	181	P	Pn	11 03 12.2	+1.3
TMWZ	Te Maipa	1.96	155	P	Pb	11 03 13.0	-1.8
SNZO	South Karori	1.98	182	P	Pn	11 03 12.7	+1.4
URZ	Urewera	2.09	60	P	Pn	11 03 13.3	+0.5
URZ	Urewera	2.09	60	P	Pn	11 03 13.8	+1.0
TRWZ	Traveller	2.17	162	P	Pb	11 03 16.9	-1.5
NNZ	Nelson	2.18	210	P	Pn	11 03 14.8	+0.8
TUWZ	Tuamarina	2.20	197	P	Pn	11 03 15.4	+1.1
TKNZ	Takaka Hill	2.21	219	P	Pn	11 03 15.3	+0.8
PLWZ	Palliser	2.26	172	P	Pn	11 03 17.0	+1.8
AWAZ	Awhitu Peninsu	2.27	357	P	Pn	11 03 15.6	+0.4
QRZ	Quartz Range	2.30	229	P	Pn	11 03 16.9	+1.2
QRZ	Quartz Range	2.30	229	P	Pn	11 03 15.4	-0.3
MWZ	Matawai	2.34	66	P	Pn	11 03 15.7	-0.6
ETAZ	East Tamaki Re	2.38	2	P	Pn	11 03 17.3	+0.6
WTAZ	Waiatarua	2.40	355	P	Pn	11 03 18.2	+1.0
BSWZ	Blackbirch Sta	2.49	196	P	Pn	11 03 19.5	+1.2
RVAZ	Riverhead Bore	2.56	356	P	Pn	11 03 19.9	+0.5
MRNZ	Matariki Terra	2.59	217	P	Pn	11 03 20.2	+0.5
KUZ	Kuaotunu	2.68	16	P	Pn	11 03 20.4	-0.5
KUZ	Kuaotunu	2.68	16	P	Pn	11 03 20.5	-0.5
THZ	Tophouse	2.83	210	P	Pn	11 03 23.9	+0.8
KHZ	Kahutara	3.23	197	P	Pn	11 03 28.9	+0.5
DSZ	Denniston Nort	3.33	223	P	Pn	11 03 30.0	+0.1
WCZ	Waipu Caves	3.41	354	P	Pn	11 03 31.1	+0.2
GVZ	Greta Valley S	3.87	200	P	Pn	11 03 37.1	-0.3
LTZ	Lake Taylor	3.95	208	P	Pn	11 03 38.4	0.0
WKZ	Wanaka	6.98	216	P	Pn	11 04 22.9	+2.9

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*NAO **11** 11:07:50.9±1.3, 74.°74N×14.°79E, ML3.3*

*IDC **11** 11:07:51.8±0.9, 74.°78N×15.°20E, h0^{km}, mb3.0/3, mbtmp3.2/8, ML2.8/5, Error ellipse: s-maj=30.1km s-min=10.3km az=78.0*

*BER **11** 11:07:55.3±3.8, 74.°85N×15.°38E, h21^{km}±18^{km}, ML2.4, ML3.3(NAO), Confirmed Earthquake*

*KOLA **11** 11:07:57.0, 74.°59N×15.°92E, h0^{km}, ML2.7, Error ellipse: s-maj=27.1km s-min=17.3km az=160.0, Norwegian sea*

*UPP **11** 11:07:56.6±3.4, 74.°63N×16.°53E, h0^{km}, ML2.1*

*IEPN **11** 11:07:57.0, 75.°03N×14.°45E, h10^{km}*

ISC 11 11:07:51.1±0.8, **74.°77N**±0.°04×**15.°45E**±0.°05, **h10**^{km}, **n67**, σ**2.^{s}99**/116, **mb2.8**/3, **1D**, **Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJO1	Bjornoya	0.99	104	Pg	Pn	11 08 13.7	+2.7
BJO1				Lg	Lg	11 08 26.9	
BJO1	Bjornoya	0.99	104	*e*P	Pn	11 08 13.6	+2.7
BJO1				*e*S	Sn	11 08 26.6	+1.7
BJO1	Bjornoya	0.99	104	*e*P	Pn	11 08 13.7	+2.7
BJO1				*e*S	Sn	11 08 26.9	+2.0
BJO1				IAML		11 08 32.3	
	comp=Z,205nm,0.2s						
HSPB	Hornsund (broa	2.24	1	Pn	Pn	11 08 28.2	0.0
HSPB				Sn	Sn	11 08 51.5	-4.3
HSPB	Hornsund (broa	2.24	1	*e*P	Pn	11 08 28.1	-0.1
HSPB				*e*S	Sn	11 08 50.8	-5.0
HSPB	Hornsund (broa	2.24	1	*e*P	Pn	11 08 28.2	0.0
HSPB				*e*S	Sn	11 08 51.4	-4.4
HSPB				IAML		11 08 52.1	
	comp=Z,51nm,0.3s						
HOPEN	Hopen	2.95	49	Pn	Pn	11 08 39.6	+1.7
HOPEN				Sn	Sn	11 09 13.1	-0.3
HOPEN	Hopen	2.95	49	*e*P	Pn	11 08 39.8	+1.8
HOPEN				*e*S	Sn	11 09 12.7	-0.7
HOPEN	Hopen	2.95	49	*e*P	Pn	11 08 39.9	+2.0
HOPEN				*e*S	Sn	11 09 12.8	-0.5
HOPEN				IAML		11 09 13.9	
	comp=Z,27nm,0.2s						
BRBB	Barentsburg B	3.35	356	Pn	Pn	11 08 45.1	+1.7
BRBB				Sn	Sn	11 09 19.9	-3.3
BRBB	Barentsburg B	3.35	356	*e*P	Pn	11 08 44.5	+1.1
BRBB				*e*S	Sn	11 09 19.0	-4.2
SPA0	Spitsbergen Ar	3.43	3	Pn	Pn	11 08 45.8	+1.2
	baz=174,slow=18						
SPA0				Sn	Sn	11 09 21.6	-3.6
	baz=160,slow=22						
SPA0	Spitsbergen Ar	3.43	3	⇓*i*P	Pn	11 08 45.7	+1.2
SPA0				*i* S	Sn	11 09 22.0	-3.2
SPA0	Spitsbergen Ar	3.43	3	Pn	Pn	11 08 45.8	+1.2
	baz=174,slow=18						
SPA0				Sn	Sn	11 09 21.6	-3.6
	baz=160,slow=22						
SPITS	Spitsbergen Ar	3.43	3	Pn	Pn	11 08 45.7	+1.2
	baz=172,slow=16						
SPITS				Sn	Sn	11 09 22.8	-2.4
	baz=173,slow=28						
	comp=Z,2.6nm,0.3s						
KBS	Kingsbay	4.25	351	Pn	Pn	11 08 57.2	+1.5
KBS	Kingsbay	4.25	351	*e*P	Pn	11 08 56.3	+0.5
KBS				S	Sn	11 09 39.7	-5.7
KBS	Kingsbay	4.25	351	*e*P	Pn	11 08 56.7	+0.9
HAMF	Hammerfest	4.82	145	Pn	Pn	11 09 05.5	+1.9
HAMF				Sn	Sn	11 09 57.4	-2.0
HAMF	Hammerfest	4.82	145	*e*P	Pn	11 09 05.3	+1.7
HAMF				*e*S	Sn	11 09 57.1	-2.2
HAMF				IAML		11 10 00.9	
	comp=Z,20nm,0.4s						
TRO	Tromso	5.28	167	Pn	Pn	11 09 10.7	+0.9
TRO				Sn	Sn	11 10 07.1	-3.5
TRO	Tromso	5.28	167	*e*P	Pn	11 09 10.9	+1.0
TRO				*e*S	Sn	11 10 07.1	-3.5
TRO				IAML		11 10 10.7	
	comp=Z,5.2nm,0.2s						
JETT	Jettan, Norway	5.46	161	Pn	Pn	11 09 13.9	+1.4
JETT				Sn	Sn	11 10 13.9	-1.3
JETT	Jettan, Norway	5.46	161	Pn	Pn	11 09 13.9	+1.4
JETT				Sn	Sn	11 10 13.9	-1.3
KIF	Kilpisjarvi	6.03	161	Pn	Pn	11 09 21.5	+1.3
KIF				Sn	Sn	11 10 26.5	-2.6
KIF	Kilpisjarvi	6.03	161	*e*P	Pn	11 09 21.3	+1.1
KIF				*e*S	Sn	11 10 25.3	-3.8
ARA0	ARCESS Array S	6.09	145	Pn	Pn	11 09 22.8	+1.7
	baz=328,slow=12						
ARA0				Sn	Sn	11 10 27.6	-3.2
	baz=335,slow=22						
ARA0	ARCESS Array S	6.09	145	Pn	Pn	11 09 22.8	+1.7
	baz=328,slow=12						
ARA0				Sn	Sn	11 10 27.6	-3.2
	baz=335,slow=22						
ARA0				IAML		11 10 34.0	
	comp=Z,7.6nm,0.2s						
ARCES	ARCESS Array B	6.09	145	Pn	Pn	11 09 22.8	+1.7
	comp=Z,0.4nm,0.3s,baz=325,slow=11,SNR=44						
ARCES				Sn	Sn	11 10 27.4	-3.3
	comp=Z,2.0nm,0.3s,baz=347,slow=22,SNR=13						
	comp=Z,7.6nm,0.9s						
ARCES	ARCESS Array B	6.09	145	P	Pn	11 09 23.0	+1.9
ARCES				S	Sn	11 10 28.6	-2.2
KEV	Kevo	6.14	139	Pn	Pn	11 09 24.3	+2.5
KEV				Sn	Sn	11 10 29.9	-2.0
KEV	Kevo	6.14	139	*e*P	Pn	11 09 23.5	+1.8
KEV				*e*S	Sn	11 10 29.0	-2.9
KTK1	Kautokeino	6.27	153	*e*P	Pn	11 09 25.8	+2.3
KTK1				*e*S	Sn	11 10 33.4	-1.8
KTK1				IAML		11 10 40.9	
	comp=Z,7.4nm,0.2s						
VADS	Vadso	6.27	131	P	Pn	11 09 26.2	+2.8
VADS				S	Sn	11 10 33.2	-1.9
VADS	Vadso	6.27	131	*e*P	Pn	11 09 26.3	+2.8
VADS				*e*S	Sn	11 10 33.4	-1.7
VADS				IAML		11 10 39.8	
	comp=Z,22nm,0.3s						
LOF	Lofoten	6.71	186	*e*P	Pn	11 09 28.8	-0.7
LOF				*e*S	Sn	11 10 40.2	-5.6
LOF				IAML		11 10 43.1	
	comp=Z,7.6nm,0.2s						
STEI	Steigen	6.88	181	*e*P	Pn	11 09 32.5	+0.7
STEI				*e*S	Sn	11 10 45.4	-4.6
STEI				IAML		11 10 49.4	
	comp=Z,2.9nm,0.4s						
HEF	Hetta	6.90	154	*e*P	Pn	11 09 34.2	+2.1
HEF				*e*S	Sn	11 10 46.6	-3.9
NIKU	Nikkaluokta	7.04	169	P	Pn	11 09 35.9	+1.9
NIKU				S	Sn	11 10 52.7	-1.2
LANU	Lannavaara	7.07	160	P	Pn	11 09 36.0	+1.5
LANU				S	Sn	11 10 52.5	-2.3
RATU	Laukkuluspa	7.11	167	P	Pn	11 09 36.6	+1.6
FAUS	Fauske	7.43	180	P	Pn	11 09 41.4	+2.0
FAUS				S	Sn	11 11 00.6	-3.0
FAUS	Fauske	7.43	180	*e*P	Pn	11 09 41.1	+1.7
FAUS				*e*S	Sn	11 10 60.0	-3.6
FAUS				IAML		11 11 04.4	
	comp=Z,2.4nm,0.2s						
SALU	Saltoluokta	7.50	171	P	Pn	11 09 42.4	+2.1
SALU	Saltoluokta	7.50	171	*e*P	Pn	11 09 42.6	+2.2
TERR	Teriberka	8.22	123	P	Pn	11 09 51.5	+1.3

TERR				S	Sn	11 11 17.9	-5.0
KONS	Konsvik	8.35	186	eP	Pn	11 09 52.2	+0.2
KONS				eS	Sn	11 11 19.4	-6.8
KONS				IAML		11 11 22.7	
	comp=Z,3.9nm,0.2s						
STOK	Stokkvaagen	8.52	187	eP	Pn	11 09 54.8	+0.4
STOK				eS	Sn	11 11 24.8	-5.6
MOR8	Moi Rana	8.65	183	eP	Pn	11 09 56.1	-0.1
ZFI	Zemlya Franca-	8.94	33	eP	Pn	11 10 01.4	+1.4
ZFI				eS	Sn	11 11 33.8	-6.8
OMEGA	Omega	8.94	34	eP	Pn	11 10 01.5	+1.5
OMEGA				eS	Sn	11 11 33.7	-6.9
ZFI2	Zemlya Franca-	8.94	33	eP	Pn	11 10 01.5	+1.4
ZFI2				eS	Sn	11 11 33.7	-6.9
APA0	Apatity Array	9.11	133	Pn	Pn	11 10 04.5	+2.2
	baz=336,slow=10						
APA0				Sn	Sn	11 11 37.8	-7.0
	baz=318,slow=28						
APA0	Apatity Array	9.11	133	P	Pn	11 10 05.4	+3.0
APA0				S	Sn	11 11 39.4	-5.4
APA0	Apatity Array	9.11	133	Pn	Pn	11 10 04.5	+2.2
	baz=336,slow=10						
APA0				Sn	Sn	11 11 37.8	-7.0
	baz=318,slow=28						
LVZ	Lovozero	9.19	129	P	Pn	11 10 05.0	+1.5
LVZ				S	Sn	11 11 41.6	-5.3
APA	Apatity	9.22	132	S	Sn	11 11 41.8	-5.7
NOA	NORSAR Array B	13.88	189	Pn	Pn	11 11 09.3	+1.6
	baz=1.9,slow=12,SNR=2.4						
	comp=Z,0.3nm,0.7s						
FIA0	FINESS Array S	13.92	158	Pn	Pn	11 11 07.2	-0.9
	baz=1.1,slow=14						
FIA0	FINESS Array S	13.92	158	Pn	Pn	11 11 07.2	-0.9
	baz=1.1,slow=14						
FINES	FINESS Array B	13.92	158	Pn	Pn	11 11 07.5	-0.7
	comp=Z,0.1nm,0.3s,baz=4.7,slow=12,SNR=5.8						
FINES				Sn	Sn	11 13 33.3	-9.2
	comp=Z,0.2nm,0.3s,baz=358,slow=24,SNR=2.6						
	comp=Z,0.3nm,0.3s						
NRA0	NORESS Array S	14.18	188	Pn	Pn	11 11 12.2	+0.5
	baz=352,slow=14						
NRA0	NORESS Array S	14.18	188	Pn	Pn	11 11 12.2	+0.5
	baz=352,slow=14						
HFS	Hagfors	14.72	183	Pn	Pn	11 11 18.8	-0.2
	comp=Z,0.1nm,0.3s,baz=12,slow=15,SNR=2.0						
	comp=Z,0.9nm,0.6s						
YKA	Yellowknife Ar	39.17	326	P	P	11 15 19.5	+1.1
	comp=Z,0.1nm,0.5s,baz=13,slow=8.3,SNR=2.9						
	comp=Z,0.1nm,0.5s						
MKAR	Makanchi Array	39.45	96	P	P	11 15 25.6	+4.6
	comp=Z,0.1nm,0.5s,baz=332,slow=9.0,SNR=1.5						
	comp=Z,0.1nm,0.5s						
ILAR	Eielson Array	40.23	348	P	P	11 15 29.1	+1.9
	comp=Z,0.2nm,0.6s,baz=358,slow=5.4,SNR=5.7						
	comp=Z,0.2nm,0.6s						

*SOME **11** 11:08:36.6, 40.°90N×70.°13E, h10^{km}*
*ISU **11** 11:08:38.3, 41.°06N×69.°45E, h4^{km}*
*NNC **11** 11:08:38.8±5.6, 40.°92N×69.°70E, h0^{km}, mb3.5, mpv3.2,*
Error ellipse: s-maj=43.3km s-min=23.5km az=52.0
*KRNET **11** 11:08:39.4±0.1, 41.°02N×70.°20E, h15^{km}, mb3.1*
ISC 11 11:08:39.4±1.2**, 41.°01N**±0.°03×**70.°06E**±0.°03**, h6**^{km}±10^{km},
n29, σ1.^{s}71/45**, 17C-5D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YBZ	Yangibazar	0.47	309	P	Pb	11 08 49.5	-0.5
YBZ				S	Sg	11 08 53.7	-0.8
CHRV	Charvak	0.64	352	P	Pg	11 08 51.4	-0.3
CHRV				S	Sb	11 09 01.2	-0.9
KUMR	Kumaryk	0.65	291	P	Sb	11 09 04.0	+1.6
TAS	Tashkent	0.66	299	⇓iP	Pb	11 08 53.7	+0.4
	baz=95						
TAS				⇓iS	Sn	11 09 04.0	-2.0
	baz=95						
TRKS	Terek-Say	0.96	57	⇑iP	Pg	11 08 55.7	-2.2
	baz=59						
TRKS				⇑iS	Sg	11 09 07.9	-2.5
	baz=59						
BTK	Batken	1.11	149	⇑iP	Pb	11 08 59.9	-1.1
	baz=54						
BTK				⇑iS	Sg	11 09 14.8	-0.3
	baz=54						
IUG	Iuzhnay	1.14	359	P	Pb	11 09 00.4	-1.1
	13nm,0.1s						
IUG				S	Sn	11 09 17.9	0.0
	189nm,0.8s						
IUG	Iuzhnay	1.14	359	eP	Pb	11 09 00.4	-1.1
	13nm,0.0s						
IUG				eS	Sn	11 09 17.9	0.0
	82nm,0.2s						
CHMI	Chimion	1.33	123	P	Pn	11 09 04.0	-0.5
CHMI				S	Sg	11 09 27.6	+5.4
FRG	Fergana	1.45	115	P	Pg	11 09 07.4	+0.2
ARK	Arkit	1.63	60	⇑iP	Pn	11 09 08.3	-0.4
	baz=59						
ARK				⇑iS	Sn	11 09 29.2	-0.9
	baz=59						
ANR	Andizhan	1.76	98	P	Sg	11 09 37.1	+1.2
DRK	Karamyk	2.02	138	⇓iP	Pb	11 09 15.9	-0.8
	baz=41						
DRK				⇓iS	Sb	11 09 42.2	-0.1
	baz=41						
KK31	Karatay Array	2.12	9	Pn	Pb	11 09 18.1	-0.1
	7.6nm,0.5s,baz=180,slow=12,SNR=46						
KK31				Sn	Sg	11 09 49.2	+1.7
	14nm,0.5s,baz=188,slow=25,SNR=7.9						
KKAR	Karatay Array	2.12	9	⇑iP	Pb	11 09 17.9	-0.3
	baz=6.0						
KKAR				⇑iS	Sb	11 09 45.7	+1.0
	baz=6.0						
OHH	Osh	2.12	102	⇑iP	Pb	11 09 16.7	-1.6
	baz=3.0						
OHH				⇑iS	Sb	11 09 43.6	-1.3
	baz=3.0						
MNAS	Manas	2.35	50	⇑iP	Pb	11 09 20.3	-1.9
	baz=49						
MNAS				⇑iS	Sb	11 09 49.6	-1.8
	baz=49						
MRKS	Merke	2.93	53	Pg	Pb	11 09 31.5	-0.6
	10nm,0.8s						
MRKS				Lg	Lg	11 10 10.7	
	27nm,1.1s						
MRKS	Merke	2.93	53	ePg	Pb	11 09 31.5	-0.6
	9.1nm,0.2s						
MRKS				eLg	Lg	11 10 10.7	
	8.7nm,0.2s						
AML	Almayashu	2.94	66	⇑Pn	Pb	11 09 30.5	-1.9
	1.1nm,0.8s						
AML				⇓Sn	Sb	11 10 10.1	+1.2
	3.6nm,0.6s						
AML	Almayashu	2.94	66	⇑eP	Pn	11 09 28.4	+1.4
	baz=66						
AML				⇑iS	Sn	11 10 04.0	+1.1
	baz=66						
TKM2	Tokmak 2	4.55	63	⇑Pn	Pb	11 09 54.6	-5.1
	4.7nm,0.8s						
TKM2				⇑Sn	Sb	11 10 53.0	-1.8
	9.7nm,0.8s						
DGS	Degeres	4.79	60	Pg	Pb	11 10 05.7	+1.8
	2.2nm,0.7s						
DGS				Lg	Lg	11 11 09.8	
	7.8nm,0.8s						
DGS	Degeres	4.79	60	ePg	Pb	11 10 05.7	+1.8
	2.2nm,0.7s						
DGS				eLg	Lg	11 11 09.8	
	7.2nm,0.3s						
KST	Kastek	4.84	63	ePg	Pb	11 10 06.3	+1.7
	1.3nm,0.2s						
KST				eLg	Lg	11 11 10.4	
	8.4nm,0.2s						
KRBS	Karabastau	4.95	55	ePg	Pb	11 10 07.9	+1.5
	1.3nm,0.1s						
KRBS				eLg	Lg	11 11 13.1	
	2.9nm,0.2s						
BTLS	Baital	4.97	35	Pg	Pb	11 10 09.4	+2.6
	1.5nm,0.3s						
BTLS				Lg	Lg	11 11 15.8	
	5.1nm,0.8s						
BTLS	Baital	4.97	35	ePg	Pb	11 10 09.4	+2.6
	1.5nm,0.3s						
BTLS				eLg	Lg	11 11 15.8	
	3.0nm,0.9s						
KTBS	Karatobe	5.60	59	ePg	Pb	11 10 20.9	+3.5
	1.5nm,0.1s						
KTBS				eLg	Lg	11 11 35.5	
	3.9nm,0.3s						

*IDC **11** 11:12:55.8±2.3, 31.°74S×71.°00W, h0^{km}, mb3.7/1,*
mbtmp3.5/2, ML3.4/1, MS2.4/1, Error ellipse:
s-maj=129.4km s-min=45.8km az=97.0
*SJA **11** 11:13:02.2±0.8, 32.°07S×71.°26W, h66^{km}±7^{km}, ML3.6,*
MW3.7, Hypocentre not reviewed by the ISC
*GUC **11** 11:13:04.3±0.8, 32.°07S×71.°12W, h69^{km}±4^{km}, ML3.5*
ISC 11 11:13:04.2±1.0**, 32.°06S**±0.°03×**71.°21W**±0.°06**, h67**^{km}±8^{km},
n44, σ0.^{s}67/57**, 6C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	Catapilco	0.50	188	i P	Pn	11 13 17.0	+0.3
VA06				i S	Sn	11 13 26.7	+0.7
VA06				IAML		11 13 30.4	
	comp=N,5µm,0.3s						
CO02	Combarbal	0.88	12	⇓iP	Pn	11 13 20.9	-0.3
CO02				i S	Sn	11 13 33.3	-0.3
CO02				IAML		11 13 35.5	
	comp=E,15µm,0.3s						
CO02	Combarbal	0.88	12	eP		11 13 20.0	
CO02				eS		11 13 33.5	
CO02				IAML		11 13 33.7	
	comp=Z,2µm,0.1s						
VA03	San Esteban	0.89	142	⇑eP	Pn	11 13 20.7	-0.6
VA03				i S	Sn	11 13 33.3	-0.7
VA03				IAML		11 13 36.1	
	comp=E,4µm,0.1s						
VA03	San Esteban	0.89	142	eP		11 13 20.0	
VA03				eS		11 13 34.0	
VA03				IAML		11 13 35.5	
	comp=Z,1µm,0.1s						
ROCH	El Roble	0.92	170	eP	Pn	11 13 21.4	-0.4
ROCH				i S	Sn	11 13 34.7	-0.1
ROCH				IAML		11 13 35.6	
	comp=N,2µm,0.1s						
ROC1	El Roble	0.92	170	eP		11 13 20.9	
VA01	Torpederas	1.02	201	eP	Pn	11 13 23.3	+0.5
VA01				i S	Sn	11 13 37.9	+1.2
VA01				IAML		11 13 41.8	
	comp=E,1µm,0.5s						
VA01	Torpederas	1.02	201	eP		11 13 22.0	
VA01				eS		11 13 23.4	
PEL	Peldehue	1.16	158	eP	Pn	11 13 24.3	-0.4
PEL				i S	Sn	11 13 39.7	-0.3
PEL				IAML		11 13 40.3	
	comp=N,1µm,0.5s						
PEL	Peldehue	1.16	158	eP		11 13 24.2	
PEL				eS		11 13 40.1	
MT02	Curacav	1.19	177	eP	Pn	11 13 25.0	-0.1
MT02				i S	Sn	11 13 40.7	+0.1
MT02				IAML		11 13 42.6	
	comp=N,1µm,0.3s						
MT02	Curacav	1.19	177	eP		11 13 24.0	
MT02				eS		11 13 41.1	
MT02				IAML		11 13 43.5	
	comp=Z,589nm,0.3s						
CO03	El Pedregal	1.30	20	⇑eP	Pn	11 13 26.7	+0.2
CO03				i S	Sn	11 13 43.7	+0.4
CO03				IAML		11 13 46.9	
CO03	El Pedregal	1.30	20	eP		11 13 26.0	
CO03				eS		11 13 44.3	
CO03				IAML		11 13 45.9	
	comp=Z,1µm,0.2s						
MT10	Hacienda Santa	1.33	155	eP	Pn	11 13 27.1	0.0
MT10				i S	Sn	11 13 44.0	-0.1
MT10				IAML		11 13 45.3	
	comp=N,3µm,0.4s						
MT05	Renca	1.38	163	⇑eP	Pn	11 13 27.3	-0.3
MT05				i S	Sn	11 13 45.3	+0.1
MT05				IAML		11 13 49.6	
	comp=E,1µm,0.3s						
MT05	Renca	1.38	163	eP		11 13 26.0	
MT05				eP		11 13 27.7	
MT05				eS		11 13 46.3	
CO06	Fray Jorge	1.43	345	eP	Pn	11 13 28.6	+0.4
CO06				IAML		11 13 52.4	
	comp=N,1µm,0.4s						
FCH	Farellones	1.48	149	⇑iP	Pn	11 13 29.2	+0.1
FCH				i S	Sn	11 13 48.4	+0.6
MT03	Universidad Ad	1.54	158	eP	Pn	11 13 29.9	+0.1
MT03				i S	Sn	11 13 49.4	+0.4
MT03				IAML		11 13 58.2	
	comp=E,1µm,0.2s						
MT03	Universidad Ad	1.54	158	eP		11 13 30.1	
MT03				eS		11 13 49.2	
MT03				eS		11 13 50.9	
MT03				IAML		11 13 53.5	
	comp=Z,662nm,0.1s						
MT04	Ro Olivares	1.61	146	eP	Pn	11 13 31.9	+1.0
MT04				i S	Sn	11 13 51.9	+0.9
MT04				IAML		11 13 54.7	
	comp=E,916nm,0.6s						
VA05	Santo Domingo	1.62	192	eP	Pn	11 13 31.4	+0.6
VA05				i S	Sn	11 13 51.5	+0.7
RTLS	Leoncito	1.65	81	eP		11 13 32.0	
RTLS				eS		11 13 58.7	
RTLS				IAML		11 14 02.9	
	comp=Z,499nm,0.4s						
MT08	Bocatoma Ro	1.70	144	⇑iP	Pn	11 13 33.3	+1.3
MT08				i S	Sn	11 13 54.8	+1.8
MT08				IAML		11 13 58.0	
	comp=N,871nm,0.5s						
MT09	Talagante	1.72	174	i P	Pn	11 13 32.5	+0.4
MT09				i S	Sn	11 13 54.0	+0.7
MT09				IAML		11 13 58.0	
	comp=N,877nm,0.3s						
MT12	Pirque	1.75	162	eP	Pn	11 13 32.6	+0.1
MT12				i S	Sn	11 13 53.9	-0.1
MT12				IAML		11 13 59.7	
	comp=E,828nm,0.5s						
MT01	Popeta	1.79	181	eP	Pn	11 13 33.4	+0.3
MT01				i S	Sn	11 13 55.3	+0.3
MT01				IAML		11 14 01.1	
	comp=E,655nm,0.5s						
MT01	Popeta	1.79	181	eP		11 13 32.0	
MT01				eS		11 13 44.2	
MT01				IAML		11 14 01.9	
	comp=Z,432nm,0.1s						
MT13	San Alfonso	1.85	155	eP	Pn	11 13 34.5	+0.7
MT13				i S	Sn	11 13 57.6	+1.3
MT13				IAML		11 14 05.4	
	comp=E,612nm,0.3s						
GO04	Tololo Observa	1.92	11	eP	Pn	11 13 35.3	+0.3
GO04				i S	Sn	11 13 59.4	+1.2
GO04	Tololo Observa	1.92	11	eP		11 13 34.6	
GO04				eS		11 14 00.3	
LMEL	Las Melosas	1.97	155	⇑eP	Pn	11 13 36.5	+0.9
LMEL				i S	Sn	11 14 00.4	+1.1
LMEL				IAML		11 14 07.0	
	comp=N,762nm,0.1s						
ARCO	CERRO ARCO	2.08	113	eP		11 13 38.5	
ARCO				eS		11 14 05.2	
ASAL	Salagasta	2.08	105	eP		11 13 38.0	
ASAL				eS		11 14 02.7	
CO05	La Serena	2.14	359	eP	Pn	11 13 38.8	+1.1
AAGR	Agrelo	2.25	117	eP		11 13 40.0	
CO01	Juntas del Tor	2.29	25	eP	Pn	11 13 41.0	+1.0
CO01				i S	Sn	11 14 07.8	+0.5
CO01	Juntas del Tor	2.29	25	eP		11 13 40.0	
CO01				eS		11 14 08.4	
CO01				IAML		11 14 12.7	
	comp=Z,154nm,0.3s						
BO01	Tunca	2.32	177	eP	Pn	11 13 40.3	+0.1
BO01				i S	Sn	11 14 07.6	-0.1
BO01				IAML		11 14 14.7	
	comp=N,199nm,0.1s						
BO01	Tunca	2.32	177	eP		11 13 40.3	
BO01				eS		11 14 12.4	
BO01				IAML		11 14 14.5	
	comp=Z,171nm,0.3s						
BO03	Pichilemu	2.50	194	eP	Pn	11 13 42.7	+0.1
BO03				IAML		11 14 24.1	
	comp=N,138nm,0.4s						
CFA	Coronel Fontan	2.57	81	LR	LR	11 14 32.8	
	comp=N,79nm,18.1s,baz=204,slow=41						
CFA	Coronel Fontan	2.57	81	eP		11 13 28.3	
BO02	Sierra Bellavi	2.74	173	eP	Pn	11 13 46.5	+0.6
BO02	Sierra Bellavi	2.74	173	eP		11 13 46.6	
BO02				eS		11 14 17.2	
BO02				IAML		11 14 28.3	
	comp=Z,271nm,0.2s						
GO05	Huala	3.00	191	eP		11 13 49.2	
GO05				eS		11 14 27.2	
LCO	Las Campanas	3.08	8	eP		11 13 50.9	
LCO				eS		11 14 27.9	
LCO				IAML		11 14 43.2	
	comp=Z,664nm,0.6s						
AC05	El Transito	3.32	14	eP	Pn	11 13 54.5	+0.6
AC05	El Transito	3.32	14	eP		11 13 53.0	
AC05				eS		11 14 28.7	
AC05				IAML		11 14 36.2	
	comp=Z,140nm,0.3s						
AC04	Llanos de Chal	3.85	2	eP	Pn	11 14 00.7	-0.3
AC04	Llanos de Chal	3.85	2	eP		11 14 00.0	
AC04				eS		11 14 47.2	
AC04				IAML		11 15 00.5	
	comp=Z,143nm,0.7s						
GO03	Copiap	4.54	11	eP		11 14 09.0	
GO03				eS		11 15 03.2	
H03N1	Juan Fernandez	6.63	256	T	T	11 21 18.4	
	baz=84,slow=73,SNR=342						
H03N3	Juan Fernandez	6.64	256	T	T	11 21 23.4	
	baz=84,slow=73,SNR=387						
H03N2	Juan Fernandez	6.65	256	T	T	11 21 27.6	
	baz=84,slow=73,SNR=339						
PLCA	Paso Flores	8.67	177	Pn	Pn	11 15 07.0	+0.1
	comp=Z,0.1nm,0.3s,baz=339,slow=13,SNR=1.7						
	comp=Z,1.4nm,1.0s						
TORD	Torodi Ar. Bea	82.89	70	P	P	11 25 21.2	-0.8
	comp=Z,0.6nm,0.8s,baz=233,slow=7.0,SNR=2.0						
	comp=Z,0.6nm,0.8s						
H11S2	WAKE ISLAND Hy	126.48	270	T	T	13 51 16.6	
	baz=117,slow=75,SNR=7.1						
H11S1	WAKE ISLAND Hy	126.49	270	T	T	13 51 20.0	
	baz=117,slow=75,SNR=4.8						
H11S3	WAKE ISLAND Hy	126.50	270	T	T	13 51 16.8	
	baz=117,slow=75,SNR=4.9						
H11N3	WAKE ISLAND Hy	126.84	272	T	T	13 51 42.3	
	baz=116						
H11N1	WAKE ISLAND Hy	126.86	272	T	T	13 51 43.4	
	baz=116						
H11N2	WAKE ISLAND Hy	126.86	272	T	T	13 51 42.4	
	baz=116						
BVAR	Borovoye Array	145.38	41	PKPbc	PKPab	11 32 34.3	+0.1
	comp=Z,0.4nm,0.4s,baz=309,slow=1.5,SNR=4.0						
KURBB	Kurchatov Arra	150.97	41	PKPbc	PKiKP	11 32 49.0	-0.5
	comp=Z,1.0nm,0.2s,baz=272,slow=2.7,SNR=4.3						
ZALV	Zalesovo Beam	152.22	31	PKPbc	PKiKP	11 32 51.2	-0.8
	comp=Z,0.9nm,0.4s,baz=301,slow=0.8,SNR=5.6						

*ISK **11** 11:14:28.6, 35.°52N×25.°94E, h18^{km}, ML2.7/8*
*ATH **11** 11:14:30.2, 35.°46N×25.°95E, h19^{km}±4^{km}, ML2.2/5, Error*
ellipse: s-maj=4.7km s-min=0.9km az=193.0
*THE **11** 11:14:30.3, 35.°46N×25.°95E, h15^{km}±2^{km}, ML2.1/5, Error*
ellipse: s-maj=2.3km s-min=0.5km az=175.0
ISC 11 11:14:29.7±1.0**, 35.°47N**±0.°03×**25.°94E**±0.°02**, h18**^{km}±3^{km},
n40, σ0.^{s}64/58**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STIA	Sitia Lasithi	0.29	155	P	Pg	11 14 36.2	+0.1
STIA				S	Sb	11 14 41.1	+0.3
STIA	Sitia Lasithi	0.29	155	P	Pg	11 14 36.2	+0.1
STIA				S	Sb	11 14 41.1	+0.3
STIA				AML	AML	11 14 41.4	
	comp=N,1535µm,0.5s						
STIA				AML	AML	11 14 41.6	
	comp=E,1227µm,0.2s						
ZKR	Zakros	0.42	147	P	Pg	11 14 38.4	0.0
ZKR				S	Sb	11 14 45.0	+0.4
	comp=E,318nm,0.3s						
ZKR	Zakros	0.42	147	Pg	Pg	11 14 38.3	0.0
ZKR				Sg	Sb	11 14 45.2	+0.6
ZKR	Zakros	0.42	147	P	Pg	11 14 38.4	0.0
ZKR				S	Sg	11 14 44.4	+0.3
ZKR				AML	AML	11 14 45.2	
	comp=E,819µm,0.3s						
ZKR				AML	AML	11 14 45.8	
	comp=N,309µm,0.1s						
FRMA	Ierapetra Chan	0.48	200	P	Pg	11 14 39.0	-0.4
FRMA				S	Sg	11 14 46.4	+0.4
	comp=N,90nm,0.3s						
FRMA	Ierapetra Chan	0.48	200	P	Pg	11 14 39.0	-0.4
FRMA				S	Sg	11 14 45.5	-0.5
FRMA				AML	AML	11 14 45.9	
	comp=E,483µm,0.3s						
FRMA				AML	AML	11 14 47.0	
	comp=N,411µm,0.1s						
HRKL	Herakleio	0.70	258	P	Pb	11 14 43.9	+0.5
HRKL	Herakleio	0.70	258	Pg	Pb	11 14 43.2	-0.2
HRKL				Sg	Sg	11 14 53.7	+0.8
HRKL	Herakleio	0.70	258	P	Pb	11 14 43.9	+0.5
HRKL				S	Sb	11 14 52.8	+0.1
IACM	Heraklion	0.73	258	P	Pb	11 14 44.1	+0.2
IACM				S	Sb	11 14 54.3	+0.9
KSTL	Kastelli Herak	0.73	257	P	Pb	11 14 42.0	-1.8
KSTL	Kastelli Herak	0.73	257	P	Pb	11 14 41.5	-2.3
SANT	Santorini	0.98	337	P	Pb	11 14 48.2	-0.1
SANT				S	Sb	11 15 01.5	+0.6
	comp=N,248nm,0.3s						
SANT	Santorini	0.98	337	Pg	Pb	11 14 47.2	-1.1
SANT				Sg	Sb	11 15 00.7	-0.2
SANT	Santorini	0.98	337	P	Pb	11 14 47.9	-0.3
SANT				S	Sb	11 15 01.5	+0.6
SANT				AML	AML	11 15 02.4	
	comp=N,233µm,0.2s						
SANT				AML	AML	11 15 02.5	
	comp=E,746µm,0.3s						
THR6	Thira Island,	0.99	334	P	Pb	11 14 49.0	+0.7
THR6	Thira Island,	0.99	334	P	Pb	11 14 49.1	+0.7
KARP	Karpathos	1.00	85	P	Pb	11 14 48.6	0.0
KARP				S	Sg	11 15 02.4	0.0
	comp=E,338nm,0.5s						
KARP	Karpathos	1.00	85	Pg	Pb	11 14 48.5	0.0
KARP				Sg	Sn	11 15 02.6	0.0
KARP	Karpathos	1.00	85	P	Pb	11 14 48.6	0.0
KARP				S	Sb	11 15 01.7	+0.3
KARP				AML	AML	11 15 05.4	
	comp=E,632µm,0.2s						
KARP				AML	AML	11 15 05.7	
	comp=N,512µm,0.3s						
THR9	Santorini-Faro	1.01	332	P	Pn	11 14 49.4	+0.5
THR8	Santorini-Mono	1.01	338	P	Pb	11 14 49.0	+0.3
THR3	Thira Island,	1.04	335	P	Pb	11 14 48.4	-0.7
THR3	Thira Island,	1.04	335	P	Pb	11 14 48.4	-0.7
THR5	Thira Island,	1.06	333	P	Pb	11 14 48.9	-0.7
SAP3	Santorini-Thir	1.08	334	P	Pb	11 14 50.2	+0.3
SAP3				S	Sb	11 15 04.3	+0.6
SAP3	Santorini-Thir	1.08	334	P	Pb	11 14 49.7	-0.2
PRNS	Prines Rethymn	1.18	265	P	Pn	11 14 51.4	+0.1
PRNS				S	Sg	11 15 08.8	+0.9
	comp=N,50nm,0.6s						
IMMV	Iera Moni Meta	1.60	270	P	Pn	11 14 56.6	-0.5
IMMV	Iera Moni Meta	1.60	270	Pn	Pn	11 14 56.8	-0.3
IMMV	Iera Moni Meta	1.60	270	P	Pn	11 14 56.6	-0.5
APE	Apeiranthos	1.63	348	P	Pn	11 14 57.1	-0.5
APE	Apeiranthos	1.63	348	Pn	Pn	11 14 56.7	-0.9
APE	Apeiranthos	1.63	348	P	Pn	11 14 56.4	-1.2
GVD	Gavdhos	1.64	248	Pn	Pn	11 14 57.8	+0.1
GVD	Gavdhos	1.64	248	P	Pn	11 14 58.1	+0.4
RODP	Rodopos	1.78	274	P	Pn	11 14 59.6	0.0
RODP	Rodopos	1.78	274	Pn	Pn	11 14 59.4	-0.2
ARG	Arkhangelos	1.93	67	Pn	Pn	11 15 01.2	-0.4

*IDC **11** 12:10:25.1±1.8, 31.°40N×130.°56E, h0^{km}, mb3.0/2,*
mbtmp3.1/6, ML2.6/4, Error ellipse: s-maj=40.4km
s-min=15.5km az=105.0
*JMA **11** 12:10:25.6±0.1, 31.°4N±0.°1×130.°6E±0.°2, h10^{km}±1^{km},*
MV3.9/20, SATSUMA PENINSULA REGION
JMA Felt III J1 at SATSUMA PENINSULA REGION.
*NIED **11** 12:10:25.6, 31.°38N×130.°62E, h10^{km}, MW3.8, Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm;
M_{rr}-1.09; $M_{\theta\theta}$-0.18; $M_{\phi\phi}$1.27; $M_{r\theta}$1.09; $M_{\theta\phi}$5.69; $M_{\phi r}$1.75;
Fault plane solution: $M_0$6.01000×10^{14} NP1:
ϕ_s356.00000°, δ84.00000°, λ166.00000°. NP2:
ϕ_s87.00000°, δ76.00000°, λ7.00000°.
ISC 11 12:10:25.8±1.1**, 31.°38N**±0.°03×**130.°61E**±0.°03**, h4**^{km}±9^{km},
n19, σ0.^{s}69/23**, 5D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSU	**Suzuyama**	**0.18**	**314**	P	**Pg**	**12 10 29.5**	**+0.2**
JSU				S	**Sg**	**12 10 32.4**	**+0.7**
JTSR	**Tashiro 2**	**0.34**	**128**	*i* P	**Pg**	**12 10 32.1**	**-0.3**
JTSR				S	**Sg**	**12 10 36.7**	**-0.3**
JNAR	**Kushima--Naru**	**0.59**	**76**	*i* P	**Pg**	**12 10 37.1**	**+0.1**
JNAR				S	**Sg**	**12 10 45.2**	**+0.5**
JTZ	**Takazaki**	**0.66**	**38**	⇓*i*P	**Pg**	**12 10 38.4**	**-0.1**
JTZ				⇓S	**Sg**	**12 10 46.8**	**-0.3**
JNKG	**Nichinankitago**	**0.71**	**67**	⇓*i*P	**Pg**	**12 10 39.7**	**+0.2**
JZO	**Okuchi**	**0.76**	**360**	⇓*i*P	**Pg**	**12 10 39.9**	**-0.4**
JZO				⇓S	**Sg**	**12 10 50.0**	**-0.1**
JTN	**Tanegashima 3**	**0.79**	**156**	*i* P	**Pg**	**12 10 40.9**	**0.0**
JSJ	**Shimokoshiki**	**0.82**	**292**	*i* P	**Pg**	**12 10 40.5**	**-0.9**
JSJ				S	**Sg**	**12 10 51.7**	**-0.3**
JMTN	**Minamitane**	**1.01**	**165**	*i* P	**Pg**	**12 10 44.3**	**-0.9**
JNU	**Nakatsue**	**1.75**	**8**	Pg	**Pn**	**12 10 55.8**	**-1.1**
	16nm,0.3s,baz=209,slow=9.0,SNR=52						
JNU				Lg	Lg	12 11 20.8	
	26nm,0.3s,baz=134,slow=13,SNR=5.4						
JOW	**Kunigami**	**4.97**	**205**	Pn	**Pn**	**12 11 41.8**	**+0.6**
	0.8nm,0.3s,baz=307,slow=29,SNR=1.7						
JOW				Sn	**Sn**	**12 12 38.4**	**-0.6**
	0.2nm,0.3s,baz=51,slow=5.4,SNR=1.7						
	13nm,0.7s						
KSRS	**Korea Array**	**6.45**	**341**	Pn	**Pn**	**12 12 02.2**	**+0.8**
	0.1nm,0.3s,baz=166,slow=14,SNR=2.0						
KSRS				Pg	Pb	12 12 22.8	+4.3
	0.3nm,0.3s,baz=163,slow=16,SNR=8.0						
KSRS				Lg	Lg	12 13 45.4	
	0.2nm,0.3s,baz=167,slow=31,SNR=3.6						
	0.3nm,0.5s						
MJAR	**Matsushiro Arr**	**8.14**	**49**	Pn	**Pn**	**12 12 23.7**	**-1.0**
	baz=250,slow=14,SNR=1.7						
	0.3nm,0.4s						
KLR	**Kul'dur**	**17.85**	**2**	P	**Pn**	**12 14 34.2**	**-0.7**
	0.1nm,0.3s,baz=165,slow=12,SNR=1.7						
	0.7nm,0.7s						
SONM	**Songino Array**	**24.71**	**319**	P	**P**	**12 15 47.1**	**-0.9**
	0.1nm,0.5s,baz=141,slow=9.3,SNR=2.7						
	0.1nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**34.59**	**101**	T	T	12 53 10.5	
	baz=296,slow=75,SNR=32						
H11N1	**WAKE ISLAND Hy**	**34.59**	**101**	T	T	12 53 10.6	
	baz=296,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy**	**34.60**	**101**	T	T	12 53 11.7	
	baz=296,slow=75,SNR=19						
YKA	**Yellowknife Ar**	**73.00**	**26**	P	**P**	**12 21 57.2**	**+1.0**
	0.1nm,0.7s,baz=297,slow=6.2,SNR=1.8						
	0.1nm,0.7s						

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*JMA **11** 12:13:07.9±0.1, 43°.0N±0°.5×145°.4E±0°.7, h48km±1km, MV2.8/39, OFF NEMURO PENINSULA*

*SKHL **11** 12:13:08.4±0.3, 43°.00N×145°.40E, h43km±3km, mb4.0/5*

ISC 11 12:13:07.2±1.8**, 42°.97N**±0°.09×**145°.45E**±0°.05**, h47**km±12km**, n14, σ**$0^{s}.$**55**/24**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKHN	**Kushirohamanak**	**0.24**	**298**	*e*P	**Pn**	**12 13 16.0**	**+0.5**
NMR	**Nemuro--Hokkai**	**0.45**	**26**	*i* P	**Pn**	**12 13 18.0**	**+0.3**
NMR				*i* S	**Sn**	**12 13 25.0**	**-0.1**
NMR				A	A	12 13 25.8	
	340nm,0.2s						
NMR				A	A	12 13 25.8	
	370nm,0.2s						
NEM2	**Nemuro 2**	**0.45**	**28**	*e*P	**Pn**	**12 13 18.0**	**+0.3**
NEM2				*e*S	**Sn**	**12 13 25.1**	**0.0**
AKK	**Akkeshi**	**0.45**	**277**	*e*P	**Pn**	**12 13 17.7**	**0.0**
AKK				AMB	AMB	12 13 17.9	
	150nm,0.2s						
AKK				*e*S	**Sn**	**12 13 24.6**	**-0.6**
AKK				A	A	12 13 25.3	
	420nm,0.2s						
AKK				A	A	12 13 25.3	
	240nm,0.2s						
JAK	**Akkeshi**	**0.56**	**273**	*e*P	**Pn**	**12 13 19.1**	**+0.1**
JAK				*e*S	**Sn**	**12 13 27.3**	**-0.1**
JNK	**Nakash**	**0.82**	**319**	*e*P	**Pn**	**12 13 22.3**	**-0.1**
JNK				*e*S	**Sn**	**12 13 32.5**	**-1.0**
JNSB	**Nemuroshibetsu**	**0.87**	**338**	*e*P	**Pn**	**12 13 23.3**	**+0.2**
JNSB				*e*S	**Sn**	**12 13 34.5**	**-0.2**
JRA	**Rausu**	**1.00**	**346**	*e*P	**Pn**	**12 13 25.1**	**+0.3**
YUK	**Yuzh-Kuril'sk**	**1.11**	**15**	*e*P	**Pn**	**12 13 26.6**	**+0.3**
YUK				AMB	AMB	12 13 29.1	
	30nm,0.2s						
YUK				*e*S	**Sn**	**12 13 40.1**	**-0.3**
YUK				A	A	12 13 42.3	
	240nm,0.2s						
YUK				A	A	12 13 42.3	
	250nm,0.2s						
JOB	**Onbets**	**1.19**	**267**	*e*P	**Pn**	**12 13 27.5**	**+0.1**
JOB				*e*S	**Sn**	**12 13 42.3**	**-0.1**
JAR	**Ashorobuto**	**1.28**	**286**	*e*P	**Pn**	**12 13 28.9**	**+0.3**
SHO	**Shikotan**	**1.35**	**48**	*e*P	**Pn**	**12 13 29.3**	**-0.3**
SHO				AMB	AMB	12 13 33.0	
	30nm,0.2s						
SHO				*e*S	**Sn**	**12 13 45.2**	**-1.1**
SHO				A	A	12 13 47.2	
	40nm,0.2s						
SHO				A	A	12 13 47.2	
	90nm,0.2s						
JTKR	**Abashiri--Toko**	**1.51**	**312**	*e*P	**Pn**	**12 13 32.6**	**+0.9**
KUR	**Kuril'sk**	**2.85**	**37**	*e*P	**Pn**	**12 13 51.4**	**+1.2**
KUR				AMB	AMB	12 13 51.7	
	20nm,0.4s						
KUR				*e*S	**Sn**	**12 14 22.8**	**-0.5**
KUR				A	A	12 14 25.5	
	50nm,0.5s						
KUR				A	A	12 14 25.5	
	20nm,0.5s						

ROM 11 12:33:35.5±0.1**, 42°.815N**±0°.002×**13°.053E**±0°.003**, h6**km**, Md0.8**/4**, 1C, Error ellipse: s-maj=0.2km s-min=0.2km az=236.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.08**	**342**	P	Pg	12 33 37.8	+0.3
T1216				S	Sg	12 33 39.3	+0.4
T1216				END			
T1245	**Castelsantange**	**0.11**	**67**	P	Pg	12 33 38.2	+0.2
T1245				S	Sg	12 33 40.2	+0.6
T1245				END			
T1214	**Arquata del Tr**	**0.13**	**116**	P	Pg	12 33 38.6	+0.3
T1214				S	Sg	12 33 40.9	+0.7
T1214				END			
T1218	**Civita (PG)**	**0.15**	**162**	P	Pg	12 33 39.1	+0.4
T1218				END			
T1219	**Muccia, Frazio**	**0.24**	**352**	AML	AML		
	comp=N,48μm,1.6s						
T1219				AML	AML		
	comp=E,57μm,1.6s						
AQU	**L'Aquila**	**0.53**	**151**	⇑P	Pg	12 33 45.3	-0.4

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*NNC **11** 12:33:58.7±0.6, 42°.59N×70°.10E, h0km, mpv1.7, Error ellipse: s-maj=9.9km s-min=2.9km az=119.0, Suspected Mining explosion.*

*KRNET **11** 12:33:59.8±0.1, 42°.60N×70°.09E, h15km, mb2.7*

ISC 11 12:33:57.6±2.7**, 42°.68N**±0°.06×**69°.9E**±0°.1**, h0**km**, n18, σ**$0^{s}.$**89**/36**, 25C-11D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK07	**Karatay Array**	**0.59**	**46**	⇓P	**Pb**	**12 34 10.1**	**-0.6**
KK07				⇓S	**Sb**	**12 34 18.8**	**-0.9**
KK08	**Karatay Array**	**0.59**	**44**	⇑P	**Pb**	**12 34 10.1**	**-0.7**
KK08				⇑S	**Sb**	**12 34 18.8**	**-1.0**
KK03	**Karatay Array**	**0.60**	**45**	⇓P	**Pb**	**12 34 10.3**	**-0.6**
KK03				⇑S	**Sb**	**12 34 19.2**	**-0.7**
KK01	**Karatay Array**	**0.60**	**45**	⇑P	**Pb**	**12 34 10.8**	**-0.2**
KK01				⇑S	**Sb**	**12 34 19.2**	**-0.8**
KK02	**Karatay Array**	**0.60**	**45**	⇑P	**Pb**	**12 34 10.8**	**-0.2**
KK02				⇓S	**Sb**	**12 34 19.5**	**-0.6**
KK31	**Karatay Array**	**0.60**	**45**	⇑P	**Pb**	**12 34 10.3**	**-0.7**
	0.8nm,0.3s,baz=211,slow=17,SNR=30						
KK31				⇑S	**Sb**	**12 34 18.6**	**-1.5**
	3.5nm,0.4s,baz=210,slow=30,SNR=12						
KKAR	**Karatay Array**	**0.60**	**45**	⇑*i*P	**Pb**	**12 34 11.1**	**+0.1**
	baz=32						
KKAR				⇑*i*S	**Sb**	**12 34 19.5**	**-0.6**
	baz=32						
KK04	**Karatay Array**	**0.60**	**45**	⇑P	**Pb**	**12 34 10.8**	**-0.3**
KK04				⇑S	**Sb**	**12 34 19.6**	**-0.6**
KK06	**Karatay Array**	**0.60**	**47**	⇓P	**Pb**	**12 34 11.0**	**-0.1**
KK06				⇑S	**Sb**	**12 34 19.2**	**-0.9**
KK09	**Karatay Array**	**0.61**	**44**	⇑P	**Pb**	**12 34 11.0**	**-0.2**
KK09				⇑S	**Sb**	**12 34 19.2**	**-1.1**
KK05	**Karatay Array**	**0.62**	**45**	⇓P	**Pb**	**12 34 10.8**	**-0.5**
KK05				⇓S	**Sb**	**12 34 19.1**	**-1.5**
TRKS	**Terek-Say**	**1.46**	**141**	⇑*i*P	**Pn**	**12 34 25.8**	**+0.4**
	baz=44						
TRKS				⇑*i*S	**Sg**	**12 34 44.7**	**+0.1**
	baz=44						
ARK	**Arkit**	**1.75**	**120**	⇑*i*P	**Pn**	**12 34 29.6**	**+0.3**
	baz=19						
ARK				⇑*i*S	**Sn**	**12 34 51.4**	**-1.0**
	baz=19						
MNAS	**Manas**	**1.92**	**95**	⇑*i*P	**Pb**	**12 34 32.8**	**-0.7**
	baz=93						
MNAS				⇑*i*S	**Sn**	**12 34 56.9**	**+0.4**
	baz=93						
EKS2	**Erkin-Say**	**2.84**	**89**	⇑*i*P	**Pn**	**12 34 46.2**	**+1.9**
	baz=87						
EKS2				⇑*i*S	**Sn**	**12 35 20.0**	**+0.7**
	baz=87						
AML	**Almayashu**	**2.84**	**100**	⇑*e*P	**Pn**	**12 34 46.2**	**+1.6**
	baz=99						
AML				⇑*i*S	**Sn**	**12 35 20.0**	**+0.2**
	baz=99						
ARLS	**Aral**	**3.37**	**103**	⇓*i*P	**Pn**	**12 34 53.0**	**+1.4**
	baz=2.0						
ARLS				⇓*i*S	**Sn**	**12 35 31.8**	**-0.5**
	baz=2.0						
UCH	**Uchtor**	**3.43**	**96**	⇓*e*P	**Pn**	**12 34 54.4**	**+1.8**
	baz=95						
UCH				⇓*i*S	**Sn**	**12 35 34.1**	**-0.1**
	baz=95						

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*ROM **11** 12:35:32.2±0.3, 39°.78N±0°.01×15°.89E±0°.04, h277km±2km, ML3.4/17, Error ellipse: s-maj=3.0km s-min=0.6km az=91.0*

*LDG **11** 12:35:32.1±0.1, 39°.86N×15°.93E, h284km, Ml3.1/14, Error ellipse: s-maj=2.7km s-min=1.6km az=41.0*

*IDC **11** 12:35:37.1±1.6, 39°.97N×15°.69E, h307km±17km, mb3.1/7, mbtmp3.7/11, Error ellipse: s-maj=30.7km s-min=13.6km az=99.0*

ISC 11 12:35:33.1±0.8**, 39°.82N**±0°.07×**15°.86E**±0°.07**, h269**km±6km**, n88, σ**$0^{s}.$**92**/111**, mb3.5**/6**, 2C-4D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMN	**Mormanno**	**0.13**	**54**	P	**Pn**	**12 36 08.4**	**+0.8**
CUC	**Castrocucco**	**0.18**	**350**	⇓P	**Pn**	**12 36 08.1**	**+0.4**
CUC				S	**S**	**12 36 34.5**	**-0.6**
CUC				AML	AML		
	comp=E,366μm,0.7s						
CUC				AML	AML		
	comp=N,156μm,0.6s						
CUC				AML	AML		
	comp=N,123μm,0.6s						
CUC				AML	AML		
	comp=E,308μm,0.7s						
CUC				AML	AML		
	comp=E,366μm,1.3s						
CUC				AML	AML		
	comp=E,308μm,1.3s						
CUC				AML	AML		
	comp=N,156μm,0.6s						
CUC				AML	AML		
	comp=N,123μm,0.6s						
SIRI	**Monte Sirino -**	**0.37**	**1**	P	**Pn**	**12 36 08.6**	**+0.5**
SIRI				AML	AML		
	comp=N,292μm,0.5s						
SIRI				AML	AML		
	comp=E,356μm,0.3s						
SIRI				AML	AML		
	comp=E,362μm,0.3s						
SIRI				AML	AML		
	comp=N,292μm,0.5s						
SIRI				AML	AML		
	comp=N,284μm,0.5s						
MGR	**Morigerati**	**0.40**	**324**	⇓P	**Pn**	**12 36 08.7**	**+0.8**
MGR				S	**S**	**12 36 36.1**	**+0.6**
MGR				AML	AML		
	comp=E,123μm,1.3s						
MGR				AML	AML		
	comp=N,112μm,0.2s						
MGR				AML	AML		
	comp=E,123μm,0.7s						
TDS	**Terranova Siba**	**0.40**	**113**	P	**Pn**	**12 36 09.4**	**+1.3**
TDS				S	**S**	**12 36 36.5**	**+0.9**
TDS				AML	AML		
	comp=N,130μm,0.6s						
TDS				AML	AML		
	comp=N,130μm,0.6s						
TDS				AML	AML		
	comp=E,208μm,0.4s						
SCHR	**S. Chirico Rap**	**0.42**	**24**	P	**Pn**	**12 36 09.0**	**+0.9**
SCHR				S	**S**	**12 36 36.1**	**+0.3**
MTSN	**Montesano sull**	**0.46**	**350**	P	**Pn**	**12 36 08.7**	**+0.5**
MTSN				AML	AML		
	comp=E,106μm,1.1s						
MTSN				AML	AML		
	comp=N,101μm,1.6s						
MTSN				AML	AML		
	comp=N,101μm,0.4s						
MTSN				AML	AML		
	comp=E,106μm,0.9s						
MCEL	**Monticello**	**0.51**	**355**	P	**Pn**	**12 36 09.7**	**+1.3**
MCEL				AML	AML		
	comp=E,248μm,0.6s						
MCEL				AML	AML		
	comp=N,179μm,0.5s						
MCEL				AML	AML		
	comp=N,179μm,1.5s						
MCEL				AML	AML		
	comp=E,248μm,1.4s						
ORI	**Oriolo Calabro**	**0.52**	**61**	P	**Pn**	**12 36 09.2**	**+0.9**
AG11	**Viggiano (PZ)**	**0.52**	**8**	P	**Pn**	**12 36 09.6**	**+1.2**
AG11				S	**S**	**12 36 36.6**	**+0.4**
SLCN	**Sala Consilina**	**0.60**	**343**	P	**Pn**	**12 36 09.5**	**+0.8**
CAR1	**CAROLEI**	**0.62**	**154**	P	**Pn**	**12 36 09.0**	**+0.2**
CAR1				S	**S**	**12 36 34.8**	**-2.1**
CAR1				AML	AML		
	comp=E,1160μm,0.4s						
CAR1				AML	AML		
	comp=N,1360μm,0.5s						
CAR1				AML	AML		
	comp=N,1265μm,0.9s						
CAR1				AML	AML		
	comp=N,1355μm,0.5s						
CAR1				AML	AML		
	comp=N,1355μm,1.5s						
CAR1				AML	AML		
	comp=E,1400μm,0.4s						
CAR1				AML	AML		
	comp=E,1160μm,0.4s						
SPS2	**Spezzano della**	**0.64**	**144**	P	**Pn**	**12 36 10.3**	**+1.5**
SPS2				AML	AML		
	comp=E,222μm,0.8s						
SPS2				AML	AML		
	comp=N,313μm,0.3s						
CELI	**Celico**	**0.65**	**129**	P	**Pn**	**12 36 10.2**	**+1.3**
CELI				S	**S**	**12 36 37.5**	**+0.4**
CMPR	**Campora**	**0.66**	**320**	P	**Pn**	**12 36 09.6**	**+0.9**
CRAC	**Craco**	**0.70**	**39**	P	**Pn**	**12 36 09.6**	**+0.7**
PTRP	**Pietrapertosa**	**0.72**	**12**	P	**Pn**	**12 36 09.9**	**+0.9**
CDRU	**Civita di Ruta**	**0.80**	**328**	P	**Pn**	**12 36 10.3**	**+0.9**
PIPA	**Pietrapaola**	**0.81**	**114**	P	**Pn**	**12 36 10.3**	**+0.9**
PIPA				AML	AML		
	comp=E,510μm,0.5s						
PIPA				AML	AML		
	comp=N,514μm,1.4s						
PIPA				AML	AML		
	comp=N,514μm,0.6s						
PIPA				AML	AML		
	comp=E,510μm,1.5s						
MIGL	**Miglionico**	**0.91**	**29**	P	**Pn**	**12 36 10.1**	**+0.4**
TIP	**Timpagrande**	**0.94**	**132**	P	**Pn**	**12 36 10.9**	**+0.8**
TIP				S	**S**	**12 36 38.7**	**-0.6**
TIP				AML	AML		
	comp=E,209μm,1.4s						
TIP				AML	AML		
	comp=N,231μm,0.7s						
TIP				AML	AML		
	comp=E,244μm,0.3s						
TIP				AML	AML		
	comp=N,284μm,0.7s						
TIP				AML	AML		
	comp=N,284μm,1.3s						
TIP				AML	AML		
	comp=N,231μm,1.3s						
TIP				AML	AML		
	comp=E,208μm,1.4s						
MRLC	**Muro Lucano**	**0.98**	**343**	P	**Pn**	**12 36 11.0**	**+0.9**
SERS	**Sersale**	**1.01**	**140**	P	**Pn**	**12 36 11.2**	**+0.7**
SERS				AML	AML		
	comp=N,280μm,1.0s						
SERS				AML	AML		
	comp=E,412μm,1.2s						
SERS				AML	AML		
	comp=N,280μm,1.0s						
SERS				AML	AML		
	comp=N,280μm,1.0s						
SERS				AML	AML		
	comp=E,412μm,0.8s						
LADO	**San Nicola del**	**1.02**	**121**	P	**Pn**	**12 36 11.2**	**+0.8**
MATE	**Matera**	**1.05**	**38**	P	**Pn**	**12 36 10.8**	**+0.4**
MATE				S	**S**	**12 36 38.7**	**-1.2**
MATE				AML	AML		
	comp=E,230μm,1.2s						
MATE				AML	AML		
	comp=N,246μm,0.9s						
MATE				AML	AML		
	comp=N,246μm,1.1s						
MATE				AML	AML		
	comp=E,230μm,0.8s						
LTRZ	**Laterza**	**1.08**	**43**	P	**Pn**	**12 36 10.8**	**+0.2**
LTRZ				S	**S**	**12 36 38.9**	**-1.4**
GRI	**Girifalco**	**1.08**	**156**	P	**Pn**	**12 36 11.8**	**+1.0**
GRI				AML	AML		
	comp=E,608μm,0.4s						
GRI				AML	AML		
	comp=N,460μm,0.4s						
GRI				AML	AML		
	comp=N,460μm,1.6s						
PALZ	**Palazzo San Ge**	**1.13**	**4**	P	**Pn**	**12 36 11.4**	**+0.5**
JOPP	**Joppolo**	**1.21**	**179**	⇑P	**Pn**	**12 36 11.6**	**0.0**
JOPP				S	**S**	**12 36 39.6**	**-2.3**
JOPP				AML	AML		
	comp=E,508μm,0.9s						
JOPP				AML	AML		
	comp=N,618μm,0.7s						
SNAL	**S. Angelo Dei**	**1.21**	**336**	P	**Pn**	**12 36 12.5**	**+1.0**
AMUR	**Altamura**	**1.23**	**27**	⇓P	**Pn**	**12 36 12.3**	**+0.8**
MRVN	**Minervino Murg**	**1.27**	**12**	⇓P	**Pn**	**12 36 12.4**	**+0.6**
CAFE	**Carife**	**1.30**	**339**	P	**Pn**	**12 36 13.4**	**+1.4**
TAR1	**Taranto**	**1.30**	**57**	P	**Pn**	**12 36 12.4**	**+0.5**
NOCI	**Noci**	**1.34**	**43**	P	**Pn**	**12 36 12.8**	**+0.7**
NOCI				AML	AML		
	comp=N,288μm,0.7s						
NOCI				AML	AML		
	comp=E,201μm,1.4s						
PLAC	**Placanica**	**1.44**	**162**	⇑P	**Pn**	**12 36 13.4**	**+0.4**
PLAC				AML	AML		
	comp=E,520μm,0.3s						
PLAC				AML	AML		
	comp=N,618μm,1.6s						
PLAC				AML	AML		
	comp=E,626μm,1.6s						
PLAC				AML	AML		
	comp=E,520μm,0.3s						
PLAC				AML	AML		
	comp=N,617μm,1.6s						
PLAC				AML	AML		
	comp=N,544μm,0.3s						
PLAC				AML	AML		
	comp=E,520μm,1.7s						
PLAC				AML	AML		
	comp=N,544μm,1.7s						
PLAC				AML	AML		
	comp=E,626μm,0.4s						
PLAC				AML	AML		
	comp=N,617μm,0.4s						
MSRU	**Castanea**	**1.57**	**190**	P	**Pn**	**12 36 13.7**	**-0.3**
MSRU				S	**S**	**12 36 44.1**	**-2.1**
MSRU				AML	AML		
	comp=E,526μm,1.4s						
MSRU				AML	AML		
	comp=N,378μm,1.1s						
MSRU				AML	AML		
	comp=N,378μm,0.9s						
MSRU				AML	AML		
	comp=E,526μm,0.6s						
VPL	**Vulcano Piano**	**1.59**	**206**	P	**Pn**	**12 36 15.3**	**+1.2**
MESG	**Mesagne**	**1.71**	**63**	P	**Pn**	**12 36 15.4**	**+0.7**
SOI	**Samo**	**1.75**	**175**	P	**Pn**	**12 36 15.3**	**0.0**
NOV	**Novara**	**1.87**	**198**	P	**Pn**	**12 36 16.9**	**+0.5**
MSAG	**Monte S. Angel**	**1.90**	**1**	P	**Pn**	**12 36 17.0**	**+0.6**
AIO	**Antillo**	**1.91**	**195**	P	**Pn**	**12 36 17.2**	**+0.7**
MUCR	**Ucria**	**1.93**	**204**	P	**Pn**	**12 36 17.5**	**+0.7**
MODR	**Mondragone**	**2.01**	**312**	P	**Pn**	**12 36 18.8**	**+1.5**
MSFR	**San Fratello**	**2.04**	**209**	P	**Pn**	**12 36 18.8**	**+1.1**
EPZF	**Pizzo Felice**	**2.14**	**202**	P	**Pn**	**12 36 20.0**	**+1.3**
CSLB	**Castelbuono**	**2.34**	**217**	P	**Pn**	**12 36 21.6**	**+1.2**
HLNI	**Lentini**	**2.58**	**198**	P	**Pn**	**12 36 22.9**	**+0.2**
VAE	**Valguarnera**	**2.59**	**206**	P	Pn	12 36 31.6	+8.8
	comp=E,30nm,0.8s,baz=25,slow=22,SNR=4.4						
MEU	**Monte Lauro**	**2.81**	**195**	P	**Pn**	**12 36 25.3**	**+0.3**
VLO	**Vlora**	**2.86**	**76**	AML	AML		
	comp=N,810μm,1.7s						
VLO				AML	AML		
	comp=N,810μm,0.3s						
VLO				AML	AML		
	comp=E,832μm,0.5s						
PGF	**Pioggiola**	**5.85**	**300**	*e*P	**Pn**	**12 37 00.3**	**+0.4**
PGF				*e*Sn	**S**	**12 38 09.6**	**+0.2**
	comp=E,0.5nm,0.3s						
ABTA	**Abfaltersbach**	**7.34**	**342**	*e*Pn	**Pn**	**12 37 19.5**	**+1.2**
	comp=E,6.1nm,0.4s						
SBF	**Sospel**	**7.47**	**305**	*e*P	**Pn**	**12 37 20.4**	**+0.5**
SBF				*e*Sn	**S**	**12 38 45.9**	**-0.1**
	comp=E,1.7nm,0.2s						
KBA	**Koelnbreinsper**	**7.49**	**347**	*i* Pn	**Pn**	**12 37 21.3**	**+1.2**
	comp=E,1.1nm,0.4s						
LMR	**La Mourre**	**7.84**	**300**	*e*P	**Pn**	**12 37 24.8**	**+0.4**
LMR				*e*Sn	**S**	**12 38 54.1**	**-0.1**
	comp=E,0.7nm,0.3s						
BIOA	**Bad Ischl, Aus**	**8.04**	**349**	*i* Pn	**Pn**	**12 37 28.7**	**+1.9**
	comp=E,1.0nm,0.3s						
WTTA	**Wattenberg**	**8.05**	**339**	*e*Pn	**Pn**	**12 37 29.0**	**+1.8**
	comp=E,2.2nm,0.5s						
FETA	**Feichten**	**8.11**	**334**	*e*Pn	**Pn**	**12 37 29.2**	**+1.3**
	comp=E,5.8nm,0.8s						
MOA	**Molln**	**8.11**	**352**	*i* Pn	**Pn**	**12 37 29.2**	**+1.4**
	comp=E,2.2nm,0.5s						
DAVOX	**Davos/Dischmat**	**8.21**	**330**	P	**Pn**	**12 37 30.9**	**+1.7**
	comp=E,1.7nm,0.4s,baz=157,slow=14,SNR=6.2						
MOTA	**Moosalm**	**8.28**	**337**	*i* Pn	**Pn**	**12 37 31.7**	**+1.7**
	comp=E,2.1nm,0.5s						
MBDF	**Montbardon**	**8.33**	**309**	*e*P	**Pn**	**12 37 31.1**	**+0.4**
MBDF				*e*Sn	**S**	**12 39 05.5**	**-0.2**
	comp=E,0.6nm,0.5s						
RETA	**Reutte**	**8.51**	**336**	*e*Pn	**Pn**	**12 37 34.4**	**+1.6**
	comp=E,2.4nm,0.3s						
DAVA	**Damuels**	**8.63**	**332**	*i* Pn	**Pn**	**12 37 35.5**	**+1.1**
	comp=E,1.9nm,0.3s						
SMRF	**Simiane la Rot**	**8.72**	**302**	*e*P	**Pn**	**12 37 35.7**	**+0.2**
SMRF				*e*Sn	**S**	**12 39 14.3**	**-0.2**
	comp=E,0.5nm,0.2s						
LPL	**La Plagne**	**8.81**	**313**	*e*P	**Pn**	**12 37 37.1**	**+0.4**
LPL				*e*Sn	**S**	**12 39 16.4**	**-0.4**
	comp=E,1.8nm,0.3s						
ORIF	**Oris-en-Rattie**	**8.97**	**308**	*e*P	**Pn**	**12 37 39.0**	**+0.4**
ORIF				*e*Sn	**S**	**12 39 20.1**	**-0.2**
	comp=E,0.7nm,0.3s						
GERES	**GERESS Array B**	**9.16**	**351**	P	**Pn**	**12 37 42.0**	**+1.1**
	comp=E,4.4nm,0.6s,baz=163,slow=13,SNR=31						
KHC	**Kasperske Hory**	**9.45**	**351**	*e*P	**Pn**	**12 37 45.2**	**+0.7**
CABF	**La Chapelle**	**9.84**	**317**	*e*P	**Pn**	**12 37 48.7**	**-0.8**
CABF				*e*Sn	**S**	**12 39 40.1**	**-0.2**
	comp=E,0.9nm,0.1s						
HINF	**Hinteralfeld**	**10.30**	**324**	*e*P	**Pn**	**12 37 54.5**	**-0.7**
HINF				*e*Sn	**S**	**12 39 50.6**	**-0.2**
	comp=E,1.7nm,0.5s						
CDF	**Champ du Feu**	**10.57**	**327**	*e*P	**Pn**	**12 37 58.6**	**+0.1**
CDF				*e*Sn	**S**	**12 39 56.8**	**-0.3**
	comp=E,0.6nm,0.3s						
HAU	**Haudompre**	**10.67**	**323**	*e*P	**Pn**	**12 37 59.4**	**-0.3**

SMF	Signal de Mont	11.10	312	*e*P	Pn	12 38 05.2	+0.1
SMF				*e*Sn	S	12 40 09.4	+0.2
	comp=E,1.0nm,0.4s						
BRG	Berggiesshubel	11.14	354	*e*P	P	12 38 07.2	-1.7
BRG				Amp		12 38 07.8	
	comp=Z,3.1nm,0.8s						
SSF	Saint Saulge	11.53	313	*e*P	Pn	12 38 10.7	+0.4
SSF				*e*Sn	S	12 40 19.3	+0.4
	comp=Z,0.5nm,0.2s						
BGF	Bois d'Agland	11.64	310	*e*P	Pn	12 38 11.7	0.0
BGF				*e*Sn	S	12 40 21.9	+0.5
	comp=Z,1.8nm,0.3s						
EKA	Eskdalemuir Ar	20.03	327	P	P	12 39 45.4	-0.5
	comp=Z,0.2nm,0.4s,baz=137,slow=11,SNR=4.8						
HFS	Hagfors	20.39	357	P	P	12 39 49.1	-0.5
	comp=Z,1.7nm,0.5s,baz=155,slow=11,SNR=14						
	comp=Z,1.7nm,0.5s						
NB2	NORSAR Subarra	21.44	354	P	P	12 40 00.4	+0.2
	comp=Z,0.8nm,0.7s,baz=170,slow=11						
NOA	NORSAR Array B	21.44	354	P	P	12 39 59.1	-1.1
	comp=Z,0.2nm,0.3s,baz=160,slow=9.6,SNR=4.7						
	comp=Z,0.2nm,0.3s						
FINES	FINESS Array B	22.55	13	P	P	12 40 10.3	+0.1
	comp=Z,1.8nm,0.7s,baz=172,slow=8.2,SNR=6.9						
	comp=Z,1.8nm,0.7s						
TORD	Torodi Ar. Bea	29.35	209	P	P	12 41 12.4	+0.9
	comp=Z,0.9nm,0.5s,baz=19,slow=9.3,SNR=13						
	comp=Z,0.9nm,0.5s						
ARCES	ARCESS Array B	30.22	7	P	P	12 41 18.8	+0.3
	comp=Z,7.4nm,1.1s,baz=183,slow=9.0,SNR=2.8						
	comp=Z,7.4nm,1.1s						
SCHQ	Schefferville	54.77	315	P	P	12 44 35.3	+0.4
	comp=Z,0.5nm,0.3s,baz=64,slow=14,SNR=1.4						
	comp=Z,0.5nm,0.3s						
SONM	Songino Array	62.20	50	P	P	12 45 26.7	+0.4
	comp=Z,0.2nm,0.5s,baz=270,slow=2.1,SNR=1.8						
	comp=Z,0.2nm,0.5s						

IDC ***11*** *12:53:28.6±1.9, 23°.27N×44°.99W, h0km, mb3.5/9, mbtmp3.5/9, Error ellipse: s-maj=61.9km s-min=22.0km az=8.0*

ISC 11 12:53:30.1±1.7**, 23°.3N**±0°.4×**45°.0W**±0°.1**, h10**km**, n9, σ0^s.49**/9**, mb3.5**/9**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	45.31	94	P	P	13 01 48.4	-0.1
	2.5nm,1.0s,baz=298,slow=7.0,SNR=7.7						
	2.5nm,1.0s						
GERES	GERESS Array B	52.38	45	P	P	13 02 42.6	+0.1
	0.6nm,0.9s,baz=285,slow=7.8,SNR=3.6						
	0.6nm,0.9s						
TXAR	Lajitas Array	52.49	290	P	P	13 02 43.7	0.0
	0.2nm,0.7s,baz=95,slow=6.4,SNR=2.5						
	0.2nm,0.7s						
NOA	NORSAR Array B	53.71	30	P	P	13 02 52.4	+0.3
	0.4nm,0.8s,baz=250,slow=7.3,SNR=2.0						
	0.4nm,0.8s						
PDAR	Pinedale Array	56.19	307	P	P	13 03 10.7	+0.1
	0.4nm,0.5s,baz=93,slow=10,SNR=5.7						
	0.4nm,0.5s						
YKA	Yellowknife Ar	60.24	330	P	P	13 03 37.3	-0.9
	0.2nm,0.7s,baz=102,slow=7.0,SNR=4.6						
	0.2nm,0.7s						
NVAR	Mina Array Bea	63.23	303	P	P	13 03 59.5	+0.3
	0.2nm,0.7s,baz=58,slow=3.6,SNR=2.4						
	0.2nm,0.7s						
BRTR	Keskin Array B	67.06	55	P	P	13 04 23.8	-0.2
	0.5nm,0.6s,baz=280,slow=4.2,SNR=2.1						
	0.5nm,0.6s						
ILAR	Eielson Array	74.13	334	P	P	13 05 07.0	+0.6
	1.1nm,1.1s,baz=60,slow=4.8,SNR=5.6						
	1.1nm,1.1s						

BGR ***11*** *12:53:35.1, 22°.42N×45°.12W, h10km, mb4.8*

MOS ***11*** *12:53:39.4±0.9, 23°.53N×44°.99W, h10km, mb5.0/39, Error ellipse: s-maj=9.3km s-min=6.9km az=48.4*

IDC ***11*** *12:53:39.0±0.5, 23°.50N×44°.98W, h0km, mb4.5/27, mbtmp4.5/27, MS3.7/12, Error ellipse: s-maj=17.1km s-min=12.1km az=167.0*

NEIC ***11*** *12:53:41.8±1.3, 23°.5N±0°.1×45°.0W±0°.1, h10km±1km, mb5.0/104, Error ellipse: s-maj=23.4km s-min=17.5km az=154.0*

ISC 11 12:53:41.5±0.4**, 23°.44N**±0°.08×**44°.99W**±0°.06**, h15**km**, n616, σ0^s.72**/613**, mb4.8**/147**, MS3.8**/17**, 12C-11D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	San Juan	20.48	259	P	P	12 58 17.3	-1.6
	4.0nm,0.3s,baz=32,slow=13,SNR=1.1						
	4.0nm,0.3s						
CELP	Cerrillos	20.88	259	P	P	12 58 23.0	-0.2
CELP				IAmb	IAmb	12 58 28.2	
	comp=Z,82nm,1.3s						
UUPR	Utuado, UPR, P	20.95	260	P	P	12 58 23.8	-0.2
SDDR	Presa de Saban	24.90	265	P	P	12 59 05.3	+1.1
SDDR				IAmb	IAmb	12 59 08.6	
	comp=Z,51nm,1.4s						
SDV	Santo Domingo	28.50	244	P	P	12 59 36.4	-0.3
	comp=Z,15nm,1.0s,baz=66,slow=7.7,SNR=7.5						
	comp=Z,15nm,1.0s						
SDV	Santo Domingo	28.50	244	P	P	12 59 37.1	+0.4
SDV	Santo Domingo	28.50	244	*e*P	P	12 59 36.9	+0.2
HRV	Adam Dziewonsk	29.11	317	P	P	12 59 42.0	+0.4
	baz=122						
PKME	Peaks-Kenny Pk	29.40	324	P	P	12 59 45.1	+0.8
	baz=130						
SGCB	S£o Gabriel d	31.74	226	*e*P	P	13 00 06.1	+0.9
RUSC	La Rusia	32.19	242	P	P	13 00 09.8	+0.1
PABK	Blue Knob Stat	32.85	309	P	P	13 00 15.2	+0.4
	baz=110						
BLA	Blacksburg	33.32	303	P	P	13 00 19.9	+1.0
	baz=104						
BLA	Blacksburg	33.32	303	P	P	13 00 19.8	+0.9
	baz=104						
JSC	Jenkinsville	33.39	297	P	P	13 00 19.8	+0.3
	baz=99						
KMSC	Kings Mountain	33.60	299	P	P	13 00 21.9	+0.6
	baz=100						
KMSC	Kings Mountain	33.60	299	P	P	13 00 22.9	+1.6
	baz=100						
HODGE	Hodges	34.20	297	P	P	13 00 27.5	+0.9
	baz=98						
P53A	Whipple	34.66	306	P	P	13 00 30.5	0.0
	baz=107						
P53A				P	P	13 00 30.5	0.0
	baz=107						
M53A	WI Miller and	34.75	310	P	P	13 00 31.8	+0.6
	baz=110						
O53A	New Philadelph	34.75	307	P	P	13 00 31.9	+0.6
	baz=108						
P52A	Corning	35.25	306	P	P	13 00 35.7	+0.2
	baz=106						
TZTN	Tazewell	35.62	300	P	P	13 00 38.8	0.0
	baz=101						
TKL	Tuckaleechee C	35.65	299	P	P	13 00 39.9	+0.8
	baz=99						
152A	Waverly Hall	36.07	294	P	P	13 00 43.0	+0.2
152A				IAmb	IAmb	13 01 40.1	
	comp=Z,49nm,1.8s						
152A	Waverly Hall	36.07	294	P	P	13 00 44.2	+1.4
	baz=94						
V51A	Loudon	36.14	299	P	P	13 00 44.1	+0.8
	baz=99						
T50A	Nancy	36.73	301	P	P	13 00 49.0	+0.7
T50A	Nancy	36.73	301	P	P	13 00 48.8	+0.5
	baz=100						
T50A				P	P	13 00 48.8	+0.5
	baz=100						
SAML	Samuel	36.78	211	P	P	13 00 49.2	+0.3
SAML	Samuel	36.78	211	P	P	13 00 49.2	+0.3
SAML				pmax	pmax		
	comp=Z,11nm,1.3s						
SAML	Samuel	36.78	211	*e*P	P	13 00 48.5	-0.4
W50A	Signal Mountai	36.83	298	P	P	13 00 50.9	+1.7
	baz=98						
P49A	Miami Univ. Ec	37.15	305	P	P	13 00 51.5	-0.4
	baz=104						
P49A	Miami Univ. Ec	37.15	305	P	P	13 00 52.1	+0.3
	baz=104						
R49A	Shelbyville	37.23	303	P	P	13 00 54.0	+1.5
	baz=102						
R49A				P	P	13 00 54.0	+1.5
	baz=102						
U49A	Red Boiling Sp	37.39	300	P	P	13 00 54.7	+0.8
	baz=99						
L48A	N Adams	37.58	309	P	P	13 00 55.1	-0.3
	baz=107						
L48A				P	P	13 00 55.1	-0.3
	baz=107						
Y49A	Blount Mountai	37.59	295	P	P	13 00 54.1	-1.5
	baz=95						
O48B	Farmland	37.65	306	P	P	13 00 56.0	-0.1
	baz=104						
O48B	Farmland	37.65	306	P	P	13 00 55.7	-0.4
	baz=104						
LRAL	Lakeview Retre	38.01	294	P	P	13 00 58.9	-0.3
	baz=94						
WCI	Wyandotte Cave	38.08	303	P	P	13 00 59.4	-0.4
	baz=101						
WCI	Wyandotte Cave	38.08	303	P	P	13 01 00.9	+1.2
	baz=101						
ESDC	Sonseca Array	38.16	55	P	P	13 00 59.0	-1.5
	comp=Z,3.7nm,1.2s,baz=251,slow=8.8,SNR=8.7						
	comp=Z,3.7nm,1.2s						
ESDC	Sonseca Array	38.16	55	P	P	13 00 59.9	-0.6
X48A	Hartselle	38.16	296	P	P	13 01 00.9	+0.5
	baz=95						
Z47A	Carrollton	38.92	294	P	P	13 01 07.9	+1.1
	baz=93						
WVT	Waverly	38.98	299	P	P	13 01 07.5	+0.2
WVT	Waverly	38.98	299	P	P	13 01 07.5	+0.2
WVT				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WVT	Waverly	38.98	299	P	P	13 01 07.2	-0.1
	baz=97						
WVT	Waverly	38.98	299	P	P	13 01 08.1	+0.8
	baz=97						
ETMB	Extrema	39.04	215	P	P	13 01 07.1	-0.8
ETMB	Extrema	39.04	215	*e*P	P	13 01 07.6	-0.3
P46A	Rosedale	39.05	305	P	P	13 01 08.4	+0.5
	baz=102						
PLAL	Pickwick Lake	39.06	297	P	P	13 01 09.2	+1.3
PLAL				IAmb	IAmb	13 01 10.3	
	comp=Z,32nm,1.1s						
OTAV	Otavalo	39.84	239	P	P	13 01 14.6	-0.7
OTAV	Otavalo	39.84	239	P	P	13 01 14.6	-0.7
OTAV				pmax	pmax		
	comp=Z,16nm,1.2s						
OTAV	Otavalo	39.84	239	*e*P	P	13 01 16.8	+1.5
W45A	Hickory Valley	39.98	297	P	P	13 01 15.9	+0.2
OXF	Oxford	40.11	296	P	P	13 01 17.3	+0.6
	baz=94						
L44A	Lake County Fo	40.14	308	P	P	13 01 17.2	+0.3
	baz=104						
Q44A	Meyer Farm, Va	40.30	303	P	P	13 01 19.1	+0.8
	baz=99						
S44A	Carbondale	40.31	301	P	P	13 01 19.8	+1.4
	baz=98						
HDIL	Hopedale	40.80	305	P	P	13 01 22.6	+0.2
	baz=101						
344A	Westbrook Farm	41.13	291	P	P	13 01 26.3	+1.0
	baz=90						
FVM	French Village	41.27	301	P	P	13 01 27.3	+1.1
	baz=97						
TIC	Toumodi	41.87	107	⇑ *i*P	P	13 01 34.6	+3.1
	comp=Z,4.0nm,0.2s						
CCM	Cathedral Cave	41.92	301	P	P	13 01 32.5	+0.9
CCM	Cathedral Cave	41.92	301	P	P	13 01 32.5	+0.9
CCM				pmax	pmax		
	comp=Z,19nm,1.0s						
CCM	Cathedral Cave	41.92	301	P	P	13 01 31.6	0.0
	baz=97						
CCM	Cathedral Cave	41.92	301	P	P	13 01 32.5	+0.9
	baz=97,SNR=8.7						
JFWS	Jewell Farm	41.99	309	P	P	13 01 32.4	+0.3
	baz=103						
N41A	Harden Midland	42.00	305	P	P	13 01 32.6	+0.4
N41A				IAmb	IAmb	13 01 33.9	
	comp=Z,32nm,1.1s						
N41A	Harden Midland	42.00	305	P	P	13 01 31.7	-0.5
	baz=100						
DBIC	Dimbokro	42.00	107	P	P	13 01 31.8	-0.7
	comp=Z,8.6nm,1.0s,baz=292,slow=9.9,SNR=5.7						
	comp=Z,8.6nm,1.0s						
LIC	Lamto	42.06	108	⇑ *i*P	P	13 01 32.8	-0.2
	comp=Z,42nm,1.0s						
SIV	San Ignacio	42.23	203	P	P	13 01 34.5	+0.2
	comp=Z,2.1nm,1.0s,baz=1.0,slow=9.9,SNR=4.6						
	comp=Z,2.1nm,1.0s						
KIC	Kosan Boka	42.24	107	⇑ *i*P	P	13 01 35.3	+0.8
	comp=Z,3.2nm,0.6s						
FCAR	Ozark Folk Cen	42.42	298	P	P	13 01 35.2	-0.6
L40A	Anamosa	42.52	307	P	P	13 01 36.9	+0.5
	baz=101						
WHAR	Wooly Hollow	42.52	297	P	P	13 01 36.9	+0.3
WHAR				IAmb	IAmb	13 01 38.0	
	comp=Z,35nm,1.1s						
G40A	Rib Lake	42.52	312	P	P	13 01 37.7	+1.2
	baz=105						
P40A	Paris	42.72	303	P	P	13 01 38.2	0.0
	baz=98,SNR=5.6						
R40A	Maddies Statio	42.74	302	P	P	13 01 38.0	-0.3
R40A				IAmb	IAmb	13 01 39.7	
	comp=Z,47nm,1.8s						
R40A	Maddies Statio	42.74	302	P	P	13 01 38.2	-0.2
	baz=96						
Z41A	Richland Creek	42.89	294	P	P	13 01 40.0	+0.4
	baz=90						
Z41A				P	P	13 01 40.0	+0.4
	baz=90						
U40A	Yellville	43.04	299	P	P	13 01 41.5	+0.7
	baz=94,SNR=5.6						
U40A				P	P	13 01 41.5	+0.7
	baz=94,SNR=5.6						
H10N2	ASCENSION HYDR	43.07	133	T	T	13 47 22.0	
	baz=317,slow=75,SNR=22						
H10N3	ASCENSION HYDR	43.07	133	T	T	13 47 25.2	
	baz=317,slow=75,SNR=23						
H10N1	ASCENSION HYDR	43.09	133	T	T	13 47 21.8	
	baz=317,slow=75,SNR=25						
BBSD	Serra de San D	43.17	202	*e*P	P	13 01 42.4	+0.5
FRB	Frobisher Bay	43.22	345	P	P	13 01 41.6	-0.2
	comp=Z,5.8nm,1.0s,baz=135,slow=6.4,SNR=5.2						
	comp=Z,5.8nm,1.0s						
S39A	Bolivar	43.52	301	P	P	13 01 44.9	+0.3
	baz=95						
MIAR	Mount Ida	43.55	296	P	P	13 01 45.2	+0.3
	baz=91						
MIAR	Mount Ida	43.55	296	P	P	13 01 45.4	+0.5
	baz=91						
K38A	Parkersburg	43.75	308	P	P	13 01 47.3	+0.9
	baz=100						
H10S3	ASCENSION HYDR	43.77	134	T	T	13 48 14.1	
	baz=316,slow=74,SNR=76						
H10S2	ASCENSION HYDR	43.79	134	T	T	13 48 15.4	
	baz=264,slow=74,SNR=56						
E38A	The Farm, Brul	43.79	314	P	P	13 01 47.0	+0.3
	baz=106						
N38A	Joes South For	43.80	305	P	P	13 01 47.4	+0.6
	baz=98						
P38A	Dawn	43.87	303	P	P	13 01 47.8	+0.3
P38A	Dawn	43.87	303	P	P	13 01 47.7	+0.3
	baz=97						
HHAR	Hobbs	43.91	299	P	P	13 01 48.1	+0.3
BBRB	Robore, Bolivi	43.92	201	*e*P	P	13 01 48.9	+1.0
SCIA	State Center	43.95	307	P	P	13 01 48.8	+0.8
	baz=99						
SCIA	State Center	43.95	307	P	P	13 01 49.5	+1.4
	baz=99						
EYMN	Ely	44.13	316	P	P	13 01 49.6	+0.2
	baz=107						
EYMN	Ely	44.13	316	P	P	13 01 49.6	+0.2
	baz=107						
U38A	Gravette	44.28	299		P	13 01 50.5	-0.3
U38A				IAmb	IAmb	13 01 52.5	
	comp=Z,42nm,1.8s						
U38A	Gravette	44.28	299	P	P	13 01 51.1	+0.3
	baz=93						
SPMN	Marine on St.	44.30	311	P	P	13 01 51.3	+0.5
	baz=103						
SPMN	Marine on St.	44.30	311	P	P	13 01 51.6	+0.9
	baz=103						
I37A	Lemond, Waseca	44.46	310	P	P	13 01 52.5	+0.4
I37B	Waseca	44.46	310	P	P	13 01 52.7	+0.6
	baz=101						
NATX	Nacogdoches	44.48	292	P	P	13 01 52.6	+0.1
	baz=88						
NATX	Nacogdoches	44.48	292	P	P	13 01 53.3	+0.9
	baz=88						
F36A	Milaca	44.93	312	P	P	13 01 56.3	+0.5
	baz=103						
X37A	Clayton	45.03	296	P	P	13 01 57.4	+0.7
	baz=90						
TORD	Torodi Ar. Bea	45.32	95	P	P	13 01 58.2	-1.0
	comp=Z,12nm,1.1s,baz=292,slow=7.7,SNR=13						
	comp=Z,12nm,1.1s						
TUL1	Leonard	45.40	298	P	P	13 01 59.9	+0.3
	baz=91						
TUL1	Leonard	45.40	298	P	P	13 01 60.0	+0.3
	baz=91						
LPAZ	La Paz	45.51	212	P	P	13 02 01.7	+0.3
	comp=Z,8.2nm,1.1s,baz=14,slow=9.8,SNR=11						
	comp=Z,8.2nm,1.1s						
LPAZ	La Paz	45.51	212	P	P	13 02 02.1	+0.7
LPAZ				IAmb	IAmb	13 02 04.1	
	comp=Z,14nm,1.1s						
LPAZ	La Paz	45.51	212	*e*P	P	13 02 02.3	+0.9
N35A	Tabor	45.62	305	P	P	13 02 01.1	-0.3
	baz=96						
ICESG	Greenland Ices	45.77	3	*i* P	P	13 02 03.5	+1.0
T35B	Sooner Cattle	46.01	299	P	P	13 02 03.8	-0.7
	baz=92						
KSU1	Kansas State U	46.20	302	P	P	13 02 06.0	0.0
KSU1	Kansas State U	46.20	302	P	P	13 02 05.9	0.0
	baz=94						
KSU1	Kansas State U	46.20	302	P	P	13 02 05.8	-0.1
	baz=94						
TAM	Tamanrasset	46.26	80	P	P	13 02 07.9	+1.1
TAM				IAmb	IAmb	13 02 09.3	
	comp=Z,10nm,1.0s						
TAM	Tamanrasset	46.26	80	P	P	13 02 07.9	+1.1
TAM				pmax	pmax		
	comp=Z,10.0nm,1.0s						
W35A	Tecumseh	46.27	297		P	13 02 06.4	-0.2
L34A	Svendsen Farm,	46.29	306	P	P	13 02 07.2	+0.6
L34A	Svendsen Farm,	46.29	306	P	P	13 02 07.3	+0.6
	baz=97,SNR=6.9						
SNF	Seneffe	46.60	42	*d*P	P	13 02 07.6	-1.3
DOU	Dourbes	46.68	42	*d*P	P	13 02 09.4	-0.1
	comp=Z,3.9nm,0.8s						
ECSD	EROS Data Cent	46.70	309	P	P	13 02 10.2	+0.3
	baz=98						
ECSD	EROS Data Cent	46.70	309	P	P	13 02 09.4	-0.5
	baz=98						
BMRD	Maredsous	46.84	42	*d*P	P	13 02 11.0	+0.2
WHTX	Lake Whitney,	46.84	293	P	P	13 02 12.4	+1.3
WHTX				IAmb	IAmb	13 02 14.1	
	comp=Z,23nm,1.1s						
WHTX	Lake Whitney,	46.84	293	P	P	13 02 11.8	+0.7
	baz=87						
WHTX	Lake Whitney,	46.84	293	P	P	13 02 12.3	+1.2
	baz=87						
BNI	Bardonecchia	46.94	50	P	P	13 02 12.2	+0.4
BNI	Bardonecchia	46.94	50	P	P	13 02 12.2	+0.4
BNI				pmax	pmax		
	comp=Z,28nm,1.3s						
435B	Jarrell	47.03	291	P	P	13 02 13.4	+0.8
	baz=86						
AGMN	Agassiz Nation	47.04	315	P	P	13 02 12.5	0.0
	baz=103						
AGMN	Agassiz Nation	47.04	315	P	P	13 02 12.8	+0.4
	baz=103						
BGES	Gesves	47.06	42	*d*P	P	13 02 12.1	-0.5
	comp=Z,5.3nm,1.1s						
RCHB	Rochefort	47.09	42	*d*P	P	13 02 11.7	-1.0
	comp=Z,5.2nm,1.1s						
CROK	Carrier	47.18	299		P	13 02 13.8	0.0
BCLA	Clavier	47.20	42	*d*P	P	13 02 13.5	-0.1
	comp=Z,5.7nm,1.2s						
FW03	Perrin-Whitt E	47.30	294	P	P	13 02 15.3	+0.6
FW03				IAmb	IAmb	13 02 16.7	
	comp=Z,37nm,1.4s						
BSTI	Sart Tilman	47.41	42	*d*P	P	13 02 15.7	+0.4
ULM	Lac du Bonnet	47.53	318	P	P	13 02 14.0	-2.2
	comp=Z,11nm,1.1s,baz=104,slow=7.0,SNR=6.4						
	comp=Z,11nm,1.1s						
WLF	Walferdange	47.54	43	P	P	13 02 16.0	-0.3
WLF				IAmb	IAmb	13 02 17.3	
	comp=Z,16nm,1.1s						
WLF	Walferdange	47.54	43	P	P	13 02 16.0	-0.3
WLF				pmax	pmax		
	comp=Z,16nm,1.1s						
WLF	Walferdange	47.54	43	*d*P	P	13 02 16.7	+0.4
	comp=Z,8.2nm,1.2s						
WLF	Walferdange	47.54	43	*e*P	P	13 02 16.6	+0.4
	comp=Z,18nm,1.1s,baz=259,slow=7.5						
BGNE	Belgrade	47.56	305	P	P	13 02 17.3	+0.7
BGNE	Belgrade	47.56	305	P	P	13 02 16.6	0.0
	baz=95						
BGNE	Belgrade	47.56	305	P	P	13 02 17.2	+0.6
	baz=95						
SENIN	Lac Senin/Sane	47.59	48	P	P	13 02 17.0	0.0
BHOU	Houvegnez	47.62	42	*d*P	P	13 02 17.1	+0.2
	comp=Z,9.4nm,1.1s						
MEM	Membach	47.69	42	*d*P	P	13 02 17.5	+0.1
	comp=Z,5.9nm,1.2s						
BTNL	Ternell	47.76	42	*d*P	P	13 02 18.3	+0.3
	comp=Z,11nm,1.2s						
R32A	Long Quarter,	47.80	301	P	P	13 02 18.8	+0.2
R32A	Long Quarter,	47.80	301	P	P	13 02 19.2	+0.7
	baz=92,SNR=5.1						
WMOK	Wichita Mounta	47.84	296	P	P	13 02 19.4	+0.5
	baz=89,SNR=8.4						
WMOK	Wichita Mounta	47.84	296	P	P	13 02 19.8	+0.8
	baz=89,SNR=8.4						
U32A	Winter Ranch,	48.00	299		P	13 02 20.9	+0.8
U32A	Winter Ranch,	48.00	299	P	P	13 02 20.8	+0.7
	baz=90						
K31A	O'Neill	48.12	307	P	P	13 02 21.8	+0.9
	baz=96						
KEST	Kesra	48.27	62	P	P	13 02 22.1	-0.1
	comp=Z,18nm,1.1s,baz=222,slow=6.4,SNR=5.8						
KEST				LR	LR	13 19 27.9	
	comp=Z,57nm,21.0s,baz=242,slow=32						
	comp=Z,18nm,1.1s						
AHRW	Bad Neuenahr-A	48.33	42	*e*P	P	13 02 23.4	+1.1
	comp=Z,22nm,1.0s,baz=259,slow=7.5						
SUSD	Miller	48.47	309	P	P	13 02 23.6	+0.1
	baz=97						
SUSD	Miller	48.47	309	P	P	13 02 23.7	+0.1
	baz=97						
CBKS	Cedar Bluff	48.62	302	P	P	13 02 24.8	-0.1
	baz=92						
CBKS	Cedar Bluff	48.62	302	P	P	13 02 24.6	-0.2
	baz=92						
BFO	Black Forest	48.64	45	P	P	13 02 25.0	+0.1
BFO				IAmb	IAmb	13 02 27.5	
	comp=Z,14nm,1.0s						
BFO	Black Forest	48.64	45	P	P	13 02 25.0	+0.1
BFO				pmax	pmax		
	comp=Z,14nm,1.0s						
BFO	Black Forest	48.64	45	*e*P	P	13 02 24.6	-0.3
	comp=Z,18nm,1.1s,baz=259,slow=7.5						
ABTX	Abilene, Hawle	48.66	294	P	P	13 02 25.0	-0.1
	baz=86						
ABTX	Abilene, Hawle	48.66	294	P	P	13 02 25.1	-0.1
	baz=86						
BUG	Bochum--Univer	48.67	41	*e*P	P	13 02 25.2	+0.2
	comp=Z,40nm,1.8s,baz=259,slow=7.5						
833A	Chaparral WMA,	48.85	288	P	P	13 02 26.8	0.0
	baz=83						
833A	Chaparral WMA,	48.85	288	P	P	13 02 26.6	-0.1
	baz=83						
JCT	Junction City	48.97	291	P	P	13 02 27.6	-0.1
	baz=84						
JCT	Junction City	48.97	291	P	P	13 02 27.2	-0.4
	baz=84						
TNS	Taunus Mts	49.11	43	*e*P	P	13 02 28.6	+0.2
	comp=Z,23nm,1.5s,baz=259,slow=7.5						
IBBN	Ibbenburen	49.19	40	*e*P	P	13 02 29.4	+0.5
	comp=Z,13nm,1.1s,baz=259,slow=7.5						
STU	Stuttgart	49.29	45	*e*P	P	13 02 30.0	+0.2
	comp=Z,37nm,0.9s,baz=259,slow=7.5						
SUMG	Summit	49.30	3	*i* P	P	13 02 32.0	+2.0
KASTN	Kahler Asten	49.31	42	*e*P	P	13 02 30.3	+0.3
	comp=Z,12nm,1.4s,baz=259,slow=7.5						
FCC	Fort Churchill	49.38	329	P	P	13 02 30.9	+0.6
FCC				IAmb	IAmb	13 02 31.9	
	comp=Z,13nm,0.9s						
FCC	Fort Churchill	49.38	329	P	P	13 02 30.9	+0.6
FCC				pmax	pmax		
	comp=Z,13nm,0.9s						
MDND	Maddock	49.41	314	P	P	13 02 30.4	-0.4
	baz=100						
MDND	Maddock	49.41	314	P	P	13 02 31.5	+0.7
	baz=100						
DAVA	Damuels	49.49	47	*e*P	P	13 02 32.3	+0.8

	comp=Z,21nm,1.3s						
DAVA	Damuels	49.49	47	*e*P	P	13 02 32.0	+0.5
	comp=Z,20nm,1.2s,baz=259,slow=7.5						
UBR	Ueberruh	49.70	47	*e*P	P	13 02 33.1	+0.1
	comp=Z,29nm,1.2s,baz=259,slow=7.5						
E28A	Huff	49.96	312	P	P	13 02 34.4	-0.6
	baz=98						
OSSC	Osservatorio P	50.00	52	P	P	13 02 35.9	+0.6
OSSC				IAmb	IAmb	13 02 45.1	
	comp=Z,18nm,1.1s						
FETA	Feichten	50.02	48	*e*P	P	13 02 36.3	+0.7
	comp=Z,18nm,1.1s						
RETA	Reutte	50.11	47	*e*P	P	13 02 36.9	+0.7
	comp=Z,6.6nm,1.1s						
POST	Post	50.18	294	P	P	13 02 37.6	+0.7
POST				IAmb	IAmb	13 02 38.3	
	comp=Z,26nm,0.9s						
AMTX	Amarillo	50.22	297	P	P	13 02 37.3	+0.1
	baz=87						
AMTX	Amarillo	50.22	297	P	P	13 02 38.0	+0.8
	baz=87,SNR=8.2						
RETH	Rethem/Aller,	50.24	40	*e*P	P	13 02 37.8	+0.9
	comp=Z,20nm,1.3s,baz=259,slow=7.5						
MOTA	Moosalm	50.32	47	*i* P	P	13 02 38.5	+0.6
	comp=Z,12nm,1.1s						
GTTG	Gottingen	50.33	42	*e*P	P	13 02 37.5	-0.2
	comp=Z,10.0nm,0.8s,baz=259,slow=7.5						
SQTA	Sankt Quirin	50.38	47	*e*P	P	13 02 38.8	+0.5
	comp=Z,24nm,1.3s						
OGNE	Ogallala	50.45	304	P	P	13 02 39.1	+0.2
	baz=92						
OGNE	Ogallala	50.45	304	P	P	13 02 39.9	+1.0
	baz=92						
CTI	Castel Tesino	50.53	49	P	P	13 02 39.1	-0.3
CTI				IAmb	IAmb	13 02 40.7	
	comp=Z,32nm,1.4s						
CTI	Castel Tesino	50.53	49	P	P	13 02 39.1	-0.3
CTI				pmax	pmax		
	comp=Z,31nm,1.4s						
NRDL	Niedersach Rie	50.63	40	*e*P	P	13 02 40.5	+0.7
	comp=Z,23nm,1.3s,baz=259,slow=7.5						
WATA	Walderalm	50.64	47	*e*P	P	13 02 39.5	-0.7
	comp=Z,18nm,1.1s						
CLZ	Clausthal	50.65	41	*e*P	P	13 02 40.1	+0.1
	comp=Z,14nm,1.3s,baz=259,slow=7.5						
WTTA	Wattenberg	50.67	47	*e*P	P	13 02 40.8	+0.3
	comp=Z,13nm,1.1s						
WTTA	Wattenberg	50.67	47	*e*P	P	13 02 40.4	-0.1
	comp=Z,12nm,1.1s,baz=259,slow=7.5						
GRF	Grafenberg Arr	50.76	44	*e*P	P	13 02 41.1	+0.1
	comp=Z,6.5nm,0.7s,baz=259,slow=7.5						
KSCO	Kaye Shedlock'	50.88	302	P	P	13 02 42.5	+0.3
KSCO				IAmb	IAmb	13 02 44.6	
	comp=Z,30nm,1.2s						
KSCO	Kaye Shedlock'	50.88	302	P	P	13 02 42.2	0.0
	baz=90						
KSCO	Kaye Shedlock'	50.88	302	P	P	13 02 42.5	+0.3
	baz=90						
ASSE	Asse, Remlinge	50.89	41	*e*P	P	13 02 42.5	+0.8
	comp=Z,14nm,1.4s,baz=259,slow=7.5						
BSEG	Bad Segeberg	51.09	39	*e*P	P	13 02 43.9	+0.6
	comp=Z,27nm,1.2s,baz=259,slow=7.5						
MSTX	Muleshoe	51.18	296	P	P	13 02 44.5	0.0
MSTX				IAmb	IAmb	13 02 45.7	
	comp=Z,21nm,1.1s						
MSTX	Muleshoe	51.18	296	P	P	13 02 44.8	+0.3
	baz=86,SNR=6.6						
MSTX	Muleshoe	51.18	296	P	P	13 02 45.1	+0.6
	baz=86,SNR=6.6						
MOX	Moxa	51.18	43	*e*P	P	13 02 44.1	+0.1
	comp=Z,31nm,2.0s,baz=259,slow=7.5						
ABTA	Abfaltersbach	51.20	48	*e*P	P	13 02 44.4	0.0
	comp=Z,9.7nm,1.1s						
FLTG	Flechtingen	51.27	41	*e*P	P	13 02 44.9	+0.2
	comp=Z,18nm,1.4s,baz=259,slow=7.5						
NEUB	Neuenburg	51.38	42	*e*P	P	13 02 45.8	+0.2
	comp=Z,13nm,1.1s,baz=259,slow=7.5						
ROTZ	Rotzenmuhle	51.41	44	*e*P	P	13 02 45.6	-0.2
	comp=Z,0.7nm,1.1s,baz=259,slow=7.5						
RJOB	Jochberg	51.51	47	*e*P	P	13 02 46.9	+0.2
	comp=Z,6.7nm,1.1s,baz=259,slow=7.5						
WERN	Wernitzgruen	51.60	44	*e*P	P	13 02 47.5	+0.2
	comp=Z,14nm,1.2s,baz=259,slow=7.5						
NKC	Novy Kostel	51.63	44	*e*P	P	13 02 47.9	+0.4
NKC	Novy Kostel	51.63	44	*e*P	P	13 02 47.9	+0.4
KBA	Koelnbreinsper	51.81	48	*e*P	P	13 02 48.7	-0.3
	comp=Z,7.5nm,0.9s						
KBA	Koelnbreinsper	51.81	48	*e*P	P	13 02 48.6	-0.5
	comp=Z,11nm,1.1s,baz=259,slow=7.5						
MYKA	Terra Mystica	51.97	48	*e*P	P	13 02 49.9	-0.2
	comp=Z,14nm,1.2s						
BIOA	Bad Ischl, Aus	52.07	47	*i* P	P	13 02 50.6	-0.2
	comp=Z,13nm,1.2s						
RSSD	Black Hills	52.08	308	P	P	13 02 51.4	+0.2
	baz=93						
RSSD	Black Hills	52.08	308	P	P	13 02 51.2	0.0
	baz=93						
CLL	Collm	52.16	42	*i* P	P	13 02 51.3	0.0
	comp=Z,13nm,1.4s						
CLL				*e*x	x	13 02 58.0	
CLL				*e*PP	PP	13 04 51.0	+1.4
CLL				AMS	AMS	13 21 00.0	
	comp=Z,100nm,19.5s						
CLL	Collm	52.16	42	*i* P	P	13 02 51.3	0.0
CLL				*e*		13 02 58.0	
CLL				pmax	pmax		
	comp=Z,13nm,1.4s						
CLL	Collm	52.16	42	*e*P	P	13 02 51.1	-0.2
	comp=Z,7.9nm,1.1s,baz=259,slow=7.5						
KHC	Kasperske Hory	52.20	45	*e*P	P	13 02 52.2	+0.4
KHC	Kasperske Hory	52.20	45	*i* P	P	13 02 51.2	-0.6
KHC				pmax	pmax		
	comp=Z,17nm,1.2s						
FFC	Flin Flon	52.23	322	P	P	13 02 51.5	-0.4
FFC				IAmb	IAmb	13 02 53.2	
	comp=Z,17nm,1.2s						
FFC	Flin Flon	52.23	322	P	P	13 02 51.5	-0.4
FFC				pmax	pmax		
	comp=Z,17nm,1.2s						
GEC2	GERESS Array S	52.25	46	P	P	13 02 51.1	-1.1
GEC2	GERESS Array S	52.25	46	*e*P	P	13 02 51.6	-0.6
	comp=Z,12nm,1.3s,baz=259,slow=7.5						
GERES	GERESS Array B	52.25	46	P	P	13 02 51.9	-0.4
	comp=Z,7.1nm,1.2s,baz=251,slow=6.9,SNR=18						
	comp=Z,7.1nm,1.2s						
GERES	GERESS Array B	52.25	46	P	P	13 02 52.0	-0.2
FBE	Freiberg	52.31	43	*e*P	P	13 02 52.8	+0.3
	comp=Z,14nm,1.0s,baz=259,slow=7.5						
T25A	Trinidad	52.33	300	P	P	13 02 53.6	+0.5
	baz=87						
TX31	Lajitas Ar. Si	52.43	290	P	P	13 02 53.7	-0.2
TX31	Lajitas Ar. Si	52.43	290	P	P	13 02 54.1	+0.2
	baz=82,SNR=6.8						
TX32	Lajitas Array	52.43	290	P	P	13 02 53.3	-0.6
TX32				IAmb	IAmb	13 02 54.9	
	comp=Z,24nm,1.9s						
TXAR	Lajitas Array	52.43	290	P	P	13 02 54.0	+0.1
	comp=Z,2.3nm,0.9s,baz=97,slow=8.2,SNR=20						
	comp=Z,2.3nm,0.9s						
TXAR	Lajitas Array	52.43	290	P	P	13 02 54.0	+0.1
MOA	Molln	52.51	47	*e*P	P	13 02 53.8	-0.3
	comp=Z,10nm,1.4s						
MOA	Molln	52.51	47	*e*P	P	13 02 54.0	0.0
	comp=Z,16nm,1.4s,baz=259,slow=7.5						
DGMT	Dagmar	52.54	314	P	P	13 02 54.0	-0.3
DGMT				IAmb	IAmb	13 02 55.7	
	comp=Z,15nm,1.1s						
DGMT	Dagmar	52.54	314	P	P	13 02 54.4	0.0
	baz=96						
DGMT	Dagmar	52.54	314	P	P	13 02 54.2	-0.1
	baz=96						
OBKA	Obir	52.58	49	*e*P	P	13 02 54.6	-0.1
	comp=Z,22nm,1.2s						
OBKA	Obir	52.58	49	*e*P	P	13 02 54.7	-0.1
	comp=Z,25nm,1.3s,baz=259,slow=7.5						
CKRC	Cesky Krumlov	52.64	46	*e*P	P	13 02 55.2	+0.2
CKRC	Cesky Krumlov	52.64	46	*e*P	P	13 02 55.2	+0.2
GDL2	Guadalupe Moun	52.67	293	P	P	13 02 55.3	-0.3
BRG	Berggiesshubel	52.67	43	*i* P	P	13 02 55.6	+0.3
BRG				Amp		13 02 57.7	
	comp=Z,7.7nm,1.2s						
BRG	Berggiesshubel	52.67	43	*i* P	P	13 02 55.5	+0.3
BRG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BRG	Berggiesshubel	52.67	43	*e*P	P	13 02 54.9	-0.3
	comp=Z,7.7nm,1.2s,baz=259,slow=7.5						
RUE	Ruedersdorf	52.83	41	*e*P	P	13 02 56.6	+0.3
	comp=Z,23nm,0.7s,baz=259,slow=7.5						
Q24A	Divide	52.84	302	P	P	13 02 57.5	+0.4
Q24A				IAmb	IAmb	13 02 59.3	
	comp=Z,24nm,1.1s						
Q24A	Divide	52.84	302	P	P	13 02 58.0	+0.9
	baz=88,SNR=8.0						
SOKA	Soboth	52.92	48	*e*P	P	13 02 56.5	-0.7
	comp=Z,5.8nm,1.1s						
SDCO	Great Sand Dun	53.17	300	P	P	13 03 00.5	+1.0
	baz=87						
SDCO	Great Sand Dun	53.17	300	P	P	13 03 00.4	+1.0
	baz=87						
ISCO	Idaho Springs	53.18	303	P	P	13 02 59.5	-0.1
	baz=89						
ISCO	Idaho Springs	53.18	303	P	P	13 03 00.6	+1.1
	baz=89						
ARSA	Arzberg	53.30	48	*e*P	P	13 02 59.6	-0.4
	comp=Z,10.0nm,1.1s						
ARSA	Arzberg	53.30	48	*e*P	P	13 02 59.1	-0.9
	comp=Z,10nm,1.2s,baz=259,slow=7.5						
N23A	Red Feather La	53.42	304	P	P	13 03 01.8	+0.5
	baz=89						
NB2	NORSAR Subarra	53.54	30	P	P	13 03 01.4	-0.1
	comp=Z,16nm,1.4s,baz=251,slow=7.9						
NOA	NORSAR Array B	53.54	30	P	P	13 03 01.2	-0.3
	comp=Z,4.0nm,1.1s,baz=251,slow=7.6,SNR=4.7						
	comp=Z,4.0nm,1.1s						
CONA	Conrad Observa	53.59	47	*e*P	P	13 03 01.9	-0.2
	comp=Z,7.1nm,1.4s						
MNTX	Cornudas Mount	53.59	293	P	P	13 03 02.2	-0.1
	baz=83						
MNTX	Cornudas Mount	53.59	293	P	P	13 03 01.9	-0.4
	baz=83						
LAO	LASA Array	53.76	312	P	P	13 03 03.3	-0.1
	baz=93						
LAO	LASA Array	53.76	312	P	P	13 03 03.5	+0.2
	baz=93						
K22A	Casper	53.84	307	P	P	13 03 03.8	-0.3
	baz=90,SNR=5.4						
K22A	Casper	53.84	307	P	P	13 03 04.1	-0.1
	baz=90						
RONA	Rosalia, Austr	53.86	47	*e*P	P	13 03 03.9	-0.2
	comp=Z,11nm,1.0s						
MECA	Mercedes	53.95	194	*e*P	P	13 03 05.0	+0.3
OSTC	Ostas	54.07	44	*e*P	P	13 03 05.3	-0.2
OSTC	Ostas	54.07	44	*e*P	P	13 03 05.3	-0.2
DPC	Dobruska-Polom	54.11	44	*e*P	P	13 03 06.5	+0.6
DPC	Dobruska-Polom	54.11	44	*e*P	P	13 03 06.5	+0.6
ANMO	Albuquerque	54.13	297	P	P	13 03 07.7	+1.3
ANMO	Albuquerque	54.13	297	*ce*P	P	13 03 06.8	+0.4
ANMO				pmax	pmax		
	comp=Z,12nm,1.4s						
ANMO	Albuquerque	54.13	297	P	P	13 03 06.8	+0.4
	baz=85						
ANMO	Albuquerque	54.13	297	P	P	13 03 07.8	+1.3
	baz=85,SNR=7.9						
S22A	4UR Ranch, Cre	54.22	301	P	P	13 03 08.0	+0.8
	baz=86,SNR=7.2						
KRLC	Kraliky	54.38	44	*e*P	P	13 03 07.6	-0.2
KRLC	Kraliky	54.38	44	*e*P	P	13 03 07.6	-0.2
MODS	Modra-Piesok	54.56	46	*e*P	P	13 03 09.2	+0.1
MODS				pmax	pmax		
	comp=Z,31nm,1.4s						
MODS	Modra-Piesok	54.56	46	*e*P	P	13 03 09.2	+0.1
Y22F	Passcal Instru	54.60	296	P	P	13 03 10.5	+0.7
	baz=84						
Y22A	Socorro	54.65	296	P	P	13 03 10.7	+0.5
	baz=84						
MORC	Moravsky Berou	54.84	45	P	P	13 03 10.6	-0.6
MORC	Moravsky Berou	54.84	45	P	P	13 03 10.6	-0.6
MORC				pmax	pmax		
	comp=Z,10.0nm,1.3s						
O20A	White River Ci	55.19	304	P	P	13 03 14.5	+0.5
	baz=87						
121A	Cookes Peak, D	55.50	294	P	P	13 03 17.7	+1.3
121A				IAmb	IAmb	13 03 19.0	
	comp=Z,22nm,1.1s						
121A	Cookes Peak, D	55.50	294	P	P	13 03 17.7	+1.3
	baz=82,SNR=7.8						
121A	Cookes Peak, D	55.50	294	P	P	13 03 17.6	+1.3
	baz=82,SNR=7.8						
MVCO	Mesa Verde	55.58	300	P	P	13 03 17.6	+0.6
MVCO	Mesa Verde	55.58	300	P	P	13 03 18.3	+1.3
	baz=85,SNR=7.2						
VYHS	Vyhne	55.61	46	*e*P	P	13 03 16.6	-0.1
VYHS				pmax	pmax		
	comp=Z,8.0nm,1.3s						
VYHS	Vyhne	55.61	46	*e*P	P	13 03 16.6	-0.1
RLMT	Red Lodge	55.84	310	P	P	13 03 19.0	+0.4
	baz=90,SNR=9.7						
PDAR	Pinedale Array	56.08	307	P	P	13 03 20.1	-0.3
	comp=Z,7.7nm,0.9s,baz=105,slow=4.5,SNR=34						
	comp=Z,7.7nm,0.9s						
BW06	Boulder Array	56.08	307	P	P	13 03 20.3	-0.2
BW06				IAmb	IAmb	13 03 21.6	
	comp=Z,20nm,1.1s						
BW06	Boulder Array	56.08	307	P	P	13 03 20.5	0.0
	baz=88,SNR=12						
GCMT	Greycliff	56.12	310	P	P	13 03 21.0	+0.4
EGMT	Eagleton	56.22	313	P	P	13 03 21.8	+0.6
	baz=92,SNR=8.8						
YMP	Mirror Lake Pl	56.47	309	P	P	13 03 24.0	+0.7
P18A	Preston Nutter	56.76	303	P	P	13 03 25.9	+0.4
P18A				IAmb	IAmb	13 03 27.3	
	comp=Z,15nm,0.8s						
H17A	Grant Village	56.78	309	P	P	13 03 26.7	+1.2
	baz=89						
W18A	Petrified Fore	56.79	298	P	P	13 03 26.1	+0.6
W18A				IAmb	IAmb	13 03 27.6	
	comp=Z,18nm,1.2s						
W18A	Petrified Fore	56.79	298	P	P	13 03 25.1	-0.4
	baz=83						
MOOW	Moose Ponds	56.92	308	P	P	13 03 26.7	+0.3
SRU	San Rafael Swe	57.01	302	P	P	13 03 27.8	+0.7
SRU	San Rafael Swe	57.01	302	P	P	13 03 27.8	+0.7
SRU				pmax	pmax		
	comp=Z,21nm,1.0s						
YMR	Madison River	57.05	309	P	P	13 03 28.1	+0.8
AHID	Auburn Hatcher	57.21	307	P	P	13 03 28.6	+0.1
AHID				IAmb	IAmb	13 03 30.4	
	comp=Z,27nm,1.6s						
BOZ	Bozeman (W)	57.50	310	P	P	13 03 30.8	+0.4
BOZ	Bozeman (W)	57.50	310	P	P	13 03 30.8	+0.4
BOZ				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BOZ	Bozeman (W)	57.50	310	P	P	13 03 30.9	+0.4
	baz=89,SNR=8.8						
HRY	Holter Researc	57.62	311	P	P	13 03 31.2	0.0
MPU	Maple Canyon	57.79	304	P	P	13 03 32.6	0.0
MPU				IAmb	IAmb	13 03 34.4	
	comp=Z,13nm,1.0s						
TUC	Tucson	58.05	294	P	P	13 03 35.4	+1.1
TUC				IAmb	IAmb	13 03 36.7	
	comp=Z,13nm,1.1s						
TUC	Tucson	58.05	294	P	P	13 03 35.4	+1.1
TUC				pmax	pmax		
	comp=Z,13nm,1.2s						
TUC	Tucson	58.05	294	P	P	13 03 35.3	+1.0
	baz=81						
LRM	Limekiln Ridge	58.07	310	P	P	13 03 33.9	-0.6
WUAZ	Wupatki	58.07	298	P	P	13 03 35.6	+1.1
	baz=82,SNR=7.6						
NLU	North Lily Min	58.14	304	P	P	13 03 35.4	+0.4
NLU				IAmb	IAmb	13 03 36.9	
	comp=Z,19nm,1.2s						
MSU	Marysvale	58.36	302	P	P	13 03 37.2	+0.6
MSU	Marysvale	58.36	302	P	P	13 03 37.2	+0.6
MVU	Marysvale	58.38	302	P	P	13 03 37.2	+0.4
DUG	Dugway, Tooele	58.68	304	P	P	13 03 39.5	+0.8
DUG				IAmb	IAmb	13 03 40.5	
	comp=Z,15nm,0.9s						
DUG	Dugway, Tooele	58.68	304	P	P	13 03 39.5	+0.8
DUG				pmax	pmax		
	comp=Z,15nm,0.9s						
DUG	Dugway, Tooele	58.68	304	P	P	13 03 39.6	+0.9
	baz=85,SNR=13						
MSO	Missoula	59.06	312	P	P	13 03 41.5	+0.3
	baz=88						
HLID	Hailey	59.59	308	P	P	13 03 46.0	+1.0
HLID	Hailey	59.59	308	P	P	13 03 46.0	+1.0
	baz=86,SNR=8.6						
Y14A	Wickenburg	59.63	297	P	P	13 03 46.5	+1.3
214A	Organ Pipe Nat	59.80	294	P	P	13 03 47.8	+1.4
	baz=80,SNR=8.9						
YKA	Yellowknife Ar	60.08	330	P	P	13 03 46.8	-0.9
	comp=Z,4.7nm,1.1s,baz=98,slow=7.6,SNR=24						
	comp=Z,4.7nm,1.1s						
Q12A	Willow Creek R	60.35	303	P	P	13 03 51.3	+1.0
ELK	Elko	60.46	305	P	P	13 03 51.5	+0.4
ELK				IAmb	IAmb	13 03 52.6	
	comp=Z,11nm,1.0s						
ELK	Elko	60.46	305	P	P	13 03 51.5	+0.4
ELK				pmax	pmax		
	comp=Z,11nm,1.0s						
PDMCI	Parker Dam,Lak	60.50	297	P	P	13 03 52.1	+1.0
	baz=80,SNR=5.6						
MLR	Muntele Rosu	60.51	50	P	P	13 03 51.2	-0.1
MLR	Muntele Rosu	60.51	50	P	P	13 03 51.2	-0.1
MLR				pmax	pmax		
	comp=Z,28nm,1.3s						
PLID	Pearl Lake	60.60	310	P	P	13 03 52.3	+0.3
PLID				IAmb	IAmb	13 03 53.4	
	comp=Z,15nm,1.0s						
FINES	FINESS Array B	60.65	31	P	P	13 03 51.4	-0.4
	comp=Z,3.6nm,0.9s,baz=276,slow=5.2,SNR=6.8						
	comp=Z,3.6nm,0.9s						
NACGM	Naroch	60.73	39	*e*P	P	13 03 53.2	+0.8
	comp=Z,10.0nm,0.9s,baz=270						
PRN	Pahroc Range	60.75	301	P	P	13 03 53.5	+0.5
PRN				IAmb	IAmb	13 03 55.7	
	comp=Z,13nm,1.1s						
R11A	Troy Canyon, C	61.03	302	P	P	13 03 55.6	+0.6
	baz=82,SNR=9.0						
NEW	Newport	61.15	313	P	P	13 03 56.1	+0.7
	baz=86,SNR=11						
GLA	Glamis	61.28	296	P	P	13 03 57.5	+0.9
	baz=79						
IRM	Iron Mountain	61.34	297	P	P	13 03 57.5	+0.6
	baz=80						
ARCES	ARCESS Array B	61.44	22	P	P	13 03 54.8	-2.2
	comp=Z,9.4nm,1.0s,baz=349,slow=4.9,SNR=4.3						
	comp=Z,9.4nm,1.0s						
GMRC	Granite Mounta	61.65	298	P	P	13 04 00.2	+1.0
	baz=80,SNR=8.2						
BC3	Big Chuckawall	61.68	297	P	P	13 03 60.0	+0.6
	baz=79						
TUQ	Turquoise Moun	61.75	299	P	P	13 04 00.4	+0.5
	baz=80						
TPNV	Topopah Spring	61.76	301	P	P	13 04 00.4	+0.5
TPNV				IAmb	IAmb	13 04 02.7	
	comp=Z,14nm,1.1s						
TPNV	Topopah Spring	61.76	301	P	P	13 04 00.4	+0.5
TPNV				pmax	pmax		
	comp=Z,14nm,1.2s						
TPNV	Topopah Spring	61.76	301	P	P	13 04 00.7	+0.7
	baz=81,SNR=8.9						
BELC	Belle Mtn. Jos	62.07	297	P	P	13 04 01.9	-0.1
	baz=79,SNR=5.5						
SWSC	Sam W. Stewart	62.10	296	P	P	13 04 02.3	+0.3
	baz=79						
HEC	Hector,Ludlow	62.19	298	P	P	13 04 02.8	0.0
	baz=80						
FURC	Furnace Creek,	62.33	300	P	P	13 04 04.1	+0.7
	baz=80						
AKASG	Malin Array Be	62.34	44	P	P	13 04 02.2	-1.1
	comp=Z,2.0nm,0.6s,baz=271,slow=5.9,SNR=12						
	comp=Z,2.0nm,0.6s						
AKASG	Malin Array Be	62.34	44	P	P	13 04 03.2	-0.1
AKASG	Malin Array Be	62.34	44	*c i*P	P	13 04 02.9	-0.4
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKBB	Malin Array Si	62.34	44	*ce*P	P	13 04 02.7	-0.6
AKBB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
IKP	In-Ko-Pah, Jac	62.41	296	P	P	13 04 04.4	+0.2
	baz=79						
GSC	Goldstone, Bar	62.48	299	P	P	13 04 05.4	+0.7
	baz=80						
TPFO	Pinon Flats	62.51	297	P	P	13 04 05.3	+0.3
	baz=79						
PFO	Pinyon Flats O	62.52	297	P	P	13 04 04.5	-0.5
PFO	Pinyon Flats O	62.52	297	*i* P	P	13 04 05.5	+0.5
PFO				pmax	pmax		
	comp=Z,37nm,3.6s						
PFO	Pinyon Flats O	62.52	297	P	P	13 04 04.4	-0.5
	baz=79						
J08A	Circle Bar Ran	62.55	308	P	P	13 04 05.1	+0.1
J08A				IAmb	IAmb	13 04 06.8	
	comp=Z,20nm,1.5s						
MONP2	Monument Peak	62.62	296	P	P	13 04 05.5	-0.3
	baz=79						
GRAC	Grapevine Rang	62.64	301	P	P	13 04 06.8	+1.2
GRAC	Grapevine Rang	62.64	301	P	P	13 04 06.1	+0.4
	baz=80						
BBRC	Big Bear Solar	62.77	298	P	P	13 04 06.9	+0.1
	baz=79						
MPMC	Manual Prospec	62.90	300	P	P	13 04 07.8	+0.2
	baz=80,SNR=8.0						
NV11	Mina Array Sit	63.02	302	P	P	13 04 08.3	0.0
NVAR	Mina Array Bea	63.13	303	P	P	13 04 09.5	+0.3
	comp=Z,2.0nm,0.8s,baz=86,slow=6.1,SNR=11						
	comp=Z,2.0nm,0.8s						
CWC	Cottonwood Cre	63.30	300	P	P	13 04 10.8	+0.6
	baz=80						
BFSC	Mount Baldy Ra	63.37	298	P	P	13 04 10.6	-0.1
	baz=79						
EDW2	Edwards Air Fo	63.52	299	P	P	13 04 12.0	+0.4
	baz=79,SNR=5.7						
ISA	Isabella, Lake	63.76	299	P	P	13 04 14.2	+1.1
ISA	Isabella, Lake	63.76	299	P	P	13 04 14.2	+1.1
ISA				pmax	pmax		
	comp=Z,18nm,1.2s						
ISA	Isabella, Lake	63.76	299	P	P	13 04 13.7	+0.5
	baz=79						
OMMB	Old Mammoth Mi	63.81	302	P	P	13 04 14.6	+0.8
OMMB				IAmb	IAmb	13 04 16.2	
	comp=Z,11nm,1.1s						
MDPB	Devils Postpil	63.87	302	P	P	13 04 15.4	+1.3
MDPB				IAmb	IAmb	13 04 16.6	
	comp=Z,12nm,1.1s						
MOD	Modoc Plateau	64.09	307	P	P	13 04 16.4	+1.1
MOD				IAmb	IAmb	13 04 17.2	
	comp=Z,15nm,1.2s						
ARVC	Arvin	64.15	299	P	P	13 04 16.2	+0.6
	baz=78						
WRGLY	Wrigley	64.16	330	P	P	13 04 15.8	+0.6
	baz=89,SNR=6.4						
VES	Vestal, Richgr	64.21	300	P	P	13 04 16.3	+0.3
	baz=79						
KOTAN	Kotaneelee Air	64.55	327	P	P	13 04 17.6	-0.2
	baz=87						
A36M	Sachs Harbour	64.89	340	P	P	13 04 20.1	+0.3
	baz=92,SNR=11						
SNCC	San Nicolas Is	65.10	297	P	P	13 04 21.6	-0.3
	baz=77						
J04A	Umpqua Nationa	65.19	308	P	P	13 04 22.7	+0.1
LIRD	Liard River Hi	65.64	326	P	P	13 04 25.1	+0.2
	baz=85						
OBN	Obninsk	66.34	38⇑	*e*P	P	13 04 30.2	+0.8
OBN				*e*		13 04 35.2	
OBN						13 06 58.0	
OBN				*e*S	S	13 13 18.2	-0.3
OBN				pmax	pmax		
	comp=Z,37nm,1.1s						
OBN				MLR	MLR		
	comp=Z,37nm,15.0s						
BR131	Keskin Array S	66.95	55	P	P	13 04 34.0	+0.1
BR131				IAmb	IAmb	13 04 35.9	
	comp=Z,13nm,1.2s						
BR131	Keskin Array S	66.95	55	P	P	13 04 34.0	+0.1
BR131				pmax	pmax		
	comp=Z,13nm,1.3s						
BRTR	Keskin Array B	66.95	55	P	P	13 04 33.5	-0.4
	comp=Z,3.0nm,0.9s,baz=258,slow=4.9,SNR=13						
BRTR				LR	LR	13 33 03.0	
	comp=Z,27nm,18.2s,baz=306,slow=35						
	comp=Z,3.0nm,0.9s						
BRTR	Keskin Array B	66.95	55	P	P	13 04 34.1	+0.3
BRTR	Keskin Array B	66.95	55	*c i*P	P	13 04 35.0	+1.1
BRTR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KLMR	Klimovskoe	67.17	32	*e*P	P	13 04 33.5	-1.1
KLMR				AMP		13 04 43.4	
	comp=Z,15nm,1.2s						
KLMR	Klimovskoe	67.17	32	*e*P	P	13 04 33.5	-1.1
KLMR				pmax	pmax		
	comp=Z,15nm,1.2s						
H09W1	TRISTAN DA CUN	67.62	152	T	T	14 18 19.2	
DLBC	Dease Lake	67.78	326	P	P	13 04 38.8	+0.2
	baz=81						
INK	Inuvik	67.92	336	P	P	13 04 38.8	-0.5
	baz=82,SNR=5.2						
F31M	Tsiigehtchic	68.12	335	P	P	13 04 40.6	+0.1

```
      baz=82
FARO  Faro, Yukon        68.79 330   P      P       13 04 44.9  0.0
      baz=80
P33M  Teslin, Yukon      68.89 328   P      P       13 04 45.8 +0.2
      baz=80
G30M  tAoh Zraii Nji     69.15 335   P      P       13 04 46.9 -0.2
      baz=79
M31M  Drury Creek, Y     69.27 330   P      P       13 04 48.6 +0.7
      baz=79
P32M  Atlin              69.45 327   P      P       13 04 49.6 +0.5
      baz=79
EPYK  Eagle Plains       69.46 335   P      P       13 04 49.2 +0.2
      baz=79
U33K  Whale Pass         69.85 323   P      P       13 04 52.2 +0.7
      baz=78
N31M  Braeburn, Yuko     70.06 329   P      P       13 04 53.1 +0.3
      baz=78
M30M  Minto, Yukon       70.29 331   P      P       13 04 53.8 -0.3
      baz=77
I29M  Ogilvie Camp,      70.31 334   P      P       13 04 54.0 -0.3
      baz=77
K29M  Barlow Dome        70.33 332   P      P       13 04 54.4 -0.1
      baz=77
O30N  Mendenhall         70.37 329   P      P       13 04 55.3 +0.7
      baz=77
N30M  Aishikik Lake      70.68 329   P      P       13 04 56.6  0.0
      baz=76
L29M  L29M               70.77 331   P      P       13 04 56.6 -0.5
      baz=76
E27K  Coleen River       70.89 337   P      P       13 04 57.9 +0.2
      baz=75
HYT   Haines Junctio     71.03 329   P      P       13 04 59.2 +0.4
      baz=76
M29M  Somme Creek        71.08 331   P      P       13 04 59.3 +0.2
      baz=76
DAWY  Dawson             71.08 332   P      P       13 04 59.0  0.0
DAWY                                 IAmb   IAmb    13 05 00.3
      comp=Z,9.7nm,1.1s
DAWY  Dawson             71.08 332   P      P       13 04 58.5 -0.5
      baz=76
C27K  Jago River         71.23 339   P      P       13 05 00.4 +0.7
      baz=74
G27K  Doyon Strip        71.28 335   P      P       13 05 00.0 -0.1
      baz=74
H27K  Steamboat Moun     71.38 335   P      P       13 05 00.4 -0.3
      baz=74
YUK6  Outpost Mounta     71.41 329   P      P       13 05 01.1 -0.2
      baz=75
YUK4  Talbot Arm         71.44 330   P      P       13 05 00.4 -1.0
      baz=75
C26K  Camden Bay         71.55 339   P      P       13 05 01.8 +0.3
      baz=72
I27K  Kandik River       71.59 334   P      P       13 05 02.0  0.0
      baz=74
EGAK  Eagle              71.63 333   P      P       13 05 02.5 +0.3
      baz=74
F26K  Sheenjek River     71.95 337   P      P       13 05 04.6 +0.5
      baz=72
G26K  Porcupine Rive     72.04 336   P      P       13 05 05.3 +0.7
      baz=72
YUK3  Moose Creek        72.16 330   P      P       13 05 06.0 +0.3
      baz=74
BVCY  Beaver Creek       72.16 331   P      P       13 05 05.0 -0.5
      baz=74
BMAR  Burnt Mountain     72.19 336   P      P       13 05 05.9 +0.4
D25K  Kavik River        72.22 339   P      P       13 05 05.1 -0.6
      baz=71
K27K  Chicken            72.23 333   P      P       13 05 04.9 -0.9
      baz=73
I26K  Coal Creek Min     72.29 334   P      P       13 05 06.2 +0.1
      baz=73
O28M  Mount Upton        72.31 329   P      P       13 05 06.6 -0.1
      baz=74
E25K  Arctic Village     72.33 337   P      P       13 05 06.9 +0.5
      baz=71,SNR=11
BCAR  Beaver Creek A     72.38 332   P      P       13 05 06.9 +0.1
L27K  Beaver Creek,      72.40 332   P      P       13 05 07.2 +0.3
KIV   Kislovodsk         72.51  49  eP      P       13 05 10.3 +2.3
KIV                                  pmax   pmax
      comp=Z,11nm,1.1s
KIV                                  MLR    MLR
      comp=Z,22nm,17.0s
F25K  Christian Rive     72.53 337   P      P       13 05 07.7 +0.1
      baz=71
PINM  Pinnacle           72.54 328   P      P       13 05 06.2 -1.6
      baz=74
KIRV  Kirov              72.54  33  iP      P       13 05 07.7  0.0
SHA1  Shidzhatmaz        72.55  49  iP      P       13 05 09.5 +1.1
M27K  Edge Creek, AK     72.63 331   P      P       13 05 09.0 +0.5
M27K  Edge Creek, AK     72.63 331   P      P       13 05 08.6 +0.2
      baz=73
J26L  Joseph Creek       72.70 333   P      P       13 05 08.2 -0.5
      baz=72
KBZ   Khabaz             72.72  49   P      P       13 05 08.4 -0.7
      comp=Z,4.0nm,1.0s,baz=16,slow=12,SNR=3.8
      comp=Z,4.0nm,1.0s
CTG   Chitna Glacier     72.80 329   P      P       13 05 09.0 -0.4
      baz=73
C24K  Franklin Bluff     72.85 339   P      P       13 05 08.8 -0.5
      baz=69
G25K  Bearman Lake       72.97 336   P      P       13 05 10.4 +0.2
      baz=70
SCRK  Sand Creek         73.04 333   P      P       13 05 10.9 +0.1
      baz=72
D24K  Happy Valley       73.10 339   P      P       13 05 11.7 +0.8
      baz=69
M26K  Nabesna, AK        73.11 331   P      P       13 05 11.0 -0.2
      baz=72
PRP   Porcupine Dome     73.17 335   P      P       13 05 11.7 +0.2
      baz=71
F24K  Squaw Lake         73.36 337   P      P       13 05 13.3 +0.8
      baz=69
E24K  Your Creek         73.38 338   P      P       13 05 13.1 +0.5
      baz=69
MCARA McCarthy VSAT      73.45 330   P      P       13 05 13.4 +0.3
      baz=72
G24K  Hadweenzic Riv     73.50 336   P      P       13 05 13.7 +0.4
      baz=69
GURO  Guroymak-BITLI     73.56  55   P      P       13 05 14.9 +0.5
GURO                                 IAmb   IAmb    13 05 17.2
      comp=Z,18nm,1.6s
E23K  Chandalar          73.78 338   P      P       13 05 14.9 -0.2
      baz=68
D23K  Nanushuk River     73.79 339   P      P       13 05 15.5 +0.5
      baz=67
K24K  Donnelly Dome      73.85 333   P      P       13 05 15.0 -0.5
      baz=70
IL31                     73.96 334   P      P       13 05 16.5 +0.5
IL31                                 IAmb   IAmb    13 05 25.8
      comp=Z,14nm,1.1s
ILAR  Eielson Array      73.96 334   P      P       13 05 16.6 +0.6
      comp=Z,6.3nm,0.9s,baz=69,slow=4.5,SNR=39
      comp=Z,6.3nm,0.9s
ILAR  Eielson Array      73.96 334   P      P       13 05 16.5 +0.4
ILAR  Eielson Array      73.96 334   P      P       13 05 16.5 +0.4
H24K  Noodor Dome        73.97 335   P      P       13 05 16.5 +0.4
H24K  Noodor Dome        73.97 335   P      P       13 05 16.8 +0.7
      baz=69
PAX   Paxson             74.01 332   P      P       13 05 16.6 +0.1
      baz=70
POKR  Poker Plat Res     74.06 335   P      P       13 05 17.4 +0.8
      baz=69
HARP  HAARP              74.07 332   P      P       13 05 16.9 +0.2
      baz=70
N25K  Chitina, Valde     74.09 331   P      P       13 05 17.3 +0.4
      baz=70
HDA   Harding Lake       74.12 334   P      P       13 05 17.2 +0.3
      baz=69
COLD  Coldfoot           74.30 337   P      P       13 05 18.7 +0.8
      baz=67
COLA  College            74.31 334   P      P       13 05 18.0  0.0
COLA                                 IAmb   IAmb    13 05 28.0
      comp=Z,16nm,1.2s
COLA  College            74.31 334  iP      P       13 05 18.5 +0.5
COLA                                 pmax   pmax
      comp=Z,8.0nm,1.0s
COLA  College            74.31 334   P      P       13 05 18.0  0.0
      baz=68
TCOL  CIGO, UAF Yank     74.32 334   P      P       13 05 18.3 +0.3
TCOL                                 IAmb   IAmb    13 05 28.0
      comp=Z,17nm,1.2s
TCOL  CIGO, UAF Yank     74.32 334   P      P       13 05 17.9 -0.2
      baz=68
CCB   Clear Creek Bu     74.38 334   P      P       13 05 19.0 +0.6
CCB                                  IAmb   IAmb    13 05 28.3
      comp=Z,19nm,1.2s
G23K  Bananza Creek      74.44 337   P      P       13 05 19.5 +0.7
      baz=67
E22K  Anaktuvuk Pass     74.50 338   P      P       13 05 19.5 +0.3
      baz=66
WRH   Wood River Hil     74.56 334   P      P       13 05 19.5  0.0
WRH                                  IAmb   IAmb    13 05 29.3
      comp=Z,9.9nm,1.0s
H23K  Yukon River        74.61 336   P      P       13 05 20.1 +0.3
H23K                                 IAmb   IAmb    13 05 30.7
      comp=Z,18nm,1.1s
H23K  Yukon River        74.61 336   P      P       13 05 20.5 +0.7
      baz=67
M24K  Tolsona, Glenn     74.61 331   P      P       13 05 20.6 +0.6
      baz=69
KLU   Klutina            74.72 331   P      P       13 05 20.5 -0.1
      baz=69
I23K  Minto, Yukon-K     74.80 335   P      P       13 05 21.5 +0.6
      baz=67
F22K  John River         74.89 338   P      P       13 05 22.1 +0.7
      baz=65
NEA2  Nenana             74.90 334   P      P       13 05 22.1 +0.6
      baz=67
GNI   Garni              75.08  52ceP      P       13 05 25.0 +1.8
GNI                                  pmax   pmax
      comp=Z,23nm,1.7s
MCK   McKinley           75.18 333   P      P       13 05 23.7 +0.5
      baz=67,SNR=5.5
SCM   Sheep Creek Mo     75.22 331   P      P       13 05 23.5  0.0
      baz=68
H22K  Ishtalitna Cre     75.27 336   P      P       13 05 24.1 +0.5
      baz=66
MLY   Manley             75.38 335   P      P       13 05 25.1 +0.8
      baz=66
M23K  Glacier View       75.41 331   P      P       13 05 25.8 +1.2
      baz=68
F21K  Alatna River       75.47 338   P      P       13 05 24.7 -0.1
      baz=64
SML   Sawmill            75.67 332   P      P       13 05 25.5 -0.5
      baz=67
G21K  Allakaket          75.79 337   P      P       13 05 27.6 +1.1
      baz=64,SNR=7.0
I21K  Tanana             75.80 335   P      P       13 05 27.3 +0.6
      baz=65
TRF   Thorofare Moun     75.85 333   P      P       13 05 27.4 +0.2
      baz=66
BPAW  Bear Paw Mtn.      75.86 334   P      P       13 05 27.3 +0.2
      baz=66
KNK   Knik Glacier       75.88 331   P      P       13 05 27.2  0.0
      baz=67
H21K  Melozitna Rive     75.91 336   P      P       13 05 27.9 +0.6
      baz=64
PWL   Port Wells         76.04 331   P      P       13 05 27.8 -0.4
      baz=67
PMR   Palmer             76.11 331   P      P       13 05 28.6 +0.2
      baz=66
IMAR  Indian Mountai     76.11 336   P      P       13 05 29.7 +1.2
MAK   Makhachkala        76.16  49  eP      P       13 05 27.1 -2.0
MAK                                 e               13 08 14.3
MAK                                 eS      S       13 15 10.6 -2.0
MAK                                 eSSS    SSS     13 23 26.2
MAK                                  pmax   pmax
      comp=Z,517nm,1.4s
MAK                                  MLR    MLR
      comp=Z,256nm,15.0s
CUT   Chulitna           76.27 332   P      P       13 05 29.8 +0.5
      baz=66
M22K  Willow             76.47 332   P      P       13 05 31.1 +0.6
      baz=66
CHUM  Lake Minchumin     76.49 334   P      P       13 05 30.6  0.0
      baz=64,SNR=6.1
RC01  Rabbit Creek A     76.58 331   P      P       13 05 31.7 +0.6
      baz=66
O22K  Cooper Landing     76.82 331   P      P       13 05 31.6 -0.9
      baz=66
PPLA  Purkeypile         76.87 333   P      P       13 05 33.2 +0.3
      baz=64
SUA   Susitna One        76.87 332   P      P       13 05 33.5 +0.5
      baz=65
SKT   Skwentna           76.99 332   P      P       13 05 33.8 +0.3
      baz=65
MBAR  Mbarara            77.16  96   P      P       13 05 36.4 +1.0
      comp=Z,2.5nm,0.2s,baz=60,slow=7.5,SNR=5.5
      comp=Z,2.5nm,0.2s
CAPN  Captain Cook N     77.34 331   P      P       13 05 35.6 +0.1
      baz=65
K20K  Telida             77.42 334   P      P       13 05 36.3 +0.4
      baz=63
BRSE  Bradley Lake S     77.59 330   P      P       13 05 37.2 +0.3
      baz=65
M20K  Styx River         77.71 333   P      P       13 05 37.7 +0.2
M20K                                 IAmb   IAmb    13 05 45.1
      comp=Z,13nm,1.4s
M20K  Styx River         77.71 333   P      P       13 05 37.8 +0.2
      baz=63
L20K  Farewell, AK       77.75 333   P      P       13 05 37.7 -0.1
      baz=63
GCSA  Galena City Sc     77.85 336   P      P       13 05 38.2 +0.1
      baz=61
ARU   Arti               77.91  34c iP      P       13 05 39.2 +0.5
ARU                                                 13 08 37.3
ARU                                  S      S       13 15 32.5 +1.2
ARU                                  pmax   pmax
      comp=Z,13nm,1.9s
HOM   Homer              78.04 330   P      P       13 05 40.5 +1.1
      baz=64
RDOG  Red Dog Mine       78.18 340   P      P       13 05 40.6 +0.6
      baz=56
M19K  Big River Lodg     78.23 333   P      P       13 05 40.8 +0.4
      baz=62
L19K  White Mountain     78.29 333   P      P       13 05 41.2 +0.4
      baz=62
O20K  Slope Mountain     78.30 331   P      P       13 05 40.9  0.0
      baz=63
TTA   Tatalina           78.40 334   P      P       13 05 41.0 -0.5
      baz=61
N19K  Bonanza Creek      78.78 332   P      P       13 05 43.6 +0.1
      baz=62
Q20K  Shuyak Island      78.86 329   P      P       13 05 43.8  0.0
      baz=63
O19K  Port Alsworth      79.00 331   P      P       13 05 44.6  0.0
      baz=62
Q19K  Cape Douglas,      79.29 330   P      P       13 05 45.8 -0.6
      baz=62
OHAK  Old Harbor         79.92 328   P      P       13 05 48.9 -0.7
      baz=62
Q18K  Katmai Hardscr     80.05 330   P      P       13 05 51.0 +0.5
      baz=61
Q17K  Contact Creek      80.64 330   P      P       13 05 54.1 +0.3
      baz=60
N16K  Nishlik Lake       80.78 333   P      P       13 05 55.7 +1.4
      baz=58
Q16K  King Salmon        80.78 331   P      P       13 05 54.8 +0.5
      baz=60
O16K  Kokwok River B     80.95 332   P      P       13 05 55.6 +0.4
      baz=59
ANM   Nome               81.02 338   P      P       13 05 55.9 +0.4
      baz=53
TNA   Tin City           81.26 339   P      P       13 05 57.4 +0.7
      baz=51
RAYN  Ar Rayn            81.39  68   P      P       13 05 59.1 +0.8
RAYN  Ar Rayn            81.39  68   P      P       13 05 59.1 +0.8
RAYN                                 pmax   pmax
      comp=Z,6.0nm,1.1s
ABKAR Akbulak array      81.73  40   P      P       13 06 00.1 +0.5
R16K  Pilot Point        81.77 330   P      P       13 05 60.0 +0.4
      baz=59
LBTB  Lobatse            83.65 121   LR     LR      13 37 44.7
      comp=Z,115nm,18.5s,baz=338,slow=32
SUR   Sutherland         83.81 129   LR     LR      13 37 08.0
      comp=Z,75nm,18.1s,baz=340,slow=31
SDPT  Sand Point         84.32 329   P      P       13 06 11.8 -1.0
      baz=56
TIXI  Tiksi              85.07   2  iP      P       13 06 16.7 +0.4
TIXI                                 pmax   pmax
      comp=Z,3.0nm,1.4s
BOSA  Boshof             85.15 124   LR     LR      13 37 52.4
      comp=Z,50nm,18.9s,baz=246,slow=31
BRVK  Borovoye           85.48  33   P      P       13 06 18.9 +0.2
BRVK                                 IAmb   IAmb    13 06 21.9
      comp=Z,11nm,1.4s
BRVK  Borovoye           85.48  33ceP      P       13 06 19.2 +0.5
BRVK                                 pmax   pmax
      comp=Z,7.0nm,1.3s
BVAR  Borovoye Array     85.56  33   P      P       13 06 20.2 +1.1
      comp=Z,3.4nm,0.9s,baz=290,slow=4.3,SNR=12
BVAR                                 LR     LR      13 42 16.3
      comp=Z,50nm,18.4s,baz=307,slow=34
      comp=Z,3.4nm,0.9s
BILL  Bilibino           85.92 349  eP      P       13 06 21.1 +0.5
BILL                                e               13 06 23.8
BILL                                e               13 06 26.1
BILL                                iSSS    SSS     13 26 08.6
BILL                                 MLR    MLR
      comp=Z,29nm,17.0s
UNV   Unalaska Valle     88.04 330   P      P       13 06 28.6 -2.6
      baz=52
NIKH  Nikolski High      89.69 330   P      P       13 06 36.5 -2.4
      baz=50
KURK  Kurchatov          91.02  32   P      P       13 06 45.1 -0.1
KURK  Kurchatov          91.02  32ceP      P       13 06 45.4 +0.2
KURK                                 pmax   pmax
      comp=Z,5.0nm,1.2s
KURBB Kurchatov Arra     91.04  32   P      P       13 06 45.7 +0.4
      comp=Z,2.6nm,0.9s,baz=309,slow=5.1,SNR=19
      comp=Z,2.6nm,0.9s
ZALV  Zalesovo Beam      91.63  27   P      P       13 06 48.3 +0.3
      comp=Z,1.5nm,0.9s,baz=305,slow=5.2,SNR=6.2
ZALV                                 LR     LR      13 46 29.4
      comp=Z,22nm,19.0s,baz=356,slow=35
      comp=Z,1.5nm,0.9s
ZALV  Zalesovo Beam      91.63  27   P      P       13 06 47.5 -0.5
ZALV  Zalesovo Beam      91.63  27  iP      P       13 06 49.0 +1.0
ZALV                                 pmax   pmax
      comp=Z,2.0nm,0.9s
WSAR  Wadi Sarin         92.50  63   LR     LR      13 50 59.3
      comp=Z,35nm,19.5s,baz=344,slow=37
AAK   Ala-Archa          93.82  40   LR     LR      13 47 23.4
      comp=Z,19nm,19.8s,baz=334,slow=34
YAK   Yakutsk            94.72   3   LR     LR      13 44 52.7
      comp=Z,19nm,21.8s,baz=88,slow=32
MK31  Makanchi Array     95.44  33  iP      P       13 07 05.3 -0.4
MKAR  Makanchi Array     95.44  33   P      P       13 07 06.0 +0.3
      comp=Z,1.4nm,1.2s,baz=330,slow=1.7,SNR=4.2
MKAR                                 LR     LR      13 48 02.5
      comp=Z,44nm,19.5s,baz=296,slow=34
      comp=Z,1.4nm,1.2s
MKAR  Makanchi Array     95.44  33   P      P       13 07 06.0 +0.3
KSH   Kashi              96.59  42   P      P       13 07 11.3  0.0
KSH                                  pmax   pmax
      comp=Z,2.0nm,0.7s
SHEM  Shemya Is, Ala     96.86 337   LR     LR      13 50 46.6
      comp=Z,29nm,19.4s,baz=115,slow=35
WMQ   Urumqi            100.24  33  eP      Pdif    13 07 29.7 +2.3
HHC   Hu-ho-hao-te      112.42  19  eP      PKiKP   13 12 12.4 -5.0
LZH   Lanzhou           113.86  27  ePKP    PKiKP   13 12 17.3 -3.1
LZH                                  sPKP           13 12 31.9
CD2   Chengdu           118.20  30   PKP    PKPdf   13 12 27.6 -1.1
PZH   PanZhiHua         120.83  35   PKP    PKPdf   13 12 32.7 -1.3
NJ2   Nanjing           122.70  16  eP      PKPdf   13 12 35.4 -1.8
NJ2                                  pmax   pmax
      comp=Z,10.0nm,0.5s
CMAR  Chiang Mai Arr    125.46  43   PKP    PKPdf   13 12 42.9  0.0
      comp=Z,0.6nm,0.8s,baz=290,slow=3.1,SNR=4.9
ASAR  Alice Springs     178.96 103   PKP    PKPdf   13 13 51.8 -0.5
      comp=Z,0.8nm,1.0s,baz=194,slow=1.5,SNR=5.0
```

ROM 11 13:01:29.5±0.1,41°.513N±0°.004×14°.607E±0°.005, h10^{km},ML2.0/9,Error ellipse: s-maj=0.4km s-min=0.4km az=196.0,Southern Italy

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op     ISC      h  m  s     ISC
BSSO  Busso              0.04 344    P      Pg       13 01 31.6 +0.1
BSSO                                 S      Sg       13 01 33.4 +0.4
BSSO                                 AML    AML
      comp=E,2030µm,0.3s
BSSO                                 AML    AML
      comp=N,1035µm,0.2s
BSSO                                 AML    AML
      comp=E,4957µm,0.3s
T1101 Santa Maria De     0.07 234    P      Pg       13 01 31.9 +0.2
T1101                                S      Sg       13 01 33.6 +0.3
T1101                                AML    AML
      comp=E,13150µm,1.6s
T1101                                AML    AML
      comp=N,15715µm,1.6s
T1101                                AML    AML
      comp=E,12640µm,1.6s
T1101                                AML    AML
      comp=N,15245µm,1.6s
T1101                                AML    AML
      comp=E,12855µm,1.6s
T1101                                AML    AML
      comp=N,15415µm,1.6s
T1101                                AML    AML
      comp=N,15415µm,0.4s
T1101                                AML    AML
      comp=E,12855µm,0.4s
SACR  S. Croce Del S     0.14 147    P      Pg       13 01 33.0 +0.3
SACR                                 S      Sg       13 01 36.0 +1.1
SACR                                 AML    AML
      comp=N,1135µm,0.3s
SACR                                 AML    AML
      comp=N,1175µm,1.2s
SACR                                 AML    AML
      comp=E,1108µm,1.0s
SACR                                 AML    AML
      comp=N,1135µm,1.7s
SACR                                 AML    AML
      comp=E,1228µm,0.9s
SGG   Gregorio Mates     0.21 234    P      Pg       13 01 34.3 +0.4
SGG                                  S      Sg       13 01 38.5 +1.5
SGG                                  AML    AML
      comp=N,698µm,0.4s
SGG                                  AML    AML
      comp=E,686µm,0.5s
SGG                                  AML    AML
      comp=N,698µm,1.6s
SGG                                  AML    AML
      comp=E,686µm,1.5s
GATE  Gambatesa          0.23  90    P      Pb       13 01 35.6 -0.1
TRIV  Trivento           0.26 351    P      Pg       13 01 35.5 +0.7
TRIV                                 S      Sb       13 01 40.7 -0.1
TRIV                                 AML    AML
      comp=E,608µm,0.6s
TRIV                                 AML    AML
      comp=N,662µm,0.4s
TRIV                                 AML    AML
      comp=E,590µm,0.6s
TRIV                                 AML    AML
      comp=N,599µm,0.4s
CIGN  Sant'Elia a Pi     0.27  58    P      Pg       13 01 35.5 +0.7
CIGN                                 AML    AML
      comp=E,272µm,1.4s
CIGN                                 AML    AML
      comp=N,276µm,0.9s
MIDA  Miranda            0.29 296    P      Pg       13 01 35.8 +0.4
MIDA                                 S      Sb       13 01 41.3 -0.6
MIDA                                 AML    AML
      comp=N,276µm,0.5s
MIDA                                 AML    AML
      comp=E,416µm,0.4s
MIDA                                 AML    AML
      comp=N,258µm,0.3s
VAGA  Valle Agricola     0.30 251    P      Pg       13 01 35.9 +0.4
VAGA                                 S      Sb       13 01 41.4 -0.5
PSB1  Pescosannita       0.33 152    P      Pg       13 01 36.2 +0.2
PSB1                                 S      Sb       13 01 41.8 -0.9
PSB1                                 AML    AML
      comp=N,230µm,0.5s
PSB1                                 AML    AML
      comp=E,216µm,0.6s
PSB1                                 AML    AML
      comp=N,222µm,0.6s
PSB1                                 AML    AML
      comp=E,224µm,0.8s
PSB1                                 AML    AML
      comp=E,224µm,1.2s
PSB1                                 AML    AML
      comp=E,216µm,0.6s
VITU  Vitulano (BN)      0.33 177    P      Pb       13 01 37.2 -0.3
VITU                                 S      Sb       13 01 42.5 -0.3
RNI2  Rionero Sannit     0.39 299    P      Pg       13 01 37.5 +0.3
RNI2                                 S      Sb       13 01 43.7 -0.9
RNI2                                 AML    AML
      comp=E,333µm,1.4s
RNI2                                 AML    AML
      comp=N,250µm,0.6s
RNI2                                 AML    AML
      comp=E,326µm,1.4s
RNI2                                 AML    AML
      comp=E,334µm,1.4s
RNI2                                 AML    AML
      comp=N,250µm,0.6s
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RNI2				AML	AML		
	comp=N,262µm,0.6s						
MELA	**Melanico ??? S**	0.43	64	P	Pg	13 01 37.8	-0.2
MELA				S	Sb	13 01 45.0	-0.8
PIGN	**Pignataro Magg**	0.45	226	P	Pg	13 01 38.4	+0.2
PIGN				S	Sb	13 01 45.5	-0.6
MRB1	**Monte Rocchett**	0.47	144	P	Pg	13 01 35.4	-3.4
PAOL	**Paolisi**	0.48	184	P	Pg	13 01 39.3	+0.4
LPEL	**Lama dei Pelig**	0.62	329	P	Pg	13 01 41.0	-0.5
LPEL				S	Sb	13 01 50.5	-0.7
LPEL				AML	AML		
	comp=E,303µm,1.5s						
LPEL				AML	AML		
	comp=N,217µm,1.6s						
LPEL				AML	AML		
	comp=N,217µm,0.4s						
MODR	**Mondragone**	0.66	237	P	Pg	13 01 42.3	+0.1
CAFE	**Carife**	0.68	135	P	Pg	13 01 42.0	-0.6
INTR	**Introdacqua**	0.72	314	P	Pg	13 01 42.7	-0.8
INTR				S	Sg	13 01 53.4	+0.4

ROM 11 13:10:22.7±0.1, 43°.051N±0°.002×13°.058E±0°.003, h7^{km}, ML2.3/44, 22C-7D, Error ellipse: s-maj=0.2km s-min=0.0km az=106.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	0.03	124	P	Pg	13 10 24.2	+0.1
FDMO				S	Sg	13 10 25.2	+0.1
FDMO				AML	AML		
	comp=E,19950µm,0.3s						
FDMO				AML	AML		
	comp=N,11100µm,0.2s						
T1219	**Muccia, Frazio**	0.04	277	P	Pg	13 10 24.3	+0.1
T1219				S	Sg	13 10 25.5	+0.2
T1219				AML	AML		
	comp=E,16800µm,0.4s						
T1219				AML	AML		
	comp=N,39750µm,0.3s						
T1219				AML	AML		
	comp=N,37500µm,0.3s						
T1219				AML	AML		
	comp=E,20200µm,0.3s						
T1220	**Camerino, Fraz**	0.06	21	⇓P	Pg	13 10 24.8	+0.3
T1220				AML	AML		
	comp=N,67850µm,0.4s						
T1220				AML	AML		
	comp=E,92250µm,0.2s						
T1220				AML	AML		
	comp=E,97100µm,0.2s						
T1220				AML	AML		
	comp=N,67900µm,0.4s						
T1220				AML	AML		
	comp=N,67900µm,0.4s						
FEMA	**Monte Fema**	0.09	184	P	Pg	13 10 25.2	+0.3
FEMA				S	Sg	13 10 27.1	+0.6
FEMA				AML	AML		
	comp=E,9220µm,0.5s						
FEMA				AML	AML		
	comp=N,5370µm,0.6s						
FEMA				AML	AML		
	comp=N,5370µm,0.5s						
FEMA				AML	AML		
	comp=E,9220µm,0.5s						
CSP1	**Cessapalombo**	0.12	69	P	Pg	13 10 25.6	+0.3
CSP1				S	Sg	13 10 27.9	+0.8
CSP1				AML	AML		
	comp=E,8500µm,0.4s						
CSP1				AML	AML		
	comp=N,6820µm,0.2s						
CSP1				AML	AML		
	comp=E,8495µm,0.4s						
CSP1				AML	AML		
	comp=N,6825µm,0.2s						
CESI	**CESI - Serrava**	0.12	248	⇑P	Pg	13 10 25.8	+0.4
CESI				S	Sg	13 10 28.1	+0.9
CESI				AML	AML		
	comp=E,2250µm,0.5s						
CESI				AML	AML		
	comp=N,2185µm,0.4s						
SEF1	**Sefro**	0.12	320	⇑P	Pg	13 10 25.8	+0.4
SEF1				S	Sg	13 10 28.1	+0.8
SEF1				AML	AML		
	comp=N,5020µm,1.0s						
SEF1				AML	AML		
	comp=E,5065µm,0.6s						
SEF1				AML	AML		
	comp=N,5015µm,1.0s						
SEF1				AML	AML		
	comp=E,5065µm,0.6s						
SEF1				AML	AML		
	comp=N,5015µm,1.0s						
SEF1				AML	AML		
	comp=E,5065µm,1.4s						
T1256	**Bolognola (MC)**	0.13	110	⇑P	Pg	13 10 25.9	+0.4
T1256				AML	AML		
	comp=N,3990µm,1.5s						
T1256				AML	AML		
	comp=E,7250µm,0.4s						
T1256				AML	AML		
	comp=E,7180µm,0.4s						
T1256				AML	AML		
	comp=N,3540µm,0.6s						
T1256				AML	AML		
	comp=N,3540µm,1.4s						
T1256				AML	AML		
	comp=E,7180µm,1.6s						
T1256				AML	AML		
	comp=N,3990µm,0.5s						
T1256				AML	AML		
	comp=E,7250µm,1.6s						
MDAR	**Monte D'Aria**	0.15	24	P	Pg	13 10 26.3	+0.3
MDAR				S	Sg	13 10 29.2	+1.0
MDAR				AML	AML		
	comp=N,4075µm,0.3s						
MDAR				AML	AML		
	comp=E,3375µm,0.5s						
MDAR				AML	AML		
	comp=N,4075µm,0.3s						
T1216	**Preci, Frazion**	0.16	190	⇑P	Pg	13 10 26.4	+0.3
T1216				S	Sg	13 10 29.4	+1.1
T1216				AML	AML		
	comp=E,4025µm,0.4s						
T1216				AML	AML		
	comp=N,4355µm,0.3s						
T1216				AML	AML		
	comp=E,4025µm,0.5s						
MC2	**Monte Cornacci**	0.17	145	P	Pg	13 10 26.6	+0.4
MC2				S	Sg	13 10 29.7	+1.1
GAG1	**Gagliole**	0.19	2	⇑P	Pg	13 10 27.1	+0.6
GAG1				AML	AML		
	comp=N,8330µm,0.4s						
GAG1				AML	AML		
	comp=E,7115µm,0.5s						
GAG1				AML	AML		
	comp=N,8330µm,0.4s						
GAG1				AML	AML		
	comp=E,7115µm,0.5s						
GAG1				AML	AML		
	comp=E,7115µm,1.5s						
SSM1	**San Severino M**	0.20	26	⇑P	Pg	13 10 27.2	+0.5
GUMA	**Gualdo di Mace**	0.20	87	⇑P	Pg	13 10 27.5	+0.8
GUMA				AML	AML		
	comp=N,6050µm,0.5s						
GUMA				AML	AML		
	comp=E,7885µm,0.4s						
GUMA				AML	AML		
	comp=E,9520µm,0.4s						
GUMA				AML	AML		
	comp=N,6055µm,0.4s						
T1245	**Castelsantange**	0.22	154	⇓P	Pg	13 10 27.5	+0.5
T1245				AML	AML		
	comp=E,1305µm,0.2s						
T1245				AML	AML		
	comp=N,1550µm,0.5s						
T1245				AML	AML		
	comp=N,1425µm,0.5s						
T1245				AML	AML		
	comp=N,1425µm,1.5s						
T1245				AML	AML		
	comp=N,1550µm,1.5s						
T1245				AML	AML		
	comp=E,1400µm,0.5s						
SNTG	**Esanatoglia**	0.22	337	⇑P	Pg	13 10 27.5	+0.4
SNTG				AML	AML		
	comp=E,955µm,0.6s						
SNTG				AML	AML		
	comp=N,959µm,0.1s						
SNTG				AML	AML		
	comp=E,955µm,1.4s						
MMO1	**Montemonaco**	0.25	127	P	Pg	13 10 30.0	+2.4
EL6	**Elcito**	0.28	7	P	Pg	13 10 27.9	-0.3
EL6				AML	AML		
	comp=E,3965µm,0.2s						
EL6				AML	AML		
	comp=N,5265µm,0.3s						
EL6				AML	AML		
	comp=E,3960µm,0.2s						
T1215	**Vallo di Nera,**	0.28	209	⇑P	Pg	13 10 28.6	+0.3
T1215				S	Sg	13 10 32.8	+0.7
T1215				AML	AML		
	comp=N,612µm,0.9s						
T1215				AML	AML		
	comp=E,526µm,0.7s						
T1215				AML	AML		
	comp=N,625µm,0.9s						
T1215				AML	AML		
	comp=E,528µm,1.4s						
T1215				AML	AML		
	comp=N,612µm,0.9s						
T1215				AML	AML		
	comp=E,526µm,0.8s						
T1215				AML	AML		
	comp=N,625µm,0.9s						
T1215				AML	AML		
	comp=E,526µm,1.2s						
T1215				AML	AML		
	comp=E,528µm,0.6s						
T1215				AML	AML		
	comp=N,625µm,1.1s						
T1215				AML	AML		
	comp=N,612µm,1.1s						
ASSB	**Assisi San Ben**	0.29	268	⇑P	Pg	13 10 28.7	+0.2
ASSB				AML	AML		
	comp=E,2085µm,0.4s						
ASSB				AML	AML		
	comp=N,2080µm,0.2s						
T1212	**Cascia, Frazio**	0.30	182	⇑P	Pg	13 10 28.4	-0.2
T1212				AML	AML		
	comp=N,1365µm,0.7s						
T1212				AML	AML		
	comp=E,1350µm,0.4s						
T1212				AML	AML		
	comp=E,1425µm,1.0s						
T1212				AML	AML		
	comp=N,1415µm,0.7s						
T1212				AML	AML		
	comp=N,1365µm,0.7s						
T1214	**Arquata del Tr**	0.31	159	⇑P	Pg	13 10 29.0	+0.2
T1214				AML	AML		
	comp=N,612µm,0.6s						
T1214				AML	AML		
	comp=N,591µm,0.6s						
T1214				AML	AML		
	comp=E,600µm,1.3s						
T1214				AML	AML		
	comp=E,618µm,1.3s						
T1214				AML	AML		
	comp=E,618µm,0.7s						
T1214				AML	AML		
	comp=E,600µm,0.7s						
T1214				AML	AML		
	comp=N,612µm,0.6s						
T1214				AML	AML		
	comp=N,591µm,0.6s						
FOSV	**Fossato di Vic**	0.33	318	⇓P	Pg	13 10 29.4	+0.3
FOSV				AML	AML		
	comp=E,488µm,0.6s						
FOSV				AML	AML		
	comp=N,735µm,0.9s						
FOSV				AML	AML		
	comp=E,488µm,1.4s						
ATCC	**AVT- Casa Cast**	0.33	294	⇑P	Pg	13 10 29.6	+0.3
ATCC				AML	AML		
	comp=N,2860µm,0.2s						
ATCC				AML	AML		
	comp=E,2620µm,0.1s						
T1241	**Roccafluvione,**	0.34	125	⇑P	Pg	13 10 29.6	+0.3
T1241				AML	AML		
	comp=E,595µm,0.5s						
T1241				AML	AML		
	comp=N,990µm,0.4s						
T1241				AML	AML		
	comp=E,696µm,0.5s						
T1241				AML	AML		
	comp=N,1080µm,0.4s						
T1241				AML	AML		
	comp=E,595µm,1.5s						
T1241				AML	AML		
	comp=E,696µm,1.5s						
CING	**Cingoli**	0.34	17	⇑P	Pg	13 10 29.6	+0.3
CING				AML	AML		
	comp=E,938µm,1.2s						
CING				AML	AML		
	comp=N,1032µm,1.6s						
CING				AML	AML		
	comp=N,1032µm,0.4s						
CING				AML	AML		
	comp=E,938µm,0.8s						
T1217	**Poggiodomo (PG**	0.35	195	⇑P	Pg	13 10 29.8	+0.2
T1217				AML	AML		
	comp=E,592µm,0.5s						
T1217				AML	AML		
	comp=N,744µm,1.4s						
T1217				AML	AML		
	comp=E,592µm,0.5s						
T1217				AML	AML		
	comp=N,744µm,0.6s						
T1218	**Civita (PG)**	0.38	174	⇓P	Pg	13 10 30.3	+0.1
T1218				AML	AML		
	comp=E,676µm,0.7s						
T1218				AML	AML		
	comp=N,750µm,0.4s						
T1218				AML	AML		
	comp=E,662µm,0.7s						
T1218				AML	AML		
	comp=N,725µm,0.4s						
T1218				AML	AML		
	comp=E,676µm,1.3s						
T1218				AML	AML		
	comp=E,662µm,1.3s						
T1218				AML	AML		
	comp=N,725µm,1.6s						
T1218				AML	AML		
	comp=N,750µm,1.6s						
SSFR	**Montelago di S**	0.43	332	⇑P	Pg	13 10 31.6	+0.4
SSFR				S	Sb	13 10 38.8	-0.7
SSFR				AML	AML		
	comp=E,1055µm,0.7s						
SSFR				AML	AML		
	comp=N,1028µm,0.2s						
SSFR				AML	AML		
	comp=E,830µm,0.7s						
SSFR				AML	AML		
	comp=N,833µm,1.3s						
SSFR				AML	AML		
	comp=E,1055µm,1.3s						
SSFR				AML	AML		
	comp=E,830µm,1.3s						
MOMA	**Monte Martano**	0.43	236	P	Pg	13 10 31.2	+0.1
MOMA				AML	AML		
	comp=E,370µm,0.4s						
MOMA				AML	AML		
	comp=N,552µm,0.4s						
MOMA				AML	AML		
	comp=E,355µm,0.4s						
MOMA				AML	AML		
	comp=N,473µm,0.3s						
MOMA				AML	AML		
	comp=E,369µm,0.4s						
MURB	**Monte Urbino**	0.44	299	⇑P	Pg	13 10 31.6	+0.2
MURB				AML	AML		
	comp=E,1235µm,0.5s						
MURB				AML	AML		
	comp=N,1232µm,0.2s						
MURB				AML	AML		
	comp=N,1141µm,0.2s						
MURB				AML	AML		
	comp=E,1374µm,0.2s						
MURB				AML	AML		
	comp=E,1235µm,0.5s						
ARVD	**Arcevia**	0.46	349	P	Pg	13 10 30.1	-1.4
ARVD				S	Sb	13 10 39.2	-0.9
ARVD				AML	AML		
	comp=E,464µm,0.1s						
ARVD				AML	AML		
	comp=N,356µm,0.8s						
ARRO	**Arrone**	0.52	205	⇑P	Pg	13 10 32.9	+0.3
ARRO				S	Sb	13 10 41.1	-0.7
ARRO				AML	AML		
	comp=N,203µm,1.0s						
ARRO				AML	AML		
	comp=E,246µm,0.8s						
PP3	**Marolino**	0.52	51	⇓P	Pb	13 10 33.9	-0.2
FRON	**Frontone**	0.53	333	P	Pg	13 10 33.0	+0.1
FRON				AML	AML		
	comp=N,324µm,0.8s						
FRON				AML	AML		
	comp=E,269µm,0.8s						
T1211	**Morro Reatino**	0.54	196	S	Sb	13 10 42.4	-0.1
T1211				AML	AML		
	comp=E,334µm,1.5s						
T1211				AML	AML		
	comp=N,478µm,1.2s						
T1211				AML	AML		
	comp=E,384µm,1.4s						
T1211				AML	AML		
	comp=N,480µm,0.4s						
T1211				AML	AML		
	comp=N,480µm,1.6s						
T1211				AML	AML		
	comp=E,334µm,0.5s						
T1211				AML	AML		
	comp=E,384µm,0.6s						
RM33	**Pellescritta (**	0.55	168	P	Pg	13 10 33.5	+0.1
RM33				AML	AML		
	comp=E,198µm,0.4s						
RM33				AML	AML		
	comp=N,184µm,0.3s						
CESX	**Cesi**	0.56	219	⇑P	Pg	13 10 33.3	-0.2
CESX				S	Sb	13 10 42.3	-0.8
CESX				AML	AML		
	comp=N,370µm,0.4s						
CESX				AML	AML		
	comp=E,380µm,0.4s						
CAMP	**Campotosto**	0.58	153	⇓P	Pg	13 10 33.7	-0.1
CAMP				AML	AML		
	comp=E,118µm,1.3s						
CAMP				AML	AML		
	comp=N,138µm,1.3s						
CAMP				AML	AML		
	comp=E,118µm,0.7s						
CAMP				AML	AML		
	comp=N,138µm,0.7s						
ATVO	**AVT- Monte Val**	0.58	305	P	Pg	13 10 33.8	0.0
ATVO				S	Sb	13 10 43.2	-0.4
ATVO				AML	AML		
	comp=E,170µm,0.8s						
ATVO				AML	AML		
	comp=N,230µm,0.9s						
ATVO				AML	AML		
	comp=E,170µm,1.2s						
TERO	**Teramo**	0.59	137	⇑P	Pg	13 10 33.6	-0.4
TERO				AML	AML		
	comp=N,234µm,0.4s						
TERO				AML	AML		
	comp=E,212µm,0.4s						
MPAG	**Monte Paganucc**	0.62	339	P	Pg	13 10 34.8	+0.2
MPAG				S	Sb	13 10 45.1	+0.3
MPAG				AML	AML		
	comp=N,231µm,0.3s						
MPAG				AML	AML		
	comp=E,214µm,0.4s						
PIEI	**Pieia**	0.62	322	P	Pg	13 10 34.6	0.0
PIEI				S	Sb	13 10 44.7	0.0
PIEI				AML	AML		
	comp=E,235µm,1.3s						
PIEI				AML	AML		
	comp=N,156µm,0.8s						
PIEI				AML	AML		
	comp=N,156µm,0.8s						
PIEI				AML	AML		
	comp=E,235µm,0.7s						
NARO	**Abbazia di Nar**	0.66	328	P	Pg	13 10 35.3	-0.1
NARO				S	Sb	13 10 46.1	+0.2
NARO				AML	AML		
	comp=E,121µm,0.7s						
NARO				AML	AML		
	comp=N,126µm,0.7s						
NARO				AML	AML		
	comp=E,121µm,1.3s						
FSSB	**Fossombrone**	0.67	342	⇑P	Pg	13 10 35.8	+0.2
FSSB				S	Sb	13 10 46.9	+0.6
FSSB				AML	AML		
	comp=E,457µm,0.3s						
FSSB				AML	AML		
	comp=N,614µm,0.4s						
APEC	**Apecchio**	0.69	318	S	Sb	13 10 47.4	+0.6
APEC				AML	AML		
	comp=N,222µm,0.8s						
APEC				AML	AML		
	comp=N,222µm,1.2s						
APEC				AML	AML		
	comp=E,170µm,0.4s						
MGAB	**Montegabbione**	0.71	259	P	Pg	13 10 36.6	+0.3
MGAB				AML	AML		
	comp=E,347µm,0.4s						
MGAB				AML	AML		
	comp=N,310µm,0.4s						
MGAB				AML	AML		
	comp=N,360µm,0.4s						
MGAB				AML	AML		
	comp=E,274µm,0.4s						
GIGS	**Gran Sasso**	0.71	148	⇓P	Pg	13 10 36.1	-0.2
GIGS				AML	AML		
	comp=E,65µm,1.6s						
GIGS				AML	AML		
	comp=N,62µm,1.6s						
GIGS				AML	AML		
	comp=E,65µm,0.4s						
GIGS				AML	AML		
	comp=N,62µm,0.4s						
BADI	**Badiali**	0.75	308	S	Sb	13 10 49.3	+0.8
FIAM	**Fiamignano**	0.78	177	S	Sb	13 10 49.1	-0.4
FIAM				AML	AML		
	comp=E,117µm,0.8s						
FIAM				AML	AML		
	comp=N,129µm,1.6s						
FIAM				AML	AML		
	comp=N,129µm,0.4s						
INTR	**Introdacqua**	1.21	149	P	Pn	13 10 47.1	+1.0
TRIV	**Trivento**	1.69	139	P	Pn	13 10 51.6	-1.1
BRJN	**Brijuni**	1.92	15	Sn	Sn	13 11 20.6	+0.5
BRJN	**Brijuni**	1.92	15	*e*Pn	Pn	13 10 55.3	-0.4
NVLJ	**Novalja**	2.00	40	Sn	Sn	13 11 22.4	+0.2
SMRN	**Sveta Marina**	2.14	21	Sn	Sn	13 11 25.4	-0.1
SMRN	**Sveta Marina**	2.14	21	*e*Pn	Pn	13 10 58.0	-0.7

ROM 11 13:10:57.2±0.1, 43°.073N±0°.004×13°.055E±0°.004, h6^{km}, ML1.9/1, Error ellipse: s-maj=0.3km s-min=0.3km az=56.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	0.04	244	P	Pg	13 10 58.9	+0.3
T1219				S	Sg	13 10 59.9	+0.3
FDMO	**Fiordimonte**	0.04	146	P	Pg	13 10 58.8	+0.2
FDMO				S	Sg	13 10 59.7	+0.1
T1220	**Camerino, Fraz**	0.04	34	P	Pg	13 10 59.0	+0.3
T1220				S	Sg	13 11 00.1	+0.4
T1220				AML	AML		
	comp=E,17200µm,1.2s						
T1220				AML	AML		
	comp=N,2736µm,1.6s						
T1220				AML	AML		
	comp=N,2736µm,0.4s						
CSP1	**Cessapalombo**	0.11	80	P	Pg	13 11 00.1	+0.4
CSP1				S	Sg	13 11 01.9	+0.5
T1216	**Preci, Frazion**	0.18	188	P	Pg	13 11 03.7	+2.7
SNTG	**Esanatoglia**	0.20	335	P	Pg	13 11 01.8	+0.6
SNTG				S	Sg	13 11 05.1	+1.1

IDC 11 13:12:37.6±9.7, 20°.67N×144°.59E, h121^{km}±89^{km}, mb3.2/11, mbtmp3.6/11, MS2.8/1, Error ellipse: s-maj=30.7km s-min=18.9km az=83.0

ISC 11 13:12:35.2±0.9,20°.7N±0°.2×144°.6E±0°.2,h100^{km},n18,σ0^{s}.83/11,mb3.5/11,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**7.03**	**178**	LR	LR	13 16 32.3	
	comp=Z,61nm,18.2s,baz=45,slow=33						
H11S3	**WAKE ISLAND Hy**	**20.88**	**92**	T	T	13 38 25.0	
	baz=280,slow=74,SNR=77						
H11S1	**WAKE ISLAND Hy**	**20.89**	**92**	T	T	13 38 25.8	
	baz=280,slow=74,SNR=148						
H11S2	**WAKE ISLAND Hy**	**20.90**	**92**	T	T	13 38 26.8	
	baz=280,slow=74,SNR=116						
H11N1	**WAKE ISLAND Hy**	**20.91**	**89**	T	T	13 38 27.9	
	baz=276,slow=74,SNR=110						
H11N2	**WAKE ISLAND Hy**	**20.91**	**89**	T	T	13 38 28.1	
	baz=276,slow=74,SNR=150						
H11N3	**WAKE ISLAND Hy**	**20.92**	**89**	T	T	13 38 29.2	
	baz=276,slow=74,SNR=88						
KSRS	**Korea Array**	**22.16**	**323**	P	**P**	**13 17 24.1**	**+1.2**
	1.3nm,0.9s,baz=146,slow=8.9,SNR=6.1						
	1.3nm,0.9s						
WRA	**Warramunga Arr**	**41.59**	**195**	P	**P**	**13 20 13.7**	**+0.2**
	0.4nm,0.6s,baz=12,slow=8.7,SNR=6.2						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**45.28**	**194**	P	**P**	**13 20 42.8**	**-0.2**
	0.3nm,0.7s,baz=18,slow=9.7,SNR=1.9						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**56.40**	**313**	P	**P**	**13 22 06.0**	**-0.3**
	0.4nm,0.9s,baz=92,slow=7.2,SNR=2.8						
	0.4nm,0.9s						
KURBB	**Kurchatov Arra**	**59.21**	**317**	P	**P**	**13 22 25.1**	**-0.7**
	0.5nm,0.6s,baz=94,slow=7.7,SNR=8.9						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**62.35**	**27**	P	**P**	**13 22 45.7**	**-1.2**
	0.4nm,0.7s,baz=270,slow=5.3,SNR=5.4						
	0.4nm,0.7s						
BVAR	**Borovoye Array**	**64.34**	**320**	P	**P**	**13 23 00.4**	**+0.2**
	1.7nm,0.8s,baz=94,slow=7.6,SNR=7.9						
	1.7nm,0.8s						
YKA	**Yellowknife Ar**	**76.73**	**28**	P	**P**	**13 24 15.8**	**+0.5**
	0.7nm,0.8s,baz=289,slow=5.2,SNR=9.9						
	0.7nm,0.8s						
NVAR	**Mina Array Bea**	**82.72**	**52**	P	**P**	**13 24 49.6**	**+1.1**
	0.5nm,0.7s,baz=260,slow=5.9,SNR=4.8						
	0.5nm,0.7s						
FINES	**FINESS Array B**	**84.70**	**335**	P	**P**	**13 24 57.2**	**-0.5**
	1.2nm,0.9s,baz=43,slow=6.3,SNR=3.8						
	1.2nm,0.9s						
PDAR	**Pinedale Array**	**87.17**	**45**	P	**P**	**13 25 10.8**	**+0.1**
	0.3nm,0.7s,baz=254,slow=3.3,SNR=2.1						
	0.3nm,0.7s						

IDC 11 13:19:35.5±1.3,31°.94N×104°.77E,h0^{km},mb3.2/4,
mbtmp3.3/4,Error ellipse: s-maj=80.1km s-min=25.3km
az=61.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**22.74**	**317**	P	P	13 24 38.9	-0.4
	0.5nm,0.8s,baz=115,slow=11,SNR=4.8						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**58.85**	**147**	P	P	13 29 35.5	-0.7
	0.3nm,0.6s,baz=339,slow=7.7,SNR=7.5						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**61.91**	**150**	P	P	13 29 57.6	+0.5
	0.2nm,0.6s,baz=334,slow=6.6,SNR=8.0						
	0.2nm,0.6s						
YKA	**Yellowknife Ar**	**80.73**	**17**	P	P	13 31 50.6	+0.2
	0.1nm,0.5s,baz=325,slow=4.8,SNR=5.3						
	0.1nm,0.5s						

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*IDC **11** 13:32:05.8±3.2, 9°.97N×125°.65E, h0^{km}, mb3.3/3,*
mbtmp3.3/3, MS2.2/2, Error ellipse: s-maj=259.8km
s-min=29.3km az=65.0
*MAN **11** 13:32:08.6, 9°.84N×125°.33E, h10^{km}, mb4.4, ML3.2, MS3.0*
MAN INTENSITY II - SURIGAO CITY.
ISC 11 13:32:07.1±1.2,9°.97N±0°.03×125°.49E±0°.04,h13^{km}±9^{km},
n21,σ1^{s}.79/34,mb3.3/3,8C-8D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.19**	**180**	⇓*i*P	**Pb**	**13 32 12.5**	**+0.1**
SCPH				*i* S	**Sb**	**13 32 15.8**	**-0.1**
MSLP	**Maasin**	**0.64**	**285**	⇓*e*P	**Pg**	**13 32 19.6**	**0.0**
MSLP				*e*S	**Sb**	**13 32 30.1**	**+1.1**
GLSP	**General Luna,**	**0.66**	**107**	⇓*e*P	**Pn**	**13 32 21.7**	**-0.3**
GLSP				*e*S	**Sn**	**13 32 31.8**	**-0.4**
BUTP	**Butuan**	**1.01**	**173**	⇑*e*P	**Pn**	**13 32 26.2**	**-0.6**
BUTP				*e*S	**Sn**	**13 32 43.4**	**+2.6**
TABP	**Talibon, Bohol**	**1.15**	**276**	⇓*e*P	**Pn**	**13 32 27.5**	**-1.3**
TABP				*e*S	**Sb**	**13 32 41.2**	**-2.3**
GHBP	**Garcia Hernand**	**1.20**	**254**	⇑*e*P	**Pn**	**13 32 27.8**	**-1.7**
GHBP				*e*S	**Sg**	**13 32 47.9**	**+2.0**
LLP	**Lapu-Lapu**	**1.54**	**283**	⇓*e*P	**Pn**	**13 32 34.0**	**-0.2**
LLP				*e*S	**Sn**	**13 32 53.1**	**-0.9**
TASP	**Talacogon, Agu**	**1.54**	**168**	⇓*e*P	**Pg**	**13 32 35.2**	**-1.6**
TASP				*e*S	**Sg**	**13 33 02.8**	**+6.0**
TBP	**Tagbilaran**	**1.63**	**260**	⇑*e*P	**Pn**	**13 32 34.8**	**-0.6**
TBP				*i* S	**Sn**	**13 32 54.0**	**-2.2**
CGP	**Cagayan de Oro**	**1.70**	**208**	⇑*e*P	**Pn**	**13 32 34.5**	**-2.0**
CGP				*e*S	**Sn**	**13 32 56.5**	**-1.5**
CDOP	**Cateel, Davao**	**2.37**	**157**	⇓*e*P	**Pb**	**13 32 48.3**	**-1.3**
CDOP				*e*S	**Sg**	**13 33 21.5**	**-1.8**
DCPH	**Dipolog City**	**2.52**	**237**	⇑*e*P	**Pn**	**13 32 47.2**	**-0.5**
DCPH				*e*S	**Sn**	**13 33 19.3**	**+1.0**
CNP	**Catarman**	**2.65**	**342**	⇑*e*P	**Pb**	**13 32 52.9**	**-1.5**
CNP				*e*S	**Sg**	**13 33 32.3**	**0.0**
DAV	**Davao City (W)**	**2.88**	**178**	LR	LR	13 33 51.9	
	comp=Z,24nm,21.5s,baz=134,slow=37						
GUIM	**Jordan**	**2.93**	**283**	⇓*e*P	**Pn**	**13 32 54.3**	**+1.0**
GUIM				*e*S	**Sn**	**13 33 28.6**	**+0.2**
KCP	**Kidapawan**	**2.97**	**188**	⇑*e*P	**Pg**	**13 33 02.4**	**-1.7**
KCP				*i* S	**Sn**	**13 33 31.0**	**+1.5**
RCP	**Roxas**	**3.12**	**301**	⇑*e*P	**Pn**	**13 32 58.5**	**+2.4**
KSRS	**Korea Array**	**27.45**	**4**	LR	LR	13 47 40.2	
	comp=Z,9.2nm,21.5s,baz=240,slow=34						
WRA	**Warramunga Arr**	**30.98**	**164**	P	**P**	**13 38 23.9**	**-0.4**
	0.4nm,0.9s,baz=345,slow=10,SNR=2.1						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**34.43**	**166**	P	**P**	**13 38 55.5**	**+1.0**
	0.2nm,0.7s,baz=341,slow=6.8,SNR=7.9						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**51.80**	**323**	P	**P**	**13 41 16.2**	**+1.5**
	0.3nm,0.7s,baz=132,slow=8.0,SNR=3.7						
	0.3nm,0.7s						

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*KLM **11** 14:04:46, 6°.81S×130°.80E, h92^{km}, mb5.5*
*BJI **11** 14:04:47.3±0.0, 6°.89S×130°.72E, h123^{km}, mb4.9/61,*
mB5.1/35
*MOS **11** 14:04:47.8±0.9, 6°.75S×130°.22E, h104^{km}, mb5.2/20, Error*
ellipse: s-maj=11.6km s-min=5.9km az=107.4
*GCMT **11** 14:04:49.8±0.3, 6°.74S±0°.02×130°.28E±0°.02, h124^{km}±2^{km},*
MW4.9/81, Moment Tensor Solution. s23,c33; s81,c116;
Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.92±.08;
$M_{\theta\theta}$-2.85±.09; $M_{\phi\phi}$1.93±.10; $M_{r\theta}$-0.52±.06; $M_{\theta\phi}$0.04±.09;
$M_{\phi r}$1.22±.06; Best double couple: $M_0$2.84300×10^{16}
NP1:ϕ_s310.00000°,δ73.00000°,λ148.00000°. NP2:
ϕ_s50.00000°,δ60.00000°,λ20.00000°. Principal axes: T
2.7590, Plg34.0000°, Azm267.0000°; N 0.1740,
Plg54.0000°, Azm105.0000°; P -2.9280, Plg8.0000°,
Azm3.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function
*NEIC **11** 14:04:49.8±2.6, 6°.78S±0°.06×130°.28E±0°.07, h113^{km}±5^{km},*
mb5.2/64 Error ellipse: s-maj=9.6km s-min=8.2km
az=76.0
*DJA **11** 14:04:50.8±0.2, 7°S±2°×13°0E±°, h120^{km}±2^{km}, M5.1/84,*
mB5.6/55, mb5.4/84, MLv5.8/15, Mw(mB)5.1/55,
MwMwp4.8/6, Mwp5.1/6
*IDC **11** 14:04:51.2±1.3, 6°.79S×130°.29E, h121^{km}±10^{km}, mb4.7/28,*
mbtmp5.1/32, MS3.4/22, Error ellipse: s-maj=17.0km
s-min=8.1km az=83.0
ISC 11 14:04:50.7±0.3,6°.84S±0°.03×130°.30E±0°.05,h124^{km}±2^{km},
h125^{km}:pP-P,n459,σ1^{s}.53/488,mb5.1/108,26C-17D,
Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.51**	**139**		**Pn**	**14 05 19.2**	**+0.7**
SAUI				Sn	**Sn**	**14 05 38.2**	**-1.5**
SAUI	**Saumlaki**	**1.51**	**139**	P	**Pn**	**14 05 19.7**	**+1.2**
BNDI	**Bandanaira**	**2.33**	**350**	P	**Pn**	**14 05 29.4**	**+0.8**
MSAI	**Masohi**	**3.73**	**338**	P	**Pn**	**14 05 48.8**	**+2.1**
AAI	**Ambon**	**3.77**	**326**	P	**Pn**	**14 05 48.9**	**+1.6**
FAKI	**Fak Fak**	**4.35**	**27**	Pn	**Pn**	**14 05 52.8**	**-2.3**
FAKI	**Fak Fak**	**4.35**	**27**	P	**Pn**	**14 05 53.1**	**-2.0**
NLAI	**Namlea**	**4.79**	**318**	P	**Pn**	**14 06 02.8**	**+1.9**
SIJI	**Sorong**	**6.01**	**9**	P	**Pn**	**14 06 15.4**	**-1.9**
	465nm,0.3s,baz=190,slow=8.7,SNR=471						
SIJI				S	**Sn**	**14 07 17.8**	**-7.2**
	464nm,0.6s,baz=304,slow=23,SNR=18						
MTN	**Manton Dam**	**6.02**	**172**	P	**Pn**	**14 06 16.6**	**-0.9**
	baz=6.1,SNR=1000						
MTN	**Manton Dam**	**6.02**	**172**	Pn	**Pn**	**14 06 16.6**	**-0.9**
KDU	**Kakadu**	**6.19**	**160**	P	**Pn**	**14 06 18.7**	**-1.1**
	baz=6.2,SNR=1000						
SANI	**Sanana**	**6.41**	**318**	P	**Pn**	**14 06 24.3**	**+1.6**
	358nm,0.8s,5µm2µm1.6nm						
RKPI	**Ransiki, Papua**	**6.55**	**36**	P	**Pn**	**14 06 23.7**	**-1.0**
	2µm,0.9s,21µm31nm						
SOEI	**Soe**	**6.63**	**244**	Pn	**Pn**	**14 06 26.8**	**+0.9**
SOEI	**Soe**	**6.63**	**244**	P	**Pn**	**14 06 27.2**	**+1.3**
	1µm,0.5s,16µm3µm18nm						
LBMI	**Labuha**	**6.76**	**336**	P	**Pn**	**14 06 27.8**	**+0.3**
	2µm,0.8s,17µm3.7nm						
SRPI	**Serui, Papua**	**7.71**	**50**	P	**Pn**	**14 06 39.2**	**-1.1**
	288nm,0.8s,3µm2.4nm						
TNTI	**Ternate**	**8.11**	**339**	Pn	**Pn**	**14 06 45.4**	**-0.2**
TNTI	**Ternate**	**8.11**	**339**	P	**Pn**	**14 06 45.2**	**-0.5**
	801nm,0.8s,7µm						
MMRI	**Maumere**	**8.19**	**257**	Pn	**Pn**	**14 06 47.6**	**+0.9**
MMRI	**Maumere**	**8.19**	**257**	P	**Pn**	**14 06 48.2**	**+1.5**
	425nm,0.5s,5µm						
KNRA	**Kununurra**	**8.91**	**190**	P	**Pn**	**14 06 54.8**	**-1.7**
	baz=9.0,SNR=1000						
KNRA	**Kununurra**	**8.91**	**190**	Pn	**Pn**	**14 06 54.8**	**-1.7**
LUWI	**Luwuk**	**9.46**	**307**	P	**Pn**	**14 07 07.4**	**+3.5**
	154nm,0.9s						
SMPI	**Sarmi**	**9.67**	**61**	P	**Pn**	**14 07 06.2**	**-0.5**
	132nm,0.7s,3µm						
BSSI	**Bau Bau, Buton**	**9.77**	**273**	P	**Pn**	**14 07 10.2**	**+2.1**
	157nm,0.8s,2µm						
BASI	**Baing, Sumba**	**10.18**	**250**	P	**Pn**	**14 07 12.1**	**-1.6**
	701nm,0.6s,10µm						
BKSI	**Bulukumba**	**10.23**	**278**	P	**Pn**	**14 07 15.7**	**+1.4**
	68nm,0.6s,930nm						
GTOI	**Gorontalo**	**10.39**	**315**	P	**Pn**	**14 07 20.7**	**+4.2**
	76nm,0.6s,1µm						
KAPI	**Kappang**	**10.65**	**279**	P	**Pn**	**14 07 22.5**	**+2.6**
	44nm,0.9s,baz=98,slow=6.7,SNR=28						
KAPI				LR	LR	14 12 41.5	
	comp=Z,190nm,18.8s,baz=102,slow=44						
KAPI	**Kappang**	**10.65**	**279**	Pn	**Pn**	**14 07 22.2**	**+2.3**
KAPI	**Kappang**	**10.65**	**279**	*c i*P	**Pn**	**14 07 21.5**	**+1.6**
GENI	**Genyem**	**10.70**	**67**	P	**Pn**	**14 07 19.8**	**-0.8**
	194nm,0.5s,2µm						
SPSI	**Sidrap Palu**	**10.86**	**285**	P	**Pn**	**14 07 24.6**	**+1.8**
	314nm,0.6s,3µm						
MRSI	**Marisa**	**11.06**	**311**	P	**Pn**	**14 07 28.0**	**+2.5**
	526nm,1.0s,4µm						
SGSI	**Sangihe**	**11.49**	**335**	P	**Pn**	**14 07 30.2**	**-0.9**
	515nm,0.6s,9µm						
FITZ	**Fitzroy Crossi**	**12.08**	**202**	Pn	**Pn**	**14 07 35.1**	**-3.7**
TOLI2	**Tolitoli**	**12.35**	**309**	Pn	**Pn**	**14 07 44.6**	**+2.2**
PLAI	**Plampang**	**12.56**	**260**	P	**Pn**	**14 07 42.6**	**-2.6**
	479nm,0.7s,5µm						
MPSI	**Mapaga**	**12.59**	**304**	P	**Pn**	**14 07 47.8**	**+2.2**
	30nm,0.7s						
TWSI	**Taliwang, Sumb**	**13.43**	**261**	P	**Pn**	**14 07 53.4**	**-3.0**
	172nm,0.6s,2µm						
WB0	**Warramunga Arr**	**13.45**	**163**	Pn	**Pn**	**14 07 52.1**	**-4.6**
I07AU	**WARRAMUNGA INF**	**13.59**	**164**	P	**Pn**	**14 07 56.0**	**-2.6**
	baz=332,slow=18,SNR=1.6						
WRAB	**Tennant Creek**	**13.60**	**164**	Pn	Pn	14 07 53.7	-4.9
WRAB	**Tennant Creek**	**13.60**	**164**	*i* P	**Pn**	**14 07 55.1**	**-3.5**
WRA	**Warramunga Arr**	**13.60**	**164**	P	**Pn**	**14 07 55.6**	**-3.1**
	306nm,0.5s,baz=349,slow=13,SNR=293						
WRA				S	Sn	14 10 16.0	-13
	188nm,0.5s,baz=333,slow=23,SNR=7.8						
WB2	**Warramunga Arr**	**13.61**	**164**	Pn	**Pn**	**14 07 54.2**	**-4.6**
SKMP	**Bagumbayan, Su**	**14.46**	**336**	⇑*e*P	**Pn**	**14 08 08.3**	**-1.3**
BKB	**Balikpapan**	**14.47**	**292**	P	**P**	**14 08 14.5**	**+1.6**
	271nm,1.1s,2µm						
COEN	**Coen**	**14.50**	**120**	P	**Pn**	**14 08 09.2**	**-1.0**
	baz=14,SNR=32						
COEN	**Coen**	**14.50**	**120**		**Pn**	**14 08 08.6**	**-1.5**
DAV	**Davao City (W)**	**14.60**	**341**	P	**Pn**	**14 08 10.8**	**-0.6**
	125nm,0.6s,baz=122,slow=9.5,SNR=1.2						
DAV				LR	LR	14 14 16.9	
	comp=Z,109nm,19.5s,baz=122,slow=39						
KCP	**Kidapawan**	**14.70**	**339**	⇑*i*P	**Pn**	**14 08 12.2**	**-0.6**
SRBI	**Singaraja**	**15.01**	**264**	P	**Pn**	**14 08 15.2**	**-1.4**
	67nm,0.6s,938nm						
CTBH	**Cotabato--PC H**	**15.21**	**337**	⇑*e*P	**Pn**	**14 08 17.6**	**-1.6**
BBKI	**Banjar Baru**	**15.76**	**282**	P	**P**	**14 08 28.9**	**+1.7**
	760nm,0.7s,22µm						
ABJI	**Asem Bagus**	**15.96**	**266**	P	**Pn**	**14 08 27.7**	**-0.7**
	174nm,0.9s,2µm						
JAGI	**Jajag, Banyuwa**	**16.09**	**263**		**Pn**	**14 08 25.7**	**-4.3**
JAGI	**Jajag, Banyuwa**	**16.09**	**263**	P	**Pn**	**14 08 26.3**	**-3.7**
	160nm,0.8s,3µm						
CGP	**Cagayan de Oro**	**16.19**	**340**	⇓*e*P	**Pn**	**14 08 31.3**	**+0.1**
QIS	**Mount Isa**	**16.35**	**147**	P	**Pn**	**14 08 30.7**	**-2.4**
	baz=16,SNR=153						
BUTP	**Butuan**	**16.38**	**343**	⇑*e*P	**P**	**14 08 34.7**	**+0.6**
BLJI	**Banyuglugur**	**16.59**	**266**	P	**Pn**	**14 08 35.8**	**-0.4**
	284nm,1.0s,4µm						
MYLDM	**Lahad Datu**	**16.77**	**315**		**Pn**	**14 08 36.0**	**-2.3**
GMJI	**Gumukmas**	**16.77**	**264**	P	**Pn**	**14 08 34.5**	**-3.8**
	104nm,0.6s,1µm						
PMG	**Port Moresby**	**16.88**	**100**	P	**Pn**	**14 08 40.9**	**+1.1**
	26nm,0.4s,baz=291,slow=8.4,SNR=20						
PMG				S	Sn	14 11 36.1	-12
	31nm,0.4s,baz=171,slow=24,SNR=9.8						
PMG	**Port Moresby**	**16.88**	**100**		**Pn**	**14 08 40.7**	**+0.9**
PMG	**Port Moresby**	**16.88**	**100**	*c i*P	**Pn**	**14 08 41.0**	**+1.3**
PMG				pmax	pmax		
	comp=Z,69nm,0.9s						
GLSP	**General Luna,**	**17.03**	**346**	⇑*e*P	**P**	**14 08 40.1**	**-1.2**
AS31	**Alice Springs**	**17.09**	**169**	P	**P**	**14 08 39.0**	**-3.0**
ASAR	**Alice Springs**	**17.09**	**169**	P	**P**	**14 08 41.4**	**-0.5**
	comp=Z,223nm,0.7s,baz=346,slow=14,SNR=1214						
ASAR				S	**Sn**	**14 11 43.1**	**-10**
	comp=Z,36nm,0.5s,baz=335,slow=19,SNR=5.4						
ASAR	**Alice Springs**	**17.09**	**169**	P	**P**	**14 08 39.1**	**-2.8**
SCPH	**Surigao**	**17.19**	**344**	⇓*e*P	**Pn**	**14 08 43.7**	**+0.2**
GHBP	**Garcia Hernand**	**17.41**	**340**	⇓*e*P	**P**	**14 08 45.7**	**+0.2**
MBWA	**Marble Bar**	**17.53**	**215**	P	**P**	**14 08 44.8**	**-2.0**
SNPH	**Sibulan**	**17.55**	**336**	*e*P	**Pn**	**14 08 48.5**	**+0.8**
BWJI	**Bawean**	**17.56**	**272**	P	**Pn**	**14 08 50.4**	**+2.5**
	comp=Z,1µm,0.9s,comp=Z,11µm						
TBP	**Tagbilaran**	**17.63**	**339**	⇓*e*P	**Pn**	**14 08 48.4**	**-0.3**
MTSU	**Mount Surprise**	**17.68**	**131**	P	**Pn**	**14 08 49.3**	**-0.1**
	baz=18,SNR=151						
GRJI	**Gresik**	**17.69**	**269**	P	**Pn**	**14 08 49.9**	**+0.4**
	comp=Z,284nm,0.7s,comp=Z,3µm						
MSLP	**Maasin**	**17.71**	**342**	⇓*e*P	**P**	**14 08 48.8**	**0.0**
PSA00	**Pilbara Seismi**	**17.80**	**214**	P	**P**	**14 08 49.2**	**-0.5**
PSA00	**Pilbara Seismi**	**17.80**	**214**	P	**P**	**14 08 49.7**	**0.0**
SPMM	**Sapulut**	**17.95**	**309**	P	**Pn**	**14 08 54.0**	**+1.4**
LLP	**Lapu-Lapu**	**18.17**	**340**	⇓*e*P	**Pn**	**14 08 55.2**	**0.0**
LLP				*e*S	**Sn**	**14 12 19.7**	**+0.9**
WRKA	**Warakurna**	**18.20**	**186**	P	**P**	**14 08 53.9**	**-0.2**
	baz=18,SNR=1000						
CNOP	**Candoni, Negro**	**18.23**	**335**	⇓*e*P	**Pn**	**14 08 56.6**	**+0.8**
TBJI	**Tambak Boyo**	**18.32**	**269**	P	**Pn**	**14 08 57.3**	**+0.3**
	comp=Z,316nm,0.8s						
PWJI	**Pagerwojo**	**18.38**	**265**	P	**P**	**14 08 53.9**	**-2.2**
	comp=Z,190nm,0.6s						
NGJI	**Ngawi**	**18.70**	**267**	P	**Pn**	**14 09 01.0**	**-0.5**
	comp=Z,118nm,0.9s						
PBKI	**Pangkalan Bun**	**19.01**	**282**	P	**Pn**	**14 09 05.6**	**+0.5**
	comp=Z,578nm,1.0s,comp=Z,7µm						
UWJI	**Ujung Watu**	**19.23**	**270**	P	**P**	**14 09 05.5**	**+0.1**
	comp=Z,133nm,1.1s,comp=Z,5µm						
UGM	**Wanagama**	**19.64**	**266**	P	**P**	**14 09 07.4**	**-2.5**
UGM	**Wanagama**	**19.64**	**266**	P	**P**	**14 09 09.4**	**-0.5**
	comp=Z,123nm,0.8s						
SMRI	**Semarang**	**19.71**	**268**	P	**Pn**	**14 09 13.8**	**+0.4**
	comp=Z,166nm,0.6s						
YOGI	**Yogyakarta**	**19.86**	**266**	P	**P**	**14 09 12.9**	**+0.6**
	comp=Z,101nm,0.8s,comp=Z,7µm						
SBUM	**Sibu**	**20.27**	**296**	P	**P**	**14 09 16.4**	**-0.3**
SBUM	**Sibu**	**20.27**	**296**	P	Pn	14 09 19.0	-0.8
CTA	**Charters Tower**	**20.32**	**132**	P	Pn	14 09 19.3	-1.1
	comp=Z,23nm,0.8s,baz=296,slow=11,SNR=28						
CTA				S	**S**	**14 12 55.0**	**-3.4**
	comp=Z,11nm,0.5s,baz=263,slow=10,SNR=2.5						
CTA				LR	LR	14 17 33.4	
	comp=Z,144nm,19.8s,baz=306,slow=37						
	comp=Z,23nm,0.8s						
KPJI	**Karang Pucung**	**21.21**	**267**	P	**P**	**14 09 24.9**	**-1.9**
	comp=Z,139nm,0.9s						
KSM	**Kuching**	**21.59**	**292**	P	**P**	**14 09 30.2**	**-0.7**
KSM	**Kuching**	**21.59**	**292**	P	**P**	**14 09 32.0**	**+1.1**
CMJI	**Cimerak**	**21.69**	**266**	P	**P**	**14 09 31.9**	**0.0**
	comp=Z,115nm,0.8s						
GIRL	**Giralia**	**22.06**	**223**	P	**P**	**14 09 37.1**	**+1.5**
	baz=22,SNR=23						
GIRL	**Giralia**	**22.06**	**223**	P	**P**	**14 09 35.2**	**-0.4**
MEEK	**Meekatharra**	**22.62**	**208**	P	**P**	**14 09 41.8**	**+0.5**
	baz=23,SNR=23						
CBJI	**Citeko**	**23.30**	**270**	P	**P**	**14 09 47.4**	**-0.4**
	comp=Z,202nm,0.8s						
SKJI	**Sukabumi**	**23.57**	**268**	P	**P**	**14 09 49.5**	**-0.8**
	comp=Z,218nm,0.6s,comp=Z,2µm						
QLP	**Quilpie**	**23.70**	**148**	P	**P**	**14 09 52.8**	**+1.5**
	baz=24,SNR=35						
FORT	**Forrest**	**23.91**	**185**	P	**P**	**14 09 55.1**	**+1.9**
	baz=24,SNR=17						
FORT	**Forrest**	**23.91**	**185**	P	**P**	**14 09 53.0**	**-0.1**
CGJI	**Cibinong**	**24.44**	**269**	P	**P**	**14 09 56.1**	**-2.0**
	comp=Z,116nm,0.5s,comp=Z,2µm						
PPBI	**Pangkal Pinang**	**24.52**	**280**	P	**P**	**14 10 00.1**	**+1.2**
	comp=Z,45nm,0.5s,comp=Z,6µm						
GUMO	**Guam**	**24.92**	**35**	P	**P**	**14 10 03.0**	**+0.5**
	comp=Z,111nm,0.9s,baz=174,slow=11,SNR=7.7						
GUMO				LR	LR	14 19 09.6	
	comp=Z,58nm,21.9s,baz=212,slow=34						
	comp=Z,111nm,0.9s						
GUMO	**Guam**	**24.92**	**35**	P	**P**	**14 10 03.0**	**+0.5**
KMBL	**Kambalda**	**25.64**	**197**	P	**P**	**14 10 10.0**	**+1.2**
	baz=26,SNR=20						
KASI	**Kota Agung**	**25.68**	**271**	P	**P**	**14 10 07.8**	**-1.7**
	comp=Z,64nm,0.8s						
MORW	**Morawa**	**25.89**	**210**	P	**P**	**14 10 12.1**	**+1.0**
	baz=26,SNR=10						
MORW	**Morawa**	**25.89**	**210**	P	**P**	**14 10 11.0**	**-0.1**
MORW				IAmb	IAmb	14 10 48.1	
	comp=Z,46nm,0.8s						
MDSI	**Maura Dua**	**26.10**	**274**	P	**P**	**14 10 13.7**	**+0.5**
	comp=Z,21nm,0.9s						
LWLI	**Liwa**	**26.16**	**273**	P	**P**	**14 10 15.5**	**+1.6**
	comp=Z,74nm,0.9s						
RMQ	**Roma**	**26.28**	**140**	P	**P**	**14 10 16.1**	**+1.4**
	baz=26,SNR=4.9						
BBOO	**Buckleboo**	**26.39**	**169**	P	**P**	**14 10 16.4**	**+0.8**
	baz=26,SNR=36						
BBOO	**Buckleboo**	**26.39**	**169**	P	**P**	**14 10 15.6**	**0.0**
DSRI	**Dabo**	**26.42**	**283**	P	**P**	**14 10 18.9**	**+2.8**
	comp=Z,46nm,1.2s,comp=Z,1µm						
TPRI	**Tanjung Pinang**	**26.85**	**286**	P	**P**	**14 10 22.4**	**+2.5**
	comp=Z,98nm,0.9s,comp=Z,4µmcomp=Z,2µm						
BLDU	**Ballidu**	**26.87**	**207**	P	**P**	**14 10 21.1**	**+1.1**
	baz=27,SNR=23						
STKA	**Stephens Creek**	**27.05**	**159**	P	**P**	**14 10 22.5**	**+1.0**
	comp=Z,15nm,0.6s,baz=332,slow=9.4,SNR=22						
STKA				LR	LR	14 23 12.6	
	comp=Z,194nm,19.5s,baz=342,slow=41						
	comp=Z,15nm,0.6s						
STKA	**Stephens Creek**	**27.05**	**159**	P	**P**	**14 10 22.6**	**+1.0**
	baz=27,SNR=24						
STKA	**Stephens Creek**	**27.05**	**159**	P	**P**	**14 10 22.3**	**+0.8**
KLBR	**Kellerberrin**	**27.28**	**204**	P	**P**	**14 10 24.9**	**+1.4**
	baz=27,SNR=15						
HTT	**Hallett**	**27.64**	**164**	P	**P**	**14 10 28.6**	**+1.7**
	baz=28,SNR=17						
MYKOM	**Kota Tinggi**	**27.75**	**287**	P	**P**	**14 10 28.8**	**+0.8**
MYKOM	**Kota Tinggi**	**27.75**	**287**	P	**P**	**14 10 31.0**	**+3.0**
MASI	**Maura Aman, Be**	**28.19**	**276**	P	**P**	**14 10 30.9**	**-1.0**
	comp=Z,34nm,0.9s						
MUN	**Mundaring**	**28.26**	**206**	P	**P**	**14 10 33.3**	**+1.1**
	baz=28,SNR=3.9						
CMSA	**Cobar Meteorol**	**28.48**	**152**	P	**P**	**14 10 35.5**	**+1.3**
	baz=28,SNR=40						
NWAO	**Narrogin (SRO)**	**28.66**	**203**	P	**P**	**14 10 37.0**	**+1.2**
	comp=Z,11nm,0.3s,baz=32,slow=7.2,SNR=45						
NWAO				LR	LR	14 23 04.8	
	comp=Z,101nm,21.5s,baz=1.0,slow=38						
	comp=Z,11nm,0.3s						
NWAO	**Narrogin (SRO)**	**28.66**	**203**	P	**P**	**14 10 37.1**	**+1.3**
	baz=29,SNR=35						
NWAO				P	**P**	**14 10 37.1**	**+1.3**
	baz=29,SNR=35						
NWAO	**Narrogin (SRO)**	**28.66**	**203**	P	**P**	**14 10 36.8**	**+1.0**
NWAO	**Narrogin (SRO)**	**28.66**	**203**	P	**P**	**14 10 36.2**	**+0.4**
NWAO				IAmb	IAmb	14 11 20.9	
	comp=Z,58nm,0.7s						
SDSI	**Sungai Dareh**	**29.38**	**280**	P	**P**	**14 10 43.6**	**+1.1**
	comp=Z,35nm,0.9s,comp=Z,920nm						
HNR	**Honiara**	**29.46**	**97**	LR	LR	14 22 48.7	
	comp=Z,1µm,21.5s,baz=104,slow=37						
RKGY	**Rocky Gully**	**30.25**	**202**	P	**P**	**14 10 52.5**	**+2.7**
	baz=30,SNR=13						
YULB	**Yu-li**	**31.31**	**344**	P	**P**	**14 10 57.0**	**-2.3**
YULB				IAmb	IAmb	14 11 01.0	
	comp=Z,44nm,1.3s						
YULB				PcP	**PcP**	**14 13 47.8**	**-2.9**
IPM	**Ipoh**	**31.31**	**290**	PcP	**PcP**	**14 13 52.8**	**+1.9**
TPUB	**Ta-pu**	**31.41**	**343**	P	**P**	**14 10 58.9**	**-1.3**
TPUB				IAmb	IAmb	14 11 51.6	
	comp=Z,73nm,1.4s						
ARPS	**Mount Arapiles**	**31.60**	**162**	P	**P**	**14 11 03.6**	**+1.9**
	baz=32,SNR=23						
SSLB	**Suanglung**	**31.78**	**344**	P	**P**	**14 11 00.8**	**-2.6**
SSLB				IAmb	IAmb	14 11 34.6	
	comp=Z,78nm,1.6s						
KULM	**Kulim**	**31.95**	**291**	P	**P**	**14 11 03.7**	**-1.4**
KULM				IAmb	IAmb	14 11 08.0	
	comp=Z,38nm,0.7s						
KULM				PcP	**PcP**	**14 13 54.2**	**+1.6**
NACB	**Ninganchiao**	**31.97**	**345**	PcP	**PcP**	**14 13 50.6**	**-1.8**
CAN	**Canberra**	**33.15**	**151**	P	**P**	**14 11 17.4**	**+2.0**
CAN				pP	**pP**	**14 11 43.9**	**+1.6**
JOW	**Kunigami**	**33.53**	**357**	P	**P**	**14 11 19.4**	**+0.7**
	comp=Z,113nm,0.7s,baz=174,slow=8.3,SNR=26						
	comp=Z,113nm,0.7s						
JOW	**Kunigami**	**33.53**	**357**	P	**P**	**14 11 16.9**	**-1.7**
TOO	**Toolangi**	**33.57**	**158**	P	**P**	**14 11 19.6**	**+0.6**
	baz=34,SNR=7.2						
GSI	**Gunungsitoli**	**33.64**	**283**	PcP	**PcP**	**14 13 59.6**	**+2.2**
GSI	**Gunungsitoli**	**33.64**	**283**	P	**P**	**14 11 20.4**	**+0.5**
	comp=Z,78nm,0.8s						
KCSI	**Kotacane, Aceh**	**34.06**	**287**	P	**P**	**14 11 24.2**	**+0.7**
	comp=Z,18nm,0.6s						
SRIT	**Nakonsritamara**	**34.23**	**296**	P	**P**	**14 11 23.9**	**-0.9**
LHMI	**Lhok Sumawe**	**35.38**	**289**	P	**P**	**14 11 33.8**	**-1.0**
MLSI	**Meulaboh, Aceh**	**35.59**	**287**	P	**P**	**14 11 34.5**	**-2.1**
	comp=Z,108nm,0.7s						
JCJ	**Chichijima**	**35.64**	**18**	P	**P**	**14 11 36.9**	**+0.1**
	comp=Z,76nm,0.4s,baz=267,slow=21,SNR=11						
JCJ				LR	LR	14 26 44.7	
	comp=Z,23nm,18.8s,baz=68,slow=37						
	comp=Z,76nm,0.4s						
JCJ	**Chichijima**	**35.64**	**18**	P	**P**	**14 11 34.4**	**-2.5**
PHRA	**Phrae**	**38.91**	**311**	P	**P**	**14 12 04.4**	**-0.1**
PINNC	**Pines Island,**	**39.05**	**118**	P	**P**	**14 12 04.5**	**-1.3**
JNU	**Nakatsue**	**39.74**	**1**	P	**P**	**14 12 11.1**	**-0.2**
	comp=Z,38nm,1.0s,baz=178,slow=1.8,SNR=20						
JNU				LR	LR	14 26 45.0	
	comp=Z,62nm,20.6s,baz=143,slow=33						
	comp=Z,38nm,1.0s						
JNU	**Nakatsue**	**39.74**	**1**	P	**P**	**14 12 08.7**	**-2.6**
JNU				IAmb	IAmb	14 12 12.2	
	comp=Z,36nm,0.9s						
CM31	**Chiang Mai Arr**	**39.86**	**310**	P	**P**	**14 12 11.6**	**-0.9**
CM31				IAmb	IAmb	14 12 19.5	
	comp=Z,27nm,0.7s						
CMAR	**Chiang Mai Arr**	**39.86**	**310**	P	**P**	**14 12 12.8**	**+0.3**
	comp=Z,13nm,0.6s,baz=136,slow=7.0,SNR=84						
CMAR				ScP	**ScP**	**14 17 54.6**	**+0.9**
	comp=Z,4.0nm,0.8s,baz=163,slow=3.5,SNR=13						
	comp=Z,13nm,0.6s						
CMAR	**Chiang Mai Arr**	**39.86**	**310**	P	**P**	**14 12 11.8**	**-0.7**
CRAI	**Chiangrai**	**39.87**	**313**	P	**P**	**14 12 11.3**	**-1.3**
NJ2	**Nanjing**	**40.18**	**345**	*e*P	**P**	**14 12 15.4**	**+0.5**
NJ2				pP	**pwP**	**14 12 44.2**	**-1.7**
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
JMN	**Monobe**	**40.49**	**5**	P	**P**	**14 12 17.7**	**+0.2**
JMN				IAmb	IAmb	14 12 18.6	
	comp=Z,37nm,0.6s						

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JHS   Saijyo           41.70   3   P     P      14 12 26.4 -0.9
JHS                                IAmb  IAmb   14 12 28.8
      comp=Z,45nm,0.8s
ENH   Enshi            41.96 333   P     P      14 12 29.4 -0.1
INU   Inuyama          42.44   8   P     P      14 12 31.8 -1.4
INU                                IAmb  IAmb   14 13 16.7
      comp=Z,81nm,1.8s
INU   Inuyama          42.44   8   P     P      14 12 33.0 -0.3
JGF   Kuroka           42.73   8   P     P      14 12 34.2 -1.5
TJN   Taejon           43.08 357   P     P      14 12 38.6 +0.2
TJN   Taejon           43.08 357ceP     P      14 12 38.3 -0.1
PZH   PanZhiHua        43.19 321   P     P      14 12 39.9 +0.2
PZH                                pmax  pmax
      comp=Z,10.0nm,0.8s
PZH                                pmax  pmax
      comp=Z,90nm,4.8s
MJAR  Matsushiro Arr   43.78   9   P     P      14 12 43.2 -0.9
      comp=Z,29nm,0.8s,baz=187,slow=9.5,SNR=97
MJAR                               LR    LR     14 29 10.6
      comp=Z,57nm,21.7s,baz=190,slow=33
      comp=Z,29nm,0.8s
MAJO  Matsushiro       43.78   9   P     P      14 12 41.5 -2.6
MAJO                               IAmb  IAmb   14 12 44.0
      comp=Z,43nm,0.7s
MAJO  Matsushiro       43.78   9d iP     P      14 12 42.9 -1.2
MAJO                               pmax  pmax
      comp=Z,41nm,0.7s
MAJO  Matsushiro       43.78   9   P     P      14 12 42.6 -1.5
MJB9  Matsu-Tunnel     43.79   9   P     P      14 12 42.6 -1.5
MJB9                               IAmb  IAmb   14 12 45.0
      comp=Z,42nm,0.7s
KSRS  Korea Array      44.12 357   P     P      14 12 47.3 +0.6
      comp=Z,8.5nm,0.6s,baz=175,slow=9.1,SNR=63
KSRS                               ScP   ScP    14 18 10.6 +0.3
      comp=Z,4.9nm,0.7s,baz=176,slow=4.4,SNR=17
KSRS                               LR    LR     14 31 08.1
      comp=Z,29nm,20.8s,baz=170,slow=36
      comp=Z,8.5nm,0.6s
KS19  Wonju Array Si   44.17 357   P     P      14 12 46.3 -0.9
KS19                               IAmb  IAmb   14 12 48.2
      comp=Z,83nm,1.9s
INCN  Inchon           44.22 356   P     P      14 12 48.3 +0.7
TNCH  TengChong        44.27 317  eP     P      14 12 52.1 +3.6
TNCH                               pmax  pmax
      comp=Z,110nm,4.2s
TIA   Tai'an           44.57 345   P     P      14 12 50.2 -0.2
TIA                                pmax  pmax
      comp=Z,6.0nm,1.0s
JSD   Sado             45.26   9   P     P      14 12 53.4 -2.4
JSD                                IAmb  IAmb   14 12 57.0
      comp=Z,19nm,0.5s
CD2   Chengdu          45.33 327  eP     P      14 12 56.5  0.0
CD2                                pmax  pmax
      comp=Z,10.0nm,0.5s
XAN   Xi'an            45.42 335   P     P      14 12 56.0 -1.2
XAN                                pmax  pmax
      comp=Z,6.0nm,0.6s
JMM   Marumori         45.54  12   P     P      14 12 56.7 -1.3
HNS   HongShan         46.36 343 ⇓P     P      14 13 04.3 -0.1
HNS                                ScP   ScP    14 18 20.4 +0.8
HNS                                S     S      14 19 39.4 -3.1
HNS                                pmax  pmax
      comp=Z,16nm,0.8s
BRDH  Bariadhala       47.87 309   LR    LR     14 37 23.7
      comp=Z,47nm,18.2s,baz=149,slow=41
BJT   Baijiatuau       48.41 345   P     P      14 13 20.4 +0.1
JTM   Tenmabayashi     48.41  11   P     P      14 13 19.7 -0.6
JTM                                IAmb  IAmb   14 13 21.6
      comp=Z,44nm,1.0s
BJI   Beijing          48.43 345   P     P      14 13 20.5 +0.1
BJI                                pP    pP     14 13 49.5 +1.3
BJI                                pmax  pmax
      comp=Z,15nm,0.6s
LZH   Lanzhou          49.40 332  eP     P      14 13 31.3 +3.1
LZH                                sP    sP     14 14 16.3 +6.6
LZH                                pmax  pmax
      comp=Z,14nm,1.0s
VLA   Vladivostok      49.74   2d iP     P      14 13 32.5 +2.2
VLA                                pmax  pmax
      comp=Z,42nm,0.9s
ERM   Erimo            50.02  12   P     P      14 13 32.5  0.0
ERM                                IAmb  IAmb   14 14 29.6
      comp=Z,50nm,1.3s
ERM   Erimo            50.02  12ceP     P      14 13 32.9 +0.4
ERM                                pmax  pmax
      comp=Z,50nm,1.3s
HHC   Hu-ho-hao-te     50.48 342  eP     P      14 13 36.8 +0.6
HHC                                pmax  pmax
      comp=Z,25nm,0.8s
HHC                                pmax  pmax
      comp=Z,220nm,5.4s
CN2   Changchun        50.59 355 ⇓P     P      14 13 36.2 -0.6
CN2                               epP    pP     14 14 05.4 +0.5
CN2                               eS     S      14 20 40.8 -1.0
CN2                                pmax  pmax
      comp=Z,10.0nm,0.6s
CN2                                pmax  pmax
      comp=Z,100nm,4.0s
BTO   Baotou           50.77 340  eP     P      14 13 30.9 -7.4
BTO                                pP    pP     14 13 56.7  -10
BTO                                sP    pwP    14 14 14.5 +5.7
BTO                                PcP   PcP    14 14 44.9 -8.7
BTO                                PP    PP     14 15 20.3  -15
BTO                                S     S      14 20 31.5  -13
BTO                                sS    sS     14 21 22.8 -9.0
BTO                                pmax  pmax
      comp=Z,22nm,0.6s
BTO                                pmax  pmax
      comp=Z,680nm,5.4s
BTO                                LR    LR
      comp=N,500nm,5.6s
BTO                                LR    LR
      comp=E,370nm,5.5s
BTO                                LR    LR
      comp=Z,930nm,5.9s
USA0B Ussuriysk Arra   50.82   2   P     P      14 13 36.1 -2.4
USA0B                              IAmb  IAmb   14 13 39.3
      comp=Z,15nm,0.6s
USA0B Ussuriysk Arra   50.82   2 i P     P      14 13 38.7 +0.2
USRK  Ussuriysk Ar.    50.82   2   P     P      14 13 38.8 +0.3
      comp=Z,14nm,0.6s,baz=188,slow=7.3,SNR=27
      comp=Z,14nm,0.6s
USRK  Ussuriysk Ar.    50.82   2   P     P      14 13 38.1 -0.3
RPZ   Rata Peaks       51.18 143   P     P      14 13 42.5 +1.2
      comp=Z,6.4nm,0.7s,baz=342,slow=6.4,SNR=2.1
      comp=Z,6.4nm,0.7s
MDJ   Mudanjiang       51.22 359   P     P      14 13 41.6 +0.1
MDJ                                pmax  pmax
      comp=Z,31nm,0.8s
MDJ                                pmax  pmax
      comp=Z,280nm,5.5s
MDJ   Mudanjiang       51.22 359   P     P      14 13 40.3 -1.1
MDJ                                IAmb  IAmb   14 13 42.9
      comp=Z,20nm,0.6s
MDJ   Mudanjiang       51.22 359   P     P      14 13 41.8 +0.3
PALK  Pallekele        51.42 285   LR    LR     14 36 26.1
      comp=Z,48nm,18.1s,baz=216,slow=37
PALK  Pallekele        51.42 285   P     P      14 13 42.4 -1.1
PALK                               IAmb  IAmb   14 13 51.1
      comp=Z,60nm,1.9s
PALK  Pallekele        51.42 285   P     P      14 13 42.4 -1.1
PALK                               pmax  pmax
      comp=Z,60nm,1.9s
TUWZ  Tuamarina        51.81 139   P     P      14 13 46.6 +0.6
ASAJ  Asahikawa        51.92  11   P     P      14 13 47.2 +0.5
      comp=Z,25nm,0.6s,baz=232,slow=9.2,SNR=124
ASAJ                               LR    LR     14 37 43.1
      comp=Z,22nm,18.2s,baz=179,slow=38
      comp=Z,25nm,0.6s
JKA   Kamikawa-asahi   51.92  11   P     P      14 13 46.6 -0.1
JKA                                IAmb  IAmb   14 13 48.0
      comp=Z,27nm,0.6s
XLT   XiLinHaoTe       52.12 347⇑iP     P      14 13 48.9 +0.7
XLT                                pmax  pmax
      comp=Z,14nm,1.1s
XLT                                pmax  pmax
      comp=Z,71nm,4.3s
LSA   Lhasa            52.29 316   P     P      14 13 51.2 +0.9
LSA                                pmax  pmax
      comp=Z,35nm,0.5s
LSA   Lhasa            52.29 316   P     P      14 13 51.0 +0.8
LSA   Lhasa            52.29 316   P     P      14 13 51.0 +0.8
LSA                                pmax  pmax
      comp=Z,26nm,0.5s
LSA   Lhasa            52.29 316 i P     P      14 13 51.1 +0.8
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      SNR=7.4
LSA   Lhasa            52.29 316   P     P      14 13 51.2 +0.9
LSA                                sP    sP     14 14 31.3 -0.9
BNX   BinXian          52.40 357 ⇑P     P      14 13 50.0 -0.2
BNX                                pmax  pmax
      comp=Z,13nm,0.9s
BNX                                pmax  pmax
      comp=Z,180nm,4.7s
GTA   Gaotai           53.98 331 ⇑P     P      14 14 03.1 +1.1
GTA                                ScP   ScP    14 18 53.2 +0.8
GTA                                S     S      14 21 25.2 -3.2
GTA                                pmax  pmax
      comp=Z,6.0nm,0.8s
GTA                                pmax  pmax
      comp=Z,57nm,5.5s
YSS   Yuzh-Sakhalins   54.69  10   P     P      14 14 05.7 -1.2
YSS   Yuzh-Sakhalins   54.69  10⇓iP     P      14 14 07.1 +0.3
YSS                                pmax  pmax
      comp=Z,50nm,0.6s
YSS   Yuzh-Sakhalins   54.69  10   P     P      14 14 07.1 +0.3
YSS                                sP    sP     14 14 47.3 +0.2
KLR   Kul'dur          55.85   1   P     P      14 14 15.9 +0.8
      comp=Z,11nm,0.9s,baz=202,slow=4.3,SNR=35
KLR                                ScP   ScP    14 19 00.1 -0.1
      comp=Z,1.4nm,0.5s,baz=175,slow=4.4,SNR=5.5
KLR                                LR    LR     14 40 08.2
      comp=Z,20nm,18.9s,baz=186,slow=38
      comp=Z,11nm,0.9s
KLR   Kul'dur          55.85   1ceP     P      14 14 15.5 +0.4
KLR                                pmax  pmax
      comp=Z,20nm,1.0s
HYB   Hyderabad        56.51 296⇑eP     P      14 14 19.5 -1.0
HYB                                IVmB_BB      14 14 19.9
      comp=Z,185nm,0.4s
UGL   Uglegorsk        56.63   9⇓iP     P      14 14 21.6 +1.0
UGL                                pmax  pmax
      comp=Z,90nm,0.8s
HEH   HeiHe            56.91 358  eP     P      14 14 22.4 -0.3
HEH                                sP    sP     14 15 08.3 +4.2
HEH                                ScP   ScP    14 19 01.6 -3.3
HEH                                S     S      14 22 05.3 -1.5
HEH                                ScS   ScS    14 23 55.5 -4.2
HEH                                pmax  pmax
      comp=Z,22nm,1.0s
HEH                                pmax  pmax
      comp=Z,130nm,4.6s
DGAR  Diego Garcia     57.37 266   P     P      14 14 24.6 -2.0
DGAR  Diego Garcia     57.37 266   P     P      14 14 24.6 -2.0
DGAR                               pmax  pmax
      comp=Z,312nm,1.4s
ULN   Ulaanbaatar      58.20 342   P     P      14 14 31.6 -0.4
ULN                                IAmb  IAmb   14 14 34.0
      comp=Z,13nm,0.9s
ULN   Ulaanbaatar      58.20 342ceP     P      14 14 33.0 +1.0
ULN                                pmax  pmax
      comp=Z,16nm,1.0s
ULN   Ulaanbaatar      58.20 342   P     P      14 14 33.0 +1.0
ULN                                ScP   ScP    14 19 11.4 +0.5
SONM  Songino Array    58.38 341   P     P      14 14 34.4 +1.2
      comp=Z,2.8nm,0.5s,baz=159,slow=7.6,SNR=26
SONM                               ScP   ScP    14 19 11.2 -0.4
      comp=Z,1.1nm,0.9s,baz=177,slow=3.0,SNR=4.1
      comp=Z,2.8nm,0.5s
SONM  Songino Array    58.38 341   P     P      14 14 33.5 +0.3
TYV   Tymovskoe        58.45   9  eP     P      14 14 34.6 +1.2
TYV                               eS     S      14 22 30.2 +3.3
TYV                                pmax  pmax
      comp=Z,19nm,0.7s
TYV                                pmax  pmax
      comp=Z,100nm,3.5s
TYV                                smax  smax
      comp=N,700nm,7.3s
TYV                                smax  smax
      comp=E,200nm,7.3s
DRV   Dumont d'Urvil   60.11 176   P     P      14 14 45.9 +1.4
ZEA   Zeya             60.40 358  eP     P      14 14 47.4 +0.6
ZEA                                pmax  pmax
      comp=N,10.0nm,0.8s
ZEA                                pmax  pmax
      comp=Z,20nm,0.8s
ZAK   Zakamensk        61.61 341  eP     P      14 14 55.4 +0.2
ZAK                                pmax  pmax
      comp=Z,4.0nm,1.1s
WMQ   Urumqi           63.42 327  eP     P      14 15 08.8 +1.5
WMQ                                pP    pP     14 15 34.4 -2.4
WMQ                                sP    sP     14 15 52.5 +2.4
WMQ                                pmax  pmax
      comp=Z,20nm,0.9s
MOY   Mondy            63.47 340  eP     P      14 15 08.9 +1.4
PEA0B Petropavlovsk-   64.08  18   P     P      14 15 11.8 +0.5
PEA0B                              IAmb  IAmb   14 15 13.3
      comp=Z,31nm,0.8s
PEA0B Petropavlovsk-   64.08  18ceP     P      14 15 12.1 +0.8
PETK  Petropavlovsk-   64.08  18   P     P      14 15 12.4 +1.1
      comp=Z,18nm,0.8s,baz=182,slow=4.1,SNR=30
PETK                               LR    LR     14 38 36.2
      comp=Z,21nm,21.9s,baz=192,slow=32
      comp=Z,18nm,0.8s
PETK  Petropavlovsk-   64.08  18   P     P      14 15 11.2 -0.1
PET   Petropavlovsk    64.30  19  eP     P      14 15 11.2 -1.5
PET                                pmax  pmax
      comp=Z,62nm,1.3s
BOD   Bodaibo          65.79 351  eP     P      14 15 22.0 -0.2
BOD                                pmax  pmax
      comp=Z,10.0nm,1.5s
ZSN   Zaisan           67.29 328  eP     P      14 15 33.5 +1.4
      baz=328
ZSN   Zaisan           67.29 328  eP     P      14 15 33.4 +1.4
NIL   Nilore           67.34 311   P     P      14 15 32.6 -0.1
NIL   Nilore           67.34 311   P     P      14 15 32.6 -0.1
NIL                                pmax  pmax
      comp=Z,27nm,0.6s
NIL   Nilore           67.34 311   P     P      14 15 33.1 +0.4
DGZ   Jazzator, Alta   67.50 331⇑iP     P      14 15 34.5 +0.9
DGZ                                pmax  pmax
      comp=Z,5.0nm,0.6s
SHLS  Shalkode         67.77 322  eP     P      14 15 35.1 -0.3
      baz=322
SHLS  Shalkode         67.77 322  eP     P      14 15 35.0 -0.3
TARG  Taragay, Kyrgy   68.03 320   P     P      14 15 35.6 -1.8
TARG  Taragay, Kyrgy   68.03 320   P     P      14 15 35.6 -1.8
TARG                               pmax  pmax
      comp=Z,6.0nm,0.6s
KSH   Kashi            68.10 317   P     P      14 15 39.3 +1.8
KSH                                pmax  pmax
      comp=Z,13nm,0.7s
MA2   Magadan          68.18  11   P     P      14 15 38.4 +1.1
      comp=Z,16nm,0.8s,baz=180,slow=5.1,SNR=30
MA2                                LR    LR     14 47 28.6
      comp=Z,18nm,18.4s,baz=200,slow=38
      comp=Z,16nm,0.8s
MA2   Magadan          68.18  11   P     P      14 15 37.1 -0.3
MA2                                IAmb  IAmb   14 15 39.5
      comp=Z,20nm,0.9s
MA2   Magadan          68.18  11ceP     P      14 15 38.2 +0.8
MA2                                pmax  pmax
      comp=Z,25nm,1.0s
MA2   Magadan          68.18  11   P     P      14 15 38.1 +0.8
MA2                                pP    pP     14 16 06.6 +0.4
MA2                                sP    sP     14 16 19.3 +0.3
MK31  Makanchi Array   68.25 327   P     P      14 15 38.5 +0.3
MK31  Makanchi Array   68.25 327c iP     P      14 15 39.0 +0.8
MKAR  Makanchi Array   68.25 327   P     P      14 15 39.1 +0.9
      comp=Z,19nm,0.6s,baz=122,slow=7.9,SNR=292
      comp=Z,19nm,0.6s
MKAR  Makanchi Array   68.25 327   P     P      14 15 37.5 -0.6
CCD   Concordia, Ant   68.34 182   P     P      14 15 40.5 +1.8
SATY  Saty             68.37 322  eP     P      14 15 40.3 +1.2
      baz=322
SATY  Saty             68.37 322  eP     P      14 15 40.2 +1.2
KPKS  Kokpek           68.42 322  eP     P      14 15 40.4 +1.0
      baz=322
KPKS  Kokpek           68.42 322  eP     P      14 15 40.3 +1.0
MAKZ  Makanchi         68.43 327   P     P      14 15 39.3  0.0
MAKZ                               IAmb  IAmb   14 15 48.5
      comp=Z,16nm,0.8s
MAKZ  Makanchi         68.43 327   P     P      14 15 39.3  0.0
MAKZ                               pmax  pmax
      comp=Z,16nm,0.8s
MAKZ  Makanchi         68.43 327   P     P      14 15 40.0 +0.7
YAK   Yakutsk          68.67 360   P     P      14 15 41.1 +0.8
      comp=Z,22nm,0.6s,baz=291,slow=0.2,SNR=24
      comp=Z,22nm,0.6s
YAK   Yakutsk          68.67 360  eP     P      14 15 40.0 -0.3
YAK                               e*PP   pP     14 16 08.3 -1.1
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YAK                               ePPP   PPP    14 19 54.0
YAK                               eS     S      14 24 33.1  0.0
YAK                               e*SS   sS     14 25 23.9  0.0
YAK                                pmax  pmax
      comp=Z,55nm,0.9s
YAK                                pmax  pmax
      comp=N,17nm,1.1s
YAK                                pmax  pmax
      comp=E,6.0nm,1.0s
YAK                                pmax  pmax
      comp=Z,151nm,4.8s
YAK                                pmax  pmax
      comp=N,97nm,4.8s
YAK                                pmax  pmax
      comp=E,119nm,5.4s
YAK                                smax  smax
      comp=E,124nm,4.4s
YAK                                smax  smax
      comp=N,60nm,4.8s
YAK   Yakutsk          68.67 360   P     P      14 15 40.7 +0.4
TNSS  Tian-Shan        69.26 321  eP     P      14 15 46.1 +1.1
      baz=321
TNSS  Tian-Shan        69.26 321  eP     P      14 15 46.0 +1.1
MDOK  Medeo            69.26 321  eP     P      14 15 45.7 +1.0
      baz=321
MDOK  Medeo            69.26 321  eP     P      14 15 45.6 +0.9
CHKK  Chushkaly        69.66 322  eP     P      14 15 47.4 +0.5
      baz=322
CHKK  Chushkaly        69.66 322  eP     P      14 15 47.4 +0.5
TKM2  Tokmak 2         70.05 320   P     P      14 15 50.5 +1.0
      SNR=7.6
KUU   Kurty            70.08 322  eP     P      14 15 50.5 +0.9
      comp=N,12nm,0.6s,baz=322
KUU   Kurty            70.08 322  eP     P      14 15 50.4 +0.9
KUU                                pmax  pmax
      comp=Z,12nm,0.6s
UCH   Uchtor           70.40 319   P     P      14 15 53.7 +1.7
      SNR=13
AAK   Ala-Archa        70.61 320   P     P      14 15 54.3 +1.4
      SNR=11
AAK   Ala-Archa        70.61 320   P     P      14 15 53.5 +0.5
AAK   Ala-Archa        70.61 320ceP     P      14 15 54.6 +1.7
AAK                                pmax  pmax
      comp=Z,19nm,1.7s
AAK   Ala-Archa        70.61 320 i P     P      14 15 54.1 +1.2
      SNR=14
AAK   Ala-Archa        70.61 320   P     P      14 15 54.3 +1.4
AML   Almayashu        70.88 319   P     P      14 15 56.4 +1.5
      SNR=16
USP   Ospenovka        70.92 320   P     P      14 15 55.8 +1.2
      SNR=13
SGDS  Sogindy          70.93 320  eP     P      14 15 55.5 +0.8
      baz=320
SGDS  Sogindy          70.93 320  eP     P      14 15 55.5 +0.8
EKS2  Erkin-Say        71.08 319   P     P      14 15 57.4 +1.7
      SNR=9.7
ZAA0  Zalesovo Array   71.57 334   P     P      14 15 58.2 -0.1
ZALV  Zalesovo Beam    71.57 334   P     P      14 15 58.2  0.0
      comp=Z,4.2nm,0.6s,baz=120,slow=5.3,SNR=21
ZALV                               LR    LR     14 48 55.2
      comp=Z,19nm,21.7s,baz=75,slow=37
      comp=Z,4.2nm,0.6s
ZALV  Zalesovo Beam    71.57 334   P     P      14 15 57.7 -0.5
SEY   Seymchan         71.59  10   P     P      14 15 59.5 +1.3
      comp=Z,33nm,0.9s,baz=198,slow=4.8,SNR=147
      comp=Z,33nm,0.9s
SEY   Seymchan         71.59  10ceP     P      14 15 59.3 +1.1
SEY                                pmax  pmax
      comp=Z,42nm,0.9s
GAR   Garm             71.76 315   P     P      14 15 59.7 -0.2
GAR                                IAmb  IAmb   14 16 01.5
      comp=Z,30nm,0.8s
BTLS  Baital           72.08 322  eP     P      14 16 02.2 +0.6
      baz=322
BTLS  Baital           72.08 322  eP     P      14 16 02.1 +0.6
KURK  Kurchatov        72.53 328   P     P      14 16 04.5 +0.5
KURK  Kurchatov        72.53 328ceP     P      14 16 04.9 +0.9
KURK                               pmax  pmax
      comp=Z,7.0nm,0.8s
VNDA  Vanda            72.57 173   P     P      14 16 05.0 +1.1
      comp=Z,16nm,1.3s,baz=322,slow=7.6,SNR=12
VNDA                               LR    LR     14 45 46.5
      comp=Z,56nm,20.7s,baz=294,slow=34
      comp=Z,16nm,1.3s
VNDA  Vanda            72.57 173   P     P      14 16 02.4 -1.4
VNDA                               IAmb  IAmb   14 18 40.0
      comp=Z,74nm,1.8s
VNDA  Vanda            72.57 173   P     P      14 16 05.0 +1.1
IUG   Iuzhnay          73.31 318  eP     P      14 16 10.2 +1.1
      baz=318
IUG   Iuzhnay          73.31 318  eP     P      14 16 10.1 +1.1
KK31  Karatay Array    73.42 319   P     P      14 16 09.0 -0.4
KK31  Karatay Array    73.42 319   P     P      14 16 09.0 -0.4
KK31                               pmax  pmax
      comp=Z,6.0nm,1.0s
KKAR  Karatay Array    73.42 319   P     P      14 16 09.9 +0.4
KKAR  Karatay Array    73.42 319   P     P      14 16 09.9 +0.4
MAW   Mawson           75.21 201   LR    LR     14 46 34.5
      comp=Z,123nm,19.6s,baz=53,slow=33
BRZS  Berezniki        75.35 326  eP     P      14 16 21.1 +0.6
      baz=326
BRZS  Berezniki        75.35 326  eP     P      14 16 21.1 +0.6
BVAR  Borovoye Array   78.09 328   LR    LR     14 53 34.8
      comp=Z,9.7nm,19.9s,baz=108,slow=38
SOHO  SOHO             78.14 296 i P     P      14 16 37.3 +0.6
      SNR=7.1
BRVK  Borovoye         78.16 328   P     P      14 16 36.4 +0.2
BRVK  Borovoye         78.16 328ceP     P      14 16 37.4 +1.2
BRVK                               pmax  pmax
      comp=Z,5.0nm,0.8s
TIXI  Tiksi            78.33 360   P     P      14 16 36.7  0.0
      comp=Z,4.3nm,0.4s,baz=89,slow=22,SNR=23
TIXI                               LR    LR     14 53 15.3
      comp=Z,17nm,20.2s,baz=181,slow=37
      comp=Z,4.3nm,0.4s
TIXI  Tiksi            78.33 360   P     P      14 16 37.3 +0.5
TIXI  Tiksi            78.33 360ceP     P      14 16 36.8  0.0
TIXI                               pmax  pmax
      comp=Z,8.0nm,0.8s
MDH   Madha            78.61 297   P     P      14 16 39.2 -0.1
UOSS  Minazif          78.61 297   P     P      14 16 39.0 -0.3
HATD  Hatta, Dubai     78.65 297   P     P      14 16 40.8 +1.3
ASHO  Ashiyiah         78.69 297   P     P      14 16 41.0 +1.2
MSFE  Esma-Masafi      78.75 297   P     P      14 16 41.4 +1.3
BANOM Banah            78.75 298 i P     P      14 16 41.5 +1.4
      SNR=13
ALNE  Al Ain           78.82 296   P     P      14 16 41.6 +1.2
BILL  Bilibino         78.89  13⇓iP     P      14 16 40.3 +0.4
BILL                                            14 16 50.0
BILL                               *SP   sP     14 17 21.0 -0.8
BILL                              e*SS   PnS    14 27 34.8 +7.7
BILL                              eSS    SS     14 31 33.2 -2.4
BILL                               pmax  pmax
      comp=Z,2.0nm,1.1s
SHME  Shamm            78.92 298 i P     P      14 16 42.0 +1.1
      SNR=9.6
NAZ   Nazwa, Dubai     79.10 297   P     P      14 16 43.0 +1.0
FAQ   Al Faqa, Dubai   79.11 297 i P     P      14 16 42.6 +0.5
      SNR=7.1
GEYT  Alibeck          80.34 310   P     P      14 16 49.3 +0.9
      comp=Z,2.3nm,0.5s,baz=188,slow=5.2,SNR=4.7
      comp=Z,2.3nm,0.5s
MZR   Muzera           80.64 295 i P     P      14 16 51.7 +1.4
      SNR=11
NRIK  Noril'sk         81.48 346   P     P      14 16 54.5 +0.8
      comp=Z,2.3nm,0.4s,baz=151,slow=4.3,SNR=6.8
      comp=Z,2.3nm,0.4s
NRIK  Noril'sk         81.48 346ceP     P      14 16 55.3 +1.6
NRIK                               pmax  pmax
      comp=Z,10.0nm,0.9s
VOI   Vohitsoka        81.48 249   P     P      14 16 56.0 +1.0
VOI                                IAmb  IAmb   14 16 56.9
      comp=Z,28nm,0.7s
ABKAR Akbulak array    82.57 322   P     P      14 16 59.6 -0.3
ABKAR Akbulak array    82.57 322   P     P      14 16 59.4 -0.5
QSPA  South Pole Qui   83.14 180   P     P      14 17 03.6 +0.9
      comp=Z,5.9nm,0.6s,baz=297,slow=1.2,SNR=58
      comp=Z,5.9nm,0.6s
S12K  Black Hills      83.32  32   P     P      14 17 04.4 +0.8
      baz=248
SDPT  Sand Point       84.03  32   P     P      14 17 08.2 +1.0
      baz=249
TNA   Tin City         84.96  22   P     P      14 17 12.6 +1.0
      baz=241
ANM   Nome             85.46  23   P     P      14 17 15.4 +1.2
      baz=244
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ARU	Arti	85.73	328	d iP	P	14 17 15.0	-0.7
ARU				S	SKSac	14 27 28.1	-1.5
ARU				SS	SS	14 33 12.0	-5.4
ARU				pmax	pmax		
	comp=Z,7.0nm,1.8s						
P16K	Nushagak River	86.57	29	P	P	14 17 20.9	+1.2
	baz=251						
N16K	Nishlik Lake	86.68	28	P	P	14 17 22.0	+1.7
	baz=250						
O16K	Kokwok River B	86.70	29	P	P	14 17 21.6	+1.2
	baz=251						
O17K	Koliganek Bris	87.24	29	P	P	14 17 24.4	+1.4
	baz=252						
Q17K	Contact Creek	87.37	31	P	P	14 17 24.0	+0.2
	baz=253						
RAYN	Ar Rayn	87.95	294	P	P	14 17 25.0	-2.3
RAYN				IAmb	IAmb	14 17 29.8	
	comp=Z,15nm,0.8s						
RAYN	Ar Rayn	87.95	294	P	P	14 17 25.0	-2.3
RAYN				pmax	pmax		
	comp=Z,15nm,0.9s						
RAYN	Ar Rayn	87.95	294	iP	P	14 17 28.0	+0.7
	SNR=14						
TTA	Tatalina	88.72	26	P	P	14 17 29.9	-0.1
TTA	Tatalina	88.72	26	P	P	14 17 29.9	-0.1
TTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TTA	Tatalina	88.72	26	P	P	14 17 31.4	+1.4
	baz=252						
GCSA	Galena City Sc	88.91	24	P	P	14 17 31.6	+0.9
	baz=252						
AKT	Akhty	88.94	312	eP	P	14 17 30.5	-1.1
AKT				e*PP	pP	14 18 02.1	-0.1
AKT				e*SP	sP	14 18 13.9	-1.0
AKT				pmax	pmax		
	comp=Z,11nm,0.8s						
L19K	White Mountain	89.01	27	P	P	14 17 33.5	+2.2
	baz=254						
M19K	Big River Lodg	89.14	27	P	P	14 17 34.5	+2.5
	baz=254						
L20K	Farewell, AK	89.53	27	P	P	14 17 35.5	+1.7
	baz=254						
K20K	Telida	89.68	26	P	P	14 17 35.5	+1.1
	baz=254						
IMAR	Indian Mountai	90.53	23	P	P	14 17 37.3	-1.0
CHUM	Lake Minchumin	90.58	26	P	P	14 17 39.1	+0.5
	baz=256						
SUA	Susitna One	90.71	28	P	P	14 17 39.6	+0.2
	baz=257						
I21K	Tanana	91.04	24	P	P	14 17 41.4	+0.7
	baz=256						
MLY	Manley	91.51	25	P	P	14 17 43.3	+0.3
	baz=257						
F22K	John River	91.53	22	P	P	14 17 44.0	+1.0
	baz=256						
E22K	Anaktuvuk Pass	91.81	21	P	P	14 17 44.9	+0.6
	baz=256						
I23K	Minto, Yukon-K	92.11	25	P	P	14 17 44.4	-1.3
I23K				IAmb	IAmb	14 17 46.8	
	comp=Z,5.3nm,0.7s						
I23K	Minto, Yukon-K	92.11	25	P	P	14 17 46.2	+0.6
	baz=258						
G23K	Bananza Creek	92.17	23	P	P	14 17 46.5	+0.5
	baz=258						
H23K	Yukon River	92.17	24	P	P	14 17 46.5	+0.5
	baz=258						
COLD	Coldfoot	92.21	23	P	P	14 17 45.4	-0.7
COLD	Coldfoot	92.21	23	P	P	14 17 46.9	+0.8
	baz=258						
D23K	Nanushuk River	92.41	21	P	P	14 17 48.5	+1.6
	baz=257						
E23K	Chandalar	92.60	22	P	P	14 17 49.0	+1.0
	baz=258						
H24K	Noodor Dome	92.85	24	P	P	14 17 49.5	+0.3
	baz=260						
ILAR	Eielson Array	93.08	25	P	P	14 17 49.2	-0.9
	comp=Z,1.7nm,0.8s,baz=279,slow=4.4,SNR=13						
ILAR				PKKP	PKKPdf	14 34 59.6	0.0
	comp=Z,0.6nm,0.6s,baz=351,slow=1.4,SNR=10						
	comp=Z,1.7nm,0.8s						
D24K	Happy Valley	93.10	21	P	P	14 17 51.5	+1.4
	baz=259						
F24K	Squaw Lake	93.14	22	P	P	14 17 51.5	+1.1
	baz=260						
G24K	Hadweenzic Riv	93.16	23	P	P	14 17 51.2	+0.7
	baz=260						
C24K	Franklin Bluff	93.25	20	P	P	14 17 51.9	+1.0
	baz=259						
F25K	Christian Rive	94.00	22	P	P	14 17 55.4	+0.9
	baz=262						
E25K	Arctic Village	94.11	22	P	P	14 17 55.8	+1.0
	baz=262						
BMAR	Burnt Mountain	94.39	23	P	P	14 17 55.8	-0.4
J26L	Joseph Creek	94.45	26	P	P	14 17 56.9	+0.3
	baz=264						
F26K	Sheenjek River	94.59	22	P	P	14 17 58.3	+1.2
	baz=263						
G26K	Porcupine Rive	94.64	23	P	P	14 17 58.4	+1.2
	baz=264						
C27K	Jago River	94.96	21	P	P	14 17 59.6	+0.9
	baz=264						
K27K	Chicken	95.05	26	P	P	14 18 00.6	+1.4
	baz=265						
L27K	Beaver Creek,	95.08	27	P	P	14 18 00.6	+1.2
	baz=265						
I27K	Kandik River	95.38	25	P	P	14 18 02.1	+1.3
	baz=266						
H27K	Steamboat Moun	95.47	24	P	P	14 18 02.5	+1.3
	baz=266						
E27K	Coleen River	95.59	22	P	P	14 18 02.2	+0.6
	baz=266						
SNAA	Sanae	95.89	193	LR	LR	15 00 58.0	
	comp=Z,84nm,18.4s,baz=88,slow=35						
DAWY	Dawson	96.23	26	P	P	14 18 03.4	-1.3
DAWY				IAmb	IAmb	14 18 06.6	
	comp=Z,5.5nm,1.1s						
DAWY	Dawson	96.23	26	P	P	14 18 05.5	+0.9
	baz=267						
BOSA	Boshof	99.80	240	P	Pdif	14 18 21.9	+0.3
	comp=Z,3.1nm,0.8s,baz=126,slow=3.0,SNR=3.8						
	comp=Z,3.1nm,0.8s						
ARCES	ARCESS Array B	101.53	340	P	Pdif	14 18 28.6	+0.4
	comp=Z,6.6nm,1.1s,baz=39,slow=4.6,SNR=4.4						
FINES	FINESS Array B	102.77	331	PKiKP	PKiKP	14 22 54.2	+0.5
	comp=Z,1.2nm,0.5s,baz=100,slow=3.1,SNR=11						
YKA	Yellowknife Ar	107.48	26	PKKPbc	PKKPbc	14 34 18.1	-2.3
	comp=Z,1.0nm,0.6s,baz=109,slow=3.0,SNR=21						
NVAR	Mina Array Bea	110.96	52	PKKPbc	PKKPbc	14 34 07.9	-0.9
	comp=Z,0.4nm,0.7s,baz=140,slow=3.3,SNR=4.1						
GERES	GERESS Array B	112.49	320	PKiKP	PKiKP	14 23 12.9	+0.4
	comp=Z,1.6nm,0.6s,baz=62,slow=1.6,SNR=17						
GERES				SKP	SKPdf	14 26 36.3	-0.4
	comp=Z,0.5nm,0.6s,baz=113,slow=2.2,SNR=4.9						
KBA	Koelnbreinsper	113.20	318	iPKiKP	PKiKP	14 23 14.0	0.0
	comp=Z,1.5nm,0.6s						
WTTA	Wattenberg	114.27	319	ePKiKP	PKiKP	14 23 16.4	+0.4
	comp=Z,7.5nm,0.4s						
MOTA	Moosalm	114.59	319	ePKiKP	PKiKP	14 23 16.8	+0.1
	comp=Z,2.7nm,0.5s						
FETA	Feichten	114.93	319	iPKiKP	PKPdf	14 23 17.6	+0.3
	comp=Z,1.7nm,0.5s						
DAVA	Damuels	115.40	319	iPKiKP	PKPdf	14 23 18.6	+0.4
	comp=Z,4.5nm,0.4s						
PDAR	Pinedale Array	116.56	45	PKKPbc	PKKPbc	14 33 48.9	-1.1
	comp=Z,0.4nm,0.7s,baz=131,slow=4.5,SNR=4.0						
ULM	Lac du Bonnet	122.15	33	PKKPbc	PKKPbc	14 33 27.8	-1.7
	comp=Z,3.9nm,0.9s,baz=130,slow=4.4,SNR=4.3						
TXAR	Lajitas Array	124.59	59	PKP	PKiKP	14 23 37.0	+0.3
	comp=Z,0.2nm,0.4s,baz=202,slow=3.8,SNR=4.2						
TXAR				PKKPbc	PKKPab	14 33 18.6	+0.1
	comp=Z,0.3nm,0.5s,baz=123,slow=5.1,SNR=7.1						
TXAR	Lajitas Array	124.59	59	PKIKP	PKiKP	14 23 37.0	+0.3
ESDC	Sonseca Array	127.60	316	PKP	PKiKP	14 23 42.6	+0.3
	comp=Z,1.6nm,1.1s,baz=1.7,slow=4.2,SNR=5.2						
PLCA	Paso Flores	128.92	160	PKP	PKiKP	14 23 46.2	+1.2
	comp=Z,0.7nm,0.5s,baz=308,slow=2.4,SNR=4.2						
PLCA				SKPbc	SKPbc	14 26 54.0	
	comp=Z,1.8nm,0.8s,baz=197,slow=10,SNR=3.0						
TORD	Torodi Ar. Bea	129.07	281	PKP	PKiKP	14 23 46.3	+0.5
	comp=Z,7.5nm,0.5s,baz=82,slow=2.4,SNR=57						
TORD				SKPbc	SKPab	14 26 54.2	+0.1
	comp=Z,9.5nm,1.0s,baz=75,slow=3.6,SNR=20						
PMRV	Marv??o	130.06	317	eSKP	SKPbc	14 26 59.2	+1.2
SCHQ	Schefferville	130.20	13	SKPbc	SKPab	14 26 57.5	-0.3
	comp=Z,7.3nm,0.9s,baz=8.9,slow=4.2,SNR=12						
PBAR	Barrancos	130.41	315	eSKP	SKPbc	14 26 59.5	+0.2
PESTR	Estremoz	130.47	317	eSKP	SKPbc	14 26 59.7	+0.2
PMTG	Montargil	130.80	317	eSKP	SKPbc	14 26 58.1	-2.5
EVO	Evora	130.92	316	eSKP	SKPbc	14 27 01.6	+0.5
PBEJ	Beja	131.06	316	eSKP	SKPbc	14 27 01.9	+0.3
PVAQ	Vaqueiros	131.25	315	eSKP	SKPbc	14 27 02.8	+0.5
PCVE	Castro Verde	131.37	315	eSKP	SKPbc	14 27 03.4	+0.6
MESJ	Messejana	131.39	316	eSKP	SKPbc	14 27 03.6	+0.8
PBDV	Barranco-do-Ve	131.47	315	eSKP	SKPbc	14 27 03.9	+0.7
KIC	Kosan Boka	135.35	272	⇓iPKP1	PKiKP	14 23 59.1	+0.5
	comp=Z,11nm,0.4s						
DBIC	Dimbokro	135.48	273	PKP	PKiKP	14 23 58.1	-0.7
	comp=Z,9.7nm,0.4s,baz=87,slow=2.2,SNR=22						
DBIC				SKPbc	SKPbc	14 27 17.0	-0.3
	comp=Z,15nm,0.7s,baz=115,slow=4.5,SNR=16						
LIC	Lamto	135.62	272	⇓iPKP1	PKiKP	14 23 59.7	+0.6
	comp=Z,47nm,0.4s						
TIC	Toumodi	135.64	273	⇑iPKP1	PKiKP	14 23 59.9	+0.7
	comp=Z,18nm,0.3s						
PB06	IPOC Station P	144.78	147	PKPdf	PKPdf	14 24 15.2	+1.1
PB03	IPOC Station P	145.21	146		PKiKP	14 24 16.9	-1.8
PB07	IPOC Station P	145.39	146	PKPdf	PKPab	14 24 17.3	+1.8
CPUP	Villa Florida	146.21	168	PKPbc	PKPbc	14 24 17.1	-0.3
	comp=Z,6.8nm,0.8s,baz=162,slow=3.3,SNR=12						
CPUP				SKPbc	SKiKP	14 27 45.4	-0.1
	comp=Z,2.5nm,0.5s,baz=141,slow=4.9,SNR=4.4						
CPUP	Villa Florida	146.21	168		PKPab	14 24 18.8	+0.6
CPUP	Villa Florida	146.21	168	PKP2	PKPab	14 24 18.8	+0.6
PSGCX	Pisagua	146.92	143	PKPbc	PKPab	14 24 21.3	0.0
PB11	IPOC Station P	147.07	144		PKPab	14 24 21.9	-0.1
MNMC	Minye Minye	147.59	143	PKPab	PKPab	14 24 24.2	0.0
PB16	IPOC Station P	148.26	142	PKPab	PKiKP	14 24 26.2	+0.6
LPAZ	La Paz	150.66	142	PKPbc	PKiKP	14 24 31.9	+1.2
	comp=Z,8.8nm,0.4s,baz=34,slow=2.5,SNR=36						
LPAZ	La Paz	150.66	142	PKPab	PKiKP	14 24 32.0	+1.3
BDFB	Brasilia	157.60	184	PKP	PKPdf	14 24 34.3	+0.8
	comp=Z,2.0nm,0.6s,baz=127,slow=6.4,SNR=3.2						

KRSC 11 14:07:26.0±1.6, 51°.36N×157°.87E, h97^{km}±18^{km}, Ml3.9, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	0.46	16	eP	Pn	14 07 42.3	+1.1
KDTR				eS	Sn	14 07 52.5	0.0
PAU	Pauzhetka	0.67	279	eP	Pn	14 07 44.6	+1.8
MTVR	Mutnovka	1.14	10	eP	Pn	14 07 49.1	+1.2
MTVR				eS	Sn	14 08 05.1	+0.7
RUS	Russkaya	1.14	20	eP	Pn	14 07 48.8	+1.1
RUS				eS	Sn	14 08 04.4	+0.3
GRL	Gorelyy	1.20	6	eP	Pn	14 07 49.9	+1.4
GRL				eS	Sn	14 08 07.2	+1.7
SKR	Severo-Kuril's	1.30	239	eP	Pn	14 07 50.9	+1.3
SKR				eS	Sn	14 08 08.2	+0.7
KRMR	Karymshinskiy	1.48	6	eP	Pn	14 07 53.0	+1.3
APC	Apacha	1.62	345	eP	Pn	14 07 54.3	+0.7
APC				eS	Sn	14 08 13.9	-0.6
PET	Petropavlovsk	1.73	16	eP	Pn	14 07 56.6	+1.7
PET				eS	Sn	14 08 18.7	+1.8
DALK	Dalny	1.76	18	eP	Pn	14 07 57.0	+1.8
INSR	Institute	1.76	15	eS	Sn	14 08 20.7	+3.0
UGLR	Uglovaya	1.94	17	eP	Pn	14 08 00.4	+2.7
AVH	Avacha	1.98	15	eP	Pn	14 08 00.9	+2.7
SMAR	Somma	1.99	16	eP	Pn	14 08 01.1	+2.7
KOK	Koryaka	1.99	13	eP	Pn	14 08 01.1	+2.8
SDLR	Sedlovina	2.02	18	eP	Pn	14 08 00.9	+2.2
KRER	Koryakskii	2.02	15	eP	Pn	14 08 01.3	+2.5
KRX	Arik	2.05	13	eP	Pn	14 08 01.6	+2.4
SPN	Mys Shipunski	2.18	36	eP	Pn	14 08 04.7	+4.0
SPN				eS	Sn	14 08 31.1	+3.8
GNL	Ganaly	2.34	1	eP	Pn	14 08 04.6	+1.7
BKI	Bering	6.19	48	eP	Pn	14 08 57.2	+2.4
BKI				eS	Sn	14 09 59.3	-4.7

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*IDC **11** 14:17:26.2±4.6, 23°.17S×70°.17W, h0^{km}, mb3.9/1, mbtmp3.8/2, ML3.5/1, MS3.9/1, Error ellipse: s-maj=147.1km s-min=64.9km az=88.0*

*SJA **11** 14:17:27.8±0.8, 22°.73S×70°.60W, h25^{km}±5^{km}, ML3.6, MW3.9, Hypocentre not reviewed by the ISC*

*GUC **11** 14:17:30.9±0.8, 22°.73S×70°.50W, h39^{km}±4^{km}, ML3.6*

ISC 11 14:17:30.6±1.5, 22°.76S±0°.04×70°.48W±0°.06, h27^{km}±12^{km}, n30, σ0^{s}.96/27, 4C-6D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB04	IPOC Station P	0.53	36	⇓iP	Pb	14 17 41.1	-0.3
PB04				IAML		14 17 49.8	
	comp=E,4µm,0.4s						
PB04	IPOC Station P	0.53	36	eP		14 17 41.1	
PB04				eS		14 17 48.4	
PB04				IAML		14 17 54.0	
	comp=Z,2µm,0.6s						
PB10	IPOC Station P	0.75	185	⇑iP	Pb	14 17 45.0	-0.1
PB10				iS	Sn	14 17 55.9	+0.1
PB10	IPOC Station P	0.75	185	eP		14 17 45.0	
PB10				eS		14 17 57.1	
PB10				IAML		14 18 00.6	
	comp=Z,927nm,0.4s						
PB06	IPOC Station P	0.84	86	⇓iP	Pn	14 17 46.6	-0.2
PB06				iS	Sn	14 17 58.0	-0.3
PB06				IAML		14 17 58.6	
	comp=N,6µm,0.3s						
PB06	IPOC Station P	0.84	86	eP		14 17 46.5	
PB06				eS		14 17 57.9	
PB06				IAML		14 17 59.7	
	comp=Z,2µm,0.4s						
PB03	IPOC Station P	0.98	44	⇓iP	Pn	14 17 48.3	-0.3
PB03				iS	Sn	14 18 00.8	-0.9
PB03				IAML		14 18 03.9	
	comp=E,2µm,0.5s						
PB03	IPOC Station P	0.98	44	eP		14 17 48.3	
PB03				eS		14 18 02.7	
PB03				IAML		14 18 05.2	
	comp=Z,1µm,0.3s						
PB15	IPOC Station P	1.03	116	iP	Pb	14 17 49.8	-0.1
PB15				iS	Sn	14 18 03.6	+0.6
PB15	IPOC Station P	1.03	116	eP		14 17 49.8	
PB15				eS		14 18 04.1	
PB15				IAML		14 18 09.5	
	comp=Z,2µm,0.2s						
PB07	IPOC Station P	1.17	28	⇓iP	Pn	14 17 51.1	-0.2
PB07				iS	Sn	14 18 06.0	-0.5
PB07				IAML		14 18 10.8	
	comp=N,2µm,0.4s						
PB07	IPOC Station P	1.17	28	eP		14 17 51.0	
PB07				eS		14 18 06.2	
PB07				IAML		14 18 10.5	
	comp=Z,2µm,0.6s						
LVC	Limon Verde	1.46	84	LR	LR	14 18 24.5	
	comp=Z,100nm,19.7s,baz=338,slow=45						
LVC	Limon Verde	1.46	84	iP	Pb	14 17 56.6	-0.6
LVC	Limon Verde	1.46	84	eP		14 17 56.7	
LVC				IAML		14 18 15.9	
	comp=Z,370nm,0.4s						
PB09	IPOC Station P	1.50	50	⇓iP	Pb	14 17 57.0	-0.8
PB09				iS	Sb	14 18 16.9	+0.4
PB09				IAML		14 18 22.1	
	comp=N,917nm,0.3s						
PB09	IPOC Station P	1.50	50	eP		14 17 56.0	
PB09				IAML		14 18 19.9	
	comp=Z,697nm,0.7s						
PB02	IPOC Station P	1.54	21	⇑iP	Pn	14 17 56.2	0.0
PB02				iS	Sn	14 18 16.2	+0.9
PB02				IAML		14 18 24.3	
	comp=E,2µm,0.5s						
PB02	IPOC Station P	1.54	21	eP		14 17 56.6	
PB02				IAML		14 18 22.4	
	comp=Z,2µm,0.4s						
PB14	IPOC Station P	1.86	178	⇓iP	Pn	14 18 01.1	+0.3
PB14	IPOC Station P	1.86	178	eP		14 18 01.1	
PB14				IAML		14 18 32.9	
	comp=Z,274nm,0.4s						
PB01	IPOC Station P	1.94	28	eP		14 18 02.0	
PB01				eP		14 18 02.7	
PB01				IAML		14 18 32.6	
	comp=Z,464nm,0.6s						
PB01	IPOC Station P	1.94	28	⇑iP	Pn	14 18 02.5	+0.6
PB01				iS	Sn	14 18 27.0	+1.6
PB01				IAML		14 18 31.6	
	comp=E,916nm,0.7s						
TA01	Diego Aracena	2.20	7	iP	Pn	14 18 04.4	-1.0
TA01	Diego Aracena	2.20	7	eP		14 18 04.5	
TA01				IAML		14 18 42.4	
	comp=Z,367nm,0.6s						
GO02	Mina Guanaco	2.52	161	eP		14 18 11.0	
PB08	IPOC Station P	2.89	26	eP	Pn	14 18 16.9	+1.8
PB08				IAML		14 19 02.2	
	comp=N,309nm,0.7s						
PB08	IPOC Station P	2.89	26	eP		14 18 16.0	
PB08				IAML		14 19 04.9	
	comp=Z,246nm,1.0s						
PB11	IPOC Station P	3.08	15	iP	Pn	14 18 17.5	-0.2
PB11	IPOC Station P	3.08	15	eP		14 18 17.9	
PB11				IAML		14 19 06.5	
	comp=Z,294nm,0.8s						
PSGC	Pisagua	3.17	6	⇑iP	Pn	14 18 17.6	-1.1
PSGCX	Pisagua	3.17	6	eP		14 18 17.9	
PSGCX				IAML		14 19 16.9	
	comp=Z,85nm,1.1s						
GO01	Chusmiza	3.30	22	eP		14 18 22.0	
AC01	Pan de Azucar	3.37	182	eP		14 18 19.0	
AC01				IAML		14 19 18.3	
	comp=Z,104nm,0.7s						
MNMC	Minye Minye	3.71	13	iP	Pn	14 18 26.4	+0.1
MNMCX	Minye Minye	3.71	13	eP		14 18 26.7	
MNMCX				IAML		14 19 31.0	
	comp=Z,200nm,0.6s						
PB12	IPOC Station P	4.13	2	eP		14 18 30.0	
PB12				IAML		14 19 43.4	
	comp=Z,91nm,0.6s						
PB16	IPOC Station P	4.50	12	eP		14 18 38.0	
PB16				IAML		14 20 04.0	
	comp=Z,58nm,0.6s						
LPAZ	La Paz	6.81	19	Pn	Pn	14 19 12.2	+2.9
	comp=Z,0.4nm,0.3s,baz=98,slow=2.2,SNR=3.1						
	comp=Z,1.0nm,0.3s						
H03N1	Juan Fernandez	12.97	213	T	T	14 34 05.8	
	baz=38,slow=72,SNR=199						
H03N2	Juan Fernandez	12.98	213	T	T	14 33 49.5	
	baz=38,slow=72,SNR=59						
H03N3	Juan Fernandez	12.99	213	T	T	14 34 13.5	
	baz=38,slow=72,SNR=60						
ELK	Elko	75.65	326	LR	LR	15 01 01.9	
	comp=Z,62nm,18.6s,baz=36,slow=34						
TORD	Torodi Ar. Bea	79.15	71	P	P	14 29 32.7	-0.6
	comp=Z,0.6nm,0.5s,baz=255,slow=4.6,SNR=6.0						
	comp=Z,0.6nm,0.5s						
H11S2	WAKE ISLAND Hy	126.58	277	T	T	16 55 56.8	
	baz=105,slow=75,SNR=43						
H11S1	WAKE ISLAND Hy	126.59	277	T	T	16 55 49.2	
	baz=105,slow=75,SNR=22						
H11S3	WAKE ISLAND Hy	126.60	277	T	T	16 55 58.0	
	baz=105,slow=75,SNR=25						
H11N3	WAKE ISLAND Hy	126.70	278	T	T	16 56 17.2	
	baz=104,slow=75,SNR=29						
H11N2	WAKE ISLAND Hy	126.72	278	T	T	16 56 10.2	
	baz=104,slow=75,SNR=23						
H11N1	WAKE ISLAND Hy	126.72	278	T	T	16 56 25.6	
	baz=104,slow=75,SNR=15						
MKAR	Makanchi Array	147.50	36	PKPbc	PKPbc	14 37 12.0	-0.1
	comp=Z,0.5nm,0.9s,baz=318,slow=1.9,SNR=2.8						

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*IDC **11** 15:04:32.6±1.5, 47°.24N×146°.19E, h402^{km}±20^{km}, mb2.8/6, mbtmp3.6/12, Error ellipse: s-maj=30.3km s-min=17.6km az=155.0*

ISC 11 15:04:32.0±0.9, 47°.2N±0°.1×146°.2E±0°.1, h395^{km}, n12, σ0^{s}.75/12, mb3.1/6, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	Asahikawa	4.03	221	P	Pn	15 05 44.7	+0.6
	3.5nm,0.4s,baz=4.3,slow=4.1,SNR=24						
PETK	Petropavlovsk-	9.41	47	P	P	15 06 42.9	0.0
	2.3nm,1.0s,baz=223,slow=10.0,SNR=1.6						
KLR	Kul'dur	9.87	287	P	Pn	15 06 48.9	+0.5
	0.7nm,0.5s,baz=110,slow=8.7,SNR=4.5						
MJAR	Matsushiro Arr	12.23	212	P	Pn	15 07 15.4	-0.6
	1.3nm,0.5s,baz=17,slow=11,SNR=13						
MA2	Magadan	12.65	11	P	Pn	15 07 19.5	-1.0
	1.0nm,0.5s,baz=194,slow=9.8,SNR=3.7						
SEY	Seymchan	16.11	10	P	P	15 07 57.6	+1.4
	1.0nm,0.3s,baz=181,slow=5.5,SNR=11						
ILAR	Eielson Array	39.11	39	P	P	15 11 22.8	+0.1
	0.7nm,0.6s,baz=249,slow=6.0,SNR=13						
	0.7nm,0.6s						
MKAR	Makanchi Array	42.48	294	P	P	15 11 49.8	-0.3
	0.5nm,0.5s,baz=68,slow=8.2,SNR=6.4						
	0.5nm,0.5s						
YKA	Yellowknife Ar	53.29	35	P	P	15 13 11.0	-0.4
	0.3nm,0.6s,baz=305,slow=7.2,SNR=6.8						
	0.3nm,0.6s						
NOA	NORSAR Array B	66.12	338	P	P	15 14 37.1	-0.8
	0.7nm,0.8s,baz=93,slow=9.8,SNR=1.7						
	0.7nm,0.8s						
PDAR	Pinedale Array	68.16	50	P	P	15 14 51.5	+0.4
	0.3nm,0.5s,baz=344,slow=0.7,SNR=4.5						
	0.3nm,0.5s						
TXAR	Lajitas Array	81.25	56	P	P	15 16 05.8	+0.4
	0.1nm,0.4s,baz=299,slow=5.0,SNR=2.3						
	0.1nm,0.4s						

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*SJA **11** 15:15:33.8±1.5, 29°.99S×72°.25W, h10^{km}±7^{km}, ML4.2, MW4.1, Hypocentre not reviewed by the ISC*

*IDC **11** 15:15:36.3±1.0, 30°.12S×72°.05W, h0^{km}, mb4.0/5, mbtmp4.0/9, ML4.1/4, MS3.2/6, Error ellipse: s-maj=31.0km s-min=28.2km az=129.0*

*NEIC **11** 15:15:36.6±2.1, 29°.918S±0°.010×72°.20W±0°.07, h10^{km}±2^{km}, mb4.3/3, ML4.0(GUC), Error ellipse: s-maj=10.3km s-min=3.0km az=272.0*

*GUC **11** 15:15:38.2±0.8, 29°.98S×72°.03W, h10^{km}±5^{km}, ML4.0*

ISC 11 15:15:36.2±1.7, 29°.94S±0°.04×72°.14W±0°.06, h3^{km}±10^{km}, n82, σ1^{s}.50/83, mb4.2/6, MS3.4/3, 4C-5D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.78	89		Pg	15 15 52.1	+0.9
CO05	La Serena	0.78	89	⇓iP	Pg	15 15 52.1	+0.9
CO05				iS	Sg	15 16 01.5	+0.1
CO05				IAML		15 16 03.7	
	comp=N,10µm,0.3s						
CO06	Fray Jorge	0.85	149	Pg	Pg	15 15 53.1	+0.6
CO06	Fray Jorge	0.85	149	⇓iP	Pg	15 15 53.1	+0.6
CO06				iS	Sg	15 16 04.3	+0.7
CO06				IAML		15 16 06.7	
	comp=E,6µm,0.3s						
GO04	Tololo Observa	1.18	102		Pg	15 15 58.6	-0.3
GO04	Tololo Observa	1.18	102	⇓iP	Pg	15 15 58.6	-0.3
GO04				iS	Sg	15 16 11.5	-2.8
GO04	Tololo Observa	1.18	102	iP		15 15 58.7	
GO04				eS		15 16 15.4	
CO03	El Pedregal	1.54	126		Pn	15 16 04.0	-0.7
CO03	El Pedregal	1.54	126	⇓iP	Pn	15 16 04.0	-0.7
CO03				iS	Sn	15 16 23.5	-1.7
CO03				IAML		15 16 26.8	
	comp=E,4µm,0.5s						
CO03	El Pedregal	1.54	126	iP		15 16 04.0	
CO03				eS		15 16 23.5	
CO03				IAML		15 16 26.0	
	comp=Z,2µm,0.7s						
LCO	Las Campanas	1.56	54		Pn	15 16 05.2	+0.2
LCO	Las Campanas	1.56	54	⇑iP	Pn	15 16 05.3	+0.2
LCO				iS	Sb	15 16 26.4	+0.3
LCO	Las Campanas	1.56	54	iP		15 16 05.2	
LCO				eS		15 16 28.6	
LCO				IAML		15 16 33.7	
	comp=Z,2µm,0.9s						
CO02	Combarbal	1.60	142		Pn	15 16 05.4	-0.1
CO02	Combarbal	1.60	142	⇓iP	Pn	15 16 05.5	-0.1
CO02				iS	Sn	15 16 26.1	-0.6
CO02	Combarbal	1.60	142	iP		15 16 04.0	
CO02				eS		15 16 26.6	
CO02				IAML		15 16 30.5	
	comp=Z,4µm,0.5s						
CO01	Juntas del Tor	1.77	92		Pn	15 16 08.5	+0.4
CO01	Juntas del Tor	1.77	92	⇑iP	Pn	15 16 08.4	+0.4
CO01				iS	Sn	15 16 31.1	-0.1
CO01				IAML		15 16 33.7	
	comp=N,1µm,0.3s						
CO01	Juntas del Tor	1.77	92	iP		15 16 07.0	
CO01				IAML		15 16 36.8	
	comp=Z,749nm,1.6s						
AC04	Llanos de Chal	1.96	29		Pn	15 16 10.4	0.0
AC04	Llanos de Chal	1.96	29	⇑iP	Pn	15 16 10.1	-0.3
AC04	Llanos de Chal	1.96	29	iP		15 16 10.2	

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AC04                              eS            15 16 45.0
AC04                               IAML         15 16 49.7
       comp=Z,1μm,0.8s
AC05   El Transito        1.96  56        Pn    15 16 11.2 +0.7
AC05   El Transito        1.96  56⇑iP     Pn    15 16 11.2 +0.7
AC05                              i S     Sn    15 16 35.8  0.0
AC05                               IAML         15 16 43.8
       comp=N,1μm,0.7s
AC05   El Transito        1.96  56 i P          15 16 10.0
AC05                              eS            15 16 39.1
AC05                               IAML         15 16 53.8
       comp=Z,1μm,1.0s
VA06   Catapilco          2.71 165  Pn    Pn    15 16 20.5 -0.2
VA06   Catapilco          2.71 165 eP     Pn    15 16 20.6 -0.2
VA06                               IAML         15 17 17.3
       comp=E,1μm,0.5s
GO03   Copiap             2.87  36  Pn    Pn    15 16 23.4 +0.5
GO03   Copiap             2.87  36 eP     Pn    15 16 23.4 +0.5
GO03   Copiap             2.87  36 i P          15 16 23.4
RTLS   Leoncito           3.07 128 i P          15 16 29.0
RTLS                              eS            15 17 07.3
RTLS                               IAML         15 17 22.5
       comp=Z,1μm,0.7s
VA03   San Esteban        3.12 155        Pn    15 16 27.9 +1.4
VA03   San Esteban        3.12 155 i P          15 16 27.0
VA03                               IAML         15 17 24.6
       comp=Z,698nm,0.9s
ROCH   El Roble           3.17 163  IAML        15 17 23.6
       comp=N,1μm,0.5s
ROC1   El Roble           3.17 163        Pn    15 16 27.4  0.0
ROC1   El Roble           3.17 163 eP           15 16 27.5
ZON    Zonda              3.38 119        Pn    15 16 33.6 +3.6
MT02   Curacav            3.42 166        Pn    15 16 31.6 +1.1
MT02   Curacav            3.42 166 eP     Pn    15 16 31.6 +1.1
MT02                               IAML         15 17 41.9
       comp=E,261nm,0.7s
MT02   Curacav            3.42 166 i P          15 16 30.0
MT02                               IAML         15 17 29.0
       comp=Z,331nm,1.4s
PEL    Peldehue           3.43 159        Pn    15 16 31.2 +0.6
PEL    Peldehue           3.43 159  IAML        15 17 35.1
       comp=N,527nm,0.7s
MT10   Hacienda Santa     3.59 158 eP     Pn    15 16 34.0 +1.0
MT05   Renca              3.64 161        Pn    15 16 31.8 -1.8
MT05   Renca              3.64 161 i P          15 16 33.9
MT05                               IAML         15 17 46.8
       comp=Z,608nm,1.1s
CFA    Coronel Fontan     3.74 117  Pn    Pn    15 16 37.7 +2.7
       comp=Z,12nm,0.3s,baz=306,slow=14,SNR=97
CFA                                 Sn    Sn    15 17 16.8 -2.8
       comp=Z,17nm,0.3s,baz=289,slow=11,SNR=4.6
CFA                                 LR    LR    15 17 45.1
       comp=Z,129nm,20.6s,baz=264,slow=36
CFA    Coronel Fontan     3.74 117 i P          15 16 36.0
CFA                                 IAML        15 17 47.9
       comp=Z,3μm,0.8s
MT03   Universidad Ad     3.81 159        Pn    15 16 36.1 +0.2
MT03   Universidad Ad     3.81 159 eP     Pn    15 16 37.0 +1.1
MT03   Universidad Ad     3.81 159 i P          15 16 37.0
MT03                                IAML        15 17 37.5
       comp=Z,442nm,1.6s
MT04   Ro Olivares        3.85 154 eP     Pn    15 16 39.0 +2.4
MT04                               i S    Sn    15 17 23.2 +0.7
ASAL   Salagasta          3.87 134 i P          15 16 40.6
ASAL                                IAML        15 17 47.0
       comp=Z,257nm,1.1s
MT08   Bocatoma Ro        3.93 153        Pn    15 16 33.6 -4.1
MT09   Talagante          3.95 166        Pn    15 16 37.5 -0.4
MT01   Popeta             3.98 169        Pn    15 16 37.4 -0.9
MT01   Popeta             3.98 169 i P          15 16 37.0
MT01                                IAML        15 17 50.2
       comp=Z,177nm,0.9s
AC01   Pan de Azucar      4.01  20  Pn    Pn    15 16 37.5 -1.2
AC01   Pan de Azucar      4.01  20 i P          15 16 37.7
AC01                                IAML        15 17 52.8
       comp=Z,225nm,1.4s
AC02   Maricunga          4.07  41        Pn    15 16 40.9 +1.1
MT13   San Alfonso        4.11 158        Pn    15 16 40.6 +0.5
MT13   San Alfonso        4.11 158 eP     Pn    15 16 41.3 +1.3
LMEL   Las Melosas        4.23 158        Pn    15 16 40.7 -1.1
BO01   Tunca              4.53 169  Pn    Pn    15 16 45.9 +0.2
BO01   Tunca              4.53 169 i P          15 16 45.0
BO01                                IAML        15 18 05.7
       comp=Z,115nm,1.1s
BO02   Sierra Bellavi     4.97 167        Pn    15 16 52.2 +0.4
BO02   Sierra Bellavi     4.97 167 i P          15 16 52.1
BO02                                IAML        15 18 19.2
       comp=Z,162nm,0.8s
GO05   Huala              5.06 178  Pn    Pn    15 16 52.0 -1.0
GO02   Mina Guanaco       5.27  26  Pn    Pn    15 16 55.5 -0.6
GO02   Mina Guanaco       5.27  26 i P          15 16 55.8
PB14   IPOC Station P     5.51  17        Pn    15 16 57.5 -2.0
H03N1  Juan Fernandez     6.75 237  T     T     15 24 34.4
       baz=69,slow=72,SNR=282
H03N2  Juan Fernandez     6.76 237  T     T     15 24 34.6
       baz=69,slow=72,SNR=267
H03N3  Juan Fernandez     6.76 237  T     T     15 24 33.8
       baz=69,slow=72,SNR=259
VA04   Juan Fernndez      6.79 235  Pn    Pn    15 17 16.0 -0.7
BI05   Punta Hualpn       6.85 187  Pn    Pn    15 17 16.2 -1.3
PB15   IPOC Station P     7.12  20  Pn    Pn    15 17 20.6 -0.8
PB04   IPOC Station P     7.78  14  Pn    Pn    15 17 30.1 -0.5
LVC    Limon Verde        7.85  22  Pn    Pn    15 17 30.4 -1.3
       comp=Z,0.8nm,0.3s,baz=184,slow=11,SNR=8.6
LVC                                 Sn    Sn    15 18 57.7 -3.6
       comp=Z,1.1nm,0.3s,baz=258,slow=8.2,SNR=3.9
LVC                                 Lg    Lg    15 19 36.2
       comp=Z,1.5nm,0.3s,baz=161,slow=18,SNR=4.4
LVC                                 LR    LR    15 21 00.8
       comp=Z,107nm,18.3s,baz=200,slow=41
PSGCX  Pisagua           10.46  11  Pn    Pn    15 18 04.5 -2.7
PLCA   Paso Flores       10.85 174  Pn    Pn    15 18 11.1 -1.3
       comp=Z,0.3nm,0.3s,baz=337,slow=9.8,SNR=7.6
       comp=Z,1.6nm,0.6s
PLCA   Paso Flores       10.85 174  Pn    Pn    15 18 10.0 -2.5
TRQA   Tornquist         11.68 137  Pn    Pn    15 18 20.0 -3.8
CPUP   Villa Florida     13.55  78  Pn    Pn    15 18 51.3 +1.9
       comp=Z,0.2nm,0.3s,baz=244,slow=11,SNR=5.2
CPUP                                Lg    Lg    15 22 31.4
       comp=Z,0.1nm,0.3s,baz=318,slow=18,SNR=1.5
CPUP                                LR    LR    15 24 20.9
       comp=Z,131nm,19.6s,baz=228,slow=39
       comp=Z,1.9nm,0.6s
LPAZ   La Paz            14.08  16  Pn    Pn    15 19 00.5 +3.3
       comp=Z,0.4nm,0.3s,baz=194,slow=7.2,SNR=10
       comp=Z,2.8nm,0.6s
LPAZ   La Paz            14.08  16        Pn    15 18 54.1 -3.1
SIV    San Ignacio       17.20  39  Pn    P     15 19 39.6 +0.3
       comp=Z,0.1nm,0.3s,baz=219,slow=11,SNR=23
       comp=Z,4.8nm,0.6s
ETMB   Extrema           20.77  17  P     P     15 20 18.6 +0.1
ETMB                                IAmb  IAmb  15 20 24.3
       comp=Z,4.0nm,0.9s
BDFB   Brasilia          26.33  63  P     P     15 21 13.0 -0.6
       comp=Z,1.5nm,0.5s,baz=209,slow=13,SNR=2.2
       comp=Z,1.5nm,0.5s
RPN    Rapa Nui          32.71 266  LR    LR    15 31 31.1
       comp=Z,81nm,19.4s,baz=40,slow=29
PMSA   Palmer Station    35.22 174  LR    LR    15 36 02.9
       comp=Z,27nm,18.4s,baz=224,slow=35
QSPA   South Pole Qui    60.28 180  P     P     15 25 46.5 +0.5
QSPA                                IAmb  IAmb  15 26 08.7
       comp=Z,3.2nm,1.1s
TXAR   Lajitas Array     66.17 330  P     P     15 26 26.9 +1.6
       comp=Z,0.4nm,0.9s,baz=134,slow=14,SNR=3.5
       comp=Z,0.4nm,0.9s
DBIC   Dimbokro          74.00  72  P     P     15 27 13.8 +0.2
       comp=Z,3.7nm,0.7s,baz=126,slow=8.5,SNR=3.9
DBIC                                LR    LR    15 58 21.5
       comp=Z,45nm,19.3s,baz=214,slow=35
       comp=Z,3.7nm,0.7s
PDAR   Pinedale Array    80.11 333  P     P     15 27 49.4 +1.7
       comp=Z,0.8nm,1.0s,baz=134,slow=5.1,SNR=2.4
       comp=Z,0.8nm,1.0s
TORD   Torodi Ar. Bea    82.92  71  P     P     15 28 03.3 +0.4
       comp=Z,2.2nm,0.7s,baz=266,slow=3.0,SNR=4.4
       comp=Z,2.2nm,0.7s
TORD   Torodi Ar. Bea    82.92  71  P     P     15 28 00.7 -2.2
TORD                                IAmb  IAmb  15 28 04.2
       comp=Z,4.2nm,1.0s
ASAR   Alice Springs    121.12 208  PKP   PKiKP 15 34 31.7 +0.5
       comp=Z,0.3nm,0.9s,baz=160,slow=1.4,SNR=2.0
WRA    Warramunga Arr   124.23 210  PKP   PKPdf 15 34 35.8 -1.3
       comp=Z,0.2nm,0.3s,baz=154,slow=1.6,SNR=1.7
H11S2  WAKE ISLAND Hy125.64 272     T     T     17 53 31.6
       baz=113,slow=74
H11S1  WAKE ISLAND Hy125.66 272     T     T     17 53 31.8
       baz=113,slow=74
H11S3  WAKE ISLAND Hy125.66 272     T     T     17 53 33.0
       baz=113
ZALV   Zalesovo Beam    150.77  28  PKPbc PKiKP 15 35 30.9 +0.7
       comp=Z,4.4nm,0.5s,baz=307,slow=3.3,SNR=23
MKAR   Makanchi Array   154.00  43  PKPbc PKiKP 15 35 37.9 +0.7
       comp=Z,0.3nm,0.7s,baz=329,slow=2.2,SNR=3.9
```

WEL 11 16:25:29.7±0.6**, 43°S**±4°×**17°8E**±°**, h33**km**, M3.6**/12**, ML3.9**/25**, MLv3.6**/12**, Error ellipse: s-maj=0.0km s-min=0.0km az=70.3, confirmed, Off east coast of South Island**

```
Code   Station Name        Δ°   AZ°   Phase ID        Time      Res
                                     Op     ISC      h  m  s    ISC
TRWZ   Traveller          2.33 324   P      Pn      16 26 06.9 +1.2
TRWZ                                 S      Sn      16 26 33.4 +0.2
PLWZ   Palliser           2.41 315   P      Pn      16 26 07.8 +1.1
PLWZ                                 S      Sn      16 26 35.7 +0.6
TMWZ   Te Maipa           2.50 331   P      Pn      16 26 08.9 +0.9
TMWZ                                 S      Sn      16 26 37.4  0.0
CPWZ   Castlepoint        2.58 337   P      Pn      16 26 10.4 +1.3
CPWZ                                 S      Sn      16 26 39.6 +0.3
MTW    Mount Morrison     2.61 324   P      Pn      16 26 10.3 +0.8
MTW                                  S      Sn      16 26 41.3 +1.2
BFZ    Birch Farm         2.78 340   P      Pn      16 26 12.7 +0.8
BFZ                                  S      Sn      16 26 42.7 -1.6
TIWZ   Tintock            2.80 334   P      Pn      16 26 13.0 +0.9
TIWZ                                 S      Sn      16 26 45.0 +0.3
HOWZ   Holdsworth Sta     2.82 328   P      Pn      16 26 13.3 +0.8
HOWZ                                 S      Sn      16 26 43.8 -1.5
CAW    Cannon Point       2.85 319   P      Pn      16 26 13.7 +1.0
CAW                                  S      Sn      16 26 46.2 +0.4
WEL    Wellington         2.86 314   P      Pn      16 26 14.2 +1.2
PRWZ   Pori Road          2.97 337   P      Pn      16 26 15.8 +1.2
MRZ    Mangatainoka R     3.00 331   P      Pn      16 26 15.8 +0.8
MRZ                                  S      Sn      16 26 48.0 -1.9
OGWZ   Otaki Gorge        3.03 324   P      Pn      16 26 16.4 +1.1
OGWZ                                 S      Sn      16 26 49.4 -1.1
PRHZ   Porangahau         3.10 347   P      Pn      16 26 16.7 +0.4
PRHZ                                 S      Sn      16 26 49.4 -2.8
KIW    Kapiti Island      3.11 321   P      Pn      16 26 17.8 +1.4
KIW                                  S      Sn      16 26 53.6 +1.1
BSWZ   Blackbirch Sta     3.12 299   P      Pn      16 26 16.9 +0.3
DVHZ   Dannevirke         3.16 341   P      Pn      16 26 17.9 +0.7
TCW    Tory Channel       3.18 310   P      Pn      16 26 18.6 +1.2
POWZ   Post Office Ro     3.18 335   P      Pn      16 26 18.7 +1.2
TUWZ   Tuamarina          3.24 304   P      Pn      16 26 19.4 +1.3
PXZ    Pawanui            3.30 351   P      Pn      16 26 19.0  0.0
WPHZ   Waipukurau         3.33 346   P      Pn      16 26 20.1 +0.6
TSZ    Takapari Road      3.44 340   P      Pn      16 26 21.8 +0.9
PNHZ   Pukenui            3.52 343   P      Pn      16 26 22.9 +0.8
KAHZ   Kahuranaki         3.53 352   P      Pn      16 26 22.5 +0.3
MQZ    McQueen's Vall     3.56 262   P      Pn      16 26 22.5  0.0
MQZ                                  S      Sn      16 26 59.9 -3.5
DUWZ   D'Urville Isla     3.66 312   P      Pn      16 26 26.2 +2.3
THZ    Tophouse           3.73 293   P      Pn      16 26 25.0  0.0
THZ                                  S      Sn      16 27 08.7 +0.8
MCHZ   McNeill Hill       3.90 351   P      Pn      16 26 27.8 +0.5
KWHZ   Kaweka Forest      3.96 348   P      Pn      16 26 28.6 +0.4
BHHZ   Black Hill Sta     3.96 344   P      Pn      16 26 28.7 +0.6
MRNZ   Matariki Terra     4.00 297   P      Pn      16 26 28.8 +0.1
WAZ    Wanganui           4.02 331   P      Pn      16 26 31.4 +2.5
TKNZ   Takaka Hill        4.07 302   P      Pn      16 26 30.6 +0.9
MOVZ   Moawhango          4.11 341   P      Pn      16 26 31.0 +0.8
BKZ    Black Stump Fm     4.20 349   P      Pn      16 26 31.3 -0.1
WNVZ   Wahianoa           4.22 339   P      Pn      16 26 33.1 +1.3
NMHZ   Naumai             4.23 353   P      Pn      16 26 32.3 +0.4
CTZ    Chatham Island     4.29  98   P      Pn      16 26 26.8 -5.8
CTZ                                  S      Sn      16 27 09.6  -12
OTVZ   Oturere            4.36 341   P      Pn      16 26 34.7 +1.0
NGZ    Ngauruhoe          4.36 340   P      Pn      16 26 35.8 +2.1
RAHZ   Arahi              4.39 356   P      Pn      16 26 34.4 +0.3
NNVZ   North Ngauruho     4.40 340   P      Pn      16 26 35.4 +1.1
NTVZ   North Tongarir     4.42 341   P      Pn      16 26 35.3 +0.8
KRVZ   Karewarewa         4.43 341   P      Pn      16 26 36.1 +1.4
MTHZ   Maungataniwha      4.47 353   P      Pn      16 26 35.3 +0.2
RITZ   Rihia Road         4.50 343   P      Pn      16 26 37.5 +2.1
MRHZ   Matea Rd           4.54 349   P      Pn      16 26 37.3 +1.2
VRZ    Vera Road          4.66 333   P      Pn      16 26 39.0 +1.3
HIZ    Hauiti             5.19 336   P      Pn      16 26 46.7 +1.7
ODZ    Otahua Downs       5.24 248   P      Pn      16 26 45.5 -0.2
```

IDC ***11*** *16:40:15.3±1.1, 8°29S×147°46E, h0km, mb3.9/8, mbtmp4.0/11, ML4.2/3, MS3.4/3, Error ellipse: s-maj=36.1km s-min=9.9km az=100.0*

ISC 11 16:40:19.7±0.8**, 8°43S**±0°09×**147°5E**±0°1**, h35**km**, n15,** σ1**§63**/15**, mb4.0**/7**, Eastern New Guinea region**

```
Code   Station Name        Δ°   AZ°   Phase ID        Time      Res
                                     Op     ISC      h  m  s    ISC
PMG    Port Moresby       1.01 197   Pg     Pn      16 40 36.7 -0.8
       450nm,0.3s,baz=27,slow=8.8,SNR=571
PMG                                  Lg     Lg      16 40 54.3
       743nm,0.3s,baz=11,slow=22,SNR=11
KRVT   Keravat (AS076     6.11  48   Pn     Pn      16 41 45.8 -1.8
       6.3nm,0.3s,baz=220,slow=6.7,SNR=3.5
KRVT                                 Sn     Sn      16 42 56.8 +0.5
       1.9nm,0.3s,baz=166,slow=17,SNR=1.6
       21nm,0.3s
CTA    Charters Tower    11.65 186   Pn     Pn      16 43 05.2 +1.6
       1.3nm,0.3s,baz=4.7,slow=13,SNR=21
CTA                                  LR     LR      16 47 21.9
       comp=Z,40nm,19.0s,baz=336,slow=36
       8.2nm,0.5s
HNR    Honiara           12.37  96   LR     LR      16 47 09.1
       comp=Z,682nm,19.5s,baz=54,slow=33
WRA    Warramunga Arr    17.10 227   P      Pn      16 44 15.9 -0.3
       0.8nm,0.3s,baz=50,slow=12,SNR=8.9
WRA                                  S      Sn      16 47 14.1  -11
       0.5nm,0.8s,baz=38,slow=22,SNR=2.4
       2.1nm,0.7s
SIJI   Sorong            17.80 294   LR     LR      16 52 19.9
       comp=Z,93nm,18.7s,baz=112,slow=41
ASAR   Alice Springs     19.95 219   P      P       16 44 49.5 +0.5
       1.4nm,0.5s,baz=48,slow=9.8,SNR=38
ASAR                                 S      S       16 48 27.1 -4.6
       0.5nm,0.9s,baz=42,slow=23,SNR=4.0
       1.4nm,0.5s
MJAR   Matsushiro Arr    45.57 350   P      P       16 48 35.3 -1.0
       2.2nm,0.9s,baz=182,slow=8.2,SNR=5.3
       2.2nm,0.9s
KSRS   Korea Array       49.17 339   P      P       16 49 04.5 +0.2
       1.7nm,0.8s,baz=163,slow=7.8,SNR=7.1
       1.7nm,0.8s
USRK   Ussuriysk Ar.     54.23 346   P      P       16 49 42.3 +0.3
       0.8nm,0.6s,baz=172,slow=6.7,SNR=5.5
       0.8nm,0.6s
CMAR   Chiang Mai Arr    54.82 300   P      P       16 49 47.3 +0.5
       0.3nm,0.3s,baz=124,slow=5.3,SNR=5.1
       0.3nm,0.3s
SONM   Songino Array     66.74 331   P      P       16 51 08.5 +1.0
       1.0nm,0.9s,baz=168,slow=3.6,SNR=6.4
       1.0nm,0.9s
MKAR   Makanchi Array    79.66 321   P      P       16 52 24.5 +0.8
       1.7nm,0.7s,baz=103,slow=6.2,SNR=19
       1.7nm,0.7s
ZALV   Zalesovo Beam     81.30 328   P      P       16 52 31.8 -0.6
       0.8nm,0.4s,baz=122,slow=5.4,SNR=6.2
       0.8nm,0.4s
TORD   Torodi Ar. Bea   146.07 281   PKPbc  PKPdf   16 59 56.5 +0.3
       0.9nm,0.6s,baz=80,slow=4.1,SNR=6.4
```

IDC ***11*** *16:45:32.7±1.6, 2°59N×127°59E, h0km, mb3.4/4, mbtmp3.4/4, MS2.3/1, Error ellipse: s-maj=130.8km s-min=22.9km az=70.0*

DJA ***11*** *16:45:37.1±1.4, 2°N±7°×12°8E±°, h21km±8km, M3.8/10, mb4.0/6, mB4.7/1, MLv3.7/10, Mw(mB)3.9/1*

ISC 11 16:45:37.3±1.2**, 2°6N**±0°1×**127°9E**±0°1**, h35**km**, n13,** σ1**§11**/11**, mb3.4**/4**, Northern Molucca Sea**

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Code   Station Name        Δ°   AZ°   Phase ID        Time      Res
                                     Op     ISC      h  m  s    ISC
TNTI   Ternate            1.93 197   P      Pn      16 46 07.2 -0.5
SGSI   Sangihe            2.62 294   P      Pn      16 46 17.9 +0.8
LBMI   Labuha             3.28 188   P      Pn      16 46 26.2  0.0
DAV    Davao City (W)     4.99 332   LR     LR      16 48 55.2
       comp=Z,33nm,21.5s,baz=64,slow=42
SANI   Sanana             5.04 203   P      Pn      16 46 48.7 -1.8
GTOI   Gorontalo          5.31 248   P      Pn      16 46 55.1 +1.0
       5.5nm,0.6s,0.0nm
LUWI   Luwuk              6.32 235   P      Pn      16 47 03.4 -4.6
       17nm,1.0s,0.3nm
MRSI   Marisa             6.36 250   P      Pn      16 47 08.6  0.0
       21nm,0.5s,538nm0.1nm
FAKI   Fak Fak            7.00 142   P      Pn      16 47 17.8 +0.4
WRA    Warramunga Arr    23.30 165   P      P       16 50 41.5 -0.7
       0.9nm,0.6s,baz=343,slow=11,SNR=6.1
       0.9nm,0.6s
ASAR   Alice Springs     26.78 168   P      P       16 51 16.2 +2.0
       0.2nm,0.5s,baz=354,slow=10.0,SNR=1.8
       0.2nm,0.5s
SONM   Songino Array     48.72 341   P      P       16 54 18.5  0.0
       0.2nm,0.6s,baz=165,slow=7.8,SNR=3.1
       0.2nm,0.6s
MKAR   Makanchi Array    59.14 325   P      P       16 55 34.1 -0.4
       0.3nm,0.5s,baz=112,slow=8.1,SNR=6.3
       0.3nm,0.5s
```

KRSC ***11*** *16:55:53.2±1.8, 51°83N×161°20E, h64km±32km, Ml4.9*

MOS ***11*** *16:55:54.7±0.8, 51°77N×161°16E, h54km, mb4.3/6, Error ellipse: s-maj=7.1km s-min=3.7km az=99.1*

NEIC ***11*** *16:55:55.4±2.2, 51°73N±0°09×161°1E±0°1, h38km±7km, mb4.3/24, Error ellipse: s-maj=13.3km s-min=10.7km az=179.0*

IDC ***11*** *16:55:57.1±2.0, 51°89N×160°93E, h46km±20km, mb3.4/19, mbtmp3.7/24, ML4.1/5, MS2.8/5, Error ellipse: s-maj=17.5km s-min=11.9km az=154.0*

ISC 11 16:55:55.6±0.9**, 51°78N**±0°04×**161°19E**±0°04**, h42**km±9km**, n182,** σ1**§38**/236**, mb4.0**/33**, 2C-2D, Off east coast of Kamchatka Peninsula**

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Code   Station Name        Δ°   AZ°   Phase ID        Time      Res
                                     Op     ISC      h  m  s    ISC
SPN    Mys Shipunski      1.50 332   PN     Pn      16 56 19.0 -0.9
SPN                                  S      Sn      16 56 35.5 -2.8
SPN    Mys Shipunski      1.50 332  eP      Pn      16 56 19.0 -0.9
SPN                                 eS      Sn      16 56 35.5 -2.8
RUS    Russkaya           1.77 293   PN     Pn      16 56 23.4 -0.3
RUS                                  S      Sn      16 56 43.9 -1.1
RUS    Russkaya           1.77 293  eP      Pn      16 56 23.4 -0.3
RUS                                 eS      Sn      16 56 43.9 -1.1
NLC    Nalytchevo         1.79 322   PN     Pn      16 56 24.7 +0.8
NLC                                  S      Sn      16 56 45.0 -0.4
NLC    Nalytchevo         1.79 322  eP      Pn      16 56 24.7 +0.8
NLC                                 eS      Sn      16 56 45.0 -0.4
KDTR   Khodutka, Kamc     1.93 272   PN     Pn      16 56 26.0 +0.1
KDTR                                 S      Sn      16 56 47.1 -1.8
KDTR   Khodutka, Kamc     1.93 272  eP      Pn      16 56 26.0 +0.1
KDTR                                eS      Sn      16 56 47.1 -1.8
DALK   Dalny              1.94 311   PN     Pn      16 56 26.0 -0.1
DALK                                 S      Sn      16 56 47.7 -1.5
DALK   Dalny              1.94 311  eP      Pn      16 56 26.0 -0.1
DALK                                eS      Sn      16 56 47.7 -1.5
MTVR   Mutnovka           1.98 292   PN     Pn      16 56 26.8 +0.1
MTVR                                 S      Sn      16 56 49.5 -0.8
MTVR   Mutnovka           1.98 292  eP      Pn      16 56 26.8 +0.1
MTVR                                eS      Sn      16 56 49.5 -0.8
PET    Petropavlovsk      1.99 310          Pn      16 56 26.6 -0.1
PET    Petropavlovsk      1.99 310⇓iPN      Pn      16 56 26.7  0.0
PET                                 eS      Sn      16 56 48.9 -1.4
PET                                  pmax   pmax
       comp=Z,798nm,0.3s
PET                                  smax   smax
       comp=E,4μm,0.5s
PET                                  smax   smax
       comp=N,2μm,0.5s
PET    Petropavlovsk      1.99 310  eP      Pn      16 56 26.6 -0.1
PET                                 eS      Sn      16 56 48.9 -1.4
UGLR   Uglovaya           2.03 316   PN     Pn      16 56 27.8 +0.4
UGLR   Uglovaya           2.03 316  eP      Pn      16 56 27.8 +0.4
INSR   Institute          2.04 310  eP      Pn      16 56 27.4  0.0
INSR                                eS      Sn      16 56 50.3 -1.2
SDLR   Sedlovina          2.05 318   PN     Pn      16 56 27.8 +0.1
SDLR                                 S      Sn      16 56 51.5 -0.6
SDLR   Sedlovina          2.05 318  eP      Pn      16 56 27.8 +0.1
SDLR                                eS      Sn      16 56 51.5 -0.6
GRL    Gorelyy            2.07 293   PN     Pn      16 56 28.5 +0.6
GRL    Gorelyy            2.07 293  eP      Pn      16 56 28.5 +0.6
SMAR   Somma              2.08 316   PN     Pn      16 56 28.4 +0.3
SMAR   Somma              2.08 316  eP      Pn      16 56 28.4 +0.3
AVH    Avacha             2.11 316   PN     Pn      16 56 29.0 +0.6
AVH                                  S      Sn      16 56 53.9 +0.5
AVH    Avacha             2.11 316  eP      Pn      16 56 29.0 +0.6
AVH                                 eS      Sn      16 56 53.9 +0.5
KRER   Koryakskii         2.13 317   PN     Pn      16 56 29.3 +0.5
KRER                                 S      Sn      16 56 54.2 +0.1
KRER   Koryakskii         2.13 317  eP      Pn      16 56 29.3 +0.5
KRER                                eS      Sn      16 56 54.2 +0.1
KRMR   Karymshinskiy      2.15 300   PN     Pn      16 56 28.9  0.0
KRMR                                 S      Sn      16 56 53.8 -0.5
KRMR   Karymshinskiy      2.15 300  eP      Pn      16 56 28.9  0.0
KRMR                                eS      Sn      16 56 53.8 -0.5
KOK    Koryaka            2.17 315   PN     Pn      16 56 29.7 +0.4
KOK    Koryaka            2.17 315  eP      Pn      16 56 29.7 +0.4
KRX    Arik               2.21 317   PN     Pn      16 56 30.3 +0.4
KRX                                  S      Sn      16 56 55.6 -0.4
KRX    Arik               2.21 317  eP      Pn      16 56 30.3 +0.4
KRX                                 eS      Sn      16 56 55.6 -0.4
PEA0B  Petropavlovsk-     2.51 303   Pn     Pn      16 56 34.4 +0.5
PEA0B  Petropavlovsk-     2.51 303   PN     Pn      16 56 34.4 +0.5
PETK   Petropavlovsk-     2.51 303   P      Pn      16 56 34.1 +0.2
       comp=N,88nm,0.3s,baz=111,slow=17,SNR=1183
PETK                                 S      Sn      16 57 03.9 +0.6
       comp=N,149nm,0.4s,baz=103,slow=22,SNR=10
PETK                                 LR     LR      16 57 49.0
       comp=N,216nm,21.1s,baz=149,slow=48
       comp=N,228nm,0.4s
PETK   Petropavlovsk-     2.51 303   Pn     Pn      16 56 33.4 -0.5
PETK   Petropavlovsk-     2.51 303   PN     Pn      16 56 33.4 -0.5
APC    Apacha             2.72 296   PN     Pn      16 56 37.8 +1.1
APC                                  S      Sn      16 57 10.2 +1.8
APC    Apacha             2.72 296  eP      Pn      16 56 37.8 +1.1
APC                                 eS      Sn      16 57 10.2 +1.8
PAU    Pauzhetka          2.75 265   PN     Pn      16 56 38.8 +1.8
PAU    Pauzhetka          2.75 265  eP      Pn      16 56 38.8 +1.8
GNL    Ganaly             2.75 315   PN     Pn      16 56 38.1 +0.9
GNL                                  S      Sn      16 57 10.8 +1.6
GNL    Ganaly             2.75 315  eP      Pn      16 56 38.1 +0.9
GNL                                 eS      Sn      16 57 10.8 +1.6
MKZ    Mys Kozlova        2.80   7   PN     Pn      16 56 37.3 -0.5
MKZ                                  S      Sn      16 57 08.4 -1.8
MKZ    Mys Kozlova        2.80   7  eP      Pn      16 56 37.3 -0.5
MKZ                                 eS      Sn      16 57 08.4 -1.8
SKR    Severo-Kuril's     3.37 253  ePN     Pn      16 56 46.1 +0.5
SKR                                 eS      Sn      16 57 22.9 -1.5
SKR                                  pmax   pmax
       comp=Z,258nm,0.3s
SKR                                  smax   smax
       comp=N,3μm,0.5s
SKR                                  smax   smax
       comp=E,4μm,0.5s
SKR    Severo-Kuril's     3.37 253  eP      Pn      16 56 46.2 +0.5
SKR                                 eS      Sn      16 57 22.7 -1.7
TUMD   Tumrok D           3.46 353  eP      Pn      16 56 47.1 +0.2
TUMD                                eS      Sn      16 57 24.4 -2.2
TUMR   Tumrok             3.56 350   PN     Pn      16 56 47.1 -1.3
TUMR   Tumrok             3.56 350  eP      Pn      16 56 49.5 +1.1
TUMR                                eS      Sn      16 57 28.6 -0.6
KMNR   Kamenistaya        4.02 352   PN     Pn      16 56 56.2 +1.5
KMNR                                 S      Sn      16 57 42.4 +1.9
KMNR   Kamenistaya        4.02 352  eP      Pn      16 56 56.2 +1.5
KMNR                                eS      Sn      16 57 42.4 +1.9
BZP    Bezymyannyi-Pe     4.16 355  eP      Pn      16 56 57.8 +1.3
BZP                                 eS      Sn      16 57 44.1 +0.2
BZGR   Bezymyannyi-Gr     4.17 356   PN     Pn      16 56 57.9 +1.1
BZGR                                 S      Sn      16 57 44.4 +0.1
BZGR   Bezymyannyi-Gr     4.17 356  eP      Pn      16 56 57.9 +1.1
BZGR                                eS      Sn      16 57 44.4 +0.1
BZMR   Bezymyannaya       4.18 355   PN     Pn      16 56 58.6 +1.7
BZMR                                 S      Sn      16 57 45.9 +1.4
BZMR   Bezymyannaya       4.18 355  eP      Pn      16 56 58.5 +1.7
BZMR                                eS      Sn      16 57 45.9 +1.4
KIRR   Kirishev           4.21 354   PN     Pn      16 56 58.7 +1.4
KIRR                                 S      Sn      16 57 46.6 +1.4
KIRR   Kirishev           4.21 354  eP      Pn      16 56 58.7 +1.4
KIRR                                eS      Sn      16 57 46.6 +1.4
BZWR   Bezymyannyi-We     4.21 355   PN     Pn      16 56 58.8 +1.5
BZWR   Bezymyannyi-We     4.21 355  eP      Pn      16 56 58.8 +1.5
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KPT   Kopyto             4.23 353  PN    Pn      16 56 59.3 +1.8
KPT   Kopyto             4.23 353 eP     Pn      16 56 59.3 +1.8
KOZ   Kozyrevsk          4.35 350  PN    Pn      16 57 00.4 +1.3
KOZ                                S     Sn      16 57 49.1 +0.5
KOZ   Kozyrevsk          4.35 350 eP     Pn      16 57 00.4 +1.3
KOZ                               eS     Sn      16 57 49.1 +0.5
ESO   Esso               4.40 341  PN    Pn      16 57 02.7 +2.9
ESO   Esso               4.40 341 eP     Pn      16 57 02.7 +2.9
BKI   Bering             4.46  38  PN    Pn      16 57 00.7 +0.1
BKI   Bering             4.46  38 eP     Pn      16 57 00.7 +0.1
BKI                               eS     Sn      16 57 46.3 -4.9
KBTR  Krutoberegovo      4.54  12  PN    Pn      16 57 01.8 +0.1
KBTR  Krutoberegovo      4.54  12 eP     Pn      16 57 01.8 +0.1
KBTR                              eS     Sn      16 57 50.3 -2.7
KLY   Klyuchi            4.55 356  PN    Pn      16 57 02.6 +0.8
KLY                                S     Sn      16 57 52.6 -0.7
KLY   Klyuchi            4.55 356 eP     Pn      16 57 02.6 +0.8
KLY                               eS     Sn      16 57 52.6 -0.7
KBG   Krutoberegovo      4.57  11  PN    Pn      16 57 02.3 +0.2
KBG   Krutoberegovo      4.57  11 eP     Pn      16 57 02.3 +0.2
KBG                               eS     Sn      16 57 52.5 -1.4
SRDR  Sredinnyy          4.62 350  PN    Pn      16 57 03.8 +0.9
SRDR  Sredinnyy          4.62 350 eP     Pn      16 57 03.8 +0.9
SMKR  Semkarok           4.81   2  PN    Pn      16 57 06.5 +1.0
SMKR                               S     Sn      16 58 00.2 +0.3
SMKR  Semkarok           4.81   2 eP     Pn      16 57 06.5 +1.0
SMKR                              eS     Sn      16 58 00.2 +0.3
SRKR  Sorokina           4.88 360  PN    Pn      16 57 07.8 +1.4
SRKR                               S     Sn      16 58 02.4 +0.8
SRKR  Sorokina           4.88 360 eP     Pn      16 57 07.8 +1.4
SRKR                              eS     Sn      16 58 02.4 +0.8
TIGL  Tigil              6.17 347 eP     Pn      16 57 25.2 +1.2
OSSR  Ossora             7.56   7  PN    Pn      16 57 42.9 -0.2
OSSR  Ossora             7.56   7 eP     Pn      16 57 42.9 -0.2
SHEM  Shemya Is, Ala     7.98  78  P     Pn      16 57 50.7 +1.8
      comp=E,80nm,0.3s,baz=218,slow=1.5,SNR=32
SHEM                               S     Sn      16 59 13.2 -4.6
      comp=E,123nm,0.5s,baz=313,slow=21,SNR=15
SHEM                               LR    LR      17 00 51.9
      comp=E,70nm,20.2s,baz=168,slow=36
SMY   Shemya             7.98  78  Pn    Pn      16 57 49.4 +0.5
SMY   Shemya             7.98  78  PN    Pn      16 57 50.7 +1.8
MA2   Magadan            9.77 327  P     Pn      16 58 12.9 -0.4
      comp=E,0.2nm,0.3s,baz=131,slow=8.2,SNR=6.8
      comp=E,1.5nm,0.4s
MA2   Magadan            9.77 327  Pn    Pn      16 58 13.8 +0.5
MA2   Magadan            9.77 327 i PN   Pn      16 58 12.7 -0.6
KMSK  Kamenskaya        11.05  12  PN    Pn      16 58 32.3 +1.5
KMSK  Kamenskaya        11.05  12 eP     Pn      16 58 32.3 +1.5
AMKA  Amchitka          11.28  85  Pn    Pn      16 58 34.9 +0.8
SHO   Shikotan          12.46 236  PN    Pn      16 58 49.5 -0.7
YUK   Yuzh-Kuril'sk     12.86 239 ePN    Pn      16 58 56.1 +0.5
YSS   Yuzh-Sakhalins    12.94 255  Pn    Pn      16 58 55.0 -1.7
YSS   Yuzh-Sakhalins    12.94 255 ePN    Pn      16 58 57.9 +1.2
YSS                                pmax  pmax
      comp=Z,10.0nm,1.0s
YSS                                MLR   MLR
      comp=Z,200nm,14.0s
YSS                                MLR   MLR
      comp=N,100nm,16.0s
YSS                                MLR   MLR
      comp=E,100nm,14.0s
NMR   Nemuro--Hokkai    13.38 237 ePN    Pn      16 59 02.3 -0.5
JKA   Kamikawa-asahi    14.60 246  Pn    Pn      16 59 18.8 -0.4
ASAJ  Asahikawa         14.60 246  P     Pn      16 59 18.4 -0.8
      comp=E,0.4nm,0.3s,baz=67,slow=13,SNR=14
      comp=E,3.8nm,0.7s
ERM   Erimo             15.69 239  Pn    Pn      16 59 31.7 -1.7
ERM   Erimo             15.69 239  P     Pn      16 59 31.7 -1.7
ERM                                pmax  pmax
      comp=Z,36nm,1.2s
BILL  Bilibino          16.50   7  Pn    Pn      16 59 43.2 -0.4
BILL  Bilibino          16.50   7deP     Pn      16 59 44.4 +0.8
BILL                               pmax  pmax
      comp=Z,8.0nm,1.0s
BILL                               MLR   MLR
      comp=Z,33nm,17.0s
SPIA  Saint Paul Isl    17.38  61        Pn      16 59 55.0 +0.4
JTM   Tenmabayashi      17.66 239        P       16 59 59.0 +0.2
KLR   Kul'dur           18.84 274  P     P       17 00 11.8  0.0
      comp=Z,0.1nm,0.3s,baz=70,slow=11,SNR=9.0
KLR                                LR    LR      17 07 15.9
      comp=Z,36nm,21.0s,baz=64,slow=36
      comp=Z,1.8nm,0.7s
KLR   Kul'dur           18.84 274 i P    Pn      17 00 12.2 -0.3
KLR                                pmax  pmax
      comp=Z,4.0nm,0.9s
YAK   Yakutsk           19.82 313  P     P       17 00 19.7 -2.6
      comp=Z,0.2nm,0.3s,baz=148,slow=0.4,SNR=8.1
YAK                                LR    LR      17 09 09.5
      comp=Z,23nm,20.5s,baz=113,slow=40
      comp=Z,4.9nm,0.4s
YAK   Yakutsk           19.82 313  P     P       17 00 19.6 -2.6
YAK                                IAmb  IAmb    17 00 23.4
      comp=Z,20nm,1.0s
YAK   Yakutsk           19.82 313 eP     P       17 00 18.6 -3.6
YAK                               eS     S       17 04 00.7 -2.2
YAK                                pmax  pmax
      comp=Z,15nm,0.9s
YAK                                pmax  pmax
      comp=E,7.0nm,1.4s
YAK                                pmax  pmax
      comp=N,2.0nm,1.2s
YAK                                pmax  pmax
      comp=Z,216nm,5.4s
YAK                                pmax  pmax
      comp=N,71nm,4.7s
YAK                                pmax  pmax
      comp=E,67nm,5.3s
YAK                                smax  smax
      comp=E,53nm,3.2s
YAK                                smax  smax
      comp=N,52nm,3.6s
AKUT  Akutan            19.94  70  P     P       17 00 21.3 -2.4
JMM   Marumori          19.98 234  P     P       17 00 23.2 -1.0
USRK  Ussuriysk Ar.     20.86 260  P     P       17 00 31.8 -1.9
      comp=N,0.6nm,0.6s,baz=64,slow=12,SNR=2.5
      comp=N,0.6nm,0.6s
TNA   Tin City          20.87  37  P     P       17 00 34.0 +0.4
TNA                                IAmb  IAmb    17 00 53.6
      comp=Z,13nm,0.8s
HEH   HeiHe             21.20 279 eP     P       17 00 39.9 +2.6
HEH                                pmax  pmax
      comp=Z,7.0nm,0.9s
ANM   Nome              21.46  41  P     P       17 00 40.8 +0.8
ANM                                IAmb  IAmb    17 01 00.3
      comp=Z,12nm,1.2s
ANM   Nome              21.46  41  P     P       17 00 40.8 +0.8
ANM                                pmax  pmax
      comp=Z,12nm,1.2s
MJA0  Matsu Arr-Jizo    22.29 236 eP     P       17 00 52.3 +3.1
MJA0                               pmax  pmax
      comp=Z,2.0nm,0.7s
MAJO  Matsushiro        22.31 236  P     P       17 00 49.9 +0.5
MAJO                               IAmb  IAmb    17 00 53.1
      comp=Z,12nm,0.9s
MAJO  Matsushiro        22.31 236 i P    P       17 00 51.3 +1.9
MJAR  Matsushiro Arr    22.31 236  P     P       17 00 50.4 +1.1
      comp=Z,2.4nm,1.1s,baz=36,slow=7.9,SNR=7.6
      comp=Z,2.4nm,1.1s
TIXI  Tiksi             24.55 336  P     P       17 01 10.6 -0.3
      comp=Z,2.6nm,0.6s,baz=90,slow=22,SNR=20
TIXI                               LR    LR      17 11 14.9
      comp=Z,35nm,19.9s,baz=238,slow=38
      comp=Z,2.6nm,0.6s
TIXI  Tiksi             24.55 336  P     P       17 01 11.1 +0.2
TTA   Tatalina          25.13  47  P     P       17 01 19.1 +2.7
TTA                                IAmb  IAmb    17 01 27.1
      comp=Z,6.6nm,1.0s
TTA   Tatalina          25.13  47  P     P       17 01 19.1 +2.7
TTA                                pmax  pmax
      comp=Z,7.0nm,1.0s
L19K  White Mountain    25.60  49  P     P       17 01 21.2 +0.7
N19K  Bonanza Creek     25.73  52  P     P       17 01 23.3 +1.5
N19K                               IAmb  IAmb    17 01 33.4
      comp=Z,8.3nm,1.1s
M19K  Big River Lodg    25.80  50  P     P       17 01 23.8 +1.4
M19K                               IAmb  IAmb    17 01 43.9
      comp=Z,10nm,1.4s
K20K  Telida            26.05  46  P     P       17 01 25.2 +0.6
M20K  Styx River        26.40  50  P     P       17 01 26.7 -1.2
IMAR  Indian Mountai    26.55  40  P     P       17 01 29.5 +0.5
PPLA  Purkeypile        26.87  47  P     P       17 01 30.8 -1.4
PPLA                               IAmb  IAmb    17 01 59.0
      comp=Z,11nm,1.4s
H21K  Melozitna Rive    26.88  41  P     P       17 01 32.7 +0.6
H21K                               IAmb  IAmb    17 01 53.0
      comp=Z,7.4nm,1.1s
KSRS  Korea Array       27.39 252  P     P       17 01 37.6 +0.8
      comp=Z,0.8nm,0.7s,baz=40,slow=9.9,SNR=4.1
      comp=Z,0.8nm,0.7s
SML   Sawmill           28.67  50  P     P       17 01 49.7 +1.5
ILAR  Eielson Array     29.28  44  P     P       17 01 54.0 +0.6
      comp=Z,0.2nm,0.9s,baz=243,slow=6.0,SNR=1.6
      comp=Z,0.2nm,0.9s
BMAR  Burnt Mountain    30.34  38  P     P       17 02 04.3 +1.5
I26K  Coal Creek Min    30.87  43  P     P       17 02 04.2 -3.3
I26K                               IAmb  IAmb    17 02 09.8
      comp=Z,6.6nm,1.2s
BCAR  Beaver Creek A    31.61  47  P     P       17 02 15.6 +1.5
H11N2 WAKE ISLAND Hy    32.30 170  T     T       17 37 00.1
      baz=349,slow=76,SNR=27
H11N3 WAKE ISLAND Hy    32.31 170  T     T       17 37 01.1
      baz=349,slow=76,SNR=42
H11N1 WAKE ISLAND Hy    32.32 170  T     T       17 37 02.2
      baz=349,slow=76,SNR=41
H11S1 WAKE ISLAND Hy    33.49 170  T     T       17 38 22.4
      baz=350,slow=76,SNR=17
H11S3 WAKE ISLAND Hy    33.50 171  T     T       17 38 29.0
      baz=350,slow=76,SNR=48
H11S2 WAKE ISLAND Hy    33.51 170  T     T       17 38 23.8
      baz=350,slow=76,SNR=11
ULN   Ulaanbaatar       34.47 285ceP     P       17 02 38.3 -1.0
ULN                                pmax  pmax
      comp=Z,4.0nm,2.5s
INK   Inuvik            34.51  37  P     P       17 02 40.3 +1.1
      comp=Z,0.9nm,0.9s,baz=268,slow=10,SNR=3.2
      comp=Z,0.9nm,0.9s
SONM  Songino Array     34.88 286  P     P       17 02 42.2 -0.6
      comp=Z,0.1nm,0.3s,baz=62,slow=7.5,SNR=2.6
      comp=Z,0.1nm,0.3s
HHC   Hu-ho-hao-te      35.33 272 eP     P       17 02 47.9 +1.2
HHC                                pmax  pmax
      comp=Z,26nm,0.9s
YKA   Yellowknife Ar    43.68  42  P     P       17 03 56.0 +0.2
      comp=Z,0.1nm,0.6s,baz=301,slow=8.3,SNR=2.6
      comp=Z,0.1nm,0.6s
WMQ   Urumqi            48.05 291 eP     P       17 04 33.0 +2.4
KURK  Kurchatov         49.00 303  P     P       17 04 37.8 +0.1
KURBB Kurchatov Arra    49.10 303  P     P       17 04 37.8 -0.7
      comp=Z,0.3nm,0.3s,baz=60,slow=7.6,SNR=6.7
      comp=Z,0.3nm,0.3s
MKAR  Makanchi Array    49.34 297  P     P       17 04 39.4 -1.0
      comp=Z,0.4nm,0.5s,baz=60,slow=7.8,SNR=11
      comp=Z,0.4nm,0.5s
PZH   PanZhiHua         50.89 264  P     P       17 04 53.5 +1.0
PZH                                pmax  pmax
      comp=Z,10.0nm,0.6s
PZH                                pmax  pmax
      comp=Z,70nm,5.9s
ARU   Arti              54.82 318c iP    P       17 05 20.8 -0.1
ARU                                              17 06 19.3
ARU                                              17 07 21.7
ARU                                S     S       17 12 58.8 +0.3
ARU                                SS    SS      17 16 34.9 -6.4
ARU                                pmax  pmax
      comp=Z,4.0nm,0.8s
NVAR  Mina Array Bea    55.56  70  P     P       17 05 29.6 +2.7
      comp=Z,0.2nm,0.4s,baz=304,slow=7.8,SNR=2.5
      comp=Z,0.2nm,0.4s
PDAR  Pinedale Array    57.58  61  P     P       17 05 43.5 +2.4
      comp=Z,0.6nm,0.7s,baz=310,slow=3.0,SNR=5.8
      comp=Z,0.6nm,0.7s
CMAR  Chiang Mai Arr    58.59 260  P     P       17 05 48.5 +0.3
      comp=Z,0.9nm,0.5s,baz=28,slow=7.2,SNR=8.2
      comp=Z,0.9nm,0.5s
ABKAR Akbulak array     59.16 312  P     P       17 05 50.6 -1.1
ABKAR                              IAmb  IAmb    17 06 14.7
      comp=Z,1.9nm,1.1s
JIRN  Jiri              59.70 277 eP     P       17 05 53.8 -2.4
RAMN  Ramite            59.96 276 eP     P       17 05 58.6 +0.7
      comp=Z,7.6nm,0.6s
PKI   Pulchoki          60.24 278 eP     P       17 06 00.7 +0.8
PKIN  Phulchoki         60.25 278 eP     P       17 06 00.6 +0.7
      comp=Z,4.8nm,0.5s
DMN   Daman             60.40 278 eP     P       17 06 01.7 +0.8
      comp=Z,11nm,0.5s
GKN   Gorkha            60.41 279 eP     P       17 06 01.6 +0.8
DANN  Dangsing          60.70 279 eP     P       17 06 04.0 +1.0
FINES FINESS Array B    61.59 337  P     P       17 06 08.2 +0.1
      comp=Z,0.8nm,0.8s,baz=353,slow=10,SNR=1.5
      comp=Z,0.8nm,0.8s
NOA   NORSAR Array B    64.99 344  P     P       17 06 31.3 +0.6
      comp=Z,0.5nm,0.9s,baz=52,slow=14,SNR=1.7
      comp=Z,0.5nm,0.9s
AKASG Malin Array Be    70.08 330  P     P       17 07 02.3 -0.6
      comp=Z,0.1nm,0.3s,baz=22,slow=5.5,SNR=2.3
      comp=Z,0.1nm,0.3s
TXAR  Lajitas Array     70.53  67  P     P       17 07 08.1 +1.9
      comp=Z,0.4nm,0.6s,baz=295,slow=4.2,SNR=6.4
      comp=Z,0.4nm,0.6s
WRAB  Tennant Creek     75.17 206  P     P       17 07 32.3 -1.1
WRAB                               IAmb  IAmb    17 07 58.2
      comp=Z,3.8nm,0.8s
WRAB  Tennant Creek     75.17 206  P     P       17 07 32.3 -1.1
WRAB                               pmax  pmax
      comp=Z,4.0nm,0.9s
WRA   Warramunga Arr    75.18 206  P     P       17 07 33.9 +0.4
      comp=Z,2.7nm,0.9s,baz=20,slow=5.9,SNR=13
      comp=Z,2.7nm,0.9s
WRA   Warramunga Arr    75.18 206 i P    P       17 07 34.5 +1.0
WRA                                pmax  pmax
      comp=Z,3.0nm,0.9s
AS31  Alice Springs     78.85 205  P     P       17 07 52.5 -1.5
ASAR  Alice Springs     78.85 205  P     P       17 07 55.5 +1.5
      comp=Z,2.2nm,0.7s,baz=16,slow=5.1,SNR=45
      comp=Z,2.2nm,0.7s
ASAR  Alice Springs     78.85 205  P     P       17 07 54.3 +0.2
ASAR  Alice Springs     78.85 205  P     P       17 07 54.3 +0.2
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VAO ***11*** *16:59:11.3±3.5, 24°.74S×69°.73W, h10^{km}, mb4.1*

SJA ***11*** *16:59:31.4±0.8, 23°.21S×69°.28W, h88^{km}±3^{km}, ML4.0, MW3.8, Hypocentre not reviewed by the ISC*

IDC ***11*** *16:59:32.1±1.9, 23°.36S×69°.17W, h66^{km}±11^{km}, mb3.6/1, mbtmp4.0/4, Error ellipse: s-maj=62.3km s-min=16.6km az=96.0*

GUC ***11*** *16:59:32.9±0.7, 23°.19S×69°.26W, h89^{km}±3^{km}, ML3.8*

ISC 11 16:59:32.2±0.8**, 23°.24S**±0°.05×**69°.15W**±0°.06**, h78**^{km}±9^{km}**, n26, σ1ˢ52**/37**, 6C-4D, Northern Chile**

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Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                  Op     ISC        h  m  s     ISC
PB15  IPOC Station P     0.30 277⇓iP     Pn      16 59 45.9 +1.3
PB15                              i S    Sn      16 59 55.4 +1.7
PB15  IPOC Station P     0.30 277 eP             16 59 45.0
PB15                              eS             16 59 55.1
PB06  IPOC Station P     0.66 324⇓iP     Pn      16 59 48.0 +0.5
PB06                              i S    Sn      16 59 59.1 +0.2
PB06                               IAML          17 00 00.0
      comp=E,14µm,0.1s
PB06  IPOC Station P     0.66 324 eP             16 59 48.0
PB06                              eS             16 59 59.2
PB06                               IAML          17 00 00.2
      comp=Z,7µm,0.1s
LVC   Limon Verde        0.67  19  P     Pn      16 59 48.9 +1.1
      comp=Z,560nm,0.3s,baz=200,slow=9.3,SNR=4386
LVC                                S     Sn      17 00 00.8 +1.5
      comp=Z,4µm,0.3s,baz=56,slow=22,SNR=70
LVC                                LR    LR      17 00 15.3
      comp=Z,427nm,18.4s,baz=207,slow=56
LVC   Limon Verde        0.67  19 eP     Pn      16 59 48.3 +0.5
LVC                               i S    Sn      17 00 00.8 +1.5
LVC   Limon Verde        0.67  19 eP     Pn      16 59 48.9 +1.1
LVC   Limon Verde        0.67  19 eP             16 59 48.9
LVC                                IAML          17 00 01.1
      comp=Z,3µm,0.2s
LVC                               eS             17 00 01.3
PB04  IPOC Station P     1.29 314⇓iP     Pn      16 59 54.8 -0.2
PB04                              i S    Sn      17 00 11.1 -1.0
PB04                               IAML          17 00 13.5
      comp=N,2µm,0.2s
PB04  IPOC Station P     1.29 314 eP             16 59 54.8
PB04                              eS             17 00 11.1
PB04                               IAML          17 00 16.6
      comp=Z,1µm,0.3s
PB03  IPOC Station P     1.31 335⇓iP     Pn      16 59 55.5 +0.2
PB03                              i S    Sn      17 00 12.3 -0.2
PB03                               IAML          17 00 12.8
      comp=N,6µm,0.2s
PB03  IPOC Station P     1.31 335 eP             16 59 55.4
PB03                              eS             17 00 12.4
PB03                               IAML          17 00 12.6
      comp=Z,4µm,0.2s
PB10  IPOC Station P     1.32 258⇑iP     Pn      16 59 55.4 +0.3
PB10                              i S    Sn      17 00 12.0 -0.4
PB10                               IAML          17 00 16.0
      comp=E,988nm,0.2s
PB10  IPOC Station P     1.32 258 eP             16 59 50.2
PB10                              eP             16 59 54.0
PB10                              eS             17 00 12.5
PB09  IPOC Station P     1.44 357⇑iP     Pn      16 59 58.3 +1.4
PB09                               IAML          17 00 20.9
      comp=E,1µm,0.3s
PB09  IPOC Station P     1.44 357 eP             16 59 57.0
PB09                              eS             17 00 17.0
PB09                               IAML          17 00 19.9
      comp=Z,1µm,0.4s
PB07  IPOC Station P     1.66 335⇑iP     Pn      16 59 59.9 +0.2
PB07                               IAML          17 00 21.1
      comp=E,1µm,0.5s
PB07  IPOC Station P     1.66 335 eP             16 59 59.8
PB07                              eS             17 00 18.9
PB07                               IAML          17 00 23.7
      comp=Z,2µm,0.4s
PB14  IPOC Station P     1.79 220 eP     Pn      17 00 02.7 +1.0
PB14  IPOC Station P     1.79 220 eP             17 00 01.6
GO02  Mina Guanaco       1.95 192⇑iP     Pn      17 00 05.9 +2.1
GO02  Mina Guanaco       1.95 192 eP             17 00 05.0
GO02                              eS             17 00 29.8
PB02  IPOC Station P     2.04 340⇑iP     Pn      17 00 04.7  0.0
PB02                              i S    Sn      17 00 29.8 +0.5
PB02                               IAML          17 00 38.2
      comp=E,1µm,0.4s
PB02  IPOC Station P     2.04 340 eP             17 00 04.7
PB02                              eS             17 00 30.5
PB01  IPOC Station P     2.21 352⇑iP     Pn      17 00 07.3 +0.3
PB01                              i S    Sn      17 00 33.5  0.0
PB01                               IAML          17 00 35.3
      comp=N,1µm,0.2s
PB01  IPOC Station P     2.21 352 eP             17 00 07.1
PB01                              eS             17 00 33.7
TA01  Diego Aracena      2.83 340 eP             17 00 15.5
TA01                              eS             17 00 47.2
PB08  IPOC Station P     3.09 360 eP             17 00 19.3
PB08                              eS             17 00 44.8
TA02  Huaiquique         3.10 343 eP             17 00 20.6
AC01  Pan de Azucar      3.18 204 eP             17 00 19.8
AC01                              eS             17 00 47.5
HJA   Humahuaca          3.44  90 eP             17 00 28.0
PB11  IPOC Station P     3.50 352 eP             17 00 23.4
PB11                              eS             17 00 50.2
YJA   Yavi               3.52  73 eP             17 00 29.0
GO03  Copiap             4.44 193 eP             17 00 37.7
PB16  IPOC Station P     4.89 356 eP             17 00 44.0
AC04  Llanos de Chal     5.24 199 eP             17 00 45.0
LPAZ  La Paz             6.99   8  P     Pn      17 01 13.9 +1.5
      comp=N,1.9nm,0.4s,baz=186,slow=6.4,SNR=12
LPAZ  La Paz             6.99   8 eP     Pn      17 01 14.3 +1.8
CFA   Coronel Fontan     8.37 175  P     Pn      17 01 30.4 -0.4
      comp=N,3.1nm,0.3s,baz=346,slow=12,SNR=21
CFA                                S     Sn      17 02 59.6 -4.0
      comp=N,2.6nm,0.5s,baz=288,slow=20,SNR=1.6
BBSD  Serra de San D    10.02  55 eP     Pn      17 01 52.9 -0.5
BBRB  Robore, Bolivi    10.04  62 eP     Pn      17 01 51.6 -2.0
SIV   San Ignacio       10.48  48  P     Pn      17 01 59.3 -0.4
      comp=N,6.7nm,0.5s,baz=218,slow=6.2,SNR=37
SIV                                S     Sn      17 03 51.5 -3.9
      comp=N,1.3nm,0.8s,baz=83,slow=21,SNR=3.1
PTLB  Pontes e Lacer    12.22  52 eP     Pn      17 02 22.3 -0.9
PDRB  Porto dos Gac     16.54  48 eP     Pn      17 03 19.9 +0.5
SNDB  Serra Nova Dou    20.35  60 eP     P       17 04 00.5 -2.0
NPGB  Novo Progresso    20.86  42 eP     P       17 04 08.9 +0.9
TORD  Torodi Ar. Bea    78.15  70  P     P       17 11 26.0 +2.5
      comp=N,0.6nm,0.5s,baz=254,slow=5.2,SNR=7.6
      comp=N,0.6nm,0.5s
MKAR  Makanchi Array   147.16  37  PKPbc PKPbc   17 19 05.5 -0.9
      comp=N,0.2nm,0.7s,baz=295,slow=3.7,SNR=2.7
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NEIC ***11*** *17:10:38.2, 30°.61S×177°.53W, h46^{km}*

NEIC ***11*** *17:10:38.2, 30°.61S×176°.95W, h46^{km}, Moment Tensor Solution. Duration: 3ˢ0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.52; M$_{\theta\theta}$-0.32; M$_{\phi\phi}$-2.20; M$_{r\theta}$0.27; M$_{\theta\phi}$-1.15; M$_{\phi r}$1.11; Fault plane solution: M$_0$2.87000×10^{17} NP1:φ$_s$20.34000°, δ56.77000°, λ84.31000°. NP2:φ$_s$210.63000°, δ33.66000°, λ98.60000°. Principal axes: T 2.7682, Plg77.0000°, Azm272.0000°; N 0.2050, Plg5.0000°, Azm23.0000°; P -2.9732, Plg12.0000°, Azm114.0000°;*

BGR ***11*** *17:10:38.6, 30°.89S×176°.74W, h33^{km}, Ms5.3*

NEIC ***11*** *17:10:38.7±1.4, 30°.52S±0°.05×177°.5W±0°.1, h22^{km}±1^{km}, mb5.6/176, Ms_20 5.3/202, Mwb5.4/58, Mww5.6/25, Error ellipse: s-maj=14.8km s-min=8.3km az=267.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.26; M$_{\theta\theta}$-0.61; M$_{\phi\phi}$-0.66; M$_{r\theta}$0.61; M$_{\theta\phi}$-0.60; M$_{\phi r}$1.04; Fault plane solution: M$_0$1.74000×10^{17} NP1: φ$_s$231.97000°, δ23.80000°, λ106.03000°. NP2: φ$_s$34.53000°, δ67.18000°, λ83.05000°. Principal axes: T 1.7681, Plg67.0000°, Azm292.0000°; N -0.0673, Plg6.0000°, Azm37.0000°; P -1.7009, Plg22.0000°, Azm130.0000°;*

BJI ***11*** *17:10:38.5±0.0, 30°.15S×177°.24W, h24^{km}, mb5.3/50, mB5.8/49, Ms5.3/50, Ms7 5.1/53*

MOS ***11*** *17:10:38.3±1.2, 30°.54S×177°.68W, h21^{km}, mb5.7/36, MS5.2/26, Error ellipse: s-maj=9.3km s-min=7.6km az=110.2*

NEIC ***11*** *17:10:40.3, 30°.60S×177°.55W, h35^{km}*

IDC ***11*** *17:10:40.9±1.9, 30°.38S×177°.74W, h27^{km}±12^{km}, mb4.9/28, mbtmp5.0/30, ML4.5/2, MS5.0/55, Error ellipse: s-maj=13.3km s-min=13.0km az=19.0*

NOU ***11*** *17:10:43.4, 30°.82S×177°.37W, h54^{km}, ML5.6/159, Kermadec Islands, New Zealand*

GCMT ***11*** *17:10:44.7±0.1, 30°.54S±0°.01×177°.53W±0°.01, h37^{km}, MW5.7/149, Moment Tensor Solution. s147,c282; s149,c278; Duration: 1ˢ6 Moment tensor: Scale 10^{17} Nm; M$_{rr}$2.94±.04; M$_{\theta\theta}$0.06±.03; M$_{\phi\phi}$-3.00±.03; M$_{r\theta}$0.24±.05; M$_{\theta\phi}$-1.28±.03; M$_{\phi r}$2.04±.05; Best double couple: M$_0$3.81100×10^{17} NP1:φ$_s$12.00000°, δ62.00000°, λ81.00000°. NP2:φ$_s$210.00000°, δ30.00000°, λ106.00000°. Principal axes: T 3.5800, Plg72.0000°, Azm261.0000°; N 0.4570, Plg8.0000°, Azm16.0000°; P -4.0420, Plg16.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 17:10:40.5±0.3**, 30°.59S**±0°.03×**177°.55W**±0°.04**, h30**^{km}±1^{km}**, h31**^{km}**:pP-P, n1299, σ1ˢ79**/1255**, mb5.5**/192**, MS5.3**/201**, 51C-34D, Kermadec Islands**

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Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                  Op     ISC        h  m  s     ISC
GLKZ  Green Lake         1.36 346  P     Pn      17 11 01.3 -2.2
GLKZ                               S     Sn      17 11 14.5 -6.1
RAO   Raoul Island       1.38 347  Pn    Pn      17 11 00.8 -2.8
      2µm,0.3s,baz=121,slow=7.9,SNR=54
RAO                                Sn    Sn      17 11 17.9 -2.9
      17µm,0.3s,baz=90,slow=20,SNR=15
RAO   Raoul Island       1.38 347        Pn      17 11 01.3 -2.3
RAO                                Sn    Sn      17 11 15.9 -4.9
RAO   Raoul Island       1.38 347  P     Pn      17 11 01.3 -2.3
RAO                                              17 11 15.9
RIZ   Raoul Island       1.38 346  P     Pn      17 11 01.9 -1.9
RIZ                                S     Sn      17 11 17.6 -3.4
MXZ   Matakaoa Point     7.75 205  Pn    Pn      17 12 26.6 -4.6
MXZ                                Sn    Sn      17 13 55.3 -2.7
MXZ   Matakaoa Point     7.75 205  P     Pn      17 12 30.4 -0.9
MXZ                                S     Sn      17 13 58.2 +0.2
WMGZ  Waiomatatini S     7.94 204  P     Pn      17 12 31.9 -1.9
WMGZ                               S     Sn      17 14 03.7 +1.0
HAZ   Te Kaha            8.12 207  P     Pn      17 12 34.7 -1.6
HAZ                                S     Sn      17 14 09.3 +2.3
PKGZ  Pakihiroa          8.12 205  S     Sn      17 14 06.6 -0.7
PKGZ  Pakihiroa          8.12 205  P     Pn      17 12 33.9 -2.5
PUZ   Puketiti           8.22 204  P     Pn      17 12 34.6 -3.2
PUZ                                S     Sn      17 14 09.4 -0.2
RUGZ  Raukumara Rang     8.34 207  P     Pn      17 12 37.8 -1.7
TWGZ  Tauwhareparae      8.41 205  S     Sn      17 14 15.4 +1.0
TWGZ  Tauwhareparae      8.41 205  P     Pn      17 12 38.1 -2.3
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CNGZ	**Carnagh Statio**	**8.61**	**203**	P	**Pn**	**17 12 40.4**	**-2.6**
TKGZ	**Te Karaka**	**8.70**	**205**	P	**Pn**	**17 12 41.7**	**-2.4**
TKGZ				S	**Sn**	**17 14 20.2**	**-1.0**
MWZ	**Matawai**	**8.72**	**206**	P	**Pn**	**17 12 41.8**	**-2.8**
MWZ				S	**Sn**	**17 14 22.3**	**+0.4**
OPRZ	**Ohinepanea**	**8.72**	**212**	P	**Pn**	**17 12 44.8**	**+0.3**
TGRZ	**Tauranga**	**8.77**	**214**	P	**Pn**	**17 12 47.9**	**+2.7**
URZ	**Urewera**	**8.82**	**209**	Pn	**Pn**	**17 12 42.8**	**-3.1**
	2.4nm,0.3s,baz=358,slow=4.9,SNR=28						
URZ				Sn	**Sn**	**17 14 22.5**	**-1.8**
	39nm,0.3s,baz=20,slow=4.5,SNR=8.5						
URZ	**Urewera**	**8.82**	**209**	P	**Pn**	**17 12 45.7**	**-0.2**
URZ	**Urewera**	**8.82**	**209**	P	**Pn**	**17 12 43.2**	**-2.8**
URZ				S	**Sn**	**17 14 23.2**	**-1.1**
RIGZ	**Rimuhau**	**8.96**	**204**	P	**Pn**	**17 12 45.2**	**-2.7**
RIGZ				S	**Sn**	**17 14 26.7**	**-1.1**
KARZ	**Kaharoa**	**9.01**	**213**	P	**Pn**	**17 12 50.7**	**+2.2**
KMRZ	**Kaimai**	**9.02**	**215**	P	**Pn**	**17 12 51.9**	**+3.3**
OMRZ	**Omania**	**9.02**	**212**	P	**Pn**	**17 12 51.7**	**+3.0**
WTAZ	**Waiatarua**	**9.10**	**224**	P	Pn	17 13 00.5	+11
RRRZ	**Republican Roa**	**9.14**	**211**	P	Pn	17 12 55.3	+4.9
MUGZ	**Murupara**	**9.15**	**209**	P	**Pn**	**17 12 48.9**	**-1.5**
RTZ	**Ruatahuna**	**9.18**	**208**	Pn	**Pn**	**17 12 46.9**	**-4.0**
RTZ				Sn	**Sn**	**17 14 28.7**	**-4.5**
SNGZ	**Shannon Statio**	**9.18**	**206**	P	**Pn**	**17 12 48.1**	**-2.8**
SNGZ				S	**Sn**	**17 14 32.9**	**-0.3**
KNZ	**Kokohu**	**9.28**	**204**	P	**Pn**	**17 12 48.5**	**-3.6**
MHGZ	**Mahia Peninsul**	**9.31**	**202**	P	**Pn**	**17 12 49.4**	**-3.3**
RAHZ	**Arahi**	**9.40**	**207**	P	**Pn**	**17 12 51.2**	**-2.7**
MTHZ	**Maungataniwha**	**9.44**	**208**	P	**Pn**	**17 12 52.2**	**-2.2**
WPRZ	**Whakapapatarin**	**9.45**	**212**	P	Pn	17 12 59.8	+5.2
WHHZ	**Waihua**	**9.48**	**205**	P	**Pn**	**17 12 52.9**	**-2.1**
MRHZ	**Matea Rd**	**9.60**	**209**	P	**Pn**	**17 12 54.4**	**-2.2**
NMHZ	**Naumai**	**9.66**	**207**	P	**Pn**	**17 12 54.7**	**-2.8**
ARHZ	**Aropaoanui**	**9.73**	**206**	P	**Pn**	**17 12 55.7**	**-2.8**
BKZ	**Black Stump Fm**	**9.85**	**208**	Pn	**Pn**	**17 12 56.1**	**-4.0**
BKZ				Sn	**Sn**	**17 14 44.1**	**-5.5**
BKZ	**Black Stump Fm**	**9.85**	**208**	P	**Pn**	**17 12 57.7**	**-2.4**
BKZ	**Black Stump Fm**	**9.85**	**208**	P	**Pn**	**17 12 56.2**	**-3.8**
MCHZ	**McNeill Hill**	**10.01**	**207**	P	**Pn**	**17 12 59.3**	**-2.8**
HIZ	**Hauiti**	**10.07**	**216**	Pn	**Pn**	**17 12 59.0**	**-4.1**
HIZ	**Hauiti**	**10.07**	**216**	P	**Pn**	**17 13 05.1**	**+2.0**
KWHZ	**Kaweka Forest**	**10.10**	**208**	P	**Pn**	**17 12 59.2**	**-4.3**
NTVZ	**North Tongarir**	**10.14**	**211**	P	**Pn**	**17 13 02.6**	**-1.6**
OTVZ	**Oturere**	**10.20**	**211**	P	**Pn**	**17 13 05.7**	**+0.8**
KAHZ	**Kahuranaki**	**10.24**	**205**	P	**Pn**	**17 13 01.0**	**-4.5**
BHHZ	**Black Hill Sta**	**10.30**	**209**	P	**Pn**	**17 13 03.5**	**-2.8**
MOVZ	**Moawhango**	**10.36**	**210**	P	**Pn**	**17 13 06.5**	**-0.6**
PXZ	**Pawanui**	**10.46**	**204**	P	**Pn**	**17 13 04.3**	**-4.1**
PNHZ	**Pukenui**	**10.60**	**207**	P	**Pn**	**17 13 05.9**	**-4.5**
WPHZ	**Waipukurau**	**10.64**	**206**	P	**Pn**	**17 13 07.1**	**-3.8**
PRHZ	**Porangahau**	**10.75**	**205**	P	Pn	17 13 07.2	-5.1
TSZ	**Takapari Road**	**10.82**	**207**	P	**Pn**	**17 13 09.5**	**-3.8**
BFZ	**Birch Farm**	**11.25**	**205**		Pn	17 13 13.8	-5.5
MRZ	**Mangatainoka R**	**11.49**	**207**		Pn	17 13 17.5	-4.9
LKBA	**Tubou, Lakemba**	**12.36**	**354**	P	**P**	**17 13 41.7**	**-4.5**
	13nm,0.8s						
SNZO	**South Karori**	**12.39**	**208**	Pn	Pn	17 13 29.1	-5.7
PLWZ	**Palliser**	**12.39**	**206**	Pn	Pn	17 13 27.9	-7.0
BHW	**Baring Head**	**12.40**	**207**		Pn	17 13 23.8	-11
TCW	**Tory Channel**	**12.48**	**210**	Pn	Pn	17 13 30.3	-5.7
TUWZ	**Tuamarina**	**12.81**	**210**		Pn	17 13 35.6	-4.8
NNZ	**Nelson**	**12.89**	**212**	Pn	Pn	17 13 34.6	-6.9
TKNZ	**Takaka Hill**	**12.94**	**214**	Pn	Pn	17 13 35.8	-6.6
CMWZ	**Cape Campbell**	**12.96**	**209**	Pn	**Pn**	**17 13 38.1**	**-4.4**
QRZ	**Quartz Range**	**12.99**	**216**	Pn	Pn	17 13 37.5	-5.6
BSWZ	**Blackbirch Sta**	**13.07**	**210**	Pn	**Pn**	**17 13 39.9**	**-4.2**
CTZ	**Chatham Island**	**13.14**	**177**	P	**Pn**	**17 13 44.4**	**-0.6**
MRNZ	**Matariki Terra**	**13.32**	**213**	Pn	**Pn**	**17 13 43.1**	**-4.4**
NIUE	**Niue**	**13.39**	**33**	P	**Pn**	**17 13 44.9**	**-3.7**
	baz=13,SNR=3.2						
NIUE	**Niue**	**13.39**	**33**	Pn	**Pn**	**17 13 43.7**	**-4.8**
MSVF	**Nonsavu**	**13.41**	**342**	Pn	**Pn**	**17 13 45.4**	**-3.6**
	0.3nm,0.3s,baz=140,slow=16,SNR=3.9						
MSVF				LR	LR	17 18 10.6	
	comp=Z,16µm,19.1s,baz=179,slow=34						
	2.7nm,0.6s						
MSVF	**Nonsavu**	**13.41**	**342**	P	**Pn**	**17 13 52.3**	**+3.3**
MSVF	**Nonsavu**	**13.41**	**342**	*i* P	**Pn**	**17 13 48.8**	**-0.2**
THZ	**Tophouse**	**13.54**	**212**	Pn	Pn	17 13 44.4	-6.1
KHZ	**Kahutara**	**13.79**	**209**		Pn	17 13 48.6	-5.3
TAVE	**Taveuni**	**13.99**	**351**	P	**P**	**17 14 02.5**	**-1.8**
DSZ	**Denniston Nort**	**14.05**	**215**		**Pn**	**17 13 54.2**	**-3.2**
GVZ	**Greta Valley S**	**14.46**	**209**		Pn	17 13 57.2	-5.7
YSA	**Yasawairara**	**14.53**	**341**	P	**P**	**17 14 09.2**	**-1.1**
LTZ	**Lake Taylor**	**14.63**	**211**		Pn	17 13 58.7	-6.8
INZ	**Inchbonnie**	**14.97**	**213**	Pn	Pn	17 14 02.4	-7.4
OXZ	**Oxford**	**15.17**	**210**		Pn	17 14 04.3	-8.2
PINNC	**Pines Island,**	**15.58**	**297**	P	**P**	**17 14 20.9**	**-1.1**
PINNC	**Pines Island,**	**15.58**	**297**	P	**P**	**17 14 22.4**	**+0.4**
RPZ	**Rata Peaks**	**15.91**	**211**	Pn	**Pn**	**17 14 17.3**	**-4.9**
	2.8nm,0.3s,baz=90,slow=20,SNR=17						
RPZ				Sn	Sn	17 17 00.7	-17
	4.2nm,0.3s,baz=322,slow=23,SNR=11						
RPZ				LR	LR	17 20 49.5	
	comp=Z,4µm,21.9s,baz=46,slow=38						
RPZ	**Rata Peaks**	**15.91**	**211**	Pn	Pn	17 14 11.8	-10
RPZ	**Rata Peaks**	**15.91**	**211**	P	**Pn**	**17 14 21.6**	**-0.6**
OUENC	**Ouen Island, N**	**16.16**	**297**		**P**	**17 14 27.4**	**-1.0**
OUENC	**Ouen Island, N**	**16.16**	**297**	P	**P**	**17 14 29.4**	**+1.0**
YATNC	**Mamie plateau,**	**16.32**	**298**	P	**P**	**17 14 32.4**	**+2.2**
FOZ	**Fox Glacier**	**16.36**	**214**		**Pn**	**17 14 22.2**	**-5.6**
ONTNC	**Ouen Toro**	**16.52**	**296**		**P**	**17 14 31.1**	**-1.3**
ONTNC				IAmb	IAmb	17 14 36.3	
	comp=Z,1µm,2.0s						
ONTNC	**Ouen Toro**	**16.52**	**296**	P	**P**	**17 14 34.8**	**+2.4**
DZM	**Mont Dzumac**	**16.65**	**297**	*e*Pn	**Pn**	**17 14 31.9**	**0.0**
	comp=Z,842nm,1.2s						
DZM				*e*LR	LR	17 18 23.0	
	comp=Z,25µm,24.5s						
DZM	**Mont Dzumac**	**16.65**	**297**	Pn	**Pn**	**17 14 32.6**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=142,slow=12,SNR=41						
DZM				LR	LR	17 19 51.3	
	comp=Z,16µm,18.4s,baz=132,slow=34						
DZM	**Mont Dzumac**	**16.65**	**297**	P	**P**	**17 14 34.1**	**+0.1**
DZM				IAmb	IAmb	17 14 38.1	
	comp=Z,972nm,1.9s						
DZM	**Mont Dzumac**	**16.65**	**297**	P	**P**	**17 14 36.4**	**+2.4**
NOUC	**Port Laguerre**	**16.75**	**297**	P	**P**	**17 14 37.1**	**+2.2**
LIFNC	**LIFOU**	**16.82**	**302**	P	**P**	**17 14 36.1**	**+0.4**
LIFNC	**LIFOU**	**16.82**	**302**	P	**P**	**17 14 38.2**	**+2.5**
LBZ	**Lake Benmore**	**16.83**	**212**		Pn	17 14 26.5	-7.4
ODZ	**Otahua Downs**	**17.15**	**209**	P	**Pn**	**17 14 32.3**	**-5.5**
ODZ	**Otahua Downs**	**17.15**	**209**	P	**Pn**	**17 14 38.0**	**+0.2**
JCZ	**Jackson Bay**	**17.26**	**215**	P	**Pn**	**17 14 37.7**	**-1.6**
AFI	**Afiamalu**	**17.44**	**19**	P	Pn	17 14 34.2	-7.4
	comp=Z,31nm,0.9s,baz=174,slow=6.4,SNR=6.6						
AFI				S	Sn	17 17 35.8	-19
	comp=Z,20nm,0.5s,baz=191,slow=22,SNR=2.4						
WKZ	**Wanaka**	**17.70**	**213**		**Pn**	**17 14 38.3**	**-6.5**
DVP	**Devils Point**	**18.23**	**311**	P	**P**	**17 14 55.7**	**+4.3**
RAR	**Rarotonga**	**18.50**	**64**	P	**P**	**17 14 53.5**	**-0.8**
	comp=Z,1.8nm,0.3s,baz=222,slow=4.2,SNR=16						
RAR				LR	LR	17 20 19.7	
	comp=Z,4µm,21.2s,baz=244,slow=31						
	comp=Z,118nm,0.9s						
RAR	**Rarotonga**	**18.50**	**64**	P	**P**	**17 14 52.3**	**-2.0**
RAR	**Rarotonga**	**18.50**	**64**	P	**P**	**17 14 54.1**	**-0.2**
MLZ	**Mavora Lakes**	**18.53**	**213**	P	**P**	**17 14 49.3**	**-5.2**
SYZ	**Scrubby Hill**	**18.97**	**209**	P	**Pn**	**17 14 59.9**	**-0.2**
WHZ	**Wether Hill Ro**	**19.00**	**212**	P	**P**	**17 14 56.5**	**-3.2**
KOUNC	**Koumac, New Ca**	**19.17**	**297**	P	**P**	**17 14 59.2**	**-2.4**
KOUNC				IAmb	IAmb	17 15 06.9	
	comp=Z,476nm,1.6s						
KOUNC	**Koumac, New Ca**	**19.17**	**297**	P	**Pn**	**17 15 04.7**	**+2.0**
PYZ	**Puysegur Point**	**19.80**	**214**		**P**	**17 15 05.2**	**-3.1**
LHI	**Lord Howe Isla**	**20.05**	**261**	P	Pn	17 15 16.3	+3.2
	baz=20,SNR=12						
LHI	**Lord Howe Isla**	**20.05**	**261**	P	Pn	17 15 12.4	-0.7
LHI				IAmb	IAmb	17 15 16.7	
	comp=Z,260nm,0.9s						
LHI	**Lord Howe Isla**	**20.05**	**261**	P	Pn	17 15 15.5	+2.4
FUNA	**Funafuti**	**22.16**	**351**	IAMs_20	IAMs_20	17 23 36.7	
	comp=Z,10µm,19.0s						
GC1S	**Gold Coast 1 S**	**25.30**	**268**	P	**P**	**17 16 08.0**	**+3.6**
AUWSH	**Wavell State H**	**25.88**	**270**	P	**P**	**17 16 12.6**	**+2.9**
TBI	**Tubuai**	**26.01**	**81**	*e*P	**P**	**17 16 11.3**	**+0.4**
	comp=Z,2µm,26.8s						
TBI				*e*LR	LR	17 22 42.7	
	comp=Z,55µm,27.0s						
TBI				*e*LR	LR	17 22 42.9	
	comp=Z,189µm,24.8s						
TBI	**Tubuai**	**26.01**	**81**	*e*T	T	17 43 32.6	
	comp=Z,79nm,0.3s						
NTLH	**Newcastle Hard**	**26.20**	**257**	P	**P**	**17 16 16.3**	**+3.7**
ARMA	**Armidale**	**26.51**	**262**	P	**P**	**17 16 18.8**	**+3.2**
	baz=27,SNR=25						
ARMA	**Armidale**	**26.51**	**262**	P	**P**	**17 16 16.1**	**+0.6**
ARMA				IAmb	IAmb	17 16 20.6	
	comp=Z,469nm,1.9s						
ARMA	**Armidale**	**26.51**	**262**	P	**P**	**17 16 17.5**	**+1.9**
RIV	**Riverview**	**26.62**	**255**	P	**P**	**17 16 19.4**	**+3.0**
	baz=27,SNR=4.1						
RIV	**Riverview**	**26.62**	**255**	P	**P**	**17 16 18.2**	**+1.9**
MGCD	**Mangrove Creek**	**26.68**	**256**	P	**P**	**17 16 20.6**	**+3.6**
	baz=27,SNR=39						
MGCD	**Mangrove Creek**	**26.68**	**256**	P	**P**	**17 16 19.8**	**+2.9**
WOLH	**Wollongong Har**	**26.84**	**253**	P	**P**	**17 16 21.6**	**+3.3**
	comp=Z,167nm,0.9s						
SYDH	**Sydney Hard Ro**	**26.96**	**255**	P	**P**	**17 16 22.6**	**+3.1**
	comp=Z,148nm,0.8s						
AUPHS	**Peel High Scho**	**27.05**	**261**	P	**P**	**17 16 22.3**	**+2.0**
AUUHS	**Ulladulla High**	**27.17**	**251**	P	**P**	**17 16 24.7**	**+3.4**
	comp=Z,106nm,1.4s						
CNB	**Canberra Magne**	**28.08**	**252**	P	**P**	**17 16 31.0**	**+1.5**
EIDS	**Eidsvold**	**28.13**	**273**	P	**P**	**17 16 31.3**	**+1.3**
	baz=28,SNR=28						
EIDS	**Eidsvold**	**28.13**	**273**	P	**P**	**17 16 28.9**	**-1.1**
EIDS				IAmb	IAmb	17 16 33.6	
	comp=Z,256nm,1.4s						
EIDS	**Eidsvold**	**28.13**	**273**	P	**P**	**17 16 31.1**	**+1.1**
MILA	**Mila**	**28.30**	**248**	P	**P**	**17 16 33.9**	**+2.4**
	baz=28,SNR=9.3						
MILA	**Mila**	**28.30**	**248**	P	**P**	**17 16 34.2**	**+2.7**
PPT2	**Papeete2**	**28.54**	**69**	*e*P	**P**	**17 16 35.6**	**+1.8**
	comp=Z,103nm,1.4s						
PPT2				*e*S	**S**	**17 21 18.6**	**-1.5**
	comp=Z,2µm,26.0s						
PPT2				*e*LR	LR	17 23 53.5	
	comp=Z,7µm,25.5s						
PPT2				*e*LR	LR	17 23 53.7	
	comp=Z,11µm,26.0s						
PPT2	**Papeete2**	**28.54**	**69**	*e*T	T	17 46 21.6	
	comp=Z,19nm,0.3s						
PPTF	**Pamatai, Papee**	**28.55**	**69**	P	**P**	**17 16 33.9**	**0.0**
GD1S	**Gladstone Soft**	**28.55**	**276**	P	**P**	**17 16 35.9**	**+2.2**
	comp=Z,49nm,0.7s						
PPT	**Papeete**	**28.55**	**69**	P	**P**	**17 16 35.5**	**+1.7**
	comp=Z,35nm,0.8s,baz=245,slow=23,SNR=3.1						
PPT				LR	LR	17 24 59.1	
	comp=Z,3µm,21.6s,baz=240,slow=30						
	comp=Z,35nm,0.8s						
TVO	**Taravao**	**28.70**	**70**	*e*T	T	17 46 41.3	
	comp=Z,7.2nm,0.3s						
TIAR	**Tiarei**	**28.75**	**70**	*e*P	**P**	**17 16 37.3**	**+1.8**
	comp=Z,12nm,0.8s						
AUDCS	**Dubbo College**	**28.84**	**258**	P	**P**	**17 16 38.1**	**+1.8**
YNG	**Young**	**28.89**	**254**	P	**P**	**17 16 38.9**	**+2.2**
MCQ	**Macquarie Isla**	**29.23**	**208**	P	**P**	**17 16 39.3**	**-0.1**
MCQ				IAmb	IAmb	17 16 41.8	
	comp=Z,192nm,1.3s						
MCQ	**Macquarie Isla**	**29.23**	**208**	P	**P**	**17 16 39.3**	**-0.1**
MCQ				pmax	pmax		
	comp=Z,192nm,1.3s						
MEH	**Mehetia**	**29.62**	**72**	*e*T	T	17 47 56.1	
	comp=Z,35nm,0.3s						
GLAD	**Gladstone**	**29.63**	**240**	P	**P**	**17 16 45.3**	**+2.2**
	comp=Z,59nm,0.9s						
HNR	**Honiara**	**29.72**	**310**	P	P	17 16 37.8	-6.4
	comp=Z,215nm,0.6s,baz=153,slow=11,SNR=1.9						
HNR				LR	LR	17 26 40.3	
	comp=Z,36µm,21.6s,baz=146,slow=33						
HNR	**Honiara**	**29.72**	**310**	P	**P**	**17 16 43.0**	**-1.1**
HNR				IAmb	IAmb	17 17 16.3	
	comp=Z,103nm,1.1s						
HNR	**Honiara**	**29.72**	**310**	P	**P**	**17 16 47.5**	**+3.4**
HNR	**Honiara**	**29.72**	**310**	P	**P**	**17 16 43.0**	**-1.1**
HNR				pmax	pmax		
	comp=Z,103nm,1.1s						
HNR				MLR	MLR		
	comp=Z,3µm,21.0s						
AULRC	**Lightning Ridg**	**29.80**	**263**	P	**P**	**17 16 46.4**	**+1.6**
RMQ	**Roma**	**29.81**	**269**	P	**P**	**17 16 47.2**	**+2.3**
	baz=30,SNR=132						
RMQ	**Roma**	**29.81**	**269**	P	**P**	**17 16 46.7**	**+1.8**
AULHS	**Lilydale High**	**30.26**	**240**	P	**P**	**17 16 49.8**	**+1.1**
CORO	**Coronation Par**	**30.35**	**239**	P	**P**	**17 16 50.8**	**+1.3**
AUTAR	**Taroona High S**	**30.47**	**236**	P	**P**	**17 16 51.4**	**+0.9**
MOO	**Moorlands**	**30.49**	**237**	P	**P**	**17 16 52.3**	**+1.6**
	baz=31,SNR=7.2						
MOO	**Moorlands**	**30.49**	**237**	P	**P**	**17 16 52.1**	**+1.3**
TAU	**Tasmania Unive**	**30.49**	**236**	P	**P**	**17 16 49.5**	**-1.2**
TAU				IAmb	IAmb	17 16 53.4	
	comp=Z,235nm,1.8s						
TAU	**Tasmania Unive**	**30.49**	**236**	IAMs_20	IAMs_20	17 27 14.5	
	comp=Z,8µm,20.0s						
TAU	**Tasmania Unive**	**30.49**	**236**	P	**P**	**17 16 51.6**	**+0.9**
TAU	**Tasmania Unive**	**30.49**	**236**	P	**P**	**17 16 49.5**	**-1.2**
TAU				pmax	pmax		
	comp=Z,235nm,1.8s						
TAU				MLR	MLR		
	comp=Z,8µm,20.0s						
TOO	**Toolangi**	**31.24**	**247**	P	**P**	**17 16 59.6**	**+2.1**
	baz=31,SNR=22						
TOO	**Toolangi**	**31.24**	**247**	P	**P**	**17 16 57.9**	**+0.4**
TOO	**Toolangi**	**31.24**	**247**	P	**P**	**17 17 00.1**	**+2.6**
TOO	**Toolangi**	**31.24**	**247**	P	**P**	**17 16 57.9**	**+0.4**
TOO				pmax	pmax		
	comp=Z,232nm,1.4s						
PMOR	**Pomariorio Ree**	**31.31**	**67**	*e*T	T	17 49 49.2	
	comp=Z,6.0nm,0.3s						
VAH	**Vaihoa**	**31.39**	**68**	*e*P	**P**	**17 16 59.0**	**+0.1**
	comp=Z,88nm,1.2s						
VAH	**Vaihoa**	**31.39**	**68**	*e*T	T	17 49 58.5	
	comp=Z,145nm,0.3s						
CMSA	**Cobar Meteorol**	**31.41**	**259**	P	**P**	**17 17 00.9**	**+1.9**
	baz=32,SNR=117						
CMSA	**Cobar Meteorol**	**31.41**	**259**	P	**P**	**17 17 00.7**	**+1.8**
MLBS	**Spotswood, Mel**	**31.72**	**247**	P	**P**	**17 17 03.4**	**+1.8**
GEXS	**Deakin Univers**	**32.21**	**246**	P	**P**	**17 17 08.0**	**+2.1**
TARA	**Tarawa**	**33.04**	**342**	IAMs_20	IAMs_20	17 30 17.1	
	comp=Z,5µm,18.0s						
QLP	**Quilpie**	**33.68**	**267**	P	**P**	**17 17 20.2**	**+1.2**
	baz=34,SNR=50						
QLP	**Quilpie**	**33.68**	**267**	P	**P**	**17 17 21.3**	**+2.4**
TV1H	**Townsville Har**	**34.11**	**281**	P	**P**	**17 17 24.2**	**+1.5**
	comp=Z,111nm,1.1s						
ARPS	**Mount Arapiles**	**34.16**	**249**	P	**P**	**17 17 23.5**	**+0.6**
	baz=34,SNR=26						
ARPS	**Mount Arapiles**	**34.16**	**249**	P	**P**	**17 17 25.6**	**+2.6**
CTA	**Charters Tower**	**34.21**	**279**	P	**P**	**17 17 24.1**	**+0.6**
	comp=Z,101nm,0.4s,baz=103,slow=9.9,SNR=60						
CTA				LR	LR	17 29 57.2	
	comp=Z,8µm,18.3s,baz=130,slow=34						
	comp=Z,101nm,0.4s						
CTA	**Charters Tower**	**34.21**	**279**	P	**P**	**17 17 25.4**	**+1.8**
CTAO	**Charters Tower**	**34.21**	**279**	P	**P**	**17 17 25.1**	**+1.5**
CTAO	**Charters Tower**	**34.21**	**279**	P	**P**	**17 17 25.6**	**+2.0**
CTAO	**Charters Tower**	**34.21**	**279**	P	**P**	**17 17 25.1**	**+1.5**
CTAO				pmax	pmax		
	comp=Z,307nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,8µm,18.0s						
STKA	**Stephens Creek**	**34.81**	**257**	P	**P**	**17 17 29.6**	**+0.9**
	comp=Z,231nm,1.0s,baz=105,slow=12,SNR=241						
STKA				LR	LR	17 30 38.4	
	comp=Z,5µm,18.4s,baz=95,slow=34						
	comp=Z,231nm,1.0s						
STKA	**Stephens Creek**	**34.81**	**257**	P	**P**	**17 17 30.4**	**+1.7**
	baz=35,SNR=144						
STKA	**Stephens Creek**	**34.81**	**257**	P	**P**	**17 17 28.4**	**-0.3**
STKA				IAmb	IAmb	17 17 32.1	
	comp=Z,56nm,0.9s						
STKA	**Stephens Creek**	**34.81**	**257**	P	**P**	**17 17 30.8**	**+2.1**
STKA	**Stephens Creek**	**34.81**	**257**	*c i*P	**P**	**17 17 30.6**	**+1.9**
INKA	**Innaminka**	**36.38**	**264**	P	**P**	**17 17 44.9**	**+2.8**
MTSU	**Mount Surprise**	**36.71**	**281**	P	**P**	**17 17 46.4**	**+1.3**
	baz=37,SNR=50						
MTSU	**Mount Surprise**	**36.71**	**281**	P	**P**	**17 17 46.7**	**+1.6**
HTT	**Hallett**	**36.82**	**254**	P	**P**	**17 17 46.9**	**+1.0**
	baz=37,SNR=123						
HTT	**Hallett**	**36.82**	**254**	P	**P**	**17 17 47.7**	**+1.8**
PTPS	**Port Pirie**	**37.62**	**254**	P	**P**	**17 17 55.0**	**+2.3**
	comp=Z,496nm,0.9s						
XMAS	**Kiritimati**	**37.70**	**34**	P	**P**	**17 17 51.9**	**-1.5**
XMAS				IAmb	IAmb	17 18 11.3	
	comp=Z,146nm,0.9s						
LCRK	**Leigh Creek**	**37.91**	**259**	P	**P**	**17 17 56.8**	**+1.6**
WHYH	**Whyalla**	**37.99**	**254**	P	**P**	**17 17 57.4**	**+1.6**
	comp=Z,254nm,1.4s						
RKT	**Rikitea**	**38.53**	**89**	*e*P	**P**	**17 18 00.8**	**+0.4**
	comp=Z,49µm,36.5s						
RKT				*e*S	**S**	**17 23 54.0**	**-0.4**
	comp=Z,370µm,27.8s						
RKT				*e*LR	LR	17 28 31.0	
	comp=Z,1532µm,27.5s						
RKT	**Rikitea**	**38.53**	**89**	*e*T	T	17 59 06.1	
	comp=Z,4.9nm,0.3s						
RABL	**Rabaul**	**38.79**	**307**	P	**P**	**17 18 00.1**	**-2.6**
RABL	**Rabaul**	**38.79**	**307**	P	**P**	**17 18 05.6**	**+2.9**
PMG	**Port Moresby**	**39.04**	**295**	ScP	**ScP**	**17 23 59.6**	**-1.1**
	comp=Z,8.7nm,0.8s,baz=198,slow=7.3,SNR=2.7						
PMG				LR	LR	17 31 01.3	
	comp=Z,4µm,22.0s,baz=142,slow=32						
PMG	**Port Moresby**	**39.04**	**295**	P	**P**	**17 18 02.6**	**-2.2**
PMG				IAmb	IAmb	17 18 06.4	
	comp=Z,193nm,1.8s						
PMG	**Port Moresby**	**39.04**	**295**	P	**P**	**17 18 07.3**	**+2.6**
PMG	**Port Moresby**	**39.04**	**295**	*c i*P	**P**	**17 18 04.7**	**0.0**
PMG				pmax	pmax		
	comp=Z,96nm,1.7s						
BBOO	**Buckleboo**	**39.29**	**254**	P	**P**	**17 18 07.4**	**+0.7**
	baz=39,SNR=40						
BBOO	**Buckleboo**	**39.29**	**254**	P	**P**	**17 18 05.5**	**-1.2**
BBOO	**Buckleboo**	**39.29**	**254**	P	**P**	**17 18 07.7**	**+1.0**
COEN	**Coen**	**39.69**	**286**	P	**P**	**17 18 11.8**	**+1.5**
	baz=40,SNR=11						
COEN	**Coen**	**39.69**	**286**	P	**P**	**17 18 09.2**	**-1.0**
COEN				IAmb	IAmb	17 18 12.9	
	comp=Z,199nm,1.4s						
COEN	**Coen**	**39.69**	**286**	P	**P**	**17 18 12.4**	**+2.2**
QIS	**Mount Isa**	**39.71**	**274**	P	**P**	**17 18 10.9**	**+0.5**
	baz=40,SNR=41						
QIS	**Mount Isa**	**39.71**	**274**	P	**P**	**17 18 10.7**	**+0.3**
OOD	**Oodnadatta**	**40.69**	**262**	P	**P**	**17 18 20.3**	**+1.9**
TAOE	**Nuku Hiva Isla**	**41.03**	**66**	*e*P	**P**	**17 18 21.6**	**+0.2**
	comp=Z,162nm,26.0s						
TAOE				*e*S	**S**	**17 24 31.4**	**-0.8**
	comp=Z,1µm,25.8s						
TAOE				*e*LR	LR	17 29 40.3	
	comp=Z,5µm,24.6s						
MULG	**Mulgathing**	**41.46**	**258**	P	**P**	**17 18 26.1**	**+1.4**
KWAJ	**Kwajalein Atol**	**41.68**	**338**	IAMs_20	IAMs_20	17 31 36.1	
	comp=Z,4µm,21.0s						
AS01	**Alice Springs**	**43.44**	**267**	P	**P**	**17 18 41.0**	**0.0**
	comp=Z,59nm,0.6s						
AS31	**Alice Springs**	**43.48**	**267**	P	**P**	**17 18 39.5**	**-1.8**
ASAR	**Alice Springs**	**43.48**	**267**	P	**P**	**17 18 39.2**	**-2.1**
	comp=Z,20nm,0.5s,baz=105,slow=7.4,SNR=447						
ASAR				PcP	**PcP**	**17 20 29.1**	**0.0**
	comp=Z,1.6nm,0.5s,baz=108,slow=8.1,SNR=1.7						
ASAR				ScP	**ScP**	**17 24 17.7**	**-0.7**
	comp=Z,4.6nm,0.8s,baz=97,slow=4.2,SNR=5.9						
ASAR				S	**S**	**17 25 06.0**	**-2.2**
	comp=Z,1.2nm,0.8s,baz=147,slow=3.0,SNR=2.9						
ASAR				LR	LR	17 36 31.1	
	comp=Z,7µm,18.2s,baz=111,slow=36						
ASAR				PKKP	**PKKPdf**	**17 42 09.7**	**+2.0**
	comp=Z,0.3nm,0.6s,baz=336,slow=9.3,SNR=5.5						
	comp=Z,20nm,0.5s						
ASAR	**Alice Springs**	**43.48**	**267**	P	**P**	**17 18 39.8**	**-1.5**
WB1	**Warramunga Ar.**	**44.48**	**272**	P	**P**	**17 18 49.0**	**-0.3**
WB2	**Warramunga Arr**	**44.48**	**272**	P	**P**	**17 18 48.6**	**-0.7**
	baz=45						
WB2	**Warramunga Arr**	**44.48**	**272**	P	**P**	**17 18 48.2**	**-1.1**
WRAB	**Tennant Creek**	**44.48**	**272**	P	**P**	**17 18 48.1**	**-1.2**
WRAB	**Tennant Creek**	**44.48**	**272**	P	**P**	**17 18 49.0**	**-0.4**
WRAB	**Tennant Creek**	**44.48**	**272**	*ce*P	**P**	**17 18 48.9**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,325nm,1.7s						
WRA	**Warramunga Arr**	**44.49**	**272**	P	**P**	**17 18 48.6**	**-0.8**
	comp=Z,29nm,0.3s,baz=110,slow=8.0,SNR=472						
WRA				PcP	**PcP**	**17 20 31.8**	**-0.8**
	comp=Z,2.2nm,0.7s,baz=108,slow=8.0,SNR=1.4						
WRA				ScP	**ScP**	**17 24 21.7**	**-0.8**
	comp=Z,12nm,1.2s,baz=110,slow=4.2,SNR=5.8						
WRA				S	**S**	**17 25 18.8**	**-4.1**
	comp=Z,6.4nm,0.9s,baz=112,slow=13,SNR=3.9						
WRA				LR	LR	17 35 43.2	
	comp=Z,5µm,20.7s,baz=104,slow=34						
	comp=Z,29nm,0.3s						
WRA	**Warramunga Arr**	**44.49**	**272**	PcP	**PcP**	**17 20 31.4**	**-1.2**
WB0	**Warramunga Arr**	**44.51**	**272**	PcP	**PcP**	**17 20 32.0**	**-0.6**
FORT	**Forrest**	**46.37**	**255**	P	**P**	**17 19 01.6**	**-2.5**
FORT				IAmb	IAmb	17 19 17.3	
	comp=Z,87nm,0.8s						
FORT	**Forrest**	**46.37**	**255**	P	**P**	**17 19 05.5**	**+1.4**
WRKA	**Warakurna**	**47.84**	**263**	P	**P**	**17 19 14.2**	**-1.5**
	baz=48,SNR=62						
WRKA	**Warakurna**	**47.84**	**263**	P	**P**	**17 19 15.1**	**-0.6**
VNDA	**Vanda**	**47.94**	**186**	P	**P**	**17 19 20.1**	**+4.4**
	comp=Z,4.6nm,0.6s,baz=20,slow=7.2,SNR=12						
VNDA				LR	LR	17 36 34.1	
	comp=Z,535nm,20.4s,baz=37,slow=32						
GENI	**Genyem**	**48.69**	**297**	P	**P**	**17 19 24.0**	**+1.7**
KDU	**Kakadu**	**49.33**	**280**	P	**P**	**17 19 26.2**	**-1.0**
	baz=50,SNR=10						
KDU	**Kakadu**	**49.33**	**280**	P	**P**	**17 19 26.6**	**-0.6**
SMPI	**Sarmi**	**50.20**	**296**	P	**P**	**17 19 33.2**	**-0.6**
	comp=Z,29nm,1.3s						
MTN	**Manton Dam**	**50.39**	**279**	P	**P**	**17 19 34.6**	**-0.7**
	baz=51,SNR=18						
MTN	**Manton Dam**	**50.39**	**279**	P	**P**	**17 19 32.9**	**-2.4**
MTN				IAmb	IAmb	17 20 12.7	
	comp=Z,49nm,1.2s						
MTN	**Manton Dam**	**50.39**	**279**	P	**P**	**17 19 36.9**	**+1.6**
KNRA	**Kununurra**	**51.10**	**274**	P	**P**	**17 19 37.9**	**-2.7**
KNRA				IAmb	IAmb	17 19 43.9	
	comp=Z,52nm,0.6s						
KNRA	**Kununurra**	**51.10**	**274**	P	**P**	**17 19 41.0**	**+0.4**
	comp=Z,100nm,1.3s						
KMBL	**Kambalda**	**51.33**	**253**	P	**P**	**17 19 41.3**	**-0.9**
	baz=51,SNR=7.1						
KMBL	**Kambalda**	**51.33**	**253**	P	**P**	**17 19 43.1**	**+0.9**
WAKE	**Wake Island**	**51.87**	**341**	P	**P**	**17 19 45.0**	**-1.1**
WAKE				IAmb	IAmb	17 20 04.9	
	comp=Z,124nm,1.1s						
WAKE	**Wake Island**	**51.87**	**341**	P	**P**	**17 19 49.8**	**+3.7**
	comp=Z,108nm,1.0s						
SRPI	**Serui, Papua**	**52.20**	**294**	P	**P**	**17 19 48.6**	**-0.3**
H11N3	**WAKE ISLAND Hy**	**52.21**	**341**	P	**P**	**17 19 51.6**	**+3.2**
	baz=188,slow=8.2,SNR=4.9						
H11N1	**WAKE ISLAND Hy**	**52.21**	**341**	P	**P**	**17 19 50.3**	**+1.9**
	baz=188,slow=8.2,SNR=5.1						
H11N2	**WAKE ISLAND Hy**	**52.22**	**341**	P	**P**	**17 19 53.0**	**+4.5**
	baz=188,slow=8.2,SNR=3.6						
SAUI	**Saumlaki**	**52.73**	**284**	IAmb	IAmb	17 20 28.2	
	comp=Z,81nm,0.9s						
SAUI				IAMs_20	IAMs_20	17 40 11.3	
	comp=Z,3µm,20.0s						
SAUI	**Saumlaki**	**52.73**	**284**	P	**P**	**17 19 55.0**	**+2.2**
	comp=Z,91nm,1.2s						
SAUI	**Saumlaki**	**52.73**	**284**	P	**P**	**17 19 52.7**	**-0.1**
	comp=Z,93nm,1.1s,comp=Z,5µm						
FITZ	**Fitzroy Crossi**	**52.74**	**270**	P	**P**	**17 19 52.2**	**-0.6**
	baz=53						
FITZ	**Fitzroy Crossi**	**52.74**	**270**	P	**P**	**17 19 51.7**	**-1.1**
FITZ	**Fitzroy Crossi**	**52.74**	**270**	P	**P**	**17 19 52.6**	**-0.2**
HLP	**Hilina Pali**	**54.02**	**26**	P	**P**	**17 20 00.6**	**-1.5**
RKPI	**Ransiki, Papua**	**54.05**	**293**	P	**P**	**17 20 01.7**	**-0.8**
	comp=Z,80nm,0.7s						
SDHHI	**Sand Hill**	**54.11**	**26**	P	**P**	**17 20 01.0**	**-1.8**
SDHHI				IAmb	IAmb	17 20 17.0	
	comp=Z,99nm,1.0s						
RIM	**Rim**	**54.13**	**26**	P	**P**	**17 20 00.8**	**-2.2**
PUH	**Pauahi**	**54.13**	**26**	P	**P**	**17 20 00.2**	**-2.8**
KKO	**Keanakako`i**	**54.13**	**26**	P	**P**	**17 20 00.7**	**-2.3**
MLH	**Mauna Loa**	**54.17**	**26**	P	**P**	**17 20 03.1**	**-0.4**
MLH				IAmb	IAmb	17 20 20.6	
	comp=Z,94nm,1.0s						
HMH	**Humuʻula Sheep**	**54.24**	**26**	P	**P**	**17 20 03.7**	**-0.3**
POHA	**Pohakuloa**	**54.36**	**26**	P	**P**	**17 20 06.2**	**+1.4**
HPAH	**Hawaii Prepara**	**54.55**	**25**	P	**P**	**17 20 03.6**	**-2.4**
KLBR	**Kellerberrin**	**54.65**	**251**	P	**P**	**17 20 05.6**	**-1.1**
	baz=55,SNR=14						
KLBR	**Kellerberrin**	**54.65**	**251**	P	**P**	**17 20 05.0**	**-1.7**
NWAO	**Narrogin (SRO)**	**54.69**	**249**	LR	LR	17 41 28.4	
	comp=Z,2µm,20.0s,baz=68,slow=34						
NWAO	**Narrogin (SRO)**	**54.69**	**249**	P	**P**	**17 20 05.4**	**-1.5**
	baz=55,SNR=4.2						
NWAO				P	**P**	**17 20 05.4**	**-1.5**
	baz=55,SNR=4.2						
NWAO	**Narrogin (SRO)**	**54.69**	**249**	P	**P**	**17 20 05.2**	**-1.8**
NWAO				IAmb	IAmb	17 20 08.0	

	comp=Z,95nm,1.7s						
NWAO	**Narrogin (SRO)**	**54.69**	**249**	P	**P**	**17 20 05.1**	**-1.8**
NWAO				IAmb	IAmb	17 20 08.0	
	comp=Z,290nm,1.6s						
NWAO	**Narrogin (SRO)**	**54.69**	**249**	IAMs_20	IAMs_20	17 40 46.2	
	comp=Z,2µm,20.0s						
NWAO	**Narrogin (SRO)**	**54.69**	**249**	P	**P**	**17 20 08.6**	**+1.7**
NWAO	**Narrogin (SRO)**	**54.69**	**249**	P	**P**	**17 20 07.0**	**+0.1**
NWAO	**Narrogin (SRO)**	**54.69**	**249**	P	**P**	**17 20 05.2**	**-1.8**
NWAO				pmax	pmax		
	comp=Z,95nm,1.7s						
NWAO				MLR	MLR		
	comp=Z,2µm,20.0s						
FAKI	**Fak Fak**	**54.77**	**290**	P	**P**	**17 20 07.5**	**-0.2**
FAKI	**Fak Fak**	**54.77**	**290**	P	**P**	**17 20 06.6**	**-1.1**
	comp=Z,54nm,1.5s,comp=Z,1µmcomp=Z,2µm						
HON	**Honolulu**	**54.94**	**22**	P	**P**	**17 20 05.5**	**-3.1**
HON	**Honolulu**	**54.94**	**22**	P	**P**	**17 20 05.6**	**-3.1**
HON				pmax	pmax		
	comp=Z,564nm,1.8s						
KIP	**Kipapa**	**55.02**	**22**	P	**P**	**17 20 07.3**	**-2.0**
KIP	**Kipapa**	**55.02**	**22**	P	**P**	**17 20 11.8**	**+2.5**
KIP	**Kipapa**	**55.02**	**22**	P	**P**	**17 20 11.5**	**+2.3**
KIP	**Kipapa**	**55.02**	**22**	*ce*P	**P**	**17 20 11.6**	**+2.3**
KIP				pmax	pmax		
	comp=Z,75nm,1.7s						
KHLH	**Kahului Airpor**	**55.08**	**24**	P	**P**	**17 20 07.7**	**-2.0**
KHLH				IAmb	IAmb	17 20 49.8	
	comp=Z,141nm,1.4s						
CASY	**Casey**	**55.15**	**208**	P	**P**	**17 20 08.5**	**-1.2**
OPA	**Opana**	**55.27**	**22**	P	**P**	**17 20 09.0**	**-2.1**
OPA	**Opana**	**55.27**	**22**	P	**P**	**17 20 09.0**	**-2.1**
OPA				pmax	pmax		
	comp=Z,354nm,1.8s						
MEEK	**Meekatharra**	**55.51**	**257**	P	**P**	**17 20 11.8**	**-1.2**
	baz=56,SNR=6.3						
MEEK	**Meekatharra**	**55.51**	**257**	P	**P**	**17 20 12.2**	**-0.8**
BNDI	**Bandanaira**	**55.77**	**287**	P	**P**	**17 20 15.4**	**+0.5**
BNDI	**Bandanaira**	**55.77**	**287**	P	**P**	**17 20 13.7**	**-1.2**
	comp=Z,114nm,1.2s,comp=Z,3µm						
MUN	**Mundaring**	**55.79**	**250**	P	**P**	**17 20 12.4**	**-2.6**
	baz=56,SNR=4.4						
MUN	**Mundaring**	**55.79**	**250**	P	**P**	**17 20 15.1**	**+0.2**
BLDU	**Ballidu**	**55.80**	**252**	P	**P**	**17 20 13.7**	**-1.3**
	baz=56,SNR=8.4						
BLDU	**Ballidu**	**55.80**	**252**	P	**P**	**17 20 15.6**	**+0.6**
PSA00	**Pilbara Seismi**	**56.33**	**263**	P	**P**	**17 20 15.5**	**-3.4**
PSA00				IAmb	IAmb	17 20 18.9	
	comp=Z,163nm,2.0s						
PSA00	**Pilbara Seismi**	**56.33**	**263**	P	**P**	**17 20 16.5**	**-2.3**
PSA00				IAmb	IAmb	17 20 19.0	
	comp=Z,108nm,1.9s						
MBWA	**Marble Bar**	**56.59**	**264**	P	**P**	**17 20 18.6**	**-2.1**
MBWA				IAmb	IAmb	17 20 20.7	
	comp=Z,186nm,1.9s						
MBWA	**Marble Bar**	**56.59**	**264**	P	**P**	**17 20 19.3**	**-1.4**
SIJI	**Sorong**	**56.76**	**291**	P	**P**	**17 20 21.1**	**-0.9**
	comp=Z,19nm,0.7s,baz=123,slow=9.9,SNR=43						
SIJI				LR	LR	17 44 29.2	
	comp=Z,999nm,19.4s,baz=119,slow=36						
	comp=Z,19nm,0.7s						
MORW	**Morawa**	**56.84**	**253**	P	**P**	**17 20 21.4**	**-1.1**
	baz=57,SNR=19						
MORW	**Morawa**	**56.84**	**253**	P	**P**	**17 20 20.6**	**-1.9**
MORW				IAmb	IAmb	17 20 21.8	
	comp=Z,36nm,1.1s						
MORW	**Morawa**	**56.84**	**253**	P	**P**	**17 20 21.4**	**-1.1**
GUMO	**Guam**	**56.89**	**315**	P	**P**	**17 20 21.0**	**-1.7**
	comp=Z,56nm,0.9s,baz=125,slow=6.4,SNR=3.1						
GUMO				LR	LR	17 42 24.3	
	comp=Z,1µm,19.8s,baz=135,slow=34						
	comp=Z,56nm,0.9s						
GUMO	**Guam**	**56.89**	**315**	P	**P**	**17 20 20.6**	**-2.1**
MSAI	**Masohi**	**57.23**	**287**	P	**P**	**17 20 23.8**	**-1.6**
	comp=Z,6.3nm,0.9s,comp=Z,193nm						
AAI	**Ambon**	**57.65**	**287**	P	**P**	**17 20 26.6**	**-1.7**
	comp=Z,49nm,1.5s,comp=Z,950nm						
SOEI	**Soe**	**57.76**	**278**	IAmb	IAmb	17 20 57.1	
	comp=Z,83nm,1.0s						
SOEI	**Soe**	**57.76**	**278**	P	**P**	**17 20 31.0**	**+1.8**
SOEI	**Soe**	**57.76**	**278**	P	**P**	**17 20 29.9**	**+0.7**
	comp=Z,89nm,1.2s,comp=Z,1µmcomp=Z,3µm						
NLAI	**Namlea**	**58.80**	**286**	P	**P**	**17 20 35.4**	**-1.0**
	comp=Z,20nm,0.9s						
RPN	**Rapa Nui**	**59.01**	**105**	LR	LR	17 39 44.2	
	comp=Z,2µm,22.0s,baz=252,slow=29						
QSPA	**South Pole Qui**	**59.52**	**180**	P	**P**	**17 20 43.5**	**+2.8**
	comp=Z,43nm,1.0s,baz=38,slow=1.6,SNR=113						
QSPA				LR	LR	17 45 37.8	
	comp=Z,1µm,18.1s,baz=42,slow=35						
	comp=Z,43nm,1.0s						
LBMI	**Labuha**	**59.95**	**289**	P	**P**	**17 20 43.6**	**-0.7**
	comp=Z,72nm,1.6s						
MMRI	**Maumere**	**60.05**	**278**	P	**P**	**17 20 44.4**	**-0.6**
MMRI	**Maumere**	**60.05**	**278**	P	**P**	**17 20 44.0**	**-1.0**
	comp=Z,70nm,1.1s,comp=Z,2µmcomp=Z,2µm						
SANI	**Sanana**	**60.39**	**287**	P	**P**	**17 20 46.6**	**-0.7**
SANI	**Sanana**	**60.39**	**287**	P	**P**	**17 20 45.3**	**-2.0**
	comp=Z,69nm,1.5s,comp=Z,1µmcomp=Z,2µm						
GIRL	**Giralia**	**60.69**	**260**	P	**P**	**17 20 48.4**	**-0.8**
	baz=61,SNR=4.3						
BASI	**Baing, Sumba**	**60.69**	**275**	P	**P**	**17 20 48.3**	**-1.1**
	comp=Z,142nm,1.4s,comp=Z,2µmcomp=Z,2µm						
TNTI	**Ternate**	**60.87**	**290**	IAmb	IAmb	17 20 50.6	
	comp=Z,107nm,1.6s						
TNTI	**Ternate**	**60.87**	**290**	P	**P**	**17 20 50.2**	**-0.4**
	comp=Z,28nm,1.1s						
TNTI	**Ternate**	**60.87**	**290**	P	**P**	**17 20 49.3**	**-1.3**
	comp=Z,33nm,1.1s,comp=Z,890nm						
BSSI	**Bau Bau, Buton**	**62.81**	**279**	P	**P**	**17 21 01.7**	**-1.9**
	comp=Z,22nm,1.0s,comp=Z,860nm						
BKSI	**Bulukumba**	**63.55**	**280**	P	**P**	**17 21 06.4**	**-2.1**
	comp=Z,23nm,1.1s,comp=Z,765nmcomp=Z,2µm						
LUWI	**Luwuk**	**63.61**	**286**	P	**P**	**17 21 10.7**	**+1.8**
LUWI	**Luwuk**	**63.61**	**286**	P	**P**	**17 21 08.1**	**-0.8**
	comp=Z,68nm,1.2s,comp=Z,2µm						
PLAI	**Plampang**	**63.78**	**275**	P	**P**	**17 21 10.2**	**+0.1**
PLAI	**Plampang**	**63.78**	**275**	P	**P**	**17 21 09.1**	**-1.0**
	comp=Z,56nm,1.1s,comp=Z,1µmcomp=Z,2µm						
KAPI	**Kappang**	**64.02**	**280**	P	**P**	**17 21 10.1**	**-1.5**
	comp=Z,6.1nm,0.4s,baz=112,slow=3.3,SNR=26						
KAPI				LR	LR	17 49 37.2	
	comp=Z,2µm,18.4s,baz=136,slow=37						
	comp=Z,6.1nm,0.4s						
KAPI	**Kappang**	**64.02**	**280**	P	**P**	**17 21 10.1**	**-1.5**
KAPI				IAmb	IAmb	17 21 12.5	
	comp=Z,107nm,1.6s						
KAPI	**Kappang**	**64.02**	**280**	P	**P**	**17 21 11.8**	**+0.1**
	comp=Z,38nm,2.0s						
KAPI	**Kappang**	**64.02**	**280**	*c i*P	**P**	**17 21 10.4**	**-1.3**
KAPI				pmax	pmax		
	comp=Z,66nm,1.6s						
KAPI	**Kappang**	**64.02**	**280**	P	**P**	**17 21 15.6**	**+3.9**
KAPI				P	**P**	**17 21 15.6**	**+3.9**
SGSI	**Sangihe**	**64.06**	**292**	P	**P**	**17 21 10.2**	**-1.7**
SPSI	**Sidrap Palu**	**64.56**	**281**	P	**P**	**17 21 13.3**	**-1.8**
	comp=Z,22nm,1.2s,comp=Z,660nm						
TWSI	**Taliwang, Sumb**	**64.59**	**275**	P	**P**	**17 21 14.5**	**-0.9**
	comp=Z,38nm,1.6s,comp=Z,987nm						
MRSI	**Marisa**	**65.14**	**286**	P	**P**	**17 21 16.8**	**-2.2**
	comp=Z,16nm,1.2s,comp=Z,503nm						
DAV	**Davao City (W)**	**66.06**	**295**	LR	LR	17 46 48.2	
	comp=Z,290nm,21.7s,baz=124,slow=33						
DAV	**Davao City (W)**	**66.06**	**295**	P	**P**	**17 21 25.0**	**+0.2**
DNP	**Denpasar**	**66.06**	**274**	P	**P**	**17 21 24.2**	**-0.7**
SRBI	**Singaraja**	**66.35**	**275**	P	**P**	**17 21 25.9**	**-0.9**
	comp=Z,62nm,1.5s,comp=Z,2µm						
TOLI2	**Tolitoli**	**66.46**	**286**	IAmb	IAmb	17 21 26.9	
	comp=Z,105nm,1.9s						
TOLI2	**Tolitoli**	**66.46**	**286**	P	**P**	**17 21 28.8**	**+1.4**
MPSI	**Mapaga**	**66.76**	**285**	P	**P**	**17 21 27.2**	**-2.2**
	comp=Z,18nm,0.9s,comp=Z,823nmcomp=Z,2µm						
JAGI	**Jajag, Banyuwa**	**67.07**	**274**	IAMs_20	IAMs_20	17 50 32.9	
	comp=Z,2µm,20.0s						
JAGI	**Jajag, Banyuwa**	**67.07**	**274**	P	**P**	**17 21 29.9**	**-1.5**
JAGI	**Jajag, Banyuwa**	**67.07**	**274**	P	**P**	**17 21 29.0**	**-2.4**
	comp=Z,76nm,1.6s,comp=Z,1µm						
ABJI	**Asem Bagus**	**67.33**	**274**	P	**P**	**17 21 31.8**	**-1.2**
	comp=Z,49nm,1.3s						
GMJI	**Gumukmas**	**67.78**	**273**	P	**P**	**17 21 34.9**	**-0.9**
	comp=Z,68nm,1.6s						
BLJI	**Banyuglugur**	**67.91**	**274**	P	**P**	**17 21 35.7**	**-1.0**
	comp=Z,44nm,0.5s,comp=Z,1µm						
BBKI	**Banjar Baru**	**69.00**	**279**	P	**P**	**17 21 43.2**	**-0.3**
	comp=Z,60nm,1.7s,comp=Z,4µm						
JCJ	**Chichijima**	**69.07**	**322**	LR	LR	17 46 20.4	
	comp=Z,908nm,21.1s,baz=118,slow=31						
GRJI	**Gresik**	**69.28**	**274**	P	**P**	**17 21 44.5**	**-0.7**
	comp=Z,71nm,1.5s,comp=Z,1µm						
PWJI	**Pagerwojo**	**69.31**	**273**	P	**P**	**17 21 44.5**	**-0.9**
	comp=Z,39nm,1.2s						
BELA	**Belgrano 2**	**69.54**	**172**	P	**P**	**17 21 46.3**	**+0.5**
BELA				IAmb	IAmb	17 21 48.7	
	comp=Z,32nm,0.9s						
NGJI	**Ngawi**	**69.93**	**273**	P	**P**	**17 21 50.0**	**+0.8**
UGM	**Wanagama**	**70.47**	**272**	IAMs_20	IAMs_20	17 52 41.9	
	comp=Z,2µm,22.0s						
UGM	**Wanagama**	**70.47**	**272**	P	**P**	**17 21 55.5**	**+2.9**
UGM	**Wanagama**	**70.47**	**272**	P	**P**	**17 21 52.0**	**-0.6**
	comp=Z,101nm,1.2s						
MYLDM	**Lahad Datu**	**70.62**	**288**	P	**P**	**17 21 52.0**	**-1.5**
PMSA	**Palmer Station**	**71.93**	**156**	LR	LR	17 46 45.2	
	comp=Z,1µm,20.8s,baz=283,slow=30						
PMSA	**Palmer Station**	**71.93**	**156**	P	**P**	**17 22 00.5**	**-0.1**
PMSA				IAmb	IAmb	17 23 16.5	
	comp=Z,44nm,0.6s						
PBKI	**Pangkalan Bun**	**72.10**	**278**	P	**P**	**17 22 02.1**	**-0.3**
	comp=Z,62nm,0.9s,comp=Z,2µm						
KPJI	**Karang Pucung**	**72.13**	**272**	P	**P**	**17 22 01.7**	**-0.9**
	comp=Z,87nm,1.8s,comp=Z,2µm						
MAW	**Mawson**	**72.26**	**200**	P	**P**	**17 22 04.4**	**+1.9**
	comp=Z,23nm,0.8s,baz=132,slow=6.4,SNR=1.9						
MAW				LR	LR	17 52 35.5	
	comp=Z,1µm,20.9s,baz=118,slow=35						
	comp=Z,23nm,0.8s						
KKM	**Kota Kinabalu**	**72.98**	**288**	P	**P**	**17 22 06.2**	**-1.5**
KKM	**Kota Kinabalu**	**72.98**	**288**	P	**P**	**17 22 07.1**	**-0.7**
BBJI	**Bungbulang**	**73.17**	**271**	P	**P**	**17 22 08.6**	**-0.3**
XMI	**Christmas Isla**	**73.41**	**268**	P	**P**	**17 22 12.2**	**+2.0**
CNJI	**Cibinong**	**73.69**	**271**	P	**P**	**17 22 07.6**	**-4.2**
SBUM	**Sibu**	**74.34**	**282**	P	**P**	**17 22 14.0**	**-1.6**
SBUM				IAmb	IAmb	17 22 16.7	
	comp=Z,105nm,1.8s						
MG03	**Isla Dawson**	**75.06**	**144**	P	**P**	**17 22 18.4**	**-0.7**
MG03				IAmb	IAmb	17 22 36.6	
	comp=Z,56nm,1.0s						
MG05	**Puerto Natales**	**75.12**	**142**	P	**P**	**17 22 18.1**	**-1.5**
MG05				IAmb	IAmb	17 22 37.8	
	comp=Z,99nm,1.1s						
GO10	**Punta Arenas**	**75.12**	**143**	P	**P**	**17 22 19.6**	**0.0**
JHJ	**Hachijo jima 2**	**75.12**	**324**	LR	LR	17 51 41.2	
	comp=Z,440nm,19.3s,baz=115,slow=33						
SBJI	**Serang**	**75.14**	**272**	P	**P**	**17 22 18.3**	**-2.0**
	comp=Z,94nm,0.5s,comp=Z,5µm						
CGJI	**Cibinong**	**75.27**	**271**	P	**P**	**17 22 19.3**	**-1.7**
	comp=Z,36nm,0.9s,comp=Z,1µm						
GO09	**Cerro Castillo**	**75.41**	**141**	P	**P**	**17 22 18.8**	**-2.5**
KSM	**Kuching**	**75.44**	**281**	P	**P**	**17 22 20.0**	**-2.0**
KSM				IAmb	IAmb	17 22 22.6	
	comp=Z,108nm,1.7s						
KSM	**Kuching**	**75.44**	**281**	P	**P**	**17 22 22.2**	**+0.2**
	comp=Z,26nm,1.0s						
BLSI	**Bandar Lampung**	**76.28**	**272**	P	**P**	**17 22 24.5**	**-2.3**
KASI	**Kota Agung**	**76.84**	**271**	P	**P**	**17 22 30.2**	**+0.2**
	comp=Z,44nm,1.0s,comp=Z,992nm						
JOW	**Kunigami**	**77.08**	**312**	P	**P**	**17 22 30.4**	**-0.6**
	comp=Z,23nm,0.9s,baz=172,slow=5.3,SNR=2.3						
JOW				LR	LR	17 52 07.4	
	comp=Z,1µm,21.4s,baz=152,slow=32						
	comp=Z,23nm,0.9s						
JOW	**Kunigami**	**77.08**	**312**	P	**P**	**17 22 28.6**	**-2.3**
JOW				IAmb	IAmb	17 22 48.5	
	comp=Z,37nm,0.8s						
PPBI	**Pangkal Pinang**	**77.12**	**275**	P	**P**	**17 22 30.6**	**-1.0**
	comp=Z,20nm,0.7s,comp=Z,3µm						
JSG	**Sagara**	**77.16**	**324**	P	**P**	**17 22 28.9**	**-2.3**
LWLI	**Liwa**	**77.47**	**272**	P	**P**	**17 22 33.4**	**-0.3**
	comp=Z,117nm,0.8s,comp=Z,3µmcomp=Z,2µm						
TROLL	**Troll, Antarti**	**77.68**	**180**	P	**P**	**17 22 36.2**	**+2.3**
TROLL	**Troll, Antarti**	**77.68**	**180**	PcP	**PcP**	**17 22 43.6**	**-0.4**
SNAA	**Sanae**	**77.95**	**178**	P	**P**	**17 22 37.5**	**+2.1**
SNAA	**Sanae**	**77.95**	**178**	PcP	**PcP**	**17 22 45.9**	**+0.9**
SNAA	**Sanae**	**77.95**	**178**	LR	LR	17 55 46.3	
	comp=Z,892nm,19.1s,baz=195,slow=35						
SNAA	**Sanae**	**77.95**	**178**	P	**P**	**17 22 34.0**	**-1.4**
SNAA				IAmb	IAmb	17 23 03.5	
	comp=Z,51nm,1.1s						
SNAA				IAMs_20	IAMs_20	17 56 40.7	
	comp=Z,1µm,19.0s						
SNAA	**Sanae**	**77.95**	**178**	*i* P	**P**	**17 22 35.5**	**+0.2**
VNA3	**Neumayer Olymp**	**78.08**	**176**	P	**P**	**17 22 37.7**	**+1.7**
VNA3	**Neumayer Olymp**	**78.08**	**176**	PcP	**PcP**	**17 22 46.4**	**+0.9**
INU	**Inuyama**	**78.29**	**324**	P	**P**	**17 22 35.8**	**-1.7**
INU	**Inuyama**	**78.29**	**324**	P	**P**	**17 22 37.9**	**+0.4**
JGF	**Kuroka**	**78.31**	**324**	P	**P**	**17 22 35.9**	**-1.8**
JGF				IAmb	IAmb	17 22 54.5	
	comp=Z,104nm,1.7s						
JGF	**Kuroka**	**78.31**	**324**	P	**P**	**17 22 38.4**	**+0.7**
JMM	**Marumori**	**78.44**	**328**	P	**P**	**17 22 36.8**	**-1.5**
VNA2	**Neumayer--Watz**	**78.52**	**177**	P	**P**	**17 22 40.6**	**+2.2**
	baz=177,slow=4.0						
VNA2	**Neumayer--Watz**	**78.52**	**177**	PcP	**PcP**	**17 22 50.0**	**+2.5**
	baz=177,slow=4.0						
MJAR	**Matsushiro Arr**	**78.62**	**325**	P	**P**	**17 22 38.5**	**-0.9**
	comp=Z,9.0nm,1.1s,baz=164,slow=5.4,SNR=12						
MJAR				LR	LR	17 52 03.3	
	comp=Z,526nm,21.5s,baz=148,slow=32						
	comp=Z,9.0nm,1.1s						
MAJO	**Matsushiro**	**78.62**	**325**	P	**P**	**17 22 37.6**	**-1.7**
MAJO	**Matsushiro**	**78.62**	**325**	P	**P**	**17 22 41.2**	**+1.8**
MAJO	**Matsushiro**	**78.62**	**325**	*i* P	**P**	**17 22 38.7**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,33nm,2.2s						
NVL	**N'lazarevskaya**	**78.70**	**183**	*e*P	**P**	**17 22 39.2**	**-0.2**
NVL				*e*S	**S**	**17 32 28.3**	**-6.0**
NVL				pmax	pmax		
	comp=Z,57nm,1.1s						
NVL				MLR	MLR		
	comp=Z,617nm,17.0s						
MNAI	**Manna**	**78.75**	**272**	IAMs_20	IAMs_20	17 56 37.3	
	comp=Z,1µm,20.0s						
VNA1	**Neumayer--Stat**	**78.75**	**176**	P	**P**	**17 22 42.2**	**+2.6**
AY01	**Puyuhuapi**	**78.80**	**135**	P	**P**	**17 22 38.4**	**-2.0**
AY01				IAmb	IAmb	17 22 53.1	
	comp=Z,58nm,1.2s						
JSU	**Suzuyama**	**79.04**	**317**	P	**P**	**17 22 40.0**	**-1.8**
JSU				IAmb	IAmb	17 22 54.0	
	comp=Z,54nm,1.1s						
JSU	**Suzuyama**	**79.04**	**317**	P	**P**	**17 22 42.4**	**+0.6**
TWGBT	**Beinan**	**79.28**	**304**	P	**P**	**17 22 45.6**	**+2.3**
JSD	**Sado**	**79.78**	**326**	P	**P**	**17 22 44.9**	**-0.7**
JSD				IAmb	IAmb	17 23 03.8	
	comp=Z,38nm,1.1s						
JSD	**Sado**	**79.78**	**326**	P	**P**	**17 22 46.6**	**+1.0**
TPUB	**Ta-pu**	**79.91**	**305**	P	**P**	**17 22 45.0**	**-1.7**
TPUB				IAmb	IAmb	17 23 04.0	
	comp=Z,60nm,0.8s						
TPUB	**Ta-pu**	**79.91**	**305**	P	**P**	**17 22 46.8**	**+0.1**
LL02	**Futaleuf**	**79.94**	**134**	P	**P**	**17 22 44.7**	**-2.0**
LL02				IAmb	IAmb	17 23 05.4	
	comp=Z,146nm,1.6s						
JNU	**Nakatsue**	**79.96**	**318**	P	**P**	**17 22 46.3**	**-0.5**
	comp=Z,29nm,1.2s,baz=71,slow=3.9,SNR=6.2						
JNU				LR	LR	17 56 02.0	
	comp=Z,254nm,18.6s,baz=146,slow=34						
	comp=Z,29nm,1.2s						
JNU	**Nakatsue**	**79.96**	**318**	P	**P**	**17 22 45.1**	**-1.7**
JNU				IAmb	IAmb	17 23 13.5	
	comp=Z,50nm,1.2s						
JNU	**Nakatsue**	**79.96**	**318**	P	**P**	**17 22 48.3**	**+1.5**
MASI	**Maura Aman, Be**	**79.98**	**272**	P	**P**	**17 22 46.6**	**-0.8**
	comp=Z,72nm,0.8s,comp=Z,810nm						
SSLB	**Suanglung**	**79.99**	**305**	P	**P**	**17 22 45.6**	**-1.5**
SSLB				IAmb	IAmb	17 22 57.5	
	comp=Z,38nm,0.9s						
SSLB	**Suanglung**	**79.99**	**305**	P	**P**	**17 22 49.7**	**+2.6**
H03S2	**Juan Fernandez**	**80.04**	**123**	T	T	18 51 58.7	
	baz=238,slow=74,SNR=201						
H03S1	**Juan Fernandez**	**80.05**	**123**	T	T	18 51 56.4	
	baz=238,slow=74,SNR=190						
H03S3	**Juan Fernandez**	**80.05**	**123**	T	T	18 52 26.9	
	baz=238,slow=74,SNR=167						
JHS	**Saijyo**	**80.08**	**321**	P	**P**	**17 22 46.1**	**-1.3**
JHS				IAmb	IAmb	17 23 05.4	
	comp=Z,56nm,1.0s						
JHS	**Saijyo**	**80.08**	**321**	P	**P**	**17 22 49.4**	**+2.0**
H03N3	**Juan Fernandez**	**80.23**	**123**	T	T	18 52 17.4	
	baz=241,slow=72,SNR=46						
H03N2	**Juan Fernandez**	**80.23**	**123**	T	T	18 52 15.4	
	baz=241,slow=72,SNR=42						
H03N1	**Juan Fernandez**	**80.25**	**123**	T	T	18 52 15.0	
	baz=241,slow=72,SNR=58						
JTM	**Tenmabayashi**	**80.69**	**329**	P	**P**	**17 22 49.1**	**-1.3**
JTM				IAmb	IAmb	17 23 07.7	
	comp=Z,61nm,0.9s						
MYKOM	**Kota Tinggi**	**81.10**	**277**	P	**P**	**17 22 51.9**	**-1.5**
MYKOM				IAMs_20	IAMs_20	18 04 27.9	
	comp=Z,1µm,18.0s						
KIWB	**Kanaga Island**	**82.09**	**0**	P	**P**	**17 22 57.2**	**-0.4**
PLCA	**Paso Flores**	**82.09**	**133**	P	**P**	**17 23 00.6**	**+2.2**
	comp=Z,8.7nm,1.0s,baz=265,slow=3.9,SNR=6.8						
PLCA				LR	LR	17 50 55.5	
	comp=Z,1µm,21.4s,baz=252,slow=29						
	comp=Z,8.7nm,1.0s						
PLCA	**Paso Flores**	**82.09**	**133**	P	**P**	**17 22 56.2**	**-2.1**
PLCA				IAmb	IAmb	17 23 17.1	
	comp=Z,181nm,1.9s						
ADK	**Adak**	**82.13**	**1**	P	**P**	**17 22 57.4**	**-0.3**
ADK				IAMs_20	IAMs_20	17 53 03.7	
	comp=Z,2µm,20.0s						
ADK	**Adak**	**82.13**	**1**	P	**P**	**17 23 00.2**	**+2.5**
ADK	**Adak**	**82.13**	**1**	P	**P**	**17 22 57.4**	**-0.3**
ADK				pmax	pmax		
	comp=Z,152nm,0.4s						
ADK				MLR	MLR		
	comp=Z,2µm,20.0s						
GO06	**Curarrehue**	**82.14**	**131**	P	**P**	**17 22 56.4**	**-2.2**
GO06				IAmb	IAmb	17 23 17.1	
	comp=Z,79nm,1.6s						
EFI	**East Falkland**	**82.42**	**147**	P	**P**	**17 22 58.6**	**-1.0**
EFI	**East Falkland**	**82.42**	**147**	*i* P	**P**	**17 22 58.2**	**-1.4**
EFI				pmax	pmax		
	comp=Z,31nm,0.7s						
DLV	**T Lat**	**82.58**	**288**	P	**P**	**17 23 01.7**	**+0.4**
	comp=Z,71nm,1.0s						
PDSI	**Padang**	**82.63**	**273**	P	**P**	**17 22 59.9**	**-1.6**
BKNI	**Bangkinang**	**82.76**	**275**	P	**P**	**17 23 01.9**	**-0.2**
JKA	**Kamikawa-asahi**	**82.79**	**332**	P	**P**	**17 23 00.1**	**-1.4**
JKA				IAmb	IAmb	17 23 15.4	
	comp=Z,34nm,1.1s						
ASAJ	**Asahikawa**	**82.79**	**332**	P	**P**	**17 23 01.6**	**+0.1**
	comp=Z,16nm,1.1s,baz=210,slow=5.3,SNR=13						
ASAJ				LR	LR	17 57 19.8	
	comp=Z,2µm,19.2s,baz=155,slow=34						
	comp=Z,16nm,1.1s						
SHEM	**Shemya Is, Ala**	**83.29**	**355**	LR	LR	17 57 25.3	
	comp=Z,1µm,18.9s,baz=142,slow=34						
CLES	**Cleveland East**	**83.33**	**5**	P	**P**	**17 23 02.8**	**-1.2**
CLES				IAmb	IAmb	17 23 28.6	
	comp=Z,840nm,1.4s						
NIKH	**Nikolski High**	**83.56**	**5**	P	**P**	**17 23 04.4**	**-0.8**
NIKH	**Nikolski High**	**83.56**	**5**	P	**P**	**17 23 06.2**	**+1.0**
NIKH	**Nikolski High**	**83.56**	**5**	P	**P**	**17 23 06.4**	**+1.3**
	baz=188						
SNCC	**San Nicolas Is**	**83.90**	**46**	P	**P**	**17 23 08.3**	**+0.9**
	baz=227						
TJN	**Taejon**	**84.30**	**318**	P	**P**	**17 23 08.3**	**-1.1**
TJN	**Taejon**	**84.30**	**318**	P	**P**	**17 23 11.2**	**+1.8**
	comp=Z,120nm,0.9s						
TJN	**Taejon**	**84.30**	**318**	P	**P**	**17 23 08.3**	**-1.1**
TJN				pmax	pmax		
	comp=Z,188nm,1.2s						
LPIG	**La Paz**	**84.31**	**58**	LR	LR	17 55 56.8	
	comp=Z,1µm,18.1s,baz=226,slow=32						
SLBS	**Sierra La Lagu**	**84.33**	**58**	P	**P**	**17 23 08.1**	**-1.8**
SLBS				IAmb	IAmb	17 23 28.0	
	comp=Z,76nm,1.4s						
SLBS	**Sierra La Lagu**	**84.33**	**58**	IAMs_20	IAMs_20	17 56 03.6	
	comp=Z,1µm,19.0s						
SCZ2	**Santa Cruz Isl**	**84.34**	**45**	P	**P**	**17 23 10.6**	**+0.9**
	baz=227						
SSE	**Sheshan**	**84.53**	**311**	P	**P**	**17 23 09.2**	**-1.4**
SSE				S	**S**	**17 33 39.2**	**+3.8**
SSE				pmax	pmax		
	comp=Z,27nm,0.7s						
SSE				pmax	pmax		
	comp=Z,170nm,6.5s						
SSE				LR	LR		
	comp=Z,260nm,21.5s						
SSE				LR	LR		
	comp=Z,300nm,21.6s						
SBC	**Santa Barbara**	**84.59**	**45**	P	**P**	**17 23 12.8**	**+1.8**
	baz=227						
UNV	**Unalaska Valle**	**84.63**	**7**	P	**P**	**17 23 10.9**	**+0.3**
	baz=190						
CIS	**Catalina Islan**	**84.69**	**46**	P	**P**	**17 23 12.8**	**+1.3**
	baz=228						
KSRS	**Korea Array**	**84.74**	**319**	P	**P**	**17 23 10.8**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=141,slow=6.3,SNR=7.0						
KSRS				LR	LR	18 00 31.3	
	comp=Z,334nm,18.1s,baz=125,slow=35						
	comp=Z,1.4nm,0.7s						
KSAR	**Wonju Array Be**	**84.76**	**319**	P	**P**	**17 23 10.8**	**-0.9**
KSAR	**Wonju Array Be**	**84.76**	**319**	P	**P**	**17 23 10.8**	**-0.9**
KS19	**Wonju Array Si**	**84.81**	**319**	P	**P**	**17 23 10.2**	**-1.7**
PKM	**Mcpherson Peak**	**84.84**	**44**	P	**P**	**17 23 11.5**	**-0.9**
	baz=227						
IPM	**Ipoh**	**84.90**	**278**	P	**P**	**17 23 11.3**	**-1.7**
IPM				IAmb	IAmb	17 23 13.7	
	comp=Z,102nm,1.7s						
IPM				IAMs_20	IAMs_20	18 02 44.4	
	comp=Z,1µm,20.0s						
IPM	**Ipoh**	**84.90**	**278**	P	**P**	**17 23 13.9**	**+0.9**
	comp=Z,26nm,1.1s						
FMP	**Fort Macarthur**	**84.97**	**46**	P	**P**	**17 23 12.8**	**0.0**
	baz=228						
SMMC	**Simmler**	**85.02**	**44**	P	**P**	**17 23 14.2**	**+1.1**
	baz=227						
YSS	**Yuzh-Sakhalins**	**85.09**	**334**	P	**P**	**17 23 13.1**	**0.0**
YSS				IAmb	IAmb	17 23 25.0	
	comp=Z,43nm,0.9s						
YSS				IAMs_20	IAMs_20	17 56 48.9	
	comp=Z,2µm,20.0s						
YSS	**Yuzh-Sakhalins**	**85.09**	**334**	P	**P**	**17 23 14.2**	**+1.1**
	comp=Z,52nm,1.0s						
YSS	**Yuzh-Sakhalins**	**85.09**	**334**	*ce*P	**P**	**17 23 14.0**	**+0.9**
YSS				pmax	pmax		
	comp=Z,75nm,1.3s						
SAO	**San Andreas Ge**	**85.16**	**42**	IAMs_20	IAMs_20	17 54 23.0	
	comp=Z,2µm,20.0s						
109C	**Camp Elliot, M**	**85.17**	**47**	P	**P**	**17 23 14.9**	**+1.0**
	baz=229						
DECC	**Green Verdugo**	**85.31**	**46**	P	**P**	**17 23 15.0**	**+0.4**
	baz=228						
OSI	**Osito Audit: C**	**85.31**	**45**	P	**P**	**17 23 15.9**	**+1.3**
	baz=228						
MCCM	**Marconi Confer**	**85.32**	**40**	IAMs_20	IAMs_20	17 59 52.1	
	comp=Z,1µm,20.0s						
PASC	**Pasadena Art C**	**85.35**	**46**	IAMs_20	IAMs_20	18 00 20.1	
	comp=Z,1µm,18.0s						
QIZ	**Qiongzhong**	**85.42**	**295**	P	**P**	**17 23 16.3**	**+0.8**
QIZ				sP	**pwP**	**17 23 28.9**	**-0.3**
QIZ				S	**S**	**17 33 42.1**	**-2.8**
QIZ				sS	**sS**	**17 34 01.3**	**+2.5**
QIZ				SS	**SS**	**17 39 18.8**	**-2.1**
QIZ				pmax	pmax		
	comp=Z,390nm,11.4s						
QIZ				LR	LR		
	comp=Z,380nm,18.6s						
QIZ				LR	LR		
	comp=Z,240nm,18.6s						
QIZ				LR	LR		
	comp=Z,490nm,20.6s						
INCN	**Inchon**	**85.49**	**319**	P	**P**	**17 23 17.9**	**+2.5**
MURC	**Murrieta**	**85.58**	**47**	P	**P**	**17 23 17.0**	**+1.0**
	baz=229,SNR=6.0						
ARVC	**Arvin**	**85.59**	**45**	P	**P**	**17 23 17.5**	**+1.6**
	baz=228						
MONP2	**Monument Peak**	**85.61**	**48**	P	**P**	**17 23 18.0**	**+1.6**
	baz=229,SNR=8.6						
KULM	**Kulim**	**85.63**	**279**	P	**P**	**17 23 14.5**	**-2.2**
KULM				IAMs_20	IAMs_20	18 02 59.0	
	comp=Z,1µm,20.0s						
IKP	**In-Ko-Pah, Jac**	**85.65**	**48**	P	**P**	**17 23 18.4**	**+2.0**
	baz=229						
BFSC	**Mount Baldy Ra**	**85.72**	**46**	P	**P**	**17 23 17.9**	**+1.1**
	baz=228,SNR=6.6						
RPSI	**Rantau Prapat**	**85.78**	**276**	IAMs_20	IAMs_20	18 01 15.9	
	comp=Z,2µm,22.0s						
HOPS	**Hopland Field**	**85.81**	**39**	IAMs_20	IAMs_20	18 02 52.1	
	comp=Z,1µm,18.0s						
PET	**Petropavlovsk**	**85.81**	**346**	*e*P	P	17 23 21.8	+5.3
PET				*e*S	**S**	**17 33 55.6**	**+8.5**
PET				pmax	pmax		
	comp=Z,300nm,11.2s						
PET				pmax	pmax		
	comp=Z,70nm,1.4s						
PET				MLR	MLR		
	comp=Z,1µm,15.0s						

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PSI   Prapat           85.84 276    P        P        17 23 16.6 -1.2
VES   Vestal, Richgr   85.92  44    P        P        17 23 19.4 +1.9
      baz=227
EDW2  Edwards Air Fo   85.94  45    P        P        17 23 19.6 +1.9
      baz=228,SNR=12
FALS  False Pass       85.97   8    P        P        17 23 19.8 +2.5
      baz=192
SWSC  Sam W. Stewart   86.04  48    P        P        17 23 20.3 +2.1
      baz=230
PFO   Pinyon Flats O   86.06  47    LR       LR       17 54 41.7
      comp=Z,734nm,20.6s,baz=238,slow=31
PFO   Pinyon Flats O   86.06  47  i P        P        17 23 19.3 +0.9
PFO                                 pmax     pmax
      comp=Z,10.0nm,0.9s
PFO   Pinyon Flats O   86.06  47    P        P        17 23 20.4 +2.0
      baz=229,SNR=9.1
TEY   Ternei           86.06 329  eP         P        17 23 12.9 -5.0
TPFO  Pinon Flats      86.06  47    P        P        17 23 20.2 +1.7
      baz=229,SNR=7.7
VOG   Valley Oaks Go   86.07  43    P        P        17 23 19.4 +1.2
      baz=227
PEA0B Petropavlovsk-   86.10 345    P        P        17 23 17.0 -1.0
PEA0B Petropavlovsk-   86.10 345ceP          P        17 23 18.4 +0.4
PETK  Petropavlovsk-   86.10 345    P        P        17 23 17.7 -0.3
      comp=Z,23nm,0.9s,baz=152,slow=6.3,SNR=19
PETK                                LR       LR       17 55 11.1
      comp=Z,869nm,21.8s,baz=163,slow=31
      comp=Z,23nm,0.9s
PETK  Petropavlovsk-   86.10 345    P        P        17 23 16.8 -1.2
ISA   Isabella, Lake   86.17  44    P        P        17 23 21.3 +2.4
      baz=228,SNR=5.1
BBRC  Big Bear Solar   86.19  46    P        P        17 23 21.5 +2.3
      baz=229
GSI   Gunungsitoli     86.24 274    IAMs_20  IAMs_20  18 00 05.9
      comp=Z,1µm,22.0s
GSI   Gunungsitoli     86.24 274    P        P        17 23 21.0 +1.3
GSI   Gunungsitoli     86.24 274    P        P        17 23 20.0 +0.3
LRMC  Laurel Mtn Rad   86.53  45    P        P        17 23 22.3 +1.6
      baz=228,SNR=6.5
RRX   Edison Barstow   86.55  46    P        P        17 23 22.4 +1.7
      baz=229
BELC  Belle Mtn. Jos   86.60  47    P        P        17 23 23.3 +2.2
      baz=229,SNR=5.3
CMB   Columbia Colle   86.65  42    P        P        17 23 20.8 -0.4
CMB                                 IAmb     IAmb     17 23 38.4
      comp=Z,34nm,1.2s
CMB                                 IAMs_20  IAMs_20  17 52 26.4
      comp=Z,1µm,22.0s
CMB   Columbia Colle   86.65  42    P        P        17 23 20.8 -0.4
CMB                                 pmax     pmax
      comp=Z,34nm,1.2s
CMB                                 MLR      MLR
      comp=Z,1µm,22.0s
NJ2   Nanjing          86.66 310  eP         P        17 23 23.6 +2.3
NJ2                                 sP       pwP      17 23 33.5 -1.5
NJ2                                 sS       sS       17 34 07.8 -2.7
NJ2                                 pmax     pmax
      comp=Z,12nm,0.5s
NJ2                                 pmax     pmax
      comp=Z,400nm,4.4s
NJ2                                 LR       LR
      comp=Z,900nm,19.4s
NJ2                                 LR       LR
      comp=Z,440nm,20.8s
NJ2                                 LR       LR
      comp=Z,950nm,21.8s
BC3   Big Chuckawall   86.72  48    P        P        17 23 24.6 +2.9
      baz=230,SNR=15
GLA   Glamis           86.73  48    P        P        17 23 24.6 +2.9
      baz=230
VLA   Vladivostok      86.78 326c iP         P        17 23 23.4 +1.9
VLA                                 pmax     pmax
      comp=Z,19nm,1.3s
SDPT  Sand Point       86.84  10    P        P        17 23 21.8 +0.2
      baz=195
CWC   Cottonwood Cre   86.92  44    P        P        17 23 24.7 +2.0
      baz=228
HEC   Hector,Ludlow    86.93  46    P        P        17 23 24.7 +2.1
      baz=229,SNR=6.2
GSC   Goldstone, Bar   86.94  46    P        P        17 23 22.3 -0.4
GSC                                 IAmb     IAmb     17 23 40.6
      comp=Z,67nm,1.2s
GSC   Goldstone, Bar   86.94  46    P        P        17 23 22.3 -0.4
GSC                                 pmax     pmax
      comp=Z,67nm,1.3s
GSC   Goldstone, Bar   86.94  46    P        P        17 23 25.2 +2.5
      baz=229,SNR=15
S12K  Black Hills      86.97   9    P        P        17 23 23.3 +1.1
      baz=193
MPMC  Manual Prospec   87.03  45    P        P        17 23 23.6 +0.4
      baz=228,SNR=17
UGL   Uglegorsk        87.11 335  eP         P        17 23 24.2 +1.2
KCSI  Kotacane, Aceh   87.19 276    P        P        17 23 25.4 +1.0
IRM   Iron Mountain    87.24  47    P        P        17 23 27.1 +3.0
      baz=230,SNR=22
TIN   Tinemaha, Big    87.24  44    P        P        17 23 26.0 +1.9
      baz=228
GMRC  Granite Mounta   87.32  47    P        P        17 23 26.3 +1.7
      baz=230,SNR=9.3
214A  Organ Pipe Nat   87.36  50    P        P        17 23 26.7 +1.9
      baz=231
EMB   Emerald Bay      87.46  41    P        P        17 23 24.8 -0.5
EMB                                 IAmb     IAmb     17 23 41.8
      comp=Z,19nm,1.0s
USA0B Ussuriysk Arra   87.53 326c iP         P        17 23 25.7 +0.5
USRK  Ussuriysk Ar.    87.53 326    P        P        17 23 25.2  0.0
      comp=Z,15nm,1.1s,baz=130,slow=3.0,SNR=14
USRK                                LR       LR       17 56 31.8
      comp=Z,670nm,21.9s,baz=126,slow=32
      comp=Z,15nm,1.1s
TUQ   Turquoise Moun   87.58  46    P        P        17 23 28.0 +2.2
      baz=229,SNR=7.9
GWY   Greenwater Val   87.61  45    P        P        17 23 25.4 -0.6
GWY                                 IAmb     IAmb     17 23 43.5
      comp=Z,26nm,1.1s
SPIA  Saint Paul Isl   87.65   4    P        P        17 23 25.5 +0.1
SPIA  Saint Paul Isl   87.65   4    P        P        17 23 27.0 +1.6
SPIA  Saint Paul Isl   87.65   4    P        P        17 23 26.5 +1.2
      baz=186
SHOC  Shoshone, Teco   87.66  45    P        P        17 23 28.4 +2.4
      baz=229
FURC  Furnace Creek,   87.67  45    P        P        17 23 28.3 +2.3
      baz=229
LCH   Last Change Ra   87.71  44    P        P        17 23 25.1 -1.4
LCH                                 IAmb     IAmb     17 23 43.9
      comp=Z,57nm,1.6s
MPK   Martis Peak      87.72  41    P        P        17 23 25.4 -1.1
MPK                                 IAmb     IAmb     17 23 47.2
      comp=Z,40nm,1.1s
GRAC  Grapevine Rang   87.72  44    P        P        17 23 27.9 +1.5
      baz=228,SNR=5.9
LHV   Little Huntoon   87.89  43    P        P        17 23 26.1 -0.9
YBH   Yreka Blue Hor   87.95  38    LR       LR       17 55 10.3
      comp=Z,588nm,21.8s,baz=226,slow=30
YBH   Yreka Blue Hor   87.95  38    P        P        17 23 27.0 -0.4
YBH   Yreka Blue Hor   87.95  38    P        P        17 23 27.0 -0.4
YBH                                 pmax     pmax
      comp=Z,16nm,1.1s
YBH                                 MLR      MLR
      comp=Z,900nm,18.0s
YERR  Yerington        87.95  42    P        P        17 23 27.2 -0.4
YERR                                IAmb     IAmb     17 23 59.7
      comp=Z,29nm,1.2s
NEE2  Needles Airpor   87.97  47    P        P        17 23 29.2 +1.6
      baz=230
PDMCI Parker Dam,Lak   87.97  48    P        P        17 23 29.4 +1.9
      baz=230,SNR=9.8
CHGN  Chignik          88.07  11    P        P        17 23 28.0 +0.5
CHGN  Chignik          88.07  11    P        P        17 23 28.3 +0.9
      baz=196
NVAR  Mina Array Bea   88.12  42    P        P        17 23 28.4  0.0
      comp=Z,4.6nm,0.8s,baz=222,slow=8.2,SNR=32
NVAR                                PKKP     PKKPdf   17 41 10.1 +0.8
      comp=Z,0.1nm,0.3s,baz=357,slow=5.9,SNR=2.7
NVAR                                PKKPbc   PKKPbc   17 41 15.2 +1.2
      comp=Z,0.9nm,0.7s,baz=68,slow=3.2,SNR=5.7
NVAR                                PKPPKP   P'P'df   17 49 20.4 +2.6
      comp=Z,0.3nm,0.7s,baz=51,slow=12,SNR=2.2
NVAR                                LR       LR       17 56 31.2
      comp=Z,990nm,20.3s,baz=222,slow=31
      comp=Z,4.6nm,0.8s
NVAR  Mina Array Bea   88.12  42    P        P        17 23 27.7 -0.7
MZP   Montezuma Peak   88.18  44    P        P        17 23 27.3 -1.5
NV11  Mina Array Sit   88.21  43    P        P        17 23 28.5 -0.3
NV11                                IAmb     IAmb     17 23 46.1
      comp=Z,37nm,1.4s
SRIT  Nakonsritamara   88.22 281    P        P        17 23 31.6 +2.4
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      comp=Z,26nm,1.7s
PAHR  Pah Rah Range    88.36  41    P        P        17 23 29.0 -0.5
TPNV  Topopah Spring   88.36  45    P        P        17 23 30.2 +0.6
      baz=229,SNR=12
TYV   Tymovskoe        88.39 336  eP         P        17 23 30.0 +0.9
TYV                               eS         S        17 34 16.8 +4.7
TYV                                 pmax     pmax
      comp=Z,49nm,1.7s
TYV                                 pmax     pmax
      comp=Z,400nm,2.6s
TYV                                 smax     smax
      comp=N,500nm,9.4s
TYV                                 smax     smax
      comp=E,100nm,9.4s
HUMO  Hull Mountain    88.44  37    P        P        17 23 28.6 -1.1
HUMO                                IAmb     IAmb     17 23 47.6
      comp=Z,40nm,1.4s
SURA  Surathani        88.49 281    P        P        17 23 31.9 +1.4
L04D  Klamath Falls    88.51  38    P        P        17 23 28.5 -1.6
TPH   Tonopah          88.52  43    P        P        17 23 29.7 -0.6
TPH   Tonopah          88.52  43    P        P        17 23 29.7 -0.6
TPH                                 pmax     pmax
      comp=Z,164nm,1.2s
KVN   Kaiserville      88.66  42    P        P        17 23 29.8 -1.1
KVN   Kaiserville      88.66  42    P        P        17 23 29.8 -1.1
KVN                                 pmax     pmax
      comp=Z,19nm,1.1s
LHMI  Lhok Sumawe      88.77 277    IAMs_20  IAMs_20  18 06 02.0
      comp=Z,1µm,21.0s
WHN   Wuhan            88.77 307 ⇓P          P        17 23 32.4 +1.0
WHN                                 S        S        17 34 15.1 -1.5
WHN                                 LR       LR
      comp=Z,3µm,25.8s
CFA   Coronel Fontan   88.81 126    LR       LR       17 54 41.0
      comp=Z,1µm,21.3s,baz=252,slow=30
TUC   Tucson           88.93  51    P        P        17 23 32.7 +0.4
      baz=232
MDJ   Mudanjiang       89.00 325    P        P        17 23 32.0 -0.2
MDJ                                 SS       SS       17 40 14.4 +1.9
MDJ                                 pmax     pmax
      comp=Z,17nm,1.4s
MDJ                                 pmax     pmax
      comp=Z,570nm,5.2s
MDJ                                 LR       LR
      comp=Z,320nm,23.2s
MDJ                                 LR       LR
      comp=Z,360nm,22.2s
MDJ                                 LR       LR
      comp=Z,730nm,23.2s
MDJ   Mudanjiang       89.00 325    IAmb     IAmb     17 23 53.0
      comp=Z,15nm,0.8s
MDJ   Mudanjiang       89.00 325    P        P        17 23 33.5 +1.3
      comp=Z,22nm,0.9s
TRQA  Tornquist        89.02 135    P        P        17 23 31.4 -1.4
TRQA                                IAmb     IAmb     17 23 49.9
      comp=Z,60nm,1.4s
TRQA  Tornquist        89.02 135    P        P        17 23 31.4 -1.4
TRQA                                pmax     pmax
      comp=Z,60nm,1.5s
DL2   Dalian           89.35 317    P        P        17 23 34.1 +0.2
DL2                                 SKS      SKSac    17 34 00.0 -1.7
DL2                                 S        ScS      17 34 25.3 -1.1
DL2                                 SS       SS       17 40 14.2 -3.5
DL2                                 pmax     pmax
      comp=Z,23nm,1.0s
DL2                                 pmax     pmax
      comp=Z,220nm,5.9s
DL2                                 LR       LR
      comp=Z,550nm,20.1s
DL2                                 LR       LR
      comp=Z,350nm,21.8s
DL2                                 LR       LR
      comp=Z,850nm,28.4s
MOD   Modoc Plateau    89.36  39    P        P        17 23 33.1 -1.0
MOD                                 IAMs_20  IAMs_20  18 00 21.9
      comp=Z,1µm,19.0s
R16K  Pilot Point      89.42  11    P        P        17 23 33.2 -0.5
      baz=197
I04A  Tendick Farm,    89.56  36    P        P        17 23 34.8 -0.1
K05A  Summer Lake      89.61  38    P        P        17 23 34.5 -0.8
K05A                                IAmb     IAmb     17 23 52.8
      comp=Z,73nm,1.3s
R11A  Troy Canyon, C   89.67  44    P        P        17 23 34.8 -1.0
      baz=230
COR   Corvallis        89.67  35    IAMs_20  IAMs_20  17 54 09.2
      comp=Z,1µm,21.0s
R17K  Ugashik Creek    89.69  11    P        P        17 23 34.4 -0.6
      baz=198
J05D  Fort Rock, OR    89.82  37    P        P        17 23 34.9 -1.3
OHAK  Old Harbor       89.85  13    P        P        17 23 37.0 +1.2
      baz=201
UNM   Universidad Na   90.15  68    IAMs_20  IAMs_20  17 54 02.8
      comp=Z,1µm,22.0s
SNY   Shenyang         90.19 320 ⇓P          P        17 23 37.9 +0.2
SNY                                 pmax     pmax
      comp=Z,24nm,1.3s
SNY                                 LR       LR
      comp=Z,340nm,23.0s
SNY                                 LR       LR
      comp=Z,580nm,23.7s
SNY                                 LR       LR
      comp=Z,1µm,23.2s
NONG  Nongkai          90.22 291    P        P        17 23 39.4 +0.9
      comp=Z,104nm,1.0s
H04A  Detroit Lake     90.31  36    P        P        17 23 36.8 -1.6
H04A                                IAmb     IAmb     17 23 54.6
      comp=Z,23nm,0.8s
PINE  Pine Mountain    90.32  37    P        P        17 23 38.2 -0.4
PINE                                IAmb     IAmb     17 23 56.2
      comp=Z,53nm,1.1s
Q17K  Contact Creek    90.36  11    P        P        17 23 38.5 +0.2
      baz=198
TIA   Tai'an           90.38 313    P        P        17 23 39.3 +0.4
TIA                                 pP       sP       17 23 50.1 -0.2
TIA                                 sP       pwP      17 23 53.8 +1.2
TIA                                 SKS      SKSac    17 34 10.9 +2.9
TIA                                 pmax     pmax
      comp=Z,20nm,1.6s
TIA                                 pmax     pmax
      comp=Z,370nm,11.6s
TIA                                 LR       LR
      comp=Z,340nm,26.9s
TIA                                 LR       LR
      comp=Z,340nm,24.3s
TIA                                 LR       LR
      comp=Z,650nm,25.0s
WUAZ  Wupatki          90.50  48    P        P        17 23 40.3 +0.7
      baz=232
CN2   Changchun        90.53 323 ⇑P          P        17 23 39.1 -0.2
CN2                               eS         S        17 34 35.2 +2.8
CN2                                 pmax     pmax
      comp=Z,30nm,1.4s
CN2                                 pmax     pmax
      comp=Z,300nm,6.0s
CN2                                 LR       LR
      comp=Z,300nm,19.0s
CN2                                 LR       LR
      comp=Z,600nm,19.0s
CN2                                 LR       LR
      comp=Z,700nm,18.0s
GRNR  Gornyy           90.63 333⇑iP          P        17 23 40.6 +1.0
GRNR                              eS         S        17 34 40.4 +7.3
GRNR                                pmax     pmax
      comp=E,2.0nm,1.1s
GRNR                                pmax     pmax
      comp=N,3.0nm,1.2s
GRNR                                pmax     pmax
      comp=Z,10.0nm,1.2s
GRNR                                smax     smax
      comp=N,3.0nm,0.5s
P16K  Nushagak River   90.76  10    P        P        17 23 40.1 +0.1
      baz=197
SPR3  Spring Creek 3   90.84  44    P        P        17 23 40.4 -1.0
Q18K  Katmai Hardscr   90.88  12    P        P        17 23 41.3 +0.6
      baz=199
BNX   BinXian          90.89 325 ⇑P          P        17 23 40.3 -0.6
BNX                                 pP       pP       17 23 47.8 -1.6
BNX                                 sP       sP       17 23 51.4 -1.0
BNX                                 sS       sS       17 34 53.0 +3.4
BNX                                 pmax     pmax
      comp=N,23nm,1.5s
BNX                                 pmax     pmax
      comp=N,210nm,5.5s
BNX                                 LR       LR
      comp=N,270nm,15.7s
BNX                                 LR       LR
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      comp=N,280nm,20.6s
BNX                                 LR       LR
      comp=N,400nm,18.4s
121A  Cookes Peak, D   91.10  52    P        P        17 23 42.3 -0.2
      baz=234
P17K  Kvichak River    91.16  11    P        P        17 23 42.2 +0.3
      baz=198
O16K  Kokwok River B   91.29  10    P        P        17 23 42.5 +0.1
      baz=197
Q20K  Shuyak Island    91.32  13    P        P        17 23 42.4 -0.2
      baz=202
W18A  Petrified Fore   91.33  49    P        P        17 23 42.7 -0.8
      baz=233
Q19K  Cape Douglas,    91.38  12    P        P        17 23 43.4 +0.5
      baz=200
KLR   Kul'dur          91.40 330    P        P        17 23 43.1 -0.1
      comp=N,6.7nm,0.8s,baz=125,slow=3.8,SNR=24
KLR                                 LR       LR       18 03 00.4
      comp=N,809nm,19.1s,baz=142,slow=34
      comp=N,6.7nm,0.8s
KLR   Kul'dur          91.40 330ceP          P        17 23 43.7 +0.5
KLR                                 pmax     pmax
      comp=Z,41nm,1.6s
NLWA  Neilton Lookou   91.41  33    IAMs_20  IAMs_20  17 55 53.0
      comp=Z,1µm,19.0s
ELK   Elko             91.42  42    LR       LR       17 58 44.0
      comp=Z,811nm,20.0s,baz=242,slow=32
ELK   Elko             91.42  42    P        P        17 23 43.3 -0.6
ELK                                 IAMs_20  IAMs_20  18 02 56.8
      comp=Z,1µm,18.0s
ELK   Elko             91.42  42    P        P        17 23 43.3 -0.6
ELK                                 pmax     pmax
      comp=Z,12nm,1.1s
ELK                                 MLR      MLR
      comp=Z,1µm,18.0s
G06A  Carlson Farm,    91.48  36    IAmb     IAmb     17 24 00.8
      comp=Z,34nm,0.9s
EPT   El Paso          91.54  54    IAMs_20  IAMs_20  18 03 13.2
      comp=Z,1µm,18.0s
O17K  Koliganek Bris   91.61  10    P        P        17 23 44.0 +0.1
      baz=198
MVU   Marysvale        91.82  46    IAmb     IAmb     17 24 04.7
      comp=Z,47nm,1.2s
GYA   Guiyang          91.98 300⇓iP          P        17 23 47.1 +0.4
GYA                                 pP       pwP      17 23 59.2 -1.2
GYA                                 sP       sP       17 24 04.2 +6.1
GYA                                 PP       PP       17 27 33.2 +6.4
GYA                                 SKS      SKSac    17 34 19.8 +2.0
GYA                                 S        S        17 34 42.8 -3.9
GYA                                 pmax     pmax
      comp=Z,17nm,1.8s
GYA                                 pmax     pmax
      comp=Z,280nm,3.6s
GYA                                 LR       LR
      comp=Z,510nm,25.6s
ENH   Enshi            92.03 304    P        P        17 23 48.7 +2.0
N16K  Nishlik Lake     92.04   9    P        P        17 23 47.1 +1.2
      baz=196
TXAR  Lajitas Array    92.17  57    P        P        17 23 49.0 +1.6
      comp=Z,3.0nm,1.1s,baz=217,slow=6.1,SNR=19
TXAR                                LR       LR       17 58 39.6
      comp=Z,780nm,19.2s,baz=235,slow=31
      comp=Z,3.0nm,1.1s
MNTX  Cornudas Mount   92.28  54    P        P        17 23 47.9 +0.1
      baz=235
G08A  Pilot Rock       92.38  37    IAmb     IAmb     17 24 05.1
      comp=Z,30nm,1.1s
CNPM  China Poot       92.39  13    P        P        17 23 45.9 -1.7
LYN   LuoYang          92.42 309⇑iP          P        17 23 48.9 +0.6
LYN                                 pmax     pmax
      comp=Z,19nm,0.5s
LYN                                 pmax     pmax
      comp=Z,270nm,3.3s
LYN                                 LR       LR
      comp=Z,310nm,21.2s
LYN                                 LR       LR
      comp=Z,410nm,18.6s
LYN                                 LR       LR
      comp=Z,410nm,24.4s
HOM   Homer            92.44  13    P        P        17 23 48.0 +0.3
      baz=202
CMIG  Matias Romero    92.45  72    P        P        17 23 50.8 +1.9
      comp=Z,5.1nm,0.9s,baz=315,slow=5.2,SNR=4.5
CMIG                                LR       LR       17 57 12.8
      comp=Z,350nm,20.4s,baz=234,slow=30
      comp=Z,5.1nm,0.9s
O19K  Port Alsworth    92.46  11    IAmb     IAmb     17 24 15.6
      comp=Z,46nm,1.3s
O19K                                IAMs_20  IAMs_20  18 00 37.0
      comp=Z,1µm,21.0s
O19K  Port Alsworth    92.46  11    P        P        17 23 47.2 -0.6
      baz=200
ILSW  Iliamna Southw   92.46  12    IAmb     IAmb     17 23 58.2
      comp=Z,16nm,0.8s
DUG   Dugway, Tooele   92.51  44    IAMs_20  IAMs_20  17 59 13.5
      comp=Z,956nm,19.0s
DUG   Dugway, Tooele   92.51  44    P        P        17 23 49.0 +0.2
      baz=231
Y22D  IRIS PASSCAL I   92.58  52    P        P        17 23 46.9 -2.4
      baz=234
Y22F  Passcal Instru   92.58  52    P        P        17 23 46.9 -2.4
      baz=234
HNS   HongShan         92.64 312 ⇑P          P        17 23 49.8 +0.5
HNS                                 pP       sP       17 24 00.6 -0.1
HNS                                 SKS      SKSac    17 34 23.4 +2.8
HNS                                 S        S        17 34 46.7 -5.1
HNS                                 sS       sS       17 35 09.1 +3.1
HNS                                 pmax     pmax
      comp=Z,17nm,1.7s
HNS                                 pmax     pmax
      comp=Z,310nm,5.9s
HNS                                 LR       LR
      comp=Z,480nm,20.7s
HNS                                 LR       LR
      comp=Z,540nm,24.7s
HNS                                 LR       LR
      comp=Z,670nm,25.0s
O20K  Slope Mountain   92.65  12    P        P        17 23 48.3 -0.5
      baz=201
BRLK  Bradley Lake     92.68  13    IAMs_20  IAMs_20  18 00 56.6
      comp=Z,2µm,21.0s
BRSE  Bradley Lake S   92.69  13    P        P        17 23 48.5 -0.5
      baz=203
MFID  Camas Ranch      92.82  40    P        P        17 23 48.6 -1.5
MFID                                IAmb     IAmb     17 24 07.1
      comp=Z,18nm,0.9s
BMO   Blue Mountains   92.96  38    IAMs_20  IAMs_20  18 02 41.2
      comp=Z,851nm,18.0s
NNA   Nana             93.00 106    LR       LR       17 56 03.7
      comp=Z,969nm,21.9s,baz=241,slow=29
N19K  Bonanza Creek    93.01  11    IAMs_20  IAMs_20  18 01 03.7
      comp=Z,1µm,21.0s
N19K  Bonanza Creek    93.01  11    P        P        17 23 51.1 +0.6
      baz=200
BBB   Bella Bella      93.09  28    LR       LR       18 02 24.9
      comp=Z,709nm,18.0s,baz=228,slow=33
SEW   Seward           93.28  14    P        P        17 23 53.0 +1.4
      baz=204
BJT   Baijiatuau       93.32 315    P        P        17 23 52.9 +0.5
BJI   Beijing          93.33 315    P        P        17 23 53.0 +0.6
BJI                                 pmax     pmax
      comp=Z,120nm,6.5s
BJI                                 LR       LR
      comp=Z,350nm,19.1s
BJI                                 LR       LR
      comp=Z,280nm,21.8s
BJI                                 LR       LR
      comp=Z,490nm,22.2s
Q23K  Middleton Isla   93.34  15    P        P        17 23 52.6 +0.7
      baz=206
MVCO  Mesa Verde       93.38  48    P        P        17 23 53.1 +0.1
      baz=234
ANMO  Albuquerque      93.40  51    LR       LR       17 59 50.8
      comp=Z,411nm,18.3s,baz=330,slow=32
ANMO  Albuquerque      93.40  51    P        P        17 23 52.0 -1.1
ANMO                                IAmb     IAmb     17 24 10.6
      comp=Z,16nm,1.1s
ANMO  Albuquerque      93.40  51ceP          P        17 23 54.0 +0.9
ANMO                                pmax     pmax
      comp=Z,18nm,2.5s
ANMO  Albuquerque      93.40  51    P        P        17 23 54.3 +1.2
      baz=235
LVC   Limon Verde      93.50 119    LR       LR       17 57 18.0
      comp=Z,1µm,21.5s,baz=256,slow=30
CAPN  Captain Cook N   93.56  13    P        P        17 23 54.3 +1.4
      baz=203
O22K  Cooper Landing   93.57  13    IAMs_20  IAMs_20  18 01 23.6
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     comp=Z,1µm,22.0s
O22K Cooper Landing   93.57  13 P        P        17 23 54.6 +1.6
     baz=204
MA2  Magadan          93.58 344 P        P        17 23 51.6 -1.5
     comp=Z,4.9nm,0.8s,baz=158,slow=5.5,SNR=12
MA2                             LR       LR       18 00 42.3
     comp=Z,1µm,21.9s,baz=171,slow=32
     comp=Z,4.9nm,0.8s
MA2  Magadan          93.58 344 P        P        17 23 52.0 -1.0
MA2                             IAMs_20  IAMs_20  18 00 31.0
     comp=Z,1µm,22.0s
MA2  Magadan          93.58 344 P        P        17 23 56.0 +2.9
MA2  Magadan          93.58 344ceP       P        17 23 52.4 -0.7
MA2                             pmax     pmax
     comp=Z,26nm,1.7s
P23K Montague Islan   93.62  15 P        P        17 23 55.2 +2.0
     baz=206
HLID Hailey           93.70  41 P        P        17 23 56.1 +1.9
     baz=230
SPCR Spurr Chakacha   93.77  12 P        P        17 23 55.0 +1.0
     baz=202
PLID Pearl Lake       93.81  39 IAmb     IAmb     17 24 11.4
     comp=Z,16nm,0.9s
PLID                            IAMs_20  IAMs_20  18 02 40.8
     comp=Z,1µm,19.0s
CM31 Chiang Mai Arr   93.83 289 P        P        17 23 56.1 +0.9
CMAR Chiang Mai Arr   93.83 289 P        P        17 23 55.9 +0.6
     comp=Z,3.0nm,0.9s,baz=141,slow=2.8,SNR=12
CMAR                            PP       PP       17 27 41.0 -0.2
     comp=Z,0.6nm,0.3s,baz=145,slow=4.6,SNR=4.7
CMAR                            LR       LR       18 07 03.4
     comp=Z,163nm,20.4s,baz=125,slow=36
     comp=Z,3.0nm,0.9s
BSUT Blindstream Ca   93.95  45 P        P        17 23 54.5 -1.3
CHTO Chiang Mai       94.01 289 P        P        17 23 54.3 -1.7
CHTO Chiang Mai       94.01 289 P        P        17 23 54.3 -1.7
M19K Big River Lodg   94.06  11 IAMs_20  IAMs_20  18 01 37.3
     comp=Z,1µm,20.0s
M19K Big River Lodg   94.06  11 P        P        17 23 57.2 +2.0
     baz=200
HEH  HeiHe            94.08 328 eP       P        17 23 54.3 -1.2
HEH                             pP       pP       17 24 03.3 -0.7
HEH                             S        S        17 35 09.0 +5.1
HEH                             pmax     pmax
     comp=Z,9.0nm,1.5s
HEH                             pmax     pmax
     comp=Z,230nm,9.7s
HEH                             LR       LR
     comp=Z,650nm,19.9s
HEH                             LR       LR
     comp=Z,320nm,22.0s
HEH                             LR       LR
     comp=Z,1µm,22.8s
HWUT Hardware Ranch   94.12  43 IAMs_20  IAMs_20  18 00 33.2
     comp=Z,1µm,20.0s
RC01 Rabbit Creek A   94.13  13 P        P        17 23 56.4 +0.9
     baz=204
V35K Ketchikan        94.18  24 P        P        17 23 56.8 +0.9
     baz=218
PWL  Port Wells       94.20  14 IAMs_20  IAMs_20  18 01 17.2
     comp=Z,1µm,20.0s
PWL  Port Wells       94.20  14 P        P        17 23 57.6 +1.7
     baz=205
ATAH Atahualpa        94.23 101 LR       LR       17 56 44.7
     comp=Z,648nm,21.2s,baz=241,slow=29
M20K Styx River       94.25  11 IAMs_20  IAMs_20  18 01 55.3
     comp=Z,1µm,21.0s
M20K Styx River       94.25  11 P        P        17 23 57.4 +1.2
     baz=201
L19K White Mountain   94.25  10 IAmb     IAmb     17 24 25.1
     comp=Z,17nm,1.1s
L19K White Mountain   94.25  10 P        P        17 23 57.9 +1.8
     baz=199
KMI  Kunming          94.25 297 ⇓P       P        17 23 58.0 +0.7
KMI                             pP       sP       17 24 07.7 -1.0
KMI                             SKS      SKSac    17 34 28.3 -2.3
KMI                             S        S        17 35 04.9 -2.2
KMI                             sS       sS       17 35 21.7 +0.5
KMI                             pmax     pmax
     comp=Z,16nm,0.9s
KMI                             LR       LR
     comp=Z,480nm,18.3s
KMI                             LR       LR
     comp=Z,510nm,19.6s
KMI                             LR       LR
     comp=Z,580nm,20.3s
SUA  Susitna One      94.28  13 P        P        17 23 56.9 +0.5
     baz=203
U33K Whale Pass       94.28  23 P        P        17 23 57.5 +1.2
     baz=217
XAN  Xi'an            94.54 307 P        P        17 23 57.5 -0.7
XAN                             pP       sP       17 24 08.1 -1.5
XAN                             sP       pwP      17 24 14.2 +2.3
XAN                             SKS      SKSac    17 34 31.1 -0.2
XAN                             S        ScS      17 35 09.8 -0.1
XAN                             sS       sS       17 35 24.0 +1.1
XAN                             pmax     pmax
     comp=Z,8.0nm,1.5s
XAN                             pmax     pmax
     comp=Z,170nm,8.1s
XAN                             LR       LR
     comp=Z,190nm,13.0s
XAN                             LR       LR
     comp=Z,390nm,17.3s
XAN                             LR       LR
     comp=Z,600nm,17.9s
SKT  Skwentna         94.62  12 IAMs_20  IAMs_20  18 02 06.1
     comp=Z,1µm,20.0s
SKT  Skwentna         94.62  12 P        P        17 23 58.4 +0.6
     baz=202
M22K Willow           94.67  13 P        P        17 23 59.5 +1.6
     baz=203
KNK  Knik Glacier     94.68  14 IAMs_20  IAMs_20  18 01 44.8
     comp=Z,1µm,21.0s
KNK  Knik Glacier     94.68  14 P        P        17 23 58.7 +0.6
     baz=205
L20K Farewell, AK     94.68  11 P        P        17 23 58.5 +0.4
     baz=200
PMR  Palmer           94.71  13 P        P        17 23 58.2  0.0
     baz=204
S22A 4UR Ranch, Cre   94.77  49 P        P        17 23 59.0 -0.5
     baz=235
S31K Pelican          94.78  21 P        P        17 24 00.2 +1.7
     baz=215
TTA  Tatalina         94.78  10 P        P        17 24 00.7 +2.1
TTA  Tatalina         94.78  10 P        P        17 23 59.0 +0.4
     baz=198
WRAK Wrangell Islan   94.79  23 IAMs_20  IAMs_20  18 03 58.9
     comp=Z,941nm,20.0s
S32K Killisnoo        94.89  22 P        P        17 24 00.5 +1.4
     baz=216
SML  Sawmill          95.06  13 IAMs_20  IAMs_20  18 01 58.0
     comp=Z,966nm,20.0s
AHID Auburn Hatcher   95.10  43 IAMs_20  IAMs_20  17 58 13.2
     comp=Z,916nm,20.0s
M23K Glacier View     95.17  14 P        P        17 24 01.2 +0.8
     baz=206
CUT  Chulitna         95.24  12 P        P        17 24 01.9 +1.3
     baz=203
O20A White River Ci   95.26  46 P        P        17 24 02.2 +0.7
     baz=234
KLU  Klutina          95.28  15 IAMs_20  IAMs_20  18 02 39.8
     comp=Z,974nm,20.0s
KLU  Klutina          95.28  15 P        P        17 24 02.1 +1.1
     baz=207
PNL  Peninsula        95.29  18 P        P        17 24 01.8 +0.9
     baz=212
SCM  Sheep Creek Mo   95.29  14 IAMs_20  IAMs_20  18 02 14.0
     comp=Z,937nm,21.0s
SCM  Sheep Creek Mo   95.29  14 P        P        17 24 02.8 +1.8
     baz=206
R31K City Hall, Gus   95.30  21 P        P        17 24 03.0 +2.1
     baz=215
NEW  Newport          95.31  36 IAMs_20  IAMs_20  17 57 13.2
     comp=Z,1µm,21.0s
NEW  Newport          95.31  36 P        P        17 24 02.1 +0.8
     baz=229
ANM  Nome             95.32   5 P        P        17 24 03.0 +2.1
     baz=190
TGL  Tana Glacier     95.35  16 IAMs_20  IAMs_20  18 04 51.4
     comp=Z,1µm,19.0s
PPLA Purkeypile       95.35  11 P        P        17 24 04.5 +3.2
     baz=202
MSTX Muleshoe         95.37  54 P        P        17 24 03.6 +1.6
     baz=237
SNET Serv Nac Est T   95.42  77 IAMs_20  IAMs_20  17 56 36.1
     comp=Z,1µm,21.0s
BCPM Bancas Point     95.47  18 IAMs_20  IAMs_20  18 03 14.8
     comp=Z,1µm,20.0s
K20K Telida           95.48  10 P        P        17 24 03.5 +1.7
     baz=200
R32K Eaglecrest       95.56  21 P        P        17 24 02.6 +0.4
     baz=216
PBA  Port Blair       95.58 280 P        P        17 24 07.3 +4.0
JCT  Junction City    95.61  58 P        P        17 24 04.8 +1.7
     baz=238
REDW Red Top Meadow   95.61  42 IAmb     IAmb     17 24 20.1
     comp=Z,18nm,1.1s
SDCO Great Sand Dun   95.63  49 P        P        17 24 04.2 +0.8
     baz=235
FXWY Fox Creek        95.68  42 P        P        17 24 01.7 -1.7
N25K Chitina, Valde   95.68  15 IAMs_20  IAMs_20  18 01 38.3
     comp=Z,928nm,20.0s
N25K Chitina, Valde   95.68  15 P        P        17 24 03.6 +0.9
     baz=208
PZH  PanZhiHua        95.74 297 P        P        17 24 04.3 +0.4
PZH                             sP       pwP      17 24 18.0 +0.3
PZH                             SKS      SKSac    17 34 37.8 -0.5
PZH                             S        S        17 35 14.5 -5.2
PZH                             sS       sS       17 35 36.1 +2.2
PZH                             pmax     pmax
     comp=Z,10.0nm,0.6s
PZH                             pmax     pmax
     comp=Z,180nm,5.6s
PZH                             LR       LR
     comp=Z,1µm,19.8s
PZH                             LR       LR
     comp=Z,810nm,20.6s
PZH                             LR       LR
     comp=Z,2µm,19.8s
M24K Tolsona, Glenn   95.78  14 P        P        17 24 05.5 +2.3
     baz=207
DLMT Dillon           95.84  40 IAmb     IAmb     17 24 21.1
     comp=Z,16nm,1.2s
DLMT                            IAMs_20  IAMs_20  18 01 35.7
     comp=Z,907nm,20.0s
MCARA McCarthy VSAT   95.85  16 P        P        17 24 06.0 +2.6
     baz=209
CAST Castle Rocks     95.86  11 P        P        17 24 04.9 +1.5
     baz=202
LOGN Logan Glacier    95.86  17 IAMs_20  IAMs_20  18 04 57.0
     comp=Z,1µm,19.0s
BARN Barnard Glacie   95.90  17 IAMs_20  IAMs_20  18 04 09.0
     comp=Z,1µm,18.0s
CTGM Chitina Glacie   95.90  17 IAMs_20  IAMs_20  18 04 59.0
     comp=Z,932nm,20.0s
WAT1 Susitna Watana   95.95  13 P        P        17 24 05.1 +1.2
     baz=205
T25A Trinidad         96.01  50 P        P        17 24 06.1 +1.1
     baz=236
BW06 Boulder Array    96.01  43 IAMs_20  IAMs_20  18 06 05.2
     comp=Z,973nm,19.0s
BW06 Boulder Array    96.01  43 P        P        17 24 05.2 +0.2
     baz=233
PDAR Pinedale Array   96.01  43 P        P        17 24 05.5 +0.6
     comp=Z,0.9nm,0.9s,baz=242,slow=3.2,SNR=5.1
PDAR                            PKKPbc   PKKPbc   17 40 53.4 -0.4
     comp=Z,1.7nm,0.6s,baz=83,slow=3.4,SNR=13
PDAR                            LR       LR       18 05 21.7
     comp=Z,468nm,18.1s,baz=237,slow=34
     comp=Z,0.9nm,0.9s
O28M Mount Upton      96.02  17 P        P        17 24 06.1 +1.5
     baz=212
MSO  Missoula         96.03  38 IAMs_20  IAMs_20  18 04 06.6
     comp=Z,1µm,19.0s
O29M Mount Kennedy    96.05  18 P        P        17 24 06.4 +1.9
     baz=213
FLWY Flagg Ranch      96.13  42 IAmb     IAmb     17 24 22.9
     comp=Z,17nm,1.1s
FLWY                            IAMs_20  IAMs_20  18 05 55.4
     comp=Z,1µm,18.0s
TNA  Tin City         96.13   4 IAmb     IAmb     17 24 20.4
     comp=Z,19nm,1.0s
TNA  Tin City         96.13   4 P        P        17 24 06.6 +2.1
     baz=188
TRF  Thorofare Moun   96.20  12 P        P        17 24 04.2 -1.0
TRF                             IAmb     IAmb     17 24 23.4
     comp=Z,14nm,1.0s
TRF  Thorofare Moun   96.20  12 P        P        17 24 06.4 +1.3
     baz=203
CHUM Lake Minchumin   96.25  11 P        P        17 24 06.0 +0.9
     baz=202
SEY  Seymchan         96.25 347 P        P        17 24 05.2  0.0
     comp=Z,5.3nm,1.0s,baz=144,slow=5.3,SNR=26
SEY                             PKKPbc   PKKPbc   17 40 54.1 +0.6
     comp=Z,1.5nm,0.2s,baz=328,slow=9.5,SNR=3.9
SEY                             LR       LR       18 03 26.9
     comp=Z,1µm,20.8s,baz=145,slow=33
     comp=Z,5.3nm,1.0s
SEY  Seymchan         96.25 347ceP       P        17 24 05.0 -0.2
SEY                             pmax     pmax
     comp=Z,15nm,1.1s
HARP HAARP            96.26  15 P        P        17 24 06.0 +0.7
     baz=208
SKAG Skagway          96.28  20 P        P        17 24 05.4  0.0
     baz=216
S34M Telegraph Cree   96.37  23 P        P        17 24 05.3 -0.5
     baz=219
H17A Grant Village    96.39  42 P        P        17 24 06.2 -0.4
     baz=233
GCSA Galena City Sc   96.39   9 P        P        17 24 07.8 +2.0
     baz=198
RND  Reindeer         96.42  13 IAmb     IAmb     17 24 12.6
     comp=Z,22nm,1.5s
RND                             IAMs_20  IAMs_20  18 03 11.8
     comp=Z,1µm,20.0s
CD2  Chengdu          96.52 302 P        P        17 24 06.6 -0.7
CD2                             pmax     pmax
     comp=Z,10.0nm,0.5s
BOZ  Bozeman (W)      96.53  40 P        P        17 24 08.7 +1.6
     baz=232
ZEA  Zeya             96.60 331 eP       P        17 24 07.6 +0.6
ZEA                             e                 17 36 58.4
ZEA                             pmax     pmax
     comp=Z,10.0nm,1.1s
ZEA                             MLR      MLR
     comp=E,500nm,18.0s
HHC  Hu-ho-hao-te     96.64 314 eP       P        17 24 06.3 -1.4
HHC                             SKS      SKSac    17 34 40.6 -1.7
HHC                             S        S        17 35 26.9  0.0
HHC                             pmax     pmax
     comp=E,25nm,0.9s
HHC                             pmax     pmax
     comp=E,370nm,6.1s
HHC                             LR       LR
     comp=E,620nm,20.3s
HHC                             LR       LR
     comp=E,690nm,19.7s
HHC                             LR       LR
     comp=E,2µm,19.5s
BPAW Bear Paw Mtn.    96.68  11 IAMs_20  IAMs_20  18 03 31.5
     comp=Z,1µm,22.0s
PAX  Paxson           96.70  14 P        P        17 24 09.1 +1.8
     baz=207
MCK  McKinley         96.70  12 P        P        17 24 08.2 +1.0
     baz=204
ISCO Idaho Springs    96.72  48 IAMs_20  IAMs_20  17 57 19.1
     comp=Z,1µm,22.0s
ISCO Idaho Springs    96.72  48 P        P        17 24 10.1 +1.8
     baz=236
M26K Nabesna, AK      96.74  15 P        P        17 24 09.8 +2.2
     baz=210
YUK3 Moose Creek      96.81  17 P        P        17 24 09.4 +1.3
     baz=212
YUK4 Talbot Arm       96.91  18 P        P        17 24 08.4  0.0
     baz=213
M27K Edge Creek, AK   96.97  16 IAmb     IAmb     17 24 20.7
     comp=Z,11nm,1.1s
M27K Edge Creek, AK   96.97  16 P        P        17 24 09.8 +1.2
     baz=210
HIA  Hailar           97.10 324 IAMs_20  IAMs_20  18 06 21.2
     comp=Z,836nm,20.0s
N23A Red Feather La   97.13  46 P        P        17 24 09.0 -1.1
     baz=236
O30N Mendenhall       97.13  19 P        Pdif     17 24 12.1 +2.7
     baz=215
DLBC Dease Lake       97.15  23 LR       LR       18 03 59.8
     comp=Z,457nm,19.5s,baz=274,slow=33
DLBC Dease Lake       97.15  23 P        Pdif     17 24 10.4 +0.8
     baz=220
L26K Log Cabin Wild   97.21  15 IAMs_20  IAMs_20  18 03 30.7
     comp=Z,1µm,21.0s
BVCY Beaver Creek     97.26  16 P        Pdif     17 24 11.6 +1.7
     baz=211
TGUH Tegucigalpa,Un   97.26  78 IAMs_20  IAMs_20  17 57 20.7
     comp=Z,1µm,22.0s
JTS  Las Juntas de    97.38  82 LR       LR       17 57 58.6
     comp=Z,673nm,21.1s,baz=261,slow=29
K24K Donnelly Dome    97.38  14 P        Pdif     17 24 11.7 +1.3
     baz=207
435B Jarrell          97.39  59 IAMs_20  IAMs_20  18 04 24.6
     comp=Z,1µm,18.0s
BTO  Baotou           97.47 313 eP       P        17 24 10.7 -0.8
BTO                             sP       sP       17 24 21.4 -1.5
BTO                             S        S        17 35 37.1 +3.1
BTO                             pmax     pmax
     comp=Z,24nm,0.5s
BTO                             pmax     pmax
     comp=Z,700nm,7.9s
BTO                             LR       LR
     comp=Z,1µm,21.5s
BTO                             LR       LR
     comp=Z,2µm,24.9s
BTO                             LR       LR
     comp=Z,3µm,25.9s
TNCH TengChong        97.49 295 ⇑P       P        17 24 11.8 -0.2
TNCH                            pP       pP       17 24 16.9 -3.5
TNCH                            pmax     pmax
     comp=Z,13nm,1.6s
TNCH                            pmax     pmax
     comp=Z,110nm,3.8s
TNCH                            LR       LR
     comp=Z,250nm,21.9s
TNCH                            LR       LR
     comp=Z,220nm,21.3s
TNCH                            LR       LR
     comp=Z,310nm,23.2s
I21K Tanana           97.52  11 IAMs_20  IAMs_20  18 04 15.7
     comp=Z,980nm,21.0s
I21K Tanana           97.52  11 P        Pdif     17 24 11.9 +1.0
     baz=202
RIDG Independent Ri   97.52  14 IAMs_20  IAMs_20  18 03 00.8
     comp=Z,1µm,20.0s
RIDG Independent Ri   97.52  14 P        Pdif     17 24 12.3 +1.2
     baz=208
WRH  Wood River Hil   97.53  12 IAmb     IAmb     17 24 33.4
     comp=Z,42nm,1.9s
WRH                             IAMs_20  IAMs_20  18 03 37.2
     comp=Z,1µm,20.0s
MLY  Manley           97.58  11 IAMs_20  IAMs_20  18 12 11.4
     comp=Z,850nm,19.0s
MLY  Manley           97.58  11 P        Pdif     17 24 11.9 +0.6
     baz=203
L27K Beaver Creek,    97.59  16 IAMs_20  IAMs_20  18 08 06.7
     comp=Z,869nm,19.0s
L27K Beaver Creek,    97.59  16 P        Pdif     17 24 11.7 +0.3
     baz=210
P33M Teslin, Yukon    97.64  21 P        Pdif     17 24 12.6 +0.8
     baz=218
LPAZ La Paz           97.71 114 P        Pdif     17 24 16.6 +2.8
     comp=Z,0.7nm,0.4s,baz=314,slow=1.6,SNR=2.4
LPAZ                            LR       LR       17 59 42.9
     comp=Z,494nm,21.1s,baz=215,slow=30
     comp=Z,0.7nm,0.4s
CCB  Clear Creek Bu   97.74  12 IAMs_20  IAMs_20  18 03 42.8
     comp=Z,1µm,20.0s
N31M Braeburn, Yuko   97.80  19 IAMs_20  IAMs_20  18 05 10.5
     comp=Z,1µm,20.0s
H21K Melozitna Rive   97.83  10 P        Pdif     17 24 13.5 +1.1
     baz=201
M29M Somme Creek      97.88  17 P        Pdif     17 24 14.3 +1.6
     baz=213
MND  Mandalay         97.91 291 P        Pdif     17 24 13.7  0.0
SCRK Sand Creek       97.91  14          P        17 24 11.7 -1.2
SCRK                            IAMs_20  IAMs_20  18 03 24.1
     comp=Z,1µm,21.0s
SCRK Sand Creek       97.91  14 P        Pdif     17 24 12.9  0.0
     baz=209
I23K Minto, Yukon-K   97.92  12 P        Pdif     17 24 13.0 +0.3
     baz=204
COLA College          97.94  12 P        Pdif     17 24 14.1 +1.3
ILAR Eielson Array    98.03  13 P        Pdif     17 24 13.6 +0.3
     comp=Z,1.2nm,1.0s,baz=214,slow=5.9,SNR=4.1
ILAR                            PP       PP       17 28 16.0 +3.1
     comp=Z,1.1nm,0.9s,baz=211,slow=8.0,SNR=4.2
ILAR                            PKiKP    PKiKP    17 28 48.3 +2.1
     comp=Z,0.6nm,0.8s,baz=230,slow=7.0,SNR=2.5
ILAR                            PKKPbc   PKKPbc   17 40 47.0 -1.7
     comp=Z,0.6nm,0.7s,baz=325,slow=2.3,SNR=5.7
ILAR                            LR       LR       18 01 00.4
     comp=Z,222nm,22.0s,baz=196,slow=31
     comp=Z,1.2nm,1.0s
POKR Poker Plat Res   98.24  12 IAMs_20  IAMs_20  18 04 18.9
     comp=Z,1µm,20.0s
H22K Ishtalitna Cre   98.27  11 P        Pdif     17 24 15.9 +1.6
     baz=203
K27K Chicken          98.37  15 IAMs_20  IAMs_20  18 07 03.3
     comp=Z,1µm,21.0s
K27K Chicken          98.37  15 P        Pdif     17 24 17.4 +2.7
     baz=210
M30M Minto, Yukon     98.42  18 P        Pdif     17 24 16.5 +1.4
     baz=215
J26L Joseph Creek     98.46  14 IAmb     IAmb     17 24 28.9
     comp=Z,7.9nm,0.7s
J26L                            IAMs_20  IAMs_20  18 04 01.6
     comp=Z,1µm,21.0s
J26L Joseph Creek     98.46  14 P        Pdif     17 24 16.7 +1.4
     baz=209
H23K Yukon River      98.51  11 IAMs_20  IAMs_20  18 10 19.0
     comp=Z,1µm,20.0s
L29M L29M             98.52  17 P        Pdif     17 24 18.3 +2.8
     baz=214
G21K Allakaket        98.53  10 P        Pdif     17 24 18.7 +3.2
     baz=201
M31M Drury Creek, Y   98.77  19 P        Pdif     17 24 19.4 +2.8
     baz=217
RDOG Red Dog Mine     98.96   6 IAMs_20  IAMs_20  18 10 22.7
     comp=Z,869nm,19.0s
RDOG Red Dog Mine     98.96   6 P        Pdif     17 24 20.3 +3.0
     baz=193
PRP  Porcupine Dome   98.96  13 P        Pdif     17 24 19.6 +2.1
     baz=208
EGMT Eagleton         99.01  39 IAMs_20  IAMs_20  18 06 12.4
     comp=Z,1µm,20.0s
BILL Bilibino         99.08 354 P        Pdif     17 24 16.3 -1.5
BILL                            IAmb     IAmb     17 24 20.0
     comp=Z,26nm,1.9s
BILL                            IAMs_20  IAMs_20  18 07 03.2
     comp=Z,1µm,20.0s
BILL Bilibino         99.08 354deP       Pdif     17 24 18.1 +0.3
BILL                           i *SP     pP       17 24 23.4 -2.8
BILL                           e                  17 28 19.1
BILL                           eS        SKSac    17 34 53.8 +0.6
BILL                           e                  17 35 59.5
BILL                            SS       SS       17 42 49.0  +14
BILL                           eSSS      SSS      17 46 32.7
BILL                            pmax     pmax
     comp=Z,11nm,1.5s
BILL                            MLR      MLR
     comp=Z,552nm,19.0s
FARO Faro, Yukon      99.09  19 P        Pdif     17 24 20.8 +2.7
     baz=218
LZH  Lanzhou          99.15 306 eP       Pdif     17 24 23.8 +4.6
LZH                             pP       pwP      17 24 32.7 -0.2
LZH                             S        S        17 35 42.2 -6.3
LZH                             pmax     pmax
     comp=Z,14nm,1.3s
LZH                             pmax     pmax
     comp=Z,150nm,4.9s
LZH                             LR       LR
     comp=Z,350nm,17.1s
LZH                             LR       LR
     comp=Z,540nm,19.4s
LZH                             LR       LR
     comp=Z,730nm,20.0s
EGAK Eagle            99.22  15 IAMs_20  IAMs_20  18 08 45.8
     comp=Z,906nm,19.0s
EGAK Eagle            99.22  15 P        Pdif     17 24 20.5 +2.0
     baz=211
G23K Bananza Creek    99.24  11 P        Pdif     17 24 21.3 +2.7
     baz=204
I26K Coal Creek Min   99.25  14 IAMs_20  IAMs_20  18 05 06.5
     comp=Z,1µm,20.0s
I26K Coal Creek Min   99.25  14 P        Pdif     17 24 20.4 +1.8
     baz=210
CPUP Villa Florida    99.56 128 PKKP     PKKPdf   17 40 46.4 +0.5
     comp=Z,1.3nm,0.6s,baz=154,slow=3.1,SNR=3.8
CPUP                            LR       LR       18 01 26.8
     comp=Z,794nm,21.8s,baz=244,slow=30
F22K John River       99.65  10 P        Pdif     17 24 23.1 +2.7
     baz=202
MMPY Sheldon Lake,   100.00  20 P        Pdif     17 24 24.6 +2.5
     baz=219
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RSSD	Black Hills	100.09	45	IAMs_20	IAMs_20	18 03 37.2	
	comp=Z,1µm,20.0s						
RSSD	Black Hills	100.09	45	P	Pdif	17 24 24.4	+1.2
	baz=237						
E22K	Anaktuvuk Pass	100.29	10	P	Pdif	17 24 25.5	+2.2
	baz=202						
F24K	Squaw Lake	100.33	11	P	Pdif	17 24 25.9	+2.4
	baz=206						
I29M	Ogilvie Camp,	100.36	16	IAMs_20	IAMs_20	18 05 05.0	
	comp=Z,1µm,21.0s						
E23K	Chandalar	100.55	10	P	Pdif	17 24 28.9	+4.4
	baz=204						
G26K	Porcupine Rive	100.56	13	P	Pdif	17 24 27.8	+3.4
	baz=209						
E24K	Your Creek	100.74	11	P	Pdif	17 24 27.9	+2.6
	baz=205						
F26K	Sheenjek River	101.15	12	P	Pdif	17 24 29.7	+2.6
	baz=209						
TUL1	Leonard	101.27	55	IAMs_20	IAMs_20	18 10 15.0	
	comp=Z,1µm,19.0s						
YAK	Yakutsk	101.57	337	IAMs_20	IAMs_20	18 02 44.6	
	comp=Z,939nm,22.0s						
YAK	Yakutsk	101.57	337	*e*P	Pdif	17 24 22.5	-6.5
YAK				*e*S	SKSac	17 35 01.9	-3.7
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,1.0nm,0.9s						
YAK				smax	smax		
	comp=N,83nm,2.5s						
YAK				smax	smax		
	comp=E,22nm,1.6s						
YAK				MLR	MLR		
	comp=Z,744nm,18.0s						
G30M	tAoh Zraii Nji	102.18	15	P	Pdif	17 24 32.2	+0.5
	baz=216						
C24K	Franklin Bluff	102.20	10	P	Pdif	17 24 32.4	+0.7
	baz=205						
D25K	Kavik River	102.20	11	P	Pdif	17 24 33.5	+1.7
	baz=207						
KSU1	Kansas State U	102.27	52	IAMs_20	IAMs_20	18 00 41.3	
	comp=Z,846nm,21.0s						
C27K	Jago River	102.92	12	P	Pdif	17 24 35.7	+0.8
	baz=210						
C26K	Camden Bay	102.97	11	P	Pdif	17 24 36.0	+0.9
	baz=208						
F31M	Tsiigehtchic	103.13	16	P	Pdif	17 24 36.0	+0.1
	baz=218						
SONM	Songino Array	103.54	318	Pdiff	Pdif	17 24 38.5	+0.1
	comp=Z,0.1nm,0.5s,baz=159,slow=0.5,SNR=1.1						
SONM				PKKPbc	PKKPbc	17 40 33.6	+1.4
	comp=Z,0.3nm,0.8s,baz=53,slow=0.7,SNR=3.0						
SONM				PKKP	PKKPdf	17 40 43.0	+1.7
	comp=Z,0.5nm,0.8s,baz=240,slow=2.9,SNR=3.7						
INK	Inuvik	103.86	15	Pdiff	Pdif	17 24 37.5	-1.6
	comp=Z,0.7nm,0.9s,baz=257,slow=9.4,SNR=2.1						
INK				PKiKP	PP	17 28 57.6	+0.8
	comp=Z,2.6nm,1.0s,baz=257,slow=7.0,SNR=4.6						
YKA	Yellowknife Ar	105.45	25	Pdiff	Pdif	17 24 45.2	-1.1
	comp=Z,0.1nm,0.4s,baz=243,slow=5.0,SNR=1.7						
YKA				PKiKP	PKiKP	17 28 59.8	+0.1
	comp=Z,0.5nm,0.7s,baz=243,slow=1.5,SNR=7.7						
YKA				PKKPbc	PKKPbc	17 40 23.9	-2.8
	comp=Z,1.2nm,0.8s,baz=44,slow=2.8,SNR=11						
SAML	Samuel	105.86	111	IAMs_20	IAMs_20	18 05 08.0	
	comp=Z,859nm,20.0s						
C36M	Paulatuk	106.94	17	IAMs_20	IAMs_20	18 09 39.1	
	comp=Z,1µm,20.0s						
MTDJ	Mount Denham	107.46	79	IAMs_20	IAMs_20	18 03 37.1	
	comp=Z,1µm,21.0s						
RAMN	Ramite	107.86	291	*e*P	PKiKP	17 29 05.7	+0.1
	comp=Z,14nm,0.8s						
ULM	Lac du Bonnet	107.95	42	PKKPbc	PKKPbc	17 40 17.9	-0.6
	comp=Z,2.1nm,0.7s,baz=243,slow=5.2,SNR=3.3						
JIRN	Jiri	108.49	292	*e*P	PKiKP	17 29 06.5	-0.4
TIXI	Tiksi	108.55	344	Pdiff	Pdif	17 24 58.9	-1.0
	comp=Z,0.5nm,0.3s,baz=90,slow=20,SNR=1.3						
TIXI				PKiKP	PKiKP	17 29 05.3	+0.1
	comp=Z,1.8nm,0.8s,baz=90,slow=20,SNR=4.7						
GUN	Gumba	108.85	292	*e*P	PKiKP	17 29 07.2	-0.4
SDV	Santo Domingo	109.01	91	IAMs_20	IAMs_20	18 05 54.3	
	comp=Z,891nm,22.0s						
PKI	Pulchoki	109.08	291	*e*P	PKiKP	17 29 07.3	-0.7
PKIN	Phulchoki	109.09	291	*e*P	PKiKP	17 29 07.4	-0.5
DANN	Dangsing	110.73	291	*e*P	PKiKP	17 29 10.6	-0.4
	comp=Z,8.5nm,0.6s						
BLA	Blacksburg	112.98	59	IAMs_20	IAMs_20	18 07 31.4	
	comp=Z,948nm,21.0s						
WMQ	Urumqi	113.65	308	*e*PKP	PKiKP	17 29 15.5	-0.3
DGZ	Jazzator, Alta	115.73	314	*i* PKIKP	PKiKP	17 29 20.3	+0.6
ZSN	Zaisan	116.69	311	*e*PKP	PKPdf	17 29 21.2	-0.3
	baz=311						
ZSN	Zaisan	116.69	311	*e*PKIKP	PKPdf	17 29 21.2	-0.3
BOSA	Boshof	117.23	203	PKP	PKiKP	17 29 24.7	+1.3
	comp=Z,4.4nm,1.0s,baz=159,slow=5.1,SNR=4.2						
BOSA				PKKPbc	PKKPbc	17 39 47.0	-0.1
	comp=Z,2.9nm,0.8s,baz=17,slow=7.6,SNR=1.5						
RES	Resolute Bay	117.32	17		PKPdf	17 29 20.3	-1.5
RES	Resolute Bay	117.32	17	PKIKP	PKPdf	17 29 20.3	-1.5
MK31	Makanchi Array	118.19	310		PKPdf	17 29 22.9	-1.5
MK31	Makanchi Array	118.19	310	*i* PKIKP	PKPdf	17 29 23.7	-0.7
MKAR	Makanchi Array	118.19	310	PKP	PKPdf	17 29 23.5	-0.9
	comp=Z,4.6nm,0.8s,baz=154,slow=0.4,SNR=38						
MKAR				PKKPbc	PKKPab	17 39 45.5	+1.1
	comp=Z,0.4nm,0.6s,baz=266,slow=5.3,SNR=4.6						
MKAR	Makanchi Array	118.19	310		PKPdf	17 29 22.6	-1.8
MAKZ	Makanchi	118.40	310		PKPdf	17 29 23.0	-1.7
MAKZ	Makanchi	118.40	310	⇓PKIKP	PKPdf	17 29 24.6	-0.2
ZAA0	Zalesovo Array	118.43	318		PKPdf	17 29 23.0	-1.6
ZALV	Zalesovo Beam	118.43	318	PKP	PKPdf	17 29 23.3	-1.2
	comp=Z,2.7nm,0.7s,baz=139,slow=1.1,SNR=14						
SHLS	Shalkode	119.14	305	*e*PKP	PKPdf	17 29 25.6	-0.9
	baz=305						
SHLS	Shalkode	119.14	305	*e*PKIKP	PKPdf	17 29 25.5	-0.9
UZB	Uzynbulak	119.45	305	*e*PKP	PKPdf	17 29 26.7	-0.5
	baz=305						
UZB	Uzynbulak	119.45	305	*e*PKIKP	PKPdf	17 29 26.6	-0.5
KPKS	Kokpek	119.77	305	*e*PKP	PKPdf	17 29 27.5	-0.1
	baz=305						
KPKS	Kokpek	119.77	305	*e*PKIKP	PKPdf	17 29 27.5	-0.1
SATY	Saty	119.86	305	*e*PKP	PKiKP	17 29 27.8	-0.1
	baz=305						
SATY	Saty	119.86	305	*e*PKIKP	PKiKP	17 29 27.8	-0.1
ZHN	Zhinishke	119.86	305	*e*PKP	PKPdf	17 29 27.6	-0.2
	baz=305						
ZHN	Zhinishke	119.86	305	*e*PKIKP	PKPdf	17 29 27.6	-0.2
NRIK	Noril'sk	119.97	336	PKP	PKPdf	17 29 26.2	-0.9
	comp=Z,2.1nm,0.4s,baz=122,slow=2.7,SNR=7.7						
NRIK	Noril'sk	119.97	336	*c i*PKIKP	PKPdf	17 29 26.6	-0.5
L61B	Northampton	120.29	56	P	PKPdf	17 29 27.7	-0.8
	baz=255						
SEM	Semipalatinsk	120.38	314	*e*PKP	PKPdf	17 29 27.8	-0.9
	baz=314						
SEM	Semipalatinsk	120.38	314	*e*PKIKP	PKPdf	17 29 27.8	-0.9
ARXS	Arharly	120.56	306	*e*PKIKP	PKPdf	17 29 28.5	-0.6
KSH	Kashi	120.67	300	PKP	PKiKP	17 29 30.5	+0.9
KSH				sPKP		17 29 37.9	
KSH				SKS	SKSdf	17 36 41.3	+1.8
KSH				LR	LR		
	comp=Z,500nm,15.8s						
KSH				LR	LR		
	comp=Z,310nm,12.7s						
KSH				LR	LR		
	comp=Z,430nm,14.8s						
MDOK	Medeo	120.84	305	*e*PKP	PKPdf	17 29 29.4	-0.4
	baz=305						
MDOK	Medeo	120.84	305	*e*PKIKP	PKPdf	17 29 29.4	-0.4
TNSS	Tian-Shan	120.89	305	*e*PKP	PKPdf	17 29 30.1	-0.1
	baz=305						
TNSS	Tian-Shan	120.89	305	*e*PKIKP	PKPdf	17 29 30.1	-0.1
AAA	Alma-Ata	120.95	305	*e*PKP	PKiKP	17 29 29.8	-0.2
	baz=305						
AAA	Alma-Ata	120.95	305	*e*PKIKP	PKiKP	17 29 29.8	-0.2
NIL	Nilore	121.05	293		PKPdf	17 29 28.4	-1.9
NIL	Nilore	121.05	293	PKIKP	PKPdf	17 29 28.4	-1.9
NIL				MLR	MLR		
	comp=Z,500nm,21.0s						
KURK	Kurchatov	121.46	314		PKPdf	17 29 29.2	-1.3
KURK	Kurchatov	121.46	314	*c i*PKIKP	PKPdf	17 29 29.7	-0.8
KURK				pmax	pmax		
	comp=Z,52nm,1.7s						
KURK	Kurchatov	121.46	314	P	PKPdf	17 29 28.2	-2.3
KURBB	Kurchatov Arra	121.50	314	PKP	PKPdf	17 29 29.0	-1.6
	comp=Z,10nm,0.7s,baz=106,slow=1.9,SNR=106						
KURBB				PKKPbc	PKKPbc	17 39 33.0	+1.5
	comp=Z,0.4nm,0.2s,baz=247,slow=4.8,SNR=3.0						
KUU	Kurty	121.52	305	*e*PKP	PKPdf	17 29 30.2	-0.7
	baz=306						
KUU	Kurty	121.52	305	*e*PKIKP	PKPdf	17 29 30.1	-0.7
TKM2	Tokmak 2	121.82	304	P	PKPdf	17 29 31.7	-0.1
	SNR=19						
KBK	Karagaybulak	122.22	304	P	PKiKP	17 29 32.7	+0.1
	SNR=13						
UCH	Uchtor	122.43	303	P	PKiKP	17 29 33.6	+0.2
	SNR=31						
CHMS	Chumysh	122.44	304	P	PKiKP	17 29 32.7	-0.2
	SNR=19						
AAK	Ala-Archa	122.54	304	P	PKiKP	17 29 33.4	+0.2
	SNR=11						
AAK	Ala-Archa	122.54	304	PKP	PKiKP	17 29 33.2	0.0
	comp=Z,7.6nm,0.7s,baz=150,slow=2.8,SNR=31						
AAK				PKKPbc	PKKPbc	17 39 29.3	+1.8
	comp=Z,0.8nm,0.7s,baz=241,slow=8.8,SNR=3.8						
AAK	Ala-Archa	122.54	304		PKPdf	17 29 31.3	-1.7
AAK	Ala-Archa	122.54	304	*c i*PKIKP	PKiKP	17 29 33.3	0.0
AAK				pmax	pmax		
	comp=Z,31nm,1.7s						
AAK	Ala-Archa	122.54	304	P	PKPdf	17 29 30.4	-2.7
SGDS	Sogindy	122.63	305	*e*PKP	PKPdf	17 29 33.0	-0.2
	baz=305						
SGDS	Sogindy	122.63	305	*e*PKIKP	PKPdf	17 29 32.9	-0.2
USP	Ospenovka	122.68	304	P	PKiKP	17 29 33.3	-0.1
	SNR=15						
AML	Almayashu	123.00	303	P	PKiKP	17 29 34.5	0.0
	SNR=29						
EKS2	Erkin-Say	123.06	304	P	PKiKP	17 29 34.4	+0.2
	SNR=17						
PKME	Peaks-Kenny Pk	123.32	53	P	PKiKP	17 29 34.4	-0.1
	baz=258						
BTLS	Baital	123.38	306	⇑*i*PKP	PKPdf	17 29 34.3	-0.1
	baz=306						
BTLS	Baital	123.38	306	*c i*PKIKP	PKPdf	17 29 34.3	-0.1
TULEG	Thule	123.86	15	*i* P	PKiKP	17 29 34.5	-0.1
KBL	Kabul	124.65	293	P	PKPdf	17 29 37.3	-0.1
BRZS	Berezniki	125.10	312	*e*PKP	PKPdf	17 29 37.0	-0.6
	baz=312						
BRZS	Berezniki	125.10	312	*e*PKIKP	PKPdf	17 29 36.9	-0.6
IUG	Iuzhnay	125.67	302	⇑*e*PKP	PKiKP	17 29 39.3	-0.2
	baz=302						
IUG	Iuzhnay	125.67	302	*ce*PKIKP	PKiKP	17 29 39.2	-0.2
SCHQ	Schefferville	126.13	42	PKP	PKPdf	17 29 38.3	-1.0
	comp=Z,6.4nm,0.9s,baz=339,slow=1.2,SNR=5.2						
SCHQ	Schefferville	126.13	42		PKPdf	17 29 37.9	-1.4
BRVK	Borovoye	126.88	316		PKPdf	17 29 39.8	-1.0
BRVK	Borovoye	126.88	316	*c i*PKIKP	PKPdf	17 29 40.5	-0.3
BRVK				pmax	pmax		
	comp=Z,62nm,1.7s						
BRVK	Borovoye	126.88	316	P	PKPdf	17 29 37.0	-3.8
KULLO	Kullorsuaq	127.19	17	*i* P	PKiKP	17 29 41.3	0.0
NEEM	North Greenlan	127.33	13	*i* P	PKiKP	17 29 42.2	+0.2
UPNV	Upernavik	128.12	19	*i* P	PKiKP	17 29 43.1	-0.1
NOR	Nord	128.37	4	*e*P	PKiKP	17 29 50.5	+6.9
JLN	Jalan Bani Buh	128.73	275	P	PKiKP	17 29 46.0	+0.1
WBK	Wadi Bani Khal	129.28	275	P	PKiKP	17 29 46.8	-0.3
DQM	DQM	129.48	271	P	PKiKP	17 29 47.5	0.0
WSAR	Wadi Sarin	129.80	276	P	PKPdf	17 29 47.2	-0.2
JMDO	Jabal Madar	129.93	275	P	PKPdf	17 29 47.8	+0.2
SMDO	Samad	130.23	275	P	PKPdf	17 29 48.1	-0.2
BIDO	Bidbid	130.33	276	P	PKPdf	17 29 48.0	-0.3
DMTO	DMTO	130.81	267	P	PKiKP	17 29 49.8	-0.4
BSY	Bisya	130.85	275	P	PKPdf	17 29 48.9	-0.4
ILULI	Ilulissat	130.99	22	*i* P	PKiKP	17 29 49.3	+0.3
HOQ	Hoqain	131.05	276	P	PKPdf	17 29 49.5	-0.2
RBK	Rabkut	131.35	267	P	PKPdf	17 29 50.8	+0.3
ARQ	Araqi	131.64	275	P	PKPdf	17 29 51.1	+0.2
	SNR=6.3						
WHFO	Wadi Hawf	131.91	267	P	PKiKP	17 29 54.1	+1.6
	SNR=5.1						
SOHO	SOHO	131.91	276	P	PKPdf	17 29 51.6	+0.3
SPA0	Spitsbergen Ar	131.92	356	*e*pPKPdf	pPKPdf	17 29 58.2	-0.1
SFJD	Kangerlussuaq	132.01	25	*i* P	PKiKP	17 29 52.2	+1.0
ABTO	Aybut	132.07	266	P	PKiKP	17 29 53.6	+0.7
SVE	Sverdlovsk	132.29	321	*e*PKIKP	PKiKP	17 29 51.5	-0.5
SVE				pmax	pmax		
	comp=Z,35nm,1.7s						
UOSS	Minazif	132.47	277	P	PKPdf	17 29 51.9	-0.4
HATD	Hatta, Dubai	132.49	277	P	PKPdf	17 29 51.8	-0.6
MDH	Madha	132.50	277	P	PKPdf	17 29 52.3	-0.1
ASHO	Ashiyiah	132.51	277	P	PKPdf	17 29 52.1	-0.4
ALNE	Al Ain	132.56	276	P	PKiKP	17 29 53.8	+0.2
	SNR=6.2						
UMZA	Um Al Zommool	132.59	274	P	PKiKP	17 29 53.5	-0.2
MASF	Masafi	132.65	278	P	PKPdf	17 29 52.3	-0.4
DAG	Danmarks Havn	132.69	6	*i* P	PKPdf	17 29 50.2	-1.0
BANOM	Banah	132.70	278	P	PKPdf	17 29 52.3	-0.5
SUMG	Summit	132.78	16	*i* P	PKiKP	17 29 53.0	-0.2
KIBK	Kibwezi	132.84	232	IAMs_20	IAMs_20	18 24 38.1	
	comp=Z,678nm,20.0s						
SHME	Shamm	132.88	278	P	PKiKP	17 29 54.0	-0.2
FAQ	Al Faqa, Dubai	132.93	276	P	PKiKP	17 29 54.2	-0.1
NAZ	Nazwa, Dubai	132.95	277	P	PKPdf	17 29 53.2	0.0
ASUD	Al Ashush, Dub	133.11	276	P	PKiKP	17 29 54.8	+0.1
UMQ	Umm Al-Quwin	133.12	278	P	PKiKP	17 29 54.0	-0.7
AJN	Ajban	133.38	276	P	PKPdf	17 29 53.1	-1.0
ARU	Arti	133.48	321	PKP	PKPdf	17 29 53.2	-0.1
	comp=Z,6.6nm,0.5s,baz=79,slow=1.0,SNR=18						
ARU	Arti	133.48	321		PKPdf	17 29 51.6	-1.6
ARU	Arti	133.48	321	*i* PKIKP	PKPdf	17 29 53.7	+0.5
ARU						17 32 22.0	
ARU				MLR	MLR		
	comp=Z,704nm,20.0s						
DY2G	Dye2	133.81	25	*i* P	PKPdf	17 29 53.6	-0.3
GEYT	Alibeck	133.99	295	PKP	PKPdf	17 29 55.0	+0.1
	comp=Z,9.2nm,0.8s,baz=185,slow=5.6,SNR=10						
GEYT				SKPbc	SKPbc	17 33 21.9	+0.1
	comp=Z,15nm,1.1s,baz=134,slow=4.3,SNR=11						
MZR	Muzera	134.14	273	P	PKPdf	17 29 56.0	+0.5
KMBO	Kilima Mbogo	134.26	233	SKPbc	SKPbc	17 33 23.8	-0.1
	comp=Z,0.1nm,0.5s,baz=21,slow=24,SNR=7.2						
KMBO	Kilima Mbogo	134.26	233	IAMs_20	IAMs_20	18 20 49.1	
	comp=Z,698nm,20.0s						
AKTO	Aktyubinsk	134.52	312	PKP	PKPdf	17 29 55.0	-0.4
	comp=Z,12nm,0.8s,baz=136,slow=2.2,SNR=18						
AKTO	Aktyubinsk	134.52	312	PKIKP	PKPdf	17 29 55.0	-0.4
ICESG	Greenland Ices	134.62	20	*i* P	PKiKP	17 29 56.4	-0.5
DBG	Daneborg	134.74	8	*i* P	PKPdf	17 29 55.0	-0.1
GHWR	Ruwais	134.99	274	P	PKiKP	17 29 58.2	-0.4
JRN	Qarnain Island	135.34	276	P	PKPdf	17 29 58.3	+0.6
KIRV	Kirov	137.70	325	*i* PKIKP	PKPdf	17 30 01.5	+0.5
KIRV				*i*		17 30 04.2	
LODK	Lodwar	138.82	235	P	PKiKP	17 30 06.9	+0.2
ARA0	ARCESS Array S	138.86	348	*e*PKPdf	PKPdf	17 30 00.9	-1.9
ARCES	ARCESS Array B	138.86	348	PKhKP	PKPpre	17 29 52.0	
	comp=Z,6.2nm,0.8s,baz=318,slow=5.2,SNR=1.8						
ARCES				PKP	PKPdf	17 30 01.8	-1.1
	comp=Z,8.1nm,0.8s,baz=26,slow=1.5,SNR=8.3						
ARCES				SKPbc	SKPbc	17 33 35.1	-0.4
	comp=Z,15nm,1.1s,baz=24,slow=12,SNR=4.4						
MBAR	Mbarara	138.93	226	IAMs_20	IAMs_20	18 36 46.1	
	comp=Z,600nm,19.0s						
MBAR	Mbarara	138.93	226	P	PKiKP	17 30 07.7	+0.6
KTK1	Kautokeino	139.72	349	*e*PKPdf	PKPdf	17 30 03.3	-1.1
ADZR	Andozero	139.75	336	*e*PKIKP	PKiKP	17 30 06.7	-0.3
ADZR				pmax	pmax		
	comp=Z,13nm,1.0s						
KLMR	Klimovskoe	141.11	332	*e*PKPdf	PKPdf	17 30 06.5	-0.7
KLMR				AMP		17 30 14.9	
	comp=Z,52nm,1.6s						
KLMR				*e*PP	PP	17 33 07.6	-1.4
KLMR				*e*SKiKP	SKiKP	17 33 46.5	+2.7
KLMR				LQ	LQ	18 21 56.0	
KLMR				LQ	LQ	18 21 56.0	
KLMR				LR	LR	18 23 54.6	
KLMR				AMP		18 32 36.2	
	comp=Z,949nm,21.0s						
KLMR	Klimovskoe	141.11	332	*e*PKIKP	PKPdf	17 30 06.4	-0.7
KLMR				*e*		17 33 07.6	
KLMR				pmax	pmax		
	comp=Z,52nm,1.6s						
KLMR				MLR	MLR		
	comp=Z,949nm,21.0s						
RAYN	Ar Rayn	141.19	270		PKPdf	17 30 05.5	-3.1
RAYN	Ar Rayn	141.19	270	IAMs_20	IAMs_20	18 27 03.3	
	comp=Z,607nm,21.0s						
RAYN	Ar Rayn	141.19	270	PKIKP	PKPdf	17 30 05.5	-3.1
RAYN				MLR	MLR		
	comp=Z,600nm,21.0s						
RAYN	Ar Rayn	141.19	270	P	PKPdf	17 30 08.9	+0.3
STEI	Steigen	141.87	352	*e*PKPdf	PKPdf	17 30 04.0	-4.3
FAUS	Fauske	142.39	352	*e*PKPdf	PKPdf	17 30 08.0	-1.3
KONS	Konsvik	143.49	353	*e*PKPdf	PKPdf	17 30 10.0	-1.2
GROC	Groznyy	143.51	302	*e*P	Pdif	17 27 33.7	-2.3
GROC				*e*		17 30 09.6	
GROC				pmax	pmax		
	comp=Z,296nm,1.4s						
MOR8	Moi Rana	143.65	352	*e*PKPdf	PKPbc	17 30 09.3	+0.2
VRH	Novokhopyorsk	144.45	317	*e*PKIKP	PKPbc	17 30 11.9	0.0
VRH				pmax	pmax		
	comp=Z,53nm,1.6s						
GNI	Garni	144.50	297		PKPab	17 30 11.5	-1.0
GNI	Garni	144.50	297	*i* PKIKP	PKPbc	17 30 13.0	+0.3
GNI				*i*		17 30 18.1	
GNI	Garni	144.50	297	P	PKPab	17 30 12.5	0.0
MOS	Moscow	144.71	326	*e*PKIKP	PKPab	17 30 10.6	-1.9
MOS				pmax	pmax		
	comp=Z,142nm,1.3s						
MOS				MLR	MLR		
	comp=Z,500nm,21.0s						
ZEI	Tsey	144.94	302	*i* PKIKP	PKPab	17 30 13.2	-0.9
ZEI				pmax	pmax		
	comp=Z,54nm,0.9s						
FIA1	FINESS Array S	145.46	340		PKPdf	17 30 13.8	-1.0
FINES	FINESS Array B	145.46	340	PKPbc	PKPdf	17 30 14.5	-0.3
	comp=Z,100nm,0.8s,baz=51,slow=4.1,SNR=374						
LPSR	Galich'ya Gora	145.51	320	*e*PKIKP	PKPdf	17 30 14.8	-0.3
LPSR				pmax	pmax		
	comp=Z,120nm,1.1s						
NSS	Namsos	145.52	353	*e*PKPab	PKPab	17 30 15.1	-0.2
KBZ	Khabaz	145.54	304	PKPbc	PKPbc	17 30 15.6	0.0
	comp=Z,19nm,0.9s,baz=81,slow=1.7,SNR=22						
KBZ	Khabaz	145.54	304	*i* PKIKP	PKPbc	17 30 15.5	-0.2
KBZ				*i*		17 30 20.2	
OBN	Obninsk	145.55	325	⇓P	PKPab	17 30 15.7	+0.1
OBN	Obninsk	145.55	325	*c i*PKIKP	PKPbc	17 30 15.1	-0.2
OBN				*i*		17 30 19.0	
OBN				*e*		17 30 23.4	
OBN						17 33 37.0	
OBN				SSS	SSS	17 57 48.0	
OBN				pmax	pmax		
	comp=Z,593nm,1.6s						
OBN				pmax	pmax		
	comp=Z,215nm,1.7s						
KIV	Kislovodsk	145.65	304	⇑P	PKPab	17 30 17.0	+0.5
KIV	Kislovodsk	145.65	304	IAMs_20	IAMs_20	18 41 05.4	
	comp=Z,529nm,20.0s						
KIV	Kislovodsk	145.65	304	*e*PKHKP	PKPpre	17 30 10.4	
KIV				*i*		17 30 15.5	
KIV				*e*		17 33 32.2	
KIV				*e*SS	SS	17 52 23.8	-5.2
KIV				pmax	pmax		
	comp=Z,35nm,1.1s						
KIV	Kislovodsk	145.65	304	P	PKPdf	17 30 13.8	-2.1
VORR	Voronezh	145.73	319	*e*PKP2	PKPab	17 30 16.4	0.0
VORR				pmax	pmax		
	comp=Z,279nm,1.5s						
VSR	Storozhevoye	145.94	318	*e*PKP2	PKPdf	17 30 16.1	+0.2
VSR				pmax	pmax		
	comp=Z,320nm,1.8s						
VORD	Divnogorie	145.96	317	*e*PKP2	PKPdf	17 30 16.1	+0.1
VORD				pmax	pmax		
	comp=Z,150nm,1.3s						
MEF	Metsahovi	146.94	340	*e*P	PKPbc	17 30 19.3	0.0
TBLU	Trondheim	146.95	354	*e*PKPab	PKPbc	17 30 18.9	-0.4
RAF	Rauma	146.99	343	*e*P	PKPbc	17 30 19.3	-0.1
VSU	Vasula	147.56	336	*e*P	PKPbc	17 30 21.1	0.0
KOPT	Kop Dagi	147.76	297		PKPdf	17 30 20.3	+0.6
SOC	Sochi	147.84	304	*c i*PKP2	PKPbc	17 30 22.0	-0.4
SOC				*e*		17 33 45.0	
SOC				*e*PPP	PPP	17 37 04.8	
SOC				*e*SS	SS	17 52 49.3	-4.1
SOC				*e*SSS	SSS	17 58 28.9	
SOC				pmax	pmax		
	comp=Z,51nm,1.3s						
SOC				MLR	MLR		
	comp=Z,375nm,20.0s						
MOL	Molde	147.84	356	*e*PKPab	PKPbc	17 30 22.1	+0.4
AAL	Aland	148.16	343	*e*P	PKPbc	17 30 22.3	-0.3
KTUT	Trabzon	148.21	299	⇓P	PKPbc	17 30 23.3	-0.2
DOMB	Dombas	148.25	354	*e*PKPbc	PKPbc	17 30 21.5	-1.4
AKN	Aaknes	148.27	356	*e*PKPab	PKPbc	17 30 23.6	+0.7
MTSE	Matsula	148.33	339	*e*P	PKiKP	17 30 24.1	-0.6
NC303	NORSAR Array S	148.80	352		PKPdf	17 30 21.8	+1.3
FOO	Floro	148.94	358	*e*PKPbc	PKPbc	17 30 23.8	-0.8
NB2	NORSAR Subarra	149.00	352	PKP	PKPbc	17 30 24.7	-0.2
	comp=Z,377nm,2.0s,baz=12,slow=2.6						
NB2	NORSAR Subarra	149.00	352	PKPab	PKPbc	17 30 24.7	-0.2
	slow=2.6						
NOA	NORSAR Array B	149.00	352	PKP	PKPdf	17 30 20.9	+0.1
	comp=Z,2.3nm,0.7s,baz=76,slow=14,SNR=11						
NOA				PKPbc	PKPbc	17 30 24.9	0.0
	comp=Z,14nm,0.8s,baz=14,slow=4.3,SNR=41						
UPP	Uppsala	149.00	345	*e*P	PKPbc	17 30 24.4	-0.5
ANN	Anapa	149.16	307	*i* PKP2	PKPbc	17 30 25.4	-0.3
ANN				pmax	pmax		
	comp=Z,108nm,0.9s						
NC602	NORSAR Array S	149.25	351	*e*PKPbc	PKPbc	17 30 25.1	-0.4
SUE	Sulen	149.49	358	*e*PKPbc	PKPbc	17 30 25.5	-0.5
SKAR	Skarslia	149.66	354	*e*PKPbc	PKPbc	17 30 26.7	+0.1
SLIT	Slitere, Latvi	149.68	339	*e*P	PKPbc	17 30 26.9	+0.3
ISAL	Salakas	149.92	333	*e*P	PKPbc	17 30 27.4	+0.2
MNK	Minsk	149.94	330	*i* PKiKP	PKiKP	17 30 27.8	-0.5
	comp=E,3.0nm,1.0s						
MNK				*i* PKiKP	PKiKP	17 30 27.8	-0.5
	comp=N,22nm,1.0s						
MNK				*i* PKiKP	PKiKP	17 30 27.8	-0.5
	comp=Z,108nm,1.0s,baz=48						
MNK				*i* SKP		17 33 36.2	
MNK				*i* PKS	PKSdf	17 33 41.0	-16
MNK				*i* PP	PP	17 33 51.1	-10
MNK				*i* PPP	PPP	17 37 06.8	
MNK				*i* SKS	SKSdf	17 37 57.9	+30
MNK				*i* SKKS	SKKSac	17 40 22.4	-28
MNK				*i* SS	SS	17 53 20.3	+4.7
MNK				*i* SSS	SSS	17 59 00.5	
MNK				*i* LQ	LQ	18 29 27.6	
MNK				*i* LR	LR	18 30 53.0	
MNK				*i* LRM	MLR	18 33 44.5	
	comp=N,559nm,20.7s						
MNK				*i* LRM	MLR	18 33 53.3	
	comp=E,99nm,20.5s						
MNK				*i* LRM	MLR	18 34 11.3	
	comp=Z,696nm,20.2s						
MNK	Minsk	149.94	330	*i* PKP2	PKiKP	17 30 27.7	-0.5
MNK				*i* SS	SS	17 53 20.2	+4.7
MNK				*i* SSS	SSS	17 59 00.5	
MNK				pmax	pmax		
	comp=E,3.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,108nm,1.0s						
MNK				pmax	pmax		
	comp=N,22nm,1.0s						
ASK	Askoy	150.05	357	*e*PKPbc	PKPbc	17 30 27.4	0.0
NACGM	Naroch	150.13	331	*e*PKP	PKiKP	17 30 28.1	-0.5
	comp=N,4µm,1.1s						
BER	Bergen	150.15	357	*e*PKPbc	PKPbc	17 30 27.8	+0.2
VIKU	Vikbolandet	150.44	345	*e*P	PKPbc	17 30 28.4	0.0
VSVD	Vaisvydziai	150.44	335	*e*P	PKiKP	17 30 29.4	+0.2
KONO	Kongsberg	150.54	353	⇑PKIKP	PKPbc	17 30 28.4	-0.2
KONO	Kongsberg	150.54	353	*e*PKPbc	PKPbc	17 30 28.6	0.0
ODD1	Odda	150.55	356	*e*PKPbc	PKiKP	17 30 29.0	-0.4
PABE	Paberze	150.79	335	*e*P	PKiKP	17 30 30.2	+0.2
BLS5	Blasjo	151.04	356	*e*PKPbc	PKiKP	17 30 30.5	+0.1
PBUR	Paburge	151.10	337	*e*P	PKiKP	17 30 30.9	+0.4
SIM	Simferopol'	151.37	309	*i* PKIKP	PKiKP	17 30 31.9	+0.4
SIM				pmax	pmax		
	comp=Z,124nm,0.9s						
DIKM	Dikmen	151.45	302	⇑P	PKiKP	17 30 32.8	+1.0
AKASG	Malin Array Be	151.69	323	PKP	PKPdf	17 30 24.4	-0.8
	comp=Z,1.5nm,0.8s,baz=40,slow=1.5,SNR=10						
AKASG				PKPbc	PKiKP	17 30 31.6	-0.3
	comp=Z,46nm,0.7s,baz=39,slow=2.8,SNR=70						
HOMB	Homborsund	152.02	353	*e*PKPbc	PKiKP	17 30 32.3	-0.1
SNART	Snartemo	152.07	355	*e*PKPbc	PKiKP	17 30 32.6	+0.2
BZK	Bozkurt	152.30	303		PKPbc	17 30 30.4	-2.8
OVD	Ostervraa, Den	152.74	351	*i* P	PKiKP	17 30 34.5	+0.6
DEL	Delary	152.91	346	*e*P	PKiKP	17 30 34.7	+0.4
BR131	Keskin Array S	153.03	298	P	PKPdf	17 30 26.3	-1.5
BRTR	Keskin Array B	153.03	298	PKPbc	PKPbc	17 30 34.5	-0.7
	comp=Z,9.9nm,0.7s,baz=138,slow=2.1,SNR=35						
BRTR	Keskin Array B	153.03	298		PKPdf	17 30 24.6	-3.3
BRTR				PKPbc	PKPbc	17 30 32.0	-3.2

BRTR	Keskin Array B	153.03	298	PKIKP	PKPbc	17 30 32.0	-3.2
GOET	G??ttrup	153.15	352	eP	PKiKP	17 30 37.8	+3.1
SORM	Soroca	153.58	319	⇑P	PKPbc	17 30 35.7	-0.1
SORM	Soroca	153.58	319	⇑PKIKP	PKPbc	17 30 35.7	-0.1
ANTO	Ankara	153.64	299	⇑P	PKPbc	17 30 36.3	-0.1
ANTO	Ankara	153.64	299	⇑PKIKP	PKPbc	17 30 36.3	-0.1
ANTO	Ankara	153.64	299	P	PKPdf	17 30 27.0	-1.6
BSD	Bornholm Skovb	153.93	344	eP	PKiKP	17 30 36.8	+0.3
BSD	Bornholm Skovb	153.93	344	i P	PKPbc	17 30 35.6	-0.8
BSD				IAMs_20	IAMs_20	18 33 52.4	
	comp=Z,887nm,28.2s						
LLD	Lille Linde	154.31	347	eP	PKiKP	17 30 38.3	+1.1
MDUB	Mudurnu	154.71	301		PKPbc	17 30 36.3	-2.4
TLCR		154.74	313	⇓P	PKiKP	17 30 39.1	+0.6
TLCR		154.74	313	⇓PKIKP	PKiKP	17 30 39.1	+0.6
LIC	Lamto	154.76	162	⇑iP	PKiKP	17 30 40.7	+1.2
	comp=Z,26nm,0.8s						
LVV	L'vov	154.85	326	ePKIKP	PKPdf	17 30 29.6	-0.3
KIC	Kosan Boka	154.97	163	⇓iP	PKPbc	17 30 42.6	+2.7
	comp=Z,3.7nm,0.3s						
TPGR	Topolog	155.14	312	⇓P	PKPdf	17 30 40.4	+10
TIC	Toumodi	155.16	162	⇑iP	PKPdf	17 30 39.7	+8.3
	comp=Z,19nm,0.3s						
CFR	Carcaliu	155.18	313	⇓P	PKPdf	17 30 40.2	+10
CFR	Carcaliu	155.18	313	⇓PKIKP	PKPdf	17 30 40.2	+10
DBIC	Dimbokro	155.23	162	PKPbc	PKPdf	17 30 41.7	+10
	comp=Z,5.7nm,0.8s,baz=169,slow=1.8,SNR=7.5						
BURAR	Bucovina Array	155.62	321	⇑P	PKPdf	17 30 42.0	+11
BURAR	Bucovina Array	155.62	321	⇑PKIKP	PKPdf	17 30 42.0	+11
VRI	Vrincioaia	155.71	316	⇓P	PKPdf	17 30 41.9	+11
VRI	Vrincioaia	155.71	316	⇓PKIKP	PKPdf	17 30 41.9	+11
PLOR	Plostina	155.77	316	⇑P	PKPdf	17 30 42.8	+12
PLOR	Plostina	155.77	316	⇑PKIKP	PKPdf	17 30 42.8	+11
BSEG	Bad Segeberg	155.99	349	ePKPdf	PKPdf	17 30 31.4	+0.2
	baz=29,slow=1.2						
BSEG				ePKPab	PKPab	17 30 58.9	+0.4
	baz=20,slow=4.4						
COVR	Voineasa-Covas	156.04	316	⇑P	PKPab	17 30 54.7	-4.4
HLG	Helgoland	156.10	352	ePKPab	PKPab	17 31 00.1	+1.2
	baz=20,slow=4.4						
MLR	Muntele Rosu	156.38	316	IAMs_20	IAMs_20	18 45 09.6	
	comp=Z,587nm,20.0s						
STHS	Stebnicka Huta	156.44	328	ePKP2	PKPab	17 31 00.5	-0.1
STHS	Stebnicka Huta	156.44	328	ePKP	PKPab	17 31 00.5	-0.1
RUE	Ruedersdorf	156.60	342	ePKPdf	PKPdf	17 30 32.4	+0.4
	baz=29,slow=1.2						
RUE				ePKPab	PKPab	17 31 00.9	-0.3
	baz=20,slow=4.4						
VOIR		156.94	316	⇑P	PKPab	17 30 48.6	-14
ARR	Arges	157.23	317	⇑P	PKPdf	17 30 34.2	+1.0
RETH	Rethem/Aller,	157.30	349	ePKPdf	PKPdf	17 30 33.3	+0.4
	baz=29,slow=1.2						
RETH				ePKPab	PKPab	17 31 04.1	0.0
	baz=20,slow=4.4						
FLTG	Flechtingen	157.34	346	ePKPdf	PKPdf	17 30 32.6	-0.4
	baz=29,slow=1.2						
FLTG				ePKPab	PKPab	17 31 03.8	-0.5
	baz=20,slow=4.4						
NRDL	Niedersach Rie	157.41	348	ePKPdf	PKPdf	17 30 33.6	+0.6
	baz=29,slow=1.2						
NRDL				ePKPab	PKPab	17 31 04.0	-0.5
	baz=20,slow=4.4						
OKC	Ostrava-Krasne	157.43	333	AMS	AMS	18 43 50.0	
	comp=Z,600nm,18.9s						
OSTC	Ostas	157.55	337	ePKPDF	PKPdf	17 30 34.4	+1.0
OSTC				AMS	AMS	18 43 00.0	
	comp=Z,1μm,22.4s						
OSTC	Ostas	157.55	337	ePKIKP	PKPdf	17 30 34.4	+1.0
OSTC				MLR	MLR		
	comp=Z,1μm,22.4s						
ASSE	Asse, Remlinge	157.64	347	ePKPdf	PKPdf	17 30 34.1	+0.8
	baz=29,slow=1.2						
ASSE				ePKPab	PKPab	17 31 05.7	+0.1
	baz=20,slow=4.4						
UPC	Upice	157.66	337	AMS	AMS	18 43 00.0	
	comp=Z,800nm,18.6s						
DPC	Dobruska-Polom	157.69	336	ePKPDF	PKPdf	17 30 34.4	+0.8
DPC				ePKPAB	PKPab	17 31 05.0	-1.0
DPC				AMS	AMS	18 43 40.0	
	comp=Z,800nm,20.5s						
DPC	Dobruska-Polom	157.69	336	ePKIKP	PKPdf	17 30 34.4	+0.8
DPC				e		17 31 05.0	
DPC				MLR	MLR		
	comp=Z,800nm,20.5s						
MORC	Moravsky Berou	157.72	334	ePKP	PKPdf	17 30 33.8	+0.1
KRLC	Kraliky	157.75	335	ePKPDF	PKPdf	17 30 34.4	+0.7
KRLC				ex	x	17 30 49.6	
KRLC				ePKPAB	PKPab	17 31 06.2	-0.1
KRLC				AMS	AMS	18 40 10.0	
	comp=Z,500nm,17.6s						
KRLC	Kraliky	157.75	335	ePKIKP	PKPdf	17 30 34.4	+0.7
KRLC				e		17 31 06.2	
KRLC				MLR	MLR		
	comp=Z,500nm,17.6s						
CLL	Collm	157.87	342	i PKPdf	PKPdf	17 30 34.1	+0.4
	comp=Z,28nm,1.8s						
CLL				ePKPdif	sPKPdf	17 30 45.0	-0.3
	comp=Z,32nm,1.9s						
CLL				i x	x	17 30 54.2	
	comp=Z,9.0nm,0.9s						
CLL				i PKPab	PKPab	17 31 06.2	-0.5
	comp=Z,57nm,1.3s						
CLL				ePP	PP	17 34 48.0	+2.2
CLL				ePPP	PPP	17 38 22.0	
CLL				ePPPP		17 40 54.0	
CLL				ePPPrev		17 43 30.0	
CLL				ePSKS		17 45 00.0	
CLL				ePPS	PPS	17 48 00.0	
CLL				ex	x	17 49 54.0	
CLL				ex	x	17 51 06.0	
CLL				eSS	SS	17 54 42.0	+0.7
CLL				ePSPS		17 56 18.0	
CLL				eSSS	SSS	18 00 54.0	
CLL				ex	x	18 03 06.0	
CLL				eSSSS		18 04 54.0	
CLL				AMS	AMS	18 40 00.0	
	comp=N,500nm,21.7s						
CLL				AMS	AMS	18 40 00.0	
	comp=E,300nm,20.7s						
CLL	Collm	157.87	342	i PKIKP	PKPdf	17 30 34.1	+0.4
CLL				e		17 30 45.0	
CLL				i		17 31 06.2	
CLL				pmax	pmax		
	comp=Z,28nm,1.8s						
CLL				pmax	pmax		
	comp=Z,32nm,1.9s						
CLL				pmax	pmax		
	comp=Z,57nm,1.3s						
CLL	Collm	157.87	342	ePKPdf	PKPdf	17 30 33.8	0.0
	baz=29,slow=1.2						
CLL				ePKPab	PKPab	17 31 06.4	-0.2
	baz=20,slow=4.4						
IBBN	Ibbenburen	157.96	351	ePKPdf	PKPdf	17 30 34.6	+0.8
	baz=29,slow=1.2						
IBBN				ePKPab	PKPab	17 31 07.3	+0.3
	baz=20,slow=4.4						
CLZ	Clausthal	157.98	347	ePKPdf	PKPdf	17 30 33.5	-0.4
	baz=29,slow=1.2						
CLZ				ePKPab	PKPab	17 31 07.5	+0.3
	baz=20,slow=4.4						
BRG	Berggiesshubel	158.00	340	Amp		17 30 36.7	
	comp=Z,30nm,1.8s						
BRG	Berggiesshubel	158.00	340	Amp		17 31 10.0	
	comp=Z,75nm,1.6s						
BRG	Berggiesshubel	158.00	340	ePKIKP	PKPdf	17 30 34.5	+0.6
BRG				pmax	pmax		
	comp=Z,30nm,1.8s						
BRG				pmax	pmax		
	comp=Z,20nm,1.3s						
BRG	Berggiesshubel	158.00	340	ePKPdf	PKPdf	17 30 33.3	-0.6
	baz=29,slow=1.2						
BRG				ePKPab	PKPab	17 31 07.3	0.0
	baz=20,slow=4.4						
BRG	Berggiesshubel	158.00	340	⇓ePKPf		17 30 34.6	
BRG	Berggiesshubel	158.00	340	P	PKPdf	17 30 47.3	+13
BRG	Berggiesshubel	158.00	340	Amp		17 30 49.8	
	comp=Z,20nm,1.3s						
BRG	Berggiesshubel	158.00	340	PKPab	PKPab	17 31 07.5	+0.2
PVCC	Panska Ves	158.12	339	ePKPAB	PKPab	17 31 08.5	+0.7
PVCC				AMS	AMS	18 37 10.0	
	comp=Z,600nm,21.3s						
PVCC	Panska Ves	158.12	339	ePKP2	PKPab	17 31 08.5	+0.7
PVCC				MLR	MLR		
	comp=Z,600nm,21.3s						
FBE	Freiberg	158.12	341	ePKPdf	PKPdf	17 30 33.7	-0.3
	baz=29,slow=1.2						
FBE				ePKPab	PKPab	17 31 08.2	+0.4
	baz=20,slow=4.4						
PSZ	Piszkesteto	158.13	327	PKPdf	PKPdf	17 30 31.8	-2.5
PSZ					PKPab	17 31 07.2	-0.8
PSZ	Piszkesteto	158.13	327	PKIKP	PKPdf	17 30 31.8	-2.5
PSZ						17 31 07.3	
PSZ				MLR	MLR		
	comp=Z,700nm,21.0s						
VYHS	Vyhne	158.19	330	ePKIKP	PKPdf	17 30 34.8	+0.5
VYHS				e		17 31 07.2	
VYHS	Vyhne	158.19	330	e	PKPab	17 31 07.2	-1.0
VYHS	Vyhne	158.19	330	ePKP	PKPdf	17 30 34.8	+0.5
NEUB	Neuenburg	158.27	344	ePKPdf	PKPdf	17 30 34.0	-0.2
	baz=29,slow=1.2						
NEUB				ePKPab	PKPab	17 31 08.1	-0.3
	baz=20,slow=4.4						
GTTG	Gottingen	158.34	347	ePKPdf	PKPdf	17 30 35.2	+0.9
	baz=29,slow=1.2						
GTTG				ePKPab	PKPab	17 31 08.8	+0.1
	baz=20,slow=4.4						
JAVC	Velka Javorina	158.40	332	e	PKPab	17 31 10.0	+0.9
JAVC	Velka Javorina	158.40	332	ePKP	PKPdf	17 30 35.5	+0.9
SURR	Surduc	158.44	320	⇑P	PKPab	17 30 59.5	-10
VRAC	Vranov	158.46	334	e	PKPab	17 31 09.6	+0.3
VRAC	Vranov	158.46	334	ePKP	PKPdf	17 30 34.5	-0.1
GOPC	GO Pecny, Ondr	158.58	338	AMS	AMS	18 40 20.0	
	comp=Z,600nm,21.3s						
PRU	Pruhonice	158.59	338	AMS	AMS	18 46 10.0	
	comp=Z,600nm,19.5s						
KRUC	Moravsky	158.73	334	ePKP	PKPdf	17 30 34.4	-0.5
KRUC				e		17 31 10.2	
BZS	Buzias	158.81	320	⇑P	PKPdf	17 30 33.4	-1.7
BZS	Buzias	158.81	320	⇑PKIKP	PKPdf	17 30 33.4	-1.7
TANN	Tannenbergstha	158.82	342	ePKPdf	PKPdf	17 30 34.9	-0.1
	baz=29,slow=1.2						
TANN				ePKPab	PKPab	17 31 10.9	0.0
	baz=20,slow=4.4						
MOX	Moxa	158.83	344	ePKPdf	PKPdf	17 30 34.5	-0.5
	baz=29,slow=1.2						
MOX				ePKPab	PKPab	17 31 10.6	-0.3
	baz=20,slow=4.4						
MOX				eL	L	18 53 53.6	
	comp=Z,441nm,21.8s						
WERD	Werda	158.84	342	ePKPdf	PKPdf	17 30 34.9	-0.1
	baz=29,slow=1.2						
WERD				ePKPab	PKPab	17 31 11.0	0.0
	baz=20,slow=4.4						
PLN	Plauen	158.84	343	ePKPdf	PKPdf	17 30 34.6	-0.4
	baz=29,slow=1.2						
PLN				ePKPab	PKPab	17 31 10.7	-0.2
	baz=20,slow=4.4						
BUG	Bochum--Univer	158.87	352	ePKPdf	PKPdf	17 30 35.3	+0.4
	baz=29,slow=1.2						
BUG				ePKPab	PKPab	17 31 10.6	-0.3
	baz=20,slow=4.4						
TREC	Trest	158.87	336	AMS	AMS	18 39 20.0	
	comp=Z,800nm,23.0s						
GUNZ	Gunzen	158.91	342	ePKPdf	PKPdf	17 30 34.9	-0.2
	baz=29,slow=1.2						
GUNZ				ePKPab	PKPab	17 31 11.4	+0.1
	baz=20,slow=4.4						
KASTN	Kahler Asten	158.94	350	ePKPdf	PKPdf	17 30 35.1	0.0
	baz=29,slow=1.2						
KASTN				ePKPab	PKPab	17 31 11.2	-0.1
	baz=20,slow=4.4						
MODS	Modra-Piesok	158.94	332	ePKIKP	PKPdf	17 30 36.6	+1.4
MODS				e		17 30 48.5	
MODS				e		17 31 12.3	
MODS	Modra-Piesok	158.94	332	ePKP	PKPdf	17 30 36.6	+1.4
MODS				e		17 30 48.5	
MODS				e		17 31 12.3	
WERN	Wernitzgruen	158.96	342	ePKPdf	PKPdf	17 30 35.6	+0.4
	baz=29,slow=1.2						
WERN				ePKPab	PKPab	17 31 11.9	+0.4
	baz=20,slow=4.4						
NKC	Novy Kostel	158.99	342	AMS	AMS	18 40 40.0	
	comp=Z,800nm,24.3s						
UBBA	Unterbreizbach	159.02	347	ePKPdf	PKPdf	17 30 33.6	-1.4
	baz=29,slow=1.2						
UBBA				ePKPab	PKPab	17 31 10.3	-1.2
	baz=20,slow=4.4						
MANZ	Manzenberg	159.31	342	ePKPdf	PKPdf	17 30 35.1	-0.5
	baz=29,slow=1.2						
MANZ				ePKPab	PKPab	17 31 12.8	-0.2
	baz=20,slow=4.4						
ROTZ	Rotzenmuhle	159.48	342	ePKPdf	PKPdf	17 30 36.2	+0.5
	baz=29,slow=1.2						
ROTZ				ePKPab	PKPab	17 31 14.2	+0.5
	baz=20,slow=4.4						
VTS	Vitosha	159.51	312	⇑P	PKPab	17 31 15.1	+0.7
VTS	Vitosha	159.51	312	⇑PKP2	PKPab	17 31 15.1	+0.7
KHC	Kasperske Hory	159.65	339	ePKPDF	PKPdf	17 30 36.0	0.0
KHC				ePKPAB	PKPab	17 31 14.7	+0.2
KHC				ex	x	17 31 46.0	
KHC				ex	x	18 01 24.9	
KHC				AMS	AMS	18 44 40.0	
	comp=Z,700nm,23.6s						
KHC	Kasperske Hory	159.65	339	ePKIKP	PKPdf	17 30 36.0	0.0
KHC				e		17 31 14.7	
KHC				MLR	MLR		
	comp=Z,700nm,23.6s						
CKRC	Cesky Krumlov	159.68	337	ePKPDF	PKPdf	17 30 36.1	+0.1
CKRC				ePKPAB	PKPab	17 31 15.1	+0.4
CKRC				AMS	AMS	18 42 10.0	
	comp=Z,600nm,20.6s						
CKRC	Cesky Krumlov	159.68	337	ePKIKP	PKPdf	17 30 36.1	+0.1
CKRC				e		17 31 15.1	
CKRC				MLR	MLR		
	comp=Z,600nm,20.6s						
AHRW	Bad Neuenahr-A	159.77	351	ePKPdf	PKPdf	17 30 36.6	+0.6
	baz=29,slow=1.2						
AHRW				ePKPab	PKPab	17 31 15.0	+0.1
	baz=20,slow=4.4						
GRA1	Grafenberg Arr	159.81	343	PKPdf	PKPdf	17 30 33.6	-2.5
GRA1					PKPab	17 31 14.6	-0.5
GRF	Grafenberg Arr	159.81	343	PKIKP	PKPdf	17 30 33.7	-2.5
GRF						17 31 14.6	
GRF				MLR	MLR		
	comp=Z,600nm,18.0s						
GRF	Grafenberg Arr	159.81	343	ePKPdf	PKPdf	17 30 36.6	+0.5
	baz=29,slow=1.2						
GRF				ePKPab	PKPab	17 31 15.8	+0.7
	baz=20,slow=4.4						
GRF				eL	L	18 54 53.0	
	comp=Z,405nm,21.0s						
MEM	Membach	159.83	353	dPKP	PKPab	17 31 14.9	-0.2
BTNL	Ternell	159.84	353	dPKPdf	PKPdf	17 30 36.1	-0.1
BTNL				dPKP	PKPab	17 31 15.2	-0.1
GEC2	GERESS Array S	159.86	338	ePKPdf	PKPdf	17 30 35.6	-0.8
	baz=29,slow=1.2						
GEC2				ePKPab	PKPab	17 31 15.6	0.0
	baz=20,slow=4.4						
GERES	GERESS Array B	159.86	338	PKP	PKPdf	17 30 34.9	-1.5
	comp=Z,0.8nm,0.7s,baz=86,slow=1.5,SNR=5.2						
GERES				PKPab	PKPab	17 31 15.6	0.0
	comp=Z,1.5nm,0.7s,baz=42,slow=6.1,SNR=6.6						
CONA	Conrad Observa	159.86	333	ePKP	PKPdf	17 30 37.5	+1.2
	comp=Z,3.7nm,1.0s						
CONA				ePKP	PKPab	17 31 16.5	+0.9
	comp=Z,32nm,1.6s						
RONA	Rosalia, Austr	159.88	332	ePKP	PKPdf	17 30 35.5	-0.8
	comp=Z,9.9nm,1.5s						
RONA				ePKP	PKPab	17 31 16.4	+0.8
	comp=Z,28nm,1.3s						
TNS	Taunus Mts	159.88	349	ePKPdf	PKPdf	17 30 36.3	0.0
	baz=29,slow=1.2						
TNS				ePKPab	PKPab	17 31 15.2	-0.3
	baz=20,slow=4.4						
BSTI	Sart Tilman	159.90	354	dPKP	PKPab	17 31 15.5	+0.1
MORH	Mrgy, Hungar	159.95	326	⇓P	PKPdf	17 30 36.6	+0.2
SNF	Seneffe	160.06	357	dPKP	PKPab	17 31 16.3	+0.2
BCLA	Clavier	160.08	355	dPKPdf	PKPdf	17 30 36.1	-0.3
BCLA				dPKP	PKPab	17 31 14.9	-1.3
BHOU	Houvegnez	160.08	353	dPKPdf	PKPdf	17 30 37.3	+0.9
BHOU				dPKP	PKPab	17 31 16.5	+0.2
BMRD	Maredsous	160.24	356	dPKPdf	PKPdf	17 30 36.6	0.0
BMRD				dPKP	PKPab	17 31 16.8	-0.2
RCHB	Rochefort	160.35	355	dPKP	PKPab	17 31 16.9	-0.5
DOU	Dourbes	160.45	356	dPKPdf	PKPdf	17 30 36.7	-0.1
DOU				dPKP	PKPab	17 31 16.6	-1.2
MOA	Molln	160.53	336	i PKP	PKPdf	17 30 37.4	+0.4
	comp=Z,7.3nm,1.6s						
MOA				ePKP	PKPab	17 31 19.2	+0.8
	comp=Z,34nm,1.7s						
ARSA	Arzberg	160.55	332	ePKP	PKPdf	17 30 37.9	+0.8
	comp=Z,7.0nm,1.1s						
WLF	Walferdange	160.75	353	PKPdf	PKPdf	17 30 35.0	-2.1
WLF					PKPab	17 31 18.1	-1.1
WLF	Walferdange	160.75	353	PKIKP	PKPdf	17 30 35.1	-2.1
WLF						17 31 18.1	
WLF	Walferdange	160.75	353	dPKPdf	PKPdf	17 30 38.2	+1.0
WLF				dPKP	PKPab	17 31 19.5	+0.3
WLF	Walferdange	160.75	353	ePKPdf	PKPdf	17 30 38.1	+0.9
	baz=29,slow=1.2						
WLF				ePKPab	PKPab	17 31 19.7	+0.5
	baz=20,slow=4.4						
BIOA	Bad Ischl, Aus	160.88	336	i PKP	PKPdf	17 30 37.6	+0.2
	comp=Z,2.8nm,1.1s						
BIOA				i PKP	PKPab	17 31 20.9	+1.0
	comp=Z,39nm,1.4s,SNR=7.6						
RJOB	Jochberg	161.12	338	ePKPdf	PKPdf	17 30 36.4	-1.3
	baz=29,slow=1.2						
RJOB				ePKPab	PKPab	17 31 21.4	+0.4
	baz=20,slow=4.4						
STU	Stuttgart	161.13	346	ePKPdf	PKPdf	17 30 38.0	+0.4
	baz=29,slow=1.2						
STU				ePKPab	PKPab	17 31 20.7	-0.3
	baz=20,slow=4.4						
FUR	Furstenfeldbru	161.19	341	ePKPdf	PKPdf	17 30 38.1	+0.4
	baz=29,slow=1.2						
FUR				ePKPab	PKPab	17 31 21.9	+0.7
	baz=20,slow=4.4						
SOKA	Soboth	161.21	332	i PKP	PKPdf	17 30 38.3	+0.5
	comp=Z,7.9nm,1.3s						
SOKA				ePKP	PKPab	17 31 21.7	+0.3
	comp=Z,25nm,1.5s,SNR=5.2						
KBA	Koelnbreinsper	161.51	336	i PKP	PKPdf	17 30 38.1	-0.2
	comp=Z,5.9nm,1.4s						
KBA				i PKP	PKPab	17 31 22.2	-0.7
	comp=Z,6.5nm,1.0s						
BFO	Black Forest	161.72	347	PKPdf	PKPdf	17 30 36.4	-1.8
BFO					PKPab	17 31 21.9	-1.7
BFO	Black Forest	161.72	347	PKP2	PKPab	17 31 21.9	-1.7
BFO						18 30 36.4	
BFO	Black Forest	161.72	347	ePKPdf	PKPdf	17 30 38.0	-0.3
	baz=29,slow=1.2						
BFO				ePKPab	PKPab	17 31 23.4	-0.2
	baz=20,slow=4.4						
MYKA	Terra Mystica	161.79	335	i PKP	PKPdf	17 30 38.5	+0.1
	comp=Z,9.8nm,1.7s						
MYKA				i PKP	PKPab	17 31 23.7	-0.2
	comp=Z,27nm,1.9s						
WATA	Walderalm	161.86	340	i PKP	PKPdf	17 30 39.1	+0.5
	comp=Z,10nm,1.5s						
WATA				ePKP	PKPab	17 31 24.5	+0.1
	comp=Z,48nm,1.3s,SNR=13						
WATA				i PP	PP	17 35 06.5	-1.2
	comp=Z,20nm,1.4s						
WTTA	Wattenberg	161.91	339	ePKP	PKPdf	17 30 39.6	+0.9
	comp=Z,12nm,1.6s						
WTTA				ePKP	PKPab	17 31 24.3	-0.3
	comp=Z,53nm,1.4s,SNR=6.2						
WTTA				i PP	PP	17 35 06.6	-1.3
	comp=Z,19nm,1.6s						
UBR	Ueberruh	161.95	343	ePKPdf	PKPdf	17 30 38.6	0.0
	baz=29,slow=1.2						
UBR				ePKPab	PKPab	17 31 25.0	+0.3
	baz=20,slow=4.4						
RETA	Reutte	161.96	342	ePKP	PKPdf	17 30 37.9	-0.7
	comp=Z,5.6nm,1.2s						
RETA				ePKP	PKPab	17 31 24.5	-0.2
	comp=Z,39nm,1.4s,SNR=9.5						
MOTA	Moosalm	161.99	341	ePKP	PKPdf	17 30 37.9	-0.9
	comp=Z,12nm,1.4s						
MOTA				ePKP	PKPab	17 31 24.2	-0.8
	comp=Z,62nm,1.5s,SNR=9.9						
MOTA				i PP	PP	17 35 06.7	-1.6
	comp=Z,13nm,1.7s						
ECH	Echery	162.04	350	PKPdf	PKPdf	17 30 36.4	-2.2
ECH					PKPab	17 31 24.2	-0.7
ECH	Echery	162.04	350	PKIKP	PKPdf	17 30 36.4	-2.2
ECH						17 31 24.2	
SQTA	Sankt Quirin	162.07	340	ePKP	PKPdf	17 30 39.4	+0.6
	comp=Z,14nm,1.9s						
SQTA				ePKP	PKPab	17 31 24.9	-0.3
	comp=Z,38nm,1.4s,SNR=7.5						
SQTA				i PP	PP	17 35 07.2	-1.6
	comp=Z,17nm,1.4s						
ABTA	Abfaltersbach	162.08	337	ePKP	PKPdf	17 30 38.8	+0.1
	comp=Z,12nm,1.6s						
ABTA				ePKP	PKPab	17 31 24.1	-1.1
	comp=Z,19nm,1.4s						
DAVA	Damuels	162.37	343	i PKP	PKPdf	17 30 37.5	-1.7
	comp=Z,5.0nm,1.1s						
DAVA				ePKP	PKPab	17 31 26.1	-0.5
	comp=Z,44nm,1.6s,SNR=7.5						
FETA	Feichten	162.39	341	ePKP	PKPdf	17 30 39.0	-0.2
	comp=Z,9.8nm,1.9s						
FETA				ePKP	PKPab	17 31 26.2	-0.5
	comp=Z,35nm,1.5s,SNR=6.3						
TORD	Torodi Ar. Bea	162.62	178	PKP	PKPdf	17 30 41.0	+0.9
	comp=Z,2.9nm,1.1s,baz=74,slow=1.6,SNR=12						
TORD				PKPab	PKPab	17 31 30.0	+1.8
	comp=Z,16nm,0.9s,baz=175,slow=3.5,SNR=14						
CTI	Castel Tesino	162.98	338	PKPdf	PKPdf	17 30 36.3	-3.4
CTI					PKPab	17 31 26.9	-2.4
CTI	Castel Tesino	162.98	338	PKP2	PKPab	17 31 26.9	-2.4
CTI						18 30 36.3	
SENIN	Lac Senin/Sane	163.81	348	PKPdf	PKPdf	17 30 37.9	-2.8
SENIN					PKPab	17 31 32.0	-1.0
SSB	Saint Sauveur	165.25	354	PKPdf	PKPdf	17 30 39.4	-2.3
SSB					PKPab	17 31 36.2	-2.9
SSB	Saint Sauveur	165.25	354	PKIKP	PKPdf	17 30 39.4	-2.3
SSB						17 31 36.2	
PGAV	Gavieira, Arco	165.75	34	eLR	LR	18 29 06.6	
PGAV				A	A	18 45 04.6	
	comp=Z,562nm,18.0s						
PCAB	Cabril	166.06	34	eLQ	LQ	17 30 58.3	
POLO	Lamas de Olo	166.43	35	ePKPdf	PKPdf	17 30 44.8	+1.9
PVRL	Vila Real	166.54	35	eLQ	LQ	17 30 55.9	
PVIS	Viseu	166.87	37	eLQ	LQ	17 30 59.0	
MVO	Moncorvo	166.96	33	ePKPdf	PKPdf	17 30 51.3	+8.1
MVO	Moncorvo	166.96	33	ePP	PP	17 35 37.8	+3.1
MVO	Moncorvo	166.96	33	eLR	LR	18 30 35.8	
MVO				A	A	18 45 20.6	
	comp=Z,798nm,20.0s						
PCAS	Casmilo, Conde	167.01	40	ePKPdf	PKPdf	17 30 50.3	+7.1
PSBE	So Bento	167.20	43	ePKPdf	PKPdf	17 30 45.9	+2.5
PMAFR	Mafra	167.26	46	ePKPdf	PKPdf	17 30 47.1	+3.7
MTE	Manteigas	167.28	37	ePKPdf	PKPdf	17 30 44.0	+0.5
MTE	Manteigas	167.28	37	ePP	PP	17 35 40.8	+4.4
MTE	Manteigas	167.28	37	eLR	LR	18 32 14.1	
MTE				A	A	18 44 46.3	
	comp=Z,609nm,20.0s						
PCBR	Castelo Branco	167.72	39	ePKPdf	PKPdf	17 30 45.6	+1.9
PMTG	Montargil	167.83	43	ePKPdf	PKPdf	17 30 48.9	+5.1
PNCL	Nicolau / Gran	168.24	47	ePKPdf	PKPdf	17 30 42.1	-2.0
PNCL	Nicolau / Gran	168.24	47	ePP	PP	17 35 45.3	+3.7
EVO	Evora	168.30	45	ePKPdf	PKPdf	17 30 46.1	+1.9
PESTR	Estremoz	168.33	42	ePKPdf	PKPdf	17 30 46.1	+1.9
PFVI	Vila Bisbo	168.59	52	ePKPdf	PKPdf	17 30 48.3	+3.9
PFVI	Vila Bisbo	168.59	52	ePP	PP	17 35 38.2	-5.3
MESJ	Messejana	168.60	48	ePKIKP	PKPdf	17 30 42.9	-1.5
MESJ				e		17 35 42.5	
MESJ	Messejana	168.60	48	ePKPdf	PKPdf	17 30 42.9	-1.5
MESJ				ePP	PP	17 35 42.5	-0.9
MESJ				IAMs_20	IAMs_20	18 49 16.9	
	comp=E,787nm,33.0s						
MORF	Marmelete	168.62	51	ePKIKP	PKPdf	17 30 42.9	-1.6
MORF				e		17 35 42.4	
MORF	Marmelete	168.62	51	ePKPdf	PKPdf	17 30 47.3	+2.8
MORF	Marmelete	168.62	51	ePKPdf	PKPdf	17 30 42.9	-1.6
MORF				ePP	PP	17 35 42.4	-1.3
MORF				IAMs_20	IAMs_20	18 57 55.6	
	comp=Z,652nm,16.0s						
PCVE	Castro Verde	168.84	48	ePKPdf	PKPdf	17 30 46.4	+1.9
PBAR	Barrancos	169.12	43	ePKPdf	PKPdf	17 30 51.6	+6.9
PBDV	Barranco-do-Ve	169.13	50	ePKPdf	PKPdf	17 30 52.8	+8.0
PVAQ	Vaqueiros	169.18	48	ePP	PP	17 35 51.7	+5.3
PVAQ	Vaqueiros	169.18	48	eLR	LR	18 32 33.6	
PVAQ				A	A	18 49 04.4	
	comp=Z,541nm,20.0s						
PAB	San Pablo	169.48	30	⇑PKIKP	PKPdf	17 30 45.9	+0.9
ESDC	Sonseca Array	169.53	28	PKP	PKPdf	17 30 45.5	+0.4
	comp=Z,3.8nm,1.2s,baz=329,slow=2.4,SNR=12						

ROM 11 17:28:13.6±0.1,**42°.507N**±0°.004×**13°.400E**±0°.004,

h9^{km},ML1.3/4,6C-5D,Error ellipse: s-maj=0.4km s-min=0.2km az=169.0,Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
T1247	Pizzolo (AQ)	0.10	229	⇑P	Pg	17 28 16.7	+0.5
T1247				S	Sg	17 28 18.6	+0.5
T1247				AML	AML		
	comp=E,754µm,0.7s						
T1247				AML	AML		
	comp=N,828µm,1.0s						
GIGS	Gran Sasso	0.14	115	⇑P	Pg	17 28 17.3	+0.6
GIGS				S	Sg	17 28 19.7	+0.8
GIGS				AML	AML		
	comp=E,84µm,0.2s						
GIGS				AML	AML		
	comp=N,55µm,1.6s						
GIGS				AML	AML		
	comp=N,55µm,0.4s						
RM33	Pellescritta (	0.14	271	⇑P	Pg	17 28 17.3	+0.5
RM33				S	Sg	17 28 19.7	+0.7
RM33				AML	AML		
	comp=N,162µm,0.4s						
RM33				AML	AML		
	comp=E,180µm,0.2s						
TERO	Teramo	0.19	52	⇑P	Pg	17 28 18.2	+0.6
TERO				S	Sg	17 28 21.4	+1.0
TERO				AML	AML		
	comp=N,122µm,1.3s						
TERO				AML	AML		
	comp=E,140µm,0.2s						
TERO				AML	AML		
	comp=N,122µm,0.7s						
T1218	Civita (PG)	0.27	308	P	Pg	17 28 18.9	-0.1
T1214	Arquata del Tr	0.29	331	⇑P	Pg	17 28 20.2	+0.7
T1214				S	Sb	17 28 24.9	-1.1
T1241	Roccafluvione,	0.35	4	⇓P	Pb	17 28 21.5	-0.5
T1241				S	Sb	17 28 26.7	-0.9
T1212	Cascia, Frazio	0.36	313	⇓P	Pg	17 28 21.1	+0.4
T1212				S	Sg	17 28 26.5	+1.0
T1245	Castelsantange	0.38	336	P	Pn	17 28 27.9	+2.5
MMO1	Montemonaco	0.40	352	P	Pb	17 28 22.1	-0.7
MMO1				S	Sb	17 28 28.7	-0.3
T1217	Poggiodomo (PG	0.40	301	P	Pg	17 28 22.2	+0.7
T1217				S	Sb	17 28 28.3	-0.9
T1211	Morro Reatino	0.40	274	⇓P	Pg	17 28 22.0	+0.5
T1211				S	Sb	17 28 28.2	-1.1
FDMO	Fiordimonte	0.58	337	⇓P	Pg	17 28 25.1	+0.3
T1220	Camerino, Fraz	0.65	339	⇓P	Pg	17 28 26.1	+0.1
FOSV	Fossato di Vic	0.92	329	⇑P	Pg	17 28 29.4	-1.8
ATTE	AVT- Monte Tez	1.03	312	P	Pg	17 28 33.1	-0.4

MAN 11 17:34:43.5,9°.85N×125°.45E,h21^{km},mb4.0,ML2.7,MS2.3, 2C-3D,Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.08	149	⇓*i*P	Pb	17 34 47.4	0.0
SCPH				*i* S	Sb	17 34 49.9	-0.2
MSLP	Maasin	0.64	296	⇓*e*P	Pb	17 34 56.1	+0.1
MSLP				*e*S	Sn	17 35 07.6	+0.7
GLSP	General Luna,	0.67	96	⇑*e*P	Pn	17 34 57.9	+0.1
GLSP				*e*S	Sn	17 35 08.3	+0.6
BUTP	Butuan	0.90	169	⇓*e*P	Pb	17 34 57.6	-2.7
BUTP				*e*S	Sn	17 35 18.5	+5.3
CGP	Cagayan de Oro	1.57	208	⇑*e*P	Pn	17 35 05.8	-4.3
CGP				*e*S	Sn	17 35 29.6	-0.3

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*IDC **11** 17:34:19.1±10.0,22°.04S×172°.00W,h0^{km},mb4.1/4, mbtmp4.1/5,ML3.4/1,Error ellipse: s-maj=214.8km s-min=137.4km az=46.0*

*NEIC **11** 17:36:07.2±0.5,24°.4S±0°.2×179°.9E±0°.3,h507^{km}±24^{km}, mb4.1/9,Error ellipse: s-maj=46.2km s-min=18.0km az=223.0*

ISC 11 17:36:07.5±5.8,**24°.6S**±0°.7×**179°.8E**±0°.6,**h500^{km},n17, σ0^{s}.85**/17,**mb4.0**/8,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PINNC	Pines Island,	11.53	277	P	P	17 38 41.0	-0.1
ONTNC	Ouen Toro	12.49	278	P	P	17 38 51.2	-0.1
DZM	Mont Dzumac	12.56	279	P	P	17 38 54.0	+1.9
	0.1nm,0.3s,baz=106,slow=18,SNR=2.5 3.0nm,0.8s						
CTA	Charters Tower	31.34	271	P	P	17 41 46.9	+0.3
	3.8nm,0.4s,baz=97,slow=11,SNR=17 3.8nm,0.4s						
CTAO	Charters Tower	31.34	271	P	P	17 41 46.3	-0.3
CTAO				IAmb	IAmb	17 41 48.1	
	comp=Z,9.5nm,1.1s						
STKA	Stephens Creek	34.35	249	P	P	17 42 13.0	+1.0
	comp=Z,1.5nm,0.6s,baz=89,slow=7.2,SNR=3.4 comp=Z,1.5nm,0.6s						
BBOO	Buckleboo	39.06	248	P	P	17 42 50.7	-0.1
ASAR	Alice Springs	41.79	261	P	P	17 43 12.8	-0.1
	comp=Z,0.5nm,0.4s,baz=98,slow=7.4,SNR=9.6 comp=Z,0.5nm,0.4s						
ASAR	Alice Springs	41.79	261	P	P	17 43 12.2	-0.7
WRAB	Tennant Creek	42.22	267	P	P	17 43 15.3	-0.9
WRAB				IAmb	IAmb	17 43 18.8	
	comp=Z,6.1nm,1.2s						
WB0	Warramunga Arr	42.22	267	P	P	17 43 15.6	-0.7
WB0				IAmb	IAmb	17 43 33.8	
	comp=Z,9.5nm,1.5s						
WRA	Warramunga Arr	42.22	267	P	P	17 43 15.5	-0.8
	comp=Z,1.1nm,0.4s,baz=97,slow=8.4,SNR=18 comp=Z,1.1nm,0.4s						
WRA	Warramunga Arr	42.22	267	P	P	17 43 15.3	-1.0
FORT	Forrest	45.95	250	P	P	17 43 44.4	-0.7
FITZ	Fitzroy Crossi	50.64	266	P	P	17 44 20.3	+0.1
MORW	Morawa	56.52	250	P	P	17 45 01.0	-1.0
MORW				IAmb	IAmb	17 45 23.9	
	comp=Z,17nm,1.2s						
QSPA	South Pole Qui	65.53	180	P	P	17 46 01.2	+0.4
QSPA				IAmb	IAmb	17 46 26.9	
	comp=Z,5.1nm,1.4s						

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*IDC **11** 17:36:27.2±13.0,15°.23N×99°.86W,h0^{km},mb3.9/2, mbtmp3.7/3,ML3.6/1,MS4.6/3,Error ellipse: s-maj=244.3km s-min=141.6km az=116.0*

*MEX **11** 17:37:00.2±0.4,17°.89N×101°.13W,h64^{km}±5^{km},MD4.2*

ISC 11 17:36:59.3±1.0,**17°.88N**±0°.03×**101°.12W**±0°.02,**h59^{km}**±9^{km},**n60,σ1^{s}.52**/109,**MS4.6**/3,**Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PET2	Petatlan	0.37	202	*e*P	Pn	17 37 09.7	-0.1
PET2				*e*S	Sn	17 37 17.7	+0.2
ZIIG	Zihuatanejo	0.43	231	*i* P	Pn	17 37 10.2	-0.1
ZIIG				*i* S	Sn	17 37 18.4	0.0
UON	La Union	0.67	278	*e*P	Pn	17 37 12.8	-0.2
UON				*e*S	Sn	17 37 22.7	-0.4
ARIG	Puente Sto Nin	0.84	61	*e*P	Pn	17 37 14.9	-0.3
ARIG				*i* S	Sn	17 37 26.6	-0.3
ATYC	Atoyac	0.93	135	*e*P	Pn	17 37 16.3	0.0
ATYC				*e*S	Sn	17 37 29.1	+0.1
CAIG	El Cayaco	1.16	135	*i* P	Pn	17 37 19.6	+0.2
CAIG				*i* S	Sn	17 37 34.0	-0.3
MEIG	Mezcala	1.43	88	*i* P	Pn	17 37 23.4	+0.4
MEIG				*i* S	Sn	17 37 40.5	-0.4
PLIG	Platanillo	1.62	71	*e*P	Pn	17 37 25.9	+0.2
PLIG				*i* S	Sn	17 37 45.1	-0.5
DAIG	Los Arroyos	1.64	121	*e*P	Pn	17 37 26.5	+0.7
DAIG				*e*S	Sn	17 37 45.6	-0.3
MOIG	Morelia	1.79	358	*e*P	Pn	17 37 27.8	-0.4
MOIG				*e*S	Sn	17 37 50.1	+0.1
MAVM	Malinalco, Edo	1.88	55	*e*P	Pn	17 37 38.7	+9.4
MAVM				*e*S	Sn	17 37 58.5	+6.4
TOVM	TOLUCA	1.96	44	*e*P	Pn	17 37 30.9	+0.4
TOVM				*e*S	Sn	17 37 52.4	-1.7
MMIG	Aquila	2.16	281	*i* P	Pn	17 37 32.5	-0.4
MMIG				*i* S	Sn	17 37 57.4	-1.2
INVM	La Marquesa	2.17	49	*e*P	Pn	17 37 33.3	-0.1
INVM				*e*S	Sn	17 37 57.9	-1.4
YAIG	Yautepec	2.18	63	*e*P	Pn	17 37 33.7	+0.4
YAIG				*e*S	Sn	17 37 58.1	-1.2
AOVM	Tlapan	2.19	51	*e*P	Pn	17 37 33.8	0.0
AOVM				*e*S	Sn	17 37 59.8	-0.3
ATVM	ATLACOMULCO	2.23	33	*e*P	Pn	17 37 34.0	-0.1
ATVM				*e*S	Sn	17 38 00.8	0.0
CJVM	Cuajimalpa	2.28	49	*e*P	Pn	17 37 33.4	-1.5
CJVM				*e*S	Sn	17 38 02.1	+0.1
TLVM	San Miguel Top	2.29	54	*e*P	Pn	17 37 34.1	-0.9
TLVM				*e*S	Sn	17 38 00.8	-1.4
UNM	Universidad Na	2.34	52	*e*P	Pn	17 37 36.4	+0.8
UNM				*e*S	Sn	17 38 02.9	-0.4
XCVM	Xochimilco	2.34	54	*e*P	Pn	17 37 36.1	+0.5
XCVM				*e*S	Sn	17 38 01.7	-1.7
MHVM	Bosque de Chap	2.37	50	*e*P	Pn	17 37 36.1	+0.1
MHVM				*e*S	Sn	17 38 02.1	-1.9
TLIG	Tlapa	2.45	97	*e*P	Pn	17 37 38.5	+1.4
TLIG				*i* S	Sn	17 38 05.1	-0.9
MGIG	Malinaltepec	2.46	105	*e*P	Pn	17 37 38.6	+1.5
MGIG				*i* S	Sn	17 38 05.7	-0.4
PBVM	Pinon	2.48	51	*e*P	Pn	17 37 36.6	-0.7
PBVM				*e*S	Sn	17 38 04.3	-2.0
THVM	De Xico	2.48	55	*e*P	Pn	17 37 38.0	+0.4
THVM				*e*S	Sn	17 38 06.3	-0.7
GMVM	Gustavo A Made	2.49	50	*e*P	Pn	17 37 37.2	-0.6
GMVM				*e*S	Sn	17 38 05.4	-1.8
AMVM	AMECAMECA	2.54	60	*e*P	Pn	17 37 38.5	+0.1
AMVM				*e*S	Sn	17 38 07.3	-1.1
PTVM	Pico Tres Padr	2.56	48	*e*P	Pn	17 37 37.9	-0.7
PTVM				*e*S	Sn	17 38 08.1	-0.6
ZUVM	ZUMPANGO	2.74	45	*e*P	Pn	17 37 37.4	-3.6
ZUVM				*e*S	Sn	17 38 11.7	-1.4
COIG	Colima	2.76	298	*e*P	Pn	17 37 42.5	+1.2
COIG				*e*S	Sn	17 38 12.4	-1.1
JUBC	Volcan de Coli	2.84	305	*e*P	Pn	17 37 44.3	+1.9
JUBC				*e*S	Sn	17 38 14.8	-0.8
EZ5V		2.84	304	*e*P	Pn	17 37 44.0	+1.5
EZ5V				*e*S	Sn	17 38 15.3	-0.4
FTIG	Fresnillo de T	2.84	89	*i* P	Pn	17 37 43.7	+1.3
FTIG				*i* S	Sn	17 38 15.1	-0.4
MNGA	Volcan de Coli	2.85	304	*e*P	Pn	17 37 44.2	+1.6
MNGA				*e*S	Sn	17 38 15.0	-0.8
INCO	Volcan de Coli	2.87	305	*e*P	Pn	17 37 44.7	+1.7
INCO				*e*S	Sn	17 38 15.3	-1.3
SOMAC	Volcano de Col	2.89	305	*e*P	Pn	17 37 45.0	+1.8
SOMAC				*e*S	Sn	17 38 15.5	-1.5
VTVM	Tizayuca	2.91	49	*e*P	Pn	17 37 43.6	+0.2
VTVM				*e*S	Sn	17 38 18.6	+1.2
CDAR	Ciudad de Arme	2.94	292	*e*P	Pn	17 37 43.9	+0.3
CDAR				*e*S	Sn	17 38 15.7	-2.1
R15V		3.01	296	*e*P	Pn	17 37 45.4	+0.9
R15V				*e*S	Sn	17 38 18.0	-1.4
HLIG	Huajuapan de L	3.16	90	*i* P	Pn	17 37 48.3	+1.6
HLIG				*i* S	Sn	17 38 21.4	-1.9
PNIG	Pinotepa	3.22	117	*e*P	Pn	17 37 48.5	+1.0
PNIG				*i* S	Sn	17 38 21.7	-2.9
TXIG	Tlaxiaco	3.26	100	*i* P	Pn	17 37 50.0	+1.9
TXIG				*e*S	Sn	17 38 24.0	-1.9
YOIG	Yosondua	3.56	106	*i* P	Pn	17 37 54.4	+2.1
YOIG				*e*S	Sn	17 38 31.6	-1.8
TPIG	Tehuac#an	3.61	81	*e*P	Pn	17 37 53.2	+0.3
TPIG				*e*S	Sn	17 38 33.5	-1.0
CIHU	Emiliano Zapat	3.70	292	*e*P	Pn	17 37 54.0	0.0
CIHU				*e*S	Sn	17 38 32.7	-3.6
TOIG	Toxpalan	3.86	86	*i* P	Pn	17 37 57.8	+1.5
TOIG				*i* S	Sn	17 38 39.1	-1.5
CJM	Chamela	4.05	294	*e*P	Pn	17 37 58.8	-0.1
CJM				*e*S	Sn	17 38 43.9	-1.2
PEIG	Puerto Escondi	4.24	116	*e*P	Pn	17 38 03.2	+1.8
PEIG				*e*S	Sn	17 38 46.3	-3.3
VHO	Vista Hermosa	4.26	100	*e*P	Pn	17 38 02.6	+0.7
VHO				*e*S	Sn	17 38 48.5	-1.9
ANIG	Ahuacatlan	4.50	315	*e*P	Pn	17 38 05.9	+0.8
ANIG				*e*S	Sn	17 38 55.7	-0.6
NEUV	Arroyo Zacate	5.07	91	*i* P	Pn	17 38 13.7	+1.0
NEUV				*e*S	Sn	17 39 08.3	-1.7
HUIG	Huatulco	5.24	113	*e*P	Pn	17 38 15.7	+0.6
HUIG				*e*S	Sn	17 39 09.2	-4.9
CMIG	Matias Romero	6.00	97	*i* P	Pn	17 38 27.3	+1.8
CMIG				*e*S	Sn	17 39 29.4	-3.5
TXAR	Lajitas Array	11.64	349	Pn	Pn	17 39 55.5	+13
	0.1nm,0.3s,baz=169,slow=15,SNR=4.2 0.4nm,0.7s						
NVAR	Mina Array Bea	25.39	327	P	P	17 42 22.3	+0.9
	1.4nm,0.7s,baz=141,slow=12,SNR=12 1.4nm,0.7s						
PDAR	Pinedale Array	25.83	346	P	P	17 42 26.4	+1.0
	0.8nm,0.8s,baz=148,slow=11,SNR=3.9 0.8nm,0.8s						
SIV	San Ignacio	51.86	128	LR	LR	18 02 54.6	
	comp=Z,560nm,21.7s,baz=258,slow=32						
RES	Resolute Bay	56.92	2	LR	LR	18 14 43.2	
	comp=Z,623nm,19.6s,baz=232,slow=39						
FINES	FINESS Array B	90.52	23	LR	LR	18 33 28.8	
	comp=Z,225nm,20.9s,baz=44,slow=37						

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*NNC **11** 17:57:16.1±11.0,37°.34N×70°.77E,h0^{km},mb3.6,mpv3.2, Error ellipse: s-maj=89.3km s-min=78.9km az=150.0*

*IDC **11** 17:57:31.1±27.0,37°.21N×71°.94E,h426^{km}±205^{km}, mb2.6/3,mbtmp3.6/5,Error ellipse: s-maj=340.1km s-min=38.0km az=72.0*

ISC 11 17:57:09.3±1.6,**36°.88N**±0°.08×**70°.4E**±0°.2,**h250^{km},n24, σ2^{s}.02**/27,**mb3.0**/3,**2C-4D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AML	Almayashu	5.83	25	P	Pn	17 58 37.2	+1.5
	SNR=34						
AML	Almayashu	5.83	25	⇑P	Pn	17 58 36.9	+1.3
	0.6nm,0.3s						
AML				⇓S	S	17 59 41.2	-3.4
	22nm,0.8s						
KK31	Karatay Array	6.21	1	⇓P	Pn	17 58 42.6	+2.6
	0.3nm,0.2s,baz=164,slow=11,SNR=4.9						
KK31				⇓S	S	17 59 48.7	-4.0
	2.4nm,0.5s,baz=170,slow=16,SNR=6.5						
UCH	Uchtor	6.22	30	P	Pn	17 58 42.1	+1.6
	SNR=18						
EKS2	Erkin-Say	6.33	23	P	Pn	17 58 43.9	+2.2
	SNR=22						
AAK	Ala-Archa	6.56	28	P	Pn	17 58 46.6	+2.1
	SNR=7.7						
KBK	Karagaybulak	6.75	30	P	Pn	17 58 49.8	+2.8
	SNR=6.8						
USP	Ospenovka	7.11	25	P	Pn	17 58 55.7	+4.4
	SNR=5.2						
TKM2	Tokmak 2	7.24	32	P	Pn	17 58 55.8	+2.7
	SNR=11						
TKM2	Tokmak 2	7.24	32	⇓P	Pn	17 58 55.0	+1.9
	3.1nm,0.5s						
TKM2				⇑S	S	18 00 15.3	-1.1
	4.6nm,0.7s						
MKAR	Makanchi Array	13.28	38	P	P	18 00 11.5	+1.5
	1.6nm,0.6s,baz=226,slow=12,SNR=18						
DANN	Dangsing	14.11	123	*e*P	P	18 00 19.1	-0.5
GKN	Gorkha	14.92	122	*e*P	Pn	18 00 28.3	-0.5
	13nm,0.4s						
KKN	Kakani	15.50	122	*e*P	Pn	18 00 35.4	-0.3
	21nm,0.6s						
PKIN	Phulchoki	15.71	122	*e*P	P	18 00 37.3	0.0
	10nm,0.5s						
PKI	Pulchoki	15.72	122	*e*P	P	18 00 37.4	-0.1
	11nm,0.7s						
GUN	Gumba	15.83	120	*e*P	Pn	18 00 39.1	-0.7
	6.3nm,0.3s						
JIRN	Jiri	16.20	120	*e*P	P	18 00 42.1	-0.7
	16nm,0.6s						
RAMN	Ramite	16.93	121	*e*P	P	18 00 49.8	-0.8
	7.6nm,0.4s						
TAPN	Taplejung	17.46	118	*e*P	P	18 00 56.5	+0.1
	4.0nm,0.5s						
ZALV	Zalesovo Beam	19.78	26	P	Pn	18 01 24.6	-0.8
	1.3nm,0.4s,baz=214,slow=9.8,SNR=9.1						
CMAR	Chiang Mai Arr	31.07	118	P	P	18 03 04.8	+0.4
	0.2nm,0.5s,baz=312,slow=8.5,SNR=2.4 0.2nm,0.5s						
WRA	Warramunga Arr	82.61	122	P	P	18 09 04.1	-0.7
	0.5nm,0.9s,baz=326,slow=4.5,SNR=4.8 0.5nm,0.9s						
ASAR	Alice Springs	84.88	125	P	P	18 09 14.9	-1.3
	0.2nm,0.8s,baz=324,slow=4.6,SNR=1.8 0.2nm,0.8s						

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*IDC **11** 17:59:40.2±1.9,43°.88N×105°.30W,h0^{km},mbtmp3.5/2, ML3.3/2,Error ellipse: s-maj=53.6km s-min=9.7km az=149.0*

*NEIC **11** 17:59:41.5±1.9,43°.97N±0°.05×105°.22W±0°.04,h0^{km}±2^{km}, ML3.1/74,Error ellipse: s-maj=8.6km s-min=5.2km az=4.0*

ISC 11 17:59:41.3±1.1,**43°.98N**±0°.07×**105°.19W**±0°.07,**h0^{km},n67, σ0^{s}.95**/66,**Wyoming**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.84	80		Pg	17 59 58.5	+1.2
K22A	Casper	1.65	217		Pn	18 00 10.1	-1.6
K22A				IAML		18 00 35.9	
	comp=N,286nm,0.3s						
PHWY	Pilot Hill	2.68	184	Pn	Pn	18 00 26.1	+0.1
RWWY	Rawlins	2.73	214		Pn	18 00 27.1	+0.5
RWWY				IAML		18 01 06.4	
	comp=N,89nm,0.7s						
RWWY				IAML		18 01 06.4	
	comp=N,85nm,0.7s						
LAO	LASA Array	2.81	345		Pn	18 00 27.1	-0.4
N23A	Red Feather La	3.13	191		Pn	18 00 31.8	-0.3
N23A				IAML		18 01 21.3	
	comp=N,38nm,0.6s						
N23A				IAML		18 01 27.9	
	comp=E,36nm,0.7s						
RLMT	Red Lodge	3.13	293		Pn	18 00 31.6	-0.5
RLMT				IAML		18 01 27.4	
	comp=E,35nm,0.8s						
BW06	Boulder Array	3.41	251		Pn	18 00 36.6	+0.7
BW06				IAML		18 01 25.0	
	comp=E,30nm,0.8s						
PD31	Pinedale Array	3.41	251		Pn	18 00 36.8	+0.9
PDAR	Pinedale Array	3.41	251	Pn	Pn	18 00 37.1	+1.2
	comp=E,2.1nm,0.3s,baz=75,slow=17,SNR=48						
PDAR				Lg	Lg	18 01 21.7	
	comp=E,4.4nm,0.3s,baz=75,slow=35,SNR=5.1 comp=E,2.0nm,0.3s						
PDAR	Pinedale Array	3.41	251		Pn	18 00 36.4	+0.4
YMP	Mirror Lake Pl	3.65	284		Pn	18 00 39.1	-0.1
GCMT	Greycliff	3.67	301		Pn	18 00 39.0	-0.3
LKWY	Lake	3.79	281		Pn	18 00 43.1	+1.9
LKWY				IAML		18 01 43.6	
	comp=E,24nm,4.8s						
LKWY				IAML		18 01 45.3	
	comp=E,29nm,4.2s						
OGNE	Ogallala	3.82	141	Pn	Pn	18 00 40.9	-0.5
H17A	Grant Village	3.90	278		Pn	18 00 44.3	+1.7
FLWY	Flagg Ranch	3.98	273		Pn	18 00 44.2	+0.5
FLWY				IAML		18 01 52.2	
	comp=E,30nm,1.5s						
FLWY				IAML		18 01 55.4	
	comp=E,29nm,4.0s						
MOOW	Moose Ponds	4.03	269		Pn	18 00 44.7	+0.3
SNOW	Snow King Moun	4.07	265		Pn	18 00 45.6	+0.6
SNOW				IAML		18 02 00.2	
	comp=E,28nm,4.0s						
SNOW				IAML		18 03 04.6	
	comp=E,24nm,4.5s						
YFT	Old Faithful	4.09	279	Pn	Pn	18 00 45.8	+0.6
YFT				IAML		18 02 00.8	
	comp=N,17nm,3.8s						
YFT				IAML		18 03 01.0	
	comp=E,22nm,4.9s						
E28A	Huff	4.10	49	Pn	Pn	18 00 44.6	-0.5
IMW	Indian Meadow	4.16	271		Pn	18 00 46.0	-0.3
IMW				IAML		18 01 54.6	
	comp=E,20nm,0.7s						
IMW				IAML		18 01 55.4	
	comp=E,18nm,0.7s						
REDW	Red Top Meadow	4.16	263		Pn	18 00 46.3	+0.1
REDW				IAML		18 01 56.8	
	comp=E,19nm,0.7s						
REDW				IAML		18 01 57.1	
	comp=E,24nm,0.7s						
ISCO	Idaho Springs	4.19	185		Pn	18 00 45.3	-1.4
YMR	Madison River	4.21	281		Pn	18 00 45.5	-1.4
YMR				IAML		18 02 36.2	
	comp=E,27nm,4.9s						
YMR				IAML		18 03 27.8	
	comp=N,22nm,4.8s						
FXWY	Fox Creek	4.24	267		Pn	18 00 47.5	+0.2
O20A	White River Ci	4.46	212		Pn	18 00 49.5	-0.8
AHID	Auburn Hatcher	4.48	256		Pn	18 00 49.0	-1.6
AHID				IAML		18 02 21.8	
	comp=N,20nm,4.2s						
AHID				IAML		18 02 27.1	
	comp=N,16nm,4.3s						
SUSD	Miller	4.50	82	Pn	Pn	18 00 51.3	+0.6
DGMT	Dagmar	4.54	8		Pn	18 00 51.1	-0.2
RDMU	Red Mountain	4.71	225		Pn	18 00 52.7	-1.1
RDMU				IAML		18 02 11.1	
	comp=E,18nm,2.4s						
RDMU				IAML		18 03 52.2	
	comp=N,16nm,4.9s						
BOZ	Bozeman (W)	4.87	292		Pn	18 00 54.9	-0.9
BOZ				IAML		18 01 49.9	
	comp=N,12nm,5.0s						
BOZ				IAML		18 03 44.3	
	comp=N,12nm,4.7s						
K31A	O'Neill	4.88	104	Pn	Pn	18 00 54.4	-1.6
Q24A	Divide	5.01	180	Pn	Pn	18 00 55.3	-2.7
EGMT	Eagleton	5.15	323	Pn	Pn	18 00 59.6	-0.1
HWUT	Hardware Ranch	5.26	245	Pn	Pn	18 01 00.9	-0.3
HWUT				IAML		18 02 32.9	
	comp=N,13nm,0.8s						
BSUT	Blindstream Ca	5.38	232	Pn	Pn	18 01 03.5	+0.4
TCUT	Toone Canyon	5.41	240	Pn	Pn	18 01 02.3	-1.1
HRY	Holter Researc	5.42	303		Pn	18 01 02.9	-0.5
LRM	Limekiln Ridge	5.48	292	Pn	Pn	18 01 04.7	+0.3
MDND	Maddock	5.49	43	Pn	Pn	18 01 04.5	+0.2
MCMT	McKenzie Canyo	5.56	281	Pn	Pn	18 01 05.4	0.0
P18A	Preston Nutter	5.76	223	Pn	Pn	18 01 08.6	+0.3
BGNE	Belgrade	5.79	114	Pn	Pn	18 01 07.8	-0.5
SPUT	South Promonto	5.98	246	Pn	Pn	18 01 11.5	+0.3
HVU	Hansel Valley	5.99	251	Pn	Pn	18 01 11.1	-0.3
PV07	Paradox Valley	6.12	206	Pn	Pn	18 01 13.2	+0.1
P17A	Butcher Ranch,	6.13	225	Pn	Pn	18 01 12.4	-0.7
PV15	Paradox Valley	6.16	205	Pn	Pn	18 01 15.6	+1.9
ECSD	EROS Data Cent	6.20	89	Pn	Pn	18 01 14.0	0.0
PV23	Carpenter Ridg	6.23	209	Pn	Pn	18 01 15.0	+0.3
SDCO	Great Sand Dun	6.23	182	Pn	Pn	18 01 13.1	-1.6
SRU	San Rafael Swe	6.30	221	Pn	Pn	18 01 15.2	-0.3
PV10	Paradox Valley	6.31	209	Pn	Pn	18 01 16.3	+0.6
PV11	David Mesa, Pa	6.32	207	Pn	Pn	18 01 15.3	-0.5
S22A	4UR Ranch, Cre	6.35	192	Pn	Pn	18 01 17.5	+1.2
PV13	Radium Mtn., P	6.43	207	Pn	Pn	18 01 16.9	-0.5
TMUT	Trail Mountain	6.50	226	Pn	Pn	18 01 17.3	-1.1
NLU	North Lily Min	6.52	234	Pn	Pn	18 01 18.3	-0.3
N33A	J Bar K, Exete	6.58	117	Pn	Pn	18 01 17.7	-1.6
Q16A	Castle Valley	6.76	224	Pn	Pn	18 01 21.6	-0.4
MSO	Missoula	6.79	298	Pn	Pn	18 01 22.2	0.0
DUG	Dugway, Tooele	6.82	239	Pn	Pn	18 01 23.1	+0.5
T25A	Trinidad	6.86	175	Pn	Pn	18 01 24.2	+1.0
WALA	Waterton Lakes	7.87	313	Pn	Pn	18 01 35.9	-1.2
I10CA	LAC DU BONNET	8.81	42	I	I	18 54 10.0	
	baz=223,slow=332,SNR=3.9						
ULM	Lac du Bonnet	8.92	42	Pn	Pn	18 01 49.6	-1.7
	comp=N,0.8nm,0.3s,baz=224,slow=13,SNR=6.6						
ULM				Lg	Lg	18 04 16.9	
	comp=N,0.2nm,0.3s,baz=161,slow=22,SNR=3.6 comp=N,1.9nm,0.4s						

IDC 11 18:02:50.6±13.0,**38°.14S**×**95°.65W,h0^{km},mb3.8**/4,**mbtmp3.8**/4,**MS3.8**/1,**Error ellipse: s-maj=361.9km s-min=53.0km az=4.0,Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	14.20	77	T	T	18 20 07.8	
	baz=251,slow=74,SNR=64						
H03S1	Juan Fernandez	14.21	78	T	T	18 20 07.9	
	baz=251,slow=74,SNR=56						
H03S3	Juan Fernandez	14.22	77	T	T	18 20 06.7	
	baz=251,slow=74,SNR=89						
H03N2	Juan Fernandez	14.35	76	T	T	18 20 36.7	
	baz=248,slow=72,SNR=47						
H03N3	Juan Fernandez	14.35	76	T	T	18 20 25.8	
	baz=248,slow=72,SNR=33						
H03N1	Juan Fernandez	14.37	76	T	T	18 20 14.7	
	baz=248,slow=72,SNR=43						
LVC	Limon Verde	27.65	64	LR	LR	18 16 23.5	
	comp=Z,189nm,19.1s,baz=284,slow=29						
LPAZ	La Paz	32.54	56	P	P	18 09 24.1	+0.1
	0.5nm,0.4s,baz=210,slow=8.1,SNR=3.8 0.5nm,0.4s						
TXAR	Lajitas Array	67.54	352	P	P	18 13 48.6	0.0
	0.7nm,1.0s,baz=171,slow=6.9,SNR=5.2						

	0.7nm,1.0s						
NVAR	**Mina Array Bea**	**79.00**	**342**	P	P	18 14 57.1	+0.8
	0.3nm,0.5s,baz=177,slow=7.8,SNR=3.5						
	0.3nm,0.5s						
PDAR	**Pinedale Array**	**81.51**	**350**	P	P	18 15 09.2	-0.6
	1.1nm,0.9s,baz=157,slow=5.8,SNR=7.2						
	1.1nm,0.9s						

IDC 11 18:04:44.0±8.4**,31°.72S×179°.93E,h435^{km}**±103^{km}**,**
mb2.5/2**,mbtmp3.5**/3**,Error ellipse: s-maj=108.2km**
s-min=47.1km az=6.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.92**	**199**	P	P	18 06 28.8	+1.3
	4.4nm,0.4s,baz=27,slow=2.1,SNR=6.1						
URZ				S	S	18 07 50.8	-1.2
	7.0nm,0.4s,baz=333,slow=16,SNR=8.8						
ASAR	**Alice Springs**	**41.29**	**269**	P	P	18 11 50.0	+0.1
	0.2nm,0.7s,baz=102,slow=8.7,SNR=4.2						
	0.2nm,0.7s						
WRA	**Warramunga Arr**	**42.40**	**275**	P	P	18 11 58.6	-0.2
	0.2nm,0.3s,baz=112,slow=7.8,SNR=5.2						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**145.74**	**338**	PKPbc	PKPdf	18 23 31.4	+0.3
	1.6nm,0.9s,baz=42,slow=3.1,SNR=5.2						

MAN 11 18:07:21.4,15°.86N×120°.08E,h10^{km},mb4.3,ML3.1,
MS2.8,4C-5D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPP	**San Manuel, Pa**	**0.64**	**63**	⇓*e*P	Pb	18 07 34.6	-0.1
SMPP				*e*S	Sb	18 07 44.4	+0.6
PCPH	**Palayan**	**1.02**	**107**	⇓*e*P	Pg	18 07 39.5	-1.5
PCPH				*e*S	Sg	18 07 53.1	-1.2
BALP	**Baler**	**1.44**	**94**	⇑*e*P	Pn	18 07 46.7	-0.9
BALP				*e*S	Sb	18 08 07.3	+0.5
SAMP	**Sagada Mountai**	**1.45**	**33**	⇑*e*P	Pn	18 07 46.7	-0.9
SAMP				*e*S	Sg	18 08 08.9	+0.9
MACP	**Maragondon, Ca**	**1.70**	**159**	⇓*e*P	Pn	18 07 51.1	0.0
ABRA	**Dolores**	**1.88**	**19**	⇓*e*P	Pn	18 07 53.8	+0.2
ABRA				*e*S	Sn	18 08 18.3	+0.9
CAUP	**Cauayan**	**1.99**	**57**	⇓*e*P	Pb	18 07 57.1	-0.6
CAUP				*e*S	Sg	18 08 24.4	-1.0
LUBP	**Lubang**	**2.12**	**176**	⇑*e*P	Pn	18 07 56.8	-0.1
LUBP				*e*S	Sn	18 08 23.2	0.0
LQP	**Lukban**	**2.23**	**141**	⇑*e*P	Pn	18 07 57.3	-1.4
LQP				*e*S	Sb	18 08 28.9	-0.9

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*IDC **11** 18:18:47.3±2.2,30°.36S×177°.61W,h0^{km},mb3.8/3,*
mbtmp3.8/3,Error ellipse: s-maj=48.5km s-min=24.0km
az=105.0

*NEIC **11** 18:18:48.8±1.2,30°.4S±0°.1×177°.65W±0°.05,h10^{km}±2^{km},*
mb4.1/7,Error ellipse: s-maj=18.5km s-min=8.1km
az=176.0

ISC 11 18:18:48.4±1.3**,30°.48S**±0°.07×**177°.8W**±0°.2**,h10^{km},n18,**
σ1^{s}.12/19**,mb4.0**/7**,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.23**	**354**	Pn	**Pn**	**18 19 11.0**	**-0.6**
	44nm,0.3s,baz=102,slow=20,SNR=1.6						
RAO				Sn	**Sb**	**18 19 27.1**	**-0.4**
	411nm,0.3s,baz=149,slow=20,SNR=11						
RAO	**Raoul Island**	**1.23**	**354**	Pn	**Pn**	**18 19 11.0**	**-0.6**
URZ	**Urewera**	**8.84**	**207**	Pn	Pn	18 20 48.8	-7.3
	1.0nm,0.3s,baz=277,slow=21,SNR=0.9						
URZ				Sn	**Sn**	**18 22 34.5**	**-1.3**
	0.6nm,0.3s,baz=99,slow=5.4,SNR=1.8						
RTZ	**Ruatahuna**	**9.20**	**207**	Pn	**Pn**	**18 20 59.9**	**-1.3**
BKZ	**Black Stump Fm**	**9.86**	**207**	Pn	**Pn**	**18 21 09.9**	**-0.4**
CTAO	**Charters Tower**	**34.00**	**279**	P	**P**	**18 25 31.8**	**-0.7**
STKA	**Stephens Creek**	**34.65**	**257**	P	**P**	**18 25 40.6**	**+2.6**
	1.9nm,0.7s,baz=98,slow=14,SNR=3.8						
	1.9nm,0.7s						
STKA	**Stephens Creek**	**34.65**	**257**	P	**P**	**18 25 37.5**	**-0.6**
STKA				IAmb	IAmb	18 25 44.4	
	comp=Z,1.8nm,1.4s						
AS31	**Alice Springs**	**43.30**	**267**	P	**P**	**18 26 51.7**	**+1.1**
AS31				IAmb	IAmb	18 27 13.9	
	comp=Z,1.1nm,1.1s						
ASAR	**Alice Springs**	**43.30**	**267**	P	**P**	**18 26 51.9**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=107,slow=7.5,SNR=21						
	comp=Z,0.2nm,0.3s						
ASAR	**Alice Springs**	**43.30**	**267**	P	**P**	**18 26 51.5**	**+0.9**
WRAB	**Tennant Creek**	**44.29**	**272**	P	**P**	**18 26 58.9**	**+0.3**
WRAB				IAmb	IAmb	18 27 11.9	
	comp=Z,9.0nm,1.4s						
WRA	**Warramunga Arr**	**44.29**	**272**	P	**P**	**18 26 60.0**	**+1.4**
	comp=Z,0.6nm,0.4s,baz=110,slow=8.1,SNR=13						
	comp=Z,0.6nm,0.4s						
WRA	**Warramunga Arr**	**44.29**	**272**	P	**P**	**18 26 59.7**	**+1.1**
WB0	**Warramunga Arr**	**44.32**	**272**	P	**P**	**18 26 59.1**	**+0.3**
WB0				IAmb	IAmb	18 27 26.9	
	comp=Z,7.7nm,1.4s						
QSPA	**South Pole Qui**	**59.63**	**180**	P	**P**	**18 28 53.6**	**+1.2**
QSPA				IAmb	IAmb	18 28 58.2	
	comp=Z,2.6nm,1.1s						
FINES	**FINESS Array B**	**145.28**	**340**	PKPbc	**PKPdf**	**18 38 25.2**	**-0.5**
	comp=Z,1.7nm,0.6s,baz=55,slow=4.2,SNR=22						
AKASG	**Malin Array Be**	**151.48**	**323**	PKPbc	**PKiKP**	**18 38 42.3**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=32,slow=2.4,SNR=4.1						

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*IDC **11** 18:36:22.8±1.6,5°.03S×73°.12E,h0^{km},mb3.5/3,*
mbtmp3.6/4,ML3.5/1,Error ellipse: s-maj=152.2km
s-min=27.4km az=106.0

ISC 11 18:36:24.2±1.1**,5°.1S**±0°.2×**73°.2E**±0°.6**,h10^{km},n9,**σ**0^{s}.64**/7**,**
mb3.6/3**,Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**2.65**	**196**	Pn	**Pn**	**18 37 06.3**	**-0.4**
	baz=79,slow=74						
H08S3				Sn	**Sn**	**18 37 39.1**	**+0.3**
H08S2	**Diego Garcia H**	**2.66**	**196**	Pn	**Pn**	**18 37 06.8**	**-0.1**
	baz=226,slow=74						
PALK	**Pallekele**	**14.35**	**31**	Pn	**Pn**	**18 39 47.4**	**-0.2**
	0.2nm,0.3s,baz=234,slow=19,SNR=1.3						
PALK				Sn	Sn	18 42 17.9	-9.0
	0.2nm,0.3s,baz=27,slow=20,SNR=1.7						
	1.5nm,0.5s						
H01W3	**Cape Leeuwin H**	**48.01**	**134**	T	T	19 36 29.3	
	baz=298,slow=75,SNR=4.9						
H01W2	**Cape Leeuwin H**	**48.02**	**134**	T	T	19 36 36.7	
	baz=298,slow=75,SNR=5.3						
H01W1	**Cape Leeuwin H**	**48.03**	**134**	T	T	19 36 32.9	
	baz=298,slow=75,SNR=5.0						
MKAR	**Makanchi Array**	**52.26**	**8**	P	**P**	**18 45 34.8**	**-0.8**
	0.4nm,0.7s,baz=196,slow=9.0,SNR=2.5						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**59.60**	**8**	P	**P**	**18 46 28.7**	**+0.7**
	0.5nm,0.5s,baz=211,slow=8.2,SNR=3.6						
	0.5nm,0.5s						
SONM	**Songino Array**	**60.20**	**25**	P	**P**	**18 46 32.9**	**+0.4**
	0.5nm,0.9s,baz=213,slow=6.9,SNR=3.7						
	0.5nm,0.9s						

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*BJI **11** 18:48:35.8±0.0,30°.73N×130°.79E,h141^{km},mb5.3/88,*
mB5.4/60

*MOS **11** 18:48:40.4±1.0,31°.03N×130°.39E,h150^{km},mb5.7/73,*
MS4.0/4,Error ellipse: s-maj=5.5km s-min=3.3km
az=112.2

*IDC **11** 18:48:41.1±0.3,31°.00N×130°.35E,h142^{km}±2^{km},mb4.9/39,*
mbtmp5.3/46,MS4.0/35,Error ellipse: s-maj=7.8km
s-min=5.8km az=93.0

*NEIC **11** 18:48:41.0±1.9,31°.00N±0°.04×130°.39E±0°.07,*
h138^{km}±3^{km},mb5.5/475,Mwb5.4/14,Mww5.3/32,Error
ellipse: s-maj=8.8km s-min=6.4km az=97.0,Moment
Tensor Solution. Moment tensor: Scale 10^{17}Nm;
M_{rr}0.92; $M_{\theta\theta}$-0.05; $M_{\phi\phi}$-0.87; $M_{r\theta}$0.39; $M_{\theta\phi}$-0.59; $M_{\phi r}$1.26;
Fault plane solution: $M_0$1.70000×10^{17} NP1:
ϕ_s220.92000°,δ20.44000°,λ110.95000°. NP2:
ϕ_s18.70000°,δ70.96000°,λ82.41000°. Principal axes: T
1.5726, Plg63.0000°, Azm277.0000°; N 0.2293,
Plg7.0000°, Azm21.0000°; P -1.8019, Plg26.0000°,
Azm115.0000°;

*NEIC **11** 18:48:41.4,31°.03N×130°.38E,h140^{km}*

*NEIC **11** 18:48:41.1,30°.99N×130°.40E,h140^{km}*

*NEIC **11** 18:48:41.4,30°.93N×130°.62E,h140^{km},Moment Tensor*
Solution. Duration: 2^{s}.3 Moment tensor: Scale 10^{17}Nm;
M_{rr}0.77; $M_{\theta\theta}$-0.24; $M_{\phi\phi}$-0.54; $M_{r\theta}$0.44; $M_{\theta\phi}$-0.34; $M_{\phi r}$0.69;
Fault plane solution: $M_0$1.12000×10^{17} NP1:ϕ_s32.98000°,
δ68.38000°,λ89.87000°. NP2:ϕ_s213.32000°,δ21.62000°,
λ90.32000°. Principal axes: T 1.1276, Plg67.0000°,
Azm303.0000°; N -0.0153, Plg0.0000°, Azm33.0000°; P
-1.1124, Plg23.0000°, Azm123.0000°;

*JMA **11** 18:48:42.2±0.1,31°.0N±0°.3×130°.4E±0°.6,h136^{km}±1^{km},*
MD5.1/40,MW5.3/40,NEAR TANEGASHIMA ISLAND

JMA Felt III J1 at NEAR TANEGASHIMA ISLAND .

*NIED **11** 18:48:42.2,30°.99N×130°.42E,h136^{km},MW5.3,Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm;
M_{rr}0.57; $M_{\theta\theta}$-0.12; $M_{\phi\phi}$-0.45; $M_{r\theta}$0.56; $M_{\theta\phi}$-0.29; $M_{\phi r}$0.77;
Fault plane solution: $M_0$1.12000×10^{17} NP1:ϕ_s35.00000°,
δ74.00000°,λ93.00000°. NP2:ϕ_s204.00000°,δ16.00000°,
λ79.00000°.

*GCMT **11** 18:48:43.0±0.1,31°.03N±0°.01×130°.37E±0°.01,*
h146^{km}±1^{km},MW5.4/145,Moment Tensor Solution.
s112,c172; s145,c258; Duration: 1^{s}.2 Moment tensor:
Scale 10^{17}Nm; M_{rr}0.69±.02; $M_{\theta\theta}$-0.26±.03; $M_{\phi\phi}$-0.42±.03;
$M_{r\theta}$0.69±.02; $M_{\theta\phi}$-0.31±.03; $M_{\phi r}$1.10±.02; Best double
couple: $M_0$1.46400×10^{17} NP1:ϕ_s33.00000°,δ76.00000°,
λ88.00000°. NP2:ϕ_s222.00000°,δ14.00000°,λ99.00000°.
Principal axes: T 1.4780, Plg59.0000°, Azm300.0000°; N
-0.0280, Plg2.0000°, Azm33.0000°; P -1.4500,
Plg31.0000°, Azm125.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
Triangular moment-rate function

*BGR **11** 18:48:44.9,31°.67N×131°.34E,h151^{km}±1^{km},mb6.1*

ISC 11 18:48:41.3±0.2**,31°.00N**±0°.02×**130°.38E**±0°.02**,h146^{km}**±1^{km}**,**
h146^{km}:pP-P,n1820,σ**1^{s}.38**/1887**,mb5.5**/491**,197C-55D,**
Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTSR	**Tashiro 2**	**0.50**	**70**	*i* P	**Pn**	**18 49 01.7**	**-0.4**
JTSR				S	**Sn**	**18 49 16.3**	**-1.7**
JTSR	**Tashiro 2**	**0.50**	**70**	A	A	18 49 01.7	
	comp=E,386nm,0.5s,comp=E,315nm,1.6s						
JSU	**Suzuyama**	**0.51**	**7**	Pn	**Pn**	**18 49 02.2**	**0.0**
JSU				Sn	**Sn**	**18 49 16.9**	**-1.3**
JSU	**Suzuyama**	**0.51**	**7**	*i* P	**Pn**	**18 49 02.2**	**0.0**
JSU				S	**Sn**	**18 49 17.3**	**-1.0**
JSU	**Suzuyama**	**0.51**	**7**	A	A	18 49 02.2	
	comp=E,262nm,1.8s,comp=E,285nm,2.3s						
JKC	**Kuchinoerabu**	**0.56**	**196**	*i* P	**Pn**	**18 49 02.4**	**-0.1**
JKC				S	**Sn**	**18 49 17.7**	**-0.8**
JKC	**Kuchinoerabu**	**0.56**	**196**	A	A	18 49 02.4	
	comp=E,93nm,2.8s,comp=E,119nm,1.6s						
JTN	**Tanegashima 3**	**0.62**	**123**	*i* P	**Pn**	**18 49 02.6**	**-0.2**
JTN				S	**Sn**	**18 49 18.3**	**-0.8**
JTN	**Tanegashima 3**	**0.62**	**123**	A	A	18 49 02.6	
	comp=E,194nm,1.2s,comp=E,126nm,0.3s						
JMTN	**Minamitane**	**0.75**	**143**	*i* P	**Pn**	**18 49 03.4**	**-0.3**
JMTN				S	**Sn**	**18 49 19.6**	**-1.0**
JMTN	**Minamitane**	**0.75**	**143**	A	A	18 49 03.4	
	comp=E,190nm,2.1s,comp=E,123nm,1.3s						
JYAK	**Yakushimahirau**	**0.77**	**171**	*i* P	**Pn**	**18 49 03.5**	**-0.3**
JYAK				S	**Sn**	**18 49 19.8**	**-1.1**
JYAK	**Yakushimahirau**	**0.77**	**171**	A	A	18 49 03.5	
	comp=E,536nm,1.6s,comp=E,279nm,0.6s						
JSJ	**Shimokoshiki**	**0.88**	**320**	⇓*i*P	**Pn**	**18 49 04.5**	**-0.2**
JSJ				⇓S	**Sn**	**18 49 21.9**	**-0.7**
JSJ	**Shimokoshiki**	**0.88**	**320**	A	A	18 49 04.5	
	comp=E,161nm,2.1s,comp=E,88nm,3.1s						
JNAR	**Kushima--Naru**	**0.93**	**55**	*i* P	**Pn**	**18 49 05.2**	**+0.1**
JNAR				S	**Sn**	**18 49 22.7**	**-0.4**
JNAR	**Kushima--Naru**	**0.93**	**55**	A	A	18 49 05.2	
	comp=E,128nm,2.6s,comp=E,141nm,2.0s						
JNKG	**Nichinankitago**	**1.08**	**52**	P	**Pn**	**18 49 06.5**	**+0.1**
JNKG				S	**Sn**	**18 49 24.5**	**-1.0**
JNKG	**Nichinankitago**	**1.08**	**52**	A	A	18 49 06.5	
	comp=E,74nm,1.1s,comp=E,159nm,1.9s						
JTZ	**Takazaki**	**1.09**	**34**	*i* P	**Pn**	**18 49 06.4**	**0.0**
JTZ				S	**Sn**	**18 49 24.3**	**-1.3**
JTZ	**Takazaki**	**1.09**	**34**	A	A	18 49 06.4	
	comp=E,141nm,1.1s,comp=E,145nm,1.7s						
JZO	**Okuchi**	**1.16**	**9**	P	**Pn**	**18 49 07.3**	**+0.2**
JZO				S	**Sn**	**18 49 26.6**	**-0.2**
JZO	**Okuchi**	**1.16**	**9**	A	A	18 49 07.3	
	comp=E,142nm,4.1s,comp=E,113nm,1.7s						
JNN	**Nakanoshima**	**1.23**	**201**	*i* P	**Pn**	**18 49 08.0**	**+0.2**
JNN				S	**Sn**	**18 49 28.6**	**+0.6**
JNN	**Nakanoshima**	**1.23**	**201**	A	A	18 49 08.0	
	comp=E,189nm,0.7s,comp=E,195nm,0.7s						
JHD	**Hondo**	**1.48**	**352**	A	A	18 49 10.9	
	comp=E,95nm,3.4s,comp=E,67nm,2.4s						
JTSN	**Tsuno**	**1.57**	**37**	A	A	18 49 11.6	
	comp=E,38nm,2.3s,comp=E,40nm,4.8s						
JIU3	**Izumi3**	**1.59**	**13**	*i* P	**Pn**	**18 49 12.1**	**+0.6**
JIU3				S	**Sn**	**18 49 34.2**	**-0.5**
JIU3	**Izumi3**	**1.59**	**13**	A	A	18 49 12.1	
	comp=E,122nm,1.6s,comp=E,81nm,3.1s						
NGSJ	**Nagasakinomoza**	**1.70**	**343**	A	A	18 49 13.5	
	comp=E,60nm,3.0s,comp=E,40nm,2.1s						
JHHC	**Hyugahichiya**	**1.80**	**36**	A	A	18 49 14.2	
	comp=E,23nm,3.3s,comp=E,31nm,4.1s						
JKIT	**Kitakata**	**1.86**	**29**	A	A	18 49 15.0	
	comp=E,25nm,1.3s,comp=E,36nm,3.2s						
JTA	**Tamana**	**1.97**	**4**	A	A	18 49 16.5	
	comp=E,26nm,4.2s,comp=E,33nm,4.6s						
JTAJ	**Takarajima**	**2.10**	**209**	*i* P	**Pn**	**18 49 17.9**	**+0.5**
JTAJ				S	**Sn**	**18 49 45.3**	**+0.2**
JTAJ	**Takarajima**	**2.10**	**209**	A	A	18 49 17.9	
	comp=E,23nm,3.7s,comp=E,30nm,2.3s						
JUR	**Ureshino**	**2.12**	**350**	A	A	18 49 18.5	
	comp=E,33nm,4.1s,comp=E,33nm,2.9s						
JFU	**Fukue jima 2**	**2.16**	**320**	A	A	18 49 19.1	
	comp=E,17nm,2.8s,comp=E,34nm,2.1s						
JNU	**Nakatsue**	**2.16**	**11**	P	**Pn**	**18 49 18.4**	**+0.3**
	2μm,0.7s,baz=211,slow=8.0,SNR=1937						
JNU				S	**Sn**	**18 49 44.9**	**-1.6**
	7μm,0.9s,baz=256,slow=22,SNR=21						
JNU	**Nakatsue**	**2.16**	**11**	Pn	**Pn**	**18 49 18.4**	**+0.3**
JNU				Sn	**Sn**	**18 49 45.8**	**-0.7**
JNU	**Nakatsue**	**2.16**	**11**	P	**Pn**	**18 49 19.1**	**+1.0**
JNU	**Nakatsue**	**2.16**	**11**	A	A	18 49 18.8	
	comp=E,23nm,1.9s,comp=E,44nm,2.7s						
JSKE	**Saikikamae**	**2.21**	**35**	A	A	18 49 19.3	
	comp=E,31nm,1.8s,comp=E,22nm,2.1s						
JUS	**Usuki**	**2.37**	**29**	A	A	18 49 21.3	
	comp=E,24nm,1.2s,comp=E,30nm,2.3s						
JFI	**Itaya**	**2.42**	**0**	A	A	18 49 22.2	
	comp=E,26nm,4.6s,comp=E,21nm,2.3s						
JBEP	**Beppuamama**	**2.49**	**20**	A	A	18 49 22.9	
	comp=E,27nm,2.0s,comp=E,38nm,2.0s						
JAM	**Amami Oshima**	**2.66**	**195**	A	A	18 49 25.1	
	comp=E,24nm,1.7s,comp=E,30nm,4.1s						
JZK	**Kikaishima**	**2.70**	**188**	A	A	18 49 25.5	
	comp=E,99nm,1.3s,comp=E,134nm,1.1s						
JFA	**Akaike**	**2.73**	**7**	A	A	18 49 26.1	
	comp=E,19nm,2.8s,comp=E,18nm,3.9s						
JTO	**Tosashimizu**	**2.77**	**47**	A	A	18 49 26.3	
	comp=E,20nm,1.6s,comp=E,11nm,0.6s						
JKI	**Kunimi**	**2.81**	**21**	A	A	18 49 27.1	
	comp=E,12nm,3.1s,comp=E,17nm,3.6s						
JII	**Iki**	**2.84**	**349**	A	A	18 49 27.7	
	comp=E,22nm,3.3s,comp=E,17nm,3.8s						
UWA2	**Uwa jima 2**	**2.92**	**40**	A	A	18 49 28.3	
	comp=E,7.0nm,3.7s,comp=E,11nm,2.2s						
JAMN	**Amaminishikomi**	**2.94**	**201**	A	A	18 49 28.8	
	comp=E,25nm,0.7s,comp=E,30nm,1.7s						
JNA	**Nagahama**	**3.11**	**34**	A	A	18 49 30.8	
	comp=E,8.0nm,3.0s,comp=E,9.0nm,2.0s						
JKU	**Kubokawa**	**3.24**	**44**	A	A	18 49 32.5	
	comp=E,12nm,2.2s,comp=E,12nm,2.3s						
JKD	**Kudamatsu**	**3.30**	**22**	A	A	18 49 33.4	
	comp=E,7.0nm,8.3s,comp=E,7.0nm,5.5s						
JTY	**Toyota**	**3.31**	**10**	A	A	18 49 33.6	
	comp=E,9.0nm,2.0s,comp=E,8.0nm,4.3s						
JTK	**Tokunoshima**	**3.43**	**202**	A	A	18 49 35.3	
	comp=E,22nm,0.8s,comp=E,22nm,0.7s						
JTSM	**Tsushimamitsus**	**3.44**	**346**	A	A	18 49 35.5	
	comp=E,9.0nm,3.3s,comp=E,9.0nm,2.2s						
JET	**Tanbara**	**3.58**	**38**	A	A	18 49 37.0	
	comp=E,8.0nm,7.9s,comp=E,8.0nm,10.0s						
JTU	**Tsushima**	**3.61**	**347**		**Pn**	**18 49 36.3**	**0.0**
JTU				Sn	**Sn**	**18 50 19.9**	**+0.8**
JTU	**Tsushima**	**3.61**	**347**	P	**Pn**	**18 49 37.2**	**+0.9**
JTU	**Tsushima**	**3.61**	**347**	A	A	18 49 37.9	
	comp=E,6.0nm,3.9s,comp=E,6.0nm,4.1s						
JHM	**Kurahashi**	**3.62**	**30**	A	A	18 49 37.6	
	comp=E,6.0nm,3.5s,comp=E,5.0nm,2.0s						
JKHR	**Kochiharuno**	**3.64**	**46**	A	A	18 49 37.8	
	comp=E,19nm,1.0s,comp=E,16nm,2.7s						
JHIK	**Hikimi**	**3.76**	**20**	A	A	18 49 39.5	
	comp=E,6.0nm,4.6s,comp=E,5.0nm,1.9s						
JHGM	**Hagimishima**	**3.83**	**9**	A	A	18 49 40.5	
	comp=E,12nm,3.9s,comp=E,8.0nm,2.4s						
JOKE	**Okinoerabujima**	**3.95**	**204**	A	A	18 49 42.3	
	comp=E,12nm,1.1s,comp=E,8.0nm,4.6s						
MRT2	**Murotomisaki 2**	**3.98**	**52**	A	A	18 49 42.3	
	comp=E,14nm,3.0s,comp=E,15nm,1.1s						
JMN	**Monobe**	**4.02**	**46**	Pn	**Pn**	**18 49 41.4**	**-0.4**
JMN				Sn	**Sn**	**18 50 24.8**	**-4.0**
JMN	**Monobe**	**4.02**	**46**	P	**Pn**	**18 49 41.8**	**0.0**
JMN	**Monobe**	**4.02**	**46**	A	A	18 49 42.8	
	comp=E,21nm,1.0s,comp=E,14nm,1.0s						
JHT	**Toyohira**	**4.04**	**25**	A	A	18 49 43.2	
	comp=E,5.0nm,4.4s,comp=E,5.0nm,3.7s						
JYRO	**Yoronjima**	**4.30**	**204**	A	A	18 49 47.0	
	comp=N,9.0nm,4.1s						
JJG	**Jouge**	**4.32**	**32**	A	A	18 49 46.9	
	comp=E,4.0nm,3.1s,comp=E,5.0nm,5.6s						
JMAF	**Mimaanabuki**	**4.40**	**45**	A	A	18 49 47.9	
	comp=E,14nm,1.2s,comp=E,9.0nm,1.2s						
JAI	**Aioi**	**4.43**	**50**	A	A	18 49 48.3	
	comp=E,17nm,1.7s,comp=E,12nm,1.5s						
JGT2	**ShimaneMisato**	**4.43**	**23**	A	A	18 49 48.5	
	comp=E,6.0nm,2.3s						
JIH	**Iheya**	**4.48**	**209**	A	A	18 49 49.3	
	comp=E,6.0nm,1.2s,comp=E,5.0nm,4.3s						
JJS	**Sakaide**	**4.51**	**41**	A	A	18 49 49.4	
	comp=E,6.0nm,1.7s,comp=E,6.0nm,2.7s						
JOW	**Kunigami**	**4.54**	**204**	P	**Pn**	**18 49 47.3**	**-1.3**
	157nm,0.3s,baz=88,slow=20,SNR=161						
JOW				S	**Sn**	**18 50 36.8**	**-4.1**
	587nm,0.3s,baz=39,slow=28,SNR=16						
JOW				LR	LR	18 51 46.6	
	comp=Z,1μm,19.1s,baz=346,slow=41						
JOW	**Kunigami**	**4.54**	**204**	Pn	**Pn**	**18 49 47.4**	**-1.1**
JOW				Sn	**Sn**	**18 50 36.5**	**-4.5**
JOW	**Kunigami**	**4.54**	**204**	P	**Pn**	**18 49 48.4**	**-0.2**
JOW	**Kunigami**	**4.54**	**204**	A	A	18 49 50.1	
	comp=E,3.0nm,0.9s,comp=E,6.0nm,5.2s						
JHS	**Saijyo**	**4.61**	**29**		**Pn**	**18 49 48.5**	**-1.0**
JHS	**Saijyo**	**4.61**	**29**	P	**Pn**	**18 49 50.0**	**+0.6**
JHS	**Saijyo**	**4.61**	**29**	A	A	18 49 50.8	
	comp=E,5.0nm,4.7s,comp=E,4.0nm,4.1s						
JISK	**Izumosakaura**	**4.95**	**24**	A	A	18 49 55.4	
	comp=E,7.0nm,1.7s,comp=E,6.0nm,4.1s						
JWM	**Minabe**	**5.08**	**55**	A	A	18 49 57.0	
	comp=E,6.0nm,1.8s,comp=E,8.0nm,1.9s						
JKDJ	**Kitadaitoujima**	**5.09**	**171**	A	A	18 49 57.3	
	comp=E,21nm,3.7s,comp=E,15nm,3.1s						
JAWN	**Awajishima-nag**	**5.16**	**46**	A	A	18 49 58.1	
	comp=E,4.0nm,3.0s,comp=E,8.0nm,2.6s						
JWKM	**Wakayamakushim**	**5.17**	**60**	A	A	18 49 58.2	
	comp=E,9.0nm,5.0s,comp=E,12nm,1.8s						
JMZ	**Minamidaito 2**	**5.21**	**172**	Pn	**Pn**	**18 49 56.6**	**-0.9**
JMZ				Sn	**Sn**	**18 50 51.3**	**-5.6**
JMZ	**Minamidaito 2**	**5.21**	**172**	P	**Pn**	**18 49 57.6**	**+0.1**
JMZ	**Minamidaito 2**	**5.21**	**172**	A	A	18 49 58.9	
	comp=E,16nm,2.8s,comp=E,26nm,3.0s						
JTNC	**Tanabenakahech**	**5.24**	**56**	A	A	18 49 59.2	
	comp=E,8.0nm,1.3s,comp=E,11nm,0.9s						
JJT3	**Tamagusuku3**	**5.35**	**206**	A	A	18 50 01.0	
	comp=E,10.0nm,5.2s,comp=E,12nm,4.2s						
JMIK	**Miki**	**5.47**	**45**	A	A	18 50 02.3	
	comp=E,4.0nm,1.4s,comp=E,4.0nm,3.7s						
JMMH	**Miemihama**	**5.54**	**58**	A	A	18 50 03.2	
	comp=E,6.0nm,2.3s,comp=E,6.0nm,1.0s						
TJN	**Taejon**	**5.92**	**336**		**Pn**	**18 50 08.4**	**+1.5**
TJN	**Taejon**	**5.92**	**336**	P	**Pn**	**18 50 09.1**	**+2.2**
TJN	**Taejon**	**5.92**	**336**	*ce*P	**Pn**	**18 50 08.6**	**+1.7**
JKN2	**Miekihoku**	**5.93**	**55**	A	A	18 50 08.5	
	comp=E,5.0nm,2.7s,comp=E,6.0nm,6.0s						
JKY	**Yasaka**	**6.08**	**39**	A	A	18 50 10.6	
	comp=E,3.0nm,4.5s,comp=E,4.0nm,3.2s						
TSUJ	**Tsu 2**	**6.29**	**52**	A	A	18 50 13.3	
	comp=N,7.0nm,1.4s						
JIE	**Ise**	**6.32**	**56**	A	A	18 50 13.7	
	comp=E,5.0nm,7.4s,comp=E,5.0nm,2.6s						
JEG	**Eigenji**	**6.52**	**49**	A	A	18 50 16.4	
	comp=E,3.0nm,1.6s,comp=E,3.0nm,3.0s						
KSAR	**Wonju Array Be**	**6.75**	**343**		**Pn**	**18 50 19.3**	**+1.4**
KSAR	**Wonju Array Be**	**6.75**	**343**	P	**Pn**	**18 50 19.3**	**+1.4**
KSRS	**Korea Array**	**6.75**	**343**	P	**Pn**	**18 50 19.0**	**+1.1**
	103nm,0.9s,baz=160,slow=15,SNR=173						
KSRS				ScP	**ScP**	**19 00 13.5**	**-0.2**
	6.0nm,1.0s,baz=191,slow=1.5,SNR=12						
KS19	**Wonju Array Si**	**6.81**	**343**		**Pn**	**18 50 19.5**	**+0.7**
JICN	**Ichinomiyachia**	**6.92**	**50**	A	A	18 50 21.7	
	comp=E,10.0nm,1.2s,comp=E,8.0nm,1.9s						
JYTA	**Yamagatataniai**	**7.02**	**48**	A	A	18 50 23.2	
	comp=E,4.0nm,1.3s,comp=E,4.0nm,1.1s						
INU	**Inuyama**	**7.06**	**50**	Pn	**Pn**	**18 50 23.1**	**+1.1**
INU	**Inuyama**	**7.06**	**50**	P	**Pn**	**18 50 24.6**	**+2.6**
JAO	**Obara**	**7.17**	**52**	A	A	18 50 25.2	
	comp=E,4.0nm,1.8s,comp=E,6.0nm,1.9s						
INCN	**Inchon**	**7.17**	**335**	Pn	**Pn**	**18 50 25.3**	**+1.7**
INCN	**Inchon**	**7.17**	**335**	P	**Pn**	**18 50 25.9**	**+2.3**
INCN	**Inchon**	**7.17**	**335**	P	**Pn**	**18 50 25.3**	**+1.7**
INCN	**Inchon**	**7.17**	**335**	P	**Pn**	**18 50 25.9**	**+2.3**
INCN				S	**Sn**	**18 51 48.6**	**+4.8**
HMMJ	**Hamamatsu 2**	**7.27**	**56**	A	A	18 50 26.5	
	comp=N,3.0nm,2.3s						
JGF	**Kuroka**	**7.43**	**50**		**Pn**	**18 50 27.6**	**+0.5**
JGF	**Kuroka**	**7.43**	**50**	P	**Pn**	**18 50 29.1**	**+2.0**
JSG	**Sagara**	**7.52**	**59**	Pn	**Pn**	**18 50 31.3**	**+3.0**
JNY	**Yasuok**	**7.63**	**53**	A	A	18 50 31.4	
	comp=N,4.0nm,1.7s						
SSE	**Sheshan**	**7.89**	**273**	P	**Pn**	**18 50 33.8**	**+0.6**
SSE				S	**Sn**	**18 52 01.6**	**+0.6**
SSE				pmax	pmax		
	comp=Z,120nm,0.8s						
SSE				pmax	pmax		
	comp=Z,310nm,4.5s						
SSE				LR	LR		
	comp=N,1μm,10.7s						
SSE				LR	LR		
	comp=E,1μm,10.7s						
JHJ	**Hachijo jima 2**	**8.26**	**73**	P	**Pn**	**18 50 41.6**	**+3.5**
	398nm,0.3s,baz=258,slow=18,SNR=29						
JHJ				S	**Sn**	**18 52 10.8**	**+0.8**
	409nm,1.1s,baz=124,slow=11,SNR=1.4						
JHJ				LR	LR	18 52 47.4	
	comp=Z,662nm,19.5s,baz=277,slow=30						
JHJ2	**Mitsune**	**8.29**	**73**		**Pn**	**18 50 41.4**	**+3.0**
MAJO	**Matsushiro**	**8.55**	**48**		**Pn**	**18 50 42.6**	**+0.6**
MAJO	**Matsushiro**	**8.55**	**48**	P	**Pn**	**18 50 43.9**	**+1.9**
MAJO	**Matsushiro**	**8.55**	**48**	*i* P	**Pn**	**18 50 42.4**	**+0.4**
MJB9	**Matsu-Tunnel**	**8.55**	**48**		**Pn**	**18 50 42.4**	**+0.4**
MJAR	**Matsushiro Arr**	**8.55**	**48**	P	**Pn**	**18 50 42.7**	**+0.7**
	32nm,0.5s,baz=238,slow=14,SNR=160						
MJAR				S	**Sn**	**18 52 11.1**	**-5.9**
	48nm,1.0s,baz=229,slow=14,SNR=5.4						
MJAR				LR	LR	18 54 27.8	
	comp=Z,691nm,18.5s,baz=228,slow=40						
YOJ	**Yonaguni jima**	**9.22**	**227**	Pn	**Pn**	**18 50 49.1**	**-1.8**
YOJ	**Yonaguni jima**	**9.22**	**227**	P	**Pn**	**18 50 49.2**	**-1.8**
JSD	**Sado**	**9.57**	**41**		**Pn**	**18 50 55.4**	**-0.2**
JSD	**Sado**	**9.57**	**41**	P	**Pn**	**18 50 57.7**	**+2.2**
TATO	**Taipei**	**9.88**	**235**		**Pn**	**18 51 01.2**	**+1.4**
TATO	**Taipei**	**9.88**	**235**	P	**Pn**	**18 51 01.7**	**+1.9**
TATO	**Taipei**	**9.88**	**235**	P	**Pn**	**18 51 01.2**	**+1.4**
TATO				S	**Sn**	**18 52 46.2**	**-3.0**
NJ2	**Nanjing**	**9.89**	**279**	⇓P	**Pn**	**18 51 01.8**	**+1.9**
NJ2				sP		18 51 31.7	
NJ2				S	**Sn**	**18 52 48.7**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,93nm,0.9s						
NJ2				LR	LR		
	comp=N,2μm,8.5s						
NJ2				LR	LR		
	comp=E,1μm,9.9s						
NJ2				LR	LR		
	comp=Z,2μm,12.8s						
YHNB	**Yeheng**	**10.15**	**234**		**Pn**	**18 51 03.4**	**-0.1**
YHNB	**Yeheng**	**10.15**	**234**	P	**Pn**	**18 51 04.3**	**+0.8**
NACB	**Ninganchiao**	**10.34**	**231**		**Pn**	**18 51 03.3**	**-2.5**
NACB	**Ninganchiao**	**10.34**	**231**	P	**Pn**	**18 51 06.0**	**+0.2**
DL2	**Dalian**	**10.66**	**320**	P	**Pn**	**18 51 11.5**	**+1.5**
DL2				sP		18 51 46.3	

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DL2                                S      Sn      18 53 13.2 +5.4
DL2                                pmax   pmax
      comp=Z,72nm,1.0s
DL2                                pmax   pmax
      comp=Z,350nm,5.6s
JMM   Marumori         10.99  49          Pn      18 51 14.6 +0.2
JMM   Marumori         10.99  49   P      Pn      18 51 17.6 +3.2
SSLB  Suanglung        11.03 232          Pn      18 51 11.5 -3.5
JCJ   Chichijima       11.04 108   P      Pn      18 51 16.7 +1.6
      1µm,0.9s,baz=295,slow=3.2,SNR=34
JCJ                                S      Sn      18 53 20.1 +3.0
      48nm,0.6s,baz=303,slow=23,SNR=1.1
JCJ   Chichijima       11.04 108          Pn      18 51 16.3 +1.1
JCJ   Chichijima       11.04 108   P      Pn      18 51 17.8 +2.7
YULB  Yu-li            11.07 229          Pn      18 51 11.1 -4.5
TPUB  Ta-pu            11.57 231          Pn      18 51 18.4 -3.8
TWG   Pinlang          11.62 228   Pn     Pn      18 51 19.2 -3.7
SNY   Shenyang         12.11 335 ⇑P      Pn      18 51 31.0 +2.0
SNY                                sP     sPn     18 52 05.7 +1.6
SNY                                S      Sn      18 53 48.0 +5.3
SNY                                pmax   pmax
      comp=Z,81nm,1.0s
SNY                                LR     LR
      comp=N,2µm,5.7s
SNY                                LR     LR
      comp=E,3µm,5.9s
SNY                                LR     LR
      comp=Z,2µm,12.3s
VLA   Vladivostok      12.16   5c iP     P       18 51 32.9 -3.2
TIA   Tai'an           12.21 299   P      Pn      18 51 32.0 +1.6
TIA                                sP     sPn     18 52 09.6 +4.2
TIA                                S      S       18 53 54.9 -7.3
TIA                                PcP    PcP     18 56 54.0 -6.8
TIA                                ScS    ScS     19 03 55.7 -0.5
TIA                                pmax   pmax
      comp=Z,32nm,0.9s
TIA                                pmax   pmax
      comp=Z,420nm,4.5s
TIA                                LR     LR
      comp=N,1µm,9.1s
TIA                                LR     LR
      comp=E,700nm,9.8s
TIA                                LR     LR
      comp=Z,1µm,11.8s
KNMB  Chin-men Tao     12.45 241          Pn      18 51 34.8 +1.3
JTM   Tenmabayashi     13.05  39          Pn      18 51 42.7 +1.5
JTM   Tenmabayashi     13.05  39   P      Pn      18 51 42.5 +1.4
USA0B Ussuriysk Arra   13.24   5   Pn     Pn      18 51 44.0 +0.4
USA0B Ussuriysk Arra   13.24   5c iP     Pn      18 51 45.5 +1.9
USRK  Ussuriysk Ar.    13.24   5   P      Pn      18 51 42.5 -1.0
      6.7nm,0.9s,baz=196,slow=31,SNR=7.8
USRK  Ussuriysk Ar.    13.24   5          Pn      18 51 44.6 +1.1
USRK  Ussuriysk Ar.    13.24   5   P      Pn      18 51 44.7 +1.1
CN2   Changchun        13.37 344 ⇑P      P       18 51 48.3 -1.2
CN2                               esP     sPn     18 52 25.6 +4.4
CN2                               eS      Sn      18 54 13.3 +0.4
CN2                                pmax   pmax
      comp=Z,50nm,1.0s
CN2                                pmax   pmax
      comp=Z,700nm,3.0s
MDJ   Mudanjiang       13.61 358   P      P       18 51 50.5 -1.7
MDJ                                sP     sPn     18 52 27.3 +2.7
MDJ                                S      Sn      18 54 15.7 -3.1
MDJ                                pmax   pmax
      comp=Z,46nm,1.1s
MDJ                                pmax   pmax
      comp=Z,950nm,3.9s
MDJ   Mudanjiang       13.61 358          Pn      18 51 48.6 +0.3
MDJ   Mudanjiang       13.61 358   P      P       18 51 50.7 -1.5
      60nm,2.0s
WHN   Wuhan            13.79 272⇓iP      P       18 51 52.8 -1.5
WHN                                sP     sPn     18 52 31.2 +4.1
WHN                                S      S       18 54 29.3 -5.1
WHN                                pmax   pmax
      comp=Z,280nm,0.7s
WHN                                pmax   pmax
      comp=Z,3µm,2.7s
WHN                                LR     LR
      comp=N,8µm,4.6s
WHN                                LR     LR
      comp=E,3µm,3.4s
WHN                                LR     LR
      comp=Z,5µm,5.7s
HNS   HongShan         14.45 300 ⇑P      Pn      18 52 00.0 +1.1
HNS                                sP     sPn     18 52 36.4 +0.3
HNS                                S      Sn      18 54 41.2 +2.2
HNS                                pmax   pmax
      comp=Z,230nm,1.0s
HNS                                LR     LR
      comp=N,810nm,11.9s
HNS                                LR     LR
      comp=E,930nm,11.9s
HNS                                LR     LR
      comp=Z,1µm,10.4s
BJT   Baijiatuau       14.65 312          P       18 52 03.0 -0.7
BJT   Baijiatuau       14.65 312   P      P       18 52 04.6 +0.8
BJT   Baijiatuau       14.65 312   P      P       18 52 03.0 -0.7
BJI   Beijing          14.65 312   P      P       18 52 03.6 -0.2
BJI                                S      Sn      18 54 47.1 +3.2
BJI                                pmax   pmax
      comp=Z,500nm,0.9s
TEY   Ternei           14.84  17⇑eP      P       18 52 06.6 +0.7
TEY                               e               18 54 52.4
TEY                                pmax   pmax
      comp=N,200nm,3.3s
TEY                                pmax   pmax
      comp=Z,200nm,3.5s
TEY                                pmax   pmax
      comp=E,10.0nm,1.5s
TEY                                pmax   pmax
      comp=N,30nm,1.6s
TEY                                pmax   pmax
      comp=Z,40nm,1.6s
BNX   BinXian          14.90 352 ⇑P      P       18 52 06.1 -0.4
BNX                                sP     sPn     18 52 42.3 +0.1
BNX                                S      Sn      18 54 52.5 +2.7
BNX                                PcS    PcS     19 00 38.2 -0.8
BNX                                pmax   pmax
      comp=Z,84nm,1.6s
BNX                                pmax   pmax
      comp=Z,680nm,5.6s
BNX                                LR     LR
      comp=Z,690nm,9.2s
BNX                                LR     LR
      comp=Z,610nm,10.8s
BNX                                LR     LR
      comp=Z,950nm,9.8s
ERM   Erimo            15.03  39   P      Pn      18 52 04.6 -1.5
ERM   Erimo            15.03  39   P      Pn      18 52 05.8 -0.4
ERM   Erimo            15.03  39ceP      Pn      18 52 04.0 -2.2
ERM                                pmax   pmax
      comp=Z,80nm,1.3s
JEM   Erimo            15.03  39   P      Pn      18 52 05.9 -0.3
CNSH  ChangSha         15.44 264 ⇑P      Pn      18 52 11.9 +0.6
CNSH                               S      Sn      18 54 59.0 -3.9
CNSH                               LR     LR
      comp=Z,870nm,3.7s
CNSH                               LR     LR
      comp=Z,730nm,4.6s
CNSH                               LR     LR
      comp=Z,840nm,4.2s
LYN   LuoYang          15.48 288⇑iP      P       18 52 12.9 -0.1
LYN                                sP     sP      18 52 54.1 -2.2
LYN                                S      S       18 55 08.8 +1.5
LYN                                ScS    ScS     19 04 05.3 +1.2
LYN                                pmax   pmax
      comp=Z,230nm,1.0s
LYN                                pmax   pmax
      comp=Z,1µm,6.5s
TIY   Taiyuan          16.25 299  eP      P       18 52 24.4 +2.8
TIY                                sP     sP      18 53 00.7 -4.3
TIY                                S      Sn      18 55 25.1 +2.6
TIY                                pmax   pmax
      comp=Z,300nm,0.8s
ASAJ  Asahikawa        16.27  33   P      Pn      18 52 19.7 -1.7
      comp=Z,65nm,0.6s,baz=230,slow=12,SNR=200
ASAJ                               S      S       18 55 15.8 -6.6
      comp=Z,9.3nm,0.9s,baz=135,slow=32,SNR=2.3
ASAJ  Asahikawa        16.27  33   P      Pn      18 52 19.8 -1.5
JKA   Kamikawa-asahi   16.27  33   P      Pn      18 52 19.8 -1.5
HKPS  Hong Kong Po S   16.90 243   P      Pn      18 52 29.8 +0.5
GZH   Guangzhou        17.08 247   P      P       18 52 25.6 -5.2
GZH                                sP     sP      18 53 05.7 -8.3
GZH                                S      S       18 55 32.4 -9.2
GZH                                pmax   pmax
      comp=Z,140nm,1.1s
XLT   XiLinHaoTe       17.14 323⇑iP      Pn      18 52 33.5 +1.5
XLT                                sP     sP      18 53 12.9 -2.0
XLT                                S      S       18 55 38.8 -3.7
XLT                                pmax   pmax
      comp=Z,150nm,1.0s
XLT                                pmax   pmax
      comp=Z,950nm,4.5s
XLT                                LR     LR
      comp=Z,850nm,13.2s
XLT                                LR     LR
      comp=Z,930nm,9.4s
YUK   Yuzh-Kuril'sk    17.86  39  i P     P       18 52 39.0 -0.1
ENH   Enshi            18.00 273          Pn      18 52 42.0 -0.3
ENH   Enshi            18.00 273   P      Pn      18 52 43.0 +0.7
HHC   Hu-ho-hao-te     18.10 308  eP      Pn      18 52 44.0 +0.4
HHC                                sP     sP      18 53 23.1 -2.4
HHC                                S      S       18 56 00.8 -1.1
HHC                                pmax   pmax
      comp=Z,310nm,1.3s
HHC                                pmax   pmax
      comp=Z,2µm,4.8s
KLR   Kul'dur          18.24   3   P      P       18 52 42.2 -1.1
      comp=Z,36nm,0.9s,baz=177,slow=8.4,SNR=168
KLR   Kul'dur          18.24   3ceP      P       18 52 43.3  0.0
KLR                                pmax   pmax
      comp=Z,199nm,2.5s
SHO   Shikotan         18.28  41  eP      P       18 52 43.6 -0.2
SHO                               eS      S       18 56 00.0 -5.2
SHO                                pmax   pmax
      comp=Z,22nm,0.8s
SHO                                pmax   pmax
      comp=N,7.0nm,0.7s
SHO                                pmax   pmax
      comp=E,14nm,0.7s
XAN   Xi'an            18.34 285   P      Pn      18 52 45.6 -0.8
XAN                                S      S       18 56 07.6 +0.9
XAN                                pmax   pmax
      comp=E,280nm,1.0s
XAN                                pmax   pmax
      comp=E,740nm,3.5s
GULI  GuiLin           18.53 257 ⇓P      Pn      18 52 54.4 +5.8
GULI                               S      Sn      18 56 18.2 +1.1
GULI                               pmax   pmax
      comp=Z,200nm,0.8s
GULI                               LR     LR
      comp=N,1µm,6.1s
GULI                               LR     LR
      comp=E,510nm,7.5s
GULI                               LR     LR
      comp=Z,790nm,8.7s
YSS   Yuzh-Sakhalins   18.58  27   P      P       18 52 45.8 -1.2
YSS   Yuzh-Sakhalins   18.58  27   P      P       18 52 47.0 +0.1
YSS   Yuzh-Sakhalins   18.58  27ceP      P       18 52 46.0 -0.9
YSS                                pmax   pmax
      comp=Z,163nm,1.3s
BTO   Baotou           19.06 306⇑iP      Pn      18 52 55.5 +0.7
BTO                                pP     pP      18 53 21.7 +4.0
BTO                                sP     sP      18 53 39.4 +3.3
BTO                                S      S       18 56 20.7 -0.2
BTO                                PcP    PcP     18 57 12.2 +1.4
BTO                                ScP    ScP     19 00 33.8 +0.7
BTO                                pmax   pmax
      comp=Z,350nm,1.2s
BTO                                pmax   pmax
      comp=Z,5µm,5.1s
BTO                                LR     LR
      comp=Z,3µm,11.0s
BTO                                LR     LR
      comp=Z,2µm,13.7s
HEH   HeiHe            19.36 354  eP      P       18 52 55.1 -0.4
HEH                                sP     sP      18 53 40.5 +1.0
HEH                                S      S       18 56 24.4 -2.2
HEH                                PcP    PcP     18 57 12.1 +1.1
HEH                                ScS    ScS     19 04 13.1 -2.0
HEH                                pmax   pmax
      comp=Z,57nm,1.2s
HEH                                pmax   pmax
      comp=Z,320nm,5.5s
HIA   Hailar           19.94 339   P      P       18 53 01.1 -0.7
HIA   Hailar           19.94 339   P      P       18 53 02.0 +0.2
HIA   Hailar           19.94 339   P      P       18 53 01.1 -0.7
UGL   Uglegorsk        20.11  23  eP      P       18 53 03.1 -0.4
UGL                               eS      S       18 56 39.6 -1.7
UGL                                pmax   pmax
      comp=Z,75nm,1.0s
UGL                                smax   smax
      comp=E,600nm,6.1s
UGL                                smax   smax
      comp=N,1µm,10.0s
GRNR  Gornyy           20.26  11⇑iP      P       18 53 02.9 -2.3
GRNR                              eS      S       18 56 40.4 -3.9
GRNR                               pmax   pmax
      comp=E,2.0nm,0.7s
GRNR                               pmax   pmax
      comp=N,20nm,0.8s
GRNR                               pmax   pmax
      comp=Z,2.0nm,0.7s
GRNR                               smax   smax
      comp=N,2.0nm,0.7s
GRNR                               MLR    MLR
      comp=E,290nm,12.0s
GRNR                               MLR    MLR
      comp=N,160nm,16.0s
GRNR                               MLR    MLR
      comp=Z,260nm,15.0s
GYA   Guiyang          21.27 264⇑iP      P       18 53 16.2 -0.1
GYA                                pP     pP      18 53 47.0 +4.9
GYA                                sP     sP      18 54 03.7 +3.4
GYA                                S      S       18 56 59.5 -4.7
GYA                                sS     sS      18 57 49.9 +1.7
GYA                                pmax   pmax
      comp=Z,140nm,1.0s
GYA                                pmax   pmax
      comp=Z,1µm,3.5s
MSLP  Maasin           21.38 195  eS      pP      18 53 45.7 +2.4
MSLP  Maasin           21.38 195⇑eP      P       18 53 16.5 -0.9
TYV   Tymovskoe        21.85  21  eP      P       18 53 22.1  0.0
TYV                               eS      S       18 57 18.6 +4.9
TYV                                pmax   pmax
      comp=Z,69nm,1.6s
TYV                                pmax   pmax
      comp=Z,600nm,2.5s
GUMO  Guam             21.86 139   P      P       18 53 22.3 -0.2
      comp=Z,507nm,0.9s,baz=330,slow=1.4,SNR=27
      comp=Z,507nm,0.9s
GUMO  Guam             21.86 139   P      P       18 53 22.8 +0.2
GUMO  Guam             21.86 139   P      P       18 53 24.0 +1.5
GUMO  Guam             21.86 139   P      P       18 53 22.8 +0.2
GUMO                               pmax   pmax
      comp=Z,704nm,1.0s
TBP   Tagbilaran       22.05 197  eP      P       18 53 20.3 -4.1
QIZ   Qiongzhong       22.05 242   P      P       18 53 25.4 +0.9
QIZ                                sP     sP      18 54 07.4 -1.2
QIZ                                S      S       18 57 18.5 +0.9
QIZ                                sS     sS      18 58 06.3 +2.5
QIZ                                pmax   pmax
      comp=Z,55nm,1.0s
QIZ                                pmax   pmax
      comp=Z,370nm,4.1s
QIZ                                LR     LR
      comp=Z,450nm,9.6s
QIZ                                LR     LR
      comp=Z,530nm,12.7s
QIZ                                LR     LR
      comp=Z,410nm,10.4s
QIZ   Qiongzhong       22.05 242   P      P       18 53 25.0 +0.5
QIZ   Qiongzhong       22.05 242   P      P       18 53 25.0 +0.5
CNOP  Candoni, Negro   22.26 201⇑eP      P       18 53 26.8 +0.3
LZH   Lanzhou          22.66 290 ⇑P      P       18 53 30.6 +0.2
LZH                                pP     pP      18 53 59.0 +1.8
LZH                                sP     sP      18 54 14.7 -0.6
LZH                                S      S       18 57 31.8 +4.2
LZH                                SS     SnSn    18 58 23.8 +8.6
LZH                                pmax   pmax
      comp=Z,1µm,1.2s
LZH                                pmax   pmax
      comp=Z,2µm,4.6s
LZH                                LR     LR
      comp=Z,880nm,13.3s
LZH                                LR     LR
      comp=Z,800nm,12.7s
LZH                                LR     LR
      comp=Z,1µm,15.2s
CD2   Chengdu          22.81 277   P      P       18 53 31.5 -0.3
CD2                                pP     pP      18 53 55.4 -3.4
CD2                                sP     sP      18 54 16.9  0.0
CD2                                S      S       18 57 31.4 +1.4
CD2                                sS     sS      18 58 24.4 +5.6
CD2                                pmax   pmax
      comp=Z,460nm,0.8s
CD2                                LR     LR
      comp=Z,1µm,8.5s
CD2                                LR     LR
      comp=Z,1µm,9.2s
CD2                                LR     LR
      comp=Z,1µm,8.9s
ZEA   Zeya             22.84 355  eP      P       18 53 30.5 -1.2
ZEA                               e               18 54 00.5
ZEA                               e               18 58 26.1
ZEA                                pmax   pmax
      comp=E,100nm,2.4s
ZEA                                pmax   pmax
      comp=N,200nm,2.9s
ZEA                                pmax   pmax
      comp=Z,400nm,2.6s
ZEA                                pmax   pmax
      comp=N,30nm,1.0s
ZEA                                pmax   pmax
      comp=Z,60nm,1.0s
ZEA                                MLR    MLR
      comp=Z,300nm,13.0s
BIPH  Bislig           23.00 190  i S     sP      18 54 14.5 -4.4
BIPH  Bislig           23.00 190⇓iP      P       18 53 44.9 +11
DCPH  Dipolog City     23.24 198  eS      pP      18 54 08.2 +4.7
DCPH  Dipolog City     23.24 198⇑eP      P       18 53 35.5 -0.2
NKL   Nikolayevsk      23.37  16  eP      P       18 53 33.6 -3.0
NKL                               eS      S       18 57 36.9 -1.4
NKL                                pmax   pmax
      comp=E,197nm,0.6s
NKL                                pmax   pmax
      comp=N,576nm,1.1s
NKL                                pmax   pmax
      comp=Z,1µm,1.1s
NKL                                smax   smax
      comp=N,382nm,3.6s
NKL                                smax   smax
      comp=E,531nm,3.6s
NKL                                MLR    MLR
      comp=E,15µm,25.0s
NKL                                MLR    MLR
      comp=N,6µm,26.0s
NKL                                MLR    MLR
      comp=Z,9µm,26.0s
DAV   Davao City (W)   24.22 192   P      P       18 53 42.2 -2.5
CTBH  Cotabato--PC H   24.34 195⇓iP      P       18 53 46.6 +0.9
KCP   Kidapawan        24.37 193  i S     pP      18 54 17.3 +1.7
KCP   Kidapawan        24.37 193⇓iP      P       18 53 45.1 -1.0
ULN   Ulaanbaatar      24.52 320   P      P       18 53 47.6 +0.4
ULN                                IAmb   IAmb    18 53 51.1
      comp=Z,137nm,1.1s
ULN   Ulaanbaatar      24.52 320ceP      P       18 53 47.6 +0.4
ULN                                pmax   pmax
      comp=Z,256nm,1.7s
ULN   Ulaanbaatar      24.52 320   P      P       18 53 47.8 +0.5
ULN                                P      P       18 53 47.8 +0.5
ULN                                S      S       18 58 10.4  +13
ULN                                S      S       18 58 10.4  +13
SONM  Songino Array    24.87 319   P      P       18 53 50.7 +0.3
      comp=Z,118nm,0.9s,baz=138,slow=8.8,SNR=333
SONM                               pP     pP      18 54 21.1 +0.6
      comp=Z,32nm,0.8s,baz=132,slow=9.0,SNR=2.7
SONM                               PcP    PcP     18 57 20.3 -2.0
      comp=Z,2.9nm,0.8s,baz=227,slow=3.7,SNR=2.4
SONM                               ScP    ScP     19 00 46.7 -1.0
      comp=Z,2.9nm,0.9s,baz=108,slow=3.8,SNR=5.6
SONM                               LR     LR      19 05 37.9
      comp=Z,490nm,18.1s,baz=140,slow=41
      comp=Z,118nm,0.9s
SONM  Songino Array    24.87 319   P      P       18 53 50.8 +0.3
SONM                               IAmb   IAmb    18 53 53.4
      comp=Z,165nm,0.9s
KMI   Kunming          25.05 263 ⇓P      P       18 53 52.9 +0.5
KMI                                sP     sP      18 54 37.3 -2.1
KMI                                S      S       18 58 05.1 -1.0
KMI                                pmax   pmax
      comp=Z,99nm,1.1s
KMI                                pmax   pmax
      comp=Z,370nm,6.0s
KMI                                LR     LR
      comp=Z,380nm,9.5s
KMI                                LR     LR
      comp=Z,410nm,6.1s
KMI                                LR     LR
      comp=Z,460nm,11.2s
PZH   PanZhiHua        25.47 267   P      P       18 53 55.0 -1.1
PZH                                pP     pP      18 54 23.8 -2.6
PZH                                PP     PnPn    18 54 41.6 +0.5
PZH                                S      S       18 58 16.5 +4.0
PZH                                sS     sS      18 59 01.8 -4.4
PZH                                ScP    ScP     19 00 49.9 +0.1
PZH                                ScS    ScS     19 04 36.8 -2.4
PZH                                pmax   pmax
      comp=Z,90nm,1.1s
PZH                                pmax   pmax
      comp=Z,370nm,3.5s
GTA   Gaotai           26.25 297 ⇑P      P       18 54 02.9 -0.1
GTA                                pP     pP      18 54 35.5 +2.2
GTA                                sP     sP      18 54 54.3 +4.2
GTA                                PcP    PcP     18 57 26.2 +0.5
GTA                                S      S       18 58 26.6 +1.9
GTA                                sS     sS      18 59 18.9 +0.3
GTA                                ScP    ScP     19 00 52.0 +0.1
GTA                                PcS    PcS     19 01 06.1 -0.8
GTA                                pmax   pmax
      comp=Z,120nm,0.8s
GTA                                pmax   pmax
      comp=Z,340nm,4.0s
GTA                                LR     LR
      comp=Z,430nm,12.4s
GTA                                LR     LR
      comp=Z,820nm,12.4s
GTA                                LR     LR
      comp=Z,550nm,13.4s
DLV   T  Lat           27.73 232   P      P       18 54 17.8 +1.3
NONG  Nongkai          27.83 249   P      P       18 54 18.1 +1.0
      comp=Z,137nm,0.8s
ZAK   Zakamensk        27.98 322  eP      P       18 54 17.2 -1.1
ZAK                                pmax   pmax
      comp=Z,28nm,1.2s
MYLDM Lahad Datu       28.00 206   P      P       18 54 20.0 +1.4
KKM   Kota Kinabalu    28.16 211   P      P       18 54 21.0 +0.8
IRK   Irkutsk          28.57 326  eP      P       18 54 23.4 +0.1
IRK                                pmax   pmax
      comp=Z,110nm,2.8s
TNCH  TengChong        28.68 266 ⇓P      P       18 54 24.7 -0.2
TNCH                               pP     pP      18 54 55.7 +0.2
TNCH                               sP     sP      18 55 11.8 -0.4
TNCH                               PP     PnPn    18 55 25.0 +1.8
TNCH                               PcP    PcP     18 57 32.7 +0.8
TNCH                               S      S       18 59 01.1 -2.3
TNCH                               sS     sS      18 59 53.2 -4.3
TNCH                               pmax   pmax
      comp=Z,33nm,1.3s
TNCH                               pmax   pmax
      comp=Z,200nm,4.2s
CRAI  Chiangrai        29.02 255   P      P       18 54 28.9 +1.2
CRAI                               IAmb   IAmb    18 54 29.9
      comp=Z,42nm,0.8s
BOD   Bodaibo          29.10 342  eP      P       18 54 27.2 -0.7
BOD                                pmax   pmax
      comp=Z,21nm,1.6s
PEA0B Petropavlovsk-   29.68  34   P      P       18 54 32.2 -0.9
PEA0B                              IAmb   IAmb    18 54 35.1
      comp=Z,52nm,1.1s
PEA0B Petropavlovsk-   29.68  34ceP      P       18 54 33.3 +0.1
PETK  Petropavlovsk-   29.68  34   P      P       18 54 32.6 -0.6
      comp=Z,25nm,0.9s,baz=220,slow=8.9,SNR=19
PETK                               pP     pP      18 55 04.9 +0.8
      comp=Z,13nm,1.1s,baz=318,slow=2.0,SNR=2.4
PETK                               LR     LR      19 07 01.6
      comp=Z,117nm,20.7s,baz=248,slow=37
      comp=Z,25nm,0.9s
PETK  Petropavlovsk-   29.68  34   P      P       18 54 32.1 -1.1
MOY   Mondy            29.90 322  eP      P       18 54 35.0 -0.2
MOY                                pmax   pmax
      comp=Z,92nm,3.0s
GOMU  GeErMu           29.96 290   P      P       18 54 36.2 -0.1
GOMU                               S      S       18 59 30.4 +6.8
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GOMU				pmax	pmax		
	comp=Z,140nm,0.8s						
GOMU				LR	LR		
	comp=Z,140nm,13.1s						
GOMU				LR	LR		
	comp=Z,260nm,13.7s						
GOMU				LR	LR		
	comp=Z,380nm,13.9s						
PHRA	**Phrae**	**29.97**	**253**	P	**P**	**18 54 37.0**	**+0.9**
PET	**Petropavlovsk**	**30.09**	**35**	P	**P**	**18 54 35.6**	**-1.1**
PET				IAmb	IAmb	18 54 39.3	
	comp=Z,154nm,1.4s						
PET	**Petropavlovsk**	**30.09**	**35**	P	**P**	**18 54 39.8**	**+3.1**
	comp=Z,295nm,2.0s						
PET	**Petropavlovsk**	**30.09**	**35**	*e*P	**P**	**18 54 37.8**	**+1.1**
PET				*e**PP	**pP**	**18 55 08.5**	**+0.7**
PET				*e*S	**S**	**18 59 22.8**	**-1.6**
PET				pmax	pmax		
	comp=Z,103nm,1.3s						
PET				MLR	MLR		
	comp=Z,300nm,19.0s						
PET				MLR	MLR		
	comp=Z,500nm,19.0s						
TNTI	**Ternate**	**30.20**	**186**	P	**P**	**18 54 36.8**	**-1.2**
TNTI	**Ternate**	**30.20**	**186**	P	**P**	**18 54 41.4**	**+3.4**
TNTI	**Ternate**	**30.20**	**186**	P	P	18 54 47.5	+9.5
PBKT	**Sadao Pong**	**30.39**	**249**	P	**P**	**18 54 39.8**	**0.0**
PBKT				IAmb	IAmb	18 54 44.1	
	comp=Z,115nm,0.9s						
CHTO	**Chiang Mai**	**30.87**	**254**	P	**P**	**18 54 43.5**	**-0.6**
CHTO					**PcP**	**18 57 37.4**	**-0.1**
CHTO	**Chiang Mai**	**30.87**	**254**	P	**P**	**18 54 43.5**	**-0.6**
CHTO						18 57 37.4	
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTOI	**Gorontalo**	**30.99**	**194**	P	P	18 54 39.5	-5.5
	comp=Z,4.5nm,1.0s						
YAK	**Yakutsk**	**31.05**	**359**	P	**P**	**18 54 43.6**	**-1.4**
YAK				IAmb	IAmb	18 54 44.9	
	comp=Z,181nm,1.4s						
YAK					**PcP**	**18 57 36.3**	**-0.7**
YAK	**Yakutsk**	**31.05**	**359***c*	*i*P	**P**	**18 54 43.5**	**-1.5**
YAK				*e**PP	**pP**	**18 55 16.2**	**+0.1**
YAK				*e*		18 55 50.9	
YAK				*e*		18 57 35.8	
YAK				*e*S	**S**	**18 59 38.3**	**-0.8**
YAK				*e**SS	**sS**	**19 00 32.5**	**-0.9**
YAK				*e*SS	**SnSn**	**19 01 39.1**	**+1.2**
YAK				pmax	pmax		
	comp=Z,67nm,1.1s						
YAK				pmax	pmax		
	comp=N,36nm,1.4s						
YAK				pmax	pmax		
	comp=E,21nm,1.4s						
YAK				pmax	pmax		
	comp=Z,111nm,3.7s						
YAK				pmax	pmax		
	comp=N,60nm,2.0s						
YAK				pmax	pmax		
	comp=E,41nm,2.5s						
YAK				smax	smax		
	comp=N,57nm,1.8s						
YAK				smax	smax		
	comp=E,113nm,2.0s						
YAK	**Yakutsk**	**31.05**	**359**	P	**P**	**18 54 43.8**	**-1.3**
YAK				PcP	**PcP**	**18 57 36.7**	**-0.4**
YAK				ScP	**ScP**	**19 01 06.0**	**-0.3**
CM31	**Chiang Mai Arr**	**31.05**	**254**	P	**P**	**18 54 46.4**	**+0.8**
CM31				IAmb	IAmb	18 54 47.5	
	comp=Z,38nm,0.7s						
CM31					**PcP**	**18 57 39.1**	**+1.3**
CM31	**Chiang Mai Arr**	**31.05**	**254**	P	**P**	**18 54 46.7**	**+1.1**
	SNR=21						
CMAR	**Chiang Mai Arr**	**31.05**	**254**	P	**P**	**18 54 45.8**	**+0.2**
	comp=Z,27nm,0.8s,baz=51,slow=7.3,SNR=142						
CMAR				PcP	**PcP**	**18 57 39.2**	**+1.3**
	comp=Z,14nm,0.8s,baz=36,slow=1.3,SNR=16						
CMAR				ScP	**ScP**	**19 01 08.1**	**+1.0**
	comp=Z,0.6nm,0.4s,baz=38,slow=1.8,SNR=5.1						
	comp=Z,27nm,0.8s						
CMAR	**Chiang Mai Arr**	**31.05**	**254**	P	**P**	**18 54 46.6**	**+1.0**
CMAR					**PcP**	**18 57 38.5**	**+0.6**
TOLI2	**Tolitoli**	**31.08**	**199**	P	**P**	**18 54 45.5**	**-0.3**
TOLI2	**Tolitoli**	**31.08**	**199**	P	**P**	**18 54 46.1**	**+0.2**
	comp=Z,27nm,0.9s						
MRSI	**Marisa**	**31.39**	**196**	P	**P**	**18 54 47.9**	**-0.6**
	comp=Z,17nm,0.8s						
SIJI	**Sorong**	**31.70**	**178**	LR	LR	19 09 20.2	
	comp=Z,153nm,18.0s,baz=338,slow=39						
MA2	**Magadan**	**31.70**	**20**	P	**P**	**18 54 50.3**	**-0.6**
MA2				IAmb	IAmb	18 54 52.3	
	comp=Z,43nm,0.8s						
MA2	**Magadan**	**31.70**	**20**	P	**P**	**18 54 51.1**	**+0.2**
MA2	**Magadan**	**31.70**	**20***c*	*e*P	**P**	**18 54 50.9**	**+0.1**
MA2				pmax	pmax		
	comp=Z,146nm,1.7s						
MA2	**Magadan**	**31.70**	**20**	P	**P**	**18 54 51.0**	**+0.1**
MA2				PcP	**PcP**	**18 57 39.2**	**+0.3**
MA2				ScP	**ScP**	**19 01 08.4**	**-0.2**
MND	**Mandalay**	**31.84**	**262**	P	**P**	**18 54 53.1**	**+0.6**
MPSI	**Mapaga**	**32.07**	**200**	P	**P**	**18 54 55.1**	**+0.6**
	comp=Z,14nm,0.9s						
LUWI	**Luwuk**	**32.67**	**194**	P	**P**	**18 54 57.9**	**-1.9**
SANI	**Sanana**	**33.13**	**188**	P	**P**	**18 55 03.0**	**-0.7**
SANI	**Sanana**	**33.13**	**188**	P	**P**	**18 55 02.4**	**-1.3**
	comp=Z,17nm,0.8s						
SBUM	**Sibu**	**33.18**	**215**	P	**P**	**18 55 04.1**	**-0.1**
SMPI	**Sarmi**	**33.75**	**165**	P	**P**	**18 55 10.0**	**+0.9**
	comp=Z,97nm,1.5s,comp=Z,1µm						
LSA	**Lhasa**	**33.76**	**278**	P	**P**	**18 55 10.4**	**+0.7**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LSA	**Lhasa**	**33.76**	**278**	P	**P**	**18 55 09.5**	**-0.2**
LSA				PcP	**PcP**	**18 57 46.3**	**+0.6**
LSA	**Lhasa**	**33.76**	**278**	*i* P	**P**	**18 55 10.9**	**+1.3**
	SNR=13						
LSA	**Lhasa**	**33.76**	**278**	P	**P**	**18 55 11.0**	**+1.3**
LSA				PcP	**PcP**	**18 57 46.4**	**+0.6**
FAKI	**Fak Fak**	**33.77**	**177**	P	**P**	**18 55 09.5**	**+0.2**
FAKI				IAmb	IAmb	18 55 41.4	
	comp=Z,100nm,1.0s						
FAKI	**Fak Fak**	**33.77**	**177**	P	**P**	**18 55 10.4**	**+1.1**
SHL	**Shillong**	**34.21**	**271**	P	**P**	**18 55 12.0**	**-1.2**
SHL				IAmb	IAmb	18 55 16.0	
	comp=Z,38nm,0.6s						
SHL					**PcP**	**18 57 46.7**	**-0.1**
SHL	**Shillong**	**34.21**	**271**	P	**P**	**18 55 12.8**	**-0.5**
	SNR=17						
AAI	**Ambon**	**34.55**	**184**	P	**P**	**18 55 16.0**	**0.0**
	comp=Z,38nm,0.7s,comp=Z,681nm						
GENI	**Genyem**	**34.68**	**163**	P	**P**	**18 55 18.0**	**+0.9**
WAKE	**Wake Island**	**34.70**	**101**	P	**P**	**18 55 17.5**	**+0.2**
WAKE				IAmb	IAmb	18 55 18.5	
	comp=Z,96nm,1.0s						
WAKE	**Wake Island**	**34.70**	**101**	P	**P**	**18 55 18.8**	**+1.5**
WAKE	**Wake Island**	**34.70**	**101**	P	**P**	**18 55 17.6**	**+0.3**
WAKE				pP	**pP**	**18 55 48.6**	**+0.3**
H11N2	**WAKE ISLAND Hy**	**34.71**	**100**	P	**P**	**18 55 18.4**	**+1.2**
	baz=276,slow=10.0,SNR=5.7						
H11N1	**WAKE ISLAND Hy**	**34.71**	**100**	P	**P**	**18 55 18.1**	**+1.0**
	baz=276,slow=10.0,SNR=6.9						
H11N3	**WAKE ISLAND Hy**	**34.72**	**100**	P	**P**	**18 55 18.6**	**+1.3**
	baz=276,slow=10.0,SNR=12						
SEY	**Seymchan**	**34.92**	**17***c*	*e*P	**P**	**18 55 18.7**	**0.0**
SEY				pmax	pmax		
	comp=Z,73nm,1.0s						
KSM	**Kuching**	**34.98**	**217**	P	**P**	**18 55 20.1**	**+0.4**
KSM				IAmb	IAmb	18 55 22.2	
	comp=Z,135nm,1.5s						
KSM	**Kuching**	**34.98**	**217**	P	**P**	**18 55 21.1**	**+1.4**
H11S3	**WAKE ISLAND Hy**	**35.09**	**102**	P	**P**	**18 55 21.7**	**+1.2**
BRDH	**Bariadhala**	**35.40**	**266**	P	**P**	**18 55 23.6**	**+0.3**
	comp=Z,92nm,0.3s,baz=270,slow=19,SNR=1.1						
	comp=Z,92nm,0.3s						
PATS	**Pohnpei**	**35.52**	**127**	P	**P**	**18 55 25.6**	**+1.2**
WMQ	**Urumqi**	**35.85**	**303**	⇑*i*P	**P**	**18 55 27.1**	**+0.1**
WMQ				pP	pP	18 56 00.4	+2.1
WMQ				sP	sP	18 56 13.0	-1.9
WMQ				PcP	**PcP**	**18 57 51.5**	**+0.3**
WMQ				S	**S**	**19 00 55.9**	**+1.9**
WMQ				SS	**SnSn**	**19 03 26.0**	**-8.1**
WMQ				pmax	pmax		
	comp=Z,81nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,550nm,3.7s						
WMQ				LR	LR		
	comp=Z,410nm,10.3s						
WMQ				LR	LR		
	comp=Z,310nm,13.3s						
WMQ				LR	LR		
	comp=Z,330nm,24.9s						
SURA	**Surathani**	**35.92**	**239**	P	**P**	**18 55 29.4**	**+1.6**
SRIT	**Nakonsritamara**	**36.32**	**239**	P	**P**	**18 55 32.4**	**+1.2**
SRIT				IAmb	IAmb	18 55 34.0	
	comp=Z,124nm,1.0s						
SRIT	**Nakonsritamara**	**36.32**	**239**	P	**P**	**18 55 33.0**	**+1.8**
SKLT	**Songkhla**	**36.56**	**236**	P	**P**	**18 55 35.1**	**+1.9**
DGZ	**Jazzator, Alta**	**37.07**	**313**	⇑*i*P	**P**	**18 55 37.4**	**0.0**
DGZ				pmax	pmax		
	comp=Z,33nm,1.8s						
KAPI	**Kappang**	**37.22**	**198**	P	**P**	**18 55 38.6**	**-0.1**
	comp=Z,3.9nm,0.4s,baz=8.9,slow=4.2,SNR=6.9						
KAPI				PcP	**PcP**	**18 57 56.1**	**+0.6**
	comp=Z,13nm,0.8s,baz=67,slow=4.4,SNR=6.3						
	comp=Z,3.9nm,0.4s						
KAPI	**Kappang**	**37.22**	**198**	P	**P**	**18 55 37.8**	**-1.0**
KAPI					**PcP**	**18 57 55.7**	**+0.1**
KAPI	**Kappang**	**37.22**	**198**	P	**P**	**18 55 40.4**	**+1.7**
	comp=Z,10nm,1.4s						
KAPI	**Kappang**	**37.22**	**198**	P	**P**	**18 55 37.2**	**-1.5**
KAPI				S	**S**	**19 01 16.0**	**+1.0**
TAPN	**Taplejung**	**37.27**	**275**	*e*P	**P**	**18 55 40.2**	**+0.7**
	comp=Z,30nm,0.7s						
BBKI	**Banjar Baru**	**37.33**	**206**	P	**P**	**18 55 40.1**	**+0.4**
	comp=Z,224nm,0.9s,comp=Z,5µm						
BKSI	**Bulukumba**	**37.42**	**197**	P	**P**	**18 55 41.2**	**+0.8**
	comp=Z,13nm,0.9s						
ODAN	**Odare**	**37.68**	**275**	*e*P	**P**	**18 55 43.2**	**+0.3**
	comp=Z,203nm,0.7s						
KULM	**Kulim**	**37.86**	**234**	P	**P**	**18 55 44.8**	**+0.6**
BSSI	**Bau Bau, Buton**	**38.12**	**196**	P	**P**	**18 55 46.1**	**-0.2**
	comp=Z,40nm,0.9s						
IPM	**Ipoh**	**38.19**	**232**	P	**P**	**18 55 46.9**	**0.0**
IPM	**Ipoh**	**38.19**	**232**	P	**P**	**18 55 47.8**	**+0.8**
ZSN	**Zaisan**	**38.30**	**309**	⇑*i*P	**P**	**18 55 48.0**	**+0.3**
	baz=309						
ZSN	**Zaisan**	**38.30**	**309***c*	*i*P	**P**	**18 55 47.9**	**+0.3**
RAMN	**Ramite**	**38.33**	**275**	*e*P	**P**	**18 55 49.1**	**+0.8**
	comp=Z,94nm,0.8s						
MYKOM	**Kota Tinggi**	**38.39**	**226**	P	**P**	**18 55 49.2**	**+0.6**
JIRN	**Jiri**	**38.48**	**277**	*e*P	**P**	**18 55 49.6**	**-0.1**
	comp=Z,198nm,0.8s						
TPRI	**Tanjung Pinang**	**38.66**	**224**	P	**P**	**18 55 52.3**	**+1.4**
	comp=Z,118nm,1.0s,comp=Z,1µm						
GUN	**Gumba**	**38.68**	**277**	*e*P	**P**	**18 55 51.5**	**+0.1**
	comp=Z,390nm,0.8s						
PKI	**Pulchoki**	**39.17**	**277**	*e*P	**P**	**18 55 54.7**	**-0.8**
	comp=Z,152nm,0.9s						
PKIN	**Phulchoki**	**39.18**	**277**	*e*P	**P**	**18 55 54.9**	**-0.6**
	comp=Z,125nm,0.8s						
KKN	**Kakani**	**39.22**	**277**	*e*P	**P**	**18 55 55.3**	**-0.4**
	comp=Z,218nm,0.8s						
DMN	**Daman**	**39.42**	**277**	*e*P	**P**	**18 55 57.1**	**-0.3**
	comp=Z,69nm,0.7s						
GKN	**Gorkha**	**39.71**	**278**	*e*P	**P**	**18 55 59.0**	**-0.7**
	comp=Z,62nm,0.6s						
PBA	**Port Blair**	**39.73**	**249**	P	**P**	**18 55 58.9**	**-0.8**
PBA				IAmb	IAmb	18 56 01.8	
	comp=Z,72nm,0.7s						
ZAA0	**Zalesovo Array**	**39.76**	**319**	P	**P**	**18 55 59.0**	**-0.6**
ZAA0				IAmb	IAmb	18 56 02.2	
	comp=Z,74nm,1.2s						
ZALV	**Zalesovo Beam**	**39.76**	**319**	P	**P**	**18 55 58.8**	**-0.7**
	comp=Z,40nm,0.9s,baz=104,slow=6.3,SNR=67						
ZALV				PcP	**PcP**	**18 58 02.6**	**-0.3**
	comp=Z,26nm,0.8s,baz=91,slow=3.9,SNR=13						
ZALV				ScP	**ScP**	**19 01 35.7**	**-2.4**
	comp=Z,7.6nm,1.0s,baz=113,slow=3.9,SNR=8.5						
ZALV				LR	LR	19 14 40.2	
	comp=Z,249nm,18.4s,baz=356,slow=39						
	comp=Z,40nm,0.9s						
ZALV	**Zalesovo Beam**	**39.76**	**319**	P	**P**	**18 55 58.6**	**-0.9**
MK31	**Makanchi Array**	**39.96**	**307**	P	**P**	**18 56 01.1**	**-0.3**
MK31				PP	**PP**	**18 57 37.6**	**+1.5**
MK31	**Makanchi Array**	**39.96**	**307***c*	*i*P	**P**	**18 56 01.5**	**+0.1**
MKAR	**Makanchi Array**	**39.96**	**307**	P	**P**	**18 56 01.4**	**-0.1**
	comp=Z,36nm,0.8s,baz=96,slow=9.2,SNR=280						
MKAR				pP	**pP**	**18 56 33.5**	**+0.4**
	comp=Z,12nm,0.8s,baz=88,slow=13,SNR=4.1						
MKAR				PP	**PnPn**	**18 57 40.9**	**-0.1**
	comp=Z,11nm,0.9s,baz=88,slow=11,SNR=4.8						
MKAR				PcP	**PcP**	**18 58 03.6**	**-0.2**
	comp=Z,14nm,0.8s,baz=79,slow=4.6,SNR=6.5						
MKAR				ScP	**ScP**	**19 01 37.8**	**-1.4**
	comp=Z,3.6nm,0.8s,baz=90,slow=6.1,SNR=7.4						
MKAR				S	**S**	**19 01 51.4**	**-4.3**
	comp=Z,0.4nm,0.6s,baz=35,slow=4.3,SNR=1.1						
MKAR				PKiKP	**PKiKP**	**19 05 12.6**	**-1.5**
	comp=Z,1.3nm,0.9s,baz=24,slow=0.3,SNR=5.1						
	comp=Z,36nm,0.8s						
MKAR	**Makanchi Array**	**39.96**	**307**	P	**P**	**18 56 01.3**	**-0.1**
MKAR				PP	**PP**	**18 57 37.3**	**+1.1**
MMRI	**Maumere**	**40.17**	**193**	P	**P**	**18 56 01.8**	**-1.6**
MMRI	**Maumere**	**40.17**	**193**	P	**P**	**18 56 03.6**	**+0.3**
MMRI	**Maumere**	**40.17**	**193**	P	**P**	**18 56 02.6**	**-0.7**
	comp=Z,29nm,0.9s						
MAKZ	**Makanchi**	**40.18**	**307**	P	**P**	**18 56 02.6**	**-0.6**
MAKZ				PP	**PP**	**18 57 38.5**	**+0.1**
MAKZ	**Makanchi**	**40.18**	**307**	P	**P**	**18 56 03.2**	**+0.1**
MAKZ	**Makanchi**	**40.18**	**307**	P	**P**	**18 56 03.2**	**+0.1**
MAKZ				pP	**pP**	**18 56 35.5**	**+0.5**
MAKZ				PcP	**PcP**	**18 58 04.3**	**-0.2**
MAKZ				ScP	**ScP**	**19 01 39.4**	**-0.6**
PPBI	**Pangkal Pinang**	**40.25**	**219**	P	**P**	**18 56 05.4**	**+1.4**
	comp=Z,134nm,1.1s,comp=Z,4µm						
DANN	**Dangsing**	**40.37**	**278**	*e*P	**P**	**18 56 04.5**	**-0.8**
	comp=Z,166nm,0.6s						
LHMI	**Lhok Sumawe**	**40.53**	**238**	P	**P**	**18 56 07.2**	**+0.9**
LHMI	**Lhok Sumawe**	**40.53**	**238**	P	**P**	**18 56 08.0**	**+1.7**
LHMI	**Lhok Sumawe**	**40.53**	**238**	P	**P**	**18 56 08.0**	**+1.7**
	comp=Z,405nm,0.9s,comp=Z,3µm						
TSI	**Tuntungan**	**40.58**	**234**	P	**P**	**18 56 07.7**	**+0.9**
	comp=Z,661nm,0.8s,comp=Z,6µm						
RABL	**Rabaul**	**40.70**	**145**	P	**P**	**18 56 09.1**	**+1.3**
RABL				IAmb	IAmb	18 56 11.1	
	comp=Z,81nm,1.0s						
RABL	**Rabaul**	**40.70**	**145**	P	**P**	**18 56 10.1**	**+2.3**
TIXI	**Tiksi**	**40.72**	**359**	LR	LR	19 13 01.3	
	comp=Z,223nm,19.0s,baz=2.0,slow=36						
TIXI	**Tiksi**	**40.72**	**359**	P	**P**	**18 56 05.9**	**-1.3**
TIXI				IAmb	IAmb	18 56 08.1	
	comp=Z,77nm,0.8s						
TIXI	**Tiksi**	**40.72**	**359***c*	*e*P	**P**	**18 56 06.0**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,127nm,1.3s						
TIXI	**Tiksi**	**40.72**	**359**	P	**P**	**18 56 06.1**	**-1.0**
PSI	**Prapat**	**40.84**	**233**	P	**P**	**18 56 10.3**	**+1.3**
PSI	**Prapat**	**40.84**	**233**	P	**P**	**18 56 09.5**	**+0.5**
PSI				pmax	pmax		
	comp=Z,236nm,0.7s						
RPSI	**Rantau Prapat**	**40.91**	**233**	P	**P**	**18 56 09.5**	**0.0**
SOEI	**Soe**	**40.94**	**189**	P	**P**	**18 56 08.6**	**-1.2**
SOEI	**Soe**	**40.94**	**189**	P	**P**	**18 56 09.5**	**-0.3**
SOEI	**Soe**	**40.94**	**189**	P	**P**	**18 56 08.9**	**-0.9**
	comp=Z,36nm,0.6s						
KCSI	**Kotacane, Aceh**	**41.12**	**235**	P	**P**	**18 56 10.6**	**-0.6**
	comp=Z,156nm,0.7s,comp=Z,1µm						
AMKA	**Amchitka**	**41.16**	**46**	P	**P**	**18 56 12.3**	**+1.3**
JMBI	**JAMBI**	**41.23**	**223**	P	**P**	**18 56 15.4**	**+3.4**
	comp=Z,86nm,1.2s						
BKNI	**Bangkinang**	**41.28**	**228**	P	**P**	**18 56 13.1**	**+0.6**
BKNI				IAmb	IAmb	18 56 15.7	
	comp=Z,120nm,0.8s						
BKNI	**Bangkinang**	**41.28**	**228**	P	**P**	**18 56 14.8**	**+2.3**
BKNI	**Bangkinang**	**41.28**	**228**	P	**P**	**18 56 14.9**	**+2.4**
	comp=Z,160nm,0.7s,comp=Z,2µm						
PLAI	**Plampang**	**41.40**	**199**	P	**P**	**18 56 13.0**	**-0.4**
PLAI	**Plampang**	**41.40**	**199**	P	**P**	**18 56 12.9**	**-0.4**
	comp=Z,66nm,0.9s						
GRJI	**Gresik**	**41.41**	**207**	P	**P**	**18 56 15.1**	**+1.6**
	comp=Z,171nm,1.1s						
SRBI	**Singaraja**	**41.49**	**203**	P	**P**	**18 56 14.2**	**+0.1**
	comp=Z,37nm,0.8s						
ABJI	**Asem Bagus**	**41.56**	**205**	P	**P**	**18 56 15.3**	**+0.6**
	comp=Z,115nm,1.2s,comp=Z,2µm						
TWSI	**Taliwang, Sumb**	**41.57**	**200**	P	**P**	**18 56 14.9**	**+0.1**
	comp=Z,151nm,1.1s,comp=Z,1µm						
TBJI	**Tambak Boyo**	**41.58**	**208**	P	**P**	**18 56 17.3**	**+2.5**
	comp=Z,378nm,1.1s						
MLSI	**Meulaboh, Aceh**	**41.58**	**237**	P	**P**	**18 56 14.7**	**-0.2**
	comp=Z,400nm,0.7s,comp=Z,4µm						
UWJI	**Ujung Watu**	**41.59**	**210**	P	**P**	**18 56 17.3**	**+2.3**
	comp=Z,141nm,1.2s,comp=Z,5µm						
PMBI	**Palembang**	**41.63**	**221**	P	**P**	**18 56 16.5**	**+1.2**
PMBI	**Palembang**	**41.63**	**221**	P	**P**	**18 56 18.0**	**+2.6**
	comp=Z,324nm,1.2s						
PMBI	**Palembang**	**41.63**	**221**	P	**P**	**18 56 18.0**	**+2.6**
	comp=Z,324nm,1.2s,comp=Z,4µm						
SEM	**Semipalatinsk**	**41.75**	**312**	*i* P	**P**	**18 56 15.9**	**-0.4**
	comp=Z,103nm,1.3s,baz=312						
SEM	**Semipalatinsk**	**41.75**	**312**	*i* P	**P**	**18 56 15.8**	**-0.4**
SEM				pmax	pmax		
	comp=Z,103nm,1.3s						
SHLS	**Shalkode**	**41.80**	**302**	⇑*i*P	**P**	**18 56 13.9**	**-2.8**
	baz=302						
SHLS	**Shalkode**	**41.80**	**302***c*	*i*P	**P**	**18 56 13.8**	**-2.8**
SDSI	**Sungai Dareh**	**42.01**	**226**	P	**P**	**18 56 19.4**	**+1.0**
	comp=Z,57nm,0.8s,comp=Z,535nm						
WUS	**Wushi**	**42.04**	**299**	P	**P**	**18 56 19.5**	**+0.8**
WUS				pP	**pP**	**18 56 52.4**	**+1.7**
UZB	**Uzynbulak**	**42.13**	**302**	*e*P	**P**	**18 56 19.4**	**0.0**
	baz=302						
UZB	**Uzynbulak**	**42.13**	**302**	*e*P	**P**	**18 56 19.3**	**0.0**
JAGI	**Jajag, Banyuwa**	**42.21**	**204**	P	**P**	**18 56 18.6**	**-1.4**
JAGI	**Jajag, Banyuwa**	**42.21**	**204**	P	**P**	**18 56 20.9**	**+0.9**
JAGI	**Jajag, Banyuwa**	**42.21**	**204**	P	**P**	**18 56 21.0**	**+0.9**
	comp=Z,24nm,0.9s						
NGJI	**Ngawi**	**42.23**	**209**	P	**P**	**18 56 22.6**	**+2.5**
	comp=Z,134nm,1.0s						
GMJI	**Gumukmas**	**42.29**	**205**	P	**P**	**18 56 20.8**	**+0.2**
	comp=Z,33nm,1.3s						
KPKS	**Kokpek**	**42.37**	**302**	⇑*i*P	**P**	**18 56 21.3**	**+0.1**
	baz=302						
KPKS	**Kokpek**	**42.37**	**302***c*	*i*P	**P**	**18 56 21.2**	**+0.1**
SMRI	**Semarang**	**42.37**	**210**	P	**P**	**18 56 20.9**	**-0.5**
SMRI	**Semarang**	**42.37**	**210**	P	**P**	**18 56 23.4**	**+2.1**
	comp=Z,183nm,1.1s						
SMRI	**Semarang**	**42.37**	**210**	P	**P**	**18 56 23.4**	**+2.1**
	comp=Z,184nm,1.2s						
ZHN	**Zhinishke**	**42.55**	**302**	⇑*i*P	**P**	**18 56 22.8**	**0.0**
	baz=302						
ZHN	**Zhinishke**	**42.55**	**302***c*	*i*P	**P**	**18 56 22.7**	**0.0**
BILL	**Bilibino**	**42.57**	**19**	P	**P**	**18 56 22.1**	**-0.1**
BILL				IAmb	IAmb	18 56 24.2	
	comp=Z,64nm,0.9s						
BILL				PcP	**PcP**	**18 58 12.3**	**+0.4**
BILL	**Bilibino**	**42.57**	**19***d*	*i*P	**P**	**18 56 22.7**	**+0.4**
BILL				*i*		18 58 02.5	
BILL				*i*		18 58 12.3	
BILL				*i* S	**S**	**19 02 33.0**	**-0.6**
BILL				*e**SS	**sS**	**19 03 34.2**	**+4.5**
BILL				*i* SS	**ScS**	**19 06 07.2**	**-0.4**
BILL				pmax	pmax		
	comp=Z,107nm,1.3s						
BILL				MLR	MLR		
	comp=Z,110nm,17.0s						
BILL	**Bilibino**	**42.57**	**19**	⇓P	**P**	**18 56 22.8**	**+0.5**
BILL				PcP	**PcP**	**18 58 12.7**	**+0.8**
TDK	**Taldyqorghan**	**42.57**	**304**	⇑*i*P	**P**	**18 56 23.3**	**+0.6**
	comp=Z,63nm,0.9s,baz=304						
TDK	**Taldyqorghan**	**42.57**	**304***c*	*i*P	**P**	**18 56 23.2**	**+0.6**
TDK				pmax	pmax		
	comp=Z,63nm,0.9s						
SATY	**Saty**	**42.58**	**301**	⇑*i*P	**P**	**18 56 23.2**	**+0.3**
	baz=301						
SATY	**Saty**	**42.58**	**301***c*	*i*P	**P**	**18 56 23.2**	**+0.3**
PDSI	**Padang**	**42.60**	**227**	P	**P**	**18 56 23.1**	**-0.1**
	comp=Z,43nm,0.9s,comp=Z,377nm						
PWJI	**Pagerwojo**	**42.69**	**208**	P	**P**	**18 56 23.6**	**-0.2**
	comp=Z,125nm,0.9s						
KURK	**Kurchatov**	**42.82**	**313**	P	**P**	**18 56 23.9**	**-0.7**
KURK				IAmb	IAmb	18 56 27.4	
	comp=Z,90nm,0.9s						
KURK				PP	**PP**	**18 58 05.5**	**-1.2**
KURK	**Kurchatov**	**42.82**	**313***c*	*e*P	**P**	**18 56 24.4**	**-0.1**
KURK				pmax	pmax		
	comp=Z,104nm,1.0s						
KURK	**Kurchatov**	**42.82**	**313**	P	**P**	**18 56 25.0**	**+0.4**
KURK	**Kurchatov**	**42.82**	**313**	P	**P**	**18 56 24.5**	**-0.1**
KURK				pP	**pP**	**18 56 56.2**	**-0.7**
KURK				sP	**sP**	**18 57 11.7**	**-1.5**
KURK				PcP	**PcP**	**18 58 12.5**	**-0.5**
GSI	**Gunungsitoli**	**42.84**	**233**	P	**P**	**18 56 24.6**	**-0.6**
GSI	**Gunungsitoli**	**42.84**	**233**	P	**P**	**18 56 26.1**	**+0.9**
GSI	**Gunungsitoli**	**42.84**	**233**	P	**P**	**18 56 25.1**	**-0.1**
	comp=Z,687nm,0.6s,comp=Z,7µm						
KURBB	**Kurchatov Arra**	**42.87**	**313**	P	**P**	**18 56 24.2**	**-0.7**
	comp=Z,42nm,0.9s,baz=104,slow=7.4,SNR=104						
KURBB				ScP	**ScP**	**19 01 48.2**	**-2.4**
	comp=Z,2.0nm,0.8s,baz=92,slow=3.0,SNR=4.4						
KURBB				LR	LR	19 14 49.0	
	comp=Z,309nm,20.4s,baz=182,slow=37						
KURBB				PKPPKP	**P'P'df**	**19 28 19.6**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=358,slow=12,SNR=5.1						
	comp=Z,42nm,0.9s						
SNSI	**Sinabang, Aceh**	**42.92**	**235**	P	**P**	**18 56 25.8**	**0.0**
	comp=Z,222nm,0.8s,comp=Z,2µm						
ARXS	**Arharly**	**42.98**	**303**	*e*P	**P**	**18 56 26.0**	**-0.1**
TARG	**Taragay, Kyrgy**	**43.08**	**300**	P	**P**	**18 56 27.7**	**+0.4**
TARG				IAmb	IAmb	18 56 31.2	
	comp=Z,60nm,0.8s						
TARG	**Taragay, Kyrgy**	**43.08**	**300**	P	**P**	**18 56 27.7**	**+0.4**
TARG				pmax	pmax		
	comp=Z,60nm,0.8s						
UGM	**Wanagama**	**43.11**	**209**	P	**P**	**18 56 27.5**	**+0.2**
UGM	**Wanagama**	**43.11**	**209**	P	**P**	**18 56 28.5**	**+1.2**
UGM	**Wanagama**	**43.11**	**209**	P	**P**	**18 56 28.1**	**+0.8**
	comp=Z,286nm,1.3s						
YOGI	**Yogyakarta**	**43.12**	**210**	P	**P**	**18 56 28.9**	**+1.5**
	comp=Z,160nm,1.1s,comp=Z,2µm						
KLI	**Kotabumi**	**43.20**	**219**	P	**P**	**18 56 29.2**	**+1.2**
	comp=Z,323nm,0.9s,comp=Z,3µm						
MDSI	**Maura Dua**	**43.25**	**220**	P	**P**	**18 56 29.1**	**+0.7**
	comp=Z,157nm,1.4s,comp=Z,1µm						
MASI	**Maura Aman, Be**	**43.26**	**223**	P	**P**	**18 56 30.0**	**+1.4**
	comp=Z,140nm,1.0s,comp=Z,2µm						
PMG	**Port Moresby**	**43.28**	**155**	P	**P**	**18 56 28.6**	**0.0**
PMG	**Port Moresby**	**43.28**	**155***c*	*e*P	**P**	**18 56 30.4**	**+1.8**
PMG				pmax	pmax		
	comp=Z,17nm,1.3s						
PMG	**Port Moresby**	**43.28**	**155**	P	**P**	**18 56 29.1**	**+0.5**
PMG				pP	**pP**	**18 57 00.6**	**-0.3**
KPJI	**Karang Pucung**	**43.30**	**212**	P	**P**	**18 56 29.9**	**+1.2**
	comp=Z,315nm,1.1s,comp=Z,3µm						
PBSI	**Pulau Batu**	**43.37**	**231**	P	**P**	**18 56 29.8**	**+0.4**
	comp=Z,581nm,0.9s,comp=Z,5µm						
BLSI	**Bandar Lampung**	**43.41**	**218**	P	**P**	**18 56 31.1**	**+1.4**
	comp=Z,119nm,1.2s						
KSI	**Kapahiang**	**43.47**	**223**	P	**P**	**18 56 31.1**	**+0.9**
	comp=Z,111nm,0.9s						
MDOK	**Medeo**	**43.57**	**302**	*i* P	**P**	**18 56 31.6**	**+0.7**
	baz=302						
MDOK	**Medeo**	**43.57**	**302**	*i* P	**P**	**18 56 31.6**	**+0.7**
SBJI	**Serang**	**43.59**	**216**	P	**P**	**18 56 32.8**	**+1.7**
	comp=Z,257nm,1.4s,comp=Z,16µm						
CHKK	**Chushkaly**	**43.59**	**303**	*e*P	**P**	**18 56 31.1**	**+0.2**
	baz=303						
CHKK	**Chushkaly**	**43.59**	**303**	*e*P	**P**	**18 56 31.1**	**+0.2**
MTN	**Manton Dam**	**43.59**	**179**	P	**P**	**18 56 30.6**	**-0.4**
MTN					**pP**	**18 57 01.8**	**-1.7**
MTN				IAmb	IAmb	18 57 04.9	
	comp=Z,117nm,1.1s						
TNSS	**Tian-Shan**	**43.65**	**301**	*e*P	**P**	**18 56 32.6**	**+0.8**
	baz=301						
TNSS	**Tian-Shan**	**43.65**	**301**	*e*P	**P**	**18 56 32.6**	**+0.8**
AAA	**Alma-Ata**	**43.66**	**302**	*e*P	**P**	**18 56 32.6**	**+1.0**
	comp=Z,138nm,0.9s,baz=302						
AAA	**Alma-Ata**	**43.66**	**302**	*e*P	**P**	**18 56 32.5**	**+1.0**
AAA				pmax	pmax		
	comp=Z,138nm,0.9s						
LWLI	**Liwa**	**43.76**	**220**	P	**P**	**18 56 32.9**	**+0.3**
	comp=Z,123nm,0.9s,comp=Z,2µm						
KASI	**Kota Agung**	**43.94**	**219**	P	**P**	**18 56 35.7**	**+1.8**
	comp=Z,65nm,0.9s,comp=Z,587nm						
BBJI	**Bungbulang**	**44.00**	**213**	P	**P**	**18 56 34.1**	**-0.4**
KUU	**Kurty**	**44.06**	**303**	⇑*i*P	**P**	**18 56 34.8**	**+0.1**
	comp=Z,85nm,1.1s,baz=303						
KUU	**Kurty**	**44.06**	**303***c*	*i*P	**P**	**18 56 34.7**	**+0.1**
KUU				pmax	pmax		
	comp=Z,85nm,1.1s						
CNJI	**Cibinong**	**44.12**	**214**	P	**P**	**18 56 34.3**	**-1.0**
	comp=Z,42nm,1.1s,comp=Z,421nm						
CGJI	**Cibinong**	**44.23**	**216**	P	**P**	**18 56 34.8**	**-1.4**
	comp=Z,72nm,0.9s,comp=Z,4µmcomp=Z,9µm						
TKM2	**Tokmak 2**	**44.64**	**301**	P	**P**	**18 56 40.6**	**+1.1**
	SNR=83						
KSH	**Kashi**	**44.65**	**296**	P	**P**	**18 56 43.6**	**+4.1**

KSH				pP	pP	18 57 17.0	+5.1
KSH				PP	**PP**	**18 58 34.0**	**+7.5**
KSH				pmax	pmax		
	comp=Z,31nm,1.2s						
KSH				LR	LR		
	comp=Z,280nm,8.9s						
KSH				LR	LR		
	comp=Z,400nm,16.8s						
KSH				LR	LR		
	comp=Z,480nm,12.0s						
KBK	**Karagaybulak**	**45.14**	**301**	P	**P**	**18 56 44.4**	**+1.0**
	SNR=44						
CHMS	**Chumysh**	**45.26**	**302**	P	**P**	**18 56 44.9**	**+0.7**
	SNR=42						
SGDS	**Sogindy**	**45.32**	**302**	*e*P	**P**	**18 56 44.9**	**+0.2**
	baz=302						
SGDS	**Sogindy**	**45.32**	**302**	*e*P	**P**	**18 56 44.9**	**+0.2**
NRIK	**Noril'sk**	**45.36**	**340**	P	**P**	**18 56 43.0**	**-1.5**
	comp=Z,96nm,0.8s,baz=118,slow=8.9,SNR=83						
NRIK				ScP	**ScP**	**19 01 58.4**	**-2.0**
	comp=Z,2.4nm,0.5s,baz=122,slow=1.8,SNR=3.6						
NRIK				LR	LR	19 17 34.5	
	comp=Z,302nm,19.1s,baz=320,slow=38						
	comp=Z,96nm,0.8s						
NRIK	**Noril'sk**	**45.36**	**340**	P	**P**	**18 56 43.6**	**-0.9**
NRIK				IAmb	IAmb	18 56 45.9	
	comp=Z,124nm,1.0s						
NRIK	**Noril'sk**	**45.36**	**340**	*ce*P	**P**	**18 56 42.5**	**-2.0**
NRIK				pmax	pmax		
	comp=Z,76nm,0.6s						
USP	**Ospenovka**	**45.42**	**302**	P	**P**	**18 56 46.0**	**+0.5**
	SNR=25						
AAK	**Ala-Archa**	**45.47**	**301**	P	**P**	**18 56 46.6**	**+0.6**
	SNR=20						
AAK	**Ala-Archa**	**45.47**	**301**	P	**P**	**18 56 46.3**	**+0.3**
	comp=Z,18nm,0.8s,baz=104,slow=6.3,SNR=26						
AAK				PcP	**PcP**	**18 58 22.0**	**-0.5**
	comp=Z,11nm,0.8s,baz=117,slow=4.7,SNR=4.3						
AAK				LR	LR	19 18 24.4	
	comp=Z,212nm,19.7s,baz=60,slow=39						
	comp=Z,18nm,0.8s						
AAK	**Ala-Archa**	**45.47**	**301**	P	**P**	**18 56 45.8**	**-0.2**
AAK				pP	**pP**	**18 57 18.5**	**+0.1**
AAK				PcP	**PcP**	**18 58 22.0**	**-0.5**
AAK	**Ala-Archa**	**45.47**	**301**	*ce*P	**P**	**18 56 46.8**	**+0.8**
AAK				pmax	pmax		
	comp=Z,23nm,1.0s						
AAK	**Ala-Archa**	**45.47**	**301**	*i* P	**P**	**18 56 46.6**	**+0.6**
	SNR=5.9						
AAK	**Ala-Archa**	**45.47**	**301**	P	**P**	**18 56 46.9**	**+0.8**
AAK	**Ala-Archa**	**45.47**	**301**	P	**P**	**18 56 46.6**	**+0.6**
AAK				pP	**pP**	**18 57 18.6**	**+0.1**
AAK				PcP	**PcP**	**18 58 22.2**	**-0.3**
UCH	**Uchtor**	**45.49**	**300**	P	**P**	**18 56 47.8**	**+1.3**
	SNR=95						
BTLS	**Baital**	**45.66**	**304**	⇑*i*P	**P**	**18 56 47.3**	**0.0**
	baz=304						
BTLS	**Baital**	**45.66**	**304**	*c i*P	**P**	**18 56 47.2**	**0.0**
EKS2	**Erkin-Say**	**46.00**	**301**	P	**P**	**18 56 50.6**	**+0.5**
	SNR=17						
AML	**Almayashu**	**46.10**	**300**	P	**P**	**18 56 52.5**	**+1.2**
	SNR=36						
COEN	**Coen**	**46.36**	**163**	P	**P**	**18 56 53.5**	**+0.6**
COEN	**Coen**	**46.36**	**163**	P	**P**	**18 56 54.2**	**+1.3**
KNRA	**Kununurra**	**46.43**	**182**	P	**P**	**18 56 54.2**	**+0.7**
KNRA				pP	**pP**	**18 57 24.2**	**-2.0**
KNRA				IAmb	IAmb	18 57 28.0	
	comp=Z,98nm,0.8s						
BRZS	**Berezniki**	**46.56**	**311**	⇑*i*P	**P**	**18 56 54.3**	**+0.1**
	baz=311						
BRZS	**Berezniki**	**46.56**	**311**	*c i*P	**P**	**18 56 54.3**	**+0.1**
NIL	**Nilore**	**47.82**	**289**	P	**P**	**18 57 04.1**	**-0.2**
NIL				IAmb	IAmb	18 57 07.8	
	comp=Z,77nm,0.8s						
NIL	**Nilore**	**47.82**	**289**	P	**P**	**18 57 04.1**	**-0.2**
NIL				pmax	pmax		
	comp=Z,77nm,0.9s						
NIL	**Nilore**	**47.82**	**289**	P	**P**	**18 57 05.1**	**+0.8**
NIL	**Nilore**	**47.82**	**289**	P	**P**	**18 57 04.7**	**+0.4**
NIL				pP	**pP**	**18 57 36.5**	**-0.5**
SPIA	**Saint Paul Isl**	**48.09**	**39**	P	**P**	**18 57 06.4**	**+0.5**
	baz=263						
BRVK	**Borovoye**	**48.16**	**315**	P	**P**	**18 57 05.9**	**-0.7**
BRVK				IAmb	IAmb	18 57 10.0	
	comp=Z,72nm,0.7s						
BRVK	**Borovoye**	**48.16**	**315**	*ce*P	**P**	**18 57 06.7**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,105nm,1.0s						
BRVK	**Borovoye**	**48.16**	**315**	P	**P**	**18 57 06.9**	**+0.4**
BRVK	**Borovoye**	**48.16**	**315**	P	**P**	**18 57 06.8**	**+0.2**
BRVK				pP	**pP**	**18 57 39.4**	**-0.2**
BRVK				sP	**sP**	**18 57 55.9**	**+0.1**
BRVK				PcP	**PcP**	**18 58 31.5**	**-0.1**
BRVK				ScP	**ScP**	**19 02 11.0**	**-1.5**
KK31	**Karatay Array**	**48.34**	**302**	P	**P**	**18 57 07.4**	**-0.7**
KK31				IAmb	IAmb	18 57 10.1	
	comp=Z,96nm,1.4s						
KK31				pP	**pP**	**18 57 40.2**	**-0.8**
KK31				PcP	**PcP**	**18 58 32.2**	**-0.3**
KKAR	**Karatay Array**	**48.34**	**302**	P	**P**	**18 57 08.2**	**+0.1**
KKAR				IAmb	IAmb	18 57 10.1	
	comp=Z,96nm,1.4s						
KKAR				pP	**pP**	**18 57 39.7**	**-1.3**
KKAR				PcP	**PcP**	**18 58 32.3**	**-0.2**
HYB	**Hyderabad**	**48.76**	**266**	⇓*e*P	**P**	**18 57 11.8**	**+0.1**
HYB				IVmB_BB		18 57 12.4	
	comp=Z,182nm,1.0s						
HYB				*e*pP	**pP**	**18 57 41.8**	**-2.7**
HYB				*e*sP	**sP**	**18 57 59.6**	**-1.1**
HYB				*e*PcP	**PcP**	**18 58 34.3**	**-0.1**
HYB				*e*PP	**PP**	**18 59 06.7**	**+0.6**
HYB				*e*ScP	**ScP**	**19 02 15.8**	**+0.1**
HYB				*e*sS	**sS**	**19 04 58.1**	**-2.8**
HYB				*e*ScS	**ScS**	**19 06 47.9**	**-1.6**
HYB				*e*SS	**SS**	**19 07 38.2**	**+2.2**
IUG	**Iuzhnay**	**48.81**	**301**	⇑*i*P	**P**	**18 57 12.4**	**+0.5**
	baz=301						
IUG	**Iuzhnay**	**48.81**	**301**	*c i*P	**P**	**18 57 12.3**	**+0.5**
FITZ	**Fitzroy Crossi**	**49.02**	**186**	P	**P**	**18 57 13.7**	**+0.3**
FITZ				pP	**pP**	**18 57 44.7**	**-1.7**
FITZ	**Fitzroy Crossi**	**49.02**	**186**	P	**P**	**18 57 14.0**	**+0.6**
GAR	**Garm**	**49.07**	**297**	P	**P**	**18 57 14.0**	**+0.1**
GAR				IAmb	IAmb	18 57 17.1	
	comp=Z,213nm,1.4s						
CHM	**Chimkent**	**49.10**	**301**	*e*P	**P**	**18 57 14.7**	**+0.7**
	baz=301						
CHM	**Chimkent**	**49.10**	**301**	*e*P	**P**	**18 57 14.6**	**+0.7**
UNV	**Unalaska Valle**	**49.99**	**44**	P	**P**	**18 57 21.3**	**+0.9**
	baz=269						
CHGR	**Chuyangaron**	**50.02**	**296**	P	**P**	**18 57 20.6**	**-0.5**
CHGR				IAmb	IAmb	18 57 25.1	
	comp=Z,117nm,0.8s						
CHGR	**Chuyangaron**	**50.02**	**296**	P	**P**	**18 57 20.6**	**-0.5**
CHGR				pmax	pmax		
	comp=Z,117nm,0.8s						
TNA	**Tin City**	**50.55**	**28**	P	**P**	**18 57 25.1**	**+0.7**
TNA				IAmb	IAmb	18 57 27.0	
	comp=Z,104nm,1.0s						
TNA	**Tin City**	**50.55**	**28**	P	**P**	**18 57 25.6**	**+1.2**
	baz=258						
WB0	**Warramunga Arr**	**50.62**	**175**	P	**P**	**18 57 24.9**	**-0.6**
WB0				pP	**pP**	**18 57 57.2**	**-1.7**
WB0				IAmb	IAmb	18 58 00.6	
	comp=Z,59nm,1.4s						
MTSU	**Mount Surprise**	**50.65**	**163**	P	**P**	**18 57 27.8**	**+2.0**
WRAB	**Tennant Creek**	**50.78**	**175**	P	**P**	**18 57 26.0**	**-0.7**
WRAB				pP	**pP**	**18 57 58.6**	**-1.6**
WRAB	**Tennant Creek**	**50.78**	**175**	P	**P**	**18 57 27.2**	**+0.5**
WRAB	**Tennant Creek**	**50.78**	**175**	*ce*P	**P**	**18 57 27.2**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,20nm,1.7s						
WRAB	**Tennant Creek**	**50.78**	**175**	P	**P**	**18 57 26.9**	**+0.2**
WRAB				pP	**pP**	**18 58 00.1**	**-0.1**
WRAB				PcP	**PcP**	**18 58 42.0**	**+0.4**
WRA	**Warramunga Arr**	**50.79**	**175**	P	**P**	**18 57 26.9**	**+0.2**
	comp=Z,5.5nm,0.6s,baz=355,slow=8.1,SNR=90						
WRA				pP	**pP**	**18 57 59.2**	**-1.0**
	comp=Z,11nm,0.6s,baz=350,slow=8.1,SNR=8.5						
WRA				PcP	**PcP**	**18 58 38.9**	**-2.7**
	comp=Z,8.5nm,0.7s,baz=352,slow=8.3,SNR=5.0						
WRA				ScP	**ScP**	**19 02 24.2**	**+0.1**
	comp=Z,5.1nm,1.1s,baz=354,slow=4.7,SNR=8.2						
WRA				S	**S**	**19 04 30.0**	**-1.4**
	comp=Z,4.1nm,1.1s,baz=351,slow=13,SNR=7.3						
	comp=Z,5.5nm,0.6s						
WRA	**Warramunga Arr**	**50.79**	**175**	*i* P	**P**	**18 57 26.8**	**0.0**
WRA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WB2	**Warramunga Arr**	**50.79**	**175**	P	**P**	**18 57 26.7**	**-0.1**
WB2				pP	**pP**	**18 57 58.4**	**-1.8**
KBL	**Kabul**	**51.00**	**291**	P	**P**	**18 57 27.8**	**-0.8**
KBL	**Kabul**	**51.00**	**291**	P	**P**	**18 57 27.8**	**-0.8**
KBL				pmax	pmax		
	comp=Z,412nm,2.0s						
KBL	**Kabul**	**51.00**	**291**	P	**P**	**18 57 29.3**	**+0.7**
	SNR=49						
ANM	**Nome**	**51.44**	**30**	IAmb	IAmb	18 57 33.9	
	comp=Z,69nm,0.9s						
ANM	**Nome**	**51.44**	**30**	P	**P**	**18 57 32.8**	**+1.7**
	baz=262						
FALS	**False Pass**	**51.80**	**42**	P	**P**	**18 57 34.5**	**+0.7**
	baz=271						
PALK	**Pallekele**	**51.99**	**254**	P	**P**	**18 57 36.9**	**+1.0**
	comp=Z,60nm,0.7s,baz=154,slow=10,SNR=54						
	comp=Z,60nm,0.7s						
PALK	**Pallekele**	**51.99**	**254**	P	**P**	**18 57 36.5**	**+0.5**
PALK				IAmb	IAmb	18 57 38.5	
	comp=Z,68nm,0.8s						
PALK	**Pallekele**	**51.99**	**254**	*c i*P	**P**	**18 57 36.8**	**+0.8**
PALK				pmax	pmax		
	comp=Z,92nm,0.8s						
PALK	**Pallekele**	**51.99**	**254**	P	**P**	**18 57 37.0**	**+1.0**
QIS	**Mount Isa**	**52.02**	**169**	P	**P**	**18 57 36.1**	**+0.2**
TV1H	**Townsville Har**	**52.40**	**160**	P	**P**	**18 57 41.2**	**+2.5**
	comp=Z,20nm,1.1s						
S12K	**Black Hills**	**52.56**	**41**	P	**P**	**18 57 39.9**	**+0.4**
	baz=271						
MBWA	**Marble Bar**	**52.85**	**192**	P	**P**	**18 57 42.5**	**+0.4**
MBWA	**Marble Bar**	**52.85**	**192**	P	**P**	**18 57 43.4**	**+1.4**
MBWA	**Marble Bar**	**52.85**	**192**	P	**P**	**18 57 42.0**	**0.0**
MBWA	**Marble Bar**	**52.85**	**192**	P	**P**	**18 57 42.3**	**+0.2**
MBWA				PcP	**PcP**	**18 58 49.2**	**0.0**
RDOG	**Red Dog Mine**	**52.95**	**26**	IAmb	IAmb	18 57 44.4	
	comp=Z,107nm,1.6s						
RDOG	**Red Dog Mine**	**52.95**	**26**	P	**P**	**18 57 42.7**	**+0.4**
	baz=261,SNR=10						
CTA	**Charters Tower**	**53.03**	**161**	LR	LR	19 18 41.2	
	comp=Z,157nm,21.6s,baz=332,slow=34						
CTA	**Charters Tower**	**53.03**	**161**	P	**P**	**18 57 44.8**	**+1.4**
CTAO	**Charters Tower**	**53.03**	**161**	P	**P**	**18 57 43.6**	**+0.3**
CTAO				IAmb	IAmb	18 57 45.6	
	comp=Z,57nm,1.4s						
CTAO					**pP**	**18 58 13.7**	**-3.3**
CTAO	**Charters Tower**	**53.03**	**161**	P	**P**	**18 57 44.9**	**+1.5**
CTAO	**Charters Tower**	**53.03**	**161**	P	**P**	**18 57 44.1**	**+0.8**
CTAO				pP	**pP**	**18 58 16.8**	**-0.1**
PSA00	**Pilbara Seismi**	**53.24**	**192**	IAmb	IAmb	18 57 46.4	
	comp=Z,46nm,0.9s						
PSA00	**Pilbara Seismi**	**53.24**	**192**	IAmb	IAmb	18 57 46.3	
	comp=Z,29nm,0.8s						
PSA00	**Pilbara Seismi**	**53.24**	**192**	P	**P**	**18 57 45.5**	**+0.7**
SDPT	**Sand Point**	**53.47**	**42**	P	**P**	**18 57 46.7**	**+0.5**
	baz=273						
COCO	**West Island**	**53.68**	**222**	P	**P**	**18 57 48.5**	**+0.3**
COCO	**West Island**	**53.68**	**222**	P	**P**	**18 57 48.5**	**+0.3**
COCO				pmax	pmax		
	comp=Z,776nm,2.0s						
SVE	**Sverdlovsk**	**53.73**	**320**	*e*P	**P**	**18 57 48.7**	**+0.6**
SVE				pmax	pmax		
	comp=Z,141nm,1.0s						
PCHI	**Peechi**	**53.91**	**260**	⇑*e*P	**P**	**18 57 50.6**	**+0.6**
PCHI				*e*S	**sS**	**19 06 10.8**	**-1.6**
N16K	**Nishlik Lake**	**54.22**	**35**	P	**P**	**18 57 52.9**	**+1.3**
	baz=271,SNR=53						
ASAR	**Alice Springs**	**54.46**	**176**	P	**P**	**18 57 54.5**	**+0.8**
	comp=Z,10nm,0.8s,baz=6.5,slow=14,SNR=77						
ASAR				pP	**pP**	**18 58 26.6**	**-1.0**
	comp=Z,9.7nm,1.0s,baz=357,slow=5.6,SNR=3.1						
ASAR				ScP	**ScP**	**19 02 40.7**	**+0.7**
	comp=Z,2.5nm,1.0s,baz=1.9,slow=3.5,SNR=4.4						
ASAR				S	**S**	**19 05 22.6**	**+1.4**
	comp=Z,3.2nm,1.1s,baz=7.0,slow=22,SNR=10						
ASAR				PKPPKP	**P'P'df**	**19 28 03.1**	**+0.8**
	comp=Z,0.9nm,1.1s,baz=177,slow=1.9,SNR=4.4						
ASAR				PKP2bc	**P'P'bc**	**19 28 16.4**	**-0.4**
	comp=Z,2.3nm,0.9s,baz=156,slow=2.5,SNR=7.2						
	comp=Z,10nm,0.8s						
ASAR	**Alice Springs**	**54.46**	**176**	P	**P**	**18 57 53.7**	**0.0**
ASAR					**S**	**19 05 18.6**	**-2.6**
AS01	**Alice Springs**	**54.46**	**176**	P	**P**	**18 57 54.9**	**+1.2**
	comp=Z,20nm,0.7s						
CHGN	**Chignik**	**54.58**	**40**	P	**P**	**18 57 53.6**	**-0.5**
CHGN	**Chignik**	**54.58**	**40**	P	**P**	**18 57 54.8**	**+0.6**
	baz=274						
O16K	**Kokwok River B**	**54.58**	**36**	P	**P**	**18 57 55.0**	**+0.9**
	baz=272,SNR=55						
P16K	**Nushagak River**	**54.65**	**37**	P	**P**	**18 57 55.9**	**+1.2**
	baz=272,SNR=24						
ABKAR	**Akbulak array**	**54.86**	**311**	P	**P**	**18 57 55.5**	**-0.9**
ABKAR				IAmb	IAmb	18 57 59.1	
	comp=Z,98nm,0.8s						
ARU	**Arti**	**54.90**	**320**	LR	LR	19 24 25.8	
	comp=Z,269nm,19.0s,baz=106,slow=39						
ARU	**Arti**	**54.90**	**320**	P	**P**	**18 57 55.8**	**-0.7**
ARU				pP	**pP**	**18 58 29.6**	**-0.7**
ARU	**Arti**	**54.90**	**320**	*c i*P	**P**	**18 57 56.3**	**-0.2**
ARU				*PP	**pP**	**18 58 32.7**	**+2.4**
ARU						18 58 51.7	
ARU				S	**S**	**19 05 26.0**	**-0.5**
ARU				SS	**SS**	**19 09 07.3**	**-4.3**
ARU				pmax	pmax		
	comp=Z,128nm,0.8s						
ARU	**Arti**	**54.90**	**320**	P	**P**	**18 57 56.5**	**0.0**
ARU				pP	**pP**	**18 58 31.4**	**+1.1**
R16K	**Pilot Point**	**54.95**	**39**	P	**P**	**18 57 56.8**	**0.0**
	baz=274,SNR=5.3						
O17K	**Koliganek Bris**	**55.08**	**36**	P	**P**	**18 57 58.6**	**+0.9**
	baz=273,SNR=21						
Q16K	**King Salmon**	**55.36**	**37**	P	**P**	**18 58 00.7**	**+0.9**
	baz=274,SNR=24						
P17K	**Kvichak River**	**55.44**	**37**	P	**P**	**18 58 01.6**	**+1.2**
	baz=274						
TTA	**Tatalina**	**55.49**	**32**	P	**P**	**18 58 00.6**	**-0.2**
TTA				IAmb	IAmb	18 58 03.0	
	comp=Z,55nm,1.1s						
TTA	**Tatalina**	**55.49**	**32**	P	**P**	**18 58 01.6**	**+0.8**
TTA	**Tatalina**	**55.49**	**32**	P	**P**	**18 58 00.6**	**-0.2**
TTA				pmax	pmax		
	comp=Z,55nm,1.1s						
TTA	**Tatalina**	**55.49**	**32**	P	**P**	**18 58 01.9**	**+1.1**
	baz=271,SNR=43						
A21K	**Barrow**	**55.53**	**22**	P	**P**	**18 58 00.8**	**0.0**
A21K				IAmb	IAmb	18 58 02.5	
	comp=Z,73nm,0.9s						
A21K	**Barrow**	**55.53**	**22**	P	**P**	**18 58 01.4**	**+0.6**
	baz=265,SNR=9.0						
R17K	**Ugashik Creek**	**55.58**	**39**	P	**P**	**18 58 01.2**	**-0.2**
	baz=275						
WRKA	**Warakurna**	**55.75**	**182**	P	**P**	**18 58 04.0**	**+1.0**
SVW2	**Sparrevohn**	**55.76**	**34**	P	**P**	**18 58 02.2**	**-0.4**
SVW2				IAmb	IAmb	18 58 05.5	
	comp=Z,79nm,1.2s						
SVW2	**Sparrevohn**	**55.76**	**34**	P	**P**	**18 58 03.9**	**+1.2**
Q17K	**Contact Creek**	**55.80**	**38**	P	**P**	**18 58 02.8**	**-0.2**
	baz=275,SNR=7.9						
AKTO	**Aktyubinsk**	**55.92**	**313**	LR	LR	19 24 23.6	
	comp=Z,311nm,18.5s,baz=38,slow=38						
L19K	**White Mountain**	**56.05**	**33**	IAmb	IAmb	18 58 07.4	
	comp=Z,102nm,1.2s						
L19K	**White Mountain**	**56.05**	**33**	P	**P**	**18 58 06.0**	**+1.3**
	baz=273						
Q18K	**Katmai Hardscr**	**56.22**	**37**	P	**P**	**18 58 06.0**	**-0.1**
	baz=275,SNR=11						
M19K	**Big River Lodg**	**56.29**	**33**	IAmb	IAmb	18 58 08.7	
	comp=Z,28nm,0.8s						
M19K	**Big River Lodg**	**56.29**	**33**	P	**P**	**18 58 07.9**	**+1.5**
	baz=273						
N19K	**Bonanza Creek**	**56.31**	**35**	IAmb	IAmb	18 58 08.8	
	comp=Z,30nm,0.7s						
N19K	**Bonanza Creek**	**56.31**	**35**	P	**P**	**18 58 08.1**	**+1.4**
	baz=274						
K20K	**Telida**	**56.36**	**32**	P	**P**	**18 58 08.4**	**+1.5**
	baz=273,SNR=111						
IMAR	**Indian Mountai**	**56.40**	**28**	P	**P**	**18 58 07.5**	**+0.4**
IMAR				pP	**pP**	**18 58 41.9**	**+0.7**
IMAR				PcP	**PcP**	**18 59 03.5**	**+1.1**
O19K	**Port Alsworth**	**56.44**	**35**	P	**P**	**18 58 08.5**	**+1.1**
	baz=275,SNR=51						
F21K	**Alatna River**	**56.49**	**27**	P	**P**	**18 58 08.4**	**+0.7**
	baz=271						
G21K	**Allakaket**	**56.49**	**28**	P	**P**	**18 58 08.9**	**+1.1**
	baz=271						
L20K	**Farewell, AK**	**56.49**	**33**	P	**P**	**18 58 09.3**	**+1.5**
	baz=274,SNR=49						
H21K	**Melozitna Rive**	**56.80**	**29**	IAmb	IAmb	18 58 12.5	
	comp=Z,71nm,1.1s						
H21K	**Melozitna Rive**	**56.80**	**29**	P	**P**	**18 58 11.3**	**+1.3**
	baz=272						
M20K	**Styx River**	**56.88**	**33**	IAmb	IAmb	18 58 13.1	
	comp=Z,34nm,0.8s						
M20K	**Styx River**	**56.88**	**33**	P	**P**	**18 58 12.2**	**+1.5**
	baz=274,SNR=43						
Q19K	**Cape Douglas,**	**56.90**	**37**	IAmb	IAmb	18 58 11.8	
	comp=Z,86nm,0.8s						
Q19K	**Cape Douglas,**	**56.90**	**37**	P	**P**	**18 58 10.7**	**-0.1**
	baz=276,SNR=21						
F22K	**John River**	**56.99**	**27**	P	**P**	**18 58 12.5**	**+1.2**
	baz=272						
ILSW	**Iliamna Southw**	**57.05**	**36**	P	**P**	**18 58 11.1**	**-0.8**
E22K	**Anaktuvuk Pass**	**57.11**	**26**	P	**P**	**18 58 13.2**	**+1.1**
	baz=272,SNR=85						
CHUM	**Lake Minchumin**	**57.11**	**31**	P	**P**	**18 58 13.8**	**+1.7**
	baz=274,SNR=79						
I21K	**Tanana**	**57.17**	**29**	IAmb	IAmb	18 58 15.4	
	comp=Z,108nm,1.1s						
I21K	**Tanana**	**57.17**	**29**	P	**P**	**18 58 14.3**	**+1.8**
	baz=273						
RSO	**Redoubt South**	**57.20**	**35**	P	**P**	**18 58 13.2**	**+0.2**
PPLA	**Purkeypile**	**57.24**	**32**	P	**P**	**18 58 15.0**	**+1.7**
	baz=275,SNR=49						
CAST	**Castle Rocks**	**57.25**	**31**	IAmb	IAmb	18 58 15.7	
	comp=Z,101nm,1.1s						
CAST	**Castle Rocks**	**57.25**	**31**	P	**P**	**18 58 14.7**	**+1.6**
	baz=274,SNR=97						
OHAK	**Old Harbor**	**57.29**	**39**	IAmb	IAmb	18 58 15.2	
	comp=Z,34nm,1.0s						
OHAK	**Old Harbor**	**57.29**	**39**	P	**P**	**18 58 15.9**	**+2.4**
OHAK	**Old Harbor**	**57.29**	**39**	P	**P**	**18 58 13.8**	**+0.4**
	baz=277,SNR=7.3						
O20K	**Slope Mountain**	**57.30**	**35**	P	**P**	**18 58 14.3**	**+0.7**
	baz=276,SNR=12						
H22K	**Ishtalitna Cre**	**57.38**	**29**	P	**P**	**18 58 15.7**	**+1.7**
	baz=274						
SPCR	**Spurr Chakacha**	**57.39**	**34**	P	**P**	**18 58 15.4**	**+1.2**
	baz=276,SNR=32						
SPU	**Mount Spurr**	**57.46**	**34**	P	**P**	**18 58 15.0**	**+0.2**
D23K	**Nanushuk River**	**57.50**	**25**	P	**P**	**18 58 15.7**	**+0.9**
	baz=272						
Q20K	**Shuyak Island**	**57.59**	**37**	P	**P**	**18 58 15.8**	**+0.3**
	baz=277,SNR=8.3						
KDAK	**Kodiak Island**	**57.60**	**38**	P	**P**	**18 58 15.6**	**0.0**
KDAK					**pP**	**18 58 49.3**	**-0.5**
KDAK	**Kodiak Island**	**57.60**	**38**	P	**P**	**18 58 15.6**	**0.0**
KDAK				*PP	**pP**	**18 58 49.3**	**-0.5**
KDAK				pmax	pmax		
	comp=Z,245nm,1.6s						
KDAK	**Kodiak Island**	**57.60**	**38**	P	**P**	**18 58 16.0**	**+0.4**
KDAK				pP	**pP**	**18 58 49.6**	**-0.2**
SKT	**Skwentna**	**57.63**	**33**	IAmb	IAmb	18 58 17.5	
	comp=Z,61nm,1.1s						
SKT	**Skwentna**	**57.63**	**33**	P	**P**	**18 58 16.4**	**+0.5**
	baz=276,SNR=34						
BPAW	**Bear Paw Mtn.**	**57.68**	**31**	P	**P**	**18 58 16.4**	**+0.3**
BPAW				IAmb	IAmb	18 58 18.6	
	comp=Z,68nm,1.1s						
BPAW	**Bear Paw Mtn.**	**57.68**	**31**	P	**P**	**18 58 17.4**	**+1.3**
	baz=275,SNR=33						
MLY	**Manley**	**57.71**	**30**	IAmb	IAmb	18 58 18.9	
	comp=Z,66nm,1.1s						
MLY	**Manley**	**57.71**	**30**	P	**P**	**18 58 17.5**	**+1.1**
	baz=275,SNR=63						
KTH	**Kantishna Hill**	**57.76**	**31**	IAmb	IAmb	18 58 19.1	
	comp=Z,114nm,1.3s						
COLD	**Coldfoot**	**57.77**	**27**	IAmb	IAmb	18 58 19.1	
	comp=Z,74nm,1.6s						
COLD	**Coldfoot**	**57.77**	**27**	P	**P**	**18 58 17.7**	**+1.1**
	baz=274,SNR=15						
HOM	**Homer**	**57.84**	**36**	P	**P**	**18 58 17.4**	**+0.1**
	baz=277						
MNCI	**Minicoy**	**57.84**	**260**	P	**P**	**18 58 16.8**	**-1.2**
G23K	**Bananza Creek**	**57.87**	**28**	P	**P**	**18 58 18.6**	**+1.2**
	baz=274						
E23K	**Chandalar**	**57.94**	**26**	P	**P**	**18 58 19.0**	**+1.0**
	baz=274						
CAPN	**Captain Cook N**	**57.95**	**35**	P	**P**	**18 58 17.1**	**-0.9**
CAPN	**Captain Cook N**	**57.95**	**35**	P	**P**	**18 58 19.2**	**+1.2**
	baz=277,SNR=9.4						
TRF	**Thorofare Moun**	**58.05**	**31**	IAmb	IAmb	18 58 20.7	
	comp=Z,35nm,1.1s						
TRF	**Thorofare Moun**	**58.05**	**31**	P	**P**	**18 58 19.4**	**+0.5**
	baz=276,SNR=23						
SUA	**Susitna One**	**58.06**	**34**	P	**P**	**18 58 19.2**	**+0.2**
	baz=277,SNR=140						
CNPM	**China Poot**	**58.06**	**36**	P	**P**	**18 58 18.3**	**-0.6**
CNPM				IAmb	IAmb	18 58 21.6	
	comp=Z,55nm,0.8s						
H23K	**Yukon River**	**58.14**	**29**	P	**P**	**18 58 20.9**	**+1.6**
	baz=275,SNR=118						
D24K	**Happy Valley**	**58.15**	**25**	P	**P**	**18 58 20.0**	**+0.7**
	baz=274						
C24K	**Franklin Bluff**	**58.16**	**24**	P	**P**	**18 58 20.0**	**+0.6**
	baz=274						
CUT	**Chulitna**	**58.17**	**33**	P	**P**	**18 58 20.0**	**+0.4**
	baz=277,SNR=17						
BRLK	**Bradley Lake**	**58.21**	**36**	P	**P**	**18 58 18.9**	**-1.0**
BRLK				IAmb	IAmb	18 58 22.4	
	comp=Z,88nm,1.0s						
I23K	**Minto, Yukon-K**	**58.28**	**29**	IAmb	IAmb	18 59 12.2	
	comp=Z,73nm,1.2s						
I23K	**Minto, Yukon-K**	**58.28**	**29**	P	**P**	**18 58 21.6**	**+1.4**
	baz=276,SNR=22						
BRSE	**Bradley Lake S**	**58.28**	**36**	P	**P**	**18 58 20.5**	**+0.1**
	baz=278,SNR=29						
M22K	**Willow**	**58.32**	**33**	P	**P**	**18 58 21.1**	**+0.5**
	baz=277,SNR=11						
FIS	**Fire Island**	**58.35**	**34**	P	**P**	**18 58 21.4**	**+0.6**
E24K	**Your Creek**	**58.36**	**26**	P	**P**	**18 58 22.1**	**+1.3**
	baz=275,SNR=61						
NEA2	**Nenana**	**58.46**	**30**	P	**P**	**18 58 22.0**	**+0.5**
NEA2					**pP**	**18 58 54.9**	**-0.9**
NEA2	**Nenana**	**58.46**	**30**	P	**P**	**18 58 22.8**	**+1.2**
	baz=276,SNR=34						
RC01	**Rabbit Creek A**	**58.59**	**34**	P	**P**	**18 58 22.8**	**+0.3**
	baz=278,SNR=39						
MCK	**McKinley**	**58.62**	**31**	IAmb	IAmb	18 58 25.1	
	comp=Z,71nm,1.0s						
MCK	**McKinley**	**58.62**	**31**	P	**P**	**18 58 23.2**	**+0.5**
	baz=277,SNR=51						
GEYT	**Alibeck**	**58.63**	**298**	P	**P**	**18 58 23.9**	**+0.7**
	comp=Z,26nm,0.7s,baz=58,slow=3.7,SNR=39						
GEYT				pP	**pP**	**18 58 57.8**	**+0.4**
	comp=Z,11nm,0.7s,baz=82,slow=3.1,SNR=3.7						
GEYT				PP	**PP**	**19 00 34.2**	**-0.1**
	comp=Z,9.8nm,1.1s,baz=82,slow=3.1,SNR=4.2						
GEYT				LR	LR	19 27 00.1	
	comp=Z,138nm,18.3s,baz=39,slow=39						
	comp=Z,26nm,0.7s						
F24K	**Squaw Lake**	**58.63**	**26**	P	**P**	**18 58 23.8**	**+1.1**
	baz=276						
O22K	**Cooper Landing**	**58.68**	**35**	P	**P**	**18 58 23.4**	**+0.3**
	baz=278,SNR=12						
OOD	**Oodnadatta**	**58.68**	**174**	P	**P**	**18 58 24.8**	**+1.4**
RND	**Reindeer**	**58.69**	**31**	IAmb	IAmb	18 58 24.7	
	comp=Z,97nm,1.0s						
MDM	**Murphy Dome**	**58.77**	**29**	P	**P**	**18 58 24.3**	**+0.6**
MDM				pP	**pP**	**18 58 56.9**	**-1.1**
PMR	**Palmer**	**58.81**	**33**	IAmb	IAmb	18 58 25.4	
	comp=Z,106nm,1.1s						
PMR	**Palmer**	**58.81**	**33**	P	**P**	**18 58 24.3**	**+0.4**
PMR	**Palmer**	**58.81**	**33**	P	**P**	**18 58 24.3**	**+0.4**
	baz=278,SNR=22						
H24K	**Noodor Dome**	**58.82**	**28**	IAmb	IAmb	18 58 26.9	
	comp=Z,69nm,1.1s						
H24K	**Noodor Dome**	**58.82**	**28**	P	**P**	**18 58 25.5**	**+1.5**
	baz=277						
SEW	**Seward**	**58.87**	**35**	P	**P**	**18 58 24.2**	**-0.2**
SEW				pP	**pP**	**18 58 57.6**	**-1.1**
SEW	**Seward**	**58.87**	**35**	P	**P**	**18 58 24.7**	**+0.3**
	baz=279,SNR=61						
G24K	**Hadweenzic Riv**	**58.88**	**27**	P	**P**	**18 58 26.0**	**+1.5**
	baz=276						
GHO	**Glory Hole Cre**	**58.88**	**33**	IAmb	IAmb	18 58 27.3	
	comp=Z,104nm,1.2s						
WRH	**Wood River Hil**	**58.89**	**30**	P	**P**	**18 58 24.5**	**0.0**
WRH				IAmb	IAmb	18 58 28.0	
	comp=Z,39nm,0.9s						
WRH				pP	**pP**	**18 58 56.8**	**-2.0**
WRH					**PcP**	**18 59 11.6**	**-0.6**

WAT1	Susitna Watana	58.91	32	P	P	18 58 25.1	+0.4
	baz=278						
TCOL	CIGO, UAF Yank	58.94	30	IAmb	IAmb	18 58 28.0	
	comp=Z,26nm,0.9s						
TCOL	CIGO, UAF Yank	58.94	30	P	P	18 58 25.7	+0.9
	baz=277						
COLA	College	58.95	30	P	P	18 58 25.1	+0.3
COLA				IAmb	IAmb	18 58 28.0	
	comp=Z,24nm,0.9s						
COLA	College	58.95	30	P	P	18 58 26.4	+1.6
COLA	College	58.95	30	*c* *i*P	P	18 58 25.4	+0.6
COLA				pmax	pmax		
	comp=Z,32nm,1.1s						
COLA	College	58.95	30	P	P	18 58 25.5	+0.6
	baz=277						
COLA	College	58.95	30	P	P	18 58 25.8	+1.0
CCB	Clear Creek Bu	58.99	30	P	P	18 58 24.9	-0.3
CCB				IAmb	IAmb	18 58 28.4	
	comp=Z,26nm,1.0s						
D25K	Kavik River	59.01	24	P	P	18 58 25.5	+0.2
	baz=276						
POKR	Poker Plat Res	59.09	29	P	P	18 58 27.1	+1.2
	baz=277,SNR=48						
KNK	Knik Glacier	59.16	34	P	P	18 58 27.2	+0.8
	baz=279,SNR=51						
SML	Sawmill	59.16	33	IAmb	IAmb	18 58 28.2	
	comp=Z,88nm,1.1s						
SML	Sawmill	59.16	33	P	P	18 58 26.8	+0.4
	baz=279,SNR=24						
INKA	Innaminka	59.24	169	P	P	18 58 29.7	+2.4
PWL	Port Wells	59.30	34	P	P	18 58 27.2	-0.2
PWL	Port Wells	59.30	34	P	P	18 58 27.9	+0.4
	baz=279,SNR=34						
IL31		59.37	30	IAmb	IAmb	18 58 30.5	
	comp=Z,23nm,0.8s						
ILAR	Eielson Array	59.37	30	P	P	18 58 27.4	-0.3
	comp=Z,16nm,0.8s,baz=274,slow=5.5,SNR=110						
ILAR				pP	pP	18 59 02.0	-0.1
	comp=Z,4.2nm,0.7s,baz=281,slow=6.7,SNR=3.3						
ILAR				PKPPKP	P'P'df	19 28 00.5	+1.6
	comp=Z,1.0nm,1.0s,baz=184,slow=1.3,SNR=6.1						
	comp=Z,16nm,0.8s						
ILAR	Eielson Array	59.37	30	P	P	18 58 27.0	-0.8
HDA	Harding Lake	59.39	30	IAmb	IAmb	18 58 29.0	
	comp=Z,89nm,0.9s						
HDA	Harding Lake	59.39	30	P	P	18 58 27.7	-0.2
	baz=278,SNR=72						
G25K	Bearman Lake	59.41	27	P	P	18 58 29.7	+1.7
	baz=278						
E25K	Arctic Village	59.44	26	P	P	18 58 29.8	+1.5
	baz=277,SNR=35						
M23K	Glacier View	59.44	33	P	P	18 58 28.9	+0.6
	baz=279,SNR=25						
EIDS	Eidsvold	59.45	158	P	P	18 58 28.1	-0.7
EIDS					pP	18 59 01.6	-1.4
EIDS	Eidsvold	59.45	158	P	P	18 58 29.8	+1.0
	comp=Z,14nm,1.2s						
C26K	Camden Bay	59.45	24	P	P	18 58 29.8	+1.5
	baz=277						
F25K	Christian Rive	59.48	26	P	P	18 58 30.3	+1.7
	baz=278						
KIRV	Kirov	59.52	323	*ce*P	P	18 58 29.1	+0.2
SCM	Sheep Creek Mo	59.62	33	P	P	18 58 30.5	+0.9
	baz=280,SNR=41						
FYU	Fort Yukon	59.78	27	P	P	18 58 31.1	+0.5
FYU				IAmb	IAmb	18 58 33.6	
	comp=Z,99nm,1.1s						
RMQ	Roma	59.80	161	P	P	18 58 33.4	+2.2
PRP	Porcupine Dome	59.83	29	IAmb	IAmb	18 58 33.2	
	comp=Z,43nm,0.9s						
PRP	Porcupine Dome	59.83	29	P	P	18 58 32.1	+1.0
	baz=279,SNR=50						
P23K	Montague Islan	59.90	35	P	P	18 58 32.7	+1.2
	baz=280,SNR=15						
C27K	Jago River	59.91	24	P	P	18 58 32.4	+1.0
	baz=278						
K24K	Donnelly Dome	59.99	31	P	P	18 58 32.4	+0.2
	baz=280,SNR=20						
F26K	Sheenjek River	60.03	26	P	P	18 58 33.9	+1.5
	baz=279						
M24K	Tolsona, Glenn	60.11	33	IAmb	IAmb	18 58 35.5	
	comp=Z,87nm,1.1s						
M24K	Tolsona, Glenn	60.11	33	P	P	18 58 34.2	+1.2
	baz=280,SNR=20						
PAX	Paxson	60.28	32	P	P	18 58 34.3	+0.1
PAX				IAmb	IAmb	18 58 36.0	
	comp=Z,43nm,1.0s						
PAX	Paxson	60.28	32	P	P	18 58 34.3	+0.1
PAX				pmax	pmax		
	comp=Z,43nm,1.0s						
PAX	Paxson	60.28	32	P	P	18 58 34.8	+0.7
	baz=280,SNR=26						
G26K	Porcupine Rive	60.29	27	P	P	18 58 35.9	+1.9
	baz=280						
KLU	Klutina	60.34	33	IAmb	IAmb	18 58 36.6	
	comp=Z,61nm,1.1s						
KLU	Klutina	60.34	33	P	P	18 58 35.5	+0.9
	baz=281,SNR=30						
RIDG	Independent Ri	60.41	31	IAmb	IAmb	18 59 20.4	
	comp=Z,50nm,1.0s						
RIDG	Independent Ri	60.41	31	P	P	18 58 35.0	0.0
	baz=280,SNR=22						
NGCH	Negor - Chabah	60.42	283	P	P	18 58 37.7	+2.2
DIV	Divide	60.48	34	P	P	18 58 35.9	+0.3
DIV				IAmb	IAmb	18 58 37.6	
	comp=Z,92nm,1.0s						
HARP	HAARP	60.52	32	P	P	18 58 36.9	+1.1
	baz=281,SNR=30						
Q23K	Middleton Isla	60.54	36	P	P	18 58 36.5	+0.7
	baz=282						
EYAK	Cordova Ski Ar	60.61	34	IAmb	IAmb	18 58 37.9	
	comp=Z,28nm,1.0s						
EYAK	Cordova Ski Ar	60.61	34	P	P	18 58 37.0	+0.7
EYAK	Cordova Ski Ar	60.61	34	P	P	18 58 37.0	+0.7
	baz=282,SNR=7.5						
KOUNC	Koumac, New Ca	60.72	143	P	P	18 58 37.6	+0.1
KOUNC					pP	18 59 10.7	-1.3
KOUNC				IAmb	IAmb	18 59 14.2	
	comp=Z,92nm,1.5s						
KOUNC	Koumac, New Ca	60.72	143	P	P	18 58 39.5	+2.0
SCRK	Sand Creek	60.74	30	IAmb	IAmb	18 58 38.8	
	comp=Z,99nm,1.0s						
SCRK	Sand Creek	60.74	30	P	P	18 58 37.5	+0.2
	baz=281,SNR=68						
DOT	Dot Lake	60.77	31	IAmb	IAmb	18 58 38.7	
	comp=Z,70nm,0.9s						
J26L	Joseph Creek	60.82	30	IAmb	IAmb	18 58 38.9	
	comp=Z,51nm,0.9s						
J26L	Joseph Creek	60.82	30	P	P	18 58 37.7	-0.1
	baz=281,SNR=42						
I26K	Coal Creek Min	60.84	29	P	P	18 58 37.8	0.0
	baz=281,SNR=20						
E27K	Coleen River	60.90	25	P	P	18 58 39.6	+1.4
	baz=281						
N25K	Chitina, Valde	60.94	33	IAmb	IAmb	18 58 41.9	
	comp=Z,64nm,1.2s						
N25K	Chitina, Valde	60.94	33	P	P	18 58 39.5	+0.8
	baz=282,SNR=22						
MENT	Mentasta	61.07	31	P	P	18 58 39.9	+0.4
MENT				IAmb	IAmb	18 58 41.8	
	comp=Z,104nm,1.0s						
MENT	Mentasta	61.07	31	P	P	18 58 40.6	+1.2
G27K	Doyon Strip	61.14	27	P	P	18 58 41.4	+1.5
	baz=282						
L26K	Log Cabin Wild	61.22	31	P	P	18 58 40.0	-0.4
L26K				IAmb	IAmb	18 58 42.8	
	comp=Z,64nm,0.9s						
L26K	Log Cabin Wild	61.22	31	P	P	18 58 41.5	+1.1
	baz=282,SNR=46						
MORW	Morawa	61.27	194	IAmb	IAmb	18 58 42.5	
	comp=Z,37nm,1.1s						
MORW	Morawa	61.27	194	P	P	18 58 42.4	+1.3
H27K	Steamboat Moun	61.31	28	P	P	18 58 42.3	+1.2
	baz=282						
GLB	Gilahina Butte	61.34	33	IAmb	IAmb	18 58 43.6	
	comp=Z,79nm,1.2s						
I27K	Kandik River	61.41	28	P	P	18 58 43.1	+1.4
	baz=282						
FORT	Forrest	61.48	182	P	P	18 58 42.3	-0.1
FORT				IAmb	IAmb	18 58 44.0	
	comp=Z,55nm,0.8s						
M26K	Nabesna, AK	61.51	32	P	P	18 58 43.6	+1.2
	baz=283						
K27K	Chicken	61.56	30	IAmb	IAmb	18 58 45.0	
	comp=Z,93nm,1.1s						
K27K	Chicken	61.56	30	P	P	18 58 43.8	+1.2
	baz=283						
VRDI	Verde Repeater	61.56	33	IAmb	IAmb	18 58 44.9	
	comp=Z,95nm,1.2s						
MCARA	McCarthy VSAT	61.73	33	P	P	18 58 43.8	0.0
MCARA				IAmb	IAmb	18 58 46.2	
	comp=Z,128nm,1.3s						
MCARA	McCarthy VSAT	61.73	33	P	P	18 58 45.1	+1.2
	baz=283,SNR=32						
EGAK	Eagle	61.78	29	IAmb	IAmb	18 58 45.7	
	comp=Z,25nm,0.8s						
EGAK	Eagle	61.78	29	P	P	18 58 44.6	+0.5
	baz=283,SNR=15						
BELG	Belogornoye	61.88	316	LR	LR	19 29 00.8	
	comp=Z,108nm,19.3s,baz=138,slow=39						
BELG	Belogornoye	61.88	316	*c* *i*P	P	18 58 44.7	-0.2
BELG				pmax	pmax		
	comp=Z,83nm,1.1s						
L27K	Beaver Creek,	61.88	31	IAmb	IAmb	18 58 47.5	
	comp=Z,79nm,1.1s						
L27K	Beaver Creek,	61.88	31	P	P	18 58 46.4	+1.5
	baz=283,SNR=68						
TGL	Tana Glacier	61.97	34	IAmb	IAmb	18 58 47.4	
	comp=Z,71nm,0.9s						
M27K	Edge Creek, AK	62.03	32	IAmb	IAmb	18 58 48.2	
	comp=Z,67nm,0.9s						
M27K	Edge Creek, AK	62.03	32	P	P	18 58 47.1	+1.1
	baz=284						
KAAM	Kaadhehdhoo	62.15	252	P	P	18 58 49.2	+1.9
	SNR=18						
AULRC	Lightning Ridg	62.38	163	P	P	18 58 50.8	+2.3
BARN	Barnard Glacie	62.45	33	P	P	18 58 49.3	+0.4
BARN				IAmb	IAmb	18 58 50.9	
	comp=Z,36nm,0.8s						
LIFNC	LIFOU	62.47	141	P	P	18 58 49.6	+0.4
LIFNC				IAmb	IAmb	18 59 26.6	
	comp=Z,42nm,1.1s						
BVCY	Beaver Creek	62.47	32	P	P	18 58 49.9	+1.1
	baz=284,SNR=10						
CTG	Chitna Glacier	62.62	33	P	P	18 58 51.2	+1.2
	baz=285,SNR=26						
CTGM	Chitina Glacie	62.62	33	IAmb	IAmb	18 58 52.1	
	comp=Z,61nm,1.0s						
BLDU	Ballidu	62.63	193	P	P	18 58 51.6	+1.4
DAWY	Dawson	62.70	30	IAmb	IAmb	18 58 52.2	
	comp=Z,31nm,0.9s						
DAWY	Dawson	62.70	30	P	P	18 58 51.1	+0.8
	baz=285,SNR=32						
I29M	Ogilvie Camp,	62.81	28	IAmb	IAmb	18 58 53.2	
	comp=Z,51nm,0.9s						
I29M	Ogilvie Camp,	62.81	28	P	P	18 58 51.8	+0.8
	baz=285,SNR=30						
YUK3	Moose Creek	62.82	32	P	P	18 58 52.4	+1.0
	baz=285,SNR=34						
JASK	Jask - Hormozg	62.94	285	P	P	18 58 54.4	+1.9
NOUC	Port Laguerre	63.05	142	P	P	18 58 55.4	+2.3
	comp=Z,28nm,1.3s						
NOUC	Port Laguerre	63.05	142	P	P	18 58 54.5	+1.4
NOUC				pP	PcP	18 59 29.2	-0.3
J29M	Klondike Camp	63.09	29	P	P	18 58 54.4	+1.5
	baz=286						
DZM	Mont Dzumac	63.10	142	*e*P	P	18 58 53.5	0.0
	comp=Z,79nm,1.1s						
DZM				*e*pP	pP	18 59 27.8	-0.5
	comp=Z,81nm,1.2s						
DZM				*e*S	S	19 07 13.6	+0.5
	comp=Z,261nm,24.4s						
DZM	Mont Dzumac	63.10	142	*e*LR	LR	19 17 55.8	
	comp=Z,329nm,39.9s						
DZM	Mont Dzumac	63.10	142	LR	LR	19 22 37.6	
	comp=Z,105nm,20.9s,baz=343,slow=32						
DZM	Mont Dzumac	63.10	142	P	P	18 58 53.8	+0.2
DZM				IAmb	IAmb	18 58 56.3	
	comp=Z,40nm,1.1s						
DZM					pP	18 59 26.6	-1.6
DZM	Mont Dzumac	63.10	142	P	P	18 58 55.6	+2.1
DZM	Mont Dzumac	63.10	142	P	P	18 58 55.0	+1.5
DZM				pP	pP	18 59 28.3	0.0
JLN	Jalan Bani Buh	63.15	281	P	P	18 58 55.2	+1.3
	SNR=13						
EPYK	Eagle Plains	63.16	27	IAmb	IAmb	18 58 55.2	
	comp=Z,110nm,1.0s						
EPYK	Eagle Plains	63.16	27	P	P	18 58 54.1	+0.8
	baz=286,SNR=53						
G30M	tAoh Zraii Nji	63.18	26	P	P	18 58 54.0	+0.5
	baz=286						
O28M	Mount Upton	63.21	33	P	P	18 58 55.2	+1.1
	baz=286						
YUK8	Steele Glacier	63.27	33	P	P	18 58 55.3	+0.9
	baz=286,SNR=16						
YATNC	Mamie plateau,	63.33	142	P	P	18 58 57.9	+3.0
WBK	Wadi Bani Khal	63.33	281	P	P	18 58 56.8	+1.6
	SNR=12						
WSAR	Wadi Sarin	63.36	282	P	P	18 58 55.5	+0.2
	comp=Z,44nm,0.8s,baz=106,slow=6.4,SNR=27						
	comp=Z,44nm,0.8s						
WSAR	Wadi Sarin	63.36	282	P	P	18 58 56.6	+1.3
	SNR=6.6						
PCA	Pinnacle	63.37	34	IAmb	IAmb	18 58 57.0	
	comp=Z,74nm,0.9s						
PINM	Pinnacle	63.37	34	P	P	18 58 55.7	+0.9
	baz=286,SNR=11						
KLBR	Kellerberrin	63.39	192	P	P	18 58 55.5	+0.4
STKA	Stephens Creek	63.43	169	P	P	18 58 56.3	+0.9
	comp=Z,7.4nm,0.5s,baz=349,slow=6.0,SNR=24						
STKA				pP	pP	18 59 29.9	-0.4
	comp=Z,16nm,0.6s,baz=344,slow=7.8,SNR=7.6						
STKA				LR	LR	19 24 28.8	
	comp=Z,97nm,21.8s,baz=5.2,slow=34						
	comp=Z,7.4nm,0.5s						
STKA	Stephens Creek	63.43	169	P	P	18 58 56.5	+1.1
L29M	L29M	63.50	31	P	P	18 58 57.4	+1.7
	baz=286						
ADZR	Andozero	63.52	330	⇑*i*P	P	18 58 55.5	-0.1
ADZR				pmax	pmax		
	comp=Z,244nm,0.8s						
M29M	Somme Creek	63.54	31	P	P	18 58 57.9	+1.9
	baz=286,SNR=34						
K29M	Barlow Dome	63.55	30	P	P	18 58 57.4	+1.3
	baz=287						
OUENC	Ouen Island, N	63.59	142	P	P	18 58 56.8	+0.1
OUENC					pP	18 59 31.4	0.0
OUENC				IAmb	IAmb	18 59 34.7	
	comp=Z,90nm,1.5s						
OUENC	Ouen Island, N	63.59	142	P	P	18 58 58.8	+2.2
HOPEN	Hopen	63.60	345	*e*P	P	18 58 56.3	+0.3
HOPEN				IAmb	IAmb	18 58 57.0	
	comp=Z,260nm,1.0s						
BIDO	Bidbid	63.66	283	P	P	18 58 59.6	+2.3
	SNR=13						
BCPM	Bancas Point	63.71	34	IAmb	IAmb	18 58 59.5	
	comp=Z,96nm,1.0s						
YUK4	Talbot Arm	63.77	32	P	P	18 58 59.1	+1.4
	baz=287,SNR=20						
LVZ	Lovozero	63.77	335	P	P	18 58 55.4	-1.9
LVZ	Lovozero	63.77	335	*ce*P	P	18 58 56.3	-1.0
LVZ				pmax	pmax		
	comp=Z,108nm,1.3s						
LVZ	Lovozero	63.77	335	P	P	18 58 56.3	-1.0
INK	Inuvik	63.78	24	LR	LR	19 29 01.3	
	comp=Z,94nm,18.6s,baz=26,slow=38						
INK	Inuvik	63.78	24	IAmb	IAmb	18 58 58.9	
	comp=Z,44nm,1.1s						
INK	Inuvik	63.78	24	P	P	18 58 57.9	+0.6
	baz=288,SNR=34						
KLMR	Klimovskoe	63.86	327	⇑*i*P	P	18 58 57.6	-0.3
KLMR				⇓*i*P	P	18 58 57.6	-0.3
KLMR				⇑*i*P	P	18 58 57.6	-0.3
KLMR				*e*pP	PcP	18 59 31.2	-1.2
KLMR	Klimovskoe	63.86	327	*c* *i*P	P	18 58 57.5	-0.3
KLMR				*e**PP	PcP	18 59 31.2	-1.2
CMSA	Cobar Meteorol	63.87	165	P	P	18 59 00.2	+2.0
PNL	Peninsula	63.91	34	P	P	18 59 00.3	+2.0
PNL	Peninsula	63.91	34	P	P	18 58 59.4	+1.0
	baz=287,SNR=7.0						
SMDO	Samad	63.92	282	P	P	18 59 00.8	+1.7
	SNR=21						
F31M	Tsiigehtchic	63.97	25	P	P	18 58 58.8	+0.3
	baz=288						
YUK6	Outpost Mounta	64.02	33	P	P	18 59 00.7	+1.4
	baz=287,SNR=13						
O29M	Mount Kennedy	64.11	34	P	P	18 59 01.2	+1.4
	baz=287						
JMDO	Jabal Madar	64.16	282	P	P	18 59 02.2	+1.6
	SNR=15						
JMDO				P	P	18 59 02.2	+1.6
	SNR=15						
BANOM	Banah	64.22	286	*i* P	P	18 59 02.3	+1.3
	SNR=9.2						
BANOM	Banah	64.22	286	P	P	18 59 02.7	+1.8
M30M	Minto, Yukon	64.24	31	P	P	18 59 00.6	+0.2
M30M	Minto, Yukon	64.24	31	P	P	18 59 02.1	+1.7
	baz=288,SNR=19						
SHME	Shamm	64.30	286	*i* P	P	18 59 03.2	+1.9
	SNR=20						
SHME	Shamm	64.30	286	P	P	18 59 03.7	+2.3
	SNR=12						
MAYO	Mayo, Yukon	64.32	30	IAmb	IAmb	18 59 03.3	
	comp=Z,53nm,0.8s						
MAYO	Mayo, Yukon	64.32	30	P	P	18 59 02.2	+1.3
	baz=288						
HOQ	Hoqain	64.32	283	P	P	18 59 03.4	+1.8
	SNR=11						
HOQ				P	P	18 59 03.4	+1.8
	SNR=11						
APA	Apatity	64.33	335	⇓*i*P	P	18 58 59.1	-1.8
APA				*i* *PP	pP	18 59 38.0	+2.4
APA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,800nm,15.0s						
ARMA	Armidale	64.33	160	P	P	18 59 01.6	+0.2
ARMA	Armidale	64.33	160	P	P	18 59 03.9	+2.5
	comp=Z,18nm,1.3s						
N30M	Aishikik Lake	64.45	32	P	P	18 59 03.5	+1.6
	baz=288						
HYT	Haines Junctio	64.46	33	IAmb	IAmb	18 59 04.8	
	comp=Z,64nm,1.1s						
HYT	Haines Junctio	64.46	33	P	P	18 59 03.1	+1.0
	baz=288,SNR=25						
MDH	Madha	64.47	285	P	P	18 59 03.4	+0.9
MASF	Masafi	64.56	285	P	P	18 59 04.9	+1.7
MSFE	Esma-Masafi	64.56	285	*i* P	P	18 59 04.6	+1.4
	SNR=8.6						
SPA0	Spitsbergen Ar	64.57	348	*e*P	P	18 59 02.4	0.0
SPA0				IAmb	IAmb	18 59 03.1	
	comp=Z,312nm,1.1s						
SPITS	Spitsbergen Ar	64.57	348	P	P	18 59 02.1	-0.2
SPITS				pmax	pmax		
	comp=Z,273nm,1.1s						
UOSS	Minazif	64.69	285	P	P	18 59 04.4	+0.4
UOSS				IAmb	IAmb	18 59 07.2	
	comp=Z,54nm,1.4s						
UOSS	Minazif	64.69	285	*i* P	P	18 59 04.8	+0.8
	SNR=5.4						
UOSS	Minazif	64.69	285	P	P	18 59 04.9	+1.0
UOSS	Minazif	64.69	285	P	P	18 59 04.4	+0.4
SOHO	SOHO	64.74	284	*i* P	P	18 59 05.4	+1.1
	SNR=32						
SOHO	SOHO	64.74	284	P	P	18 59 05.5	+1.1
BSY	Bisya	64.76	282	P	P	18 59 05.7	+1.2
	SNR=16						
NWAO	Narrogin (SRO)	64.78	192	P	P	18 59 03.3	-0.9
NWAO				IAmb	IAmb	18 59 05.6	
	comp=Z,53nm,1.1s						
NWAO	Narrogin (SRO)	64.78	192	IAmb	IAmb	18 59 05.5	
	comp=Z,172nm,1.1s						
NWAO	Narrogin (SRO)	64.78	192	P	P	18 59 04.9	+0.7
NWAO	Narrogin (SRO)	64.78	192	P	P	18 59 03.3	-0.9
NWAO				pmax	pmax		
	comp=Z,53nm,1.1s						
NWAO	Narrogin (SRO)	64.78	192	P	P	18 59 04.7	+0.5
NWAO	Narrogin (SRO)	64.78	192	P	P	18 59 04.6	+0.4
HATD	Hatta, Dubai	64.80	285	*i* P	P	18 59 06.2	+1.5
	SNR=11						
HATD	Hatta, Dubai	64.80	285	P	P	18 59 06.5	+1.8
	SNR=10						
VADS	Vadso	64.82	338	*e*P	P	18 59 04.1	+0.1
VADS				IAmb	IAmb	18 59 04.5	
	comp=Z,194nm,1.1s						
MHTO	MHTO	64.85	280	P	P	18 59 06.0	+1.0
	SNR=23						
UMQ	Umm Al-Quwin	64.90	286	P	P	18 59 06.6	+1.3
ASHO	Ashiyiah	64.92	285	*i* P	P	18 59 06.5	+1.0
	SNR=20						
ASHO	Ashiyiah	64.92	285	P	P	18 59 06.9	+1.4
	SNR=12						
KBS	Kingsbay	64.93	349	P	P	18 59 04.2	-0.4
KBS	Kingsbay	64.93	349	*ce*P	P	18 59 04.4	-0.2
KBS				pmax	pmax		
	comp=Z,128nm,1.3s						
KBS	Kingsbay	64.93	349	*i* P	P	18 59 04.5	-0.2
KBS	Kingsbay	64.93	349	*e*P	P	18 59 04.9	+0.3
KBS				IAmb	IAmb	18 59 05.5	
	comp=Z,110nm,1.0s						
KBS	Kingsbay	64.93	349	P	P	18 59 04.2	-0.4
KBS				pP	pP	18 59 40.4	+0.9
P30M	Million Dollar	64.94	34	P	P	18 59 06.6	+1.6
	baz=289						
N31M	Braeburn, Yuko	65.04	32	IAmb	IAmb	18 59 08.4	
	comp=Z,68nm,1.0s						
N31M	Braeburn, Yuko	65.04	32	P	P	18 59 06.9	+1.3
	baz=289,SNR=19						
ARQ	Araqi	65.08	283	P	P	18 59 08.0	+1.4
	SNR=18						
ARQ				P	P	18 59 08.0	+1.4
	SNR=18						
AKT	Akhty	65.12	305	*e*P	P	18 59 07.5	+0.9
AKT				*e*		18 59 37.8	
AKT				*e**PP	pP	18 59 44.7	+3.2
AKT				pmax	pmax		
	comp=Z,350nm,1.1s						
NAZ	Nazwa, Dubai	65.12	285	*i* P	P	18 59 09.0	+2.2
	SNR=7.0						
NAZ	Nazwa, Dubai	65.12	285	P	P	18 59 08.4	+1.6
	SNR=8.9						
A36M	Sachs Harbour	65.12	19	P	P	18 59 06.7	+0.7
	baz=294,SNR=94						
O30N	Mendenhall	65.13	33	P	P	18 59 07.4	+1.1
	baz=289,SNR=11						
AUDCS	Dubbo College	65.22	163	P	P	18 59 08.8	+1.8
FAQ	Al Faqa, Dubai	65.28	285	*i* P	P	18 59 08.5	+0.8
	SNR=8.5						
FAQ	Al Faqa, Dubai	65.28	285	P	P	18 59 09.1	+1.3
	SNR=9.1						
HSPB	Hornsund (broa	65.33	347	*e*P	P	18 59 07.2	0.0
HSPB	Hornsund (broa	65.33	347	*e*P	P	18 59 07.0	-0.1
HSPB				IAmb	IAmb	18 59 08.1	
	comp=Z,258nm,0.9s						
LKRN	Lenkeran, Azer	65.33	302	P	P	18 59 07.2	-0.7
M31M	Drury Creek, Y	65.42	31	IAmb	IAmb	18 59 10.4	
	comp=Z,43nm,1.3s						
M31M	Drury Creek, Y	65.42	31	P	P	18 59 09.2	+1.1
	baz=290,SNR=15						
ALNE	Al Ain	65.43	284	*i* P	P	18 59 09.8	+1.0
	SNR=35						
ALNE	Al Ain	65.43	284	P	P	18 59 10.2	+1.4
	SNR=27						
PLBC	Pleasant Camp	65.44	34	P	P	18 59 09.4	+1.2
	baz=290,SNR=7.8						
ASUD	Al Ashush, Dub	65.55	285	*i* P	P	18 59 10.3	+0.8
	SNR=9.1						
ASUD	Al Ashush, Dub	65.55	285	P	P	18 59 13.0	+3.5
	SNR=6.6						
SEKA	Sheki	65.59	305	P	P	18 59 08.4	-1.2
DQM	DQM	65.67	279	P	P	18 59 11.1	+0.8
KEV	Kevo	65.72	338	P	P	18 59 08.7	-1.1
KEV	Kevo	65.72	338	P	P	18 59 08.7	-1.1
KEV				pmax	pmax		
	comp=Z,160nm,1.0s						
KEV	Kevo	65.72	338	P	P	18 59 09.3	-0.5
VRH	Novokhopyorsk	65.73	316	*c* *i*P	P	18 59 09.9	-0.3
VRH				pmax	pmax		
	comp=Z,201nm,0.8s						
MNGR	Mingechevir, A	65.82	304	P	P	18 59 10.3	-0.7
AJN	Ajban	65.86	285	*i* P	P	18 59 12.1	+0.6
	SNR=8.1						
AJN	Ajban	65.86	285	P	P	18 59 12.9	+1.5
	SNR=7.6						
GROC	Groznyy	65.87	307	*e*P	P	18 59 12.3	+1.1
GROC				*e*		18 59 40.9	
GROC				*e**PP	PcP	18 59 43.4	+2.4
GROC				*e*		19 01 36.6	
GROC				pmax	pmax		
	comp=Z,639nm,1.4s						
FARO	Faro, Yukon	65.87	31	P	P	18 59 11.3	+0.3
FARO				IAmb	IAmb	18 59 13.3	
	comp=Z,82nm,1.0s						
FARO	Faro, Yukon	65.87	31	P	P	18 59 12.1	+1.1
	baz=291,SNR=54						
SKAG	Skagway	65.94	34	IAmb	IAmb	18 59 14.1	
	comp=Z,48nm,1.0s						
SKAG	Skagway	65.94	34	P	P	18 59 13.5	+2.1
SKAG	Skagway	65.94	34	P	P	18 59 12.9	+1.6
	baz=290,SNR=5.8						

S31K	Pelican	66.02	36	P	P	18 59 12.2	+0.3
	baz=290						
ARA0	ARCESS Array S	66.28	338	eP	P	18 59 13.3	-0.2
ARA0				IAmb	IAmb	18 59 14.5	
	comp=Z,133nm,1.1s						
ARCES	ARCESS Array B	66.28	338	P	P	18 59 13.1	-0.4
	comp=Z,66nm,0.9s,baz=61,slow=7.8,SNR=85						
ARCES				pP	pP	18 59 49.2	+0.7
	comp=Z,24nm,1.0s,baz=34,slow=7.3,SNR=2.6						
	comp=Z,66nm,0.9s						
ARCES	ARCESS Array B	66.28	338	P	P	18 59 12.4	-1.0
NOR	Nord	66.36	355	i P	P	18 59 13.1	-0.7
NOR				IAmb	IAmb	18 59 19.4	
	comp=Z,18nm,1.0s						
HAMF	Hammerfest	66.37	340	eP	P	18 59 13.6	-0.3
HAMF				IAmb	IAmb	18 59 13.8	
	comp=Z,82nm,0.7s						
GANJ	Ganja	66.41	304	P	P	18 59 14.1	-0.7
MOS	Moscow	66.47	322	eP	P	18 59 13.1	-1.7
MOS				e*PP	pP	18 59 50.8	+1.1
MOS				e		19 00 01.8	
MOS				eS	S	19 07 50.8	-2.5
MOS				e		19 08 20.2	
MOS				e		19 08 53.7	
MOS				pmax	pmax		
	comp=Z,1µm,1.5s						
MOS				pmax	pmax		
	comp=Z,716nm,1.2s						
MOS				pmax	pmax		
	comp=N,200nm,1.2s						
MOS				pmax	pmax		
	comp=E,300nm,1.2s						
MOS				pmax	pmax		
	comp=N,197nm,1.1s						
MOS				pmax	pmax		
	comp=E,218nm,1.1s						
BESE	Bessie Mountai	66.48	35	P	P	18 59 14.9	0.0
UMZA	Um Al Zommool	66.48	283	P	P	18 59 16.0	+0.5
ALE	Alert	66.55	2	P	P	18 59 15.2	+0.2
C36M	Paulatuk	66.58	22	P	P	18 59 15.5	+0.2
C36M				IAmb	IAmb	18 59 16.7	
	comp=Z,86nm,0.8s						
C36M	Paulatuk	66.58	22	P	P	18 59 15.9	+0.6
	baz=296,SNR=25						
MMPY	Sheldon Lake,	66.63	30	P	P	18 59 17.1	+1.2
	baz=292,SNR=16						
P32M	Atlin	66.66	33	P	P	18 59 17.3	+1.2
	baz=292,SNR=6.0						
MSVF	Nonsavu	66.67	130	P	P	18 59 16.1	-0.6
MSVF					pP	18 59 51.0	-0.8
MSVF				IAmb	IAmb	18 59 54.7	
	comp=Z,57nm,1.1s						
MSVF	Nonsavu	66.67	130	P	P	18 59 18.4	+1.6
MSVF	Nonsavu	66.67	130	P	P	18 59 16.1	-0.6
MSVF				*PP	pP	18 59 51.0	-0.8
MSVF				pmax	pmax		
	comp=Z,57nm,1.1s						
MSVF	Nonsavu	66.67	130	P	P	18 59 18.3	+1.6
MSVF				pP	pP	18 59 52.5	+0.7
AUALB	St Joseph's Co	66.69	191	P	P	18 59 20.4	+4.1
R32K	Eaglecrest	66.75	35	P	P	18 59 17.7	+1.1
	baz=292						
SIT	Sitka	66.79	36	IAmb	IAmb	18 59 19.6	
	comp=Z,100nm,1.2s						
SIT	Sitka	66.79	36	P	P	18 59 18.5	+1.7
SIT	Sitka	66.79	36	P	P	18 59 18.1	+1.2
	baz=291						
P33M	Teslin, Yukon	66.85	33	P	P	18 59 17.4	+0.1
P33M				IAmb	IAmb	18 59 19.7	
	comp=Z,48nm,1.1s						
P33M	Teslin, Yukon	66.85	33	P	P	18 59 18.6	+1.3
	baz=292,SNR=19						
LPSR	Galich'ya Gora	66.87	318	eP	P	18 59 17.0	-0.4
LPSR				pmax	pmax		
	comp=Z,260nm,0.9s						
S32K	Killisnoo	67.02	36	P	P	18 59 19.3	+1.0
	baz=292						
VORR	Voronezh	67.04	317	⇑iP	P	18 59 18.5	0.0
VORR				pmax	pmax		
	comp=Z,276nm,0.9s						
MZWR	Madinat Zayed	67.11	285	P	P	18 59 19.9	+0.5
VSR	Storozhevoye	67.23	317	eP	P	18 59 19.4	-0.3
VSR				pmax	pmax		
	comp=Z,240nm,0.9s						
KTK1	Kautokeino	67.24	338	eP	P	18 59 19.2	-0.4
KTK1				IAmb	IAmb	18 59 19.9	
	comp=Z,157nm,0.9s						
VORD	Divnogorie	67.25	317	eP	P	18 59 19.4	-0.4
VORD				pmax	pmax		
	comp=Z,150nm,1.4s						
OBN	Obninsk	67.25	322	LR	LR	19 32 20.5	
	comp=Z,31nm,18.4s,baz=96,slow=39						
OBN	Obninsk	67.25	322	P	P	18 59 18.8	-0.9
OBN	Obninsk	67.25	322	c iP	P	18 59 19.5	-0.3
OBN				i *PP	pP	18 59 57.1	+2.4
OBN				e*SP	sP	19 00 13.3	+2.9
OBN				*SS	sS	19 09 01.0	-2.4
OBN				pmax	pmax		
	comp=Z,410nm,1.3s						
OBN				MLR	MLR		
	comp=Z,139nm,14.0s						
OBN	Obninsk	67.25	322	P	P	18 59 19.7	-0.1
DGAR	Diego Garcia	67.26	246	P	P	18 59 22.2	+1.8
NCK	Nalchik	67.26	308	d iP	P	18 59 20.9	+0.8
NCK				pmax	pmax		
	comp=Z,106nm,1.0s						
ZEI	Tsey	67.31	307	eP	P	18 59 18.4	-2.3
ZEI				pmax	pmax		
	comp=Z,315nm,1.4s						
H08S3	Diego Garcia H	67.37	245	P	P	18 59 22.2	+1.4
	baz=188,slow=74,SNR=5.8						
H08S2	Diego Garcia H	67.37	245	P	P	18 59 22.8	+1.9
	baz=116,slow=74,SNR=6.3						
JRN	Qarnain Island	67.46	286	P	P	18 59 22.3	+0.7
NAX	Nakhchivan	67.55	303	P	P	18 59 21.2	-0.9
Q32M	Nakina River	67.58	34	P	P	18 59 22.8	+0.7
	baz=293						
KBZ	Khabaz	67.64	308	P	P	18 59 22.9	+0.5
	comp=Z,277nm,0.9s,baz=100,slow=2.9,SNR=276						
KBZ	Khabaz	67.64	308	ceP	P	18 59 23.0	+0.5
KBZ				pmax	pmax		
	comp=Z,341nm,0.9s						
ONI	Oni	67.69	307	P	P	18 59 23.7	+0.8
ONI	Oni	67.69	307	P	P	18 59 23.7	+0.8
ONI				pmax	pmax		
	comp=Z,151nm,0.8s						
KIV	Kislovodsk	67.70	309	⇓P	P	18 59 24.6	+1.6
KIV	Kislovodsk	67.70	309	P	P	18 59 23.2	+0.2
KIV	Kislovodsk	67.70	309	eP	P	18 59 23.7	+0.7
KIV				e		18 59 59.5	
KIV				pmax	pmax		
	comp=Z,469nm,1.1s						
KIV	Kislovodsk	67.70	309	i P	P	18 59 23.7	+0.7
	SNR=129						
KIV	Kislovodsk	67.70	309	P	P	18 59 24.4	+1.4
KIV	Kislovodsk	67.70	309	P	P	18 59 23.9	+0.9
KIV				pP	pP	18 59 58.6	+0.6
KIV				sP	sP	19 00 13.2	-0.6
GNI	Garni	67.72	304	P	P	18 59 24.1	+0.9
GNI	Garni	67.72	304	c iP	P	18 59 24.5	+1.3
GNI				pmax	pmax		
	comp=Z,203nm,1.0s						
GNI	Garni	67.72	304	P	P	18 59 24.7	+1.5
GNI	Garni	67.72	304	P	P	18 59 25.2	+1.9
GNI	Garni	67.72	304	P	P	18 59 24.8	+1.5
MZR	Muzera	67.76	284	i P	P	18 59 24.3	+0.7
	SNR=18						
MZR	Muzera	67.76	284	P	P	18 59 24.5	+0.9
	SNR=21						
SHA1	Shidzhatmaz	67.80	309	c iP	P	18 59 24.2	+0.4
GHWR	Ruwais	67.85	285	P	P	18 59 25.0	+0.9
JETT	Jettan, Norway	67.87	339	eP	P	18 59 23.2	-0.3
JETT				IAmb	IAmb	18 59 24.6	
	comp=Z,156nm,1.0s						
NEY	Neytrino	67.94	308	⇑eP	P	18 59 25.8	+1.2
AKH	Akhalkalaki	68.11	306	P	P	18 59 26.9	+1.2
AKH	Akhalkalaki	68.11	306	P	P	18 59 26.9	+1.2
AKH				pmax	pmax		
	comp=Z,459nm,0.9s						
SHAO	Shalim	68.13	278	i P	P	18 59 27.1	+1.2
	SNR=24						
SHAO	Shalim	68.13	278	P	P	18 59 27.2	+1.2
	SNR=13						
SHAO				P	P	18 59 27.2	+1.2
	SNR=13						
CAN	Canberra	68.25	164	P	P	18 59 28.0	+1.8
ARPS	Mount Arapiles	68.26	170	P	P	18 59 27.1	+0.9
TRO	Tromso	68.28	339	eP	P	18 59 25.4	-0.5
TRO				IAmb	IAmb	18 59 26.6	
	comp=Z,81nm,1.0s						
U33K	Whale Pass	68.28	37	P	P	18 59 27.4	+1.2
	baz=293						
PUL	Pulkovo	68.52	328	ceP	P	18 59 27.7	+0.1
PUL				pmax	pmax		
	comp=Z,461nm,1.3s						
CRAG	Craig	68.54	37	P	P	18 59 29.2	+1.4
	baz=294						
S34M	Telegraph Cree	68.55	35	P	P	18 59 28.7	+0.8
	baz=294						
WRAK	Wrangell Islan	68.56	36	P	P	18 59 29.1	+1.2
	baz=294						
SHMA	Al-Shehemyia	68.63	288	P	P	18 59 29.8	+0.9
KARS	Kars	68.70	305	P	P	18 59 30.1	+0.7
KARS	Kars	68.70	305	P	P	18 59 30.1	+0.7
KARS				pmax	pmax		
	comp=Z,576nm,1.0s						
SLWR	Sila	68.79	286	P	P	18 59 31.0	+1.1
DMTO	DMTO	68.84	278	P	P	18 59 31.4	+1.0
	SNR=10						
DLBC	Dease Lake	68.87	34	P	P	18 59 31.0	+1.0
	comp=Z,13nm,1.0s,baz=318,slow=8.7,SNR=10						
	comp=Z,13nm,1.0s						
DLBC	Dease Lake	68.87	34	P	P	18 59 30.9	+1.0
DLBC	Dease Lake	68.87	34	P	P	18 59 31.4	+1.5
	baz=295						
SAKB	Bahrain	68.93	288	P	P	18 59 31.3	+0.6
SMRA	Abu-Samra	69.21	287	P	P	18 59 33.1	+0.5
T35M	Bob Quinn	69.38	35	P	P	18 59 34.6	+1.6
	baz=295						
V35K	Ketchikan	69.38	37	P	P	18 59 33.7	+0.7
	baz=295						
RBK	Rabkut	69.57	279	P	P	18 59 35.5	+0.6
	SNR=21						
WRGLY	Wrigley	69.60	28	P	P	18 59 35.0	+0.8
	baz=298,SNR=5.0						
FIA1	FINESS Array S	69.67	330	P	P	18 59 33.4	-1.2
FINES	FINESS Array B	69.67	330	P	P	18 59 34.2	-0.5
	comp=Z,127nm,0.7s,baz=69,slow=6.1,SNR=618						
FINES				LR	LR	19 32 04.5	
	comp=Z,123nm,19.3s,baz=66,slow=37						
	comp=Z,127nm,0.7s						
WHFO	Wadi Hawf	69.75	279	P	P	18 59 36.3	+0.3
	SNR=29						
H02S1	DAWSON INLET T	69.81	39	P	P	18 59 36.7	+1.0
	SNR=5.9						
SOC	Sochi	69.83	309	eP	P	18 59 33.0	-3.0
SOC				e*PP	pP	19 00 12.2	+0.9
SOC				ePPP	PPP	19 03 57.6	
SOC				eS	S	19 08 30.8	-2.9
SOC				eSS	SS	19 13 05.1	+0.4
SOC				pmax	pmax		
	comp=Z,344nm,0.8s						
LIRD	Liard River Hi	70.27	32	P	P	18 59 39.5	+1.1
	baz=298						
GURO	Guroymak-BITLI	70.28	304	P	P	18 59 40.2	+1.2
STEI	Steigen	70.33	339	eP	P	18 59 38.0	-0.6
STEI				IAmb	IAmb	18 59 38.9	
	comp=Z,172nm,1.0s						
ABTO	Aybut	70.41	279	P	P	18 59 40.8	+0.7
	SNR=21						
RES	Resolute Bay	70.52	12	P	P	18 59 39.1	-0.6
RES				IAmb	IAmb	18 59 41.0	
	comp=Z,153nm,1.8s						
RES	Resolute Bay	70.52	12	P	P	18 59 39.1	-0.6
RES				pmax	pmax		
	comp=Z,153nm,1.8s						
FAUS	Fauske	70.63	338	eP	P	18 59 39.7	-0.7
FAUS				IAmb	IAmb	18 59 40.7	
	comp=Z,134nm,0.9s						
LOF	Lofoten	70.74	339	eP	P	18 59 42.1	+1.0
VSU	Vasula	70.76	327	c iP	P	18 59 41.2	-0.2
VSU				pmax	pmax		
	comp=Z,728nm,1.0s						
VSU	Vasula	70.76	327	eP	P	18 59 41.8	+0.4
DAG	Danmarks Havn	70.79	353	i P	P	18 59 40.8	-0.5
ANN	Anapa	70.83	311	c iP	P	18 59 41.8	-0.2
ANN				e*PP	pP	19 00 18.6	+1.2
ANN				e		19 02 23.9	
ANN				eS	S	19 08 45.4	+0.2
ANN				pmax	pmax		
	comp=Z,525nm,0.9s						
ANN				pmax	pmax		
	comp=N,88nm,0.7s						
ANN				pmax	pmax		
	comp=E,73nm,0.8s						
KOTAN	Kotaneelee Air	70.84	31	P	P	18 59 42.4	+0.6
	baz=299						
KTUT	Trabzon	70.86	307	⇑P	P	18 59 43.1	+0.8
MEF	Metsahovi	70.97	329	eP	P	18 59 42.7	+0.1
AFI	Afiamalu	71.25	120	LR	LR	19 25 06.7	
	comp=E,115nm,21.8s,baz=300,slow=31						
MOR8	Moi Rana	71.60	337	eP	P	18 59 44.4	-2.0
MOR8				IAmb	IAmb	18 59 45.4	
	comp=Z,189nm,1.0s						
RAF	Rauma	71.69	331	eP	P	18 59 46.8	-0.1
NEEM	North Greenlan	71.81	0	i P	P	18 59 47.7	0.0
KONS	Konsvik	71.84	338	eP	P	18 59 47.2	-0.5
KONS				IAmb	IAmb	18 59 47.8	
	comp=Z,63nm,1.0s						
MTSE	Matsula	71.98	328	eP	P	18 59 48.9	+0.3
TULEG	Thule	72.05	5	P	P	18 59 48.0	-0.8
TULEG				IAmb	IAmb	18 59 49.8	
	comp=Z,70nm,0.9s						
TULEG	Thule	72.05	5	i P	P	18 59 48.6	-0.3
MNK	Minsk	72.07	323	i P	P	18 59 49.9	+0.6
	comp=E,22nm,0.9s						
MNK				i P	P	18 59 49.9	+0.6
	comp=N,52nm,0.9s						
MNK				i P	P	18 59 49.9	+0.6
	comp=Z,274nm,0.9s,baz=62						
MNK				i pP	pP	19 00 26.4	+1.6
MNK				i sP	sP	19 00 42.8	+2.3
MNK				i PP	PP	19 02 31.8	+0.9
MNK				i PPP	PPP	19 04 16.4	
MNK				i S	S	19 09 00.2	+1.0
MNK				i sS	sS	19 10 03.9	+3.5
MNK				i SS	SS	19 13 48.2	+10
MNK				i SSS	SSS	19 17 02.1	
MNK	Minsk	72.07	323	i P	P	18 59 49.9	+0.6
MNK				i		19 00 07.2	
MNK				i *PP	pP	19 00 26.4	+1.6
MNK				i *SP	sP	19 00 42.7	+2.3
MNK				i		19 02 31.7	
MNK				i PPP	PPP	19 04 16.3	
MNK				i S	S	19 09 00.1	+1.0
MNK				pmax	pmax		
	comp=N,52nm,0.9s						
MNK				pmax	pmax		
	comp=E,22nm,0.9s						
MNK				pmax	pmax		
	comp=Z,274nm,0.9s						
NACGM	Naroch	72.44	324	⇑iP	P	18 59 51.7	+0.2
	comp=Z,400nm,0.9s,baz=61						
ISAL	Salakas	72.44	325	eP	P	18 59 53.4	+1.9
AAL	Aland	72.88	331	eP	P	18 59 53.4	-0.6
SIM	Simferopol'	72.88	312	eP	P	18 59 54.6	+0.3
SIM				pmax	pmax		
	comp=Z,371nm,1.0s						
AKASG	Malin Array Be	73.15	319	P	P	18 59 55.3	-0.5
	comp=Z,50nm,0.6s,baz=46,slow=5.9,SNR=466						
AKASG				LR	LR	19 37 01.2	
	comp=Z,125nm,18.0s,baz=49,slow=40						
	comp=Z,50nm,0.6s						
AKASG	Malin Array Be	73.15	319	P	P	18 59 54.8	-1.0
AKASG				PcP	PcP	19 00 15.6	+3.9
AKASG	Malin Array Be	73.15	319	i P	P	18 59 55.2	-0.5
AKASG				pmax	pmax		
	comp=Z,65nm,0.6s						
AKBB	Malin Array Si	73.15	319	ceP	P	18 59 55.2	-0.6
AKBB				pmax	pmax		
	comp=Z,247nm,1.0s						
DBG	Daneborg	73.17	352	i P	P	18 59 54.8	-0.7
SLIT	Slitere, Latvi	73.23	328	eP	P	18 59 55.8	-0.3
VSVD	Vaisvydziai	73.31	326	eP	P	18 59 56.5	-0.1
NSS	Namsos	73.42	337	eP	P	18 59 55.9	-1.2
NSS				IAmb	IAmb	18 59 57.4	
	comp=Z,34nm,0.8s						
YKA	Yellowknife Ar	73.43	26	P	P	18 59 57.7	+0.5
	comp=Z,19nm,0.7s,baz=304,slow=5.5,SNR=303						
YKA				pP	pP	19 00 32.0	-0.8
	comp=Z,5.9nm,0.8s,baz=301,slow=5.4,SNR=3.0						
	comp=Z,19nm,0.7s						
YKA	Yellowknife Ar	73.43	26	P	P	18 59 57.3	+0.1
YKA				PcP	PcP	19 00 13.0	+0.4
YKA				pP	pP	19 00 32.2	-0.7
PABE	Paberze	73.54	325	P	P	18 59 57.5	-0.4
PABE	Paberze	73.54	325	eP	P	18 59 58.2	+0.3
DIKM	Dikmen	73.63	309	⇓P	P	18 59 59.9	+1.1
UPP	Uppsala	74.05	331	eP	P	19 00 00.8	0.0
RAYN	Ar Rayn	74.11	288	P	P	19 00 02.0	+0.1
RAYN	Ar Rayn	74.11	288	P	P	19 00 02.9	+1.0
RAYN	Ar Rayn	74.11	288	i P	P	19 00 02.5	+0.5
	SNR=306						
RAYN	Ar Rayn	74.11	288	P	P	19 00 02.9	+1.0
PBUR	Paburge	74.25	326	eP	P	19 00 02.5	+0.4
KULLO	Kullorsuaq	74.57	2	i P	P	19 00 03.2	-0.4
HILA	High Level	74.73	30	P	P	19 00 04.8	0.0
HILA				pP	pP	19 00 41.2	+0.6
TBLU	Trondheim	74.81	336	eP	P	19 00 04.0	-1.2
SORM	Soroca	74.89	317	⇑P	P	19 00 05.4	-0.6
SORM	Soroca	74.89	317	P	P	19 00 05.3	-0.6
KIS	Kishinev	75.18	316	c iP	P	19 00 07.0	-0.6
KIS				e		19 00 16.0	
KIS				pmax	pmax		
	comp=Z,100nm,0.6s						
MILM	Milestii Mici	75.22	316	⇑iP	P	19 00 07.0	-0.8
	comp=Z,160nm,0.8s						
MILM	Milestii Mici	75.22	316	ePcP	PcP	19 00 17.0	-3.6
MILM				epP	pP	19 00 36.0	-7.6
MILM				eSS	SS	19 15 10.0	+43
MILM	Milestii Mici	75.22	316	c iP	P	19 00 07.0	-0.8
MILM				e		19 00 17.0	
MILM				pmax	pmax		
	comp=Z,160nm,0.8s						
VIKU	Vikbolandet	75.22	330	eP	P	19 00 07.4	-0.2
BR131	Keskin Array S	75.61	308	c iP	P	19 00 10.7	+0.3
BR131	Keskin Array S	75.61	308	P	P	19 00 11.2	+0.8
	SNR=129						
BRTR	Keskin Array B	75.61	308	P	P	19 00 10.7	+0.3
	comp=Z,228nm,0.9s,baz=98,slow=4.2,SNR=722						
	comp=Z,228nm,0.9s						
BRTR	Keskin Array B	75.61	308	i P	P	19 00 10.6	+0.2
BRTR				pmax	pmax		
	comp=Z,230nm,0.9s						
WAPA	Wapiti River	75.62	34	IAmb	IAmb	19 00 11.5	
	comp=Z,63nm,0.9s						
NC303	NORSAR Array S	75.70	334	IAmb	IAmb	19 00 10.8	
	comp=Z,98nm,1.0s						
LEOM	Leova	75.78	316	⇑P	P	19 00 11.3	+0.3
LEOM	Leova	75.78	316	P	P	19 00 11.3	+0.3
IAS	Iasi	75.83	317	⇑P	P	19 00 11.4	+0.1
IAS	Iasi	75.83	317	P	P	19 00 11.4	+0.1
NB2	NORSAR Subarra	75.88	334	P	P	19 00 10.4	-1.0
	comp=Z,108nm,1.0s,baz=50,slow=5.9						
NB2	NORSAR Subarra	75.88	334	P	P	19 00 10.4	-1.0
	slow=5.9						
NOA	NORSAR Array B	75.88	334	P	P	19 00 10.4	-1.0
	comp=Z,57nm,0.9s,baz=49,slow=5.7,SNR=155						
NOA				LR	LR	19 36 42.8	
	comp=Z,89nm,19.3s,baz=55,slow=38						
	comp=Z,57nm,0.9s						
NC602	NORSAR Array S	75.95	334	IAmb	IAmb	19 00 11.9	
	comp=Z,103nm,1.1s						
NC602	NORSAR Array S	75.95	334	eP	P	19 00 10.7	-1.0
NC602				IAmb	IAmb	19 00 11.5	
	comp=Z,60nm,1.1s						
DOMB	Dombas	76.02	335	eP	P	19 00 11.7	-0.5
DOMB				IAmb	IAmb	19 00 12.5	
	comp=Z,100nm,1.0s						
NBO00	NORSAR Array S	76.05	334	IAmb	IAmb	19 00 12.2	
	comp=Z,127nm,1.1s						
TLCR		76.08	314	⇑P	P	19 00 12.9	+0.2
TLCR		76.08	314	P	P	19 00 12.9	+0.2
ANTO	Ankara	76.11	308	⇑P	P	19 00 13.6	+0.4
ANTO				⇑P	P	19 00 13.7	+0.5
ANTO	Ankara	76.11	308	P	P	19 00 13.0	-0.2
ANTO	Ankara	76.11	308	P	P	19 00 13.6	+0.4
ANTO	Ankara	76.11	308	P	P	19 00 14.0	+0.8
NAO01	NORSAR Array S	76.13	334	IAmb	IAmb	19 00 13.0	
	comp=Z,121nm,1.1s						
VLDR	Vladesti	76.19	315	⇑P	P	19 00 13.9	+0.5
MOL	Molde	76.20	336	eP	P	19 00 12.6	-0.5
JURR	Jurilovca	76.25	314	⇓P	P	19 00 14.3	+0.6
GIUM	Giurgiulesti	76.30	315	⇑P	P	19 00 14.9	+0.9
KDZE	Karadeniz Ereo	76.32	310	⇑P	P	19 00 13.6	-0.6
TATR	Tatarca	76.34	315	⇓P	P	19 00 14.9	+0.7
UPNV	Upernavik	76.40	2	i P	P	19 00 13.9	-0.1
SUMG	Summit	76.42	357	i P	P	19 00 15.1	+0.4
LVV	L'vov	76.47	320	eP	P	19 00 14.4	-0.5
TPGR	Topolog	76.49	314	⇑P	P	19 00 15.5	+0.4
GHRR		76.49	316	⇑P	P	19 00 16.3	+1.2
CFR	Carcaliu	76.50	315	⇑P	P	19 00 15.2	0.0
CFR	Carcaliu	76.50	315	P	P	19 00 15.1	0.0
IZVR	Izvoarele	76.54	315	⇓P	P	19 00 16.1	+0.8
TUDR		76.57	315	⇓P	P	19 00 16.5	+1.0
AKN	Aaknes	76.65	336	eP	P	19 00 15.7	0.0
AKN				IAmb	IAmb	19 00 16.6	
	comp=Z,99nm,1.0s						
TIRR	Tirgusor	76.69	314	⇑P	P	19 00 16.6	+0.4
TIRR	Tirgusor	76.69	314	P	P	19 00 16.6	+0.4
TESR	Tescani	76.71	316	⇑P	P	19 00 16.5	+0.2
PANC	Panciu	76.74	316	⇑P	P	19 00 18.0	+1.5
EFOR	EFORIE	76.75	314	⇓P	P	19 00 17.6	+1.1
OSL	Oslo	76.77	333	eP	P	19 00 16.1	-0.3
BIZ	Bicaz	76.81	317	⇓P	P	19 00 17.9	+1.0
MFTR	Murfatlar	76.83	314	⇑P	P	19 00 17.4	+0.5
ODBI	Odobesti	76.85	316	⇑P	P	19 00 17.9	+0.8
TLBR	Topalu	76.87	314	⇓P	P	19 00 18.0	+0.8
SCO	Scoresbysund	76.88	351	IAmb	IAmb	19 00 18.8	
	comp=Z,122nm,1.2s						
SCO	Scoresbysund	76.88	351	i P	P	19 00 16.9	+0.1
BUR08	Bucovina Ar. S	76.97	318	P	P	19 00 17.8	-0.1
BUR08				IAmb	IAmb	19 00 19.4	
	comp=Z,107nm,0.9s						
BURAR	Bucovina Array	76.97	318	⇑P	P	19 00 18.6	+0.7
BURAR	Bucovina Array	76.97	318	IAmb	IAmb	19 00 19.8	
	comp=Z,129nm,0.9s						
BURAR	Bucovina Array	76.97	318	P	P	19 00 18.6	+0.7
VRI	Vrincioaia	77.00	316	⇑P	P	19 00 18.7	+0.7
VRI	Vrincioaia	77.00	316	P	P	19 00 18.7	+0.7
PLOR	Plostina	77.05	316	⇑P	P	19 00 19.1	+0.7
PLOR	Plostina	77.05	316	P	P	19 00 19.0	+0.7
GRER		77.10	315	⇓P	P	19 00 20.9	+2.4
BEL	Belsk	77.10	323	eP	P	19 00 19.1	+0.8
BISRR	Bisoca	77.17	316	⇑P	P	19 00 20.4	+1.3
SKAR	Skarslia	77.19	335	eP	P	19 00 18.9	+0.1
PSN	Preselentsi	77.23	313	P	P	19 00 20.1	+0.9
ICOR	Ion Corvin	77.24	314	⇓P	P	19 00 20.6	+1.3
AMRR	Amara	77.28	314	⇓P	P	19 00 20.8	+1.3
AMRR	Amara	77.28	314	P	P	19 00 20.8	+1.3
COVR	Voineasa-Covas	77.32	316	⇓P	P	19 00 20.6	+0.8
KONO	Kongsberg	77.39	333	P	P	19 00 19.0	-0.9
KONO	Kongsberg	77.39	333	P	P	19 00 19.0	-0.9
KONO				pmax	pmax		
	comp=Z,51nm,1.2s						
KONO	Kongsberg	77.39	333	eP	P	19 00 19.2	-0.7
OZUR		77.44	316	⇑P	P	19 00 21.6	+1.2
NEHR	Nehoiu	77.48	316	⇑P	P	19 00 21.6	+0.9
ISR	Istrita	77.50	315	⇑P	P	19 00 21.8	+1.0
ISR	Istrita	77.50	315	P	P	19 00 21.8	+1.0
RAO	Raoul Island	77.53	135	LR	LR	19 29 53.4	
	comp=Z,36nm,20.7s,baz=34,slow=32						
HYA	Hoyanger	77.63	336	eP	P	19 00 20.9	-0.2
MLR	Muntele Rosu	77.66	316	⇑P	P	19 00 22.4	+0.5
MLR	Muntele Rosu	77.66	316	LR	LR	19 35 43.1	
	comp=Z,157nm,20.2s,baz=60,slow=36						
MLR	Muntele Rosu	77.66	316	IAmb	IAmb	19 00 23.3	
	comp=Z,88nm,1.1s						
MLR	Muntele Rosu	77.66	316	P	P	19 00 22.3	+0.5
LEHL	Lehliu	77.66	315	⇓P	P	19 00 23.0	+1.4
DEL	Delary	77.67	329	eP	P	19 00 21.1	-0.4
FOO	Floro	77.72	336	eP	P	19 00 22.2	+0.6
DOPR	Dopca	77.74	316	⇑P	P	19 00 23.1	+1.0
ARCR	ARCALIA	77.75	318	⇑P	P	19 00 23.3	+1.1
SECR		77.83	315	⇓P	P	19 00 23.5	+0.9
SULR		77.90	315	⇑P	P	19 00 23.9	+1.0
PLAR	PLOIESTI	77.92	315	⇑P	P	19 00 24.4	+1.3
BMR	Baia Mare	77.93	319	⇑P	P	19 00 24.4	+1.3
BMR	Baia Mare	77.93	319	P	P	19 00 24.3	+1.3
PRD	Provadia	77.96	313	P	P	19 00 24.5	+1.2
BSD	Bornholm Skovb	78.03	328	eP	P	19 00 23.5	0.0
BSD	Bornholm Skovb	78.03	328	i P	P	19 00 23.1	-0.4

GKP	Gorka Klasztor	78.05	326	eP	P	19 00 23.8	+0.2
GKP	Gorka Klasztor	78.05	326	eP	P	19 00 24.4	+0.8
CSS	Mathiatis	78.12	304	P	P	19 00 23.3	-1.1
CSS				IAmb	IAmb	19 00 25.7	
	comp=Z,118nm,0.9s						
SUE	Sulen	78.20	336	eP	P	19 00 24.8	+0.5
STHS	Stebnicka Huta	78.21	321	eP	P	19 00 24.6	-0.1
STHS				pmax	pmax		
	comp=Z,114nm,1.3s						
STHS	Stebnicka Huta	78.21	321	eP	P	19 00 24.6	-0.1
TRPA	Tarpa	78.22	319	⇑P	P	19 00 25.3	+0.7
VOIR		78.22	316	⇓P	P	19 00 24.9	0.0
VOIR		78.22	316	P	P	19 00 24.9	0.0
MDB	Medias	78.24	317	⇑P	P	19 00 26.4	+1.5
MDB	Medias	78.24	317	P	P	19 00 26.3	+1.5
SGRR	Singureni	78.31	315	⇑P	P	19 00 25.4	+0.2
RAZG	Razgrad	78.33	314	⇓P	P	19 00 26.4	+1.0
ODD1	Odda	78.33	335	eP	P	19 00 25.5	+0.4
ODD1				IAmb	IAmb	19 00 26.4	
	comp=Z,55nm,1.1s						
CJR	Cluj-Napoca	78.39	318	⇑P	P	19 00 26.7	+1.0
CJR	Cluj-Napoca	78.39	318	P	P	19 00 26.7	+1.0
BER	Bergen	78.47	335	eP	P	19 00 26.4	+0.6
ARR	Arges	78.51	316	⇑P	P	19 00 27.5	+1.1
MESR	Meseseni	78.52	318	⇓P	P	19 00 28.0	+1.7
OJC	Ojcow	78.53	322	eP	P	19 00 27.1	+0.8
ISP	Isparta	78.67	307	IAmb	IAmb	19 00 28.3	
	comp=Z,133nm,1.0s						
OVD	Ostervraa, Den	78.68	331	iP	P	19 00 26.4	-0.6
MARR	Marisel-Cluj	78.69	318	⇑P	P	19 00 27.9	+0.5
NIE	Niedzica	78.72	321	eP	P	19 00 29.3	+1.8
BLS5	Blasjo	78.73	334	eP	P	19 00 27.3	0.0
HOMB	Homborsund	78.73	333	eP	P	19 00 26.5	-0.7
HOMB				IAmb	IAmb	19 00 27.4	
	comp=Z,70nm,1.1s						
HUMR	Humele	78.75	315	⇑P	P	19 00 27.4	-0.3
COPA	Copaceanca	78.82	315	⇓P	P	19 00 28.0	0.0
SZH	Strazhica	78.84	314	P	P	19 00 28.5	+0.3
DRGR		78.86	318	⇑P	P	19 00 29.0	+0.7
DRGR		78.86	318	P	P	19 00 29.0	+0.7
JMB	Yambol	78.86	313	P	P	19 00 29.1	+0.8
LOT	Lotru	78.98	317	⇑P	P	19 00 29.7	+0.6
EDRB	Edirne	79.08	312	P	P	19 00 30.1	+0.6
LLD	Lille Linde	79.11	329	iP	P	19 00 29.7	+0.4
RGN	Rugen	79.11	328	eP	P	19 00 30.0	+0.7
	comp=Z,238nm,1.1s,baz=48,slow=5.1						
KECS	Kecovo	79.15	320	eP	P	19 00 30.6	+0.8
KECS				pmax	pmax		
	comp=Z,61nm,1.1s						
KECS	Kecovo	79.15	320	eP	P	19 00 30.6	+0.8
SNART	Snartemo	79.19	333	eP	P	19 00 30.1	+0.4
SNART				IAmb	IAmb	19 00 30.4	
	comp=Z,333nm,1.1s						
BORR	Bors	79.22	319	⇓P	P	19 00 31.4	+1.3
DEV	Deva	79.25	317	⇑P	P	19 00 31.3	+1.0
DEV	Deva	79.25	317	P	P	19 00 31.3	+1.0
GOET	G??ttrup	79.27	332	iP	P	19 00 30.1	-0.1
LANS	Liptovska Anna	79.32	321	eP	P	19 00 32.2	+1.5
LANS				pmax	pmax		
	comp=Z,74nm,1.4s						
LANS	Liptovska Anna	79.32	321	eP	P	19 00 32.2	+1.5
VLAD	Vladila	79.39	315	⇑P	P	19 00 31.4	+0.3
B08A	Colville Reser	79.44	40	P	P	19 00 31.7	+0.3
B08A					pP	19 01 05.3	-2.4
MSEY	Mahe Island	79.54	258	P	P	19 00 31.9	-0.6
MSEY				IAmb	IAmb	19 00 34.6	
	comp=Z,97nm,1.1s						
MSEY	Mahe Island	79.54	258	P	P	19 00 31.9	-0.6
MSEY				pmax	pmax		
	comp=Z,97nm,1.2s						
MSEY	Mahe Island	79.54	258	iP	P	19 00 32.7	+0.2
	SNR=16						
MSEY	Mahe Island	79.54	258	P	P	19 00 33.3	+0.8
KULA	Kula-Manisa	79.57	309	P	P	19 00 32.4	0.0
PLVB	Pleven	79.59	314	⇑P	P	19 00 32.6	+0.4
GZR	Gura Zlata	79.59	317	⇓P	P	19 00 33.2	+0.9
GZR	Gura Zlata	79.59	317	P	P	19 00 33.2	+0.9
OKC	Ostrava-Krasne	79.62	322	⇑eP	P	19 00 32.8	+0.5
OKC	Ostrava-Krasne	79.62	322	eP	P	19 00 32.8	+0.5
MANT	Manisa	79.65	309	IAmb	IAmb	19 00 34.1	
	comp=Z,142nm,1.0s						
MUD	Monsted U'grnd	79.67	331	iP	P	19 00 31.9	-0.5
DIM	Dimitrovgrad	79.74	313	P	P	19 00 33.8	+0.7
SRE	Strehaia	79.74	316	⇑P	P	19 00 34.4	+1.4
SRE	Strehaia	79.74	316	P	P	19 00 34.4	+1.4
SIRR	Siria	79.75	318	⇑P	P	19 00 33.7	+0.6
SURR	Surduc	79.77	317	⇑P	P	19 00 33.7	+0.5
PSZ	Piszkesteto	79.80	320	⇑P	P	19 00 34.3	+0.9
PSZ	Piszkesteto	79.80	320	P	P	19 00 33.2	-0.1
PSZ				IAmb	IAmb	19 00 35.4	
	comp=Z,160nm,1.2s						
PSZ	Piszkesteto	79.80	320	P	P	19 00 34.3	+0.9
ICESG	Greenland Ices	79.94	356	iP	P	19 00 34.5	+0.4
BSZH	Besenyszg	79.95	320	⇓P	P	19 00 35.8	+1.7
KSP	Ksiaz	79.97	324	eP	P	19 00 34.8	+0.6
MORC	Moravsky Berou	79.97	323	⇑P	P	19 00 35.1	+0.9
MORC	Moravsky Berou	79.97	323	IAmb	IAmb	19 00 36.1	
	comp=Z,131nm,1.0s						
MORC	Moravsky Berou	79.97	323	⇑iP	P	19 00 34.8	+0.6
MORC	Moravsky Berou	79.97	323	P	P	19 00 35.1	+0.9
BAIL	Bailesti	80.01	316	⇑P	P	19 00 35.6	+1.1
KDZ	Kurdzhali	80.03	313	P	P	19 00 35.6	+0.9
ALN	Alexandroupoli	80.03	312	P	P	19 00 34.7	0.0
ALN	Alexandroupoli	80.03	312	P	P	19 00 34.7	0.0
ALN				IAmb	IAmb	19 00 36.0	
	comp=Z,98nm,1.1s						
ALN	Alexandroupoli	80.03	312	P	P	19 00 34.7	0.0
ALN				pmax	pmax		
	comp=Z,98nm,1.1s						
VYHS	Vyhne	80.04	321	eP	P	19 00 35.5	+0.9
VYHS				pmax	pmax		
	comp=Z,191nm,1.2s						
VYHS	Vyhne	80.04	321	eP	P	19 00 35.5	+0.9
ILULI	Ilulissat	80.08	1	IAmb	IAmb	19 00 35.5	
	comp=Z,61nm,1.2s						
ILULI	Ilulissat	80.08	1	iP	P	19 00 34.2	-0.2
HERR	Herculane	80.09	317	⇑P	P	19 00 35.1	+0.2
AKAS	Kas	80.11	306	IAmb	IAmb	19 00 35.5	
	comp=Z,130nm,1.0s						
PUNG	Punghina	80.12	316	⇑P	P	19 00 35.4	+0.4
MPEP	Malo Peshtene	80.14	315	P	P	19 00 38.8	+3.6
BZS	Buzias	80.14	318	⇑P	P	19 00 35.2	0.0
BZS	Buzias	80.14	318	P	P	19 00 35.2	0.0
DJES	Djerdap	80.15	316	⇑P	P	19 00 35.3	+0.1
DJES	Djerdap	80.15	316	P	P	19 00 35.1	-0.1
OSTC	Ostas	80.19	324	⇑eP	P	19 00 36.1	+0.8
OSTC	Ostas	80.19	324	eP	P	19 00 36.1	+0.8
KRLC	Kraliky	80.19	323	⇑iP	P	19 00 35.8	+0.4
KRLC	Kraliky	80.19	323	⇑iP	P	19 00 35.8	+0.4
RUE	Ruedersdorf	80.20	326	eP	P	19 00 35.6	+0.3
RUE	Ruedersdorf	80.20	326	eP	P	19 00 36.2	+1.0
	comp=Z,333nm,1.1s,baz=48,slow=5.1						
RDO	Rodhopi	80.22	312	P	P	19 00 35.9	+0.2
RDO	Rodhopi	80.22	312	P	P	19 00 35.3	-0.4
RDO				IAmb	IAmb	19 00 37.1	
	comp=Z,115nm,1.0s						
PLD	Plovdiv	80.23	313	P	P	19 00 36.3	+0.6
AMBH	Ambrzfalva	80.24	319	⇓P	P	19 00 37.0	+1.3
DPC	Dobruska-Polom	80.26	324	⇑iP	P	19 00 36.6	+0.8
DPC	Dobruska-Polom	80.26	324	⇑iP	P	19 00 36.6	+0.8
UPC	Upice	80.32	324	⇑iP	P	19 00 36.7	+0.7
UPC	Upice	80.32	324	⇑iP	P	19 00 36.7	+0.7
PGB	Panagyurishte	80.32	314	P	P	19 00 36.7	+0.4
RZN	Rozhen	80.45	313	P	P	19 00 37.7	+0.6
JAVC	Velka Javorina	80.45	322	⇑iP	P	19 00 38.5	+1.7
G06A	Carlson Farm,	80.49	43	P	P	19 00 37.5	+0.4
G06A				IAmb	IAmb	19 00 39.6	
	comp=Z,97nm,1.9s						
YER	Yerkesik	80.55	308	P	P	19 00 38.4	+0.8
MDVR	Moldovita	80.56	317	⇑P	P	19 00 37.6	+0.1
NEW	Newport	80.69	39	P	P	19 00 39.1	+0.9
	comp=Z,7.0nm,0.6s,baz=308,slow=6.4,SNR=14						
NEW				pP	pP	19 01 14.3	-0.1
	comp=Z,5.9nm,0.8s,baz=310,slow=9.5,SNR=3.8						
	comp=Z,7.0nm,0.6s						
NEW	Newport	80.69	39	P	P	19 00 38.2	+0.1
NEW	Newport	80.69	39	P	P	19 00 39.1	+0.9
	baz=307						
SRO	Srobarova	80.73	321	eP	P	19 00 39.1	+0.9
SRO				pmax	pmax		
	comp=Z,74nm,0.9s						
SRO	Srobarova	80.73	321	eP	P	19 00 39.1	+0.9
VRAC	Vranov	80.75	323	⇑P	P	19 00 39.2	+0.9
VRAC	Vranov	80.75	323	⇑iP	P	19 00 39.2	+0.9
VRAC	Vranov	80.75	323	P	P	19 00 39.2	+0.9
PRK	Paraskevi	80.77	310	P	P	19 00 38.8	+0.2
SMOL	Smolenice	80.79	322	eP	P	19 00 40.0	+1.4
SMOL				pmax	pmax		
	comp=Z,98nm,1.0s						
BSEG	Bad Segeberg	80.86	329	eP	P	19 00 39.2	+0.4
	comp=Z,152nm,1.0s,baz=48,slow=5.1						
VTS	Vitosha	80.86	314	⇑P	P	19 00 41.6	+2.3
VTS	Vitosha	80.86	314	IAmb	IAmb	19 00 43.0	
	comp=Z,100nm,1.0s						
VTS	Vitosha	80.86	314	P	P	19 00 41.5	+2.3
VTS	Vitosha	80.86	314	P	P	19 00 40.0	+0.8
LRW	Lerwick	80.88	338	eP	P	19 00 38.1	-0.6
LRW				IAmb	IAmb	19 00 39.5	
	comp=Z,102nm,1.0s						
MODS	Modra-Piesok	80.95	322	eP	P	19 00 40.7	+1.2
MODS				pmax	pmax		
	comp=Z,390nm,1.2s						
MODS	Modra-Piesok	80.95	322	eP	P	19 00 40.7	+1.2
KRUC	Moravsky	81.00	323	⇑iP	P	19 00 40.3	+0.6
PVCC	Panska Ves	81.03	324	⇑iP	P	19 00 40.4	+0.6
PVCC	Panska Ves	81.03	324	⇑iP	P	19 00 40.4	+0.6
MMB	Musomiste	81.12	313	P	P	19 00 40.5	0.0
BRG	Berggiesshubel	81.13	325	iP	P	19 00 40.9	+0.6
BRG				Amp		19 00 42.0	
	comp=Z,75nm,1.1s						
BRG	Berggiesshubel	81.13	325	P	P	19 00 53.5	+13
BRG				Amp		19 00 57.3	
	comp=Z,22nm,1.0s						
BRG				pP	pP	19 01 14.0	-2.6
BRG				Amp		19 01 16.3	
	comp=Z,18nm,1.1s						
BRG	Berggiesshubel	81.13	325	iP	P	19 00 40.9	+0.6
BRG						19 01 13.9	
BRG				pmax	pmax		
	comp=Z,75nm,1.1s						
BRG				pmax	pmax		
	comp=Z,22nm,1.0s						
BRG				pmax	pmax		
	comp=Z,18nm,1.1s						
BRG	Berggiesshubel	81.13	325	eP	P	19 00 40.9	+0.6
	comp=Z,74nm,1.1s,baz=48,slow=5.1						
PINE	Pine Mountain	81.13	44	P	P	19 00 40.3	-0.4
PINE					pP	19 01 15.2	-1.9
ARG	Arkhangelos	81.14	307	P	P	19 00 41.0	+0.4
NVR	Nevrokopi	81.17	313	P	P	19 00 41.6	+0.8
YBH	Yreka Blue Hor	81.21	46	P	P	19 00 41.9	+0.9
	comp=Z,5.2nm,0.9s,baz=332,slow=1.6,SNR=11						
	comp=Z,5.2nm,0.9s						
YBH	Yreka Blue Hor	81.21	46	P	P	19 00 40.7	-0.3
YBH				pP	pP	19 01 15.0	-2.3
BOVS	Bovan	81.21	316	⇑P	P	19 00 40.4	-0.5
SMG	Samos	81.22	309	P	P	19 00 41.1	0.0
DAT	Datca	81.24	308	P	P	19 00 40.6	-0.7
GOPC	GO Pecny, Ondr	81.30	324	⇑eP	P	19 00 41.9	+0.6
GOPC	GO Pecny, Ondr	81.30	324	eP	P	19 00 41.9	+0.6
CLL	Collm	81.31	326	⇑iP	P	19 00 41.6	+0.4
	comp=Z,255nm,0.9s						
CLL				epP	pP	19 01 18.0	+0.5
CLL				esP	sP	19 01 32.0	-1.0
CLL				ePP	PP	19 03 51.0	+2.7
CLL				eSSSS		19 22 12.0	
CLL	Collm	81.31	326	⇑iP	P	19 00 41.6	+0.4
CLL				e*PP	pP	19 01 18.0	+0.5
CLL				pmax	pmax		
	comp=Z,255nm,0.9s						
CLL	Collm	81.31	326	eP	P	19 00 41.6	+0.4
	comp=Z,255nm,0.9s,baz=48,slow=5.1						
KKB	Krupnik	81.37	314	P	P	19 00 42.2	+0.4
KOKK	Kokkinochori,	81.38	313	P	P	19 00 41.9	+0.1
PRU	Pruhonice	81.38	324	⇑iP	P	19 00 42.1	+0.4
PRU	Pruhonice	81.38	324	⇑iP	P	19 00 42.1	+0.4
FBE	Freiberg	81.39	325	eP	P	19 00 42.6	+0.9
	comp=Z,259nm,1.2s,baz=48,slow=5.1						
FRGS	Fruska Gora	81.45	318	⇑P	P	19 00 42.8	+0.6
FRGS	Fruska Gora	81.45	318	⇑iP	P	19 00 42.4	+0.2
SRS	Serrai	81.47	313	P	P	19 00 42.0	-0.3
FLTG	Flechtingen	81.49	327	eP	P	19 00 42.2	+0.1
	comp=Z,231nm,1.0s,baz=48,slow=5.1						
MORH	Mrgy, Hungar	81.49	319	⇑P	P	19 00 42.9	+0.6
URZ	Urewera	81.53	145	LR	LR	19 35 52.5	
	comp=Z,66nm,18.2s,baz=44,slow=35						
RTZ	Ruatahuna	81.74	145	P	P	19 00 43.9	+0.3
RTZ				pP	pP	19 01 17.9	-2.0
RTZ				IAmb	IAmb	19 01 20.2	
	comp=Z,48nm,0.9s						
ASSE	Asse, Remlinge	81.88	327	eP	P	19 00 44.7	+0.5
	comp=Z,79nm,1.2s,baz=48,slow=5.1						
RONA	Rosalia, Austr	81.88	321	iP	P	19 00 45.3	+0.9
	comp=Z,50nm,1.1s,SNR=28						
NRDL	Niedersach Rie	81.90	328	eP	P	19 00 44.9	+0.6
	comp=Z,90nm,1.1s,baz=48,slow=5.1						
DIVS	Divibare	81.96	317	P	P	19 00 44.2	-0.7
DIVS				IAmb	IAmb	19 00 46.1	
	comp=Z,86nm,1.0s						
DIVS	Divibare	81.96	317	⇑iP	P	19 00 44.6	-0.3
NEUB	Neuenburg	81.97	326	eP	P	19 00 45.3	+0.6
	comp=Z,372nm,1.0s,baz=48,slow=5.1						
TEKS	Tekeris	81.97	318	eP	P	19 00 44.1	-0.8
CONA	Conrad Observa	81.97	322	iP	P	19 00 46.1	+1.2
	comp=Z,125nm,0.9s,SNR=88						
VAY	Valandovo	81.99	314	iP	P	19 00 45.2	+0.1
STIP	Stip	82.02	314	iP	P	19 00 44.3	-0.9
ATD	Arta Tunnel	82.07	279	P	P	19 00 47.2	+1.3
	comp=Z,5.4nm,1.0s,baz=35,slow=3.2,SNR=20						
	comp=Z,5.4nm,1.0s						
ATD	Arta Tunnel	82.07	279	IAmb	IAmb	19 00 49.2	
	comp=Z,182nm,1.1s						
ATD	Arta Tunnel	82.07	279	P	P	19 00 48.2	+2.3
	SNR=9.3						
RETH	Rethem/Aller,	82.08	328	eP	P	19 00 45.6	+0.4
	comp=Z,165nm,1.0s,baz=48,slow=5.1						
TANN	Tannenbergstha	82.15	325	eP	P	19 00 46.2	+0.4
	comp=Z,135nm,1.5s,baz=48,slow=5.1						
TANN				epP	pP	19 01 23.9	+1.9
KARP	Karpathos	82.16	307	P	P	19 00 46.3	+0.2
CHRS	Christianenhau	82.16	327	epP	pP	19 01 23.6	+1.6
WERD	Werda	82.20	325	eP	P	19 00 46.7	+0.7
	comp=Z,157nm,1.4s,baz=48,slow=5.1						
CLZ	Clausthal	82.21	327	eP	P	19 00 47.0	+0.9
	comp=Z,308nm,1.1s,baz=48,slow=5.1						
CKRC	Cesky Krumlov	82.23	323	⇑iP	P	19 00 46.7	+0.5
CKRC	Cesky Krumlov	82.23	323	⇑iP	P	19 00 46.7	+0.5
GUNZ	Gunzen	82.24	325	eP	P	19 00 46.9	+0.7
	comp=Z,336nm,1.8s,baz=48,slow=5.1						
PLN	Plauen	82.25	325	eP	P	19 00 46.7	+0.5
	comp=Z,129nm,1.3s,baz=48,slow=5.1						
NKC	Novy Kostel	82.27	325	⇑iP	P	19 00 46.8	+0.5
NKC	Novy Kostel	82.27	325	⇑iP	P	19 00 46.8	+0.5
WERN	Wernitzgruen	82.27	325	eP	P	19 00 47.2	+0.8
	comp=Z,107nm,1.1s,baz=48,slow=5.1						
GRG	Griva	82.31	313	P	P	19 00 46.0	-0.7
SFJD	Kangerlussuaq	82.31	0	P	P	19 00 45.7	-0.5
SFJD				IAmb	IAmb	19 00 47.4	
	comp=Z,213nm,1.7s						
SFJD	Kangerlussuaq	82.31	0	P	P	19 00 45.7	-0.5
SFJD				pmax	pmax		
	comp=Z,213nm,1.7s						
SFJD	Kangerlussuaq	82.31	0	iP	P	19 00 45.8	-0.4
SKO	Skopje	82.32	315	iP	P	19 00 47.5	+0.8
MOX	Moxa	82.41	326	eP	P	19 00 47.6	+0.5
	comp=Z,93nm,1.1s,baz=48,slow=5.1						
MOX				epP	pP	19 01 25.1	+1.7
KHC	Kasperske Hory	82.41	324	IAmb	IAmb	19 00 48.9	
	comp=Z,74nm,1.0s						
KHC	Kasperske Hory	82.41	324	⇑iP	P	19 00 47.5	+0.4
KHC				ex	x	19 01 02.5	
KHC	Kasperske Hory	82.41	324	⇑iP	P	19 00 47.5	+0.4
APE	Apeiranthos	82.44	309	⇓P	P	19 00 46.5	-1.1
APE	Apeiranthos	82.44	309	P	P	19 00 46.4	-1.1
BBLS	Lazići	82.44	317	⇑iP	P	19 00 47.9	+0.5
SJES	Sjenica	82.46	316	⇑iP	P	19 00 47.8	+0.2
GEC2	GERESS Array S	82.53	323	IAmb	IAmb	19 00 49.3	
	comp=Z,70nm,1.0s						
GEC2	GERESS Array S	82.53	323	eP	P	19 00 48.1	+0.3
	comp=Z,71nm,1.1s,baz=48,slow=5.1						
GERES	GERESS Array B	82.53	323	P	P	19 00 47.6	-0.2
	comp=Z,26nm,0.8s,baz=49,slow=2.9,SNR=123						
GERES				LR	LR	19 42 36.3	
	comp=Z,163nm,18.1s,baz=70,slow=39						
	comp=Z,26nm,0.8s						
ARSA	Arzberg	82.57	321	iP	P	19 00 48.7	+0.7
	comp=Z,76nm,1.1s,SNR=25						
HAPS	Han Pijesak,BI	82.58	317	⇑iP	P	19 00 48.5	+0.3
MANZ	Manzenberg	82.60	325	eP	P	19 00 48.8	+0.8
	comp=Z,23nm,1.1s,baz=48,slow=5.1						
GTTG	Gottingen	82.60	327	eP	P	19 00 48.8	+0.8
	comp=Z,230nm,1.1s,baz=48,slow=5.1						
RUDO	Rudo	82.61	317	eP	P	19 00 47.7	-0.5
BMO	Blue Mountains	82.63	42	P	P	19 00 48.5	+0.1
BMO				pP	pP	19 01 23.3	-1.6
ROTZ	Rotzenmuhle	82.69	325	eP	P	19 00 49.4	+0.9
	comp=Z,68nm,1.4s,baz=48,slow=5.1						
LIT	Litokhoron	82.73	313	P	P	19 00 48.3	-0.7
DY2G	Dye2	82.81	359	iP	P	19 00 48.8	-0.3
CRUX	Bergwerk Schwa	82.83	326	epP	pP	19 01 27.2	+1.6
MOA	Molln	82.86	322	iP	P	19 00 50.2	+0.7
	comp=Z,118nm,1.1s						
SANT	Santorini	82.87	308	⇓P	P	19 00 48.5	-1.2
SANT	Santorini	82.87	308	P	P	19 00 48.3	-1.4
BIGH	Upper Bighouse	83.04	338	eP	P	19 00 49.3	-0.8
BIGH				IAmb	IAmb	19 00 50.8	
	comp=Z,71nm,1.0s						
ZKR	Zakros	83.04	307	P	P	19 00 50.9	+0.3
FNA	Florina	83.04	314	P	P	19 00 49.9	-0.7
UBBA	Unterbreizbach	83.07	327	eP	P	19 00 49.8	-0.5
	comp=Z,304nm,1.6s,baz=48,slow=5.1						
KZN	Kozani	83.07	313	P	P	19 00 50.6	-0.2
STIA	Sitia Lasithi	83.08	307	P	P	19 00 50.9	+0.1
IBBN	Ibbenburen	83.09	329	eP	P	19 00 50.8	+0.3
	comp=Z,314nm,1.1s,baz=48,slow=5.1						
PHP	Peshkopia	83.10	315	P	P	19 00 50.6	-0.2
RPZ	Rata Peaks	83.15	152	LR	LR	19 34 08.2	
	comp=Z,78nm,19.7s,baz=308,slow=33						
VLY	Voula,Athens	83.16	310	P	P	19 00 50.0	-1.1
A051A	Mrakovica	83.19	319	⇑iP	P	19 00 51.2	-0.1
ATAL	Atalanti	83.19	311	P	P	19 00 50.4	-0.9
BLY	Banja Luka	83.19	319	⇑iP	P	19 00 51.6	+0.4
SOKA	Soboth	83.19	321	iP	P	19 00 51.9	+0.6
	comp=Z,315nm,1.2s,SNR=91						
OHR	Ohrid	83.21	314	iP	P	19 00 51.3	-0.1
GRF	Grafenberg Arr	83.22	325	eP	P	19 00 52.4	+1.1
	comp=Z,461nm,1.1s,baz=48,slow=5.1						
FCC	Fort Churchill	83.22	22	IAmb	IAmb	19 00 52.5	
	comp=Z,92nm,1.2s						
GRFO	Grafenberg	83.22	325	P	P	19 00 51.6	+0.3
GRFO	Grafenberg	83.22	325	P	P	19 00 51.6	+0.3
GRFO				pmax	pmax		
	comp=Z,364nm,1.1s						
PLID	Pearl Lake	83.23	41	P	P	19 00 51.2	-0.5
PLID				pP	pP	19 01 26.8	-1.4
ANGG	Ammassalik, Gr	83.25	355	iP	P	19 00 49.8	-1.2
MSO	Missoula	83.28	39	P	P	19 00 52.2	+0.5
	baz=309						
BIOA	Bad Ischl, Aus	83.29	323	iP	P	19 00 52.3	+0.7
	comp=Z,174nm,1.2s,SNR=57						
THL	Klokotos Trika	83.34	312	P	P	19 00 50.5	-1.5
GCIS	Gornji Cirnik	83.37	320	iP	P	19 00 52.4	+0.3
PDG	Podgorica	83.38	316	⇑P	P	19 00 52.2	+0.1
PDG	Podgorica	83.38	316	P	P	19 00 51.7	-0.5
PDG				IAmb	IAmb	19 00 53.5	
	comp=Z,112nm,0.9s						
FRMA	Ierapetra Chan	83.42	307	P	P	19 00 52.5	0.0
AGG	Agios Georgios	83.45	312	P	P	19 00 51.3	-1.4
MGRS	Mrkonjic Grad	83.45	319	⇑iP	P	19 00 53.7	+1.1
KBN	Korca	83.50	314	P	P	19 00 52.6	-0.3
FFC	Flin Flon	83.50	28	P	P	19 00 52.5	-0.1
FFC				IAmb	IAmb	19 00 54.1	
	comp=Z,67nm,1.4s						
FFC	Flin Flon	83.50	28	P	P	19 00 52.5	-0.1
FFC				pmax	pmax		
	comp=Z,67nm,1.4s						
BRY	Bratogost	83.52	317	eP	P	19 00 52.6	-0.5
MCD	Coleburn Disti	83.54	337	⇑eP	P	19 00 51.9	-0.8
KASTN	Kahler Asten	83.55	328	eP	P	19 00 53.5	+0.5
	comp=Z,167nm,1.1s,baz=48,slow=5.1						
KASTN				epP	pP	19 01 31.1	+1.8
OBKA	Obir	83.56	321	iP	P	19 00 53.5	+0.3
	comp=Z,122nm,0.9s,SNR=25						
OBKA	Obir	83.56	321	⇑iP	P	19 00 53.0	-0.2
DRME	Dracevica, Mon	83.56	316	⇑iP	P	19 00 53.2	+0.1
SRKY	Kupres RS	83.62	318	eP	P	19 00 53.2	-0.3
TIR	Tirane	83.64	315	IAmb	IAmb	19 00 57.8	
	comp=Z,112nm,1.0s						
RJOB	Jochberg	83.70	323	eP	P	19 00 54.7	+0.9
	comp=Z,196nm,1.1s,baz=48,slow=5.1						
A050A	Klekovaca	83.72	319	⇑iP	P	19 00 54.6	+0.6
VNDS	Vrh nad Dolski	83.73	321	iP	P	19 00 54.1	+0.2
TREB	Trebinje	83.74	317	eP	P	19 00 53.3	-0.7
DRUM	Mains of Drumt	83.80	336	eP	P	19 00 53.0	-1.0
DRUM				IAmb	IAmb	19 00 54.4	
	comp=Z,200nm,1.5s						
BOJS	Bojanci	83.81	320	iP	P	19 00 54.7	+0.3
BOJS	Bojanci	83.81	320	⇑iP	P	19 00 54.6	+0.3
HCY	Herceg Novi	83.82	316	eP	P	19 00 54.0	-0.4
KBA	Koelnbreinsper	83.84	322	iP	P	19 00 54.8	+0.1
	comp=Z,68nm,0.8s,SNR=57						
IDI	Anoyia	83.85	308	⇓P	P	19 00 54.3	-0.5
IDI	Anoyia	83.85	308	P	P	19 00 53.8	-1.0
LSK	Leskovik	83.89	313	P	P	19 00 55.0	0.0
BUG	Bochum--Univer	83.91	328	eP	P	19 00 54.8	+0.2
	comp=Z,225nm,1.1s,baz=48,slow=5.1						
ANX	Ano Chora	83.95	312	P	P	19 00 54.6	-0.7
MYKA	Terra Mystica	83.97	322	iP	P	19 00 55.0	-0.2
	comp=Z,62nm,0.6s,SNR=33						
STON	Ston	84.03	317	eP	P	19 00 54.5	-1.0
EFP	Efpalio	84.06	311	P	P	19 00 54.8	-0.9
PRNS	Prines Rethymn	84.07	308	P	P	19 00 56.1	+0.3
CEY	Cerknica	84.11	321	⇑iP	P	19 00 55.9	0.0
LAKA	Lakka	84.12	311	P	P	19 00 55.9	-0.2
KLV	Kalavryta, Ach	84.12	311	P	P	19 00 54.9	-1.2
PRED	Cave del Predi	84.13	322	P	P	19 00 55.0	-1.0
PRED				IAmb	IAmb	19 00 56.8	
	comp=Z,64nm,0.8s						
CADS	Cadrg	84.17	321	eP	P	19 00 55.4	-0.8
PVO	Paravola	84.19	312	P	P	19 00 54.9	-1.5
FUR	Furstenfeldbru	84.20	324	eP	P	19 00 57.3	+1.0
	comp=Z,396nm,1.0s,baz=48,slow=5.1						
TNS	Taunus Mts	84.20	327	eP	P	19 00 56.9	+0.6
	comp=Z,195nm,1.0s,baz=48,slow=5.1						
LEWI	Lewis, Hebride	84.26	339	⇑eP	P	19 00 55.6	-0.7
LEWI				IAmb	IAmb	19 00 56.9	
	comp=Z,144nm,1.3s						
MPK	Martis Peak	84.27	47	IAmb	IAmb	19 00 59.5	
	comp=Z,57nm,1.4s						
MFID	Camas Ranch	84.35	42	P	P	19 00 57.4	+0.1
MFID				IAmb	IAmb	19 00 59.9	
	comp=Z,52nm,1.4s						
MFID					pP	19 01 30.9	-3.0
IMMV	Iera Moni Meta	84.37	308	P	P	19 00 56.6	-0.8
FRB	Frobisher Bay	84.39	8	P	P	19 00 56.2	-0.7
	comp=Z,63nm,0.8s,baz=340,slow=5.8,SNR=50						
	comp=Z,63nm,0.8s						
SABO	M.te Sabotino	84.40	321	IAmb	IAmb	19 00 58.2	
	comp=Z,228nm,0.9s						
EMB	Emerald Bay	84.41	48	IAmb	IAmb	19 01 00.1	
	comp=Z,53nm,1.3s						
IGT	Igoumenitsa	84.42	313	P	P	19 00 57.0	-0.5
PAHR	Pah Rah Range	84.44	47	P	P	19 00 58.0	+0.1
SKDS	Skadanscina	84.45	321	⇑iP	P	19 00 57.3	-0.3
DRO	Drossia	84.46	311	P	P	19 00 57.5	-0.3
CLUD	Cludinico	84.48	322	P	P	19 00 56.8	-0.9
ABTA	Abfaltersbach	84.49	322	iP	P	19 00 57.2	-0.7
	comp=Z,149nm,0.9s,SNR=50						
KPL	Plockton	84.52	338	eP	P	19 00 56.6	-1.0
KPL				IAmb	IAmb	19 00 58.1	
	comp=Z,311nm,1.5s						
WATA	Walderalm	84.59	323	iP	P	19 00 58.2	-0.2
	comp=Z,43nm,0.9s,SNR=21						
WTTA	Wattenberg	84.61	323	iP	P	19 00 58.6	+0.1
	comp=Z,112nm,1.2s,SNR=33						
AHRW	Bad Neuenahr-A	84.62	328	eP	P	19 00 58.9	+0.6
	comp=Z,254nm,1.1s,baz=48,slow=5.1						
GVDS	Gavdos	84.64	308	P	P	19 00 58.5	-0.2
GVD	Gavdhos	84.65	308	P	P	19 00 58.5	-0.2
LKD2	Lefkada island	84.65	312	P	P	19 00 57.9	-0.8
NYDR	Nydri-Lefkada	84.67	312	P	P	19 00 57.7	-1.0
EGMT	Eagleton	84.68	36	IAmb	IAmb	19 01 00.8	
	comp=Z,72nm,1.2s						
EGMT	Eagleton	84.68	36	P	P	19 00 59.5	+0.7
	baz=312,SNR=12						
INVG	Invergeldie, C	84.71	337	eP	P	19 00 57.5	-1.1
RAR	Rarotonga	84.74	118	LR	LR	19 32 10.8	
	comp=Z,65nm,20.0s,baz=304,slow=31						
EVGI	Lefkada island	84.75	312	P	P	19 00 57.5	-1.7
ITM	Ithomi	84.76	310	P	P	19 00 58.3	-1.0

CIMO	**Cimolais**	84.81	322	P	P	19 00 58.3	-1.1
CIMO				IAmb	IAmb	19 00 59.8	
	comp=Z,101nm,0.9s						
MOTA	**Moosalm**	84.83	323	*i* P	P	19 00 59.3	-0.3
	comp=Z,61nm,0.9s,SNR=29						
STU	**Stuttgart**	84.83	325	*e*P	P	19 01 00.1	+0.7
	comp=Z,483nm,1.0s,baz=48,slow=5.1						
SQTA	**Sankt Quirin**	84.86	323	*i* P	P	19 00 59.6	-0.1
	comp=Z,64nm,0.9s,SNR=28						
RETA	**Reutte**	84.91	324	*i* P	P	19 00 60.0	+0.1
	comp=Z,72nm,1.1s,SNR=42						
DLMT	**Dillon**	84.93	39	P	P	19 01 00.4	+0.3
DLMT				IAmb	IAmb	19 01 02.6	
	comp=Z,48nm,1.0s						
DLMT					pP	19 01 35.8	-0.9
YERR	**Yerington**	84.95	47	IAmb	IAmb	19 01 02.8	
	comp=Z,47nm,1.4s						
BTNL	**Ternell**	85.02	328	*d*P	P	19 01 00.1	-0.3
	comp=Z,51nm,1.1s						
VLS	**Valsamata**	85.05	312	P	P	19 01 00.1	-0.6
MEM	**Membach**	85.06	328	*d*P	P	19 01 00.2	-0.3
	comp=Z,54nm,1.0s						
HLID	**Hailey**	85.06	41	P	P	19 01 01.7	+0.8
HLID				pP	pP	19 01 37.1	-0.4
HLID	**Hailey**	85.06	41	P	P	19 01 02.3	+1.4
	baz=309						
GDLE	**Glaisdale, N Y**	85.11	334	*e*P	P	19 00 59.4	-1.3
GDLE				IAmb	IAmb	19 01 00.9	
	comp=Z,102nm,1.0s						
UBR	**Ueberruh**	85.11	324	*e*P	P	19 01 01.1	+0.2
	comp=Z,127nm,1.3s,baz=48,slow=5.1						
UBR				*e*pP	pP	19 01 39.1	+1.6
NUUK	**Nuuk**	85.13	1	*i* P	P	19 01 00.1	-0.4
LTHK	**Lithakia**	85.16	311	P	P	19 01 00.4	-0.8
EDMD	**Edmundbyers**	85.22	335⇑	*e*P	P	19 01 00.0	-1.2
EDMD				IAmb	IAmb	19 01 01.4	
	comp=Z,59nm,0.8s						
FETA	**Feichten**	85.23	323	*i* P	P	19 01 01.5	-0.1
	comp=Z,58nm,1.0s,SNR=25						
BHOU	**Houvegnez**	85.24	328	*d*P	P	19 01 01.9	+0.4
	comp=Z,48nm,1.2s						
EKA	**Eskdalemuir Ar**	85.26	335	LR	LR	19 42 51.7	
	comp=Z,98nm,18.2s,baz=53,slow=38						
BSTI	**Sart Tilman**	85.28	328	*d*P	P	19 01 01.7	+0.1
	comp=Z,12nm,1.1s						
ESK	**Eskdalemuir**	85.29	335⇑	*e*P	P	19 01 00.8	-0.8
ESK				IAmb	IAmb	19 01 01.9	
	comp=Z,119nm,1.2s						
ESK	**Eskdalemuir**	85.29	335	P	P	19 01 00.6	-1.0
ESK				IAmb	IAmb	19 01 02.2	
	comp=Z,161nm,1.4s						
ESK	**Eskdalemuir**	85.29	335	P	P	19 01 00.6	-1.0
ESK				pmax	pmax		
	comp=Z,161nm,1.4s						
BOZ	**Bozeman (W)**	85.30	38	P	P	19 01 03.1	+1.1
	baz=311,SNR=15						
LAWE	**Loch Awe, Argy**	85.30	337	*e*P	P	19 01 00.6	-1.0
CTI	**Castel Tesino**	85.40	322	IAmb	IAmb	19 01 03.6	
	comp=Z,114nm,1.1s						
DAVA	**Damuels**	85.49	324	*i* P	P	19 01 02.8	-0.2
	comp=Z,88nm,1.1s,SNR=32						
BCLA	**Clavier**	85.51	328	*d*P	P	19 01 02.2	-0.5
	comp=Z,35nm,1.2s						
BCLA				*d*x	x	19 01 07.6	
BFO	**Black Forest**	85.55	325	P	P	19 01 02.5	-0.5
BFO	**Black Forest**	85.55	325	P	P	19 01 02.5	-0.5
BFO				pmax	pmax		
	comp=Z,212nm,1.4s						
BFO	**Black Forest**	85.55	325	*e*P	P	19 01 03.1	+0.1
	comp=Z,180nm,1.3s,baz=48,slow=5.1						
KVN	**Kaiserville**	85.63	47	IAmb	IAmb	19 01 06.2	
	comp=Z,51nm,1.2s						
BGES	**Gesves**	85.64	328	*d*P	P	19 01 03.1	-0.3
	comp=Z,33nm,1.2s						
LMK	**Market Rasen**	85.65	333	*e*P	P	19 01 02.3	-1.0
WLF	**Walferdange**	85.66	327	*d*P	P	19 01 03.9	+0.4
	comp=Z,108nm,1.1s						
WLF	**Walferdange**	85.66	327	*e*P	P	19 01 04.3	+0.8
	comp=Z,278nm,1.1s,baz=48,slow=5.1						
RCHB	**Rochefort**	85.73	328	*d*P	P	19 01 03.5	-0.3
	comp=Z,66nm,1.0s						
RCHB				*d*x	x	19 01 09.7	
FUORN	**Ofenpass-Fuorn**	85.74	323	P	P	19 01 04.0	-0.3
FUORN				IAmb	IAmb	19 01 06.0	
	comp=Z,97nm,1.1s						
FUORN				pP	pP	19 01 39.0	-1.9
HPK	**Haverah Park**	85.77	334⇑	*e*P	P	19 01 03.2	-0.7
HPK				IAmb	IAmb	19 01 04.4	
	comp=Z,189nm,1.2s						
NEWG	**New Galloway**	85.81	336⇑	*e*P	P	19 01 03.2	-0.9
NEWG				IAmb	IAmb	19 01 04.4	
	comp=Z,84nm,1.2s						
KESW	**Keswick, Cumbr**	85.83	335⇑	*e*P	P	19 01 03.5	-0.7
KESW				IAmb	IAmb	19 01 04.8	
	comp=Z,125nm,1.1s						
WACR	**West Acre**	85.83	332	*e*P	P	19 01 03.0	-1.3
WACR				IAmb	IAmb	19 01 04.9	
	comp=Z,119nm,0.9s						
DAVOX	**Davos/Dischmat**	85.83	324	LR	LR	19 44 41.3	
	comp=Z,197nm,19.0s,baz=68,slow=39						
BMRD	**Maredsous**	85.84	328	*d*P	P	19 01 03.8	-0.5
	comp=Z,60nm,1.1s						
NVAR	**Mina Array Bea**	85.87	47	P	P	19 01 06.2	+1.2
	comp=Z,7.8nm,0.7s,baz=294,slow=5.5,SNR=64						
NVAR				pP	pP	19 01 41.8	0.0
	comp=Z,3.6nm,0.6s,baz=305,slow=5.5,SNR=4.7						
	comp=Z,7.8nm,0.7s						
SNF	**Seneffe**	85.91	329	*d*P	P	19 01 04.6	-0.1
	comp=Z,57nm,1.1s						
OMMB	**Old Mammoth Mi**	85.91	48	P	P	19 01 05.4	0.0
OMMB				pP	pP	19 01 39.7	-2.4
DOU	**Dourbes**	86.06	328	*d*P	P	19 01 04.7	-0.8
ECH	**Echery**	86.20	326	IAmb	IAmb	19 01 08.0	
	comp=Z,93nm,1.2s						
LBWR	**Ladybower, Pea**	86.23	334	*e*P	P	19 01 05.5	-0.7
LBWR				IAmb	IAmb	19 01 07.2	
	comp=Z,188nm,1.0s						
SALO	**Salr**	86.27	322	P	P	19 01 05.8	-0.8
SALO				IAmb	IAmb	19 01 10.7	
	comp=Z,32nm,0.8s						
ELK	**Elko**	86.34	44	P	P	19 01 08.3	+0.9
	comp=Z,4.1nm,0.9s,baz=299,slow=3.7,SNR=13						
ELK				pP	pP	19 01 43.9	-0.2
	comp=Z,3.9nm,0.8s,baz=302,slow=5.5,SNR=5.2						
	comp=Z,4.1nm,0.9s						
ELK	**Elko**	86.34	44	P	P	19 01 06.6	-0.8
ELK					pP	19 01 41.3	-2.8
GUMA	**Gualdo di Mace**	86.42	319	IAmb	IAmb	19 01 11.9	
	comp=Z,146nm,0.9s						
CLGH	**Cloghs, Cushen**	86.49	337	*e*P	P	19 01 06.5	-1.0
CLGH				IAmb	IAmb	19 01 08.4	
	comp=Z,68nm,1.0s						
CWF	**Charnwood Fore**	86.58	333⇑	*e*P	P	19 01 06.6	-1.3
CWF				IAmb	IAmb	19 01 07.9	
	comp=Z,89nm,1.2s						
IOMK	**Kirk Michael**	86.61	335	*e*P	P	19 01 06.9	-1.2
IOMK				IAmb	IAmb	19 01 08.4	
	comp=Z,265nm,1.3s						
LKWY	**Lake**	86.64	39	IAmb	IAmb	19 01 12.9	
	comp=Z,38nm,1.1s						
H17A	**Grant Village**	86.65	39	IAmb	IAmb	19 01 13.1	
	comp=Z,46nm,1.1s						
H17A	**Grant Village**	86.65	39	P	P	19 01 11.6	+2.7
	baz=311,SNR=28						
CAMP	**Campotosto**	86.71	319	P	P	19 01 09.4	+0.4
DSP	**Deep Springs**	86.72	48	P	P	19 01 09.1	+0.2
DSP					pP	19 01 43.4	-2.2
WIM	**Isle of Man**	86.74	335	*e*P	P	19 01 07.1	-1.6
INTR	**Introdacqua**	86.77	318	IAmb	IAmb	19 01 11.9	
	comp=Z,49nm,1.0s						
FLWY	**Flagg Ranch**	86.79	39	IAmb	IAmb	19 01 12.9	
	comp=Z,37nm,1.1s						
ELSH	**Elham, Standar**	86.80	331	*e*P	P	19 01 07.9	-1.1
AQU	**L'Aquila**	86.83	319	P	P	19 01 09.6	+0.1
AQU	**L'Aquila**	86.83	319	P	P	19 01 09.6	+0.1
AQU				pmax	pmax		
	comp=Z,213nm,1.0s						
TIP	**Timpagrande**	86.85	315	IAmb	IAmb	19 01 11.2	
	comp=Z,113nm,1.2s						
RLMT	**Red Lodge**	86.87	38	P	P	19 01 09.5	-0.3
RLMT				IAmb	IAmb	19 01 12.4	
	comp=Z,52nm,1.4s						
RLMT					pP	19 01 44.2	-2.2
RLMT	**Red Lodge**	86.87	38	P	P	19 01 11.2	+1.4
	baz=312,SNR=13						
ZCCA	**Zocca**	86.87	321	IAmb	IAmb	19 01 22.4	
	comp=Z,69nm,0.9s						
CUC	**Castrocucco**	86.92	316	P	P	19 01 08.4	-1.5
CUC				IAmb	IAmb	19 01 10.8	
	comp=Z,38nm,1.1s						
MOOW	**Moose Ponds**	86.99	39	P	P	19 01 10.8	+0.4
PAOL	**Paolisi**	87.00	317	IAmb	IAmb	19 01 11.0	
	comp=Z,67nm,1.3s						
DGMT	**Dagmar**	87.06	33	IAmb	IAmb	19 01 12.5	
	comp=Z,64nm,1.1s						
DGMT	**Dagmar**	87.06	33	P	P	19 01 11.4	+1.0
	baz=316						
DGMT	**Dagmar**	87.06	33	P	P	19 01 10.8	+0.4
	baz=316						
CESX	**Cesi**	87.13	319	IAmb	IAmb	19 01 12.2	
	comp=Z,49nm,1.1s						
REDW	**Red Top Meadow**	87.18	40	P	P	19 01 10.5	-0.8
FOEL	**Foel Wylfa**	87.19	334	*e*P	P	19 01 10.1	-0.9
FOEL				IAmb	IAmb	19 01 12.0	
	comp=Z,79nm,1.1s						
CWC	**Cottonwood Cre**	87.20	49	P	P	19 01 12.2	+0.6
	baz=307						
WME	**Myndd Eilian**	87.20	335⇑	*e*P	P	19 01 09.9	-1.0
OSSC	**Osservatorio P**	87.27	320	P	P	19 01 10.7	-0.9
OSSC				IAmb	IAmb	19 01 13.1	
	comp=Z,80nm,1.0s						
WLF1	**Llynfaes**	87.32	335	*e*P	P	19 01 11.4	-0.1
WLF1				IAmb	IAmb	19 01 12.8	
	comp=Z,205nm,1.3s						
LAO	**LASA Array**	87.35	35	IAmb	IAmb	19 01 14.3	
	comp=Z,46nm,1.1s						
LAO	**LASA Array**	87.35	35	P	P	19 01 13.2	+1.3
	baz=314,SNR=12						
LAO	**LASA Array**	87.35	35	P	P	19 01 12.5	+0.6
	baz=314						
HLM1	**Long Mynd**	87.36	334⇑	*e*P	P	19 01 10.6	-1.2
HLM1				IAmb	IAmb	19 01 11.9	
	comp=Z,52nm,1.4s						
LLW	**Llanuwychllyn**	87.40	334	*e*P	P	19 01 10.8	-1.1
SENIN	**Lac Senin/Sane**	87.41	324	IAmb	IAmb	19 01 17.0	
	comp=Z,60nm,0.8s						
ARVC	**Arvin**	87.50	50	P	P	19 01 13.2	+0.5
	baz=307						
LATE	**Laterza**	87.56	320	P	P	19 01 12.1	-0.9
R11A	**Troy Canyon, C**	87.61	46	P	P	19 01 14.7	+1.2
	baz=308,SNR=16						
SCZ2	**Santa Cruz Isl**	87.63	51	P	P	19 01 13.9	+0.5
	baz=306						
STRD	**Stroud**	87.66	333	*e*P	P	19 01 12.1	-1.1
STRD				IAmb	IAmb	19 01 13.4	
	comp=Z,145nm,1.3s						
MSSA	**Maissana**	87.67	322	P	P	19 01 11.9	-1.6
MSSA				IAmb	IAmb	19 01 14.0	
	comp=Z,66nm,1.5s						
MPMC	**Manual Prospec**	87.81	49	P	P	19 01 15.2	+0.7
	baz=307						
HWUT	**Hardware Ranch**	87.93	41	IAmb	IAmb	19 01 17.8	
	comp=Z,43nm,1.2s						
CASP	**Castiglione de**	87.97	320	IAmb	IAmb	19 01 16.2	
	comp=Z,47nm,1.0s						
FURC	**Furnace Creek,**	87.97	48	P	P	19 01 16.2	+1.3
	baz=308						
LRMC	**Laurel Mtn Rad**	88.04	49	P	P	19 01 16.4	+0.9
	baz=307						
TPNV	**Topopah Spring**	88.06	47	P	P	19 01 15.0	-0.6
TPNV	**Topopah Spring**	88.06	47	P	P	19 01 15.0	-0.6
TPNV				pmax	pmax		
	comp=Z,26nm,1.5s						
TPNV	**Topopah Spring**	88.06	47	P	P	19 01 16.8	+1.2
	baz=308,SNR=7.8						
DUG	**Dugway, Tooele**	88.12	43	P	P	19 01 17.5	+1.7
	baz=310,SNR=16						
IVI	**Ivigtut**	88.12	359	*i* P	P	19 01 14.0	-1.1
EDW2	**Edwards Air Fo**	88.19	50	P	P	19 01 17.1	+1.0
	baz=307						
BW06	**Boulder Array**	88.29	40	P	P	19 01 17.2	+0.6
	baz=312,SNR=8.3						
PDAR	**Pinedale Array**	88.29	40	P	P	19 01 17.2	+0.6
	comp=Z,7.6nm,0.8s,baz=326,slow=0.8,SNR=39						
PDAR				pP	pP	19 01 52.0	-1.4
	comp=Z,4.8nm,0.8s,baz=335,slow=1.5,SNR=5.9						
PDAR				PKKPbc	PKKPbc	19 18 59.0	0.0
	comp=Z,0.8nm,0.8s,baz=132,slow=4.4,SNR=5.7						
	comp=Z,7.6nm,0.8s						
PDAR	**Pinedale Array**	88.29	40	P	P	19 01 16.6	0.0
PDAR					pP	19 01 51.8	-1.6
TCUT	**Toone Canyon**	88.34	42	IAmb	IAmb	19 01 19.6	
	comp=Z,26nm,1.1s						
CLF	**Chambon-Foret**	88.62	328	IAmb	IAmb	19 01 19.1	
	comp=Z,69nm,0.9s						
BNI	**Bardonecchia**	88.64	324	IAmb	IAmb	19 01 23.5	
	comp=Z,21nm,0.8s						
SHOC	**Shoshone, Teco**	88.69	48	P	P	19 01 19.6	+1.3
	baz=308						
GSC	**Goldstone, Bar**	88.71	49	P	P	19 01 20.1	+1.5
	baz=308,SNR=5.9						
BSUT	**Blindstream Ca**	89.09	42	IAmb	IAmb	19 01 23.8	
	comp=Z,33nm,1.5s						
TUQ	**Turquoise Moun**	89.20	48	P	P	19 01 22.0	+1.1
	baz=308						
HEC	**Hector,Ludlow**	89.31	49	P	P	19 01 22.2	+0.8
	baz=308						
ULM	**Lac du Bonnet**	89.33	28	P	P	19 01 21.5	+0.5
	comp=Z,74nm,0.9s,baz=318,slow=4.9,SNR=77						
	comp=Z,74nm,0.9s						
TCRU	**Three Creeks R**	89.36	44	IAmb	IAmb	19 01 49.3	
	comp=Z,26nm,0.3s						
RAFF	**Raffo Rosso**	89.54	314	P	P	19 01 22.1	-0.2
SSB	**Saint Sauveur**	89.55	325	IAmb	IAmb	19 01 22.8	
	comp=Z,36nm,1.3s						
MVU	**Marysvale**	89.57	44	IAmb	IAmb	19 01 26.2	
	comp=Z,110nm,1.4s						
MDND	**Maddock**	89.61	31	IAmb	IAmb	19 01 24.8	
	comp=Z,95nm,1.2s						
MDND	**Maddock**	89.61	31	P	P	19 01 23.5	+1.1
	baz=319						
MDND	**Maddock**	89.61	31	P	P	19 01 22.9	+0.5
	baz=319						
RDMU	**Red Mountain**	89.75	41	P	P	19 01 23.8	+0.3
RDMU				pP	pP	19 01 57.6	-2.8
GMRC	**Granite Mounta**	89.77	49	P	P	19 01 24.4	+0.8
	baz=308						
P17A	**Butcher Ranch,**	89.80	43	IAmb	IAmb	19 01 26.6	
	comp=Z,64nm,1.2s						
MTPU	**Mount Pierson**	89.88	44	IAmb	IAmb	19 01 27.8	
	comp=Z,33nm,1.5s						
Q16A	**Castle Valley**	89.92	43	IAmb	IAmb	19 01 28.3	
	comp=Z,56nm,1.4s						
PFO	**Pinyon Flats O**	89.97	50	P	P	19 01 25.1	+0.6
	comp=Z,2.1nm,0.8s,baz=277,slow=3.6,SNR=3.6						
	comp=Z,2.1nm,0.8s						
PFO	**Pinyon Flats O**	89.97	50	P	P	19 01 25.2	+0.7
	baz=308						
TPFO	**Pinon Flats**	89.98	50	P	P	19 01 24.9	+0.3
	baz=308						
P18A	**Preston Nutter**	89.99	42	IAmb	IAmb	19 01 27.7	
	comp=Z,58nm,1.1s						
K22A	**Casper**	90.00	38	IAmb	IAmb	19 01 26.5	
	comp=Z,36nm,1.2s						
K22A	**Casper**	90.00	38	P	P	19 01 25.2	+0.6
	baz=314						
K22A	**Casper**	90.00	38	P	P	19 01 25.0	+0.4
	baz=314						
BELC	**Belle Mtn. Jos**	90.04	50	P	P	19 01 25.4	+0.5
	baz=308						
E28A	**Huff**	90.07	32	P	P	19 01 25.6	+1.0
	baz=318						
SRU	**San Rafael Swe**	90.17	43	P	P	19 01 25.1	-0.4
SRU				IAmb	IAmb	19 01 27.9	
	comp=Z,20nm,0.9s						
SRU	**San Rafael Swe**	90.17	43	P	P	19 01 25.1	-0.4
SRU				pmax	pmax		
	comp=Z,20nm,0.9s						
RSSD	**Black Hills**	90.25	36	P	P	19 01 25.8	0.0
RSSD				IAmb	IAmb	19 01 28.2	
	comp=Z,106nm,1.6s						
RSSD	**Black Hills**	90.25	36	P	P	19 01 25.8	0.0
RSSD				pmax	pmax		
	comp=Z,106nm,1.6s						
RSSD	**Black Hills**	90.25	36	P	P	19 01 26.6	+0.8
	baz=316						
RSSD	**Black Hills**	90.25	36	P	P	19 01 26.6	+0.8
	baz=316						
RWWY	**Rawlins**	90.30	39	IAmb	IAmb	19 01 28.3	
	comp=Z,36nm,1.2s						
MONP2	**Monument Peak**	90.44	51	P	P	19 01 28.0	+1.1
	baz=308						
IRM	**Iron Mountain**	90.50	49	P	P	19 01 28.1	+1.2
	baz=309						
BC3	**Big Chuckawall**	90.61	50	P	P	19 01 28.7	+1.2
	baz=308						
PPT	**Papeete**	90.70	110	LR	LR	19 33 56.0	
	comp=Z,77nm,21.7s,baz=297,slow=30						
PPT2	**Papeete2**	90.71	110	*e*P	P	19 01 28.6	+0.6
	comp=Z,71nm,25.8s						
PPT2	**Papeete2**	90.71	110	*e*S	S	19 12 10.3	-1.8
	comp=Z,224nm,27.2s						
PPT2	**Papeete2**	90.71	110	*e*LR	LR	19 30 42.5	
	comp=Z,204nm,25.2s						
PPT2				*e*LR	LR	19 30 42.5	
	comp=Z,230nm,24.0s						
PMOR	**Pomariorio Ree**	90.71	107	*e*T	T	20 41 05.6	
	comp=Z,4.9nm,0.2s						
O20A	**White River Ci**	90.79	41	IAmb	IAmb	19 01 30.6	
	comp=Z,23nm,1.1s						
O20A	**White River Ci**	90.79	41	P	P	19 01 29.5	+1.2
	baz=313						
IKP	**In-Ko-Pah, Jac**	90.79	51	P	P	19 01 29.3	+0.9
	baz=308						
U15A	**North Rim**	90.86	46	P	P	19 01 29.5	+0.6
U15A				IAmb	IAmb	19 01 32.1	
	comp=Z,29nm,1.4s						
AGMN	**Agassiz Nation**	90.87	29	P	P	19 01 27.9	-0.3
AGMN				IAmb	IAmb	19 01 29.7	
	comp=Z,36nm,1.2s						
AGMN	**Agassiz Nation**	90.87	29	P	P	19 01 28.4	+0.2
	baz=322						
AGMN	**Agassiz Nation**	90.87	29	P	P	19 01 28.4	+0.2
	baz=322						
PDMCI	**Parker Dam,Lak**	91.05	48	P	P	19 01 30.9	+1.5
	baz=309						
D32B	**Dogwood Acres,**	91.29	30	P	P	19 01 31.0	+0.8
	baz=321						
GLA	**Glamis**	91.39	50	P	P	19 01 32.2	+1.2
	baz=309						
PV23	**Carpenter Ridg**	91.49	43	IAmb	IAmb	19 01 34.6	
	comp=Z,70nm,1.1s						
PHWY	**Pilot Hill**	91.51	39	IAmb	IAmb	19 01 34.1	
	comp=Z,25nm,1.2s						
N23A	**Red Feather La**	91.53	39	P	P	19 01 33.1	+1.3
	baz=314						
PV11	**David Mesa, Pa**	91.67	43	P	P	19 01 33.3	+0.9
PV11				IAmb	IAmb	19 01 35.4	
	comp=Z,37nm,0.9s						
B35A	**Bob, Littlefor**	91.69	28	P	P	19 01 32.8	+0.8
	baz=323						
PV07	**Paradox Valley**	91.71	42	IAmb	IAmb	19 01 35.3	
	comp=Z,54nm,1.6s						
PV13	**Radium Mtn., P**	91.80	43	IAmb	IAmb	19 01 35.8	
	comp=Z,33nm,1.0s						
PV15	**Paradox Valley**	91.87	42	IAmb	IAmb	19 01 36.1	
	comp=Z,37nm,1.2s						
WUAZ	**Wupatki**	92.02	46	IAmb	IAmb	19 01 36.9	
	comp=Z,20nm,1.1s						
WUAZ	**Wupatki**	92.02	46	P	P	19 01 35.8	+1.8
	baz=311						
SMCO	**Snowmass**	92.16	41	P	P	19 01 35.5	+0.5
SMCO				IAmb	IAmb	19 01 37.6	
	comp=Z,19nm,0.9s						
SMCO					pP	19 02 10.0	-1.9
SUSD	**Miller**	92.48	33	P	P	19 01 36.5	+0.7
	baz=319						
SUSD	**Miller**	92.48	33	P	P	19 01 36.5	+0.7
	baz=319						
ISCO	**Idaho Springs**	92.48	40	P	P	19 01 37.7	+1.4
	baz=315						
ISCO	**Idaho Springs**	92.48	40	P	P	19 01 36.8	+0.5
	baz=315						
F33A	**5 Mile Ranch,**	92.61	31	IAmb	IAmb	19 01 38.3	
	comp=Z,38nm,1.1s						
F33A	**5 Mile Ranch,**	92.61	31	P	P	19 01 37.2	+0.9
	baz=321						
MVCO	**Mesa Verde**	92.62	43	IAmb	IAmb	19 01 40.3	
	comp=Z,31nm,1.2s						
MVCO	**Mesa Verde**	92.62	43	P	P	19 01 38.4	+1.5
	baz=313						
EYMN	**Ely**	92.90	27	P	P	19 01 37.7	0.0
EYMN				IAmb	IAmb	19 01 39.4	
	comp=Z,45nm,1.0s						
EYMN	**Ely**	92.90	27	P	P	19 01 38.6	+1.0
	baz=325						
EYMN	**Ely**	92.90	27	P	P	19 01 38.1	+0.5
	baz=325						
KIBK	**Kibwezi**	93.19	269	P	P	19 01 39.1	-0.6
KIBK				IAmb	IAmb	19 01 41.3	
	comp=Z,30nm,1.4s						
S22A	**4UR Ranch, Cre**	93.23	42	P	P	19 01 41.2	+1.4
	baz=314						
SCHQ	**Schefferville**	93.25	10	P	P	19 01 39.2	+0.1
	comp=Z,19nm,0.9s,baz=1.1,slow=4.0,SNR=12						
SCHQ				LR	LR	19 48 46.5	
	comp=Z,64nm,18.5s,baz=30,slow=39						
	comp=Z,19nm,0.9s						
SCHQ	**Schefferville**	93.25	10	IAmb	IAmb	19 01 40.0	
	comp=Z,31nm,1.1s						
KMBO	**Kilima Mbogo**	93.26	271	P	P	19 01 39.6	-0.6
KMBO				IAmb	IAmb	19 01 41.8	
	comp=Z,17nm,1.2s						
KMBO	**Kilima Mbogo**	93.26	271	P	P	19 01 39.6	-0.6
KMBO				pmax	pmax		
	comp=Z,17nm,1.2s						
KMBO	**Kilima Mbogo**	93.26	271	*i* P	P	19 01 40.2	0.0
	SNR=12						
W18A	**Petrified Fore**	93.28	45	P	P	19 01 40.9	+0.9
	baz=312						
Q24A	**Divide**	93.33	40	P	P	19 01 40.3	0.0
	baz=315						
214A	**Organ Pipe Nat**	93.40	49	IAmb	IAmb	19 01 42.9	
	comp=Z,18nm,1.2s						
214A	**Organ Pipe Nat**	93.40	49	P	P	19 01 41.0	+0.7
	baz=310						
KEST	**Kesra**	93.57	316	P	P	19 01 40.8	-0.4
	comp=Z,19nm,1.0s,baz=8.1,slow=4.2,SNR=10.0						
	comp=Z,19nm,1.0s						
KEST	**Kesra**	93.57	316	P	P	19 01 40.7	-0.4
KEST				IAmb	IAmb	19 01 43.2	
	comp=Z,28nm,1.1s						
OGNE	**Ogallala**	93.57	37	P	P	19 01 41.5	+0.5
	baz=317						
OGNE	**Ogallala**	93.57	37	P	P	19 01 41.8	+0.8
	baz=317						
F36A	**Milaca**	93.77	29	IAmb	IAmb	19 01 43.0	
	comp=Z,17nm,1.1s						
F36A	**Milaca**	93.77	29	P	P	19 01 41.8	+0.1
	baz=323						
TBI	**Tubuai**	93.85	115	*e*LR	LR	19 32 09.9	
	comp=Z,1µm,36.8s						
TBI				*e*LR	LR	19 32 10.0	
	comp=Z,2µm,36.5s						
ABPO	**Ambohimpanom**	93.96	250	P	P	19 01 42.9	-0.3
ABPO				IAmb	IAmb	19 01 46.2	
	comp=Z,33nm,1.1s						
ABPO	**Ambohimpanom**	93.96	250	P	P	19 01 42.9	-0.3
ABPO				pmax	pmax		
	comp=Z,33nm,1.2s						
E38A	**The Farm, Brul**	93.97	28	IAmb	IAmb	19 01 44.0	
	comp=Z,60nm,1.2s						
E38A	**The Farm, Brul**	93.97	28	P	P	19 01 42.6	0.0
	baz=325						
SDCO	**Great Sand Dun**	93.98	41	P	P	19 01 44.2	+1.0
	baz=315						
SDCO	**Great Sand Dun**	93.98	41	P	P	19 01 44.1	+0.8
	baz=315						
TAOE	**Nuku Hiva Isla**	94.05	98	*e*LR	LR	19 32 12.6	
	comp=Z,178nm,23.2s						
ECSD	**EROS Data Cent**	94.10	32	P	P	19 01 44.0	+0.7
	baz=321						
ECSD	**EROS Data Cent**	94.10	32	P	P	19 01 43.6	+0.3
	baz=321						
TUC	**Tucson**	94.48	48	P	P	19 01 44.9	-0.5
TUC	**Tucson**	94.48	48	P	P	19 01 44.9	-0.5
TUC				pmax	pmax		
	comp=Z,13nm,1.4s						
TUC	**Tucson**	94.48	48	P	P	19 01 46.5	+1.2
	baz=311						
SPMN	**Marine on St.**	94.59	29	IAmb	IAmb	19 01 47.0	
	comp=Z,18nm,0.9s						
SPMN	**Marine on St.**	94.59	29	P	P	19 01 45.9	+0.5
	baz=324						
SPMN	**Marine on St.**	94.59	29	P	P	19 01 46.1	+0.6
	baz=324						
KSCO	**Kaye Shedlock’**	94.66	39	P	P	19 01 46.8	+0.7
	baz=317						
KSCO	**Kaye Shedlock’**	94.66	39	P	P	19 01 47.3	+1.2
	baz=317						
T25A	**Trinidad**	95.03	41	P	P	19 01 49.2	+1.3

	baz=315						
BGNE	Belgrade	95.17	34	P	P	19 01 48.1	-0.1
BGNE	Belgrade	95.17	34	P	P	19 01 49.6	+1.4
	baz=320						
BGNE	Belgrade	95.17	34	P	P	19 01 48.4	+0.2
	baz=320						
I37B	Waseca	95.31	30	P	P	19 01 49.7	+1.0
	baz=324						
COWI	Conover	95.33	26	P	P	19 01 49.8	+0.9
	baz=327						
ANMO	Albuquerque	95.38	44	P	P	19 01 50.3	+0.7
	comp=Z,1.5nm,0.7s,baz=333,slow=2.1,SNR=4.6						
	comp=Z,1.5nm,0.7s						
ANMO	Albuquerque	95.38	44	P	P	19 01 49.1	-0.5
ANMO	Albuquerque	95.38	44	P	P	19 01 50.5	+1.0
	baz=314						
ANMO	Albuquerque	95.38	44	P	P	19 01 50.9	+1.4
	baz=314						
G40A	Rib Lake	95.61	27	IAmb	IAmb	19 01 51.8	
	comp=Z,26nm,0.9s						
G40A	Rib Lake	95.61	27	P	P	19 01 50.6	+0.5
	baz=326						
Y22D	IRIS PASSCAL I	95.70	45	P	P	19 01 51.4	+0.4
	baz=314						
Y22F	Passcal Instru	95.70	45	P	P	19 01 51.5	+0.6
	baz=314						
121A	Cookes Peak, D	96.22	46	P	P	19 01 54.4	+1.0
	baz=313						
CBKS	Cedar Bluff	96.33	37	P	P	19 01 55.0	+1.4
	baz=319						
CBKS	Cedar Bluff	96.33	37	P	P	19 01 54.0	+0.4
	baz=319						
I40A	Norwalk	96.58	29	P	P	19 01 55.1	+0.5
	baz=326						
SCIA	State Center	97.08	31	P	Pdif	19 01 57.6	+0.7
	baz=324						
KSU1	Kansas State U	97.70	35	P	Pdif	19 01 59.8	+0.1
	baz=321						
ESBB	Sonseca Array	97.89	326	IAmb	IAmb	19 02 01.1	
	comp=Z,18nm,1.4s						
ESDC	Sonseca Array	97.89	326	P	P	19 01 59.8	-0.8
	comp=Z,6.5nm,0.9s,baz=26,slow=3.4,SNR=25						
ESDC				PP	PP	19 05 58.8	-1.3
	comp=Z,11nm,1.2s,baz=42,slow=7.9,SNR=11						
ESDC				LR	LR	19 50 54.2	
	comp=Z,112nm,18.5s,baz=3.5,slow=38						
	comp=Z,6.5nm,0.9s						
ESDC	Sonseca Array	97.89	326	IAmb	IAmb	19 02 01.7	
	comp=Z,8.8nm,1.1s						
PCAB	Cabril	98.11	330	*e*Pdif	Pdif	19 02 05.8	+4.2
MVO	Moncorvo	98.12	329	*e*Pdif	P	19 02 01.0	-0.6
PAB	San Pablo	98.18	326	P	P	19 02 01.1	-0.9
PAB				IAmb	IAmb	19 02 02.4	
	comp=Z,8.4nm,1.1s						
PAB	San Pablo	98.18	326	P	P	19 02 01.1	-0.9
PAB				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MNTX	Cornudas Mount	98.27	45	P	Pdif	19 02 03.9	+1.4
	baz=314						
MNTX	Cornudas Mount	98.27	45	P	Pdif	19 02 03.6	+1.1
	baz=314						
POLO	Lamas de Olo	98.29	330	*e*Pdif	P	19 02 01.8	-0.6
MBAR	Mbarara	98.58	274	P	P	19 02 04.0	-0.3
MBAR				IAmb	IAmb	19 02 06.2	
	comp=Z,17nm,1.3s						
MBAR	Mbarara	98.58	274	P	P	19 02 04.0	-0.3
MBAR				pmax	pmax		
	comp=Z,17nm,1.3s						
P38A	Dawn	98.76	33	P	Pdif	19 02 05.6	+1.2
	baz=323						
MTE	Manteigas	98.97	329	*e*Pdif	Pdif	19 02 06.2	+0.8
N41A	Harden Midland	99.09	30	P	Pdif	19 02 06.9	+1.0
	baz=325						
L44A	Lake County Fo	99.10	28	P	Pdif	19 02 06.3	+0.4
	baz=328						
PMRV	Marv??o	99.69	328	*e*Pdif	Pdif	19 02 09.2	+0.6
WMOK	Wichita Mounta	99.89	39	P	Pdif	19 02 09.0	-0.6
	baz=319						
PESTR	Estremoz	100.23	328	*e*Pdif	Pdif	19 02 05.9	-5.1
PBAR	Barrancos	100.54	327	*e*Pdif	Pdif	19 02 11.8	-0.6
L48A	N Adams	100.65	26	P	Pdif	19 02 13.8	+1.0
	baz=330						
L48A				P	Pdif	19 02 13.8	+1.0
	baz=330						
PMAFR	Mafra	100.92	329	*e*Pdif	Pdif	19 02 13.8	-0.3
SFIN	Lafayette	100.95	28	P	Pdif	19 02 13.8	-0.3
	baz=328						
TXAR	Lajitas Array	100.98	46	P	Pdif	19 02 15.3	+0.7
	comp=Z,0.7nm,0.8s,baz=276,slow=2.0,SNR=8.8						
TXAR				PP	PP	19 06 25.7	+1.8
	comp=Z,1.9nm,1.1s,baz=328,slow=4.4,SNR=6.8						
TXAR				PKKPbc	PKKPbc	19 18 27.5	+2.3
	comp=Z,0.6nm,0.7s,baz=143,slow=3.3,SNR=5.9						
PVAQ	Vaqueiros	101.48	327	*e*Pdif	Pdif	19 02 17.4	+0.8
O53A	New Philadelph	103.30	24	P	Pdif	19 02 24.3	-0.3
	baz=333						
TORD	Torodi Ar. Bea	114.02	304	PKP	PKPdf	19 07 02.9	-0.9
	comp=Z,1.9nm,0.7s,baz=32,slow=1.4,SNR=9.3						
TORD				PP	PP	19 07 53.1	-6.3
	comp=Z,5.7nm,0.9s,baz=32,slow=8.3,SNR=15						
BOSA	Boshof	116.17	251	PKP	PKPdf	19 07 06.7	-0.9
	comp=Z,3.5nm,0.7s,baz=20,slow=2.6,SNR=8.7						
QSPA	South Pole Qui	120.76	180		PKPdf	19 07 14.6	-0.6
DBIC	Dimbokro	123.13	303	PKP	PKPdf	19 07 21.0	-0.3
	comp=Z,14nm,0.8s,baz=26,slow=1.7,SNR=16						
DBIC				PP	PP	19 09 02.7	+0.4
	comp=Z,13nm,1.0s,baz=29,slow=8.1,SNR=5.0						
DBIC	Dimbokro	123.13	303	PKPdf	PKPdf	19 07 19.8	-1.5
DBIC				PP	PP	19 08 55.3	-6.9
DBIC	Dimbokro	123.13	303	PKIKP	PKPdf	19 07 21.0	-0.3
KIC	Kosan Boka	123.25	303	⇑*i*P	PKPdf	19 07 21.1	-0.5
	comp=Z,7.9nm,0.6s						
TIC	Toumodi	123.26	303	⇑*i*P	PKPdf	19 07 18.4	-3.2
	comp=Z,37nm,0.3s						
LIC	Lamto	123.56	303	⇑*i*P	PKPdf	19 07 21.6	-0.5
	comp=Z,78nm,0.9s						
ACON	Acoyapa	125.31	44		PKPdf	19 07 24.4	-1.1
NVL	N'lazarevskaya	128.28	202	*e*PKIKP	PKiKP	19 07 30.5	+0.5
NVL				pmax	pmax		
	comp=Z,19nm,1.1s						
TROLL	Troll, Antarti	130.60	199	PKPdf	PKiKP	19 07 35.0	+0.1
SNAA	Sanae	132.23	198	PKPdf	PKPdf	19 07 37.4	+0.4
VNA2	Neumayer--Watz	133.87	198	PKPdf	PKiKP	19 07 40.9	-0.4
	baz=95,slow=1.0						
VNA3	Neumayer Olymp	134.25	197	PKPdf	PKPdf	19 07 41.3	+0.6
SDV	Santo Domingo	135.52	30	PKP	PKPdf	19 07 44.4	-0.6
	comp=Z,31nm,0.9s,baz=336,slow=7.8,SNR=18						
SDV				pPKP	pPKPdf	19 08 24.2	+0.5
	comp=Z,13nm,0.9s,baz=47,slow=2.2,SNR=3.0						
SDV	Santo Domingo	135.52	30	PKPpre	PKPpre	19 07 31.4	
SDV				PKPdf	PKPdf	19 07 42.5	-2.6
ROSC	El Rosal	137.26	38	PKP	PKPdf	19 07 49.0	+0.4
	comp=Z,13nm,0.8s,baz=328,slow=13,SNR=4.1						
OTAV	Otavalo	138.61	47		PKPdf	19 07 49.3	-1.8
OTAV	Otavalo	138.61	47	PKIKP	PKPdf	19 07 49.3	-1.8
OTAV	Otavalo	138.61	47	*e*P	PKPdf	19 07 50.7	-0.5
OTAV	Otavalo	138.61	47	*e*P	PKPdf	19 07 47.5	-3.6
MDP	Montagnes des	143.99	5	PKP	PKPab	19 07 57.9	+0.1
	comp=Z,43nm,0.9s,baz=280,slow=1.2,SNR=5.3						
ATAH	Atahualpa	144.11	55	PKP	PKPdf	19 08 00.5	-0.4
	comp=Z,37nm,1.1s,baz=322,slow=3.6,SNR=18						
SGCB	S£o Gabriel d	145.13	32	*e*P	PKPbc	19 08 01.8	-0.1
BOAV	Boa Vista	145.21	19		PKPbc	19 08 01.0	-1.2
BOAV	Boa Vista	145.21	19	*e*P	PKPbc	19 08 01.8	-0.4
TBTG	Tabatinga, AM	147.19	40	*e*P	PKPdf	19 08 06.1	+0.5
CZSB	Cruzeiro do Su	148.36	48	PKPdf	PKPdf	19 08 07.4	-0.2
CZSB	Cruzeiro do Su	148.36	48	*e*P	PKPdf	19 08 07.7	+0.1
CZSB	Cruzeiro do Su	148.36	48	*e*P	PKPdf	19 08 08.2	+0.6
NNA	Nana	148.53	59	PKPbc	PKPbc	19 08 10.9	-0.7
	comp=Z,34nm,0.7s,baz=314,slow=5.0,SNR=14						
NNA	Nana	148.53	59		PKPbc	19 08 11.0	-0.6
TEFE	Tefe	149.21	30	*e*P	PKPdf	19 08 08.9	-0.1
MCPB	Macapa, AP	149.44	5	*e*P	PKPdf	19 08 10.4	+1.1
RCBR	Riachuelo	151.84	330	*e*P	PKiKP	19 08 20.3	+0.3
ITTB	Itaituba	152.89	13	*e*P	PKPdf	19 08 15.3	+0.7
ETMB	Extrema	153.88	40	*e*P	PKPdf	19 08 15.7	-0.3
PRPB	Parauapebas	155.30	0	*e*P	PKPdf	19 08 18.8	+0.8
NPGB	Novo Progresso	155.57	14	*e*P	PKPdf	19 08 18.8	+0.5
LPAZ	La Paz	157.65	53	PKP	PKPdf	19 08 22.9	+1.2
	comp=Z,3.2nm,0.9s,baz=21,slow=1.9,SNR=8.1						
LPAZ				PKPab	PKPab	19 08 54.9	+0.4
	comp=Z,4.2nm,0.8s,baz=33,slow=8.7,SNR=7.6						
LPAZ	La Paz	157.65	53	PKPdf	PKPdf	19 08 20.4	-1.3
LPAZ				PKPab	PKPab	19 08 52.8	-1.7
LPAZ	La Paz	157.65	53	PKIKP	PKPdf	19 08 20.4	-1.3
LPAZ						19 08 52.8	
SMTB	Santa Maria do	157.90	355	*e*P	PKPdf	19 08 20.8	-0.5
PB16	IPOC Station P	158.01	60	PKPdf	PKPdf	19 08 20.4	-1.7
PB16					PKPab	19 08 55.4	-0.7
CLDB	Colider	159.17	17	*e*P	PKPdf	19 08 23.1	+0.3
VILB	Vilhena	159.56	31	*e*P	PKPdf	19 08 24.7	+1.4
LVC	Limon Verde	160.88	69	PKPab	PKPab	19 09 08.7	+0.5
	comp=Z,5.0nm,0.7s,baz=235,slow=5.3,SNR=4.5						
SDBA	SAO DESIDERIO	160.99	346	*e*P	PKPdf	19 08 21.7	-3.1
SIV	San Ignacio	161.76	38	PKP	PKPdf	19 08 26.4	+0.8
	comp=Z,15nm,0.9s,baz=20,slow=0.8,SNR=42						
SIV				pPKP	pPKPdf	19 09 04.7	+0.3
	comp=Z,5.8nm,0.8s,baz=340,slow=0.7,SNR=4.5						
SIV				PP	PP	19 12 57.4	+2.5
	comp=Z,2.0nm,0.7s,baz=309,slow=3.0,SNR=4.5						
PTLB	Pontes e Lacer	162.24	32	*e*P	PKPdf	19 08 26.9	+0.8
PTLB	Pontes e Lacer	162.24	32	*e*P	PKPdf	19 08 27.2	+1.2
GUA01	Guaratinga, BA	163.09	326	*e*P	PKPab	19 09 16.6	-0.7
JANB	Januaria	163.41	342	*e*P	PKPdf	19 08 27.8	+0.6
JANB	Januaria	163.41	342	*e*P	PKPdf	19 08 27.0	-0.3
SALV	Santo Antonio	163.98	22	*e*P	PKPdf	19 08 28.4	+0.7
BDFB	Brasilia	164.64	354	PKP	PKPdf	19 08 28.5	+0.1
	comp=Z,8.1nm,1.0s,baz=358,slow=3.3,SNR=7.7						
BDFB				PKPab	PKPab	19 09 23.5	-0.7
	comp=Z,5.7nm,0.6s,baz=67,slow=3.1,SNR=6.2						
BDFB				PP	PP	19 13 10.3	+0.8
	comp=Z,2.0nm,0.6s,baz=102,slow=11,SNR=2.3						
BDFB	Brasilia	164.64	354	PKPdf	PKPdf	19 08 27.4	-1.0
BDFB					PKPab	19 09 23.2	-1.0
BDFB	Brasilia	164.64	354	*e*P	PKPdf	19 08 27.7	-0.8
ARAG	Araguaiana, MT	164.65	8	*e*P	PKPdf	19 08 29.0	+0.7
ARAG	Araguaiana, MT	164.65	8	*e*P	PKPdf	19 08 29.5	+1.2
BSFB	Barra de Sao F	165.51	325	*e*P	PKPdf	19 08 28.0	-0.9
SJMB	Sao Joao De Ma	165.57	326	*e*P	PKPdf	19 08 29.4	+0.4
SJMB	Sao Joao De Ma	165.57	326	*e*P	PKPab	19 09 27.3	-1.0
PP1B	Ponte de Pedra	165.83	21	*e*P	PKPdf	19 08 30.2	+0.9
AQDB	Aquidauana	168.18	29		PKPdf	19 08 29.8	-1.1
AQDB				PKPab	PKPab	19 09 38.0	-1.7
DUB01	Friburgo-RJ	169.01	322	*e*P	PKPab	19 09 42.4	-1.1
RCLB	Rio Claro- Sao	171.25	347	*e*P	PKPdf	19 08 32.7	-0.1
TRCB	Terra Rica	171.40	19	*e*P	PKPdf	19 08 33.3	+0.5
CPUP	Villa Florida	171.79	57	PKP	PKPdf	19 08 33.0	+0.2
	comp=Z,16nm,1.3s,baz=220,slow=5.9,SNR=5.0						
CPUP				pPKP	pPKPdf	19 09 11.8	0.0
	comp=Z,3.2nm,1.0s,baz=8.1,slow=7.1,SNR=3.7						
FRTB	Fartura	172.38	360	*e*P	PKPdf	19 08 34.7	+1.4
ALGR	Alto Alegre (B	176.32	54	*e*P	PKPab	19 10 18.0	+2.1

MAN 11 18:52:39.8, 10°.99N×124°.62E, h269^{km}, mb5.1, ML4.0, MS4.1, Leyte

*SJA **11** 19:07:24.4±1.9, 29°.90S×72°.45W, h10^{km}, ML4.0, MW3.7, Hypocentre not reviewed by the ISC*
*IDC **11** 19:07:28.9±1.5, 29°.96S×72°.25W, h0^{km}, mb4.1/1, mbtmp3.9/6, ML3.8/5, MS3.4/2, Error ellipse: s-maj=42.0km s-min=27.2km az=77.0*
*NEIC **11** 19:07:29.3±1.8, 29°.97S±0°.05×72°.15W±0°.05, h10^{km}±1^{km}, mb4.1/3, ML4.0(GUC), Error ellipse: s-maj=8.9km s-min=6.3km az=224.0*
*GUC **11** 19:07:30.6±0.7, 29°.97S×72°.10W, h32^{km}±4^{km}, ML4.0*
ISC 11 19:07:28.7±1.6**, 29°.96S**±0°.04×**72°.14W**±0°.05**, h7**^{km}±9^{km}**, n77, σ1s01**/88**, 2C-7D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.78	87		Pg	19 07 44.2	+0.4
CO05					Sg	19 07 54.0	0.0
CO05	La Serena	0.78	87	⇓*i*P	Pg	19 07 44.3	+0.5
CO05				*i* S	Sg	19 07 53.5	-0.5
CO05				IAML		19 07 57.1	
	comp=E,8µm,0.5s						
CO06	Fray Jorge	0.84	149		Pg	19 07 45.3	+0.4
CO06					Sb	19 07 56.9	-0.2
CO06	Fray Jorge	0.84	149	⇓*i*P	Pg	19 07 45.2	+0.4
CO06				*i* S	Sg	19 07 56.1	+0.4
GO04	Tololo Observa	1.18	101		Pb	19 07 50.8	-0.8
GO04	Tololo Observa	1.18	101	⇓*i*P	Pb	19 07 50.9	-0.8
GO04				IAML		19 08 09.3	
	comp=N,7µm,0.4s						
GO04	Tololo Observa	1.18	101	*i* P		19 07 51.0	
GO04				*e*S		19 08 04.8	
CO03	El Pedregal	1.53	125		Pn	19 07 56.2	-0.4
CO03				Sn	Sn	19 08 15.4	-1.3
CO03	El Pedregal	1.53	125	⇓*i*P	Pn	19 07 56.2	-0.4
CO03				*i* S	Sb	19 08 16.4	-0.8
CO03				IAML		19 08 18.8	
	comp=E,2µm,0.4s						
CO03	El Pedregal	1.53	125	*i* P		19 07 56.2	
CO03				*e*S		19 08 16.7	
CO03				IAML		19 08 18.2	
	comp=Z,2µm,0.5s						
LCO	Las Campanas	1.57	53		Pn	19 07 57.5	+0.2
LCO	Las Campanas	1.57	53	*i* P		19 07 57.5	
LCO				*e*S		19 08 18.3	
LCO				IAML		19 08 26.0	
	comp=Z,1µm,0.9s						
CO02	Combarbal	1.58	142		Pn	19 07 57.7	+0.3
CO02	Combarbal	1.58	142	⇓*i*P	Pn	19 07 57.7	+0.3
CO02				*i* S	Sb	19 08 18.1	-0.5
CO02				IAML		19 08 24.9	
	comp=E,3µm,0.6s						
CO02	Combarbal	1.58	142	*e*P		19 07 57.6	
CO02				*e*S		19 08 17.8	
CO02				IAML		19 08 23.6	
	comp=Z,2µm,0.6s						
CO01	Juntas del Tor	1.77	91		Pn	19 08 00.3	+0.3
CO01	Juntas del Tor	1.77	91	⇑*i*P	Pn	19 08 00.7	+0.6
CO01				*i* S	Sn	19 08 22.7	-0.3
CO01				IAML		19 08 25.4	
	comp=N,926nm,0.4s						
CO01	Juntas del Tor	1.77	91	*i* P		19 08 00.0	
CO01				IAML		19 08 24.4	
	comp=Z,538nm,0.9s						
AC05	El Transito	1.97	56		Pn	19 08 03.5	+0.8
AC05	El Transito	1.97	56	⇑*i*P	Pn	19 08 03.5	+0.8
AC05				*i* S	Sn	19 08 27.1	-0.7
AC05	El Transito	1.97	56	*i* P		19 08 02.0	
AC05				⇓*e*S		19 08 31.7	
AC05				IAML		19 08 35.9	
	comp=Z,778nm,1.2s						
AC04	Llanos de Chal	1.98	28		Pn	19 08 02.8	+0.1
AC04	Llanos de Chal	1.98	28	*i* P	Pn	19 08 02.7	+0.1
AC04	Llanos de Chal	1.98	28	*i* P		19 08 02.7	
AC04				*e*S		19 08 32.8	
AC04				IAML		19 08 42.1	
	comp=Z,557nm,0.8s						
VA06	Catapilco	2.69	165	Pn	Pn	19 08 12.4	0.0
VA06	Catapilco	2.69	165	*e*P	Pn	19 08 12.7	+0.2
GO03	Copiap	2.89	36	Pn	Pn	19 08 15.7	+0.5
GO03	Copiap	2.89	36	*e*P	Pn	19 08 15.8	+0.5
GO03				IAML		19 09 11.8	
	comp=N,448nm,0.8s						
GO03	Copiap	2.89	36	*i* P		19 08 16.0	
GO03				*e*S		19 08 59.6	
RTLS	Leoncito	3.06	128	*i* P		19 08 21.0	
RTLS				*e*S		19 09 02.3	
RTLS				IAML		19 09 18.4	
	comp=Z,573nm,0.8s						
VA03	San Esteban	3.11	155		Pn	19 08 19.2	+0.9
VA03	San Esteban	3.11	155	*e*P	Pn	19 08 20.0	+1.6
VA03				*e*S	Sn	19 08 56.0	+0.2
VA03				IAML		19 09 14.3	
	comp=E,642nm,0.7s						
VA03	San Esteban	3.11	155	*i* P		19 08 19.0	
VA03				IAML		19 09 15.2	
	comp=Z,326nm,0.7s						
ROCH	El Roble	3.16	163	*e*P	Pn	19 08 19.6	+0.5
ROC1	El Roble	3.16	163		Pn	19 08 19.7	+0.6
ZON	Zonda	3.37	119		Pn	19 08 23.7	+1.8
MT02	Curacav	3.40	166		Pn	19 08 21.9	-0.3
MT02	Curacav	3.40	166	*i* P		19 08 22.0	
MT02				IAML		19 09 20.8	
	comp=Z,140nm,0.7s						
PEL	Peldehue	3.41	159		Pn	19 08 22.9	+0.5
PEL	Peldehue	3.41	159	*e*P	Pn	19 08 23.4	+1.0
PEL				IAML		19 09 27.7	
	comp=N,600nm,0.9s						
MT10	Hacienda Santa	3.58	158	*e*P	Pn	19 08 25.9	+1.1
MT10				*e*S	Sn	19 09 06.9	-0.4
MT05	Renca	3.63	161		Pn	19 08 25.9	+0.5
MT05	Renca	3.63	161	*e*S	Sn	19 09 08.6	+0.1
VA05	Santo Domingo	3.72	173	Pn	Pn	19 08 26.5	-0.1
CFA	Coronel Fontan	3.74	117	Pn	Pn	19 08 29.9	+3.0
	comp=N,7.1nm,0.3s,baz=303,slow=15,SNR=49						
CFA				Sn	Sb	19 09 17.1	-3.5
	comp=N,9.8nm,0.3s,baz=92,slow=16,SNR=4.3						
	comp=N,33nm,0.5s						
CFA	Coronel Fontan	3.74	117	*i* P		19 08 29.0	
CFA				IAML		19 09 37.5	
	comp=Z,2µm,0.6s						
MT03	Universidad Ad	3.79	159		Pn	19 08 28.0	+0.4
MT03	Universidad Ad	3.79	159	*i* P		19 08 29.0	
MT03				IAML		19 09 29.5	
	comp=Z,248nm,1.6s						
MT04	Ro Olivares	3.84	154	*e*P	Pn	19 08 30.3	+1.9
ASAL	Salagasta	3.86	134	*i* P		19 08 33.0	
ASAL				*e*S		19 09 25.0	
ASAL				IAML		19 09 37.3	
	comp=Z,125nm,1.3s						
MT08	Bocatoma Ro	3.92	153	Pn	Pn	19 08 31.1	+1.6
MT09	Talagante	3.93	166		Pn	19 08 30.5	+0.8
MT09	Talagante	3.93	166	*e*P	Pn	19 08 30.6	+1.0
MT09				*e*S	Sn	19 09 15.4	-0.7
MT01	Popeta	3.97	169		Pn	19 08 29.9	-0.2
MT01	Popeta	3.97	169	*e*P	Pn	19 08 30.2	+0.2
MT01	Popeta	3.97	169	*i* P		19 08 30.2	
MT01				IAML		19 09 43.5	
	comp=Z,108nm,0.6s						
AC01	Pan de Azucar	4.03	20	⇓*i*P		19 08 30.0	
AC01				IAML		19 09 45.2	
	comp=Z,113nm,1.4s						
AC01	Pan de Azucar	4.03	20	Pn	Pn	19 08 29.8	-1.1
AC02	Maricunga	4.09	41		Pn	19 08 32.9	+0.8
AC02	Maricunga	4.09	41	*i* P		19 08 32.0	
AC02				IAML		19 09 47.1	
	comp=Z,156nm,0.6s						
MT13	San Alfonso	4.09	158		Pn	19 08 33.0	+1.1
MT13	San Alfonso	4.09	158	*e*S	Sn	19 09 19.6	-0.4
LMEL	Las Melosas	4.21	158		Pn	19 08 34.5	+1.0
LMEL	Las Melosas	4.21	158	*e*P	Pn	19 08 35.5	+1.9
BO01	Tunca	4.51	169	Pn	Pn	19 08 37.6	+0.2
BO01	Tunca	4.51	169	*i* P		19 08 37.0	
BO01				IAML		19 09 57.8	
	comp=Z,64nm,1.2s						
BO02	Sierra Bellavi	4.96	167		Pn	19 08 43.9	+0.2
BO02	Sierra Bellavi	4.96	167	*i* P		19 08 45.0	
BO02				IAML		19 10 15.4	
	comp=Z,92nm,0.7s						
GO05	Huala	5.04	178	Pn	Pn	19 08 43.6	-1.1
GO02	Mina Guanaco	5.28	26	Pn	Pn	19 08 48.0	-0.4
GO02	Mina Guanaco	5.28	26	*i* P		19 08 48.0	
PB14	IPOC Station P	5.53	17	Pn	Pn	19 08 49.9	-1.9
H03N1	Juan Fernandez	6.74	237	Pn	Pn	19 09 08.6	+0.8
	baz=114,slow=18						
H03N1				T	T	19 16 24.5	
	baz=69,slow=72,SNR=99						
H03N2	Juan Fernandez	6.75	237	Pn	Pn	19 09 07.9	0.0
	baz=114,slow=18						
H03N2				T	T	19 16 25.0	
	baz=69,slow=72,SNR=113						
H03N3	Juan Fernandez	6.75	237	Pn	Pn	19 09 07.9	-0.2
	baz=114,slow=18						
H03N3				T	T	19 16 23.7	
	baz=69,slow=72,SNR=95						
VA04	Juan Fernndez	6.78	235	Pn	Pn	19 09 07.4	-1.2
PB15	IPOC Station P	7.13	20	Pn	Pn	19 09 12.2	-1.5
PB04	IPOC Station P	7.80	14	Pn	Pn	19 09 22.6	-0.3
LVC	Limon Verde	7.87	22	Pn	Pn	19 09 23.2	-0.7
	comp=Z,0.5nm,0.3s,baz=217,slow=5.1,SNR=2.0						
	comp=Z,2.9nm,0.7s						
PB09	IPOC Station P	8.54	18	Pn	Pn	19 09 32.2	-0.8
PB02	IPOC Station P	8.84	14	Pn	Pn	19 09 36.2	-0.8
PLCA	Paso Flores	10.83	174	Pn	Pn	19 10 03.6	-0.7
	comp=Z,0.2nm,0.3s,baz=340,slow=12,SNR=5.9						
	comp=Z,1.1nm,0.5s						
PLCA	Paso Flores	10.83	174	Pn	Pn	19 10 04.3	+0.1
TRQA	Tornquist	11.67	136	Pn	Pn	19 10 15.3	-0.3
CPUP	Villa Florida	13.56	78	LR	LR	19 16 58.1	
	comp=Z,68nm,19.9s,baz=21,slow=42						
CPUP	Villa Florida	13.56	78	Pn	Pn	19 10 42.1	+0.6
LPAZ	La Paz	14.09	16	Pn	Pn	19 10 51.0	+1.6
	comp=Z,0.2nm,0.3s,baz=190,slow=11,SNR=1.6						
	comp=Z,1.3nm,0.5s						
PLTB	Pedras Altas	16.02	101	Pn	Pn	19 11 14.0	-0.6
PLTB				IAmb	IAmb	19 11 40.6	
	comp=Z,1.2nm,0.6s						
SIV	San Ignacio	17.22	39	P	P	19 11 32.4	+1.0
	baz=220,slow=12,SNR=5.4						
	comp=Z,2.9nm,0.6s						
SNAA	Sanae	55.36	159	P	P	19 17 03.1	0.0
SNAA				IAmb	IAmb	19 17 16.1	
	comp=Z,11nm,1.4s						
TORD	Torodi Ar. Bea	82.93	71	P	P	19 19 55.5	+0.7
	comp=Z,1.1nm,0.6s,baz=256,slow=5.8,SNR=7.7						
	comp=Z,1.1nm,0.6s						
TORD	Torodi Ar. Bea	82.93	71	P	P	19 19 54.6	-0.1
TORD				IAmb	IAmb	19 19 56.4	
	comp=Z,1.4nm,0.8s						
LBTB	Lobatse	84.09	115	LR	LR	19 52 28.6	
	comp=Z,48nm,19.6s,baz=50,slow=32						
KURBB	Kurchatov Arra	149.88	38	PKPbc	PKPbc	19 27 20.9	+1.6
	comp=Z,0.3nm,0.3s,baz=309,slow=3.4,SNR=4.3						
AAK	Ala-Archa	150.48	55	PKPbc	PKPbc	19 27 22.8	+1.5
	comp=Z,0.5nm,0.8s,baz=234,slow=8.7,SNR=4.8						
ZALV	Zalesovo Beam	150.79	28	PKPbc	PKPbc	19 27 23.1	+1.8
	comp=Z,3.0nm,0.5s,baz=308,slow=3.1,SNR=16						
PZH	PanZhiHua	173.60	121	PKP	PKPdf	19 27 37.6	-1.9

TAP 11 19:36:19.8, 23°.15N×120°.78E, h6^{km}, ML0.7, 1C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STYH	Taoyuan	0.02	359	⇑*i*P	Pg	19 36 21.5	+0.5
	baz=8.0						
STYH				*i* S	Sg	19 36 22.5	+0.7
	baz=8.0						
STYT	Tauyuan	0.02	309	*e*P	Pg	19 36 21.5	+0.4
	baz=319						
STYT				*e*S	Sg	19 36 22.5	+0.5
	baz=319						
WTP	Ta-pu	0.18	303	*e*P	Pg	19 36 24.2	+0.8
	baz=304						
WTP				*e*S	Sg	19 36 27.3	+1.5
	baz=304						
SLGT	Liugui	0.20	218	*e*P	Pg	19 36 24.8	+1.1
	baz=218						
SLGT				*e*S	Sg	19 36 28.2	+1.9
	baz=218						
TPUB	Ta-pu	0.20	318	*e*P	Pg	19 36 24.8	+0.9
	baz=318						
TPUB				*e*S	Sg	19 36 28.3	+1.7
	baz=318						
CHN1	Nanshi	0.23	279	*e*P	Pg	19 36 25.4	+1.0
	baz=279						
CHN4	Tsaushan	0.26	320	*e*P	Pb	19 36 26.6	-0.3
	baz=320						

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*MOS **11** 19:57:45.2±0.9, 37°.58N×141°.50E, h35^{km}, mb5.8/118, MS5.0/25, Error ellipse: s-maj=5.4km s-min=3.3km az=106.5*
*BJI **11** 19:57:45.5±0.0, 37°.55N×141°.48E, h52^{km}, mb5.3/85, mB5.1/62, Ms4.9/91, Ms7 4.8/85*
*NEIC **11** 19:57:46.5, 37°.53N×141°.57E, h50^{km}*
*NEIC **11** 19:57:46.5, 37°.63N×141°.32E, h50^{km}, Moment Tensor Solution. Duration: 2s3 Moment tensor: Scale 10^{16}Nm; M_{rr}7.43; $M_{\theta\theta}$-0.03; $M_{\phi\phi}$-7.40; $M_{r\theta}$2.22; $M_{\theta\phi}$-1.54; $M_{\phi r}$5.98; Fault plane solution: $M_0$9.90000×10^{16} NP1:ϕ_s17.24000°, δ65.12000°, λ95.15000°. NP2:ϕ_s185.15000°, δ25.38000°, λ79.04000°. Principal axes: T 9.8023, Plg69.0000°, Azm298.0000°; N 0.1987, Plg5.0000°, Azm195.0000°; P -10.0010, Plg20.0000°, Azm103.0000°;*
*JMA **11** 19:57:47.6±0.1, 37°.5N±0°.3×141°.5E±0°.7, h46^{km}±1^{km}, MD5.4/40, MW5.3/40, E OFF FUKUSHIMA PREF*
JMA Felt IV J1 at E OFF FUKUSHIMA PREF .
*NIED **11** 19:57:47.6, 37°.51N×141°.54E, h46^{km}, MW5.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}5.38; $M_{\theta\theta}$0.65; $M_{\phi\phi}$-6.03; $M_{r\theta}$3.16; $M_{\theta\phi}$-1.73; $M_{\phi r}$6.76; Fault plane solution: $M_0$9.54000×10^{16} NP1:ϕ_s23.00000°, δ71.00000°, λ97.00000°. NP2:ϕ_s181.00000°, δ20.00000°,*

λ69.00000°.

NEIC ***11*** *19:57:48.1±1.5, 37°.53N±0°.05×141°.51E±0°.07, h44km±4km, mb5.5/288, Mwr5.2/28, Mww5.3/28 Error ellipse: s-maj=8.4km s-min=6.8km az=72.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}2.85; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$-2.77; $M_{r\theta}$2.10; $M_{\theta\phi}$-1.02; $M_{\phi r}$6.50; Fault plane solution: $M_0$7.46000×10^{16} NP1:ϕ_s199.48000°, δ11.80000°, λ91.50000°. NP2:ϕ_s17.94000°, δ78.21000°, λ89.69000°. Principal axes: T 7.3257, Plg57.0000°, Azm288.0000°; N 0.2617, Plg0.0000°, Azm18.0000°; P -7.5874, Plg33.0000°, Azm108.0000°;*

IDC ***11*** *19:57:48.8±1.3, 37°.59N×141°.41E, h54km±11km, mb5.0/45, mbtmp5.2/53, MS4.5/89 Error ellipse: s-maj=10.1km s-min=8.4km az=109.0*

NEIC ***11*** *19:57:48.4, 37°.54N×141°.47E, h46km*

GCMT ***11*** *19:57:50.1±0.1, 37°.56N±0°.01×141°.62E±0°.01, h48km, MW5.3/142, Moment Tensor Solution. s107,c180; s142,c260; Duration: $1^{s}2$ Moment tensor: Scale 10^{17} Nm; M_{rr}1.14±.02; $M_{\theta\theta}$-0.16±.01; $M_{\phi\phi}$-0.97±.02; $M_{r\theta}$0.35±.01; $M_{\theta\phi}$-0.28±.01; $M_{\phi r}$0.69±.01; Best double couple: $M_0$1.34500×10^{17} NP1:ϕ_s23.00000°, δ62.00000°, λ95.00000°. NP2:ϕ_s193.00000°, δ28.00000°, λ81.00000°. Principal axes: T 1.3870, Plg72.0000°, Azm303.0000°; N -0.0840, Plg4.0000°, Azm200.0000°; P -1.3030, Plg17.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***11*** *19:57:51.1, 38°.08N×142°.43E, h51km±1km, mb5.6, Ms4.9*

ISC 11 19:57:47.8±0.2**, 37°.51N**±0°.02×**141°.52E**±0°.03**, h48km**±1km**, h48km:pP-P, n1786,** $\sigma 1^{s}44$/1802**, mb5.5**/412**, MS4.7**/134**, 144C-60D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.53	255	⇓P	Pn	19 57 59.2	-0.1
JFK				⇓S	Sn	19 58 07.1	-0.5
JFK	Kawauchi	0.53	255	A	A	19 57 59.2	
	comp=E,404nm,1.1s,comp=E,385nm,3.3s						
JMST	Minamisoumatoc	0.55	294	⇓iP	Pn	19 57 59.3	-0.1
JMST				⇓S	Sn	19 58 07.4	-0.4
JMST	Minamisoumatoc	0.55	294	A	A	19 57 59.3	
	comp=E,264nm,3.3s,comp=E,126nm,2.9s						
JMM	Marumori	0.68	302		Pn	19 58 01.3	+0.1
JMM				Sn	Sn	19 58 10.6	-0.2
JMM	Marumori	0.68	302	P	Pn	19 58 01.4	+0.3
JMM	Marumori	0.68	302	⇓iP	Pn	19 58 01.3	+0.1
JMM				⇓S	Sn	19 58 10.7	-0.2
JMM	Marumori	0.68	302	A	A	19 58 01.3	
	comp=E,390nm,0.5s,comp=E,166nm,0.5s						
ONAJ	Iwakimizuishiy	0.70	235	⇓iP	Pn	19 58 01.4	-0.1
ONAJ				⇓S	Sn	19 58 11.0	-0.4
ONAJ	Iwakimizuishiy	0.70	235	A	A	19 58 01.4	
	comp=E,749nm,0.4s,comp=E,459nm,0.5s						
JIKH	Ishinomakikobu	0.80	357	⇓iP	Pn	19 58 02.5	-0.2
JIKH				⇓S	Sn	19 58 12.7	-1.0
JIKH	Ishinomakikobu	0.80	357	A	A	19 58 02.5	
	comp=E,328nm,1.4s,comp=E,112nm,2.8s						
JFFD	Fukushimafurud	0.87	242	A	A	19 58 03.9	
	comp=E,220nm,1.4s,comp=E,172nm,1.6s						
JOTO	OTAMA OYAMA	0.94	274	i P	Pn	19 58 05.5	+0.8
JOTO				S	Sn	19 58 18.1	+1.0
JOTO	OTAMA OYAMA	0.94	274	A	A	19 58 05.5	
	comp=E,276nm,1.2s,comp=E,389nm,1.3s						
JIO	Ouri	0.95	352	⇓iP	Pn	19 58 04.8	-0.1
JIO				⇓S	Sn	19 58 16.4	-1.0
JIO	Ouri	0.95	352	A	A	19 58 04.8	
	comp=E,254nm,1.6s,comp=E,58nm,1.2s						
JOU	Okura	1.09	322	⇓iP	Pn	19 58 06.9	+0.2
JOU	Okura	1.09	322	A	A	19 58 06.9	
	comp=E,235nm,1.4s,comp=E,297nm,3.4s						
JYAR	Yonezawaarcadi	1.16	291	A	A	19 58 08.0	
	comp=E,239nm,1.2s,comp=E,220nm,1.0s						
JHO	Hitachi	1.17	221	A	A	19 58 08.2	
	comp=E,33nm,1.8s,comp=E,105nm,4.2s						
JOFO	Osakifurukawao	1.19	336	A	A	19 58 08.3	
	comp=E,687nm,4.2s,comp=E,525nm,3.2s						
JKMT	Kesennumamotoy	1.30	358	A	A	19 58 09.8	
	comp=E,73nm,1.5s,comp=E,46nm,1.5s						
JYS	Shirataka	1.35	302	i P	Pn	19 58 10.8	+0.6
JYS	Shirataka	1.35	302	A	A	19 58 10.8	
	comp=E,157nm,2.0s,comp=E,137nm,2.1s						
JHYU	Hitachinakayam	1.38	213	A	A	19 58 11.2	
	comp=E,60nm,2.4s,comp=E,57nm,0.7s						
JSB	Shiboa	1.39	248	A	A	19 58 11.3	
	comp=E,180nm,2.0s,comp=E,199nm,2.9s						
JFY	Yanaizu	1.45	267	⇓iP	Pn	19 58 12.2	+0.6
JFY	Yanaizu	1.45	267	A	A	19 58 12.2	
	comp=E,58nm,3.4s,comp=E,61nm,3.5s						
JMK	Ichinoseki	1.46	351	⇓iP	Pn	19 58 12.0	+0.3
JMK				⇓S	Sn	19 58 30.2	+0.5
JMK	Ichinoseki	1.46	351	A	A	19 58 12.0	
	comp=E,154nm,1.5s,comp=E,68nm,0.9s						
OFUJ	Ofunato	1.57	4	A	A	19 58 13.7	
	comp=E,61nm,2.9s,comp=E,30nm,0.9s						
JYT	Yasato	1.66	220	A	A	19 58 15.2	
	comp=E,91nm,0.4s,comp=E,89nm,0.3s						
JYK	Kaneyama	1.68	327	⇓iP	Pn	19 58 15.3	+0.6
JYK	Kaneyama	1.68	327	A	A	19 58 15.3	
	comp=E,58nm,5.0s,comp=E,59nm,1.1s						
JIHU	Itakohorinouch	1.73	208	A	A	19 58 16.2	
	comp=E,236nm,2.1s,comp=E,181nm,1.3s						
JNS	Sasagawa	1.77	281	A	A	19 58 16.9	
	comp=E,40nm,3.6s,comp=E,38nm,4.3s						
JYA	Atsumi	1.79	308	A	A	19 58 17.1	
	comp=E,66nm,3.4s,comp=E,54nm,3.4s						
CHOJ	Chosi	1.88	197	A	A	19 58 18.2	
	comp=E,47nm,1.7s,comp=E,56nm,2.1s						
JYYZ	Yamagatayuza	1.96	321	A	A	19 58 19.4	
	comp=E,157nm,2.5s,comp=E,185nm,3.5s						
JKT	Katashina	1.96	249	A	A	19 58 19.5	
	comp=E,29nm,3.1s,comp=E,45nm,3.2s						
JOM	Ohasama	1.97	355	A	A	19 58 19.4	
	comp=E,64nm,4.0s,comp=E,34nm,2.0s						
JAG	Ashikaga	1.98	237	A	A	19 58 19.8	
	comp=E,28nm,4.7s,comp=E,34nm,4.5s						
JUON	Uonuma	1.98	262	A	A	19 58 19.9	
	comp=E,27nm,0.9s,comp=E,47nm,1.9s						
JRG	Rokugo	2.01	340	A	A	19 58 20.1	
	comp=E,60nm,1.3s,comp=E,54nm,1.6s						
JAW	Awa shima	2.03	299	A	A	19 58 20.5	
	comp=E,43nm,3.2s,comp=E,33nm,3.6s						
JSMT	Sammumatsuo	2.05	205	A	A	19 58 20.8	
	comp=E,139nm,2.1s,comp=E,96nm,3.5s						
MIYJ	Miyakonagasawa	2.08	6	A	A	19 58 20.9	
	comp=E,52nm,3.1s,comp=E,25nm,1.4s						
JIZZ	Izumozaki	2.23	271	A	A	19 58 23.5	
	comp=E,109nm,2.0s,comp=E,92nm,2.7s						
JSZI	Iwateshizukuis	2.27	349	A	A	19 58 24.2	
	comp=E,67nm,2.8s,comp=E,116nm,1.3s						
JYW	Yuwa	2.28	334	A	A	19 58 23.9	
	comp=E,162nm,1.3s,comp=E,131nm,1.6s						
JTB	Tobi-shima	2.29	318	A	A	19 58 24.1	
	comp=E,25nm,3.1s,comp=E,38nm,3.9s						
TOK	Tokyo	2.30	218	A	A	19 58 24.4	
	comp=E,117nm,1.1s,comp=E,141nm,1.2s						
JCN	Nagara	2.34	207	A	A	19 58 24.9	
	comp=E,130nm,1.9s,comp=E,140nm,2.4s						
I30JP	ISUMI INFRASON	2.40	204	P	Pn	19 58 28.8	+4.3
	baz=36,slow=17,SNR=1.3						
JHU	Hanno	2.44	228	A	A	19 58 26.4	
	comp=E,35nm,2.8s,comp=E,26nm,2.0s						
JTH	Tanohata	2.44	6	A	A	19 58 26.1	
	comp=E,44nm,2.5s,comp=E,27nm,1.2s						
JKZ	Kuzumaki	2.48	357	A	A	19 58 26.6	
	comp=E,52nm,2.7s,comp=E,70nm,1.6s						
JGK	Kuni	2.49	249	A	A	19 58 27.1	
	comp=E,48nm,3.9s,comp=E,75nm,3.5s						
JKUC	kamogawauchiur	2.57	205	A	A	19 58 28.2	
	comp=E,57nm,4.1s,comp=E,60nm,1.9s						
JRY	Ryogami san	2.58	236	A	A	19 58 28.3	
	comp=E,22nm,1.8s,comp=E,35nm,3.2s						
JSD	Sado	2.64	283	Pn	Pn	19 58 28.1	+0.3
JSD	Sado	2.64	283	P	Pn	19 58 28.2	+0.4
JSD	Sado	2.64	283	A	A	19 58 29.2	
	comp=E,15nm,4.4s,comp=E,11nm,3.6s						
JSGW	Sagamiharawaka	2.66	225	A	A	19 58 29.5	
	comp=E,57nm,1.7s,comp=E,30nm,1.5s						
JKEN	Kujiedanarisaw	2.70	3	A	A	19 58 29.7	
	comp=E,169nm,1.1s,comp=E,118nm,1.0s						
JJN	Nakama	2.71	262	A	A	19 58 30.2	
	comp=E,33nm,3.2s,comp=E,49nm,1.9s						
JYO	Yokosk	2.73	214	A	A	19 58 30.4	
	comp=E,74nm,3.4s,comp=E,77nm,0.9s						
JAH	Hinai	2.77	346	A	A	19 58 30.8	
	comp=E,112nm,1.6s,comp=E,47nm,1.3s						
TATJ	Tateyama 2	2.80	209	A	A	19 58 31.4	
	comp=E,136nm,1.8s,comp=E,268nm,2.0s						
MJAR	Matsushiro Arr	2.82	251	P	Pn	19 58 31.3	+0.9
	528nm,0.8s,baz=74,slow=14,SNR=1462						
MJAR				S	Sn	19 59 08.1	+5.0
	606nm,0.9s,baz=80,slow=27,SNR=6.3						
MJAR				LR	LR	19 59 55.7	
	comp=Z,21µm,20.2s,baz=42,slow=46						
MAJO	Matsushiro	2.82	251	Pn	Pn	19 58 32.0	+1.6
MAJO	Matsushiro	2.82	251	P	Pn	19 58 32.1	+1.8
MAJO	Matsushiro	2.82	251	d iP	Pn	19 58 32.1	+1.8
MJB9	Matsu-Tunnel	2.82	251	Pn	Pn	19 58 33.0	+2.6
JANG	Nango	2.86	360	A	A	19 58 32.1	
	comp=E,37nm,1.7s,comp=E,32nm,3.2s						
JNG	Nsakai	2.95	249	A	A	19 58 33.6	
	comp=E,14nm,3.1s,comp=E,38nm,5.1s						
JNTW	Noshirotokiwa	2.96	339	A	A	19 58 33.5	
	comp=E,258nm,4.3s,comp=E,151nm,3.2s						
JOD2	Odawara 2	2.98	222	A	A	19 58 34.0	
	comp=E,39nm,4.4s,comp=E,71nm,2.1s						
JOG3	Oga3	3.07	322	A	A	19 58 30.7	
	comp=E,42nm,2.1s,comp=E,53nm,4.0s						
JYN	Shimob	3.12	231	A	A	19 58 36.1	
	comp=E,83nm,2.1s,comp=E,64nm,1.6s						
JNT	Takato	3.17	240	A	A	19 58 36.8	
	comp=E,20nm,3.9s,comp=E,21nm,1.3s						
JFNN	Fujinakano	3.25	226	A	A	19 58 37.8	
	comp=E,75nm,2.2s,comp=E,49nm,2.3s						
JHTM	Izuhatsuma	3.25	219	A	A	19 58 37.9	
	comp=E,63nm,1.0s,comp=E,59nm,0.7s						
JIM2	Oshima 3	3.26	212	A	A	19 58 37.9	
	comp=E,47nm,0.8s,comp=E,40nm,2.0s						
JHHS	Hirosakihyakuz	3.27	344	A	A	19 58 37.9	
	comp=E,100nm,4.8s,comp=E,73nm,6.2s						
JTM	Tenmabayashi	3.29	354	Pn	Pn	19 58 38.0	+1.2
JTM	Tenmabayashi	3.29	354	P	Pn	19 58 38.6	+1.8
JTM	Tenmabayashi	3.29	354	A	A	19 58 38.2	
	comp=E,55nm,4.1s,comp=E,23nm,3.2s						
JIW	Iwasaki	3.30	340	A	A	19 58 38.4	
	comp=E,39nm,3.8s,comp=E,22nm,2.3s						
JSZ	Suzu	3.31	270	A	A	19 58 38.7	
	comp=E,11nm,8.0s,comp=E,13nm,3.5s						
JTT	Ttatey	3.47	256	A	A	19 58 41.0	
	comp=E,22nm,2.6s,comp=E,33nm,2.3s						
JTHY	Toshimahigashi	3.48	212	A	A	19 58 41.1	
	comp=E,31nm,4.1s,comp=E,32nm,1.9s						
JARK	Aomorirokkasho	3.50	358	A	A	19 58 41.0	
	comp=E,38nm,1.4s,comp=E,29nm,1.3s						
JIZS	Izushimoda	3.51	218	A	A	19 58 41.5	
	comp=E,19nm,1.7s,comp=E,19nm,1.9s						
JGN	Niukaw	3.61	250	A	A	19 58 42.9	
	comp=E,10.0nm,7.6s,comp=E,12nm,6.0s						
SHZ3	Shizuoka 3	3.62	229	A	A	19 58 43.0	
	comp=E,29nm,1.9s,comp=E,31nm,1.8s						
JNIO	Niijimaoohara	3.63	211	A	A	19 58 43.2	
	comp=E,39nm,2.3s,comp=E,39nm,1.9s						
JNY	Yasuok	3.65	235	A	A	19 58 43.4	
	comp=E,33nm,2.8s,comp=E,38nm,1.5s						
JSI2	Shiura 2	3.65	347	A	A	19 58 43.3	
	comp=E,25nm,1.3s,comp=E,23nm,1.1s						
JHG	Hegura jima	3.67	277	A	A	19 58 43.7	
	comp=E,10.0nm,6.7s,comp=E,9.0nm,3.5s						
JSKK	Shikinejimakit	3.68	211	A	A	19 58 43.8	
	comp=E,29nm,1.9s,comp=E,13nm,3.9s						
JAHD	Aomorihigashid	3.76	358	A	A	19 58 44.7	
	comp=E,110nm,1.6s,comp=E,108nm,1.6s						
JMYK	Miyake Tsubota	3.79	206	A	A	19 58 45.5	
	comp=E,21nm,3.2s,comp=E,18nm,2.5s						
JJH	Hakui	3.83	263	A	A	19 58 46.0	
	comp=E,9.0nm,4.2s,comp=E,15nm,2.6s						
JKO	Kozu shima	3.84	211	A	A	19 58 46.1	
	comp=E,31nm,3.0s,comp=E,23nm,2.4s						
JGF	Kuroka	3.85	242	Pn	Pn	19 58 46.7	+2.2
JGF	Kuroka	3.85	242	P	Pn	19 58 47.2	+2.6
JGF	Kuroka	3.85	242	A	A	19 58 46.4	
	comp=E,16nm,2.4s,comp=E,19nm,2.8s						
JOT	Ohata	3.89	355	A	A	19 58 46.6	
	comp=E,24nm,4.7s,comp=E,20nm,2.8s						
JSG	Sagara	3.91	225		Pn	19 58 46.8	+1.6
JSG	Sagara	3.91	225	P	Pn	19 58 49.8	+4.5
JSG	Sagara	3.91	225	A	A	19 58 47.1	
	comp=E,31nm,1.5s,comp=E,32nm,2.7s						
JMKN	Mikurajimanish	3.93	204	A	A	19 58 47.4	
	comp=E,13nm,3.6s,comp=E,11nm,3.8s						
JKKS	Kakegawashinom	3.97	227	A	A	19 58 48.0	
	comp=E,36nm,2.4s,comp=E,24nm,2.0s						
HMMJ	Hamamatsu 2	4.05	230	A	A	19 58 49.2	
	comp=E,10.0nm,1.9s,comp=E,9.0nm,1.8s						
JAO	Obara	4.10	238	A	A	19 58 49.9	
	comp=E,22nm,3.5s,comp=E,20nm,2.4s						
JSR	Shiriuchi	4.11	348	A	A	19 58 49.7	
	comp=E,25nm,2.2s,comp=E,25nm,2.4s						
JSSY	Shinshiroyabe	4.15	233	A	A	19 58 50.5	
	comp=E,10.0nm,5.4s,comp=E,8.0nm,4.1s						
JOMM	Oshimamatsumae	4.18	344	A	A	19 58 50.7	
	comp=E,13nm,4.2s,comp=E,12nm,3.6s						
INU	Inuyama	4.22	241	Pn	Pn	19 58 51.0	+1.4
INU	Inuyama	4.22	241	P	Pn	19 58 51.8	+2.2
JYTA	Yamagatataniai	4.30	245	A	A	19 58 52.6	
	comp=E,9.0nm,5.7s,comp=E,16nm,2.3s						
JKG	Kaga	4.34	255	A	A	19 58 53.2	
	comp=E,8.0nm,4.8s,comp=E,11nm,4.6s						
JICN	Ichinomiyachia	4.37	241	A	A	19 58 53.6	
	comp=E,27nm,2.0s,comp=E,32nm,2.2s						
JKB	Kayabe	4.39	355	A	A	19 58 53.7	
	comp=E,26nm,2.2s,comp=E,24nm,1.3s						
JAA	Atsumi	4.56	232	A	A	19 58 56.3	
	comp=E,9.0nm,3.5s,comp=E,13nm,3.9s						
JHJ2	Mitsune	4.60	198	Pn	Pn	19 58 55.2	+0.5
JHJ2	Mitsune	4.60	198	P	Pn	19 58 56.3	+1.5
JHJ	Hachijo jima 2	4.60	198	P	Pn	19 58 55.5	+0.7
	569nm,0.3s,baz=26,slow=18,SNR=54						
JHJ				S	Sn	19 59 46.2	-0.8
	1µm,0.5s,baz=64,slow=17,SNR=3.9						
JHJ				LR	LR	20 01 07.9	
	comp=Z,4µm,19.9s,baz=30,slow=43						
JHCJ	Hachijojimakas	4.64	198	A	A	19 58 57.4	
	comp=E,11nm,3.4s,comp=E,10.0nm,3.6s						
ERM	Erimo	4.68	15	Pn	Pn	19 58 55.2	-0.5
ERM	Erimo	4.68	15	P	Pn	19 58 57.0	+1.2
ERM	Erimo	4.68	15	ceP	Pn	19 58 55.4	-0.4
ERM				pmax	pmax		
	comp=Z,177nm,1.3s						
JEM	Erimo	4.68	15	P	Pn	19 58 56.9	+1.1
JEM	Erimo	4.68	15	A	A	19 58 57.6	
	comp=Z,11nm,3.9s,comp=Z,14nm,4.0s						
JYM2	Yakumo 2	4.69	349	A	A	19 58 57.9	
	comp=Z,19nm,1.9s,comp=Z,29nm,1.9s						
JEG	Eigenji	4.77	242	A	A	19 58 59.2	
	comp=Z,5.0nm,4.0s,comp=Z,10.0nm,2.4s						
JOSM	Okushiri--Mats	4.83	342	A	A	19 58 59.9	
	comp=Z,13nm,4.6s,comp=Z,9.0nm,5.2s						
JNBK	Urakawa-nobuka	4.86	11	A	A	19 59 00.2	
	comp=Z,24nm,1.0s,comp=Z,22nm,1.5s						
JFM	Mihama	4.88	248	A	A	19 59 00.7	
	comp=Z,10.0nm,2.9s,comp=Z,11nm,4.5s						
JSHD	Hidakashinhida	4.95	8	A	A	19 59 01.4	
	comp=Z,25nm,1.4s,comp=Z,39nm,1.5s						
JNB	Noboribetsu	4.97	356	A	A	19 59 01.8	
	comp=Z,11nm,3.3s,comp=Z,7.0nm,2.8s						
JTHR	Tokachihiroo	4.97	15	A	A	19 59 01.6	
	comp=Z,13nm,3.3s,comp=Z,13nm,1.5s						
JIE	Ise	4.99	233	A	A	19 59 02.3	
	comp=Z,9.0nm,5.7s,comp=Z,11nm,5.1s						
JHST	Hiyamasetana	5.07	346	A	A	19 59 03.2	
	comp=Z,16nm,2.5s,comp=Z,13nm,6.9s						
JIAM	Iburiatsuma	5.12	3	A	A	19 59 03.8	
	comp=Z,33nm,1.2s,comp=Z,29nm,1.1s						
JSH	Shimam	5.25	348	A	A	19 59 05.8	
	comp=Z,7.0nm,2.9s,comp=Z,6.0nm,2.5s						
JCH	Churui	5.29	15	A	A	19 59 06.2	
	comp=Z,16nm,2.6s,comp=Z,14nm,3.1s						
JBT2	Biratori 2	5.30	7	A	A	19 59 06.4	
	comp=Z,15nm,1.6s,comp=Z,16nm,1.7s						
JEW	Eniwo	5.33	359	A	A	19 59 06.7	
	comp=Z,16nm,3.3s,comp=Z,15nm,4.2s						
JKY	Yasaka	5.49	252	A	A	19 59 09.4	
	comp=Z,7.0nm,2.8s,comp=Z,10.0nm,5.8s						
JHE	Heguri	5.52	241	A	A	19 59 09.7	
	comp=Z,6.0nm,5.6s,comp=Z,6.0nm,2.3s						
JOB	Onbets	5.67	17	A	A	19 59 11.5	
	comp=Z,21nm,2.6s,comp=Z,41nm,1.7s						
JFR	Furan	5.71	8	A	A	19 59 12.0	
	comp=Z,11nm,1.3s,comp=Z,8.0nm,1.0s						
JISS	Ishikarishitsu	5.76	359	A	A	19 59 12.8	
	comp=Z,15nm,3.8s,comp=Z,18nm,2.5s						
JKSM	Kasumi	5.84	253	A	A	19 59 14.2	
	comp=Z,3.0nm,2.6s,comp=Z,5.0nm,3.1s						
JMIK	Miki	5.88	245	A	A	19 59 14.8	
	comp=Z,7.0nm,2.3s,comp=Z,8.0nm,4.3s						
JSK	Shakotan	5.89	353	A	A	19 59 14.7	
	comp=Z,8.0nm,2.2s,comp=Z,7.0nm,1.8s						
JAK	Akkeshi	6.00	23	A	A	19 59 16.0	
	comp=Z,19nm,2.5s,comp=Z,14nm,2.6s						
JAB	Ashibetsu	6.01	5	A	A	19 59 16.3	
	comp=Z,21nm,1.4s,comp=Z,22nm,3.1s						
JAR	Ashorobuto	6.03	16	A	A	19 59 16.5	
	comp=Z,11nm,3.0s,comp=Z,9.0nm,1.5s						
JAWN	Awajishima-nag	6.15	243	A	A	19 59 18.6	
	comp=Z,5.0nm,6.1s,comp=Z,8.0nm,3.8s						
JHR	Hokuryu	6.23	1	A	A	19 59 19.4	
	comp=Z,10.0nm,3.1s,comp=Z,11nm,4.3s						
ASAJ	Asahikawa	6.65	7	P	Pn	19 59 22.2	-0.7
	comp=Z,27nm,0.3s,baz=221,slow=11,SNR=81						
ASAJ				S	Sn	20 00 37.2	-0.2
	comp=Z,199nm,0.8s,baz=267,slow=27,SNR=1.6						
JKA	Kamikawa-asahi	6.65	7		Pn	19 59 21.7	-1.2
NMR	Nemuro--Hokkai	6.68	27	⇓iP	Pn	19 59 20.4	-2.8
NMR				eS	Sn	20 00 30.8	-7.1
RUSJ	Misakicho	7.17	22	eP	Pn	19 59 28.7	-1.3
RUSJ				eS	Sn	20 00 46.7	-3.3
JHS	Saijyo	7.24	252		Pn	19 59 31.9	+0.9
JHS	Saijyo	7.24	252	P	Pn	19 59 34.5	+3.6
JMN	Monobe	7.27	241		Pn	19 59 32.6	+1.1
JMN	Monobe	7.27	241	P	Pn	19 59 34.1	+2.6
YUK	Yuzh-Kuril'sk	7.30	25	eP	Pn	19 59 30.9	-0.9
YUK				eS	Sn	20 00 47.1	-6.2
YUK				pmax	pmax		
	comp=Z,521nm,0.4s						
YUK				pmax	pmax		
	comp=E,162nm,0.3s						
YUK				pmax	pmax		
	comp=N,109nm,0.2s						
SHO	Shikotan	7.53	31	c iP	Pn	19 59 32.5	-2.3
SHO				eS	Sn	20 00 50.4	-8.4
SHO				pmax	pmax		
	comp=Z,130nm,0.5s						
SHO				pmax	pmax		
	comp=N,70nm,0.6s						
SHO				pmax	pmax		
	comp=E,55nm,0.3s						
TEY	Ternei	8.38	335	⇑eP	Pn	19 59 49.3	+2.8
TEY				e		20 01 27.3	
TEY				pmax	pmax		
	comp=N,20nm,0.8s						
TEY				pmax	pmax		
	comp=Z,40nm,0.8s						
KUR	Kuril'sk	9.07	30	eP	Pn	19 59 55.2	-0.8
KUR				i S	Sn	20 01 30.9	-5.7
KUR				pmax	pmax		
	comp=Z,196nm,0.9s						
KUR				pmax	pmax		
	comp=N,103nm,0.3s						
KUR				pmax	pmax		
	comp=E,63nm,0.3s						
KUR				smax	smax		
	comp=E,737nm,0.6s						
KUR				smax	smax		
	comp=N,468nm,0.5s						
YSS	Yuzh-Sakhalins	9.48	5		Pn	20 00 01.6	0.0
YSS	Yuzh-Sakhalins	9.48	5	P	Pn	20 00 00.9	-0.7
YSS	Yuzh-Sakhalins	9.48	5	eP	Pn	20 00 00.7	-0.9
YSS				eS	Sn	20 01 43.2	-3.6
YSS				pmax	pmax		
	comp=Z,400nm,3.9s						
YSS				pmax	pmax		
	comp=Z,130nm,1.1s						
YSS				MLR	MLR		
	comp=N,1µm,16.0s						
YSS				MLR	MLR		
	comp=Z,1µm,16.0s						
YSS				MLR	MLR		
	comp=E,900nm,14.0s						
JNU	Nakatsue	9.73	246	P	Pn	20 00 07.4	+2.2
	comp=E,113nm,0.8s,baz=60,slow=5.1,SNR=52						
JNU				LR	LR	20 04 16.2	
	comp=E,6µm,20.0s,baz=61,slow=40						
JNU	Nakatsue	9.73	246		Pn	20 00 06.6	+1.5
JNU	Nakatsue	9.73	246	P	Pn	20 00 07.8	+2.6
USA0B	Ussuriysk Arra	9.84	316		Pn	20 00 08.0	+1.6
USA0B	Ussuriysk Arra	9.84	316	c iP	Pn	20 00 08.2	+1.8
USRK	Ussuriysk Ar.	9.84	316	P	Pn	20 00 07.4	+1.0
	comp=E,113nm,1.0s,baz=128,slow=11,SNR=88						
USRK				LR	LR	20 03 41.8	
	comp=E,6µm,18.9s,baz=126,slow=36						
USRK	Ussuriysk Ar.	9.84	316	Pn	Pn	20 00 07.6	+1.2
USRK	Ussuriysk Ar.	9.84	316	P	Pn	20 00 07.6	+1.2
JTU	Tsushima	10.26	257		Pn	20 00 13.4	+1.2
JTU	Tsushima	10.26	257	P	Pn	20 00 16.2	+3.9
JCJ	Chichijima	10.40	177	P	Pn	20 00 13.5	-0.7
	comp=E,220nm,0.5s,baz=88,slow=19,SNR=29						
JCJ				S	Sn	20 02 01.5	-7.9
	comp=E,312nm,0.6s,baz=272,slow=22,SNR=2.8						
JCJ	Chichijima	10.40	177		Pn	20 00 11.9	-2.4
JCJ	Chichijima	10.40	177	P	Pn	20 00 16.3	+2.1
KSRS	Korea Array	10.81	274	P	Pn	20 00 23.0	+3.2
	comp=E,98nm,0.8s,baz=90,slow=13,SNR=153						
KSRS				LR	LR	20 04 23.4	
	comp=E,4µm,18.9s,baz=85,slow=37						
KSRS				PcP	PcP	20 06 18.4	+0.8
	comp=E,2.5nm,0.8s,baz=148,slow=0.4,SNR=4.6						
KSAR	Wonju Array Be	10.84	274		Pn	20 00 21.6	+1.4
KSAR	Wonju Array Be	10.84	274	P	Pn	20 00 21.6	+1.4
KS19	Wonju Array Si	10.85	274		Pn	20 00 20.9	+0.5
JSU	Suzuyama	10.91	240	Pn	Pn	20 00 22.9	+1.6
JSU	Suzuyama	10.91	240	P	Pn	20 00 25.2	+3.9
TJN	Taejon	11.39	269		Pn	20 00 27.6	-0.1
TJN	Taejon	11.39	269	P	Pn	20 00 29.4	+1.7
TJN	Taejon	11.39	269	c iP	Pn	20 00 31.7	+4.0
MDJ	Mudanjiang	11.46	312	P	Pn	20 00 32.0	+3.3
MDJ				sP		20 00 46.1	
MDJ				S	Sn	20 02 41.2	+6.0
MDJ				ScS	ScS	20 13 13.7	-8.6
MDJ				pmax	pmax		
	comp=E,160nm,1.4s						
MDJ				pmax	pmax		
	comp=E,890nm,3.9s						
MDJ				LR	LR		
	comp=E,3µm,17.6s						
MDJ				LR	LR		
	comp=E,4µm,19.0s						
MDJ				LR	LR		
	comp=E,6µm,20.1s						
MDJ	Mudanjiang	11.46	312		Pn	20 00 30.1	+1.5
MDJ	Mudanjiang	11.46	312	P	Pn	20 00 29.9	+1.2
UGL	Uglegorsk	11.57	2	eP	Pn	20 00 30.1	-0.1
UGL				S	Sn	20 02 29.3	-8.5
UGL				pmax	pmax		
	comp=Z,38nm,0.8s						
UGL				MLR	MLR		
	comp=Z,2µm,15.0s						
UGL				MLR	MLR		
	comp=N,1µm,14.0s						
UGL				MLR	MLR		
	comp=E,2µm,14.0s						
INCN	Inchon	11.83	274	P	Pn	20 00 36.9	+3.1
BNX	BinXian	13.37	312	⇓P	Pn	20 00 54.5	-0.2
BNX				pP	P	20 01 02.8	-0.2
BNX				PP	PnPn	20 01 05.5	+2.8
BNX				sP		20 01 08.2	
BNX				S	Sn	20 03 21.1	-0.7
BNX				sS	S	20 03 31.9	-12
BNX				pmax	pmax		
	comp=E,12nm,1.1s						
BNX				pmax	pmax		
	comp=E,360nm,5.2s						
BNX				LR	LR		
	comp=E,2µm,16.3s						
BNX				LR	LR		
	comp=E,3µm,16.8s						
BNX				LR	LR		
	comp=E,4µm,18.4s						
TYV	Tymovskoe	13.38	3	eP	Pn	20 00 53.3	-1.5
TYV				eS	Sn	20 03 20.1	-1.8
TYV				pmax	pmax		
	comp=Z,100nm,1.5s						
TYV				pmax	pmax		
	comp=Z,54nm,1.4s						
TYV				smax	smax		

	comp=N,300nm,4.2s						
TYV				smax	smax		
	comp=E,300nm,4.2s						
TYV				MLR	MLR		
	comp=Z,2µm,16.0s						
KLR	**Kul'dur**	**13.69**	**332**	P	**Pn**	**20 00 58.2**	**-0.9**
	comp=Z,6.2nm,0.6s,baz=132,slow=12,SNR=21						
KLR				LR	LR	20 06 15.4	
	comp=Z,3µm,18.2s,baz=145,slow=37						
KLR	**Kul'dur**	**13.69**	**332**	*ce*P	**Pn**	**20 00 58.7**	**-0.4**
KLR				pmax	pmax		
	comp=Z,29nm,1.7s						
CN2	**Changchun**	**13.72**	**302**	*e*P	**Pn**	**20 00 59.8**	**+0.3**
CN2				*e*sP	P	20 01 15.0	+8.1
CN2				*e*S	**Sn**	**20 03 30.3**	**+0.1**
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
CN2				pmax	pmax		
	comp=Z,300nm,4.0s						
CN2				LR	LR		
	comp=Z,2µm,16.0s						
CN2				LR	LR		
	comp=Z,2µm,16.0s						
CN2				LR	LR		
	comp=Z,3µm,16.0s						
GRNR	**Gornyy**	**13.75**	**346**	⇓*i*P	**Pn**	**20 00 57.3**	**-2.6**
GRNR				*e*S	**Sn**	**20 03 28.0**	**-3.0**
GRNR				pmax	pmax		
	comp=E,5.0nm,0.8s						
GRNR				pmax	pmax		
	comp=N,5.0nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GRNR				smax	smax		
	comp=N,3.0nm,0.6s						
GRNR				MLR	MLR		
	comp=E,930nm,15.0s						
GRNR				MLR	MLR		
	comp=N,1µm,20.0s						
GRNR				MLR	MLR		
	comp=Z,2µm,16.0s						
SNY	**Shenyang**	**14.47**	**293**	⇑P	**Pn**	**20 01 09.8**	**+0.2**
SNY				pmax	pmax		
	comp=Z,68nm,1.1s						
SNY				LR	LR		
	comp=Z,3µm,13.0s						
SNY				LR	LR		
	comp=Z,5µm,20.8s						
SNY				LR	LR		
	comp=Z,8µm,17.0s						
JMZ	**Minamidaito 2**	**14.57**	**220**	Pn	**Pn**	**20 01 10.5**	**-0.6**
JOW	**Kunigami**	**15.44**	**230**	P	**Pn**	**20 01 21.8**	**-0.6**
	comp=Z,130nm,0.9s,baz=51,slow=12,SNR=14						
JOW				LR	LR	20 06 57.5	
	comp=Z,958nm,21.9s,baz=64,slow=36						
JOW	**Kunigami**	**15.44**	**230**		**Pn**	**20 01 21.9**	**-0.5**
JOW	**Kunigami**	**15.44**	**230**	P	**P**	**20 01 24.4**	**-1.8**
NKL	**Nikolayevsk**	**15.65**	**358**	*e*P	**Pn**	**20 01 22.5**	**-2.4**
NKL				*e*S	**Sn**	**20 04 13.4**	**-3.8**
NKL				pmax	pmax		
	comp=E,20nm,1.1s						
NKL				pmax	pmax		
	comp=N,75nm,1.0s						
NKL				pmax	pmax		
	comp=Z,126nm,1.0s						
NKL				smax	smax		
	comp=E,184nm,3.8s						
NKL				smax	smax		
	comp=N,164nm,7.5s						
NKL				MLR	MLR		
	comp=E,4µm,14.0s						
NKL				MLR	MLR		
	comp=N,9µm,24.0s						
NKL				MLR	MLR		
	comp=Z,6µm,21.0s						
DL2	**Dalian**	**15.70**	**281**	P	**Pn**	**20 01 26.5**	**+0.8**
DL2				pmax	pmax		
	comp=Z,180nm,0.9s						
DL2				pmax	pmax		
	comp=Z,420nm,5.7s						
DL2				LR	LR		
	comp=Z,610nm,17.5s						
DL2				LR	LR		
	comp=Z,2µm,18.8s						
DL2				LR	LR		
	comp=Z,3µm,19.6s						
OKH	**Okha**	**16.07**	**3**	*de*P	**Pn**	**20 01 23.5**	**-6.8**
OKH				pmax	pmax		
	comp=Z,100nm,13.8s						
OKH				MLR	MLR		
	comp=Z,1µm,19.0s						
OKH				MLR	MLR		
	comp=E,2µm,17.0s						
OKH				MLR	MLR		
	comp=N,2µm,15.0s						
HEH	**HeiHe**	**16.27**	**326**	*e*P	**Pn**	**20 01 29.4**	**-3.4**
HEH				sP	**pP**	**20 01 46.0**	**-0.1**
HEH				S	**Sn**	**20 04 32.8**	**+0.7**
HEH				pmax	pmax		
	comp=N,280nm,3.8s						
HEH				LR	LR		
	comp=N,2µm,16.7s						
HEH				LR	LR		
	comp=N,2µm,16.3s						
HEH				LR	LR		
	comp=N,3µm,19.6s						
SKR	**Severo-Kuril's**	**16.79**	**34**	*e*P	P	20 01 55.6	+15
SKR				pmax	pmax		
	comp=Z,67nm,0.8s						
SKR				pmax	pmax		
	comp=Z,200nm,3.9s						
SKR				MLR	MLR		
	comp=Z,300nm,11.0s						
SSE	**Sheshan**	**17.96**	**255**	P	**Pn**	**20 01 53.1**	**-0.8**
SSE				S	**Sn**	**20 05 15.3**	**+2.0**
SSE				pmax	pmax		
	comp=Z,58nm,1.1s						
SSE				pmax	pmax		
	comp=Z,250nm,8.9s						
SSE				LR	LR		
	comp=Z,680nm,17.4s						
SSE				LR	LR		
	comp=Z,780nm,17.4s						
ZEA	**Zeya**	**18.99**	**333**	*e*P	**P**	**20 02 04.5**	**-0.7**
ZEA				pmax	pmax		
	comp=E,100nm,1.0s						
ZEA				pmax	pmax		
	comp=N,200nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,300nm,1.1s						
ZEA				pmax	pmax		
	comp=E,110nm,0.8s						
ZEA				pmax	pmax		
	comp=N,190nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,280nm,0.9s						
ZEA				MLR	MLR		
	comp=E,800nm,17.0s						
ZEA				MLR	MLR		
	comp=N,1µm,15.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,20.0s						
PEA0B	**Petropavlovsk-**	**19.24**	**31**	P	**P**	**20 02 07.0**	**-0.9**
PEA0B	**Petropavlovsk-**	**19.24**	**31**	P	**P**	**20 02 07.0**	**-0.9**
PEA0B				pmax	pmax		
	comp=Z,52nm,1.0s						
PETK	**Petropavlovsk-**	**19.24**	**31**	P	**P**	**20 02 08.4**	**+0.6**
	comp=Z,16nm,0.9s,baz=226,slow=9.8,SNR=12						
NJ2	**Nanjing**	**19.38**	**260**	*e*P	**P**	**20 02 08.0**	**-1.6**
NJ2				sP	**sP**	**20 02 24.8**	**-1.9**
NJ2				S	**Sn**	**20 05 47.4**	**-0.2**
NJ2				sS	**sS**	**20 06 01.1**	**-2.9**
NJ2				pmax	pmax		
	comp=Z,54nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,280nm,3.5s						
NJ2				LR	LR		
	comp=Z,1µm,21.3s						
NJ2				LR	LR		
	comp=Z,1µm,22.7s						
NJ2				LR	LR		
	comp=Z,2µm,16.1s						
TIA	**Tai'an**	**19.55**	**274**	P	**P**	**20 02 10.3**	**-1.2**
TIA				sP	**sP**	**20 02 25.7**	**-2.9**
TIA				S	**S**	**20 05 45.5**	**-4.2**
TIA				SS	**SnSn**	**20 06 13.0**	**+6.7**
TIA				pmax	pmax		
	comp=Z,73nm,1.0s						
TIA				pmax	pmax		
	comp=Z,520nm,7.6s						
TIA				LR	LR		
	comp=Z,1µm,15.3s						
TIA				LR	LR		
	comp=Z,1µm,17.9s						
TIA				LR	LR		
	comp=Z,2µm,15.5s						
PET	**Petropavlovsk**	**19.57**	**32**	P	**P**	**20 02 10.7**	**-0.7**
PET	**Petropavlovsk**	**19.57**	**32**	*e*P	**Pn**	**20 02 16.4**	**+3.3**
PET				*e*S	**S**	**20 05 43.2**	**-6.5**
PET				pmax	pmax		
	comp=Z,100nm,1.4s						
PET				MLR	MLR		
	comp=Z,600nm,12.0s						
PET				MLR	MLR		
	comp=Z,900nm,12.0s						
HIA	**Hailar**	**19.64**	**314**	P	**P**	**20 02 10.2**	**-2.1**
HIA	**Hailar**	**19.64**	**314**	P	**P**	**20 02 11.8**	**-0.5**
HIA	**Hailar**	**19.64**	**314**	P	**P**	**20 02 10.2**	**-2.1**
HIA				pmax	pmax		
	comp=Z,48nm,1.1s						
BJI	**Beijing**	**19.90**	**285**	P	**P**	**20 02 13.8**	**-1.4**
BJI				S	**S**	**20 05 54.0**	**-2.6**
BJI				pmax	pmax		
	comp=Z,64nm,0.8s						
BJT	**Baijiatuau**	**19.91**	**285**	P	**P**	**20 02 12.7**	**-2.6**
BJT	**Baijiatuau**	**19.91**	**285**	P	**P**	**20 02 14.5**	**-0.8**
BJT	**Baijiatuau**	**19.91**	**285**	P	**P**	**20 02 12.7**	**-2.6**
BJT				pmax	pmax		
	comp=Z,71nm,0.7s						
XLT	**XiLinHaoTe**	**20.27**	**296**	⇑*i*P	**P**	**20 02 17.4**	**-1.9**
XLT				sP	sP	20 02 34.8	-1.7
XLT				PP	**PnPn**	**20 02 37.4**	**+0.1**
XLT				S	**S**	**20 05 55.5**	**-8.5**
XLT				sS	sS	20 06 18.3	-3.7
XLT				SS	**SnSn**	**20 06 28.7**	**+4.8**
XLT				pmax	pmax		
	comp=Z,130nm,1.5s						
XLT				pmax	pmax		
	comp=Z,300nm,4.1s						
XLT				LR	LR		
	comp=Z,2µm,17.9s						
XLT				LR	LR		
	comp=Z,3µm,17.2s						
YOJ	**Yonaguni jima**	**20.47**	**236**	P	**P**	**20 02 19.2**	**-2.2**
YOJ				IAmb	IAmb	20 02 20.4	
	comp=Z,300nm,1.3s						
YOJ	**Yonaguni jima**	**20.47**	**236**	P	**P**	**20 02 19.2**	**-2.2**
YOJ				pmax	pmax		
	comp=Z,300nm,1.3s						
TATO	**Taipei**	**21.15**	**240**	P	**P**	**20 02 27.1**	**-1.6**
TATO	**Taipei**	**21.15**	**240**	P	**P**	**20 02 27.5**	**-1.2**
HNS	**HongShan**	**21.27**	**278**	⇑P	**P**	**20 02 27.1**	**-2.8**
HNS				sP	**pP**	**20 02 43.2**	**+2.0**
HNS				PP	**PnPn**	**20 02 50.9**	**0.0**
HNS				S	**S**	**20 06 13.2**	**-10**
HNS				ScS	**ScS**	**20 13 47.2**	**-2.8**
HNS				pmax	pmax		
	comp=Z,510nm,0.9s						
HNS				LR	LR		
	comp=Z,790nm,13.9s						
HNS				LR	LR		
	comp=Z,2µm,16.3s						
HNS				LR	LR		
	comp=Z,2µm,15.7s						
YHNB	**Yeheng**	**21.42**	**239**	P	**P**	**20 02 29.8**	**-2.0**
YHNB				IAmb	IAmb	20 02 33.4	
	comp=Z,87nm,0.6s						
YHNB	**Yeheng**	**21.42**	**239**	P	**P**	**20 02 31.0**	**-0.8**
NACB	**Ninganchiao**	**21.61**	**238**	P	**P**	**20 02 30.2**	**-3.5**
NACB	**Ninganchiao**	**21.61**	**238**	P	**P**	**20 02 31.1**	**-2.6**
SSLB	**Suanglung**	**22.30**	**238**	P	**P**	**20 02 37.5**	**-3.7**
SSLB	**Suanglung**	**22.30**	**238**	P	**P**	**20 02 38.4**	**-2.8**
YULB	**Yu-li**	**22.34**	**237**	P	**P**	**20 02 39.5**	**-2.1**
TPUB	**Ta-pu**	**22.84**	**238**	P	**P**	**20 02 42.9**	**-4.0**
TPUB				IAmb	IAmb	20 02 44.8	
	comp=Z,186nm,0.7s						
TPUB	**Ta-pu**	**22.84**	**238**	P	**P**	**20 02 44.3**	**-2.7**
MA2	**Magadan**	**22.87**	**12**	P	**P**	**20 02 46.6**	**-0.3**
	comp=Z,47nm,0.9s,baz=206,slow=8.5,SNR=46						
MA2				LR	LR	20 12 04.1	
	comp=Z,407nm,18.4s,baz=198,slow=38						
	comp=Z,47nm,0.9s						
MA2	**Magadan**	**22.87**	**12**	P	**P**	**20 02 45.5**	**-1.4**
MA2	**Magadan**	**22.87**	**12**	P	**P**	**20 02 46.9**	**0.0**
MA2	**Magadan**	**22.87**	**12**	*ce*P	**P**	**20 02 46.7**	**-0.3**
MA2				pmax	pmax		
	comp=Z,91nm,1.3s						
TWGBT	**Beinan**	**22.88**	**236**	P	**P**	**20 02 45.6**	**-1.7**
TWG	**Pinlang**	**22.88**	**236**	P	**P**	**20 02 44.9**	**-2.4**
TWG				IAmb	IAmb	20 02 51.1	
	comp=Z,148nm,0.6s						
TIY	**Taiyuan**	**23.01**	**279**	*e*P	**P**	**20 02 46.1**	**-2.5**
TIY				pmax	pmax		
	comp=Z,84nm,1.1s						
TIY				pmax	pmax		
	comp=Z,280nm,6.0s						
TIY				LR	LR		
	comp=Z,1µm,19.2s						
TIY				LR	LR		
	comp=Z,1µm,18.6s						
TIY				LR	LR		
	comp=Z,2µm,17.9s						
HHC	**Hu-ho-hao-te**	**23.41**	**288**	*e*P	**P**	**20 02 50.8**	**-1.7**
HHC				pP	pP	20 03 03.6	-0.6
HHC				S	**S**	**20 06 57.0**	**-5.2**
HHC				SS	**SnSn**	**20 07 46.6**	**+5.9**
HHC				pmax	pmax		
	comp=Z,82nm,0.8s						
HHC				pmax	pmax		
	comp=Z,360nm,5.3s						
HHC				LR	LR		
	comp=Z,1µm,14.0s						
HHC				LR	LR		
	comp=Z,2µm,14.0s						
HHC				LR	LR		
	comp=Z,2µm,14.4s						
WHN	**Wuhan**	**23.52**	**261**	⇓*i*P	**P**	**20 02 53.5**	**0.0**
WHN				PP	**PnPn**	**20 03 28.7**	**+7.0**
WHN				S	**S**	**20 06 59.5**	**-4.3**
WHN				pmax	pmax		
	comp=Z,310nm,0.6s						
WHN				pmax	pmax		
	comp=Z,960nm,2.8s						
WHN				LR	LR		
	comp=Z,2µm,13.6s						
WHN				LR	LR		
	comp=Z,3µm,13.5s						
WHN				LR	LR		
	comp=Z,8µm,29.1s						
KNMB	**Chin-men Tao**	**23.64**	**243**	P	**P**	**20 02 51.6**	**-3.1**
KNMB				IAmb	IAmb	20 02 53.4	
	comp=Z,99nm,0.7s						
LYN	**LuoYang**	**23.64**	**272**	⇑*i*P	**P**	**20 02 52.1**	**-2.5**
LYN				pP	pP	20 03 04.5	-2.1
LYN				S	**S**	**20 06 57.1**	**-8.7**
LYN				ScS	**ScS**	**20 13 59.6**	**+0.6**
LYN				pmax	pmax		
	comp=Z,220nm,0.8s						
LYN				pmax	pmax		
	comp=Z,320nm,5.9s						
LYN				LR	LR		
	comp=Z,1µm,15.1s						
LYN				LR	LR		
	comp=Z,2µm,16.8s						
LYN				LR	LR		
	comp=Z,2µm,17.6s						
GUMO	**Guam**	**24.01**	**172**	P	**P**	**20 03 00.1**	**+2.0**
	comp=Z,43nm,0.8s,baz=359,slow=16,SNR=2.5						
GUMO				LR	LR	20 12 47.7	
	comp=Z,376nm,20.7s,baz=23,slow=37						
	comp=Z,43nm,0.8s						
GUMO	**Guam**	**24.01**	**172**	P	**P**	**20 02 59.5**	**+1.4**
CIT	**Chita**	**24.40**	**315**	*e*P	**P**	**20 02 59.6**	**-1.9**
CIT				*e*		20 03 07.0	
CIT				pmax	pmax		
	comp=Z,596nm,1.3s						
BTO	**Baotou**	**24.59**	**287**	⇓*i*P	**P**	**20 03 04.0**	**+0.6**
BTO				pP	**pP**	**20 03 15.1**	**-0.7**
BTO				sP	**sP**	**20 03 18.6**	**-2.9**
BTO				PP	**PnPn**	**20 03 41.3**	**+4.9**
BTO				PcP	**PcP**	**20 06 41.5**	**+1.3**
BTO				S	**S**	**20 07 22.1**	**+0.9**
BTO				ScP	**ScP**	**20 10 14.7**	**-0.3**
BTO				pmax	pmax		
	comp=Z,1µm,5.2s						
BTO				LR	LR		
	comp=Z,6µm,16.4s						
BTO				LR	LR		
	comp=Z,4µm,21.6s						
BTO				LR	LR		
	comp=Z,6µm,20.1s						
YAK	**Yakutsk**	**25.63**	**347**	P	**P**	**20 03 11.4**	**-1.1**
	comp=Z,315nm,0.8s,baz=152,slow=4.5,SNR=264						
YAK				PcP	**PcP**	**20 06 42.4**	**+0.4**
	comp=Z,14nm,0.7s,baz=325,slow=5.6,SNR=3.1						
YAK				S	**S**	**20 07 35.5**	**-1.6**
	comp=Z,2.2nm,0.5s,baz=232,slow=22,SNR=5.8						
YAK				LR	LR	20 13 43.0	
	comp=Z,2µm,18.3s,baz=155,slow=37						
	comp=Z,315nm,0.8s						
YAK	**Yakutsk**	**25.63**	**347**	P	**P**	**20 03 11.2**	**-1.3**
YAK	**Yakutsk**	**25.63**	**347**	*c i*P	**P**	**20 03 11.6**	**-0.8**
YAK				*e**PP	**pP**	**20 03 24.7**	**0.0**
YAK				*e*		20 03 50.3	
YAK				*e*		20 06 41.3	
YAK				*e*S	**S**	**20 07 35.2**	**-1.9**
YAK				*e*SS	**SnSn**	**20 08 39.1**	**+4.6**
YAK				pmax	pmax		
	comp=Z,493nm,0.9s						
YAK				pmax	pmax		
	comp=N,166nm,1.1s						
YAK				pmax	pmax		
	comp=E,85nm,1.0s						
YAK				pmax	pmax		
	comp=Z,143nm,1.3s						
YAK				pmax	pmax		
	comp=N,135nm,1.3s						
YAK				pmax	pmax		
	comp=E,37nm,0.9s						
YAK				smax	smax		
	comp=E,287nm,1.8s						
YAK				smax	smax		
	comp=N,279nm,2.4s						
YAK				MLR	MLR		
	comp=Z,2µm,17.0s						
CNSH	**ChangSha**	**25.68**	**257**	⇑P	**P**	**20 03 13.2**	**0.0**
CNSH				S	**S**	**20 07 39.8**	**+1.3**
CNSH				pmax	pmax		
	comp=Z,65nm,0.7s						
CNSH				LR	LR		
	comp=Z,1µm,23.1s						
CNSH				LR	LR		
	comp=Z,710nm,20.2s						
CNSH				LR	LR		
	comp=Z,1µm,22.3s						
SEY	**Seymchan**	**26.31**	**11**	P	**P**	**20 03 19.1**	**+0.5**
	comp=Z,78nm,1.0s,baz=206,slow=6.6,SNR=56						
SEY				PcP	**PcP**	**20 06 44.6**	**+1.1**
	comp=Z,8.3nm,1.0s,baz=180,slow=23,SNR=7.1						
SEY				LR	LR	20 15 36.1	
	comp=Z,480nm,18.1s,baz=190,slow=41						
	comp=Z,78nm,1.0s						
SEY	**Seymchan**	**26.31**	**11**	*ce*P	**P**	**20 03 19.5**	**+0.9**
SEY				pmax	pmax		
	comp=Z,151nm,1.3s						
XAN	**Xi'an**	**26.60**	**272**	P	**P**	**20 03 20.2**	**-1.4**
XAN				pP	pP	20 03 32.2	-1.8
XAN				sP	sP	20 03 37.2	-2.5
XAN				S	**S**	**20 07 43.7**	**-9.4**
XAN				sS	sS	20 08 14.4	+0.4
XAN				pmax	pmax		
	comp=Z,55nm,0.6s						
XAN				pmax	pmax		
	comp=Z,280nm,3.8s						
XAN				LR	LR		
	comp=Z,550nm,16.9s						
XAN				LR	LR		
	comp=Z,630nm,19.8s						
XAN				LR	LR		
	comp=Z,1µm,20.6s						
ULN	**Ulaanbaatar**	**27.16**	**303**	P	**P**	**20 03 25.5**	**-1.1**
ULN				IAmb	IAmb	20 03 29.3	
	comp=Z,54nm,0.7s						
ULN	**Ulaanbaatar**	**27.16**	**303**	*ce*P	**P**	**20 03 26.1**	**-0.6**
ULN				pmax	pmax		
	comp=Z,94nm,1.3s						
ULN	**Ulaanbaatar**	**27.16**	**303**	P	**P**	**20 03 26.9**	**+0.2**
ULN				P	**P**	**20 03 26.9**	**+0.2**
BOD	**Bodaibo**	**27.18**	**327**	⇓*i*P	**P**	**20 03 25.9**	**-0.6**
BOD				pmax	pmax		
	comp=Z,130nm,1.0s						
ENH	**Enshi**	**27.46**	**264**	P	**P**	**20 03 28.5**	**-0.9**
ENH	**Enshi**	**27.46**	**264**	P	**P**	**20 03 29.1**	**-0.3**
SONM	**Songino Array**	**27.59**	**303**	P	**P**	**20 03 29.7**	**-0.8**
	comp=Z,63nm,0.8s,baz=106,slow=8.3,SNR=246						
SONM				PcP	**PcP**	**20 06 47.4**	**+0.4**
	comp=Z,5.4nm,0.6s,baz=128,slow=2.5,SNR=7.2						
SONM				ScP	**ScP**	**20 10 20.8**	**-2.9**
	comp=Z,1.5nm,1.0s,baz=90,slow=4.4,SNR=3.4						
SONM				LR	LR	20 14 44.3	
	comp=Z,900nm,19.4s,baz=94,slow=37						
	comp=Z,63nm,0.8s						
SONM	**Songino Array**	**27.59**	**303**	P	**P**	**20 03 29.7**	**-0.8**
SONM				IAmb	IAmb	20 03 32.8	
	comp=Z,78nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**28.32**	**122**	T	T	20 33 52.6	
	baz=314,slow=75,SNR=854						
H11N1	**WAKE ISLAND Hy**	**28.33**	**122**	T	T	20 33 53.2	
	baz=314,slow=75,SNR=627						
H11N3	**WAKE ISLAND Hy**	**28.34**	**122**	T	T	20 33 53.9	
	baz=314,slow=75,SNR=828						
H11S1	**WAKE ISLAND Hy**	**29.05**	**124**	T	T	20 34 46.2	
	baz=316,slow=75,SNR=1411						
H11S3	**WAKE ISLAND Hy**	**29.05**	**124**	T	T	20 34 53.2	
	baz=316,slow=75,SNR=1504						
H11S2	**WAKE ISLAND Hy**	**29.06**	**124**	T	T	20 34 45.9	
	baz=316,slow=75,SNR=1567						
IRK	**Irkutsk**	**29.85**	**312**	*e*P	**P**	**20 03 49.4**	**-0.9**
IRK				pmax	pmax		
	comp=Z,58nm,1.3s						
ZAK	**Zakamensk**	**30.05**	**308**	*e*P	**P**	**20 03 50.9**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,63nm,1.1s						
LZH	**Lanzhou**	**30.07**	**279**	⇑P	**P**	**20 03 52.7**	**0.0**
LZH				pP	pP	20 04 05.6	+0.4
LZH				sP	sP	20 04 10.3	-0.5
LZH				PP	**PnPn**	**20 04 49.3**	**-1.7**
LZH				PcP	**PcP**	**20 06 55.1**	**+1.6**
LZH				S	**S**	**20 08 46.9**	**-1.1**
LZH				sS	sS	20 09 07.6	-1.3
LZH				SS	**SnSn**	**20 10 19.5**	**-4.1**
LZH				pmax	pmax		
	comp=Z,150nm,1.2s						
LZH				pmax	pmax		
	comp=Z,360nm,5.1s						
LZH				LR	LR		
	comp=Z,840nm,16.2s						
LZH				LR	LR		
	comp=Z,2µm,15.9s						
LZH				LR	LR		
	comp=Z,3µm,17.5s						
GYA	**Guiyang**	**31.39**	**260**	⇑*i*P	**P**	**20 04 03.6**	**-0.7**
GYA				pP	pP	20 04 17.2	+0.4
GYA				PP	**PnPn**	**20 05 07.1**	**-1.1**
GYA				S	**S**	**20 09 07.1**	**-1.5**
GYA				sS	sS	20 09 32.0	+2.5
GYA				pmax	pmax		
	comp=Z,320nm,0.9s						
GYA				LR	LR		
	comp=Z,930nm,18.0s						
GYA				LR	LR		
	comp=Z,1µm,23.8s						
GYA				LR	LR		
	comp=Z,2µm,24.9s						
MOY	**Mondy**	**31.70**	**310**	*e*P	**P**	**20 04 06.2**	**-0.6**
MOY				pmax	pmax		
	comp=Z,61nm,1.3s						
CD2	**Chengdu**	**31.76**	**269**	P	**P**	**20 04 06.3**	**-1.2**
CD2				S	**S**	**20 09 14.8**	**+0.6**
CD2				pmax	pmax		
	comp=Z,90nm,0.8s						
CD2				LR	LR		
	comp=Z,1µm,17.1s						
CD2				LR	LR		
	comp=Z,2µm,19.1s						
GTA	**Gaotai**	**32.51**	**286**	⇑P	**P**	**20 04 13.2**	**-0.8**
GTA				pP	pP	20 04 22.6	-3.9
GTA				PcP	**PcP**	**20 07 00.9**	**+0.9**

GTA				S	S	20 09 23.2	-2.7
GTA				ScP	ScP	20 10 40.5	+0.7
GTA				PcS	PcS	20 10 45.3	+0.1
GTA				ScS	ScS	20 14 38.1	-1.3
GTA				pmax	pmax		
	comp=Z,27nm,0.7s						
GTA				pmax	pmax		
	comp=Z,340nm,5.1s						
GTA				LR	LR		
	comp=Z,710nm,18.2s						
GTA				LR	LR		
	comp=Z,1µm,19.3s						
GTA				LR	LR		
	comp=Z,2µm,18.9s						
QIZ	Qiongzhong	33.20	245	⇑iP	P	20 04 21.1	+1.0
QIZ				S	S	20 09 36.9	+0.2
QIZ				sS	sS	20 09 56.0	-1.7
QIZ				pmax	pmax		
	comp=Z,59nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,250nm,5.5s						
QIZ				LR	LR		
	comp=Z,800nm,12.7s						
QIZ				LR	LR		
	comp=Z,550nm,14.3s						
QIZ				LR	LR		
	comp=Z,680nm,23.9s						
QIZ	Qiongzhong	33.20	245	P	P	20 04 20.4	+0.2
QIZ				IAmb	IAmb	20 04 22.7	
	comp=Z,86nm,1.2s						
QIZ	Qiongzhong	33.20	245	P	P	20 04 21.6	+1.5
QIZ	Qiongzhong	33.20	245	P	P	20 04 21.4	+1.3
QIZ				pP	pP	20 04 34.0	+1.4
QIZ				sP	sP	20 04 38.5	+0.2
BILL	Bilibino	33.55	17	P	P	20 04 21.9	-0.7
BILL	Bilibino	33.55	17	d iP	P	20 04 22.3	-0.3
BILL				i *PP	pP	20 04 34.9	-0.2
BILL				i *SP	sP	20 04 39.0	-1.8
BILL				e		20 05 36.0	
BILL				e		20 07 02.9	
BILL				eS	S	20 09 45.8	+4.6
BILL				SS	SnSn	20 11 53.0	+6.0
BILL				pmax	pmax		
	comp=Z,27nm,1.3s						
BILL				MLR	MLR		
	comp=Z,276nm,17.0s						
BILL	Bilibino	33.55	17	P	P	20 04 22.3	-0.3
BILL				pP	pP	20 04 33.4	-1.7
BILL				PcP	PcP	20 07 03.2	+1.1
DAV	Davao City (W)	33.59	210	LR	LR	20 19 35.2	
	comp=Z,362nm,18.3s,baz=67,slow=39						
TIXI	Tiksi	34.83	353	P	P	20 04 32.8	-0.8
	comp=Z,27nm,0.8s,baz=270,slow=24,SNR=69						
TIXI				LR	LR	20 19 58.1	
	comp=Z,952nm,18.4s,baz=118,slow=38						
	comp=Z,27nm,0.8s						
TIXI	Tiksi	34.83	353	P	P	20 04 32.9	-0.7
TIXI				IAmb	IAmb	20 04 35.3	
	comp=Z,40nm,1.0s						
TIXI	Tiksi	34.83	353	ceP	P	20 04 33.0	-0.7
TIXI				pmax	pmax		
	comp=Z,81nm,1.7s						
TIXI	Tiksi	34.83	353	P	P	20 04 33.0	-0.7
TIXI				PcP	PcP	20 07 06.3	+0.6
KMI	Kunming	35.12	261	⇑P	P	20 04 36.6	-0.3
KMI				pP	pP	20 04 46.9	-2.6
KMI				sP	sP	20 04 54.0	-1.2
KMI				S	S	20 10 03.1	-3.6
KMI				pmax	pmax		
	comp=Z,230nm,1.0s						
KMI				LR	LR		
	comp=Z,770nm,20.9s						
KMI				LR	LR		
	comp=Z,990nm,26.2s						
KMI				LR	LR		
	comp=Z,2µm,27.2s						
KMI	Kunming	35.12	261	P	P	20 04 36.6	-0.3
KMI				pP	pP	20 04 49.8	+0.3
PZH	PanZhiHua	35.24	264	P	P	20 04 37.2	-0.6
PZH				sP	sP	20 04 54.7	-1.4
PZH				PcP	PcP	20 07 04.5	-3.4
PZH				S	S	20 10 06.9	-1.4
PZH				PcS	PcS	20 10 53.7	-1.5
PZH				SS	SnSn	20 12 23.0	-6.1
PZH				pmax	pmax		
	comp=Z,110nm,0.9s						
PZH				pmax	pmax		
	comp=Z,380nm,6.2s						
PZH				LR	LR		
	comp=Z,520nm,16.1s						
PZH				LR	LR		
	comp=Z,1µm,15.4s						
PZH				LR	LR		
	comp=Z,2µm,15.7s						
GOMU	GeErMu	37.10	283	P	P	20 04 54.3	+0.3
GOMU				S	S	20 10 36.8	-0.3
GOMU				pmax	pmax		
	comp=Z,91nm,1.0s						
GOMU				LR	LR		
	comp=Z,510nm,19.8s						
GOMU				LR	LR		
	comp=Z,760nm,19.0s						
GOMU				LR	LR		
	comp=Z,980nm,19.1s						
NIKH	Nikolski High	37.40	49	P	P	20 04 57.2	+1.4
	baz=266						
MYLDM	Lahad Datu	38.43	219	P	P	20 05 05.3	+0.4
MYLDM				IAmb	IAmb	20 05 38.9	
	comp=Z,90nm,1.0s						
TNCH	TengChong	38.49	264	⇑P	P	20 05 06.1	+0.5
TNCH				pP	pP	20 05 17.7	-0.6
TNCH				sP	sP	20 05 22.4	-1.5
TNCH				PP	PnPn	20 06 38.1	+1.6
TNCH				S	S	20 10 55.7	-2.3
TNCH				SS	SnSn	20 13 42.0	-5.8
TNCH				pmax	pmax		
	comp=Z,190nm,1.4s						
TNCH				pmax	pmax		
	comp=Z,710nm,4.0s						
TNCH				LR	LR		
	comp=Z,330nm,13.6s						
TNCH				LR	LR		
	comp=Z,500nm,13.1s						
TNCH				LR	LR		
	comp=Z,520nm,14.6s						
NONG	Nongkai	38.74	251	P	P	20 05 08.0	+0.5
	comp=Z,173nm,0.9s						
TNTI	Ternate	38.82	203	P	P	20 05 08.3	+0.2
TNTI				IAmb	IAmb	20 05 23.2	
	comp=Z,147nm,1.4s						
TNTI	Ternate	38.82	203	P	P	20 05 09.6	+1.5
TNTI	Ternate	38.82	203	P	P	20 05 08.6	+0.5
	comp=Z,84nm,1.6s,comp=Z,1µm						
KKM	Kota Kinabalu	38.88	223	P	P	20 05 08.7	-0.2
KKM				IAmb	IAmb	20 05 48.8	
	comp=Z,93nm,1.5s						
DLV	T Lat	39.00	238	P	P	20 05 11.1	+1.2
	comp=Z,88nm,0.7s						
SIJI	Sorong	39.35	196	LR	LR	20 19 34.0	
	comp=Z,502nm,20.2s,baz=10,slow=33						
SRPI	Serui, Papua	39.48	188	P	P	20 05 28.8	+15
CRAI	Chiangrai	39.58	256	P	P	20 05 14.3	-0.2
CRAI				IAmb	IAmb	20 05 21.0	
	comp=Z,63nm,0.9s						
GENI	Genyem	39.92	182	P	P	20 05 18.5	+1.2
LBMI	Labuha	40.11	202	P	P	20 05 18.9	0.0
	comp=Z,80nm,1.3s,comp=Z,2µm						
DGZ	Jazzator, Alta	40.19	305	c iP	P	20 05 20.7	+1.3
DGZ				pmax	pmax		
	comp=Z,451nm,0.9s						
TNA	Tin City	40.40	30	P	P	20 05 21.8	+1.1
TNA				IAmb	IAmb	20 05 23.9	
	comp=Z,66nm,1.0s						
TNA	Tin City	40.40	30	P	P	20 05 22.6	+1.8
	baz=251,SNR=69						
GTOI	Gorontalo	40.47	209	P	P	20 05 21.5	-0.4
	comp=Z,49nm,0.9s,comp=Z,562nm						
PHRA	Phrae	40.69	254	P	P	20 05 24.0	+0.3
WMQ	Urumqi	40.70	296	⇑iP	P	20 05 24.7	+1.0
WMQ				sP	sP	20 05 42.4	+0.4
WMQ				PP	PnPn	20 07 03.0	+0.7
WMQ				PcP	PcP	20 07 20.2	-4.3
WMQ				PcS	PcS	20 11 14.0	-1.2
WMQ				S	S	20 11 31.4	+0.8
WMQ				pmax	pmax		
	comp=Z,69nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,690nm,3.7s						
WMQ				LR	LR		
	comp=Z,600nm,14.3s						
WMQ				LR	LR		
	comp=Z,950nm,12.5s						
WMQ				LR	LR		
	comp=Z,1µm,25.5s						
TOLI2	Tolitoli	40.95	213	P	P	20 05 25.6	-0.2
TOLI2	Tolitoli	40.95	213	P	P	20 05 24.5	-1.3
MRSI	Marisa	41.04	211	P	P	20 05 26.4	-0.2
	comp=Z,104nm,1.7s,comp=Z,2µm						
FAKI	Fak Fak	41.13	194	P	P	20 05 27.1	-0.2
FAKI	Fak Fak	41.13	194	P	P	20 05 28.1	+0.8
FAKI	Fak Fak	41.13	194	P	P	20 05 27.6	+0.3
	comp=Z,44nm,0.8s,comp=Z,750nm						
ANM	Nome	41.15	32	P	P	20 05 27.7	+0.7
ANM	Nome	41.15	32	P	P	20 05 27.7	+0.7
ANM				pmax	pmax		
	comp=Z,41nm,1.2s						
ANM	Nome	41.15	32	P	P	20 05 29.1	+2.2
	baz=255,SNR=24						
CHTO	Chiang Mai	41.49	255	P	P	20 05 29.9	-0.4
CHTO	Chiang Mai	41.49	255	P	P	20 05 29.9	-0.4
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.9s						
ZAA0	Zalesovo Array	41.66	312	P	P	20 05 30.8	-0.5
ZALV	Zalesovo Beam	41.66	312	P	P	20 05 31.1	-0.2
	comp=Z,132nm,0.9s,baz=90,slow=7.4,SNR=320						
ZALV				PcP	PcP	20 07 27.2	0.0
	comp=Z,27nm,0.8s,baz=93,slow=3.0,SNR=6.8						
ZALV				ScP	ScP	20 11 12.1	-1.3
	comp=Z,2.7nm,0.8s,baz=79,slow=3.2,SNR=4.0						
ZALV				S	S	20 11 40.0	-4.3
	comp=Z,1.7nm,0.8s,baz=35,slow=3.5,SNR=3.0						
ZALV				LR	LR	20 23 31.9	
	comp=Z,2µm,18.2s,baz=86,slow=37						
	comp=Z,132nm,0.9s						
ZALV	Zalesovo Beam	41.66	312	P	P	20 05 31.3	0.0
ZALV	Zalesovo Beam	41.66	312	P	P	20 05 31.3	0.0
CM31	Chiang Mai Arr	41.70	255	P	P	20 05 31.4	-0.6
CM31	Chiang Mai Arr	41.70	255	P	P	20 05 32.6	+0.5
	SNR=10						
CMAR	Chiang Mai Arr	41.70	255	P	P	20 05 32.3	+0.2
	comp=Z,7.2nm,0.6s,baz=44,slow=7.6,SNR=63						
CMAR				PcP	PcP	20 07 29.3	+1.3
	comp=Z,4.5nm,0.9s,baz=360,slow=1.1,SNR=5.9						
CMAR				ScP	ScP	20 11 13.7	-0.5
	comp=Z,3.5nm,1.2s,baz=21,slow=2.0,SNR=6.0						
CMAR				LR	LR	20 23 53.0	
	comp=Z,627nm,20.6s,baz=55,slow=38						
	comp=Z,7.2nm,0.6s						
CMAR	Chiang Mai Arr	41.70	255	P	P	20 05 31.1	-0.9
CMAR	Chiang Mai Arr	41.70	255	i P	P	20 05 32.2	+0.2
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SANI	Sanana	41.91	204	P	P	20 05 33.4	-0.3
SANI	Sanana	41.91	204	P	P	20 05 33.2	-0.5
	comp=Z,94nm,0.7s,comp=Z,1µm						
MND	Mandalay	41.92	262	P	P	20 05 34.2	+0.4
MPSI	Mapaga	42.03	213	P	P	20 05 34.7	+0.1
	comp=Z,19nm,0.8s,comp=Z,761nm						
LUWI	Luwuk	42.10	209	P	P	20 05 33.8	-1.5
LUWI				IAmb	IAmb	20 05 49.5	
	comp=Z,204nm,1.5s						
LUWI	Luwuk	42.10	209	P	P	20 05 36.0	+0.8
LUWI	Luwuk	42.10	209	P	P	20 05 33.7	-1.5
	comp=Z,105nm,1.5s,comp=Z,6µm						
ZSN	Zaisan	42.10	302	⇑iP	P	20 05 36.0	+0.9
	baz=302						
ZSN				eS	S	20 11 52.1	+1.0
	baz=302						
ZSN	Zaisan	42.10	302	c iP	P	20 05 35.9	+0.9
ZSN				eS	S	20 11 52.1	+1.0
LSA	Lhasa	42.25	275	P	P	20 05 37.9	+0.9
LSA				pmax	pmax		
	comp=Z,34nm,0.9s						
LSA	Lhasa	42.25	275	P	P	20 05 37.6	+0.6
LSA	Lhasa	42.25	275	P	P	20 05 37.6	+0.6
LSA				pmax	pmax		
	comp=Z,49nm,1.0s						
LSA	Lhasa	42.25	275	P	P	20 05 37.7	+0.7
LSA	Lhasa	42.25	275	P	P	20 05 37.9	+0.9
MSAI	Masohi	42.30	199	P	P	20 05 38.0	+1.2
	comp=Z,13nm,1.5s,comp=Z,232nm						
RABL	Rabaul	42.65	164	P	P	20 05 39.4	-0.4
NLAI	Namlea	42.70	202	P	P	20 05 41.4	+1.3
	comp=Z,27nm,0.8s,comp=Z,3µm						
KRVT	Keravat (AS076	42.73	164	LR	LR	20 22 16.0	
	comp=Z,124nm,20.3s,baz=113,slow=34						
AAI	Ambon	42.82	200	P	P	20 05 42.6	+1.6
	comp=Z,125nm,1.2s,comp=Z,1µm						
NRIK	Noril'sk	42.87	335	P	P	20 05 40.6	-0.3
	comp=Z,12nm,0.4s,baz=110,slow=8.3,SNR=29						
NRIK				PcP	PcP	20 07 31.8	+0.8
	comp=Z,19nm,0.8s,baz=98,slow=7.1,SNR=3.6						
NRIK				LR	LR	20 24 41.5	
	comp=Z,1µm,19.1s,baz=109,slow=38						
	comp=Z,12nm,0.4s						
NRIK	Noril'sk	42.87	335	P	P	20 05 40.4	-0.6
NRIK	Noril'sk	42.87	335	ceP	P	20 05 40.3	-0.6
NRIK				pmax	pmax		
	comp=Z,31nm,0.8s						
RDOG	Red Dog Mine	43.05	27	P	P	20 05 43.3	+1.0
RDOG				IAmb	IAmb	20 05 45.2	
	comp=Z,80nm,1.1s						
RDOG	Red Dog Mine	43.05	27	P	P	20 05 44.1	+1.8
	baz=254,SNR=14						
BNDI	Bandanaira	43.19	197	P	P	20 05 45.6	+1.5
BNDI	Bandanaira	43.19	197	P	P	20 05 44.8	+0.7
	comp=Z,293nm,1.6s,comp=Z,6µm						
SHL	Shillong	43.50	269	P	P	20 05 46.1	-0.7
SHL				IAmb	IAmb	20 05 50.2	
	comp=Z,85nm,1.0s						
SHL	Shillong	43.50	269	P	P	20 05 46.1	-0.7
SHL				pmax	pmax		
	comp=Z,85nm,1.0s						
SHL	Shillong	43.50	269	P	P	20 05 46.5	-0.3
	SNR=22						
N16K	Nishlik Lake	43.50	38	P	P	20 05 47.5	+1.3
	baz=266,SNR=15						
O16K	Kokwok River B	43.79	40	P	P	20 05 49.9	+1.4
	baz=268,SNR=8.4						
P16K	Nushagak River	43.82	41	P	P	20 05 50.7	+2.0
	baz=268,SNR=15						
MK31	Makanchi Array	43.94	302	P	P	20 05 49.9	0.0
MK31				IAmb	IAmb	20 05 51.4	
	comp=Z,150nm,1.4s						
MK31	Makanchi Array	43.94	302	c iP	P	20 05 50.0	+0.1
MKAR	Makanchi Array	43.94	302	P	P	20 05 50.0	+0.1
	comp=Z,38nm,0.6s,baz=84,slow=8.3,SNR=383						
MKAR				PcP	PcP	20 07 35.1	0.0
	comp=Z,8.7nm,0.7s,baz=118,slow=1.8,SNR=3.1						
MKAR				ScP	ScP	20 11 24.5	+1.7
	comp=Z,0.7nm,0.8s,baz=62,slow=1.4,SNR=3.7						
MKAR				LR	LR	20 25 24.9	
	comp=Z,694nm,19.0s,baz=90,slow=38						
	comp=Z,38nm,0.6s						
MKAR	Makanchi Array	43.94	302	P	P	20 05 49.9	-0.1
R16K	Pilot Point	44.02	43	P	P	20 05 50.7	+0.4
	baz=270						
SBUM	Sibu	44.06	225	P	P	20 05 51.0	-0.1
MAKZ	Makanchi	44.15	302	P	P	20 05 51.8	+0.2
MAKZ				IAmb	IAmb	20 05 53.2	
	comp=Z,204nm,1.5s						
MAKZ	Makanchi	44.15	302	P	P	20 05 52.0	+0.4
MAKZ	Makanchi	44.15	302	⇑P	P	20 05 51.7	+0.2
MAKZ				pP	pP	20 06 03.4	-1.0
O17K	Koliganek Bris	44.30	39	P	P	20 05 53.3	+0.7
	baz=268,SNR=11						
Q16K	King Salmon	44.51	41	P	P	20 05 55.2	+1.0
	baz=270,SNR=6.9						
P17K	Kvichak River	44.63	40	P	P	20 05 56.2	+1.1
	baz=269						
R17K	Ugashik Creek	44.66	43	P	P	20 05 56.0	+0.6
	baz=271						
Q17K	Contact Creek	44.92	42	P	P	20 05 58.0	+0.4
	baz=271,SNR=5.7						
TTA	Tatalina	44.99	35	P	P	20 05 58.3	+0.2
TTA	Tatalina	44.99	35	P	P	20 05 58.3	+0.2
	baz=266,SNR=5.7						
SVW2	Sparrevohn	45.09	38	P	P	20 06 01.2	+2.3
BRDH	Bariadhala	45.11	265	P	P	20 05 59.8	+0.3
	comp=Z,85nm,0.5s,baz=90,slow=11,SNR=6.2						
BRDH				LR	LR	20 27 27.6	
	comp=Z,593nm,18.7s,baz=72,slow=40						
	comp=Z,85nm,0.5s						
Q18K	Katmai Hardscr	45.37	41	P	P	20 06 01.6	+0.4
	baz=271						
L19K	White Mountain	45.48	36	P	P	20 06 02.2	+0.3
	baz=268						
N19K	Bonanza Creek	45.62	38	P	P	20 06 04.3	+1.2
	baz=270						
M19K	Big River Lodg	45.69	37	P	P	20 06 04.6	+1.1
	baz=268						
O19K	Port Alsworth	45.70	39	P	P	20 06 04.5	+0.9
	baz=270,SNR=7.6						
KURK	Kurchatov	45.71	308	P	P	20 06 03.7	-0.2
KURK	Kurchatov	45.71	308	ceP	P	20 06 03.6	-0.2
KURK				pmax	pmax		
	comp=Z,209nm,0.8s						
KURK	Kurchatov	45.71	308	P	P	20 06 04.0	+0.1
KURK				P	P	20 06 04.0	+0.1
KURK	Kurchatov	45.71	308	⇑P	P	20 06 03.8	-0.1
KURK				sP	sP	20 06 20.6	-1.7
KURBB	Kurchatov Arra	45.78	308	P	P	20 06 04.3	-0.1
	comp=Z,110nm,0.7s,baz=83,slow=8.3,SNR=677						
KURBB				PcP	PcP	20 07 40.9	-0.4
	comp=Z,15nm,0.8s,baz=95,slow=3.4,SNR=3.3						
KURBB				LR	LR	20 25 54.6	
	comp=Z,2µm,19.7s,baz=65,slow=37						
	comp=Z,110nm,0.7s						
K20K	Telida	45.89	34	P	P	20 06 06.8	+1.7
	baz=267						
KSM	Kuching	45.94	226	P	P	20 06 07.2	+1.2
KSM				IAmb	IAmb	20 06 23.2	
	comp=Z,58nm,0.9s						
KSM	Kuching	45.94	226	P	P	20 06 07.4	+1.3
L20K	Farewell, AK	45.95	36	P	P	20 06 07.0	+1.4
	baz=268						
SPSI	Sidrap Palu	45.95	211	P	P	20 06 05.7	-0.4
	comp=Z,46nm,1.1s,comp=Z,614nm						
A21K	Barrow	45.99	23	P	P	20 06 06.3	+0.5
A21K	Barrow	45.99	23	P	P	20 06 06.7	+0.9
	baz=257,SNR=14						
TAPN	Taplejung	45.99	274	eP	P	20 06 07.3	+0.5
	comp=Z,118nm,0.9s						
Q19K	Cape Douglas,	46.07	41	P	P	20 06 06.8	+0.2
	baz=272,SNR=5.7						
IMAR	Indian Mountai	46.20	31	P	P	20 06 08.3	+0.7
SAUI	Saumlaki	46.25	194	P	P	20 06 11.3	+2.9
	comp=Z,229nm,1.3s,comp=Z,8µm						
M20K	Styx River	46.28	37	P	P	20 06 10.2	+1.9
	baz=270						
G21K	Allakaket	46.35	30	P	P	20 06 10.1	+1.4
	baz=265						
OHAK	Old Harbor	46.35	43	P	P	20 06 09.8	+1.0
OHAK	Old Harbor	46.35	43	P	P	20 06 09.7	+0.9
	baz=274						
F21K	Alatna River	46.42	29	P	P	20 06 10.5	+1.2
	baz=264						
ODAN	Odare	46.47	273	eP	P	20 06 10.7	+0.2
	comp=Z,369nm,1.2s						
O20K	Slope Mountain	46.55	39	P	P	20 06 11.5	+1.1
	baz=272						
H21K	Melozitna Rive	46.57	31	P	P	20 06 12.1	+1.7
	baz=266						
KDAK	Kodiak Island	46.69	42	P	P	20 06 11.5	+0.1
	comp=Z,24nm,0.8s,baz=285,slow=4.1,SNR=14						
KDAK				PcP	PcP	20 07 45.5	+1.1
	comp=Z,20nm,0.9s,baz=242,slow=6.0,SNR=2.4						
KDAK				LR	LR	20 25 39.3	
	comp=Z,556nm,21.2s,baz=266,slow=36						
	comp=Z,24nm,0.8s						
KDAK	Kodiak Island	46.69	42	P	P	20 06 11.8	+0.4
KDAK				IAmb	IAmb	20 06 26.2	
	comp=Z,60nm,0.9s						
KDAK	Kodiak Island	46.69	42	P	P	20 06 11.8	+0.4
KDAK				pmax	pmax		
	comp=Z,60nm,0.9s						
KDAK	Kodiak Island	46.69	42	P	P	20 06 12.1	+0.7
KDAK				pP	pP	20 06 24.2	-0.1
SHLS	Shalkode	46.69	297	⇑iP	P	20 06 09.7	-2.3
	baz=297						
SHLS	Shalkode	46.69	297	c iP	P	20 06 09.6	-2.3
CHUM	Lake Minchumin	46.69	34	P	P	20 06 13.7	+2.3
	baz=268,SNR=13						
SPCR	Spurr Chakacha	46.73	38	P	P	20 06 13.9	+2.0
	baz=271,SNR=8.1						
PPLA	Purkeypile	46.73	35	P	P	20 06 13.1	+1.2
PPLA				IAmb	IAmb	20 06 32.6	
	comp=Z,77nm,1.4s						
PPLA	Purkeypile	46.73	35	P	P	20 06 13.6	+1.7
	baz=270,SNR=8.6						
Q20K	Shuyak Island	46.74	41	P	P	20 06 11.9	+0.1
	baz=273						
CAST	Castle Rocks	46.79	34	P	P	20 06 13.7	+1.5
	baz=269,SNR=13						
I21K	Tanana	46.88	32	P	P	20 06 14.8	+2.0
	baz=268						
KAPI	Kappang	46.91	210	LR	LR	20 26 08.7	
	comp=Z,170nm,20.1s,baz=6.5,slow=36						
KAPI	Kappang	46.91	210	P	P	20 06 14.2	+0.6
KAPI	Kappang	46.91	210	P	P	20 06 15.7	+2.1
KAPI	Kappang	46.91	210	P	P	20 06 14.2	+0.6
KAPI				pmax	pmax		
	comp=Z,260nm,1.6s						
KAPI	Kappang	46.91	210	P	P	20 06 15.4	+1.8
KAPI				P	P	20 06 15.4	+1.8
F22K	John River	46.95	29	P	P	20 06 14.8	+1.4
	baz=265						
PMG	Port Moresby	46.96	172	LR	LR	20 25 20.2	
	comp=Z,210nm,21.9s,baz=332,slow=35						
PMG	Port Moresby	46.96	172	P	P	20 06 14.8	+0.8
PMG	Port Moresby	46.96	172	P	P	20 06 14.8	+0.8
PMG				pmax	pmax		
	comp=Z,20nm,1.0s						
TDK	Taldyqorghan	46.97	300	eP	P	20 06 14.6	+0.7
	comp=Z,91nm,0.5s,baz=300						
TDK	Taldyqorghan	46.97	300	eP	P	20 06 14.6	+0.7
TDK				pmax	pmax		
	comp=Z,91nm,0.5s						
UZB	Uzynbulak	47.01	297	⇑iP	P	20 06 14.5	+0.1
	baz=297						
UZB	Uzynbulak	47.01	297	c iP	P	20 06 14.4	+0.1
SKT	Skwentna	47.04	36	P	P	20 06 15.3	+1.1
	baz=271,SNR=8.9						
BKSI	Bulukumba	47.05	210	P	P	20 06 14.6	-0.1
	comp=Z,52nm,1.1s,comp=Z,634nm						
RAMN	Ramite	47.06	274	eP	P	20 06 15.3	+0.2
	comp=Z,332nm,0.9s						
JIRN	Jiri	47.06	275	eP	P	20 06 15.8	+0.6
	comp=Z,423nm,1.3s						
HOM	Homer	47.07	40	P	P	20 06 15.6	+1.2
	baz=273						
SURA	Surathani	47.12	244	P	P	20 06 16.8	+1.5
E22K	Anaktuvuk Pass	47.15	28	P	P	20 06 16.8	+1.8
	baz=265						
KPKS	Kokpek	47.16	298	⇑iP	P	20 06 15.7	+0.2
	baz=298						
KPKS	Kokpek	47.16	298	c iP	P	20 06 15.7	+0.2
H22K	Ishtalitna Cre	47.17	31	P	P	20 06 17.4	+2.3
	baz=267						
GUN	Gumba	47.19	275	eP	P	20 06 16.7	+0.5
	comp=Z,375nm,1.0s						
CAPN	Captain Cook N	47.26	38	P	P	20 06 16.7	+0.9
	baz=272						
BPAW	Bear Paw Mtn.	47.28	34	P	P	20 06 17.1	+1.1
BPAW	Bear Paw Mtn.	47.28	34	P	P	20 06 17.8	+1.8
	baz=270,SNR=10						
MLY	Manley	47.41	32	P	P	20 06 17.7	+0.7
MLY	Manley	47.41	32	P	P	20 06 18.9	+1.9
	baz=269,SNR=27						
WUS	Wushi	47.41	295	P	P	20 06 18.5	+1.0
WUS				pP	pP	20 06 30.0	-0.5
WUS				sP	sP	20 06 35.9	-0.2
ZHN	Zhinishke	47.41	298	⇑iP	P	20 06 17.8	+0.3
	baz=298						
ZHN	Zhinishke	47.41	298	c iP	P	20 06 17.8	+0.3
SUA	Susitna One	47.43	37	P	P	20 06 18.8	+1.5
	baz=272,SNR=19						
SATY	Saty	47.47	297	⇑iP	P	20 06 18.3	+0.3
	baz=297						
SATY	Saty	47.47	297	c iP	P	20 06 18.2	+0.3
BRSE	Bradley Lake S	47.52	39	P	P	20 06 19.7	+1.8
	baz=274						
SRIT	Nakonsritamara	47.53	244	P	P	20 06 19.1	+0.6
SRIT				IAmb	IAmb	20 06 21.0	
	comp=Z,76nm,0.9s						
SRIT	Nakonsritamara	47.53	244	P	P	20 06 20.5	+2.0
ARXS	Arharly	47.56	299	eP	P	20 06 18.7	+0.1

TRF	Thorofare Moun	47.59	34	P	P	20 06 20.1	+1.5
	baz=271,SNR=12						
CUT	Chulitna	47.62	36	P	P	20 06 19.1	+0.4
	baz=272						
D23K	Nanushuk River	47.63	27	P	P	20 06 20.4	+1.7
	baz=265						
BSSI	Bau Bau, Buton	47.65	209	P	P	20 06 19.6	+0.2
	comp=Z,47nm,0.9s						
COLD	Coldfoot	47.70	29	P	P	20 06 20.8	+1.6
	baz=267,SNR=12						
BBKI	Banjar Baru	47.71	217	P	P	20 06 19.7	-0.1
	comp=Z,83nm,1.0s,comp=Z,13µm						
M22K	Willow	47.72	37	P	P	20 06 20.5	+1.1
	baz=272						
PKI	Pulchoki	47.72	275	*e*P	P	20 06 20.3	0.0
	comp=Z,213nm,1.2s						
KKN	Kakani	47.72	275	*e*P	P	20 06 20.3	+0.1
	comp=Z,505nm,1.1s						
PKIN	Phulchoki	47.73	275	*e*P	P	20 06 20.1	-0.2
	comp=Z,121nm,0.9s						
G23K	Bananza Creek	47.75	30	P	P	20 06 21.0	+1.3
	baz=268						
SKLT	Songkhla	47.81	241	P	P	20 06 22.1	+1.4
H23K	Yukon River	47.92	31	P	P	20 06 23.2	+2.3
	baz=269,SNR=60						
RC01	Rabbit Creek A	47.93	38	P	P	20 06 21.9	+0.8
	baz=273,SNR=14						
DMN	Daman	47.94	275	*e*P	P	20 06 22.2	+0.3
	comp=Z,182nm,1.2s						
BWN	Browne	47.95	33	P	P	20 06 23.0	+1.8
E23K	Chandalar	47.96	28	P	P	20 06 22.4	+1.1
	baz=267						
O22K	Cooper Landing	47.98	38	P	P	20 06 21.8	+0.4
	baz=274						
I23K	Minto, Yukon-K	47.99	32	P	P	20 06 22.6	+1.2
	baz=270,SNR=11						
NEA2	Nenana	48.12	33	P	P	20 06 23.7	+1.3
NEA2				IAmb	IAmb	20 06 25.4	
	comp=Z,53nm,1.2s						
NEA2	Nenana	48.12	33	P	P	20 06 23.8	+1.3
	baz=271,SNR=8.7						
GKN	Gorkha	48.14	276	*e*P	P	20 06 23.5	+0.2
	comp=Z,666nm,1.0s						
SEW	Seward	48.14	39	P	P	20 06 23.0	+0.4
	baz=274						
MCK	McKinley	48.19	34	P	P	20 06 24.0	+0.9
	baz=272,SNR=11						
PMR	Palmer	48.20	37	P	P	20 06 23.4	+0.4
PMR	Palmer	48.20	37	P	P	20 06 24.4	+1.3
PMR	Palmer	48.20	37	P	P	20 06 23.5	+0.4
PMR				pmax	pmax		
	comp=Z,30nm,1.1s						
PMR	Palmer	48.20	37	P	P	20 06 23.7	+0.6
	baz=273,SNR=8.7						
RND	Reindeer	48.24	34	P	P	20 06 23.9	+0.4
RND	Reindeer	48.24	34	P	P	20 06 23.9	+0.4
RND				pmax	pmax		
	comp=Z,24nm,1.0s						
CHKK	Chushkaly	48.24	299	*e*P	P	20 06 24.0	+0.2
	baz=299						
CHKK	Chushkaly	48.24	299	*e*P	P	20 06 23.9	+0.2
TARG	Taragay, Kyrgy	48.27	296	P	P	20 06 25.1	+0.6
TARG	Taragay, Kyrgy	48.27	296	P	P	20 06 25.1	+0.6
TARG				pmax	pmax		
	comp=Z,78nm,0.7s						
GHO	Glory Hole Cre	48.28	37	P	P	20 06 23.9	0.0
GHO				IAmb	IAmb	20 06 39.1	
	comp=Z,68nm,1.1s						
D24K	Happy Valley	48.31	27	P	P	20 06 25.4	+1.5
	baz=267						
E24K	Your Creek	48.39	28	P	P	20 06 26.6	+2.0
	baz=268,SNR=72						
C24K	Franklin Bluff	48.39	26	P	P	20 06 26.3	+1.8
	baz=266						
MDOK	Medeo	48.39	298	*i* P	P	20 06 25.7	+0.6
	baz=298						
MDOK	Medeo	48.39	298	*i* P	P	20 06 25.7	+0.6
WAT1	Susitna Watana	48.40	35	P	P	20 06 25.3	+0.6
	baz=273						
AAA	Alma-Ata	48.47	298	*e*P	P	20 06 26.7	+1.1
	comp=Z,45nm,0.6s,baz=298						
AAA	Alma-Ata	48.47	298	*e*P	P	20 06 26.6	+1.0
AAA				pmax	pmax		
	comp=Z,45nm,0.6s						
TNSS	Tian-Shan	48.50	298	*i* P	P	20 06 27.2	+0.9
	baz=298						
TNSS	Tian-Shan	48.50	298	*i* P	P	20 06 27.1	+0.9
KNK	Knik Glacier	48.53	37	P	P	20 06 26.8	+1.1
	baz=274,SNR=9.9						
SML	Sawmill	48.56	37	P	P	20 06 27.1	+1.1
	baz=274,SNR=17						
F24K	Squaw Lake	48.60	29	P	P	20 06 27.6	+1.4
	baz=269,SNR=16						
H24K	Noodor Dome	48.60	31	P	P	20 06 28.4	+2.2
	baz=271,SNR=27						
TCOL	CIGO, UAF Yank	48.63	32	P	P	20 06 27.8	+1.4
	baz=272						
PWL	Port Wells	48.63	38	P	P	20 06 26.9	+0.4
PWL				IAmb	IAmb	20 06 41.9	
	comp=Z,33nm,1.0s						
PWL	Port Wells	48.63	38	P	P	20 06 26.8	+0.3
	baz=275,SNR=8.2						
COLA	College	48.63	32	P	P	20 06 27.0	+0.6
COLA				IAmb	IAmb	20 06 42.4	
	comp=Z,70nm,1.5s						
COLA	College	48.63	32	P	P	20 06 30.1	+3.7
COLA	College	48.63	32	P	P	20 06 27.0	+0.6
COLA				pmax	pmax		
	comp=Z,70nm,1.5s						
COLA	College	48.63	32	P	P	20 06 28.0	+1.6
	baz=272						
COLA	College	48.63	32	P	P	20 06 27.7	+1.3
DANN	Dangsing	48.67	277	*e*P	P	20 06 28.2	+0.6
	comp=Z,1µm,0.8s						
KUU	Kurty	48.68	299	⇑*i*P	P	20 06 27.0	-0.2
	comp=Z,65nm,0.6s,baz=299						
KUU	Kurty	48.68	299	*c i*P	P	20 06 26.9	-0.2
KUU				pmax	pmax		
	comp=Z,65nm,0.6s						
G24K	Hadweenzic Riv	48.76	30	P	P	20 06 29.2	+1.8
	baz=270						
POKR	Poker Plat Res	48.80	32	P	P	20 06 29.0	+1.2
POKR	Poker Plat Res	48.80	32	P	P	20 06 29.7	+1.9
	baz=272,SNR=34						
M23K	Glacier View	48.85	37	P	P	20 06 29.1	+0.9
	baz=274,SNR=14						
SCM	Sheep Creek Mo	49.04	36	P	P	20 06 30.5	+0.9
SCM				IAmb	IAmb	20 06 45.1	
	comp=Z,38nm,1.0s						
SCM	Sheep Creek Mo	49.04	36	P	P	20 06 30.5	+0.9
SCM				pmax	pmax		
	comp=Z,38nm,1.0s						
SCM	Sheep Creek Mo	49.04	36	P	P	20 06 30.7	+1.0
	baz=275,SNR=11						
HDA	Harding Lake	49.04	33	P	P	20 06 30.1	+0.5
	baz=273,SNR=19						
IL31		49.05	33	P	P	20 06 29.7	+0.1
IL31				IAmb	IAmb	20 06 31.5	
	comp=Z,32nm,0.9s						
ILAR	Eielson Array	49.05	33	P	P	20 06 30.1	+0.4
	comp=Z,16nm,0.8s,baz=269,slow=6.2,SNR=169						
ILAR				PcP	PcP	20 07 51.0	-1.7
	comp=Z,3.9nm,0.8s,baz=265,slow=3.5,SNR=1.3						
ILAR				LR	LR	20 28 16.1	
	comp=Z,207nm,21.0s,baz=256,slow=37						
	comp=Z,16nm,0.8s						
ILAR	Eielson Array	49.05	33	P	P	20 06 29.7	+0.1
KULM	Kulim	49.13	240	P	P	20 06 31.2	+0.4
KULM				IAmb	IAmb	20 06 32.9	
	comp=Z,80nm,1.4s						
P23K	Montague Islan	49.17	39	P	P	20 06 31.4	+0.8
	baz=276						
D25K	Kavik River	49.19	27	P	P	20 06 32.2	+1.5
	baz=269						
ULHL	Ulahol	49.23	297	P	P	20 06 32.0	+0.4
	SNR=9.9						
G25K	Bearman Lake	49.30	30	P	P	20 06 33.7	+2.2
	baz=272						
MMRI	Maumere	49.32	206	P	P	20 06 32.0	-0.2
MMRI				IAmb	IAmb	20 06 47.3	
	comp=Z,59nm,0.9s						
MMRI	Maumere	49.32	206	P	P	20 06 32.6	+0.4
MMRI	Maumere	49.32	206	P	P	20 06 32.4	+0.2
	comp=Z,74nm,1.4s,comp=Z,936nm						
IPM	Ipoh	49.46	238	P	P	20 06 33.1	-0.3
IPM	Ipoh	49.46	238	P	P	20 06 33.7	+0.3
F25K	Christian Rive	49.46	29	P	P	20 06 35.3	+2.5
	baz=271,SNR=31						
TKM2	Tokmak 2	49.48	298	P	P	20 06 34.2	+0.7
	SNR=224						
E25K	Arctic Village	49.48	28	P	P	20 06 35.2	+2.3
	baz=271,SNR=38						
M24K	Tolsona, Glenn	49.55	36	P	P	20 06 35.0	+1.4
	baz=275,SNR=7.0						
BRZS	Berezniki	49.58	308	⇑*i*P	P	20 06 33.8	-0.2
	comp=Z,55nm,1.2s,baz=308						
BRZS	Berezniki	49.58	308	*c i*P	P	20 06 33.7	-0.2
BRZS				pmax	pmax		
	comp=Z,55nm,1.2s						
PRP	Porcupine Dome	49.59	32	P	P	20 06 35.3	+1.4
	baz=273,SNR=32						
K24K	Donnelly Dome	49.59	34	P	P	20 06 34.6	+0.8
	baz=274,SNR=14						
MYKOM	Kota Tinggi	49.61	233	P	P	20 06 33.2	-1.3
MYKOM				IAmb	IAmb	20 06 36.8	
	comp=Z,73nm,1.5s						
C26K	Camden Bay	49.71	26	P	P	20 06 36.7	+2.2
	baz=270						
SOEI	Soe	49.72	203	P	P	20 06 34.8	-0.6
SOEI	Soe	49.72	203	P	P	20 06 36.2	+0.8
SOEI	Soe	49.72	203	P	P	20 06 33.3	-2.1
	comp=Z,120nm,0.9s,comp=Z,1µm						
KLU	Klutina	49.74	37	P	P	20 06 36.6	+1.6
	baz=276,SNR=16						
HNR	Honiara	49.78	156	LR	LR	20 26 46.0	
	comp=Z,7µm,20.3s,baz=344,slow=35						
PAX	Paxson	49.80	35	P	P	20 06 37.0	+1.6
	baz=275,SNR=8.7						
TPRI	Tanjung Pinang	49.85	232	P	P	20 06 37.6	+1.3
	comp=Z,64nm,0.8s,comp=Z,884nm						
BMAR	Burnt Mountain	49.88	29	P	P	20 06 36.9	+1.0
EYAK	Cordova Ski Ar	49.93	38	P	P	20 06 38.4	+2.1
	comp=Z,28nm,1.3s						
EYAK	Cordova Ski Ar	49.93	38	P	P	20 06 37.7	+1.4
	baz=277,SNR=6.8						
BTLS	Baital	49.94	301	*i* P	P	20 06 36.7	0.0
	comp=Z,30nm,0.6s,baz=301						
BTLS	Baital	49.94	301	*i* P	P	20 06 36.7	0.0
BTLS				pmax	pmax		
	comp=Z,30nm,0.6s						
SGDS	Sogindy	50.00	299	⇑*i*P	P	20 06 37.5	+0.2
	baz=299						
SGDS	Sogindy	50.00	299	*c i*P	P	20 06 37.5	+0.2
HARP	HAARP	50.00	36	P	P	20 06 38.5	+1.6
	baz=276,SNR=7.0						
RIDG	Independent Ri	50.01	34	P	P	20 06 37.6	+0.6
	baz=275,SNR=7.9						
KBK	Karagaybulak	50.02	298	P	P	20 06 38.4	+0.8
	SNR=80						
F26K	Sheenjek River	50.03	29	P	P	20 06 39.4	+2.2
	baz=272						
CHMS	Chumysh	50.05	298	P	P	20 06 38.0	+0.4
	SNR=25						
C27K	Jago River	50.13	26	P	P	20 06 39.7	+1.9
	baz=271						
USP	Ospenovka	50.14	299	P	P	20 06 38.8	+0.4
	SNR=74						
G26K	Porcupine Rive	50.21	30	P	P	20 06 40.8	+2.4
	baz=273						
KSH	Kashi	50.29	294	P	P	20 06 43.9	+4.3
KSH				sP	sP	20 07 02.2	+4.0
KSH				S	S	20 13 56.8	+7.9
KSH				pmax	pmax		
	comp=Z,51nm,0.9s						
KSH				LR	LR		
	comp=Z,1µm,15.1s						
KSH				LR	LR		
	comp=Z,1µm,17.2s						
KSH				LR	LR		
	comp=Z,2µm,16.1s						
BVAR	Borovoye Array	50.32	312	LR	LR	20 29 01.1	
	comp=Z,1µm,19.0s,baz=80,slow=37						
AAK	Ala-Archa	50.34	298	P	P	20 06 40.4	+0.4
	SNR=77						
AAK	Ala-Archa	50.34	298	LR	LR	20 29 25.6	
	comp=Z,2µm,18.9s,baz=76,slow=38						
AAK	Ala-Archa	50.34	298	P	P	20 06 40.2	+0.3
AAK				IAmb	IAmb	20 06 42.9	
	comp=Z,45nm,0.7s						
AAK	Ala-Archa	50.34	298	*ce*P	P	20 06 40.1	+0.1
AAK				pmax	pmax		
	comp=Z,51nm,0.8s						
AAK	Ala-Archa	50.34	298	*i* P	P	20 06 40.2	+0.3
	SNR=104						
AAK	Ala-Archa	50.34	298	P	P	20 06 40.5	+0.5
AAK				P	P	20 06 40.5	+0.5
AAK	Ala-Archa	50.34	298	⇑P	P	20 06 40.3	+0.4
AAK				pP	pP	20 06 51.4	-1.6
AAK				sP	sP	20 06 57.3	-1.2
N25K	Chitina, Valde	50.35	37	P	P	20 06 41.3	+1.6
	baz=277						
SCRK	Sand Creek	50.37	34	P	P	20 06 40.6	+0.8
	baz=276,SNR=25						
BRVK	Borovoye	50.37	312	P	P	20 06 40.0	+0.2
BRVK				IAmb	IAmb	20 06 41.3	
	comp=Z,84nm,0.9s						
BRVK	Borovoye	50.37	312	P	P	20 06 40.0	+0.2
BRVK				pmax	pmax		
	comp=Z,84nm,1.0s						
BRVK	Borovoye	50.37	312	P	P	20 06 40.1	+0.2
BRVK				P	P	20 06 40.1	+0.2
BRVK	Borovoye	50.37	312	P	P	20 06 40.0	+0.2
BRVK				pP	pP	20 06 52.7	-0.2
BRVK				sP	sP	20 06 58.0	-0.5
UCH	Uchtor	50.45	298	P	P	20 06 41.9	+0.7
	SNR=34						
J26L	Joseph Creek	50.50	33	P	P	20 06 41.4	+0.7
	baz=276,SNR=7.7						
PBA	Port Blair	50.57	253	P	P	20 06 42.4	+0.6
PBA				IAmb	IAmb	20 07 03.6	
	comp=Z,59nm,0.9s						
PBA	Port Blair	50.57	253	P	P	20 06 42.4	+0.6
I26K	Coal Creek Min	50.59	32	P	P	20 06 42.3	+1.0
	baz=275						
KDU	Kakadu	50.65	191	P	P	20 06 42.8	+0.6
L26K	Log Cabin Wild	50.76	35	P	P	20 06 44.0	+1.3
	baz=277						
EKS2	Erkin-Say	50.84	298	P	P	20 06 44.2	+0.5
	SNR=6.8						
E27K	Coleen River	50.97	28	P	P	20 06 45.8	+1.7
	baz=274						
M26K	Nabesna, AK	51.00	35	P	P	20 06 46.5	+2.0
	baz=278						
MTN	Manton Dam	51.02	193	P	P	20 06 44.3	-0.8
MTN	Manton Dam	51.02	193	P	P	20 06 45.7	+0.6
G27K	Doyon Strip	51.06	30	P	P	20 06 46.9	+2.0
	baz=276						
AML	Almayashu	51.06	298	P	P	20 06 46.8	+1.0
	SNR=111						
MCARA	McCarthy VSAT	51.13	37	P	P	20 06 47.1	+1.7
	baz=279,SNR=8.8						
H27K	Steamboat Moun	51.17	30	P	P	20 06 47.8	+2.1
	baz=276,SNR=26						
PLAI	Plampang	51.17	211	P	P	20 06 45.1	-1.1
	comp=Z,41nm,1.3s						
PLAI	Plampang	51.17	211	P	P	20 06 44.6	-1.6
	comp=Z,41nm,1.3s						
K27K	Chicken	51.20	33	P	P	20 06 47.3	+1.4
	baz=277						
I27K	Kandik River	51.20	31	P	P	20 06 47.7	+1.7
	baz=276						
COEN	Coen	51.21	178	P	P	20 06 47.0	+0.5
COEN				IAmb	IAmb	20 07 02.5	
	comp=Z,51nm,1.1s						
COEN	Coen	51.21	178	P	P	20 06 47.7	+1.2
PPBI	Pangkal Pinang	51.30	228	P	P	20 06 47.9	+0.6
	comp=Z,26nm,0.7s,comp=Z,4µm						
L27K	Beaver Creek,	51.44	35	P	P	20 06 49.8	+2.1
	baz=278,SNR=32						
BCAR	Beaver Creek A	51.46	35	P	P	20 06 49.0	+1.1
TWSI	Taliwang, Sumb	51.46	212	P	P	20 06 46.9	-1.5
	comp=Z,67nm,1.1s,comp=Z,691nm						
EGAK	Eagle	51.49	32	P	P	20 06 48.5	+0.4
EGAK				IAmb	IAmb	20 07 03.5	
	comp=Z,56nm,1.6s						
EGAK	Eagle	51.49	32	P	P	20 06 49.0	+0.9
	baz=278,SNR=11						
M27K	Edge Creek, AK	51.52	35	P	P	20 06 50.3	+1.7
	baz=279						
SRBI	Singaraja	51.60	214	P	P	20 06 51.3	+1.9
	comp=Z,70nm,0.7s,comp=Z,1µm						
LHMI	Lhok Sumawe	51.75	243	P	P	20 06 51.4	+0.7
LHMI				IAmb	IAmb	20 06 54.4	
	comp=Z,66nm,0.8s						
ABJI	Asem Bagus	51.78	215	P	P	20 06 51.7	+0.9
	comp=Z,60nm,1.0s,comp=Z,2µm						
BVCY	Beaver Creek	51.98	35	P	P	20 06 53.4	+1.6
	baz=280,SNR=7.0						
CTG	Chitna Glacier	52.01	37	P	P	20 06 53.2	+1.0
	baz=280,SNR=5.6						
PSI	Prapat	52.11	239	P	P	20 06 54.2	+0.7
PSI	Prapat	52.11	239	P	P	20 06 53.4	-0.1
PSI				pmax	pmax		
	comp=Z,39nm,0.9s						
RPSI	Rantau Prapat	52.19	239	P	P	20 06 53.4	-0.4
RPSI				IAmb	IAmb	20 06 54.7	
	comp=Z,39nm,0.9s						
YUK3	Moose Creek	52.28	36	P	P	20 06 55.4	+1.2
	baz=280,SNR=13						
DAWY	Dawson	52.36	33	P	P	20 06 55.5	+0.9
DAWY	Dawson	52.36	33	P	P	20 06 55.8	+1.2
	baz=280,SNR=6.0						
JAGI	Jajag, Banyuwa	52.42	215	P	P	20 06 54.0	-1.5
JAGI				IAmb	IAmb	20 07 29.2	
	comp=Z,27nm,0.7s						
JAGI	Jajag, Banyuwa	52.42	215	P	P	20 06 56.6	+1.1
JAGI	Jajag, Banyuwa	52.42	215	P	P	20 06 55.1	-0.4
	comp=Z,44nm,1.2s						
DZA	Taraz	52.47	299	*e*P	P	20 06 56.1	+0.4
	comp=Z,66nm,1.2s,baz=299						
DZA	Taraz	52.47	299	*e*P	P	20 06 56.1	+0.4
DZA				pmax	pmax		
	comp=Z,66nm,1.2s						
BKNI	Bangkinang	52.53	235	P	P	20 06 57.5	+1.1
BKNI	Bangkinang	52.53	235	P	P	20 06 59.2	+2.8
BKNI	Bangkinang	52.53	235	P	P	20 06 58.4	+2.0
	comp=Z,189nm,1.1s,comp=Z,2µm						
GMJI	Gumukmas	52.57	216	P	P	20 06 56.4	-0.2
	comp=Z,33nm,1.0s						
O28M	Mount Upton	52.59	37	P	P	20 06 58.0	+1.3
	baz=281						
I29M	Ogilvie Camp,	52.60	31	P	P	20 06 58.1	+1.7
	baz=280,SNR=30						
YUK8	Steele Glacier	52.70	37	P	P	20 06 59.0	+1.6
	baz=281						
PINM	Pinnacle	52.70	38	P	P	20 06 59.0	+1.8
	baz=282						
PMBI	Palembang	52.73	229	P	P	20 06 57.9	+0.1
NGJI	Ngawi	52.74	219	P	P	20 07 12.8	+15
J29M	Klondike Camp	52.80	32	P	P	20 06 59.7	+1.9
	baz=280,SNR=7.1						
KK31	Karatay Array	52.96	300	P	P	20 06 59.0	-0.3
KK31	Karatay Array	52.96	300	P	P	20 06 59.1	-0.3
KK31				pmax	pmax		
	comp=Z,108nm,1.2s						
KKAR	Karatay Array	52.96	300	P	P	20 06 59.3	-0.1
KKAR	Karatay Array	52.96	300	P	P	20 06 59.3	-0.1
M29M	Somme Creek	53.07	35	P	P	20 07 02.3	+2.3
	baz=282,SNR=17						
EPYK	Eagle Plains	53.07	30	P	P	20 07 00.9	+1.1
EPYK	Eagle Plains	53.07	30	P	P	20 07 01.9	+2.0
	baz=280,SNR=87						
L29M	L29M	53.09	34	P	P	20 07 02.3	+2.3
	baz=281						
PWJI	Pagerwojo	53.13	218	P	P	20 06 59.8	-1.0
	comp=Z,117nm,0.7s						
G30M	tAoh Zraii Nji	53.16	29	P	P	20 07 01.8	+1.3
	baz=280						
K29M	Barlow Dome	53.21	33	P	P	20 07 02.8	+1.8
	baz=281						
YUK4	Talbot Arm	53.21	36	P	P	20 07 03.1	+1.9
	baz=282,SNR=10.0						
PNL	Peninsula	53.21	38	P	P	20 07 02.9	+1.9
	baz=283						
SDSI	Sungai Dareh	53.24	233	P	P	20 07 02.0	+0.4
	comp=Z,109nm,1.2s,comp=Z,1µm						
YUK6	Outpost Mounta	53.43	37	P	P	20 07 05.0	+2.2
	baz=283,SNR=5.3						
O29M	Mount Kennedy	53.47	38	P	P	20 07 05.1	+2.2
	baz=283,SNR=8.1						
IUG	Iuzhnay	53.62	299	⇑*i*P	P	20 07 04.9	+0.6
	comp=Z,61nm,0.8s,baz=299						
IUG	Iuzhnay	53.62	299	*c i*P	P	20 07 04.9	+0.6
IUG				pmax	pmax		
	comp=Z,61nm,0.8s						
UGM	Wanagama	53.67	219	P	P	20 07 04.3	-0.5
UGM	Wanagama	53.67	219	P	P	20 07 05.2	+0.4
UGM	Wanagama	53.67	219	P	P	20 07 04.7	-0.1
	comp=Z,182nm,1.3s						
M30M	Minto, Yukon	53.80	35	P	P	20 07 07.7	+2.4
	baz=283,SNR=20						
PDSI	Padang	53.84	234	P	P	20 07 06.0	-0.1
	comp=Z,18nm,0.8s						
CHM	Chimkent	53.86	299	*e*P	P	20 07 06.6	+0.6
	comp=Z,35nm,0.7s,baz=299						
CHM	Chimkent	53.86	299	*e*P	P	20 07 06.6	+0.6
CHM				pmax	pmax		
	comp=Z,35nm,0.7s						
HYT	Haines Junctio	53.87	37	P	P	20 07 07.5	+1.7
HYT				IAmb	IAmb	20 07 23.5	
	comp=Z,58nm,1.0s						
HYT	Haines Junctio	53.87	37	P	P	20 07 08.4	+2.5
	baz=284,SNR=22						
N30M	Aishikik Lake	53.92	36	P	P	20 07 08.3	+2.1
	baz=283						
INK	Inuvik	53.93	27	P	P	20 07 06.9	+1.0
	comp=Z,37nm,0.9s,baz=288,slow=6.7,SNR=101						
INK				LR	LR	20 31 26.9	
	comp=Z,104nm,18.8s,baz=276,slow=37						
	comp=Z,37nm,0.9s						
INK	Inuvik	53.93	27	P	P	20 07 06.8	+0.9
INK				IAmb	IAmb	20 07 08.4	
	comp=Z,51nm,1.0s						
INK	Inuvik	53.93	27	P	P	20 07 07.3	+1.4
	baz=282,SNR=42						
MAYO	Mayo, Yukon	53.97	33	P	P	20 07 07.9	+1.5
	baz=283,SNR=5.2						
KPJI	Karang Pucung	54.00	221	P	P	20 07 06.8	-0.4
	comp=Z,93nm,1.1s						
F31M	Tsiigehtchic	54.02	28	P	P	20 07 07.9	+1.2
	baz=282,SNR=29						
GSI	Gunungsitoli	54.12	239	P	P	20 07 07.8	-0.3
GSI	Gunungsitoli	54.12	239	P	P	20 07 08.7	+0.6
KLI	Kotabumi	54.23	227	P	P	20 07 09.0	+0.2
	comp=Z,159nm,1.1s						
KNRA	Kununurra	54.24	195	P	P	20 07 08.8	0.0
P30M	Million Dollar	54.30	38	P	P	20 07 10.0	+1.1
	baz=284						
MDSI	Maura Dua	54.32	228	P	P	20 07 09.1	-0.4
	comp=Z,83nm,1.2s,comp=Z,1µm						
BLSI	Bandar Lampung	54.41	226	P	P	20 07 13.4	+3.2
TAS	Tashkent	54.43	298	P	P	20 07 10.5	+0.4
TAS	Tashkent	54.43	298	P	P	20 07 10.5	+0.4
TAS				pmax	pmax		
	comp=Z,127nm,0.9s						
MASI	Maura Aman, Be	54.43	231	P	P	20 07 11.2	+0.8
	comp=Z,75nm,1.0s,comp=Z,808nm						
N31M	Braeburn, Yuko	54.52	36	P	P	20 07 12.1	+1.6
	baz=284,SNR=6.7						
NIL	Nilore	54.55	288	P	P	20 07 11.2	+0.2
NIL	Nilore	54.55	288	P	P	20 07 11.3	+0.2
NIL				pmax	pmax		
	comp=Z,96nm,0.8s						
NIL	Nilore	54.55	288	P	P	20 07 11.7	+0.6
NIL	Nilore	54.55	288	P	P	20 07 11.8	+0.6
O30N	Mendenhall	54.55	37	P	P	20 07 12.8	+2.0
	baz=285,SNR=6.6						
GAR	Garm	54.57	295	P	P	20 07 11.2	-0.1
PLBC	Pleasant Camp	54.76	38	P	P	20 07 14.2	+2.0
	baz=285,SNR=5.3						
LWLI	Liwa	54.82	228	P	P	20 07 12.9	-0.4
	comp=Z,87nm,0.8s,comp=Z,1µm						
SVE	Sverdlovsk	54.85	318	*d i*P	P	20 07 13.6	+0.7
SVE				pmax	pmax		
	comp=Z,301nm,1.0s						
SVE				MLR	MLR		
	comp=Z,2µm,17.0s						
KASI	Kota Agung	54.97	227	P	P	20 07 13.4	-0.8
	comp=Z,43nm,0.7s						
M31M	Drury Creek, Y	54.98	35	P	P	20 07 15.8	+2.0
	baz=285,SNR=15						
CGJI	Cibinong	55.17	225	P	P	20 07 21.6	+6.0
S31K	Pelican	55.24	40	P	P	20 07 17.5	+1.9
	baz=286						
SKAG	Skagway	55.27	38	P	P	20 07 17.4	+1.5
	baz=286						
MTSU	Mount Surprise	55.41	177	P	P	20 07 20.0	+2.8
	comp=Z,16nm,0.9s						
FARO	Faro, Yukon	55.44	35	P	P	20 07 19.1	+2.0
	baz=286,SNR=12						

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CHGR  Chuyangaron       55.54 295    P       P        20 07 18.8 +0.5
CHGR  Chuyangaron       55.54 295    P       P        20 07 18.8 +0.5
CHGR                                 pmax    pmax
      comp=Z,604nm,0.8s
A36M  Sachs Harbour     55.79  22    P       P        20 07 20.6 +1.2
A36M  Sachs Harbour     55.79  22    P       P        20 07 21.1 +1.7
      baz=286,SNR=52
SIT   Sitka             55.97  41    P       P        20 07 23.0 +2.1
      baz=288
R32K  Eaglecrest        56.02  39    P       P        20 07 23.8 +2.5
      baz=288
P32M  Atlin             56.02  38    P       P        20 07 23.3 +2.0
      baz=287,SNR=6.1
ARU   Arti              56.06 318    LR      LR       20 33 57.7
      comp=Z,1µm,18.1s,baz=71,slow=39
ARU   Arti              56.06 318    P       P        20 07 21.8 +0.2
ARU   Arti              56.06 318 c iP       P        20 07 21.7 +0.1
ARU                                  *PP     pP       20 07 33.4 -1.5
ARU                                                   20 08 16.4
ARU                                                   20 09 22.1
ARU                                  PPP     PPP      20 10 38.4
ARU                                  S       S        20 15 08.1 +1.5
ARU                                  SS      SS       20 18 51.6 -1.1
ARU                                  pmax    pmax
      comp=Z,342nm,1.1s
ARU                                  MLR     MLR
      comp=Z,1µm,17.0s
ARU   Arti              56.06 318  ⇑ P       P        20 07 21.7 +0.1
ARU                                  pP      pP       20 07 33.3 -1.5
S32K  Killisnoo         56.23  40    P       P        20 07 24.4 +1.6
      baz=288
MMPY  Sheldon Lake,     56.26  34    P       P        20 07 25.2 +2.2
      baz=287,SNR=11
P33M  Teslin, Yukon     56.27  37    P       P        20 07 25.3 +2.2
      baz=288,SNR=14
Q32M  Nakina River      56.92  38    P       P        20 07 30.0 +2.0
      baz=289
C36M  Paulatuk          56.97  25    P       P        20 07 28.7 +1.0
      baz=289,SNR=15
FITZ  Fitzroy Crossi    57.29 198    P       P        20 07 31.3 +0.7
FITZ  Fitzroy Crossi    57.29 198    P       P        20 07 31.5 +0.8
KBL   Kabul             57.33 291    P       P        20 07 30.5 -0.7
KBL   Kabul             57.33 291    P       P        20 07 30.5 -0.7
KBL                                  pmax    pmax
      comp=Z,117nm,1.0s
KBL   Kabul             57.33 291    P       P        20 07 31.0 -0.2
      SNR=53
KBL                                  P       P        20 07 31.0 -0.2
      SNR=53
WB0   Warramunga Arr    57.36 188    P       P        20 07 30.6 -0.6
U33K  Whale Pass        57.43  41    P       P        20 07 33.2 +2.0
      baz=290
CTA   Charters Tower    57.46 175    LR      LR       20 30 52.0
      comp=Z,112nm,21.9s,baz=338,slow=34
CTAO  Charters Tower    57.46 175    P       P        20 07 31.9 +0.1
CTAO                                 IAmb    IAmb     20 07 49.3
      comp=Z,47nm,1.6s
CTAO  Charters Tower    57.46 175    P       P        20 07 31.9 +0.1
CTAO                                 pmax    pmax
      comp=Z,47nm,1.6s
CTAO  Charters Tower    57.46 175    P       P        20 07 32.6 +0.8
CTAO                                 pP      pP       20 07 44.4 -0.7
WRAB  Tennant Creek     57.53 188    P       P        20 07 32.3 -0.1
WRAB  Tennant Creek     57.53 188    P       P        20 07 32.2 -0.1
WRAB                                 pP      pP       20 07 44.8 -0.8
WRA   Warramunga Arr    57.54 188    P       P        20 07 32.2 -0.2
      comp=Z,19nm,0.7s,baz=5.7,slow=7.4,SNR=153
WRA                                  LR      LR       20 31 44.7
      comp=Z,206nm,20.3s,baz=12,slow=35
      comp=Z,19nm,0.7s
WRA   Warramunga Arr    57.54 188    P       P        20 07 31.5 -0.9
CRAG  Craig             57.65  42    P       P        20 07 35.2 +2.4
      baz=290
ABKAR Akbulak array     57.70 310    P       P        20 07 33.2 -0.1
ABKAR Akbulak array     57.70 310    P       P        20 07 33.1 -0.1
WRAK  Wrangell Islan    57.73  41    P       P        20 07 35.3 +1.9
      baz=290
QIS   Mount Isa         57.78 182    P       P        20 07 35.1 +1.0
S34M  Telegraph Cree    57.84  39    P       P        20 07 36.5 +2.4
      baz=290,SNR=6.0
DLBC  Dease Lake        58.20  38    P       P        20 07 37.8 +1.0
      comp=Z,13nm,0.9s,baz=282,slow=6.3,SNR=12
DLBC                                 LR      LR       20 31 26.6
      comp=Z,185nm,21.9s,baz=286,slow=35
      comp=Z,13nm,0.9s
DLBC  Dease Lake        58.20  38    P       P        20 07 37.8 +1.0
DLBC                                 IAmb    IAmb     20 07 53.8
      comp=Z,38nm,1.2s
DLBC  Dease Lake        58.20  38    P       P        20 07 39.5 +2.7
      baz=291,SNR=8.1
HYB   Hyderabad         58.30 268 ⇑eP        P        20 07 38.0  0.0
HYB                                  IVmB_BB          20 07 38.4
      comp=Z,499nm,1.1s
HYB                                 epP      pP       20 07 50.8 -0.5
HYB                                 ePcP     PcP      20 08 28.7  0.0
AKTO  Aktyubinsk        58.42 312    LR      LR       20 33 59.0
      comp=Z,1µm,18.8s,baz=64,slow=37
V35K  Ketchikan         58.51  42    P       P        20 07 41.2 +2.4
      baz=291
T35M  Bob Quinn         58.62  40    P       P        20 07 42.2 +2.6
      baz=291,SNR=5.7
WRGLY Wrigley           59.40  32    P       P        20 07 46.6 +1.7
      baz=293,SNR=5.3
HOPEN Hopen             59.60 346   eP       P        20 07 47.1 +1.0
ALE   Alert             59.63   4    P       P        20 07 47.0 +0.7
ALE                                  pP      pP       20 08 00.4 +0.8
LIRD  Liard River Hi    59.73  36    P       P        20 07 49.6 +2.4
      baz=293,SNR=11
KIRV  Kirov             59.92 323    LR      LR       20 36 14.4
      comp=Z,384nm,18.8s,baz=63,slow=38
KIRV  Kirov             59.92 323 ceP        P        20 07 48.8 +0.3
SPA0  Spitsbergen Ar    60.08 349   eP       P        20 07 49.9 +0.6
SPB2  Spitsbergen Ar    60.08 349    P       P        20 07 49.8 +0.4
SPB2                                 IAmb    IAmb     20 08 53.7
      comp=Z,50nm,1.1s
SPITS Spitsbergen Ar    60.08 349    LR      LR       20 35 25.7
      comp=Z,529nm,20.9s,baz=12,slow=38
SPITS Spitsbergen Ar    60.08 349    P       P        20 07 49.5 +0.1
SPITS                                pmax    pmax
      comp=Z,112nm,1.4s
KBS   Kingsbay          60.20 350    P       P        20 07 51.1 +0.9
KBS   Kingsbay          60.20 350 ceP        P        20 07 52.1 +1.9
KBS                                  pmax    pmax
      comp=Z,48nm,0.8s
KBS   Kingsbay          60.20 350  i P       P        20 07 51.3 +1.0
KBS   Kingsbay          60.20 350    P       P        20 07 51.1 +0.9
KOTAN Kotaneelee Air    60.39  35    P       P        20 07 53.6 +1.9
      baz=294
NOR   Nord              60.59 356  i P       P        20 07 52.9 +0.1
NOR                                  IAmb    IAmb     20 07 53.5
      comp=Z,29nm,0.8s
AS01  Alice Springs     61.26 188    P       P        20 07 58.6 +0.5
      comp=Z,46nm,0.8s
AS31  Alice Springs     61.27 188    P       P        20 07 58.2 +0.1
ASAR  Alice Springs     61.27 188    P       P        20 07 58.3 +0.2
      comp=Z,15nm,0.8s,baz=10,slow=6.5,SNR=144
ASAR                                 LR      LR       20 34 01.1
      comp=Z,230nm,20.8s,baz=1.0,slow=35
ASAR                                 PKP2bc  P'P'bc   20 37 20.8 +5.0
      comp=Z,2.2nm,0.8s,baz=170,slow=2.1,SNR=17
      comp=Z,15nm,0.8s
BBB   Bella Bella       61.67  44    LR      LR       20 32 23.0
      comp=Z,150nm,21.4s,baz=291,slow=34
LVZ   Lovozero          61.71 336    P       P        20 08 00.3 -0.3
LVZ   Lovozero          61.71 336 ceP        P        20 08 02.3 +1.6
LVZ                                  pmax    pmax
      comp=Z,134nm,1.7s
LVZ   Lovozero          61.71 336    P       P        20 08 00.5 -0.1
MBWA  Marble Bar        61.86 203    P       P        20 08 02.2 +0.2
MBWA                                 IAmb    IAmb     20 08 17.4
      comp=Z,50nm,0.9s
MBWA  Marble Bar        61.86 203    P       P        20 08 02.9 +0.8
MBWA  Marble Bar        61.86 203    P       P        20 08 02.4 +0.4
MBWA                                 P       P        20 08 02.4 +0.4
MBWA  Marble Bar        61.86 203    P       P        20 08 02.2 +0.2
MBWA                                 pP      pP       20 08 15.4 -0.1
RES   Resolute Bay      62.12  15    P       P        20 08 02.8 -0.5
      comp=Z,44nm,0.9s,baz=305,slow=6.4,SNR=130
RES                                  LR      LR       20 36 32.5
      comp=Z,134nm,21.8s,baz=348,slow=37
      comp=Z,44nm,0.9s
RES   Resolute Bay      62.12  15    P       P        20 08 03.4 +0.2
RES                                  IAmb    IAmb     20 08 04.6
      comp=Z,54nm,0.9s
RES   Resolute Bay      62.12  15    P       P        20 08 03.4 +0.2
RES                                  pmax    pmax
      comp=Z,54nm,0.9s
VADS  Vadso             62.15 339   eP       P        20 08 03.6 +0.1
VADS                                 IAmb    IAmb     20 08 04.8
      comp=Z,175nm,1.0s
PSA00 Pilbara Seismi    62.21 203    P       P        20 08 04.7 +0.3
PSA00                                IAmb    IAmb     20 08 05.8
      comp=Z,53nm,1.2s
PSA00 Pilbara Seismi    62.21 203    P       P        20 08 03.5 -0.9
PSA00                                IAmb    IAmb     20 08 19.7
      comp=Z,24nm,1.0s
PSA00 Pilbara Seismi    62.21 203    P       P        20 08 05.4 +1.0
APA   Apatity           62.29 336 ⇓iP        P        20 08 01.8 -2.7
APA                                  pmax    pmax
      comp=Z,73nm,0.6s
ADZR  Andozero          62.39 331 ⇑iP        P        20 08 05.3 +0.1
PALK  Pallekele         62.55 257    LR      LR       20 37 09.5
      comp=Z,307nm,20.8s,baz=153,slow=38
PALK  Pallekele         62.55 257    P       P        20 08 07.1  0.0
PALK                                 IAmb    IAmb     20 08 08.6
      comp=Z,51nm,1.2s
PALK  Pallekele         62.55 257    P       P        20 08 07.1  0.0
PALK                                 pmax    pmax
      comp=Z,51nm,1.3s
PALK  Pallekele         62.55 257    P       P        20 08 07.6 +0.6
KEV   Kevo              63.03 339    P       P        20 08 09.1 -0.2
KEV   Kevo              63.03 339    P       P        20 08 09.1 -0.2
KEV                                  pmax    pmax
      comp=Z,103nm,1.0s
KEV   Kevo              63.03 339    P       P        20 08 09.1 -0.2
KEV                                  pP      pP       20 08 20.9 -1.8
EIDS  Eidsvold          63.19 170    P       P        20 08 11.9 +1.0
EIDS                                 IAmb    IAmb     20 08 26.8
      comp=Z,42nm,1.4s
EIDS  Eidsvold          63.19 170    P       P        20 08 12.2 +1.4
YKA   Yellowknife Ar    63.36  30    P       P        20 08 10.9 -0.7
      comp=Z,11nm,0.8s,baz=300,slow=6.7,SNR=138
YKA                                  LR      LR       20 35 36.8
      comp=Z,129nm,21.8s,baz=272,slow=36
YKA                                  PKPPKP  P'P'df   20 37 09.8 -4.2
      comp=Z,0.8nm,0.9s,baz=119,slow=3.1,SNR=6.3
      comp=Z,11nm,0.8s
YKA   Yellowknife Ar    63.36  30    P       P        20 08 12.0 +0.4
YKA   Yellowknife Ar    63.36  30    P       P        20 08 12.0 +0.4
HAMF  Hammerfest        63.40 341   eP       P        20 08 12.0 +0.2
KLMR  Klimovskoe        63.40 328 ⇑iP        P        20 08 12.0  0.0
KLMR                              ⇓iP        P        20 08 12.0  0.0
KLMR                              ⇑iP        P        20 08 12.0  0.0
KLMR                                 AMP              20 08 12.8
      comp=Z,189nm,1.0s
KLMR                                 AMP              20 08 13.2
      comp=Z,217nm,1.5s
KLMR                                ePP      PP       20 10 31.3  0.0
KLMR                                 LQ      LQ       20 30 59.2
KLMR                                 LQ      LQ       20 30 59.2
KLMR                                 LR      LR       20 36 03.3
KLMR                                 AMP              20 37 55.6
      comp=Z,840nm,15.0s
KLMR  Klimovskoe        63.40 328 c iP       P        20 08 11.9  0.0
KLMR                                e                 20 10 31.3
KLMR                                 pmax    pmax
      comp=Z,189nm,1.0s
KLMR                                 pmax    pmax
      comp=Z,217nm,1.5s
KLMR                                 MLR     MLR
      comp=Z,840nm,15.0s
WRKA  Warakurna         63.44 193    P       P        20 08 12.9 +0.3
BELG  Belogornoye       63.51 317    LR      LR       20 37 32.2
      comp=Z,461nm,19.4s,baz=95,slow=38
BELG  Belogornoye       63.51 317 c iP       P        20 08 12.2 -0.6
BELG                                 pmax    pmax
      comp=Z,51nm,1.1s
ARA0  ARCESS Array S    63.58 339   eP       P        20 08 13.1 +0.1
ARA0                                 IAmb    IAmb     20 08 14.9
      comp=Z,101nm,1.1s
ARCES ARCESS Array B    63.58 339    P       P        20 08 12.4 -0.6
      comp=Z,51nm,0.9s,baz=51,slow=7.9,SNR=25
ARCES                                LR      LR       20 39 50.2
      comp=Z,440nm,18.3s,baz=56,slow=40
      comp=Z,51nm,0.9s
ARCES ARCESS Array B    63.58 339    P       P        20 08 12.9 -0.1
ARCES ARCESS Array B    63.58 339    P       P        20 08 12.9 -0.1
ARCES                                pmax    pmax
      comp=Z,82nm,1.0s
GEYT  Alibeck           63.68 299    P       P        20 08 14.3 +0.1
      comp=Z,66nm,1.0s,baz=40,slow=2.5,SNR=90
GEYT                                 LR      LR       20 36 55.3
      comp=Z,349nm,21.5s,baz=63,slow=37
      comp=Z,66nm,1.0s
NOUC  Port Laguerre     63.72 154    P       P        20 08 15.4 +1.0
DZM   Mont Dzumac       63.74 154   eP       P        20 08 24.5  +10
      comp=Z,131nm,1.2s
DZM                                 eS       S        20 16 45.8 -0.2
      comp=Z,310nm,28.8s
DZM                                 eSS      SS       20 20 54.7 -0.3
      comp=Z,254nm,27.6s
DZM                                 eLR      LR       20 27 16.9
      comp=Z,1µm,21.4s
DZM   Mont Dzumac       63.74 154    P       P        20 08 17.0 +2.3
      comp=Z,5.3nm,0.7s,baz=40,slow=7.5,SNR=7.4
DZM                                  LR      LR       20 33 39.0
      comp=Z,704nm,20.7s,baz=22,slow=34
      comp=Z,5.3nm,0.7s
DZM   Mont Dzumac       63.74 154    P       P        20 08 15.8 +1.1
DZM   Mont Dzumac       63.74 154    P       P        20 08 20.4 +5.7
DZM                                  pP      sP       20 08 33.5  0.0
QLP   Quilpie           63.80 177    P       P        20 08 15.8 +0.9
PCHI  Peechi            63.99 263 ⇑eP        P        20 08 16.6 +0.1
PCHI                                eS       S        20 16 55.6 +6.1
RMQ   Roma              64.02 173    P       P        20 08 18.5 +2.2
OUENC Ouen Island, N    64.20 154            P        20 08 18.9 +1.3
OUENC                                IAmb    IAmb     20 08 34.9
      comp=Z,40nm,1.1s
HILA  High Level        64.31  35    P       P        20 08 18.5 +0.5
KTK1  Kautokeino        64.54 339   eP       P        20 08 19.7 +0.4
KTK1                                 IAmb    IAmb     20 08 20.6
      comp=Z,104nm,1.0s
PINNC Pines Island,     64.59 153    P       P        20 08 21.4 +1.3
PINNC                                IAmb    IAmb     20 08 52.7
      comp=Z,71nm,1.4s
TULEG Thule             64.62   8    P       P        20 08 19.4 -0.3
TULEG                                IAmb    IAmb     20 08 20.6
      comp=Z,59nm,0.9s
TULEG Thule             64.62   8  i P       P        20 08 19.4 -0.3
TULEG                                IAmb    IAmb     20 08 20.2
      comp=Z,60nm,0.9s
MSVF  Nonsavu           64.82 141    LR      LR       20 31 05.6
      comp=Z,514nm,21.9s,baz=354,slow=31
INKA  Innaminka         64.91 181    P       P        20 08 23.3 +1.2
WAPA  Wapiti River      64.94  39    P       P        20 08 22.7 +0.5
JETT  Jettan, Norway    64.96 341   eP       P        20 08 22.6 +0.5
JETT                                 IAmb    IAmb     20 08 23.3
      comp=Z,96nm,1.1s
NEEM  North Greenlan    65.05   3  i P       P        20 08 23.2 +0.3
NEEM                                 IAmb    IAmb     20 08 24.1
      comp=Z,77nm,0.9s
OOD   Oodnadatta        65.19 186    P       P        20 08 25.2 +1.3
TRO   Tromso            65.30 341   eP       P        20 08 24.5 +0.3
TRO                                  IAmb    IAmb     20 08 26.9
      comp=Z,199nm,1.5s
DAG   Danmarks Havn     65.31 355  i P       P        20 08 23.0 -1.2
DAG                                  IAmb    IAmb     20 08 25.0
      comp=Z,64nm,0.9s
LLLB  Lillooet          65.86  44    P       P        20 08 29.2 +1.0
LLLB                                 IAmb    IAmb     20 08 44.3
      comp=Z,43nm,1.2s
AULRC Lightning Ridg    66.86 174    P       P        20 08 37.6 +3.0
      comp=Z,69nm,1.4s
MOS   Moscow            66.92 323   eP       P        20 08 33.3 -1.5
MOS                                 e                 20 08 42.9
MOS                                 e                 20 08 51.5
MOS                                 e                 20 09 02.9
MOS                                 e                 20 10 59.8
MOS                                 eS       S        20 17 23.6 -0.5
MOS                                  pmax    pmax
      comp=Z,600nm,1.8s
MOS                                  pmax    pmax
      comp=Z,235nm,1.3s
MOS                                  pmax    pmax
      comp=N,94nm,1.0s
MOS                                  pmax    pmax
      comp=E,95nm,1.0s
MOS                                  MLR     MLR
      comp=Z,500nm,19.0s
VRH   Novokhopyorsk     67.29 318 c iP       P        20 08 36.9 -0.3
VRH                                  pmax    pmax
      comp=Z,110nm,0.8s
VRH                                  pmax    pmax
      comp=Z,130nm,0.8s
VRH                                  MLR     MLR
      comp=Z,1µm,17.0s
MEEK  Meekatharra       67.34 202    P       P        20 08 38.2 +0.4
AFI   Afiamalu          67.37 130    LR      LR       20 31 09.3
      comp=Z,335nm,21.5s,baz=306,slow=30
STEI  Steigen           67.45 341   eP       P        20 08 38.1 +0.1
STEI                                 IAmb    IAmb     20 08 38.9
      comp=Z,61nm,1.0s
KULLO Kullorsuaq        67.50   5  i P       P        20 08 37.5 -0.7
KULLO                                IAmb    IAmb     20 08 52.8
      comp=Z,59nm,1.2s
LCRK  Leigh Creek       67.67 183    P       P        20 08 41.0 +1.3
OBN   Obninsk           67.77 323    LR      LR       20 41 40.8
      comp=Z,101nm,18.1s,baz=44,slow=39
OBN   Obninsk           67.77 323    P       P        20 08 39.7 -0.5
OBN   Obninsk           67.77 323 c iP       P        20 08 40.1 -0.1
OBN                                 i                 20 08 47.7
OBN                                 e*SP     sP       20 08 59.0 -0.1
OBN                                 e                 20 11 07.6
OBN                                 eS       S        20 17 37.2 +3.0
OBN                                  *SS     sS       20 18 12.0  +15
OBN                                  pmax    pmax
      comp=Z,246nm,1.7s
OBN                                  MLR     MLR
      comp=Z,451nm,17.0s
OBN   Obninsk           67.77 323    P       P        20 08 40.1 -0.1
MULG  Mulgathing        67.80 187    P       P        20 08 41.2 +0.7
DBG   Daneborg          67.80 355  i P       P        20 08 39.4 -0.7
DBG                                  IAmb    IAmb     20 08 40.4
      comp=Z,12nm,0.8s
PUL   Pulkovo           67.82 329 ceP        P        20 08 41.5 +1.0
PUL                                  pmax    pmax
      comp=Z,55nm,0.5s
FAUS  Fauske            67.83 340   eP       P        20 08 40.7 +0.3
FAUS                                 IAmb    IAmb     20 08 41.5
      comp=Z,122nm,1.0s
LPSR  Galich'ya Gora    67.99 320   eP       P        20 08 41.0 -0.7
LPSR                                 pmax    pmax
      comp=Z,190nm,1.0s
LPSR                                 pmax    pmax
      comp=Z,170nm,1.0s
LPSR                                 MLR     MLR
      comp=Z,910nm,16.0s
ARMA  Armidale          68.23 171    P       P        20 08 43.5 +0.1
ARMA                                 IAmb    IAmb     20 08 59.9
      comp=Z,65nm,1.3s
ARMA  Armidale          68.23 171    P       P        20 08 44.6 +1.2
LTY   Liberty           68.27  47    P       P        20 08 44.0 +0.4
VORR  Voronezh          68.36 319   eP       P        20 08 44.3 +0.3
VORR                                 pmax    pmax
      comp=Z,70nm,0.5s
FIA1  FINESS Array S    68.43 332    P       P        20 08 44.1 -0.1
FINES FINESS Array B    68.44 332    P       P        20 08 44.3  0.0
      comp=Z,98nm,0.8s,baz=58,slow=7.5,SNR=217
FINES                                LR      LR       20 41 00.4
      comp=Z,790nm,18.1s,baz=52,slow=38
      comp=Z,98nm,0.8s
FINES FINESS Array B    68.44 332    P       P        20 08 44.0 -0.3
VSR   Storozhevoye      68.63 319   eP       P        20 08 45.1 -0.6
VSR                                  pmax    pmax
      comp=Z,200nm,1.1s
VSR                                  pmax    pmax
      comp=Z,150nm,1.0s
VSR                                  MLR     MLR
      comp=Z,2µm,18.0s
VORD  Divnogorie        68.70 318   eP       P        20 08 45.2 -0.9
VORD                                 pmax    pmax
      comp=Z,110nm,1.1s
CMSA  Cobar Meteorol    68.80 176    P       P        20 08 47.9 +1.1
AUPHS Peel High Scho    68.81 171    P       P        20 08 48.0 +1.1
AKT   Akhty             68.86 307   eP       P        20 08 47.2 -0.3
AKT                                 e*PP     pP       20 08 59.5 -1.6
AKT                                 e*SP     sP       20 09 06.4 -0.1
AKT                                 e                 20 09 10.0
AKT                                 e                 20 11 18.8
AKT                                  pmax    pmax
      comp=Z,66nm,0.8s
K02D  Willamette Mer    68.87  52    P       P        20 08 47.9 +0.4
MOR8  Moi Rana          68.95 340   eP       P        20 08 46.4 -1.0
MOR8                                 IAmb    IAmb     20 08 47.2
      comp=Z,142nm,1.0s
STKA  Stephens Creek    69.03 180    P       P        20 08 48.9 +0.7
      comp=Z,13nm,0.7s,baz=342,slow=7.8,SNR=42
STKA                                 LR      LR       20 38 02.0
      comp=Z,240nm,21.3s,baz=14,slow=35
      comp=Z,13nm,0.7s
STKA  Stephens Creek    69.03 180    P       P        20 08 49.1 +0.9
STKA  Stephens Creek    69.03 180    P       P        20 08 49.2 +1.0
STKA  Stephens Creek    69.03 180    P       P        20 08 49.1 +0.9
STKA                                 pmax    pmax
      comp=Z,11nm,0.9s
KONS  Konsvik           69.06 340   eP       P        20 08 48.4 +0.3
FORT  Forrest           69.09 192    P       P        20 08 49.2 +0.7
FORT  Forrest           69.09 192    P       P        20 08 49.5 +0.9
GROC  Groznyy           69.17 309   eP       P        20 08 42.7 -6.5
GROC                                e                 20 11 21.2
GROC                                 pmax    pmax
      comp=Z,452nm,1.6s
SEKA  Sheki             69.35 306    P       P        20 08 48.7 -1.7
LKRN  Lenkeran, Azer    69.64 304    P       P        20 08 51.0 -1.2
MNGR  Mingechevir, A    69.65 306    P       P        20 08 50.9 -1.3
AUDCS Dubbo College     69.69 174    P       P        20 08 53.9 +1.6
JMIC  Jan Mayen         69.69 350    LR      LR       20 42 48.7
      comp=Z,118nm,18.9s,baz=52,slow=39
NEW   Newport           69.73  44    P       P        20 08 53.4 +0.7
NEW   Newport           69.73  44    P       P        20 08 53.4 +0.7
NEW                                  pmax    pmax
      comp=Z,29nm,1.2s
NEW   Newport           69.73  44    P       P        20 08 53.7 +1.0
      baz=304,SNR=9.9
MEF   Metsahovi         69.86 332   eP       P        20 08 53.6 +0.5
JASK  Jask - Hormozg    69.98 288    P       P        20 08 55.7 +1.2
YBH   Yreka Blue Hor    69.99  52    LR      LR       20 33 49.5
      comp=Z,98nm,21.8s,baz=295,slow=31
YBH   Yreka Blue Hor    69.99  52    P       P        20 08 55.9 +1.5
YBH   Yreka Blue Hor    69.99  52    P       P        20 08 55.9 +1.5
YBH                                  pmax    pmax
      comp=Z,32nm,1.3s
VSU   Vasula            70.09 330 c iP       P        20 08 54.9 +0.4
VSU                                  pmax    pmax
      comp=Z,357nm,1.1s
VSU   Vasula            70.09 330   eP       P        20 08 55.3 +0.8
BBOO  Buckleboo         70.14 185            P        20 08 55.6 +0.6
BBOO                                 IAmb    IAmb     20 09 10.7
      comp=Z,74nm,0.9s
BBOO  Buckleboo         70.14 185    P       P        20 08 55.8 +0.7
GANJ  Ganja             70.21 306    P       P        20 08 54.4 -1.3
SUMG  Summit            70.21 360  i P       P        20 08 56.8 +1.2
SUMG                                 IAmb    IAmb     20 08 57.5
      comp=Z,70nm,1.0s
WHYH  Whyalla           70.28 184    P       P        20 08 57.1 +1.3
RAF   Rauma             70.28 333   eP       P        20 08 56.1 +0.4
MORW  Morawa            70.40 204    P       P        20 08 57.4 +0.6
MORW                                 IAmb    IAmb     20 08 58.2
      comp=Z,40nm,0.9s
MORW  Morawa            70.40 204    P       P        20 08 57.4 +0.6
ZEI   Tsey              70.56 309   eP       P        20 08 56.5 -1.5
ZEI                                  pmax    pmax
      comp=Z,56nm,1.4s
HTT   Hallett           70.62 182    P       P        20 08 59.2 +1.2
KVAR  Kislovodsk Arr    70.66 311    LR      LR       20 41 26.4
      comp=Z,286nm,18.9s,baz=236,slow=37
KBZ   Khabaz            70.66 311    P       P        20 08 57.6 -0.7
      comp=Z,52nm,0.9s,baz=64,slow=5.2,SNR=52
KBZ                                  LR      LR       20 44 40.0
      comp=Z,519nm,19.3s,baz=50,slow=40
      comp=Z,52nm,0.9s
KBZ   Khabaz            70.66 311 ceP        P        20 08 58.7 +0.4
KIV   Kislovodsk        70.66 311  ⇑ P       P        20 08 59.2 +0.8
KIV   Kislovodsk        70.66 311    P       P        20 08 58.4 -0.1
KIV   Kislovodsk        70.66 311   eP       P        20 08 59.3 +0.8
KIV                                 e                 20 11 33.1
KIV                                 eS       S        20 18 09.5 +0.5
KIV                                 eSS      SS       20 22 41.8 +1.1
KIV                                  pmax    pmax
      comp=Z,173nm,1.1s
KIV                                  pmax    pmax
      comp=Z,25nm,3.3s
KIV                                  MLR     MLR
      comp=Z,232nm,18.0s
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KIV   Kislovodsk        70.66 311 i P    P     20 08 58.8 +0.4
      SNR=29
KIV   Kislovodsk        70.66 311   P    P     20 08 59.2 +0.8
KIV   Kislovodsk        70.66 311   P    P     20 08 58.9 +0.4
SHA1  Shidzhatmaz       70.80 311  eP    P     20 08 59.5  0.0
JLN   Jalan Bani Buh    70.82 284   P    P     20 09 01.0 +1.3
      SNR=6.6
WSAR  Wadi Sarin        70.83 285   LR   LR    20 45 37.8
      comp=Z,311nm,18.4s,baz=78,slow=41
WSAR  Wadi Sarin        70.83 285   P    P     20 09 00.3 +0.6
NSS   Namsos            70.87 339  eP    P     20 08 59.3 +0.1
NSS                                 IAmb IAmb  20 09 00.0
      comp=Z,56nm,0.9s
WBK   Wadi Bani Khal    70.91 284   P    P     20 09 02.0 +1.7
      SNR=10.0
KMBL  Kambalda          70.93 198   P    P     20 09 00.9 +1.0
ONI   Oni               70.95 309   P    P     20 09 00.8 +0.6
ONI                                 IAmb IAmb  20 09 02.4
      comp=Z,79nm,1.2s
ONI   Oni               70.95 309   P    P     20 09 00.8 +0.6
ONI                                 pmax pmax
      comp=Z,79nm,1.2s
WALA  Waterton Lakes    71.03  42   P    P     20 09 01.4 +0.7
NEY   Neytrino          71.03 310 i P    P     20 09 02.2 +1.4
NEY                                 pmax pmax
      comp=Z,7.0nm,0.8s
BIDO  Bidbid            71.06 285   P    P     20 09 03.0 +1.9
      SNR=9.4
MTSE  Matsula           71.08 331  eP    P     20 09 01.3 +0.7
BANOM Banah             71.14 288 i P    P     20 09 02.0 +0.4
      SNR=28
BANOM Banah             71.14 288   P    P     20 09 03.0 +1.4
      SNR=8.9
SHME  Shamm             71.19 289 i P    P     20 09 02.0 +0.2
      SNR=54
SHME  Shamm             71.19 289   P    P     20 09 02.9 +1.1
      SNR=12
SMDO  Samad             71.37 285   P    P     20 09 05.0 +1.9
      SNR=11
MOD   Modoc Plateau     71.40  51   P    P     20 09 04.2 +1.1
MDH   Madha             71.48 288 i P    P     20 09 02.7 -0.9
      SNR=6.4
MDH   Madha             71.48 288   P    P     20 09 03.6  0.0
GNI   Garni             71.49 307   P    P     20 09 03.1 -0.6
      comp=Z,44nm,1.1s,baz=18,slow=3.2,SNR=21
GNI                                 LR   LR    20 43 07.5
      comp=Z,519nm,18.9s,baz=58,slow=38
      comp=Z,44nm,1.1s
GNI   Garni             71.49 307   P    P     20 09 03.9 +0.2
GNI                                 IAmb IAmb  20 09 07.5
      comp=Z,86nm,1.2s
GNI   Garni             71.49 307⥣eP    P     20 09 04.3 +0.7
GNI                                 pmax pmax
      comp=Z,99nm,1.3s
GNI   Garni             71.49 307   P    P     20 09 04.4 +0.7
GNI   Garni             71.49 307   P    P     20 09 04.6 +1.0
GNI   Garni             71.49 307   P    P     20 09 04.7 +1.0
GNI                                 sP   sP    20 09 22.4 -0.3
AAL   Aland             71.50 333  eP    P     20 09 03.1  0.0
MASF  Masafi            71.55 288   P    P     20 09 05.6 +1.6
      SNR=7.8
BMO   Blue Mountains    71.55  47   P    P     20 09 04.3 +0.5
BMO   Blue Mountains    71.55  47   P    P     20 09 04.3 +0.5
BMO                                 pmax pmax
      comp=Z,31nm,1.2s
MSFE  Esma-Masafi       71.55 288 i P    P     20 09 04.1  0.0
      SNR=18
AKH   Akhalkalaki       71.58 308   P    P     20 09 04.7 +0.5
AKH                                 IAmb IAmb  20 09 25.1
      comp=Z,86nm,0.9s
AKH   Akhalkalaki       71.58 308   P    P     20 09 04.7 +0.5
AKH                                 pmax pmax
      comp=Z,87nm,0.9s
BLDU  Ballidu           71.63 202   P    P     20 09 01.9 -2.3
HOQ   Hoqain            71.65 286   P    P     20 09 05.1 +0.4
      SNR=11
SCO   Scoresbysund      71.65 354   P    P     20 09 04.3 +0.5
SCO                                 IAmb IAmb  20 09 06.0
      comp=Z,64nm,1.1s
SCO   Scoresbysund      71.65 354   P    P     20 09 04.3 +0.5
SCO                                 pmax pmax
      comp=Z,64nm,1.1s
SCO   Scoresbysund      71.65 354 i P    P     20 09 04.8 +1.0
SCO                                 IAmb IAmb  20 09 05.7
      comp=Z,60nm,1.1s
JMDO  Jabal Madar       71.71 284   P    P     20 09 06.0 +0.9
      SNR=11
YNG   Young             71.73 174   P    P     20 09 05.9 +1.2
UOSS  Minazif           71.75 288   P    P     20 09 05.0 -0.2
UOSS                                IAmb IAmb  20 09 06.2
      comp=Z,89nm,0.9s
UOSS  Minazif           71.75 288 i P    P     20 09 04.8 -0.4
      SNR=21
UOSS  Minazif           71.75 288   P    P     20 09 05.5 +0.2
UOSS  Minazif           71.75 288   P    P     20 09 05.1 -0.2
UMQ   Umm Al-Quwin      71.84 288   P    P     20 09 06.3 +0.6
HATD  Hatta, Dubai      71.86 288 i P    P     20 09 06.1 +0.2
      SNR=37
HATD  Hatta, Dubai      71.86 288   P    P     20 09 07.0 +1.1
      SNR=9.8
SOHO  SOHO              71.94 287 i P    P     20 09 06.3  0.0
      SNR=6.4
SOHO  SOHO              71.94 287   P    P     20 09 06.6 +0.3
ASHO  Ashiyiah          72.00 288 i P    P     20 09 06.7 -0.1
      SNR=25
ASHO  Ashiyiah          72.00 288   P    P     20 09 08.0 +1.2
      SNR=9.3
WVOR  Wild Horse Val    72.12  50   P    P     20 09 08.4 +1.0
WVOR  Wild Horse Val    72.12  50   P    P     20 09 08.4 +1.0
WVOR                                pmax pmax
      comp=Z,53nm,1.5s
NAZ   Nazwa, Dubai      72.13 288 i P    P     20 09 08.0 +0.5
      SNR=6.6
NAZ   Nazwa, Dubai      72.13 288   P    P     20 09 09.0 +1.5
      SNR=9.6
MNK   Minsk             72.15 326 i P    P     20 09 07.3 +0.1
      comp=E,8.0nm,0.9s
MNK                               i P    P     20 09 07.3 +0.1
      comp=N,34nm,0.9s
MNK                               i P    P     20 09 07.3 +0.1
      comp=Z,144nm,0.9s,baz=50
MNK                               i pP   PcP   20 09 23.8 -1.5
MNK                               i sP   sP    20 09 30.7 +4.6
MNK                               i PP   PP    20 11 47.9 +0.6
MNK                               i PPP  PPP   20 13 32.0
MNK                               i S    S     20 18 25.4 -0.2
MNK                               i sS   sS    20 18 53.8 +5.3
MNK                               i SS   SS    20 23 04.6 +1.9
MNK                               i SSS  SSS   20 26 24.8
MNK                               i LQ   LQ    20 34 44.7
MNK                               i LR   LR    20 38 01.1
MNK                               i LRM  MLR   20 42 45.4
      comp=E,62nm,18.2s
MNK                               i LRM  MLR   20 43 11.1
      comp=N,558nm,18.5s
MNK                               i LRM  MLR   20 44 03.5
      comp=Z,533nm,18.1s
MNK   Minsk             72.15 326 i P    P     20 09 07.2 +0.1
MNK                               i *PP  PcP   20 09 23.7 -1.5
MNK                               i            20 09 25.0
MNK                               i            20 11 47.8
MNK                               i PPP  PPP   20 13 32.0
MNK                               i S    S     20 18 25.4 -0.2
MNK                               i *SS  sS    20 18 53.8 +5.3
MNK                               i SS   SS    20 23 04.6 +1.9
MNK                                 pmax pmax
      comp=N,34nm,0.9s
MNK                                 pmax pmax
      comp=E,8.0nm,0.9s
MNK                                 pmax pmax
      comp=Z,144nm,0.9s
MNK                                 MLR  MLR
      comp=E,62nm,18.0s
MNK                                 MLR  MLR
      comp=N,558nm,19.0s
MNK                                 MLR  MLR
      comp=Z,533nm,18.0s
PLID  Pearl Lake        72.17  47   P    P     20 09 08.4 +0.6
BSY   Bisya             72.20 285   P    P     20 09 09.0 +1.0
      SNR=15
ISAL  Salakas           72.22 327  eP    P     20 09 09.6 +2.0
KLBR  Kellerberrin      72.24 201   P    P     20 09 08.1 +0.3
KARS  Kars              72.28 308   P    P     20 09 09.1 +0.8
KARS  Kars              72.28 308   P    P     20 09 09.1 +0.8
KARS                                pmax pmax
      comp=Z,157nm,1.2s
FAQ   Al Faqa, Dubai    72.32 288 i P    P     20 09 09.0 +0.3
      SNR=16
FAQ   Al Faqa, Dubai    72.32 288   P    P     20 09 09.0 +0.3
      SNR=8.7
MSO   Missoula          72.32  44   P    P     20 09 09.0 +0.6
MSO   Missoula          72.32  44   P    P     20 09 09.8 +1.4
      baz=306,SNR=7.3
TBLU  Trondheim         72.34 339  eP    P     20 09 07.4 -0.6
TBLU                                IAmb IAmb  20 09 07.9
      comp=Z,62nm,0.7s
NACGM Naroch            72.38 327  eP    P     20 09 07.9 -0.6
      comp=E,2µm,1.1s
ARQ   Araqi             72.39 286   P    P     20 09 10.0 +0.9
      SNR=22
SLIT  Slitere, Latvi    72.41 330  eP    P     20 09 08.9 +0.3
UPP   Uppsala           72.57 334  eP    P     20 09 09.8 +0.3
ALNE  Al Ain            72.58 287 i P    P     20 09 10.8 +0.6
      SNR=9.1
ALNE  Al Ain            72.58 287   P    P     20 09 10.8 +0.6
      SNR=22
MHTO  MHTO              72.58 283   P    P     20 09 11.0 +0.7
      SNR=22
ASUD  Al Ashush, Dub    72.58 288 i P    P     20 09 11.0 +0.8
      SNR=7.8
ASUD  Al Ashush, Dub    72.58 288   P    P     20 09 11.0 +0.8
      SNR=6.5
SOC   Sochi             72.64 312  eP    P     20 09 09.1 -1.2
SOC                                e*PP  pP    20 09 22.7 -1.2
SOC                                e*SP  PcP   20 09 28.2 +0.7
SOC                                e           20 11 47.7
SOC                                ePPP  PPP   20 13 33.6
SOC                                eS    S     20 18 29.7 -2.0
SOC                                eSS   SS    20 23 12.8 +2.0
SOC                                 pmax pmax
      comp=Z,46nm,1.0s
SOC                                 MLR  MLR
      comp=Z,564nm,20.0s
KAAM  Kaadhehdhoo       72.76 257   P    P     20 09 12.1 +0.8
CAN   Canberra          72.79 174   P    P     20 09 12.0 +1.0
CAN                                 IAmb IAmb  20 09 27.6
      comp=Z,66nm,1.1s
CAN   Canberra          72.79 174   P    P     20 09 12.0 +1.0
CAN                                 pmax pmax
      comp=Z,66nm,1.1s
VSVD  Vaisvydziai       72.88 329  eP    P     20 09 11.7 +0.3
AJN   Ajban             72.88 288   P    P     20 09 12.0 +0.1
PABE  Paberze           73.18 328   P    P     20 09 13.1 -0.1
PABE  Paberze           73.18 328  eP    P     20 09 13.9 +0.7
ILULI Ilulissat         73.18   5   P    P     20 09 13.2 +0.2
ILULI                               IAmb IAmb  20 09 34.9
      comp=Z,136nm,2.0s
ILULI Ilulissat         73.18   5   P    P     20 09 13.2 +0.2
ILULI                               pmax pmax
      comp=Z,136nm,2.0s
ILULI Ilulissat         73.18   5 i P    P     20 09 12.1 -0.9
ILULI                               IAmb IAmb  20 09 14.3
      comp=Z,15nm,0.7s
FFC   Flin Flon         73.26  33   P    P     20 09 14.1 +0.4
FFC                                 IAmb IAmb  20 09 15.5
      comp=Z,43nm,0.9s
FFC   Flin Flon         73.26  33   P    P     20 09 14.1 +0.4
FFC                                 pmax pmax
      comp=Z,43nm,1.0s
ANN   Anapa             73.26 314  eP    P     20 09 13.6 -0.3
DQM   DQM               73.51 283   P    P     20 09 15.6 -0.2
CMB   Columbia Colle    73.53  55   P    P     20 09 16.2 +0.6
CMB   Columbia Colle    73.53  55   P    P     20 09 16.2 +0.6
CMB                                 pmax pmax
      comp=Z,48nm,1.4s
FCC   Fort Churchill    73.54  27   P    P     20 09 15.5 +0.3
FCC                                 IAmb IAmb  20 09 16.8
      comp=Z,67nm,1.1s
FCC   Fort Churchill    73.54  27   P    P     20 09 15.5 +0.3
FCC                                 pmax pmax
      comp=Z,67nm,1.1s
NC405 NORSAR Array S    73.57 337   P    P     20 09 15.7 +0.3
GEVA  Gevas             73.61 306   P    P     20 09 16.0 -0.2
MOL   Molde             73.64 340  eP    P     20 09 16.7 +0.9
MOL                                 IAmb IAmb  20 09 17.7
      comp=Z,46nm,0.8s
NWAO  Narrogin (SRO)    73.64 201   LR   LR    20 41 36.0
      comp=Z,63nm,20.3s,baz=316,slow=36
NWAO  Narrogin (SRO)    73.64 201   P    P     20 09 16.5 +0.5
NWAO                                IAmb IAmb  20 09 17.7
      comp=Z,35nm,0.8s
NWAO  Narrogin (SRO)    73.64 201   P    P     20 09 17.1 +1.1
NWAO  Narrogin (SRO)    73.64 201   P    P     20 09 17.4 +1.3
NWAO  Narrogin (SRO)    73.64 201   P    P     20 09 16.5 +0.5
NWAO                                pmax pmax
      comp=Z,35nm,0.9s
NWAO  Narrogin (SRO)    73.64 201   P    P     20 09 17.3 +1.3
PBUR  Paburge           73.67 329  eP    P     20 09 16.9 +0.9
HFS   Hagfors           73.69 336   LR   LR    20 44 21.7
      comp=Z,1µm,19.4s,baz=42,slow=38
ICESG Greenland Ices    73.71   0 i P    P     20 09 17.3 +0.7
ICESG                               IAmb IAmb  20 09 18.2
      comp=Z,47nm,0.9s
UMZA  Um Al Zommool     73.78 286   P    P     20 09 16.9 -0.4
NB2   NORSAR Subarra    73.78 337   P    P     20 09 16.7  0.0
      comp=Z,97nm,0.9s,baz=39,slow=6.2
NB2   NORSAR Subarra    73.78 337   P    P     20 09 16.7  0.0
      slow=6.2
NOA   NORSAR Array B    73.78 337   P    P     20 09 16.9 +0.2
      comp=Z,53nm,0.9s,baz=39,slow=5.9,SNR=158
NOA                                 LR   LR    20 45 14.8
      comp=Z,797nm,19.2s,baz=45,slow=39
      comp=Z,53nm,0.9s
EGMT  Eagleton          73.86  41   P    P     20 09 18.6 +1.1
      baz=308,SNR=6.0
VIKU  Vikbolandet       73.88 333  eP    P     20 09 17.7 +0.4
ARPS  Mount Arapiles    73.91 180   P    P     20 09 18.6 +1.1
NC602 NORSAR Array S    73.92 337  eP    P     20 09 17.5  0.0
NC602                               IAmb IAmb  20 09 18.9
      comp=Z,55nm,1.1s
AKASG Malin Array Be    73.97 322   P    P     20 09 17.3 -0.7
      comp=Z,35nm,0.6s,baz=38,slow=5.8,SNR=137
AKASG                               LR   LR    20 45 02.1
      comp=Z,818nm,18.1s,baz=58,slow=38
      comp=Z,35nm,0.6s
AKASG Malin Array Be    73.97 322   P    P     20 09 17.8 -0.2
AKASG Malin Array Be    73.97 322 i P    P     20 09 17.7 -0.2
AKASG                               pmax pmax
      comp=Z,34nm,0.6s
AKBB  Malin Array Si    73.97 322   P    P     20 09 17.8 -0.2
AKBB  Malin Array Si    73.97 322ceP    P     20 09 17.7 -0.2
HLID  Hailey            73.99  47   P    P     20 09 19.4 +1.0
HLID  Hailey            73.99  47   P    P     20 09 19.5 +1.1
      baz=307,SNR=15
NAO01 NORSAR Array S    74.04 337  eP    P     20 09 18.3 +0.1
NAO01                               IAmb IAmb  20 09 19.6
      comp=Z,59nm,0.9s
AKN   Aaknes            74.11 340  eP    P     20 09 18.8 +0.2
AKN                                 IAmb IAmb  20 09 20.2
      comp=Z,64nm,1.2s
GURO  Guroymak-BITLI    74.13 306   P    P     20 09 20.0 +0.7
MZWR  Madinat Zayed     74.16 288   P    P     20 09 18.8 -0.7
KOPT  Kop Dagi          74.24 308   P    P     20 09 20.6 +0.5
KOPT                                IAmb IAmb  20 09 41.5
      comp=Z,47nm,1.3s
JRN   Qarnain Island    74.28 289   P    P     20 09 19.2 -0.9
BOZ   Bozeman (W)       74.34  44   P    P     20 09 21.2 +0.8
BOZ   Bozeman (W)       74.34  44   P    P     20 09 21.3 +0.8
BOZ                                 pmax pmax
      comp=Z,25nm,0.9s
BOZ   Bozeman (W)       74.34  44   P    P     20 09 21.4 +1.0
      baz=308,SNR=34
MILA  Mila              74.53 174   P    P     20 09 23.3 +2.1
NVAR  Mina Array Bea    74.64  53   P    P     20 09 23.6 +1.3
      comp=Z,9.8nm,0.9s,baz=282,slow=6.3,SNR=51
NVAR                                LR   LR    20 39 21.7
      comp=Z,107nm,18.8s,baz=286,slow=33
      comp=Z,9.8nm,0.9s
NVAR  Mina Array Bea    74.64  53   P    P     20 09 22.9 +0.5
NV11  Mina Array Sit    74.73  53   P    P     20 09 23.2 +0.4
OSL   Oslo              74.80 337  eP    P     20 09 23.1 +0.5
OSL                                 IAmb IAmb  20 09 23.9
      comp=Z,98nm,1.0s
TOO   Toolangi          74.80 177   P    P     20 09 23.9 +1.1
TOO   Toolangi          74.80 177   P    P     20 09 23.8 +1.1
TOO   Toolangi          74.80 177   P    P     20 09 23.9 +1.1
TOO                                 pmax pmax
      comp=Z,17nm,0.9s
GHWR  Ruwais            74.81 289   P    P     20 09 22.3 -1.0
MZR   Muzera            74.89 287 i P    P     20 09 23.8  0.0
      SNR=28
MZR   Muzera            74.89 287   P    P     20 09 23.8  0.0
      SNR=10
SKAR  Skarslia          74.94 338  eP    P     20 09 24.5 +1.0
SKAR                                IAmb IAmb  20 09 25.2
      comp=Z,49nm,0.9s
SIM   Simferopol'       75.05 315  eP    P     20 09 24.7 +0.4
SIM                                 pmax pmax
      comp=Z,189nm,1.3s
SIM                                 MLR  MLR
      comp=Z,394nm,18.0s
FOO   Floro             75.12 340  eP    P     20 09 25.1 +0.8
HYA   Hoyanger          75.16 339  eP    P     20 09 25.5 +0.9
HYA                                 IAmb IAmb  20 09 26.1
      comp=Z,92nm,0.9s
SHMA  Al-Shehemyia      75.17 291   P    P     20 09 24.8 -0.5
ELK   Elko              75.18  50   LR   LR    20 40 29.3
      comp=Z,112nm,19.9s,baz=310,slow=34
ELK   Elko              75.18  50   P    P     20 09 26.1 +0.7
ELK   Elko              75.18  50   P    P     20 09 26.1 +0.7
ELK                                 pmax pmax
      comp=Z,16nm,1.2s
YMR   Madison River     75.29  45   P    P     20 09 27.2 +1.2
KONO  Kongsberg         75.38 337   P    P     20 09 26.2 +0.3
KONO                                IAmb IAmb  20 09 26.8
      comp=Z,30nm,0.8s
KONO  Kongsberg         75.38 337ceP    P     20 09 26.6 +0.7
KONO                                pmax pmax
      comp=Z,53nm,1.7s
KONO  Kongsberg         75.38 337  eP    P     20 09 26.2 +0.3
SFJD  Kangerlussuaq     75.41   5   P    P     20 09 25.6 -0.3
      comp=Z,20nm,0.8s,baz=29,slow=4.0,SNR=9.8
SFJD                                LR   LR    20 43 17.6
      comp=Z,210nm,21.0s,baz=350,slow=36
      comp=Z,20nm,0.8s
SFJD  Kangerlussuaq     75.41   5   P    P     20 09 26.0 +0.1
SFJD  Kangerlussuaq     75.41   5   P    P     20 09 26.0 +0.1
SFJD                                pmax pmax
      comp=Z,25nm,0.9s
SFJD  Kangerlussuaq     75.41   5 i P    P     20 09 25.0 -1.0
SFJD                                IAmb IAmb  20 09 27.5
      comp=Z,32nm,1.1s
SAKB  Bahrain           75.41 292   P    P     20 09 26.0 -0.7
TPH   Tonopah           75.53  53   P    P     20 09 28.8 +1.3
TPH   Tonopah           75.53  53   P    P     20 09 28.8 +1.3
TPH                                 pmax pmax
      comp=Z,191nm,1.1s
SLWR  Sila              75.64 289   P    P     20 09 27.7 -0.3
VES   Vestal, Richgr    75.64  56   P    P     20 09 28.7 +0.8
      baz=306
H17A  Grant Village     75.67  45   P    P     20 09 30.6 +2.4
      baz=309,SNR=39
SMRA  Abu-Samra         75.90 290   P    P     20 09 29.4 -0.1
RLMT  Red Lodge         75.94  44   P    P     20 09 30.9 +1.2
RLMT  Red Lodge         75.94  44   P    P     20 09 31.4 +1.7
      baz=309,SNR=11
CWC   Cottonwood Cre    75.95  55   P    P     20 09 30.8 +0.9
      baz=306
ASK   Askoy             76.00 339  eP    P     20 09 28.7 -0.7
HVU   Hansel Valley     76.03  48   P    P     20 09 31.3 +1.1
HVU   Hansel Valley     76.03  48   P    P     20 09 31.3 +1.1
HVU                                 pmax pmax
      comp=Z,28nm,1.2s
BER   Bergen            76.04 339  eP    P     20 09 30.4 +0.8
ODD1  Odda              76.06 338  eP    P     20 09 30.4 +0.6
ODD1                                IAmb IAmb  20 09 31.5
      comp=Z,54nm,0.9s
SHAO  Shalim            76.08 282 i P    P     20 09 32.0 +1.4
      SNR=5.9
SHAO  Shalim            76.08 282   P    P     20 09 30.9 +0.3
SORM  Soroca            76.08 321 ⥣P    P     20 09 30.0 -0.2
SORM  Soroca            76.08 321   P    P     20 09 29.9 -0.2
GRAC  Grapevine Rang    76.08  54   P    P     20 09 31.9 +1.4
GRAC                                IAmb IAmb  20 09 47.2
      comp=Z,35nm,0.9s
GRAC  Grapevine Rang    76.08  54   P    P     20 09 31.8 +1.4
      baz=307
ISA   Isabella, Lake    76.15  56   P    P     20 09 31.1 +0.2
      baz=306
DY2G  Dye2              76.17   3 i P    P     20 09 30.6  0.0
DY2G                                IAmb IAmb  20 09 32.0
      comp=Z,173nm,1.6s
SCZ2  Santa Cruz Isl    76.36  58   P    P     20 09 32.7 +0.7
      baz=306
AHID  Auburn Hatcher    76.39  46   P    P     20 09 33.6 +1.3
R11A  Troy Canyon, C    76.40  52   P    P     20 09 33.8 +1.3
      baz=307,SNR=27
DGMT  Dagmar            76.42  39   P    P     20 09 32.8 +0.7
DGMT                                IAmb IAmb  20 09 34.1
      comp=Z,40nm,0.9s
DGMT  Dagmar            76.42  39   P    P     20 09 32.7 +0.7
      baz=312,SNR=9.1
DEL   Delary            76.42 333  eP    P     20 09 32.0 +0.2
DIKM  Dikmen            76.44 312 ⥥P    P     20 09 33.9 +1.6
BLS5  Blasjo            76.51 338  eP    P     20 09 33.2 +0.8
BLS5                                IAmb IAmb  20 09 34.1
      comp=Z,77nm,1.1s
RAO   Raoul Island      76.51 144   LR   LR    20 36 60.0
      comp=Z,330nm,20.2s,baz=346,slow=31
MPMC  Manual Prospec    76.56  55   P    P     20 09 34.0 +0.7
      baz=307,SNR=11
LAO   LASA Array        76.56  41   P    P     20 09 33.9 +0.9
LAO                                 IAmb IAmb  20 09 49.6
      comp=Z,54nm,1.1s
LAO   LASA Array        76.56  41   P    P     20 09 34.4 +1.4
      baz=311,SNR=18
KIS   Kishinev          76.59 320  eP    P     20 09 32.0 -1.0
KIS                                 pmax pmax
      comp=Z,30nm,0.4s
KIS                                 MLR  MLR
      comp=Z,500nm,16.5s
MILM  Milestii Mici     76.64 319  eP    P     20 09 31.0 -2.3
MILM                                pmax pmax
      comp=Z,80nm,0.9s
MILM                                MLR  MLR
      comp=Z,1µm,22.0s
FURC  Furnace Creek,    76.72  54   P    P     20 09 35.4 +1.4
      baz=307,SNR=6.3
LRMC  Laurel Mtn Rad    76.78  55   P    P     20 09 35.3 +0.7
      baz=307,SNR=7.0
DMTO  DMTO              76.78 282   P    P     20 09 34.2 -0.4
HOMB  Homborsund        76.82 337  eP    P     20 09 34.5 +0.5
HOMB                                IAmb IAmb  20 09 34.8
      comp=Z,58nm,1.1s
TPNV  Topopah Spring    76.83  54   P    P     20 09 35.8 +1.0
TPNV                                IAmb IAmb  20 09 51.4
      comp=Z,62nm,1.3s
TPNV  Topopah Spring    76.83  54   P    P     20 09 35.8 +1.0
TPNV                                pmax pmax
      comp=Z,62nm,1.3s
TPNV  Topopah Spring    76.83  54   P    P     20 09 36.2 +1.4
      baz=307,SNR=18
SNCC  San Nicolas Is    76.87  58   P    P     20 09 36.5 +1.6
      baz=306
EDW2  Edwards Air Fo    76.93  56   P    P     20 09 36.7 +1.4
      baz=307,SNR=11
DUG   Dugway, Tooele    76.98  49   P    P     20 09 37.0 +1.4
DUG                                 IAmb IAmb  20 09 52.4
      comp=Z,42nm,1.2s
DUG   Dugway, Tooele    76.98  49   P    P     20 09 37.0 +1.4
DUG                                 pmax pmax
      comp=Z,42nm,1.2s
DUG   Dugway, Tooele    76.98  49   P    P     20 09 36.6 +1.0
      baz=308,SNR=17
OVD   Ostervraa, Den    77.03 335 i P    P     20 09 35.2 -0.1
OVD                                 IAmb IAmb  20 09 36.0
      comp=Z,80nm,0.8s
KMY   Karmoy            77.04 339  eP    P     20 09 35.9 +0.6
LVV   L'vov             77.05 324  eP    P     20 09 35.7 +0.1
LVV                                 MLR  MLR
      comp=N,500nm,16.0s
LVV                                 MLR  MLR
      comp=E,700nm,16.0s
LVV                                 MLR  MLR
      comp=Z,900nm,16.0s
BSD   Bornholm Skovb    77.07 332  eP    P     20 09 36.3 +0.7
BSD   Bornholm Skovb    77.07 332 i P    P     20 09 35.2 -0.4
BSD                                 IAmb IAmb  20 09 36.4
      comp=Z,89nm,1.1s
BEL   Belsk             77.10 327  eP    P     20 09 36.7 +0.9
IAS   Iasi              77.11 320 ⥣P    P     20 09 36.2 +0.3
IAS   Iasi              77.11 320   P    P     20 09 36.2 +0.3
SNART Snartemo          77.17 337  eP    P     20 09 36.4 +0.3
SNART                               IAmb IAmb  20 09 37.2
      comp=Z,155nm,1.0s
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BORG  Borgarnes         77.19 353   LR      LR        20 44 41.1
      comp=Z,167nm,20.6s,baz=19,slow=36
BORG  Borgarnes         77.19 353   P       P         20 09 38.0 +1.9
BORG  Borgarnes         77.19 353   P       P         20 09 38.0 +1.9
BORG                                pmax    pmax
      comp=Z,590nm,2.0s
ANGG  Ammassalik, Gr    77.21 360 i P       P         20 09 35.4 -0.7
ANGG                                IAmb    IAmb      20 09 36.3
      comp=Z,54nm,1.1s
LEOM  Leova             77.23 319 ⇑P       P         20 09 37.4 +0.8
LEOM  Leova             77.23 319   P       P         20 09 37.4 +0.8
BW06  Boulder Array     77.28  46   P       P         20 09 38.3 +1.0
      baz=310,SNR=12
PD31  Pinedale Array    77.28  46   P       P         20 09 37.8 +0.5
PDAR  Pinedale Array    77.28  46   P       P         20 09 38.1 +0.8
      comp=Z,8.7nm,0.9s,baz=278,slow=2.7,SNR=59
PDAR                                LR      LR        20 42 58.9
      comp=Z,120nm,19.9s,baz=322,slow=35
      comp=Z,8.7nm,0.9s
PDAR  Pinedale Array    77.28  46   P       P         20 09 38.0 +0.6
SHOC  Shoshone, Teco    77.44  54   P       P         20 09 39.0 +0.9
      baz=307
GSC   Goldstone, Bar    77.46  55   P       P         20 09 39.4 +1.1
      baz=307,SNR=5.6
RBK   Rabkut            77.48 282   P       P         20 09 38.1 -0.5
CIS   Catalina Islan    77.53  58   P       P         20 09 39.8 +1.1
      baz=307
BFSC  Mount Baldy Ra    77.53  56   P       P         20 09 39.4 +0.6
      baz=307
GKP   Gorka Klasztor    77.54 329  eP       P         20 09 38.6 +0.3
GKP   Gorka Klasztor    77.54 329  eP       P         20 09 39.2 +0.9
WHFO  Wadi Hawf         77.58 283   P       P         20 09 39.0 -0.1
      SNR=5.5
GOET  G??ttrup          77.58 336 i P       P         20 09 38.9 +0.6
GOET                                IAmb    IAmb      20 09 39.8
      comp=Z,100nm,0.7s
VLDR  Vladesti          77.73 319 ⇑P       P         20 09 40.1 +0.6
TLCR                    77.78 318 ⇑P       P         20 09 40.1 +0.3
TLCR                    77.78 318   P       P         20 09 40.1 +0.3
BNN   Bunyan            77.82 310   P       P         20 09 40.5 +0.2
LLD   Lille Linde       77.89 333 i P       P         20 09 40.8 +0.7
LLD                                 IAmb    IAmb      20 09 41.5
      comp=Z,39nm,0.8s
TATR  Tatarca           77.92 319 ⇓P       P         20 09 41.0 +0.5
TUQ   Turquoise Moun    77.95  55   P       P         20 09 42.3 +1.2
      baz=308
BUR08 Bucovina Ar. S    77.98 322   P       P         20 09 41.1 +0.1
BUR08                               IAmb    IAmb      20 09 42.7
      comp=Z,53nm,1.1s
BURAR Bucovina Array    77.99 322 ⇓P       P         20 09 42.0 +0.9
BURAR Bucovina Array    77.99 322   P       P         20 09 41.4 +0.3
BURAR                               IAmb    IAmb      20 09 42.6
      comp=Z,39nm,0.8s
BURAR Bucovina Array    77.99 322   P       P         20 09 41.9 +0.9
GAZ   Gaziantep         78.01 308   P       P         20 09 42.2 +0.9
GAZ                                 IAmb    IAmb      20 09 43.5
      comp=Z,58nm,1.0s
TESR  Tescani           78.03 320 ⇑P       P         20 09 41.8 +0.7
JURR  Jurilovca         78.03 318 ⇓P       P         20 09 42.0 +0.9
HEC   Hector,Ludlow     78.05  55   P       P         20 09 43.0 +1.4
      baz=308
MUD   Monsted U'grnd    78.06 335 i P       P         20 09 40.5 -0.6
MUD                                 IAmb    IAmb      20 09 42.0
      comp=Z,62nm,1.1s
RGN   Rugen             78.10 332   P       P         20 09 41.4 +0.1
RGN   Rugen             78.10 332  eP       P         20 09 41.9 +0.6
      comp=Z,188nm,1.4s,baz=37,slow=5.2
NUUK  Nuuk              78.11   6 i P       P         20 09 42.4 +1.2
NUUK                                IAmb    IAmb      20 09 42.9
      comp=Z,52nm,0.8s
CFR   Carcaliu          78.15 318 ⇓P       P         20 09 41.8  0.0
CFR   Carcaliu          78.15 318   P       P         20 09 41.8  0.0
TPGR  Topolog           78.21 318 ⇑P       P         20 09 42.5 +0.3
DGAR  Diego Garcia      78.22 251   P       P         20 09 42.1 -0.5
DGAR  Diego Garcia      78.22 251   P       P         20 09 42.1 -0.5
DGAR                                pmax    pmax
      comp=Z,415nm,1.6s
DGAR  Diego Garcia      78.22 251   P       P         20 09 43.5 +0.9
MURC  Murrieta          78.23  57   P       P         20 09 43.4 +0.9
      baz=307
ABTO  Aybut             78.27 283   P       P         20 09 43.0  0.0
      SNR=5.7
ODBI  Odobesti          78.32 319 ⇓P       P         20 09 41.9 -0.9
VRI   Vrincioaia        78.42 320 ⇓P       P         20 09 44.0 +0.7
VRI   Vrincioaia        78.42 320   P       P         20 09 44.0 +0.7
PLOR  Plostina          78.47 320 ⇑P       P         20 09 44.5 +0.9
PLOR  Plostina          78.47 320   P       P         20 09 44.5 +0.9
TIRR  Tirgusor          78.48 318 ⇓P       P         20 09 43.5 -0.1
TIRR  Tirgusor          78.48 318   P       P         20 09 43.5 -0.1
TIRR                                IAmb    IAmb      20 09 46.1
      comp=Z,61nm,0.9s
TIRR  Tirgusor          78.48 318   P       P         20 09 43.5 -0.1
TIRR                                pmax    pmax
      comp=Z,61nm,0.9s
GMRC  Granite Mounta    78.52  55   P       P         20 09 45.3 +1.1
      baz=308,SNR=6.8
BR131 Keskin Array S    78.60 312   P       P         20 09 44.4 -0.2
BR131                               IAmb    IAmb      20 09 46.2
      comp=Z,45nm,1.1s
BR131 Keskin Array S    78.60 312   P       P         20 09 44.4 -0.2
BR131                               pmax    pmax
      comp=Z,45nm,1.1s
BR131 Keskin Array S    78.60 312   P       P         20 09 45.2 +0.6
BR131                               P       P         20 09 45.5 +0.9
      SNR=13
BRTR  Keskin Array B    78.60 312   P       P         20 09 44.0 -0.6
      comp=Z,15nm,0.9s,baz=94,slow=4.0,SNR=60
BRTR                                LR      LR        20 49 09.8
      comp=Z,293nm,18.4s,baz=66,slow=39
      comp=Z,15nm,0.9s
BRTR  Keskin Array B    78.60 312   P       P         20 09 44.1 -0.5
BRTR  Keskin Array B    78.60 312 i P       P         20 09 44.9 +0.3
BRTR                                pmax    pmax
      comp=Z,15nm,0.9s
TLBR  Topalu            78.62 318 ⇑P       P         20 09 45.2 +0.8
STHS  Stebnicka Huta    78.62 325  eP       P         20 09 44.9 +0.5
STHS                                pmax    pmax
      comp=Z,37nm,0.9s
STHS  Stebnicka Huta    78.62 325  eP       P         20 09 44.9 +0.5
MFTR  Murfatlar         78.66 318 ⇑P       P         20 09 44.8 +0.2
OJC   Ojcow             78.69 326  eP       P         20 09 45.5 +0.7
OJC   Ojcow             78.69 326   P       P         20 09 44.7  0.0
OJC                                 IAmb    IAmb      20 09 46.7
      comp=Z,101nm,1.1s
OJC   Ojcow             78.69 326   P       P         20 09 44.7  0.0
OJC                                 pmax    pmax
      comp=Z,101nm,1.1s
COVR  Voineasa-Covas    78.70 320 ⇓P       P         20 09 45.5 +0.6
PFO   Pinyon Flats O    78.71  56   LR      LR        20 37 24.7
      comp=Z,396nm,22.0s,baz=263,slow=30
PFO   Pinyon Flats O    78.71  56   P       P         20 09 46.2 +0.9
PFO   Pinyon Flats O    78.71  56   P       P         20 09 46.2 +0.9
PFO                                 pmax    pmax
      comp=Z,42nm,1.3s
PFO   Pinyon Flats O    78.71  56   P       P         20 09 46.1 +0.8
      baz=308,SNR=5.7
TPFO  Pinon Flats       78.71  56   P       P         20 09 46.2 +0.9
      baz=308,SNR=5.4
109C  Camp Elliot, M    78.72  57   P       P         20 09 45.8 +0.6
      baz=308
OZUR                    78.75 320 ⇓P       P         20 09 46.2 +1.0
CVDA  Cernavoda         78.77 318 ⇓P       P         20 09 46.0 +0.8
BELC  Belle Mtn. Jos    78.77  56   P       P         20 09 46.5 +0.9
      baz=308
ARCR  ARCALIA           78.78 322 ⇑P       P         20 09 46.9 +1.6
TRPA  Tarpa             78.93 323 ⇑P       P         20 09 47.0 +1.0
PGOR  Pogoanele         78.94 319 ⇓P       P         20 09 47.9 +1.8
ANTO  Ankara            79.01 312 ⇑P       P         20 09 47.4 +0.6
ANTO  Ankara            79.01 312   P       P         20 09 46.9 +0.1
ANTO                                IAmb    IAmb      20 09 48.6
      comp=Z,50nm,1.1s
ANTO  Ankara            79.01 312   P       P         20 09 47.3 +0.6
ISR   Istrita           79.02 319 ⇑P       P         20 09 48.1 +1.3
ISR   Istrita           79.02 319   P       P         20 09 48.0 +1.3
ICOR  Ion Corvin        79.04 318 ⇑P       P         20 09 47.9 +1.2
DOPR  Dopca             79.04 320 ⇑P       P         20 09 48.2 +1.5
BR231 Keskin MP Arra    79.04 312   P       P         20 09 47.2 +0.2
BR231                               IAmb    IAmb      20 09 48.8
      comp=Z,44nm,1.1s
NIE   Niedzica          79.05 325  eP       P         20 09 48.4 +1.7
K22A  Casper            79.05  44   P       P         20 09 47.9 +0.8
      baz=311,SNR=6.1
ULM   Lac du Bonnet     79.06  33   P       P         20 09 46.5 -0.2
      comp=Z,18nm,0.9s,baz=307,slow=6.3,SNR=21
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ULM                                 LR      LR        20 45 54.8
      comp=Z,145nm,20.3s,baz=352,slow=36
      comp=Z,18nm,0.9s
ULM   Lac du Bonnet     79.06  33   P       P         20 09 46.6 -0.2
ULM   Lac du Bonnet     79.06  33   P       P         20 09 46.6 -0.2
ULM                                 pmax    pmax
      comp=Z,31nm,1.1s
MLR   Muntele Rosu      79.08 320 ⇑P       P         20 09 47.2 +0.1
MLR   Muntele Rosu      79.08 320   P       P         20 09 45.9 -1.2
      comp=Z,8.6nm,0.5s,baz=61,slow=4.9,SNR=3.1
MLR                                 LR      LR        20 48 09.4
      comp=Z,1µm,18.1s,baz=48,slow=38
      comp=Z,8.6nm,0.5s
MLR   Muntele Rosu      79.08 320   P       P         20 09 47.2 +0.1
MLR                                 IAmb    IAmb      20 09 49.0
      comp=Z,57nm,1.3s
MLR   Muntele Rosu      79.08 320   P       P         20 09 47.2 +0.1
MLR                                 pmax    pmax
      comp=Z,57nm,1.3s
MDND  Maddock           79.08  37   P       P         20 09 47.6 +0.7
      baz=315,SNR=9.7
MDND  Maddock           79.08  37   P       P         20 09 48.1 +1.1
      baz=315
MONP2 Monument Peak     79.17  57   P       P         20 09 48.5 +0.6
      baz=308
IRM   Iron Mountain     79.24  55   P       P         20 09 48.5 +0.4
      baz=308,SNR=8.3
RWWY  Rawlins           79.30  45   P       P         20 09 49.3 +0.7
LEHL  Lehliu            79.32 319 ⇑P       P         20 09 48.9 +0.7
SECR                    79.33 319 ⇓P       P         20 09 49.7 +1.4
BC3   Big Chuckawall    79.34  56   P       P         20 09 49.3 +0.6
      baz=308,SNR=7.7
CBX   Cerro Bola        79.36  57   P       P         20 09 48.7 -0.1
CJR   Cluj-Napoca       79.41 322 ⇑P       P         20 09 50.3 +1.4
CJR   Cluj-Napoca       79.41 322   P       P         20 09 50.2 +1.4
RSSD  Black Hills       79.42  42   P       P         20 09 50.2 +1.1
      baz=313
MESR  Meseseni          79.42 322 ⇑P       P         20 09 50.3 +1.5
PLAR  PLOIESTI          79.43 319 ⇑P       P         20 09 49.9 +1.1
W13A  Hualapai Mount    79.47  54   P       P         20 09 50.2 +0.6
SULR                    79.47 319 ⇓P       P         20 09 49.7 +0.7
RUE   Ruedersdorf       79.52 331  eP       P         20 09 49.9 +0.8
RUE   Ruedersdorf       79.52 331  eP       P         20 09 49.6 +0.5
      comp=Z,83nm,1.2s,baz=37,slow=5.2
IKP   In-Ko-Pah, Jac    79.53  57   P       P         20 09 50.7 +1.0
      baz=308
SWSC  Sam W. Stewart    79.55  57   P       P         20 09 50.6 +0.9
      baz=308
MDUB  Mudurnu           79.56 313   P       P         20 09 50.3 +0.5
VOIR                    79.57 320 ⇑P       P         20 09 50.6 +0.8
VOIR                    79.57 320   P       P         20 09 50.5 +0.8
LANS  Liptovska Anna    79.62 326  eP       P         20 09 51.3 +1.4
LANS                                pmax    pmax
      comp=Z,19nm,0.9s
LANS  Liptovska Anna    79.62 326  eP       P         20 09 51.2 +1.4
U15A  North Rim         79.65  52   P       P         20 09 52.1 +1.6
U15A                                IAmb    IAmb      20 10 07.7
      comp=Z,65nm,1.5s
MARR  Marisel-Cluj      79.68 322 ⇑P       P         20 09 50.8 +0.5
BSEG  Bad Segeberg      79.68 333  eP       P         20 09 50.4 +0.4
      comp=Z,80nm,1.1s,baz=37,slow=5.2
OKC   Ostrava-Krasne    79.70 327 ⇑AMS     AMS       20 48 00.0
      comp=Z,900nm,16.1s
O20A  White River Ci    79.73  47   P       P         20 09 51.6 +0.7
      baz=311,SNR=8.0
KSP   Ksiaz             79.74 328  eP       P         20 09 51.2 +0.7
DRGR                    79.79 322 ⇑P       P         20 09 51.3 +0.3
DRGR                    79.79 322   P       P         20 09 51.2 +0.3
PDMCI Parker Dam,Lak    79.80  55   P       P         20 09 52.2 +1.2
      baz=309
ARR   Arges             79.83 320 ⇓P       P         20 09 53.0 +1.8
OSTC  Ostas             79.99 328⇑iP       P         20 09 52.6 +0.8
OSTC                                AMS     AMS       20 48 00.0
      comp=Z,800nm,17.9s
OSTC  Ostas             79.99 328⇑iP       P         20 09 52.6 +0.8
OSTC                                MLR     MLR
      comp=Z,800nm,17.9s
MORC  Moravsky Berou    80.01 327 ⇑P       P         20 09 53.0 +1.0
MORC  Moravsky Berou    80.01 327   P       P         20 09 52.6 +0.6
MORC                                IAmb    IAmb      20 09 53.9
      comp=Z,50nm,1.0s
MORC  Moravsky Berou    80.01 327⇑iP       P         20 09 52.6 +0.6
MORC  Moravsky Berou    80.01 327   P       P         20 09 52.9 +1.0
ESJX  Sierra Juarez     80.03  57   P       P         20 09 53.5 +0.9
ESJX                                IAmb    IAmb      20 10 09.2
      comp=Z,52nm,1.3s
RAZG  Razgrad           80.10 318 ⇑P       P         20 09 52.8 +0.3
DPC   Dobruska-Polom    80.10 328⇑iP       P         20 09 53.3 +0.8
DPC                                 AMS     AMS       20 48 30.0
      comp=Z,700nm,17.5s
DPC   Dobruska-Polom    80.10 328⇑iP       P         20 09 53.3 +0.8
DPC                                 MLR     MLR
      comp=Z,700nm,17.5s
KRLC  Kraliky           80.11 327⇑iP       P         20 09 53.1 +0.6
KRLC                                AMS     AMS       20 48 20.0
      comp=Z,700nm,19.1s
KRLC  Kraliky           80.11 327⇑iP       P         20 09 53.1 +0.6
KRLC                                MLR     MLR
      comp=Z,700nm,19.1s
UPC   Upice             80.11 328⇑eP       P         20 09 53.2 +0.7
UPC                                 AMS     AMS       20 47 50.0
      comp=Z,800nm,19.7s
UPC   Upice             80.11 328  eP       P         20 09 53.2 +0.7
UPC                                 MLR     MLR
      comp=Z,800nm,19.7s
GLA   Glamis            80.13  56   P       P         20 09 54.1 +1.2
GLA                                 IAmb    IAmb      20 10 09.6
      comp=Z,95nm,1.6s
GLA   Glamis            80.13  56   P       P         20 09 54.1 +1.2
GLA                                 pmax    pmax
      comp=Z,95nm,1.6s
GLA   Glamis            80.13  56   P       P         20 09 54.3 +1.3
      baz=308
LOT   Lotru             80.21 321 ⇑P       P         20 09 53.8 +0.6
HUMR  Humele            80.24 320 ⇑P       P         20 09 52.8 -0.4
PSZ   Piszkesteto       80.32 324 ⇑P       P         20 09 54.3 +0.6
PSZ   Piszkesteto       80.32 324   P       P         20 09 54.3 +0.6
PSZ                                 IAmb    IAmb      20 09 55.8
      comp=Z,76nm,1.1s
PSZ   Piszkesteto       80.32 324   P       P         20 09 54.3 +0.6
PSZ                                 pmax    pmax
      comp=Z,76nm,1.1s
RAR   Rarotonga         80.37 126   LR      LR        20 40 13.3
      comp=Z,542nm,19.2s,baz=310,slow=32
BORA  Eskisehir         80.37 313   P       P         20 09 54.3 +0.2
BORA                                IAmb    IAmb      20 09 55.5
      comp=Z,52nm,1.3s
VYHS  Vyhne             80.38 325  eP       P         20 09 54.8 +0.8
VYHS                                pmax    pmax
      comp=Z,41nm,1.1s
VYHS  Vyhne             80.38 325  eP       P         20 09 54.8 +0.8
AGMN  Agassiz Nation    80.50  35   P       P         20 09 54.3 -0.3
AGMN  Agassiz Nation    80.50  35   P       P         20 09 54.5 -0.1
      baz=317,SNR=14
N23A  Red Feather La    80.54  45   P       P         20 09 57.0 +1.7
      baz=312,SNR=14
RAYN  Ar Rayn           80.56 292   P       P         20 09 54.9 -0.5
RAYN                                IAmb    IAmb      20 09 56.5
      comp=Z,38nm,0.9s
RAYN  Ar Rayn           80.56 292   P       P         20 09 55.4  0.0
RAYN  Ar Rayn           80.56 292 i P       P         20 09 55.3  0.0
      SNR=40
RAYN  Ar Rayn           80.56 292   P       P         20 09 55.4  0.0
FLTG  Flechtingen       80.61 332  eP       P         20 09 54.8 -0.3
      comp=Z,65nm,0.9s,baz=37,slow=5.2
JAVC  Velka Javorina    80.64 326⇑iP       P         20 09 57.0 +1.6
BRG   Berggiesshubel    80.69 329 i P       P         20 09 56.0 +0.5
BRG                                 Amp               20 09 57.2
      comp=Z,39nm,1.0s
BRG                                 pP      pP        20 10 11.1 +1.7
BRG                                 Amp               20 10 16.7
      comp=Z,22nm,1.2s
BRG                                 PP      PP        20 12 59.7 +0.6
BRG                                 Amp               20 13 00.8
      comp=Z,13nm,1.4s
BRG                                 Amp               20 49 17.0
      comp=N,0.5nm,13.0s
BRG                                 Amp               20 49 20.0
      comp=Z,0.9nm,14.9s
BRG                                 Amp               20 49 24.0
      comp=E,0.3nm,14.0s
BRG   Berggiesshubel    80.69 329 i P       P         20 09 56.0 +0.5
BRG                                                   20 10 11.1
BRG                                                   20 12 59.6
BRG                                 pmax    pmax
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      comp=Z,39nm,1.0s
BRG                                 pmax    pmax
      comp=Z,22nm,1.2s
BRG                                 pmax    pmax
      comp=Z,13nm,1.4s
BRG                                 MLR     MLR
      comp=N,537nm,13.0s
BRG                                 MLR     MLR
      comp=Z,877nm,14.9s
BRG                                 MLR     MLR
      comp=E,300nm,14.0s
BRG   Berggiesshubel    80.69 329  eP       P         20 09 55.9 +0.3
      comp=E,40nm,1.0s,baz=37,slow=5.2
PVCC  Panska Ves        80.70 329 ⇑AMS     AMS       20 48 50.0
      comp=E,800nm,15.9s
LINV  Loch Inver, As    80.71 343  eP       P         20 09 56.2 +0.7
LINV                                IAmb    IAmb      20 09 59.1
      comp=Z,42nm,1.1s
CLL   Collm             80.73 330   P       P         20 09 55.7  0.0
CLL                                 IAmb    IAmb      20 09 57.0
      comp=Z,71nm,1.0s
CLL   Collm             80.73 330⇑iP       P         20 09 55.8  0.0
      comp=Z,76nm,1.0s
CLL                                epP      pP        20 10 09.0 -0.6
CLL                                esP      sP        20 10 16.0 +1.1
CLL                                ePP      PP        20 13 03.0 +3.6
CLL                                eS       S         20 19 59.0 -0.6
CLL                                esS      sS        20 20 27.0 +4.1
CLL                                ePS      PnS       20 20 54.0 +3.8
CLL                                e(SS)              20 25 48.0
CLL                                eSSS     SSS       20 28 42.0
CLL                                eSSSS              20 31 24.0
CLL                                 AMS     AMS       20 48 00.0
      comp=N,500nm,19.2s
CLL                                 AMS     AMS       20 48 00.0
      comp=E,300nm,20.4s
CLL                                 AMS     AMS       20 48 00.0
      comp=Z,600nm,18.0s
CLL   Collm             80.73 330⇑iP       P         20 09 55.8  0.0
CLL                                e*PP     pP        20 10 12.0 +2.4
CLL                                eS       S         20 19 59.0 -0.6
CLL                                 pmax    pmax
      comp=Z,76nm,1.0s
CLL                                 MLR     MLR
      comp=Z,600nm,18.0s
CLL   Collm             80.73 330  eP       P         20 09 55.6  0.0
      comp=Z,64nm,1.0s,baz=37,slow=5.2
GZR   Gura Zlata        80.75 321 ⇑P       P         20 09 56.7 +0.6
GZR   Gura Zlata        80.75 321   P       P         20 09 56.6 +0.6
PV15  Paradox Valley    80.75  48   P       P         20 09 57.3 +0.8
VRAC  Vranov            80.77 327 ⇑P       P         20 09 57.0 +1.0
VRAC  Vranov            80.77 327   P       P         20 09 56.6 +0.6
      comp=Z,32nm,1.0s,baz=50,slow=4.7,SNR=44
VRAC                                LR      LR        20 49 30.3
      comp=Z,500nm,18.6s,baz=37,slow=38
      comp=Z,32nm,1.0s
VRAC  Vranov            80.77 327⇑iP       P         20 09 56.8 +0.8
VRAC  Vranov            80.77 327   P       P         20 09 57.0 +1.0
WUAZ  Wupatki           80.80  52   P       P         20 09 57.4 +0.8
WUAZ                                IAmb    IAmb      20 10 13.6
      comp=Z,48nm,1.1s
WUAZ  Wupatki           80.80  52   P       P         20 09 58.1 +1.4
      baz=310,SNR=14
D32B  Dogwood Acres,    80.82  36   P       P         20 09 56.7 +0.4
      baz=317
SURR  Surduc            80.82 322 ⇑P       P         20 09 57.2 +0.9
FBE   Freiberg          80.89 330  eP       P         20 09 57.1 +0.5
      comp=Z,89nm,1.2s,baz=37,slow=5.2
NRDL  Niedersach Rie    80.90 332  eP       P         20 09 56.9 +0.4
      comp=Z,37nm,1.1s,baz=37,slow=5.2
VLAD  Vladila           80.90 319 ⇑P       P         20 09 57.2 +0.4
RETH  Rethem/Aller,     80.98 333  eP       P         20 09 57.2 +0.2
      comp=Z,90nm,1.2s,baz=37,slow=5.2
ASSE  Asse, Remlinge    80.98 332  eP       P         20 09 57.2 +0.2
      comp=Z,28nm,1.2s,baz=37,slow=5.2
SMOL  Smolenice         81.00 326  eP       P         20 09 58.4 +1.1
SMOL                                pmax    pmax
      comp=Z,22nm,0.9s
KRUC  Moravsky          81.04 327⇑iP       P         20 09 58.0 +0.5
GOPC  GO Pecny, Ondr    81.08 328⇑eP       P         20 09 58.4 +0.7
GOPC                                AMS     AMS       20 48 40.0
      comp=Z,800nm,17.5s
GOPC  GO Pecny, Ondr    81.08 328  eP       P         20 09 58.4 +0.7
GOPC                                MLR     MLR
      comp=Z,800nm,17.5s
LEWI  Lewis, Hebride    81.09 344  eP       P         20 09 58.2 +0.7
LEWI                                IAmb    IAmb      20 09 59.1
      comp=Z,34nm,0.9s
PRU   Pruhonice         81.12 329⇑eP       P         20 09 58.7 +0.8
PRU                                epP      pP        20 10 14.1 +2.4
PRU                                 AMS     AMS       20 48 40.0
      comp=Z,800nm,18.3s
PRU   Pruhonice         81.12 329  eP       P         20 09 58.7 +0.8
PRU                                e                  20 10 14.1
PRU                                 MLR     MLR
      comp=Z,800nm,18.3s
SRO   Srobarova         81.12 325  eP       P         20 09 59.3 +1.4
SRO                                 pmax    pmax
      comp=Z,46nm,0.8s
SRO   Srobarova         81.12 325  eP       P         20 09 59.3 +1.4
DRUM  Mains of Drumt    81.14 341  eP       P         20 09 57.9 +0.1
BZS   Buzias            81.16 322 ⇑P       P         20 09 58.0 -0.1
BZS   Buzias            81.16 322   P       P         20 09 58.0 -0.1
MODS  Modra-Piesok      81.17 326  eP       P         20 09 59.4 +1.2
MODS                                pmax    pmax
      comp=Z,88nm,1.1s
MODS  Modra-Piesok      81.17 326  eP       P         20 09 59.4 +1.2
PLVB  Pleven            81.22 319 ⇑P       P         20 09 58.5 +0.1
NEUB  Neuenburg         81.29 331  eP       P         20 09 58.8 +0.1
      comp=Z,90nm,1.1s,baz=37,slow=5.2
HERR  Herculane         81.29 321 ⇓P       P         20 09 59.4 +0.5
IVI   Ivigtut           81.32   5   P       P         20 09 58.9 +0.3
CLZ   Clausthal         81.32 332  eP       P         20 09 59.3 +0.4
      comp=Z,95nm,1.2s,baz=37,slow=5.2
B35A  Bob, Littlefor    81.41  34   P       P         20 09 59.4  0.0
      baz=319,SNR=12
ISCO  Idaho Springs     81.46  46   P       P         20 10 01.0 +0.7
ISCO  Idaho Springs     81.46  46   P       P         20 10 01.0 +0.7
ISCO                                pmax    pmax
      comp=Z,44nm,1.7s
ISCO  Idaho Springs     81.46  46   P       P         20 10 01.7 +1.4
      baz=312,SNR=8.0
MVCO  Mesa Verde        81.48  49   P       P         20 10 00.7 +0.4
MVCO                                IAmb    IAmb      20 10 17.1
      comp=Z,62nm,1.4s
MVCO  Mesa Verde        81.48  49   P       P         20 10 01.8 +1.5
      baz=311,SNR=12
KPL   Plockton          81.54 343  eP       P         20 10 00.6 +0.7
KPL                                 IAmb    IAmb      20 10 01.8
      comp=Z,79nm,1.0s
TANN  Tannenbergstha    81.64 330  eP       P         20 10 00.9 +0.2
      comp=Z,66nm,1.8s,baz=37,slow=5.2
TANN                               epP      pP        20 10 15.3 +0.8
HIZ   Hauiti            81.65 154   P       P         20 10 01.3 +0.8
WERD  Werda             81.68 330  eP       P         20 10 01.1 +0.2
      comp=Z,32nm,1.1s,baz=37,slow=5.2
PLN   Plauen            81.71 330  eP       P         20 10 01.3 +0.3
      comp=Z,107nm,2.0s,baz=37,slow=5.2
GTTG  Gottingen         81.71 332  eP       P         20 10 01.1 +0.1
      comp=Z,64nm,1.1s,baz=37,slow=5.2
MDVR  Moldovita         81.71 321 ⇑P       P         20 10 01.1 -0.1
GUNZ  Gunzen            81.73 330  eP       P         20 10 01.5 +0.4
      comp=Z,36nm,1.0s,baz=37,slow=5.2
WERN  Wernitzgruen      81.77 330  eP       P         20 10 01.8 +0.4
      comp=Z,38nm,1.0s,baz=37,slow=5.2
NKC   Novy Kostel       81.79 330⇑eP       P         20 10 01.8 +0.4
NKC                                 AMS     AMS       20 49 50.0
      comp=Z,700nm,17.2s
NKC   Novy Kostel       81.79 330  eP       P         20 10 01.8 +0.4
NKC                                 MLR     MLR
      comp=Z,700nm,17.2s
MOX   Moxa              81.79 330  eP       P         20 10 01.6 +0.2
      comp=Z,34nm,1.1s,baz=37,slow=5.2
MOX                                eL       L         20 50 51.6
      comp=Z,548nm,19.9s
SUSD  Miller            81.82  39   P       P         20 10 02.2 +0.5
      baz=316,SNR=12
SUSD  Miller            81.82  39   P       P         20 10 02.5 +0.9
      baz=316
CSS   Mathiatis         81.84 308   P       P         20 10 02.0  0.0
IBBN  Ibbenburen        81.91 333  eP       P         20 10 01.9  0.0
      comp=Z,85nm,1.1s,baz=37,slow=5.2
IBBN                               epP      pP        20 10 16.8 +1.0
INVG  Invergeldie, C    81.97 342  eP       P         20 10 02.5 +0.3
BALB  Balikesir         82.01 314   P       P         20 10 02.8 +0.1
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W18A  Petrified Fore    82.08  52   P       P       20 10 04.2 +0.7
      baz=311
F33A  5 Mile Ranch,     82.10  37   P       P       20 10 03.9 +0.7
      baz=317
RONA  Rosalia, Austr    82.11 326  i PcP    P       20 10 04.3 +1.1
      comp=Z,46nm,0.9s,SNR=32
MANZ  Manzenberg        82.12 330  eP       P       20 10 03.5 +0.4
      comp=Z,7.9nm,1.0s,baz=37,slow=5.2
CKRC  Cesky Krumlov     82.12 328⇑iP       P       20 10 03.6 +0.4
CKRC                                AMS     AMS     20 49 30.0
      comp=Z,600nm,15.7s
CKRC  Cesky Krumlov     82.12 328⇑iP       P       20 10 03.6 +0.4
CKRC                                MLR     MLR
      comp=Z,600nm,15.7s
S22A  4UR Ranch, Cre    82.13  48   P       P       20 10 04.5 +0.7
      baz=312,SNR=22
CONA  Conrad Observa    82.13 327  i P      P       20 10 04.3 +1.0
      comp=Z,40nm,1.0s,SNR=21
214A  Organ Pipe Nat    82.14  56   P       P       20 10 04.4 +0.8
      baz=310
MORH  Mrgy, Hungar      82.15 324  ⇓P      P       20 10 03.1  -0.2
KHC   Kasperske Hory    82.18 328   P       P       20 10 03.7 +0.2
KHC                                 IAmb    IAmb    20 10 05.3
      comp=Z,49nm,1.0s
KHC   Kasperske Hory    82.18 328⇑iP       P       20 10 03.8 +0.2
KHC                                esP      sP      20 10 23.3 +0.5
KHC                                 AMS     AMS     20 49 30.0
      comp=Z,800nm,17.8s
KHC   Kasperske Hory    82.18 328⇑iP       P       20 10 03.8 +0.2
KHC                                e                20 10 23.3
KHC                                 MLR     MLR
      comp=Z,800nm,17.8s
URZ   Urewera           82.23 152   LR      LR      20 42 13.3
      comp=Z,446nm,20.6s,baz=68,slow=32
ROTZ  Rotzenmuhle       82.25 330  eP       P       20 10 04.4 +0.6
      comp=Z,19nm,1.4s,baz=37,slow=5.2
UBBA  Unterbreizbach    82.28 331  eP       P       20 10 02.7  -1.1
      comp=Z,34nm,1.4s,baz=37,slow=5.2
RDO   Rodhopi           82.28 317   P       P       20 10 04.3 +0.1
RDO                                 IAmb    IAmb    20 10 06.2
      comp=Z,145nm,1.7s
Q24A  Divide            82.29  46   P       P       20 10 05.5 +0.8
      baz=313
RZN   Rozhen            82.35 318   P       P       20 10 05.5 +0.8
GEC2  GERESS Array S    82.35 328   P       P       20 10 04.6 +0.1
GEC2  GERESS Array S    82.35 328  eP       P       20 10 04.5  0.0
      comp=Z,28nm,0.9s,baz=37,slow=5.2
GERES GERESS Array B    82.35 328   P       P       20 10 04.2  -0.3
      comp=Z,13nm,0.8s,baz=43,slow=4.4,SNR=11
GERES                               PKKPbc  PKKPbc  20 28 30.3  -0.2
      comp=Z,0.4nm,0.7s,baz=236,slow=1.1,SNR=5.1
GERES                               LR      LR      20 50 01.1
      comp=Z,606nm,18.0s,baz=38,slow=38
      comp=Z,13nm,0.8s
GERES GERESS Array B    82.35 328   P       P       20 10 04.3  -0.2
GERES GERESS Array B    82.35 328   P       P       20 10 04.3  -0.2
FRGS  Fruska Gora       82.37 323  ⇑P      P       20 10 05.0 +0.3
FRGS  Fruska Gora       82.37 323⇑iP       P       20 10 04.9 +0.3
MANT  Manisa            82.39 313   P       P       20 10 05.1  0.0
LAWE  Loch Awe, Argy    82.45 342  eP       P       20 10 05.2 +0.5
VTS   Vitosha           82.48 319   P       P       20 10 06.4 +1.0
VTS                                 IAmb    IAmb    20 10 08.6
      comp=Z,33nm,0.8s
VTS   Vitosha           82.48 319   P       P       20 10 06.4 +1.0
VTS                                 pmax    pmax
      comp=Z,33nm,0.8s
VTS   Vitosha           82.48 319   P       P       20 10 06.2 +0.8
BOVS  Bovan             82.54 321  ⇓P      P       20 10 04.5  -1.0
KASTN Kahler Asten      82.56 332  eP       P       20 10 05.5 +0.1
      comp=Z,35nm,1.1s,baz=37,slow=5.2
OGNE  Ogallala          82.67  43   P       P       20 10 07.0 +0.7
      baz=314
EYMN  Ely               82.69  33   P       P       20 10 06.5 +0.3
      baz=320,SNR=13
EYMN  Ely               82.69  33   P       P       20 10 06.3 +0.1
      baz=320,SNR=13
GRA1  Grafenberg Arr    82.70 330   P       P       20 10 06.9 +0.7
GRA1                                IAmb    IAmb    20 10 08.3
      comp=Z,92nm,1.1s
GRF   Grafenberg Arr    82.70 330   P       P       20 10 06.9 +0.7
GRF                                 pmax    pmax
      comp=Z,92nm,1.1s
GRF   Grafenberg Arr    82.70 330  eP       P       20 10 06.9 +0.7
      comp=Z,93nm,1.1s,baz=37,slow=5.2
GRF                                eL       L       20 51 21.2
      comp=Z,474nm,19.3s
GRFO  Grafenberg        82.70 330   P       P       20 10 06.7 +0.5
GRFO                                IAmb    IAmb    20 10 08.2
      comp=Z,83nm,1.1s
GRFO  Grafenberg        82.70 330   P       P       20 10 06.7 +0.5
GRFO                                pmax    pmax
      comp=Z,83nm,1.1s
EKA   Eskdalemuir Ar    82.72 341   P       P       20 10 05.9  -0.2
      comp=Z,14nm,0.9s,baz=32,slow=4.9,SNR=26
EKA                                 PP      PP      20 13 11.7  -3.9
      comp=Z,3.5nm,0.9s,baz=32,slow=8.4,SNR=3.5
EKA                                 LR      LR      20 50 10.3
      comp=Z,450nm,20.9s,baz=34,slow=38
      comp=Z,14nm,0.9s
GHAJ  Ghor Haditha      82.74 304   P       P       20 10 07.0 +0.3
GHAJ                                IAmb    IAmb    20 10 07.9
      comp=Z,37nm,0.8s
ESK   Eskdalemuir       82.74 341  eP       P       20 10 06.8 +0.5
ESK   Eskdalemuir       82.74 341   P       P       20 10 06.5 +0.3
ESK                                 IAmb    IAmb    20 10 24.4
      comp=Z,86nm,1.8s
ESK   Eskdalemuir       82.74 341   P       P       20 10 06.5 +0.3
ESK                                 pmax    pmax
      comp=Z,86nm,1.8s
ELL   Elmali            82.77 311   P       P       20 10 07.0 +0.1
ELL   Elmali            82.77 311   P       P       20 10 07.0 +0.1
ELL                                 pmax    pmax
      comp=Z,160nm,0.9s
BUG   Bochum--Univer    82.79 333  eP       P       20 10 06.4  -0.2
      comp=Z,38nm,1.0s,baz=37,slow=5.2
ARSA  Arzberg           82.80 326  i P      P       20 10 07.3 +0.5
      comp=Z,26nm,1.1s,SNR=9.2
EDMD  Edmundbyers       82.83 340  eP       P       20 10 06.9 +0.1
MOA   Molln             82.88 327  i P      P       20 10 07.7 +0.5
      comp=Z,37nm,1.2s
MOA   Molln             82.88 327  eP       P       20 10 07.6 +0.4
      baz=37,slow=5.2
SDCO  Great Sand Dun    82.91  47   P       P       20 10 08.5 +0.7
SDCO  Great Sand Dun    82.91  47   P       P       20 10 08.9 +1.1
      baz=313,SNR=14
MMB   Musomiste         82.95 318   P       P       20 10 08.2 +0.5
TEKS  Tekeris           82.96 322⇑iP       P       20 10 07.0  -0.6
DIVS  Divibare          83.06 322   P       P       20 10 08.0  -0.2
DIVS                                IAmb    IAmb    20 10 09.7
      comp=Z,79nm,1.5s
DIVS  Divibare          83.06 322⇑iP       P       20 10 08.3 +0.1
KKB   Krupnik           83.09 319   P       P       20 10 09.1 +0.7
NEWG  New Galloway      83.19 341  eP       P       20 10 08.7 +0.1
NEWG                                IAmb    IAmb    20 10 09.9
      comp=Z,18nm,1.0s
K31A  O'Neill           83.22  40   P       P       20 10 09.9 +0.8
      baz=316
TUC   Tucson            83.23  54   P       P       20 10 10.2 +0.8
TUC   Tucson            83.23  54   P       P       20 10 10.2 +0.8
TUC                                 pmax    pmax
      comp=Z,38nm,1.5s
TUC   Tucson            83.23  54   P       P       20 10 10.5 +1.2
      baz=310
BIOA  Bad Ischl, Aus    83.28 328  i P      P       20 10 09.7 +0.5
      comp=Z,41nm,0.9s,SNR=18
AKAS  Kas               83.29 311   P       P       20 10 09.2  -0.4
TNS   Taunus Mts        83.35 332  eP       P       20 10 09.7 +0.1
      comp=Z,30nm,1.0s,baz=37,slow=5.2
KESW  Keswick, Cumbr    83.36 340  eP       P       20 10 09.9 +0.5
F36A  Milaca            83.38  35   P       P       20 10 09.7  0.0
      baz=319
PERS  Pernice           83.44 326  eP       P       20 10 10.1  0.0
SOKA  Soboth            83.45 326  i P      P       20 10 10.5 +0.3
      comp=Z,58nm,0.9s,SNR=26
ECSD  EROS Data Cent    83.49  38   P       P       20 10 10.6 +0.2
ECSD                                IAmb    IAmb    20 10 11.9
      comp=Z,28nm,0.9s
ECSD  EROS Data Cent    83.49  38   P       P       20 10 10.8 +0.4
      baz=317,SNR=23
HPK   Haverah Park      83.51 339  eP       P       20 10 10.8 +0.6
HPK                                 IAmb    IAmb    20 10 11.7
      comp=Z,41nm,0.8s
BBLS  Lazi&#263;i       83.52 322⇑iP       P       20 10 11.0 +0.4
HAPS  Han Pijesak,Bl    83.58 322⇑iP       P       20 10 11.5 +0.6
AHRW  Bad Neuenahr-A    83.60 333  eP       P       20 10 10.9 +0.1
      comp=Z,47nm,1.2s,baz=37,slow=5.2
RJOB  Jochberg          83.60 328  eP       P       20 10 11.4 +0.5
      comp=Z,57nm,0.9s,baz=37,slow=5.2
SJES  Sjenica           83.68 321⇑iP       P       20 10 11.9 +0.4
STIP  Stip              83.69 319  i P      P       20 10 10.9  -0.5
KSCO  Kaye Shedlock'    83.69  45   P       P       20 10 12.4 +0.7
      baz=314
E38A  The Farm, Brul    83.70  34   P       P       20 10 11.5 +0.1
      baz=320,SNR=15
RUDO  Rudo              83.72 322  eP       P       20 10 10.8  -0.7
VAY   Valandovo         83.75 318  i P      P       20 10 12.2 +0.5
OBKA  Obir              83.79 326  i P      P       20 10 12.0  0.0
      comp=Z,16nm,0.9s
OBKA  Obir              83.79 326  eP       P       20 10 11.3  -0.7
GCIS  Gornji Cirnik     83.80 325  eP       P       20 10 11.8  -0.1
A051A Mrakovica         83.86 324⇑iP       P       20 10 12.0  -0.3
SKO   Skopje            83.87 320  i P      P       20 10 13.4 +1.0
KBA   Koelnbreinsper    83.88 327  i P      P       20 10 12.5  -0.1
      comp=Z,37nm,0.8s,SNR=13
FUR   Furstenfeldbru    83.89 329  eP       P       20 10 12.8 +0.4
      comp=Z,93nm,0.9s,baz=37,slow=5.2
BTNL  Ternell           83.90 333  dP       P       20 10 12.3  -0.1
      comp=Z,18nm,1.1s
WACR  West Acre         83.92 337  eP       P       20 10 12.7 +0.3
WACR                                IAmb    IAmb    20 10 13.5
      comp=Z,97nm,1.0s
MEM   Membach           83.93 333  dP       P       20 10 12.4  -0.1
      comp=Z,21nm,0.9s
BLY   Banja Luka        83.93 324  eP       P       20 10 12.2  -0.4
T25A  Trinidad          83.96  47   P       P       20 10 14.1 +0.9
T25A                                IAmb    IAmb    20 10 15.6
      comp=Z,33nm,0.9s
T25A  Trinidad          83.96  47   P       P       20 10 13.6 +0.4
      baz=313,SNR=17
LBWR  Ladybower, Pea    84.03 339  eP       P       20 10 13.4 +0.5
LBWR                                IAmb    IAmb    20 10 14.4
      comp=Z,97nm,0.9s
MYKA  Terra Mystica     84.10 327  i P      P       20 10 13.0  -0.5
      comp=Z,20nm,0.8s,SNR=7.3
BSTI  Sart Tilman       84.10 334  dP       P       20 10 13.9 +0.6
BHOU  Houvegnez         84.14 333  dP       P       20 10 13.8 +0.2
      comp=Z,12nm,1.2s
WIM   Isle of Man       84.17 341  eP       P       20 10 14.1 +0.5
EIL   Elat              84.19 303   LR      LR      20 51 20.7
      comp=Z,331nm,21.6s,baz=61,slow=38
SPMN  Marine on St.     84.19  35   P       P       20 10 14.3 +0.3
      baz=320
ANMO  Albuquerque       84.22  50   LR      LR      20 41 15.6
      comp=Z,136nm,21.8s,baz=49,slow=31
ANMO  Albuquerque       84.22  50   P       P       20 10 14.5  0.0
ANMO                                IAmb    IAmb    20 10 31.5
      comp=Z,42nm,1.3s
ANMO  Albuquerque       84.22  50   P       P       20 10 14.5  0.0
ANMO                                pmax    pmax
      comp=Z,42nm,1.3s
ANMO  Albuquerque       84.22  50   P       P       20 10 15.5 +1.0
      baz=312
MGRS  Mrkonjic Grad     84.23 324  eP       P       20 10 14.8 +0.7
STU   Stuttgart         84.24 331   P       P       20 10 13.9  -0.2
STU                                 IAmb    IAmb    20 10 15.6
      comp=Z,70nm,1.1s
STU   Stuttgart         84.24 331   P       P       20 10 13.9  -0.2
STU                                 pmax    pmax
      comp=Z,70nm,1.1s
STU   Stuttgart         84.24 331  eP       P       20 10 14.2 +0.1
      comp=Z,152nm,1.0s,baz=37,slow=5.2
BOJS  Bojanci           84.25 325  eP       P       20 10 13.9  -0.3
BOJS  Bojanci           84.25 325⇑iP       P       20 10 13.9  -0.3
PMOR  Pomariorio Ree    84.29 114  eT       T       21 43 00.5
      comp=Z,57nm,0.2s
BCLA  Clavier           84.33 334  dP       P       20 10 14.4  -0.1
      comp=Z,14nm,1.2s
BGNE  Belgrade          84.41  41   P       P       20 10 15.0  -0.1
BGNE  Belgrade          84.41  41   P       P       20 10 16.1 +1.0
      baz=316
WATA  Walderalm         84.42 328  i P      P       20 10 15.3  0.0
      comp=Z,39nm,2.0s,SNR=10
A050A Klekovaca         84.44 324  eP       P       20 10 15.3  0.0
BGES  Gesves            84.44 334  dP       P       20 10 15.0  -0.1
      comp=Z,19nm,1.2s
CEY   Cerknica          84.44 326⇑iP       P       20 10 14.6  -0.6
SRKY  Kupres RS         84.45 323  eP       P       20 10 15.3  -0.1
WTTA  Wattenberg        84.45 328  i P      P       20 10 15.3  -0.2
      comp=Z,23nm,1.1s,SNR=11
WTTA  Wattenberg        84.45 328  eP       P       20 10 15.5  0.0
      baz=37,slow=5.2
CWF   Charnwood Fore    84.49 338  eP       P       20 10 14.3  -0.9
ABTA  Abfaltersbach     84.49 328  i P      P       20 10 14.6  -0.9
      comp=Z,16nm,0.9s,SNR=7.2
CLUD  Cludinico         84.56 327   P       P       20 10 14.8  -1.0
CLUD                                IAmb    IAmb    20 10 15.8
      comp=Z,43nm,0.9s
RCHB  Rochefort         84.58 333  dP       P       20 10 15.7  -0.1
      comp=Z,22nm,1.1s
Y22A  Socorro           84.58  51   P       P       20 10 18.1 +1.8
      baz=312
MOTA  Moosalm           84.61 329  i PcP    P       20 10 16.2  0.0
      comp=Z,36nm,1.0s,SNR=21
SNF   Seneffe           84.62 334  dP       P       20 10 15.2  -0.7
      comp=Z,35nm,1.1s
BMRD  Maredsous         84.62 334  dP       P       20 10 15.8  -0.2
      comp=Z,37nm,1.1s
RETA  Reutte            84.64 329  i PcP    P       20 10 16.6 +0.4
      comp=Z,57nm,0.9s,SNR=22
PDG   Podgorica         84.65 321  ⇓P      P       20 10 16.5 +0.2
PDG   Podgorica         84.65 321   P       P       20 10 16.4 +0.2
BRY   Bratogost         84.66 322  eP       P       20 10 16.2  -0.3
WLF   Walferdange       84.66 333   P       P       20 10 16.1  -0.1
WLF                                 IAmb    IAmb    20 10 18.2
      comp=Z,56nm,1.3s
WLF   Walferdange       84.66 333   P       P       20 10 16.1  -0.1
WLF                                 pmax    pmax
      comp=Z,56nm,1.3s
WLF   Walferdange       84.66 333  dP       P       20 10 16.1  -0.1
      comp=Z,14nm,0.0s
WLF   Walferdange       84.66 333  eP       P       20 10 16.7 +0.5
      comp=Z,71nm,1.4s,baz=37,slow=5.2
SQTA  Sankt Quirin      84.67 329  i PcP    P       20 10 16.5  0.0
      comp=Z,20nm,0.9s,SNR=10
WME   Myndd Eilian      84.75 340  eP       P       20 10 16.9 +0.4
UBR   Ueberruh          84.75 329  eP       P       20 10 16.7  -0.1
      comp=Z,31nm,1.3s,baz=37,slow=5.2
FNA   Florina           84.76 319   P       P       20 10 16.5  -0.5
FNA   Florina           84.76 319   P       P       20 10 16.5  -0.5
FNA                                 pmax    pmax
      comp=Z,15nm,1.0s
PPT   Papeete           84.77 117   LR      LR      20 43 03.0
      comp=Z,362nm,19.3s,baz=346,slow=32
PPT2  Papeete2          84.78 117  eS       S       20 20 40.1  -1.8
      comp=Z,147nm,24.2s
PPT2  Papeete2          84.78 117  eLR      LR      20 37 00.4
      comp=Z,768nm,28.2s
PPT2                               eLR      LR      20 37 01.2
      comp=Z,1µm,29.5s
PPT2  Papeete2          84.78 117  eT       T       21 43 38.3
      comp=Z,7.1nm,0.3s
STAL  STALIGIAL         84.79 327   P       P       20 10 15.5  -1.4
STAL                                IAmb    IAmb    20 10 16.8
      comp=Z,32nm,0.8s
OHR   Ohrid             84.83 319  i P      P       20 10 17.8 +0.5
I37B  Waseca            84.83  36   P       P       20 10 18.2 +1.0
      baz=319,SNR=17
DOU   Dourbes           84.85 334  dP       P       20 10 16.9  -0.2
      comp=Z,13nm,1.2s
SCHQ  Schefferville     84.86  16   P       P       20 10 17.5 +0.4
      comp=Z,19nm,0.8s,baz=354,slow=6.2,SNR=13
SCHQ                                LR      LR      20 50 14.2
      comp=Z,233nm,21.0s,baz=347,slow=37
      comp=Z,19nm,0.8s
DRME  Dracevica, Mon    84.86 321  eP       P       20 10 17.5 +0.1
CIMO  Cimolais          84.87 327   P       P       20 10 16.2  -1.2
CIMO                                IAmb    IAmb    20 10 17.2
      comp=Z,15nm,1.0s
WLF1  Llynfaes          84.87 340  eP       P       20 10 18.6 +1.5
WLF1                                IAmb    IAmb    20 10 19.5
      comp=Z,134nm,1.4s
FOEL  Foel Wylfa        84.90 339  eP       P       20 10 17.8 +0.4
FOEL                                IAmb    IAmb    20 10 19.1
      comp=Z,85nm,1.0s
TIAR  Tiarei            84.93 116  eT       T       21 43 48.2
      comp=Z,2.3nm,0.3s
BFO   Black Forest      84.93 331   P       P       20 10 17.6  -0.1
BFO   Black Forest      84.93 331   P       P       20 10 17.6  -0.1
BFO                                 pmax    pmax
      comp=Z,75nm,1.0s
BFO   Black Forest      84.93 331  eP       P       20 10 17.6  -0.1
      comp=Z,69nm,1.0s,baz=37,slow=5.2
BFO                                epP      pP      20 10 32.4 +0.8
121A  Cookes Peak, D    85.00  52   P       P       20 10 19.1 +0.6
      baz=312,SNR=13
121A  Cookes Peak, D    85.00  52   P       P       20 10 20.1 +1.6
      baz=312
HCY   Herceg Novi       85.02 321⇑iP       P       20 10 17.7  -0.4
FETA  Feichten          85.03 329  i PcP    P       20 10 18.4 +0.1
      comp=Z,30nm,0.9s,SNR=15
LLW   Llanuwychllyn     85.06 340  eP       P       20 10 18.4 +0.2
STON  Ston              85.09 322  eP       P       20 10 18.9 +0.5
ELSH  Elham, Standar    85.12 336  eP       P       20 10 18.6 +0.1
ELSH                                IAmb    IAmb    20 10 19.6
      comp=Z,116nm,0.9s
HLM1  Long Mynd         85.14 339  eP       P       20 10 18.8 +0.2
COWI  Conover           85.14  33   P       P       20 10 18.6  -0.1
COWI                                IAmb    IAmb    20 10 19.5
      comp=Z,23nm,0.9s
DAVA  Damuels           85.16 329  i PcP    P       20 10 19.0 +0.1
      comp=Z,67nm,1.0s,SNR=21
DAVA  Damuels           85.16 329  eP       P       20 10 18.9  -0.1
      baz=37,slow=5.2
RPZ   Rata Peaks        85.17 159   P       P       20 10 18.4  -0.1
      comp=Z,2.6nm,0.4s,baz=270,slow=10,SNR=1.3
RPZ                                 LR      LR      20 42 05.7
      comp=Z,369nm,20.7s,baz=336,slow=31
      comp=Z,2.6nm,0.4s
KARP  Karpathos         85.21 312   P       P       20 10 19.2  -0.1
HSIG                    85.25  57   P       P       20 10 20.3 +0.7
HSIG                                IAmb    IAmb    20 10 36.7
      comp=Z,38nm,1.3s
G40A  Rib Lake          85.33  34   P       P       20 10 20.1 +0.4
      baz=321,SNR=8.5
CTI   Castel Tesino     85.41 328   P       P       20 10 19.1  -1.1
CTI                                 IAmb    IAmb    20 10 20.2
      comp=Z,25nm,1.0s
CTI   Castel Tesino     85.41 328   P       P       20 10 19.1  -1.1
CTI                                 pmax    pmax
      comp=Z,25nm,1.0s
DSB   Dublin            85.43 341   P       P       20 10 20.4 +0.4
DSB                                 IAmb    IAmb    20 10 21.1
      comp=Z,32nm,1.0s
CBKS  Cedar Bluff       85.43  43   P       P       20 10 20.1  -0.1
CBKS                                IAmb    IAmb    20 10 21.4
      comp=Z,26nm,1.0s
CBKS  Cedar Bluff       85.43  43   P       P       20 10 20.2  -0.1
CBKS                                pmax    pmax
      comp=Z,27nm,1.0s
CBKS  Cedar Bluff       85.43  43   P       P       20 10 20.0  -0.3
      baz=316,SNR=5.3
SRIG  Santa Rosalia     85.47  59   P       P       20 10 21.3 +0.6
SRIG                                IAmb    IAmb    20 10 37.9
      comp=Z,48nm,1.3s
ECH   Echery            85.48 331   P       P       20 10 19.9  -0.4
ECH                                 IAmb    IAmb    20 10 21.5
      comp=Z,42nm,0.9s
ECH   Echery            85.48 331   P       P       20 10 19.9  -0.4
ECH                                 pmax    pmax
      comp=Z,42nm,0.9s
AGG   Agios Georgios    85.52 317   P       P       20 10 20.0  -0.8
AGG   Agios Georgios    85.52 317   P       P       20 10 20.0  -0.8
AGG                                 pmax    pmax
      comp=Z,4.0nm,0.8s
FUORN Ofenpass-Fuorn    85.54 329   P       P       20 10 21.7 +0.7
FUORN                               IAmb    IAmb    20 10 22.5
      comp=Z,55nm,0.9s
LBZ   Lake Benmore      85.55 160   P       P       20 10 21.5 +1.1
DAVOX Davos/Dischmat    85.57 329   P       P       20 10 20.6  -0.5
      comp=Z,19nm,0.9s,baz=30,slow=1.4,SNR=30
DAVOX                               LR      LR      20 52 04.7
      comp=Z,852nm,19.4s,baz=30,slow=38
      comp=Z,19nm,0.9s
STRD  Stroud            85.59 338  eP       P       20 10 20.8 +0.1
STRD                                IAmb    IAmb    20 10 22.2
      comp=Z,146nm,0.9s
HMNX  Herstmonceux      85.62 337  eP       P       20 10 21.8 +0.8
WOL   Wolverton         85.71 338  eP       P       20 10 21.3  -0.1
MONM  Monmouth          85.72 339  eP       P       20 10 21.9 +0.5
LPW   Lampeter          85.83 340  eP       P       20 10 22.3 +0.3
TEOL  Teolo             85.95 327   P       P       20 10 22.8 +0.1
TEOL                                IAmb    IAmb    20 10 23.6
      comp=Z,28nm,0.9s
MEH   Mehetia           86.05 116  eT       T       21 45 12.4
      comp=Z,46nm,0.3s
N35A  Tabor             86.10  40   P       P       20 10 24.7 +1.1
      baz=318
RSBS  Rosebush, Pemb    86.16 340  eP       P       20 10 23.7 +0.1
RSBS                                IAmb    IAmb    20 10 24.8
      comp=Z,33nm,1.0s
TAOE  Nuku Hiva Isla    86.20 104  eLR      LR      20 37 40.2
      comp=Z,1µm,26.1s
I40A  Norwalk           86.22  35   P       P       20 10 24.6 +0.5
      baz=321
SALO  Salr              86.23 328   P       P       20 10 23.7  -0.4
SALO                                IAmb    IAmb    20 10 24.8
      comp=Z,50nm,1.1s
SCIA  State Center      86.52  38   P       P       20 10 26.3 +0.7
SCIA  State Center      86.52  38   P       P       20 10 25.8 +0.2
      baz=320,SNR=5.2
SCIA  State Center      86.52  38   P       P       20 10 26.8 +1.2
      baz=320,SNR=5.2
IDI   Anoyia            86.73 313  ⇑P      P       20 10 26.1  -0.7
IDI   Anoyia            86.73 313   P       P       20 10 25.5  -1.3
      comp=Z,31nm,0.8s,baz=36,slow=10,SNR=18
IDI                                 LR      LR      20 54 12.9
      comp=Z,183nm,18.6s,baz=23,slow=39
      comp=Z,31nm,0.8s
IDI   Anoyia            86.73 313   P       P       20 10 25.9  -0.9
IDI                                 IAmb    IAmb    20 10 27.2
      comp=Z,35nm,0.8s
KSU1  Kansas State U    86.90  41   P       P       20 10 27.5  0.0
KSU1                                IAmb    IAmb    20 10 28.7
      comp=Z,40nm,0.9s
KSU1  Kansas State U    86.90  41   P       P       20 10 27.5  0.0
      baz=318,SNR=10
SENIN Lac Senin/Sane    86.94 330   P       P       20 10 27.7  -0.1
SENIN                               IAmb    IAmb    20 10 28.9
      comp=Z,52nm,1.0s
I42A  Draeger Farm,     86.98  34   P       P       20 10 28.5 +0.7
      baz=322,SNR=6.6
H43A  Windswept, Lux    87.03  33   P       P       20 10 28.9 +0.9
      baz=323,SNR=5.0
ZCCA  Zocca             87.05 327   P       P       20 10 29.2 +1.0
ITM   Ithomi            87.07 316   P       P       20 10 27.6  -0.7
MNTX  Cornudas Mount    87.07  52   P       P       20 10 28.7 +0.2
      baz=313,SNR=8.7
MSTX  Muleshoe          87.11  49   P       P       20 10 29.0 +0.2
      baz=314
AMTX  Amarillo          87.11  47   P       P       20 10 29.6 +0.8
AMTX                                IAmb    IAmb    20 10 31.0
      comp=Z,37nm,0.9s
AMTX  Amarillo          87.11  47   P       P       20 10 29.0 +0.2
      baz=315
FDMO  Fiordimonte       87.14 325   P       P       20 10 28.7  0.0
JFWS  Jewell Farm       87.15  35   P       P       20 10 28.3  -0.4
      baz=321
MURB  Monte Urbino      87.22 325   P       P       20 10 30.1 +1.0
MURB                                IAmb    IAmb    20 10 31.1
      comp=Z,38nm,0.9s
L40A  Anamosa           87.35  36   P       P       20 10 29.8 +0.2
      baz=321,SNR=7.8
N38A  Joes South For    87.36  38   P       P       20 10 30.4 +0.7
      baz=320,SNR=9.0
CLF   Chambon-Foret     87.43 334   P       P       20 10 30.1 +0.3
CLF                                 IAmb    IAmb    20 10 31.6
      comp=Z,45nm,1.0s
INTR  Introdacqua       87.56 324   P       P       20 10 30.2  -0.5
INTR                                IAmb    IAmb    20 10 31.9
      comp=Z,30nm,0.9s
U32A  Winter Ranch,     87.58  45   P       P       20 10 31.4 +0.5
U32A                                IAmb    IAmb    20 10 33.0
      comp=Z,26nm,0.9s
JQE   Queens East       87.82 337  eP       P       20 10 31.9 +0.2
JVM   Valle D.L. Mar    87.86 337  eP       P       20 10 31.9 +0.1
JSA   Saint Aubin       87.87 337  eP       P       20 10 31.9  0.0
GLMI  Grayling          88.06  31   P       P       20 10 33.7 +0.7
GLMI  Grayling          88.06  31   P       P       20 10 33.3 +0.3
      baz=325,SNR=5.3
P38A  Dawn              88.09  39   P       P       20 10 34.0 +0.8
      baz=319,SNR=9.9
L42A  Oliver, Polo      88.13  36   P       P       20 10 33.5 +0.2
      baz=322,SNR=5.6
BNI   Bardonecchia      88.27 330   P       P       20 10 34.1  0.0
BNI   Bardonecchia      88.27 330   P       P       20 10 34.1  0.0
BNI                                 pmax    pmax
      comp=Z,10.0nm,1.1s
TIP   Timpagrande       88.33 320   P       P       20 10 34.3  -0.2
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TIP				IAmb	IAmb	20 10 39.9	
	comp=Z,30nm,1.0s						
T35B	**Sooner Cattle**	**88.56**	**43**	P	**P**	**20 10 36.4**	**+0.9**
	baz=318						
N41A	**Harden Midland**	**88.58**	**37**	P	**P**	**20 10 35.7**	**+0.2**
	baz=321						
TBI	**Tubuai**	**88.70**	**121**	*e*S	**S**	**20 21 17.7**	**-1.7**
	comp=Z,670nm,28.0s						
TBI	**Tubuai**	**88.70**	**121**	*e*LR	LR	20 38 49.2	
	comp=Z,15µm,22.8s						
TBI				*e*LR	LR	20 38 49.4	
	comp=Z,4µm,28.5s						
TBI	**Tubuai**	**88.70**	**121**	*e*T	T	21 48 30.7	
	comp=Z,70nm,0.3s						
L44A	**Lake County Fo**	**88.79**	**34**	P	**P**	**20 10 36.9**	**+0.5**
	baz=323						
LPIG	**La Paz**	**88.88**	**60**	LR	LR	20 45 18.5	
	comp=Z,103nm,18.9s,baz=245,slow=32						
WMOK	**Wichita Mounta**	**88.89**	**46**		**P**	**20 10 37.2**	**+0.1**
WMOK				IAmb	IAmb	20 10 53.3	
	comp=Z,24nm,1.2s						
WMOK	**Wichita Mounta**	**88.89**	**46**	P	**P**	**20 10 37.2**	**+0.1**
WMOK				pmax	pmax		
	comp=Z,24nm,1.3s						
WMOK	**Wichita Mounta**	**88.89**	**46**	P	**P**	**20 10 37.3**	**+0.1**
	baz=316,SNR=9.7						
WMOK	**Wichita Mounta**	**88.89**	**46**	P	**P**	**20 10 38.0**	**+0.9**
	baz=316,SNR=9.7						
P40A	**Paris**	**88.91**	**38**	P	**P**	**20 10 37.9**	**+0.8**
	baz=320,SNR=13						
J47A	**Sunmer**	**89.28**	**32**	P	**P**	**20 10 40.1**	**+1.4**
	baz=325,SNR=5.4						
J47A				P	**P**	**20 10 40.1**	**+1.4**
	baz=325,SNR=5.4						
M44A	**Midewin, Midew**	**89.36**	**35**	P	**P**	**20 10 40.0**	**+0.9**
	baz=323						
HDIL	**Hopedale**	**89.44**	**36**	P	**P**	**20 10 39.4**	**-0.1**
	baz=322						
L46A	**Eue Claire**	**89.64**	**34**	P	**P**	**20 10 41.3**	**+0.9**
	baz=324						
L46A				P	**P**	**20 10 41.3**	**+0.9**
	baz=324						
S39A	**Bolivar**	**89.67**	**40**	P	**P**	**20 10 40.4**	**-0.2**
	baz=320,SNR=8.1						
MSEY	**Mahe Island**	**89.67**	**264**		**P**	**20 10 40.9**	**-0.2**
MSEY				IAmb	IAmb	20 10 57.0	
	comp=Z,33nm,1.2s						
MSEY	**Mahe Island**	**89.67**	**264**	P	**P**	**20 10 40.9**	**-0.2**
MSEY				pmax	pmax		
	comp=Z,33nm,1.3s						
TUL1	**Leonard**	**89.69**	**43**		**P**	**20 10 40.8**	**+0.1**
TUL1				IAmb	IAmb	20 10 42.5	
	comp=Z,19nm,0.8s						
TUL1	**Leonard**	**89.69**	**43**	P	**P**	**20 10 40.9**	**+0.1**
	baz=318,SNR=6.8						
TUL1	**Leonard**	**89.69**	**43**	P	**P**	**20 10 41.6**	**+0.8**
	baz=318,SNR=6.8						
R40A	**Maddies Statio**	**89.75**	**39**	P	**P**	**20 10 41.4**	**+0.4**
	baz=320,SNR=8.8						
TX31	**Lajitas Ar. Si**	**89.77**	**52**	P	**P**	**20 10 41.9**	**+0.4**
TX31	**Lajitas Ar. Si**	**89.77**	**52**	P	**P**	**20 10 42.5**	**+1.1**
	baz=314,SNR=24						
TX32	**Lajitas Array**	**89.77**	**52**	P	**P**	**20 10 41.8**	**+0.4**
TX32				IAmb	IAmb	20 10 57.9	
	comp=Z,33nm,1.4s						
TXAR	**Lajitas Array**	**89.77**	**52**	P	**P**	**20 10 42.3**	**+0.9**
	comp=Z,11nm,0.8s,baz=297,slow=3.3,SNR=101						
TXAR				LR	LR	20 45 04.6	
	comp=Z,170nm,21.9s,baz=320,slow=32						
	comp=Z,11nm,0.8s						
TXAR	**Lajitas Array**	**89.77**	**52**	P	**P**	**20 10 41.8**	**+0.4**
WTFS	**Witchita Falls**	**89.77**	**46**		**P**	**20 10 41.3**	**+0.1**
WTFS				IAmb	IAmb	20 10 57.2	
	comp=Z,34nm,1.3s						
ATD	**Arta Tunnel**	**89.83**	**284**	LR	LR	20 55 53.8	
	comp=Z,5.7nm,19.3s,baz=41,slow=39						
ABTX	**Abilene, Hawle**	**89.91**	**48**	P	**P**	**20 10 42.2**	**+0.3**
	baz=316,SNR=7.4						
ABTX	**Abilene, Hawle**	**89.91**	**48**	P	**P**	**20 10 43.1**	**+1.1**
	baz=316,SNR=7.4						
P43A	**Skaggs, Pawnee**	**90.05**	**37**	P	**P**	**20 10 43.1**	**+0.7**
	baz=322						
U38A	**Gravette**	**90.05**	**42**	P	**P**	**20 10 42.8**	**+0.3**
	baz=319,SNR=12						
SADO	**Sadowa**	**90.24**	**28**	LR	LR	20 53 25.7	
	comp=Z,170nm,20.0s,baz=318,slow=37						
HHAR	**Hobbs**	**90.41**	**42**	P	**P**	**20 10 43.9**	**-0.3**
HHAR				IAmb	IAmb	20 10 45.3	
	comp=Z,15nm,0.8s						
CCM	**Cathedral Cave**	**90.44**	**39**	P	**P**	**20 10 44.2**	**-0.1**
CCM				IAmb	IAmb	20 11 00.8	
	comp=Z,33nm,1.1s						
CCM	**Cathedral Cave**	**90.44**	**39**	P	**P**	**20 10 44.2**	**-0.1**
CCM				pmax	pmax		
	comp=Z,33nm,1.1s						
CCM	**Cathedral Cave**	**90.44**	**39**	P	**P**	**20 10 44.5**	**+0.2**
	baz=321						
CCM	**Cathedral Cave**	**90.44**	**39**	P	**P**	**20 10 45.0**	**+0.8**
	baz=321,SNR=8.6						
L48A	**N Adams**	**90.50**	**32**	P	**P**	**20 10 45.5**	**+1.0**
	baz=325,SNR=6.7						
L48A				P	**P**	**20 10 45.5**	**+1.0**
	baz=325,SNR=6.7						
AAM	**Ann Arbor**	**90.53**	**32**	P	**P**	**20 10 45.2**	**+0.6**
	baz=326						
SFIN	**Lafayette**	**90.59**	**35**	P	**P**	**20 10 45.5**	**+0.6**
	baz=324						
SFIN	**Lafayette**	**90.59**	**35**	P	**P**	**20 10 45.9**	**+1.0**
	baz=324						
Z35A	**Perchaven, San**	**90.78**	**46**	P	**P**	**20 10 46.6**	**+0.7**
	baz=317,SNR=10						
N47A	**Urbana**	**90.82**	**34**	P	**P**	**20 10 46.5**	**+0.6**
	baz=324,SNR=8.1						
N47A				P	**P**	**20 10 46.5**	**+0.6**
	baz=324,SNR=8.1						
VAE	**Valguarnera**	**90.82**	**321**	LR	LR	20 55 52.4	
	comp=Z,467nm,18.2s,baz=65,slow=38						
Q44A	**Meyer Farm, Va**	**90.87**	**37**	P	**P**	**20 10 47.1**	**+0.9**
	baz=322						
X37A	**Clayton**	**90.90**	**44**	P	**P**	**20 10 47.1**	**+0.7**
	baz=318,SNR=5.7						
T42A	**Van Buren**	**91.31**	**39**	P	**P**	**20 10 48.4**	**+0.1**
	baz=321,SNR=7.8						
JCT	**Junction City**	**91.34**	**49**	P	**P**	**20 10 48.7**	**+0.1**
JCT				IAmb	IAmb	20 11 04.8	
	comp=Z,52nm,1.6s						
JCT	**Junction City**	**91.34**	**49**	P	**P**	**20 10 48.7**	**+0.1**
JCT				pmax	pmax		
	comp=Z,52nm,1.6s						
JCT	**Junction City**	**91.34**	**49**	P	**P**	**20 10 48.5**	**-0.2**
	baz=316,SNR=5.7						
JCT	**Junction City**	**91.34**	**49**	P	**P**	**20 10 49.5**	**+0.9**
	baz=316,SNR=5.7						
OLIL	**Olney**	**91.44**	**37**	P	**P**	**20 10 48.8**	**-0.1**
OLIL				IAmb	IAmb	20 11 05.1	
	comp=Z,31nm,1.0s						
N49A	**Columbus Grove**	**91.45**	**33**	P	**P**	**20 10 49.6**	**+0.8**
	baz=325,SNR=6.1						
N49A				P	**P**	**20 10 49.6**	**+0.8**
	baz=325,SNR=6.1						
O48B	**Farmland**	**91.57**	**34**	P	**P**	**20 10 50.0**	**+0.6**
	baz=325,SNR=5.9						
O48B	**Farmland**	**91.57**	**34**	P	**P**	**20 10 49.9**	**+0.5**
	baz=325,SNR=5.9						
WHTX	**Lake Whitney,**	**91.64**	**47**	P	**P**	**20 10 50.6**	**+0.7**
WHTX	**Lake Whitney,**	**91.64**	**47**	P	**P**	**20 10 51.0**	**+1.0**
	baz=317,SNR=15						
WHTX	**Lake Whitney,**	**91.64**	**47**	P	**P**	**20 10 51.2**	**+1.2**
	baz=317,SNR=15						
FCAR	**Ozark Folk Cen**	**91.66**	**41**	P	**P**	**20 10 50.0**	**+0.1**
FCAR				IAmb	IAmb	20 10 51.0	
	comp=Z,18nm,0.9s						
S44A	**Carbondale**	**91.71**	**38**	P	**P**	**20 10 51.1**	**+0.9**
	baz=322						
MIAR	**Mount Ida**	**91.91**	**43**	P	**P**	**20 10 51.6**	**+0.5**
MIAR				IAmb	IAmb	20 10 53.0	
	comp=Z,30nm,0.9s						
MIAR	**Mount Ida**	**91.91**	**43**	P	**P**	**20 10 51.6**	**+0.5**
MIAR				pmax	pmax		
	comp=Z,30nm,0.9s						
MIAR	**Mount Ida**	**91.91**	**43**	P	**P**	**20 10 51.5**	**+0.3**
	baz=319,SNR=14						
MIAR	**Mount Ida**	**91.91**	**43**	P	**P**	**20 10 52.0**	**+0.8**
	baz=319,SNR=14						
LONY	**Lake Ozonia**	**91.97**	**25**	P	**P**	**20 10 53.0**	**+1.8**
	baz=332						
435B	**Jarrell**	**92.45**	**48**	P	**P**	**20 10 54.7**	**+1.0**
	baz=317						
ACSO	**Alum Creek Sta**	**92.53**	**32**	P	**P**	**20 10 54.6**	**+0.7**
	baz=326						
WCI	**Wyandotte Cave**	**92.69**	**36**	P	**P**	**20 10 55.0**	**+0.3**
WCI				IAmb	IAmb	20 11 54.4	
	comp=Z,14nm,0.8s						
WCI	**Wyandotte Cave**	**92.69**	**36**	P	**P**	**20 10 55.0**	**+0.3**
WCI				pmax	pmax		
	comp=Z,14nm,0.8s						
WCI	**Wyandotte Cave**	**92.69**	**36**	P	**P**	**20 10 55.8**	**+1.1**
	baz=324						
PKME	**Peaks-Kenny Pk**	**93.04**	**21**	P	**P**	**20 10 57.6**	**+1.5**
	baz=336						
P51A	**Williamsport**	**93.12**	**33**	P	**P**	**20 10 57.2**	**+0.6**
	baz=326,SNR=5.5						
P51A				P	**P**	**20 10 57.2**	**+0.6**
	baz=326,SNR=5.5						
833A	**Chaparral WMA,**	**93.13**	**50**	P	**P**	**20 10 58.0**	**+1.1**
	baz=316						
O53A	**New Philadelph**	**93.26**	**31**	P	**P**	**20 10 57.9**	**+0.6**
	baz=327						
T47A	**Sharon Grove**	**93.31**	**37**	P	**P**	**20 10 58.4**	**+0.9**
	baz=323,SNR=5.7						
ACCN	**Adirondack Com**	**93.38**	**25**	P	**P**	**20 10 58.4**	**+0.7**
	baz=333						
P52A	**Corning**	**93.39**	**32**	P	**P**	**20 10 58.5**	**+0.6**
	baz=327						
R50A	**Paris**	**93.55**	**34**	P	**P**	**20 10 59.5**	**+0.9**
	baz=325						
R50A				P	**P**	**20 10 59.5**	**+0.9**
	baz=325						
WVT	**Waverly**	**93.64**	**38**	P	**P**	**20 10 59.1**	**0.0**
	baz=323						
O54A	**Avella**	**93.66**	**31**	P	**P**	**20 11 00.1**	**+0.9**
	baz=328						
O54A				P	**P**	**20 11 00.1**	**+0.9**
	baz=328						
OXF	**Oxford**	**94.13**	**40**	P	**P**	**20 11 02.2**	**+0.8**
	baz=322						
U49A	**Red Boiling Sp**	**94.32**	**36**	P	**P**	**20 11 02.5**	**+0.3**
	baz=324						
MCWV	**Mont Chateau**	**94.32**	**31**	P	**P**	**20 11 02.5**	**+0.3**
	baz=328						
T50A	**Nancy**	**94.35**	**36**	P	**P**	**20 11 02.8**	**+0.5**
	baz=325						
T50A				P	**P**	**20 11 02.8**	**+0.5**
	baz=325						
Q54A	**Coxs Mills**	**94.48**	**32**	P	**P**	**20 11 03.9**	**+1.0**
	baz=328						
Q54A				P	**P**	**20 11 03.9**	**+1.0**
	baz=328						
KEST	**Kesra**	**94.70**	**323**	P	**P**	**20 11 02.9**	**-1.2**
	comp=Z,12nm,1.0s,baz=13,slow=3.4,SNR=5.8						
KEST				LR	LR	20 58 54.6	
	comp=Z,412nm,19.0s,baz=340,slow=39						
	comp=Z,12nm,1.0s						
TZTN	**Tazewell**	**95.33**	**35**	P	**P**	**20 11 07.4**	**+0.5**
	baz=326						
TKL	**Tuckaleechee C**	**95.95**	**36**	LR	LR	20 56 41.6	
	comp=Z,96nm,21.0s,baz=326,slow=37						
LRAL	**Lakeview Retre**	**96.52**	**39**	P	**P**	**20 11 12.9**	**+0.6**
	baz=323						
ESDC	**Sonseca Array**	**96.90**	**334**	P	**P**	**20 11 13.2**	**-0.8**
	comp=Z,3.5nm,0.9s,baz=16,slow=4.2,SNR=19						
ESDC				PP	PP	20 15 00.5	-8.2
	comp=Z,2.2nm,1.0s,baz=29,slow=6.3,SNR=4.4						
ESDC				LR	LR	20 59 33.4	
	comp=Z,746nm,20.6s,baz=18,slow=38						
	comp=Z,3.5nm,0.9s						
ESDC	**Sonseca Array**	**96.90**	**334**	P	**P**	**20 11 13.1**	**-0.9**
KMSC	**Kings Mountain**	**97.49**	**34**	P	Pdif	20 11 16.9	+0.2
	baz=327						
TORD	**Torodi Ar. Bea**	**117.06**	**315**	PKP	**PKPdf**	**20 16 27.1**	**-0.9**
	comp=Z,3.0nm,0.7s,baz=41,slow=1.2,SNR=17						
TORD				PP	PP	20 17 25.2	-12
	comp=Z,4.8nm,1.0s,baz=22,slow=7.2,SNR=8.3						
TORD				PKKPbc	**PKKPbc**	**20 26 52.9**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=194,slow=2.1,SNR=3.8						
TORD				PKKP	PKKPdf	20 27 08.7	-9.2
	comp=Z,2.0nm,1.1s,baz=200,slow=2.3,SNR=5.7						
LBTB	**Lobatse**	**124.78**	**263**	PKPdf	**PKPdf**	**20 16 42.3**	**-0.2**
LBTB	**Lobatse**	**124.78**	**263**	PKIKP	**PKPdf**	**20 16 42.3**	**-0.2**
PTBC	**PUERTO BERRIO,**	**124.81**	**45**	*e*P	**PKPdf**	**20 16 42.0**	**-0.9**
SDV	**Santo Domingo**	**124.91**	**40**	PKPdf	**PKPdf**	**20 16 43.0**	**-0.3**
SDV	**Santo Domingo**	**124.91**	**40**	*e*P	**PKiKP**	**20 16 45.1**	**+1.4**
GUY2C	**Guyana, Caldas**	**125.36**	**47**	*e*P	**PKiKP**	**20 16 44.9**	**0.0**
YOTC	**Yotoco, Valle**	**125.77**	**49**	*e*P	**PKPdf**	**20 16 44.9**	**0.0**
DBIC	**Dimbokro**	**126.00**	**317**	PKP	**PKPdf**	**20 16 43.5**	**-1.6**
	comp=Z,11nm,0.7s,baz=46,slow=2.4,SNR=12						
DBIC				PP	**PP**	**20 18 32.1**	**-5.9**
	comp=Z,7.2nm,0.9s,baz=54,slow=8.9,SNR=4.0						
DBIC	**Dimbokro**	**126.00**	**317**	PKPdf	**PKPdf**	**20 16 44.2**	**-0.9**
DBIC	**Dimbokro**	**126.00**	**317**	PKIKP	**PKPdf**	**20 16 44.2**	**-0.9**
RUSC	**La Rusia**	**126.11**	**44**	*e*P	**PKPdf**	**20 16 45.9**	**-0.1**
TIC	**Toumodi**	**126.11**	**317**	⇓*i*PKIKP	**PKPdf**	**20 16 45.2**	**-0.2**
	comp=Z,5.9nm,0.2s						
KIC	**Kosan Boka**	**126.20**	**317**	⇑*i*PKIKP	**PKPdf**	**20 16 44.9**	**-0.6**
	comp=Z,5.1nm,0.7s						
ROSC	**El Rosal**	**126.27**	**46**	PKP	**PKPdf**	**20 16 46.2**	**0.0**
	comp=Z,6.4nm,0.3s,baz=335,slow=19,SNR=2.0						
LIC	**Lamto**	**126.47**	**317**	⇑*i*PKIKP	**PKPdf**	**20 16 45.3**	**-0.7**
	comp=Z,28nm,0.7s						
ORTC	**Ortega, Tolima**	**126.48**	**48**	*e*P	**PKPdf**	**20 16 45.9**	**-0.3**
POPC	**Popayan, Colom**	**126.70**	**50**	*e*P	**PKPdf**	**20 16 46.8**	**0.0**
BOSA	**Boshof**	**126.74**	**260**	PKP	**PKPdf**	**20 16 45.7**	**-0.6**
	comp=Z,5.4nm,0.8s,baz=118,slow=2.4,SNR=6.3						
CHIC	**Chingaza**	**126.78**	**46**	*i* P	**PKiKP**	**20 16 47.8**	**+0.1**
PRAC	**Prado**	**126.85**	**48**		**PKPdf**	**20 16 46.5**	**-0.4**
PRAC	**Prado**	**126.85**	**48**	*e*P	**PKPdf**	**20 16 46.8**	**0.0**
VILC	**Villavicencio,**	**127.22**	**46**	*e*P	**PKPdf**	**20 16 47.8**	**+0.1**
QSPA	**South Pole Qui**	**127.25**	**180**		**PKPdf**	**20 16 46.1**	**+0.2**
OTAV	**Otavalo**	**127.37**	**54**	*e*P	**PKPdf**	**20 16 46.8**	**-1.5**
ARNL	**Arenillas**	**129.12**	**59**		**PKPdf**	**20 16 50.2**	**-0.9**
ATAH	**Atahualpa**	**132.85**	**60**	PKP	**PKPdf**	**20 16 58.8**	**+0.2**
	comp=Z,4.4nm,0.7s,baz=96,slow=9.2,SNR=5.2						
BOAV	**Boa Vista**	**135.34**	**32**	*e*P	**PKiKP**	**20 17 03.7**	**-0.7**
TEFE	**Tefe**	**138.53**	**42**	*e*P	**PKiKP**	**20 17 10.3**	**-0.5**
TROLL	**Troll, Antarti**	**139.71**	**198**	PKPdf	**PKPdf**	**20 17 05.6**	**-3.7**
VNA2	**Neumayer--Watz**	**142.79**	**196**	PKPdf	**PKPdf**	**20 17 11.4**	**-3.2**
	baz=100,slow=2.0						
VNA3	**Neumayer Olymp**	**143.04**	**195**	PKPdf	PKPbc	20 17 12.3	+0.2
SAML	**Samuel**	**143.85**	**44**	PKPdf	PKPbc	20 17 15.8	-0.1
SAML	**Samuel**	**143.85**	**44**	PKIKP	PKPbc	20 17 15.9	-0.1
SAML	**Samuel**	**143.85**	**44**	*e*P	**PKPdf**	**20 17 19.8**	**+1.5**
NPGB	**Novo Progresso**	**146.02**	**31**	*e*P	**PKPbc**	**20 17 23.0**	**+0.2**
LPAZ	**La Paz**	**146.38**	**59**	PKPbc	**PKPbc**	**20 17 24.2**	**-0.4**
	comp=Z,16nm,0.7s,baz=325,slow=3.3,SNR=35						
LPAZ	**La Paz**	**146.38**	**59**		**PKPbc**	**20 17 24.8**	**+0.2**
LPAZ	**La Paz**	**146.38**	**59**	PKP2	**PKPbc**	**20 17 24.8**	**+0.2**
LPAZ	**La Paz**	**146.38**	**59**	*e*P	**PKPdf**	**20 17 23.3**	**0.0**
LPAZ	**La Paz**	**146.38**	**59**	*e*P	**PKPdf**	**20 17 23.8**	**+0.5**
PB12	**IPOC Station P**	**146.41**	**65**		**PKPab**	**20 17 24.9**	**0.0**
PB16	**IPOC Station P**	**146.81**	**63**		**PKPbc**	**20 17 26.2**	**+0.5**
NBCL	**Cascavel-CE**	**146.87**	**360**	*e*P	**PKPbc**	**20 17 25.0**	**-0.3**
H03N2	**Juan Fernandez**	**146.99**	**95**	T	T	23 02 21.3	
	baz=291,slow=76,SNR=55						
H03N3	**Juan Fernandez**	**147.00**	**95**	T	T	23 02 17.2	
	baz=291,slow=76,SNR=67						
H03N1	**Juan Fernandez**	**147.00**	**95**	T	T	23 02 19.6	
	baz=291,slow=76,SNR=65						
PRPB	**Parauapebas**	**147.14**	**21**	*e*P	**PKPbc**	**20 17 25.1**	**-1.0**
MNMC	**Minye Minye**	**147.27**	**65**		**PKPbc**	**20 17 26.1**	**-0.6**
PB11	**IPOC Station P**	**147.63**	**66**		**PKPdf**	**20 17 25.9**	**+1.2**
GO01	**Chusmiza**	**147.90**	**65**		**PKPbc**	**20 17 27.2**	**-1.4**
PB08	**IPOC Station P**	**148.23**	**66**		**PKPbc**	**20 17 28.0**	**-1.4**
RCBR	**Riachuelo**	**148.38**	**355**	*e*P	**PKPdf**	**20 17 27.6**	**+1.6**
VILB	**Vilhena**	**148.79**	**44**		**PKPbc**	**20 17 28.5**	**-1.9**
VILB	**Vilhena**	**148.79**	**44**	*e*P	**PKPdf**	**20 17 28.4**	**+1.8**
PB03	**IPOC Station P**	**148.97**	**69**		**PKPbc**	**20 17 31.3**	**+0.4**
PB09	**IPOC Station P**	**149.19**	**68**		**PKiKP**	**20 17 32.2**	**-0.5**
LVC	**Limon Verde**	**149.93**	**69**	*e*P	**PKPdf**	**20 17 30.6**	**+2.0**
LCO	**Las Campanas**	**151.86**	**82**		**PKiKP**	**20 17 38.1**	**-0.1**
LCO	**Las Campanas**	**151.86**	**82**	PKIKP	**PKiKP**	**20 17 38.1**	**-0.1**
GO09	**Cerro Castillo**	**152.45**	**131**		**PKiKP**	**20 17 38.5**	**+0.2**
MT02	**Curacav**	**153.12**	**91**		**PKiKP**	**20 17 40.5**	**+0.2**
VA03	**San Esteban**	**153.42**	**89**		**PKPbc**	**20 17 40.6**	**-0.3**
BO02	**Sierra Bellavi**	**153.84**	**94**		**PKiKP**	**20 17 41.9**	**+0.1**
MT13	**San Alfonso**	**153.94**	**91**		**PKiKP**	**20 17 42.1**	**0.0**
MT08	**Bocatoma Ro**	**154.07**	**91**		**PKiKP**	**20 17 43.2**	**+0.7**
PLCA	**Paso Flores**	**154.99**	**107**	PKPab	**PKPab**	**20 17 59.9**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=294,slow=6.6,SNR=4.8						
RVDE	**Rio Verde (Bra**	**156.63**	**43**	*e*P	**PKPdf**	**20 17 39.1**	**+1.1**
BDFB	**Brasilia**	**156.64**	**24**	PKPab	**PKPab**	**20 18 07.9**	**+0.7**
	comp=Z,10nm,1.0s,baz=277,slow=2.4,SNR=7.6						
CPUP	**Villa Florida**	**160.54**	**60**	PKP	**PKPdf**	**20 17 42.7**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=0.0,slow=7.1,SNR=3.1						
CPUP				PKPab	**PKPab**	**20 18 24.8**	**+0.9**
	comp=Z,1.0nm,0.6s,baz=228,slow=4.6,SNR=3.2						

JMA 11 19:59:06.7±0.0**, 35°.4N**±0°.2×**133°.8E**±0°.1**, h9^{km}, MV0.7**/28**, EASTERN TOTTORI PREF, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.05**	**184**	*i* P	Pg	19 59 08.5	-0.1
JAD	**Aida**	**0.56**	**150**	P	Pg	19 59 17.5	-0.1
JAD				S	Sg	19 59 25.1	+0.1
JNM	**Ikuma**	**0.65**	**276**	*e*P	Pg	19 59 19.5	+0.2
JHS	**Saijyo**	**0.72**	**234**	*e*S	Sg	19 59 30.0	-0.1
JISK	**Izumosakaura**	**0.80**	**276**	*e*P	Pg	19 59 21.9	-0.3
JOI	**OKI**	**0.98**	**332**	*e*P	Pg	19 59 24.8	-0.8
JOI				*e*S	Sg	19 59 37.8	-0.6

IDC 11 20:50:00.1±2.4**, 6°.71S**×**129°.49E, h0^{km}, mb3.2**/1**, mbtmp3.3**/3**, ML3.4**/2**, MS3.6**/1**, Error ellipse: s-maj=148.5km s-min=33.3km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.97**	**161**	Pn	Pn	20 53 20.2	+0.7
	0.2nm,0.3s,baz=343,slow=13,SNR=6.9						
WRA				Sn	Sn	20 55 43.5	-12
	0.5nm,0.3s,baz=332,slow=22,SNR=9.9						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**17.38**	**166**	P	Pn	20 54 03.7	-0.5
	0.1nm,0.3s,baz=346,slow=12,SNR=10						
ASAR				S	Sn	20 57 03.5	-15
	0.6nm,0.6s,baz=321,slow=22,SNR=5.2						
	0.5nm,0.5s						
JCJ	**Chichijima**	**35.79**	**20**	LR	LR	21 10 05.1	
	comp=Z,102nm,21.9s,baz=108,slow=34						
MKAR	**Makanchi Array**	**67.71**	**327**	P	P	21 00 59.4	0.0
	0.1nm,0.5s,baz=148,slow=7.6,SNR=2.0						
	0.1nm,0.5s						

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*IDC **11** 20:56:44.1±2.1, 17°.39S×178°.88W, h602^{km}±19^{km}, mb3.1/7, mbtmp4.1/9, Error ellipse: s-maj=102.4km s-min=16.7km az=154.0*

ISC 11 20:56:44.1±1.8**, 17°.4S**±0°.7×**178°.9W**±0°.4**, h600^{km}, n9,** σ**0^{s}.37**/9**, mb3.6**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.96**	**262**	P	**P**	**20 58 03.1**	**0.0**
	70nm,0.6s,baz=100,slow=2.9,SNR=47						
DZM	**Mont Dzumac**	**14.60**	**249**	P	**P**	**20 59 49.0**	**+0.3**
	3.0nm,0.8s,baz=170,slow=17,SNR=7.0						
CTA	**Charters Tower**	**33.10**	**260**	P	**P**	**21 02 32.6**	**+0.2**
	1.4nm,0.4s,baz=90,slow=13,SNR=2.4						
	1.4nm,0.4s						
WRA	**Warramunga Arr**	**44.30**	**259**	P	**P**	**21 04 01.8**	**-0.6**
	0.9nm,0.3s,baz=90,slow=7.8,SNR=33						
	0.9nm,0.3s						
ASAR	**Alice Springs**	**44.52**	**254**	P	**P**	**21 04 03.8**	**-0.2**
	8.9nm,0.8s,baz=87,slow=8.9,SNR=86						
	8.9nm,0.8s						
NVAR	**Mina Array Bea**	**79.33**	**44**	P	**P**	**21 07 49.4**	**+0.3**
	1.0nm,0.9s,baz=219,slow=7.2,SNR=5.8						
	1.0nm,0.9s						
ILAR	**Eielson Array**	**85.45**	**13**	P	**P**	**21 08 19.0**	**+0.1**
	0.3nm,0.4s,baz=224,slow=5.2,SNR=12						
	0.3nm,0.4s						
TXAR	**Lajitas Array**	**86.08**	**58**	P	**P**	**21 08 22.8**	**0.0**
	1.2nm,0.8s,baz=221,slow=6.6,SNR=9.6						
	1.2nm,0.8s						
PDAR	**Pinedale Array**	**87.25**	**44**	P	**P**	**21 08 27.9**	**-0.4**
	0.5nm,0.8s,baz=222,slow=2.0,SNR=5.1						
	0.5nm,0.8s						

DDA 11 21:02:22.2±0.0**, 38°.23N**×**32°.67E, h10^{km}**±2^{km}**, ML1.7, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ALIN	**Konya, Altinte**	**0.18**	**69**	P	Pg	21 02 26.1	-0.1
KONT	**Konya--Tatoy**	**0.37**	**220**	P	Pg	21 02 30.0	+0.4
KDHN	**Kadinhani**	**0.52**	**304**	P	Pb	21 02 33.0	-0.4
KDHN				S	Sb	21 02 40.3	-0.8
SEDI	**Konya, Seydise**	**1.06**	**223**	P	Pn	21 02 52.1	+8.9
SEDI				S	Sn	21 03 04.4	+6.3
SEDI				*i* AML	AML	21 03 09.0	
	comp=N,26nm,0.5s						
SEDI				*i* AML	AML	21 03 10.0	
	comp=E,20nm,0.6s						
KEPZ	**Antalya-Kepez**	**1.57**	**213**	P	Pn	21 02 50.7	+0.5

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*ISK **11** 21:02:34.9, 37°.12N×36°.18E, h18^{km}, ML2.4/9*

*DDA **11** 21:02:35.5±0.0, 37°.23N×36°.27E, h8^{km}±2^{km}, ML2.6*

ISC 11 21:02:34.9±1.1**, 37°.19N**±0°.03×**36°.23E**±0°.02**, h8^{km}**±10^{km}**, n28,** σ**0^{s}.61**/42**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KAMA	**Osmaniye**	**0.35**	**90**	P	**Pg**	**21 02 41.7**	**-0.2**
KAMA				S	**Sg**	**21 02 46.0**	**-0.6**
KOZT	**Kozan**	**0.43**	**313**	Pg	**Pb**	**21 02 44.6**	**-0.2**
KOZT				Sg	**Sb**	**21 02 51.6**	**+0.1**
HCB	**Kahramanmara**	**0.56**	**74**	P	**Pg**	**21 02 45.6**	**-0.2**
HCB				S	**Sg**	**21 02 52.6**	**-0.7**
AKO	**Adana**	**0.68**	**294**	P	**Pb**	**21 02 48.9**	**-0.2**
KAHM	**Kahramanmaras,**	**0.69**	**61**	P	**Pg**	**21 02 47.9**	**-0.3**
GAZ	**Gaziantep**	**0.79**	**91**	Pg	**Pb**	**21 02 51.4**	**+0.5**
GAZ				Sg	**Sn**	**21 03 03.4**	**-0.9**
KUZU	**Kuzuini**	**0.80**	**121**	P	**Pb**	**21 02 51.3**	**+0.4**
KUZU				S	**Sb**	**21 03 02.0**	**0.0**
KUZU				*i* AML	AML	21 03 06.0	
	comp=N,334nm,0.3s						
SAIM	**ADANA**	**0.80**	**352**	P	**Pg**	**21 02 50.1**	**-0.1**
KARA	**Karaisali**	**0.94**	**275**	Pg	**Pg**	**21 02 53.1**	**+0.2**
KARA				Sg	**Sb**	**21 03 05.9**	**-0.1**
RHAN	**Hatay/Reyhanl**	**0.97**	**162**	P	**Pn**	**21 02 55.8**	**+0.9**
RHAN				S	**Sn**	**21 03 09.3**	**+0.4**
RHAN				*i* AML	AML	21 03 11.0	
	comp=N,123nm,0.3s						
GZT	**Gaziantep**	**1.08**	**81**	P	**Pb**	**21 02 55.4**	**-0.5**
GZT				S	**Sb**	**21 03 10.0**	**-0.2**
GZT				*i* AML	AML	21 03 12.0	
	comp=N,156nm,0.2s						
YAHY	**KAYSERI_Yahyal**	**1.14**	**323**	P	**Pb**	**21 02 56.6**	**-0.3**
DED	**Mersin**	**1.16**	**259**	P	**Pg**	**21 02 57.6**	**+0.3**
NZIP	**Nizip/Gaziante**	**1.17**	**97**	P	**Pn**	**21 02 57.4**	**-0.2**
NZIP				S	**Sb**	**21 03 12.1**	**-0.5**
NZIP				*i* AML	AML	21 03 14.0	
	comp=E,180nm,0.3s						
NZIP				*i* AML	AML	21 03 15.0	
	comp=N,115nm,0.5s						
SARI	**SarD1z-Kayseri**	**1.23**	**7**	Pn	**Pb**	**21 02 58.6**	**+0.1**
SARI				Sn	**Sg**	**21 03 16.2**	**+1.8**
AKCA	**Adyaman/G¶l**	**1.31**	**62**	P	**Pn**	**21 02 59.2**	**-0.4**
AKCA				S	**Sb**	**21 03 16.6**	**-0.2**
AKCA				*i* AML	AML	21 03 18.0	
	comp=N,124nm,0.4s						
AKCA				*i* AML	AML	21 03 19.0	
	comp=E,102nm,0.5s						
NIDE	**Nigde/Merkez-G**	**1.41**	**306**	P	**Pg**	**21 03 02.7**	**+0.7**
BNN	**Bunyan**	**1.69**	**350**	Pn	**Pb**	**21 03 05.7**	**-0.6**
KERG	**Konya-Eregli**	**1.69**	**278**	P	**Pb**	**21 03 06.0**	**-0.3**
KERG				*i* AML	AML	21 03 22.0	
	comp=E,10nm,1.1s						
KERG				S	**Sg**	**21 03 29.4**	**+0.1**
DARE	**Darende-Malaty**	**1.70**	**35**	Pn	**Pn**	**21 03 05.7**	**+0.7**
DARE				Sn	**Sb**	**21 03 28.1**	**0.0**
AZEY	**Adyaman-Merk**	**1.72**	**68**	P	**Pb**	**21 03 06.6**	**-0.3**
SURC	**SANLIURFA_SURC**	**1.93**	**98**	P	**Pg**	**21 03 11.4**	**-0.5**
GULA	**Gulagac**	**1.96**	**307**	Pn	**Pn**	**21 03 08.4**	**-0.1**
NARI	**Adyaman-Kaht**	**2.13**	**70**	P	**Pb**	**21 03 14.8**	**+1.0**
HANM	**anlurfa/Hi**	**2.15**	**79**	P	**Pb**	**21 03 14.5**	**+0.4**
HANM				S	**Sb**	**21 03 41.9**	**+1.0**
HANM				*i* AML	AML	21 03 44.0	
	comp=N,42nm,0.4s						
SANL	**SANLIURFA_Merk**	**2.21**	**90**	P	**Pb**	**21 03 16.1**	**+1.0**
IKL	**Isikli**	**2.25**	**246**	Pn	**Pn**	**21 03 11.6**	**-0.8**
AKKU	**Akkuyu-Mersin**	**2.38**	**245**	Pn	**Pn**	**21 03 13.5**	**-0.7**

*IDC **11** 21:11:15.4±2.2, 43.°29N×105.°25W, h0km, mb2.4/1, mbtmp3.3/3, ML3.4/2, MS3.2/5, Error ellipse: s-maj=43.4km s-min=9.2km az=154.0*

*NEIC **11** 21:11:18.3±1.1, 43.°55N±0.°05×105.°29W±0.°05, h0km±1km, ML3.3/50, Error ellipse: s-maj=9.5km s-min=6.2km az=152.0*

ISC 11 21:11:17.4±1.0**, 43.°55N**±0.°05×**105.°31W**±0.°05**, h0km, n37, σ1.s02**/32**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.09	58		Pg	21 11 37.9	-0.3
K22A	Casper	1.26	225		Pg	21 11 40.4	-1.1
K22A				IAML		21 12 07.2	
	comp=E,312nm,0.3s						
PHWY	Pilot Hill	2.25	183		Pn	21 11 56.3	+0.3
RWWY	Rawlins	2.33	218		Pn	21 11 58.6	+1.5
RWWY				IAML		21 12 34.0	
	comp=E,231nm,0.4s						
RWWY				IAML		21 12 36.2	
	comp=E,156nm,0.8s						
N23A	Red Feather La	2.69	190		Pn	21 12 03.1	+1.0
N23A				IAML		21 12 49.4	
	comp=N,118nm,0.5s						
N23A				IAML		21 12 51.2	
	comp=E,129nm,0.8s						
BRIGG	Briggsdale	3.05	166	Pn	Pn	21 12 07.8	+0.8
BW06	Boulder Array	3.20	257		Pn	21 12 09.5	+0.3
BW06				IAML		21 13 22.5	
	comp=E,47nm,2.4s						
PD31	Pinedale Array	3.20	257		Pn	21 12 09.6	+0.5
PDAR	Pinedale Array	3.20	257	Pn	Pn	21 12 09.9	+0.7
	comp=E,2.5nm,0.3s,baz=82,slow=17,SNR=51						
PDAR				Lg	Lg	21 12 55.8	
	comp=E,14nm,0.3s,baz=80,slow=32,SNR=12						
	comp=E,7.4nm,0.3s						
PDAR	Pinedale Array	3.20	257		Pn	21 12 10.2	+1.1
LAO	LASA Array	3.21	349	Pn	Pn	21 12 10.5	+1.5
RLMT	Red Lodge	3.25	300		Pn	21 12 10.4	+0.7
RLMT				IAML		21 14 08.0	
	comp=E,69nm,4.5s						
RLMT				IAML		21 14 10.0	
	comp=E,73nm,4.7s						
OGNE	Ogallala	3.56	136		Pn	21 12 15.0	+1.0
YMP	Mirror Lake Pl	3.69	291	Pn	Pn	21 12 16.6	+0.8
ISCO	Idaho Springs	3.75	184		Pn	21 12 17.6	+0.8
LKWY	Lake	3.81	287	Pn	Pn	21 12 19.5	+2.0
LKWY				IAML		21 13 31.2	
	comp=E,60nm,1.1s						
LKWY				IAML		21 13 58.4	
	comp=E,42nm,3.4s						
FLWY	Flagg Ranch	3.94	280		Pn	21 12 20.3	+1.1
YNR	Norris Junctio	4.04	289		Pn	21 12 22.6	+2.0
YNR				IAML		21 13 29.7	
	comp=E,29nm,4.8s						
YNR				IAML		21 13 51.4	
	comp=N,30nm,2.5s						
O20A	White River Ci	4.05	214		Pn	21 12 22.0	+1.2
O20A				IAML		21 14 15.5	
	comp=E,62nm,2.3s						
RDMU	Red Mountain	4.35	228	Pn	Pn	21 12 25.4	+0.6
RDMU				IAML		21 13 52.0	
	comp=E,33nm,1.2s						
RDMU				IAML		21 14 09.1	
	comp=N,32nm,3.4s						
E28A	Huff	4.46	46	Pn	Pn	21 12 26.8	+0.6
Q24A	Divide	4.58	178	Pn	Pn	21 12 28.6	+0.5
BOZ	Bozeman (W)	4.96	297	Pn	Pn	21 12 32.7	-0.5
BOZ				IAML		21 14 21.9	
	comp=N,24nm,4.9s						
BOZ				IAML		21 15 30.2	
	comp=N,27nm,4.5s						
DGMT	Dagmar	4.99	9	Pn	Pn	21 12 33.6	+0.1
HWUT	Hardware Ranch	5.01	249		Pn	21 12 34.8	+0.8
HWUT				IAML		21 14 18.0	
	comp=N,29nm,1.9s						
P18A	Preston Nutter	5.39	225		Pn	21 12 39.6	+0.4
EGMT	Eagleton	5.45	327	Pn	Pn	21 12 41.0	+1.1
LRM	Limekiln Ridge	5.58	297	Pn	Pn	21 12 42.4	+0.7
PV07	Paradox Valley	5.69	207	Pn	Pn	21 12 44.5	+1.1
ECSD	EROS Data Cent	6.31	85		Pn	21 12 52.1	+0.5
ANMO	Albuquerque	8.63	186	LR	LR	21 17 05.5	
	comp=N,98nm,20.0s,baz=116,slow=42						
I10CA	LAC DU BONNET	9.20	40	I	I	22 08 30.0	
	baz=220,slow=326,SNR=5.8						
ULM	Lac du Bonnet	9.30	41	Pn	Pn	21 13 31.1	-1.6
	comp=N,1.3nm,0.3s,baz=234,slow=13,SNR=8.8						
ULM				Lg	Lg	21 16 05.0	
	comp=N,0.4nm,0.3s,baz=133,slow=19,SNR=1.7						
ULM				LR	LR	21 17 06.4	
	comp=N,76nm,18.8s,baz=322,slow=37						
	comp=N,2.4nm,0.3s						
NEW	Newport	9.49	304	LR	LR	21 17 56.2	
	comp=N,163nm,19.7s,baz=69,slow=42						
PFO	Pinyon Flats O	13.20	225	LR	LR	21 19 51.0	
	comp=N,114nm,19.2s,baz=334,slow=40						
BBB	Bella Bella	17.51	308	LR	LR	21 22 24.6	
	comp=N,128nm,18.7s,baz=144,slow=38						
YKA	Yellowknife Ar	19.75	347	P	Pn	21 15 49.7	-0.2
	comp=N,0.1nm,0.4s,baz=153,slow=12,SNR=3.4						
	comp=N,0.1nm,0.4s						

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*IDC **11** 21:22:17.6±2.2, 21.°62N×142.°99E, h305km±20km, mb3.0/5, mbtmp4.0/8, Error ellipse: s-maj=44.7km s-min=17.9km az=86.0*

ISC 11 21:22:18.0±1.1**, 21.°6N**±0.°1×**143.°0E**±0.°3**, h311km, n10, σ0.s56**/12**, mb3.1**/5**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.49	352	P	Pn	21 23 42.3	+0.6
	31nm,0.4s,baz=270,slow=19,SNR=6.1						
JCJ				S	S	21 24 47.9	-1.1
	48nm,0.4s,baz=132,slow=23,SNR=9.2						
JHJ	Hachijo jima 2	11.80	347	P	Pn	21 24 57.8	-0.1
	217nm,0.9s,baz=120,slow=22,SNR=6.3						
MJAR	Matsushiro Arr	15.44	345	P	P	21 25 39.4	+0.1
	1.1nm,0.5s,baz=170,slow=11,SNR=7.5						
KLR	Kul'dur	28.96	345	P	P	21 27 49.6	+0.4
	0.8nm,0.4s,baz=152,slow=8.7,SNR=5.3						
	0.8nm,0.4s						
WRA	Warramunga Arr	42.18	192	P	P	21 29 40.7	-0.5
	0.3nm,0.3s,baz=15,slow=8.3,SNR=8.9						
	0.3nm,0.3s						
ZALV	Zalesovo Beam	54.17	322	PcP	PcP	21 32 11.8	-0.1
	0.4nm,0.4s,baz=98,slow=2.9,SNR=2.3						
MKAR	Makanchi Array	54.63	313	P	P	21 31 15.8	+0.6
	0.3nm,0.7s,baz=92,slow=9.1,SNR=3.0						
MKAR				PcP	PcP	21 32 14.1	+0.2
	0.3nm,0.8s,baz=80,slow=5.5,SNR=3.8						
	0.3nm,0.7s						
YKA	Yellowknife Ar	76.58	28	P	P	21 33 34.3	0.0
	0.2nm,0.5s,baz=293,slow=5.6,SNR=2.9						
	0.2nm,0.5s						
FINES	FINESS Array B	83.17	334	P	P	21 34 08.8	-0.6
	0.8nm,0.5s,baz=72,slow=5.5,SNR=12						
	0.8nm,0.5s						
PLCA	Paso Flores	145.83	132	PKPbc	PKPbc	21 41 21.5	+0.3
	2.4nm,1.1s,baz=288,slow=3.2,SNR=3.4						

NOU 11 21:26:09.0, 17.°89S×167.°60E, h72km, MLv4.3/9**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.58	74	P	Pn	21 26 24.3	+1.5
DVP	Devils Point	0.58	74	P	Pn	21 26 24.2	+1.4
LIFNC	LIFOU	2.89	187	P	Pn	21 26 51.0	-1.8
KOUNC	Koumac, New Ca	4.10	229	P	Pn	21 27 11.2	+2.0
YATNC	Mamie plateau,	4.20	189	P	Pn	21 27 09.0	-1.6
DZM	Mont Dzumac	4.30	194	P	Pn	21 27 11.9	-0.2
DZM	Mont Dzumac	4.30	194	P	Pn	21 27 11.6	-0.5
NOUC	Port Laguerre	4.36	196	P	Pn	21 27 13.3	+0.5
NOUC	Port Laguerre	4.36	196	P	Pn	21 27 13.1	+0.3
ONTNC	Ouen Toro	4.53	194	P	Pn	21 27 15.2	+0.2
ONTNC	Ouen Toro	4.53	194	P	Pn	21 27 15.0	0.0
OUENC	Ouen Island, N	4.56	189	P	Pn	21 27 15.6	+0.1
OUENC	Ouen Island, N	4.56	189	P	Pn	21 27 15.5	0.0
PINNC	Pines Island,	4.70	182	P	Pn	21 27 17.9	+0.5

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*NEIC **11** 21:28:40.7±1.3, 52.°5N±0.°5×178.°7W±0.°2, h128km±50km, Error ellipse: s-maj=81.3km s-min=7.8km az=166.0*

AEIC 11 21:28:41.0±1.3**, 52.°1N**±0.°4×**178.°6W**±0.°1**, h163km**±8km**, ML2.8, mb3.6**/5(NEIC)**, Error ellipse: s-maj=52.5km s-min=6.4km az=167.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIWB	Kanaga Island	0.89	102	Pn	Pn	21 29 05.3	-0.8
KIWB				Sn	Sn	21 29 24.4	-0.9
ADK	Adak	1.17	97	Pn	Pn	21 29 07.0	-1.3
ADK				Sn	Sn	21 29 28.0	-1.3
AMKA	Amchitka	1.50	244	Pn	Pn	21 29 10.6	-0.8
AMKA				Sn	Sn	21 29 33.2	-1.7
GSTR	Great Sitkin T	1.54	87	Pn	Pn	21 29 10.8	-1.1
NIKH	Nikolski High	5.99	77	Pn	Pn	21 30 06.1	-1.4
UNV	Unalaska Valle	7.50	71	Pn	Pn	21 30 27.2	-0.2
M20K	Styx River	16.88	44		P	21 32 26.6	-0.2
CNPM	China Poot	16.99	53	P	P	21 32 28.1	+0.1
BRLK	Bradley Lake	17.22	53	P	P	21 32 30.4	0.0
BRLK				IAmb	IAmb	21 32 47.5	
	comp=Z,8.8nm,1.2s						
SKT	Skwentna	17.61	45	P	P	21 32 35.3	+0.5
SKT				IAmb	IAmb	21 32 38.9	
	comp=Z,1.0nm,0.9s						
SUA	Susitna One	17.78	47	P	P	21 32 35.4	-1.3
SUA				IAmb	IAmb	21 33 09.4	
	comp=Z,2.8nm,1.2s						

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*ATH **11** 21:37:27.4, 34.°92N×22.°83E, h8km±3km, ML3.5/2, Error ellipse: s-maj=5.0km s-min=1.6km az=53.0*

*NEIC **11** 21:37:27.9±1.5, 34.°92N±0.°06×22.°84E±0.°06, h40km±9km, mb4.0/14, Error ellipse: s-maj=9.6km s-min=4.9km az=141.0*

*THE **11** 21:37:28.7, 34.°97N×22.°91E, h12km±1km, ML3.2/9, Error ellipse: s-maj=1.8km s-min=0.7km az=233.0*

*ISK **11** 21:37:28.6, 35.°05N×22.°97E, h21km, ML3.5/12*

*IDC **11** 21:37:31.5±1.7, 35.°17N×22.°96E, h60km±16km, mb3.6/13, mbtmp3.8/18, MS2.9/2, Error ellipse: s-maj=18.5km s-min=12.8km az=174.0*

*DDA **11** 21:37:58.0±0.0, 35.°94N×25.°88E, h18km, ML3.1*

ISC 11 21:37:28.9±1.1**, 35.°00N**±0.°05×**22.°99E**±0.°04**, h42km**±11km**, n157, σ1.s89**/175**, mb4.0**/20**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.61	68	P	Pn	21 37 40.3	-0.9
KNDR	Palaiochora Ch	0.61	68	Pg	Pn	21 37 40.1	-1.1
KNDR				Sg	Sn	21 37 49.4	-0.6
KNDR	Palaiochora Ch	0.61	68	P	Pn	21 37 40.6	-0.6
KNDR				S	Sn	21 37 51.0	+1.0
KNDR				AML	AML	21 37 57.8	
	comp=N,10633μm,0.7s						
KNDR				AML	AML	21 38 01.8	
	comp=E,13048μm,0.6s						
RODP	Rodopos	0.84	48	P	Pn	21 37 46.0	+1.7
RODP	Rodopos	0.84	48	Pg	Pn	21 37 45.5	+1.2
RODP				Sg	Sn	21 37 56.8	+1.4
ANKY	Antikythira Is	0.90	16	P	Pn	21 37 46.1	+1.0
ANKY				S	Sn	21 38 01.3	+4.4
	comp=E,3μm,0.7s						
ANKY	Antikythira Is	0.90	16	P	Pn	21 37 46.7	+1.6
ANKY				S	Sn	21 38 00.1	+3.2
GVD	Gavdhos	0.91	100	P	Pn	21 37 47.3	+1.9
GVD	Gavdhos	0.91	100	Pg	Pn	21 37 47.2	+1.9
GVD	Gavdhos	0.91	100	P	Pn	21 37 46.6	+1.3
GVD				S	Sn	21 38 01.2	+3.9
GVD				AML	AML	21 38 09.8	
	comp=N,2723μm,0.4s						
GVD				AML	AML	21 38 10.2	
	comp=E,4232μm,0.6s						
GVDS	Gavdos	0.92	100	P	Pn	21 37 46.8	+1.5
GVDS	Gavdos	0.92	100	Pg	Pn	21 37 46.8	+1.5
IMMV	Iera Moni Meta	0.93	60	P	Pn	21 37 47.5	+2.0
IMMV	Iera Moni Meta	0.93	60	Pg	Pn	21 37 46.7	+1.2
IMMV	Iera Moni Meta	0.93	60	P	Pn	21 37 47.6	+2.0
CHAN	Chania	1.00	59	P	Pn	21 37 48.4	+1.9
KTHA	Kythira Island	1.25	3	P	Pn	21 37 51.9	+1.9
KTHA				S	Sn	21 38 08.9	+3.3
	comp=E,1μm,0.5s						
KTHA	Kythira Island	1.25	3	Pn	Pn	21 37 50.8	+0.8
KTHA	Kythira Island	1.25	3	P	Pn	21 37 51.8	+1.8
PRNS	Prines Rethymn	1.29	73	P	Pn	21 37 51.8	+1.4
TMBK	Timbaki Herakl	1.46	87	P	Pn	21 37 55.4	+2.7
TMBK	Timbaki Herakl	1.46	87	P	Pn	21 37 55.4	+2.7
IDI	Anoyia	1.58	79	P	Pn	21 37 57.0	+2.5
	comp=E,50nm,0.4s,baz=269,slow=14,SNR=129						
IDI				S	Sn	21 38 17.0	+3.2
	comp=E,76nm,0.4s,baz=311,slow=20,SNR=11						
IDI	Anoyia	1.58	79	P	Pn	21 37 56.8	+2.3
IDI	Anoyia	1.58	79	Pn	Pn	21 37 56.3	+1.8
IDI	Anoyia	1.58	79		Pn	21 37 56.5	+2.0
IDI				Sn	Sn	21 38 18.9	+5.1
IDI	Anoyia	1.58	79	P	Pn	21 37 56.8	+2.3
IACM	Heraklion	1.73	79	P	Pn	21 37 59.5	+3.0
IACM	Heraklion	1.73	79	P	Pn	21 37 59.3	+2.8
HRKL	Herakleio	1.75	79	P	Pn	21 37 59.2	+2.4
HRKL	Herakleio	1.75	79	Pn	Pn	21 37 58.9	+2.1
PYL	PYLOS	2.14	332	P	Pn	21 38 03.0	+0.8
FRMA	Ierapetra Chan	2.25	89	P	Pn	21 38 07.5	+3.9
ITM	Ithomi	2.34	339	P	Pn	21 38 06.7	+1.8
ITM	Ithomi	2.34	339	Pn	Pn	21 38 06.6	+1.7
ITM	Ithomi	2.34	339		Pn	21 38 06.0	+1.1
KRND	KRANIDI	2.38	3	P	Pn	21 38 07.6	+2.2
KRND				S	Sn	21 38 37.9	+4.6
	comp=E,292nm,0.7s						
KRND	KRANIDI	2.38	3	P	Pn	21 38 07.7	+2.2
THR6	Thira Island,	2.38	55	P	Pn	21 38 06.8	+1.4
THR5	Thira Island,	2.38	53	P	Pn	21 38 06.6	+1.2
THR3	Thira Island,	2.41	54	P	Pn	21 38 07.2	+1.4
SANT	Santorini	2.43	55	P	Pn	21 38 07.4	+1.3
SANT	Santorini	2.43	55	Pn	Pn	21 38 07.6	+1.5
SANT	Santorini	2.43	55		Pn	21 38 07.2	+1.1
SANT				Sn	Sn	21 38 35.2	+0.6
THT2	Imerovigli	2.44	53	P	Pn	21 38 08.2	+2.0
CMBO	Columbo, Santo	2.45	53	P	Pn	21 38 07.2	+0.8
THR8	Santorini-Mono	2.46	55	P	Pn	21 38 07.3	+0.8
STIA	Sitia Lasithi	2.55	85	P	Pn	21 38 10.6	+2.9
STIA	Sitia Lasithi	2.55	85	P	Pn	21 38 10.1	+2.4
ZKR	Zakros	2.65	87	P	Pn	21 38 11.9	+2.8
ZKR	Zakros	2.65	87	Pn	Pn	21 38 11.6	+2.5
ZKR	Zakros	2.65	87	P	Pn	21 38 11.7	+2.5
APE	Apeiranthos	2.91	44	P	Pn	21 38 13.3	+0.5
APE	Apeiranthos	2.91	44	Pn	Pn	21 38 13.3	+0.5
VLY	Voula,Athens	2.92	13	P	Pn	21 38 14.2	+1.4
ATHU	Athens Univers	3.02	12	P	Pn	21 38 15.9	+1.6
KLV	Kalavryta, Ach	3.11	348	P	Pn	21 38 17.8	+2.3
DRO	Drossia	3.12	341	P	Pn	21 38 17.7	+2.1
DION	Dionisos Attik	3.16	14	P	Pn	21 38 18.7	+2.5
VILL	Villia	3.16	5	P	Pn	21 38 17.1	+0.8
RLS	Riolos of Patr	3.29	338	P	Pn	21 38 19.7	+1.8
LAKA	Lakka	3.33	346	P	Pn	21 38 20.0	+1.5
KARP	Karpathos	3.45	80	P	Pn	21 38 21.3	+1.1
KARP	Karpathos	3.45	80	Pn	Pn	21 38 23.0	+2.8
KARP	Karpathos	3.45	80	Pn	Pn	21 38 21.1	+0.9
SERG	Sergoula	3.48	348	P	Pn	21 38 21.9	+1.3
SERG				S	Sn	21 39 03.9	+3.2
	comp=E,68nm,0.4s						
EREA	Eretria	3.49	12	P	Pn	21 38 22.4	+1.7
EFP	Efpalio	3.53	346	P	Pn	21 38 23.3	+2.1
ATAL	Atalanti	3.68	0	P	Pn	21 38 24.5	+1.2
ANX	Ano Chora	3.68	347	P	Pn	21 38 25.2	+1.8
VLS	Valsamata	3.71	329	P	Pn	21 38 23.5	-0.2
AXAR	Agios Charalam	3.77	356	P	Pn	21 38 25.8	+1.3
PVO	Paravola	3.79	342	P	Pn	21 38 26.1	+1.3
PVO				S	Sn	21 39 11.6	+3.4
	comp=E,78nm,0.9s						
EVR	Evrytania	4.02	347	P	Pn	21 38 31.9	+3.9
EVR				S	Sn	21 39 18.1	+4.2
	comp=E,60nm,0.6s						
AGG	Agios Georgios	4.05	353	P	Pn	21 38 29.8	+1.4
AGG				S	Sn	21 39 15.7	+1.2
	comp=E,58nm,0.4s						
AGG	Agios Georgios	4.05	353		Pn	21 38 29.0	+0.7
MAKR	Makrakomi, Fth	4.06	350	P	Pn	21 38 30.7	+2.1
MAKR				S	Sn	21 39 17.9	+3.1
	comp=E,142nm,0.4s						
EVGI	Lefkada island	4.07	333	P	Pn	21 38 29.5	+0.9
NYDR	Nydri-Lefkada	4.13	334	P	Pn	21 38 31.1	+1.6
BDRM	Kayabasi	4.15	59	SPECP		21 38 29.0	
BDRM				P	Pn	21 38 29.1	-0.7
ARG	Arkhangelos	4.35	72	Pn	Pn	21 38 32.9	+0.4
THL	Klokotos Trika	4.62	351	P	Pn	21 38 36.9	+0.7
AYDN	Tasoluk	4.75	55	SPECP		21 38 38.0	
AYDN				P	Pn	21 38 38.1	0.0
IGT	Igoumenitsa	4.99	336	P	Pn	21 38 40.7	-0.6
LIT	Litokhoron	5.10	356	Pn	Pn	21 38 42.8	-0.1
FETY	Fethiye	5.21	70	P	Pn	21 38 45.5	+1.2
IZZE	Mula-Seydike	5.27	72	SPECP		21 38 43.0	
IZZE				P	Pn	21 38 43.8	-1.3
IZZE				S	Sn	21 39 38.8	-5.8
KEK	Kerkira	5.34	333	P	Pn	21 38 46.8	+0.6
KEK	Kerkira	5.34	333	Pn	Pn	21 38 46.2	+0.1
TAVA	DENIZLI_Tavas	5.38	61	SPECP		21 38 46.0	
TAVA				P	Pn	21 38 46.3	-0.4
SRN	Sarande	5.42	335	P	Pn	21 38 45.6	-1.5
AKAS	Kas	5.52	75	Pn	Pn	21 38 49.4	+0.7
AKAS	Kas	5.52	75	SPECP		21 38 48.0	
AKAS				P	Pn	21 38 48.5	-0.3
AKAS				*i* AML	AML	21 39 50.0	
	comp=E,86nm,1.7s						
AKAS				*i* AML	AML	21 40 26.0	
	comp=E,87nm,1.9s						
CAEL	Denizli, Camel	5.54	66	SPECP		21 38 47.0	
CAEL				P	Pn	21 38 47.1	-1.9
CAEL				*i* AML	AML	21 39 57.0	
	comp=E,80nm,2.2s						
CAEL				*i* AML	AML	21 40 30.0	
	comp=E,95nm,2.2s						
GOLH	Golhisar	5.76	65	SPECP		21 38 49.0	
GOLH				P	Pn	21 38 49.5	-2.5
GOLH				*i* AML	AML	21 39 36.0	
	comp=E,39nm,2.8s						
GOLH				*i* AML	AML	21 40 34.0	
	comp=E,38nm,3.2s						
KBN	Korca	5.88	343	Pn	Pn	21 38 54.0	+0.5
ELL	Elmali	5.88	71	Pn	Pn	21 38 53.9	+0.3
FNA	Florina	5.91	348	P	Pn	21 38 54.2	+0.2
FNA	Florina	5.91	348		Pn	21 38 53.2	-0.8
AKUM	Antalya-Kumluc	6.13	75	SPECP		21 38 55.0	
AKUM				P	Pn	21 38 55.3	-1.6
AKUM				*i* AML	AML	21 40 17.0	
	comp=E,33nm,1.5s						
AKUM				*i* AML	AML	21 40 19.0	
	comp=E,35nm,2.0s						
OHR	Ohrid	6.34	345	*i* Pn	Pn	21 39 00.6	+0.7
ALN	Alexandroupoli	6.36	21	Pn	Pn	21 39 00.6	+0.6
RDO	Rodhopi	6.45	17	Pn	Pn	21 39 01.5	+0.2
TIP	Timpagrande	6.50	312	Pn	Pn	21 39 00.3	-1.7
STIP	Stip	6.71	355	*i* Pn	Pn	21 39 05.9	+1.1
RAFF	Raffo Rosso	7.33	290	Pn	Pn	21 39 11.8	-1.5
VAE	Valguarnera	7.36	292	P	Pn	21 39 15.9	+2.1
	comp=E,6.2nm,0.4s,baz=88,slow=18,SNR=1.7						
VAE				S	Sn	21 40 30.3	-5.8
	comp=E,10.0nm,0.7s,baz=209,slow=23,SNR=1.8						
CUC	Castrocucco	7.57	313	Pn	Pn	21 39 15.9	-0.8
SGRT	San Giovanni R	8.82	322	Pn	Pn	21 39 31.8	-2.1
DIVS	Divibare	9.37	347	Pn	Pn	21 39 38.8	-2.7
BR131	Keskin Array S	9.69	58	Pn	Pn	21 39 47.4	+1.5
BRTR	Keskin Array B	9.69	58	P	Pn	21 39 47.7	+1.8
	comp=E,1.7nm,0.7s,baz=234,slow=15,SNR=10						
BRTR				LR	LR	21 44 25.4	
	comp=E,62nm,18.4s,baz=274,slow=43						
BRTR	Keskin Array B	9.69	58	Pn	Pn	21 39 47.2	+1.3
MMAI	Mount Meron Ar	10.49	97	P	Pn	21 39 55.4	-1.4
	comp=E,0.3nm,0.3s,baz=269,slow=12,SNR=9.9						
GHAJ	Ghor Haditha	11.16	106	Pn	Pn	21 40 04.7	-1.2
EIL	Elat	11.42	114	P	Pn	21 40 08.0	-1.5
	comp=E,5.8nm,0.8s,baz=228,slow=14,SNR=1.6						
CTI	Castel Tesino	13.99	325	Pn	Pn	21 40 43.7	-0.8
FUORN	Ofenpass-Fuorn	15.06	324		P	21 41 02.6	-1.1
FUORN				IAmb	IAmb	21 41 27.7	
	comp=Z,3.1nm,1.2s						
GERES	GERESS Array B	15.44	336	P	Pn	21 41 03.5	-0.3
	comp=Z,0.2nm,0.4s,baz=141,slow=11,SNR=2.1						
GERES				LR	LR	21 48 19.4	
	comp=Z,54nm,18.3s,baz=100,slow=42						
KHC	Kasperske Hory	15.73	337		P	21 41 10.1	-0.8
KHC	Kasperske Hory	15.73	337	*e*P	P	21 41 11.9	+1.0
AKASG	Malin Array Be	16.33	14	P	Pn	21 41 14.9	-0.1
	comp=Z,0.5nm,0.4s,baz=201,slow=10,SNR=6.3						
AKASG	Malin Array Be	16.33	14	Pn	Pn	21 41 14.9	-0.1
KBZ	Khabaz	17.65	54	P	P	21 41 33.4	+1.3
	comp=Z,1.6nm,0.8s,baz=225,slow=13,SNR=1.9						
PABE	Paberze	20.51	2	P	P	21 42 01.8	-1.5
PABE	Paberze	20.51	2	*e*P	P	21 42 01.8	-1.5
BSD	Bornholm Skovb	20.88	347	*e*P	P	21 42 05.8	-1.5
VSVD	Vaisvydziai	20.99	1	*e*P	P	21 42 07.1	-1.3
VIKU	Vikbolandet	23.88	352	*e*P	P	21 42 37.0	-1.3
HFS	Hagfors	25.86	349	P	P	21 42 55.5	-0.8
	comp=Z,2.7nm,0.5s,baz=156,slow=11,SNR=26						
	comp=Z,2.7nm,0.5s						
FINES	FINESS Array B	26.53	3	P	P	21 43 01.0	-1.3
	comp=Z,0.6nm,0.4s,baz=165,slow=10,SNR=13						
	comp=Z,0.6nm,0.4s						
FINES	FINESS Array B	26.53	3	P	P	21 43 00.4	-1.9
FIA1	FINESS Array S	26.53	3	P	P	21 43 00.5	-1.8
FIA1				IAmb	IAmb	21 43 05.8	
	comp=Z,12nm,1.4s						
NC602	NORSAR Array S	26.79	347	P	P	21 43 04.2	-0.4
NB2	NORSAR Subarra	27.13	347	P	P	21 43 08.6	+0.8
	comp=Z,0.7nm,0.5s,baz=159,slow=9.3						
NOA	NORSAR Array B	27.13	347	P	P	21 43 07.2	-0.6
	comp=Z,0.5nm,0.7s,baz=160,slow=9.2,SNR=8.6						
	comp=Z,0.5nm,0.7s						
EKA	Eskdalemuir Ar	27.17	327	P	P	21 43 08.4	+0.2
	comp=Z,0.1nm,0.3s,baz=117,slow=8.9,SNR=1.9						
	comp=Z,0.1nm,0.3s						
TORD	Torodi Ar. Bea	29.06	227	P	P	21 43 26.9	+1.5
	comp=Z,0.7nm,0.8s,baz=32,slow=8.9,SNR=9.1						
	comp=Z,0.7nm,0.8s						
TORD	Torodi Ar. Bea	29.06	227	P	P	21 43 22.1	-3.3
ARCES	ARCESS Array B	34.61	2	P	P	21 44 12.5	-1.1
	comp=Z,5.1nm,1.1s,baz=180,slow=6.3,SNR=5.5						
	comp=Z,5.1nm,1.1s						
KK31	Karatay Array	37.36	63	P	P	21 44 37.5	+0.1
KKAR	Karatay Array	37.36	63	P	P	21 44 37.4	-0.1
BRVK	Borovoye	37.68	47	P	P	21 44 39.6	-0.4
BRVK				IAmb	IAmb	21 44 40.3	
	comp=Z,1.8nm,1.1s						
DBIC	Dimbokro	38.11	229	P	P	21 44 45.1	+1.2
	comp=Z,1.2nm,0.5s,baz=42,slow=9.6,SNR=1.6						
	comp=Z,1.2nm,0.5s						
AAK	Ala-Archa	40.31	63	P	P	21 45 02.4	0.0
AAK				IAmb	IAmb	21 45 09.0	
	comp=Z,3.0nm,1.2s						
KURK	Kurchatov	42.66	51	P	P	21 45 20.6	-0.5
KURK				IAmb	IAmb	21 45 21.3	
	comp=Z,1.8nm,0.7s						
MAKZ	Makanchi	45.12	56	P	P	21 45 40.8	-0.4
MAKZ				IAmb	IAmb	21 46 07.0	
	comp=Z,2.8nm,1.4s						
MK31	Makanchi Array	45.34	56	P	P	21 45 42.7	-0.1
MK31				IAmb	IAmb	21 45 43.3	
	comp=Z,1.3nm,0.6s						
MKAR	Makanchi Array	45.34	56	P	P	21 45 42.8	0.0
	comp=Z,1.2nm,0.4s,baz=271,slow=8.2,SNR=40						
	comp=Z,1.2nm,0.4s						
MKAR	Makanchi Array	45.34	56	P	P	21 45 42.6	-0.3
ZAA0	Zalesovo Array	46.39	46	P	P	21 45 49.8	-1.1
ZAA0				IAmb	IAmb	21 45 50.7	
	comp=Z,2.7nm,0.5s						
ZALV	Zalesovo Beam	46.39	46	P	P	21 45 50.4	-0.5
	comp=Z,2.9nm,0.4s,baz=272,slow=8.9,SNR=12						
	comp=Z,2.9nm,0.4s						
ZALV	Zalesovo Beam	46.39	46	P	P	21 45 49.9	-1.0
SONM	Songino Array	60.95	50	P	P	21 47 37.9	+0.1
	comp=Z,0.4nm,0.7s,baz=86,slow=8.3,SNR=5.0						
	comp=Z,0.4nm,0.7s						
INK	Inuvik	75.51	351	P	P	21 49 08.7	+0.3
	comp=Z,1.4nm,1.0s,baz=38,slow=2.8,SNR=2.2						
	comp=Z,1.4nm,1.0s						
YKA	Yellowknife Ar	77.04	341	P	P	21 49 17.1	-0.1
	comp=Z,0.1nm,0.6s,baz=43,slow=5.1,SNR=2.8						
	comp=Z,0.1nm,0.6s						
KSRS	Korea Array	79.78	51	P	P	21 49 33.0	+0.2
	comp=Z,0.8nm,0.5s,baz=313,slow=5.1,SNR=7.0						
	comp=Z,0.8nm,0.5s						

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*IDC **11** 21:39:45.9±0.9, 12.°39S×165.°57E, h0km, mb4.2/10, mbtmp4.1/11, ML3.5/1, MS3.5/18, Error ellipse: s-maj=27.2km s-min=20.5km az=146.0*

*NEIC **11** 21:39:47.7±0.9, 12.°35S±0.°09×165.°6E±0.°1, h10km±1km, mb4.5/18, Error ellipse: s-maj=18.8km s-min=14.3km az=66.0*

ISC 11 21:39:47.2±0.5, 12°.42S±0°.07×165°.65E±0°.08, h10^{km}, n67, σ1^{s}.20/56, mb4.5/25, MS3.4/16, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	6.34	297	Pn	Pn	21 41 20.7	-0.1
	301nm,0.3s,baz=152,slow=7.2,SNR=4.7						
HNR				Sn	Sn	21 42 31.7	-1.6
	268nm,0.3s,baz=180,slow=18,SNR=2.2						
HNR	**Honiara**	6.34	297	Pn	Pn	21 41 20.4	-0.4
KOUNC	**Koumac, New Ca**	8.19	189	Pn	Pn	21 41 47.3	+1.1
DZM	**Mont Dzumac**	9.63	176	*e*LR	LR	21 44 16.3	
	comp=Z,226nm,26.6s						
DZM	**Mont Dzumac**	9.63	176	Pn	Pn	21 42 07.7	+1.6
	0.5nm,0.3s,baz=62,slow=5.4,SNR=26						
DZM				Sn	Sn	21 43 51.3	-3.1
	0.3nm,0.3s,baz=165,slow=20,SNR=1.5						
DZM				LR	LR	21 45 32.8	
	comp=Z,218nm,18.1s,baz=44,slow=36						
	1.8nm,0.4s						
DZM	**Mont Dzumac**	9.63	176	Pn	Pn	21 42 07.3	+1.3
ONTNC	**Ouen Toro**	9.86	176	Pn	Pn	21 42 11.1	+1.9
OUENC	**Ouen Island, N**	10.01	174	Pn	Pn	21 42 12.3	+1.1
PINNC	**Pines Island,**	10.28	171	Pn	Pn	21 42 17.1	+2.2
MSVF	**Nonsavu**	13.09	115	Pn	Pn	21 42 50.7	-2.7
KRVT	**Keravat (AS076**	15.70	300	LR	LR	21 49 33.2	
	comp=Z,141nm,21.5s,baz=255,slow=38						
PMG	**Port Moresby**	18.40	278	LR	LR	21 50 34.8	
	comp=Z,148nm,18.7s,baz=120,slow=35						
CTA	**Charters Tower**	20.11	245	P	P	21 44 20.5	-0.9
	12nm,1.1s,baz=73,slow=12,SNR=5.6						
CTA				LR	LR	21 51 02.1	
	comp=Z,154nm,19.7s,baz=72,slow=34						
	12nm,1.1s						
CTAO	**Charters Tower**	20.11	245		P	21 44 21.1	-0.3
CTAO				IAmb	IAmb	21 44 23.8	
	comp=Z,24nm,1.2s						
ARMA	**Armidale**	22.12	214	P	P	21 44 43.7	+0.5
ARMA				IAmb	IAmb	21 44 47.6	
	comp=Z,21nm,1.3s						
STKA	**Stephens Creek**	29.40	225	LR	LR	21 56 24.9	
	comp=Z,153nm,20.2s,baz=51,slow=34						
WB0	**Warramunga Arr**	30.87	252	P	P	21 46 03.5	-0.6
WB0				IAmb	IAmb	21 46 03.8	
	comp=Z,3.3nm,0.8s						
WRA	**Warramunga Arr**	30.95	252	P	P	21 46 04.0	-0.8
	comp=Z,2.0nm,1.1s,baz=84,slow=8.9,SNR=9.1						
WRA				LR	LR	21 58 59.0	
	comp=Z,58nm,18.0s,baz=102,slow=37						
	comp=Z,2.0nm,1.1s						
WRA	**Warramunga Arr**	30.95	252	P	P	21 46 03.9	-0.8
AS31	**Alice Springs**	32.11	245	P	P	21 46 14.0	-1.0
ASAR	**Alice Springs**	32.12	245	P	P	21 46 14.0	-1.0
	comp=Z,2.1nm,0.8s,baz=69,slow=8.8,SNR=14						
ASAR				LR	LR	21 58 08.9	
	comp=Z,91nm,19.3s,baz=78,slow=34						
	comp=Z,2.1nm,0.8s						
ASAR	**Alice Springs**	32.12	245	P	P	21 46 14.0	-1.0
GUMO	**Guam**	33.05	321	P	P	21 46 22.1	-1.0
	comp=Z,14nm,0.3s,baz=192,slow=19,SNR=5.6						
GUMO				LR	LR	21 58 14.3	
	comp=Z,60nm,21.8s,baz=158,slow=34						
PYZ	**Puysegur Point**	33.65	179	P	P	21 46 29.4	+1.3
SIJI	**Sorong**	35.97	286	LR	LR	22 02 54.8	
	comp=Z,89nm,20.0s,baz=112,slow=39						
FITZ	**Fitzroy Crossi**	38.95	257	P	P	21 47 13.2	-0.7
PPT	**Papeete**	43.48	102	LR	LR	22 01 47.1	
	comp=Z,40nm,21.5s,baz=331,slow=30						
PPT2	**Papeete2**	43.48	102	*e*LR	LR	21 59 55.0	
	comp=Z,149nm,34.2s						
PPT2				*e*LR	LR	21 59 55.2	
	comp=Z,259nm,30.5s						
DAV	**Davao City (W)**	44.29	294	LR	LR	22 06 06.3	
	comp=Z,28nm,18.5s,baz=68,slow=36						
KAPI	**Kappang**	45.91	275	LR	LR	22 07 21.3	
	comp=Z,18nm,20.5s,baz=70,slow=36						
NWAO	**Narrogin (SRO)**	48.63	237	LR	LR	22 09 23.2	
	comp=Z,85nm,19.4s,baz=345,slow=37						
MJAR	**Matsushiro Arr**	55.14	333	LR	LR	22 11 07.1	
	comp=Z,16nm,20.7s,baz=132,slow=34						
NJ2	**Nanjing**	62.93	316	*e*P	P	21 50 15.4	+1.3
NJ2				pP	pwP	21 50 20.2	-2.6
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
PETK	**Petropavlovsk-**	65.62	355	LR	LR	22 13 44.0	
	comp=Z,17nm,20.2s,baz=48,slow=31						
CMAR	**Chiang Mai Arr**	72.58	294	P	P	21 51 16.2	+1.0
	comp=Z,1.2nm,0.3s,baz=106,slow=4.1,SNR=7.7						
	comp=Z,1.2nm,0.3s						
CMAR	**Chiang Mai Arr**	72.58	294	P	P	21 51 15.9	+0.6
HHC	**Hu-ho-hao-te**	72.81	320	*e*P	P	21 51 17.8	+1.5
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC				pmax	pmax		
	comp=Z,85nm,5.8s						
PZH	**PanZhiHua**	73.13	303	P	P	21 51 19.3	+0.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,140nm,6.0s						
BTO	**Baotou**	73.66	319	*e*P	P	21 51 23.5	+2.2
BTO				pmax	pmax		
	comp=Z,18nm,0.7s						
BTO				pmax	pmax		
	comp=Z,450nm,5.0s						
LZH	**Lanzhou**	75.61	313	*e*P	P	21 51 34.1	+1.3
LZH				pP	sP	21 51 37.5	+2.7
LZH				sP	pwP	21 51 42.0	+0.4
LZH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ULN	**Ulaanbaatar**	79.35	324	P	P	21 51 53.2	-0.3
ULN				IAmb	IAmb	21 51 55.5	
	comp=Z,3.6nm,1.1s						
YAK	**Yakutsk**	79.38	344	P	P	21 51 52.5	-0.5
YAK				IAmb	IAmb	21 51 54.3	
	comp=Z,4.7nm,0.8s						
SONM	**Songino Array**	79.71	324	P	P	21 51 56.0	+0.6
	comp=Z,0.9nm,1.0s,baz=145,slow=6.3,SNR=7.4						
	comp=Z,0.9nm,1.0s						
SONM	**Songino Array**	79.71	324	P	P	21 51 55.3	-0.1
GTA	**Gaotai**	79.94	314	*e*P	P	21 51 57.8	+1.0
GTA				sP	pwP	21 52 17.2	+12
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL	**Bilibino**	80.24	0	P	P	21 51 57.7	0.0
BILL				IAmb	IAmb	21 51 59.3	
	comp=Z,9.4nm,1.0s						
BRDH	**Bariadhala**	80.41	296	LR	LR	22 29 04.5	
	comp=Z,60nm,19.5s,baz=356,slow=37						
CAST	**Castle Rocks**	82.28	18	P	P	21 52 08.7	+0.1
CAST				IAmb	IAmb	21 52 10.8	
	comp=Z,6.6nm,1.0s						
KTH	**Kantishna Hill**	82.72	18	P	P	21 52 10.9	-0.1
KTH				IAmb	IAmb	21 52 13.1	
	comp=Z,3.5nm,0.9s						
N25K	**Chitina, Valde**	83.45	22	P	P	21 52 14.1	-0.7
N25K				IAmb	IAmb	21 52 26.1	
	comp=Z,6.5nm,1.1s						
IMAR	**Indian Mountai**	83.76	16	P	P	21 52 16.0	-0.2
IL31		84.84	18	P	P	21 52 20.5	-1.1
ILAR	**Eielson Array**	84.84	18	P	P	21 52 21.6	-0.1
	comp=Z,3.6nm,1.0s,baz=224,slow=6.1,SNR=17						
	comp=Z,3.6nm,1.0s						
ILAR	**Eielson Array**	84.84	18	P	P	21 52 20.8	-0.9
SCRK	**Sand Creek**	85.23	20	P	P	21 52 23.6	-0.3
NVAR	**Mina Array Bea**	86.97	50	P	P	21 52 34.1	+0.9
	comp=Z,1.1nm,0.9s,baz=238,slow=8.5,SNR=4.4						
NVAR				LR	LR	22 26 10.8	
	comp=Z,50nm,18.2s,baz=201,slow=32						
	comp=Z,1.1nm,0.9s						
BMAR	**Burnt Mountain**	87.34	17	P	P	21 52 35.0	+1.0
BELA	**Belgrano 2**	89.13	176	P	P	21 52 43.6	+1.0
WMQ	**Urumqi**	89.99	315	*e*P	P	21 52 49.1	+1.9
MK31	**Makanchi Array**	94.45	317	P	P	21 53 07.0	-0.7
MK31				IAmb	IAmb	21 53 08.9	
	comp=Z,2.8nm,1.2s						
MKAR	**Makanchi Array**	94.45	317	P	P	21 53 08.0	+0.2
	comp=Z,1.9nm,1.0s,baz=88,slow=6.5,SNR=11						
	comp=Z,1.9nm,1.0s						
MKAR	**Makanchi Array**	94.45	317	P	P	21 53 07.3	-0.4
ZALV	**Zalesovo Beam**	94.61	324	P	P	21 53 08.2	0.0
	comp=Z,0.6nm,0.6s,baz=93,slow=7.2,SNR=4.4						
	comp=Z,0.6nm,0.6s						
YKA	**Yellowknife Ar**	96.23	27	P	P	21 53 15.0	-0.4
	comp=Z,0.4nm,0.7s,baz=260,slow=4.7,SNR=7.3						
	comp=Z,0.4nm,0.7s						
AAK	**Ala-Archa**	99.14	312	LR	LR	22 39 16.2	
	comp=Z,22nm,19.5s,baz=234,slow=36						
ARCES	**ARCESS Array B**	117.63	345	PKP	PKiKP	21 58 34.2	+1.1
	comp=Z,4.5nm,1.0s,baz=86,slow=4.6,SNR=1.3						
ESDC	**Sonseca Array**	151.34	343	PKPbc	PKPbc	21 59 40.8	-0.8
	comp=Z,1.5nm,1.0s,baz=54,slow=2.5,SNR=6.3						

*NEIC **11** 21:41:21.5±0.8, 20°.1S±0°.2×177°.59W±0°.06, h557^{km}±12^{km}, mb4.3/21, Error ellipse: s-maj=30.0km s-min=6.8km az=172.0*

*IDC **11** 21:41:21.9±2.5, 19°.72S×177°.89W, h541^{km}±22^{km}, mb3.4/7, mbtmp4.4/8, Error ellipse: s-maj=72.3km s-min=14.8km az=151.0*

ISC 11 21:41:21.2±0.6, 19°.9S±0°.1×177°.67W±0°.10, h550^{km}, n40, σ1^{s}.29/40, mb4.3/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	4.60	297	P	P	21 42 46.3	-1.5
	2.3nm,0.4s,baz=220,slow=22,SNR=1.6						
MSVF	**Nonsavu**	4.60	297		P	21 42 49.9	+2.0
NIUE	**Niue**	7.35	85	P	P	21 43 12.3	-0.2
AFI	**Afiamalu**	8.21	44	P	P	21 43 20.8	-0.3
	12nm,0.3s,baz=216,slow=18,SNR=2.9						
AFI				S	S	21 44 54.8	-4.6
	20nm,0.3s,baz=260,slow=15,SNR=6.6						
PINNC	**Pines Island,**	14.14	256	P	P	21 44 20.9	-0.9
DZM	**Mont Dzumac**	15.00	259	P	P	21 44 32.5	+1.8
	5.9nm,0.5s,baz=96,slow=21,SNR=8.4						
DZM	**Mont Dzumac**	15.00	259	P	P	21 44 31.7	+1.0
DZM				IAmb	IAmb	21 44 34.8	
	comp=Z,22nm,1.4s						
KOUNC	**Koumac, New Ca**	16.95	265	P	P	21 44 50.9	+1.4
EIDS	**Eidsvold**	29.31	253	P	P	21 46 38.7	-1.0
EIDS				IAmb	IAmb	21 46 55.9	
	comp=Z,12nm,1.4s						
ARMA	**Armidale**	29.61	243	P	P	21 46 41.8	-0.6
ARMA				IAmb	IAmb	21 46 43.2	
	comp=Z,6.5nm,0.9s						
CTA	**Charters Tower**	33.86	263	P	P	21 47 18.8	+0.1
	comp=Z,9.6nm,0.4s,baz=95,slow=9.6,SNR=21						
	comp=Z,9.6nm,0.4s						
CTAO	**Charters Tower**	33.86	263	P	P	21 47 18.4	-0.3
TOO	**Toolangi**	36.50	233	P	P	21 47 39.2	-1.2
TOO				IAmb	IAmb	21 47 42.2	
	comp=Z,12nm,1.2s						
STKA	**Stephens Creek**	38.33	244	P	P	21 47 55.5	+0.2
	comp=Z,4.4nm,0.8s,baz=68,slow=10,SNR=7.0						
	comp=Z,4.4nm,0.8s						
STKA	**Stephens Creek**	38.33	244	P	P	21 47 54.9	-0.5
BBOO	**Buckleboo**	43.09	243	P	P	21 48 32.6	-0.6
AS31	**Alice Springs**	44.96	256	P	P	21 48 47.2	-0.6
ASAR	**Alice Springs**	44.96	256	P	P	21 48 47.6	-0.2
	comp=Z,8.6nm,0.8s,baz=91,slow=8.0,SNR=65						
	comp=Z,8.6nm,0.8s						
ASAR	**Alice Springs**	44.96	256	P	P	21 48 46.8	-1.0
WB0	**Warramunga Arr**	44.97	262	P	P	21 48 47.5	-0.5
WRA	**Warramunga Arr**	44.99	261	P	P	21 48 47.6	-0.6
	comp=Z,4.2nm,0.4s,baz=97,slow=8.0,SNR=105						
	comp=Z,4.2nm,0.4s						
WRA	**Warramunga Arr**	44.99	261	P	P	21 48 47.2	-0.9
MTN	**Manton Dam**	49.47	270	P	P	21 49 21.4	-0.4
MTN				IAmb	IAmb	21 49 22.0	
	comp=Z,9.5nm,0.8s						
FORT	**Forrest**	49.82	246	P	P	21 49 22.1	-2.0
FITZ	**Fitzroy Crossi**	53.42	262	P	P	21 49 50.1	-0.2
SOEI	**Soe**	56.80	271	P	P	21 50 15.1	+1.1
SOEI				IAmb	IAmb	21 50 16.4	
	comp=Z,11nm,0.7s						
PSA00	**Pilbara Seismi**	58.11	256	P	P	21 50 22.0	-0.7
PSA00				IAmb	IAmb	21 50 25.4	
	comp=Z,14nm,1.2s						
MBWA	**Marble Bar**	58.29	257	P	P	21 50 23.1	-0.8
MBWA				IAmb	IAmb	21 50 28.7	
	comp=Z,17nm,1.3s						
MORW	**Morawa**	60.34	247	P	P	21 50 36.5	-1.0
MORW				IAmb	IAmb	21 50 39.1	
	comp=Z,20nm,1.3s						
QSPA	**South Pole Qui**	70.16	180	P	P	21 51 38.6	+0.1
QSPA				IAmb	IAmb	21 52 06.3	
	comp=Z,15nm,1.4s						
TXAR	**Lajitas Array**	86.47	57	P	P	21 53 08.7	+2.5
	comp=Z,0.6nm,0.7s,baz=213,slow=6.0,SNR=6.5						
	comp=Z,0.6nm,0.7s						
H21K	**Melozitna Rive**	87.37	10	P	P	21 53 10.3	+0.8
CCB	**Clear Creek Bu**	87.37	12	P	P	21 53 09.8	+0.3
CCB				IAmb	IAmb	21 53 10.8	
	comp=Z,2.7nm,0.5s						
IMAR	**Indian Mountai**	87.52	10	P	P	21 53 11.1	+0.9
ILAR	**Eielson Array**	87.67	13	P	P	21 53 11.5	+0.6
	comp=Z,0.4nm,0.4s,baz=216,slow=5.5,SNR=7.4						
	comp=Z,0.4nm,0.4s						
ILAR	**Eielson Array**	87.67	13	P	P	21 53 12.1	+1.2
PDAR	**Pinedale Array**	88.32	43	P	P	21 53 16.6	+1.8
	comp=Z,0.4nm,0.6s,baz=261,slow=0.9,SNR=5.8						
	comp=Z,0.4nm,0.6s						
AKASG	**Malin Array Be**	142.65	332	PKhKP	PKPpre	21 59 49.2	
	comp=Z,0.9nm,0.5s,baz=44,slow=4.4,SNR=7.7						
CLL	**Collm**	147.56	347	*i* PKPbc	PKiKP	22 00 04.9	-0.3
GERES	**GERESS Array B**	149.72	345	PKPbc	PKPbc	22 00 09.6	+0.4
	comp=Z,0.5nm,0.7s,baz=29,slow=3.0,SNR=4.3						

*IDC **11** 21:41:52.9±2.1, 29°.86S×72°.25W, h0^{km}, mb3.7/1, mbtmp3.7/4, ML3.6/3, Error ellipse: s-maj=50.3km s-min=30.9km az=70.0*

*SJA **11** 21:41:53.7±0.7, 29°.93S×72°.10W, h25^{km}±3^{km}, ML3.7, MW4.1, Hypocentre not reviewed by the ISC*

*GUC **11** 21:41:58.9±0.8, 30°.13S×71°.71W, h23^{km}±6^{km}, ML3.6*

ISC 11 21:41:56.7±1.7, 30°.05S±0°.03×71°.90W±0°.07, h23^{km}±13^{km}, n28, σ1^{s}.73/33, 8C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	0.59	78⇓	*e*P	Pb	21 42 08.8	+0.5
CO05				*e*S	Sn	21 42 16.2	-2.3
CO05				IAML		21 42 20.5	
	comp=N,7μm,0.3s						
CO06	**Fray Jorge**	0.67	160⇑	*e*P	Pb	21 42 09.8	+0.1
CO06				*e*S	Sn	21 42 18.7	-1.7
CO06				IAML		21 42 23.9	
	comp=N,4μm,0.2s						
GO04	**Tololo Observa**	0.96	98⇓	*e*P	Pn	21 42 15.3	+0.3
GO04				*e*S	Sn	21 42 27.2	-0.9
GO04				IAML		21 42 36.9	
	comp=E,5μm,0.5s						
GO04	**Tololo Observa**	0.96	98	*e*P		21 42 15.4	
GO04				*e*S		21 42 32.6	
CO03	**El Pedregal**	1.31	127⇑	*e*P	Pb	21 42 20.4	-0.2
CO03				*e*S	Sn	21 42 36.8	+0.3
CO03				IAML		21 42 44.7	
	comp=E,2μm,0.3s						
CO03	**El Pedregal**	1.31	127	*e*P		21 42 20.8	
CO03				IAML		21 42 42.6	
	comp=Z,947nm,0.5s						
CO02	**Combarbal**	1.39	146⇓	*e*P	Pb	21 42 22.1	+0.1
CO02				*e*S	Sb	21 42 39.3	-0.1
CO02				IAML		21 42 54.5	
	comp=N,3μm,0.3s						
CO02	**Combarbal**	1.39	146	*e*P		21 42 22.2	
CO02				*e*S		21 42 45.2	
CO02				IAML		21 42 47.7	
	comp=Z,2μm,0.6s						
LCO	**Las Campanas**	1.47	46⇑	*e*P	Pn	21 42 21.7	-0.3
LCO				*e*S	Sb	21 42 43.1	+1.3
LCO	**Las Campanas**	1.47	46	*e*P		21 42 22.0	
LCO				*e*S		21 42 42.7	
LCO				IAML		21 42 49.2	
	comp=Z,4μm,0.6s						
CO01	**Juntas del Tor**	1.57	88⇑	*e*P	Pb	21 42 24.7	-0.4
CO01				*e*S	Sb	21 42 45.1	+0.5
CO01	**Juntas del Tor**	1.57	88	*e*P		21 42 25.2	
CO01				*e*S		21 42 47.7	
CO01				IAML		21 42 49.0	
	comp=Z,770nm,0.3s						
AC05	**El Transito**	1.86	50⇑	*e*P	Pn	21 42 28.2	+0.9
AC05				*e*S	Sb	21 42 52.5	-0.4
AC05				IAML		21 42 58.8	
	comp=N,541nm,0.5s						
AC05	**El Transito**	1.86	50	*e*P		21 42 28.1	
AC05				*e*S		21 42 52.3	
AC05				IAML		21 43 02.0	
	comp=Z,506nm,0.6s						
AC04	**Llanos de Chal**	1.97	22⇑	*e*P	Pn	21 42 27.4	-1.3
AC04				*e*S	Sn	21 42 56.6	+3.9
AC04	**Llanos de Chal**	1.97	22	*e*P		21 42 27.3	
AC04				*e*S		21 42 56.5	
AC04				IAML		21 43 06.2	
	comp=Z,310nm,0.5s						
VA06	**Catapilco**	2.56	169	*e*P	Pn	21 42 37.2	+0.5
VA06				IAML		21 43 24.8	
	comp=E,653nm,0.8s						
RTLS	**Leoncito**	2.84	129	*e*P		21 42 45.0	
RTLS				*e*S		21 43 24.3	
RTLS				IAML		21 43 39.1	
	comp=Z,416nm,0.6s						
GO03	**Copiap**	2.85	31	*e*P	Pn	21 42 40.1	-0.6
GO03				*e*S	Sn	21 43 15.6	+1.2
GO03				IAML		21 43 30.4	
	comp=N,197nm,0.5s						
GO03	**Copiap**	2.85	31	*e*P		21 42 40.3	
GO03				*e*S		21 43 18.8	
VA03	**San Esteban**	2.94	157	*e*P	Pn	21 42 44.8	+2.7
VA03	**San Esteban**	2.94	157	*e*P		21 42 44.5	
VA03				*e*S		21 43 23.2	
VA03				IAML		21 43 39.0	
	comp=Z,244nm,0.7s						
VA01	**Torpederas**	2.98	176	*e*P		21 42 49.9	
VA01				IAML		21 43 33.6	
	comp=Z,199nm,0.7s						
ROCH	**El Roble**	3.01	166	*e*P	Pn	21 42 44.2	+1.0
ROCH				IAML		21 43 40.2	
	comp=N,350nm,0.3s						
ROC1	**El Roble**	3.02	166	*e*P		21 42 45.5	
ROC1				*e*S		21 43 15.0	
PEL	**Peldehue**	3.26	162	*e*P		21 42 48.2	
PEL				*e*S		21 43 40.1	
MT02	**Curacav**	3.27	169	*e*P		21 42 47.2	
MT02				*e*S		21 43 43.8	
MT02				IAML		21 43 48.4	
	comp=Z,123nm,0.6s						
MT10	**Hacienda Santa**	3.42	161⇑	*e*P	Pn	21 42 50.6	+1.9
CFA	**Coronel Fontan**	3.51	117	Pn	Pb	21 42 54.4	-3.8
	comp=Z,6.2nm,0.3s,baz=302,slow=14,SNR=32						
CFA				Sn	Sb	21 43 41.3	+0.9
	comp=Z,11nm,0.3s,baz=97,slow=14,SNR=4.7						
	comp=Z,17nm,0.4s						
CFA	**Coronel Fontan**	3.51	117	*e*P		21 42 54.5	
CFA				*e*S		21 43 51.5	
MT03	**Universidad Ad**	3.63	161	*e*P		21 42 53.0	
MT03				*e*S		21 43 47.2	
MT03				IAML		21 43 58.6	
	comp=Z,146nm,0.9s						
ASAL	**Salagasta**	3.65	135	*e*P		21 42 57.6	
ASAL				*e*S		21 43 52.4	
MT01	**Popeta**	3.84	172	*e*P		21 42 55.1	
MT01				*e*S		21 43 42.3	
MT01				IAML		21 44 00.0	
	comp=Z,51nm,0.8s						
AC02	**Maricunga**	4.02	38	*e*P	Pn	21 42 57.9	+0.5
AC02	**Maricunga**	4.02	38	*e*P		21 42 58.0	
AC02				*e*S		21 43 58.5	
AC02				IAML		21 44 11.5	
	comp=Z,110nm,0.9s						
AC01	**Pan de Azucar**	4.05	17	*e*P		21 42 54.3	
AC01				IAML		21 44 11.3	
	comp=Z,78nm,0.7s						
BO01	**Tunca**	4.39	171	*e*P	Pn	21 43 01.9	0.0
BO01	**Tunca**	4.39	171	*e*P		21 43 01.0	
BO01				*e*S		21 43 54.1	
BO01				IAML		21 44 31.5	
	comp=Z,26nm,0.6s						
BO03	**Pichilemu**	4.44	181⇑	*e*P	Pn	21 43 01.4	-1.1
BO02	**Sierra Bellavi**	4.83	169	*e*P		21 43 09.1	
BO02				*e*S		21 44 06.4	
BO02				IAML		21 44 39.9	
	comp=Z,51nm,0.8s						
H03N1	**Juan Fernandez**	6.87	239	Pn	Pn	21 43 32.7	-3.0
	baz=89,slow=16						
H03N1				Sn	Sn	21 44 41.4	-12
H03N1				T	T	21 50 49.5	
	baz=68,slow=72,SNR=521						
H03N2	**Juan Fernandez**	6.88	239	Pn	Pn	21 43 32.7	-3.1
	baz=89,slow=16						
H03N2				Sn	Sn	21 44 42.6	-11
H03N2				T	T	21 50 57.3	
	baz=68,slow=72,SNR=454						
H03N3	**Juan Fernandez**	6.88	239	Pn	Pn	21 43 33.2	-2.7
	baz=89,slow=16						
H03N3				Sn	Sn	21 44 42.0	-11
H03N3				T	T	21 50 49.2	
	baz=68,slow=72,SNR=406						
LVC	**Limon Verde**	7.88	21	Pn	Pn	21 43 47.2	-3.0
	comp=Z,0.3nm,0.3s,baz=214,slow=15,SNR=1.8						
LVC				Sn	Sn	21 45 13.7	-5.1
	comp=Z,0.3nm,0.3s,baz=226,slow=15,SNR=1.4						
LVC				Lg	Lg	21 45 52.3	
	comp=Z,1.2nm,0.3s,baz=36,slow=20,SNR=5.4						
	comp=Z,2.2nm,0.6s						
PLCA	**Paso Flores**	10.72	174	Pn	Pn	21 44 29.4	+0.5
	comp=Z,0.2nm,0.3s,baz=348,slow=12,SNR=4.9						
	comp=Z,1.8nm,0.9s						
TORD	**Torodi Ar. Bea**	82.76	70	P	P	21 54 19.9	+0.7
	comp=Z,0.4nm,0.6s,baz=246,slow=3.7,SNR=5.9						
	comp=Z,0.4nm,0.6s						
H11S2	**WAKE ISLAND Hy**	125.85	272	T	T	00 19 55.4	
	baz=114,slow=75,SNR=6.0						
H11S1	**WAKE ISLAND Hy**	125.87	272	T	T	00 19 44.7	
	baz=114,slow=75,SNR=4.7						
H11S3	**WAKE ISLAND Hy**	125.87	272	T	T	00 19 55.0	
	baz=114,slow=75,SNR=4.0						
ZALV	**Zalesovo Beam**	150.76	29	PKPbc	PKPbc	22 01 47.1	+0.5
	comp=Z,1.1nm,0.4s,baz=322,slow=2.9,SNR=6.1						

*WEL **11** 21:54:00, 45°.19S×167°.08E, h28^{km}, ML4.7, Mw4.3, Moment Tensor Solution. s5 Moment tensor: Scale 10^{15} Nm; M$_{rr}$-0.10; M$_{\theta\theta}$-2.23; M$_{\phi\phi}$2.32; M$_{r\theta}$-2.06; M$_{\theta\phi}$-0.27; M$_{\phi r}$-1.36; Fault plane solution: M$_0$3.33000×10^{15} NP1: φ$_s$136.00000°, δ44.00000°, λ-176.00000°. NP2: φ$_s$43.00000°, δ87.00000°, λ-46.00000°. Principal axes: T -363.4000, Plg28.0000°, Azm99.0000°; N 61.1200, Plg44.0000°, Azm220.0000°; P 302.2900, Plg33.0000°, Azm349.0000°;*

*NOU **11** 21:54:06.8, 45°.14S×167°.05E, h11^{km}, mb4.8/16, South Island, New Zealand*

*WEL **11** 21:54:07.8±0.9, 45°S±5°×16°7E±°, h18^{km}±5^{km}, M4.7/13, ML4.9/13, MLv4.7/13, Error ellipse: s-maj=0.0km s-min=0.0km az=108.7, confirmed*

*NEIC **11** 21:54:08.1±1.3, 45°.18S±0°.05×167°.08E±0°.05, h30^{km}±5^{km}, mb4.2/11, Mwr4.3/34, Error ellipse: s-maj=8.8km s-min=3.4km az=147.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.37; M$_{\theta\theta}$-1.41; M$_{\phi\phi}$2.79; M$_{r\theta}$-1.33; M$_{\theta\phi}$0.99; M$_{\phi r}$-0.79; Fault plane solution: M$_0$3.03000×10^{15} NP1: φ$_s$47.58000°, δ71.21000°, λ-43.71000°. NP2: φ$_s$154.69000°, δ49.14000°, λ-154.80000°. Principal axes: T 3.2652, Plg14.0000°, Azm106.0000°; N -0.5357, Plg43.0000°, Azm209.0000°; P -2.7295, Plg44.0000°, Azm3.0000°;*

*NEIC **11** 21:54:08.1, 45°.18S×167°.08E, h30^{km}*

*IDC **11** 21:54:13.3±3.3, 44°.83S×167°.35E, h69^{km}±31^{km}, mb3.7/4, mbtmp4.0/5, ML4.8/2, MS3.5/10, Error ellipse: s-maj=28.0km s-min=21.8km az=23.0*

ISC 11 21:54:08.2±0.9, 45°.15S±0°.04×167°.09E±0°.04, h29^{km}±7^{km}, n178, σ1^{s}.29/183, mb4.1/8, MS3.5/10, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCZ	**Deep Cove**	0.32	172		Pb	21 54 15.9	0.0
DCZ					Sb	21 54 20.6	-0.5
DCZ	**Deep Cove**	0.32	172	P	Pb	21 54 15.9	0.0
DCZ				S	Sb	21 54 21.1	0.0
MLZ	**Mavora Lakes**	0.76	107		Pn	21 54 22.4	-0.6
MLZ				Sn	Sb	21 54 32.6	-0.3
MLZ	**Mavora Lakes**	0.76	107	P	Pn	21 54 22.4	-0.6
MLZ				S	Sb	21 54 32.9	0.0
MSZ	**Milford Sound**	0.76	52	P	Pn	21 54 22.0	-1.0
WHZ	**Wether Hill Ro**	0.96	141		Pn	21 54 25.5	-0.3
WHZ				Sn	Sn	21 54 38.1	-0.3
WHZ	**Wether Hill Ro**	0.96	141	P	Pn	21 54 25.4	-0.3
WHZ				S	Sn	21 54 38.5	+0.1
PYZ	**Puysegur Point**	1.06	196		Pn	21 54 25.8	-1.3
PYZ				Sn	Sn	21 54 40.4	-0.5
PYZ	**Puysegur Point**	1.06	196	P	Pn	21 54 26.4	-0.7

PYZ	Puysegur Point	1.06	196	P	Pn	21 54 26.0	-1.1
WKZ	Wanaka	1.40	78		Pb	21 54 33.2	-0.5
WKZ					Sb	21 54 51.8	+0.5
WKZ	Wanaka	1.40	78	P	Pb	21 54 33.5	-0.3
EAZ	Earnscleugh	1.57	94	P	Pn	21 54 35.2	+1.0
EAZ				S	Sb	21 54 55.0	-1.1
JCZ	Jackson Bay	1.62	49	P	Pb	21 54 36.3	-1.1
JCZ	Jackson Bay	1.62	49	P	Pb	21 54 37.9	+0.5
JCZ				S	Sb	21 54 59.4	+1.9
APZ	The Paps	1.80	160	P	Pn	21 54 37.6	+0.3
TUZ	Tuapeka	1.96	115	P	Pn	21 54 40.6	+1.2
SYZ	Scrubby Hill	2.00	135	P	Pn	21 54 40.9	+0.9
SYZ	Scrubby Hill	2.00	135	P	Pn	21 54 40.3	+0.4
LBZ	Lake Benmore	2.33	72		Pn	21 54 45.2	+0.6
LBZ	Lake Benmore	2.33	72	P	Pn	21 54 45.2	+0.6
LBZ				S	Sn	21 55 14.7	+2.4
ODZ	Otahua Downs	2.52	89		Pn	21 54 47.3	+0.2
ODZ	Otahua Downs	2.52	89	P	Pn	21 54 48.0	+0.8
ODZ	Otahua Downs	2.52	89	P	Pn	21 54 47.3	+0.2
FOZ	Fox Glacier	2.54	51		Pn	21 54 47.4	+0.1
FOZ	Fox Glacier	2.54	51	P	Pn	21 54 47.3	0.0
HHSZ	Highcliff Hill	2.57	108	P	Pn	21 54 49.0	+1.0
TMZ	Timaru	2.89	76	P	Pn	21 54 52.5	+0.2
GCSZ	Gaunt Creek Bo	2.96	53	P	Pn	21 54 53.2	0.0
ARCZ	Arundel	3.16	69	P	Pn	21 54 56.0	+0.1
RPZ	Rata Peaks	3.18	65	P	Pn	21 54 57.3	+1.1
	472nm,0.3s,baz=229,slow=6.5,SNR=930						
RPZ				S	Sn	21 55 31.1	-2.1
	616nm,0.5s,baz=229,slow=14,SNR=4.6						
RPZ	Rata Peaks	3.18	65		Pn	21 54 56.9	+0.6
RPZ	Rata Peaks	3.18	65	P	Pn	21 54 57.6	+1.3
RPZ	Rata Peaks	3.18	65	P	Pn	21 54 57.0	+0.8
WVZ	Waitaha Valley	3.34	53	P	Pn	21 54 58.3	-0.2
MHCZ	Mount Hutt	3.59	65	P	Pn	21 55 02.2	+0.2
WACZ	Wakanui South	3.60	72	P	Pn	21 55 02.3	+0.3
RACZ	Rakaia	3.88	70	P	Pn	21 55 05.9	0.0
INZ	Inchbonnie	3.97	54		Pn	21 55 07.2	+0.2
INZ	Inchbonnie	3.97	54	P	Pn	21 55 08.0	+0.9
OXZ	Oxford	3.99	65		Pn	21 55 07.0	-0.5
OXZ	Oxford	3.99	65	P	Pn	21 55 07.1	-0.3
MQZ	McQueen’s Vall	4.24	72		Pn	21 55 10.3	-0.4
MQZ	McQueen’s Vall	4.24	72	P	Pn	21 55 10.5	-0.2
AKCZ	Akaroa Harbour	4.35	75	P	Pn	21 55 12.6	+0.2
LTZ	Lake Taylor	4.42	60		Pn	21 55 13.1	-0.3
LTZ	Lake Taylor	4.42	60	P	Pn	21 55 13.0	-0.3
AMCZ	Amberley	4.46	66		Pn	21 55 13.7	0.0
AMCZ	Amberley	4.46	66	P	Pn	21 55 13.8	0.0
GVZ	Greta Valley S	4.81	65		Pn	21 55 18.5	-0.1
GVZ	Greta Valley S	4.81	65	P	Pn	21 55 18.3	-0.3
DSZ	Denniston Nort	4.83	47		Pn	21 55 18.6	-0.4
DSZ	Denniston Nort	4.83	47	P	Pn	21 55 18.7	-0.3
KHZ	Kahutara	5.41	62		Pn	21 55 26.6	-0.2
KHZ	Kahutara	5.41	62	P	Pn	21 55 26.5	-0.3
THZ	Tophouse	5.42	53		Pn	21 55 26.7	-0.3
THZ	Tophouse	5.42	53	P	Pn	21 55 27.0	0.0
MRNZ	Matariki Terra	5.58	50		Pn	21 55 29.5	+0.3
MRNZ	Matariki Terra	5.58	50	P	Pn	21 55 29.6	+0.3
QRZ	Quartz Range	5.88	45		Pn	21 55 32.9	-0.4
QRZ	Quartz Range	5.88	45	P	Pn	21 55 33.8	+0.5
QRZ	Quartz Range	5.88	45	P	Pn	21 55 33.0	-0.3
TKNZ	Takaka Hill	5.95	48		Pn	21 55 33.9	-0.4
TKNZ	Takaka Hill	5.95	48	P	Pn	21 55 34.2	0.0
BSWZ	Blackbirch Sta	6.01	58	Pn	Pn	21 55 35.2	+0.1
BSWZ	Blackbirch Sta	6.01	58	P	Pn	21 55 36.4	+1.3
NNZ	Nelson	6.04	52		Pn	21 55 35.6	0.0
NNZ	Nelson	6.04	52	P	Pn	21 55 36.0	+0.4
CMWZ	Cape Campbell	6.20	59	P	Pn	21 55 43.5	+5.8
TUWZ	Tuamarina	6.23	56		Pn	21 55 37.7	-0.4
TUWZ	Tuamarina	6.23	56	P	Pn	21 55 37.8	-0.3
TCW	Tory Channel	6.56	56		Pn	21 55 42.0	-0.7
TCW	Tory Channel	6.56	56	P	Pn	21 55 44.6	+2.0
DUWZ	D’Urville Isla	6.63	51	P	Pn	21 55 44.8	+1.1
SNZO	South Karori	6.75	58	Pn	Pn	21 55 44.9	-0.4
SNZO	South Karori	6.75	58	P	Pn	21 55 46.5	+1.2
PLWZ	Palliser	6.94	62	Pn	Pn	21 55 46.9	-1.1
PLWZ	Palliser	6.94	62	P	Pn	21 55 47.9	-0.1
CAW	Cannon Point	7.09	58	P	Pn	21 55 49.6	-0.4
KIW	Kapiti Island	7.15	56	P	Pn	21 55 50.4	-0.5
TRWZ	Traveller	7.31	62	P	Pn	21 55 52.6	-0.3
MTW	Mount Morrison	7.33	60	P	Pn	21 55 51.7	-1.5
OGWZ	Otaki Gorge	7.33	57	P	Pn	21 55 52.4	-0.9
HOWZ	Holdsworth Sta	7.49	58	P	Pn	21 55 55.6	+0.1
TMWZ	Te Maipa	7.60	61	P	Pn	21 55 57.0	0.0
NMEZ	Namu Road	7.62	44	P	Pn	21 55 57.6	+0.4
MRZ	Mangatainoka R	7.67	57	Pn	Pn	21 55 56.9	-1.1
MRZ	Mangatainoka R	7.67	57	P	Pn	21 55 57.2	-0.7
NBEZ	Newall Road No	7.73	43	P	Pn	21 55 58.8	0.0
KHEZ	Kahui Hut	7.78	44	P	Pn	21 55 59.9	+0.4
KHEZ	Kahui Hut	7.78	44	P	Pn	21 56 00.0	+0.5
TIWZ	Tintock	7.79	59	P	Pn	21 55 59.8	+0.2
NEZ	North Egmont	7.84	44	P	Pn	21 56 01.0	+0.7
PKE	Pukeiti	7.85	43	P	Pn	21 56 00.5	+0.2
LREZ	Lake Rotokare	7.85	46	P	Pn	21 56 02.2	+1.8
WAZ	Wanganui	7.94	50	P	Pn	21 56 03.6	+2.0
DREZ	Durham Road	7.96	44	P	Pn	21 56 02.6	+0.8
POWZ	Post Office Ro	7.96	56	P	Pn	21 56 04.1	+2.2
PRWZ	Pori Road	7.97	58	P	Pn	21 56 01.3	-0.8
BFZ	Birch Farm	8.06	60	P	Pn	21 56 03.2	-0.1
BFZ	Birch Farm	8.06	60	P	Pn	21 56 02.6	-0.7
DVHZ	Dannevirke	8.25	57	P	Pn	21 56 07.6	+1.7
VRZ	Vera Road	8.28	46	P	Pn	21 56 07.5	+1.2
MTVZ	Mangateitei	8.47	50	P	Pn	21 56 13.5	+4.6
PNHZ	Pukenui	8.52	55	P	Pn	21 56 09.7	+0.1
TRVZ	Turoa	8.57	50	P	Pn	21 56 12.4	+1.9
WNVZ	Wahianoa	8.58	50	P	Pn	21 56 13.8	+3.2
MOVZ	Moawhango	8.61	51	P	Pn	21 56 14.1	+3.3
TWVZ	Taurewa	8.68	49	P	Pn	21 56 13.4	+1.6
NGZ	Ngauruhoe	8.69	50	P	Pn	21 56 13.3	+1.2
SNVZ	South Ngauruho	8.70	50	P	Pn	21 56 14.4	+2.2
BHHZ	Black Hill Sta	8.72	53	P	Pn	21 56 13.4	+1.0
WTVZ	West Tongariro	8.72	49	P	Pn	21 56 14.8	+2.3
NNVZ	North Ngauruho	8.73	49	P	Pn	21 56 14.7	+2.1
OTVZ	Oturere	8.73	50	P	Pn	21 56 14.5	+1.9
KRVZ	Karewarewa	8.77	49	P	Pn	21 56 15.4	+2.3
ETVZ	East Tongariro	8.78	50	P	Pn	21 56 15.5	+2.3
NTVZ	North Tongarir	8.78	50	P	Pn	21 56 15.9	+2.6
TMVZ	Te Maari	8.79	50	P	Pn	21 56 17.3	+4.0
HIZ	Hauiti	8.80	44	Pn	Pn	21 56 13.0	-0.4
HIZ	Hauiti	8.80	44	P	Pn	21 56 13.0	-0.4
HIZ	Hauiti	8.80	44	P	Pn	21 56 13.1	-0.3
KWHZ	Kaweka Forest	8.97	54	P	Pn	21 56 19.3	+3.5
KAHZ	Kahuranaki	8.99	57	P	Pn	21 56 15.6	-0.5
RATZ	Rangitukua	9.00	49	P	Pn	21 56 18.9	+2.6
MCHZ	McNeill Hill	9.11	55	P	Pn	21 56 25.1	+7.4
BKZ	Black Stump Fm	9.19	53	Pn	Pn	21 56 20.0	+1.2
BKZ	Black Stump Fm	9.19	53	P	Pn	21 56 20.0	+1.2
BKZ	Black Stump Fm	9.19	53	P	Pn	21 56 24.1	+5.4
TLZ	Tolley Road	9.28	46	P	Pn	21 56 21.5	+1.4
NMHZ	Naumai	9.41	53	P	Pn	21 56 25.4	+3.5
MTHZ	Maungataniwha	9.60	52	P	Pn	21 56 27.5	+3.1
RAHZ	Arahi	9.69	54	P	Pn	21 56 28.0	+2.3
TOZ	Tahuroa Road	9.73	43	Pn	Pn	21 56 26.2	+0.1
TOZ	Tahuroa Road	9.73	43	P	Pn	21 56 26.2	+0.1
AWAZ	Awhitu Peninsu	9.88	38	P	Pn	21 56 28.6	+0.4
WTAZ	Waiatarua	9.96	37	P	Pn	21 56 29.9	+0.6
ETAZ	East Tamaki Re	10.10	39	P	Pn	21 56 31.6	+0.4
RVAZ	Riverhead Bore	10.10	37	P	Pn	21 56 31.9	+0.7
URZ	Urewera	10.17	51	P	Pn	21 56 31.1	-1.0
	2.5nm,0.3s,baz=330,slow=8.1,SNR=9.3						
URZ				S	Sn	21 58 19.7	-5.4
	47nm,0.7s,baz=7.3,slow=24,SNR=8.8						
	5.8nm,0.3s						
URZ	Urewera	10.17	51	P	Pn	21 56 31.1	-1.0
MBAZ	Motutapu North	10.24	38	P	Pn	21 56 33.0	-0.1
WIAZ	Waiheke Island	10.32	39	P	Pn	21 56 35.0	+0.8
MWZ	Matawai	10.35	53	P	Pn	21 56 34.9	+0.3
KUZ	Kuaotunu	10.62	41	P	Pn	21 56 39.4	+1.0
TWGZ	Tauwhareparae	10.71	53	P	Pn	21 56 39.8	+0.2
TAU	Tasmania Unive	14.40	272	Pn	Pn	21 57 28.7	-1.2
TAU	Tasmania Unive	14.40	272	P	Pn	21 57 30.0	+0.1
GLAD	Gladstone	14.55	280	P	Pn	21 57 31.8	-0.2
	26nm,0.8s						
MOO	Moorlands	14.62	274	P	Pn	21 57 33.5	+0.5
CAN	Canberra	16.91	299		Pn	21 58 03.1	+0.4
CAN				IAmb	IAmb	21 58 08.6	
	comp=Z,25nm,1.4s						
TOO	Toolangi	17.86	288	P	P	21 58 15.0	+0.1
TOO				IAmb	IAmb	21 58 38.7	
	comp=Z,13nm,1.0s						
DZM	Mont Dzumac	23.02	358	LR	LR	22 06 19.4	
	comp=Z,39nm,19.2s,baz=207,slow=32						
DZM	Mont Dzumac	23.02	358	P	P	21 59 12.3	+1.4
EIDS	Eidsvold	23.59	321	P	P	21 59 17.1	+0.6
EIDS				IAmb	IAmb	21 59 20.6	
	comp=Z,11nm,1.1s						
STKA	Stephens Creek	23.83	295	LR	LR	22 07 33.7	
	comp=Z,125nm,19.4s,baz=190,slow=34						
CTA	Charters Tower	30.36	319	LR	LR	22 11 01.7	
	comp=Z,93nm,19.8s,baz=122,slow=33						
CTAO	Charters Tower	30.36	319	P	P	22 00 14.4	-3.0
CTAO				IAmb	IAmb	22 00 39.4	
	comp=Z,6.4nm,1.1s						
VNDA	Vanda	32.55	182	LR	LR	22 11 15.7	
	comp=Z,74nm,20.5s,baz=294,slow=31						
AS31	Alice Springs	34.41	297	P	P	22 00 52.2	-0.8
AS31				IAmb	IAmb	22 01 05.9	
	comp=Z,1.1nm,1.1s						
ASAR	Alice Springs	34.41	297	P	P	22 00 54.0	+1.0
	comp=Z,1.0nm,0.7s,baz=134,slow=6.2,SNR=12						
ASAR				PcP	PcP	22 03 27.7	-0.4
	comp=Z,0.3nm,0.7s,baz=133,slow=3.9,SNR=2.2						
ASAR				LR	LR	22 14 34.3	
	comp=Z,93nm,18.0s,baz=154,slow=36						
	comp=Z,1.0nm,0.7s						
ASAR	Alice Springs	34.41	297	P	P	22 00 51.1	-1.9
WRA	Warramunga Arr	36.92	302	P	P	22 01 15.1	+0.5
	comp=Z,2.1nm,0.7s,baz=136,slow=8.2,SNR=26						
WRA				PcP	PcP	22 03 35.2	-0.4
	comp=Z,0.6nm,1.0s,baz=146,slow=3.1,SNR=3.1						
WRA				LR	LR	22 15 52.6	
	comp=Z,73nm,18.7s,baz=130,slow=35						
	comp=Z,2.1nm,0.7s						
WRA	Warramunga Arr	36.92	302	P	P	22 01 13.7	-0.8
WB0	Warramunga Arr	37.02	302	P	P	22 01 14.7	-0.7
WB0				IAmb	IAmb	22 01 18.8	
	comp=Z,6.1nm,1.1s						
COEN	Coen	37.12	319	P	P	22 01 16.0	-0.2
FITZ	Fitzroy Crossi	43.73	294	P	P	22 02 11.0	+0.1
QSPA	South Pole Qui	44.98	180	P	P	22 02 24.1	+3.5
	comp=Z,1.7nm,0.9s,baz=68,slow=0.7,SNR=6.0						
QSPA				LR	LR	22 18 16.3	
	comp=Z,73nm,21.7s,baz=20,slow=32						
	comp=Z,1.7nm,0.9s						
QSPA	South Pole Qui	44.98	180	P	P	22 02 20.7	+0.2
QSPA				IAmb	IAmb	22 02 30.5	
	comp=Z,5.8nm,1.2s						
KAPI	Kappang	57.38	300	LR	LR	22 28 18.0	
	comp=Z,29nm,21.8s,baz=180,slow=36						
DAV	Davao City (W)	63.92	313	LR	LR	22 33 18.0	
	comp=Z,46nm,19.9s,baz=165,slow=37						
CMAR	Chiang Mai Arr	88.41	298	P	P	22 06 59.2	+1.7
	comp=Z,0.5nm,0.6s,baz=140,slow=2.9,SNR=1.1						
	comp=Z,0.5nm,0.6s						
NNA	Nana	99.12	117	LR	LR	22 42 37.4	
	comp=Z,26nm,20.3s,baz=284,slow=29						
BRTR	Keskin Array B	145.60	278	PKPbc	PKPbc	22 13 43.5	-0.1
	comp=Z,2.2nm,0.9s,baz=144,slow=4.8,SNR=13						
TORD	Torodi Ar. Bea	145.77	206	PKPbc	PKPdf	22 13 44.0	-0.2
	comp=Z,0.9nm,0.4s,baz=137,slow=2.2,SNR=18						
ARCES	ARCESS Array B	148.91	335	PKPbc	PKPbc	22 13 51.5	-0.3
	comp=Z,5.3nm,0.9s,baz=44,slow=5.4,SNR=6.2						
AKASG	Malin Array Be	151.52	297	PKPbc	PKPbc	22 13 58.3	-0.3
	comp=Z,0.7nm,0.4s,baz=64,slow=2.3,SNR=4.7						
FINES	FINESS Array B	152.12	320	PKPbc	PKPbc	22 13 59.1	-0.5
	comp=Z,2.1nm,0.6s,baz=74,slow=4.1,SNR=23						

IDC 11 22:08:42.5±13.0**,4°.19S**×**102°.70W,h0^{km},mb3.6**/3**,**
mbtmp3.6/3**,MS3.6**/18**,Error ellipse: s-maj=499.2km**
s-min=181.2km az=110.0,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	22.51	20	LR	LR	22 20 32.9	
	comp=Z,88nm,20.0s,baz=196,slow=32						
JTS	Las Juntas de	22.79	51	LR	LR	22 19 57.3	
	comp=Z,44nm,20.1s,baz=120,slow=30						
ATAH	Atahualpa	24.36	98	LR	LR	22 21 45.4	
	comp=Z,90nm,19.0s,baz=266,slow=32						
NNA	Nana	26.73	108	LR	LR	22 22 55.5	
	comp=Z,109nm,20.2s,baz=282,slow=32						
SDV	Santo Domingo	34.51	68	LR	LR	22 27 31.1	
	comp=Z,89nm,21.9s,baz=256,slow=33						
LPAZ	La Paz	36.01	112	LR	LR	22 28 28.3	
	comp=Z,75nm,18.6s,baz=285,slow=33						
H03N2	Juan Fernandez	36.58	146	T	T	22 55 49.0	
	baz=322,slow=77,SNR=21						
H03N1	Juan Fernandez	36.59	146	T	T	22 55 51.2	
	baz=322,slow=77,SNR=30						
H03N3	Juan Fernandez	36.60	146	T	T	22 56 02.7	
	baz=322,slow=77,SNR=23						
LVC	Limon Verde	37.47	122	LR	LR	22 27 39.8	
	comp=Z,131nm,20.1s,baz=269,slow=30						
PFO	Pinyon Flats O	39.78	342	LR	LR	22 29 02.7	
	comp=Z,101nm,19.9s,baz=192,slow=31						
CFA	Coronel Fontan	42.31	134	LR	LR	22 30 19.4	
	comp=Z,119nm,19.1s,baz=256,slow=31						
SIV	San Ignacio	42.53	109	LR	LR	22 32 53.1	
	comp=Z,148nm,18.4s,baz=290,slow=34						
ELK	Elko	46.17	347	LR	LR	22 34 36.5	
	comp=Z,65nm,18.4s,baz=165,slow=34						
PDAR	Pinedale Array	47.15	353	P	P	22 17 17.0	0.0
	1.5nm,0.9s,baz=157,slow=8.1,SNR=10						
	1.5nm,0.9s						
PPT	Papeete	47.77	250	LR	LR	22 31 03.5	
	comp=Z,33nm,21.5s,baz=2.5,slow=28						
YBH	Yreka Blue Hor	49.21	340	LR	LR	22 33 47.7	
	comp=Z,28nm,20.6s,baz=160,slow=31						
NEW	Newport	53.74	348	LR	LR	22 37 16.1	
	comp=Z,78nm,18.6s,baz=270,slow=32						
BBB	Bella Bella	60.17	342	LR	LR	22 41 03.0	
	comp=Z,46nm,19.0s,baz=74,slow=32						
YKA	Yellowknife Ar	67.12	354	P	P	22 19 38.0	+0.3
	0.2nm,0.7s,baz=164,slow=6.8,SNR=3.2						
	0.2nm,0.7s						
INK	Inuvik	75.46	349	LR	LR	22 50 45.4	
	comp=Z,48nm,19.1s,baz=276,slow=33						
ILAR	Eielson Array	76.06	342	P	P	22 20 31.2	-0.3
	0.6nm,0.8s,baz=153,slow=5.2,SNR=5.8						
	0.6nm,0.8s						
RPZ	Rata Peaks	84.42	227	LR	LR	22 51 51.0	
	comp=Z,56nm,21.8s,baz=40,slow=31						
SHEM	Shemya Is, Ala	89.19	323	LR	LR	22 51 42.4	
	comp=Z,49nm,21.6s,baz=149,slow=29						
H11N3	WAKE ISLAND Hy	91.76	290	T	T	00 02 30.0	
	baz=96,slow=74,SNR=30						
H11N2	WAKE ISLAND Hy	91.78	290	T	T	00 02 27.0	
	baz=96,slow=74,SNR=25						
H11N1	WAKE ISLAND Hy	91.78	290	T	T	00 02 16.5	
	baz=96,slow=74,SNR=24						
H11S2	WAKE ISLAND Hy	91.87	288	T	T	00 02 25.4	
	baz=94,slow=75,SNR=56						
H11S1	WAKE ISLAND Hy	91.88	288	T	T	00 02 24.9	
	baz=94,slow=75,SNR=53						
H11S3	WAKE ISLAND Hy	91.89	288	T	T	00 02 25.7	
	baz=94,slow=75,SNR=53						

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*WEL **11** 22:39:36.0±0.4, 42°S±3°×17°4E±°, h7^{km}±4^{km}, M3.5/14, ML3.8/14, MLv3.5/14, Error ellipse: s-maj=0.0km s-min=0.0km az=150.7, confirmed*

*NOU **11** 22:39:37.4, 41°.98S×174°.36E, h43^{km}, MLv4.1/9, Cook Strait, New Zealand*

ISC 11 22:39:34.6±1.2**, 41°.85S**±0°.03×**174°.25E**±0°.03**, h8^{km}**±10^{km}**,**
n88, σ1^{s}00/96**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.10	346	P	Pg	22 39 38.2	+1.3
BSWZ	Blackbirch Sta	0.31	295	P	Pg	22 39 40.5	-0.1
BSWZ				S	Sg	22 39 44.5	-0.2
TUWZ	Tuamarina	0.47	331	P	Pg	22 39 43.2	-0.6
TUWZ				S	Sg	22 39 48.9	-1.1
TCW	Tory Channel	0.64	2	P	Pg	22 39 46.3	-0.5
TCW				S	Sg	22 39 54.1	-1.0
WEL	Wellington	0.69	35	P	Pg	22 39 48.6	+0.9
KHZ	Kahutara	0.78	223	P	Pn	22 39 52.5	+0.7
KHZ	Kahutara	0.78	223	P	Pn	22 39 52.0	+0.2
KHZ				S	Sn	22 40 05.3	+1.6
PLWZ	Palliser	0.81	70	P	Pb	22 39 52.2	+1.4
NNZ	Nelson	0.91	314	P	Pg	22 39 50.8	-1.2
NNZ				S	Sg	22 40 01.9	-1.8
CAW	Cannon Point	0.96	40	P	Pg	22 39 53.5	+0.4
THZ	Tophouse	1.01	274	P	Pg	22 39 53.7	-0.2
DUWZ	D’Urville Isla	1.07	347	P	Pg	22 39 53.6	-1.5
DUWZ				S	Sg	22 40 08.3	-0.8
KIW	Kapiti Island	1.10	27	P	Pg	22 39 55.4	-0.4
KIW				S	Sb	22 40 11.1	+0.6
MTW	Mount Morrison	1.17	54	P	Pb	22 39 56.8	-0.2
TRWZ	Traveller	1.17	68	P	Pb	22 39 56.9	-0.2
MRNZ	Matariki Terra	1.20	291	P	Pb	22 39 57.0	-0.6
MRNZ				S	Sg	22 40 13.3	+0.1
OGWZ	Otaki Gorge	1.24	34	P	Pn	22 39 58.0	-0.3
TKNZ	Takaka Hill	1.26	310	P	Pn	22 39 57.2	-1.3
HOWZ	Holdsworth Sta	1.35	46	P	Pn	22 39 59.2	-0.5
GVZ	Greta Valley S	1.44	218	P	Pn	22 40 01.3	+0.4
TMWZ	Te Maipa	1.44	60	P	Pn	22 40 00.3	-0.7
MRZ	Mangatainoka R	1.55	41	P	Pn	22 40 02.1	-0.4
TIWZ	Tintock	1.63	50	P	Pn	22 40 02.9	-0.8
QRZ	Quartz Range	1.65	308	P	Pn	22 40 04.4	+0.6
QRZ	Quartz Range	1.65	308	P	Pn	22 40 03.9	+0.1
LTZ	Lake Taylor	1.74	237	P	Pn	22 40 05.4	+0.3
CPWZ	Castlepoint	1.74	58	P	Pg	22 40 09.0	+1.0
AMCZ	Amberley	1.78	221	P	Pn	22 40 05.9	+0.3
DSZ	Denniston Nort	1.83	272	P	Pn	22 40 07.3	+1.0
PRWZ	Pori Road	1.83	46	P	Pn	22 40 05.7	-0.7
POWZ	Post Office Ro	1.85	39	P	Pn	22 40 06.1	-0.5
BFZ	Birch Farm	1.91	53	P	Pn	22 40 06.4	-1.0
BFZ	Birch Farm	1.91	53	P	Pn	22 40 06.1	-1.3
DVHZ	Dannevirke	2.12	44	P	Pn	22 40 09.0	-1.3
WAZ	Wanganui	2.16	15	P	Pn	22 40 12.5	+1.5
MQZ	McQueen’s Vall	2.20	212	P	Pn	22 40 10.3	-1.1
OXZ	Oxford	2.20	227	P	Pn	22 40 10.8	-0.7
TSZ	Takapari Road	2.21	37	P	Pn	22 40 11.6	0.0
AKCZ	Akaroa Harbour	2.25	205	P	Pn	22 40 11.7	-0.4
INZ	Inchbonnie	2.26	246	P	Pn	22 40 12.6	+0.4
LREZ	Lake Rotokare	2.39	3	P	Pb	22 40 18.2	+0.4
PRHZ	Porangahau	2.40	50	P	Pn	22 40 12.7	-1.5
PNHZ	Pukenui	2.43	38	P	Pn	22 40 13.5	-1.1
RACZ	Rakaia	2.44	219	P	Pn	22 40 13.7	-0.9
NMEZ	Namu Road	2.45	353	P	Pb	22 40 19.0	+0.2
KHEZ	Kahui Hut	2.56	356	P	Pb	22 40 19.9	-0.8
KHEZ	Kahui Hut	2.56	356	P	Pb	22 40 20.6	-0.1
NBEZ	Newall Road No	2.59	353	P	Pb	22 40 21.2	-0.1
MHCZ	Mount Hutt	2.59	229	P	Pn	22 40 16.1	-0.8
MTVZ	Mangateitei	2.63	21	P	Pb	22 40 20.6	-1.4
PKE	Pukeiti	2.66	356	P	Pb	22 40 22.5	+0.1
PXZ	Pawanui	2.69	48	P	Pn	22 40 16.2	-1.9
PKVZ	Pokaka	2.69	19	P	Pb	22 40 22.9	0.0
MOVZ	Moawhango	2.69	26	P	Pn	22 40 18.0	-0.3
WNVZ	Wahianoa	2.72	23	P	Pn	22 40 19.9	+1.2
BHHZ	Black Hill Sta	2.73	31	P	Pn	22 40 18.3	-0.5
VRZ	Vera Road	2.75	8	P	Pn	22 40 20.3	+1.4
FWVZ	Far West T-bar	2.77	21	P	Pb	22 40 23.7	-0.9
NGZ	Ngauruhoe	2.86	22	P	Pn	22 40 22.7	+2.1
KAHZ	Kahuranaki	2.86	45	P	Pn	22 40 18.9	-1.7
SNVZ	South Ngauruho	2.86	22	P	Pn	22 40 22.0	+1.3
WVZ	Waitaha Valley	2.87	244	P	Pn	22 40 21.0	+0.4
OTVZ	Oturere	2.89	22	P	Pn	22 40 23.5	+2.4
NNVZ	North Ngauruho	2.91	22	P	Pn	22 40 22.3	+1.0
WTVZ	West Tongariro	2.92	21	P	Pb	22 40 26.1	-0.8
ETVZ	East Tongariro	2.93	23	P	Pb	22 40 26.7	-0.4
KWHZ	Kaweka Forest	2.93	35	P	Pn	22 40 20.1	-1.4
TMVZ	Te Maari	2.95	23	P	Pb	22 40 26.6	-0.8
KRVZ	Karewarewa	2.95	22	P	Pb	22 40 27.6	+0.2
NTVZ	North Tongarir	2.95	22	P	Pn	22 40 22.4	+0.5
RPZ	Rata Peaks	3.00	230	P	Pn	22 40 21.7	-0.8
RPZ	Rata Peaks	3.00	230	P	Pn	22 40 22.1	-0.3
ARCZ	Arundel	3.08	226	P	Pn	22 40 23.3	-0.2
RITZ	Rihia Road	3.12	24	P	Pb	22 40 30.1	-0.2
BKZ	Black Stump Fm	3.18	33	P	Pn	22 40 26.6	+1.7
BKZ	Black Stump Fm	3.18	33	P	Pb	22 40 30.1	-1.3
GCSZ	Gaunt Creek Bo	3.25	242	P	Pn	22 40 26.8	+1.0
HIZ	Hauiti	3.36	8	P	Pn	22 40 28.9	+1.5
HIZ	Hauiti	3.36	8	P	Pn	22 40 28.9	+1.5
TMZ	Timaru	3.47	222	P	Pn	22 40 28.6	-0.3
FOZ	Fox Glacier	3.67	241	P	Pn	22 40 31.9	+0.2
LBZ	Lake Benmore	3.91	228	P	Pn	22 40 35.6	+0.6
ODZ	Otahua Downs	4.13	218	P	Pn	22 40 37.3	-0.7
ODZ	Otahua Downs	4.13	218	P	Pn	22 40 37.0	-1.0
KMRZ	Kaimai	4.20	19	P	Pn	22 40 40.3	+1.2
JCZ	Jackson Bay	4.58	239	P	Pn	22 40 44.8	+0.5
JCZ	Jackson Bay	4.58	239	P	Pn	22 40 45.0	+0.7
AWAZ	Awhitu Peninsu	4.79	4	P	Pn	22 40 49.6	+2.6

IDC 11 22:46:45.1±8.6**,7°.45N**×**93°.53E,h0^{km},mb3.3**/3**,**
mbtmp3.3/3**,Error ellipse: s-maj=438.6km**
s-min=31.2km az=58.0,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	40.37	348	P	P	22 54 24.6	-0.1
	0.1nm,0.4s,baz=174,slow=7.9,SNR=1.7						
	0.1nm,0.4s						
WRA	Warramunga Arr	48.51	125	P	P	22 55 29.6	-0.6
	0.4nm,0.4s,baz=302,slow=8.1,SNR=14						
	0.4nm,0.4s						
ASAR	Alice Springs	50.11	129	P	P	22 55 43.0	+0.5
	0.2nm,0.5s,baz=309,slow=8.5,SNR=5.8						
	0.2nm,0.5s						

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*PGC **11** 23:09:02.4, 62°.08N×124°.17W, h1^{km}, ML3.4/9, 156km west of Fort Simpson, Nt Nw Territories - Nunavut, Canada*

*ANF **11** 23:09:03.5±1.8, 62°.13N×124°.06W, h19^{km}±14^{km}, ML4.0/2, Error ellipse: s-maj=3.7km s-min=2.3km az=103.0*

ISC 11 23:09:01.4±0.8**, 62°.10N**±0°.03×**123°.90W**±0°.04**, h5^{km}, n71,**
σ1^{s}95/92**, Northwest Territories**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRGLY	Wrigley	1.15	10	P	Pg	23 09 23.9	+0.5
	baz=196						
WRGLY				S	Sg	23 09 39.6	+1.3
	baz=196						
KOTAN	Kotaneelee Air	1.98	182	P	Pn	23 09 36.3	+0.8
	baz=358						
KOTAN				Sb	Sg	23 10 06.2	+1.3
	baz=358						
NBC2	NorthernBC 2	2.43	163	Pn	Pn	23 09 43.2	+1.5
NBC2				Sn	Sn	23 10 13.4	+1.6
NBC1	NorthernBC 1	2.46	179	Pn	Pn	23 09 39.1	-2.9
LIRD	Liard River Hi	2.91	203	Sb	Sg	23 10 31.8	-2.9
	baz=19						
NBC3	NorthernBC 3	2.93	146	Pn	Pn	23 09 49.9	+1.3
NBC3				Sn	Sn	23 10 26.5	+2.3
NBC3				Sg	Sg	23 10 35.5	0.0
FNBB	Fort Nelson	3.25	172	Pn	Pn	23 09 53.5	+0.5
NOWN	Norman Wells,	3.44	340	Pn	Pn	23 09 56.2	+0.7
MMPY	Sheldon Lake,	3.47	282	Pn	Pn	23 09 54.9	-1.2
MMPY	Sheldon Lake,	3.47	282	P	Pn	23 09 55.0	-1.1
	baz=96						
MMPY				Sb	Sb	23 10 45.9	+0.2
	baz=96						
NBC6	NorthernBC 6	3.75	159	Pn	Pn	23 10 00.5	+0.6
NBC6				Sg	Sg	23 10 58.5	-3.3
FARO	Faro, Yukon	4.43	276	Pn	Pn	23 10 08.1	-1.2
FARO	Faro, Yukon	4.43	276	P	Pn	23 10 08.3	-0.9
	baz=88,SNR=7.4						
FARO				Sb	Sb	23 11 14.0	+0.6
	baz=88						
NBC5	NorthernBC 5	4.63	172	Pn	Pn	23 10 11.4	-0.7
NBC5				Sn	Sn	23 11 04.2	-2.1
NBC5				Sg	Sg	23 11 28.3	-1.8
P33M	Teslin, Yukon	4.72	250	Pn	Pn	23 10 12.2	-1.0
P33M				Sg	Sb	23 11 23.2	+1.6
P33M	Teslin, Yukon	4.72	250	P	Pn	23 10 12.4	-0.8
	baz=62,SNR=9.8						
P33M				Sb	Sb	23 11 23.5	+1.8
	baz=62						
DLBC	Dease Lake	4.78	222	Pn	Pn	23 10 13.7	-0.3
DLBC				Sg	Sb	23 11 28.0	+4.7
DLBC	Dease Lake	4.78	222	P	Pn	23 10 13.4	-0.6
	baz=36						
DLBC				Sb	Sb	23 11 27.6	+4.3
	baz=36						
M31M	Drury Creek, Y	4.92	276	P	Pn	23 10 14.6	-1.3
	baz=87						
M31M				Sb	Sb	23 11 29.6	+2.1
	baz=87						
Q32M	Nakina River	5.20	236	P	Pn	23 10 19.2	-0.7
	baz=48						
Q32M				S	Sn	23 11 18.2	-2.0
	baz=48						
P32M	Atlin	5.42	247	Pn	Pn	23 10 22.1	-0.8
P32M	Atlin	5.42	247	P	Pn	23 10 22.0	-0.8
	baz=58,SNR=55						

S34M	Telegraph Cree	5.55	224	Pn	Pn	23 10 24.6	0.0
S34M	Telegraph Cree	5.55	224	P	Pn	23 10 24.7	+0.2
	baz=37						
N31M	Braeburn, Yuko	5.67	269	P	Pn	23 10 26.1	-0.1
	baz=79						
O30N	Mendenhall	6.00	263	P	Pn	23 10 30.2	-0.6
	baz=72,SNR=15						
M30M	Minto, Yukon	6.03	280	Pn	Pn	23 10 29.2	-1.9
M30M	Minto, Yukon	6.03	280	P	Pn	23 10 29.9	-1.2
	baz=89,SNR=22						
T35M	Bob Quinn	6.07	215	Pn	Pn	23 10 32.1	+0.5
T35M	Bob Quinn	6.07	215	P	Pn	23 10 32.4	+0.8
	baz=29						
SKAG	Skagway	6.19	250	P	Pn	23 10 32.2	-1.2
	baz=60						
N30M	Aishikik Lake	6.29	270	Pn	Pn	23 10 33.8	-1.0
N30M	Aishikik Lake	6.29	270	P	Pn	23 10 34.0	-0.8
	baz=78						
K29M	Barlow Dome	6.45	292	Pn	Pn	23 10 35.1	-1.9
K29M	Barlow Dome	6.45	292	P	Pn	23 10 35.9	-1.1
	baz=100						
P30M	Million Dollar	6.63	258	Pn	Pn	23 10 38.4	-1.0
P30M				Sg	Sb	23 12 21.7	+5.0
P30M	Million Dollar	6.63	258	P	Pn	23 10 38.7	-0.8
	baz=67						
HYT	Haines Junctio	6.65	265	Pn	Pn	23 10 38.6	-1.1
HYT				Sg	Sb	23 12 23.4	+6.4
HYT	Haines Junctio	6.65	265	P	Pn	23 10 38.8	-0.9
	baz=73,SNR=21						
L29M	L29M	6.65	285	Pn	Pn	23 10 37.9	-1.7
L29M	L29M	6.65	285	P	Pn	23 10 38.1	-1.6
	baz=93,SNR=5.2						
NBC4	NorthernBC 4	6.65	164	Sn	Sn	23 11 51.7	-4.0
PLBC	Pleasant Camp	6.66	252	Pn	Pn	23 10 37.8	-1.8
PLBC	Pleasant Camp	6.66	252	P	Pn	23 10 39.2	-0.5
	baz=61						
YUK5	Granite Creek	6.73	268	Pn	Pn	23 10 40.6	-0.3
YUK5				Sn	Sn	23 11 55.4	-2.5
YUK5				Sg	Sb	23 12 27.4	+7.9
F31M	Tsiigehtchic	6.81	326	P	Pn	23 10 41.1	-0.7
	baz=138						
M29M	Somme Creek	6.81	279	Pn	Pn	23 10 39.2	-2.7
M29M	Somme Creek	6.81	279	P	Pn	23 10 40.4	-1.5
	baz=87						
KUKN	Kugluktuk,NWT	6.84	29	Pn	Pn	23 10 42.4	+0.1
KUKN				Sn	Sn	23 11 58.3	-2.2
J29M	Klondike Camp	6.87	296	Pn	Pn	23 10 42.3	-0.5
J29M	Klondike Camp	6.87	296	P	Pn	23 10 42.3	-0.5
	baz=104						
YUK6	Outpost Mounta	7.01	267	Pn	Pn	23 10 43.3	-1.5
YUK6	Outpost Mounta	7.01	267	P	Pn	23 10 44.4	-0.5
	baz=74,SNR=16						
EPYK	Eagle Plains	7.03	313	Pn	Pn	23 10 44.4	-0.5
EPYK	Eagle Plains	7.03	313	P	Pn	23 10 44.6	-0.3
	baz=122						
YUK7	Dusty Glacier	7.04	263	Pn	Pn	23 10 44.6	-0.5
YUK4	Talbot Arm	7.05	270	Pn	Pn	23 10 43.4	-1.9
YUK4	Talbot Arm	7.05	270	P	Pn	23 10 43.6	-1.7
	baz=78,SNR=21						
G30M	tAoh Zraii Nji	7.21	318	P	Pn	23 10 46.1	-1.3
	baz=128						
DAWY	Dawson	7.30	292	Pn	Pn	23 10 46.3	-2.3
DAWY	Dawson	7.30	292	P	Pn	23 10 47.0	-1.6
	baz=99						
INK	Inuvik	7.42	331	Pn	Pn	23 10 48.9	-1.2
INK	Inuvik	7.42	331	P	Pn	23 10 49.7	-0.4
	baz=143						
H27K	Steamboat Moun	8.72	306	Pn	Pn	23 11 07.8	-0.3
H27K	Steamboat Moun	8.72	306	P	Pn	23 11 08.2	+0.1
	baz=111						
M26K	Nabesna, AK	8.91	280	P	Pn	23 11 10.3	-0.4
	baz=84						
G27K	Doyon Strip	8.99	309	Pn	Pn	23 11 10.9	-0.8
G27K	Doyon Strip	8.99	309	P	Pn	23 11 10.8	-0.9
	baz=114						
G26K	Porcupine Rive	9.82	308	P	Pn	23 11 23.3	+0.2
	baz=111						
F26K	Sheenjek River	10.23	312	P	Pn	23 11 26.9	-1.8
	baz=114						
C27K	Jago River	11.02	322	P	Pn	23 11 39.3	-0.1
	baz=124						

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*NEIC **11** 23:30:57.5±2.7, 52°.9N±0°.3×175°.7W±0°.1, h215^{km}±17^{km}, mb3.7/12, ML3.1(AEIC), Error ellipse: s-maj=47.1km s-min=8.2km az=168.0*

AEIC 11 23:30:57.6±3.6**, 52°.3N**±0°.2×**175°.7W**±0°.2**, h221**^{km}±6^{km}**, Error ellipse: s-maj=36.9km s-min=11.2km az=161.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSTR	Great Sitkin T	0.33	228	Pn	Pn	23 31 28.0	+1.2
GSTR				Sn	S	23 31 50.8	+1.3
ADK	Adak	0.77	236	Pn	Pn	23 31 29.6	+1.4
ADK				Sn	S	23 31 54.3	+2.2
KIWB	Kanaga Island	1.03	244	Pn	Pn	23 31 30.6	+0.8
KIWB				Sn	S	23 31 59.0	+4.2
AMKA	Amchitka	3.27	255	Pn	Pn	23 31 52.4	+1.1
AMKA				Sn	S	23 32 33.5	+0.1
NIKH	Nikolski High	4.19	78	Pn	Pn	23 31 59.9	-2.5
SDPT	Sand Point	9.47	65	Pn	Pn	23 33 04.5	-5.0
OHAK	Old Harbor	13.79	60	Pn	Pn	23 33 59.4	-4.4
SVW2	Sparrevohn	14.05	43	Pn	Pn	23 33 59.4	-7.6
KDAK	Kodiak Island	14.27	58	Pn	Pn	23 34 04.2	-5.6
N19K	Bonanza Creek	14.38	45		Pn	23 34 08.0	-3.2
BRLK	Bradley Lake	15.65	52	P	P	23 34 22.7	-3.3
SKT	Skwentna	16.18	44	P	P	23 34 27.5	-4.2
SUA	Susitna One	16.30	46	P	P	23 34 30.0	-3.3
SUA				IAmb	IAmb	23 34 40.8	
	comp=Z,5.8nm,1.5s						
PPLA	Purkeypile	16.33	40	P	P	23 34 29.4	-4.2
PPLA				IAmb	IAmb	23 34 40.3	
	comp=Z,5.8nm,1.4s						
CAST	Castle Rocks	16.64	39	P	P	23 34 31.1	-5.7
KTH	Kantishna Hill	17.16	39	P	P	23 34 38.7	-3.8
KTH				IAmb	IAmb	23 35 04.4	
	comp=Z,2.7nm,1.1s						
GHO	Glory Hole Cre	17.23	46	P	P	23 34 39.1	-4.2
I21K	Tanana	17.65	34		P	23 34 43.4	-4.4
I21K				IAmb	IAmb	23 35 00.5	
	comp=Z,5.9nm,1.5s						
SCM	Sheep Creek Mo	17.96	47	P	P	23 34 47.3	-4.0
MLY	Manley	18.00	35	P	P	23 34 47.6	-4.0
MLY				IAmb	IAmb	23 35 16.5	
	comp=Z,4.0nm,1.4s						
MDM	Murphy Dome	18.87	37		P	23 34 56.5	-4.6
H24K	Noodor Dome	19.44	35	P	P	23 35 02.5	-4.6
H24K				IAmb	IAmb	23 35 08.7	
	comp=Z,4.3nm,1.4s						
BMAR	Burnt Mountain	21.38	33	P	P	23 35 22.5	-5.1

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*PNSN **11** 23:49:58.9, 48°.59N×123°.05W, h12^{km}, MD2.6, Fault plane solution: NP1:ϕ_s60.00000°, δ20.00000°, λ30.00000°.*

*SEA **11** 23:49:58.9±1.5, 48°.59N±0°.01×123°.05W±0°.01, h12^{km}±4^{km}, ML2.6/12, ML2.3/10(NEIC), Error ellipse: s-maj=1.9km s-min=1.2km az=183.0*

NEIC 11 23:49:58.0±1.4**, 48°.592N**±0°.009×**123°.08W**±0°.02**, h18**^{km}±2^{km}**, Error ellipse: s-maj=2.5km s-min=1.0km az=67.0, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UWFH	University of	0.06	136		Pg	23 50 02.2	+0.9
MCW	Mount Constitu	0.19	62		Pb	23 50 02.4	-0.4
SNB	Saturna Island	0.19	342		Pb	23 50 03.1	+0.2
SNB					Sg	23 50 06.5	+0.3
B011	North Saanich	0.25	283		Pg	23 50 03.8	+0.1
B011					Sg	23 50 07.6	0.0
PGC	Sidney	0.25	283		Pg	23 50 03.9	+0.1
PGC				IAML		23 50 08.0	
	comp=E,378nm,0.2s						
PGC	Sidney	0.25	283		Sg	23 50 07.8	+0.2
PGC	Sidney	0.25	283	IAML		23 50 07.8	
	comp=N,2.4nm,0.7s						
SVOH	Skagit Valley	0.42	135		Pg	23 50 06.4	-0.3
SVOH					Sb	23 50 12.8	-0.2
SQM	Sequim	0.52	178		Pg	23 50 08.4	0.0
BLN	Blyn Mountain	0.59	173		Pg	23 50 09.4	-0.4
BLN					Sb	23 50 17.8	0.0
STW	Striped Peak	0.59	222		Pg	23 50 09.4	-0.4
STW					Sb	23 50 17.8	-0.1
B04A	Port Angeles	0.60	208		Pg	23 50 09.4	-0.6
B04A				IAML		23 50 18.3	
	comp=N,322nm,0.2s						
B04A				IAML		23 50 18.4	
	comp=E,262nm,0.2s						
B04A	Port Angeles	0.60	208		Pg	23 50 09.5	-0.6
B926	Mesachie Lake	0.73	289		Pb	23 50 12.1	-0.1
CLRS	Cowichan Lake	0.73	289	Pg	Pb	23 50 11.5	-0.7
CLRS				IAML		23 50 22.0	
	comp=E,81nm,0.3s						
CLRS				IAML		23 50 22.4	
	comp=N,107nm,0.2s						
VDB	Vedder Mountai	0.78	56		Pb	23 50 12.3	-0.8
B013	Quilcene	0.79	172		Pb	23 50 12.4	-0.8
B013	Quilcene	0.79	172		Pb	23 50 12.2	-0.9
B013					Sb	23 50 23.1	-0.4
JCW	Jim Creek	0.86	117		Pb	23 50 14.3	-0.2
OBC	Olympics--Boni	0.87	230		Pb	23 50 14.3	-0.3
C04A	Brinnon	0.88	175		Pb	23 50 13.8	-0.9
P403	Sandy Floe Qua	0.88	234		Pb	23 50 14.2	-0.7
P403					Sb	23 50 26.2	-0.1
HDW	Hoodsport	0.94	179		Pb	23 50 14.9	-1.0
SHUK	Shuksan-Mt. Ba	0.96	74		Pb	23 50 16.0	-0.4
RPW	Rockport	1.05	97		Pb	23 50 17.4	-0.3
SHB	Sechelt	1.13	333		Pn	23 50 19.1	-0.1
B927	Port Alberni	1.30	299		Pn	23 50 21.6	+0.2
GPW	Glacier Peak	1.38	109		Pb	23 50 23.5	+0.1
TXB	Texada	1.42	322		Pn	23 50 23.4	+0.4
RATT	Rattlesnake La	1.45	143		Pn	23 50 23.7	+0.4
OZB	Mount Ozzard	1.64	284	Pn	Pb	23 50 27.0	-0.7
FMW	Mount Fremont	1.91	150		Pb	23 50 31.4	-1.1
LTY	Liberty	2.10	129		Pn	23 50 33.3	+0.9
LTY				IAML		23 51 08.9	
	comp=E,26nm,4.9s						
LLLB	Lillooet	2.17	21	Pn	Pn	23 50 34.1	+0.8
SAW	Saint Andrews	2.62	109		Pn	23 50 41.4	+1.9

IDC 11 23:58:02.1±1.9**, 3°.51N×124°.15E, h0**^{km}**, mb3.5**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=208.1km s-min=25.4km az=63.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.36	157	P	P	00 03 31.2	+0.1
	0.5nm,0.4s,baz=335,slow=10,SNR=10						
	0.5nm,0.4s						
ASAR	Alice Springs	28.63	161	P	P	00 04 00.5	-0.1
	0.2nm,0.5s,baz=343,slow=7.1,SNR=5.2						
	0.2nm,0.5s						
MKAR	Makanchi Array	56.30	327	P	P	00 07 44.6	-0.1
	0.2nm,0.5s,baz=120,slow=8.2,SNR=7.9						
	0.2nm,0.5s						

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*IDC **12** 00:04:11.7±0.7, 39°.98N×29°.72W, h0^{km}, mb3.7/13, mbtmp3.7/14, ML4.3/1, MS3.6/61, Error ellipse: s-maj=21.4km s-min=13.0km az=172.0*

*SVSA **12** 00:04:14.9±1.3, 40°.03N×29°.76W, h10^{km}, ML3.7(INMG), Error ellipse: s-maj=5.8km s-min=3.0km az=21.0*

*GCMT **12** 00:04:14.0±0.4, 40°.37N±0°.06×29°.69W±0°.04, h20^{km}±1^{km}, MW4.8/72, Moment Tensor Solution. s11,c11; s72,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.69±.15; $M_{\theta\theta}$0.50±.10; $M_{\phi\phi}$1.19±.09; $M_{r\theta}$1.13±.26; $M_{\theta\phi}$-0.15±.06; $M_{\phi r}$0.17±.17; Best double couple: $M_0$1.70400×10^{16} NP1:ϕ_s323.00000°, δ52.00000°, λ-120.00000°. NP2: ϕ_s186.00000°, δ46.00000°, λ-57.00000°. Principal axes: T 1.2260, Plg3.0000°, Azm73.0000°; N 0.9570, Plg23.0000°, Azm342.0000°; P -2.1820, Plg67.0000°, Azm171.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 12 00:04:11.4±1.6**, 39°.81N**±0°.07×**29°.70W**±0°.04**, h4**^{km}±11^{km}**, n87, σ1^{s}.21**/57**, mb3.7**/13**, MS3.6**/60**, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H07N1	FLORES T-PHASE	1.10	264	Pn	Pn	00 04 33.5	-0.1
H07N1				T	T	00 05 47.9	
H07N1	FLORES T-PHASE	1.10	264	*e*P	Pb	00 04 31.8	-1.2
H07N1				*e*S	Sg	00 04 44.1	-2.6
H07N1				A	A	00 04 54.8	
	854nm,0.7s						
H07S1	FLORES T-PHASE	1.24	250	Pn	Pg	00 04 37.4	+2.3
H07S1	FLORES T-PHASE	1.24	250	*e*S	Sb	00 04 49.1	-2.5
H07S1				A	A	00 04 52.9	
	200nm,0.5s						
PCED	Cedros	1.41	146	*e*P	Pg	00 04 38.7	+0.3
PCED				*e*S	Sg	00 04 56.7	0.0
PCED				A	A	00 04 58.0	
	298nm,0.5s						
CALA	Caldeira	1.45	147	*e*P	Pg	00 04 40.1	+0.9
CALA				*e*S	Sg	00 04 58.1	+0.1
CALA				A	A	00 05 02.0	
	477nm,0.5s						
SRBC	Serra Branca	1.50	120	*e*P	Pb	00 04 39.0	-0.8
SRBC				*e*S	Sn	00 04 57.6	-1.5
SRBC				A	A	00 04 59.6	
	995nm,0.3s						
HOR	Horta	1.53	146	*e*P	Pg	00 04 40.9	+0.3
HOR				*e*S	Sb	00 04 59.7	-0.2
HOR				A	A	00 05 01.4	
	593nm,0.3s						
PGRA	Graciosa	1.54	120	*e*P	Pb	00 04 39.9	-0.7
PGRA				*e*S	Sn	00 04 58.6	-1.6
PGRA				A	A	00 05 02.5	
	166nm,0.2s						
ROSA	Rosais	1.57	133	*e*P	Pb	00 04 40.7	-0.3
ROSA				*e*S	Sb	00 05 00.5	-0.7
ROSA				A	A	00 05 03.2	
	120nm,0.4s						
PICO	Pico	1.64	142	*e*P	Pg	00 04 42.5	-0.3
PICO				*e*S	Sb	00 05 02.7	-0.6
PICO				A	A	00 05 05.8	
	665nm,0.6s						
PCAN	Candelaria	1.64	144	*e*P	Pg	00 04 42.6	-0.3
PCAN				*e*S	Sb	00 05 02.8	-0.5
PCAN				A	A	00 05 09.6	
	679nm,0.5s						
PMAN	Manadas	1.72	133	*e*P	Pb	00 04 42.5	-1.0
PMAN				*e*S	Sn	00 05 02.9	-1.5
PMAN				A	A	00 05 05.1	
	147nm,0.7s						
PPNO	Prainha do Nor	1.74	140	*e*P	Pb	00 04 43.6	-0.4
PPNO				*e*S	Sn	00 05 04.2	-0.9
PPNO				A	A	00 05 13.4	
	176nm,0.5s						
PID	Ribeirinha	1.84	137	*e*P	Pb	00 04 45.2	-0.4
PID				*e*S	Sn	00 05 07.1	-0.4
PID				A	A	00 05 08.3	
	136nm,0.6s						
PSBA	Serra de Santa	2.12	119	*e*P	Pn	00 04 47.4	-0.2
PSBA				*e*S	Sn	00 05 12.4	-2.0
PSBA				A	A	00 05 16.5	
	204nm,0.4s						
PAGU	Agualva, Azore	2.21	117	*e*P	Pn	00 04 48.8	-0.1
PAGU				*e*S	Sn	00 05 14.8	-1.9
PAGU				A	A	00 05 16.9	
	112nm,0.3s						
ADH	Angra Heroismo	2.24	120	*e*P	Pn	00 04 48.1	-1.1
ADH				*e*S	Sn	00 05 14.4	-2.8
ADH				A	A	00 05 16.8	
	67nm,0.5s						
PSET	Sete Cidades	3.69	121	*e*P	Pn	00 05 09.8	+0.6
PSET				*e*S	Sn	00 05 51.6	-1.5
PSET				A	A	00 05 57.3	
	36nm,0.5s						
PDA	Ponta Delgada	3.77	122	*e*P	Pn	00 05 10.9	+0.6
CMLA	Cha da Macela	3.85	121	*e*S	Sn	00 05 55.1	-2.0
BART	Pico Bartolome	4.08	118	*e*P	Pn	00 05 15.2	+0.5
PSMA	Santa Maria	4.56	127	*e*P	Pn	00 05 21.9	+0.7
PSMA				*e*S	Sn	00 06 12.6	-2.0
PSMA				A	A	00 06 16.0	
	19nm,0.3s						
PSMN	Pico do Norte,	4.59	126	*e*P	Pn	00 05 22.2	+0.6
PSMN				*e*S	Sn	00 06 13.5	-2.0
PSMN				A	A	00 06 16.7	
	20nm,0.7s						
ESDC	Sonseca Array	19.78	82	P	Pn	00 08 43.8	-0.3
	0.2nm,0.3s,baz=279,slow=8.9,SNR=6.9						
ESDC				LR	LR	00 15 22.3	
	comp=Z,297nm,18.2s,baz=272,slow=34						
	1.5nm,1.0s						
MDT	Midelt	21.35	101	P	P	00 09 00.5	+0.7
	2.4nm,1.0s,baz=258,slow=16,SNR=2.7						
MDT				LR	LR	00 15 22.1	
	comp=Z,162nm,21.7s,baz=305,slow=31						
	2.4nm,1.0s						
EKA	Eskdalemuir Ar	23.50	40	P	P	00 09 21.2	-0.8
	2.0nm,1.0s,baz=251,slow=10,SNR=3.7						
EKA				LR	LR	00 16 14.7	
	comp=Z,184nm,21.8s,baz=236,slow=31						
	2.0nm,1.0s						
BBTS	Babate	27.58	152	LR	LR	00 18 24.4	
	comp=Z,99nm,21.2s,baz=6.0,slow=31						
SCHQ	Schefferville	28.91	314	LR	LR	00 19 44.7	
	comp=Z,111nm,19.3s,baz=82,slow=32						
DAVOX	Davos/Dischmat	29.40	63	LR	LR	00 20 28.6	
	comp=Z,97nm,18.3s,baz=275,slow=33						
KEST	Kesra	30.97	85	LR	LR	00 21 16.3	
	comp=Z,138nm,20.5s,baz=258,slow=33						
GERES	GERESS Array B	31.96	59	LR	LR	00 22 12.4	
	comp=Z,68nm,19.9s,baz=259,slow=34						
NOA	NORSAR Array B	32.83	36	LR	LR	00 22 09.7	
	comp=Z,67nm,19.7s,baz=250,slow=33						
FRB	Frobisher Bay	33.08	329	LR	LR	00 20 13.0	
	comp=Z,112nm,19.7s,baz=77,slow=29						
HFS	Hagfors	33.68	38	LR	LR	00 22 25.6	
	comp=Z,128nm,21.0s,baz=258,slow=33						
VRAC	Vranov	33.85	58	LR	LR	00 22 30.9	
	comp=Z,69nm,20.9s,baz=264,slow=32						
VAE	Valguarnera	34.28	80	LR	LR	00 24 16.2	
	comp=Z,211nm,18.4s,baz=328,slow=35						
SADO	Sadowa	36.45	294	LR	LR	00 25 34.6	
	comp=Z,236nm,18.6s,baz=122,slow=35						
SJG	San Juan	38.15	246	LR	LR	00 23 25.3	
	comp=Z,73nm,20.0s,baz=84,slow=30						
TORD	Torodi Ar. Bea	38.31	125	P	P	00 11 35.4	+2.1
	1.1nm,0.7s,baz=318,slow=5.5,SNR=6.1						
TORD				LR	LR	00 26 52.3	
	comp=Z,85nm,18.7s,baz=323,slow=35						
	1.1nm,0.7s						
DBIC	Dimbokro	39.83	139	P	P	00 11 47.6	+1.6
	2.5nm,0.7s,baz=342,slow=8.3,SNR=3.8						
DBIC				LR	LR	00 25 41.7	
	comp=Z,44nm,19.4s,baz=338,slow=32						
	2.5nm,0.7s						
FINES	FINESS Array B	39.88	38	P	P	00 11 45.9	0.0
	1.3nm,0.8s,baz=266,slow=4.2,SNR=1.8						
FINES				LR	LR	00 26 28.8	
	comp=Z,106nm,20.5s,baz=272,slow=34						
	1.3nm,0.8s						
MDP	Montagnes des	40.27	217	LR	LR	00 24 36.1	
	comp=Z,61nm,20.4s,baz=76,slow=30						
MLR	Muntele Rosu	40.63	63	LR	LR	00 29 08.5	
	comp=Z,66nm,18.5s,baz=260,slow=37						
ARCES	ARCESS Array B	41.28	26	LR	LR	00 25 49.0	
	comp=Z,55nm,21.4s,baz=270,slow=32						
AKASG	Malin Array Be	41.85	55	P	P	00 12 02.0	-0.3
	0.2nm,0.3s,baz=275,slow=7.9,SNR=6.0						
AKASG				LR	LR	00 28 45.7	
	comp=Z,110nm,18.1s,baz=266,slow=35						
	0.2nm,0.3s						
TKL	Tuckaleechee C	42.42	282	LR	LR	00 28 26.5	
	comp=Z,142nm,19.4s,baz=85,slow=34						
IDI	Anoyia	42.96	78	LR	LR	00 30 10.3	
	comp=Z,27nm,20.2s,baz=263,slow=36						
OBN	Obninsk	45.57	47	LR	LR	00 30 36.8	
	comp=Z,14nm,21.8s,baz=183,slow=35						
ULM	Lac du Bonnet	46.47	306	LR	LR	00 31 21.2	
	comp=Z,134nm,18.2s,baz=76,slow=35						
SDV	Santo Domingo	47.70	241	LR	LR	00 29 16.0	
	comp=Z,52nm,21.4s,baz=68,slow=32						
BRTR	Keskin Array B	47.74	69	P	P	00 12 50.5	+0.8
	0.5nm,0.8s,baz=272,slow=4.0,SNR=2.4						
BRTR				LR	LR	00 33 41.3	
	comp=Z,43nm,19.3s,baz=307,slow=37						
	0.5nm,0.8s						
BELG	Belogornoye	52.59	49	LR	LR	00 35 38.0	
	comp=Z,61nm,18.5s,baz=341,slow=36						
KBZ	Khabaz	52.68	60	LR	LR	00 35 45.1	
	comp=Z,35nm,20.3s,baz=8.5,slow=36						
EIL	Elat	53.06	80	LR	LR	00 37 56.8	
	comp=Z,26nm,18.3s,baz=302,slow=38						
ROSC	El Rosal	53.14	241	LR	LR	00 34 02.0	
	comp=Z,117nm,19.9s,baz=80,slow=34						
YKA	Yellowknife Ar	53.38	325	P	P	00 13 31.1	-0.5
	0.6nm,1.0s,baz=67,slow=7.0,SNR=5.1						
YKA				PcP	PcP	00 14 38.8	-0.1
	0.4nm,0.8s,baz=71,slow=4.4,SNR=4.3						
	0.6nm,1.0s						
GNI	Garni	55.40	64	LR	LR	00 36 56.9	
	comp=Z,15nm,21.4s,baz=260,slow=36						
JTS	Las Juntas de	56.95	255	LR	LR	00 34 15.1	
	comp=Z,71nm,21.6s,baz=98,slow=32						
ARU	Arti	57.10	41	LR	LR	00 37 44.4	
	comp=Z,61nm,18.5s,baz=168,slow=35						
PDAR	Pinedale Array	57.90	301	P	P	00 14 04.5	-0.3
	0.9nm,0.9s,baz=68,slow=9.7,SNR=5.5						
PDAR				LR	LR	00 38 57.6	
	comp=Z,139nm,18.3s,baz=82,slow=36						
	0.9nm,0.9s						
INK	Inuvik	58.43	335	P	P	00 14 07.6	-0.1
	0.3nm,0.4s,baz=125,slow=18,SNR=1.2						
	0.3nm,0.4s						
ANMO	Albuquerque	59.43	292	LR	LR	00 38 57.8	
	comp=Z,71nm,20.2s,baz=159,slow=35						
NEW	Newport	60.16	310	LR	LR	00 38 24.5	
	comp=Z,125nm,21.8s,baz=58,slow=34						
TXAR	Lajitas Array	60.22	285	P	P	00 14 22.5	+1.6
	2.7nm,0.8s,baz=71,slow=7.9,SNR=18						
TXAR				LR	LR	00 40 57.4	
	comp=Z,73nm,18.9s,baz=54,slow=37						
	2.7nm,0.8s						
CMIG	Matias Romero	60.30	268	LR	LR	00 37 36.6	
	comp=Z,88nm,20.9s,baz=40,slow=33						
ELK	Elko	62.60	301	LR	LR	00 42 26.2	
	comp=Z,109nm,18.2s,baz=58,slow=37						
ATAH	Atahualpa	64.79	235	LR	LR	00 40 27.9	
	comp=Z,47nm,21.4s,baz=26,slow=34						
ILAR	Eielson Array	64.83	335	LR	LR	00 41 22.6	
	comp=Z,39nm,18.2s,baz=36,slow=34						
GEYT	Alibeck	65.58	60	LR	LR	00 43 36.0	
	comp=Z,17nm,21.3s,baz=176,slow=36						
NVAR	Mina Array Bea	65.83	301	LR	LR	00 43 31.4	
	comp=Z,116nm,19.5s,baz=11,slow=36						
LPAZ	La Paz	66.31	221	LR	LR	00 42 48.6	
	comp=Z,28nm,18.1s,baz=36,slow=35						
YBH	Yreka Blue Hor	66.88	306	LR	LR	00 43 30.8	
	comp=Z,68nm,18.7s,baz=77,slow=35						
PFO	Pinyon Flats O	67.19	295	LR	LR	00 44 24.9	
	comp=Z,81nm,18.2s,baz=62,slow=36						
NNA	Nana	67.60	231	LR	LR	00 42 50.4	
	comp=Z,38nm,20.9s,baz=18,slow=34						
LPIG	La Paz	68.05	284	LR	LR	00 43 01.2	
	comp=Z,68nm,21.6s,baz=3.5,slow=34						
MBAR	Mbarara	68.08	110	LR	LR	00 44 02.8	
	comp=Z,43nm,19.1s,baz=275,slow=35						
ZALV	Zalesovo Beam	71.01	35	LR	LR	00 46 04.5	
	comp=Z,28nm,20.2s,baz=326,slow=36						
KDAK	Kodiak Island	71.67	332	LR	LR	00 46 31.8	
	comp=Z,42nm,18.1s,baz=73,slow=36						
AAK	Ala-Archa	73.09	48	LR	LR	00 49 31.9	
	comp=Z,42nm,18.9s,baz=343,slow=37						
MKAR	Makanchi Array	74.63	41	P	P	00 15 51.4	-0.4
	0.7nm,0.9s,baz=336,slow=5.6,SNR=4.1						
MKAR				LR	LR	00 48 30.3	
	comp=Z,72nm,19.9s,baz=260,slow=36						
	0.7nm,0.9s						
LSZ	Lusaka	76.81	123	LR	LR	00 49 48.9	
	comp=Z,101nm,18.3s,baz=300,slow=36						
LBTB	Lobatse	82.55	131	LR	LR	00 52 15.8	
	comp=Z,36nm,19.9s,baz=48,slow=35						
SONM	Songino Array	84.42	28	P	P	00 16 45.4	+0.3
	0.6nm,0.9s,baz=315,slow=4.3,SNR=5.2						
SONM				LR	LR	00 56 06.3	
	comp=Z,28nm,18.4s,baz=344,slow=37						
	0.6nm,0.9s						
BOSA	Boshof	85.12	134	LR	LR	00 53 14.5	
	comp=Z,41nm,19.1s,baz=296,slow=34						
SUR	Sutherland	85.72	139	LR	LR	00 51 25.4	
	comp=Z,29nm,21.2s,baz=207,slow=33						
ASAJ	Asahikawa	96.17	6	LR	LR	00 58 31.0	
	comp=Z,12nm,21.3s,baz=165,slow=34						

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*IDC **12** 00:12:21.9±1.3, 24°.30N×122°.56E, h0^{km}, mb3.5/5, mbtmp3.6/6, ML3.5/1, MS2.5/1, Error ellipse: s-maj=45.8km s-min=23.2km az=85.0*

*JMA **12** 00:12:29.8±0.1, 24°N±2°×122°.8E±0°.5, h63^{km}±1^{km},*

MV3.5/14, NW OFF ISHIGAKIJIMA IS
*TAP **12** 00:12:30.6, 24.°15N×122.°80E, h42^{km}, ML3.9, C*
ISC 12 00:12:29.1±0.8, **24.°10N**±0.°03×**122.°86E**±0.°02, **h52**^{km}±7^{km},
n150, σ**1.s45**/253, **mb3.5**/5, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.36	13	*i* P	Pn	00 12 39.9	+0.8
JYNG				S	Sn	00 12 47.0	+0.9
YOJ	Yonaguni jima	0.39	21	P	Pn	00 12 40.1	+0.8
YOJ	Yonaguni jima	0.39	21	P	Pn	00 12 40.1	+0.8
YOJ				S	Sn	00 12 47.3	+0.7
YOJ	Yonaguni jima	0.39	21	P	Pn	00 12 40.0	+0.8
	baz=31						
YOJ				S	Sn	00 12 46.9	+0.3
	baz=31						
IRIF	Iriomote-Funau	0.83	73	P	Pn	00 12 45.6	+1.0
IRIF				S	Sn	00 12 57.7	+1.7
HATJ	Hateruma jima	0.87	93	P	Pn	00 12 46.9	+1.8
HATJ				S	Sn	00 12 59.1	+2.2
EWUT	Wuta	1.04	290	P	Pn	00 12 48.2	+0.7
	baz=287						
EWUT				*e*S	Sn	00 13 01.8	+0.7
	baz=287						
TWC	Suao	1.05	299	P	Pn	00 12 48.4	+0.8
	baz=288						
TWC				S	Sn	00 13 01.3	0.0
	baz=288						
JKRS	Kuro-shima	1.06	82	P	Pn	00 12 49.2	+1.5
JKRS				S	Sn	00 13 02.9	+1.4
ENA	Nanau	1.07	288	*i* P	Pn	00 12 48.7	+0.8
	baz=286						
ENA				S	Sn	00 13 01.8	+0.1
	baz=286						
EGS		1.12	312	P	Pn	00 12 49.5	+0.9
	baz=320						
EGS				S	Sn	00 13 03.2	+0.2
	baz=320						
ETL	Fush Village	1.13	273	P	Pn	00 12 49.5	+0.8
	baz=257						
ETL				*e*S	Sn	00 13 03.1	-0.1
	baz=257						
HWA	Hwalien	1.15	264	*e*P	Pn	00 12 49.8	+0.8
	baz=261						
HWA				*e*S	Sn	00 13 04.3	+0.6
	baz=261						
TWD	Chiawan	1.15	269	P	Pn	00 12 49.4	+0.5
	baz=266						
TWD				*e*S	Sn	00 13 04.1	+0.4
	baz=266						
NACB	Ninganchiao	1.16	274	P	Pn	00 12 49.6	+0.6
NACB	Ninganchiao	1.16	274	P	Pn	00 12 49.8	+0.8
	baz=258						
NACB				S	Sn	00 13 04.0	+0.2
	baz=258						
NDS	Dongshan	1.17	297	*e*P	Pn	00 12 50.5	+1.3
	baz=296						
NDS				*e*S	Sn	00 13 04.5	+0.4
	baz=296						
JIJ	Ishigaki jima	1.20	77	P	Pn	00 12 50.5	+0.9
JIJ				S	Sn	00 13 05.4	+0.5
TWB1	Santiao Chiao	1.20	319	P	Pn	00 12 50.3	+0.7
	baz=331						
TWB1				*e*S	Sn	00 13 04.5	-0.4
	baz=331						
ILA	Ilan	1.21	304	*e*P	Pn	00 12 50.4	+0.7
	baz=312						
ILA				*e*S	Sn	00 13 05.4	+0.4
	baz=312						
TWE	Neicheng	1.25	300	P	Pn	00 12 51.9	+1.6
	baz=307						
TWE				*e*S	Sn	00 13 06.6	+0.5
	baz=307						
ETLH	Xiulin Townshi	1.26	275	P	Pn	00 12 51.3	+0.8
	baz=273						
ETLH				*e*S	Sn	00 13 06.3	-0.1
	baz=273						
TIPB	Shuangxi	1.28	313	P	Pn	00 12 51.7	+1.0
	baz=312						
TIPB				S	Sn	00 13 06.7	-0.1
	baz=312						
LATG	Datong	1.29	290	P	Pn	00 12 52.2	+1.3
	baz=275						
LATG				S	Sn	00 13 07.4	+0.2
	baz=275						
ENTT	Nioudou	1.29	295	P	Pn	00 12 52.5	+1.6
	baz=281						
ENTT				*e*S	Sn	00 13 07.8	+0.7
	baz=281						
FUSB	Fushanzhiwuyua	1.33	300	P	Pn	00 12 52.8	+1.4
	baz=311						
FUSB				*e*S	Sn	00 13 08.6	+0.5
	baz=311						
ESL	Shilin	1.33	258	P	Pn	00 12 51.7	+0.3
	baz=255						
ESL				*e*S	Sn	00 13 07.3	-0.8
	baz=255						
SXI1	Grass Mountain	1.33	318	P	Pn	00 12 52.4	+0.9
	baz=328						
SXI1				S	Sn	00 13 08.5	+0.3
	baz=328						
EGFH	Guangfu	1.38	252	*e*P	Pn	00 12 52.5	+0.6
	baz=249						
EGFH				*e*S	Sn	00 13 09.8	+0.7
	baz=249						
NWF	Wu-fen Shan	1.38	315	*e*P	Pn	00 12 53.2	+1.1
	baz=314						
NWF				*e*S	Sn	00 13 09.4	+0.2
	baz=314						
NNSB	Datong	1.39	284	P	Pn	00 12 53.4	+1.2
	baz=282						
NNSB				*e*S	Sn	00 13 09.8	+0.3
	baz=282						
NNS	Nan Shan	1.40	284	P	Pn	00 12 53.5	+1.1
	baz=282						
NNS				*e*S	Sn	00 13 09.9	+0.1
	baz=282						
NWLT	Wulai	1.41	299	P	Pn	00 12 54.5	+2.1
	baz=309						
NWLT				*e*S	Sn	00 13 11.4	+1.5
	baz=309						
JISG	Ishigakijimahi	1.41	70	*i* P	Pn	00 12 53.2	+0.7
JISG				*e*S	Sn	00 13 10.5	+0.5
HGSD	Ruisui	1.45	246	P	Pn	00 12 53.3	+0.4
	baz=242						
HGSD				*e*S	Sn	00 13 10.4	-0.4
	baz=242						
TWA	Mucha	1.46	307	*e*P	Pn	00 12 54.3	+1.2
	baz=306						
TWA				*e*S	Sn	00 13 11.5	+0.5
	baz=306						
WHF	Hehuan Shan	1.46	272	P	Pn	00 12 54.2	+0.8
	baz=269						
WHF				*e*S	Sn	00 13 11.3	-0.4
	baz=269						
YHNB	Yeheng	1.47	293	P	Pn	00 12 54.9	+1.6
YHNB	Yeheng	1.47	293	P	Pn	00 12 55.0	+1.6
	baz=278						
YHNB				S	Sn	00 13 11.9	+0.5
	baz=278						
NSK	Sanguang	1.48	293	P	Pn	00 12 55.1	+1.6
	baz=278						
NSK				S	Sn	00 13 12.2	+0.4
	baz=278						
NHDH	Xindian Distri	1.49	306	P	Pn	00 12 54.9	+1.4
	baz=317						
NHDH				S	Sn	00 13 12.5	+0.6
	baz=317						
TATO	Taipei	1.52	305	P	Pn	00 12 55.2	+1.2
EHY	Hungye	1.52	248	P	Pn	00 12 54.7	+0.7
	baz=258						
EHY				S	Sn	00 13 12.8	+0.1
	baz=258						
CHGB	Renai	1.54	269	P	Pn	00 12 55.6	+1.2
	baz=266						
CHGB				*e*S	Sn	00 13 13.7	+0.3
	baz=266						
TWT	Tachien	1.54	276	*e*P	Pn	00 12 55.9	+1.5
	baz=262						
TWT				*e*S	Sn	00 13 14.2	+0.7
	baz=262						
OWD	Renai	1.54	265	P	Pn	00 12 55.2	+0.8
	baz=262						
OWD				*e*S	Sn	00 13 14.1	+0.7
	baz=262						
TDCB	Techi	1.56	276	*e*P	Pn	00 12 56.1	+1.5
	baz=262						
TDCB				*e*S	Sn	00 13 13.4	-0.4
	baz=262						
YM01	YM01	1.57	312	*e*P	Pn	00 12 55.6	+1.0
	baz=311						
YM01				*e*S	Sn	00 13 14.4	+0.6
	baz=311						
YULB	Yu-li	1.59	244	P	Pn	00 12 55.8	+0.8
YULB	Yu-li	1.59	244	P	Pn	00 12 55.7	+0.8
	baz=232						
YULB				S	Sn	00 13 14.8	+0.4
	baz=232						
WUSB	Renai	1.59	267	P	Pn	00 12 56.5	+1.4
	baz=264						
WUSB				*e*S	Sn	00 13 15.0	+0.4
	baz=264						
EYUL	Yuli	1.59	242	*e*P	Pn	00 12 55.8	+0.8
	baz=239						
EYUL				*e*S	Sn	00 13 14.9	+0.4
	baz=239						
VWDT	VWDT	1.61	258	P	Pn	00 12 56.6	+1.5
	baz=255						
VWDT				S	Sn	00 13 14.8	0.0
	baz=255						
TWY	Chenhua	1.64	316	*e*S	Sn	00 13 16.3	+0.8
	baz=316						
TWS1	Kuangyinshan	1.65	308	P	Pn	00 12 57.0	+1.3
	baz=307						
TWS1				*e*S	Sn	00 13 16.2	+0.5
	baz=307						
NTST	Danshui	1.66	310	*e*P	Pn	00 12 57.9	+2.0
	baz=309						
NTST				*e*S	Sn	00 13 17.2	+1.0
	baz=309						
NFF	Wufeng Townshi	1.67	289	P	Pn	00 12 57.7	+1.6
	baz=287						
NFF				*e*S	Sn	00 13 17.5	+1.0
	baz=287						
FULB	Fuli	1.69	238	*e*P	Pn	00 12 56.6	+0.4
	baz=226						
FULB				*e*S	Sn	00 13 16.6	-0.2
	baz=226						
CHKT	Chengkung	1.69	234	*e*P	Pn	00 12 56.5	+0.2
	baz=221						
CHKT				*e*S	Sn	00 13 15.7	-1.1
	baz=221						
NCU	National Centr	1.75	300	*e*S	Sn	00 13 20.2	+1.9
	baz=298						
NCUH	Zhongli	1.75	300	*e*S	Sn	00 13 20.2	+1.9
	baz=298						
WHP	Taichung City	1.75	276	*e*P	Pn	00 12 59.4	+2.2
	baz=263						
WHP				*e*S	Sn	00 13 19.0	+0.5
	baz=263						
LIOB	Emei	1.77	288	P	Pn	00 12 59.5	+2.2
	baz=286						
LIOB				*e*S	Sn	00 13 20.6	+1.9
	baz=286						
JTJ	Tarama	1.77	72	P	Pn	00 12 58.4	+1.1
JTJ				S	Sn	00 13 20.1	+1.4
SSLB	Suanglung	1.77	260	P	Pn	00 12 58.9	+1.5
SSLB	Suanglung	1.77	260	P	Pn	00 12 58.8	+1.4
	baz=258						
SSLB				*e*S	Sn	00 13 19.6	+0.9
	baz=258						
NSTT	Nanjuang	1.77	288	*e*P	Pn	00 12 59.6	+2.2
	baz=286						
NSTT				*e*S	Sn	00 13 20.9	+2.0
	baz=286						
WCS	Beigang Elemen	1.78	269	*e*P	Pn	00 12 59.4	+2.0
	baz=267						
WCS				*e*S	Sn	00 13 19.8	+0.9
	baz=267						
EHD	Haiduan	1.79	238	P	Pn	00 12 58.0	+0.4
	baz=227						
EHD				S	Sn	00 13 18.3	-0.9
	baz=227						
SMLT	Sun Moon Lake	1.80	264	*e*P	Pn	00 12 59.5	+1.6
	baz=261						
SMLT				*e*S	Sn	00 13 20.1	+0.3
	baz=261						
EDH	Donghe	1.81	232	*e*P	Pn	00 12 58.1	+0.2
	baz=222						
EDH				*e*S	Sn	00 13 18.1	-1.7
	baz=222						
TYC	Yuchr	1.84	264	*e*P	Pn	00 12 59.6	+1.3
	baz=262						
TYC				*e*S	Sn	00 13 20.8	+0.4
	baz=262						
SBCB	Hsinchu	1.84	292	*e*P	Pn	00 12 59.9	+1.6
	baz=290						
SBCB				*e*S	Sn	00 13 22.7	+2.2
	baz=290						
LDUT	Ludao	1.91	222	*e*P	Pn	00 12 59.0	-0.2
	baz=219						
LDUT				*e*S	Sn	00 13 20.2	-1.9
	baz=219						
ELDTW	Lidau	1.92	242	P	Pn	00 12 60.0	+0.5
	baz=239						
ELDTW				S	Sn	00 13 20.7	-1.7
	baz=239						
TWQ1	Liyutan	1.92	278	*e*P	Pn	00 13 01.2	+1.8
	baz=275						
TWQ1				*e*S	Sn	00 13 23.6	+1.1
	baz=275						
NMLH	Miaoli	1.94	283	*e*P	Pn	00 13 01.9	+2.2
	baz=281						
NMLH				*e*S	Sn	00 13 24.4	+1.6
	baz=281						
NSY	Sanyi	1.94	280	*e*P	Pn	00 13 00.9	+1.2
	baz=277						
NSY				*e*S	Sn	00 13 23.4	+0.5
	baz=277						
WJS	Zhushan	1.97	262	*e*P	Pn	00 13 02.8	+2.8
	baz=260						
WJS				*e*S	Sn	00 13 27.3	+3.7
	baz=260						
ALS	Alishan	1.97	253	P	Pn	00 13 02.4	+2.0
	baz=250						
ALS				*e*S	Sn	00 13 25.5	+1.5
	baz=250						
LONT	Longtian	1.98	234	*e*P	Pn	00 13 01.0	+0.8
	baz=225						
LONT				*e*S	Sn	00 13 23.3	-0.6
	baz=225						
TCU	Taichung	1.99	272	*e*P	Pn	00 13 03.3	+2.9
	baz=270						
TCU				*e*S	Sn	00 13 25.6	+1.4
	baz=270						
WNT	Mingjian	2.00	264	*e*P	Pn	00 13 02.6	+2.1
	baz=262						
WNT				*e*S	Sn	00 13 25.5	+1.1
	baz=262						
WDJ	Dajia District	2.04	277	*e*P	Pn	00 13 02.8	+1.8
	baz=275						
WDJ				*e*S	Sn	00 13 26.0	+0.6
	baz=275						
CHN5	Tsauling	2.06	256	*e*P	Pn	00 13 04.1	+2.8
	baz=254						
CHN5				*e*S	Sn	00 13 27.5	+1.6
	baz=254						
TTN	Taitung	2.06	230	*e*S	Sn	00 13 27.3	+1.4
	baz=219						
TWGBT	Beinan	2.07	232	P	Pn	00 13 02.5	+1.0
TWGBT	Beinan	2.07	232	*e*P	Pn	00 13 02.0	+0.5
	baz=241						
TWGBT				*e*S	Sn	00 13 25.6	-0.5
	baz=241						
TWG	Pinlang	2.08	233	*e*P	Pn	00 13 02.0	+0.4
	baz=241						
TWG				*e*S	Sn	00 13 26.0	-0.3
	baz=241						
WCHH	Zhanghua	2.10	270	*e*P	Pn	00 13 04.0	+2.1
	baz=268						
WCHH				*e*S	Sn	00 13 29.1	+2.3
	baz=268						
STYH	Taoyuan	2.12	245	P	Pn	00 13 04.0	+1.8
	baz=235						
STYH				S	Sn	00 13 28.9	+1.5
	baz=235						
WDLH	Douliu	2.16	260	P	Pn	00 13 05.3	+2.6
	baz=257						
WDLH				*e*S	Sn	00 13 31.5	+3.2
	baz=257						
WCKO	Fanlu	2.17	253	P	Pn	00 13 06.0	+3.2
	baz=250						
WCKO				*e*S	Sn	00 13 31.0	+2.6
	baz=250						
TPUB	Ta-pu	2.19	249	P	Pn	00 13 05.9	+2.7
TPUB	Ta-pu	2.19	249	*i* P	Pn	00 13 05.9	+2.7
	baz=247						
TPUB				S	Sn	00 13 31.5	+2.4
	baz=247						
WTP	Ta-pu	2.23	248	*i* P	Pn	00 13 06.3	+2.7
	baz=245						
WTP				*i* S	Sn	00 13 32.3	+2.4
	baz=245						
JIRB	Irabujima	2.23	71	P	Pn	00 13 04.9	+1.3
JIRB				*e*S	Sn	00 13 31.3	+1.3
CHN2	Minshiung	2.25	256	*e*P	Pn	00 13 06.4	+2.5
	baz=254						
CHN2				*e*S	Sn	00 13 33.4	+2.9
	baz=254						
WRL	Guolierlin Hig	2.28	266	*e*P	Pn	00 13 06.7	+2.4
	baz=263						
WRL				*e*S	Sn	00 13 32.4	+1.2
	baz=263						
WTK	Tuku	2.30	260	*e*P	Pn	00 13 06.4	+1.9
	baz=258						
WTK				*e*S	Sn	00 13 34.3	+2.7
	baz=258						
ECL	Taimali	2.30	230	*e*P	Pn	00 13 05.8	+1.2
	baz=237						
ECL				*e*S	Sn	00 13 31.9	+0.1
	baz=237						
CHY	Chiayi	2.31	255	*e*P	Pn	00 13 06.5	+1.9
	baz=253						
CHY				*e*S	Sn	00 13 33.0	+1.0
	baz=253						
SGST	Jiashian	2.32	245	P	Pn	00 13 07.1	+2.2
	baz=234						
SGST				S	Sn	00 13 35.1	+2.8
	baz=234						
CHN1	Nanshi	2.32	247	*i* P	Pn	00 13 07.9	+3.0
	baz=245						
CHN1				*i* S	Sn	00 13 35.5	+3.2
	baz=245						
TWK	Hsinying	2.32	250	P	Pn	00 13 07.8	+2.8
	baz=247						
TWK				S	Sn	00 13 35.8	+3.4
	baz=247						
JIKM	Ikemajima	2.33	69	P	Pn	00 13 06.3	+1.3
JIKM				*e*S	Sn	00 13 34.0	+1.6
JMJ	Miyako jima 2	2.33	72	P	Pn	00 13 06.1	+1.1
JMJ2	Miyako jima3	2.34	74	P	Pn	00 13 07.0	+1.8
JMJ2				*e*S	Sn	00 13 34.8	+2.1
LAY	Lan-yu	2.38	211	*e*P	Pn	00 13 05.5	-0.2
	baz=208						
LAY				*e*S	Sn	00 13 32.0	-1.7
	baz=208						
LYUB	Lan-yu	2.39	210	*e*P	Pn	00 13 06.7	+0.8
	baz=207						
LYUB				*e*S	Sn	00 13 33.8	-0.2
	baz=207						
WSF	Szhu	2.46	260	*e*P	Pn	00 13 09.2	+2.5
	baz=257						
WSF				*e*S	Sn	00 13 38.1	+2.6
	baz=257						
TSMG	Majia	2.46	236	*e*P	Pn	00 13 09.0	+2.2
	baz=228						
ICHU	Yijhu	2.47	253	*e*P	Pn	00 13 09.1	+2.1
	baz=251						
ICHU				*e*S	Sn	00 13 37.2	+1.2
	baz=251						
WSL	Shuilin Townsh	2.48	257	*e*P	Pn	00 13 09.8	+2.8
	baz=255						
WSL				*e*S	Sn	00 13 39.3	+3.3
	baz=255						
SCST	Cishan	2.48	241	*e*P	Pn	00 13 10.8	+3.7
	baz=229						
SCST				*e*S	Sn	00 13 39.9	+3.7
	baz=229						
EAST	Anshuo	2.52	228	*e*P	Pn	00 13 08.5	+0.9
	baz=233						
EAST				*e*S	Sn	00 13 36.8	-0.3
	baz=233						
TAWH	Dawu Township	2.52	226	*e*P	Pn	00 13 08.1	+0.5
	baz=231						
TAWH				*e*S	Sn	00 13 36.1	-1.0
	baz=231						
MASBT	Mashibuluo	2.52	235	*e*P	Pn	00 13 09.2	+1.5
	baz=224						
MASBT				*e*S	Sn	00 13 39.0	+1.8
	baz=224						
CHN8	Yiju	2.54	253	*e*P	Pn	00 13 10.3	+2.4
	baz=251						
CHN8				*e*S	Sn	00 13 38.7	+1.2
	baz=251						
TWM1	Shoushan	2.57	241	*e*P	Pn	00 13 12.7	+4.4
	baz=229						
TWM1				*e*S	Sn	00 13 43.6	+5.1
	baz=229						
SCZT	Fangliau	2.68	231	*e*P	Pn	00 13 11.7	+1.9
	baz=223						
SCZT				*e*S	Sn	00 13 42.6	+1.5
	baz=223						
TSCK	Chigu Township	2.71	250	*e*P	Pn	00 13 13.1	+2.8
	baz=248						
TSCK				*e*S	Sn	00 13 45.0	+3.2
	baz=248						
SMST	Manzhou Townsh	2.78	222	*e*P	Pn	00 13 12.4	+1.2
	baz=220						
SMST				*e*S	Sn	00 13 43.3	-0.2
	baz=220						
TSEB	Hengchuen, Pin	2.83	220	*e*S	Sn	00 13 46.3	+1.5
	baz=225						
HEN	Hengchun	2.85	224	*e*P	Pn	00 13 14.5	+2.3
	baz=221						
HEN				*e*S	Sn	00 13 46.6	+1.2
	baz=221						
TWKBT	Hengchun	2.86	222	*e*P	Pn	00 13 14.9	+2.6
	baz=219						
TWKBT				*e*S	Sn	00 13 47.2	+1.8
	baz=219						
TWK1	Hengchun	2.86	222	*e*P	Pn	00 13 14.9	+2.6
	baz=219						
TWK1				*e*S	Sn	00 13 46.8	+1.4
	baz=219						
WDGT	Dungji	3.05	255	*e*P	Pn	00 13 16.9	+2.1
	baz=252						
WDGT				*e*S	Sn	00 13 51.2	+1.1
	baz=252						
PHUB	P'eng-hu	3.06	260	*e*P	Pn	00 13 17.2	+2.1
	baz=271						
PHUB				*e*S	Sn	00 13 50.7	+0.2
	baz=271						
PNG	Penghu	3.07	261	*e*P	Pn	00 13 16.7	+1.5
	baz=258						
PNG				*e*S	Sn	00 13 51.3	+0.6
	baz=258						
VWUC	VWUC	3.23	287	*e*P	Pn	00 13 19.4	+2.1
	baz=284						
VWUC				*e*S	Sn	00 13 55.0	+0.5
	baz=284						
VCHM	Qimei	3.27	255	*e*P	Pn	00 13 19.3	+1.5
	baz=253						
VCHM				*e*S	Sn	00 13 55.7	+0.3
	baz=253						
MATB	Ma-tsu	3.34	308	*e*P	Pn	00 13 19.7	+0.9
	baz=306						
MATB				*e*S	Sn	00 13 56.3	-0.9
	baz=306						
XPSS	Dashiqiu	3.71	320	*e*P	Pn	00 13 26.4	+2.5
	baz=319						
XPSS				*e*S	Sn	00 14 07.9	+1.6
	baz=319						
LYJJ	Jianjiangzhen	3.72	312	*e*S	Sn	00 14 06.5	-0.1
	baz=309						
MHZQ	Yeshan	4.00	301	*e*P	Pn	00 13 30.3	+2.4
	baz=297						
MHZQ				*e*S	Sn	00 14 14.3	+0.8
	baz=297						
KNM	Kinmen	4.05	275	*e*P	Pn	00 13 31.6	+3.0
	baz=264						
KNM				*e*S	Sn	00 14 16.2	+1.5
	baz=264						
KNMB	Chin-men Tao	4.09	276	*e*P	Pn	00 13 31.0	+1.8
	baz=264						
KNMB				*e*S	Sn	00 14 16.1	+0.3
	baz=264						
AXDP	Jialang	4.52	281	*e*P	Pn	00 13 36.3	+1.3
	baz=278						
AXDP				*e*S	Sn	00 14 26.2	-0.2
	baz=278						
ZPLA	Ao Xicun	4.67	269	*e*P	Pn	00 13 38.0	+0.9
	baz=267						
ZPLA				*e*S	Sn	00 14 28.9	-1.2
	baz=267						

SXFK	Yanhouchang	5.25	297	*e*P	Pn	00 13 46.5	+1.4
	baz=292						
SXFK				*e*S	Sn	00 14 43.7	-0.5
	baz=292						
JOW	Kunigami	5.60	60	Pn	Pn	00 13 49.2	-0.7
	2.9nm,0.3s,baz=126,slow=22,SNR=20						
JOW				Sn	Sn	00 14 50.3	-2.7
	3.3nm,0.3s,baz=123,slow=25,SNR=2.7						
	7.3nm,0.3s						
JOW	Kunigami	5.60	60	P	Pn	00 13 49.5	-0.4
KSRS	Korea Array	14.00	17	Pn	P	00 15 48.6	-2.5
	0.1nm,0.3s,baz=197,slow=12,SNR=9.9						
JHJ	Hachijo jima 2	17.35	55	LR	LR	00 21 10.8	
	comp=Z,16nm,21.9s,baz=280,slow=30						
KLR	Kul'dur	26.04	13	P	P	00 17 55.0	-2.3
	1.3nm,0.7s,baz=221,slow=6.9,SNR=5.9						
	1.3nm,0.7s						
SONM	Songino Array	27.06	335	P	P	00 18 04.0	-2.8
	0.6nm,0.7s,baz=144,slow=9.5,SNR=4.9						
	0.6nm,0.7s						
WRA	Warramunga Arr	45.18	165	P	P	00 20 41.8	+0.8
	0.9nm,1.2s,baz=345,slow=8.7,SNR=1.2						
	0.9nm,1.2s						
ASAR	Alice Springs	48.68	166	P	P	00 21 11.0	+2.7
	0.1nm,0.5s,baz=348,slow=5.8,SNR=1.2						
	0.1nm,0.5s						
YKA	Yellowknife Ar	82.45	23	P	P	00 24 45.5	-0.1
	0.4nm,0.7s,baz=313,slow=4.9,SNR=8.4						
	0.4nm,0.7s						

*IDC **12** 00:39:50.9±2.6, 13°.50N×90°.01W, h0^{km}, mb3.5/8, mbtmp3.6/8, MS2.8/1, Error ellipse: s-maj=64.8km s-min=37.7km az=16.0*
*SNET **12** 00:39:59.3±1.1, 13°.37N×90°.55W, h22^{km}, ML4.0, ML4.0*
*GCG **12** 00:40:00.9±0.3, 13°.56N×90°.72W, h3^{km}±14^{km}, MD3.7*
*INET **12** 00:40:01.3±1.1, 13°.66N×90°.30W, h15^{km}±7^{km}, MW2.9*
ISC 12 00:39:56.4±1.1, **13°.25N**±0°.08×**90°.63W**±0°.06, **h20**^{km}±5^{km}, **n51**, σ**1^{s}.14**/57, **mb3.5**/7, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUBE	Las Nubes	1.06	52	*e*P	Pb	00 40 15.7	-0.4
NUBE				*e*S	Sb	00 40 28.6	-1.0
LOAL	Lomas de Alarc	1.12	48	*e*P	Pb	00 40 17.3	+0.2
LOAL				*e*S	Sn	00 40 31.8	0.0
SLOZ	Alcaldia de Sa	1.13	47	*e*P	Pb	00 40 17.3	-0.1
SLOZ				*e*S	Sn	00 40 31.6	-0.6
CEVE	Cerro Verde	1.14	59	*e*P	Pb	00 40 18.0	+0.4
CEVE				IAML		00 40 36.7	
	comp=Z,4µm,0.2s						
PCG	Pacaya	1.14	1	*e*P	Pb	00 40 17.8	+0.2
SBLS	San Blas	1.15	59	*e*P	Pb	00 40 17.9	+0.2
RTR	El Retiro	1.16	56	*e*P	Pb	00 40 18.2	+0.3
RTR				*e*S	Sn	00 40 33.0	0.0
FUG	Fuego 3	1.21	350	*e*P	Pn	00 40 18.5	+0.1
JAYA	Jayaque - finc	1.22	70	*e*P	Pn	00 40 18.9	+0.4
JAYA				IAML		00 40 36.0	
	comp=Z,3µm,0.3s						
UNIC	Universidad Ca	1.28	55	*e*P	Pn	00 40 19.7	+0.4
CEDA	San Andres	1.33	65	*e*P	Pn	00 40 20.8	+1.0
NBG	Las Nubes	1.36	12	*e*P	Pb	00 40 22.1	+0.7
NBG				*e*S	Sb	00 40 38.6	+0.1
PMON	Piamonte	1.36	70	*e*P	Pn	00 40 21.2	+0.8
SULM	Suchitepequez,	1.39	319	*e*P	Pn	00 40 21.5	+0.8
BOQS	Boqueron	1.40	70	*e*P	Pn	00 40 22.2	+1.2
BOQS				*e*S	Sb	00 40 40.5	+0.8
SNET	Serv Nac Est T	1.43	72	*e*P	Pn	00 40 22.4	+1.1
SNET				*e*S	Sb	00 40 40.9	+0.6
SNET				IAML		00 40 45.8	
	comp=Z,2µm,0.3s						
UEES	Universidad Ev	1.44	71	*e*P	Pn	00 40 22.4	+1.0
SEMO	Seminario San	1.45	71	*e*P	Pn	00 40 22.7	+1.3
LFU	La Fuente	1.56	71	*e*P	Pn	00 40 24.4	+1.4
LFRS	El Faro	1.57	76	*e*P	Pn	00 40 24.9	+1.6
LFRS				*e*S	Sb	00 40 44.0	-0.4
SJTE	Alcalda de S	1.62	77	*e*P	Pn	00 40 25.4	+1.5
MTO3	Montecristo	1.69	47	*e*P	Pn	00 40 25.5	+0.6
PAVA	Las Pavas	1.71	74	*e*P	Pn	00 40 26.9	+1.7
TECO	Alcaldia de Te	1.83	81	*e*P	Pn	00 40 28.0	+1.3
LLGN	La Laguna	1.88	61	*e*P	Pn	00 40 28.2	+0.7
SCLA	Alcaldia de Sa	1.91	76	*e*P	Pn	00 40 29.4	+1.5
P5NO	Presa 5 de nov	1.97	68	*e*P	Pn	00 40 28.9	+0.3
PQSS	Presa 15 de Se	2.05	79	*e*P	Pn	00 40 30.9	+1.2
PQSS				*e*S	Sb	00 40 56.6	-1.5
COEB	Comit de Eme	2.06	83	*e*P	Pn	00 40 30.9	+0.9
TECA	Tecapa	2.09	83	*e*P	Pn	00 40 31.5	+1.1
PACA	Pacayal	2.26	84	*e*P	Pn	00 40 35.3	+2.5
VSM	San Miguel	2.30	85	*e*P	Pn	00 40 35.5	+2.0
FAGO	Alcalda de S	2.50	79	*e*P	Pn	00 40 37.1	+1.2
LCND	La Caada	2.67	88	*e*P	Pn	00 40 39.7	+1.4
CNCH	Conchagua	2.73	89	*e*P	Pn	00 40 40.3	+1.1
CNCH				IAML		00 41 18.7	
	comp=Z,819nm,0.3s						
CRIN	San Cristobal	3.54	98	*e*P	Pn	00 40 52.2	+1.9
CRIN				*e*S	Sn	00 41 31.0	-0.5
CNGN	Cerro Negro	3.91	100	*e*P	Pn	00 40 56.7	+1.3
CNGN				*e*S	Sn	00 41 39.1	-1.6
MOMN	Momotombo	4.08	101	*e*P	Pn	00 40 58.9	+1.2
COPN	Copaltepe	4.08	105	*e*P	Pn	00 40 58.2	+0.5
MATN	Matagalpa	4.60	93	*e*P	Pn	00 41 05.6	+0.8
BOAB	BOACO BROADBAN	4.91	99	*e*P	Pn	00 41 09.4	+0.4
BOAB				*e*S	Sn	00 42 02.2	-3.1
TXAR	Lajitas Array	20.06	325	P	P	00 44 29.4	+0.8
	comp=Z,0.5nm,0.5s,baz=149,slow=12,SNR=8.7						
	comp=Z,0.5nm,0.5s						
SJG	San Juan	24.05	75	LR	LR	00 54 04.6	
	comp=Z,22nm,18.9s,baz=59,slow=36						
NVAR	Mina Array Bea	35.09	321	P	P	00 46 48.6	0.0
	comp=Z,0.5nm,0.7s,baz=139,slow=8.7,SNR=5.8						
NVAR				PcP	PcP	00 49 18.8	-1.3
	comp=Z,0.5nm,0.7s,baz=123,slow=4.5,SNR=4.2						
	comp=Z,0.5nm,0.7s						
SCHQ	Schefferville	45.48	19	P	P	00 48 09.4	-4.7
	comp=Z,2.6nm,0.5s,baz=217,slow=5.8,SNR=11						
	comp=Z,2.6nm,0.5s						
YKA	Yellowknife Ar	52.07	346	P	P	00 49 00.4	-4.1
	comp=Z,0.1nm,0.3s,baz=152,slow=7.0,SNR=5.0						
	comp=Z,0.1nm,0.3s						
RES	Resolute Bay	61.48	359	P	P	00 50 06.6	-4.6
	comp=Z,0.7nm,0.6s,baz=173,slow=7.3,SNR=3.5						
	comp=Z,0.7nm,0.6s						
INK	Inuvik	61.54	343	P	P	00 50 08.3	-3.3
	comp=Z,0.7nm,0.6s,baz=215,slow=3.4,SNR=3.7						
	comp=Z,0.7nm,0.6s						
ILAR	Eielson Array	64.05	337	P	P	00 50 24.9	-3.6
	comp=Z,0.1nm,0.4s,baz=96,slow=5.5,SNR=5.2						
	comp=Z,0.1nm,0.4s						
ESDC	Sonseca Array	79.14	52	P	P	00 51 54.4	-5.6
	comp=Z,0.3nm,0.7s,baz=278,slow=5.0,SNR=2.0						
	comp=Z,0.3nm,0.7s						
CMAR	Chiang Mai Arr	147.11	343	PKPbc	PKPdf	00 59 36.5	-0.3
	comp=Z,1.2nm,0.3s,baz=344,slow=2.3,SNR=1.7						

*IDC **12** 00:45:48.4±4.7, 5°.89S×154°.67E, h163^{km}±33^{km}, mb3.3/6, mbtmp3.7/7, Error ellipse: s-maj=49.4km s-min=21.5km az=105.0*
ISC 12 00:45:46.5±1.1, **6°.0S**±0°.2×**154°.8E**±0°.2, **h150**^{km}, **n8**, σ**0^{s}.97**/10, **mb3.6**/6, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.23	301	P	Pn	00 46 37.8	+0.9
	12nm,0.4s,baz=46,slow=14,SNR=1.5						
KRVT				S	Sn	00 47 15.1	-0.7
	21nm,0.3s,baz=133,slow=23,SNR=6.0						
WRA	Warramunga Arr	24.26	233	P	P	00 50 50.7	+0.8
	1.0nm,0.4s,baz=58,slow=9.9,SNR=23						
WRA				PcP	PcP	00 54 26.2	0.0
	0.1nm,0.3s,baz=60,slow=2.9,SNR=1.0						
	1.0nm,0.4s						
ASAR	Alice Springs	26.72	227	P	P	00 51 11.9	-0.2
	0.4nm,0.4s,baz=54,slow=9.6,SNR=5.2						
	0.4nm,0.4s						
SONM	Songino Array	68.39	327	P	P	00 56 32.2	+0.2
	0.5nm,0.6s,baz=159,slow=6.0,SNR=4.5						
	0.5nm,0.6s						
MKAR	Makanchi Array	82.52	319	P	P	00 57 52.6	+0.1
	0.6nm,0.6s,baz=97,slow=5.4,SNR=9.2						
	0.6nm,0.6s						
ZALV	Zalesovo Beam	83.24	326	P	P	00 57 55.0	-1.0
	0.4nm,0.3s,baz=117,slow=5.2,SNR=3.9						
	0.4nm,0.3s						
NVAR	Mina Array Bea	91.24	52	P	P	00 58 36.0	+0.7
	0.3nm,0.7s,baz=226,slow=3.6,SNR=1.9						
	0.3nm,0.7s						
TORD	Torodi Ar. Bea	152.57	287	PKPbc	PKPbc	01 05 24.5	-1.8
	0.1nm,0.3s,baz=107,slow=2.0,SNR=1.5						

IDC 12 00:49:40.6±4.2, **3°.51S**×**130°.79E**, **h0**^{km}, **mb3.1**/2, **mbtmp3.1**/3, **ML2.8**/1, **MS2.2**/1, **Error ellipse: s-maj=301.7km s-min=31.6km az=72.0**, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	11.73	334	LR	LR	00 57 39.2	
	comp=Z,13nm,20.0s,baz=182,slow=41						
WRA	Warramunga Arr	16.70	168	Pn	Pn	00 53 34.8	-1.3
	baz=349,slow=12,SNR=1.2						
WRA				Sn	Sn	00 56 29.6	-13
	baz=358,slow=20,SNR=1.1						
	0.2nm,0.5s						
ASAR	Alice Springs	20.26	172	P	P	00 54 18.4	+0.5
	0.3nm,0.3s,baz=351,slow=11,SNR=7.0						
	0.3nm,0.3s						
MKAR	Makanchi Array	65.78	326	P	P	01 00 27.5	0.0
	0.3nm,0.9s,baz=140,slow=5.1,SNR=2.0						
	0.3nm,0.9s						

IDC 12 01:05:01.6±13.0, **5°.30S**×**149°.39E**, **h0**^{km}, **mb3.5**/3, **mbtmp3.5**/3, **MS2.9**/1, **Error ellipse: s-maj=219.4km s-min=99.9km az=12.0**, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.64	208	Sn	Sn	01 07 07.8	+0.1
	1.3nm,0.3s,baz=86,slow=22,SNR=2.2						
WRA	Warramunga Arr	20.65	224	P	P	01 09 43.4	+0.4
	0.5nm,0.3s,baz=49,slow=10,SNR=9.2						
	0.5nm,0.3s						
ASAR	Alice Springs	23.58	218	P	P	01 10 14.0	-0.2
	0.2nm,0.5s,baz=50,slow=9.0,SNR=4.6						
	0.2nm,0.5s						
DAV	Davao City (W)	26.75	297	LR	LR	01 21 17.7	
	comp=Z,24nm,19.3s,baz=36,slow=36						
STKA	Stephens Creek	27.43	194	P	P	01 10 49.0	-0.2
	0.7nm,0.3s,baz=0.0,slow=11,SNR=1.3						
	0.7nm,0.3s						

*SJA **12** 01:18:01.2±0.8, 19°.83S×69°.27W, h100^{km}±3^{km}, ML3.8, MW3.8, Hypocentre not reviewed by the ISC*
*GUC **12** 01:18:02.5±0.7, 19°.80S×69°.23W, h99^{km}±3^{km}, ML3.5*
*IDC **12** 01:18:03.2±1.9, 19°.77S×69°.00W, h116^{km}±17^{km}, mb3.4/4, mbtmp3.8/8, MS2.2/1, Error ellipse: s-maj=29.7km s-min=18.8km az=105.0*
*VAO **12** 01:18:06.4±0.7, 19°.75S×68°.89W, h108^{km}, mb4.0*
ISC 12 01:18:01.4±0.6, **19°.77S**±0°.04×**69°.20W**±0°.06, **h100**^{km}±6^{km}, **n38**, σ**1^{s}.38**/51, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.37	173	*e*P	Pn	01 18 17.4	+0.6
PB08				*i* S	Sn	01 18 29.0	+0.7
PB08				IAML		01 18 33.3	
	comp=N,2µm,0.2s						
PB08	IPOC Station P	0.37	173	*e*P		01 18 17.2	
PB08				*e*S		01 18 28.4	
PB08				IAML		01 18 29.9	
	comp=Z,2µm,0.4s						
PB11	IPOC Station P	0.43	271	*e*P	Pn	01 18 17.0	+0.1
PB11				*i* S	Sn	01 18 28.3	-0.1
PB11	IPOC Station P	0.43	271	*e*P		01 18 16.7	
PB11				*e*S		01 18 28.5	
PB11				IAML		01 18 29.4	
	comp=Z,3µm,0.4s						
MNMC	Minye Minye	0.74	330	*e*P	Pn	01 18 20.6	+1.1
MNMC				*i* S	Sn	01 18 34.5	+1.5
MNMCX	Minye Minye	0.74	330	*e*P		01 18 20.6	
MNMCX				*e*P		01 18 20.6	
MNMCX				*e*S		01 18 34.8	
MNMCX				IAML		01 18 35.6	
	comp=Z,9µm,0.4s						
PSGC	Pisagua	0.89	281	*e*P	Pn	01 18 20.7	0.0
PSGC				*i* S	Sn	01 18 34.8	-0.5
PSGCX	Pisagua	0.89	281	*e*P		01 18 20.6	
PSGCX				*e*P		01 18 20.6	
PSGCX				*e*S		01 18 35.4	
PSGCX				IAML		01 18 39.5	
	comp=Z,2µm,0.8s						
TA02	Huaiquique	1.00	240	*e*P	Pn	01 18 21.7	-0.2
TA02				*i* S	Sn	01 18 36.7	-0.5
TA02	Huaiquique	1.00	240	*e*P		01 18 21.8	
TA02				*e*S		01 18 37.0	
TA02				IAML		01 18 39.7	
	comp=Z,3µm,0.3s						
TA01	Diego Aracena	1.21	229	*e*P	Pn	01 18 23.7	-0.5
TA01				*i* S	Sn	01 18 40.4	-1.1
TA01				IAML		01 18 41.7	
	comp=E,1µm,0.3s						
TA01	Diego Aracena	1.21	229	*e*P		01 18 23.6	
TA01				*e*S		01 18 40.9	
TA01				IAML		01 18 47.6	
	comp=Z,830nm,0.4s						
PB01	IPOC Station P	1.29	192	*e*P	Pn	01 18 25.3	0.0
PB01				*i* S	Sn	01 18 43.6	+0.3
PB01	IPOC Station P	1.29	192	*e*P		01 18 25.5	
PB01				*e*S		01 18 43.7	
PB01				IAML		01 18 44.4	
	comp=Z,2µm,0.2s						
PB16	IPOC Station P	1.46	348	*e*P	Pn	01 18 29.4	+1.7
PB16				*i* S	Sn	01 18 49.9	+2.3
PB16	IPOC Station P	1.46	348	*e*P		01 18 29.5	
PB16				*e*S		01 18 50.8	
PB12	IPOC Station P	1.57	317	*e*P	Pn	01 18 28.8	+0.1
PB12				*i* S	Sn	01 18 49.0	-0.3
PB12				IAML		01 18 56.5	
	comp=E,947nm,0.3s						
PB12	IPOC Station P	1.57	317	*e*P		01 18 28.8	
PB12				*e*S		01 18 50.0	
PB12				IAML		01 18 54.6	
	comp=Z,517nm,0.3s						
PB02	IPOC Station P	1.67	203	*e*P	Pn	01 18 29.7	-0.2
PB02	IPOC Station P	1.67	203	*e*P		01 18 29.9	
PB02				*e*S		01 18 51.2	
PB02				IAML		01 18 56.4	
	comp=Z,1µm,0.3s						
AP01	Chacalluta	1.76	322	*e*P		01 18 28.4	
AP01				*e*P		01 18 31.6	
AP01				*e*S		01 18 58.6	
AP01				IAML		01 19 01.4	
	comp=Z,678nm,0.6s						
PB09	IPOC Station P	2.01	181	*e*P	Pn	01 18 35.1	+0.7
PB09	IPOC Station P	2.01	181	*e*P		01 18 34.0	
PB09				*e*S		01 19 01.1	
PB09				IAML		01 19 02.9	
	comp=Z,456nm,0.4s						
PB07	IPOC Station P	2.05	198	*e*P		01 18 34.0	
PB07				*e*P		01 18 34.9	
PB07				*e*S		01 18 59.1	
PB07				IAML		01 19 02.1	
	comp=Z,529nm,0.3s						
PB07	IPOC Station P	2.05	198	*e*P	Pn	01 18 34.8	0.0
PB03	IPOC Station P	2.32	193	*e*P		01 18 38.6	
PB03				*e*S		01 19 06.0	
PB03				IAML		01 19 14.5	
	comp=Z,339nm,0.4s						
PB04	IPOC Station P	2.70	199	*e*P		01 18 43.9	
LVC	Limon Verde	2.84	175	P	Pn	01 18 46.5	+1.2
	comp=Z,22nm,0.4s,baz=43,slow=13,SNR=31						
LVC				S	Sn	01 19 19.4	+0.3
	comp=Z,67nm,0.3s,baz=72,slow=20,SNR=6.3						
LVC	Limon Verde	2.84	175	*e*P		01 18 45.9	
LVC				*e*S		01 19 15.3	
LPAZ	La Paz	3.61	17	P	Pn	01 18 58.2	+2.2
	comp=Z,5.6nm,0.8s,baz=192,slow=8.7,SNR=21						
LPAZ				S	Sn	01 19 33.6	-4.4
	comp=Z,6.8nm,0.6s,baz=202,slow=8.0,SNR=4.4						
LPAZ				LR	LR	01 20 11.1	
	comp=Z,31nm,18.7s,baz=280,slow=36						
LPAZ	La Paz	3.61	17	*e*P	Pn	01 18 59.4	+3.4
BBSD	Serra de San D	8.55	74	*e*P	Pn	01 20 01.6	-0.8
SIV	San Ignacio	8.60	65	P	Pn	01 20 01.6	-1.7
	comp=Z,4.4nm,0.6s,baz=250,slow=12,SNR=29						
PTLB	Pontes e Lacer	10.51	67	*e*P	Pn	01 20 30.1	+0.9
VILB	Vilhena	10.98	53	*e*P	Pn	01 20 36.9	+1.3
PANT	Pantanal (Braz	11.90	88	*e*P	Pn	01 20 46.9	-1.0
CPUP	Villa Florida	12.72	123	P	Pn	01 20 57.7	-1.1
	comp=Z,1.7nm,0.8s,baz=295,slow=13,SNR=3.8						
PTGB	Pitanga	16.61	110	*e*P	P	01 21 50.0	+0.8
ALGR	Alto Alegre (B	17.25	124	*e*P	P	01 21 56.1	-0.1
ITAB	Concordia	17.32	119	*e*P	Pn	01 21 58.2	+1.2
NPGB	Novo Progresso	18.45	49	*e*P	Pn	01 22 10.7	-0.1
FRTB	Fartura	18.61	105	*e*P	Pn	01 22 11.7	-0.9
SNDB	Serra Nova Dou	18.88	68	*e*P	P	01 22 13.7	-0.4
BB19B	Bebedouro	19.42	97	*e*P	P	01 22 19.8	-0.2
IPMB	Ipameri, GO	19.94	88	*e*P	P	01 22 25.4	-0.4
BDFB	Brasilia	20.59	82	P	P	01 22 32.5	-0.3
	comp=Z,1.6nm,0.4s,baz=271,slow=12,SNR=4.3						
	comp=Z,1.6nm,0.4s						
PLCA	Paso Flores	20.92	183	P	P	01 22 38.4	+2.2
	comp=Z,2.5nm,0.9s,baz=356,slow=8.2,SNR=4.1						
	comp=Z,2.5nm,0.9s						
PLCA	Paso Flores	20.92	183	*e*P	P	01 22 40.0	+3.9
JANB	Januaria	24.20	83	*e*P	P	01 23 09.0	+0.1
SDBA	SAO DESIDERIO	24.45	76	*e*P	P	01 23 10.6	-0.7
TORD	Torodi Ar. Bea	77.04	71	P	P	01 29 42.7	-1.4
	comp=Z,0.3nm,0.6s,baz=254,slow=5.6,SNR=6.1						
TORD				pP	pP	01 30 10.3	-0.8
	comp=Z,0.5nm,0.8s,baz=252,slow=4.4,SNR=2.5						
	comp=Z,0.3nm,0.6s						
YKA	Yellowknife Ar	89.47	341	P	P	01 30 47.0	+0.1
	comp=Z,0.9nm,0.7s,baz=135,slow=4.9,SNR=16						
YKA				pP	pP	01 31 14.6	+0.3
	comp=Z,0.8nm,0.9s,baz=133,slow=4.9,SNR=7.7						
	comp=Z,0.9nm,0.7s						
ASAR	Alice Springs	131.30	209	PKP	PKPdf	01 37 01.7	-1.1
	comp=Z,0.2nm,0.6s,baz=124,slow=2.7,SNR=1.6						
WRA	Warramunga Arr	134.28	212	PKP	PKPdf	01 37 07.9	-0.6
	comp=Z,0.3nm,0.5s,baz=147,slow=1.5,SNR=1.8						

IDC 12 01:23:15.9±2.2, **2°.67N**×**123°.20E**, **h0**^{km}, **mb3.3**/3, **mbtmp3.3**/3, **Error ellipse: s-maj=324.9km s-min=28.8km az=62.0**, **Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.00	155	P	P	01 28 42.1	+0.5
	0.6nm,0.5s,baz=335,slow=9.7,SNR=11						
	0.6nm,0.5s						
ASAR	Alice Springs	28.18	159	P	P	01 29 09.7	-0.7
	0.2nm,0.7s,baz=336,slow=8.3,SNR=4.8						
	0.2nm,0.7s						
MKAR	Makanchi Array	56.47	327	P	P	01 32 59.6	-0.1
	0.3nm,0.9s,baz=126,slow=7.8,SNR=2.1						
	0.3nm,0.9s						

*IDC **12** 01:24:37.8±4.2, 4°.73S×101°.86E, h0^{km}, mb3.6/5, mbtmp3.6/5, MS3.2/2, Error ellipse: s-maj=177.2km s-min=24.2km az=54.0*
*DJA **12** 01:24:42.1±0.8, 5°S±3°×10°2E±°, h12^{km}±6^{km}, M4.6/14, mB6.3/3, mb4.5/14, MLv4.5/14, Mw(mB)6.0/3*
ISC 12 01:24:44.5±1.4, **4°.67S**±0°.08×**101°.93E**±0°.08, **h46**^{km}±14^{km}, **n40**, σ**0^{s}.91**/42, **mb3.9**/5, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	1.07	73	P	Pn	01 25 02.0	-1.1
MNAI				S	Sn	01 25 15.4	-1.4
KSI	Kapahiang	1.21	33	P	Pn	01 25 04.5	-0.5
KSI				S	Sn	01 25 20.2	-0.1
MASI	Maura Aman, Be	1.55	12	P	Pn	01 25 09.6	-0.1
MASI				S	Sn	01 25 29.2	+0.6
LWLI	Liwa	2.15	99	P	Pn	01 25 19.3	+1.3
LWLI				S	Sn	01 25 44.0	+0.4
MDSI	Maura Dua	2.25	85	P	Pn	01 25 18.6	-0.7
MDSI				S	Sn	01 25 46.4	+0.5
PPSI	Pulau Pagai	2.69	315	P	Pn	01 25 25.7	+0.4
KASI	Kota Agung	2.70	108	P	Pn	01 25 26.2	+0.8
KASI				S	Sn	01 25 56.9	+0.1
KLI	Kotabumi	2.93	94	P	Pn	01 25 29.5	+1.0
SDSI	Sungai Dareh	3.74	352	P	Pn	01 25 40.9	+1.1
PDSI	Padang	4.01	339	P	Pn	01 25 43.1	-0.3
CGJI	Cibinong	4.22	117	P	Pn	01 25 46.6	+0.3
DSRI	Dabo	4.93	33	P	Pn	01 25 56.9	+0.8
PBSI	Pulau Batu	5.85	321	P	Pn	01 26 08.8	0.0
	45nm,0.8s,0.3nm						
CMJI	Cimerak	7.18	116	P	Pn	01 26 26.7	-0.3
	36nm,1.2s,0.3nm						
GSI	Gunungsitoli	7.35	324	P	Pn	01 26 28.3	-1.1
	17nm,0.6s,0.2nm						
SNSI	Sinabang, Aceh	8.98	321	P	Pn	01 26 50.6	-1.1
	22nm,0.7s						
UGM	Wanagama	9.13	111	P	Pn	01 26 52.6	-1.2
	74nm,2.0s						
UWJI	Ujung Watu	9.15	101	P	Pn	01 26 52.2	-1.7
PBKI	Pangkalan Bun	9.92	79	P	Pn	01 27 05.3	+0.8
	71nm,0.5s,9µm						
PWJI	Pagerwojo	10.37	109	P	Pn	01 27 09.9	-0.7
	12nm,0.6s						
BWJI	Bawean	10.75	97	P	Pn	01 27 14.2	-1.7
GMJI	Gumukmas	11.99	108	P	Pn	01 27 33.5	+0.6
	11nm,0.7s						
BLJI	Banyuglugur	12.00	105	P	Pn	01 27 33.4	+0.5
JAGI	Jajag, Banyuwa	12.72	108	P	Pn	01 27 43.7	+0.9
	11nm,0.6s						
SRBI	Singaraja	13.63	105	P	Pn	01 27 56.6	+1.3
	11nm,0.5s						
IGBI	Denpasar	13.76	108	P	Pn	01 27 58.2	+1.2
	25nm,0.8s						
KBKI	Kotabaru	14.27	85	P	Pn	01 28 04.2	+0.2
	3µm,1.0s,134µm						
TWSI	Taliwang, Sumb	15.39	106	P	Pn	01 28 19.9	+1.2
	8.3nm,0.8s						
PLAI	Plampang	16.27	106	P	Pn	01 28 29.9	-0.1
	7.3nm,0.8s						
BKSI	Bulukumba	18.14	93	P	Pn	01 28 54.4	+1.2
H08S2	Diego Garcia H	29.41	263	T	T	02 01 06.8	
	baz=86,slow=76,SNR=9.9						
H08S3	Diego Garcia H	29.41	263	T	T	02 01 09.7	
	baz=86,slow=76,SNR=10.0						
H08S1	Diego Carcia H	29.43	263	T	T	02 01 08.9	
	baz=86,slow=76,SNR=4.6						
WRA	Warramunga Arr	35.01	118	P	P	01 31 31.8	-1.2
	0.1nm,0.4s,baz=297,slow=11,SNR=2.1						
	0.1nm,0.4s						
ASAR	Alice Springs	36.15	125	P	P	01 31 42.5	-0.2
	0.2nm,0.6s,baz=300,slow=8.1,SNR=2.5						
	0.2nm,0.6s						
SONM	Songino Array	52.43	4	P	P	01 33 52.7	+0.2
	0.7nm,0.6s,baz=188,slow=9.4,SNR=8.2						
	0.7nm,0.6s						
AAK	Ala-Archa	53.26	335	LR	LR	02 01 43.0	
	comp=Z,17nm,18.6s,baz=161,slow=42						
MKAR	Makanchi Array	54.11	343	P	P	01 34 04.5	-0.2
	0.8nm,0.6s,baz=151,slow=9.3,SNR=10						
MKAR				LR	LR	01 59 17.5	
	comp=Z,22nm,18.0s,baz=104,slow=38						
	0.8nm,0.6s						
ZALV	Zalesovo Beam	60.14	348	P	P	01 34 46.8	-0.4
	0.6nm,0.3s,baz=158,slow=5.4,SNR=3.7						
	0.6nm,0.3s						
TXAR	Lajitas Array	145.52	42	PKPbc	PKPab	01 44 19.8	+0.9
	0.2nm,0.6s,baz=300,slow=1.8,SNR=1.7						

*IDC **12** 01:26:20.3±0.7, 4°.67S×102°.59E, h0^{km}, mb4.5/19, mbtmp4.5/20, ML4.1/1, MS3.2/4, Error ellipse: s-maj=24.8km s-min=13.6km az=48.0*
*DJA **12** 01:26:28.2±0.3, 5°S±3°×10°3E±°, h41^{km}±4^{km}, M4.9/27, mB5.6/8, mb4.8/27, MLv4.8/23, Mw(mB)5.1/8, MwMwp8.8/1, Mwp8.2/1*
*NEIC **12** 01:26:28.3±1.3, 4°.67S±0°.07×102°.58E±0°.06, h54^{km}±3^{km}, mb4.6/48, Error ellipse: s-maj=9.6km s-min=9.0km az=164.0*
ISC 12 01:26:28.2±0.7, **4°.73S**±0°.05×**102°.57E**±0°.04, **h60**^{km}±5^{km}, **n183**, σ**1^{s}.17**/193, **mb4.7**/50, **MS3.2**/3, **1C-1D**, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	0.53	47	Pn	Pn	01 26 39.2	-1.3
MNAI				Sn	Sn	01 26 47.7	-1.7
MNAI	Manna	0.53	47	P	Pn	01 26 39.4	-1.1
MNAI				S	Sn	01 26 47.9	-1.5
KSI	Kapahiang	1.07	1	P	Pn	01 26 47.2	0.0
KSI				S	Sn	01 27 02.0	+0.7
LWLI	Liwa	1.51	101	P	Pn	01 26 52.5	-0.6

MASI	Maura Aman, Be	1.61	348	P	Pn	01 26 54.8	+0.4
MASI				S	Sn	01 27 16.2	+2.0
MDSI	Maura Dua	1.62	82	P	Pn	01 26 54.4	-0.1
MDSI				S	Sn	01 27 14.5	+0.1
KASI	Kota Agung	2.08	112	P	Pn	01 27 00.2	-0.5
KASI				S	Sn	01 27 23.6	-1.9
KLI	Kotabumi	2.28	93	P	Pn	01 27 05.0	+1.5
KLI				S	Sn	01 27 33.0	+2.5
BLSI	Bandar Lampung	2.74	103	P	Pn	01 27 11.0	+1.2
PMBI	Palembang	2.83	51	Pn	Pn	01 27 08.3	-2.7
PMBI	Palembang	2.83	51	P	Pn	01 27 09.8	-1.3
PPSI	Pulau Pagai	3.21	307	P	Pn	01 27 16.8	+0.6
PPSI				S	Sn	01 27 54.8	+1.4
JMBI	JAMBI	3.26	19	P	Pn	01 27 18.1	+1.3
CGJI	Cibinong	3.63	121	P	Pn	01 27 22.4	+0.5
SBJI	Serang	3.81	111	P	Pn	01 27 24.2	-0.1
SBJI				S	Sn	01 28 09.4	+1.5
SDSI	Sungai Dareh	3.94	343	P	Pn	01 27 27.6	+1.4
PDSI	Padang	4.34	331	P	Pn	01 27 32.5	+0.8
PDSI				S	Sn	01 28 21.5	+0.5
RGRI	Rengat	4.36	357	P	Pn	01 27 33.2	+1.3
PPBI	Pangkal Pinang	4.38	55	P	Pn	01 27 32.9	+0.7
DSRI	Dabo	4.67	25	P	Pn	01 27 37.4	+1.1
CNJI	Cibinong	5.21	120	P	Pn	01 27 43.1	-0.5
	39nm,0.6s,1µm0.3nm						
BKNI	Bangkinang	5.25	343	Pn	Pn	01 27 43.7	-0.4
BKNI	Bangkinang	5.25	343	P	Pn	01 27 44.7	+0.6
	112nm,1.0s,5µm0.9nm						
TPRI	Tanjung Pinang	5.94	19	P	Pn	01 28 05.8	+12
PBSI	Pulau Batu	6.32	317	P	Pn	01 27 59.0	+0.2
	68nm,0.5s,0.5nm						
CMJI	Cimerak	6.58	118	P	Pn	01 28 01.9	-0.5
	51nm,0.8s,0.4nm						
MYKOM	Kota Tinggi	6.60	11	Pn	Pn	01 28 01.8	-0.9
KPJI	Karang Pucung	6.83	113	P	Pn	01 28 07.5	+1.6
	38nm,0.6s,0.1nm						
GSI	Gunungsitoli	7.80	320		Pn	01 28 18.1	-1.0
GSI	Gunungsitoli	7.80	320	P	Pn	01 28 17.6	-1.5
	40nm,0.5s,0.2nm						
UGM	Wanagama	8.52	112	Pn	Pn	01 28 28.7	-0.2
UGM	Wanagama	8.52	112	P	Pn	01 28 29.0	+0.1
	58nm,0.9s						
COCO	West Island	9.33	217		Pn	01 28 38.6	-1.5
SNSI	Sinabang, Aceh	9.44	319	P	Pn	01 28 40.7	-0.9
	41nm,1.0s						
PWJI	Pagerwojo	9.74	110	P	Pn	01 28 46.5	+0.8
	21nm,0.5s						
GMJI	Gumukmas	11.36	109	P	Pn	01 29 08.9	+1.1
	14nm,0.7s						
ABJI	Asem Bagus	11.99	105	P	Pn	01 29 18.5	+2.1
	43nm,0.5s						
JAGI	Jajag, Banyuwa	12.09	109		Pn	01 29 16.8	-1.0
JAGI	Jajag, Banyuwa	12.09	109	P	Pn	01 29 17.5	-0.3
	33nm,0.5s						
MTKI	Muara Teweh, K	12.87	73	P	Pn	01 29 29.1	+0.6
	48nm,0.5s						
SRBI	Singaraja	13.00	106	P	Pn	01 29 30.0	-0.2
	41nm,0.6s						
IGBI	Denpasar	13.13	109	P	Pn	01 29 33.9	+1.9
TWSI	Taliwang, Sumb	14.76	106	P	Pn	01 29 54.0	+0.3
	15nm,0.6s						
PLAI	Plampang	15.64	106	P	Pn	01 30 01.8	-3.2
KAPI	Kappang	17.12	92	P	Pn	01 30 22.5	-1.1
	0.7nm,0.3s,baz=265,slow=9.1,SNR=7.1						
KAPI				LR	LR	01 37 24.1	
	comp=Z,62nm,20.9s,baz=266,slow=39						
	6.5nm,0.7s						
KAPI	Kappang	17.12	92	P	Pn	01 30 24.0	+0.4
SPSI	Sidrap Palu	17.17	88	P	P	01 30 26.0	+1.0
	17nm,1.1s,5µm						
BKSI	Bulukumba	17.50	93	P	P	01 30 29.4	+0.7
	18nm,0.6s						
MPSI	Mapaga	18.03	74	P	Pn	01 30 37.0	+2.3
	24nm,0.8s						
BASI	Baing, Sumba	18.66	108	P	Pn	01 30 43.4	+1.0
	77nm,0.9s						
TOLI2	Tolitoli	19.10	73	P	P	01 30 46.9	+0.6
MMRI	Maumere	19.91	102	P	P	01 30 54.1	-1.1
MMRI				IAmb	IAmb	01 31 03.4	
	comp=Z,39nm,1.3s						
MRSI	Marisa	20.03	76	P	Pn	01 30 58.6	-0.1
	comp=Z,42nm,0.6s						
LUWI	Luwuk	20.50	80	P	P	01 31 01.7	+0.1
LUWI				IAmb	IAmb	01 31 18.4	
	comp=Z,30nm,0.7s						
SOEI	Soe	22.09	104	P	P	01 31 18.5	-0.3
SOEI				IAmb	IAmb	01 31 32.5	
	comp=Z,15nm,0.6s						
SOEI	Soe	22.09	104	P	P	01 31 21.1	+2.3
	comp=Z,15nm,0.6s						
CM31	Chiang Mai Arr	23.32	351	P	P	01 31 31.1	-0.1
CM31				IAmb	IAmb	01 31 32.2	
	comp=Z,11nm,0.7s						
CMAR	Chiang Mai Arr	23.32	351	P	P	01 31 30.6	-0.7
	comp=Z,7.0nm,0.6s,baz=182,slow=9.2,SNR=5.1						
CMAR				LR	LR	01 40 17.3	
	comp=Z,43nm,20.9s,baz=130,slow=36						
	comp=Z,7.0nm,0.6s						
CHTO	Chiang Mai	23.66	351	P	P	01 31 33.2	-1.3
CRAI	Chiangrai	24.90	355	P	P	01 31 45.0	-0.6
LBMI	Labuha	25.23	81	P	P	01 31 52.6	+3.8
	comp=Z,42nm,0.8s,comp=Z,1µm						
FITZ	Fitzroy Crossi	26.18	122	P	P	01 31 56.9	-0.4
KNRA	Kununurra	27.94	115	P	P	01 32 12.1	-1.1
KNRA				IAmb	IAmb	01 32 42.0	
	comp=Z,18nm,0.8s						
MTN	Manton Dam	29.33	108	P	P	01 32 24.9	-0.7
MTN				IAmb	IAmb	01 32 33.8	
	comp=Z,16nm,1.2s						
TNCH	TengChong	29.84	353	eP	P	01 32 35.6	+5.5
TNCH				pmax	pmax		
	comp=Z,150nm,5.3s						
H08S2	Diego Garcia H	30.04	263	T	T	02 03 36.1	
	baz=86,slow=76,SNR=3.6						
H08S3	Diego Garcia H	30.04	263	T	T	02 03 26.1	
	baz=86,slow=76,SNR=4.4						
H08S1	Diego Carcia H	30.05	263	T	T	02 03 37.3	
	baz=86,slow=76,SNR=3.1						
PZH	PanZhiHua	31.06	359	P	P	01 32 44.3	+3.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,110nm,5.5s						
NWAO	Narrogin (SRO)	31.22	156	LR	LR	01 45 58.8	
	comp=Z,48nm,19.2s,baz=262,slow=38						
SHL	Shillong	31.85	341	P	P	01 32 46.2	-1.6
H01W3	Cape Leeuwin H	31.86	162	T	T	02 06 26.2	
	baz=339,slow=76,SNR=8.3						
H01W2	Cape Leeuwin H	31.87	162	T	T	02 06 27.9	
	baz=339,slow=76,SNR=6.6						
H01W1	Cape Leeuwin H	31.88	162	T	T	02 06 29.6	
	baz=339,slow=76,SNR=8.1						
WB0	Warramunga Arr	34.41	118	P	P	01 33 10.1	0.0
WRA	Warramunga Arr	34.42	119	P	P	01 33 09.6	-0.7
	comp=Z,2.0nm,0.4s,baz=300,slow=9.1,SNR=35						
WRA				PcP	PcP	01 35 45.2	+0.4
	comp=Z,0.9nm,0.5s,baz=297,slow=2.1,SNR=5.8						
	comp=Z,2.0nm,0.4s						
WRAB	Tennant Creek	34.43	119	P	P	01 33 10.3	0.0
WRAB				IAmb	IAmb	01 33 15.6	
	comp=Z,4.8nm,0.5s						
WB2	Warramunga Arr	34.43	119	P	P	01 33 09.8	-0.6
WB2				IAmb	IAmb	01 33 18.6	
	comp=Z,4.5nm,0.7s						
TAPN	Taplejung	34.97	337	eP	P	01 33 16.1	+0.9
	comp=Z,16nm,0.5s						
RAMN	Ramite	35.08	335	eP	P	01 33 17.2	+1.2
	comp=Z,14nm,0.4s						
FORT	Forrest	35.32	140	P	P	01 33 18.1	+0.3
ENH	Enshi	35.43	10	P	P	01 33 17.5	-1.3
ENH				IAmb	IAmb	01 33 19.3	
	comp=Z,8.6nm,0.5s						
AS31	Alice Springs	35.59	125	P	P	01 33 20.3	0.0
ASAR	Alice Springs	35.59	125	P	P	01 33 20.4	+0.2
	comp=Z,2.4nm,0.5s,baz=293,slow=7.6,SNR=28						
ASAR				PcP	PcP	01 35 48.9	+0.7
	comp=Z,1.1nm,0.5s,baz=296,slow=2.3,SNR=7.3						
	comp=Z,2.4nm,0.5s						
ASAR	Alice Springs	35.59	125	P	P	01 33 18.9	-1.4
JIRN	Jiri	35.87	335	eP	P	01 33 23.8	+0.8
	comp=Z,26nm,0.5s						
PKI	Pulchoki	36.13	334	eP	P	01 33 25.5	+0.3
	comp=Z,13nm,0.6s						
PKIN	Phulchoki	36.15	334	eP	P	01 33 25.5	+0.3
	comp=Z,12nm,0.5s						
GUN	Gumba	36.22	335	eP	P	01 33 26.8	+0.8
	comp=Z,53nm,0.5s						
DMN	Daman	36.30	333	eP	P	01 33 27.0	+0.5
GKN	Gorkha	36.85	333	eP	P	01 33 31.7	+0.6
	comp=Z,18nm,0.5s						
DANN	Dangsing	37.55	332	eP	P	01 33 37.9	+0.8
	comp=Z,56nm,0.5s						
XAN	Xi'an	39.02	8	P	P	01 33 48.6	-0.6
XAN				pP	pP	01 34 04.6	+0.3
XAN				S	S	01 39 41.1	-3.0
XAN				pmax	pmax		
	comp=Z,13nm,0.9s						
XAN				pmax	pmax		
	comp=Z,110nm,5.1s						
NJ2	Nanjing	39.73	22	eP	P	01 33 57.4	+2.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LYN	LuoYang	40.17	13	⇓P	P	01 33 59.1	+0.5
LYN				pmax	pmax		
	comp=Z,15nm,0.7s						
GTA	Gaotai	43.99	357	eP	P	01 34 30.2	+0.3
GTA				pP	pP	01 34 44.0	-1.2
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CTAO	Charters Tower	45.14	114	P	P	01 34 39.3	+0.1
CTAO				IAmb	IAmb	01 34 39.8	
	comp=Z,7.5nm,0.8s						
STKA	Stephens Creek	45.43	131	P	P	01 34 41.9	+0.5
	comp=Z,7.2nm,0.8s,baz=315,slow=8.1,SNR=10						
	comp=Z,7.2nm,0.8s						
STKA	Stephens Creek	45.43	131	P	P	01 34 42.0	+0.7
HHC	Hu-ho-hao-te	46.10	9	eP	P	01 34 49.6	+3.0
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,320nm,5.7s						
BJI	Beijing	46.28	14	P	P	01 34 47.8	0.0
BJI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
NIL	Nilore	47.18	326	P	P	01 34 54.9	-0.1
KSRS	Korea Array	48.15	27	P	P	01 35 02.2	-0.2
	comp=Z,1.6nm,0.7s,baz=226,slow=7.0,SNR=6.1						
	comp=Z,1.6nm,0.7s						
JCJ	Chichijima	49.66	48	P	P	01 35 13.2	-0.9
	comp=Z,37nm,0.5s,baz=234,slow=19,SNR=1.3						
WMQ	Urumqi	50.16	346	eP	P	01 35 19.9	+2.2
KSH	Kashi	50.40	333	P	P	01 35 19.0	-0.7
KSH				sP	pP	01 35 37.8	+2.5
KSH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
EIDS	Eidsvold	50.79	119	P	P	01 35 23.0	+0.2
EIDS				IAmb	IAmb	01 36 01.6	
	comp=Z,15nm,1.4s						
SONM	Songino Array	52.45	3	P	P	01 35 35.4	+0.5
	comp=Z,6.7nm,0.7s,baz=181,slow=9.5,SNR=47						
SONM				PcP	PcP	01 36 45.1	+0.2
	comp=Z,2.0nm,0.5s,baz=183,slow=4.5,SNR=10.0						
	comp=Z,6.7nm,0.7s						
SONM	Songino Array	52.45	3	P	P	01 35 35.2	+0.3
SONM				IAmb	IAmb	01 35 36.3	
	comp=Z,9.7nm,1.0s						
ULN	Ulaanbaatar	52.52	4	P	P	01 35 35.3	-0.2
ULN				IAmb	IAmb	01 35 36.8	
	comp=Z,6.1nm,1.1s						
CN2	Changchun	52.53	21	eP	P	01 35 39.5	+4.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GAR	Garm	52.74	329	P	P	01 35 36.8	-0.4
MJAR	Matsushiro Arr	52.86	36	P	P	01 35 36.2	-1.8
	comp=Z,1.8nm,0.6s,baz=203,slow=8.7,SNR=10						
	comp=Z,1.8nm,0.6s						
CHGR	Chuyangaron	53.10	327	P	P	01 35 39.1	-0.7
JSD	Sado	53.92	35	P	P	01 35 44.8	-1.0
JSD				IAmb	IAmb	01 35 53.7	
	comp=Z,6.8nm,1.0s						
MK31	Makanchi Array	54.35	343	P	P	01 35 48.8	0.0
MK31				IAmb	IAmb	01 35 49.3	
	comp=Z,6.6nm,0.6s						
MKAR	Makanchi Array	54.35	343	P	P	01 35 48.6	-0.2
	comp=Z,10nm,0.6s,baz=154,slow=8.7,SNR=94						
MKAR				PcP	PcP	01 36 52.5	+0.5
	comp=Z,0.6nm,0.5s,baz=136,slow=5.9,SNR=1.0						
	comp=Z,10nm,0.6s						
MKAR	Makanchi Array	54.35	343	P	P	01 35 48.9	+0.2
MAKZ	Makanchi	54.46	343	P	P	01 35 48.4	-1.2
BNX	BinXian	54.90	21	⇑P	P	01 35 52.2	-0.5
BNX				pmax	pmax		
	comp=Z,13nm,0.8s						
BNX				pmax	pmax		
	comp=Z,140nm,5.3s						
USRK	Ussuriysk Ar.	55.42	25	P	P	01 35 56.3	-0.2
	comp=Z,4.4nm,0.6s,baz=220,slow=5.9,SNR=9.7						
	comp=Z,4.4nm,0.6s						
KK31	Karatay Array	55.74	332	P	P	01 35 58.6	-0.2
KKAR	Karatay Array	55.74	332	P	P	01 35 58.7	-0.2
JTM	Tenmabayashi	57.39	34	P	P	01 36 08.9	-1.6
HEH	HeiHe	58.82	18	eP	P	01 36 20.0	-0.4
HEH				pmax	pmax		
	comp=Z,12nm,0.8s						
KURK	Kurchatov	58.95	342	P	P	01 36 20.5	-0.8
KURK				IAmb	IAmb	01 36 21.9	
	comp=Z,6.8nm,0.8s						
GEYT	Alibeck	59.17	320	P	P	01 36 23.8	+0.6
	comp=Z,4.4nm,0.7s,baz=155,slow=4.9,SNR=6.8						
	comp=Z,4.4nm,0.7s						
ERM	Erimo	59.38	34	P	P	01 36 23.7	-0.7
ZAA0	Zalesovo Array	60.33	348	P	P	01 36 30.5	-0.2
ZALV	Zalesovo Beam	60.33	348	P	P	01 36 30.2	-0.5
	comp=Z,17nm,0.5s,baz=164,slow=5.5,SNR=74						
	comp=Z,17nm,0.5s						
JKA	Kamikawa-asahi	60.47	32	P	P	01 36 31.6	-0.3
BRVK	Borovoye	63.69	339	P	P	01 36 52.7	-0.5
BRVK				IAmb	IAmb	01 36 54.1	
	comp=Z,4.7nm,0.8s						
ABKAR	Akbulak array	65.25	331	P	P	01 37 03.5	0.0
YAK	Yakutsk	69.76	13	LR	LR	02 09 40.0	
	comp=Z,30nm,20.2s,baz=193,slow=37						
KBZ	Khabaz	72.04	319	P	P	01 37 46.5	+0.6
	comp=Z,3.4nm,0.8s,baz=127,slow=4.7,SNR=5.8						
	comp=Z,3.4nm,0.8s						
PETK	Petropavlovsk-	73.85	31	P	P	01 37 55.9	-0.6
	comp=Z,2.0nm,0.9s,baz=241,slow=7.4,SNR=1.3						
	comp=Z,2.0nm,0.9s						
MA2	Magadan	74.48	23	P	P	01 38 00.1	+0.1
MA2				IAmb	IAmb	01 38 38.7	
	comp=Z,14nm,1.5s						
BKZ	Black Stump Fm	74.57	129	P	P	01 38 01.4	+0.3
NRIK	Noril'sk	74.63	355	P	P	01 37 59.7	-1.0
	comp=Z,3.2nm,0.3s,baz=182,slow=5.5,SNR=5.7						
	comp=Z,3.2nm,0.3s						
NRIK	Noril'sk	74.63	355	P	P	01 37 59.8	-0.9
NRIK				IAmb	IAmb	01 38 01.9	
	comp=Z,5.9nm,1.0s						
RTZ	Ruatahuna	74.89	129	P	P	01 38 02.6	-0.4
BR131	Keskin Array S	77.04	312	P	P	01 38 14.5	-0.8
BR131				IAmb	IAmb	01 38 16.4	
	comp=Z,3.6nm,0.7s						
BRTR	Keskin Array B	77.04	312	P	P	01 38 15.5	+0.2
	comp=Z,2.4nm,0.7s,baz=134,slow=7.2,SNR=19						
	comp=Z,2.4nm,0.7s						
BRTR	Keskin Array B	77.04	312	P	P	01 38 14.8	-0.5
TIXI	Tiksi	78.15	8	P	P	01 38 19.9	-0.6
AKASG	Malin Array Be	83.20	322	P	P	01 38 47.8	-0.2
	comp=Z,0.3nm,0.3s,baz=86,slow=3.5,SNR=5.4						
	comp=Z,0.3nm,0.3s						
BURAR	Bucovina Array	84.99	318		P	01 38 57.8	+0.5
BURAR				IAmb	IAmb	01 39 00.3	
	comp=Z,3.5nm,0.8s						
BUR08	Bucovina Ar. S	85.01	319	P	P	01 38 57.9	+0.5
BUR08				IAmb	IAmb	01 39 00.4	
	comp=Z,4.4nm,1.1s						
MNK	Minsk	85.01	326	i P	P	01 38 58.1	+1.0
	comp=E,2.0nm,1.2s						
MNK				i P	P	01 38 58.1	+1.0
	comp=N,40nm,1.0s						
MNK				i P	P	01 38 58.1	+1.0
	comp=Z,15nm,1.4s,baz=105						
MNK				i pP	pP	01 39 12.6	-1.2
MNK				i PPP	PPP	01 44 14.6	
MNK				i S	S	01 49 17.3	-4.2
MNK				i sS	pS	01 49 43.3	+0.8
MNK				i SS	SS	01 54 58.2	+2.4
MNK				i SSS	SSS	01 58 06.2	
IZAR	Zarasai	86.23	327	eP	P	01 39 03.4	+0.2
VSU	Vasula	86.64	329	eP	P	01 39 05.8	+0.7
VSVD	Vaisvydziai	87.56	327	eP	P	01 39 10.7	+1.1
FINES	FINESS Array B	87.70	332	P	P	01 39 10.9	+0.7
	comp=Z,3.2nm,0.6s,baz=109,slow=4.8,SNR=39						
	comp=Z,3.2nm,0.6s						
STHS	Stebnicka Huta	87.93	320	eP	P	01 39 11.7	+0.1
MTSE	Matsula	88.19	329	eP	P	01 39 13.6	+1.1
MEF	Metsahovi	88.22	331	eP	P	01 39 13.4	+0.8
VYHS	Vyhne	89.36	319	eP	P	01 39 19.8	+1.5
SRO	Srobarova	89.61	318	eP	P	01 39 21.6	+2.1
ARCES	ARCESS Array B	89.90	340	P	P	01 39 20.9	+0.5
	comp=Z,3.8nm,0.9s,baz=64,slow=2.8,SNR=4.6						
	comp=Z,3.8nm,0.9s						
GERES	GERESS Array B	92.78	319	P	P	01 39 34.6	+0.3
	comp=Z,0.4nm,0.5s,baz=108,slow=4.3,SNR=4.5						
	comp=Z,0.4nm,0.5s						
YKA	Yellowknife Ar	116.18	18	PKP	PKiKP	01 45 03.6	-0.8
	comp=Z,0.4nm,0.8s,baz=293,slow=1.5,SNR=5.9						
NVAR	Mina Array Bea	129.99	42	PKP	PKiKP	01 45 33.5	+0.7
	comp=Z,0.8nm,0.5s,baz=309,slow=2.3,SNR=10						
ULM	Lac du Bonnet	132.05	16	PKP	PKPdf	01 45 34.7	-0.5
	comp=Z,3.4nm,0.8s,baz=133,slow=4.2,SNR=5.2						
PDAR	Pinedale Array	132.60	32	PKP	PKPdf	01 45 36.5	-0.4
	comp=Z,0.5nm,0.5s,baz=156,slow=2.5,SNR=12						
PLCA	Paso Flores	134.32	187	PKP	PKPdf	01 45 40.0	+0.1
	comp=Z,1.9nm,0.8s,baz=162,slow=20,SNR=2.2						
BDFB	Brasilia	144.53	235	PKP	PKPdf	01 45 58.8	-0.4
	comp=Z,1.1nm,0.4s,baz=104,slow=4.3,SNR=4.4						
OLIL	Olney	144.79	15	PKPdf	PKPab	01 45 57.5	-0.3
P52A	Corning	144.99	6		PKPab	01 45 57.9	-0.6
HHAR	Hobbs	145.12	24	PKPbc	PKPbc	01 45 58.1	-0.9
TXAR	Lajitas Array	145.14	42	PKPbc	PKPdf	01 45 59.9	+0.1
	comp=Z,3.2nm,0.5s,baz=280,slow=1.1,SNR=59						
TXAR	Lajitas Array	145.14	42	PKPbc	PKPab	01 45 59.5	0.0
S44A	Carbondale	145.46	17	PKPbc	PKPdf	01 45 59.7	-0.3
T42A	Van Buren	145.50	19	PKPbc	PKPdf	01 46 00.1	0.0
WCI	Wyandotte Cave	145.69	12	PKPbc	PKPbc	01 46 00.6	-0.1
FCAR	Ozark Folk Cen	146.16	22	PKPbc	PKPbc	01 46 02.2	0.0
R53A	Hurricane	146.30	6	PKPbc	PKPab	01 46 03.3	-0.2
MIAR	Mount Ida	146.77	25	PKPbc	PKPbc	01 46 04.1	0.0
JCT	Junction City	146.82	37	PKPbc	PKPbc	01 46 04.2	-0.3
WVT	Waverly	147.32	16	PKPbc	PKPbc	01 46 05.5	-0.1
V52A	Sevierville	148.52	10	PKPbc	PKPbc	01 46 08.3	-0.6
CPCT	Cooper Cave	148.74	11	PKPbc	PKPbc	01 46 08.1	-1.3
X48A	Hartselle	149.11	16	PKPbc	PKPbc	01 46 08.7	-1.6
Y49A	Blount Mountai	149.84	15	PKPbc	PKPbc	01 46 10.2	-2.1

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*DJA **12** 02:14:18.1±0.5, 3°S±3°×13°9E±°, h36^{km}±6^{km}, M4.8/26, mB5.5/9, mb4.6/26, MLv4.7/5, Mw(mB)5.0/9*

*NEIC **12** 02:14:18.8±1.4, 3°.0S±0°.1×138°.87E±0°.09, h43^{km}±8^{km}, mb4.4/25, Error ellipse: s-maj=16.2km s-min=11.3km az=209.0*

*IDC **12** 02:14:20.8±4.4, 2°.81S×139°.09E, h67^{km}±40^{km}, mb3.9/8, mbtmp4.2/10, ML3.2/2, MS3.7/36, Error ellipse: s-maj=34.4km s-min=18.7km az=66.0*

ISC 12 02:14:19.0±0.4, **2°.96S**±0°.05×**139°.07E**±0°.05, **h46^{km}, n113, σ2^{s}11**/89, **mb4.4**/28, **MS3.7**/30, **Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	1.03	340	P	Pn	02 14 33.7	-3.4
SMPI				S	Sn	02 14 47.2	-3.2
GENI	Genyem	1.16	72	P	Pn	02 14 35.3	-3.5
GENI				S	Sn	02 14 49.6	-3.9
SRPI	Serui, Papua	3.03	291	P	Pn	02 15 04.7	+0.3
SRPI				S	Sn	02 15 40.0	+0.5
RKPI	Ransiki, Papua	5.09	286	P	Pn	02 15 34.3	+1.4
	73nm,0.7s,6µm0.6nm						
FAKI	Fak Fak	6.81	270	Pn	Pn	02 15 53.1	-3.3
SIJI	Sorong	8.07	285	LR	LR	02 20 20.0	
	comp=Z,476nm,20.3s,baz=82,slow=45						
BNDI	Bandanaira	9.27	260	P	Pn	02 16 31.7	+1.5
	69nm,1.4s						
MSAI	Masohi	10.13	268	P	Pn	02 16 46.4	+4.4
	6.7nm,1.1s						
PMG	Port Moresby	10.28	129	P	Pn	02 16 47.3	+3.3
	1.8nm,0.3s,baz=319,slow=6.3,SNR=4.0						
PMG				S	Sn	02 18 38.0	+0.1
	6.8nm,0.6s,baz=276,slow=16,SNR=1.3						
	9.5nm,0.6s						
PMG	Port Moresby	10.28	129	Pn	Pn	02 16 46.1	+2.2
COEN	Coen	11.65	160	Pn	Pn	02 17 03.5	+0.7
LBMI	Labuha	11.79	281	P	Pn	02 17 00.6	-4.1
NLAI	Namlea	11.95	268	P	Pn	02 17 09.4	+2.5
	25nm,1.1s,3µm						
MTN	Manton Dam	12.57	218	Pn	Pn	02 17 12.2	-3.1
SANI	Sanana	13.10	274	P	Pn	02 17 23.4	+0.9
	49nm,0.9s						
RABL	Rabaul	13.13	96	Pn	Pn	02 17 24.7	+1.7
SOEI	Soe	16.18	245	Pn	Pn	02 18 00.2	-3.2
SOEI	Soe	16.18	245	P	P	02 18 06.5	+0.5
	98nm,1.0s,966nm						
KNRA	Kununurra	16.20	218	Pn	Pn	02 18 01.0	-2.6
BBSI	Bau Bau	16.64	261	P	P	02 18 13.8	+2.8
DAV	Davao City (W)	16.75	307	LR	LR	02 25 13.3	
	comp=Z,101nm,18.7s,baz=157,slow=39						
WB0	Warramunga Arr	17.32	195		Pn	02 18 16.3	-1.2
WB0				IAmb	IAmb	02 18 32.7	
	comp=Z,59nm,1.2s						
GUMO	Guam	17.42	19	LR	LR	02 24 30.3	
	comp=Z,172nm,19.6s,baz=180,slow=35						
MRSI	Marisa	17.46	281	P	P	02 18 20.3	+0.2
	comp=Z,25nm,0.9s						
WRAB	Tennant Creek	17.48	195	P	Pn	02 18 18.6	-1.0
WRAB				IAmb	IAmb	02 18 34.8	
	comp=Z,67nm,1.3s						
WB2	Warramunga Arr	17.49	195		Pn	02 18 19.0	-0.8
WRA	Warramunga Arr	17.50	195	P	Pn	02 18 18.1	-1.7
	comp=Z,5.9nm,0.6s,baz=19,slow=12,SNR=24						
WRA				S	Sn	02 21 28.9	-4.9
	comp=Z,5.8nm,0.8s,baz=12,slow=21,SNR=4.9						
WRA				LR	LR	02 25 53.7	
	comp=Z,809nm,19.2s,baz=358,slow=39						
WRA	Warramunga Arr	17.50	195	P	Pn	02 18 18.9	-0.8
MMRI	Maumere	17.66	251	P	P	02 18 25.7	+3.4
	comp=Z,20nm,0.5s,comp=Z,2µm						
CTA	Charters Tower	18.41	158	P	Pn	02 18 32.8	+1.8
	comp=Z,0.3nm,0.3s,baz=348,slow=14,SNR=2.5						
CTA				LR	LR	02 26 07.5	
	comp=Z,664nm,18.1s,baz=337,slow=38						
	comp=Z,3.1nm,0.8s						
CTAO	Charters Tower	18.41	158	P	Pn	02 18 31.2	+0.2
CTAO				IAmb	IAmb	02 18 57.9	
	comp=Z,13nm,1.1s						
TOLI2	Tolitoli	18.72	282	P	P	02 18 32.1	-1.9
BSSI	Bau Bau, Buton	18.78	260	P	Pn	02 18 37.2	+1.7
	comp=Z,27nm,1.2s						
BKSI	Bulukumba	19.04	262	P	Pn	02 18 41.7	+3.1
	comp=Z,10nm,1.2s						
SPSI	Sidrap Palu	19.29	266	P	Pn	02 18 43.9	+2.3
	comp=Z,16nm,0.5s,comp=Z,3µm						
KAPI	Kappang	19.38	263	LR	LR	02 28 05.0	
	comp=Z,62nm,18.1s,baz=96,slow=42						
KAPI	Kappang	19.38	263	P	P	02 18 38.2	-2.9
FITZ	Fitzroy Crossi	19.99	220	P	P	02 18 46.4	-1.4
AS31	Alice Springs	21.18	193	P	P	02 19 00.2	-0.4
AS31				IAmb	IAmb	02 19 18.9	
	comp=Z,17nm,0.9s						
ASAR	Alice Springs	21.18	193	P	P	02 19 01.4	+0.7
	comp=Z,9.7nm,0.7s,baz=20,slow=11,SNR=43						
ASAR				S	S	02 22 55.2	+1.3
	comp=Z,4.7nm,0.8s,baz=11,slow=26,SNR=4.7						
ASAR				LR	LR	02 27 50.1	
	comp=Z,534nm,19.0s,baz=12,slow=38						
	comp=Z,9.7nm,0.7s						
ASAR	Alice Springs	21.18	193	P	P	02 19 00.2	-0.4
PLAI	Plampang	21.96	254	P	P	02 19 11.0	+1.9
	comp=Z,14nm,0.9s						
BBKI	Banjar Baru	24.19	268	P	P	02 19 35.1	+3.6
	comp=Z,87nm,1.1s,comp=Z,12µm						
EIDS	Eidsvold	25.10	154	P	P	02 19 40.6	+1.0
EIDS				IAmb	IAmb	02 19 47.5	
	comp=Z,11nm,0.8s						
MBWA	Marble Bar	26.10	225	P	P	02 19 46.7	-2.1
MBWA				IAmb	IAmb	02 20 03.3	
	comp=Z,25nm,1.4s						
PSA00	Pilbara Seismi	26.30	224	P	P	02 19 48.5	-2.0
STKA	Stephens Creek	28.86	176	P	P	02 20 13.8	+0.5
	comp=Z,1.6nm,0.6s,baz=340,slow=12,SNR=3.8						
STKA				LR	LR	02 33 03.6	
	comp=Z,510nm,18.1s,baz=360,slow=39						
	comp=Z,1.6nm,0.6s						
JOW	Kunigami	31.40	341	LR	LR	02 31 53.6	
	comp=Z,102nm,19.0s,baz=112,slow=34						
DZM	Mont Dzumac	32.67	128	LR	LR	02 34 06.1	
	comp=Z,67nm,18.2s,baz=36,slow=36						

MDSI	Maura Dua	34.85	266	P	P	02 21 06.3	+0.2
	comp=Z,25nm,1.4s,comp=Z,1µm						
JHJ	Hachijo jima 2	35.89	1	LR	LR	02 32 30.9	
	comp=Z,126nm,19.0s,baz=140,slow=30						
NWAO	Narrogin (SRO)	36.15	212	LR	LR	02 37 15.8	
	comp=Z,694nm,18.2s,baz=163,slow=38						
JNU	Nakatsue	36.72	348	LR	LR	02 34 23.0	
	comp=Z,72nm,20.2s,baz=152,slow=33						
NJ2	Nanjing	39.76	333	eP	P	02 21 49.3	+1.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KSRS	Korea Array	41.52	347	LR	LR	02 40 03.4	
	comp=Z,48nm,18.8s,baz=120,slow=37						
MLSI	Meulaboh, Aceh	43.23	279	P	P	02 22 27.0	+11
CMAR	Chiang Mai Arr	44.87	300	P	P	02 22 28.5	-0.8
	comp=Z,1.1nm,0.3s,baz=126,slow=6.6,SNR=6.4						
	comp=Z,1.1nm,0.3s						
CMAR	Chiang Mai Arr	44.87	300	P	P	02 22 28.3	-1.0
LYN	LuoYang	44.92	328	eP	P	02 22 29.1	-0.3
CHTO	Chiang Mai	45.02	300	P	P	02 22 29.5	-1.0
PZH	PanZhiHua	46.46	311	P	P	02 22 45.6	+3.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,110nm,5.2s						
XAN	Xi'an	46.49	325	P	P	02 22 39.4	-2.5
XAN				pP	pP	02 22 44.3	-10
XAN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ASAJ	Asahikawa	46.97	3	LR	LR	02 40 00.7	
	comp=Z,43nm,21.8s,baz=138,slow=33						
USRK	Ussuriysk Ar.	47.38	353	LR	LR	02 39 12.4	
	comp=Z,92nm,21.0s,baz=163,slow=32						
BJT	Baijiatuau	47.65	336	P	P	02 22 49.4	-1.4
BJT				IAmb	IAmb	02 22 54.0	
	comp=Z,5.7nm,0.9s						
BJI	Beijing	47.67	336	P	P	02 22 53.7	+2.8
BJI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MDJ	Mudanjiang	48.12	351	P	P	02 22 57.1	+2.8
MDJ				PcP	PcP	02 24 24.5	+3.1
MDJ				PP	PP	02 24 48.5	+1.5
MDJ				PcS	PcS	02 28 19.5	+2.5
MDJ	Mudanjiang	48.12	351	SS	SS	02 33 24.1	+4.5
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,140nm,6.5s						
TUWZ	Tuamarina	49.46	146	P	P	02 23 05.5	+0.8
RPZ	Rata Peaks	49.49	150	LR	LR	02 42 52.1	
	comp=Z,66nm,20.7s,baz=313,slow=34						
AFI	Afiamalu	49.72	106	LR	LR	02 44 17.6	
	comp=Z,75nm,18.0s,baz=73,slow=36						
HHC	Hu-ho-hao-te	50.32	333	eP	P	02 23 15.8	+4.5
HHC				pmax	pmax		
	comp=Z,22nm,0.8s						
HHC				pmax	pmax		
	comp=Z,270nm,5.6s						
KLR	Kul'dur	52.37	354	LR	LR	02 42 38.7	
	comp=Z,65nm,20.3s,baz=209,slow=32						
SHL	Shillong	53.77	305	P	P	02 23 35.6	-1.8
SHL				IAmb	IAmb	02 23 37.1	
	comp=Z,9.1nm,1.4s						
HEH	HeiHe	53.95	351	eP	P	02 23 24.1	-14
PETK	Petropavlovsk-	58.02	13	LR	LR	02 45 18.9	
	comp=Z,56nm,21.9s,baz=220,slow=32						
SONM	Songino Array	58.10	335	LR	LR	02 50 17.5	
	comp=Z,103nm,18.8s,baz=172,slow=37						
PALK	Pallekele	59.12	280	LR	LR	02 51 33.7	
	comp=Z,26nm,20.7s,baz=238,slow=38						
RAR	Rarotonga	62.10	112	LR	LR	02 51 21.1	
	comp=Z,11nm,18.2s,baz=196,slow=36						
SHEM	Shemya Is, Ala	62.83	23	LR	LR	02 47 08.6	
	comp=Z,66nm,20.4s,baz=86,slow=31						
MA2	Magadan	63.03	7	LR	LR	02 49 26.1	
	comp=Z,26nm,21.9s,baz=112,slow=34						
YAK	Yakutsk	65.21	355	LR	LR	02 52 24.5	
	comp=Z,43nm,18.8s,baz=103,slow=35						
WMQ	Urumqi	65.43	322	eP	P	02 24 59.6	+2.3
MK31	Makanchi Array	70.20	322	P	P	02 25 26.2	-1.0
MK31				IAmb	IAmb	02 25 27.7	
	comp=Z,4.1nm,1.1s						
MKAR	Makanchi Array	70.20	322	P	P	02 25 26.8	-0.4
	comp=Z,3.7nm,1.0s,baz=104,slow=9.0,SNR=19						
	comp=Z,3.7nm,1.0s						
MKAR	Makanchi Array	70.20	322	P	P	02 25 26.7	-0.6
MAKZ	Makanchi	70.40	322	P	P	02 25 27.8	-0.7
MAKZ				IAmb	IAmb	02 25 28.8	
	comp=Z,4.2nm,0.8s						
KSH	Kashi	71.52	313	P	P	02 25 36.4	+0.9
KSH				pP	pP	02 25 46.8	-2.1
KSH				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ZALV	Zalesovo Beam	72.33	330	P	P	02 25 38.5	-1.4
	comp=Z,0.4nm,0.4s,baz=105,slow=3.4,SNR=2.6						
ZALV				LR	LR	02 59 34.5	
	comp=Z,18nm,18.6s,baz=86,slow=38						
	comp=Z,0.4nm,0.4s						
ZALV	Zalesovo Beam	72.33	330	P	P	02 25 38.7	-1.1
AAK	Ala-Archa	73.63	316	LR	LR	03 01 01.8	
	comp=Z,16nm,18.6s,baz=150,slow=38						
VNDA	Vanda	75.50	175	P	P	02 25 59.3	+1.3
	comp=Z,6.8nm,0.8s,baz=342,slow=5.4,SNR=7.3						
VNDA				LR	LR	02 58 00.6	
	comp=Z,125nm,19.5s,baz=309,slow=35						
	comp=Z,6.8nm,0.8s						
GAR	Garm	75.53	311	P	P	02 25 58.2	-0.9
KK31	Karatay Array	76.56	316	P	P	02 26 03.7	-1.0
KK31				IAmb	IAmb	02 26 15.1	
	comp=Z,2.8nm,1.4s						
KKAR	Karatay Array	76.56	316	P	P	02 26 03.5	-1.3
BRVK	Borovoye	79.79	325	P	P	02 26 21.0	-1.4
BRVK				IAmb	IAmb	02 26 22.6	
	comp=Z,3.5nm,0.9s						
OHAK	Old Harbor	80.59	31	P	P	02 26 26.4	-0.1
KDAK	Kodiak Island	81.14	30	LR	LR	02 57 44.4	
	comp=Z,92nm,21.8s,baz=260,slow=32						
MAW	Mawson	82.03	202	LR	LR	03 01 11.8	
	comp=Z,96nm,18.6s,baz=68,slow=34						
GEYT	Alibeck	84.68	308	P	P	02 26 46.6	-1.7
	comp=Z,1.7nm,0.6s,baz=88,slow=3.3,SNR=4.4						
	comp=Z,1.7nm,0.6s						
ABKAR	Akbulak array	85.14	320	P	P	02 26 50.4	+0.1
IL31		85.91	24	P	P	02 26 52.7	-1.1
IL31				IAmb	IAmb	02 26 52.9	
	comp=Z,2.3nm,1.1s						
ILAR	Eielson Array	85.91	24	P	P	02 26 51.5	-2.3
	comp=Z,0.9nm,0.8s,baz=260,slow=5.0,SNR=11						
ILAR				LR	LR	03 07 58.8	
	comp=Z,18nm,18.9s,baz=258,slow=38						
	comp=Z,0.9nm,0.8s						
ILAR	Eielson Array	85.91	24	P	P	02 26 52.4	-1.4
QSPA	South Pole Qui	86.98	180	P	P	02 26 59.3	0.0
BMAR	Burnt Mountain	87.50	22	P	P	02 27 01.4	-0.2
INK	Inuvik	91.77	22	LR	LR	03 03 50.2	
	comp=Z,50nm,21.2s,baz=320,slow=32						
BBB	Bella Bella	94.05	38	LR	LR	03 05 00.4	
	comp=Z,28nm,18.8s,baz=68,slow=32						
YBH	Yreka Blue Hor	98.10	48	LR	LR	03 04 31.5	
	comp=Z,83nm,20.5s,baz=304,slow=31						
SPITS	Spitsbergen Ar	99.29	350	LR	LR	03 11 57.6	
	comp=Z,31nm,21.9s,baz=10,slow=35						
DBIC	Dimbokro	143.87	277	PKP	PKPab	02 33 47.5	0.0
	comp=Z,0.9nm,0.5s,baz=101,slow=22,SNR=3.2						
CPUP	Villa Florida	146.84	152	PKPbc	PKPdf	02 33 55.9	+0.7
	comp=Z,1.3nm,0.8s,baz=216,slow=3.9,SNR=3.5						
LPAZ	La Paz	147.01	126	PKPbc	PKPdf	02 33 57.3	+0.8
	comp=Z,1.5nm,0.7s,baz=226,slow=5.3,SNR=4.9						

WEL ***12*** *02:26:38.7±0.4, 43°S±3°×17°3E±°, h13^{km}±4^{km}, M3.0/14, ML3.2/18, MLv3.0/14, Error ellipse: s-maj=0.0km s-min=0.0km az=122.1, confirmed*

NOU ***12*** *02:26:41.6, 42°.35S×171°.57E, h120^{km}, MLv4.0/7, South Island, New Zealand*

ISC 12 02:26:37.7±1.1**, 42°.63S**±0°.02×**172°.91E**±0°.03**, h8**^{km}±11^{km}**, n50, σ1^{s}.51**/56**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	Greta Valley S	0.35	165	P	Pg	02 26 45.9	+1.2
GVZ				S	Sg	02 26 51.7	+2.3
LTZ	Lake Taylor	0.50	251	P	Pn	02 26 49.8	-1.5
LTZ				S	Sb	02 26 57.9	+1.7
KHZ	Kahutara	0.51	66	P	Pg	02 26 47.7	+0.1
AMCZ	Amberley	0.58	199	P	Pb	02 26 51.1	+0.9
THZ	Tophouse	0.86	360	P	Pn	02 26 55.2	-1.1
OXZ	Oxford	0.95	222	P	Pn	02 26 57.3	-0.2
OXZ				S	Sn	02 27 11.1	-0.1
INZ	Inchbonnie	1.09	264	P	Pn	02 27 00.2	+0.9
MQZ	McQueen's Vall	1.10	190	P	Pg	02 26 57.9	-0.9
BSWZ	Blackbirch Sta	1.16	39	P	Pg	02 26 59.9	0.0
BSWZ				S	Sn	02 27 17.0	+0.7
DSZ	Denniston Nort	1.20	317	P	Pn	02 27 02.4	+1.5
DSZ				S	Sn	02 27 20.2	+2.7
MRNZ	Matariki Terra	1.23	355	P	Pn	02 27 01.7	+0.4
RACZ	Rakaia	1.24	207	P	Pb	02 27 00.9	-0.5
RACZ				S	Sg	02 27 17.3	-0.3
AKCZ	Akaroa Harbour	1.25	180	P	Pn	02 27 00.2	-1.4
MHCZ	Mount Hutt	1.34	227	P	Pg	02 27 02.7	-0.7
TUWZ	Tuamarina	1.42	33	P	Pn	02 27 04.2	+0.3
NNZ	Nelson	1.45	14	P	Pg	02 27 05.1	-0.5
NNZ				S	Sg	02 27 25.9	+1.6
WACZ	Wakanui South	1.53	210	P	Pn	02 27 05.2	-0.2
TKNZ	Takaka Hill	1.59	1	P	Pg	02 27 07.4	-0.8
TKNZ				S	Sg	02 27 29.2	+0.3
WVZ	Waitaha Valley	1.66	254	P	Pg	02 27 08.6	-1.0
RPZ	Rata Peaks	1.74	231	P	Pb	02 27 08.7	-1.3
RPZ	Rata Peaks	1.74	231	P	Pn	02 27 08.4	+0.1
TCW	Tory Channel	1.74	36	P	Pn	02 27 08.1	-0.2
QRZ	Quartz Range	1.82	351	P	Pg	02 27 10.9	-1.7
QRZ	Quartz Range	1.82	351	P	Pg	02 27 10.6	-2.0
ARCZ	Arundel	1.83	223	P	Pn	02 27 09.4	-0.1
DUWZ	D'Urville Isla	1.97	23	P	Pn	02 27 12.5	+1.0
GCSZ	Gaunt Creek Bo	2.02	249	P	Pb	02 27 13.7	-1.0
PLWZ	Palliser	2.04	60	P	Pn	02 27 10.9	-1.5
CAW	Cannon Point	2.21	47	P	Pn	02 27 13.6	-1.2
TMZ	Timaru	2.24	218	P	Pn	02 27 15.0	-0.2
KIW	Kapiti Island	2.31	41	P	Pn	02 27 15.7	-0.5
MTW	Mount Morrison	2.43	54	P	Pn	02 27 15.8	-2.0
FOZ	Fox Glacier	2.44	247	P	Pb	02 27 19.6	-2.3
OGWZ	Otaki Gorge	2.48	44	P	Pn	02 27 17.3	-1.1
HOWZ	Holdsworth Sta	2.60	49	P	Pn	02 27 18.6	-1.6
LBZ	Lake Benmore	2.65	227	P	Pn	02 27 21.4	+0.5
MRZ	Mangatainoka R	2.80	46	P	Pn	02 27 21.3	-1.6
ODZ	Otahua Downs	2.92	213	P	Pn	02 27 23.5	-1.1
ODZ	Otahua Downs	2.92	213	P	Pn	02 27 22.3	-2.3
JCZ	Jackson Bay	3.34	243	P	Pn	02 27 24.4	-6.0
KHEZ	Kahui Hut	3.43	14	P	Pb	02 27 35.8	-3.0
NBEZ	Newall Road No	3.43	13	P	Pn	02 27 34.3	+2.8
NEZ	North Egmont	3.47	15	P	Pb	02 27 36.7	-2.8
PKE	Pukeiti	3.52	14	P	Pn	02 27 36.1	+3.2
VRZ	Vera Road	3.77	22	P	Pn	02 27 38.0	+1.9
NGZ	Ngauruhoe	4.00	32	P	Pn	02 27 39.9	+0.3
HIZ	Hauiti	4.37	20	P	Pn	02 27 47.2	+2.8
HIZ	Hauiti	4.37	20	P	Pn	02 27 45.8	+1.4
BKZ	Black Stump Fm	4.39	39	P	Pb	02 27 55.1	-0.1
MBAZ	Motutapu North	6.05	15	P	Pn	02 28 13.0	+5.5

IDC ***12*** *02:39:29.6±7.5, 30°.58S×178°.87W, h0^{km}, mb3.4/2, mbtmp3.4/2, Error ellipse: s-maj=319.1km s-min=56.0km az=156.0*

WEL ***12*** *02:40:12.2±0.6, 32°S±12°×17°9W±3°1, h327^{km}±8^{km}, M4.4/13, mB4.7/11, ML5.0/6, MLv5.2/13, Mw(mB)4.0/11, Error ellipse: s-maj=0.0km s-min=0.0km az=110.7, confirmed*

ISC 12 02:40:10.5±0.9**, 31°.5S**±0°.1×**179°.0W**±0°.3**, h350**^{km}**, n43, σ1^{s}.56**/60**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.36	23	P	Pn	02 41 04.6	0.0
GLKZ				S	S	02 41 45.7	-2.3
RIZ	Raoul Island	2.38	23	P	Pn	02 41 05.5	+0.8
RIZ				S	S	02 41 48.1	-0.1
HAZ	Te Kaha	6.84	202	P	Pn	02 41 52.9	+2.0
HAZ				S	S	02 43 12.1	-0.3
PKGZ	Pakihiroa	6.87	200	P	Pn	02 41 55.6	+4.3
PKGZ				S	S	02 43 13.6	+0.4
PUZ	Puketiti	6.99	198	P	Pn	02 41 55.0	+2.3
PUZ				S	S	02 43 16.2	+0.5
TWGZ	Tauwhareparae	7.16	200	P	Pn	02 41 57.4	+2.6
TWGZ				S	S	02 43 21.9	+2.4
CNGZ	Carnagh Statio	7.39	197	P	Pn	02 41 59.8	+2.5
MWZ	Matawai	7.45	202	P	Pn	02 41 57.9	-0.2
MWZ				S	S	02 43 26.0	+0.4
TKGZ	Te Karaka	7.45	200	P	Pn	02 42 00.9	+2.9
TKGZ				S	S	02 43 23.9	-1.6
URZ	Urewera	7.52	204	P	Pn	02 41 58.4	-0.4
URZ				S	S	02 43 25.5	-1.6
RAGZ	Rawiri	7.63	202	P	Pn	02 42 01.2	+1.0
RAGZ				S	S	02 43 29.0	-0.6
RIGZ	Rimuhau	7.72	199	P	Pn	02 42 03.0	+1.8
RIGZ				S	S	02 43 30.1	-1.4
MUGZ	Murupara	7.83	205	P	Pn	02 42 03.6	+1.0
MUGZ				S	S	02 43 31.9	-2.0
SNGZ	Shannon Statio	7.91	201	P	Pn	02 42 02.2	-1.4
SNGZ				S	S	02 43 35.6	-0.1
KNZ	Kokohu	8.04	199	P	Pn	02 42 03.9	-1.0
KNZ				S	S	02 43 36.6	-1.7
MHGZ	Mahia Peninsul	8.10	197	P	P	02 42 08.7	0.0
RAHZ	Arahi	8.12	202	P	Pn	02 42 04.6	-1.3
RAHZ				S	S	02 43 37.8	-2.3
MTHZ	Maungataniwha	8.14	204	P	Pn	02 42 08.4	+2.1
MTHZ				S	S	02 43 39.1	-1.6
WHHZ	Waihua	8.22	201	P	P	02 42 10.5	+0.4
WHHZ				S	S	02 43 41.0	-1.3
NMHZ	Naumai	8.37	203	P	Pn	02 42 07.5	-1.6
NMHZ				S	S	02 43 45.0	-0.8
ARHZ	Aropaoanui	8.46	202	P	Pn	02 42 08.7	-1.3
ARHZ				S	S	02 43 46.5	-1.1
BKZ	Black Stump Fm	8.54	204	P	Pn	02 42 09.2	-1.9
HIZ	Hauiti	8.67	214	P	P	02 42 17.2	+2.1
MCHZ	McNeill Hill	8.72	203	P	Pn	02 42 15.0	+1.9
NTVZ	North Tongarir	8.79	208	P	Pn	02 42 15.5	+1.4
OTVZ	Oturere	8.85	208	P	Pn	02 42 16.5	+1.6
SNVZ	South Ngauruho	8.88	208	P	Pn	02 42 16.6	+1.4
NGZ	Ngauruhoe	8.89	208	P	P	02 42 17.5	-0.2
BHHZ	Black Hill Sta	8.98	205	P	Pn	02 42 15.5	-0.8
KAHZ	Kahuranaki	8.98	201	P	Pn	02 42 14.7	-1.6
PXZ	Pawanui	9.21	200	P	Pn	02 42 18.4	-0.4
PNHZ	Pukenui	9.31	204	P	Pn	02 42 18.7	-1.4
WPHZ	Waipukurau	9.37	202	P	Pn	02 42 22.2	+1.4
PRHZ	Porangahau	9.49	201	P	Pn	02 42 21.6	-0.7
TSZ	Takapari Road	9.52	204	P	Pn	02 42 22.8	+0.1
DVHZ	Dannevirke	9.67	203	P	Pn	02 42 23.3	-1.1
BFZ	Birch Farm	9.99	201	P	Pn	02 42 25.9	-2.3
TIWZ	Tintock	10.19	203	P	Pn	02 42 30.6	-0.1
OGWZ	Otaki Gorge	10.47	205	P	Pn	02 42 33.3	-0.7
KIW	Kapiti Island	10.61	206	P	Pn	02 42 35.5	-0.1
ASAR	Alice Springs	42.23	269	P	P	02 47 25.5	-5.3
	0.3nm,0.8s,baz=108,slow=7.3,SNR=1.8						
	0.3nm,0.8s						
WRA	Warramunga Arr	43.31	274	P	P	02 47 33.9	-5.5
	0.2nm,0.2s,baz=111,slow=8.0,SNR=6.6						
	0.2nm,0.2s						
FINES	FINESS Array B	145.82	339	PKPbc	PKPdf	02 59 06.8	-0.3
	1.5nm,0.4s,baz=65,slow=4.2,SNR=41						

IDC 12 02:49:09.2±10.0**, 20°.85S×179°.63W, h467**^{km}±61^{km}**, mb3.0**/4**, mbtmp3.8**/5**, Error ellipse: s-maj=231.1km s-min=31.8km az=143.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.80	324	P	P	02 50 23.8	-0.2
	4.5nm,0.4s,baz=72,slow=20,SNR=11						
CTA	Charters Tower	31.94	265	P	P	02 54 57.0	+1.5
	1.8nm,0.4s,baz=79,slow=10,SNR=2.0						
	1.8nm,0.4s						
ASAR	Alice Springs	42.96	257	P	P	02 56 26.0	-0.1
	0.9nm,0.6s,baz=96,slow=7.9,SNR=18						
	0.9nm,0.6s						
WRA	Warramunga Arr	43.05	263	P	P	02 56 26.0	-0.8
	0.5nm,0.5s,baz=98,slow=7.5,SNR=21						
	0.5nm,0.5s						
ILAR	Eielson Array	89.00	13	P	P	03 01 12.9	+0.1
	0.3nm,0.8s,baz=211,slow=4.7,SNR=2.2						
	0.3nm,0.8s						

IDC 12 02:49:55.3±6.7**, 32°.10S×179°.42E, h520**^{km}±92^{km}**, mb2.9**/3**, mbtmp3.9**/4**, Error ellipse: s-maj=119.3km s-min=41.8km az=1.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.43	196	P	P	02 51 37.7	+1.3
	15nm,0.4s,baz=17,slow=3.1,SNR=18						
URZ				S	S	02 52 57.7	-1.6
	25nm,1.0s,baz=72,slow=6.4,SNR=2.1						
STKA	Stephens Creek	31.97	260	P	P	02 55 40.0	+1.5
	1.4nm,0.6s,baz=108,slow=14,SNR=3.7						
	1.4nm,0.6s						
ASAR	Alice Springs	40.85	270	P	P	02 56 51.6	-0.2
	0.5nm,0.6s,baz=103,slow=7.5,SNR=10						
	0.5nm,0.6s						
WRA	Warramunga Arr	42.00	275	P	P	02 57 00.1	-0.9
	0.9nm,0.5s,baz=116,slow=7.4,SNR=9.6						
	0.9nm,0.5s						
FINES	FINESS Array B	145.92	337	PKPbc	PKPdf	03 08 34.9	+0.9
	1.5nm,0.9s,baz=30,slow=4.6,SNR=4.0						

IDC ***12*** *03:32:09.7±6.5, 20°.20N×121°.16E, h0^{km}, mb3.1/3, mbtmp3.1/3, Error ellipse: s-maj=563.4km s-min=30.1km az=61.0*

TAP ***12*** *03:32:27.8, 21°.06N×122°.22E, h154^{km}, ML3.7, D*

MAN ***12*** *03:32:28.0, 20°.79N×122°.07E, h146^{km}, mb4.1, ML2.8, MS2.5*

ISC 12 03:32:25.4±1.0**, 20°.91N**±0°.03×**122°.13E**±0°.08**, h166**^{km}±7^{km}**, n70, σ1^{s}.41**/123**, mb2.9**/3**, 3C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	Basco	0.49	198	⇑iP	Pn	03 32 48.8	+0.3
BBP				eS	Sn	03 33 05.9	-0.3
LYUB	Lan-yu	1.20	335	P	Pn	03 32 54.8	+1.4
	baz=328						
LYUB				S	Sn	03 33 12.4	-2.6
	baz=328						
LAY	Lan-yu	1.25	334	S	Sn	03 33 13.4	-2.4
	baz=328						
TSEB	Hengchuen, Pin	1.51	311	P	Pn	03 32 58.8	+2.5
	baz=298						
TSEB				iS	Sn	03 33 21.5	+1.4
	baz=298						
TWKBT	Hengchun	1.60	310	P	Pn	03 32 59.2	+2.0
	baz=300						
TWKBT				S	Sn	03 33 22.2	+0.4
	baz=300						
TWK1	Hengchun	1.61	310	iP	Pn	03 32 58.4	+1.1
	baz=300						
TWK1				iS	Sn	03 33 21.8	-0.1
	baz=300						
SMST	Manzhou Townsh	1.64	313	P	Pn	03 32 58.9	+1.3
	baz=312						
SMST				S	Sn	03 33 21.8	-0.6
	baz=312						
HEN	Hengchun	1.69	310	iS	Sn	03 33 23.8	+0.3
	baz=304						
CICP	Calayan Island	1.75	201	⇓iP	Pn	03 32 59.0	+0.2
CICP				iS	Sn	03 33 23.3	-1.3
TAWH	Dawu Township	1.83	321	P	Pn	03 33 00.9	+1.2
	baz=319						
TAWH				S	Sn	03 33 24.8	-1.3
	baz=319						
LDUT	Ludao	1.86	341	P	Pn	03 33 01.5	+1.6
	baz=341						
LDUT				S	Sn	03 33 24.9	-1.9
	baz=341						
EAST	Anshuo	1.89	321	iP	Pn	03 33 01.4	+1.1
	baz=320						
EAST				iS	Sn	03 33 24.7	-2.7
	baz=320						
ECL	Taimali	2.00	327	P	Pn	03 33 02.4	+0.9
	baz=318						
ECL				iS	Sn	03 33 27.2	-2.3
	baz=318						
SCZT	Fangliau	2.02	316	iP	Pn	03 33 03.6	+1.9
	baz=312						
SCZT				S	Sn	03 33 29.8	-0.2
	baz=312						
TWGBT	Beinan	2.13	333	P	Pn	03 33 03.9	+0.9
	baz=322						
TWGBT				S	Sn	03 33 30.0	-2.3
	baz=322						
TWG	Pinlang	2.14	333	iP	Pn	03 33 03.9	+0.8
	baz=322						
TWG				iS	Sn	03 33 30.0	-2.3
	baz=322						
EDH	Donghe	2.19	340	P	Pn	03 33 04.7	+1.0
	baz=340						
EDH				S	Sn	03 33 33.0	-0.5
	baz=340						
MASBT	Mashibuluo	2.19	321	P	Pn	03 33 04.8	+1.1
	baz=317						
MASBT				S	Sn	03 33 31.8	-1.6
	baz=317						
LONT	Longtian	2.19	335	P	Pn	03 33 03.8	+0.1
	baz=324						
LONT				S	Sn	03 33 32.3	-1.2
	baz=324						
TSMG	Majia	2.26	323	S	Sn	03 33 32.5	-2.2
	baz=318						
SSD	Sandimen	2.30	323	S	Sn	03 33 34.4	-1.2
	baz=319						
EHD	Haiduan	2.39	339	P	Pn	03 33 05.8	-0.2
	baz=330						
EHD				S	Sn	03 33 35.7	-1.8
	baz=330						
FULB	Fuli	2.41	341	P	Pn	03 33 07.1	+0.9
	baz=341						
FULB				S	Sn	03 33 36.5	-1.5
	baz=341						
TWM1	Shoushan	2.48	321	iP	Pn	03 33 09.4	+2.3
	baz=324						
TWM1				S	Sn	03 33 39.7	+0.2
	baz=324						
SCST	Cishan	2.48	323	P	Pn	03 33 08.2	+1.0
	baz=319						
SCST				S	Sn	03 33 38.7	-0.9
	baz=319						
SLGT	Liugui	2.49	327	P	Pn	03 33 08.8	+1.6
	baz=323						
SLGT				S	Sn	03 33 39.7	+0.1
	baz=323						
ELDTW	Lidau	2.49	336	iP	Pn	03 33 09.0	+1.6
	baz=332						
ELDTW				S	Sn	03 33 37.4	-2.5
	baz=332						
EYUL	Yuli	2.54	343	P	Pn	03 33 09.6	+1.8
	baz=342						
EYUL				S	Sn	03 33 40.0	-0.8
	baz=342						
PACPP	Pamplona Cagay	2.54	197	⇑eP	Pn	03 33 08.7	+0.7
PACPP				eS	Sn	03 33 39.2	-1.6
STYH	Taoyuan	2.58	331	P	Pn	03 33 09.2	+0.9
	baz=332						
STYH				S	Sn	03 33 41.2	-0.3
	baz=332						
YULB	Yu-li	2.59	343	P	Pn	03 33 08.6	+0.2
	baz=343						
YULB				S	Sn	03 33 39.6	-2.2
	baz=343						
SGST	Jiashian	2.59	327	iS	Sn	03 33 40.8	-1.1
	baz=323						
HGSD	Ruisui	2.65	346	P	Pn	03 33 10.1	+0.9
	baz=345						
HGSD				S	Sn	03 33 42.6	-0.5
	baz=345						
SGCP	Gonzaga	2.66	182	⇓eP	Pn	03 33 10.8	+1.5
SGCP				eS	Sn	03 33 42.2	-1.0
EHY	Hungye	2.69	344	iP	Pn	03 33 09.9	+0.3
	baz=333						
EHY				iS	Sn	03 33 42.7	-1.3
	baz=333						
CHN1	Nanshi	2.71	327	iP	Pn	03 33 11.1	+1.2
	baz=324						
CHN1				iS	Sn	03 33 43.2	-1.2
	baz=324						
TPUB	Ta-pu	2.76	330	P	Pn	03 33 11.2	+0.7
	baz=319						
TPUB				S	Sn	03 33 43.3	-2.2
	baz=319						
TWK	Hsinying	2.80	327	iP	Pn	03 33 12.2	+1.2
	baz=324						
TWK				iS	Sn	03 33 44.6	-1.8
	baz=324						
CHN4	Tsaushan	2.82	330	iP	Pn	03 33 11.7	+0.5
	baz=320						

CHN4				eS	Sn	03 33 45.6	-1.2
	baz=320						
ALS	Alishan	2.87	335	S	Sn	03 33 46.2	-2.0
	baz=323						
SCLT	Jiali	2.88	322	i S	Sn	03 33 47.7	-0.4
	baz=325						
WCKO	Fanlu	2.89	331	S	Sn	03 33 46.4	-1.9
	baz=321						
TSCK	Chigu Township	2.92	320	P	Pn	03 33 13.6	+1.2
	baz=309						
TSCK				S	Sn	03 33 47.8	-1.3
	baz=309						
ESL	Shilin	2.96	348	P	Pn	03 33 14.0	+1.0
	baz=349						
VWDT	VWDT	2.98	342	P	Pn	03 33 15.0	+1.9
	baz=343						
VWDT				S	Sn	03 33 47.8	-2.4
	baz=343						
ICHU	Yijhu	2.98	325	P	Pn	03 33 13.3	+0.1
	baz=322						
ICHU				S	Sn	03 33 48.2	-2.2
	baz=322						
CHN5	Tsauling	2.99	334	i P	Pn	03 33 14.2	+0.7
	baz=323						
CHN5				i S	Sn	03 33 49.8	-1.0
	baz=323						
CHY	Chiayi	3.02	329	S	Sn	03 33 50.0	-1.2
	baz=320						
SSLB	Suanglung	3.06	339	P	Pn	03 33 14.8	+0.5
	baz=328						
SSLB				S	Sn	03 33 50.8	-1.5
	baz=328						
WDLH	Douliu	3.13	332	S	Sn	03 33 52.8	-1.0
	baz=329						
WSL	Shuilin Townsh	3.14	326	P	Pn	03 33 15.1	-0.1
	baz=323						
WSL				S	Sn	03 33 51.3	-2.6
	baz=323						
APYP	Conner	3.15	196⇑	eP	Pn	03 33 16.4	+1.1
APYP				eS	Sn	03 33 52.8	-1.2
OWD	Renai	3.16	344	P	Pn	03 33 16.6	+1.0
	baz=341						
OWD				S	Sn	03 33 53.5	-1.0
	baz=341						
SMLT	Sun Moon Lake	3.17	339	P	Pn	03 33 16.2	+0.5
	baz=328						
SMLT				S	Sn	03 33 53.4	-1.4
	baz=328						
WJS	Zhushan	3.18	336	P	Pn	03 33 17.1	+1.5
	baz=333						
WJS				S	Sn	03 33 54.3	-0.5
	baz=333						
WTK	Tuku	3.20	330	S	Sn	03 33 54.0	-1.3
	baz=322						
TYC	Yuchr	3.20	339	i P	Pn	03 33 16.6	+0.6
	baz=328						
TYC				i S	Sn	03 33 54.7	-0.6
	baz=328						
WUSB	Renai	3.21	343	P	Pn	03 33 17.4	+1.2
	baz=345						
WUSB				S	Sn	03 33 55.8	+0.2
	baz=345						
CHGB	Renai	3.26	344	P	Pn	03 33 18.3	+1.4
	baz=348						
CHGB				S	Sn	03 33 55.6	-1.3
	baz=348						
WDGT	Dungji	3.27	316	i P	Pn	03 33 17.2	+0.4
	baz=313						
WDGT				S	Sn	03 33 54.4	-2.5
	baz=313						
WHF	Hehuan Shan	3.32	346	P	Pn	03 33 19.3	+1.5
	baz=350						
WCS	Beigang Elemen	3.33	340	P	Pn	03 33 18.5	+1.0
	baz=329						
WCS				S	Sn	03 33 58.0	-0.1
	baz=329						
ETLH	Xiulin Townshi	3.34	350	P	Pn	03 33 19.5	+1.8
	baz=348						
WRL	Guolierlin Hig	3.39	332	P	Pn	03 33 18.3	0.0
	baz=329						
WRL				S	Sn	03 33 57.7	-1.9
	baz=329						
VCHM	Qimei	3.39	313	P	Pn	03 33 19.1	+0.8
	baz=310						
VCHM				S	Sn	03 33 57.6	-2.0
	baz=310						
PHUB	P'eng-hu	3.51	318	P	Pn	03 33 19.5	-0.3
	baz=321						
PHUB				S	Sn	03 33 59.1	-3.1
	baz=321						
WHP	Taichung City	3.53	342	P	Pn	03 33 20.8	+0.7
	baz=331						
WHP				S	Sn	03 34 03.4	+0.6
	baz=331						
MKAR	Makanchi Array	41.32	318	P	P	03 39 56.4	+1.6
	0.2nm,0.5s,baz=103,slow=7.5,SNR=2.7						
	0.2nm,0.5s						
WRA	Warramunga Arr	42.32	163	P	P	03 40 02.0	-1.1
	0.1nm,0.4s,baz=341,slow=8.9,SNR=6.3						
	0.1nm,0.4s						
ASAR	Alice Springs	45.77	165	P	P	03 40 30.0	-0.6
	0.2nm,0.6s,baz=347,slow=7.6,SNR=1.6						
	0.2nm,0.6s						

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*IDC **12** 04:03:18.9±0.9, 16°.39N×98°.42W, h0^{km}, mb4.0/13, mbtmp4.0/16, ML3.6/3, MS3.7/41, Error ellipse: s-maj=22.1km s-min=13.9km az=31.0*
*MEX **12** 04:03:19.7±0.9, 16°.03N×98°.64W, h16^{km}±15^{km}, MD4.8*
*NEIC **12** 04:03:21.3±2.1, 16°.16N±0°.04×98°.47W±0°.04, h23^{km}±6^{km}, mb4.5/306, Md4.8/182(MEX), Error ellipse: s-maj=7.1km s-min=4.4km az=216.0*
ISC 12 04:03:18.2±1.0, **16°.08N**±0°.03×**98°.59W**±0°.02, **h6**^{km}±6^{km}, **n694,** σ1^{s}**94**/747, **mb4.6**/122, **MS3.8**/40, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.54	55		Pg	04 03 29.4	+0.8
PNIG					Sg	04 03 37.2	+1.5
PNIG	Pinotepa	0.54	55	i P	Pg	04 03 29.4	+0.8
PNIG				i S	Sg	04 03 37.2	+1.5
MGIG	Malinaltepec	1.14	358		Pn	04 03 38.2	-2.7
MGIG					Sb	04 03 53.9	-1.8
MGIG	Malinaltepec	1.14	358	i P	Pn	04 03 38.2	-2.7
MGIG				i S	Sb	04 03 53.9	-1.8
YOIG	Yosondua	1.26	52		Pn	04 03 40.5	-2.1
YOIG					Sb	04 04 00.0	+0.8
YOIG	Yosondua	1.26	52	i P	Pn	04 03 40.5	-2.1
YOIG				i S	Sb	04 04 00.0	+0.8
DAIG	Los Arroyos	1.38	313		Pn	04 03 40.4	-3.5
DAIG					Sn	04 03 56.0	-6.5
DAIG	Los Arroyos	1.38	313	i P	Pn	04 03 40.4	-3.5
DAIG				i S	Sn	04 03 56.0	-6.5
PEIG	Puerto Escondi	1.39	93		Pn	04 03 41.8	-2.4
PEIG					Sn	04 03 58.6	-4.2
PEIG	Puerto Escondi	1.39	93	i P	Pn	04 03 41.8	-2.4
PEIG				i S	Sn	04 03 58.6	-4.2
TXIG	Tlaxiaco	1.41	34	eP	Pn	04 03 42.4	-2.2
TXIG				eS	Sn	04 04 03.1	-0.4
VNTA	La Mica	1.44	305	eP	Pn	04 03 43.5	-1.3
VNTA				eS	Sn	04 04 00.1	-3.9
ACP2	Acapulco	1.47	303		Pn	04 03 41.8	-3.4
ACP2					Sn	04 04 00.1	-4.7
ACP2	Acapulco	1.47	303	i P	Pn	04 03 41.8	-3.4
ACP2				eS	Sn	04 04 00.1	-4.7
TLIG	Tlapa	1.47	1		Pn	04 03 43.2	-2.1
TLIG				Sn	Sn	04 04 03.4	-1.6
TLIG	Tlapa	1.47	1	i P	Pn	04 03 43.4	-2.0
TLIG				i S	Sn	04 04 03.6	-1.3
HMTT	Tlapaneco	1.71	1		Pn	04 03 47.6	-1.0
HMTT					Sn	04 04 08.9	-1.8
HMTT	Tlapaneco	1.71	1	eP	Pn	04 03 47.6	-1.0
HMTT				eS	Sn	04 04 08.9	-1.8
FTIG	Fresnillo de T	1.87	14	eP	Pn	04 03 49.1	-1.7
FTIG				eS	Sn	04 04 15.0	+0.3
CAIG	El Cayaco	1.87	301		Pn	04 03 47.4	-3.3
CAIG					Sn	04 04 15.0	+0.4
CAIG	El Cayaco	1.87	301	eP	Pn	04 03 47.4	-3.3
CAIG				i S	Sn	04 04 15.0	+0.4
HLIG	Huajuapan de L	1.89	23		Pn	04 03 49.3	-2.0
HLIG					Sn	04 04 16.6	+1.1
HLIG	Huajuapan de L	1.89	23	i P	Pn	04 03 49.3	-2.0
HLIG				i S	Sn	04 04 16.6	+1.1
VHO	Vista Hermosa	2.04	61	i P	Pn	04 03 51.8	-1.3
VHO				i S	Sb	04 04 22.0	+0.7
OXIG	Oaxaca	2.04	61		Pn	04 03 51.8	-1.4
OXIG					Sb	04 04 22.0	+0.6
OXBJ	Oaxaca	2.04	61		Pn	04 03 51.9	-1.3
OXBJ	Oaxaca	2.04	61	eP	Pn	04 03 52.1	-1.1
MEIG	Mezcala	2.08	332		Pn	04 03 51.9	-1.8
MEIG					Sn	04 04 21.7	+1.7
MEIG	Mezcala	2.08	332	i P	Pn	04 03 51.9	-1.8
MEIG				i S	Sn	04 04 21.7	+1.7
PANG	Puerto Angel	2.08	101		Pn	04 03 52.5	-1.0
PANG					Sn	04 04 12.2	-7.6
PANG	Puerto Angel	2.08	101	eP	Pn	04 03 52.5	-1.0
PANG				i S	Sn	04 04 12.2	-7.6
ATYC	Atoyac	2.09	303	eP	Pn	04 03 54.9	+1.1
ATYC				eS	Sn	04 04 14.4	-5.7
HUIG	Huatulco	2.41	97		Pn	04 03 56.2	-2.0
HUIG					Sn	04 04 21.8	-6.2
HUIG	Huatulco	2.41	97	i P	Pn	04 03 56.2	-2.0
HUIG				eS	Sn	04 04 21.8	-6.2
PLIG	Platanillo	2.46	339		Pn	04 03 57.8	-1.0
PLIG					Sn	04 04 24.1	-5.2
PLIG	Platanillo	2.46	339	eP	Pn	04 03 57.8	-1.0
PLIG				eS	Sn	04 04 24.1	-5.2
TOIG	Toxpalan	2.48	36		Pn	04 03 59.2	0.0
TOIG					Sn	04 04 20.2	-10
TOIG	Toxpalan	2.48	36	eP	Pn	04 03 59.2	0.0
TOIG				eS	Sn	04 04 33.4	+3.6
TPIG	Tehuac#an	2.60	27		Pn	04 03 59.5	-1.4
TPIG					Sn	04 04 21.3	-12
TPIG	Tehuac#an	2.60	27	eP	Pn	04 03 59.5	-1.4
TPIG				eS	Sn	04 04 21.3	-12
ARIG	Puente Sto Nin	2.75	323		Pn	04 04 01.5	-1.4
ARIG					Sn	04 04 33.6	-3.0
ARIG	Puente Sto Nin	2.75	323	eP	Pn	04 04 01.5	-1.4
ARIG				eS	Sn	04 04 33.6	-3.0
YAIG	Yautepec	2.80	351		Pn	04 04 04.7	+1.1
YAIG					Sn	04 04 29.5	-8.3
YAIG	Yautepec	2.80	351	eP	Pn	04 04 04.7	+1.1
YAIG				eS	Sn	04 04 29.5	-8.3
PET2	Petatlan	2.94	300	eP	Pn	04 04 05.2	-0.2
PET2				eS	Sn	04 04 37.3	-3.7
PHPU	Puebla	2.97	8		Pn	04 04 05.3	-0.8
PHPU					Sn	04 04 39.5	-2.8
PHPU	Puebla	2.97	8	eP	Pn	04 04 05.3	-0.8
PHPU				eS	Sn	04 04 39.5	-2.8
MAVM	Malinalco, Edo	2.98	343	e	Pg	04 04 16.2	+0.8
MAVM				e		04 04 45.1	
AMVM	AMECAMECA	3.04	357		Pn	04 04 10.4	+3.3
AMVM					Sn	04 04 45.1	+1.2
AMVM	AMECAMECA	3.04	357	i P	Pn	04 04 10.4	+3.3
AMVM				eS	Sn	04 04 45.1	+1.2
NEUV	Arroyo Zacate	3.12	58	eP	Pn	04 04 06.4	-1.6
NEUV				eS	Sn	04 04 43.7	-1.9
ZIIG	Zihuatanejo	3.14	299		Pn	04 04 06.8	-1.4
ZIIG					Sn	04 04 45.7	-0.3
ZIIG	Zihuatanejo	3.14	299	eP	Pn	04 04 06.8	-1.4
ZIIG				eS	Sn	04 04 45.7	-0.3
TLVM	San Miguel Top	3.15	350	eP	Pb	04 04 13.2	-1.7
TLVM				eS	Sn	04 04 43.8	-3.1
TEJU	Tejupilco	3.18	332	eP	Pb	04 04 14.2	-1.0
TEJU				eS	Sb	04 04 53.0	-1.3
XCVM	Xochimilco	3.19	351	eP	Pb	04 04 13.7	-1.7
XCVM				eS	Sn	04 04 47.6	-0.1
THVM	De Xico	3.23	354	eP	Pn	04 04 12.5	+2.8
THVM				eS	Sn	04 04 49.2	+0.6
AOVM	Tlapan	3.24	348	i P	Pn	04 04 13.7	+3.6
AOVM				eS	Sn	04 04 46.4	-2.8
UNM	Universidad Na	3.28	350		Pn	04 04 11.3	+0.9
UNM	Universidad Na	3.28	350	eP	Pn	04 04 14.4	+4.1
UNM				eP	Pb	04 04 14.9	-2.0
UNM				eS	Sn	04 04 52.4	+2.6
UNM				eS	Sb	04 04 52.9	-4.3
CUIG	Ciudad Univers	3.28	350		Pn	04 04 14.9	+4.6
CUIG					Sn	04 04 52.9	+3.1
CUP5	Mexico City	3.28	350	eP	Pn	04 04 13.9	+3.6
CUP5				eS	Sn	04 04 50.6	+0.8
INVM	La Marquesa	3.28	347	eP	Pb	04 04 15.4	-1.6
INVM				eS	Sn	04 04 45.6	-4.4
COVM	Coyoacan	3.29	351	eP	Pb	04 04 16.3	-0.9
COVM				eS	Sn	04 04 43.3	-6.9
BJVM	Benito Juarez	3.32	351	eP	Pb	04 04 16.1	-1.6
BJVM				eS	Sn	04 04 52.1	+1.3
CJVM	Cuajimalpa	3.33	349	eP	Pb	04 04 16.6	-1.1
CJVM				eS	Sn	04 04 48.1	-2.9
SCT2	Benito Juarez	3.33	351	eP	Pb	04 04 19.1	+1.2
SCT2				eS	Sn	04 04 51.1	-0.1
TXVM	Universitario	3.35	355	eP	Pb	04 04 17.5	-0.6
TXVM				eS	Sn	04 04 50.2	-1.3
VRVM	Mexico City	3.35	352	e	Sn	04 04 43.3	-8.4
MHVM	Bosque de Chap	3.36	350	eP	Pb	04 04 16.9	-1.4
MHVM				eS	Sn	04 04 48.1	-3.7
PBVM	Pinon	3.37	352		Pn	04 04 16.2	+4.9
PBVM					Sn	04 04 47.7	-4.0
PBVM	Pinon	3.37	352	eP	Pn	04 04 16.2	+4.9
PBVM				eS	Sn	04 04 47.7	-4.0
GMVM	Gustavo A Made	3.43	352	eP	Pb	04 04 17.9	-1.6
GMVM				eS	Sn	04 04 49.9	-3.6
PTVM	Pico Tres Padr	3.52	352		Pn	04 04 18.6	+4.9
PTVM					Sn	04 04 48.6	-7.3
PTVM	Pico Tres Padr	3.52	352	eP	Pn	04 04 18.6	+4.9
PTVM				eS	Sn	04 04 48.6	-7.3
UON	La Union	3.61	302	eS	Sn	04 04 59.4	+1.8
VTVM	Tizayuca	3.67	357		Pb	04 04 23.5	-0.2
VTVM					Sn	04 05 00.9	+1.4
VTVM	Tizayuca	3.67	357	eP	Pb	04 04 23.5	-0.2
VTVM				eS	Sn	04 05 00.9	+1.4
JAUV	Jalcomulco	3.68	27	eP	Pn	04 04 13.0	-2.7
JAUV				eS	Sn	04 04 53.3	-6.1
CMIG	Matias Romero	3.69	74	Pn	Pn	04 04 14.0	-1.8
	31nm,0.3s,baz=265,slow=11,SNR=556						
CMIG				Sn	Sn	04 04 57.9	-1.8
	41nm,0.3s,baz=273,slow=23,SNR=6.3						
CMIG				Lg	Lg	04 05 09.5	
	36nm,0.3s,baz=269,slow=19,SNR=3.8						
	82nm,0.4s						
CMIG	Matias Romero	3.69	74		Pn	04 04 13.9	-1.9
CMIG					Sn	04 04 52.5	-7.2
CMIG	Matias Romero	3.69	74	i P	Pn	04 04 13.9	-1.9
CMIG				eS	Sn	04 04 52.5	-7.2
ZUVM	ZUMPANGO	3.75	353		Pb	04 04 22.8	-2.2
ZUVM					Sn	04 05 01.3	-0.2
ZUVM	ZUMPANGO	3.75	353	eP	Pb	04 04 22.8	-2.2
ZUVM				eS	Sn	04 05 01.3	-0.2
NILT	Santiago Nilte	3.85	82	eP	Pn	04 04 17.9	0.0
NILT				eS	Sn	04 05 01.6	-1.9
ATVM	ATLACOMULCO	3.85	342		Pn	04 04 23.3	+5.1
ATVM					Sn	04 05 02.5	-1.4
ATVM	ATLACOMULCO	3.85	342	eP	Pn	04 04 23.3	+5.1
ATVM				eS	Sn	04 05 02.5	-1.4
PMUV	Sontecomapan	4.12	53	eP	Pn	04 04 17.2	-4.5
PMUV				eS	Sn	04 05 17.6	+7.3
DHIG	Demacu	4.21	354		Pn	04 04 29.0	+5.8
DHIG					Sn	04 05 12.8	-0.1
DEIG	Demacu	4.22	354	eP	Pn	04 04 29.0	+5.8
DEIG				eS	Sn	04 05 12.8	-0.1
MIHL	Minatitlan	4.31	63	e	Pg	04 04 40.3	-0.5
MIHL				i		04 05 46.3	
MOIG	Morelia	4.35	326		Pn	04 04 26.1	+1.1
MOIG	Morelia	4.35	326	eP	Pn	04 04 28.1	+3.1
MOIG				eS	Sn	04 05 07.1	-9.0
TUIG	Tuzandepetl	4.43	63	eP	Pn	04 04 20.5	-5.5
TUIG				eS	Sn	04 05 09.2	-8.8
URUA	Uruapan	4.69	316	eS	Sn	04 05 27.2	+2.5
JRQG	Juriquilla Cam	4.92	339	eP	Pb	04 04 40.5	-4.4
JRQG				eS	Sn	04 05 23.4	-6.9
MMIG	Aquila	5.04	296		Pn	04 04 33.3	-1.1
MMIG					Sn	04 05 22.4	-11
MMIG	Aquila	5.04	296	eP	Pn	04 04 33.3	-1.1
MMIG				eS	Sn	04 05 22.4	-11
PCIG		5.18	93		Pn	04 04 34.9	-1.4
PCIG					Sn	04 05 28.1	-8.3
PCIG		5.18	93	eP	Pn	04 04 34.9	-1.4
PCIG				eS	Sn	04 05 28.1	-8.3
TGIG		5.29	82		Pn	04 04 36.7	-1.2
TGIG					Sn	04 05 37.4	-1.8
TGIG		5.29	82	eP	Pn	04 04 36.7	-1.2
TGIG				eS	Sn	04 05 37.4	-1.8
IGIG	Irapuato, Guan	5.32	331	eP	Pn	04 04 40.1	+1.7
IGIG				eS	Sn	04 05 35.0	-5.1
CTUV	Llano Grande	5.37	2	e	Pb	04 04 51.9	-0.5
CTUV				e		04 05 45.4	
COIG	Colima	5.75	303	eP	Pn	04 04 45.0	+0.8
COIG				eS	Sn	04 05 52.8	+2.1
JUBC	Volcan de Coli	5.84	306	eP	Pn	04 04 48.5	+2.9
JUBC				eS	Sn	04 05 56.5	+3.4
EZ5V		5.85	306		Sn	04 05 47.0	-6.2
EZ5V		5.85	306	eP	Pn	04 04 47.9	+2.3
EZ5V				eS	Sn	04 05 47.0	-6.2
MNGA	Volcan de Coli	5.85	306	eP	Pn	04 04 47.8	+2.0
MNGA				eS	Sn	04 05 43.7	-10
INCO	Volcan de Coli	5.88	306	eP	Pn	04 04 48.4	+2.2
INCO				eS	Sn	04 05 53.2	-0.8
SOMAC	Volcano de Col	5.89	306	eP	Pn	04 04 48.3	+1.9
SOMAC				eS	Sn	04 05 48.0	-6.5
CDAR	Ciudad de Arme	5.90	300	eP	Pn	04 04 46.6	+0.5
CDAR				eS	Sn	04 05 58.8	+4.7
RPIG	Rio Verde	5.92	347	eP	Pn	04 04 51.6	+5.1
RPIG				eS	Sn	04 05 56.3	+1.5
R15V		5.99	302	eP	Pn	04 04 47.5	+0.1
R15V				eS	Sn	04 05 54.8	-1.6
PATR	El Naranjo	6.20	98	i P	Pn	04 04 50.2	-0.3
PATR				eS	Sn	04 05 54.2	-7.7
CCIG	Comitan	6.21	87		Pn	04 04 49.6	-0.9
CCIG	Comitan	6.21	87	eP	Pn	04 04 49.4	-1.1
CCIG				eS	Sn	04 06 01.2	-0.7
PAVE	Pavencul	6.24	97	i P	Pn	04 04 51.1	0.0
PAVE				eS	Sn	04 05 56.0	-6.9
CHUJ	Union Juarez	6.32	98	i P	Pn	04 04 52.0	-0.2
CHUJ				eS	Sn	04 05 55.6	-9.4
CIHU	Emiliano Zapat	6.66	299	eP	Pn	04 04 56.6	+0.1
CIHU				eS	Sn	04 06 15.3	+2.5
AAIG	Aguscalientes	6.86	329		Sn	04 06 20.6	+2.5
AAIG	Aguscalientes	6.86	329	eP	Pn	04 05 03.9	+4.3
AAIG				eS	Sn	04 06 20.6	+2.5
GTIG	Gomez Farias	6.97	356	eP	Pn	04 05 04.6	+3.7
GTIG				eS	Sn	04 06 23.8	+3.3
CJM	Chamela	7.02	300	eP	Pn	04 04 59.7	-1.9
CJM				eS	Sn	04 06 25.2	+3.4
ANIG	Ahuacatlan	7.49	312	eP	Pn	04 05 09.0	+0.9
ANIG				eS	Sn	04 06 29.2	-4.2
SCIG	Sabancuy	7.62	67	e	Pn	04 04 55.0	-15
SCIG				e		04 06 18.0	
ZAIG	Zacatecas	7.63	331		Pn	04 05 11.7	+1.4
ZAIG	Zacatecas	7.63	331	eP	Pn	04 05 13.5	+3.3
ZAIG				eS	Sn	04 06 35.9	-1.4
PETF	Flores	8.41	83	Pn	Pn	04 05 19.0	-1.6
TEIG	Tepich	10.63	66	Pn	Pn	04 05 49.5	-1.6
PDIG	Papasquiaro	10.95	326	eP	Pn	04 05 57.2	+1.6
PDIG				eS	Sn	04 08 00.5	+1.8
833A	Chaparral WMA,	12.20	357	Pn	Pn	04 06 11.9	-0.7
833A	Chaparral WMA,	12.20	357	P	Pn	04 06 12.7	+0.1
	baz=176						
HPIG		12.64	330	Pn	Pn	04 06 19.9	+1.2
MATN	Matagalpa	12.66	103		Pn	04 06 19.3	+0.4
ACON	Acoyapa	13.64	106		Pn	04 06 32.7	+0.4
ORTG	Ortega, Santa	13.99	112	Pn	Pn	04 06 39.2	+2.0
TX32	Lajitas Array	13.99	341		Pn	04 06 36.9	-0.3
TXAR	Lajitas Array	13.99	341	Pn	Pn	04 06 38.0	+0.9
	baz=161,slow=14,SNR=12						
TXAR				Lg	Lg	04 10 42.4	
	baz=162,slow=31,SNR=5.7						
TXAR				LR	LR	04 11 51.0	
	comp=Z,418nm,20.2s,baz=153,slow=37						
	1.2nm,0.9s						
TXAR	Lajitas Array	13.99	341	Pn	Pn	04 06 36.9	-0.3
TX31	Lajitas Ar. Si	13.99	341		Pn	04 06 36.6	-0.5
DUNO	Dulce Nombre,	14.08	113		Pn	04 06 41.1	+2.7
JCT	Junction City	14.37	356	Pn	Pn	04 06 41.8	-0.5
JCT	Junction City	14.37	356	P	Pn	04 06 42.9	+0.6
	baz=175						
JTS	Las Juntas de	14.47	112	Pn	Pn	04 06 47.6	+3.9
	0.9nm,0.3s,baz=317,slow=7.8,SNR=5.7						
JTS	Las Juntas de	14.47	112		Pn	04 06 45.0	+1.3
435B	Jarrell	14.66	3	Pn	Pn	04 06 45.4	-0.8
435B	Jarrell	14.66	3	P	Pn	04 06 47.0	+0.8
	baz=183						
RIMA	Rio Macho	15.66	112		Pn	04 07 00.9	+1.1
RIMA				IAmb	IAmb	04 07 10.7	
	comp=Z,42nm,1.3s						
WHTX	Lake Whitney,	15.87	4	Pn	Pn	04 07 01.7	-0.5
WHTX				IAmb	IAmb	04 07 06.8	
	comp=Z,54nm,1.1s						
WHTX	Lake Whitney,	15.87	4	P	Pn	04 07 03.1	+0.9
	baz=184						
NATX	Nacogdoches	16.01	12		Pn	04 07 02.3	-1.7
NATX				IAmb	IAmb	04 07 07.6	
	comp=Z,41nm,0.9s						
NATX	Nacogdoches	16.01	12	P	Pn	04 07 04.1	+0.1
	baz=193						
FW13	Cleburne	16.23	4	Pn	Pn	04 07 04.6	-2.3
FW13				IAmb	IAmb	04 07 10.6	
	comp=Z,19nm,0.8s						
342A	Flagon Creek P	16.26	19		Pn	04 07 03.2	-4.0
FW14	Alvarado	16.29	4	Pn	Pn	04 07 04.8	-2.9
FW14				IAmb	IAmb	04 07 14.7	
	comp=Z,66nm,1.4s						
SRBA	San Rafael, Bu	16.34	113	P	Pn	04 07 09.7	+1.2
ODSA	Odessa	16.37	348	Pn	Pn	04 07 08.2	-0.5
ODSA				IAmb	IAmb	04 07 13.1	
	comp=Z,11nm,0.8s						
ABTX	Abilene, Hawle	16.50	357	P	Pn	04 07 11.2	+1.0
	baz=176,SNR=14						
FW07	Weatherford	16.56	2		Pn	04 07 09.5	-1.6
FW07				IAmb	IAmb	04 07 15.1	
	comp=Z,38nm,0.8s						
MNTX	Cornudas Mount	16.73	340	P	Pn	04 07 14.9	+1.7
	baz=156						
CLNB	Carlsbad	16.81	344	Pn	Pn	04 07 13.5	-0.8
FW06	Azle	16.84	3	Pn	Pn	04 07 13.0	-1.7
FW06				IAmb	IAmb	04 07 17.4	
	comp=Z,34nm,0.9s						
GDL2	Guadalupe Moun	16.88	343	Pn	Pn	04 07 15.3	+0.1
FW03	Perrin-Whitt E	16.89	2		Pn	04 07 13.7	-1.5
FW03				IAmb	IAmb	04 07 19.1	
	comp=Z,35nm,0.8s						
SRIG	Santa Rosalia	16.89	314	Pn	Pn	04 07 16.2	+0.9
POST	Post	17.11	352		Pn	04 07 16.5	-1.6
POST				IAmb	IAmb	04 07 21.2	
	comp=Z,18nm,0.8s						
BRU2	Volcan	17.13	113		Pn	04 07 18.3	-0.2
BRU2				IAmb	IAmb	04 07 36.9	
	comp=Z,51nm,1.5s						
HSIG		17.19	321	P	P	04 07 20.6	-0.1
Z35A	Perchaven, San	17.22	4		Pn	04 07 17.9	-1.4
Z35A				IAmb	IAmb	04 07 21.2	
	comp=Z,30nm,0.9s						
Z38A	Mt. Pleasant	17.41	10	Pn	Pn	04 07 18.7	-3.0
Z38A				IAmb	IAmb	04 07 23.6	
	comp=Z,43nm,0.9s						
WTFS	Witchita Falls	17.61	0	Pn	Pn	04 07 22.9	-1.3
WTFS				IAmb	IAmb	04 07 38.2	
	comp=Z,8.6nm,0.8s						
VBMS	Vicksburg	17.66	23	Pn	Pn	04 07 22.9	-1.9
VBMS				IAmb	IAmb	04 07 36.9	
	comp=Z,65nm,1.2s						
143A	Socs Landing,	17.78	20	Pn	Pn	04 07 23.1	-3.3
143A				IAmb	IAmb	04 07 37.4	
	comp=Z,24nm,0.9s						
LOOK	Love County	17.88	4	Pn	Pn	04 07 24.8	-2.8
Z41A	Richland Creek	17.88	16		Pn	04 07 24.7	-2.9
319A	Douglas	18.08	329	Pn	Pn	04 07 28.3	-1.8
MSTX	Muleshoe	18.20	349	P	Pn	04 07 32.1	+0.4
	baz=167,SNR=7.5						
WLAR	White Oak Lake	18.21	15	Pn	Pn	04 07 27.7	-4.0
WLAR				IAmb	IAmb	04 07 44.8	
	comp=Z,20nm,0.8s						
121A	Cookes Peak, D	18.38	335	P	P	04 07 33.1	-0.8
121A	Cookes Peak, D	18.38	335	P	Pn	04 07 35.5	+1.6
	baz=150,SNR=8.6						
X34A	Smith Ranch, M	18.45	2		P	04 07 32.2	-2.4
WMOK	Wichita Mounta	18.58	360		P	04 07 34.7	-1.3
WMOK	Wichita Mounta	18.58	360	P	P	04 07 35.6	-0.4
	baz=179						
146A	Union	18.61	26		P	04 07 33.9	-2.4
X37A	Clayton	18.65	8		P	04 07 35.0	-1.7
AMTX	Amarillo	18.93	352	P	P	04 07 38.8	-1.1
MIAR	Mount Ida	18.93	13	P	P	04 07 38.3	-1.5
MIAR	Mount Ida	18.93	13	P	P	04 07 39.8	0.0
	baz=195,SNR=8.8						
DUN6	Lazy B Ranch	18.96	332	P	Pn	04 07 41.2	+0.2
DUN6				IAmb	IAmb	04 07 53.0	
	comp=Z,31nm,1.0s						
X40A	Basin Creek Fa	19.04	15	P	P	04 07 38.8	-2.2

W35A	Tecumseh	19.05	4		P	04 07 39.9	-1.2
W35A				IAmb	IAmb	04 07 41.3	
	comp=Z,50nm,1.5s						
FNO	Franklin	19.12	3		P	04 07 40.4	-1.6
BNM	Barren Site	19.39	340	P	P	04 07 45.0	-0.1
UALR	University of	19.44	16		P	04 07 43.3	-2.1
OK025	Westminster Rd	19.45	3		P	04 07 44.2	-1.3
OK025				IAmb	IAmb	04 07 45.0	
	comp=Z,19nm,0.6s						
CSTR	Hydro, Custer	19.48	360		P	04 07 44.9	-1.0
Y45A	Yeager Farm, C	19.50	23	P	P	04 07 44.4	-1.6
Z47A	Carrollton	19.52	27	P	P	04 07 44.4	-1.8
LENM	Lemitar	19.52	339	P	P	04 07 47.5	+1.0
TUC	Tucson	19.58	328	P	Pn	04 07 48.3	-0.1
TUC	Tucson	19.58	328	P	Pn	04 07 49.4	+1.0
	baz=142						
OK029	Liberty Lake	19.66	3		P	04 07 47.0	-0.8
OK029				IAmb	IAmb	04 07 53.3	
	comp=Z,16nm,0.9s						
352A	Blakely	19.75	37	P	P	04 07 46.1	-2.7
352A				IAmb	IAmb	04 07 49.5	
	comp=Z,14nm,0.8s						
DEOK	Depew	19.77	5		P	04 07 47.4	-1.6
DEOK				IAmb	IAmb	04 07 49.9	
	comp=Z,31nm,1.1s						
LRAL	Lakeview Retre	19.87	30	P	P	04 07 49.0	-1.1
LRAL				IAmb	IAmb	04 07 50.3	
	comp=Z,19nm,1.1s						
LRAL	Lakeview Retre	19.87	30	P	P	04 07 49.8	-0.4
	baz=214,SNR=6.6						
OK052	Battle Ridge R	19.89	4	P	P	04 07 48.5	-1.8
OK052				IAmb	IAmb	04 07 50.0	
	comp=Z,30nm,1.0s						
TUL1	Leonard	19.90	7	P	P	04 07 48.4	-2.1
TUL1				IAmb	IAmb	04 07 52.8	
	comp=Z,25nm,0.9s						
TUL1	Leonard	19.90	7	P	P	04 07 49.4	-1.1
	baz=188,SNR=7.0						
ELIS	Ellis County	19.91	358	P	P	04 07 49.2	-1.4
ELIS				IAmb	IAmb	04 08 00.9	
	comp=Z,20nm,1.0s						
OK053	SW of W Deep R	19.91	4		P	04 07 48.5	-2.1
OK053				IAmb	IAmb	04 07 50.1	
	comp=Z,26nm,0.9s						
OK033	Mehan	19.93	4		P	04 07 49.5	-1.3
OK033				IAmb	IAmb	04 07 50.4	
	comp=Z,34nm,0.9s						
WHAR	Wooly Hollow	19.94	15	P	P	04 07 49.5	-1.4
WHAR				IAmb	IAmb	04 07 57.4	
	comp=Z,15nm,0.9s						
ANMO	Albuquerque	20.06	341	Pn	P	04 07 52.9	+0.5
	comp=Z,0.3nm,0.3s,baz=207,slow=4.5,SNR=16						
ANMO				Lg	Lg	04 13 45.3	
	comp=Z,0.1nm,0.3s,baz=146,slow=7.3,SNR=1.4						
ANMO				LR	LR	04 16 24.5	
	comp=Z,516nm,18.5s,baz=246,slow=40						
	comp=Z,4.7nm,0.7s						
ANMO	Albuquerque	20.06	341	P	P	04 07 52.4	0.0
ANMO	Albuquerque	20.06	341	P	P	04 07 53.3	+0.9
	baz=157						
QUOK	Quay	20.08	4		P	04 07 50.4	-2.0
QUOK				IAmb	IAmb	04 07 51.2	
	comp=Z,11nm,0.7s						
OXF	Oxford	20.12	23	P	P	04 07 51.5	-1.3
OXF	Oxford	20.12	23	P	P	04 07 51.4	-1.3
	baz=206						
U32A	Winter Ranch,	20.22	359	P	P	04 07 52.7	-1.2
U32A				IAmb	IAmb	04 07 59.8	
	comp=Z,34nm,0.9s						
RLO	Rose Lookout	20.25	8		P	04 07 53.5	-0.8
RLO				IAmb	IAmb	04 07 56.4	
	comp=Z,15nm,0.8s						
OK050	Pawnee Station	20.28	4	P	P	04 07 52.9	-1.7
OK046	Pawnee Station	20.29	4		P	04 07 53.0	-1.7
CROK	Carrier	20.35	1	P	P	04 07 53.4	-1.9
CROK				IAmb	IAmb	04 08 00.4	
	comp=Z,34nm,1.0s						
214A	Organ Pipe Nat	20.42	323	P	P	04 07 57.5	+1.4
214A	Organ Pipe Nat	20.42	323	P	Pn	04 07 58.4	+0.2
	baz=137						
TIGA	Tifton	20.51	39	P	P	04 07 55.3	-1.8
	baz=225						
PIX	Pinacate	20.51	321	P	P	04 07 58.6	+1.5
HHAR	Hobbs	20.54	11	P	P	04 07 55.7	-1.7
HHAR				IAmb	IAmb	04 08 01.5	
	comp=Z,19nm,1.0s						
FCAR	Ozark Folk Cen	20.55	15	P	P	04 07 55.9	-1.6
FCAR				IAmb	IAmb	04 08 02.1	
	comp=Z,18nm,1.1s						
U38A	Gravette	20.62	10	P	P	04 07 57.2	-1.0
U38A				IAmb	IAmb	04 08 02.1	
	comp=Z,20nm,0.8s						
BLOK	Blackwell	20.63	3		P	04 07 56.4	-2.0
Y49A	Blount Mountai	20.83	30	P	P	04 07 59.0	-1.6
Y49A				IAmb	IAmb	04 08 00.2	
	comp=Z,20nm,0.8s						
T35A	Sooner Cattle	20.83	5	P	P	04 07 58.9	-1.7
LCAR	Lake Charles	20.98	17	P	P	04 08 00.7	-1.4
LCAR				IAmb	IAmb	04 08 05.7	
	comp=Z,14nm,0.7s						
X18A	Snowflake	21.01	333	P	P	04 08 04.0	+1.3
X18A				IAmb	IAmb	04 08 08.4	
	comp=Z,13nm,0.9s						
SFX	San Felipe	21.02	318	P	P	04 08 04.3	+1.6
X48A	Hartselle	21.03	27	P	P	04 08 00.4	-2.2
X48A				IAmb	IAmb	04 08 01.9	
	comp=Z,18nm,0.8s						
PLAL	Pickwick Lake	21.05	25	P	P	04 08 01.4	-1.5
PLAL				IAmb	IAmb	04 08 06.7	
	comp=Z,30nm,0.9s						
W18A	Petrified Fore	21.42	334	P	P	04 08 08.1	+0.9
W18A	Petrified Fore	21.42	334	P	P	04 08 08.6	+1.5
	baz=149						
113A	Mohawk Valley,	21.56	323	P	P	04 08 10.2	+1.7
T25A	Trinidad	21.60	347	P	P	04 08 10.2	+1.1
T25A				IAmb	IAmb	04 08 14.8	
	comp=Z,24nm,1.1s						
T25A	Trinidad	21.60	347	P	P	04 08 11.2	+2.2
	baz=164,SNR=15						
154A	Montrose	21.63	38	P	P	04 08 06.6	-2.6
154A				IAmb	IAmb	04 08 23.5	
	comp=Z,25nm,0.9s						
FPAL	Fort Paine	21.77	30	P	P	04 08 08.3	-2.4
FPAL				IAmb	IAmb	04 08 09.9	
	comp=Z,25nm,1.0s						
T42A	Van Buren	21.90	16	P	P	04 08 10.7	-1.3
T42A				IAmb	IAmb	04 08 15.2	
	comp=Z,35nm,1.1s						
UTMT	University of	21.96	21	P	P	04 08 12.2	-0.4
HICK	Hickman	22.01	20	P	P	04 08 12.1	-1.1
Y14A	Wickenburg	22.02	326	P	P	04 08 14.8	+1.4
Y52A	Lilburn	22.02	34	P	P	04 08 11.4	-2.0
Y52A				IAmb	IAmb	04 08 13.3	
	comp=Z,18nm,0.8s						
S39A	Bolivar	22.02	11	P	P	04 08 11.5	-1.8
S39A				IAmb	IAmb	04 08 15.4	
	comp=Z,21nm,0.8s						
WVT	Waverly	22.15	24	P	P	04 08 12.6	-2.1
WVT	Waverly	22.15	24	P	P	04 08 14.5	-0.2
	baz=208						
X51A	Calhoun	22.16	31	P	P	04 08 12.7	-2.1
X51A				IAmb	IAmb	04 08 14.1	
	comp=Z,27nm,1.2s						
SWET	Sewanee	22.17	28	P	P	04 08 12.5	-2.5
V48A	Smith Brothers	22.22	26	P	P	04 08 12.8	-2.7
V48A				IAmb	IAmb	04 08 17.1	
	comp=Z,19nm,0.8s						
R32A	Long Quarter,	22.25	360	P	P	04 08 14.9	-1.0
R32A				IAmb	IAmb	04 08 18.0	
	comp=Z,22nm,0.9s						
ESJX	Sierra Juarez	22.36	318	P	P	04 08 19.1	+1.9
GLA	Glamis	22.39	322	P	P	04 08 18.5	+1.2
GLA				IAmb	IAmb	04 08 29.2	
	comp=Z,12nm,0.9s						
GLA	Glamis	22.39	322	P	P	04 08 19.4	+2.1
	baz=135						
SDCO	Great Sand Dun	22.43	346	P	P	04 08 17.5	-0.5
SDCO	Great Sand Dun	22.43	346	P	P	04 08 18.1	+0.1
	baz=162,SNR=9.2						
W50A	Signal Mountai	22.44	30	P	P	04 08 15.2	-2.7
WUAZ	Wupatki	22.47	332	P	P	04 08 19.8	+1.4
WUAZ				IAmb	IAmb	04 08 22.3	
	comp=Z,23nm,0.9s						
WUAZ	Wupatki	22.47	332	P	P	04 08 20.7	+2.3
	baz=146,SNR=20						
CGM3	Cape Girardeau	22.56	19	P	P	04 08 18.6	-0.6
T45A	Paducah	22.64	21	P	P	04 08 19.0	-1.0
GTBY	Guantanamo Bay	22.65	77	P	P	04 08 18.9	-1.3
CBKS	Cedar Bluff	22.67	358	P	P	04 08 19.4	-0.8
CBKS				IAmb	IAmb	04 08 25.4	
	comp=Z,30nm,1.1s						
CBKS	Cedar Bluff	22.67	358	P	P	04 08 21.1	+0.8
	baz=177						
BLYC	Blythe	22.71	324	P	P	04 08 22.1	+1.3
CLTN	Cedars of Leba	22.73	26	P	P	04 08 18.2	-2.7
CLTN				IAmb	IAmb	04 08 23.2	
	comp=Z,16nm,1.0s						
S22A	4UR Ranch, Cre	22.77	343	P	P	04 08 21.6	-0.1
S22A				IAmb	IAmb	04 08 39.2	
	comp=Z,14nm,1.1s						
S22A	4UR Ranch, Cre	22.77	343	P	P	04 08 22.5	+0.8
	baz=159,SNR=12						
YUH	Yuha Desert	22.77	320	P	P	04 08 23.6	+2.1
MVCO	Mesa Verde	22.80	339	P	P	04 08 21.9	0.0
MVCO				IAmb	IAmb	04 08 23.7	
	comp=Z,28nm,1.1s						
MVCO	Mesa Verde	22.80	339	P	P	04 08 22.5	+0.6
	baz=154,SNR=19						
R40A	Maddies Statio	22.81	13	P	P	04 08 21.1	-0.7
CCM	Cathedral Cave	22.83	15	P	P	04 08 20.3	-1.6
CCM	Cathedral Cave	22.83	15	P	P	04 08 21.8	-0.1
	baz=198						
RMX	La Rumorosa	22.84	319	P	P	04 08 23.8	+1.5
IKP	In-Ko-Pah, Jac	22.89	319	P	P	04 08 25.0	+2.2
	baz=132						
SWSC	Sam W. Stewart	22.90	320	P	P	04 08 25.0	+2.2
	baz=133						
PDMCI	Parker Dam,Lak	22.91	325	P	P	04 08 24.4	+1.7
	baz=138						
FVM	French Village	22.97	17	P	P	04 08 22.5	-1.0
FVM				IAmb	IAmb	04 08 24.2	
	comp=Z,20nm,0.9s						
KSU1	Kansas State U	23.00	4	P	P	04 08 23.4	-0.3
	baz=185						
CPCT	Cooper Cave	23.02	30	P	P	04 08 22.3	-1.8
CPCT				IAmb	IAmb	04 08 23.6	
	comp=Z,13nm,0.9s						
W52A	Murphy	23.04	32	P	P	04 08 23.4	-0.8
S44A	Carbondale	23.05	19	P	P	04 08 23.9	-0.4
KSCO	Kaye Shedlock’	23.11	352	P	P	04 08 24.5	-0.6
KSCO	Kaye Shedlock’	23.11	352	P	P	04 08 25.1	+0.1
	baz=170						
T47A	Sharon Grove	23.18	24	P	P	04 08 24.7	-0.9
BC3	Big Chuckawall	23.18	322	P	P	04 08 27.9	+2.1
	baz=135,SNR=5.7						
MONP2	Monument Peak	23.25	319	P	P	04 08 28.2	+1.6
	baz=132						
HODGE	Hodges	23.29	36	P	P	04 08 24.1	-2.7
HODGE				IAmb	IAmb	04 08 27.5	
	comp=Z,26nm,1.3s						
U49A	Red Boiling Sp	23.32	27	P	P	04 08 24.5	-2.5
IRM	Iron Mountain	23.36	323	P	P	04 08 28.9	+1.4
	baz=136,SNR=9.7						
W13A	Hualapai Mount	23.37	327	P	P	04 08 29.6	+1.8
V51A	Loudon	23.39	30	P	P	04 08 25.5	-2.2
V51A				IAmb	IAmb	04 08 27.6	
	comp=Z,20nm,1.0s						
BG3	Lake Jocassee	23.48	34	P	P	04 08 26.8	-1.9
BG3				IAmb	IAmb	04 08 31.5	
	comp=Z,12nm,0.9s						
Q24A	Divide	23.51	347	P	P	04 08 29.0	-0.3
Q24A	Divide	23.51	347	P	P	04 08 29.5	+0.3
	baz=164						
TKL	Tuckaleechee C	23.56	31	P	P	04 08 28.9	-0.5
	comp=Z,3.6nm,0.8s,baz=179,slow=8.8,SNR=6.3						
TKL				S	S	04 12 47.3	+3.3
	comp=Z,1.7nm,0.8s,baz=306,slow=11,SNR=1.3						
	comp=Z,3.6nm,0.8s						
SLM	Saint Louis	23.64	16	P	P	04 08 29.4	-0.8
U15A	North Rim	23.64	332	P	P	04 08 30.8	+0.3
U15A				IAmb	IAmb	04 08 41.5	
	comp=Z,11nm,1.0s						
PMD	Palm Desert	23.73	321	P	P	04 08 33.0	+1.9
BELC	Belle Mtn. Jos	23.75	322	P	P	04 08 32.8	+1.3
	baz=134,SNR=5.5						
CSU	Charleston Sou	23.75	42	P	P	04 08 30.3	-1.0
TPFO	Pinon Flats	23.75	321	P	P	04 08 32.6	+1.1
	baz=133						
PFO	Pinyon Flats O	23.76	321	P	P	04 08 31.8	+0.3
	comp=Z,1.6nm,0.7s,baz=121,slow=5.9,SNR=4.7						
PFO				LR	LR	04 18 20.4	
	comp=Z,278nm,18.5s,baz=140,slow=38						
	comp=Z,1.6nm,0.7s						
PFO	Pinyon Flats O	23.76	321	P	P	04 08 32.8	+1.3
PFO	Pinyon Flats O	23.76	321	P	P	04 08 33.2	+1.7
	baz=133						
NHSC	New Hope	23.76	41	P	P	04 08 30.6	-0.8
NHSC	New Hope	23.76	41	P	P	04 08 30.6	-0.8
	baz=229						
PV13	Radium Mtn., P	23.77	340	P	P	04 08 32.2	+0.5
PV13				IAmb	IAmb	04 08 32.8	
	comp=Z,10nm,0.9s						
PV02	Paradox Valley	23.78	340	P	P	04 08 31.9	+0.1
PV02				IAmb	IAmb	04 08 33.1	
	comp=Z,9.4nm,0.9s						
PV15	Paradox Valley	23.82	340	P	P	04 08 33.0	+0.7
PV15				IAmb	IAmb	04 08 33.9	
	comp=Z,18nm,0.9s						
USIN	University of	23.83	22	P	P	04 08 31.0	-1.0
PV03	Paradox Valley	23.86	340	P	P	04 08 32.7	+0.1
PV03				IAmb	IAmb	04 08 33.6	
	comp=Z,11nm,0.9s						
P38A	Dawn	23.87	10	P	P	04 08 30.7	-1.7
P38A				IAmb	IAmb	04 08 32.2	
	comp=Z,20nm,0.8s						
PV18	Skein Mesa, Pa	23.87	340	P	P	04 08 33.4	+0.7
PV18				IAmb	IAmb	04 08 34.2	
	comp=Z,9.2nm,0.8s						
JSC	Jenkinsville	23.90	38	P	P	04 08 30.2	-2.5
PV12	Saucer Basin,	23.90	340	P	P	04 08 33.1	+0.1
PV12				IAmb	IAmb	04 08 34.9	
	comp=Z,17nm,0.8s						
PAULI	Pauline	23.97	36	P	P	04 08 31.4	-2.0
PAULI				IAmb	IAmb	04 08 32.4	
	comp=Z,17nm,1.4s						
PV14	Lion Creek, Pa	24.03	340	P	P	04 08 34.4	+0.2
P40A	Paris	24.05	12	P	P	04 08 32.9	-1.2
GMRC	Granite Mounta	24.11	324	P	P	04 08 36.4	+1.5
	baz=136						
SMCO	Snowmass	24.15	344	P	P	04 08 36.0	+0.5
T50A	Nancy	24.16	28	P	P	04 08 33.6	-1.6
T50A				IAmb	IAmb	04 08 35.9	
	comp=Z,19nm,0.9s						
PV21	Cone Mtn., Par	24.18	340	P	P	04 08 35.2	-0.5
MURC	Murrieta	24.20	319	P	P	04 08 37.8	+2.1
	baz=131						
Y57A	Sumter	24.23	39	P	P	04 08 35.0	-0.8
Y57A				IAmb	IAmb	04 08 36.5	
	comp=Z,16nm,0.9s						
Q44A	Meyer Farm, Va	24.24	18	P	P	04 08 34.4	-1.4
V12A	Nelson	24.36	326	P	P	04 08 38.0	+0.9
TZTN	Tazewell	24.37	30	P	P	04 08 35.9	-1.2
TZTN				IAmb	IAmb	04 08 42.9	
	comp=Z,25nm,1.1s						
TZTN	Tazewell	24.37	30	P	P	04 08 36.5	-0.7
	baz=217						
OLIL	Olney	24.37	20	P	P	04 08 35.5	-1.6
ISCO	Idaho Springs	24.41	347	P	P	04 08 37.6	-0.3
ISCO				IAmb	IAmb	04 08 39.7	
	comp=Z,16nm,0.9s						
ISCO	Idaho Springs	24.41	347	P	P	04 08 38.4	+0.6
	baz=163,SNR=17						
KMSC	Kings Mountain	24.47	36	P	P	04 08 36.9	-1.2
KMSC				IAmb	IAmb	04 08 47.7	
	comp=Z,27nm,1.5s						
KMSC	Kings Mountain	24.47	36	P	P	04 08 37.5	-0.5
	baz=223						
PKCU	Pink Cliffs	24.49	333	P	P	04 08 40.3	+1.7
PKCU				IAmb	IAmb	04 08 49.8	
	comp=Z,11nm,1.0s						
HEC	Hector,Ludlow	24.53	323	P	P	04 08 40.6	+1.9
	baz=135						
LCMT	Little Creek M	24.56	331	P	P	04 08 39.8	+0.8
WCI	Wyandotte Cave	24.58	24		P	04 08 38.1	-0.8
WCI	Wyandotte Cave	24.58	24	P	P	04 08 38.7	-0.2
	baz=209						
BIRD	Birdtown, Kers	24.62	38	P	P	04 08 37.8	-1.6
BIRD				IAmb	IAmb	04 08 39.0	
	comp=Z,12nm,1.0s						
TUQ	Turquoise Moun	24.73	324	P	P	04 08 42.3	+1.8
	baz=137,SNR=13						
P43A	Skaggs, Pawnee	24.77	17	P	P	04 08 39.5	-1.2
P43A				IAmb	IAmb	04 08 49.6	
	comp=Z,19nm,0.9s						
N35A	Tabor	24.82	5	P	P	04 08 39.8	-1.4
BRIGG	Briggsdale	24.91	350	P	P	04 08 43.4	+1.3
MTPU	Mount Pierson	24.94	334	IAmb	IAmb	04 08 53.9	
	comp=Z,14nm,0.8s						
OGNE	Ogallala	24.95	354	P	P	04 08 42.9	+0.5
OGNE	Ogallala	24.95	354	P	P	04 08 43.9	+1.5
	baz=172,SNR=5.2						
V55A	Taylorsville	25.05	35	P	P	04 08 42.5	-0.8
V55A				IAmb	IAmb	04 08 58.3	
	comp=Z,16nm,1.1s						
R49A	Shelbyville	25.08	26	P	P	04 08 42.9	-0.6
R49A				IAmb	IAmb	04 08 44.0	
	comp=Z,7.8nm,0.8s						
SHPR	Sheep Range	25.11	327	P	P	04 08 45.0	+1.0
GSC	Goldstone, Bar	25.13	323	P	P	04 08 46.5	+2.3
GSC	Goldstone, Bar	25.13	323	P	P	04 08 46.8	+2.6
	baz=135						
SRU	San Rafael Swe	25.21	338	P	P	04 08 46.0	+1.1
SRU				IAmb	IAmb	04 09 02.9	
	comp=Z,16nm,1.2s						
U54A	Nelsons Funny	25.23	33	P	P	04 08 43.3	-1.7
S51A	Beattyville	25.23	29	P	P	04 08 43.9	-1.0
BGNE	Belgrade	25.24	1	P	P	04 08 43.3	-1.7
BGNE				IAmb	IAmb	04 08 56.3	
	comp=Z,22nm,1.1s						
X58A	Rowland	25.24	40	P	P	04 08 43.8	-1.2
W57A	Gilead	25.25	38	P	P	04 08 43.7	-1.4
Q16A	Castle Valley	25.28	337	P	P	04 08 46.0	+0.4
Q16A				IAmb	IAmb	04 08 55.9	
	comp=Z,11nm,0.8s						
BLO	Bloomington	25.32	22	P	P	04 08 44.2	-1.4
OTAV	Otavalo	25.35	126	P	P	04 08 50.1	+3.4
O20A	White River Ci	25.39	343	P	P	04 08 47.0	+0.4
O20A				IAmb	IAmb	04 08 50.1	
	comp=Z,21nm,1.1s						
O20A	White River Ci	25.39	343	P	P	04 08 49.3	+2.7
	baz=158,SNR=9.1						
R50A	Paris	25.43	27	P	P	04 08 45.0	-1.7
R50A				IAmb	IAmb	04 08 57.4	
	comp=Z,21nm,1.3s						
N41A	Harden Midland	25.44	14	P	P	04 08 45.5	-1.3
P46A	Rosedale	25.47	21	P	P	04 08 45.2	-1.8
N23A	Red Feather La	25.53	347	P	P	04 08 48.5	+0.6
N23A				IAmb	IAmb	04 08 50.6	
	comp=Z,16nm,0.9s						
N23A	Red Feather La	25.53	347	P	P	04 08 49.2	+1.3
	baz=163,SNR=12						
EDW2	Edwards Air Fo	25.55	321	P	P	04 08 49.7	+1.9
	baz=132						
O44A	Mansfield	25.55	18	P	P	04 08 46.9	-0.9
P18A	Preston Nutter	25.57	339	P	P	04 08 49.5	+1.2
P17A	Butcher Ranch,	25.61	338	P	P	04 08 48.4	-0.1
P17A				IAmb	IAmb	04 08 52.0	
	comp=Z,18nm,1.4s						
TMUT	Trail Mountain	25.63	337	P	P	04 08 47.8	-1.0
TMUT				IAmb	IAmb	04 09 02.9	
	comp=Z,8.9nm,1.0s						
QSM	Queen of Sheba	25.64	324	P	P	04 08 49.5	+0.9
GWY	Greenwater Val	25.69	325	P	P	04 08 50.6	+1.4
HDIL	Hopedale	25.69	16	P	P	04 08 48.0	-1.0
HDIL	Hopedale	25.69	16	P	P	04 08 48.4	-0.6
	baz=201,SNR=5.4						
PRN	Pahroc Range	25.75	329	P	P	04 08 50.4	+0.6
LRMC	Laurel Mtn Rad	25.77	322	P	P	04 08 51.8	+1.8
	baz=134						
PHWY	Pilot Hill	25.82	348	P	P	04 08 50.0	-0.5
PHWY				IAmb	IAmb	04 08 53.4	
	comp=Z,12nm,0.9s						
P48A	Milroy	25.98	24	P	P	04 08 49.8	-1.9
P48A				IAmb	IAmb	04 08 55.3	
	comp=Z,14nm,1.0s						
TPNV	Topopah Spring	26.02	326	P	P	04 08 54.7	+2.5
TPNV				IAmb	IAmb	04 09 11.4	
	comp=Z,8.5nm,1.1s						
TPNV	Topopah Spring	26.02	326	P	P	04 08 56.0	+3.8
	baz=138,SNR=5.9						
MPMC	Manual Prospec	26.06	323	P	P	04 08 55.1	+2.4
	baz=135,SNR=8.7						
WCT	Wildcat Mounta	26.11	326	P	P	04 08 54.8	+1.8
SCIA	State Center	26.15	9	P	P	04 08 52.0	-1.2
SCIA	State Center	26.15	9	P	P	04 08 53.5	+0.3
	baz=192,SNR=8.7						
SFIN	Lafayette	26.19	20	P	P	04 08 52.9	-0.7
SFIN	Lafayette	26.19	20	P	P	04 08 53.5	0.0
	baz=205						
RDMU	Red Mountain	26.20	341	P	P	04 08 54.5	+0.6
RDMU				IAmb	IAmb	04 09 02.1	
	comp=Z,9.2nm,0.8s						
V58A	Windy Hill, Pi	26.21	38	P	P	04 08 52.4	-1.4
PORT	Chimborazo Vol	26.22	130	P	P	04 08 57.8	+3.1
PORT				IAmb	IAmb	04 09 05.9	
	comp=Z,9.1nm,1.2s						
S11A	Rachel	26.28	328	P	P	04 08 55.7	+1.1
S11A				IAmb	IAmb	04 09 03.5	
	comp=Z,19nm,1.5s						
ROSC	El Rosal	26.32	112	P	P	04 08 59.9	+4.5
	comp=Z,3.9nm,0.6s,baz=327,slow=23,SNR=1.8						
ROSC	El Rosal	26.32	112	P	P	04 08 57.1	+1.7
ROSC				IAmb	IAmb	04 09 04.6	
	comp=Z,16nm,1.3s						
P49A	Miami Univ. Ec	26.32	25	P	P	04 08 53.3	-1.5
P49A	Miami Univ. Ec	26.32	25	P	P	04 08 53.5	-1.3
	baz=211,SNR=8.2						
ISA	Isabella, Lake	26.36	321	P	P	04 08 57.5	+2.2
S54A	Dingess, Beckl	26.47	32	P	P	04 08 55.7	-0.4
BLA	Blacksburg	26.49	34	P	P	04 08 55.7	-0.7
	baz=222						
NLU	North Lily Min	26.53	336	P	P	04 08 57.2	+0.3
BSUT	Blindstream Ca	26.56	339	P	P	04 08 57.8	+0.5
BSUT				IAmb	IAmb	04 09 06.4	
	comp=Z,13nm,1.0s						
R53A	Hurricane	26.56	30	P	P	04 08 55.4	-1.5
RWWY	Rawlins	26.58	345	P	P	04 08 57.8	+0.4
RWWY				IAmb	IAmb	04 09 01.7	
	comp=Z,21nm,1.2s						
CNNC	Cliffs of the	26.59	40	P	P	04 08 55.5	-1.6
CNNC	Cliffs of the	26.59	40	P	P	04 08 56.9	-0.3
	baz=229						
L40A	Anamosa	26.66	12	P	P	04 08 56.7	-1.0
L40A				IAmb	IAmb	04 08 57.5	
	comp=Z,22nm,1.1s						
GRAC	Grapevine Rang	26.66	325	P	P	04 08 59.5	+1.6
CWC	Cottonwood Cre	26.67	323	P	P	04 08 59.6	+1.5
	baz=134						
SPR3	Spring Creek 3	26.67	332	P	P	04 08 58.7	+0.4
R11A	Troy Canyon, C	26.75	329	P	P	04 08 59.5	+0.6
R11A	Troy Canyon, C	26.75	329	P	P	04 09 00.3	+1.5
	baz=141						
O48B	Farmland	26.77	23	P	P	04 08 58.5	-0.3
	baz=210,SNR=9.1						
M44A	Midewin, Midew	26.81	18	P	P	04 08 57.8	-1.3
VES	Vestal, Richgr	26.85	321	P	P	04 09 02.1	+2.5
	baz=132						
Q52A	Bidwell	26.91	29	P	P	04 08 59.2	-0.9
Q12A	Willow Creek R	26.93	331	P	P	04 09 01.1	+0.6
K38A	Parkersburg	26.94	10	P	P	04 08 59.4	-0.9
K38A				IAmb	IAmb	04 09 04.9	
	comp=Z,19nm,1.2s						
L42A	Oliver, Polo	26.95	15	P	P	04 08 59.0	-1.4
T57A	Hurt	26.98	36	P	P	04 08 59.9	-0.8
T57A				IAmb	IAmb	04 09 18.3	
	comp=Z,10nm,0.9s						
P51A	Williamsport	26.98	27	P	P	04 08 59.8	-0.9
RUSC	La Rusia	26.98	109	P	P	04 09 03.8	+2.3
RUSC				IAmb	IAmb	04 09 17.8	
	comp=Z,15nm,1.1s						
LCH	Last Change Ra	26.98	325	P	P	04 09 02.7	+1.8
DUG	Dugway, Tooele	27.02	336	P	P	04 09 01.7	+0.4
DUG	Dugway, Tooele	27.02	336	P	P	04 09 03.0	+1.8
	baz=148						
O49A	Covington	27.03	25	P	P	04 08 59.7	-1.5
O49A				IAmb	IAmb	04 09 03.0	
	comp=Z,18nm,0.9s						
SMMC	Simmler	27.07	319	P	P	04 09 03.7	+2.1
	baz=129						
N47A	Urbana	27.12	22	P	P	04 08 59.1	-2.9
TCUT	Toone Canyon	27.30	339	P	P	04 09 03.9	+0.1
TCUT				IAmb	IAmb	04 09 12.1	
	comp=Z,12nm,0.9s						
K22A	Casper	27.34	347	P	P	04 09 04.5	+0.4
K22A				IAmb	IAmb	04 09 22.3	

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      comp=Z,9.6nm,1.0s
K22A  Casper           27.34 347  P     P     04 09 05.3 +1.2
      baz=163
U59A  Littleton        27.38  39  P     P     04 09 03.1 -1.2
U59A                              IAmb  IAmb  04 09 08.2
      comp=Z,12nm,1.2s
P52A  Corning          27.52  28  P     P     04 09 03.7 -1.8
P52A                              IAmb  IAmb  04 09 08.2
      comp=Z,18nm,1.1s
P52A  Corning          27.52  28  P     P     04 09 05.2 -0.4
      baz=216
L44A  Lake County Fo   27.58  17  P     P     04 09 06.1 +0.1
      baz=202
ECSD  EROS Data Cent   27.61   3  P     P     04 09 06.3  0.0
      baz=184
ACSO  Alum Creek Sta   27.63  26  P     P     04 09 06.0 -0.5
      baz=214
JFWS  Jewell Farm      27.68  13  P     P     04 09 05.6 -1.3
JFWS                              IAmb  IAmb  04 09 07.3
      comp=Z,15nm,0.8s
JFWS  Jewell Farm      27.68  13  P     P     04 09 06.9  0.0
      baz=197
BGU   Big Grassy Mou   27.73 336  P     P     04 09 07.4 -0.3
HWUT  Hardware Ranch   27.79 339  P     P     04 09 09.1 +0.9
SPUT  South Promonto   27.84 337  P     P     04 09 09.5 +0.9
OMMB  Old Mammoth Mi   28.01 324  P     P     04 09 11.2 +0.9
MDPB  Devils Postpil   28.07 324        P     04 09 11.7 +0.9
MDPB                              IAmb  IAmb  04 09 25.9
      comp=Z,8.1nm,1.3s
NV11  Mina Array Sit   28.13 326  P     P     04 09 12.2 +1.0
SDV   Santo Domingo    28.20 101  P     P     04 09 12.0 -0.1
      comp=Z,5.2nm,0.7s,baz=298,slow=4.0,SNR=7.4
SDV                               LR    LR    04 21 59.3
      comp=Z,133nm,18.4s,baz=2.5,slow=40
      comp=Z,5.2nm,0.7s
SDV   Santo Domingo    28.20 101  P     P     04 09 12.2 +0.1
SDV                               IAmb  IAmb  04 09 15.3
      comp=Z,5.2nm,0.8s
BW06  Boulder Array    28.20 343  P     P     04 09 12.4 +0.5
BW06                              IAmb  IAmb  04 09 17.4
      comp=Z,7.2nm,1.1s
BW06  Boulder Array    28.20 343  P     P     04 09 12.8 +0.9
      baz=157,SNR=7.2
PD31  Pinedale Array   28.20 343  P     P     04 09 12.3 +0.4
PD31                              IAmb  IAmb  04 09 17.4
      comp=Z,7.1nm,1.1s
PDAR  Pinedale Array   28.20 343  P     P     04 09 11.8 -0.1
      comp=Z,3.2nm,0.9s,baz=146,slow=8.4,SNR=17
PDAR                              LR    LR    04 21 10.5
      comp=Z,326nm,20.6s,baz=167,slow=38
      comp=Z,3.2nm,0.9s
PDAR  Pinedale Array   28.20 343  P     P     04 09 11.7 -0.2
NVAR  Mina Array Bea   28.21 326  P     P     04 09 13.5 +1.5
      comp=Z,2.4nm,0.7s,baz=148,slow=10,SNR=17
NVAR                              LR    LR    04 21 59.5
      comp=Z,258nm,18.7s,baz=163,slow=40
      comp=Z,2.4nm,0.7s
NVAR  Mina Array Bea   28.21 326  P     P     04 09 12.9 +0.9
RSSD  Black Hills      28.33 352  P     P     04 09 13.2 +0.2
RSSD  Black Hills      28.33 352  P     P     04 09 13.6 +0.6
      baz=169
HVU   Hansel Valley    28.38 337  P     P     04 09 14.1 +0.7
HVU                               IAmb  IAmb  04 09 15.1
      comp=Z,6.9nm,1.1s
O53A  New Philadelph   28.43  29  P     P     04 09 12.8 -0.9
      baz=217
ELK   Elko             28.50 333  LR    LR    04 21 48.7
      comp=Z,586nm,21.6s,baz=167,slow=39
MCWV  Mont Chateau     28.62  31  P     P     04 09 11.7 -3.7
      baz=220
REDW  Red Top Meadow   29.13 341  IAmb  IAmb  04 09 24.7
      comp=Z,12nm,1.2s
SNOW  Snow King Moun   29.19 342  IAmb  IAmb  04 09 32.7
      comp=Z,23nm,1.5s
SPMN  Marine on St.    29.46   8  P     P     04 09 21.9 -0.8
      baz=191
EMB   Emerald Bay      29.58 325  P     P     04 09 25.7 +1.5
EMB                               IAmb  IAmb  04 09 26.9
      comp=Z,9.1nm,0.9s
FLWY  Flagg Ranch      29.74 342  P     P     04 09 26.6 +1.0
RLMT  Red Lodge        30.31 345  P     P     04 09 31.4 +0.8
RLMT  Red Lodge        30.31 345  P     P     04 09 30.9 +0.3
      baz=159
E28A  Huff             30.45 357  P     P     04 09 32.1 +0.5
HLID  Hailey           30.52 337  P     P     04 09 32.9 +0.5
HLID  Hailey           30.52 337  P     P     04 09 33.3 +0.9
      baz=149
ATAH  Atahualpa        30.53 138  LR    LR    04 19 25.8
      comp=Z,103nm,18.1s,baz=339,slow=32
M55A  Ridgway          30.54  30  P     P     04 09 32.1 -0.3
M55A                              IAmb  IAmb  04 09 49.3
      comp=Z,17nm,1.4s
F42A  Maple Grove Fa   30.86  14  P     P     04 09 32.7 -2.5
MFID  Camas Ranch      30.95 335  P     P     04 09 36.3 +0.2
MFID                              IAmb  IAmb  04 09 38.2
      comp=Z,8.6nm,1.3s
WVOR  Wild Horse Val   31.39 331  P     P     04 09 40.7 +0.7
WVOR                              IAmb  IAmb  04 09 42.4
      comp=Z,9.1nm,1.4s
BOZ   Bozeman (W)      31.39 342  P     P     04 09 41.2 +1.2
      baz=155
MDND  Maddock          31.69 359  P     P     04 09 42.6 +0.2
      baz=178,SNR=7.6
LRM   Limekiln Ridge   31.84 341  P     P     04 09 44.5 +0.3
J08A  Circle Bar Ran   32.03 332  P     P     04 09 45.9 +0.2
J08A                              IAmb  IAmb  04 09 47.9
      comp=Z,9.4nm,1.0s
AGMN  Agassiz Nation   32.20   3  P     P     04 09 46.2 -0.7
PLID  Pearl Lake       32.42 337  P     P     04 09 49.5 +0.3
PLID                              IAmb  IAmb  04 09 50.4
      comp=Z,13nm,1.3s
HRY   Holter Researc   32.47 343  P     P     04 09 49.7 +0.3
DGMT  Dagmar           32.62 353  P     P     04 09 50.2 -0.4
DGMT  Dagmar           32.62 353  P     P     04 09 51.2 +0.5
      baz=170
YBH   Yreka Blue Hor   32.93 326  LR    LR    04 25 01.1
      comp=Z,176nm,18.9s,baz=158,slow=40
SADO  Sadowa           32.97  26  LR    LR    04 24 29.0
      comp=Z,45nm,20.9s,baz=292,slow=39
G08A  Pilot Rock       33.78 334  P     P     04 10 01.1 +0.2
G08A                              IAmb  IAmb  04 10 13.6
      comp=Z,5.9nm,1.0s
ULM   Lac du Bonnet    34.15   3  P     P     04 10 02.2 -1.7
      comp=Z,3.1nm,0.7s,baz=175,slow=11,SNR=5.8
ULM                               LR    LR    04 25 39.1
      comp=Z,72nm,21.6s,baz=256,slow=40
      comp=Z,3.1nm,0.7s
L61B  Northampton      34.40  35  P     P     04 10 06.2 +0.1
      baz=228
NNA   Nana             35.23 141  LR    LR    04 22 24.3
      comp=Z,60nm,18.9s,baz=330,slow=32
NEW   Newport          35.52 339  LR    LR    04 25 53.2
      comp=Z,336nm,18.5s,baz=172,slow=38
LTY   Liberty          36.06 334  P     P     04 10 21.8 +1.2
FFC   Flin Flon        38.65 357  P     P     04 10 42.0 -0.3
FFC                               IAmb  IAmb  04 10 50.2
      comp=Z,7.0nm,0.9s
ETMB  Extrema          41.10 127  P     P     04 11 05.1 +1.9
FCC   Fort Churchill   42.74   3  P     P     04 11 15.5 -0.4
LPAZ  La Paz           44.02 136  P     P     04 11 31.0 +3.4
      comp=Z,0.5nm,0.7s,baz=188,slow=2.5,SNR=1.4
LPAZ                              LR    LR    04 28 55.9
      comp=Z,42nm,18.8s,baz=306,slow=35
      comp=Z,0.5nm,0.7s
RPN   Rapa Nui         44.20 194  LR    LR    04 25 25.7
      comp=Z,75nm,21.3s,baz=64,slow=30
SCHQ  Schefferville    45.77  25  P     P     04 11 39.4 -1.0
      comp=Z,9.2nm,0.8s,baz=231,slow=11,SNR=10
SCHQ                              LR    LR    04 35 42.0
      comp=Z,109nm,18.4s,baz=185,slow=43
      comp=Z,9.2nm,0.8s
MDP   Montagnes des    46.36  98  LR    LR    04 31 46.5
      comp=Z,53nm,19.6s,baz=283,slow=37
YKA   Yellowknife Ar   47.71 350  P     P     04 11 53.6 -1.8
      comp=Z,2.2nm,0.8s,baz=159,slow=7.5,SNR=22
YKA                               LR    LR    04 34 32.4
      comp=Z,168nm,18.6s,baz=304,slow=40
      comp=Z,2.2nm,0.8s
DLBC  Dease Lake       48.27 338  LR    LR    04 31 26.5
      comp=Z,325nm,19.7s,baz=114,slow=35
SIV   San Ignacio      48.85 129  P     P     04 12 07.1 +2.2
      comp=Z,0.8nm,0.8s,baz=301,slow=14,SNR=4.4
SIV                               LR    LR    04 32 24.3
      comp=Z,45nm,18.4s,baz=330,slow=36
      comp=Z,0.8nm,0.8s
S32K  Killisnoo        49.31 335  P     P     04 12 08.9 +1.1
      baz=132
P33M  Teslin, Yukon    50.55 339  P     P     04 12 18.6 +1.3
      baz=135
SKAG  Skagway          50.94 337  P     P     04 12 21.5 +1.3
      baz=132
N32M  Quiet Lake       51.31 339  P     P     04 12 23.9 +0.8
      baz=136
PLBC  Pleasant Camp    51.33 336  P     P     04 12 24.6 +1.4
      baz=131
FRB   Frobisher Bay    51.92  16  LR    LR    04 37 28.6
      comp=Z,60nm,19.2s,baz=208,slow=40
P30M  Million Dollar   52.00 337  P     P     04 12 29.6 +1.4
      baz=131
O30N  Mendenhall       52.10 338  P     P     04 12 30.3 +1.3
      baz=132
FARO  Faro, Yukon      52.18 340  P     P     04 12 30.3 +0.8
      baz=136
N31M  Braeburn, Yuko   52.48 339  P     P     04 12 32.9 +1.2
      baz=133
H03N2 Juan Fernandez   52.70 159  T     T     05 09 19.9
      baz=337,slow=77,SNR=934
H03N1 Juan Fernandez   52.71 159  T     T     05 09 21.1
      baz=337,slow=77,SNR=632
H03N3 Juan Fernandez   52.72 159  T     T     05 09 20.1
      baz=337,slow=77,SNR=803
M29M  Somme Creek      54.06 338  P     P     04 12 44.8 +1.3
      baz=130
YUK3  Moose Creek      54.37 337  P     P     04 12 47.1 +1.2
      baz=128
L29M  L29M             54.38 339  P     P     04 12 46.6 +0.9
      baz=131
K29M  Barlow Dome      54.67 340  P     P     04 12 48.9 +1.0
      baz=132
BVCY  Beaver Creek     54.91 338  P     P     04 12 50.5 +1.0
      baz=128
MCARA McCarthy VSAT    55.12 336  P     P     04 12 51.6 +0.6
      baz=125
M27K  Edge Creek, AK   55.26 337  P     P     04 12 52.7 +0.5
      baz=126
DAWY  Dawson           55.44 340  P     P     04 12 54.1 +0.8
      baz=130
BCAR  Beaver Creek A   55.65 338  P     P     04 12 55.0 +0.2
CFA   Coronel Fontan   55.65 149  LR    LR    04 31 43.0
      comp=Z,62nm,21.2s,baz=102,slow=30
L27K  Beaver Creek,    55.66 338  P     P     04 12 56.2 +1.3
      baz=127
M26K  Nabesna, AK      55.70 337  P     P     04 12 56.1 +0.9
      baz=125
EYAK  Cordova Ski Ar   55.78 334  P     P     04 12 57.1 +1.4
      baz=121
F31M  Tsiigehtchic     56.13 344  P     P     04 12 58.5 +0.3
      baz=138
EPYK  Eagle Plains     56.16 343  P     P     04 12 59.0 +0.5
      baz=134
L26K  Log Cabin Wild   56.20 337  P     P     04 12 59.9 +1.1
      baz=125
P23K  Montague Islan   56.21 333  P     P     04 13 00.5 +1.7
      baz=119
K27K  Chicken          56.34 339  P     P     04 13 01.0 +1.3
      baz=127
KLU   Klutina          56.35 335  P     P     04 13 01.0 +1.1
      baz=122
G30M  tAoh Zraii Nji   56.46 343  P     P     04 13 01.7 +1.2
      baz=135
EGAK  Eagle            56.49 340  P     P     04 13 01.0 +0.3
EGAK                              IAmb  IAmb  04 13 06.5
      comp=Z,6.4nm,1.1s
EGAK  Eagle            56.49 340  P     P     04 13 01.0 +0.3
      baz=129
HARP  HAARP            56.53 336  P     P     04 13 01.5 +0.3
      baz=123
INK   Inuvik           56.73 345  P     P     04 13 02.6 +0.3
INK                               IAmb  IAmb  04 13 03.5
      comp=Z,3.9nm,0.8s
INK   Inuvik           56.73 345  P     P     04 13 02.8 +0.4
      baz=139
M24K  Tolsona, Glenn   56.77 335  P     P     04 13 03.2 +0.3
      baz=122
DOT   Dot Lake         56.82 338  P     P     04 13 04.1 +0.9
DOT                               IAmb  IAmb  04 13 10.5
      comp=Z,5.0nm,0.9s
PAX   Paxson           56.97 337  P     P     04 13 04.9 +0.6
PAX                               IAmb  IAmb  04 13 10.6
      comp=Z,4.4nm,1.2s
PAX   Paxson           56.97 337  P     P     04 13 04.5 +0.2
      baz=123
SCRK  Sand Creek       56.98 338  P     P     04 13 06.0 +1.5
SCRK                              IAmb  IAmb  04 13 10.9
      comp=Z,6.4nm,1.1s
SCRK  Sand Creek       56.98 338  P     P     04 13 05.4 +1.0
      baz=125
J26L  Joseph Creek     57.14 339  P     P     04 13 06.5 +0.9
J26L  Joseph Creek     57.14 339  P     P     04 13 06.8 +1.3
      baz=126
I27K  Kandik River     57.16 340  P     P     04 13 05.8 +0.2
      baz=129
RIDG  Independent Ri   57.16 338  P     P     04 13 06.3 +0.6
RIDG  Independent Ri   57.16 338  P     P     04 13 06.0 +0.4
      baz=124
O22K  Cooper Landing   57.46 333  P     P     04 13 08.0 +0.4
      baz=117
I26K  Coal Creek Min   57.48 340  P     P     04 13 08.0 +0.2
      baz=127
H27K  Steamboat Moun   57.52 341  P     P     04 13 08.6 +0.4
      baz=129
K24K  Donnelly Dome    57.54 337  P     P     04 13 09.0 +0.7
      baz=123
KDAK  Kodiak Island    57.64 329  LR    LR    04 36 58.9
      comp=Z,72nm,18.5s,baz=159,slow=35
GHO   Glory Hole Cre   57.73 334  P     P     04 13 09.9 +0.2
PMR   Palmer           57.73 334  P     P     04 13 09.6 +0.1
      baz=118
RC01  Rabbit Creek A   57.74 333  P     P     04 13 10.0 +0.3
      baz=118
OHAK  Old Harbor       57.78 328  P     P     04 13 10.5 +0.6
      baz=112
G27K  Doyon Strip      57.93 341  P     P     04 13 10.7 -0.3
      baz=129
A36M  Sachs Harbour    58.06 351  P     P     04 13 11.1 -0.7
A36M                              IAmb  IAmb  04 13 11.7
      comp=Z,3.8nm,0.8s
A36M  Sachs Harbour    58.06 351  P     P     04 13 11.2 -0.5
      baz=149,SNR=5.4
CAPN  Captain Cook N   58.22 333  P     P     04 13 13.4 +0.4
      baz=116
M22K  Willow           58.22 334  P     P     04 13 12.9 -0.1
      baz=118
HDA   Harding Lake     58.30 338  P     P     04 13 13.8 +0.2
HDA                               IAmb  IAmb  04 13 14.4
      comp=Z,3.3nm,0.8s
HDA   Harding Lake     58.30 338  P     P     04 13 14.0 +0.4
      baz=122
SUA   Susitna One      58.35 334  P     P     04 13 14.5 +0.4
SUA   Susitna One      58.35 334  P     P     04 13 14.9 +0.8
      baz=117,SNR=5.9
PRP   Porcupine Dome   58.41 339  P     P     04 13 14.5  0.0
PRP                               IAmb  IAmb  04 13 15.6
      comp=Z,6.2nm,1.0s
PRP   Porcupine Dome   58.41 339  P     P     04 13 15.0 +0.6
      baz=124,SNR=5.6
IL03  Eielson Array    58.46 338  P     P     04 13 14.2 -0.5
IL31                   58.48 338  P     P     04 13 14.4 -0.3
ILAR  Eielson Array    58.48 338  P     P     04 13 14.6 -0.2
      comp=Z,2.1nm,0.9s,baz=141,slow=5.3,SNR=22
ILAR                              LR    LR    04 41 16.6
      comp=Z,167nm,20.5s,baz=154,slow=39
      comp=Z,2.1nm,0.9s
ILAR  Eielson Array    58.48 338  P     P     04 13 14.8  0.0
RND   Reindeer         58.50 336  P     P     04 13 15.4 +0.4
RND                               IAmb  IAmb  04 13 17.1
      comp=Z,8.5nm,1.2s
CUT   Chulitna         58.58 335  P     P     04 13 15.4 -0.1
G26K  Porcupine Rive   58.68 341  P     P     04 13 16.1 -0.1
      baz=127
MCK   McKinley         58.70 336  P     P     04 13 16.6 +0.3
MCK   McKinley         58.70 336  P     P     04 13 17.0 +0.7
      baz=120
E27K  Coleen River     58.79 343  P     P     04 13 17.3 +0.3
      baz=130
POKR  Poker Plat Res   58.86 338  P     P     04 13 17.8 +0.4
POKR                              IAmb  IAmb  04 13 18.3
      comp=Z,4.2nm,0.9s
POKR  Poker Plat Res   58.86 338  P     P     04 13 17.6 +0.2
      baz=122
SKT   Skwentna         58.92 334  P     P     04 13 18.6 +0.6
SKT                               IAmb  IAmb  04 13 18.8
      comp=Z,4.9nm,0.8s
SKT   Skwentna         58.92 334  P     P     04 13 18.4 +0.5
      baz=116
TRF   Thorofare Moun   59.09 336  P     P     04 13 19.5 +0.3
TRF   Thorofare Moun   59.09 336  P     P     04 13 19.5 +0.3
      baz=118,SNR=8.6
Q18K  Katmai Hardscr   59.16 330  P     P     04 13 19.8  0.0
      baz=111
NEA2  Nenana           59.18 337  P     P     04 13 20.1 +0.4
NEA2                              IAmb  IAmb  04 13 26.8
      comp=Z,7.8nm,1.4s
NEA2  Nenana           59.18 337  P     P     04 13 20.1 +0.4
      baz=120
BMAR  Burnt Mountain   59.21 341  P     P     04 13 19.8 -0.1
F26K  Sheenjek River   59.24 342  P     P     04 13 19.9 -0.2
      baz=127
G25K  Bearman Lake     59.31 340  P     P     04 13 21.2 +0.6
      baz=124
KTH   Kantishna Hill   59.39 336  P     P     04 13 21.0 -0.2
KTH                               IAmb  IAmb  04 13 21.8
      comp=Z,6.5nm,1.0s
H24K  Noodor Dome      59.40 339  P     P     04 13 21.5 +0.3
H24K                              IAmb  IAmb  04 13 22.2
      comp=Z,5.2nm,0.8s
H24K  Noodor Dome      59.40 339  P     P     04 13 21.8 +0.6
      baz=122
O19K  Port Alsworth    59.41 331  P     P     04 13 21.2 -0.1
      baz=112
P18K  Big Mountain,    59.53 330  P     P     04 13 22.2  0.0
      baz=111
M20K  Styx River       59.56 333  P     P     04 13 22.6 +0.2
M20K  Styx River       59.56 333  P     P     04 13 22.5 +0.1
      baz=115,SNR=5.6
I23K  Minto, Yukon-K   59.57 338  P     P     04 13 22.6 +0.3
I23K  Minto, Yukon-K   59.57 338  P     P     04 13 22.9 +0.6
      baz=120,SNR=5.6
SFJD  Kangerlussuaq    59.59  20  LR    LR    04 41 37.1
      comp=Z,50nm,19.2s,baz=215,slow=39
PPLA  Purkeypile       59.60 335  P     P     04 13 23.4 +0.6
PPLA  Purkeypile       59.60 335  P     P     04 13 23.0 +0.2
      baz=116
F25K  Christian Rive   59.64 341  P     P     04 13 23.2 +0.3
      baz=125
BPAW  Bear Paw Mtn.    59.67 336  P     P     04 13 23.1  0.0
      baz=118
O18K  Koktuh Hills     59.69 331  P     P     04 13 23.8 +0.4
O18K  Koktuh Hills     59.69 331  P     P     04 13 23.2 -0.1
      baz=112
N19K  Bonanza Creek    59.72 332  P     P     04 13 23.8 +0.2
N19K  Bonanza Creek    59.72 332  P     P     04 13 23.6  0.0
      baz=113
G24K  Hadweenzic Riv   59.73 340  P     P     04 13 23.9 +0.5
      baz=123
CAST  Castle Rocks     59.79 335  P     P     04 13 23.8 -0.1
CAST  Castle Rocks     59.79 335  P     P     04 13 23.8 -0.1
      baz=116,SNR=6.8
E25K  Arctic Village   59.93 342  P     P     04 13 24.2 -0.6
      baz=126
Q16K  King Salmon      59.97 329  P     P     04 13 25.3 +0.1
      baz=109
H23K  Yukon River      59.98 338  P     P     04 13 25.3  0.0
      baz=120
MLY   Manley           60.02 337  P     P     04 13 25.5 -0.1
MLY                               IAmb  IAmb  04 13 28.1
      comp=Z,5.5nm,1.1s
MLY   Manley           60.02 337  P     P     04 13 25.6  0.0
      baz=119,SNR=6.0
R16K  Pilot Point      60.07 328  P     P     04 13 26.7 +0.8
      baz=108
CHUM  Lake Minchumin   60.09 336  P     P     04 13 25.9 -0.1
      baz=116
M19K  Big River Lodg   60.11 333  P     P     04 13 26.9 +0.7
M19K                              IAmb  IAmb  04 13 27.2
      comp=Z,4.5nm,0.8s
M19K  Big River Lodg   60.11 333  P     P     04 13 26.7 +0.5
      baz=113
L20K  Farewell, AK     60.12 334  P     P     04 13 26.2 -0.1
      baz=114
CHGN  Chignik          60.13 326  P     P     04 13 26.1 -0.3
      baz=106
C27K  Jago River       60.30 343  P     P     04 13 27.5 +0.2
      baz=128
F24K  Squaw Lake       60.31 340  P     P     04 13 27.7 +0.2
      baz=123
SVW2  Sparrevohn       60.32 332  P     P     04 13 27.3 -0.3
SVW2                              IAmb  IAmb  04 13 28.3
      comp=Z,3.8nm,0.8s
PPT   Papeete          60.35 239  LR    LR    04 33 29.3
      comp=Z,77nm,22.0s,baz=14,slow=30
L19K  White Mountain   60.42 333  P     P     04 13 28.2 -0.1
L19K                              IAmb  IAmb  04 13 42.9
      comp=Z,5.0nm,1.1s
L19K  White Mountain   60.42 333  P     P     04 13 28.2 -0.1
      baz=113
O17K  Koliganek Bris   60.55 330  P     P     04 13 29.6 +0.4
      baz=110
I21K  Tanana           60.55 337  P     P     04 13 29.4 +0.3
I21K                              IAmb  IAmb  04 13 43.4
      comp=Z,5.7nm,1.2s
I21K  Tanana           60.55 337  P     P     04 13 29.6 +0.5
      baz=118
K20K  Telida           60.57 335  P     P     04 13 28.9 -0.4
K20K                              IAmb  IAmb  04 13 29.7
      comp=Z,6.5nm,1.0s
K20K  Telida           60.57 335  P     P     04 13 29.1 -0.2
      baz=114
G23K  Bananza Creek    60.60 339  P     P     04 13 29.6 +0.1
      baz=120
H22K  Ishtalitna Cre   60.67 338  P     P     04 13 29.8 -0.2
      baz=118
E24K  Your Creek       60.81 341  P     P     04 13 31.7 +0.9
      baz=122
C26K  Camden Bay       60.81 343  P     P     04 13 31.0 +0.2
      baz=127
D25K  Kavik River      60.87 342  P     P     04 13 32.1 +0.8
      baz=125
COLD  Coldfoot         60.92 340  P     P     04 13 32.7 +1.1
COLD                              IAmb  IAmb  04 13 33.0
      comp=Z,3.8nm,1.0s
COLD  Coldfoot         60.92 340  P     P     04 13 32.6 +1.0
      baz=120
O16K  Kokwok River B   60.97 330  P     P     04 13 32.2 +0.2
      baz=108
H21K  Melozitna Rive   61.08 337  P     P     04 13 32.3 -0.4
      baz=117
E23K  Chandalar        61.16 341  P     P     04 13 34.2 +0.9
      baz=121
TTA   Tatalina         61.21 334  P     P     04 13 33.3 -0.5
TTA                               IAmb  IAmb  04 13 34.1
      comp=Z,4.6nm,1.0s
TTA   Tatalina         61.21 334  P     P     04 13 33.2 -0.5
      baz=112
D24K  Happy Valley     61.50 342  P     P     04 13 35.1 -0.3
      baz=123
N16K  Nishlik Lake     61.58 331  P     P     04 13 36.6 +0.4
      baz=108
G21K  Allakaket        61.73 338  P     P     04 13 37.7 +0.6
      baz=117
F22K  John River       61.73 339  P     P     04 13 37.9 +0.8
      baz=118
C24K  Franklin Bluff   61.77 342  P     P     04 13 38.0 +0.7
      baz=123
D23K  Nanushuk River   61.97 341  P     P     04 13 39.2 +0.6
      baz=121
F21K  Alatna River     62.04 339  P     P     04 13 39.5 +0.4
      baz=117
PLCA  Paso Flores      62.24 156  LR    LR    04 34 43.7
      comp=Z,61nm,19.5s,baz=312,slow=30
NIKH  Nikolski High    65.44 321  P     P     04 14 03.4 +1.6
      baz=96
ANM   Nome             65.67 334  P     P     04 14 03.1  0.0
ANM                               IAmb  IAmb  04 14 04.3
      comp=Z,3.1nm,1.0s
ANM   Nome             65.67 334  P     P     04 14 03.2 +0.1
      baz=104
RDOG  Red Dog Mine     65.69 338  P     P     04 14 02.4 -0.7
RDOG                              IAmb  IAmb  04 14 03.6
      comp=Z,6.3nm,1.2s
RDOG  Red Dog Mine     65.69 338  P     P     04 14 03.5 +0.4
      baz=108
SPIA  Saint Paul Isl   66.69 326  P     P     04 14 11.0 +1.3
      baz=96
TNA   Tin City         66.95 335  P     P     04 14 11.6 +0.3
TNA                               IAmb  IAmb  04 14 17.5
      comp=Z,3.6nm,0.9s
TNA   Tin City         66.95 335  P     P     04 14 11.9 +0.6
      baz=102
BORG  Borgarnes        70.15  26  LR    LR    04 46 50.3
      comp=Z,34nm,18.2s,baz=337,slow=37
```

BILL	**Bilibino**	**77.13**	**337**	P	**P**	**04 15 12.2**	**-0.1**
BILL				IAmb	IAmb	04 15 19.4	
	comp=Z,8.8nm,1.3s						
SPITS	**Spitsbergen Ar**	**79.30**	**11**	LR	LR	04 51 30.5	
	comp=Z,76nm,19.0s,baz=271,slow=37						
ESDC	**Sonseca Array**	**83.39**	**51**	P	**P**	**04 15 46.2**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=299,slow=5.6,SNR=5.0						
	comp=Z,0.9nm,0.8s						
MDT	**Midelt**	**84.71**	**58**	LR	LR	04 48 38.0	
	comp=Z,34nm,20.6s,baz=296,slow=32						
NOA	**NORSAR Array B**	**85.30**	**27**	P	**P**	**04 15 56.4**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=302,slow=5.2,SNR=3.3						
NOA				LR	LR	04 55 54.0	
	comp=Z,14nm,18.3s,baz=290,slow=37						
	comp=Z,0.5nm,0.7s						
ARCES	**ARCESS Array B**	**86.09**	**17**	LR	LR	04 58 48.5	
	comp=Z,31nm,18.0s,baz=325,slow=39						
MA2	**Magadan**	**86.30**	**331**	LR	LR	04 54 11.5	
	comp=Z,40nm,21.5s,baz=90,slow=36						
HFS	**Hagfors**	**86.80**	**28**	LR	LR	04 57 03.4	
	comp=Z,29nm,18.1s,baz=246,slow=37						
TIXI	**Tiksi**	**86.83**	**346**	LR	LR	05 01 17.4	
	comp=Z,36nm,18.1s,baz=177,slow=40						
DAVOX	**Davos/Dischmat**	**90.53**	**41**	LR	LR	04 57 17.2	
	comp=Z,28nm,20.3s,baz=260,slow=36						
FINES	**FINESS Array B**	**91.22**	**23**	LR	LR	04 59 21.3	
	comp=Z,30nm,18.9s,baz=288,slow=37						
GERES	**GERESS Array B**	**91.96**	**38**	LR	LR	04 59 25.4	
	comp=Z,26nm,18.2s,baz=327,slow=37						
YAK	**Yakutsk**	**93.37**	**339**	LR	LR	05 01 56.7	
	comp=Z,42nm,20.4s,baz=83,slow=38						
VRAC	**Vranov**	**93.42**	**36**	LR	LR	05 04 33.5	
	comp=Z,28nm,18.1s,baz=273,slow=40						
AKASG	**Malin Array Be**	**99.34**	**31**	LR	LR	05 04 28.2	
	comp=Z,16nm,18.3s,baz=13,slow=37						
NJ2	**Nanjing**	**120.18**	**323**	*e*P	**PKiKP**	**04 22 13.4**	**+2.7**
NJ2	**Nanjing**	**120.18**	**323**	pmax	pmax		
	comp=Z,9.0nm,0.5s						
WRA	**Warramunga Arr**	**129.68**	**257**	PKP	**PKiKP**	**04 22 29.4**	**-0.5**
	comp=Z,1.1nm,1.0s,baz=81,slow=1.7,SNR=5.5						
ASAR	**Alice Springs**	**130.28**	**252**	PKP	**PKiKP**	**04 22 34.3**	**+3.3**
	comp=Z,0.8nm,0.9s,baz=116,slow=2.2,SNR=4.2						
PZH	**PanZhiHua**	**133.28**	**335**	PKP	**PKiKP**	**04 22 36.7**	**-0.5**

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*NEIC **12** 04:12:52.1±2.1, 16.°00N±0.°03×98.°63W±0.°02, h21^{km}±8^{km}, mb4.1/11, Md4.2/70(MEX), Error ellipse: s-maj=4.2km s-min=1.8km az=198.0*

*IDC **12** 04:12:54.0±8.9, 16.°28N×98.°36W, h0^{km}, mb3.4/3, mbtmp3.2/4, ML3.3/1, Error ellipse: s-maj=157.4km s-min=132.3km az=24.0*

*MEX **12** 04:12:55.0±0.6, 16.°04N×98.°65W, h16^{km}±3^{km}, MD4.2*

ISC 12 04:12:47.9±1.3**, 15.°95N**±0.°04×**98.°64W**±0.°02**, h9**^{km}±9^{km}**, n82, σ1^{s}69**/117**, mb4.0**/7**, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.66**	**49**		**Pn**	**04 13 04.5**	**+1.1**
PNIG					**Sn**	**04 13 12.4**	**-1.5**
PNIG	**Pinotepa**	**0.66**	**49**	*i* P	**Pn**	**04 13 04.5**	**+1.1**
PNIG				*i* S	**Sn**	**04 13 12.4**	**-1.5**
MGIG	**Malinaltepec**	**1.27**	**0**		**Pn**	**04 13 13.2**	**+1.2**
MGIG					**Sb**	**04 13 27.8**	**-0.9**
MGIG	**Malinaltepec**	**1.27**	**0**	*i* P	**Pn**	**04 13 13.2**	**+1.2**
MGIG				*i* S	**Sb**	**04 13 27.8**	**-0.9**
YOIG	**Yosondua**	**1.38**	**49**		**Pg**	**04 13 15.7**	**+1.2**
YOIG					**Sn**	**04 13 32.1**	**-0.1**
YOIG	**Yosondua**	**1.38**	**49**	*i* P	**Pg**	**04 13 15.7**	**+1.2**
YOIG				*i* S	**Sn**	**04 13 32.1**	**-0.1**
DAIG	**Los Arroyos**	**1.44**	**318**		**Pg**	**04 13 15.6**	**+0.2**
DAIG					**Sb**	**04 13 30.1**	**-3.1**
DAIG	**Los Arroyos**	**1.44**	**318**	*e*P	**Pg**	**04 13 15.6**	**+0.2**
DAIG				*e*S	**Sb**	**04 13 30.1**	**-3.1**
PEIG	**Puerto Escondi**	**1.44**	**88**		**Pg**	**04 13 17.0**	**+1.5**
PEIG					**Sn**	**04 13 33.7**	**+0.5**
PEIG	**Puerto Escondi**	**1.44**	**88**	*i* P	**Pg**	**04 13 17.0**	**+1.5**
PEIG				*e*S	**Sn**	**04 13 33.7**	**+0.5**
ACP2	**Acapulco**	**1.50**	**308**	*i*	**Pn**	**04 13 15.3**	**+0.3**
ACP2				*i*		04 13 33.1	
TXIG	**Tlaxiaco**	**1.54**	**33**		**Sg**	**04 13 37.7**	**+0.2**
TXIG	**Tlaxiaco**	**1.54**	**33**	*i* P	**Pg**	**04 13 17.7**	**+0.2**
TXIG				*i* S	**Sg**	**04 13 37.7**	**+0.2**
TLIG	**Tlapa**	**1.60**	**3**		**Pg**	**04 13 18.6**	**0.0**
TLIG				Sn	**Sg**	**04 13 39.5**	**+0.1**
TLIG	**Tlapa**	**1.60**	**3**	*e*P	**Pg**	**04 13 18.6**	**0.0**
TLIG				*e*S	**Sb**	**04 13 37.5**	**-0.6**
HMTT	**Tlapaneco**	**1.84**	**2**		**Pg**	**04 13 25.0**	**+1.9**
HMTT					**Sg**	**04 13 46.7**	**-0.3**
HMTT	**Tlapaneco**	**1.84**	**2**	*e*P	**Pg**	**04 13 25.0**	**+1.9**
HMTT				*e*S	**Sg**	**04 13 46.7**	**-0.3**
CAIG	**El Cayaco**	**1.90**	**305**		**Pb**	**04 13 22.7**	**0.0**
CAIG					**Sg**	**04 13 48.2**	**-0.8**
CAIG	**El Cayaco**	**1.90**	**305**	*e*P	**Pb**	**04 13 22.7**	**0.0**
CAIG				*e*S	**Sg**	**04 13 48.2**	**-0.8**
FTIG	**Fresnillo de T**	**2.00**	**14**		**Pb**	**04 13 24.6**	**0.0**
FTIG					**Sg**	**04 13 50.5**	**-1.8**
FTIG	**Fresnillo de T**	**2.00**	**14**	*i* P	**Pb**	**04 13 24.6**	**0.0**
FTIG				*i* S	**Sg**	**04 13 50.5**	**-1.8**
HLIG	**Huajuapan de L**	**2.03**	**23**		**Pb**	**04 13 24.9**	**-0.2**
HLIG					**Sg**	**04 13 51.1**	**-2.1**
HLIG	**Huajuapan de L**	**2.03**	**23**	*i* P	**Pb**	**04 13 24.9**	**-0.2**
HLIG				*i* S	**Sg**	**04 13 51.1**	**-2.1**
OXIG	**Oaxaca**	**2.14**	**58**		**Pb**	**04 13 26.9**	**-0.1**
OXIG					**Sb**	**04 13 52.7**	**-1.0**
VHO	**Vista Hermosa**	**2.14**	**58**	*i* P	**Pb**	**04 13 26.9**	**-0.1**
VHO				*e*S	**Sb**	**04 13 52.7**	**-1.0**
OXBJ	**Oaxaca**	**2.15**	**59**		**Pb**	**04 13 26.6**	**-0.4**
OXBJ					**Sb**	**04 13 54.1**	**+0.2**
OXBJ	**Oaxaca**	**2.15**	**59**	*e*P	**Pb**	**04 13 26.6**	**-0.4**
OXBJ				*e*S	**Sb**	**04 13 54.1**	**+0.2**
MEIG	**Mezcala**	**2.17**	**335**		**Pb**	**04 13 26.9**	**-0.5**
MEIG					**Sn**	**04 13 51.7**	**+0.3**
MEIG	**Mezcala**	**2.17**	**335**	*e*P	**Pb**	**04 13 26.9**	**-0.5**
MEIG				*e*S	**Sn**	**04 13 51.7**	**+0.3**
HUIG	**Huatulco**	**2.44**	**94**		**Pb**	**04 13 31.6**	**-0.4**
HUIG					**Sn**	**04 13 57.8**	**-0.3**
HUIG	**Huatulco**	**2.44**	**94**	*e*P	**Pb**	**04 13 31.6**	**-0.4**
HUIG				*i* S	**Sn**	**04 13 57.8**	**-0.3**
PLIG	**Platanillo**	**2.56**	**341**		**Pb**	**04 13 33.3**	**-0.7**
PLIG					**Sb**	**04 14 02.9**	**-2.9**
PLIG	**Platanillo**	**2.56**	**341**	*e*P	**Pb**	**04 13 33.3**	**-0.7**
PLIG				*e*S	**Sb**	**04 14 02.9**	**-2.9**
TOIG	**Toxpalan**	**2.61**	**35**		**Pb**	**04 13 33.9**	**-1.0**
TOIG					**Sb**	**04 14 06.3**	**-0.8**
TOIG	**Toxpalan**	**2.61**	**35**	*e*P	**Pb**	**04 13 33.9**	**-1.0**
TOIG				*e*S	**Sb**	**04 14 06.3**	**-0.8**
TPIG	**Tehuac#an**	**2.74**	**26**		**Pb**	**04 13 35.4**	**-1.8**
TPIG					**Sn**	**04 14 07.2**	**+1.6**
TPIG	**Tehuac#an**	**2.74**	**26**	*e*P	**Pb**	**04 13 35.4**	**-1.8**
TPIG				*e*S	**Sn**	**04 14 07.2**	**+1.6**
ARIG	**Puente Sto Nin**	**2.83**	**325**		**Pb**	**04 13 37.3**	**-1.3**
ARIG					**Sn**	**04 14 09.2**	**+1.6**
ARIG	**Puente Sto Nin**	**2.83**	**325**	*e*P	**Pb**	**04 13 37.3**	**-1.3**
ARIG				*e*S	**Sn**	**04 14 09.2**	**+1.6**
YAIG	**Yautepec**	**2.92**	**352**		**Pb**	**04 13 40.1**	**-0.1**
YAIG					**Sb**	**04 14 14.2**	**-1.9**
YAIG	**Yautepec**	**2.92**	**352**	*e*P	**Pb**	**04 13 40.1**	**-0.1**
YAIG				*e*S	**Sb**	**04 14 14.2**	**-1.9**
NEUV	**Arroyo Zacate**	**3.23**	**57**	*i* P	**Pb**	**04 13 42.1**	**-3.3**
NEUV				*i* S	**Sb**	**04 14 21.2**	**-3.8**
UNM	**Universidad Na**	**3.40**	**351**	Pn	**Pn**	**04 13 44.3**	**+3.0**
UNM	**Universidad Na**	**3.40**	**351**	*e*P	**Pb**	**04 13 47.9**	**-0.5**
UNM				*e*S	**Sb**	**04 14 28.4**	**-1.6**
CUP5	**Mexico City**	**3.40**	**351**	*e*	Pg	04 13 57.7	+4.7
CUP5				*e*		04 14 32.1	
CMIG	**Matias Romero**	**3.78**	**72**		**Pn**	**04 13 49.0**	**+2.7**
CMIG					**Sn**	**04 14 31.4**	**+0.5**
CMIG	**Matias Romero**	**3.78**	**72**	*e*P	**Pn**	**04 13 49.0**	**+2.7**
CMIG				*e*S	**Sn**	**04 14 31.4**	**+0.5**
JAUV	**Jalcomulco**	**3.82**	**27**	*e*P	**Pn**	**04 13 48.8**	**+1.9**
JAUV				*e*S	**Sn**	**04 14 30.9**	**-1.1**
PMUV	**Sontecomapan**	**4.24**	**52**	*e*P	Pn	04 13 47.5	-5.2
PMUV				*e*S	**Sb**	**04 14 51.6**	**-2.3**
DEIG	**Demacu**	**4.34**	**355**	*i*	**Pg**	**04 14 08.6**	**-2.5**
DEIG				*i*		04 14 59.0	
MOIG	**Morelia**	**4.43**	**327**	Pn	**Pn**	**04 13 57.8**	**+2.3**
MOIG	**Morelia**	**4.43**	**327**	*i*	**Pb**	**04 14 05.9**	**-0.1**
MOIG				*i*		04 15 00.0	
JRQG	**Juriquilla Cam**	**5.03**	**340**	*i*	**Pb**	**04 14 19.4**	**+3.2**
JRQG				*i*		04 15 13.3	
MMIG	**Aquila**	**5.06**	**298**	*i*	**Pn**	**04 14 02.3**	**-1.7**
MMIG				*i*		04 15 21.7	
PCIG		**5.22**	**92**		Pn	04 14 12.1	+5.9
PCIG					**Sn**	**04 15 00.4**	**-6.2**
PCIG		**5.22**	**92**	*e*P	Pn	04 14 12.1	+5.9
PCIG				*e*S	**Sn**	**04 15 00.4**	**-6.2**
TGIG		**5.36**	**80**	*i*	**Pn**	**04 14 05.4**	**-2.8**
TGIG				*i*		04 15 33.8	
IGIG	**Irapuato, Guan**	**5.41**	**332**	*i*	**Pn**	**04 14 09.0**	**0.0**
IGIG				*i*		04 15 28.4	
CCIG	**Comitan**	**6.26**	**86**	Pn	**Pn**	**04 14 22.7**	**+2.1**
CCIG	**Comitan**	**6.26**	**86**	*i*	Pb	04 14 29.8	-7.4
CCIG				*i*		04 15 36.1	
ZAIG	**Zacatecas**	**7.72**	**332**	Pn	**Pn**	**04 14 42.6**	**+1.8**
PETF	**Flores**	**8.47**	**82**	Pn	**Pn**	**04 14 53.4**	**+2.5**
TXAR	**Lajitas Array**	**14.10**	**342**	Pn	**P**	**04 16 13.5**	**-2.2**
	baz=162,slow=15,SNR=2.3						
	0.2nm,0.8s						
HKT	**Hockley**	**14.17**	**10**	Pn	**Pn**	**04 16 09.9**	**+1.2**
342A	**Flagon Creek P**	**16.40**	**19**	Pn	**Pn**	**04 16 39.4**	**+1.1**
FW07	**Weatherford**	**16.69**	**3**	Pn	**Pn**	**04 16 42.5**	**+0.5**
FW07				IAmb	IAmb	04 17 04.4	
	comp=Z,9.4nm,0.9s						
HSIG		**17.26**	**321**	Pn	**P**	**04 16 50.2**	**-0.5**
Z41A	**Richland Creek**	**18.02**	**16**		**P**	**04 16 60.0**	**+0.9**
AMTX	**Amarillo**	**19.05**	**352**	P	**P**	**04 17 09.5**	**-1.0**
AMTX				IAmb	IAmb	04 17 25.3	
	comp=Z,3.6nm,0.8s						
TUL1	**Leonard**	**20.04**	**7**	P	Pn	04 17 22.3	-0.7
TUL1				IAmb	IAmb	04 17 54.9	
	comp=Z,12nm,1.2s						
WVT	**Waverly**	**22.29**	**24**	P	**P**	**04 17 47.6**	**+2.2**
WVT				IAmb	IAmb	04 17 51.5	
	comp=Z,5.3nm,0.8s						
R40A	**Maddies Statio**	**22.95**	**13**	P	**P**	**04 17 54.6**	**+2.2**
R40A				IAmb	IAmb	04 17 58.0	
	comp=Z,7.3nm,0.8s						
SMCO	**Snowmass**	**24.26**	**344**	P	**P**	**04 18 06.2**	**+0.4**
WCI	**Wyandotte Cave**	**24.71**	**24**	P	**P**	**04 18 10.0**	**+0.5**
WCI				IAmb	IAmb	04 18 35.0	
	comp=Z,11nm,1.3s						
OTAV	**Otavalo**	**25.32**	**126**	P	**P**	**04 18 16.3**	**+0.6**
OTAV				IAmb	IAmb	04 18 21.5	
	comp=Z,9.9nm,1.5s						
P46A	**Rosedale**	**25.61**	**21**	P	**P**	**04 18 18.9**	**+1.4**
NVAR	**Mina Array Bea**	**28.29**	**326**	P	P	04 18 48.6	+6.6
	comp=Z,0.5nm,0.9s,baz=138,slow=11,SNR=2.2						
	comp=Z,0.5nm,0.9s						
PDAR	**Pinedale Array**	**28.31**	**343**	P	P	04 18 48.4	+6.3
	comp=Z,0.3nm,0.8s,baz=161,slow=8.4,SNR=1.8						
	comp=Z,0.3nm,0.8s						
YKA	**Yellowknife Ar**	**47.83**	**350**	P	P	04 21 30.5	+4.9
	comp=Z,0.5nm,0.9s,baz=160,slow=7.2,SNR=4.4						
	comp=Z,0.5nm,0.9s						
H03N2	**Juan Fernandez**	**52.60**	**159**	T	T	05 18 53.8	
	baz=337,slow=77,SNR=116						
H03N1	**Juan Fernandez**	**52.60**	**159**	T	T	05 18 52.5	
	baz=337,slow=77,SNR=173						
H03N3	**Juan Fernandez**	**52.61**	**159**	T	T	05 18 54.0	
	baz=337,slow=77,SNR=179						

MAN 12 04:17:08.3, 8.°00N×125.°48E, h19^{km}, mb4.3, ML3.2, MS2.9, 10C-7D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.43**	**254**	⇑*i*P	Pn	04 17 18.4	-1.1
BUKP				*i* S	Sb	04 17 24.1	+0.6
TASP	**Talacogon, Agu**	**0.56**	**36**	⇑*e*P	Pg	04 17 20.0	+0.6
TASP				*i* S	Sn	04 17 30.4	+0.5
BIPH	**Bislig**	**0.89**	**78**	⇓*i*P	Pb	04 17 24.0	-1.1
BIPH				*i* S	Sb	04 17 33.6	-3.2
CGP	**Cagayan de Oro**	**0.90**	**300**	⇑*e*P	Pb	04 17 24.2	-1.0
CGP				*e*S	Sb	04 17 36.8	0.0
BUTP	**Butuan**	**0.97**	**8**	⇑*e*P	Pg	04 17 28.1	+0.9
CDOP	**Cateel, Davao**	**0.98**	**103**	⇓*i*P	Pb	04 17 26.4	-0.1
CDOP				*e*S	Sn	04 17 40.6	+0.3
KCP	**Kidapawan**	**1.06**	**201**	⇓*i*P	Pg	04 17 30.0	+1.1
KCP				*i* S	Sn	04 17 42.1	-0.3
MATI	**Mati**	**1.30**	**144**	⇑*e*P	Pg	04 17 34.8	+1.3
MATI				*e*S	Sg	04 17 55.6	+5.1
SCPH	**Surigao**	**1.77**	**0**	⇓*e*P	Pn	04 17 37.9	0.0
GLSP	**General Luna,**	**1.88**	**20**	⇑*e*P	Pn	04 17 39.5	0.0
GLSP				*e*S	Sb	04 18 04.1	-1.2
GHBP	**Garcia Hernand**	**1.98**	**325**	⇑*i*P	Pb	04 17 42.6	-1.1
GHBP				*e*S	Sb	04 18 09.1	+1.1
PAGZ	**Pagadian**	**2.08**	**266**	⇓*i*P	Pg	04 17 46.9	-1.3
PAGZ				*e*S	Sg	04 18 16.5	+1.1
LSIP	**Lazi, Siquijor**	**2.14**	**302**	⇓*i*P	Pn	04 17 36.4	-6.7
LSIP				*i* S	Sn	04 18 10.6	+1.4
LSIP	**Lazi, Siquijor**	**2.14**	**302**	⇓*e*P	Pn	04 17 43.9	+0.9
LSIP				*e*S	Sn	04 18 10.6	+1.5
TBP	**Tagbilaran**	**2.32**	**317**	*e*P	Pn	04 17 46.6	+1.2
TBP				*e*S	Sn	04 18 15.5	+2.1
TABP	**Talibon, Bohol**	**2.37**	**332**	⇑*e*P	Pn	04 17 46.3	+0.2
TABP				*i* S	Sn	04 18 16.5	+1.9
TABP	**Talibon, Bohol**	**2.37**	**332**	⇑*e*P	Pn	04 17 46.6	+0.5
TABP				*e*S	Sn	04 18 15.9	+1.3
DACP	**Dalaguete, Ceb**	**2.61**	**312**	⇑*e*P	Pn	04 17 50.0	+0.6

IDC 12 04:31:35.8±3.5**, 6.°44S×148.°02E, h0**^{km}**, mb3.3**/1**, mbtmp3.2**/3**, ML3.3**/1**, Error ellipse: s-maj=96.2km s-min=36.2km az=102.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.07**	**196**	Pn	Pn	04 32 27.9	+2.2
	5.2nm,0.3s,baz=359,slow=8.0,SNR=2.3						
PMG				Sn	Sn	04 33 03.3	+0.2
	2.7nm,0.3s,baz=321,slow=19,SNR=3.9						
WRA	**Warramunga Arr**	**18.89**	**223**	P	P	04 35 57.9	-0.2
	0.1nm,0.3s,baz=50,slow=11,SNR=5.5						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**21.86**	**217**	P	P	04 36 29.7	-0.6
	0.7nm,0.5s,baz=52,slow=9.7,SNR=14						
	0.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**146.18**	**284**	PKPbc	PKPdf	04 51 18.2	0.0
	0.8nm,1.2s,baz=84,slow=3.5,SNR=2.4						

IDC 12 04:38:55.9±4.4**, 6.°50S×154.°67E, h0**^{km}**, mb3.5**/4**, mbtmp3.5**/4**, Error ellipse: s-maj=145.8km s-min=32.1km az=112.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.84**	**234**	P	P	04 44 12.2	+1.2
	0.7nm,0.7s,baz=66,slow=10,SNR=7.8						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**26.26**	**227**	P	P	04 44 32.1	-1.0
	0.2nm,0.4s,baz=60,slow=9.9,SNR=9.3						
	0.2nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**27.52**	**25**	T	T	05 13 05.1	
	baz=203,slow=75,SNR=126						
H11S2	**WAKE ISLAND Hy**	**27.52**	**25**	T	T	05 13 05.2	
	baz=203,slow=75,SNR=122						
H11S1	**WAKE ISLAND Hy**	**27.54**	**25**	T	T	05 13 07.3	
	baz=203,slow=75,SNR=51						
H11N1	**WAKE ISLAND Hy**	**28.69**	**25**	T	T	05 14 39.9	
	baz=204						
H11N3	**WAKE ISLAND Hy**	**28.70**	**25**	T	T	05 14 33.8	
	baz=204						
H11N2	**WAKE ISLAND Hy**	**28.71**	**25**	T	T	05 14 47.8	
	baz=204						
SONM	**Songino Array**	**68.75**	**327**	P	P	04 50 02.7	+0.9
	0.2nm,0.3s,baz=139,slow=6.1,SNR=2.5						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**82.82**	**319**	P	P	04 51 20.4	-1.8
	0.4nm,0.7s,baz=102,slow=6.1,SNR=4.0						
	0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**152.58**	**286**	PKPbc	PKiKP	04 58 56.5	+0.7
	1.4nm,1.2s,baz=90,slow=0.8,SNR=3.7						

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*DJA **12** 04:40:01.4±0.9, 7°S±11°×10°4E±°, h90^{km}±24^{km}, M4.1/7, mb4.5/1, MLv3.9/7*

*IDC **12** 04:40:07.3±12.0, 5.°88S×104.°06E, h0^{km}, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=248.3km s-min=169.1km az=180.0*

ISC 12 04:40:00.7±3.8**, 7.°12S**±0.°10×**104.°25E**±0.°09**, h20**^{km}±23^{km}**, n12, σ1^{s}75**/17**, mb3.9**/3**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**1.52**	**71**	P	**Pb**	**04 40 28.5**	**+0.2**
CGJI				S	**Sb**	**04 40 48.4**	**+1.3**
KASI	**Kota Agung**	**1.60**	**9**	P	**Pb**	**04 40 29.1**	**-0.6**
KASI				S	**Sg**	**04 40 52.1**	**+4.0**
LWLI	**Liwa**	**2.09**	**355**	P	**Pn**	**04 40 35.0**	**+0.2**
LWLI				S	**Sb**	**04 41 03.5**	**-0.3**
MDSI	**Maura Dua**	**2.62**	**358**	P	**Pn**	**04 40 42.6**	**+0.7**
MDSI				S	**Sb**	**04 41 16.9**	**-1.8**
CNJI	**Cibinong**	**2.87**	**94**	P	**Pn**	**04 40 44.4**	**-0.9**
CNJI				S	**Sn**	**04 41 17.0**	**-2.3**
CMJI	**Cimerak**	**4.22**	**99**	P	**Pn**	**04 41 02.6**	**-1.4**
KPJI	**Karang Pucung**	**4.65**	**93**	P	**Pn**	**04 41 09.0**	**-0.9**
UGM	**Wanagama**	**6.27**	**98**	P	**Pn**	**04 41 32.5**	**+0.2**
PWJI	**Pagerwojo**	**7.54**	**97**	P	**Pn**	**04 41 52.1**	**+2.4**
CMAR	**Chiang Mai Arr**	**25.95**	**348**	P	**P**	**04 45 30.4**	**-1.6**
	1.9nm,0.3s,baz=182,slow=9.6,SNR=4.6						
	1.9nm,0.3s						
SONM	**Songino Array**	**54.75**	**2**	P	**P**	**04 49 29.6**	**+0.6**
	0.8nm,0.7s,baz=176,slow=8.1,SNR=8.2						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**57.12**	**342**	P	**P**	**04 49 46.7**	**+0.8**
	0.4nm,0.4s,baz=153,slow=8.3,SNR=9.9						
	0.4nm,0.4s						

IDC 12 05:04:34.8±2.1**, 2.°48N×127.°98E, h0**^{km}**, mb3.4**/3**, mbtmp3.4**/3**, MS3.4**/1**, Error ellipse: s-maj=136.3km s-min=26.5km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.14**	**165**	P	P	05 09 43.2	+0.4
	0.6nm,0.3s,baz=344,slow=11,SNR=15						
WRA				LR	LR	05 20 05.0	
	comp=Z,91nm,19.4s,baz=58,slow=40						
	0.6nm,0.3s						
ASAR	**Alice Springs**	**26.62**	**168**	P	P	05 10 14.4	-0.8
	0.2nm,0.5s,baz=356,slow=8.1,SNR=4.9						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**59.29**	**325**	P	P	05 14 38.8	+0.3
	0.3nm,0.5s,baz=123,slow=8.9,SNR=4.6						
	0.3nm,0.5s						

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*UCR **12** 05:06:26.7±1.6, 8.°49N×82.°76W, h3^{km}±7^{km}, MW3.9*

*UPA **12** 05:06:27.8±0.5, 8.°65N×82.°78W, h14^{km}±2^{km}, MW3.6*

ISC 12 05:06:28.1±0.9**, 8.°61N**±0.°03×**82.°77W**±0.°03**, h17**^{km}±6^{km}**, n22, σ0^{s}76**/37**, 1C, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.20**	**24**	*i* P	**Pg**	**05 06 32.5**	**-0.6**
BRU2				*i* S	**Sg**	**05 06 36.6**	**+0.1**
BRU2	**Volcan**	**0.20**	**24**	*e*P	**Pg**	**05 06 32.5**	**-0.6**
LESP3	**La Esperanza,**	**0.20**	**185**	*i* P	**Pb**	**05 06 33.2**	**-0.2**
LESP3				*i* S	**Sg**	**05 06 37.6**	**+1.3**
BC3P	**Paso Ancho**	**0.26**	**38**	*i* P	**Pg**	**05 06 33.6**	**-0.4**
BC3P				*i* S	**Sg**	**05 06 38.2**	**+0.1**
BCO2	**Palmira**	**0.26**	**66**	*i* P	**Pg**	**05 06 34.0**	**-0.1**
BCO2				*i* S	**Sb**	**05 06 39.1**	**+0.2**
PTAR3	**Potrerillos Ar**	**0.28**	**73**	*i* P	**Pb**	**05 06 34.4**	**-0.5**
PTAR3				*i* S	**Sb**	**05 06 39.7**	**+0.2**
EDSV	**San Vito**	**0.29**	**317**	⇑*i*P	**Pb**	**05 06 35.2**	**+0.2**
EDSV				*e*S	**Sb**	**05 06 41.6**	**+2.0**
DVD	**David**	**0.36**	**118**	*i* P	**Pb**	**05 06 36.0**	**-0.2**
DVD				*i* S	**Sb**	**05 06 42.3**	**+0.7**
EDAD	**Golfito**	**0.39**	**276**	*e*P	**Pb**	**05 06 35.8**	**-0.9**
EDAD				*e*S	**Sb**	**05 06 42.2**	**-0.3**
EDP2	**Potrero Grande**	**0.57**	**315**	*e*P	**Pb**	**05 06 40.2**	**+0.5**
EDP2				*e*S	**Sn**	**05 06 51.6**	**+1.0**
EDBA	**Buenos Aires**	**0.74**	**318**	*e*P	**Pn**	**05 06 43.3**	**-0.6**
EDBA				*e*S	**Sn**	**05 06 56.2**	**+1.4**
EDPN	**Palmar Norte**	**0.76**	**297**	*e*P	**Pn**	**05 06 43.1**	**-1.1**
CNI2	**El Empalme, Bo**	**0.86**	**20**	*e*P	**Pg**	**05 06 43.0**	**-1.9**
CNI2				*e*S	**Sg**	**05 06 56.9**	**+0.5**
BRIBI	**Bribri**	**1.01**	**356**	*e*P	**Pn**	**05 06 47.9**	**+0.3**
BUS1	**Rivas**	**1.34**	**314**	*e*P	**Pn**	**05 06 52.4**	**-0.2**
RVSTA	**Santa Teresita**	**1.61**	**328**	*e*P	**Pb**	**05 06 57.5**	**0.0**
RVSTA				*e*S	**Sg**	**05 07 20.3**	**+0.2**
VERB	**Verbena**	**1.61**	**326**	*e*P	**Pb**	**05 06 57.4**	**-0.1**
LCOCO	**El Coco**	**1.66**	**332**	*e*P	**Pb**	**05 06 57.9**	**-0.4**
LCOCO				*e*S	**Sg**	**05 07 22.4**	**+0.7**
LCR2	**La Lucha 2**	**1.66**	**313**	*e*P	**Pb**	**05 06 57.6**	**-0.8**
ABE2	**San Pablo**	**1.67**	**311**	*e*P	**Pb**	**05 06 58.1**	**-0.5**
ABE2				*e*S	**Sg**	**05 07 21.8**	**-0.2**
RVLA	**Villa Bonita**	**1.69**	**332**	*e*P	**Pb**	**05 06 59.0**	**+0.1**
RVLA				*e*S	**Sg**	**05 07 23.0**	**+0.2**
ICR3	**Volcano Irazu**	**1.72**	**323**	*e*P	**Pb**	**05 06 59.5**	**0.0**

IDC 12 05:07:14.7±3.4**, 6.°49S×147.°86E, h0**^{km}**, mb3.6**/1**, mbtmp3.5**/3**, ML3.4**/1**, MS3.3**/5**, Error ellipse: s-maj=89.3km s-min=35.5km az=100.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.98**	**193**	Pn	Pn	05 08 04.7	+1.4
	6.7nm,0.3s,baz=40,slow=14,SNR=2.8						
PMG				Sn	Sn	05 08 40.6	+0.7
	2.8nm,0.3s,baz=330,slow=20,SNR=4.2						
KRVT	**Keravat (AS076**	**4.68**	**63**	LR	LR	05 10 04.6	
	comp=Z,177nm,20.4s,baz=31,slow=36						
HNR	**Honiara**	**12.32**	**105**	LR	LR	05 14 05.8	
	comp=Z,833nm,18.4s,baz=311,slow=33						
CTA	**Charters Tower**	**13.61**	**186**	LR	LR	05 15 46.8	
	comp=Z,50nm,18.6s,baz=4.0,slow=38						
WRA	**Warramunga Arr**	**18.74**	**223**	P	P	05 11 35.1	-0.3
	0.1nm,0.3s,baz=49,slow=11,SNR=6.5						
	0.9nm,0.8s						
GUMO	**Guam**	**20.16**	**352**	LR	LR	05 18 06.6	
	comp=Z,40nm,20.9s,baz=82,slow=32						
ASAR	**Alice Springs**	**21.72**	**217**	P	P	05 12 07.5	-0.3
	1.9nm,0.6s,baz=54,slow=9.4,SNR=35						
ASAR				LR	LR	05 21 15.8	
	comp=Z,79nm,20.5s,baz=52,slow=39						
	1.9nm,0.6s						
TORD	**Torodi Ar. Bea**	**146.03**	**284**	PKPbc	PKPdf	05 26 56.7	-0.2
	0.7nm,0.8s,baz=69,slow=1.8,SNR=3.3						

WEL 12 05:48:02.2±1.1**, 40°S**±3°×**17°4E**±°**, h93**^{km}±9^{km}**, M3.2**/14**, ML3.5**/15**, MLv3.2**/14**, Error ellipse: s-maj=0.0km s-min=0.0km az=87.6, confirmed, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NMEZ	**Namu Road**	**0.62**	**348**	P	Pn	05 48 19.2	+1.0
NMEZ				S	Sn	05 48 32.8	+2.7
LREZ	**Lake Rotokare**	**0.62**	**27**	P	Pn	05 48 19.0	+0.8
LREZ				S	Sn	05 48 32.3	+2.0
KHEZ	**Kahui Hut**	**0.72**	**358**	P	Pn	05 48 20.2	+0.9
KHEZ				S	Sn	05 48 34.0	+2.0
NEZ	**North Egmont**	**0.75**	**3**	P	Pn	05 48 20.0	+0.5
NBEZ	**Newall Road No**	**0.76**	**350**	P	Pn	05 48 20.6	+1.0
NBEZ				S	Sn	05 48 35.0	+2.5
WAZ	**Wanganui**	**0.77**	**70**	P	Pn	05 48 20.2	+0.5
DUWZ	**D'Urville Isla**	**0.79**	**187**	P	Pn	05 48 20.5	+0.7
DUWZ				S	Sn	05 48 34.5	+1.4
PKE	**Pukeiti**	**0.82**	**357**	P	Pn	05 48 20.9	+0.7
PKE				S	Sn	05 48 34.8	+1.1
DREZ	**Durham Road**	**0.84**	**9**	P	Pn	05 48 21.0	+0.7
DREZ				S	Sn	05 48 35.7	+1.8
VRZ	**Vera Road**	**1.05**	**32**	P	Pn	05 48 22.7	+0.1
VRZ				S	Sn	05 48 38.8	+0.8
KIW	**Kapiti Island**	**1.07**	**142**	P	Pn	05 48 23.3	+0.4
KIW				S	Sn	05 48 39.2	+0.7
OGWZ	**Otaki Gorge**	**1.18**	**133**	P	Pn	05 48 23.8	-0.2
TCW	**Tory Channel**	**1.20**	**171**	P	Pn	05 48 25.1	+0.6
TCW				S	Sn	05 48 41.7	+0.5
PKVZ	**Pokaka**	**1.24**	**55**	P	Pn	05 48 25.0	+0.1
MTVZ	**Mangateitei**	**1.27**	**61**	P	Pn	05 48 25.4	+0.1
NNZ	**Nelson**	**1.30**	**203**	P	Pn	05 48 26.3	+0.8
TKNZ	**Takaka Hill**	**1.31**	**219**	P	Pn	05 48 26.5	+0.9
CAW	**Cannon Point**	**1.34**	**145**	P	Pn	05 48 25.9	-0.1
MRZ	**Mangatainoka R**	**1.34**	**119**	P	Pn	05 48 25.4	-0.6
TRVZ	**Turoa**	**1.37**	**59**	P	Pn	05 48 26.6	0.0
POWZ	**Post Office Ro**	**1.38**	**106**	P	Pn	05 48 26.5	0.0
WEL	**Wellington**	**1.38**	**157**	P	Pn	05 48 27.1	+0.5
WNVZ	**Wahianoa**	**1.39**	**61**	P	Pn	05 48 26.5	-0.3
DRZ	**Dome Shelter**	**1.39**	**58**	P	Pn	05 48 27.7	+0.7

FWVZ	Far West T-bar	1.40	57	P	Pn	05 48 27.1	+0.1
WHVZ	Whangaehu Hut	1.40	59	P	Pn	05 48 27.4	+0.4
QRZ	Quartz Range	1.41	235	P	Pn	05 48 27.5	+0.7
TUWZ	Tuamarina	1.41	183	P	Pn	05 48 27.6	+0.7
HOWZ	Holdsworth Sta	1.43	128	P	Pn	05 48 26.5	-0.6
TWVZ	Taurewa	1.44	49	P	Pn	05 48 26.9	-0.4
TUVZ	Tukino	1.45	59	P	Pn	05 48 27.9	+0.2
MOVZ	Moawhango	1.46	66	P	Pn	05 48 27.0	-0.5
NGZ	Ngauruhoe	1.47	56	P	Pn	05 48 27.5	-0.3
TSZ	Takapari Road	1.48	92	P	Pn	05 48 26.6	-1.2
SNVZ	South Ngauruho	1.49	57	P	Pn	05 48 28.3	+0.2
WTVZ	West Tongariro	1.50	54	P	Pn	05 48 27.7	-0.4
NNVZ	North Ngauruho	1.50	54	P	Pn	05 48 28.2	-0.1
OTVZ	Oturere	1.52	56	P	Pn	05 48 28.6	+0.2
KRVZ	Karewarewa	1.54	54	P	Pn	05 48 28.2	-0.5
ETVZ	East Tongariro	1.56	56	P	Pn	05 48 29.1	+0.1
NTVZ	North Tongarir	1.56	55	P	Pn	05 48 29.0	0.0
PRWZ	Pori Road	1.57	111	P	Pn	05 48 30.3	+1.4
TMVZ	Te Maari	1.57	55	P	Pn	05 48 29.3	+0.2
MTW	Mount Morrison	1.59	136	P	Pn	05 48 28.5	-0.7
TIWZ	Tintock	1.60	119	P	Pn	05 48 29.5	+0.1
HIZ	Hauiti	1.63	23	P	Pn	05 48 29.3	-0.4
BHHZ	Black Hill Sta	1.65	72	P	Pn	05 48 28.7	-1.3
KATZ	Kakaramea	1.65	51	P	Pn	05 48 30.1	0.0
PNHZ	Pukenui	1.66	87	P	Pn	05 48 28.8	-1.3
MRNZ	Matariki Terra	1.69	215	P	Pn	05 48 31.2	+0.8
BSWZ	Blackbirch Sta	1.70	184	P	Pn	05 48 31.6	+1.0
RITZ	Rihia Road	1.75	54	P	Pn	05 48 31.0	-0.3
RATZ	Rangitukua	1.77	50	P	Pn	05 48 32.1	+0.6
TMWZ	Te Maipa	1.78	128	P	Pn	05 48 30.8	-0.9
PLWZ	Palliser	1.80	150	P	Pn	05 48 31.1	-0.8
BFZ	Birch Farm	1.81	112	P	Pn	05 48 30.7	-1.3
WPHZ	Waipukurau	1.84	92	P	Pn	05 48 35.0	+2.6
TRWZ	Traveller	1.86	138	P	Pn	05 48 32.1	-0.6
KWHZ	Kaweka Forest	1.93	73	P	Pn	05 48 33.1	-0.5
THZ	Tophouse	1.94	206	P	Pn	05 48 34.5	+0.8
TLZ	Tolley Road	2.05	35	P	Pn	05 48 35.0	-0.2
BKZ	Black Stump Fm	2.08	67	P	Pn	05 48 33.7	-1.8
MCHZ	McNeill Hill	2.13	75	P	Pn	05 48 37.9	+1.8
PXZ	Pawanui	2.17	91	P	Pn	05 48 37.3	+0.7
KAHZ	Kahuranaki	2.19	85	P	Pn	05 48 35.7	-1.3
NMHZ	Naumai	2.33	68	P	Pn	05 48 38.2	-0.7
ARHZ	Aropaoanui	2.40	73	P	Pn	05 48 42.1	+2.4
DSZ	Denniston Nort	2.42	224	P	Pn	05 48 40.4	+0.4
KHZ	Kahutara	2.42	189	P	Pn	05 48 39.9	-0.1
MTHZ	Maungataniwha	2.46	63	P	Pn	05 48 40.5	-0.1
TOZ	Tahuroa Road	2.55	27	P	Pn	05 48 41.2	-0.6
RAHZ	Arahi	2.60	66	P	Pn	05 48 44.3	+1.9
RTZ	Ruatahuna	2.68	59	P	Pn	05 48 41.3	-2.2
URZ	Urewera	2.96	55	P	Pn	05 48 44.7	-2.6
AWAZ	Awhitu Peninsu	2.99	9	P	Pn	05 48 47.6	0.0
LTZ	Lake Taylor	3.06	205	P	Pn	05 48 49.3	+0.7
INZ	Inchbonnie	3.33	215	P	Pn	05 48 52.4	+0.2
WVZ	Waitaha Valley	3.93	218	P	Pn	05 49 01.0	+0.8
MHCZ	Mount Hutt	3.97	207	P	Pn	05 49 00.7	0.0
GCSZ	Gaunt Creek Bo	4.31	219	P	Pn	05 49 05.5	+0.1
FOZ	Fox Glacier	4.72	221	P	Pn	05 49 11.0	+0.1
TMZ	Timaru	4.91	206	P	Pn	05 49 12.7	-0.9
JCZ	Jackson Bay	5.63	222	P	Pn	05 49 22.5	-1.0

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*IDC **12** 05:48:50.5±6.4, 1°.82N×99°.04E, h145^{km}±56^{km}, mb3.8/17, mbtmp4.2/18, Error ellipse: s-maj=27.1km s-min=12.7km az=55.0*

*DJA **12** 05:48:50.5±0.3, 2°N±2°×9°9E±°, h139^{km}±5^{km}, M4.6/17, mb4.7/7, mB5.0/7, MLv4.7/17, Mw(mB)4.4/7*

*NEIC **12** 05:48:51.5±1.3, 1°.96N±0°.06×98°.99E±0°.06, h141^{km}±6^{km}, mb4.5/33, Error ellipse: s-maj=9.4km s-min=8.3km az=110.0*

ISC 12 05:48:51.4±0.4**, 1°.92N**±0°.05×**99°.01E**±0°.05**, h150**^{km}**, n102, σ1^{s}54**/115**, mb4.3**/37**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPSI	Rantau Prapat	0.78	354	Pn	Pn	05 49 13.3	-1.2
PSI	Prapat	0.88	355	P	Pn	05 49 13.4	-2.0
GSI	Gunungsitoli	1.56	247	Pn	Pn	05 49 21.3	-0.3
GSI				Sn	Sn	05 49 43.2	-1.4
GSI	Gunungsitoli	1.56	247	P	Pn	05 49 21.5	-0.1
GSI	Gunungsitoli	1.56	247	P	Pn	05 49 21.5	-0.1
TSI	Tuntungan	1.64	344	P	Pn	05 49 22.0	-0.5
KCSI	Kotacane, Aceh	2.02	322	P	Pn	05 49 26.0	-0.8
KCSI				S	Sn	05 49 51.2	-2.8
PBSI	Pulau Batu	2.09	200	P	Pn	05 49 27.3	-0.3
PBSI				S	Sn	05 49 54.0	-1.5
BKNI	Bangkinang	2.57	128	Pn	Pn	05 49 33.8	+0.3
BKNI	Bangkinang	2.57	128	P	Pn	05 49 34.2	+0.7
BKNI	Bangkinang	2.57	128	P	Pn	05 49 33.9	+0.4
SNSI	Sinabang, Aceh	2.72	280	P	Pn	05 49 35.4	+0.1
SNSI				S	Sn	05 50 06.7	-2.5
PDSI	Padang	3.16	153	P	Pn	05 49 40.3	-0.6
IPM	Ipoh	3.25	38	Pn	Pn	05 49 42.3	+0.4
IPM	Ipoh	3.25	38	P	Pn	05 49 42.4	+0.4
MLSI	Meulaboh, Aceh	3.50	312	P	Pn	05 49 44.8	-0.3
SDSI	Sungai Dareh	3.72	139	P	Pn	05 49 48.5	+0.4
KULM	Kulim	3.73	26	Pn	Pn	05 49 47.4	-0.8
LHMI	Lhok Sumawe	3.88	328		Pn	05 49 49.9	-0.3
LHMI	Lhok Sumawe	3.88	328	P	Pn	05 49 50.2	0.0
LHMI	Lhok Sumawe	3.88	328	P	Pn	05 49 49.7	-0.5
PPSI	Pulau Pagai	4.75	168	P	Pn	05 50 00.3	-1.3
SKLT	Songkhla	5.46	17	P	Pn	05 50 10.4	-0.6
MASI	Maura Aman, Be	5.97	147	P	Pn	05 50 15.0	-2.9
	68nm,0.8s,1µm0.3nm						
KSI	Kapahiang	6.59	147	P	Pn	05 50 25.2	-0.9
	134nm,0.6s,3.2nm						
SRIT	Nakonsritamara	6.66	5		Pn	05 50 26.3	-0.7
SRIT	Nakonsritamara	6.66	5	P	Pn	05 50 26.4	-0.6
SURA	Surathani	7.23	5	P	Pn	05 50 33.6	-1.0
	22nm,0.7s						
MNAI	Manna	7.38	148		Pn	05 50 34.5	-2.1
MNAI	Manna	7.38	148	P	Pn	05 50 34.2	-2.4
	264nm,0.6s,6µm1.3nm						
MDSI	Maura Dua	8.19	141	P	Pn	05 50 46.1	-1.4
	36nm,1.0s,630nm						
KASI	Kota Agung	9.20	143	P	Pn	05 50 57.7	-3.2
	34nm,0.5s,3µm						
SBUM	Sibu	13.21	87	Pn	Pn	05 51 52.5	-1.0
UGM	Wanagama	15.07	130	Pn	Pn	05 52 15.3	-1.6
CMAR	Chiang Mai Arr	16.44	360	P	P	05 52 34.6	+1.0
	4.6nm,0.6s,baz=190,slow=10,SNR=19						
CMAR	Chiang Mai Arr	16.44	360		Pn	05 52 32.9	-0.7
KKM	Kota Kinabalu	17.65	76		Pn	05 52 49.0	+0.7
KKM				IAmb	IAmb	05 52 53.1	
	comp=Z,10nm,0.8s						
CRAI	Chiangrai	18.25	4		Pn	05 52 55.3	0.0
MYLDM	Lahad Datu	19.72	80	P	P	05 53 09.7	+0.1
MYLDM				IAmb	IAmb	05 53 16.0	
	comp=Z,22nm,1.0s						
TOLI2	Tolitoli	21.78	92	P	P	05 53 31.8	+0.2
TOLI2				IAmb	IAmb	05 53 32.8	
	comp=Z,14nm,0.7s						
TNCH	TengChong	22.98	359	*e*P	P	05 53 43.3	0.0
TNCH				pmax	pmax		
	comp=Z,160nm,5.2s						
PZH	PanZhiHua	24.59	6	P	P	05 54 01.5	+3.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,5.2s						
MTN	Manton Dam	35.10	116	P	P	05 55 32.0	+1.4
MTN				IAmb	IAmb	05 55 41.9	
	comp=Z,14nm,1.1s						
NJ2	Nanjing	35.33	30	*e*P	P	05 55 33.5	+1.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	40.39	15	*e*P	P	05 56 19.1	+4.3
HHC				pmax	pmax		
	comp=Z,22nm,0.9s						
HHC				pmax	pmax		
	comp=Z,270nm,5.4s						
WB0	Warramunga Arr	40.87	124	P	P	05 56 18.4	-0.6
WB0				IAmb	IAmb	05 56 21.2	
	comp=Z,9.4nm,0.5s						
WRA	Warramunga Arr	40.90	124	P	P	05 56 18.6	-0.7
	comp=Z,16nm,0.5s,baz=302,slow=9.0,SNR=160						
WRA				PcP	PcP	05 58 16.8	-0.3
	comp=Z,0.3nm,0.5s,baz=321,slow=2.5,SNR=2.8						
WRAB	Tennant Creek	40.91	124	P	P	05 56 19.6	+0.3
WRAB				IAmb	IAmb	05 56 21.7	
	comp=Z,16nm,0.5s						
WB2	Warramunga Arr	40.91	124	P	P	05 56 19.9	+0.5
AS31	Alice Springs	42.41	129	P	P	05 56 32.3	+0.8
ASAR	Alice Springs	42.41	129	P	P	05 56 30.3	-1.2
	comp=Z,0.6nm,0.4s,baz=303,slow=7.5,SNR=18						
ASAR				PcP	PcP	05 58 19.4	-2.6
	comp=Z,0.3nm,0.4s,baz=290,slow=3.1,SNR=4.2						
	comp=Z,0.6nm,0.4s						
ASAR	Alice Springs	42.41	129	P	P	05 56 32.4	+0.9
KSH	Kashi	42.90	334	P	P	05 56 34.9	-0.5
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WMQ	Urumqi	42.92	348	*e*P	P	05 56 38.1	+2.7
KSRS	Korea Array	44.25	33	P	P	05 56 44.0	-2.0
	comp=Z,1.7nm,0.6s,baz=219,slow=9.9,SNR=9.2						
	comp=Z,1.7nm,0.6s						
JMN	Monobe	45.44	42	P	P	05 56 55.7	+0.2
JMN				IAmb	IAmb	05 57 18.3	
	comp=Z,21nm,1.3s						
JHS	Saijyo	45.71	40	P	P	05 56 58.3	+0.7
JHS				IAmb	IAmb	05 56 59.2	
	comp=Z,9.9nm,1.0s						
SONM	Songino Array	46.19	7	P	P	05 57 02.3	+1.0
	comp=Z,1.5nm,0.5s,baz=190,slow=10.0,SNR=6.5						
SONM				PcP	PcP	05 58 34.7	+0.1
	comp=Z,0.3nm,0.4s,baz=173,slow=4.3,SNR=2.0						
	comp=Z,1.5nm,0.5s						
SONM	Songino Array	46.19	7	P	P	05 57 01.5	+0.2
MK31	Makanchi Array	47.02	344	P	P	05 57 08.3	+0.7
MKAR	Makanchi Array	47.02	344	P	P	05 57 08.4	+0.8
	comp=Z,2.2nm,0.4s,baz=156,slow=8.7,SNR=46						
	comp=Z,2.2nm,0.4s						
MKAR	Makanchi Array	47.02	344	P	P	05 57 08.2	+0.5
MAKZ	Makanchi	47.12	344	P	P	05 57 09.4	+1.0
MAKZ				IAmb	IAmb	05 57 11.6	
	comp=Z,2.1nm,0.5s						
KK31	Karatay Array	48.25	332	P	P	05 57 15.6	-1.5
KKAR	Karatay Array	48.25	332	P	P	05 57 16.4	-0.7
KKAR	Karatay Array	48.25	332	P	P	05 57 15.6	-1.5
KKAR				IAmb	IAmb	05 57 20.6	
	comp=Z,2.7nm,1.3s						
MJAR	Matsushiro Arr	49.95	42	P	P	05 57 29.8	-0.5
	comp=Z,0.6nm,0.4s,baz=216,slow=7.9,SNR=5.1						
	comp=Z,0.6nm,0.4s						
MDJ	Mudanjiang	50.38	28	P	P	05 57 35.8	+2.5
MDJ				sP	sP	05 58 23.4	-0.9
MDJ				PP	PP	05 59 31.3	+0.9
MDJ				PcS	PcS	06 02 49.9	+3.0
MDJ				S	S	06 04 33.7	-1.2
MDJ				ScS	ScS	06 07 12.9	+3.9
MDJ	Mudanjiang	50.38	28	SS	SS	06 08 02.6	-8.1
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,170nm,4.3s						
USRK	Ussuriysk Ar.	51.24	30	P	P	05 57 40.8	+1.1
	comp=Z,1.8nm,0.6s,baz=242,slow=8.0,SNR=1.9						
	comp=Z,1.8nm,0.6s						
ZAA0	Zalesovo Array	53.16	350	P	P	05 57 54.8	+1.0
ZAA0				IAmb	IAmb	05 57 55.3	
	comp=Z,4.5nm,0.7s						
ZALV	Zalesovo Beam	53.16	350	P	P	05 57 54.4	+0.6
	comp=Z,5.2nm,0.3s,baz=159,slow=7.4,SNR=24						
ZALV				pP	pP	05 58 26.9	-1.7
	comp=Z,0.7nm,0.3s,baz=157,slow=6.7,SNR=1.4						
	comp=Z,5.2nm,0.3s						
ZALV	Zalesovo Beam	53.16	350	P	P	05 57 54.8	+1.1
JTM	Tenmabayashi	54.20	39	P	P	05 58 01.6	+0.2
KLR	Kul'dur	54.82	26	P	P	05 58 06.7	+0.8
	comp=Z,5.3nm,0.6s,baz=244,slow=7.5,SNR=26						
	comp=Z,5.3nm,0.6s						
ERM	Erimo	56.18	39	P	P	05 58 14.8	-0.9
ERM				IAmb	IAmb	05 58 40.5	
	comp=Z,12nm,1.1s						
BRVK	Borovoye	56.26	340	P	P	05 58 16.4	+0.4
BRVK				IAmb	IAmb	05 58 26.6	
	comp=Z,2.7nm,0.8s						
JKA	Kamikawa-asahi	57.02	36	P	P	05 58 22.3	+0.7
JKA				IAmb	IAmb	05 58 32.4	
	comp=Z,7.6nm,1.1s						
ABKAR	Akbulak array	57.76	331	P	P	05 58 27.4	+0.7
ABKAR				IAmb	IAmb	05 58 27.9	
	comp=Z,3.3nm,0.8s						
YSS	Yuzh-Sakhalins	58.75	34	P	P	05 58 34.6	+1.0
AKTO	Aktyubinsk	59.47	331	P	P	05 58 38.4	-0.2
	comp=Z,1.0nm,0.5s,baz=111,slow=8.6,SNR=2.5						
	comp=Z,1.0nm,0.5s						
ARU	Arti	63.25	336	P	P	05 59 03.2	-0.5
	comp=Z,0.9nm,0.3s,baz=184,slow=7.8,SNR=3.6						
	comp=Z,0.9nm,0.3s						
YAK	Yakutsk	64.24	15	P	P	05 59 10.6	+0.4
MA2	Magadan	69.92	25	P	P	05 59 46.8	+0.7
MA2				IAmb	IAmb	06 00 00.1	
	comp=Z,6.3nm,0.9s						
BRTR	Keskin Array B	69.98	312	P	P	05 59 47.1	+0.1
	comp=Z,0.7nm,0.6s,baz=115,slow=5.6,SNR=4.4						
	comp=Z,0.7nm,0.6s						
BRTR	Keskin Array B	69.98	312	P	P	05 59 47.7	+0.7
PEA0B	Petropavlovsk-	70.15	33	P	P	05 59 48.2	+0.6
PETK	Petropavlovsk-	70.15	33	P	P	05 59 46.6	-1.0
	comp=Z,2.5nm,0.8s,baz=226,slow=7.8,SNR=4.4						
	comp=Z,2.5nm,0.8s						
PETK	Petropavlovsk-	70.15	33	P	P	05 59 48.0	+0.4
TIXI	Tiksi	72.18	10	P	P	05 59 58.8	-0.6
	comp=Z,1.3nm,0.3s,baz=92,slow=6.9,SNR=6.8						
	comp=Z,1.3nm,0.3s						
TIXI	Tiksi	72.18	10	P	P	05 59 58.9	-0.5
AKASG	Malin Array Be	75.80	322	P	P	06 00 20.4	-0.5
	comp=Z,0.1nm,0.3s,baz=76,slow=4.2,SNR=5.3						
	comp=Z,0.1nm,0.3s						
FIA1	FINESS Array S	80.21	332	P	P	06 00 45.4	+0.5
FIA1				IAmb	IAmb	06 00 59.1	
	comp=Z,8.4nm,1.3s						
FINES	FINESS Array B	80.21	332	P	P	06 00 45.1	+0.1
	comp=Z,1.3nm,0.3s,baz=104,slow=5.1,SNR=18						
FINES				pP	pP	06 01 19.4	-3.4
	comp=Z,1.0nm,0.7s,baz=90,slow=8.3,SNR=1.4						
	comp=Z,1.3nm,0.3s						
FINES	FINESS Array B	80.21	332	P	P	06 00 45.6	+0.6
ARCES	ARCESS Array B	82.48	340	P	P	06 00 57.2	+0.4
	comp=Z,1.1nm,0.4s,baz=108,slow=4.0,SNR=17						
	comp=Z,1.1nm,0.4s						
ARCES	ARCESS Array B	82.48	340	P	P	06 00 57.7	+0.9
ARCES				IAmb	IAmb	06 01 16.8	
	comp=Z,9.9nm,1.1s						
CLL	Collm	86.01	321	*e*P	P	06 01 15.0	0.0
CLL				AMS	AMS	10 05 00.0	
	comp=Z,100nm,21.2s						
SPB2	Spitsbergen Ar	86.62	348	P	P	06 01 18.0	+0.5
NC405	NORSAR Array S	87.02	331	P	P	06 01 21.1	+1.4
NOA	NORSAR Array B	87.26	331	P	P	06 01 21.3	+0.3
	comp=Z,1.2nm,1.0s,baz=94,slow=5.8,SNR=1.8						
	comp=Z,1.2nm,1.0s						
NVAR	Mina Array Bea	127.14	37	PKP	PKiKP	06 07 39.6	+0.4
	comp=Z,0.5nm,0.7s,baz=235,slow=1.6,SNR=4.9						

ROM 12 06:08:54.5±0.1**, 43°.046N**±0°.006×**12°.999E**±0°.007**, h9**^{km}**, ML1.5**/20**, 8C-2D, Error ellipse: s-maj=0.8km s-min=0.4km az=323.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FDMO	Fiordimonte	0.07	99	P	Pg	06 08 56.6	0.0
FDMO				S	Sg	06 08 57.7	-0.4
FDMO				AML	AML		
	comp=N,1024µm,0.2s						
FDMO				AML	AML		
	comp=E,827µm,0.2s						
CESI	CESI - Serrava	0.08	239	⇑P	Pg	06 08 57.3	+0.6
CESI				S	Sg	06 08 59.1	+0.7
CESI				AML	AML		
	comp=N,627µm,0.7s						
CESI				AML	AML		
	comp=E,422µm,0.8s						
T1220	Camerino, Fraz	0.09	46	P	Pg	06 08 57.3	+0.4
T1220				S	Sg	06 08 59.3	+0.7
T1220				AML	AML		
	comp=N,1430µm,0.4s						
T1220				AML	AML		
	comp=E,2395µm,0.3s						
T1216	Preci, Frazion	0.16	175	⇓P	Pg	06 08 58.4	+0.5
T1216				S	Sg	06 09 01.3	+1.1
T1216				AML	AML		
	comp=N,552µm,1.4s						
T1216				AML	AML		
	comp=E,324µm,0.1s						
T1216				AML	AML		
	comp=N,551µm,1.4s						
T1216				AML	AML		
	comp=N,551µm,0.6s						
T1216				AML	AML		
	comp=E,324µm,1.9s						
CSP1	Cessapalombo	0.16	73	⇑P	Pg	06 08 58.5	+0.6
CSP1				S	Sg	06 09 01.5	+1.1
CSP1				AML	AML		
	comp=N,248µm,1.6s						
CSP1				AML	AML		
	comp=N,248µm,0.4s						
CSP1				AML	AML		
	comp=E,216µm,0.7s						
T1256	Bolognola (MC)	0.17	103	P	Pg	06 08 58.7	+0.6
T1256				AML	AML		
	comp=E,218µm,1.4s						
T1256				AML	AML		
	comp=N,148µm,1.0s						
T1256				AML	AML		
	comp=E,218µm,0.6s						
MC2	Monte Cornacci	0.19	134	P	Pg	06 08 59.1	+0.5
SNTG	Esanatoglia	0.21	348	⇑P	Pg	06 08 59.6	+0.7
SNTG				AML	AML		
	comp=E,151µm,0.2s						
SNTG				AML	AML		
	comp=N,112µm,0.2s						
T1245	Castelsantange	0.23	144	P	Pg	06 08 59.8	+0.5
T1245				S	Sg	06 09 04.0	+1.5
T1245				AML	AML		
	comp=E,158µm,0.3s						
T1245				AML	AML		
	comp=N,236µm,0.8s						
GUMA	Gualdo di Mace	0.25	86	P	Pg	06 09 00.4	+1.0
GUMA				S	Sg	06 09 05.1	+2.3
GUMA				AML	AML		
	comp=E,420µm,1.0s						
GUMA				AML	AML		
	comp=N,662µm,0.3s						
GUMA				AML	AML		
	comp=N,470µm,0.2s						
GUMA				AML	AML		
	comp=E,420µm,1.0s						
GUMA				AML	AML		
	comp=E,634µm,0.3s						
ASSB	Assisi San Ben	0.25	269	⇑P	Pg	06 09 00.4	+0.9
ASSB				AML	AML		
	comp=N,152µm,0.3s						
ASSB				AML	AML		
	comp=N,152µm,1.7s						
ASSB				AML	AML		
	comp=E,113µm,0.2s						
T1215	Vallo di Nera,	0.26	202	P	Pg	06 09 00.5	+0.8
T1215				S	Sb	06 09 05.0	-1.0
MMO1	Montemonaco	0.28	121	P	Pg	06 09 00.2	+0.1
MMO1				S	Sb	06 09 05.5	-1.1
EL6	Elcito	0.29	15	⇑P	Pg	06 09 01.1	+0.8
EL6				AML	AML		
	comp=E,220µm,0.2s						
EL6				AML	AML		
	comp=N,218µm,1.5s						
EL6				AML	AML		
	comp=N,218µm,0.5s						
T1212	Cascia, Frazio	0.30	174	P	Pg	06 09 01.0	+0.6
T1212				S	Sb	06 09 06.2	-0.8
T1212				AML	AML		
	comp=E,99µm,1.0s						
T1212				AML	AML		
	comp=N,80µm,0.7s						
T1212				AML	AML		
	comp=N,80µm,1.3s						
T1212				AML	AML		
	comp=E,99µm,1.0s						
T1217	Poggiodomo (PG	0.34	189	P	Pg	06 09 01.8	+0.6
T1217				S	Sb	06 09 07.5	-0.7
CING	Cingoli	0.36	23	⇓P	Pb	06 09 02.4	-0.7
CING				AML	AML		
	comp=N,103µm,0.7s						
CING				AML	AML		
	comp=E,143µm,0.2s						
CING				AML	AML		
	comp=N,103µm,1.3s						
T1241	Roccafluvione,	0.37	121	⇑P	Pg	06 09 02.4	+0.6
T1241				S	Sb	06 09 08.6	-0.5
T1241				AML	AML		
	comp=E,82µm,1.5s						
T1241				AML	AML		
	comp=N,87µm,1.1s						
T1218	Civita (PG)	0.39	167	P	Pg	06 09 02.5	+0.4
T1218				S	Sb	06 09 09.1	-0.5
MOMA	Monte Martano	0.40	233	S	Sg	06 09 04.0	-3.5
MOMA				AML	AML		
	comp=E,60µm,0.2s						
MOMA				AML	AML		
	comp=N,47µm,0.5s						
MURB	Monte Urbino	0.41	302	⇑P	Pb	06 09 03.5	-0.4
MURB				AML	AML		
	comp=E,84µm,0.2s						
MURB				AML	AML		
	comp=N,72µm,1.6s						
MURB				AML	AML		
	comp=N,72µm,0.4s						
ARVD	Arcevia	0.45	355	⇑P	Pb	06 09 04.1	-0.5
ARVD				AML	AML		
	comp=N,42µm,1.2s						
ARVD				AML	AML		
	comp=E,45µm,1.3s						
ARVD				AML	AML		
	comp=N,42µm,0.8s						
SMA1	SAN MARTINO	0.48	149	P	Pg	06 09 04.1	+0.3
FRON	Frontone	0.51	337	P	Pb	06 09 05.2	-0.4
FRON				AML	AML		
	comp=E,37µm,0.3s						
FRON				AML	AML		
	comp=N,56µm,1.2s						
FRON				AML	AML		
	comp=N,56µm,0.8s						
PIEI	Pieia	0.59	325	P	Pb	06 09 07.1	+0.1
PIEI				S	Sb	06 09 16.9	+1.2
FSSB	Fossombrone	0.67	346	S	Sn	06 09 19.6	-1.1
FSSB				AML	AML		
	comp=N,116µm,0.4s						
FSSB				AML	AML		
	comp=E,74µm,0.2s						
SRES	S.Oreste - Sor	0.89	204	AML	AML		
	comp=N,130µm,1.2s						
SRES				AML	AML		
	comp=E,58µm,0.4s						

ROM 12 06:09:32.5±0.1**, 43°.048N**±0°.006×**13°.001E**±0°.006**, h9**^{km}**, ML1.5**/14**, 9C-3D, Error ellipse: s-maj=0.7km s-min=0.4km az=334.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	Muccia, Frazio	0.01	30	P	Pg	06 09 33.9	-0.3
T1219				S	Sg	06 09 34.4	-0.9
FDMO	Fiordimonte	0.06	100	P	Pg	06 09 34.7	+0.1
FDMO				S	Sg	06 09 35.9	-0.1
FDMO				AML	AML		
	comp=E,891µm,0.2s						
FDMO				AML	AML		
	comp=N,1225µm,0.3s						
FDMO				AML	AML		
	comp=E,891µm,1.8s						
FDMO				AML	AML		
	comp=N,1225µm,1.7s						
CESI	CESI - Serrava	0.08	239	P	Pg	06 09 35.5	+0.7
CESI				S	Sg	06 09 37.2	+0.8
CESI				AML	AML		
	comp=N,532µm,0.7s						
CESI				AML	AML		
	comp=E,426µm,0.4s						
T1220	Camerino, Fraz	0.09	46	⇑P	Pg	06 09 35.5	+0.6
T1220				AML	AML		
	comp=N,1126µm,0.2s						
T1220				AML	AML		
	comp=E,1835µm,0.3s						
T1220				AML	AML		
	comp=N,1122µm,0.2s						
T1220				AML	AML		
	comp=E,1835µm,1.7s						
CSP1	Cessapalombo	0.16	73	⇑P	Pg	06 09 36.7	+0.7
CSP1				S	Sg	06 09 39.6	+1.3
CSP1				AML	AML		
	comp=E,222µm,0.9s						
CSP1				AML	AML		

	comp=N,368µm,1.6s						
CSP1				AML	AML		
	comp=N,368µm,0.4s						
CSP1				AML	AML		
	comp=E,222µm,1.1s						
T1216	Preci, Frazion	0.16	175	⇑P	Pg	06 09 36.6	+0.7
T1216				S	Sg	06 09 39.5	+1.3
T1216				AML	AML		
	comp=E,352µm,1.0s						
T1216				AML	AML		
	comp=N,571µm,1.4s						
T1216				AML	AML		
	comp=E,352µm,1.0s						
T1256	Bolognola (MC)	0.17	104	P	Pg	06 09 36.9	+0.7
T1256				S	Sg	06 09 40.1	+1.4
T1256				AML	AML		
	comp=E,202µm,0.7s						
T1256				AML	AML		
	comp=N,144µm,1.0s						
MC2	Monte Cornacci	0.19	134	P	Pg	06 09 37.3	+0.7
SNTG	Esanatoglia	0.21	348	⇑P	Pg	06 09 37.9	+0.9
SNTG				AML	AML		
	comp=N,124µm,0.2s						
SNTG				AML	AML		
	comp=E,162µm,0.2s						
T1245	Castelsantange	0.23	144	P	Pg	06 09 38.0	+0.6
T1245				AML	AML		
	comp=E,170µm,1.3s						
T1245				AML	AML		
	comp=N,238µm,1.5s						
T1245				AML	AML		
	comp=N,238µm,0.5s						
T1245				AML	AML		
	comp=E,170µm,0.7s						
ASSB	Assisi San Ben	0.25	269	⇑P	Pb	06 09 38.6	-0.8
ASSB				AML	AML		
	comp=E,108µm,0.4s						
ASSB				AML	AML		
	comp=N,182µm,0.3s						
T1215	Vallo di Nera,	0.26	202	⇓P	Pb	06 09 38.7	-0.8
T1215				S	Sb	06 09 43.2	-1.0
MMO1	Montemonaco	0.28	122	P	Pg	06 09 38.8	+0.6
MMO1				S	Sb	06 09 43.6	-1.1
EL6	Elcito	0.29	15	⇑P	Pb	06 09 39.3	-0.8
EL6				AML	AML		
	comp=E,234µm,0.4s						
EL6				AML	AML		
	comp=N,205µm,0.6s						
EL6				AML	AML		
	comp=E,234µm,1.6s						
T1212	Cascia, Frazio	0.30	174	P	Pg	06 09 39.2	+0.7
T1212				S	Sb	06 09 44.3	-0.9
T1212				AML	AML		
	comp=E,103µm,1.2s						
T1212				AML	AML		
	comp=E,103µm,0.8s						
T1212				AML	AML		
	comp=N,101µm,1.0s						
T1217	Poggiodomo (PG	0.34	189	P	Pg	06 09 40.0	+0.7
T1217				S	Sb	06 09 45.7	-0.7
CING	Cingoli	0.36	23	⇓P	Pb	06 09 40.5	-0.6
CING				AML	AML		
	comp=E,128µm,0.2s						
CING				AML	AML		
	comp=N,110µm,0.7s						
CING				AML	AML		
	comp=N,110µm,1.3s						
T1241	Roccafluvione,	0.37	121	P	Pg	06 09 40.5	+0.7
T1241				S	Sb	06 09 46.8	-0.4
T1218	Civita (PG)	0.39	167	⇓P	Pg	06 09 40.7	+0.5
T1218				S	Sb	06 09 47.0	-0.8
MURB	Monte Urbino	0.41	302	⇑P	Pb	06 09 41.6	-0.4
MURB				AML	AML		
	comp=E,88µm,0.2s						
MURB				AML	AML		
	comp=N,99µm,1.5s						
MURB				AML	AML		
	comp=N,99µm,0.5s						
ARVD	Arcevia	0.45	355	⇑P	Pb	06 09 42.3	-0.5
ARVD				AML	AML		
	comp=N,56µm,1.5s						
ARVD				AML	AML		
	comp=E,50µm,0.3s						
ARVD				AML	AML		
	comp=N,56µm,0.5s						
SMA1	SAN MARTINO	0.48	149	P	Pg	06 09 42.4	+0.4
T1211	Morro Reatino	0.53	192	⇑P	Pg	06 09 43.3	+0.6
T1211				S	Sb	06 09 52.0	+0.3
RM33	Pellescritta (	0.56	164	P	Pg	06 09 43.6	+0.1
PIEI	Pieia	0.59	325	S	Sb	06 09 55.3	+1.6

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*IDC **12** 06:10:35.9±3.2, 10°.59S×161°.36E, h54^{km}±23^{km}, mb3.6/4, mbtmp3.9/6, ML3.6/2, MS3.3/5, Error ellipse: s-maj=35.8km s-min=17.8km az=65.0*

ISC 12 06:10:35.8±1.4**, 10°.7S**±0°.1×**161°.4E**±0°.2**, h61**^{km}**, n9, σ1^{s}.75**/9**, mb3.7**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.86	311	P	Pn	06 11 04.3	-1.2
	5µm,0.4s,baz=174,slow=11,SNR=23						
HNR				S	Sn	06 11 26.7	-1.3
	7µm,0.3s,baz=170,slow=18,SNR=4.1						
HNR				LR	LR	06 12 00.7	
	comp=Z,4µm,19.6s,baz=220,slow=47						
DZM	Mont Dzumac	12.34	157	P	Pn	06 13 30.1	+1.3
	0.3nm,0.3s,baz=328,slow=18,SNR=13						
DZM				S	Sn	06 15 41.6	-3.3
	6.1nm,1.1s,baz=112,slow=9.5,SNR=1.9						
	2.2nm,0.8s						
CTA	Charters Tower	17.32	235	P	P	06 14 35.1	+0.9
	0.1nm,0.3s,baz=62,slow=15,SNR=2.0						
CTA				LR	LR	06 20 45.3	
	comp=Z,60nm,18.1s,baz=86,slow=35						
	3.2nm,0.8s						
AFI	Afiamalu	26.42	100	LR	LR	06 24 25.4	
	comp=Z,37nm,19.4s,baz=165,slow=31						
WRA	Warramunga Arr	27.63	247	P	P	06 16 18.9	+1.0
	1.4nm,0.7s,baz=77,slow=8.9,SNR=8.0						
WRA				LR	LR	06 26 52.1	
	comp=Z,44nm,19.1s,baz=138,slow=35						
	1.4nm,0.7s						
STKA	Stephens Creek	27.93	218	LR	LR	06 27 20.2	
	comp=Z,81nm,18.6s,baz=27,slow=36						
ASAR	Alice Springs	29.19	240	P	P	06 16 32.2	+0.4
	0.6nm,0.7s,baz=65,slow=10,SNR=8.6						
ASAR				LR	LR	06 27 36.5	
	comp=Z,76nm,18.8s,baz=95,slow=35						
	0.6nm,0.7s						
SONM	Songino Array	75.86	325	P	P	06 22 16.7	+0.9
	0.7nm,0.6s,baz=130,slow=4.8,SNR=5.9						
	0.7nm,0.6s						
MKAR	Makanchi Array	90.33	318	P	P	06 23 30.4	+0.1
	0.4nm,0.4s,baz=92,slow=6.6,SNR=11						
	0.4nm,0.4s						

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*IDC **12** 06:18:11.5±0.7, 37°.07N×141°.43E, h0^{km}, mb3.9/15, mbtmp3.9/22, ML3.4/7, MS2.8/2, Error ellipse: s-maj=17.5km s-min=14.4km az=108.0*

*JMA **12** 06:18:13.6±0.1, 37°.1N±0°.3×141°.4E±0°.7, h27^{km}, MD4.3/40, MV4.2/40, E OFF FUKUSHIMA PREF*

JMA Felt I J1 at E OFF FUKUSHIMA PREF .

*NIED **12** 06:18:13.6, 37°.12N×141°.37E, h27^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.93; $M_{\theta\theta}$0.76; $M_{\phi\phi}$3.17; $M_{r\theta}$1.31; $M_{\theta\phi}$2.35; $M_{\phi r}$5.96; Fault plane solution: $M_0$7.46000×10^{14} NP1: ϕ_s196.00000°, δ73.00000°, λ-101.00000°. NP2: ϕ_s49.00000°, δ20.00000°, λ-58.00000°.*

*NEIC **12** 06:18:16.1±1.2, 37°.21N±0°.05×141°.38E±0°.09, h35^{km}±9^{km}, mb4.3/13 Error ellipse: s-maj=10.6km s-min=7.5km az=82.0*

ISC 12 06:18:12.5±1.6**, 37°.11N**±0°.04×**141°.44E**±0°.05**, h11**^{km}±9^{km}**, n101, σ1^{s}.29**/92**, mb4.1**/26**, 1C, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.51	270	P	Pg	06 18 22.8	+0.3
ONAJ				eS	Sg	06 18 29.4	+0.1
ONAJ	Iwakimizuishiy	0.51	270	A	A	06 18 22.8	
	comp=E,34nm,0.3s,comp=E,12nm,0.3s						
JFK	Kawauchi	0.52	300	P	Pg	06 18 22.9	+0.2
JFK	Kawauchi	0.52	300	A	A	06 18 22.9	
	comp=E,4.0nm,0.4s,comp=E,4.0nm,0.9s						
JFFD	Fukushimafurud	0.70	269	P	Pg	06 18 26.0	-0.1
JFFD				S	Sg	06 18 34.7	-0.5
JMST	Minamisoumatoc	0.76	325	P	Pg	06 18 27.1	0.0
JMST				S	Sg	06 18 36.9	-0.1
JMST	Minamisoumatoc	0.76	325	A	A	06 18 27.1	
	comp=E,9.0nm,0.6s,comp=E,14nm,0.3s						
JHO	Hitachi	0.85	235	P	Pb	06 18 28.3	-1.1
JHO				S	Sb	06 18 39.4	-1.5
JMM	Marumori	0.92	326		Pb	06 18 29.9	-0.6
JMM				Sn	Sb	06 18 41.5	-1.2
JMM	Marumori	0.92	326	P	Pb	06 18 30.0	-0.4
JMM	Marumori	0.92	326	P	Pb	06 18 29.8	-0.6
JMM				S	Sb	06 18 41.5	-1.2
JOTO	OTAMA OYAMA	0.99	298	eS	Sb	06 18 43.6	-1.2
JSB	Shiboa	1.22	264	P	Pn	06 18 35.2	-0.4
JSB				eS	Sb	06 18 51.0	-0.5
JSB	Shiboa	1.22	264	A	A	06 18 35.2	
	comp=E,18nm,0.9s,comp=E,14nm,0.8s						
JYAR	Yonezawaarcadi	1.31	308	A	A	06 18 35.7	
	comp=E,29nm,0.9s,comp=E,41nm,1.3s						
JIO	Ouri	1.35	357	P	Pn	06 18 36.7	-0.6
JOU	Okura	1.40	334	iP	Pn	06 18 38.1	0.0
JOU				S	Sb	06 18 56.6	0.0
JOU	Okura	1.40	334	A	A	06 18 38.1	
	comp=E,8.0nm,1.0s,comp=E,9.0nm,0.7s						
JFY	Yanaizu	1.42	283	iP	Pn	06 18 38.0	-0.2
JFY				S	Sn	06 18 56.3	-0.7
JFY	Yanaizu	1.42	283	A	A	06 18 38.0	
	comp=E,4.0nm,3.6s,comp=E,5.0nm,0.3s						
JOFO	Osakifurukawao	1.55	345	A	A	06 18 39.8	
	comp=E,27nm,1.9s,comp=E,16nm,0.8s						
JYS	Shirataka	1.56	316	A	A	06 18 39.6	
	comp=E,9.0nm,1.8s,comp=E,11nm,1.4s						
JYA	Atsumi	2.02	318	A	A	06 18 46.3	
	comp=E,11nm,1.1s,comp=E,14nm,1.0s						
JIZZ	Izumozaki	2.22	282	A	A	06 18 49.0	
	comp=E,9.0nm,1.8s,comp=E,6.0nm,3.6s						
MJAR	Matsushiro Arr	2.65	259	Pn	Pn	06 18 55.9	+0.6
	3.6nm,0.3s,baz=82,slow=15,SNR=230						
MJAR				Sn	Sn	06 19 28.1	+0.6
	2.8nm,0.3s,baz=158,slow=40,SNR=2.5						
MJAR				LR	LR	06 20 12.2	
	comp=Z,168nm,19.1s,baz=70,slow=46						
	20nm,0.3s						
MAJO	Matsushiro	2.65	259	Pn	Pn	06 18 56.2	+0.9
MAJO	Matsushiro	2.65	259	P	Pn	06 18 56.6	+1.3
MJB9	Matsu-Tunnel	2.65	259	Pn	Pn	06 18 56.4	+1.1
JSD	Sado	2.69	291		Pn	06 18 55.4	-0.4
JSD	Sado	2.69	291	P	Pn	06 18 55.4	-0.4
JSG	Sagara	3.58	228	P	Pn	06 19 10.7	+2.6
JGF	Kuroka	3.62	247	Pn	Pn	06 19 10.5	+1.8
JGF	Kuroka	3.62	247	P	Pn	06 19 10.4	+1.8
JTM	Tenmabayashi	3.69	356	Pn	Pn	06 19 10.9	+1.4
JTM	Tenmabayashi	3.69	356	P	Pn	06 19 11.1	+1.6
INU	Inuyama	3.98	245	Pn	Pn	06 19 15.5	+2.0
INU	Inuyama	3.98	245	P	Pn	06 19 16.1	+2.6
JHJ2	Mitsune	4.20	199	Pn	Pn	06 19 18.4	+1.9
JHJ2	Mitsune	4.20	199	P	Pn	06 19 19.0	+2.5
JHJ	Hachijo jima 2	4.20	199	Pn	Pn	06 19 17.5	+1.0
	15nm,0.3s,baz=262,slow=22,SNR=5.5						
JHJ				Sn	Sn	06 20 01.8	-3.9
	9.1nm,0.3s,baz=79,slow=20,SNR=0.9						
	121nm,0.8s						
ERM	Erimo	5.08	15	Pn	Pn	06 19 28.7	+0.1
ERM	Erimo	5.08	15	P	Pn	06 19 29.0	+0.4
JEM	Erimo	5.08	15	P	Pn	06 19 29.2	+0.6
JMN	Monobe	7.03	244	Pn	Pn	06 19 56.6	+1.1
JMN	Monobe	7.03	244	P	Pn	06 19 56.6	+1.1
ASAJ	Asahikawa	7.06	7	Pn	Pn	06 19 55.7	-0.1
	1.4nm,0.3s,baz=223,slow=12,SNR=15						
ASAJ				Sn	Sn	06 21 12.5	-3.6
	0.4nm,0.3s,baz=212,slow=10,SNR=1.7						
	3.2nm,0.4s						
JKA	Kamikawa-asahi	7.06	7	Pn	Pn	06 19 55.5	-0.3
JHS	Saijyo	7.06	255	Pn	Pn	06 19 57.7	+1.8
JHS	Saijyo	7.06	255	P	Pn	06 19 58.4	+2.5
JNU	Nakatsue	9.52	248	Pn	Pn	06 20 30.1	+0.6
	0.1nm,0.3s,baz=57,slow=9.2,SNR=3.6						
	4.2nm,0.8s						
JCJ	Chichijima	10.00	176	Pn	Pn	06 20 36.1	-0.1
	2.6nm,0.3s,baz=186,slow=19,SNR=1.8						
	45nm,0.8s						
USRK	Ussuriysk Ar.	10.08	318	Pn	Pn	06 20 37.8	+0.5
	0.2nm,0.3s,baz=129,slow=11,SNR=1.8						
	2.7nm,0.6s						
KSRS	Korea Array	10.78	276	Pn	Pn	06 20 48.1	+1.3
	0.2nm,0.3s,baz=92,slow=14,SNR=3.6						
	1.9nm,0.9s						
CN2	Changchun	13.88	304	eP	Pn	06 21 30.1	+0.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KLR	Kul'dur	14.01	333	LR	LR	06 26 36.5	
	comp=Z,46nm,18.4s,baz=128,slow=36						
HNS	HongShan	21.26	279	⇑P	P	06 22 56.8	-1.9
HNS				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC	Hu-ho-hao-te	23.47	288	eP	P	06 23 19.8	-2.4
HHC				pmax	pmax		
	comp=Z,36nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,6.3s						
SEY	Seymchan	26.72	11	P	P	06 23 53.0	+1.4
	comp=Z,0.5nm,0.3s,baz=218,slow=19,SNR=1.1						
	comp=Z,0.5nm,0.3s						
SONM	Songino Array	27.76	304	P	P	06 24 02.0	+0.6
	comp=Z,2.1nm,0.7s,baz=98,slow=8.4,SNR=11						
	comp=Z,2.1nm,0.7s						
H11N2	WAKE ISLAND Hy	28.17	121	T	T	06 53 35.7	
	baz=314,slow=75,SNR=552						
H11N1	WAKE ISLAND Hy	28.18	121	T	T	06 53 39.0	
	baz=314,slow=75,SNR=111						
H11N3	WAKE ISLAND Hy	28.19	121	T	T	06 53 39.7	
	baz=314,slow=75,SNR=435						
H11S1	WAKE ISLAND Hy	28.88	123	T	T	06 54 31.5	
	baz=316,slow=76,SNR=74						
H11S3	WAKE ISLAND Hy	28.88	123	T	T	06 54 26.9	
	baz=316,slow=76,SNR=52						
H11S2	WAKE ISLAND Hy	28.90	123	T	T	06 54 31.9	
	baz=316,slow=76,SNR=64						
PZH	PanZhiHua	35.13	264	P	P	06 25 05.7	-0.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,50nm,5.2s						
WMQ	Urumqi	40.82	297	eP	P	06 25 53.3	-0.9
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ZAA0	Zalesovo Array	41.88	312	P	P	06 26 01.4	-1.2
ZALV	Zalesovo Beam	41.88	312	P	P	06 26 02.9	+0.3
	comp=Z,1.7nm,0.6s,baz=77,slow=6.4,SNR=5.0						
	comp=Z,1.7nm,0.6s						
ZALV	Zalesovo Beam	41.88	312	P	P	06 26 01.0	-1.6
MK31	Makanchi Array	44.10	302	P	P	06 26 19.2	-1.5
MK31				IAmb	IAmb	06 26 25.9	
	comp=Z,2.1nm,0.9s						
MKAR	Makanchi Array	44.10	302	P	P	06 26 20.6	-0.1
	comp=Z,1.1nm,0.8s,baz=87,slow=9.5,SNR=8.0						
	comp=Z,1.1nm,0.8s						
MKAR	Makanchi Array	44.10	302	P	P	06 26 19.9	-0.9
MAKZ	Makanchi	44.31	302	P	P	06 26 22.4	0.0
MAKZ				IAmb	IAmb	06 26 28.1	
	comp=Z,2.0nm,0.7s						
KURK	Kurchatov	45.90	308	P	P	06 26 33.8	-1.2
KURK				IAmb	IAmb	06 26 40.6	
	comp=Z,5.4nm,0.7s						
POKR	Poker Plat Res	49.18	32	P	P	06 26 58.6	-1.7
SCM	Sheep Creek Mo	49.40	36	P	P	06 27 01.8	-0.3
SCM				IAmb	IAmb	06 27 04.8	
	comp=Z,6.1nm,1.0s						
ILAR	Eielson Array	49.42	32	P	P	06 27 03.8	+1.6
	comp=Z,1.4nm,0.7s,baz=268,slow=6.4,SNR=18						
	comp=Z,1.4nm,0.7s						
BMAR	Burnt Mountain	50.26	29	P	P	06 27 07.7	-0.8
GLB	Gilahina Butte	51.11	37	P	P	06 27 13.9	-1.1
GLB				IAmb	IAmb	06 27 19.6	
	comp=Z,8.5nm,1.4s						
BCAR	Beaver Creek A	51.82	34	P	P	06 27 18.6	-1.8
DAWY	Dawson	52.73	33	P	P	06 27 26.1	-0.9
M30M	Minto, Yukon	54.17	34	P	P	06 27 37.9	+0.3
M30M				IAmb	IAmb	06 27 38.3	
	comp=Z,3.3nm,1.2s						
WB0	Warramunga Arr	56.95	188	P	P	06 27 58.1	+0.1
WB0				IAmb	IAmb	06 28 05.4	
	comp=Z,7.3nm,1.4s						
WRA	Warramunga Arr	57.13	188	P	P	06 27 59.2	0.0
	comp=Z,0.7nm,0.5s,baz=4.9,slow=7.3,SNR=15						
	comp=Z,0.7nm,0.5s						
WRA	Warramunga Arr	57.13	188	P	P	06 27 59.7	+0.4
ABKAR	Akbulak array	57.91	310	P	P	06 28 02.8	-1.6
ASAR	Alice Springs	60.86	188	P	P	06 28 25.6	+0.5
	comp=Z,0.3nm,0.6s,baz=3.3,slow=8.2,SNR=7.3						
	comp=Z,0.3nm,0.6s						
ASAR	Alice Springs	60.86	188	P	P	06 28 24.1	-1.0
YKA	Yellowknife Ar	63.74	30	P	P	06 28 45.1	+1.2
	comp=Z,0.2nm,0.7s,baz=301,slow=6.4,SNR=4.5						
	comp=Z,0.2nm,0.7s						
GEYT	Alibeck	63.82	299	P	P	06 28 46.1	+1.1
	comp=Z,2.1nm,0.7s,baz=10,slow=1.6,SNR=1.7						
	comp=Z,2.1nm,0.7s						
ARCES	ARCESS Array B	63.94	339	P	P	06 28 46.5	+1.3
	comp=Z,10nm,1.1s,baz=60,slow=9.4,SNR=4.8						
	comp=Z,10nm,1.1s						
FINES	FINESS Array B	68.76	332	P	P	06 29 17.1	+1.0
	comp=Z,2.0nm,0.7s,baz=54,slow=7.1,SNR=2.0						
	comp=Z,2.0nm,0.7s						
NOA	NORSAR Array B	74.13	337	P	P	06 29 49.5	+0.9
	comp=Z,1.6nm,0.9s,baz=39,slow=5.7,SNR=1.4						
	comp=Z,1.6nm,0.9s						
AKASG	Malin Array Be	74.25	322	P	P	06 29 50.3	+0.8
	comp=Z,0.5nm,0.4s,baz=40,slow=5.8,SNR=4.3						
	comp=Z,0.5nm,0.4s						
NVAR	Mina Array Bea	74.93	53	P	P	06 29 55.3	+1.3
	comp=Z,0.1nm,0.4s,baz=301,slow=6.2,SNR=2.0						
	comp=Z,0.1nm,0.4s						
GERES	GERESS Array B	82.66	328	P	P	06 30 37.5	+1.5
	comp=Z,0.3nm,0.4s,baz=22,slow=5.5,SNR=4.2						
	comp=Z,0.3nm,0.4s						
LPAZ	La Paz	146.64	60	PKPbc	PKPdf	06 37 53.6	-0.4
	comp=Z,1.0nm,0.6s,baz=335,slow=3.6,SNR=5.2						
H03N2	Juan Fernandez	147.01	96	T	T	09 22 15.7	
	baz=291,slow=76,SNR=39						
H03N3	Juan Fernandez	147.02	96	T	T	09 22 17.7	
	baz=291,slow=76,SNR=43						
H03N1	Juan Fernandez	147.03	96	T	T	09 22 16.9	
	baz=291,slow=76,SNR=45						

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*IDC **12** 06:27:01.2±1.3, 13°.73N×92°.98E, h0^{km}, mb3.6/5, mbtmp3.6/6, ML3.8/1, MS2.7/2, Error ellipse: s-maj=42.4km s-min=24.7km az=64.0*

ISC 12 06:27:06.1±1.2**, 13°.8N**±0°.2×**93°.1E**±0°.2**, h32**^{km}**, n10, σ0^{s}.68**/6**, mb3.8**/5**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.33	50	Pn	Pn	06 28 50.8	-0.1
	0.4nm,0.3s,baz=240,slow=15,SNR=0.8						
CMAR				LR	LR	06 32 09.1	
	comp=Z,58nm,21.0s,baz=225,slow=42						
	0.6nm,0.3s						
PALK	Pallekele	13.75	243	LR	LR	06 35 10.0	
	comp=Z,38nm,18.7s,baz=153,slow=36						
H08S3	Diego Garcia H	29.48	225	T	T	07 04 00.4	
	baz=43,slow=74						
H08S2	Diego Garcia H	29.49	225	T	T	07 04 09.2	
	baz=43,slow=74						
H08S1	Diego Carcia H	29.50	225	T	T	07 04 06.6	
	baz=43						
MKAR	Makanchi Array	34.13	347	P	P	06 33 47.6	-0.5
	0.4nm,0.9s,baz=161,slow=8.6,SNR=2.6						
	0.4nm,0.9s						
SONM	Songino Array	35.73	15	P	P	06 34 02.5	+0.6
	0.3nm,0.8s,baz=212,slow=5.1,SNR=2.9						
	0.3nm,0.8s						
WRA	Warramunga Arr	52.65	129	P	P	06 36 16.9	-0.7
	1.0nm,0.8s,baz=305,slow=8.6,SNR=6.5						
	1.0nm,0.8s						
ASAR	Alice Springs	54.59	133	P	P	06 36 32.3	+0.6
	0.8nm,0.6s,baz=311,slow=7.0,SNR=13						
	0.8nm,0.6s						
TORD	Torodi Ar. Bea	88.22	283	P	P	06 39 54.9	0.0
	0.5nm,0.7s,baz=84,slow=4.0,SNR=2.8						
	0.5nm,0.7s						

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*IDC **12** 07:03:30.1±0.8, 25°.71N×140°.69E, h0^{km}, mb3.9/9, mbtmp3.9/9, MS2.8/4, Error ellipse: s-maj=42.1km s-min=18.3km az=109.0*

*NEIC **12** 07:03:39.0±1.3, 25°.79N±0°.04×142°.3E±0°.2, h92^{km}±10^{km}, mb4.2/11, Error ellipse: s-maj=30.4km s-min=6.2km az=86.0*

ISC 12 07:03:39.3±1.0**, 25°.72N**±0°.09×**142°.2E**±0°.2**, h100**^{km}**, n34, σ1^{s}.22**/24**, mb3.9**/14**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.37	358	Pn	Pn	07 04 04.8	+0.9
	121nm,0.3s,baz=90,slow=20,SNR=60						
JCJ				Sn	Sn	07 04 26.6	+4.0
	55nm,0.3s,baz=280,slow=22,SNR=15						
JCJ	Chichijima	1.37	358		Pn	07 04 02.7	-1.3
MJAR	Matsushiro Arr	11.32	343	LR	LR	07 10 25.4	
	comp=Z,58nm,19.6s,baz=162,slow=38						
JMM	Marumori	12.17	355	Pn	Pn	07 06 27.5	-1.6
GUMO	Guam	12.32	168	LR	LR	07 10 25.5	
	comp=Z,48nm,18.6s,baz=134,slow=33						
KSRS	Korea Array	16.87	317	Pn	P	07 07 29.8	+0.2
	0.2nm,0.3s,baz=133,slow=12,SNR=25						
KSRS				LR	LR	07 13 28.4	
	comp=Z,26nm,18.9s,baz=155,slow=38						
KSAR	Wonju Array Be	16.89	317	P	Pn	07 07 28.4	-1.0
KS19	Wonju Array Si	16.93	317		Pn	07 07 29.5	-0.5
KS19				IAmb	IAmb	07 07 30.8	
	comp=Z,13nm,1.1s						
SSLB	Suanglung	19.42	269	P	P	07 07 57.9	+0.1
SSLB				IAmb	IAmb	07 08 00.4	
	comp=Z,9.6nm,1.1s						
USRK	Ussuriysk Ar.	20.22	338	P	P	07 08 05.3	-0.9
USA0B	Ussuriysk Arra	20.23	338	P	P	07 08 06.3	0.0
H11S3	WAKE ISLAND Hy	23.75	103	T	T	07 34 22.9	
	baz=291,slow=75,SNR=47						
H11S1	WAKE ISLAND Hy	23.75	103	T	T	07 34 23.3	
	baz=291,slow=75,SNR=58						
H11S2	WAKE ISLAND Hy	23.77	103	T	T	07 34 24.1	
	baz=291,slow=75,SNR=52						
KLR	Kul'dur	24.85	344	LR	LR	07 17 56.2	
	comp=Z,22nm,18.4s,baz=192,slow=35						
ULN	Ulaanbaatar	35.35	318	P	P	07 10 25.3	+0.1
ULN				IAmb	IAmb	07 10 26.4	
	comp=Z,3.2nm,0.9s						
SONM	Songino Array	35.74	318	P	P	07 10 28.4	-0.1
	comp=Z,0.7nm,0.6s,baz=128,slow=8.8,SNR=7.2						
SONM	Songino Array	35.74	318	P	P	07 10 28.1	-0.4
SONM				IAmb	IAmb	07 10 29.5	
	comp=Z,2.7nm,1.3s						
MTN	Manton Dam	39.83	197	P	P	07 11 02.8	-0.2
MTN				IAmb	IAmb	07 11 05.4	
	comp=Z,11nm,1.2s						
WB0	Warramunga Arr	45.85	190	P	P	07 11 52.0	+0.4
WB0				IAmb	IAmb	07 11 53.4	
	comp=Z,4.0nm,0.8s						
WRAB	Tennant Creek	46.02	190	P	P	07 11 54.2	+1.2
WB2	Warramunga Arr	46.03	190	P	P	07 11 54.0	+1.0
WRA	Warramunga Arr	46.03	190	P	P	07 11 53.8	+0.8
	comp=Z,6.2nm,0.8s,baz=9.1,slow=8.6,SNR=37						
	comp=Z,6.2nm,0.8s						
WRA	Warramunga Arr	46.03	190	P	P	07 11 53.9	+0.8
ASAR	Alice Springs	49.76	190	P	P	07 12 23.1	+1.4
	comp=Z,0.4nm,0.7s,baz=14,slow=14,SNR=7.0						
	comp=Z,0.4nm,0.7s						
CAST	Castle Rocks	56.45	29	P	P	07 13 09.4	-1.0
CAST				IAmb	IAmb	07 13 13.2	
	comp=Z,3.2nm,1.3s						
ILAR	Eielson Array	58.90	28	P	P	07 13 35.3	+7.8
	comp=Z,1.5nm,0.9s,baz=255,slow=5.3,SNR=10						
	comp=Z,1.5nm,0.9s						
INK	Inuvik	64.26	24	P	P	07 14 10.8	+7.4
	comp=Z,1.2nm,0.8s,baz=256,slow=4.2,SNR=5.7						
	comp=Z,1.2nm,0.8s						
YKA	Yellowknife Ar	73.33	28	P	P	07 15 07.8	+8.0
	comp=Z,0.8nm,0.7s,baz=292,slow=5.9,SNR=16						
	comp=Z,0.8nm,0.7s						
FINES	FINESS Array B	79.19	334	P	P	07 15 33.8	+0.8
	comp=Z,0.8nm,0.5s,baz=58,slow=5.2,SNR=11						
	comp=Z,0.8nm,0.5s						
NVAR	Mina Array Bea	81.33	52	P	P	07 15 54.7	+9.4
	comp=Z,0.3nm,0.5s,baz=280,slow=5.4,SNR=3.8						
	comp=Z,0.3nm,0.5s						
NOA	NORSAR Array B	84.90	338	P	P	07 16 03.3	+0.5
	comp=Z,0.9nm,0.8s,baz=43,slow=4.6,SNR=1.8						
	comp=Z,0.9nm,0.8s						
PDAR	Pinedale Array	85.16	45	P	P	07 16 13.2	+8.4

	comp=Z,0.6nm,0.8s,baz=324,slow=4.5,SNR=4.4						
	comp=Z,0.6nm,0.8s						
LPAZ	**La Paz**	**150.20**	**78**	PKPbc	**PKPab**	**07 23 26.2**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=200,slow=4.7,SNR=4.9						

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*MOS **12** 07:13:12.5±0.0, 43°.00N×47°.49E, h15^{km}, MPVA3.7*
*DRS **12** 07:13:13.2±0.0, 43°.07N×47°.58E, h14^{km}, FELT I=II-III MSK at Makhachkala*
ISC 12 07:13:13.5±0.8, **43°.03N**±0°.02×**47°.49E**±0°.02, **h14**^{km}±5^{km}, **n70,**$\sigma 1^{s}.14$/129, **1C-4D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAK	**Makhachkala**	**0.07**	**169**	*e*Pg	**Pg**	**07 13 15.5**	**-0.7**
MAK				*e*Sg	**Sg**	**07 13 19.0**	**+1.0**
MAK	**Makhachkala**	**0.07**	**169**	⇓*i*PG	**Pg**	**07 13 15.5**	**-0.7**
MAK				pmax	pmax		
	comp=Z,2µm,0.4s						
KANR	**Karaman**	**0.17**	**0**	*e*Pg	**Pb**	**07 13 17.7**	**-0.7**
KANR				*i* Sg	**Sb**	**07 13 22.9**	**+1.2**
KANR	**Karaman**	**0.17**	**0**	*e*PG	**Pb**	**07 13 17.7**	**-0.7**
KANR				*i* S	**Sb**	**07 13 22.9**	**+1.2**
BUJR	**Buynaksk**	**0.34**	**234**	*i* Pg	**Pg**	**07 13 20.8**	**+0.2**
BUJR				*i* Sg	**Sb**	**07 13 26.8**	**0.0**
BUJR	**Buynaksk**	**0.34**	**234**	*i* PG	**Pg**	**07 13 20.8**	**+0.2**
BUJR				*i* S	**Sb**	**07 13 26.8**	**0.0**
KRNR	**Karanay**	**0.47**	**245**	*i* Pg	**Pg**	**07 13 22.8**	**-0.1**
KRNR				*e*Sg	**Sb**	**07 13 30.6**	**0.0**
KRNR	**Karanay**	**0.47**	**245**	*i* PG	**Pg**	**07 13 22.8**	**-0.1**
KRNR				*e*S	**Sb**	**07 13 30.6**	**0.0**
DBC	**Dubki**	**0.48**	**269**	*e*Pg	**Pg**	**07 13 22.8**	**-0.2**
	comp=Z,64nm,0.3s						
DBC				*e*Sg	**Sg**	**07 13 30.4**	**+0.9**
	comp=Z,254nm,0.4s						
DBC	**Dubki**	**0.48**	**269**	*e*PG	**Pg**	**07 13 22.9**	**-0.2**
DBC				*e*S	**Sg**	**07 13 30.5**	**+0.9**
SGKR	**Sergokala**	**0.58**	**167**	*e*Pg	**Pb**	**07 13 25.4**	**-0.1**
	comp=Z,1.0nm,0.3s						
SGKR				*e*Sg	**Sb**	**07 13 33.8**	**+0.1**
	comp=Z,532nm,0.4s						
SGKR	**Sergokala**	**0.58**	**167**	*e*PG	**Pb**	**07 13 25.4**	**-0.1**
SGKR				*i* S	**Sn**	**07 13 34.6**	**-2.2**
SGKR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SGKR				smax	smax		
	comp=N,341nm,0.5s						
UNCR	**Uncukul**	**0.60**	**239**	*e*Pg	**Pg**	**07 13 25.4**	**+0.1**
	comp=N,122nm,0.4s						
UNCR				*e*Sg	**Sb**	**07 13 34.8**	**+0.6**
	comp=N,1µm,0.4s						
UNCR	**Uncukul**	**0.60**	**239**	*e*PG	**Pg**	**07 13 25.4**	**+0.1**
UNCR				*e*S	**Sb**	**07 13 35.0**	**+0.8**
DLMR	**Dylym**	**0.63**	**274**	*e*Pg	**Pb**	**07 13 26.4**	**0.0**
	comp=N,74nm,0.2s						
DLMR				*e*Sg	**Sb**	**07 13 36.1**	**+1.0**
	comp=N,2µm,0.4s						
DLMR	**Dylym**	**0.63**	**274**	*e*PG	**Pb**	**07 13 26.8**	**+0.4**
DLMR				*e*S	**Sn**	**07 13 37.3**	**-0.7**
HNZR	**Khunzah**	**0.74**	**231**	*e*PG	**Pb**	**07 13 28.5**	**+0.2**
HNZR				*i* S	**Sn**	**07 13 40.1**	**-0.8**
HNZR				pmax	pmax		
	comp=Z,84nm,0.4s						
HNZR				smax	smax		
	comp=N,68nm,0.4s						
GNBR	**Gunib**	**0.75**	**211**	*e*Pg	**Pn**	**07 13 29.0**	**-0.8**
GNBR				*e*Sg	**Sn**	**07 13 40.6**	**-0.3**
GNBR	**Gunib**	**0.75**	**211**	*e*PG	**Pn**	**07 13 29.0**	**-0.8**
GNBR				*e*S	**Sn**	**07 13 40.6**	**-0.3**
XNZR	**Khunzakh**	**0.75**	**230**	*e*Pg	**Pb**	**07 13 28.5**	**-0.1**
	comp=N,83nm,0.4s						
XNZR				*e*Sg	**Sb**	**07 13 39.5**	**+0.7**
	comp=N,172nm,0.5s						
URKR	**Urkarakh**	**0.87**	**173**	*e*Pg	**Pn**	**07 13 31.6**	**+0.1**
	comp=N,27nm,0.3s						
URKR				*e*Sg	**Sn**	**07 13 44.5**	**+0.4**
	comp=N,495nm,0.2s						
URKR	**Urkarakh**	**0.87**	**173**	*e*PG	**Pn**	**07 13 31.6**	**+0.1**
URKR				*e*S	**Sn**	**07 13 44.5**	**+0.4**
KMKR	**Kumukh**	**0.94**	**198**	*e*Pg	**Pn**	**07 13 32.4**	**-0.2**
	comp=N,112nm,0.2s						
KMKR				*e*Sg	**Sn**	**07 13 46.9**	**+0.9**
	comp=N,209nm,0.5s						
KMKR	**Kumukh**	**0.94**	**198**	*e*PG	**Pn**	**07 13 32.5**	**-0.1**
KMKR				*e*S	**Sn**	**07 13 46.8**	**+0.8**
BTLR	**Botlikh**	**1.00**	**249**	*e*Pg	**Pg**	**07 13 32.9**	**0.0**
	comp=N,43nm,0.1s						
BTLR				*e*Sg	**Sn**	**07 13 47.9**	**+0.6**
	comp=N,490nm,0.2s						
BTLR	**Botlikh**	**1.00**	**249**	*e*PG	**Pg**	**07 13 32.8**	**0.0**
BTLR				*i* S	**Sn**	**07 13 48.4**	**+1.2**
BTLR				pmax	pmax		
	comp=Z,43nm,0.1s						
BTLR				smax	smax		
	comp=E,164nm,0.3s						
DVE	**Vedeno**	**1.00**	**266**	*e*Pg	**Pn**	**07 13 34.0**	**+0.7**
DVE				*e*Sg	**Sn**	**07 13 47.7**	**+0.5**
DVE	**Vedeno**	**1.00**	**266**	*e*PG	**Pn**	**07 13 34.0**	**+0.7**
DVE				*e*S	**Sn**	**07 13 47.7**	**+0.5**
DRN	**Derbent**	**1.18**	**148**	*e*Pg	**Pg**	**07 13 36.1**	**-0.1**
	comp=E,197nm,0.8s						
DRN				*e*Sg	**Sg**	**07 13 52.8**	**+1.4**
	comp=E,294nm,0.3s						
DRN	**Derbent**	**1.18**	**148**	*e*PG	**Pg**	**07 13 37.6**	**+1.4**
DRN				*e*S	**Sg**	**07 13 53.2**	**+1.7**
GROC	**Groznyy**	**1.25**	**279**	*e*Pg	**Pg**	**07 13 38.0**	**+0.4**
GROC				*e*Sg	**Sg**	**07 13 55.4**	**+1.5**
GROC	**Groznyy**	**1.25**	**279**	*e*PG	**Pg**	**07 13 38.0**	**+0.4**
GROC				*e*S	**Sg**	**07 13 55.4**	**+1.5**
KSMR	**Kasumkent**	**1.50**	**161**	*e*Pg	**Pg**	**07 13 41.6**	**-0.7**
	comp=E,4.0nm,0.1s						
KSMR				*e*Sg	**Sg**	**07 14 03.3**	**+1.3**
	comp=E,188nm,0.3s						
KSMR	**Kasumkent**	**1.50**	**161**	*e*PG	**Pg**	**07 13 43.1**	**+0.7**
KSMR				*i* S	**Sg**	**07 14 03.2**	**+1.3**
LGD	**Lagodekhi**	**1.51**	**218**	PG	**Pg**	**07 13 41.9**	**-0.6**
LGD	**Lagodekhi**	**1.51**	**218**	P	**Pg**	**07 13 41.9**	**-0.6**
AKT	**Akhty**	**1.56**	**173**	*e*Pg	**Pb**	**07 13 42.1**	**-0.1**
	comp=E,85nm,0.3s						
AKT				*e*Sg	**Sg**	**07 14 03.8**	**+0.1**
	comp=E,360nm,0.4s						
AKT	**Akhty**	**1.56**	**173**	*e*PN	**Pb**	**07 13 42.1**	**-0.1**
AKT				*e*S	**Sg**	**07 14 04.1**	**+0.4**
SHTL	**Shatili**	**1.76**	**259**	PN	**Pb**	**07 13 45.4**	**-0.2**
SHTL				S	**Sg**	**07 14 09.4**	**-0.7**
SHTL	**Shatili**	**1.76**	**259**	P	**Pb**	**07 13 45.4**	**-0.2**
SHTL				S	**Sg**	**07 14 09.4**	**-0.7**
KMGR	**Komgaron**	**1.92**	**272**	*e*Pg	**Pb**	**07 13 48.0**	**-0.4**
KMGR	**Komgaron**	**1.92**	**272**	*e*PN	**Pb**	**07 13 48.0**	**-0.4**
PNSH	**Pansheti**	**2.15**	**260**	PN	**Pb**	**07 13 51.4**	**-1.0**
PNSH				S	**Sb**	**07 14 19.7**	**+0.8**
PNSH	**Pansheti**	**2.15**	**260**	P	**Pb**	**07 13 51.4**	**-1.0**
PNSH				S	**Sb**	**07 14 19.7**	**+0.8**
LACR	**Lac**	**2.35**	**266**	*e*Pn	**Pb**	**07 13 53.9**	**-1.9**
LACR				*i* Sn	**Sb**	**07 14 22.9**	**-1.9**
LACR	**Lac**	**2.35**	**266**	*e*PN	**Pb**	**07 13 53.9**	**-1.9**
LACR				*i* S	**Sb**	**07 14 22.8**	**-1.9**
STDR	**Stavd-Durt**	**2.53**	**279**	*e*Pn	**Pb**	**07 13 57.0**	**-1.7**
STDR				*e*Sn	**Sb**	**07 14 27.4**	**-2.3**
STDR	**Stavd-Durt**	**2.53**	**279**	*e*PN	**Pb**	**07 13 57.0**	**-1.7**
STDR				*e*S	**Sb**	**07 14 27.4**	**-2.3**
ZEI	**Tsey**	**2.65**	**266**	*e*Pn	**Pn**	**07 13 56.7**	**+0.7**
ZEI				*e*Sn	**Sn**	**07 14 28.8**	**+0.8**
ZEI	**Tsey**	**2.65**	**266**	*e*PN	**Pn**	**07 13 56.7**	**+0.7**
ZEI				*e*S	**Sn**	**07 14 28.8**	**+0.8**
DIGR	**Digorskoe uzhe**	**2.87**	**269**	*e*Pn	**Pn**	**07 13 59.7**	**+0.6**
DIGR				*e*Sn	**Sn**	**07 14 35.2**	**+1.6**
DIGR	**Digorskoe uzhe**	**2.87**	**269**	*e*PN	**Pn**	**07 13 59.7**	**+0.6**
DIGR				*e*S	**Sn**	**07 14 35.2**	**+1.6**
NCK	**Nalchik**	**2.88**	**281**	*i* PN	**Pn**	**07 13 59.1**	**0.0**
KBZ	**Khabaz**	**3.42**	**283**	*e*Pn	**Pn**	**07 14 06.2**	**-0.2**
KBZ				*e*Sn	**Sn**	**07 14 48.8**	**+2.0**
KBZ	**Khabaz**	**3.42**	**283**	*e*PN	**Pn**	**07 14 06.2**	**-0.2**
KBZ				*e*S	**Sn**	**07 14 48.8**	**+2.0**
NEY	**Neytrino**	**3.50**	**275**	*e*Pn	**Pn**	**07 14 07.8**	**+0.2**
NEY				*e*Sn	**Sn**	**07 14 48.5**	**-0.4**
NEY	**Neytrino**	**3.50**	**275**	*i* PN	**Pn**	**07 14 08.0**	**+0.3**
BEYR	**Belyy Ugol+**	**3.54**	**288**	*e*Pn	**Pn**	**07 14 07.4**	**-0.7**
BEYR				*e*Sn	**Sn**	**07 14 51.0**	**+1.3**
BEYR	**Belyy Ugol+**	**3.54**	**288**	*e*PN	**Pn**	**07 14 07.4**	**-0.7**
BEYR				*e*S	**Sn**	**07 14 51.0**	**+1.3**
SHA1	**Shidzhatmaz**	**3.59**	**283**	*e*Pn	**Pn**	**07 14 08.6**	**-0.4**
SHA1				*e*Sn	**Sn**	**07 14 53.2**	**+1.8**
SHA1	**Shidzhatmaz**	**3.59**	**283**	*e*PN	**Pn**	**07 14 08.6**	**-0.4**
SHA1				*e*S	**Sn**	**07 14 53.2**	**+1.8**
KIV0	**Kislovodsk Arr**	**3.61**	**287**	*e*Pn	**Pn**	**07 14 10.5**	**+1.4**
KIV0				*e*Sn	**Sn**	**07 14 51.8**	**+0.2**
KIV	**Kislovodsk**	**3.61**	**286**	*e*PN	**Pn**	**07 14 10.5**	**+1.3**
KIV				*e*S	**Sn**	**07 14 51.8**	**0.0**
BELG	**Belogornoye**	**9.37**	**1**	*i* P	**Pn**	**07 15 26.6**	**-1.5**
AKTO	**Aktyubinsk**	**10.34**	**41**	⇑Sn	**Sn**	**07 17 34.0**	**-3.1**
	comp=E,1.2nm,0.7s						
AB31	**Akbulak array**	**10.64**	**50**	⇓Pn	**Pn**	**07 15 48.1**	**+2.6**
	comp=E,0.3nm,0.4s,baz=237,slow=14						
AB31				⇓Sn	**Sn**	**07 17 41.4**	**-3.1**
	comp=E,0.5nm,0.4s,baz=244,slow=25						
AB31	**Akbulak array**	**10.64**	**50**	P	**Pn**	**07 15 48.1**	**+2.6**
AB31				S	**Sn**	**07 17 41.4**	**-3.1**
OBN	**Obninsk**	**14.03**	**333**	*e*P	**Pn**	**07 16 31.6**	**-0.1**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ARU	**Arti**	**15.18**	**24***d*	*i*P	**Pn**	**07 16 46.7**	**-0.6**
ARU				S	**Sn**	**07 19 37.8**	**+2.8**
ARU				pmax	pmax		
	comp=Z,29nm,3.3s						
AAK	**Ala-Archa**	**19.79**	**82**	*i* P	**Pn**	**07 17 43.2**	**-1.8**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.2s						

ROM 12 07:14:41.9±0.0, **42°.728N**±0°.003×**13°.188E**±0°.004, **h9**^{km}**, ML2.2**/38**, 7C-2D, Error ellipse: s-maj=0.3km s-min=0.1km az=76.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.04**	**25**	P	Pg	07 14 43.7	-0.2
T1214				S	Sg	07 14 44.7	-0.6
T1214				AML	AML		
	comp=E,5875µm,1.4s						
T1214				AML	AML		
	comp=E,6055µm,1.4s						
T1214				AML	AML		
	comp=E,5870µm,1.4s						
T1214				AML	AML		
	comp=N,8710µm,0.3s						
T1214				AML	AML		
	comp=N,8390µm,0.3s						
T1214				AML	AML		
	comp=E,6055µm,0.6s						
T1214				AML	AML		
	comp=E,5870µm,0.6s						
T1218	**Civita (PG)**	**0.08**	**223**	P	Pg	07 14 44.5	+0.3
T1218				S	Sg	07 14 46.3	+0.4
T1218				AML	AML		
	comp=E,6305µm,0.4s						
T1218				AML	AML		
	comp=E,6015µm,0.3s						
T1218				AML	AML		
	comp=N,5435µm,1.0s						
T1218				AML	AML		
	comp=E,6305µm,0.3s						
T1218				AML	AML		
	comp=N,5435µm,1.0s						
T1218				AML	AML		
	comp=E,6015µm,0.3s						
T1218				AML	AML		
	comp=N,5430µm,1.0s						
T1218				AML	AML		
	comp=N,5430µm,1.0s						
T1218				AML	AML		
	comp=N,5435µm,1.0s						
T1212	**Cascia, Frazio**	**0.11**	**283**	P	Pg	07 14 45.0	+0.4
T1212				S	Sg	07 14 47.4	+0.9
T1212				AML	AML		
	comp=E,1074µm,0.6s						
T1212				AML	AML		
	comp=N,1155µm,1.0s						
T1212				AML	AML		
	comp=E,1076µm,0.6s						
T1212				AML	AML		
	comp=N,1185µm,1.0s						
T1212				AML	AML		
	comp=E,1034µm,0.6s						
T1212				AML	AML		
	comp=N,1155µm,1.0s						
T1212				AML	AML		
	comp=N,1185µm,1.0s						
T1212				AML	AML		
	comp=E,1035µm,0.6s						
T1212				AML	AML		
	comp=E,1076µm,1.4s						
T1212				AML	AML		
	comp=E,1035µm,1.4s						
T1212				AML	AML		
	comp=N,1185µm,1.0s						
T1212				AML	AML		
	comp=N,1155µm,1.0s						
T1245	**Castelsantange**	**0.13**	**360**	P	Pg	07 14 45.3	+0.3
T1245				S	Sg	07 14 47.7	+0.5
T1245				AML	AML		
	comp=E,2675µm,0.4s						
T1245				AML	AML		
	comp=N,4675µm,0.3s						
T1245				AML	AML		
	comp=E,2675µm,0.4s						
T1245				AML	AML		
	comp=N,4850µm,0.3s						
T1245				AML	AML		
	comp=E,3005µm,0.4s						
T1245				AML	AML		
	comp=E,2680µm,0.4s						
SMA1	**SAN MARTINO**	**0.15**	**132**	P	Pg	07 14 45.8	+0.6
SMA1				S	Sg	07 14 49.0	+1.5
SMA1				AML	AML		
	comp=E,3010µm,0.7s						
SMA1				AML	AML		
	comp=E,3010µm,1.3s						
SMA1				AML	AML		
	comp=N,3415µm,0.4s						
MC2	**Monte Cornacci**	**0.18**	**1**	P	Pg	07 14 46.5	+0.6
MC2				S	Sg	07 14 50.3	+1.6
T1217	**Poggiodomo (PG**	**0.19**	**265**	P	Pg	07 14 46.5	+0.7
T1217				S	Sg	07 14 50.1	+1.5
T1217				AML	AML		
	comp=E,726µm,0.5s						
T1217				AML	AML		
	comp=N,877µm,0.5s						
T1217				AML	AML		
	comp=E,858µm,0.5s						
T1217				AML	AML		
	comp=E,726µm,0.5s						
T1217				AML	AML		
	comp=N,932µm,0.5s						
MMO1	**Montemonaco**	**0.20**	**31**	P	Pg	07 14 46.7	+0.6
MMO1				S	Sg	07 14 50.3	+1.4
T1216	**Preci, Frazion**	**0.20**	**323**	P	Pg	07 14 46.6	+0.4
T1216				S	Sg	07 14 50.5	+1.4
T1216				AML	AML		
	comp=E,986µm,0.3s						
T1216				AML	AML		
	comp=N,1295µm,0.5s						
T1216				AML	AML		
	comp=N,1295µm,0.5s						
T1216				AML	AML		
	comp=E,987µm,0.3s						
RM33	**Pellescritta (**	**0.22**	**175**	P	Pg	07 14 47.0	+0.6
RM33				S	Sg	07 14 50.8	+1.4
RM33				AML	AML		
	comp=E,1090µm,0.2s						
RM33				AML	AML		
	comp=N,740µm,0.2s						
RM33				AML	AML		
	comp=E,1100µm,0.2s						
RM33				AML	AML		
	comp=N,720µm,0.2s						
RM33				AML	AML		
	comp=N,740µm,0.2s						
RM33				AML	AML		
	comp=E,1090µm,0.2s						
RM33				AML	AML		
	comp=N,720µm,1.8s						
RM33				AML	AML		
	comp=N,740µm,1.8s						
T1241	**Roccafluvione,**	**0.22**	**54**	P	Pg	07 14 47.0	+0.6
T1241				S	Sg	07 14 50.8	+1.3
T1241				AML	AML		
	comp=N,1326µm,0.3s						
T1241				AML	AML		
	comp=E,1175µm,0.7s						
T1241				AML	AML		
	comp=N,1328µm,0.3s						
T1241				AML	AML		
	comp=N,1282µm,0.3s						
T1241				AML	AML		
	comp=E,1170µm,0.7s						
T1241				AML	AML		
	comp=N,1325µm,0.3s						
T1241				AML	AML		
	comp=N,1325µm,1.7s						
T1241				AML	AML		
	comp=E,1095µm,0.8s						
T1241				AML	AML		
	comp=N,1282µm,1.7s						
T1215	**Vallo di Nera,**	**0.25**	**288**	P	Pg	07 14 47.5	+0.6
T1215				S	Sg	07 14 51.8	+1.5
T1215				AML	AML		
	comp=E,340µm,1.1s						
T1215				AML	AML		
	comp=E,319µm,1.0s						
T1215				AML	AML		
	comp=N,450µm,0.2s						
T1215				AML	AML		
	comp=N,427µm,0.2s						
T1215				AML	AML		
	comp=E,340µm,0.9s						
T1215				AML	AML		
	comp=N,427µm,1.8s						
T1215				AML	AML		
	comp=N,450µm,1.8s						
CAMP	**Campotosto**	**0.25**	**140**	P	Pg	07 14 47.4	+0.4
CAMP				S	Sg	07 14 51.7	+1.2
CAMP				AML	AML		
	comp=E,386µm,0.7s						
CAMP				AML	AML		
	comp=N,588µm,0.5s						
CAMP				AML	AML		
	comp=N,588µm,1.5s						
CAMP				AML	AML		
	comp=E,386µm,1.3s						
T1247	**Pizzolo (AQ)**	**0.30**	**164**	P	Pb	07 14 49.1	-0.3
T1247				AML	AML		
	comp=E,975µm,0.5s						
T1247				AML	AML		
	comp=E,975µm,1.5s						
T1247				AML	AML		
	comp=N,986µm,0.4s						
T1211	**Morro Reatino**	**0.31**	**232**	P	Pb	07 14 48.9	-0.7
T1211				S	Sb	07 14 54.1	-0.8
T1211				AML	AML		
	comp=E,776µm,0.6s						
T1211				AML	AML		
	comp=E,744µm,0.6s						
T1211				AML	AML		
	comp=N,1180µm,0.5s						
T1211				AML	AML		
	comp=E,776µm,0.7s						
T1211				AML	AML		
	comp=E,744µm,0.7s						
T1211				AML	AML		
	comp=E,776µm,1.3s						
T1211				AML	AML		
	comp=E,744µm,1.3s						
T1211				AML	AML		
	comp=N,1195µm,0.5s						
FDMO	**Fiordimonte**	**0.32**	**347**	P	Pg	07 14 48.6	+0.4
FDMO				S	Sb	07 14 54.3	-0.7
FDMO				AML	AML		
	comp=E,357µm,0.2s						
FDMO				AML	AML		
	comp=N,270µm,1.6s						
FDMO				AML	AML		
	comp=N,270µm,0.4s						
T1222	**Castel Sant'An**	**0.34**	**199**	P	Pg	07 14 49.2	+0.5
T1222				S	Sb	07 14 54.9	-0.8
T1222				AML	AML		
	comp=E,268µm,1.3s						
T1222				AML	AML		
	comp=N,216µm,1.2s						
T1222				AML	AML		
	comp=E,318µm,1.3s						
T1222				AML	AML		
	comp=N,193µm,1.3s						
T1222				AML	AML		
	comp=N,216µm,1.2s						
T1222				AML	AML		
	comp=N,193µm,1.2s						
T1222				AML	AML		
	comp=E,268µm,0.7s						
T1222				AML	AML		
	comp=E,318µm,0.7s						
T1222				AML	AML		
	comp=N,216µm,0.8s						
T1222				AML	AML		
	comp=N,193µm,0.8s						
CESI	**CESI - Serrava**	**0.35**	**323**	P	Pg	07 14 49.2	+0.5
CESI				S	Sb	07 14 55.2	-0.7
CESI				AML	AML		
	comp=E,480µm,0.3s						
CESI				AML	AML		
	comp=N,647µm,0.3s						
GUMA	**Gualdo di Mace**	**0.35**	**18**	P	Pb	07 14 50.0	-0.3
GUMA				AML	AML		
	comp=E,1875µm,0.3s						
GUMA				AML	AML		
	comp=N,1215µm,1.5s						
GUMA				AML	AML		
	comp=N,1215µm,0.5s						
T1219	**Muccia, Frazio**	**0.35**	**338**	P	Pg	07 14 49.2	+0.3
T1219				S	Sb	07 14 55.0	-1.0
T1219				AML	AML		
	comp=E,412µm,0.2s						
T1219				AML	AML		
	comp=E,394µm,0.2s						
T1219				AML	AML		
	comp=N,530µm,0.6s						
T1219				AML	AML		
	comp=N,482µm,0.6s						
CSP1	**Cessapalombo**	**0.36**	**2**	P	Pg	07 14 49.6	+0.5
CSP1				S	Sb	07 14 55.7	-0.7
CSP1				AML	AML		
	comp=E,492µm,0.3s						
CSP1				AML	AML		
	comp=N,1325µm,0.4s						
CSP1				AML	AML		
	comp=E,492µm,0.3s						
T1220	**Camerino, Fraz**	**0.39**	**349**	P	Pg	07 14 50.0	+0.5
T1220				S	Sb	07 14 56.8	-0.3
GIGS	**Gran Sasso**	**0.40**	**134**	P	Pg	07 14 49.8	+0.1
GIGS				S	Sg	07 14 55.9	+1.1
GIGS				AML	AML		
	comp=E,130µm,0.6s						
GIGS				AML	AML		
	comp=N,135µm,0.6s						
OFFI	**Offida**	**0.42**	**60**	P	Pb	07 14 51.4	-0.1
OFFI				AML	AML		
	comp=E,448µm,1.4s						
OFFI				AML	AML		
	comp=N,775µm,0.6s						
OFFI				AML	AML		
	comp=N,775µm,1.4s						
OFFI				AML	AML		
	comp=E,448µm,0.6s						
MOMA	**Monte Martano**	**0.46**	**280**	⇑P	Pg	07 14 51.3	+0.4
MOMA				S	Sb	07 14 59.6	+0.4
MOMA				AML	AML		
	comp=E,332µm,0.2s						
MOMA				AML	AML		
	comp=N,262µm,0.6s						
MOMA				AML	AML		
	comp=N,262µm,1.4s						
FIAM	**Fiamignano**	**0.46**	**187**	P	Pg	07 14 51.5	+0.6
FIAM				AML	AML		
	comp=E,132µm,1.0s						
FIAM				AML	AML		
	comp=N,144µm,0.4s						
ASSB	**Assisi San Ben**	**0.50**	**309**	P	Pg	07 14 51.8	+0.2
ASSB				S	Sb	07 14 59.8	-0.5
ASSB				AML	AML		
	comp=N,230µm,0.2s						
ASSB				AML	AML		
	comp=E,239µm,0.3s						
FAGN	**Fagnano**	**0.55**	**147**	P	Pg	07 14 52.6	+0.2
FAGN				AML	AML		
	comp=E,561µm,1.5s						
FAGN				AML	AML		

	comp=N,558µm,0.2s						
FAGN				AML	AML		
	comp=E,561µm,0.5s						
SNTG	Esanatoglia	0.56	341	⇓P	Pg	07 14 53.0	+0.3
SNTG				S	Sb	07 15 02.2	+0.3
SNTG				AML	AML		
	comp=N,115µm,0.2s						
SNTG				AML	AML		
	comp=E,103µm,0.5s						
EL6	Elcito	0.60	354	S	Sb	07 15 03.3	0.0
EL6				AML	AML		
	comp=E,190µm,0.2s						
EL6				AML	AML		
	comp=N,197µm,0.8s						
EL6				AML	AML		
	comp=N,197µm,1.2s						
ATCC	AVT- Casa Cast	0.61	319	P	Pg	07 14 53.5	-0.2
ATCC				AML	AML		
	comp=E,158µm,0.6s						
ATCC				AML	AML		
	comp=N,172µm,0.3s						
CING	Cingoli	0.65	0	⇑P	Pb	07 14 55.0	-0.4
CING				AML	AML		
	comp=E,106µm,0.3s						
CING				AML	AML		
	comp=N,78µm,1.0s						
FOSV	Fossato di Vic	0.65	331	⇑P	Pg	07 14 54.5	+0.1
FOSV				S	Sb	07 15 04.8	+0.3
FOSV				AML	AML		
	comp=E,110µm,1.6s						
FOSV				AML	AML		
	comp=N,98µm,0.9s						
FOSV				AML	AML		
	comp=N,98µm,1.1s						
FOSV				AML	AML		
	comp=E,110µm,0.4s						
T0110	Collepietro	0.67	139	⇑P	Pg	07 14 54.8	+0.1
T0110				AML	AML		
	comp=N,414µm,0.4s						
T0110				AML	AML		
	comp=E,424µm,0.5s						
MURB	Monte Urbino	0.72	318	⇑P	Pb	07 14 56.5	-0.1
MURB				S	Sn	07 15 08.6	-1.0
MURB				AML	AML		
	comp=N,294µm,0.3s						
MURB				AML	AML		
	comp=E,391µm,0.3s						
SSFR	Montelago di S	0.77	337	P	Pb	07 14 57.3	-0.1
SSFR				AML	AML		
	comp=E,266µm,1.5s						
SSFR				AML	AML		
	comp=N,237µm,1.3s						
SSFR				AML	AML		
	comp=N,156µm,0.8s						
SSFR				AML	AML		
	comp=E,196µm,0.3s						
SSFR				AML	AML		
	comp=E,266µm,0.5s						
SSFR				AML	AML		
	comp=N,237µm,0.7s						
SSFR				AML	AML		
	comp=N,156µm,1.2s						
ARVD	Arcevia	0.79	347	P	Pg	07 14 57.1	0.0
ARVD				AML	AML		
	comp=E,59µm,1.6s						
ARVD				AML	AML		
	comp=E,59µm,0.4s						
ARVD				AML	AML		
	comp=N,49µm,0.7s						
MGAB	Montegabbione	0.81	284	⇓P	Pn	07 14 59.4	-0.1
ATVO	AVT- Monte Val	0.87	319	⇑P	Pb	07 14 58.9	-0.2
INTR	Introdacqua	0.89	143	S	Sb	07 15 11.9	+0.4
INTR				AML	AML		
	comp=E,106µm,0.9s						
INTR				AML	AML		
	comp=N,152µm,0.8s						
INTR				AML	AML		
	comp=E,106µm,1.1s						
PIEI	Pieia	0.94	330	⇑P	Pg	07 15 00.1	+0.2
PIEI				S	Sn	07 15 14.9	+0.1
PIEI				AML	AML		
	comp=E,41µm,0.3s						
PIEI				AML	AML		
	comp=N,42µm,1.6s						
PIEI				AML	AML		
	comp=N,42µm,0.4s						
LPEL	Lama dei Pelig	1.00	132	S	Sn	07 15 15.7	-0.7
LPEL				AML	AML		
	comp=E,90µm,0.7s						
LPEL				AML	AML		
	comp=N,76µm,1.5s						
LPEL				AML	AML		
	comp=N,76µm,0.5s						
LPEL				AML	AML		
	comp=E,90µm,1.3s						
PTRJ	Pietraroja	1.69	143	P	Pn	07 15 11.1	-0.5
DUGI	Dugi Otok	1.86	47	*e*Pn	Pg	07 15 16.9	-0.6
VIRC	Vir	2.07	40	Sn	Sn	07 15 43.9	+1.2
MORI	Morici	2.16	57	*e*Pn	Pb	07 15 21.8	+0.6
HVAR	Hvar	2.44	78	Sn	Sn	07 15 51.2	-0.5
LSTV	Lastovo	2.73	88	Sn	Sn	07 15 58.9	0.0
RICI	Ricice	2.99	74	*e*Pn	Pb	07 15 32.4	-2.8
RICI				Sn	Sn	07 16 07.6	+2.3

ROM 12 07:15:23.7±0.0**, 42°.738N**±0°.002×**13°.187E**±0°.004**,**
h12^{km}, ML1.2/7**, Error ellipse: s-maj=0.3km**
s-min=0.0km az=80.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1218	Civita (PG)	0.09	218	P	Pg	07 15 26.8	+0.3
T1218				S	Sg	07 15 28.9	+0.4
T1218				AML	AML		
	comp=N,267µm,0.8s						
T1218				AML	AML		
	comp=E,321µm,0.4s						
T1212	Cascia, Frazio	0.11	277	P	Pg	07 15 27.0	+0.3
T1212				S	Sg	07 15 29.2	+0.4
T1212				AML	AML		
	comp=E,108µm,0.2s						
T1212				AML	AML		
	comp=N,171µm,0.1s						
T1245	Castelsantange	0.12	0	P	Pg	07 15 27.3	+0.3
T1245				S	Sg	07 15 29.6	+0.3
T1245				AML	AML		
	comp=E,416µm,0.7s						
T1245				AML	AML		
	comp=N,430µm,0.2s						
T1245				AML	AML		
	comp=E,416µm,1.3s						
MC2	Monte Cornacci	0.17	1	P	Pg	07 15 28.3	+0.5
MC2				S	Sg	07 15 31.4	+0.8
T1217	Poggiodomo (PG	0.19	262	P	Pg	07 15 28.5	+0.5
T1217				S	Sg	07 15 31.7	+0.8
MMO1	Montemonaco	0.19	33	P	Pg	07 15 28.3	+0.4
MMO1				S	Sg	07 15 31.8	+0.9
T1216	Preci, Frazion	0.20	321	P	Pg	07 15 28.3	+0.3
T1216				S	Sg	07 15 31.9	+0.9
T1216				AML	AML		
	comp=E,106µm,0.4s						
T1241	Roccafluvione,	0.21	57	P	Pg	07 15 28.7	+0.3
T1241				S	Sg	07 15 32.3	+0.8
T1241				AML	AML		
	comp=E,28500µm,1.6s						
T1241				AML	AML		
	comp=N,18000µm,1.6s						
T1241				AML	AML		
	comp=N,65µm,0.4s						
T1241				AML	AML		
	comp=E,56µm,1.3s						
RM33	Pellescritta (	0.23	175	P	Pg	07 15 28.9	+0.3
RM33				S	Sg	07 15 33.0	+1.0
RM33				AML	AML		
	comp=N,79µm,1.4s						
RM33				AML	AML		
	comp=E,127µm,1.7s						
T1215	Vallo di Nera,	0.24	285	P	Pg	07 15 29.2	+0.3
T1215				S	Sg	07 15 33.3	+1.0
T1256	Bolognola (MC)	0.27	6	S	Sb	07 15 36.5	+1.2
FDMO	Fiordimonte	0.31	346	P	Pb	07 15 31.0	-0.2
FDMO				S	Sg	07 15 35.1	+0.9
T1220	Camerino, Fraz	0.38	349	P	Pg	07 15 31.6	+0.3
T1220				S	Sb	07 15 37.7	-0.6

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*SOME **12** 07:16:42.7, 42°.47N×78°.38E, h10^{km}*
*NNC **12** 07:16:42.4±0.8, 42°.45N×78°.40E, h0^{km}, mb2.3, mpv2.8,*
Error ellipse: s-maj=5.8km s-min=2.7km az=168.0
*KRNET **12** 07:16:44.3±0.1, 41°.29N×77°.15E, h13^{km}, mb1.8*
ISC 12 07:16:40.1±1.4**, 42°.35N**±0°.04×**78°.43E**±0°.03**, h16**^{km}±10^{km}**,**
n35, σ1^{s}13/65**, 6C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.71	359	P	Pb	07 16 54.5	+0.2
	4.4nm,0.1s						
SATY				S	Sg	07 17 03.0	-0.5
	33nm,0.1s						
SATY	Saty	0.71	359	*e*P	Pb	07 16 54.5	+0.2
	4.4nm,0.1s						
SATY				*e*S	Sg	07 17 03.0	-0.5
	33nm,0.1s						
TARG	Taragay, Kyrgy	0.77	217	⇑*e*P	Pn	07 16 57.1	+0.4
	baz=48						
TARG				⇑*e*S	Sb	07 17 07.0	+1.2
	baz=48						
KDJ	Kajisay	0.95	257	⇓*e*P	Pn	07 17 00.6	+1.6
	baz=2.0						
KDJ				⇓*e*S	Sn	07 17 12.4	+0.1
	baz=2.0						
KPKS	Kokpek	1.14	10	P	Pb	07 17 01.8	+0.3
	5.1nm,0.1s						
KPKS				S	Sg	07 17 15.7	-1.1
	9.8nm,0.2s						
KPKS	Kokpek	1.14	10	*e*P	Pb	07 17 01.8	+0.3
	5.1nm,0.1s						
KPKS				*e*S	Sg	07 17 15.7	-1.1
	9.8nm,0.2s						
KURS	Kuram	1.16	351	P	Pn	07 17 02.6	+0.9
	0.7nm,0.1s						
KURS				S	Sb	07 17 17.2	+0.6
	3.5nm,0.2s						
KURS	Kuram	1.16	351	*e*P	Pn	07 17 02.6	+0.9
	0.7nm,0.1s						
KURS				*e*S	Sb	07 17 17.2	+0.6
	3.5nm,0.2s						
PDGK	Podgornoye	1.26	38	P	Pb	07 17 04.2	+0.7
	0.3nm,0.2s						
PDGK				S	Sb	07 17 19.7	+0.1
	1.9nm,0.3s						
PDGK	Podgornoye	1.26	38	⇓P	Pg	07 17 04.9	+0.6
	0.7nm,0.6s						
PDGK				⇑S	Sb	07 17 20.1	+0.6
	2.7nm,0.6s						
TNSS	Tian-Shan	1.29	303	P	Pg	07 17 05.3	+0.3
	1.2nm,0.1s						
TNSS				S	Sg	07 17 21.7	-0.2
	3.6nm,0.1s						
TNSS	Tian-Shan	1.29	303	*e*P	Pg	07 17 05.3	+0.3
	1.2nm,0.1s						
TNSS				*e*S	Sg	07 17 21.7	-0.2
	3.6nm,0.1s						
MDOK	Medeo	1.30	309	P	Pb	07 17 04.9	+0.6
	0.7nm,0.4s						
MDOK				Pg	Pg	07 17 05.0	-0.2
	1.3nm,0.2s						
MDOK				Lg	Lg	07 17 21.3	
	7.0nm,0.2s						
MDOK				⇑S	Sb	07 17 21.5	+0.6
	6.8nm,0.8s						
MDOK	Medeo	1.30	309	*e*P	Pg	07 17 05.0	-0.2
	1.3nm,0.2s						
MDOK				*e*S	Sb	07 17 21.2	+0.4
	7.0nm,0.2s						
IZV	Izvestkoviy	1.50	298	P	Pg	07 17 09.4	+0.3
	1.0nm,0.1s						
IZV				S	Sg	07 17 28.6	0.0
	10nm,0.2s						
IZV	Izvestkoviy	1.50	298	*e*P	Pg	07 17 09.4	+0.3
	1.0nm,0.1s						
IZV				*e*S	Sg	07 17 28.6	0.0
	10nm,0.2s						
ULHL	Ulahol	1.62	267	⇓*e*P	Pn	07 17 06.7	-1.6
	baz=25						
ULHL				⇓*e*S	Sn	07 17 23.5	-5.5
	baz=25						
MTBS	Maitube	1.67	299	P	Pg	07 17 12.0	-0.1
	1.8nm,0.1s						
MTBS				S	Sg	07 17 33.2	-0.6
	5.6nm,0.2s						
MTBS	Maitube	1.67	299	*e*P	Pg	07 17 12.0	-0.1
	1.8nm,0.1s						
MTBS				*e*S	Sg	07 17 33.2	-0.6
	5.6nm,0.2s						
BLB	Baldybastay	1.75	1	P	Pb	07 17 13.1	+1.2
	5.9nm,0.0s						
BLB				S	Sb	07 17 35.3	+1.5
	20nm,0.2s						
CHKK	Chushkaly	1.84	326	P	Pg	07 17 14.9	-0.5
	2.0nm,0.3s						
CHKK				S	Sg	07 17 38.3	-1.0
	14nm,0.2s						
CHKK	Chushkaly	1.84	326	⇓*i*P	Pg	07 17 14.9	-0.5
	2.0nm,0.3s						
CHKK				*e*S	Sg	07 17 38.3	-1.0
	14nm,0.2s						
BOOM	Boomskoye usch	1.85	275	⇑*e*P	Pn	07 17 12.8	+1.5
	baz=24						
BOOM				⇑*e*S	Sn	07 17 33.7	-0.7
	baz=24						
KTBS	Karatobe	1.87	317	P	Pg	07 17 15.7	-0.3
	2.9nm,0.2s						
KTBS				S	Sg	07 17 39.5	-0.8
	11nm,0.2s						
KTBS	Karatobe	1.87	317	*e*P	Pg	07 17 15.7	-0.3
	2.9nm,0.2s						
KTBS				*e*S	Sg	07 17 39.5	-0.8
	11nm,0.2s						
ARXS	Arharly	1.92	347	P	Pg	07 17 16.2	-0.7
	1.1nm,0.1s						
ARXS				S	Sb	07 17 40.6	+2.1
	5.9nm,0.1s						
ARXS	Arharly	1.92	347	*e*P	Pg	07 17 16.2	-0.7
	1.1nm,0.1s						
ARXS				*e*S	Sb	07 17 40.6	+2.1
	5.9nm,0.1s						
KST	Kastek	1.94	292	P	Pg	07 17 16.9	-0.5
	1.4nm,0.2s						
KST				S	Sg	07 17 41.7	-0.9
	7.0nm,0.5s						
KST	Kastek	1.94	292	*e*P	Pg	07 17 16.9	-0.5
	1.4nm,0.2s						
KST				*e*S	Sg	07 17 41.7	-0.9
	7.0nm,0.5s						
KUU	Kurty	2.17	316	Pg	Pb	07 17 20.6	+1.5
	0.9nm,0.1s						
KUU				Lg	Lg	07 17 48.0	
	5.7nm,0.1s						
KUU	Kurty	2.17	316	*e*Pg	Pb	07 17 20.6	+1.5
	0.9nm,0.1s						
KUU				*e*Lg	Lg	07 17 48.0	
	5.7nm,0.1s						
DJR	Jarkent	2.22	26	Pg	Pg	07 17 21.7	-0.9
	0.8nm,0.2s						
DJR				Lg	Lg	07 17 50.0	
	14nm,0.2s						
DJR	Jarkent	2.22	26	*e*Pg	Pg	07 17 21.7	-0.9
	0.8nm,0.2s						
DJR				*e*Lg	Lg	07 17 50.0	
	14nm,0.2s						
KRBS	Karabastau	2.43	305	Pg	Pg	07 17 25.5	-1.1
	1.0nm,0.5s						
KRBS				Lg	Lg	07 17 56.3	
	5.2nm,0.2s						
KRBS	Karabastau	2.43	305	*e*Pg	Pg	07 17 25.5	-1.1
	1.0nm,0.5s						
KRBS				*e*Lg	Lg	07 17 56.3	
	5.2nm,0.2s						

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*NEIC **12** 07:26:14.9, 39°.51S×75°.30W, h10^{km}*
*NEIC **12** 07:26:14.9±1.5, 39°.51S±0°.05×75°.30W±0°.08, h10^{km}±1^{km}, mb4.5/14, Mwr4.0/25, ML4.1(GUC), Error ellipse: s-maj=10.8km s-min=8.2km az=267.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.13; $M_{\theta\theta}$-0.05; $M_{\phi\phi}$1.18; $M_{r\theta}$0.46; $M_{\theta\phi}$0.82; $M_{\phi r}$-0.06; Fault plane solution: $M_0$1.49000×10^{15} NP1:ϕ_s229.94000°, δ53.55000°, λ-56.87000°. NP2:ϕ_s2.25000°, δ47.65000°, λ-126.50000°. Principal axes: T 1.5986, Plg3.0000°, Azm297.0000°; N -0.2435, Plg26.0000°, Azm29.0000°; P -1.3550, Plg64.0000°, Azm201.0000°;*
*VAO **12** 07:26:16.9±0.5, 39°.60S×75°.39W, h10^{km}, mb4.4*
*SJA **12** 07:26:16.1±2.2, 39°.74S×74°.99W, h10^{km}, ML3.3, MW3.6, Hypocentre not reviewed by the ISC*
*GUC **12** 07:26:17.1±0.6, 39°.58S×75°.24W, h28^{km}±5^{km}, ML4.1*
*IDC **12** 07:26:20.8±3.7, 39°.61S×75°.17W, h49^{km}±33^{km}, mb3.8/10, mbtmp4.1/12, ML4.5/2, MS3.3/7, Error ellipse: s-maj=28.0km s-min=19.0km az=81.0*
ISC 12 07:26:15.1±1.6**, 39°.54S**±0°.05×**75°.28W**±0°.06**, h10**^{km}±9^{km}**,**
n123, σ1^{s}52/130**, mb4.3**/16**, MS3.5**/4**, 3C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LR04	Corral	1.47	104	Pn	Pn	07 26 41.1	-0.6
LR04				Sn	Sn	07 26 59.4	-1.7
LR04	Corral	1.47	104	*e*P	Pn	07 26 40.9	-0.8
BI04	Isla Mocha	1.56	45	⇑*i*P	Pn	07 26 42.3	-0.6
BI04				*i* S	Sn	07 27 02.3	-1.0
BI04				IAML		07 27 03.7	
	comp=N,2µm,0.4s						
LR02	Universidad Au	1.59	100	*e*P	Pn	07 26 43.0	-0.3
LC02	Puerto Saavedr	1.65	64		Pn	07 26 43.9	-0.2
LC02				Sn	Sb	07 27 05.2	-1.3
LC02	Puerto Saavedr	1.65	64	*e*P	Pn	07 26 44.0	-0.2
LC02				*i* S	Sn	07 27 04.6	-0.9
LR03	Panguipulli	2.27	93		Pn	07 26 53.4	+0.7
LR03	Panguipulli	2.27	93	*e*P	Pn	07 26 53.2	+0.5
LR03				*i* S	Sn	07 27 20.3	-0.4
LL05	Los Muermos	2.32	144		Pn	07 26 52.9	-0.5
LL05	Los Muermos	2.32	144	⇑*i*P	Pn	07 26 53.0	-0.5
LL05				*i* S	Sn	07 27 18.4	-3.7
LL05				IAML		07 27 21.9	
	comp=N,1µm,0.3s						
LL04	Puerto Octay	2.59	123		Pn	07 26 57.3	+0.2
LL04	Puerto Octay	2.59	123	*e*P	Pn	07 26 57.3	+0.2
LL04				*i* S	Sn	07 27 26.8	-1.9
LL04				IAML		07 27 29.4	
	comp=N,2µm,0.4s						
LL03	Petrohue	2.72	127		Pn	07 26 59.0	+0.1
LL03	Petrohue	2.72	127	*e*P	Pn	07 26 58.9	+0.1
GO06	Curarrehue	2.94	92	Pn	Pn	07 27 03.0	+0.9
GO06	Curarrehue	2.94	92	*e*P	Pn	07 27 03.0	+0.9
GO06				*i* S	Sn	07 27 36.8	-0.8
GO06				IAML		07 27 39.9	
	comp=N,273nm,0.2s						
LL06	Loncomilla	2.96	155	Pn	Pn	07 27 01.9	-0.3
LL06	Loncomilla	2.96	155	*e*P	Pn	07 27 01.7	-0.4
LL06				*i* S	Sn	07 27 32.9	-4.8
LL06				IAML		07 27 38.1	
	comp=E,1µm,0.4s						
BI05	Punta Hualpn	3.23	31	Pn	Pn	07 27 04.8	-1.2
LL07	Hotel Espejo d	3.56	158	Pn	Pn	07 27 11.5	+1.0
GO07	Milladeo Hill,	3.78	162		Pn	07 27 13.7	+0.3
GO07	Milladeo Hill,	3.78	162	*i* P		07 27 13.1	
GO07				*e*S		07 27 55.6	
PLCA	Paso Flores	3.82	110	P	Pn	07 27 15.2	+1.2
	comp=E,11nm,0.3s,baz=284,slow=14,SNR=139						
PLCA				S	Sn	07 27 59.3	+0.2
	comp=E,38nm,0.6s,baz=66,slow=7.8,SNR=3.4						
PLCA				LR	LR	07 28 26.0	
	comp=E,205nm,21.5s,baz=231,slow=34						
	comp=E,38nm,0.4s						
PLCA	Paso Flores	3.82	110	*e*P	Pn	07 27 15.2	+1.2
PLCA	Paso Flores	3.82	110	*i* P		07 27 15.1	
PLCA				IAML		07 28 15.7	
	comp=Z,58nm,0.7s						
LL02	Futaleuf	4.47	146		Pn	07 27 23.4	+0.4
GO05	Huala	5.25	32		Pn	07 27 33.1	-0.5
GO05	Huala	5.25	32	⇑*e*		07 26 04.4	
GO05				*i* P		07 27 32.4	
GO05				*e*S		07 28 31.2	
AY01	Puyuhuapi	5.26	159	Pn	Pn	07 27 34.7	+0.9
BO02	Sierra Bellavi	5.94	39		Pn	07 27 42.4	-0.9
BO01	Tunca	6.13	34	Pn	Pn	07 27 44.8	-1.1
H03S1	Juan Fernandez	6.38	332	T	T	07 34 26.9	
	baz=155,slow=72,SNR=16						
H03S2	Juan Fernandez	6.40	332	T	T	07 34 26.4	
	baz=155,slow=72,SNR=14						
H03S3	Juan Fernandez	6.40	332	T	T	07 34 24.3	
	baz=155,slow=72,SNR=16						
MT01	Popeta	6.52	31		Pn	07 27 49.5	-1.6
VA04	Juan Fernndez	6.54	333		Pn	07 27 50.0	-1.4
VA05	Santo Domingo	6.57	28	Pn	Pn	07 27 50.2	-1.6
MT09	Talagante	6.70	32	Pn	Pn	07 27 52.3	-1.5
LMEL	Las Melosas	6.99	37		Pn	07 27 57.4	-0.3
MT02	Curacav	7.10	29		Pn	07 27 57.2	-1.9
AY02	Valle Explorad	7.11	168		Pn	07 28 00.7	+1.5
MT03	Universidad Ad	7.15	34		Pn	07 27 58.4	-1.4
PEL	Peldehue	7.38	32		Pn	07 28 01.5	-1.5
ROC1	El Roble	7.40	29		Pn	07 28 02.1	-1.3
MT08	Bocatoma Ro	7.41	37		Pn	07 28 02.8	-0.8
VA06	Catapilco	7.67	26	Pn	Pn	07 28 05.2	-1.7
VA03	San Esteban	7.76	31		Pn	07 28 07.1	-1.2
CO02	Combarbal	9.02	24		Pn	07 28 23.8	-1.7
GO08	Villa O'Higgin	9.14	169		Pn	07 28 29.0	+2.0
CO06	Fray Jorge	9.33	20	Pn	Pn	07 28 27.4	-2.3
CO03	El Pedregal	9.45	25		Pn	07 28 30.6	-0.8
CFA	Coronel Fontan	9.77	38	P	Pn	07 28 32.9	-2.9
	comp=Z,1.6nm,0.3s,baz=262,slow=7.9,SNR=21						
CFA				S	Sn	07 30 21.6	-4.0
	comp=Z,3.8nm,0.5s,baz=114,slow=21,SNR=7.0						
CFA				LR	LR	07 32 40.7	
	comp=Z,82nm,18.8s,baz=96,slow=39						
GO04	Tololo Observa	10.04	23	Pn	Pn	07 28 38.4	-1.2
CO01	Juntas del Tor	10.44	26	Pn	Pn	07 28 44.7	-0.5
TRQA	Tornquist	10.49	86	Pn	Pn	07 28 46.6	+1.0
AC05	El Transito	11.45	23		Pn	07 28 57.6	-1.1
MECA	Mercedes	17.39	59	*e*P	P	07 30 20.2	+1.0
PLTB	Pedras Altas	19.22	73	P	Pn	07 30 39.4	-0.9
PLTB				IAmb	IAmb	07 30 40.8	
	comp=Z,12nm,0.9s						
PLTB	Pedras Altas	19.22	73	*e*P	Pn	07 30 40.5	+0.2
CPUP	Villa Florida	19.96	54	P	Pn	07 30 48.3	-0.8
	comp=Z,0.3nm,0.3s,baz=238,slow=11,SNR=12						
CPUP				LR	LR	07 38 18.5	
	comp=Z,49nm,18.9s,baz=224,slow=36						
	comp=Z,3.2nm,0.7s						
CPUP	Villa Florida	19.96	54		P	07 30 46.8	-0.7
CPUP	Villa Florida	19.96	54	*e*P	Pn	07 30 49.9	+0.7
PB08	IPOC Station P	20.04	17	P	P	07 30 45.7	-3.0
CPSB	Cacapava Do Su	20.04	70	*e*P	Pn	07 30 50.4	+0.3
MNMC	Minye Minye	20.92	15	P	P	07 30 57.1	-1.1
MNMC				IAmb	IAmb	07 31 01.8	
	comp=Z,17nm,0.7s						
ALGR	Alto Alegre (B	21.25	67	*e*P	P	07 31 03.7	+2.2
CRSM	Crissiumal (Br	21.34	62	*e*P	P	07 31 04.0	+1.6
PB16	IPOC Station P	21.71	15	P	P	07 31 06.8	-0.2
PB16				IAmb	IAmb	07 31 11.3	
	comp=Z,22nm,1.2s						
ITAB	Concordia	22.82	64	P	P	07 31 17.6	-0.7
ITAB				IAmb	IAmb	07 31 23.1	
	comp=Z,17nm,0.9s						
ITAB	Concordia	22.82	64	*e*P	P	07 31 19.7	+1.4
FRBT	Francisco Belt	22.99	61	*e*P	P	07 31 21.5	+1.4
MURT	Porto Murtinho	23.35	45	*e*P	P	07 31 25.0	+1.2
MCR1	Marechal Candi	23.38	56	*e*P	P	07 31 26.6	+2.6
AMBA	Amambai (Brazi	23.89	52	*e*P	P	07 31 29.8	+0.7
LPAZ	La Paz	23.99	17	P	P	07 31 32.3	+1.7
	comp=Z,1.2nm,0.7s,baz=188,slow=12,SNR=4.7						
	comp=Z,1.2nm,0.7s						
LPAZ	La Paz	23.99	17	P	P	07 31 29.3	-1.3
PTGB	Pitanga	24.50	60	*e*P	P	07 31 36.1	+1.4
AQDB	Aquidauana	25.36	47	P	P	07 31 41.6	-0.9
AQDB				IAmb	IAmb	07 31 47.0	
	comp=Z,11nm,1.3s						
AQDB	Aquidauana	25.36	47	*e*P	P	07 31 44.2	+1.7
PMSA	Palmer Station	26.12	169	P	P	07 31 47.8	-1.1
TIJ01	Guaruva-PR	26.20	65	*e*P	P	07 31 52.9	+2.7
SIV	San Ignacio	26.54	32	P	P	07 31 52.8	-0.4
	comp=Z,2.0nm,0.8s,baz=209,slow=9.4,SNR=5.5						
	comp=Z,2.0nm,0.8s						
RVDE	Rio Verde (Bra	26.95	47	*e*P	P	07 31 59.1	+2.2
FRTB	Fartura	27.11	61	*e*P	P	07 32 01.2	+3.0
PCMB	Pacaembu	27.20	56	*e*P	P	07 32 00.4	+1.3
NNA	Nana	27.47	357	LR	LR	07 40 53.5	
	comp=Z,30nm,18.2s,baz=187,slow=32						
PTLB	Pontes e Lacer	27.85	35	*e*P	P	07 32 06.4	+1.5
SALV	Santo Antonio	29.11	42	*e*P	P	07 32 17.6	+1.5
VAO	Valinhos	29.11	64	*e*P	P	07 32 20.0	+3.7
BB19B	Bebedouro	29.37	59	*e*P	P	07 32 19.6	+1.2
PARB	Paraibuna	29.84	66	*e*P	P	07 32 25.1	+2.5

ETMB	Extrema	30.68	18	*e*P	P	07 32 31.8	+1.8
RPN	Rapa Nui	30.84	283	LR	LR	07 41 05.2	
	comp=Z,103nm,19.4s,baz=87,slow=29						
ARAG	Araguaiana, MT	31.38	47	*e*P	P	07 32 37.4	+1.2
CZSB	Cruzeiro do Su	31.75	5	P	P	07 32 39.2	-0.3
CZSB				IAmb	IAmb	07 32 41.4	
	comp=Z,8.6nm,0.7s						
CZSB	Cruzeiro do Su	31.75	5	*e*P	P	07 32 41.2	+1.7
IPMB	Ipameri, GO	31.80	55	*e*P	P	07 32 43.0	+3.1
PDRB	Porto dos Gac	32.31	36	*e*P	P	07 32 45.4	+1.0
SAML	Samuel	32.32	23	*e*P	P	07 32 47.3	+2.8
PMNB	Patos De Minas	32.54	58	*e*P	P	07 32 47.7	+1.2
BDFB	Brasilia	33.68	53	P	P	07 32 56.7	+0.2
	comp=Z,1.8nm,0.7s,baz=312,slow=5.5,SNR=3.3						
	comp=Z,1.8nm,0.7s						
TBTG	Tabatinga, AM	35.52	9	P	P	07 33 11.5	-0.8
SJMB	Sao Joao De Ma	35.99	65	*e*P	P	07 33 19.2	+2.8
JANB	Januaria	36.46	57	*e*P	P	07 33 24.2	+3.7
ITTB	Itaituba	39.23	32	*e*P	P	07 33 44.7	+1.0
SMTB	Santa Maria do	39.31	46	*e*P	P	07 33 45.5	+1.0
RUSC	La Rusia	45.25	3	P	P	07 34 32.4	-0.9
SNAA	Sanae	47.53	156	P	P	07 34 50.4	+0.2
SNAA				IAmb	IAmb	07 35 00.8	
	comp=Z,9.1nm,1.0s						
SDV	Santo Domingo	48.37	6	P	P	07 34 56.1	-1.3
SDV				IAmb	IAmb	07 34 58.2	
	comp=Z,3.7nm,0.8s						
SDV	Santo Domingo	48.37	6	*e*P	P	07 34 58.1	+0.7
QSPA	South Pole Qui	50.71	180	P	P	07 35 14.5	-0.2
	comp=Z,2.5nm,1.1s,baz=303,slow=1.0,SNR=7.4						
	comp=Z,2.5nm,1.1s						
TXAR	Lajitas Array	73.44	334	P	P	07 37 48.9	+1.3
	comp=Z,1.1nm,0.6s,baz=153,slow=7.5,SNR=7.2						
	comp=Z,1.1nm,0.6s						
BOSA	Boshof	79.76	119	P	P	07 38 23.6	-0.2
	comp=Z,4.4nm,0.9s,baz=267,slow=4.7,SNR=3.8						
BOSA				LR	LR	08 08 39.2	
	comp=Z,28nm,20.8s,baz=188,slow=32						
	comp=Z,4.4nm,0.9s						
LBTB	Lobatse	82.29	116	LR	LR	08 14 44.1	
	comp=Z,31nm,18.1s,baz=176,slow=35						
NVAR	Mina Array Bea	87.04	328	P	P	07 39 02.7	+1.9
	comp=Z,0.9nm,0.9s,baz=166,slow=4.8,SNR=5.8						
	comp=Z,0.9nm,0.9s						
PDAR	Pinedale Array	87.61	335	P	P	07 39 04.5	+1.0
	comp=Z,1.1nm,0.8s,baz=163,slow=5.6,SNR=7.0						
	comp=Z,1.1nm,0.8s						
TORD	Torodi Ar. Bea	88.48	72	P	P	07 39 08.0	0.0
	comp=Z,0.3nm,0.6s,baz=224,slow=4.0,SNR=2.3						
	comp=Z,0.3nm,0.6s						
ULM	Lac du Bonnet	91.22	347	P	P	07 39 19.1	-0.9
	comp=Z,1.9nm,0.7s,baz=142,slow=3.9,SNR=4.4						
	comp=Z,1.9nm,0.7s						
WRA	Warramunga Arr	114.67	211	PKP	PKiKP	07 44 54.3	-1.9
	comp=Z,1.0nm,1.2s,baz=163,slow=1.5,SNR=3.0						
GERES	GERESS Array B	117.83	48	PKP	PKiKP	07 45 01.6	+0.3
	comp=Z,0.7nm,0.7s,baz=180,slow=2.4,SNR=6.2						
BRTR	Keskin Array B	126.65	65	PKP	PKPdf	07 45 17.5	-1.2
	comp=Z,0.7nm,0.7s,baz=294,slow=1.4,SNR=4.3						
AKASG	Malin Array Be	127.77	51	PKP	PKPdf	07 45 18.8	-1.4
	comp=Z,0.3nm,0.3s,baz=264,slow=2.2,SNR=5.5						
MJAR	Matsushiro Arr	153.54	274	PKPab	PKPab	07 46 26.4	+0.1
	comp=Z,0.8nm,0.7s,baz=128,slow=4.2,SNR=2.3						
ZALV	Zalesovo Beam	160.26	37	PKP	PKPdf	07 46 14.2	+0.1
	comp=Z,0.3nm,0.2s,baz=179,slow=5.8,SNR=2.4						
ZALV				PKPab	pPKPab	07 46 55.6	-0.8
	comp=Z,1.4nm,0.6s,baz=289,slow=4.4,SNR=6.1						
MKAR	Makanchi Array	162.14	59	PKP	PKPdf	07 46 16.0	-0.4
	comp=Z,0.5nm,0.8s,baz=327,slow=1.4,SNR=4.7						
MKAR				PKPab	PKPab	07 47 03.6	+0.4
	comp=Z,0.4nm,0.8s,baz=276,slow=2.8,SNR=3.0						
SONM	Songino Array	171.62	352	PKP	PKPdf	07 46 22.9	-0.7
	comp=Z,0.5nm,0.8s,baz=31,slow=0.8,SNR=3.2						
SONM				PKPab	PKPab	07 47 44.5	-0.5
	comp=Z,0.4nm,0.8s,baz=48,slow=2.1,SNR=2.9						

ROM 12 07:59:19.5±0.1**, 42°.797N**±0°.004×**13°.200E**±0°.006**, h10^{km}, ML1.6**/3**, 1C-1D, Error ellipse: s-maj=0.5km s-min=0.3km az=333.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	Arquata del Tr	0.04	170	P	Pg	07 59 21.4	-0.1
T1214				S	Sg	07 59 22.3	-0.7
T1214				AML	AML		
	comp=N,1215μm,0.2s						
T1214				AML	AML		
	comp=E,670μm,0.2s						
T1214				AML	AML		
	comp=N,1155μm,0.2s						
T1214				AML	AML		
	comp=E,724μm,0.2s						
T1245	Castelsantange	0.06	352	P	Pg	07 59 21.9	+0.1
T1245				S	Sg	07 59 23.2	-0.2
T1245				AML	AML		
	comp=E,738μm,0.4s						
T1245				AML	AML		
	comp=N,929μm,0.9s						
T1245				AML	AML		
	comp=N,929μm,0.8s						
T1245				AML	AML		
	comp=E,680μm,1.0s						
T1245				AML	AML		
	comp=N,929μm,1.2s						
T1245				AML	AML		
	comp=N,760μm,0.3s						
MC2	Monte Cornacci	0.12	357	P	Pg	07 59 22.1	-0.4
MC2				S	Sg	07 59 25.7	+1.0
T1212	Cascia, Frazio	0.12	249	P	Pg	07 59 23.0	+0.5
T1212				S	Sg	07 59 25.3	+0.8
MMO1	Montemonaco	0.14	42	P	Pg	07 59 23.3	+0.6
MMO1				S	Sg	07 59 25.9	+0.9
T1218	Civita (PG)	0.14	206	P	Pg	07 59 23.3	+0.5
T1218				S	Sg	07 59 26.0	+1.0
T1241	Roccafluvione,	0.18	71	P	Pg	07 59 24.3	+0.9
T1241				S	Sg	07 59 27.4	+1.4
T1217	Poggiodomo (PG	0.21	247	P	Pg	07 59 24.8	+0.8
T1217				S	Sg	07 59 28.6	+1.5
T1215	Vallo di Nera,	0.24	271	P	Pg	07 59 25.3	+0.8
T1215				S	Sg	07 59 29.3	+1.4
FDMO	Fiordimonte	0.25	341	⇓P	Pb	07 59 25.6	-0.6
CSP1	Cessapalombo	0.29	1	P	Pg	07 59 26.1	+0.6
T1219	Muccia, Frazio	0.29	331	⇑P	Pb	07 59 26.3	-0.6
T1220	Camerino, Fraz	0.32	346	P	Pg	07 59 26.0	0.0
TERO	Teramo	0.34	120	P	Pg	07 59 26.7	+0.4
TERO				S	Sb	07 59 32.2	-1.1

ROM 12 08:00:10.9±0.0**, 43°.019N**±0°.002×**13°.113E**±0°.003**, h9^{km}, ML1.5**/6**, 1D, Error ellipse: s-maj=0.2km s-min=0.1km az=63.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	Muccia, Frazio	0.09	296	P	Pg	08 00 13.6	+0.3
T1219				S	Sg	08 00 15.3	+0.4
T1219				AML	AML		
	comp=E,348μm,0.1s						
T1219				AML	AML		
	comp=N,888μm,0.2s						
T1219				AML	AML		
	comp=E,326μm,0.3s						
T1219				AML	AML		
	comp=N,884μm,0.2s						
T1219				AML	AML		
	comp=N,888μm,0.2s						
T1219				AML	AML		
	comp=E,326μm,0.3s						
T1219				AML	AML		
	comp=E,348μm,0.1s						
T1220	Camerino, Fraz	0.09	349	P	Pg	08 00 13.7	+0.4
T1220				S	Sg	08 00 15.7	+0.7
T1220				AML	AML		
	comp=E,1765μm,1.2s						
T1220				AML	AML		
	comp=E,1760μm,1.2s						
T1220				AML	AML		
	comp=N,2090μm,0.2s						
T1220				AML	AML		
	comp=E,1760μm,0.8s						
CSP1	Cessapalombo	0.10	43	P	Pg	08 00 13.8	+0.3
CSP1				S	Sg	08 00 15.8	+0.4
CSP1				AML	AML		
	comp=E,294μm,0.8s						
CSP1				AML	AML		
	comp=N,494μm,1.3s						
CSP1				AML	AML		
	comp=E,294μm,0.8s						
CSP1				AML	AML		
	comp=N,495μm,1.3s						
CSP1				AML	AML		
	comp=N,495μm,0.7s						
MC2	Monte Cornacci	0.12	152	P	Pg	08 00 14.2	+0.4
MC2				S	Sg	08 00 16.3	+0.4
T1216	Preci, Frazion	0.14	208	P	Pg	08 00 14.7	+0.7
T1216				S	Sg	08 00 17.4	+1.1
T1216				AML	AML		
	comp=E,260μm,1.0s						
T1216				AML	AML		
	comp=N,214μm,1.0s						
T1216				AML	AML		
	comp=N,214μm,1.0s						
T1216				AML	AML		
	comp=E,260μm,1.0s						
T1245	Castelsantange	0.17	161	P	Pg	08 00 15.2	+0.6
T1245				S	Sg	08 00 18.4	+1.2
T1245				AML	AML		
	comp=E,172μm,1.5s						
T1245				AML	AML		
	comp=N,194μm,0.9s						
T1245				AML	AML		
	comp=E,172μm,1.5s						
T1245				AML	AML		
	comp=E,172μm,0.5s						
T1245				AML	AML		
	comp=N,194μm,1.1s						
MMO1	Montemonaco	0.20	127	P	Pg	08 00 15.5	+0.5
MMO1				S	Sg	08 00 19.0	+1.2
SNTG	Esanatoglia	0.27	332	⇓P	Pg	08 00 16.9	+0.7
T1214	Arquata del Tr	0.27	165	P	Pg	08 00 17.0	+0.7
T1215	Vallo di Nera,	0.28	220	P	Pg	08 00 17.3	+0.7
T1215				S	Sb	08 00 22.0	-1.0
T1241	Roccafluvione,	0.28	125	P	Pb	08 00 17.5	-0.7
T1241				S	Sb	08 00 22.3	-0.8
EL6	Elcito	0.31	358	P	Pg	08 00 17.8	+0.7
EL6				S	Sb	08 00 23.1	-0.8
ASSB	Assisi San Ben	0.33	274	P	Pg	08 00 18.2	+0.7
ASSB				S	Sb	08 00 23.8	-0.7
ASSB				AML	AML		
	comp=E,81μm,1.6s						
ASSB				AML	AML		
	comp=N,134μm,0.2s						
MOMA	Monte Martano	0.45	242	AML	AML		
	comp=E,40μm,0.1s						
MOMA				AML	AML		
	comp=N,44μm,0.2s						

NOU ***12*** *08:16:03.7, 42°.04S×174°.54E, h13^{km}, MLv4.0/10, Off E. Coast of S. Island, N.Z.*
WEL ***12*** *08:16:04.9±0.5, 42°S±3°×17°4E±°, h11^{km}±4^{km}, M3.2/14, ML3.5/15, MLv3.2/14, Error ellipse: s-maj=0.0km s-min=0.0km az=152.8, confirmed*
ISC 12 08:16:04.0±1.1**, 41°.92S**±0°.03×**174°.33E**±0°.03**, h10^{km}**±8^{km}**, n89, σ1^{s}22**/100**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.19	332	P	Pg	08 16 08.1	+0.2
CMWZ				S	Sg	08 16 11.5	+0.9
BSWZ	Blackbirch Sta	0.39	300	P	Pg	08 16 10.8	-0.9
TUWZ	Tuamarina	0.57	329	P	Pg	08 16 14.2	-0.7
TUWZ				S	Sg	08 16 21.4	-1.0
SNZO	South Karori	0.67	25	P	Pb	08 16 17.9	+0.2
TCW	Tory Channel	0.71	357	P	Pg	08 16 17.1	-0.4
WEL	Wellington	0.71	28	P	Pb	08 16 18.7	+0.2
WEL				S	Sn	08 16 31.3	+0.2
KHZ	Kahutara	0.77	229	P	Pb	08 16 20.4	+0.9
KHZ	Kahutara	0.77	229	P	Pb	08 16 20.1	+0.6
KHZ				S	Sn	08 16 32.0	-0.7
PLWZ	Palliser	0.77	64	P	Pn	08 16 20.9	-0.1
PLWZ				S	Sn	08 16 34.3	+1.6
CAW	Cannon Point	0.98	35	P	Pb	08 16 23.4	+0.4
CAW				S	Sn	08 16 38.1	+0.4
NNZ	Nelson	1.00	314	P	Pb	08 16 21.6	-1.7
NNZ				S	Sb	08 16 35.9	-0.6
THZ	Tophouse	1.07	278	P	Pb	08 16 23.7	-1.1
KIW	Kapiti Island	1.14	23	P	Pb	08 16 25.7	-0.1
KIW				S	Sg	08 16 41.6	+0.9
TRWZ	Traveller	1.14	64	P	Pb	08 16 25.6	-0.2
DUWZ	D’Urville Isla	1.15	344	P	Pn	08 16 24.7	-1.5
DUWZ				S	Sb	08 16 40.9	-0.2
MTW	Mount Morrison	1.16	50	P	Pb	08 16 25.9	-0.3
MTW				S	Sn	08 16 42.3	+0.1
OGWZ	Otaki Gorge	1.27	30	P	Pn	08 16 27.6	-0.2
MRNZ	Matariki Terra	1.29	293	P	Pn	08 16 27.3	-0.7
MRNZ				S	Sb	08 16 44.3	-0.6
HOWZ	Holdsworth Sta	1.35	42	P	Pn	08 16 28.4	-0.5
TKNZ	Takaka Hill	1.35	310	P	Pn	08 16 28.0	-1.0
GVZ	Greta Valley S	1.42	222	P	Pn	08 16 29.7	-0.3
TMWZ	Te Maipa	1.42	56	P	Pn	08 16 29.4	-0.6
MRZ	Mangatainoka R	1.57	37	P	Pn	08 16 31.4	-0.5
TIWZ	Tintock	1.63	46	P	Pn	08 16 32.3	-0.5
QRZ	Quartz Range	1.74	308	P	Pn	08 16 34.8	+0.6
QRZ	Quartz Range	1.74	308	P	Pn	08 16 34.1	-0.1
LTZ	Lake Taylor	1.75	240	P	Pn	08 16 34.0	-0.5
AMCZ	Amberley	1.77	224	P	Pg	08 16 40.4	+2.5
PRWZ	Pori Road	1.84	43	P	Pn	08 16 34.9	-0.8
POWZ	Post Office Ro	1.87	36	P	Pn	08 16 35.4	-0.7
DSZ	Denniston Nort	1.90	274	P	Pn	08 16 36.9	+0.4
BFZ	Birch Farm	1.90	50	P	Pn	08 16 35.5	-1.0
BFZ	Birch Farm	1.90	50	P	Pn	08 16 35.3	-1.2
DVHZ	Dannevirke	2.13	41	P	Pn	08 16 38.3	-1.4
MQZ	McQueen’s Vall	2.17	214	P	Pn	08 16 38.5	-1.7
OXZ	Oxford	2.20	229	P	Pn	08 16 37.7	-2.9
WAZ	Wanganui	2.21	13	P	Pn	08 16 42.1	+1.3
TSZ	Takapari Road	2.23	34	P	Pn	08 16 40.1	-0.9
INZ	Inchbonnie	2.29	248	P	Pn	08 16 41.4	-0.4
PRHZ	Porangahau	2.40	47	P	Pn	08 16 42.0	-1.3
WPHZ	Waipukurau	2.44	42	P	Pn	08 16 42.8	-1.1
PNHZ	Pukenui	2.45	36	P	Pn	08 16 43.0	-1.1
LREZ	Lake Rotokare	2.45	1	P	Pn	08 16 45.9	+1.8
NMEZ	Namu Road	2.52	352	P	Pb	08 16 48.4	-0.9
MHCZ	Mount Hutt	2.60	231	P	Pn	08 16 45.0	-1.2
KHEZ	Kahui Hut	2.63	355	P	Pb	08 16 49.6	-1.6
KHEZ	Kahui Hut	2.63	355	P	Pn	08 16 49.0	+2.5
NEZ	North Egmont	2.65	356	P	Pn	08 16 49.4	+2.5
NBEZ	Newall Road No	2.67	352	P	Pn	08 16 49.0	+2.0
MTVZ	Mangateitei	2.67	19	P	Pn	08 16 49.2	+2.0
DREZ	Durham Road	2.73	358	P	Pn	08 16 49.9	+2.1
MOVZ	Moawhango	2.73	24	P	Pn	08 16 48.3	+0.3
PKE	Pukeiti	2.73	354	P	Pn	08 16 49.5	+1.6
PKVZ	Pokaka	2.73	17	P	Pb	08 16 52.0	-1.0
BHHZ	Black Hill Sta	2.76	29	P	Pn	08 16 47.7	-0.6
WNVZ	Wahianoa	2.76	21	P	Pn	08 16 48.8	+0.4
TRVZ	Turoa	2.77	20	P	Pn	08 16 49.9	+1.2
VRZ	Vera Road	2.81	7	P	Pn	08 16 50.0	+1.1
TUVZ	Tukino	2.83	21	P	Pn	08 16 50.5	+1.1
KAHZ	Kahuranaki	2.87	43	P	Pn	08 16 48.3	-1.5
WVZ	Waitaha Valley	2.90	245	P	Pn	08 16 51.3	+1.1
NGZ	Ngauruhoe	2.90	20	P	Pn	08 16 51.1	+0.7
SNVZ	South Ngauruho	2.90	21	P	Pn	08 16 52.3	+1.8
OTVZ	Oturere	2.93	21	P	Pn	08 16 51.1	+0.3
NNVZ	North Ngauruho	2.95	20	P	Pn	08 16 51.6	+0.6
KWHZ	Kaweka Forest	2.95	33	P	Pn	08 16 49.7	-1.3
WTVZ	West Tongariro	2.96	19	P	Pn	08 16 53.5	+2.4
ETVZ	East Tongariro	2.97	21	P	Pn	08 16 52.0	+0.7
TMVZ	Te Maari	2.99	21	P	Pb	08 16 56.1	-1.3
KRVZ	Karewarewa	2.99	20	P	Pn	08 16 52.5	+0.9
NTVZ	North Tongarir	3.00	20	P	Pn	08 16 51.9	+0.3
RPZ	Rata Peaks	3.01	232	P	Pn	08 16 51.3	-0.4
RPZ	Rata Peaks	3.01	232	P	Pn	08 16 50.8	-0.9
ARCZ	Arundel	3.08	228	P	Pn	08 16 51.8	-0.9
RITZ	Rihia Road	3.16	22	P	Pb	08 17 00.0	-0.2
BKZ	Black Stump Fm	3.20	32	P	Pn	08 16 53.0	-1.5
BKZ	Black Stump Fm	3.20	32	P	Pn	08 16 53.0	-1.5
RATZ	Rangitukua	3.24	20	P	Pb	08 17 00.6	-1.0
GCSZ	Gaunt Creek Bo	3.27	243	P	Pn	08 16 56.7	+1.4
HIZ	Hauiti	3.42	7	P	Pn	08 16 58.6	+1.2
HIZ	Hauiti	3.42	7	P	Pn	08 16 58.4	+1.0
TMZ	Timaru	3.46	223	P	Pn	08 16 57.5	-0.5
ODZ	Otahua Downs	4.12	219	P	Pn	08 17 06.2	-0.8
ODZ	Otahua Downs	4.12	219	P	Pn	08 17 05.5	-1.5
JCZ	Jackson Bay	4.60	240	P	Pn	08 17 14.8	+1.1
JCZ	Jackson Bay	4.60	240	P	Pn	08 17 14.0	+0.3
AWAZ	Awhitu Peninsu	4.85	3	P	Pn	08 17 19.2	+2.1
ETAZ	East Tamaki Re	4.98	6	P	Pn	08 17 20.8	+2.0
RVAZ	Riverhead Bore	5.14	2	P	Pn	08 17 24.2	+3.2

FUNV ***12*** *08:31:36.6, 8°.33N×72°.15W, h6^{km}, MW2.7*
RSNC ***12*** *08:31:39.3±0.8, 7°.47N×72°.01W, h0^{km}±7^{km}, ML2.0*
ISC 12 08:31:36.3±1.3**, 7°.59N**±0°.06×**71°.95W**±0°.03**, h33^{km}**±10^{km}**, n10, σ1^{s}51**/18**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	0.46	308	⇓*e*P	Pn	08 31 46.8	0.0
CAPV				*e*S	Sn	08 31 53.3	-0.6
PAMC	Pamplona, Colo	0.78	252	*e*P	Pn	08 31 51.1	-0.5
PAMC				*e*S	Sb	08 32 01.1	-1.3
PAMC				*i*		08 32 01.5	
	comp=Z,45nm,0.2s						
TAMC	Tame, Arauca	1.15	172	*e*P	Pb	08 31 57.9	+0.1
TAMC				*e*S	Sb	08 32 13.1	+0.6
TAMC				*i*		08 32 14.9	
	comp=Z,39nm,0.1s						
SOCV	Socops	1.28	57	*e*P	Pn	08 31 58.5	+0.4
SOCV				*e*S	Sb	08 32 18.6	+2.3
BARC	Barichara	1.57	231	*e*P	Pb	08 32 05.3	+0.3
BARC				*e*S	Sb	08 32 25.0	+0.4
BARC				*i*		08 32 28.8	
	comp=Z,28nm,0.3s						
BRRC	Barranca, Sant	1.81	255	*e*P	Pb	08 32 09.1	+0.2
BRRC				*e*S	Sb	08 32 33.0	+1.7
BRRC				*i*		08 32 33.6	
	comp=Z,11nm,0.3s						
RUSC	La Rusia	2.02	214	*e*P	Pb	08 32 11.9	-0.9
RUSC				*e*S	Sb	08 32 38.1	+0.3
RUSC				*i*		08 32 39.6	
	comp=Z,9.7nm,0.3s						
BAUV	El Baul	4.09	70	*e*P	Pn	08 32 38.7	+2.0
BAUV				*e*S	Sn	08 33 23.9	+0.4
BENV	Beln	4.91	61	*e*P	Pn	08 32 48.7	+0.8
CACV	CAICARA DEL OR	5.36	90	*e*P	Pb	08 33 05.5	-3.8

IDC ***12*** *08:32:42.9±0.6, 15°.75S×67°.23E, h0^{km}, mb4.1/17, mbtmp4.1/17, Error ellipse: s-maj=21.2km s-min=17.1km az=155.0*
NEIC ***12*** *08:32:45.2±1.4, 15°.8S±0°.1×67°.2E±0°.1, h10^{km}±1^{km}, mb4.5/24, Error ellipse: s-maj=23.9km s-min=19.3km az=227.0*
ISC 12 08:32:44.5±0.6**, 15°.8S**±0°.1×**67°.24E**±0°.09**, h10^{km}, n52, σ0^{s}67**/46**, mb4.3**/26**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	9.57	33	T	T	08 44 45.1	
	baz=212,slow=76						
H08S2	Diego Garcia H	9.58	33	T	T	08 44 45.8	
	baz=212						
H08S3	Diego Garcia H	9.59	33	T	T	08 44 46.5	
	baz=212,slow=76						
MSEY	Mahe Island	15.98	312	Pn	Pn	08 36 29.0	-0.6
MSEY				IAmb	IAmb	08 36 58.0	
	comp=Z,32nm,1.4s						
PALK	Pallekele	26.51	31	P	P	08 38 22.3	-0.1
PALK				IAmb	IAmb	08 38 51.5	
	comp=Z,6.8nm,1.1s						
LBTB	Lobatse	39.96	250	P	P	08 40 20.1	+0.6
	comp=Z,5.6nm,0.9s,baz=116,slow=13,SNR=4.4						
	comp=Z,5.6nm,0.9s						
BOSA	Boshof	40.71	244	P	P	08 40 26.2	+0.5
	comp=Z,3.6nm,0.8s,baz=100,slow=5.5,SNR=4.0						
	comp=Z,3.6nm,0.8s						
H01W3	Cape Leeuwin H	45.99	123	T	T	09 30 15.2	
	baz=284						
H01W2	Cape Leeuwin H	46.00	123	T	T	09 30 15.5	
	baz=284						
H01W1	Cape Leeuwin H	46.01	123	T	T	09 30 15.9	
	baz=284						
CMAR	Chiang Mai Arr	46.18	44	P	P	08 41 11.3	+1.6
	comp=Z,1.6nm,0.3s,baz=237,slow=8.4,SNR=7.5						
	comp=Z,1.6nm,0.3s						
CMAR	Chiang Mai Arr	46.18	44	P	P	08 41 09.7	0.0
CHTO	Chiang Mai	46.43	43	P	P	08 41 12.4	+0.7
SHL	Shillong	47.60	31	P	P	08 41 21.6	+0.7
SHL				IAmb	IAmb	08 41 29.6	
	comp=Z,14nm,1.4s						
CRAI	Chiangrai	48.38	43	P	P	08 41 26.4	-0.5
CRAI				IAmb	IAmb	08 41 46.5	
	comp=Z,6.9nm,1.3s						
MBWA	Marble Bar	49.90	105	P	P	08 41 39.0	+0.4
KKM	Kota Kinabalu	53.12	70	P	P	08 42 03.1	+0.2
KKM				IAmb	IAmb	08 42 19.5	
	comp=Z,14nm,1.1s						
SOEI	Soe	55.81	91	P	P	08 42 22.7	+0.2
AAK	Ala-Archa	58.51	6	P	P	08 42 42.0	+0.8
KK31	Karatay Array	58.67	3	P	P	08 42 42.4	+0.3
KKAR	Karatay Array	58.67	3	P	P	08 42 42.2	+0.2
KKAR				IAmb	IAmb	08 42 56.0	
	comp=Z,2.5nm,1.1s						
GNI	Garni	59.45	340	P	P	08 42 48.9	+1.2
	comp=Z,2.2nm,0.3s,baz=84,slow=10,SNR=3.2						
	comp=Z,2.2nm,0.3s						
ASAR	Alice Springs	62.77	109	P	P	08 43 10.8	+0.2
	comp=Z,0.8nm,0.9s,baz=270,slow=6.8,SNR=5.5						
	comp=Z,0.8nm,0.9s						
ASAR	Alice Springs	62.77	109	P	P	08 43 10.6	0.0
BRTR	Keskin Array B	63.49	332	P	P	08 43 15.2	+0.2
WRA	Warramunga Arr	63.64	105	P	P	08 43 16.5	+0.2
	comp=Z,1.3nm,0.9s,baz=260,slow=6.3,SNR=8.9						
	comp=Z,1.3nm,0.9s						
WRA	Warramunga Arr	63.64	105	P	P	08 43 14.6	-1.7
WB2	Warramunga Arr	63.65	105	P	P	08 43 16.0	-0.4
MAKZ	Makanchi	63.70	11	P	P	08 43 16.3	+0.2
MAKZ				IAmb	IAmb	08 43 33.5	
	comp=Z,3.6nm,1.5s						
MK31	Makanchi Array	63.74	11	P	P	08 43 15.2	-1.2
MKAR	Makanchi Array	63.74	11	P	P	08 43 15.6	-0.8
	comp=Z,0.5nm,0.9s,baz=212,slow=6.8,SNR=4.9						
	comp=Z,0.5nm,0.9s						
MKAR	Makanchi Array	63.74	11	P	P	08 43 15.0	-1.4
ABKAR	Akbulak array	65.07	355	P	P	08 43 24.7	-0.2
ABKAR				IAmb	IAmb	08 43 25.0	
	comp=Z,4.1nm,1.1s						
BVAR	Borovoye Array	68.58	2	P	P	08 43 46.8	-0.5
	comp=Z,0.7nm,0.6s,baz=123,slow=7.6,SNR=4.4						
	comp=Z,0.7nm,0.6s						
TORD	Torodi Ar. Bea	70.90	290	P	P	08 44 02.0	-0.4
	comp=Z,2.5nm,1.1s,baz=93,slow=4.0,SNR=8.6						
	comp=Z,2.5nm,1.1s						
TORD	Torodi Ar. Bea	70.90	290	P	P	08 44 02.3	-0.1
ZAA0	Zalesovo Array	71.06	11	P	P	08 44 03.2	+0.6
ZAA0				IAmb	IAmb	08 44 10.8	
	comp=Z,3.6nm,1.3s						
ZALV	Zalesovo Beam	71.06	11	P	P	08 44 01.7	-0.8
	comp=Z,0.6nm,0.7s,baz=198,slow=7.6,SNR=2.0						
	comp=Z,0.6nm,0.7s						
ZALV	Zalesovo Beam	71.06	11	P	P	08 44 02.4	-0.2
TOO	Toolangi	71.35	125	P	P	08 44 04.0	-0.8
TOO				IAmb	IAmb	08 44 08.1	
	comp=Z,7.4nm,1.1s						
SONM	Songino Array	72.35	27	P	P	08 44 10.3	-0.3
	comp=Z,0.8nm,0.9s,baz=222,slow=4.0,SNR=4.8						
	comp=Z,0.8nm,0.9s						
SONM	Songino Array	72.35	27	P	P	08 44 10.3	-0.3
QSPA	South Pole Qui	74.30	180	P	P	08 44 22.1	+0.1
	comp=Z,6.6nm,1.0s,baz=281,slow=3.8,SNR=11						
	comp=Z,6.6nm,1.0s						
QSPA	South Pole Qui	74.30	180	P	P	08 44 22.6	+0.7
DBIC	Dimbokro	74.76	282	P	P	08 44 25.1	-0.3
	comp=Z,7.0nm,1.0s,baz=148,slow=6.3,SNR=4.8						
	comp=Z,7.0nm,1.0s						
KSRS	Korea Array	77.79	45	P	P	08 44 41.5	-0.6
	comp=Z,1.3nm,0.9s,baz=237,slow=7.1,SNR=4.4						
	comp=Z,1.3nm,0.9s						
USRK	Ussuriysk Ar.	83.82	41	P	P	08 45 13.8	-0.4
	comp=Z,2.7nm,0.7s,baz=233,slow=8.4,SNR=1.7						
	comp=Z,2.7nm,0.7s						
MJAR	Matsushiro Arr	84.69	50	P	P	08 45 19.1	+0.2
	comp=Z,1.6nm,0.9s,baz=221,slow=4.9,SNR=5.8						
	comp=Z,1.6nm,0.9s						
ESDC	Sonseca Array	86.12	313	P	P	08 45 26.2	+0.2
	comp=Z,1.8nm,0.9s,baz=109,slow=2.7,SNR=6.5						
	comp=Z,1.8nm,0.9s						
ESDC	Sonseca Array	86.12	313	P	P	08 45 26.1	+0.2
ESDC				IAmb	IAmb	08 45 38.4	
	comp=Z,8.5nm,1.4s						
YKA	Yellowknife Ar	133.33	1	PKP	PKPdf	08 51 59.5	-0.9
	comp=Z,0.5nm,0.9s,baz=349,slow=1.8,SNR=6.2						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PDAR	Pinedale Array	152.97	355	PKPbc	PKPbc	08 52 41.9	-0.8
	comp=Z,1.0nm,0.8s,baz=57,slow=2.2,SNR=8.5						

IDC ***12*** *08:33:20.6±0.8, 15.°87S×67.°28E, h0^{km}, mb3.9/11, mbtmp3.9/11, MS3.6/3, Error ellipse: s-maj=28.6km s-min=24.5km az=159.0*

ISC 12 08:33:22.2±0.7**, 15.°9S**±0.°2×**67.°3E**±0.°2**, h10**^{km}**, n22,** σ**0.^{s}73**/13**, mb4.0**/11**, MS3.7**/3**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	9.63	33	T	T	08 45 24.9	
	baz=212						
H08S2	Diego Garcia H	9.64	33	T	T	08 45 28.8	
	baz=212						
H08S3	Diego Garcia H	9.65	33	T	T	08 45 28.8	
	baz=212						
BOSA	Boshof	40.69	244	P	P	08 41 03.6	+0.3
	4.5nm,1.1s,baz=200,slow=13,SNR=1.8						
	4.5nm,1.1s						
H01W3	Cape Leeuwin H	45.94	123	T	T	09 30 57.4	
	baz=282,slow=75						
H01W2	Cape Leeuwin H	45.94	123	T	T	09 30 59.0	
	baz=282,slow=75						
H01W1	Cape Leeuwin H	45.96	123	T	T	09 30 58.2	
	baz=282,slow=75						
CMAR	Chiang Mai Arr	46.22	44	P	P	08 41 49.4	+1.5
	2.8nm,0.3s,baz=224,slow=7.5,SNR=2.6						
	2.8nm,0.3s						
GEYT	Alibeck	54.19	351	LR	LR	09 03 40.3	
	comp=Z,38nm,20.2s,baz=346,slow=34						
DAV	Davao City (W)	62.07	73	LR	LR	09 08 52.0	
	comp=Z,64nm,19.9s,baz=264,slow=34						
ASAR	Alice Springs	62.73	109	P	P	08 43 47.3	-0.8
	0.3nm,0.7s,baz=238,slow=5.1,SNR=1.5						
	0.3nm,0.7s						
KBZ	Khabaz	63.35	340	LR	LR	09 10 37.0	
	comp=Z,48nm,18.1s,baz=112,slow=35						
WRA	Warramunga Arr	63.60	105	P	P	08 43 53.0	-0.9
	0.6nm,0.7s,baz=271,slow=9.7,SNR=1.6						
	0.6nm,0.7s						
MKAR	Makanchi Array	63.82	11	P	P	08 43 54.3	-0.3
	0.2nm,0.7s,baz=217,slow=7.4,SNR=1.6						
	0.2nm,0.7s						
BVAR	Borovoye Array	68.65	2	P	P	08 44 25.6	+0.1
	0.6nm,0.5s,baz=186,slow=7.1,SNR=2.3						
	0.6nm,0.5s						
TORD	Torodi Ar. Bea	70.94	290	P	P	08 44 40.3	-0.1
	1.2nm,1.0s,baz=120,slow=3.7,SNR=2.5						
	1.2nm,1.0s						
QSPA	South Pole Qui	74.22	180	P	P	08 45 00.1	+0.8
	2.1nm,0.9s,baz=284,slow=2.8,SNR=1.4						
	2.1nm,0.9s						
KSRS	Korea Array	77.84	45	P	P	08 45 20.1	0.0
	1.0nm,0.8s,baz=244,slow=6.1,SNR=2.9						
	1.0nm,0.8s						
MJAR	Matsushiro Arr	84.73	50	P	P	08 45 56.7	-0.1
	1.4nm,0.7s,baz=232,slow=6.0,SNR=4.2						
	1.4nm,0.7s						
ESDC	Sonseca Array	86.19	313	P	P	08 46 03.8	-0.3
	1.2nm,1.1s,baz=76,slow=5.4,SNR=1.9						
	1.2nm,1.1s						
YKA	Yellowknife Ar	133.41	1	PKP	PKiKP	08 52 39.1	-0.4
	0.2nm,0.7s,baz=350,slow=2.3,SNR=3.9						
PDAR	Pinedale Array	153.05	355	PKPbc	PKPbc	08 53 19.8	-0.8
	0.5nm,0.8s,baz=120,slow=3.6,SNR=2.4						

IDC ***12*** *09:12:32.7±0.6, 13.°70N×90.°26W, h0^{km}, mb4.3/16, mbtmp4.4/17, ML4.7/1, MS4.3/53, Error ellipse: s-maj=32.0km s-min=12.3km az=58.0*

GCG ***12*** *09:12:36.4±1.0, 13.°23N×90.°84W, h44^{km}, MD4.5*

SNET ***12*** *09:12:36.3±1.5, 13.°21N×90.°82W, h12^{km}, ML4.4*

GCMT ***12*** *09:12:36.5±0.2, 13.°12N±0.°02×91.°23W±0.°02, h16^{km}±1^{km}, MW5.0/100, Moment Tensor Solution. s58,c73; s100,c153; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.12±.15; $M_{\theta\theta}$-2.34±.10; $M_{\phi\phi}$-0.77±.09; $M_{r\theta}$2.89±.28; $M_{\theta\phi}$0.98±.06; $M_{\phi r}$-2.40±.31; Best double couple: $M_0$4.78100×10^{16} NP1:ϕ_s126.00000°, δ71.00000°, λ96.00000°. NP2:ϕ_s288.00000°, δ20.00000°, λ73.00000°. Principal axes: T 4.9810, Plg64.0000°, Azm46.0000°; N -0.3980, Plg6.0000°, Azm304.0000°; P -4.5820, Plg26.0000°, Azm212.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***12*** *09:12:38.5±2.5, 13.°36N±0.°08×90.°81W±0.°08, h35^{km}±2^{km}, mb4.8/102 Error ellipse: s-maj=15.9km s-min=9.7km az=223.0*

ISC 12 09:12:36.7±0.5**, 13.°33N**±0.°04×**90.°86W**±0.°04**, h33**^{km}±2^{km}**, h33**^{km}**:pP-P, n580,** σ**1.^{s}24**/542**, mb4.8**/58**, MS4.3**/58**, 3C-1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	1.08	13	eP	Pb	09 12 57.6	+0.4
FUG	Fuego 3	1.11	1	eP	Pb	09 12 57.1	-0.5
SULM	Suchitepequez,	1.19	325	eP	Pn	09 12 57.4	+0.4
NUBE	Las Nubes	1.20	61	eP	Pn	09 12 58.2	+0.9
NUBE				eS	Sb	09 13 16.9	+2.7
LOAL	Lomas de Alarc	1.24	58	eP	Pb	09 12 59.2	-0.6
SLOZ	Alcaldia de Sa	1.26	56	eP	Pb	09 12 59.3	-0.6
SLOZ				eS	Sb	09 13 15.2	-0.6
CEVE	Cerro Verde	1.30	68	eP	Pb	09 13 00.1	-0.7
SBLS	San Blas	1.31	67	eP	Pb	09 12 60.0	-0.9
RTR	El Retiro	1.31	64	eP	Pb	09 13 00.3	-0.6
NBG	Las Nubes	1.35	22	eP	Pb	09 13 02.7	+1.0
JAYA	Jayaque - finc	1.41	77	eP	Pn	09 13 00.6	+0.3
UNIC	Universidad Ca	1.43	63	eP	Pb	09 13 01.8	-1.1
CEDA	San Andres	1.50	72	eP	Pn	09 13 02.5	+1.1
PMON	Piamonte	1.55	76	eP	Pn	09 13 03.2	+1.1
BOQS	Boqueron	1.59	75	eP	Pb	09 13 04.5	-1.2
UEES	Universidad Ev	1.62	76	eP	Pn	09 13 04.7	+1.6
SNET	Serv Nac Est T	1.63	77		Pn	09 13 03.6	+0.5
SNET	Serv Nac Est T	1.63	77	eP	Pn	09 13 04.0	+0.8
UTEC	Universidad Te	1.66	77	eP	Pn	09 13 05.2	+1.6
LFU	La Fuente	1.75	76	eP	Pb	09 13 06.7	-1.6
LFRS	El Faro	1.78	80	eP	Pn	09 13 06.7	+1.5
SJTE	Alcalda de S	1.83	81	iP	Pn	09 13 07.0	+1.1
PAVA	Las Pavas	1.91	78	eP	Pn	09 13 08.1	+1.0
TECO	Alcaldia de Te	2.04	84	eP	Pn	09 13 09.7	+1.0
LLGN	La Laguna	2.04	66	eP	Pn	09 13 10.4	+1.6
UESV	Universidad de	2.04	81	eP	Pn	09 13 10.2	+1.4
SCLA	Alcaldia de Sa	2.11	80	eP	Pn	09 13 11.1	+1.4
P5NO	Presa 5 de nov	2.15	72	eP	Pn	09 13 11.2	+0.9
ALJI	Alcalda de J	2.23	90	eP	Pn	09 13 12.4	+1.0
PQSS	Presa 15 de Se	2.26	82	eP	Pn	09 13 13.3	+1.5
COEB	Comit de Eme	2.28	86	eP	Pn	09 13 12.6	+0.4
TECA	Tecapa	2.30	86	eP	Pn	09 13 13.7	+1.1
PACA	Pacayal	2.48	87	eP	Pn	09 13 16.3	+1.4
LCY	Lacayo	2.50	88	eP	Pn	09 13 16.7	+1.5
VSM	San Miguel	2.52	87	eP	Pn	09 13 17.1	+1.5
FAGO	Alcalda de S	2.71	82	eP	Pn	09 13 18.8	+0.8
LCND	La Caada	2.89	90	eP	Pn	09 13 21.0	+0.5
CNCH	Conchagua	2.95	91	eP	Pn	09 13 21.6	+0.2
CCIG	Comitan	3.18	337		Pn	09 13 26.0	+1.3
TGUH	Tegucigalpa,Un	3.56	78		Pn	09 13 30.4	+0.6
TGUH	Tegucigalpa,Un	3.56	78	eP	Pn	09 13 31.3	+1.4
TGUH				eS	Sb	09 14 26.5	+4.4
CRIN	San Cristobal	3.77	99		Pn	09 13 32.7	0.0
CRIN	San Cristobal	3.77	99	eP	Pn	09 13 32.6	0.0
CNGN	Cerro Negro	4.14	101		Pn	09 13 38.4	+0.6
MATN	Matagalpa	4.83	94		Pn	09 13 47.1	-0.1
BOAB	BOACO BROADBAN	5.14	99	Pn	Pn	09 13 49.6	-1.8
CMIG	Matias Romero	5.39	314	Pn	Pn	09 13 53.9	-0.9
	2.0nm,0.3s,baz=170,slow=14,SNR=18						
CMIG				Sn	Sn	09 14 54.7	-1.1
	5.6nm,0.3s,baz=134,slow=7.2,SNR=4.7						
ACON	Acoyapa	5.71	103		Pn	09 13 57.4	-1.9
JUD3	Juan Diaz 3	6.09	121	eP	Pn	09 14 03.4	-1.1
BAGA	Bagaces	6.15	116	eP	Pn	09 14 07.5	+2.2
NARJA	Naranjal	6.19	122	eP	Pn	09 14 05.8	-0.1
CMARA	Lajas Hojancha	6.26	121	eP	Pn	09 14 04.1	-2.8
POPE	POPE, Guanacas	6.37	120	eP	Pn	09 14 08.8	+0.4
ESPN	Las Esperanzas	6.50	99		Pn	09 14 10.8	+0.6
JUNT	Juntas	6.53	117	eP	Pn	09 14 11.0	+0.6
JTS	Las Juntas de	6.53	117	Pn	Pn	09 14 00.8	-10
	1.6nm,0.3s,baz=290,slow=22,SNR=13						
JTS				Sn	Sn	09 15 19.9	-4.0
	2.5nm,0.3s,baz=298,slow=17,SNR=1.0						
JTS	Las Juntas de	6.53	117	eP	Pn	09 13 59.9	-11
JTS	Las Juntas de	6.53	117	eP	Pn	09 14 11.9	+1.3
ARE1	Arenal 1	6.66	115	eP	Pn	09 14 13.1	+0.8
VACR	Volcan Arenal	6.69	114	eP	Pn	09 14 13.2	+0.4
LAFE	Finca La Fe, P	6.80	120	eP	Pn	09 14 14.2	0.0
SRA1	San Ramn	7.03	117	eP	Pn	09 14 20.1	+2.5
JACO	JACO, Garabito	7.09	120		Pn	09 14 20.9	+2.7
JACO	JACO, Garabito	7.09	120	eP	Pn	09 14 20.5	+2.3
TCS1	Tacares	7.21	116	eP	Pn	09 14 23.2	+3.2
TEIG	Tepich	7.29	20	Pn	Pn	09 14 23.6	+2.6
TEIG	Tepich	7.29	20	eP	Pn	09 14 24.1	+3.1
HDC	Heredia	7.39	116		Pn	09 14 22.8	+0.3
HDC3	Heredia 3	7.39	116	eP	Pn	09 14 25.1	+2.6
OCM	Ochomogo	7.57	116	eP	Pn	09 14 27.2	+2.1
ABE2	San Pablo	7.58	118	eP	Pn	09 14 27.5	+2.2
LCR2	La Lucha 2	7.61	117	eP	Pn	09 14 28.1	+2.6
VICA	Volcano Irazu	7.64	115	eP	Pn	09 14 28.6	+2.5
LLNJ	Naranjito	7.66	119	eP	Pn	09 14 28.3	+2.3
PCAYA	Pacayas	7.70	115	eP	Pn	09 14 31.1	+4.4
RIMA	Rio Macho	7.72	117		Pn	09 14 27.9	+0.8
RIMA	Rio Macho	7.72	117	eP	Pn	09 14 29.1	+2.0
VERB	Verbena	7.79	115	eP	Pn	09 14 32.9	+5.0
RVSTA	Santa Teresita	7.81	114	eP	Pn	09 14 33.3	+5.0
CDM	Cerro de Muert	7.91	118	eP	Pn	09 14 32.3	+2.5
BUS1	Rivas	7.92	118	eP	Pn	09 14 32.2	+2.1
MRVA	Moravia de Chi	8.06	115	eP	Pn	09 14 34.4	+2.7
PEZE	Perez Zeledon,	8.06	118		Pn	09 14 33.6	+1.9
SRBA	San Rafael, Bu	8.41	118		Pn	09 14 38.1	+1.6
SRBA	San Rafael, Bu	8.41	118	eP	Pn	09 14 36.9	+0.4
PLAN	Los Planes de	8.43	123	eP	Pn	09 14 38.6	+1.9
BURE	Buenos Aires	8.46	118	eP	Pn	09 14 38.5	+1.5
EDBA	Buenos Aires	8.52	118	eP	Pn	09 14 40.3	+2.4
TLIG	Tlapa	8.54	301		Pn	09 14 39.0	+0.8
EDP2	Potrero Grande	8.67	119	eP	Pn	09 14 42.6	+2.6
EDAD	Golfito	8.87	121	eP	Pn	09 14 45.1	+2.4
EDSV	San Vito	8.95	119	eP	Pn	09 14 44.3	+0.4
CDITO	Canoas	9.16	120		Pn	09 14 47.0	+0.4
CDITO	Canoas	9.16	120	eP	Pn	09 14 49.5	+2.9
BRU2	Volcan	9.20	119		Pn	09 14 48.2	+0.9
BRU2	Volcan	9.20	119	eP	Pn	09 14 49.7	+2.4
MOIG	Morelia	11.74	304		Pn	09 15 24.5	+2.3
SOR	Soroa	12.01	37	Pn	Pn	09 15 26.8	+1.1
ZAIG	Zacatecas	14.55	312	Pn	Pn	09 16 01.0	+0.3
CBOC	Ciudad Bolivar	16.41	115	eP	P	09 16 29.6	+2.2
735A	Kenedy	16.74	338	P	P	09 16 31.0	+0.2
735A				IAmb	IAmb	09 16 34.7	
	comp=Z,121nm,1.4s						
833A	Chaparral WMA,	16.90	333	P	P	09 16 32.5	-0.1
833A	Chaparral WMA,	16.90	333	P	P	09 16 32.5	-0.1
	baz=150						
YOTC	Yotoco, Valle	17.08	122	eP	P	09 16 35.4	+0.6
DWPF	Disney Wildern	17.13	29	P	P	09 16 34.8	-0.3
	baz=212						
HKT	Hockley	17.17	345		Pn	09 16 34.7	+0.6
HKT				IAmb	IAmb	09 16 39.2	
	comp=Z,119nm,1.8s						
GUY2C	Guyana, Caldas	17.28	116	eP	P	09 16 38.3	+1.0
TULM	Tulcn-Chalpat	18.02	133	P	P	09 16 47.3	+1.7
PULU	Pululahua	18.02	136	P	P	09 16 47.1	+1.6
PULU				IAmb	IAmb	09 16 52.1	
	comp=Z,55nm,0.9s						
ORTC	Ortega, Tolima	18.04	120	eP	P	09 16 47.9	+2.6
BRAL	Brewton	18.10	11	P	P	09 16 46.4	+0.7
	baz=192						
SPBC	San Pablo de B	18.22	113	⇑eP	Pn	09 16 48.9	+1.5
ROSC	El Rosal	18.37	116	P	Pn	09 16 51.8	+2.3
	comp=Z,38nm,1.1s,baz=329,slow=6.5,SNR=15						
ROSC	El Rosal	18.37	116		Pn	09 16 51.1	+1.7
ROSC				IAmb	IAmb	09 16 55.3	
	comp=Z,68nm,1.2s						
ROSC	El Rosal	18.37	116	eP	Pn	09 16 53.7	+4.2
435B	Jarrell	18.44	341	P	Pn	09 16 50.3	+0.5
435B	Jarrell	18.44	341	P	Pn	09 16 50.9	+1.0
	baz=159						
NATX	Nacogdoches	18.67	350	P	Pn	09 16 53.3	+0.7
	baz=168						
VBMS	Vicksburg	18.80	1	P	Pn	09 16 57.0	+2.8
VBMS	Vicksburg	18.80	1	P	Pn	09 16 54.8	+0.6
	baz=181						
352A	Blakely	18.87	16	P	Pn	09 16 57.6	+2.6
352A				IAmb	IAmb	09 17 02.1	
	comp=Z,69nm,1.1s						
JCT	Junction City	18.96	336	P	Pn	09 16 57.3	+1.2
JCT	Junction City	18.96	336	P	Pn	09 16 56.6	+0.5
	baz=152,SNR=10.0						
PORT	Chimborazo Vol	18.97	140	P	Pn	09 16 58.8	+1.9
PORT				IAmb	IAmb	09 17 02.2	
	comp=Z,46nm,1.2s						
CHIC	Chingaza	18.99	116	eP	Pn	09 16 58.5	+1.5
RUSC	La Rusia	19.01	111		Pn	09 16 58.2	+0.8
TIGA	Tifton	19.23	19	P	Pn	09 17 02.8	+3.5
TIGA				IAmb	IAmb	09 17 05.1	
	comp=Z,72nm,1.3s						
TIGA	Tifton	19.23	19	P	Pn	09 16 58.7	-0.5
	baz=202						
143A	Socs Landing,	19.29	359	P	Pn	09 17 00.8	+0.8
143A				IAmb	IAmb	09 17 11.5	
	comp=Z,74nm,1.1s						
HPIG		19.37	317	P	Pn	09 17 01.3	0.0
HPIG				IAmb	IAmb	09 17 07.5	
	comp=Z,126nm,2.0s						
WHTX	Lake Whitney,	19.54	343	P	Pn	09 17 02.4	-0.6
	baz=160						
FW16	Waxahatchie	19.85	345	P	Pn	09 17 06.1	-0.6
FW16				IAmb	IAmb	09 17 21.6	
	comp=Z,67nm,1.2s						
TXAR	Lajitas Array	19.87	325	P	Pn	09 17 07.0	-0.1
	comp=Z,0.5nm,0.3s,baz=154,slow=13,SNR=50						
TXAR				PcP	PcP	09 21 25.3	+3.3
	comp=Z,0.7nm,0.9s,baz=151,slow=5.7,SNR=3.4						
TXAR				LR	LR	09 25 53.2	
	comp=Z,181nm,19.9s,baz=128,slow=40						
	comp=Z,18nm,1.0s						
TX31	Lajitas Ar. Si	19.87	325	P	Pn	09 17 07.0	-0.1
TX32	Lajitas Array	19.87	325	P	Pn	09 17 07.0	0.0
Z41A	Richland Creek	19.92	355	P	Pn	09 17 06.9	-0.5
LRAL	Lakeview Retre	19.93	10	P	P	09 17 06.3	+0.5
	baz=191						
Z47A	Carrollton	19.94	7	P	Pn	09 17 07.8	0.0
Z47A				IAmb	IAmb	09 17 15.8	
	comp=Z,58nm,1.1s						
152A	Waverly Hall	20.05	15	P	Pn	09 17 08.7	-0.5
MACC	Macarena, Meta	20.17	122	eP	P	09 17 09.1	+0.4
Z38A	Mt. Pleasant	20.19	350	P	Pn	09 17 10.2	-0.6
FW07	Weatherford	20.30	343	P	Pn	09 17 12.3	+0.3
FW07				IAmb	IAmb	09 17 14.2	
	comp=Z,19nm,0.9s						
SDV	Santo Domingo	20.33	100	P	P	09 17 09.4	-1.1
	comp=Z,9.9nm,0.7s,baz=280,slow=5.0,SNR=10						
SDV	Santo Domingo	20.33	100	P	P	09 17 09.7	-0.8
SDV	Santo Domingo	20.33	100	eP	P	09 17 09.6	-1.0
WLAR	White Oak Lake	20.37	355	P	Pn	09 17 11.8	-1.0
WLAR				IAmb	IAmb	09 17 29.0	
	comp=Z,69nm,1.2s						
Y45A	Yeager Farm, C	20.48	3	P	Pn	09 17 15.0	+0.9
Y45A				IAmb	IAmb	09 17 17.9	
	comp=Z,42nm,0.8s						
Z51A	Franklin	20.56	14	P	Pn	09 17 16.6	+1.5
Z51A				IAmb	IAmb	09 17 25.6	
	comp=Z,110nm,1.8s						
MCRA	Macar, Loja	20.65	148	P	P	09 17 13.5	-0.4
ABTX	Abilene, Hawle	20.82	339	P	P	09 17 15.7	+0.2
ABTX	Abilene, Hawle	20.82	339	P	P	09 17 15.8	+0.2
	baz=155,SNR=8.2						
OXF	Oxford	21.13	3	P	P	09 17 21.8	+3.0
OXF	Oxford	21.13	3	P	P	09 17 19.1	+0.3
	baz=184,SNR=7.5						
MIAR	Mount Ida	21.27	354	P	P	09 17 21.0	+0.7
MIAR				IAmb	IAmb	09 17 33.4	
	comp=Z,36nm,1.1s						
MIAR	Mount Ida	21.27	354	P	P	09 17 21.1	+0.8
	baz=172,SNR=8.6						
LPIG	La Paz	21.28	303	LR	LR	09 25 41.0	
	comp=Z,472nm,19.3s,baz=144,slow=36						
X48A	Hartselle	21.31	9	P	P	09 17 23.3	+2.5
X48A				IAmb	IAmb	09 17 37.3	
	comp=Z,45nm,1.3s						
Y52A	Lilburn	21.36	16	P	P	09 17 22.2	+0.9
UALR	University of	21.39	357	P	P	09 17 22.2	+0.6
UALR				IAmb	IAmb	09 17 41.1	
	comp=Z,57nm,1.1s						
ODSA	Odessa	21.55	332	P	P	09 17 24.1	+0.7
ODSA				IAmb	IAmb	09 17 28.5	
	comp=Z,58nm,1.1s						
X51A	Calhoun	21.83	13	P	P	09 17 27.9	+1.6
X51A				IAmb	IAmb	09 17 36.4	
	comp=Z,34nm,1.2s						
POST	Post	21.92	335	P	P	09 17 28.1	+0.8
POST				IAmb	IAmb	09 17 42.7	
	comp=Z,21nm,0.8s						
NHSC	New Hope	21.97	25	P	P	09 17 27.2	-0.7
	baz=209						
SWET	Sewanee	22.24	11	P	P	09 17 32.0	+1.2
CLNB	Carlsbad	22.30	330	P	P	09 17 32.3	+0.7
W50A	Signal Mountai	22.35	12	P	P	09 17 32.9	+1.0
W50A				IAmb	IAmb	09 17 44.0	
	comp=Z,47nm,1.6s						
HTMS	Hat Mesa	22.35	331	P	P	09 17 32.5	+0.3
W35A	Tecumseh	22.40	347		P	09 17 32.0	-0.5
W35A				IAmb	IAmb	09 17 34.4	
	comp=Z,25nm,0.9s						
WMOK	Wichita Mounta	22.49	343	P	P	09 17 32.6	-0.8
	baz=159,SNR=6.3						
GDL2	Guadalupe Moun	22.49	329	P	P	09 17 33.5	-0.1
FCAR	Ozark Folk Cen	22.49	357	P	P	09 17 33.4	0.0
V48A	Smith Brothers	22.61	9	P	P	09 17 34.5	-0.2
V48A				IAmb	IAmb	09 17 36.4	
	comp=Z,27nm,1.1s						
FNO	Franklin	22.62	346		P	09 17 34.4	-0.4
FNO				IAmb	IAmb	09 17 37.4	
	comp=Z,50nm,0.9s						
MNTX	Cornudas Mount	22.63	326	P	P	09 17 34.4	-0.6
	baz=140,SNR=85						
WVT	Waverly	22.87	6	P	P	09 17 37.5	+0.1
	baz=187						
TUL1	Leonard	22.92	350	P	P	09 17 38.0	+0.1
	baz=167						
CLTN	Cedars of Leba	23.03	9	P	P	09 17 39.3	+0.3
CLTN				IAmb	IAmb	09 17 40.3	
	comp=Z,34nm,1.2s						
TKL	Tuckaleechee C	23.13	15	P	P	09 17 39.5	-0.6
	comp=Z,8.8nm,0.7s,baz=185,slow=10,SNR=16						
TKL				LR	LR	09 27 39.5	
	comp=Z,2µm,19.4s,baz=201,slow=40						
MSTX	Muleshoe	23.22	334	P	P	09 17 40.7	-0.5
	baz=149						
KMSC	Kings Mountain	23.36	20	P	P	09 17 42.1	-0.3
	baz=204						
AMTX	Amarillo	23.59	337	P	P	09 17 44.4	-0.3
	baz=153						
T47A	Sharon Grove	23.80	7	P	P	09 17 46.1	-0.5
ATAH	Atahualpa	23.81	148	P	P	09 17 49.4	+2.1
	comp=Z,13nm,1.0s,baz=331,slow=12,SNR=8.5						
ATAH				LR	LR	09 25 58.4	
	comp=Z,419nm,18.4s,baz=332,slow=34						
	comp=Z,13nm,1.0s						
TZTN	Tazewell	24.03	15	P	P	09 17 48.7	-0.1
	baz=198						
SRIG	Santa Rosalia	24.35	308	P	P	09 17 52.5	+0.7
S39A	Bolivar	24.36	355	P	P	09 17 50.6	-1.2
121A	Cookes Peak, D	24.60	324	P	P	09 17 56.0	+1.8
121A	Cookes Peak, D	24.60	324	P	P	09 17 53.9	-0.2
	baz=137,SNR=26						
CCM	Cathedral Cave	24.63	359	P	P	09 17 52.8	-1.4
CCM				IAmb	IAmb	09 17 55.5	
	comp=Z,18nm,0.9s						
CCM	Cathedral Cave	24.63	359	P	P	09 17 53.7	-0.4
	baz=179						
319A	Douglas	24.68	320	P	P	09 17 56.3	+1.4
319A				IAmb	IAmb	09 18 19.1	
	comp=Z,31nm,1.0s						
USIN	University of	24.70	6	P	P	09 17 55.0	+0.2
USIN				IAmb	IAmb	09 17 56.4	
	comp=Z,37nm,1.1s						
CNNC	Cliffs of the	24.76	26	P	P	09 17 54.6	-0.8
	baz=211						
CRNM	Carthage	25.09	328	P	P	09 18 00.4	+1.8
WCI	Wyandotte Cave	25.13	8	P	P	09 17 58.3	-0.4
WCI				IAmb	IAmb	09 18 34.1	
	comp=Z,30nm,0.8s						
WCI	Wyandotte Cave	25.13	8	P	P	09 17 58.2	-0.5
	baz=190						
BNM	Barren Site	25.19	328	P	P	09 18 01.4	+1.8
Y22D	IRIS PASSCAL I	25.28	327	P	P	09 18 02.3	+1.9
Y22D	IRIS PASSCAL I	25.28	327	P	P	09 17 60.0	-0.4
	baz=141						
Y22F	Passcal Instru	25.28	327	P	P	09 18 00.2	-0.1
	baz=141						
LENM	Lemitar	25.38	328	P	P	09 18 03.1	+1.9
BLA	Blacksburg	25.55	20	P	P	09 18 02.8	+0.2
	baz=204						
ANMO	Albuquerque	25.73	329	P	P	09 18 05.2	+0.8
	comp=Z,4.6nm,0.8s,baz=240,slow=12,SNR=17						
ANMO				LR	LR	09 30 25.5	
	comp=Z,331nm,18.5s,baz=233,slow=42						
	comp=Z,4.6nm,0.8s						
ANMO	Albuquerque	25.73	329	P	P	09 18 04.9	+0.4
ANMO	Albuquerque	25.73	329	P	P	09 18 04.7	+0.3
	baz=143						
R32A	Long Quarter,	25.95	346	P	P	09 18 06.2	+0.1
KSU1	Kansas State U	26.17	350	P	P	09 18 08.2	+0.1
	baz=167						
TUC	Tucson	26.26	319	P	P	09 18 10.5	+1.3
TUC	Tucson	26.26	319	P	P	09 18 09.4	+0.3
	baz=131						
P48A	Milroy	26.47	9	P	P	09 18 08.7	-2.1
P48A				IAmb	IAmb	09 18 10.5	
	comp=Z,30nm,1.2s						
CBKS	Cedar Bluff	26.57	344	P	P	09 18 12.6	+0.7
	baz=160						
T25A	Trinidad	26.63	335	P	P	09 18 12.0	-0.6
	baz=149						
P49A	Miami Univ. Ec	26.66	11	P	P	09 18 12.3	-0.3
	baz=193						
TBTG	Tabatinga, AM	27.12	129	eP	P	09 18 17.9	+0.9
SGCB	S£o Gabriel d	27.14	118	eP	P	09 18 16.9	-0.3
SFIN	Lafayette	27.15	6	P	P	09 18 17.4	+0.5
	baz=188						
HDIL	Hopedale	27.16	3	P	P	09 18 16.3	-0.8
	baz=183						
O48B	Farmland	27.29	10	P	P	09 18 16.7	-1.5
	baz=192						
P52A	Corning	27.31	15	P	P	09 18 17.6	-0.8
	baz=199						
214A	Organ Pipe Nat	27.36	316	P	P	09 18 20.1	+1.1
214A	Organ Pipe Nat	27.36	316	P	P	09 18 20.7	+1.7
	baz=128,SNR=8.3						
W18A	Petrified Fore	27.59	325	P	P	09 18 23.4	+2.1
W18A	Petrified Fore	27.59	325	P	P	09 18 23.4	+2.1
	baz=137,SNR=13						
SDCO	Great Sand Dun	27.59	334	P	P	09 18 21.9	+0.6
	baz=148						
KSCO	Kaye Shedlock’	27.62	340	P	P	09 18 22.1	+0.8
	baz=155						
CZSB	Cruzeiro do Su	27.62	138	P	P	09 18 24.4	+3.0
CZSB				IAmb	IAmb	09 18 34.4	
	comp=Z,30nm,1.2s						
CZSB	Cruzeiro do Su	27.62	138	eP	P	09 18 23.9	+2.4
ACSO	Alum Creek Sta	27.68	13	P	P	09 18 21.6	-0.1
	baz=196						
S22A	4UR Ranch, Cre	28.17	332	P	P	09 18 27.4	+0.9
	baz=145						
113A	Mohawk Valley,	28.50	317	P	P	09 18 30.7	+1.6
MVCO	Mesa Verde	28.53	330	P	P	09 18 31.1	+1.5
	baz=142,SNR=12						
NNA	Nana	28.74	150	LR	LR	09 27 46.6	
	comp=Z,257nm,19.6s,baz=316,slow=32						
WUAZ	Wupatki	28.81	324	P	P	09 18 33.7	+1.7
	baz=135,SNR=14						
GLA	Glamis	29.38	316	P	P	09 18 37.9	+0.9
	baz=126						
M53A	WI Miller and	29.38	16	P	P	09 18 37.4	+0.5
	baz=200						
ISCO	Idaho Springs	29.39	336	P	P	09 18 38.9	+1.6
	baz=150						
JFWS	Jewell Farm	29.48	1	P	P	09 18 37.0	-0.8
	baz=181						
SSPA	Standing Stone	29.48	20	P	P	09 18 38.8	+1.0
	baz=206						
AAM	Ann Arbor	29.54	11	P	P	09 18 37.8	-0.4
	baz=194						
BLYC	Blythe	29.59	317	P	P	09 18 39.9	+1.0
BLYC				IAmb	IAmb	09 18 43.0	
	comp=Z,21nm,1.4s						
PDMCI	Parker Dam,Lak	29.69	319	P	P	09 18 41.0	+1.4
	baz=129						
U15A	North Rim	29.98	324	P	P	09 18 43.6	+1.0
U15A				IAmb	IAmb	09 18 48.9	
	comp=Z,20nm,1.1s						
SWSC	Sam W. Stewart	29.98	315	P	P	09 18 43.4	+1.2
	baz=125						

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IKP    In-Ko-Pah, Jac    30.03 314  P     P      09 18 44.2 +1.4
       baz=124
BC3    Big Chuckawall    30.16 316  P     P      09 18 46.0 +2.0
       baz=126,SNR=13
ERPA   Erie              30.20  16  P     P      09 18 45.6 +1.5
       baz=201
IRM    Iron Mountain     30.25 317  P     P      09 18 46.2 +1.5
       baz=127,SNR=8.9
NEE2   Needles Airpor    30.29 319  P     P      09 18 46.4 +1.4
       baz=129
MONP2  Monument Peak     30.38 314  P     P      09 18 47.2 +1.1
       baz=124
N23A   Red Feather La    30.47 337  P     P      09 18 47.7 +0.9
       baz=150
KNB    Kanab             30.69 324  P     P      09 18 50.8 +2.1
ECSD   EROS Data Cent    30.70 352  P     P      09 18 48.5 -0.1
       baz=169
BELC   Belle Mtn. Jos    30.73 316  P     P      09 18 49.8 +0.8
       baz=126
O20A   White River Ci    30.76 333  P     P      09 18 49.9 +0.5
       baz=145
TPFO   Pinon Flats       30.81 315  P     P      09 18 50.3 +0.5
       baz=125
PFO    Pinyon Flats O    30.82 315  LR    LR     09 33 08.6
       comp=Z,446nm,18.6s,baz=128,slow=40
PFO    Pinyon Flats O    30.82 315  P     P      09 18 50.6 +0.8
       baz=125
PFO    Pinyon Flats O    30.82 315  P     P      09 18 50.7 +0.9
PFO                                 sP    sP     09 19 04.3 +1.4
109C   Camp Elliot, M    30.86 314  P     P      09 18 50.6 +0.6
       baz=123
TEFE   Tefe              30.95 121  eP    P      09 18 50.1 -0.9
GMRC   Granite Mounta    30.97 318  P     P      09 18 53.0 +1.8
       baz=128,SNR=6.9
Q16A   Castle Valley     31.19 328  P     P      09 18 54.5 +1.4
MURC   Murrieta          31.32 315  P     P      09 18 55.9 +1.8
       baz=124
HEC    Hector,Ludlow     31.44 317  P     P      09 18 56.5 +1.3
       baz=127
BBRC   Big Bear Solar    31.50 316  P     P      09 18 57.4 +1.4
       baz=125
BINY   Binghamton        31.53  21  P     P      09 18 56.5 +0.7
       baz=208
TUQ    Turquoise Moun    31.54 319  P     P      09 18 57.8 +1.6
       baz=128
SPMN   Marine on St.     31.83 357  P     P      09 18 57.4 -1.1
SPMN   Marine on St.     31.83 357  P     P      09 18 57.4 -1.1
       baz=176,SNR=13
BOAV   Boa Vista         31.91 107  P     P      09 18 59.9 +0.4
BOAV                                IAmb  IAmb   09 19 00.1
       comp=Z,20nm,1.0s
BOAV   Boa Vista         31.91 107  eP    P      09 18 59.4 -0.1
BFSC   Mount Baldy Ra    31.99 315  P     P      09 19 01.5 +1.3
       baz=124
GSC    Goldstone, Bar    32.03 318  P     P      09 19 02.1 +1.7
GSC    Goldstone, Bar    32.03 318  P     P      09 19 01.8 +1.4
       baz=126
SHOC   Shoshone, Teco    32.05 319  P     P      09 19 01.3 +0.8
       baz=128
K22A   Casper            32.21 338  P     P      09 19 02.4 +0.5
       baz=150
DECC   Green Verdugo     32.47 315  P     P      09 19 04.4 +0.2
       baz=123
EDW2   Edwards Air Fo    32.58 316  P     P      09 19 04.8 -0.5
       baz=124
TPNV   Topopah Spring    32.69 321  P     P      09 19 07.5 +1.2
       baz=129,SNR=6.8
RSSD   Black Hills       32.70 342  P     P      09 19 07.1 +0.8
       baz=156
LRMC   Laurel Mtn Rad    32.71 317  P     P      09 19 07.3 +0.8
       baz=126
FURC   Furnace Creek,    32.77 319  P     P      09 19 08.0 +1.2
       baz=128
SADO   Sadowa            32.89  15  LR    LR     09 33 31.4
       comp=Z,2μm,18.7s,baz=160,slow=39
MPMC   Manual Prospec    32.93 318  P     P      09 19 10.0 +1.6
       baz=127,SNR=15
SPR3   Spring Creek 3    32.93 325  P     P      09 19 10.4 +1.9
SPR3                                IAmb  IAmb   09 19 14.3
       comp=Z,21nm,1.1s
OSI    Osito Audit: C    32.93 315  P     P      09 19 09.3 +1.0
       baz=123
DUG    Dugway, Tooele    32.98 328  P     P      09 19 10.0 +1.2
       baz=138
R11A   Troy Canyon, C    33.20 323  P     P      09 19 12.1 +1.3
       baz=132,SNR=16
GRAC   Grapevine Rang    33.42 320  P     P      09 19 13.9 +1.4
       baz=128,SNR=11
BW06   Boulder Array     33.49 335  P     P      09 19 13.9 +0.6
       baz=146
PDAR   Pinedale Array    33.49 335  P     P      09 19 13.3  0.0
       comp=Z,2.6nm,1.0s,baz=140,slow=9.4,SNR=11
PDAR                                PcP   PcP    09 21 53.1 -0.8
       comp=Z,1.2nm,1.0s,baz=133,slow=4.0,SNR=3.5
       comp=Z,2.6nm,1.0s
HRV    Adam Dziewonsk    33.53  26  P     P      09 19 15.2 +1.8
       baz=215
CWC    Cottonwood Cre    33.54 318  P     P      09 19 14.9 +1.1
       baz=126
ETMB   Extrema           33.58 132  P     P      09 19 13.1 -0.9
ETMB                                IAmb  IAmb   09 19 21.4
       comp=Z,16nm,0.9s
ETMB   Extrema           33.58 132  eP    P      09 19 12.9 -1.2
BGU    Big Grassy Mou    33.64 329  P     P      09 19 15.3 +0.8
BGU                                 IAmb  IAmb   09 19 20.1
       comp=Z,12nm,1.2s
PKM    Mcpherson Peak    33.83 314  P     P      09 19 17.4 +1.0
       baz=122
VES    Vestal, Richgr    33.86 316  P     P      09 19 17.2 +1.0
       baz=124,SNR=8.4
MACA   Manacapuru-AM     34.14 117  P     P      09 19 18.2 -0.8
MACA   Manacapuru-AM     34.14 117  eP    P      09 19 18.5 -0.5
LONY   Lake Ozonia       34.14  21  P     P      09 19 19.0 +0.3
       baz=209
AHID   Auburn Hatcher    34.15 333  P     P      09 19 19.7 +0.7
AHID                                IAmb  IAmb   09 19 23.5
       comp=Z,9.0nm,1.1s
HVU    Hansel Valley     34.16 330  P     P      09 19 20.3 +1.3
SMMC   Simmler           34.19 315  P     P      09 19 20.0 +0.7
       baz=122
EYMN   Ely               34.52 359  P     P      09 19 20.3 -1.5
       baz=179
REDW   Red Top Meadow    34.52 334  P     P      09 19 22.9 +0.6
ELK    Elko              34.65 327  LR    LR     09 34 24.2
       comp=Z,281nm,18.5s,baz=140,slow=38
NVAR   Mina Array Bea    34.88 321  P     P      09 19 27.6 +2.2
       comp=Z,18nm,0.8s,baz=138,slow=8.2,SNR=116
NVAR                                PcP   PcP    09 22 00.0 +2.1
       comp=Z,4.0nm,1.0s,baz=140,slow=4.7,SNR=4.0
NVAR                                LR    LR     09 36 23.1
       comp=Z,615nm,18.0s,baz=129,slow=41
       comp=Z,18nm,0.8s
NVAR   Mina Array Bea    34.88 321  P     P      09 19 27.5 +2.1
AGMN   Agassiz Nation    35.11 354  P     P      09 19 25.1 -1.8
AGMN                                IAmb  IAmb   09 19 26.4
       comp=Z,16nm,1.1s
AGMN   Agassiz Nation    35.11 354  P     P      09 19 25.9 -1.0
       baz=171
KVN    Kaiserville       35.15 322  P     P      09 19 28.7 +1.1
KVN                                 IAmb  IAmb   09 19 35.8
       comp=Z,19nm,1.3s
MDND   Maddock           35.18 350  P     P      09 19 26.7 -0.8
       baz=165
H17A   Grant Village     35.25 335  P     P      09 19 29.2 +0.7
       baz=145
SAML   Samuel            35.29 127  P     P      09 19 27.6 -1.2
SAML   Samuel            35.29 127  P     P      09 19 26.6 -2.2
RLMT   Red Lodge         35.34 337  P     P      09 19 30.0 +0.8
       baz=148
YERR   Yerington         35.80 321  P     P      09 19 34.1 +0.8
YERR                                IAmb  IAmb   09 19 36.4
       comp=Z,11nm,1.0s
HLID   Hailey            36.30 331  P     P      09 19 37.9 +0.5
       baz=139,SNR=6.0
EMB    Emerald Bay       36.33 320  P     P      09 19 39.4 +1.5
MCMT   McKenzie Canyo    36.56 333  P     P      09 19 41.6 +1.8
BOZ    Bozeman (W)       36.66 335  P     P      09 19 41.6 +1.1
       baz=145
DGMT   Dagmar            36.74 345  P     P      09 19 41.8 +0.8
       baz=158
LPAZ   La Paz            37.03 142  P     P      09 19 42.6 -1.7
       comp=Z,0.8nm,0.6s,baz=317,slow=9.4,SNR=3.5
       comp=Z,0.8nm,0.6s
ULM    Lac du Bonnet     37.05 355  P     P      09 19 41.6 -1.8
       comp=Z,24nm,1.0s,baz=174,slow=8.4,SNR=16
ULM                                 LR    LR     09 38 17.0
       comp=Z,674nm,18.3s,baz=170,slow=42
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       comp=Z,24nm,1.0s
WVOR   Wild Horse Val    37.66 326  P     P      09 19 50.2 +1.2
WVOR                                IAmb  IAmb   09 19 53.3
       comp=Z,16nm,1.1s
EGMT   Eagleton          38.00 339  P     P      09 19 52.4 +0.8
       baz=149
MPGF   Montagnes des     38.55  99  P     P      09 19 53.5 -3.2
MPGF                                pP    pP     09 20 03.8 -2.3
MSO    Missoula          38.61 334  P     P      09 19 57.5 +0.6
       baz=142
ITTB   Itaituba          39.06 114  eP    P      09 20 01.0 +0.1
YBH    Yreka Blue Hor    39.57 322  LR    LR     09 36 46.2
       comp=Z,400nm,19.5s,baz=146,slow=37
VILB   Vilhena           40.07 129  P     P      09 20 09.6 +0.2
VILB                                IAmb  IAmb   09 20 26.0
       comp=Z,18nm,1.0s
VILB   Vilhena           40.07 129  eP    P      09 20 10.9 +1.6
J04A   Umpqua Nationa    40.13 324  P     P      09 20 10.3 +0.5
NPGB   Novo Progresso    40.66 118  eP    P      09 20 12.1 -2.2
NEW    Newport           41.09 333  P     P      09 20 17.8 +0.4
       baz=139
H04A   Detroit Lake      41.09 326  P     P      09 20 18.7 +1.3
H04A                                IAmb  IAmb   09 20 22.4
       comp=Z,31nm,1.2s
I03D   Drain, OR         41.13 324  P     P      09 20 19.3 +1.6
HOOD   Mount Hood Mea    41.21 327  P     P      09 20 19.5 +0.9
SIV    San Ignacio       41.43 134  P     P      09 20 19.6 -0.9
       comp=Z,7.6nm,0.8s,baz=312,slow=8.4,SNR=21
SIV                                 LR    LR     09 36 36.6
       comp=Z,221nm,18.4s,baz=304,slow=35
       comp=Z,7.6nm,0.8s
COR    Corvallis         41.65 325  P     P      09 20 21.9 -0.1
COR                                 pP    pP     09 20 32.3 +0.7
LVC    Limon Verde       41.70 149  LR    LR     09 37 50.4
       comp=Z,193nm,18.2s,baz=320,slow=36
PDRB   Porto dos Gac     41.96 125  eP    P      09 20 26.0 +1.1
FFC    Flin Flon         42.21 350  P     P      09 20 25.6 -0.8
FFC    Flin Flon         42.21 350  P     P      09 20 25.8 -0.6
FFC                                 pP    pP     09 20 35.4 -0.7
FFC                                 sP    sP     09 20 40.1 +0.2
CLDB   Colider           42.30 123  eP    P      09 20 28.6 +0.9
PTLB   Pontes e Lacer    42.46 131  eP    P      09 20 31.7 +2.8
BBRB   Robore, Bolivi    43.87 135  eP    P      09 20 42.2 +1.9
RPN    Rapa Nui          44.03 204  LR    LR     09 34 14.1
       comp=Z,312nm,19.4s,baz=27,slow=29
LLLB   Lillooet          44.92 332  P     P      09 20 49.2 +0.8
SALV   Santo Antonio     45.31 129  eP    P      09 20 53.9 +2.0
FCC    Fort Churchill    45.41 358  P     P      09 20 50.6 -1.4
FCC                                 IAmb  IAmb   09 20 51.4
       comp=Z,9.8nm,1.1s
SCHQ   Schefferville     45.48  19  P     P      09 20 49.7 -2.9
       comp=Z,18nm,1.0s,baz=227,slow=4.1,SNR=13
SCHQ                                LR    LR     09 41 09.6
       comp=Z,1μm,18.1s,baz=216,slow=38
       comp=Z,18nm,1.0s
SCHQ   Schefferville     45.48  19  P     P      09 20 51.1 -1.6
SNDB   Serra Nova Dou    46.61 121  eP    P      09 21 04.0 +1.9
RVDE   Rio Verde (Bra    47.82 131  eP    P      09 21 13.5 +2.0
AQDB   Aquidauana        48.21 134  eP    P      09 21 17.0 +2.6
ARAG   Araguaiana, MT    48.21 126  eP    P      09 21 16.4 +1.9
SMTB   Santa Maria do    48.29 115  eP    P      09 21 15.4 +0.1
BBB    Bella Bella       48.88 330  LR    LR     09 45 54.4
       comp=Z,324nm,18.3s,baz=159,slow=41
ZON    Zonda             49.44 155  P     P      09 21 25.0 +1.2
CFA    Coronel Fontan    49.67 154  LR    LR     09 38 08.7
       comp=Z,114nm,21.5s,baz=332,slow=31
AMBA   Amambai (Brazi    50.32 135  eP    P      09 21 31.9 +1.3
CPUP   Villa Florida     51.16 140  P     P      09 21 38.2 +1.4
       comp=Z,2.0nm,0.8s,baz=330,slow=7.2,SNR=3.1
CPUP                                LR    LR     09 44 41.1
       comp=Z,226nm,19.0s,baz=328,slow=38
       comp=Z,2.0nm,0.8s
CPUP   Villa Florida     51.16 140  P     P      09 21 38.0 +1.1
BDFB   Brasilia          51.23 123  LR    LR     09 44 07.1
       comp=Z,317nm,19.4s,baz=302,slow=37
YKA    Yellowknife Ar    51.93 346  P     P      09 21 41.0 -1.1
       comp=Z,5.3nm,1.0s,baz=146,slow=8.0,SNR=40
YKA                                 LR    LR     09 46 44.6
       comp=Z,273nm,19.3s,baz=114,slow=40
       comp=Z,5.3nm,1.0s
SDBA   SAO DESIDERIO     52.25 117  eP    P      09 21 45.7 +0.4
V35K   Ketchikan         52.45 332  P     P      09 21 45.7 -0.4
       baz=127
KOTAN  Kotaneelee Air    52.69 340  P     P      09 21 47.9  0.0
       baz=138
FRB    Frobisher Bay     52.72  12  LR    LR     09 45 13.3
       comp=Z,1μm,19.9s,baz=202,slow=38
T35M   Bob Quinn         52.87 334  P     P      09 21 48.5 -0.8
       baz=129
TAOE   Nuku Hiva Isla    53.67 248  eS    S      09 29 27.2 -0.8
       comp=Z,170nm,24.3s
TAOE                                eLR   LR     09 37 21.4
       comp=Z,169nm,20.8s
DLBC   Dease Lake        53.71 336  P     P      09 21 56.4 +1.0
DLBC   Dease Lake        53.71 336  P     P      09 21 55.5 +0.1
       baz=130
S34M   Telegraph Cree    53.83 335  P     P      09 21 56.2 -0.1
       baz=129
T33K   Petersburg        53.94 333  P     P      09 21 56.9 -0.2
       baz=126
WTLY   Watson Lake, Y    54.35 338  P     P      09 22 00.1  0.0
       baz=132
WRGLY  Wrigley           54.86 343  P     P      09 22 03.9 +0.4
       baz=140
Q32M   Nakina River      54.95 335  P     P      09 22 04.8 +0.2
       baz=128
P32M   Atlin             55.93 335  P     P      09 22 12.3 +0.8
       baz=127
P33M   Teslin, Yukon     55.95 336  P     P      09 22 12.0 +0.4
       baz=128
S31K   Pelican           56.06 333  P     P      09 22 12.4 +0.1
       baz=123
RKT    Rikitea           56.36 230  eLR   LR     09 38 47.9
       comp=Z,57μm,24.8s
RKT    Rikitea           56.36 230  eT    T      10 22 44.3
       comp=Z,9.3nm,0.3s
SKAG   Skagway           56.52 335  P     P      09 22 15.9 +0.3
       baz=125
N32M   Quiet Lake        56.63 337  P     P      09 22 16.5  0.0
       baz=128
PLBC   Pleasant Camp     56.95 334  P     P      09 22 18.8 +0.2
       baz=124
PLCA   Paso Flores       56.99 162  P     P      09 22 21.2 +2.0
       comp=Z,4.1nm,1.2s,baz=262,slow=9.2,SNR=3.3
PLCA                                LR    LR     09 41 39.2
       comp=Z,153nm,18.3s,baz=345,slow=31
       comp=Z,4.1nm,1.2s
PLCA   Paso Flores       56.99 162  P     P      09 22 20.5 +1.2
PLCA                                pP    pwP    09 22 30.4 -0.5
FARO   Faro, Yukon       57.41 338  P     P      09 22 21.8 -0.1
       baz=129
GDU01  Guandu, BA        57.48 116  eP    P      09 22 24.5 +1.4
P30M   Million Dollar    57.57 335  P     P      09 22 23.1  0.0
       baz=124
O30N   Mendenhall        57.58 336  P     P      09 22 23.3 +0.1
       baz=125
M31M   Drury Creek, Y    57.78 338  P     P      09 22 24.5  0.0
       baz=128
N31M   Braeburn, Yuko    57.88 336  P     P      09 22 25.4 +0.2
       baz=126
HYT    Haines Junctio    58.19 335  P     P      09 22 28.4 +0.9
       baz=124
O29M   Mount Kennedy     58.34 334  P     P      09 22 29.1 +0.4
       baz=122
PNL    Peninsula         58.36 333  P     P      09 22 28.8 +0.2
       baz=121
N30M   Aishikik Lake     58.38 336  P     P      09 22 28.6 -0.2
       baz=124
YUK6   Outpost Mounta    58.60 335  P     P      09 22 30.3 -0.3
       baz=123
YUK4   Talbot Arm        58.94 335  P     P      09 22 32.6 -0.2
       baz=123
YUK8   Steele Glacier    59.36 335  P     P      09 22 35.8  0.0
       baz=121
M29M   Somme Creek       59.47 337  P     P      09 22 37.0 +0.7
       baz=123
L29M   L29M              59.71 337  P     P      09 22 38.9 +1.0
       baz=124
SFJD   Kangerlussuaq     59.82  17  LR    LR     09 49 47.9
       comp=Z,1μm,18.2s,baz=224,slow=38
CTG    Chitna Glacier    59.86 334  P     P      09 22 39.1  0.0
       baz=120
YUK3   Moose Creek       59.90 335  P     P      09 22 39.5 +0.1
       baz=121
K29M   Barlow Dome       59.90 338  P     P      09 22 39.1 -0.2
       baz=125
BVCY   Beaver Creek      60.39 336  P     P      09 22 42.6 -0.1
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       baz=121
DAWY   Dawson            60.71 338  P     P      09 22 44.3 -0.5
       baz=123
M27K   Edge Creek, AK    60.77 335  P     P      09 22 45.0 -0.3
       baz=120
MCARA  McCarthy VSAT     60.77 334  P     P      09 22 44.8 -0.4
       baz=118
F31M   Tsiigehtchic      60.88 343  P     P      09 22 45.7 -0.1
       baz=131
I29M   Ogilvie Camp,     61.05 339  P     P      09 22 46.0 -1.0
       baz=125
EPYK   Eagle Plains      61.12 341  P     P      09 22 46.9 -0.6
       baz=127
M26K   Nabesna, AK       61.25 335  P     P      09 22 48.5  0.0
       baz=119
G30M   tAoh Zraii Nji    61.34 341  P     P      09 22 49.0  0.0
       baz=128
RES    Resolute Bay      61.39 359  LR    LR     09 52 25.8
       comp=Z,579nm,18.1s,baz=180,slow=39
INK    Inuvik            61.39 343  LR    LR     09 53 16.9
       comp=Z,192nm,19.6s,baz=142,slow=40
INK    Inuvik            61.39 343  P     P      09 22 48.7 -0.5
       baz=131,SNR=5.3
N25K   Chitina, Valde    61.55 334  P     P      09 22 50.0 -0.5
       baz=117
EYAK   Cordova Ski Ar    61.59 333  P     P      09 22 50.5 -0.2
       baz=115
K27K   Chicken           61.70 337  P     P      09 22 51.6 +0.2
       baz=120
EGAK   Eagle             61.74 338  P     P      09 22 51.3 -0.3
       baz=122
KLU    Klutina           62.06 334  P     P      09 22 54.2 +0.2
       baz=115
P23K   Montague Islan    62.11 332  P     P      09 22 54.0 -0.2
       baz=113
A36M   Sachs Harbour     62.12 349  P     P      09 22 52.6 -1.4
       baz=142,SNR=6.3
HARP   HAARP             62.14 335  P     P      09 22 53.6 -0.8
       baz=116
I27K   Kandik River      62.34 339  P     P      09 22 55.6 -0.2
       baz=122
SCRK   Sand Creek        62.40 337  P     P      09 22 56.0 -0.3
       baz=118
M24K   Tolsona, Glenn    62.44 334  P     P      09 22 56.3 -0.2
       baz=115
J26L   Joseph Creek      62.49 337  P     P      09 22 56.6 -0.3
J26L                                IAmb  IAmb   09 22 58.1
       comp=Z,6.8nm,1.1s
J26L   Joseph Creek      62.49 337  P     P      09 22 56.8  0.0
       baz=119
PAX    Paxson            62.52 335  P     P      09 22 56.9 -0.2
       baz=116
RIDG   Independent Ri    62.63 336  P     P      09 22 57.7  0.0
       baz=118
H27K   Steamboat Moun    62.64 339  P     P      09 22 57.8  0.0
       baz=122
I26K   Coal Creek Min    62.74 338  P     P      09 22 57.8 -0.6
       baz=120
SCM    Sheep Creek Mo    62.82 334  P     P      09 22 58.8 -0.2
       baz=114
M23K   Glacier View      62.97 333  P     P      09 22 59.9 -0.1
       baz=114
G27K   Doyon Strip       63.00 340  P     P      09 23 00.1  0.0
       baz=122
K24K   Donnelly Dome     63.02 336  P     P      09 23 00.5 +0.2
       baz=117
PMOR   Pomariorio Ree    63.07 245  eT    T      10 31 26.9
       comp=Z,3.0nm,0.2s
SEW    Seward            63.10 331  P     P      09 23 01.5 +0.7
       baz=111
KNK    Knik Glacier      63.14 333  P     P      09 23 01.4 +0.3
       baz=113
SML    Sawmill           63.24 333  P     P      09 23 02.6 +0.7
       baz=113
O22K   Cooper Landing    63.37 332  P     P      09 23 03.6 +1.0
       baz=111
PMR    Palmer            63.51 333  P     P      09 23 03.9 +0.4
       baz=112
BRSE   Bradley Lake S    63.58 331  P     P      09 23 05.0 +1.0
       baz=110
RC01   Rabbit Creek A    63.59 332  P     P      09 23 04.0 -0.1
       baz=111
BRLK   Bradley Lake      63.66 331  P     P      09 23 05.2 +0.6
PRP    Porcupine Dome    63.71 338  P     P      09 23 04.5 -0.5
       baz=118
E27K   Coleen River      63.72 341  P     P      09 23 04.9 +0.1
       baz=123,SNR=6.8
WAT1   Susitna Watana    63.74 334  P     P      09 23 05.5 +0.4
       baz=113
HDA    Harding Lake      63.75 336  P     P      09 23 04.5 -0.6
       baz=116
G26K   Porcupine Rive    63.79 340  P     P      09 23 05.0 -0.2
       baz=120
KDAK   Kodiak Island     63.86 328  LR    LR     09 51 07.8
       comp=Z,159nm,18.0s,baz=116,slow=36
IL31                     63.89 337  P     P      09 23 05.7 -0.2
IL31                                IAmb  IAmb   09 23 06.5
       comp=Z,10nm,1.2s
ILAR   Eielson Array     63.89 337  P     P      09 23 05.5 -0.5
       comp=Z,5.4nm,1.0s,baz=129,slow=4.4,SNR=36
ILAR                                LR    LR     09 54 13.4
       comp=Z,243nm,19.7s,baz=92,slow=39
       comp=Z,5.4nm,1.0s
M22K   Willow            64.01 333  P     P      09 23 07.1 +0.4
       baz=111
Q20K   Shuyak Island     64.02 329  P     P      09 23 06.1 -0.8
       baz=108
OHAK   Old Harbor        64.07 328  P     P      09 23 06.0 -1.2
       baz=106
CAPN   Captain Cook N    64.13 332  P     P      09 23 07.1 -0.4
       baz=110
POKR   Poker Plat Res    64.25 337  P     P      09 23 07.2 -1.1
       baz=116
MCK    McKinley          64.26 335  P     P      09 23 08.1 -0.4
       baz=113
F26K   Sheenjek River    64.28 340  P     P      09 23 08.2 -0.3
       baz=120
BMAR   Burnt Mountain    64.30 340  P     P      09 23 08.8 +0.1
COLA   College           64.31 337  P     P      09 23 08.9 +0.2
       baz=115
COLA   College           64.31 337  P     P      09 23 07.4 -1.2
COLA                                pP    pP     09 23 17.1 -1.7
TCOL   CIGO, UAF Yank    64.31 337  P     P      09 23 08.3 -0.4
       baz=115
CUT    Chulitna          64.31 334  P     P      09 23 08.5 -0.2
       baz=112
G25K   Bearman Lake      64.50 339  P     P      09 23 09.5 -0.4
       baz=118
O20K   Slope Mountain    64.59 331  P     P      09 23 10.1 -0.6
       baz=108
NEA2   Nenana            64.66 336  P     P      09 23 10.4 -0.7
       baz=114
TRF    Thorofare Moun    64.71 335  P     P      09 23 10.8 -0.8
       baz=112
SKT    Skwentna          64.72 333  P     P      09 23 10.9 -0.5
       baz=110,SNR=5.8
H24K   Noodor Dome       64.73 338  P     P      09 23 11.1 -0.4
       baz=115
F25K   Christian Rive    64.73 340  P     P      09 23 11.3 -0.3
       baz=118,SNR=6.6
G24K   Hadweenzic Riv    64.96 338  P     P      09 23 12.7 -0.2
       baz=116
E25K   Arctic Village    64.96 340  P     P      09 23 12.8 -0.2
       baz=119,SNR=5.2
I23K   Minto, Yukon-K    65.00 337  P     P      09 23 13.1 -0.2
I23K                                IAmb  IAmb   09 23 14.1
       comp=Z,9.4nm,1.0s
I23K   Minto, Yukon-K    65.00 337  P     P      09 23 13.4 +0.2
       baz=114,SNR=9.2
C27K   Jago River        65.14 342  P     P      09 23 13.8 -0.3
       baz=121
BPAW   Bear Paw Mtn.     65.24 335  P     P      09 23 14.2 -0.6
       baz=112
PPLA   Purkeypile        65.32 334  P     P      09 23 14.9 -0.6
       baz=110
Q18K   Katmai Hardscr    65.34 329  P     P      09 23 15.7  0.0
       baz=105
H23K   Yukon River       65.35 337  P     P      09 23 14.8 -0.7
       baz=114
M20K   Styx River        65.40 333  P     P      09 23 15.2 -0.7
M20K                                IAmb  IAmb   09 23 53.4
       comp=Z,17nm,1.4s
M20K   Styx River        65.40 333  P     P      09 23 15.9 -0.1
       baz=108
O19K   Port Alsworth     65.43 331  P     P      09 23 15.5 -0.6
       baz=107
CAST   Castle Rocks      65.45 334  P     P      09 23 15.4 -0.9
       baz=110
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F24K	Squaw Lake	65.47	339	P	P	09 23 16.0	-0.3
	baz=116						
MLY	Manley	65.49	336	P	P	09 23 16.4	-0.1
MLY				IAmb	IAmb	09 23 17.0	
	comp=Z,10nm,1.0s						
MLY	Manley	65.49	336	P	P	09 23 16.5	0.0
	baz=112,SNR=14						
PPT	Papeete	65.58	244	LR	LR	09 45 07.1	
	comp=Z,291nm,20.2s,baz=67,slow=30						
PPT2	Papeete2	65.58	244	*e*S	S	09 32 00.2	-1.3
	comp=Z,82nm,25.0s						
PPT2	Papeete2	65.58	244	*e*LR	LR	09 42 56.5	
	comp=Z,190nm,22.0s						
PPT2				*e*LR	LR	09 43 04.6	
	comp=Z,111nm,25.2s						
C26K	Camden Bay	65.64	342	P	P	09 23 17.1	-0.1
	baz=120						
P18K	Big Mountain,	65.65	330	P	P	09 23 17.4	-0.2
	baz=106						
Q17K	Contact Creek	65.69	328	P	P	09 23 18.0	+0.1
	baz=104						
N19K	Bonanza Creek	65.69	331	P	P	09 23 17.8	-0.1
	baz=107						
CHUM	Lake Minchumin	65.71	335	P	P	09 23 17.6	-0.2
	baz=110						
O18K	Koktuh Hills	65.77	330	P	P	09 23 18.5	+0.2
	baz=106						
R17K	Ugashik Creek	65.79	328	P	P	09 23 18.6	+0.1
	baz=104						
D25K	Kavik River	65.80	341	P	P	09 23 18.6	+0.2
	baz=118						
G23K	Bananza Creek	65.88	338	P	P	09 23 18.9	-0.1
	baz=114						
E24K	Your Creek	65.92	340	P	P	09 23 19.0	-0.2
	baz=116						
L20K	Farewell, AK	65.92	333	P	P	09 23 19.1	-0.1
	baz=108						
M19K	Big River Lodg	65.97	332	P	P	09 23 19.0	-0.6
M19K				IAmb	IAmb	09 23 20.8	
	comp=Z,9.7nm,1.2s						
M19K	Big River Lodg	65.97	332	P	P	09 23 19.5	-0.1
	baz=107						
I21K	Tanana	66.04	336	P	P	09 23 19.7	-0.2
	baz=111						
H22K	Ishtalitna Cre	66.07	337	P	P	09 23 20.1	-0.1
	baz=112						
COLD	Coldfoot	66.16	339	P	P	09 23 20.3	-0.3
	baz=114						
Q16K	King Salmon	66.18	329	P	P	09 23 21.3	+0.4
	baz=104						
L19K	White Mountain	66.26	333	P	P	09 23 21.0	-0.5
	baz=107						
K20K	Telida	66.28	334	P	P	09 23 21.2	-0.4
	baz=108,SNR=5.6						
E23K	Chandalar	66.29	339	P	P	09 23 22.0	+0.3
	baz=115						
R16K	Pilot Point	66.40	327	P	P	09 23 22.4	+0.1
	baz=103						
D24K	Happy Valley	66.50	341	P	P	09 23 22.9	+0.1
	baz=116						
H21K	Melozitna Rive	66.53	336	P	P	09 23 22.8	-0.3
	baz=110						
CHGN	Chignik	66.58	326	P	P	09 23 23.6	+0.1
	baz=101						
SUMG	Summit	66.59	15	*i*P	P	09 23 21.0	-2.8
O17K	Koliganek Bris	66.67	330	P	P	09 23 24.2	+0.2
	baz=104,SNR=5.7						
C24K	Franklin Bluff	66.71	341	P	P	09 23 23.8	-0.3
	baz=116						
P16K	Nushagak River	66.94	329	P	P	09 23 26.3	+0.6
	baz=103						
F22K	John River	66.97	338	P	P	09 23 26.0	+0.2
	baz=112						
TTA	Tatalina	66.99	333	P	P	09 23 26.0	-0.2
	baz=106						
D23K	Nanushuk River	67.03	340	P	P	09 23 26.3	+0.1
	baz=114						
E22K	Anaktuvuk Pass	67.08	339	P	P	09 23 26.5	-0.1
	baz=112						
G21K	Allakaket	67.10	337	P	P	09 23 26.5	-0.2
	baz=110						
O16K	Kokwok River B	67.12	329	P	P	09 23 26.9	0.0
	baz=103						
NEEM	North Greenlan	67.22	9	*i*P	P	09 23 25.8	-1.9
F21K	Alatna River	67.34	338	P	P	09 23 28.7	+0.5
	baz=110,SNR=16						
N16K	Nishlik Lake	67.64	330	P	P	09 23 30.5	+0.3
	baz=103						
TBI	Tubuai	67.92	238	*e*LR	LR	09 44 05.2	
	comp=Z,616nm,30.5s						
TBI				*e*LR	LR	09 44 08.2	
	comp=Z,2μm,22.2s						
TBI	Tubuai	67.92	238	*e*T	T	10 37 14.4	
	comp=Z,3.5nm,0.3s						
BORG	Borgarnes	69.33	25	LR	LR	09 53 02.8	
	comp=Z,64nm,19.1s,baz=270,slow=35						
A21K	Barrow	69.78	342	P	P	09 23 43.0	-0.3
	baz=109						
ALE	Alert	70.16	4	P	P	09 23 43.1	-2.4
ALE				pP	pP	09 23 53.5	-2.3
RDOG	Red Dog Mine	71.03	338	P	P	09 23 50.1	-1.0
RDOG				IAmb	IAmb	09 23 52.8	
	comp=Z,11nm,1.4s						
RDOG	Red Dog Mine	71.03	338	P	P	09 23 51.3	+0.3
	baz=102						
ANM	Nome	71.40	334	P	P	09 23 53.6	+0.2
	baz=98						
BBTS	Babate	71.81	79	LR	LR	09 52 14.2	
	comp=Z,286nm,19.6s,baz=263,slow=34						
TNA	Tin City	72.60	335	P	P	09 24 01.3	+0.8
	baz=96						
JMIC	Jan Mayen	75.00	20	LR	LR	09 58 11.5	
	comp=Z,252nm,19.7s,baz=274,slow=37						
EKA	Eskdalemuir Ar	77.86	36	LR	LR	09 59 40.7	
	comp=Z,143nm,18.4s,baz=300,slow=37						
ESDC	Sonseca Array	79.26	52	P	P	09 24 36.4	-2.7
	comp=Z,2.3nm,1.0s,baz=293,slow=6.5,SNR=6.0						
ESDC				LR	LR	09 54 50.9	
	comp=Z,129nm,21.2s,baz=306,slow=32						
	comp=Z,2.3nm,1.0s						
MDT	Midelt	79.80	59	LR	LR	09 54 41.8	
	comp=Z,253nm,20.9s,baz=303,slow=32						
PMSA	Palmer Station	80.49	169	LR	LR	09 52 27.3	
	comp=Z,100nm,20.7s,baz=308,slow=30						
SPITS	Spitsbergen Ar	80.52	12	LR	LR	10 02 26.8	
	comp=Z,607nm,19.5s,baz=249,slow=37						
BILL	Bilibino	82.49	338	P	P	09 24 55.9	+0.2
BILL				IAmb	IAmb	09 24 57.6	
	comp=Z,14nm,1.1s						
NOA	NORSAR Array B	84.20	29	LR	LR	10 00 09.7	
	comp=Z,146nm,21.3s,baz=285,slow=34						
TIC	Toumodi	84.47	84⇑	*e*P	P	09 25 06.2	-0.7
	comp=Z,7.6nm,0.2s						
LIC	Lamto	84.55	85⇑	*i*P	P	09 25 06.6	-0.7
	comp=Z,21nm,0.8s						
DBIC	Dimbokro	84.62	84	P	P	09 25 06.9	-0.8
	comp=Z,1.9nm,0.5s,baz=284,slow=4.2,SNR=5.4						
DBIC				LR	LR	09 58 12.0	
	comp=Z,143nm,21.6s,baz=298,slow=33						
	comp=Z,1.9nm,0.5s						
KIC	Kosan Boka	84.80	85⇓	*i*P	P	09 25 08.2	-0.4
	comp=Z,4.7nm,0.6s						
HFS	Hagfors	85.65	29	LR	LR	10 00 40.4	
	comp=Z,141nm,21.8s,baz=292,slow=34						
ARCES	ARCESS Array B	86.42	18	LR	LR	10 04 07.1	
	comp=Z,210nm,18.7s,baz=288,slow=36						
GERES	GERESS Array B	89.41	40	P	P	09 25 28.7	-1.7
	comp=Z,0.3nm,0.6s,baz=187,slow=1.1,SNR=3.6						
	comp=Z,0.3nm,0.6s						
TORD	Torodi Ar. Bea	89.46	77	P	P	09 25 28.5	-2.6
	comp=Z,0.6nm,0.8s,baz=303,slow=5.4,SNR=4.5						
TORD				LR	LR	10 03 16.7	
	comp=Z,137nm,19.6s,baz=282,slow=34						
	comp=Z,0.6nm,0.8s						
SEY	Seymchan	89.81	336	LR	LR	10 13 15.1	
	comp=Z,99nm,18.1s,baz=340,slow=41						
KEST	Kesra	90.41	53	LR	LR	10 00 59.6	
	comp=Z,62nm,20.0s,baz=284,slow=32						
FINES	FINESS Array B	90.63	25	LR	LR	10 07 21.4	
	comp=Z,191nm,18.1s,baz=274,slow=36						
VRAC	Vranov	91.03	39	LR	LR	10 07 40.5	
	comp=Z,159nm,18.2s,baz=294,slow=37						
TIXI	Tiksi	91.14	348	LR	LR	10 12 40.6	
	comp=Z,172nm,18.6s,baz=176,slow=40						
MA2	Magadan	92.19	333	LR	LR	10 10 59.7	
	comp=Z,93nm,19.2s,baz=56,slow=38						
VAE	Valguarnera	93.74	50	LR	LR	10 02 54.3	
	comp=Z,140nm,18.1s,baz=324,slow=32						
NRIK	Noril'sk	97.54	1	LR	LR	10 13 09.9	
	comp=Z,430nm,20.2s,baz=360,slow=37						
AKASG	Malin Array Be	97.67	34	LR	LR	10 13 22.2	
	comp=Z,128nm,18.0s,baz=346,slow=38						
MLR	Muntele Rosu	98.39	39	LR	LR	10 07 20.8	
	comp=Z,124nm,20.0s,baz=306,slow=34						
YAK	Yakutsk	98.44	342	LR	LR	10 17 31.3	
	comp=Z,159nm,19.8s,baz=84,slow=40						
DZM	Mont Dzumac	106.50	251	*e*LR	LR	10 02 01.9	
	comp=Z,63nm,34.0s						
MKAR	Makanchi Array	119.84	5	PKP	PKPdf	09 31 21.9	-2.0
	comp=Z,0.3nm,0.7s,baz=13,slow=1.9,SNR=2.1						
HHC	Hu-ho-hao-te	122.23	340	*e*P	PKiKP	09 31 30.5	+1.6
WMQ	Urumqi	123.11	1	*e*P	PKPdf	09 31 30.4	+0.1
WMQ				LR	LR		
	comp=N,200nm,16.1s						
WMQ				LR	LR		
	comp=E,260nm,18.1s						
WMQ				LR	LR		
	comp=Z,300nm,22.1s						
NJ2	Nanjing	126.65	328	*e*P	PKPdf	09 31 37.4	+0.1
NJ2				pP	sPKPdf	09 31 53.9	+2.3
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
WRA	Warramunga Arr	136.30	255	PKP	PKiKP	09 31 58.4	+0.8
	comp=Z,1.2nm,0.8s,baz=82,slow=1.7,SNR=5.9						
ASAR	Alice Springs	136.48	250	PKP	PKPdf	09 31 56.7	+0.6
	comp=Z,3.5nm,1.3s,baz=108,slow=2.1,SNR=2.2						
PZH	PanZhiHua	138.55	343	PKP	PKPdf	09 31 57.9	-2.2
CMAR	Chiang Mai Arr	146.97	343	PKPbc	PKPbc	09 32 17.3	+0.4
	comp=Z,2.9nm,0.5s,baz=333,slow=3.7,SNR=24						

NOU ***12*** *09:23:00.9, 37°.85S×177°.62E, h74^{km}, MLv4.7/14, Off E. Coast of N. Island, N.Z.*

WEL ***12*** *09:23:00, 37°.79S×177°.55E, h56^{km}, ML4.2, Mw4.4, Moment Tensor Solution. s5 Moment tensor: Scale 10^{15} Nm; M_{rr}2.74; $M_{\theta\theta}$-0.13; $M_{\phi\phi}$-2.62; $M_{r\theta}$0.65; $M_{\theta\phi}$-0.81; $M_{\phi r}$3.64; Fault plane solution: $M_0$4.64000×10^{15} NP1: ϕ_s202.00000°, δ19.00000°, λ100.00000°. NP2: ϕ_s11.00000°, δ71.00000°, λ87.00000°. Principal axes: T -468.2400, Plg64.0000°, Azm276.0000°; N 8.8800, Plg3.0000°, Azm12.0000°; P 459.3600, Plg26.0000°, Azm104.0000°;*

WEL ***12*** *09:23:02.9±0.3, 38°S±3°×17°8E±°, h28^{km}±3^{km}, M4.2/48, ML4.5/48, MLv4.2/48 Error ellipse: s-maj=0.0km s-min=0.0km az=40.7, confirmed*

NEIC ***12*** *09:23:02.6±1.6, 37°.84S±0°.04×177°.60E±0°.06, h47^{km}±8^{km}, mb4.8/24, Error ellipse: s-maj=6.7km s-min=6.2km az=100.0*

IDC ***12*** *09:23:02.4±1.5, 38°.06S×177°.61E, h64^{km}±8^{km}, mb4.3/4, mbtmp4.5/5, MS3.6/7, Error ellipse: s-maj=30.9km s-min=24.3km az=121.0*

ISC 12 09:23:02.9±0.5**, 37°.81S**±0°.04×**177°.57E**±0°.03**, h58**^{km}±3^{km}**, n212,** σ1^{s}**49**/227**, mb4.7**/17**, MS3.5**/6**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUGZ	Raukumara Rang	0.18	150	P	Pn	09 23 10.1	-2.0
RUGZ				S	Sn	09 23 15.5	-3.3
HAZ	Te Kaha	0.18	72	P	Pn	09 23 10.1	-1.8
HAZ				S	Sn	09 23 15.4	-3.1
PKGZ	Pakihiroa	0.41	101	P	Pn	09 23 12.3	-1.6
PKGZ				S	Sn	09 23 23.0	+1.3
WIZ	White Island	0.41	313	P	Pn	09 23 12.6	-1.1
WSRZ	White Island S	0.43	313	P	Pn	09 23 13.0	-0.9
WHRZ	Whale Island	0.47	265	P	Pn	09 23 14.3	-0.1
TWGZ	Tauwhareparae	0.49	138	P	Pn	09 23 14.5	-0.1
TWGZ				S	Sn	09 23 24.0	+0.8
MWZ	Matawai	0.52	183	P	Pn	09 23 14.4	-0.6
MWZ				S	Sn	09 23 23.0	-0.8
URZ	Urewera	0.57	219	P	Pn	09 23 15.1	-0.4
	2μm,0.3s,baz=351,slow=4.2,SNR=4664						
URZ				S	Sn	09 23 24.9	+0.3
	7μm,0.3s,baz=276,slow=19,SNR=27						
URZ	Urewera	0.57	219	P	Pn	09 23 15.4	-0.1
URZ	Urewera	0.57	219	P	Pn	09 23 15.2	-0.3
URZ				S	Sn	09 23 24.2	-0.5
PUZ	Puketiti	0.60	116	P	Pn	09 23 15.6	-0.3
PUZ				S	Sn	09 23 25.7	+0.3
MXZ	Matakaoa Point	0.64	67		Pn	09 23 15.4	-0.9
MXZ	Matakaoa Point	0.64	67	P	Pn	09 23 15.5	-0.7
MXZ	Matakaoa Point	0.64	67	P	Pn	09 23 15.5	-0.7
TKGZ	Te Karaka	0.66	161	P	Pn	09 23 17.1	+0.5
TKGZ				S	Sn	09 23 29.3	+2.7
WMGZ	Waiomatatini S	0.67	91	P	Pn	09 23 16.5	-0.2
WMGZ				S	Sn	09 23 28.0	+1.3
RAGZ	Rawiri	0.69	190	P	Pn	09 23 17.5	+0.4
RAGZ				S	Sn	09 23 28.3	+1.0
EDRZ	Edgecumbe	0.72	246	P	Pn	09 23 17.4	+0.1
MARZ	Manawahe	0.73	256	P	Pn	09 23 17.1	-0.2
OPRZ	Ohinepanea	0.80	267	P	Pn	09 23 18.0	-0.3
CNGZ	Carnagh Statio	0.84	143	P	Pn	09 23 19.0	+0.2
RIGZ	Rimuhau	0.91	170	P	Pn	09 23 19.9	+0.2
MUGZ	Murupara	0.91	223	P	Pn	09 23 19.7	0.0
RTZ	Ruatahuna	0.93	210		Pn	09 23 19.6	-0.3
RTZ	Ruatahuna	0.93	210	P	Pn	09 23 19.8	-0.1
MKRZ	Makatiti	0.93	249	P	Pn	09 23 20.6	+0.6
TARZ	Mount Tarawera	0.94	243	P	Pn	09 23 20.6	+0.4
LIRZ	Lichensteins R	0.95	258	P	Pn	09 23 20.6	+0.4
RRRZ	Republican Roa	0.98	237	P	Pn	09 23 20.9	+0.2
SNGZ	Shannon Statio	0.98	190	P	Pn	09 23 21.8	+1.1
OMRZ	Omania	0.99	252	P	Pn	09 23 21.0	+0.2
TGRZ	Tauranga	1.04	274	P	Pn	09 23 21.1	-0.2
HLRZ	Highlands Stat	1.05	245	P	Pn	09 23 22.1	+0.5
KARZ	Kaharoa	1.07	258	P	Pn	09 23 21.9	+0.2
NGRZ	Ngongotaha	1.13	255	P	Pn	09 23 23.1	+0.6
UTU	Utuhina	1.14	251	P	Pn	09 23 23.8	+1.0
PRRZ	Plateau Road	1.15	233	P	Pn	09 23 23.1	+0.2
HSRZ	Hossack Road	1.16	244	P	Pn	09 23 23.5	+0.6
HRRZ	Handcock Road	1.17	240	P	Pn	09 23 23.4	+0.4
RAHZ	Arahi	1.17	199	P	Pn	09 23 23.8	+0.7
MYRZ	Mayor Island	1.18	296	P	Pn	09 23 22.9	-0.3
MTHZ	Maungataniwha	1.19	209	P	Pn	09 23 23.3	0.0
KNZ	Kokohu	1.21	176	P	Pn	09 23 23.3	-0.4
ALRZ	Allen Road	1.22	232	P	Pn	09 23 24.0	+0.2
GRRZ	Galatos Road	1.27	245	P	Pn	09 23 25.1	+0.7
KMRZ	Kaimai	1.29	268	P	Pn	09 23 24.6	-0.1
WHHZ	Waihua	1.29	192	P	Pn	09 23 25.6	+0.9
WPRZ	Whakapapatarin	1.31	237	P	Pn	09 23 25.5	+0.5
MRHZ	Matea Rd	1.36	221	P	Pn	09 23 25.9	+0.2
MHGZ	Mahia Peninsul	1.36	169	P	Pn	09 23 25.5	-0.2
NMHZ	Naumai	1.42	205	P	Pn	09 23 27.4	+1.0
ARHZ	Aropaoanui	1.52	197	P	Pn	09 23 28.6	+0.8
WHTZ	Whakaora	1.53	236	P	Pn	09 23 28.9	+0.9
KUTZ	Kaahu Road	1.53	243	P	Pn	09 23 28.6	+0.6
HATZ	Hinemaiaia	1.58	227	P	Pn	09 23 29.0	+0.3
BKZ	Black Stump Fm	1.59	212		Pn	09 23 28.9	+0.1
BKZ	Black Stump Fm	1.59	212	P	Pn	09 23 29.0	+0.1
BKZ	Black Stump Fm	1.59	212	P	Pn	09 23 28.9	+0.1
TOZ	Tahuroa Road	1.64	272	Pn	Pn	09 23 28.6	-0.8
TOZ	Tahuroa Road	1.64	272	P	Pn	09 23 29.4	0.0
TLZ	Tolley Road	1.68	252	P	Pn	09 23 30.4	+0.3
WATZ	Wairara	1.70	238	P	Pn	09 23 30.8	+0.5
RATZ	Rangitukua	1.76	233	P	Pn	09 23 31.8	+0.7
MCHZ	McNeill Hill	1.77	202	P	Pn	09 23 32.0	+0.9
RITZ	Rihia Road	1.78	229	P	Pn	09 23 32.2	+0.9
KUZ	Kuaotunu	1.82	305	P	Pn	09 23 31.0	-0.8
KUZ	Kuaotunu	1.82	305	P	Pn	09 23 31.1	-0.7
KWHZ	Kaweka Forest	1.84	209	P	Pn	09 23 33.1	+0.8
KATZ	Kakaramea	1.87	231	P	Pn	09 23 33.5	+0.8
CKHZ	Cape Kidnapper	1.88	192	P	Pn	09 23 32.8	+0.1
TMVZ	Te Maari	1.96	228	P	Pn	09 23 34.5	+0.7
NTVZ	North Tongarir	1.96	229	P	Pn	09 23 34.6	+0.7
ETVZ	East Tongariro	1.97	227	P	Pn	09 23 33.8	-0.2
KRVZ	Karewarewa	1.98	229	P	Pn	09 23 34.9	+0.8
OTVZ	Oturere	2.01	227	P	Pn	09 23 35.3	+0.7
NNVZ	North Ngauruho	2.02	229	P	Pn	09 23 35.6	+0.8
WTVZ	West Tongariro	2.02	229	P	Pn	09 23 35.7	+0.9
SNVZ	South Ngauruho	2.04	227	P	Pn	09 23 35.7	+0.7
BHHZ	Black Hill Sta	2.05	215	P	Pn	09 23 35.3	+0.3
KAHZ	Kahuranaki	2.05	195	P	Pn	09 23 34.9	-0.2
NGZ	Ngauruhoe	2.06	228	P	Pn	09 23 36.1	+0.8
TUVZ	Tukino	2.09	225	P	Pn	09 23 36.2	+0.6
TWVZ	Taurewa	2.09	232	P	Pn	09 23 36.3	+0.7
MOVZ	Moawhango	2.13	221	P	Pn	09 23 36.4	+0.2
WHVZ	Whangaehu Hut	2.14	226	P	Pn	09 23 37.0	+0.6
FWVZ	Far West T-bar	2.14	227	P	Pn	09 23 37.0	+0.6
DRZ	Dome Shelter	2.15	226	P	Pn	09 23 38.9	+2.3
WNVZ	Wahianoa	2.16	225	P	Pn	09 23 37.1	+0.5
TRVZ	Turoa	2.17	226	P	Pn	09 23 37.4	+0.5
WIAZ	Waiheke Island	2.19	297	P	Pn	09 23 36.9	0.0
HIZ	Hauiti	2.25	251		Pn	09 23 38.3	+0.7
HIZ	Hauiti	2.25	251	P	Pn	09 23 38.8	+1.1
HIZ	Hauiti	2.25	251	P	Pn	09 23 38.9	+1.2
ETAZ	East Tamaki Re	2.27	291	P	Pn	09 23 38.4	+0.4
MTVZ	Mangateitei	2.27	226	P	Pn	09 23 38.7	+0.6
PKVZ	Pokaka	2.28	229	P	Pn	09 23 39.2	+1.0
PXZ	Pawanui	2.28	194	P	Pn	09 23 36.8	-1.3
GRZ	Great Barrier	2.30	312	P	Pn	09 23 38.1	-0.3
PNHZ	Pukenui	2.35	207	P	Pn	09 23 39.0	-0.2
MBAZ	Motutapu North	2.37	295	P	Pn	09 23 39.8	+0.5
WPHZ	Waipukurau	2.41	201	P	Pn	09 23 39.4	-0.6
EPAZ	Eden Park BICE	2.44	292	P	Pn	09 23 41.1	+0.9
AWAZ	Awhitu Peninsu	2.44	287	P	Pn	09 23 41.0	+0.6
HBAZ	Herne Bay Bore	2.46	292	P	Pn	09 23 41.5	+1.0
WTAZ	Waiatarua	2.54	289	P	Pn	09 23 42.6	+0.9
PRHZ	Porangahau	2.56	196	P	Pn	09 23 40.5	-1.4
VRZ	Vera Road	2.56	238	P	Pn	09 23 43.6	+1.6
TSZ	Takapari Road	2.57	209	P	Pn	09 23 41.4	-0.7
RVAZ	Riverhead Bore	2.60	293	P	Pn	09 23 43.3	+0.8
DVHZ	Dannevirke	2.71	203	P	Pn	09 23 42.8	-1.2
WAZ	Wanganui	2.80	225	P	Pn	09 23 46.7	+1.5
POWZ	Post Office Ro	2.93	208	P	Pn	09 23 46.4	-0.6
LREZ	Lake Rotokare	2.97	235	P	Pn	09 23 50.0	+2.4
DREZ	Durham Road	2.98	241	P	Pn	09 23 50.6	+3.0
PRWZ	Pori Road	3.01	204	P	Pn	09 23 47.3	-0.8
BFZ	Birch Farm	3.04	199		Pn	09 23 47.5	-1.1
BFZ	Birch Farm	3.04	199	P	Pn	09 23 47.1	-1.5
BFZ	Birch Farm	3.04	199	P	Pn	09 23 46.9	-1.7
NEZ	North Egmont	3.09	241	P	Pn	09 23 52.3	+3.1
PKE	Pukeiti	3.13	243	P	Pn	09 23 52.7	+2.9
KHEZ	Kahui Hut	3.15	241	P	Pn	09 23 53.0	+2.8
WCZ	Waipu Caves	3.19	305	P	Pn	09 23 50.9	+0.3
TIWZ	Tintock	3.23	203	P	Pn	09 23 50.4	-0.8
MRZ	Mangatainoka R	3.24	208		Pn	09 23 50.1	-1.0
MRZ	Mangatainoka R	3.24	208	P	Pn	09 23 49.6	-1.6
NBEZ	Newall Road No	3.24	242	P	Pn	09 23 53.9	+2.6
CPWZ	Castlepoint	3.27	198	P	Pn	09 23 50.7	-1.0
NMEZ	Namu Road	3.30	240	P	Pn	09 23 55.2	+3.1
HOWZ	Holdsworth Sta	3.47	207	P	Pn	09 23 52.3	-2.1
OGWZ	Otaki Gorge	3.53	211	P	Pn	09 23 53.7	-1.5
TMWZ	Te Maipa	3.54	201	P	Pn	09 23 53.0	-2.3
KIW	Kapiti Island	3.68	213	P	Pn	09 23 55.9	-1.3
MTW	Mount Morrison	3.70	205	P	Pn	09 23 55.1	-2.5
CAW	Cannon Point	3.82	210	P	Pn	09 23 56.8	-2.3
TRWZ	Traveller	3.86	201	P	Pn	09 23 57.5	-2.3
WEL	Wellington	4.09	211	P	Pn	09 24 00.6	-2.2
DUWZ	D'Urville Isla	4.11	222	P	Pn	09 24 01.8	-1.4
SNZO	South Karori	4.13	211	P	Pn	09 24 01.4	-2.1
TCW	Tory Channel	4.24	216	P	Pn	09 24 02.6	-2.4
TUWZ	Tuamarina	4.57	217		Pn	09 24 06.8	-2.6
TUWZ	Tuamarina	4.57	217	P	Pn	09 24 07.1	-2.3
NNZ	Nelson	4.70	222	P	Pn	09 24 09.4	-1.7
TKNZ	Takaka Hill	4.80	227		Pn	09 24 10.9	-1.8
TKNZ	Takaka Hill	4.80	227	P	Pn	09 24 12.2	-0.5
BSWZ	Blackbirch Sta	4.83	215	P	Pn	09 24 10.8	-2.1
QRZ	Quartz Range	4.93	231	P	Pn	09 24 13.0	-1.4
QRZ	Quartz Range	4.93	231	P	Pn	09 24 12.9	-1.5
MRNZ	Matariki Terra	5.16	225	P	Pn	09 24 15.3	-2.3
THZ	Tophouse	5.33	221		Pn	09 24 18.4	-1.5
THZ	Tophouse	5.33	221	P	Pn	09 24 17.6	-2.3
KHZ	Kahutara	5.54	213	P	Pn	09 24 19.8	-2.9
DSZ	Denniston Nort	5.93	227	P	Pn	09 24 26.9	-1.1
LTZ	Lake Taylor	6.40	218		Pn	09 24 31.8	-2.8
INZ	Inchbonnie	6.78	222		Pn	09 24 38.3	-1.4
INZ	Inchbonnie	6.78	222	P	Pn	09 24 37.9	-1.8
CTZ	Chatham Island	7.38	145	P	Pn	09 24 46.6	-1.3
CTZ	Chatham Island	7.38	145	P	Pn	09 24 46.6	-1.3
RPZ	Rata Peaks	7.69	218	P	Pn	09 24 49.0	-3.2
	10nm,0.4s,baz=281,slow=2.4,SNR=20						
RPZ				S	Sn	09 26 12.0	-5.9
	26nm,0.3s,baz=148,slow=19,SNR=14						
RPZ	Rata Peaks	7.69	218	P	Pn	09 24 48.8	-3.4
ODZ	Otahua Downs	8.90	214	P	Pn	09 25 04.1	-4.6
JCZ	Jackson Bay	9.12	224	P	Pn	09 25 08.0	-3.8
MSZ	Milford Sound	9.98	224	P	Pn	09 25 22.9	-0.5
DCZ	Deep Cove	10.91	222	Pn	Pn	09 25 35.3	-0.9
PYZ	Puysegur Point	11.62	221	P	Pn	09 25 44.2	-1.7
DZM	Mont Dzumac	18.39	325	LR	LR	09 33 22.2	
	comp=Z,83nm,18.1s,baz=196,slow=33						
TAU	Tasmania Unive	23.53	248	P	P	09 28 08.1	+0.3
TAU				IAmb	IAmb	09 28 18.2	
	comp=Z,50nm,1.4s						
TOO	Toolangi	25.32	261	P	P	09 28 26.5	+2.3
EIDS	Eidsvold	25.65	291	P	P	09 28 30.2	+2.9
FUNA	Funafuti	29.19	3	P	P	09 28 59.4	+0.4
STKA	Stephens Creek	29.98	270	P	P	09 29 08.3	+2.4
	comp=Z,2.4nm,0.7s,baz=118,slow=11,SNR=5.3						
STKA				LR	LR	09 39 51.2	
	comp=Z,53nm,21.8s,baz=43,slow=34						
STKA	Stephens Creek	29.98	270	P	P	09 29 07.2	+1.3
CTA	Charters Tower	32.39	294	LR	LR	09 42 27.5	
	comp=Z,60nm,18.1s,baz=104,slow=36						
CTAO	Charters Tower	32.39	294	P	P	09 29 29.2	+2.0
CTAO				IAmb	IAmb	09 29 59.4	
	comp=Z,12nm,1.1s						
HNR	Honiara	32.42	326	LR	LR	09 39 47.4	
	comp=Z,570nm,19.8s,baz=177,slow=31						
BBOO	Buckleboo	34.03	266	P	P	09 29 42.0	+0.6
DRV	Dumont d'Urvil	35.90	204	P	P	09 29 57.9	+0.9
DRV				pP	pP	09 30 12.3	+0.7
COEN	Coen	38.66	299	P	P	09 30 22.1	+1.1
COEN				IAmb	IAmb	09 30 24.7	
	comp=Z,7.0nm,0.8s						
AS31	Alice Springs	39.73	278	P	P	09 30 30.1	+0.1
ASAR	Alice Springs	39.73	278	P	P	09 30 29.6	-0.4
	comp=Z,3.3nm,0.6s,baz=130,slow=8.8,SNR=83						
ASAR				PcP	PcP	09 32 33.1	-2.4
	comp=Z,0.4nm,0.5s,baz=120,slow=3.8,SNR=2.1						
ASAR				ScP	ScP	09 36 16.0	-3.4
	comp=Z,0.2nm,0.6s,baz=115,slow=4.2,SNR=1.9						
ASAR				LR	LR	09 47 06.0	
	comp=Z,78nm,18.2s,baz=118,slow=36						
	comp=Z,3.3nm,0.6s						
ASAR	Alice Springs	39.73	278	P	P	09 30 29.9	0.0
FORT	Forrest	41.11	265	P	P	09 30 41.5	+0.4
WB2	Warramunga Arr	41.41	283	P	P	09 30 44.3	+0.5
WB2				IAmb	IAmb	09 30 46.3	
	comp=Z,6.4nm,0.6s						
WRAB	Tennant Creek	41.41	283	P	P	09 30 44.2	+0.3
WRAB				IAmb	IAmb	09 30 46.3	
	comp=Z,6.2nm,0.6s						
WRAB	Tennant Creek	41.41	283	P	P	09 30 44.1	+0.3
WRAB				pP	pP	09 30 58.2	-0.4
WRA	Warramunga Arr	41.42	283	P	P	09 30 44.2	+0.4
	comp=Z,3.5nm,0.4s,baz=124,slow=7.2,SNR=52						
WRA				LR	LR	09 47 59.8	
	comp=Z,50nm,18.3s,baz=132,slow=36						
	comp=Z,3.5nm,0.4s						
WRA	Warramunga Arr	41.42	283	P	P	09 30 44.4	+0.6
WB0	Warramunga Arr	41.48	283	P	P	09 30 44.6	+0.3
WB0				IAmb	IAmb	09 30 46.8	
	comp=Z,8.6nm,0.4s						
CCD	Concordia, Ant	44.82	197	P	P	09 31 14.4	+3.4
CCD				pP	pP	09 31 29.0	+2.9
CCD				sP	sP	09 31 35.0	+2.2
CASY	Casey	46.89	211	P	P	09 31 27.2	+0.2
MTN	Manton Dam	48.15	288	P	P	09 31 37.5	+0.2
MTN				IAmb	IAmb	09 31 39.9	
	comp=Z,20nm,1.3s						
NWAO	Narrogin (SRO)	48.70	257	P	P	09 31 40.7	-0.8
NWAO	Narrogin (SRO)	48.70	257	P	P	09 31 40.8	-0.8
NWAO				sP	sP	09 32 01.1	-2.1
FITZ	Fitzroy Crossi	49.23	279	P	P	09 31 45.6	-0.1
MORW	Morawa	51.27	261	P	P	09 32 00.4	-0.6
PSA00	Pilbara Seismi	51.91	271	P	P	09 32 04.9	-1.0
PSA00				IAmb	IAmb	09 32 32.7	
	comp=Z,11nm,0.9s						
MBWA	Marble Bar	52.22	271	P	P	09 32 06.5	-1.7
MBWA				IAmb	IAmb	09 32 17.3	
	comp=Z,18nm,1.3s						
MBWA	Marble Bar	52.22	271	P	P	09 32 06.9	-1.2
MBWA				pP	pP	09 32 21.8	-1.7
QSPA	South Pole Qui	52.31	180	P	P	09 32 10.5	+2.0
QSPA				IAmb	IAmb	09 32 22.0	
	comp=Z,7.7nm,0.6s						
FAKI	Fak Fak	54.05	299	P	P	09 32 21.4	-0.3
FAKI				IAmb	IAmb	09 32 36.8	
	comp=Z,8.3nm,1.0s						

KAPI	Kappang	61.75	287	LR	LR	10 01 13.7	
	comp=Z,40nm,18.5s,baz=158,slow=37						
SNAA	Sanae	70.82	180	P	P	09 34 13.2	+0.2
SNAA				IAmb	IAmb	09 34 50.5	
	comp=Z,16nm,1.5s						
KSRS	Korea Array	87.80	323	P	P	09 35 46.2	+0.8
	comp=Z,2.9nm,0.6s,baz=142,slow=5.6,SNR=15						
	comp=Z,2.9nm,0.6s						
CMAR	Chiang Mai Arr	92.51	291	P	P	09 36 08.0	0.0
	comp=Z,2.9nm,0.6s,baz=146,slow=3.3,SNR=11						
	comp=Z,2.9nm,0.6s						
MKAR	Makanchi Array	119.58	308	PKP	PKPdf	09 41 43.0	-2.6
	comp=Z,0.3nm,0.6s,baz=127,slow=1.7,SNR=3.0						
KURBB	Kurchatov Arra	123.36	311	PKP	PKPdf	09 41 50.2	-2.5
	comp=Z,0.4nm,0.4s,baz=106,slow=2.1,SNR=1.9						
BVAR	Borovoye Array	128.89	312	PKP	PKPdf	09 42 02.0	-1.3
	comp=Z,0.4nm,0.6s,baz=112,slow=2.4,SNR=2.3						
ARCES	ARCESS Array B	144.84	343	PKPbc	PKPab	09 42 29.0	-2.3
	comp=Z,4.8nm,0.8s,baz=20,slow=3.9,SNR=5.0						
FINES	FINESS Array B	150.44	332	PKPbc	PKPbc	09 42 45.4	-1.5
	comp=Z,1.9nm,0.6s,baz=39,slow=3.3,SNR=13						
BRTR	Keskin Array B	151.93	285	PKPbc	PKPbc	09 42 49.6	-1.7
	comp=Z,1.1nm,0.7s,baz=163,slow=4.9,SNR=7.1						
AKASG	Malin Array Be	154.14	310	PKPab	PKPab	09 43 08.2	-1.4
	comp=Z,0.4nm,0.4s,baz=53,slow=4.6,SNR=6.5						
TORD	Torodi Ar. Bea	155.16	190	PKPbc	PKPbc	09 42 59.2	
	comp=Z,0.6nm,0.4s,baz=146,slow=3.1,SNR=8.7						
TORD				PKPab	sPKPdf	09 43 13.7	+0.4
	comp=Z,1.2nm,0.6s,baz=173,slow=3.0,SNR=5.7						

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*IDC **12** 09:37:37.5±1.1, 38°.51N×103°.80E, h0^{km}, mb3.6/6, mbtmp3.6/8, ML3.4/2, MS3.3/3, Error ellipse: s-maj=34.5km s-min=18.5km az=68.0*

ISC 12 09:37:42.5±1.2**, 38°.5N**±0°.2×**103°.7E**±0°.2**, h35^{km}, n10, σ0^{s}.64**/8**, mb3.5**/5**, Gansu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	9.52	11	Pn	Pn	09 39 57.4	+0.2
	0.4nm,0.3s,baz=189,slow=15,SNR=13						
SONM				Pg		09 40 32.2	
	1.1nm,0.3s,baz=198,slow=16,SNR=4.3						
SONM				Lg	Lg	09 42 38.8	
	0.9nm,0.3s,baz=200,slow=29,SNR=4.5						
SONM				LR	LR	09 43 55.4	
	comp=Z,95nm,18.5s,baz=184,slow=40						
	1.5nm,0.6s						
MKAR	Makanchi Array	17.76	305	P	P	09 41 46.8	-0.6
	0.1nm,0.3s,baz=106,slow=14,SNR=3.9						
	0.4nm,0.5s						
ZALV	Zalesovo Beam	20.13	326	P	P	09 42 13.6	+0.4
	1.6nm,0.7s,baz=132,slow=10,SNR=6.9						
	1.6nm,0.7s						
KURBB	Kurchatov Arra	21.53	312	P	P	09 42 28.2	-0.1
	1.5nm,0.2s,baz=118,slow=11,SNR=4.5						
	1.5nm,0.2s						
DAV	Davao City (W)	37.02	142	LR	LR	10 00 20.2	
	comp=Z,32nm,18.4s,baz=132,slow=37						
PETK	Petropavlovsk-	39.39	50	LR	LR	10 01 41.1	
	comp=Z,70nm,21.2s,baz=25,slow=37						
FINES	FINESS Array B	51.35	323	P	P	09 46 43.5	+0.4
	0.8nm,0.6s,baz=98,slow=7.9,SNR=5.9						
	0.8nm,0.6s						
ILAR	Eielson Array	63.35	27	P	P	09 48 07.0	-0.7
	0.2nm,0.7s,baz=293,slow=3.9,SNR=4.6						
	0.2nm,0.7s						
WRA	Warramunga Arr	64.86	148	P	P	09 48 17.6	-0.5
	0.4nm,1.0s,baz=340,slow=6.8,SNR=2.1						
	0.4nm,1.0s						
ASAR	Alice Springs	68.02	150	P	P	09 48 39.1	+0.8
	0.2nm,0.4s,baz=343,slow=6.4,SNR=6.6						
	0.2nm,0.4s						

ROM 12 09:43:52.8±0.1**, 42°.747N**±0°.008×**13°.188E**±0°.010**, h10^{km}, ML1.3**/6**, Error ellipse: s-maj=0.9km s-min=0.7km az=22.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	Arquata del Tr	0.02	51	P	Pg	09 43 55.0	+0.1
T1214				S	Sg	09 43 56.0	-0.3
T1214				AML	AML		
	comp=E,238µm,0.1s						
T1214				AML	AML		
	comp=E,254µm,1.4s						
T1214				AML	AML		
	comp=N,227µm,0.8s						
T1214				AML	AML		
	comp=N,189µm,0.4s						
T1218	Civita (PG)	0.09	215	P	Pg	09 43 55.8	+0.3
T1218				S	Sg	09 43 57.6	+0.2
T1218				AML	AML		
	comp=E,238µm,0.2s						
T1218				AML	AML		
	comp=N,274µm,0.4s						
T1218				AML	AML		
	comp=E,242µm,0.2s						
T1218				AML	AML		
	comp=N,272µm,1.0s						
T1218				AML	AML		
	comp=N,274µm,0.4s						
T1218				AML	AML		
	comp=N,272µm,1.0s						
T1218				AML	AML		
	comp=E,238µm,0.2s						
T1218				AML	AML		
	comp=E,241µm,0.2s						
T1212	Cascia, Frazio	0.10	273	P	Pg	09 43 56.3	+0.7
T1245	Castelsantange	0.11	0	AML	AML		
	comp=N,125µm,0.2s						
T1245				AML	AML		
	comp=E,105µm,1.3s						
SMA1	SAN MARTINO	0.16	137	P	Pg	09 43 57.0	+0.6
SMA1				S	Sg	09 44 00.2	+1.2
SMA1				AML	AML		
	comp=E,114µm,0.4s						
SMA1				AML	AML		
	comp=N,100µm,0.4s						
SMA1				AML	AML		
	comp=N,100µm,0.4s						
MC2	Monte Cornacci	0.17	1	S	Sg	09 43 57.9	-1.4
T1216	Preci, Frazion	0.19	319	S	Sg	09 43 57.6	-2.1
T1217	Poggiodomo (PG	0.19	260	P	Pb	09 43 58.0	-0.4
RM33	Pellescritta (	0.24	175	P	Pg	09 43 58.3	+0.5
RM33				S	Sg	09 44 02.1	+1.0
T1215	Vallo di Nera,	0.24	283	S	Sg	09 43 58.8	-2.4
FDMO	Fiordimonte	0.30	346	S	Sg	09 44 00.5	-2.4
TERO	Teramo	0.33	112	P	Pg	09 43 59.9	+0.4
ASSB	Assisi San Ben	0.49	307	AML	AML		
	comp=E,68µm,1.2s						
ASSB				AML	AML		
	comp=E,68µm,0.8s						
ASSB				AML	AML		
	comp=E,68µm,0.8s						
ASSB				AML	AML		
	comp=N,45µm,0.4s						
SAMA	S.Maria delle	1.06	205	P	Pn	09 44 15.0	+1.4

ROM 12 09:44:26.0±0.1**, 43°.013N**±0°.004×**13°.102E**±0°.005**, h9^{km}, ML2.0**/29**, 11C-8D, Error ellipse: s-maj=0.4km s-min=0.3km az=42.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FDMO	Fiordimonte	0.03	336	P	Pg	09 44 27.6	-0.1
FDMO				S	Sg	09 44 28.4	-0.6
T1219	Muccia, Frazio	0.08	302	⇓P	Pg	09 44 28.6	+0.4
T1219				S	Sg	09 44 30.4	+0.4
T1219				AML	AML		
	comp=E,2595µm,0.3s						
T1219				AML	AML		
	comp=E,2630µm,0.3s						
T1219				AML	AML		
	comp=N,2805µm,0.8s						
T1219				AML	AML		
	comp=N,2670µm,0.8s						
T1256	Bolognola (MC)	0.09	94	P	Pg	09 44 28.8	+0.3
T1256				S	Sg	09 44 30.8	+0.5
T1256				AML	AML		
	comp=E,1091µm,0.3s						
T1256				AML	AML		
	comp=N,1107µm,0.2s						
T1256				AML	AML		
	comp=N,1107µm,1.8s						
T1256				AML	AML		
	comp=E,1091µm,1.7s						
T1220	Camerino, Fraz	0.10	354	P	Pg	09 44 29.0	+0.5
T1220				S	Sg	09 44 31.2	+1.0
T1220				AML	AML		
	comp=E,7830µm,0.3s						
T1220				AML	AML		
	comp=N,9485µm,1.4s						
T1220				AML	AML		
	comp=N,9485µm,0.6s						
MC2	Monte Cornacci	0.12	147	P	Pg	09 44 29.4	+0.5
MC2				S	Sg	09 44 32.0	+1.0
T1216	Preci, Frazion	0.14	206	P	Pg	09 44 29.6	+0.5
T1216				S	Sg	09 44 32.1	+0.9
T1216				AML	AML		
	comp=E,1970µm,0.8s						
T1216				AML	AML		
	comp=N,2100µm,1.1s						
T1216				AML	AML		
	comp=E,1970µm,0.8s						
CESI	CESI - Serrava	0.14	267	P	Pg	09 44 29.9	+0.7
CESI				S	Sg	09 44 32.6	+1.2
CESI				AML	AML		
	comp=N,2590µm,0.2s						
CESI				AML	AML		
	comp=E,1655µm,0.2s						
CESI				AML	AML		
	comp=N,2590µm,1.8s						
T1245	Castelsantange	0.17	158	P	Pg	09 44 30.1	+0.5
T1245				S	Sg	09 44 33.4	+1.2
T1245				AML	AML		
	comp=E,1175µm,0.6s						
T1245				AML	AML		
	comp=N,1265µm,0.7s						
T1245				AML	AML		
	comp=N,1265µm,0.8s						
T1245				AML	AML		
	comp=E,1170µm,1.1s						
T1245				AML	AML		
	comp=N,1230µm,1.3s						
T1245				AML	AML		
	comp=E,1170µm,0.9s						
T1245				AML	AML		
	comp=N,1230µm,0.7s						
MMO1	Montemonaco	0.20	124	P	Pg	09 44 30.6	+0.5
MMO1				S	Sg	09 44 34.2	+1.2
T1212	Cascia, Frazio	0.27	189	P	Pg	09 44 31.8	+0.5
T1212				S	Sb	09 44 36.6	-1.0
T1212				AML	AML		
	comp=E,642µm,0.3s						
T1212				AML	AML		
	comp=N,692µm,0.2s						
T1212				AML	AML		
	comp=E,642µm,0.3s						
T1212				AML	AML		
	comp=N,692µm,1.8s						
SNTG	Esanatoglia	0.27	334	P	Pg	09 44 32.0	+0.6
SNTG				S	Sb	09 44 37.0	-0.7
SNTG				AML	AML		
	comp=E,205µm,1.1s						
SNTG				AML	AML		
	comp=N,204µm,0.9s						
T1215	Vallo di Nera,	0.27	219	⇑P	Pg	09 44 32.1	+0.7
T1215				AML	AML		
	comp=E,216µm,1.6s						
T1215				AML	AML		
	comp=E,196µm,1.6s						
T1215				AML	AML		
	comp=N,278µm,0.4s						
T1215				AML	AML		
	comp=E,216µm,1.6s						
T1215				AML	AML		
	comp=N,278µm,0.3s						
T1215				AML	AML		
	comp=E,195µm,1.6s						
T1215				AML	AML		
	comp=N,278µm,1.6s						
T1215				AML	AML		
	comp=E,195µm,0.4s						
T1215				AML	AML		
	comp=E,216µm,0.4s						
T1241	Roccafluvione,	0.29	123	⇑P	Pg	09 44 32.4	+0.7
EL6	Elcito	0.32	0	⇓P	Pg	09 44 33.0	+0.7
EL6				AML	AML		
	comp=N,384µm,1.4s						
EL6				AML	AML		
	comp=N,384µm,0.6s						
EL6				AML	AML		
	comp=E,428µm,0.2s						
ASSB	Assisi San Ben	0.33	275	P	Pg	09 44 33.2	+0.7
ASSB				AML	AML		
	comp=E,633µm,0.9s						
ASSB				AML	AML		
	comp=N,682µm,0.1s						
ASSB				AML	AML		
	comp=E,633µm,1.1s						
T1218	Civita (PG)	0.34	178	P	Pg	09 44 33.2	+0.4
T1218				S	Sb	09 44 38.9	-1.0
T1218				AML	AML		
	comp=E,218µm,0.3s						
T1218				AML	AML		
	comp=E,272µm,1.2s						
T1218				AML	AML		
	comp=N,441µm,1.3s						
T1218				AML	AML		
	comp=E,218µm,0.4s						
T1218				AML	AML		
	comp=N,410µm,0.4s						
CING	Cingoli	0.37	11	⇓P	Pb	09 44 34.1	-0.6
CING				AML	AML		
	comp=E,162µm,1.1s						
CING				AML	AML		
	comp=N,136µm,0.4s						
CING				AML	AML		
	comp=E,162µm,0.9s						
CING				AML	AML		
	comp=N,136µm,1.6s						
FOSV	Fossato di Vic	0.38	319	⇓P	Pb	09 44 34.3	-0.5
FOSV				AML	AML		
	comp=N,447µm,0.2s						
FOSV				AML	AML		
	comp=E,216µm,0.2s						
ATCC	AVT- Casa Cast	0.38	297	⇑P	Pb	09 44 34.4	-0.4
ATCC				AML	AML		
	comp=N,514µm,0.2s						
ATCC				AML	AML		
	comp=E,1022µm,0.2s						
SMA1	SAN MARTINO	0.42	156	P	Pg	09 44 34.7	+0.5
SMA1				S	Sb	09 44 41.3	-0.8
SMA1				AML	AML		
	comp=N,158µm,0.3s						
SMA1				AML	AML		
	comp=E,166µm,1.4s						
MOMA	Monte Martano	0.44	242	⇓P	Pb	09 44 35.6	-0.4
MOMA				AML	AML		
	comp=N,214µm,1.1s						
MOMA				AML	AML		
	comp=E,250µm,1.3s						
MOMA				AML	AML		
	comp=N,214µm,0.9s						
MOMA				AML	AML		
	comp=E,250µm,0.7s						
SSFR	Montelago di S	0.48	331	⇑P	Pb	09 44 36.0	-0.6
SSFR				AML	AML		
	comp=E,430µm,1.1s						
SSFR				AML	AML		
	comp=N,445µm,0.9s						
SSFR				AML	AML		
	comp=E,430µm,1.2s						
SSFR				AML	AML		
	comp=N,357µm,0.2s						
SSFR				AML	AML		
	comp=E,430µm,0.8s						
SSFR				AML	AML		
	comp=E,430µm,0.9s						
MURB	Monte Urbino	0.49	301	⇑P	Pb	09 44 36.3	-0.5
MURB				AML	AML		
	comp=E,342µm,1.2s						
MURB				AML	AML		
	comp=N,340µm,0.7s						
MURB				AML	AML		
	comp=E,342µm,0.8s						
ARVD	Arcevia	0.50	346	⇑P	Pb	09 44 36.6	-0.4
ARVD				S	Sb	09 44 45.0	+0.7
ARVD				AML	AML		
	comp=N,103µm,1.5s						
ARVD				AML	AML		
	comp=E,118µm,1.5s						
ARVD				AML	AML		
	comp=N,103µm,0.5s						
ARVD				AML	AML		
	comp=E,118µm,0.5s						
RM33	Pellescritta (	0.51	171	⇑P	Pg	09 44 36.4	+0.5
RM33				AML	AML		
	comp=E,127µm,1.0s						
RM33				AML	AML		
	comp=N,84µm,1.5s						
RM33				AML	AML		
	comp=N,84µm,0.5s						
T1211	Morro Reatino	0.51	201	⇑P	Pb	09 44 36.6	-0.6
T1211				AML	AML		
	comp=E,144µm,0.1s						
T1211				AML	AML		
	comp=E,143µm,0.1s						
T1211				AML	AML		
	comp=N,164µm,1.0s						
ATFO	Monte Foce - G	0.53	313	⇓P	Pb	09 44 37.0	-0.4
ATFO				AML	AML		
	comp=E,105µm,1.4s						
ATFO				AML	AML		
	comp=N,101µm,0.1s						
CAMP	Campotosto	0.53	155	P	Pg	09 44 36.5	+0.3
CAMP				AML	AML		
	comp=E,102µm,0.3s						
CAMP				AML	AML		
	comp=N,64µm,0.9s						
CAMP				AML	AML		
	comp=E,102µm,1.7s						
TERO	Teramo	0.54	136	⇓P	Pg	09 44 36.7	+0.3
TERO				AML	AML		
	comp=N,124µm,0.4s						
TERO				AML	AML		
	comp=E,110µm,1.1s						
TERO				AML	AML		
	comp=N,124µm,1.6s						
TERO				AML	AML		
	comp=E,110µm,0.9s						
ATVO	AVT- Monte Val	0.63	306	⇑P	Pb	09 44 38.7	-0.5
ATVO				S	Sb	09 44 48.9	+0.9
ATVO				AML	AML		
	comp=E,63µm,0.8s						
ATVO				AML	AML		
	comp=N,45µm,1.4s						
ATVO				AML	AML		
	comp=E,63µm,0.8s						
ATVO				AML	AML		
	comp=E,63µm,1.2s						
MPAG	Monte Paganucc	0.67	338	⇑P	Pb	09 44 39.6	-0.1
PIEI	Pieia	0.67	322	⇓P	Pb	09 44 39.4	-0.4
PIEI				S	Sb	09 44 50.5	+1.3
PIEI				AML	AML		
	comp=E,112µm,0.3s						
PIEI				AML	AML		
	comp=N,58µm,0.2s						
PIEI				AML	AML		
	comp=E,112µm,1.7s						
FSSB	Fossombrone	0.72	341	⇑P	Pb	09 44 40.9	+0.3
FSSB				AML	AML		
	comp=N,332µm,0.3s						
FSSB				AML	AML		
	comp=E,175µm,1.1s						

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*IDC **12** 09:44:36.0±3.3, 37°.56N×141°.78E, h54^{km}±23^{km}, mb3.5/8, mbtmp3.7/10, ML2.5/2, MS2.4/1, Error ellipse: s-maj=32.6km s-min=14.4km az=123.0*

*JMA **12** 09:44:37.3±0.1, 37°.5N±0°.2×141°.3E±0°.6, h53^{km}, MV3.8/40, E OFF FUKUSHIMA PREF*

JMA Felt II J1 at E OFF FUKUSHIMA PREF .

ISC 12 09:44:35.6±1.6**, 37°.50N**±0°.06×**141°.54E**±0°.09**, h42^{km}**±13^{km}**, n28, σ1^{s}.41**/33**, mb3.6**/8**, 11D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.55	256	*i* P	Pn	09 44 47.6	+0.5
JFK				*i* S	Sn	09 44 54.6	-0.6
JMST	Minamisoumatoc	0.56	293	⇓*i*P	Pn	09 44 47.7	+0.5
JMST				⇓S	Sn	09 44 55.1	-0.4
JMM	Marumori	0.69	302	⇓*i*P	Pn	09 44 49.5	+0.5
JMM				⇓S	Sn	09 44 58.1	-0.5
ONAJ	Iwakimizuishiy	0.71	236	⇓*i*P	Pn	09 44 49.8	+0.5
ONAJ				⇓S	Sn	09 44 58.4	-0.8
JFFD	Fukushimafurud	0.88	243	*i* P	Pn	09 44 51.8	+0.2
JFFD				S	Sn	09 45 01.7	-1.5
JOTO	OTAMA OYAMA	0.96	274	*i* P	Pn	09 44 52.9	+0.3
JOTO				S	Sn	09 45 04.2	-1.0
JIO	Ouri	0.96	351	⇓*i*P	Pn	09 44 54.2	+1.6
JIO				⇓S	Sn	09 45 06.0	+0.9
JOU	Okura	1.11	321	⇓*i*P	Pn	09 44 55.0	+0.4
JYS	Shirataka	1.37	302	*i* P	Pn	09 44 58.5	+0.3
JYS				*e*S	Sn	09 45 14.2	-1.0
JFY	Yanaizu	1.46	267	⇓*i*P	Pn	09 44 59.4	-0.1
JMK	Ichinoseki	1.47	350	*i* P	Pn	09 45 00.9	+1.4
JMK				S	Sn	09 45 18.4	+0.8
JYK	Kaneyama	1.69	327	⇓*i*P	Pn	09 45 03.6	+1.0
MJAR	Matsushiro Arr	2.83	251	P	Pn	09 45 19.5	+1.1
	0.5nm,0.3s,baz=111,slow=6.9,SNR=22						
MJAR				S	Sn	09 45 57.2	+6.0
	4.5nm,0.5s,baz=71,slow=15,SNR=4.8						
MJAR				LR	LR	09 46 39.1	
	comp=Z,63nm,18.4s,baz=36,slow=41						
	2.2nm,0.3s						
ASAJ	Asahikawa	6.66	7	P	Pn	09 46 09.0	-1.8
	0.1nm,0.3s,baz=261,slow=15,SNR=2.1						
ASAJ				S	Sn	09 47 26.0	+0.7
	2.2nm,0.6s,baz=199,slow=23,SNR=1.8						
	0.7nm,0.3s						
SONM	Songino Array	27.61	303	P	P	09 50 18.8	-0.2
	0.5nm,0.5s,baz=107,slow=9.7,SNR=5.6						
	0.5nm,0.5s						
H11N2	WAKE ISLAND Hy	28.30	122	T	T	10 20 42.2	
	baz=315,slow=76,SNR=29						
H11N1	WAKE ISLAND Hy	28.31	122	T	T	10 20 43.3	
	baz=315,slow=76,SNR=44						
H11N3	WAKE ISLAND Hy	28.32	122	T	T	10 20 42.2	
	baz=315,slow=76,SNR=54						
H11S1	WAKE ISLAND Hy	29.03	124	T	T	10 21 38.4	
	baz=316,slow=76,SNR=20						
H11S3	WAKE ISLAND Hy	29.03	124	T	T	10 21 37.5	
	baz=316,slow=76,SNR=19						
H11S2	WAKE ISLAND Hy	29.05	124	T	T	10 21 38.6	
	baz=316,slow=76,SNR=25						
ZALV	Zalesovo Beam	41.67	312	P	P	09 52 20.0	+0.1
	0.8nm,0.7s,baz=82,slow=11,SNR=3.7						
	0.8nm,0.7s						
MKAR	Makanchi Array	43.96	302	P	P	09 52 37.8	-0.7
	0.7nm,0.6s,baz=85,slow=9.1,SNR=11						
	0.7nm,0.6s						
KURBB	Kurchatov Arra	45.79	308	P	P	09 52 52.4	-0.6
	1.1nm,0.3s,baz=85,slow=8.4,SNR=6.8						
	1.1nm,0.3s						
BVAR	Borovoye Array	50.33	312	P	P	09 53 29.1	+1.1
	0.3nm,0.3s,baz=7.7,slow=37,SNR=2.6						
	0.3nm,0.3s						
WRA	Warramunga Arr	57.54	188	P	P	09 54 21.0	+0.2
	0.2nm,0.4s,baz=345,slow=7.9,SNR=1.8						
	0.2nm,0.4s						
FINES	FINESS Array B	68.45	332	P	P	09 55 32.6	-0.2
	1.3nm,0.9s,baz=12,slow=9.9,SNR=6.1						
	1.3nm,0.9s						
AKASG	Malin Array Be	73.99	322	P	P	09 56 05.8	-0.8
	0.3nm,0.4s,baz=39,slow=5.5,SNR=2.4						
	0.3nm,0.4s						

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*NEIC **12** 09:46:02.6±1.9, 18°.45N±0°.05×67°.67W±0°.02, h28^{km}±7^{km}, ML2.8/34, Md2.8/26(RSPR), Error ellipse: s-maj=7.2km s-min=2.7km az=189.0*

*RSPR **12** 09:46:05.0, 18°.51N×67°.57W, h21^{km}±1^{km}, MD2.8/12*

ISC 12 09:46:03.6±1.0**, 18°.51N**±0°.06×**67°.53W**±0°.03**, h27^{km}, n54, σ0^{s}.73**/61**, 8C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.13	155	⇑*e*P	Pb	09 46 09.3	+0.5
IDE	Isla Desecheo	0.13	155	*e*S	Sb	09 46 12.9	+0.6
IDE	Isla Desecheo	0.13	155		Pb	09 46 09.3	+0.5
IDE					Sb	09 46 12.9	+0.6
AGPR	Aguadilla, PR	0.40	96	⇓*e*P	Pn	09 46 13.2	-0.4
AGPR	Aguadilla, PR	0.40	96	*e*S	Sn	09 46 19.5	-0.8
AGPR	Aguadilla, PR	0.40	96		Pn	09 46 13.2	-0.4

AGPR					Sn	09 46 19.5	-0.8
AGPR	Aguadilla, PR	0.40	96	IAML		09 46 19.9	
	comp=N,699nm,0.6s						
AGPR				IAML		09 46 22.2	
	comp=E,536nm,0.2s						
PRSN	Puerto Rico Se	0.47	128	⇓*e*P	Pn	09 46 13.9	-0.6
PRSN	Puerto Rico Se	0.47	128	*e*S	Sb	09 46 21.0	+1.0
PRSN	Puerto Rico Se	0.47	128		Pn	09 46 13.9	-0.6
PRSN					Sb	09 46 21.0	+1.0
PRSN	Puerto Rico Se	0.47	128	IAML		09 46 21.3	
	comp=N,4µm,0.3s						
PRSN				IAML		09 46 21.7	
	comp=E,4µm,0.3s						
LSP	Las Mesas	0.54	128	⇓*e*P	Pn	09 46 15.2	-0.4
LSP	Las Mesas	0.54	128	*e*S	Sn	09 46 23.6	-0.2
LSP	Las Mesas	0.54	128		Pn	09 46 15.2	-0.4
LSP					Sn	09 46 23.6	-0.2
CRPR	Cabo Rojo, PR	0.64	141	⇑*e*P	Pb	09 46 16.2	-0.1
CRPR	Cabo Rojo, PR	0.64	141	*e*S	Sb	09 46 25.3	+0.4
CRPR	Cabo Rojo, PR	0.64	141		Pb	09 46 16.2	-0.1
CRPR					Sb	09 46 25.3	+0.4
MLPR	Magueyes Islan	0.71	139	⇓*e*P	Pb	09 46 17.2	-0.2
MLPR	Magueyes Islan	0.71	139	*e*S	Sb	09 46 26.8	0.0
MLPR	Magueyes Islan	0.71	139		Pb	09 46 17.2	-0.2
MLPR					Sb	09 46 26.8	0.0
AOPR	Arecibo Observ	0.76	102	⇓*e*P	Pn	09 46 19.1	+0.6
AOPR	Arecibo Observ	0.76	102	*e*S	Sn	09 46 28.9	-0.3
AOPR	Arecibo Observ	0.76	102		Pn	09 46 19.1	+0.6
AOPR					Sn	09 46 28.9	-0.3
AOPR	Arecibo Observ	0.76	102	IAML		09 46 34.6	
	comp=N,509nm,0.2s						
PCDR	Punta Cana, DR	0.80	271	⇑*e*P	Pn	09 46 19.2	0.0
PCDR	Punta Cana, DR	0.80	271	*e*S	Sn	09 46 30.7	+0.5
PCDR	Punta Cana, DR	0.80	271		Pn	09 46 19.2	0.0
PCDR					Sn	09 46 30.7	+0.5
PCDR	Punta Cana, DR	0.80	271	IAML		09 46 31.9	
	comp=N,289nm,0.6s						
UUPR	Utuado, UPR, P	0.81	108	⇑*e*P	Pn	09 46 19.2	-0.1
UUPR	Utuado, UPR, P	0.81	108	*e*S	Sn	09 46 30.4	-0.1
UUPR	Utuado, UPR, P	0.81	108		Pn	09 46 19.2	-0.1
UUPR					Sn	09 46 30.4	-0.1
GBPR	Guanica, Bosqu	0.82	130	⇑*e*P	Pb	09 46 19.6	+0.4
GBPR	Guanica, Bosqu	0.82	130	*e*S	Sb	09 46 30.6	+0.7
GBPR	Guanica, Bosqu	0.82	130		Pb	09 46 19.6	+0.4
GBPR					Sb	09 46 30.6	+0.7
EMPR	Esperanza - Ma	0.95	92	⇑*e*P	Pb	09 46 21.8	+0.2
EMPR	Esperanza - Ma	0.95	92	*e*S	Sn	09 46 35.8	+1.9
EMPR	Esperanza - Ma	0.95	92		Pb	09 46 21.8	+0.2
EMPR					Sn	09 46 35.8	+1.9
EMPR	Esperanza - Ma	0.95	92	IAML		09 46 37.9	
	comp=N,462nm,0.5s						
OBIP	Obispado Ponce	1.00	118	⇑*e*P	Pn	09 46 21.2	-0.6
OBIP	Obispado Ponce	1.00	118	*e*S	Sn	09 46 34.5	-0.5
OBIP	Obispado Ponce	1.00	118		Pn	09 46 21.2	-0.6
OBIP					Sn	09 46 34.5	-0.5
CELP	Cerrillos	1.00	115	⇑*e*P	Pb	09 46 22.3	0.0
CELP	Cerrillos	1.00	115	*e*S	Sb	09 46 35.5	+0.2
CELP	Cerrillos	1.00	115		Pb	09 46 22.3	0.0
CELP					Sb	09 46 35.5	+0.2
CELP	Cerrillos	1.00	115	IAML		09 46 41.2	
	comp=E,168nm,0.2s						
CELP				IAML		09 46 41.8	
	comp=N,185nm,0.3s						
SJG	San Juan	1.37	106		Pb	09 46 28.7	+0.1
SJG				IAML		09 46 50.9	
	comp=N,236nm,0.3s						
GCPR	Guaynabo City	1.39	98		Pb	09 46 28.8	-0.1
GCPR				IAML		09 46 50.9	
	comp=E,167nm,0.3s						
GCPR				IAML		09 46 50.9	
	comp=N,124nm,0.2s						
CBYP	Canovanas	1.61	98	Pn	Pb	09 46 31.4	-1.3
CBYP					Pn	09 46 31.8	+1.5
HUMP	Col San Antoni	1.64	103		Pb	09 46 32.4	-0.8
HUMP				IAML		09 46 55.1	
	comp=N,168nm,0.5s						
HUMP				IAML		09 47 00.6	
	comp=E,131nm,0.3s						
DR12	Loma Pena Alta	1.77	279		Pn	09 46 25.1	-7.4
MTP	Monte Pirata	1.93	102		Pb	09 46 36.6	-1.4
MTP				IAML		09 47 07.8	
	comp=N,40nm,0.5s						
MTP				IAML		09 47 11.5	
	comp=E,54nm,0.5s						
CUPR	Culebra, Puert	2.15	95	Pn	Pb	09 46 39.8	-2.0
CUPR				IAML		09 47 15.1	
	comp=N,30nm,0.6s						
STVI	Saint Thomas	2.45	93		Pn	09 46 42.5	+0.6
STVI				IAML		09 47 21.2	
	comp=N,38nm,0.6s						
STVI				IAML		09 47 22.8	
	comp=E,38nm,0.6s						
SDDR	Presa de Saban	3.59	278	Pn	Pn	09 46 56.0	-1.5
SDDR				IAML		09 48 02.9	
	comp=E,31nm,0.9s						

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*KRNET **12** 09:50:31.8±0.1, 41°.43N×70°.93E, h24^{km}, mb2.6*
*ISU **12** 09:50:32.8, 41°.61N×70°.92E, h5^{km}*
*SOME **12** 09:50:32.1, 41°.47N×70°.93E, h5^{km}*
*NNC **12** 09:50:34.5±2.9, 41°.53N×70°.90E, h0^{km}, mb2.7, mpv2.4, Error ellipse: s-maj=26.1km s-min=8.0km az=37.0*
ISC 12 09:50:32.8±0.9**, 41°.48N**±0°.03×**70°.92E**±0°.02**, h13**^{km}±7^{km}**, n21, σ1^{s}.36**/36**, 22C-2D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRKS	Terek-Say	0.17	73	⇑*e*P	Pg	09 50 36.6	-0.4
	baz=81						
TRKS				⇑*e*S	Sg	09 50 40.3	+0.4
	baz=81						
CHMG	Chimgan	0.69	276	P	Pg	09 50 45.2	-1.0
CHMG				S	Sg	09 50 54.8	-0.4
ARK	Arkit	0.84	68	⇑*e*P	Pg	09 50 47.9	-1.2
	baz=64						
ARK				⇑*e*S	Sg	09 50 59.7	-0.5
	baz=64						
ARK	Arkit	0.84	68	P	Pg	09 50 48.0	-1.2
ARK				S	Sg	09 50 59.8	-0.5
IUG	Iuzhnay	0.94	315	*e*P	Pb	09 50 50.5	-0.5
	baz=17						
IUG				*e*S	Sg	09 51 03.7	+0.4
	baz=17						
IUG	Iuzhnay	0.94	315	*e*P	Pb	09 50 50.5	-0.5
	10nm,0.1s						
IUG				*e*S	Sg	09 51 03.6	+0.4
	43nm,0.2s						
FRG	Fergana	1.28	149	P	Sg	09 51 18.0	+3.8
NZBK	Nazarbek	1.38	260	P	Sg	09 51 19.2	+1.9
BTK	Batken	1.42	183	⇑*e*P	Pn	09 50 57.1	-1.2
	baz=84						
BTK				⇑*e*S	Sn	09 51 15.7	-1.2
	baz=84						
MNAS	Manas	1.55	49	⇑*i*P	Pn	09 51 00.5	+0.3
	baz=48						
MNAS				⇑*i*S	Sb	09 51 21.4	+0.4
	baz=48						
KK31	Karatay Array	1.65	350	⇑P	Pb	09 51 03.8	+0.8
	2.6nm,0.5s,baz=172,slow=14,SNR=17						
KK31				⇑S	Sb	09 51 25.3	+1.6
	2.2nm,0.2s,baz=153,slow=30,SNR=11						
KKAR	Karatay Array	1.65	350	⇑*e*P	Pn	09 51 02.3	+0.9
	baz=49						
KKAR				⇑*e*S	Sb	09 51 24.9	+1.2
	baz=49						
MRKS	Merke	2.13	53	*e*Pg	Pb	09 51 11.7	+0.5
	5.0nm,0.3s						
MRKS				*e*Lg	Lg	09 51 40.2	
	12nm,0.3s						
AML	Almayashu	2.17	72	⇓Pn	Pb	09 51 11.9	-0.3
	0.5nm,0.5s						
AML				⇑Sn	Sg	09 51 41.7	-1.0
	0.7nm,0.5s						
AML	Almayashu	2.17	72	⇑*e*P	Pn	09 51 09.4	+0.4
	baz=70						
AML				⇑*e*S	Sn	09 51 36.6	+0.7
	baz=70						
GAR	Garm	2.52	191	⇑*e*P	Pn	09 51 13.2	-0.3
	baz=91						
GAR				⇑*e*S	Sn	09 51 43.7	-0.4
	baz=91						
ARLS	Aral	2.58	80	⇑*e*P	Pn	09 51 14.6	+0.3
	baz=79						
ARLS				⇑*e*S	Sn	09 51 46.4	+0.8
	baz=79						
UCH	Uchtor	2.79	73	⇑*e*P	Pn	09 51 18.0	+0.6
	baz=72						
UCH				⇑*e*S	Sn	09 51 51.6	+0.5
	baz=72						
TKM2	Tokmak 2	3.76	66	⇑Pg	Pb	09 51 41.3	+2.2
	1.7nm,0.7s						
TKM2				⇓Lg	Lg	09 52 31.8	
	5.8nm,0.8s						
KST	Kastek	4.06	66	*e*Pg	Pg	09 51 47.1	-3.3
	1.7nm,0.2s						
KST				*e*Lg	Lg	09 52 41.1	
	5.0nm,0.3s						
KRBS	Karabastau	4.15	56	*e*Pg	Pg	09 51 49.5	-2.8
	0.6nm,0.1s						
KRBS				*e*Lg	Lg	09 52 44.8	
	1.5nm,0.7s						

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*FUNV **12** 10:03:23.8, 8°.49N×71°.60W, h5^{km}, MW3.3*
ISC 12 10:03:21.9±1.2**, 8°.62N**±0°.03×**71°.57W**±0°.03**, h6**^{km}±11^{km}**, n22, σ1^{s}.65**/36**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.78	115	*e*P	Pg	10 03 37.8	+0.9
SOCV				*e*S	Sg	10 03 48.1	+1.2
CAPV	Capacho	1.05	225	*e*P	Pg	10 03 41.3	-0.8
CAPV				*e*S	Sg	10 03 54.6	-1.3
PAMC	Pamplona, Colo	1.69	222	*e*P	Pn	10 03 53.4	+0.9
PAMC				*e*S	Sg	10 04 16.2	-0.3
PAMC				*i*		10 04 18.7	
	comp=Z,86nm,0.3s						
MCQV	Machiques	1.71	326	*e*P	Pg	10 03 54.7	-0.1
MCQV				*e*S	Sg	10 04 18.3	+1.2
CURV	Curarigua	2.11	49	*e*P	Pb	10 04 00.7	0.0
CURV				*e*S	Sb	10 04 27.8	+0.7
TAMC	Tame, Arauca	2.18	186	*e*P	Pn	10 04 00.7	+1.9
BARC	Barichara	2.57	219	*e*P	Pb	10 04 09.0	+0.4
BARC				*e*S	Sb	10 04 42.2	+1.6
BARC				*i*		10 04 45.4	
	comp=Z,41nm,0.5s						
BRRC	Barranca, Sant	2.60	235	*e*P	Pb	10 04 09.7	+0.6
BRRC				*e*S	Sb	10 04 41.0	-0.3
BRRC				*i*		10 04 44.0	
	comp=Z,13nm,0.2s						
CRJC	Cerrejon, Guaj	2.72	332	*e*P	Pb	10 04 09.2	-1.9
RUSC	La Rusia	3.10	209	*e*P	Pn	10 04 13.3	+1.5
RUSC				*e*S	Sb	10 04 57.5	+1.5
RUSC				*i*		10 05 03.1	
	comp=Z,9.4nm,0.3s						
MAPV	Macapo	3.30	68	*e*P	Pn	10 04 16.2	+2.0
MAPV				*e*S	Sn	10 04 54.7	+0.9
ZARC	Zaragoza, Cauc	3.45	251	*e*P	Pn	10 04 15.8	-0.4
BAUV	El Baul	3.50	84	*e*P	Pn	10 04 18.5	+1.5
BAUV				*e*S	Sn	10 04 58.4	-0.3
PTBC	PUERTO BERRIO,	3.53	234	*e*P	Pb	10 04 24.1	-0.8
PTBC				*e*S	Sb	10 05 06.1	-2.0
PTBC				*i*		10 05 11.3	
	comp=Z,12nm,0.3s						
SJCC	San Jacinto, C	3.79	290	*e*P	Pn	10 04 22.7	+1.7
SPBC	San Pablo de B	3.85	220	*e*P	Pb	10 04 31.3	+0.9
UREC	San Jos de Ur	4.02	258	*e*P	Pb	10 04 31.7	-1.5
BENV	Beln	4.14	71	*e*P	Pn	10 04 27.0	+1.2
BENV				*e*S	Sn	10 05 14.8	+0.2
PTGC	Puerto Gaitan,	4.42	187	*e*P	Pn	10 04 30.0	+0.3
TACV	Tcata	4.73	71	*e*P	Pn	10 04 36.7	+2.8
CACV	CAICARA DEL OR	5.08	101	*e*P	Pb	10 04 48.5	-2.9
CACV				*e*S	Sb	10 05 47.6	-5.2
MERV	Las Mercedes	5.24	83	*e*P	Pn	10 04 41.8	+0.9
MERV				*e*S	Sn	10 05 40.5	-1.3

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*FUNV **12** 10:08:08.5, 8°.38N×71°.36W, h3^{km}, MW2.7*
ISC 12 10:08:08.1±1.6**, 8°.37N**±0°.07×**71°.32W**±0°.04**, h7**^{km}±13^{km}**, n10, σ1^{s}.09**/19**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.47	101	*e*P	Pb	10 08 18.7	0.0
SOCV				*e*S	Sb	10 08 25.6	-0.2
CAPV	Capacho	1.11	243	*e*P	Pg	10 08 29.0	-0.5
CAPV				*e*S	Sg	10 08 43.5	-0.3
PAMC	Pamplona, Colo	1.71	233	*e*P	Pb	10 08 39.9	-0.4
PAMC				*e*S	Sg	10 09 04.1	+0.8
TAMC	Tame, Arauca	1.98	194	*e*P	Pb	10 08 45.0	+0.4
TAMC				*e*S	Sg	10 09 11.3	-0.5
CURV	Curarigua	2.11	39	*e*P	Pn	10 08 44.2	+0.2
CURV				*e*S	Sn	10 09 10.8	+0.2
RUSC	La Rusia	3.02	216	*e*P	Pn	10 08 58.6	+1.7
RUSC				*e*S	Sn	10 09 31.1	-2.5
MAPV	Macapo	3.17	63	*e*P	Pn	10 08 59.0	+0.4
MAPV				*e*S	Sn	10 09 36.5	-0.3
BAUV	El Baul	3.29	80	*e*P	Pn	10 09 00.7	+0.6
BAUV				*e*S	Sn	10 09 38.7	-0.8
PTBC	PUERTO BERRIO,	3.61	240	*e*P	Pn	10 09 05.0	+0.5
PTBC				*e*S	Sb	10 09 58.5	+2.2
ZARC	Zaragoza, Cauc	3.62	256	*e*P	Pn	10 09 03.9	-0.7

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*BJI **12** 10:09:34.9±0.0, 21°.38S×178°.79W, h593^{km}, mb4.8/46, mB5.0/29*
*MOS **12** 10:09:35.1±1.3, 21°.56S×179°.30W, h585^{km}, mb5.1/21, Error ellipse: s-maj=12.0km s-min=11.3km az=157.1*
*NOU **12** 10:09:36.4, 21°.63S×179°.15W, h592^{km}, ML5.0/146, Fiji Islands Region*
*NEIC **12** 10:09:36.5±2.0, 21°.64S±0°.09×179°.24W±0°.09, h584^{km}±4^{km}, mb5.1/109, Error ellipse: s-maj=13.9km s-min=11.2km az=224.0*
*IDC **12** 10:09:37.1±0.4, 21°.65S×179°.32W, h596^{km}±3^{km}, mb4.3/38, mbtmp5.3/42, Error ellipse: s-maj=7.4km s-min=6.9km az=149.0*
*BGR **12** 10:09:37.3, 22°.69S×179°.11W, h626^{km}±9^{km}*
*GCMT **12** 10:09:40.5±0.2, 21°.79S±0°.02×179°.10W±0°.02, h611^{km}±1^{km}, MW5.4/113, Moment Tensor Solution. s113,c185; Duration: 1^{s}.2 Moment tensor: Scale 10^{17} Nm; M_{rr}0.87±.03; $M_{\theta\theta}$0.27±.04; $M_{\phi\phi}$-1.14±.04; $M_{r\theta}$-0.54±.04; $M_{\theta\phi}$-0.22±.04; $M_{\phi r}$-1.16±.04; Best double couple: $M_0$1.64700×10^{17} NP1:ϕ_s203.00000°, δ71.00000°, λ102.00000°. NP2:ϕ_s349.00000°, δ22.00000°, λ58.00000°. Principal axes: T 1.5350, Plg62.0000°, Azm131.0000°; N 0.2250, Plg12.0000°, Azm19.0000°; P -1.7600, Plg25.0000°, Azm283.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
ISC 12 10:09:36.8±0.3**, 21°.67S**±0°.04×**179°.22W**±0°.04**, h596**^{km}±2^{km}**, h597**^{km}**:pP-P, n1184, σ1^{s}.20**/1303**, mb5.1**/139**, 81C-69D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	Tubou, Lakemba	3.44	6	P	P	10 10 58.9	+0.5
MSVF	Nonsavu	4.69	326	P	P	10 11 07.5	+0.2
	769nm,0.7s,baz=150,slow=8.7,SNR=222						
MSVF				S	S	10 12 21.7	+0.9
	123nm,0.8s,baz=280,slow=22,SNR=1.0						
MSVF	Nonsavu	4.69	326	P	P	10 11 07.7	+0.5
TAVE	Taveuni	4.98	352	P	P	10 11 09.6	+0.2
YSA	Yasawairara	5.80	328	P	P	10 11 16.1	0.0
FUTU	Fugatoga	7.40	8	P	P	10 11 30.3	-0.2
RIZ	Raoul Island	7.63	171	P	P	10 11 30.2	-2.1
RIZ				S	S	10 13 06.4	-0.7
RAO	Raoul Island	7.64	171	P	P	10 11 32.0	-0.4
	416nm,0.4s,baz=0.0,slow=20,SNR=5.6						
RAO				S	S	10 13 07.0	-0.3
	718nm,0.6s,baz=111,slow=22,SNR=12						
GLKZ	Green Lake	7.65	171	P	P	10 11 32.1	-0.4
GLKZ				S	S	10 13 05.3	-2.2
NIUE	Niue	9.09	75	P	P	10 11 45.6	-1.1
	baz=9.0,SNR=24						
NIUE	Niue	9.09	75	P	P	10 11 46.0	-0.6
NIUE	Niue	9.09	75	P	P	10 11 45.8	-0.8
AFI	Afiamalu	10.48	44	P	P	10 11 57.3	-3.2
	393nm,0.6s,baz=234,slow=19,SNR=56						
AFI				S	S	10 13 49.1	-9.2
	260nm,0.7s,baz=9.1,slow=23,SNR=7.5						
RTV	Rentapao	12.25	286	P	P	10 12 18.3	+0.1
PINNC	Pines Island,	12.39	263	P	P	10 12 19.0	-0.5
PINNC	Pines Island,	12.39	263	P	P	10 12 19.2	-0.3
DVP	Devils Point	12.49	286	P	P	10 12 20.8	+0.2
LIFNC	LIFOU	12.66	272	P	P	10 12 20.7	-1.5
LIFNC	LIFOU	12.66	272	P	P	10 12 21.0	-1.2
YATNC	Mamie plateau,	12.90	266	P	P	10 12 24.6	-0.1
OUENC	Ouen Island, N	12.95	264	P	P	10 12 24.5	-0.6
OUENC	Ouen Island, N	12.95	264	P	P	10 12 25.0	-0.1
ONTNC	Ouen Toro	13.30	265	P	P	10 12 28.7	-0.1
ONTNC	Ouen Toro	13.30	265	P	P	10 12 30.0	+1.2
DZM	Mont Dzumac	13.31	266	*e*Pn	P	10 12 27.5	-1.5
	362nm,1.2s						
DZM				*e*S	S	10 14 46.5	-3.9
	2µm,26.3s						
DZM	Mont Dzumac	13.31	266	P	P	10 12 28.2	-0.8
	132nm,0.6s,baz=87,slow=12,SNR=105						
DZM				ScP	ScP	10 19 48.1	+2.2
	34nm,1.0s,baz=76,slow=11,SNR=11						
DZM	Mont Dzumac	13.31	266	P	P	10 12 28.2	-0.8
NOUC	Port Laguerre	13.45	265	P	P	10 12 29.4	-0.8
NFK	Norfolk Island	13.72	235	P	P	10 12 33.9	+0.9
	baz=14,SNR=4.0						
GRZ	Great Barrier	15.25	197	P	P	10 12 48.5	+1.3
KOUNC	Koumac, New Ca	15.43	271	P	P	10 12 49.9	+0.8
KOUNC	Koumac, New Ca	15.43	271	P	P	10 12 50.1	+1.0
KUZ	Kuaotunu	15.65	195	P	P	10 12 52.5	+1.6
KUZ	Kuaotunu	15.65	195	P	P	10 12 52.2	+1.3
WIAZ	Waiheke Island	15.85	197	P	P	10 12 54.2	+1.5
WMGZ	Waiomatatini S	16.22	187	P	P	10 12 55.9	-0.3
HAZ	Te Kaha	16.24	189	P	P	10 12 55.1	-1.2
PKGZ	Pakihiroa	16.33	188	P	P	10 12 55.5	-1.7
RUGZ	Raukumara Rang	16.46	189	P	P	10 12 56.9	-1.6
TGRZ	Tauranga	16.47	193	P	P	10 13 00.3	+1.8
PUZ	Puketiti	16.49	187	P	P	10 12 57.7	-0.9
OPRZ	Ohinepanea	16.52	192	P	P	10 13 00.0	+1.1
TWGZ	Tauwhareparae	16.63	188	P	P	10 12 59.9	0.0
TOZ	Tahuroa Road	16.64	195	P	P	10 13 01.7	+1.7
KMRZ	Kaimai	16.65	193	P	P	10 13 01.0	+0.8
EDRZ	Edgecumbe	16.75	191	P	P	10 13 01.3	+0.2
KARZ	Kaharoa	16.76	193	P	P	10 13 02.1	+1.0
URZ	Urewera	16.83	190	P	P	10 12 59.8	-2.0
	52nm,0.3s,baz=69,slow=2.1,SNR=60						
URZ	Urewera	16.83	190	P	P	10 12 59.9	-1.8
URZ	Urewera	16.83	190	P	P	10 12 59.6	-2.1
MWZ	Matawai	16.84	189	P	P	10 13 00.2	-1.6
NGRZ	Ngongotaha	16.85	193	P	P	10 13 04.1	+2.1
TKGZ	Te Karaka	16.90	188	P	P	10 13 02.3	-0.1
CNGZ	Carnagh Statio	16.90	187	P	P	10 13 01.6	-0.8
RAGZ	Rawiri	17.02	189	P	P	10 13 03.0	-0.5
HSRZ	Hossack Road	17.04	192	P	P	10 13 05.3	+1.7
MUGZ	Murupara	17.10	191	P	P	10 13 03.0	-1.2
RIGZ	Rimuhau	17.18	188	P	P	10 13 03.6	-1.4
PRRZ	Plateau Road	17.19	192	P	P	10 13 04.7	-0.4
RTZ	Ruatahuna	17.20	190	P	P	10 13 03.8	-1.5
RTZ	Ruatahuna	17.20	190	P	P	10 13 03.6	-1.6
KUTZ	Kaahu Road	17.30	193	P	P	10 13 07.0	+0.9
RAHZ	Arahi	17.48	190	P	P	10 13 07.0	-0.7
HIZ	Hauiti	17.54	196	P	P	10 13 10.6	+2.4
WHHZ	Waihua	17.61	189	P	P	10 13 09.2	+0.4
RATZ	Rangitukua	17.67	193	P	P	10 13 09.5	0.0
NMHZ	Naumai	17.70	190	P	P	10 13 09.2	-0.5
RITZ	Rihia Road	17.76	193	P	P	10 13 10.1	-0.2
BKZ	Black Stump Fm	17.82	191	P	P	10 13 09.6	-1.2
BKZ	Black Stump Fm	17.82	191	P	P	10 13 08.1	-2.7
ARHZ	Aropaoanui	17.83	190	P	P	10 13 11.0	+0.1
NTVZ	North Tongarir	17.91	193	P	P	10 13 11.7	0.0
TMVZ	Te Maari	17.92	193	P	P	10 13 11.9	0.0
TWVZ	Taurewa	17.94	194	P	P	10 13 11.7	-0.3
ETVZ	East Tongariro	17.94	193	P	P	10 13 11.5	-0.5
WTVZ	West Tongariro	17.95	193	P	P	10 13 12.4	+0.3
NNVZ	North Ngauruho	17.96	193	P	P	10 13 12.2	0.0
OTVZ	Oturere	17.98	193	P	P	10 13 11.8	-0.6
NGZ	Ngauruhoe	18.00	193	P	P	10 13 12.6	0.0
SNVZ	South Ngauruho	18.00	193	P	P	10 13 12.4	-0.2
MCHZ	McNeill Hill	18.06	190	P	P	10 13 12.0	-0.9
TUVZ	Tukino	18.08	193	P	P	10 13 12.3	-1.0
KWHZ	Kaweka Forest	18.08	191	P	P	10 13 12.2	-1.0
RAR	Rarotonga	18.11	92	P	P	10 13 14.4	+0.7
	25nm,0.9s,baz=197,slow=12,SNR=3.6						
TRVZ	Turoa	18.13	193	P	P	10 13 13.1	-0.7
VRZ	Vera Road	18.14	195	P	P	10 13 15.7	+2.0
WNVZ	Wahianoa	18.15	193	P	P	10 13 12.9	-1.0
PKVZ	Pokaka	18.17	194	P	P	10 13 13.8	-0.2
MOVZ	Moawhango	18.19	193	P	P	10 13 13.7	-0.5
CKHZ	Cape Kidnapper	18.21	189	P	P	10 13 14.3	0.0
BHHZ	Black Hill Sta	18.21	192	P	P	10 13 11.9	-2.5
MTVZ	Mangateitei	18.23	193	P	P	10 13 14.4	-0.2
KAHZ	Kahuranaki	18.37	190	P	P	10 13 15.1	-0.7
PKE	Pukeiti	18.41	197	P	P	10 13 19.9	+3.7
NEZ	North Egmont	18.45	197	P	P	10 13 20.0	+3.4
KHEZ	Kahui Hut	18.50	197	P	P	10 13 20.4	+3.4
NBEZ	Newall Road No	18.51	197	P	P	10 13 20.6	+3.6
LREZ	Lake Rotokare	18.55	196	P	P	10 13 21.3	+3.9
PNHZ	Pukenui	18.60	191	P	P	10 13 16.2	-1.6
PXZ	Pawanui	18.60	189	P	P	10 13 16.7	-1.1
NMEZ	Namu Road	18.64	197	P	P	10 13 21.5	+3.3
WAZ	Wanganui	18.69	194	P	P	10 13 18.7	0.0
WPHZ	Waipukurau	18.70	190	P	P	10 13 19.0	+0.2
TSZ	Takapari Road	18.78	192	P	P	10 13 18.7	-0.9
PRHZ	Porangahau	18.87	190	P	P	10 13 19.5	-0.8
DVHZ	Dannevirke	18.98	191	P	P	10 13 20.5	-0.8
PRWZ	Pori Road	19.26	191	P	P	10 13 23.6	-0.3
BFZ	Birch Farm	19.34	190	P	P	10 13 24.1	-0.5
BFZ	Birch Farm	19.34	190	P	P	10 13 23.1	-1.4
MRZ	Mangatainoka R	19.44	192	P	P	10 13 23.5	-1.9
MRZ	Mangatainoka R	19.44	192	P	P	10 13 23.2	-2.2
HOWZ	Holdsworth Sta	19.68	192	P	P	10 13 26.4	-1.2
TCW	Tory Channel	20.24	194	P	P	10 13 32.7	0.0
QRZ	Quartz Range	20.34	198	P	P	10 13 34.4	+0.9
QRZ	Quartz Range	20.34	198	P	P	10 13 33.7	+0.2
TKNZ	Takaka Hill	20.41	197	P	P	10 13 33.8	-0.4
TUWZ	Tuamarina	20.53	195	P	P	10 13 34.5	-0.7
MRNZ	Matariki Terra	20.80	197	P	P	10 13 37.7	0.0
THZ	Tophouse	21.10	197	P	P	10 13 39.7	-0.8
DSZ	Denniston Nort	21.39	199	P	P	10 13 43.3	+0.2
KHZ	Kahutara	21.56	195	P	P	10 13 43.5	-0.9
LHI	Lord Howe Isla	21.72	239	P	P	10 13 48.0	+1.9
	baz=22,SNR=6.0						
LHI	Lord Howe Isla	21.72	239	P	P	10 13 47.5	+1.4
LHI	Lord Howe Isla	21.72	239	P	P	10 13 48.0	+1.9
GVZ	Greta Valley S	22.20	195	P	P	10 13 49.0	-1.2
LTZ	Lake Taylor	22.22	197	P	P	10 13 49.3	-1.1
INZ	Inchbonnie	22.40	198	P	P	10 13 51.5	-0.5
OXZ	Oxford	22.79	197	P	P	10 13 54.4	-1.1
RPZ	Rata Peaks	23.42	198	P	P	10 14 00.3	-0.7
	21nm,0.5s,baz=39,slow=6.5,SNR=19						
	21nm,0.5s						
RPZ	Rata Peaks	23.42	198	P	P	10 14 01.5	+0.4
RPZ	Rata Peaks	23.42	198	P	P	10 14 00.2	-0.9
HNR	Honiara	23.43	298	P	P	10 14 00.7	-0.8
	1µm,0.4s,baz=166,slow=8.3,SNR=7.3						
HNR	Honiara	23.43	298	P	P	10 14 00.1	-1.4
HNR	Honiara	23.43	298	P	P	10 14 00.4	-1.1
HNR	Honiara	23.43	298	P	P	10 14 00.1	-1.4
FOZ	Fox Glacier	23.63	200	P	P	10 14 02.2	-0.6
TARA	Tarawa	24.14	340	P	P	10 14 08.0	+0.2
	252nm,1.0s						
JCZ	Jackson Bay	24.45	201	P	P	10 14 10.8	+0.5
ODZ	Otahua Downs	24.76	197	P	P	10 14 12.1	-0.7
GC1S	Gold Coast 1 S	25.52	250	P	P	10 14 21.7	+1.9
	86nm,0.7s						
MLZ	Mavora Lakes	25.82	201	P	P	10 14 23.4	+1.1
AUWSH	Wavell State H	25.84	252	P	P	10 14 23.5	+0.9
DCZ	Deep Cove	26.23	202	P	P	10 14 26.9	+1.1
WHZ	Wether Hill Ro	26.34	200	P	P	10 14 27.6	+0.9
GD1S	Gladstone Soft	27.37	260	P	P	10 14 37.5	+1.4
	48nm,0.6s						
EIDS	Eidsvold	27.45	256	P	P	10 14 36.8	+0.1
	baz=28,SNR=63						
EIDS	Eidsvold	27.45	256	P	P	10 14 36.9	+0.1
EIDS	Eidsvold	27.45	256	P	P	10 14 36.8	+0.1
TBI	Tubuai	27.52	99	*e*S	S	10 18 40.3	+2.3
	1µm,30.5s						
ARMA	Armidale	27.54	246	P	P	10 14 38.9	+1.3
	baz=28,SNR=142						
ARMA	Armidale	27.54	246	P	P	10 14 38.8	+1.3
ARMA	Armidale	27.54	246	P	P	10 14 38.8	+1.2
RK1H	Rockhampton Ha	28.00	261	P	P	10 14 41.6	0.0
NTLH	Newcastle Hard	28.07	240	P	P	10 14 43.7	+1.7
PPT2	Papeete2	28.20	87	*e*S	S	10 18 50.7	+2.0
	277nm,26.5s						
PPT	Papeete	28.20	87	P	P	10 14 44.1	+0.7
	47nm,0.9s,baz=223,slow=18,SNR=5.2						
	47nm,0.9s						
AUPHS	Peel High Scho	28.30	244	P	P	10 14 45.2	+1.1

MGCD	Mangrove Creek	28.63	240	P	P	10 14 48.3	+1.4
	baz=29,SNR=65						
MGCD	Mangrove Creek	28.63	240	P	P	10 14 48.3	+1.4
RIV	Riverview	28.77	239	P	P	10 14 47.9	-0.2
	baz=29,SNR=4.8						
SYDH	Sydney Hard Ro	29.08	239	P	P	10 14 52.0	+1.2
WOLH	Wollongong Har	29.17	238	P	P	10 14 52.9	+1.4
RMQ	Roma	29.58	254	P	P	10 14 55.1	-0.2
	baz=30,SNR=120						
RMQ	Roma	29.58	254	P	P	10 14 56.0	+0.8
AUUHS	Ulladulla High	29.79	236	P	P	10 14 57.9	+1.1
AUDCS	Dubbo College	30.42	243	P	P	10 15 04.0	+1.7
PMOR	Pomariorio Ree	30.43	83	*e*P	P	10 15 02.7	+0.1
	171nm,1.2s						
AULRC	Lightning Ridg	30.51	249	P	P	10 15 04.1	+1.0
VAH	Vaihoa	30.61	83	*e*P	P	10 15 03.9	-0.2
	106nm,1.0s						
CNB	Canberra Magne	30.63	237	P	P	10 15 05.6	+1.4
CAN	Canberra	30.91	237	P	P	10 15 07.3	+0.7
CAN	Canberra	30.91	237	P	P	10 15 07.3	+0.7
CAN				pmax	pmax		
	comp=Z,125nm,1.2s						
CAN	Canberra	30.91	237	P	P	10 15 07.6	+1.0
CAN				ScP	ScP	10 20 33.5	+2.4
MILA	Mila	31.36	234	P	P	10 15 10.6	+0.2
	baz=32,SNR=4.8						
TV1H	Townsville Har	31.89	268	P	P	10 15 14.9	-0.1
CTA	Charters Tower	32.26	266	P	P	10 15 18.2	0.0
	comp=Z,136nm,0.5s,baz=94,slow=9.8,SNR=355						
CTA				ScP	ScP	10 20 37.4	+1.5
	comp=Z,27nm,1.0s,baz=103,slow=1.7,SNR=8.6						
	comp=Z,136nm,0.5s						
CTA	Charters Tower	32.26	266	P	P	10 15 18.0	-0.1
CTAO	Charters Tower	32.26	266	P	P	10 15 18.2	0.0
CTAO	Charters Tower	32.26	266	P	P	10 15 17.8	-0.3
CTAO	Charters Tower	32.26	266	P	P	10 15 18.2	0.0
CTAO				pmax	pmax		
	comp=Z,164nm,0.6s						
CTAO	Charters Tower	32.26	266	P	P	10 15 18.2	0.0
CTAO				ScP	ScP	10 20 38.3	+2.4
CMSA	Cobar Meteorol	32.75	245	P	P	10 15 22.6	+0.5
	baz=33,SNR=269						
CMSA	Cobar Meteorol	32.75	245	P	P	10 15 22.7	+0.5
KRVT	Keravat (AS076	32.80	298	ScP	ScP	10 20 38.4	+0.5
	comp=Z,42nm,0.9s,baz=108,slow=3.2,SNR=4.1						
QLP	Quilpie	33.63	254	P	P	10 15 29.7	+0.1
	baz=34,SNR=76						
QLP	Quilpie	33.63	254	P	P	10 15 29.7	+0.1
TOO	Toolangi	34.29	235	P	P	10 15 35.5	+0.5
	baz=34,SNR=26						
TOO	Toolangi	34.29	235	P	P	10 15 35.9	+0.9
TOO	Toolangi	34.29	235	P	P	10 15 35.8	+0.9
TOO	Toolangi	34.29	235	P	P	10 15 35.9	+0.9
TOO				pmax	pmax		
	comp=Z,125nm,1.3s						
MTSU	Mount Surprise	34.41	269	P	P	10 15 35.9	-0.3
	baz=34,SNR=154						
MTSU	Mount Surprise	34.41	269	P	P	10 15 36.3	0.0
PMG	Port Moresby	34.52	285	P	P	10 15 36.8	-0.4
	comp=Z,253nm,0.9s,baz=80,slow=5.6,SNR=46						
PMG				ScP	ScP	10 20 45.7	+1.7
	comp=Z,15nm,0.7s,baz=129,slow=6.0,SNR=4.8						
	comp=Z,253nm,0.9s						
PMG	Port Moresby	34.52	285	P	P	10 15 36.7	-0.5
PMG	Port Moresby	34.52	285	P	P	10 15 37.1	-0.1
PMG	Port Moresby	34.52	285	*d i*P	P	10 15 36.1	-1.1
PMG				pmax	pmax		
	comp=Z,330nm,1.0s						
PMG	Port Moresby	34.52	285	P	P	10 15 36.6	-0.5
PMG				ScP	ScP	10 20 45.8	+1.8
MOO	Moorlands	34.87	226	P	P	10 15 40.7	+1.0
	baz=35,SNR=3.2						
GEXS	Deakin Univers	35.38	234	P	P	10 15 45.1	+1.1
STKA	Stephens Creek	36.26	245	P	P	10 15 51.9	+0.6
	comp=Z,62nm,0.5s,baz=90,slow=9.8,SNR=151						
STKA				ScP	S	10 20 50.5	-0.1
	comp=Z,18nm,0.9s,baz=65,slow=5.7,SNR=8.2						
	comp=Z,62nm,0.5s						
STKA	Stephens Creek	36.26	245	P	P	10 15 51.9	+0.6
	baz=36,SNR=131						
STKA	Stephens Creek	36.26	245	P	P	10 15 51.9	+0.6
STKA				IAmb	IAmb	10 15 53.5	
	comp=Z,43nm,1.4s						
STKA	Stephens Creek	36.26	245	P	P	10 15 52.0	+0.6
STKA	Stephens Creek	36.26	245	*c i*P	P	10 15 50.8	-0.5
COEN	Coen	36.54	276	P	P	10 15 54.0	+0.1
	baz=37,SNR=79						
COEN	Coen	36.54	276	P	P	10 15 53.9	+0.1
INKA	Innaminka	36.75	252	P	P	10 15 56.5	+1.1
ARPS	Mount Arapiles	36.89	237	P	P	10 15 56.7	+0.3
	baz=37,SNR=16						
ARPS	Mount Arapiles	36.89	237	P	P	10 15 56.8	+0.4
QIS	Mount Isa	38.34	264	P	P	10 16 07.7	-0.7
	baz=38,SNR=43						
QIS	Mount Isa	38.34	264	P	P	10 16 07.8	-0.7
HTT	Hallett	38.68	243	P	P	10 16 11.2	+0.2
	baz=39,SNR=33						
HTT	Hallett	38.68	243	P	P	10 16 11.2	+0.2
LCRK	Leigh Creek	39.03	248	P	P	10 16 14.1	+0.3
TAOE	Nuku Hiva Isla	39.67	77	*e*P	P	10 16 18.6	-0.6
	comp=Z,414nm,1.1s						
TAOE				*e*S	S	10 21 43.3	+2.0
	comp=Z,165nm,24.4s						
WHYH	Whyalla	39.76	244	P	P	10 16 20.0	+0.4
RKT	Rikitea	40.82	101	*e*sS	sS	10 25 06.0	+1.9
	comp=Z,55µm,36.5s						
BBOO	Buckleboo	41.01	245	P	P	10 16 29.4	-0.1
	baz=41,SNR=88						
BBOO	Buckleboo	41.01	245	P	P	10 16 29.5	-0.1
BBOO	Buckleboo	41.01	245	P	P	10 16 29.4	-0.1
OOD	Oodnadatta	41.23	252	P	P	10 16 31.9	+0.6
MULG	Mulgathing	42.62	248	P	P	10 16 42.1	-0.1
AS01	Alice Springs	43.11	258	P	P	10 16 45.9	-0.2
AS31	Alice Springs	43.15	258	P	P	10 16 46.2	-0.3
AS31				IAmb	IAmb	10 16 48.0	
	comp=Z,52nm,0.6s						
ASAR	Alice Springs	43.15	258	P	P	10 16 46.5	+0.1
	comp=Z,140nm,0.6s,baz=97,slow=7.7,SNR=2004						
ASAR				ScP	ScP	10 21 19.0	+1.6
	comp=Z,21nm,0.9s,baz=108,slow=4.0,SNR=25						
ASAR				S	S	10 22 28.6	-2.4
	comp=Z,21nm,0.8s,baz=95,slow=16,SNR=29						
	comp=Z,140nm,0.6s						
ASAR	Alice Springs	43.15	258	P	P	10 16 45.9	-0.6
ASAR	Alice Springs	43.15	258	P	P	10 16 45.9	-0.6
WB0	Warramunga Arr	43.30	264	P	P	10 16 46.7	-1.0
WB2	Warramunga Arr	43.31	264	P	P	10 16 46.8	-0.9
WRAB	Tennant Creek	43.31	264	P	P	10 16 46.8	-0.9
WRAB	Tennant Creek	43.31	264	P	P	10 16 46.9	-0.8
WRAB	Tennant Creek	43.31	264	*d i*P	P	10 16 45.9	-1.8
WRAB				pmax	pmax		
	comp=Z,285nm,1.1s						
WRAB	Tennant Creek	43.31	264	P	P	10 16 46.6	-1.1
WRAB				ScP	ScP	10 21 20.6	+2.4
WRA	Warramunga Arr	43.32	264	P	P	10 16 46.8	-1.1
	comp=Z,105nm,0.7s,baz=95,slow=5.4,SNR=787						
WRA				ScP	ScP	10 21 19.7	+1.6
	comp=Z,22nm,1.0s,baz=97,slow=4.2,SNR=24						
WRA				S	S	10 22 30.1	-3.4
	comp=Z,5.5nm,0.8s,baz=100,slow=14,SNR=8.3						
	comp=Z,105nm,0.7s						
WRA	Warramunga Arr	43.32	264	P	P	10 16 46.7	-1.1
WRA	Warramunga Arr	43.32	264	P	P	10 16 46.7	-1.1
WRA				pmax	pmax		
	comp=Z,24nm,1.0s						
GENI	Genyem	43.79	290	P	P	10 16 51.8	+0.4
GENI	Genyem	43.79	290	P	P	10 16 51.3	-0.1
	comp=Z,377nm,1.1s,comp=Z,4µm						
SMPI	Sarmi	45.35	290	P	P	10 17 03.0	-0.4
	comp=Z,181nm,1.1s,comp=Z,2µm						
KDU	Kakadu	46.85	273	P	P	10 17 13.8	-0.8
	baz=47,SNR=65						
KDU	Kakadu	46.85	273	P	P	10 17 13.9	-0.8
KHLU	Kahalu`u	46.93	31	P	P	10 17 14.9	-0.4
KHLU				IAmb	IAmb	10 17 15.9	
	comp=Z,74nm,0.8s						
KIP	Kipapa	47.57	27	P	P	10 17 19.3	-0.7
SRPI	Serui, Papua	47.58	288	P	P	10 17 20.0	-0.2
FORT	Forrest	47.79	248	P	P	10 17 21.0	-0.6
	baz=48,SNR=87						
FORT	Forrest	47.79	248	P	P	10 17 20.9	-0.7
FORT	Forrest	47.79	248	P	P	10 17 21.0	-0.6
MTN	Manton Dam	48.05	272	P	P	10 17 22.4	-1.3
	baz=48,SNR=64						
MTN	Manton Dam	48.05	272	P	P	10 17 22.9	-0.7
MTN	Manton Dam	48.05	272	P	P	10 17 22.6	-1.1
WRKA	Warakurna	48.06	255	P	P	10 17 23.3	-0.4
	baz=48,SNR=575						
WRKA	Warakurna	48.06	255	P	P	10 17 23.0	-0.7
KNRA	Kununurra	49.45	268	P	P	10 17 33.7	-0.2
	baz=50,SNR=6.0						
KNRA	Kununurra	49.45	268	P	P	10 17 33.8	-0.2
KNRA	Kununurra	49.45	268	P	P	10 17 33.9	-0.1
SAUI	Saumlaki	49.52	278	P	P	10 17 35.2	+0.7
	comp=Z,419nm,1.0s						
SAUI	Saumlaki	49.52	278	P	P	10 17 34.4	-0.1
	comp=Z,421nm,1.0s,comp=Z,10µm						
RKPI	Ransiki, Papua	49.57	287	P	P	10 17 34.4	-0.5
	comp=Z,109nm,0.8s						
GUMO	Guam	49.70	312	P	P	10 17 35.3	-0.3
	comp=Z,141nm,0.7s,baz=186,slow=8.6,SNR=14						
	comp=Z,141nm,0.7s						
GUMO	Guam	49.70	312	P	P	10 17 35.5	-0.2
GUMO	Guam	49.70	312	P	P	10 17 35.4	-0.3
GUMO	Guam	49.70	312	P	P	10 17 35.5	-0.2
GUMO				pmax	pmax		
	comp=Z,243nm,1.0s						
GUMO	Guam	49.70	312	P	P	10 17 35.4	-0.3
GUMO				ScP	ScP	10 21 45.8	+0.9
FAKI	Fak Fak	50.67	285	P	P	10 17 42.0	-1.0
FAKI	Fak Fak	50.67	285	P	P	10 17 42.0	-1.0
FAKI	Fak Fak	50.67	285	P	P	10 17 42.3	-0.6
	comp=Z,142nm,1.4s,comp=Z,2µm						
FITZ	Fitzroy Crossi	51.75	264	P	P	10 17 50.5	-0.1
DRV	Dumont d'Urvil	51.87	199	P	P	10 17 51.3	+0.6
DRV				ScP	ScP	10 21 56.4	+3.0
BNDI	Bandanaira	52.13	282	P	P	10 17 53.1	-0.3
BNDI	Bandanaira	52.13	282	P	P	10 17 53.2	-0.2
	comp=Z,571nm,0.9s,comp=Z,6µm						
KMBL	Kambalda	53.04	246	P	P	10 17 59.1	-0.6
	baz=53,SNR=14						
KMBL	Kambalda	53.04	246	P	P	10 17 59.2	-0.5
MSAI	Masohi	53.49	282	P	P	10 18 02.7	-0.4
	comp=Z,30nm,0.6s,comp=Z,1µm						
AAI	Ambon	54.02	282	P	P	10 18 06.1	-0.7
	comp=Z,167nm,1.2s,comp=Z,3µmcomp=Z,13µm						
NLAI	Namlea	55.20	282	P	P	10 18 14.6	-0.4
	comp=Z,106nm,1.1s						
SOEI	Soe	55.41	273	P	P	10 18 17.1	+0.5
SOEI	Soe	55.41	273	P	P	10 18 17.6	+1.0
LBMI	Labuha	55.93	285	P	P	10 18 19.6	-0.5
	comp=Z,198nm,1.0s,comp=Z,2µm						
PSA00	Pilbara Seismi	56.30	258	P	P	10 18 21.7	-0.8
PSA00				IAmb	IAmb	10 18 23.3	
	comp=Z,164nm,1.2s						
PSA00	Pilbara Seismi	56.30	258	P	P	10 18 22.0	-0.5
MEEK	Meekatharra	56.46	252	P	P	10 18 22.5	-1.1
	baz=56,SNR=17						
MEEK	Meekatharra	56.46	252	P	P	10 18 22.8	-0.8
MBWA	Marble Bar	56.49	258	P	P	10 18 23.2	-0.7
MBWA				IAmb	IAmb	10 18 24.5	
	comp=Z,225nm,1.4s						
MBWA	Marble Bar	56.49	258	P	P	10 18 22.9	-1.0
MBWA	Marble Bar	56.49	258	⇓P	P	10 18 23.1	-0.7
KLBR	Kellerberrin	56.53	246	P	P	10 18 23.6	-0.4
	baz=57,SNR=36						
KLBR	Kellerberrin	56.53	246	P	P	10 18 23.6	-0.4
SBA	Scott Base	56.63	184	P	P	10 18 27.2	+3.4
VNDA	Vanda	56.65	185	P	P	10 18 25.1	+1.2
	comp=Z,21nm,1.0s,baz=12,slow=6.1,SNR=40						
	comp=Z,21nm,1.0s						
VNDA	Vanda	56.65	185	P	P	10 18 26.5	+2.5
VNDA	Vanda	56.65	185	P	P	10 18 26.5	+2.5
VNDA				pmax	pmax		
	comp=Z,95nm,1.6s						
VNDA	Vanda	56.65	185	P	P	10 18 25.6	+1.7
VNDA				ScP	ScP	10 22 17.1	+2.8
TNTI	Ternate	56.67	286	P	P	10 18 24.9	-0.2
SANI	Sanana	56.70	282	P	P	10 18 24.4	-1.0
NWAO	Narrogin (SRO)	56.83	244	P	P	10 18 25.6	-0.3
	comp=Z,33nm,1.0s,baz=118,slow=8.2,SNR=15						
	comp=Z,33nm,1.0s						
NWAO	Narrogin (SRO)	56.83	244	P	P	10 18 25.7	-0.3
	baz=57,SNR=12						
NWAO				P	P	10 18 25.7	-0.3
	baz=57,SNR=12						
NWAO	Narrogin (SRO)	56.83	244	P	P	10 18 26.5	+0.5
NWAO	Narrogin (SRO)	56.83	244	P	P	10 18 26.5	+0.5
NWAO				IAmb	IAmb	10 18 27.4	
	comp=Z,105nm,0.8s						
NWAO	Narrogin (SRO)	56.83	244	P	P	10 18 26.0	0.0
NWAO	Narrogin (SRO)	56.83	244	P	P	10 18 25.8	-0.2
NWAO	Narrogin (SRO)	56.83	244	P	P	10 18 26.5	+0.5
NWAO				pmax	pmax		
	comp=Z,34nm,0.9s						
NWAO	Narrogin (SRO)	56.83	244	P	P	10 18 25.3	-0.6
NWAO				ScP	ScP	10 22 16.5	+0.5
BLDU	Ballidu	57.54	247	P	P	10 18 30.3	-0.6
	baz=58,SNR=45						
BLDU	Ballidu	57.54	247	P	P	10 18 30.1	-0.8
MMRI	Maumere	57.67	273	P	P	10 18 31.1	-0.9
MMRI				IAmb	IAmb	10 18 32.6	
	comp=Z,128nm,0.6s						
MMRI	Maumere	57.67	273	P	P	10 18 31.0	-1.0
MUN	Mundaring	57.79	245	P	P	10 18 32.6	+0.1
	baz=58,SNR=16						
MUN	Mundaring	57.79	245	P	P	10 18 32.8	+0.2
MTKN	Mount Kenneth	58.17	245	P	P	10 18 36.9	+1.9
MORW	Morawa	58.33	248	P	P	10 18 35.8	-0.4
	baz=58,SNR=21						
MORW	Morawa	58.33	248	P	P	10 18 36.0	-0.2
MORW	Morawa	58.33	248	P	P	10 18 35.8	-0.4
LUWI	Luwuk	60.04	282	P	P	10 18 48.2	+0.4
	comp=Z,210nm,1.3s						
CCD	Concordia, Ant	61.05	194	P	P	10 18 55.0	+1.1
GIRL	Giralia	61.14	255	P	P	10 18 55.8	+0.9
	baz=61,SNR=17						
GIRL	Giralia	61.14	255	P	P	10 18 55.9	+0.9
GIRL	Giralia	61.14	255	P	P	10 18 55.7	+0.9
JCJ	Chichijima	61.20	321	P	P	10 18 55.1	0.0
	comp=Z,75nm,0.6s,baz=172,slow=14,SNR=4.3						
	comp=Z,75nm,0.6s						
KAPI	Kappang	61.26	276	P	P	10 18 55.5	-0.3
	comp=Z,11nm,0.4s,baz=102,slow=4.1,SNR=18						
	comp=Z,11nm,0.4s						
KAPI	Kappang	61.26	276	P	P	10 18 55.5	-0.3
	comp=Z,30nm,1.0s						
KAPI	Kappang	61.26	276	P	P	10 18 55.2	-0.6
KCP	Kidapawan	61.58	291	⇓*i*P	P	10 18 57.1	-0.8
TASP	Talacogon, Agu	61.67	293	⇑*e*P	P	10 18 58.0	-0.4
PLAI	Plampang	61.75	271	P	P	10 18 58.4	-0.6
SKMP	Bagumbayan, Su	61.82	290	⇑*e*P	P	10 18 58.4	-1.0
GLSP	General Luna,	62.07	295	⇑*e*P	P	10 19 00.5	-0.5
BUTP	Butuan	62.09	293	⇑*e*P	P	10 19 01.0	-0.1
CASY	Casey	62.42	205	P	P	10 19 03.0	+0.6
CASY				IAmb	IAmb	10 19 53.5	
	comp=Z,63nm,1.1s						
CASY	Casey	62.42	205	P	P	10 19 03.2	+0.8
CGP	Cagayan de Oro	62.62	292	⇓*e*P	P	10 19 05.2	+0.7
TOLI2	Tolitoli	62.74	283	P	P	10 19 05.1	-0.3
TOLI2				IAmb	IAmb	10 19 05.9	
	comp=Z,82nm,1.0s						
TOLI2	Tolitoli	62.74	283	P	P	10 19 06.2	+0.8
MSLP	Maasin	63.32	294	⇑*e*P	P	10 19 07.3	-1.7
PAGZ	Pagadian	63.46	291	⇑*e*P	P	10 19 09.5	-0.4
TABP	Talibon, Bohol	63.74	294	⇑*e*P	P	10 19 10.6	-1.1
LSIP	Lazi, Siquijor	63.87	292	⇑*e*P	P	10 19 12.1	-0.5
TBP	Tagbilaran	63.95	293	⇓*e*P	P	10 19 11.2	-1.9
OCLP	Ormoc	63.99	295	⇑*e*P	P	10 19 12.9	-0.4
IPIL	Ipil	64.14	291	⇑*e*P	P	10 19 14.4	+0.1
DACP	Dalaguete, Ceb	64.28	293	⇑*e*P	P	10 19 15.5	+0.4
CNOP	Candoni, Negro	65.06	293	⇑*e*P	P	10 19 17.8	-2.2
PVCP	Virac	65.68	297	⇑*e*P	P	10 19 24.1	+0.3
RCP	Roxas	65.83	294	⇓*e*P	P	10 19 24.3	-0.5
MYLDM	Lahad Datu	66.54	286	P	P	10 19 29.8	+0.5
MYLDM				IAmb	IAmb	10 19 36.1	
	comp=Z,106nm,1.5s						
JCNP	Jose Panganiba	67.25	297	⇑*e*P	P	10 19 33.3	-0.2
QSPA	South Pole Qui	68.40	180	P	P	10 19 40.7	+0.8
	comp=Z,95nm,0.8s,baz=21,slow=3.3,SNR=457						
	comp=Z,95nm,0.8s						
QSPA	South Pole Qui	68.40	180	P	P	10 19 40.4	+0.5
QSPA	South Pole Qui	68.40	180	P	P	10 19 41.0	+1.1
LBLP	Los Banos, Lag	68.42	296	⇑*e*P	P	10 19 37.2	-3.4
UGM	Wanagama	68.81	270	P	P	10 19 42.5	-0.7
RTBP	Dona Remedios	68.95	297	⇑*e*P	P	10 19 43.4	-0.4
KKM	Kota Kinabalu	68.97	286	P	P	10 19 43.6	-0.6
KKM				IAmb	IAmb	10 19 44.8	
	comp=Z,35nm,0.6s						
KKM	Kota Kinabalu	68.97	286	P	P	10 19 44.1	0.0
ABPP	Abucay Bataan	69.35	296	⇑*e*P	P	10 19 46.1	-0.1
SMPP	San Manuel, Pa	69.87	297	⇑*e*P	P	10 19 50.0	+0.7
JOW	Kunigami	70.06	311	P	P	10 19 50.4	+0.1
	comp=Z,67nm,1.0s,baz=127,slow=15,SNR=10						
	comp=Z,67nm,1.0s						
JOW	Kunigami	70.06	311	P	P	10 19 51.0	+0.8
JOW				IAmb	IAmb	10 19 51.8	
	comp=Z,65nm,0.9s						
JOW	Kunigami	70.06	311	P	P	10 19 50.5	+0.3
JMM	Marumori	70.14	327	P	P	10 19 50.7	+0.3
SAMP	Sagada Mountai	70.16	298	⇑*e*P	P	10 19 50.3	-0.8
JGF	Kuroka	70.26	323	P	P	10 19 50.6	-0.6
JGF	Kuroka	70.26	323	P	P	10 19 50.9	-0.4
INU	Inuyama	70.26	323	P	P	10 19 51.3	+0.1
INU	Inuyama	70.26	323	P	P	10 19 51.8	+0.6
	comp=Z,22nm,1.1s						
INU	Inuyama	70.26	323	P	P	10 19 50.6	-0.6
APYP	Conner	70.29	299	⇑*e*P	P	10 19 51.8	+0.1
MJAR	Matsushiro Arr	70.49	325	P	P	10 19 51.7	-0.9
	comp=Z,17nm,0.8s,baz=160,slow=6.1,SNR=43						
MJAR				pP	pP	10 21 53.4	+0.1
	comp=Z,2.1nm,0.8s,baz=153,slow=6.2,SNR=4.0						
MJAR				PKPPKP	P'P'df	10 47 42.8	-1.2
	comp=Z,1.5nm,0.8s,baz=324,slow=4.2,SNR=5.0						
	comp=Z,17nm,0.8s						
MAJO	Matsushiro	70.49	325	P	P	10 19 52.4	-0.2
MAJO	Matsushiro	70.49	325	P	P	10 19 52.2	-0.4
MAJO	Matsushiro	70.49	325	*d i*P	P	10 19 52.0	-0.6
MAJO				pmax	pmax		
	comp=Z,30nm,1.0s						
MAJO	Matsushiro	70.49	325	P	P	10 19 52.0	-0.6
MJB9	Matsu-Tunnel	70.49	325	P	P	10 19 53.6	+1.0
PACPP	Pamplona Cagay	70.52	300	⇑*e*P	P	10 19 53.3	+0.2
JMN	Monobe	70.93	320	P	P	10 19 55.7	+0.5
JMN				IAmb	IAmb	10 19 56.9	
	comp=Z,45nm,1.0s						
JMN	Monobe	70.93	320	P	P	10 19 55.9	+0.7
SBUM	Sibu	71.09	281	P	P	10 19 56.5	-0.1
JSU	Suzuyama	71.56	316	P	P	10 19 58.8	-0.1
JSU				IAmb	IAmb	10 20 00.0	
	comp=Z,61nm,1.1s						
JSU	Suzuyama	71.56	316	P	P	10 19 59.0	+0.1
JSD	Sado	71.57	326	P	P	10 19 59.2	+0.4
JSD	Sado	71.57	326	P	P	10 19 59.8	+1.0
BBJI	Bungbulang	71.63	269	P	P	10 19 58.7	-1.1
JHS	Saijyo	72.26	320	P	P	10 20 02.9	0.0
JHS				IAmb	IAmb	10 20 04.4	
	comp=Z,70nm,0.9s						
JHS	Saijyo	72.26	320	P	P	10 20 03.2	+0.3
JTM	Tenmabayashi	72.28	329	P	P	10 20 02.9	+0.1
JTM				IAmb	IAmb	10 20 04.1	
	comp=Z,41nm,1.0s						
JNU	Nakatsue	72.35	318	P	P	10 20 03.4	-0.1
	comp=Z,26nm,0.9s,baz=115,slow=4.5,SNR=16						
	comp=Z,26nm,0.9s						
JNU	Nakatsue	72.35	318	P	P	10 20 03.6	+0.1
JNU				IAmb	IAmb	10 20 04.5	
	comp=Z,48nm,1.1s						
JNU	Nakatsue	72.35	318	P	P	10 20 03.9	+0.4
KSM	Kuching	72.45	279	P	P	10 20 04.6	+0.1
KSM				IAmb	IAmb	10 20 05.8	
	comp=Z,92nm,1.0s						
KSM	Kuching	72.45	279	P	P	10 20 04.8	+0.3
TWG	Pinlang	73.06	304	P	P	10 20 06.0	-1.7
TWG				IAmb	IAmb	10 20 06.7	
	comp=Z,43nm,0.5s						
YULB	Yu-li	73.20	304	P	P	10 20 06.9	-1.6
NACB	Ninganchiao	73.40	305	P	P	10 20 09.0	-0.6
TPUB	Ta-pu	73.66	304	P	P	10 20 09.8	-1.4
TPUB	Ta-pu	73.66	304	P	P	10 20 09.8	-1.4
SSLB	Suanglung	73.68	304	P	P	10 20 10.1	-1.2
YHNB	Yeheng	73.84	305	P	P	10 20 12.6	+0.4
ASAJ	Asahikawa	74.22	332	P	P	10 20 14.4	+0.6
	comp=Z,9.8nm,0.8s,baz=221,slow=8.5,SNR=21						
	comp=Z,9.8nm,0.8s						
NIKH	Nikolski High	74.87	6	P	P	10 20 15.9	-1.4
	baz=190						
YSS	Yuzh-Sakhalins	76.44	334	P	P	10 20 27.2	+1.2
	comp=Z,16nm,1.4s						
YSS	Yuzh-Sakhalins	76.44	334	*d i*P	P	10 20 26.7	+0.7
YSS				pmax	pmax		
	comp=Z,23nm,1.4s						
TJN	Taejon	76.67	318	P	P	10 20 27.9	+0.4
KSRS	Korea Array	77.02	319	P	P	10 20 29.4	0.0
	comp=Z,5.3nm,0.9s,baz=140,slow=6.0,SNR=18						
	comp=Z,5.3nm,0.9s						
PETK	Petropavlovsk-	77.12	346	P	P	10 20 29.7	+0.1
	comp=Z,6.6nm,1.0s,baz=147,slow=8.6,SNR=11						
	comp=Z,6.6nm,1.0s						
SDPT	Sand Point	78.36	11	P	P	10 20 35.2	-1.0
	baz=198						
DLV	T Lat	78.38	288	P	P	10 20 38.6	+1.1
	comp=Z,55nm,1.2s						
S12K	Black Hills	78.44	10	P	P	10 20 36.4	-0.3
	baz=196						
SCZ2	Santa Cruz Isl	79.23	47	P	P	10 20 41.9	+0.5
	baz=235						
USA0B	Ussuriysk Arra	79.30	327	P	P	10 20 42.3	+0.9
USA0B	Ussuriysk Arra	79.30	327	*d i*P	P	10 20 42.1	+0.7
USRK	Ussuriysk Ar.	79.30	327	P	P	10 20 42.1	+0.7
	comp=Z,17nm,1.0s,baz=129,slow=3.8,SNR=16						
	comp=Z,17nm,1.0s						
USRK	Ussuriysk Ar.	79.30	327	P	P	10 20 42.4	+1.0
USRK	Ussuriysk Ar.	79.30	327	P	P	10 20 42.4	+1.0
SBC	Santa Barbara	79.44	46	P	P	10 20 43.3	+1.0
	baz=234						
PKM	Mcpherson Peak	79.63	46	P	P	10 20 44.3	+0.7
	baz=234,SNR=5.9						
CHGN	Chignik	79.64	12	P	P	10 20 44.9	+2.0
	baz=200						
TYV	Tymovskoe	79.65	337	*e*P	P	10 20 43.8	+0.7
TYV				pmax	pmax		
	comp=Z,12nm,1.2s						
TYV				pmax	pmax		
	comp=Z,300nm,6.6s						
SAO	San Andreas Ge	79.66	44	P	P	10 20 44.8	+1.3
SAO	San Andreas Ge	79.66	44	P	P	10 20 44.8	+1.3
SAO				pmax	pmax		
	comp=Z,39nm,1.1s						
CIS	Catalina Islan	79.73	48	P	P	10 20 44.5	+0.5
	baz=236						
PMPB	Monarch Peak	79.75	44	P	P	10 20 45.8	+1.6
PMPB				IAmb	IAmb	10 20 46.4	
	comp=Z,95nm,1.4s						
SMMC	Simmler	79.75	46	P	P	10 20 45.5	+1.4
	baz=234						
NJ2	Nanjing	79.75	310	⇓*i*P	P	10 20 44.9	+0.8
NJ2				pmax	pmax		
	comp=Z,25nm,0.6s						
FMP	Fort Macarthur	79.99	48	P	P	10 20 45.7	+0.4
	baz=236						
HOPS	Hopland Field	80.00	41	P	P	10 20 46.7	+1.5
HOPS				IAmb	IAmb	10 20 47.5	
	comp=Z,62nm,0.9s						
MAW	Mawson	80.08	200	P	P	10 20 45.7	+0.5
	comp=Z,24nm,0.7s,baz=112,slow=6.6,SNR=6.2						
	comp=Z,24nm,0.7s						
OSI	Osito Audit: C	80.20	47	P	P	10 20 46.6	+0.1
	baz=235						
DECC	Green Verdugo	80.26	47	P	P	10 20 46.9	+0.2
	baz=236,SNR=7.3						
QIZ	Qiongzhong	80.30	295	P	P	10 20 48.2	+0.9
QIZ				sP	sP	10 23 52.3	+1.0
QIZ				S	S	10 30 07.6	+2.5
QIZ				pmax	pmax		
	comp=Z,180nm,2.3s						
109C	Camp Elliot, M	80.35	49	P	P	10 20 47.7	+0.5
	baz=236,SNR=13						
ARVC	Arvin	80.42	46	P	P	10 20 47.9	+0.4
	baz=235,SNR=8.7						
JCC	Jacoby Creek,	80.57	39	P	P	10 20 49.5	+1.4
JCC				IAmb	IAmb	10 20 50.6	
	comp=Z,108nm,1.4s						
VES	Vestal, Richgr	80.66	46	P	P	10 20 49.1	+0.4
	baz=235,SNR=24						
MURC	Murrieta	80.68	48	P	P	10 20 49.5	+0.6
	baz=236,SNR=22						
BFSC	Mount Baldy Ra	80.72	48	P	P	10 20 49.5	+0.2
	baz=236,SNR=12						
VOG	Valley Oaks Go	80.74	45	P	P	10 20 49.2	+0.1
	baz=234						
MDJ	Mudanjiang	80.83	326	P	P	10 20 50.4	+1.0
MDJ				PcP	PcP	10 20 54.5	+0.6
MDJ				pP	pP	10 22 55.7	+1.6

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MDJ                                  PP       PP       10 24 03.9 -1.5
MDJ                                  S        S        10 30 12.5 +3.1
MDJ                                  ScS      ScS      10 30 24.1 +1.1
MDJ                                  SS       SS       10 35 47.6 +5.9
MDJ                                  pmax     pmax
       comp=Z,20nm,1.8s
MDJ                                  pmax     pmax
       comp=Z,230nm,5.5s
MDJ    Mudanjiang         80.83 326  P        P        10 20 51.2 +1.8
       comp=Z,21nm,1.8s
MONP2  Monument Peak      80.83  49  P        P        10 20 50.6 +0.6
       baz=237,SNR=29
EDW2   Edwards Air Fo     80.85  47  P        P        10 20 50.6 +0.7
       baz=236,SNR=29
IKP    In-Ko-Pah, Jac     80.92  50  P        P        10 20 51.0 +0.7
       baz=237,SNR=20
ISA    Isabella, Lake     80.97  46  P        P        10 20 51.1 +0.7
       baz=235,SNR=15
R16K   Pilot Point        80.99  12  P        P        10 20 49.8 -0.1
       baz=200
YUH    Yuha Desert        81.06  50  P        P        10 20 51.5 +0.6
YUH                                  IAmb     IAmb     10 20 53.0
       comp=Z,43nm,1.1s
PFO    Pinyon Flats O     81.20  49 iP        P        10 20 49.3 -2.5
PFO                                 i                  10 26 10.0
PFO                                  pmax     pmax
       comp=Z,33nm,1.0s
PFO    Pinyon Flats O     81.20  49  P        P        10 20 52.6 +0.9
       baz=237,SNR=13
TPFO   Pinon Flats        81.20  49  P        P        10 20 52.3 +0.5
       baz=237,SNR=13
BBRC   Big Bear Solar     81.24  48  P        P        10 20 52.4 +0.3
       baz=236
R17K   Ugashik Creek      81.29  12  P        P        10 20 53.1 +1.7
       baz=201
SWSC   Sam W. Stewart     81.30  50  P        P        10 20 53.5 +1.4
       baz=237,SNR=32
LRMC   Laurel Mtn Rad     81.39  47  P        P        10 20 53.2 +0.5
       baz=236,SNR=19
L02F   Cave Junction      81.66  38  P        P        10 20 55.5 +1.8
L02F                                 IAmb     IAmb     10 20 56.2
       comp=Z,53nm,1.2s
CWC    Cottonwood Cre     81.67  46  P        P        10 20 54.7 +0.6
       baz=235
MDPB   Devils Postpil     81.70  44  P        P        10 20 55.0 +0.7
MDPB                                 IAmb     IAmb     10 20 56.2
       comp=Z,46nm,0.9s
BELC   Belle Mtn. Jos     81.73  49  P        P        10 20 55.2 +0.7
       baz=237,SNR=29
MPMC   Manual Prospec     81.85  46  P        P        10 20 55.5 +0.4
       baz=236,SNR=52
GSC    Goldstone, Bar     81.89  47  P        P        10 20 55.9 +0.8
       baz=236,SNR=23
YBH    Yreka Blue Hor     81.91  39  P        P        10 20 56.1 +1.0
       comp=Z,36nm,0.8s,baz=189,slow=2.0,SNR=120
       comp=Z,36nm,0.8s
TIN    Tinemaha, Big      81.92  45  P        P        10 20 56.1 +0.8
       baz=235,SNR=9.8
BC3    Big Chuckawall     81.93  49  P        P        10 20 56.5 +1.1
       baz=237,SNR=21
HEC    Hector,Ludlow      81.95  48  P        P        10 20 56.1 +0.6
       baz=237,SNR=46
Q17K   Contact Creek      81.97  12  P        P        10 20 54.4 -0.6
       baz=202
GLA    Glamis             82.05  50  P        P        10 20 57.1 +1.1
       baz=238,SNR=16
IPM    Ipoh               82.15 278  P        P        10 20 57.2 +0.3
Q16K   King Salmon        82.20  12  P        P        10 20 55.8 -0.2
       baz=201
QSM    Queen of Sheba     82.22  46  P        P        10 20 57.4 +0.7
KDAK   Kodiak Island      82.22  14  P        P        10 20 55.7 -0.5
       comp=Z,7.4nm,0.8s,baz=216,slow=17,SNR=9.8
       comp=Z,7.4nm,0.8s
WHN    Wuhan              82.23 307 ⇑P        P        10 20 57.9 +1.1
WHN                                  S        S        10 30 20.8 -3.1
P16K   Nushagak River     82.29  11  P        P        10 20 55.9 -0.5
       baz=200
GMRC   Granite Mounta     82.39  48  P        P        10 20 58.3 +0.5
       baz=237,SNR=25
IRM    Iron Mountain      82.42  49  P        P        10 20 58.9 +1.1
       baz=238,SNR=41
GRAC   Grapevine Rang     82.46  45  P        P        10 20 58.8 +0.8
       baz=236,SNR=38
DBO    Dodson Butte       82.47  38  P        P        10 20 59.5 +1.5
DBO                                  IAmb     IAmb     10 21 00.3
       comp=Z,52nm,1.1s
FURC   Furnace Creek,     82.50  46  P        P        10 20 58.2 +0.1
       baz=236,SNR=23
Q18K   Katmai Hardscr     82.50  12  P        P        10 20 57.0 -0.7
       baz=203
CN2    Changchun          82.54 323 ⇑P        P        10 20 58.7 +0.6
CN2                                 epP       pP       10 23 04.7 +1.3
CN2                                 eS        S        10 30 27.5 +1.0
CN2                                  pmax     pmax
       comp=Z,30nm,1.0s
CN2                                  pmax     pmax
       comp=Z,200nm,4.0s
TUQ    Turquoise Moun     82.57  47  P        P        10 20 59.1 +0.4
       baz=237,SNR=14
SHOC   Shoshone, Teco     82.58  47  P        P        10 20 59.1 +0.6
       baz=237,SNR=22
NVAR   Mina Array Bea     82.66  44  P        P        10 20 59.9 +0.8
       comp=Z,36nm,0.9s,baz=224,slow=8.5,SNR=195
NVAR                                 pP       pwP      10 23 06.8 -0.9
       comp=Z,6.4nm,1.2s,baz=229,slow=8.2,SNR=4.4
NVAR                                 PKKPbc   PKKPbc   10 39 19.6 -0.6
       comp=Z,0.6nm,0.8s,baz=86,slow=2.2,SNR=4.5
       comp=Z,36nm,0.9s
NVAR   Mina Array Bea     82.66  44  P        P        10 20 59.4 +0.3
BNX    BinXian            82.73 325 ⇑P        P        10 20 59.2 +0.2
BNX                                  pmax     pmax
       comp=Z,16nm,0.9s
BNX                                  pmax     pmax
       comp=Z,120nm,5.8s
NV11   Mina Array Sit     82.75  44  P        P        10 20 59.9 +0.4
NV11                                 IAmb     IAmb     10 21 01.2
       comp=Z,54nm,1.1s
O16K   Kokwok River B     82.81  11  P        P        10 20 58.1 -0.9
       baz=200
214A   Organ Pipe Nat     82.93  52  P        P        10 21 01.4 +0.9
       baz=239
KLR    Kul'dur            82.96 330  P        P        10 21 00.1 +0.1
       comp=Z,3.8nm,1.0s,baz=122,slow=14,SNR=9.5
KLR                                  PKKPbc   PKKPbc   10 39 16.8 -2.9
       comp=Z,0.3nm,0.2s,baz=309,slow=4.3,SNR=5.2
       comp=Z,3.8nm,1.0s
KLR    Kul'dur            82.96 330d iP       P        10 20 59.1 -1.0
KLR                                  pmax     pmax
       comp=Z,9.0nm,1.3s
P18K   Big Mountain,      83.14  12  P        P        10 20 59.0 -1.9
P18K   Big Mountain,      83.14  12  P        P        10 21 00.0 -0.8
       baz=202
O17K   Koliganek Bris     83.15  11  P        P        10 21 00.2 -0.6
       baz=201
TPNV   Topopah Spring     83.17  46  P        P        10 21 01.9 +0.2
       baz=236,SNR=33
PDMCI  Parker Dam,Lak     83.20  49  P        P        10 21 02.5 +0.9
       baz=238,SNR=33
PSI    Prapat             83.46 276  P        P        10 21 03.7 +0.1
N16K   Nishlik Lake       83.53  10  P        P        10 21 03.1 +0.5
       baz=199
SKLT   Songkhla           83.55 280  P        P        10 21 04.2 +0.3
O18K   Koktuh Hills       83.58  12  P        P        10 21 02.0 -0.9
O18K                                 IAmb     IAmb     10 21 03.4
       comp=Z,42nm,0.8s
O18K   Koktuh Hills       83.58  12  P        P        10 21 02.2 -0.7
       baz=202,SNR=17
P19K   Oil Pt             83.79  13  P        P        10 21 03.0 -0.9
       baz=204
O19K   Port Alsworth      84.06  12  P        P        10 21 04.5 -0.7
       baz=203,SNR=35
GSI    Gunungsitoli       84.16 274  P        P        10 21 07.6 +0.7
O20K   Slope Mountain     84.31  13  P        P        10 21 05.3 -1.2
       baz=205
R11A   Troy Canyon, C     84.38  45  P        P        10 21 07.1 -0.5
       baz=237,SNR=13
BRSE   Bradley Lake S     84.41  14  P        P        10 21 06.8 -0.2
       baz=206
TUC    Tucson             84.60  52  P        P        10 21 09.9 +1.2
       baz=240
N19K   Bonanza Creek      84.60  12  P        P        10 21 06.7 -1.3
N19K   Bonanza Creek      84.60  12  P        P        10 21 07.0 -1.0
       baz=203
SVW2   Sparrevohn         84.66  11  P        P        10 21 08.0 -0.2
       comp=Z,18nm,1.0s
SEW    Seward             85.03  14  P        P        10 21 09.2 -0.7
       baz=208
SRIT   Nakonsritamara     85.03 281  P        P        10 21 12.9 +1.8
       comp=Z,83nm,1.0s
SURA   Surathani          85.22 282  P        P        10 21 13.6 +1.6
CAPN   Captain Cook N     85.24  13  P        P        10 21 11.1 +0.1
       baz=206
319A   Douglas            85.26  54  P        P        10 21 13.5 +1.5
O22K   Cooper Landing     85.30  14  P        P        10 21 10.4 -0.8
       baz=207,SNR=5.9
P23K   Montague Islan     85.42  15  P        P        10 21 11.2 -0.6
       baz=209
HNS    HongShan           85.50 313 ⇓P        P        10 21 13.7 +0.9
HNS                                  pP       pwP      10 23 21.8 -2.1
HNS                                  PP       PP       10 24 47.7 +4.7
HNS                                  SKS      SKSac    10 30 40.1 -1.6
HNS                                  S        S        10 30 58.2 +2.7
HNS                                  pmax     pmax
       comp=Z,15nm,1.2s
KNB    Kanab              85.53  47  P        P        10 21 13.2  0.0
KNB                                  IAmb     IAmb     10 21 15.3
       comp=Z,32nm,1.0s
KNB    Kanab              85.53  47  P        P        10 21 13.2  0.0
KNB                                  pmax     pmax
       comp=Z,32nm,1.0s
LYN    LuoYang            85.61 310⇑iP        P        10 21 14.9 +1.5
LYN                                  S        S        10 31 00.7 +4.0
LYN                                  pmax     pmax
       comp=Z,20nm,0.7s
NONG   Nongkai            85.62 291  P        P        10 21 15.2 +1.4
       comp=Z,44nm,1.3s
M19K   Big River Lodg     85.63  12  P        P        10 21 11.3 -1.5
M19K   Big River Lodg     85.63  12  P        P        10 21 12.4 -0.4
       baz=203
HEH    HeiHe              85.71 329 eP        P        10 21 13.7 +0.2
HEH                                  S        S        10 30 53.4 -3.5
HEH                                  pmax     pmax
       comp=Z,14nm,1.2s
HEH                                  pmax     pmax
       comp=Z,180nm,7.5s
ENH    Enshi              85.76 305  P        P        10 21 14.0 -0.3
ENH                                  IAmb     IAmb     10 21 16.1
       comp=Z,43nm,0.9s
ENH    Enshi              85.76 305  P        P        10 21 15.1 +0.9
       comp=Z,53nm,1.6s
WUAZ   Wupatki            85.77  49  P        P        10 21 14.8 +0.5
       baz=240
L19K   White Mountain     85.80  11  P        P        10 21 13.0 -0.7
L19K                                 IAmb     IAmb     10 21 14.7
       comp=Z,32nm,0.9s
L19K   White Mountain     85.80  11  P        P        10 21 13.5 -0.2
       baz=203
RC01   Rabbit Creek A     85.84  14  P        P        10 21 13.5 -0.4
       baz=207,SNR=18
M20K   Styx River         85.85  12  P        P        10 21 12.2 -1.7
M20K   Styx River         85.85  12  P        P        10 21 12.8 -1.2
       baz=204
ELK    Elko               85.91  43  P        P        10 21 15.4 +0.4
       comp=Z,12nm,0.9s,baz=245,slow=4.7,SNR=34
       comp=Z,12nm,0.9s
BJI    Beijing            85.93 316  P        P        10 21 15.6 +0.9
BJI                                  pmax     pmax
       comp=Z,4.0nm,0.9s
PWL    Port Wells         85.95  15  P        P        10 21 13.6 -0.8
       baz=209,SNR=7.5
COYC   Coyhaique          86.06 138  P        P        10 21 16.6 +1.1
AY01   Puyuhuapi          86.22 137  P        P        10 21 17.2 +1.0
AY01                                 IAmb     IAmb     10 21 18.6
       comp=Z,46nm,1.1s
G08A   Pilot Rock         86.24  38  P        P        10 21 17.1 +0.8
G08A                                 IAmb     IAmb     10 21 18.1
       comp=Z,69nm,1.1s
GYA    Guiyang            86.24 300⇑iP        P        10 21 17.9 +1.2
GYA                                  pP       pP       10 23 24.7 +1.3
GYA                                  PP       PP       10 24 52.1 +2.8
GYA                                  SKS      SKSac    10 30 47.3 +0.3
GYA                                  S        S        10 31 03.4 +0.1
GYA                                  pmax     pmax
       comp=Z,16nm,1.1s
L20K   Farewell, AK       86.25  11  P        P        10 21 15.1 -0.7
       baz=204
SKT    Skwentna           86.25  13  P        P        10 21 14.4 -1.4
       baz=206,SNR=6.9
TTA    Tatalina           86.29  10  P        P        10 21 16.2 +0.2
TTA    Tatalina           86.29  10  P        P        10 21 16.0 -0.1
TTA    Tatalina           86.29  10  P        P        10 21 16.3 +0.2
TTA                                  pmax     pmax
       comp=Z,17nm,1.2s
TTA    Tatalina           86.29  10  P        P        10 21 15.8 -0.3
       baz=202,SNR=8.0
EYAK   Cordova Ski Ar     86.32  16  P        P        10 21 16.0 -0.1
EYAK   Cordova Ski Ar     86.32  16  P        P        10 21 15.3 -0.8
       baz=211
M22K   Willow             86.35  13  P        P        10 21 15.2 -0.9
       baz=207,SNR=14
KNK    Knik Glacier       86.42  14  P        P        10 21 16.3 -0.3
       baz=208,SNR=13
PMR    Palmer             86.42  14  P        P        10 21 16.0 -0.6
PMR    Palmer             86.42  14  P        P        10 21 15.9 -0.6
       baz=208,SNR=18
TROLL  Troll, Antarti     86.56 181  P        P        10 21 16.9 -0.5
ANM    Nome               86.63   6  P        P        10 21 17.2 -0.3
       baz=193
SIT    Sitka              86.63  22  P        P        10 21 17.8 +0.1
       baz=220
U33K   Whale Pass         86.73  24  P        P        10 21 19.3 +1.2
       baz=222
V35K   Ketchikan          86.73  25  P        P        10 21 18.6 +0.5
       baz=223
W18A   Petrified Fore     86.74  50  P        P        10 21 19.8 +0.8
       baz=241
SML    Sawmill            86.79  14  P        P        10 21 17.9 -0.4
       baz=209,SNR=5.0
SNAA   Sanae              86.87 179  P        P        10 21 18.4 -0.5
SNAA   Sanae              86.87 179  P        P        10 21 18.4 -0.5
       comp=Z,7.3nm,0.5s,baz=207,slow=8.0,SNR=58
       comp=Z,7.3nm,0.5s
SNAA   Sanae              86.87 179  P        P        10 21 17.8 -1.0
SNAA   Sanae              86.87 179 iP        P        10 21 17.7 -1.1
SNAA                                 pmax     pmax
       comp=Z,21nm,1.2s
CUT    Chulitna           86.90  13  P        P        10 21 17.9 -0.8
CUT    Chulitna           86.90  13  P        P        10 21 17.8 -0.9
       baz=207,SNR=24
M23K   Glacier View       86.92  14  P        P        10 21 18.3 -0.6
       baz=209,SNR=7.8
121A   Cookes Peak, D     86.93  53  P        P        10 21 20.4 +0.5
121A                                 IAmb     IAmb     10 21 22.6
       comp=Z,68nm,1.5s
121A   Cookes Peak, D     86.93  53  P        P        10 21 21.0 +1.0
       baz=242,SNR=25
121A   Cookes Peak, D     86.93  53  P        P        10 21 20.9 +1.0
       baz=242
PPLA   Purkeypile         86.95  12  P        P        10 21 18.8 -0.5
       baz=205
S31K   Pelican            87.02  21  P        P        10 21 19.6 +0.2
       baz=219
K20K   Telida             87.03  11  P        P        10 21 19.1 -0.3
       baz=203,SNR=19
SCM    Sheep Creek Mo     87.05  15  P        P        10 21 19.3 -0.3
       baz=210,SNR=24
VNA3   Neumayer Olymp     87.05 177  P        P        10 21 18.9 -0.7
KLU    Klutina            87.09  15  P        P        10 21 19.5 -0.3
       baz=211,SNR=7.7
DUG    Dugway, Tooele     87.19  45  P        P        10 21 20.7 -0.2
       baz=238,SNR=8.1
WRAK   Wrangell Islan     87.24  24  P        P        10 21 20.9 +0.4
       baz=223
SEY    Seymchan           87.26 347  P        P        10 21 19.9 -0.6
       comp=Z,4.8nm,0.8s,baz=139,slow=7.1,SNR=12
SEY                                  pP       pP       10 23 28.5 +0.7
       comp=Z,5.3nm,0.3s,baz=124,slow=7.3,SNR=3.5
       comp=Z,4.8nm,0.8s
SEY    Seymchan           87.26 347 iP        P        10 21 19.1 -1.4
SEY                                  pmax     pmax
       comp=Z,6.0nm,0.9s
LL02   Futaleuf           87.29 136  P        P        10 21 23.2 +1.9
T33K   Petersburg         87.31  23  P        P        10 21 21.0 +0.2
       baz=222
PNL    Peninsula          87.35  19  P        P        10 21 21.3 +0.3
PNL    Peninsula          87.35  19  P        P        10 21 21.0  0.0
       baz=217
TNA    Tin City           87.39   5  P        P        10 21 20.9 -0.1
TNA    Tin City           87.39   5  P        P        10 21 21.0  0.0
       baz=190,SNR=8.1
PINM   Pinnacle           87.44  18  P        P        10 21 21.1 -0.4
       baz=216
CAST   Castle Rocks       87.45  12  P        P        10 21 19.8 -1.6
       baz=205,SNR=31
VNA2   Neumayer--Watz     87.48 177  P        P        10 21 21.6  0.0
       baz=188,slow=5.0
NVL    N'lazarevskaya     87.48 184⇓iP        P        10 21 21.7 +0.1
NVL                                  pmax     pmax
       comp=Z,36nm,0.6s
N25K   Chitina, Valde     87.51  16  P        P        10 21 22.2 +0.3
N25K                                 IAmb     IAmb     10 21 22.7
       comp=Z,27nm,0.7s
N25K   Chitina, Valde     87.51  16  P        P        10 21 21.7 -0.1
       baz=212,SNR=22
KIDD   KIDD Seismic O     87.54  54  P        P        10 21 23.4 +0.7
       baz=243
M24K   Tolsona, Glenn     87.56  15  P        P        10 21 21.9 -0.1
       baz=210,SNR=8.0
GLB    Gilahina Butte     87.58  16  P        P        10 21 22.3 +0.2
GLB                                  IAmb     IAmb     10 21 22.9
       comp=Z,23nm,0.7s
Q16A   Castle Valley      87.62  46  P        P        10 21 24.1 +1.1
WAT1   Susitna Watana     87.64  14  P        P        10 21 21.7 -0.7
       baz=208
VNA1   Neumayer--Stat     87.71 177  P        P        10 21 22.8 +0.2
MCARA  McCarthy VSAT      87.73  17  P        P        10 21 22.8 +0.1
       baz=213,SNR=13
TMUT   Trail Mountain     87.79  46  P        P        10 21 25.1 +1.2
TMUT                                 IAmb     IAmb     10 21 26.2
       comp=Z,43nm,0.9s
CHUM   Lake Minchumin     87.83  12  P        P        10 21 21.7 -1.4
       baz=205,SNR=18
TRF    Thorofare Moun     87.83  13  P        P        10 21 22.3 -1.1
       baz=207,SNR=45
CTG    Chitna Glacier     87.84  17  P        P        10 21 23.2 -0.3
       baz=215,SNR=13
GCSA   Galena City Sc     87.86   9  P        P        10 21 23.3 +0.2
       baz=201,SNR=12
MPU    Maple Canyon       87.87  45  P        P        10 21 24.4 +0.2
MPU                                  IAmb     IAmb     10 21 26.1
       comp=Z,25nm,1.2s
XAN    Xi'an              87.94 308  P        P        10 21 25.3 +0.9
XAN                                  pP       pwP      10 23 36.8 +0.6
XAN                                  SKS      SKSac    10 30 53.2 -3.5
XAN                                  S        S        10 31 17.3 -1.3
XAN                                  pmax     pmax
       comp=Z,19nm,0.9s
XAN                                  pmax     pmax
       comp=Z,140nm,6.2s
HLID   Hailey             87.96  41  P        P        10 21 25.1 +0.6
       baz=237,SNR=47
O28M   Mount Upton        88.01  18  P        P        10 21 24.4  0.0
       baz=216
HARP   HAARP              88.05  15  P        P        10 21 24.6 +0.3
       baz=211,SNR=8.9
O29M   Mount Kennedy      88.11  19  P        P        10 21 24.9 +0.2
       baz=217
PLBC   Pleasant Camp      88.13  20  P        P        10 21 25.2 +0.6
       baz=219
SRU    San Rafael Swe     88.15  46  P        P        10 21 25.9 +0.4
SRU                                  IAmb     IAmb     10 21 27.1
       comp=Z,53nm,1.0s
SRU    San Rafael Swe     88.15  46  P        P        10 21 25.9 +0.4
SRU                                  pmax     pmax
       comp=Z,53nm,1.0s
Y22A   Socorro            88.19  52  P        P        10 21 27.0 +1.2
       baz=242
BPAW   Bear Paw Mtn.      88.28  12  P        P        10 21 24.7 -0.6
       baz=206
Y22D   IRIS PASSCAL I     88.28  52  P        P        10 21 27.2 +1.0
       baz=242,SNR=9.5
Y22D   IRIS PASSCAL I     88.28  52  P        P        10 21 27.6 +1.5
       baz=242
Y22F   Passcal Instru     88.28  52  P        P        10 21 27.1 +0.9
       baz=242,SNR=9.4
MNTX   Cornudas Mount     88.36  55  P        P        10 21 26.9 +0.5
       baz=243
MNTX   Cornudas Mount     88.36  55  P        P        10 21 27.6 +1.2
       baz=243
MCK    McKinley           88.36  13  P        P        10 21 25.1 -0.5
MCK                                  IAmb     IAmb     10 21 26.4
       comp=Z,34nm,1.1s
MCK    McKinley           88.36  13  P        P        10 21 25.1 -0.5
MCK                                  pmax     pmax
       comp=Z,34nm,1.1s
MCK    McKinley           88.36  13  P        P        10 21 24.8 -0.8
       baz=208,SNR=14
T35M   Bob Quinn          88.45  24  P        P        10 21 26.9 +0.6
       baz=225
P30M   Million Dollar     88.46  20  P        P        10 21 27.0 +0.7
       baz=219
PAX    Paxson             88.47  15  P        P        10 21 25.5 -0.7
       baz=211,SNR=7.2
SKAG   Skagway            88.47  21  P        P        10 21 27.5 +1.3
       baz=220
YUK8   Steele Glacier     88.55  18  P        P        10 21 26.9  0.0
       baz=216,SNR=24
M26K   Nabesna, AK        88.59  16  P        P        10 21 27.1 +0.2
M26K                                 IAmb     IAmb     10 21 27.9
       comp=Z,24nm,1.1s
M26K   Nabesna, AK        88.59  16  P        P        10 21 26.8  0.0
       baz=213,SNR=14
MVCO   Mesa Verde         88.62  49  P        P        10 21 28.1 +0.3
       baz=241
TX31   Lajitas Ar. Si     88.64  58  P        P        10 21 28.5 +0.6
TX31   Lajitas Ar. Si     88.64  58  P        P        10 21 29.2 +1.3
       baz=244
TX32   Lajitas Array      88.64  58  P        P        10 21 28.5 +0.6
TXAR   Lajitas Array      88.64  58  P        P        10 21 29.0 +1.1
       comp=Z,32nm,0.9s,baz=218,slow=5.4,SNR=171
TXAR                                 PKKPbc   PKKPbc   10 39 05.7 +0.3
       comp=Z,0.6nm,0.6s,baz=100,slow=3.1,SNR=7.0
       comp=Z,32nm,0.9s
YUK6   Outpost Mounta     88.68  19  P        P        10 21 27.4 -0.1
       baz=218
YUK3   Moose Creek        88.75  17  P        P        10 21 27.8 +0.1
       baz=216,SNR=33
S34M   Telegraph Cree     88.79  23  P        P        10 21 28.5 +0.8
       baz=224,SNR=11
HYT    Haines Junctio     88.85  19  P        P        10 21 28.5 +0.4
       baz=218,SNR=5.3
M27K   Edge Creek, AK     88.85  16  P        P        10 21 27.9 -0.2
M27K                                 IAmb     IAmb     10 21 30.1
       comp=Z,59nm,1.4s
M27K   Edge Creek, AK     88.85  16  P        P        10 21 28.2 +0.1
       baz=214
MENT   Mentasta           88.86  15  P        P        10 21 28.5 +0.5
KMI    Kunming            88.87 298 ⇑P        P        10 21 30.9 +1.7
KMI                                  SKS      SKSac    10 31 02.1 -0.8
KMI                                  pmax     pmax
       comp=Z,18nm,1.3s
YUK4   Talbot Arm         88.92  18  P        P        10 21 29.4 +0.9
       baz=217,SNR=6.7
NEW    Newport            88.99  36  P        P        10 21 29.2 +0.2
       comp=Z,5.4nm,0.7s,baz=232,slow=5.0,SNR=12
       comp=Z,5.4nm,0.7s
NEW    Newport            88.99  36  P        P        10 21 29.1 +0.1
NEW                                  IAmb     IAmb     10 21 30.0
       comp=Z,20nm,1.2s
NEW    Newport            88.99  36  P        P        10 21 29.1 +0.1
NEW                                  pmax     pmax
       comp=Z,19nm,1.3s
NEW    Newport            88.99  36  P        P        10 21 29.4 +0.4
       baz=235,SNR=7.0
ANMO   Albuquerque        89.02  52  P        P        10 21 30.1 +0.4
ANMO                                 IAmb     IAmb     10 21 31.3
       comp=Z,31nm,1.0s
ANMO   Albuquerque        89.02  52c iP       P        10 21 29.1 -0.6
ANMO                                 pmax     pmax
       comp=Z,39nm,1.1s
ANMO   Albuquerque        89.02  52  P        P        10 21 30.1 +0.4
       baz=243
ANMO   Albuquerque        89.02  52  P        P        10 21 30.5 +0.9
       baz=243
L26K   Log Cabin Wild     89.03  16  P        P        10 21 28.9 +0.1
L26K   Log Cabin Wild     89.03  16  P        P        10 21 29.1 +0.3
       baz=213,SNR=9.4
I21K   Tanana             89.07  11  P        P        10 21 28.1 -0.8
I21K                                 IAmb     IAmb     10 21 29.3
       comp=Z,22nm,0.8s
I21K   Tanana             89.07  11  P        P        10 21 28.0 -0.8
       baz=205
NEA2   Nenana             89.10  13  P        P        10 21 27.7 -1.3
       baz=208,SNR=9.5
P32M   Atlin              89.11  21  P        P        10 21 29.0 -0.2
       baz=222
K24K   Donnelly Dome      89.11  14  P        P        10 21 29.2  0.0
       baz=211,SNR=17
Q32M   Nakina River       89.14  22  P        P        10 21 30.0 +0.4
       baz=223
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BVCY  Beaver Creek      89.16  17   P        P        10 21 29.6 +0.2
      baz=215,SNR=7.4
MLY   Manley            89.16  12   P        P        10 21 28.2 -1.1
      baz=206,SNR=15
WRH   Wood River Hil    89.19  13   P        P        10 21 28.5 -0.9
WRH                                 IAmb     IAmb     10 21 29.5
      comp=Z,29nm,0.9s
GO06  Curarrehue        89.21 133   P        P        10 21 32.0 +1.6
GO06                                IAmb     IAmb     10 21 32.8
      comp=Z,45nm,1.0s
O30N  Mendenhall        89.24  20   P        P        10 21 29.7 -0.1
      baz=220,SNR=6.3
RIDG  Independent Ri    89.27  15   P        P        10 21 29.5 -0.5
      baz=212,SNR=9.7
PLCA  Paso Flores       89.29 134   P        P        10 21 32.2 +1.4
      comp=Z,25nm,0.9s,baz=239,slow=5.1,SNR=53
      comp=Z,25nm,0.9s
PLCA  Paso Flores       89.29 134   P        P        10 21 31.6 +0.8
PLCA                                IAmb     IAmb     10 21 33.2
      comp=Z,36nm,1.0s
PLCA  Paso Flores       89.29 134   P        P        10 21 31.6 +0.8
PLCA                                pmax     pmax
      comp=Z,36nm,1.0s
HHC   Hu-ho-hao-te      89.36 315  eP        P        10 21 31.3 +0.4
HHC                                 SKS      SKSac    10 31 03.6 -1.1
HHC                                 S        ScS      10 31 34.9 +0.9
HHC                                 pmax     pmax
      comp=Z,28nm,0.8s
HHC                                 pmax     pmax
      comp=Z,130nm,4.8s
H21K  Melozitna Rive    89.36  11   P        P        10 21 29.2 -1.0
H21K  Melozitna Rive    89.36  11   P        P        10 21 29.8 -0.5
      baz=204
HDA   Harding Lake      89.38  13   P        P        10 21 29.9 -0.5
HDA                                 IAmb     IAmb     10 21 30.4
      comp=Z,14nm,0.6s
HDA   Harding Lake      89.38  13   P        P        10 21 30.0 -0.3
      baz=210,SNR=22
CCB   Clear Creek Bu    89.41  13   P        P        10 21 29.3 -1.1
CCB                                 IAmb     IAmb     10 21 30.2
      comp=Z,24nm,0.9s
CMAR  Chiang Mai Arr    89.43 290   P        P        10 21 33.0 +1.3
      comp=Z,17nm,0.9s,baz=129,slow=3.2,SNR=88
CMAR                                pP       pP       10 23 40.6 +1.3
      comp=Z,0.7nm,0.3s,baz=114,slow=4.0,SNR=1.6
CMAR                                PP       PP       10 25 13.8 -0.5
      comp=Z,1.1nm,0.3s,baz=112,slow=7.1,SNR=4.5
CMAR                                PKKPbc   PKKPbc   10 39 03.8 +0.8
      comp=Z,1.5nm,0.3s,baz=295,slow=4.8,SNR=6.8
      comp=Z,17nm,0.9s
L27K  Beaver Creek,     89.44  16   P        P        10 21 30.9 +0.2
L27K  Beaver Creek,     89.44  16   P        P        10 21 30.4 -0.4
      baz=214
BCAR  Beaver Creek A    89.46  16   P        P        10 21 31.2 +0.4
N30M  Aishikik Lake     89.47  19   P        P        10 21 31.0 +0.1
      baz=219
IMAR  Indian Mountai    89.50  10   P        P        10 21 30.4 -0.4
I23K  Minto, Yukon-K    89.53  12   P        P        10 21 30.1 -0.8
      baz=208,SNR=9.0
DLBC  Dease Lake        89.57  23   P        P        10 21 32.0 +0.5
      comp=Z,6.4nm,0.8s,baz=235,slow=8.9,SNR=8.9
      comp=Z,6.4nm,0.8s
DLBC  Dease Lake        89.57  23   P        P        10 21 30.9 -0.6
      baz=225
MDM   Murphy Dome       89.59  13   P        P        10 21 30.0 -1.3
MDM                                 IAmb     IAmb     10 21 31.2
      comp=Z,21nm,0.9s
TCOL  CIGO, UAF Yank    89.59  13   P        P        10 21 30.1 -1.1
      baz=209,SNR=7.0
COLA  College           89.59  13   P        P        10 21 30.6 -0.7
COLA  College           89.59  13c iP        P        10 21 29.4 -1.9
COLA                                pmax     pmax
      comp=Z,26nm,0.9s
COLA  College           89.59  13   P        P        10 21 29.9 -1.3
      baz=209
AHID  Auburn Hatcher    89.61  43   P        P        10 21 33.0 +0.8
AHID                                IAmb     IAmb     10 21 34.5
      comp=Z,37nm,0.8s
SCRK  Sand Creek        89.68  15   P        P        10 21 31.2 -0.7
      baz=212,SNR=20
IL31                    89.71  13   P        P        10 21 30.7 -1.1
IL31                                IAmb     IAmb     10 21 31.9
      comp=Z,44nm,1.7s
ILAR  Eielson Array     89.71  13   P        P        10 21 30.8 -1.1
      comp=Z,7.9nm,0.9s,baz=222,slow=4.9,SNR=78
ILAR                                pP       pP       10 23 40.7 +0.5
      comp=Z,2.8nm,1.0s,baz=227,slow=6.1,SNR=5.9
ILAR                                PKiKP    PKiKP    10 26 23.2 -1.1
      comp=Z,0.4nm,0.7s,baz=230,slow=3.4,SNR=4.7
ILAR                                PKKP     PKKPdf   10 38 58.5 -1.2
      comp=Z,0.2nm,0.5s,baz=340,slow=2.6,SNR=5.3
      comp=Z,7.9nm,0.9s
ILAR  Eielson Array     89.71  13   P        P        10 21 31.2 -0.6
ILAR  Eielson Array     89.71  13   P        P        10 21 31.2 -0.6
H22K  Ishtalitna Cre    89.83  11   P        P        10 21 32.6 +0.2
      baz=206
M29M  Somme Creek       89.85  18   P        P        10 21 32.3 -0.4
      baz=217
P33M  Teslin, Yukon     89.88  21   P        P        10 21 32.7 -0.1
      baz=222
N31M  Braeburn, Yuko    89.89  19   P        P        10 21 33.0 +0.2
      baz=220
POKR  Poker Plat Res    89.89  13   P        P        10 21 31.6 -1.1
      baz=209,SNR=5.3
MSO   Missoula          89.99  39   P        P        10 21 33.4 -0.4
      baz=238
G21K  Allakaket         90.03  10   P        P        10 21 32.8 -0.5
      baz=204
S22A  4UR Ranch, Cre    90.05  49   P        P        10 21 34.9 +0.5
      baz=242,SNR=30
BILL  Bilibino          90.08 355   P        P        10 21 33.3 -0.2
BILL  Bilibino          90.08 355c iP        P        10 21 32.6 -0.9
BILL                               e*PP      pP       10 23 42.9 +1.2
BILL                               e                  10 25 15.9
BILL                               ePPP      PPP      10 27 19.3
BILL                                pmax     pmax
      comp=Z,9.0nm,1.0s
H23K  Yukon River       90.10  12   P        P        10 21 32.9 -0.8
      baz=207
K27K  Chicken           90.18  15   P        P        10 21 34.3 +0.3
K27K                                IAmb     IAmb     10 21 35.4
      comp=Z,17nm,1.0s
K27K  Chicken           90.18  15   P        P        10 21 34.5 +0.5
      baz=214
O20A  White River Ci    90.19  46   P        P        10 21 35.0  0.0
      baz=242,SNR=11
J26L  Joseph Creek      90.22  15   P        P        10 21 34.4  0.0
      baz=213
PZH   PanZhiHua         90.25 298   P        P        10 21 36.2 +0.8
PZH                                 pmax     pmax
      comp=Z,10.0nm,0.9s
PZH                                 pmax     pmax
      comp=Z,110nm,5.1s
RDOG  Red Dog Mine      90.27   6   P        P        10 21 34.2 -0.2
      baz=195
M30M  Minto, Yukon      90.43  18   P        P        10 21 35.2 -0.1
      baz=219
H24K  Noodor Dome       90.44  12   P        P        10 21 35.5 +0.2
      baz=209
L29M  L29M              90.47  17   P        P        10 21 35.5  0.0
      baz=218,SNR=17
BW06  Boulder Array     90.59  44   P        P        10 21 36.6 -0.2
      baz=241,SNR=26
PDAR  Pinedale Array    90.59  44   P        P        10 21 36.9 +0.1
      comp=Z,15nm,0.8s,baz=204,slow=3.0,SNR=112
PDAR                                PKKPbc   PKKPbc   10 39 00.1 -1.2
      comp=Z,0.8nm,0.9s,baz=96,slow=4.5,SNR=4.2
      comp=Z,15nm,0.8s
PDAR  Pinedale Array    90.59  44   P        P        10 21 36.5 -0.3
PRP   Porcupine Dome    90.64  13   P        P        10 21 35.3 -1.0
      baz=211,SNR=7.2
F21K  Alatna River      90.68  10   P        P        10 21 36.5 +0.2
      baz=204
BOZ   Bozeman (W)       90.72  40   P        P        10 21 36.6 -0.5
      baz=239,SNR=22
G22K  Bettles           90.73  11   P        P        10 21 36.3 -0.2
      baz=206
H17A  Grant Village     90.75  42   P        P        10 21 38.6 +1.1
      baz=240,SNR=9.4
G23K  Bananza Creek     90.80  11   P        P        10 21 36.6 -0.3
      baz=207
M31M  Drury Creek, Y    90.86  19   P        P        10 21 37.0 -0.3
      baz=221
DAWY  Dawson            90.90  16   P        P        10 21 37.5 +0.1
DAWY  Dawson            90.90  16   P        P        10 21 37.1 -0.3
      baz=217,SNR=13
SDCO  Great Sand Dun    90.98  50   P        P        10 21 38.4 -0.3
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      baz=243,SNR=24
SDCO  Great Sand Dun    90.98  50   P        P        10 21 38.9 +0.1
      baz=243
I26K  Coal Creek Min    90.99  14   P        P        10 21 37.3 -0.4
      baz=213
EGAK  Eagle             91.03  15   P        P        10 21 37.9 -0.1
      baz=215,SNR=14
F22K  John River        91.15  10   P        P        10 21 38.1 -0.4
      baz=205
K29M  Barlow Dome       91.22  17   P        P        10 21 38.8 -0.2
      baz=218
COLD  Coldfoot          91.23  11   P        P        10 21 38.7 -0.2
      baz=207,SNR=7.6
G24K  Hadweenzic Riv    91.27  12   P        P        10 21 38.4 -0.7
      baz=209
MSTX  Muleshoe          91.32  54   P        P        10 21 40.1 -0.1
      baz=245
MSTX  Muleshoe          91.32  54   P        P        10 21 40.3 +0.1
      baz=245
MAYO  Mayo, Yukon       91.48  18   P        P        10 21 40.2 +0.1
      baz=220
T25A  Trinidad          91.49  50   P        P        10 21 40.8 -0.2
      baz=244
J29M  Klondike Camp     91.52  17   P        P        10 21 40.4 +0.1
      baz=218,SNR=5.6
I27K  Kandik River      91.60  15   P        P        10 21 40.0 -0.7
      baz=215
833A  Chaparral WMA,    91.63  60   P        P        10 21 42.0 +0.4
      baz=246
833A  Chaparral WMA,    91.63  60   P        P        10 21 42.2 +0.6
      baz=246
Q24A  Divide            91.77  49   P        P        10 21 42.2 -0.3
      baz=243,SNR=7.7
E22K  Anaktuvuk Pass    91.78  10   P        P        10 21 41.3 -0.2
      baz=205
ISCO  Idaho Springs     91.83  48   P        P        10 21 42.8 +0.1
      baz=243,SNR=6.9
ISCO  Idaho Springs     91.83  48   P        P        10 21 43.4 +0.7
      baz=243
F24K  Squaw Lake        91.91  12   P        P        10 21 42.8 +0.8
      baz=209
RLMT  Red Lodge         91.92  42   P        P        10 21 43.3 +0.5
      baz=241,SNR=8.3
MT01  Popeta            92.02 128   P        P        10 21 43.7 +0.3
E23K  Chandalar         92.08  11   P        P        10 21 42.9 +0.1
      baz=207
N23A  Red Feather La    92.09  47   P        P        10 21 43.7 -0.1
      baz=243,SNR=11
H27K  Steamboat Moun    92.14  14   P        P        10 21 42.9 -0.2
      baz=215
JCT   Junction City     92.17  58   P        P        10 21 44.2  0.0
      baz=246
JCT   Junction City     92.17  58   P        P        10 21 44.1  0.0
      baz=246
I29M  Ogilvie Camp,     92.22  16   P        P        10 21 43.1 -0.3
      baz=218,SNR=5.7
G26K  Porcupine Rive    92.24  13   P        P        10 21 43.7 +0.2
      baz=213
E24K  Your Creek        92.29  11   P        P        10 21 44.4 +0.6
      baz=208
TNCH  TengChong         92.34 296   P        P        10 21 46.2 +1.1
TNCH                                pP       pP       10 23 53.1 -0.1
TNCH                                sP       sP       10 24 53.3 +1.3
TNCH                                SKS      SKSac    10 31 22.8 +0.5
TNCH                                S        ScS      10 32 03.2 +3.5
TNCH                                pmax     pmax
      comp=Z,19nm,0.9s
TNCH                                pmax     pmax
      comp=Z,67nm,4.1s
F25K  Christian Rive    92.41  12   P        P        10 21 44.9 +0.6
      baz=211
BMAR  Burnt Mountain    92.48  13   P        P        10 21 44.7 +0.1
K22A  Casper            92.51  45   P        P        10 21 45.0 -0.5
      baz=243,SNR=9.9
K22A  Casper            92.51  45   P        P        10 21 45.6 +0.1
      baz=243
AMTX  Amarillo          92.53  53   P        P        10 21 45.6 -0.1
      baz=245
AMTX  Amarillo          92.53  53   P        P        10 21 45.9 +0.2
      baz=245
LZH   Lanzhou           92.58 308  ⇑P        P        10 21 47.2 +1.2
LZH                                 pP       pwP      10 24 00.6 +2.0
LZH                                 SKS      SKSac    10 31 19.8 -3.3
LZH                                 S        ScS      10 32 06.0 +4.8
LZH                                 sS       sS       10 35 44.1 -6.9
LZH                                 pmax     pmax
      comp=Z,17nm,1.5s
LZH                                 pmax     pmax
      comp=Z,170nm,6.2s
D23K  Nanushuk River    92.72  10   P        P        10 21 46.4 +0.8
      baz=206
F26K  Sheenjek River    92.80  13   P        P        10 21 46.9 +0.8
      baz=212
E25K  Arctic Village    92.88  12   P        P        10 21 47.2 +0.7
      baz=211
KOTAN Kotaneelee Air    92.98  24   P        P        10 21 48.0 +1.0
      baz=230
EGMT  Eagleton          93.05  39   P        P        10 21 48.0 +0.2
      baz=241
735A  Kenedy            93.12  60   P        P        10 21 50.0 +1.6
      baz=247
ABTX  Abilene, Hawle    93.16  56   P        P        10 21 48.1 -0.4
      baz=246
ABTX  Abilene, Hawle    93.16  56   P        P        10 21 48.8 +0.3
      baz=246
D24K  Happy Valley      93.19  10   P        P        10 21 48.6 +0.8
      baz=208
EPYK  Eagle Plains      93.42  16   P        P        10 21 49.0 +0.1
      baz=219
KSCO  Kaye Shedlock'    93.56  49   P        P        10 21 50.3 -0.1
      baz=245
KSCO  Kaye Shedlock'    93.56  49   P        P        10 21 50.9 +0.5
      baz=245
C24K  Franklin Bluff    93.71  10   P        P        10 21 49.9 -0.2
      baz=208
E27K  Coleen River      93.74  13   P        P        10 21 50.4  0.0
      baz=215
D25K  Kavik River       93.76  11   P        P        10 21 50.0 -0.4
      baz=210
G30M  tAoh Zraii Nji    94.02  16   P        P        10 21 50.8 -0.9
      baz=220
435B  Jarrell           94.05  59   P        P        10 21 52.9 +0.3
      baz=247
A21K  Barrow            94.07   7   P        P        10 21 51.6 -0.1
      baz=201
C27K  Jago River        94.52  12   P        P        10 21 54.2 +0.4
      baz=213
LAO   LASA Array        94.54  41   P        P        10 21 54.6 +0.1
      baz=243
LAO   LASA Array        94.54  41   P        P        10 21 55.7 +1.2
      baz=243
C26K  Camden Bay        94.54  11   P        P        10 21 54.8 +0.9
      baz=212
WMOK  Wichita Mounta    94.65  55   P        P        10 21 55.2 -0.1
      baz=247
WMOK  Wichita Mounta    94.65  55   P        P        10 21 55.4 +0.2
      baz=247
RSSD  Black Hills       94.79  44   P        P        10 21 54.9 -1.0
RSSD                                IAmb     IAmb     10 21 57.9
      comp=Z,14nm,1.0s
RSSD  Black Hills       94.79  44   P        P        10 21 54.9 -1.0
RSSD                                pmax     pmax
      comp=Z,14nm,1.0s
RSSD  Black Hills       94.79  44   P        P        10 21 55.7 -0.2
      baz=244
RSSD  Black Hills       94.79  44   P        P        10 21 55.7 -0.2
      baz=244
F31M  Tsiigehtchic      95.00  16   P        P        10 21 56.4 +0.5
      baz=222
Z35A  Perchaven, San    95.28  56   P        P        10 21 58.5 +0.4
      baz=248
ULN   Ulaanbaatar       95.50 320 i P        P        10 21 58.3 -0.7
ULN                                 pmax     pmax
      comp=Z,2.0nm,0.7s
CBKS  Cedar Bluff       95.54  51   P        P        10 21 59.6 +0.3
      baz=247
CBKS  Cedar Bluff       95.54  51   P        P        10 21 60.0 +0.8
      baz=247
INK   Inuvik            95.70  16   P        P        10 21 58.1 -1.0
      comp=Z,3.8nm,0.9s,baz=228,slow=3.6,SNR=16
      comp=Z,3.8nm,0.9s
INK   Inuvik            95.70  16   P        P        10 21 60.0 +0.9
      baz=222
SONM  Songino Array     95.89 319   P        P        10 22 00.8 +0.1
      comp=Z,0.9nm,0.9s,baz=119,slow=5.1,SNR=4.7
SONM                                pP       pP       10 24 10.6 +1.4
      comp=Z,0.9nm,1.0s,baz=113,slow=3.3,SNR=3.1
SONM                                PP       PP       10 26 00.8 -2.9
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      comp=Z,1.1nm,0.8s,baz=113,slow=7.1,SNR=4.1
SONM                                S        SKSac    10 31 38.6 -1.4
      comp=Z,0.7nm,0.8s,baz=169,slow=3.0,SNR=8.3
SONM                                PKKPbc   PKKPbc   10 38 46.8 -0.9
      comp=Z,2.2nm,0.9s,baz=275,slow=3.3,SNR=10
      comp=Z,0.9nm,0.9s
R32A  Long Quarter,     96.13  51   P        P        10 22 02.2 +0.3
      baz=247
DGMT  Dagmar            96.55  40   P        P        10 22 04.2 +0.7
      baz=245
DGMT  Dagmar            96.55  40   P        P        10 22 04.2 +0.7
      baz=245
NATX  Nacogdoches       96.73  59   P        P        10 22 05.3 +0.6
      baz=249
TUL1  Leonard           97.36  54   P        P        10 22 08.0 +0.7
      baz=249
BGNE  Belgrade          97.66  49   P        P        10 22 09.8 +1.2
      baz=248
K31A  O'Neill           97.70  47   P        P        10 22 10.0 +1.2
      baz=248
KSU1  Kansas State U    97.91  51   P        P        10 22 09.8 +0.1
      baz=249
KSU1  Kansas State U    97.91  51   P        P        10 22 11.0 +1.2
      baz=249
YKA   Yellowknife Ar    98.05  25   P        Pdif     10 22 09.5 -0.3
      comp=Z,1.7nm,0.8s,baz=241,slow=4.5,SNR=30
YKA                                 pP       pP       10 24 25.8 +6.4
      comp=Z,0.9nm,0.9s,baz=242,slow=5.0,SNR=5.6
YKA                                 PP       PP       10 26 15.9 -3.5
      comp=Z,0.8nm,1.0s,baz=227,slow=7.5,SNR=4.6
      comp=Z,1.7nm,0.8s
ECSD  EROS Data Cent    99.57  47   P        Pdif     10 22 16.8 -0.2
      baz=249
ECSD  EROS Data Cent    99.57  47   P        Pdif     10 22 16.5 -0.5
      baz=249
A36M  Sachs Harbour    100.30  15   P        Pdif     10 22 19.6 +0.1
      baz=230
I37B  Waseca           101.85  47   P        Pdif     10 22 27.9 +0.8
      baz=251
F36A  Milaca           102.35  46   P        Pdif     10 22 31.4 +2.1
      baz=252
LPAZ  La Paz           102.66 113   P        Pdif     10 22 32.9 +0.7
      comp=Z,1.9nm,0.8s,baz=248,slow=5.4,SNR=7.8
RES   Resolute Bay     109.24  16   PKiKP    PKiKP    10 26 57.6 -1.4
      comp=Z,2.0nm,0.6s,baz=265,slow=21,SNR=12
ZALV  Zalesovo Beam    110.68 321   PKiKP    PKiKP    10 27 01.0 -1.3
      comp=Z,2.0nm,0.6s,baz=18,slow=0.9,SNR=10
MKAR  Makanchi Array   111.17 313   PKiKP    PKiKP    10 27 02.4 -1.2
      comp=Z,1.0nm,0.4s,baz=75,slow=0.7,SNR=18
MKAR                                SKP               10 29 42.2
      comp=Z,1.1nm,0.9s,baz=90,slow=2.4,SNR=3.8
MKAR                                PKKPbc   PKKPbc   10 38 01.9 -0.5
      comp=Z,4.1nm,0.8s,baz=274,slow=4.1,SNR=21
MKAR                                PKKPab   PKKPab   10 38 13.9 +1.2
      comp=Z,3.0nm,0.8s,baz=269,slow=4.9,SNR=10
MAKZ  Makanchi         111.38 313 ⇓PKIKP    PKiKP    10 27 02.0 -2.0
KURK  Kurchatov        114.08 317⇑iPKIKP    PKPdf    10 27 07.0 -1.9
KURBB Kurchatov Arra   114.12 317   PKP      PKPdf    10 27 07.5 -1.5
      comp=Z,2.3nm,0.6s,baz=110,slow=1.8,SNR=19
KURBB                               SKP               10 29 47.5
      comp=Z,2.6nm,1.0s,baz=110,slow=2.1,SNR=5.2
KURBB                               PKKPbc   PKKPbc   10 37 51.9 -0.8
      comp=Z,1.8nm,0.6s,baz=272,slow=4.1,SNR=18
KURBB                               PKKPab   PKKPab   10 38 00.8 +1.3
      comp=Z,3.8nm,0.8s,baz=275,slow=5.1,SNR=18
KURBB                               SKKPbc   SKKPbc   10 40 39.0 -3.8
      comp=Z,0.2nm,0.4s,baz=276,slow=4.3,SNR=4.3
AAK   Ala-Archa        116.12 308   PKP      PKPdf    10 27 11.8 -1.6
      comp=Z,0.8nm,0.4s,baz=204,slow=10,SNR=3.7
AAK                                 PKKPbc   PKKPbc   10 37 46.1 +0.1
      comp=Z,5.8nm,0.7s,baz=219,slow=2.9,SNR=17
AAK   Ala-Archa        116.12 308 i PKIKP    PKPdf    10 27 12.1 -1.3
HUMP  Col San Antoni   117.68  80            PKPdf    10 27 16.0 -0.8
GAR   Garm             118.91 303            PKPdf    10 27 18.2 -0.6
NEEM  North Greenlan   118.95  11 i P        PKPdf    10 27 17.3 -0.7
KULLO Kullorsuaq       119.06  15 i P        PKPdf    10 27 16.7 -1.1
KK31  Karatay Array    119.08 308   PKPdf    PKPdf    10 27 18.1 -0.7
KK31  Karatay Array    119.08 308   PKIKP    PKPdf    10 27 18.2 -0.7
KKAR  Karatay Array    119.08 308   PKPdf    PKPdf    10 27 18.1 -0.8
KKAR  Karatay Array    119.08 308   PKIKP    PKPdf    10 27 18.1 -0.8
BVAR  Borovoye Array   119.23 320   PKP      PKPdf    10 27 17.9 -1.0
      comp=Z,6.0nm,0.4s,baz=113,slow=2.1,SNR=50
BVAR                                PP       PP       10 28 46.5 -4.2
      comp=Z,1.8nm,0.7s,baz=97,slow=6.4,SNR=4.7
BVAR                                SKP               10 29 58.8
      comp=Z,3.2nm,0.8s,baz=122,slow=1.9,SNR=6.4
BVAR                                PKKPbc   PKKPbc   10 37 34.4 -0.7
      comp=Z,1.3nm,0.5s,baz=272,slow=3.4,SNR=7.9
BRVK  Borovoye         119.29 320   PKPdf    PKPdf    10 27 18.2 -0.7
BRVK  Borovoye         119.29 320   PKIKP    PKPdf    10 27 18.2 -0.7
BDFB  Brasilia         119.47 124   PKP      PKPdf    10 27 19.9 -0.7
      comp=Z,2.1nm,0.3s,baz=231,slow=5.0,SNR=7.3
UPNV  Upernavik        120.11  17 i P        PKPdf    10 27 19.1 -0.8
SCHQ  Schefferville    120.30  38   PKP      PKPdf    10 27 19.8 -1.0
      comp=Z,5.0nm,0.8s,baz=257,slow=4.3,SNR=7.9
NUUG  Nuugaatsiaq      121.49  18 i P        PKPdf    10 27 21.4 -1.1
KBS   Kingsbay         122.46 357 eP         PKPdf    10 27 23.4 -0.9
SPA0  Spitsbergen Ar   122.96 356 ePKPdf     PKPdf    10 27 24.8 -0.5
SPITS Spitsbergen Ar   122.96 356   PKP      PKPdf    10 27 24.7 -0.7
      comp=Z,26nm,0.7s,baz=18,slow=9.6,SNR=32
SPITS Spitsbergen Ar   122.96 356   PKIKP    PKPdf    10 27 25.2 -0.1
SPB2  Spitsbergen Ar   122.96 356            PKPdf    10 27 25.2 -0.2
ILULI Ilulissat        123.23  20            PKPdf    10 27 25.1 -0.9
ILULI Ilulissat        123.23  20   PKIKP    PKPdf    10 27 25.1 -0.9
ILULI Ilulissat        123.23  20 i P        PKPdf    10 27 25.1 -0.9
DAG   Danmarks Havn    124.01   5 i P        PKPdf    10 27 25.8 -1.5
GBN   Guysborough      124.42  49   PKPdf    PKPdf    10 27 28.6 -0.4
SFJD  Kangerlussuaq    124.45  22 i P        PKPdf    10 27 27.5 -0.9
SUMG  Summit           124.55  13 i P        PKPdf    10 27 28.6 -0.4
BOSA  Boshof           124.71 206   PKP      PKPdf    10 27 29.9 -0.4
      comp=Z,10nm,1.0s,baz=151,slow=1.7,SNR=7.0
ARU   Arti             125.50 325   PKP      PKPdf    10 27 30.3 -0.4
      comp=Z,10nm,0.5s,baz=296,slow=0.7,SNR=16
ARU   Arti             125.50 325 i PKIKP    PKPdf    10 27 30.0 -0.7
ARU                                                   10 29 29.3
ARU                                                   10 33 44.7
DBG   Daneborg         126.13   7 i P        PKPdf    10 27 30.9 -0.6
ABKAR Akbulak array    126.14 316            PKPdf    10 27 31.5 -0.6
ABKAR Akbulak array    126.14 316   PKPdf    PKPdf    10 27 32.0 -0.2
DY2G  Dye2             126.21  21 i P        PKPdf    10 27 31.4 -0.7
ICESG Greenland Ices   126.65  17 i P        PKPdf    10 27 31.5 -1.5
AKTO  Aktyubinsk       127.17 318   PKP      PKPdf    10 27 33.9 -0.3
      comp=Z,4.0nm,0.7s,baz=71,slow=3.6,SNR=13
GEYT  Alibeck          128.44 302   PKP      PKiKP    10 27 37.7  0.0
      comp=Z,3.6nm,0.6s,baz=11,slow=1.5,SNR=7.4
GEYT                                PP       PP       10 29 49.7 -2.3
      comp=Z,1.5nm,0.5s,baz=83,slow=6.1,SNR=4.7
SCO   Scoresbysund     129.36  10 i P        PKPdf    10 27 37.8 +0.2
KIRV  Kirov            129.40 329   PKP      PKPdf    10 27 37.6 -0.4
      comp=Z,14nm,0.5s,baz=162,slow=2.9,SNR=4.5
ARA0  ARCESS Array S   129.85 349 ePKPdf     PKPdf    10 27 38.5 -0.2
ARCES ARCESS Array B   129.85 349   PKP      PKPdf    10 27 38.0 -0.7
      comp=Z,9.6nm,0.6s,baz=32,slow=1.0,SNR=24
ARCES                               PP       PP       10 30 05.7 +6.1
      comp=Z,22nm,0.9s,baz=29,slow=2.8,SNR=11
KTK1  Kautokeino       130.71 350 ePKPdf     PKPdf    10 27 39.3 -1.0
TRO   Tromso           130.79 352 ePKPdf     PKPdf    10 27 40.4  0.0
KLMR  Klimovskoe       132.48 335 ePKPdf     PKPdf    10 27 41.7 -2.1
KLMR                                AMP               10 27 49.0
      comp=Z,34nm,2.0s
KLMR                              ePP        PP       10 30 13.8 -2.7
KLMR  Klimovskoe       132.48 335 ePKIKP     PKPdf    10 27 41.6 -2.2
KLMR                              e                   10 30 13.7
KLMR                                pmax     pmax
      comp=Z,34nm,2.0s
BELG  Belogornoye      132.84 322   PKP      PKPdf    10 27 44.2 -0.5
      comp=Z,28nm,0.9s,baz=38,slow=0.3,SNR=10
BELG                                SKPbc    SKPbc    10 30 17.6 +0.3
      comp=Z,96nm,1.0s,baz=108,slow=0.9,SNR=27
LOF   Lofoten          132.87 354 ePKPdf     PKPdf    10 27 44.4 +0.1
FAUS  Fauske           133.38 352 ePKPdf     PKPdf    10 27 45.7 +0.3
LSZ   Lusaka           134.49 219   PKIKP    PKPdf    10 27 49.4 +0.2
MAK   Makhachkala      135.84 310 i P        Pdif     10 24 53.1 -5.2
MAK                               i                   10 27 51.5
MAK                               e                   10 30 37.2
MAK                               ePPP       PPP      10 33 39.5
MAK                                 pmax     pmax
      comp=Z,521nm,1.1s
FINES FINESS Array B   136.56 343   PKP      PKPdf    10 27 51.8 +0.4
      comp=Z,6.1nm,0.7s,baz=48,slow=2.1,SNR=11
FINES                               SKPbc    SKPbc    10 30 28.8 +0.2
      comp=Z,17nm,0.9s,baz=54,slow=4.9,SNR=16
OBN   Obninsk          137.22 330   SKPbc    SKPbc    10 30 30.6 -0.2
      comp=Z,6.2nm,0.8s,baz=107,slow=3.0,SNR=8.7
OBN   Obninsk          137.22 330 ePKIKP     PKPdf    10 27 51.3 -1.5
OBN                               e                   10 30 45.3
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OBN				ePPP	PPP	10 33 53.0	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KMBO	Kilima Mbogo	137.79	242	Pdiff	SKPbc	10 30 36.7	+2.6
RAF	Rauma	138.04	345	eP	SKPbc	10 30 32.5	-0.4
MEF	Metsahovi	138.04	343	eP	PKiKP	10 27 55.9	-0.5
MEF	Metsahovi	138.04	343	eP	SKPbc	10 30 33.1	+0.2
GNI	Garni	138.50	307	PKP	PKPdf	10 27 56.3	+0.4
	comp=Z,4.2nm,0.6s,baz=57,slow=17,SNR=4.1						
GNI				SKPbc	SKPbc	10 30 34.1	-1.1
	comp=Z,4.5nm,0.5s,baz=244,slow=3.9,SNR=6.7						
GNI	Garni	138.50	307	i PKIKP	PKPdf	10 27 53.1	-2.8
VSU	Vasula	138.76	340	eP	PKiKP	10 27 57.0	-0.9
KBZ	Khabaz	138.86	312	SKPbc	SKPbc	10 30 35.6	-0.1
	comp=Z,4.2nm,0.8s,baz=87,slow=5.3,SNR=6.2						
AAL	Aland	139.20	345	eP	SKPbc	10 30 36.4	+0.3
AKN	Aaknes	139.29	356	e	PKPdf	10 27 49.7	-6.8
AKN				ePKPdf	PKiKP	10 27 56.1	-2.8
MTSE	Matsula	139.45	342	eP	SKPbc	10 30 37.0	+0.2
NB2	NORSAR Subarra	139.99	352	PKP	PKPdf	10 27 50.1	-7.7
	comp=Z,2.5nm,0.6s,baz=16,slow=4.0						
NB2				SKPa		10 30 38.3	
	comp=Z,2.6nm,0.7s,baz=14,slow=2.8						
NOA	NORSAR Array B	139.99	352	PKhKP	PKPpre	10 27 50.5	
	comp=Z,0.8nm,0.5s,baz=30,slow=1.5,SNR=11						
NOA				PKP	PKPdf	10 27 57.8	0.0
	comp=Z,2.5nm,0.6s,baz=14,slow=4.0,SNR=6.8						
NOA				SKPbc	SKPbc	10 30 38.6	+0.4
	comp=Z,5.8nm,0.9s,baz=14,slow=4.3,SNR=12						
UPP	Uppsala	140.02	347	eP	SKPbc	10 30 38.0	-0.3
NC602	NORSAR Array S	140.24	352	e	PKPdf	10 27 51.6	-6.6
HFS	Hagfors	140.50	350	PKhKP	PKPpre	10 27 51.9	
	comp=Z,4.3nm,0.3s,baz=68,slow=4.0,SNR=50						
HFS				PKP	PKPdf	10 27 58.5	-0.2
	comp=Z,6.5nm,0.7s,baz=46,slow=4.3,SNR=6.1						
HFS				SKPbc	SKPbc	10 30 39.9	+0.3
	comp=Z,12nm,0.8s,baz=101,slow=1.5,SNR=12						
SKAR	Skarslia	140.67	354	ePKPdf	PKPdf	10 27 55.6	-3.4
SOC	Sochi	141.07	313	i PKIKP	PKPdf	10 28 01.4	+1.2
SOC				e		10 31 07.6	
SOC				ePPP	PPP	10 34 25.0	
SOC				eSS	SS	10 48 52.0	+0.3
SOC				eSSS	SSS	10 54 15.4	
MNK	Minsk	141.37	335	i PKP	PKPdf	10 27 58.0	-2.4
	comp=E,4.0nm,1.4s						
MNK				i PKP	PKPdf	10 27 58.0	-2.4
	comp=N,45nm,1.0s						
MNK				i PKP	PKPdf	10 27 58.0	-2.4
	comp=Z,14nm,1.0s,baz=42						
MNK				i pPKP	pPKPdf	10 30 16.8	-0.9
MNK				i PP	PP	10 31 09.7	-1.3
MNK				i PPP	PPP	10 34 23.5	
MNK				i SKKS		10 43 18.0	
MNK				i SS	SS	10 48 22.1	-32
MNK				i SSS	SSS	10 54 23.3	
MNK	Minsk	141.37	335	i PKIKP	PKPdf	10 27 58.0	-2.4
MNK				i		10 31 09.7	
MNK				i PPP	PPP	10 34 23.4	
MNK				i SSS	SSS	10 54 23.2	
MNK				pmax	pmax		
	comp=N,45nm,1.0s						
MNK				pmax	pmax		
	comp=Z,14nm,1.0s						
MNK				pmax	pmax		
	comp=E,4.0nm,1.4s						
VIKU	Vikbolandet	141.45	347	eP	PKPdf	10 27 55.6	-4.7
VIKU	Vikbolandet	141.45	347	eP	SKPbc	10 30 42.2	+0.2
NACGM	Naroch	141.49	336	ePKP	PKPdf	10 27 59.1	-1.5
	comp=Z,17nm,1.0s,baz=41						
KONO	Kongsberg	141.54	353	ePKPdf	PKPdf	10 27 55.5	-5.0
ODD1	Odda	141.57	355	ePKPdf	PKPdf	10 27 55.9	-4.7
VSVD	Vaisvydziai	141.66	339	eP	SKPbc	10 30 43.4	+0.8
STRU	Stroemstad	141.93	351	i P	PKPdf	10 27 56.6	-4.6
PABE	Paberze	142.03	339	eP	PKPdf	10 27 57.2	-4.3
PABE	Paberze	142.03	339	eP	SKPbc	10 30 44.2	+0.7
SHEL	Horse Pasture	142.06	170	PKPdf	PKPdf	10 28 01.4	-1.4
SHEL	Horse Pasture	142.06	170	PKIKP	PKPdf	10 28 01.4	-1.4
BLS5	Blasjo	142.07	355	ePKPdf	PKPdf	10 27 57.9	-3.6
HOMB	Homborsund	143.01	353	i P	PKPab	10 27 59.0	-1.9
HOMB	Homborsund	143.01	353	ePKPbc	PKPab	10 28 00.8	-0.1
BORU	Boraas	143.03	349	i P	PKPab	10 27 59.7	-1.3
BIGH	Upper Bighouse	143.06	4	eP	PKPab	10 28 00.4	-0.7
SNART	Snartemo	143.08	354	i P	PKPab	10 28 00.6	-0.6
SNART	Snartemo	143.08	354	ePKPbc	PKPab	10 28 00.8	-0.4
LINV	Loch Inver, As	143.31	5	eP	PKPab	10 28 01.1	-1.0
MBAR	Mbarara	143.32	237		PKPdf	10 28 04.8	-0.5
MBAR	Mbarara	143.32	237	i PKIKP	PKPab	10 28 03.4	-0.3
ONAU	Onsala	143.40	350	i P	PKPab	10 28 01.1	-1.3
AKASG	Malin Array Be	143.46	329	PKP	PKPab	10 28 01.9	-1.0
	comp=Z,5.6nm,0.4s,baz=36,slow=4.2,SNR=72						
AKASG				SKPbc	SKPbc	10 30 47.4	+0.2
	comp=Z,5.8nm,0.7s,baz=31,slow=2.5,SNR=15						
AKASG	Malin Array Be	143.46	329		PKPab	10 28 02.1	-0.8
AKASG	Malin Array Be	143.46	329	PKIKP	PKPab	10 28 02.1	-0.8
AKBB	Malin Array Si	143.46	329		PKPab	10 28 02.0	-0.9
AKBB	Malin Array Si	143.46	329	i PKIKP	PKPab	10 28 01.8	-1.1
FABU	Falkenberg	143.64	349	i P	PKPbc	10 28 01.6	-1.7
BLEU	Blekinge	143.66	346	i P	PKPbc	10 28 02.2	-1.3
OVD	Ostervraa, Den	143.73	351	i P	PKPbc	10 28 03.2	-0.4
DEL	Delary	143.92	348	eP	PKPbc	10 28 03.6	-0.7
DEL	Delary	143.92	348	eP	SKPbc	10 30 48.5	+0.4
DEL	Delary	143.92	348	i P	PKPbc	10 28 03.0	-1.2
MCD	Coleburn Disti	144.01	4	eP	PKPbc	10 28 03.4	-1.1
KPL	Plockton	144.06	6	eP	PKPbc	10 28 04.2	-0.5
SIM	Simferopol'	144.13	318	ePKIKP	PKPab	10 28 06.1	+0.4
SIM				e		10 31 32.3	
SIM				pmax	pmax		
	comp=Z,25nm,0.8s						
SIM				pmax	pmax		
	comp=Z,17nm,0.7s						
SIM				pmax	pmax		
	comp=Z,26nm,15.0s						
BJUU	Bjuv	144.46	348	i P	PKPdf	10 28 05.1	-0.6
MUD	Monsted U'grnd	144.71	352	i P	PKPdf	10 28 05.0	-1.1
MUD				eP	PKPbc	10 28 05.9	-0.7
DRUM	Mains of Drumt	144.72	3	eP	PKPdf	10 28 05.4	-0.8
LUNU	Lund	144.79	348	i P	PKPdf	10 28 06.0	-0.3
BSD	Bornholm Skovb	144.96	346	eP	PKPdf	10 28 06.7	+0.1
BSD	Bornholm Skovb	144.96	346	eP	SKPbc	10 30 51.0	+0.5
BSD	Bornholm Skovb	144.96	346	i P	PKPdf	10 28 06.7	+0.1
INVG	Invergeldie, C	145.11	5	eP	PKPdf	10 28 07.2	+0.4
LAWE	Loch Awe, Argy	145.16	6	eP	PKPdf	10 28 07.4	+0.5
SORM	Soroca	145.58	327	⇑P	PKPdf	10 28 08.3	+0.4
SORM	Soroca	145.58	327	⇑PKIKP	PKPdf	10 28 08.3	+0.4
PGBU	Glenifferbraes	145.68	5	eP	PKPbc	10 28 09.9	+0.4
MILM	Milestii Mici	146.11	325	⇑iP	PKPbc	10 28 10.0	-1.0
	comp=Z,30nm,0.5s						
MILM	Milestii Mici	146.11	325	c iPKIKP	PKPbc	10 28 10.0	-1.0
MILM				pmax	pmax		
	comp=Z,30nm,0.5s						
BEL	Belsk	146.12	338	ePKPbc	PKPbc	10 28 11.0	+0.1
EKA	Eskdalemuir Ar	146.26	4	PKPbc	PKPbc	10 28 10.4	-0.7
	comp=Z,24nm,0.8s,baz=350,slow=2.5,SNR=53						
ESK	Eskdalemuir	146.27	4		PKPbc	10 28 10.5	-0.7
ESK	Eskdalemuir	146.27	4	PKIKP	PKPbc	10 28 10.5	-0.7
ASF	Jabal al Asfar	146.28	296	PKPbc	PKPbc	10 28 13.0	+0.9
	comp=Z,2.4nm,0.4s,baz=122,slow=2.1,SNR=3.8						
NEWG	New Galloway	146.39	5	eP	PKPbc	10 28 10.3	-1.2
LVV	L'vov	146.44	332	ePKP2	PKPbc	10 28 11.2	-0.6
BR131	Keskin Array S	146.75	310		PKPbc	10 28 12.5	-0.7
BR131	Keskin Array S	146.75	310	PKP2	PKPbc	10 28 12.5	-0.7
BRTR	Keskin Array B	146.75	310	PKP	PKPdf	10 28 09.6	-0.8
	comp=Z,4.9nm,0.7s,baz=45,slow=1.7,SNR=22						
BRTR				PKPbc	PKPbc	10 28 12.9	-0.3
	comp=Z,4.4nm,0.7s,baz=54,slow=2.5,SNR=16						
BRTR				pPKPbc	pPKPbc	10 30 30.7	+3.0
	comp=Z,14nm,1.1s,baz=93,slow=2.9,SNR=13						
BRTR				SKPbc	SKiKP	10 30 55.5	+0.1
	comp=Z,3.3nm,0.9s,baz=144,slow=2.8,SNR=4.4						
BRTR	Keskin Array B	146.75	310		PKPbc	10 28 12.3	-0.9
BRTR	Keskin Array B	146.75	310	PKIKP	PKPbc	10 28 12.3	-0.9
EDMD	Edmundbyers	146.83	3	eP	PKPdf	10 28 11.1	+1.3
VASR	Vaslui	146.83	325	⇑P	PKPbc	10 28 13.7	+0.7
BSEG	Bad Segeberg	146.98	350	ePKPbc	PKPbc	10 28 13.2	+0.1
	baz=18,slow=2.3						
KESW	Keswick, Cumbr	147.00	4	eP	PKPbc	10 28 12.6	-0.5
TLCR		147.16	322	⇓P	PKPbc	10 28 13.7	-0.2
VLDR	Vladesti	147.17	324	⇑P	PKPbc	10 28 14.0	+0.1
IOMK	Kirk Michael	147.21	6	eP	PKPbc	10 28 12.8	-0.9
ANTO	Ankara	147.29	311	⇑P	PKPdf	10 28 09.6	-1.6
ANTO	Ankara	147.29	311		PKPbc	10 28 13.8	-0.7
ANTO	Ankara	147.29	311	⇑PKHKP	PKPpre	10 28 09.6	
WIM	Isle of Man	147.31	6	eP	PKPbc	10 28 13.5	-0.5
MMAI	Mount Meron Ar	147.37	298	PKPbc	PKPbc	10 28 15.4	+0.5
	comp=Z,6.6nm,0.5s,baz=71,slow=5.5,SNR=8.4						
MMAI				pPKPbc	pPKPab	10 30 30.9	+0.9
	comp=Z,2.9nm,0.5s,baz=106,slow=5.2,SNR=3.2						
GHRR		147.40	325	⇑P	PKPbc	10 28 14.5	0.0
BUR08	Bucovina Ar. S	147.48	329		PKPbc	10 28 15.4	+0.6
BURAR	Bucovina Array	147.49	329	⇓P	PKPbc	10 28 15.2	+0.3
BURAR	Bucovina Array	147.49	329	PKPdf	PKPdf	10 28 11.8	+0.5
BURAR					PKPbc	10 28 15.4	+0.6
BURAR	Bucovina Array	147.49	329	⇓PKP2	PKPbc	10 28 15.2	+0.3
H07S1	FLORES T-PHASE	147.51	50	ePKP	PKiKP	10 28 16.5	-0.1
IZVR	Izvoarele	147.53	324	⇑P	PKPab	10 28 34.0	+15
CFR	Carcaliu	147.55	323	⇑P	PKPbc	10 28 14.0	-0.9
TPGR	Topolog	147.58	322	⇓P	PKPbc	10 28 14.9	-0.2
RUE	Ruedersdorf	147.65	345	eP	PKPbc	10 28 15.1	+0.2
RUE	Ruedersdorf	147.65	345	ePKPbc	PKPbc	10 28 14.7	-0.1
	baz=18,slow=2.3						
HPK	Haverah Park	147.71	3	eP	PKPbc	10 28 14.7	-0.4
OJC	Ojcow	147.81	337	ePKPbc	PKPbc	10 28 15.3	-0.1
OJC	Ojcow	147.81	337		PKPbc	10 28 14.7	-0.7
OJC	Ojcow	147.81	337	PKP2	PKPbc	10 28 14.7	-0.7
TIRR	Tirgusor	147.82	321	⇓P	PKPbc	10 28 13.9	-1.7
TIRR	Tirgusor	147.82	321	⇓PKIKP	PKPbc	10 28 13.9	-1.7
VRI	Vrincioaia	147.89	325	⇓P	PKPbc	10 28 15.2	-0.6
VRI	Vrincioaia	147.89	325	⇓PKP2	PKPbc	10 28 15.2	-0.6
STHS	Stebnicka Huta	147.90	335	ePKP2	PKPbc	10 28 15.3	-0.4
STHS	Stebnicka Huta	147.90	335	ePKP	PKPbc	10 28 15.3	-0.4
EFOR	EFORIE	147.91	321	⇓P	PKPab	10 28 23.8	+3.1
PLOR	Plostina	147.94	325	⇓P	PKPbc	10 28 14.2	-1.8
PLOR	Plostina	147.94	325	⇓PKHKP	PKPpre	10 28 14.2	
TLBR	Topalu	147.98	322	⇓P	PKPbc	10 28 15.9	-0.1
MANR	Mangalia	148.09	320	⇓P	PKPbc	10 28 15.7	-0.6
WME	Myndd Eilian	148.09	6	eP	PKPbc	10 28 14.8	-1.2
COVR	Voineasa-Covas	148.19	325	⇓P	PKPbc	10 28 16.1	-0.5
WLF1	Llynfaes	148.19	6	eP	PKPbc	10 28 16.4	+0.2
OZUR		148.24	326	⇓P	PKPbc	10 28 15.9	-0.8
BMR	Baia Mare	148.26	330	⇓P	PKPbc	10 28 16.1	-0.5
BMR	Baia Mare	148.26	330	⇓PKHKP	PKPpre	10 28 16.1	
LBWR	Ladybower, Pea	148.26	3	eP	PKPbc	10 28 15.7	-0.8
EIL	Elat	148.27	292	PKPbc	PKPbc	10 28 17.0	-0.2
	comp=Z,6.6nm,0.8s,baz=90,slow=5.1,SNR=2.9						
NIE	Niedzica	148.27	335	ePKPbc	PKiKP	10 28 17.8	-0.1
ARCR	ARCALIA	148.28	329	⇓P	PKPbc	10 28 16.9	+0.2
RETH	Rethem/Aller,	148.29	350	ePKPbc	PKPbc	10 28 16.6	+0.1
	baz=18,slow=2.3						
FLTG	Flechtingen	148.34	348	ePKPbc	PKPbc	10 28 16.3	-0.3
	baz=18,slow=2.3						
FLTG				epPKPbc	pPKPab	10 30 37.1	+3.9
	baz=20,slow=2.6						
TRPA	Tarpa	148.35	332	⇓P	PKPbc	10 28 16.1	-0.8
NRDL	Niedersach Rie	148.40	349	ePKPbc	PKPbc	10 28 16.7	0.0
	baz=18,slow=2.3						
KSP	Ksiaz	148.45	341	ePKPbc	PKPbc	10 28 17.3	+0.3
ISR	Istrita	148.47	324	⇑P	PKiKP	10 28 18.1	-0.3
ISR	Istrita	148.47	324	⇑PKP2	PKiKP	10 28 18.1	-0.3
DOPR	Dopca	148.53	326	⇓P	PKPbc	10 28 16.7	-0.7
MLR	Muntele Rosu	148.55	325	⇑P	PKPbc	10 28 16.6	-1.1
MLR	Muntele Rosu	148.55	325	PKPbc	PKPbc	10 28 16.9	-0.7
	comp=Z,11nm,0.7s,baz=44,slow=4.8,SNR=13						
MLR				pPKPab	pPKPab	10 30 35.4	+1.1
	comp=Z,3.1nm,0.8s,baz=29,slow=19,SNR=3.1						
MLR	Muntele Rosu	148.55	325		PKPbc	10 28 17.1	-0.5
MLR	Muntele Rosu	148.55	325	⇑PKHKP	PKPpre	10 28 16.6	
ASSE	Asse, Remlinge	148.64	348	ePKPbc	PKPbc	10 28 17.3	0.0
	baz=18,slow=2.3						
FOEL	Foel Wylfa	148.69	5	eP	PKPbc	10 28 16.5	-1.0
OKC	Ostrava-Krasne	148.72	338	⇑ePKP	PKPbc	10 28 17.6	-0.1
OKC	Ostrava-Krasne	148.72	338	ePKHKP	PKPpre	10 28 17.6	
OSTC	Ostas	148.72	341	⇑ePKP	PKPbc	10 28 16.3	-1.4
OSTC				epPKP	pPKPab	10 30 37.0	+2.3
OSTC	Ostas	148.72	341	ePKHKP	PKPpre	10 28 16.3	
CHVC	Chvalec	148.74	341	⇑ePKP	PKPbc	10 28 17.6	-0.2
CHVC	Chvalec	148.74	341	ePKHKP	PKPpre	10 28 17.6	
SECR		148.78	324	⇑P	PKPbc	10 28 17.7	-0.3
LANS	Liptovska Anna	148.81	336	ePKP2	PKiKP	10 28 19.1	+0.1
LANS	Liptovska Anna	148.81	336	ePKP	PKiKP	10 28 19.1	+0.1
UPC	Upice	148.83	341	⇑ePKP	PKPbc	10 28 18.1	+0.2
UPC				epPKP	pPKPab	10 30 37.8	+2.7
UPC	Upice	148.83	341	ePKP2	PKPbc	10 28 18.1	+0.2
DPC	Dobruska-Polom	148.87	341	⇑ePKP	PKPbc	10 28 17.8	-0.3
DPC				epPKP	pPKPbc	10 30 34.1	+0.4
DPC	Dobruska-Polom	148.87	341	ePKHKP	PKPpre	10 28 17.8	
MESR	Meseseni	148.90	330	⇓P	PKiKP	10 28 18.9	-0.2
CJR	Cluj-Napoca	148.91	329	⇑P	PKPbc	10 28 18.8	+0.5
CJR	Cluj-Napoca	148.91	329	⇑PKP2	PKPbc	10 28 18.8	+0.5
CLL	Collm	148.92	345		PKPbc	10 28 17.4	-0.7
CLL	Collm	148.92	345	ePKPdf	PKPdf	10 28 14.0	+0.7
CLL				⇑iPKPbc	PKPbc	10 28 18.0	-0.1
	comp=Z,77nm,1.2s						
CLL				ex	x	10 28 22.0	
CLL				ePKPab	PKPab	10 28 24.0	-0.6
CLL				ex	x	10 28 32.0	
CLL				epPKPab	pPKPab	10 30 36.0	+0.6
CLL				ex	x	10 30 40.0	
CLL				eSKPdf	SKPdf	10 30 50.0	-1.2
CLL	Collm	148.92	345	PKHKP	PKPpre	10 28 17.4	
CLL	Collm	148.92	345	ePKPbc	PKPbc	10 28 18.1	-0.1
	baz=18,slow=2.3						
CLL				epPKPbc	pPKPab	10 30 39.5	+4.1
	baz=20,slow=2.6						
IBBN	Ibbenburen	148.95	352	ePKPbc	PKPbc	10 28 18.1	0.0
	baz=18,slow=2.3						
IBBN				epPKPbc	pPKPab	10 30 40.2	+4.6
	baz=20,slow=2.6						
KRLC	Kraliky	148.97	340	⇑ePKP	PKPbc	10 28 18.5	+0.1
KRLC				epPKP	pPKPab	10 30 35.5	-0.1
KRLC	Kraliky	148.97	340	ePKP2	PKPbc	10 28 18.5	+0.1
MORC	Moravsky Berou	148.97	339	⇑P	PKPbc	10 28 18.2	-0.1
MORC	Moravsky Berou	148.97	339	ePKP	PKPbc	10 28 18.3	-0.1
MORC				e		10 30 37.0	
CLZ	Clausthal	148.98	348	ePKPbc	PKPbc	10 28 18.6	+0.3
	baz=18,slow=2.3						
VOIR		149.06	326	⇑P	PKPbc	10 28 18.2	-0.5
VOIR		149.06	326	⇑PKHKP	PKPpre	10 28 18.2	
BRG	Berggiesshubel	149.08	344	⇓ePKPf		10 28 13.5	
BRG				Amp		10 28 14.7	
	comp=Z,5.8nm,1.3s						
BRG				PKPab	PKPbc	10 28 18.9	+0.4
BRG				Amp		10 28 19.8	
	comp=Z,44nm,1.0s						
BRG				pPKP	pPKPab	10 30 36.2	+0.1
BRG				Amp		10 30 42.8	
	comp=Z,30nm,1.6s						
BRG	Berggiesshubel	149.08	344	ePKHKP	PKPpre	10 28 13.5	
BRG				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BRG	Berggiesshubel	149.08	344	ePKPbc	PKPbc	10 28 18.6	+0.1
	baz=18,slow=2.3						
BRG				epPKPbc	pPKPab	10 30 40.8	+4.7
	baz=20,slow=2.6						
MARR	Marisel-Cluj	149.16	329	⇓P	PKPbc	10 28 19.1	+0.1
FBE	Freiberg	149.19	344	ePKPbc	PKiKP	10 28 19.3	-0.3
	baz=18,slow=2.3						
PVCC	Panska Ves	149.23	343	⇑ePKP	PKPbc	10 28 19.0	+0.1
PVCC				ex	x	10 30 42.0	
PVCC	Panska Ves	149.23	343	ePKHKP	PKPpre	10 28 19.0	
DRGR		149.27	330	⇓P	PKPbc	10 28 17.6	-1.7
DRGR		149.27	330	⇓PKHKP	PKPpre	10 28 17.6	
NEUB	Neuenburg	149.29	346	ePKPbc	PKPbc	10 28 19.1	+0.1
	baz=18,slow=2.3						
NEUB				epPKPbc	pPKPab	10 30 42.0	+5.1
	baz=20,slow=2.6						
ARR	Arges	149.33	326	⇓P	PKiKP	10 28 20.1	-0.1
GTTG	Gottingen	149.34	349	ePKPbc	PKPbc	10 28 19.1	0.0
	baz=18,slow=2.3						
GTTG				epPKPbc	pPKPab	10 30 41.8	+4.7
	baz=20,slow=2.6						
VYHS	Vyhne	149.59	336	ePKHKP	PKPpre	10 28 20.0	
VYHS	Vyhne	149.59	336	ePKP	PKPbc	10 28 20.0	+0.2
VYHS				e		10 30 37.2	
PCED	Cedros	149.60	50	ePKP	PKPbc	10 28 20.1	-0.1
VRAC	Vranov	149.69	339	⇑P	PKPbc	10 28 19.8	-0.3
VRAC	Vranov	149.69	339	PKPbc	PKPbc	10 28 20.3	+0.2
	comp=Z,12nm,0.8s,baz=24,slow=3.7,SNR=16						
VRAC	Vranov	149.69	339	ePKP	PKPbc	10 28 20.1	0.0
VRAC				e		10 30 39.6	
VRAC	Vranov	149.69	339	⇑PKHKP	PKPpre	10 28 19.8	
JAVC	Velka Javorina	149.71	338	ePKP	PKiKP	10 28 21.4	+0.6
JAVC				e		10 30 42.1	
LOT	Lotru	149.72	327	⇓P	PKPbc	10 28 20.1	-0.3
GOPC	GO Pecny, Ondr	149.72	342	⇑ePKP	PKPbc	10 28 19.5	-0.6
GOPC	GO Pecny, Ondr	149.72	342	ePKHKP	PKPpre	10 28 19.5	
PRU	Pruhonice	149.72	342	⇑ePKP	PKPbc	10 28 19.5	-0.6
PRU				ePKPAB	PKPab	10 28 28.3	+0.3
PRU				epPKP	pPKPab	10 30 37.8	-0.8
PRU	Pruhonice	149.72	342	ePKHKP	PKPpre	10 28 19.5	
PRU				e		10 28 28.3	
PCAN	Candelaria	149.82	50	ePKP	PKPbc	10 28 20.1	-0.6
DEV	Deva	149.84	328	⇓P	PKPbc	10 28 20.3	-0.2
DEV	Deva	149.84	328	⇓PKHKP	PKPpre	10 28 20.3	
PICO	Pico	149.85	50	ePKP	PKPbc	10 28 19.6	-1.2
MOX	Moxa	149.86	346	ePKPbc	PKPbc	10 28 20.3	-0.1
	baz=18,slow=2.3						
MOX				epPKPbc	pPKPab	10 30 44.0	+4.7
	baz=20,slow=2.6						
BUG	Bochum--Univer	149.86	352	ePKPbc	PKPbc	10 28 20.0	-0.3
	baz=18,slow=2.3						
TANN	Tannenbergstha	149.88	345	ePKPbc	PKPbc	10 28 20.4	-0.1
	baz=18,slow=2.3						
PLN	Plauen	149.88	345	ePKPbc	PKPbc	10 28 20.3	-0.1
	baz=18,slow=2.3						
WERD	Werda	149.88	345	ePKPbc	PKPbc	10 28 20.5	0.0
	baz=18,slow=2.3						
WERD				epPKPbc	pPKPab	10 30 43.4	+4.1
	baz=20,slow=2.6						
ROSA	Rosais	149.88	49		PKiKP	10 28 21.2	-0.2
ROSA	Rosais	149.88	49	ePKP	PKPbc	10 28 19.4	-1.4
KASTN	Kahler Asten	149.93	350	ePKPbc	PKPbc	10 28 20.5	-0.1
	baz=18,slow=2.3						
PGRA	Graciosa	149.93	48	ePKP	PKPbc	10 28 20.6	-0.3
GUNZ	Gunzen	149.95	345	ePKPbc	PKPbc	10 28 20.7	0.0
	baz=18,slow=2.3						
KRUC	Moravsky	149.97	339	ePKP	PKPbc	10 28 20.5	-0.2
KRUC				e		10 30 40.6	
PPNO	Prainha do Nor	149.97	50	ePKP	PKPbc	10 28 19.8	-1.3
WERN	Wernitzgruen	150.01	345	ePKPbc	PKiKP	10 28 21.2	-0.2
	baz=18,slow=2.3						
WERN				epPKPbc	pPKPab	10 30 43.2	+3.4
	baz=20,slow=2.6						
PMAN	Manadas	150.03	49	ePKP	PKPbc	10 28 21.2	0.0
NKC	Novy Kostel	150.05	345	⇑ePKP	PKPbc	10 28 20.8	-0.1
NKC				epPKP	pPKPab	10 30 39.6	-0.4
NKC	Novy Kostel	150.05	345	ePKHKP	PKPpre	10 28 20.8	
TREC	Trest	150.06	341	⇑ePKP	PKPbc	10 28 20.7	-0.2
TREC	Trest	150.06	341	ePKHKP	PKPpre	10 28 20.7	
SIRR	Siria	150.15	330	⇑P	PKPbc	10 28 20.8	-0.4
GZR	Gura Zlata	150.25	328	⇓P	PKPbc	10 28 21.5	-0.1
GZR	Gura Zlata	150.25	328	⇓PKIKP	PKPbc	10 28 21.5	-0.1
MODS	Modra-Piesok	150.26	338	ePKIKP	PKiKP	10 28 21.9	0.0
MODS	Modra-Piesok	150.26	338	ePKP	PKiKP	10 28 21.9	0.0
MODS				e		10 30 42.5	
SURR	Surduc	150.31	329	⇑P	PKPbc	10 28 21.8	+0.2
MANZ	Manzenberg	150.36	345	ePKPbc	PKPbc	10 28 21.7	+0.1
	baz=18,slow=2.3						
WOL	Wolverton	150.37	3	eP	PKPbc	10 28 21.0	-0.5
ROTZ	Rotzenmuhle	150.54	345	ePKPbc	PKPbc	10 28 21.9	-0.1
	baz=18,slow=2.3						
ELSH	Elham, Standar	150.58	360	eP	PKPbc	10 28 21.7	-0.3
PAGU	Agualva, Azore	150.60	48	ePKP	PKPbc	10 28 21.7	-0.8
PLVB	Pleven	150.64	323	⇓P	PKPbc	10 28 21.8	-0.6
BZS	Buzias	150.65	329	⇓P	PKPbc	10 28 21.8	-0.6
AHRW	Bad Neuenahr-A	150.76	352	ePKPbc	PKPbc	10 28 22.3	-0.1
	baz=18,slow=2.3						
AHRW				epPKPbc	pPKPab	10 30 46.3	+3.4
	baz=20,slow=2.6						
KHC	Kasperske Hory	150.76	343	PKPdf	PKPdf	10 28 15.4	-0.9
KHC				PKPbc	PKPbc	10 28 22.3	-0.3
KHC				PKPab	PKPab	10 28 32.9	+0.4
KHC	Kasperske Hory	150.76	343	ePKPDF	PKPdf	10 28 16.1	-0.2
KHC				⇑ePKP	PKPbc	10 28 22.3	-0.3
KHC				ePKPAB	PKPab	10 28 32.6	+0.1
KHC				epPKP	pPKPbc	10 30 40.4	+1.7
KHC	Kasperske Hory	150.76	343	ePKIKP	PKPdf	10 28 16.1	-0.2
KHC				e		10 28 32.6	
HERR	Herculane	150.80	328	⇓P	PKPbc	10 28 22.0	-0.8
MEM	Membach	150.83	353	dPKPdf	PKPdf	10 28 16.1	-0.2
MEM				dPKPbc	PKPbc	10 28 22.1	-0.5
CKRC	Cesky Krumlov	150.84	341	⇑ePKP	PKPdf	10 28 16.5	+0.1
CKRC				ex	x	10 28 22.2	
CKRC				eSKP		10 30 40.1	
CKRC	Cesky Krumlov	150.84	341	ePKIKP	PKPdf	10 28 16.5	+0.1
BTNL	Ternell	150.84	353	dPKP	PKPbc	10 28 22.5	-0.2
GRF	Grafenberg Arr	150.84	346	ePKPbc	PKPbc	10 28 22.8	+0.1
	baz=18,slow=2.3						
SBD	Saint Breward	150.84	7	eP	PKPbc	10 28 22.1	-0.5
HMNX	Herstmonceux	150.86	1	eP	PKPbc	10 28 22.7	0.0
TNS	Taunus Mts	150.87	350	ePKPbc	PKPbc	10 28 22.7	-0.1
	baz=18,slow=2.3						
BSTI	Sart Tilman	150.90	354	dPKP	PKPbc	10 28 22.6	-0.2
GEC2	GERESS Array S	150.99	342		PKPdf	10 28 16.0	-0.7
GEC2				PKPbc	PKPbc	10 28 22.9	-0.3
GEC2	GERESS Array S	150.99	342	ePKPbc	PKPbc	10 28 23.0	-0.3
	baz=18,slow=2.3						
GERES	GERESS Array B	150.99	342	PKP	PKPdf	10 28 16.7	0.0
	comp=Z,0.8nm,0.8s,baz=40,slow=2.3,SNR=6.6						
GERES				PKPbc	PKPbc	10 28 22.9	-0.3
	comp=Z,10nm,0.8s,baz=38,slow=2.4,SNR=60						
GERES				pPKPbc	pPKPbc	10 30 39.8	+0.4
	comp=Z,2.5nm,1.0s,baz=53,slow=0.7,SNR=4.9						
BHOU	Houvegnez	151.08	353	dPKP	PKPbc	10 28 23.4	+0.1
SNF	Seneffe	151.09	355	dPKP	PKPbc	10 28 23.0	-0.1
SNF				dPKPab	PKPab	10 28 32.9	-0.8
BCLA	Clavier	151.09	354	dPKPbc	PKPbc	10 28 22.8	-0.4
BCLA				dPKiKP	PKiKP	10 28 23.2	-0.3
BCLA				dPKPab	PKPab	10 28 32.6	-1.1
CONA	Conrad Observa	151.13	339	i PKP	PKPbc	10 28 23.4	-0.1
	comp=Z,17nm,0.8s,SNR=12						
CONA				epPKP	pPKPab	10 30 44.3	-0.2
	comp=Z,20nm,1.8s						
RONA	Rosalia, Austr	151.18	338	i PKP	PKPbc	10 28 23.5	0.0
	comp=Z,17nm,0.5s,SNR=17						
RONA				epPKP	pPKPab	10 30 44.1	-0.5
	comp=Z,12nm,0.9s						
MDVR	Moldovita	151.22	328	⇓P	PKPbc	10 28 23.3	-0.4
BMRD	Maredsous	151.25	355	dPKP	PKPbc	10 28 23.2	-0.3
BMRD				dPKPab	PKPab	10 28 33.8	-0.6
RCHB	Rochefort	151.36	354	dPKP	PKPbc	10 28 23.5	-0.3
DOU	Dourbes	151.47	355	dPKP	PKPbc	10 28 23.8	-0.2
DOU				dPKPab	PKPab	10 28 34.1	-1.2
MORH	Mrgy, Hungar	151.51	333	⇓P	PKPbc	10 28 23.8	-0.5
MOA	Molln	151.72	341	i PKP	PKPbc	10 28 24.2	-0.5
	comp=Z,4.7nm,0.6s						
MOA				epPKP	pPKPab	10 30 46.7	-0.2
	comp=Z,5.2nm,1.0s						
WLF	Walferdange	151.74	353	dPKP	PKiKP	10 28 25.2	+0.3
WLF				dPKPab	PKPab	10 28 36.5	0.0
WLF	Walferdange	151.74	353	ePKPbc	PKiKP	10 28 25.2	+0.3
	baz=18,slow=2.3						
ARSA	Arzberg	151.83	338	i PKP	PKPbc	10 28 24.2	-0.8
	comp=Z,1.3nm,0.4s						
ARSA				epPKiKP	pPKPab	10 30 44.8	-2.4
	comp=Z,6.5nm,1.2s						
FRGS	Fruska Gora	151.84	331	⇑P	PKiKP	10 28 25.5	+0.2
VTS	Vitosha	151.91	323	⇑P	PKiKP	10 28 26.4	+0.7
VTS	Vitosha	151.91	323	⇑PKIKP	PKiKP	10 28 26.4	+0.7
BOVS	Bovan	152.04	326	⇑P	PKPbc	10 28 24.8	-0.8
BIOA	Bad Ischl, Aus	152.05	341	i PKP	PKPbc	10 28 24.8	-0.7
	comp=Z,4.7nm,0.6s						
BIOA				epPKiKP	pPKiKP	10 30 45.1	+2.4
	comp=Z,9.4nm,1.2s						
STU	Stuttgart	152.13	348	ePKPbc	PKPbc	10 28 25.5	-0.1
	baz=18,slow=2.3						
RJOB	Jochberg	152.25	342	ePKPbc	PKPbc	10 28 25.3	-0.6
	baz=18,slow=2.3						
FUR	Furstenfeldbru	152.25	345	ePKPbc	PKPbc	10 28 25.5	-0.4
	baz=18,slow=2.3						
PGRON	Lagoa das Cont	152.32	49	ePKP	PKPdf	10 28 20.8	+1.8
BART	Pico Bartolome	152.47	49	ePKP	PKPdf	10 28 20.5	+1.2
SOKA	Soboth	152.50	338	i PKP	PKPbc	10 28 25.6	-0.9
	comp=Z,4.8nm,0.7s						
SOKA				epPKP	pPKPbc	10 30 43.5	+0.4
	comp=Z,6.7nm,1.5s						
KBA	Koelnbreinsper	152.69	341	i PKP	PKPbc	10 28 26.2	-0.9
	comp=Z,3.7nm,0.5s						
KBA				epPKP	pPKPbc	10 30 43.8	+0.2
	comp=Z,8.2nm,1.5s						
BFO	Black Forest	152.72	349	ePKPbc	PKPbc	10 28 26.4	-0.5
	baz=18,slow=2.3						
BFO				epPKPbc	pPKPab	10 30 49.4	-1.7
	baz=20,slow=2.6						
OBKA	Obir	152.81	339	i PKP	PKPbc	10 28 26.2	-1.1
	comp=Z,2.2nm,0.8s						
PSMN	Pico do Norte,	152.90	50	ePKP	PKPdf	10 28 23.0	+3.2
WATA	Walderalm	152.95	344	i PKP	PKPdf	10 28 18.8	-1.0
	comp=Z,3.2nm,0.7s						
WATA				i PKP	PKPbc	10 28 26.8	-0.8

	comp=Z,4.3nm,0.5s						
WATA				*e*pPKiKP	pPKiKP	10 30 46.3	+1.7
	comp=Z,14nm,1.2s						
UBR	**Ueberruh**	152.98	346	*e*PKPbc	PKPbc	10 28 27.0	-0.6
	baz=18,slow=2.3						
UBR				*e*pPKPbc	pPKPab	10 30 50.2	-2.0
	baz=20,slow=2.6						
MYKA	**Terra Mystica**	153.00	340	*i* PKP	PKPbc	10 28 26.6	-1.1
	comp=Z,3.3nm,0.4s						
MYKA				*e*pPKiKP	pPKiKP	10 30 46.0	+1.4
	comp=Z,10nm,1.2s						
WTTA	**Wattenberg**	153.00	344	*i* PKP	PKPbc	10 28 27.2	-0.6
	comp=Z,8.8nm,0.5s						
WTTA				*e*pPKiKP	pPKiKP	10 30 46.3	+1.5
	comp=Z,19nm,1.9s						
RETA	**Reutte**	153.01	345	*i* PKP	PKPbc	10 28 27.0	-0.7
	comp=Z,4.8nm,0.9s						
MOTA	**Moosalm**	153.06	344	*e*PKP	PKPdf	10 28 19.0	-0.9
	comp=Z,4.9nm,0.9s						
MOTA				*i* PKP	PKPbc	10 28 27.3	-0.6
	comp=Z,8.6nm,0.8s						
MOTA				*e*pPKiKP	pPKiKP	10 30 46.0	+1.1
	comp=Z,6.9nm,0.8s						
VNDS	**Vrh nad Dolski**	153.11	338	*i* PKPbc	PKPbc	10 28 27.2	-0.6
SQTA	**Sankt Quirin**	153.15	344	*e*PKP	PKPdf	10 28 19.2	-0.8
	comp=Z,6.0nm,0.9s						
SQTA				*i* PKP	PKPbc	10 28 27.5	-0.5
	comp=Z,14nm,1.0s						
SQTA				*e*pPKP	pPKPbc	10 30 45.3	+0.6
	comp=Z,9.3nm,0.9s						
ABTA	**Abfaltersbach**	153.23	342	*i* PKP	PKPdf	10 28 19.0	-1.1
	comp=Z,3.6nm,0.6s						
ABTA				*i* PKP	PKPbc	10 28 27.5	-0.7
	comp=Z,7.0nm,0.6s						
CRNS	**Crni Vrh**	153.28	339	*i* PKPbc	PKPbc	10 28 27.3	-0.9
DAVA	**Damuels**	153.41	346	*i* PKP	PKPbc	10 28 28.0	-0.6
	comp=Z,6.6nm,0.8s						
DAVA				*e*pPKiKP	pPKiKP	10 30 48.3	+2.6
	comp=Z,9.6nm,1.2s						
BOJS	**Bojanci**	153.43	337	*i* PKPbc	PKPbc	10 28 28.4	-0.1
FETA	**Feichten**	153.46	345	*i* PKP	PKPdf	10 28 19.7	-0.8
	comp=Z,12nm,1.0s,SNR=6.6						
FETA				*i* PKP	PKPbc	10 28 28.3	-0.4
	comp=Z,3.4nm,0.6s						
FETA				*e*pPKiKP	pPKiKP	10 30 48.2	+2.4
	comp=Z,5.3nm,0.9s						
CIMO	**Cimolais**	153.65	342		PKPbc	10 28 28.2	-0.8
DAVOX	**Davos/Dischmat**	153.88	346	PKP	PKPdf	10 28 20.7	-0.5
	comp=Z,5.4nm,0.9s,baz=0.0,slow=1.0,SNR=9.1						
DAVOX				PKPbc	PKPbc	10 28 29.6	0.0
	comp=Z,10.0nm,0.7s,baz=38,slow=4.4,SNR=14						
DAVOX				PKPab	PKPab	10 28 44.8	-1.2
	comp=Z,1.3nm,0.4s,baz=10,slow=11,SNR=3.5						
FUORN	**Ofenpass-Fuorn**	153.94	345	PKPdf	PKPdf	10 28 21.4	+0.1
FUORN					PKPbc	10 28 29.5	-0.4
FUORN				PKPab	PKPab	10 28 46.9	+0.6
CTI	**Castel Tesino**	154.11	342		PKPdf	10 28 21.0	-0.4
CTI				PKPbc	PKiKP	10 28 31.7	+1.6
CTI	**Castel Tesino**	154.11	342	PKIKP	PKiKP	10 28 31.7	+1.6
BNI	**Bardonecchia**	156.18	350		PKPdf	10 28 23.7	-0.5
BNI	**Bardonecchia**	156.18	350	PKIKP	PKPdf	10 28 23.7	-0.5
ESDC	**Sonseca Array**	161.60	12	PKP	PKPdf	10 28 30.6	+0.1
	comp=Z,1.4nm,0.9s,baz=350,slow=4.5,SNR=5.3						
ESDC				PKPab	PKPab	10 29 19.0	-0.6
	comp=Z,7.0nm,1.1s,baz=346,slow=4.9,SNR=14						
ESDC	**Sonseca Array**	161.60	12	PKPdf	PKPdf	10 28 29.8	-0.8
ESDC					PKPab	10 29 19.2	-0.3
LIC	**Lamto**	163.65	159	⇑*i*PKIKP	PKPdf	10 28 32.3	-0.9
	comp=Z,91nm,1.1s						
LIC	**Lamto**	163.65	159	⇑*i*PKP1	PKPab	10 29 30.2	+1.2
	comp=Z,100nm,0.7s						
KIC	**Kosan Boka**	163.87	160	⇑*i*PKIKP	PKPdf	10 28 32.6	-0.8
	comp=Z,9.4nm,0.6s						
KIC	**Kosan Boka**	163.87	160	⇓*i*PKP1	PKPab	10 29 31.1	+1.1
	comp=Z,34nm,0.6s						
TIC	**Toumodi**	164.04	159	⇑*i*PKIKP	PKPdf	10 28 32.8	-0.8
	comp=Z,18nm,0.3s						
TIC	**Toumodi**	164.04	159	⇑*i*PKP1	PKPab	10 29 31.6	+0.8
	comp=Z,20nm,0.3s						
DBIC	**Dimbokro**	164.12	159	PKP	PKPdf	10 28 32.9	-0.7
	comp=Z,15nm,0.7s,baz=177,slow=0.8,SNR=16						
DBIC				PKPab	PKPab	10 29 31.9	+0.8
	comp=Z,15nm,0.7s,baz=204,slow=5.2,SNR=18						
DBIC	**Dimbokro**	164.12	159		PKPdf	10 28 33.2	-0.3
DBIC				PKPab	PKPab	10 29 32.1	+1.0
DBIC	**Dimbokro**	164.12	159	PKP2	PKPab	10 29 32.1	+1.0
DBIC						11 28 33.3	
TORD	**Torodi Ar. Bea**	171.48	186	PKP	PKPdf	10 28 37.6	-0.9
	comp=Z,9.8nm,0.9s,baz=250,slow=0.1,SNR=43						
TORD				PKPab	PKPab	10 30 03.8	+0.2
	comp=Z,8.5nm,0.7s,baz=175,slow=4.0,SNR=23						
TORD				PP	PP	10 33 54.3	+0.3
	comp=Z,2.4nm,0.8s,baz=184,slow=5.3,SNR=7.2						
TORD	**Torodi Ar. Bea**	171.48	186		PKPdf	10 28 36.8	-1.8
TORD					PKPab	10 30 02.5	-1.1

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*WEL **12** 10:14:00, 40°.28S×176°.33E, h42^{km}, ML4.6, Mw4.3, Moment Tensor Solution. s5 Moment tensor: Scale 10^{15} Nm; M$_{rr}$-2.67; M$_{\theta\theta}$0.38; M$_{\phi\phi}$2.29; M$_{r\theta}$0.86; M$_{\theta\phi}$1.82; M$_{\phi r}$-2.12; Fault plane solution: M$_0$3.84000×10^{15} NP1: φ$_s$237.00000°, δ39.00000°, λ-44.00000°. NP2: φ$_s$4.00000°, δ64.00000°, λ-121.00000°. Principal axes: T -396.4000, Plg14.0000°, Azm115.0000°; N 24.2200, Plg27.0000°, Azm18.0000°; P 372.1700, Plg59.0000°, Azm230.0000°;*

*IDC **12** 10:14:46.7±1.0, 40°.31S×176°.42E, h0^{km}, mb4.6/2, mbtmp4.4/4, ML3.9/2, MS3.2/3 Error ellipse: s-maj=33.6km s-min=22.3km az=120.0*

*NOU **12** 10:14:52.9, 40°.37S×176°.37E, h49^{km}, MLv4.6/12, North Island, New Zealand*

*NEIC **12** 10:14:52.9±2.1, 40°.31S±0°.03×176°.41E±0°.09, h43^{km}±7^{km}, mb4.6/11, Mwr4.2/31, Error ellipse: s-maj=10.2km s-min=1.1km az=112.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.95; M$_{\theta\theta}$1.37; M$_{\phi\phi}$-0.42; M$_{r\theta}$0.52; M$_{\theta\phi}$1.63; M$_{\phi r}$-0.86; Fault plane solution: M$_0$2.27000×10^{15} NP1: φ$_s$277.28000°, δ63.83000°, λ-29.75000°. NP2: φ$_s$21.42000°, δ63.55000°, λ-150.49000°. Principal axes: T 2.3355, Plg0.0000°, Azm329.0000°; N -0.1343, Plg51.0000°, Azm60.0000°; P -2.2012, Plg39.0000°, Azm239.0000°;*

*NEIC **12** 10:14:53, 40°.34S×176°.36E, h45^{km}*

*WEL **12** 10:14:53.3±0.3, 40°S±3°×17°6E±°, h32^{km}±3^{km}, M4.6/18, ML4.9/18, MLv4.6/18, Error ellipse: s-maj=0.0km s-min=0.0km az=119.0, confirmed*

ISC 12 10:14:53.3±0.7**, 40°.34S**±0°.03×**176°.42E**±0°.04**, h51**^{km}±5^{km}**, n205, σ1^{s}17**/228**, mb4.7**/9**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRHZ	**Porangahau**	0.18	66	P	Pn	10 15 01.4	-0.2
PRHZ				S	Sn	10 15 07.9	+0.3
DVHZ	**Dannevirke**	0.20	282	P	Pn	10 15 00.7	-1.0
DVHZ				S	Sn	10 15 05.8	-1.9
WPHZ	**Waipukurau**	0.28	4	P	Pn	10 15 01.4	-0.9
WPHZ				S	Sn	10 15 07.4	-1.3
BFZ	**Birch Farm**	0.36	201		Pn	10 15 03.5	+0.4
BFZ				Sn	Sn	10 15 10.2	+0.1
BFZ	**Birch Farm**	0.36	201	P	Pn	10 15 03.5	+0.4
BFZ	**Birch Farm**	0.36	201	P	Pn	10 15 03.6	+0.4
PRWZ	**Pori Road**	0.40	238	P	Pn	10 15 03.9	+0.3
PRWZ				S	Sn	10 15 11.6	+0.8
TSZ	**Takapari Road**	0.45	309	P	Pn	10 15 02.9	-1.1
TSZ				S	Sn	10 15 09.7	-2.1
PNHZ	**Pukenui**	0.46	339	P	Pn	10 15 03.1	-1.1
PNHZ				S	Sn	10 15 10.3	-1.7
PXZ	**Pawanui**	0.46	48	P	Pn	10 15 04.1	0.0
POWZ	**Post Office Ro**	0.50	264	P	Pn	10 15 04.3	-0.3
POWZ				S	Sn	10 15 12.2	-0.5
CPWZ	**Castlepoint**	0.59	196	P	Pn	10 15 07.1	+1.4
CPWZ				S	Sn	10 15 17.4	+2.8
TIWZ	**Tintock**	0.59	223	P	Pn	10 15 06.3	+0.5
KAHZ	**Kahuranaki**	0.65	33	P	Pn	10 15 06.5	+0.1
MRZ	**Mangatainoka R**	0.71	243		Pn	10 15 07.2	-0.1
MRZ				Sn	Sn	10 15 17.5	+0.1
MRZ	**Mangatainoka R**	0.71	243	P	Pn	10 15 07.5	+0.2
MRZ				S	Sn	10 15 17.8	+0.4
CKHZ	**Cape Kidnapper**	0.85	37	P	Pn	10 15 08.8	-0.3
TMWZ	**Te Maipa**	0.86	207	P	Pn	10 15 09.7	+0.4
TMWZ				S	Sn	10 15 21.8	+0.9
HOWZ	**Holdsworth Sta**	0.88	231	P	Pn	10 15 09.7	+0.1
HOWZ				S	Sn	10 15 21.9	+0.5
BHHZ	**Black Hill Sta**	0.89	342	P	Pn	10 15 09.2	-0.5
BHHZ				S	Sn	10 15 20.3	-1.4
KWHZ	**Kaweka Forest**	0.92	0	P	Pn	10 15 09.6	-0.4
MCHZ	**McNeill Hill**	0.92	14	P	Pn	10 15 09.9	0.0
OGWZ	**Otaki Gorge**	1.06	243	P	Pn	10 15 12.0	+0.1
OGWZ				S	Sn	10 15 25.7	+0.1
MOVZ	**Moawhango**	1.06	331	P	Pn	10 15 11.9	-0.1
MOVZ				S	Sn	10 15 24.9	-0.8
MTW	**Mount Morrison**	1.07	220	P	Pn	10 15 11.8	-0.2
MTW				S	Sn	10 15 26.1	+0.2
ARHZ	**Aropaoanui**	1.17	23	P	Pn	10 15 13.3	0.0
BKZ	**Black Stump Fm**	1.18	3		Pn	10 15 12.5	-0.9
BKZ				Sn	Sn	10 15 27.0	-1.4
BKZ	**Black Stump Fm**	1.18	3	P	Pn	10 15 13.1	-0.4
BKZ	**Black Stump Fm**	1.18	3	P	Pn	10 15 13.1	-0.4
TRWZ	**Traveller**	1.19	207	P	Pn	10 15 13.7	0.0
WNVZ	**Wahianoa**	1.19	328	P	Pn	10 15 14.1	+0.3
MTVZ	**Mangateitei**	1.20	322	P	Pn	10 15 14.2	+0.4
TUVZ	**Tukino**	1.22	331	P	Pn	10 15 14.6	+0.4
WHVZ	**Whangaehu Hut**	1.23	329	P	Pn	10 15 14.8	+0.3
TRVZ	**Turoa**	1.24	327	P	Pn	10 15 14.7	+0.3
WAZ	**Wanganui**	1.25	298	P	Pn	10 15 15.3	+0.9
DRZ	**Dome Shelter**	1.25	328	P	Pn	10 15 15.1	+0.4
KIW	**Kapiti Island**	1.26	245	P	Pn	10 15 14.6	+0.1
FWVZ	**Far West T-bar**	1.27	328	P	Pn	10 15 15.3	+0.4
NMHZ	**Naumai**	1.28	14	P	Pn	10 15 14.9	0.0
CAW	**Cannon Point**	1.28	233	P	Pn	10 15 14.7	-0.2
SNVZ	**South Ngauruho**	1.30	332	P	Pn	10 15 15.5	+0.3
OTVZ	**Oturere**	1.31	334	P	Pn	10 15 15.7	+0.3
ETVZ	**East Tongariro**	1.32	335	P	Pn	10 15 15.7	+0.2
NGZ	**Ngauruhoe**	1.32	331	P	Pn	10 15 15.8	+0.2
PKVZ	**Pokaka**	1.33	322	P	Pn	10 15 16.0	+0.4
TMVZ	**Te Maari**	1.34	336	P	Pn	10 15 16.0	+0.2
NNVZ	**North Ngauruho**	1.36	333	P	Pn	10 15 16.3	+0.2
NTVZ	**North Tongarir**	1.37	335	P	Pn	10 15 16.3	+0.2
WTVZ	**West Tongariro**	1.38	332	P	Pn	10 15 16.5	+0.2
KRVZ	**Karewarewa**	1.38	334	P	Pn	10 15 16.7	+0.4
MSWZ	**Moikau Station**	1.39	219		Pn	10 15 15.4	-0.9
MSWZ				Sn	Sn	10 15 33.1	-0.5
MSWZ	**Moikau Station**	1.39	219	P	Pn	10 15 15.8	-0.6
WHHZ	**Waihua**	1.41	27	P	Pn	10 15 16.5	-0.1
RITZ	**Rihia Road**	1.43	342	P	Pn	10 15 17.3	+0.4
KATZ	**Kakaramea**	1.47	338	P	Pn	10 15 17.9	+0.3
TWVZ	**Taurewa**	1.48	329	P	Pn	10 15 17.7	+0.1
MRHZ	**Matea Rd**	1.50	0	P	Pn	10 15 18.0	+0.1
PLWZ	**Palliser**	1.51	215		Pn	10 15 17.1	-0.9
PLWZ	**Palliser**	1.51	215	P	Pn	10 15 17.2	-0.9
RAHZ	**Arahi**	1.51	20	P	Pn	10 15 17.7	-0.3
MTHZ	**Maungataniwha**	1.52	13	P	Pn	10 15 17.7	-0.5
RATZ	**Rangitukua**	1.55	341	P	Pn	10 15 18.6	0.0
WEL	**Wellington**	1.57	232	P	Pn	10 15 18.2	-0.5
BHW	**Baring Head**	1.58	227		Pn	10 15 18.7	-0.3
SNZO	**South Karori**	1.62	233	P	Pn	10 15 18.9	-0.5
KNZ	**Kokohu**	1.64	37	P	Pn	10 15 18.8	-0.8
MHGZ	**Mahia Peninsul**	1.65	45	P	Pn	10 15 19.4	-0.5
WHTZ	**Whakaora**	1.71	348	P	Pn	10 15 20.9	+0.1
SNGZ	**Shannon Statio**	1.71	25	P	Pn	10 15 20.4	-0.4
WATZ	**Wairara**	1.71	342	P	Pn	10 15 20.6	-0.2
VRZ	**Vera Road**	1.76	313	P	Pn	10 15 21.8	+0.4
ALRZ	**Allen Road**	1.78	358	P	Pn	10 15 21.0	-0.7
RTZ	**Ruatahuna**	1.78	14		Pn	10 15 21.3	-0.4
RTZ	**Ruatahuna**	1.78	14	P	Pn	10 15 21.3	-0.4
LREZ	**Lake Rotokare**	1.78	299	P	Pn	10 15 21.3	-0.4
WPRZ	**Whakapapatarin**	1.83	354	P	Pn	10 15 21.8	-0.5
PRRZ	**Plateau Road**	1.84	359	P	Pn	10 15 21.9	-0.6
TCW	**Tory Channel**	1.84	241		Pn	10 15 21.8	-0.7
TCW	**Tory Channel**	1.84	241	P	Pn	10 15 21.8	-0.7
MUGZ	**Murupara**	1.88	8	P	Pn	10 15 22.2	-0.8
KUTZ	**Kaahu Road**	1.91	346	P	Pn	10 15 23.0	-0.3
RIGZ	**Rimuhau**	1.94	33	P	Pn	10 15 23.1	-0.7
HRRZ	**Handcock Road**	1.95	357	P	Pn	10 15 23.8	-0.2
DUWZ	**D’Urville Isla**	1.96	256	P	Pn	10 15 23.7	-0.4
RAGZ	**Rawiri**	2.00	23	P	Pn	10 15 23.9	-0.8
GRRZ	**Galatos Road**	2.00	353	P	Pn	10 15 24.6	-0.1
HSRZ	**Hossack Road**	2.03	356	P	Pn	10 15 24.6	-0.5
DREZ	**Durham Road**	2.06	303	P	Pn	10 15 26.7	+1.2
NEZ	**North Egmont**	2.08	300	P	Pn	10 15 27.2	+1.3
HLRZ	**Highlands Stat**	2.09	359	P	Pn	10 15 26.3	+0.4
TARZ	**Mount Tarawera**	2.10	2	P	Pn	10 15 25.6	-0.5
TLZ	**Tolley Road**	2.12	341	P	Pn	10 15 25.7	-0.6
KHEZ	**Kahui Hut**	2.12	299	P	Pn	10 15 26.5	+0.1
KHEZ	**Kahui Hut**	2.12	299	P	Pn	10 15 27.6	+1.2
URZ	**Urewera**	2.15	15	Pn	Pn	10 15 25.2	-1.4
	37nm,0.3s,baz=314,slow=6.8,SNR=32						
URZ				Sn	Sn	10 15 50.6	-1.5
	104nm,0.3s,baz=140,slow=17,SNR=16						
URZ				LR	LR	10 16 01.2	
	comp=Z,124nm,21.1s,baz=302,slow=35 76nm,0.3s						
URZ	**Urewera**	2.15	15	P	Pn	10 15 25.5	-1.1
URZ	**Urewera**	2.15	15	P	Pn	10 15 25.4	-1.3
NMEZ	**Namu Road**	2.16	295	P	Pn	10 15 28.3	+1.4
TUWZ	**Tuamarina**	2.17	239		Pn	10 15 25.7	-1.2
TUWZ	**Tuamarina**	2.17	239	P	Pn	10 15 25.9	-1.0
UTU	**Utuhina**	2.17	355	P	Pn	10 15 26.7	-0.3
CMWZ	**Cape Campbell**	2.18	229		Pn	10 15 26.4	-0.8
CMWZ	**Cape Campbell**	2.18	229	P	Pn	10 15 26.5	-0.6
MWZ	**Matawai**	2.18	24	P	Pn	10 15 25.9	-1.3
HIZ	**Hauiti**	2.19	326		Pn	10 15 27.6	+0.4
HIZ	**Hauiti**	2.19	326	P	Pn	10 15 27.5	+0.3
HIZ	**Hauiti**	2.19	326	P	Pn	10 15 27.4	+0.1
PKE	**Pukeiti**	2.19	301	P	Pn	10 15 28.8	+1.5
TKGZ	**Te Karaka**	2.20	31	P	Pn	10 15 26.2	-1.1
OMRZ	**Omania**	2.23	359	P	Pn	10 15 27.0	-0.8
OMRZ				P	Pn	10 15 27.0	-0.8
NBEZ	**Newall Road No**	2.24	298	P	Pn	10 15 29.3	+1.5
NGRZ	**Ngongotaha**	2.24	355	P	Pn	10 15 27.7	-0.3
EDRZ	**Edgecumbe**	2.25	7	P	Pn	10 15 27.1	-1.0
CNGZ	**Carnagh Statio**	2.32	37	P	Pn	10 15 28.0	-0.9
KARZ	**Kaharoa**	2.32	357	P	Pn	10 15 28.6	-0.5
LIRZ	**Lichensteins R**	2.33	359	P	Pn	10 15 29.2	0.0
BSWZ	**Blackbirch Sta**	2.36	234		Pn	10 15 28.4	-1.2
BSWZ	**Blackbirch Sta**	2.36	234	P	Pn	10 15 28.5	-1.2
NNZ	**Nelson**	2.47	248		Pn	10 15 30.6	-0.5
NNZ	**Nelson**	2.47	248	P	Pn	10 15 30.7	-0.3
TWGZ	**Tauwhareparae**	2.48	30	P	Pn	10 15 30.9	-0.4
OPRZ	**Ohinepanea**	2.50	3	P	Pn	10 15 30.3	-1.1
RUGZ	**Raukumara Rang**	2.57	23	P	Pn	10 15 31.5	-1.0
TGRZ	**Tauranga**	2.61	357	P	Pn	10 15 32.1	-0.9
PUZ	**Puketiti**	2.68	33	P	Pn	10 15 32.4	-1.5
TOZ	**Tahuroa Road**	2.70	344	Pn	Pn	10 15 33.7	-0.5
TOZ	**Tahuroa Road**	2.70	344	P	Pn	10 15 33.8	-0.4
TKNZ	**Takaka Hill**	2.72	254		Pn	10 15 34.2	-0.3
TKNZ	**Takaka Hill**	2.72	254	P	Pn	10 15 34.2	-0.3
PKGZ	**Pakihiroa**	2.77	28	P	Pn	10 15 34.2	-1.0
HAZ	**Te Kaha**	2.79	23	P	Pn	10 15 34.2	-1.3
WMGZ	**Waiomatatini S**	2.96	32	P	Pn	10 15 36.4	-1.4
MRNZ	**Matariki Terra**	2.97	248		Pn	10 15 37.6	-0.3
MRNZ	**Matariki Terra**	2.97	248	P	Pn	10 15 37.6	-0.3
KHZ	**Kahutara**	3.00	225	P	Pn	10 15 36.3	-1.9
QRZ	**Quartz Range**	3.00	259	P	Pn	10 15 38.0	-0.3
QRZ	**Quartz Range**	3.00	259	P	Pn	10 15 37.6	-0.7
THZ	**Tophouse**	3.01	241		Pn	10 15 37.1	-1.5
THZ	**Tophouse**	3.01	241	P	Pn	10 15 37.2	-1.3
AWAZ	**Awhitu Peninsu**	3.55	336	P	Pn	10 15 46.1	+0.2
ETAZ	**East Tamaki Re**	3.58	341	P	Pn	10 15 45.9	-0.3
KUZ	**Kuaotunu**	3.63	351	P	Pn	10 15 46.9	-0.1
KUZ	**Kuaotunu**	3.63	351	P	Pn	10 15 46.6	-0.3
GVZ	**Greta Valley S**	3.65	223	P	Pn	10 15 45.0	-2.2
WIAZ	**Waiheke Island**	3.68	344	P	Pn	10 15 47.6	-0.1
WTAZ	**Waiatarua**	3.70	336	P	Pn	10 15 48.3	+0.4
EPAZ	**Eden Park BICE**	3.70	339	P	Pn	10 15 48.4	+0.4
HBAZ	**Herne Bay Bore**	3.73	339	P	Pn	10 15 48.3	0.0
DSZ	**Denniston Nort**	3.76	247	P	Pn	10 15 47.5	-1.3
MBAZ	**Motutapu North**	3.76	341	P	Pn	10 15 48.4	-0.3
RVAZ	**Riverhead Bore**	3.84	337	P	Pn	10 15 50.1	+0.2
LTZ	**Lake Taylor**	3.95	231		Pn	10 15 49.8	-1.6
LTZ	**Lake Taylor**	3.95	231	P	Pn	10 15 49.2	-2.2
AMCZ	**Amberley**	4.00	224	P	Pn	10 15 49.3	-2.6
GRZ	**Great Barrier**	4.15	349	P	Pn	10 15 53.8	-0.3
MQZ	**McQueen’s Vall**	4.38	219	P	Pn	10 15 54.0	-3.2
AKCZ	**Akaroa Harbour**	4.39	215	P	Pn	10 15 55.0	-2.3
INZ	**Inchbonnie**	4.43	236	P	Pn	10 15 55.7	-2.2
RACZ	**Rakaia**	4.65	222	P	Pn	10 15 57.9	-3.0
WCZ	**Waipu Caves**	4.69	339	P	Pn	10 16 01.9	+0.4
WACZ	**Wakanui South**	4.95	222	P	Pn	10 16 02.1	-3.0
WVZ	**Waitaha Valley**	5.05	235	P	Pn	10 16 03.9	-2.6
RPZ	**Rata Peaks**	5.23	228	Pn	Pn	10 16 07.0	-1.8
	5.0nm,0.3s,baz=226,slow=2.7,SNR=28						
RPZ				Sn	Sn	10 17 02.5	-5.3
	124nm,0.3s,baz=258,slow=3.7,SNR=62						
RPZ				LR	LR	10 18 40.5	
	comp=Z,334nm,19.6s,baz=96,slow=44 9.9nm,0.3s						
RPZ	**Rata Peaks**	5.23	228	P	Pn	10 16 07.4	-1.5
RPZ	**Rata Peaks**	5.23	228	P	Pn	10 16 07.2	-1.7
ARCZ	**Arundel**	5.31	226	P	Pn	10 16 07.6	-2.4
GCSZ	**Gaunt Creek Bo**	5.43	235	P	Pn	10 16 09.6	-2.1
TMZ	**Timaru**	5.69	223	P	Pn	10 16 12.9	-2.3
FOZ	**Fox Glacier**	5.87	235	P	Pn	10 16 14.9	-2.7
LBZ	**Lake Benmore**	6.13	227	P	Pn	10 16 19.0	-2.3
CTZ	**Chatham Island**	6.20	125	Pn	Pn	10 16 22.7	+0.6
CTZ	**Chatham Island**	6.20	125	P	Pn	10 16 23.1	+1.0
CTZ	**Chatham Island**	6.20	125	P	Pn	10 16 22.8	+0.6
ODZ	**Otahua Downs**	6.34	220	P	Pn	10 16 21.9	-2.2
ODZ	**Otahua Downs**	6.34	220	P	Pn	10 16 21.3	-2.8
JCZ	**Jackson Bay**	6.78	234	P	Pn	10 16 28.2	-2.1
JCZ	**Jackson Bay**	6.78	234	P	Pn	10 16 27.6	-2.7
HHSZ	**Highcliff Hill**	6.99	216	P	Pn	10 16 31.5	-1.5
EAZ	**Earnscleugh**	7.16	225	P	Pn	10 16 32.7	-2.6
TUZ	**Tuapeka**	7.49	219	P	Pn	10 16 38.6	-1.2
MLZ	**Mavora Lakes**	7.90	228	P	Pn	10 16 43.0	-2.5
APZ	**The Paps**	8.91	221	P	Pn	10 16 56.7	-2.7
PYZ	**Puysegur Point**	9.18	227	Pn	Pn	10 17 02.1	-0.9
TOO	**Toolangi**	24.15	267	P	P	10 20 06.6	+2.0
TOO				IAmb	IAmb	10 20 46.0	
	comp=Z,19nm,1.1s						
STKA	**Stephens Creek**	29.23	276	P	P	10 20 51.4	+1.1
STKA				IAmb	IAmb	10 20 53.8	
	comp=Z,7.6nm,1.1s						
AS31	**Alice Springs**	39.29	282		P	10 22 16.6	-0.8
AS31				IAmb	IAmb	10 22 30.0	
	comp=Z,6.7nm,0.8s						
ASAR	**Alice Springs**	39.29	282	P	P	10 22 17.5	+0.1
	comp=Z,2.5nm,0.5s,baz=131,slow=7.2,SNR=8.5 comp=Z,2.5nm,0.5s						
ASAR	**Alice Springs**	39.29	282	P	P	10 22 17.6	+0.3
PMG	**Port Moresby**	40.30	312	LR	LR	10 39 04.4	
	comp=Z,76nm,18.1s,baz=167,slow=36						
WB2	**Warramunga Arr**	41.20	287	P	P	10 22 33.2	+0.1
WRAB	**Tennant Creek**	41.20	287	P	P	10 22 32.3	-0.8
WRAB				IAmb	IAmb	10 22 40.2	
	comp=Z,15nm,0.8s						
WRA	**Warramunga Arr**	41.21	287	P	P	10 22 33.6	+0.4
	comp=Z,7.3nm,0.5s,baz=126,slow=8.2,SNR=18 comp=Z,7.3nm,0.5s						
WB0	**Warramunga Arr**	41.28	287	P	P	10 22 31.1	-2.7
WB0				IAmb	IAmb	10 22 38.9	
	comp=Z,15nm,0.9s						
FITZ	**Fitzroy Crossi**	48.79	282	P	P	10 23 33.7	+0.3
MORW	**Morawa**	50.03	263	P	P	10 23 41.8	-1.0
MORW				IAmb	IAmb	10 23 46.4	
	comp=Z,17nm,1.2s						
SNAA	**Sanae**	68.29	180	P	P	10 25 50.4	+1.9
SNAA				IAmb	IAmb	10 26 27.5	
	comp=Z,11nm,1.3s						
GO09	**Cerro Castillo**	70.87	142	P	P	10 26 04.6	0.0
YKA	**Yellowknife Ar**	116.34	29	PKP	PKPdf	10 33 30.7	+0.6
	comp=Z,0.2nm,0.6s,baz=242,slow=1.2,SNR=4.9						
MKAR	**Makanchi Array**	120.42	307	PKP	PKPdf	10 33 38.7	+0.2
	comp=Z,0.3nm,0.7s,baz=125,slow=7.2,SNR=2.6						
KURBB	**Kurchatov Arra**	124.32	310	PKP	PKPdf	10 33 45.8	0.0
	comp=Z,0.3nm,0.7s,baz=117,slow=1.6,SNR=2.3						
ARCES	**ARCESS Array B**	146.98	342	PKPbc	PKPbc	10 34 29.1	0.0
	comp=Z,5.9nm,1.0s,baz=46,slow=3.5,SNR=6.5						
BRTR	**Keskin Array B**	151.63	281	PKPbc	PKPbc	10 34 41.3	-0.5
	comp=Z,0.6nm,0.6s,baz=98,slow=2.2,SNR=3.6						
BRTR				PKPab	PKPab	10 34 50.1	-0.7
	comp=Z,1.1nm,0.8s,baz=128,slow=4.4,SNR=5.5						
FINES	**FINESS Array B**	152.21	329	PKPbc	PKPbc	10 34 42.6	+0.4
	comp=Z,1.2nm,0.6s,baz=44,slow=4.2,SNR=8.8						
TORD	**Torodi Ar. Bea**	152.52	191	PKPbc	PKiKP	10 34 45.9	+1.3
	comp=Z,1.6nm,0.6s,baz=158,slow=3.5,SNR=9.4						
TORD				PKPab	PKPab	10 34 56.4	+1.7
	comp=Z,2.3nm,0.7s,baz=171,slow=3.2,SNR=9.6						

IDC 12 10:29:23.2±2.5**, 2°.83S**×**140°.60E, h0**^{km}**, mb3.5**/3**, mbtmp3.5**/4**, ML3.2**/1**, Error ellipse: s-maj=113.0km s-min=25.0km az=87.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	18.07	199	P	P	10 33 36.6	+0.2
	0.1nm,0.3s,baz=17,slow=12,SNR=4.6 0.2nm,0.4s						
ASAR	**Alice Springs**	21.70	197	P	P	10 34 15.9	-0.1
	0.3nm,0.5s,baz=9.9,slow=10,SNR=10.0 0.3nm,0.5s						
STKA	**Stephens Creek**	28.91	178	P	P	10 35 23.2	-0.7
	0.9nm,0.5s,baz=342,slow=9.6,SNR=3.5 0.9nm,0.5s						
SONM	**Songino Array**	58.65	334	P	P	10 39 22.6	+0.2
	1.0nm,0.9s,baz=149,slow=6.7,SNR=7.2 1.0nm,0.9s						

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*IDC **12** 10:34:09.7±2.1, 38°.09N×142°.63E, h0^{km}, mb3.5/4, mbtmp3.3/6, ML2.5/2, MS3.3/1, Error ellipse: s-maj=42.1km s-min=25.2km az=98.0*

*JMA **12** 10:34:13.2±0.2, 37°.9N±0°.5×142°.4E±1°.0, h34^{km}±2^{km}, MV3.5/38, SE OFF MIYAGI PREF*

ISC 12 10:34:12.0±2.1**, 37°.99N**±0°.06×**142°.42E**±0°.08**, h16**^{km}±12^{km}**, n26, σ1^{s}28**/30**, mb3.4**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	0.82	293	P	Pg	10 34 28.6	+0.7
JIKH				S	Sb	10 34 39.4	+0.6
JIO	**Ouri**	0.97	299	P	Pn	10 34 30.9	0.0
JIO				S	Sb	10 34 43.2	+0.3
JKMT	**Kesennumamotoy**	1.11	318	P	Pg	10 34 33.3	-0.1
JKMT				S	Sb	10 34 47.5	+0.4
JMST	**Minamisoumatoc**	1.24	258	P	Pn	10 34 33.9	-0.8
JMST				S	Sn	10 34 48.9	-2.2
JMM	**Marumori**	1.29	265	*i* P	Pn	10 34 35.1	-0.3
JMM				S	Sn	10 34 50.9	-1.5
JMK	**Ichinoseki**	1.35	316	*i* P	Pb	10 34 36.9	0.0
JFK	**Kawauchi**	1.38	244	P	Pn	10 34 35.6	-0.9
JFK				S	Sn	10 34 51.7	-2.8
JOU	**Okura**	1.44	286	*i* P	Pb	10 34 38.3	-0.1
JOU				*e*S	Sn	10 34 55.7	-0.3
JOTO	**OTAMA OYAMA**	1.71	256	P	Pn	10 34 41.8	+0.6
JOTO				S	Sn	10 35 02.4	-0.3
JOM	**Ohasama**	1.73	330	*e*P	Pb	10 34 42.6	-0.8
JYK	**Kaneyama**	1.87	300	P	Pb	10 34 44.9	-0.9
JRG	**Rokugo**	1.99	316	P	Pb	10 34 46.9	-0.8
JFY	**Yanaizu**	2.23	256	*e*P	Pn	10 34 49.0	+0.7
JFY				*e*S	Sn	10 35 16.0	+0.4
MJAR	**Matsushiro Arr**	3.66	248	Pn	Pn	10 35 09.2	+1.3
	0.1nm,0.3s,baz=62,slow=9.4,SNR=8.2						
MJAR				Sn	Sb	10 35 57.4	-3.0
	0.1nm,0.3s,baz=88,slow=17,SNR=1.4 1.5nm,0.7s						
ASAJ	**Asahikawa**	6.13	1	Pn	Pn	10 35 39.5	-2.4
	0.2nm,0.3s,baz=212,slow=12,SNR=5.5						
ASAJ				Sn	Sn	10 36 51.7	+0.2
	0.4nm,0.3s,baz=233,slow=30,SNR=1.7 0.9nm,0.6s						
USRK	**Ussuriysk Ar.**	10.02	312	Pn	Pn	10 36 40.8	+5.5
	0.3nm,0.3s,baz=123,slow=12,SNR=7.3						
SONM	**Songino Array**	27.94	302	P	P	10 40 03.4	+1.7
	0.3nm,0.6s,baz=108,slow=9.3,SNR=2.1 0.3nm,0.6s						
H11N2	**WAKE ISLAND Hy**	27.98	124	T	T	11 09 05.7	
	baz=316,slow=76						
H11N1	**WAKE ISLAND Hy**	27.98	124	T	T	11 09 14.1	
	baz=316,slow=76						
H11N3	**WAKE ISLAND Hy**	27.99	124	T	T	11 09 14.1	
	baz=316,slow=76						
H11S1	**WAKE ISLAND Hy**	28.73	126	T	T	11 10 08.9	
	baz=318,slow=76,SNR=7.2						
H11S3	**WAKE ISLAND Hy**	28.73	126	T	T	11 10 09.3	
	baz=318,slow=76,SNR=7.4						
H11S2	**WAKE ISLAND Hy**	28.75	126	T	T	11 10 12.6	
	baz=318,slow=76,SNR=6.3						
MKAR	**Makanchi Array**	44.30	301	P	P	10 42 21.7	+0.7
	0.3nm,0.7s,baz=96,slow=8.8,SNR=4.5 0.3nm,0.7s						
KURBB	**Kurchatov Arra**	46.06	307	P	P	10 42 34.9	0.0
	0.8nm,0.6s,baz=82,slow=8.1,SNR=7.1 0.8nm,0.6s						
WRA	**Warramunga Arr**	58.12	189	P	P	10 44 06.0	+1.2
	0.7nm,1.2s,baz=6.2,slow=7.0,SNR=2.1						
WRA				LR	LR	11 09 15.0	

comp=Z,23nm,18.4s,baz=252,slow=36
0.7nm,1.2s

DNK ***12*** *10:39:46.0±1.5,67°.04N×20°.64E,h0^{km},ML2.8(UPP), Suspected explosion*
UPP ***12*** *10:39:46.7±0.1,67°.17N×20°.58E,h0^{km},ML2.8,Confirmed Induced event*
HEL ***12*** *10:39:48.8±0.5,67°.17N×20°.67E,h0^{km},ML1.2,Explosion*
ISC 12 10:39:47.4±0.9,**67°.15N**±0°.03×**20°.65E**±0°.03,**h0^{km},n20, σ0^s.92**/29,**Sweden**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	0.04	229	P	Pg	10 39 47.8	-0.4
DUNU				S	Sg	10 39 49.2	+0.4
DUNU	**Dundret**	0.04	229	P	Pg	10 39 47.8	-0.4
DUNU				S	Sg	10 39 49.2	+0.4
MASU	**Masugnsbyn**	0.61	59	P	Pg	10 39 58.6	-0.4
MASU	**Masugnsbyn**	0.61	59	P	Pg	10 39 58.6	-0.4
RATU	**Laukkuluspa**	0.79	329	P	Pg	10 40 00.5	-2.1
RATU	**Laukkuluspa**	0.79	329	P	Pg	10 40 00.5	-2.1
SALU	**Saltoluokta**	0.86	286	P	Pg	10 40 03.0	-1.0
SALU	**Saltoluokta**	0.86	286	P	Pg	10 40 03.0	-1.0
NIKU	**Nikkaluokta**	0.95	320	P	Pg	10 40 04.9	-0.8
NIKU	**Nikkaluokta**	0.95	320	P	Pg	10 40 04.9	-0.8
PAJU	**Pajala**	0.97	96	PG	Pb	10 40 06.8	-0.4
PAJU				SB	Sb	10 40 19.7	-0.9
LANU	**Lannavaara**	1.04	29	SB	Sg	10 40 21.1	+0.3
KLF	**Kolari**	1.29	85	PG	Pg	10 40 11.4	-0.8
KLF				MSG		10 40 27.7	
	comp=Z,0.8nm,0.2s						
KLF				SG	Sg	10 40 28.5	-0.5
KALU	**Kalix**	1.69	139	SN	Sg	10 40 43.5	+1.8
HEF	**Hetta**	1.70	41	MSG		10 40 39.1	
	comp=Z,1.1nm,0.2s						
HEF				SN	Sb	10 40 41.8	+0.2
TOF	**Tornio**	1.82	125	PG	Pb	10 40 20.5	-1.0
TOF				MSG		10 40 43.2	
	comp=Z,1.3nm,0.2s						
TOF				SG	Sg	10 40 45.3	-0.4
KIF	**Kilpisjarvi**	1.86	2	PG	Pb	10 40 22.8	+0.5
KIF				MSG		10 40 44.8	
	comp=Z,2.5nm,0.2s						
KIF				SG	Sb	10 40 46.5	+0.4
KTK1	**Kautokeino**	2.11	26	PB	Pn	10 40 24.8	+0.9
KTK1				SG	Sb	10 40 53.5	+0.3
RNF	**Rovaniemi**	2.19	102	PG	Pb	10 40 27.4	-0.4
RNF				SG	Sb	10 40 55.4	0.0
ARA0	**ARCESS Array S**	3.00	35	PG	Pb	10 40 42.2	+0.6
ARA0				SG	Sb	10 41 19.7	+1.0

WEL 12 10:46:10.4±0.5,**42°S**±4°×**17°4E**±°,**h11^{km}**±4^{km},**M2.0**/3, **ML2.4**/7,**MLv2.0**/3,**Error ellipse: s-maj=0.0km s-min=0.0km az=114.8,confirmed,South Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BSWZ	**Blackbirch Sta**	0.35	11	P	Pb	10 46 18.0	-0.6
BSWZ				S	Sb	10 46 24.0	-0.1
KHZ	**Kahutara**	0.40	207	P	Pb	10 46 19.1	-0.3
KHZ				S	Sb	10 46 25.7	0.0
CMWZ	**Cape Campbell**	0.45	46	P	Pb	10 46 20.7	+0.5
TUWZ	**Tuamarina**	0.64	11	P	Pb	10 46 23.5	0.0
THZ	**Tophouse**	0.72	294	P	Pg	10 46 24.5	+0.2
THZ				S	Sg	10 46 34.3	+0.5
MRNZ	**Matariki Terra**	1.01	310	P	Pb	10 46 30.2	+0.3
GVZ	**Greta Valley S**	1.06	211	P	Pn	10 46 31.9	+0.6
GVZ				S	Sn	10 46 48.0	+1.9
LTZ	**Lake Taylor**	1.33	237	P	Pb	10 46 35.7	+0.3
MQZ	**McQueen's Vall**	1.84	206	P	Pn	10 46 41.3	-0.6
MQZ				S	Sn	10 47 04.3	-0.9
INZ	**Inchbonnie**	1.86	248	P	Pb	10 46 44.4	+0.1

IDC ***12*** *10:54:51.0±3.5,36°.13N×71°.11E,h61^{km}±29^{km},mb3.5/11, mbtmp3.8/16,ML3.5/5,MS3.1/1,Error ellipse: s-maj=26.3km s-min=20.5km az=9.0*
NNC ***12*** *10:55:00.9±3.3,36°.87N×70°.98E,h135^{km}±42^{km},mb3.4, mpv4.1,Error ellipse: s-maj=30.5km s-min=22.5km az=21.0*
ISC 12 10:54:53.5±0.7,**36°.30N**±0°.07×**71°.13E**±0°.07,**h100^{km},n40, σ2^s.77**/42,**mb3.6**/10,**4C-4D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	6.16	18	P	Pn	10 56 23.2	+1.0
	SNR=104						
AML	**Almayashu**	6.16	18	⇓P	Pn	10 56 23.4	+1.2
	4.1nm,0.6s						
AML				⇑S	Sn	10 57 28.3	-3.1
	5.3nm,0.7s						
UCH	**Uchtor**	6.48	23	P	Pn	10 56 27.8	+1.2
	SNR=28						
EKS2	**Erkin-Say**	6.68	17	P	Pn	10 56 30.4	+1.4
	SNR=41						
KK31	**Karatay Array**	6.81	356	⇓P	Pn	10 56 31.1	+0.3
	16nm,0.3s,baz=177,slow=12,SNR=393						
KK31				⇓S	Sn	10 57 42.7	-4.1
	11nm,0.6s						
AAK	**Ala-Archa**	6.85	21	P	Pn	10 56 33.0	+1.6
	SNR=65						
AAK	**Ala-Archa**	6.85	21	P	Pn	10 56 32.6	+1.3
	40nm,0.3s,baz=168,slow=4.1,SNR=148						
AAK				S	Sn	10 57 47.4	-0.4
	2.2nm,0.4s,baz=149,slow=19,SNR=0.8						
KBK	**Karagaybulak**	7.00	24	P	Pn	10 56 35.2	+1.7
	SNR=9.8						
CHMS	**Chumysh**	7.25	22	P	Pn	10 56 38.0	+1.2
	SNR=13						
USP	**Ospenovka**	7.43	19	P	Pn	10 56 39.8	+0.7
	SNR=23						
TKM2	**Tokmak 2**	7.46	26	P	Pn	10 56 41.0	+1.3
	SNR=27						
TKM2	**Tokmak 2**	7.46	26	⇑P	Pn	10 56 40.6	+0.9
	8.1nm,0.5s						
MDOK	**Medeo**	8.23	32	⇑P	Pn	10 56 51.7	+1.5
	2.7nm,0.5s						
GEYT	**Alibeck**	10.52	283	P	Pn	10 57 20.4	-0.8
	0.7nm,0.3s,baz=111,slow=8.1,SNR=5.4						
GEYT				S	Sn	10 59 10.9	-6.1
	1.8nm,0.3s,baz=142,slow=31,SNR=7.4						
	1.2nm,0.3s						
PYUN	**Piuthan**	12.94	126	*e*P	P	10 57 54.2	-6.4
	3.5nm,0.2s						
PYUN				*e*S	Sn	11 00 11.0	-5.2
DANN	**Dangsing**	13.29	123	*e*P	P	10 57 58.8	-5.7
	4.8nm,0.3s						
MK31	**Makanchi Array**	13.40	35	P	Pn	10 57 59.0	-0.5
	1.6nm,0.7s,baz=218,slow=14,SNR=5.7						
MKAR	**Makanchi Array**	13.40	35	P	Pn	10 57 59.6	+0.1
	0.1nm,0.3s,baz=222,slow=14,SNR=6.5						
	0.9nm,0.8s						
PKIN	**Phulchoki**	14.90	122	*e*P	P	10 58 19.2	-3.2
	3.5nm,0.2s						
PKI	**Pulchoki**	14.91	122	*e*P	P	10 58 19.4	-3.2
	3.2nm,0.3s						
KURBB	**Kurchatov Arra**	15.28	18	P	P	10 58 25.2	-0.9
	0.1nm,0.3s,baz=209,slow=11,SNR=4.6						
	0.6nm,0.4s						
AB31	**Akbulak array**	15.31	331	P	Pn	10 58 22.4	-1.6
	1.3nm,0.3s,baz=138,slow=12,SNR=173						
AB31				P	Pn	10 58 22.4	-1.6
	1.3nm,0.3s,baz=138,slow=12,SNR=173						
AB31				⇑S	Sn	11 01 03.4	-10
	0.9nm,0.6s,baz=151,slow=24,SNR=4.3						
JIRN	**Jiri**	15.40	120	*e*P	P	10 58 25.0	-3.0
	9.3nm,0.4s						
BVA0	**Borovoye Array**	16.73	358	P	P	10 58 42.2	0.0
	2.9nm,0.8s,baz=164,slow=12,SNR=10.0						
BVAR	**Borovoye Array**	16.73	358	P	P	10 58 42.2	0.0
	0.1nm,0.3s,baz=166,slow=13,SNR=11						
	1.3nm,0.5s						
AKTO	**Aktyubinsk**	17.01	330	P	P	10 58 45.2	0.0
	0.9nm,0.3s,baz=134,slow=10,SNR=14						
	4.9nm,0.6s						
AKTO	**Aktyubinsk**	17.01	330	⇓P	P	10 58 45.4	+0.2
	6.1nm,0.9s						
ZALV	**Zalesovo Beam**	20.06	24	P	Pn	10 59 19.2	-2.0
	2.5nm,0.4s,baz=214,slow=11,SNR=14						
	2.5nm,0.4s						
ARU	**Arti**	21.86	341	P	P	10 59 39.3	+1.5
	1.2nm,0.3s,baz=119,slow=19,SNR=1.6						
	1.2nm,0.3s						
AKASG	**Malin Array Be**	33.15	309	P	P	11 01 22.0	+1.9
	0.3nm,0.4s,baz=79,slow=5.9,SNR=4.8						
	0.3nm,0.4s						
FINES	**FINESS Array B**	37.71	326	P	P	11 02 01.8	+2.9
	2.1nm,0.7s,baz=117,slow=9.3,SNR=11						
	2.1nm,0.7s						
ARCES	**ARCESS Array B**	41.37	338	P	P	11 02 32.3	+3.1
	5.1nm,1.0s,baz=114,slow=8.1,SNR=5.5						
	5.1nm,1.0s						
NB2	**NORSAR Subarra**	44.60	323	P	P	11 02 58.0	+2.6
	comp=Z,1.0nm,0.5s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	44.60	323	P	P	11 02 58.1	+2.7
	comp=Z,0.8nm,0.6s,baz=97,slow=7.8,SNR=4.7						
	comp=Z,0.8nm,0.6s						
KSRS	**Korea Array**	44.85	71	LR	LR	11 25 20.3	
	comp=Z,21nm,18.6s,baz=230,slow=41						
TORD	**Torodi Ar. Bea**	65.81	269	P	P	11 05 29.1	+0.8
	comp=Z,0.8nm,0.8s,baz=49,slow=5.4,SNR=5.1						
	comp=Z,0.8nm,0.8s						
INK	**Inuvik**	74.09	9	P	P	11 06 21.3	+3.2
	comp=Z,0.5nm,0.5s,baz=330,slow=7.7,SNR=4.7						
	comp=Z,0.5nm,0.5s						
YKA	**Yellowknife Ar**	81.44	3	P	P	11 07 02.2	+3.2
	comp=Z,0.5nm,0.7s,baz=350,slow=5.2,SNR=10						
	comp=Z,0.5nm,0.7s						
WRA	**Warramunga Arr**	81.80	122	P	P	11 07 03.0	+1.4
	comp=Z,0.5nm,1.0s,baz=325,slow=4.6,SNR=2.3						
	comp=Z,0.5nm,1.0s						
ASAR	**Alice Springs**	84.06	125	P	P	11 07 15.1	+1.9
	comp=Z,0.1nm,0.4s,baz=305,slow=4.7,SNR=4.7						
	comp=Z,0.1nm,0.4s						

REN ***12*** *11:01:33.2±0.9,39°.29N±0°.02×115°.02W±0°.03,h0^{km}±6^{km}, ML3.1/6,ML2.8/60(NEIC),Error ellipse: s-maj=3.8km s-min=2.4km az=214.0*
NEIC 12 11:01:35.3±1.0,**39°.29N**±0°.03×**115°.04W**±0°.03,**h5^{km}**±6^{km}, **Error ellipse: s-maj=3.7km s-min=3.2km az=195.0, Nevada**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
Q12A	**Willow Creek R**	0.30	146		Pg	11 01 39.6	-1.5
Q12A					Sg	11 01 44.7	-0.3
Q12A	**Willow Creek R**	0.30	146	IAML		11 01 45.1	
	comp=N,2μm,0.5s						
Q12A				IAML		11 01 46.1	
	comp=E,2μm,0.5s						
SPR3	**Spring Creek 3**	0.62	117		Pg	11 01 47.0	-0.4
SPR3					Sg	11 01 56.7	+1.2
SPR3	**Spring Creek 3**	0.62	117	IAML		11 01 59.9	
	comp=E,468nm,0.2s						
R11A	**Troy Canyon, C**	1.03	205		Pg	11 01 53.2	-1.8
R11A					Sb	11 02 09.4	-0.2
R11A	**Troy Canyon, C**	1.03	205	IAML		11 02 09.8	
	comp=N,171nm,0.1s						
ELK	**Elko**	1.47	354		Pn	11 02 01.4	-1.2
ELK					Sg	11 02 22.7	+0.3
Q09A	**Carvers**	1.73	256		Pn	11 02 06.1	0.0
S11A	**Rachel**	1.73	199		Pn	11 02 06.1	-0.1
S11A	**Rachel**	1.73	199	IAML		11 02 43.6	
	comp=N,141nm,0.8s						
PRN	**Pahroc Range**	1.88	180		Pn	11 02 08.0	-0.2
DUG	**Dugway, Tooele**	1.94	61	Pn	Pn	11 02 08.3	-0.8
DUG				IAML		11 02 39.6	
	comp=N,67nm,0.7s						
DUG				IAML		11 02 41.4	
	comp=N,70nm,0.6s						
TPH	**Tonopah**	2.09	235		Pn	11 02 11.2	+0.1
BGU	**Big Grassy Mou**	2.25	43		Pn	11 02 12.6	-0.7
BGU				IAML		11 02 54.5	
	comp=E,41nm,0.4s						
MVU	**Marysvale**	2.34	109		Pn	11 02 14.7	+0.1
KVN	**Kaiserville**	2.39	265		Pn	11 02 14.8	-0.4
KVN				IAML		11 02 55.6	
	comp=E,65nm,0.7s						
MZP	**Montezuma Peak**	2.42	230		Pn	11 02 15.3	-0.6
CPY	**CP-1**	2.48	199		Pn	11 02 16.3	-0.2
TPNV	**Topopah Spring**	2.52	203		Pn	11 02 17.3	+0.2
TPNV	**Topopah Spring**	2.52	203	IAML		11 02 58.3	
	comp=E,35nm,2.5s						
TPNV				IAML		11 03 11.6	
	comp=E,30nm,0.6s						
LCMT	**Little Creek M**	2.68	147		Pn	11 02 19.0	-0.2
LCMT	**Little Creek M**	2.68	147	IAML		11 03 00.3	
	comp=N,54nm,0.4s						
LCMT				IAML		11 03 01.2	
	comp=E,63nm,0.2s						
NVAR	**Mina Array Bea**	2.69	252		Pn	11 02 19.3	0.0
NV08	**Mina Array Sit**	2.71	252		Pn	11 02 19.2	-0.4
NV09	**Mina Array Sit**	2.71	253		Pn	11 02 19.3	-0.3
SHPR	**Sheep Range**	2.78	182		Pn	11 02 20.4	-0.2
SGV	**South Grapevin**	2.79	215		Pn	11 02 20.9	+0.2
SPUT	**South Promonto**	2.83	44		Pn	11 02 21.1	-0.2
SPUT				IAML		11 03 09.4	
	comp=N,34nm,0.5s						
LHV	**Little Huntoon**	2.90	250		Pn	11 02 23.3	+1.2
LHV	**Little Huntoon**	2.90	250	IAML		11 03 13.3	
	comp=E,50nm,0.6s						
LHV				IAML		11 03 22.8	
	comp=N,45nm,0.9s						
LCH	**Last Change Ra**	2.90	226		Pn	11 02 22.3	+0.1
LCH	**Last Change Ra**	2.90	226	IAML		11 03 09.7	
	comp=N,21nm,0.5s						
LCH				IAML		11 03 12.2	
	comp=E,28nm,0.5s						
AMDNV	**Amargosa**	2.99	199		Pn	11 02 23.9	+0.5
HVU	**Hansel Valley**	3.03	34		Pn	11 02 24.0	-0.1
HVU				IAML		11 03 19.3	
	comp=E,46nm,0.7s						
HVU				IAML		11 03 26.8	
	comp=N,37nm,0.7s						
YERR	**Yerington**	3.28	266		Pn	11 02 27.3	-0.2
YERR	**Yerington**	3.28	266	IAML		11 03 23.1	
	comp=N,34nm,0.6s						
PAHR	**Pah Rah Range**	3.38	278		Pn	11 02 29.5	+0.5
PAHR	**Pah Rah Range**	3.38	278	IAML		11 03 25.6	
	comp=E,13nm,1.3s						
V12A	**Nelson**	3.56	177		Pn	11 02 30.7	-0.5
V12A	**Nelson**	3.56	177	IAML		11 03 41.4	
	comp=N,13nm,1.1s						
WVA	**Winnemucca Val**	3.75	282		Pn	11 02 34.3	+0.3
PEAR	**Peavine Mounta**	3.82	276		Pn	11 02 35.3	+0.3
MPK	**Martis Peak**	3.87	272		Pn	11 02 35.7	0.0
MPK	**Martis Peak**	3.87	272	IAML		11 03 46.3	
	comp=E,16nm,1.6s						
MPK				IAML		11 03 46.9	
	comp=N,15nm,1.0s						
EMB	**Emerald Bay**	3.95	267		Pn	11 02 37.0	+0.3
EMB	**Emerald Bay**	3.95	267	IAML		11 03 43.7	
	comp=N,15nm,0.5s						
EMB				IAML		11 03 47.0	
	comp=E,10nm,0.8s						

IDC 12 11:06:15.0±3.2,**4°.96S**×**153°.34E,h0^{km},mb3.3**/2, **mbtmp3.3**/2,**Error ellipse: s-maj=59.6km s-min=36.6km az=69.0,New Ireland region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	1.47	296	Pn	Pg	11 06 43.1	0.0
	23nm,0.3s,baz=235,slow=1.5,SNR=25						
KRVT				Sn	Sg	11 06 58.1	-4.0
	132nm,0.3s,baz=88,slow=22,SNR=14						
WRA	**Warramunga Arr**	23.74	230	P	P	11 11 28.2	-0.9
	0.8nm,0.6s,baz=53,slow=10.0,SNR=8.4						
	0.8nm,0.6s						
ASAR	**Alice Springs**	26.40	223	P	P	11 11 54.6	+1.2
	0.1nm,0.4s,baz=52,slow=8.8,SNR=1.2						
	0.1nm,0.4s						
TORD	**Torodi Ar. Bea**	150.87	288	PKPbc	PKPbc	11 26 10.0	-0.7
	0.4nm,0.9s,baz=49,slow=4.0,SNR=1.4						

IDC ***12*** *11:11:41.1±2.3,7°.19S×127°.45E,h0^{km},mb3.5/1, mbtmp3.9/3,ML4.2/2,Error ellipse: s-maj=284.0km s-min=31.5km az=64.0*
ISC 12 11:11:41.8±1.6,**7°.1S**±0°.2×**127°.8E**±0°.2,**h10^{km},n13, σ1^s.78**/11,**Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	6.65	150	P	Pn	11 13 27.5	+7.9
KDU	**Kakadu**	7.28	141	P	Pn	11 13 35.9	+7.7
KNRA	**Kununurra**	8.63	174	P	Pn	11 13 50.5	+3.7
FITZ	**Fitzroy Crossi**	11.18	190	P	Pn	11 14 21.8	+0.1
	0.7nm,0.7s						
WRA	**Warramunga Arr**	14.32	154	Pn	Pn	11 15 04.5	-0.3
	0.9nm,0.3s,baz=329,slow=13,SNR=24						
WRA				Sn	Sn	11 17 28.7	-15
	0.6nm,0.3s,baz=326,slow=22,SNR=9.7						
	1.3nm,0.4s						
ASAR	**Alice Springs**	17.55	161	P	P	11 15 47.6	-0.1
	1.1nm,0.3s,baz=341,slow=12,SNR=96						
ASAR				S	Sn	11 18 49.5	-13
	0.8nm,0.7s,baz=318,slow=18,SNR=4.7						
	3.1nm,0.3s						
AS01	**Alice Springs**	17.56	161	P	P	11 15 47.9	0.0
WRKA	**Warakurna**	17.90	178	P	P	11 15 50.7	-0.9
MEEK	**Meekatharra**	21.34	203	P	P	11 16 27.6	-1.6
OOD	**Oodnadatta**	21.96	161	P	P	11 16 34.4	-1.4
MULG	**Mulgathing**	23.86	166	P	P	11 16 53.1	-2.3
LCRK	**Leigh Creek**	25.26	158	P	P	11 17 07.6	-0.7
MKAR	**Makanchi Array**	67.07	328	P	P	11 22 36.1	+0.7
	0.3nm,0.6s,baz=122,slow=7.7,SNR=5.1						
	0.3nm,0.6s						

RSNC 12 11:16:53.3±1.1,**6°.83N**×**73°.16W,h146^{km}**±5^{km},**ML3.0, Mw3.6,1C-1D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	0.24	187	⇓*i*P	Pn	11 17 12.9	-0.6
BARC				*e*S	Sn	11 17 28.2	-0.7
BARC				*i*		11 17 29.5	
	comp=Z,253nm,0.2s						
BRRC	**Barranca, Sant**	0.62	296	*e*P	Pn	11 17 14.7	-0.1
BRRC				*e*S	Sn	11 17 31.4	+0.2
BRRC				*i*		11 17 35.1	
	comp=Z,247nm,0.3s						
PAMC	**Pamplona, Colo**	0.68	42	*e*P	Pn	11 17 15.9	+0.1
PAMC				*e*S	Sn	11 17 33.0	+0.1
PAMC				*i*		11 17 35.7	
	comp=Z,139nm,0.5s						
RUSC	**La Rusia**	0.94	176	*e*P	Pn	11 17 16.8	-0.9
RUSC				*e*S	Sn	11 17 35.7	-0.7
RUSC				*i*		11 17 37.7	
	comp=Z,87nm,0.3s						
PTBC	**PUERTO BERRIO,**	1.32	257	*e*P	Pn	11 17 19.4	-1.3
PTBC				*e*S	Sn	11 17 40.4	-1.3
PTBC				*i*		11 17 47.9	
	comp=Z,128nm,0.4s						
TAMC	**Tame, Arauca**	1.41	106	⇑*i*P	Pn	11 17 21.4	-0.3
TAMC				*e*S	Sn	11 17 43.4	0.0
TAMC				*i*		11 17 43.8	
	comp=Z,63nm,0.3s						
SPBC	**San Pablo de B**	1.48	218	*e*P	Pn	11 17 21.9	-0.7
SPBC				*e*S	Sn	11 17 44.1	-0.8
SPBC				*i*		11 17 50.2	
	comp=Z,170nm,0.2s						
ZARC	**Zaragoza, Cauc**	1.81	291	*e*P	Pn	11 17 25.4	-0.6
ZARC				*e*S	Sn	11 17 51.4	+0.3
ZARC				*i*		11 17 55.8	
	comp=Z,114nm,0.4s						
CHIC	**Chingaza**	2.26	195	*e*P	Pn	11 17 31.3	-0.5
CHIC				*e*S	Sn	11 18 00.8	-0.5
CHIC				*i*		11 18 06.8	
	comp=Z,36nm,0.4s						
ROSC	**El Rosal**	2.29	210	*e*P	Pn	11 17 32.8	+0.7
ROSC				*i*		11 18 09.8	
	comp=Z,86nm,0.4s						
HELC	**Santa Helena**	2.44	255	*e*P	Pn	11 17 33.6	-0.3
HELC				*e*S	Sn	11 18 05.6	+0.5
HELC				*i*		11 18 11.9	
	comp=Z,71nm,0.4s						
UREC	**San Jos de Ur**	2.53	291	*e*P	Pn	11 17 32.8	-1.8
UREC				*e*S	Sn	11 18 04.8	-1.7
UREC				*i*		11 18 15.5	
	comp=Z,75nm,0.2s						
GUY2C	**Guyana, Caldas**	2.72	234	*e*P	Pn	11 17 38.0	+0.6
GUY2C				*e*S	Sn	11 18 14.8	+3.4
GUY2C				IAML		11 18 21.1	
	comp=Z,48nm,0.6s						
LL1C	**La Loma 1 Cana**	2.72	352	*e*S	Sn	11 18 13.6	+2.8
VILC	**Villavicencio,**	2.75	191	*e*P	Pn	11 17 36.7	-0.9
VILC				*e*S	Sn	11 18 13.4	+1.6
VILC				*i*		11 18 20.4	
	comp=Z,54nm,0.4s						
PTGC	**Puerto Gaitan,**	2.81	159	*e*P	Pn	11 17 36.2	-1.9
PTGC				*e*S	Sn	11 18 09.7	-3.0
PTGC				*i*		11 18 11.0	
	comp=Z,50nm,0.1s						
RECRC	**Villamaria, Ca**	2.87	230	*e*P	Pn	11 17 40.5	+1.1
RECRC				*e*S	Sn	11 18 17.5	+2.6
NIZA	**Niza - Manizal**	2.90	233	*e*P	Pn	11 17 40.2	+0.7
NIZA				*e*S	Sn	11 18 18.1	+2.9
CBOC	**Ciudad Bolivar**	3.00	251	*e*P	Pn	11 17 40.5	-0.1
CBOC				*e*S	Sn	11 18 17.1	-0.1
CBOC				*i*		11 18 30.4	
	comp=Z,24nm,0.3s						
DBBC	**Dabeiba**	3.04	274	*e*P	Pn	11 17 40.4	-0.7
DBBC				*e*S	Sn	11 18 16.1	-1.9
DBBC				*i*		11 18 22.9	
	comp=Z,131nm,0.0s						
ANIL	**Santa Ana**	3.23	224	*e*P	Pn	11 17 45.0	+1.2
ANIL				*e*S	Sn	11 18 23.8	+1.1
ANIL				*i*		11 18 30.1	
	comp=Z,109nm,0.2s						
APAC	**Apartado, Choc**	3.56	288	*e*P	Pn	11 17 46.8	-0.9
APAC				*e*S	Sn	11 18 26.8	-3.1
APAC				*i*		11 18 36.3	
	comp=Z,30nm,0.8s						
ORTC	**Ortega, Tolima**	3.57	216	*e*P	Pn	11 17 47.3	-0.7
ORTC				*e*S	Sn	11 18 30.8	+0.4
ORTC				*i*		11 18 33.6	
	comp=Z,21nm,0.2s						
SJCC	**San Jacinto, C**	3.65	327	*e*P	Pn	11 17 46.8	-2.1
SJCC				*e*S	Sn	11 18 28.1	-3.9
CRJC	**Cerrejon, Guaj**	4.17	4	*e*P	Pn	11 17 51.5	-4.3
CRJC				*e*S	Sn	11 18 41.8	-2.6
CRJC				*i*		11 18 43.8	
	comp=Z,18nm,0.1s						
SMRC	**Santa Marta, M**	4.43	346	*e*P	Pn	11 17 59.0	-0.1
SMRC				*e*S	Sn	11 18 45.5	-5.0
SMRC				*i*		11 18 49.5	
	comp=Z,11nm,0.2s						
URIC	**Uribia, Colomb**	4.97	13	*e*P	Pn	11 17 53.1	-13
URIC				*e*S	Sn	11 18 59.6	-3.6
GARC	**Garzon, Huila**	5.17	207	*e*P	Pn	11 18 07.8	-1.4
GARC				*e*S	Sn	11 19 03.8	-4.5
GARC				*i*		11 19 09.0	
	comp=Z,14nm,0.2s						
FLOC	**Florencia**	5.78	206	*e*P	Pn	11 18 16.2	-0.9
FLOC				*e*S	Sn	11 19 20.8	-1.8

SOME ***12*** *11:50:32.3,54°.00N×82°.20E,h5^{km}*
IDC ***12*** *11:50:33.4±0.5,53°.70N×82°.09E,h0^{km},mb4.0/16, mbtmp4.0/25,ML3.5/9,MS3.1/13,Error ellipse: s-maj=8.2km s-min=7.0km az=158.0*
MOS ***12*** *11:50:33.5±1.3,53°.62N×81°.81E,h12^{km},mb4.5/14,Error ellipse: s-maj=6.6km s-min=4.6km az=77.4*
NNC ***12*** *11:50:35.7±0.7,53°.65N×81°.85E,h19^{km}±3^{km},mb4.6, mpv4.4,Error ellipse: s-maj=4.4km s-min=2.1km az=152.0*
ASRS ***12*** *11:50:35.0±0.3,54°N±1°×8°2E±°,h8^{km},MLh4.6/20,Error ellipse: s-maj=3.1km s-min=2.2km az=98.0,confirmed*
NEIC ***12*** *11:50:35.3±1.8,53°.65N±0°.06×81°.92E±0°.07,h15^{km}±5^{km}, mb4.3/23,Error ellipse: s-maj=8.9km s-min=4.9km az=207.0*
BJI ***12*** *11:50:36.4±0.0,53°.55N×82°.12E,h20^{km},mb4.2/15, mB4.4/4,ML4.5/2,Ms4.0/7,Ms7 3.8/6*
ISC 12 11:50:34.7±1.2,**53°.70N**±0°.02×**81°.85E**±0°.02,**h12^{km}**±8^{km}, **n241,σ2^s.15**/279,**mb4.2**/45,**MS3.2**/9,**20C-25D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BSTK	**Bystrovka, Nov**	0.99	28	⇓Pg	Pb	11 50 53.0	-0.8
BSTK				Sg	Sb	11 51 07.2	+0.4
BSTK	**Bystrovka, Nov**	0.99	28	PG	Pb	11 50 52.9	-0.8
BSTK						11 51 07.1	
KHAR	**Kharino, NSO,**	1.37	48	⇓Pg	Pn	11 50 59.0	-0.7
KHAR	**Kharino, NSO,**	1.37	48	PG	Pn	11 50 59.0	-0.7
NVS	**Novosibirsk**	1.40	35	⇓Pg	Pn	11 50 59.0	-1.1
NVS				Sg	Sn	11 51 19.1	+0.6

NVS	Novosibirsk	1.40	35	PG	Pn	11 50 59.0	-1.1
NVS						11 51 19.1	
NVSII	Novosibirsk	1.40	35	⇓Pg	Pn	11 50 59.2	-0.9
NVSII				Sg	Sn	11 51 19.1	+0.6
NVSII	Novosibirsk	1.40	35	PG	Pn	11 50 59.6	-0.5
NVSII						11 51 19.1	
ZAA0	Zalesovo Array	1.78	81	Pn	Pn	11 51 05.2	-0.1
ZAA0	Zalesovo Array	1.78	81	⇓Pn	Pn	11 51 05.1	-0.1
	16nm,0.4s						
ZAA0				⇓Sn	Sn	11 51 28.3	+0.5
	271nm,0.7s						
ZALV	Zalesovo Beam	1.78	81	Pg	Pn	11 51 04.9	-0.4
	45nm,0.3s,baz=267,slow=11,SNR=396						
ZALV				Lg	Lg	11 51 27.4	
	323nm,0.3s,baz=266,slow=28,SNR=18						
ZALV				LR	LR	11 51 58.1	
	comp=Z,105nm,21.1s,baz=284,slow=52						
ZALV	Zalesovo Beam	1.78	81	Pn	Pn	11 51 04.6	-0.7
ZALV	Zalesovo Beam	1.78	81	PN	Pn	11 51 04.6	-0.7
SALR	Pechorkino, Sa	2.38	71	Pg	Pn	11 51 16.4	+2.8
SALR				Sg	Sb	11 51 46.8	-0.1
SALR	Pechorkino, Sa	2.38	71	PN	Pn	11 51 16.4	+2.8
SALR						11 51 46.8	
BJR1	Bachatsky 1, K	2.53	76	Pg	Pn	11 51 18.6	+2.9
BJR1				Sg	Sb	11 51 51.1	-0.1
BJR1	Bachatsky 1, K	2.53	76	PN	Pn	11 51 18.6	+2.9
BJR1						11 51 51.1	
BJR2	Bachatsky-2, K	2.59	75	Pg	Pn	11 51 19.3	+2.7
BJR2				Sg	Sb	11 51 53.2	+0.3
BJR2	Bachatsky-2, K	2.59	75	PN	Pn	11 51 19.2	+2.7
BJR2						11 51 53.2	
BJR3	Bachatsky-3 (S	2.60	77	Pg	Pb	11 51 20.0	-1.3
BJR3				Sg	Sb	11 51 54.3	+1.2
BJR3	Bachatsky-3 (S	2.60	77	PN	Pb	11 51 19.9	-1.3
BJR3						11 51 54.2	
ELT	Eltsovka	2.66	98	Pn	Pn	11 51 17.3	-0.1
ELT				Pg	Pb	11 51 21.0	-1.3
ELT				Sg	Sb	11 51 53.9	-1.1
ELT	Eltsovka	2.66	98	PN	Pn	11 51 17.3	-0.1
ELT						11 51 53.8	
VCHU	Verkh-Chumysh,	2.73	83	Pg	Pb	11 51 23.7	+0.1
VCHU				Sg	Sb	11 51 57.4	+0.3
VCHU	Verkh-Chumysh,	2.73	83	PN	Pb	11 51 23.6	+0.1
VCHU						11 51 57.3	
KEM	Kemerovo	2.97	55	Pg	Pb	11 51 27.9	+0.4
KEM				Sg	Sb	11 52 04.9	+1.2
KEM	Kemerovo	2.97	55	PN	Pb	11 51 27.9	+0.4
KEM						11 52 04.9	
KOTO	Kotino, Kuzbas	3.04	79	Pg	Pb	11 51 28.4	-0.3
KOTO				Sg	Sg	11 52 10.5	-1.7
KOTO	Kotino, Kuzbas	3.04	79	PN	Pb	11 51 28.4	-0.3
KOTO						11 52 10.5	
GALT	Gorno-Altaysk,	3.04	123	Pg	Pb	11 51 28.4	-0.3
GALT				Sg	Sb	11 52 06.8	+1.0
GALT	Gorno-Altaysk,	3.04	123	PN	Pb	11 51 28.4	-0.3
GALT						11 52 06.7	
MALIN	Malinovka, Kuz	3.25	93	Pg	Pb	11 51 34.8	+2.4
MALIN				Sg	Sb	11 52 14.2	+2.4
MALIN	Malinovka, Kuz	3.25	93	PN	Pb	11 51 34.7	+2.4
MALIN						11 52 14.2	
UKR	Ust'-Kan	3.30	146	Pn	Pn	11 51 25.5	-0.9
UKR				Pg	Pb	11 51 35.9	+2.6
UKR				Sg	Sb	11 52 14.7	+1.2
UKR	Ust'-Kan	3.30	146	PN	Pn	11 51 25.4	-0.9
UKR						11 51 35.9	
UKR						11 52 14.6	
SEM	Semipalatinsk	3.45	197	Pg	Pg	11 51 47.7	+6.9
	76nm,0.3s						
SEM				Lg	Lg	11 52 30.2	
	783nm,0.3s						
SEM	Semipalatinsk	3.45	197	*e*Pg	Pb	11 51 33.5	-2.4
	3.9nm,0.1s						
SEM				*e*Lg	Lg	11 52 19.4	
	154nm,0.3s						
KURK	Kurchatov	3.59	215	Pn	Pn	11 51 31.6	+1.3
KURK	Kurchatov	3.59	215	⇑Pn	Pn	11 51 30.7	+0.5
	20nm,0.9s						
KURK				⇓Pg	Pb	11 51 40.2	+2.0
	167nm,1.1s						
KURK				⇓Sn	Sn	11 52 12.6	0.0
	64nm,0.4s						
KURK				⇓Lg	Lg	11 52 29.4	
	704nm,0.8s						
KURK	Kurchatov	3.59	215	Pg	Pg	11 51 44.0	+0.5
KURK				Sg	Sg	11 52 34.3	+4.3
KURK	Kurchatov	3.59	215	PN	Pn	11 51 33.4	+3.2
KURK						11 52 15.8	
KURBB	Kurchatov Arra	3.70	215	Pn	Pn	11 51 33.4	+1.6
	0.8nm,0.3s,baz=38,slow=14,SNR=108						
KURBB				Pg	Pb	11 51 42.6	+2.6
	3.8nm,0.3s,baz=40,slow=18,SNR=123						
KURBB				Sn	Sn	11 52 15.8	+0.5
	6.6nm,0.3s,baz=28,slow=13,SNR=3.8						
KURBB				Lg	Lg	11 52 30.1	
	10nm,0.3s,baz=41,slow=33,SNR=6.8						
	14nm,0.8s						
KURBB	Kurchatov Arra	3.70	215	⇑Pn	Pn	11 51 31.8	+0.1
	15nm,0.8s						
KURBB				⇓Pg	Pb	11 51 41.7	+1.7
	104nm,0.7s						
KURBB				⇓Sn	Sn	11 52 14.6	-0.6
	177nm,0.5s						
KURBB				⇑Lg	Lg	11 52 31.5	
	843nm,0.7s						
KURBB	Kurchatov Arra	3.70	215	PN	Pn	11 51 31.8	+0.1
KURBB				P	Pb	11 51 41.7	+1.7
KURBB				S	Sn	11 52 14.6	-0.6
TASR	Tashtagol	3.75	102	Pg	Pb	11 51 40.9	+0.1
TASR				Sg	Sb	11 52 28.6	+2.4
TASR	Tashtagol	3.75	102	PN	Pb	11 51 40.9	+0.1
TASR						11 52 28.6	
ARTR	Artybash	3.81	118	Pg	Pb	11 51 42.9	+1.0
ARTR				Sg	Sb	11 52 30.8	+2.7
ARTR	Artybash	3.81	118	PN	Pb	11 51 42.9	+1.0
ARTR						11 52 30.8	
LUZB	Luzhba, Kemero	4.19	88	Pg	Pb	11 51 49.1	+0.6
LUZB				Sg	Sb	11 52 42.7	+3.7
LUZB	Luzhba, Kemero	4.19	88	PN	Pb	11 51 49.0	+0.6
LUZB						11 52 42.7	
BRCR	Berchikul'	4.23	60	Pn	Pn	11 51 40.5	+1.5
BRCR				Pg	Pb	11 51 49.7	+0.6
BRCR				Sg	Sb	11 52 45.4	+5.4
BRCR	Berchikul'	4.23	60	PN	Pn	11 51 40.4	+1.5
BRCR						11 51 49.6	
BRCR						11 52 45.3	
ULGR	Ulagan, Altay	4.87	127	Pg	Pb	11 52 03.6	+3.7
ULGR				Sg	Sg	11 53 07.1	-3.8
CHBI	Chibit, Altay	4.87	132	Pn	Pn	11 51 49.9	+1.9
CHBI				Pg	Pb	11 52 04.8	+4.7
CHBI				Sg	Sg	11 53 06.6	-4.5
CHBI	Chibit, Altay	4.87	132	PN	Pn	11 51 49.8	+1.9
CHBI						11 52 04.7	
DGZ	Jazzator, Alta	5.30	137	Pn	Pn	11 51 54.2	+0.3
DGZ				Pg	Pb	11 52 10.6	+3.2
DGZ				Sg	Sb	11 53 19.0	+8.0
DGZ	Jazzator, Alta	5.30	137	PN	Pn	11 51 54.2	+0.3
DGZ						11 52 10.6	
CUR	Chagan-Uzun	5.41	129	Pn	Pn	11 51 55.9	+0.5
CUR				Pg	Pb	11 52 12.9	+3.7
CUR				Sg	Sg	11 53 22.9	-5.3
CUR	Chagan-Uzun	5.41	129	PN	Pn	11 51 55.8	+0.5
CUR						11 52 12.9	
CERR	Cheremushki	5.80	95	Pn	Pn	11 52 03.6	+3.0
CERR				Sg	Sb	11 53 31.5	+6.2
CERR	Cheremushki	5.80	95	PN	Pn	11 52 03.6	+3.0
CERR						11 53 31.5	
DJOS	Djoyskaya Sosn	5.81	95	Pn	Pn	11 52 03.5	+2.8
DJOS				Sg	Sb	11 53 33.8	+8.4
DJOS	Djoyskaya Sosn	5.81	95	PN	Pn	11 52 03.4	+2.8
DJOS						11 53 33.8	
ZSN	Zaisan	6.55	162	Pg	Pb	11 52 32.8	+4.2
	23nm,0.4s						
ZSN				Lg	Lg	11 53 50.9	
	123nm,0.9s						
ZSN	Zaisan	6.55	162	*e*Pg	Pn	11 52 10.4	-0.5
	6.3nm,0.6s						
ZSN				*e*Lg	Lg	11 53 21.8	
	134nm,1.2s						
BRZS	Berezniki	6.79	240	Pg	Pb	11 52 30.0	-2.7
	22nm,0.6s						
BRZS				Lg	Lg	11 53 47.2	
	39nm,0.4s						
BRZS	Berezniki	6.79	240	*e*Pg	Pn	11 52 18.1	+3.9
	30nm,0.6s						
BRZS				*e*Lg	Lg	11 53 36.4	
	60nm,0.7s						
BVA0	Borovoye Array	6.89	269	⇓Pn	Pn	11 52 15.9	+0.3
	34nm,0.7s,baz=76,slow=17,SNR=11						
BVA0				Sn	Sn	11 53 34.4	+0.5
	46nm,0.5s,baz=85,slow=26,SNR=15						
BVA0				⇓Lg	Lg	11 54 14.9	
	68nm,0.9s,baz=77,slow=24,SNR=5.8						
BVA0	Borovoye Array	6.89	269	PN	Pn	11 52 15.9	+0.3
BVA0				S	Sn	11 53 34.4	+0.5
BVAR	Borovoye Array	6.89	269	Pn	Pn	11 52 18.7	+3.1
	1.2nm,0.3s,baz=76,slow=15,SNR=151						
BVAR				Sn	Sn	11 53 34.2	+0.3
	4.0nm,0.3s,baz=77,slow=24,SNR=31						
BVAR				Lg	Lg	11 54 17.1	
	baz=77,slow=26						
BVAR				LR	LR	11 55 20.2	
	comp=Z,71nm,19.9s,baz=75,slow=41						
	27nm,0.5s						
MAKZ	Makanchi	6.91	179	Pn	Pn	11 52 16.9	+1.1
MAKZ	Makanchi	6.91	179	⇑Pn	Pn	11 52 15.8	0.0
	22nm,0.6s						
MAKZ				⇓Sn	Sn	11 53 34.3	0.0
	26nm,0.9s						
MAKZ				⇑Lg	Lg	11 54 11.0	
	166nm,0.8s						
MAKZ	Makanchi	6.91	179	Pn	Pn	11 52 16.8	+1.0
MAKZ				Sg	Sg	11 54 08.9	-7.3
MAKZ	Makanchi	6.91	179	PN	Pn	11 52 16.9	+1.1
MK31	Makanchi Array	6.92	177		Pn	11 52 17.2	+1.2
MK31	Makanchi Array	6.92	177	⇑Pn	Pn	11 52 15.8	-0.3
	21nm,0.6s,baz=4.9,slow=12,SNR=250						
MK31				⇑Sn	Sn	11 53 33.0	-1.8
	15nm,0.5s,baz=11,slow=26,SNR=3.0						
MK31				⇑Lg	Lg	11 54 12.7	
	173nm,0.8s,baz=0.8,slow=28,SNR=7.3						
MK31	Makanchi Array	6.92	177*c*	*i*PN	Pn	11 52 16.9	+0.8
MKAR	Makanchi Array	6.92	177	Pn	Pn	11 52 17.2	+1.2
	4.7nm,0.3s,baz=2.9,slow=12,SNR=274						
MKAR				Sn	Sn	11 53 33.2	-1.6
	7.5nm,0.3s,baz=9.3,slow=25,SNR=7.2						
MKAR				Lg	Lg	11 54 08.9	
	8.5nm,0.3s,baz=353,slow=28,SNR=14						
MKAR				LR	LR	11 55 07.2	
	comp=Z,127nm,19.9s,baz=43,slow=40						
	17nm,0.5s						
MKAR	Makanchi Array	6.92	177	Pn	Pn	11 52 17.3	+1.2
MKAR				Sg	Sg	11 54 11.0	-5.9
BRVK	Borovoye	6.95	269	Pn	Pn	11 52 19.5	+3.1
BRVK	Borovoye	6.95	269	⇓Pn	Pn	11 52 17.0	+0.6
	46nm,0.8s						
BRVK				⇑Sn	Sn	11 53 35.5	+0.1
	50nm,0.8s						
BRVK				⇓Lg	Lg	11 54 17.0	
	74nm,0.9s						
BRVK	Borovoye	6.95	269	PN	Pn	11 52 19.5	+3.1
MINR	Mina	7.33	76	Pn	Pn	11 52 25.6	+4.1
MINR				Sg	Sg	11 54 27.5	-2.2
MINR	Mina	7.33	76	P	Pn	11 52 25.6	+4.1
OTUK	Ortayu	8.11	231	⇑Pn	Pn	11 52 33.6	+1.2
	21nm,0.5s						
OTUK				⇓Sn	Sn	11 54 01.2	-2.8
	22nm,0.8s						
OTUK	Ortayu	8.11	231	P	Pn	11 52 33.6	+1.2
OTUK				S	Sn	11 54 01.2	-2.8
TDK	Taldyqorghan	8.99	196	Pg	Pn	11 53 04.1	+20
	36nm,0.5s						
TDK				Lg	Lg	11 54 47.1	
	50nm,0.5s						
DJR	Jarkent	9.48	189	Pg	Pn	11 53 11.2	+20
	6.0nm,0.3s						
DJR				Lg	Lg	11 55 00.6	
	7.7nm,0.3s						
BLB	Baldybastay	9.87	194	Pg	Pn	11 53 15.9	+19
	11nm,0.3s						
BLB				Lg	Lg	11 55 08.7	
	7.7nm,0.5s						
BTLS	Baital	10.05	213	Pg	Pn	11 53 16.7	+18
	5.3nm,0.3s						
BTLS				Lg	Lg	11 55 09.2	
	8.2nm,0.4s						
CHKK	Chushkaly	10.36	200	Pg	Pn	11 53 22.2	+19
	4.6nm,0.3s						
CHKK				Lg	Lg	11 55 19.4	
	14nm,0.2s						
KPKS	Kokpek	10.46	193	Pg	Pn	11 53 24.7	+20
	2.5nm,0.2s						
KPKS				Lg	Lg	11 55 24.3	
	15nm,0.3s						
KUU	Kurty	10.47	202	Pg	Pn	11 53 23.0	+18
	7.9nm,0.7s						
KUU				Lg	Lg	11 55 21.2	
	18nm,0.5s						
PDGK	Podgornoye	10.50	189	Pg	Pn	11 53 25.1	+20
	2.3nm,0.7s						
PDGK				Lg	Lg	11 55 25.3	
	5.2nm,0.4s						
PDGK	Podgornoye	10.50	189	⇑Pn	Pn	11 53 04.1	-1.1
	6.3nm,0.8s						
PDGK				⇓Lg	Lg	11 56 06.8	
	75nm,0.8s						
PDGK	Podgornoye	10.50	189	P	Pn	11 53 04.9	-0.3
KTBS	Karatobe	10.56	201	Pg	Pn	11 53 24.8	+19
	4.1nm,0.4s						
KTBS				Lg	Lg	11 55 24.6	
	24nm,0.5s						
WMQ	Urumqi	10.61	156	*e*P	Pn	11 53 07.8	+1.2
WMQ				S	Sn	11 55 02.2	-3.2
WMQ				LR	LR		
	comp=N,330nm,11.3s						
WMQ				LR	LR		
	comp=Z,100nm,15.5s						
SHLS	Shalkode	10.67	189	Pg	Pn	11 53 27.4	+20
	7.8nm,0.3s						
SHLS				Lg	Lg	11 55 29.6	
	15nm,0.7s						
UZB	Uzynbulak	10.73	191	Pg	Pn	11 53 28.4	+20
	3.8nm,0.3s						
UZB				Lg	Lg	11 55 31.2	
	7.3nm,0.3s						
KRBS	Karabastau	10.81	205	Pg	Pn	11 53 27.7	+18
	4.6nm,0.3s						
KRBS				Lg	Lg	11 55 30.6	
	12nm,0.5s						
SATY	Saty	10.89	193	Pg	Pn	11 53 29.9	+19
	4.2nm,0.4s						
SATY				Lg	Lg	11 55 34.1	
	8.4nm,0.5s						
KOTS	Kotyrbulak	10.94	199	Pg	Pn	11 53 29.8	+19
	6.0nm,0.5s						
KOTS				Lg	Lg	11 55 33.9	
	16nm,0.4s						
KNDC	Almaty	10.98	199	⇑Lg	Lg	11 56 24.3	
	265nm,0.8s						
MDOK	Medeo	11.02	199	Pn	Pn	11 53 11.0	-1.2
	11nm,1.2s						
MDOK				Pg		11 53 30.9	
	6.7nm,0.7s						
MDOK				Sn	Sn	11 55 13.6	-1.8
	10nm,0.6s						
MDOK				Lg	Lg	11 55 35.7	
	9.8nm,1.2s						
MDOK				⇓Lg	Lg	11 56 24.9	
	92nm,1.1s						
MDOK	Medeo	11.02	199	P	Pn	11 53 11.0	-1.2
MDOK				S	Sn	11 55 13.6	-1.8
TNSS	Tian-Shan	11.16	199	Pg	Pn	11 53 33.0	+19
	4.6nm,0.4s						
TNSS				Lg	Lg	11 55 39.5	
	5.0nm,0.1s						
MTBS	Maitube	11.17	201	Pg	Pn	11 53 33.4	+19
	5.2nm,0.3s						
MTBS				Lg	Lg	11 55 39.7	
	12nm,0.4s						
DGS	Degeres	11.21	203	Pg	Pn	11 53 33.5	+19
	13nm,0.4s						
DGS				Lg	Lg	11 55 40.4	
	16nm,0.4s						
IZV	Izvestkoviy	11.22	200	Pg	Pn	11 53 34.1	+19
	4.3nm,0.4s						
IZV				Lg	Lg	11 55 41.1	
	14nm,0.3s						
KST	Kastek	11.36	202	Pg	Pn	11 53 35.6	+19
	9.1nm,0.3s						
KST				Lg	Lg	11 55 44.6	
	16nm,0.9s						
USP	Ospenovka	11.52	208	P	Pn	11 53 17.3	-1.7
	SNR=19						
TKM2	Tokmak 2	11.56	204	P	Pn	11 53 20.9	+1.2
	SNR=11						
TKM2	Tokmak 2	11.56	204	⇓Pn	Pn	11 53 18.9	-0.8
	5.8nm,0.7s						
TKM2				⇓Lg	Lg	11 56 42.5	
	86nm,0.8s						
TKM2	Tokmak 2	11.56	204	P	Pn	11 53 18.9	-0.8
KBK	Karagaybulak	11.97	205	P	Pn	11 53 25.9	+0.6
	SNR=6.2						
AAK	Ala-Archa	12.10	207	P	Pn	11 53 28.7	+1.6
	SNR=11						
AAK	Ala-Archa	12.10	207	Pn	Pn	11 53 25.5	-1.6
	1.7nm,0.3s,baz=67,slow=4.4,SNR=32						
AAK				Sn	Sn	11 55 34.5	-7.6
	0.4nm,0.3s,baz=330,slow=21,SNR=2.3						
AAK				Lg	Lg	11 56 56.8	
	0.8nm,0.3s,baz=265,slow=15,SNR=6.4						
AAK				LR	LR	11 58 33.8	
	comp=Z,46nm,18.5s,baz=28,slow=40						
	11nm,0.6s						
AAK	Ala-Archa	12.10	207	Pn	Pn	11 53 25.7	-1.4
AAK	Ala-Archa	12.10	207	*ce*P	Pn	11 53 28.4	+1.3
AAK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
EKS2	Erkin-Say	12.28	209	P	Pn	11 53 30.8	+1.2
	SNR=10.0						
MRKS	Merke	12.37	211	Pg	P	11 53 48.4	+5.6
	comp=Z,2.5nm,0.2s						
MRKS				Lg	Lg	11 56 07.2	
	comp=Z,18nm,0.6s						
SVE	Sverdlovsk	12.48	293	*e*P	Pn	11 53 32.3	+0.3
SVE				*e*S	Sn	11 55 54.6	+3.7
SVE				pmax	pmax		
	comp=Z,29nm,1.2s						
UCH	Uchtor	12.48	206	P	Pn	11 53 34.1	+1.5
	SNR=6.6						
AML	Almayashu	12.79	208	⇑Pn	Pn	11 53 36.1	-0.7
	comp=Z,1.2nm,0.9s						
AML				⇑Sn	Sn	11 55 57.2	-2.0
	comp=Z,0.7nm,0.6s						
AML				⇑Lg	Lg	11 57 21.6	
	comp=Z,9.4nm,1.1s						
AML	Almayashu	12.79	208	P	Pn	11 53 36.5	-0.3
AML				S	Sn	11 55 57.2	-2.0
KK31	Karatay Array	12.99	220	Pn	Pn	11 53 37.4	-1.7
KK31	Karatay Array	12.99	220	Pn	Pn	11 53 37.0	-2.0
	comp=Z,4.2nm,0.4s,baz=28,slow=13,SNR=82						
KK31				⇑Sn	Sn	11 56 01.0	-2.5
	comp=Z,2.1nm,0.6s,baz=223,slow=17,SNR=2.6						
KK31				⇓Lg	Lg	11 57 27.0	
	comp=Z,46nm,1.1s,baz=37,slow=26,SNR=6.1						
KK31	Karatay Array	12.99	220	P	Pn	11 53 37.4	-1.7
KKAR	Karatay Array	12.99	220		Pn	11 53 36.9	-2.2
KKAR	Karatay Array	12.99	220		Pn	11 53 37.4	-1.7
KKAR	Karatay Array	12.99	220	P	Pn	11 53 36.9	-2.2
ARU	Arti	13.60	291	Pn	Pn	11 53 47.4	+0.1
	baz=116,slow=18,SNR=3.6						
ARU				Sn	Sn	11 56 09.4	-8.8
	baz=89,slow=22,SNR=2.4						
ARU				LR	LR	12 00 09.9	
	comp=Z,68nm,18.9s,baz=124,slow=42						
	comp=Z,0.9nm,0.3s						
ARU	Arti	13.60	291		Pn	11 53 47.0	-0.3
ARU	Arti	13.60	291	P	Pn	11 53 49.8	+2.5
ARU				S	Sn	11 56 21.5	+3.3
IUG	Iuzhnay	13.99	219	Pg	P	11 54 09.7	+8.9
	comp=Z,23nm,0.5s						
IUG				Lg	Lg	11 56 45.7	
AB31	Akbulak array	14.34	261	Pn	Pn	11 53 57.1	-0.3
	comp=Z,3.2nm,0.7s,baz=66,slow=8.8,SNR=29						
AB31				⇓Sn	Sn	11 56 36.2	0.0
	comp=Z,4.8nm,1.0s,baz=66,slow=18,SNR=2.8						
AB31	Akbulak array	14.34	261	P	Pn	11 53 57.9	+0.5
AB31				S	Sn	11 56 36.2	0.0
ABKAR	Akbulak array	14.34	261		Pn	11 53 56.8	-0.6
ABKAR	Akbulak array	14.34	261	Pn	Pn	11 53 56.5	-0.9
KSH	Kashi	14.75	198	P	P	11 54 10.5	+1.2
KSH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
AKTO	Aktyubinsk	14.99	267	Pn	Pn	11 54 05.8	-0.6
	comp=Z,0.9nm,0.3s,baz=70,slow=9.0,SNR=9.0						
AKTO				Sn	Sn	11 56 45.5	-6.7
	comp=Z,0.7nm,0.3s,baz=295,slow=0.6,SNR=3.0						
	comp=Z,4.3nm,0.5s						
AKTO	Aktyubinsk	14.99	267	⇑Pn	Pn	11 54 06.3	-0.1
	comp=Z,3.2nm,0.7s						
AKTO				⇑Sn	Sn	11 56 51.3	-0.9
	comp=Z,11nm,1.4s						
NRIK	Noril'sk	15.91	7	Pn	Pn	11 54 16.8	-1.4
	comp=Z,0.2nm,0.3s,baz=216,slow=1.9,SNR=1.5						
NRIK				Sn	Sn	11 57 01.9	-12
	comp=Z,0.2nm,0.3s,baz=250,slow=12,SNR=2.1						
	comp=Z,0.6nm,0.3s						
NRIK	Noril'sk	15.91	7	*i* P	Pn	11 54 19.8	+1.6
SONM	Songino Array	16.56	101	Pn	Pn	11 54 24.7	-2.0
	comp=Z,0.1nm,0.3s,baz=287,slow=12,SNR=9.5						
SONM				Lg	Lg	11 59 06.9	
	comp=Z,0.2nm,0.3s,baz=296,slow=21,SNR=4.0						
SONM				LR	LR	12 01 00.6	
	comp=Z,56nm,20.5s,baz=300,slow=38						
	comp=Z,1.2nm,0.8s						
GAR	Garm	16.69	213		Pn	11 54 27.9	-0.5
GAR				IAmb	IAmb	11 54 35.4	
	comp=Z,18nm,0.7s						
ULN	Ulaanbaatar	16.93	100		Pn	11 54 30.4	-1.0
ULN	Ulaanbaatar	16.93	100	P	Pn	11 54 30.4	-1.0
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CHGR	Chuyangaron	17.38	215	Pn	Pn	11 54 36.8	-0.4
CHGR				IAmb	IAmb	11 54 41.5	
	comp=Z,18nm,0.8s						
CHGR	Chuyangaron	17.38	215	P	Pn	11 54 36.8	-0.4
CHGR				pmax	pmax		
	comp=Z,18nm,0.8s						
KIRV	Kirov	18.60	298	P	Pn	11 54 53.0	+1.2
	comp=Z,1.0nm,0.3s,baz=84,slow=9.2,SNR=2.0						
	comp=Z,11nm,0.6s						
BELG	Belogornoye	20.50	280	P	P	11 55 12.7	+0.3
	comp=Z,12nm,1.0s,baz=85,slow=2.9,SNR=2.6						
BELG				LR	LR	12 03 20.3	
	comp=Z,26nm,20.8s,baz=310,slow=37						
	comp=Z,12nm,1.0s						
NIL	Nilore	20.96	200	P	P	11 55 16.1	-1.4
NIL				IAmb	IAmb	11 55 21.9	
	comp=Z,11nm,0.8s						
NIL	Nilore	20.96	200	P	P	11 55 16.1	-1.4
NIL				pmax	pmax		
	comp=Z,11nm,0.8s						
KBL	Kabul	21.19	210	P	P	11 55 20.1	-0.1
KBL	Kabul	21.19	210	P	P	11 55 20.1	-0.1
KBL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GEYT	Alibeck	22.70	236	P	P	11 55 37.5	+1.4
	comp=Z,3.2nm,0.7s,baz=29,slow=3.4,SNR=6.1						
	comp=Z,3.2nm,0.7s						
KLMR	Klimovskoe	23.61	305	*e*P	P	11 55 45.6	+0.4
KLMR				AMP		11 56 03.2	
	comp=Z,37nm,1.9s						
KLMR	Klimovskoe	23.61	305	*e*P	P	11 55 45.6	+0.4
KLMR				pmax	pmax		
	comp=Z,37nm,1.9s						
HHC	Hu-ho-hao-te	23.71	111	*e*P	P	11 55 47.7	+1.2
HHC				pmax	pmax		
	comp=Z,28nm,0.8s						
DANN	Dangsing	25.37	176	*e*P	P	11 56 03.6	+1.6
PYUN	Piuthan	25.59	178	*e*P	P	11 56 04.5	+0.5
	comp=Z,53nm,0.8s						
GUN	Gumba	25.94	172	*e*P	P	11 56 08.5	+1.2
OBN	Obninsk	26.04	292	*e*P	P	11 56 07.9	+0.4
OBN				*e*		11 56 48.7	
OBN				*e*PPP	PPP	11 56 55.9	
OBN				*e*		11 59 34.5	
OBN				pmax	pmax		
	comp=Z,16nm,0.7s						
OBN				MLR	MLR		
	comp=Z,229nm,5.0s						
JIRN	Jiri	26.21	171	*e*P	P	11 56 10.9	+1.1
	comp=Z,24nm,0.5s						
PKI	Pulchoki	26.24	173	*e*P	P	11 56 11.0	+1.0
RAMN	Ramite	26.96	171	*e*P	P	11 56 16.7	+0.4
TIXI	Tiksi	26.99	31	P	P	11 56 15.6	-0.4
	comp=Z,2.3nm,0.8s,baz=268,slow=23,SNR=13						
	comp=Z,2.3nm,0.8s						
TIXI	Tiksi	26.99	31	P	P	11 56 15.0	-1.0

TIXI	**Tiksi**	**26.99**	**31**	*i* P	**P**	**11 56 14.8**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	**ARCESS Array B**	**29.70**	**324**	LR	LR	12 10 31.0	
	comp=Z,108nm,18.8s,baz=240,slow=40						
FINES	**FINESS Array B**	**30.02**	**307**	P	**P**	**11 56 44.0**	**+1.0**
	comp=Z,4.7nm,1.2s,baz=79,slow=9.9,SNR=12						
FINES				LR	LR	12 10 44.6	
	comp=Z,54nm,18.6s,baz=78,slow=40						
	comp=Z,4.7nm,1.2s						
FINES	**FINESS Array B**	**30.02**	**307**	P	**P**	**11 56 42.5**	**-0.5**
FINES	**FINESS Array B**	**30.02**	**307**	*i* P	**P**	**11 56 43.7**	**+0.7**
FINES				pmax	pmax		
	comp=Z,5.0nm,1.2s						
PZH	**PanZhiHua**	**30.92**	**144**	P	**P**	**11 56 51.1**	**-0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TNCH	**TengChong**	**31.24**	**150**	P	**P**	**11 56 56.4**	**+2.1**
TNCH				pP	pP	11 56 58.5	+0.6
TNCH				S	**S**	**12 01 59.5**	**-1.1**
TNCH				sS	sS	12 02 09.0	+2.5
TNCH				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NACGM	**Naroch**	**31.46**	**295**	*e*P	**P**	**11 56 58.8**	**+3.1**
	baz=69						
AKASG	**Malin Array Be**	**31.78**	**286**	P	**P**	**11 56 59.4**	**+0.7**
	comp=Z,0.3nm,0.2s,baz=50,slow=8.9,SNR=14						
	comp=Z,0.3nm,0.2s						
AKASG	**Malin Array Be**	**31.78**	**286**	*i* P	**P**	**11 57 00.2**	**+1.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
USA0B	**Ussuriysk Arra**	**33.62**	**86**	P	**P**	**11 57 14.0**	**-0.9**
USA0B	**Ussuriysk Arra**	**33.62**	**86**	P	**P**	**11 57 14.0**	**-0.9**
USA0B				pmax	pmax		
	comp=Z,18nm,0.7s						
BRTR	**Keskin Array B**	**35.17**	**267**	P	**P**	**11 57 24.8**	**-3.7**
	comp=Z,0.3nm,0.6s,baz=34,slow=6.9,SNR=1.7						
KSRS	**Korea Array**	**35.40**	**98**	LR	LR	12 12 44.4	
	comp=Z,16nm,19.2s,baz=255,slow=38						
BUR08	**Bucovina Ar. S**	**35.57**	**284**	P	**P**	**11 57 32.2**	**+0.4**
BUR08				IAmb	IAmb	11 57 34.6	
	comp=Z,5.0nm,0.9s						
BURAR	**Bucovina Array**	**35.58**	**284**	P	**P**	**11 57 32.2**	**+0.4**
BURAR				IAmb	IAmb	11 57 34.5	
	comp=Z,3.1nm,0.8s						
BURAR	**Bucovina Array**	**35.58**	**284**	P	**P**	**11 57 33.7**	**+1.9**
HFS	**Hagfors**	**36.21**	**308**	LR	LR	12 13 54.1	
	comp=Z,66nm,18.0s,baz=109,slow=39						
NC405	**NORSAR Array S**	**36.77**	**310**	P	**P**	**11 57 43.2**	**+1.4**
NB2	**NORSAR Subarra**	**37.03**	**310**	P	**P**	**11 57 45.2**	**+1.2**
	comp=Z,2.7nm,0.6s,baz=66,slow=8.6						
NOA	**NORSAR Array B**	**37.03**	**310**	P	**P**	**11 57 44.8**	**+0.8**
	comp=Z,1.3nm,0.8s,baz=64,slow=8.1,SNR=10						
NOA				LR	LR	12 13 36.2	
	comp=Z,26nm,18.7s,baz=80,slow=37						
	comp=Z,1.3nm,0.8s						
OJC	**Ojcow**	**37.32**	**291**	P	**P**	**11 57 47.2**	**+0.6**
OJC	**Ojcow**	**37.32**	**291**	P	**P**	**11 57 47.2**	**+0.6**
OJC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**37.59**	**153**	P	**P**	**11 57 49.1**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=342,slow=8.4,SNR=15						
	comp=Z,1.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**37.59**	**153**	P	**P**	**11 57 48.9**	**-0.2**
CMAR	**Chiang Mai Arr**	**37.59**	**153**	*i* P	**P**	**11 57 49.5**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
OSTC	**Ostas**	**39.13**	**293**	*e*P	**P**	**11 58 05.6**	**+3.8**
OSTC	**Ostas**	**39.13**	**293**	*e*P	**P**	**11 58 05.6**	**+3.8**
DPC	**Dobruska-Polom**	**39.18**	**293**	*e*P	**P**	**11 58 04.2**	**+1.9**
DPC	**Dobruska-Polom**	**39.18**	**293**	*e*P	**P**	**11 58 04.2**	**+1.9**
VRAC	**Vranov**	**39.57**	**291**	LR	LR	12 15 44.4	
	comp=Z,37nm,20.0s,baz=160,slow=38						
BILL	**Bilibino**	**39.94**	**36**	*e*P	**P**	**11 58 08.5**	**+0.2**
BILL				*e*		11 59 40.8	
BILL				*e*		12 00 09.7	
BILL				pmax	pmax		
	comp=Z,9.0nm,2.5s						
BILL				MLR	MLR		
	comp=Z,24nm,5.0s						
CLL	**Collm**	**40.48**	**296**	⇓*i*P	**P**	**11 58 14.9**	**+1.9**
	comp=Z,7.0nm,0.7s						
CLL				AMS	AMS	13 02 00.0	
	comp=Z,100nm,20.4s						
CLL	**Collm**	**40.48**	**296**	⇓*i*P	**P**	**11 58 14.9**	**+1.9**
CLL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CONA	**Conrad Observa**	**40.73**	**290**	*e*P	**P**	**11 58 17.3**	**+2.1**
	comp=Z,1.9nm,0.8s						
CKRC	**Cesky Krumlov**	**41.10**	**292**	*e*P	**P**	**11 58 20.5**	**+2.3**
CKRC	**Cesky Krumlov**	**41.10**	**292**	*e*P	**P**	**11 58 20.5**	**+2.3**
ARSA	**Arzberg**	**41.30**	**289**	*e*P	**P**	**11 58 22.5**	**+2.6**
	comp=Z,2.7nm,0.8s						
KHC	**Kasperske Hory**	**41.33**	**293**	*e*P	**P**	**11 58 22.3**	**+2.2**
KHC	**Kasperske Hory**	**41.33**	**293**	*i* P	**P**	**11 58 21.0**	**+0.9**
KHC				pmax	pmax		
	comp=Z,11nm,1.3s						
NKC	**Novy Kostel**	**41.35**	**295**	*e*pP	pP	11 58 27.3	+3.4
NKC	**Novy Kostel**	**41.35**	**295**	*e*P	P	11 58 27.3	+7.1
GERES	**GERESS Array B**	**41.42**	**292**	P	**P**	**11 58 22.8**	**+1.8**
	comp=Z,0.8nm,0.6s,baz=65,slow=7.5,SNR=8.2						
GERES				LR	LR	12 15 41.4	
	comp=Z,50nm,18.2s,baz=66,slow=36						
	comp=Z,0.8nm,0.6s						
MOA	**Molln**	**41.67**	**291**	*e*P	**P**	**11 58 25.4**	**+2.5**
	comp=Z,1.9nm,0.8s						
OBKA	**Obir**	**42.27**	**289**	*i* P	**P**	**11 58 29.9**	**+2.0**
	comp=Z,2.0nm,0.6s						
KBA	**Koelnbreinsper**	**42.62**	**290**	*e*P	**P**	**11 58 33.6**	**+2.8**
	comp=Z,3.2nm,0.8s						
CLUD	**Cludinico**	**43.24**	**290**	P	**P**	**11 58 36.9**	**+1.2**
CLUD				IAmb	IAmb	11 58 38.8	
	comp=Z,5.5nm,0.9s						
CIMO	**Cimolais**	**43.57**	**290**	P	**P**	**11 58 38.6**	**+0.2**
CIMO				IAmb	IAmb	11 58 40.7	
	comp=Z,5.9nm,0.8s						
MOTA	**Moosalm**	**43.71**	**292**	*e*P	**P**	**11 58 42.0**	**+2.4**
	comp=Z,0.5nm,0.4s						
RETA	**Reutte**	**43.81**	**292**	*e*P	**P**	**11 58 42.5**	**+2.2**
	comp=Z,1.4nm,0.6s						
FETA	**Feichten**	**44.11**	**292**	*e*P	**P**	**11 58 44.9**	**+2.1**
	comp=Z,0.4nm,0.4s						
FUORN	**Ofenpass-Fuorn**	**44.60**	**291**	P	**P**	**11 58 47.3**	**+0.4**
FUORN				IAmb	IAmb	11 58 49.8	
	comp=Z,4.0nm,0.7s						
BNI	**Bardonecchia**	**47.54**	**292**	P	**P**	**11 59 11.2**	**+1.3**
BNI	**Bardonecchia**	**47.54**	**292**	P	**P**	**11 59 11.2**	**+1.3**
BNI				pmax	pmax		
	comp=Z,20nm,1.5s						
TNA	**Tin City**	**49.78**	**31**	P	**P**	**11 59 26.9**	**+0.3**
TNA				IAmb	IAmb	11 59 37.2	
	comp=Z,3.0nm,1.1s						
I21K	**Tanana**	**54.49**	**25**	P	**P**	**12 00 01.8**	**+0.2**
PRP	**Porcupine Dome**	**55.73**	**22**	P	**P**	**12 00 11.4**	**+0.6**
PRP				IAmb	IAmb	12 00 44.9	
	comp=Z,3.3nm,1.4s						
CCB	**Clear Creek Bu**	**55.94**	**23**	P	**P**	**12 00 12.2**	**0.0**
CCB				IAmb	IAmb	12 00 14.2	
	comp=Z,3.1nm,1.0s						
IL31		**56.05**	**23**	P	**P**	**12 00 13.2**	**+0.3**
IL31				IAmb	IAmb	12 00 14.5	
	comp=Z,2.9nm,0.9s						
ILAR	**Eielson Array**	**56.05**	**23**	P	**P**	**12 00 12.8**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=317,slow=4.7,SNR=32						
	comp=Z,2.0nm,0.8s						
ILAR	**Eielson Array**	**56.05**	**23**	P	**P**	**12 00 13.6**	**+0.6**
ILAR	**Eielson Array**	**56.05**	**23**	P	**P**	**12 00 13.6**	**+0.6**
YKA	**Yellowknife Ar**	**63.42**	**8**	P	**P**	**12 01 03.6**	**-0.1**
	comp=Z,0.5nm,1.0s,baz=348,slow=7.6,SNR=4.2						
	comp=Z,0.5nm,1.0s						
SCHQ	**Schefferville**	**68.78**	**341**	P	**P**	**12 01 38.7**	**+0.5**
	comp=Z,3.8nm,0.7s,baz=342,slow=5.1,SNR=5.2						
	comp=Z,3.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.69**	**270**	P	**P**	**12 02 08.3**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=41,slow=4.7,SNR=6.6						
	comp=Z,0.4nm,0.6s						
PDAR	**Pinedale Array**	**83.41**	**8**	P	**P**	**12 03 01.9**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=14,slow=4.1,SNR=3.1						
	comp=Z,0.4nm,0.8s						
WRA	**Warramunga Arr**	**86.11**	**132**	P	**P**	**12 03 13.4**	**-2.0**
	comp=Z,1.0nm,0.8s,baz=334,slow=5.4,SNR=5.4						
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**86.11**	**132**	*i* P	**P**	**12 03 14.6**	**-0.8**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NVAR	**Mina Array Bea**	**86.60**	**16**	P	**P**	**12 03 19.2**	**+1.1**
	comp=Z,1.5nm,0.8s,baz=329,slow=2.9,SNR=10						
	comp=Z,1.5nm,0.8s						
ASAR	**Alice Springs**	**89.18**	**134**	P	**P**	**12 03 28.4**	**-1.8**
	comp=Z,0.9nm,0.8s,baz=334,slow=4.6,SNR=12						
	comp=Z,0.9nm,0.8s						
ANMO	**Albuquerque**	**91.42**	**7**	*i* P	**P**	**12 03 39.9**	**-1.0**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						

IDC 12 12:14:05.9±1.8**,4°.80S**×**151°.33E,h66**^{km}±28^{km}**,mb3.4**/2**, mbtmp3.6**/2**,Error ellipse: s-maj=108.4km s-min=26.5km az=131.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.85**	**55**	P	Pn	12 14 22.4	0.0
	327nm,0.3s,baz=254,slow=2.0,SNR=294						
KRVT				S	Sn	12 14 35.5	+0.9
	1μm,0.4s,baz=159,slow=22,SNR=26						
WRA	**Warramunga Arr**	**22.36**	**226**	P	P	12 18 58.8	+0.1
	1.3nm,0.5s,baz=51,slow=10.0,SNR=16						
WRA				PcP	PcP	12 22 51.9	0.0
	0.4nm,0.8s,baz=49,slow=2.4,SNR=2.3						
	1.3nm,0.5s						
ASAR	**Alice Springs**	**25.18**	**220**	P	P	12 19 25.4	0.0
	1.1nm,0.8s,baz=54,slow=8.7,SNR=25						
	1.1nm,0.8s						
TORD	**Torodi Ar. Bea**	**148.91**	**288**	PKPbc	PKPbc	12 33 46.5	-0.8
	0.2nm,0.3s,baz=86,slow=2.5,SNR=6.0						

BJI ***12*** *12:21:18.2±0.0,27°.09N×103°.41E,h10^{km},mb4.5/52, mB4.8/34,ML4.8/23,Ms4.5/62,Ms7 4.3/57*

GCMT ***12*** *12:21:20.7±0.3,27°.02N±0°.02×103°.55E±0°.02,h22^{km}±1^{km}, MW4.8/90,Moment Tensor Solution. s15,c17; s90,c122; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.30±.11; M$_{θθ}$1.40±.08; M$_{ϕϕ}$-1.10±.07; M$_{rθ}$-0.38±.12; M$_{θϕ}$-1.30±.07; M$_{ϕr}$-0.30±.13; Best double couple: M$_{0}$1.87600×10^{16} NP1:ϕ$_{s}$69.00000°,δ83.00000°,λ-164.00000°. NP2: ϕ$_{s}$337.00000°,δ74.00000°,λ-7.00000°. Principal axes: T 1.9770, Plg6.0000°, Azm202.0000°; N -0.2020, Plg73.0000°, Azm93.0000°; P -1.7750, Plg16.0000°, Azm294.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***12*** *12:21:21.3±0.9,27°.16N×103°.54E,h43^{km},mb4.8/41 Error ellipse: s-maj=6.7km s-min=4.4km az=113.6*

IDC ***12*** *12:21:21.5±2.9,27°.20N×103°.50E,h29^{km}±20^{km},mb4.2/32, mbtmp4.3/33,ML3.8/1,MS4.0/59,Error ellipse: s-maj=12.8km s-min=10.5km az=25.0*

NEIC ***12*** *12:21:23.7±1.2,27°.20N±0°.07×103°.57E±0°.05,h37^{km}±7^{km}, mb4.8/86,Error ellipse: s-maj=12.7km s-min=3.0km az=148.0*

ISC 12 12:21:21.5±0.4**,27°.10N**±0°.03×**103°.44E**±0°.03**,h29**^{km}±2^{km}**, h29**^{km}**:pP-P,n508,**σ1^{s}**.39**/513**,mb4.7**/115**,MS4.0**/67**, 36C-10D,Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PZH	**PanZhiHua**	**1.63**	**249**	Pg	**Pn**	**12 21 47.3**	**-1.0**
PZH				Sg	**Sb**	**12 22 09.3**	**-1.8**
PZH				smax	smax		
	comp=N,14μm,0.4s						
PZH				smax	smax		
	comp=E,9μm,0.7s						
KMI	**Kunming**	**2.06**	**198**	⇑Pn	**Pn**	**12 21 55.2**	**+0.8**
KMI				Sn	**Sb**	**12 22 24.0**	**+0.3**
KMI				smax	smax		
	comp=N,3μm,1.0s						
KMI				smax	smax		
	comp=E,4μm,0.9s						
GYA	**Guiyang**	**2.95**	**102**	⇓Pn	**Pn**	**12 22 09.0**	**+2.5**
GYA				Sn	**Sb**	**12 22 48.2**	**-0.9**
GYA				smax	smax		
	comp=N,3μm,1.2s						
GYA				smax	smax		
	comp=E,2μm,1.1s						
CD2	**Chengdu**	**3.81**	**4**	Pn	**Pn**	**12 22 19.5**	**+1.2**
CD2				Pg	**Pb**	**12 22 30.3**	**+2.2**
CD2				Sn	**Sn**	**12 23 04.5**	**+2.3**
CD2				Sg	**Sb**	**12 23 19.2**	**+5.4**
CD2				smax	smax		
	comp=N,5μm,1.2s						
CD2				smax	smax		
	comp=E,7μm,1.5s						
TNCH	**TengChong**	**4.88**	**246**	Pn	**Pn**	**12 22 30.9**	**-2.2**
TNCH				Pg	**Pb**	**12 22 44.1**	**-2.3**
TNCH				Sn	**Sn**	**12 23 31.0**	**+2.2**
TNCH				Sg	**Sb**	**12 23 51.8**	**+7.1**
TNCH				smax	smax		
	comp=N,5μm,1.1s						
TNCH				smax	smax		
	comp=E,3μm,1.0s						
TNCH				LR	LR		
	comp=N,14μm,3.9s						
TNCH				LR	LR		
	comp=Z,1μm,8.4s						
ENH	**Enshi**	**6.18**	**58**	Pn	**Pn**	**12 22 51.3**	**+0.4**
GULI	**GuiLin**	**6.48**	**105**	P	Pb	12 23 04.3	-9.1
GULI				S	Sb	12 24 19.8	-11
GULI				pmax	pmax		
	comp=Z,40nm,0.7s						
GULI				LR	LR		
	comp=N,2μm,7.3s						
GULI				LR	LR		
	comp=E,4μm,6.2s						
GULI				LR	LR		
	comp=Z,2μm,8.7s						
CRAI	**Chiangrai**	**7.39**	**203**	Pn	**Pn**	**12 23 10.1**	**+2.6**
MND	**Mandalay**	**8.37**	**234**		Pn	12 23 26.5	+5.7
XAN	**Xi'an**	**8.38**	**33**	P	**Pn**	**12 23 20.3**	**-0.7**
XAN				smax	smax		
	comp=Z,630nm,1.1s						
XAN				smax	smax		
	comp=Z,420nm,1.0s						
CNSH	**ChangSha**	**8.49**	**80**	⇑P	**Pn**	**12 23 24.0**	**+1.5**
CNSH				S	**Sn**	**12 24 52.5**	**-4.8**
CNSH				smax	smax		
	comp=Z,280nm,1.7s						
CNSH				smax	smax		
	comp=Z,120nm,1.4s						
LZH	**Lanzhou**	**8.97**	**2**	P	**Pn**	**12 23 31.8**	**+2.6**
LZH				smax	smax		
	comp=Z,190nm,1.5s						
LZH				smax	smax		
	comp=Z,250nm,1.5s						
LZH				LR	LR		
	comp=Z,1μm,5.2s						
LZH				LR	LR		
	comp=Z,930nm,6.9s						
PHRA	**Phrae**	**9.05**	**200**		**Pn**	**12 23 33.0**	**+2.8**
CHTO	**Chiang Mai**	**9.22**	**208**		**Pn**	**12 23 35.7**	**+3.1**
CHTO	**Chiang Mai**	**9.22**	**208**	P	**Pn**	**12 23 35.7**	**+3.1**
CM31	**Chiang Mai Arr**	**9.54**	**207**	Pn	**Pn**	**12 23 40.0**	**+3.0**
CMAR	**Chiang Mai Arr**	**9.54**	**207**	Pn	**Pn**	**12 23 39.1**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=14,slow=13,SNR=32						
CMAR				Pg		12 24 17.6	
	comp=Z,0.2nm,0.3s,baz=5.6,slow=16,SNR=3.4						
CMAR				Lg	Lg	12 26 26.8	
	comp=Z,0.2nm,0.3s,baz=8.9,slow=25,SNR=1.1						
CMAR				LR	LR	12 27 47.3	
	comp=Z,279nm,20.1s,baz=20,slow=40						
	comp=Z,5.7nm,1.0s						
CMAR	**Chiang Mai Arr**	**9.54**	**207**		**Pn**	**12 23 40.9**	**+3.8**
CMAR	**Chiang Mai Arr**	**9.54**	**207**	*i* P	**Pn**	**12 23 40.5**	**+3.5**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GZH	**Guangzhou**	**9.82**	**112**	P	**Pn**	**12 23 41.6**	**+0.8**
GZH				S	**Sn**	**12 25 33.1**	**+3.0**
GZH				smax	smax		
	comp=Z,180nm,2.0s						
GZH				smax	smax		
	comp=Z,130nm,1.4s						
QIZ	**Qiongzhong**	**9.96**	**142**	P	**Pn**	**12 23 43.8**	**+1.1**
QIZ				S	**Sn**	**12 25 35.2**	**+1.7**
QIZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
QIZ				LR	LR		
	comp=Z,4μm,9.0s						
QIZ				LR	LR		
	comp=Z,4μm,8.2s						
QIZ				LR	LR		
	comp=Z,3μm,7.0s						
WHN	**Wuhan**	**10.16**	**68**	⇑P	**Pn**	**12 23 46.4**	**+1.0**
WHN				sP		12 23 50.1	
WHN				S	**Sn**	**12 25 38.3**	**-0.2**
WHN				LR	LR		
	comp=Z,14μm,6.5s						
WHN				LR	LR		
	comp=Z,8μm,9.9s						
WHN				LR	LR		
	comp=Z,8μm,12.8s						
SHL	**Shillong**	**10.48**	**264**	Pn	Pn	12 23 54.1	+4.2
SHL	**Shillong**	**10.48**	**264**	P	Pn	12 23 54.1	+4.1
LYN	**LuoYang**	**10.74**	**44**	⇓P	**Pn**	**12 23 51.7**	**-1.6**
LYN				PP	**PnPn**	**12 24 00.9**	**-0.2**
LYN				sP		12 24 04.6	
LYN				S	**Sn**	**12 25 54.3**	**+1.8**
LYN				pmax	pmax		
	comp=Z,13nm,0.5s						
LYN				LR	LR		
	comp=Z,4μm,11.5s						
LYN				LR	LR		
	comp=Z,4μm,11.2s						
LYN				LR	LR		
	comp=Z,1μm,12.8s						
LSA	**Lhasa**	**11.13**	**286**	P	**Pn**	**12 23 59.8**	**+0.7**
GOMU	**GeErMu**	**11.67**	**323**	P	**Pn**	**12 24 10.2**	**+3.8**
GOMU				pP		12 24 13.0	
GOMU				sP		12 24 17.1	
GOMU				S	**Sn**	**12 26 16.7**	**+0.8**
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,100nm,4.6s						
GOMU				LR	LR		
	comp=Z,1μm,10.6s						
GOMU				LR	LR		
	comp=Z,1μm,10.3s						
GOMU				LR	LR		
	comp=Z,620nm,10.1s						
GTA	**Gaotai**	**12.65**	**347**	*e*P	**Pn**	**12 24 19.7**	**+0.2**
GTA				pP		12 24 24.0	
GTA				pmax	pmax		
	comp=Z,100nm,4.8s						
GTA				LR	LR		
	comp=Z,2μm,16.3s						
GTA				LR	LR		
	comp=Z,760nm,12.3s						
TIY	**Taiyuan**	**13.02**	**33**	⇑P	**Pn**	**12 24 27.0**	**+2.4**
TIY				PP	P	12 24 40.3	+5.6
TIY				pmax	pmax		
	comp=Z,21nm,0.5s						
TIY				LR	LR		
	comp=Z,2μm,6.7s						
TIY				LR	LR		
	comp=Z,1μm,4.9s						
TIY				LR	LR		
	comp=Z,1μm,8.8s						
HNS	**HongShan**	**14.00**	**40**	⇓P	**Pn**	**12 24 37.1**	**-0.8**
HNS				*e*S	**Sn**	**12 27 12.6**	**+0.3**
HNS				pmax	pmax		
	comp=Z,14nm,1.1s						
HNS				pmax	pmax		
	comp=Z,190nm,5.8s						
HNS				LR	LR		
	comp=Z,1μm,8.0s						
HNS				LR	LR		
	comp=Z,1μm,7.6s						
HNS				LR	LR		
	comp=Z,1μm,7.8s						
NJ2	**Nanjing**	**14.29**	**66**	*e*P	**Pn**	**12 24 40.9**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,170nm,4.1s						
NJ2				LR	LR		
	comp=Z,3μm,10.4s						
NJ2				LR	LR		
	comp=Z,2μm,8.5s						
BTO	**Baotou**	**14.53**	**20**	*e*P	**Pn**	**12 24 44.6**	**-0.6**
BTO				S	**Sn**	**12 27 28.7**	**+3.3**
BTO				pmax	pmax		
	comp=Z,60nm,1.1s						
BTO				pmax	pmax		
	comp=Z,470nm,4.8s						
BTO				LR	LR		
	comp=Z,4μm,11.7s						
BTO				LR	LR		
	comp=Z,5μm,10.9s						
BTO				LR	LR		
	comp=Z,4μm,11.5s						
TIA	**Tai'an**	**14.76**	**49**	P	**Pn**	**12 24 47.6**	**-0.7**
TIA				S	**Sn**	**12 27 35.4**	**+4.5**
TIA				pmax	pmax		
	comp=Z,8.0nm,0.5s						
TIA				pmax	pmax		
	comp=Z,94nm,5.4s						
TIA				LR	LR		
	comp=Z,1μm,11.5s						
TIA				LR	LR		
	comp=Z,530nm,12.2s						
RAMN	**Ramite**	**15.01**	**273**	*e*P	**Pn**	**12 24 49.1**	**-2.8**
HHC	**Hu-ho-hao-te**	**15.27**	**24**	*e*P	**Pn**	**12 24 55.9**	**+0.8**
HHC				pmax	pmax		
	comp=Z,27nm,0.8s						
HHC				pmax	pmax		
	comp=Z,190nm,5.1s						
HHC				LR	LR		
	comp=Z,1μm,8.6s						
HHC				LR	LR		
	comp=Z,2μm,7.8s						
HHC				LR	LR		
	comp=Z,2μm,11.9s						
JIRN	**Jiri**	**15.34**	**276**	*e*P	**Pn**	**12 24 53.9**	**-2.4**
GUN	**Gumba**	**15.61**	**277**	*e*P	**Pn**	**12 24 57.3**	**-2.5**
	comp=Z,160nm,1.0s						
PKI	**Pulchoki**	**16.03**	**276**	*e*P	**Pn**	**12 25 02.1**	**-3.2**
PKIN	**Phulchoki**	**16.05**	**276**	*e*P	**Pn**	**12 25 02.3**	**-3.1**
	comp=Z,40nm,0.8s						
DMN	**Daman**	**16.30**	**276**	*e*P	**Pn**	**12 25 05.5**	**-3.1**
	comp=Z,34nm,0.7s						
BJT	**Baijiatuau**	**16.67**	**36**	P	**Pn**	**12 25 12.5**	**-0.4**
BJT	**Baijiatuau**	**16.67**	**36**	P	**Pn**	**12 25 12.5**	**-0.4**
BJT				pmax	pmax		
	comp=Z,32nm,1.1s						
BJI	**Beijing**	**16.69**	**36**	P	**Pn**	**12 25 12.7**	**-0.4**
BJI				sP	**sP**	**12 25 26.1**	**-1.4**
BJI				S	**Sn**	**12 28 10.7**	**-6.9**
BJI				pmax	pmax		
	comp=Z,11nm,1.1s						
BJI				pmax	pmax		
	comp=Z,130nm,3.9s						
BJI				LR	LR		
	comp=Z,340nm,8.2s						
BJI				LR	LR		
	comp=Z,230nm,6.9s						
BJI				LR	LR		
	comp=Z,260nm,9.6s						
DANN	**Dangsing**	**17.47**	**279**	*e*P	**Pn**	**12 25 20.8**	**-2.6**
	comp=Z,42nm,0.5s						
PYUN	**Piuthan**	**18.16**	**278**	*e*P	**Pn**	**12 25 28.0**	**-3.7**
	comp=Z,162nm,1.1s						
DL2	**Dalian**	**19.23**	**48**	P	P	12 25 32.6	-11
DL2				S	Sn	12 29 00.1	-19
DL2				pmax	pmax		
	comp=Z,34nm,1.8s						
DL2				pmax	pmax		
	comp=Z,370nm,3.5s						
DL2				LR	LR		
	comp=N,640nm,17.9s						
DL2				LR	LR		
	comp=E,590nm,13.9s						
DL2				LR	LR		
	comp=Z,530nm,10.4s						
XLT	**XiLinHaoTe**	**19.63**	**28**	⇓*i*P	**Pn**	**12 25 48.6**	**-0.7**
XLT				pP	sP	12 26 00.6	+0.5
XLT				PP	**PnPn**	**12 26 09.8**	**+6.6**
XLT				S	**S**	**12 29 23.1**	**-4.7**
XLT				sS	sS	12 29 36.3	-5.0
XLT				SS	**SnSn**	**12 29 48.7**	**+5.3**
XLT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,210nm,4.3s						
XLT				LR	LR		
	comp=Z,520nm,8.1s						
XLT				LR	LR		

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                comp=Z,610nm,8.9s
SONM  Songino Array      20.83   6 P       P      12 25 59.8 -1.0
                comp=Z,7.7nm,0.9s,baz=188,slow=12,SNR=38
SONM                               Lg      Lg     12 32 20.6
                comp=Z,0.1nm,0.3s,baz=174,slow=28,SNR=3.2
SONM                               LR      LR     12 35 40.3
                comp=Z,106nm,18.0s,baz=184,slow=41
                comp=Z,7.7nm,0.9s
SONM  Songino Array      20.83   6         P      12 26 00.8 -0.1
SONM  Songino Array      20.83   6 P       P      12 26 00.8 -0.1
SONM                               pmax    pmax
                comp=Z,16nm,1.1s
ULN   Ulaanbaatar        20.93   7         P      12 26 01.8 -0.1
ULN   Ulaanbaatar        20.93   7ceP      P      12 26 01.5 -0.4
ULN                                pmax    pmax
                comp=Z,18nm,1.0s
WMQ   Urumqi             20.99 327 ⇑P      P      12 26 02.5  0.0
WMQ                                pP      Pn     12 26 06.2 +1.0
WMQ                                S       S      12 29 54.9 +0.1
WMQ                                pmax    pmax
                comp=Z,23nm,0.7s
WMQ                                LR      LR
                comp=Z,1μm,16.1s
WMQ                                LR      LR
                comp=Z,1μm,17.1s
WMQ                                LR      LR
                comp=Z,250nm,19.7s
JOW   Kunigami           22.13  85 P       P      12 26 14.3 -0.5
                comp=Z,14nm,0.5s,baz=270,slow=4.0,SNR=8.8
                comp=Z,14nm,0.5s
TJN   Taejon             22.30  60 P       P      12 26 15.6 -1.0
TJN   Taejon             22.30  60ceP      P      12 26 16.2 -0.4
IPM   Ipoh               22.61 186 P       P      12 26 20.1 +0.1
IPM                                IAmb    IAmb   12 26 26.7
                comp=Z,17nm,0.7s
KSAR  Wonju Array Be     23.04  57 P       P      12 26 21.7 -2.6
KSAR  Wonju Array Be     23.04  57 P       P      12 26 21.7 -2.6
KS19  Wonju Array Si     23.05  57 P       P      12 26 23.7 -0.7
KSRS  Korea Array        23.07  57 P       P      12 26 23.0 -1.7
                comp=Z,4.8nm,0.6s,baz=245,slow=10,SNR=24
KSRS                               LR      LR     12 35 14.9
                comp=Z,340nm,18.2s,baz=270,slow=36
                comp=Z,4.8nm,0.6s
ZAK   Zakamensk          23.25 360 eP      P      12 26 26.2 -0.3
ZAK                                pmax    pmax
                comp=Z,16nm,1.3s
JTU   Tsushima           23.45  65 P       P      12 26 27.6 -0.8
JTU                                IAmb    IAmb   12 26 38.4
                comp=Z,29nm,1.1s
KKM   Kota Kinabalu      24.21 148 P       P      12 26 37.3 +1.4
KKM                                IAmb    IAmb   12 26 44.3
                comp=Z,42nm,1.1s
CN2   Changchun          24.36  41 ⇑P      P      12 26 36.6 -0.4
CN2                                esP     pP     12 26 41.6 -4.4
CN2                                eS      S      12 30 48.9 -5.7
CN2                                pmax    pmax
                comp=Z,10.0nm,0.7s
CN2                                pmax    pmax
                comp=Z,200nm,4.0s
CN2                                LR      LR
                comp=Z,400nm,13.0s
CN2                                LR      LR
                comp=Z,500nm,13.0s
CN2                                LR      LR
                comp=Z,500nm,12.0s
JNU   Nakatsue           24.45  69 P       P      12 26 37.2 -0.7
                comp=Z,17nm,1.0s,baz=278,slow=3.3,SNR=13
JNU                                LR      LR     12 36 22.5
                comp=Z,502nm,19.4s,baz=260,slow=37
                comp=Z,17nm,1.0s
JNU   Nakatsue           24.45  69 P       P      12 26 38.3 +0.4
JNU                                IAmb    IAmb   12 26 39.1
                comp=Z,34nm,1.1s
MOY   Mondy              24.61 356 eP      P      12 26 39.4 +0.2
MOY                                pmax    pmax
                comp=Z,18nm,2.6s
ZSN   Zaisan             25.01 329 eP      P      12 26 44.0 +1.2
                baz=329
ZSN   Zaisan             25.01 329 eP      P      12 26 43.9 +1.2
IRK   Irkutsk            25.12   1 eP      P      12 26 44.6 +0.8
IRK                                pmax    pmax
                comp=Z,44nm,1.7s
SHLS  Shalkode           25.20 316 eP      P      12 26 43.4 -1.3
                baz=316
SHLS  Shalkode           25.20 316 eP      P      12 26 43.3 -1.3
UZB   Uzynbulak          25.47 315 eP      P      12 26 48.3 +1.1
                baz=315
UZB   Uzynbulak          25.47 315 eP      P      12 26 48.3 +1.1
HIA   Hailar             25.47  25 P       P      12 26 46.8 -0.1
HIA                                IAmb    IAmb   12 26 48.4
                comp=Z,28nm,0.9s
HIA   Hailar             25.47  25c iP     P      12 26 45.5 -1.5
HIA                                pmax    pmax
                comp=Z,35nm,0.9s
DGZ   Jazzator, Alta     25.72 336 i P     P      12 26 48.0 -1.3
DGZ                                pmax    pmax
                comp=Z,31nm,1.0s
MK31  Makanchi Array     25.79 325 P       P      12 26 49.7 -0.2
MK31  Makanchi Array     25.79 325 i P     P      12 26 49.6 -0.2
MKAR  Makanchi Array     25.79 325 P       P      12 26 49.5 -0.4
                comp=Z,4.4nm,0.8s,baz=122,slow=9.2,SNR=28
MKAR                               ScP     ScP    12 33 55.6 -1.0
                comp=Z,0.7nm,0.7s,baz=108,slow=5.3,SNR=5.8
                comp=Z,4.4nm,0.8s
MKAR  Makanchi Array     25.79 325 P       P      12 26 49.7 -0.2
MKAR  Makanchi Array     25.79 325 P       P      12 26 49.7 -0.2
SATY  Saty               25.81 315 eP      P      12 26 51.4 +1.1
                baz=314
SATY  Saty               25.81 315 eP      P      12 26 51.4 +1.1
KPKS  Kokpek             25.84 316 eP      P      12 26 51.4 +0.8
                baz=315
KPKS  Kokpek             25.84 316 eP      P      12 26 51.3 +0.8
MAKZ  Makanchi           25.95 325 P       P      12 26 51.9 +0.5
MAKZ  Makanchi           25.95 325 P       P      12 26 51.9 +0.5
MAKZ                               pmax    pmax
                comp=Z,13nm,1.0s
KSH   Kashi              25.98 305 P       P      12 26 54.5 +2.7
KSH                                pP      pP     12 26 59.4 -1.4
KSH                                pmax    pmax
                comp=Z,15nm,1.0s
KSH                                LR      LR
                comp=Z,540nm,15.3s
KSH                                LR      LR
                comp=Z,290nm,10.0s
KSH                                LR      LR
                comp=Z,400nm,11.3s
JHS   Saijyo             26.55  65 P       P      12 26 58.1 +1.2
JHS                                IAmb    IAmb   12 27 00.4
                comp=Z,33nm,0.9s
BNX   BinXian            26.63  39 ⇓P      P      12 26 58.0 +0.5
BNX                                pmax    pmax
                comp=Z,20nm,1.0s
BNX                                pmax    pmax
                comp=Z,67nm,4.8s
MDOK  Medeo              26.73 314 eP      P      12 26 59.6 +0.9
                baz=313
MDOK  Medeo              26.73 314 eP      P      12 26 59.5 +0.9
TNSS  Tian-Shan          26.74 313 eP      P      12 26 60.0 +1.0
                baz=313
TNSS  Tian-Shan          26.74 313 eP      P      12 26 59.9 +1.0
NIL   Nilore             26.79 291 P       P      12 26 58.8 -0.3
NIL   Nilore             26.79 291 P       P      12 26 58.8 -0.3
NIL                                pmax    pmax
                comp=Z,38nm,0.9s
TDK   Taldyqorghan       26.83 318 eP      P      12 27 00.1 +0.8
                baz=318
TDK   Taldyqorghan       26.83 318 eP      P      12 27 00.1 +0.8
SDSI  Sungai Dareh       27.93 184 P       P      12 27 09.3 -0.1
                comp=Z,9.7nm,0.7s,comp=Z,8μm
AAK   Ala-Archa          28.19 311 P       P      12 27 11.8 +0.1
                comp=Z,4.0nm,0.6s,baz=140,slow=7.2,SNR=14
AAK                                LR      LR     12 38 57.4
                comp=Z,278nm,18.6s,baz=136,slow=38
                comp=Z,4.0nm,0.6s
AAK   Ala-Archa          28.19 311 P       P      12 27 12.5 +0.9
AAK   Ala-Archa          28.19 311ceP      P      12 27 11.5 -0.2
AAK                                pmax    pmax
                comp=Z,12nm,1.7s
USA0B Ussuriysk Arra     28.60  46 i P     P      12 27 13.3 -1.8
USRK  Ussuriysk Ar.      28.60  46 P       P      12 27 14.2 -0.9
                comp=Z,7.2nm,0.8s,baz=249,slow=7.3,SNR=12
USRK                               LR      LR     12 38 25.7
                comp=Z,342nm,18.5s,baz=223,slow=36
                comp=Z,7.2nm,0.8s
DAV   Davao City (W)     28.96 129 LR      LR     12 39 17.1
                comp=Z,148nm,18.0s,baz=185,slow=37
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HEH   HeiHe              29.51  32 eP      P      12 27 22.0 -1.1
HEH                                S       S      12 32 14.0 -1.8
HEH                                pmax    pmax
                comp=Z,13nm,1.0s
HEH                                pmax    pmax
                comp=Z,160nm,5.0s
HEH                                LR      LR
                comp=Z,320nm,11.6s
HEH                                LR      LR
                comp=Z,450nm,10.7s
GAR   Garm               30.04 302 P       P      12 27 29.1 +1.0
ZAA0  Zalesovo Array     30.14 338 P       P      12 27 29.6 +0.9
ZAA0                               IAmb    IAmb   12 27 45.3
                comp=Z,19nm,1.4s
ZALV  Zalesovo Beam      30.14 338 P       P      12 27 27.9 -0.7
                comp=Z,1.4nm,0.4s,baz=145,slow=10,SNR=7.5
ZALV                               LR      LR     12 39 33.5
                comp=Z,204nm,18.6s,baz=152,slow=36
                comp=Z,1.4nm,0.4s
ZALV  Zalesovo Beam      30.14 338 P       P      12 27 28.8 +0.2
ZALV  Zalesovo Beam      30.14 338 i P     P      12 27 29.0 +0.4
ZALV                               pmax    pmax
                comp=Z,1.0nm,0.4s
KURBB Kurchatov Arra     30.20 328 P       P      12 27 28.9 -0.3
                comp=Z,2.5nm,0.9s,baz=138,slow=9.5,SNR=30
KURBB                              PcP     PcP    12 30 28.8 -0.9
                comp=Z,1.1nm,0.8s,baz=108,slow=2.4,SNR=4.3
KURBB                              LR      LR     12 39 16.8
                comp=Z,531nm,20.6s,baz=159,slow=36
                comp=Z,2.5nm,0.9s
KURK  Kurchatov          30.22 328 P       P      12 27 30.3 +0.9
KURK                               IAmb    IAmb   12 27 44.0
                comp=Z,7.9nm,0.7s
KURK  Kurchatov          30.22 328ceP      P      12 27 28.6 -0.8
KURK                               pmax    pmax
                comp=Z,11nm,1.3s
KURK  Kurchatov          30.22 328 P       P      12 27 29.6 +0.2
KURK                               pP      sP     12 27 39.0 -3.4
KURK                               sP      pP     12 27 43.0 +4.5
KBL   Kabul              30.35 293 P       P      12 27 31.6 +0.6
KBL                                IAmb    IAmb   12 27 35.8
                comp=Z,19nm,1.4s
KBL   Kabul              30.35 293 P       P      12 27 31.6 +0.6
KBL                                pmax    pmax
                comp=Z,19nm,1.4s
PCHI  Peechi             30.38 242 eP      P      12 27 29.4 -1.7
DZA   Taraz              30.44 310 eP      P      12 27 32.0 +0.5
                baz=309
DZA   Taraz              30.44 310 eP      P      12 27 32.0 +0.5
CHGR  Chuyangaron        30.84 301 P       P      12 27 36.0 +0.8
CHGR                               IAmb    IAmb   12 27 53.0
                comp=Z,29nm,1.1s
CHGR  Chuyangaron        30.84 301 P       P      12 27 36.0 +0.8
CHGR                               pmax    pmax
                comp=Z,29nm,1.1s
MJAR  Matsushiro Arr     30.87  64 P       P      12 27 34.1 -1.3
                comp=Z,2.8nm,0.9s,baz=261,slow=9.8,SNR=11
MJAR                               LR      LR     12 40 49.4
                comp=Z,359nm,18.9s,baz=262,slow=38
                comp=Z,2.8nm,0.9s
KLR   Kul'dur            31.06  37 P       P      12 27 35.8 -1.0
                comp=Z,3.7nm,0.9s,baz=248,slow=10,SNR=8.9
KLR                                LR      LR     12 41 55.2
                comp=Z,244nm,19.0s,baz=230,slow=40
                comp=Z,3.7nm,0.9s
KLR   Kul'dur            31.06  37ceP      P      12 27 34.5 -2.3
KLR                                pmax    pmax
                comp=Z,6.0nm,1.3s
KK31  Karatay Array      31.07 310 P       P      12 27 37.3 +0.2
KK31  Karatay Array      31.07 310 P       P      12 27 37.3 +0.2
KK31                               pmax    pmax
                comp=Z,8.0nm,1.4s
KKAR  Karatay Array      31.07 310 P       P      12 27 37.1  0.0
KKAR  Karatay Array      31.07 310 P       P      12 27 37.6 +0.5
KKAR                               IAmb    IAmb   12 27 49.4
                comp=Z,7.6nm,1.4s
KKAR  Karatay Array      31.07 310 P       P      12 27 37.6 +0.5
KKAR                               pmax    pmax
                comp=Z,8.0nm,1.4s
IUG   Iuzhnay            31.10 308 eP      P      12 27 38.3 +0.8
                baz=307
IUG   Iuzhnay            31.10 308 eP      P      12 27 38.2 +0.8
MDSI  Maura Dua          31.40 179 P       P      12 27 41.9 +1.8
                comp=Z,12nm,1.0s,comp=Z,2μm
BOD   Bodaibo            31.60  11 eP      P      12 27 41.8 +0.3
BOD                                pmax    pmax
                comp=Z,6.0nm,1.8s
JHJ   Hachijo jima 2     31.90  70 LR      LR     12 40 21.8
                comp=Z,272nm,21.5s,baz=266,slow=36
ZEA   Zeya               31.90  27 eP      P      12 27 44.5 +0.3
ZEA                                pmax    pmax
                comp=Z,10.0nm,0.7s
ZEA                                MLR     MLR
                comp=Z,200nm,15.0s
BRZS  Berezniki          32.80 322 eP      P      12 27 53.4 +1.2
                baz=322
BRZS  Berezniki          32.80 322 eP      P      12 27 53.3 +1.2
LUWI  Luwuk              33.60 143 P       P      12 28 00.0 +0.6
                comp=Z,47nm,1.1s,comp=Z,2μm
JCJ   Chichijima         34.40  81 LR      LR     12 40 53.6
                comp=Z,220nm,21.0s,baz=271,slow=34
GRNR  Gornyy             34.43  38⇓iP      P      12 28 05.0 -1.3
GRNR                               eS      S      12 33 31.8 -0.7
GRNR                               pmax    pmax
                comp=E,1.0nm,0.5s
GRNR                               pmax    pmax
                comp=N,1.0nm,0.8s
GRNR                               pmax    pmax
                comp=Z,2.0nm,0.9s
GRNR                               smax    smax
                comp=N,3.0nm,0.5s
GRNR                               MLR     MLR
                comp=E,310nm,16.0s
GRNR                               MLR     MLR
                comp=N,210nm,17.0s
GRNR                               MLR     MLR
                comp=Z,270nm,13.0s
KAPI  Kappang            35.61 151 i P     P      12 28 19.0 +2.3
KAPI  Kappang            35.61 151 P       P      12 28 23.9 +7.2
KAPI                               pP      sP     12 28 33.6 +4.0
BVAR  Borovoye Array     35.67 326 LR      LR     12 42 29.8
                comp=Z,254nm,21.0s,baz=116,slow=36
ASAJ  Asahikawa          35.69  51 P       P      12 28 16.8 -0.4
                comp=Z,4.3nm,0.8s,baz=259,slow=11,SNR=7.4
ASAJ                               LR      LR     12 43 14.1
                comp=Z,189nm,19.1s,baz=196,slow=37
                comp=Z,4.3nm,0.8s
JKA   Kamikawa-asahi     35.69  51 P       P      12 28 15.8 -1.4
JKA                                IAmb    IAmb   12 28 30.3
                comp=Z,6.2nm,0.8s
BRVK  Borovoye           35.74 326ceP      P      12 28 17.2 -0.3
BRVK                               pmax    pmax
                comp=Z,8.0nm,1.7s
BRVK  Borovoye           35.74 326 P       P      12 28 18.6 +1.1
YSS   Yuzh-Sakhalins     36.63  47 P       P      12 28 24.2 -1.0
YSS                                IAmb    IAmb   12 28 35.4
                comp=Z,6.3nm,0.7s
YSS   Yuzh-Sakhalins     36.63  47 eP      P      12 28 24.6 -0.6
YSS                                pmax    pmax
                comp=Z,10.0nm,0.7s
YSS                                MLR     MLR
                comp=Z,300nm,14.0s
TWSI  Taliwang, Sumb     37.93 158 P       P      12 28 37.3 +0.8
                comp=Z,17nm,1.2s
TYV   Tymovskoe          37.98  41 eP      P      12 28 36.9 +0.3
TYV                                pmax    pmax
                comp=Z,9.0nm,1.1s
TYV                                pmax    pmax
                comp=Z,200nm,6.0s
YAK   Yakutsk            39.06  19 P       P      12 28 44.2 -1.3
                comp=Z,5.5nm,0.3s,baz=204,slow=1.5,SNR=5.9
YAK                                LR      LR     12 46 41.1
                comp=Z,123nm,19.1s,baz=260,slow=39
                comp=Z,5.5nm,0.3s
YAK   Yakutsk            39.06  19 P       P      12 28 45.0 -0.5
YAK   Yakutsk            39.06  19 eP      P      12 28 44.6 -0.9
YAK                                e*PP    sP     12 28 55.0 -3.5
YAK                                e              12 30 11.7
YAK                                e              12 30 52.9
YAK                                eS      S      12 34 40.8 -1.9
YAK                                e*SS    sS     12 35 02.0 +4.1
YAK                                e              12 38 49.6
YAK                                pmax    pmax
                comp=Z,22nm,0.9s
YAK                                pmax    pmax
                comp=E,7.0nm,1.1s
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YAK                                pmax    pmax
                comp=N,7.0nm,1.0s
YAK                                pmax    pmax
                comp=Z,124nm,4.5s
YAK                                pmax    pmax
                comp=N,76nm,4.6s
YAK                                pmax    pmax
                comp=E,110nm,4.5s
YAK                                smax    smax
                comp=E,135nm,5.2s
YAK                                smax    smax
                comp=N,80nm,4.4s
YAK                                MLR     MLR
                comp=Z,143nm,19.0s
YAK                                MLR     MLR
                comp=E,144nm,21.0s
GEYT  Alibeck            39.38 298 P       P      12 28 48.7 +0.1
                comp=E,7.6nm,0.7s,baz=110,slow=6.5,SNR=13
GEYT                               LR      LR     12 47 46.0
                comp=E,182nm,19.8s,baz=127,slow=40
                comp=E,7.6nm,0.7s
ABKAR Akbulak array      40.01 315 P       P      12 28 53.9 +0.3
ABKAR Akbulak array      40.01 315 P       P      12 28 54.0 +0.4
ABKAR                              IAmb    IAmb   12 28 55.0
                comp=Z,6.2nm,0.7s
GUMO  Guam               40.91 101 LR      LR     12 45 00.9
                comp=Z,62nm,20.0s,baz=298,slow=35
AKTO  Aktyubinsk         41.55 317 P       P      12 29 06.3  0.0
                comp=Z,5.4nm,0.7s,baz=90,slow=13,SNR=18
AKTO                               LR      LR     12 47 12.6
                comp=Z,139nm,18.3s,baz=63,slow=37
                comp=Z,5.4nm,0.7s
SVE   Sverdlovsk         42.44 326 eP      P      12 29 14.9 +1.4
SVE                                pmax    pmax
                comp=Z,19nm,1.2s
NRIK  Noril'sk           43.29 352 P       P      12 29 19.8 -0.5
                comp=Z,4.5nm,0.5s,baz=149,slow=6.5,SNR=4.7
NRIK                               LR      LR     12 47 30.0
                comp=Z,220nm,21.8s,baz=168,slow=36
                comp=Z,4.5nm,0.5s
NRIK  Noril'sk           43.29 352 P       P      12 29 19.7 -0.5
NRIK                               IAmb    IAmb   12 29 36.3
                comp=Z,22nm,1.4s
ARU   Arti               43.31 325 P       P      12 29 20.1 -0.4
                comp=Z,3.4nm,0.4s,baz=132,slow=4.2,SNR=14
ARU                                LR      LR     12 47 30.3
                comp=Z,134nm,18.8s,baz=110,slow=36
                comp=Z,3.4nm,0.4s
ARU   Arti               43.31 325 P       P      12 29 20.7 +0.2
ARU                                IAmb    IAmb   12 29 36.2
                comp=Z,15nm,0.9s
ARU   Arti               43.31 325c iP     P      12 29 20.8 +0.2
ARU                                *PP     sP     12 29 34.7 +0.9
ARU                                               12 31 00.4
ARU                                S       S      12 35 45.7 -0.4
ARU                                SS      SS     12 38 58.5 -1.4
ARU                                pmax    pmax
                comp=Z,13nm,0.9s
ARU   Arti               43.31 325 P       P      12 29 20.8 +0.2
ARU                                pP      sP     12 29 30.8 -3.0
ARU                                sP      pP     12 29 34.3 +4.4
MA2   Magadan            45.77  31 LR      LR     12 49 30.8
                comp=Z,99nm,19.2s,baz=264,slow=37
TIXI  Tiksi              46.78  11 LR      LR     12 51 07.6
                comp=Z,175nm,20.7s,baz=200,slow=38
TIXI  Tiksi              46.78  11 P       P      12 29 46.4 -1.6
TIXI  Tiksi              46.78  11ceP      P      12 29 45.7 -2.2
TIXI                               pmax    pmax
                comp=Z,3.0nm,0.5s
TIXI  Tiksi              46.78  11 P       P      12 29 46.7 -1.2
TIXI                               pP      sP     12 29 56.9 -4.2
PETK  Petropavlovsk-     47.51  42 LR      LR     12 49 48.1
                comp=Z,199nm,20.2s,baz=256,slow=36
SEY   Seymchan           47.88  28 P       P      12 29 56.9 +0.4
                comp=Z,1.4nm,0.8s,baz=236,slow=3.6,SNR=2.9
SEY                                LR      LR     12 51 42.1
                comp=Z,274nm,18.6s,baz=246,slow=38
                comp=Z,1.4nm,0.8s
SEY   Seymchan           47.88  28 i P     P      12 29 55.5 -1.0
SEY                                pmax    pmax
                comp=Z,3.0nm,1.1s
BELG  Belogornoye        48.32 317 LR      LR     12 50 37.6
                comp=Z,153nm,20.5s,baz=131,slow=36
BELG  Belogornoye        48.32 317d iP     P      12 29 59.8 -0.3
BELG                               pmax    pmax
                comp=Z,5.0nm,0.8s
KIRV  Kirov              48.68 326ceP      P      12 30 03.6 +0.8
GNI   Garni              49.76 301 LR      LR     12 54 46.1
                comp=Z,106nm,20.7s,baz=122,slow=40
GNI   Garni              49.76 301 P       P      12 30 13.0 +1.4
GNI   Garni              49.76 301ceP      P      12 30 12.5 +0.9
GNI                                pmax    pmax
                comp=Z,23nm,1.3s
ZEI   Tsey               50.26 304 eP      P      12 30 13.4 -2.0
ZEI                                pmax    pmax
                comp=Z,12nm,1.2s
MBWA  Marble Bar         50.50 160 P       P      12 30 17.6 +0.6
ONI   Oni                50.60 304 P       P      12 30 19.1 +1.3
ONI                                IAmb    IAmb   12 30 20.0
                comp=Z,11nm,0.9s
ONI   Oni                50.60 304 P       P      12 30 19.1 +1.3
ONI                                pmax    pmax
                comp=Z,11nm,0.9s
KBZ   Khabaz             50.96 306 P       P      12 30 19.8 -0.5
                comp=Z,1.6nm,0.8s,baz=111,slow=14,SNR=2.0
KBZ                                LR      LR     12 56 18.6
                comp=Z,94nm,19.1s,baz=62,slow=41
                comp=Z,1.6nm,0.8s
KVAR  Kislovodsk Arr     51.10 306 LR      LR     12 54 46.7
                comp=Z,181nm,18.0s,baz=146,slow=39
KIV   Kislovodsk         51.10 306 P       P      12 30 22.2 +0.6
KIV   Kislovodsk         51.10 306 eP      P      12 30 21.2 -0.4
KIV                                pmax    pmax
                comp=Z,25nm,1.1s
KIV                                MLR     MLR
                comp=Z,68nm,16.0s
KIV   Kislovodsk         51.10 306 P       P      12 30 21.5 -0.1
KIV                                sP      sP     12 30 35.2 +0.5
NEY   Neytrino           51.10 305 i P     P      12 30 22.1 +0.4
NEY                                pmax    pmax
                comp=Z,2.0nm,0.7s
SHA1  Shidzhatmaz        51.13 306 i P     P      12 30 21.0 -1.0
GURO  Guroymak-BITLI     52.00 299 P       P      12 30 29.5 +1.1
GURO                               IAmb    IAmb   12 30 30.3
                comp=Z,14nm,0.9s
KLMR  Klimovskoe         54.06 327 eP      P      12 30 42.1 -1.0
KLMR                               AMP            12 30 52.0
                comp=Z,46nm,1.0s
KLMR                               ePcP    PcP    12 31 48.1 +0.4
KLMR                               ePP     PP     12 32 39.3 -5.2
KLMR                               LR      LR     12 51 33.8
KLMR  Klimovskoe         54.06 327 eP      P      12 30 42.1 -1.0
KLMR                               e              12 31 48.0
KLMR                               pmax    pmax
                comp=Z,46nm,1.0s
MOS   Moscow             54.54 321 eP      P      12 30 48.7 +2.1
BILL  Bilibino           55.05  24 P       P      12 30 48.9 -1.2
BILL                               IAmb    IAmb   12 31 03.2
                comp=Z,21nm,1.5s
BILL  Bilibino           55.05  24 eP      P      12 30 48.0 -2.1
BILL                               e              12 31 50.8
BILL                               e              12 32 52.7
BILL                               ePPP    PPP    12 34 03.4
BILL                               pmax    pmax
                comp=Z,9.0nm,1.3s
BILL  Bilibino           55.05  24 P       P      12 30 49.2 -0.9
BILL                               pP      pP     12 30 58.4 -1.3
BILL                               sP      sP     12 31 02.6 -0.9
OBN   Obninsk            55.11 320 eP      P      12 30 49.8 -1.0
OBN                                e              12 31 50.7
OBN                                e              12 32 52.9
OBN                                ePPP    PPP    12 34 06.3
OBN                                pmax    pmax
                comp=Z,5.0nm,0.9s
WRAB  Tennant Creek      55.52 144 P       P      12 30 54.3 +0.1
WRAB  Tennant Creek      55.52 144 P       P      12 30 54.3 +0.1
WRAB                               pmax    pmax
                comp=Z,16nm,0.7s
WRAB  Tennant Creek      55.52 144 P       P      12 30 54.6 +0.5
WRA   Warramunga Arr     55.53 144 P       P      12 30 54.5 +0.3
                comp=Z,6.1nm,0.7s,baz=333,slow=8.4,SNR=81
WRA                                LR      LR     12 59 06.9
                comp=Z,68nm,18.2s,baz=316,slow=41
                comp=Z,6.1nm,0.7s
WRA   Warramunga Arr     55.53 144 P       P      12 30 54.7 +0.5
WRA   Warramunga Arr     55.53 144 P       P      12 30 54.7 +0.5
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WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WB2	Warramunga Arr	55.53	144	P	P	12 30 54.6	+0.3
SIM	Simferopol'	57.15	308	P	P	12 31 05.8	+0.3
SIM				*e*S	S	12 38 55.2	-3.8
SIM				pmax	pmax		
	comp=Z,16nm,0.8s						
SIM				smax	smax		
	comp=E,250nm,29.5s						
SIM				MLR	MLR		
	comp=Z,48nm,16.0s						
BR131	Keskin Array S	58.28	302	P	P	12 31 13.3	-0.5
BR131	Keskin Array S	58.28	302	P	P	12 31 13.3	-0.5
BR131				pmax	pmax		
	comp=Z,29nm,1.8s						
BRTR	Keskin Array B	58.28	302	P	P	12 31 12.8	-1.0
	comp=Z,2.6nm,0.7s,baz=112,slow=6.8,SNR=16						
BRTR				LR	LR	13 02 32.7	
	comp=Z,77nm,18.4s,baz=92,slow=42						
	comp=Z,2.6nm,0.7s						
BRTR	Keskin Array B	58.28	302	*i* P	P	12 31 13.3	-0.5
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AS31	Alice Springs	58.42	147	P	P	12 31 15.3	+0.6
ASAR	Alice Springs	58.42	147	P	P	12 31 15.2	+0.5
	comp=Z,4.1nm,0.7s,baz=331,slow=7.0,SNR=54						
	comp=Z,4.1nm,0.7s						
EIL	Elat	59.49	290	LR	LR	13 00 26.6	
	comp=Z,144nm,18.7s,baz=57,slow=39						
AKASG	Malin Array Be	59.74	315	P	P	12 31 22.7	-0.8
	comp=Z,1.5nm,0.5s,baz=63,slow=6.1,SNR=12						
AKASG				LR	LR	12 57 30.4	
	comp=Z,141nm,18.3s,baz=80,slow=36						
	comp=Z,1.5nm,0.5s						
AKASG	Malin Array Be	59.74	315	*i* P	P	12 31 23.0	-0.5
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKBB	Malin Array Si	59.74	315	*i* P	P	12 31 23.6	+0.1
AKBB				pmax	pmax		
	comp=Z,68nm,5.6s						
FINES	FINESS Array B	60.59	327	P	P	12 31 29.1	-0.1
	comp=Z,2.1nm,0.6s,baz=94,slow=6.1,SNR=14						
FINES				LR	LR	12 57 56.1	
	comp=Z,170nm,20.0s,baz=85,slow=36						
	comp=Z,2.1nm,0.6s						
ARCES	ARCESS Array B	60.68	337	P	P	12 31 29.4	-0.3
	comp=Z,4.4nm,0.9s,baz=90,slow=8.1,SNR=1.8						
	comp=Z,4.4nm,0.9s						
NACGM	Naroch	60.75	320	*e*P	P	12 31 28.3	-2.1
	comp=Z,22nm,1.0s,baz=84						
NWAO	Narrogin (SRO)	61.12	167	LR	LR	12 59 20.8	
	comp=Z,82nm,20.1s,baz=262,slow=37						
TPGR	Topolog	61.16	308	⇑P	P	12 31 33.6	+0.2
VRI	Vrincioaia	62.14	310	⇑P	P	12 31 40.8	+0.9
VRI	Vrincioaia	62.14	310	P	P	12 31 40.8	+0.9
PLOR	Plostina	62.20	310	⇑P	P	12 31 41.3	+0.9
PLOR	Plostina	62.20	310	P	P	12 31 41.3	+0.9
ISR	Istrita	62.42	309	⇑P	P	12 31 42.3	+0.5
ISR	Istrita	62.42	309	P	P	12 31 42.3	+0.5
JETT	Jettan, Norway	62.47	337	*e*P	P	12 31 42.5	+0.7
COVR	Voineasa-Covas	62.51	310	⇑P	P	12 31 43.5	+1.1
CTAO	Charters Tower	62.62	134	P	P	12 31 49.2	+5.8
OZUR		62.74	310	⇑P	P	12 31 44.3	+0.3
MLR	Muntele Rosu	62.76	309	⇑P	P	12 31 45.4	+1.3
MLR	Muntele Rosu	62.76	309	LR	LR	13 02 23.7	
	comp=Z,126nm,18.1s,baz=50,slow=39						
MLR	Muntele Rosu	62.76	309	P	P	12 31 45.5	+1.3
MLR	Muntele Rosu	62.76	309	P	P	12 31 45.5	+1.3
MLR				pmax	pmax		
	comp=Z,15nm,0.9s						
BURAR	Bucovina Array	62.83	312	⇑P	P	12 31 44.7	0.0
BURAR	Bucovina Array	62.83	312	P	P	12 31 44.6	0.0
SPA0	Spitsbergen Ar	63.08	347	*e*P	P	12 31 47.1	+1.4
SPITS	Spitsbergen Ar	63.08	347	LR	LR	13 01 17.9	
	comp=Z,134nm,19.9s,baz=48,slow=38						
VOIR		63.38	310	⇑P	P	12 31 47.7	-0.7
VOIR		63.38	310	P	P	12 31 47.6	-0.7
ARR	Arges	63.68	310	⇑P	P	12 31 50.4	+0.1
LOT	Lotru	64.26	310	⇑P	P	12 31 53.8	-0.3
MARR	Marisel-Cluj	64.42	311	⇑P	P	12 31 55.7	+0.6
STEI	Steigen	64.53	335	*e*P	P	12 31 54.3	-1.0
FAUS	Fauske	64.60	335	*e*P	P	12 31 55.7	-0.1
DRGR		64.67	311	⇑P	P	12 31 57.3	+0.6
DRGR		64.67	311	P	P	12 31 57.3	+0.6
GZR	Gura Zlata	64.95	310	⇓P	P	12 31 58.8	+0.2
GZR	Gura Zlata	64.95	310	P	P	12 31 58.7	+0.2
TNA	Tin City	65.11	27	P	P	12 31 58.3	-0.8
TNA	Tin City	65.11	27	P	P	12 31 58.1	-1.0
	baz=281						
SURR	Surduc	65.31	310	⇑P	P	12 32 00.8	0.0
VTS	Vitosha	65.32	307	⇑P	P	12 32 00.5	-0.6
VTS	Vitosha	65.32	307	P	P	12 32 02.7	+1.6
VTS				IAmb	IAmb	12 32 14.4	
	comp=Z,6.3nm,0.8s						
VTS	Vitosha	65.32	307	P	P	12 32 02.7	+1.6
VTS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HERR	Herculane	65.32	309	⇑P	P	12 32 00.7	-0.2
SIRR	Siria	65.50	311	⇓P	P	12 32 02.6	+0.6
BZS	Buzias	65.69	310	⇓P	P	12 32 02.8	-0.5
BZS	Buzias	65.69	310	P	P	12 32 02.7	-0.5
HNR	Honiara	65.69	115	LR	LR	13 02 36.6	
	comp=Z,346nm,18.1s,baz=282,slow=38						
MDVR	Moldovita	65.83	309	⇑P	P	12 32 04.8	+0.6
IDI	Anoyia	66.09	299	LR	LR	13 05 47.6	
	comp=Z,47nm,18.3s,baz=74,slow=40						
ANM	Nome	66.38	28	P	P	12 32 06.8	-0.6
	baz=283						
VYHS	Vyhne	66.79	314	*e*P	P	12 32 13.2	+2.9
VYHS	Vyhne	66.79	314	*e*P	P	12 32 13.2	+2.9
VYHS				*e*		12 33 53.0	
MORC	Moravsky Berou	67.28	315	⇑P	P	12 32 13.2	-0.2
MORC	Moravsky Berou	67.28	315	*e*P	P	12 32 10.8	-2.6
MORC	Moravsky Berou	67.28	315	P	P	12 32 13.2	-0.2
JAVC	Velka Javorina	67.44	315	*e*P	P	12 32 16.2	+1.7
NIKH	Nikolski High	67.52	41	P	P	12 32 13.9	-0.9
	baz=285						
MORH	Mrgy, Hungar	67.53	312	⇑P	P	12 32 14.4	-0.6
NC602	NORSAR Array S	67.66	328	*e*P	P	12 32 15.3	-0.3
A21K	Barrow	67.71	20	P	P	12 32 16.1	+0.4
A21K	Barrow	67.71	20	P	P	12 32 15.7	0.0
	baz=288						
NB2	NORSAR Subarra	67.73	328	P	P	12 32 15.1	-1.0
	comp=Z,2.2nm,0.6s,baz=75,slow=6.5						
NB2	NORSAR Subarra	67.73	328	P	P	12 32 15.1	-1.0
	slow=6.5						
NOA	NORSAR Array B	67.73	328	P	P	12 32 14.3	-1.7
	comp=Z,1.2nm,0.7s,baz=74,slow=6.4,SNR=7.2						
NOA				LR	LR	13 02 17.8	
	comp=Z,104nm,20.5s,baz=65,slow=36						
	comp=Z,1.2nm,0.7s						
DPC	Dobruska-Polom	67.88	316	*e*P	P	12 32 23.9	+6.7
DPC	Dobruska-Polom	67.88	316	*e*P	P	12 32 23.9	+6.7
NC204	NORSAR Array S	67.88	329	P	P	12 32 17.1	+0.1
VRAC	Vranov	68.00	315	LR	LR	13 03 06.5	
	comp=Z,155nm,19.0s,baz=61,slow=37						
VRAC	Vranov	68.00	315	*e*P	P	12 32 18.1	+0.2
KRUC	Moravsky	68.19	315	*e*P	P	12 32 19.8	+0.7
RONA	Rosalia, Austr	68.65	314	*e*P	P	12 32 22.6	+0.5
	comp=Z,2.0nm,0.7s						
CONA	Conrad Observa	68.86	314	*e*P	P	12 32 22.2	-1.2
	comp=Z,2.4nm,1.1s						
KONO	Kongsberg	68.90	327	*e*P	P	12 32 21.4	-2.0
STKA	Stephens Creek	69.00	146	P	P	12 32 24.5	+0.2
	comp=Z,1.6nm,0.8s,baz=330,slow=16,SNR=1.5						
	comp=Z,1.6nm,0.8s						
ARSA	Arzberg	69.28	313	*e*P	P	12 32 24.9	-1.1
	comp=Z,2.4nm,1.0s						
KIBK	Kibwezi	69.36	256	P	P	12 32 28.5	+1.4
KIBK				IAmb	IAmb	12 32 44.4	
	comp=Z,24nm,1.7s						
CKRC	Cesky Krumlov	69.58	315	*e*P	P	12 32 28.1	+0.3
CKRC	Cesky Krumlov	69.58	315	*e*P	P	12 32 28.1	+0.3
GCSA	Galena City Sc	69.82	27	P	P	12 32 29.1	+0.2
	baz=290						
MOA	Molln	69.91	314	P	P	12 32 29.4	-0.4
	comp=Z,4.9nm,1.3s						
KHC	Kasperske Hory	69.94	316	*e*P	P	12 32 29.9	-0.1
KHC	Kasperske Hory	69.94	316	*e*P	P	12 32 29.9	-0.1
GERES	GERESS Array B	69.95	315	P	P	12 32 29.8	-0.4
	comp=Z,0.9nm,0.6s,baz=62,slow=6.3,SNR=8.6						
GERES				LR	LR	13 04 15.7	
	comp=Z,198nm,20.8s,baz=76,slow=37						
	comp=Z,0.9nm,0.6s						
FALS	False Pass	70.04	38	P	P	12 32 29.4	-1.0
	baz=289						
F21K	Alatna River	70.20	24	P	P	12 32 31.2	-0.1
	baz=293						
E22K	Anaktuvuk Pass	70.42	23	P	P	12 32 32.6	-0.1
	baz=294						
D23K	Nanushuk River	70.46	22	P	P	12 32 33.1	+0.2
	baz=294						
G21K	Allakaket	70.47	24	P	P	12 32 32.3	-0.6
	baz=293						
N16K	Nishlik Lake	70.51	31	P	P	12 32 33.0	-0.3
	baz=290						
F22K	John River	70.55	23	P	P	12 32 33.6	+0.2
	baz=294						
KBA	Koelnbreinsper	70.75	314	*e*P	P	12 32 33.9	-1.3
	comp=Z,2.4nm,0.7s						
C24K	Franklin Bluff	70.77	21	P	P	12 32 34.3	-0.4
	baz=296						
TTA	Tatalina	70.84	28	P	P	12 32 35.0	-0.4
TTA				IAmb	IAmb	12 32 59.0	
	comp=Z,7.6nm,1.2s						
TTA	Tatalina	70.84	28	P	P	12 32 35.0	-0.4
TTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TTA	Tatalina	70.84	28	P	P	12 32 34.8	-0.5
	baz=292						
D24K	Happy Valley	70.98	21	P	P	12 32 35.8	-0.2
	baz=296						
G22K	Bettles	71.03	24	P	P	12 32 35.9	-0.3
	baz=294						
H21K	Melozitna Rive	71.07	25	P	P	12 32 36.3	-0.3
H21K				IAmb	IAmb	12 32 51.5	
	comp=Z,6.8nm,1.0s						
H21K	Melozitna Rive	71.07	25	P	P	12 32 36.5	-0.1
	baz=294						
O16K	Kokwok River B	71.14	32	P	P	12 32 36.6	-0.5
	baz=291						
E23K	Chandalar	71.20	22	P	P	12 32 37.5	0.0
	baz=296						
COLD	Coldfoot	71.36	23	P	P	12 32 37.8	-0.5
	baz=295						
P16K	Nushagak River	71.39	33	P	P	12 32 37.5	-1.0
	baz=292						
ABTA	Abfaltersbach	71.40	313	*e*P	P	12 32 38.1	-0.9
	comp=Z,1.8nm,0.7s						
JMIC	Jan Mayen	71.41	341	LR	LR	13 07 55.5	
	comp=Z,45nm,18.9s,baz=74,slow=39						
SDPT	Sand Point	71.46	37	P	P	12 32 38.2	-0.9
	baz=291						
K20K	Telida	71.49	28	P	P	12 32 39.2	+0.1
K20K				IAmb	IAmb	12 32 41.1	
	comp=Z,16nm,1.4s						
K20K	Telida	71.49	28	P	P	12 32 38.8	-0.4
	baz=293						
H22K	Ishtalitna Cre	71.51	25	P	P	12 32 38.8	-0.4
	baz=295						
O17K	Koliganek Bris	71.54	32	P	P	12 32 39.0	-0.5
	baz=292						
E24K	Your Creek	71.58	22	P	P	12 32 39.5	-0.2
	baz=297						
I21K	Tanana	71.58	26	P	P	12 32 40.6	+0.9
I21K				IAmb	IAmb	12 32 46.1	
	comp=Z,7.7nm,0.8s						
I21K	Tanana	71.58	26	P	P	12 32 39.5	-0.2
	baz=294						
L19K	White Mountain	71.62	29	P	P	12 32 40.1	+0.1
L19K				IAmb	IAmb	12 32 53.1	
	comp=Z,8.4nm,0.8s						
L19K	White Mountain	71.62	29	P	P	12 32 40.1	+0.1
	baz=293						
G23K	Bananza Creek	71.65	24	P	P	12 32 40.3	+0.1
	baz=296						
D25K	Kavik River	71.68	21	P	P	12 32 40.5	+0.2
	baz=298						
SVW2	Sparrevohn	71.73	30	P	P	12 32 41.0	+0.3
SVW2				IAmb	IAmb	12 33 16.6	
	comp=Z,14nm,1.3s						
WTTA	Wattenberg	71.78	314	*e*P	P	12 32 41.0	-0.5
	comp=Z,5.6nm,1.2s						
C26K	Camden Bay	71.85	20	P	P	12 32 41.3	+0.2
	baz=299						
L20K	Farewell, AK	71.92	28	P	P	12 32 41.8	-0.1
	baz=294						
M19K	Big River Lodg	71.93	29	P	P	12 32 42.1	+0.2
M19K	Big River Lodg	71.93	29	P	P	12 32 41.6	-0.3
	baz=294						
CHUM	Lake Minchumin	71.99	27	P	P	12 32 41.8	-0.3
	baz=295,SNR=7.1						
F24K	Squaw Lake	72.03	23	P	P	12 32 42.2	-0.2
	baz=297						
SQTA	Sankt Quirin	72.07	314	*e*P	P	12 32 42.5	-0.7
	comp=Z,3.3nm,0.6s						
MOTA	Moosalm	72.09	314	*e*P	P	12 32 42.9	-0.4
	comp=Z,2.2nm,0.5s						
MLY	Manley	72.12	25	P	P	12 32 43.3	+0.4
MLY				IAmb	IAmb	12 32 43.9	
	comp=Z,5.1nm,0.7s						
MLY	Manley	72.12	25	P	P	12 32 42.9	0.0
	baz=296,SNR=8.6						
R16K	Pilot Point	72.14	34	P	P	12 32 43.3	+0.2
	baz=292						
Q16K	King Salmon	72.17	33	P	P	12 32 43.7	+0.4
	baz=293						
CHGN	Chignik	72.20	35	P	P	12 32 43.3	-0.2
	baz=292						
H23K	Yukon River	72.22	24	P	P	12 32 42.9	-0.6
H23K				IAmb	IAmb	12 32 45.4	
	comp=Z,24nm,1.6s						
H23K	Yukon River	72.22	24	P	P	12 32 43.4	-0.1
	baz=296						
CAST	Castle Rocks	72.28	27	P	P	12 32 44.6	+0.7
CAST	Castle Rocks	72.28	27	P	P	12 32 43.9	0.0
	baz=295,SNR=5.4						
N19K	Bonanza Creek	72.33	30	P	P	12 32 44.5	+0.2
N19K				IAmb	IAmb	12 32 46.2	
	comp=Z,10nm,1.1s						
N19K	Bonanza Creek	72.33	30	P	P	12 32 44.2	-0.2
	baz=294						
C27K	Jago River	72.35	20	P	P	12 32 44.3	0.0
	baz=300						
O18K	Koktuh Hills	72.39	31	P	P	12 32 44.7	0.0
O18K	Koktuh Hills	72.39	31	P	P	12 32 44.1	-0.5
	baz=294						
BPAW	Bear Paw Mtn.	72.43	26	P	P	12 32 45.0	+0.2
BPAW				IAmb	IAmb	12 32 50.4	
	comp=Z,9.9nm,0.8s						
BPAW	Bear Paw Mtn.	72.43	26	P	P	12 32 44.7	-0.1
	baz=296,SNR=15						
FETA	Feichten	72.45	314	*e*P	P	12 32 44.6	-0.8
	comp=Z,4.3nm,0.8s						
PPLA	Purkeypile	72.46	28	P	P	12 32 45.9	+0.8
PPLA				IAmb	IAmb	12 32 51.7	
	comp=Z,16nm,1.0s						
PPLA	Purkeypile	72.46	28	P	P	12 32 45.0	-0.2
	baz=295,SNR=7.1						
M20K	Styx River	72.49	29	P	P	12 32 45.4	+0.1
M20K				IAmb	IAmb	12 32 53.4	
	comp=Z,9.0nm,0.8s						
M20K	Styx River	72.49	29	P	P	12 32 45.1	-0.1
	baz=295						
G24K	Hadweenzic Riv	72.56	23	P	P	12 32 46.0	+0.5
	baz=298						
P18K	Big Mountain,	72.56	32	P	P	12 32 45.6	-0.1
	baz=294						
I23K	Minto, Yukon-K	72.59	25	P	P	12 32 45.3	-0.4
I23K	Minto, Yukon-K	72.59	25	P	P	12 32 45.6	0.0
	baz=297,SNR=5.1						
O19K	Port Alsworth	72.66	31	P	P	12 32 46.0	-0.1
	baz=294						
Q17K	Contact Creek	72.70	33	P	P	12 32 46.2	-0.4
	baz=293						
R17K	Ugashik Creek	72.71	34	P	P	12 32 46.0	-0.5
	baz=293						
F25K	Christian Rive	72.76	22	P	P	12 32 46.5	-0.2
	baz=299						
H24K	Noodor Dome	72.82	24	P	P	12 32 47.5	+0.3
H24K	Noodor Dome	72.82	24	P	P	12 32 46.4	-0.7
	baz=298						
FUORN	Ofenpass-Fuorn	72.89	314	P	P	12 32 48.8	+0.6
NEA2	Nenana	72.95	25	P	P	12 32 48.3	+0.4
NEA2				IAmb	IAmb	12 32 49.5	
	comp=Z,19nm,1.3s						
NEA2	Nenana	72.95	25	P	P	12 32 47.2	-0.7
	baz=297,SNR=12						
Q18K	Katmai Hardscr	72.97	32	P	P	12 32 47.1	-1.1
	baz=294						
TRF	Thorofare Moun	72.99	27	P	P	12 32 49.4	+1.0
TRF				IAmb	IAmb	12 32 56.0	
	comp=Z,6.3nm,0.8s						
TRF	Thorofare Moun	72.99	27	P	P	12 32 47.8	-0.6
	baz=296						
G25K	Bearman Lake	73.01	23	P	P	12 32 47.9	-0.2
	baz=299						
MDM	Murphy Dome	73.10	25	P	P	12 32 48.9	+0.1
SKT	Skwentna	73.13	28	P	P	12 32 48.7	-0.3
SKT				IAmb	IAmb	12 32 49.8	
	comp=Z,10nm,1.1s						
SKT	Skwentna	73.13	28	P	P	12 32 48.6	-0.4
	baz=296,SNR=5.8						
BMAR	Burnt Mountain	73.19	22	P	P	12 32 49.8	+0.5
F26K	Sheenjek River	73.20	22	P	P	12 32 48.9	-0.4
	baz=300						
TCOL	CIGO, UAF Yank	73.28	25	P	P	12 32 49.5	-0.3
	baz=298						
COLA	College	73.29	25	P	P	12 32 48.1	-1.7
COLA	College	73.29	25	P	P	12 32 49.2	-0.6
	baz=298						
POKR	Poker Plat Res	73.33	25	P	P	12 32 49.7	-0.4
	baz=298,SNR=7.9						
P19K	Oil Pt	73.38	31	P	P	12 32 49.8	-0.8
	baz=295						
WRH	Wood River Hil	73.39	25	P	P	12 32 50.5	0.0
MCK	McKinley	73.40	26	P	P	12 32 50.6	0.0
MCK	McKinley	73.40	26	P	P	12 32 50.6	0.0
MCK				pmax	pmax		
	comp=Z,31nm,1.8s						
MCK	McKinley	73.40	26	P	P	12 32 50.6	0.0
	baz=298						
CCB	Clear Creek Bu	73.41	25	P	P	12 32 50.1	-0.5
BFO	Black Forest	73.48	316	*i* P	P	12 32 51.4	+0.1
SUA	Susitna One	73.69	29	P	P	12 32 52.1	-0.4
SUA				IAmb	IAmb	12 32 59.9	
	comp=Z,12nm,0.8s						
SUA	Susitna One	73.69	29	P	P	12 32 51.8	-0.6
	baz=297						
IL31		73.70	25	P	P	12 32 53.1	+0.9
IL31				IAmb	IAmb	12 33 11.3	
	comp=Z,9.9nm,1.5s						
ILAR	Eielson Array	73.70	25	P	P	12 32 50.4	-1.9
	comp=Z,1.8nm,1.0s,baz=282,slow=3.7,SNR=18						
ILAR				LR	LR	13 07 57.3	
	comp=Z,148nm,19.0s,baz=286,slow=38						
	comp=Z,1.8nm,1.0s						
ILAR	Eielson Array	73.70	25	P	P	12 32 51.4	-0.9
ILAR	Eielson Array	73.70	25	P	P	12 32 51.4	-0.9
G26K	Porcupine Rive	73.71	22	P	P	12 32 51.9	-0.3
	baz=301						
E27K	Coleen River	73.76	21	P	P	12 32 52.7	+0.1
	baz=303						
CAPN	Captain Cook N	73.83	30	P	P	12 32 52.8	-0.2
	baz=296						
PRP	Porcupine Dome	73.83	24	P	P	12 32 53.7	+0.5
PRP				IAmb	IAmb	12 33 00.7	
	comp=Z,9.9nm,0.7s						
PRP	Porcupine Dome	73.83	24	P	P	12 32 52.7	-0.5
	baz=300,SNR=15						
M22K	Willow	73.83	28	P	P	12 32 52.5	-0.5
	baz=297						
HDA	Harding Lake	73.85	25	P	P	12 32 52.7	-0.4
	baz=299						
WAT1	Susitna Watana	73.98	27	P	P	12 32 53.7	-0.3
	baz=298						
RC01	Rabbit Creek A	74.30	29	P	P	12 32 56.1	+0.3
RC01				IAmb	IAmb	12 33 08.7	
	comp=Z,11nm,1.0s						
RC01	Rabbit Creek A	74.30	29	P	P	12 32 55.8	0.0
	baz=298						
PMR	Palmer	74.32	28	P	P	12 32 55.3	-0.7
	baz=298,SNR=7.7						
BRLK	Bradley Lake	74.40	30	P	P	12 32 56.2	-0.3
BRLK				IAmb	IAmb	12 33 00.0	
	comp=Z,10nm,1.0s						
OHAK	Old Harbor	74.41	33	P	P	12 32 56.3	-0.2
	baz=296						
BRSE	Bradley Lake S	74.48	30	P	P	12 32 56.2	-0.8
	baz=297						
G27K	Doyon Strip	74.49	22	P	P	12 32 55.8	-1.1
	baz=303						
KDAK	Kodiak Island	74.50	33	LR	LR	13 09 01.6	
	comp=Z,80nm,18.4s,baz=272,slow=38						
SML	Sawmill	74.56	28	P	P	12 32 57.4	0.0
SML	Sawmill	74.56	28	P	P	12 32 57.0	-0.4
	baz=298,SNR=6.3						
O22K	Cooper Landing	74.59	29	P	P	12 32 57.2	-0.3
	baz=298						
K24K	Donnelly Dome	74.60	25	P	P	12 32 57.1	-0.5
	baz=300,SNR=12						
KNK	Knik Glacier	74.69	28	P	P	12 32 58.1	-0.1
	baz=298						
I26K	Coal Creek Min	74.79	24	P	P	12 32 58.7	+0.1
	baz=302						
M23K	Glacier View	74.82	28	P	P	12 32 58.5	-0.4
	baz=299						
H27K	Steamboat Moun	74.86	22	P	P	12 32 59.0	0.0
	baz=303						
SEW	Seward	74.89	30	P	P	12 32 59.1	-0.1
	baz=298						
SCM	Sheep Creek Mo	74.96	28	P	P	12 32 59.1	-0.7
	baz=299						
RIDG	Independent Ri	74.99	25	P	P	12 32 59.2	-0.6
	baz=301						
PWL	Port Wells	75.01	29	P	P	12 32 59.8	-0.2
	baz=299						
J26L	Joseph Creek	75.07	24	P	P	12 32 59.7	-0.6
J26L	Joseph Creek	75.07	24	P	P	12 32 59.8	-0.6
	baz=302,SNR=21						
PAX	Paxson	75.14	26	P	P	12 32 59.9	-0.9
	baz=301						
I27K	Kandik River	75.17	23	P	P	12 33 00.8	0.0
	baz=303						
SCRK	Sand Creek	75.19	25	P	P	12 33 00.5	-0.6
	baz=302						
M24K	Tolsona, Glenn	75.30	27	P	P	12 33 01.8	+0.1
	baz=300,SNR=8.0						
HARP	HAARP	75.56	27	P	P	12 33 03.0	-0.2
	baz=301						
A36M	Sachs Harbour	75.67	14	P	P	12 33 04.1	+0.5
A36M				IAmb	IAmb	12 33 06.1	
	comp=Z,13nm,0.9s						
A36M	Sachs Harbour	75.67	14	P	P	12 33 03.2	-0.3
	baz=316						
KLU	Klutina	75.71	28	P	P	12 33 03.7	-0.4
	baz=301,SNR=9.5						
EGAK	Eagle	75.79	24	P	P	12 33 03.8	-0.5
	baz=304						
P23K	Montague Islan	75.84	29	P	P	12 33 04.1	-0.6
	baz=300						
K27K	Chicken	75.87	24	P	P	12 33 05.1	+0.2
K27K				IAmb	IAmb	12 33 12.3	
	comp=Z,5.6nm,0.8s						
K27K	Chicken	75.87	24	P	P	12 33 04.5	-0.3
	baz=303						
L26K	Log Cabin Wild	75.94	26	P	P	12 33 04.7	-0.6
	baz=302						
INK	Inuvik	76.12	19	LR	LR	13 11 18.4	
	comp=Z,89nm,18.1s,baz=310,slow=39						
INK	Inuvik	76.12	19	P	P	12 33 06.2	0.0
INK				IAmb	IAmb	12 33 07.5	
	comp=Z,11nm,1.1s						
INK	Inuvik	76.12	19	P	P	12 33 06.2	0.0
INK				pmax	pmax		
	comp=Z,11nm,1.2s						
INK	Inuvik	76.12	19	P	P	12 33 05.5	-0.6
	baz=310						
G30M	tAoh Zraii Nji	76.14	20	P	P	12 33 05.9	-0.6
	baz=308						
N25K	Chitina, Valde	76.20	27	P	P	12 33 06.3	-0.6
	baz=302						
EYAK	Cordova Ski Ar	76.27	28	P	P	12 33 07.9	+0.8
EYAK	Cordova Ski Ar	76.27	28	P	P	12 33 06.5	-0.7
	baz=301						
EPYK	Eagle Plains	76.36	21	P	P	12 33 07.8	+0.1
	baz=307						
M26K	Nabesna, AK	76.41	26	P	P	12 33 07.7	-0.3
	baz=303						
I29M	Ogilvie Camp,	76.44	22	P	P	12 33 08.0	-0.1
	baz=306						
L27K	Beaver Creek,	76.50	25	P	P	12 33 08.5	+0.1
	baz=304,SNR=6.8						
BCAR	Beaver Creek A	76.51	25	P	P	12 33 09.3	+0.7
Q23K	Middleton Isla	76.59	30	P	P	12 33 09.1	+0.1
	baz=301						
F31M	Tsiigehtchic	76.61	19	P	P	12 33 08.7	-0.2
	baz=310						
DAWY	Dawson	76.83	24	P	P	12 33 10.3	0.0

DAWY	**Dawson**	**76.83**	**24**	P	**P**	**12 33 10.1**	**-0.3**
	baz=305						
M27K	**Edge Creek, AK**	**76.87**	**26**	P	**P**	**12 33 11.7**	**+0.9**
M27K				IAmb	IAmb	12 35 47.1	
	comp=Z,20nm,1.6s						
M27K	**Edge Creek, AK**	**76.87**	**26**	P	**P**	**12 33 11.0**	**+0.3**
	baz=304						
EKA	**Eskdalemuir Ar**	**76.92**	**326**	LR	LR	13 12 23.8	
	comp=Z,93nm,18.9s,baz=40,slow=40						
MCARA	**McCarthy VSAT**	**76.95**	**27**	P	**P**	**12 33 11.5**	**+0.4**
	baz=303						
BVCY	**Beaver Creek**	**77.23**	**25**	P	**P**	**12 33 12.6**	**-0.1**
	baz=304						
K29M	**Barlow Dome**	**77.62**	**23**	P	**P**	**12 33 15.2**	**+0.3**
	baz=307						
YUK3	**Moose Creek**	**77.75**	**26**	P	**P**	**12 33 15.8**	**0.0**
	baz=305						
L29M	**L29M**	**77.85**	**24**	P	**P**	**12 33 16.3**	**+0.3**
	baz=307						
CTG	**Chitna Glacier**	**77.87**	**27**	P	**P**	**12 33 16.2**	**-0.1**
	baz=304						
C36M	**Paulatuk**	**77.88**	**16**	P	**P**	**12 33 15.9**	**-0.1**
C36M				IAmb	IAmb	12 33 22.7	
	comp=Z,7.2nm,0.7s						
C36M	**Paulatuk**	**77.88**	**16**	P	**P**	**12 33 15.6**	**-0.4**
	baz=318						
M29M	**Somme Creek**	**78.12**	**25**	P	**P**	**12 33 18.0**	**+0.3**
	baz=306						
YUK8	**Steele Glacier**	**78.31**	**26**	P	**P**	**12 33 19.1**	**+0.2**
	baz=306						
M30M	**Minto, Yukon**	**78.66**	**24**	P	**P**	**12 33 20.6**	**0.0**
	baz=308						
YUK4	**Talbot Arm**	**78.71**	**26**	P	**P**	**12 33 20.2**	**-0.8**
	baz=307						
PINM	**Pinnacle**	**78.81**	**27**	P	**P**	**12 33 21.4**	**0.0**
	baz=305						
N30M	**Aishikik Lake**	**79.24**	**25**	P	**P**	**12 33 23.9**	**+0.1**
	baz=308						
PNL	**Peninsula**	**79.41**	**27**	P	**P**	**12 33 24.8**	**+0.1**
	baz=306						
HYT	**Haines Junctio**	**79.47**	**26**	P	**P**	**12 33 24.9**	**-0.2**
	baz=308						
N31M	**Braeburn, Yuko**	**79.71**	**25**	P	**P**	**12 33 26.1**	**-0.2**
	baz=309						
O30N	**Mendenhall**	**80.05**	**25**	P	**P**	**12 33 27.7**	**-0.5**
	baz=309						
FARO	**Faro, Yukon**	**80.12**	**23**	P	**P**	**12 33 28.9**	**+0.4**
	baz=311						
PLBC	**Pleasant Camp**	**80.76**	**27**	P	**P**	**12 33 32.0**	**+0.1**
	baz=309						
N32M	**Quiet Lake**	**80.93**	**24**	P	**P**	**12 33 32.9**	**0.0**
	baz=311						
SKAG	**Skagway**	**81.17**	**26**	P	**P**	**12 33 33.7**	**-0.4**
	baz=310						
SFJD	**Kangerlussuaq**	**84.17**	**350**	LR	LR	13 14 03.5	
	comp=Z,72nm,18.2s,baz=26,slow=38						
LSZ	**Lusaka**	**84.24**	**250**	LR	LR	13 13 01.5	
	comp=Z,66nm,18.5s,baz=156,slow=37						
ESDC	**Sonseca Array**	**85.28**	**312**	P	**P**	**12 33 56.6**	**+0.8**
	comp=Z,3.3nm,1.3s,baz=53,slow=7.2,SNR=2.8						
ESDC				LR	LR	13 19 16.6	
	comp=Z,73nm,18.2s,baz=0.0,slow=41						
	comp=Z,3.3nm,1.3s						
YKA	**Yellowknife Ar**	**85.68**	**17**	P	**P**	**12 33 56.6**	**-0.6**
	comp=Z,2.8nm,1.0s,baz=325,slow=4.5,SNR=22						
	comp=Z,2.8nm,1.0s						
YKA	**Yellowknife Ar**	**85.68**	**17**	*i* P	**P**	**12 33 57.2**	**-0.1**
YKA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BBB	**Bella Bella**	**89.10**	**29**	LR	LR	13 18 55.5	
	comp=Z,40nm,18.2s,baz=273,slow=39						
FRB	**Frobisher Bay**	**89.25**	**356**	LR	LR	13 16 42.6	
	comp=Z,50nm,18.1s,baz=5.5,slow=37						
MDT	**Midelt**	**89.33**	**307**	LR	LR	13 19 56.0	
	comp=Z,32nm,18.9s,baz=4.0,slow=39						
LBTB	**Lobatse**	**91.16**	**243**	LR	LR	13 16 01.8	
	comp=Z,70nm,18.1s,baz=72,slow=36						
TORD	**Torodi Ar. Bea**	**94.27**	**287**	P	**P**	**12 34 39.2**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=61,slow=3.4,SNR=2.2						
	comp=Z,0.6nm,0.8s						
NEW	**Newport**	**96.63**	**26**	LR	LR	13 23 02.8	
	comp=Z,83nm,20.1s,baz=315,slow=38						
SCHQ	**Schefferville**	**97.98**	**354**	LR	LR	13 22 31.0	
	comp=Z,49nm,18.8s,baz=94,slow=38						
SUR	**Sutherland**	**98.32**	**238**	LR	LR	13 16 43.4	
	comp=Z,102nm,18.5s,baz=54,slow=34						
MAW	**Mawson**	**99.15**	**195**	LR	LR	13 18 03.3	
	comp=Z,86nm,18.2s,baz=48,slow=34						
YBH	**Yreka Blue Hor**	**99.31**	**33**	LR	LR	13 22 27.2	
	comp=Z,28nm,18.7s,baz=324,slow=37						
TXAR	**Lajitas Array**	**118.17**	**27**	PKP	**PKiKP**	**12 40 06.9**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=316,slow=0.8,SNR=1.6						
ROSC	**El Rosal**	**148.18**	**356**	PKPbc	**PKPbc**	**12 41 06.6**	**+0.7**
	comp=Z,15nm,0.4s,baz=90,slow=13,SNR=10						
BDFB	**Brasilia**	**151.15**	**287**	PKPbc	**PKPbc**	**12 41 11.9**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=54,slow=1.1,SNR=3.1						

IDC ***12*** *12:34:50.2±18.0, 1°.12N×100°.33E, h202^{km}±152^{km}, mb3.2/3, mbtmp3.7/3, Error ellipse: s-maj=242.3km s-min=21.2km az=56.0*

DJA ***12*** *12:34:51.6±0.4, 1°N±3°×10°0E±°, h191^{km}±5^{km}, M3.6/13, MLv3.6/13*

ISC 12 12:34:50.1±0.9**, 1°.06N**±0°.07×**100°.13E**±0°.08**, h200**^{km}**, n13, σ1§13**/18**, mb3.1**/3**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKNI	**Bangkinang**	**1.16**	**129**	P	**Pn**	**12 35 22.3**	**+1.3**
BKNI				S	**Sn**	**12 35 46.7**	**+1.7**
PDSI	**Padang**	**1.99**	**170**	P	**Pn**	**12 35 29.1**	**+0.6**
PDSI				S	**Sn**	**12 35 59.5**	**+1.0**
PBSI	**Pulau Batu**	**2.16**	**239**	P	**Pn**	**12 35 31.0**	**+0.8**
PBSI				S	**Sn**	**12 36 01.8**	**+0.3**
SDSI	**Sungai Dareh**	**2.37**	**147**	P	**Pn**	**12 35 34.1**	**+1.6**
GSI	**Gunungsitoli**	**2.57**	**275**	P	**Pn**	**12 35 35.7**	**+1.0**
TSI	**Tuntungan**	**2.89**	**327**	P	**Pn**	**12 35 39.5**	**+1.1**
KCSI	**Kotacane, Aceh**	**3.40**	**316**	P	**Pn**	**12 35 44.9**	**+0.4**
PPSI	**Pulau Pagai**	**3.80**	**182**	P	**Pn**	**12 35 49.6**	**+0.2**
SNSI	**Sinabang, Aceh**	**4.03**	**289**	P	**Pn**	**12 35 54.0**	**+1.7**
MLSI	**Meulaboh, Aceh**	**4.90**	**311**	P	**Pn**	**12 36 03.9**	**+0.7**
WRA	**Warramunga Arr**	**39.50**	**124**	P	**P**	**12 42 00.6**	**-1.0**
	1.2nm,0.3s,baz=303,slow=9.0,SNR=23						
WRA				PcP	**PcP**	**12 44 04.4**	**-0.8**
	0.1nm,0.4s,baz=310,slow=2.4,SNR=1.9						
	1.2nm,0.3s						
ASAR	**Alice Springs**	**41.00**	**129**	P	**P**	**12 42 12.4**	**-1.5**
	0.3nm,0.4s,baz=300,slow=7.7,SNR=16						
ASAR				PcP	**PcP**	**12 44 09.4**	**-0.7**
	0.1nm,0.7s,baz=307,slow=2.3,SNR=1.4						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**48.14**	**344**	P	**P**	**12 43 09.8**	**-0.2**
	0.5nm,0.6s,baz=145,slow=8.2,SNR=5.3						
	0.5nm,0.6s						

ROM 12 12:44:13.0±0.1**, 43°.458N**±0°.003×**12°.344E**±0°.005**, h8**^{km}**, ML0.9**/4**, 4C-1D, Error ellipse: s-maj=0.4km s-min=0.0km az=55.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATPI	**Pietralunga -**	**0.04**	**100**	P	Pg	12 44 14.7	+0.1
ATPI				S	Sg	12 44 15.8	-0.1
ATVO	**AVT- Monte Val**	**0.09**	**149**	P	Pg	12 44 15.6	+0.4
ATVO				S	Sg	12 44 17.6	+0.9
ATVO				AML	AML		
	comp=E,106µm,0.9s						
ATVO				AML	AML		
	comp=N,69µm,0.3s						
BADI	**Badiali**	**0.09**	**306**	⇑P	Pg	12 44 15.6	+0.4
BADI				S	Sg	12 44 17.4	+0.7
APEC	**Apecchio**	**0.12**	**29**	P	Pg	12 44 15.9	+0.4
APEC				S	Sg	12 44 18.3	+0.9
ATMI	**Monte Miggiano**	**0.14**	**204**	P	Pg	12 44 16.4	+0.5
ATMI				S	Sg	12 44 18.4	+0.5
PIEI	**Pieia**	**0.16**	**61**	P	Pg	12 44 16.7	+0.3
PIEI				S	Sg	12 44 19.9	+1.2
PIEI				AML	AML		
	comp=E,88µm,0.3s						
PIEI				AML	AML		
	comp=N,56µm,0.3s						
ATFO	**Monte Foce - G**	**0.19**	**119**	P	Pg	12 44 17.3	+0.4
ATFO				S	Sg	12 44 20.8	+1.3
ATFO				AML	AML		
	comp=E,71µm,0.5s						
ATFO				AML	AML		
	comp=N,49µm,1.1s						
ATFO				AML	AML		
	comp=N,49µm,0.9s						
ATFO				AML	AML		
	comp=E,71µm,0.5s						
PARC	**Parchiule**	**0.20**	**338**	P	Pg	12 44 17.8	+0.6
PARC				S	Sg	12 44 21.2	+1.2
PARC				AML	AML		
	comp=E,33µm,0.1s						
PARC				AML	AML		
	comp=N,33µm,0.6s						
MURB	**Monte Urbino**	**0.23**	**146**	P	Pg	12 44 18.4	+0.7
MURB				AML	AML		
	comp=E,48µm,1.1s						
MURB				AML	AML		
	comp=N,44µm,1.1s						
MURB				AML	AML		
	comp=E,48µm,0.9s						
MURB				AML	AML		
	comp=N,44µm,0.9s						
T1219	**Muccia, Frazio**	**0.63**	**129**	S	Sn	12 44 37.5	-1.1
T1217	**Poggiodomo (PG**	**0.86**	**150**	S	Sn	12 44 46.6	+2.2
T1245	**Castelsantange**	**0.86**	**134**	⇑P	Pn	12 44 32.9	+1.3
T1245				S	Sn	12 44 45.7	+1.2
T1245				AML	AML		
	comp=N,306µm,0.1s						
T1245				AML	AML		
	comp=E,311µm,0.6s						
T1212	**Cascia, Frazio**	**0.87**	**144**	P	Pn	12 44 34.0	+2.3
T1212				S	Sn	12 44 45.8	+1.1
T1212				AML	AML		
	comp=E,130µm,0.1s						
T1212				AML	AML		
	comp=N,180µm,0.1s						
MMO1	**Montemonaco**	**0.91**	**127**	S	Sn	12 44 47.4	+1.8
T1214	**Arquata del Tr**	**0.94**	**137**	⇓P	Pn	12 44 33.2	+0.4
T1214				S	Sn	12 44 46.5	0.0
T1214				AML	AML		
	comp=E,101µm,1.6s						
T1214				AML	AML		
	comp=N,84µm,0.1s						
T1214				AML	AML		
	comp=E,101µm,0.4s						
T1218	**Civita (PG)**	**0.97**	**144**	S	Sn	12 44 48.2	+1.1
TEOL	**Teolo**	**1.96**	**346**	S	Sg	12 45 18.7	+2.7
LEOD	**Capriano del C**	**2.56**	**322**	⇑P	Pb	12 45 00.3	+1.2
CIMO	**Cimolais**	**2.85**	**1**	S	Sg	12 45 44.5	-0.1
EUCT	**Pavia**	**2.89**	**308**	⇑P	Pn	12 44 58.8	-0.6
MUGIO	**Muggio**	**3.41**	**317**	S	Sb	12 45 53.7	-1.6
SLCN	**Sala Consilina**	**3.93**	**140**	S	Sn	12 46 00.4	+0.4
SLCN				AML	AML		
	comp=E,63µm,1.5s						
SLCN				AML	AML		
	comp=E,63µm,0.5s						
SLCN				AML	AML		
	comp=N,54µm,1.0s						

ROM 12 12:44:42.8±0.1**, 42°.875N**±0°.003×**13°.033E**±0°.003**, h9**^{km}**, ML0.9**/1**, 1C-2D, Error ellipse: s-maj=0.2km s-min=0.2km az=220.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1216	**Preci, Frazion**	**0.02**	**328**	⇓P	Pg	12 44 44.7	+0.2
T1216				S	Sg	12 44 46.0	+0.3
T1216				AML	AML		
	comp=N,290µm,1.0s						
T1216				AML	AML		
	comp=E,414µm,0.3s						
MC2	**Monte Cornacci**	**0.12**	**72**	P	Pg	12 44 46.0	+0.2
MC2				S	Sg	12 44 48.5	+0.5
FDMO	**Fiordimonte**	**0.17**	**14**	⇑P	Pg	12 44 46.9	+0.5
FDMO				S	Sg	12 44 50.0	+1.1
FDMO				AML	AML		
	comp=E,75µm,0.2s						
FDMO				AML	AML		
	comp=N,55µm,0.3s						
T1219	**Muccia, Frazio**	**0.18**	**354**	P	Pg	12 44 47.2	+0.5
T1220	**Camerino, Fraz**	**0.24**	**10**	⇓P	Pg	12 44 48.5	+0.9
T1211	**Morro Reatino**	**0.37**	**201**	S	Sg	12 44 56.0	+1.1
TERO	**Teramo**	**0.49**	**121**	P	Pg	12 44 51.5	-0.8
CDCA	**Citt' di Caste**	**0.83**	**315**	P	Pb	12 44 59.9	+0.6

NNC 12 12:47:21.6±23.0**, 37°.18N×69°.47E, h0**^{km}**, mb3.6, mpv3.2, 2C-1D, Error ellipse: s-maj=327.0km s-min=182.9km az=144.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.92**	**32**	⇑P	Pn	12 48 50.8	0.0
	0.3nm,0.5s						
AML				⇑S	Sn	12 50 00.4	+0.9
	1.1nm,0.7s						
KK31	**Karatay Array**	**5.97**	**7**	P	Pn	12 48 52.8	+1.7
	1.8nm,0.4s,baz=195,slow=14,SNR=28						
TKM2	**Tokmak 2**	**7.41**	**37**	⇓P	Pn	12 49 09.5	-1.7
	3.6nm,0.9s						

ROM 12 12:47:43.1±0.1**, 43°.025N**±0°.002×**13°.143E**±0°.004**, h8**^{km}**, ML1.2**/9**, 3C-2D, Error ellipse: s-maj=0.3km s-min=0.1km az=249.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDMO	**Fiordimonte**	**0.04**	**286**	P	Pg	12 47 44.8	0.0
FDMO				AML	AML		
	comp=N,338µm,0.2s						
FDMO				AML	AML		
	comp=E,396µm,0.2s						
T1256	**Bolognola (MC)**	**0.06**	**107**	⇑P	Pg	12 47 45.4	+0.3
T1256				S	Sg	12 47 46.6	0.0
T1256				AML	AML		
	comp=E,295µm,1.4s						
T1256				AML	AML		
	comp=N,210µm,1.1s						
T1256				AML	AML		
	comp=E,212µm,0.3s						
T1256				AML	AML		
	comp=N,193µm,0.2s						
T1256				AML	AML		
	comp=E,284µm,0.3s						
T1256				AML	AML		
	comp=N,197µm,0.3s						
T1220	**Camerino, Fraz**	**0.09**	**335**	⇓P	Pg	12 47 46.0	+0.6
T1220				AML	AML		
	comp=E,694µm,1.1s						
T1220				AML	AML		
	comp=N,618µm,1.0s						
T1220				AML	AML		
	comp=E,694µm,1.1s						
T1220				AML	AML		
	comp=N,618µm,1.0s						
T1220				AML	AML		
	comp=E,653µm,0.4s						
T1220				AML	AML		
	comp=E,9407µm,0.8s						
T1220				AML	AML		
	comp=N,643µm,0.3s						
T1220				AML	AML		
	comp=N,614µm,0.3s						
MC2	**Monte Cornacci**	**0.12**	**163**	P	Pg	12 47 46.4	+0.5
MC2				S	Sg	12 47 48.4	+0.6
T1216	**Preci, Frazion**	**0.16**	**214**	P	Pg	12 47 47.2	+0.7
T1216				S	Sg	12 47 49.9	+1.1
T1245	**Castelsantange**	**0.17**	**169**	P	Pg	12 47 47.4	+0.6
T1245				S	Sg	12 47 50.5	+1.3
T1245				AML	AML		
	comp=N,168µm,0.2s						
T1245				AML	AML		
	comp=E,170µm,0.1s						
T1245				AML	AML		
	comp=E,170µm,0.1s						
T1245				AML	AML		
	comp=N,334µm,0.3s						
T1245				AML	AML		
	comp=E,336µm,0.3s						
T1245				AML	AML		
	comp=N,168µm,0.2s						
MMO1	**Montemonaco**	**0.18**	**133**	P	Pg	12 47 47.5	+0.6
MMO1				S	Sg	12 47 50.7	+1.2
T1214	**Arquata del Tr**	**0.27**	**170**	P	Pg	12 47 49.1	+0.6
T1214				S	Sb	12 47 53.8	-1.3
T1214				AML	AML		
	comp=E,380µm,0.2s						
T1214				AML	AML		
	comp=N,274µm,0.1s						
SNTG	**Esanatoglia**	**0.27**	**327**	P	Pg	12 47 49.3	+0.7
SNTG				AML	AML		
	comp=E,145µm,1.2s						
SNTG				AML	AML		
	comp=E,17µm,0.1s						
SNTG				AML	AML		
	comp=N,14µm,0.1s						
T1212	**Cascia, Frazio**	**0.28**	**195**	⇑P	Pg	12 47 49.5	+0.8
T1212				S	Sb	12 47 54.2	-1.2
T1215	**Vallo di Nera,**	**0.30**	**222**	P	Pb	12 47 50.0	-0.8
T1215				AML	AML		
	comp=E,67µm,0.5s						
T1215				AML	AML		
	comp=N,17µm,0.3s						
EL6	**Elcito**	**0.31**	**354**	⇓P	Pb	12 47 50.2	-0.8
EL6				AML	AML		
	comp=E,37µm,0.1s						
EL6				AML	AML		
	comp=N,26µm,0.2s						
CING	**Cingoli**	**0.35**	**6**	⇑P	Pb	12 47 51.0	-0.7
CING				AML	AML		
	comp=N,14µm,0.2s						
CING				AML	AML		
	comp=E,22µm,0.1s						
ASSB	**Assisi San Ben**	**0.35**	**273**	P	Pb	12 47 51.0	-0.8
ASSB				AML	AML		
	comp=E,66µm,1.1s						
ASSB				AML	AML		
	comp=N,105µm,0.2s						
ASSB				AML	AML		
	comp=E,65µm,0.2s						
ASSB				AML	AML		
	comp=N,105µm,0.2s						
TERO	**Teramo**	**0.53**	**140**	P	Pg	12 47 54.0	+0.7
TERO				AML	AML		
	comp=E,52µm,0.1s						
TERO				AML	AML		
	comp=N,64µm,0.1s						

ROM 12 12:47:57.8±0.1**, 42°.806N**±0°.002×**13°.210E**±0°.003**, h14**^{km}**, ML1.3**/7**, 4C-4D, Error ellipse: s-maj=0.2km s-min=0.1km az=349.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1214	**Arquata del Tr**	**0.05**	**181**	P	Pg	12 48 00.7	+0.1
T1214				S	Sg	12 48 02.6	+0.1
T1214				AML	AML		
	comp=E,380µm,0.2s						
T1214				AML	AML		
	comp=N,274µm,0.1s						
T1214				AML	AML		
	comp=E,380µm,0.2s						
T1245	**Castelsantange**	**0.05**	**342**	P	Pg	12 48 00.7	0.0
T1245				AML	AML		
	comp=E,661µm,0.9s						
T1245				AML	AML		
	comp=N,746µm,0.2s						
T1245				AML	AML		
	comp=E,661µm,1.1s						
MC2	**Monte Cornacci**	**0.11**	**352**	⇓P	Pg	12 48 01.4	+0.1
MC2				S	Sg	12 48 04.0	+0.4
MMO1	**Montemonaco**	**0.13**	**43**	P	Pg	12 48 01.6	+0.2
MMO1				S	Sg	12 48 04.2	+0.4
T1212	**Cascia, Frazio**	**0.13**	**246**	⇑P	Pg	12 48 01.7	+0.3
T1212				S	Sg	12 48 04.2	+0.4
T1218	**Civita (PG)**	**0.15**	**207**	⇓P	Pg	12 48 02.0	+0.3
T1218				S	Sb	12 48 05.1	-0.6
T1218				AML	AML		
	comp=E,200µm,0.8s						
T1218				AML	AML		
	comp=N,227µm,0.8s						
T1218				AML	AML		
	comp=N,192µm,0.2s						
T1218				AML	AML		
	comp=E,172µm,0.1s						
T1216	**Preci, Frazion**	**0.16**	**301**	⇑P	Pg	12 48 02.0	+0.2
T1241	**Roccafluvione,**	**0.17**	**73**	P	Pg	12 48 02.3	+0.3
T1241				S	Sg	12 48 05.3	+0.6
T1241				AML	AML		
	comp=E,220µm,0.3s						
T1241				AML	AML		
	comp=N,97µm,1.0s						
SMA1	**SAN MARTINO**	**0.20**	**152**	P	Pg	12 48 02.7	+0.3
SMA1				S	Sg	12 48 06.2	+0.7
SMA1				AML	AML		
	comp=E,79µm,1.2s						
SMA1				AML	AML		
	comp=N,82µm,0.4s						
SMA1				AML	AML		
	comp=E,79µm,0.8s						
T1217	**Poggiodomo (PG**	**0.23**	**245**	⇓P	Pg	12 48 03.1	+0.3
T1217				S	Sb	12 48 07.1	-0.7
FDMO	**Fiordimonte**	**0.25**	**339**	⇓P	Pb	12 48 03.7	-0.5
T1215	**Vallo di Nera,**	**0.25**	**269**	⇑P	Pg	12 48 03.5	+0.2
T1215				S	Sb	12 48 07.8	-0.7
RM33	**Pellescritta (**	**0.30**	**179**	⇑P	Pb	12 48 04.6	-0.4
RM33				AML	AML		
	comp=E,41µm,0.4s						
RM33				AML	AML		
	comp=N,37µm,1.4s						
RM33				AML	AML		
	comp=N,37µm,0.6s						
TERO	**Teramo**	**0.34**	**122**	P	Pg	12 48 05.1	+0.2
TERO				AML	AML		
	comp=E,52µm,0.1s						
TERO				AML	AML		
	comp=N,64µm,0.1s						
COR1	**Corinaldo**	**0.84**	**350**	S	Sg	12 48 24.4	-0.8

CNRM ***12*** *13:20:37.2, 36°.80N×7°.44W, h58^{km}, ml2.1*

IGIL ***12*** *13:20:39.9, 36°.85N×7°.35W, h30^{km}, ML2.4*

SFS ***12*** *13:20:39.3, 36°.84N×7°.34W, h28^{km}, ML2.8/12, ML3.0/10, MLv2.7/12*

MDD ***12*** *13:20:39.5±0.5, 36°.85N×7°.35W, h41^{km}±11^{km}, mb_Lg2.9/15, Error ellipse: s-maj=4.8km s-min=2.5km az=13.0*

INMG ***12*** *13:20:39.2±1.6, 36°.80N×7°.37W, h26^{km}±5^{km}, ML2.4, Error ellipse: s-maj=3.5km s-min=2.4km az=32.0*

ISC 12 13:20:36.1±1.0**, 36°.80N**±0°.03×**7°.32W**±0°.02**, h20**^{km}±7^{km}**, n70, σ1§50**/127**, 1C-5D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARNO	**Arenosillo**	**0.56**	**58**	P	**Pn**	**13 20 50.4**	**+1.6**
ARNO				S	**Sn**	**13 20 58.6**	**+1.1**
PBDV	**Barranco-do-Ve**	**0.66**	**312**	⇓*i*P	**Pn**	**13 20 51.1**	**+0.9**
PBDV				*e*S	**Sn**	**13 20 59.5**	**-0.5**
PBDV				A	A	13 21 00.0	
	122nm,0.3s						
PVAQ	**Vaqueiros**	**0.68**	**332**	P	**Pn**	**13 20 51.4**	**+0.8**
PVAQ				S	**Sn**	**13 21 00.6**	**+0.1**
PVAQ	**Vaqueiros**	**0.68**	**332**	⇓*i*P	**Pn**	**13 20 51.5**	**+1.0**
PVAQ				*e*S	**Sn**	**13 21 00.0**	**-0.5**
PVAQ				A	A	13 21 05.1	
	135nm,0.2s						
EGRO	**El Granado**	**0.74**	**350**	S	**Sn**	**13 21 01.8**	**-0.2**
EGRO				P	**Pn**	**13 20 52.5**	**+1.1**
EGRO	**El Granado**	**0.74**	**350**	⇓P	**Pn**	**13 20 52.5**	**+1.1**
EGRO				S	**Sn**	**13 21 01.7**	**-0.3**
EGRO				*i* Vmb_Lg		13 21 02.6	
PCVE	**Castro Verde**	**1.01**	**326**	*e*P	**Pn**	**13 20 56.2**	**+1.2**
PCVE				*e*S	**Sn**	**13 21 08.7**	**+0.1**
PCVE				A	A	13 21 16.9	
	27nm,0.2s						
EMIN	**Mina Concepcio**	**1.09**	**28**	S	**Sb**	**13 21 09.6**	**-0.5**
EMIN				P	**Pb**	**13 20 57.0**	**+0.7**
EMIN	**Mina Concepcio**	**1.09**	**28**	P	**Pb**	**13 20 57.0**	**+0.7**
EMIN				S	**Sb**	**13 21 09.6**	**-0.5**
EMIN				*i* Vmb_Lg		13 21 13.8	
MORF	**Marmelete**	**1.18**	**296**	*e*P	**Pb**	**13 20 58.2**	**+0.5**
MORF				*e*S	**Sb**	**13 21 12.2**	**-0.3**
MORF				A	A	13 21 13.5	
	63nm,0.1s						
MORF	**Marmelete**	**1.18**	**296**	*e*P	**Pb**	**13 20 58.2**	**+0.5**
MORF				*e*S	**Sb**	**13 21 11.9**	**-0.6**
MORF				IAML		13 21 13.4	
	comp=E,133nm,0.1s						

ESPR	Espera	1.18	86	P	Pn	13 20 56.9	-0.5
ESPR				S	Sn	13 21 13.4	+0.7
ESPR	Espera	1.18	86	⇑P	Pb	13 20 59.0	+1.3
ESPR				S	Sn	13 21 13.5	+0.7
ESPR				*i* Vmb_Lg		13 21 14.8	
PFVI	Vila Bisbo	1.25	286	P	Pn	13 20 56.8	-1.5
PFVI				S	Sn	13 21 12.8	-1.8
PFVI	Vila Bisbo	1.25	286	*e*P	Pb	13 20 59.3	+0.4
PFVI				*e*S	Sn	13 21 13.6	-1.0
PFVI				A	A	13 21 14.4	
	comp=E,56nm,0.1s						
MESJ	Messejana	1.26	326	⇓*e*P	Pb	13 20 59.7	+0.6
MESJ				*e*S	Sn	13 21 14.1	-0.7
MESJ				A	A	13 21 25.1	
	comp=E,30nm,0.5s						
MESJ	Messejana	1.26	326	*e*P	Pb	13 20 59.6	+0.5
MESJ				*e*S	Sn	13 21 13.8	-1.0
MESJ				IAML		13 21 16.9	
	comp=N,21nm,0.1s						
PBEJ	Beja	1.30	341	*e*P	Pb	13 21 00.1	+0.3
PBEJ				*e*S	Sb	13 21 17.0	+1.0
PBEJ				A	A	13 21 26.0	
	comp=N,19nm,0.3s						
PTEO	Sao Teotonio	1.34	304	*e*P	Pb	13 21 01.1	+0.6
PTEO				*e*S	Sn	13 21 16.3	-0.6
PTEO				A	A	13 21 17.4	
	comp=N,35nm,0.3s						
PBAR	Barrancos	1.39	9	S	Sb	13 21 19.4	+0.8
PBAR				P	Pb	13 21 01.4	+0.1
PBAR	Barrancos	1.39	9	*e*P	Pb	13 21 01.6	+0.3
PBAR				A	A	13 21 24.7	
	comp=N,44nm,0.3s						
PNCL	Nicolau / Gran	1.62	324	P	Pb	13 21 04.5	-0.8
PNCL	Nicolau / Gran	1.62	324	*e*P	Pb	13 21 04.6	-0.7
PNCL				*e*S	Sn	13 21 23.2	-0.6
PNCL				A	A	13 21 34.6	
	comp=N,20nm,0.6s						
EVO	Evora	1.81	343	P	Pn	13 21 07.3	+1.2
EVO				S	Sn	13 21 28.1	-0.4
EVO	Evora	1.81	343	⇓*e*P	Pn	13 21 07.3	+1.2
EVO				*e*S	Sn	13 21 28.6	+0.1
EVO				A	A	13 21 42.4	
	comp=N,19nm,0.1s						
EBAD	Badajoz	1.97	7	P	Pn	13 21 08.8	+0.6
EBAD				S	Sn	13 21 32.5	+0.2
EBAD	Badajoz	1.97	7	P	Pn	13 21 09.2	+0.9
EBAD				S	Sn	13 21 30.9	-1.4
EBAD				*i* Vmb_Lg		13 21 44.2	
ECAB	El Cabril	1.98	49	P	Pn	13 21 09.3	+0.9
ECAB				S	Sn	13 21 30.7	-1.9
ECAB	El Cabril	1.98	49	P	Pn	13 21 09.3	+0.9
ECAB				S	Sn	13 21 30.6	-2.1
ECAB				*i* Vmb_Lg		13 21 41.4	
EMIJ	Mijas	2.06	96	S	Sb	13 21 36.8	-1.2
EMIJ	Mijas	2.06	96	P	Pb	13 21 11.7	-1.1
EMIJ				S	Sn	13 21 32.8	-1.9
EMIJ				*i* Vmb_Lg		13 21 43.6	
PESTR	Estremoz	2.07	354	P	Pn	13 21 09.9	+0.2
PESTR				S	Sn	13 21 33.2	-1.7
PESTR	Estremoz	2.07	354	P	Pn	13 21 10.6	+0.9
PESTR				S	Sn	13 21 34.4	-0.5
PESTR	Estremoz	2.07	354	*e*P	Pn	13 21 10.6	+0.9
PESTR				*e*S	Sn	13 21 34.8	-0.1
PESTR				A	A	13 21 48.1	
	comp=N,15nm,0.6s						
EMAL	Malaga-Limoner	2.32	90	S	Sn	13 21 41.6	+0.6
PMTG	Montargil	2.37	343	*e*P	Pn	13 21 14.9	+1.1
PMTG				*e*S	Sn	13 21 42.2	-0.1
PMTG				A	A	13 22 01.9	
	comp=N,12nm,0.4s						
EADA	Adamuz	2.57	57	P	Pn	13 21 17.8	+1.2
EADA				S	Sn	13 21 47.7	+0.3
EADA	Adamuz	2.57	57	P	Pn	13 21 17.8	+1.2
EADA				S	Sn	13 21 47.5	+0.2
EADA				*i* Vmb_Lg		13 21 53.4	
EGOR	Sierra Gorda,	2.59	82	P	Pn	13 21 18.7	+1.8
EGOR				S	Sn	13 21 49.2	+1.3
EGOR	Sierra Gorda,	2.59	82	P	Pn	13 21 18.3	+1.4
EGOR				S	Sn	13 21 48.9	+0.9
EGOR				*i* Vmb_Lg		13 22 14.1	
PMRV	Marv??o	2.62	359	*e*P	Pn	13 21 18.4	+1.1
PMRV				*e*S	Sn	13 21 48.1	-0.4
PMRV				A	A	13 21 48.5	
	comp=N,12nm,0.1s						
PMAFR	Mafra	2.65	325	*e*P	Pn	13 21 19.9	+2.3
PMAFR				*e*S	Sn	13 21 49.9	+0.7
PSBE	So Bento	2.95	337	*e*P	Pn	13 21 23.3	+1.6
PSBE				*e*S	Sn	13 21 56.3	-0.2
PSBE				A	A	13 21 59.9	
	comp=N,8.4nm,0.8s						
PCBR	Castelo Branco	3.04	358	*e*P	Pn	13 21 24.1	+1.2
PCBR				*e*S	Sn	13 21 57.7	-1.0
PCBR				A	A	13 21 58.1	
	comp=N,9.0nm,0.1s						
EQUE	Quentar	3.13	81	P	Pn	13 21 25.4	+1.1
EQUE				S	Sn	13 22 02.1	+0.9
PCAS	Casmilo, Conde	3.38	344	*e*S	Sn	13 22 07.1	+0.1
PCAS				A	A	13 22 41.6	
	comp=N,6.6nm,0.4s						
EPLA	Plasencia	3.40	16	P	Pn	13 21 29.6	+1.6
EPLA				S	Sn	13 22 06.0	-1.7
EPLA				*i* Vmb_Lg		13 22 07.2	
PSIM	Granatula de C	3.47	53	P	Pn	13 21 30.0	+1.1
PSIM				S	Sn	13 22 06.3	-3.1
EQES	Quesada	3.53	72	P	Pn	13 21 31.0	+1.1
EQES				S	Sn	13 22 10.0	-1.1
EQES				*i* Vmb_Lg		13 22 16.5	
EBER	Berja	3.56	87	P	Pn	13 21 32.1	+1.9
EBER				S	Sn	13 22 12.6	+0.9
MTE	Manteigas	3.60	357	*e*S	Sn	13 22 10.8	-1.8
MTE				A	A	13 22 42.1	
	comp=N,13nm,0.7s						
PAB	San Pablo	3.60	40	P	Pn	13 21 32.2	+1.4
PAB				S	Sn	13 22 08.8	-4.0
PAB				*i* Vmb_Lg		13 22 11.7	
AKLM	AKL	3.63	128	P	Pn	13 21 30.8	-0.3
AKLM				S	Sn	13 22 11.7	-1.7
ESDC	Sonseca Array	3.90	42	P	Pn	13 21 36.1	+1.3
ESDC				S	Sn	13 22 15.6	-4.5
ESDC				*i* Vmb_Lg		13 22 19.5	
PVIS	Viseu	3.93	354	*e*S	Sn	13 22 20.0	-0.9
MVO	Moncorvo	4.36	3	*e*S	Sn	13 22 28.6	-2.9
MD31	MD31	4.46	151	P	Pn	13 21 43.9	+1.4
MD31				S	Sn	13 22 34.3	+0.5
PVRL	Vila Real	4.48	356	*e*S	Sn	13 22 32.2	-2.1
PVRL				A	A	13 22 33.6	
	comp=N,5.9nm,0.1s						
MDT	Midelt	4.56	150	P	Pn	13 21 45.1	+1.1
MDT				S	Sn	13 22 36.2	-0.3
POLO	Lamas de Olo	4.58	356	*e*S	Sn	13 22 34.6	-2.3
UCM	Universidad Co	4.74	41	P	Pn	13 21 48.1	+1.8
UCM				S	Sn	13 22 36.8	-4.0
ETOB	Tobarra	4.93	66	P	Pn	13 21 49.5	+0.4
ETOB				S	Sn	13 22 43.8	-1.8
ETOB	Tobarra	4.93	66	P	Pn	13 21 49.5	+0.4
ETOB				S	Sn	13 22 43.7	-1.9
ETOB				*i* Vmb_Lg		13 22 47.6	
ELOB	Lobios	5.09	354	P	Pn	13 21 52.3	+1.0
ELOB				S	Sn	13 22 45.7	-3.7
ELOB				*i* Vmb_Lg		13 22 50.5	
PGAV	Gavieira, Arco	5.21	352	*e*S	Sn	13 22 49.1	-3.3
EVIV	Cofrentes, Val	5.48	61	P	Pn	13 21 56.8	+0.2
EVIV				S	Sn	13 22 55.6	-3.4
EVIV				*i* Vmb_Lg		13 23 17.6	
OUK	Oukaimeden	5.60	185	P	Pn	13 21 59.8	+1.3
OUK				S	Sn	13 22 60.0	-2.4
ETOR	Torete	5.75	44	P	Pn	13 22 01.3	+1.1
ETOR				S	Sn	13 23 00.5	-5.1
TTIG	Tnine Tigouga,	6.31	189	P	Pn	13 22 09.1	+1.1
EMOS	Mosqueruela	6.44	54	P	Pn	13 22 11.8	+2.0

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*IDC **12** 14:01:47.0±5.9, 36°.64N×70°.89E, h68^{km}±35^{km}, mb3.5/2, mbtmp3.6/9, ML3.3/7, MS3.5/1, Error ellipse: s-maj=75.3km s-min=25.0km az=149.0*

*NNC **12** 14:01:51.9±2.0, 36°.86N×70°.98E, h121^{km}±39^{km}, mb2.9, mpv3.4, Error ellipse: s-maj=21.7km s-min=15.4km az=64.0*

ISC 12 14:01:49.6±1.9**, 36°.8N**±0°.1×**70°.71E**±0°.09**, h100**^{km}**, n20, σ1^{s}.54**/24**, 3C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.82	22	P	Pn	14 03 14.3	+0.5
	SNR=12						
AML	Almayashu	5.82	22	⇑P	Pn	14 03 14.1	+0.2
	0.6nm,0.5s						
AML				⇓S	Sn	14 04 19.2	-0.2
	1.8nm,0.6s						
UCH	Uchtor	6.19	27	P	Pn	14 03 18.8	-0.1
	SNR=8.1						
KK31	Karatay Array	6.32	359	P	Pn	14 03 22.1	+1.9
	3.9nm,0.3s,baz=175,slow=12,SNR=186						
KK31				⇑S	Sn	14 04 32.1	+1.1
	1.2nm,0.3s,baz=187,slow=24,SNR=7.8						
EKS2	Erkin-Say	6.33	21	P	Pn	14 03 21.6	+1.1
	SNR=15						
AAK	Ala-Archa	6.54	25	P	Pn	14 03 23.8	+0.5
	SNR=9.8						
AAK	Ala-Archa	6.54	25	P	Pn	14 03 23.4	+0.1
	2.7nm,0.3s,baz=173,slow=5.7,SNR=36						
AAK				S	Sn	14 04 35.9	-0.5
	1.5nm,0.3s,baz=141,slow=23,SNR=6.1						
	4.6nm,0.3s						
TKM2	Tokmak 2	7.19	30	P	Pn	14 03 30.9	-1.4
	SNR=7.2						
TKM2	Tokmak 2	7.19	30	⇑P	Pn	14 03 32.0	-0.3
	1.3nm,0.4s						
GEYT	Alibeck	10.09	280	P	Pn	14 04 10.7	-0.8
	0.3nm,0.3s,baz=118,slow=8.8,SNR=1.7						
GEYT				S	Sn	14 06 00.9	-2.0
	1.4nm,0.3s,baz=303,slow=30,SNR=6.8						
	0.5nm,0.3s						
MKAR	Makanchi Array	13.21	37	P	Pn	14 04 51.5	-1.6
	baz=237,slow=15,SNR=1.9						
	0.1nm,0.5s						
AB31	Akbulak array	14.73	331	P	Pn	14 05 13.4	+0.7
	0.4nm,0.2s,baz=142,slow=12,SNR=50						
KURBB	Kurchatov Arra	14.94	20	P	Pn	14 05 13.6	-1.7
	0.1nm,0.3s,baz=210,slow=11,SNR=1.4						
	0.6nm,0.2s						
BVAR	Borovoye Array	16.25	359	P	P	14 05 33.5	+0.5
	baz=152,slow=9.5,SNR=2.1						
	0.4nm,0.6s						
AKTO	Aktyubinsk	16.42	330	P	P	14 05 34.2	-0.7
	0.4nm,0.3s,baz=142,slow=7.5,SNR=7.6						
AKTO				S	Sn	14 08 33.2	-2.7
	0.5nm,0.5s,baz=89,slow=21,SNR=1.4						
	0.6nm,0.4s						
AKTO	Aktyubinsk	16.42	330	⇓P	P	14 05 36.5	+1.6
	2.5nm,1.1s						
ZALV	Zalesovo Beam	19.76	25	P	Pn	14 06 10.8	-3.1
	0.6nm,0.3s,baz=209,slow=9.8,SNR=9.7						
	1.6nm,0.3s						
FINES	FINESS Array B	37.12	326	P	P	14 08 52.6	+2.5
	1.8nm,0.8s,baz=111,slow=11,SNR=4.5						
	1.8nm,0.8s						
NOA	NORSAR Array B	44.02	323	P	P	14 09 49.0	+2.1
	0.6nm,0.7s,baz=97,slow=7.8,SNR=3.7						
	0.6nm,0.7s						
SEY	Seymchan	54.32	34	LR	LR	14 37 20.9	
	comp=Z,54nm,22.0s,baz=336,slow=39						

MAN 12 14:04:35.0, 9°.60N×125°.51E, h17^{km}**, mb3.5, ML2.2, MS1.6, 3C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.64	74	⇑*e*P	Pg	14 04 47.6	0.0
GLSP				*e*S	Sn	14 04 59.8	+0.8
GHBP	Garcia Hernand	1.17	271	⇑*e*P	Pn	14 04 55.3	-1.3
GHBP				*e*S	Sg	14 05 12.8	-0.1
TABP	Talibon, Bohol	1.25	293	⇑*e*P	Pn	14 04 57.0	-0.7
TABP				*e*S	Sn	14 05 14.7	+0.4

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*IDC **12** 14:05:53.2±1.0, 21°.63N×143°.20E, h310^{km}±8^{km}, mb4.1/31, mbtmp4.8/37, Error ellipse: s-maj=12.2km s-min=7.2km az=82.0*

*NEIC **12** 14:05:54.4±1.4, 21°.61N±0°.07×143°.17E±0°.07, h316^{km}±6^{km}, mb4.4/215, Error ellipse: s-maj=11.8km s-min=7.9km az=218.0*

ISC 12 14:05:52.9±0.6**, 21°.66N**±0°.04×**143°.15E**±0°.07**, h306**^{km}±5^{km}**, n513, σ0^{s}.96**/542**, mb4.5**/144**, 6C-2D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.49	351	P	Pn	14 07 17.2	+0.9
	318nm,0.4s,baz=125,slow=9.3,SNR=83						
JCJ				S	S	14 08 22.1	-1.4
	93nm,0.4s,baz=250,slow=21,SNR=1.1						
JCJ	Chichijima	5.49	351	Pn	Pn	14 07 17.3	+1.0
GUMO	Guam	8.19	168	P	Pn	14 07 50.8	+1.9
	252nm,0.7s,baz=143,slow=1.1,SNR=28						
GUMO				S	S	14 09 23.2	0.0
	7.5nm,0.3s,baz=20,slow=21,SNR=0.9						
GUMO	Guam	8.19	168	Pn	Pn	14 07 49.4	+0.4
JHJ2	Mitsune	11.79	346	P	Pn	14 08 33.1	+0.4
JHJ	Hachijo jima 2	11.80	346	P	Pn	14 08 33.2	+0.3
	64nm,0.4s,baz=217,slow=20,SNR=7.3						
JHJ				S	S	14 10 44.1	-0.3
	40nm,0.3s,baz=264,slow=22,SNR=1.7						
JOW	Kunigami	14.51	294	P	Pn	14 09 05.9	+0.5
	4.7nm,0.4s,baz=105,slow=27,SNR=1.4						
JMN	Monobe	14.55	328	Pn	Pn	14 09 08.4	+2.5
INU	Inuyama	14.66	340	P	Pn	14 09 06.6	-0.5
JGF	Kuroka	14.79	341	Pn	Pn	14 09 09.9	+1.3
MJAR	Matsushiro Arr	15.44	345	P	P	14 09 15.1	+0.6
	3.1nm,0.3s,baz=162,slow=9.3,SNR=24						
MJAR				S	S	14 11 52.9	-8.9
	3.6nm,0.6s,baz=140,slow=14,SNR=4.9						
MJAR				ScP	ScP	14 17 00.5	-1.9
	1.4nm,1.0s,baz=139,slow=2.2,SNR=4.6						
MAJO	Matsushiro	15.45	345	P	Pn	14 09 15.7	-0.6
MAJO				IAmb	IAmb	14 09 16.8	
	comp=Z,14nm,1.0s						
MJB9	Matsu-Tunnel	15.45	345	P	Pn	14 09 16.5	+0.1
MJB9				IAmb	IAmb	14 09 17.7	
	comp=Z,13nm,1.0s						
JNU	Nakatsue	15.77	319	P	Pn	14 09 20.1	-0.1
	comp=Z,6.4nm,0.7s,baz=111,slow=3.5,SNR=14						
JHS	Saijyo	15.95	329	P	Pn	14 09 21.9	-0.3
JHS				IAmb	IAmb	14 09 23.2	
	comp=Z,15nm,0.7s						
JSD	Sado	16.86	347	P	P	14 09 30.2	+0.3
TJN	Taejon	20.10	320	P	P	14 10 05.0	+0.6
YHNB	Yeheng	20.24	283	P	P	14 10 07.0	+1.0
ERM	Erimo	20.30	0	P	P	14 10 07.8	+1.4
ERM				IAmb	IAmb	14 10 09.7	
	comp=Z,33nm,0.9s						
KSRS	Korea Array	20.53	323	P	P	14 10 09.6	+0.9
	comp=Z,11nm,0.7s,baz=148,slow=8.7,SNR=57						
KSRS				ScP	ScP	14 17 12.7	-0.6
	comp=Z,2.1nm,0.9s,baz=148,slow=3.1,SNR=6.1						
	comp=Z,11nm,0.7s						
KSAR	Wonju Array Be	20.54	323	P	P	14 10 09.7	+0.8
KS19	Wonju Array Si	20.59	323	P	P	14 10 09.9	+0.5
KS19				IAmb	IAmb	14 10 10.7	
	comp=Z,12nm,0.6s						
MSLP	Maasin	20.96	240	⇑*e*P	P	14 10 13.5	+0.4
TABP	Talibon, Bohol	21.41	240	⇑*e*P	P	14 10 17.2	-0.1
GHBP	Garcia Hernand	21.68	239	⇑*e*P	P	14 10 19.2	-0.6
ASAJ	Asahikawa	22.41	359	P	P	14 10 26.7	+0.7
	comp=Z,5.4nm,0.5s,baz=207,slow=9.7,SNR=26						
	comp=Z,5.4nm,0.5s						
JKA	Kamikawa-asahi	22.41	359	P	P	14 10 27.2	+1.2
GUIM	Jordan	22.56	244	⇑*e*P	P	14 10 28.5	+0.8
CNOP	Candoni, Negro	22.94	242	⇑*e*P	P	14 10 30.9	-0.3
USA0B	Ussuriysk Arra	24.31	340	P	P	14 10 44.0	+0.8
USA0B				IAmb	IAmb	14 10 45.8	
	comp=Z,9.3nm,0.8s						
USRK	Ussuriysk Ar.	24.31	340	P	P	14 10 43.6	+0.3
	comp=Z,4.9nm,0.5s,baz=141,slow=7.0,SNR=15						
	comp=Z,4.9nm,0.5s						
USRK	Ussuriysk Ar.	24.31	340	P	P	14 10 44.1	+0.9
CN2	Changchun	26.52	330	*e*P	P	14 11 05.3	+2.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TIA	Tai'an	26.89	308	P	P	14 11 07.6	+1.1
TIA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BNX	BinXian	27.26	335	⇓P	P	14 11 10.4	+0.8
BNX				pmax	pmax		
	comp=Z,27nm,0.8s						
BNX				pmax	pmax		
	comp=Z,89nm,4.3s						
KLR	Kul'dur	28.97	344	P	P	14 11 25.4	+0.7
	comp=Z,28nm,0.6s,baz=152,slow=7.5,SNR=99						
KLR				PcP	PcP	14 14 25.3	+0.5
	comp=Z,2.5nm,0.6s,baz=152,slow=5.7,SNR=5.8						
	comp=Z,28nm,0.6s						
HNS	HongShan	29.15	309	⇓P	P	14 11 27.4	+1.0
HNS				pmax	pmax		
	comp=Z,19nm,0.8s						
HEH	HeiHe	31.12	340	⇑P	P	14 11 44.2	+0.7
HEH				PcP	PcP	14 14 28.4	-2.0
HEH				S	S	14 16 28.0	+2.1
HEH				ScP	ScP	14 17 42.8	-1.0
HEH				pmax	pmax		
	comp=Z,32nm,1.1s						
HEH				pmax	pmax		
	comp=Z,160nm,4.1s						
PMG	Port Moresby	31.12	172	P	P	14 11 42.8	-1.1
PMG				IAmb	IAmb	14 11 49.9	
	comp=Z,24nm,1.2s						
HHC	Hu-ho-hao-te	32.84	313	*e*P	P	14 11 57.5	-1.2
HHC				pmax	pmax		
	comp=Z,22nm,0.7s						
HHC				pmax	pmax		
	comp=Z,270nm,5.2s						
HIA	Hailar	33.23	332	P	P	14 12 02.4	+0.5
HIA				IAmb	IAmb	14 12 03.8	
	comp=Z,11nm,0.7s						
PEA0B	Petropavlovsk-	33.33	16	P	P	14 12 03.6	+1.1
PEA0B				IAmb	IAmb	14 12 19.6	
	comp=Z,29nm,1.1s						
PETK	Petropavlovsk-	33.33	16	P	P	14 12 03.4	+0.9
	comp=Z,3.6nm,0.8s,baz=176,slow=6.4,SNR=8.6						
PETK				PcP	PcP	14 14 36.2	-0.3
	comp=Z,2.2nm,0.9s,baz=190,slow=5.9,SNR=1.8						
	comp=Z,3.6nm,0.8s						
PETK	Petropavlovsk-	33.33	16	P	P	14 12 03.1	+0.6
COEN	Coen	35.39	180	P	P	14 12 20.4	-0.2
SBUM	Sibu	35.62	242	P	P	14 12 23.2	+0.6
SBUM				IAmb	IAmb	14 12 24.3	
	comp=Z,7.5nm,0.6s						
MTN	Manton Dam	36.26	200	P	P	14 12 27.1	-0.7
MTN				IAmb	IAmb	14 13 07.5	
	comp=Z,19nm,1.2s						
PZH	PanZhiHua	37.99	286	P	P	14 12 42.1	-0.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,120nm,5.7s						
ULN	Ulaanbaatar	38.98	321	P	P	14 12 51.5	+1.1
SONM	Songino Array	39.35	321	P	P	14 12 54.3	+0.9
	comp=Z,4.1nm,0.6s,baz=128,slow=6.7,SNR=44						
SONM				PcP	PcP	14 14 55.4	+0.3
	comp=Z,0.8nm,0.7s,baz=101,slow=2.6,SNR=3.7						
SONM				ScP	ScP	14 18 13.2	-0.8
	comp=Z,0.5nm,0.8s,baz=122,slow=3.6,SNR=4.8						
	comp=Z,4.1nm,0.6s						
SONM	Songino Array	39.35	321	P	P	14 12 54.1	+0.7
CRAI	Chiangrai	39.88	276	P	P	14 12 57.9	-0.1
YAK	Yakutsk	41.40	350	P	P	14 13 09.4	-0.3
YAK				IAmb	IAmb	14 13 10.3	
	comp=Z,34nm,0.8s						
CHTO	Chiang Mai	41.47	274	P	P	14 13 11.1	+0.1
CMAR	Chiang Mai Arr	41.54	274	P	P	14 13 12.3	+0.8
	comp=Z,1.7nm,0.6s,baz=82,slow=6.0,SNR=18						
	comp=Z,1.7nm,0.6s						
CMAR	Chiang Mai Arr	41.54	274	P	P	14 13 12.1	+0.6
CTAO	Charters Tower	41.60	176	P	P	14 13 11.5	-0.3
SEY	Seymchan	41.73	6	P	P	14 13 13.2	+0.8
	comp=Z,3.4nm,0.6s,baz=173,slow=8.5,SNR=18						
	comp=Z,3.4nm,0.6s						
WB0	Warramunga Arr	42.05	192	P	P	14 13 14.6	-0.9
WB2	Warramunga Arr	42.23	192	P	P	14 13 15.9	-1.0
WB2				IAmb	IAmb	14 13 16.8	
	comp=Z,18nm,0.3s						
WRA	Warramunga Arr	42.23	192	P	P	14 13 16.2	-0.7
	comp=Z,5.7nm,0.3s,baz=15,slow=9.4,SNR=192						
WRA				ScP	ScP	14 18 25.4	-0.2
	comp=Z,1.0nm,0.6s,baz=12,slow=4.7,SNR=10						
	comp=Z,5.7nm,0.3s						
KULM	Kulim	44.22	255	P	P	14 13 33.7	+0.8
IPM	Ipoh	44.24	253	P	P	14 13 33.3	+0.3
AS31	Alice Springs	45.94	192	P	P	14 13 44.8	-1.4
ASAR	Alice Springs	45.94	192	P	P	14 13 45.2	-0.9
	comp=Z,1.7nm,0.3s,baz=13,slow=6.9,SNR=125						
ASAR				ScP	ScP	14 18 41.2	+0.4
	comp=Z,0.4nm,0.5s,baz=14,slow=3.7,SNR=7.8						
	comp=Z,1.7nm,0.3s						
ASAR	Alice Springs	45.94	192	P	P	14 13 45.1	-1.0
MASI	Maura Aman, Be	46.99	243	P	P	14 14 08.7	+14
LSA	Lhasa	47.22	291	P	P	14 13 57.3	+0.7
NIKH	Nikolski High	48.04	37	P	P	14 14 02.5	+0.7
	baz=248						
BILL	Bilibino	48.57	11	P	P	14 14 06.1	+0.5
BILL				IAmb	IAmb	14 14 07.1	
	comp=Z,21nm,0.6s						
GSI	Gunungsitoli	48.75	252	P	P	14 14 07.5	-0.4
GSI				IAmb	IAmb	14 14 08.5	
	comp=Z,10.0nm,0.5s						
UNV	Unalaska Valle	49.66	37	P	P	14 14 14.7	+0.6
UNV	Unalaska Valle	49.66	37	P	P	14 14 14.8	+0.8
	baz=250						
AKUT	Akutan	50.17	37	P	P	14 14 18.1	+0.3
WMQ	Urumqi	50.58	309	*e*P	P	14 14 22.9	+1.7
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
TIXI	Tiksi	50.69	354	P	P	14 14 20.7	-0.8
RAMN	Ramite	51.45	288	*e*P	P	14 14 28.5	+0.3
	comp=Z,6.9nm,0.4s						
JIRN	Jiri	51.73	289	*e*P	P	14 14 31.0	+0.6
GUN	Gumba	51.98	289	*e*P	P	14 14 32.8	+0.7
	comp=Z,12nm,0.4s						
PKI	Pulchoki	52.43	289	*e*P	P	14 14 35.5	+0.1
	comp=Z,9.5nm,0.5s						
PKIN	Phulchoki	52.44	289	*e*P	P	14 14 35.4	0.0
	comp=Z,7.9nm,0.4s						
S12K	Black Hills	52.70	36	P	P	14 14 36.5	0.0
	baz=253						
GKN	Gorkha	53.06	289	*e*P	P	14 14 40.2	+0.4
	comp=Z,15nm,0.3s						
STKA	Stephens Creek	53.25	182	P	P	14 14 40.0	-0.8
	comp=Z,8.6nm,0.4s,baz=3.3,slow=7.6,SNR=28						
	comp=Z,8.6nm,0.4s						
STKA	Stephens Creek	53.25	182	P	P	14 14 39.7	-1.0
SDPT	Sand Point	53.46	36	P	P	14 14 42.4	+0.5
	baz=254						
DANN	Dangsing	53.78	290	*e*P	P	14 14 46.1	+0.9
	comp=Z,91nm,0.3s						
TNA	Tin City	53.99	23	P	P	14 14 46.3	+0.6
TNA	Tin City	53.99	23	P	P	14 14 46.3	+0.6
	baz=240						
ZAA0	Zalesovo Array	54.22	322	P	P	14 14 47.4	-0.1
ZAA0				IAmb	IAmb	14 14 48.5	
	comp=Z,12nm,0.7s						
ZAA0				PcP	PcP	14 15 46.7	-0.9
ZALV	Zalesovo Beam	54.22	322	P	P	14 14 47.6	+0.1
	comp=Z,12nm,0.6s,baz=106,slow=8.0,SNR=47						
ZALV				PcP	PcP	14 15 47.0	-0.6
	comp=Z,4.5nm,0.4s,baz=117,slow=3.8,SNR=12						
	comp=Z,12nm,0.6s						
ZALV	Zalesovo Beam	54.22	322	P	P	14 14 47.4	-0.1
ZALV				PcP	PcP	14 15 46.7	-0.9
ANM	Nome	54.47	25	P	P	14 14 50.2	+1.1
ANM	Nome	54.47	25	P	P	14 14 49.8	+0.7
	baz=243						
PYUN	Piuthan	54.49	290	*e*P	P	14 14 50.1	0.0
	comp=Z,14nm,0.5s						
BBOO	Buckleboo	54.58	187	P	P	14 14 49.6	-0.7
MK31	Makanchi Array	54.70	313	P	P	14 14 51.8	+0.7
MKAR	Makanchi Array	54.70	313	P	P	14 14 51.9	+0.7
	comp=Z,8.7nm,0.5s,baz=88,slow=8.4,SNR=177						
MKAR				PcP	PcP	14 15 49.6	0.0
	comp=Z,2.2nm,0.4s,baz=73,slow=4.0,SNR=11						
MKAR				ScP	ScP	14 19 16.6	-1.6
	comp=Z,0.5nm,0.8s,baz=97,slow=3.6,SNR=3.9						
	comp=Z,8.7nm,0.5s						
MKAR	Makanchi Array	54.70	313	P	P	14 14 51.7	+0.5
CHGN	Chignik	54.83	36	P	P	14 14 51.3	-0.4
CHGN	Chignik	54.83	36	P	P	14 14 51.7	-0.1
	baz=256						
MAKZ	Makanchi	54.92	313	P	P	14 14 53.3	+0.6
MAKZ				IAmb	IAmb	14 14 54.2	
	comp=Z,11nm,0.6s						
R16K	Pilot Point	55.59	34	P	P	14 14 56.6	-0.5
	baz=256						
P16K	Nushagak River	55.75	32	P	P	14 14 58.2	-0.1

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      baz=254
O16K  Kokwok River B    55.86  32  P     P      14 14 59.3 +0.3
      baz=254
R17K  Ugashik Creek     56.23  34  P     P      14 15 01.3 -0.4
      baz=257
Q16K  King Salmon       56.33  33  P     P      14 15 02.3 -0.1
      baz=256
O17K  Koliganek Bris    56.39  32  P     P      14 15 02.8 +0.1
      baz=255,SNR=8.3
Q17K  Contact Creek     56.63  34  P     P      14 15 04.5 -0.1
      baz=257
RDOG  Red Dog Mine      56.92  21  P     P      14 15 06.6 +0.2
      baz=244
Q18K  Katmai Hardscr    57.16  33  P     P      14 15 07.8 -0.5
      baz=257
P18K  Big Mountain,     57.22  32  P     P      14 15 08.7  0.0
      baz=257
O18K  Koktuh Hills      57.34  32  P     P      14 15 09.4  0.0
      baz=256
SVW2  Sparrevohn        57.46  30  P     P      14 15 11.1 +0.9
SVW2                               IAmb  IAmb   14 15 11.9
      comp=Z,8.6nm,0.6s
KURK  Kurchatov         57.48 317  P     P      14 15 10.8 +0.3
KURK                               IAmb  IAmb   14 15 11.7
      comp=Z,15nm,0.7s
KURBB Kurchatov Arra    57.53 317  P     P      14 15 11.3 +0.4
      comp=Z,29nm,0.6s,baz=94,slow=7.5,SNR=186
KURBB                              PcP   PcP    14 15 59.8 -0.8
      comp=Z,1.4nm,0.4s,baz=95,slow=4.0,SNR=1.7
      comp=Z,29nm,0.6s
TTA   Tatalina          57.75  28  P     P      14 15 12.6 +0.3
TTA   Tatalina          57.75  28  P     P      14 15 12.5 +0.2
      baz=254
O19K  Port Alsworth     57.85  32  P     P      14 15 13.6 +0.7
O19K                               IAmb  IAmb   14 15 14.5
      comp=Z,14nm,0.7s
O19K  Port Alsworth     57.85  32  P     P      14 15 13.1 +0.3
      baz=257,SNR=8.9
N19K  Bonanza Creek     57.91  31  P     P      14 15 14.3 +0.9
N19K                               IAmb  IAmb   14 15 15.4
      comp=Z,11nm,0.8s
N19K  Bonanza Creek     57.91  31  P     P      14 15 13.6 +0.1
      baz=256
Q19K  Cape Douglas,     57.92  33  P     P      14 15 13.0 -0.4
Q19K  Cape Douglas,     57.92  33  P     P      14 15 12.6 -0.9
      baz=258
GCSA  Galena City Sc    57.92  26  P     P      14 15 13.9 +0.6
      baz=252,SNR=5.1
NRIK  Noril'sk          58.02 340  P     P      14 15 13.6 -0.4
      comp=Z,8.8nm,0.7s,baz=111,slow=8.4,SNR=12
NRIK                               PcP   PcP    14 16 01.9 -0.3
      comp=Z,4.9nm,0.6s,baz=82,slow=2.3,SNR=5.8
      comp=Z,8.8nm,0.7s
NRIK  Noril'sk          58.02 340  P     P      14 15 13.9 -0.1
NRIK                               IAmb  IAmb   14 15 15.0
      comp=Z,8.9nm,0.8s
L19K  White Mountain    58.07  29  P     P      14 15 15.0 +0.6
L19K  White Mountain    58.07  29  P     P      14 15 14.7 +0.2
      baz=255
P19K  Oil Pt            58.27  32  P     P      14 15 16.1 +0.3
      baz=258
ILSW  Iliamna Southw    58.38  32  P     P      14 15 16.9 +0.2
ILSW                               IAmb  IAmb   14 15 42.0
      comp=Z,19nm,1.3s
Q20K  Shuyak Island     58.50  34  P     P      14 15 17.0 -0.4
      baz=260
L20K  Farewell, AK      58.58  29  P     P      14 15 18.2 +0.2
      baz=256
O20K  Slope Mountain    58.65  32  P     P      14 15 18.6 +0.1
      baz=259
K20K  Telida            58.72  28  P     P      14 15 20.1 +1.2
K20K  Telida            58.72  28  P     P      14 15 18.5 -0.3
      baz=255
M20K  Styx River        58.79  30  P     P      14 15 19.2 -0.2
      baz=257
TOO   Toolangi          58.95 178  P     P      14 15 20.3 -0.4
HOM   Homer             59.06  33  P     P      14 15 20.9 -0.3
      baz=260
KSH   Kashi             59.23 304  P     P      14 15 26.6 +3.7
KSH                                pmax  pmax
      comp=Z,9.0nm,0.7s
CNPM  China Poot        59.24  33  P     P      14 15 22.1 -0.4
CNPM                               IAmb  IAmb   14 15 54.1
      comp=Z,18nm,1.1s
TKM2  Tokmak 2          59.34 308  P     P      14 15 25.1 +1.3
      SNR=18
PPLA  Purkeypile        59.44  29  P     P      14 15 24.6 +0.6
PPLA  Purkeypile        59.44  29  P     P      14 15 24.2 +0.3
      baz=258
BRLK  Bradley Lake      59.46  32  P     P      14 15 23.1 -0.8
BRLK                               IAmb  IAmb   14 15 24.1
      comp=Z,9.7nm,0.6s
CAPN  Captain Cook N    59.50  31  P     P      14 15 24.0 -0.1
      baz=260
BRSE  Bradley Lake S    59.53  32  P     P      14 15 24.2 -0.2
      baz=261
IMAR  Indian Mountai    59.54  25  P     P      14 15 24.9 +0.5
SKT   Skwentna          59.55  30  P     P      14 15 24.3 -0.3
SKT                                IAmb  IAmb   14 15 25.2
      comp=Z,10nm,1.0s
SKT   Skwentna          59.55  30  P     P      14 15 24.5  0.0
      baz=259,SNR=7.5
CAST  Castle Rocks      59.60  28  P     P      14 15 25.3 +0.4
CAST                               IAmb  IAmb   14 15 26.5
      comp=Z,14nm,0.8s
CAST  Castle Rocks      59.60  28  P     P      14 15 25.0 +0.1
      baz=257,SNR=20
CHUM  Lake Minchumin    59.60  28  P     P      14 15 25.5 +0.6
      baz=257,SNR=7.6
G21K  Allakaket         59.78  24  P     P      14 15 26.6 +0.5
      baz=254
SUA   Susitna One       59.82  31  P     P      14 15 26.7 +0.2
      baz=260
H21K  Melozitna Rive    59.83  26  P     P      14 15 27.4 +1.1
H21K                               IAmb  IAmb   14 15 28.6
      comp=Z,14nm,0.9s
H21K  Melozitna Rive    59.83  26  P     P      14 15 27.6 +1.2
      baz=255,SNR=15
KBK   Karagaybulak      59.83 308  P     P      14 15 28.3 +1.3
      SNR=10
F21K  Alatna River      59.98  24  P     P      14 15 28.5 +1.1
      baz=254
FIS   Fire Island       60.01  31  P     P      14 15 28.0 +0.3
I21K  Tanana            60.04  26  P     P      14 15 28.9 +1.1
I21K                               IAmb  IAmb   14 15 30.1
      comp=Z,11nm,0.7s
I21K  Tanana            60.04  26  P     P      14 15 28.9 +1.1
      baz=256
USP   Ospenovka         60.13 308  P     P      14 15 29.8 +0.9
      SNR=9.8
KTH   Kantishna Hill    60.14  28  P     P      14 15 28.6  0.0
O22K  Cooper Landing    60.15  32  P     P      14 15 28.4 -0.1
O22K  Cooper Landing    60.15  32  P     P      14 15 27.7 -0.8
      baz=261
M22K  Willow            60.16  30  P     P      14 15 28.4 -0.2
M22K                               IAmb  IAmb   14 15 29.1
      comp=Z,16nm,0.8s
M22K  Willow            60.16  30  P     P      14 15 28.4 -0.2
      baz=260
AAK   Ala-Archa         60.17 308  P     P      14 15 30.2 +1.0
      SNR=8.1
AAK   Ala-Archa         60.17 308  P     P      14 15 29.9 +0.7
AAK                                IAmb  IAmb   14 15 30.6
      comp=Z,5.3nm,0.5s
UCH   Uchtor            60.17 307  P     P      14 15 31.4 +1.8
      SNR=15
BPAW  Bear Paw Mtn.     60.22  28  P     P      14 15 29.5 +0.4
BPAW                               IAmb  IAmb   14 15 30.6
      comp=Z,13nm,0.7s
BPAW  Bear Paw Mtn.     60.22  28  P     P      14 15 29.3 +0.2
      baz=258,SNR=12
SEW   Seward            60.22  32  P     P      14 15 29.0 -0.1
SEW                                IAmb  IAmb   14 15 37.1
      comp=Z,11nm,1.1s
SEW   Seward            60.22  32  P     P      14 15 29.0 -0.1
      baz=262
RC01  Rabbit Creek A    60.24  31  P     P      14 15 29.1 -0.1
RC01                               IAmb  IAmb   14 15 30.2
      comp=Z,14nm,1.1s
RC01  Rabbit Creek A    60.24  31  P     P      14 15 29.3 +0.1
      baz=261,SNR=7.2
A21K  Barrow            60.26  19  P     P      14 15 29.8 +0.7
A21K                               IAmb  IAmb   14 15 30.8
      comp=Z,16nm,0.9s
A21K  Barrow            60.26  19  P     P      14 15 29.6 +0.5
      baz=248,SNR=12
TRF   Thorofare Moun    60.40  28  P     P      14 15 30.3 -0.2
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TRF                                IAmb  IAmb   14 15 31.2
      comp=Z,12nm,0.9s
TRF   Thorofare Moun    60.40  28  P     P      14 15 30.5 +0.1
      baz=259,SNR=7.5
H22K  Ishtalitna Cre    60.46  25  P     P      14 15 31.7 +1.1
      baz=257
MLY   Manley            60.52  26  P     P      14 15 31.8 +0.6
MLY   Manley            60.52  26  P     P      14 15 31.9 +0.8
      baz=258,SNR=12
F22K  John River        60.55  24  P     P      14 15 32.4 +1.2
      baz=255
PMR   Palmer            60.60  31  P     P      14 15 31.2 -0.4
PMR                                IAmb  IAmb   14 15 32.0
      comp=Z,6.6nm,0.7s
PMR   Palmer            60.60  31  P     P      14 15 30.7 -0.9
      baz=261,SNR=6.1
AML   Almayashu         60.79 307  P     P      14 15 35.3 +1.6
      SNR=9.0
E22K  Anaktuvuk Pass    60.84  23  P     P      14 15 34.0 +0.8
      baz=255
PWL   Port Wells        60.88  31  P     P      14 15 33.5  0.0
PWL   Port Wells        60.88  31  P     P      14 15 33.4 -0.1
      baz=262,SNR=6.4
BWN   Browne            60.89  28  P     P      14 15 34.1 +0.5
BWN                                IAmb  IAmb   14 15 36.1
      comp=Z,24nm,1.2s
KNK   Knik Glacier      60.90  31  P     P      14 15 33.7  0.0
KNK                                IAmb  IAmb   14 15 34.6
      comp=Z,16nm,0.6s
KNK   Knik Glacier      60.90  31  P     P      14 15 33.7  0.0
      baz=262,SNR=6.3
SML   Sawmill           61.01  30  P     P      14 15 34.4 -0.1
SML                                IAmb  IAmb   14 15 35.4
      comp=Z,13nm,0.8s
SML   Sawmill           61.01  30  P     P      14 15 34.7 +0.2
      baz=262,SNR=5.9
MCK   McKinley          61.04  28  P     P      14 15 34.3 -0.2
MCK   McKinley          61.04  28  P     P      14 15 34.7 +0.2
      baz=260,SNR=6.4
WAT1  Susitna Watana    61.06  29  P     P      14 15 34.8  0.0
      baz=261
I23K  Minto, Yukon-K    61.12  26  P     P      14 15 35.7 +0.7
I23K                               IAmb  IAmb   14 15 37.5
      comp=Z,9.7nm,0.8s
I23K  Minto, Yukon-K    61.12  26  P     P      14 15 36.0 +1.0
      baz=259,SNR=18
NEA2  Nenana            61.14  27  P     P      14 15 35.1 -0.1
NEA2                               IAmb  IAmb   14 15 36.3
      comp=Z,6.8nm,0.6s
NEA2  Nenana            61.14  27  P     P      14 15 35.8 +0.6
      baz=260,SNR=9.2
G23K  Bananza Creek     61.17  25  P     P      14 15 36.3 +0.9
      baz=257
H23K  Yukon River       61.18  26  P     P      14 15 36.5 +1.1
H23K  Yukon River       61.18  26  P     P      14 15 36.6 +1.1
      baz=258
COLD  Coldfoot          61.22  24  P     P      14 15 36.7 +1.1
COLD  Coldfoot          61.22  24  P     P      14 15 36.9 +1.3
      baz=257,SNR=9.4
M23K  Glacier View      61.30  30  P     P      14 15 36.6 +0.4
      baz=262
D23K  Nanushuk River    61.46  22  P     P      14 15 37.8 +0.6
      baz=256,SNR=12
SCM   Sheep Creek Mo    61.49  30  P     P      14 15 37.9 +0.3
SCM                                IAmb  IAmb   14 15 41.1
      comp=Z,34nm,1.5s
SCM   Sheep Creek Mo    61.49  30  P     P      14 15 37.8 +0.2
      baz=263
WRH   Wood River Hil    61.53  27  P     P      14 15 37.2 -0.6
MDM   Murphy Dome       61.55  27  P     P      14 15 37.8 -0.2
E23K  Chandalar         61.62  23  P     P      14 15 39.2 +0.8
      baz=257
CCB   Clear Creek Bu    61.68  27  P     P      14 15 38.2 -0.6
TCOL  CIGO, UAF Yank    61.70  27  P     P      14 15 39.0 +0.2
TCOL                               IAmb  IAmb   14 15 41.1
      comp=Z,9.4nm,0.6s
TCOL  CIGO, UAF Yank    61.70  27  P     P      14 15 39.4 +0.6
      baz=260,SNR=5.8
COLA  College           61.70  27  P     P      14 15 39.2 +0.4
COLA                               IAmb  IAmb   14 15 41.1
      comp=Z,9.7nm,0.6s
COLA  College           61.70  27  P     P      14 15 39.3 +0.5
      baz=260
Q23K  Middleton Isla    61.70  33  P     P      14 15 39.9 +1.0
      baz=265
H24K  Noodor Dome       61.85  26  P     P      14 15 40.8 +0.8
H24K                               IAmb  IAmb   14 15 42.0
      comp=Z,6.7nm,0.8s
H24K  Noodor Dome       61.85  26  P     P      14 15 40.9 +1.0
      baz=260
POKR  Poker Plat Res    61.91  27  P     P      14 15 40.9 +0.6
      baz=261
HDA   Harding Lake      62.01  28  P     P      14 15 41.2 +0.2
      baz=262,SNR=7.6
NIL   Nilore            62.02 298  P     P      14 15 41.2 -0.5
NIL                                IAmb  IAmb   14 15 44.0
      comp=Z,12nm,0.8s
E24K  Your Creek        62.04  23  P     P      14 15 42.2 +1.0
      baz=258
M24K  Tolsona, Glenn    62.06  30  P     P      14 15 42.0 +0.5
M24K                               IAmb  IAmb   14 15 47.8
      comp=Z,14nm,1.2s
M24K  Tolsona, Glenn    62.06  30  P     P      14 15 42.5 +1.1
      baz=264
IL31                    62.09  27  P     P      14 15 40.5 -1.0
IL31                               IAmb  IAmb   14 15 41.5
      comp=Z,7.9nm,0.7s
ILAR  Eielson Array     62.09  27  P     P      14 15 40.6 -0.9
      comp=Z,5.1nm,0.6s,baz=259,slow=5.5,SNR=93
      comp=Z,5.1nm,0.6s
ILAR  Eielson Array     62.09  27  P     P      14 15 40.4 -1.1
EYAK  Cordova Ski Ar    62.11  32  P     P      14 15 41.9 +0.3
EYAK                               IAmb  IAmb   14 15 44.4
      comp=Z,15nm,1.2s
EYAK  Cordova Ski Ar    62.11  32  P     P      14 15 42.2 +0.6
      baz=265
IL03  Eielson Array     62.11  27  P     P      14 15 40.5 -1.1
KLU   Klutina           62.11  31  P     P      14 15 42.2 +0.4
KLU   Klutina           62.11  31  P     P      14 15 42.7 +0.9
      baz=264,SNR=6.7
D24K  Happy Valley      62.15  22  P     P      14 15 42.7 +0.9
      baz=257
F24K  Squaw Lake        62.16  24  P     P      14 15 43.2 +1.2
      baz=259
G24K  Hadweenzic Riv    62.16  25  P     P      14 15 42.7 +0.7
      baz=260
C24K  Franklin Bluff    62.32  21  P     P      14 15 43.4 +0.5
      baz=257
K24K  Donnelly Dome     62.44  28  P     P      14 15 44.2 +0.4
      baz=263
PAX   Paxson            62.48  29  P     P      14 15 44.0 -0.2
PAX                                IAmb  IAmb   14 15 44.9
      comp=Z,4.6nm,0.5s
PAX   Paxson            62.48  29  P     P      14 15 44.5 +0.3
      baz=264
HARP  HAARP             62.57  30  P     P      14 15 45.1 +0.5
      baz=264,SNR=6.0
BVAR  Borovoye Array    62.68 320  P     P      14 15 46.2 +0.6
      comp=Z,36nm,0.5s,baz=94,slow=7.4,SNR=175
BVAR                               PcP   PcP    14 16 21.2  0.0
      comp=Z,3.7nm,0.5s,baz=96,slow=5.1,SNR=4.5
      comp=Z,36nm,0.5s
G25K  Bearman Lake      62.71  25  P     P      14 15 46.6 +1.1
      baz=261
BRVK  Borovoye          62.74 320  P     P      14 15 46.4 +0.4
N25K  Chitina, Valde    62.76  31  P     P      14 15 46.6 +0.6
N25K  Chitina, Valde    62.76  31  P     P      14 15 45.2 -0.8
      baz=265
PRP   Porcupine Dome    62.77  26  P     P      14 15 45.3 -0.8
      baz=262
RIDG  Independent Ri    62.84  28  P     P      14 15 46.3 -0.2
RIDG                               IAmb  IAmb   14 15 47.4
      comp=Z,11nm,0.8s
RIDG  Independent Ri    62.84  28  P     P      14 15 46.1 -0.5
      baz=264,SNR=7.8
F25K  Christian Rive    63.02  24  P     P      14 15 48.8 +1.2
      baz=261
FYU   Fort Yukon        63.03  25  P     P      14 15 48.6 +1.0
FYU                                IAmb  IAmb   14 15 49.4
      comp=Z,9.4nm,0.6s
D25K  Kavik River       63.04  22  P     P      14 15 48.4 +0.7
      baz=260
KK31  Karatay Array     63.05 308  P     P      14 15 48.7 +0.5
KK31                               IAmb  IAmb   14 15 49.8
      comp=Z,14nm,0.8s
KKAR  Karatay Array     63.05 308  P     P      14 15 48.7 +0.4
GLB   Gilahina Butte    63.12  31  P     P      14 15 48.5 +0.2
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GLB                                IAmb  IAmb   14 16 07.2
      comp=Z,12nm,1.5s
E25K  Arctic Village    63.13  23  P     P      14 15 50.0 +1.7
      baz=261,SNR=11
DOT   Dot Lake          63.18  29  P     P      14 15 48.5 -0.2
DOT                                IAmb  IAmb   14 15 49.2
      comp=Z,5.0nm,0.6s
SCRK  Sand Creek        63.25  28  P     P      14 15 49.0 -0.3
SCRK                               IAmb  IAmb   14 15 50.2
      comp=Z,9.1nm,0.7s
SCRK  Sand Creek        63.25  28  P     P      14 15 49.3  0.0
      baz=264,SNR=13
VRDI  Verde Repeater    63.28  31  P     P      14 15 49.7 +0.1
VRDI                               IAmb  IAmb   14 16 28.4
      comp=Z,7.9nm,1.1s
BMAR  Burnt Mountain    63.40  24  P     P      14 15 51.5 +1.4
L26K  Log Cabin Wild    63.45  29  P     P      14 15 51.0 +0.5
      baz=266
J26L  Joseph Creek      63.48  28  P     P      14 15 50.5 -0.2
J26L                               IAmb  IAmb   14 15 51.6
      comp=Z,10.0nm,0.8s
J26L  Joseph Creek      63.48  28  P     P      14 15 51.0 +0.3
      baz=265
MCARA McCarthy VSAT     63.49  31  P     P      14 15 51.3 +0.5
MCARA                              IAmb  IAmb   14 16 02.2
      comp=Z,12nm,1.1s
MCARA McCarthy VSAT     63.49  31  P     P      14 15 51.1 +0.3
      baz=267
M26K  Nabesna, AK       63.57  30  P     P      14 15 51.8 +0.5
M26K  Nabesna, AK       63.57  30  P     P      14 15 51.4 +0.1
      baz=266
F26K  Sheenjek River    63.60  24  P     P      14 15 52.6 +1.2
      baz=262
GAR   Garm              63.65 304  P     P      14 15 52.7 +0.4
C26K  Camden Bay        63.65  21  P     P      14 15 53.1 +1.6
      baz=261
G26K  Porcupine Rive    63.65  25  P     P      14 15 52.9 +1.3
      baz=263
I26K  Coal Creek Min    63.73  27  P     P      14 15 52.7 +0.5
      baz=265
C27K  Jago River        64.02  22  P     P      14 15 55.1 +1.1
      baz=262
M27K  Edge Creek, AK    64.09  30  P     P      14 15 55.1 +0.4
      baz=267
K27K  Chicken           64.09  28  P     P      14 15 55.1 +0.5
      baz=266
BARN  Barnard Glacie    64.14  32  P     P      14 15 55.8 +0.7
BARN                               IAmb  IAmb   14 16 14.3
      comp=Z,13nm,1.4s
L27K  Beaver Creek,     64.14  29  P     P      14 15 55.4 +0.3
L27K  Beaver Creek,     64.14  29  P     P      14 15 55.3 +0.3
      baz=267
BCAR  Beaver Creek A    64.17  29  P     P      14 15 55.5 +0.4
CTG   Chitna Glacier    64.29  32  P     P      14 15 56.8 +0.7
      baz=268
CTGM  Chitina Glacie    64.30  32  P     P      14 15 56.6 +0.5
CTGM                               IAmb  IAmb   14 15 57.7
      comp=Z,6.7nm,1.0s
TAU   Tasmania Unive    64.36 177  P     P      14 15 56.5  0.0
I27K  Kandik River      64.39  26  P     P      14 15 57.0 +0.4
      baz=266
LOGN  Logan Glacier     64.45  32  P     P      14 15 57.4 +0.2
LOGN                               IAmb  IAmb   14 16 12.5
      comp=Z,16nm,1.4s
G27K  Doyon Strip       64.47  25  P     P      14 15 57.8 +0.8
      baz=265
H27K  Steamboat Moun    64.47  26  P     P      14 15 57.9 +0.8
      baz=266,SNR=19
EGAK  Eagle             64.53  27  P     P      14 15 57.2 -0.2
EGAK  Eagle             64.53  27  P     P      14 15 57.0 -0.4
      baz=267
BVCY  Beaver Creek      64.56  30  P     P      14 15 58.2 +0.5
      baz=268
CHGR  Chuyangaron       64.59 304  P     P      14 15 58.9 +0.5
E27K  Coleen River      64.61  24  P     P      14 15 58.9 +1.0
      baz=265
YUK3  Moose Creek       64.73  31  P     P      14 15 59.3 +0.2
      baz=269
PCA   Pinnacle          64.81  33  P     P      14 15 59.9 +0.5
PINM  Pinnacle          64.82  33  P     P      14 15 59.5 +0.1
      baz=270,SNR=13
O28M  Mount Upton       64.85  32  P     P      14 16 00.5 +0.6
      baz=270
YUK8  Steele Glacier    65.06  31  P     P      14 16 01.9 +0.7
      baz=270,SNR=8.3
PNL   Peninsula         65.25  33  P     P      14 16 03.0 +0.9
      baz=271,SNR=12
DAWY  Dawson            65.27  28  P     P      14 16 02.8 +0.5
DAWY  Dawson            65.27  28  P     P      14 16 02.5 +0.2
      baz=269,SNR=5.4
KBL   Kabul             65.33 299  P     P      14 16 03.4 +0.1
YUK4  Talbot Arm        65.60  31  P     P      14 16 05.4 +0.8
      baz=271,SNR=33
O29M  Mount Kennedy     65.65  32  P     P      14 16 05.7 +0.9
      baz=271
M29M  Somme Creek       65.68  30  P     P      14 16 05.9 +0.9
      baz=270
YUK6  Outpost Mounta    65.75  32  P     P      14 16 06.4 +0.9
      baz=271,SNR=28
I29M  Ogilvie Camp,     65.76  27  P     P      14 16 05.9 +0.6
I29M                               IAmb  IAmb   14 16 06.7
      comp=Z,11nm,1.2s
I29M  Ogilvie Camp,     65.76  27  P     P      14 16 06.2 +0.9
      baz=269,SNR=6.0
L29M  L29M              65.83  29  P     P      14 16 07.0 +1.3
      baz=270
HYT   Haines Junctio    66.17  32  P     P      14 16 08.8 +0.8
HYT                                IAmb  IAmb   14 16 10.2
      comp=Z,6.3nm,1.0s
HYT   Haines Junctio    66.17  32  P     P      14 16 08.9 +0.8
      baz=272,SNR=13
N30M  Aishikik Lake     66.35  31  P     P      14 16 10.1 +1.0
      baz=272
EPYK  Eagle Plains      66.42  26  P     P      14 16 10.1 +0.6
EPYK  Eagle Plains      66.42  26  P     P      14 16 10.3 +0.9
      baz=270,SNR=11
M30M  Minto, Yukon      66.45  30  P     P      14 16 10.6 +0.9
M30M  Minto, Yukon      66.45  30  P     P      14 16 10.8 +1.1
      baz=272
P30M  Million Dollar    66.47  33  P     P      14 16 10.8 +0.9
      baz=273
G30M  tAoh Zraii Nji    66.62  25  P     P      14 16 11.4 +0.8
      baz=270
PLBC  Pleasant Camp     66.80  33  P     P      14 16 12.2 +0.3
      baz=273,SNR=6.1
MAYO  Mayo, Yukon       66.83  29  P     P      14 16 13.0 +0.9
MAYO  Mayo, Yukon       66.83  29  P     P      14 16 13.2 +1.2
      baz=272
O30N  Mendenhall        66.86  32  P     P      14 16 13.1 +0.7
      baz=273
N31M  Braeburn, Yuko    66.97  31  P     P      14 16 14.0 +1.0
N31M                               IAmb  IAmb   14 16 14.7
      comp=Z,7.1nm,0.8s
N31M  Braeburn, Yuko    66.97  31  P     P      14 16 13.9 +0.9
      baz=273
SKAG  Skagway           67.33  33  P     P      14 16 16.3 +1.1
F31M  Tsiigehtchic      67.57  24  P     P      14 16 16.5 -0.1
      baz=272
M31M  Drury Creek, Y    67.59  30  P     P      14 16 17.3 +0.5
M31M                               IAmb  IAmb   14 16 18.3
      comp=Z,6.9nm,1.1s
M31M  Drury Creek, Y    67.59  30  P     P      14 16 17.0 +0.2
      baz=274
INK   Inuvik            67.62  24  P     P      14 16 16.8  0.0
INK                                IAmb  IAmb   14 16 17.3
      comp=Z,5.0nm,0.7s
INK   Inuvik            67.62  24  P     P      14 16 17.2 +0.4
      baz=272
RTZ   Ruatahuna         67.83 152  P     P      14 16 17.3 -1.3
RTZ                                IAmb  IAmb   14 16 40.8
      comp=Z,16nm,1.2s
QRZ   Quartz Range      67.90 156  P     P      14 16 18.5 -0.4
JIS   Juneau Island     67.92  34  P     P      14 16 19.5 +0.7
FARO  Faro, Yukon       68.07  30  P     P      14 16 20.3 +0.5
FARO                               IAmb  IAmb   14 16 22.9
      comp=Z,7.5nm,1.2s
FARO  Faro, Yukon       68.07  30  P     P      14 16 20.6 +0.7
      baz=275
BKZ   Black Stump Fm    68.08 153  P     P      14 16 18.9 -1.2
P32M  Atlin             68.14  33  P     P      14 16 20.8 +0.6
      baz=276
N32M  Quiet Lake        68.30  31  P     P      14 16 21.7 +0.5
      baz=276
P33M  Teslin, Yukon     68.52  32  P     P      14 16 23.1 +0.4
P33M  Teslin, Yukon     68.52  32  P     P      14 16 23.1 +0.4
      baz=276
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U33K	Whale Pass	68.85	37	P	P	14 16 25.3	+0.7
	baz=277						
T33K	Petersburg	68.85	36	P	P	14 16 25.3	+0.7
	baz=277						
MRZ	Mangatainoka R	68.95	154	P	P	14 16 24.4	-1.0
ARU	Arti	69.28	324	P	P	14 16 27.4	+0.1
	comp=Z,14nm,0.3s,baz=91,slow=6.0,SNR=32						
	comp=Z,14nm,0.3s						
ARU	Arti	69.28	324	P	P	14 16 27.1	-0.2
ABKAR	Akbulak array	69.56	316	P	P	14 16 29.2	+0.1
PLWZ	Palliser	69.59	155	P	P	14 16 28.1	-1.2
A36M	Sachs Harbour	70.09	19	P	P	14 16 32.0	+0.1
A36M	Sachs Harbour	70.09	19	P	P	14 16 32.5	+0.7
	baz=278						
DLBC	Dease Lake	70.18	34	P	P	14 16 33.6	+0.8
DLBC				IAmb	IAmb	14 16 46.0	
	comp=Z,13nm,1.5s						
DLBC	Dease Lake	70.18	34	P	P	14 16 33.2	+0.5
	baz=279						
WTLY	Watson Lake, Y	70.53	32	P	P	14 16 35.7	+0.9
	baz=280						
AKTO	Aktyubinsk	70.58	317	P	P	14 16 35.0	-0.3
	comp=Z,3.3nm,0.6s,baz=90,slow=5.6,SNR=13						
	comp=Z,3.3nm,0.6s						
C36M	Paulatuk	70.91	22	P	P	14 16 36.6	-0.3
C36M	Paulatuk	70.91	22	P	P	14 16 37.7	+0.8
	baz=280						
LIRD	Liard River Hi	72.00	33	P	P	14 16 44.0	+0.4
	baz=282						
WRGLY	Wrigley	72.41	28	P	P	14 16 46.6	+0.8
	baz=283						
KOTAN	Kotaneelee Air	72.85	32	P	P	14 16 49.1	+0.5
	baz=284						
GEYT	Alibeck	73.24	305	P	P	14 16 51.0	-0.3
	comp=Z,3.2nm,0.6s,baz=90,slow=1.9,SNR=8.6						
	comp=Z,3.2nm,0.6s						
CBB	Campbell River	74.64	42	P	P	14 17 00.5	+1.5
CLRS	Cowichan Lake	75.75	43	P	P	14 17 06.2	+0.9
SPA0	Spitsbergen Ar	75.87	350	*e*P	P	14 17 05.4	-0.1
SPB2	Spitsbergen Ar	75.87	350	P	P	14 17 05.7	+0.2
KBS	Kingsbay	76.03	351	P	P	14 17 06.3	-0.1
KBS	Kingsbay	76.03	351	*e*P	P	14 17 06.9	+0.5
BELG	Belogornoye	76.41	321	P	P	14 17 09.2	+0.2
	comp=Z,29nm,0.6s,baz=301,slow=1.1,SNR=9.5						
	comp=Z,29nm,0.6s						
WISH	Wishkah	76.48	45	P	P	14 17 10.0	+0.6
YKA	Yellowknife Ar	76.51	28	P	P	14 17 09.3	0.0
	comp=Z,7.5nm,0.5s,baz=290,slow=5.7,SNR=130						
	comp=Z,7.5nm,0.5s						
YKA	Yellowknife Ar	76.51	28	P	P	14 17 09.2	-0.2
LLLB	Lillooet	76.62	41	P	P	14 17 11.1	+0.8
LLLB				IAmb	IAmb	14 17 30.0	
	comp=Z,10nm,1.5s						
RADR	Rader Ridge	76.67	45	P	P	14 17 11.4	+0.8
E03A	Lebam	76.78	45	P	P	14 17 11.9	+0.8
LVZ	Lovozero	76.83	338	P	P	14 17 11.6	+0.6
RES	Resolute Bay	77.12	13	P	P	14 17 12.6	+0.1
RES				IAmb	IAmb	14 17 13.5	
	comp=Z,6.7nm,0.7s						
I02E	Swisshome, OR	77.33	48	P	P	14 17 15.2	+1.0
I03D	Drain, OR	77.80	48	P	P	14 17 17.0	+0.2
I03D				IAmb	IAmb	14 17 40.0	
	comp=Z,17nm,1.4s						
LON	Longmire	77.87	44	P	P	14 17 17.3	+0.1
LON				IAmb	IAmb	14 17 35.8	
	comp=Z,8.1nm,1.2s						
BUCK	Buck Mountain	77.89	47	P	P	14 17 18.5	+1.0
K02D	Willamette Mer	77.89	49	P	P	14 17 17.8	+0.3
DBO	Dodson Butte	78.06	48	P	P	14 17 19.0	+0.7
JCC	Jacoby Creek,	78.22	51	P	P	14 17 20.1	+0.9
KEV	Kevo	78.39	341	P	P	14 17 19.6	0.0
I04A	Tendick Farm,	78.41	47	P	P	14 17 20.8	+0.5
HUMO	Hull Mountain	78.42	49	P	P	14 17 21.4	+1.1
HUMO				IAmb	IAmb	14 17 23.4	
	comp=Z,12nm,1.5s						
KHMM	Horse Mountain	78.42	51	P	P	14 17 21.4	+0.9
KHMM				IAmb	IAmb	14 17 22.6	
	comp=Z,7.8nm,0.7s						
LTY	Liberty	78.44	44	P	P	14 17 20.4	0.0
LTY				IAmb	IAmb	14 17 52.2	
	comp=Z,12nm,1.4s						
YBH	Yreka Blue Hor	78.87	50	P	P	14 17 23.5	+0.7
KCPM	Cahto Peak	78.91	52	P	P	14 17 23.9	+0.8
KCPM				IAmb	IAmb	14 17 25.2	
	comp=Z,12nm,1.0s						
B08A	Colville Reser	78.92	42	P	P	14 17 22.9	0.0
B08A				IAmb	IAmb	14 17 24.1	
	comp=Z,4.7nm,0.9s						
ARA0	ARCESS Array S	78.95	341	*e*P	P	14 17 23.1	+0.4
ARCES	ARCESS Array B	78.95	341	P	P	14 17 22.9	+0.3
	comp=Z,13nm,0.5s,baz=72,slow=8.2,SNR=68						
	comp=Z,13nm,0.5s						
ARCES	ARCESS Array B	78.95	341	P	P	14 17 22.9	+0.3
L04D	Klamath Falls	79.00	49	P	P	14 17 23.7	+0.1
K04D	Chiloquin, OR	79.25	48	P	P	14 17 25.8	+0.9
J05D	Fort Rock, OR	79.39	48	P	P	14 17 26.4	+0.7
PINE	Pine Mountain	79.42	47	P	P	14 17 26.7	+0.7
K05A	Summer Lake	79.81	48	P	P	14 17 28.6	+0.6
K05A				IAmb	IAmb	14 17 30.0	
	comp=Z,8.4nm,1.1s						
KTK1	Kautokeino	79.91	342	*e*P	P	14 17 28.1	+0.3
TULEG	Thule	80.11	7	P	P	14 17 28.7	+0.1
G08A	Pilot Rock	80.23	45	P	P	14 17 30.1	-0.1
I07A	Izee	80.29	46	P	P	14 17 30.5	0.0
NEW	Newport	80.33	42	P	P	14 17 30.7	+0.2
NEW				IAmb	IAmb	14 17 31.6	
	comp=Z,5.3nm,0.7s						
NEW	Newport	80.33	42	P	P	14 17 30.6	+0.1
	baz=292						
JETT	Jettan, Norway	80.40	343	*e*P	P	14 17 30.4	0.0
JETT				IAmb	IAmb	14 17 31.3	
	comp=Z,17nm,0.7s						
TRO	Tromso	80.76	343	*e*P	P	14 17 31.8	-0.4
CMB	Columbia Colle	81.81	52	P	P	14 17 38.6	+0.1
CMB				IAmb	IAmb	14 17 39.6	
	comp=Z,4.9nm,0.8s						
WALA	Waterton Lakes	81.99	40	P	P	14 17 40.1	+0.9
WALA				IAmb	IAmb	14 17 41.0	
	comp=Z,5.0nm,0.8s						
YERR	Yerington	82.31	51	P	P	14 17 41.5	+0.3
YERR				IAmb	IAmb	14 17 42.3	
	comp=Z,3.4nm,0.8s						
KBZ	Khabaz	82.37	314	P	P	14 17 41.9	+0.8
	comp=Z,12nm,0.8s,baz=95,slow=6.2,SNR=20						
	comp=Z,12nm,0.8s						
KIV	Kislovodsk	82.43	314	P	P	14 17 42.3	+0.8
MSO	Missoula	82.88	42	P	P	14 17 43.7	-0.2
	baz=294						
STEI	Steigen	82.89	343	*e*P	P	14 17 43.1	-0.2
STEI				IAmb	IAmb	14 17 43.8	
	comp=Z,16nm,0.6s						
MFID	Camas Ranch	83.02	46	P	P	14 17 44.9	+0.3
MFID				IAmb	IAmb	14 17 45.5	
	comp=Z,4.2nm,0.7s						
SMMC	Simmler	83.09	55	P	P	14 17 44.4	-0.7
	baz=292						
KVN	Kaiserville	83.11	51	P	P	14 17 45.4	+0.1
KVN				IAmb	IAmb	14 17 46.0	
	comp=Z,3.0nm,0.7s						
NVAR	Mina Array Bea	83.20	51	P	P	14 17 46.1	+0.3
	comp=Z,4.0nm,0.7s,baz=276,slow=5.4,SNR=38						
	comp=Z,4.0nm,0.7s						
FIA1	FINESS Array S	83.20	334	P	P	14 17 44.0	-1.0
FIA1				IAmb	IAmb	14 18 22.7	
	comp=Z,5.7nm,1.1s						
FINES	FINESS Array B	83.20	334	P	P	14 17 44.1	-0.9
	comp=Z,5.6nm,0.3s,baz=69,slow=4.9,SNR=130						
	comp=Z,5.6nm,0.3s						
FINES	FINESS Array B	83.20	334	P	P	14 17 43.9	-1.1
FAUS	Fauske	83.25	342	*e*P	P	14 17 45.1	-0.1
NV11	Mina Array Sit	83.30	51	P	P	14 17 46.5	+0.3
PKM	Mcpherson Peak	83.39	55	P	P	14 17 46.3	-0.5
	baz=292						
SCZ2	Santa Cruz Isl	83.85	56	P	P	14 17 48.7	-0.2
	baz=292						
HLID	Hailey	83.90	46	P	P	14 17 49.7	+0.5
	baz=294						
LRM	Limekiln Ridge	84.23	43	P	P	14 17 51.2	+0.3
HRY	Holter Researc	84.24	42	P	P	14 17 51.2	+0.5
MOR8	Moi Rana	84.32	341	*e*P	P	14 17 49.0	-1.6
GRAC	Grapevine Rang	84.43	53	P	P	14 17 52.0	+0.2
	baz=293						
ELK	Elko	84.48	48	P	P	14 17 51.9	-0.3
ELK				IAmb	IAmb	14 17 53.4	
	comp=Z,8.7nm,1.1s						
MPMC	Manual Prospec	84.70	53	P	P	14 17 53.4	0.0
	baz=293						
LRMC	Laurel Mtn Rad	84.78	54	P	P	14 17 53.8	+0.1
	baz=293						
BOZ	Bozeman (W)	84.85	43	P	P	14 17 53.8	-0.1
BOZ				IAmb	IAmb	14 17 54.8	
	comp=Z,4.5nm,0.6s						
BOZ	Bozeman (W)	84.85	43	P	P	14 17 54.5	+0.6
	baz=296						
FMP	Fort Macarthur	84.99	56	P	P	14 17 54.9	+0.3
	baz=293						
FURC	Furnace Creek,	85.01	53	P	P	14 17 54.8	+0.2
	baz=293						
WCT	Wildcat Mounta	85.06	52	P	P	14 17 54.7	-0.3
R11A	Troy Canyon, C	85.19	51	P	P	14 17 55.6	-0.1
R11A	Troy Canyon, C	85.19	51	P	P	14 17 55.9	+0.2
	baz=294						
QSM	Queen of Sheba	85.20	53	P	P	14 17 55.5	-0.1
QSM				IAmb	IAmb	14 17 56.7	
	comp=Z,5.9nm,1.0s						
GWY	Greenwater Val	85.26	53	P	P	14 17 55.9	-0.2
GWY				IAmb	IAmb	14 17 57.0	
	comp=Z,6.1nm,0.9s						
TPNV	Topopah Spring	85.27	52	P	P	14 17 56.1	0.0
TPNV				IAmb	IAmb	14 17 57.2	
	comp=Z,5.9nm,0.8s						
TPNV	Topopah Spring	85.27	52	P	P	14 17 56.6	+0.5
	baz=294						
GSC	Goldstone, Bar	85.51	54	P	P	14 17 57.4	+0.1
	baz=293						
HVU	Hansel Valley	85.74	47	P	P	14 17 57.8	-0.5
SPR3	Spring Creek 3	85.83	50	P	P	14 17 58.4	-0.6
SPR3				IAmb	IAmb	14 18 00.9	
	comp=Z,6.1nm,1.5s						
MURC	Murrieta	85.88	56	P	P	14 17 59.2	+0.2
	baz=293						
BGU	Big Grassy Mou	85.93	48	P	P	14 17 59.0	-0.3
PRN	Pahroc Range	85.96	51	P	P	14 17 59.6	+0.2
PRN				IAmb	IAmb	14 18 01.1	
	comp=Z,6.1nm,1.1s						
HEC	Hector,Ludlow	86.05	54	P	P	14 18 00.1	+0.3
	baz=294						
TUQ	Turquoise Moun	86.12	53	P	P	14 18 00.1	-0.1
	baz=294						
SPUT	South Promonto	86.16	47	P	P	14 18 00.4	0.0
MNK	Minsk	86.19	328	*i* P	P	14 17 57.6	-2.3
	comp=E,3.0nm,0.8s						
MNK				*i* P	P	14 17 57.6	-2.3
	comp=N,47nm,1.1s						
MNK				*i* P	P	14 17 57.6	-2.3
	comp=Z,6.0nm,0.6s,baz=57						
MNK				*i* pP	pP	14 19 12.7	+1.6
MNK				*i* PP	PP	14 21 23.9	-0.9
MNK				*i* PPP	PPP	14 23 17.3	
MNK				*i* SKS	SKiKP	14 26 20.5	+10
MNK				*i* S	SKSac	14 27 52.8	-3.4
MNK				*i* sS	sS	14 30 12.3	-2.9
MNK				*i* SS	SS	14 33 03.9	-50
NSS	Namsos	86.22	341	*e*P	P	14 17 59.4	-0.5
NSS				IAmb	IAmb	14 18 02.0	
	comp=Z,630nm,2.8s						
109C	Camp Elliot, M	86.23	56	P	P	14 18 00.5	-0.2
	baz=293						
SHPR	Sheep Range	86.25	52	P	P	14 18 01.2	+0.3
DUG	Dugway, Tooele	86.39	48	P	P	14 18 01.4	0.0
DUG				IAmb	IAmb	14 18 02.5	
	comp=Z,2.9nm,0.7s						
DUG	Dugway, Tooele	86.39	48	P	P	14 18 01.8	+0.3
	baz=295						
PFO	Pinyon Flats O	86.44	55	P	P	14 18 01.4	-0.4
PFO				IAmb	IAmb	14 18 02.5	
	comp=Z,3.8nm,0.9s						
PFO	Pinyon Flats O	86.44	55	P	P	14 18 01.5	-0.4
	baz=294						
TPFO	Pinon Flats	86.45	55	P	P	14 18 01.5	-0.4
	baz=294						
PMD	Palm Desert	86.49	55	P	P	14 18 01.1	-0.8
PMD				IAmb	IAmb	14 18 03.0	
	comp=Z,4.6nm,0.9s						
NACGM	Naroch	86.51	329	*e*P	P	14 18 01.3	-0.2
	comp=Z,12nm,0.9s,baz=56						
RLMT	Red Lodge	86.55	43		P	14 18 03.5	+1.2
RLMT				IAmb	IAmb	14 18 04.9	
	comp=Z,6.3nm,0.7s						
RLMT	Red Lodge	86.55	43	P	P	14 18 02.7	+0.4
	baz=297						
GMRC	Granite Mounta	86.58	54	P	P	14 18 02.8	+0.3
	baz=294						
BELC	Belle Mtn. Jos	86.64	55	P	P	14 18 02.6	-0.2
	baz=294						
MONP2	Monument Peak	86.76	56	P	P	14 18 03.2	-0.3
	baz=294						
V12A	Nelson	86.80	53		P	14 18 03.9	+0.5
V12A				IAmb	IAmb	14 18 04.8	
	comp=Z,3.7nm,0.8s						
TCUT	Toone Canyon	86.95	47		P	14 18 05.5	+1.2
TCUT				IAmb	IAmb	14 18 06.7	
	comp=Z,7.2nm,0.7s						
FCC	Fort Churchill	87.09	26	P	P	14 18 03.8	-0.4
FCC				IAmb	IAmb	14 18 04.3	
	comp=Z,5.8nm,0.8s						
IKP	In-Ko-Pah, Jac	87.09	56	P	P	14 18 04.8	-0.1
	baz=294						
BC3	Big Chuckawall	87.19	55	P	P	14 18 05.7	+0.3
	baz=294						
SWSC	Sam W. Stewart	87.21	56	P	P	14 18 05.4	0.0
	baz=294						
IRM	Iron Mountain	87.22	54	P	P	14 18 05.4	0.0
	baz=294						
YUH	Yuha Desert	87.24	56	P	P	14 18 05.4	0.0
YUH				IAmb	IAmb	14 18 18.5	
	comp=Z,6.5nm,1.5s						
LCMT	Little Creek M	87.44	51	P	P	14 18 06.7	+0.1
BW06	Boulder Array	87.45	45	P	P	14 18 06.0	-0.6
	baz=297						
PDAR	Pinedale Array	87.45	45	P	P	14 18 05.5	-1.0
	comp=Z,0.4nm,0.5s,baz=172,slow=1.9,SNR=11						
	comp=Z,0.4nm,0.5s						
PDAR	Pinedale Array	87.45	45	P	P	14 18 05.9	-0.7
PABE	Paberze	87.50	330	P	P	14 18 05.8	-0.4
AKASG	Malin Array Be	87.52	324	P	P	14 18 04.7	-1.7
	comp=Z,0.8nm,0.4s,baz=47,slow=5.0,SNR=11						
	comp=Z,0.8nm,0.4s						
GLA	Glamis	87.92	55	P	P	14 18 08.8	0.0
	baz=294						
PDMCI	Parker Dam,Lak	87.92	54	P	P	14 18 08.7	0.0
	baz=295						
U15A	North Rim	88.38	51	P	P	14 18 11.5	+0.4
P18A	Preston Nutter	88.41	48	P	P	14 18 11.7	+0.5
P18A				IAmb	IAmb	14 18 12.9	
	comp=Z,2.5nm,0.7s						
SRU	San Rafael Swe	88.45	48	P	P	14 18 11.3	0.0
SRU				IAmb	IAmb	14 18 11.9	
	comp=Z,3.7nm,0.6s						
NC405	NORSAR Array S	88.75	339	P	P	14 18 11.0	-1.0
NB201	NORSAR Array S	88.94	339	P	P	14 18 11.8	-1.1
NC204	NORSAR Array S	88.95	339	P	P	14 18 12.1	-0.9
NB2	NORSAR Subarra	88.97	339	P	P	14 18 11.5	-1.6
	comp=Z,3.8nm,0.7s,baz=44,slow=5.1						
NB2	NORSAR Subarra	88.97	339	P	P	14 18 11.5	-1.6
	slow=5.1						
NOA	NORSAR Array B	88.97	339	P	P	14 18 11.4	-1.6
	comp=Z,2.8nm,0.8s,baz=46,slow=4.5,SNR=9.0						
	comp=Z,2.8nm,0.8s						
NC602	NORSAR Array S	89.08	338	*e*P	P	14 18 13.8	+0.3
NBO00	NORSAR Array S	89.12	339	P	P	14 18 12.7	-1.1
WUAZ	Wupatki	89.45	52	P	P	14 18 15.8	-0.2
	baz=296						
K22A	Casper	89.47	44	P	P	14 18 15.6	-0.4
	baz=299						
O20A	White River Ci	89.55	47	P	P	14 18 16.4	0.0
	baz=298						
214A	Organ Pipe Nat	89.92	56	P	P	14 18 18.7	+0.6
	baz=296						
SKAR	Skarslia	90.20	340	*e*P	P	14 18 16.8	-2.0
RSSD	Black Hills	90.30	42	P	P	14 18 19.3	-0.6
RSSD				IAmb	IAmb	14 18 20.2	
	comp=Z,4.3nm,0.6s						
RSSD	Black Hills	90.30	42	P	P	14 18 19.6	-0.3
	baz=301						
BR131	Keskin Array S	90.35	313	P	P	14 18 19.2	-0.8
BR131				IAmb	IAmb	14 18 19.8	
	comp=Z,3.8nm,0.8s						
BRTR	Keskin Array B	90.35	313	P	P	14 18 18.8	-1.3
	comp=Z,1.7nm,0.7s,baz=80,slow=2.5,SNR=12						
	comp=Z,1.7nm,0.7s						
N23A	Red Feather La	90.71	45	P	P	14 18 21.4	-0.5
	baz=300						
ISCO	Idaho Springs	91.47	46	P	P	14 18 25.8	+0.2
	baz=300						
ANMO	Albuquerque	93.28	50	P	P	14 18 33.8	+0.1
	baz=299						
GERES	GERESS Array B	96.60	329	P	P	14 18 46.9	-1.6
	comp=Z,0.3nm,0.4s,baz=50,slow=6.5,SNR=4.2						
	comp=Z,0.3nm,0.4s						
TORD	Torodi Ar. Bea	128.74	309	PKP	PKPdf	14 24 24.1	-0.8
	comp=Z,0.6nm,0.3s,baz=43,slow=1.3,SNR=18						
PLCA	Paso Flores	145.75	131	PKPbc	PKPbc	14 24 56.5	+0.1
	comp=Z,1.3nm,0.6s,baz=276,slow=4.6,SNR=8.6						
LPAZ	La Paz	149.98	85	PKPbc	PKPbc	14 25 08.7	-0.2
	comp=Z,4.0nm,0.6s,baz=274,slow=5.0,SNR=3.7						

IDC ***12*** *14:32:53.5±1.2, 24°.17S×67°.07W, h165km±10km, mb3.4/5, mbtmp4.0/12, Error ellipse: s-maj=18.4km s-min=14.1km az=37.0*

SJA ***12*** *14:32:54.5±1.2, 24°.19S×67°.20W, h160km, ML4.1, MW4.0, Hypocentre not reviewed by the ISC*

NEIC ***12*** *14:32:54.3±2.2, 24°.17S±0°.07×67°.2W±0°.1, h179km±10km, mb4.2/8, ML4.4(GUC), Error ellipse: s-maj=15.6km s-min=9.7km az=86.0*

GUC ***12*** *14:32:55.4±0.6, 24°.15S×67°.46W, h203km±8km, ML4.4*

VAO ***12*** *14:32:55.1±0.6, 24°.20S×67°.34W, h180km, mb3.9*

ISC 12 14:32:54.1±0.7, **24°.18S**±0°.04×**67°.30W**±0°.06, **h178**km±8km, **n108,** σ1.s39/128, **mb3.6**/6, **16C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.73	109	*e*P		14 33 28.0	
HJA	Humahuaca	1.99	61	*e*P		14 33 31.7	
LVC	Limon Verde	2.15	316	P	Pn	14 33 34.3	+1.2
	339nm,0.3s,baz=136,slow=7.7,SNR=1062						
LVC				S	S	14 34 03.8	+0.6
	153nm,0.4s,baz=161,slow=4.9,SNR=3.4						
LVC	Limon Verde	2.15	316		Pn	14 33 34.6	+1.5
LVC	Limon Verde	2.15	316	⇑*i*P	Pn	14 33 34.6	+1.5
LVC				*i* S	S	14 34 04.5	+1.3
LVC	Limon Verde	2.15	316	*e*P	Pn	14 33 34.6	+1.5
LVC	Limon Verde	2.15	316	*e*P		14 33 34.6	
LVC				*e*S		14 34 05.0	
LVC				IAML		14 34 06.6	
	comp=Z,395nm,0.2s						
PB15	IPOC Station P	2.21	296		Pn	14 33 35.2	+1.6
PB15	IPOC Station P	2.21	296	⇑*i*P	Pn	14 33 35.4	+1.8
PB15				*i* S	S	14 34 05.2	+1.1
PB15	IPOC Station P	2.21	296	*e*P		14 33 35.4	
PB15				*e*S		14 34 05.8	
PB15				IAML		14 34 10.3	
	comp=Z,3µm,0.2s						
GO02	Mina Guanaco	2.30	244		Pn	14 33 36.4	+1.8
GO02	Mina Guanaco	2.30	244	⇑*i*P	Pn	14 33 36.5	+1.8
GO02				*i* S	S	14 34 08.1	+2.0
GO02	Mina Guanaco	2.30	244	*e*P		14 33 36.5	
GO02				*e*S		14 34 08.3	
PB06	IPOC Station P	2.55	305		Pn	14 33 38.8	+1.4
PB06	IPOC Station P	2.55	305	⇑*i*P	Pn	14 33 39.0	+1.6
PB06				*i* S	S	14 34 11.5	+0.5
PB06				IAML		14 34 13.5	
	comp=N,1µm,0.4s						
PB06	IPOC Station P	2.55	305	*e*P		14 33 39.0	
PB06				*e*S		14 34 11.8	
PB06				IAML		14 34 16.8	
	comp=Z,683nm,0.8s						
YJA	Yavi	2.59	40	*e*P		14 33 38.6	
PB14	IPOC Station P	2.86	260	Pn	Pn	14 33 42.4	+1.1
PB14	IPOC Station P	2.86	260	⇑*i*P	Pn	14 33 42.5	+1.1
PB14				*i* S	S	14 34 17.5	-0.3
PB14				IAML		14 34 19.6	
	comp=E,388nm,0.4s						
PB14	IPOC Station P	2.86	260	*e*P		14 33 42.4	
PB14				*e*S		14 34 18.5	
PB14				IAML		14 34 21.2	
	comp=Z,514nm,0.4s						
PB09	IPOC Station P	2.97	323		Pn	14 33 44.1	+1.5
PB09	IPOC Station P	2.97	323	⇑*i*P	Pn	14 33 44.1	+1.5
PB09				*i* S	S	14 34 20.9	+0.8
PB09				IAML		14 34 27.4	
	comp=N,438nm,0.3s						
PB09	IPOC Station P	2.97	323	*e*P		14 33 44.1	
PB09				*e*S		14 34 21.5	
PB09				IAML		14 34 27.7	
	comp=Z,396nm,0.2s						
PB10	IPOC Station P	3.05	282		Pn	14 33 44.5	+1.2
PB10	IPOC Station P	3.05	282	⇑*i*P	Pn	14 33 44.7	+1.4
PB10				*i* S	S	14 34 21.4	-0.1
PB10				IAML		14 34 26.1	
	comp=E,617nm,0.4s						
PB10	IPOC Station P	3.05	282	*e*P		14 33 44.7	
PB10				*e*S		14 34 22.0	
PB10				IAML		14 34 24.6	
	comp=Z,282nm,0.4s						
PB03	IPOC Station P	3.10	313		Pn	14 33 44.8	+0.8
PB03	IPOC Station P	3.10	313	⇑*i*P	Pn	14 33 45.0	+1.0
PB03				*i* S	S	14 34 22.1	-0.8
PB03				IAML		14 34 26.1	
	comp=E,574nm,0.2s						
PB03	IPOC Station P	3.10	313	*e*P		14 33 45.0	
PB03				*e*S		14 34 22.1	
PB03				IAML		14 34 25.3	
	comp=Z,514nm,0.4s						
AC02	Maricunga	3.12	212	Pn	Pn	14 33 46.2	+1.6
PB04	IPOC Station P	3.20	305		Pn	14 33 45.9	+0.6
PB04	IPOC Station P	3.20	305	⇑*i*P	Pn	14 33 46.1	+0.8
PB04				*i* S	S	14 34 25.0	0.0
PB04				IAML		14 34 29.3	
	comp=N,709nm,0.3s						
PB07	IPOC Station P	3.41	315		Pn	14 33 48.6	+0.7
PB07	IPOC Station P	3.41	315	⇑*i*P	Pn	14 33 48.7	+0.7
PB07				*i* S	S	14 34 28.5	-1.3
AC01	Pan de Azucar	3.57	236	Pn	Pn	14 33 49.9	+0.2
AC01	Pan de Azucar	3.57	236	⇑*e*P	Pn	14 33 50.0	+0.2
AC01				*e*S	S	14 34 32.1	-1.1
AC01	Pan de Azucar	3.57	236	*e*P		14 33 49.9	
AC01				*e*S		14 34 32.1	
AC01				IAML		14 34 37.6	
	comp=Z,169nm,0.6s						
PB01	IPOC Station P	3.72	327		Pn	14 33 51.9	+0.2
PB01	IPOC Station P	3.72	327	⇑*i*P	Pn	14 33 51.9	+0.2
PB01				*i* S	S	14 34 35.4	-1.3
PB02	IPOC Station P	3.72	319		Pn	14 33 51.7	-0.1
PB02	IPOC Station P	3.72	319	⇑*i*P	Pn	14 33 52.0	+0.2
PB02				*i* S	S	14 34 35.5	-1.1
GO03	Copiap	4.30	217	Pn	Pn	14 33 58.9	-0.2
GO03	Copiap	4.30	217	*e*P		14 33 59.1	
GO03				*e*S		14 34 48.0	
PB08	IPOC Station P	4.37	337		Pn	14 34 00.7	+0.3
PB08	IPOC Station P	4.37	337	⇑*i*P	Pn	14 34 01.0	+0.7
PB08				*i* S	S	14 34 51.1	-1.0
PB08	IPOC Station P	4.37	337	*e*P		14 34 01.1	
PB08				*e*S		14 34 52.2	
PB08				IAML		14 34 53.1	
	comp=Z,137nm,0.3s						
CYA	Choya	4.45	163	⇑*e*P	Pn	14 34 01.6	+0.6
TA01	Diego Aracena	4.48	323	Pn	Pn	14 34 00.9	-0.4
TA01	Diego Aracena	4.48	323	*e*P	Pn	14 34 00.8	-0.5
TA01				*i* S	S	14 34 51.2	-2.7
TA01	Diego Aracena	4.48	323	*e*P		14 34 00.9	
TA01				*e*S		14 34 51.7	
TA01				IAML		14 34 58.4	
	comp=Z,66nm,0.2s						
TA02	Huaiquique	4.69	326		Pn	14 34 03.9	-0.2
GO01	Chusmiza	4.82	338		Pn	14 34 06.2	-0.1
PB11	IPOC Station P	4.91	333	Pn	Pn	14 34 06.1	-1.0
PB11	IPOC Station P	4.91	333	⇑*i*P	Pn	14 34 06.0	-1.1
PB11				*i* S	S	14 35 00.6	-3.6
PB11	IPOC Station P	4.91	333	*e*P		14 34 06.1	
PB11				*e*S		14 35 02.3	
PB11				IAML		14 35 07.5	
	comp=Z,76nm,0.2s						
AC04	Llanos de Chal	5.25	219	Pn	Pn	14 34 10.1	-1.2
AC04	Llanos de Chal	5.25	219	*e*P	Pn	14 34 10.1	-1.2
AC04				*e*S	S	14 35 09.2	-2.6
PSGCX	Pisagua	5.26	330	Pn	Pn	14 34 09.7	-1.9
AC05	El Transito	5.35	209		Pn	14 34 12.2	-0.4
AC05	El Transito	5.35	209	⇓*e*P	Pn	14 34 12.3	-0.4
AC05				*e*S	S	14 35 13.2	-1.1

AC05	El Transito	5.35	209	*e*P		14 34 12.3	
AC05				IAML		14 35 51.5	
	comp=Z,46nm,1.1s						
MNMC	Minye Minye	5.46	337		Pn	14 34 13.2	-1.2
LCO	Las Campanas	5.69	212	Pn	Pn	14 34 16.2	-1.1
PB16	IPOC Station P	6.17	340		Pn	14 34 23.4	-0.5
PB12	IPOC Station P	6.21	332	Pn	Pn	14 34 22.9	-1.2
CO01	Juntas del Tor	6.29	203	Pn	Pn	14 34 25.6	+0.5
AP01	Chacalluta	6.44	333	Pn	Pn	14 34 26.6	-0.3
TICA	Tres Isletas	6.64	111	*e*P	Pn	14 34 28.9	-0.6
GO04	Tololo Observa	6.73	207	Pn	Pn	14 34 29.8	-1.2
VACA	Villa Angela C	6.87	121	*e*P	Pn	14 34 32.8	+0.3
CO03	El Pedregal	7.28	204	Pn	Pn	14 34 37.7	-0.4
CFA	Coronel Fontan	7.44	186	P	Pn	14 34 39.7	-0.4
	comp=Z,2.4nm,0.3s,baz=29,slow=22,SNR=18						
CFA				S	S	14 35 58.2	-5.6
	comp=Z,5.7nm,0.4s,baz=126,slow=23,SNR=8.1						
CO02	Combarbal	7.72	204	Pn	Pn	14 34 42.0	-1.9
LPAZ	La Paz	7.89	354	P	Pn	14 34 46.8	+0.1
	comp=Z,9.0nm,0.3s,baz=153,slow=9.5,SNR=52						
LPAZ				S	S	14 36 09.4	-6.1
	comp=Z,4.5nm,0.7s,baz=209,slow=24,SNR=1.8						
LPAZ	La Paz	7.89	354	Pn	Pn	14 34 46.6	0.0
LPAZ	La Paz	7.89	354	*e*P	Pn	14 34 46.8	+0.1
CPUP	Villa Florida	9.28	105	P	Pn	14 35 00.9	-3.3
	comp=Z,3.2nm,0.8s,baz=286,slow=12,SNR=4.8						
MURT	Porto Murtinho	9.28	76	*e*P	Pn	14 35 03.4	-0.9
MECA	Mercedes	9.62	124	*e*P	Pn	14 35 07.9	-0.8
SIV	San Ignacio	10.03	37	P	Pn	14 35 11.4	-2.9
	comp=Z,4.6nm,0.4s,baz=229,slow=11,SNR=22						
SIV				S	S	14 36 57.7	-9.1
	comp=Z,0.9nm,0.6s,baz=324,slow=21,SNR=1.6						
AQDB	Aquidauana	11.35	73	*e*P	Pn	14 35 32.0	+0.6
PTLB	Pontes e Lacer	11.59	43	Pn	Pn	14 35 34.1	-0.4
PTLB	Pontes e Lacer	11.59	43	*e*P	Pn	14 35 34.5	+0.1
MCR1	Marechal Candi	12.10	94	*e*P	Pn	14 35 42.8	+1.8
CRSM	Crissiumal (Br	12.39	108	*e*P	Pn	14 35 46.6	+2.0
SALV	Santo Antonio	13.66	55	*e*P	Pn	14 36 02.2	+1.4
CPSB	Cacapava Do Su	13.79	120	*e*P	Pn	14 36 02.5	+0.1
PTGB	Pitanga	13.89	95	*e*P	Pn	14 36 04.9	+1.2
ITAB	Concordia	14.01	106		Pn	14 36 06.6	+1.5
ITAB	Concordia	14.01	106	*e*P	Pn	14 36 05.5	+0.4
PLTB	Pedras Altas	14.26	125		Pn	14 36 09.5	+1.4
TRQA	Tornquist	14.56	163	Pn	Pn	14 36 11.1	-0.7
PCMB	Pacaembu	15.00	83	*e*P	Pn	14 36 18.8	+1.3
SAML	Samuel	15.65	15		P	14 36 24.1	-1.7
SAML	Samuel	15.65	15	*e*P	P	14 36 24.8	-1.0
GO06	Curarrehue	15.76	192	P	Pn	14 36 27.8	+1.2
GO06				IAmb	IAmb	14 37 06.7	
	comp=Z,16nm,1.4s						
ITRB	Iturama	16.34	77	*e*P	P	14 36 34.2	+0.9
PLCA	Paso Flores	16.73	189	P	Pn	14 36 37.9	-0.4
	comp=Z,2.9nm,1.1s,baz=18,slow=12,SNR=2.2						
PLCA	Paso Flores	16.73	189	P	Pn	14 36 39.0	+0.7
PLCA				IAmb	IAmb	14 37 22.2	
	comp=Z,14nm,1.5s						
ARAG	Araguaiana, MT	16.82	63	*e*P	P	14 36 39.4	+0.8
BB19B	Bebedouro	17.61	84	*e*P	P	14 36 48.6	+1.3
RCLB	Rio Claro- Sao	18.25	88	*e*P	P	14 36 55.0	+0.7
PET01	Itanhaem-SP	18.27	94	*e*P	P	14 36 53.9	-0.6
IPMB	Ipameri, GO	18.84	75	*e*P	P	14 37 00.4	-0.4
BDFB	Brasilia	20.01	68	P	P	14 37 12.0	-1.5
	comp=Z,4.3nm,0.4s,baz=253,slow=6.8,SNR=8.9						
BDFB	Brasilia	20.01	68	P	P	14 37 12.9	-0.6
BDFB				IAmb	IAmb	14 37 14.9	
	comp=Z,5.6nm,0.5s						
BDFB	Brasilia	20.01	68	*e*P	P	14 37 13.2	-0.2
PMNB	Patos De Minas	20.22	78	*e*P	P	14 37 15.1	-0.6
TEFE	Tefe	20.71	8	*e*P	P	14 37 20.5	-0.3
SGCB	S£o Gabriel d	23.92	1	*e*P	P	14 37 52.0	+0.1
SMTB	Santa Maria do	24.22	54	*e*P	P	14 37 54.9	+0.2
BOAV	Boa Vista	27.23	15	P	P	14 38 22.1	+0.3
S54A	Dingess, Beckl	63.04	348	P	P	14 43 02.9	+0.6
TXAR	Lajitas Array	63.66	325	P	P	14 43 07.7	+1.0
	comp=Z,0.4nm,0.7s,baz=154,slow=13,SNR=4.1						
	comp=Z,0.4nm,0.7s						
TORD	Torodi Ar. Bea	76.89	69	P	P	14 44 26.9	-0.2
	comp=Z,1.0nm,0.5s,baz=258,slow=5.9,SNR=14						
	comp=Z,1.0nm,0.5s						
TORD	Torodi Ar. Bea	76.89	69	P	P	14 44 26.6	-0.5
PDAR	Pinedale Array	77.16	329	P	P	14 44 29.9	+1.6
	comp=Z,0.2nm,0.4s,baz=132,slow=8.3,SNR=5.7						
	comp=Z,0.2nm,0.4s						
NVAR	Mina Array Bea	78.51	321	P	P	14 44 38.5	+2.6
	comp=Z,0.3nm,0.5s,baz=152,slow=5.8,SNR=3.6						
	comp=Z,0.3nm,0.5s						
SCHQ	Schefferville	78.69	0	P	P	14 44 37.2	+1.0
SCHQ				IAmb	IAmb	14 45 16.7	
	comp=Z,3.6nm,0.9s						
YKA	Yellowknife Ar	94.20	340	P	P	14 45 52.4	+0.1
	comp=Z,0.6nm,0.7s,baz=134,slow=4.4,SNR=11						
	comp=Z,0.6nm,0.7s						
ASAR	Alice Springs	128.18	205	PKP	PKiKP	14 51 40.9	+0.3
	comp=Z,0.9nm,0.7s,baz=132,slow=1.8,SNR=19						
WRA	Warramunga Arr	131.34	208	PKP	PKiKP	14 51 47.1	+0.1
	comp=Z,0.7nm,0.5s,baz=155,slow=1.7,SNR=12						
ZALV	Zalesovo Beam	143.68	28	PKP	PKPdf	14 52 06.3	-1.2
	comp=Z,1.7nm,0.5s,baz=305,slow=5.1,SNR=10						
MKAR	Makanchi Array	146.84	39	PKPbc	PKPab	14 52 14.9	-2.2
	comp=Z,2.0nm,0.6s,baz=312,slow=2.6,SNR=30						
PZH	PanZhiHua	169.82	75	PKP	PKPdf	14 52 38.8	-2.3

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*IDC **12** 15:02:32.3±17.0, 7°.76S×118°.97E, h0km, mb3.8/2, mbtmp3.7/3, ML3.6/1, Error ellipse: s-maj=306.2km s-min=187.2km az=4.0*

*DJA **12** 15:02:55.7±0.8, 8°S±5°×11°9E±°, h146km±14km, M3.2/7, MLv3.2/7*

ISC 12 15:02:55.2±1.1**, 8°.34S**±0°.07×**119°.49E**±0°.06**, h150km, n9, σ0s.76**/11**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	1.76	254	P	Pn	15 03 28.1	+0.5
PLAI				S	Sn	15 03 52.8	+0.3
BASI	Baing, Sumba	2.15	150	P	Pn	15 03 32.4	+0.3
BASI				S	Sn	15 04 01.3	+0.8
BSSI	Bau Bau, Buton	2.40	24	P	Pn	15 03 35.2	+0.1
TWSI	Taliwang, Sumb	2.61	261	P	Pn	15 03 38.0	+0.3
BKSI	Bulukumba	3.07	12	P	Pn	15 03 44.1	+0.7
SOEI	Soe	4.92	107	P	Pn	15 04 08.5	+0.8
WRA	Warramunga Arr	18.43	130	P	P	15 06 57.8	-1.4
	0.2nm,0.3s,baz=306,slow=12,SNR=7.2						
	0.5nm,0.7s						
ASAR	Alice Springs	20.56	139	P	P	15 07 21.7	-0.6
	1.2nm,0.5s,baz=315,slow=8.9,SNR=39						
	1.2nm,0.5s						
STKA	Stephens Creek	31.16	142	P	P	15 08 59.6	-0.3
	1.1nm,0.3s,baz=310,slow=7.6,SNR=5.6						
	1.1nm,0.3s						

IDC 12 15:07:11.8±4.5**, 30°.84S**×**178°.28W, h0km, mb3.3**/2**, mbtmp3.3**/2**, Error ellipse: s-maj=220.9km s-min=51.3km az=160.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.84	268	P	P	15 15 11.5	-0.5
	0.2nm,0.6s,baz=105,slow=7.7,SNR=7.2						
	0.2nm,0.6s						
WRA	Warramunga Arr	43.87	273	P	P	15 15 20.6	+0.4
	0.3nm,0.6s,baz=112,slow=8.0,SNR=4.7						
	0.3nm,0.6s						
MKAR	Makanchi Array	117.87	310	PKP	PKPdf	15 25 58.3	-1.8
	0.2nm,0.8s,baz=98,slow=3.1,SNR=1.9						
FINES	FINESS Array B	145.47	340	PKPbc	PKPab	15 26 51.3	0.0
	3.2nm,1.1s,baz=20,slow=4.6,SNR=7.2						

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*DJA **12** 15:42:24.3±0.7, 1°N±4°×9°9E±°, h81km±9km, M3.4/6, MLv3.4/6*

*IDC **12** 15:42:27.0±3.3, 0°.49N×97°.84E, h0km, mb3.5/5, mbtmp3.4/6, ML3.7/1, MS3.2/3, Error ellipse: s-maj=131.8km s-min=23.2km az=60.0*

ISC 12 15:42:31.3±1.1**, 0°.5N**±0°.2×**98°.0E**±0°.3**, h29km, n17, σ0s.85**/10**, mb3.5**/5**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBSI	Pulau Batu	0.62	149	P	Pb	15 42 42.6	-1.2
PBSI				S	Sn	15 42 54.2	+0.9
GSI	Gunungsitoli	0.90	335	P	Pn	15 42 48.5	+0.4
SBSI	Sibolga	1.41	41	P	Pn	15 42 41.4	-14
SBSI				S	Sn	15 43 01.5	-11
SNSI	Sinabang, Aceh	2.51	320	P	Pn	15 43 10.6	+0.3
PDSI	Padang	2.86	119	P	Pn	15 43 00.8	-14
CMAR	Chiang Mai Arr	17.89	3	P	Pn	15 46 37.6	-0.6
	0.1nm,0.3s,baz=194,slow=10,SNR=2.6						
	0.2nm,0.4s						
PALK	Pallekele	18.48	292	LR	LR	15 53 05.5	
	comp=Z,36nm,19.4s,baz=252,slow=35						
H08S2	Diego Garcia H	26.65	252	T	T	16 15 31.2	
	baz=73,slow=76,SNR=92						
H08S3	Diego Garcia H	26.65	252	T	T	16 15 38.8	
	baz=73,slow=76,SNR=100						
H08S1	Diego Carcia H	26.67	252	T	T	16 15 32.8	
	baz=73,slow=76,SNR=38						
WRA	Warramunga Arr	41.01	122	P	P	15 50 13.7	+1.4
	0.2nm,0.5s,baz=299,slow=8.4,SNR=2.0						
	0.2nm,0.5s						
ASAR	Alice Springs	42.36	127	P	P	15 50 23.4	+0.1
	0.3nm,0.7s,baz=303,slow=7.3,SNR=4.2						
	0.3nm,0.7s						
SONM	Songino Array	47.73	8	P	P	15 51 05.6	-0.2
	0.3nm,0.6s,baz=186,slow=8.7,SNR=2.8						
	0.3nm,0.6s						
MKAR	Makanchi Array	48.12	346	P	P	15 51 08.7	+0.1
	0.5nm,0.7s,baz=175,slow=8.0,SNR=6.4						
	0.5nm,0.7s						
ZALV	Zalesovo Beam	54.38	350	P	P	15 51 55.0	-0.5
	0.7nm,0.4s,baz=171,slow=6.1,SNR=5.2						
	0.7nm,0.4s						
BRTR	Keskin Array B	70.15	312	LR	LR	16 25 34.8	
	comp=Z,15nm,18.8s,baz=190,slow=37						
TIXI	Tiksi	73.76	10	LR	LR	16 28 59.2	
	comp=Z,29nm,18.4s,baz=340,slow=38						

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*IDC **12** 15:47:35.2±15.0, 37°.10N×21°.84E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=310.7km s-min=48.3km az=30.0*

*THE **12** 15:47:35.9, 36°.80N×21°.45E, h0km±2km, ML3.0/10, Error ellipse: s-maj=2.9km s-min=1.2km az=221.0*

*ATH **12** 15:47:36.8, 36°.82N×21°.49E, h10km±31km, ML2.9/9, Error ellipse: s-maj=31.6km s-min=1.6km az=0.0*

ISC 12 15:47:35.5±1.3**, 36°.80N**±0°.05×**21°.49E**±0°.03**, h10km**±7km**, n71, σ1s.21**/86**, mb3.6**/4**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYL	PYLOS	0.23	65	P	Pg	15 47 40.5	+0.3
PYL				S	Sg	15 47 43.4	+0.1
	15µm,0.2s						
PYL	PYLOS	0.23	65	P	Pg	15 47 40.5	+0.3
PYL				S	Sg	15 47 43.4	+0.1
PYL				AML	AML	15 47 43.7	
	comp=N,18739µm,0.1s						
PYL				AML	AML	15 47 43.7	
	comp=E,23324µm,0.1s						
ITM	Ithomi	0.52	43	P	Pg	15 47 45.4	-0.2
ITM				S	Sb	15 47 53.6	-0.7
	comp=E,2µm,0.4s						
ITM	Ithomi	0.52	43	P	Pg	15 47 45.4	-0.2
ITM				S	Sb	15 47 53.0	-1.3
ITM				AML	AML	15 47 54.2	
	comp=E,3047µm,0.4s						
ITM				AML	AML	15 47 55.0	
	comp=N,4106µm,0.3s						
LTHK	Lithakia	1.05	330	P	Pg	15 47 55.1	-0.5
LTHK				S	Sb	15 48 10.5	+1.0
	comp=N,792nm,0.6s						
LTHK	Lithakia	1.05	330	P	Pg	15 47 55.1	-0.5
LTHK				S	Sb	15 48 10.2	+0.8
LTHK				AML	AML	15 48 20.6	
	comp=E,1353µm,0.5s						
LTHK				AML	AML	15 48 28.3	
	comp=N,2118µm,0.5s						
DRO	Drossia	1.17	9	P	Pg	15 47 56.9	-1.0
DRO				S	Sn	15 48 15.0	+1.1
	comp=N,2µm,0.4s						
DRO	Drossia	1.17	9	P	Pg	15 47 56.9	-1.0
DRO				S	Sb	15 48 13.8	+0.9
DRO				AML	AML	15 48 21.8	
	comp=E,3596µm,0.4s						
DRO				AML	AML	15 48 24.8	
	comp=N,2691µm,0.4s						
MNVA	Monemvasia	1.25	95	P	Pn	15 48 00.5	+1.5
RLS	Riolos of Patr	1.26	359	P	Pg	15 47 58.7	-0.9
RLS				S	Sn	15 48 18.6	+2.5
	comp=N,415nm,1.3s						
RLS	Riolos of Patr	1.26	359	P	Pg	15 47 58.6	-1.0
RLS				S	Sn	15 48 16.9	+0.9
RLS				AML	AML	15 48 25.8	
	comp=N,923µm,0.8s						
RLS				AML	AML	15 48 27.2	
	comp=E,590µm,0.7s						
KLV	Kalavryta, Ach	1.35	23	P	Pg	15 47 59.9	-1.5
KLV				S	Sn	15 48 21.2	+2.7
	comp=E,295nm,0.5s						
KLV	Kalavryta, Ach	1.35	23	P	Pg	15 47 59.9	-1.5
KLV				AML	AML	15 48 24.5	
	comp=E,725µm,0.6s						
KLV				AML	AML	15 48 26.3	
	comp=N,449µm,0.5s						
KTHA	Kythira Island	1.38	113	P	Pn	15 48 01.5	+0.7
KTHA				S	Sn	15 48 21.6	+2.5
	comp=N,488nm,0.4s						
KTHA	Kythira Island	1.38	113	P	Pn	15 48 01.2	+0.4
KTHA				AML	AML	15 48 25.5	
	comp=E,1182µm,0.6s						
KTHA				AML	AML	15 48 27.1	
	comp=N,765µm,0.4s						
KRND	KRANIDI	1.45	66	P	Pn	15 48 02.5	+0.7
KRND				S	Sn	15 48 24.1	+3.2
	comp=N,248nm,0.7s						
KRND	KRANIDI	1.45	66	P	Pn	15 48 02.2	+0.4
KRND				AML	AML	15 48 30.9	
	comp=E,536µm,0.4s						
KRND				AML	AML	15 48 33.8	
	comp=N,421µm,0.4s						
LAKA	Lakka	1.49	15	P	Pn	15 48 02.6	+0.2
LAKA				S	Sn	15 48 24.8	+2.9
	comp=N,1µm,0.7s						
LAKA	Lakka	1.49	15	P	Pn	15 48 02.4	0.0
EPID	Epidavros	1.54	58	P	Pg	15 48 04.6	-0.4
ALIK	Aliki, Aigiali	1.54	19	P	Pg	15 48 04.8	-0.3
THAL	Thalero	1.55	37	P	Pg	15 48 04.6	-0.6
VLS	Valsamata	1.55	333	P	Pn	15 48 03.4	+0.2
VLS				S	Sg	15 48 25.9	+0.5
	comp=N,212nm,0.5s						
VLS	Valsamata	1.55	333	P	Pn	15 48 03.0	-0.2
VLS				AML	AML	15 48 36.0	
	comp=E,370µm,0.5s						
VLS				AML	AML	15 48 36.0	
	comp=N,475µm,0.6s						
TRIZ	Trizonia	1.63	16	P	Pn	15 48 04.4	+0.1
EFP	Efpalio	1.66	11	P	Pb	15 48 06.4	+0.3
EFP	Efpalio	1.66	11	P	Pb	15 48 06.3	+0.1
SERG	Sergoula	1.67	15	P	Pb	15 48 06.7	+0.3
SERG	Sergoula	1.67	15	P	Pn	15 48 05.6	+0.7
LOUT	Loutraki	1.68	44	P	Pb	15 48 06.2	-0.2
LOUT	Loutraki	1.68	44	P	Pn	15 48 05.4	+0.5
PVO	Paravola	1.81	1	P	Pb	15 48 08.4	-0.4
ANX	Ano Chora	1.82	11	P	Pb	15 48 09.5	+0.5
ANX	Ano Chora	1.82	11	P	Pn	15 48 08.2	+1.2
VILL	Villia	1.99	46	P	Pb	15 48 11.3	-0.5
VIL2	Platees	2.00	45	P	Pn	15 48 09.6	+0.2
NYDR	Nydri-Lefkada	2.01	342	P	Pn	15 48 11.4	+1.9
LKD2	Lefkada island	2.09	342	P	Pb	15 48 13.2	-0.3
LKD2	Lefkada island	2.09	342	P	Pn	15 48 12.0	+1.3
VLY	Voula,Athens	2.12	60	P	Pn	15 48 11.5	+0.5
VLY	Voula,Athens	2.12	60	P	Pn	15 48 11.4	+0.4
EVR	Evrytania	2.13	7	P	Pb	15 48 14.8	+0.6
ATHU	Athens Univers	2.17	57	P	Pn	15 48 11.8	+0.1
AXAR	Agios Charalam	2.17	25	P	Pn	15 48 13.5	+1.8
AXAR	Agios Charalam	2.17	25	P	Pn	15 48 13.2	+1.5
LKR	Lokris	2.20	33	P	Pn	15 48 13.0	+0.9
ATAL	Atalanti	2.25	32	P	Pb	15 48 15.0	-1.2
ATAL	Atalanti	2.25	32	P	Pn	15 48 13.5	+0.8
PTL	Penteli	2.27	56	P	Pb	15 48 17.1	+0.6
MAKR	Makrakomi, Fth	2.27	13	P	Pb	15 48 16.4	-0.2
MAKR	Makrakomi, Fth	2.27	13	P	Pb	15 48 15.6	-1.0
AGG	Agios Georgios	2.32	16	P	Pb	15 48 16.4	-1.0
AGG	Agios Georgios	2.32	16	P	Pn	15 48 15.9	+2.2
DION	Dionisos Attik	2.33	56	P	Pn	15 48 15.4	+1.5
DION	Dionisos Attik	2.33	56	P	Pn	15 48 15.2	+1.3
IMMV	Iera Moni Meta	2.42	123	P	Pn	15 48 16.2	+1.1
EREA	Eretria	2.53	49	P	Pn	15 48 17.7	+1.1
EREA	Eretria	2.53	49	P	Pn	15 48 17.1	+0.5
THL	Klokotos Trika	2.79	8	P	Pn	15 48 22.0	+1.8
THL	Klokotos Trika	2.79	8	P	Pn	15 48 22.0	+1.8
IGT	Igoumenitsa	2.88	342	P	Pn	15 48 22.5	+1.1
IGT	Igoumenitsa	2.88	342	P	Pn	15 48 22.5	+1.1
IDI	Anoyia	3.14	118	P	Pn	15 48 25.5	+0.4
KEK	Kerkira	3.20	336	P	Pn	15 48 27.6	+1.8
FNA	Florina	3.98	359	P	Pn	15 48 37.5	+0.9
SCTE	Santa Cesarea	4.04	325	P	Pn	15 48 37.9	+0.5
CUC	Castrocucco	5.48	307	P	Pn	15 48 59.0	+1.8
FINES	FINESS Array B	24.84	5	P	P	15 52 56.1	-1.5
	comp=N,1.6nm,0.8s,baz=172,slow=11,SNR=4.8						
	comp=N,1.6nm,0.8s						
NOA	NORSAR Array B	25.12	348	P	P	15 52 59.3	-1.0
	comp=N,0.7nm,0.7s,baz=158,slow=9.0,SNR=1.9						
	comp=N,0.7nm,0.7s						
MKAR	Makanchi Array	45.38	57	P	P	15 55 52.1	-1.9
	comp=N,0.2nm,0.5s,baz=273,slow=8.3,SNR=4.8						
	comp=N,0.2nm,0.5s						
ZALV	Zalesovo Beam	46.05	47	P	P	15 55 56.9	-2.2
	comp=N,0.3nm,0.3s,baz=261,slow=9.5,SNR=2.2						
	comp=N,0.3nm,0.3s						

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*WEL **12** 15:53:17.8±0.3, 39°S±4°×17°5E±°, h18km±4km, M3.6/27, ML3.9/27, MLv3.6/27, Error ellipse: s-maj=0.0km s-min=0.0km az=0.7, confirmed*

*NOU **12** 15:53:18.7, 39°.28S×174°.75E, h30km, MLv3.5/8, North Island, New Zealand*

ISC 12 15:53:18.6±0.9**, 39°.33S**±0°.02×**174°.79E**±0°.02**, h29km**±8km**, n115, σ0s.79**/124**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRZ	Vera Road	0.20	353	P	Pn	15 53 24.8	-0.8
VRZ				S	Sb	15 53 30.0	+1.1
LREZ	Lake Rotokare	0.33	246	P	Pb	15 53 26.1	-0.2
LREZ				S	Sn	15 53 32.7	-0.6
PKVZ	Pokaka	0.43	85	P	Pb	15 53 27.3	-0.6
PKVZ				S	Sb	15 53 33.9	-0.4
WAZ	Wanganui	0.45	161	P	Pb	15 53 27.6	-0.7
WAZ				S	Sb	15 53 34.9	0.0
DREZ	Durham Road	0.48	286	P	Pn	15 53 28.9	-0.6
DREZ				S	Sn	15 53 37.3	+0.4
MTVZ	Mangateitei	0.53	97	P	Pb	15 53 28.7	-0.8
MTVZ				S	Sb	15 53 37.4	+0.5
NEZ	North Egmont	0.54	276	P	Pb	15 53 29.7	0.0
NEZ				S	Sn	15 53 38.6	0.0
TWVZ	Taurewa	0.56	63	P	Pb	15 53 29.3	-0.7
TRVZ	Turoa	0.59	88	P	Pb	15 53 29.8	-0.7
TRVZ				S	Sb	15 53 38.0	-0.7
FWVZ	Far West T-bar	0.59	83	P	Pb	15 53 29.9	-0.8
FWVZ				S	Sb	15 53 38.6	-0.3
DRZ	Dome Shelter	0.60	85	P	Pb	15 53 30.5	-0.3
KHEZ	Kahui Hut	0.60	273	P	Pn	15 53 31.0	-0.3
KHEZ	Kahui Hut	0.60	273	P	Pb	15 53 30.7	0.0
WHVZ	Whangaehu Hut	0.62	86	P	Pb	15 53 30.5	-0.5
WNVZ	Wahianoa	0.62	90	P	Pb	15 53 30.4	-0.7
PKE	Pukeiti	0.64	282	P	Pb	15 53 31.2	0.0
NGZ	Ngauruhoe	0.65	77	P	Pb	15 53 30.8	-0.7
WTVZ	West Tongariro	0.66	72	P	Pb	15 53 30.9	-0.7
NNVZ	North Ngauruho	0.67	73	P	Pb	15 53 31.2	-0.6
TUVZ	Tukino	0.67	85	P	Pb	15 53 31.4	-0.5
SNVZ	South Ngauruho	0.67	78	P	Pb	15 53 31.4	-0.6
OTVZ	Oturere	0.70	77	P	Pb	15 53 31.7	-0.6
KRVZ	Karewarewa	0.70	71	P	Pb	15 53 31.6	-0.7
NMEZ	Namu Road	0.71	263	P	Pb	15 53 32.3	-0.2
NBEZ	Newall Road No	0.72	274	P	Pn	15 53 32.6	-0.1
NTVZ	North Tongarir	0.72	72	P	Pb	15 53 32.1	-0.6
ETVZ	East Tongariro	0.74	75	P	Pb	15 53 32.4	-0.6
TMVZ	Te Maari	0.74	74	P	Pb	15 53 32.4	-0.5
MOVZ	Moawhango	0.75	97	P	Pb	15 53 32.3	-0.8
KATZ	Kakaramea	0.79	64	P	Pb	15 53 33.2	-0.6
HIZ	Hauiti	0.81	4	P	Pb	15 53 33.8	-0.4
HIZ	Hauiti	0.81	4	P	Pb	15 53 33.8	-0.4
RATZ	Rangitukua	0.89	59	P	Pb	15 53 34.9	-0.6
RITZ	Rihia Road	0.90	68	P	Pb	15 53 35.2	-0.5
WATZ	Wairara	0.96	50	P	Pb	15 53 35.9	-0.7
BHHZ	Black Hill Sta	1.00	100	P	Pn	15 53 35.8	-0.9
TLZ	Tolley Road	1.15	31	P	Pn	15 53 38.4	-0.4
KUTZ	Kaahu Road	1.16	44	P	Pn	15 53 38.8	0.0
TSZ	Takapari Road	1.16	129	P	Pn	15 53 38.5	-0.4
PNHZ	Pukenui	1.24	119	P	Pn	15 53 39.5	-0.4
KWHZ	Kaweka Forest	1.27	95	P	Pn	15 53 40.6	+0.2
POWZ	Post Office Ro	1.30	145	P	Pn	15 53 41.3	+0.4
BKZ	Black Stump Fm	1.33	84	P	Pn	15 53 41.1	-0.2
BKZ	Black Stump Fm	1.33	84	P	Pn	15 53 41.1	-0.2
WPRZ	Whakapapatarin	1.34	53	P	Pn	15 53 41.0	-0.3
MRHZ	Matea Rd	1.36	69	P	Pn	15 53 41.3	-0.3
GRRZ	Galatos Road	1.42	47	P	Pn	15 53 42.2	-0.2
DVHZ	Dannevirke	1.44	133	P	Pn	15 53 43.6	+0.9
MRZ	Mangatainoka R	1.46	156	P	Pn	15 53 43.3	+0.3
WPHZ	Waipukurau	1.47	121	P	Pb	15 53 44.6	-0.7
MCHZ	McNeill Hill	1.48	95	P	Pb	15 53 45.4	-0.1
OGWZ	Otaki Gorge	1.52	169	P	Pn	15 53 43.9	+0.2
HSRZ	Hossack Road	1.52	49	P	Pb	15 53 46.4	+0.3
PRWZ	Pori Road	1.53	144	P	Pb	15 53 45.3	-0.9
KIW	Kapiti Island	1.54	177	P	Pn	15 53 44.0	-0.1
NMHZ	Naumai	1.58	82	P	Pb	15 53 47.9	+0.7
UTU	Utuhina	1.59	44	P	Pb	15 53 47.4	+0.2
DUWZ	D'Urville Isla	1.62	204	P	Pn	15 53 45.1	-0.1
NGRZ	Ngongotaha	1.64	42	P	Pn	15 53 45.3	-0.2
MTHZ	Maungataniwha	1.66	74	P	Pn	15 53 46.7	+0.9
HOWZ	Holdsworth Sta	1.67	161	P	Pn	15 53 46.7	+0.9
TIWZ	Tintock	1.67	150	P	Pn	15 53 47.1	+1.1
KAHZ	Kahuranaki	1.68	107	P	Pb	15 53 48.0	-0.8
TOZ	Tahuroa Road	1.69	20	P	Pn	15 53 46.0	-0.1
PRHZ	Porangahau	1.70	124	P	Pn	15 53 47.5	+1.1
ARHZ	Aropaoanui	1.71	89	P	Pb	15 53 49.0	-0.3
KARZ	Kaharoa	1.73	42	P	Pb	15 53 49.7	0.0
PXZ	Pawanui	1.75	114	P	Pb	15 53 49.0	-0.9
BFZ	Birch Farm	1.76	141	P	Pn	15 53 47.6	+0.5
BFZ	Birch Farm	1.76	141	P	Pn	15 53 47.4	+0.4
MUGZ	Murupara	1.76	62	P	Pn	15 53 48.0	+0.9
CAW	Cannon Point	1.79	173	P	Pn	15 53 48.0	+0.5
RAHZ	Arahi	1.83	78	P	Pb	15 53 50.2	-1.2
RTZ	Ruatahuna	1.85	68	P	Pn	15 53 49.3	+0.9
MTW	Mount Morrison	1.91	164	P	Pn	15 53 50.6	+1.4
CPWZ	Castlepoint	1.92	146	P	Pb	15 53 53.6	+0.7
TCW	Tory Channel	1.92	192	P	Pn	15 53 49.6	+0.3
WEL	Wellington	1.96	181	P	Pn	15 53 51.1	+1.3
TMWZ	Te Maipa	1.97	155	P	Pn	15 53 51.6	+1.6
SNZO	South Karori	1.98	182	P	Pn	15 53 50.9	+0.7
SNGZ	Shannon Statio	2.06	75	P	Pn	15 53 53.1	+1.8
URZ	Urewera	2.10	60	P	Pn	15 53 52.7	+0.9
URZ	Urewera	2.10	60	P	Pn	15 53 53.2	+1.5
NNZ	Nelson	2.18	209	P	Pn	15 53 53.7	+0.9
TRWZ	Traveller	2.18	162	P	Pb	15 53 55.8	-1.5
TUWZ	Tuamarina	2.20	197	P	Pn	15 53 54.0	+0.9
TKNZ	Takaka Hill	2.21	219	P	Pn	15 53 53.8	+0.5
AWAZ	Awhitu Peninsu	2.26	357	P	Pn	15 53 54.4	+0.5
PLWZ	Palliser	2.27	171	P	Pn	15 53 55.8	+1.6
QRZ	Quartz Range	2.29	228	P	Pn	15 53 54.5	+0.1
QRZ	Quartz Range	2.29	228	P	Pn	15 53 54.0	-0.4
MWZ	Matawai	2.35	66	P	Pn	15 53 57.2	+1.9
ETAZ	East Tamaki Re	2.37	3	P	Pn	15 53 56.1	+0.6
RIGZ	Rimuhau	2.40	76	P	Pn	15 53 58.0	+2.2
WTAZ	Waiatarua	2.40	356	P	Pn	15 53 57.1	+1.2
BSWZ	Blackbirch Sta	2.49	196	P	Pn	15 53 58.6	+1.5
WIAZ	Waiheke Island	2.54	6	P	Pn	15 53 58.4	+0.6
TKGZ	Te Karaka	2.54	71	P	Pn	15 53 56.6	-1.2
MBAZ	Motutapu North	2.55	2	P	Pn	15 53 58.7	+0.7
RVAZ	Riverhead Bore	2.56	356	P	Pn	15 53 58.5	+0.4
MRNZ	Matariki Terra	2.59	216	P	Pn	15 53 59.1	+0.6
RUGZ	Raukumara Rang	2.64	60	P	Pn	15 54 00.0	+0.8
KUZ	Kuaotunu	2.68	16	P	Pn	15 53 58.9	-0.8
KUZ	Kuaotunu	2.68	16	P	Pn	15 53 59.3	-0.4
TWGZ	Tauwhareparae	2.74	66	P	Pn	15 54 02.9	+2.2
HAZ	Te Kaha	2.82	57	P	Pn	15 54 02.2	+0.6
THZ	Tophouse	2.83	210	P	Pn	15 54 02.7	+0.9
WMGZ	Waiomatatini S	3.21	63	P	Pn	15 54 08.4	+1.4
KHZ	Kahutara	3.23	197	P	Pn	15 54 07.8	+0.5
WCZ	Waipu Caves	3.40	354	P	Pn	15 54 09.8	+0.1
LTZ	Lake Taylor	3.94	208	P	Pn	15 54 17.1	-0.1
INZ	Inchbonnie	4.24	216	P	Pn	15 54 21.3	+0.2
OXZ	Oxford	4.50	207	P	Pn	15 54 23.7	-1.1
GCSZ	Gaunt Creek Bo	5.21	219	P	Pn	15 54 34.4	-0.2
FOZ	Fox Glacier	5.62	220	P	Pn	15 54 39.7	-0.5

*FUNV **12** 16:00:03.9, 10°.42N×62°.30W, h5^{km}, MW3.0*
*TRN **12** 16:00:04.3, 10°.55N×62°.31W, h1^{km}, MD3.3*
ISC 12 16:00:03.4±1.5, **10°.42N**±0°.06×**62°.38W**±0°.04, **h10**^{km}±11^{km}, **n15**, σ**1^{s}49**/23, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.88**	**287**	*e*P	**Pg**	**16 00 19.9**	**-0.4**
CRUV				*e*S	**Sg**	**16 00 33.3**	**+1.5**
TRN	**Trinidad (W)**	**0.99**	**77**	*e*P	**Pg**	**16 00 21.2**	**-1.2**
TBH	**Brigand Hill**	**1.29**	**87**	*e*P	**Pn**	**16 00 28.6**	**+1.1**
GRGR	**Grenville**	**1.84**	**23**	*e*P	**Pn**	**16 00 35.0**	**0.0**
GRGR				*e*S	**Sn**	**16 00 57.7**	**-0.7**
GRHS	**Sauteurs**	**1.93**	**22**	*e*P	**Pn**	**16 00 36.9**	**+0.6**
GRHS				*e*S	**Sg**	**16 01 05.1**	**-0.5**
TOSP	**Speyside**	**2.01**	**64**	*e*P	**Pn**	**16 00 38.0**	**+0.7**
GCMP	**Grenada, Carri**	**2.26**	**24**	*e*P	**Pn**	**16 00 41.6**	**+0.9**
GCMP				*e*S	**Sn**	**16 01 10.7**	**+2.1**
PRGV	**PARIAGUAN**	**2.78**	**234**	*e*P	**Pn**	**16 00 49.1**	**+1.2**
PRGV				*e*S	**Sn**	**16 01 22.9**	**+1.5**
SVB	**Belmont**	**3.04**	**21**	*e*S	**Sn**	**16 01 28.1**	**+0.1**
BIRV	**Birongo**	**3.83**	**271**	*e*P	**Pn**	**16 01 03.9**	**+1.6**
TACV	**Tcata**	**4.58**	**267**	*e*P	**Pn**	**16 01 14.3**	**+1.5**
TACV				*e*S	**Sn**	**16 02 05.6**	**-0.5**
CACV	**CAICARA DEL OR**	**4.99**	**236**	*e*P	Pn	16 01 13.0	-5.4
CACV				*e*S	Sn	16 02 04.6	-12
BENV	**Beln**	**5.16**	**265**	*e*P	**Pn**	**16 01 21.7**	**+1.0**
BENV				*e*S	**Sn**	**16 02 17.8**	**-2.6**
BAUV	**El Baul**	**5.77**	**256**	*e*P	**Pn**	**16 01 29.5**	**+0.5**
BAUV				*e*S	**Sn**	**16 02 33.4**	**-2.0**
MAPV	**Macapo**	**6.01**	**265**	*e*P	**Pn**	**16 01 32.4**	**-0.1**
MAPV				*e*S	**Sn**	**16 02 38.3**	**-3.1**

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*TEH **12** 16:32:20.8, 28°.72N×52°.85E, h12^{km}±45^{km}, ML3.0*
*OMAN **12** 16:32:26.8±1.5, 28°.26N×52°.73E, h10^{km}±38^{km}, mb4.2/3, ml3.1/9, Error ellipse: s-maj=18.7km s-min=11.7km az=86.0*
ISC 12 16:32:21.4±0.8, **28°.64N**±0°.05×**52°.85E**±0°.05, **h16**^{km}, **n39**, σ**1^{s}47**/55, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QIR1	**Qir**	**0.24**	**134**	Pg	**Pg**	**16 32 26.3**	**-0.5**
QIR1				Sg	**Sg**	**16 32 31.0**	**+0.6**
GHIR	**Ghir-Karzin**	**0.37**	**161**	Pg	**Pg**	**16 32 29.0**	**-0.2**
JHRM	**Jahrom**	**0.65**	**102**	Pg	**Pg**	**16 32 34.3**	**0.0**
SHI	**Shiraz**	**1.04**	**344**	Pg	**Pb**	**16 32 39.8**	**-1.4**
LMD1	**Lamerd**	**1.33**	**168**	Pg	**Pg**	**16 32 48.3**	**+1.2**
AHBU	**AHRAM**	**1.38**	**280**	Pg	**Pb**	**16 32 47.6**	**+0.6**
AHBU				Sg	**Sg**	**16 33 06.6**	**+0.5**
LAR1	**LAR**	**1.66**	**125**	Pg	**Pg**	**16 32 54.2**	**+0.9**
KLNJ	**Kolanjah**	**2.60**	**335**	Pn	**Pn**	**16 33 03.1**	**-0.1**
IMEH	**Mehriz**	**3.14**	**29**	Pn	**Pn**	**16 33 11.7**	**+1.2**
IRAM	**Ramesheh**	**3.18**	**353**	Pn	**Pn**	**16 33 11.7**	**+0.6**
BNDS	**Bandar-Abbas**	**3.19**	**112**	Pn	**Pn**	**16 33 11.4**	**+0.4**
KHGB	**Koh Gabri**	**3.60**	**60**	Pn	**Pn**	**16 33 18.2**	**+1.3**
KRBR	**Kerman**	**3.67**	**68**	Pn	**Pn**	**16 33 17.4**	**-0.4**
IBAF	**Bafgh**	**3.77**	**38**	Pn	**Pn**	**16 33 19.5**	**+0.5**
IGAR	**Gharneh**	**3.81**	**350**	Pn	**Pn**	**16 33 20.6**	**+0.9**
SHME	**Shamm**	**3.90**	**131**	P	**Pn**	**16 33 24.6**	**+3.9**
SHME				S	**Sn**	**16 34 07.1**	**+0.8**
YZKH	**Yazd**	**4.03**	**21**	Pn	**Pn**	**16 33 22.9**	**+0.3**
BANOM	**Banah**	**4.09**	**131**	P	**Pn**	**16 33 24.9**	**+1.5**
BANOM				S	**Sn**	**16 34 11.3**	**+0.2**
NASN	**Na'in**	**4.14**	**360**	Pn	**Pn**	**16 33 25.0**	**+0.7**
IZEF	**Zefreh**	**4.26**	**354**	Pn	**Pn**	**16 33 26.6**	**+0.6**
MASF	**Masafi**	**4.39**	**137**	P	**Pn**	**16 33 28.4**	**+0.8**
MDH	**Madha**	**4.53**	**136**	P	**Pn**	**16 33 30.7**	**+1.3**
MDH				S	**Sn**	**16 34 22.1**	**+0.3**
ASUD	**Al Ashush, Dub**	**4.57**	**150**	P	**Pn**	**16 33 33.0**	**+3.0**
	SNR=8.0						
UOSS	**Minazif**	**4.75**	**140**	P	**Pn**	**16 33 33.1**	**+0.7**
UOSS				S	**Sn**	**16 34 25.9**	**-1.2**
IKLH	**Kolahrood**	**4.79**	**347**	Pn	**Pn**	**16 33 33.8**	**+0.6**
HATD	**Hatta, Dubai**	**4.80**	**142**	P	**Pn**	**16 33 34.6**	**+1.5**
HATD				S	**Sn**	**16 34 28.3**	**-0.2**
ASHO	**Ashiyiah**	**4.88**	**143**	P	**Pn**	**16 33 35.1**	**+0.9**
	SNR=11						
ASHO				S	**Sn**	**16 34 29.6**	**-0.8**
ALNE	**Al Ain**	**5.26**	**150**	P	**Pn**	**16 33 41.3**	**+1.9**
ALNE				S	**Sn**	**16 34 39.2**	**-0.4**
SOHO	**SOHO**	**5.57**	**143**	P	**Pn**	**16 33 44.0**	**+0.3**
SOHO				S	**Sn**	**16 34 47.3**	**-0.2**
ARQ	**Araqi**	**6.23**	**147**	P	**Pn**	**16 33 53.9**	**+1.1**
	SNR=8.6						
ARQ				S	**Sn**	**16 35 03.1**	**-0.6**
UMZA	**Um Al Zommool**	**6.26**	**160**	P	**Pn**	**16 33 54.0**	**+0.9**
UMZA				S	**Sn**	**16 35 02.8**	**-1.5**
BSY	**Bisya**	**7.06**	**145**	P	**Pn**	**16 34 04.9**	**+0.7**
BSY				S	**Sn**	**16 35 20.9**	**-3.3**
SMDO	**Samad**	**7.27**	**139**	P	**Pn**	**16 34 08.4**	**+1.3**
SMDO				S	**Sn**	**16 35 28.3**	**-1.1**
WSAR	**Wadi Sarin**	**7.48**	**135**	P	**Pn**	**16 34 10.5**	**+0.5**
WSAR				S	**Sn**	**16 35 32.7**	**-1.9**
JMDO	**Jabal Madar**	**7.84**	**142**	P	**Pn**	**16 34 15.5**	**+0.6**
WBK	**Wadi Bani Khal**	**8.16**	**136**	P	**Pn**	**16 34 19.0**	**-0.3**
	SNR=7.3						
JLN	**Jalan Bani Buh**	**8.77**	**136**	P	**Pn**	**16 34 26.8**	**-0.9**
WHFO	**Wadi Hawf**	**10.71**	**175**	P	**Pn**	**16 34 53.2**	**-1.1**
WHFO				S	**Sn**	**16 36 47.8**	**-6.1**
ABTO	**Aybut**	**11.24**	**178**	P	**Pn**	**16 35 01.9**	**+0.3**
ABTO				S	Sn	16 36 54.9	-12

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*IDC **12** 16:37:14.6±5.1, 7°.08S×105°.76E, h0^{km}, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=261.6km s-min=27.6km az=49.0*
*DJA **12** 16:37:24.9±0.6, 7°S±4°×10°6E±°, h28^{km}±5^{km}, M3.8/11, MLv3.8/11*
ISC 12 16:37:24.6±1.1, **7°.08S**±0°.09×**106°.10E**±0°.06, **h63**^{km}, **n18**, σ**1^{s}16**/19, **mb3.4**/3, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.46**	**81**	P	**Pn**	**16 37 36.1**	**-0.3**
CGJI	**Cibinong**	**0.61**	**319**	P	**Pn**	**16 37 38.1**	**+0.1**
CGJI				S	**Sn**	**16 37 47.4**	**-0.5**
SBJI	**Serang**	**0.96**	**2**	P	**Pn**	**16 37 42.7**	**+0.5**
SBJI				S	**Sn**	**16 37 56.2**	**+1.0**
CBJI	**Citeko**	**0.99**	**49**	P	**Pn**	**16 37 42.8**	**+0.1**
CBJI				S	**Sn**	**16 37 56.8**	**+0.7**
CNJI	**Cibinong**	**1.05**	**102**	P	**Pn**	**16 37 43.9**	**+0.6**
CNJI				S	**Sn**	**16 37 57.5**	**+0.2**
BLSI	**Bandar Lampung**	**1.90**	**333**	P	**Pn**	**16 37 55.5**	**+0.7**
KASI	**Kota Agung**	**2.22**	**314**	P	**Pn**	**16 37 59.8**	**+0.7**
CMJI	**Cimerak**	**2.43**	**107**	P	**Pn**	**16 38 02.7**	**+0.7**
KPJI	**Karang Pucung**	**2.82**	**95**	P	**Pn**	**16 38 09.3**	**+2.0**
LWLI	**Liwa**	**2.88**	**315**	P	**Pn**	**16 38 09.7**	**+1.4**
MDSI	**Maura Dua**	**3.21**	**323**	P	**Pn**	**16 38 13.9**	**+1.3**
MNAI	**Manna**	**4.13**	**311**	P	**Pn**	**16 38 27.1**	**+1.8**
WRA	**Warramunga Arr**	**30.22**	**118**	P	**P**	**16 43 29.9**	**+0.3**
	0.4nm,0.5s,baz=289,slow=10,SNR=7.8						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**31.37**	**125**	P	**P**	**16 43 39.9**	**+0.3**
	0.5nm,1.1s,baz=301,slow=8.1,SNR=6.0						
	0.5nm,1.1s						
H08S2	**Diego Garcia H**	**33.33**	**267**	T	T	17 19 44.8	
	baz=95,slow=76,SNR=4.2						
H08S3	**Diego Garcia H**	**33.34**	**267**	T	T	17 19 24.2	
	baz=95,slow=76,SNR=5.9						
H08S1	**Diego Carcia H**	**33.35**	**267**	T	T	17 19 30.2	
	baz=95,slow=76,SNR=5.7						
MKAR	**Makanchi Array**	**57.66**	**341**	P	**P**	**16 47 06.0**	**-2.5**
	0.1nm,0.3s,baz=169,slow=8.8,SNR=7.1						
	0.1nm,0.3s						

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*IDC **12** 16:47:15.8±0.7, 40°.84N×143°.23E, h0^{km}, mb3.9/16, mbtmp3.9/22, ML3.1/6, MS3.4/22, Error ellipse: s-maj=18.1km s-min=14.5km az=100.0*
*MOS **12** 16:47:17.8±1.2, 40°.88N×143°.23E, h29^{km}, mb4.4/15, Error ellipse: s-maj=8.6km s-min=5.5km az=94.2*
*NIED **12** 16:47:18.9, 40°.83N×143°.32E, h33^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.84; $M_{\theta\theta}$0.39; $M_{\phi\phi}$-1.23; $M_{r\theta}$0.76; $M_{\theta\phi}$-0.57; $M_{\phi r}$0.80; Fault plane solution: $M_0$1.62000×10^{15} NP1:ϕ_s41.00000°, δ70.00000°, λ115.00000°. NP2:ϕ_s166.00000°, δ32.00000°, λ40.00000°.*
*JMA **12** 16:47:18.9±0.1, 40°.8N±0°.6×143°.3E±0°.8, h33^{km}, MV3.9/37, E OFF AOMORI PREF*
*NEIC **12** 16:47:22.5±1.8, 41°.00N±0°.06×143°.2E±0°.1, h36^{km}±8^{km}, mb4.2/30, Error ellipse: s-maj=13.5km s-min=7.2km az=121.0*
ISC 12 16:47:20.0±0.5, **40°.86N**±0°.04×**143°.32E**±0°.05, **h31**^{km}, **n158**, σ**1^{s}85**/173, **mb4.2**/44, **MS3.5**/18, **8C-3D**, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERM	**Erimo**	**1.16**	**354**		**Pn**	**16 47 39.4**	**-0.7**
ERM	**Erimo**	**1.16**	**354**	*ce*P	**Pn**	**16 47 39.6**	**-0.5**
ERM				pmax	pmax		
	comp=Z,261nm,1.0s						
JEM	**Erimo**	**1.16**	**354**	P	**Pn**	**16 47 39.7**	**-0.4**
JKEN	**Kujiedanarisaw**	**1.39**	**242**	*i* P	**Pn**	**16 47 42.2**	**-1.0**
JTHR	**Tokachihiroo**	**1.43**	**359**	*i* P	**Pn**	**16 47 43.6**	**-0.2**
JTHR				*e*S	**Sn**	**16 48 01.8**	**+0.3**
JTH	**Tanohata**	**1.44**	**231**	P	**Pn**	**16 47 43.2**	**-0.8**
JTH				*e*S	**Sn**	**16 48 00.7**	**-1.2**
JANG	**Nango**	**1.46**	**251**	*i* P	**Pn**	**16 47 43.6**	**-0.5**
JANG				*e*S	**Sn**	**16 48 02.1**	**-0.1**
JNBK	**Urakawa-nobuka**	**1.48**	**344**	*i* P	**Pn**	**16 47 44.6**	**+0.1**
JTM	**Tenmabayashi**	**1.71**	**268**		**Pn**	**16 47 47.8**	**+0.1**
JTM	**Tenmabayashi**	**1.71**	**268**	*i* P	**Pn**	**16 47 47.9**	**+0.3**
JTM				*e*S	**Sb**	**16 48 10.5**	**-1.3**
JCH	**Churui**	**1.75**	**1**	P	**Pn**	**16 47 47.9**	**-0.3**
JCH				*e*S	**Sn**	**16 48 09.1**	**-0.4**
JOT	**Ohata**	**1.79**	**288**	*i* P	**Pn**	**16 47 49.0**	**+0.3**
JOM	**Ohasama**	**2.08**	**229**	*i* P	**Pn**	**16 47 53.3**	**+0.5**
JOM				*e*S	**Sn**	**16 48 18.8**	**+1.2**
JAK	**Akkeshi**	**2.37**	**25**	P	**Pn**	**16 47 56.0**	**-0.7**
JAK				*e*S	**Sn**	**16 48 22.9**	**-1.8**
JEW	**Eniwo**	**2.42**	**325**	P	**Pn**	**16 47 58.8**	**+1.4**
JAR	**Ashorobuto**	**2.46**	**8**	*i* P	**Pn**	**16 47 57.2**	**-0.7**
JAR				S	**Sn**	**16 48 26.0**	**-0.9**
JMK	**Ichinoseki**	**2.50**	**221**	P	**Pn**	**16 47 59.1**	**+0.7**
JOMM	**Oshimamatsumae**	**2.58**	**286**	*e*P	**Pn**	**16 47 60.0**	**+0.3**
JYK	**Kaneyama**	**2.99**	**231**	P	**Pn**	**16 48 06.2**	**+0.9**
NMR	**Nemuro--Hokkai**	**3.08**	**35**	⇑*i*P	**Pn**	**16 48 05.5**	**-1.0**
NMR				*e*S	**Sn**	**16 48 38.2**	**-4.1**
JKA	**Kamikawa-asahi**	**3.30**	**351**		**Pn**	**16 48 09.8**	**+0.4**
ASAJ	**Asahikawa**	**3.30**	**351**	Pn	**Pn**	**16 48 10.8**	**+1.3**
	comp=Z,2.1nm,0.3s,baz=192,slow=17,SNR=37						
ASAJ				Sn	**Sn**	**16 48 49.8**	**+2.2**
	comp=Z,4.1nm,0.3s,baz=21,slow=16,SNR=6.3						
	comp=Z,4.7nm,0.3s						
ASAJ	**Asahikawa**	**3.30**	**351**	P	**Pn**	**16 48 09.8**	**+0.3**
RUSJ	**Misakicho**	**3.54**	**23**	⇓*i*P	**Pn**	**16 48 13.4**	**+0.6**
RUSJ				*e*S	**Sn**	**16 48 53.4**	**-0.2**
JMM	**Marumori**	**3.57**	**214**		**Pn**	**16 48 12.8**	**-0.5**
YUK	**Yuzh-Kuril'sk**	**3.69**	**30**	*d i*P	**Pn**	**16 48 14.3**	**-0.5**
YUK				*e*S	**Sn**	**16 48 54.4**	**-2.8**
YUK				pmax	pmax		
	comp=N,36nm,0.2s						
YUK				pmax	pmax		
	comp=Z,198nm,0.2s						
YUK				pmax	pmax		
	comp=E,44nm,0.1s						
YUK				smax	smax		
	comp=N,398nm,0.5s						
YUK				smax	smax		
	comp=E,415nm,0.6s						
SHO	**Shikotan**	**3.98**	**40**	*e*P	**Pn**	**16 48 17.2**	**-1.6**
SHO				*e*S	**Sn**	**16 48 58.4**	**-5.9**
SHO				pmax	pmax		
	comp=N,22nm,0.2s						
SHO				pmax	pmax		
	comp=E,13nm,0.2s						
SHO				pmax	pmax		
	comp=Z,32nm,0.2s						
SHO				smax	smax		
	comp=N,31nm,0.2s						
SHO				smax	smax		
	comp=E,165nm,0.2s						
JSD	**Sado**	**4.82**	**236**	Pn	**Pn**	**16 48 30.9**	**+0.4**
KUR	**Kuril'sk**	**5.50**	**36**	*e*P	**Pn**	**16 48 39.2**	**-0.5**
KUR				*e*S	**Sn**	**16 49 40.0**	**-1.8**
KUR				pmax	pmax		
	comp=Z,61nm,0.7s						
KUR				pmax	pmax		
	comp=N,29nm,0.9s						
KUR				smax	smax		
	comp=N,122nm,0.6s						
KUR				smax	smax		
	comp=E,73nm,0.7s						
MJB9	**Matsu-Tunnel**	**5.88**	**225**	Pn	**Pn**	**16 48 46.8**	**+1.8**
MAJO	**Matsushiro**	**5.88**	**224**	Pn	**Pn**	**16 48 46.2**	**+1.2**
MAJO	**Matsushiro**	**5.88**	**224**	*i* P	**Pn**	**16 48 46.5**	**+1.5**
MJAR	**Matsushiro Arr**	**5.88**	**224**	Pn	**Pn**	**16 48 45.0**	**0.0**
	comp=E,0.2nm,0.3s,baz=31,slow=14,SNR=20						
MJAR				LR	LR	16 51 24.7	
	comp=E,160nm,20.2s,baz=118,slow=43						
	comp=E,1.8nm,0.5s						
YSS	**Yuzh-Sakhalins**	**6.11**	**356**	*e*P	**Pn**	**16 48 50.4**	**+2.4**
YSS				*e*S	**Sn**	**16 49 56.3**	**-0.5**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
JGF	**Kuroka**	**7.04**	**224**	Pn	**Pn**	**16 49 04.1**	**+3.1**
INU	**Inuyama**	**7.41**	**224**	Pn	**Pn**	**16 49 09.1**	**+3.1**
JHJ	**Hachijo jima 2**	**8.23**	**201**	Pn	**Pn**	**16 49 15.8**	**-1.4**
	comp=Z,7.8nm,0.3s,baz=22,slow=19,SNR=2.0						
JHJ				Sn	**Sn**	**16 50 41.6**	**-7.5**
	comp=Z,4.7nm,0.3s,baz=99,slow=19,SNR=1.2						
	comp=Z,144nm,0.9s						
USA0B	**Ussuriysk Arra**	**9.01**	**295**	Pn	**Pn**	**16 49 28.1**	**+0.3**
USA0B	**Ussuriysk Arra**	**9.01**	**295**	P	**Pn**	**16 49 28.1**	**+0.3**
USRK	**Ussuriysk Ar.**	**9.01**	**295**	Pn	**Pn**	**16 49 25.4**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=98,slow=13,SNR=2.0						
USRK				LR	LR	16 53 03.4	
	comp=Z,227nm,18.3s,baz=84,slow=39						
	comp=Z,2.1nm,0.9s						
JHS	**Saijyo**	**9.96**	**237**	Pn	**Pn**	**16 49 42.6**	**+1.7**
KLR	**Kul'dur**	**11.69**	**320**	Pn	**Pn**	**16 50 04.0**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=133,slow=12,SNR=3.4						
KLR				LR	LR	16 54 56.4	
	comp=Z,128nm,18.7s,baz=159,slow=39						
	comp=Z,1.6nm,0.8s						
KLR	**Kul'dur**	**11.69**	**320**	*ce*P	**Pn**	**16 50 05.4**	**+0.8**
KLR				pmax	pmax		
	comp=Z,4.0nm,1.7s						
KSRS	**Korea Array**	**12.42**	**259**	Pn	**Pn**	**16 50 14.8**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=64,slow=14,SNR=2.8						
KSRS				LR	LR	16 54 52.8	
	comp=Z,181nm,18.1s,baz=75,slow=37						
	comp=Z,1.3nm,0.9s						
BNX	**BinXian**	**12.57**	**298**	⇑P	**Pn**	**16 50 17.6**	**+1.0**
BNX				pmax	pmax		
	comp=Z,12nm,0.9s						
BNX				pmax	pmax		
	comp=Z,64nm,4.8s						
ZEA	**Zeya**	**16.82**	**325**	*e*P	**Pn**	**16 51 10.6**	**-2.4**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ZEA				MLR	MLR		
	comp=Z,100nm,16.0s						
MA2	**Magadan**	**19.31**	**12**	LR	LR	17 00 37.0	
	comp=Z,55nm,18.1s,baz=70,slow=41						
TIA	**Tai'an**	**20.98**	**266**	*e*P	**P**	**16 52 00.2**	**-0.4**
TIA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
YAK	**Yakutsk**	**22.75**	**343**	P	**P**	**16 52 15.8**	**-3.4**
	comp=Z,2.2nm,0.3s,baz=128,slow=0.9,SNR=4.9						
YAK				LR	LR	17 01 58.9	
	comp=Z,61nm,18.9s,baz=242,slow=39						
YAK	**Yakutsk**	**22.75**	**343**	*i* P	**P**	**16 52 16.0**	**-3.2**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SEY	**Seymchan**	**22.76**	**11**	P	**P**	**16 52 16.3**	**-3.1**
	comp=Z,1.6nm,0.7s,baz=206,slow=10,SNR=11						
HHC	**Hu-ho-hao-te**	**23.95**	**280**	*e*P	**P**	**16 52 32.1**	**+0.6**
HHC				pmax	pmax		
	comp=Z,30nm,0.9s						
HHC				pmax	pmax		
	comp=Z,320nm,5.8s						
BOD	**Bodaibo**	**25.25**	**322**	*e*P	**P**	**16 52 42.3**	**-0.7**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ULN	**Ulaanbaatar**	**26.67**	**297**	P	**P**	**16 52 56.7**	**+0.5**
ULN	**Ulaanbaatar**	**26.67**	**297**	*ce*P	**P**	**16 52 54.9**	**-1.3**
ULN				pmax	pmax		
	comp=Z,10.0nm,2.5s						
SONM	**Songino Array**	**27.11**	**297**	P	**P**	**16 52 59.9**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=88,slow=8.9,SNR=12						
SONM				LR	LR	17 04 31.1	
	comp=Z,102nm,19.8s,baz=96,slow=38						
	comp=Z,1.1nm,0.5s						
SONM	**Songino Array**	**27.11**	**297**	P	**P**	**16 53 00.4**	**+0.3**
GUMO	**Guam**	**27.20**	**177**	LR	LR	17 05 07.3	
	comp=Z,14nm,18.2s,baz=3.0,slow=39						
H11N2	**WAKE ISLAND Hy**	**29.13**	**129**	T	T	17 24 05.4	
	baz=322,slow=74,SNR=46						
H11N1	**WAKE ISLAND Hy**	**29.14**	**129**	T	T	17 23 58.5	
	baz=322,slow=74,SNR=39						
H11N3	**WAKE ISLAND Hy**	**29.14**	**129**	T	T	17 23 58.4	
	baz=322,slow=74,SNR=44						
ZAK	**Zakamensk**	**29.26**	**303**	*e*P	**P**	**16 53 19.3**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ENH	**Enshi**	**29.31**	**260**	P	**P**	**16 53 19.7**	**-0.1**
ENH				IAmb	IAmb	16 53 20.1	
	comp=Z,5.0nm,0.9s						
BILL	**Bilibino**	**29.94**	**17**	P	**P**	**16 53 25.9**	**+1.1**
BILL				IAmb	IAmb	16 53 30.6	
	comp=Z,6.5nm,1.2s						
BILL	**Bilibino**	**29.94**	**17**	*e*P	**P**	**16 53 26.0**	**+1.1**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
H11S1	**WAKE ISLAND Hy**	**29.97**	**131**	T	T	17 24 56.2	
	baz=324,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.98**	**131**	T	T	17 24 57.6	
	baz=324						
H11S2	**WAKE ISLAND Hy**	**29.99**	**131**	T	T	17 24 59.2	
	baz=324,slow=74						
PZH	**PanZhiHua**	**37.09**	**260**	P	**P**	**16 54 28.0**	**+0.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,80nm,5.0s						
DAV	**Davao City (W)**	**37.19**	**210**	LR	LR	17 09 51.2	
	comp=Z,23nm,19.9s,baz=71,slow=36						
DGZ	**Jazzator, Alta**	**39.48**	**302**	*i* P	**P**	**16 54 47.6**	**0.0**
DGZ				pmax	pmax		
	comp=Z,14nm,1.8s						
ZAA0	**Zalesovo Array**	**40.54**	**309**	P	**P**	**16 54 56.6**	**+0.5**
ZAA0				IAmb	IAmb	16 55 19.2	
	comp=Z,3.3nm,0.9s						
ZALV	**Zalesovo Beam**	**40.54**	**309**	P	**P**	**16 54 56.3**	**+0.2**
	comp=Z,2.8nm,0.7s,baz=97,slow=8.6,SNR=9.0						
ZALV				PcP	**PcP**	**16 56 58.9**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=92,slow=5.0,SNR=3.3						
ZALV				LR	LR	17 12 47.0	
	comp=Z,59nm,18.2s,baz=88,slow=38						
	comp=Z,2.8nm,0.7s						
ZALV	**Zalesovo Beam**	**40.54**	**309**	P	**P**	**16 54 56.5**	**+0.4**
ZALV	**Zalesovo Beam**	**40.54**	**309**	*i* P	**P**	**16 54 56.2**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WMQ	**Urumqi**	**40.57**	**293**	*e*P	**P**	**16 54 59.2**	**+2.6**
CRAI	**Chiangrai**	**41.81**	**254**	P	**P**	**16 55 08.5**	**+1.5**
CRAI				IAmb	IAmb	16 55 11.8	
	comp=Z,4.5nm,0.8s						
IMAR	**Indian Mountai**	**42.62**	**33**	P	**P**	**16 55 14.9**	**+2.0**
I21K	**Tanana**	**43.31**	**34**	P	**P**	**16 55 20.4**	**+1.9**
I21K				IAmb	IAmb	16 55 41.0	
	comp=Z,5.1nm,1.3s						
MK31	**Makanchi Array**	**43.45**	**299**	P	**P**	**16 55 20.4**	**+0.4**
MK31	**Makanchi Array**	**43.45**	**299**	*i* P	**P**	**16 55 18.8**	**-1.2**
MKAR	**Makanchi Array**	**43.45**	**299**	P	**P**	**16 55 20.1**	**0.0**
	comp=Z,0.7nm,0.5s,baz=84,slow=9.5,SNR=16						
MKAR				LR	LR	17 14 05.9	
	comp=Z,51nm,18.8s,baz=68,slow=37						
	comp=Z,0.7nm,0.5s						
MKAR	**Makanchi Array**	**43.45**	**299**	P	**P**	**16 55 20.2**	**+0.2**
MAKZ	**Makanchi**	**43.66**	**299**	P	**P**	**16 55 21.5**	**-0.2**
MAKZ				IAmb	IAmb	16 55 34.3	
	comp=Z,3.6nm,1.1s						
MAKZ	**Makanchi**	**43.66**	**299**	P	**P**	**16 55 21.5**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MLY	**Manley**	**43.84**	**34**	P	**P**	**16 55 25.3**	**+2.4**
CMAR	**Chiang Mai Arr**	**43.97**	**253**	P	**P**	**16 55 24.8**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=50,slow=7.0,SNR=7.8						
CMAR				LR	LR	17 14 10.1	
	comp=Z,20nm,21.5s,baz=320,slow=37						
	comp=Z,0.8nm,0.9s						
H23K	**Yukon River**	**44.34**	**33**	P	**P**	**16 55 29.4**	**+2.5**
H23K				IAmb	IAmb	16 55 58.2	
	comp=Z,5.1nm,1.3s						
I23K	**Minto, Yukon-K**	**44.42**	**34**	P	**P**	**16 55 29.1**	**+1.6**
NEA2	**Nenana**	**44.56**	**35**	P	**P**	**16 55 30.4**	**+1.9**
NEA2				IAmb	IAmb	16 55 49.0	
	comp=Z,2.5nm,0.9s						
KURK	**Kurchatov**	**44.84**	**305**	*ce*P	**P**	**16 55 30.2**	**-0.8**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KURBB	**Kurchatov Arra**	**44.91**	**305**	P	**P**	**16 55 31.4**	**-0.1**
	comp=Z,3.3nm,0.6s,baz=78,slow=8.6,SNR=27						
	comp=Z,3.3nm,0.6s						
WRH	**Wood River Hil**	**44.98**	**35**	P	**P**	**16 55 33.8**	**+1.8**
ILAR	**Eielson Array**	**45.49**	**34**	P	**P**	**16 55 37.2**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=267,slow=6.1,SNR=8.3						
	comp=Z,0.6nm,0.7s						
ILAR	**Eielson Array**	**45.49**	**34**	P	**P**	**16 55 37.4**	**+1.4**
BMAR	**Burnt Mountain**	**46.28**	**31**	P	**P**	**16 55 44.8**	**+2.5**
SCRK	**Sand Creek**	**46.81**	**35**	P	**P**	**16 55 47.9**	**+1.3**
SCRK				IAmb	IAmb	16 55 48.6	
	comp=Z,2.2nm,0.9s						
JIRN	**Jiri**	**48.23**	**273**	*e*P	**P**	**16 55 58.9**	**+0.5**
GUN	**Gumba**	**48.34**	**273**	*e*P	**P**	**16 55 59.6**	**+0.4**
	comp=Z,5.9nm,0.5s						
PKI	**Pulchoki**	**48.87**	**273**	*e*P	**P**	**16 56 05.0**	**+1.8**
PKIN	**Phulchoki**	**48.88**	**273**	*e*P	**P**	**16 56 05.0**	**+1.8**
DMN	**Daman**	**49.08**	**273**	*e*P	**P**	**16 56 06.7**	**+1.9**
BVAR	**Borovoye Array**	**49.17**	**310**	P	**P**	**16 56 05.0**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=79,slow=7.7,SNR=8.1						
BVAR				LR	LR	17 18 04.7	
	comp=Z,55nm,18.4s,baz=80,slow=38						
	comp=Z,1.4nm,0.6s						
BVAR	**Borovoye Array**	**49.17**	**310**	P	**P**	**16 56 05.0**	**+0.2**
BRVK	**Borovoye**	**49.22**	**310**	*ce*P	**P**	**16 56 05.3**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
GKN	**Gorkha**	**49.23**	**274**	*e*P	**P**	**16 56 07.9**	**+2.1**
DANN	**Dangsing**	**49.72**	**275**	*e*P	**P**	**16 56 13.0**	**+3.3**
	comp=Z,20nm,0.5s						
AAK	**Ala-Archa**	**50.06**	**296**	LR	LR	17 18 34.1	
	comp=Z,45nm,18.4s,baz=108,slow=38						
INK	**Inuvik**	**50.31**	**29**	P	**P**	**16 56 14.3**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=280,slow=3.5,SNR=7.5						
	comp=Z,0.8nm,0.5s						
INK	**Inuvik**	**50.31**	**29**	P	**P**	**16 56 14.5**	**+1.3**
INK				IAmb	IAmb	16 56 32.1	
	comp=Z,5.5nm,1.4s						
PYUN	**Piuthan**	**50.43**	**275**	*e*P	**P**	**16 56 18.6**	**+3.7**
	comp=Z,3.4nm,0.4s						
KULM	**Kulim**	**52.05**	**239**	P	**P**	**16 56 28.5**	**+1.6**
KULM				IAmb	IAmb	16 56 29.0	
	comp=Z,5.6nm,0.9s						
HNR	**Honiara**	**52.34**	**159**	LR	LR	17 15 56.8	
	comp=Z,187nm,21.9s,baz=176,slow=33						
IPM	**Ipoh**	**52.42**	**238**	P	**P**	**16 56 29.7**	**0.0**
KK31	**Karatay Array**	**52.56**	**298**	P	**P**	**16 56 30.2**	**-0.3**
KK31				IAmb	IAmb	16 56 52.6	
	comp=Z,2.3nm,1.1s						
KK31	**Karatay Array**	**52.56**	**298**	P	**P**	**16 56 30.2**	**-0.3**
KK31				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KKAR	**Karatay Array**	**52.56**	**298**	P	**P**	**16 56 30.2**	**-0.3**
KKAR	**Karatay Array**	**52.56**	**298**	P	**P**	**16 56 30.2**	**-0.3**
ARU	**Arti**	**54.52**	**317**	P	**P**	**16 56 43.7**	**-0.9**
	comp=Z,3.6nm,0.7s,baz=39,slow=4.1,SNR=5.9						
ARU				LR	LR	17 22 56.5	
	comp=Z,50nm,20.0s,baz=186,slow=39						
	comp=Z,3.6nm,0.7s						
ARU	**Arti**	**54.52**	**317**	P	**P**	**16 56 44.5**	**0.0**
ARU	**Arti**	**54.52**	**317**	*d i*P	**P**	**16 56 44.6**	**0.0**
ARU						16 57 44.0	
ARU				S	**S**	**17 04 21.9**	**+0.5**
ARU				SS	**SKiKP**	**17 07 56.4**	**+5.1**
ARU				pmax	pmax		
	comp=Z,15nm,1.6s						
ABKAR	**Akbulak array**	**56.66**	**309**	P	**P**	**16 57 00.2**	**+0.2**
BBB	**Bella Bella**	**58.32**	**46**	P	**P**	**16 57 13.4**	**+1.8**
RES	**Resolute Bay**	**58.53**	**15**	P	**P**	**16 57 13.3**	**+0.5**
RES				IAmb	IAmb	16 57 38.5	
	comp=Z,2.8nm,0.9s						
RES	**Resolute Bay**	**58.53**	**15**	P	**P**	**16 57 13.3**	**+0.5**

RES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
YKA	**Yellowknife Ar**	**59.77**	**32**	P	**P**	**16 57 22.6**	**+1.0**
	comp=Z,0.2nm,0.8s,baz=296,slow=5.7,SNR=3.5						
	comp=Z,0.2nm,0.8s						
WB0	**Warramunga Arr**	**60.88**	**190**	P	**P**	**16 57 29.7**	**0.0**
WB0				IAmb	IAmb	16 57 56.4	
	comp=Z,4.4nm,1.1s						
ARCES	**ARCESS Array B**	**60.95**	**339**	LR	LR	17 26 32.0	
	comp=Z,43nm,18.1s,baz=258,slow=39						
WRAB	**Tennant Creek**	**61.05**	**190**	P	**P**	**16 57 31.2**	**+0.5**
WRAB	**Tennant Creek**	**61.05**	**190**	P	**P**	**16 57 31.3**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.5s						
WB2	**Warramunga Arr**	**61.06**	**190**	P	**P**	**16 57 30.9**	**0.0**
WRA	**Warramunga Arr**	**61.06**	**190**	P	**P**	**16 57 30.6**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=6.4,slow=6.7,SNR=6.5						
	comp=Z,0.7nm,0.7s						
BELG	**Belogornoye**	**62.04**	**316**	*i* P	**P**	**16 57 35.9**	**-1.2**
BELG				pmax	pmax		
	comp=Z,11nm,4.3s						
AS31	**Alice Springs**	**64.79**	**190**	P	**P**	**16 57 56.3**	**+0.6**
ASAR	**Alice Springs**	**64.79**	**190**	P	**P**	**16 57 55.9**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=360,slow=5.0,SNR=11						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**64.79**	**190**	P	**P**	**16 57 56.0**	**+0.4**
OBN	**Obninsk**	**65.93**	**323**	*e*P	**P**	**16 58 01.5**	**-1.2**
OBN				*e*		16 58 36.9	
OBN				*e*		17 00 24.6	
OBN				*e*PPP	PPP	17 02 02.4	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FIA1	**FINESS Array S**	**66.12**	**332**	P	**P**	**16 58 04.0**	**+0.2**
FINES	**FINESS Array B**	**66.13**	**332**	P	**P**	**16 58 03.9**	**0.0**
	comp=Z,2.2nm,0.8s,baz=53,slow=6.4,SNR=9.0						
FINES				LR	LR	17 29 12.8	
	comp=Z,54nm,21.7s,baz=70,slow=38						
	comp=Z,2.2nm,0.8s						
FINES	**FINESS Array B**	**66.13**	**332**	P	**P**	**16 58 03.8**	**-0.1**
KMPM	**Mount Pierce**	**66.73**	**56**	P	**P**	**16 58 09.8**	**+1.6**
KIV	**Kislovodsk**	**69.53**	**311**	*e*P	**P**	**16 58 24.0**	**-1.7**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KBZ	**Khabaz**	**69.55**	**310**	P	**P**	**16 58 26.6**	**+1.0**
	comp=Z,2.7nm,0.8s,baz=4.6,slow=7.5,SNR=5.2						
	comp=Z,2.7nm,0.8s						
KBZ	**Khabaz**	**69.55**	**310**	*ce*P	**P**	**16 58 26.9**	**+1.3**
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MNK	**Minsk**	**70.16**	**326**	*i* P	**P**	**16 58 26.2**	**-3.0**
	comp=E,4.0nm,1.1s						
MNK				*i* P	**P**	**16 58 26.2**	**-3.0**
	comp=N,17nm,1.4s						
MNK				*i* P	**P**	**16 58 26.2**	**-3.0**
	comp=Z,14nm,0.7s,baz=47						
MNK				*i* pP	**pwP**	**16 58 39.3**	**-1.5**
MNK				*i* PP	**PP**	**17 01 01.4**	**-2.8**
MNK				*i* PPP	PPP	17 02 43.7	
MNK				*i* S	**S**	**17 07 31.4**	**-6.8**
MNK				*i* sS	**sS**	**17 07 56.5**	**+3.4**
MNK				*i* SS	**SS**	**17 12 08.1**	**+0.7**
MNK				*i* SSS	SSS	17 15 24.0	
MNK				*i* LQ	LQ	17 24 24.6	
MNK				*i* LR	LR	17 28 23.2	
MNK				*i* LRM	MLR	17 31 11.1	
	comp=Z,65nm,17.1s						
MNK				*i* LRM	MLR	17 31 50.7	
	comp=E,30nm,24.2s						
MNK				*i* LRM	MLR	17 31 50.7	
	comp=N,610nm,28.0s						
MNK	**Minsk**	**70.16**	**326**	*i* P	**P**	**16 58 26.2**	**-3.0**
MNK				*i* *PP	**pwP**	**16 58 39.2**	**-1.5**
MNK				*i*		17 01 01.3	
MNK				*i* PPP	PPP	17 02 43.6	
MNK				*i* S	**S**	**17 07 31.4**	**-6.8**
MNK				*i* SS	**SS**	**17 12 08.1**	**+0.7**
MNK				pmax	pmax		
	comp=Z,14nm,0.7s						
MNK				pmax	pmax		
	comp=E,4.0nm,1.1s						
MNK				pmax	pmax		
	comp=N,17nm,1.4s						
MNK				MLR	MLR		
	comp=Z,65nm,17.0s						
MNK				MLR	MLR		
	comp=N,610nm,28.0s						
MNK				MLR	MLR		
	comp=E,30nm,24.0s						
GNI	**Garni**	**70.62**	**307**	*i* P	**P**	**16 58 32.4**	**-0.1**
GNI				pmax	pmax		
	comp=Z,18nm,2.0s						
HFS	**Hagfors**	**71.21**	**336**	LR	LR	17 32 30.4	
	comp=Z,34nm,19.5s,baz=50,slow=38						
SOC	**Sochi**	**71.45**	**312**	*i* P	**P**	**16 58 34.2**	**-3.1**
SOC				*e*		17 01 12.6	
SOC				*e*PPP	PPP	17 02 56.8	
SOC				*e*S	**S**	**17 07 49.0**	**-4.6**
SOC				*e*SS	**SS**	**17 12 23.8**	**-4.0**
SOC				*e*SSS	SSS	17 15 29.0	
AKASG	**Malin Array Be**	**72.18**	**322**	P	**P**	**16 58 41.5**	**0.0**
	comp=Z,1.5nm,0.7s,baz=40,slow=5.7,SNR=12						
	comp=Z,1.5nm,0.7s						
BUR08	**Bucovina Ar. S**	**76.21**	**322**	P	**P**	**16 59 05.9**	**+0.7**
BUR08				IAmb	IAmb	16 59 06.6	
	comp=Z,3.3nm,0.9s						
BURAR	**Bucovina Array**	**76.22**	**322**	P	**P**	**16 59 05.8**	**+0.5**
BURAR				IAmb	IAmb	16 59 06.6	
	comp=Z,1.2nm,0.7s						
CLL	**Collm**	**78.50**	**331**	*e*P	**P**	**16 59 18.0**	**+0.1**
CLL	**Collm**	**78.50**	**331**	*e*P	**P**	**16 59 18.0**	**+0.1**
VRAC	**Vranov**	**78.70**	**328**	LR	LR	17 37 01.2	
	comp=Z,42nm,18.1s,baz=359,slow=38						
DAVOX	**Davos/Dischmat**	**83.39**	**330**	LR	LR	17 40 17.6	
	comp=Z,37nm,18.3s,baz=220,slow=38						
TXAR	**Lajitas Array**	**86.64**	**54**	P	**P**	**17 00 01.8**	**+1.0**
	baz=325,slow=7.7,SNR=1.5						
ESDC	**Sonseca Array**	**94.48**	**335**	LR	LR	17 50 55.8	
	comp=Z,18nm,21.1s,baz=321,slow=40						

RSNC 12 16:49:56.1±1.1, 7°.16N×76°.23W, h0^{km}±5^{km}, ML3.1, Mw3.7, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBBC	**Dabeiba**	**0.14**	**172**	*e*P	Pg	16 49 57.9	-0.9
DBBC				*e*S	Sg	16 49 59.5	-1.0
DBBC				*i*		16 50 00.0	
	comp=Z,4µm,0.2s						
APAC	**Apartado, Choc**	**0.82**	**335**	*e*P	Pg	16 50 09.1	-2.8
APAC				*e*S	Sg	16 50 22.9	+0.5
APAC				*i*		16 50 26.5	
	comp=Z,707nm,0.5s						
UREC	**San Jos de Ur**	**0.91**	**49**	*e*P	Pg	16 50 10.8	-2.8
UREC				*e*S	Sg	16 50 24.0	-1.4
UREC				*i*		16 50 26.3	
	comp=Z,966nm,0.3s						
HELC	**Santa Helena**	**1.18**	**144**	*e*P	Pg	16 50 15.9	-2.9
HELC				*e*S	Sg	16 50 32.9	-1.3
HELC				*i*		16 50 36.7	
	comp=Z,163nm,0.5s						
CBOC	**Ciudad Bolivar**	**1.30**	**170**	*e*P	Pg	16 50 18.7	-2.3
CBOC				*e*S	Sb	16 50 38.7	-0.2
CBOC				*i*		16 50 45.1	
	comp=Z,317nm,0.6s						
ZARC	**Zaragoza, Cauc**	**1.40**	**76**	*e*P	Pn	16 50 18.7	-4.2
ZARC				*e*S	Sg	16 50 36.8	-4.3
ZARC				*i*		16 50 40.0	
	comp=Z,600nm,0.1s						
LCBC	**Los crdobas,**	**1.70**	**355**	*e*P	Pn	16 50 22.1	-4.9
LCBC				*e*S	Sg	16 50 54.3	+3.6
PTBC	**PUERTO BERRIO,**	**1.86**	**109**	*e*P	Pn	16 50 26.8	-2.6
PTBC				*e*S	Sn	16 50 52.9	-0.7
PTBC				*i*		16 50 55.9	
	comp=Z,263nm,0.8s						
NORC	**Norcasia**	**2.08**	**139**	*e*P	Pn	16 50 31.4	-1.0
NORC				*e*S	Sn	16 50 58.9	-0.1
NORC				*i*		16 51 04.3	
	comp=Z,190nm,0.6s						
GUY2C	**Guyana, Caldas**	**2.10**	**156**	*e*P	Pn	16 50 32.3	-0.7
GUY2C				*e*S	Sb	16 51 02.6	+0.4
GUY2C				IAML		16 51 09.3	
	comp=Z,164nm,0.8s						
NIZA	**Niza - Manizal**	**2.21**	**160**	*e*P	Pb	16 50 37.0	-0.2
NIZA				*e*S	Sb	16 51 06.2	+0.9
RECRC	**Villamaria, Ca**	**2.35**	**158**	*e*P	Pn	16 50 36.7	+0.2
RECRC				*e*S	Sb	16 51 09.8	+0.3
BRRC	**Barranca, Sant**	**2.50**	**91**	*e*P	Pn	16 50 36.3	-1.8
BRRC				*e*S	Sn	16 51 08.2	-1.0
BRRC				*i*		16 51 17.9	
	comp=Z,94nm,0.6s						
SPBC	**San Pablo de B**	**2.61**	**125**	*e*P	Pn	16 50 39.2	-0.5
SPBC				*e*S	Sn	16 51 14.1	+1.9
SPBC				*i*		16 51 21.9	
	comp=Z,88nm,0.4s						
ANIL	**Santa Ana**	**2.77**	**163**	*e*P	Pb	16 50 46.4	-0.3
ANIL				*e*S	Sb	16 51 22.5	+1.1
SJCC	**San Jacinto, C**	**2.92**	**21**	*e*P	Pn	16 50 42.4	-1.5
SJCC				*i*		16 51 38.2	
	comp=Z,24nm,0.1s						
ROSC	**El Rosal**	**2.98**	**140**	*e*P	Pb	16 50 47.9	-2.4
ROSC				*e*S	Sb	16 51 28.1	+0.6
ROSC				*i*		16 51 35.0	
	comp=Z,57nm,0.6s						
BARC	**Barichara**	**3.08**	**100**	*e*P	Pn	16 50 44.3	-1.9
BARC				*e*S	Sn	16 51 22.8	-1.0
BARC				*i*		16 51 37.3	
	comp=Z,158nm,0.7s						
YOTC	**Yotoco, Valle**	**3.15**	**182**	*e*P	Pn	16 50 45.7	-1.4
YOTC				*e*S	Sn	16 51 26.8	+1.2
YOTC				*i*		16 51 35.4	
RUSC	**La Rusia**	**3.37**	**112**	*e*P	Pn	16 50 48.8	-1.6
RUSC				*e*S	Sn	16 51 31.1	-0.3
RUSC				*i*		16 51 46.4	
	comp=Z,67nm,0.7s						
ORTC	**Ortega, Tolima**	**3.37**	**163**	*e*P	Pn	16 50 51.4	+1.4
ORTC				*e*S	Sb	16 51 37.8	-0.6
ORTC				*i*		16 51 51.1	
	comp=Z,22nm,0.5s						
PAMC	**Pamplona, Colo**	**3.50**	**87**	*e*P	Pn	16 50 50.2	-2.2
PAMC				*e*S	Sn	16 51 32.5	-2.3
CHIC	**Chingaza**	**3.53**	**135**	*e*P	Pn	16 50 53.2	+0.6
CHIC				*e*S	Sn	16 51 39.0	+3.7
CHIC				*i*		16 51 58.9	
	comp=Z,28nm,0.6s						
VILC	**Villavicencio,**	**3.94**	**140**	*e*P	Pn	16 50 59.5	+1.6
VILC				*i*		16 52 04.2	
	comp=Z,28nm,0.5s						
POPC	**Popayan, Colom**	**4.61**	**186**	*e*P	Pn	16 51 08.3	+1.0
POPC				*e*S	Sn	16 52 05.0	+3.4
PTGC	**Puerto Gaitan,**	**5.02**	**126**	*e*P	Pn	16 51 12.1	-0.7
PTGC				*e*S	Sn	16 52 12.4	+0.8

WEL 12 17:11:45.1±0.4, 42°S±3°×17°4E±°, h25^{km}±5^{km}, M2.5/6, ML2.8/7, MLv2.5/6, Error ellipse: s-maj=0.0km s-min=0.0km az=112.8, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHZ	**Kahutara**	**0.33**	**185**	P	Pn	17 11 53.9	-0.4
KHZ				S	Sn	17 12 00.1	-0.2
BSWZ	**Blackbirch Sta**	**0.43**	**31**	P	Pn	17 11 55.3	-0.4
BSWZ				S	Sn	17 12 02.6	-0.2
CMWZ	**Cape Campbell**	**0.58**	**55**	P	Pn	17 11 58.0	+0.3
CMWZ				S	Sn	17 12 07.8	+1.3
THZ	**Tophouse**	**0.60**	**303**	P	Pb	17 11 57.4	+0.5
THZ				S	Sn	17 12 07.3	+0.4
TUWZ	**Tuamarina**	**0.71**	**23**	P	Pn	17 11 59.2	-0.4
TUWZ				S	Sn	17 12 09.7	+0.1
NNZ	**Nelson**	**0.88**	**350**	P	Pn	17 12 01.8	-0.1
NNZ				S	Sn	17 12 14.0	+0.2
MRNZ	**Matariki Terra**	**0.92**	**318**	P	Pn	17 12 02.8	+0.3
GVZ	**Greta Valley S**	**0.97**	**204**	P	Pn	17 12 02.9	-0.2
GVZ				S	Sn	17 12 16.0	-0.1
TCW	**Tory Channel**	**1.02**	**31**	P	Pn	17 12 03.4	-0.4
TCW				S	Sn	17 12 17.2	-0.1
TKNZ	**Takaka Hill**	**1.15**	**336**	P	Pb	17 12 06.2	-0.1
TKNZ				S	Sb	17 12 21.6	+0.9
LTZ	**Lake Taylor**	**1.19**	**234**	P	Pn	17 12 06.5	+0.3
LTZ				S	Sn	17 12 21.5	-0.1
DUWZ	**D'Urville Isla**	**1.31**	**12**	P	Pn	17 12 08.2	+0.4
PLWZ	**Palliser**	**1.36**	**68**	P	Pn	17 12 07.0	-1.5
PLWZ				S	Sn	17 12 23.6	-2.1
DSZ	**Denniston Nort**	**1.37**	**284**	P	Pb	17 12 09.9	-0.1
DSZ				S	Sb	17 12 27.8	+0.8
CAW	**Cannon Point**	**1.48**	**49**	P	Pn	17 12 09.3	-0.9
QRZ	**Quartz Range**	**1.48**	**328**	P	Pb	17 12 11.4	-0.5
QRZ				S	Sb	17 12 30.3	-0.1
KIW	**Kapiti Island**	**1.58**	**40**	P	Pn	17 12 11.1	-0.4
OXZ	**Oxford**	**1.68**	**222**	P	Pn	17 12 11.7	-1.2
OXZ				S	Sn	17 12 31.9	-1.7
INZ	**Inchbonnie**	**1.70**	**247**	P	Pn	17 12 14.1	+0.9
MTW	**Mount Morrison**	**1.71**	**58**	P	Pn	17 12 11.7	-1.7
MTW				S	Sn	17 12 31.6	-2.9
OGWZ	**Otaki Gorge**	**1.74**	**44**	P	Pn	17 12 12.9	-0.9
MQZ	**McQueen's Vall**	**1.76**	**202**	P	Pn	17 12 11.9	-1.9
MHCZ	**Mount Hutt**	**2.07**	**225**	P	Pn	17 12 17.5	-0.8
MRZ	**Mangatainoka R**	**2.07**	**47**	P	Pn	17 12 16.8	-1.4
RPZ	**Rata Peaks**	**2.47**	**228**	P	Pn	17 12 24.1	+0.4
WNVZ	**Wahianoa**	**3.15**	**30**	P	Pn	17 12 33.7	+0.4
OTVZ	**Oturere**	**3.32**	**29**	P	Pn	17 12 32.7	-2.9

IDC 12 17:15:06.4±7.7, 7°.79S×129°.14E, h0^{km}, mb3.8/1, mbtmp3.4/3, ML3.5/2, Error ellipse: s-maj=116.6km s-min=88.5km az=97.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.09**	**158**	Pn	Pn	17 18 14.2	+0.3
	0.3nm,0.3s,baz=337,slow=13,SNR=15						
WRA				Sn	Sn	17 20 36.8	-3.5
	0.3nm,0.3s,baz=332,slow=22,SNR=8.6						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**16.44**	**164**	Pn	Pn	17 18 58.8	+0.1
	0.1nm,0.3s,baz=340,slow=9.1,SNR=21						
ASAR				Sn	Sn	17 22 02.6	+0.7
	0.1nm,0.3s,baz=357,slow=27,SNR=5.9						
	0.2nm,0.4s						
STKA	**Stephens Creek**	**26.63**	**156**	P	P	17 20 46.8	-0.1
	1.0nm,0.7s,baz=333,slow=9.0,SNR=1.3						
	1.0nm,0.7s						

ROM 12 17:25:25.1±0.2, 42°.782N±0°.005×13°.148E±0°.006, h10^{km}±1^{km}, Md1.0/5, ML1.3/4, 8C-3D, Error ellipse: s-maj=0.7km s-min=0.1km az=145.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1214	**Arquata del Tr**	**0.05**	**117**	P	Pg	17 25 27.6	+0.3
T1214				AML	AML		
	comp=E,68µm,0.2s						
T1214				AML	AML		
	comp=N,55µm,1.1s						
T1214				AML	AML		
	comp=E,69µm,0.2s						
T1214				AML	AML		
	comp=N,55µm,1.1s						
T1214				END			
T1245	**Castelsantange**	**0.08**	**22**	⇑P	Pg	17 25 28.0	+0.4
T1245				AML	AML		
	comp=E,238µm,1.5s						
T1245				AML	AML		
	comp=N,552µm,1.0s						
T1245				AML	AML		
	comp=E,232µm,0.2s						
T1245				AML	AML		
	comp=N,552µm,1.0s						
T1245				AML	AML		
	comp=N,402µm,0.2s						
T1245				AML	AML		
	comp=E,232µm,1.8s						
T1245				AML	AML		
	comp=E,238µm,0.5s						
T1212	**Cascia, Frazio**	**0.08**	**248**	⇑P	Pg	17 25 28.0	+0.4
T1212				S	Sg	17 25 29.8	+0.5
T1212				AML	AML		
	comp=E,156µm,0.2s						
T1212				AML	AML		
	comp=N,164µm,0.1s						
T1212				AML	AML		
	comp=E,156µm,0.2s						
T1212				END			
T1218	**Civita (PG)**	**0.12**	**192**	⇑P	Pg	17 25 28.4	+0.4
T1218				AML	AML		
	comp=E,171µm,0.2s						
T1218				AML	AML		
	comp=E,192µm,0.2s						
T1218				AML	AML		
	comp=N,398µm,0.2s						
T1218				AML	AML		
	comp=N,414µm,0.2s						
T1218				AML	AML		
	comp=E,172µm,0.2s						
T1218				AML	AML		
	comp=N,398µm,1.8s						
T1218				AML	AML		
	comp=N,414µm,1.8s						
MC2	**Monte Cornacci**	**0.13**	**13**	⇑P	Pg	17 25 28.8	+0.4
MC2				END			
T1216	**Preci, Frazion**	**0.14**	**319**	⇑P	Pg	17 25 28.8	+0.4
T1216				S	Sg	17 25 31.6	+0.9
T1216				END			
T1217	**Poggiodomo (PG**	**0.17**	**246**	⇓P	Pg	17 25 29.4	+0.5
T1217				S	Sg	17 25 32.5	+0.9
MMO1	**Montemonaco**	**0.18**	**48**	⇓P	Pg	17 25 29.4	+0.4
MMO1				S	Sg	17 25 32.5	+0.9
MMO1				END			
SMA1	**SAN MARTINO**	**0.20**	**138**	⇑P	Pg	17 25 30.1	+0.6
T1215	**Vallo di Nera,**	**0.21**	**276**	⇑P	Pg	17 25 30.1	+0.7
T1241	**Roccafluvione,**	**0.22**	**70**	P	Pg	17 25 30.1	+0.4
FDMO	**Fiordimonte**	**0.26**	**350**	⇑P	Pg	17 25 30.7	+0.3
RM33	**Pellescritta (**	**0.28**	**170**	⇓P	Pg	17 25 31.0	+0.2
TERO	**Teramo**	**0.37**	**115**	P	Pg	17 25 32.5	+0.1

ROM 12 17:25:59.2±0.1, 43°.057N±0°.004×13°.031E±0°.005, h9^{km}, ML1.5/18, 9C-5D, Error ellipse: s-maj=0.4km s-min=0.2km az=46.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDMO	**Fiordimonte**	**0.05**	**116**	P	Pg	17 26 01.2	+0.1
FDMO				S	Sg	17 26 02.1	-0.3
FDMO				AML	AML		
	comp=E,1400µm,0.5s						
FDMO				AML	AML		
	comp=N,2000µm,0.2s						
T1220	**Camerino, Fraz**	**0.07**	**39**	⇑P	Pg	17 26 01.7	+0.4
T1220				S	Sg	17 26 03.2	+0.3
T1220				AML	AML		
	comp=E,1975µm,0.2s						
T1220				AML	AML		
	comp=E,1980µm,0.2s						
T1220				AML	AML		
	comp=N,2035µm,0.9s						
CESI	**CESI - Serrava**	**0.11**	**241**	⇑P	Pg	17 26 02.4	+0.6
CESI				S	Sg	17 26 04.4	+0.6
CESI				AML	AML		
	comp=N,706µm,0.4s						
CESI				AML	AML		
	comp=E,618µm,0.8s						
CESI				AML	AML		
	comp=N,707µm,0.4s						
CESI				AML	AML		
	comp=E,618µm,1.2s						
T1256	**Bolognola (MC)**	**0.15**	**109**	⇓P	Pg	17 26 03.3	+0.7
T1256				S	Sg	17 26 05.9	+0.9
T1256				AML	AML		
	comp=E,251µm,0.4s						
T1256				AML	AML		
	comp=N,449µm,0.3s						
T1256				AML	AML		
	comp=E,252µm,0.4s						
MC2	**Monte Cornacci**	**0.19**	**141**	P	Pg	17 26 03.8	+0.6
MC2				S	Sg	17 26 07.2	+1.3
SNTG	**Esanatoglia**	**0.21**	**342**	P	Pg	17 26 04.2	+0.7
SNTG				S	Sg	17 26 07.8	+1.4
SNTG				AML	AML		
	comp=E,54µm,0.8s						
SNTG				AML	AML		
	comp=N,53µm,1.4s						
SNTG				AML	AML		
	comp=N,53µm,0.6s						
SNTG				AML	AML		
	comp=E,54µm,1.2s						
GUMA	**Gualdo di Mace**	**0.22**	**88**	⇓P	Pg	17 26 05.0	+1.2
GUMA				AML	AML		
	comp=E,1255µm,0.3s						
GUMA				AML	AML		
	comp=N,980µm,0.2s						
GUMA				AML	AML		
	comp=N,878µm,0.3s						
GUMA				AML	AML		
	comp=E,973µm,0.3s						
T1245	**Castelsantange**	**0.23**	**150**	P	Pg	17 26 04.5	+0.5
T1245				S	Sg	17 26 08.7	+1.6
T1245				AML	AML		
	comp=E,236µm,0.4s						
T1245				AML	AML		
	comp=N,263µm,0.2s						
MMO1	**Montemonaco**	**0.27**	**126**	P	Pg	17 26 05.3	+0.6
MMO1				S	Sb	17 26 09.7	-1.2
ASSB	**Assisi San Ben**	**0.27**	**267**	⇑P	Pg	17 26 05.3	+0.6
ASSB				AML	AML		
	comp=N,152µm,1.3s						
ASSB				AML	AML		
	comp=N,152µm,0.7s						
ASSB				AML	AML		
	comp=E,114µm,0.5s						
EL6	**Elcito**	**0.28**	**11**	⇑P	Pb	17 26 05.8	-0.7
EL6				AML	AML		
	comp=E,154µm,1.4s						
EL6				AML	AML		
	comp=N,142µm,1.3s						
EL6				AML	AML		
	comp=E,154µm,0.6s						
T1215	**Vallo di Nera,**	**0.28**	**205**	⇑P	Pg	17 26 05.5	+0.7
T1212	**Cascia, Frazio**	**0.30**	**178**	⇑P	Pg	17 26 06.0	+0.6
T1212				AML	AML		
	comp=E,202µm,1.0s						
T1212				AML	AML		
	comp=N,142µm,0.4s						
ATCC	**AVT- Casa Cast**	**0.31**	**294**	P	Pg	17 26 05.9	+0.5
ATCC				AML	AML		
	comp=E,144µm,0.3s						
ATCC				AML	AML		
	comp=N,120µm,0.3s						
ATCC				AML	AML		
	comp=N,120µm,1.7s						
ATCC				AML	AML		
	comp=E,144µm,1.7s						
T1214	**Arquata del Tr**	**0.33**	**156**	⇑P	Pg	17 26 06.3	+0.6
T1214				AML	AML		
	comp=N,115µm,1.5s						
T1214				AML	AML		
	comp=E,97µm,0.8s						
T1241	**Roccafluvione,**	**0.36**	**124**	⇑P	Pb	17 26 07.0	-0.7
T1241				AML	AML		
	comp=E,83µm,1.3s						
T1241				AML	AML		
	comp=N,72µm,0.6s						
T1241				AML	AML		
	comp=E,83µm,0.7s						
T1218	**Civita (PG)**	**0.39**	**171**	⇑P	Pg	17 26 07.5	+0.6
T1218				AML	AML		
	comp=E,71µm,1.2s						
T1218				AML	AML		
	comp=N,130µm,0.2s						
T1218				AML	AML		
	comp=E,71µm,0.8s						
MOMA	**Monte Martano**	**0.42**	**233**	⇓P	Pg	17 26 08.0	+0.6
MOMA				AML	AML		
	comp=E,52µm,0.2s						
MOMA				AML	AML		
	comp=N,31µm,1.6s						
MURB	**Monte Urbino**	**0.42**	**299**	P	Pb	17 26 08.3	-0.6
MURB				AML	AML		
	comp=E,105µm,0.2s						
MURB				AML	AML		
	comp=N,88µm,0.9s						
TERO	**Teramo**	**0.60**	**136**	⇓P	Pg	17 26 11.2	+0.3
TERO				AML	AML		
	comp=E,34µm,1.6s						
TERO				AML	AML		
	comp=N,30µm,1.5s						
TERO				AML	AML		
	comp=E,34µm,0.4s						
TERO				AML	AML		
	comp=N,30µm,0.5s						
PE3	**Peglio**	**0.75**	**329**	⇓P	Pn	17 26 15.3	-0.7

IDC 12 17:27:43.4±5.2**, 29°.42S×177°.87W, h0^{km}, mb3.1**/2**, mbtmp3.1**/2**, Error ellipse: s-maj=252.9km s-min=81.9km az=165.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.29	266	P	P	17 35 46.5	-0.7
	0.1nm,0.3s,baz=106,slow=7.1,SNR=6.1						
	0.1nm,0.3s						
WRA	Warramunga Arr	44.19	271	P	P	17 35 54.9	+0.5
	0.2nm,0.3s,baz=111,slow=7.9,SNR=5.8						
	0.2nm,0.3s						
FINES	FINESS Array B	144.26	340	PKP	PKPdf	17 47 20.0	-0.7
	4.2nm,1.1s,baz=48,slow=2.8,SNR=3.9						

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*IDC **12** 17:38:10.9±1.2, 55°.10S×159°.14E, h0^{km}, mb4.3/5, mbtmp4.3/6, ML3.6/1, MS3.4/20, Error ellipse: s-maj=37.5km s-min=33.5km az=92.0*

*NEIC **12** 17:38:12.1±1.4, 55°.15S±0°.07×158°.6E±0°.2, h10^{km}±1^{km}, mb4.3/9, Error ellipse: s-maj=21.9km s-min=5.2km az=302.0*

ISC 12 17:38:12.6±1.1**, 55°.1S**±0°.1×**158°.8E**±0°.1**, h10^{km}, n58, σ1^{s}.44**/33**, mb4.3**/8**, MS3.5**/20**, Macquarie Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQ	Macquarie Isla	0.60	6		Pb	17 38 25.1	0.0
PYZ	Puysegur Point	10.22	32	Pn	Pn	17 40 40.2	+1.0
WHZ	Wether Hill Ro	10.87	36	Pn	Pn	17 40 48.1	0.0
DCZ	Deep Cove	11.00	32	Pn	Pn	17 40 53.1	+3.3
MLZ	Mavora Lakes	11.39	35	Pn	Pn	17 40 56.6	+1.4
WKZ	Wanaka	12.17	37	Pn	Pn	17 41 07.4	+1.5
ODZ	Otahua Downs	12.57	42	Pn	Pn	17 41 12.4	+1.1
RPZ	Rata Peaks	13.86	40	Pn	Pn	17 41 27.0	-2.0
	0.3nm,0.3s,baz=225,slow=10.0,SNR=1.6						
RPZ				LR	LR	17 45 53.7	
	comp=Z,110nm,20.8s,baz=217,slow=34						
	7.6nm,1.0s						
TAU	Tasmania Unive	14.32	324	Pn	Pn	17 41 35.2	0.0
KHZ	Kahutara	15.92	43	Pn	Pn	17 41 53.9	-2.5
KHZ				IAmb	IAmb	17 42 36.8	
	comp=Z,81nm,1.4s						
TOO	Toolangi	19.74	327	P	P	17 42 39.8	-2.5
TOO				IAmb	IAmb	17 42 45.6	
	comp=Z,12nm,1.1s						
URZ	Urewera	20.88	44	LR	LR	17 50 44.9	
	comp=Z,100nm,20.6s,baz=265,slow=36						
VNDA	Vanda	22.55	178	LR	LR	17 50 32.0	
	comp=Z,142nm,18.8s,baz=306,slow=33						
STKA	Stephens Creek	26.22	325	P	P	17 43 48.8	+1.4
	comp=Z,2.9nm,0.8s,baz=336,slow=2.9,SNR=5.1						
STKA				LR	LR	17 53 31.8	
	comp=Z,103nm,18.1s,baz=202,slow=35						
	comp=Z,2.9nm,0.8s						
STKA	Stephens Creek	26.22	325	P	P	17 43 49.5	+2.1
DZM	Mont Dzumac	33.46	13	P	P	17 44 51.2	-0.6
	comp=Z,4.2nm,0.8s,baz=185,slow=12,SNR=3.5						
	comp=Z,4.2nm,0.8s						
KOUNC	Koumac, New Ca	34.73	9	P	P	17 45 02.8	+0.2
QSPA	South Pole Qui	35.02	180	LR	LR	17 58 03.8	
	comp=Z,90nm,19.3s,baz=43,slow=34						
CTA	Charters Tower	36.23	340	LR	LR	17 58 23.8	
	comp=Z,83nm,18.7s,baz=143,slow=33						
CTAO	Charters Tower	36.23	340	P	P	17 45 14.4	-1.1
AS31	Alice Springs	36.44	319	P	P	17 45 15.6	-1.8
AS31				IAmb	IAmb	17 45 19.1	
	comp=Z,2.8nm,0.8s						
ASAR	Alice Springs	36.44	319	P	P	17 45 18.1	+0.8
	comp=Z,8.2nm,0.9s,baz=158,slow=8.2,SNR=78						
ASAR				PcP	PcP	17 47 41.2	-0.1
	comp=Z,0.7nm,0.7s,baz=140,slow=4.1,SNR=6.3						
ASAR				LR	LR	17 58 23.6	
	comp=Z,38nm,21.2s,baz=163,slow=33						
	comp=Z,8.2nm,0.9s						
ASAR	Alice Springs	36.44	319	P	P	17 45 15.9	-1.5
H01W1	Cape Leeuwin H	36.69	285	T	T	18 24 02.1	
	baz=135,slow=75						
H01W2	Cape Leeuwin H	36.70	285	T	T	18 24 04.4	
	baz=135,slow=75						
H01W3	Cape Leeuwin H	36.70	285	T	T	18 24 05.3	
	baz=135,slow=75						
WB2	Warramunga Arr	39.68	322	P	P	17 45 43.5	-1.3
WB2				IAmb	IAmb	17 45 45.2	
	comp=Z,5.2nm,0.8s						
WRA	Warramunga Arr	39.69	322	P	P	17 45 44.7	-0.1
	comp=Z,4.4nm,0.9s,baz=157,slow=7.1,SNR=18						
WRA				PcP	PcP	17 47 51.4	0.0
	comp=Z,1.1nm,1.1s,baz=172,slow=2.4,SNR=5.8						
WRA				LR	LR	18 01 01.7	
	comp=Z,179nm,21.0s,baz=152,slow=34						
	comp=Z,4.4nm,0.9s						
WRA	Warramunga Arr	39.69	322	P	P	17 45 44.0	-0.8
WB0	Warramunga Arr	39.83	323	P	P	17 45 44.6	-1.4
WB0				IAmb	IAmb	17 45 46.8	
	comp=Z,9.0nm,1.1s						
HNR	Honiara	45.55	2	LR	LR	18 01 31.3	
	comp=Z,773nm,21.7s,baz=196,slow=31						
PMG	Port Moresby	46.50	344	LR	LR	18 05 12.8	
	comp=Z,75nm,18.3s,baz=285,slow=35						
AFI	Afiamalu	47.01	41	LR	LR	18 04 12.0	
	comp=Z,29nm,22.0s,baz=148,slow=33						
PPT	Papeete	54.11	67	LR	LR	18 06 17.6	
	comp=Z,55nm,19.4s,baz=224,slow=31						
SIJI	Sorong	58.55	327	LR	LR	18 15 02.1	
	comp=Z,35nm,18.1s,baz=120,slow=38						
KAPI	Kappang	58.97	313	LR	LR	18 12 17.3	
	comp=Z,38nm,19.1s,baz=172,slow=35						
DAV	Davao City (W)	67.85	324	LR	LR	18 20 21.2	
	comp=Z,16nm,18.7s,baz=169,slow=37						
GUMO	Guam	69.43	345	LR	LR	18 17 02.6	
	comp=Z,14nm,19.0s,baz=186,slow=34						
H03S2	Juan Fernandez	78.56	134	T	T	19 17 30.9	
	baz=208,slow=74						
H03S1	Juan Fernandez	78.56	134	T	T	19 17 36.7	
	baz=208,slow=74						
H03S3	Juan Fernandez	78.58	134	T	T	19 17 36.9	
	baz=208,slow=74						
H03N3	Juan Fernandez	78.89	134	T	T	19 17 48.1	
	baz=213,slow=77						
H03N2	Juan Fernandez	78.90	134	T	T	19 17 50.9	
	baz=213,slow=77						
H03N1	Juan Fernandez	78.91	134	T	T	19 17 49.1	
	baz=213,slow=77						
H08S2	Diego Garcia H	81.70	269	T	T	19 20 26.1	
	baz=144,slow=76,SNR=186						
H08S1	Diego Carcia H	81.71	269	T	T	19 20 23.9	
	baz=144,slow=76,SNR=259						
H08S3	Diego Garcia H	81.72	269	T	T	19 20 27.7	
	baz=144,slow=76,SNR=200						
CMAR	Chiang Mai Arr	89.08	305	P	P	17 51 09.3	+1.6
	comp=Z,1.4nm,0.8s,baz=170,slow=4.0,SNR=11						
CMAR				LR	LR	18 31 19.9	
	comp=Z,17nm,19.3s,baz=160,slow=36						
	comp=Z,1.4nm,0.8s						
JHJ	Hachijo jima 2	89.37	344	LR	LR	18 24 31.6	
	comp=Z,26nm,20.1s,baz=290,slow=31						
MJAR	Matsushiro Arr	92.97	343	LR	LR	18 29 42.0	
	comp=Z,15nm,19.1s,baz=166,slow=33						
KSRS	Korea Array	95.91	336	LR	LR	18 33 35.1	
	comp=Z,6.5nm,20.8s,baz=240,slow=35						
NNA	Nana	98.52	125	LR	LR	18 26 40.4	
	comp=Z,45nm,18.9s,baz=232,slow=30						
MKAR	Makanchi Array	120.18	309	PKP	PKiKP	17 57 02.8	0.0
	comp=Z,0.2nm,0.4s,baz=90,slow=8.7,SNR=4.5						
RES	Resolute Bay	146.26	27	PKPbc	PKPbc	17 57 51.0	-0.5
	comp=Z,3.7nm,0.9s,baz=267,slow=4.0,SNR=13						
MLR	Muntele Rosu	148.97	272	PKPbc	PKPbc	17 57 57.7	-2.2
	comp=Z,1.6nm,0.7s,baz=180,slow=9.1,SNR=2.7						
AKASG	Malin Array Be	149.84	283	PKPbc	PKPbc	17 58 01.6	0.0
	comp=Z,1.3nm,0.7s,baz=62,slow=1.2,SNR=6.1						
FINES	FINESS Array B	154.84	304	PKPbc	PKiKP	17 58 13.4	+0.8
	comp=Z,1.5nm,0.9s,baz=75,slow=3.0,SNR=4.8						
FINES				PKPab	PKPab	17 58 29.0	+1.0
	comp=Z,2.3nm,0.8s,baz=53,slow=10,SNR=4.4						
DAVOX	Davos/Dischmat	158.89	260	PKPab	PKPab	17 58 47.0	+0.8
	comp=Z,1.9nm,0.8s,baz=121,slow=14,SNR=4.7						

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*IDC **12** 17:38:52.2±5.6, 12°.14S×167°.65E, h380^{km}±65^{km}, mb3.3/9, mbtmp3.9/10, Error ellipse: s-maj=55.0km s-min=25.5km az=154.0*

ISC 12 17:38:46.3±1.0**, 11°.9S**±0°.1×**167°.6E**±0°.2**, h317^{km}, n10, σ0^{s}.79**/11**, mb3.5**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.19	186	P	P	17 41 10.3	+0.9
	11nm,1.3s,baz=197,slow=11,SNR=3.3						
CTA	Charters Tower	22.10	246	P	P	17 43 16.4	+0.3
	3.7nm,0.7s,baz=70,slow=10,SNR=5.9						
	3.7nm,0.7s						
STKA	Stephens Creek	31.16	226	P	P	17 44 35.5	-1.1
	2.3nm,0.8s,baz=67,slow=13,SNR=2.8						
	2.3nm,0.8s						
WRA	Warramunga Arr	32.96	252	P	P	17 44 52.3	0.0
	2.4nm,0.5s,baz=85,slow=8.8,SNR=34						
	2.4nm,0.5s						
ASAR	Alice Springs	34.10	245	P	P	17 45 01.7	-0.4
	0.6nm,0.5s,baz=69,slow=9.8,SNR=38						
ASAR				PcP	PcP	17 47 30.5	-1.1
	0.2nm,0.6s,baz=99,slow=3.1,SNR=1.5						
	0.6nm,0.5s						
CMAR	Chiang Mai Arr	74.15	293	P	P	17 49 50.0	+1.0
	0.6nm,0.6s,baz=131,slow=4.5,SNR=6.0						
	0.6nm,0.6s						
SONM	Songino Array	80.44	323	P	P	17 50 23.5	+0.2
	0.3nm,0.7s,baz=129,slow=6.3,SNR=3.1						
	0.3nm,0.7s						
ILAR	Eielson Array	83.73	18	P	P	17 50 39.8	+0.1
	0.5nm,0.6s,baz=253,slow=4.7,SNR=6.8						
	0.5nm,0.6s						
YKA	Yellowknife Ar	94.87	27	P	P	17 51 31.6	-0.6
	0.1nm,0.6s,baz=257,slow=4.5,SNR=1.9						
	0.1nm,0.6s						
MKAR	Makanchi Array	95.41	317	P	P	17 51 35.5	+0.4
	1.4nm,0.6s,baz=90,slow=6.6,SNR=17						
	1.4nm,0.6s						

ROM 12 17:44:50.5±0.1**, 42°.702N**±0°.004×**13°.242E**±0°.005**, h12^{km}, ML1.3**/11**, 6C-8D, Error ellipse: s-maj=0.3km s-min=0.3km az=267.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	SAN MARTINO	0.10	136	⇓P	Pg	17 44 53.9	+0.4
SMA1				S	Sg	17 44 55.8	+0.2
SMA1				AML	AML		
	comp=E,294μm,1.3s						
SMA1				AML	AML		
	comp=N,319μm,0.6s						
T1218	Civita (PG)	0.10	251	P	Pg	17 44 53.7	+0.3
T1218				S	Sg	17 44 55.9	+0.3
T1218				AML	AML		
	comp=E,500μm,0.3s						
T1218				AML	AML		
	comp=N,608μm,0.2s						
T1218				AML	AML		
	comp=E,500μm,0.3s						
T1218				AML	AML		
	comp=N,607μm,0.2s						
T1218				AML	AML		
	comp=E,500μm,0.3s						
T1218				AML	AML		
	comp=E,501μm,0.3s						
T1218				AML	AML		
	comp=N,608μm,0.2s						
T1218				AML	AML		
	comp=N,608μm,1.8s						
T1218				AML	AML		
	comp=N,608μm,1.8s						
T1218				AML	AML		
	comp=E,501μm,1.7s						
T1218				AML	AML		
	comp=E,500μm,1.7s						
T1212	Cascia, Frazio	0.15	289	⇑P	Pg	17 44 52.1	-2.1
T1212				AML	AML		
	comp=E,90μm,1.3s						
T1212				AML	AML		
	comp=N,98μm,0.1s						
T1212				AML	AML		
	comp=E,90μm,0.7s						
T1245	Castelsantange	0.16	346	P	Pg	17 44 52.9	-1.5
T1245				AML	AML		
	comp=E,159μm,1.6s						
T1245				AML	AML		
	comp=N,190μm,0.3s						
T1245				AML	AML		
	comp=E,159μm,0.4s						
RM33	Pellescritta (	0.19	186	⇑P	Pg	17 44 55.3	+0.5
RM33				S	Sg	17 44 58.8	+1.0
RM33				AML	AML		
	comp=E,91μm,0.3s						
RM33				AML	AML		
	comp=N,120μm,0.9s						
RM33				AML	AML		
	comp=N,120μm,0.9s						
RM33				AML	AML		
	comp=N,120μm,1.1s						
RM33				AML	AML		
	comp=E,91μm,0.3s						
T1241	Roccafluvione,	0.21	42	⇑P	Pg	17 44 55.5	+0.4
T1241				S	Sg	17 44 58.9	+0.7
T1241				AML	AML		
	comp=E,95μm,0.5s						
T1241				AML	AML		
	comp=N,123μm,0.3s						
T1241				AML	AML		
	comp=E,95μm,1.5s						
T1241				AML	AML		
	comp=N,123μm,1.7s						
MC2	Monte Cornacci	0.21	350	P	Pg	17 44 55.7	+0.4
MC2				S	Sg	17 44 59.7	+1.1
T1217	Poggiodomo (PG	0.23	273	P	Pg	17 44 55.8	+0.4
T1217				S	Sg	17 44 59.7	+0.9
T1216	Preci, Frazion	0.25	319	⇑P	Pg	17 44 53.0	-2.8
T1216				AML	AML		
	comp=E,95μm,0.3s						
T1216				AML	AML		
	comp=N,109μm,1.4s						
T1216				AML	AML		
	comp=E,95μm,0.3s						
T1216				AML	AML		
	comp=N,108μm,1.4s						
T1216				AML	AML		
	comp=N,108μm,0.6s						
TERO	Teramo	0.28	106	⇓P	Pg	17 44 56.6	+0.3
TERO				AML	AML		
	comp=E,44μm,1.2s						
TERO				AML	AML		
	comp=N,81μm,1.0s						
TERO				AML	AML		
	comp=N,81μm,1.0s						
T1215	Vallo di Nera,	0.29	290	⇑P	Pg	17 44 53.8	-2.8
T1256	Bolognola (MC)	0.30	358	⇓P	Pg	17 44 57.2	+0.4
T1256				S	Sg	17 44 59.4	-1.7
T1211	Morro Reatino	0.33	240	S	Sg	17 45 02.5	+0.7
T1211				AML	AML		
	comp=E,119μm,0.4s						
T1211				AML	AML		
	comp=N,123μm,0.8s						
T1222	Castel Sant'An	0.34	207	⇓P	Pb	17 44 58.0	-0.6
GIGS	Gran Sasso	0.35	136	P	Pg	17 44 57.8	+0.2
FDMO	Fiordimonte	0.35	341	⇓P	Pg	17 44 58.0	+0.3
FDMO				AML	AML		
	comp=E,33μm,1.2s						
FDMO				AML	AML		
	comp=N,45μm,0.2s						
FDMO				AML	AML		
	comp=E,33μm,0.8s						
GUMA	Gualdo di Mace	0.37	11	⇓P	Pb	17 44 58.7	-0.4
ARRO	Arrone	0.37	251	P	Pg	17 44 58.4	+0.4
T1219	Muccia, Frazio	0.39	334	P	Pg	17 44 58.6	+0.2
T1220	Camerino, Fraz	0.42	345	⇓P	Pg	17 44 59.2	+0.3
FIAM	Fiamignano	0.44	192	P	Pg	17 44 59.4	+0.1
ASSB	Assisi San Ben	0.55	309	⇑P	Pb	17 45 02.3	+0.1
EL6	Elcito	0.64	351	S	Sb	17 45 13.6	+1.0
ARVD	Arcevia	0.83	345	S	Sg	17 45 16.5	-0.8
SAMA	S.Maria delle	1.04	208	⇓P	Pb	17 45 08.7	-1.8
SAMA				AML	AML		
	comp=E,600μm,0.1s						
SAMA				AML	AML		
	comp=N,544μm,0.1s						

ROM 12 17:45:32.1±0.1**, 42°.746N**±0°.002×**13°.262E**±0°.004**, h14^{km}, ML1.1**/6**, 5C-5D, Error ellipse: s-maj=0.3km s-min=0.1km az=255.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	Arquata del Tr	0.04	289	⇑P	Pg	17 45 35.1	+0.1
T1214				S	Sg	17 45 36.9	+0.1
T1214				AML	AML		
	comp=E,286μm,0.3s						
T1214				AML	AML		
	comp=N,146μm,0.3s						
T1214				AML	AML		
	comp=N,146μm,0.3s						
T1214				AML	AML		
	comp=E,286μm,0.3s						
T1245	Castelsantange	0.12	334	P	Pg	17 45 36.0	+0.2
T1245				S	Sg	17 45 38.6	+0.4
T1245				AML	AML		
	comp=E,80μm,1.5s						
T1245				AML	AML		
	comp=N,154μm,0.2s						
T1245				AML	AML		
	comp=E,80μm,0.5s						
T1218	Civita (PG)	0.13	235	⇑P	Pg	17 45 36.0	+0.2
T1218				S	Sg	17 45 38.7	+0.5
T1212	Cascia, Frazio	0.16	272	⇑P	Pg	17 45 36.4	+0.3
T1212				S	Sg	17 45 39.4	+0.5
T1241	Roccafluvione,	0.17	48	⇓P	Pg	17 45 36.5	+0.3
T1241				S	Sg	17 45 39.5	+0.5
T1241				AML	AML		
	comp=E,93μm,0.6s						
T1241				AML	AML		
	comp=N,81μm,0.7s						
T1241				AML	AML		
	comp=E,93μm,0.6s						
T1241				AML	AML		
	comp=N,81μm,0.7s						
T1241				AML	AML		
	comp=E,93μm,1.4s						
MC2	Monte Cornacci	0.17	343	S	Sg	17 45 39.1	-0.3
T1216	Preci, Frazion	0.23	309	P	Pg	17 45 37.6	+0.4
T1216				S	Sg	17 45 41.2	+0.5
RM33	Pellescritta (	0.24	188	⇑P	Pg	17 45 37.7	+0.3
RM33				S	Sg	17 45 41.7	+0.7
RM33				AML	AML		
	comp=N,48μm,1.1s						
RM33				AML	AML		
	comp=N,48μm,1.1s						
RM33				AML	AML		
	comp=E,60μm,0.3s						
RM33				AML	AML		
	comp=N,48μm,0.9s						
T1217	Poggiodomo (PG	0.25	262	P	Pg	17 45 37.7	+0.2
T1217				S	Sg	17 45 41.7	+0.6
T1256	Bolognola (MC)	0.26	354	⇓P	Pg	17 45 38.1	+0.3
TERO	Teramo	0.28	116	⇓P	Pg	17 45 38.2	+0.2
TERO				AML	AML		
	comp=E,42μm,0.4s						
TERO				AML	AML		
	comp=N,37μm,0.5s						
TERO				AML	AML		
	comp=E,42μm,1.6s						
TERO				AML	AML		
	comp=N,37μm,1.5s						
T1215	Vallo di Nera,	0.29	281	⇓P	Pg	17 45 38.6	+0.3
FDMO	Fiordimonte	0.32	336	P	Pg	17 45 39.0	+0.3
T1219	Muccia, Frazio	0.36	329	⇓P	Pb	17 45 40.2	-0.1
T1211	Morro Reatino	0.37	235	S	Sb	17 45 45.4	-0.7
T1220	Camerino, Fraz	0.39	341	⇑P	Pg	17 45 40.3	+0.4
VYHS	Vyhne	6.95	32	*e*	Pb	17 47 30.9	-1.6

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*MEX **12** 17:57:13.8±0.5, 14°.08N×93°.60W, h10^{km}, MD4.1*

*IDC **12** 17:57:20.4±7.6, 15°.56N×92°.67W, h0^{km}, mb3.6/3, mbtmp3.5/5, ML3.3/2, MS3.3/1, Error ellipse: s-maj=171.5km s-min=43.3km az=15.0*

ISC 12 17:57:12.7±1.3**, 14°.31N**±0°.08×**93°.58W**±0°.04**, h10^{km}, n16, σ2^{s}.15**/25**, mb3.7**/3**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.40	65	*e*P	Pb	17 57 37.5	-1.5
THIG				*e*S	Sb	17 57 56.0	-1.0
PCIG		1.43	14	*e*P	Pg	17 57 39.7	-0.5
PCIG				*e*S	Sg	17 57 59.0	+0.4
PATR	El Naranjo	1.53	58	*e*P	Pn	17 57 39.3	-1.1
PATR				*i* S	Sg	17 58 00.2	-1.7
PAVE	Pavencul	1.61	57	*e*P	Pb	17 57 41.1	-1.7
PAVE				*e*S	Sb	17 58 01.9	-1.5
CHUJ	Union Juarez	1.62	61	*i* P	Pb	17 57 41.2	-1.7
CHUJ				*e*S	Sb	17 58 02.0	-1.6
CCIG	Comitan	2.40	35	*e*P	Pb	17 57 55.4	-0.8
CCIG				*i* S	Sb	17 58 26.7	+0.8
TGIG		2.49	10	*e*P	Pb	17 57 56.7	-0.9
TGIG				*e*S	Sb	17 58 28.9	+0.5
HUIG	Huatulco	2.84	301	*e*P	Pn	17 57 58.2	0.0
HUIG				*e*S	Sn	17 58 29.4	-3.1
CMIG	Matias Romero	3.03	336	Pn	Pb	17 58 03.3	-3.6
	2.5nm,0.3s,baz=173,slow=9.8,SNR=21						
CMIG				Sn	Sn	17 58 37.4	+0.2
	6.3nm,0.3s,baz=177,slow=19,SNR=6.4						
	6.1nm,0.3s						
CMIG	Matias Romero	3.03	336	*e*P	Pb	17 58 03.1	-3.8
CMIG				*e*S	Sn	17 58 38.2	+0.9
PEIG	Puerto Escondi	3.83	296	*e*P	Pn	17 58 12.4	+0.6
PEIG				*e*S	Sn	17 58 52.8	-4.2
TXAR	Lajitas Array	17.62	330	Pn	P	18 01 23.6	+4.0
	0.1nm,0.3s,baz=150,slow=13,SNR=5.3						
	0.4nm,0.6s						
NVAR	Mina Array Bea	32.48	322	P	P	18 03 48.9	+5.2
	0.6nm,0.8s,baz=122,slow=8.6,SNR=4.3						
	0.6nm,0.8s						
LVC	Limon Verde	43.94	146	LR	LR	18 24 24.2	
	comp=Z,34nm,18.4s,baz=212,slow=36						
YKA	Yellowknife Ar	50.38	348	P	P	18 06 12.3	+2.5
	0.7nm,0.7s,baz=136,slow=9.2,SNR=10						
	0.7nm,0.7s						
INK	Inuvik	59.71	344	P	P	18 07 19.1	+1.9
	0.5nm,0.5s,baz=116,slow=7.9,SNR=5.1						
	0.5nm,0.5s						

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*HEL **12** 17:57:13.8±0.3, 67°.83N×19°.99E, h0^{km}, ML1.1, Explosion*

*DNK **12** 17:57:14.8±0.4, 67°.82N×20°.22E, h0^{km}, ML2.8(UPP), Suspected explosion*

*UPP **12** 17:57:14.6±0.3, 67°.82N×20°.22E, h3^{km}±5^{km}, ML2.8, Confirmed Induced event*

ISC 12 17:57:14.1±0.8**, 67°.78N**±0°.03×**20°.26E**±0°.02**, h0^{km}, n29, σ0^{s}.73**/42**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATU	Laukkuluspa	0.26	281	P	Pg	17 57 19.1	+0.1
RATU				S	Sg	17 57 22.3	0.0
RATU	Laukkuluspa	0.26	281	P	Pg	17 57 19.1	+0.1
RATU				S	Sg	17 57 22.3	0.0
KOVU	Salmi	0.45	355	P	Pg	17 57 22.1	-0.5
KOVU				S	Sg	17 57 27.6	-0.8
KOVU	Salmi	0.45	355	P	Pg	17 57 22.1	-0.5
KOVU				S	Sg	17 57 27.6	-0.8
NIKU	Nikkaluokta	0.47	282	P	Pg	17 57 23.0	-0.2
NIKU	Nikkaluokta	0.47	282	P	Pg	17 57 23.0	-0.2
DUNU	Dundret	0.67	170	P	Pb	17 57 27.6	-1.0
DUNU	Dundret	0.67	170	P	Pb	17 57 27.6	-1.0
LANU	Lannavaara	0.71	67	P	Pg	17 57 27.8	+0.2
LANU	Lannavaara	0.71	67	P	Pg	17 57 27.8	+0.2
LANU	Lannavaara	0.71	67	PG	Pg	17 57 27.7	0.0
LANU				SG	Sg	17 57 37.6	+0.8
MASU	Masugnsbyn	0.74	115	P	Pb	17 57 29.1	-0.7
MASU	Masugnsbyn	0.74	115	P	Pb	17 57 29.1	-0.7
SALU	Saltoluokta	0.78	240	P	Pg	17 57 29.4	+0.3
SALU	Saltoluokta	0.78	240	P	Pg	17 57 29.4	+0.3
KIF	Kilpisjarvi	1.25	9	PN	Pg	17 57 38.0	0.0
KIF				MSG		17 57 51.9	
	comp=Z,2.3nm,0.2s						
KIF				SN	Sg	17 57 53.9	-0.2
PAJU	Pajala	1.34	123	P	Pb	17 57 39.6	-0.3
PAJU	Pajala	1.34	123	P	Pb	17 57 39.6	-0.3
HEF	Hetta	1.42	62	PG	Pn	17 57 40.7	-0.5
	baz=253						
HEF				MSG		17 57 58.6	
	comp=Z,0.9nm,0.2s						
HEF				SG	Sb	17 58 00.1	0.0
ERTU	Ertsjaerv	1.44	148	SG	Sn	17 58 01.3	+0.4
KLF	Kolari	1.52	109	PG	Pg	17 57 43.0	-0.3
KLF				MSG		17 58 02.8	
	comp=Z,1.0nm,0.2s						
KLF				SN	Sn	17 58 04.8	+1.8
HARU	Harads	1.65	170	P	Pg	17 57 45.2	-0.3
HARU	Harads	1.65	170	P	Pg	17 57 45.2	-0.3

KTK1	**Kautokeino**	**1.66**	**40**	PG	**Pn**	**17 57 44.3**	**0.0**
KTK1				SN	**Sb**	**17 58 06.8**	**-0.1**
KALU	**Kalix**	**2.28**	**146**	PB	**Pb**	**17 57 55.5**	**-0.6**
TOF	**Tornio**	**2.34**	**135**	PB	**Pb**	**17 57 56.1**	**-0.9**
	baz=313						
TOF				MSG		17 58 26.1	
	comp=Z,0.6nm,0.2s						
TOF				SG	**Sg**	**17 58 28.3**	**-0.8**
SGF	**Sodankyl**	**2.42**	**95**	PB	**Pb**	**17 57 57.7**	**-0.7**
SGF				SG	**Sg**	**17 58 30.2**	**-1.5**
RNF	**Rovaniemi**	**2.53**	**115**	PB	**Pb**	**17 57 59.3**	**-0.9**
RNF				SB	**Sb**	**17 58 33.2**	**+1.3**
ARA0	**ARCESS Array S**	**2.61**	**45**	PB	**Pn**	**17 57 58.8**	**+1.4**
	baz=229						
ARA0				SG	**Sb**	**17 58 35.2**	**+1.1**

IDC 12 18:26:48.9±5.3**, 22°.36N×144°.68E, h125**^{km}±40^{km}**, mb2.9**/3**, mbtmp3.5**/4**, Error ellipse: s-maj=164.4km s-min=27.7km az=77.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.23**	**335**	P	Pn	18 28 05.1	+0.1
	36nm,0.5s,baz=206,slow=16,SNR=7.5						
JCJ				S	Sn	18 28 58.7	-5.6
	28nm,0.3s,baz=349,slow=23,SNR=11						
H11S3	**WAKE ISLAND Hy**	**20.97**	**97**	T	T	18 54 24.3	
	baz=283						
H11S1	**WAKE ISLAND Hy**	**20.98**	**97**	T	T	18 54 26.9	
	baz=283						
H11S2	**WAKE ISLAND Hy**	**20.99**	**97**	T	T	18 54 23.3	
	baz=283						
WRA	**Warramunga Arr**	**43.24**	**194**	P	P	18 34 38.0	0.0
	0.3nm,0.4s,baz=17,slow=8.6,SNR=15						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**46.94**	**194**	P	P	18 35 06.8	-0.4
	0.1nm,0.5s,baz=10,slow=7.0,SNR=7.5						
ASAR				PcP	PcP	18 36 37.7	-0.2
	0.2nm,0.8s,baz=19,slow=3.9,SNR=2.0						
	0.1nm,0.5s						
MKAR	**Makanchi Array**	**55.28**	**312**	P	P	18 36 09.2	-0.1
	0.1nm,0.5s,baz=84,slow=7.1,SNR=2.2						
	0.1nm,0.5s						

*SJA **12** 18:59:38.7±1.5, 27°.98S×67°.46W, h147^{km}±8^{km}, ML3.6, MW3.6, Hypocentre not reviewed by the ISC*

*IDC **12** 18:59:39.7±1.2, 27°.99S×67°.68W, h135^{km}±11^{km}, mb3.1/3, mbtmp3.5/6, Error ellipse: s-maj=28.7km s-min=10.9km az=88.0*

ISC 12 18:59:39.7±0.8**, 27°.98S**±0°.06×**67°.7W**±0°.1**, h135**^{km}**, n11, σ0^{s}.86**/14**, mb3.3**/3**, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TINO	**Tinogasta**	**0.14**	**127**	*e*P		18 59 59.5	
TINO				*e*S		19 00 13.8	
AC02	**Maricunga**	**1.71**	**311**	*e*P		19 00 14.2	
AC02				IAML		19 00 54.0	
	comp=Z,41nm,0.4s						
CYA	**Choya**	**1.73**	**106**	*e*P		19 00 09.7	
CYA				*e*S		19 00 31.0	
CYA				IAML		19 00 31.7	
	comp=Z,694nm,0.8s						
AC05	**El Transito**	**2.43**	**249**	*e*P		19 00 22.7	
AC05				IAML		19 00 58.6	
	comp=Z,224nm,0.3s						
LCO	**Las Campanas**	**2.84**	**248**	*e*P		19 00 27.2	
LCO				IAML		19 01 05.0	
	comp=Z,230nm,0.5s						
CO01	**Juntas del Tor**	**2.89**	**226**	*e*P		19 00 28.9	
CO01				IAML		19 01 08.4	
	comp=Z,73nm,0.6s						
AC04	**Llanos de Chal**	**2.99**	**265**	*e*P		19 00 28.4	
AC04				IAML		19 01 10.6	
	comp=Z,54nm,0.7s						
AC01	**Pan de Azucar**	**3.17**	**305**	*e*P		19 00 30.4	
AC01				IAML		19 01 17.5	
	comp=Z,65nm,0.3s						
GO02	**Mina Guanaco**	**3.28**	**328**	*e*P		19 00 32.2	
GO04	**Tololo Observa**	**3.49**	**230**	*e*P		19 00 34.8	
CFA	**Coronel Fontan**	**3.64**	**187**	*e*P		19 00 35.5	
CFA				IAML		19 01 19.4	
	comp=Z,722nm,0.2s						
CFA	**Coronel Fontan**	**3.64**	**187**	P	**Pn**	**19 00 35.5**	**+0.6**
	comp=Z,6.2nm,0.3s,baz=330,slow=12,SNR=144						
CFA				S	**Sn**	**19 01 17.4**	**-0.3**
	comp=Z,28nm,0.3s,baz=294,slow=23,SNR=9.5						
RTLS	**Leoncito**	**4.05**	**200**	*e*P		19 00 41.8	
RTLS				IAML		19 01 31.6	
	comp=Z,120nm,1.0s						
PB14	**IPOC Station P**	**4.13**	**323**	*e*P		19 00 43.4	
PB14				IAML		19 01 36.5	
	comp=Z,74nm,0.8s						
PB15	**IPOC Station P**	**5.01**	**341**	*e*P		19 00 54.3	
PB15				IAML		19 01 58.1	
	comp=Z,58nm,0.2s						
LVC	**Limon Verde**	**5.46**	**348**	P	**Pn**	**19 01 00.3**	**+0.9**
	comp=Z,6.3nm,0.4s,baz=175,slow=11,SNR=24						
LVC				S	**Sn**	**19 02 00.5**	**-1.0**
	comp=Z,5.7nm,0.4s,baz=207,slow=24,SNR=6.2						
CPUP	**Villa Florida**	**9.38**	**82**	P	**Pn**	**19 01 52.5**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=341,slow=2.2,SNR=2.1						
TXAR	**Lajitas Array**	**66.58**	**326**	P	**P**	**19 10 16.3**	**+0.7**
	comp=Z,0.1nm,0.5s,baz=140,slow=7.1,SNR=1.8						
	comp=Z,0.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**78.59**	**68**	P	**P**	**19 11 25.3**	**-1.5**
	comp=Z,0.5nm,0.8s,baz=253,slow=5.2,SNR=2.9						
	comp=Z,0.5nm,0.8s						
PDAR	**Pinedale Array**	**80.25**	**330**	P	**P**	**19 11 36.0**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=123,slow=3.3,SNR=1.9						
	comp=Z,0.3nm,0.5s						
ASAR	**Alice Springs**	**124.59**	**204**	PKP	**PKPdf**	**19 18 22.7**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=136,slow=1.7,SNR=12						
WRA	**Warramunga Arr**	**127.81**	**207**	PKP	**PKPdf**	**19 18 29.3**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=175,slow=1.8,SNR=6.2						
KURBB	**Kurchatov Arra**	**145.90**	**39**	PKPbc	**PKPbc**	**19 19 02.8**	**-0.2**
	comp=Z,0.5nm,0.9s,baz=287,slow=2.8,SNR=2.8						
ZALV	**Zalesovo Beam**	**147.16**	**30**	PKPbc	**PKPbc**	**19 19 06.5**	**-0.1**
	comp=Z,1.6nm,0.4s,baz=294,slow=3.4,SNR=8.3						
MKAR	**Makanchi Array**	**149.91**	**43**	PKPbc	**PKPbc**	**19 19 13.6**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=308,slow=2.6,SNR=11						
MKAR				pPKPbc	**pPKPbc**	**19 19 51.0**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=283,slow=2.3,SNR=3.6						

*TEH **12** 19:08:08.9, 36°.73N×54°.84E, h9^{km}±23^{km}, ML4.1*

*IDC **12** 19:08:08.5±1.5, 36°.68N×54°.87E, h0^{km}, mb3.3/8, mbtmp3.6/17, ML3.3/9, MS3.0/7, Error ellipse: s-maj=28.8km s-min=11.8km az=180.0*

*NNC **12** 19:08:13.4±6.7, 37°.02N×54°.80E, h12^{km}±35^{km}, mb3.7, Error ellipse: s-maj=33.5km s-min=23.6km az=79.0*

*AZER **12** 19:08:16.1±0.6, 36°.66N×54°.38E, h121^{km}±42^{km}, Error ellipse: s-maj=12.7km s-min=5.7km az=52.0*

ISC 12 19:08:10.8±0.6**, 36°.82N**±0°.04×**54°.86E**±0°.04**, h15**^{km}**, n147, σ1^{s}.94**/176**, mb3.3**/9**, 5C-3D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMND	**Minoodasht**	**0.62**	**45**	Pg	**Pg**	**19 08 22.3**	**-0.6**
IMND				Sg	**Sg**	**19 08 31.6**	**+0.4**
IGLO	**Ghaloghah**	**0.89**	**250**	Pg	Pb	19 08 25.6	-2.4
IGLO				Sg	**Sb**	**19 08 38.7**	**-1.0**
SHRO	**Shahrood**	**1.24**	**131**	Pg	**Pn**	**19 08 31.5**	**-2.2**
MRVT	**Maraveh tapeh**	**1.29**	**49**	Pg	**Pn**	**19 08 35.2**	**+0.8**
IANJ	**Anjilo**	**1.55**	**210**	Pg	**Pn**	**19 08 36.0**	**-2.1**
ISHM	**Shahmirzad**	**1.62**	**232**	Pg	**Pn**	**19 08 38.1**	**-0.9**
IFIR	**Firoozkooh**	**2.07**	**236**	Pn	**Pn**	**19 08 45.9**	**+0.6**
ILAS	**Lasjerd**	**2.10**	**228**	Pn	**Pn**	**19 08 45.8**	**+0.1**
IPRN	**Peran**	**2.11**	**255**	Pn	**Pn**	**19 08 46.8**	**+1.1**
BJRD	**Bojnurd**	**2.21**	**66**	Pn	**Pn**	**19 08 49.1**	**+2.0**
DAMV	**Damavand**	**2.62**	**244**	Pn	**Pn**	**19 08 55.2**	**+2.4**
MZPU	**Pul - Mazandar**	**2.67**	**263**	Pn	**Pn**	**19 08 55.1**	**+1.6**
GEYT	**Alibeck**	**2.82**	**66**	Pn	**Pn**	**19 08 57.5**	**+2.2**
	18nm,0.3s,baz=266,slow=15,SNR=184						
GEYT				Lg	Lg	19 09 39.4	
	20nm,0.3s,baz=246,slow=11,SNR=3.9						
	45nm,0.5s						
GYA0B	**ALIBECK ARRAY**	**2.82**	**66**	⇑Pn	**Pn**	**19 08 57.4**	**+2.0**
GYA0B				⇑Lg	Lg	19 09 42.9	
IEMG	**Emamgholi**	**3.09**	**78**	Pn	**Pn**	**19 09 01.3**	**+2.0**
IVRN	**Varamin**	**3.13**	**235**	Pn	**Pn**	**19 09 00.4**	**+0.8**
IAKL	**Akhelmad**	**3.14**	**93**	Pn	**Pn**	**19 09 01.0**	**+1.1**
CHTH	**Charan**	**3.15**	**254**	Pn	**Pn**	**19 09 02.5**	**+2.5**
TNSJ	**Nastanj**	**3.19**	**153**	Pn	**Pn**	**19 08 59.8**	**-0.6**
IHSB	**Hasanabad**	**3.21**	**246**	Pn	**Pn**	**19 09 03.4**	**+2.6**
ISFB	**Sefidab**	**3.26**	**222**	Pn	**Pn**	**19 09 00.9**	**-0.5**
THKV	**Tehran--Karaj**	**3.34**	**256**	Pn	**Pn**	**19 09 05.0**	**+2.4**
IPAY	**Payeh**	**3.35**	**95**	Pn	**Pn**	**19 09 04.6**	**+1.8**
QALM	**Alamut, Qazvin**	**3.41**	**265**	Pn	**Pn**	**19 09 05.1**	**+1.4**
IMHD	**Mahdasht**	**3.57**	**253**	Pn	**Pn**	**19 09 07.3**	**+1.6**
KRSH	**Karshahi**	**3.61**	**219**	Pn	**Pn**	**19 09 05.9**	**-0.4**
IQOM	**Qom**	**3.66**	**239**	Pn	**Pn**	**19 09 07.4**	**+0.4**
TABS	**Tabas**	**3.66**	**149**	Pn	**Pn**	**19 09 06.9**	**-0.1**
IMOG	**Moghan**	**3.68**	**100**	Pn	**Pn**	**19 09 08.7**	**+1.3**
TKDS	**Koohdasht(Taba**	**3.69**	**149**	Pn	**Pn**	**19 09 07.2**	**-0.2**
GHVR	**GHOM**	**3.72**	**232**	Pn	**Pn**	**19 09 09.9**	**+2.1**
IKRD	**Kardeh**	**3.74**	**89**	Pn	**Pn**	**19 09 10.8**	**+2.6**
IGZV	**Ghazvin**	**3.76**	**265**	Pn	**Pn**	**19 09 09.7**	**+1.2**
TBHD	**Torbat heydari**	**3.81**	**110**	Pn	**Pn**	**19 09 10.6**	**+1.5**
GIDE	**GILAN DEYLAMAN**	**3.97**	**273**	Pn	**Pn**	**19 09 13.3**	**+2.0**
JIR1	**Jirandeh**	**4.06**	**270**	Pn	**Pn**	**19 09 13.5**	**+0.9**
TPRV	**Parvadeh(Tabas**	**4.07**	**158**	Pn	**Pn**	**19 09 12.5**	**-0.1**
QAMS	**Qamsar**	**4.18**	**224**	Pn	**Pn**	**19 09 13.8**	**-0.5**
IRAZ	**Razeghan**	**4.24**	**252**	Pn	**Pn**	**19 09 16.2**	**+1.2**
IMYA	**Miami**	**4.25**	**95**	Pn	**Pn**	**19 09 16.4**	**+1.3**
IKLH	**Kolahrood**	**4.41**	**219**	Pn	**Pn**	**19 09 17.4**	**0.0**
YZKH	**Yazd**	**4.42**	**183**	Pn	**Pn**	**19 09 16.9**	**-0.6**
IZEF	**Zefreh**	**4.43**	**209**	Pn	**Pn**	**19 09 17.6**	**-0.1**
ASAO	**Ashtian**	**4.54**	**242**	Pn	**Pn**	**19 09 20.5**	**+1.3**
ICHK	**Chekchek**	**4.58**	**185**	Pn	**Pn**	**19 09 19.1**	**-0.6**
TBJM	**Torbat-e-JAM**	**4.69**	**108**	Pn	**Pn**	**19 09 21.9**	**+0.6**
AFRZ	**Afriz**	**4.80**	**134**	Pn	**Pn**	**19 09 23.0**	**+0.3**
ZNJK	**Zanjan**	**4.96**	**270**	Pn	**Pn**	**19 09 26.8**	**+1.8**
IGAR	**Gharneh**	**4.98**	**209**	Pn	**Pn**	**19 09 26.0**	**+0.8**
ISAD	**Sadrabad**	**4.99**	**192**	Pn	**Pn**	**19 09 24.4**	**-0.9**
KHMZ	**Khomeyn**	**5.05**	**234**	Pn	**Pn**	**19 09 28.0**	**+1.8**
ITEG	**Tejag**	**5.05**	**140**	Pn	**Pn**	**19 09 26.4**	**+0.3**
ASTR	**Astara**	**5.12**	**292**	P	**Pn**	**19 09 26.2**	**-0.8**
	SNR=8.2						
ASTR				S	**Sn**	**19 10 23.2**	**-2.5**
ASTR	**Astara**	**5.12**	**292**	Pn	**Pn**	**19 09 26.1**	**-0.8**
LKRN	**Lenkeran, Azer**	**5.18**	**293**	P	**Pn**	**19 09 27.2**	**-0.5**
LKRN				S	**Sn**	**19 10 22.9**	**-4.2**
LKRN	**Lenkeran, Azer**	**5.18**	**293**	Pn	**Pn**	**19 09 27.1**	**-0.5**
IPIR	**Pirpir**	**5.26**	**220**	Pn	**Pn**	**19 09 29.8**	**+0.6**
BAGH	**Bagheran - Bir**	**5.38**	**137**	Pn	**Pn**	**19 09 30.3**	**-0.5**
IRAM	**Ramesheh**	**5.40**	**203**	Pn	**Pn**	**19 09 31.2**	**+0.2**
IMEH	**Mehriz**	**5.42**	**182**	Pn	**Pn**	**19 09 30.8**	**-0.5**
SHRT	**Shahrakht**	**5.46**	**124**	Pn	**Pn**	**19 09 31.4**	**-0.2**
LRK	**Lerik**	**5.48**	**291**	P	**Pn**	**19 09 31.4**	**-0.6**
	SNR=29						
LRK				S	**Sn**	**19 10 32.9**	**-2.0**
LRK	**Lerik**	**5.48**	**291**	Pn	**Pn**	**19 09 31.4**	**-0.6**
SHK1	**Shahrekord**	**5.55**	**217**	Pn	**Pn**	**19 09 33.8**	**+0.8**
IKOO	**Kooshah**	**5.56**	**141**	Pn	**Pn**	**19 09 33.2**	**0.0**
ALIB	**Äli-Bayra**	**5.57**	**306**	P	**Pn**	**19 09 33.8**	**+0.8**
ALIB				S	**Sn**	**19 10 36.3**	**-0.4**
ALIB	**Äli-Bayra**	**5.57**	**306**	Pn	**Pn**	**19 09 33.8**	**+0.8**
YRD	**Yardimli**	**5.64**	**294**	P	**Pn**	**19 09 33.5**	**-0.8**
	SNR=31						
YRD				S	**Sn**	**19 10 33.8**	**-5.0**
YRD	**Yardimli**	**5.64**	**294**	Pn	**Pn**	**19 09 33.5**	**-0.8**
GLBA	**Clilabad**	**5.65**	**297**	P	**Pn**	**19 09 33.8**	**-0.4**
	SNR=8.6						
GLBA				S	**Sn**	**19 10 37.2**	**-1.6**
GLBA	**Clilabad**	**5.65**	**297**	Pn	**Pn**	**19 09 33.8**	**-0.4**
IBRJ	**Brojen**	**5.73**	**212**	Pn	**Pn**	**19 09 35.5**	**-0.1**
IDAH	**Dahanechah**	**5.79**	**133**	Pn	**Pn**	**19 09 35.7**	**-0.7**
ISRB	**Sarab**	**5.82**	**282**	Pn	**Pn**	**19 09 37.5**	**+0.7**
GBS	**Qobustan**	**5.93**	**311**	P	**Pn**	**19 09 39.4**	**+1.2**
GBS				S	**Sn**	**19 10 44.3**	**-1.6**
GBS	**Qobustan**	**5.93**	**311**	Pn	**Pn**	**19 09 39.3**	**+1.2**
BSRN	**Basiran**	**5.99**	**143**	Pn	**Pn**	**19 09 38.9**	**-0.1**
ATGJ	**Altiaghaj**	**6.14**	**313**	P	**Pn**	**19 09 42.5**	**+1.5**
ATGJ				S	**Sn**	**19 10 50.1**	**-0.9**
ATGJ	**Altiaghaj**	**6.14**	**313**	Pn	**Pn**	**19 09 42.4**	**+1.5**
SIZA	**Siyzn**	**6.30**	**314**	P	**Pn**	**19 09 44.4**	**+1.2**
SIZA				S	**Sn**	**19 10 54.4**	**-0.5**
SIZA	**Siyzn**	**6.30**	**314**	Pn	**Pn**	**19 09 44.4**	**+1.2**
PQL	**Pirkuli**	**6.30**	**311**	P	**Pn**	**19 09 45.0**	**+1.8**
PQL				S	**Sn**	**19 10 55.2**	**+0.2**
PQL	**Pirkuli**	**6.30**	**311**	Pn	**Pn**	**19 09 45.0**	**+1.8**
SNGE	**Sanandaj**	**6.33**	**256**	Pn	**Pn**	**19 09 46.1**	**+2.3**
IHRS	**Heris**	**6.39**	**286**	Pn	**Pn**	**19 09 45.1**	**+0.5**
KLNJ	**Kolanjah**	**6.40**	**206**	Pn	**Pn**	**19 09 45.9**	**+1.0**
BLQ	**Beylaqan**	**6.43**	**299**	P	**Pn**	**19 09 45.6**	**+0.7**
	SNR=7.1						
BLQ				S	**Sn**	**19 10 53.9**	**-4.3**
QRD	**Qoradiz**	**6.50**	**296**	P	**Pn**	**19 09 45.7**	**-0.2**
	SNR=4.7						
QRD				S	**Sn**	**19 10 56.3**	**-3.6**
IKOM	**Komasi**	**6.55**	**248**	Pn	**Pn**	**19 09 49.3**	**+2.5**
IML	**Ismayilli**	**6.55**	**309**	P	**Pn**	**19 09 47.4**	**+0.7**
IML				S	**Sn**	**19 10 58.0**	**-3.2**
KHGB	**Koh Gabri**	**6.56**	**168**	Pn	**Pn**	**19 09 46.9**	**-0.1**
ZRD	**Zardab**	**6.60**	**304**	P	**Pn**	**19 09 48.2**	**+1.0**
ZRD				S	**Sn**	**19 10 59.9**	**-2.3**
ZRD	**Zardab**	**6.60**	**304**	Pn	**Pn**	**19 09 48.2**	**+1.0**
QUBA	**Quba, Azerbaij**	**6.71**	**314**	P	**Pn**	**19 09 50.4**	**+1.6**
QUBA				S	**Sn**	**19 11 02.5**	**-2.5**
XNQ	**Khinaliq**	**6.80**	**312**	P	**Pn**	**19 09 50.5**	**+0.2**
	SNR=26						
XNQ				S	**Sn**	**19 11 06.3**	**-1.2**
QBL	**Gabala**	**6.86**	**309**	P	**Pn**	**19 09 51.5**	**+0.7**
QBL				S	**Sn**	**19 11 04.9**	**-3.7**
AMIS	**Naft Sefid**	**6.91**	**224**	Pn	**Pn**	**19 09 52.0**	**+0.5**
NHDN	**Nehbandan**	**6.91**	**140**	Pn	**Pn**	**19 09 52.2**	**+0.5**
AGDM	**Agdam**	**6.91**	**301**	P	**Pn**	**19 09 51.3**	**-0.2**
	SNR=6.2						
AGDM				S	**Sn**	**19 11 06.3**	**-3.7**
BRDA	**Brd**	**6.93**	**302**	P	**Pn**	**19 09 52.8**	**+1.0**
BRDA				S	**Sn**	**19 11 07.0**	**-3.4**
QSAR	**Qusar**	**6.95**	**314**	P	**Pn**	**19 09 53.9**	**+1.9**
	SNR=10						
QSAR				S	**Sn**	**19 11 09.4**	**-1.4**
KRBR	**Kerman**	**7.00**	**166**	Pn	**Pn**	**19 09 52.8**	**-0.3**
ORD	**Ordubad**	**7.32**	**289**	P	**Pn**	**19 09 57.3**	**+0.1**
	SNR=9.9						
ORD				S	**Sn**	**19 11 16.1**	**-4.1**
ORD	**Ordubad**	**7.32**	**289**	Pn	**Pn**	**19 09 57.3**	**+0.1**
SEKA	**Sheki**	**7.40**	**309**	P	**Pn**	**19 09 58.2**	**-0.1**
SEKA				S	**Sn**	**19 11 19.2**	**-2.9**
ISHB	**Shabestar**	**7.49**	**284**	Pn	**Pn**	**19 10 01.0**	**+1.3**
IMRD	**Marand**	**7.50**	**287**	Pn	**Pn**	**19 10 01.4**	**+1.7**
GANJ	**Ganja**	**7.69**	**302**	P	**Pn**	**19 10 01.4**	**-0.8**
GANJ				S	**Sn**	**19 11 23.9**	**-5.2**
NAX	**Nakhchivan**	**7.76**	**290**	P	**Pn**	**19 10 04.3**	**+1.0**
NAX				S	**Sn**	**19 11 34.2**	**+3.3**
SBZ	**Shahbuz**	**7.78**	**292**	P	**Pn**	**19 10 03.8**	**+0.3**
SBZ				S	**Sn**	**19 11 26.8**	**-4.5**
GDB	**GEDABAY**	**8.11**	**301**	P	**Pn**	**19 10 07.9**	**-0.2**
	SNR=4.7						
QZX	**Qazax, Azerbai**	**8.52**	**303**	P	**Pn**	**19 10 14.1**	**+0.5**
	SNR=8.1						
QZX				S	**Sn**	**19 11 45.2**	**-4.3**
GNI	**Garni**	**8.60**	**296**	Pn	**Pn**	**19 10 18.7**	**+3.8**
	0.5nm,0.3s,baz=92,slow=20,SNR=2.3						
GNI				LR	LR	19 14 07.8	
	comp=Z,30nm,19.1s,baz=112,slow=41						
	4.6nm,0.8s						
KBZ	**Khabaz**	**11.45**	**311**	Pn	**Pn**	**19 10 55.0**	**+1.4**
	0.3nm,0.3s,baz=143,slow=5.1,SNR=6.5						
KBZ				Sn	**Sn**	**19 12 57.4**	**-3.8**
	0.2nm,0.3s,baz=88,slow=18,SNR=2.0						
	0.7nm,0.3s						
KVAR	**Kislovodsk Arr**	**11.69**	**311**	Pn	**Pn**	**19 10 58.2**	**+1.1**
	baz=175,slow=11						
KVAR				Sn	Sn	19 12 59.4	-8.0
	baz=186,slow=9.2						
	1.5nm,0.4s						
AB31	**Akbulak array**	**12.97**	**15**	Pn	**Pn**	**19 11 13.7**	**-0.8**
	0.4nm,0.3s,baz=202,slow=13,SNR=21						
AB31				⇑Sn	**Sn**	**19 13 38.6**	**+0.2**
	0.4nm,0.3s,baz=197,slow=24,SNR=12						
KK31	**Karatay Array**	**13.54**	**58**	Pn	**Pn**	**19 11 21.2**	**-1.1**
	0.5nm,0.3s,baz=247,slow=11,SNR=9.9						
AKTO	**Aktyubinsk**	**13.80**	**8**	Pn	**Pn**	**19 11 25.4**	**-0.3**
	0.3nm,0.3s,baz=170,slow=12,SNR=2.1						
AKTO				Sn	**Sn**	**19 13 51.4**	**-7.3**
	0.1nm,0.3s,baz=132,slow=23,SNR=1.3						
	1.1nm,0.3s						
AKTO	**Aktyubinsk**	**13.80**	**8**	⇓Pn	**Pn**	**19 11 26.8**	**+1.0**
	3.6nm,0.9s						
AKTO				⇓Sn	**Sn**	**19 13 58.0**	**-0.7**
	1.9nm,0.9s						
AAK	**Ala-Archa**	**16.17**	**63**	Pn	**Pn**	**19 11 54.5**	**-3.1**
	0.3nm,0.3s,baz=235,slow=10.0,SNR=15						
AAK				LR	LR	19 19 09.1	
	comp=Z,59nm,18.4s,baz=236,slow=41						
	2.0nm,0.5s						
BELG	**Belogornoye**	**16.39**	**344**	Pn	**Pn**	**19 11 57.4**	**-2.7**
	0.6nm,0.3s,baz=120,slow=20,SNR=3.1						
BELG				Sn	Sn	19 14 51.5	-10
	0.5nm,0.3s,baz=107,slow=19,SNR=3.8						
KSH	**Kashi**	**16.82**	**74**	P	**Pn**	**19 12 00.9**	**-4.9**
KSH				sP	P	19 12 06.6	-1.3
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BRTR	**Keskin Array B**	**16.91**	**286**	Pn	**Pn**	**19 12 08.0**	**+1.0**
	baz=113,slow=14,SNR=1.9						
	comp=Z,0.3nm,0.7s						
EIL	**Elat**	**18.10**	**253**	LR	LR	19 20 40.9	
	comp=Z,55nm,19.8s,baz=247,slow=42						
BRVK	**Borovoye**	**19.50**	**29**	⇑Pn	**P**	**19 12 39.1**	**+1.9**
	comp=Z,4.2nm,1.0s						
BVA0	**Borovoye Array**	**19.51**	**29**	⇓Pn	**Pn**	**19 12 40.5**	**+1.9**
	comp=Z,5.6nm,1.0s,baz=221,slow=12,SNR=16						
BVAR	**Borovoye Array**	**19.51**	**29**	P	**P**	**19 12 38.4**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=212,slow=11,SNR=12						
BVAR				LR	LR	19 21 00.3	
	comp=Z,35nm,18.3s,baz=175,slow=39						
	comp=Z,3.4nm,0.6s						
ARU	**Arti**	**19.78**	**6**	P	**P**	**19 12 41.0**	**+0.9**
	baz=195,slow=17,SNR=3.0						
ARU				LR	LR	19 21 48.7	
	comp=Z,45nm,20.6s,baz=206,slow=41						
	comp=Z,1.6nm,0.5s						
KURBB	**Kurchatov Arra**	**21.86**	**43**	P	**P**	**19 13 03.0**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=242,slow=9.9,SNR=5.3						
	comp=Z,0.3nm,0.7s						
MK31	**Makanchi Array**	**22.64**	**55**	⇑P	**P**	**19 13 14.7**	**+3.5**
	comp=Z,1.6nm,0.8s,baz=242,slow=9.7,SNR=8.4						
MKAR	**Makanchi Array**	**22.64**	**55**	P	**P**	**19 13 12.6**	**+1.4**
	comp=Z,0.7nm,0.9s,baz=246,slow=19,SNR=6.4						
MKAR				LR	LR	19 23 28.1	
	comp=Z,34nm,18.9s,baz=246,slow=40						
	comp=Z,0.7nm,0.9s						
AKASG	**Malin Array Be**	**22.99**	**315**	P	**P**	**19 13 14.1**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=79,slow=23,SNR=2.0						
	comp=Z,0.5nm,0.5s						
MLR	**Muntele Rosu**	**23.33**	**301**	P	**P**	**19 13 20.9**	**+2.4**
	comp=Z,1.2nm,0.7s,baz=120,slow=20,SNR=1.8						
	comp=Z,1.2nm,0.7s						
PYUN	**Piuthan**	**25.21**	**102**	*e*P	**P**	**19 13 36.0**	**-0.2**
DANN	**Dangsing**	**25.70**	**101**	*e*P	**P**	**19 13 41.5**	**+0.8**
	comp=Z,7.1nm,0.5s						
GKN	**Gorkha**	**26.55**	**101**	*e*P	**P**	**19 13 50.0**	**+1.8**
ZALV	**Zalesovo Beam**	**26.84**	**41**	P	**P**	**19 13 52.6**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=266,slow=5.8,SNR=2.2						
	comp=Z,0.2nm,0.3s						
DMN	**Daman**	**27.09**	**101**	*e*P	**P**	**19 13 56.0**	**+2.7**
PKIN	**Phulchoki**	**27.34**	**101**	*e*P	**P**	**19 13 58.1**	**+2.6**
PKI	**Pulchoki**	**27.35**	**101**	*e*P	**P**	**19 13 58.4**	**+2.7**
GUN	**Gumba**	**27.57**	**100**	*e*P	**P**	**19 14 00.9**	**+3.2**
JIRN	**Jiri**	**27.93**	**100**	*e*P	**P**	**19 14 04.5**	**+3.6**
RAMN	**Ramite**	**28.58**	**101**	*e*P	**P**	**19 14 10.5**	**+3.9**
PALK	**Pallekele**	**37.67**	**135**	LR	LR	19 32 52.8	
	comp=Z,59nm,18.2s,baz=277,slow=40						
CMAR	**Chiang Mai Arr**	**42.70**	**103**	P	**P**	**19 16 06.5**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=304,slow=8.6,SNR=5.9						
	comp=Z,0.7nm,0.7s						
ESDC	**Sonseca Array**	**45.57**	**292**	P	**P**	**19 16 32.4**	**+2.2**
	comp=Z,0.2nm,0.6s,baz=354,slow=12,SNR=1.6						
	comp=Z,0.2nm,0.6s						
ILAR	**Eielson Array**	**77.31**	**9**	P	**P**	**19 20 03.8**	**-0.5**
	comp=Z,0.4nm,1.0s,baz=316,slow=6.3,SNR=4.2						
	comp=Z,0.4nm,1.0s						

*IDC **12** 19:13:57.8±7.7, 5°.61S×152°.84E, h33^{km}±52^{km}, mb3.3/5, mbtmp3.6/6, ML1.5/1, Error ellipse: s-maj=54.8km s-min=18.9km az=103.0*

ISC 12 19:13:58.2±1.3**, 5°.62S**±0°.08×**152°.8E**±0°.2**, h37**^{km}**, n8, σ0^{s}.43**/10**, mb3.5**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.53**	**328**	Pn	**Pn**	**19 14 22.8**	**-0.3**
	38nm,0.3s,baz=177,slow=2.7,SNR=34						
KRVT				Sn	**Sn**	**19 14 41.6**	**-0.1**
	65nm,0.3s,baz=168,slow=21,SNR=15						
PMG	**Port Moresby**	**6.77**	**236**	Pn	**Pn**	**19 15 34.6**	**-0.5**
	0.5nm,0.3s,baz=347,slow=20,SNR=1.6						
PMG				Sn	**Sn**	**19 16 51.2**	**+0.3**
	0.8nm,0.3s,baz=127,slow=22,SNR=1.3						
	12nm,0.8s						
WRA	**Warramunga Arr**	**22.94**	**230**	P	**P**	**19 19 00.1**	**+0.7**
	1.1nm,0.6s,baz=54,slow=9.7,SNR=11						
	1.1nm,0.6s						
ASAR	**Alice Springs**	**25.58**	**224**	P	**P**	**19 19 23.8**	**-0.3**
	1.1nm,0.7s,baz=57,slow=8.8,SNR=14						
	1.1nm,0.7s						
SONM	**Songino Array**	**67.03**	**328**	P	**P**	**19 24 47.8**	**+0.1**
	0.2nm,0.6s,baz=137,slow=5.9,SNR=2.2						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**80.96**	**319**	P	**P**	**19 26 09.4**	**+0.4**
	0.1nm,0.4s,baz=104,slow=6.1,SNR=2.5						
	0.1nm,0.4s						
ILAR	**Eielson Array**	**82.90**	**22**	P	**P**	**19 26 18.8**	**0.0**
	0.6nm,1.1s,baz=257,slow=4.8,SNR=1.5						
	0.6nm,1.1s						
TORD	**Torodi Ar. Bea**	**150.59**	**287**	PKPbc	**PKPbc**	**19 33 46.8**	**-0.5**
	0.4nm,0.8s,baz=50,slow=2.3,SNR=3.1						

ROM 12 19:28:12.2±0.1**, 42°.897N**±0°.004×**13°.153E**±0°.004**, h15**^{km}**, ML0.8**/2**, 1C-4D, Error ellipse: s-maj=0.3km s-min=0.2km az=26.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MC2	**Monte Cornacci**	**0.03**	**61**	⇓P	Pg	19 28 15.2	+0.1
MC2				S	Sg	19 28 17.3	+0.2
T1245	**Castelsantange**	**0.05**	**148**	P	Pg	19 28 15.2	+0.1
T1245				S	Sg	19 28 17.2	+0.1
T1245				AML	AML		
	comp=E,88μm,0.4s						
T1245				AML	AML		
	comp=N,110μm,1.0s						
T1245				AML	AML		
	comp=N,110μm,1.0s						
T1245				AML	AML		
	comp=N,110μm,1.0s						
T1216	**Preci, Frazion**	**0.10**	**266**	⇓P	Pg	19 28 15.8	+0.3
T1216				S	Sg	19 28 18.1	+0.4
MMO1	**Montemonaco**	**0.13**	**89**	P	Pg	19 28 16.0	+0.1
MMO1				S	Sg	19 28 18.6	+0.3
FDMO	**Fiordimonte**	**0.15**	**341**	P	Pg	19 28 16.3	+0.2
FDMO				S	Sg	19 28 19.1	+0.4
T1212	**Cascia, Frazio**	**0.17**	**209**	⇓P	Pb	19 28 16.7	-0.3
T1212				S	Sg	19 28 19.7	+0.5
T1212				AML	AML		
	comp=E,25μm,1.4s						
T1212				AML	AML		
	comp=E,25μm,1.4s						
T1212				AML	AML		
	comp=N,28μm,1.6s						
T1212				AML	AML		
	comp=E,25μm,0.6s						
T1241	**Roccafluvione,**	**0.21**	**101**	⇑P	Pg	19 28 17.2	+0.2
T1241				S	Sb	19 28 20.9	-0.6
T1220	**Camerino, Fraz**	**0.22**	**348**	⇓P	Pg	19 28 17.4	+0.3
T1220				S	Sb	19 28 21.2	-0.5

ROM 12 19:28:42.7±0.2**, 42°.999N**±0°.004×**13°.033E**±0°.007**, h3**^{km}±2^{km}**, ML0.9**/8**, 1C-5D, Error ellipse: s-maj=0.5km s-min=0.4km az=86.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1219	**Muccia, Frazio**	**0.06**	**342**	P	Pg	19 28 44.1	0.0
T1219				S	Sg	19 28 45.2	+0.2
T1219				AML	AML		
	comp=N,242μm,1.0s						
T1219				AML	AML		
	comp=E,272μm,0.2s						
T1219				AML	AML		
	comp=E,272μm,0.2s						
T1219				AML	AML		
	comp=N,235μm,0.1s						
T1219				AML	AML		

	comp=N,242µm,1.0s						
T1219				AML	AML		
	comp=E,258µm,0.1s						
CESI	**CESI - Serrava**	**0.10**	**274**	⇑P	Pg	19 28 45.1	+0.5
CESI				AML	AML		
	comp=E,120µm,0.4s						
CESI				AML	AML		
	comp=N,126µm,0.3s						
T1216	**Preci, Frazion**	**0.11**	**186**	P	Pg	19 28 45.5	+0.6
T1216				AML	AML		
	comp=E,138µm,1.5s						
T1216				AML	AML		
	comp=N,111µm,0.3s						
T1216				AML	AML		
	comp=E,137µm,1.5s						
T1216				AML	AML		
	comp=E,137µm,0.5s						
T1216				AML	AML		
	comp=N,111µm,0.3s						
T1220	**Camerino, Fraz**	**0.12**	**20**	P	Pg	19 28 45.4	+0.3
T1220				S	Sg	19 28 47.6	+0.9
T1220				AML	AML		
	comp=E,569µm,0.3s						
T1220				AML	AML		
	comp=N,364µm,0.3s						
T1220				AML	AML		
	comp=E,569µm,1.7s						
T1256	**Bolognola (MC)**	**0.14**	**87**	S	Sg	19 28 47.9	+0.4
T1256				AML	AML		
	comp=N,44µm,1.0s						
T1256				AML	AML		
	comp=E,41µm,1.0s						
MC2	**Monte Cornacci**	**0.14**	**127**	P	Pg	19 28 46.0	+0.4
T1245	**Castelsantange**	**0.18**	**141**	P	Pg	19 28 46.7	+0.5
T1245				AML	AML		
	comp=E,54µm,1.4s						
T1245				AML	AML		
	comp=E,54µm,0.6s						
T1245				AML	AML		
	comp=N,84µm,0.2s						
T1215	**Vallo di Nera,**	**0.23**	**212**	P	Pg	19 28 47.8	+0.6
MMO1	**Montemonaco**	**0.24**	**115**	⇓P	Pg	19 28 47.4	+0.1
T1212	**Cascia, Frazio**	**0.25**	**178**	P	Pg	19 28 48.0	+0.5
T1212				S	Sg	19 28 52.4	+1.7
T1212				AML	AML		
	comp=E,41µm,0.3s						
T1212				AML	AML		
	comp=N,51µm,1.5s						
T1212				AML	AML		
	comp=E,41µm,0.3s						
T1212				AML	AML		
	comp=N,50µm,1.5s						
T1212				AML	AML		
	comp=E,41µm,1.7s						
SNTG	**Esanatoglia**	**0.27**	**345**	⇓P	Pg	19 28 48.2	+0.4
SNTG				AML	AML		
	comp=E,24µm,0.6s						
SNTG				AML	AML		
	comp=N,22µm,1.6s						
ASSB	**Assisi San Ben**	**0.28**	**279**	⇓P	Pg	19 28 48.5	+0.4
ASSB				AML	AML		
	comp=E,25µm,0.7s						
ASSB				AML	AML		
	comp=N,44µm,0.2s						
ASSB				AML	AML		
	comp=E,25µm,1.3s						
T1241	**Roccafluvione,**	**0.33**	**116**	⇓P	Pg	19 28 49.6	+0.7
T1218	**Civita (PG)**	**0.33**	**170**	⇓P	Pg	19 28 49.6	+0.4
ATCC	**AVT- Casa Cast**	**0.34**	**303**	S	Sb	19 28 56.0	-1.3

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*TAP **12** 19:47:51.0, 24°.65N×121°.98E, h60^{km}, ML3.6, B*
*JMA **12** 19:47:50.4±0.2, 24°.7N±0°.4×122°.0E±0°.4, h65^{km}±2^{km},*
MV3.2/11, TAIWAN REGION
ISC 12 19:47:50.4±1.2**, 24°.66N**±0°.02×**122°.01E**±0°.02**, h67**^{km}±4^{km}**,**
n151, σ**1**^{s}**.11**/292**, 37C-3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.16**	**251**	⇑*i*P	**Pn**	**19 48 00.4**	**-0.1**
	baz=246						
TWC				*i* S	**Sn**	**19 48 07.1**	**-0.7**
	baz=246						
EGS		**0.20**	**338**	⇑*i*P	**Pn**	**19 48 00.7**	**+0.1**
	baz=351						
EGS				S	**Sn**	**19 48 07.9**	**-0.2**
	baz=351						
NTC	**Toucheng**	**0.25**	**319**	P	**Pn**	**19 48 00.8**	**-0.1**
	baz=326						
NTC				S	**Sn**	**19 48 07.8**	**-0.8**
	baz=326						
ILA	**Ilan**	**0.26**	**293**	⇑*i*P	**Pn**	**19 48 01.3**	**+0.3**
	baz=299						
ILA				*e*S	**Sn**	**19 48 09.0**	**+0.3**
	baz=299						
NDS	**Dongshan**	**0.27**	**264**	⇑*i*P	**Pn**	**19 48 01.5**	**+0.4**
	baz=265						
NDS				*e*S	**Sn**	**19 48 08.8**	**0.0**
	baz=265						
EWUT	**Wuta**	**0.30**	**225**	⇑*i*P	**Pn**	**19 48 01.4**	**+0.2**
	baz=221						
EWUT				*i* S	**Sn**	**19 48 09.0**	**-0.2**
	baz=221						
EOS2	**EOS2**	**0.31**	**140**	*i* P	**Pn**	**19 48 02.0**	**+0.8**
	baz=135						
EOS2				*e*S	**Sn**	**19 48 10.4**	**+1.4**
	baz=135						
TWE	**Neicheng**	**0.32**	**281**	⇑*i*P	**Pn**	**19 48 01.8**	**+0.4**
	baz=283						
TWE				S	**Sn**	**19 48 09.5**	**+0.1**
	baz=283						
ENA	**Nanau**	**0.34**	**227**	⇑*i*P	**Pn**	**19 48 01.7**	**+0.2**
	baz=222						
ENA				S	**Sn**	**19 48 09.8**	**+0.1**
	baz=222						
TWB1	**Santiao Chiao**	**0.35**	**356**	⇑*i*P	**Pn**	**19 48 01.5**	**-0.1**
	baz=3.0						
TWB1				S	**Sn**	**19 48 09.0**	**-0.7**
	baz=3.0						
TIPB	**Shuangxi**	**0.35**	**331**	⇑*i*P	**Pn**	**19 48 01.7**	**0.0**
	baz=337						
TIPB				*i* S	**Sn**	**19 48 09.1**	**-0.8**
	baz=337						
FUSB	**Fushanzhiwuyua**	**0.40**	**284**	⇑*i*P	**Pn**	**19 48 02.4**	**+0.3**
	baz=287						
FUSB				S	**Sn**	**19 48 10.8**	**+0.1**
	baz=287						
ENTT	**Nioudou**	**0.41**	**267**	⇑*i*P	**Pn**	**19 48 02.6**	**+0.5**
	baz=267						
ENTT				*e*S	**Sn**	**19 48 11.3**	**+0.7**
	baz=267						
SXI1	**Grass Mountain**	**0.45**	**344**	⇑*i*P	**Pn**	**19 48 02.5**	**-0.1**
	baz=348						
SXI1				S	**Sn**	**19 48 10.8**	**-0.6**
	baz=348						
NWF	**Wu-fen Shan**	**0.46**	**333**	⇑*i*P	**Pn**	**19 48 02.8**	**+0.1**
	baz=337						
NWF				*e*S	**Sn**	**19 48 11.1**	**-0.5**
	baz=337						
WFSB	**Wu-fen Shan**	**0.46**	**333**	⇑*i*P	**Pn**	**19 48 02.8**	**+0.2**
	baz=337						
WFSB				*e*S	**Sn**	**19 48 11.1**	**-0.4**
	baz=337						
LATG	**Datong**	**0.46**	**254**	⇑*i*P	**Pn**	**19 48 03.0**	**+0.3**
	baz=254						
LATG				*e*S	**Sn**	**19 48 12.0**	**+0.3**
	baz=254						
NWLT	**Wulai**	**0.48**	**284**	⇑*i*P	**Pn**	**19 48 03.1**	**+0.4**
	baz=286						
NWLT				*e*S	**Sn**	**19 48 11.7**	**-0.1**
	baz=286						
TWA	**Mucha**	**0.50**	**309**	⇑*i*P	**Pn**	**19 48 03.1**	**+0.1**
	baz=313						
TWA				*e*S	**Sn**	**19 48 11.7**	**-0.6**
	baz=313						
TNOU	**National Taiwa**	**0.53**	**336**	⇑*i*P	**Pn**	**19 48 03.2**	**-0.1**
	baz=340						
TNOU				*e*S	**Sn**	**19 48 12.0**	**-0.7**
	baz=340						
NHDH	**Xindian Distri**	**0.54**	**304**	⇑*i*P	**Pn**	**19 48 03.5**	**+0.2**
	baz=307						
NHDH				*e*S	**Sn**	**19 48 12.1**	**-0.6**
	baz=307						
NHY	**Taipei**	**0.55**	**313**	*e*P	**Pn**	**19 48 03.7**	**+0.2**
	baz=316						
NHY				*e*S	**Sn**	**19 48 13.1**	**+0.1**
	baz=316						
TATO	**Taipei**	**0.57**	**303**	⇑P	**Pn**	**19 48 03.8**	**+0.1**
	baz=306						
TATO				*e*S	**Sn**	**19 48 12.7**	**-0.7**
	baz=306						
YHNB	**Yeheng**	**0.58**	**271**	⇑*i*P	**Pn**	**19 48 04.2**	**+0.4**
	baz=272						
YHNB				*e*S	**Sn**	**19 48 13.6**	**-0.1**
	baz=272						
TAP1	**Taipei**	**0.58**	**310**	*e*P	**Pn**	**19 48 05.0**	**+1.3**
	baz=312						
TAP1				*e*S	**Sn**	**19 48 14.3**	**+0.7**
	baz=312						
TAP	**Taipei**	**0.59**	**309**	P	**Pn**	**19 48 04.0**	**+0.1**
	baz=312						
TAP				*e*S	**Sn**	**19 48 13.5**	**-0.4**
	baz=312						
NSK	**Sanguang**	**0.59**	**271**	⇑*i*P	**Pn**	**19 48 04.3**	**+0.3**
	baz=272						
NSK				S	**Sn**	**19 48 14.0**	**0.0**
	baz=272						
EOS4	**EOS4**	**0.61**	**153**	*i* P	**Pn**	**19 48 04.0**	**+0.3**
	baz=150						
EOS4				S	**Sn**	**19 48 13.9**	**+0.5**
	baz=150						
ETL	**Fush Village**	**0.61**	**215**	P	**Pn**	**19 48 03.9**	**-0.3**
	baz=213						
ETL				*e*S	**Sn**	**19 48 14.3**	**0.0**
	baz=213						
BACT	**New Taipei Cit**	**0.62**	**303**	*e*P	**Pn**	**19 48 04.5**	**+0.3**
	baz=305						
BACT				*e*S	**Sn**	**19 48 15.1**	**+0.8**
	baz=305						
NACB	**Ninganchiao**	**0.62**	**218**	⇑*i*P	**Pn**	**19 48 03.7**	**-0.5**
	baz=216						
NACB				*e*S	**Sn**	**19 48 13.9**	**-0.3**
	baz=216						
NNSB	**Datong**	**0.62**	**248**	⇑P	**Pn**	**19 48 04.7**	**+0.3**
	baz=247						
NNSB				*e*S	**Sn**	**19 48 14.5**	**-0.1**
	baz=247						
NNSH	**Datong**	**0.62**	**248**	*e*P	**Pn**	**19 48 04.7**	**+0.4**
	baz=247						
NNSH				*e*S	**Sn**	**19 48 14.4**	**-0.1**
	baz=247						
NNS	**Nan Shan**	**0.62**	**249**	⇑*e*P	**Pn**	**19 48 04.7**	**+0.3**
	baz=248						
NNS				*e*S	**Sn**	**19 48 14.6**	**0.0**
	baz=248						
YM01	**YM01**	**0.63**	**320**	⇑*i*P	**Pn**	**19 48 04.3**	**0.0**
	baz=323						
YM01				*e*S	**Sn**	**19 48 14.2**	**-0.4**
	baz=323						
YM08	**YM08**	**0.65**	**324**	⇑*i*P	**Pn**	**19 48 04.3**	**-0.2**
	baz=327						
YM08				*e*S	**Sn**	**19 48 13.7**	**-1.3**
	baz=327						
ETLH	**Xiulin Townshi**	**0.66**	**227**	*i* P	**Pn**	**19 48 04.5**	**-0.2**
	baz=225						
ETLH				S	**Sn**	**19 48 14.8**	**-0.5**
	baz=225						
ANP	**Anpu**	**0.69**	**320**	⇑*e*P	**Pn**	**19 48 04.8**	**-0.2**
	baz=322						
ANP				*e*S	**Sn**	**19 48 16.1**	**+0.3**
	baz=322						
TWD	**Chiawan**	**0.69**	**213**	P	**Pn**	**19 48 04.9**	**-0.1**
	baz=211						
TWD				*e*S	**Sn**	**19 48 15.5**	**-0.2**
	baz=211						
TWS1	**Kuangyinshan**	**0.69**	**309**	⇑*i*P	**Pn**	**19 48 05.4**	**+0.4**
	baz=312						
TWS1				*e*S	**Sn**	**19 48 16.1**	**+0.3**
	baz=312						
NTST	**Danshui**	**0.71**	**314**	⇑*i*P	**Pn**	**19 48 05.6**	**+0.3**
	baz=317						
NTST				*e*S	**Sn**	**19 48 16.6**	**+0.4**
	baz=317						
TWY	**Chenhua**	**0.72**	**329**	*e*P	**Pn**	**19 48 05.7**	**+0.4**
	baz=332						
TWY				*e*S	**Sn**	**19 48 16.6**	**+0.4**
	baz=332						
NTY	**Taoyuan**	**0.73**	**298**	*e*P	**Pn**	**19 48 06.1**	**+0.7**
	baz=299						
NTY				*e*S	**Sn**	**19 48 17.9**	**+1.3**
	baz=299						
HWA	**Hwalien**	**0.78**	**209**	*e*P	**Pn**	**19 48 06.2**	**+0.2**
	baz=206						
HWA				*e*S	**Sn**	**19 48 18.4**	**+0.9**
	baz=206						
NCU	**National Centr**	**0.81**	**292**	⇑*i*P	**Pn**	**19 48 07.0**	**+0.6**
	baz=294						
NCU				*e*S	**Sn**	**19 48 19.1**	**+0.9**
	baz=294						
NCUH	**Zhongli**	**0.81**	**292**	⇑*i*P	**Pn**	**19 48 06.9**	**+0.5**
	baz=293						
NCUH				*e*S	**Sn**	**19 48 18.8**	**+0.5**
	baz=293						
NFF	**Wufeng Townshi**	**0.81**	**268**	⇑*i*P	**Pn**	**19 48 06.9**	**+0.4**
	baz=268						
NFF				*e*S	**Sn**	**19 48 18.6**	**+0.1**
	baz=268						
ETM	**Tongmen**	**0.84**	**214**	*e*P	**Pn**	**19 48 06.3**	**-0.5**
	baz=213						
ETM				*e*S	**Sn**	**19 48 17.9**	**-1.0**
	baz=213						
NJD	**Zhudong**	**0.84**	**275**	*e*P	**Pn**	**19 48 07.6**	**+0.8**
	baz=276						
NJD				*e*S	**Sn**	**19 48 20.0**	**+1.0**
	baz=276						
WHF	**Hehuan Shan**	**0.85**	**233**	*i* P	**Pn**	**19 48 07.4**	**+0.1**
	baz=232						
WHF				*e*S	**Sn**	**19 48 19.7**	**-0.1**
	baz=232						
TWT	**Tachien**	**0.86**	**242**	*e*P	**Pn**	**19 48 08.2**	**+1.0**
	baz=241						
TWT				*e*S	**Sn**	**19 48 20.3**	**+0.6**
	baz=241						
JYNG	**Yonagunijimaku**	**0.88**	**104**	*i* P	**Pn**	**19 48 07.6**	**+0.4**
JYNG				*e*S	**Sn**	**19 48 19.9**	**+0.3**
TEYL	**Yanliau Villag**	**0.88**	**206**	*e*P	**Pn**	**19 48 07.2**	**0.0**
	baz=205						
TEYL				*e*S	**Sn**	**19 48 19.5**	**-0.1**
	baz=205						
TDCB	**Techi**	**0.88**	**243**	*e*P	**Pn**	**19 48 08.2**	**+0.8**
	baz=242						
TDCB				*e*S	**Sn**	**19 48 19.9**	**0.0**
	baz=242						
LIOB	**Emei**	**0.91**	**269**	⇑*i*P	**Pn**	**19 48 08.2**	**+0.6**
	baz=270						
LIOB				*e*S	**Sn**	**19 48 21.0**	**+0.7**
	baz=270						
HSN1	**Hsinchu**	**0.91**	**277**	*e*P	**Pn**	**19 48 08.2**	**+0.6**
	baz=278						
HSN1				*e*S	**Sn**	**19 48 21.2**	**+0.8**
	baz=278						
NSTT	**Nanjuang**	**0.92**	**268**	⇑*i*P	**Pn**	**19 48 08.2**	**+0.4**
	baz=268						
NSTT				*e*S	**Sn**	**19 48 21.0**	**+0.4**
	baz=268						
YOJ	**Yonaguni jima**	**0.93**	**102**	P	**Pn**	**19 48 08.2**	**+0.4**
YOJ				*e*S	**Sn**	**19 48 21.0**	**+0.3**
YOJ	**Yonaguni jima**	**0.93**	**102**	⇓*i*P	**Pn**	**19 48 08.2**	**+0.4**
	baz=101						
YOJ				*e*S	**Sn**	**19 48 21.1**	**+0.3**
	baz=101						
NHW	**Xinwu Township**	**0.94**	**292**	*e*P	**Pn**	**19 48 08.5**	**+0.5**
	baz=293						
NHW				*e*S	**Sn**	**19 48 22.1**	**+1.1**
	baz=293						
SBCB	**Hsinchu**	**0.94**	**278**	*e*P	**Pn**	**19 48 08.6**	**+0.6**
	baz=279						
SBCB				*e*S	**Sn**	**19 48 21.9**	**+0.8**
	baz=279						
HSN	**Hsinchu**	**0.96**	**279**	*e*P	**Pn**	**19 48 08.3**	**+0.1**
	baz=281						
HSN				*e*S	**Sn**	**19 48 21.3**	**-0.1**
	baz=281						
PCYT	**Pengchaiyu**	**0.96**	**3**	P	**Pn**	**19 48 09.0**	**+0.7**
	baz=6.0						
PCYT				*e*S	**Sn**	**19 48 23.3**	**+1.7**
	baz=6.0						
CHGB	**Renai**	**0.97**	**232**	⇑*e*P	**Pn**	**19 48 09.1**	**+0.5**
	baz=231						
CHGB				*e*S	**Sn**	**19 48 22.1**	**0.0**
	baz=231						
ESL	**Shilin**	**1.00**	**212**	P	**Pn**	**19 48 07.8**	**-0.9**
	baz=210						
ESL				*e*S	**Sn**	**19 48 20.5**	**-1.8**
	baz=210						
OWD	**Renai**	**1.04**	**227**	*e*P	**Pn**	**19 48 09.7**	**+0.3**
	baz=226						
OWD				*e*S	**Sn**	**19 48 22.7**	**-0.8**
	baz=226						
NJN	**Zhunan**	**1.04**	**271**	*e*P	**Pn**	**19 48 09.9**	**+0.7**
	baz=272						
NJN				*e*S	**Sn**	**19 48 24.0**	**+0.8**
	baz=272						
TEGC	**Jichi Village**	**1.04**	**205**	*e*P	**Pn**	**19 48 09.8**	**+0.5**
	baz=203						
WHP	**Taichung City**	**1.04**	**249**	⇓*e*P	**Pn**	**19 48 10.7**	**+1.3**
	baz=248						
WHP				*e*S	**Sn**	**19 48 24.7**	**+1.2**
	baz=248						
WUSB	**Renai**	**1.05**	**231**	⇑P	**Pn**	**19 48 10.1**	**+0.5**
	baz=230						
WUSB				*e*S	**Sn**	**19 48 24.2**	**+0.4**
	baz=230						
NMLH	**Miaoli**	**1.12**	**264**	*e*P	**Pn**	**19 48 10.9**	**+0.7**
	baz=264						
NMLH				*e*S	**Sn**	**19 48 25.6**	**+0.5**
	baz=264						
EGFH	**Guangfu**	**1.12**	**209**	*e*P	**Pn**	**19 48 09.3**	**-1.0**
	baz=207						
EGFH				*e*S	**Sn**	**19 48 23.6**	**-1.6**
	baz=207						
WPL	**Puli Township**	**1.16**	**236**	*e*P	**Pn**	**19 48 12.0**	**+1.2**
	baz=235						
WPL				*e*S	**Sn**	**19 48 26.6**	**+0.5**
	baz=235						
NSY	**Sanyi**	**1.17**	**258**	*e*P	**Pn**	**19 48 11.8**	**+1.0**
	baz=258						
NSY				*e*S	**Sn**	**19 48 27.3**	**+1.1**
	baz=258						
DPDB	**Guoxing**	**1.17**	**238**	*e*P	**Pn**	**19 48 12.4**	**+1.4**
	baz=237						
DPDB				*e*S	**Sn**	**19 48 27.3**	**+0.9**
	baz=237						
TWQ1	**Liyutan**	**1.17**	**255**	*e*P	**Pn**	**19 48 11.7**	**+0.7**
	baz=254						
TWQ1				*e*S	**Sn**	**19 48 27.2**	**+0.9**
	baz=254						
WCS	**Beigang Elemen**	**1.17**	**239**	⇓*e*P	**Pn**	**19 48 12.2**	**+1.3**
	baz=238						
WCS				*e*S	**Sn**	**19 48 27.8**	**+1.6**
	baz=238						
VWDT	**VWDT**	**1.20**	**222**	*e*P	**Pn**	**19 48 11.8**	**+0.5**
	baz=220						
VWDT				*e*S	**Sn**	**19 48 27.2**	**+0.1**
	baz=220						
SMLT	**Sun Moon Lake**	**1.28**	**233**	*e*P	**Pn**	**19 48 13.7**	**+1.2**
	baz=232						
SMLT				*e*S	**Sn**	**19 48 31.5**	**+2.6**
	baz=232						
HGSD	**Ruisui**	**1.28**	**205**	*e*P	**Pn**	**19 48 12.4**	**0.0**
	baz=204						
HGSD				*e*S	**Sn**	**19 48 28.9**	**0.0**
	baz=204						
WDJ	**Dajia District**	**1.29**	**256**	*e*P	**Pn**	**19 48 13.2**	**+0.8**
	baz=256						
WDJ				*e*S	**Sn**	**19 48 29.6**	**+0.6**
	baz=256						
TYC	**Yuchr**	**1.30**	**235**	*e*P	**Pn**	**19 48 13.7**	**+1.2**
	baz=234						
TYC				*e*S	**Sn**	**19 48 30.5**	**+1.3**
	baz=234						
SSLB	**Suanglung**	**1.30**	**228**	*e*P	**Pn**	**19 48 13.3**	**+0.7**
	baz=227						
SSLB				*e*S	**Sn**	**19 48 30.9**	**+1.6**
	baz=227						
EHY	**Hungye**	**1.31**	**209**	*e*P	**Pn**	**19 48 11.8**	**-1.0**
	baz=207						
EHY				*e*S	**Sn**	**19 48 27.6**	**-1.9**
	baz=207						
TCU	**Taichung**	**1.32**	**247**	*e*P	**Pn**	**19 48 13.9**	**+1.0**
	baz=247						
WWF	**Wufeng**	**1.35**	**243**	*e*P	**Pn**	**19 48 14.5**	**+1.2**
	baz=242						
WWF				*e*S	**Sn**	**19 48 31.5**	**+1.1**
	baz=242						
YULB	**Yu-li**	**1.42**	**207**	*e*P	**Pn**	**19 48 13.2**	**-1.1**
	baz=206						
YULB				*e*S	**Sn**	**19 48 31.8**	**-0.4**
	baz=206						
ECBN	**Changbin**	**1.43**	**201**	*e*P	**Pn**	**19 48 12.9**	**-1.5**
	baz=200						
ECBN				*e*S	**Sn**	**19 48 30.9**	**-1.5**
	baz=200						
WJS	**Zhushan**	**1.44**	**235**	*e*P	**Pn**	**19 48 15.5**	**+1.1**
	baz=234						
WJS				*e*S	**Sn**	**19 48 34.4**	**+1.8**
	baz=234						
WNT	**Mingjian**	**1.44**	**238**	*e*P	**Pn**	**19 48 16.0**	**+1.5**
	baz=237						
WNT				*e*S	**Sn**	**19 48 34.4**	**+1.7**
	baz=237						
WCHH	**Zhanghua**	**1.45**	**247**	*e*P	**Pn**	**19 48 15.1**	**+0.5**
	baz=246						
WCHH				*e*S	**Sn**	**19 48 33.3**	**+0.6**
	baz=246						
EYUL	**Yuli**	**1.45**	**206**	*e*P	**Pn**	**19 48 14.6**	**-0.1**
	baz=205						
TWF1	**Yuli**	**1.46**	**207**	*e*P	**Pn**	**19 48 13.6**	**-1.1**
	baz=205						
WYL	**Yuanlin Townsh**	**1.48**	**242**	*e*P	**Pn**	**19 48 16.0**	**+1.0**
	baz=242						
WYL				*e*S	**Sn**	**19 48 34.7**	**+1.2**
	baz=242						
ALS	**Alishan**	**1.59**	**224**	*e*P	**Pn**	**19 48 18.0**	**+1.3**
	baz=223						
ALS				*e*S	**Sn**	**19 48 38.7**	**+2.1**
	baz=223						
FULB	**Fuli**	**1.60**	**204**	*e*P	**Pn**	**19 48 16.6**	**0.0**
	baz=203						
FULB				*e*S	**Sn**	**19 48 35.9**	**-0.5**
	baz=203						
IRIF	**Iriomote-Funau**	**1.60**	**101**	*i* P	**Pn**	**19 48 16.9**	**+0.4**
IRIF				S	**Sn**	**19 48 36.6**	**+0.2**
CHN5	**Tsauling**	**1.61**	**229**	*e*P	**Pn**	**19 48 18.3**	**+1.4**
	baz=228						
CHN5				*e*S	**Sn**	**19 48 39.5**	**+2.6**
	baz=228						
WGK	**Gukeng**	**1.64**	**234**	*e*P	**Pn**	**19 48 18.5**	**+1.3**
	baz=233						
WGK				*e*S	**Sn**	**19 48 39.2**	**+1.8**
	baz=233						
WDLH	**Douliu**	**1.66**	**235**	*e*P	**Pn**	**19 48 18.5**	**+1.1**
	baz=234						
WDLH				*e*S	**Sn**	**19 48 39.3**	**+1.5**
	baz=234						
CHKT	**Chengkung**	**1.66**	**201**	*e*P	**Pn**	**19 48 16.9**	**-0.6**
	baz=200						
CHKT				*e*S	**Sn**	**19 48 35.0**	**-2.9**
	baz=200						
WRL	**Guolierlin Hig**	**1.67**	**243**	*e*P	**Pn**	**19 48 17.9**	**+0.3**
	baz=243						
WRL				*e*S	**Sn**	**19 48 37.9**	**-0.3**
	baz=243						
EHD	**Haiduan**	**1.68**	**206**	*e*P	**Pn**	**19 48 16.6**	**-1.1**
	baz=205						
EHD				*e*S	**Sn**	**19 48 38.0**	**-0.3**
	baz=205						
ECS	**Chishang**	**1.72**	**205**	*e*P	**Pn**	**19 48 18.6**	**+0.4**
	baz=204						
ELDTW	**Lidau**	**1.73**	**212**	*e*P	**Pn**	**19 48 17.8**	**-0.6**
	baz=211						
ELDTW				*e*S	**Sn**	**19 48 38.7**	**-0.9**
	baz=211						
HATJ	**Hateruma jima**	**1.74**	**110**	*e*P	**Pn**	**19 48 19.6**	**+1.1**
HATJ				*e*S	**Sn**	**19 48 40.7**	**+0.9**
WCKO	**Fanlu**	**1.77**	**227**	*e*P	**Pn**	**19 48 20.5**	**+1.5**
	baz=226						
WCKO				*e*S	**Sn**	**19 48 42.9**	**+2.3**
	baz=226						
WTK	**Tuku**	**1.77**	**237**	*e*P	**Pn**	**19 48 19.4**	**+0.5**
	baz=236						
WTK				*e*S	**Sn**	**19 48 41.1**	**+0.6**
	baz=236						
EDH	**Donghe**	**1.80**	**201**	*e*P	**Pn**	**19 48 18.7**	**-0.7**
	baz=200						
EDH				*e*S	**Sn**	**19 48 38.9**	**-2.3**
	baz=200						
CHN4	**Tsaushan**	**1.84**	**225**	*e*P	**Pn**	**19 48 21.3**	**+1.5**
	baz=224						
CHN4				*e*S	**Sn**	**19 48 45.0**	**+2.8**
	baz=224						
TPUB	**Ta-pu**	**1.85**	**223**	*e*P	**Pn**	**19 48 21.5**	**+1.4**
	baz=222						

TPUB				*e*S	**Sn**	**19 48 45.1**	**+2.6**
	baz=222						
CHY	**Chiayi**	**1.86**	**232**	*e*P	**Pn**	**19 48 21.0**	**+0.9**
	baz=231						
CHY				*e*S	**Sn**	**19 48 43.6**	**+1.0**
	baz=231						
STYH	**Taoyuan**	**1.87**	**218**	*e*P	**Pn**	**19 48 21.6**	**+1.5**
	baz=217						
STYH				*e*S	**Sn**	**19 48 45.7**	**+2.9**
	baz=217						
JKRS	**Kuro-shima**	**1.87**	**103**	P	**Pn**	**19 48 20.4**	**+0.2**
JKRS				S	**Sn**	**19 48 43.5**	**+0.7**
STYT	**Tauyuan**	**1.88**	**218**	*e*P	**Pn**	**19 48 22.3**	**+1.8**
	baz=217						
STYT				*e*S	**Sn**	**19 48 46.0**	**+2.7**
	baz=217						
WTP	**Ta-pu**	**1.90**	**223**	*e*P	**Pn**	**19 48 22.1**	**+1.3**
	baz=221						
WTP				*e*S	**Sn**	**19 48 46.5**	**+2.8**
	baz=221						
LONT	**Longtian**	**1.93**	**205**	*e*P	**Pn**	**19 48 21.4**	**+0.4**
	baz=204						
WSF	**Szhu**	**1.93**	**238**	*e*P	**Pn**	**19 48 21.6**	**+0.6**
	baz=238						
WSF				*e*S	**Sn**	**19 48 44.9**	**+0.6**
	baz=238						
JIJ	**Ishigaki jima**	**1.96**	**98**	P	**Pn**	**19 48 21.9**	**+0.4**
JIJ				S	**Sn**	**19 48 44.6**	**-0.5**
TWK	**Hsinying**	**1.97**	**225**	*e*P	**Pn**	**19 48 22.6**	**+1.0**
	baz=224						
TWK				*e*S	**Sn**	**19 48 48.1**	**+2.8**
	baz=224						
WSL	**Shuilin Townsh**	**1.99**	**236**	*e*P	**Pn**	**19 48 22.4**	**+0.6**
	baz=235						
WSL				*e*S	**Sn**	**19 48 46.6**	**+0.9**
	baz=235						
CHN1	**Nanshi**	**2.00**	**223**	*e*P	**Pn**	**19 48 23.1**	**+1.1**
	baz=222						
CHN1				*e*S	**Sn**	**19 48 49.5**	**+3.3**
	baz=222						
TWG	**Pinlang**	**2.02**	**205**	*e*P	**Pn**	**19 48 23.1**	**+0.7**
	baz=204						
TWG				*e*S	**Sn**	**19 48 45.0**	**-1.7**
	baz=204						
TWGBT	**Beinan**	**2.02**	**205**	*e*P	**Pn**	**19 48 23.1**	**+0.7**
	baz=204						
TWGBT				*e*S	**Sn**	**19 48 45.0**	**-1.7**
	baz=204						
LDUT	**Ludao**	**2.04**	**194**	*e*P	**Pn**	**19 48 20.9**	**-1.6**
	baz=193						
LDUT				*e*S	**Sn**	**19 48 43.6**	**-3.4**
	baz=193						
SGST	**Jiashian**	**2.05**	**220**	*e*P	**Pn**	**19 48 23.5**	**+0.9**
	baz=219						
SGST				*e*S	**Sn**	**19 48 49.0**	**+1.9**
	baz=219						
ICHU	**Yijhu**	**2.05**	**231**	*e*P	**Pn**	**19 48 23.4**	**+0.8**
	baz=230						
ICHU				*e*S	**Sn**	**19 48 48.2**	**+1.0**
	baz=230						
JISG	**Ishigakijimahi**	**2.09**	**92**	P	**Pn**	**19 48 23.9**	**+0.6**
JISG				*e*S	**Sn**	**19 48 48.5**	**+0.2**
CHN8	**Yiju**	**2.10**	**232**	*e*P	**Pn**	**19 48 24.2**	**+0.9**
	baz=231						
CHN8				*e*S	**Sn**	**19 48 50.6**	**+2.0**
	baz=231						
SCST	**Cishan**	**2.25**	**219**	*e*P	**Pn**	**19 48 27.6**	**+2.2**
	baz=218						
ECL	**Taimali**	**2.27**	**205**	*e*P	**Pn**	**19 48 25.5**	**-0.2**
	baz=204						
ECL				*e*S	**Sn**	**19 48 50.4**	**-2.3**
	baz=204						
SSD	**Sandimen**	**2.29**	**214**	*e*P	**Pn**	**19 48 27.9**	**+2.0**
	baz=213						
SSD				*e*S	**Sn**	**19 48 54.9**	**+1.8**
	baz=213						
TSCK	**Chigu Township**	**2.32**	**230**	*e*P	**Pn**	**19 48 27.2**	**+0.9**
	baz=229						
TSCK				*e*S	**Sn**	**19 48 54.5**	**+0.7**
	baz=229						
VWUC	**VWUC**	**2.35**	**279**	*e*P	**Pn**	**19 48 26.5**	**-0.2**
	baz=278						
VWUC				*e*S	**Sn**	**19 48 52.4**	**-2.2**
	baz=278						
MATB	**Ma-tsu**	**2.39**	**309**	*e*P	**Pn**	**19 48 27.1**	**-0.1**
	baz=309						
MATB				*e*S	**Sn**	**19 48 54.3**	**-1.1**
	baz=309						
MASBT	**Mashibuluo**	**2.40**	**212**	*e*P	**Pn**	**19 48 29.4**	**+2.0**
	baz=211						
MSUT	**Lienchiang**	**2.41**	**309**	*e*P	**Pn**	**19 48 27.5**	**0.0**
	baz=309						
MSUT				*e*S	**Sn**	**19 48 54.7**	**-1.4**
	baz=309						
JTJ	**Tarama**	**2.45**	**90**	P	**Pn**	**19 48 29.6**	**+1.5**
JTJ				S	**Sn**	**19 48 57.7**	**+0.8**
PNG	**Penghu**	**2.50**	**245**	*e*P	**Pn**	**19 48 28.1**	**-0.6**
	baz=244						
PNG				*e*S	**Sn**	**19 48 56.0**	**-2.1**
	baz=244						
PHUB	**P'eng-hu**	**2.51**	**243**	*e*P	**Pn**	**19 48 28.2**	**-0.6**
	baz=243						
PHUB				*e*S	**Sn**	**19 48 56.0**	**-2.3**
	baz=243						
EAST	**Anshuo**	**2.51**	**205**	*e*P	**Pn**	**19 48 29.6**	**+0.7**
	baz=204						
WDGT	**Dungji**	**2.56**	**238**	*e*P	**Pn**	**19 48 29.7**	**+0.1**
	baz=237						
WDGT				*e*S	**Sn**	**19 48 58.9**	**-0.8**
	baz=237						
LAY	**Lan-yu**	**2.65**	**189**	*e*P	**Pn**	**19 48 29.8**	**-1.0**
	baz=188						
LAY				*e*S	**Sn**	**19 48 57.9**	**-3.9**
	baz=188						
LYJJ	**Jianjiangzhen**	**2.77**	**313**	*e*P	**Pn**	**19 48 32.4**	**0.0**
	baz=313						
LYJJ				*e*S	**Sn**	**19 49 03.8**	**-1.0**
	baz=313						
VCHM	**Qimei**	**2.77**	**239**	*e*P	**Pn**	**19 48 32.1**	**-0.3**
	baz=238						
XPSS	**Dashiqiu**	**2.79**	**324**	*e*P	**Pn**	**19 48 32.6**	**-0.1**
	baz=325						
XPSS				*e*S	**Sn**	**19 49 04.9**	**-0.4**
	baz=325						
MHZQ	**Yeshan**	**3.05**	**299**	*e*P	**Pn**	**19 48 36.2**	**-0.1**
	baz=298						
MHZQ				*e*S	**Sn**	**19 49 10.1**	**-1.6**
	baz=298						
KNM	**Kinmen**	**3.27**	**266**	*e*P	**Pn**	**19 48 40.9**	**+1.7**
	baz=266						
KNM				*e*S	**Sn**	**19 49 17.2**	**+0.3**
	baz=266						
KNMB	**Chin-men Tao**	**3.31**	**267**	*e*P	**Pn**	**19 48 39.2**	**-0.5**
	baz=267						
KNMB				*e*S	**Sn**	**19 49 15.2**	**-2.6**
	baz=267						
AXDP	**Jialang**	**3.68**	**275**	*e*P	**Pn**	**19 48 44.9**	**+0.1**
	baz=274						
AXDP				*e*S	**Sn**	**19 49 24.5**	**-2.5**
	baz=274						
ZPLA	**Ao Xicun**	**3.96**	**260**	*e*P	**Pn**	**19 48 48.3**	**-0.3**
	baz=259						
ZPLA				*e*S	**Sn**	**19 49 31.2**	**-2.5**
	baz=259						

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*INET **12** 19:48:11.5±0.8, 12.°50N×87.°89W, $h15^{km}\pm 8^{km}$, MW2.8*
*SNET **12** 19:48:13.4±1.2, 13.°93N×87.°47W, $h15^{km}\pm 722^{km}$, ML3.2*
ISC 12 19:48:09.0±2.4**, 12.°5N**±0.°2×**87.°9W**±0.°1**,** $h10^{km}$**, n7,** $\sigma 0.^{s}97$/9**,**
Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.82**	**2**	*e*P	**Pn**	**19 48 26.7**	**0.0**
CNCH				*e*S	**Sn**	**19 48 38.6**	**-0.4**
CNCH				IAML		19 48 40.1	
	comp=Z,1μm,0.1s						
CRIN	**San Cristobal**	**0.83**	**73**	*e*P	**Pn**	**19 48 28.4**	**+1.6**
TELN	**Telica**	**1.02**	**82**	*e*P	**Pg**	**19 48 28.3**	**-0.4**
LCY	**Lacayo**	**1.05**	**336**	*e*P	**Pn**	**19 48 31.4**	**+1.5**
PACA	**Pacayal**	**1.10**	**336**	*e*P	**Pn**	**19 48 30.7**	**0.0**
PACA				*e*S	**Sb**	**19 48 44.0**	**-0.7**
PACA	**Pacayal**	**1.10**	**336**	*e*P	**Pb**	**19 48 30.4**	**+0.1**
COPN	**Copaltepe**	**1.27**	**102**	*e*P	**Pn**	**19 48 32.6**	**-0.3**

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*KRSC **12** 19:51:56.9±0.5, 55.°59N×162.°15E, $h68^{km}\pm 13^{km}$, Ml4.7*
*MOS **12** 19:51:57.9±0.8, 55.°65N×162.°12E, $h68^{km}$, mb4.3/8, Error ellipse: s-maj=9.2km s-min=4.6km az=71.2*
*NEIC **12** 19:52:01.7±1.8, 55.°37N±0.°08×161.°9E±0.°2, $h110^{km}\pm 12^{km}$, mb4.0/31, Error ellipse: s-maj=17.3km s-min=11.8km az=87.0*
*IDC **12** 19:52:01.3±2.6, 55.°65N×161.°83E, $h81^{km}\pm 25^{km}$, mb3.6/20, mbtmp3.9/24, MS3.0/10, Error ellipse: s-maj=16.3km s-min=12.0km az=151.0*
ISC 12 19:51:59.0±0.6**, 55.°64N**±0.°03×**162.°07E**±0.°03**,** $h71^{km}\pm 5^{km}$**,**
n178, $\sigma 1.^{s}55$/208**, mb4.0**/50**, 2C-1D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.71**	**36**	PN	**Pn**	**19 52 13.4**	**-0.7**
KBTR				S	**Sn**	**19 52 25.6**	**+0.3**
KBTR	**Krutoberegovo**	**0.71**	**36**	*e*P	**Pn**	**19 52 13.4**	**-0.7**
KBTR				*e*S	**Sn**	**19 52 25.6**	**+0.3**
KBG	**Krutoberegovo**	**0.71**	**30**	PN	**Pn**	**19 52 13.1**	**-1.0**
KBG				S	**Sn**	**19 52 25.5**	**+0.1**
KBG	**Krutoberegovo**	**0.71**	**30**	*e*P	**Pn**	**19 52 13.1**	**-1.0**
KBG				*e*S	**Sn**	**19 52 25.5**	**+0.1**
BZGR	**Bezymyannyi-Gr**	**0.84**	**292**	PN	**Pn**	**19 52 15.0**	**-0.7**
BZGR				S	**Sn**	**19 52 27.7**	**-0.4**
BZGR	**Bezymyannyi-Gr**	**0.84**	**292**	*e*P	**Pn**	**19 52 15.0**	**-0.7**
BZGR				*e*S	**Sn**	**19 52 27.7**	**-0.4**
CIRR	**Tsirk**	**0.89**	**303**	PN	**Pn**	**19 52 15.9**	**-0.5**
CIRR	**Tsirk**	**0.89**	**303**	*e*P	**Pn**	**19 52 15.9**	**-0.5**
LGNR	**Loginova**	**0.90**	**300**	PN	**Pn**	**19 52 16.7**	**+0.1**
LGNR	**Loginova**	**0.90**	**300**	*e*P	**Pn**	**19 52 16.7**	**+0.1**
BZP	**Bezymyannyi-Pe**	**0.91**	**288**	*e*P	**Pn**	**19 52 15.6**	**-1.0**
BZMR	**Bezymyannaya**	**0.94**	**289**	PN	**Pn**	**19 52 16.2**	**-0.8**
BZMR	**Bezymyannaya**	**0.94**	**289**	*e*P	**Pn**	**19 52 16.2**	**-0.8**
BZWR	**Bezymyannyi-We**	**0.95**	**291**	PN	**Pn**	**19 52 16.6**	**-0.5**
BZWR				S	**Sn**	**19 52 31.2**	**+0.6**
BZWR	**Bezymyannyi-We**	**0.95**	**291**	*e*P	**Pn**	**19 52 16.6**	**-0.5**
BZWR				*e*S	**Sn**	**19 52 31.2**	**+0.6**
SMKR	**Semkarok**	**1.01**	**341**	PN	**Pn**	**19 52 17.5**	**-0.3**
SMKR				S	**Sn**	**19 52 32.2**	**+0.5**
SMKR	**Semkarok**	**1.01**	**341**	*e*P	**Pn**	**19 52 17.5**	**-0.3**
SMKR				*e*S	**Sn**	**19 52 32.2**	**+0.5**
KIRR	**Kirishev**	**1.03**	**289**	PN	**Pn**	**19 52 17.7**	**-0.4**
KIRR				S	**Sn**	**19 52 33.1**	**+0.8**
KIRR	**Kirishev**	**1.03**	**289**	*e*P	**Pn**	**19 52 17.7**	**-0.4**
KIRR				*e*S	**Sn**	**19 52 33.1**	**+0.8**
KMNR	**Kamenistaya**	**1.05**	**277**	PN	**Pn**	**19 52 17.8**	**-0.5**
KMNR				S	**Sn**	**19 52 33.1**	**+0.5**
KMNR	**Kamenistaya**	**1.05**	**277**	*e*P	**Pn**	**19 52 17.8**	**-0.5**
KMNR				*e*S	**Sn**	**19 52 33.1**	**+0.5**
KLY	**Klyuchi**	**1.05**	**311**	PN	**Pn**	**19 52 16.4**	**-1.7**
KLY				S	**Sn**	**19 52 30.2**	**-2.2**
KLY	**Klyuchi**	**1.05**	**311**	*e*P	**Pn**	**19 52 16.4**	**-1.7**
KLY				*e*S	**Sn**	**19 52 30.2**	**-2.2**
TUMD	**Tumrok D**	**1.05**	**246**	*e*P	**Pn**	**19 52 17.1**	**-1.1**
TUMD				*e*S	**Sn**	**19 52 31.6**	**-0.9**
KPT	**Kopyto**	**1.10**	**288**	PN	**Pn**	**19 52 18.2**	**-0.7**
KPT	**Kopyto**	**1.10**	**288**	*e*P	**Pn**	**19 52 18.2**	**-0.7**
SRKR	**Sorokina**	**1.14**	**334**	PN	**Pn**	**19 52 19.4**	**0.0**
SRKR	**Sorokina**	**1.14**	**334**	*e*P	**Pn**	**19 52 19.4**	**0.0**
TUMR	**Tumrok**	**1.15**	**253**	PN	**Pn**	**19 52 19.2**	**-0.4**
TUMR				S	**Sn**	**19 52 35.3**	**+0.3**
TUMR	**Tumrok**	**1.15**	**253**	*e*P	**Pn**	**19 52 19.2**	**-0.4**
TUMR				*e*S	**Sn**	**19 52 35.3**	**+0.3**
SRDR	**Sredinnyy**	**1.49**	**298**	PN	**Pn**	**19 52 23.7**	**-0.2**
SRDR				S	**Sn**	**19 52 43.4**	**+0.7**
SRDR	**Sredinnyy**	**1.49**	**298**	*e*P	**Pn**	**19 52 23.7**	**-0.2**
SRDR				*e*S	**Sn**	**19 52 43.4**	**+0.7**
ESO	**Esso**	**1.93**	**280**	PN	**Pn**	**19 52 30.7**	**+1.0**
ESO	**Esso**	**1.93**	**280**	*e*P	**Pn**	**19 52 30.7**	**+1.0**
BKI	**Bering**	**2.26**	**99**	PN	**Pn**	**19 52 33.3**	**-0.9**
BKI				S	**Sn**	**19 52 59.3**	**-1.8**
BKI	**Bering**	**2.26**	**99**	*e*P	**Pn**	**19 52 33.3**	**-0.9**
BKI				*e*S	**Sn**	**19 52 59.3**	**-1.8**
SPN	**Mys Shipunski**	**2.81**	**206**	PN	**Pn**	**19 52 40.5**	**-1.2**
SPN				S	**Sn**	**19 53 12.2**	**-2.2**
SPN	**Mys Shipunski**	**2.81**	**206**	*e*P	**Pn**	**19 52 40.5**	**-1.2**
SPN				*e*S	**Sn**	**19 53 12.2**	**-2.2**
TIGL	**Tigil**	**2.84**	**320**	*e*P	**Pn**	**19 52 43.0**	**+1.0**
NLC	**Nalytchevo**	**2.94**	**214**	PN	**Pn**	**19 52 44.3**	**+0.9**
NLC				S	**Sn**	**19 53 18.3**	**+0.8**
NLC	**Nalytchevo**	**2.94**	**214**	*e*P	**Pn**	**19 52 44.3**	**+0.9**
NLC				*e*S	**Sn**	**19 53 18.3**	**+0.8**
KRX	**Arik**	**3.03**	**223**	PN	**Pn**	**19 52 45.4**	**+0.6**
KRX	**Arik**	**3.03**	**223**	*e*P	**Pn**	**19 52 45.4**	**+0.6**
KRER	**Koryakskii**	**3.04**	**221**	PN	**Pn**	**19 52 45.1**	**+0.2**
KRER	**Koryakskii**	**3.04**	**221**	*e*P	**Pn**	**19 52 45.1**	**+0.2**
SMAR	**Somma**	**3.05**	**220**	PN	**Pn**	**19 52 45.3**	**+0.2**
SMAR	**Somma**	**3.05**	**220**	*e*P	**Pn**	**19 52 45.3**	**+0.2**
AVH	**Avacha**	**3.07**	**221**	PN	**Pn**	**19 52 46.0**	**+0.7**
AVH				S	**Sn**	**19 53 21.4**	**+0.5**
AVH	**Avacha**	**3.07**	**221**	*e*P	**Pn**	**19 52 46.0**	**+0.7**
AVH				*e*S	**Sn**	**19 53 21.4**	**+0.5**
UGLR	**Uglovaya**	**3.08**	**219**	PN	**Pn**	**19 52 45.9**	**+0.4**
UGLR	**Uglovaya**	**3.08**	**219**	*e*P	**Pn**	**19 52 45.9**	**+0.4**
GNL	**Ganaly**	**3.09**	**233**	PN	**Pn**	**19 52 46.0**	**+0.5**
GNL	**Ganaly**	**3.09**	**233**	*e*P	**Pn**	**19 52 46.0**	**+0.5**
KOK	**Koryaka**	**3.09**	**222**	PN	**Pn**	**19 52 46.3**	**+0.8**
KOK	**Koryaka**	**3.09**	**222**	*e*P	**Pn**	**19 52 46.3**	**+0.8**
DALK	**Dalny**	**3.25**	**218**	PN	**Pn**	**19 52 47.7**	**+0.1**
DALK				S	**Sn**	**19 53 24.6**	**-0.5**
DALK	**Dalny**	**3.25**	**218**	*e*P	**Pn**	**19 52 47.7**	**+0.1**
DALK				*e*S	**Sn**	**19 53 24.6**	**-0.5**
INSR	**Institute**	**3.28**	**220**	*e*S	**Sn**	**19 53 26.9**	**+1.1**
PET	**Petropavlovsk**	**3.30**	**219**		**Pn**	**19 52 47.5**	**-0.7**
PET	**Petropavlovsk**	**3.30**	**219**	PN	**Pn**	**19 52 48.7**	**+0.5**
PET				S	**Sn**	**19 53 26.3**	**+0.1**
PET	**Petropavlovsk**	**3.30**	**219**	*e*P	**Pn**	**19 52 48.7**	**+0.5**
PET				*e*S	**Sn**	**19 53 26.3**	**+0.1**
PEA0B	**Petropavlovsk-**	**3.60**	**227**	Pn	**Pn**	**19 52 52.9**	**+0.5**
PEA0B	**Petropavlovsk-**	**3.60**	**227**	PN	**Pn**	**19 52 52.9**	**+0.5**
PETK	**Petropavlovsk-**	**3.60**	**227**	P	**Pn**	**19 52 52.2**	**-0.2**
	23nm,0.5s,baz=69,slow=13,SNR=90						
PETK				S	**Sn**	**19 53 37.0**	**+3.4**
	33nm,0.7s,baz=324,slow=7.3,SNR=5.0						
PETK				LR	LR	19 54 40.2	
	comp=Z,172nm,20.4s,baz=111,slow=45						
KRMR	**Karymshinskiy**	**3.64**	**221**	PN	**Pn**	**19 52 53.6**	**+0.7**
KRMR				S	**Sn**	**19 53 36.8**	**+2.2**
KRMR	**Karymshinskiy**	**3.64**	**221**	*e*P	**Pn**	**19 52 53.6**	**+0.7**
KRMR				*e*S	**Sn**	**19 53 36.8**	**+2.2**
OSSR	**Ossora**	**3.66**	**8**	PN	**Pn**	**19 52 53.3**	**+0.1**
OSSR	**Ossora**	**3.66**	**8**	*e*P	**Pn**	**19 52 53.3**	**+0.1**
GRL	**Gorelyy**	**3.88**	**219**	PN	**Pn**	**19 52 57.9**	**+1.5**
GRL	**Gorelyy**	**3.88**	**219**	*e*P	**Pn**	**19 52 57.9**	**+1.5**
MTVR	**Mutnovka**	**3.90**	**218**	PN	**Pn**	**19 52 57.6**	**+1.0**
MTVR	**Mutnovka**	**3.90**	**218**	*e*P	**Pn**	**19 52 57.6**	**+1.0**
APC	**Apacha**	**3.96**	**229**	PN	**Pn**	**19 52 58.7**	**+1.4**
APC	**Apacha**	**3.96**	**229**	*e*P	**Pn**	**19 52 58.7**	**+1.4**
KDTR	**Khodutka, Kamc**	**4.51**	**213**	PN	**Pn**	**19 53 06.0**	**+1.3**
KDTR	**Khodutka, Kamc**	**4.51**	**213**	*e*P	**Pn**	**19 53 06.0**	**+1.3**
PAU	**Pauzhetka**	**5.22**	**219**	PN	**Pn**	**19 53 18.7**	**+4.2**
PAU	**Pauzhetka**	**5.22**	**219**	*e*P	**Pn**	**19 53 18.7**	**+4.2**
TILK	**Tilichiki**	**5.29**	**22**	PN	**Pn**	**19 53 16.8**	**+1.5**
TILK	**Tilichiki**	**5.29**	**22**	*e*P	**Pn**	**19 53 16.8**	**+1.5**
MA2	**Magadan**	**7.24**	**308**	LR	LR	19 57 27.6	
	comp=Z,33nm,18.6s,baz=85,slow=46						
SHEM	**Shemya Is, Ala**	**7.63**	**107**	LR	LR	19 56 18.8	
	comp=Z,69nm,19.9s,baz=126,slow=33						
SEY	**Seymchan**	**8.83**	**330**	P	Pn	19 54 08.8	+5.1
	0.2nm,0.3s,baz=178,slow=23,SNR=0.8						
TYV	**Tymovskoe**	**12.56**	**256**	*e*PN	**Pn**	**19 54 58.2**	**+3.7**
TYV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TYV				pmax	pmax		
	comp=Z,200nm,4.7s						
BILL	**Bilibino**	**12.60**	**7**	*e*PN	**Pn**	**19 54 57.5**	**+2.5**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.3s						
YSS	**Yuzh-Sakhalins**	**14.84**	**242**	*i* P	Pn	19 55 19.5	-5.2
GRNR	**Gornyy**	**16.08**	**263**	⇓*i*P	**P**	**19 55 43.0**	**+0.5**
GRNR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
JKA	**Kamikawa-asahi**	**16.97**	**235**	P	**Pn**	**19 55 48.5**	**-3.1**
JKA				IAmb	IAmb	19 55 55.6	
	comp=Z,11nm,1.0s						
ASAJ	**Asahikawa**	**16.97**	**235**	P	**P**	**19 55 52.8**	**+0.3**
	comp=Z,8.8nm,0.9s,baz=26,slow=4.9,SNR=16						
ASAJ				LR	LR	20 01 32.5	
	comp=Z,64nm,21.5s,baz=116,slow=34						
TNA	**Tin City**	**17.57**	**44**		**P**	**19 56 02.4**	**+3.5**
YAK	**Yakutsk**	**17.80**	**304**	P	**Pn**	**19 56 02.6**	**+1.0**
	comp=Z,2.0nm,0.4s,baz=128,slow=2.1,SNR=2.4						
ERM	**Erimo**	**18.38**	**230**	P	**P**	**19 56 05.0**	**-2.9**
ERM	**Erimo**	**18.38**	**230**	*i* P	**P**	**19 56 06.1**	**-1.8**
KLR	**Kul'dur**	**19.46**	**263**	P	**P**	**19 56 20.2**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=38,slow=10,SNR=4.6						
KLR				LR	LR	20 04 16.6	
	comp=Z,51nm,19.2s,baz=47,slow=38						
KLR	**Kul'dur**	**19.46**	**263**	*i* P	**P**	**19 56 15.9**	**-3.8**
KLR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TIXI	**Tiksi**	**21.32**	**332**	P	**P**	**19 56 41.4**	**+1.9**
	comp=Z,2.2nm,0.6s,baz=90,slow=20,SNR=16						
	comp=Z,2.2nm,0.6s						
TIXI	**Tiksi**	**21.32**	**332**	P	**P**	**19 56 41.2**	**+1.7**
TIXI				IAmb	IAmb	19 56 44.2	
	comp=Z,5.2nm,1.0s						
TIXI	**Tiksi**	**21.32**	**332**	*i* P	**P**	**19 56 38.0**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HEH	**HeiHe**	**21.41**	**270**	*e*P	**P**	**19 56 40.8**	**+0.1**
HEH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HEH				pmax	pmax		
	comp=Z,180nm,3.9s						
USRK	**Ussuriysk Ar.**	**22.31**	**252**	P	**P**	**19 56 51.8**	**+1.4**
	comp=Z,0.6nm,0.5s,baz=105,slow=14,SNR=2.1						
	comp=Z,0.6nm,0.5s						
JMM	**Marumori**	**22.83**	**228**	P	**P**	**19 56 52.5**	**-3.4**
JMM				IAmb	IAmb	19 56 57.5	
	comp=Z,9.4nm,0.7s						
P18K	**Big Mountain,**	**22.94**	**63**	P	**P**	**19 56 55.0**	**-1.9**
IMAR	**Indian Mountai**	**23.37**	**46**	P	**P**	**19 57 02.1**	**+1.2**
M20K	**Styx River**	**23.65**	**56**	P	**P**	**19 57 03.8**	**+0.2**
H21K	**Melozitna Rive**	**23.73**	**47**	P	**P**	**19 57 05.7**	**+1.5**
JSD	**Sado**	**23.79**	**232**	P	**P**	**19 57 00.5**	**-4.4**
JSD				IAmb	IAmb	19 57 09.6	
	comp=Z,8.5nm,1.0s						
PPLA	**Purkeypile**	**24.01**	**54**	P	**P**	**19 57 08.6**	**+1.7**
PPLA				IAmb	IAmb	19 57 15.7	
	comp=Z,4.7nm,1.0s						
CAST	**Castle Rocks**	**24.03**	**52**	P	**P**	**19 57 09.2**	**+2.3**
I21K	**Tanana**	**24.05**	**48**	P	**P**	**19 57 08.6**	**+1.5**
SKT	**Skwentna**	**24.39**	**56**	P	**P**	**19 57 11.2**	**+1.0**
MLY	**Manley**	**24.58**	**48**	P	**P**	**19 57 12.0**	**+0.1**
MLY				IAmb	IAmb	19 57 30.4	
	comp=Z,4.3nm,0.9s						
KDAK	**Kodiak Island**	**24.63**	**66**	P	**P**	**19 57 13.2**	**+0.9**
	comp=Z,10nm,1.1s,baz=275,slow=12,SNR=2.4						
KDAK				LR	LR	20 06 09.0	
	comp=Z,44nm,20.9s,baz=33,slow=34						
	comp=Z,10nm,1.1s						
SUA	**Susitna One**	**24.83**	**57**	P	**P**	**19 57 15.9**	**+1.6**
SUA				IAmb	IAmb	19 57 19.3	
	comp=Z,3.8nm,0.8s						
TRF	**Thorofare Moun**	**24.83**	**52**	P	**P**	**19 57 16.6**	**+2.2**
TRF				IAmb	IAmb	19 57 32.3	
	comp=Z,11nm,1.1s						
COLD	**Coldfoot**	**24.88**	**43**	P	**P**	**19 57 16.4**	**+1.9**
COLD				IAmb	IAmb	19 57 32.4	
	comp=Z,3.5nm,0.9s						
MJB9	**Matsu-Tunnel**	**25.05**	**230**	P	**P**	**19 57 14.5**	**-1.9**
MAJO	**Matsushiro**	**25.05**	**230**	P	**P**	**19 57 14.8**	**-1.7**
MAJO	**Matsushiro**	**25.05**	**230**	*i* P	**P**	**19 57 15.8**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,15nm,0.9s						
MJAR	**Matsushiro Arr**	**25.05**	**230**	P	**P**	**19 57 16.8**	**+0.3**
	comp=Z,9.5nm,0.8s,baz=28,slow=8.3,SNR=33						
MJAR				LR	LR	20 07 37.2	
	comp=Z,28nm,18.6s,baz=38,slow=38						
	comp=Z,9.5nm,0.8s						
H23K	**Yukon River**	**25.08**	**47**	P	**P**	**19 57 17.9**	**+1.5**
I23K	**Minto, Yukon-K**	**25.16**	**48**	P	**P**	**19 57 17.9**	**+0.8**
I23K				IAmb	IAmb	19 57 36.0	
	comp=Z,8.6nm,0.9s						
NEA2	**Nenana**	**25.30**	**49**	P	**P**	**19 57 19.7**	**+1.3**
NEA2				IAmb	IAmb	19 57 37.1	
	comp=Z,3.4nm,0.9s						
RC01	**Rabbit Creek A**	**25.36**	**58**	P	**P**	**19 57 19.6**	**+0.6**
RC01				IAmb	IAmb	19 57 37.0	
	comp=Z,4.1nm,1.1s						
WRH	**Wood River Hil**	**25.73**	**50**		**P**	**19 57 22.3**	**0.0**
COLA	**College**	**25.81**	**49**	*i* P	**P**	**19 57 22.2**	**-0.8**
COLA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CCB	**Clear Creek Bu**	**25.85**	**49**	P	**P**	**19 57 23.6**	**+0.2**
CCB				IAmb	IAmb	19 57 42.2	
	comp=Z,4.6nm,0.8s						
PWL	**Port Wells**	**26.08**	**58**	P	**P**	**19 57 26.4**	**+0.8**
ILAR	**Eielson Array**	**26.23**	**49**	P	**P**	**19 57 27.8**	**+1.0**
	comp=Z,1.1nm,0.8s,baz=264,slow=9.1,SNR=13						
	comp=Z,1.1nm,0.8s						
SCM	**Sheep Creek Mo**	**26.38**	**56**	P	**P**	**19 57 29.8**	**+1.5**
SCM	**Sheep Creek Mo**	**26.38**	**56**	P	**P**	**19 57 29.8**	**+1.5**
SCM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BMAR	**Burnt Mountain**	**27.06**	**43**	P	**P**	**19 57 35.5**	**+1.2**
K27K	**Chicken**	**28.39**	**50**	P	**P**	**19 57 46.9**	**+0.7**
K27K				IAmb	IAmb	19 58 03.6	
	comp=Z,5.1nm,1.1s						
EGAK	**Eagle**	**28.67**	**48**	P	**P**	**19 57 49.0**	**+0.4**
EGAK				IAmb	IAmb	19 58 04.4	
	comp=Z,6.0nm,1.1s						
BCAR	**Beaver Creek A**	**28.69**	**52**	P	**P**	**19 57 49.2**	**+0.3**
M27K	**Edge Creek, AK**	**28.80**	**53**	P	**P**	**19 57 51.3**	**+1.3**
M27K				IAmb	IAmb	19 58 08.2	
	comp=Z,2.7nm,0.8s						
INK	**Inuvik**	**31.16**	**40**	LR	LR	20 10 43.5	
	comp=Z,58nm,19.7s,baz=56,slow=36						
SONM	**Songino Array**	**34.50**	**281**	P	**P**	**19 58 41.3**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=22,slow=8.1,SNR=2.4						
SONM				PcP	**PcP**	**20 01 13.9**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=94,slow=1.7,SNR=5.9						
SONM				LR	LR	20 13 37.2	
	comp=Z,46nm,19.2s,baz=340,slow=38						
	comp=Z,0.3nm,0.5s						
HHC	**Hu-ho-hao-te**	**35.88**	**267**	*e*P	**P**	**19 58 48.3**	**-3.7**
HHC				pmax	pmax		
	comp=Z,29nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,4.9s						
H11N2	**WAKE ISLAND Hy**	**36.03**	**172**	T	T	20 38 05.0	
	baz=357,slow=76,SNR=49						
H11N3	**WAKE ISLAND Hy**	**36.05**	**172**	T	T	20 38 05.8	
	baz=357,slow=76,SNR=46						
H11N1	**WAKE ISLAND Hy**	**36.05**	**172**	T	T	20 38 08.5	
	baz=357,slow=76,SNR=8.3						
H11S1	**WAKE ISLAND Hy**	**37.23**	**173**	T	T	20 39 41.2	
	baz=349						
H11S3	**WAKE ISLAND Hy**	**37.24**	**173**	T	T	20 39 28.4	
	baz=349						
H11S2	**WAKE ISLAND Hy**	**37.25**	**173**	T	T	20 39 33.3	
	baz=349						
YKA	**Yellowknife Ar**	**40.52**	**45**	P	**P**	**19 59 32.7**	**+2.2**
	comp=Z,0.3nm,0.5s,baz=299,slow=7.9,SNR=5.8						
	comp=Z,0.3nm,0.5s						
WMQ	**Urumqi**	**47.25**	**288**	*e*P	**P**	**20 00 25.0**	**+0.3**
KURK	**Kurchatov**	**47.40**	**301**	P	**P**	**20 00 24.6**	**-1.0**
KURK				IAmb	IAmb	20 00 25.5	
	comp=Z,2.3nm,0.7s						
KURK	**Kurchatov**	**47.40**	**301**	*i* P	**P**	**20 00 23.0**	**-2.7**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MK31	**Makanchi Array**	**48.12**	**295**	*i* P	**P**	**20 00 28.5**	**-2.9**
MKAR	**Makanchi Array**	**48.12**	**295**	P	**P**	**20 00 30.5**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=55,slow=7.9,SNR=7.8						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**48.12**	**295***c*	*e*P	**P**	**20 00 30.7**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRVK	**Borovoye**	**49.76**	**308**	*i* P	**P**	**20 00 41.5**	**-2.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARCES	**ARCESS Array B**	**51.23**	**342**	P	**P**	**20 00 56.1**	**+1.5**
	comp=Z,8.3nm,1.1s,baz=14,slow=11,SNR=1.4						
	comp=Z,8.3nm,1.1s						
PZH	**PanZhiHua**	**51.90**	**262**	P	**P**	**20 00 58.1**	**-2.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,80nm,5.0s						
ARU	**Arti**	**52.32**	**317***c*	*i*P	**P**	**20 01 01.2**	**-1.7**
ARU						20 02 59.2	
ARU				S	**S**	**20 08 21.3**	**-1.2**
ARU				SS	**SS**	**20 11 57.5**	**-2.6**
ARU				pmax	pmax		

	comp=Z,14nm,2.1s						
ELK	Elko	53.82	69	P	P	20 01 18.1	+3.6
	comp=Z,0.6nm,0.4s,baz=243,slow=2.3,SNR=2.7						
	comp=Z,0.6nm,0.4s						
NVAR	Mina Array Bea	53.84	73	P	P	20 01 18.2	+3.6
	comp=Z,1.2nm,0.7s,baz=302,slow=7.7,SNR=11						
	comp=Z,1.2nm,0.7s						
ABKAR	Akbulak array	57.03	310	P	P	20 01 35.4	-1.6
FINES	FINESS Array B	58.24	337	P	P	20 01 46.0	+0.7
	comp=Z,3.1nm,0.7s,baz=30,slow=11,SNR=10						
FINES				LR	LR	20 30 21.3	
	comp=Z,31nm,18.3s,baz=271,slow=40						
	comp=Z,3.1nm,0.7s						
FINES	FINESS Array B	58.24	337	P	P	20 01 46.0	+0.7
OBN	Obninsk	60.99	328	*e*P	P	20 02 02.9	-1.4
OBN				*e*		20 02 42.8	
OBN				pmax	pmax		
	comp=Z,3.0nm,1.2s						
NB2	NORSAR Subarra	61.41	344	P	P	20 02 07.6	+0.4
	comp=Z,2.6nm,0.8s,baz=20,slow=6.9						
NOA	NORSAR Array B	61.41	344	P	P	20 02 07.2	0.0
	comp=Z,1.6nm,0.8s,baz=20,slow=6.7,SNR=7.8						
	comp=Z,1.6nm,0.8s						
GEYT	Alibeck	66.67	303	P	P	20 02 42.4	+0.5
	comp=Z,1.4nm,0.7s,baz=12,slow=12,SNR=2.7						
	comp=Z,1.4nm,0.7s						
AKASG	Malin Array Be	67.02	330	P	P	20 02 43.2	-0.7
	comp=Z,0.2nm,0.3s,baz=27,slow=6.6,SNR=2.5						
	comp=Z,0.2nm,0.3s						
TXAR	Lajitas Array	68.61	69	P	P	20 02 56.0	+1.6
	comp=Z,0.4nm,0.6s,baz=300,slow=4.5,SNR=5.1						
	comp=Z,0.4nm,0.6s						
TXAR	Lajitas Array	68.61	69	P	P	20 02 56.0	+1.6
SOC	Sochi	69.80	319	*e*P	P	20 02 57.3	-4.1
SOC				*e*PPP	PPP	20 07 13.9	
SOC				*e*S	S	20 11 55.0	-10
SOC				*e*S	S	20 11 58.3	-6.5
SOC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CLL	Collm	70.37	340	*e*P	P	20 03 07.0	+2.3
CLL				*e*pP	sP	20 03 31.0	-0.7
GERES	GERESS Array B	72.58	339	P	P	20 03 19.0	+0.8
	comp=Z,0.8nm,0.6s,baz=20,slow=5.8,SNR=5.0						
	comp=Z,0.8nm,0.6s						
KBA	Koelnbreinsper	74.33	338	*e*P	P	20 03 30.4	+1.8
	comp=Z,2.0nm,0.8s						
MOTA	Moosalm	74.53	340	*e*P	P	20 03 31.3	+1.6
	comp=Z,0.5nm,0.4s						
OBKA	Obir	74.62	337	*i* P	P	20 03 32.1	+1.9
	comp=Z,1.3nm,0.7s						
SQTA	Sankt Quirin	74.63	340	*e*P	P	20 03 32.2	+1.9
	comp=Z,0.8nm,0.3s						
FETA	Feichten	74.91	340	*e*P	P	20 03 33.8	+1.8
	comp=Z,1.3nm,0.7s						
BRTR	Keskin Array B	75.38	321	P	P	20 03 35.5	+0.8
	comp=Z,0.5nm,0.7s,baz=98,slow=9.0,SNR=2.7						
	comp=Z,0.5nm,0.7s						
WRA	Warramunga Arr	78.88	206	P	P	20 03 54.6	+0.4
	comp=Z,1.0nm,0.9s,baz=17,slow=6.0,SNR=7.1						
	comp=Z,1.0nm,0.9s						
ASAR	Alice Springs	82.56	206	P	P	20 04 14.8	+1.0
	comp=Z,1.1nm,0.8s,baz=15,slow=5.7,SNR=13						
	comp=Z,1.1nm,0.8s						

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*IDC **12** 20:00:21.8±3.7, 21.°14S×70.°24W, h0^{km}, mb3.8/1, mbtmp3.6/2, ML3.4/1, MS2.6/1, Error ellipse: s-maj=142.9km s-min=46.1km az=103.0*

*GUC **12** 20:00:25.8±0.6, 20.°16S×70.°95W, h34^{km}±2^{km}, ML3.5*

ISC 12 20:00:24.9±2.0**, 20.°17S**±0.°03×**70.°92W**±0.°09**, h23**^{km}±14^{km}**, n22,** σ0.^{s}**87**/35**, 11C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	Huaiquique	0.74	98⇑	*e*P	Pb	20 00 39.1	-0.1
TA02				*e*S	Sn	20 00 49.5	-1.1
TA02				IAML		20 00 51.6	
	comp=N,7μm,0.2s						
TA01	Diego Aracena	0.79	120⇓	*e*P	Pb	20 00 40.3	+0.2
TA01				*i* S	Sb	20 00 51.0	+0.6
TA01				IAML		20 00 52.6	
	comp=N,2μm,0.4s						
PSGC	Pisagua	0.94	53⇓	*e*P	Pb	20 00 42.0	-0.6
PSGC				*e*S	Sn	20 00 54.8	-0.8
PSGC				IAML		20 00 57.1	
	comp=N,2μm,0.2s						
PB11	IPOC Station P	1.25	71⇑	*e*P	Pn	20 00 47.2	0.0
PB11				*e*S	Sb	20 01 04.1	+0.4
PB11				IAML		20 01 06.2	
	comp=N,2μm,0.6s						
PB02	IPOC Station P	1.49	140⇑	*e*P	Pn	20 00 51.1	+0.7
PB02				*e*S	Sn	20 01 10.4	+1.1
PB02				IAML		20 01 16.3	
	comp=E,2μm,0.4s						
PB01	IPOC Station P	1.59	123⇑	*e*P	Pn	20 00 52.3	+0.5
PB01				*e*S	Sb	20 01 12.9	-0.7
PB01				IAML		20 01 20.4	
	comp=E,883nm,0.4s						
MNMC	Minye Minye	1.62	51⇑	*e*P	Pn	20 00 53.0	+0.6
MNMC				*e*S	Sb	20 01 14.3	0.0
MNMC				IAML		20 01 19.6	
	comp=E,3μm,0.3s						
PB12	IPOC Station P	1.64	20⇑	*e*P	Pn	20 00 52.5	0.0
PB12				*e*S	Sn	20 01 13.3	+0.3
PB12				IAML		20 01 23.6	
	comp=N,395nm,0.6s						
PB08	IPOC Station P	1.66	89⇑	*e*P	Pn	20 00 53.9	+0.9
PB08				*e*S	Sb	20 01 15.5	-0.1
PB08				IAML		20 01 23.3	
	comp=N,424nm,0.4s						
GO01	Chusmiza	1.69	73⇑	*e*P	Pb	20 00 54.7	-1.0
GO01				*e*S	Sb	20 01 17.2	+0.4
GO01				IAML		20 01 19.3	
	comp=N,2μm,0.2s						
PB07	IPOC Station P	1.82	148⇑	*e*P	Pn	20 00 55.6	+0.5
PB07				*e*S	Sn	20 01 16.9	-0.7
PB07				IAML		20 01 32.6	
	comp=E,321nm,0.2s						
AP01	Chacalluta	1.87	17⇑	*e*P	Pn	20 00 55.4	-0.1
AP01				*e*S	Sn	20 01 18.8	+0.4
AP01				IAML		20 01 25.8	
	comp=N,846nm,0.4s						
AP01				IAML		20 01 31.6	
	comp=E,990nm,0.5s						
PB03	IPOC Station P	2.16	150	*e*P	Pn	20 01 00.7	+0.9
PB03				*e*S	Sn	20 01 26.9	+1.0
PB03				IAML		20 01 38.7	
	comp=E,175nm,0.4s						
PB09	IPOC Station P	2.25	136	*e*P	Pn	20 01 02.8	+1.8
PB09				*e*S	Sb	20 01 31.2	-1.4
PB09				IAML		20 01 41.7	
	comp=E,738nm,0.8s						
PB09				IAML		20 01 45.0	
	comp=N,392nm,0.6s						
PB04	IPOC Station P	2.27	162	*e*P	Pn	20 01 01.3	+0.1
PB04				*e*S	Sn	20 01 27.5	-1.1
PB04				IAML		20 01 43.1	
	comp=E,254nm,0.4s						
PB06	IPOC Station P	2.82	154⇑	*e*P	Pn	20 01 09.0	+0.3
PB06				*e*S	Sn	20 01 42.0	-0.1
PB06				IAML		20 01 59.0	
	comp=E,177nm,0.7s						
LPAZ	La Paz	4.68	35	Pn	Pb	20 01 41.4	-5.3
	comp=E,0.7nm,0.3s,baz=205,slow=5.8,SNR=7.6						
LPAZ				Sn	Sb	20 02 45.0	+2.1
	baz=201,slow=8.6						
LPAZ				LR	LR	20 03 50.8	
	comp=E,63nm,21.6s,baz=254,slow=40						
	comp=E,1.2nm,0.3s						
H03N1	Juan Fernandez	15.02	207	T	T	20 19 38.2	
	baz=33,slow=72,SNR=33						
H03N2	Juan Fernandez	15.02	207	T	T	20 19 31.8	
	baz=33,slow=72,SNR=25						
H03N3	Juan Fernandez	15.03	207	T	T	20 19 31.2	
	baz=33,slow=72,SNR=24						
TORD	Torodi Ar. Bea	78.69	71	P	P	20 12 24.9	-1.0
	comp=E,0.6nm,0.6s,baz=261,slow=4.7,SNR=3.1						
	comp=E,0.6nm,0.6s						
MKAR	Makanchi Array	145.61	33	PKPbc	PKPab	20 20 02.9	+1.0
	comp=E,0.4nm,0.7s,baz=322,slow=4.3,SNR=5.2						

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*IDC **12** 20:00:35.1±0.8, 43.°73N×105.°30W, h0^{km}, mb4.1/4, mbtmp3.7/11, ML3.2/5, MS3.1/1, Error ellipse: s-maj=20.0km s-min=8.5km az=143.0*

*ANF **12** 20:00:36.7±0.3, 43.°73N×105.°30W, h0^{km}, ML3.7/16, Error ellipse: s-maj=3.5km s-min=3.1km az=102.0*

*NEIC **12** 20:00:37.1±1.4, 43.°78N±0.°05×105.°29W±0.°05, h0^{km}±1^{km}, ML3.4/54, Error ellipse: s-maj=9.6km s-min=4.7km az=148.0*

ISC 12 20:00:36.1±0.6**, 43.°83N**±0.°03×**105.°27W**±0.°04**, h0**^{km}**, n92,** σ**1.**^{s}**54**/98**, mb4.2**/4**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.93	72		Pb	20 00 55.5	+0.2
RSSD	Black Hills	0.93	72	P	Pb	20 00 55.6	+0.3
	baz=247						
K22A	Casper	1.50	218		Pn	20 01 02.3	-2.1
K22A				IAML		20 01 28.2	
	comp=N,880nm,0.3s						
K22A				IAML		20 01 29.6	
	comp=E,606nm,0.8s						
K22A	Casper	1.50	218	P	Pn	20 01 02.4	-2.0
	baz=39,SNR=160						
K22A				S	Sg	20 01 22.2	-2.0
	baz=39						
PHWY	Pilot Hill	2.53	183		Pn	20 01 18.3	-0.4
PHWY				IAML		20 01 56.4	
	comp=E,164nm,0.7s						
RWWY	Rawlins	2.58	214		Pn	20 01 19.0	-0.3
RWWY				IAML		20 01 56.4	
	comp=E,306nm,0.9s						
LAO	LASA Array	2.94	347		Pn	20 01 27.2	+3.1
LAO	LASA Array	2.94	347	P	Pn	20 01 27.0	+2.9
	baz=167						
LAO				S	Sb	20 02 05.5	-0.3
	baz=167						
N23A	Red Feather La	2.98	190		Pn	20 01 25.2	+0.4
N23A				IAML		20 02 08.2	
	comp=N,140nm,0.7s						
N23A				IAML		20 02 20.9	
	comp=E,124nm,1.1s						
N23A	Red Feather La	2.98	190	P	Pn	20 01 24.9	+0.1
	baz=9.4,SNR=13						
N23A				Sb	Sb	20 02 06.9	-0.3
	baz=9.4						
RLMT	Red Lodge	3.14	296		Pn	20 01 27.8	+0.8
RLMT				IAML		20 02 19.5	
	comp=E,105nm,0.5s						
RLMT				IAML		20 02 24.2	
	comp=E,83nm,0.4s						
RLMT	Red Lodge	3.14	296	P	Pn	20 01 28.0	+1.0
	baz=115,SNR=12						
BW06	Boulder Array	3.31	253		Pn	20 01 29.7	+0.3
BW06				IAML		20 02 19.2	
	comp=E,82nm,0.6s						
BW06				IAML		20 02 21.3	
	comp=E,85nm,0.6s						
BW06	Boulder Array	3.31	253	P	Pn	20 01 30.0	+0.6
	baz=71,SNR=20						
BW06				Sb	Sb	20 02 17.3	+0.6
	baz=71						
PD31	Pinedale Array	3.31	253	Pn	Pn	20 01 29.3	-0.1
PDAR	Pinedale Array	3.31	253	Pn	Pn	20 01 29.4	+0.1
	comp=E,9.9nm,0.4s,baz=70,slow=16,SNR=131						
PDAR				Sn	Sn	20 02 12.8	+3.3
	comp=E,23nm,0.3s,baz=68,slow=32,SNR=12						
PDAR	Pinedale Array	3.31	253		Pn	20 01 29.1	-0.3
YMP	Mirror Lake Pl	3.63	286		Pn	20 01 34.3	+0.5
GCMT	Greycliff	3.69	304		Pn	20 01 35.7	+1.1
OGNE	Ogallala	3.75	139	P	Pn	20 01 34.0	-1.3
	baz=320						
H17A	Grant Village	3.87	280		Pn	20 01 38.8	+1.9
H17A	Grant Village	3.87	280	P	Pn	20 01 38.9	+1.9
	baz=98,SNR=9.2						
FLWY	Flagg Ranch	3.93	276		Pn	20 01 38.8	+0.9
FLWY				IAML		20 02 54.1	
	comp=E,58nm,1.2s						
FLWY				IAML		20 03 18.9	
	comp=E,56nm,1.3s						
MOOW	Moose Ponds	3.97	271		Pn	20 01 39.4	+1.0
ISCO	Idaho Springs	4.04	184	Pn	Pn	20 01 39.7	+0.2
ISCO	Idaho Springs	4.04	184	P	Pn	20 01 40.1	+0.7
	baz=3.3,SNR=9.0						
ISCO				Sb	Sb	20 02 38.5	+0.7
	baz=3.3						
REDW	Red Top Meadow	4.08	265		Pn	20 01 40.7	+0.7
REDW				IAML		20 02 56.6	
	comp=E,79nm,0.7s						
IMW	Indian Meadow	4.10	273		Pn	20 01 41.8	+1.5
IMW				IAML		20 02 51.5	
	comp=E,60nm,0.7s						
FXWY	Fox Creek	4.18	269		Pn	20 01 41.6	+0.3
O20A	White River Ci	4.31	212		Pn	20 01 43.4	+0.3
O20A				IAML		20 02 53.5	
	comp=E,58nm,0.8s						
O20A				IAML		20 02 54.7	
	comp=N,63nm,0.9s						
O20A	White River Ci	4.31	212	P	Pn	20 01 43.0	-0.1
	baz=30,SNR=11						
O20A				S	Sn	20 02 32.0	-2.1
	baz=30						
AHID	Auburn Hatcher	4.39	258		Pn	20 01 43.1	-1.1
AHID				IAML		20 02 56.4	
	comp=N,52nm,0.8s						
AHID				IAML		20 03 01.0	
	comp=N,41nm,0.9s						
RDMU	Red Mountain	4.56	226		Pn	20 01 47.3	+0.7
RDMU				IAML		20 03 03.6	
	comp=E,49nm,1.1s						
RDMU				IAML		20 03 15.2	
	comp=N,34nm,1.0s						
SUSD	Miller	4.58	80	S	Sn	20 02 42.7	+2.1
	baz=263						
DGMT	Dagmar	4.70	9	Pn	Pn	20 01 50.7	+2.4
DGMT	Dagmar	4.70	9	P	Pn	20 01 51.0	+2.8
	baz=190						
DGMT				Sb	Sg	20 03 03.8	-3.1
	baz=190						
Q24A	Divide	4.87	179	P	Pn	20 01 50.8	0.0
	baz=359						
BOZ	Bozeman (W)	4.87	293		Pn	20 01 50.5	-0.2
BOZ				IAML		20 03 13.3	
	comp=N,27nm,0.9s						
BOZ				IAML		20 03 21.4	
	comp=N,24nm,1.1s						
BOZ	Bozeman (W)	4.87	293	P	Pn	20 01 51.4	+0.7
	baz=110						
BOZ				Sb	Sb	20 03 05.7	+4.2
	baz=110						
HWUT	Hardware Ranch	5.15	247		Pn	20 01 54.2	-0.4
KSCO	Kaye Shedlock'	5.21	157	Pn	Pn	20 01 55.0	-0.3
KSCO	Kaye Shedlock'	5.21	157	P	Pn	20 01 55.1	-0.3
	baz=338						
EGMT	Eagleton	5.23	325		Pn	20 01 56.2	+0.6
EGMT	Eagleton	5.23	325	P	Pn	20 01 56.5	+0.8
	baz=142						
EGMT				Sb	Sg	20 03 21.1	-3.0
	baz=142						
BSUT	Blindstream Ca	5.25	233		Pn	20 01 56.0	-0.1
BSUT				IAML		20 03 25.7	
	comp=E,21nm,1.1s						
BSUT				IAML		20 03 28.8	
	comp=N,18nm,1.0s						
LRM	Limekiln Ridge	5.48	294	Pn	Pn	20 02 01.0	+1.8
P18A	Preston Nutter	5.62	223		Pn	20 02 01.3	+0.2
MDND	Maddock	5.64	43	Sb	Sg	20 03 31.6	-5.5
	baz=226						
BGNE	Belgrade	5.78	112	Sb	Sb	20 03 31.9	+4.3
	baz=296						
SPUT	South Promonto	5.87	247		Pn	20 02 05.4	+0.9
HVU	Hansel Valley	5.89	252		Pn	20 02 05.2	+0.4
PV07	Paradox Valley	5.96	206		Pn	20 02 05.9	+0.1
P17A	Butcher Ranch,	5.98	225		Pn	20 02 06.7	+0.7
PV15	Paradox Valley	6.00	205		Pn	20 02 08.0	+1.6
SDCO	Great Sand Dun	6.08	182	P	Pn	20 02 07.7	+0.1
	baz=1.4						
PV10	Paradox Valley	6.15	209	Pn	Pn	20 02 09.7	+1.2
SRU	San Rafael Swe	6.15	222	Pn	Pn	20 02 07.2	-1.1
PV11	David Mesa, Pa	6.16	207		Pn	20 02 08.1	-0.4
S22A	4UR Ranch, Cre	6.20	192	P	Pn	20 02 07.0	-2.0
	baz=10						
ECSD	EROS Data Cent	6.26	88	P	Pn	20 02 10.9	+1.2
	baz=273						
PV13	Radium Mtn., P	6.27	207		Pn	20 02 10.0	-0.1
TMUT	Trail Mountain	6.36	227		Pn	20 02 10.7	-0.5
CBKS	Cedar Bluff	6.51	138	P	Pn	20 02 13.0	-0.2
	baz=321						
Q16A	Castle Valley	6.62	224		Pn	20 02 13.4	-1.4
HLID	Hailey	6.64	271	P	Pn	20 02 15.9	+0.9
	baz=85						
DUG	Dugway, Tooele	6.69	240	Pn	Pn	20 02 15.7	-0.1
DUG	Dugway, Tooele	6.69	240	P	Pn	20 02 15.5	-0.3
	baz=55,SNR=7.0						
T25A	Trinidad	6.72	174	P	Pn	20 02 15.9	-0.3
	baz=354						
MSO	Missoula	6.81	299	P	Pn	20 02 17.7	+0.4
	baz=114						
MVCO	Mesa Verde	7.06	201	Pn	Pn	20 02 23.0	+2.1
MVCO	Mesa Verde	7.06	201	P	Pn	20 02 22.3	+1.4
	baz=19						
MSU	Marysvale	7.44	227		Pn	20 02 26.4	+0.2
MTPU	Mount Pierson	7.80	224		Pn	20 02 30.7	-0.5
AGMN	Agassiz Nation	7.92	52	P	Pn	20 02 33.3	+0.9
	baz=239						
WALA	Waterton Lakes	7.93	314	Pn	Pn	20 02 32.4	-0.3
ELK	Elko	8.01	251	Pn	Pn	20 02 36.3	+2.3
	comp=N,0.7nm,0.3s,baz=56,slow=11,SNR=7.7						
	comp=N,1.2nm,0.3s						
KNB	Kanab	8.92	223	Pn	Pn	20 02 46.4	+0.1
ANMO	Albuquerque	8.92	186	Pg	Pg	20 03 16.8	-10
	comp=N,0.1nm,0.3s,baz=90,slow=20,SNR=1.8						
ANMO				Lg	Lg	20 05 16.9	
	comp=N,0.1nm,0.3s,baz=84,slow=18,SNR=3.5						
I10CA	LAC DU BONNET	8.96	41	I	I	20 53 30.0	
	baz=221,slow=330,SNR=6.1						
SPMN	Marine on St.	9.01	77	P	Pn	20 02 48.2	+0.8
	baz=265						
ULM	Lac du Bonnet	9.07	42	Pn	Pn	20 02 47.2	-0.9
	comp=N,1.5nm,0.3s,baz=227,slow=12,SNR=6.9						
ULM				Lg	Lg	20 05 18.4	
	comp=N,0.6nm,0.3s,baz=307,slow=22,SNR=1.6						
	comp=N,3.7nm,0.3s						
NEW	Newport	9.36	302	Lg	Lg	20 05 22.5	
	comp=N,0.1nm,0.3s,baz=162,slow=20,SNR=1.6						
EYMN	Ely	10.44	62	P	Pn	20 03 07.9	+0.9
	baz=251						
NVAR	Mina Array Bea	11.21	246	Pn	Pn	20 03 18.2	+0.4
	comp=N,0.2nm,0.3s,baz=52,slow=12,SNR=7.1						
	comp=N,0.6nm,0.5s						
YBH	Yreka Blue Hor	12.99	267	Pn	Pn	20 03 45.1	+3.2
	comp=N,0.1nm,0.3s,baz=342,slow=3.2,SNR=2.7						
	comp=N,1.3nm,1.0s						
TXAR	Lajitas Array	14.53	174	Pn	Pn	20 04 01.1	-1.9
	comp=N,0.2nm,0.8s,baz=356,slow=10.0,SNR=1.6						
TXAR				Lg	Lg	20 08 05.1	
	baz=325,slow=34,SNR=2.1						
SADO	Sadowa	18.70	78	LR	LR	20 11 41.2	
	comp=N,58nm,18.3s,baz=98,slow=36						
YKA	Yellowknife Ar	19.48	347	P	P	20 05 02.9	-1.3
	comp=N,0.1nm,0.3s,baz=163,slow=12,SNR=7.9						
	comp=N,0.3nm,0.5s						
ARCES	ARCESS Array B	61.33	18	P	P	20 10 52.0	-0.9
	comp=N,2.0nm,0.7s,baz=339,slow=6.8,SNR=4.2						
	comp=N,2.0nm,0.7s						
FINES	FINESS Array B	67.94	23	P	P	20 11 36.2	0.0
	comp=N,5.9nm,1.2s,baz=322,slow=5.3,SNR=3.5						
	comp=N,5.9nm,1.2s						
ZALV	Zalesovo Beam	82.21	354	P	P	20 12 57.5	-1.2
	comp=N,0.6nm,0.6s,baz=4.1,slow=6.2,SNR=4.1						
	comp=N,0.6nm,0.6s						
MKAR	Makanchi Array	89.51	355	P	P	20 13 34.4	-0.7
	comp=N,0.4nm,0.6s,baz=17,slow=4.3,SNR=5.9						
	comp=N,0.4nm,0.6s						

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*IDC **12** 20:29:54.9±2.4, 7.°20S×129.°69E, h108^{km}±22^{km}, mb3.9/10, mbtmp4.4/13, MS3.3/4, Error ellipse: s-maj=23.0km s-min=15.1km az=65.0*

*NEIC **12** 20:29:57.1±1.8, 7.°18S±0.°07×129.°60E±0.°06, h128^{km}±7^{km}, mb4.5/37, Error ellipse: s-maj=10.6km s-min=8.2km az=145.0*

*DJA **12** 20:29:57.4±0.2, 7°S±2°×13°0E±°, h118^{km}±6^{km}, M4.7/22, mb4.7/22, mB5.2/16, MLv5.1/15, Mw(mB)4.6/16, MwMwp7.5/1, Mwp7.2/1*

ISC 12 20:29:58.0±0.4**, 7.°22S**±0.°05×**129.°63E**±0.°05**, h139**^{km}**, n151,** σ**1.**^{s}**91**/148**, mb4.4**/33**, 1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.82	115	Pn	Pn	20 30 30.3	0.0
SAUI	Saumlaki	1.82	115	P	Pn	20 30 31.1	+0.7
SAUI	Saumlaki	1.82	115	P	Pn	20 30 30.3	0.0
BNDI	Bandanaira	2.69	6	P	Pn	20 30 40.5	-0.6
BNDI	Bandanaira	2.69	6	P	Pn	20 30 39.8	-1.3
AAI	Ambon	3.79	338	P	Pn	20 30 55.0	-0.3
MSAI	Masohi	3.91	350	P	Pn	20 30 57.8	+0.9
NLAI	Namlea	4.69	327	P	Pn	20 31 07.7	+0.6
FAKI	Fak Fak	5.00	32	Pn	Pn	20 31 09.2	-2.1
FAKI	Fak Fak	5.00	32	P	Pn	20 31 09.2	-2.1
FAKI	Fak Fak	5.00	32	P	Pn	20 31 09.4	-2.0
MTN	Manton Dam	5.78	165	Pn	Pn	20 31 20.8	-0.8
MTN	Manton Dam	5.78	165	P	Pn	20 31 20.9	-0.8
SOEI	Soe	5.87	244	Pn	Pn	20 31 21.8	-1.2
SOEI	Soe	5.87	244	P	Pn	20 31 22.4	-0.7
SOEI	Soe	5.87	244	P	Pn	20 31 21.5	-1.6
	588nm,0.6s,6μm2.6nm						
KDU	Kakadu	6.11	153	P	Pn	20 31 25.1	-1.0
SANI	Sanana	6.29	325	P	Pn	20 31 29.3	+0.8
SANI	Sanana	6.29	325	P	Pn	20 31 28.3	-0.2
	114nm,0.9s,1μm0.4nm						
LBMI	Labuha	6.88	342	P	Pn	20 31 36.0	-0.4
	190nm,0.5s,2μm0.8nm						
RKPI	Ransiki, Papua	7.26	39	P	Pn	20 31 40.1	-1.5
	750nm,0.5s,12μm3.4nm						
MMRI	Maumere	7.46	259	Pn	Pn	20 31 42.6	-1.6
MMRI	Maumere	7.46	259	P	Pn	20 31 43.5	-0.7
MMRI	Maumere	7.46	259	P	Pn	20 31 42.2	-2.0
	102nm,0.8s,1μm0.4nm						
TNTI	Ternate	8.25	344	Pn	Pn	20 31 53.2	-1.7
TNTI	Ternate	8.25	344	P	Pn	20 31 56.7	+1.8
	39nm,0.8s						
KNRA	Kununurra	8.45	186	Pn	Pn	20 31 54.9	-2.5
KNRA	Kununurra	8.45	186	P	Pn	20 31 55.2	-2.3
LUWI	Luwuk	9.19	312	P	Pn	20 32 08.7	+1.3
	54nm,0.8s,680nm						
BASI	Baing, Sumba	9.43	251	P	Pn	20 32 08.2	-2.5
	415nm,0.6s,6μm						
BKSI	Bulukumba	9.64	281	P	Pn	20 32 13.5	+0.1
	28nm,1.0s						
KAPI	Kappang	10.06	282	P	Pn	20 32 18.1	-1.1
	5.4nm,0.3s,baz=114,slow=20,SNR=1.3						
SPSI	Sidrap Palu	10.33	288	P	Pn	20 32 29.0	+6.3
SMPI	Sarmi	10.43	61	P	Pn	20 32 23.8	-0.2
	43nm,0.8s						
MRSI	Marisa	10.83	315	P	Pn	20 32 30.5	+1.2
	88nm,1.2s,981nm						
GENI	Genyem	11.46	67	P	Pn	20 32 39.0	+1.4
GENI	Genyem	11.46	67	P	Pn	20 32 37.8	+0.2
	59nm,0.6s						
FITZ	Fitzroy Crossi	11.49	199	Pn	Pn	20 32 34.8	-3.2
FITZ	Fitzroy Crossi	11.49	199	P	Pn	20 32 35.0	-3.0
PLAI	Plampang	11.85	261	P	Pn	20 32 39.3	-3.4
PLAI	Plampang	11.85	261	P	Pn	20 32 39.9	-2.8
TOLI2	Tolitoli	12.10	313	Pn	Pn	20 32 47.4	+1.3
TOLI2	Tolitoli	12.10	313	P	Pn	20 32 48.9	+2.9
MPSI	Mapaga	12.27	307	P	Pn	20 32 49.5	+1.2
	20nm,1.0s						
TWSI	Taliwang, Sumb	12.72	262	P	Pn	20 32 51.4	-2.6
WB0	Warramunga Arr	13.30	160	Pn	Pn	20 32 58.1	-3.4
WRAB	Tennant Creek	13.44	161	Pn	Pn	20 33 00.2	-3.2
WRAB	Tennant Creek	13.44	161	P	Pn	20 32 59.8	-3.5
WRA	Warramunga Arr	13.45	161	P	Pn	20 33 00.1	-3.3
	45nm,0.4s,baz=346,slow=13,SNR=161						
WRA				S	Sn	20 35 20.9	-11
	41nm,0.7s,baz=334,slow=22,SNR=9.3						
WRA				LR	LR	20 39 12.9	
	comp=Z,140nm,20.0s,baz=315,slow=42						
WB2	Warramunga Arr	13.45	161	Pn	Pn	20 32 59.8	-3.7
DAV	Davao City (W)	14.76	344	LR	LR	20 38 48.8	
	comp=Z,35nm,19.0s,baz=112,slow=36						
COEN	Coen	14.90	118		Pn	20 33 20.8	-1.0
BBKI	Banjar Baru	15.19	283	P	P	20 33 31.7	+4.5
QIS	Mount Isa	16.41	145	P	Pn	20 33 40.3	-0.1
MYLDM	Lahad Datu	16.59	318	P	Pn	20 33 41.1	-1.5
MYLDM				IAmb	IAmb	20 33 55.2	
	comp=Z,33nm,1.0s						
MBWA	Marble Bar	16.84	214	P	P	20 33 44.3	-1.2
MBWA				IAmb	IAmb	20 33 50.1	
	comp=Z,26nm,1.1s						
MBWA	Marble Bar	16.84	214	P	P	20 33 44.8	-0.6
AS31	Alice Springs	16.86	166	P	P	20 33 44.8	-0.8
AS31				IAmb	IAmb	20 33 51.3	
	comp=Z,14nm,0.6s						
ASAR	Alice Springs	16.86	166	P	P	20 33 44.9	-0.7

	comp=Z,20nm,0.6s,baz=340,slow=9.9,SNR=127						
ASAR				S	Sn	20 36 39.8	-14
	comp=Z,8.2nm,0.7s,baz=348,slow=24,SNR=7.5						
ASAR				ScP	ScP	20 41 50.0	+2.9
	comp=Z,2.1nm,0.6s,baz=356,slow=1.7,SNR=1.8						
ASAR	Alice Springs	16.86	166	P	P	20 33 44.0	-1.6
AS01	Alice Springs	16.87	166	P	P	20 33 44.4	-1.4
	comp=Z,38nm,0.6s						
PSA00	Pilbara Seismi	17.12	213	P	P	20 33 46.8	-1.6
PSA00	Pilbara Seismi	17.12	213	P	P	20 33 47.6	-0.8
PSA00				IAmb	IAmb	20 33 51.6	
	comp=Z,26nm,1.1s						
PSA00	Pilbara Seismi	17.12	213	P	P	20 33 48.6	+0.2
PMG	Port Moresby	17.48	98	P	P	20 33 50.2	-2.3
	comp=Z,4.2nm,0.5s,baz=186,slow=19,SNR=1.5						
PMG				S	S	20 36 58.3	-9.2
	comp=Z,5.7nm,0.3s,baz=212,slow=19,SNR=9.3						
PMG	Port Moresby	17.48	98	P	Pn	20 33 57.0	+3.6
PMG	Port Moresby	17.48	98	P	Pn	20 33 56.8	+3.4
WRKA	Warakurna	17.76	184	P	Pn	20 33 56.3	-0.4
MTSU	Mount Surprise	17.95	129	P	Pn	20 34 02.0	+2.9
KKM	Kota Kinabalu	18.78	314	P	P	20 34 07.1	+0.3
UGM	Wanagama	18.95	267	P	Pn	20 34 10.9	0.0
CTA	Charters Tower	20.58	130	P	P	20 34 25.9	-0.2
	comp=Z,2.3nm,0.8s,baz=352,slow=13,SNR=1.5						
	comp=Z,2.3nm,0.8s						
OOD	Oodnadatta	21.25	165	P	P	20 34 37.0	+3.8
GIRL	Giralia	21.33	222	P	P	20 34 36.5	+2.4
GIRL	Giralia	21.33	222	P	P	20 34 36.9	+2.8
BBJI	Bungbulang	21.80	268	P	P	20 34 38.8	-0.5
MEEK	Meekatharra	21.97	207	P	P	20 34 41.9	+1.0
INKA	Innaminka	22.97	154	P	P	20 34 53.3	+2.8
MULG	Mulgathing	23.32	170	P	P	20 34 56.7	+3.0
FORT	Forrest	23.48	183	P	P	20 34 56.6	+1.4
FORT				IAmb	IAmb	20 35 15.9	
	comp=Z,20nm,0.8s						
FORT	Forrest	23.48	183	P	P	20 34 58.2	+3.0
QLP	Quilpie	23.75	146	P	P	20 35 03.0	+5.4
LCRK	Leigh Creek	24.47	162	P	P	20 35 07.4	+3.2
MORW	Morawa	25.23	209	P	P	20 35 11.1	0.0
MORW				IAmb	IAmb	20 35 15.5	
	comp=Z,16nm,0.7s						
MORW	Morawa	25.23	209	P	P	20 35 13.7	+2.6
BBOO	Buckleboo	26.15	168	P	P	20 35 24.7	+5.3
BLDU	Ballidu	26.24	206	P	P	20 35 21.8	+1.6
STKA	Stephens Creek	26.95	157	LR	LR	20 46 52.8	
	comp=Z,58nm,18.9s,baz=346,slow=38						
STKA	Stephens Creek	26.95	157	P	P	20 35 25.3	-1.3
STKA	Stephens Creek	26.95	157	P	P	20 35 29.3	+2.7
NWAO	Narrogin (SRO)	28.05	203	P	P	20 35 35.9	-0.4
	comp=Z,7.3nm,0.9s,baz=189,slow=4.5,SNR=1.8						
	comp=Z,7.3nm,0.9s						
CMSA	Cobar Meteorol	28.47	150	P	P	20 35 45.6	+5.6
	comp=Z,15nm,0.9s						
TPUB	Ta-pu	31.58	344	P	P	20 36 06.4	-1.2
TPUB				IAmb	IAmb	20 36 14.6	
	comp=Z,12nm,0.9s						
TOO	Toolangi	33.47	157	P	P	20 36 25.9	+1.9
PHRA	Phrae	38.66	312	P	P	20 37 09.0	+0.7
CM31	Chiang Mai Arr	39.59	311	P	P	20 37 16.4	+0.3
CM31				IAmb	IAmb	20 37 17.4	
	comp=Z,6.4nm,0.7s						
CMAR	Chiang Mai Arr	39.59	311	P	P	20 37 16.5	+0.4
	comp=Z,5.2nm,0.6s,baz=134,slow=6.7,SNR=51						
	comp=Z,5.2nm,0.6s						
CMAR	Chiang Mai Arr	39.59	311	P	P	20 37 15.5	-0.6
CRAI	Chiangrai	39.65	314	P	P	20 37 16.5	-0.1
CHTO	Chiang Mai	39.81	311	P	P	20 37 17.5	-0.4
NJ2	Nanjing	40.38	346	eP	P	20 37 25.1	+2.7
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
JMN	Monobe	40.92	5	P	P	20 37 26.1	-0.7
JMN				IAmb	IAmb	20 37 27.6	
	comp=Z,15nm,1.1s						
PZH	PanZhiHua	43.08	322	P	P	20 37 46.3	+1.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,130nm,5.3s						
MJAR	Matsushiro Arr	44.27	10	P	P	20 37 52.5	-1.3
	comp=Z,2.4nm,0.7s,baz=195,slow=9.4,SNR=9.5						
	comp=Z,2.4nm,0.7s						
KSRS	Korea Array	44.47	358	P	P	20 37 55.1	-0.2
	comp=Z,0.7nm,0.5s,baz=231,slow=15,SNR=2.2						
	comp=Z,0.7nm,0.5s						
XAN	Xi'an	45.48	336	P	P	20 38 02.7	-0.8
XAN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
JSD	Sado	45.74	10	P	P	20 38 04.7	-0.7
HNS	HongShan	46.53	344	⇑P	P	20 38 12.0	+0.5
HNS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SHL	Shillong	49.08	313	P	P	20 38 30.5	-1.1
HHC	Hu-ho-hao-te	50.64	342	eP	P	20 38 44.0	+0.9
HHC				pmax	pmax		
	comp=Z,26nm,0.8s						
HHC				pmax	pmax		
	comp=Z,270nm,5.2s						
USA0B	Ussuriysk Arra	51.22	2	P	P	20 38 47.0	-0.2
USRK	Ussuriysk Ar.	51.22	2	P	P	20 38 47.5	+0.2
	comp=Z,2.4nm,0.5s,baz=189,slow=6.9,SNR=8.2						
	comp=Z,2.4nm,0.5s						
USRK	Ussuriysk Ar.	51.22	2	P	P	20 38 47.1	-0.2
LSA	Lhasa	52.10	317	P	P	20 38 51.8	-2.8
LSA				IAmb	IAmb	20 39 06.4	
	comp=Z,2.5nm,0.5s						
JKA	Kamikawa-asahi	52.43	12	P	P	20 38 55.6	-0.6
JKA				IAmb	IAmb	20 38 57.4	
	comp=Z,3.0nm,0.5s						
URZ	Urewera	52.78	133	LR	LR	21 02 20.6	
	comp=Z,52nm,18.2s,baz=275,slow=37						
TAPN	Taplejung	53.16	312	eP	P	20 39 02.4	+0.1
	comp=Z,28nm,0.3s						
RAMN	Ramite	53.76	311	eP	P	20 39 06.9	+0.3
	comp=Z,33nm,0.4s						
GTA	Gaotai	53.99	332	eP	P	20 39 08.2	+0.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
JIRN	Jiri	54.45	311	eP	P	20 39 11.8	0.0
	comp=Z,14nm,0.3s						
GUN	Gumba	54.82	312	eP	P	20 39 14.3	-0.1
	comp=Z,23nm,0.4s						
PKI	Pulchoki	54.99	311	eP	P	20 39 15.0	-0.6
	comp=Z,6.8nm,0.3s						
PKIN	Phulchoki	55.00	311	eP	P	20 39 15.1	-0.5
	comp=Z,7.7nm,0.3s						
GKN	Gorkha	55.80	311	eP	P	20 39 21.1	0.0
	comp=Z,24nm,0.2s						
DANN	Dangsing	56.64	311	eP	P	20 39 27.0	-0.3
	comp=Z,4.3nm,0.2s						
PYUN	Piuthan	57.09	310	eP	P	20 39 30.5	+0.1
	comp=Z,10.0nm,0.2s						
HEH	HeiHe	57.27	358	eP	P	20 39 31.6	+0.7
HEH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SONM	Songino Array	58.53	342	P	P	20 39 40.0	+0.1
	comp=Z,1.0nm,0.4s,baz=159,slow=7.0,SNR=9.6						
	comp=Z,1.0nm,0.4s						
SONM	Songino Array	58.53	342	P	P	20 39 39.5	-0.4
WMQ	Urumqi	63.38	327	eP	P	20 40 13.4	+0.7
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
PETK	Petropavlovsk-	64.65	18	P	P	20 40 21.7	+1.0
	comp=Z,2.2nm,0.8s,baz=144,slow=2.2,SNR=4.5						
	comp=Z,2.2nm,0.8s						
NIL	Nilore	67.08	311	P	P	20 40 35.7	-1.1
KSH	Kashi	67.93	318	P	P	20 40 43.4	+1.3
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MK31	Makanchi Array	68.21	327	P	P	20 40 43.2	-0.3
MK31				IAmb	IAmb	20 40 45.6	
	comp=Z,4.5nm,0.6s						
MKAR	Makanchi Array	68.21	327	P	P	20 40 44.2	+0.7
	comp=Z,6.7nm,0.5s,baz=123,slow=7.8,SNR=91						
	comp=Z,6.7nm,0.5s						
MKAR	Makanchi Array	68.21	327	P	P	20 40 43.3	-0.2
MAKZ	Makanchi	68.39	327	P	P	20 40 44.6	0.0
MAKZ				IAmb	IAmb	20 40 46.6	
	comp=Z,4.7nm,0.6s						
YAK	Yakutsk	69.04	0	P	P	20 40 48.1	-0.2
AAK	Ala-Archa	70.47	320	P	P	20 40 58.5	+0.8
AAK				IAmb	IAmb	20 41 00.5	
	comp=Z,2.0nm,0.5s						
GAR	Garm	71.56	315	P	P	20 41 03.9	-0.4
GAR				IAmb	IAmb	20 41 08.1	
	comp=Z,4.7nm,0.6s						
ZAA0	Zalesovo Array	71.62	334	P	P	20 41 03.6	-0.5
ZALV	Zalesovo Beam	71.62	334	P	P	20 41 03.5	-0.6
	comp=Z,2.0nm,0.4s,baz=121,slow=5.4,SNR=18						
	comp=Z,2.0nm,0.4s						
ZALV	Zalesovo Beam	71.62	334	P	P	20 41 03.1	-1.1
KURK	Kurchatov	72.51	329	P	P	20 41 08.3	-1.2
KURK				IAmb	IAmb	20 41 12.0	
	comp=Z,5.5nm,0.8s						
KKAR	Karatay Array	73.26	319	P	P	20 41 14.8	+0.6
TIXI	Tiksi	78.71	360	P	P	20 41 44.8	+0.4
TIXI				IAmb	IAmb	20 41 45.7	
	comp=Z,3.0nm,0.5s						
ABKAR	Akbulak array	82.45	322	P	P	20 42 04.9	+0.1
ARU	Arti	85.70	328	P	P	20 42 19.9	-1.2
ARU				IAmb	IAmb	20 42 22.3	
	comp=Z,7.5nm,0.8s						
PDAR	Pinedale Array	117.30	45	PKP	PKiKP	20 48 27.6	0.0
	comp=Z,0.5nm,0.9s,baz=186,slow=4.3,SNR=3.6						
TXAR	Lajitas Array	125.35	59	PKP	PKiKP	20 48 44.3	+0.7
	comp=Z,0.3nm,0.5s,baz=164,slow=1.8,SNR=7.8						
TORD	Torodi Ar. Bea	128.49	281	PKP	PKiKP	20 48 50.8	+0.7
	comp=Z,0.5nm,0.6s,baz=82,slow=1.6,SNR=4.1						

ROM 12 20:33:48.2±0.1, 42°.397N±0°.004×13°.386E±0°.007, h4^{km}±1^{km}, ML1.0/2, 3C-1D, Error ellipse: s-maj=0.6km s-min=0.2km az=245.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQU	L'Aquila	0.04	165	P	Pg	20 33 49.6	+0.1
AQU				S	Sg	20 33 50.5	+0.3
T1247	Pizzolo (AQ)	0.08	305	P	Pg	20 33 50.8	+0.8
T1247				AML	AML		
	comp=E,322µm,0.2s						
T1247				AML	AML		
	comp=N,360µm,1.1s						
T1247				AML	AML		
	comp=N,360µm,0.9s						
RM33	Pellescritta (	0.17	312	⇑P	Pg	20 33 52.6	+1.0
RM33				AML	AML		
	comp=E,60µm,0.2s						
RM33				AML	AML		
	comp=N,47µm,0.4s						
RM33				AML	AML		
	comp=E,60µm,0.2s						
FAGN	Fagnano	0.20	132	⇑P	Pg	20 33 52.7	+0.6
FAGN				S	Sg	20 33 55.9	+1.3
FAGN				AML	AML		
	comp=N,145µm,0.3s						
FAGN				AML	AML		
	comp=E,142µm,0.3s						
FIAM	Fiamignano	0.24	237	P	Pg	20 33 53.5	+0.6
SMA1	SAN MARTINO	0.24	351	⇑P	Pg	20 33 53.7	+0.8
SMA1				S	Sg	20 33 57.4	+1.3
TERO	Teramo	0.28	35	AML	AML		
	comp=N,45µm,0.7s						
TERO				AML	AML		
	comp=E,38µm,0.5s						
CESI	CESI - Serrava	0.70	330	AML	AML		
	comp=N,114µm,0.1s						
CESI				AML	AML		
	comp=E,59µm,0.9s						
PP3	Marolino	0.99	9	⇓P	Pn	20 34 10.2	+1.3

ROM 12 20:34:10.2±0.0, 42°.817N±0°.003×12°.962E±0°.005, h11^{km}, ML1.2/9, 6C-2D, Error ellipse: s-maj=0.4km s-min=0.3km az=259.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1215	Vallo di Nera,	0.07	258	P	Pg	20 34 13.1	+0.4
T1215				S	Sg	20 34 14.7	+0.3
T1215				AML	AML		
	comp=E,124µm,0.5s						
T1215				AML	AML		
	comp=N,216µm,0.1s						
T1215				AML	AML		
	comp=E,124µm,1.5s						
T1216	Preci, Frazion	0.09	29	⇑P	Pg	20 34 13.3	+0.5
T1216				S	Sg	20 34 15.2	+0.5
T1216				AML	AML		
	comp=N,801µm,0.4s						
T1216				AML	AML		
	comp=E,465µm,0.2s						
T1212	Cascia, Frazio	0.09	137	P	Pg	20 34 13.3	+0.5
T1212				S	Sg	20 34 15.2	+0.4
T1212				AML	AML		
	comp=N,122µm,1.3s						
T1212				AML	AML		
	comp=E,138µm,0.1s						
T1217	Poggiodomo (PG	0.11	192	P	Pg	20 34 13.7	+0.6
T1217				S	Sg	20 34 15.8	+0.6
T1217				AML	AML		
	comp=E,256µm,0.1s						
T1217				AML	AML		
	comp=N,300µm,0.2s						
T1217				AML	AML		
	comp=E,256µm,1.9s						
T1245	Castelsantange	0.17	76	⇑P	Pg	20 34 14.8	+0.7
T1245				AML	AML		
	comp=N,135µm,1.5s						
T1245				AML	AML		
	comp=N,135µm,0.5s						
T1245				AML	AML		
	comp=E,97µm,1.3s						
T1218	Civita (PG)	0.18	142	⇑P	Pg	20 34 14.9	+0.6
T1218				S	Sg	20 34 18.1	+0.9
T1218				AML	AML		
	comp=E,176µm,1.1s						
T1218				AML	AML		
	comp=N,216µm,0.2s						
T1218				AML	AML		
	comp=E,131µm,0.1s						
T1218				AML	AML		
	comp=N,229µm,0.2s						
T1218				AML	AML		
	comp=E,131µm,0.1s						
T1218				AML	AML		
	comp=E,176µm,1.1s						
T1218				AML	AML		
	comp=N,216µm,0.2s						
T1214	Arquata del Tr	0.19	107	P	Pg	20 34 14.9	+0.5
CESI	CESI - Serrava	0.19	347	P	Pg	20 34 15.0	+0.6
CESI				AML	AML		
	comp=E,59µm,0.9s						
CESI				AML	AML		
	comp=E,59µm,1.1s						
CESI				AML	AML		
	comp=N,114µm,0.1s						
MC2	Monte Cornacci	0.19	60	P	Pg	20 34 15.2	+0.7
FDMO	Fiordimonte	0.24	23	⇑P	Pg	20 34 15.8	+0.5
FDMO				AML	AML		
	comp=E,50µm,0.3s						
FDMO				AML	AML		
	comp=N,38µm,1.3s						
FDMO				AML	AML		
	comp=N,38µm,0.7s						
FDMO				AML	AML		
	comp=E,50µm,1.7s						
T1219	Muccia, Frazio	0.24	8	P	Pg	20 34 15.7	+0.4
ARRO	Arrone	0.28	211	⇑P	Pg	20 34 16.5	+0.6
MMO1	Montemonaco	0.28	73	⇓P	Pg	20 34 16.5	+0.5
MOMA	Monte Martano	0.29	268	P	Pb	20 34 17.1	-0.4
T1211	Morro Reatino	0.29	196	P	Pg	20 34 16.8	+0.5
T1220	Camerino, Fraz	0.31	18	P	Pg	20 34 16.9	+0.4
ASSB	Assisi San Ben	0.32	315	P	Pg	20 34 17.1	+0.5
ASSB				AML	AML		
	comp=E,31µm,0.1s						
ASSB				AML	AML		
	comp=E,31µm,1.9s						
ASSB				AML	AML		
	comp=N,38µm,0.9s						
RM33	Pellescritta (	0.36	149	P	Pg	20 34 18.0	+0.5
SNTG	Esanatoglia	0.44	358	⇑P	Pg	20 34 19.3	+0.4
EL6	Elcito	0.52	11	⇓P	Pg	20 34 20.8	+0.3
EL6				S	Sb	20 34 29.1	-0.1

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*JMA **12** 21:03:41.3±0.2, 37°.3N±0°.3×141°.5E±0°.9, h28^{km}±1^{km}, MV3.1/40, E OFF FUKUSHIMA PREF*

*IDC **12** 21:03:44.3±6.1, 37°.02N×141°.59E, h53^{km}±49^{km}, mb2.9/2, mbtmp3.3/4, ML2.7/2, Error ellipse: s-maj=46.7km s-min=18.1km az=56.0*

ISC 12 21:03:38.5±1.9, 37°.23N±0°.04×141°.62E±0°.07, h12^{km}±10^{km}, n20, σ1.^{s}06/26, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	0.61	283	i P	Pg	21 03 50.8	+0.4
JFK				S	Sg	21 03 57.6	-0.9
ONAJ	Iwakimizuishiy	0.67	259	i P	Pg	21 03 52.2	+0.6
ONAJ				S	Sg	21 04 00.1	-0.2
JMST	Minamisoumatoc	0.76	310	i P	Pg	21 03 53.5	+0.3
JMST				S	Sg	21 04 02.6	-0.7
JFFD	Fukushimafurud	0.86	261	i P	Pg	21 03 55.2	+0.2
JFFD				S	Sg	21 04 05.0	-1.3
JMM	Marumori	0.91	314	i P	Pb	21 03 56.1	-0.1
JMM				eS	Sb	21 04 07.2	-1.1
JHO	Hitachi	1.05	234	P	Pb	21 03 58.4	-0.1
JHO				S	Sb	21 04 11.1	-1.1
JOTO	OTAMA OYAMA	1.08	288	i P	Pb	21 03 59.0	0.0
JOTO				S	Sb	21 04 12.0	-1.1
JIO	Ouri	1.24	350	P	Pn	21 04 01.8	+0.2
JIO				S	Sb	21 04 17.1	-0.6
JOU	Okura	1.36	326	i P	Pb	21 04 04.1	+0.2
JOU				S	Sn	21 04 21.1	-0.2
JSB	Shiboa	1.39	260	eP	Pb	21 04 04.7	+0.4
JSB				eS	Sn	21 04 21.5	-0.4
MJAR	Matsushiro Arr	2.82	257	P	Pn	21 04 25.1	+1.7
	0.3nm,0.3s,baz=79,slow=16,SNR=18						
MJAR				S	Sn	21 04 58.3	+1.0
	7.0nm,0.6s,baz=112,slow=12,SNR=5.9						
	2.2nm,0.3s						
JHJ	Hachijo jima 2	4.37	201	P	Pn	21 04 46.3	+1.7
	4.0nm,0.3s,baz=49,slow=15,SNR=1.5						
JHJ				S	Sn	21 05 32.5	-3.0
	55nm,0.9s,baz=102,slow=17,SNR=1.1						
	94nm,1.1s						
H11N2	WAKE ISLAND Hy	28.11	121	T	T	21 39 00.7	
	baz=314,slow=75,SNR=23						
H11N1	WAKE ISLAND Hy	28.11	121	T	T	21 39 01.1	
	baz=314,slow=75,SNR=28						
H11N3	WAKE ISLAND Hy	28.12	121	T	T	21 39 01.8	
	baz=314,slow=75,SNR=24						
H11S1	WAKE ISLAND Hy	28.83	123	T	T	21 39 56.9	
	baz=316,slow=75,SNR=21						
H11S3	WAKE ISLAND Hy	28.83	124	T	T	21 39 55.4	
	baz=316,slow=75,SNR=16						
H11S2	WAKE ISLAND Hy	28.84	123	T	T	21 39 56.7	
	baz=316,slow=75,SNR=17						
MKAR	Makanchi Array	44.16	302	P	P	21 11 47.8	+1.0
	0.2nm,0.7s,baz=91,slow=7.2,SNR=2.7						
	0.2nm,0.7s						
WRA	Warramunga Arr	57.28	188	P	P	21 13 25.3	-0.7
	0.3nm,1.0s,baz=5.9,slow=7.1,SNR=1.8						
	0.3nm,1.0s						

IDC 12 21:17:51.4±48.0, 18°.06S×178°.09W, h0^{km}, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=890.4km s-min=164.5km az=79.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	38.82	241	P	P	21 25 19.0	+0.7
	1.3nm,0.5s,baz=65,slow=19,SNR=5.1						
	1.3nm,0.5s						
WRA	Warramunga Arr	44.90	260	P	P	21 26 07.3	-0.9
	0.4nm,0.7s,baz=97,slow=8.3,SNR=5.2						
	0.4nm,0.7s						
ASAR	Alice Springs	45.04	254	P	P	21 26 09.1	-0.3
	2.4nm,0.5s,baz=90,slow=8.5,SNR=54						
	2.4nm,0.5s						

IDC 12 21:19:13.4±5.0, 14°.82S×71°.68W, h138^{km}±67^{km}, mb3.3/2, mbtmp3.5/3, Error ellipse: s-maj=306.0km s-min=52.1km az=23.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	3.72	114	P	Pn	21 20 10.2	0.0
	3.2nm,0.6s,baz=294,slow=9.6,SNR=13						
TORD	Torodi Ar. Bea	77.75	73	P	P	21 30 55.8	0.0
	0.3nm,0.5s,baz=246,slow=5.3,SNR=5.5						
	0.3nm,0.5s						
YKA	Yellowknife Ar	84.05	341	P	P	21 31 28.0	0.0
	0.4nm,0.7s,baz=140,slow=5.0,SNR=7.0						
	0.4nm,0.7s						
SONM	Songino Array	147.04	2	PKPbc	PKPbc	21 38 39.4	-0.7
	0.4nm,0.8s,baz=339,slow=3.6,SNR=3.0						

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*IDC **12** 21:23:34.0±2.2, 8°.09S×122°.59E, h0^{km}, mb3.3/1, mbtmp3.4/3, ML3.8/2, Error ellipse: s-maj=289.5km s-min=31.0km az=56.0*

*DJA **12** 21:23:49.3±0.4, 9°S±6°×12°3E±°, h125^{km}±5^{km}, M3.9/9, mb4.2/3, mB4.8/2, MLv3.7/9, Mw(mB)4.1/2*

ISC 12 21:23:48.3±1.1, 8°.53S±0°.09×122°.55E±0°.10, h150^{km}, n11, σ1.^{s}11/12, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMRI	Maumere	0.32	252	P	Pn	21 24 07.9	-1.1
MMRI				S	Sn	21 24 22.3	-2.3
SOEI	Soe	2.09	126	P	Pn	21 24 25.8	+1.2
BASI	Baing, Sumba	2.57	229	P	Pn	21 24 30.2	-0.1
BSSI	Bau Bau, Buton	3.13	319	P	Pn	21 24 37.2	-0.2
BKSI	Bulukumba	4.00	323	P	Pn	21 24 48.3	-0.3
PLAI	Plampang	4.73	266	P	Pn	21 24 59.1	+0.9
TWSI	Taliwang, Sumb	5.61	267	P	Pn	21 25 09.7	-0.2
	17nm,0.5s,2µm0.1nm						
IGBI	Denpasar	7.33	267	P	Pn	21 25 32.6	-0.2
WRA	Warramunga Arr	16.09	136	Pn	Pn	21 27 25.8	-0.5
	0.4nm,0.3s,baz=313,slow=12,SNR=14						
	0.4nm,0.4s						
ASAR	Alice Springs	18.57	145	P	Pn	21 27 56.4	+0.4
	0.2nm,0.3s,baz=327,slow=12,SNR=11						
	0.6nm,0.4s						
MKAR	Makanchi Array	65.70	331	P	P	21 34 18.1	+1.3
	0.2nm,0.5s,baz=123,slow=7.1,SNR=2.2						
	0.2nm,0.5s						

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*IDC **12** 21:24:57.4±1.5, 1°.98N×127°.71E, h0^{km}, mb3.6/5, mbtmp3.6/5, MS2.8/1, Error ellipse: s-maj=152.7km s-min=21.5km az=69.0*

*DJA **12** 21:24:58.7±2.1, 2°N±7°×12°9E±°, h12^{km}±14^{km}, M3.9/6, MLv3.9/6*

ISC 12 21:24:58.0±1.2, 2°.4N±0°.1×128°.7E±0°.2, h10^{km}, n13, σ1.^{s}01/9, mb3.6/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	2.10	219	P	Pn	21 25 32.5	-0.8
LBMI	Labuha	3.25	202	P	Pn	21 25 49.8	+0.6
SGSI	Sangihe	3.41	292	P	Pn	21 25 50.5	-0.8
SIJI	Sorong	4.15	142	LR	LR	21 27 55.8	
	comp=Z,116nm,19.4s,baz=350,slow=39						
GTOI	Gorontalo	5.95	253	P	Pn	21 26 27.1	+0.8
WRA	Warramunga Arr	22.89	166	P	P	21 30 00.5	-1.6
	1.5nm,0.6s,baz=342,slow=11,SNR=3.0						
	1.5nm,0.6s						
ASAR	Alice Springs	26.41	169	P	P	21 30 34.3	-0.7
	0.6nm,0.5s,baz=348,slow=8.5,SNR=3.6						
	0.6nm,0.5s						
STKA	Stephens Creek	36.23	161	P	P	21 32 01.7	+0.4
	0.9nm,0.4s,baz=353,slow=12,SNR=4.3						
	0.9nm,0.4s						
H11N1	WAKE ISLAND Hy	41.08	62	T	T	22 16 39.9	
	baz=250,slow=75,SNR=11						
H11N2	WAKE ISLAND Hy	41.09	62	T	T	22 16 40.1	
	baz=250,slow=75,SNR=8.0						
H11N3	WAKE ISLAND Hy	41.10	62	T	T	22 16 45.2	
	baz=250,slow=75,SNR=10.0						
SONM	Songino Array	49.18	340	P	P	21 33 47.3	+0.8
	0.1nm,0.5s,baz=156,slow=7.7,SNR=1.6						
	0.1nm,0.5s						
MKAR	Makanchi Array	59.76	325	P	P	21 35 03.2	0.0
	0.4nm,0.8s,baz=121,slow=6.8,SNR=4.7						
	0.4nm,0.8s						

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*SNET **12** 21:33:46.7±0.6, 13°.70N×91°.15W, h20^{km}±5^{km}, ML3.7*

*GCG **12** 21:33:50.6±0.7, 14°.13N×91°.23W, h50^{km}±11^{km}, MD3.5*

ISC 12 21:33:46.3±2.3, 13°.7N±0°.1×91°.23W±0°.09, h29^{km}, n9, σ0.^{s}72/11, Near coast of Guatemala

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

SULM	Suchitepequez,	0.67	331	*e*P	Pb	21 34 00.3	+0.8
SULM				*e*S	Sb	21 34 07.9	-0.6
FUG	Fuego 3	0.82	27	*e*P	Pn	21 34 02.2	+0.1
PCG	Pacaya	0.91	42	*e*P	Pn	21 34 04.2	+0.8
STG3	Santiaguito 3,	1.04	342	*e*P	Pn	21 34 04.4	-0.8
NBG	Las Nubes	1.22	45	*e*P	Pb	21 34 09.3	+0.3
NUBE	Las Nubes	1.42	82	*e*P	Pn	21 34 10.1	-0.3
SLOZ	Alcaldia de Sa	1.44	77	*e*P	Pn	21 34 10.8	+0.3
SLOZ				*e*S	Sb	21 34 29.3	-1.2
CEVE	Cerro Verde	1.57	86	*e*P	Pn	21 34 12.6	+0.2
CEVE				IAML		21 34 34.4	
	comp=Z,1μm,0.2s						
JAYA	Jayaque - finc	1.73	92	*e*P	Pn	21 34 14.6	0.0

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*IDC **12** 21:41:05.5±0.9, 47°.78N×90°.98E, h0km, mb3.7/14, mbtmp3.8/20, ML3.4/6, MS3.2/5, Error ellipse: s-maj=19.8km s-min=11.9km az=6.0*

*MOS **12** 21:41:05.3±1.7, 47°.62N×90°.92E, h11km, mb4.2/7, Error ellipse: s-maj=7.9km s-min=5.4km az=110.8*

*NNC **12** 21:41:10.0±1.3, 48°.03N×90°.47E, h0km, mb4.5, mpv4.3, Error ellipse: s-maj=12.0km s-min=8.5km az=115.0*

*ASRS **12** 21:41:12.4±0.3, 48°N±2°×9°1E±°, h10km, MLh5.0/12, Error ellipse: s-maj=4.1km s-min=3.1km az=122.7, confirmed*

ISC 12 21:41:09.4±0.6, **47°.92N**±0°.04×**90°.67E**±0°.04, **h10km, n134, σ2.s29**/142, **mb3.8**/17, **MS3.2**/4, **24C-15D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUR	Chagan-Uzun	2.67	326	⇓Pn	Pn	21 41 55.8	+3.3
CUR				Pg	Pg	21 42 01.6	+1.1
CUR				Sg	Sg	21 42 36.9	+1.9
CUR	Chagan-Uzun	2.67	326	PN	Pn	21 41 55.8	+3.3
CUR						21 42 01.5	
CUR						21 42 36.9	
DGZ	Jazzator, Alta	2.79	311	Pn	Pn	21 41 57.7	+3.5
DGZ				Pg	Pg	21 42 03.7	+0.9
DGZ				Sg	Sg	21 42 40.2	+1.3
DGZ	Jazzator, Alta	2.79	311	PN	Pn	21 41 57.7	+3.5
DGZ						21 42 03.6	
DGZ						21 42 40.1	
CHBI	Chibit, Altay	3.17	320	Pn	Pb	21 42 05.1	-0.9
CHBI				Pg	Pg	21 42 12.6	+2.4
CHBI				Sg	Sg	21 42 54.3	+3.0
CHBI	Chibit, Altay	3.17	320	PN	Pb	21 42 05.0	-0.9
CHBI						21 42 12.5	
CHBI						21 42 54.3	
ULGR	Ulagan, Altay	3.24	328	Pn	Pb	21 42 05.8	-1.3
ULGR				Pg	Pg	21 42 15.3	+3.8
ULGR				Sg	Sg	21 42 56.8	+3.4
ULGR	Ulagan, Altay	3.24	328	PN	Pb	21 42 05.7	-1.3
ULGR						21 42 15.2	
ULGR						21 42 56.7	
ZSN	Zaisan	3.95	265	Pg	Pn	21 42 13.1	+3.0
	95nm,0.7s						
ZSN				Lg	Lg	21 42 56.2	
	207nm,0.8s						
ARTR	Artybash	4.46	332	Pn	Pn	21 42 19.7	+2.6
ARTR				Pg	Pg	21 42 34.1	-0.7
ARTR				Sg	Sg	21 43 33.8	+1.3
ARTR	Artybash	4.46	332	PN	Pn	21 42 19.6	+2.6
ARTR						21 42 34.0	
ARTR						21 43 33.8	
KZLR	Kyzyl	4.52	31	Pn	Pn	21 42 20.7	+2.8
KZLR				Pg	Pb	21 42 29.0	+0.3
KZLR				Sg	Sb	21 43 24.6	+1.4
KZLR	Kyzyl	4.52	31	PN	Pn	21 42 20.6	+2.8
KZLR						21 42 29.0	
KZLR						21 43 24.5	
UKR	Ust'-Kan	4.89	310	Pn	Pn	21 42 26.9	+3.8
UKR				Pg	Pg	21 42 43.7	+0.7
UKR				Sg	Sg	21 43 49.8	+3.4
UKR	Ust'-Kan	4.89	310	PN	Pn	21 42 26.8	+3.8
UKR						21 42 43.7	
DJOS	Djoyskaya Sosn	4.91	5	Pn	Pn	21 42 25.9	+2.6
DJOS				Pg	Pb	21 42 40.3	+4.9
DJOS				Sg	Sg	21 43 45.7	-1.1
DJOS	Djoyskaya Sosn	4.91	5	PN	Pn	21 42 25.8	+2.6
DJOS						21 42 40.3	
DJOS						21 43 45.7	
CERR	Cheremushki	4.97	5	Pg	Pb	21 42 40.5	+4.1
CERR				Sg	Sg	21 43 49.9	+1.2
GALT	Gorno-Altaysk,	5.07	325	Pg	Pb	21 42 42.5	+4.4
GALT				Sg	Sg	21 43 54.4	+2.4
TASR	Tashtagol	5.17	341	Pn	Pn	21 42 30.1	+3.3
TASR				Pg	Pg	21 42 46.1	-2.2
TASR				Sg	Sg	21 43 57.4	+2.2
TASR	Tashtagol	5.17	341	PN	Pn	21 42 30.1	+3.3
TASR						21 42 46.1	
MK31	Makanchi Array	5.80	262	⇑Pn	Pn	21 42 35.8	+0.2
	1.9nm,0.2s,baz=90,slow=14,SNR=309						
MK31				⇑Pg	Pb	21 42 54.1	+3.4
	20nm,0.6s,baz=96,slow=16,SNR=12						
MK31				⇑Lg	Lg	21 44 11.4	
	66nm,0.5s,baz=80,slow=33,SNR=8.2						
MK31	Makanchi Array	5.80	262	PN	Pn	21 42 32.8	-2.7
MK31				P	Pb	21 42 54.8	+4.1
MKAR	Makanchi Array	5.80	262	Pn	Pn	21 42 37.0	+1.5
	3.6nm,0.3s,baz=87,slow=15,SNR=79						
MKAR				Sn	Sn	21 43 40.3	-1.8
	7.0nm,0.3s,baz=81,slow=18,SNR=4.5						
MKAR				Lg	Lg	21 44 08.5	
	9.3nm,0.3s,baz=79,slow=28,SNR=4.7						
	4.1nm,0.3s						
MKAR	Makanchi Array	5.80	262	Pn	Pn	21 42 36.8	+1.3
MKAR				Pg	Pg	21 43 00.2	-0.2
MKAR				Sg	Sg	21 44 12.0	-3.6
MKAR	Makanchi Array	5.80	262	PN	Pn	21 42 37.0	+1.5
LUZB	Luzhba, Kemero	5.86	350	Pn	Pn	21 42 39.2	+2.8
LUZB				Pg	Pb	21 42 55.9	+4.3
LUZB				Sg	Sg	21 44 16.2	-1.2
LUZB	Luzhba, Kemero	5.86	350	PN	Pn	21 42 39.1	+2.8
LUZB						21 42 55.9	
LUZB						21 44 16.2	
MALIN	Malinovka, Kuz	5.92	340	Pg	Pg	21 43 00.4	-2.3
MALIN				Sg	Sg	21 44 21.4	+2.2
TAIL	Tailep, Kuzbas	5.96	340	Sg	Sg	21 44 25.6	+5.0
MAKZ	Makanchi	6.01	263	⇓Pn	Pn	21 42 39.6	+1.3
	6.0nm,0.5s						
MAKZ				⇓Pg	Pb	21 42 57.0	+2.8
	21nm,0.7s						
MAKZ				⇑Lg	Lg	21 44 16.8	
	206nm,1.0s						
MAKZ	Makanchi	6.01	263	Pn	Pn	21 42 39.1	+0.7
MAKZ				Pg	Pb	21 43 00.1	+6.0
MAKZ				Sg	Sg	21 44 21.2	-1.0
MAKZ	Makanchi	6.01	263	PN	Pn	21 42 39.0	+0.7
MAKZ						21 43 00.1	
ELT	Eltsovka	6.05	334	Pn	Pn	21 42 39.6	+0.8
ELT				Pg	Pb	21 43 01.7	+6.9
ELT				Sg	Sg	21 44 24.6	+1.2
ELT	Eltsovka	6.05	334	PN	Pn	21 42 39.6	+0.8
ELT						21 43 01.7	
ERU	Erunakovo, Kuz	6.57	343	Sg	Sg	21 44 40.5	+0.5
VCHU	Verkh-Chumysh,	6.61	338	Pn	Pn	21 42 46.0	-0.5
VCHU				Pg	Pg	21 43 12.5	-3.4
VCHU				Sg	Sg	21 44 41.7	+0.3
VCHU	Verkh-Chumysh,	6.61	338	PN	Pn	21 42 46.0	-0.5
VCHU						21 43 12.5	
ZAA0	Zalesovo Array	7.08	331	⇓Pn	Pn	21 42 53.3	+0.3
	0.7nm,0.9s						
ZAA0				⇓Pg	Pb	21 43 13.7	+1.4
	3.6nm,0.9s						
ZAA0				⇓Lg	Lg	21 44 48.6	
	33nm,1.1s						
ZALV	Zalesovo Beam	7.08	331	Pn	Pn	21 42 53.9	+0.9
	1.4nm,0.3s,baz=150,slow=14,SNR=23						
ZALV				Lg	Lg	21 44 49.6	
	3.5nm,0.3s,baz=142,slow=18,SNR=4.2						
	2.7nm,0.3s						
SALR	Pechorkino, Sa	7.22	336	Pn	Pn	21 42 57.7	+2.8
SALR				Pg	Pg	21 43 24.4	-3.1
SALR				Sg	Sg	21 45 04.0	+3.2
SALR	Pechorkino, Sa	7.22	336	P	Pn	21 42 57.6	+2.8
SEM	Semipalatinsk	7.27	294	Pg	Pn	21 42 59.5	+3.7
SEM				Lg	Lg	21 44 19.8	
MINR	Mina	7.33	16	Pn	Pn	21 43 02.2	+5.7
MINR				Pg	Pg	21 43 27.4	-2.3
MINR				Sg	Sg	21 45 02.8	-1.8
MINR	Mina	7.33	16	P	Pn	21 43 02.2	+5.7
KURK	Kurchatov	8.36	294	⇓Pn	Pn	21 43 11.0	+0.5
	17nm,0.7s						
KURK				⇑Sn	Sn	21 44 45.0	+0.2
	26nm,0.8s						
KURK				⇓Lg	Lg	21 45 31.0	
	221nm,0.7s						
KURK	Kurchatov	8.36	294	P	Pn	21 43 11.6	+1.1
DJR	Jarkent	8.36	249	Pg	Pn	21 43 16.2	+5.5
	8.2nm,0.1s						
DJR				Lg	Lg	21 44 44.7	
	12nm,0.4s						
KURBB	Kurchatov Arra	8.39	293	Pn	Pn	21 43 11.6	+0.6
	0.6nm,0.3s,baz=101,slow=15,SNR=71						
KURBB				Sn	Sn	21 44 44.7	-0.9
	1.0nm,0.3s,baz=96,slow=25,SNR=5.2						
KURBB				Lg	Lg	21 45 34.5	
	1.1nm,0.3s,baz=102,slow=32,SNR=6.3						
	15nm,0.7s						
KURBB	Kurchatov Arra	8.39	293	⇑Pn	Pn	21 43 11.2	+0.3
	11nm,0.6s						
KURBB				⇑Sn	Sn	21 44 45.6	0.0
	72nm,0.8s						
KURBB				⇓Lg	Lg	21 45 31.4	
	397nm,0.8s						
KURBB	Kurchatov Arra	8.39	293	P	Pn	21 43 11.2	+0.3
KURBB				S	Sn	21 44 45.6	0.0
ZAK	Zakamensk	8.63	69	*e*P	Pn	21 43 10.9	-3.5
ZAK				pmax	pmax		
	comp=Z,11nm,0.4s						
TDK	Taldyqorghan	8.95	256	Pg	Pn	21 43 29.8	+11
	comp=Z,34nm,0.4s						
TDK				Lg	Lg	21 45 08.0	
	comp=Z,74nm,0.3s						
PDGK	Podgornoye	9.07	244	Pg	Pn	21 43 27.5	+7.0
	comp=Z,3.7nm,0.2s						
PDGK				Lg	Lg	21 45 04.9	
	comp=Z,14nm,0.4s						
PDGK	Podgornoye	9.07	244	⇑Pn	Pn	21 43 20.6	+0.1
	comp=Z,4.1nm,0.4s						
PDGK				⇑Sn	Sn	21 45 04.4	+1.6
	comp=Z,34nm,0.7s						
PDGK				⇓Lg	Lg	21 45 56.8	
	comp=Z,89nm,0.7s						
PDGK	Podgornoye	9.07	244	P	Pn	21 43 20.6	+0.1
PDGK				S	Sn	21 45 04.4	+1.6
SHLS	Shalkode	9.19	243	Pg	Pn	21 43 24.5	+2.4
	comp=Z,46nm,0.2s						
SHLS				Lg	Lg	21 44 59.9	
	comp=Z,87nm,0.3s						
BLB	Baldybastay	9.30	250	Pg	Pn	21 43 34.5	+11
	comp=Z,21nm,0.4s						
BLB				Lg	Lg	21 45 16.1	
	comp=Z,16nm,0.4s						
UZB	Uzynbulak	9.46	244	Pg	Pn	21 43 34.4	+8.6
	comp=Z,11nm,0.3s						
UZB				Lg	Lg	21 45 15.9	
	comp=Z,18nm,0.3s						
KPKS	Kokpek	9.49	246	Pg	Pn	21 43 36.6	+10
	comp=Z,11nm,0.3s						
KPKS				Lg	Lg	21 45 20.1	
	comp=Z,40nm,0.3s						
ARXS	Arharly	9.66	252	Pg	Pn	21 43 41.8	+13
	comp=Z,11nm,0.5s						
ARXS				Lg	Lg	21 45 29.3	
	comp=Z,38nm,0.4s						
KURS	Kuram	9.80	248	Pg	Pn	21 43 41.7	+11
	comp=Z,4.5nm,0.4s						
KURS				Lg	Lg	21 45 28.3	
	comp=Z,12nm,0.4s						
ZHN	Zhinishke	9.80	246	Pg	Pn	21 43 41.3	+11
	comp=Z,7.2nm,0.3s						
ZHN				Lg	Lg	21 45 27.4	
	comp=Z,27nm,0.3s						
SATY	Saty	9.88	245	Pg	Pn	21 43 42.6	+11
	comp=Z,16nm,0.3s						
SATY				Lg	Lg	21 45 30.0	
	comp=Z,29nm,0.3s						
CHKK	Chushkaly	10.37	252	Pg	Pn	21 43 54.3	+16
	comp=Z,2.1nm,0.1s						
CHKK				Lg	Lg	21 45 50.6	
	comp=Z,9.1nm,0.2s						
SONM	Songino Array	10.57	85	Pn	Pn	21 43 36.5	-4.4
	comp=Z,0.1nm,0.3s,baz=274,slow=13,SNR=14						
SONM				Pg		21 44 14.8	
	comp=Z,0.7nm,0.3s,baz=274,slow=16,SNR=6.7						
SONM				Lg	Lg	21 46 29.9	
	comp=Z,3.8nm,0.3s,baz=270,slow=26,SNR=12						
SONM				LR	LR	21 48 06.2	
	comp=Z,59nm,21.2s,baz=350,slow=40						
	comp=Z,5.7nm,0.8s						
KOTS	Kotyrbulak	10.59	249	Pg	Pn	21 43 56.7	+15
	comp=Z,5.0nm,0.4s						
KOTS				Lg	Lg	21 45 54.2	
	comp=Z,30nm,0.3s						
KTBS	Karatobe	10.63	252	Pg	Pn	21 43 58.8	+17
	comp=Z,2.7nm,0.2s						
KTBS				Lg	Lg	21 45 58.2	
	comp=Z,27nm,0.9s						
MDOK	Medeo	10.67	249	Pg	Pn	21 43 58.2	+16
	comp=Z,6.3nm,0.3s						
MDOK				Lg	Lg	21 45 56.7	
	comp=Z,18nm,0.5s						
AAA	Alma-Ata	10.73	249	Pg	Pn	21 43 59.5	+16
	comp=Z,15nm,0.2s						
AAA				Lg	Lg	21 45 59.7	
	comp=Z,16nm,0.1s						
KUU	Kurty	10.76	253	Pg	Pn	21 44 02.2	+19
	comp=Z,2.6nm,0.5s						
KUU				Lg	Lg	21 45 42.0	
KUU				Lg	Lg	21 46 04.2	
	comp=Z,14nm,0.4s						
TNSS	Tian-Shan	10.80	248	Pg	Pn	21 44 00.2	+16
	comp=Z,4.0nm,0.2s						
TNSS				Lg	Lg	21 45 59.8	
	comp=Z,5.9nm,0.4s						
IZV	Izvestkoviy	11.01	249	Pg	Pn	21 44 04.5	+18
	comp=Z,3.8nm,0.3s						
IZV				Lg	Lg	21 46 07.7	
	comp=Z,16nm,0.9s						
ULN	Ulaanbaatar	11.01	84	*ce*P	Pn	21 43 46.0	-1.0
ULN				pmax	pmax		
	comp=Z,11nm,0.8s						
MTBS	Maitube	11.07	250	Pg	Pn	21 44 05.6	+18
	comp=Z,6.3nm,0.3s						
MTBS				Lg	Lg	21 46 09.8	
	comp=Z,9.7nm,0.3s						
KRBS	Karabastau	11.28	254	Pg	Pn	21 44 11.8	+21
	comp=Z,2.4nm,0.4s						
KRBS				Lg	Lg	21 46 20.4	
	comp=Z,5.5nm,0.4s						
KST	Kastek	11.41	250	Pg	Pn	21 44 12.5	+20
	comp=Z,4.8nm,0.3s						
KST				Lg	Lg	21 46 21.5	
	comp=Z,9.6nm,0.6s						
DGS	Degeres	11.43	251	Pg	Pn	21 44 13.5	+21
	comp=Z,8.6nm,0.2s						
DGS				Lg	Lg	21 46 23.0	
	comp=Z,13nm,0.5s						
TKM2	Tokmak 2	11.71	250	⇑Pn	Pn	21 43 57.0	+0.4
	comp=Z,4.9nm,0.6s						
TKM2				⇑Sn	Sn	21 46 08.9	+1.5
	comp=Z,8.3nm,1.1s						
TKM2				⇑Lg	Lg	21 47 19.1	
	comp=Z,31nm,1.4s						
TKM2	Tokmak 2	11.71	250	P	Pn	21 43 57.4	+0.8
TKM2				S	Sn	21 46 08.9	+1.5
BTLS	Baital	11.81	262	Pg	Pn	21 44 25.5	+28
	comp=Z,4.9nm,0.3s						
BTLS				Lg	Lg	21 46 44.6	
	comp=Z,7.8nm,0.6s						
BRZS	Berezniki	12.01	287	Pg	Pn	21 44 44.7	+44
	comp=Z,2.5nm,0.4s						
BRZS				Lg	Lg	21 47 17.7	
	comp=Z,36nm,0.7s						
SGDS	Sogindy	12.07	254	Pg	Pn	21 44 26.2	+25
	comp=Z,2.6nm,0.3s						
SGDS				Lg	Lg	21 46 45.0	
	comp=Z,7.0nm,0.5s						
OTUK	Ortayu	12.27	278	⇑Pn	Pn	21 44 03.9	-0.2
	comp=Z,14nm,0.8s						
OTUK				⇓Sn	Sn	21 46 20.5	-0.3
	comp=Z,10.0nm,0.8s						
OTUK				⇑Lg	Lg	21 47 36.7	
	comp=Z,87nm,1.3s						
OTUK	Ortayu	12.27	278	P	Pn	21 44 03.9	-0.2
OTUK				S	Sn	21 46 20.5	-0.3
AAK	Ala-Archa	12.55	251	Pn	Pn	21 44 08.3	+0.3
	comp=Z,0.9nm,0.3s,baz=107,slow=8.0,SNR=27						
AAK				Sn	Sn	21 46 20.7	-7.2
	baz=199,slow=16						
AAK				Lg	Lg	21 47 40.8	
	comp=Z,0.2nm,0.3s,baz=284,slow=16,SNR=1.9						
	comp=Z,3.4nm,0.4s						
AAK	Ala-Archa	12.55	251	*ce*P	Pn	21 44 11.0	+2.9
AAK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MRKS	Merke	13.31	254	Pg	P	21 44 48.7	+21
	comp=Z,2.3nm,0.4s						
MRKS				Lg	Lg	21 47 24.2	
	comp=Z,3.9nm,0.3s						
AML	Almayashu	13.32	251	⇓Pn	Pn	21 44 20.2	+1.5
	comp=Z,0.3nm,0.5s						
AML	Almayashu	13.32	251	P	Pn	21 44 20.3	+1.5
BVA0	Borovoye Array	13.87	299	⇓Pn	Pn	21 44 23.2	-2.8
	comp=Z,3.3nm,0.7s,baz=104,slow=14,SNR=21						
BVA0	Borovoye Array	13.87	299	P	Pn	21 44 23.2	-2.8
BVAR	Borovoye Array	13.87	299	Pn	Pn	21 44 25.0	-0.9
	comp=Z,0.1nm,0.3s,baz=104,slow=14,SNR=21						
BVAR				Sn	Sn	21 46 56.0	-3.9
	comp=Z,0.1nm,0.3s,baz=66,slow=26,SNR=1.8						
BVAR				Lg	Lg	21 48 32.0	
	baz=251,slow=23						
	comp=Z,1.5nm,0.4s						
BVAR	Borovoye Array	13.87	299	P	Pn	21 44 25.0	-0.9
BRVK	Borovoye	13.94	299	*ce*P	P	21 44 35.2	+0.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KK31	Karatay Array	14.92	259	⇑Pn	Pn	21 44 40.2	0.0
	comp=Z,2.7nm,0.7s,baz=57,slow=15,SNR=8.5						
KK31	Karatay Array	14.92	259	P	Pn	21 44 40.2	0.0
IUG	Iuzhnay	15.67	256	Pg	P	21 45 33.5	+39
	comp=Z,7.0nm,0.4s						
IUG				Lg	Lg	21 48 40.3	
	comp=Z,12nm,1.2s						
DANN	Dangsing	20.26	198	*e*P	P	21 45 45.8	+0.6
	comp=Z,3.5nm,0.4s						
AB31	Akbulak array	20.30	285	⇓Pn	P	21 45 45.7	+0.4
	comp=Z,1.4nm,0.6s,baz=80,slow=11,SNR=28						
AB31	Akbulak array	20.30	285	P	P	21 45 45.7	+0.4
GKN	Gorkha	20.43	195	*e*P	P	21 45 46.5	-0.4
	comp=Z,3.8nm,0.4s						
PYUN	Piuthan	20.67	200	*e*P	P	21 45 47.3	-2.2
	comp=Z,2.8nm,0.4s						
PKIN	Phulchoki	20.72	193	*e*P	P	21 45 49.5	-0.7
	comp=Z,2.9nm,0.5s						
DMN	Daman	20.73	194	*e*P	P	21 45 49.2	-1.1
	comp=Z,1.4nm,0.4s						
RAMN	Ramite	21.17	190	*e*P	P	21 45 52.5	-2.5
	comp=Z,1.2nm,0.3s						
ARU	Arti	21.28	306	P	P	21 45 55.4	-0.4
	comp=Z,2.8nm,0.5s,baz=85,slow=23,SNR=3.2						
ARU				S	S	21 49 55.6	+3.6
	comp=Z,0.9nm,0.5s,baz=258,slow=18,SNR=1.7						
	comp=Z,2.8nm,0.5s						
ARU	Arti	21.28	306	*d i*P	P	21 45 59.1	+3.3
ARU						21 46 06.5	
ARU				pmax	pmax		
	comp=Z,8.0nm,1.4s						
AKTO	Aktyubinsk	21.40	289	P	P	21 45 57.1	0.0
	comp=Z,0.9nm,0.6s,baz=74,slow=7.4,SNR=2.8						
	comp=Z,0.9nm,0.6s						
AKTO	Aktyubinsk	21.40	289	⇑P	P	21 45 59.2	+2.1
	comp=Z,2.4nm,0.7s						
NRIK	Noril'sk	21.54	357	P	P	21 45 56.9	-1.5
	comp=Z,2.3nm,0.4s,baz=154,slow=9.5,SNR=3.7						
	comp=Z,2.3nm,0.4s						
YAK	Yakutsk	25.98	43	*ce*P	P	21 46 48.7	+6.8
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KIRV	Kirov	26.47	309	LR	LR	21 58 21.8	
	comp=Z,34nm,21.2s,baz=298,slow=39						
KSRS	Korea Array	29.05	97	LR	LR	21 59 25.4	
	comp=Z,36nm,18.1s,baz=0.0,slow=38						
TIXI	Tiksi	29.63	23	LR	LR	21 58 58.3	
	comp=Z,68nm,18.9s,baz=196,slow=36						
OBN	Obninsk	33.67	303	*e*P	P	21 47 57.0	+6.9
OBN				*e*		21 49 12.0	
OBN				*e*PPP	PPP	21 49 22.3	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FINES	FINESS Array B	38.04	315	P	P	21 48 27.1	-0.4
	comp=Z,1.3nm,0.5s,baz=78,slow=9.3,SNR=17						
	comp=Z,1.3nm,0.5s						
FINES	FINESS Array B	38.04	315	*ce*P	P	21 48 33.7	+6.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	39.15	298	P	P	21 48 36.4	-0.5
	comp=Z,0.4nm,0.5s,baz=53,slow=8.6,SNR=3.0						
	comp=Z,0.4nm,0.5s						
AKASG	Malin Array Be	39.15	298	*ce*P	P	21 48 42.5	+5.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	39.15	298	*ce*P	P	21 48 43.5	+6.6
BRTR	Keskin Array B	41.12	280	P	P	21 48 54.5	+0.9
	comp=Z,1.8nm,0.6s,baz=84,slow=6.8,SNR=14						
	comp=Z,1.8nm,0.6s						
BRTR	Keskin Array B	41.12	280	*ce*P	P	21 48 58.2	+4.6
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BILL	Bilibino	41.54	33	*e*P	P	21 49 02.0	+5.5
BILL				*e*		21 50 41.6	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
HFS	Hagfors	44.24	316	LR	LR	22 07 18.4	
	comp=Z,64nm,18.9s,baz=272,slow=35						
NB2	NORSAR Subarra	45.06	317	P	P	21 49 23.7	-1.4
	comp=Z,1.1nm,0.7s,baz=63,slow=7.4						
NOA	NORSAR Array B	45.06	317	P	P	21 49 24.1	-1.0
	comp=Z,1.0nm,0.9s,baz=72,slow=9.1,SNR=5.4						
	comp=Z,1.0nm,0.9s						
GERES	GERESS Array B	49.03	302	P	P	21 49 55.8	-0.5
	comp=Z,0.1nm,0.3s,baz=51,slow=7.7,SNR=1.8						
	comp=Z,0.1nm,0.3s						
ILAR	Eielson Array	59.08	25	P	P	21 51 07.0	-2.3
	comp=Z,0.7nm,0.9s,baz=316,slow=4.6,SNR=4.0						
	comp=Z,0.7nm,0.9s						
INK	Inuvik	59.50	18	P	P	21 51 11.0	-1.0
	comp=Z,1.5nm,0.9s,baz=278,slow=5.9,SNR=3.3						
	comp=Z,1.5nm,0.9s						
ESDC	Sonseca Array	64.62	302	P	P	21 51 46.6	-0.4
	comp=Z,0.5nm,0.7s,baz=41,slow=5.6,SNR=1.6						
	comp=Z,0.5nm,0.7s						
YKA	Yellowknife Ar	68.11	12	P	P	21 52 07.1	-1.7
	comp=Z,0.5nm,0.7s,baz=336,slow=6.6,SNR=7.4						
	comp=Z,0.5nm,0.7s						
WRA	Warramunga Arr	78.06	138	P	P	21 53 03.5	-4.8
	comp=Z,0.4nm,0.8s,baz=340,slow=6.0,SNR=3.2						
	comp=Z,0.4nm,0.8s						
TORD	Torodi Ar. Bea	79.69	278	P	P	21 53 15.7	-1.7
	comp=Z,0.7nm,1.0s,baz=31,slow=4.6,SNR=2.9						
	comp=Z,0.7nm,1.0s						

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*DDA **12** 21:54:44.5±0.0, 39°.56N×26°.11E, h9km, ML2.4*

*ISK **12** 21:54:44.3, 39°.55N×26°.09E, h10km, ML2.7/20*

*THE **12** 21:54:45.1, 39°.57N×26°.04E, h6km±1km, ML2.6/10, Error ellipse: s-maj=1.6km s-min=0.7km az=105.0*

*ATH **12** 21:54:45.3, 39°.56N×26°.08E, h8km±1km, ML2.6/7, Error ellipse: s-maj=2.7km s-min=0.9km az=248.0*

ISC 12 21:54:44.5±0.8, **39°.56N**±0°.01×**26°.09E**±0°.02, **h12km**±5km, **n59, σ0.s69**/96, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.07	149	P	Pg	21 54 47.0	0.0
KOCA				S	Sg	21 54 48.3	-0.5
GPNR	Gulpinar-Canak	0.11	163	Pg	Pg	21 54 47.3	-0.1
GPNR				Sg	Sg	21 54 49.5	-0.1
BOZC	Bozcaada	0.28	354	Pg	Pg	21 54 50.7	+0.4
BOZC				Sg	Sg	21 54 55.1	+1.0
BOZC	Bozcaada	0.28	354	P	Pg	21 54 50.5	+0.2
BOZC				P	Pg	21 54 50.6	+0.4
BOZC				S	Sg	21 54 54.7	+0.6
BOZC				S	Sb	21 54 54.9	-1.3
BOZC				*i* AML	AML	21 54 55.0	
	comp=N,595nm,0.4s						
BOZC				*i* AML	AML	21 54 55.0	
	comp=N,606nm,0.2s						
BOZC				*i* AML	AML	21 54 55.0	
	comp=E,556nm,0.3s						
BOZC				*i* AML	AML	21 55 00.0	
	comp=E,429nm,0.2s						
EZN	Ezine	0.32	35	P	Pg	21 54 51.3	+0.3
EZN				S	Sg	21 54 56.1	+0.8
	2μm,0.3s						

EZN	Ezine	0.32	35	Pg	Pg	21 54 51.4	+0.4
EZN				Sg	Sg	21 54 56.3	+1.0
PRK	Paraskevi	0.35	156	P	Pg	21 54 51.8	+0.3
PRK				S	Sg	21 54 57.1	+1.0
	3µm,0.3s						
PRK	Paraskevi	0.35	156	P	Pg	21 54 51.8	+0.3
PRK				S	Sg	21 54 57.0	+1.0
PRK				AML	AML	21 54 58.6	
	comp=E,8074µm,0.4s						
PRK				AML	AML	21 54 58.9	
	comp=N,4846µm,0.3s						
BAYC	CANAKKALE_Bayr	0.40	63	P	Pg	21 54 52.5	+0.2
BAYC				S	Sg	21 54 57.8	+0.2
BAYC				*i* AML	AML	21 54 58.0	
	comp=N,327nm,0.5s						
BAYC				*i* AML	AML	21 54 58.0	
	comp=N,472nm,0.2s						
SIGR	SIGRI	0.40	208	P	Pg	21 54 52.5	+0.2
SIGR				S	Sg	21 54 57.9	+0.3
	comp=N,1µm,0.2s						
SIGR	SIGRI	0.40	208	Pg	Pg	21 54 52.6	+0.2
SIGR				Sg	Sg	21 54 58.2	+0.6
SIGR	SIGRI	0.40	208	P	Pg	21 54 52.5	+0.2
SIGR				S	Sg	21 54 57.8	+0.3
SIGR				AML	AML	21 54 58.5	
	comp=N,2016µm,0.3s						
SIGR				AML	AML	21 54 58.9	
	comp=E,2337µm,0.2s						
ECEA	Canakkale, Ece	0.48	8	P	Pg	21 54 51.8	-2.2
ECEA				S	Sb	21 55 01.6	-0.5
COMU	Canakkale	0.61	29	Pg	Pg	21 54 56.7	+0.3
GADA	Gvkgeada	0.64	347	Pg	Pg	21 54 57.4	+0.4
BUHA	Balikesir, Bur	0.77	94	P	Pb	21 54 58.8	-1.0
BUHA				S	Sn	21 55 12.9	+0.3
BUHA				*i* AML	AML	21 55 14.0	
	comp=E,108nm,0.5s						
BUHA				*i* AML	AML	21 55 15.0	
	comp=E,116nm,0.4s						
LIA	Limnos Island	0.78	296	P	Pb	21 54 59.9	0.0
LIA				S	Sb	21 55 10.1	-0.3
	comp=E,762nm,0.3s						
LIA	Limnos Island	0.78	296	P	Pb	21 54 59.9	0.0
LIA				S	Sg	21 55 11.0	+1.4
LIA				AML	AML	21 55 13.9	
	comp=N,1643µm,0.3s						
LIA				AML	AML	21 55 15.9	
	comp=E,1380µm,0.4s						
DKL	Dikili	0.80	128	Pg	Pb	21 55 00.1	-0.2
CANM	Can-anakkale	0.87	59	Pg	Pn	21 55 02.2	-0.3
GELI	Tayfur-Gelibol	0.89	19	Pg	Pb	21 55 01.7	-0.1
KARB	zmir-Karabur	0.93	164	P	Pb	21 55 02.3	-0.2
KARB				S	Sn	21 55 15.8	-0.9
KARB				*i* AML	AML	21 55 17.0	
	comp=E,121nm,0.3s						
KARB				*i* AML	AML	21 55 17.0	
	comp=E,157nm,0.3s						
LPK	Lapseki	0.96	32	Pg	Pb	21 55 03.1	+0.1
ZEDA	zmir-Bergama	0.97	128	P	Pb	21 55 02.5	-0.7
ZEDA				S	Sn	21 55 17.4	-0.2
ZEDA				*i* AML	AML	21 55 18.0	
	comp=E,157nm,0.4s						
ZEDA				*i* AML	AML	21 55 19.0	
	comp=E,89nm,0.2s						
SMTH	Samothraki Isl	1.00	335	P	Pb	21 55 04.0	+0.2
SMTH				S	Sg	21 55 17.7	+0.8
	comp=E,282nm,0.3s						
SMTH	Samothraki Isl	1.00	335	P	Pb	21 55 04.1	+0.2
SMTH				S	Sn	21 55 18.0	-0.5
SMTH				AML	AML	21 55 19.9	
	comp=N,490µm,0.2s						
SMTH				AML	AML	21 55 19.9	
	comp=E,444µm,0.3s						
PSRA	Psara	1.10	202	P	Pg	21 55 06.0	+0.4
PSRA				AML	AML	21 55 24.8	
	comp=N,1123µm,0.3s						
PSRA				AML	AML	21 55 25.0	
	comp=E,1003µm,0.2s						
ERIK	Erikli-Kesan	1.15	16	Pn	Pn	21 55 06.2	-0.2
ENEZ	Enez	1.17	2	P	Pb	21 55 07.1	+0.4
ENEZ				S	Sg	21 55 24.1	+1.8
	comp=E,258nm,0.4s						
ENEZ	Enez	1.17	2	Pn	Pb	21 55 07.1	+0.4
ENEZ				Sn	Sg	21 55 23.7	+1.4
CHOS	Chios island	1.18	181	Pn	Pn	21 55 06.7	-0.1
CHOS	Chios island	1.18	181	P	Pn	21 55 06.5	-0.3
CHOS				S	Sg	21 55 24.2	+1.8
BALY	Balya	1.19	81	P	Pg	21 55 07.5	+0.1
BALY				S	Sn	21 55 22.4	-0.9
BALY				*i* AML	AML	21 55 25.0	
	comp=E,74nm,0.5s						
BALY				*i* AML	AML	21 55 26.0	
	comp=E,110nm,0.4s						
KRBG	Karabiga-Canak	1.24	48	Pn	Pb	21 55 08.1	+0.2
KRBG				Sn	Sg	21 55 25.6	+1.0
URLA	Izmir	1.26	162	Pn	Pb	21 55 08.1	-0.2
URLA				Sn	Sg	21 55 25.5	+0.3
STEP	BALIKESIR_Sava	1.27	98	P	Pb	21 55 08.5	+0.1
STEP				S	Sg	21 55 28.1	+2.5
STEP				*i* AML	AML	21 55 31.0	
	comp=E,96nm,0.3s						
STEP				*i* AML	AML	21 55 32.0	
	comp=E,63nm,0.3s						
GONE	Gonen-Balikesi	1.32	68	Pn	Pb	21 55 09.3	+0.1
ALN	Alexandroupoli	1.33	359	P	Pb	21 55 09.5	+0.1
ALN				S	Sg	21 55 27.5	+0.1
	comp=E,150nm,0.5s						
ALN	Alexandroupoli	1.33	359	Pn	Pb	21 55 09.6	+0.1
ALN				Sn	Sg	21 55 27.9	+0.5
ALN	Alexandroupoli	1.33	359	P	Pb	21 55 09.5	+0.1
ALN				S	Sg	21 55 27.7	+0.2
ALN				AML	AML	21 55 28.4	
	comp=E,390µm,0.5s						
ALN				AML	AML	21 55 29.2	
	comp=N,205µm,0.6s						
KESN	Edirne-Kesan	1.34	20	P	Pn	21 55 09.0	-0.3
KESN				S	Sg	21 55 27.5	-0.2
KESN				*i* AML	AML	21 55 30.0	
	comp=N,138nm,0.4s						
KESN				*i* AML	AML	21 55 32.0	
	comp=N,124nm,0.3s						
BALB	Balikesir	1.39	86	Pn	Pb	21 55 10.1	-0.2
BLCB	Balcova	1.39	147	P	Pb	21 55 10.9	+0.5
BLCB				S	Sg	21 55 30.2	+1.0
BLCB	Balcova	1.39	147	Pn	Pb	21 55 10.1	-0.3
RKY	Sarkoy-Tekirda	1.40	36	Pn	Pb	21 55 10.6	0.0
THAS	Thassos island	1.48	315	P	Pn	21 55 11.0	0.0
THAS				S	Sn	21 55 29.5	-0.7
	comp=N,92nm,0.2s						
THAS	Thassos island	1.48	315	P	Pn	21 55 10.9	0.0
THAS				AML	AML	21 55 30.1	
	comp=N,221µm,0.3s						
THAS				AML	AML	21 55 34.1	
	comp=E,152µm,0.2s						
EDC	Edincik	1.57	60	Pn	Pn	21 55 12.3	+0.1
UKOP	Uzunkopru-Edir	1.62	15	Pn	Pb	21 55 13.9	-0.4
RDO	Rodhopi	1.64	345	P	Pn	21 55 13.5	+0.4
RDO	Rodhopi	1.64	345	Pn	Pb	21 55 13.9	-0.7
OUR	Ouranopolis	1.79	296	P	Pn	21 55 16.2	+1.0
KYMI	Kymi, Euboea I	1.81	240	P	Pn	21 55 15.0	-0.4
KAVA	Kavala	1.87	320	P	Pn	21 55 16.6	+0.2
KAVA				S	Sn	21 55 38.6	-1.3
	comp=E,80nm,0.4s						
KAVA	Kavala	1.87	320	P	Pn	21 55 16.6	+0.2
SMG	Samos	1.94	162	P	Pb	21 55 18.8	-1.0
SMG				S	Sb	21 55 44.5	+0.5
	comp=E,150nm,0.6s						
EREA	Eretria	2.03	237	P	Pn	21 55 18.4	-0.2
KOKK	Kokkinochori,	2.03	309	P	Pn	21 55 18.9	+0.3
KOKK	Kokkinochori,	2.03	309	P	Pn	21 55 18.8	+0.3

IDC ***12*** *22:24:18.4±2.3, 18°76N×145°62E, h186*^{km}*±22*^{km}*, mb3.4/14, mbtmp4.0/16, Error ellipse: s-maj=21.0km s-min=12.4km az=80.0*

NEIC ***12*** *22:24:18.1±1.4, 18°77N±0°07×145°5E±0°1, h173*^{km}*±5*^{km}*, mb4.1/33, Error ellipse: s-maj=20.5km s-min=9.8km az=84.0*

ISC 12 22:24:20.0±0.5**, 18°67N**±0°07×**145°5E**±0°1**, h200**^{km}**, n65,** σ**0ˢ84**/61**, mb3.8**/30**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.09	187	P	Pn	22 25 36.2	+0.5
	34nm,0.5s,baz=11,slow=18,SNR=1.8						
GUMO				S	Sn	22 26 34.0	-1.3
	17nm,0.3s,baz=182,slow=22,SNR=1.4						
GUMO	Guam	5.09	187	Pn	Pn	22 25 34.3	-1.4
JOW	Kunigami	17.84	300	P	P	22 28 15.9	+1.7
	22nm,0.7s,baz=136,slow=8.0,SNR=3.9						
H11S3	WAKE ISLAND Hy	20.07	87	T	T	22 49 42.7	
	baz=274,slow=74						
H11S1	WAKE ISLAND Hy	20.08	87	T	T	22 49 43.1	
	baz=274						
H11S2	WAKE ISLAND Hy	20.08	87	T	T	22 49 43.4	
	baz=274,slow=74						
H11N1	WAKE ISLAND Hy	20.21	84	T	T	22 50 22.1	
	baz=266						
H11N2	WAKE ISLAND Hy	20.22	84	T	T	22 50 18.7	
	baz=266						
H11N3	WAKE ISLAND Hy	20.23	84	T	T	22 50 20.4	
	baz=266						
FAKI	Fak Fak	25.12	213	P	P	22 29 28.3	+1.5
KNRA	Kununurra	37.91	207	P	P	22 31 16.9	-1.3
WB0	Warramunga Arr	39.73	197	P	P	22 31 34.6	+1.3
WB0				IAmb	IAmb	22 31 35.8	
	comp=Z,11nm,1.2s						
WB2	Warramunga Arr	39.91	197	P	P	22 31 36.1	+1.3
WB2				IAmb	IAmb	22 31 37.5	
	comp=Z,7.0nm,0.8s						
WRA	Warramunga Arr	39.91	197	P	P	22 31 35.9	+1.1
	comp=Z,4.6nm,0.8s,baz=18,slow=8.7,SNR=32						
WRA				PcP	PcP	22 33 35.7	-0.7
	comp=Z,0.2nm,0.5s,baz=13,slow=3.3,SNR=1.4						
	comp=Z,4.6nm,0.8s						
WRA	Warramunga Arr	39.91	197	P	P	22 31 35.6	+0.8
FITZ	Fitzroy Crossi	41.44	209	P	P	22 31 47.6	+0.4
ULN	Ulaanbaatar	42.69	322	P	P	22 31 56.4	-0.8
SONM	Songino Array	43.06	321	P	P	22 32 00.6	+0.4
	comp=Z,0.4nm,0.7s,baz=131,slow=8.9,SNR=4.4						
	comp=Z,0.4nm,0.7s						
SONM	Songino Array	43.06	321	P	P	22 31 59.6	-0.6
ASAR	Alice Springs	43.58	196	P	P	22 32 04.9	+0.3
	comp=Z,0.8nm,0.7s,baz=16,slow=8.0,SNR=10						
	comp=Z,0.8nm,0.7s						
ASAR	Alice Springs	43.58	196	P	P	22 32 05.1	+0.5
MBWA	Marble Bar	46.96	214	P	P	22 32 31.6	+0.6
MBWA				IAmb	IAmb	22 32 44.0	
	comp=Z,9.3nm,1.1s						
PSA00	Pilbara Seismi	47.24	213	P	P	22 32 33.5	+0.3
PSA00				IAmb	IAmb	22 32 35.3	
	comp=Z,5.9nm,1.2s						
GSI	Gunungsitoli	50.06	256	P	P	22 32 55.1	+0.3
GSI				IAmb	IAmb	22 32 57.9	
	comp=Z,6.9nm,0.7s						
STKA	Stephens Creek	50.40	184	P	P	22 32 57.8	+0.7
	comp=Z,1.5nm,0.7s,baz=346,slow=8.3,SNR=2.1						
	comp=Z,1.5nm,0.7s						
FORT	Forrest	51.96	199	P	P	22 33 09.0	+0.4
BBOO	Buckleboo	51.99	190	P	P	22 33 08.7	-0.2
TIXI	Tiksi	53.88	354	P	P	22 33 21.1	-1.0
	comp=Z,0.5nm,0.2s,baz=90,slow=23,SNR=2.0						
	comp=Z,0.5nm,0.2s						
ZALV	Zalesovo Beam	57.93	323	P	P	22 33 50.6	-0.6
	comp=Z,0.4nm,0.4s,baz=90,slow=6.2,SNR=2.6						
	comp=Z,0.4nm,0.4s						
MK31	Makanchi Array	58.36	314	P	P	22 33 55.0	+0.7
MKAR	Makanchi Array	58.36	314	P	P	22 33 54.5	+0.2
	comp=Z,0.8nm,0.6s,baz=92,slow=8.7,SNR=12						
	comp=Z,0.8nm,0.6s						
MKAR	Makanchi Array	58.36	314	P	P	22 33 54.9	+0.5
MAKZ	Makanchi	58.57	314	P	P	22 33 56.2	+0.4
MAKZ				IAmb	IAmb	22 33 57.4	
	comp=Z,1.3nm,0.7s						
SKT	Skwentna	61.04	29	P	P	22 34 12.5	+0.1
KURK	Kurchatov	61.18	318	P	P	22 34 12.5	-0.9
CAST	Castle Rocks	61.19	27	P	P	22 34 13.3	0.0
CAST				IAmb	IAmb	22 34 15.6	
	comp=Z,1.8nm,0.9s						
KURBB	Kurchatov Arra	61.23	318	P	P	22 34 13.3	-0.4
	comp=Z,1.2nm,0.7s,baz=96,slow=7.4,SNR=18						
	comp=Z,1.2nm,0.7s						
IMAR	Indian Mountai	61.31	24	P	P	22 34 14.2	+0.2
H21K	Melozitna Rive	61.57	25	P	P	22 34 16.1	+0.3
H21K				IAmb	IAmb	22 34 35.4	
	comp=Z,5.3nm,1.5s						
WRH	Wood River Hil	63.17	26	P	P	22 34 26.4	0.0
WRH				IAmb	IAmb	22 34 27.1	
	comp=Z,1.9nm,1.2s						
MDM	Murphy Dome	63.23	26	P	P	22 34 25.4	-1.4
MDM				IAmb	IAmb	22 34 34.8	
	comp=Z,2.7nm,1.3s						
H24K	Noodor Dome	63.58	25	P	P	22 34 30.0	+0.8
ILAR	Eielson Array	63.74	26	P	P	22 34 28.9	-1.3
	comp=Z,0.7nm,0.7s,baz=256,slow=4.9,SNR=7.9						
	comp=Z,0.7nm,0.7s						
ILAR	Eielson Array	63.74	26	P	P	22 34 29.5	-0.6
J26L	Joseph Creek	65.10	27	P	P	22 34 38.8	-0.3
J26L				IAmb	IAmb	22 34 50.1	
	comp=Z,2.6nm,1.2s						
BMAR	Burnt Mountain	65.21	24	P	P	22 34 41.4	+1.8
BCAR	Beaver Creek A	65.69	28	P	P	22 34 43.8	+1.0
EGAK	Eagle	66.16	27	P	P	22 34 46.2	+0.5
EGAK				IAmb	IAmb	22 35 04.5	
	comp=Z,3.1nm,1.4s						
BVAR	Borovoye Array	66.39	320	P	P	22 34 47.0	-0.4
	comp=Z,2.5nm,0.6s,baz=95,slow=7.3,SNR=19						
	comp=Z,2.5nm,0.6s						
BRVK	Borovoye	66.45	320	P	P	22 34 47.0	-0.8
BRVK				IAmb	IAmb	22 34 49.2	
	comp=Z,1.9nm,0.8s						
SKAG	Skagway	68.61	33	P	P	22 35 00.7	-0.5
MOBC	Moresby Island	70.83	39	P	P	22 35 15.3	+0.4
RUBB	Prince Rupert	71.71	38	P	P	22 35 20.4	+0.3
A36M	Sachs Harbour	72.16	19	P	P	22 35 22.8	+0.3
A36M				IAmb	IAmb	22 35 30.1	
	comp=Z,3.1nm,1.2s						
ABKAR	Akbulak array	73.24	317	P	P	22 35 29.3	0.0
ABKAR	Akbulak array	73.24	317	P	P	22 35 28.4	-0.8
YKA	Yellowknife Ar	78.09	28	P	P	22 35 56.4	0.0
	comp=Z,0.5nm,0.6s,baz=286,slow=5.2,SNR=10.0						
	comp=Z,0.5nm,0.6s						
RES	Resolute Bay	79.49	14	P	P	22 36 03.4	-0.4
	comp=Z,0.5nm,0.4s,baz=264,slow=18,SNR=3.1						
	comp=Z,0.5nm,0.4s						
RES	Resolute Bay	79.49	14	P	P	22 36 04.2	+0.3
RES				IAmb	IAmb	22 36 05.0	
	comp=Z,3.7nm,1.2s						
PINE	Pine Mountain	79.80	47	P	P	22 36 07.5	+1.0
PINE				IAmb	IAmb	22 36 25.6	
	comp=Z,2.6nm,1.0s						
NVAR	Mina Array Bea	83.29	52	P	P	22 36 24.1	-0.7
	comp=Z,0.4nm,0.6s,baz=266,slow=3.6,SNR=2.8						
	comp=Z,0.4nm,0.6s						
HRY	Holter Researc	84.95	42	P	P	22 36 33.5	+0.6
GSC	Goldstone, Bar	85.44	54	P	P	22 36 35.8	+0.3
GSC				IAmb	IAmb	22 36 54.3	
	comp=Z,7.0nm,1.5s						
FINES	FINESS Array B	86.84	335	P	P	22 36 39.6	-2.1
	comp=Z,0.7nm,0.5s,baz=66,slow=6.5,SNR=10						
	comp=Z,0.7nm,0.5s						
LPAZ	La Paz	147.84	91	PKPbc	PKPbc	22 43 43.1	+0.1
	comp=Z,0.9nm,0.6s,baz=318,slow=4.1,SNR=4.3						

ROM 12 22:31:57.8±0.1**, 42°945N**±0°002×**13°047E**±0°003**, h8**^{km}**, ML1.3**/8**, 4C-2D, Error ellipse: s-maj=0.2km s-min=0.0km az=237.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1216	Preci, Frazion	0.06	201	⇑P	Pg	22 31 59.8	+0.2
T1216				S	Sg	22 32 01.0	+0.2
T1216				AML	AML		
	comp=N,1045µm,0.2s						
T1216				AML	AML		
	comp=E,714µm,0.3s						
FDMO	Fiordimonte	0.10	18	P	Pg	22 32 00.4	+0.3
FDMO				S	Sg	22 32 02.1	+0.3
FDMO				AML	AML		
	comp=N,274µm,0.2s						
FDMO				AML	AML		
	comp=E,116µm,0.7s						
MC2	Monte Cornacci	0.11	107	⇑P	Pg	22 32 00.8	+0.3
T1219	Muccia, Frazio	0.12	345	⇑P	Pg	22 32 00.7	+0.3
T1219				S	Sg	22 32 02.8	+0.5
T1219				AML	AML		
	comp=E,231µm,0.1s						
T1219				AML	AML		
	comp=N,239µm,0.7s						
T1219				AML	AML		
	comp=E,236µm,0.1s						
T1219				AML	AML		
	comp=N,196µm,0.7s						
T1219				AML	AML		
	comp=E,236µm,0.1s						
T1219				AML	AML		
	comp=E,231µm,0.1s						
CESI	CESI - Serrava	0.12	300	P	Pg	22 32 01.0	+0.5
CESI				S	Sg	22 32 03.6	+1.2
CESI				AML	AML		
	comp=E,186µm,0.3s						
CESI				AML	AML		
	comp=N,311µm,0.3s						
CESI				AML	AML		
	comp=E,186µm,1.7s						
T1245	Castelsantange	0.14	130	P	Pg	22 32 01.2	+0.4
T1245				AML	AML		
	comp=E,260µm,0.2s						
T1245				AML	AML		
	comp=N,264µm,0.4s						
T1256	Bolognola (MC)	0.14	65	P	Pg	22 32 01.4	+0.5
T1256				S	Sg	22 32 04.3	+1.1
T1220	Camerino, Fraz	0.17	11	P	Pg	22 32 02.2	+0.9
T1212	Cascia, Frazio	0.19	180	⇓P	Pg	22 32 02.4	+0.7
T1212				S	Sg	22 32 06.0	+1.6
T1212				AML	AML		
	comp=E,118µm,1.5s						
T1212				AML	AML		
	comp=N,116µm,0.2s						
T1212				AML	AML		
	comp=E,118µm,1.5s						
T1212				AML	AML		
	comp=N,116µm,0.2s						
T1212				AML	AML		
	comp=E,118µm,0.5s						
T1215	Vallo di Nera,	0.19	223	P	Pg	22 32 02.5	+0.8
T1215				S	Sg	22 32 05.9	+1.5
MMO1	Montemonaco	0.21	102	P	Pg	22 32 02.6	+0.6
MMO1				S	Sg	22 32 06.2	+1.3
T1214	Arquata del Tr	0.22	147	P	Pg	22 32 02.8	+0.6
T1214				S	Sg	22 32 06.5	+1.2
T1218	Civita (PG)	0.28	170	P	Pg	22 32 03.9	+0.5
T1218				S	Sb	22 32 08.8	-1.3
T1241	Roccafluvione,	0.30	107	⇓P	Pg	22 32 04.3	+0.6
T1241				S	Sb	22 32 09.3	-1.2
T1241				AML	AML		
	comp=E,67µm,1.0s						
T1241				AML	AML		
	comp=N,42µm,0.5s						
T1241				AML	AML		
	comp=E,67µm,1.0s						
ASSB	Assisi San Ben	0.30	289	⇑P	Pg	22 32 04.3	+0.5
ASSB				S	Sb	22 32 09.4	-1.2
ASSB				AML	AML		
	comp=E,96µm,0.4s						
ASSB				AML	AML		
	comp=N,122µm,0.2s						
ASSB				AML	AML		
	comp=E,96µm,1.6s						
SNTG	Esanatoglia	0.32	346	P	Pb	22 32 05.2	-0.6
ATCC	AVT- Casa Cast	0.38	309	P	Pg	22 32 06.0	+0.8
T1211	Morro Reatino	0.43	199	P	Pb	22 32 07.2	-0.6

IDC ***12*** *22:31:57.0±1.3, 40°62N×127°36W, h0*^{km}*, mb3.5/7, mbtmp3.5/12, ML3.5/5, MS3.5/12, Error ellipse: s-maj=29.5km s-min=13.2km az=31.0*

NEIC ***12*** *22:31:59.5±1.8, 40°64N±0°08×127°2W±0°2, h13*^{km}*±9*^{km}*, ML3.3/36, ML3.5/9(NCEDC), Error ellipse: s-maj=18.0km s-min=10.3km az=75.0*

NCEDC ***12*** *22:31:59.2±5.0, 40°28N±0°09×127°2W±0°1, h4*^{km}*±2*^{km}*, Error ellipse: s-maj=15.6km s-min=13.8km az=227.0*

ISC 12 22:31:58.5±0.9**, 40°63N**±0°07×**127°27W**±0°09**, h10**^{km}**, n70,** σ**1ˢ09**/55**, mb3.6**/7**, MS3.5**/7**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	2.24	93		Pn	22 32 35.4	-0.2
KSMM	Slide Mountain	2.41	100		Pn	22 32 37.0	-1.0
KMPM	Mount Pierce	2.41	94		Pn	22 32 37.6	-0.4
KMPM	Mount Pierce	2.41	94	IAML		22 33 08.1	
	comp=N,236nm,1.2s						
JCC	Jacoby Creek,	2.47	85		Pn	22 32 37.4	-1.3
JCC	Jacoby Creek,	2.47	85	IAML		22 33 10.4	
	comp=E,110nm,0.9s						
KCRM	Chalk Rock	2.64	93		Pn	22 32 40.9	-0.3
KHMM	Horse Mountain	2.70	84		Pn	22 32 41.2	-0.8
KHMM	Horse Mountain	2.70	84	IAML		22 33 17.9	
	comp=E,179nm,0.9s						
KHMM				IAML		22 33 19.2	
	comp=N,156nm,0.8s						
KMRM	Mail Ridge	2.75	97		Pn	22 32 43.1	+0.5
KMRM	Mail Ridge	2.75	97	IAML		22 33 21.7	
	comp=E,189nm,0.9s						
KMRM				IAML		22 33 23.0	
	comp=N,146nm,0.7s						
KCPM	Cahto Peak	2.98	107		Pn	22 32 46.4	+0.5
KCPM				IAML		22 33 21.3	
	comp=N,132nm,0.5s						
L02F	Cave Junction	3.15	61		Pn	22 32 47.9	-0.3
K02D	Willamette Mer	3.40	51		Pn	22 32 50.9	-0.7
J01E	Myrtle Point	3.55	44		Pn	22 32 52.8	-0.8
J01E				IAML		22 33 31.0	
	comp=E,37nm,4.0s						
J01E				IAML		22 34 44.0	
	comp=N,34nm,4.3s						
YBH	Yreka Blue Hor	3.61	71	Pn	Pn	22 32 55.5	+0.9
	comp=N,17nm,0.3s,baz=267,slow=12,SNR=202						
YBH				Sn	Sn	22 33 37.3	0.0
	comp=N,0.9nm,0.3s,baz=166,slow=15,SNR=0.8						
YBH				LR	LR	22 34 01.1	
	comp=N,431nm,20.3s,baz=302,slow=34						
	comp=N,57nm,0.4s						
YBH	Yreka Blue Hor	3.61	71		Pn	22 32 55.0	+0.4
HOPS	Hopland Field	3.62	116		Pn	22 32 54.1	-0.5
HOPS				IAML		22 33 39.5	
	comp=E,57nm,0.8s						
HOPS				IAML		22 33 41.1	
	comp=N,44nm,1.3s						
HUMO	Hull Mountain	3.79	57		Pn	22 32 56.9	0.0
DBO	Dodson Butte	3.90	49		Pn	22 32 57.9	-0.6
L04D	Klamath Falls	4.05	65		Pn	22 33 02.3	+1.6
MCCM	Marconi Confer	4.21	125		Pn	22 33 02.5	-0.2
I03D	Drain, OR	4.23	42		Pn	22 33 02.3	-0.5
I03D				IAML		22 34 46.2	
	comp=E,23nm,3.9s						
I03D				IAML		22 35 13.0	
	comp=N,21nm,4.3s						
K04D	Chiloquin, OR	4.59	63		Pn	22 33 08.7	+0.7
J04A	Umpqua Nationa	4.65	54		Pn	22 33 08.9	0.0
I04A	Tendick Farm,	4.79	47		Pn	22 33 11.2	+0.4
K05A	Summer Lake	5.21	64		Pn	22 33 17.0	+0.4
K05A				IAML		22 33 59.6	
	comp=N,26nm,4.4s						
J05D	Fort Rock, OR	5.22	58		Pn	22 33 17.6	+0.9
MOD	Modoc Plateau	5.40	74		Pn	22 33 20.1	+0.9
MOD				IAML		22 34 07.2	
	comp=E,9.4nm,3.4s						
MOD				IAML		22 34 12.9	
	comp=N,13nm,4.5s						
H04A	Detroit Lake	5.51	41		Pn	22 33 21.3	+0.7
PINE	Pine Mountain	5.66	54		Pn	22 33 23.4	+0.7
MPK	Martis Peak	5.72	101		Pn	22 33 24.0	+0.3
EMB	Emerald Bay	5.76	104		Pn	22 33 24.5	+0.3
SAO	San Andreas Ge	5.97	128		Pn	22 33 26.8	-0.1
PAHR	Pah Rah Range	6.11	96		Pn	22 33 29.1	+0.2
BBGB	Big Mountain B	6.34	128		Pn	22 33 32.2	+0.2
YERR	Yerington	6.40	102		Pn	22 33 34.2	+1.2
WAKR	Walker	6.41	107		Pn	22 33 33.7	+0.6
I07A	Izee	6.70	57		Pn	22 33 37.4	+0.4
WVOR	Wild Horse Val	6.72	72		Pn	22 33 37.6	+0.3
PMPB	Monarch Peak	6.72	129		Pn	22 33 38.1	+0.8
MDPB	Devils Postpil	7.04	113		Pn	22 33 42.9	+1.1
J08A	Circle Bar Ran	7.09	65		Pn	22 33 42.0	-0.4
OMMB	Old Mammoth Mi	7.10	112		Pn	22 33 43.5	+0.8
NVAR	Mina Array Bea	7.27	105	Pn	Pn	22 33 46.3	+1.3
	comp=N,0.3nm,0.3s,baz=285,slow=14,SNR=11						
NVAR				Sn	Sn	22 34 55.9	-12
	baz=302,slow=22						
	comp=N,0.9nm,0.6s						
LON	Longmire	7.28	31		Pn	22 33 45.9	+1.0

ELK	**Elko**	**9.14**	**85**	Pn	**Pn**	**22 34 14.2**	**+3.6**
	comp=N,0.1nm,0.3s,baz=285,slow=7.6,SNR=2.4						
ELK				LR	LR	22 38 08.1	
	comp=N,264nm,19.0s,baz=259,slow=40						
	comp=N,0.4nm,0.3s						
NEW	**Newport**	**10.52**	**40**	LR	LR	22 38 28.6	
	comp=N,256nm,19.9s,baz=270,slow=37						
PFO	**Pinyon Flats O**	**11.11**	**126**	Pn	**Pn**	**22 34 38.9**	**+1.4**
	comp=N,0.1nm,0.3s,baz=153,slow=16,SNR=1.7						
PFO				LR	LR	22 38 32.3	
	comp=N,107nm,20.3s,baz=24,slow=35						
	comp=N,0.6nm,0.4s						
PDAR	**Pinedale Array**	**13.41**	**75**	Pn	**P**	**22 35 14.5**	**-4.0**
	comp=N,0.1nm,0.3s,baz=247,slow=3.1,SNR=6.6						
	comp=N,0.7nm,0.8s						
ANMO	**Albuquerque**	**17.39**	**102**	P	**P**	**22 36 05.0**	**+2.3**
	comp=N,1.6nm,0.8s,baz=44,slow=12,SNR=5.9						
ANMO				LR	LR	22 43 15.2	
	comp=N,84nm,19.5s,baz=60,slow=39						
LPIG	**La Paz**	**21.78**	**134**	LR	LR	22 44 03.4	
	comp=N,130nm,18.6s,baz=24,slow=33						
TXAR	**Lajitas Array**	**22.32**	**113**	P	**P**	**22 36 57.3**	**+1.0**
	comp=N,0.8nm,1.0s,baz=297,slow=8.0,SNR=4.4						
TXAR				LR	LR	22 46 31.2	
	comp=N,52nm,21.0s,baz=20,slow=39						
	comp=N,0.8nm,1.0s						
YKA	**Yellowknife Ar**	**23.18**	**15**	P	**P**	**22 37 05.0**	**+0.1**
	comp=N,0.2nm,0.6s,baz=200,slow=11,SNR=4.5						
	comp=N,0.2nm,0.6s						
ULM	**Lac du Bonnet**	**23.88**	**56**	LR	LR	22 45 57.6	
	comp=N,165nm,19.2s,baz=18,slow=35						
ILAR	**Eielson Array**	**26.70**	**341**	P	**P**	**22 37 36.9**	**-0.6**
	comp=N,0.6nm,0.9s,baz=149,slow=7.2,SNR=5.7						
ILAR				PcP	**PcP**	**22 41 01.9**	**+1.3**
	comp=N,0.4nm,1.0s,baz=160,slow=2.9,SNR=2.9						
	comp=N,0.6nm,0.9s						
TKL	**Tuckaleechee C**	**34.30**	**84**	LR	LR	22 54 45.2	
	comp=N,204nm,18.8s,baz=22,slow=40						
RES	**Resolute Bay**	**37.23**	**14**	P	**P**	**22 39 10.1**	**+0.5**
	comp=N,1.4nm,1.1s,baz=93,slow=20,SNR=2.6						
	comp=N,1.4nm,1.1s						
SCHQ	**Schefferville**	**41.72**	**49**	LR	LR	22 58 32.9	
	comp=N,163nm,18.1s,baz=54,slow=38						
H11N3	**WAKE ISLAND Hy**	**59.25**	**270**	T	T	23 46 06.7	
	baz=53,slow=75,SNR=23						
H11N2	**WAKE ISLAND Hy**	**59.26**	**270**	T	T	23 46 06.7	
	baz=53,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hy**	**59.27**	**270**	T	T	23 46 08.4	
	baz=53,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**60.13**	**269**	T	T	23 47 22.3	
	baz=54,slow=75,SNR=9.4						
H11S2	**WAKE ISLAND Hy**	**60.13**	**269**	T	T	23 47 24.0	
	baz=54,slow=75,SNR=6.3						
H11S3	**WAKE ISLAND Hy**	**60.15**	**269**	T	T	23 47 24.0	
	baz=54,slow=75,SNR=6.4						
PPT	**Papeete**	**61.51**	**204**	LR	LR	23 01 57.7	
	comp=N,20nm,20.2s,baz=13,slow=29						
JCJ	**Chichijima**	**73.30**	**291**	LR	LR	23 08 21.9	
	comp=N,62nm,20.0s,baz=62,slow=30						
SONM	**Songino Array**	**79.89**	**327**	P	**P**	**22 44 07.9**	**+0.5**
	comp=N,1.1nm,1.1s,baz=43,slow=1.9,SNR=5.8						
	comp=N,1.1nm,1.1s						
ZALV	**Zalesovo Beam**	**81.83**	**342**	P	**P**	**22 44 17.0**	**-0.4**
	comp=N,0.3nm,0.4s,baz=359,slow=5.8,SNR=2.2						
	comp=N,0.3nm,0.4s						
AKASG	**Malin Array Be**	**86.74**	**15**	P	**P**	**22 44 42.5**	**+0.1**
	comp=N,0.1nm,0.2s,baz=350,slow=3.9,SNR=1.6						
	comp=N,0.1nm,0.2s						

ROM 12 22:32:37.1±0.1**, 42°.805N**±0°.004×**12°.889E**±0°.005**,**
h10^{km}, ML0.9/7**, 2C-2D, Error ellipse: s-maj=0.4km**
s-min=0.3km az=54.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1215	**Vallo di Nera,**	**0.01**	**257**	P	Pg	22 32 39.2	+0.3
T1215				S	Sg	22 32 40.4	+0.2
T1215				AML	AML		
	comp=N,226µm,0.1s						
T1215				AML	AML		
	comp=E,150µm,0.1s						
T1215				AML	AML		
	comp=N,226µm,0.1s						
T1215				AML	AML		
	comp=N,226µm,0.1s						
T1215				AML	AML		
	comp=E,149µm,0.1s						
T1215				AML	AML		
	comp=N,211µm,0.1s						
T1215				AML	AML		
	comp=E,154µm,0.1s						
T1217	**Poggiodomo (PG**	**0.10**	**161**	P	Pg	22 32 40.2	+0.5
T1217				S	Sg	22 32 42.3	+0.7
T1217				AML	AML		
	comp=E,91µm,0.2s						
T1217				AML	AML		
	comp=N,88µm,0.9s						
T1217				AML	AML		
	comp=E,70µm,0.1s						
T1217				AML	AML		
	comp=N,77µm,0.2s						
T1217				AML	AML		
	comp=E,76µm,0.1s						
T1217				AML	AML		
	comp=N,98µm,0.2s						
T1212	**Cascia, Frazio**	**0.13**	**115**	⇓P	Pg	22 32 40.6	+0.5
T1212				S	Sg	22 32 43.1	+0.9
T1212				AML	AML		
	comp=E,73µm,0.1s						
T1212				AML	AML		
	comp=N,113µm,1.1s						
T1212				AML	AML		
	comp=N,90µm,0.2s						
T1212				AML	AML		
	comp=N,86µm,0.2s						
T1212				AML	AML		
	comp=E,73µm,0.1s						
T1216	**Preci, Frazion**	**0.13**	**48**	P	Pg	22 32 40.7	+0.5
T1216				S	Sg	22 32 43.1	+0.8
T1216				AML	AML		
	comp=E,228µm,0.1s						
T1216				AML	AML		
	comp=N,362µm,0.4s						
T1216				AML	AML		
	comp=N,337µm,0.1s						
T1216				AML	AML		
	comp=E,228µm,0.1s						
T1218	**Civita (PG)**	**0.21**	**129**	P	Pg	22 32 42.1	+0.6
T1218				S	Sg	22 32 45.6	+1.0
T1218				AML	AML		
	comp=N,44µm,0.3s						
T1218				AML	AML		
	comp=N,44µm,1.7s						
T1218				AML	AML		
	comp=E,42µm,0.1s						
MOMA	**Monte Martano**	**0.23**	**270**	⇑P	Pg	22 32 42.5	+0.5
MOMA				S	Sg	22 32 46.6	+1.4
MOMA				AML	AML		
	comp=N,12µm,0.1s						
MOMA				AML	AML		
	comp=N,12µm,1.9s						
MOMA				AML	AML		
	comp=E,12µm,0.1s						
ARRO	**Arrone**	**0.24**	**202**	⇓P	Pg	22 32 42.7	+0.7
ARRO				S	Sg	22 32 47.0	+1.6
ARRO				AML	AML		
	comp=N,21µm,0.2s						
ARRO				AML	AML		
	comp=E,18µm,0.2s						
T1219	**Muccia, Frazio**	**0.27**	**19**	AML	AML		
	comp=N,156µm,0.4s						
T1219				AML	AML		
	comp=E,178µm,1.2s						
T1211	**Morro Reatino**	**0.27**	**185**	⇑P	Pg	22 32 43.2	+0.6
T1211				S	Sb	22 32 47.9	-0.9
T1211				AML	AML		
	comp=N,19µm,0.2s						
T1211				AML	AML		
	comp=E,18µm,0.1s						

IDC 12 22:33:15.3±2.3**, 6°.51S×129°.51E, h0^{km}, mb3.4**/1**,**
mbtmp3.2/3**, ML3.5**/2**, Error ellipse: s-maj=152.1km**
s-min=32.2km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.16**	**161**	Pn	Pn	22 36 37.6	+0.4
	0.2nm,0.3s,baz=343,slow=12,SNR=10						
WRA				Sn	Sn	22 39 03.8	-11
	0.3nm,0.3s,baz=331,slow=22,SNR=7.4						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**17.58**	**167**	P	Pn	22 37 21.5	-0.4
	0.1nm,0.3s,baz=358,slow=11,SNR=5.0						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**67.55**	**327**	P	P	22 44 13.6	0.0
	0.1nm,0.4s,baz=115,slow=7.2,SNR=5.0						
	0.1nm,0.4s						

MOS ***12*** *22:41:58.5±0.0, 42°.97N×45°.94E, h12^{km}, MPVA3.6*
DRS ***12*** *22:41:59.2±0.0, 42°.98N×45°.82E, h14^{km}*
NORS ***12*** *22:42:00.2±0.0, 42°.98N×45°.94E, h12^{km}, MPVA3.6*
TIF ***12*** *22:42:00.3, 42°.95N×45°.84E, h9^{km}±3^{km}*
ISC 12 22:42:00.5±0.9**, 42°.96N**±0°.02×**45°.92E**±0°.01**, h11**^{km}±7^{km}**,**
n43, σ0^{s}.84/85**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVE	**Vedeno**	**0.15**	**92**	*i* Pg	**Pg**	**22 42 03.5**	**-0.5**
DVE				*e*Sg	**Sg**	**22 42 07.3**	**+0.8**
GROC	**Groznyy**	**0.26**	**340**	*i* Pg	**Pg**	**22 42 05.5**	**-0.2**
GROC				*i* Sg	**Sg**	**22 42 10.4**	**+1.1**
BTLR	**Botlikh**	**0.37**	**143**	*e*Pg	**Pg**	**22 42 08.0**	**0.0**
BTLR				*i* Sg	**Sb**	**22 42 14.2**	**-0.9**
DLMR	**Dylym**	**0.54**	**78**	*e*Pg	**Pg**	**22 42 10.6**	**-0.3**
DLMR				*e*Sg	**Sb**	**22 42 19.1**	**-0.6**
SHTL	**Shatili**	**0.64**	**242**	P	**Pg**	**22 42 12.3**	**-0.6**
SHTL				S	**Sg**	**22 42 21.4**	**+0.1**
DBC	**Dubki**	**0.67**	**85**	*e*Pg	**Pg**	**22 42 12.7**	**-0.8**
	9.0nm,0.2s						
DBC				*e*Sg	**Sb**	**22 42 22.9**	**-0.8**
	30nm,0.1s						
UNCR	**Uncukul**	**0.69**	**111**	*e*Pg	**Pg**	**22 42 13.5**	**-0.4**
	39nm,0.4s						
UNCR				*e*Sg	**Sb**	**22 42 24.0**	**-0.2**
	52nm,0.4s						
XNZR	**Khunzakh**	**0.72**	**126**	*e*Pg	**Pg**	**22 42 14.3**	**0.0**
	26nm,0.3s						
XNZR				*e*Sg	**Sb**	**22 42 25.1**	**+0.1**
	81nm,0.4s						
KRNR	**Karanay**	**0.74**	**100**	*e*Pg	**Pg**	**22 42 14.2**	**-0.6**
KRNR				*e*Sg	**Sb**	**22 42 25.4**	**-0.2**
KMGR	**Komgaron**	**0.78**	**277**	*e*Pg	**Pb**	**22 42 15.9**	**-0.2**
KMGR				*e*Sg	**Sn**	**22 42 28.6**	**-0.6**
BUJR	**Buynaksk**	**0.89**	**98**	*e*Pg	**Pn**	**22 42 19.3**	**+0.3**
BUJR				*i* Sg	**Sn**	**22 42 31.9**	**0.0**
GNBR	**Gunib**	**0.96**	**126**	*e*Pg	**Pn**	**22 42 19.4**	**-0.6**
GNBR				*e*Sg	**Sn**	**22 42 33.1**	**-0.6**
PNSH	**Pansheti**	**1.01**	**252**	P	**Pg**	**22 42 19.1**	**-0.8**
PNSH				S	**Sg**	**22 42 32.2**	**-0.9**
BTKR	**Batakoyurt**	**1.08**	**293**	*e*Pg	**Pn**	**22 42 21.5**	**-0.2**
BTKR				*e*Sg	**Sn**	**22 42 36.3**	**-0.5**
TRKR	**Terskaya**	**1.15**	**312**	*i* Pg	**Pb**	**22 42 22.0**	**-0.4**
TRKR				*e*Sg	**Sn**	**22 42 38.4**	**+0.1**
LGD	**Lagodekhi**	**1.15**	**168**	P	**Pg**	**22 42 22.5**	**-0.1**
LGD				S	**Sg**	**22 42 37.6**	**0.0**
MAK	**Makhachkala**	**1.17**	**89**	*e*Pg	**Pb**	**22 42 21.9**	**-0.7**
MAK				*e*Sg	**Sn**	**22 42 39.5**	**+0.8**
GUDG	**Gudauri**	**1.17**	**245**	P	**Pb**	**22 42 22.2**	**-0.6**
GUDG				S	**Sb**	**22 42 37.7**	**-0.5**
KANR	**Karaman**	**1.18**	**78**	*e*Pg	**Pg**	**22 42 23.8**	**+0.7**
KANR				*e*Sg	**Sn**	**22 42 40.0**	**+1.1**
LACR	**Lac**	**1.20**	**264**	*i* Pg	**Pn**	**22 42 22.4**	**-0.9**
LACR				*e*Sg	**Sn**	**22 42 39.9**	**+0.3**
KMKR	**Kumukh**	**1.21**	**133**	*e*Pg	**Pg**	**22 42 23.6**	**-0.1**
	30nm,0.1s						
KMKR				*e*Sg	**Sn**	**22 42 40.7**	**+0.7**
	50nm,0.6s						
ARNR	**Ardon**	**1.22**	**281**	*e*Pg	**Pb**	**22 42 23.5**	**0.0**
ARNR				*e*Sg	**Sg**	**22 42 41.7**	**+2.1**
SGKR	**Sergokala**	**1.38**	**111**	*e*Pg	**Pg**	**22 42 27.6**	**+0.6**
SGKR				*i* Sg	**Sg**	**22 42 46.0**	**+1.1**
STDR	**Stavd-Durt**	**1.42**	**287**	*e*Pg	**Pb**	**22 42 26.6**	**-0.3**
STDR				*e*Sg	**Sg**	**22 42 47.6**	**+1.6**
PRTR	**Priterechnaya**	**1.43**	**304**	*e*Pg	**Pn**	**22 42 26.1**	**-0.3**
PRTR				*e*Sg	**Sg**	**22 42 47.8**	**+1.3**
ZEI	**Tsey**	**1.49**	**264**	*e*Pg	**Pn**	**22 42 27.2**	**-0.2**
ZEI				*e*Sg	**Sb**	**22 42 47.3**	**0.0**
URKR	**Urkarakh**	**1.50**	**121**	*e*Pg	**Pn**	**22 42 27.2**	**-0.2**
	14nm,0.5s						
URKR				*e*Sg	**Sg**	**22 42 48.3**	**-0.4**
	17nm,0.2s						
DDFL	**Dedoflistskaro**	**1.52**	**174**	P	**Pg**	**22 42 31.8**	**+2.1**
DDFL				S	Sg	22 43 01.1	+12
LSNR	**Lesken**	**1.56**	**282**	*e*Pg	**Pb**	**22 42 29.3**	**-0.2**
LSNR				*e*Sg	**Sg**	**22 42 51.1**	**+0.4**
DGRG	**David-gareji**	**1.56**	**195**	P	**Pg**	**22 42 31.2**	**+0.8**
DGRG				S	**Sg**	**22 42 51.0**	**+0.3**
DIGR	**Digorskoe uzhe**	**1.72**	**269**	*e*Pg	**Pn**	**22 42 31.0**	**+0.5**
DIGR				*e*Sg	**Sb**	**22 42 54.0**	**+0.2**
NCK	**Nalchik**	**1.78**	**288**	*e*Pg	**Pb**	**22 42 32.5**	**-0.6**
NCK				*e*Sg	**Sb**	**22 42 56.0**	**+0.6**
ONI	**Oni**	**1.85**	**259**	P	**Pb**	**22 42 33.3**	**-1.1**
ONI				S	**Sb**	**22 42 57.9**	**+0.3**
TRLG	**Trialeti**	**1.96**	**224**	P	**Pb**	**22 42 36.1**	**-0.1**
TRLG				S	**Sg**	**22 43 02.6**	**-0.8**
AKT	**Akhty**	**2.00**	**137**	*e*Pg	**Pb**	**22 42 36.7**	**-0.3**
AKT				*e*Sg	**Sg**	**22 43 04.9**	**0.0**
DMNI	**Dmanisi**	**2.08**	**219**	P	**Pb**	**22 42 37.8**	**-0.5**
DMNI				S	**Sb**	**22 43 03.4**	**-0.7**
KBZ	**Khabaz**	**2.33**	**290**	*e*Pn	**Pb**	**22 42 41.0**	**-1.5**
KBZ				*e*Sn	**Sb**	**22 43 11.5**	**+0.2**
NEY	**Neytrino**	**2.36**	**278**	*e*Pn	**Pn**	**22 42 40.2**	**+0.9**
NEY				*e*Sn	**Sb**	**22 43 11.0**	**-1.2**
BGD	**Bogdanovka**	**2.42**	**226**	P	**Pb**	**22 42 44.5**	**+0.4**
BGD				S	**Sb**	**22 43 14.5**	**+0.5**
BEYR	**Belyy Ugol+**	**2.49**	**296**	*e*Pn	**Pn**	**22 42 42.4**	**+1.4**
BEYR				*e*Sn	**Sb**	**22 43 14.0**	**-1.9**
SHA1	**Shidzhatmaz**	**2.50**	**289**	*e*Pn	**Pn**	**22 42 42.9**	**+1.5**
SHA1				*e*Sn	**Sb**	**22 43 14.8**	**-1.6**
KIV0	**Kislovodsk Arr**	**2.55**	**294**	*e*Pn	**Pn**	**22 42 43.6**	**+1.7**
KIV0				*e*Sn	**Sb**	**22 43 15.6**	**-2.0**
ABS	**Abastumani**	**2.60**	**243**	P	**Pb**	**22 42 46.1**	**-1.1**
ABS				S	**Sb**	**22 43 19.8**	**+0.6**

IDC 12 23:01:58.7±3.0**, 28°.65N×139°.34E, h491**^{km}±46^{km}**, mb2.7**/4**,**
mbtmp3.5/5**, Error ellipse: s-maj=88.2km s-min=20.6km**
az=73.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**7.92**	**353**	P	P	23 03 53.7	-0.3
	0.6nm,0.4s,baz=176,slow=9.5,SNR=1.4						
SONM	**Songino Array**	**31.85**	**316**	P	P	23 07 42.5	0.0
	0.2nm,0.5s,baz=125,slow=8.4,SNR=4.4						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**47.54**	**309**	P	P	23 09 48.9	+0.1
	0.2nm,0.5s,baz=86,slow=9.3,SNR=2.7						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**48.55**	**186**	P	P	23 09 56.5	-0.1
	0.4nm,0.3s,baz=2.1,slow=7.7,SNR=11						
	0.4nm,0.3s						
FINES	**FINESS Array B**	**75.43**	**333**	P	P	23 12 51.2	-0.1
	1.2nm,0.9s,baz=41,slow=11,SNR=1.7						
	1.2nm,0.9s						

IDC ***12*** *23:34:38.0±3.0, 39°.06N×142°.99E, h0^{km}, mb3.5/4,*
mbtmp3.4/5, ML2.5/1, Error ellipse: s-maj=70.6km
s-min=32.4km az=72.0
JMA ***12*** *23:34:48.7±0.1, 38°.9N±0°.3×142°.1E±0°.7, h46^{km}±1^{km},*
MV3.7/40, KINKAZAN REGION
JMA Felt I J1 at KINKAZAN REGION .
ISC 12 23:34:45.0±2.4**, 38°.89N**±0°.06×**142°.3E**±0°.1**, h27**^{km}±13^{km}**,**
n21, σ1^{s}.92/22**, mb3.5**/4**, 14D, Near east coast of eastern**
Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.56**	**290**	⇓*i*P	**Pn**	**23 34 58.3**	**+1.1**
OFUJ				⇓S	**Sb**	**23 35 04.8**	**+1.0**
JKMT	**Kesennumamotoy**	**0.68**	**263**	⇓*i*P	**Pb**	**23 34 59.1**	**+0.7**
JKMT				⇓S	**Sb**	**23 35 06.2**	**-1.2**
JMK	**Ichinoseki**	**0.88**	**274**	⇓*i*P	**Pn**	**23 35 01.7**	**+0.2**
JMK				⇓S	**Sb**	**23 35 10.9**	**-2.1**
JIO	**Ouri**	**0.89**	**241**	⇓*i*P	**Pn**	**23 35 01.8**	**0.0**
JIO				⇓S	**Sb**	**23 35 10.6**	**-2.8**
JOM	**Ohasama**	**1.00**	**306**	⇓*i*P	**Pb**	**23 35 04.5**	**+0.8**
JOM				⇓S	**Sb**	**23 35 15.3**	**-1.2**
JOU	**Okura**	**1.42**	**249**	⇓*i*P	**Pn**	**23 35 08.9**	**0.0**
JOU				⇓S	**Sn**	**23 35 23.9**	**-2.9**
JRG	**Rokugo**	**1.42**	**291**	⇓*i*P	**Pn**	**23 35 09.6**	**+0.6**
JYK	**Kaneyama**	**1.55**	**272**	⇓*i*P	**Pn**	**23 35 10.9**	**+0.1**
JMM	**Marumori**	**1.59**	**230**	P	**Pn**	**23 35 11.4**	**+0.1**
JANG	**Nango**	**1.61**	**337**	P	**Pb**	**23 35 14.3**	**+0.3**
MJAR	**Matsushiro Arr**	**4.03**	**236**	Pn	**Pn**	**23 35 47.7**	**+2.8**
	0.2nm,0.3s,baz=53,slow=9.3,SNR=7.9						
MJAR				Sn	**Sn**	**23 36 36.6**	**+5.3**
	0.1nm,0.3s,baz=41,slow=16,SNR=1.1						
	1.3nm,0.3s						
SONM	**Songino Array**	**27.41**	**301**	P	**P**	**23 40 29.1**	**+0.8**
	0.2nm,0.6s,baz=97,slow=9.1,SNR=2.2						
	0.2nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.54**	**125**	T	T	00 11 05.5	
	baz=317,slow=75,SNR=149						
H11N1	**WAKE ISLAND Hy**	**28.55**	**125**	T	T	00 11 05.1	
	baz=317,slow=75,SNR=122						
H11N3	**WAKE ISLAND Hy**	**28.56**	**125**	T	T	00 11 06.7	
	baz=317,slow=75,SNR=152						
H11S1	**WAKE ISLAND Hy**	**29.32**	**127**	T	T	00 12 03.6	
	baz=318,slow=76,SNR=79						
H11S3	**WAKE ISLAND Hy**	**29.32**	**127**	T	T	00 12 03.6	
	baz=318,slow=76,SNR=71						
H11S2	**WAKE ISLAND Hy**	**29.34**	**127**	T	T	00 12 04.7	
	baz=318,slow=76,SNR=65						
ZALV	**Zalesovo Beam**	**41.23**	**311**	P	**P**	**23 42 26.0**	**-1.3**
	0.5nm,0.4s,baz=78,slow=7.9,SNR=2.7						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**43.78**	**301**	P	**P**	**23 42 47.9**	**-0.2**
	0.5nm,0.5s,baz=86,slow=8.6,SNR=7.1						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**59.01**	**189**	P	**P**	**23 44 41.1**	**-1.2**
	0.2nm,0.6s,baz=4.5,slow=7.0,SNR=2.0						
	0.2nm,0.6s						

RSNC ***12*** *23:36:50.9±0.9, 6°.81N×73°.15W, h149^{km}±3^{km}, ML3.3,*
Mw3.7, Fault plane solution: NP1:ϕ_s132.00000°,
δ68.00000°, λ-122.00000°.
IDC ***12*** *23:36:51.9±4.9, 6°.75N×73°.42W, h179^{km}±32^{km}, mb3.0/2,*
mbtmp3.6/3, Error ellipse: s-maj=125.2km s-min=36.9km
az=90.0
ISC 12 23:36:49.0±0.9**, 6°.83N**±0°.03×**73°.10W**±0°.04**, h158**^{km}±6^{km}**,**
n39, σ1^{s}.60/71**, 6C-7D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**198**	⇓*i*P	**Pn**	**23 37 10.9**	**+0.1**
BARC				*e*S	**Sn**	**23 37 26.1**	**-1.3**
BARC				*i*		23 37 28.6	
	comp=Z,546nm,0.3s						
PAMC	**Pamplona, Colo**	**0.65**	**38**	⇑*e*P	**Pn**	**23 37 13.7**	**+1.0**
PAMC				*e*S	**Sn**	**23 37 30.9**	**+0.1**
PAMC				*i*		23 37 32.8	
	comp=Z,174nm,0.5s						
BRRC	**Barranca, Sant**	**0.66**	**295**	⇓*i*P	**Pn**	**23 37 12.8**	**+0.5**
BRRC				*e*S	**Sn**	**23 37 29.5**	**-0.4**
BRRC				*i*		23 37 37.5	
	comp=Z,244nm,0.2s						
RUSC	**La Rusia**	**0.93**	**179**	⇓*i*P	**Pn**	**23 37 14.7**	**0.0**
RUSC				*e*S	**Sn**	**23 37 33.7**	**-0.5**
RUSC				*i*		23 37 36.4	
	comp=Z,230nm,0.5s						
TAMC	**Tame, Arauca**	**1.36**	**107**	⇑*i*P	**Pn**	**23 37 19.1**	**+1.2**
TAMC				*e*S	**Sn**	**23 37 40.6**	**+0.6**
TAMC				*i*		23 37 41.4	
	comp=Z,158nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.37**	**258**	⇓*i*P	**Pn**	**23 37 17.4**	**-0.6**
PTBC				*e*S	**Sn**	**23 37 39.1**	**-1.1**
PTBC				*i*		23 37 46.3	
	comp=Z,479nm,0.5s						
SPBC	**San Pablo de B**	**1.51**	**220**	⇓*i*P	**Pn**	**23 37 19.7**	**+0.2**
SPBC				*e*S	**Sn**	**23 37 42.3**	**-0.6**
SPBC				*i*		23 37 49.5	
	comp=Z,385nm,0.1s						
ZARC	**Zaragoza, Cauc**	**1.86**	**291**	*e*P	**Pn**	**23 37 23.1**	**-0.1**
ZARC				*e*S	**Sn**	**23 37 49.2**	**-0.1**
ZARC				*i*		23 37 55.1	
	comp=Z,367nm,0.7s						
NORC	**Norcasia**	**2.16**	**234**	*e*P	**Pn**	**23 37 26.6**	**0.0**
NORC				*e*S	**Sn**	**23 37 54.9**	**-0.6**
NORC				*i*		23 37 58.7	
	comp=Z,264nm,0.3s						
CHIC	**Chingaza**	**2.27**	**196**	*e*P	**Pn**	**23 37 28.9**	**+0.7**
CHIC				*e*S	**Sn**	**23 37 58.1**	**-0.4**
CHIC				*i*		23 38 08.0	
	comp=Z,91nm,0.3s						
ROSC	**El Rosal**	**2.32**	**212**	P	**Pn**	**23 37 30.8**	**+2.1**
	comp=Z,145nm,0.3s,baz=79,slow=5.2,SNR=87						
ROSC				S	**Sn**	**23 38 00.5**	**+1.1**
	comp=Z,167nm,0.4s,baz=140,slow=21,SNR=7.6						
ROSC	**El Rosal**	**2.32**	**212**	⇓*i*P	**Pn**	**23 37 30.4**	**+1.7**
ROSC				*e*S	**Sn**	**23 37 59.7**	**+0.3**
ROSC				*i*		23 38 08.6	
	comp=Z,272nm,0.4s						
HELC	**Santa Helena**	**2.49**	**255**	*e*P	**Pn**	**23 37 31.1**	**+0.3**
HELC				*e*S	**Sn**	**23 38 02.1**	**-0.9**
HELC				*i*		23 38 09.9	
	comp=Z,191nm,0.4s						
UREC	**San Jos de Ur**	**2.58**	**291**	*e*P	**Pn**	**23 37 30.7**	**-0.8**
UREC				*e*S	**Sn**	**23 38 02.1**	**-2.2**
UREC				*i*		23 38 15.0	
	comp=Z,162nm,0.2s						
LL1C	**La Loma 1 Cana**	**2.73**	**351**	*e*P	**Pn**	**23 37 36.3**	**+2.8**
LL1C				*e*S	**Sn**	**23 38 11.0**	**+3.2**
LL1C				*i*		23 38 16.4	
	comp=Z,327nm,0.4s						
GUY2C	**Guyana, Caldas**	**2.76**	**235**	*e*P	**Pn**	**23 37 35.1**	**+0.9**
GUY2C				*e*S	**Sn**	**23 38 10.1**	**+1.1**
GUY2C				IAML		23 38 17.5	
	comp=Z,153nm,0.6s						
VILC	**Villavicencio,**	**2.76**	**192**	*e*P	**Pn**	**23 37 34.0**	**+0.1**
VILC				*e*S	**Sn**	**23 38 09.8**	**+1.1**
VILC				*i*		23 38 24.5	
	comp=Z,133nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.79**	**160**	⇓*e*P	**Pn**	**23 37 33.8**	**-0.3**
PTGC				*e*S	**Sn**	**23 38 07.0**	**-2.0**
PTGC				*i*		23 38 07.8	
	comp=Z,96nm,0.2s						
RECRC	**Villamaria, Ca**	**2.91**	**230**	*e*P	**Pn**	**23 37 38.6**	**+2.5**
RECRC				*e*S	**Sn**	**23 38 15.9**	**+3.5**
NIZA	**Niza - Manizal**	**2.94**	**233**	*e*P	**Pn**	**23 37 40.4**	**+4.2**
NIZA				*e*S	**Sn**	**23 38 16.1**	**+3.3**
CBOC	**Ciudad Bolivar**	**3.04**	**252**	*e*P	**Pn**	**23 37 38.5**	**+1.0**
CBOC				*e*S	**Sn**	**23 38 12.0**	**-3.0**
CBOC				*i*		23 38 35.4	
	comp=Z,51nm,0.4s						
DBBC	**Dabeiba**	**3.09**	**274**	⇑*e*P	**Pn**	**23 37 38.4**	**+0.4**
DBBC				*e*S	**Sn**	**23 38 15.3**	**-0.5**
DBBC				*i*		23 38 16.9	
	comp=Z,54nm,0.3s						
ARGC	**Ariguani, Magd**	**3.22**	**340**	*e*P	**Pn**	**23 37 41.0**	**+1.6**
ARGC				*e*S	**Sn**	**23 38 18.6**	**0.0**
ARGC				*i*		23 38 23.2	
	comp=Z,34nm,0.3s						
ANIL	**Santa Ana**	**3.26**	**225**	⇑*e*P	**Pn**	**23 37 42.2**	**+1.9**
ANIL				*e*S	**Sn**	**23 38 19.6**	**-0.5**
PRAC	**Prado**	**3.57**	**210**	*e*P	**Pn**	**23 37 43.9**	**-0.1**
	comp=Z,84nm,0.3s						
PRAC				*e*S	**Sn**	**23 38 25.9**	**-0.8**
PRAC				*i*		23 38 31.6	
	comp=Z,84nm,0.3s						
ORTC	**Ortega, Tolima**	**3.60**	**216**	*e*P	**Pn**	**23 37 44.9**	**+0.4**
ORTC				*e*S	**Sn**	**23 38 28.3**	**+0.8**
ORTC				*i*		23 38 34.8	
	comp=Z,72nm,0.4s						
APAC	**Apartado, Choc**	**3.61**	**287**	⇑*e*P	**Pn**	**23 37 44.8**	**+0.4**
APAC				*e*S	**Sn**	**23 38 27.9**	**+0.3**
APAC				*i*		23 38 34.9	
	comp=Z,44nm,0.7s						
SJCC	**San Jacinto, C**	**3.68**	**326**	*e*P	**Pn**	**23 37 44.6**	**-0.8**
SJCC				*e*S	**Sn**	**23 38 24.9**	**-4.4**
SJCC				*i*		23 38 34.2	
	comp=Z,34nm,0.6s						
CRJC	**Cerrejon, Guaj**	**4.17**	**3**	*e*P	**Pn**	**23 37 51.0**	**-0.9**
CRJC				*e*S	**Sn**	**23 38 39.1**	**-1.7**
CRJC				*i*		23 38 43.4	
	comp=Z,44nm,0.2s						
YOTC	**Yotoco, Valle**	**4.29**	**229**	*e*P	**Pn**	**23 37 53.2**	**-0.2**
SMRC	**Santa Marta, M**	**4.45**	**346**	*e*P	**Pn**	**23 37 56.3**	**+0.9**
SMRC				*e*S	**Sn**	**23 38 43.9**	**-3.3**

SMRC				*i*		23 38 48.5	
	comp=Z,37nm,0.3s						
MACC	**Macarena, Meta**	**4.71**	**189**	*e*P	**Pn**	**23 37 57.5**	**-1.3**
MACC				*e*S	**Sn**	**23 38 50.0**	**-3.3**
MACC				*i*		23 38 53.8	
	comp=Z,22nm,0.8s						
JAMC	**Jamundi, Valle**	**5.05**	**225**	*e*P	**Pn**	**23 38 04.0**	**+0.5**
MALC	**Bahia Malaga**	**5.06**	**237**	*e*P	**Pn**	**23 38 05.7**	**+2.4**
GARC	**Garzon, Huila**	**5.19**	**207**	*e*P	**Pn**	**23 38 04.9**	**-0.5**
GARC				*e*S	**Sn**	**23 39 03.1**	**-1.9**
GARC				*i*		23 39 07.6	
	comp=Z,27nm,0.2s						
FLOC	**Florencia**	**5.80**	**206**	⇑*e*P	**Pn**	**23 38 13.4**	**+0.1**
FLOC				*i*		23 39 53.8	
	comp=Z,4.7nm,0.8s						
PDAR	**Pinedale Array**	**48.08**	**324**	P	**P**	**23 45 13.2**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=129,slow=8.2,SNR=1.9						
	comp=Z,0.3nm,0.7s						
YKA	**Yellowknife Ar**	**63.26**	**340**	P	**P**	**23 47 00.7**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=132,slow=6.7,SNR=14						
	comp=Z,0.4nm,0.5s						
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc	**PKPbc**	**23 56 22.0**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=106,slow=2.9,SNR=5.4						

JMA 13 00:05:46.0±0.1, 24°.1N±0°.6×122°.8E±0°.6, h33^{km}, MV1.9/9, NW OFF ISHIGAKIJIMA IS, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.37**	**26**	P	Pb	00 05 54.4	-0.4
JYNG				S	Sb	00 06 00.5	-0.2
YOJ	**Yonaguni jima**	**0.41**	**33**	P	Pb	00 05 55.3	0.0
YOJ				*e*S	Sb	00 06 01.3	-0.3
IRIF	**Iriomote-Funau**	**0.91**	**76**	*e*P	Pn	00 06 02.7	+0.2
IRIF				*e*S	Sn	00 06 13.6	-0.8
HATJ	**Hateruma jima**	**0.95**	**93**	P	Pn	00 06 03.1	0.0
JKRS	**Kuro-shima**	**1.14**	**84**	P	Pn	00 06 06.3	+0.6
JKRS				*e*S	Sn	00 06 20.2	0.0
JIJ	**Ishigaki jima**	**1.28**	**79**	P	Pn	00 06 08.0	+0.4
JIJ				S	Sn	00 06 24.1	+0.4
JISG	**Ishigakijimahi**	**1.48**	**71**	P	Pn	00 06 10.8	+0.3
JISG				*e*S	Sn	00 06 29.6	+1.0

TAP 13 00:05:50.1, 23°.75N×121°.20E, h4^{km}±1^{km}, ML0.6, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VWDT	**VWDT**	**0.06**	**279**	P	Pg	00 05 51.4	0.0
	baz=278						
OWD	**Renai**	**0.21**	**353**	*e*P	Pg	00 05 54.1	-0.2
	baz=353						
OWD				S	Sg	00 05 57.1	+0.1
	baz=353						
SSLB	**Suanglung**	**0.23**	**281**	P	Pg	00 05 54.6	0.0
	baz=280						
SSLB				S	Sg	00 05 57.9	+0.2
	baz=280						
WUSB	**Renai**	**0.26**	**342**	*e*P	Pg	00 05 55.2	0.0
	baz=342						
WUSB				*e*S	Sg	00 05 58.9	+0.3
	baz=342						

IDC 13 00:07:25.8±4.5, 1°.40S×67°.60E, h0^{km}, mb3.5/2, mbtmp3.5/2, MS3.6/10, Error ellipse: s-maj=237.8km s-min=80.1km az=129.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	**15.66**	**56**	LR	LR	00 15 46.1	
	comp=Z,157nm,19.4s,baz=4.2,slow=32						
WSAR	**Wadi Sarin**	**26.00**	**341**	LR	LR	00 20 44.8	
	comp=Z,72nm,20.8s,baz=183,slow=31						
BRDH	**Bariadhala**	**33.50**	**43**	LR	LR	00 29 14.3	
	comp=Z,74nm,18.4s,baz=53,slow=39						
CMAR	**Chiang Mai Arr**	**36.61**	**56**	LR	LR	00 27 28.1	
	comp=Z,36nm,21.1s,baz=250,slow=33						
MBAR	**Mbarara**	**36.86**	**271**	LR	LR	00 29 13.2	
	comp=Z,88nm,18.1s,baz=22,slow=36						
LSZ	**Lusaka**	**41.25**	**248**	LR	LR	00 29 12.5	
	comp=Z,121nm,20.8s,baz=96,slow=32						
LBTB	**Lobatse**	**46.82**	**236**	LR	LR	00 33 21.8	
	comp=Z,51nm,21.3s,baz=29,slow=33						
BOSA	**Boshof**	**48.60**	**232**	LR	LR	00 33 23.1	
	comp=Z,125nm,19.6s,baz=8.0,slow=32						
MKAR	**Makanchi Array**	**49.71**	**13**	P	P	00 16 19.6	-0.1
	0.4nm,0.9s,baz=183,slow=5.8,SNR=2.6						
	0.4nm,0.9s						
SUR	**Sutherland**	**53.69**	**230**	LR	LR	00 37 12.5	
	comp=Z,78nm,18.2s,baz=30,slow=33						
SONM	**Songino Array**	**59.54**	**29**	P	P	00 17 31.2	-0.1
	0.9nm,0.9s,baz=232,slow=7.3,SNR=6.2						
	0.9nm,0.9s						
PMG	**Port Moresby**	**79.48**	**99**	LR	LR	00 55 02.7	
	comp=Z,46nm,19.7s,baz=12,slow=36						
TXAR	**Lajitas Array**	**151.00**	**344**	PKPbc	PKPbc	00 27 21.3	-0.3
	0.5nm,0.8s,baz=64,slow=2.9,SNR=4.7						

*KRNET **13** 00:23:06.4±0.1, 43°.25N×78°.71E, h14^{km}, mb2.3*
*SOME **13** 00:23:06.9, 43°.25N×78°.72E, h15^{km}*
*NNC **13** 00:23:06.3±0.3, 43°.24N×78°.72E, h0^{km}, mb2.4, mpv2.6, Error ellipse: s-maj=2.7km s-min=2.1km az=4.0*

ISC 13 00:23:06.0±0.9, 43°.24N±0°.02×78°.71E±0°.02, h13^{km}±7^{km}, n28, σ0^{s}.47/54, 8C-6D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZHN	**Zhinishke**	**0.22**	**250**	*e*P	**Pg**	**00 23 10.8**	**0.0**
	baz=48						
ZHN				*e*S	**Sg**	**00 23 13.6**	**-0.5**
	baz=48						
ZHN	**Zhinishke**	**0.22**	**250**	*e*P	**Pg**	**00 23 10.8**	**0.0**
	2.9nm,0.4s						
ZHN				*e*S	**Sg**	**00 23 13.6**	**-0.5**
	70nm,0.1s						
KPKS	**Kokpek**	**0.23**	**355**	P	**Pg**	**00 23 11.1**	**+0.1**
	22nm,0.1s						
KPKS				S	**Sg**	**00 23 14.3**	**0.0**
	56nm,0.1s						
KPKS	**Kokpek**	**0.23**	**355**	*e*P	**Pg**	**00 23 11.1**	**+0.1**
	baz=56						
KPKS				*e*S	**Sg**	**00 23 14.3**	**0.0**
	baz=56						
KPKS	**Kokpek**	**0.23**	**355**	*e*P	**Pg**	**00 23 11.1**	**+0.1**
	22nm,0.0s						
KPKS				*e*S	**Sg**	**00 23 14.3**	**0.0**
	56nm,0.1s						
UZB	**Uzynbulak**	**0.24**	**113**	P	**Pg**	**00 23 11.4**	**+0.1**
	21nm,0.1s						
UZB				S	**Sg**	**00 23 14.8**	**-0.1**
	48nm,0.1s						
UZB	**Uzynbulak**	**0.24**	**113**	*e*P	**Pg**	**00 23 11.4**	**+0.1**
	baz=14						
UZB				*e*S	**Sg**	**00 23 14.8**	**-0.1**
	baz=14						
UZB	**Uzynbulak**	**0.24**	**113**	*e*P	**Pg**	**00 23 11.4**	**+0.1**
	21nm,0.1s						
UZB				*e*S	**Sg**	**00 23 14.8**	**-0.1**
	48nm,0.1s						
SATY	**Saty**	**0.29**	**231**	P	**Pg**	**00 23 12.4**	**+0.4**
	4.3nm,0.1s						
SATY				S	**Sg**	**00 23 16.5**	**+0.4**
	21nm,0.1s						
SATY	**Saty**	**0.29**	**231**	*e*P	**Pg**	**00 23 12.4**	**+0.4**
	baz=29						
SATY				*e*S	**Sg**	**00 23 16.5**	**+0.4**
	baz=29						
SATY	**Saty**	**0.29**	**231**	*e*P	**Pg**	**00 23 12.4**	**+0.4**
	4.3nm,0.1s						
SATY				*e*S	**Sg**	**00 23 16.5**	**+0.4**
	29nm,0.2s						
PDGK	**Podgornoye**	**0.57**	**81**	P	**Pg**	**00 23 17.3**	**0.0**
	0.4nm,0.1s						
PDGK				S	**Sg**	**00 23 24.8**	**-0.1**
	3.4nm,0.1s						
PDGK	**Podgornoye**	**0.57**	**81**	⇓P	**Pg**	**00 23 17.0**	**-0.3**
	0.3nm,0.3s						
PDGK				⇓S	**Sg**	**00 23 24.6**	**-0.4**
	1.1nm,0.2s						
PRZ	**Przheval'sk**	**0.79**	**197**	⇓*i*P	**Pg**	**00 23 21.6**	**+0.2**
	baz=97						
PRZ				⇓*i*S	**Sg**	**00 23 32.3**	**+0.5**
	baz=97						
BLB	**Baldybastay**	**0.87**	**349**	P	**Pg**	**00 23 22.8**	**-0.1**
	3.7nm,0.1s						
BLB				S	**Sg**	**00 23 34.5**	**+0.1**
	7.0nm,0.2s						
ANVS	**Anan'yevo**	**0.89**	**239**	⇑*e*P	**Pg**	**00 23 23.5**	**+0.2**
	baz=39						
ANVS				⇑*i*S	**Sg**	**00 23 35.7**	**+0.7**
	baz=39						
DJR	**Jarkent**	**1.34**	**35**	P	**Pg**	**00 23 31.9**	**+0.1**
	1.5nm,0.2s						
DJR				S	**Sg**	**00 23 49.9**	**+0.7**
	2.2nm,0.2s						
DJR	**Jarkent**	**1.34**	**35**	*e*P	**Pg**	**00 23 31.9**	**+0.1**
	0.8nm,0.1s						
DJR				*e*S	**Sg**	**00 23 49.9**	**+0.7**
	2.2nm,0.1s						
KTBS	**Karatobe**	**1.55**	**288**	P	**Pb**	**00 23 35.0**	**+0.3**
	1.2nm,0.4s						
KTBS				S	**Sg**	**00 23 55.4**	**-0.5**
	7.7nm,0.3s						
KTBS	**Karatobe**	**1.55**	**288**	*e*P	**Pb**	**00 23 35.0**	**+0.3**
	baz=88						
KTBS				*e*S	**Sg**	**00 23 55.5**	**-0.5**
	baz=88						
KTBS	**Karatobe**	**1.55**	**288**	*e*P	**Pb**	**00 23 35.0**	**+0.3**
	1.1nm,0.1s						
KTBS				*e*S	**Sg**	**00 23 55.4**	**-0.5**
	8.0nm,0.2s						
KDJ	**Kajisay**	**1.58**	**226**	⇑*e*P	**Pb**	**00 23 35.8**	**+0.5**
	baz=25						
KDJ				⇑*i*S	**Sg**	**00 23 56.8**	**-0.2**
	baz=25						
TARG	**Taragay, Kyrgy**	**1.65**	**204**	⇑*e*P	**Pb**	**00 23 37.4**	**+0.8**
	baz=4.0						
TARG				⇑*i*S	**Sg**	**00 23 59.6**	**+0.3**
	baz=4.0						
KUU	**Kurty**	**1.84**	**291**	*e*P	**Pb**	**00 23 39.5**	**-0.1**
	0.2nm,0.1s						
KUU				*e*S	**Sb**	**00 24 03.3**	**+0.6**
	2.1nm,0.1s						
KRBS	**Karabastau**	**2.26**	**283**	Pg	**Pb**	**00 23 47.3**	**+0.5**
	0.5nm,0.2s						
KRBS				Lg	Lg	00 24 16.9	
	1.4nm,0.2s						
KRBS	**Karabastau**	**2.26**	**283**	*e*Pg	**Pb**	**00 23 47.2**	**+0.5**
	0.5nm,0.1s						
KRBS				*e*Lg	Lg	00 24 16.9	
	1.4nm,0.1s						
TKM2	**Tokmak 2**	**2.31**	**263**	⇓*i*P	**Pb**	**00 23 47.0**	**-0.6**
	baz=63						
TKM2				⇓*i*S	**Sb**	**00 24 16.1**	**0.0**
	baz=63						
NRN	**Naryn**	**2.70**	**229**	⇑*e*P	**Pb**	**00 23 52.8**	**-1.7**
	baz=29						
NRN				⇑*i*S	**Sb**	**00 24 26.4**	**-1.3**
	baz=29						

*UPP **13** 00:30:36.0±0.0, 67°.82N×20°.21E, h0^{km}, ML2.5, Suspected explosion*
*HEL **13** 00:30:36.7±0.2, 67°.82N×20°.23E, h0^{km}, ML1.6, Explosion*

ISC 13 00:30:35.1±0.8, 67°.79N±0°.02×20°.38E±0°.03, h0^{km}, n31, σ1^{s}.04/43, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATU	**Laukkuluspa**	**0.30**	**277**	P	**Pg**	**00 30 40.7**	**-0.1**
RATU				S	**Sg**	**00 30 43.9**	**-0.8**
KOVU	**Salmi**	**0.44**	**349**	P	**Pg**	**00 30 43.8**	**+0.2**
NIKU	**Nikkaluokta**	**0.52**	**279**	P	**Pg**	**00 30 44.6**	**-0.3**
LANU	**Lannavaara**	**0.66**	**66**	P	**Pb**	**00 30 49.5**	**0.0**
LANU	**Lannavaara**	**0.66**	**66**	PG	**Pb**	**00 30 49.5**	**0.0**
LANU				SG	**Sb**	**00 30 59.0**	**-0.3**
DUNU	**Dundret**	**0.67**	**174**	P	**Pb**	**00 30 49.4**	**-0.3**
MASU	**Masugnsbyn**	**0.70**	**118**	P	**Pb**	**00 30 50.6**	**+0.4**
SALU	**Saltoluokta**	**0.83**	**241**	P	**Pg**	**00 30 50.8**	**0.0**
KIF	**Kilpisjarvi**	**1.23**	**7**	*e*P	**Pn**	**00 30 59.4**	**-0.1**
KIF	**Kilpisjarvi**	**1.23**	**7**	PG	**Pn**	**00 30 59.3**	**-0.2**
KIF				MSG		00 31 14.3	
	comp=Z,6.8nm,0.2s						
KIF				SB	**Sb**	**00 31 15.0**	**-0.6**
PAJU	**Pajala**	**1.31**	**125**	P	**Pn**	**00 31 01.3**	**+0.8**
PAJU	**Pajala**	**1.31**	**125**	PG	**Pn**	**00 31 01.1**	**+0.6**
	baz=308						
PAJU				SG	**Sn**	**00 31 19.6**	**+0.9**
HEF	**Hetta**	**1.38**	**62**	*e*P	**Pb**	**00 31 02.3**	**+0.6**
HEF	**Hetta**	**1.38**	**62**	PG	**Pb**	**00 31 02.0**	**+0.4**
	baz=245						
HEF				MSG		00 31 19.2	
	comp=Z,3.8nm,0.2s						
HEF				SG	**Sn**	**00 31 20.8**	**+0.3**
KLF	**Kolari**	**1.49**	**110**	PG	**Pg**	**00 31 04.4**	**+0.9**
	baz=296						
KLF				MSG		00 31 23.1	
	comp=Z,3.7nm,0.2s						
KLF				SN	**Sn**	**00 31 26.0**	**+2.9**
KTK1	**Kautokeino**	**1.62**	**39**	PG	**Pg**	**00 31 05.9**	**-0.2**
KTK1				SN	**Sg**	**00 31 27.9**	**+0.8**
HARU	**Harads**	**1.65**	**172**	P	**Pg**	**00 31 06.8**	**+0.2**
TRO	**Tromso**	**1.93**	**345**	SG	**Sb**	**00 31 34.7**	**-0.9**
KALU	**Kalix**	**2.27**	**147**	PN	**Pb**	**00 31 16.6**	**-0.2**
KALU				SG	**Sg**	**00 31 47.7**	**-0.1**
TOF	**Tornio**	**2.31**	**136**	PB	**Pb**	**00 31 17.8**	**+0.2**
TOF				MSG		00 31 47.2	
	comp=Z,1.3nm,0.2s						
TOF				SG	**Sg**	**00 31 49.7**	**+0.4**
SGF	**Sodankyl**	**2.38**	**96**	PB	**Pb**	**00 31 19.2**	**+0.5**
	baz=278						
SGF				SG	**Sg**	**00 31 50.6**	**-0.8**
RNF	**Rovaniemi**	**2.49**	**116**	PB	**Pb**	**00 31 20.4**	**-0.3**
RNF				SG	**Sg**	**00 31 54.4**	**-0.6**
ARA0	**ARCESS Array S**	**2.57**	**45**	PB	**Pb**	**00 31 20.5**	**-1.4**
	baz=229						
ARA0				SB	**Sb**	**00 31 53.4**	**-0.6**
KEV	**Kevo**	**3.12**	**48**	SB	**Sn**	**00 32 06.2**	**+2.9**
KEV				MSG		00 32 08.7	
	comp=Z,1.9nm,0.2s						
OUL	**Oulu**	**3.50**	**138**	PG	**Pg**	**00 31 41.1**	**-1.0**
VRF	**Varrio**	**3.51**	**86**	PG	**Pg**	**00 31 40.4**	**-1.8**
OBF8	**Ulkokalla**	**3.69**	**159**	PG	**Pg**	**00 31 44.5**	**-1.2**
OLKF	**Oulanka, Finla**	**3.83**	**108**	PG	**Pg**	**00 31 46.6**	**-1.7**
MSF	**Maaselka**	**3.91**	**115**	PG	**Pg**	**00 31 48.2**	**-1.6**
UMAU	**Umeaa**	**3.92**	**178**	SG	**Sg**	**00 32 40.5**	**-0.5**
KU6	**Riekki**	**4.14**	**111**	PG	**Pg**	**00 31 52.2**	**-2.2**
	baz=295						

*IDC **13** 00:47:57.0±0.6, 37°.12N×141°.35E, h0^{km}, mb4.0/24, mbtmp4.1/32, ML3.6/6, MS3.2/3, Error ellipse: s-maj=15.7km s-min=12.0km az=144.0*
*JMA **13** 00:47:58.8±0.2, 37°.1N±0°.3×141°.4E±0°.8, h26^{km}±1^{km}, MD4.4/40, MV4.3/40, E OFF FUKUSHIMA PREF*
JMA Felt I J1 at E OFF FUKUSHIMA PREF .
*NIED **13** 00:47:58.8, 37°.13N×141°.37E, h26^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.70; $M_{\theta\theta}$0.03; $M_{\phi\phi}$0.67; $M_{r\theta}$-0.18; $M_{\theta\phi}$0.33; $M_{\phi r}$1.10; Fault plane solution: $M_0$1.35000×10^{15} NP1: ϕ_s177.00000°, δ74.00000°, λ-107.00000°. NP2: ϕ_s45.00000°, δ23.00000°, λ-45.00000°.*
*MOS **13** 00:47:59.6±0.8, 37°.31N×141°.32E, h25^{km}, mb4.6/9 Error ellipse: s-maj=9.9km s-min=7.1km az=93.3*

ISC 13 00:47:57.4±1.4, 37°.12N±0°.04×141°.45E±0°.05, h5^{km}±8^{km}, n123, σ1^{s}.10/95, mb4.1/30, 7C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.52**	**298**	P	**Pg**	**00 48 08.0**	**+0.5**
JFK				*e*S	**Sg**	**00 48 14.6**	**+0.3**
JFK	**Kawauchi**	**0.52**	**298**	A	A	00 48 08.0	
	comp=E,7.0nm,2.8s,comp=E,10.0nm,2.9s						
ONAJ	**Iwakimizuishiy**	**0.52**	**268**	P	**Pg**	**00 48 08.0**	**+0.5**
ONAJ				*e*S	**Sg**	**00 48 15.6**	**+1.3**
ONAJ	**Iwakimizuishiy**	**0.52**	**268**	A	A	00 48 08.0	
	comp=E,37nm,0.4s,comp=E,20nm,0.9s						
JFFD	**Fukushimafurud**	**0.71**	**268**	P	**Pg**	**00 48 11.3**	**+0.2**
JFFD				S	**Sg**	**00 48 20.2**	**-0.2**
JMST	**Minamisoumatoc**	**0.75**	**323**	P	**Pg**	**00 48 12.3**	**+0.5**
JMST				*e*S	**Sg**	**00 48 22.0**	**+0.4**
JMST	**Minamisoumatoc**	**0.75**	**323**	A	A	00 48 12.3	
	comp=E,20nm,1.2s,comp=E,10.0nm,1.8s						
JHO	**Hitachi**	**0.87**	**234**	P	**Pg**	**00 48 13.6**	**-0.6**
JHO	**Hitachi**	**0.87**	**234**	A	A	00 48 13.6	
	comp=E,9.0nm,2.3s,comp=E,9.0nm,5.9s						
JMM	**Marumori**	**0.91**	**325**	P	**Pg**	**00 48 14.7**	**-0.2**
JMM	**Marumori**	**0.91**	**325**	P	**Pg**	**00 48 15.0**	**+0.1**
JMM				S	**Sg**	**00 48 26.5**	**-0.1**
JOTO	**OTAMA OYAMA**	**0.99**	**296**	P	**Pg**	**00 48 16.5**	**0.0**
JOTO				*e*S	**Sg**	**00 48 29.0**	**-0.3**
JOTO	**OTAMA OYAMA**	**0.99**	**296**	A	A	00 48 16.5	
	comp=E,15nm,1.0s,comp=E,30nm,0.5s						
JHYU	**Hitachinakayam**	**1.05**	**222**	A	A	00 48 17.1	
	comp=E,11nm,0.8s,comp=E,17nm,0.4s						
JSB	**Shiboa**	**1.23**	**263**	P	**Pb**	**00 48 20.6**	**-0.7**
JSB	**Shiboa**	**1.23**	**263**	A	A	00 48 20.6	
	comp=E,29nm,1.0s,comp=E,22nm,1.2s						
JYAR	**Yonezawaarcadi**	**1.30**	**308**	A	A	00 48 20.9	
	comp=E,59nm,0.9s,comp=E,60nm,1.3s						
JIO	**Ouri**	**1.33**	**357**	P	**Pn**	**00 48 22.0**	**-0.7**
JIO				S	**Sb**	**00 48 39.4**	**-0.9**
JYT	**Yasato**	**1.35**	**229**	A	A	00 48 21.7	
	comp=E,27nm,0.4s,comp=E,14nm,0.3s						
JIHU	**Itakohorinouch**	**1.38**	**213**	A	A	00 48 22.3	
	comp=E,25nm,2.6s,comp=E,30nm,0.8s						
JOU	**Okura**	**1.39**	**333**	P	**Pn**	**00 48 23.2**	**-0.3**
JOU	**Okura**	**1.39**	**333**	A	A	00 48 23.2	
	comp=E,11nm,2.3s,comp=E,11nm,2.4s						
JFY	**Yanaizu**	**1.42**	**282**	P	**Pn**	**00 48 23.2**	**-0.8**
JFY				S	**Sb**	**00 48 41.7**	**-1.3**
JFY	**Yanaizu**	**1.42**	**282**	A	A	00 48 23.2	
	comp=E,6.0nm,2.3s,comp=E,9.0nm,0.4s						
CHOJ	**Chosi**	**1.50**	**199**	A	A	00 48 24.3	
	comp=E,7.0nm,2.3s,comp=E,4.0nm,1.7s						
JOFO	**Osakifurukawao**	**1.54**	**344**	A	A	00 48 24.8	
	comp=E,34nm,1.5s,comp=E,20nm,1.0s						
JYS	**Shirataka**	**1.55**	**315**	A	A	00 48 24.7	
	comp=E,17nm,2.3s,comp=E,20nm,1.4s						
JSMT	**Sammumatsuo**	**1.69**	**209**	A	A	00 48 27.0	
	comp=E,16nm,2.4s,comp=E,16nm,2.5s						
JAG	**Ashikaga**	**1.75**	**247**	A	A	00 48 27.5	
	comp=E,4.0nm,1.5s,comp=E,4.0nm,4.8s						
JNS	**Sasagawa**	**1.83**	**293**	A	A	00 48 28.7	
	comp=E,6.0nm,1.3s,comp=E,4.0nm,1.1s						
JCN	**Nagara**	**1.98**	**211**	A	A	00 48 31.2	
	comp=E,10.0nm,1.6s,comp=E,11nm,1.6s						
TOK	**Tokyo**	**1.98**	**224**	A	A	00 48 31.1	
	comp=E,12nm,0.6s,comp=E,13nm,0.4s						
JYA	**Atsumi**	**2.01**	**317**	A	A	00 48 31.5	
	comp=E,16nm,1.0s,comp=E,18nm,1.0s						
JHU	**Hanno**	**2.16**	**235**	A	A	00 48 33.5	
	comp=E,4.0nm,1.7s,comp=E,3.0nm,1.7s						
JKUC	**kamogawauchiur**	**2.21**	**208**	A	A	00 48 34.6	
	comp=E,4.0nm,4.0s,comp=E,4.0nm,3.3s						
JIZZ	**Izumozaki**	**2.22**	**281**	A	A	00 48 34.3	
	comp=E,16nm,2.0s,comp=E,8.0nm,1.0s						
JYYZ	**Yamagatayuza**	**2.24**	**328**	A	A	00 48 34.8	
	comp=E,8.0nm,3.7s,comp=E,8.0nm,3.3s						
JGK	**Kuni**	**2.33**	**257**	A	A	00 48 35.8	
	comp=E,4.0nm,2.1s,comp=E,5.0nm,1.3s						
JRG	**Rokugo**	**2.36**	**344**	A	A	00 48 36.8	
	comp=E,4.0nm,3.8s,comp=E,3.0nm,1.2s						
JYW	**Yuwa**	**2.60**	**338**	A	A	00 48 40.3	
	comp=E,6.0nm,1.4s,comp=E,7.0nm,2.3s						
JJN	**Nakama**	**2.63**	**271**	A	A	00 48 40.1	
	comp=E,9.0nm,1.1s,comp=E,5.0nm,1.0s						
JSZI	**Iwateshizukuis**	**2.64**	**352**	A	A	00 48 41.5	
	comp=E,5.0nm,3.5s,comp=E,7.0nm,3.2s						
MJAR	**Matsushiro Arr**	**2.67**	**258**	Pn	**Pn**	**00 48 41.2**	**+0.1**
	9.5nm,0.3s,baz=81,slow=15,SNR=152						
MJAR				Sn	**Sn**	**00 49 14.4**	**+0.5**
	6.4nm,0.3s,baz=68,slow=14,SNR=2.7						
MJAR				LR	LR	00 49 58.3	
	comp=Z,472nm,18.3s,baz=82,slow=47						
	57nm,0.3s						
MAJO	**Matsushiro**	**2.67**	**258**	P	**Pn**	**00 48 41.4**	**+0.3**
MAJO	**Matsushiro**	**2.67**	**258**	*c i*P	**Pn**	**00 48 41.5**	**+0.3**
JSD	**Sado**	**2.69**	**291**	P	**Pn**	**00 48 40.9**	**-0.6**
JNTW	**Noshirotokiwa**	**3.30**	**343**	A	A	00 48 50.2	
	comp=E,11nm,4.2s,comp=E,5.0nm,5.6s						
JTT	**Ttatey**	**3.34**	**262**	A	A	00 48 50.3	
	comp=E,3.0nm,2.1s,comp=E,3.0nm,2.2s						
JGF	**Kuroka**	**3.64**	**247**	P	**Pn**	**00 48 55.7**	**+1.2**
JTM	**Tenmabayashi**	**3.67**	**355**	P	**Pn**	**00 48 55.9**	**+1.0**
INU	**Inuyama**	**4.00**	**245**	P	**Pn**	**00 49 00.6**	**+1.2**
JHJ2	**Mitsune**	**4.22**	**199**	P	**Pn**	**00 49 03.9**	**+1.4**
JHJ	**Hachijo jima 2**	**4.22**	**199**	Pn	**Pn**	**00 49 02.9**	**+0.4**
	30nm,0.3s,baz=155,slow=23,SNR=19						
JHJ				Sn	**Sn**	**00 49 50.1**	**-2.1**
	29nm,0.3s,baz=310,slow=23,SNR=1.8						
	69nm,0.3s						
ERM	**Erimo**	**5.06**	**15**	P	**Pn**	**00 49 13.6**	**-0.4**
ERM	**Erimo**	**5.06**	**15**	*ce*P	**Pn**	**00 49 13.1**	**-0.9**
ERM				pmax	pmax		
	comp=Z,25nm,1.0s						
JEM	**Erimo**	**5.06**	**15**	P	**Pn**	**00 49 14.0**	**0.0**
ASAJ	**Asahikawa**	**7.04**	**7**	Pn	**Pn**	**00 49 41.1**	**0.0**
	comp=Z,2.4nm,0.3s,baz=215,slow=14,SNR=5.9						
ASAJ				Sn	**Sn**	**00 50 58.3**	**-3.2**
	comp=Z,0.3nm,0.3s,baz=115,slow=26,SNR=1.9						
	comp=Z,6.0nm,0.3s						
JHS	**Saijyo**	**7.08**	**255**	P	**Pn**	**00 49 43.3**	**+1.6**
KUR	**Kuril'sk**	**9.43**	**29**	P	**Pn**	**00 50 13.8**	**-0.1**
JNU	**Nakatsue**	**9.54**	**248**	Pn	**Pn**	**00 50 14.2**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=98,slow=22,SNR=2.6						
JNU				LR	LR	00 54 17.6	
	comp=Z,125nm,19.2s,baz=64,slow=40						
	comp=Z,8.1nm,0.9s						
YSS	**Yuzh-Sakhalins**	**9.87**	**5**	*ce*P	**Pn**	**00 50 21.0**	**+1.0**
YSS				pmax	pmax		
	comp=Z,7.0nm,0.6s						
JCJ	**Chichijima**	**10.02**	**176**	Pn	**Pn**	**00 50 20.6**	**-1.4**
	comp=Z,33nm,0.3s,baz=277,slow=22,SNR=5.4						
JCJ				Sn	Sn	00 52 04.9	-10
	comp=Z,3.2nm,0.3s,baz=294,slow=23,SNR=1.4						
JCJ	**Chichijima**	**10.02**	**176**	P	**Pn**	**00 50 24.9**	**+2.8**
	comp=Z,185nm,1.2s						
USRK	**Ussuriysk Ar.**	**10.08**	**317**	Pn	**Pn**	**00 50 23.1**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=138,slow=14,SNR=2.6						
	comp=Z,4.6nm,0.6s						
KSRS	**Korea Array**	**10.79**	**276**	Pn	**Pn**	**00 50 34.0**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=93,slow=16,SNR=5.1						
KSRS				LR	LR	00 54 30.2	
	comp=Z,121nm,18.1s,baz=100,slow=37						
	comp=Z,2.7nm,0.8s						
KSRS	**Korea Array**	**10.79**	**276**	P	**Pn**	**00 50 34.0**	**+1.4**
KLR	**Kul'dur**	**14.00**	**333**	Pn	**Pn**	**00 51 20.0**	**+3.5**
	comp=Z,0.1nm,0.3s,baz=111,slow=22,SNR=1.5						
ZEA	**Zeya**	**19.31**	**334**	*i* P	**P**	**00 52 23.3**	**+0.1**
PETK	**Petropavlovsk-**	**19.59**	**30**	P	**Pn**	**00 52 27.7**	**+0.1**
	comp=Z,3.9nm,0.9s,baz=212,slow=10,SNR=2.8						
HIA	**Hailar**	**19.86**	**315**	*i* P	**P**	**00 52 26.4**	**-3.0**
SEY	**Seymchan**	**26.70**	**11**	P	**P**	**00 53 38.1**	**+0.8**
	comp=Z,2.1nm,0.8s,baz=190,slow=7.0,SNR=6.3						
	comp=Z,2.1nm,0.8s						
SEY	**Seymchan**	**26.70**	**11**	*ce*P	**P**	**00 53 36.9**	**-0.4**
SEY				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ULN	**Ulaanbaatar**	**27.33**	**304**	*ce*P	**P**	**00 53 43.4**	**0.0**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.7s						
SONM	**Songino Array**	**27.76**	**304**	P	**P**	**00 53 46.6**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=110,slow=9.5,SNR=14						
	comp=Z,1.3nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**28.17**	**121**	T	T	01 23 23.2	
	baz=314,slow=75,SNR=1319						
H11N1	**WAKE ISLAND Hy**	**28.18**	**121**	T	T	01 23 23.3	
	baz=314,slow=75,SNR=1168						
H11N3	**WAKE ISLAND Hy**	**28.18**	**121**	T	T	01 23 23.0	
	baz=314,slow=75,SNR=1167						
H11S1	**WAKE ISLAND Hy**	**28.88**	**123**	T	T	01 24 14.3	
	baz=315,slow=75,SNR=582						
H11S3	**WAKE ISLAND Hy**	**28.88**	**123**	T	T	01 24 16.5	
	baz=315,slow=75,SNR=327						
H11S2	**WAKE ISLAND Hy**	**28.90**	**123**	T	T	01 24 12.4	
	baz=315,slow=75,SNR=259						
DGZ	**Jazzator, Alta**	**40.36**	**306**	*i* P	**P**	**00 55 36.0**	**-0.3**
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**41.55**	**255**	P	**P**	**00 55 46.0**	**-0.2**
	comp=Z,1.3nm,0.3s,baz=38,slow=5.1,SNR=2.3						
	comp=Z,1.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**41.55**	**255**	P	**P**	**00 55 46.0**	**-0.2**
ZALV	**Zalesovo Beam**	**41.88**	**312**	P	**P**	**00 55 48.0**	**-0.4**
	comp=Z,2.7nm,0.8s,baz=99,slow=7.7,SNR=12						
	comp=Z,2.7nm,0.8s						
MK31	**Makanchi Array**	**44.10**	**302**	*i* P	**P**	**00 56 06.0**	**-0.6**
MKAR	**Makanchi Array**	**44.10**	**302**	P	**P**	**00 56 06.0**	**-0.6**
	comp=Z,1.9nm,0.8s,baz=88,slow=9.6,SNR=19						
	comp=Z,1.9nm,0.8s						
KURK	**Kurchatov**	**45.90**	**308**	*ce*P	**P**	**00 56 19.8**	**-1.0**

KURK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TAPN	Taplejung	45.97	274	eP	P	00 56 19.8	-2.2
	comp=Z,1.5nm,0.3s						
KURBB	Kurchatov Arra	45.97	308	P	P	00 56 21.0	-0.4
	comp=Z,5.3nm,0.7s,baz=82,slow=8.3,SNR=17						
	comp=Z,5.3nm,0.7s						
KAPI	Kappang	46.55	210	P	P	00 56 27.1	+0.8
	comp=Z,9.6nm,0.2s,baz=97,slow=18,SNR=2.0						
KDAK	Kodiak Island	47.01	42	P	P	00 56 30.5	+1.1
	comp=Z,8.4nm,0.7s,baz=301,slow=7.5,SNR=7.6						
	comp=Z,8.4nm,0.7s						
RAMN	Ramite	47.03	274	eP	P	00 56 28.8	-1.5
	comp=Z,30nm,1.0s						
JIRN	Jiri	47.04	275	eP	P	00 56 29.4	-1.1
	comp=Z,0.9nm,0.2s						
GUN	Gumba	47.18	276	eP	P	00 56 30.8	-0.8
	comp=Z,1.6nm,0.3s						
DANN	Dangsing	48.67	277	eP	P	00 56 42.3	-0.8
	comp=Z,29nm,0.7s						
PYUN	Piuthan	49.39	277	eP	P	00 56 48.4	-0.1
	comp=Z,24nm,1.0s						
ILAR	Eielson Array	49.40	32	P	P	00 56 49.0	+1.2
	comp=Z,2.4nm,0.7s,baz=270,slow=6.5,SNR=34						
	comp=Z,2.4nm,0.7s						
BVAR	Borovoye Array	50.53	312	P	P	00 56 56.3	-0.2
	comp=Z,0.4nm,0.5s,baz=90,slow=8.6,SNR=3.1						
	comp=Z,0.4nm,0.5s						
INK	Inuvik	54.29	27	P	P	00 57 25.3	+1.1
	comp=Z,1.1nm,0.9s,baz=287,slow=10,SNR=4.7						
	comp=Z,1.1nm,0.9s						
ARU	Arti	56.31	319	P	P	00 57 38.6	-0.4
	comp=Z,1.1nm,0.4s,baz=78,slow=19,SNR=4.7						
	comp=Z,1.1nm,0.4s						
ARU	Arti	56.31	319c	iP	P	00 57 39.5	+0.5
ARU				S	S	01 05 31.0	+1.5
ARU				SS	SS	01 09 18.3	+2.7
ARU				pmax	pmax		
	comp=Z,15nm,2.5s						
WRA	Warramunga Arr	57.15	188	P	P	00 57 44.8	-0.5
	comp=Z,2.1nm,0.7s,baz=5.2,slow=7.3,SNR=9.7						
	comp=Z,2.1nm,0.7s						
RES	Resolute Bay	62.51	14	P	P	00 58 20.2	-1.3
	comp=Z,0.6nm,0.7s,baz=329,slow=19,SNR=2.5						
	comp=Z,0.6nm,0.7s						
YKA	Yellowknife Ar	63.72	30	P	P	00 58 29.7	0.0
	comp=Z,0.6nm,0.8s,baz=302,slow=6.5,SNR=8.5						
	comp=Z,0.6nm,0.8s						
YKA	Yellowknife Ar	63.72	30	iP	P	00 58 30.2	+0.5
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GEYT	Alibeck	63.82	299	P	P	00 58 29.7	-1.2
	comp=Z,2.0nm,0.9s,baz=12,slow=7.8,SNR=4.0						
	comp=Z,2.0nm,0.9s						
ARCES	ARCESS Array B	63.92	339	P	P	00 58 31.1	+0.1
	comp=Z,2.4nm,0.8s,baz=66,slow=9.0,SNR=1.3						
	comp=Z,2.4nm,0.8s						
FINES	FINESS Array B	68.75	332	P	P	00 59 02.8	+0.8
	comp=Z,4.3nm,0.8s,baz=35,slow=7.0,SNR=6.9						
	comp=Z,4.3nm,0.8s						
FINES	FINESS Array B	68.75	332	iP	P	00 59 02.5	+0.5
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBZ	Khabaz	70.87	311	iP	P	00 59 13.7	-1.6
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KIV	Kislovodsk	70.87	311	eP	P	00 59 14.6	-0.9
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NB2	NORSAR Subarra	74.11	337	P	P	00 59 34.6	+0.1
	comp=Z,6.7nm,1.1s,baz=40,slow=6.2						
NOA	NORSAR Array B	74.11	337	P	P	00 59 33.7	-0.7
	comp=Z,0.6nm,0.7s,baz=39,slow=5.9,SNR=2.6						
	comp=Z,0.6nm,0.7s						
AKASG	Malin Array Be	74.25	322	P	P	00 59 34.9	-0.4
	comp=Z,1.3nm,0.6s,baz=46,slow=5.9,SNR=7.4						
	comp=Z,1.3nm,0.6s						
NVAR	Mina Array Bea	74.91	53	P	P	00 59 40.4	+0.7
	comp=Z,0.6nm,0.8s,baz=284,slow=5.1,SNR=5.0						
	comp=Z,0.6nm,0.8s						
PDAR	Pinedale Array	77.58	45	P	P	00 59 55.9	+1.0
	comp=Z,0.4nm,0.6s,baz=252,slow=2.3,SNR=6.4						
	comp=Z,0.4nm,0.6s						
BRTR	Keskin Array B	78.81	312	P	P	01 00 02.1	+0.4
	comp=Z,0.4nm,0.7s,baz=35,slow=5.3,SNR=1.9						
	comp=Z,0.4nm,0.7s						
GERES	GERESS Array B	82.65	328	P	P	01 00 22.0	0.0
	comp=Z,0.5nm,0.5s,baz=42,slow=6.1,SNR=4.9						
	comp=Z,0.5nm,0.5s						
TXAR	Lajitas Array	90.04	52	P	P	01 01 00.0	+1.3
	comp=Z,0.2nm,0.4s,baz=299,slow=4.0,SNR=6.2						
	comp=Z,0.2nm,0.4s						
LPAZ	La Paz	146.62	60	PKPbc	PKPbc	01 07 41.3	-0.1
	comp=Z,1.5nm,0.6s,baz=37,slow=2.9,SNR=5.7						
H03N2	Juan Fernandez	147.00	96	T	T	03 52 06.3	
	baz=291,slow=76,SNR=10						
H03N3	Juan Fernandez	147.01	96	T	T	03 52 04.8	
	baz=291,slow=76,SNR=9.9						
H03N1	Juan Fernandez	147.02	96	T	T	03 52 07.0	
	baz=291,slow=76,SNR=10						

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*DJA **13** 00:48:20.5±0.6, 6°S±5°×14°7E±°, h10^{km}, M4.5/5, mB5.8/1, mb4.3/5, MLv4.6/3, Mw(mB)5.3/1*

*IDC **13** 00:48:25.9±2.3, 6°.11S×147°.61E, h67^{km}±22^{km}, mb3.6/6, mbtmp4.0/9, MS3.1/1, Error ellipse: s-maj=37.7km s-min=18.1km az=113.0*

*NEIC **13** 00:48:28.1±0.7, 6°.3S±0°.1×147°.5E±0°.1, h57^{km}±17^{km}, mb4.1/14, Error ellipse: s-maj=26.6km s-min=12.4km az=131.0*

ISC 13 00:48:27.7±0.7**, 6°.21S**±0°.08×**147°.6E**±0°.1**, h77^{km}, n46,** σ1^{s}**19**/45**, mb4.2**/14**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.21	188	P	Pn	00 49 14.9	-1.0
	174nm,0.5s,baz=334,slow=6.1,SNR=27						
PMG				S	Sn	00 49 51.6	-1.4
	85nm,0.3s,baz=34,slow=17,SNR=3.8						
PMG	Port Moresby	3.21	188	Pn	Pn	00 49 14.7	-1.1
PMG	Port Moresby	3.21	188	P	Pn	00 49 15.0	-0.8
KRVT	Keravat (AS076	4.80	67	P	Pn	00 49 36.9	-0.6
	85nm,0.5s,baz=62,slow=2.9,SNR=7.9						
RABL	Rabaul	4.97	66		Pn	00 49 41.0	+1.1
MMPI	Merauke	7.50	252	P	Pn	00 50 03.3	-11
	20nm,0.7s,0.1nm						
COEN	Coen	8.85	209		Pn	00 50 31.4	-1.4
MTSU	Mount Surprise	12.28	195	P	Pn	00 51 20.1	+0.4
QIS	Mount Isa	16.24	208	P	Pn	00 52 11.5	+0.3
MTN	Manton Dam	17.52	247	P	P	00 52 27.8	+0.7
WB0	Warramunga Arr	18.61	222	P	P	00 52 38.8	-0.3
WB0				IAmb	IAmb	00 52 41.5	
	comp=Z,7.7nm,0.8s						
WRAB	Tennant Creek	18.76	222	P	P	00 52 40.6	-0.1
WB2	Warramunga Arr	18.76	222	P	P	00 52 40.7	-0.1
WB2				IAmb	IAmb	00 52 43.3	
	comp=Z,8.2nm,0.8s						
WRA	Warramunga Arr	18.77	222	P	P	00 52 40.6	-0.3
	comp=Z,3.0nm,0.3s,baz=44,slow=11,SNR=19						
WRA				PcP	PcP	00 57 04.9	-0.8
	comp=Z,0.3nm,0.6s,baz=37,slow=1.3,SNR=1.8						
WRA				ScP	ScP	01 00 36.0	+1.3
	comp=Z,1.0nm,1.1s,baz=49,slow=2.6,SNR=4.0						
EIDS	Eidsvold	19.35	170	P	P	00 52 48.0	+0.9
EIDS				IAmb	IAmb	00 52 48.8	
	comp=Z,6.9nm,0.6s						
GUMO	Guam	19.85	352	LR	LR	01 00 29.2	
	comp=Z,55nm,19.8s,baz=148,slow=37						
RMQ	Roma	20.20	177	P	P	00 52 58.0	+1.7
QLP	Quilpie	20.52	189	P	P	00 53 00.7	+1.0
KNRA	Kununurra	20.73	241	P	P	00 53 02.5	+0.4
KNRA	Kununurra	20.73	241	P	P	00 53 03.1	+1.0
AS01	Alice Springs	21.76	216	P	P	00 53 13.6	+0.4
AS31	Alice Springs	21.79	216	P	P	00 53 13.9	+0.4
AS31				IAmb	IAmb	00 53 14.4	
	comp=Z,5.8nm,0.5s						
ASAR	Alice Springs	21.79	216	P	P	00 53 13.8	+0.3
	comp=Z,9.8nm,0.5s,baz=51,slow=8.9,SNR=231						
	comp=Z,9.8nm,0.5s						
ASAR	Alice Springs	21.79	216	P	P	00 53 13.9	+0.4
INKA	Innaminka	22.38	196	P	P	00 53 20.4	+0.7
AULRC	Lightning Ridg	23.10	179	P	P	00 53 28.1	+1.0
	comp=Z,32nm,0.7s						
OOD	Oodnadatta	24.27	206	P	P	00 53 39.3	+1.6
ARMA	Armidale	24.38	172	P	P	00 53 39.8	+0.9
ARMA				IAmb	IAmb	00 53 42.6	
	comp=Z,6.2nm,0.7s						
FITZ	Fitzroy Crossi	24.46	239	P	P	00 53 40.7	+1.1
LCRK	Leigh Creek	25.68	199	P	P	00 53 52.1	+1.6
STKA	Stephens Creek	26.15	192	P	P	00 53 54.5	-0.3
	comp=Z,3.8nm,0.6s,baz=353,slow=7.4,SNR=7.7						
	comp=Z,3.8nm,0.6s						
STKA	Stephens Creek	26.15	192	P	P	00 53 55.6	+0.8
STKA	Stephens Creek	26.15	192	P	P	00 53 56.3	+1.5
BBOO	Buckleboo	28.57	201	P	P	00 54 17.9	+1.4
BBOO				IAmb	IAmb	00 54 32.3	
	comp=Z,5.6nm,1.0s						
CAN	Canberra	29.00	178	P	P	00 54 20.0	-0.4
CAN				IAmb	IAmb	00 54 23.7	
	comp=Z,12nm,1.1s						
FORT	Forrest	30.56	214	P	P	00 54 34.9	+0.8
PSA00	Pilbara Seismi	30.88	238	P	P	00 54 37.5	+0.5
PSA00				IAmb	IAmb	00 54 38.4	
	comp=Z,2.7nm,0.8s						
NWAO	Narrogin (SRO)	38.78	223	P	P	00 55 45.0	+0.1
PZH	PanZhiHua	55.05	308	P	P	00 57 56.8	+4.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.3s						
HHC	Hu-ho-hao-te	57.32	328	eP	P	00 58 13.4	+5.5
HHC				pmax	pmax		
	comp=Z,24nm,1.0s						
HHC				pmax	pmax		
	comp=Z,290nm,5.5s						
SONM	Songino Array	64.87	331	P	P	00 58 58.3	-0.6
	comp=Z,0.3nm,0.5s,baz=131,slow=4.5,SNR=3.1						
	comp=Z,0.3nm,0.5s						
WMQ	Urumqi	73.33	319	eP	P	00 59 55.0	+3.7
MKAR	Makanchi Array	78.03	320	P	P	01 00 17.3	-0.7
	comp=Z,0.2nm,0.5s,baz=100,slow=8.0,SNR=5.1						
	comp=Z,0.2nm,0.5s						
ZALV	Zalesovo Beam	79.50	328	P	P	01 00 24.0	-1.8
	comp=Z,0.3nm,0.4s,baz=123,slow=7.2,SNR=2.6						
	comp=Z,0.3nm,0.4s						
ILAR	Eielson Array	85.44	23	P	P	01 00 53.4	-3.1
	comp=Z,0.2nm,0.5s,baz=245,slow=4.6,SNR=5.0						
	comp=Z,0.2nm,0.5s						
TORD	Torodi Ar. Bea	145.72	284	PKPbc	PKPdf	01 07 58.4	0.0
	comp=Z,1.1nm,0.5s,baz=68,slow=3.6,SNR=22						

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*IDC **13** 00:53:45.5±3.4, 0°.73S×67°.52E, h0^{km}, mb3.5/6, mbtmp3.5/6, MS3.2/3, Error ellipse: s-maj=82.2km s-min=51.5km az=169.0*

ISC 13 00:53:48.6±4.0**, 0°.7S**±0°.6×**67°.6E**±0°.3**, h19^{km}, n9,** σ1^{s}**12**/7**, mb3.7**/6**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	15.32	59	LR	LR	01 01 09.9	
	comp=Z,60nm,18.7s,baz=33,slow=29						
CMAR	Chiang Mai Arr	36.26	57	LR	LR	01 14 34.8	
	comp=Z,17nm,19.4s,baz=10.0,slow=34						
MKAR	Makanchi Array	49.04	13	P	P	01 02 33.0	-1.4
	0.2nm,0.6s,baz=204,slow=9.3,SNR=2.6						
	0.2nm,0.6s						
BRTR	Keskin Array B	50.79	326	P	P	01 02 48.9	+0.8
	0.6nm,0.8s,baz=132,slow=9.3,SNR=4.1						
	0.6nm,0.8s						
BVAR	Borovoye Array	53.59	2	P	P	01 03 09.3	+0.9
	0.5nm,0.5s,baz=162,slow=10,SNR=3.5						
BVAR				LR	LR	01 25 33.9	
	comp=Z,57nm,19.2s,baz=340,slow=36						
	0.5nm,0.5s						
ZALV	Zalesovo Beam	56.32	12	P	P	01 03 27.9	-0.2
	0.3nm,0.3s,baz=210,slow=7.5,SNR=1.9						
	0.3nm,0.3s						
SONM	Songino Array	58.96	30	P	P	01 03 47.8	+0.8
	0.8nm,0.7s,baz=219,slow=8.0,SNR=7.5						
	0.8nm,0.7s						
AKASG	Malin Array Be	60.70	333	P	P	01 03 57.9	-0.9
	0.2nm,0.4s,baz=134,slow=5.3,SNR=4.7						
	0.2nm,0.4s						
TXAR	Lajitas Array	150.33	344	PKPbc	PKPbc	01 13 39.3	-0.3
	0.6nm,0.7s,baz=54,slow=2.6,SNR=8.8						

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*IDC **13** 01:11:18.8±3.7, 37°.77N×142°.36E, h0^{km}, mb3.9/3, mbtmp3.9/6, ML3.5/3, Error ellipse: s-maj=64.7km s-min=28.0km az=114.0*

*JMA **13** 01:11:23.2±0.2, 37°.7N±0°.4×142°.1E±0°.8, h34^{km}±2^{km}, MV3.9/34, SE OFF MIYAGI PREF*

*NIED **13** 01:11:23.2, 37°.73N×142°.10E, h34^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.60; $M_{\theta\theta}$-0.39; $M_{\phi\phi}$0.99; $M_{r\theta}$-0.48; $M_{\theta\phi}$-1.20; $M_{\phi r}$-2.51; Fault plane solution: $M_0$2.95000×10^{14} NP1: ϕ_s8.00000°, δ83.00000°, λ-63.00000°. NP2: ϕ_s111.00000°, δ28.00000°, λ-166.00000°.*

ISC 13 01:11:22.9±1.3**, 37°.74N**±0°.04×**142°.07E**±0°.08**, h24^{km}, n28,** σ1^{s}**31**/41**, mb3.8**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.75	320	iP	Pn	01 11 37.6	-0.3
JIKH				S	Sb	01 11 47.1	+0.1
JIO	Ouri	0.92	322	iP	Pn	01 11 40.3	+0.1
JIO				S	Sb	01 11 52.0	+0.1
JMST	Minamisoumatoc	0.94	270	iP	Pn	01 11 40.4	-0.1
JMST				S	Sn	01 11 52.8	-0.4
JFK	Kawauchi	1.02	249	iP	Pb	01 11 41.5	-0.4
JFK				S	Sb	01 11 54.6	-0.2
JMM	Marumori	1.02	278	P	Pb	01 11 41.8	0.0
JMM	Marumori	1.02	278	iP	Pb	01 11 41.8	0.0
JMM				S	Sb	01 11 54.9	+0.1
JKMT	Kesennumamotoy	1.17	336	P	Pn	01 11 43.6	-0.2
JKMT				S	Sn	01 11 58.0	-0.9
JOU	Okura	1.28	300	iP	Pb	01 11 46.3	0.0
JOU				S	Sb	01 12 02.7	+0.5
JMK	Ichinoseki	1.39	331	iP	Pb	01 11 47.3	-0.8
JMK				S	Sn	01 12 04.2	0.0
JOTO	OTAMA OYAMA	1.39	263	iP	Pb	01 11 47.9	-0.2
JOTO				S	Sb	01 12 06.0	+0.5
JYS	Shirataka	1.66	288	P	Pb	01 11 53.1	+0.4
JYS				S	Sb	01 12 14.4	+1.3
JYK	Kaneyama	1.79	312	P	Pb	01 11 53.8	-1.2
JOM	Ohasama	1.84	341	eP	Pn	01 11 53.3	+0.4
JFY	Yanaizu	1.91	261	P	Pb	01 11 55.4	-1.6
JRG	Rokugo	2.00	326	P	Pb	01 11 56.8	-1.8
JSD	Sado	3.03	277	P	Pb	01 12 12.4	-3.7
JTM	Tenmabayashi	3.14	346	P	Pn	01 12 12.9	+2.0
MJAR	Matsushiro Arr	3.31	250	Pn	Pn	01 12 15.2	+2.0
	0.7nm,0.3s,baz=80,slow=16,SNR=13						
MJAR				Sn	Sb	01 13 00.1	-0.6
	0.6nm,0.3s,baz=111,slow=43,SNR=1.5						
	3.4nm,0.4s						
MAJO	Matsushiro	3.31	250	P	Pb	01 12 17.7	-3.2
JGF	Kuroka	4.35	242	P	Pn	01 12 30.6	+3.1
ERM	Erimo	4.35	11	P	Pn	01 12 27.0	-0.5
JEM	Erimo	4.36	11	P	Pn	01 12 27.8	+0.3
JHJ2	Mitsune	4.97	202	P	Pn	01 12 38.1	+2.2
JHJ	Hachijo jima 2	4.97	203	Pn	Pn	01 12 36.5	+0.5
	18nm,0.3s,baz=36,slow=19,SNR=2.5						
JHJ				Sn	Sn	01 13 30.7	-2.0
	5.3nm,0.3s,baz=330,slow=20,SNR=0.8						
	38nm,0.3s						
ASAJ	Asahikawa	6.39	3	Pn	Pn	01 12 55.2	-0.2
	1.3nm,0.3s,baz=188,slow=21,SNR=2.9						
ASAJ				Sn	Sn	01 14 07.0	-0.5
	0.7nm,0.3s,baz=259,slow=30,SNR=1.6						
	3.8nm,0.3s						
SONM	Songino Array	27.84	303	P	P	01 17 11.8	+1.4
	1.9nm,0.7s,baz=103,slow=8.7,SNR=17						
	1.9nm,0.7s						
ZALV	Zalesovo Beam	41.83	312	P	P	01 19 10.9	+0.3
	0.7nm,0.3s,baz=92,slow=7.9,SNR=4.7						
	0.7nm,0.3s						
MKAR	Makanchi Array	44.19	302	P	P	01 19 30.1	+0.3
	0.7nm,0.7s,baz=85,slow=8.8,SNR=10						
	0.7nm,0.7s						

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*NOU **13** 01:12:21.2, 25°.03S×176°.13W, h187^{km}, mb4.4/8, South of Fiji Islands*

*IDC **13** 01:13:03.8±0.7, 30°.52S×177°.76W, h0^{km}, mb4.5/4, mbtmp4.5/7, ML3.7/3, MS3.7/9, Error ellipse: s-maj=29.0km s-min=18.4km az=120.0*

*NEIC **13** 01:13:10.2±1.4, 30°.35S±0°.08×177°.9W±0°.2, h34^{km}±6^{km}, mb4.8/22, Error ellipse: s-maj=28.0km s-min=10.9km az=91.0*

ISC 13 01:13:10.3±0.4**, 30°.43S**±0°.06×**177°.88W**±0°.09**, h46^{km}, n129,** σ1^{s}**51**/115**, mb4.8**/15**, MS3.6**/10**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.18	358	Pn	Pn	01 13 28.9	-1.4
	638nm,0.3s,baz=180,slow=22,SNR=24						
RAO				Sn	Sn	01 13 43.3	-1.9
	4µm,0.3s,baz=275,slow=23,SNR=16						
RAO				LR	LR	01 13 53.1	
	comp=Z,624nm,19.7s,baz=282,slow=39						
RAO	Raoul Island	1.18	358	Pn	Pn	01 13 28.8	-1.5
RAO				Sn	Sn	01 13 43.0	-2.3
RAO	Raoul Island	1.18	358	P	Pn	01 13 28.8	-1.5
MXZ	Matakaoa Point	7.78	203	Pn	Pn	01 14 58.0	-2.9
URZ	Urewera	8.83	207	Pn	Pn	01 15 11.4	-3.9
	1.4nm,0.3s,baz=346,slow=4.0,SNR=17						
URZ				Sn	Sn	01 16 51.3	-2.1
	8.6nm,0.3s,baz=287,slow=23,SNR=16						
	4.3nm,0.3s						
RTZ	Ruatahuna	9.20	206	Pn	Pn	01 15 14.9	-5.4
TCW	Tory Channel	12.49	208	Pn	Pn	01 16 03.3	-1.9
QRZ	Quartz Range	12.96	214	P	P	01 16 23.8	+2.6
	91nm,2.6s						
THZ	Tophouse	13.53	211	Pn	Pn	01 16 18.7	-0.8
THZ	Tophouse	13.53	211	P	Pn	01 16 19.0	-0.5
KHZ	Kahutara	13.80	208	Pn	Pn	01 16 20.6	-2.5
KHZ	Kahutara	13.80	208	P	Pn	01 16 20.8	-2.3
GVZ	Greta Valley S	14.46	208	P	Pn	01 16 29.2	-2.9
LTZ	Lake Taylor	14.63	210	P	Pn	01 16 30.4	-3.9
INZ	Inchbonnie	14.95	212	P	Pn	01 16 36.8	-1.7
OXZ	Oxford	15.17	209	P	Pn	01 16 37.2	-4.2
MHCZ	Mount Hutt	15.54	210	P	Pn	01 16 45.6	-0.6
RPZ	Rata Peaks	15.91	211	Pn	Pn	01 16 47.5	-3.4
	0.4nm,0.3s,baz=160,slow=20,SNR=2.3						
	9.0nm,0.5s						
RPZ	Rata Peaks	15.91	211	Pn	Pn	01 16 49.2	-1.7
RPZ				IAmb	IAmb	01 16 52.4	
	comp=Z,48nm,1.2s						
RPZ	Rata Peaks	15.91	211	P	Pn	01 16 51.8	+0.9
RPZ	Rata Peaks	15.91	211	P	Pn	01 16 51.4	+0.6
GCSZ	Gaunt Creek Bo	15.93	213	P	Pn	01 16 49.7	-1.4
ARCZ	Arundel	16.04	210	P	Pn	01 16 49.0	-3.6
DZM	Mont Dzumac	16.33	297	ePn	P	01 17 11.0	+12
	comp=Z,66nm,1.4s						
DZM				eLR	LR	01 21 07.4	
	comp=Z,338nm,23.1s						
DZM	Mont Dzumac	16.33	297	LR	LR	01 22 16.6	
	comp=Z,274nm,18.2s,baz=209,slow=34						
ODZ	Otahua Downs	17.15	209	Pn	Pn	01 17 04.6	-1.9
ODZ	Otahua Downs	17.15	209	P	Pn	01 17 06.4	-0.1
JCZ	Jackson Bay	17.23	214	P	Pn	01 17 07.2	-0.4
AFI	Afiamalu	17.38	20	LR	LR	01 24 55.0	
	comp=Z,72nm,18.2s,baz=182,slow=41						
MLZ	Mavora Lakes	18.51	212	P	P	01 17 20.0	-2.7
RAR	Rarotonga	18.69	65	P	P	01 17 23.0	-1.7
	comp=Z,0.9nm,0.3s,baz=275,slow=4.2,SNR=3.8						
	comp=Z,14nm,0.9s						
ARMA	Armidale	26.26	262	P	P	01 18 42.8	+1.4
TBI	Tubuai	26.26	81	eLR	LR	01 25 05.2	
	comp=Z,996nm,27.2s						
TBI				eLR	LR	01 25 05.6	
	comp=Z,4µm,25.2s						
TBI	Tubuai	26.26	81	eT	T	01 45 56.6	
	comp=Z,18nm,0.4s						
EIDS	Eidsvold	27.84	273	P	P	01 18 56.4	+0.9
EIDS				IAmb	IAmb	01 19 01.1	
	comp=Z,12nm,0.9s						
CAN	Canberra	28.16	251	P	P	01 18 59.9	+1.6
CAN				IAmb	IAmb	01 19 12.1	
	comp=Z,31nm,1.3s						
PAE	Paea	28.71	70	eT	T	01 48 52.7	
	comp=Z,5.7nm,0.2s						
PPT2	Papeete2	28.75	70	eS	S	01 23 52.1	+1.9
	comp=Z,46nm,22.0s						
PPT2				eLR	LR	01 26 16.2	
	comp=Z,183nm,25.2s						
PPT2	Papeete2	28.75	70	eT	T	01 48 57.5	
	comp=Z,4.1nm,0.3s						
HNR	Honiara	29.40	311	LR	LR	01 28 55.3	
	comp=Z,877nm,21.2s,baz=324,slow=32						
TAU	Tasmania Unive	30.35	236	P	P	01 19 17.1	-0.4
TAU				IAmb	IAmb	01 19 20.4	
	comp=Z,32nm,1.4s						
TOO	Toolangi	31.05	247		P	01 19 24.9	+1.0
TOO				IAmb	IAmb	01 19 27.8	
	comp=Z,13nm,1.1s						
VAH	Vaihoa	31.59	68	eT	T	01 52 36.6	
	comp=Z,28nm,0.2s						
CTA	Charters Tower	33.91	279	LR	LR	01 31 20.8	
	comp=Z,129nm,20.4s,baz=87,slow=32						
CTAO	Charters Tower	33.91	279	P	P	01 19 49.3	+0.2
CTAO	Charters Tower	33.91	279	P	P	01 19 52.3	+3.3
STKA	Stephens Creek	34.57	257	P	P	01 19 58.2	+3.5
	comp=Z,16nm,0.5s,baz=99,slow=10,SNR=36						
STKA				LR	LR	01 33 21.4	
	comp=Z,103nm,18.1s,baz=33,slow=35						
STKA	Stephens Creek	34.57	257	P	P	01 19 55.6	+0.9
STKA				IAmb	IAmb	01 19 59.4	
	comp=Z,7.4nm,1.1s						
PMG	Port Moresby	38.72	295	LR	LR	01 33 13.5	
	comp=Z,80nm,21.0s,baz=71,slow=31						
BBOO	Buckleboo	39.06	254	P	P	01 20 34.5	+1.7
BBOO				IAmb	IAmb	01 20 35.8	
	comp=Z,24nm,0.8s						
TAOE	Nuku Hiva Isla	41.23	67	eLR	LR	01 32 03.4	
	comp=Z,92nm,28.9s						
ASAR	Alice Springs	43.21	267	P	P	01 21 08.0	+0.9
	comp=Z,2.3nm,0.3s,baz=105,slow=7.4,SNR=8.8						
ASAR				PcP	PcP	01 22 57.5	+1.6
	comp=Z,0.8nm,0.8s,baz=123,slow=3.7,SNR=2.9						
ASAR				LR	LR	01 38 38.7	
	comp=Z,88nm,18.6s,baz=120,slow=35						
	comp=Z,2.3nm,0.3s						
DRV	Dumont d'Urvil	44.15	203	P	P	01 21 15.0	+1.1
DRV				pP	pP	01 21 22.4	-3.1
WB2	Warramunga Arr	44.19	272	P	P	01 21 14.9	-0.1
WB2				IAmb	IAmb	01 21 17.6	
	comp=Z,13nm,0.5s						
WRAB	Tennant Creek	44.20	272	P	P	01 21 15.9	+0.9
WRAB				pP	pP	01 21 23.7	-3.1
WRA	Warramunga Arr	44.20	272	P	P	01 21 16.0	+1.0
	comp=Z,6.5nm,0.4s,baz=111,slow=8.0,SNR=158						
WRA				LR	LR	01 37 57.4	
	comp=Z,97nm,20.3s,baz=111,slow=34						
	comp=Z,6.5nm,0.4s						
WRA	Warramunga Arr	44.20	272	P	P	01 21 15.3	+0.3
WB0	Warramunga Arr	44.23	272	P	P	01 21 14.6	-0.6
WB0				IAmb	IAmb	01 21 17.8	
	comp=Z,12nm,0.6s						
FORT	Forrest	46.14	255	P	P	01 21 30.5	+0.2
KNRA	Kununurra	50.81	274	P	P	01 22 07.6	+1.2
KNRA				IAmb	IAmb	01 22 09.8	
	comp=Z,14nm,1.2s						
FITZ	Fitzroy Crossi	52.46	270	P	P	01 22 18.4	-0.3
CASY	Casey	55.16	208	P	P	01 22 38.1	+0.4
CASY	Casey	55.16	208	P	P	01 22 38.4	+0.7
MBWA	Marble Bar	56.32	264	P	P	01 22 46.5	-0.3
MBWA				IAmb	IAmb	01 22 52.2	
	comp=Z,15nm,1.4s						
MBWA	Marble Bar	56.32	264	P	P	01 22 46.9	+0.1
MORW	Morawa	56.62	253	P	P	01 22 48.8	0.0
RPN	Rapa Nui	59.33	105	LR	LR	01 42 33.8	
	comp=Z,22nm,20.9s,baz=232,slow=30						
QSPA	South Pole Qui	59.68	180	P	P	01 23 11.8	+2.0
QSPA	South Pole Qui	59.68	180	P	pP	01 23 18.8	-2.8
TROLL	Troll, Antarti	77.84	180	P	PcP	01 25 10.6	-1.7
TROLL	Troll, Antarti	77.84	180	P	P	01 25 04.0	+1.4
SNAA	Sanae	78.12	178	P	PcP	01 25 12.3	-1.3
SNAA	Sanae	78.12	178	P	P	01 25 05.1	+1.1
SNAA	Sanae	78.12	178	P	P	01 25 04.3	+0.2
SNAA				IAmb	IAmb	01 25 23.9	
	comp=Z,8.6nm,1.4s						
VNA3	Neumayer Olymp	78.26	176	P	PcP	01 25 12.9	-1.2
VNA3	Neumayer Olymp	78.26	176	P	P	01 25 05.7	+0.9
VNA2	Neumayer--Watz	78.70	177	P	PcP	01 25 15.6	-0.4
	baz=134,slow=5.0						
VNA2	Neumayer--Watz	78.70	177	P	P	01 25 08.4	+1.2
	baz=162,slow=4.0						
H03S2	Juan Fernandez	80.36	123	T	T	02 54 23.2	
	baz=238,slow=74,SNR=15						
H03S1	Juan Fernandez	80.37	124	T	T	02 54 23.6	
	baz=238,slow=74,SNR=15						
H03S3	Juan Fernandez	80.38	123	T	T	02 54 23.7	
	baz=238,slow=74,SNR=17						
H03N3	Juan Fernandez	80.55	123	T	T	02 54 37.3	

	baz=241,slow=72,SNR=13						
H03N2	Juan Fernandez	80.55	123	T	T	02 54 44.5	
	baz=241,slow=72,SNR=13						
H03N1	Juan Fernandez	80.57	123	T	T	02 54 37.1	
	baz=241,slow=72,SNR=20						
PETK	Petropavlovsk-	85.87	346	P	P	01 25 45.4	+0.7
	comp=Z,3.4nm,0.7s,baz=161,slow=9.4,SNR=5.7						
	comp=Z,3.4nm,0.7s						
NVAR	Mina Array Bea	88.19	43	P	P	01 25 57.6	+1.1
	comp=Z,0.6nm,0.7s,baz=221,slow=7.7,SNR=6.4						
	comp=Z,0.6nm,0.7s						
MK31	Makanchi Array	117.87	310		PKPdf	01 31 51.1	-0.4
MKAR	Makanchi Array	117.87	310	PKP	PKPdf	01 31 51.0	-0.5
	comp=Z,0.9nm,0.6s,baz=220,slow=1.0,SNR=14						
MAKZ	Makanchi	118.08	310	PKPdf	PKPdf	01 31 50.9	-0.9
ZALV	Zalesovo Beam	118.13	318	PKP	PKPdf	01 31 50.5	-1.1
	comp=Z,0.9nm,0.7s,baz=173,slow=3.8,SNR=4.1						
KURK	Kurchatov	121.15	314	PKPdf	PKPdf	01 31 57.2	-0.3
GAR	Garm	124.46	299	PKPdf	PKiKP	01 32 04.8	0.0
KK31	Karatay Array	125.18	304	PKPdf	PKiKP	01 32 05.9	-0.1
KKAR	Karatay Array	125.18	304	PKPdf	PKiKP	01 32 06.0	+0.1
BRVK	Borovoye	126.57	316	PKPdf	PKPdf	01 32 08.0	+0.1
ARCES	ARCESS Array B	138.65	348	PKhKP	PKPpre	01 32 22.8	
	comp=Z,8.9nm,1.1s,baz=26,slow=5.9,SNR=2.1						
ARCES				PKP	PKPdf	01 32 29.5	-0.6
	comp=Z,4.9nm,0.9s,baz=36,slow=3.4,SNR=6.8						
ONI	Oni	144.96	302	PKPdf	PKPdf	01 32 43.1	+0.8
FIA1	FINESS Array S	145.21	340		PKPbc	01 32 41.7	-0.1
FINES	FINESS Array B	145.21	340	PKPbc	PKPab	01 32 42.0	+0.1
	comp=Z,16nm,0.4s,baz=54,slow=4.1,SNR=257						
FINES	FINESS Array B	145.21	340		PKPbc	01 32 41.7	-0.1
KBZ	Khabaz	145.22	304	PKPbc	PKPdf	01 32 43.0	+0.4
	comp=Z,2.1nm,0.9s,baz=261,slow=1.7,SNR=6.9						
OBN	Obninsk	145.26	325	PKPbc	PKPdf	01 32 42.3	0.0
	comp=Z,5.3nm,0.5s,baz=86,slow=0.6,SNR=4.6						
MEF	Metsahovi	146.69	340	eP	PKPbc	01 32 46.4	+0.1
RAF	Rauma	146.75	343	eP	PKPbc	01 32 46.4	0.0
VSU	Vasula	147.30	336	eP	PKPbc	01 32 48.4	+0.3
AAL	Aland	147.93	343	eP	PKPbc	01 32 49.1	-0.6
MTSE	Matsula	148.07	339	eP	PKPbc	01 32 50.5	+0.4
NC303	NORSAR Array S	148.60	351	PKPbc	PKPbc	01 32 52.2	+0.7
UPP	Uppsala	148.78	345	eP	PKPbc	01 32 51.9	0.0
NB2	NORSAR Subarra	148.80	351	PKP	PKPbc	01 32 52.5	+0.4
	comp=Z,2.0nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	148.80	351	PKPbc	PKPbc	01 32 52.3	+0.2
	comp=Z,2.7nm,0.8s,baz=16,slow=4.3,SNR=9.7						
HFS	Hagfors	149.30	349	PKPbc	PKPbc	01 32 53.1	-0.2
	comp=Z,4.6nm,0.7s,baz=11,slow=1.5,SNR=11						
VSVD	Vaisvydziai	150.18	335	eP	PKiKP	01 32 56.2	-0.1
VIKU	Vikbolandet	150.21	345	eP	PKPbc	01 32 55.5	0.0
PABE	Paberze	150.53	335	eP	PKiKP	01 32 57.4	+0.4
PBUR	Paburge	150.84	337	eP	PKiKP	01 32 57.8	+0.1
BNN	Bunyan	151.14	296	PKPbc	PKPbc	01 32 58.5	-0.1
AKASG	Malin Array Be	151.39	323	PKPbc	PKiKP	01 32 59.0	-0.1
	comp=Z,11nm,0.6s,baz=35,slow=2.8,SNR=71						
AKASG	Malin Array Be	151.39	323	PKPbc	PKPbc	01 32 58.5	0.0
AKBB	Malin Array Si	151.39	323	PKPbc	PKPbc	01 32 58.2	-0.3
EIL	Elat	151.62	277	PKPbc	PKiKP	01 33 00.8	+0.6
	comp=Z,3.5nm,0.6s,baz=350,slow=1.6,SNR=4.2						
MMAI	Mount Meron Ar	151.64	284	PKPbc	PKiKP	01 33 01.5	+1.3
	comp=Z,2.6nm,0.5s,baz=84,slow=8.5,SNR=16						
DEL	Delary	152.69	346	eP	PKPbc	01 32 59.7	-1.6
BR131	Keskin Array S	152.71	298	PKPbc	PKPbc	01 33 02.0	-0.1
BRTR	Keskin Array B	152.71	298	PKPbc	PKiKP	01 33 02.4	0.0
	comp=Z,2.0nm,0.9s,baz=141,slow=4.7,SNR=11						
BRTR	Keskin Array B	152.71	298	PKPdf	PKPdf	01 32 53.8	-1.2
BRTR				PKPbc	PKPbc	01 33 01.8	-0.3
BSD	Bornholm Skovb	153.69	343	eP	PKiKP	01 33 03.6	0.0
CLL	Collm	157.63	342	ePKPab	PKPab	01 33 31.0	-2.4
TORD	Torodi Ar. Bea	162.79	179	PKPab	PKPab	01 33 57.6	+0.9
	comp=Z,1.7nm,0.7s,baz=182,slow=3.8,SNR=10						

BEO ***13*** *01:31:53.5±0.5, 43°.76N×16°.71E, h1^{km}±2^{km}, ML3.7/15*

PDG ***13*** *01:31:53.9±0.6, 43°.74N×16°.88E, h7^{km}±1^{km}, MD4.1/8, ML4.0/13, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*

IDC ***13*** *01:31:54.0±1.0, 43°.80N×16°.87E, h0^{km}, mb3.4/4, mbtmp3.5/13, ML3.4/9, MS2.3/1, Error ellipse: s-maj=15.5km s-min=11.7km az=62.0*

LDG ***13*** *01:31:54.4±0.2, 43°.81N×16°.92E, h8^{km}, Ml3.7/33, Error ellipse: s-maj=8.1km s-min=4.4km az=26.0*

RHSSO ***13*** *01:31:54.6±0.3, 43°.72N×16°.87E, h3^{km}±1^{km}, ML4.0/20*

NEIC ***13*** *01:31:55.7±1.8, 43°.71N±0°.05×16°.83E±0°.06, h16^{km}±3^{km}, mb4.1/9, Error ellipse: s-maj=8.0km s-min=6.4km az=191.0*

ROM ***13*** *01:31:56.2, 43°.80N×16°.86E, h10^{km}, mb4.1/8, Error ellipse: s-maj=2.2km s-min=0.2km az=39.0*

PRU ***13*** *01:31:57.6±0.0, 43°.80N×16°.81E, h10^{km}, M4.1*

THE ***13*** *01:31:58.0, 43°.33N×16°.68E, h12^{km}±43^{km}, ML3.8/10, Error ellipse: s-maj=57.8km s-min=2.5km az=310.0*

ISC 13 01:31:54.6±0.8**, 43°.71N**±0°.02×**16°.81E**±0°.02**, h16^{km}**±6^{km}**, n361, $\sigma 2^{s}.21$**/506**, mb3.9**/8**, 45C-40D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RICI	Ricice	0.32	133	i Pg	Pg	01 32 00.7	-0.8
RICI				Sg	Sg	01 32 06.4	+0.2
KIJV	Kijevo	0.41	315	i Pg	Pg	01 32 01.9	-1.1
KIJV				Sg	Sg	01 32 08.4	-0.3
SRKY	Kupres RS	0.44	36	⇓iPg	Pg	01 32 01.7	-1.9
SRKY				eSg	Sg	01 32 08.1	-1.5
MAKA	Makarska	0.45	160	i Pg	Pg	01 32 03.1	-0.6
MAKA				Sg	Sb	01 32 10.3	-0.4
HVAR	Hvar	0.59	206	i Pg	Pg	01 32 05.7	-0.7
HVAR				Sg	Sb	01 32 14.8	0.0
MGRS	Mrkonjic Grad	0.73	16	⇓iPg	Pg	01 32 07.2	-1.8
MGRS				eSg	Sg	01 32 17.4	-1.3
A050A	Klekovaca	0.79	346	ePg	Pg	01 32 08.2	-1.9
A050A				eSg	Sg	01 32 20.1	-0.5
MORI	Morici	0.81	281	i Pg	Pg	01 32 09.8	-0.6
MORI				Sg	Sn	01 32 23.0	0.0
ZIRJ	Zirje	0.84	266	i Pg	Pb	01 32 10.5	-0.4
ZIRJ				Sg	Sn	01 32 23.9	+0.1
LSTV	Lastovo	0.95	176	ePg	Pb	01 32 11.5	-1.2
LSTV				Sg	Sn	01 32 26.7	+0.4
STON	Ston	1.07	142	i Pg	Pb	01 32 13.1	-1.5
STON				Sg	Sg	01 32 29.1	-0.1
STON	Ston	1.07	142	ePg	Pb	01 32 13.2	-1.5
STON				eSg	Sn	01 32 30.9	+1.6
STON	Ston	1.07	142	ePg	Pb	01 32 13.0	-1.7
STON				eSg	Sb	01 32 27.7	-0.6
BLY	Banja Luka	1.07	15	⇓P	Pb	01 32 13.5	-1.2
BLY	Banja Luka	1.07	15	ePg	Pb	01 32 14.1	-0.7
BLY				eSg	Sb	01 32 28.6	+0.1
BLY	Banja Luka	1.07	15	⇓iPg	Pb	01 32 13.3	-1.5
BLY				eSg	Sb	01 32 28.3	-0.2
UDBI	Udbina	1.11	318	i Pg	Pb	01 32 14.9	-0.5
UDBI				Sg	Sn	01 32 31.0	+0.5
PRIJ	Prijedor	1.26	357	ePg	Pb	01 32 18.0	-0.1
PRIJ				eSg	Sn	01 32 34.9	+0.7
DUGI	Dugi Otok	1.29	283	i Pg	Pb	01 32 18.7	+0.2
DUGI				Sg	Sg	01 32 38.8	+2.3
A051A	Mrakovica	1.30	3	⇓iPg	Pn	01 32 18.2	0.0
A051A				eSg	Sn	01 32 35.9	+0.6
DOB	Doboj	1.38	42	⇓iPg	Pn	01 32 18.4	-0.8
DOB				eSg	Sn	01 32 36.5	-0.6
VIRC	Vir	1.39	295	i Pg	Pb	01 32 20.0	-0.2
VIRC				Sg	Sg	01 32 41.4	+1.9
DBRK	Dubrovnik	1.43	136	i Pn	Pn	01 32 19.9	-0.1
DBRK				Sn	Sg	01 32 42.7	+1.8
PLIT	Plitvice	1.44	324	i Pn	Pb	01 32 20.9	-0.2
PLIT				Sn	Sg	01 32 43.2	+2.0
A052A	Srbac	1.48	20	⇓iPg	Pn	01 32 20.9	+0.3
A052A				eSg	Sb	01 32 41.2	+1.0
BRY	Bratogost	1.50	122	⇓iPg	Pn	01 32 20.7	-0.3
BRY	Bratogost	1.50	122	⇓iPg	Pn	01 32 20.9	-0.1
BRY				i Sg	Sg	01 32 44.1	+0.9
TREB	Trebinje	1.51	131	ePg	Pn	01 32 21.2	+0.3
TREB				eSg	Sg	01 32 44.0	+0.8
TREB	Trebinje	1.51	131	ePg	Pn	01 32 20.7	-0.2
TREB				eSg	Sb	01 32 41.2	+0.2
HAPS	Han Pijesak,Bl	1.59	76	ePg	Pb	01 32 23.6	-0.2
HAPS				eSg	Sg	01 32 45.7	-0.4
HAPS	Han Pijesak,Bl	1.59	76	⇓iPn	Pb	01 32 23.4	-0.4
HAPS				eSn	Sb	01 32 43.8	+0.1
UPM	Unac-Piva	1.61	108	ePn	Pn	01 32 23.3	+0.7
UPM				eSn	Sb	01 32 45.0	+0.7
UPM	Unac-Piva	1.61	108	⇑iPg	Pn	01 32 22.9	+0.3
UPM				i Sg	Sg	01 32 46.7	0.0
NVLJ	Novalja	1.63	302	ePn	Pb	01 32 24.2	-0.1
NVLJ				Sn	Sg	01 32 48.5	+1.3
HCY	Herceg Novi	1.77	135	ePn	Pn	01 32 25.4	+0.8
HCY				eSn	Sb	01 32 48.6	0.0
HCY	Herceg Novi	1.77	135	⇑iPn	Pn	01 32 25.4	+0.8
HCY				i Sn	Sg	01 32 51.2	-0.5
RABC	Rab	1.79	306	i Pn	Pb	01 32 27.1	+0.2
RABC				Sn	Sg	01 32 51.9	-0.2
NKME	Niksic	1.83	120	⇓iPn	Pn	01 32 26.5	+1.0
NKME				i Sn	Sg	01 32 52.3	-1.4
RUDO	Rudo	1.86	92	⇑iPn	Pn	01 32 27.0	+1.1
RUDO				eSn	Sn	01 32 50.3	+1.2
BBLS	Lazići	1.89	84	ePg	Pb	01 32 29.2	+0.4
BBLS				eSg	Sg	01 32 56.3	+0.8
MOSL	Moslavina	1.90	359	i Pn	Pn	01 32 26.9	+0.5
PLE	Pljevlja	1.92	101	⇓iPn	Pn	01 32 27.6	+0.9
PLE				i Sn	Sb	01 32 54.1	+1.1
CEME	Cevo	1.94	126	⇑iPn	Pn	01 32 28.1	+1.2
CEME				i Sn	Sb	01 32 55.0	+1.5
BLJ	Bijeljina	2.07	58	⇑iPn	Pn	01 32 27.9	-0.7
BLJ				eSn	Sn	01 32 54.4	+0.4
BUM	Brajici-Budva	2.08	132	⇑iPn	Pb	01 32 30.6	-1.5
BUM				i Sn	Sb	01 32 58.6	+0.9
BOJS	Bojanci	2.10	329	⇑iPn	Pb	01 32 31.2	-1.3
BOJS				IAML		01 33 05.2	
	comp=Z,328nm,0.4s						
BOJS	Bojanci	2.10	329	⇑iPn	Pb	01 32 31.1	-1.3
BOJS				eSn	Sb	01 32 57.6	-0.7
SGRT	San Giovanni R	2.11	202		Pn	01 32 29.1	-0.2
OZLJ	Ozalj	2.13	334	ePn	Pb	01 32 31.2	-1.6
OZLJ				Sn	Sb	01 32 59.7	+0.8
TEKS	Tekeris	2.13	66	ePn	Pn	01 32 29.1	-0.5
TEKS				eSg	Sb	01 33 00.6	+1.5
TEKS	Tekeris	2.13	66	eSn	Sn	01 32 56.7	+1.0
KOME	Kolasin	2.16	113	⇑iPn	Pn	01 32 31.2	+1.2
KOME				i Sn	Sb	01 32 59.9	0.0
ZAG	Zagreb	2.19	345	ePn	Pn	01 32 31.7	+1.4
PDG	Podgorica	2.21	125	⇓P	Pb	01 32 33.2	-1.0
PDG				⇑S	Sb	01 33 00.4	-0.8
PDG	Podgorica	2.21	125		Pb	01 32 32.6	-1.5
PDG	Podgorica	2.21	125	⇑P	Pb	01 32 32.8	-1.3
PDG	Podgorica	2.21	125	ePn	Pb	01 32 32.9	-1.2
PDG	Podgorica	2.21	125	⇑iPn	Pn	01 32 31.8	+1.2
PDG				i Sn	Sb	01 33 01.4	+0.2
PTJ	Puntijarka	2.27	345	ePn	Pn	01 32 32.4	+0.9
RIY	Rijeka	2.31	315	ePn	Pb	01 32 35.2	-0.8
RIY				Sn	Sb	01 33 02.6	-1.6
SMRN	Sveta Marina	2.31	306	ePn	Pb	01 32 34.6	-1.4
SMRN				Sn	Sb	01 33 05.6	+1.3
DRME	Dracevica, Mon	2.32	130	⇑iPn	Pn	01 32 33.8	+1.7
DRME				eSn	Sn	01 33 01.9	+1.6
DRME	Dracevica, Mon	2.32	130	⇓iPn	Pn	01 32 33.5	+1.4
DRME				i Sn	Sb	01 33 04.2	-0.3
DIVS	Divibare	2.33	79	Pn	Pn	01 32 32.8	+0.4
DIVS	Divibare	2.33	79	⇑P	Pn	01 32 33.0	+0.5
DIVS	Divibare	2.33	79	ePn	Pn	01 32 33.0	+0.5
DIVS				eSg	Sg	01 33 09.0	-0.7
DIVS	Divibare	2.33	79	ePn	Pn	01 32 32.8	+0.4
DIVS				eSn	Sn	01 33 02.0	+1.2
SJES	Sjenica	2.35	100	ePn	Pb	01 32 35.0	-1.6
SJES				eSg	Sg	01 33 09.9	-0.3
SJES	Sjenica	2.35	100	ePn	Pn	01 32 34.0	+1.3
SJES				eSn	Sn	01 33 02.2	+1.0
IVA	Berane	2.41	109	⇑iPn	Pn	01 32 34.5	+1.1
IVA				i Sn	Sb	01 33 05.9	-1.2
KALN	Kalnik	2.43	354	ePn	Pn	01 32 34.1	+0.5
IVAS	Ivanjica	2.43	92	ePn	Pn	01 32 34.8	+1.0
IVAS				eSg	Sg	01 33 12.5	-0.4
BRJN	Brijuni	2.50	300	ePn	Pb	01 32 38.4	-0.7
BRJN				Sn	Sb	01 33 10.0	+0.5
LOBO	Lobor	2.50	348	ePn	Pn	01 32 35.5	+1.0
ULC	Ulcinj	2.51	133	⇑iPn	Pn	01 32 36.7	+2.0
ULC				i Sn	Sb	01 33 08.8	-1.0
PVY	Plav	2.56	115	⇓iPn	Pn	01 32 36.7	+1.1
PVY				i Sn	Sb	01 33 09.9	-1.7
FRGS	Fruska Gora	2.59	55	⇑P	Pn	01 32 35.9	0.0
FRGS				⇑S	Sn	01 33 08.0	+0.9
FRGS	Fruska Gora	2.59	55	ePn	Pn	01 32 36.1	+0.2
FRGS				eSg	Sg	01 33 17.3	-0.6
FRGS	Fruska Gora	2.59	55	eSn	Sn	01 33 08.3	+1.3
GUMA	Gualdo di Mace	2.61	257	Pn	Pn	01 32 37.8	+1.6
CEY	Cerknica	2.64	321	ePn	Pb	01 32 39.1	-2.4
CEY				eSn	Sb	01 33 11.3	-2.4
TRUS	Trudelj	2.65	78	ePn	Pn	01 32 37.3	+0.6
TRUS				eSg	Sg	01 33 21.0	+1.2
SKDS	Skadanscina	2.71	314	i Pn	Pn	01 32 39.3	+1.8
SKDS				IAML		01 33 23.9	
	comp=Z,262nm,0.3s						
SKDS	Skadanscina	2.71	314	ePn	Pn	01 32 39.0	+1.5
SKDS				eSn	Sb	01 33 12.8	-2.8
INTR	Introdacqua	2.73	232	Pn	Pn	01 32 39.2	+1.3
CAMP	Campotosto	2.75	246		Pn	01 32 39.4	+1.2
BEHE	Becsehely	2.76	360	⇓iPn	Pn	01 32 39.2	+1.1
BEHE				eSn	Sn	01 33 12.7	+1.6
KOGS	Kog	2.76	352	⇓iPn	Pn	01 32 39.0	+0.8
FDMO	Fiordimonte	2.79	257	Pn	Pn	01 32 39.9	+1.2
VNDS	Vrh nad Dolski	2.82	329	i Pn	Pn	01 32 40.9	+1.9
MORH	Mrgy, Hungar	2.82	27	⇓P	Pn	01 32 39.0	0.0
MORH	Mrgy, Hungar	2.82	27	ePn	Pn	01 32 40.1	+1.1
MORH				eSn	Sn	01 33 14.0	+1.4
GRUS	Gruza	2.84	85	ePn	Pn	01 32 40.3	+1.1
GRUS				eSg	Sg	01 33 25.3	-0.5
AQU	L'Aquila	2.84	243	Pn	Pn	01 32 41.2	+1.9
AQU	L'Aquila	2.84	243	⇑P	Pn	01 32 41.6	+2.3
BEO	Beograd	2.85	66	ePn	Pn	01 32 40.5	+1.1
BEO				eSn	Sn	01 33 15.8	+2.4
MATE	Matera	3.06	181	⇓P	Pn	01 32 43.2	+0.9
MURB	Monte Urbino	3.15	263	Pn	Pn	01 32 45.6	+2.1
PAOL	Paolisi	3.15	212	Pn	Pn	01 32 44.0	+0.4
SELS	Selova	3.18	97	ePn	Pn	01 32 45.5	+1.5
SELS				eSn	Sn	01 33 23.8	+2.2
SABO	M.te Sabotino	3.21	316	Pn	Pn	01 32 44.9	+0.4
SOKA	Soboth	3.22	338	i Pn	Pn	01 32 45.9	+1.4
	comp=Z,9.4nm,0.4s,SNR=20						
SOKA				eSn	Sn	01 33 26.0	+3.5
	comp=Z,29nm,0.4s						
OBKA	Obir	3.22	331	i Pn	Pn	01 32 46.4	+1.8
	comp=Z,2.1nm,0.2s,SNR=40						
OBKA				eSn	Sb	01 33 28.5	-2.0
	comp=Z,69nm,0.6s						
OBKA	Obir	3.22	331	⇑iPn	Pn	01 32 46.5	+1.9
OBKA				eSn	Sn	01 33 24.9	+2.3
OBKA	Obir	3.22	331	ePn	Pn	01 32 47.0	+2.4
SVIS	Svilajnac	3.23	79	ePn	Pn	01 32 45.8	+1.2
TIR	Tirane	3.27	135	⇓P	Pn	01 32 47.0	+1.8
TIR	Tirane	3.27	135	P	Pn	01 32 47.2	+2.0
TIR	Tirane	3.27	135	Pn	Pn	01 32 45.9	+0.6
TIR	Tirane	3.27	135	⇑P	Pn	01 32 47.1	+1.8
CESX	Cesi	3.28	252	Pn	Pn	01 32 47.7	+2.4
CADS	Cadrg	3.33	320	i Pn	Pn	01 32 48.3	+2.3
PHP	Peshkopia	3.36	126	P	Pn	01 32 49.5	+3.0
PHP				S	Sn	01 33 27.2	+1.1
	comp=Z,435nm,1.0s						
MGAB	Montegabbione	3.52	258	⇑P	Pn	01 32 50.9	+2.3
BOVS	Bovan	3.56	90	⇓P	Pn	01 32 49.7	+0.6
BOVS	Bovan	3.56	90	ePn	Pn	01 32 49.8	+0.7
BOVS				eSn	Sn	01 33 34.3	+3.5
PRED	Cave del Predi	3.56	321	Pn	Pn	01 32 51.1	+1.8
KUBS	Kucevo	3.58	77	ePn	Pn	01 32 49.7	+0.2
PTCC	Patocco-Chiusa	3.64	319	⇑P	Pn	01 32 50.8	+0.5
ARSA	Arzberg	3.65	346	i Pn	Pn	01 32 51.8	+1.3
	comp=Z,15nm,0.4s,SNR=57						
ARSA				i Sn	Sn	01 33 33.4	+0.3
	comp=Z,30nm,0.4s						
ARSA	Arzberg	3.65	346	⇑P	Pn	01 32 51.8	+1.3
ARSA	Arzberg	3.65	346	ePn	Pn	01 32 51.6	+1.2
ARSA				eSn	Sn	01 33 34.1	+1.0
ARSA	Arzberg	3.65	346	ePn	Pn	01 32 51.8	+1.3
ARSA				eSg	Sn	01 33 33.2	+0.1
MYKA	Terra Mystica	3.67	324	i Pn	Pn	01 32 53.4	+2.5
	comp=Z,3.2nm,0.4s,SNR=7.1						
MYKA				i Sn	Sn	01 33 38.4	+4.6
	comp=Z,25nm,0.4s						
MDVR	Moldovita	3.69	71	⇓P	Pn	01 32 51.1	+0.1
BARS	Barje	3.77	102	ePn	Pn	01 32 54.0	+2.0
CUC	Castrocucco	3.79	192	Pn	Pn	01 32 53.7	+1.3
VLO	Vlora	3.81	147	Pn	Pn	01 32 52.6	0.0
LATE	Laterza	3.82	255	Pn	Pn	01 32 54.3	+1.6
SKO	Skopje	3.83	115	i Pn	Pn	01 32 55.4	+2.5
SCTE	Santa Cesarea	3.84	161	Pn	Pn	01 32 54.6	+1.5
STAL	STALIGIAL	3.86	313	Pn	Pn	01 32 53.7	+0.4
CLUD	Cludinico	3.90	316	Pn	Pn	01 32 55.5	+1.6
BZS	Buzias	3.92	59	⇓P	Pn	01 32 54.0	-0.2
ZAGS	Zajecar	3.93	87	ePn	Pn	01 32 55.4	+1.1
OHR	Ohrid	3.94	130	i Pn	Pn	01 32 57.5	+3.1
RONA	Rosalia, Austr	4.00	355		Pn	01 32 56.4	+1.1
RONA					Sn	01 33 42.0	+0.2
RONA	Rosalia, Austr	4.00	355	i Pn	Pn	01 32 56.4	+1.1
	comp=Z,10nm,0.4s,SNR=45						
RONA				i Sn	Sn	01 33 42.0	+0.2
	comp=Z,23nm,0.4s						
TEOL	Teolo	4.02	296	Pn	Pn	01 32 57.1	+1.5
CIMO	Cimolais	4.04	312	Pn	Pn	01 32 56.6	+0.8
OSSC	Osservatorio P	4.04	269	Pn	Pn	01 32 57.4	+1.6
PRVS	Prvonek	4.04	106	ePn	Pn	01 32 58.1	+2.2
KBA	Koelnbreinsper	4.15	325	Pn	Pn	01 33 00.3	+2.8
	comp=Z,1.7nm,0.3s,SNR=17						
KBA				eSn	Sn	01 33 49.0	+3.3
	comp=Z,44nm,0.7s						
KBA	Koelnbreinsper	4.15	325	⇓P	Pn	01 33 00.3	+2.8
KBA	Koelnbreinsper	4.15	325	ePn	Pn	01 33 00.3	+2.8
KBA				eSg	Sn	01 33 48.7	+2.9
HERR	Herculane	4.19	72	⇓P	Pn	01 32 58.4	+0.5
HERR				⇑S	Sn	01 33 48.2	+1.7
SRO	Srobarova	4.23	14	ePN	Pn	01 32 59.9	+1.5
SRO				eSN	Sn	01 33 48.1	+0.7
ZCCA	Zocca	4.25	281	Pn	Pn	01 33 01.3	+2.6
ZAPS	Zavoj	4.26	94	ePn	Pn	01 33 01.0	+2.1
ZAPS				eSn	Sn	01 33 50.3	+2.0
CONA	Conrad Observa	4.27	351	i Pn	Pn	01 33 00.2	+1.2
	comp=Z,4.9nm,0.3s,SNR=44						
CONA				i Sn	Sn	01 33 49.6	+1.1
	comp=Z,28nm,0.4s						
KBN	Korca	4.28	135	P	Pn	01 33 01.0	+1.9
KBN				S	Sn	01 33 49.5	+0.8
	comp=Z,188nm,0.7s						
KBN	Korca	4.28	135	Pn	Pn	01 33 00.7	+1.5
SIRR	Siria	4.29	52	⇑P	Pn	01 32 59.5	+0.3
ABTA	Abfaltersbach	4.29	317	Pn	Pn	01 33 01.2	+1.9
	comp=Z,5.4nm,0.2s,SNR=19						
ABTA				eSn	Sn	01 33 53.9	+4.9
	comp=Z,34nm,0.4s						
SURR	Surduc	4.30	60	⇓P	Pn	01 32 59.3	-0.1
CTI	Castel Tesino	4.34	304	Pn	Pn	01 33 01.2	+1.2
CASP	Castiglione de	4.44	260	Pn	Pn	01 33 01.7	+0.5
STIP	Stip	4.45	115	i Pn	Pn	01 33 05.7	+4.3
FNA	Florina	4.48	129	P	Pn	01 33 04.2	+2.3
FNA				S	Sn	01 33 54.6	+0.9
	comp=Z,242nm,0.8s						
FNA	Florina	4.48	129	Pn	Pn	01 33 03.2	+1.3
FNA	Florina	4.48	129	⇓P	Pn	01 33 04.3	+2.3
MOA	Molln	4.50	338	i Pn	Pn	01 33 04.5	+2.3
	comp=Z,8.5nm,0.2s						
MOA				i Sn	Sn	01 33 57.3	+3.2
	comp=Z,45nm,0.6s						
MOA	Molln	4.50	338	ePn	Pn	01 33 04.5	+2.3
MOA				eSg	Sn	01 34 00.3	+6.2
SRN	Sarande	4.51	147	P	Pn	01 33 02.2	-0.1
SRN				S	Sn	01 33 52.9	-1.5
TIP	Timpagrande	4.53	180	⇑P	Pn	01 33 04.4	+1.8
TIP	Timpagrande	4.53	180	Pn	Pn	01 33 04.2	+1.6
TIP	Timpagrande	4.53	180	⇑P	Pn	01 33 08.0	+5.4
LSK	Leskovik	4.55	140	P	Pn	01 33 04.2	+1.3
LSK				S	Sn	01 33 55.2	-0.2
	comp=Z,220nm,0.9s						
BIOA	Bad Ischl, Aus	4.55	332		Pn	01 33 05.7	+2.8
BIOA					Sn	01 33 58.8	+3.4
BIOA	Bad Ischl, Aus	4.55	332	i Pn	Pn	01 33 05.7	+2.8
	comp=Z,11nm,0.4s,SNR=25						
BIOA				i Sn	Sn	01 33 58.8	+3.4
	comp=Z,37nm,0.5s						
KEK	Kerkira	4.58	150	Pn	Pn	01 33 04.5	+1.3
GZR	Gura Zlata	4.59	66	⇓P	Pn	01 33 03.7	+0.3
MODS	Modra-Piesok	4.67	4	ePN	Pn	01 33 05.5	+1.0
MODS				eSN	Sn	01 33 57.4	-0.9
SRE	Strehaia	4.70	76	⇑P	Pn	01 33 05.7	+0.9
PSZ	Piszkesteto	4.73	26	⇑P	Pn	01 33 05.5	+0.2
PSZ	Piszkesteto	4.73	26	Pn	Pn	01 33 05.3	+0.1
PRMA	PARMA	4.78	285	Pn	Pn	01 33 07.9	+2.0
VTS	Vitosha	4.83	101	⇓S	Sn	01 34 05.0	+2.6
VTS	Vitosha	4.83	101	Pn	Pn	01 33 09.4	+2.6
VTS	Vitosha	4.83	101	⇑P	Pn	01 33 10.5	+3.7
DEV	Deva	4.85	61	⇓P	Pn	01 33 07.2	+0.3
SALO	Salr	4.87	295	Pn	Pn	01 33 08.2	+1.0
SALO	Salr	4.87	295	⇑P	Pn	01 33 09.0	+1.8
VAY	Valandovo	4.89	117	i Pn	Pn	01 33 09.4	+2.0
RJOB	Jochberg	4.91	327	ePn	Pn	01 33 10.9	+3.1
IGT	Igoumenitsa	4.94	146	P	Pn	01 33 09.0	+0.8
IGT				S	Sn	01 34 04.9	-0.1
	comp=Z,105nm,0.5s						
GRG	Griva	4.98	122	P	Pn	01 33 10.8	+2.1
VYHS	Vyhne	4.99	16	ePN	Pn	01 33 09.6	+0.8
VYHS				eSN	Sn	01 34 05.3	-0.7
VYHS				e		02 12 11.1	
KZN	Kozani	5.03	131	P	Pn	01 33 12.2	+2.8
JAN	Janina	5.06	142	P	Pn	01 33 11.3	+1.5
WTTA	Wattenberg	5.08	316	ePn	Pn	01 33 12.8	+2.5
	comp=Z,17nm,0.3s,SNR=59						
WTTA				i Sn	Sn	01 34 14.2	+5.6
	comp=Z,56nm,0.6s						
WTTA	Wattenberg	5.08	316	ePn	Pn	01 33 12.7	+2.5
WATA	Walderalm	5.16	316		Pn	01 33 13.9	+2.6
WATA					Sn	01 34 15.7	+5.2
WATA	Walderalm	5.16	316	i Pn	Pn	01 33 13.9	+2.6
	comp=Z,9.6nm,0.2s,SNR=45						
WATA				i Sn	Sn	01 34 15.6	+5.2
	comp=Z,18nm,0.4s						
KNT	Kendrikon	5.18	117	P	Pn	01 33 12.8	+1.3
JAVC	Velka Javorina	5.18	6	ePN	Pn	01 33 12.9	+1.4
JAVC				eSN	Sn	01 34 11.0	+0.1
DRGR		5.18	52	⇑P	Pn	01 33 12.3	+0.8
SQTA	Sankt Quirin	5.27	314		Pn	01 33 15.8	+3.0
SQTA					Sn	01 34 17.6	+4.4
SQTA	Sankt Quirin	5.27	314	i Pn	Pn	01 33 15.8	+3.0
	comp=Z,9.0nm,0.2s,SNR=33						
SQTA				eSn	Sn	01 34 17.6	+4.4
	comp=Z,43nm,0.6s						
MSSA	Maissana	5.29	279	Pn	Pn	01 33 14.7	+1.7
MSSA	Maissana	5.29	279	S	Sn	01 34 15.0	+1.4
MARR	Marisel-Cluj	5.36	54	⇑P	Pn	01 33 15.3	+1.4
MARR				⇓S	Sn	01 34 16.0	+0.8
KRUC	Moravsky	5.36	357	ePN	Pn	01 33 14.5	+0.6
KRUC				eSN	Sn	01 34 14.3	-0.9
CKRC	Cesky Krumlov	5.39	342	ePN	Pn	01 33 16.4	+2.0
MOTA	Moosalm	5.41	314		Pn	01 33 17.2	+2.6
MOTA					Sn	01 34 21.6	+5.0
MOTA	Moosalm	5.41	314	i Pn	Pn	01 33 17.2	+2.6
	comp=Z,20nm,0.4s,SNR=35						
MOTA				eSn	Sn	01 34 21.6	+5.0
	comp=Z,39nm,0.5s						
FETA	Feichten	5.41	310	i Pn	Pn	01 33 17.1	+2.4
	comp=Z,4.5nm,0.4s,SNR=11						
FETA				eSn	Sn	01 34 24.5	+7.9
	comp=Z,12nm,0.5s						
KECS	Kecovo	5.41	27	ePN	Pn	01 33 16.8	+2.2
KECS				eSN	Sn	01 34 15.5	-1.0
FUORN	Ofenpass-Fuorn	5.46	304	Pn	Pn	01 33 17.7	+2.1
MESR	Meseseni	5.52	49	⇓P	Pn	01 33 16.6	+0.4
GEC2	GERESS Array S	5.56	338	Pn	Pn	01 33 17.7	+0.9
GEC2	GERESS Array S	5.56	338	ePn	Pn	01 33 18.5	+1.7
GERES	GERESS Array B	5.56	338	Pn	Pn	01 33 18.6	+1.8
	comp=Z,1.9nm,0.3s,baz=156,slow=14,SNR=41						
GERES				Sn	Sn	01 34 22.4	+2.0
	comp=Z,4.3nm,0.3s,baz=144,slow=23,SNR=8.0						
	comp=Z,4.7nm,0.4s						
GERES	GERESS Array B	5.56	338	Pn	Pn	01 33 18.1	+1.3
LIT	Litokhoron	5.57	128	Pn	Pn	01 33 16.9	+0.1
LIT	Litokhoron	5.57	128	⇑P	Pn	01 33 18.2	+1.3
VRAC	Vranov	5.60	359	⇓P	Pn	01 33 17.9	+0.7
VRAC				⇑S	Sn	01 34 22.2	+1.1
VRAC	Vranov	5.60	359	Pn	Pn	01 33 18.0	+0.9
	comp=Z,0.7nm,0.3s,baz=184,slow=13,SNR=4.8						
VRAC				Sn	Sn	01 34 20.0	-1.1
	comp=Z,4.8nm,0.3s,baz=142,slow=10,SNR=7.5						
	comp=Z,2.2nm,0.3s						
VRAC	Vranov	5.60	359	ePN	Pn	01 33 17.8	+0.7
VRAC				eSN	Sn	01 34 21.5	+0.4
SRS	Serrai	5.65	115	P	Pn	01 33 20.3	+2.3
CJR	Cluj-Napoca	5.66	56	⇑P	Pn	01 33 19.0	+0.9
RETA	Reutte	5.67	314	i Pn	Pn	01 33 20.5	+2.2
	comp=Z,6.1nm,0.3s						
RETA				eSn	Sn	01 34 26.1	+3.0
	comp=Z,22nm,0.6s						

TSLK	Tsoukalades, L	5.68	148	P	Pn	01 33 19.0	+0.7
PLVB	Pleven	5.69	91	⇓P	Pn	01 33 19.6	+1.1
TYRN	Tyrnavos	5.70	133	P	Pn	01 33 19.6	+1.0
TYRN				S	Sn	01 34 23.6	0.0
	comp=Z,68nm,0.6s						
LKD2	Lefkada island	5.71	148	P	Pn	01 33 19.4	+0.6
LANS	Liptovska Anna	5.74	18	ePN	Pn	01 33 20.6	+1.4
LANS				eSN	Sn	01 34 24.8	+0.1
DAVOX	Davos/Dischmat	5.77	304	Pn	Pn	01 33 22.6	+2.9
	comp=Z,3.2nm,0.3s,baz=134,slow=18,SNR=24						
DAVOX				Sn	Sn	01 34 30.8	+5.2
	comp=Z,4.8nm,0.3s,baz=352,slow=23,SNR=3.7						
	comp=Z,11nm,0.3s						
NYDR	Nydri-Lefkada	5.79	148	P	Pn	01 33 20.0	+0.1
NYDR				S	Sn	01 34 23.8	-2.1
	comp=Z,100nm,0.5s						
PGF	Pioggiola	5.83	261	ePn	Pn	01 33 21.7	+1.2
PGF				eSn	Sn	01 34 25.1	-1.9
	comp=Z,2.7nm,0.3s						
EVGI	Lefkada island	5.86	149	P	Pn	01 33 20.8	0.0
KHC	Kasperske Hory	5.86	339	Pn	Pn	01 33 21.4	+0.6
KHC	Kasperske Hory	5.86	339	ePN	Pn	01 33 22.6	+1.8
KHC				eSN	Sn	01 34 28.4	+0.8
KHC	Kasperske Hory	5.86	339	⇑P	Pn	01 33 22.9	+2.1
FUR	Furstenfeldbru	5.89	321	ePn	Pn	01 33 23.3	+2.1
TRPA	Tarpa	5.96	40	⇑P	Pn	01 33 22.0	-0.1
DAVA	Damuels	6.04	309	i Pn	Pn	01 33 27.2	+3.9
	comp=Z,2.4nm,0.3s						
DAVA				eSn	Sn	01 34 37.2	+5.1
	comp=Z,20nm,0.4s						
DAVA	Damuels	6.04	309	⇑P	Pn	01 33 27.4	+4.0
DAVA	Damuels	6.04	309	ePn	Pn	01 33 27.3	+4.0
MORC	Moravsky Berou	6.09	5	⇓P	Pn	01 33 25.2	+1.3
MORC				⇑S	Sn	01 34 34.6	+1.4
MORC	Moravsky Berou	6.09	5	Pn	Pn	01 33 24.3	+0.4
MORC	Moravsky Berou	6.09	5	ePN	Pn	01 33 25.6	+1.7
MORC				eSN	Sn	01 34 32.2	-1.0
BMR	Baia Mare	6.13	47	⇓P	Pn	01 33 25.6	+1.1
VOIR		6.14	71	⇑P	Pn	01 33 25.4	+0.7
UBR	Ueberruh	6.14	313	ePn	Pn	01 33 26.7	+2.0
MAKR	Makrakomi, Fth	6.17	138	P	Pn	01 33 26.6	+1.5
MAKR				S	Sn	01 34 36.3	+0.9
	comp=Z,262nm,0.4s						
OKC	Ostrava-Krasne	6.20	8	eSN	Sn	01 34 35.5	-0.3
PVO	Paravola	6.21	143	P	Pn	01 33 25.7	+0.1
AGG	Agios Georgios	6.26	137	P	Pn	01 33 27.3	+0.9
AGG				S	Sn	01 34 37.7	+0.1
	comp=Z,98nm,0.4s						
AGG	Agios Georgios	6.26	137	Pn	Pn	01 33 26.7	+0.3
AGG	Agios Georgios	6.26	137	⇓P	Pn	01 33 27.3	+0.9
ARCR	ARCALIA	6.29	55	⇓P	Pn	01 33 27.3	+0.6
KRLC	Kraliky	6.36	360	ePN	Pn	01 33 29.8	+2.1
ANX	Ano Chora	6.41	141	P	Pn	01 33 30.2	+1.8
ANX				S	Sn	01 34 42.7	+1.5
	comp=Z,158nm,0.5s						
PRU	Pruhonice	6.46	347	ePN	Pn	01 33 31.5	+2.4
STHS	Stebnicka Huta	6.47	27	ePN	Pn	01 33 31.0	+1.8
STHS				eSN	Sn	01 34 42.0	-0.6
MONC	Moncucco Torin	6.50	285	⇑P	Pn	01 33 31.8	+2.2
EFP	Efpalio	6.54	142	P	Pn	01 33 31.3	+1.2
DPC	Dobruska-Polom	6.65	357	ePN	Pn	01 33 34.2	+2.6
DPC				eSN	Sn	01 34 44.9	-2.1
RAFF	Raffo Rosso	6.75	197	Pn	Pn	01 33 34.8	+1.8
MLR	Muntele Rosu	6.76	72	⇓P	Pn	01 33 33.1	-0.2
MLR	Muntele Rosu	6.76	72	Pn	Pn	01 33 36.2	+2.9
	comp=Z,0.2nm,0.3s,baz=274,slow=13,SNR=2.4						
	comp=Z,1.0nm,0.5s						
MLR	Muntele Rosu	6.76	72	Pn	Pn	01 33 33.1	-0.2
SBF	Sospel	6.78	274	ePn	Pn	01 33 33.9	+0.4
SBF				eSn	Sn	01 34 47.0	-3.4
	comp=Z,22nm,0.4s						
ROTZ	Rotzenmuhle	6.83	334	ePn	Pn	01 33 35.4	+1.3
DRO	Drossia	6.85	145	P	Pn	01 33 34.5	+0.1
RDO	Rodhopi	6.95	109	Pn	Pn	01 33 38.3	+2.5
RDO	Rodhopi	6.95	109	⇓P	Pn	01 33 38.7	+3.0
MANZ	Manzenberg	7.05	334	ePn	Pn	01 33 38.9	+1.7
BURAR	Bucovina Array	7.07	54	Pn	Pn	01 33 38.2	+0.7
BUR08	Bucovina Ar. S	7.07	53	Pn	Pn	01 33 39.0	+1.5
GRA1	Grafenberg Arr	7.10	329	Pn	Pn	01 33 38.9	+1.1
GRF	Grafenberg Arr	7.10	329	ePn	Pn	01 33 40.5	+2.7
GRFO	Grafenberg	7.10	329	Pn	Pn	01 33 38.6	+0.8
SENIN	Lac Senin/Sane	7.24	295	Pn	Pn	01 33 41.6	+1.7
WERN	Wernitzgruen	7.24	337	ePn	Pn	01 33 42.6	+2.9
MBDF	Montbardon	7.28	281	ePn	Pn	01 33 40.3	-0.1
MBDF				eSn	Sn	01 34 58.7	-4.0
	comp=Z,10nm,0.4s						
STU	Stuttgart	7.31	316	Pn	Pn	01 33 41.7	+1.1
TANN	Tannenbergstha	7.33	338	ePn	Pn	01 33 42.9	+2.0
TRIB	Obertriebel	7.37	336	ePn	Pn	01 33 44.2	+2.8
BNI	Bardonecchia	7.38	284	Pn	Pn	01 33 42.2	+0.4
ALN	Alexandroupoli	7.41	109	Pn	Pn	01 33 43.9	+2.0
LPL	La Plagne	7.41	288	ePn	Pn	01 33 42.4	+0.1
LPL	La Plagne	7.41	288	eP	Pn	01 33 47.6	+5.3
LPL				eSn	Sn	01 35 01.7	-4.3
	comp=Z,29nm,0.4s						
BRG	Berggiesshubel	7.42	346	eP	Pn	01 33 48.4	+6.3
BRG				Amp		01 33 48.9	
	comp=Z,2.2nm,0.5s						
BRG				S	Sn	01 35 11.0	+5.1
BRG				Amp		01 35 53.8	
	comp=Z,11nm,0.9s						
BFO	Black Forest	7.49	311	Pn	Pn	01 33 43.1	0.0
BFO	Black Forest	7.49	311	⇑P	Pn	01 33 44.2	+1.1
BFO	Black Forest	7.49	311	ePn	Pn	01 33 44.2	+1.1
LMR	La Mourre	7.49	271	ePn	Pn	01 33 43.7	+0.5
LMR				eSn	Sn	01 35 04.2	-3.6
	comp=Z,4.5nm,0.3s						
ITM	Ithomi	7.61	147	Pn	Pn	01 33 45.3	+0.6
MOX	Moxa	7.78	335	ePn	Pn	01 33 48.7	+1.6
ORIF	Oris-en-Rattie	7.93	283	ePn	Pn	01 33 49.5	+0.3
ORIF				eSn	Sn	01 35 14.0	-4.6
	comp=Z,13nm,0.4s						
CLL	Collm	8.02	343	Pn	Pn	01 33 50.1	-0.3
CLL	Collm	8.02	343	ePn	Pn	01 33 55.0	+4.6
CLL				ex	x	01 34 02.0	
CLL				eSn	Sn	01 35 10.0	-11
CLL				ex	x	01 35 23.0	
CLL				ex	x	01 35 29.0	
CLL				eSb	Sb	01 35 55.0	+6.7
CLL				ex	x	01 36 05.0	
CLL				eSg		01 36 11.0	
	comp=Z,30nm,1.1s						
HINF	Hinteralfeld	8.07	304	ePn	Pn	01 33 50.9	-0.3
HINF	Hinteralfeld	8.07	304	eP	Pn	01 33 56.4	+5.2
HINF				eSn	Sn	01 35 16.8	-5.3
	comp=Z,7.2nm,0.4s						
ECH	Echery	8.09	307	Pn	Pn	01 33 52.0	+0.7
ECH	Echery	8.09	307	⇑P	Pn	01 33 52.3	+1.0
CABF	La Chapelle	8.11	295	ePn	Pn	01 33 51.7	0.0
CABF	La Chapelle	8.11	295	eP	Pn	01 33 57.6	+5.9
CABF				eSn	Sn	01 35 18.0	-5.0
	comp=Z,4.2nm,0.4s						
CDF	Champ du Feu	8.12	309	ePn	Pn	01 33 51.6	-0.3
CDF				eSn	Sn	01 35 17.8	-5.5
	comp=Z,3.1nm,0.3s						
SMRF	Simiane la Rot	8.12	276	ePn	Pn	01 33 52.2	+0.3
SMRF				eSn	Sn	01 35 18.9	-4.4
	comp=Z,3.0nm,0.4s						
HAU	Haudompre	8.46	304	ePn	Pn	01 33 56.4	-0.1
HAU	Haudompre	8.46	304	eP	Pn	01 34 01.4	+4.9
HAU				eSn	Sn	01 35 26.0	-5.7
	comp=Z,11nm,0.4s						
VIVF	Saint-Julien-l	8.78	282	ePn	Pn	01 34 00.9	0.0
VIVF	Saint-Julien-l	8.78	282	eP	Pn	01 34 04.9	+4.0
VIVF				eSn	Sn	01 35 34.4	-5.0
	comp=Z,4.1nm,0.4s						
SSB	Saint Sauveur	8.90	284	Pn	Pn	01 34 02.0	-0.6
PAGF	Fort de Pagny	9.09	306	ePn	Pn	01 34 04.6	-0.4
	baz=123						
PAGF				eSn	Sn	01 35 40.9	-6.0
	comp=Z,4.2nm,0.5s						
SFTF	Sexfontaines	9.34	303	ePn	Pn	01 34 08.2	-0.3
	baz=121						
SFTF	Sexfontaines	9.34	303	eP	Pn	01 34 13.6	+5.1
SFTF				eSn	Sn	01 35 47.1	-6.1
	comp=Z,3.1nm,0.3s						
LASF	Ste Croix	9.36	277	ePn	Pn	01 34 09.0	+0.2
LASF	Ste Croix	9.36	277	eP	Pn	01 34 14.0	+5.2
LASF				eSn	Sn	01 35 48.5	-5.1
	comp=Z,1.6nm,0.4s						
WLF	Walferdange	9.43	313	Pn	Pn	01 34 09.8	+0.1
MEZF	Maizieres J'vi	9.46	304	ePn	Pn	01 34 10.0	-0.1
	baz=125						
MEZF				eSn	Sn	01 35 50.0	-6.1
	comp=Z,3.1nm,0.4s						
SAVF	Savonnieres en	9.47	305	eSn	Sn	01 35 49.9	-6.3
	comp=Z,2.3nm,0.3s						
SMF	Signal de Mont	9.61	292	ePn	Pn	01 34 11.9	-0.3
SMF				eSn	Sn	01 35 54.0	-5.8
	comp=Z,7.2nm,0.3s						
LOR	Lormes	9.76	296	ePn	Pn	01 34 15.0	+0.7
	baz=113						
LOR				eSn	Sn	01 35 57.4	-6.1
	comp=Z,7.1nm,0.3s						
KEST	Kesra	9.82	218	Pn	Pn	01 34 19.7	+4.5
	comp=Z,0.1nm,0.3s,baz=280,slow=11,SNR=3.9						
	comp=Z,3.7nm,0.9s						
KEST	Kesra	9.82	218	Pn	Pn	01 34 17.5	+2.3
SSF	Saint Saulge	9.94	294	ePn	Pn	01 34 16.6	-0.1
SSF				eSn	Sn	01 36 01.7	-6.1
	comp=Z,3.2nm,0.4s						
AVF	Avril sur Loir	9.97	293	ePn	Pn	01 34 17.1	-0.1
AVF				eSn	Sn	01 36 02.5	-6.1
	comp=Z,2.1nm,0.4s						
BGF	Bois d'Agland	10.27	291	ePn	Pn	01 34 20.9	-0.3
BGF				eSn	Sn	01 36 09.6	-6.2
	comp=Z,11nm,0.4s						
GIVF	Givet	10.39	312	eP	Pn	01 34 26.6	+3.8
GIVF				eSn	Sn	01 36 12.1	-6.7
	comp=Z,178nm,2.1s						
IDI	Anoyia	10.47	141	Pn	Pn	01 34 26.2	+2.1
	comp=Z,0.6nm,0.3s,baz=197,slow=5.8,SNR=7.8						
IDI				Sn	Sn	01 36 14.7	-6.4
	comp=Z,0.8nm,0.3s,baz=242,slow=20,SNR=1.4						
	comp=Z,8.9nm,0.9s						
IDI	Anoyia	10.47	141	Pn	Pn	01 34 22.5	-1.6
HYF	Humbligny	10.56	295	eP	Pn	01 34 30.8	+5.6
HYF				eSn	Sn	01 36 16.5	-6.6
MTLF	Montolieu	10.60	273	eP	Pn	01 34 31.7	+5.9
CAF	Calviac	10.63	282	ePn	Pn	01 34 26.2	-0.1
CAF				eSn	Sn	01 36 18.9	-6.1
	comp=Z,1.7nm,0.4s						
TCF	Toulx Ste Croi	10.65	289	ePn	Pn	01 34 26.4	-0.1
TCF				eSn	Sn	01 36 18.9	-6.5
	comp=Z,3.9nm,0.3s						
BAIF	Baives	10.70	311	ePn	Pn	01 34 26.4	-0.7
BAIF	Baives	10.70	311	eP	Pn	01 34 33.2	+6.1
BAIF				eSn	Sn	01 36 19.1	-7.3
	comp=Z,1.1nm,0.3s						
AKASG	Malin Array Be	10.96	46	Pn	Pn	01 34 31.8	+1.2
	comp=Z,0.2nm,0.3s,baz=236,slow=13,SNR=1.9						
	comp=Z,0.1nm,0.3s						
RJF	Les Rejaudoux	11.04	284	ePn	Pn	01 34 31.6	-0.1
RJF	Les Rejaudoux	11.04	284	eP	Pn	01 34 37.6	+5.9
RJF				eSn	Sn	01 36 28.3	-6.5
	comp=Z,1.7nm,0.4s						
ELL	Elmali	12.19	120	Pn	Pn	01 34 46.9	-0.7
MFF	Saint Martin d	12.31	289	eP	P	01 34 55.5	-5.8
MFF				eSn	Sn	01 36 59.2	-6.7
	comp=Z,1.5nm,0.4s						
FLN	La Foliniere	12.98	299	eP	Pn	01 35 03.4	+5.1
	baz=102						
GRR	Gorron	13.12	297	eP	P	01 35 05.6	-4.7
ESDC	Sonseca Array	16.02	263	Pn	P	01 35 41.5	-1.2
	baz=68,slow=14,SNR=2.0						
	comp=Z,0.4nm,0.8s						
EKA	Eskdalemuir Ar	17.34	319	P	P	01 36 00.6	+3.5
	comp=Z,0.3nm,0.3s,baz=117,slow=15,SNR=3.9						
NOA	NORSAR Array B	17.67	351	LR	LR	01 42 39.4	
	comp=Z,9.9nm,21.6s,baz=295,slow=37						
FINES	FINESS Array B	18.60	14	P	Pn	01 36 11.8	+0.7
	comp=Z,0.1nm,0.3s,baz=164,slow=9.7,SNR=1.7						
	comp=Z,0.7nm,0.4s						
FINES	FINESS Array B	18.60	14	P	P	01 36 10.9	+0.1
FIA1	FINESS Array S	18.60	14	P	P	01 36 10.2	-0.6
FIA1				IAmb	IAmb	01 36 13.7	
	comp=Z,14nm,1.4s						
ARCES	ARCESS Array B	26.27	7	P	P	01 37 29.5	+0.7
TORD	Torodi Ar. Bea	33.12	208	P	P	01 38 31.4	+1.4
	comp=Z,0.7nm,1.0s,baz=22,slow=10,SNR=2.4						
	comp=Z,0.7nm,1.0s						
BRVK	Borovoye	35.95	56	P	P	01 38 54.3	+0.2
BRVK				IAmb	IAmb	01 38 56.7	
	comp=Z,1.7nm,1.0s						
FURI	Furi	39.58	145		P	01 39 24.4	-1.2
TARG	Taragay, Kyrgy	43.96	71	P	P	01 40 00.8	-0.5
ZAA0	Zalesovo Array	44.28	52	P	P	01 40 03.5	+0.3
ZAA0				IAmb	IAmb	01 40 04.9	
	comp=Z,2.1nm,1.1s						
ZALV	Zalesovo Beam	44.28	52	P	P	01 40 04.2	+1.1
MK31	Makanchi Array	45.00	62	P	P	01 40 09.7	+0.6
MKAR	Makanchi Array	45.00	62	P	P	01 40 08.3	-0.8
	comp=Z,0.2nm,0.6s,baz=269,slow=7.2,SNR=2.3						
	comp=Z,0.2nm,0.6s						
MKAR	Makanchi Array	45.00	62	P	P	01 40 07.7	-1.4
SONM	Songino Array	59.18	52	P	P	01 41 55.6	+1.0
	comp=Z,0.2nm,0.7s,baz=274,slow=6.6,SNR=2.3						
	comp=Z,0.2nm,0.7s						
FCC	Fort Churchill	63.07	327	P	P	01 42 21.8	+1.2
FCC				IAmb	IAmb	01 42 32.2	
	comp=Z,4.1nm,1.4s						
INK	Inuvik	66.11	348	P	P	01 42 43.3	+2.9
INK				IAmb	IAmb	01 42 44.2	
	comp=Z,2.7nm,1.1s						
YKA	Yellowknife Ar	67.22	338	P	P	01 42 48.9	+1.4
	comp=Z,0.7nm,0.8s,baz=36,slow=5.9,SNR=9.8						
	comp=Z,0.7nm,0.8s						
IMAR	Indian Mountai	70.39	356	P	P	01 43 09.0	+1.7
BCAR	Beaver Creek A	72.20	350	P	P	01 43 19.2	+0.9
PPLA	Purkeypile	73.37	355	P	P	01 43 26.1	+0.7

ROM 13 01:32:44.0±0.1**,42.°788N**±0.°003×**12.°739E**±0.°004**,**
h8km,ML3.0/25**,6C-7D,Error ellipse: s-maj=0.3km**
s-min=0.2km az=100.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1215	Vallo di Nera,	0.10	81	P	Pg	01 32 46.9	+0.5
T1215				S	Sg	01 32 48.6	+0.5
MOMA	Monte Martano	0.13	277	P	Pg	01 32 47.2	+0.4
MOMA				S	Sg	01 32 49.6	+0.8
T1217	Poggiodomo (PG	0.16	118	P	Pg	01 32 48.0	+0.6
T1217				S	Sg	01 32 50.7	+1.0
ARRO	Arrone	0.21	175	P	Pg	01 32 49.1	+0.9
CESX	Cesi	0.21	214	P	Pg	01 32 48.6	+0.3
T1212	Cascia, Frazio	0.23	99	P	Pg	01 32 49.3	+0.6
T1212				S	Sg	01 32 53.5	+1.7
T1216	Preci, Frazion	0.23	63	P	Pg	01 32 49.5	+0.8
T1216				S	Sg	01 32 53.6	+1.7
CESI	CESI - Serrava	0.25	29	P	Pg	01 32 49.9	+0.8
ASSB	Assisi San Ben	0.26	347	P	Pg	01 32 50.1	+0.8
T1211	Morro Reatino	0.27	161	P	Pg	01 32 50.2	+0.8
T1211				S	Sb	01 32 55.1	-0.9
FEMA	Monte Fema	0.29	53	P	Pg	01 32 50.6	+0.8
FEMA				S	Sb	01 32 55.7	-0.9
T1218	Civita (PG)	0.30	113	P	Pg	01 32 50.4	+0.4
T1218				S	Sb	01 32 55.6	-1.4
T1219	Muccia, Frazio	0.33	36	P	Pg	01 32 51.2	+0.6
T1219				S	Sb	01 32 56.8	-1.0
T1214	Arquata del Tr	0.35	95	P	Pg	01 32 51.6	+0.7
T1214				S	Sb	01 32 57.2	-1.1
T1214				AML	AML		
	comp=N,3580µm,1.5s						
T1214				AML	AML		
	comp=N,3750µm,1.5s						
T1214				AML	AML		
	comp=E,3975µm,0.6s						
T1214				AML	AML		
	comp=N,3575µm,1.5s						
T1214				AML	AML		
	comp=N,3750µm,1.4s						
T1214				AML	AML		
	comp=N,3580µm,1.4s						
T1214				AML	AML		
	comp=E,4225µm,0.6s						
T1214				AML	AML		
	comp=E,3542µm,0.2s						
T1214				AML	AML		
	comp=E,3970µm,0.6s						
T1214				AML	AML		
	comp=E,3350µm,0.2s						
T1214				AML	AML		
	comp=N,3372µm,0.2s						
T1214				AML	AML		
	comp=N,3400µm,0.2s						
T1214				AML	AML		
	comp=N,3750µm,0.6s						
T1214				AML	AML		
	comp=N,3580µm,0.6s						
FDMO	Fiordimonte	0.36	46	P	Pg	01 32 51.7	+0.7
SEF1	Sefro	0.39	23	P	Pg	01 32 52.3	+0.6
SEF1				S	Sb	01 32 58.9	-0.5
SEF1				AML	AML		
	comp=E,7895µm,1.3s						
SEF1				AML	AML		
	comp=N,4795µm,1.0s						
SEF1				AML	AML		
	comp=E,7895µm,0.7s						
SEF1				AML	AML		
	comp=N,4568µm,0.2s						
SEF1				AML	AML		
	comp=N,4795µm,1.0s						
T1220	Camerino, Fraz	0.41	38	P	Pg	01 32 52.9	+0.8
T1220				AML	AML		
	comp=E,66200µm,1.6s						
T1220				AML	AML		
	comp=N,17200µm,0.4s						
T1220				AML	AML		
	comp=E,26400µm,0.3s						
T1220				AML	AML		
	comp=N,17150µm,0.4s						
T1256	Bolognola (MC)	0.42	58	⇑P	Pg	01 32 52.9	+0.6
T1256				S	Sb	01 32 59.6	-0.8
T1256				AML	AML		
	comp=N,4460µm,1.0s						
T1256				AML	AML		
	comp=E,3845µm,1.1s						
T1256				AML	AML		
	comp=N,4165µm,1.0s						
T1256				AML	AML		
	comp=E,3690µm,1.0s						
T1256				AML	AML		
	comp=E,3700µm,1.0s						
T1256				AML	AML		
	comp=E,3850µm,1.1s						
T1256				AML	AML		
	comp=E,3850µm,0.9s						
T1256				AML	AML		
	comp=N,4455µm,1.0s						
T1256				AML	AML		
	comp=N,4170µm,1.0s						
T1256				AML	AML		
	comp=E,3700µm,1.0s						
T1256				AML	AML		
	comp=E,3557µm,0.7s						
T1256				AML	AML		
	comp=E,3647µm,0.7s						
T1256				AML	AML		
	comp=N,3654µm,0.5s						
T1256				AML	AML		
	comp=N,3958µm,0.5s						
T1222	Castel Sant'An	0.44	150	P	Pg	01 32 53.2	+0.5
T1222				S	Sb	01 33 00.7	-0.2
T1222				AML	AML		
	comp=N,1580µm,0.4s						
T1222				AML	AML		
	comp=E,2780µm,0.3s						
T1222				AML	AML		
	comp=N,1480µm,0.4s						
T1222				AML	AML		
	comp=N,1575µm,0.4s						
T1222				AML	AML		
	comp=E,2820µm,0.3s						
T1222				AML	AML		
	comp=E,2780µm,0.3s						
T1222				AML	AML		
	comp=E,2819µm,0.3s						
T1222				AML	AML		
	comp=N,1580µm,0.4s						
MMO1	Montemonaco	0.45	75	P	Pg	01 32 53.1	+0.4
MMO1				S	Sb	01 33 00.4	-0.7
SMA1	SAN MARTINO	0.47	109	P	Pg	01 32 53.7	+0.6
SMA1				S	Sb	01 33 01.3	-0.4
SMA1				AML	AML		
	comp=E,3280µm,0.7s						
SMA1				AML	AML		
	comp=N,3095µm,0.4s						
SMA1				AML	AML		
	comp=N,3095µm,0.4s						
SMA1				AML	AML		
	comp=E,3280µm,1.3s						
SMA1				AML	AML		
	comp=E,2775µm,0.4s						
SNTG	Esanatoglia	0.49	17	P	Pg	01 32 54.0	+0.4
SNTG				AML	AML		
	comp=N,1255µm,1.0s						
SNTG				AML	AML		
	comp=N,1295µm,1.0s						
SNTG				AML	AML		
	comp=E,1345µm,1.0s						
SNTG				AML	AML		
	comp=E,1205µm,1.0s						
SNTG				AML	AML		
	comp=E,1205µm,1.0s						
SNTG				AML	AML		
	comp=N,1255µm,1.0s						
SNTG				AML	AML		
	comp=N,1255µm,0.3s						
SNTG				AML	AML		
	comp=N,1251µm,0.3s						
SNTG				AML	AML		
	comp=E,1005µm,0.3s						
SNTG				AML	AML		
	comp=E,971µm,0.3s						
SNTG				AML	AML		
	comp=E,1345µm,1.0s						
ATTE	AVT- Monte Tez	0.50	326	S	Sb	01 33 02.3	-0.3
ATTE				AML	AML		
	comp=E,1160µm,1.4s						
ATTE				AML	AML		
	comp=N,1455µm,1.2s						
ATTE				AML	AML		
	comp=N,1455µm,0.8s						
ATTE				AML	AML		
	comp=E,1160µm,0.6s						
MURB	Monte Urbino	0.50	342	P	Pb	01 32 54.5	-0.6
MURB				S	Sb	01 33 02.7	0.0
MURB				AML	AML		
	comp=E,6760µm,0.3s						
MURB				AML	AML		
	comp=E,6690µm,0.3s						
MURB				AML	AML		
	comp=N,7950µm,0.3s						
MURB				AML	AML		
	comp=N,7145µm,0.3s						
MURB				AML	AML		
	comp=N,7142µm,0.3s						
MURB				AML	AML		
	comp=N,7950µm,1.7s						
MURB				AML	AML		
	comp=N,7953µm,0.3s						
MURB				AML	AML		
	comp=E,6760µm,0.3s						
MURB				AML	AML		
	comp=E,6692µm,0.3s						
T1241	Roccafluvione,	0.51	82	⇑P	Pg	01 32 54.4	+0.4
T1241				S	Sb	01 33 02.6	-0.4
T1241				AML	AML		
	comp=N,1775µm,0.3s						
T1241				AML	AML		
	comp=E,2530µm,0.2s						
T1241				AML	AML		
	comp=N,1780µm,0.3s						
T1241				AML	AML		
	comp=N,1777µm,0.3s						
T1241				AML	AML		
	comp=N,1775µm,0.3s						
T1241				AML	AML		
	comp=E,2644µm,0.2s						
T1241				AML	AML		
	comp=E,2528µm,0.2s						
T1241				AML	AML		
	comp=E,2645µm,0.2s						
T1241				AML	AML		
	comp=N,1628µm,0.3s						
T1241				AML	AML		
	comp=N,1625µm,0.3s						
GUMA	Gualdo di Mace	0.52	58	P	Pb	01 32 54.9	-0.5
GUMA				AML	AML		
	comp=N,9450µm,0.4s						
GUMA				AML	AML		
	comp=E,10105µm,0.5s						
GUMA				AML	AML		
	comp=N,9450µm,1.6s						
GUMA				AML	AML		

	comp=N,9095µm,0.4s						
GUMA				AML	AML		
	comp=N,9109µm,0.4s						
GUMA				AML	AML		
	comp=E,9200µm,0.4s						
GUMA				AML	AML		
	comp=E,9200µm,0.4s						
GUMA				AML	AML		
	comp=N,9472µm,0.4s						
GUMA				AML	AML		
	comp=E,10124µm,0.5s						
T1247	**Pizzolo (AQ)**	**0.54**	**130**	P	Pg	01 32 55.1	+0.6
T1247				AML	AML		
	comp=N,2400µm,1.0s						
T1247				AML	AML		
	comp=N,2005µm,0.3s						
T1247				AML	AML		
	comp=E,1942µm,0.3s						
T1247				AML	AML		
	comp=E,2105µm,0.3s						
FIAM	**Fiamignano**	**0.59**	**152**	P	Pb	01 32 56.1	-0.5
FIAM				S	Sb	01 33 05.2	-0.1
FIAM				AML	AML		
	comp=E,928µm,0.5s						
FIAM				AML	AML		
	comp=N,764µm,0.8s						
FIAM				AML	AML		
	comp=N,764µm,0.8s						
FIAM				AML	AML		
	comp=N,695µm,0.4s						
FIAM				AML	AML		
	comp=E,928µm,0.5s						
FIAM				AML	AML		
	comp=E,928µm,0.5s						
EL6	**Elcito**	**0.60**	**26**	⇓P	Pg	01 32 56.1	+0.4
EL6				AML	AML		
	comp=N,2835µm,0.5s						
EL6				AML	AML		
	comp=E,3925µm,1.1s						
EL6				AML	AML		
	comp=N,2840µm,0.5s						
EL6				AML	AML		
	comp=N,2692µm,0.2s						
EL6				AML	AML		
	comp=E,3725µm,0.3s						
AQU	**L'Aquila**	**0.65**	**131**	P	Pb	01 32 57.6	-0.1
AQU				AML	AML		
	comp=E,1060µm,0.8s						
AQU				AML	AML		
	comp=N,818µm,1.0s						
AQU				AML	AML		
	comp=N,812µm,1.0s						
AQU				AML	AML		
	comp=N,819µm,1.0s						
AQU				AML	AML		
	comp=N,819µm,1.0s						
AQU				AML	AML		
	comp=N,812µm,1.0s						
AQU				AML	AML		
	comp=E,1059µm,0.8s						
AQU				AML	AML		
	comp=N,776µm,0.3s						
AQU				AML	AML		
	comp=N,740µm,0.3s						
AQU				AML	AML		
	comp=E,1000µm,0.9s						
AQU				AML	AML		
	comp=E,1061µm,0.8s						
AQU				AML	AML		
	comp=E,1002µm,0.9s						
TERO	**Teramo**	**0.66**	**104**	⇑P	Pg	01 32 57.2	+0.4
TERO				AML	AML		
	comp=N,1120µm,0.4s						
TERO				AML	AML		
	comp=N,1150µm,0.4s						
TERO				AML	AML		
	comp=N,1150µm,1.6s						
TERO				AML	AML		
	comp=E,872µm,0.3s						
TERO				AML	AML		
	comp=E,844µm,0.3s						
TERO				AML	AML		
	comp=E,844µm,0.3s						
TERO				AML	AML		
	comp=E,872µm,0.3s						
TERO				AML	AML		
	comp=N,1150µm,0.4s						
TERO				AML	AML		
	comp=N,1119µm,0.4s						
TERO				AML	AML		
	comp=N,1120µm,1.6s						
CING	**Cingoli**	**0.68**	**29**	⇓P	Pg	01 32 57.5	+0.5
CING				AML	AML		
	comp=N,1023µm,0.3s						
CING				AML	AML		
	comp=E,1175µm,0.4s						
CING				AML	AML		
	comp=N,1024µm,0.3s						
CING				AML	AML		
	comp=E,974µm,0.2s						
GIGS	**Gran Sasso**	**0.70**	**119**	⇓P	Pg	01 32 57.3	-0.3
GIGS				AML	AML		
	comp=E,236µm,1.6s						
GIGS				AML	AML		
	comp=E,236µm,0.4s						
GIGS				AML	AML		
	comp=E,188µm,0.5s						
GIGS				AML	AML		
	comp=N,179µm,0.5s						
GIGS				AML	AML		
	comp=N,180µm,0.5s						
OFFI	**Offida**	**0.71**	**78**	⇑P	Pb	01 32 58.8	+0.1
OFFI				AML	AML		
	comp=E,4800µm,0.4s						
OFFI				AML	AML		
	comp=N,5200µm,0.7s						
OFFI				AML	AML		
	comp=N,5202µm,0.7s						
OFFI				AML	AML		
	comp=E,4798µm,0.4s						
ARVD	**Arcevia**	**0.72**	**12**	⇑P	Pg	01 32 58.4	+0.3
ARVD				S	Sb	01 33 10.1	+1.1
ARVD				AML	AML		
	comp=N,722µm,0.6s						
ARVD				AML	AML		
	comp=E,693µm,0.6s						
ARVD				AML	AML		
	comp=E,693µm,0.6s						
ARVD				AML	AML		
	comp=N,723µm,0.6s						
PIEI	**Pieia**	**0.76**	**349**	⇓P	Pg	01 32 59.1	+0.4
PIEI				AML	AML		
	comp=N,908µm,0.3s						
PIEI				AML	AML		
	comp=E,1180µm,0.3s						
PIEI				AML	AML		
	comp=N,906µm,0.3s						
PIEI				AML	AML		
	comp=E,1182µm,0.3s						
MTCE	**Montecelio**	**0.76**	**180**	⇓P	Pg	01 32 59.1	+0.4
MTCE				AML	AML		
	comp=E,666µm,1.3s						
MTCE				AML	AML		
	comp=N,523µm,0.4s						
MTCE				AML	AML		
	comp=E,666µm,0.7s						
MTCE				AML	AML		
	comp=E,523µm,0.7s						
MTCE				AML	AML		
	comp=N,523µm,0.4s						
BADI	**Badiali**	**0.81**	**334**	S	Sn	01 33 14.9	+0.9
CERT	**Cerreto**	**0.86**	**168**	⇓P	Pg	01 33 00.2	-0.3
CERT				AML	AML		
	comp=E,748µm,0.9s						
CERT				AML	AML		
	comp=N,446µm,0.4s						
CERT				AML	AML		
	comp=E,749µm,0.9s						
CERT				AML	AML		
	comp=N,446µm,0.4s						
CERT				AML	AML		
	comp=E,749µm,1.1s						
CERT				AML	AML		
	comp=E,706µm,0.4s						
PP3	**Marolino**	**0.87**	**47**	⇓P	Pn	01 33 02.2	-0.4
PP3				AML	AML		
	comp=E,2755µm,0.7s						
PP3				AML	AML		
	comp=E,2780µm,0.7s						
PP3				AML	AML		
	comp=N,4930µm,0.4s						
PP3				AML	AML		
	comp=E,3060µm,0.6s						
PP3				AML	AML		
	comp=N,4636µm,0.4s						
PP3				AML	AML		
	comp=N,4635µm,0.4s						
PP3				AML	AML		
	comp=E,3149µm,0.7s						
PP3				AML	AML		
	comp=E,3150µm,0.7s						
VCEL	**Villa Celiera**	**0.90**	**115**	⇑P	Pb	01 33 01.7	-0.3
VCEL				AML	AML		
	comp=E,1240µm,0.5s						
VCEL				AML	AML		
	comp=N,979µm,0.8s						
VCEL				AML	AML		
	comp=N,978µm,0.8s						
VCEL				AML	AML		
	comp=E,1240µm,1.5s						
VCEL				AML	AML		
	comp=E,1244µm,0.5s						
VCEL				AML	AML		
	comp=N,930µm,0.4s						
FSSB	**Fossombrone**	**0.91**	**2**	S	Sn	01 33 16.9	+0.5
FSSB				AML	AML		
	comp=E,3080µm,0.5s						
FSSB				AML	AML		
	comp=N,1795µm,0.4s						
FSSB				AML	AML		
	comp=N,1795µm,0.4s						
FSSB				AML	AML		
	comp=E,3080µm,1.5s						
FSSB				AML	AML		
	comp=E,3080µm,0.5s						

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*IDC **13** 01:52:30.4±2.1,22°.78S×169°.83E,h0^{km},mb3.9/3,*
mbtmp3.8/4,ML3.1/1,Error ellipse: s-maj=75.9km
s-min=29.1km az=172.0

ISC 13 01:52:33.4±1.5,**23°.1S**±0°.4×**169°.9E**±0°.1,**h25**^{km},**n7**,
σ**0^{s}.71**/8,**mb4.0**/3,**Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.29**	**287**	Pn	**Pn**	**01 53 23.5**	**+0.1**
	2.2nm,0.3s,baz=102,slow=19,SNR=27						
DZM				Sn	**Sn**	**01 54 01.7**	**-0.2**
	7.1nm,0.3s,baz=97,slow=20,SNR=4.7						
	8.4nm,0.3s						
ASAR	**Alice Springs**	**32.95**	**262**	P	**P**	**01 59 06.5**	**+0.2**
	0.5nm,0.4s,baz=87,slow=9.5,SNR=8.8						
	0.5nm,0.4s						
SONM	**Songino Array**	**90.59**	**323**	P	**P**	**02 05 34.1**	**+0.6**
	0.6nm,0.7s,baz=136,slow=6.5,SNR=3.7						
	0.6nm,0.7s						
NVAR	**Mina Array Bea**	**90.90**	**48**	P	**P**	**02 05 35.5**	**+0.2**
	0.6nm,0.8s,baz=222,slow=8.7,SNR=5.2						
	0.6nm,0.8s						
JAVC	**Velka Javorina**	**146.13**	**326**	*e*PKP	**PKiKP**	**02 12 13.2**	**-1.3**
VRAC	**Vranov**	**146.38**	**328**	*e*PKP	**PKPbc**	**02 12 12.1**	**+0.1**
KRUC	**Moravsky**	**146.64**	**328**	*e*PKP	**PKPab**	**02 12 13.4**	**-0.4**

ROM 13 02:00:23.8±0.1,**43°.024N**±0°.003×**13°.008E**±0°.004,
h6^{km},**ML1.3**/16,**1C,Error ellipse: s-maj=0.3km**
s-min=0.2km az=205.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1219	**Muccia, Frazio**	**0.03**	**359**	P	Pg	02 00 25.0	-0.1
T1219				S	Sg	02 00 25.7	-0.5
T1219				AML	AML		
	comp=E,4217µm,0.1s						
T1219				AML	AML		
	comp=N,3413µm,0.1s						
T1219				AML	AML		
	comp=N,3556µm,0.1s						
T1219				AML	AML		
	comp=E,4106µm,0.1s						
FDMO	**Fiordimonte**	**0.06**	**78**	⇑P	Pg	02 00 25.6	+0.1
FDMO				S	Sg	02 00 26.6	+0.1
FDMO				AML	AML		
	comp=E,1187µm,0.2s						
FDMO				AML	AML		
	comp=N,1452µm,0.2s						
CESI	**CESI - Serrava**	**0.08**	**256**	P	Pg	02 00 26.3	+0.6
CESI				S	Sg	02 00 28.1	+1.0
CESI				AML	AML		
	comp=N,372µm,1.5s						
CESI				AML	AML		
	comp=E,386µm,0.8s						
CESI				AML	AML		
	comp=E,236µm,0.2s						
CESI				AML	AML		
	comp=N,362µm,0.3s						
T1220	**Camerino, Fraz**	**0.10**	**34**	P	Pg	02 00 26.5	+0.4
T1220				S	Sg	02 00 28.4	+0.7
T1220				AML	AML		
	comp=E,1580µm,0.2s						
T1220				AML	AML		
	comp=N,1545µm,0.3s						
T1220				AML	AML		
	comp=E,1580µm,0.2s						
T1220				AML	AML		
	comp=N,1530µm,0.3s						
T1220				AML	AML		
	comp=N,1545µm,0.3s						
T1216	**Preci, Frazion**	**0.13**	**177**	P	Pg	02 00 27.4	+0.8
T1216				S	Sg	02 00 29.9	+1.4
T1216				AML	AML		
	comp=E,329µm,0.3s						
T1216				AML	AML		
	comp=N,378µm,1.3s						
T1216				AML	AML		
	comp=E,329µm,0.3s						
T1216				AML	AML		
	comp=N,342µm,0.3s						
T1256	**Bolognola (MC)**	**0.16**	**96**	P	Pg	02 00 27.7	+0.6
T1256				S	Sg	02 00 30.6	+1.2
MC2	**Monte Cornacci**	**0.17**	**130**	P	Pg	02 00 28.3	+0.9
MC2				S	Sg	02 00 31.3	+1.6
SNTG	**Esanatoglia**	**0.24**	**348**	AML	AML		
	comp=N,75µm,1.4s						
SNTG				AML	AML		
	comp=E,69µm,0.2s						
SNTG				AML	AML		
	comp=N,75µm,0.6s						
GUMA	**Gualdo di Mace**	**0.24**	**81**	P	Pg	02 00 29.5	+0.9
GUMA				S	Sg	02 00 34.0	+2.2
GUMA				AML	AML		
	comp=E,662µm,0.3s						
GUMA				AML	AML		
	comp=N,676µm,0.2s						
GUMA				AML	AML		
	comp=E,896µm,0.2s						
GUMA				AML	AML		
	comp=N,655µm,0.2s						
GUMA				AML	AML		
	comp=N,655µm,0.2s						
GUMA				AML	AML		
	comp=N,676µm,0.2s						
GUMA				AML	AML		
	comp=E,661µm,0.3s						
GUMA				AML	AML		
	comp=E,894µm,0.2s						
ASSB	**Assisi San Ben**	**0.26**	**274**	P	Pg	02 00 29.5	+0.7
ASSB				S	Sb	02 00 34.0	-1.6
ASSB				AML	AML		
	comp=E,148µm,1.0s						
ASSB				AML	AML		
	comp=N,132µm,0.5s						
ASSB				AML	AML		
	comp=N,115µm,0.2s						
ASSB				AML	AML		
	comp=E,99µm,0.3s						
MMO1	**Montemonaco**	**0.27**	**118**	P	Pg	02 00 29.6	+0.6
MMO1				S	Sg	02 00 34.1	+1.5
T1214	**Arquata del Tr**	**0.30**	**151**	P	Pg	02 00 30.5	+0.8
T1214				S	Sb	02 00 35.5	-1.5
EL6	**Elcito**	**0.31**	**13**	P	Pb	02 00 31.2	-0.7
EL6				S	Sb	02 00 35.7	-1.6
EL6				AML	AML		
	comp=E,226µm,0.2s						
EL6				AML	AML		
	comp=N,195µm,0.2s						
EL6				AML	AML		
	comp=N,195µm,0.2s						
EL6				AML	AML		
	comp=E,226µm,0.2s						
ATCC	**AVT- Casa Cast**	**0.31**	**301**	P	Pg	02 00 30.7	+0.7
ATCC				S	Sb	02 00 36.3	-1.0
ATCC				AML	AML		
	comp=E,88µm,0.2s						
ATCC				AML	AML		
	comp=E,88µm,0.2s						
ATCC				AML	AML		
	comp=N,72µm,0.3s						
ATCC				AML	AML		
	comp=E,88µm,0.2s						
ATCC				AML	AML		
	comp=N,72µm,0.3s						
FOSV	**Fossato di Vic**	**0.33**	**326**	P	Pg	02 00 30.9	+0.7
FOSV				S	Sb	02 00 36.1	-1.5
FOSV				AML	AML		
	comp=E,55µm,0.7s						
FOSV				AML	AML		
	comp=N,97µm,0.3s						
FOSV				AML	AML		
	comp=N,97µm,0.3s						
FOSV				AML	AML		
	comp=E,36µm,0.1s						
T1241	**Roccafluvione,**	**0.35**	**118**	P	Pg	02 00 31.3	+0.6
T1241				S	Sb	02 00 37.2	-1.1
T1241				AML	AML		
	comp=E,54µm,1.3s						
T1241				AML	AML		
	comp=N,74µm,1.5s						
T1241				AML	AML		
	comp=N,47µm,0.4s						
T1241				AML	AML		
	comp=E,49µm,0.2s						
T1218	**Civita (PG)**	**0.36**	**167**	P	Pg	02 00 31.5	+0.6
T1218				S	Sb	02 00 37.5	-1.2
MOMA	**Monte Martano**	**0.39**	**236**	P	Pg	02 00 31.2	-0.2
MOMA				S	Sb	02 00 38.5	-0.9
MOMA				AML	AML		
	comp=E,58µm,0.5s						
MOMA				AML	AML		
	comp=N,55µm,1.5s						
MOMA				AML	AML		
	comp=E,57µm,0.2s						
MOMA				AML	AML		
	comp=N,52µm,0.3s						
MOMA				AML	AML		
	comp=E,84µm,0.3s						
MURB	**Monte Urbino**	**0.43**	**304**	P	Pg	02 00 32.7	+0.6
MURB				S	Sb	02 00 40.1	-0.4
MURB				AML	AML		
	comp=E,113µm,0.3s						
MURB				AML	AML		
	comp=N,79µm,1.6s						
MURB				AML	AML		
	comp=E,113µm,0.3s						
MURB				AML	AML		
	comp=N,71µm,0.3s						
ARVD	**Arcevia**	**0.48**	**354**	P	Pb	02 00 34.0	-0.6
ARVD				S	Sb	02 00 41.6	-0.3
ARVD				AML	AML		
	comp=E,39µm,0.9s						
ARVD				AML	AML		
	comp=N,33µm,0.1s						
ARVD				AML	AML		
	comp=N,33µm,0.1s						
ARVD				AML	AML		
	comp=E,38µm,0.2s						
T1211	**Morro Reatino**	**0.50**	**193**	P	Pb	02 00 34.5	-0.6
T1211				S	Sb	02 00 42.2	-0.4
T1211				AML	AML		
	comp=E,44µm,0.3s						
T1211				AML	AML		
	comp=N,53µm,0.6s						
T1211				AML	AML		
	comp=E,44µm,0.3s						
T1211				AML	AML		
	comp=N,52µm,0.5s						
CESX	**Cesi**	**0.52**	**217**	P	Pb	02 00 35.1	-0.2
CESX				S	Sb	02 00 42.6	-0.5
CESX				AML	AML		
	comp=E,55µm,0.3s						
CESX				AML	AML		
	comp=N,58µm,0.2s						
CESX				AML	AML		
	comp=E,55µm,0.3s						
CESX				AML	AML		
	comp=N,58µm,0.2s						
FRON	**Frontone**	**0.54**	**337**	P	Pb	02 00 35.0	-0.6
FRON				S	Sb	02 00 43.4	-0.2
FRON				AML	AML		
	comp=N,29µm,0.2s						
FRON				AML	AML		
	comp=E,25µm,0.3s						
PIEI	**Pieia**	**0.62**	**326**	P	Pg	02 00 36.4	+0.7
PIEI				S	Sb	02 00 46.0	+0.1
PIEI				AML	AML		
	comp=E,32µm,0.1s						
PIEI				AML	AML		
	comp=N,19µm,1.4s						
PIEI				AML	AML		
	comp=E,32µm,0.1s						
PIEI				AML	AML		
	comp=N,17µm,0.2s						

ROM 13 02:01:07.7±0.0,**42°.956N**±0°.002×**13°.116E**±0°.003,
h10^{km},**ML1.3**/14,**7C-3D,Error ellipse: s-maj=0.2km**
s-min=0.2km az=51.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FEMA	**Monte Fema**	**0.05**	**277**	P	Pg	02 01 10.2	+0.3
FEMA				S	Sg	02 01 11.6	+0.1
MC2	**Monte Cornacci**	**0.07**	**128**	⇓P	Pg	02 01 10.5	+0.3
MC2				S	Sg	02 01 12.2	+0.3
FDMO	**Fiordimonte**	**0.08**	**346**	P	Pg	02 01 10.5	+0.3
FDMO				S	Sg	02 01 12.2	+0.3
T1256	**Bolognola (MC)**	**0.10**	**58**	⇑P	Pg	02 01 10.8	+0.4
T1256				S	Sg	02 01 12.8	+0.5
T1256				AML	AML		
	comp=E,263µm,0.3s						
T1256				AML	AML		
	comp=E,240µm,0.3s						
T1256				AML	AML		
	comp=N,223µm,0.2s						
T1256				AML	AML		
	comp=N,184µm,0.2s						
T1216	**Preci, Frazion**	**0.10**	**228**	⇑P	Pg	02 01 10.8	+0.5
T1216				S	Sg	02 01 12.7	+0.6
T1216				AML	AML		
	comp=E,404µm,0.3s						
T1216				AML	AML		
	comp=N,218µm,0.2s						
T1216				AML	AML		
	comp=E,404µm,0.4s						
T1216				AML	AML		
	comp=N,218µm,0.1s						
T1216				AML	AML		
	comp=E,359µm,0.2s						
T1216				AML	AML		
	comp=N,218µm,0.1s						
T1219	**Muccia, Frazio**	**0.13**	**322**	⇓P	Pg	02 01 11.3	+0.5
T1219				S	Sg	02 01 13.5	+0.6
T1219				AML	AML		
	comp=E,336µm,0.7s						
T1219				AML	AML		
	comp=N,436µm,0.2s						
T1219				AML	AML		
	comp=E,308µm,0.3s						
T1219				AML	AML		
	comp=N,421µm,0.2s						
T1219				AML	AML		
	comp=N,421µm,0.2s						
T1219				AML	AML		
	comp=E,274µm,0.2s						
T1219				AML	AML		
	comp=E,259µm,0.2s						
T1219				AML	AML		
	comp=N,436µm,0.2s						
T1220	**Camerino, Fraz**	**0.16**	**353**	⇓P	Pg	02 01 11.7	+0.5
T1220				S	Sg	02 01 14.6	+1.0
T1220				AML	AML		

	comp=E,30705µm,1.5s						
T1220				AML	AML		
	comp=N,454µm,0.2s						
T1220				AML	AML		
	comp=E,30760µm,1.5s						
T1220				AML	AML		
	comp=E,340µm,0.5s						
T1220				AML	AML		
	comp=N,451µm,0.2s						
T1220				AML	AML		
	comp=E,19264µm,0.9s						
T1220				AML	AML		
	comp=N,455µm,0.2s						
T1220				AML	AML		
	comp=E,340µm,0.5s						
T1220				AML	AML		
	comp=N,451µm,0.2s						
CESI	**CESI - Serrava**	0.16	288	P	Pg	02 01 11.9	+0.6
CESI				S	Sg	02 01 14.8	+1.0
MMO1	**Montemonaco**	0.17	110	⇑P	Pg	02 01 11.9	+0.6
MMO1				S	Sg	02 01 14.8	+0.9
T1214	**Arquata del Tr**	0.21	161	S	Sg	02 01 16.6	+1.5
T1214				AML	AML		
	comp=N,89µm,0.5s						
T1214				AML	AML		
	comp=N,43µm,0.2s						
T1214				AML	AML		
	comp=E,44µm,0.2s						
T1212	**Cascia, Frazio**	0.21	194	⇑P	Pg	02 01 12.8	+0.7
T1212				S	Sg	02 01 16.4	+1.2
T1212				AML	AML		
	comp=E,128µm,0.8s						
T1212				AML	AML		
	comp=N,103µm,0.2s						
T1212				AML	AML		
	comp=N,103µm,0.2s						
T1212				AML	AML		
	comp=N,105µm,0.2s						
T1212				AML	AML		
	comp=E,123µm,0.2s						
T1215	**Vallo di Nera,**	0.24	230	⇑P	Pg	02 01 13.3	+0.7
T1215				S	Sg	02 01 17.1	+1.2
T1215				AML	AML		
	comp=N,95µm,0.1s						
T1215				AML	AML		
	comp=E,45µm,0.1s						
T1215				AML	AML		
	comp=N,92µm,0.1s						
T1241	**Roccafluvione,**	0.25	113	P	Pg	02 01 13.5	+0.6
T1241				S	Sb	02 01 17.7	-1.2
T1241				AML	AML		
	comp=E,41µm,0.1s						
T1241				AML	AML		
	comp=E,124µm,0.7s						
T1241				AML	AML		
	comp=N,58µm,0.1s						
T1241				AML	AML		
	comp=N,180µm,0.9s						
T1217	**Poggiodomo (PG**	0.28	209	⇑P	Pg	02 01 14.0	+0.6
T1217				S	Sb	02 01 18.6	-1.0
T1217				AML	AML		
	comp=E,101µm,0.2s						
T1217				AML	AML		
	comp=N,149µm,0.2s						
T1217				AML	AML		
	comp=E,72µm,0.2s						
T1218	**Civita (PG)**	0.29	180	P	Pg	02 01 14.2	+0.6
T1218				S	Sb	02 01 18.9	-1.0
T1218				AML	AML		
	comp=N,65µm,0.3s						
T1218				AML	AML		
	comp=E,51µm,0.2s						
T1218				AML	AML		
	comp=N,90µm,0.6s						
SNTG	**Esanatoglia**	0.33	337	P	Pg	02 01 14.6	+0.3
SNTG				S	Sg	02 01 19.8	+1.2
SNTG				AML	AML		
	comp=N,15µm,0.2s						
SNTG				AML	AML		
	comp=E,13µm,0.2s						
ATCC	**AVT- Casa Cast**	0.42	303	P	Pg	02 01 16.5	+0.6
ATCC				S	Sb	02 01 23.2	-0.4
ATCC				AML	AML		
	comp=N,26µm,0.4s						
ATCC				AML	AML		
	comp=E,47µm,0.2s						
T1211	**Morro Reatino**	0.46	205	P	Pb	02 01 17.4	-0.6
T1211				AML	AML		
	comp=N,33µm,0.3s						
SSFR	**Montelago di S**	0.54	333	⇑P	Pb	02 01 19.4	+0.1
SSFR				AML	AML		
	comp=E,25µm,0.8s						
SSFR				AML	AML		
	comp=N,27µm,0.7s						
SSFR				AML	AML		
	comp=E,24µm,0.3s						
SSFR				AML	AML		
	comp=N,26µm,0.2s						
ARVD	**Arcevia**	0.56	347	P	Pg	02 01 18.9	+0.3

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*MOS **13** 02:07:17.9±1.0, 36.°26N×70.°90E, h104km, mb4.5/27, Error ellipse: s-maj=6.0km s-min=3.6km az=79.3*

*NEIC **13** 02:07:19.3±1.7, 36.°22N±0.°04×70.°69E±0.°07, h115km±5km, mb4.5/71, Error ellipse: s-maj=8.4km s-min=5.8km az=121.0*

*IDC **13** 02:07:20.0±2.2, 36.°12N×70.°79E, h116km±19km, mb4.0/25, mbtmp4.4/28, MS3.1/1, Error ellipse: s-maj=12.8km s-min=9.4km az=14.0*

*BJI **13** 02:07:21.0±0.0, 36.°50N×70.°90E, h112km, mb4.6/33, mB4.8/15*

*NNC **13** 02:07:21.9±4.9, 36.°57N×70.°67E, h139km±78km, mb4.2, mpv4.8, Error ellipse: s-maj=56.8km s-min=27.9km az=151.0*

ISC 13 02:07:18.2±0.3**, 36.°19N**±0.°04×**70.°81E**±0.°03**, h100**km**, n425, σ1.°70**/456**, mb4.4**/77**, 25C-8D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	**Kabul**	2.18	222	Pn	Pn	02 07 54.7	+1.3
KBL				Sn	Sn	02 08 21.5	+1.2
KBL	**Kabul**	2.18	222	PN	Pn	02 07 54.7	+1.3
KBL						02 08 21.5	
CEP	**Cherat**	2.52	159	P	Pn	02 08 01.2	+3.4
CEP				S	Sn	02 08 32.0	+3.9
CHGR	**Chuyangaron**	2.79	332	Pn	Pn	02 08 01.3	0.0
CHGR	**Chuyangaron**	2.79	332	PN	Pn	02 08 01.3	0.0
GAR	**Garm**	2.84	352	Pn	Pn	02 08 02.9	+1.0
CHCP	**Chirah Chowk**	3.23	141	⇓P	Pn	02 08 09.4	+2.3
NIL	**Nilore**	3.23	141	Pn	Pn	02 08 08.8	+1.7
NIL	**Nilore**	3.23	141	PN	Pn	02 08 08.8	+1.7
THW	**Thamme Wali**	3.47	167	P	Pn	02 08 11.9	+1.6
SARP	**Sargodha**	4.53	159	P	Pn	02 08 24.6	+0.1
JMU	**Jammu**	4.84	134	eP	Pn	02 08 29.9	+1.1
JMU				eS	Sn	02 09 23.5	0.0
JMU				eS	Sn	02 09 24.7	+1.2
TAS	**Tashkent**	5.26	347	Pn	Pn	02 08 34.0	-0.5
TAS	**Tashkent**	5.26	347	PN	Pn	02 08 34.0	-0.5
KSH	**Kashi**	5.27	49	P	Pn	02 08 32.4	-2.3
KSH				S	Sn	02 09 26.8	-7.4
THN	**Thein Dam**	5.52	131	eP	Pn	02 08 39.2	+1.2
THN				eS	Sn	02 09 40.4	+0.2
THN				eS	Sn	02 09 40.9	+0.6
IUG	**Iuzhnay**	5.98	354	i P	Pn	02 08 44.9	+0.6
	baz=353						
IUG	**Iuzhnay**	5.98	354	i PN	Pn	02 08 44.9	+0.6
AML	**Almayashu**	6.35	20	P	Pn	02 08 50.3	+0.8
	SNR=307						
AML	**Almayashu**	6.35	20	⇑P	Pn	02 08 50.6	+1.1
	3.1nm,0.2s						
AML				⇑S	Sn	02 09 58.5	-2.2
	136nm,0.7s						
AML	**Almayashu**	6.35	20	PN	Pn	02 08 50.6	+1.1
BHK	**Bhakra**	6.67	134	eP	Pn	02 08 54.3	+0.8
BHK				eS	Sn	02 10 06.9	-1.1
BHK				eS	Sn	02 10 07.3	-0.8
UCH	**Uchtor**	6.68	24	P	Pn	02 08 54.9	+0.7
	SNR=122						
DZA	**Taraz**	6.71	3	eP	Pn	02 08 54.4	+0.2
	baz=2.2						
DZA	**Taraz**	6.71	3	ePN	Pn	02 08 54.3	+0.2
EKS2	**Erkin-Say**	6.86	19	P	Pn	02 08 57.2	+0.9
	SNR=98						
KK31	**Karatay Array**	6.91	358	Pn	Pn	02 08 56.6	-0.2
KK31	**Karatay Array**	6.91	358	⇑P	Pn	02 08 57.1	+0.2
	26nm,0.3s,baz=184,slow=12,SNR=1093						
KK31				⇑S	Sn	02 10 09.4	-4.5
	46nm,0.5s,baz=187,slow=24,SNR=3.6						
KK31	**Karatay Array**	6.91	358	PN	Pn	02 08 56.6	-0.2
KKAR	**Karatay Array**	6.91	358	Pn	Pn	02 08 56.4	-0.5
KKAR	**Karatay Array**	6.91	358	Pn	Pn	02 08 56.5	-0.3
KKAR	**Karatay Array**	6.91	358	PN	Pn	02 08 56.4	-0.5
AAK	**Ala-Archa**	7.05	23	P	Pn	02 08 59.8	+1.0
	SNR=122						
AAK	**Ala-Archa**	7.05	23	P	Pn	02 08 59.8	+1.0
	52nm,0.3s,baz=172,slow=6.3,SNR=223						
AAK				S	Sn	02 10 18.9	+1.5
	178nm,0.8s,baz=342,slow=19,SNR=13						
AAK				LR	LR	02 11 43.2	
	comp=Z,136nm,18.3s,baz=200,slow=37						
AAK	**Ala-Archa**	7.05	23	Pn	Pn	02 08 59.5	+0.7
AAK	**Ala-Archa**	7.05	23	cePN	Pn	02 08 59.6	+0.8
AAK				pmax	pmax		
	comp=Z,62nm,0.7s						
KBK	**Karagaybulak**	7.21	25	P	Pn	02 09 02.1	+1.0
	SNR=35						
SMLA	**Simla**	7.32	132	eP	Pn	02 09 01.9	-0.5
SMLA				eS	Sn	02 10 21.1	-2.8
SMLA				IAML		02 10 24.5	
	comp=E,256nm,0.4s						
ULHL	**Ulahol**	7.38	33	P	Pn	02 09 04.0	+0.7
	SNR=56						
CHMS	**Chumysh**	7.45	23	P	Pn	02 09 04.7	+0.5
	SNR=86						
USP	**Ospenovka**	7.62	21	P	Pn	02 09 06.8	+0.3
	SNR=94						
TKM2	**Tokmak 2**	7.67	27	P	Pn	02 09 08.0	+0.6
	SNR=76						
TKM2	**Tokmak 2**	7.67	27	⇑P	Pn	02 09 08.3	+0.9
	comp=E,134nm,0.7s						
TKM2				⇓S	Sn	02 10 29.5	-3.3
	comp=E,55nm,0.8s						
TKM2	**Tokmak 2**	7.67	27	PN	Pn	02 09 08.3	+0.9
TARG	**Taragay, Kyrgy**	7.77	42	Pn	Pn	02 09 09.1	+0.2
TARG	**Taragay, Kyrgy**	7.77	42	PN	Pn	02 09 09.1	+0.2
SGDS	**Sogindy**	7.83	21	⇑iP	Pn	02 09 09.1	-0.3
	baz=20						
SGDS	**Sogindy**	7.83	21	c iPN	Pn	02 09 09.0	-0.3
TNSS	**Tian-Shan**	8.32	33	eP	Pn	02 09 16.0	-0.4
	baz=32						
TNSS	**Tian-Shan**	8.32	33	ePN	Pn	02 09 15.9	-0.4
DDI	**Dehra Dun**	8.43	132	eP	Pn	02 09 18.1	+0.5
DDI				eS	Sn	02 10 48.2	-2.8
DDI				IAML		02 10 58.3	
	comp=E,226nm,0.4s						
MDOK	**Medeo**	8.47	33	⇑P	Pn	02 09 20.1	+2.0
	comp=E,110nm,0.8s						
MDOK				S	Sn	02 10 44.2	-7.7
	comp=E,25nm,0.8s						
MDOK	**Medeo**	8.47	33	eP	Pn	02 09 18.6	+0.5
	baz=32						
MDOK	**Medeo**	8.47	33	ePN	Pn	02 09 18.6	+0.5
KUU	**Kurty**	8.79	27	eP	Pn	02 09 21.3	-1.0
	baz=26						
KUU	**Kurty**	8.79	27	ePN	Pn	02 09 21.3	-1.0
CHKK	**Chushkaly**	9.01	30	eP	Pn	02 09 25.0	-0.3
	baz=29						
CHKK	**Chushkaly**	9.01	30	ePN	Pn	02 09 25.0	-0.3
SATY	**Saty**	9.02	38	eP	Pn	02 09 25.1	-0.6
	baz=38						
SATY	**Saty**	9.02	38	ePN	Pn	02 09 25.1	-0.6
ZHN	**Zhinishke**	9.12	38	eP	Pn	02 09 26.4	-0.6
	baz=37						
ZHN	**Zhinishke**	9.12	38	eP	Pn	02 09 26.3	-0.6
BTLS	**Baital**	9.18	15	eP	Pn	02 09 27.0	-0.7
	baz=14						
BTLS	**Baital**	9.18	15	eP	Pn	02 09 26.9	-0.7
NDI	**New Delhi**	9.23	142	eP	Pn	02 09 28.0	-0.5
NDI				eP	Pn	02 09 28.1	-0.5
NDI				eS	Sn	02 11 05.9	-4.7
NDI				eS	Sn	02 11 06.0	-4.6
KUDL	**Kundal**	9.35	147	eP	Pn	02 09 28.3	-1.8
KUDL				eS	Sn	02 11 05.0	-8.4
KUDL				eS	Sn	02 11 05.4	-8.0
UZB	**Uzynbulak**	9.40	40	eP	Pn	02 09 29.9	-0.9
	baz=39						
UZB	**Uzynbulak**	9.40	40	eP	Pn	02 09 29.9	-0.9
KPKS	**Kokpek**	9.46	37	eP	Pn	02 09 30.9	-0.7
	baz=37						
KPKS	**Kokpek**	9.46	37	eP	Pn	02 09 30.8	-0.7
SONA	**Sohna**	9.53	144	eP	Pn	02 09 31.6	-0.9
SONA				eS	Sn	02 11 11.7	-6.1
SHLS	**Shalkode**	9.64	41	eP	Pn	02 09 36.0	+1.9
	baz=42						
SHLS	**Shalkode**	9.64	41	eP	Pn	02 09 35.9	+1.9
PDGK	**Podgornoye**	9.77	40	⇑P	Pn	02 09 35.7	-0.2
	comp=E,46nm,0.9s						
PDGK	**Podgornoye**	9.77	40	P	Pn	02 09 35.7	-0.2
AJM	**Ajmer**	10.22	160	eP	Pn	02 09 41.1	-0.8
GEYT	**Alibeck**	10.29	284	P	Pn	02 09 40.0	-2.9
	comp=E,9.2nm,0.3s,baz=112,slow=10.0,SNR=45						
GEYT				S	Sn	02 11 33.5	-2.8
	comp=E,20nm,0.5s,baz=338,slow=24,SNR=8.2						
GYA0	**ALIBECK ARRAY**	10.29	284	P	Pn	02 09 39.5	-3.4
GYA0B	**ALIBECK ARRAY**	10.29	284	⇑P	Pn	02 09 39.5	-3.3
PTH	**Pithoragarh**	10.31	127	eP	Pn	02 09 39.5	-3.8
LGTI	**Lohaghat**	10.40	128	eP	Pn	02 09 41.8	-2.5
LGTI				eS	Sn	02 11 30.2	-8.6
TDK	**Taldyqorghan**	10.53	31	eP	Pn	02 09 45.5	-0.6
	baz=30						
TDK	**Taldyqorghan**	10.53	31	eP	Pn	02 09 45.4	-0.6
JHNI	**Jhansi**	12.58	146	eP	Pn	02 10 11.0	-2.6
PYUN	**Piuthan**	13.09	125	eP	Pn	02 10 16.5	-4.0
	comp=E,65nm,0.5s						
DANN	**Dangsing**	13.45	122	eP	Pn	02 10 22.0	-3.3
MAKZ	**Makanchi**	13.50	35	Pn	Pn	02 10 23.8	-1.8
MAKZ	**Makanchi**	13.50	35	P	Pn	02 10 23.8	-1.8
MK31	**Makanchi Array**	13.64	35	Pn	Pn	02 10 25.6	-1.8
MK31	**Makanchi Array**	13.64	35	P	Pn	02 10 25.8	-1.6
	comp=E,15nm,0.7s,baz=226,slow=11,SNR=147						
MK31	**Makanchi Array**	13.64	35	i P	Pn	02 10 26.0	-1.3
MKAR	**Makanchi Array**	13.64	35	P	Pn	02 10 26.1	-1.3
	comp=E,21nm,0.8s,baz=224,slow=12,SNR=50						
MKAR	**Makanchi Array**	13.64	35	Pn	Pn	02 10 25.4	-1.9
MKAR	**Makanchi Array**	13.64	35	ceP	Pn	02 10 26.7	-0.6
MKAR				pmax	pmax		
	comp=Z,21nm,0.8s						
BRZS	**Berezniki**	13.86	5	eP	Pn	02 10 28.6	-1.6
	baz=4.6						
BRZS	**Berezniki**	13.86	5	eP	Pn	02 10 28.5	-1.6
BHPL	**Bhopal**	14.12	154	eP	Pn	02 10 31.0	-2.7
BHPL				IAmb	IAmb	02 10 41.4	
	comp=Z,44nm,0.7s						
BHPL				eS	Sn	02 12 58.6	-11
VLK	**Valmikinagar**	14.19	125	eP	Pn	02 10 31.8	-2.7
VLK				eS	Sn	02 13 01.1	-10
GKN	**Gorkha**	14.27	121	eP	Pn	02 10 32.2	-3.6
	comp=Z,108nm,0.6s						
ALBI	**Allahabad**	14.38	136	eS	Sn	02 13 06.0	-9.4
DMN	**Daman**	14.84	121	eP	Pn	02 10 40.4	-2.8
WMQ	**Urumqi**	15.01	54	eP	Pn	02 10 44.7	-0.3
WMQ				S	Sn	02 13 30.5	0.0
WMQ				pmax	pmax		
	comp=Z,28nm,0.9s						
PKIN	**Phulchoki**	15.06	121	eP	Pn	02 10 43.1	-2.9
	comp=Z,16nm,0.2s						
PKIN				eS	Sn	02 13 19.6	-13
PKI	**Pulchoki**	15.07	121	eP	Pn	02 10 43.1	-3.1
	comp=Z,12nm,0.2s						
PKI				eS	Sn	02 13 20.6	-12
GUN	**Gumba**	15.20	119	eP	Pn	02 10 45.2	-2.6
	comp=Z,37nm,0.3s						
JBP	**Jabalpur**	15.22	146	eP	Pn	02 10 44.6	-3.1
JBP				IAmb	IAmb	02 10 46.2	
	comp=Z,15nm,0.5s						
JBP				eS	Sn	02 13 24.2	-12
AB31	**Akbulak array**	15.29	332	P	Pn	02 10 46.9	-1.5
	comp=Z,13nm,0.4s,baz=145,slow=14,SNR=765						
AB31	**Akbulak array**	15.29	332	P	Pn	02 10 46.9	-1.5
ABKAR	**Akbulak array**	15.29	332	Pn	Pn	02 10 46.2	-2.1
ZSN	**Zaisan**	15.35	39	eP	Pn	02 10 48.1	-1.2
	baz=38						
ZSN	**Zaisan**	15.35	39	eP	Pn	02 10 48.0	-1.2
KURBB	**Kurchatov Arra**	15.47	19	P	Pn	02 10 47.3	-3.4
	comp=Z,31nm,0.8s,baz=209,slow=9.9,SNR=18						
KURBB	**Kurchatov Arra**	15.47	19	⇓P	Pn	02 10 47.7	-3.0
	comp=Z,36nm,0.8s						
KURBB	**Kurchatov Arra**	15.47	19	P	Pn	02 10 47.7	-3.0
JIRN	**Jiri**	15.57	119	eP	Pn	02 10 50.3	-2.2
	comp=Z,135nm,0.6s						
KURK	**Kurchatov**	15.58	19	Pn	Pn	02 10 50.4	-1.6
KURK	**Kurchatov**	15.58	19	i P	P	02 10 52.5	-1.6
SEM	**Semipalatinsk**	15.77	23	eP	Pn	02 10 53.8	-0.8
	comp=Z,24nm,1.0s,baz=22						
SEM	**Semipalatinsk**	15.77	23	eP	Pn	02 10 53.8	-0.8
SEM				pmax	pmax		
	comp=Z,24nm,1.0s						
RAMN	**Ramite**	16.29	120	eP	Pn	02 10 59.3	-2.0
AKL	**Akola**	16.36	159	eP	Pn	02 11 02.0	+0.1
WSAR	**Wadi Sarin**	16.66	223	P	Pn	02 11 07.0	+1.3
	comp=Z,2.4nm,0.5s,baz=340,slow=11,SNR=3.3						
BVAR	**Borovoye Array**	16.84	359	P	Pn	02 11 06.2	-1.5
	comp=Z,12nm,0.5s,baz=163,slow=10,SNR=48						
TAPN	**Taplejung**	16.84	117	eP	Pn	02 11 06.5	-1.7
	comp=Z,77nm,0.6s						
BRVK	**Borovoye**	16.87	359		Pn	02 11 06.3	-1.7
BRVK				IAmb	IAmb	02 11 11.1	
	comp=Z,23nm,0.7s						
BRVK	**Borovoye**	16.87	359	⇑P	P	02 11 07.5	-1.0
	comp=Z,17nm,0.7s						
BRVK	**Borovoye**	16.87	359	ceP	P	02 11 07.6	-0.9
BRVK				pmax	pmax		
	comp=Z,39nm,1.3s						
AKTO	**Aktyubinsk**	16.98	331	P	P	02 11 10.0	+0.3
	comp=Z,30nm,0.6s,baz=135,slow=11,SNR=53						
AKTO				S	Sn	02 14 10.5	-7.3
	comp=Z,20nm,0.8s,baz=162,slow=20,SNR=8.6						
AKTO	**Aktyubinsk**	16.98	331	⇓P	P	02 11 10.0	+0.3
	comp=Z,19nm,0.7s						
AKTO	**Aktyubinsk**	16.98	331	P	P	02 11 10.0	+0.3
LKRN	**Lenkeran, Azer**	17.67	285	P	Pn	02 11 19.3	+1.5
BOK	**Bokaro**	17.95	129	eP	Pn	02 11 21.8	+0.5
BOK				IAmb	IAmb	02 11 22.6	
	comp=Z,23nm,0.6s						
BOK				eS	S	02 14 25.2	-16
DGZ	**Jazzator, Alta**	18.12	37	d iP	Pn	02 11 22.7	-0.7
DGZ				pmax	pmax		
	comp=Z,41nm,0.6s						
LSA	**Lhasa**	18.24	105	P	Pn	02 11 24.0	-1.3
LSA				IAmb	IAmb	02 11 30.5	
	comp=Z,18nm,1.0s						
LSA	**Lhasa**	18.24	105	P	Pn	02 11 24.0	-1.3
LSA				pmax	pmax		
	comp=Z,18nm,1.0s						
AKT	**Akhty**	18.72	293	eP	Pn	02 11 30.0	-0.5
AKT				eS	S	02 14 56.1	-0.7
AKT				pmax	pmax		
	comp=Z,9.0nm,0.4s						
AKT				smax	smax		
	comp=N,9.0nm,0.6s						
AKT				smax	smax		
	comp=E,11nm,0.5s						
SEKA	**Sheki**	19.08	292	P	Pn	02 11 35.2	+0.5
MNGR	**Mingechevir, A**	19.11	291	P	Pn	02 11 35.3	+0.3
GOMU	**GeErMu**	19.37	83	P	Pn	02 11 41.3	+2.8
GOMU				pmax	pmax		
	comp=E,21nm,0.9s						
GOMU				pmax	pmax		
	comp=E,75nm,5.8s						
GANJ	**Ganja**	19.67	290	P	Pn	02 11 41.3	-0.3
HYB	**Hyderabad**	19.92	158	⇓eP	P	02 11 43.1	+1.1
NAX	**Nakhchivan**	20.24	286	P	P	02 11 45.6	+0.2
ZAA0	**Zalesovo Array**	20.27	24		Pn	02 11 45.6	-2.7
ZALV	**Zalesovo Beam**	20.27	24	P	Pn	02 11 46.0	-2.4
	comp=E,55nm,0.5s,baz=219,slow=11,SNR=158						
	comp=E,55nm,0.5s						
ZALV	**Zalesovo Beam**	20.27	24	P	P	02 11 45.3	-0.2
ZALV	**Zalesovo Beam**	20.27	24	P	Pn	02 11 46.0	-2.3
GROC	**Groznyy**	20.44	298	P	P	02 11 47.2	-0.2
GROC				e*SP	sP	02 12 25.6	+5.9
GROC				eS	S	02 15 29.4	-1.3
GROC				pmax	pmax		
	comp=Z,160nm,1.3s						
GNI	**Garni**	20.84	289	P	Pn	02 11 54.5	-0.9
	comp=Z,28nm,0.7s,baz=11,slow=3.5,SNR=35						
	comp=Z,28nm,0.7s						
GNI	**Garni**	20.84	289		P	02 11 53.1	+1.0
GNI	**Garni**	20.84	289	ceP	Pn	02 11 54.3	-1.1
GNI				pmax	pmax		
	comp=Z,29nm,0.7s						
SHL	**Shillong**	20.92	115	P	P	02 11 53.6	+0.6
SHL	**Shillong**	20.92	115	P	P	02 11 53.6	+0.6
SHL				pmax	pmax		
	comp=Z,44nm,0.7s						
ZEI	**Tsey**	21.73	296	eP	P	02 12 02.3	+0.7
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SVE	**Sverdlovsk**	21.75	345	ceP	P	02 12 03.2	+1.8
SVE				eS	S	02 15 58.1	+2.1
SVE				pmax	pmax		
	comp=Z,32nm,1.2s						
ARU	**Arti**	21.88	342	P	P	02 12 03.9	+1.2
	comp=Z,26nm,0.8s,baz=147,slow=8.8,SNR=19						
ARU				S	S	02 15 59.5	+1.2
	comp=Z,2.7nm,0.4s,baz=334,slow=23,SNR=3.0						
	comp=Z,26nm,0.8s						
ARU	**Arti**	21.88	342	P	P	02 12 02.8	0.0
ARU				IAmb	IAmb	02 12 07.5	
	comp=Z,36nm,1.0s						
ARU	**Arti**	21.88	342	d iP	P	02 12 04.5	+1.8
ARU						02 12 35.4	
ARU				S	S	02 16 01.5	+3.2
ARU				SS	SnSn	02 16 43.7	+11
ARU				pmax	pmax		
	comp=Z,42nm,1.0s						
ONI	**Oni**	22.03	295	P	P	02 12 03.7	-0.9
ONI				IAmb	IAmb	02 12 15.6	
	comp=Z,16nm,0.9s						
ONI	**Oni**	22.03	295	P	P	02 12 03.7	-0.9
ONI				pmax	pmax		
	comp=Z,16nm,0.9s						
NCK	**Nalchik**	22.07	298	i P	P	02 12 06.5	+1.6
NCK				pmax	pmax		
	comp=Z,37nm,0.9s						
KBZ	**Khabaz**	22.61	298	P	P	02 12 12.3	+1.9
	comp=Z,8.0nm,0.7s,baz=227,slow=4.3,SNR=23						
	comp=Z,8.0nm,0.7s						
KBZ	**Khabaz**	22.61	298	ceP	P	02 12 12.1	+1.7
KBZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NEY	**Neytrino**	22.66	297	i P	P	02 12 13.2	+2.0
NEY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SHA1	**Shidzhatmaz**	22.78	298	i P	P	02 12 13.5	+1.0
KIV	**Kislovodsk**	22.80	299	P	P	02 12 10.5	-2.0
KIV				IAmb	IAmb	02 12 37.2	
	comp=Z,15nm,0.7s						
KIV	**Kislovodsk**	22.80	299	eP	P	02 12 14.2	+1.7
KIV				eS	S	02 16 16.1	+2.1
KIV				pmax	pmax		
	comp=Z,15nm,1.0s						
BELG	**Belogornoye**	23.04	322	P	P	02 12 15.6	+0.9
	comp=Z,31nm,0.8s,baz=285,slow=1.6,SNR=24						
	comp=Z,31nm,0.8s						
BELG	**Belogornoye**	23.04	322	i P	P	02 12 15.5	+0.9
BELG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA	**Gaotai**	23.10	73	⇓P	P	02 12 17.7	+2.1
GTA				pP	sP	02 12 43.7	-6.3
GTA				pmax	pmax		
	comp=Z,11nm,1.0s						
RAYN	**Ar Rayn**	25.23	247	P	P	02 12 33.6	-1.3
RAYN	**Ar Rayn**	25.23	247	P	P	02 12 33.6	-1.3
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TNCH	**TengChong**	26.23	107	eP	P	02 12 45.5	+1.4
TNCH				pP	pP	02 13 10.1	+2.8
TNCH				sP	sP	02 13 24.0	+4.6
TNCH				pmax	pmax		
	comp=Z,15nm,0.6s						
MOY	**Mondy**	26.44	45	eP	P	02 12 51.5	+5.9
KIRV	**Kirov**	26.45	335	ceP	P	02 12 47.4	+1.9
ANN	**Anapa**	26.65	299	eP	P	02 12 45.7	-1.7
ANN				e*PP	pP	02 13 10.0	-0.4
ANN				eS	S	02 17 12.6	-2.5
ANN				pmax	pmax		
	comp=Z,20nm,1.4s						
ZAK	**Zakamensk**	27.31	49	eP	P	02 12 53.6	+0.1
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
PZH	**PanZhiHua**	28.03	101	P	P	02 13 01.7	+1.6
PZH				pmax	pmax		
	comp=Z,8.0nm,1.0s						

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PZH                                 pmax    pmax
      comp=Z,100nm,5.1s
SONM  Songino Array    28.64  55    P       P          02 13 06.9 +1.5
      comp=Z,3.4nm,0.8s,baz=257,slow=6.6,SNR=19
      comp=Z,3.4nm,0.8s
SONM  Songino Array    28.64  55    P       P          02 13 04.7 -0.7
ULN   Ulaanbaatar      29.08  55    P       P          02 13 08.4 -0.9
ULN   Ulaanbaatar      29.08  55  i P       P          02 13 09.5 +0.2
ULN                                 pmax    pmax
      comp=Z,5.0nm,1.0s
BRTR  Keskin Array B   29.38 288    P       P          02 13 12.4 +0.4
      comp=Z,0.8nm,0.7s,baz=87,slow=9.6,SNR=6.6
      comp=Z,0.8nm,0.7s
BRTR  Keskin Array B   29.38 288ceP         P          02 13 12.3 +0.3
BRTR                                pmax    pmax
      comp=Z,1.0nm,0.8s
CMAR  Chiang Mai Arr   30.44 118    P       P          02 13 23.0 +1.6
      comp=Z,1.4nm,0.3s,baz=294,slow=8.6,SNR=8.6
      comp=Z,1.4nm,0.3s
CMAR  Chiang Mai Arr   30.44 118    P       P          02 13 22.3 +0.9
CMAR  Chiang Mai Arr   30.44 118ceP         P          02 13 23.5 +2.1
CMAR                                pmax    pmax
      comp=Z,2.0nm,0.3s
HHC   Hu-ho-hao-te     32.02  69  eP        P          02 13 36.3 +1.1
HHC                                 pmax    pmax
      comp=Z,32nm,1.0s
HHC                                 pmax    pmax
      comp=Z,120nm,4.9s
AKASG Malin Array Be   33.02 309    P       P          02 13 43.8 +0.1
      comp=Z,2.3nm,0.4s,baz=80,slow=6.7,SNR=27
      comp=Z,2.3nm,0.4s
AKASG Malin Array Be   33.02 309    P       P          02 13 41.0 -2.6
AKASG Malin Array Be   33.02 309ceP         P          02 13 44.0 +0.3
AKASG                               pmax    pmax
      comp=Z,2.0nm,0.4s
NRIK  Noril'sk         34.46  10    P       P          02 13 57.1 +1.2
      comp=Z,9.7nm,0.8s,baz=203,slow=4.8,SNR=14
      comp=Z,9.7nm,0.8s
NRIK  Noril'sk         34.46  10    P       P          02 13 56.6 +0.7
NRIK                                IAmb    IAmb       02 14 00.8
      comp=Z,11nm,0.8s
NRIK  Noril'sk         34.46  10ceP         P          02 13 57.0 +1.1
NRIK                                pmax    pmax
      comp=Z,13nm,0.9s
BURAR Bucovina Array   35.33 303    P       P          02 14 03.7 -0.1
BOD   Bodaibo          35.69  39  eP        P          02 14 08.7 +2.1
BOD                                 pmax    pmax
      comp=Z,9.0nm,1.6s
VSVD  Vaisvydziai      37.16 317  eP        P          02 14 19.9 +0.9
FINES FINESS Array B   37.66 326    P       P          02 14 24.0 +0.7
      comp=Z,1.8nm,0.5s,baz=111,slow=9.6,SNR=16
      comp=Z,1.8nm,0.5s
FINES FINESS Array B   37.66 326  i P       P          02 14 24.8 +1.6
FINES                               pmax    pmax
      comp=Z,2.0nm,0.5s
MTSE  Matsula          37.87 322  eP        P          02 14 25.9 +0.9
MEF   Metsahovi        38.02 324  eP        P          02 14 27.2 +0.9
RAF   Rauma            39.50 325  eP        P          02 14 39.3 +0.7
NJ2   Nanjing          39.67  82  eP        P          02 14 40.4 -0.1
NJ2                                 pP      pP         02 15 05.8 +0.9
NJ2                                 sP      sP         02 15 18.9 +2.0
NJ2                                 pmax    pmax
      comp=Z,6.0nm,0.5s
NJ2                                 pmax    pmax
      comp=Z,400nm,3.9s
AAL   Aland            40.13 323  eP        P          02 14 44.5 +0.7
VADS  Vadso            40.55 340  eP        P          02 14 48.6 +1.3
ARA0  ARCESS Array S   41.38 338  eP        P          02 14 55.6 +1.6
ARCES ARCESS Array B   41.38 338    P       P          02 14 56.1 +2.1
      comp=Z,3.7nm,0.7s,baz=112,slow=6.8,SNR=22
      comp=Z,3.7nm,0.7s
VIKU  Vikbolandet      41.47 320  eP        P          02 14 55.8 +0.9
KTK1  Kautokeino       41.84 337  eP        P          02 14 59.3 +1.5
BSD   Bornholm Skovb   42.12 315  eP        P          02 15 01.2 +1.0
ZEA   Zeya             42.40  47  eP        P          02 15 06.0 +3.5
ZEA                                 pmax    pmax
      comp=Z,10.0nm,0.8s
HAMF  Hammerfest       42.46 339  eP        P          02 15 04.3 +1.5
HEH   HeiHe            42.56  52  eP        P          02 15 04.7 +0.8
HEH                                 pmax    pmax
      comp=Z,22nm,0.8s
HEH                                 pmax    pmax
      comp=Z,150nm,4.5s
DEL   Delary           42.78 317  eP        P          02 15 06.6 +1.0
JETT  Jettan, Norway   42.98 337  eP        P          02 15 09.0 +1.9
TRO   Tromso           43.49 336  eP        P          02 15 12.8 +1.7
FAUS  Fauske           44.01 333  eP        P          02 15 16.0 +0.7
MOR8  Moi Rana         44.01 331  eP        P          02 15 15.4 +0.1
STEI  Steigen          44.18 333  eP        P          02 15 17.1 +0.5
NC602 NORSAR Array S   44.35 323  eP        P          02 15 19.2 +1.2
NB2   NORSAR Subarra   44.54 323    P       P          02 15 19.3 -0.4
      comp=Z,1.7nm,0.4s,baz=99,slow=7.9
NB2   NORSAR Subarra   44.54 323    P       P          02 15 19.3 -0.4
      slow=7.9
NOA   NORSAR Array B   44.54 323    P       P          02 15 20.0 +0.3
      comp=Z,2.5nm,0.6s,baz=159,slow=3.3,SNR=20
      comp=Z,2.5nm,0.6s
NOA   NORSAR Array B   44.54 323    P       P          02 15 20.0 +0.3
NAO01 NORSAR Array S   44.68 323    P       P          02 15 20.5 -0.2
NBO00 NORSAR Array S   44.75 323    P       P          02 15 22.2 +0.9
KSRS  Korea Array      45.13  71    P       P          02 15 25.8 +1.2
      comp=Z,1.0nm,0.4s,baz=269,slow=7.3,SNR=2.5
      comp=Z,1.0nm,0.4s
KONO  Kongsberg        45.23 321    P       P          02 15 25.9 +0.8
KONO  Kongsberg        45.23 321    P       P          02 15 25.9 +0.8
KONO                                pmax    pmax
      comp=Z,45nm,1.5s
KONO  Kongsberg        45.23 321  eP        P          02 15 26.5 +1.4
KLR   Kul'dur          45.45  54    P       P          02 15 27.6 +0.5
      comp=Z,2.3nm,0.8s,baz=287,slow=12,SNR=7.8
      comp=Z,2.3nm,0.8s
KLR   Kul'dur          45.45  54ceP         P          02 15 27.3 +0.3
KLR                                 pmax    pmax
      comp=Z,10.0nm,2.5s
DAVOX Davos/Dischmat   45.80 303    P       P          02 15 31.0 +1.0
      comp=Z,2.1nm,0.7s,baz=177,slow=9.6,SNR=4.0
      comp=Z,2.1nm,0.7s
TIXI  Tiksi            46.12  22    P       P          02 15 31.7 -0.3
TIXI                                IAmb    IAmb       02 15 35.6
      comp=Z,8.3nm,1.0s
TIXI  Tiksi            46.12  22ceP         P          02 15 31.3 -0.6
TIXI                                pmax    pmax
      comp=Z,12nm,1.3s
USRK  Ussuriysk Ar.    46.46  60    P       P          02 15 35.6 +0.6
      comp=Z,2.4nm,0.8s,baz=334,slow=8.8,SNR=4.1
      comp=Z,2.4nm,0.8s
SENIN Lac Senin/Sane   47.62 303    P       P          02 15 42.7 -1.6
YSS   Yuzh-Sakhalins   53.13  54    P       P          02 16 25.0 -0.5
YSS   Yuzh-Sakhalins   53.13  54  eP        P          02 16 25.0 -0.5
YSS                                 pmax    pmax
      comp=Z,10.0nm,0.5s
MJAR  Matsushiro Arr   53.22  68    P       P          02 16 26.8 +0.5
      comp=Z,0.8nm,0.3s,baz=297,slow=6.4,SNR=5.4
      comp=Z,0.8nm,0.3s
SEY   Seymchan         54.77  34    P       P          02 16 37.7 +0.6
      comp=Z,0.9nm,0.4s,baz=270,slow=8.0,SNR=9.8
      comp=Z,0.9nm,0.4s
SEY   Seymchan         54.77  34ceP         P          02 16 36.8 -0.3
SEY                                 pmax    pmax
      comp=Z,8.0nm,1.7s
DAG   Danmarks Havn    54.99 344  i P       P          02 16 38.0 -0.5
DBG   Daneborg         55.83 341  i P       P          02 16 37.6 -7.0
TAM   Tamanrasset      57.41 276    P       P          02 16 55.4 -1.4
TAM   Tamanrasset      57.41 276    P       P          02 16 55.4 -1.4
TAM                                 pmax    pmax
      comp=Z,4.0nm,1.3s
ESDC  Sonseca Array    57.47 298    P       P          02 16 56.5 -0.3
      comp=Z,0.3nm,0.6s,baz=60,slow=7.4,SNR=5.3
      comp=Z,0.3nm,0.6s
PEA0B Petropavlovsk-   60.30  44    P       P          02 17 16.1  0.0
PEA0B Petropavlovsk-   60.30  44    P       P          02 17 16.1  0.0
PEA0B                               pmax    pmax
      comp=Z,33nm,1.4s
NEEM  North Greenlan   61.31 348  i P       P          02 17 22.8 -0.1
TORD  Torodi Ar. Bea   65.55 269    P       P          02 17 49.5 -2.0
      comp=Z,1.2nm,0.4s,baz=50,slow=6.1,SNR=31
      comp=Z,1.2nm,0.4s
TORD  Torodi Ar. Bea   65.55 269    P       P          02 17 48.9 -2.5
A21K  Barrow           67.66  15    P       P          02 18 03.3 -0.7
A21K                                IAmb    IAmb       02 18 07.7
      comp=Z,10nm,0.9s
A21K  Barrow           67.66  15    P       P          02 18 03.7 -0.2
      baz=320
RDOG  Red Dog Mine     68.61  19    P       P          02 18 09.7 -0.3
      baz=316
TNA   Tin City         68.91  22    P       P          02 18 12.0 +0.1
TNA   Tin City         68.91  22    P       P          02 18 11.3 -0.5
      baz=312
RES   Resolute Bay     69.00 356    P       P          02 18 11.6 -0.7
RES   Resolute Bay     69.00 356    P       P          02 18 11.6 -0.7
RES                                 pmax    pmax
      comp=Z,2.0nm,1.0s
ANM   Nome             70.38  22    P       P          02 18 21.1 +0.2
ANM   Nome             70.38  22    P       P          02 18 21.1 +0.2
ANM                                 pmax    pmax
      comp=Z,4.0nm,0.9s
ANM   Nome             70.38  22    P       P          02 18 20.7 -0.3
      baz=315
C24K  Franklin Bluff   70.53  14    P       P          02 18 21.7  0.0
      baz=327
D23K  Nanushuk River   70.77  15    P       P          02 18 22.8 -0.5
      baz=326
D24K  Happy Valley     70.98  14    P       P          02 18 23.8 -0.7
      baz=327
C26K  Camden Bay       71.05  12    P       P          02 18 25.3 +0.5
      baz=330
D25K  Kavik River      71.30  13    P       P          02 18 26.9 +0.4
      baz=329
C27K  Jago River       71.51  12    P       P          02 18 28.4 +0.8
      baz=331
A36M  Sachs Harbour    71.53   5    P       P          02 18 27.1 -0.6
A36M  Sachs Harbour    71.53   5    P       P          02 18 28.5 +0.8
      baz=346,SNR=20
F21K  Alatna River     71.58  17    P       P          02 18 28.8 +0.6
      baz=324
F22K  John River       71.65  16    P       P          02 18 28.6 +0.1
      baz=325
E23K  Chandalar        71.74  15    P       P          02 18 29.8 +0.5
      baz=327
E24K  Your Creek       71.96  14    P       P          02 18 30.5  0.0
      baz=328
G21K  Allakaket        72.15  17    P       P          02 18 31.2 -0.4
      baz=324
G22K  Bettles          72.28  16    P       P          02 18 32.4 +0.1
      baz=325
COLD  Coldfoot         72.31  16    P       P          02 18 32.7 +0.2
COLD                                IAmb    IAmb       02 18 36.3
      comp=Z,9.4nm,1.0s
COLD  Coldfoot         72.31  16    P       P          02 18 32.9 +0.4
      baz=326
E25K  Arctic Village   72.49  13    P       P          02 18 34.0 +0.4
      baz=330
IMAR  Indian Mountai   72.52  18    P       P          02 18 33.1 -0.6
F24K  Squaw Lake       72.56  15    P       P          02 18 34.6 +0.6
      baz=328
GCSA  Galena City Sc   72.70  19    P       P          02 18 35.3 +0.5
      baz=321
G23K  Bananza Creek    72.78  16    P       P          02 18 35.7 +0.4
      baz=326
F25K  Christian Rive   72.94  14    P       P          02 18 36.9 +0.7
      baz=330
H21K  Melozitna Rive   73.01  17    P       P          02 18 36.0 -0.7
H21K                                IAmb    IAmb       02 18 40.3
      comp=Z,11nm,1.1s
H21K  Melozitna Rive   73.01  17    P       P          02 18 36.9 +0.2
      baz=324
F26K  Sheenjek River   73.13  13    P       P          02 18 37.0 -0.3
      baz=331
E27K  Coleen River     73.15  12    P       P          02 18 37.8 +0.3
      baz=333
H22K  Ishtalitna Cre   73.16  17    P       P          02 18 37.7 +0.2
      baz=326
BMAR  Burnt Mountain   73.28  13    P       P          02 18 38.1 -0.2
G24K  Hadweenzic Riv   73.34  15    P       P          02 18 38.6  0.0
      baz=329
G25K  Bearman Lake     73.56  14    P       P          02 18 40.2 +0.3
      baz=330
I21K  Tanana           73.60  17    P       P          02 18 39.8 -0.3
I21K  Tanana           73.60  17    P       P          02 18 40.1  0.0
      baz=325
H23K  Yukon River      73.63  16    P       P          02 18 39.4 -1.0
H23K                                IAmb    IAmb       02 18 44.6
      comp=Z,6.0nm,0.8s
H23K  Yukon River      73.63  16    P       P          02 18 40.6 +0.3
      baz=327
G26K  Porcupine Rive   73.85  13    P       P          02 18 42.0 +0.4
      baz=332
H24K  Noodor Dome      73.99  16    P       P          02 18 41.9 -0.6
H24K                                IAmb    IAmb       02 18 46.5
      comp=Z,5.0nm,0.8s
H24K  Noodor Dome      73.99  16    P       P          02 18 43.0 +0.6
      baz=328,SNR=5.8
MLY   Manley           74.02  17    P       P          02 18 42.0 -0.7
MLY                                 IAmb    IAmb       02 18 46.8
      comp=Z,5.7nm,1.0s
MLY   Manley           74.02  17    P       P          02 18 43.1 +0.4
      baz=326,SNR=7.4
C36M  Paulatuk         74.20   5    P       P          02 18 43.3 -0.2
C36M  Paulatuk         74.20   5    P       P          02 18 43.7 +0.1
      baz=348,SNR=12
INK   Inuvik           74.24   9    P       P          02 18 42.7 -1.0
INK                                 IAmb    IAmb       02 18 47.7
      comp=Z,9.6nm,0.7s
INK   Inuvik           74.24   9    P       P          02 18 42.7 -1.0
INK                                 pmax    pmax
      comp=Z,10.0nm,0.7s
INK   Inuvik           74.24   9    P       P          02 18 44.2 +0.5
      baz=340,SNR=11
I23K  Minto, Yukon-K   74.25  16    P       P          02 18 44.4 +0.6
I23K                                IAmb    IAmb       02 18 47.9
      comp=Z,5.6nm,0.9s
I23K  Minto, Yukon-K   74.25  16    P       P          02 18 43.8  0.0
      baz=327
G27K  Doyon Strip      74.37  13    P       P          02 18 44.8 +0.2
      baz=333
TTA   Tatalina         74.37  20    P       P          02 18 45.0 +0.2
      baz=322
K20K  Telida           74.56  19    P       P          02 18 46.0 +0.3
K20K                                IAmb    IAmb       02 18 49.7
      comp=Z,8.3nm,0.9s
K20K  Telida           74.56  19    P       P          02 18 46.0 +0.3
      baz=324,SNR=6.8
CHUM  Lake Minchumin   74.59  18    P       P          02 18 46.2 +0.3
      baz=325,SNR=6.3
MDM   Murphy Dome      74.66  16    P       P          02 18 45.1 -1.3
MDM                                 IAmb    IAmb       02 18 50.6
      comp=Z,10nm,1.0s
POKR  Poker Plat Res   74.70  16    P       P          02 18 46.4 -0.2
      baz=329
BPAW  Bear Paw Mtn.    74.74  18    P       P          02 18 46.5 -0.2
BPAW                                IAmb    IAmb       02 18 51.0
      comp=Z,5.3nm,0.9s
BPAW  Bear Paw Mtn.    74.74  18    P       P          02 18 46.6 -0.2
      baz=326,SNR=7.4
NEA2  Nenana           74.78  17    P       P          02 18 46.3 -0.7
NEA2                                IAmb    IAmb       02 18 50.4
      comp=Z,11nm,0.8s
NEA2  Nenana           74.78  17    P       P          02 18 46.8 -0.2
      baz=328,SNR=9.8
TCOL  CIGO, UAF Yank   74.82  16    P       P          02 18 46.4 -0.8
TCOL  CIGO, UAF Yank   74.82  16    P       P          02 18 47.4 +0.2
      baz=329
COLA  College          74.82  16    P       P          02 18 46.0 -1.2
COLA                                IAmb    IAmb       02 18 50.8
      comp=Z,12nm,0.8s
COLA  College          74.82  16    P       P          02 18 46.0 -1.2
COLA                                pmax    pmax
      comp=Z,13nm,0.9s
COLA  College          74.82  16    P       P          02 18 47.2 +0.1
      baz=329
H27K  Steamboat Moun   74.91  13    P       P          02 18 48.1 +0.3
      baz=334
CCB   Clear Creek Bu   75.03  16    P       P          02 18 48.4 +0.1
F31M  Tsiigehtchic     75.03  10    P       P          02 18 48.3  0.0
      baz=340,SNR=7.3
CAST  Castle Rocks     75.03  18    P       P          02 18 47.9 -0.6
CAST                                IAmb    IAmb       02 18 52.7
      comp=Z,13nm,0.9s
CAST  Castle Rocks     75.03  18    P       P          02 18 49.0 +0.5
      baz=325,SNR=11
BWN   Browne           75.05  17    P       P          02 18 47.9 -0.6
BWN                                 IAmb    IAmb       02 18 52.2
      comp=Z,14nm,0.9s
G30M  tAoh Zraii Nji   75.11  11    P       P          02 18 48.8 -0.1
      baz=338,SNR=7.8
IL31                   75.12  16    P       P          02 18 49.4 +0.5
ILAR  Eielson Array    75.12  16    P       P          02 18 48.7 -0.2
      comp=Z,3.0nm,0.9s,baz=327,slow=3.5,SNR=25
      comp=Z,3.0nm,0.9s
ILAR  Eielson Array    75.12  16    P       P          02 18 49.1 +0.1
ILAR  Eielson Array    75.12  16    P       P          02 18 49.1 +0.1
KTH   Kantishna Hill   75.21  18    P       P          02 18 49.1 -0.5
KTH                                 IAmb    IAmb       02 18 53.0
      comp=Z,9.8nm,0.8s
L19K  White Mountain   75.29  20    P       P          02 18 49.8 -0.2
      baz=323
L20K  Farewell, AK     75.32  20    P       P          02 18 50.1 -0.1
      baz=324
HDA   Harding Lake     75.42  16    P       P          02 18 50.2 -0.4
      baz=329
I26K  Coal Creek Min   75.43  14    P       P          02 18 50.4 -0.3
I26K                                IAmb    IAmb       02 18 54.5
      comp=Z,4.8nm,0.7s
I26K  Coal Creek Min   75.43  14    P       P          02 18 50.9 +0.3
      baz=332
PPLA  Purkeypile       75.43  19    P       P          02 18 50.7 -0.2
PPLA                                IAmb    IAmb       02 18 55.0
      comp=Z,4.9nm,0.6s
PPLA  Purkeypile       75.43  19    P       P          02 18 50.7 -0.2
      baz=325
TRF   Thorofare Moun   75.45  18    P       P          02 18 51.0 -0.1
      baz=327
I27K  Kandik River     75.46  13    P       P          02 18 51.8 +0.8
      baz=334
N16K  Nishlik Lake     75.47  23    P       P          02 18 51.9 +0.9
      baz=321
MCK   McKinley         75.54  17    P       P          02 18 50.9 -0.5
MCK                                 IAmb    IAmb       02 18 54.6
      comp=Z,6.9nm,1.3s
MCK   McKinley         75.54  17    P       P          02 18 50.9 -0.5
MCK                                 pmax    pmax
      comp=Z,7.0nm,1.3s
MCK   McKinley         75.54  17    P       P          02 18 51.8 +0.3
      baz=328
EPYK  Eagle Plains     75.59  11    P       P          02 18 51.8 +0.2
      baz=337
M19K  Big River Lodg   75.65  20    P       P          02 18 52.3 +0.3
      baz=324
J26L  Joseph Creek     76.06  15    P       P          02 18 53.2 -1.2
J26L                                IAmb    IAmb       02 18 57.8
      comp=Z,6.7nm,0.8s
J26L  Joseph Creek     76.06  15    P       P          02 18 54.4  0.0
      baz=332,SNR=9.8
K24K  Donnelly Dome    76.21  16    P       P          02 18 55.3 +0.1
      baz=330
I29M  Ogilvie Camp,    76.27  12    P       P          02 18 55.0 -0.5
      baz=336
EGAK  Eagle            76.29  14    P       P          02 18 54.8 -0.8
      baz=334
SKT   Skwentna         76.36  19    P       P          02 18 55.0 -1.1
SKT                                 IAmb    IAmb       02 18 58.9
      comp=Z,11nm,1.0s
SKT   Skwentna         76.36  19    P       P          02 18 55.7 -0.4
      baz=326,SNR=5.8
O16K  Kokwok River B   76.37  23    P       P          02 18 55.1 -1.0
      baz=321
WAT1  Susitna Watana   76.40  17    P       P          02 18 55.5 -0.8
      baz=328
SCRK  Sand Creek       76.44  15    P       P          02 18 55.9 -0.7
SCRK                                IAmb    IAmb       02 19 00.1
      comp=Z,5.4nm,0.7s
SCRK  Sand Creek       76.44  15    P       P          02 18 55.9 -0.7
      baz=332,SNR=6.0
RIDG  Independent Ri   76.47  15    P       P          02 18 55.2 -1.5
RIDG                                IAmb    IAmb       02 19 09.3
      comp=Z,8.8nm,1.3s
RIDG  Independent Ri   76.47  15    P       P          02 18 56.4 -0.3
      baz=331
N19K  Bonanza Creek    76.50  21    P       P          02 18 56.5 -0.5
      baz=324
O17K  Koliganek Bris   76.55  23    P       P          02 18 56.6 -0.5
      baz=322
DOT   Dot Lake         76.71  15    P       P          02 18 58.0 -0.1
K27K  Chicken          76.78  14    P       P          02 18 58.6 +0.2
      baz=333
PAX   Paxson           77.00  16    P       P          02 18 59.2 -0.6
PAX                                 IAmb    IAmb       02 19 02.9
      comp=Z,6.3nm,0.6s
PAX   Paxson           77.00  16    P       P          02 18 59.2 -0.6
PAX                                 pmax    pmax
      comp=Z,6.0nm,0.6s
PAX   Paxson           77.00  16    P       P          02 18 59.4 -0.4
      baz=331,SNR=6.3
SUA   Susitna One      77.00  19    P       P          02 18 59.2 -0.6
      baz=327
DAWY  Dawson           77.26  13    P       P          02 19 00.7 -0.4
      baz=336,SNR=5.3
PMR   Palmer           77.31  18    P       P          02 19 01.0 -0.4
      baz=328
SML   Sawmill          77.33  18    P       P          02 18 59.8 -1.7
SML   Sawmill          77.33  18    P       P          02 19 00.9 -0.6
      baz=329
L26K  Log Cabin Wild   77.42  15    P       P          02 19 02.1 +0.1
      baz=332
P18K  Big Mountain,    77.43  22    P       P          02 19 01.4 -0.8
P18K  Big Mountain,    77.43  22    P       P          02 19 02.1  0.0
      baz=324
M23K  Glacier View     77.49  18    P       P          02 19 01.8 -0.6
      baz=329,SNR=5.6
Q16K  King Salmon      77.55  23    P       P          02 19 02.9 +0.1
      baz=323
SCM   Sheep Creek Mo   77.56  17    P       P          02 19 02.1 -0.7
SCM                                 IAmb    IAmb       02 19 07.5
      comp=Z,10.0nm,0.9s
SCM   Sheep Creek Mo   77.56  17    P       P          02 19 02.1 -0.7
SCM                                 pmax    pmax
      comp=Z,10.0nm,0.9s
SCM   Sheep Creek Mo   77.56  17    P       P          02 19 03.0 +0.1
      baz=329
HARP  HAARP            77.57  16    P       P          02 19 02.9 +0.1
      baz=331
RC01  Rabbit Creek A   77.58  19    P       P          02 19 03.0 +0.1
      baz=328
M24K  Tolsona, Glenn   77.59  17    P       P          02 19 02.2 -0.8
M24K  Tolsona, Glenn   77.59  17    P       P          02 19 03.3 +0.3
      baz=330
UNV   Unalaska Valle   77.61  31    P       P          02 19 03.5 +0.4
      baz=316
KNK   Knik Glacier     77.64  18    P       P          02 19 03.1 -0.1
      baz=329
L27K  Beaver Creek,    77.70  15    P       P          02 19 03.8 +0.3
      baz=334
BCAR  Beaver Creek A   77.70  15    P       P          02 19 03.5 -0.2
K29M  Barlow Dome      77.80  12    P       P          02 19 04.3  0.0
      baz=337
KLU   Klutina          78.19  17    P       P          02 19 06.5 +0.1
      baz=330
Q19K  Cape Douglas,    78.28  22    P       P          02 19 07.4 +0.6
      baz=325
M27K  Edge Creek, AK   78.32  15    P       P          02 19 07.7 +0.6
      baz=334
L29M  L29M             78.37  13    P       P          02 19 07.5 +0.2
      baz=337
N25K  Chitina, Valde   78.40  16    P       P          02 19 06.6 -0.9
N25K  Chitina, Valde   78.40  16    P       P          02 19 07.7 +0.2
      baz=332
BVCY  Beaver Creek     78.48  14    P       P          02 19 08.1 +0.2
      baz=334
GLB   Gilahina Butte   78.72  16    P       P          02 19 08.9 -0.4
GLB                                 IAmb    IAmb       02 19 28.1
      comp=Z,8.4nm,1.4s
M29M  Somme Creek      78.92  13    P       P          02 19 10.8 +0.4
      baz=336
YUK3  Moose Creek      79.14  15    P       P          02 19 12.4 +0.7
      baz=335
CTG   Chitna Glacier   79.69  15    P       P          02 19 15.0 +0.3
      baz=334
M31M  Drury Creek, Y   79.86  12    P       P          02 19 15.3 -0.1
M31M                                IAmb    IAmb       02 19 18.6
      comp=Z,4.1nm,0.8s
M31M  Drury Creek, Y   79.86  12    P       P          02 19 15.8 +0.4
      baz=340
YUK4  Talbot Arm       79.89  14    P       P          02 19 16.4 +0.6
      baz=336
FARO  Faro, Yukon      80.00  11    P       P          02 19 15.3 -0.9
FARO  Faro, Yukon      80.00  11    P       P          02 19 16.4 +0.2
      baz=340
N30M  Aishikik Lake    80.08  13    P       P          02 19 16.5 -0.2
      baz=338
O28M  Mount Upton      80.11  15    P       P          02 19 16.8 -0.3
      baz=335
YUK6  Outpost Mounta   80.32  14    P       P          02 19 18.3 +0.2
      baz=337
HYT   Haines Junctio   80.59  14    P       P          02 19 19.7 +0.2
HYT                                 IAmb    IAmb       02 19 23.3
      comp=Z,5.3nm,0.8s
HYT   Haines Junctio   80.59  14    P       P          02 19 20.3 +0.8
      baz=337
O30N  Mendenhall       80.91  13    P       P          02 19 21.3 +0.3
      baz=338
```

YKA	**Yellowknife Ar**	**81.56**	**3**	P	**P**	**02 19 24.4**	**0.0**
	comp=Z,1.7nm,0.6s,baz=348,slow=5.1,SNR=18						
	comp=Z,1.7nm,0.6s						
YKA	**Yellowknife Ar**	**81.56**	**3**	P	**P**	**02 19 23.8**	**-0.6**
WRA	**Warramunga Arr**	**81.96**	**122**	P	**P**	**02 19 26.3**	**-0.8**
	comp=Z,1.8nm,0.7s,baz=323,slow=4.8,SNR=19						
	comp=Z,1.8nm,0.7s						
WRA	**Warramunga Arr**	**81.96**	**122**	P	**P**	**02 19 25.3**	**-1.9**
WB2	**Warramunga Arr**	**81.97**	**122**	P	**P**	**02 19 25.9**	**-1.3**
P33M	**Teslin, Yukon**	**82.00**	**12**	P	**P**	**02 19 25.3**	**-1.6**
P33M				IAmb	IAmb	02 19 29.8	
	comp=Z,5.6nm,0.7s						
P33M	**Teslin, Yukon**	**82.00**	**12**	P	**P**	**02 19 27.1**	**+0.2**
	baz=341						
PLBC	**Pleasant Camp**	**82.08**	**14**	P	**P**	**02 19 27.6**	**+0.5**
	baz=338						
SKAG	**Skagway**	**82.27**	**13**	P	**P**	**02 19 28.6**	**+0.5**
	baz=339						
WTLY	**Watson Lake, Y**	**82.70**	**10**	P	**P**	**02 19 30.7**	**+0.2**
	baz=344						
ASAR	**Alice Springs**	**84.20**	**125**	P	**P**	**02 19 38.1**	**-0.5**
	comp=Z,2.2nm,0.6s,baz=316,slow=5.3,SNR=12						
	comp=Z,2.2nm,0.6s						

ANF ***13*** *02:11:34.6±0.3, 37°.70N×77°.82W, h13^{km}±4^{km}, ML2.7/9, Error ellipse: s-maj=4.3km s-min=3.1km az=46.0*

SLM ***13*** *02:11:35.3±1.2, 37°.70N±0°.02×77°.82W±0°.03, h11^{km}±8^{km}, Md2.6/8, mb_Lg2.6/5(NEIC), ML2.8/14(NEIC), Error ellipse: s-maj=2.8km s-min=2.3km az=105.0*

NEIC ***13*** *02:11:35.1±1.1, 37°.71N±0°.02×77°.83W±0°.03, h14^{km}±7^{km}, Error ellipse: s-maj=2.9km s-min=2.3km az=91.0*

ISC 13 02:11:34.6±0.9**, 37°.70N**±0°.02×**77°.83W**±0°.02**, h16**^{km}±7^{km}**, n47,** σ**0^{s}.71**/70**, Virginia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
R58B	**Mineral**	**0.26**	**351**		**Pg**	**02 11 40.4**	**+0.1**
R58B				Sg	**Sg**	**02 11 44.1**	**-0.1**
R58B				IAML		02 11 44.4	
	comp=E,737nm,0.2s						
R58B	**Mineral**	**0.26**	**351**	P	**Pg**	**02 11 40.4**	**+0.1**
	baz=169						
R58B				P	**Pg**	**02 11 40.4**	**+0.1**
	baz=169						
R58B				S	**Sg**	**02 11 44.3**	**+0.1**
	baz=169						
R58B				S	**Sg**	**02 11 44.3**	**+0.1**
	baz=169						
CBN	**Corbin Frederi**	**0.62**	**35**	Pg	**Pg**	**02 11 46.3**	**-0.4**
CBN				Sg	**Sg**	**02 11 54.5**	**-0.4**
CBN	**Corbin Frederi**	**0.62**	**35**	P	**Pg**	**02 11 46.5**	**-0.2**
	baz=215						
CBN				S	**Sg**	**02 11 55.1**	**+0.2**
	baz=215						
CVVA	**Charlottesvill**	**0.64**	**300**		**Pg**	**02 11 47.5**	**+0.3**
T59A	**Double "B" Far**	**0.76**	**163**	Pg	**Pg**	**02 11 49.1**	**-0.3**
T59A				Sg	**Sg**	**02 11 59.5**	**0.0**
T59A				IAML		02 12 02.6	
	comp=E,262nm,0.1s						
T59A				IAML		02 12 02.9	
	comp=N,355nm,0.1s						
T59A	**Double "B" Far**	**0.76**	**163**	P	**Pg**	**02 11 49.4**	**0.0**
	baz=344						
T59A				P	**Pg**	**02 11 49.4**	**0.0**
	baz=344						
S57A	**Dark Hollow, R**	**0.90**	**274**	Pg	**Pb**	**02 11 51.8**	**0.0**
S57A				Sg	**Sb**	**02 12 03.4**	**0.0**
S57A	**Dark Hollow, R**	**0.90**	**274**	P	**Pb**	**02 11 51.6**	**-0.2**
	baz=93						
S57A				P	**Pb**	**02 11 51.6**	**-0.2**
	baz=93						
S57A				S	**Sg**	**02 12 04.4**	**+0.7**
	baz=93						
S57A				S	**Sg**	**02 12 04.4**	**+0.7**
	baz=93						
T60A	**Surry**	**1.04**	**123**	Pg	**Pb**	**02 11 53.9**	**-0.3**
T60A				Sg	**Sb**	**02 12 07.5**	**0.0**
T60A				IAML		02 12 10.4	
	comp=N,244nm,0.6s						
T60A				IAML		02 12 10.4	
	comp=E,168nm,0.6s						
T60A	**Surry**	**1.04**	**123**	P	**Pb**	**02 11 54.1**	**0.0**
	baz=304						
T60A				P	**Pb**	**02 11 54.1**	**0.0**
	baz=304						
T60A				S	**Sb**	**02 12 07.7**	**+0.2**
	baz=304						
T60A				S	**Sb**	**02 12 07.7**	**+0.2**
	baz=304						
T57A	**Hurt**	**1.34**	**239**		**Pn**	**02 11 58.8**	**+0.1**
T57A					**Sn**	**02 12 16.0**	**-0.1**
T57A				IAML		02 12 20.2	
	comp=E,218nm,0.2s						
T57A	**Hurt**	**1.34**	**239**	P	**Pn**	**02 11 59.0**	**+0.4**
	baz=58						
T57A				P	**Pn**	**02 11 59.0**	**+0.4**
	baz=58						
T57A				S	**Sn**	**02 12 15.9**	**-0.2**
	baz=58						
T57A				S	**Sn**	**02 12 15.9**	**-0.2**
	baz=58						
U59A	**Littleton**	**1.35**	**179**	Pn	**Pn**	**02 11 58.7**	**-0.1**
U59A				IAML		02 12 21.9	
	comp=E,208nm,0.3s						
U59A				IAML		02 12 22.9	
	comp=N,161nm,0.3s						
U59A	**Littleton**	**1.35**	**179**	P	**Pn**	**02 11 59.7**	**+0.9**
	baz=359						
U59A				P	**Pn**	**02 11 59.7**	**+0.9**
	baz=359						
U59A				S	**Sb**	**02 12 17.5**	**+1.0**
	baz=359						
U59A				S	**Sb**	**02 12 17.5**	**+1.0**
	baz=359						
S61A	**Accomac**	**1.71**	**90**	Pn	**Pn**	**02 12 03.0**	**-0.7**
P57A	**Homestead Farm**	**1.78**	**355**		**Pb**	**02 12 06.7**	**-0.2**
P57A	**Homestead Farm**	**1.78**	**355**	Pn	**Pn**	**02 12 05.9**	**+1.2**
P57A	**Homestead Farm**	**1.78**	**355**	P	**Pn**	**02 12 05.7**	**+0.9**
	baz=175						
P57A				P	**Pn**	**02 12 05.7**	**+0.9**
	baz=175						
SDMD	**Soldier's Deli**	**1.87**	**24**	Pn	**Pn**	**02 12 06.6**	**+0.6**
SDMD	**Soldier's Deli**	**1.87**	**24**	P	**Pn**	**02 12 07.3**	**+1.3**
	baz=204						
R55A	**Marlinton**	**1.90**	**288**	Pn	**Pn**	**02 12 06.9**	**+0.5**
R55A				IAmb_Lg		02 12 38.5	
	comp=Z,31nm,0.8s						
R55A	**Marlinton**	**1.90**	**288**	P	**Pb**	**02 12 08.7**	**-0.3**
	baz=107						
R55A				P	**Pb**	**02 12 08.7**	**-0.3**
	baz=107						
R61A	**Willards**	**2.06**	**72**	Pn	**Pn**	**02 12 09.2**	**+0.6**
BLA	**Blacksburg**	**2.12**	**257**	Pn	**Pn**	**02 12 10.2**	**+0.7**
BLA	**Blacksburg**	**2.12**	**257**	IAmb_Lg		02 12 46.9	
	comp=Z,26nm,0.8s						
V61A	**Roper**	**2.16**	**152**		**Pn**	**02 12 10.6**	**+0.7**
V58A	**Windy Hill, Pi**	**2.17**	**209**		**Pn**	**02 12 11.8**	**+1.8**
V58A	**Windy Hill, Pi**	**2.17**	**209**	Pn	**Pn**	**02 12 11.0**	**+1.0**
U56A	**King**	**2.45**	**237**	Pn	**Pn**	**02 12 13.5**	**-0.5**
Q54A	**Coxs Mills**	**2.69**	**299**		**Pb**	**02 12 21.0**	**-1.3**
S54A	**Dingess, Beckl**	**2.76**	**273**		**Pb**	**02 12 21.8**	**-1.9**
S54A	**Dingess, Beckl**	**2.76**	**273**	Pn	**Pn**	**02 12 19.9**	**+1.6**
WUPA	**West Chester U**	**2.82**	**37**	Pn	**Pn**	**02 12 20.3**	**+1.2**
SSPA	**Standing Stone**	**2.93**	**359**	Pn	**Pn**	**02 12 21.4**	**+0.8**
W57A	**Gilead**	**3.09**	**215**	Pn	**Pn**	**02 12 22.9**	**+0.2**
O54A	**Avella**	**3.17**	**322**	Pn	**Pn**	**02 12 24.1**	**+0.2**
N58A	**Sunbury**	**3.25**	**15**	Pn	**Pn**	**02 12 25.5**	**+0.6**
P53A	**Whipple**	**3.31**	**304**	Pn	**Pn**	**02 12 25.6**	**-0.2**
Y60A	**Bolivia**	**3.70**	**185**	Pn	**Pn**	**02 12 30.4**	**-0.7**
KSPA	**Keystone Colle**	**4.17**	**22**	Pn	**Pn**	**02 12 37.3**	**-0.3**
JSC	**Jenkinsville**	**4.40**	**220**	Pn	**Pn**	**02 12 40.6**	**-0.2**
V53A	**Saluda**	**4.49**	**245**	Pn	**Pn**	**02 12 42.1**	**0.0**
BG3	**Lake Jocassee**	**4.93**	**238**	Pn	**Pn**	**02 12 46.7**	**-1.3**
V52A	**Sevierville**	**4.99**	**250**	Pn	**Pn**	**02 12 47.4**	**-1.5**
KSCT	**Kent School, K**	**5.23**	**38**	Pn	**Pn**	**02 12 51.4**	**-0.7**
GMG	**Grassy Mountai**	**6.21**	**245**		Pn	02 12 59.2	-6.6

TEH ***13*** *02:11:37.0, 33°.62N×46°.02E, h8^{km}±316^{km}, ML2.5*

ISN ***13*** *02:11:37.8±2.1, 33°.63N×46°.01E, h6^{km}, ML2.1*

ISC 13 02:11:37.3±1.1**, 33°.60N**±0°.06×**46°.01E**±0°.06**, h8**^{km}±16^{km}**, n10,** σ**0^{s}.52**/13**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILBA	**Ilam Banvizeh**	**0.17**	**81**	Pg	**Pg**	**02 11 40.5**	**-0.3**
ILBA				Sg	**Sg**	**02 11 43.8**	**+0.5**
IBDR	**Badra**	**0.49**	**188**	*e*Pg	**Pg**	**02 11 46.0**	**-0.9**
	baz=7.0						
IBDR				*e*Sg	**Sg**	**02 11 54.0**	**+0.6**
IBDR				AML	AML	02 11 58.6	
	comp=N,110nm,0.6s						
IBDR				AML	AML	02 12 04.9	
	comp=E,102nm,0.5s						
IGHG	**Ghaleghazi**	**0.86**	**32**	Pg	**Pb**	**02 11 54.2**	**-0.4**
KCHF	**Cheshme Sefid,**	**1.09**	**52**	Pg	**Pb**	**02 11 58.4**	**-0.1**
IDHR	**Dehrash**	**1.14**	**16**	Pg	**Pb**	**02 11 59.1**	**-0.3**
KER	**Kermanshah**	**1.22**	**50**	Pg	**Pg**	**02 12 00.5**	**-0.2**
IKOM	**Komasi**	**1.37**	**65**	Pg	**Pg**	**02 12 03.7**	**0.0**
BHD	**Baghdad**	**1.40**	**257**	*e*Pg	**Pb**	**02 12 04.0**	**+0.3**
BHD				*e*Sg	**Sg**	**02 12 23.0**	**+0.6**
ILIN	**Lien**	**1.53**	**31**	Pg	**Pb**	**02 12 06.1**	**0.0**
IKFM	**Kafar-mosalman**	**1.54**	**92**	Pg	**Pg**	**02 12 07.0**	**+0.2**

DNK ***13*** *02:20:16.5±0.8, 51°.21N×15°.25E, h0^{km}, ML1.5(UPP), Suspected explosion*

UPP ***13*** *02:20:19.6±3.1, 51°.36N×15°.21E, h0^{km}, ML1.5*

IPEC ***13*** *02:20:19.4±0.2, 51°.51N×16°.17E, h1^{km}, ML2.7/6, Error ellipse: s-maj=2.0km s-min=1.1km az=37.0*

IDC ***13*** *02:20:20.9±0.7, 51°.46N×15°.97E, h0^{km}, mb3.3/1, mbtmp3.2/10, ML3.0/8, Error ellipse: s-maj=10.9km s-min=6.8km az=107.0*

BGR ***13*** *02:20:20.9±0.4, 51°.45N×16°.14E, h1^{km}, ML3.0/15, Error ellipse: s-maj=5.6km s-min=2.2km az=22.0*

PRU ***13*** *02:20:21.3±0.0, 51°.43N×16°.10E, h0^{km}*

VIE ***13*** *02:20:24.4, 51°.24N×15°.86E, h0^{km}, mb2.8/17, ml2.6/17, ms3.6/1   73 km NE of Liberec Suspected Mining induced.*

ISC 13 02:20:18.8±0.6**, 51°.52N**±0°.03×**16°.14E**±0°.02**, h0**^{km}**, n80,** σ**1^{s}.23**/154**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.69**	**172**	*i* Pg	**Pg**	**02 20 32.8**	**+0.9**
KSP				*e*Sg	**Sg**	**02 20 41.3**	**+0.5**
KSP	**Ksiaz**	**0.69**	**172**	*e*Pg	**Pg**	**02 20 32.9**	**+0.9**
KSP				*e*Sg	**Sg**	**02 20 41.2**	**+0.4**
CHVC	**Chvalec**	**0.94**	**183**	*e*PG	**Pg**	**02 20 37.6**	**+0.9**
CHVC				*e*SG	**Sg**	**02 20 49.3**	**+0.5**
OSTC	**Ostas**	**0.97**	**177**	*e*PG	**Pg**	**02 20 38.2**	**+0.9**
OSTC				*e*SG	**Sg**	**02 20 50.3**	**+0.5**
	comp=Z,72nm,0.4s						
UPC	**Upice**	**1.02**	**184**	*e*PG	**Pg**	**02 20 38.9**	**+0.6**
UPC				*e*SG	**Sg**	**02 20 51.7**	**+0.2**
	comp=Z,197nm,0.4s						
DPC	**Dobruska-Polom**	**1.18**	**174**	*e*PG	**Pg**	**02 20 41.5**	**+0.2**
DPC				*e*SG	**Sg**	**02 20 55.9**	**-0.7**
	comp=Z,55nm,0.3s						
DPC	**Dobruska-Polom**	**1.18**	**174**	*e*Pg	**Pg**	**02 20 41.6**	**+0.2**
DPC				*e*Sg	**Sg**	**02 20 56.3**	**-0.3**
PVCC	**Panska Ves**	**1.40**	**225**	*e*PG	**Pn**	**02 20 46.0**	**+0.4**
PVCC				*e*SG	**Sg**	**02 21 04.9**	**+1.1**
	comp=Z,245nm,0.3s						
KRLC	**Kraliky**	**1.50**	**164**	*e*PG	**Pn**	**02 20 47.2**	**+0.1**
KRLC				*e*SG	**Sg**	**02 21 05.5**	**-1.6**
BRG	**Berggiesshubel**	**1.52**	**246**	Pg	**Pb**	**02 20 48.6**	**+0.6**
BRG				Sg	**Sg**	**02 21 08.7**	**+1.0**
BRG				Amp		02 21 10.8	
	comp=Z,90nm,0.3s						
BRG	**Berggiesshubel**	**1.52**	**246**	*e*Pn	**Pn**	**02 20 47.1**	**-0.2**
BRG				*e*Sg	**Sn**	**02 21 08.5**	**+0.7**
GOPC	**GO Pecny, Ondr**	**1.82**	**209**	*e*PG	**Pb**	**02 20 53.0**	**0.0**
GOPC				*e*SG	**Sb**	**02 21 17.2**	**+0.8**
PRU	**Pruhonice**	**1.84**	**214**	*e*PN	**Pn**	**02 20 51.6**	**0.0**
PRU				*e*PG	**Pb**	**02 20 53.2**	**-0.1**
PRU				*e*SG	**Sb**	**02 21 17.1**	**+0.3**
	comp=Z,45nm,0.6s						
FBE	**Freiberg**	**1.85**	**252**	*e*Pg	**Pb**	**02 20 53.8**	**+0.4**
FBE				*e*Sg	**Sg**	**02 21 18.6**	**+0.4**
RAC	**Raciborz**	**1.94**	**137**	*e*PG	**Pg**	**02 20 56.0**	**0.0**
RAC				*e*SG	**Sg**	**02 21 21.0**	**-0.2**
MORC	**Moravsky Berou**	**1.96**	**152**	*e*Pn	**Pn**	**02 20 53.7**	**+0.4**
MORC				*e*Sg	**Sb**	**02 21 20.8**	**+0.4**
MORC	**Moravsky Berou**	**1.96**	**152**	*e*Pn	**Pn**	**02 20 53.5**	**+0.1**
	baz=334						
MORC				*e*Sg	**Sb**	**02 21 20.6**	**+0.2**
	comp=Z,55nm,0.6s,baz=334						
CLL	**Collm**	**1.97**	**265**	*e*Pn	**Pn**	**02 20 54.0**	**+0.5**
CLL				*e*Pg	**Pb**	**02 20 56.0**	**+0.4**
CLL				*i* x	x	02 21 00.0	
CLL				*e*x	x	02 21 11.0	
CLL				*e*Sg	**Sg**	**02 21 23.0**	**+0.8**
	comp=Z,30nm,0.4s						
CLL	**Collm**	**1.97**	**265**	*e*Pn	**Pn**	**02 20 53.6**	**+0.2**
CLL				*e*Sg	**Sg**	**02 21 23.3**	**+1.1**
OKC	**Ostrava-Krasne**	**2.12**	**142**	*e*PN	**Pn**	**02 20 55.2**	**-0.2**
OKC				*e*PG	**Pb**	**02 20 58.6**	**+0.6**
OKC				*e*SG	**Sb**	**02 21 25.3**	**+0.5**
	comp=Z,62nm,0.6s						
OKC	**Ostrava-Krasne**	**2.12**	**142**	*e*Pn	**Pn**	**02 20 54.2**	**-1.2**
OKC				*e*Sg	**Sb**	**02 21 25.3**	**+0.5**
VRAC	**Vranov**	**2.23**	**172**	Pn	**Pn**	**02 20 58.6**	**+1.5**
	comp=Z,3.0nm,0.3s,baz=339,slow=14,SNR=24						
VRAC				Lg	Lg	02 21 29.5	
	comp=Z,3.9nm,0.3s,baz=311,slow=12,SNR=3.8						
	comp=Z,8.8nm,0.3s						
VRAC	**Vranov**	**2.23**	**172**	*e*Pn	**Pn**	**02 20 57.4**	**+0.3**
	baz=353						
VRAC				*e*Sg	**Sb**	**02 21 28.9**	**+0.7**
	comp=Z,41nm,0.6s,baz=353						
TREC	**Trest**	**2.27**	**191**	*e*PG	**Pb**	**02 21 01.7**	**+1.1**
TREC				*e*SG	**Sb**	**02 21 30.2**	**+1.0**
	comp=Z,35nm,0.4s						
KRUC	**Moravsky**	**2.47**	**176**	*e*Pn	**Pn**	**02 21 00.6**	**+0.3**
	baz=357						
KRUC				*e*Sg	**Sb**	**02 21 36.5**	**+1.6**
	comp=Z,44nm,0.8s,baz=357						
TANN	**Tannenbergstha**	**2.57**	**246**	*e*Pn	**Pn**	**02 21 02.5**	**+0.7**
TANN				*e*Sg	**Sg**	**02 21 41.6**	**+0.2**
WERD	**Werda**	**2.65**	**248**	*e*Pn	**Pn**	**02 21 03.5**	**+0.7**
WERD				*e*Sg	**Sg**	**02 21 44.4**	**+0.5**
OJC	**Ojcow**	**2.66**	**118**	*e*Pg	**Pg**	**02 21 12.0**	**+2.2**
OJC				*e*Sg	**Sg**	**02 21 46.3**	**+2.1**
OJC	**Ojcow**	**2.66**	**118**	*e*Pn	**Pn**	**02 21 03.5**	**+0.6**
NKC	**Novy Kostel**	**2.67**	**243**	*e*PN	**Pn**	**02 21 03.9**	**+0.9**
NKC				*e*PG	**Pg**	**02 21 10.1**	**+0.2**
NKC				*e*SG	**Sg**	**02 21 45.6**	**+1.1**
	comp=Z,53nm,0.4s						
JAVC	**Velka Javorina**	**2.84**	**159**	*e*Pn	**Pn**	**02 21 05.5**	**+0.1**
	baz=341						
JAVC				*e*Sg	**Sb**	**02 21 47.8**	**+2.1**
	comp=Z,40nm,1.1s,baz=341						
KHC	**Kasperske Hory**	**2.90**	**215**	*e*PN	**Pn**	**02 21 06.9**	**+0.7**
KHC				*e*PG	**Pb**	**02 21 12.6**	**+1.2**
KHC				*e*SN	**Sn**	**02 21 41.2**	**-0.6**
KHC				*e*SG	**Sg**	**02 21 51.1**	**-0.8**
	comp=Z,23nm,0.3s						
CKRC	**Cesky Krumlov**	**2.95**	**204**	*e*PN	**Pn**	**02 21 08.0**	**+1.1**
CKRC				*e*PG	**Pb**	**02 21 13.6**	**+1.4**
CKRC				*e*SG	**Sb**	**02 21 50.7**	**+1.9**
	comp=Z,22nm,0.4s						
MOX	**Moxa**	**2.98**	**255**	*e*Pn	**Pn**	**02 21 08.1**	**+0.7**
MOX				*e*Sg	**Sg**	**02 21 55.3**	**+0.7**
MANZ	**Manzenberg**	**2.98**	**241**	*e*Pn	**Pn**	**02 21 08.2**	**+0.8**
ROTZ	**Rotzenmuhle**	**3.06**	**236**	*e*Pn	**Pn**	**02 21 09.3**	**+0.9**
GEC2	**GERESS Array S**	**3.10**	**211**	*e*Pn	**Pn**	**02 21 09.9**	**+0.8**
GERES	**GERESS Array B**	**3.10**	**211**	Pn	**Pn**	**02 21 10.1**	**+1.0**
	comp=Z,1.4nm,0.3s,baz=28,slow=13,SNR=38						
GERES				Sn	**Sn**	**02 21 45.3**	**-1.6**
	comp=Z,3.1nm,0.3s,baz=28,slow=26,SNR=3.1						
GERES				Lg	Lg	02 21 57.9	
	comp=Z,5.4nm,0.3s,baz=32,slow=26,SNR=10						
	comp=Z,2.5nm,0.4s						
LANS	**Liptovska Anna**	**3.19**	**137**	*e*PN	**Pn**	**02 21 11.5**	**+1.3**
LANS				*e*PG	**Pg**	**02 21 19.2**	**-0.7**
LANS				*e*SG	**Sg**	**02 22 02.5**	**+1.2**
MODS	**Modra-Piesok**	**3.24**	**166**	*e*PG	**Pg**	**02 21 20.8**	**0.0**
MODS				*e*SG	**Sg**	**02 22 01.3**	**-1.4**
NIE	**Niedzica**	**3.39**	**127**	*e*P	**Pg**	**02 21 24.3**	**+0.6**
NIE				*e*S	**Sg**	**02 22 08.0**	**+0.3**
VYHS	**Vyhne**	**3.50**	**149**	*e*PN	**Pn**	**02 21 14.6**	**+0.2**
VYHS				*e*PG	**Pg**	**02 21 25.0**	**-0.7**
VYHS				*e*SG	**Sb**	**02 22 07.2**	**+2.7**
CONA	**Conrad Observa**	**3.60**	**183**	*i* Pn	**Pn**	**02 21 16.9**	**+1.0**
	comp=Z,3.1nm,0.4s,SNR=11						
CONA				*e*Sg	**Sg**	**02 22 15.6**	**+1.1**
	comp=Z,22nm,0.5s						
CLZ	**Clausthal**	**3.60**	**277**	*e*Pn	**Pn**	**02 21 17.4**	**+1.5**
CLZ				*e*Sg	**Sg**	**02 22 16.0**	**+1.5**
GRF	**Grafenberg Arr**	**3.63**	**242**	*e*Pn	**Pn**	**02 21 17.1**	**+0.9**
GRF				*e*Sg	**Sg**	**02 22 14.4**	**-0.8**
RONA	**Rosalia, Austr**	**3.83**	**178**	*i* Pn	**Pn**	**02 21 21.6**	**+2.6**
	comp=Z,0.8nm,0.2s						
RONA				*e*Sg	**Sg**	**02 22 19.1**	**-2.6**
	comp=Z,9.4nm,0.4s						
MOA	**Molln**	**3.87**	**199**	*i* Pn	**Pn**	**02 21 20.4**	**+0.8**
	comp=Z,2.1nm,0.3s						
MOA				*e*Sg	**Sg**	**02 22 22.5**	**-0.6**
	comp=Z,14nm,0.4s						
STHS	**Stebnicka Huta**	**3.88**	**121**	*e*PN	**Pn**	**02 21 21.2**	**+1.5**
STHS				*e*PG	**Pg**	**02 21 33.7**	**+0.5**
STHS				*e*SG	**Sg**	**02 22 27.0**	**+3.5**
BIOA	**Bad Ischl, Aus**	**4.16**	**204**	*i* Pn	**Pn**	**02 21 24.3**	**+0.7**
	comp=Z,3.4nm,0.3s,SNR=8.1						
BIOA				*i* Sg	**Sg**	**02 22 31.4**	**-1.1**
	comp=Z,17nm,0.4s						
ARSA	**Arzberg**	**4.29**	**186**	*i* Pn	**Pn**	**02 21 27.6**	**+2.2**
	comp=Z,2.0nm,0.3s						
ARSA				*e*Sg	**Sg**	**02 22 37.6**	**+1.0**
	comp=Z,4.7nm,0.4s						
LUNU	**Lund**	**4.42**	**340**	P	**Pn**	**02 21 26.8**	**-0.3**
LUNU				S	**Sn**	**02 22 18.9**	**-0.3**
LUNU	**Lund**	**4.42**	**340**	P	**Pn**	**02 21 26.8**	**-0.3**
LUNU				S	**Sn**	**02 22 18.9**	**-0.3**
KBA	**Koelnbreinsper**	**4.81**	**203**	*i* Pn	**Pn**	**02 21 33.5**	**+1.0**
	comp=Z,0.8nm,0.3s,SNR=5.5						
KBA				*e*Sg	**Sg**	**02 22 52.3**	**-0.8**
	comp=Z,7.8nm,0.4s						
SOKA	**Soboth**	**4.90**	**189**	*i* Pn	**Pn**	**02 21 36.2**	**+2.4**
	comp=Z,1.1nm,0.3s						
SOKA				*e*Sg	**Sg**	**02 22 55.3**	**-0.9**
	comp=Z,1.8nm,0.5s						
BJUU	**Bjuv**	**4.92**	**339**	P	**Pn**	**02 21 33.7**	**-0.2**
BJUU				S	**Sn**	**02 22 29.8**	**-1.7**
BJUU	**Bjuv**	**4.92**	**339**	P	**Pn**	**02 21 33.7**	**-0.2**
BJUU				S	**Sn**	**02 22 29.8**	**-1.7**
OBKA	**Obir**	**5.12**	**192**	*e*Pn	**Pn**	**02 21 38.5**	**+1.6**
	comp=Z,0.5nm,0.3s						
OBKA				*e*Sg	**Sg**	**02 23 03.5**	**+0.2**
	comp=Z,6.9nm,0.7s						
DEL	**Delary**	**5.14**	**346**	P	**Pn**	**02 21 37.1**	**+0.2**
DEL	**Delary**	**5.14**	**346**	P	**Pn**	**02 21 37.1**	**+0.2**
WATA	**Walderalm**	**5.14**	**217**	*i* Pn	**Pn**	**02 21 38.7**	**+1.6**
	comp=Z,2.2nm,0.4s,SNR=4.2						
WATA				*e*Sg	**Sg**	**02 23 04.5**	**+0.7**
	comp=Z,8.2nm,0.6s						
MYKA	**Terra Mystica**	**5.16**	**199**	*e*Pn	**Pn**	**02 21 39.0**	**+1.6**
	comp=Z,0.9nm,0.3s						
MYKA				*e*Sg	**Sg**	**02 23 03.5**	**-1.1**
	comp=Z,2.2nm,0.4s						
WTTA	**Wattenberg**	**5.18**	**216**	*e*Pn	**Pn**	**02 21 39.2**	**+1.6**
	comp=Z,1.6nm,0.4s,SNR=4.3						
WTTA				*e*Sg	**Sg**	**02 23 05.1**	**+0.1**
	comp=Z,4.1nm,0.4s						
MOTA	**Moosalm**	**5.32**	**220**	*e*Pn	**Pn**	**02 21 40.0**	**+0.5**
	comp=Z,0.6nm,0.2s						
MOTA				*e*Sg	**Sg**	**02 23 08.0**	**-1.4**
	comp=Z,4.9nm,0.5s						
ABTA	**Abfaltersbach**	**5.34**	**208**	*i* Pn	**Pn**	**02 21 41.8**	**+2.1**
	comp=Z,1.6nm,0.7s						
ABTA				*e*Sg	**Sg**	**02 23 08.2**	**-2.0**
	comp=Z,16nm,0.9s						
RETA	**Reutte**	**5.34**	**223**	*e*Pn	**Pn**	**02 21 40.2**	**+0.3**
	comp=Z,1.3nm,0.3s,SNR=4.8						
RETA				*e*Sg	**Sg**	**02 23 10.0**	**-0.4**
	comp=Z,1.5nm,0.3s						
SQTA	**Sankt Quirin**	**5.37**	**219**	*i* Pn	**Pn**	**02 21 42.0**	**+1.6**
	comp=Z,1.0nm,0.2s,SNR=7.7						
SQTA				*e*Sg	**Sg**	**02 23 12.0**	**+0.7**
	comp=Z,1.9nm,0.3s						
FETA	**Feichten**	**5.73**	**220**	*i* Pn	**Pn**	**02 21 45.9**	**+0.7**
	comp=Z,1.1nm,0.6s						
FETA				*e*Sg	**Sg**	**02 23 21.4**	**-1.2**
	comp=Z,1.0nm,0.6s						
FABU	**Falkenberg**	**5.84**	**341**	P	**Pn**	**02 21 46.6**	**+0.1**
FABU	**Falkenberg**	**5.84**	**341**	P	**Pn**	**02 21 46.6**	**+0.1**
DAVA	**Damuels**	**5.88**	**226**	*e*Pn	**Pn**	**02 21 46.3**	**-1.0**
	comp=Z,0.9nm,0.2s						
DAVA				*e*Sg	**Sg**	**02 23 26.5**	**-1.2**
	comp=Z,2.2nm,0.3s						
GNOU	**Gnosjoe**	**5.95**	**347**	P	**Pn**	**02 21 48.6**	**+0.6**
GNOU	**Gnosjoe**	**5.95**	**347**	P	**Pn**	**02 21 48.6**	**+0.6**
DAVOX	**Davos/Dischmat**	**6.27**	**223**	Pn	**Pn**	**02 21 53.6**	**+0.9**
	comp=Z,0.7nm,0.3s						
DAVOX				Sn	**Sn**	**02 23 02.1**	**-3.0**
	baz=144,slow=22						
DAVOX				Lg	Lg	02 23 38.0	
	comp=Z,0.3nm,0.3s,baz=192,slow=21,SNR=2.1						
AKASG	**Malin Array Be**	**8.28**	**91**	Pn	**Pn**	**02 22 20.0**	**0.0**
	comp=Z,0.6nm,0.3s,baz=278,slow=12,SNR=6.7						
AKASG				Sn	**Sn**	**02 23 50.7**	**-3.4**
	comp=Z,0.6nm,0.3s,baz=319,slow=30,SNR=4.1						
AKASG				Lg	Lg	02 24 46.0	
	baz=194,slow=12						
	comp=Z,0.6nm,0.5s						
HFS	**Hagfors**	**8.74**	**352**	Pn	**Pn**	**02 22 27.0**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=162,slow=15,SNR=4.5						
HFS				Lg	Lg	02 25 01.6	
	baz=176,slow=33,SNR=2.0						
	comp=Z,0.5nm,0.3s						
NOA	**NORSAR Array B**	**9.92**	**346**	Pn	**Pn**	**02 22 41.0**	**-1.5**
	baz=161,slow=19,SNR=3.9						
	comp=Z,0.2nm,0.5s						
FINES	**FINESS Array B**	**11.35**	**25**	Pn	**Pn**	**02 23 01.6**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=209,slow=11,SNR=9.7						
FINES				Sn	**Sn**	**02 25 03.6**	**-5.7**
	comp=Z,0.1nm,0.3s,baz=204,slow=21,SNR=4.2						
	comp=Z,1.3nm,0.5s						
EKA	**Eskdalemuir Ar**	**12.12**	**296**	Pn	**Pn**	**02 23 12.7**	**+0.2**
	baz=104,slow=13						
	comp=Z,0.2nm,0.3s						
ARCES	**ARCESS Array B**	**18.61**	**10**	Pn	**P**	**02 24 35.5**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=197,slow=10,SNR=9.7						
	comp=Z,0.7nm,0.4s						
YKA	**Yellowknife Ar**	**59.85**	**336**	P	**P**	**02 30 27.2**	**+1.7**
	comp=Z,0.2nm,0.5s,baz=34,slow=6.2,SNR=4.1						
	comp=Z,0.2nm,0.5s						

ROM 13 02:22:21.6±0.1**, 42°.621N**±0°.003×**13°.362E**±0°.004**, h6**^{km}**, ML1.0**/8**, Error ellipse: s-maj=0.3km s-min=0.2km az=36.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	**0.02**	**295**	P	Pg	02 22 23.0	0.0
SMA1				S	Sg	02 22 23.8	-0.2
SMA1				AML	AML		
	comp=E,1004μm,0.7s						
SMA1				AML	AML		
	comp=N,852μm,0.2s						
SMA1				AML	AML		
	comp=N,627μm,0.1s						
SMA1				AML	AML		
	comp=E,997μm,0.1s						
CAMP	**Campotosto**	**0.09**	**158**	P	Pg	02 22 24.2	+0.4
CAMP				S	Sg	02 22 25.9	+0.6
CAMP				AML	AML		
	comp=E,46μm,0.7s						
CAMP				AML	AML		
	comp=N,64μm,0.7s						
CAMP				AML	AML		
	comp=N,41μm,0.2s						
CAMP				AML	AML		
	comp=E,38μm,0.2s						
RM33	**Pellescritta (**	**0.16**	**224**	P	Pg	02 22 25.3	+0.5
RM33				S	Sg	02 22 28.2	+1.1
RM33				AML	AML		
	comp=E,100μm,0.2s						
RM33				AML	AML		
	comp=N,89μm,0.3s						
RM33				AML	AML		
	comp=E,99μm,0.2s						
RM33				AML	AML		
	comp=E,142μm,0.6s						
RM33				AML	AML		
	comp=N,89μm,0.3s						
TERO	**Teramo**	**0.18**	**89**	P	Pg	02 22 25.9	+0.6
TERO				S	Sg	02 22 29.0	+1.4
TERO				AML	AML		
	comp=E,186μm,0.2s						
TERO				AML	AML		

	comp=N,193µm,0.7s						
TERO				AML	AML		
	comp=E,146µm,0.2s						
TERO				AML	AML		
	comp=N,140µm,0.1s						
TERO				AML	AML		
	comp=N,133µm,0.2s						
T1247	**Pizzolo (AQ)**	**0.19**	**195**	P	Pg	02 22 25.9	+0.5
T1247				AML	AML		
	comp=E,46µm,0.2s						
T1247				AML	AML		
	comp=N,47µm,0.2s						
GIGS	**Gran Sasso**	**0.23**	**138**	P	Pg	02 22 26.6	+0.5
GIGS				S	Sg	02 22 30.4	+1.2
GIGS				AML	AML		
	comp=N,13µm,0.2s						
GIGS				AML	AML		
	comp=E,21µm,0.1s						
T1241	**Roccafluvione,**	**0.24**	**12**	P	Pg	02 22 27.1	+0.6
T1241				S	Sg	02 22 31.1	+1.5

DJA ***13*** *02:23:12.1±0.2, 9°S±3°×11°9E±°, h60^{km}±10^{km}, M4.5/18, mb4.7/13, mB5.0/7, MLv4.6/18, Mw(mB)4.4/7*

IDC ***13*** *02:23:18.6±4.3, 8°.84S×119°.26E, h144^{km}±35^{km}, mb3.6/3, mbtmp4.2/5, Error ellipse: s-maj=64.1km s-min=15.7km az=60.0*

ISC 13 02:23:12.3±0.8, **9°.24S**±0°.07×**118°.71E**±0°.05, **h100**^{km}**, n33,** σ**2^{s}.12**/36**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.01**	**294**	P	**Pn**	**02 23 31.2**	**-1.6**
PLAI	**Plampang**	**1.01**	**294**	P	**Pn**	**02 23 31.0**	**-1.8**
PLAI				S	**Sn**	**02 23 45.1**	**-3.2**
TWSI	**Taliwang, Sumb**	**1.87**	**285**	P	**Pn**	**02 23 42.4**	**-0.8**
TWSI				S	**Sn**	**02 24 05.9**	**-0.9**
BASI	**Baing, Sumba**	**2.08**	**118**	P	**Pn**	**02 23 44.4**	**-1.6**
DNP	**Denpasar**	**3.50**	**279**	P	**Pn**	**02 24 04.6**	**-0.2**
MMRI	**Maumere**	**3.54**	**81**	P	**Pn**	**02 24 06.7**	**+1.4**
MMRI	**Maumere**	**3.54**	**81**	P	**Pn**	**02 24 05.0**	**-0.3**
BSSI	**Bau Bau, Buton**	**3.54**	**30**	P	**Pn**	**02 24 04.8**	**-0.6**
IGBI	**Denpasar**	**3.54**	**276**	P	**Pn**	**02 24 05.9**	**+0.5**
SRBI	**Singaraja**	**3.64**	**288**	P	**Pn**	**02 24 05.8**	**-0.9**
BKSI	**Bulukumba**	**4.13**	**20**	P	**Pn**	**02 24 12.9**	**-0.5**
KAPI	**Kappang**	**4.32**	**14**	P	**Pn**	**02 24 15.6**	**-0.3**
	22nm,0.3s,baz=190,slow=7.6,SNR=34						
KAPI				S	**Sn**	**02 25 02.3**	**-2.9**
	52nm,0.3s,baz=168,slow=23,SNR=11						
KAPI	**Kappang**	**4.32**	**14**	P	**Pn**	**02 24 16.0**	**+0.1**
ABJI	**Asem Bagus**	**4.65**	**288**	P	**Pn**	**02 24 21.4**	**+1.1**
BLJI	**Banyuglugur**	**5.27**	**286**	P	**Pn**	**02 24 29.0**	**+0.3**
	91nm,0.5s,0.5nm						
GMJI	**Gumukmas**	**5.29**	**280**	P	**Pn**	**02 24 28.5**	**-0.5**
	127nm,0.7s,1µm0.4nm						
SPSI	**Sidrap Palu**	**5.34**	**11**	P	**Pn**	**02 24 29.7**	**0.0**
	70nm,0.7s,1µm0.2nm						
SOEI	**Soe**	**5.51**	**96**	P	**Pn**	**02 24 33.0**	**+1.0**
SOEI	**Soe**	**5.51**	**96**	P	**Pn**	**02 24 32.5**	**+0.5**
	148nm,0.8s,1µm0.5nm						
PWJI	**Pagerwojo**	**6.93**	**280**	P	**Pn**	**02 24 53.3**	**+2.0**
	30nm,1.1s,0.4nm						
SANI	**Sanana**	**10.17**	**46**	P	**Pn**	**02 25 37.3**	**+1.9**
	11nm,0.8s						
MRSI	**Marisa**	**10.17**	**19**	P	**Pn**	**02 25 36.7**	**+1.3**
	25nm,1.3s						
NLAI	**Namlea**	**10.25**	**55**	P	**Pn**	**02 25 39.2**	**+2.7**
	7.2nm,0.7s						
GTOI	**Gorontalo**	**10.70**	**24**	P	**Pn**	**02 25 46.1**	**+3.4**
	6.4nm,0.8s						
MTN	**Manton Dam**	**12.71**	**107**	P	**Pn**	**02 26 09.5**	**0.0**
KDU	**Kakadu**	**13.94**	**105**	P	**Pn**	**02 26 26.4**	**+0.8**
MDSI	**Maura Dua**	**15.18**	**287**	P	**Pn**	**02 26 42.2**	**+0.8**
WRA	**Warramunga Arr**	**18.48**	**127**	P	**P**	**02 27 21.4**	**+0.9**
	7.0nm,0.8s,baz=300,slow=13,SNR=48						
WRA				S	**S**	**02 30 37.6**	**-8.7**
	1.7nm,0.8s,baz=297,slow=22,SNR=6.3						
ASAR	**Alice Springs**	**20.42**	**136**	P	Pn	02 27 44.0	-0.7
	9.2nm,0.7s,baz=326,slow=12,SNR=88						
ASAR				S	**S**	**02 31 24.6**	**-0.4**
	2.5nm,0.8s,baz=312,slow=24,SNR=9.2						
	9.2nm,0.7s						
AS01	**Alice Springs**	**20.45**	**136**	P	Pn	02 27 44.5	-0.5
QIS	**Mount Isa**	**23.09**	**122**	P	**P**	**02 28 11.1**	**+1.5**
STKA	**Stephens Creek**	**30.95**	**140**	P	**P**	**02 29 22.2**	**+2.2**
	2.2nm,0.8s,baz=316,slow=10,SNR=4.0						
	2.2nm,0.8s						
SONM	**Songino Array**	**57.86**	**350**	P	**P**	**02 32 53.1**	**-0.6**
	0.5nm,0.4s,baz=175,slow=7.2,SNR=4.8						
	0.5nm,0.4s						

ROM 13 02:23:15.0±0.0**, 42°.800N**±0°.002×**13°.155E**±0°.004**, h10**^{km}**, ML1.0**/15**, 2C-1D, Error ellipse: s-maj=0.2km s-min=0.2km az=115.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.06**	**135**	⇓P	Pg	02 23 17.5	+0.2
T1214				S	Sg	02 23 18.9	0.0
T1214				AML	AML		
	comp=N,288µm,0.2s						
T1214				AML	AML		
	comp=E,230µm,0.5s						
T1214				AML	AML		
	comp=E,238µm,0.5s						
T1214				AML	AML		
	comp=E,231µm,0.5s						
T1214				AML	AML		
	comp=N,292µm,0.2s						
T1214				AML	AML		
	comp=N,255µm,0.2s						
T1214				AML	AML		
	comp=E,158µm,0.2s						
T1214				AML	AML		
	comp=E,174µm,0.2s						
T1214				AML	AML		
	comp=N,292µm,0.2s						
T1212	**Cascia, Frazio**	**0.09**	**239**	P	Pg	02 23 18.1	+0.5
T1212				S	Sg	02 23 20.0	+0.5
T1212				AML	AML		
	comp=E,242µm,0.6s						
T1212				AML	AML		
	comp=N,320µm,0.1s						
T1212				AML	AML		
	comp=E,214µm,0.1s						
T1212				AML	AML		
	comp=N,342µm,0.1s						
T1212				AML	AML		
	comp=N,320µm,0.1s						
T1212				AML	AML		
	comp=E,214µm,0.1s						
T1212				AML	AML		
	comp=E,232µm,0.1s						
T1212				AML	AML		
	comp=N,342µm,0.1s						
MC2	**Monte Cornacci**	**0.12**	**13**	P	Pg	02 23 18.6	+0.5
MC2				S	Sg	02 23 21.1	+0.8
T1218	**Civita (PG)**	**0.13**	**193**	P	Pg	02 23 18.7	+0.5
T1218				S	Sg	02 23 21.2	+0.7
T1218				AML	AML		
	comp=N,276µm,0.7s						
T1218				AML	AML		
	comp=E,131µm,0.4s						
T1218				AML	AML		
	comp=N,248µm,0.2s						
T1218				AML	AML		
	comp=E,165µm,0.8s						
T1218				AML	AML		
	comp=N,276µm,0.7s						
T1218				AML	AML		
	comp=N,248µm,0.2s						
T1218				AML	AML		
	comp=N,252µm,0.2s						
T1218				AML	AML		
	comp=N,248µm,0.2s						
T1218				AML	AML		
	comp=E,133µm,0.2s						
T1218				AML	AML		
	comp=E,114µm,0.2s						
T1216	**Preci, Frazion**	**0.14**	**312**	P	Pg	02 23 18.8	+0.6
T1216				S	Sg	02 23 20.8	+0.4
T1216				AML	AML		
	comp=N,53µm,0.1s						
T1216				AML	AML		
	comp=E,47µm,0.1s						
MMO1	**Montemonaco**	**0.16**	**52**	P	Pg	02 23 19.1	+0.5
MMO1				S	Sg	02 23 22.3	+1.1
T1217	**Poggiodomo (PG**	**0.19**	**242**	P	Pg	02 23 19.6	+0.6
T1217				S	Sg	02 23 23.0	+1.2
T1217				AML	AML		
	comp=E,58µm,0.2s						
T1217				AML	AML		
	comp=N,41µm,0.1s						
T1217				AML	AML		
	comp=E,29µm,0.1s						
T1215	**Vallo di Nera,**	**0.21**	**271**	P	Pg	02 23 20.1	+0.6
T1215				S	Sg	02 23 23.6	+1.2
T1215				AML	AML		
	comp=E,23µm,0.1s						
T1215				AML	AML		
	comp=N,30µm,0.1s						
T1241	**Roccafluvione,**	**0.21**	**74**	⇑P	Pg	02 23 20.1	+0.6
T1241				S	Sg	02 23 23.7	+1.2
T1241				AML	AML		
	comp=E,53µm,0.2s						
T1241				AML	AML		
	comp=N,70µm,0.1s						
T1241				AML	AML		
	comp=N,70µm,0.1s						
T1241				AML	AML		
	comp=E,53µm,0.2s						
T1256	**Bolognola (MC)**	**0.21**	**14**	P	Pg	02 23 20.1	+0.6
T1256				S	Sg	02 23 23.8	+1.2
T1256				AML	AML		
	comp=E,50µm,0.3s						
FDMO	**Fiordimonte**	**0.24**	**348**	⇑P	Pg	02 23 20.6	+0.6
FDMO				S	Sg	02 23 24.8	+1.5
FDMO				AML	AML		
	comp=E,26µm,1.5s						
FDMO				AML	AML		
	comp=N,30µm,1.5s						
FDMO				AML	AML		
	comp=N,26µm,0.2s						
FDMO				AML	AML		
	comp=E,23µm,0.1s						
T1219	**Muccia, Frazio**	**0.28**	**337**	P	Pg	02 23 21.3	+0.6
T1219				S	Sb	02 23 25.9	-1.1
T1219				AML	AML		
	comp=E,60µm,0.4s						
T1219				AML	AML		
	comp=N,49µm,1.6s						
T1219				AML	AML		
	comp=N,40µm,0.2s						
T1219				AML	AML		
	comp=E,43µm,0.2s						
T1219				AML	AML		
	comp=N,37µm,0.1s						
T1219				AML	AML		
	comp=E,57µm,0.2s						
RM33	**Pellescritta (**	**0.29**	**171**	P	Pg	02 23 21.5	+0.5
RM33				S	Sg	02 23 26.1	+1.1
RM33				AML	AML		
	comp=E,28µm,0.1s						
RM33				AML	AML		
	comp=N,24µm,0.2s						
T1220	**Camerino, Fraz**	**0.31**	**351**	P	Pg	02 23 22.0	+0.6
T1220				S	Sb	02 23 27.2	-0.8
T1220				AML	AML		
	comp=N,94µm,0.3s						
T1220				AML	AML		
	comp=E,88µm,0.5s						
T1220				AML	AML		
	comp=N,99µm,0.3s						
T1211	**Morro Reatino**	**0.35**	**220**	P	Pg	02 23 22.4	+0.4
T1211				S	Sb	02 23 27.9	-1.0
T1211				AML	AML		
	comp=N,93µm,0.7s						
T1211				AML	AML		
	comp=N,39µm,0.3s						
T1211				AML	AML		
	comp=E,28µm,0.1s						
ARRO	**Arrone**	**0.36**	**233**	P	Pg	02 23 22.7	+0.5
ARRO				S	Sb	02 23 29.2	-0.1
ARRO				AML	AML		
	comp=E,11µm,0.2s						
ARRO				AML	AML		
	comp=N,10µm,0.3s						
ASSB	**Assisi San Ben**	**0.44**	**304**	P	Pg	02 23 24.1	+0.4
ASSB				S	Sb	02 23 31.0	-0.6
ASSB				AML	AML		
	comp=E,11µm,0.1s						
ASSB				AML	AML		
	comp=N,10µm,0.1s						

TIF ***13*** *02:25:18.6, 42°.43N×43°.76E, h8^{km}±1^{km}*

MOS ***13*** *02:25:19.8±0.0, 42°.42N×43°.69E, h4^{km}, MPVA5.0*

AZER ***13*** *02:25:20.0±0.7, 42°.44N×43°.54E, h9^{km}, Error ellipse: s-maj=8.2km s-min=5.9km az=40.0*

CFUSG ***13*** *02:25:19.2, 42°.37N×43°.48E, h12^{km}, mb3.4/2, Georgia Magtype MSH 3.3 from 5 stations*

NORS ***13*** *02:25:19.7±0.0, 42°.45N×43°.66E, h1^{km}, MPVA5.1*

IDC ***13*** *02:25:19.1±0.5, 42°.38N×43°.65E, h0^{km}, mb3.9/15, mbtmp4.0/21, ML3.8/6, MS3.4/12, Error ellipse: s-maj=9.1km s-min=6.6km az=60.0*

ISK ***13*** *02:25:20.1, 42°.40N×43°.55E, h2^{km}, ML4.3/13*

NEIC ***13*** *02:25:20.6±1.6, 42°.42N±0°.03×43°.62E±0°.08, h12^{km}±5^{km}, mb4.4/52, Error ellipse: s-maj=9.1km s-min=2.8km az=107.0*

ISC 13 02:25:19.9±0.6**, 42°.42N**±0°.01×**43°.73E**±0°.01**, h10**^{km}±4^{km}**, n398,** σ**1^{s}.78**/540**, mb4.3**/57**, MS3.2**/8**, 40C-29D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONI	**Oni**	**0.27**	**310**	Pg	**Pg**	**02 25 25.0**	**-0.3**
ONI				Sg	**Sg**	**02 25 29.1**	**+0.1**
ONI	**Oni**	**0.27**	**310**		**Pg**	**02 25 25.1**	**-0.3**
ONI				Sg	**Sg**	**02 25 28.7**	**-0.3**
ONI	**Oni**	**0.27**	**310**	PG	**Pg**	**02 25 25.1**	**-0.3**
ONI						02 25 28.7	
ONI	**Oni**	**0.27**	**310**	P	**Pg**	**02 25 25.1**	**-0.2**
ONI				S	**Sg**	**02 25 29.1**	**+0.1**
ZEI	**Tsey**	**0.39**	**19**	*i* Pg	**Pg**	**02 25 26.7**	**-0.9**
ZEI				*e*Sg	**Sg**	**02 25 32.5**	**-0.3**
ZEI	**Tsey**	**0.39**	**19**	⇑*i*PG	**Pg**	**02 25 26.9**	**-0.8**
ZEI				*e*S	**Sg**	**02 25 32.8**	**-0.1**
DIGR	**Digorskoe uzhe**	**0.49**	**347**	*i* Pg	**Pg**	**02 25 28.8**	**-0.7**
DIGR				*e*Sg	**Sg**	**02 25 35.1**	**-0.9**
DIGR	**Digorskoe uzhe**	**0.49**	**347**	*e*PG	**Pg**	**02 25 28.9**	**-0.7**
DIGR				*e*S	**Sg**	**02 25 35.4**	**-0.7**
TKB	**Tkibuli**	**0.55**	**263**	PG	**Pg**	**02 25 30.6**	**0.0**
TKB				S	**Sb**	**02 25 39.6**	**-0.1**
TKB	**Tkibuli**	**0.55**	**263**	P	**Pg**	**02 25 30.6**	**0.0**
TKB				S	**Sb**	**02 25 39.6**	**-0.1**
GUDG	**Gudauri**	**0.55**	**85**	PG	**Pg**	**02 25 29.5**	**-1.3**
GUDG	**Gudauri**	**0.55**	**85**	P	**Pg**	**02 25 29.4**	**-1.3**
LACR	**Lac**	**0.58**	**46**	*i* Pg	**Pg**	**02 25 30.2**	**-1.1**
LACR				*e*Sg	**Sg**	**02 25 38.7**	**-0.3**
LACR	**Lac**	**0.58**	**46**	*i* PG	**Pg**	**02 25 30.2**	**-1.1**
LACR				*e*S	**Sg**	**02 25 38.7**	**-0.3**
PNSH	**Pansheti**	**0.69**	**72**	*e*Pg	**Pg**	**02 25 32.1**	**-1.2**
PNSH				*e*Sg	**Sg**	**02 25 41.2**	**-1.1**
PNSH	**Pansheti**	**0.69**	**72**	⇑PG	**Pg**	**02 25 32.1**	**-1.2**
PNSH				S	**Sg**	**02 25 41.2**	**-1.1**
PNSH	**Pansheti**	**0.69**	**72**	P	**Pg**	**02 25 32.1**	**-1.2**
PNSH				S	**Sg**	**02 25 41.2**	**-1.1**
BRNG	**Burnasheti**	**0.80**	**175**	*i* Pg	**Pg**	**02 25 35.3**	**-0.1**
BRNG				*e*Sg	**Sb**	**02 25 47.8**	**+0.8**
BRNG	**Burnasheti**	**0.80**	**175**	⇓PG	**Pg**	**02 25 35.3**	**-0.1**
BRNG				S	**Sb**	**02 25 47.8**	**+0.8**
BRNG	**Burnasheti**	**0.80**	**175**	P	**Pg**	**02 25 35.3**	**-0.1**
BRNG				S	**Sb**	**02 25 47.8**	**+0.8**
LSNR	**Lesken**	**0.86**	**5**	*i* Pg	**Pg**	**02 25 36.1**	**-0.4**
LSNR				*e*Sg	**Sb**	**02 25 48.4**	**-0.2**
LSNR	**Lesken**	**0.86**	**5**	⇓*i*PG	**Pg**	**02 25 36.2**	**-0.3**
LSNR				*e*S	**Sb**	**02 25 49.0**	**+0.4**
ARNR	**Ardon**	**0.86**	**28**	*e*Pg	**Pg**	**02 25 36.8**	**+0.2**
ARNR				*e*Sg	**Sb**	**02 25 49.2**	**+0.6**
ARNR	**Ardon**	**0.86**	**28**	*e*PG	**Pb**	**02 25 37.2**	**+0.2**
ARNR				*e*S	**Sn**	**02 25 50.2**	**-0.7**
TRLG	**Trialeti**	**0.92**	**162**	*i* Pg	**Pg**	**02 25 37.1**	**-0.6**
TRLG				*e*Sg	**Sb**	**02 25 50.8**	**+0.3**
TRLG	**Trialeti**	**0.92**	**162**	⇓PG	**Pg**	**02 25 37.1**	**-0.6**
TRLG				S	**Sb**	**02 25 50.8**	**+0.3**
TRLG	**Trialeti**	**0.92**	**162**	P	**Pg**	**02 25 37.1**	**-0.6**
TRLG				S	**Sb**	**02 25 50.8**	**+0.3**
VLKR	**Vladikavkaz**	**0.94**	**48**	*e*Pg	**Pg**	**02 25 38.0**	**0.0**
VLKR				*e*Sg	**Sn**	**02 25 52.2**	**-0.5**
VLKR	**Vladikavkaz**	**0.94**	**48**	*e*PG	**Pg**	**02 25 38.1**	**+0.1**
VLKR				*e*S	**Sn**	**02 25 52.7**	**-0.1**
ABS	**Abastumani**	**0.95**	**226**	*i* Pg	**Pg**	**02 25 37.6**	**-0.7**
ABS				*e*Sg	**Sb**	**02 25 51.2**	**-0.1**
ABS	**Abastumani**	**0.95**	**226**	⇑PG	**Pg**	**02 25 37.6**	**-0.7**
ABS				S	**Sb**	**02 25 51.2**	**-0.1**
ABS	**Abastumani**	**0.95**	**226**	P	**Pg**	**02 25 37.6**	**-0.7**
ABS				S	**Sb**	**02 25 51.2**	**-0.1**
STDR	**Stavd-Durt**	**0.98**	**14**	*e*Pg	**Pb**	**02 25 39.0**	**0.0**
STDR				*e*Sg	**Sb**	**02 25 52.2**	**+0.2**
STDR	**Stavd-Durt**	**0.98**	**14**	*e*PG	**Pn**	**02 25 39.9**	**+0.1**
STDR				*e*S	**Sn**	**02 25 53.2**	**-0.5**
AKH	**Akhalkalaki**	**1.02**	**190**	Pg	**Pg**	**02 25 39.0**	**-0.6**
AKH				Sg	**Sn**	**02 25 54.6**	**-0.5**
AKH	**Akhalkalaki**	**1.02**	**190**		**Pg**	**02 25 39.1**	**-0.6**
AKH				Sg	**Sb**	**02 25 53.5**	**0.0**
AKH	**Akhalkalaki**	**1.02**	**190**	*i* Pg	**Pg**	**02 25 39.0**	**-0.6**
AKH				*i* Sg	**Sb**	**02 25 53.9**	**+0.5**
AKH	**Akhalkalaki**	**1.02**	**190**	PG	**Pg**	**02 25 39.1**	**-0.6**
AKH						02 25 53.5	
AKH	**Akhalkalaki**	**1.02**	**190**	P	**Pg**	**02 25 39.0**	**-0.6**
AKH				S	**Sb**	**02 25 53.7**	**+0.3**
SEAG	**Tbilisi Sea**	**1.03**	**129**	PG	**Pg**	**02 25 39.1**	**-0.7**
SEAG	**Tbilisi Sea**	**1.03**	**129**	P	**Pg**	**02 25 39.1**	**-0.7**
KMGR	**Komgaron**	**1.05**	**52**	*e*Pg	**Pn**	**02 25 40.6**	**-0.2**
KMGR				*e*Sg	**Sn**	**02 25 57.0**	**+1.4**
KMGR	**Komgaron**	**1.05**	**52**	*e*PG	**Pn**	**02 25 40.6**	**-0.2**
KMGR				*e*S	**Sn**	**02 25 57.0**	**+1.4**
SHTL	**Shatili**	**1.08**	**77**	*e*Pg	**Pg**	**02 25 39.0**	**-1.7**
SHTL				*e*Sg	**Sg**	**02 25 54.2**	**-0.5**
SHTL	**Shatili**	**1.08**	**77**	*e*PG	**Pg**	**02 25 39.0**	**-1.7**
SHTL				*e*S	**Sg**	**02 25 54.2**	**-0.5**
SHTL	**Shatili**	**1.08**	**77**	P	**Pg**	**02 25 39.0**	**-1.7**
SHTL				S	**Sg**	**02 25 54.2**	**-0.5**
NCK	**Nalchik**	**1.08**	**355**	*e*Pg	**Pb**	**02 25 40.8**	**+0.1**
NCK				*e*Sg	**Sn**	**02 25 56.1**	**-0.1**
NCK	**Nalchik**	**1.08**	**355**	*e*PG	**Pb**	**02 25 40.8**	**+0.1**
NCK				*e*S	**Sn**	**02 25 56.1**	**-0.1**
NEY	**Neytrino**	**1.11**	**319**	*e*Pg	**Pg**	**02 25 40.7**	**-0.6**
NEY				*e*Sg	**Sg**	**02 25 55.4**	**-0.4**
NEY	**Neytrino**	**1.11**	**319**	*e*PG	**Pg**	**02 25 40.9**	**-0.4**
NEY				*e*S	**Sb**	**02 25 56.0**	**0.0**
BTKR	**Batakoyurt**	**1.12**	**32**	*e*Pg	**Pn**	**02 25 42.8**	**+1.0**
BTKR				*e*Sg	**Sn**	**02 25 58.5**	**+1.2**
BTKR	**Batakoyurt**	**1.12**	**32**	*e*PG	**Pn**	**02 25 42.8**	**+1.0**
BTKR				*e*S	**Sn**	**02 25 58.5**	**+1.2**
DMNI	**Dmanisi**	**1.14**	**162**	*i* Pg	**Pb**	**02 25 40.4**	**-1.5**
DMNI				*e*Sg	**Sg**	**02 25 56.4**	**-0.3**
DMNI	**Dmanisi**	**1.14**	**162**	⇓PG	**Pb**	**02 25 40.4**	**-1.5**
DMNI				S	**Sg**	**02 25 56.4**	**-0.3**
DMNI	**Dmanisi**	**1.14**	**162**	P	**Pb**	**02 25 40.4**	**-1.5**
DMNI				S	**Sg**	**02 25 56.4**	**-0.3**
BGD	**Bogdanovka**	**1.16**	**185**	*e*Pg	**Pb**	**02 25 41.1**	**-1.1**
BGD				*e*Sg	**Sn**	**02 25 58.3**	**-0.1**
BGD	**Bogdanovka**	**1.16**	**185**	PG	**Pb**	**02 25 41.1**	**-1.1**
BGD				S	**Sn**	**02 25 58.3**	**-0.1**
BGD	**Bogdanovka**	**1.16**	**185**	P	**Pb**	**02 25 41.1**	**-1.1**
BGD				S	**Sn**	**02 25 58.3**	**-0.1**
PRTR	**Priterechnaya**	**1.39**	**17**	*e*Pg	**Pg**	**02 25 46.8**	**+0.2**
PRTR				*e*Sg	**Sg**	**02 26 06.7**	**+2.1**
PRTR	**Priterechnaya**	**1.39**	**17**	⇓*i*PG	**Pg**	**02 25 47.0**	**+0.4**
PRTR				*e*S	**Sg**	**02 26 07.5**	**+2.8**
KBZ	**Khabaz**	**1.44**	**335**	Pg	**Pb**	**02 25 46.5**	**-0.4**
	127nm,0.3s,baz=173,slow=15,SNR=930						
KBZ				Lg	Lg	02 26 05.3	
	243nm,0.3s,baz=221,slow=18,SNR=12						
KBZ	**Khabaz**	**1.44**	**335**	*e*Pg	**Pn**	**02 25 46.3**	**+0.2**
KBZ				*e*Sg	**Sg**	**02 26 06.4**	**0.0**
TRKR	**Terskaya**	**1.50**	**29**	*i* Pg	**Pg**	**02 25 48.7**	**+0.1**
TRKR				*i* Sg	**Sg**	**02 26 10.3**	**+2.3**
TRKR	**Terskaya**	**1.50**	**29**	⇑*i*PG	**Pg**	**02 25 49.0**	**+0.4**
TRKR				*e*S	**Sg**	**02 26 10.6**	**+2.6**
SHA1	**Shidzhatmaz**	**1.53**	**330**	*i* Pg	**Pb**	**02 25 48.5**	**-0.1**
SHA1				*i* Sg	**Sg**	**02 26 08.9**	**-0.4**
SHA1	**Shidzhatmaz**	**1.53**	**330**	⇑*i*PG	**Pb**	**02 25 48.7**	**+0.1**
SHA1				*e*S	**Sg**	**02 26 09.0**	**-0.3**
PYA1	**Pyatigorsk**	**1.71**	**344**	*e*Pg	**Pb**	**02 25 50.9**	**-0.5**
PYA1				*e*Sg	**Sg**	**02 26 14.1**	**-0.7**
PYA1	**Pyatigorsk**	**1.71**	**344**	*e*PN	**Pb**	**02 25 50.9**	**-0.5**
PYA1				*e*S	**Sg**	**02 26 14.1**	**-0.7**
GROC	**Groznyy**	**1.71**	**62**	*e*Pg	**Pg**	**02 25 52.1**	**-0.6**
GROC				*e*Sg	**Sg**	**02 26 16.1**	**+1.3**
GROC	**Groznyy**	**1.71**	**62**	*e*PN	**Pg**	**02 25 52.4**	**-0.3**
GROC				*e*S	**Sg**	**02 26 17.4**	**+2.5**
KVAR	**Kislovodsk Arr**	**1.71**	**334**	Pg	**Pg**	**02 25 52.4**	**-0.4**
	baz=88,slow=22						
KVAR				Lg	Lg	02 26 13.8	
	baz=256,slow=13						
KIV	**Kislovodsk**	**1.71**	**334**	Pn	**Pb**	**02 25 51.6**	**0.0**
KIV				Sn	**Sg**	**02 26 14.4**	**-0.6**
KIV	**Kislovodsk**	**1.71**	**334**		**Pb**	**02 25 50.9**	**-0.7**
KIV	**Kislovodsk**	**1.71**	**334**	*e*Pg	**Pb**	**02 25 51.4**	**-0.2**
KIV				*e*Sg	**Sg**	**02 26 14.8**	**-0.2**
KIV	**Kislovodsk**	**1.71**	**334**	*e*PN	**Pb**	**02 25 51.4**	**-0.2**
KIV				*e*S	**Sg**	**02 26 14.8**	**-0.2**
BATM	**Batumi**	**1.72**	**242**	*e*Pg	**Pb**	**02 25 51.5**	**-0.2**
BATM				*e*Sg	**Sg**	**02 26 14.4**	**-0.9**
BATM	**Batumi**	**1.72**	**242**	PN	**Pb**	**02 25 51.5**	**-0.2**
BATM				S	**Sg**	**02 26 14.4**	**-0.9**
BATM	**Batumi**	**1.72**	**242**	P	**Pb**	**02 25 51.5**	**-0.2**
BATM				S	**Sg**	**02 26 14.4**	**-0.9**
BEYR	**Belyy Ugol+**	**1.73**	**338**	*e*Pg	**Pb**	**02 25 51.6**	**-0.2**
BEYR				*e*Sg	**Sb**	**02 26 14.3**	**+0.8**
BEYR	**Belyy Ugol+**	**1.73**	**338**	*e*PN	**Pb**	**02 25 51.6**	**-0.2**
BEYR				*e*S	**Sb**	**02 26 14.3**	**+0.8**
DOMR	**Dombai**	**1.78**	**300**	*e*Pg	**Pb**	**02 25 53.0**	**+0.3**
DOMR				*e*Sg	**Sb**	**02 26 15.2**	**+0.1**
DOMR	**Dombai**	**1.78**	**300**	*e*PN	**Pb**	**02 25 53.0**	**+0.3**
DOMR				*e*S	**Sb**	**02 26 15.2**	**+0.1**
QZX	**Qazax, Azerbai**	**1.83**	**137**	P	**Pn**	**02 25 51.8**	**+0.3**
	SNR=545						
QZX				S	**Sb**	**02 26 16.8**	**+0.2**
DVE	**Vedeno**	**1.85**	**72**	*e*Pg	**Pb**	**02 25 54.1**	**+0.3**
DVE				*e*Sg	**Sg**	**02 26 20.2**	**+1.0**
DVE	**Vedeno**	**1.85**	**72**	*e*PN	**Pb**	**02 25 54.1**	**+0.3**
DVE				*e*S	**Sg**	**02 26 20.2**	**+1.0**
KARS	**Kars**	**1.86**	**196**	Pn	**Pb**	**02 25 53.5**	**-0.5**
KARS	**Kars**	**1.86**	**196**	Pn	**Pb**	**02 25 53.3**	**-0.7**
KARS	**Kars**	**1.86**	**196**	PN	**Pb**	**02 25 53.3**	**-0.7**
BTLR	**Botlikh**	**1.86**	**82**	*e*Pg	**Pb**	**02 25 54.0**	**0.0**
BTLR				*e*Sg	**Sg**	**02 26 19.6**	**-0.1**
BTLR	**Botlikh**	**1.86**	**82**	*e*PN	**Pb**	**02 25 54.4**	**+0.4**
BTLR				*e*S	**Sg**	**02 26 20.2**	**+0.6**
LGD	**Lagodekhi**	**1.96**	**107**	*e*Pg	**Pn**	**02 25 54.2**	**+1.0**
LGD				*e*Sg	**Sb**	**02 26 21.2**	**+1.1**
LGD	**Lagodekhi**	**1.96**	**107**	PN	**Pn**	**02 25 54.2**	**+1.0**
LGD	**Lagodekhi**	**1.96**	**107**	P	**Pn**	**02 25 54.2**	**+1.0**
LGD				S	**Sb**	**02 26 21.2**	**+1.1**
HOPA	**Hopa-Artvin**	**1.99**	**240**	Pn	**Pn**	**02 25 54.3**	**+0.6**
DDFL	**Dedoflistskaro**	**2.03**	**118**	*e*Pg	**Pb**	**02 25 56.9**	**-0.1**
DDFL				*e*Sg	**Sg**	**02 26 29.3**	**+4.2**
DDFL	**Dedoflistskaro**	**2.03**	**118**	PN	**Pb**	**02 25 56.9**	**-0.1**
DDFL				S	**Sg**	**02 26 29.3**	**+4.2**
DDFL	**Dedoflistskaro**	**2.03**	**118**	P	**Pb**	**02 25 56.9**	**-0.1**
DDFL				S	**Sg**	**02 26 29.3**	**+4.2**
SENK	**Senkaya-Erzuru**	**2.13**	**210**	Pn	**Pn**	**02 25 56.9**	**+1.2**
ARXR	**Arkhyz**	**2.13**	**303**	*i* Pg	**Pb**	**02 25 58.7**	**-0.1**
ARXR				*e*Sg	**Sb**	**02 26 26.3**	**+1.0**
ARXR	**Arkhyz**	**2.13**	**303**	*i* PN	**Pb**	**02 25 58.7**	**-0.1**
ARXR				*e*S	**Sb**	**02 26 26.3**	**+1.0**
XNZR	**Khunzakh**	**2.20**	**86**	*e*Pg	**Pb**	**02 26 00.3**	**+0.3**
XNZR				*e*Sg	**Sb**	**02 26 28.8**	**+1.4**
HNZR	**Khunzah**	**2.21**	**85**	*e*PN	**Pb**	**02 26 00.8**	**+0.7**
HNZR				*e*S	**Sg**	**02 26 29.9**	**-1.1**
DLMR	**Dylym**	**2.23**	**72**	*e*Pn	**Pb**	**02 25 59.9**	**-0.4**
DLMR				*e*Sn	**Sb**	**02 26 27.3**	**-0.8**
DLMR	**Dylym**	**2.23**	**72**	*e*PN	**Pb**	**02 25 59.9**	**-0.4**
DLMR				*e*S	**Sb**	**02 26 27.3**	**-0.8**
GDB	**GEDABAY**	**2.28**	**138**	P	**Pn**	**02 25 58.3**	**+0.5**
	SNR=677						
GDB				S	**Sn**	**02 26 27.7**	**+1.8**
UNCR	**Uncukul**	**2.28**	**82**	*e*Pn	**Pb**	**02 26 01.4**	**+0.2**
UNCR				*e*Sn	**Sb**	**02 26 29.9**	**+0.3**
UNCR	**Uncukul**	**2.28**	**82**	*e*PN	**Pb**	**02 26 01.5**	**+0.2**
METS	**Metsamor**	**2.28**	**173**	P	**Pn**	**02 25 59.2**	**+1.5**
METS				S	**Sg**	**02 26 33.0**	**-0.3**
ZKTA	**Zakatala**	**2.29**	**109**	P	**Pb**	**02 25 59.7**	**-1.6**
	SNR=246						

ZKTA				S	Sb	02 26 30.6	+0.9
DBC	**Dubki**	2.36	74	*e*Pn	Pb	02 26 02.9	+0.2
DBC				*e*Sn	Sb	02 26 31.1	-0.7
DBC	**Dubki**	2.36	74	*e*PN	Pb	02 26 02.8	+0.2
KRNR	**Karanay**	2.38	79	*e*Pn	Pb	02 26 03.0	+0.1
KRNR				*e*Sn	Sb	02 26 32.9	+0.5
KRNR	**Karanay**	2.38	79	*e*PN	Pb	02 26 03.0	+0.1
GNI	**Garni**	2.39	161	Pn	Pn	02 26 01.1	+1.8
	128nm,0.3s,baz=318,slow=4.2,SNR=168						
GNI				Lg	Lg	02 26 34.0	
	62nm,0.3s,baz=70,slow=19,SNR=3.6						
GNI				LR	LR	02 27 15.9	
	comp=Z,392nm,21.8s,baz=298,slow=49						
	386nm,0.5s						
GNI	**Garni**	2.39	161	Pn	Pb	02 26 01.9	-1.3
GNI	**Garni**	2.39	161	Pn	Pn	02 26 00.8	+1.5
GNI	**Garni**	2.39	161	*ce*PN	Pn	02 26 00.9	+1.5
GNI				pmax	pmax		
	comp=Z,278nm,0.6s						
GNBR	**Gunib**	2.40	90	*e*Pn	Pb	02 26 03.2	0.0
GNBR				*e*Sn	Sb	02 26 32.4	-0.4
GNBR	**Gunib**	2.40	90	*e*PN	Pb	02 26 03.2	0.0
ALER	**Alexandrovskoy**	2.42	346	*e*Pn	Pb	02 26 04.0	+0.5
ALER				*e*Sn	Sb	02 26 31.7	-1.7
ALER	**Alexandrovskoy**	2.42	346	*e*PN	Pb	02 26 04.0	+0.5
TASB	**TASBURUN-IGDIR**	2.46	171	Pn	Pb	02 26 02.9	-1.4
KMKR	**Kumukh**	2.52	95	*e*Pn	Pb	02 26 04.8	-0.5
KMKR				*e*Sn	Sb	02 26 35.3	-1.1
KMKR	**Kumukh**	2.52	95	*e*PN	Pb	02 26 04.8	-0.5
NVNR	**Nevinnomyssk**	2.54	330	*i* Pn	Pb	02 26 04.0	-1.6
NVNR				*e*Sn	Sb	02 26 38.5	+1.5
NVNR	**Nevinnomyssk**	2.54	330	*i* PN	Pb	02 26 04.0	-1.6
CHOM	**Cayeli-Rize**	2.58	240	Pn	Pn	02 26 02.3	+0.5
AHMR	**Akhmetovskaya**	2.62	312	*e*Pn	Pb	02 26 06.1	-0.9
AHMR				*e*Sn	Sn	02 26 35.2	+1.0
AHMR	**Akhmetovskaya**	2.62	312	*e*PN	Pb	02 26 06.1	-0.9
GANJ	**Ganja**	2.63	131	P	Pn	02 26 03.1	+0.5
	SNR=140						
GANJ				S	Sb	02 26 38.6	-1.0
GANJ	**Ganja**	2.63	131	PN	Pn	02 26 03.0	+0.5
KOPR	**Koprukoy-ERZUR**	2.81	211	Pn	Pn	02 26 06.5	+1.4
HYR	**Heyderabad**	2.83	162	P	Pn	02 26 07.2	+1.9
	SNR=66						
HYR				S	Sb	02 26 46.7	+1.4
MAK	**Makhachkala**	2.83	78	*e*Pn	Pb	02 26 08.6	-2.0
MAK				*e*Pn	Sn	02 26 42.0	+2.6
MAK	**Makhachkala**	2.83	78	*e*PN	Pb	02 26 08.3	-2.3
MAK				*e*		02 26 13.8	
MAK				*e*		02 26 16.2	
MAK				*e*S	Sb	02 26 46.1	+0.8
MAK				*e*		02 26 50.7	
MAK				*e*		02 27 00.6	
MAK				pmax	pmax		
	comp=Z,238nm,0.7s						
MAK				smax	smax		
	comp=N,1µm,0.6s						
MAK				smax	smax		
	comp=N,2µm,0.6s						
MAK				MLR	MLR		
	comp=Z,2µm,3.0s						
RPOR	**Krasnaya Polya**	2.84	298	*e*Pn	Pn	02 26 07.4	+2.0
RPOR				*e*Sn	Sn	02 26 42.4	+2.7
RPOR	**Krasnaya Polya**	2.84	298	*e*PN	Pn	02 26 07.4	+2.0
SEKA	**Sheki**	2.86	114	P	Pn	02 26 06.7	+1.0
	SNR=66						
SEKA				S	Sb	02 26 45.5	-0.7
SEKA	**Sheki**	2.86	114	PN	Pn	02 26 06.6	+1.0
AGRB	**Hanur-Agry**	2.90	191	Pn	Pn	02 26 08.3	+2.0
VSLR	**Vesyoloye**	2.91	292	*e*Pn	Pn	02 26 07.0	+0.7
VSLR				*e*Sn	Sn	02 26 42.3	+1.0
VSLR	**Vesyoloye**	2.91	292	*e*PN	Pn	02 26 07.0	+0.7
MNGR	**Mingechevir, A**	3.01	122	P	Pn	02 26 08.6	+1.0
	SNR=17						
MNGR				S	Sb	02 26 48.0	-2.3
MNGR	**Mingechevir, A**	3.01	122	PN	Pn	02 26 08.6	+1.0
GUZR	**Guzeripl'**	3.08	302	*i* Pn	Pn	02 26 10.8	+2.2
GUZR				*i* Pn	Sn	02 26 46.6	+1.1
GUZR	**Guzeripl'**	3.08	302	*i* PN	Pn	02 26 10.8	+2.2
AKT	**Akhty**	3.13	106	*e*Pn	Pn	02 26 11.5	+2.1
AKT				*e*Pn	Sn	02 26 49.2	+2.3
AKT	**Akhty**	3.13	106	⇑*i*PN	Pn	02 26 11.7	+2.3
AKT				*e*		02 26 18.4	
AKT				*e*		02 26 22.0	
AKT				*e*S	Sb	02 26 54.2	+0.3
AKT				*e*		02 27 04.8	
AKT				pmax	pmax		
	comp=Z,139nm,0.6s						
AKT				smax	smax		
	comp=N,518nm,0.5s						
AKT				smax	smax		
	comp=E,427nm,0.5s						
AKT				smax	smax		
	comp=N,590nm,0.4s						
AKT				MLR	MLR		
	comp=Z,242nm,2.0s						
SOC	**Sochi**	3.17	293	*e*Pn	Pn	02 26 10.7	+0.9
SOC				*e*Sn	Sn	02 26 49.4	+1.8
SOC	**Sochi**	3.17	293	*e*PN	Pn	02 26 09.9	+0.1
SOC				*e*		02 26 16.9	
SOC				*e*PPP	PPP	02 26 19.7	
SOC				*e*		02 26 49.7	
SOC						02 26 59.7	
SOC				pmax	pmax		
	comp=Z,34nm,0.6s						
SOC				smax	smax		
	comp=E,168nm,0.6s						
SOC				MLR	MLR		
	comp=Z,243nm,8.0s						
KTUT	**Trabzon**	3.29	246	Pn	Pn	02 26 12.3	+0.7
SBZ	**Shahbuz**	3.32	155	P	Pn	02 26 14.2	+2.2
	SNR=137						
SBZ				S	Sb	02 26 59.5	0.0
BAYT	**Aydıntepe-Bayb**	3.37	234	Pn	Pn	02 26 14.0	+1.2
BRDA	**Brd**	3.37	129	P	Pn	02 26 13.6	+1.0
	SNR=26						
BRDA				S	Sb	02 26 59.1	-1.7
MLAZ	**Malazgirt-MUS**	3.40	196	Pn	Pn	02 26 15.3	+2.2
QBL	**Gabala**	3.41	114	P	Pn	02 26 14.7	+1.5
	SNR=4.7						
QBL				S	Sn	02 26 56.8	+3.1
KOPT	**Kop Dagi**	3.42	227	Pn	Pn	02 26 13.1	-0.5
AGDM	**Agdam**	3.44	131	P	Pn	02 26 15.2	+1.7
	SNR=37						
AGDM				S	Sn	02 26 58.6	+4.2
QSAR	**Qusar**	3.50	103	P	Pn	02 26 16.2	+1.7
	SNR=42						
QSAR				S	Sb	02 27 00.8	-3.8
NAX	**Nakhchivan**	3.51	157	P	Pb	02 26 20.9	-1.2
	SNR=142						
NAX				S	Sn	02 26 59.0	+2.8
NAX	**Nakhchivan**	3.51	157	PN	Pb	02 26 20.9	-1.2
XNQ	**Khinaliq**	3.52	109	P	Pn	02 26 17.1	+2.1
	SNR=20						
XNQ				S	Sb	02 27 02.5	-3.0
GOYR	**Goytkh**	3.66	301	*i* PN	Pn	02 26 18.3	+1.6
ZRD	**Zardab**	3.67	124	P	Pn	02 26 18.4	+1.7
	SNR=16						
ZRD				S	Sn	02 27 03.7	+3.8
QUBA	**Quba, Azerbaij**	3.71	105	P	Pn	02 26 20.1	+2.8
	SNR=5.1						
QUBA				S	Sn	02 27 04.0	+2.8
IML	**Ismayilli**	3.71	114	P	Pn	02 26 19.1	+1.8
	SNR=31						
IML				S	Sn	02 27 04.0	+2.8
ORD	**Ordubad**	3.89	153	P	Pn	02 26 22.5	+2.7
	SNR=59						
ORD				S	Sb	02 27 13.4	-2.4
KDMR	**Kurdemir**	3.92	120	P	Pn	02 26 21.0	+0.8
	SNR=5.9						
KDMR				S	Sn	02 27 08.3	+2.0
BLQ	**Beylaqan**	3.96	132	P	Pn	02 26 23.1	+2.5
	SNR=15						
BLQ				S	Sb	02 27 13.9	-3.8
PQL	**Pirkuli**	3.99	112	P	Pn	02 26 23.8	+2.4
	SNR=21						
PQL				S	Sn	02 27 12.9	+4.6
QRD	**Qoradiz**	4.01	136	P	Pn	02 26 23.6	+2.1
	SNR=46						
QRD				S	Sb	02 27 16.1	-3.2
GURO	**Guroymak-BITLI**	4.08	199	Pn	Pn	02 26 23.8	+1.3
SIZA	**Siyzn**	4.09	107	P	Pn	02 26 25.1	+2.4
	SNR=20						
GEVA	**Gevas**	4.13	187	Pn	Pn	02 26 22.8	-0.5
ATGJ	**Altiaghaj**	4.20	110	P	Pn	02 26 26.6	+2.4
	SNR=14						
ATGJ				S	Sn	02 27 16.0	+2.7
GLBA	**Clilabad**	4.75	130	P	Pn	02 26 33.6	+1.9
	SNR=8.3						
GLBA				S	Sn	02 27 28.9	+2.2
YRD	**Yardimli**	4.90	134	P	Pn	02 26 35.4	+1.5
	SNR=16						
YRD				S	Sn	02 27 36.0	+5.4
ANN	**Anapa**	5.15	300	*e*PN	Pn	02 26 37.7	+0.6
ANN				*e*S	Sn	02 27 41.5	+4.9
ANN				pmax	pmax		
	comp=Z,25nm,0.3s						
ANN				smax	smax		
	comp=E,97nm,1.0s						
LRK	**Lerik**	5.15	136	P	Pn	02 26 39.4	+2.1
	SNR=21						
LRK				S	Sn	02 27 42.5	+5.6
ASTR	**Astara**	5.45	133	P	Pn	02 26 42.8	+1.5
ASTR				S	Sb	02 27 53.2	-7.5
TOKA	**Tokat**	5.84	251	Pn	Pn	02 26 44.4	-2.3
SUDU	**Sudak**	6.80	294	⇓*i*P	Pn	02 26 59.1	-0.6
SUDU				*e*S	Sn	02 28 16.2	-0.9
SUDU				pmax	pmax		
	comp=Z,10.0nm,0.3s						
SUDU				smax	smax		
	comp=N,35nm,0.5s						
SUDU				smax	smax		
	comp=E,9.0nm,0.5s						
SUDU	**Sudak**	6.80	294	⇑*i*P	Pn	02 26 59.1	-0.6
SUDU				Pm		02 27 04.5	
	comp=Z,10.0nm,0.3s						
SUDU				*e*S	Sn	02 28 16.2	-0.9
SUDU				Sm		02 28 19.1	
	comp=N,35nm,0.5s						
SUDU				Sm		02 28 19.1	
	comp=E,9.0nm,0.5s						
BNN	**Bunyan**	6.97	242	Pn	Pn	02 26 59.5	-2.8
ALU	**Alushta**	7.14	292	⇓*i*P	Pn	02 27 03.9	-0.5
ALU				Pm		02 27 09.1	
	comp=Z,15nm,0.2s						
ALU				*e*S	Sn	02 28 24.5	-1.1
ALU				Sm		02 28 27.4	
	comp=N,163nm,0.6s						
ALU				Sm		02 28 27.5	
	comp=E,20nm,0.3s						
ALU	**Alushta**	7.14	292	⇓*i*P	Pn	02 27 03.9	-0.5
ALU				*e*S	Sn	02 28 24.5	-1.1
ALU				pmax	pmax		
	comp=Z,15nm,0.3s						
ALU				smax	smax		
	comp=N,163nm,0.6s						
ALU				smax	smax		
	comp=E,20nm,0.3s						
BZK	**Bozkurt**	7.24	270	Pn	Pn	02 27 02.6	-3.1
GAZ	**Gaziantep**	7.25	226	Pn	Pn	02 27 04.9	-1.2
YAL	**Yalta**	7.27	290	*e*P	Pn	02 27 06.3	+0.2
YAL				Pm		02 27 07.4	
	comp=Z,39nm,0.4s						
YAL				*e*S	Sn	02 28 27.5	-1.2
YAL				Sm		02 28 34.0	
	comp=N,27µm,0.4s						
YAL				Sm		02 28 34.0	
	comp=E,13nm,0.3s						
YAL	**Yalta**	7.27	290	*e*P	Pn	02 27 06.3	+0.2
YAL				*e*S	Sn	02 28 27.5	-1.2
YAL				pmax	pmax		
	comp=Z,39nm,0.4s						
YAL				smax	smax		
	comp=N,27nm,0.4s						
YAL				smax	smax		
	comp=E,13nm,0.3s						
SIM	**Simferopol'**	7.41	293	x	Pn	02 27 08.4	+0.3
SIM				Pm		02 27 14.4	
	comp=Z,22nm,0.4s						
SIM				*e*S	Sn	02 28 32.2	-0.1
SIM				Sm		02 28 35.4	
	comp=N,19nm,0.5s						
SIM				Sm		02 28 35.4	
	comp=E,7.0nm,0.4s						
SIM	**Simferopol'**	7.41	293	*e*P	Pn	02 27 11.1	+3.0
SIM				*e*S	Sn	02 28 35.3	+3.0
SIM				pmax	pmax		
	comp=Z,18nm,0.8s						
SIM				smax	smax		
	comp=N,26nm,1.1s						
SEV	**Sevastopol'**	7.62	290	⇓*i*P	Pn	02 27 09.8	-1.2
SEV				Pm		02 27 11.2	
	comp=Z,25nm,0.5s						
SEV				*e*S	Sn	02 28 35.3	-2.0
SEV				Sm		02 28 38.5	
	comp=N,17nm,0.4s						
SEV				Sm		02 28 38.5	
	comp=E,13nm,0.3s						
SEV	**Sevastopol'**	7.62	290	⇓*i*P	Pn	02 27 09.8	-1.2
SEV				*e*S	Sn	02 28 35.3	-2.0
SEV				pmax	pmax		
	comp=Z,25nm,0.5s						
SEV				smax	smax		
	comp=N,17nm,0.4s						
SEV				smax	smax		
	comp=E,13nm,0.3s						
BR131	**Keskin Array S**	8.09	254	Pn	Pn	02 27 16.7	-0.8
BR131	**Keskin Array S**	8.09	254	*i* P	Pn	02 27 19.0	+1.5
BRTR	**Keskin Array B**	8.09	254	Pn	Pn	02 27 20.2	+2.7
	comp=E,0.5nm,0.3s,baz=46,slow=9.5,SNR=22						
BRTR				Sn	Sn	02 28 57.2	+8.1
	baz=33,slow=21,SNR=1.2						
	comp=E,3.7nm,0.7s						
BRTR	**Keskin Array B**	8.09	254	Pn	Pn	02 27 17.3	-0.3
VSR	**Storozhevoye**	9.34	342	*e*P	Pn	02 27 33.9	-0.6
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VORR	**Voronezh**	9.75	343	*e*P	Pn	02 27 44.1	+3.9
VORR				pmax	pmax		
	comp=Z,23nm,0.4s						
BELG	**Belogornoye**	10.32	13	Pn	Pn	02 27 46.5	-1.4
	comp=Z,0.9nm,0.3s,baz=184,slow=5.4,SNR=10.0						
BORA	**Eskisehir**	10.33	260	Pn	Pn	02 27 46.8	-1.5
LPSR	**Galich'ya Gora**	10.69	344	*e*P	Pn	02 27 52.2	-0.8
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PURM	**Purcari**	10.72	297	⇓P	Pn	02 27 52.8	-0.6
TLCR		11.13	289	⇑P	Pn	02 27 57.7	-1.3
TLCR				⇓S	Sn	02 29 56.1	-7.4
TLCR		11.13	289	⇑P	Pn	02 27 57.7	-1.3
MFTR	**Murfatlar**	11.30	284	⇑P	Pn	02 27 58.7	-2.6
TIRR	**Tirgusor**	11.32	286	⇑P	Pn	02 27 59.4	-2.3
TIRR				⇓S	Sn	02 30 02.6	-5.7
TIRR	**Tirgusor**	11.32	286	Pn	Pn	02 27 59.0	-2.7
TIRR	**Tirgusor**	11.32	286	⇑P	Pn	02 27 59.4	-2.3
TPGR	**Topolog**	11.36	288	⇓P	Pn	02 28 00.2	-2.1
TLBR	**Topalu**	11.59	286	⇑P	Pn	02 28 03.2	-2.2
TLBR				⇓S	Sn	02 30 10.4	-4.4
ICOR	**Ion Corvin**	11.74	284	⇓P	Pn	02 28 03.8	-3.5
LEOM	**Leova**	11.78	295	⇑P	Pn	02 28 06.7	-1.3
LEOM	**Leova**	11.78	295	⇑P	Pn	02 28 06.7	-1.3
GEYT	**Alibeck**	11.88	107	Pn	Pn	02 28 08.5	-0.9
	comp=Z,1.0nm,0.3s,baz=308,slow=15,SNR=6.2						
	comp=Z,2.9nm,0.4s						
SORM	**Soroca**	12.24	303	⇓P	Pn	02 28 13.6	-0.6
SORM	**Soroca**	12.24	303	⇓P	Pn	02 28 13.6	-0.6
AKTO	**Aktyubinsk**	12.69	46	Pn	Pn	02 28 18.3	-2.1
	comp=Z,1.8nm,0.3s,baz=234,slow=11,SNR=32						
AKTO				Sn	Sn	02 30 35.6	-6.0
	comp=Z,0.7nm,0.3s,baz=286,slow=23,SNR=2.1						
AKTO				LR	LR	02 33 57.7	
	comp=Z,62nm,19.8s,baz=177,slow=41						
	comp=Z,9.7nm,0.5s						
VRI	**Vrincioaia**	12.69	292	⇓P	Pn	02 28 19.6	-0.8
VRI	**Vrincioaia**	12.69	292	⇓P	Pn	02 28 19.6	-0.8
PLOR	**Plostina**	12.74	291	⇓P	Pn	02 28 19.2	-1.9
PLOR	**Plostina**	12.74	291	⇓P	Pn	02 28 19.2	-1.9
TESR	**Tescani**	12.87	294	⇑P	Pn	02 28 21.6	-1.2
AKASG	**Malin Array Be**	12.95	315	Pn	Pn	02 28 21.7	-2.2
	comp=Z,0.9nm,0.3s,baz=118,slow=14,SNR=12						
AKASG				LR	LR	02 33 30.5	
	comp=Z,120nm,18.4s,baz=148,slow=38						
	comp=Z,1.6nm,0.5s						
AKASG	**Malin Array Be**	12.95	315	Pn	Pn	02 28 21.6	-2.3
AKBB	**Malin Array Si**	12.95	315	Pn	Pn	02 28 22.0	-1.9
AKBB	**Malin Array Si**	12.95	315	P	Pn	02 28 22.0	-1.9
COVR	**Voineasa-Covas**	13.05	291	⇓P	Pn	02 28 23.5	-1.8
MLR	**Muntele Rosu**	13.18	290	⇑P	Pn	02 28 24.9	-2.2
MLR	**Muntele Rosu**	13.18	290	Pn	Pn	02 28 26.4	-0.7
	comp=Z,0.5nm,0.3s,baz=79,slow=19,SNR=6.8						
MLR	**Muntele Rosu**	13.18	290	Pn	Pn	02 28 25.7	-1.5
MLR	**Muntele Rosu**	13.18	290	P	Pn	02 28 25.7	-1.5
ABKAR	**Akbulak array**	13.20	53	Pn	Pn	02 28 26.4	-0.8
OBN	**Obninsk**	13.54	342	⇑*e*P	Pn	02 28 31.9	0.0
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,210nm,14.0s						
DOPR	**Dopca**	13.63	291	⇓P	Pn	02 28 32.1	-1.1
VOIR		13.80	289	⇑P	Pn	02 28 32.9	-2.7
VOIR		13.80	289	⇑P	Pn	02 28 32.9	-2.7
MOS	**Moscow**	13.91	346	*e*P	Pn	02 28 31.7	-5.2
MOS				*e*S	Sn	02 31 05.7	-5.6
BURAR	**Bucovina Array**	14.08	298	⇑P	Pn	02 28 37.2	-2.2
BURAR	**Bucovina Array**	14.08	298	Pn	Pn	02 28 36.9	-2.5
BURAR	**Bucovina Array**	14.08	298	⇑P	Pn	02 28 37.2	-2.2
ARR	**Arges**	14.08	289	⇓P	Pn	02 28 37.3	-2.1
BUR08	**Bucovina Ar. S**	14.10	298	Pn	Pn	02 28 36.2	-3.5
LOT	**Lotru**	14.70	289	⇓P	Pn	02 28 45.6	-2.3
VTS	**Vitosha**	15.12	278	Pn	Pn	02 28 51.8	-1.8
VTS	**Vitosha**	15.12	278	P	Pn	02 28 51.8	-1.8
VTS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MARR	**Marisel-Cluj**	15.29	293	⇑P	Pn	02 28 54.8	-1.0
DEV	**Deva**	15.34	290	⇓P	Pn	02 28 54.4	-2.0
DEV	**Deva**	15.34	290	⇓P	Pn	02 28 54.4	-2.0
GZR	**Gura Zlata**	15.39	288	⇑P	Pn	02 28 55.1	-2.0
LVV	**L'vov**	15.51	305	*e*P	P	02 29 04.9	+1.9
DRGR		15.58	293	⇑P	Pn	02 28 59.4	-0.2
DRGR		15.58	293	⇑P	Pn	02 28 59.4	-0.2
HERR	**Herculane**	15.62	286	⇓P	Pn	02 28 57.8	-2.3
BZS	**Buzias**	16.22	289	⇑P	Pn	02 29 06.5	-1.3
BZS	**Buzias**	16.22	289	⇑P	Pn	02 29 06.5	-1.3
KIRV	**Kirov**	16.57	10	LR	LR	02 36 27.3	
	comp=Z,111nm,18.4s,baz=236,slow=40						
KIRV	**Kirov**	16.57	10	*i* P	Pn	02 29 08.1	-4.1
NACGM	**Naroch**	16.71	324	*e*P	Pn	02 29 13.0	-1.1
	comp=Z,11nm,1.2s,baz=131						
ARU	**Arti**	16.96	29	Pn	Pn	02 29 13.6	-3.6
	baz=235,slow=6.6,SNR=13						
ARU				LR	LR	02 36 31.9	
	comp=Z,136nm,18.7s,baz=234,slow=40						
	comp=Z,5.1nm,0.5s						
ARU	**Arti**	16.96	29	Pn	Pn	02 29 13.5	-3.6
ARU	**Arti**	16.96	29	*c i*P	Pn	02 29 16.8	-0.3
ARU				S	Sn	02 32 25.5	-0.1
ARU				pmax	pmax		
	comp=Z,10.0nm,0.7s						
DIVS	**Divibare**	17.36	284	Pn	Pn	02 29 19.5	-2.8
SVE	**Sverdlovsk**	18.03	31	*e*P	Pn	02 29 26.7	-3.7
SVE				*e*S	Sn	02 32 42.2	-9.2
SVE				pmax	pmax		
	comp=Z,56nm,1.1s						
PABE	**Paberze**	18.35	322	Pn	Pn	02 29 30.4	-3.8
PABE	**Paberze**	18.35	322	*e*P	Pn	02 29 33.0	-1.2
VYHS	**Vyhne**	18.45	298	*e*P	Pn	02 29 38.4	+2.8
VYHS	**Vyhne**	18.45	298	*e*P	Pn	02 29 38.4	+2.8
KLMR	**Klimovskoe**	18.64	354	*e*Pn	P	02 29 35.2	-2.3
KLMR				AMP		02 29 50.3	
	comp=Z,38nm,1.4s						
KLMR	**Klimovskoe**	18.64	354	*e*P	P	02 29 35.1	-2.4
KLMR				pmax	pmax		
	comp=Z,38nm,1.4s						
VSVD	**Vaisvydziai**	18.66	323	*e*P	P	02 29 37.1	-0.6
VSVD				IAmb	IAmb	02 29 43.2	
	comp=Z,8.0nm,0.5s						
RAYN	**Ar Rayn**	18.90	175		P	02 29 41.0	+0.2
RAYN	**Ar Rayn**	18.90	175	P	P	02 29 41.0	+0.2
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VSU	**Vasula**	19.27	332	*e*P	P	02 29 44.6	+0.1
PBUR	**Paburge**	19.58	322	*e*P	P	02 29 47.3	-0.6
PBUR				IAmb	IAmb	02 29 55.8	
	comp=Z,59nm,1.3s						
KK31	**Karatay Array**	19.65	79	P	P	02 29 48.9	+0.1
KK31	**Karatay Array**	19.65	79	P	P	02 29 48.9	+0.1
KK31				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KKAR	**Karatay Array**	19.65	79	P	Pn	02 29 49.8	-0.4
KKAR	**Karatay Array**	19.65	79	P	Pn	02 29 49.8	-0.4
CHGR	**Chuyangaron**	19.66	92	P	Pn	02 29 50.1	-0.3
CHGR				IAmb	IAmb	02 30 04.6	
	comp=Z,18nm,0.7s						
CHGR	**Chuyangaron**	19.66	92	P	Pn	02 29 50.1	-0.3
CHGR				pmax	pmax		
	comp=Z,18nm,0.7s						
RONA	**Rosalia, Austr**	20.03	295	*e*P	P	02 29 52.5	-0.4
	comp=Z,3.6nm,1.2s						
KRLC	**Kraliky**	20.07	302	*e*P	Pn	02 29 59.5	+4.4
KRLC	**Kraliky**	20.07	302	*e*P	Pn	02 29 59.5	+4.4
CONA	**Conrad Observa**	20.34	295	*i* P	P	02 29 56.3	0.0
	comp=Z,4.8nm,1.4s						
GAR	**Garm**	20.41	91	P	Pn	02 29 58.4	-0.9
DPC	**Dobruska-Polom**	20.42	302	*e*P	Pn	02 30 00.6	+1.4
DPC	**Dobruska-Polom**	20.42	302	*e*P	Pn	02 30 00.6	+1.4
ARSA	**Arzberg**	20.52	293	*e*P	P	02 29 58.5	+0.3
	comp=Z,4.3nm,0.9s						
OSTC	**Ostas**	20.53	303	*e*P	Pn	02 30 00.1	-0.4
OSTC	**Ostas**	20.53	303	*e*P	Pn	02 30 00.1	-0.4
BRVK	**Borovoye**	20.67	50	P	P	02 30 00.4	+0.7
BRVK				IAmb	IAmb	02 30 10.3	
	comp=Z,12nm,0.7s						
BRVK	**Borovoye**	20.67	50	*i* P	P	02 29 59.8	+0.1
BRVK				pmax	pmax		
	comp=Z,11nm,0.7s						
BVAR	**Borovoye Array**	20.71	50	P	P	02 30 01.0	+0.8
	comp=Z,5.2nm,0.7s,baz=253,slow=7.6,SNR=23						
BVAR				S	S	02 33 43.8	-7.7
	comp=Z,3.1nm,0.7s,baz=250,slow=22,SNR=3.9						
BVAR				LR	LR	02 38 41.2	
	comp=Z,55nm,19.0s,baz=265,slow=39						
	comp=Z,5.2nm,0.7s						
SOKA	**Soboth**	20.83	292	*e*pP	Pn	02 30 03.7	-0.4
	comp=Z,6.2nm,1.0s						
OBKA	**Obir**	21.16	291	*e*Pn	P	02 30 06.4	+1.1
	comp=Z,6.0nm,1.0s						
MOA	**Molln**	21.41	295	*e*pP	P	02 30 08.9	+1.1
	comp=Z,7.6nm,1.7s						
CKRC	**Cesky Krumlov**	21.46	297	*e*P	P	02 30 10.4	+2.0
CKRC	**Cesky Krumlov**	21.46	297	*e*P	P	02 30 10.4	+2.0
ADZR	**Andozero**	21.78	354	*e*P	P	02 30 12.9	+1.4
ADZR				pmax	pmax		
	comp=Z,18nm,0.7s						
MYKA	**Terra Mystica**	21.79	291	*e*pP	P	02 30 13.4	+1.4
	comp=Z,8.9nm,1.2s						
FIA1	**FINESS Array S**	21.80	337	P	P	02 30 11.7	-0.1
FIA1				IAmb	IAmb	02 30 28.2	
	comp=Z,14nm,1.1s						
FINES	**FINESS Array B**	21.80	337	P	P	02 30 14.3	+2.4
	comp=Z,2.7nm,0.5s,baz=146,slow=11,SNR=17						
	comp=Z,2.7nm,0.5s						
FINES	**FINESS Array B**	21.80	337	P	P	02 30 10.1	-1.8
FINES	**FINESS Array B**	21.80	337	*ce*P	P	02 30 14.6	+2.7
FINES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GEC2	**GERESS Array S**	21.87	297	P	P	02 30 12.2	-0.6
GERES	**GERESS Array B**	21.87	297	P	P	02 30 14.0	+1.2
	comp=Z,2.2nm,0.8s,baz=95,slow=11,SNR=15						
	comp=Z,2.2nm,0.8s						
GERES	**GERESS Array B**	21.87	297	P	P	02 30 11.0	-1.8
KHC	**Kasperske Hory**	21.98	298	*e*P	P	02 30 19.4	+5.5
KHC	**Kasperske Hory**	21.98	298	*e*P	P	02 30 19.4	+5.5
KBA	**Koelnbreinsper**	22.00	293	*e*pP	pP	02 30 17.1	-0.5
	comp=Z,2.0nm,0.6s						
ABTA	**Abfaltersbach**	22.57	292	*e*P	P	02 30 20.8	+0.5
	comp=Z,5.6nm,1.3s						
AAK	**Ala-Archa**	22.62	79	P	P	02 30 23.8	+2.8
	comp=Z,2.0nm,0.5s,baz=236,slow=3.9,SNR=10						
AAK				LR	LR	02 41 28.5	
	comp=Z,84nm,18.3s,baz=332,slow=43						
	comp=Z,2.0nm,0.5s						
AAK	**Ala-Archa**	22.62	79	P	P	02 30 22.4	+1.5
AAK				IAmb	IAmb	02 30 29.0	
	comp=Z,15nm,1.3s						
AAK	**Ala-Archa**	22.62	79	*ce*P	P	02 30 22.3	+1.3
AAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CLL	**Collm**	22.67	304	P	P	02 30 19.8	-1.4
CLL				IAmb	IAmb	02 30 27.7	
	comp=Z,15nm,1.2s						
CLL	**Collm**	22.67	304	*e*P	P	02 30 22.0	+0.7
CLL				*e*pP	pP	02 30 25.0	+0.5
	comp=Z,16nm,1.3s						

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CLL                                 i sP    sP    02 30 26.3 +0.3
      comp=Z,16nm,1.3s
CLL                                 e(PP)         02 30 40.0
CLL                                 ePPP    PPP   02 30 52.0
CLL   Collm             22.67 304   eP      P     02 30 22.0 +0.7
CLL                                 i             02 30 26.3
MURB  Monte Urbino      22.84 283    P      P     02 30 22.7 -0.4
WTTA  Wattenberg        23.17 293   eP      P     02 30 27.6 +0.9
      comp=Z,12nm,1.2s,SNR=6.9
WATA  Walderalm         23.21 293   i P     P     02 30 27.3 +0.3
      comp=Z,9.2nm,0.9s,SNR=4.1
TEOL  Teolo             23.21 288    P      P     02 30 25.7 -1.2
TEOL                                 IAmb   IAmb  02 30 33.2
      comp=Z,14nm,0.9s
SQTA  Sankt Quirin      23.46 293   i P     P     02 30 29.9 +0.3
      comp=Z,10nm,1.2s
MOTA  Moosalm           23.53 293   i P     P     02 30 30.9 +0.6
      comp=Z,11nm,1.2s
OSSC  Osservatorio P    23.72 284    P      P     02 30 31.8 -0.3
OSSC                                 IAmb   IAmb  02 30 37.1
      comp=Z,11nm,1.0s
RETA  Reutte            23.76 294   eP      P     02 30 32.4 -0.1
      comp=Z,3.5nm,0.9s
FETA  Feichten          23.79 293   eP      P     02 30 33.6 +0.7
      comp=Z,2.7nm,0.6s,SNR=4.3
FUORN Ofenpass-Fuorn    24.12 292    P      P     02 30 34.9 -1.2
DAVA  Damuels           24.36 293   i P     P     02 30 38.2  0.0
      comp=Z,3.5nm,0.7s
DAVOX Davos/Dischmat    24.38 292    P      P     02 30 38.9 +0.6
      comp=Z,2.9nm,0.5s
      comp=Z,2.9nm,0.5s
KSH   Kashi             24.44  86    P      P     02 30 41.6 +2.7
KSH                                  pP     pP    02 30 43.1 +0.6
KSH                                  pmax   pmax
      comp=Z,6.0nm,0.9s
NIL   Nilore            24.75 101    P      P     02 30 41.0 -0.6
NIL                                  IAmb   IAmb  02 30 54.6
      comp=Z,4.6nm,0.7s
NIL   Nilore            24.75 101    P      P     02 30 41.0 -0.6
NIL                                  pmax   pmax
      comp=Z,5.0nm,0.7s
STU   Stuttgart         24.83 297    P      P     02 30 41.4 -0.8
STU   Stuttgart         24.83 297    P      P     02 30 41.4 -0.8
STU                                  pmax   pmax
      comp=Z,9.0nm,0.6s
MSSA  Maissana          24.84 286    P      P     02 30 42.7 +0.2
KURBB Kurchatov Arra    25.12  59    P      P     02 30 46.8 +2.0
      comp=Z,1.5nm,0.8s,baz=266,slow=8.7,SNR=7.8
      comp=Z,1.5nm,0.8s
KURK  Kurchatov         25.19  59    P      P     02 30 44.9 -0.5
KURK  Kurchatov         25.19  59ceP        P     02 30 46.4 +1.0
KURK                                 pmax   pmax
      comp=Z,6.0nm,1.3s
HFS   Hagfors           25.49 324    P      P     02 30 49.6 +1.5
      comp=Z,6.8nm,0.8s,baz=134,slow=11,SNR=9.2
HFS                                  LR     LR    02 39 57.3
      comp=Z,77nm,19.8s,baz=106,slow=34
      comp=Z,6.8nm,0.8s
SENIN Lac Senin/Sane    26.18 291    P      P     02 30 54.2 -0.5
NC405 NORSAR Array S    26.82 325    P      P     02 31 00.1  0.0
NB2   NORSAR Subarra    27.00 325    P      P     02 31 05.1 +3.3
      comp=Z,1.4nm,0.7s,baz=129,slow=8.6
NOA   NORSAR Array B    27.00 325    P      P     02 31 02.7 +1.0
      comp=Z,0.7nm,0.8s,baz=106,slow=9.7,SNR=1.4
NOA                                  LR     LR    02 42 23.4
      comp=Z,197nm,18.9s,baz=125,slow=38
      comp=Z,0.7nm,0.8s
MK31  Makanchi Array    27.61  68    P      P     02 31 07.6 +0.3
MK31  Makanchi Array    27.61  68   i P     P     02 31 08.0 +0.7
MKAR  Makanchi Array    27.61  68    P      P     02 31 09.1 +1.8
      comp=Z,1.5nm,0.5s,baz=271,slow=8.2,SNR=22
MKAR                                 LR     LR    02 44 03.0
      comp=Z,74nm,19.9s,baz=322,slow=41
      comp=Z,1.5nm,0.5s
MKAR  Makanchi Array    27.61  68    P      P     02 31 07.7 +0.4
MKAR  Makanchi Array    27.61  68ceP        P     02 31 11.0 +3.7
MKAR                                 pmax   pmax
      comp=Z,2.0nm,0.4s
ZAA0  Zalesovo Array    29.31  53    P      P     02 31 23.1 +0.7
ZALV  Zalesovo Beam     29.31  53    P      P     02 31 23.4 +1.0
      comp=Z,1.4nm,0.6s,baz=270,slow=10,SNR=5.6
ZALV                                 LR     LR    02 43 58.9
      comp=Z,59nm,19.2s,baz=0.5,slow=38
      comp=Z,1.4nm,0.6s
ZALV  Zalesovo Beam     29.31  53    P      P     02 31 21.8 -0.6
WMQ   Urumqi            31.84  72 ⇑P        P     02 31 48.1 +3.1
WMQ                                  sP     sP    02 31 57.7 +7.7
WMQ                                  pmax   pmax
      comp=Z,32nm,0.8s
EKA   Eskdalemuir Ar    32.78 310    P      P     02 31 53.5 +0.5
      comp=Z,1.2nm,0.7s,baz=100,slow=9.4,SNR=3.8
      comp=Z,1.2nm,0.7s
NRIK  Noril'sk          35.12  25ceP        P     02 32 14.7 +1.6
NRIK                                 pmax   pmax
      comp=Z,4.0nm,0.9s
TAM   Tamanrasset       37.27 250    P      P     02 32 31.6 -0.5
TAM   Tamanrasset       37.27 250    P      P     02 32 31.6 -0.5
TAM                                  pmax   pmax
      comp=Z,3.0nm,1.2s
PVAQ  Vaqueiros         39.28 280    P      P     02 32 47.4 -1.4
SONM  Songino Array     43.47  60    P      P     02 33 25.8 +2.5
      comp=Z,0.2nm,0.4s,baz=127,slow=39,SNR=2.0
      comp=Z,0.2nm,0.4s
ULN   Ulaanbaatar       43.88  60ceP        P     02 33 28.3 +1.7
ULN                                  pmax   pmax
      comp=Z,4.0nm,1.0s
LZH   Lanzhou           46.13  77   eP      P     02 33 49.2 +4.5
LZH                                  pP     sP    02 33 52.8 +3.0
LZH                                  pmax   pmax
      comp=Z,10.0nm,1.4s
TORD  Torodi Ar. Bea    46.56 244    P      P     02 33 47.7 -0.3
      comp=Z,3.1nm,0.9s,baz=46,slow=7.7,SNR=9.3
      comp=Z,3.1nm,0.9s
TORD  Torodi Ar. Bea    46.56 244    P      P     02 33 47.0 -0.9
TORD                                 IAmb   IAmb  02 33 51.6
      comp=Z,3.8nm,1.1s
TIXI  Tiksi             48.90  25ceP        P     02 34 05.3 -0.1
TIXI                                 pmax   pmax
      comp=Z,2.0nm,1.0s
HHC   Hu-ho-hao-te      49.47  68   eP      P     02 34 11.6 +1.2
HHC                                  pmax   pmax
      comp=Z,31nm,0.8s
HHC                                  pmax   pmax
      comp=Z,210nm,5.3s
HHC                                  LR     LR
      comp=N,240nm,15.9s
HHC                                  LR     LR
      comp=E,170nm,15.9s
HHC                                  LR     LR
      comp=Z,210nm,15.2s
CMAR  Chiang Mai Arr    52.23 100    P      P     02 34 34.1 +2.8
      comp=Z,2.0nm,0.3s,baz=296,slow=8.9,SNR=7.0
      comp=Z,2.0nm,0.3s
SEY   Seymchan          60.70  30ceP        P     02 35 33.1 +2.0
SEY                                  pmax   pmax
      comp=Z,2.0nm,0.8s
A36M  Sachs Harbour     65.63 356    P      P     02 36 04.8 +1.2
A36M                                 IAmb   IAmb  02 36 40.2
      comp=Z,3.3nm,1.1s
C36M  Paulatuk          68.19 355    P      P     02 36 20.2 +0.3
C36M                                 IAmb   IAmb  02 36 24.9
      comp=Z,3.0nm,1.1s
INK   Inuvik            69.58 359    P      P     02 36 28.3 -0.3
INK                                  IAmb   IAmb  02 36 46.9
      comp=Z,3.1nm,1.2s
INK   Inuvik            69.58 359    P      P     02 36 28.3 -0.3
INK                                  pmax   pmax
      comp=Z,3.0nm,1.3s
BMAR  Burnt Mountain    70.30   3    P      P     02 36 34.1 +1.0
IMAR  Indian Mountai    71.09   7    P      P     02 36 38.1 +0.3
H21K  Melozitna Rive    71.49   7    P      P     02 36 41.1 +0.7
H21K                                 IAmb   IAmb  02 36 49.5
      comp=Z,3.2nm,1.1s
MLY   Manley            72.29   6    P      P     02 36 44.6 -0.6
MLY                                  IAmb   IAmb  02 36 58.5
      comp=Z,7.1nm,1.5s
I26K  Coal Creek Min    72.48   3    P      P     02 36 47.0 +0.8
I26K                                 IAmb   IAmb  02 37 20.1
      comp=Z,6.2nm,1.4s
CCB   Clear Creek Bu    72.89   5    P      P     02 36 48.8 +0.2
WRH   Wood River Hil    73.04   5    P      P     02 36 50.0 +0.4
EGAK  Eagle             73.07   2    P      P     02 36 50.6 +0.8
EGAK                                 IAmb   IAmb  02 37 04.7
      comp=Z,3.7nm,1.2s
J26L  Joseph Creek      73.27   3    P      P     02 36 51.4 +0.3
J26L                                 IAmb   IAmb  02 37 27.0
      comp=Z,6.0nm,1.5s
FCC   Fort Churchill    73.28 339    P      P     02 36 51.9 +0.8
FCC                                  IAmb   IAmb  02 36 56.2
      comp=Z,3.7nm,0.9s
FCC   Fort Churchill    73.28 339    P      P     02 36 51.9 +0.8
FCC                                  pmax   pmax
      comp=Z,4.0nm,1.0s
KTH   Kantishna Hill    73.73   7    P      P     02 36 54.0 +0.2
CAST  Castle Rocks      73.76   7    P      P     02 36 54.2 +0.4
CAST                                 IAmb   IAmb  02 37 00.1
      comp=Z,2.7nm,0.8s
SCRK  Sand Creek        73.77   4    P      P     02 36 54.8 +0.8
SCRK                                 IAmb   IAmb  02 37 07.1
      comp=Z,4.7nm,1.5s
K27K  Chicken           73.80   3    P      P     02 36 53.7 -0.4
DAWY  Dawson            73.83   1    P      P     02 36 54.3  0.0
DAWY                                 IAmb   IAmb  02 37 08.3
      comp=Z,7.0nm,1.5s
RIDG  Independent Ri    73.97   4    P      P     02 36 54.1 -1.0
YKA   Yellowknife Ar    73.99 350    P      P     02 36 55.4 +0.2
      comp=Z,0.6nm,0.9s,baz=13,slow=6.4,SNR=5.9
      comp=Z,0.6nm,0.9s
YKA   Yellowknife Ar    73.99 350ceP        P     02 36 58.7 +3.5
YKA                                  pmax   pmax
      comp=Z,1.0nm,0.8s
DOT   Dot Lake          74.09   4    P      P     02 36 56.5 +0.7
DOT                                  IAmb   IAmb  02 37 32.0
      comp=Z,3.8nm,1.3s
PPLA  Purkeypile        74.26   8    P      P     02 36 57.0 +0.1
BCAR  Beaver Creek A    74.77   3    P      P     02 37 00.9 +1.1
L27K  Beaver Creek,     74.77   3    P      P     02 37 00.4 +0.6
L27K                                 IAmb   IAmb  02 37 35.0
      comp=Z,6.9nm,1.4s
N19K  Bonanza Creek     76.05   9    P      P     02 37 08.4 +1.1
B35A  Bob, Littlefor    82.13 333    P      P     02 37 40.6  0.0
YBH   Yreka Blue Hor    95.34 350    LR     LR    03 21 56.7
      comp=Z,116nm,18.5s,baz=20,slow=36
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BJI ***13*** *02:48:49.8±0.0, 13.°95N×120.°85E, h171km, mb4.4/41, mB4.9/19*
IDC ***13*** *02:48:51.0±2.4, 13.°89N×120.°75E, h172km±21km, mb4.0/25, mbtmp4.4/26, MS3.3/1, Error ellipse: s-maj=15.8km s-min=8.3km az=74.0*
NEIC ***13*** *02:48:50.3±1.5, 13.°92N±0.°08×120.°7E±0.°1, h164km±7km, mb4.6/147, Error ellipse: s-maj=15.0km s-min=11.4km az=81.0*
ISC 13 02:48:48.7±0.3**, 13.°91N**±0.°04×**120.°72E**±0.°06**, h150**km**,**
n388, σ1.s09/398**, mb4.5**/105**, 13C-10D, Mindoro**

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Code  Station Name        Δ°   AZ°    Phase ID         Time     Res
                                     Op     ISC      h  m  s    ISC
TGY   Tagaytay City      0.28  47⇓eP        Pn    02 49 06.8 -2.5
TGY                                 i S     Sn    02 49 21.6 -3.4
PGP   Puerto Galera      0.46 151⇑iP        Pn    02 49 07.0 -3.0
PGP                                 i S     Sn    02 49 18.3 -7.8
LQP   Lukban             0.82  76⇓eP        Pn    02 49 10.9 -1.4
LQP                                 i S     Sn    02 49 28.7 -1.4
GQP   Guinayangan        1.67  90⇓iP        Pn    02 49 20.4 +0.2
GQP                                 i S     Sn    02 49 56.9  +13
PCPH  Palayan            1.68  12⇓eP        Pn    02 49 17.4 -2.8
PCPH                                 eS     Sn    02 49 40.2 -4.3
IBAJ  Ibajay, Aklan      2.51 146⇓iP        Pn    02 49 29.8 -0.3
RCP   Roxas              3.06 140⇓eP        Pn    02 49 37.4 +0.5
MMPH  Masbate            3.22 118⇑iP        Pn    02 49 41.2 +2.4
LLP   Lapu-Lapu          4.78 138  eP       Pn    02 50 00.6 +1.4
LLP                                 i S     Sn    02 51 05.7  +12
TBP   Tagbilaran         5.20 143  eP       Pn    02 50 06.5 +1.7
SCPH  Surigao            6.21 131  eP       Pn    02 50 20.9 +2.6
GLSP  General Luna,      6.69 127⇑eP        Pn    02 50 27.1 +2.3
BIPH  Bislig             7.94 135⇑eP        Pn    02 50 43.5 +2.2
DAV   Davao City (W)     8.31 144   Pn      Pn    02 50 46.8 +0.5
MYLDM Lahad Datu         8.95 194   Pn      Pn    02 50 56.7 +1.9
NACB  Ninganchiao       10.24   4   Pn      Pn    02 51 13.2 +1.2
QIZ   Qiongzhong        11.61 297   P       Pn    02 51 32.2 +2.2
QIZ                                 S       Sn    02 53 41.4 +3.0
QIZ                                 pmax    pmax
      comp=Z,10.0nm,0.8s
SBUM  Sibu              14.15 217   Pn      Pn    02 52 02.9 +0.3
KSM   Kuching           16.09 221   Pn      P     02 52 33.5 +6.4
NJ2   Nanjing           18.14 355  eP       Pn    02 52 52.2 +1.1
NJ2                                 sP      sP    02 53 38.3 +3.8
NJ2                                 pmax    pmax
      comp=Z,11nm,0.7s
NJ2                                 pmax    pmax
      comp=Z,310nm,3.7s
GYA   Guiyang           18.14 316 ⇑P        Pn    02 52 52.8 +1.4
GYA                                 pmax    pmax
      comp=Z,15nm,1.0s
KAPI  Kappang           18.83 183   P       Pn    02 52 59.4 +0.1
      5.6nm,0.5s,baz=51,slow=15,SNR=5.4
KAPI  Kappang           18.83 183   P       P     02 52 57.3 +0.2
PHRA  Phrae             20.20 286   P       P     02 53 12.1 +0.2
CRAI  Chiangrai         20.43 291   P       P     02 53 14.8 +0.3
CRAI                                IAmb    IAmb  02 53 16.7
      comp=Z,12nm,0.8s
JNU   Nakatsue          21.25  24   LR      LR    03 01 28.7
      comp=Z,80nm,18.4s,baz=92,slow=36
CM31  Chiang Mai Arr    21.39 285   P       P     02 53 25.4 +0.7
CM31                                IAmb    IAmb  02 54 01.7
      comp=Z,12nm,0.4s
CMAR  Chiang Mai Arr    21.39 285   P       P     02 53 25.8 +1.0
      comp=Z,7.6nm,0.9s,baz=98,slow=8.1,SNR=24
      comp=Z,7.6nm,0.9s
CMAR  Chiang Mai Arr    21.39 285   P       P     02 53 24.3 -0.4
CHTO  Chiang Mai        21.45 286   P       P     02 53 23.7 -1.6
PZH   PanZhiHua         21.74 308   P       P     02 53 29.6 +1.1
PZH                                 pmax    pmax
      comp=Z,9.0nm,0.7s
PZH                                 pmax    pmax
      comp=Z,100nm,4.8s
LYN   LuoYang           21.87 341⇑iP        P     02 53 31.2 +1.7
LYN                                 pmax    pmax
      comp=Z,27nm,0.8s
LYN                                 pmax    pmax
      comp=Z,130nm,4.7s
XAN   Xi'an             22.72 334   P       P     02 53 37.5 -0.4
XAN                                 pP      pP    02 54 10.0 +4.2
XAN                                 S       S     02 57 34.4 -0.7
XAN                                 pmax    pmax
      comp=Z,8.0nm,0.6s
XAN                                 pmax    pmax
      comp=Z,110nm,5.1s
JMN   Monobe            23.07  29   P       P     02 53 41.1  0.0
JHS   Saijyo            23.79  26   P       P     02 53 47.2 -0.6
JHS                                 IAmb    IAmb  02 53 54.6
      comp=Z,17nm,0.9s
HNS   HongShan          24.00 348 ⇑P        P     02 53 49.6 +0.1
HNS                                 pmax    pmax
      comp=Z,22nm,0.8s
RPSI  Rantau Prapat     24.25 245   P       P     02 53 51.0 -1.0
KSAR  Wonju Array Be    24.29  14   P       P     02 53 50.3 -1.8
KSRS  Korea Array       24.31  14   P       P     02 53 52.3  0.0
      comp=Z,1.9nm,0.6s,baz=197,slow=10,SNR=4.9
      comp=Z,1.9nm,0.6s
BJT   Baijiatuau        26.31 352   P       P     02 54 09.5 -0.9
BJT                                 IAmb    IAmb  02 54 11.9
      comp=Z,6.4nm,0.5s
BJI   Beijing           26.34 352   P       P     02 54 10.6  0.0
BJI                                 pP      pP    02 54 43.0 +1.0
BJI                                 pmax    pmax
      comp=Z,3.0nm,0.5s
HHC   Hu-ho-hao-te      28.01 345  eP       P     02 54 28.1 +2.4
HHC                                 pmax    pmax
      comp=Z,30nm,0.8s
HHC                                 pmax    pmax
      comp=Z,99nm,4.5s
SHL   Shillong          29.45 298   P       P     02 54 38.0 -0.8
GTA   Gaotai            31.37 328  eP       P     02 54 56.6 +1.1
GTA                                 pmax    pmax
      comp=Z,5.0nm,0.9s
GTA                                 pmax    pmax
      comp=Z,130nm,5.1s
GTA                                 LR      LR
      comp=Z,170nm,15.3s
GTA                                 LR      LR
      comp=Z,290nm,16.7s
GTA                                 LR      LR
      comp=Z,160nm,16.0s
MDJ   Mudanjiang        31.52  12   P       P     02 54 56.8 +0.3
MDJ                                 PcS     PcS   03 01 26.3 -3.9
MDJ                                 pmax    pmax
      comp=Z,10.0nm,1.5s
MDJ                                 pmax    pmax
      comp=Z,180nm,3.7s
USRK  Ussuriysk Ar.     31.69  16   P       P     02 54 58.6 +0.7
      comp=Z,4.2nm,0.7s,baz=204,slow=8.7,SNR=13
      comp=Z,4.2nm,0.7s
USRK  Ussuriysk Ar.     31.69  16   P       P     02 54 58.0  0.0
USA0B Ussuriysk Arra    31.69  16   P       P     02 54 58.1 +0.1
USA0B                               IAmb    IAmb  02 54 59.3
      comp=Z,9.3nm,0.9s
FITZ  Fitzroy Crossi    32.17 171   P       P     02 55 02.6 +0.2
BNX   BinXian           32.23   9 ⇑P        P     02 55 03.3 +0.6
BNX                                 pmax    pmax
      comp=Z,13nm,1.0s
BNX                                 pmax    pmax
      comp=Z,88nm,3.9s
RAMN  Ramite            34.39 298  eP       P     02 55 22.1 +0.1
      comp=Z,23nm,0.6s
MBWA  Marble Bar        34.86 182   P       P     02 55 24.9 -0.8
JIRN  Jiri              34.93 299  eP       P     02 55 27.2 +0.4
      comp=Z,30nm,0.6s
GUN   Gumba             35.26 299  eP       P     02 55 30.0 +0.4
      comp=Z,30nm,0.6s
PSA00 Pilbara Seismi    35.27 181   P       P     02 55 28.6 -0.7
PKI   Pulchoki          35.57 298  eP       P     02 55 32.0 -0.2
      comp=Z,18nm,0.7s
PKIN  Phulchoki         35.59 298  eP       P     02 55 32.3  0.0
      comp=Z,9.2nm,0.4s
ULN   Ulaanbaatar       35.71 344   P       P     02 55 32.2 -0.7
DMN   Daman             35.84 298  eP       P     02 55 34.4 -0.1
      comp=Z,12nm,0.5s
SONM  Songino Array     35.86 343   P       P     02 55 34.4 +0.2
      comp=Z,6.7nm,0.6s,baz=163,slow=10,SNR=52
      comp=Z,6.7nm,0.6s
SONM  Songino Array     35.86 343   P       P     02 55 34.2 +0.1
WB0   Warramunga Arr    36.07 158   P       P     02 55 35.7 -0.3
WRA   Warramunga Arr    36.21 158   P       P     02 55 36.2 -1.1
      comp=Z,3.7nm,0.5s,baz=336,slow=9.5,SNR=56
WRA                                 S       S     03 01 03.1 -3.3
      comp=Z,1.5nm,1.0s,baz=344,slow=15,SNR=6.4
      comp=Z,3.7nm,0.5s
WRA   Warramunga Arr    36.21 158   P       P     02 55 36.5 -0.8
WB2   Warramunga Arr    36.22 158   P       P     02 55 36.4 -0.9
WB2                                 IAmb    IAmb  02 55 38.4
      comp=Z,6.4nm,0.7s
KLR   Kul'dur           36.37  12   P       P     02 55 38.5 +0.2
      comp=Z,10nm,0.9s,baz=235,slow=7.5,SNR=28
      comp=Z,10nm,0.9s
HEH   HeiHe             36.65   7  eP       P     02 55 40.9 +0.2
HEH                                 pmax    pmax
      comp=Z,10.0nm,0.9s
HEH                                 pmax    pmax
      comp=Z,190nm,5.6s
DANN  Dangsing          37.18 299  eP       P     02 55 45.7 -0.2
      comp=Z,18nm,0.5s
PYUN  Piuthan           37.78 298  eP       P     02 55 50.9 +0.1
AS31  Alice Springs     39.51 161   P       P     02 56 05.1 +0.2
ASAR  Alice Springs     39.51 161   P       P     02 56 04.5 -0.4
      comp=Z,1.8nm,0.5s,baz=340,slow=7.0,SNR=34
ASAR                                S       S     03 01 56.2  0.0
      comp=Z,0.9nm,0.9s,baz=351,slow=24,SNR=6.2
      comp=Z,1.8nm,0.5s
ASAR  Alice Springs     39.51 161   P       P     02 56 04.4 -0.6
WMQ   Urumqi            41.05 323  eP       P     02 56 19.1 +1.6
CTAO  Charters Tower    42.10 143   P       P     02 56 25.5 -0.7
MORW  Morawa            42.97 186   P       P     02 56 32.2 -0.8
MORW                                IAmb    IAmb  02 56 33.8
      comp=Z,11nm,0.9s
FORT  Forrest           44.99 171   P       P     02 56 48.2 -0.9
MK31  Makanchi Array    45.88 323   P       P     02 56 54.8 -1.2
MKAR  Makanchi Array    45.88 323   P       P     02 56 56.7 +0.6
      comp=Z,2.6nm,0.7s,baz=123,slow=9.0,SNR=31
MKAR                                PcP     PcP   02 58 30.4 -0.4
      comp=Z,1.1nm,0.7s,baz=117,slow=5.2,SNR=3.6
      comp=Z,2.6nm,0.7s
MKAR  Makanchi Array    45.88 323   P       P     02 56 54.8 -1.2
MAKZ  Makanchi          46.07 323   P       P     02 56 56.6 -1.0
TARG  Taragay, Kyrgy    46.31 315   P       P     02 56 58.4 -1.6
NWAO  Narrogin (SRO)    46.69 184   P       P     02 57 02.0 -0.4
BBOO  Buckleboo         48.72 163   P       P     02 57 17.1 -1.0
BBOO                                IAmb    IAmb  02 57 18.3
      comp=Z,9.4nm,0.6s
PETK  Petropavlovsk-    48.83  29   P       P     02 57 19.3 +0.6
      comp=Z,1.7nm,0.6s,baz=219,slow=11,SNR=2.9
      comp=Z,1.7nm,0.6s
ZAA0  Zalesovo Array    48.88 333   P       P     02 57 18.1 -1.0
ZALV  Zalesovo Beam     48.88 333   P       P     02 57 18.8 -0.3
      comp=Z,3.3nm,0.5s,baz=130,slow=7.1,SNR=16
      comp=Z,3.3nm,0.5s
ZALV  Zalesovo Beam     48.88 333   P       P     02 57 18.5 -0.6
STKA  Stephens Creek    49.73 157   P       P     02 57 25.3 -0.5
      comp=Z,2.2nm,0.6s,baz=333,slow=8.9,SNR=5.0
      comp=Z,2.2nm,0.6s
STKA  Stephens Creek    49.73 157   P       P     02 57 24.7 -1.1
KURK  Kurchatov         50.03 326   P       P     02 57 28.2 +0.4
GAR   Garm              50.80 309   P       P     02 57 33.5 -0.6
GAR                                 IAmb    IAmb  02 57 35.4
      comp=Z,7.9nm,0.9s
KBL   Kabul             50.81 303   P       P     02 57 33.6 -0.7
CHGR  Chuyangaron       51.59 308   P       P     02 57 38.3 -1.6
CHGR                                IAmb    IAmb  02 57 41.0
      comp=Z,5.8nm,0.6s
KK31  Karatay Array     51.84 314   P       P     02 57 41.4 -0.2
KKAR  Karatay Array     51.84 314   P       P     02 57 41.4 -0.2
BRVK  Borovoye          55.69 326   P       P     02 58 09.7 +0.4
CAN   Canberra          55.82 152   P       P     02 58 11.2 +0.7
TOO   Toolangi          56.25 156   P       P     02 58 13.8 +0.3
TOO                                 IAmb    IAmb  02 58 23.5
      comp=Z,15nm,1.4s
DZM   Mont Dzumac       57.34 128   P       P     02 58 22.9 +1.4
TIXI  Tiksi             57.92   3   P       P     02 58 23.9 -0.9
      comp=Z,5.1nm,0.7s,baz=270,slow=23,SNR=18
      comp=Z,5.1nm,0.7s
TIXI  Tiksi             57.92   3   P       P     02 58 23.8 -0.9
TIXI                                IAmb    IAmb  02 58 24.8
      comp=Z,8.0nm,1.0s
NRIK  Noril'sk          59.22 347   P       P     02 58 33.7 -0.1
      comp=Z,11nm,0.9s,baz=136,slow=6.8,SNR=9.5
      comp=Z,11nm,0.9s
NRIK  Noril'sk          59.22 347   P       P     02 58 33.6 -0.1
NRIK                                IAmb    IAmb  02 58 34.5
      comp=Z,13nm,0.9s
GEYT  Alibeck           60.03 306   P       P     02 58 41.2 +1.3
      comp=Z,3.3nm,0.8s,baz=169,slow=1.5,SNR=7.6
      comp=Z,3.3nm,0.8s
ABKAR Akbulak array     60.59 319   P       P     02 58 43.5 +0.1
BILL  Bilibino          61.50  18   P       P     02 58 49.5 +0.2
BILL                                IAmb    IAmb  02 58 50.5
      comp=Z,9.2nm,0.8s
ARU   Arti              63.22 327   P       P     02 59 00.2 -0.7
ARU                                 IAmb    IAmb  02 59 01.2
      comp=Z,7.4nm,0.6s
MSVF  Nonsavu           64.70 117   P       P     02 59 11.2 -0.1
UNV   Unalaska Valle    68.72  37   P       P     02 59 37.3 +1.3
      baz=264
TNA   Tin City          69.73  25   P       P     02 59 43.0 +0.9
TNA   Tin City          69.73  25   P       P     02 59 43.8 +1.7
      baz=259,SNR=5.2
ANM   Nome              70.63  26   P       P     02 59 49.1 +1.6
ANM                                 IAmb    IAmb  02 59 50.1
      comp=Z,6.5nm,0.9s
ANM   Nome              70.63  26   P       P     02 59 49.0 +1.4
      baz=262,SNR=9.4
RAYN  Ar Rayn           71.20 290   P       P     02 59 51.2 -0.7
RAYN                                IAmb    IAmb  02 59 53.1
      comp=Z,9.8nm,0.9s
ONI   Oni               71.39 311   P       P     02 59 53.4 +0.7
AKH   Akhalkalaki       71.41 309   P       P     02 59 53.2 +0.3
KBZ   Khabaz            71.76 312   P       P     02 59 54.7 -0.1
      comp=Z,3.1nm,0.9s,baz=144,slow=12,SNR=5.7
      comp=Z,3.1nm,0.9s
KIV   Kislovodsk        71.90 312   P       P     02 59 55.0 -0.8
KIV                                 IAmb    IAmb  02 59 57.3
      comp=Z,10.0nm,0.8s
RDOG  Red Dog Mine      72.10  23   P       P     02 59 56.1 -0.2
RDOG                                IAmb    IAmb  02 59 57.9
      comp=Z,5.8nm,0.8s
SDPT  Sand Point        72.31  36   P       P     02 59 58.8 +1.0
      baz=269
GURO  Guroymak-BITLI    72.69 306   P       P     03 00 00.6  0.0
GURO                                IAmb    IAmb  03 00 02.6
      comp=Z,7.9nm,0.7s
N16K  Nishlik Lake      73.33  31   P       P     03 00 03.7 -0.1
      baz=269
CHGN  Chignik           73.48  35   P       P     03 00 04.1 -0.6
      baz=270
O16K  Kokwok River B    73.66  32   P       P     03 00 05.8 +0.1
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	baz=270						
KLMR	Klimovskoe	73.68	330	*e*P	P	03 00 04.2	-1.6
KLMR				AMP		03 00 06.4	
	comp=Z,28nm,1.5s						
P16K	Nushagak River	73.71	32	P	P	03 00 06.2	+0.2
	baz=270						
BKZ	Black Stump Fm	74.08	138	P	P	03 00 07.4	-1.1
BKZ				IAmb	IAmb	03 00 50.1	
	comp=Z,10nm,1.4s						
RTZ	Ruatahuna	74.09	137	P	P	03 00 08.4	-0.2
O17K	Koliganek Bris	74.16	31	P	P	03 00 09.3	+0.7
	baz=270						
GCSA	Galena City Sc	74.28	26	P	P	03 00 10.2	+1.0
	baz=269						
A21K	Barrow	74.57	19	P	P	03 00 10.1	-0.6
A21K	Barrow	74.57	19	P	P	03 00 11.5	+0.8
	baz=268,SNR=10						
TTA	Tatalina	74.66	28	P	P	03 00 11.9	+0.3
TTA				IAmb	IAmb	03 00 13.7	
	comp=Z,7.2nm,0.6s						
TTA	Tatalina	74.66	28	P	P	03 00 12.2	+0.7
	baz=270,SNR=6.7						
Q17K	Contact Creek	74.82	33	P	P	03 00 12.7	+0.1
	baz=272						
O18K	Koktuh Hills	75.12	31	P	P	03 00 14.4	+0.2
O18K	Koktuh Hills	75.12	31	P	P	03 00 14.3	+0.2
	baz=272						
P18K	Big Mountain,	75.12	32	P	P	03 00 14.9	+0.8
P18K				IAmb	IAmb	03 00 35.0	
	comp=Z,29nm,1.5s						
P18K	Big Mountain,	75.12	32	P	P	03 00 14.4	+0.2
	baz=272						
L19K	White Mountain	75.21	29	P	P	03 00 14.9	+0.2
L19K				IAmb	IAmb	03 00 17.1	
	comp=Z,12nm,0.8s						
L19K	White Mountain	75.21	29	P	P	03 00 14.8	+0.2
	baz=272,SNR=7.1						
M19K	Big River Lodg	75.44	29	P	P	03 00 16.9	+1.0
	baz=272						
N19K	Bonanza Creek	75.44	30	P	P	03 00 15.2	-0.8
N19K				IAmb	IAmb	03 00 18.4	
	comp=Z,12nm,0.9s						
N19K	Bonanza Creek	75.44	30	P	P	03 00 16.7	+0.6
	baz=272						
K20K	Telida	75.53	28	P	P	03 00 17.0	+0.6
K20K				IAmb	IAmb	03 00 19.1	
	comp=Z,14nm,1.1s						
K20K	Telida	75.53	28	P	P	03 00 17.2	+0.8
	baz=272,SNR=6.7						
O19K	Port Alsworth	75.55	31	P	P	03 00 16.8	+0.3
	baz=273						
IMAR	Indian Mountai	75.58	25	P	P	03 00 17.3	+0.6
F21K	Alatna River	75.66	24	P	P	03 00 18.1	+1.0
	baz=272						
L20K	Farewell, AK	75.66	29	P	P	03 00 18.2	+1.1
	baz=272						
G21K	Allakaket	75.67	24	P	P	03 00 18.3	+1.2
	baz=272						
Q19K	Cape Douglas,	75.96	32	P	P	03 00 19.1	+0.1
	baz=274						
H21K	Melozitna Rive	75.98	25	P	P	03 00 19.3	+0.3
H21K				IAmb	IAmb	03 00 21.4	
	comp=Z,10.0nm,0.8s						
H21K	Melozitna Rive	75.98	25	P	P	03 00 19.6	+0.7
	baz=273						
M20K	Styx River	76.04	29	P	P	03 00 18.9	-0.5
M20K				IAmb	IAmb	03 00 21.9	
	comp=Z,12nm,0.8s						
M20K	Styx River	76.04	29	P	P	03 00 20.3	+0.8
	baz=273						
F22K	John River	76.15	23	P	P	03 00 20.6	+0.7
	baz=273						
OHAK	Old Harbor	76.27	34	P	P	03 00 21.7	+1.0
	baz=274						
CHUM	Lake Minchumin	76.29	27	P	P	03 00 21.4	+0.7
	baz=274,SNR=9.9						
I21K	Tanana	76.36	26	P	P	03 00 22.0	+0.9
	baz=274						
O20K	Slope Mountain	76.40	31	P	P	03 00 21.6	+0.2
	baz=274						
PPLA	Purkeypile	76.41	28	P	P	03 00 21.4	-0.2
PPLA				IAmb	IAmb	03 00 23.5	
	comp=Z,6.4nm,0.7s						
PPLA	Purkeypile	76.41	28	P	P	03 00 22.2	+0.6
	baz=274						
CAST	Castle Rocks	76.42	28	P	P	03 00 22.6	+1.1
CAST	Castle Rocks	76.42	28	P	P	03 00 22.2	+0.7
	baz=274,SNR=25						
G22K	Bettles	76.44	24	P	P	03 00 22.6	+1.1
	baz=274						
SPCR	Spurr Chakacha	76.52	30	P	P	03 00 22.7	+0.5
	baz=274						
H22K	Ishtalitna Cre	76.56	25	P	P	03 00 23.6	+1.3
	baz=274						
SPU	Mount Spurr	76.60	30	P	P	03 00 21.9	-0.6
D23K	Nanushuk River	76.62	22	P	P	03 00 23.7	+1.2
	baz=274						
Q20K	Shuyak Island	76.63	32	P	P	03 00 23.4	+0.7
	baz=275						
SKT	Skwentna	76.78	29	P	P	03 00 22.2	-1.4
SKT				IAmb	IAmb	03 00 25.1	
	comp=Z,8.4nm,0.9s						
SKT	Skwentna	76.78	29	P	P	03 00 23.7	+0.1
	baz=275,SNR=6.1						
BPAW	Bear Paw Mtn.	76.86	27	P	P	03 00 23.4	-0.6
BPAW	Bear Paw Mtn.	76.86	27	P	P	03 00 25.0	+1.1
	baz=275,SNR=19						
MLY	Manley	76.89	26	P	P	03 00 24.5	+0.4
MLY	Manley	76.89	26	P	P	03 00 25.0	+0.9
	baz=275,SNR=21						
COLD	Coldfoot	76.93	24	P	P	03 00 23.4	-0.9
COLD	Coldfoot	76.93	24	P	P	03 00 25.0	+0.8
	baz=275						
KTH	Kantishna Hill	76.93	27	P	P	03 00 24.4	0.0
KTH				IAmb	IAmb	03 00 26.5	
	comp=Z,7.5nm,0.9s						
G23K	Bananza Creek	77.04	24	P	P	03 00 25.6	+0.6
	baz=275						
CAPN	Captain Cook N	77.07	30	P	P	03 00 26.0	+0.9
	baz=275						
E23K	Chandalar	77.08	23	P	P	03 00 26.4	+1.2
	baz=275						
CNPM	China Poot	77.15	31	P	P	03 00 25.1	-0.5
CNPM				IAmb	IAmb	03 00 54.6	
	comp=Z,22nm,1.2s						
SUA	Susitna One	77.20	29	P	P	03 00 25.1	-0.9
SUA	Susitna One	77.20	29	P	P	03 00 25.9	-0.1
	baz=276						
TRF	Thorofare Moun	77.22	27	P	P	03 00 26.9	+0.7
TRF				IAmb	IAmb	03 00 29.8	
	comp=Z,6.1nm,0.8s						
TRF	Thorofare Moun	77.22	27	P	P	03 00 26.7	+0.5
	baz=275						
C24K	Franklin Bluff	77.26	21	P	P	03 00 26.6	+0.5
	baz=276						
D24K	Happy Valley	77.27	22	P	P	03 00 26.8	+0.7
	baz=276,SNR=11						
BRLK	Bradley Lake	77.30	31	P	P	03 00 26.9	+0.4
BRLK				IAmb	IAmb	03 00 29.6	
	comp=Z,17nm,1.0s						
H23K	Yukon River	77.32	25	P	P	03 00 27.5	+1.0
H23K				IAmb	IAmb	03 00 29.1	
	comp=Z,12nm,0.8s						
H23K	Yukon River	77.32	25	P	P	03 00 27.3	+0.8
	baz=276						
CUT	Chulitna	77.34	29	P	P	03 00 27.1	+0.5
	baz=276						
BRSE	Bradley Lake S	77.38	31	P	P	03 00 27.4	+0.5
	baz=276						
I23K	Minto, Yukon-K	77.46	26	P	P	03 00 28.1	+0.9
I23K				IAmb	IAmb	03 00 30.3	
	comp=Z,9.8nm,0.8s						
I23K	Minto, Yukon-K	77.46	26	P	P	03 00 28.2	+1.0
	baz=276,SNR=12						
BNN	Bunyan	77.47	307	P	P	03 00 27.9	-0.1
BNN				IAmb	IAmb	03 00 29.3	
	comp=Z,16nm,0.8s						
M22K	Willow	77.47	29	P	P	03 00 26.3	-1.0
M22K	Willow	77.47	29	P	P	03 00 27.7	+0.4
	baz=276,SNR=5.7						
E24K	Your Creek	77.50	23	P	P	03 00 28.6	+1.1
	baz=276						
NEA2	Nenana	77.64	26	P	P	03 00 28.0	-0.2
NEA2				IAmb	IAmb	03 00 30.4	
	comp=Z,9.9nm,0.8s						
NEA2	Nenana	77.64	26	P	P	03 00 29.4	+1.1
	baz=276,SNR=8.9						
RC01	Rabbit Creek A	77.73	30	P	P	03 00 28.8	0.0
RC01				IAmb	IAmb	03 00 29.5	
	comp=Z,11nm,1.0s						
RC01	Rabbit Creek A	77.73	30	P	P	03 00 29.2	+0.5
	baz=276						
F24K	Squaw Lake	77.79	23	P	P	03 00 29.6	+0.5
	baz=277						
MCK	McKinley	77.80	27	P	P	03 00 28.8	-0.4
MCK	McKinley	77.80	27	P	P	03 00 29.5	+0.3
	baz=277,SNR=14						
O22K	Cooper Landing	77.80	30	P	P	03 00 28.0	-1.2
O22K	Cooper Landing	77.80	30	P	P	03 00 29.1	-0.1
	baz=277						
RND	Reindeer	77.87	27	P	P	03 00 29.1	-0.5
RND				IAmb	IAmb	03 00 30.5	
	comp=Z,8.6nm,0.7s						
MDM	Murphy Dome	77.96	26	P	P	03 00 30.3	+0.2
MDM				IAmb	IAmb	03 00 32.0	
	comp=Z,9.9nm,0.8s						
PMR	Palmer	77.96	29	P	P	03 00 30.0	-0.1
	baz=277						
SEW	Seward	77.98	31	P	P	03 00 29.5	-0.7
SEW				IAmb	IAmb	03 00 33.2	
	comp=Z,16nm,1.1s						
SEW	Seward	77.98	31	P	P	03 00 30.5	+0.4
	baz=277						
H24K	Noodor Dome	78.00	25	P	P	03 00 30.0	-0.3
H24K				IAmb	IAmb	03 00 32.5	
	comp=Z,7.4nm,0.8s						
H24K	Noodor Dome	78.00	25	P	P	03 00 30.6	+0.3
	baz=277						
G24K	Hadweenzic Riv	78.05	24	P	P	03 00 31.0	+0.5
	baz=277						
WAT1	Susitna Watana	78.08	28	P	P	03 00 31.1	+0.3
	baz=277						
WRH	Wood River Hil	78.08	26	P	P	03 00 30.9	+0.3
D25K	Kavik River	78.12	21	P	P	03 00 30.9	+0.1
	baz=278						
TCOL	CIGO, UAF Yank	78.12	26	P	P	03 00 31.1	+0.2
	baz=277						
COLA	College	78.13	26	P	P	03 00 30.8	-0.1
COLA				IAmb	IAmb	03 00 33.6	
	comp=Z,11nm,0.8s						
COLA	College	78.13	26	P	P	03 00 31.5	+0.6
	baz=277						
CCB	Clear Creek Bu	78.18	26	P	P	03 00 31.4	+0.2
POKR	Poker Plat Res	78.27	26	P	P	03 00 32.2	+0.5
	baz=278						
KNK	Knik Glacier	78.30	29	P	P	03 00 31.9	0.0
KNK				IAmb	IAmb	03 00 33.4	
	comp=Z,14nm,0.9s						
KNK	Knik Glacier	78.30	29	P	P	03 00 32.1	+0.1
	baz=278						
SML	Sawmill	78.31	29	P	P	03 00 31.6	-0.4
SML				IAmb	IAmb	03 00 33.5	
	comp=Z,15nm,1.0s						
SML	Sawmill	78.31	29	P	P	03 00 32.0	-0.1
	baz=278						
PWL	Port Wells	78.43	30	P	P	03 00 31.9	-0.9
PWL	Port Wells	78.43	30	P	P	03 00 33.4	+0.6
	baz=278						
C26K	Camden Bay	78.54	21	P	P	03 00 33.4	+0.3
	baz=279						
IL31		78.55	26	P	P	03 00 31.8	-1.4
ILAR	Eielson Array	78.55	26	P	P	03 00 32.5	-0.7
	comp=Z,1.6nm,0.7s,baz=285,slow=4.3,SNR=24						
	comp=Z,1.6nm,0.7s						
ILAR	Eielson Array	78.55	26	P	P	03 00 31.7	-1.6
HDA	Harding Lake	78.58	26	P	P	03 00 32.5	-1.0
HDA				IAmb	IAmb	03 00 33.8	
	comp=Z,7.9nm,0.8s						
HDA	Harding Lake	78.58	26	P	P	03 00 33.3	-0.1
	baz=278,SNR=5.7						
G25K	Bearman Lake	78.58	24	P	P	03 00 33.8	+0.5
	baz=278						
E25K	Arctic Village	78.58	22	P	P	03 00 34.3	+0.8
	baz=279,SNR=5.2						
M23K	Glacier View	78.60	29	P	P	03 00 34.2	+0.6
	baz=278						
F25K	Christian Rive	78.64	23	P	P	03 00 34.6	+0.8
	baz=279						
SCM	Sheep Creek Mo	78.78	29	P	P	03 00 34.5	-0.1
SCM				IAmb	IAmb	03 00 36.1	
	comp=Z,11nm,0.9s						
SCM	Sheep Creek Mo	78.78	29	P	P	03 00 35.2	+0.6
	baz=278						
ARA0	ARCESS Array S	78.90	339	*e*P	P	03 00 34.5	-0.6
ARCES	ARCESS Array B	78.90	339	P	P	03 00 34.9	-0.2
	comp=Z,4.8nm,0.6s,baz=69,slow=6.3,SNR=16						
	comp=Z,4.8nm,0.6s						
ARCES	ARCESS Array B	78.90	339	P	P	03 00 34.0	-1.1
FYU	Fort Yukon	78.96	24	P	P	03 00 35.6	+0.2
FYU				IAmb	IAmb	03 00 37.7	
	comp=Z,10nm,0.8s						
C27K	Jago River	79.00	21	P	P	03 00 36.3	+0.7
	baz=280						
PRP	Porcupine Dome	79.01	25	P	P	03 00 36.0	0.0
PRP				IAmb	IAmb	03 00 39.0	
	comp=Z,5.7nm,0.8s						
PRP	Porcupine Dome	79.01	25	P	P	03 00 36.6	+0.6
	baz=279,SNR=5.4						
BR131	Keskin Array S	79.04	308	P	P	03 00 35.1	-1.5
BRTR	Keskin Array B	79.04	308	P	P	03 00 36.4	-0.3
	comp=Z,1.7nm,0.7s,baz=126,slow=4.3,SNR=16						
	comp=Z,1.7nm,0.7s						
BRTR	Keskin Array B	79.04	308	P	P	03 00 35.9	-0.7
BMAR	Burnt Mountain	79.07	23	P	P	03 00 36.5	+0.4
K24K	Donnelly Dome	79.18	27	P	P	03 00 37.2	+0.5
	baz=279,SNR=8.8						
F26K	Sheenjek River	79.19	23	P	P	03 00 37.5	+0.8
	baz=280						
M24K	Tolsona, Glenn	79.27	29	P	P	03 00 37.0	-0.4
M24K				IAmb	IAmb	03 00 39.4	
	comp=Z,12nm,0.6s						
M24K	Tolsona, Glenn	79.27	29	P	P	03 00 37.8	+0.5
	baz=279						
SPB2	Spitsbergen Ar	79.39	348	P	P	03 00 37.5	-0.1
SPA0	Spitsbergen Ar	79.39	348	*e*P	P	03 00 37.7	+0.1
SPA0				IAmb	IAmb	03 00 39.5	
	comp=Z,25nm,1.0s						
PAX	Paxson	79.45	28	P	P	03 00 38.5	+0.2
PAX	Paxson	79.45	28	P	P	03 00 38.5	+0.2
	baz=280						
G26K	Porcupine Rive	79.46	23	P	P	03 00 39.6	+1.4
	baz=281						
KLU	Klutina	79.49	29	P	P	03 00 38.2	-0.4
KLU				IAmb	IAmb	03 01 09.2	
	comp=Z,9.3nm,1.2s						
KLU	Klutina	79.49	29	P	P	03 00 39.0	+0.4
	baz=280						
RIDG	Independent Ri	79.60	27	P	P	03 00 39.4	+0.3
RIDG				IAmb	IAmb	03 00 40.2	
	comp=Z,14nm,0.8s						
RIDG	Independent Ri	79.60	27	P	P	03 00 39.1	0.0
	baz=280,SNR=8.7						
KTK1	Kautokeino	79.79	339	*e*P	P	03 00 40.0	+0.1
SCRK	Sand Creek	79.93	26	P	P	03 00 40.9	0.0
SCRK	Sand Creek	79.93	26	P	P	03 00 41.2	+0.3
	baz=281						
DOT	Dot Lake	79.96	27	P	P	03 00 40.0	-1.0
DOT				IAmb	IAmb	03 00 43.4	
	comp=Z,8.8nm,1.2s						
J26L	Joseph Creek	80.01	26	P	P	03 00 40.5	-0.8
J26L	Joseph Creek	80.01	26	P	P	03 00 41.4	+0.1
	baz=281						
I26K	Coal Creek Min	80.02	25	P	P	03 00 41.1	0.0
I26K	Coal Creek Min	80.02	25	P	P	03 00 41.2	0.0
	baz=281						
E27K	Coleen River	80.03	22	P	P	03 00 41.5	+0.2
	baz=282						
CSS	Mathiatis	80.06	304	P	P	03 00 41.2	-0.9
N25K	Chitina, Valde	80.10	29	P	P	03 00 42.1	+0.3
N25K	Chitina, Valde	80.10	29	P	P	03 00 42.0	+0.2
	baz=281						
FIA1	FINESS Array S	80.11	331	P	P	03 00 40.6	-1.1
FIA1				IAmb	IAmb	03 01 21.9	
	comp=Z,12nm,1.2s						
FINES	FINESS Array B	80.11	331	P	P	03 00 41.3	-0.5
	comp=Z,2.1nm,0.6s,baz=49,slow=6.5,SNR=14						
	comp=Z,2.1nm,0.6s						
FINES	FINESS Array B	80.11	331	P	P	03 00 40.9	-0.8
MENT	Mentasta	80.25	28	P	P	03 00 42.3	-0.2
G27K	Doyon Strip	80.31	23	P	P	03 00 43.2	+0.4
	baz=282						
AKASG	Malin Array Be	80.32	320	P	P	03 00 42.2	-0.9
	comp=Z,1.1nm,0.5s,baz=57,slow=4.4,SNR=14						
	comp=Z,1.1nm,0.5s						
AKASG	Malin Array Be	80.32	320	P	P	03 00 40.7	-2.3
VSU	Vasula	80.34	328	*e*P	P	03 00 42.8	-0.2
H27K	Steamboat Moun	80.48	24	P	P	03 00 44.7	+1.0
	baz=283,SNR=6.9						
GLB	Gilahina Butte	80.50	29	P	P	03 00 44.2	+0.3
I27K	Kandik River	80.59	25	P	P	03 00 45.1	+0.8
	baz=283						
JETT	Jettan, Norway	80.64	339	*e*P	P	03 00 44.9	+0.4
M26K	Nabesna, AK	80.68	28	P	P	03 00 44.8	-0.1
M26K				IAmb	IAmb	03 00 47.6	
	comp=Z,15nm,1.4s						
M26K	Nabesna, AK	80.68	28	P	P	03 00 45.8	+0.9
	baz=282						
VRDI	Verde Repeater	80.71	29	P	P	03 00 44.2	-1.0
K27K	Chicken	80.74	26	P	P	03 00 45.7	+0.6
K27K				IAmb	IAmb	03 00 47.7	
	comp=Z,9.4nm,0.8s						
K27K	Chicken	80.74	26	P	P	03 00 46.3	+1.2
	baz=283						
IDID	Didziasalis	80.94	325	*e*P	P	03 00 36.2	-10
EGAK	Eagle	80.96	25	P	P	03 00 45.5	-0.8
EGAK				IAmb	IAmb	03 00 47.8	
	comp=Z,9.1nm,0.7s						
EGAK	Eagle	80.96	25	P	P	03 00 47.2	+1.0
	baz=283,SNR=9.6						
NACGM	Naroch	81.00	324	*e*P	P	03 00 46.0	-0.6
L27K	Beaver Creek,	81.06	27	P	P	03 00 47.9	+1.0
	baz=283,SNR=5.4						
BCAR	Beaver Creek A	81.08	27	P	P	03 00 48.0	+1.0
M27K	Edge Creek, AK	81.20	28	P	P	03 00 49.1	+1.3
	baz=283						
BARN	Barnard Glacie	81.60	29	P	P	03 00 51.2	+1.3
BARN				IAmb	IAmb	03 00 52.3	
	comp=Z,8.9nm,0.8s						
BVCY	Beaver Creek	81.65	28	P	P	03 00 51.5	+1.6
	baz=284						
CTG	Chitna Glacier	81.77	29	P	P	03 00 51.8	+1.1
	baz=284						
CTGM	Chitina Glacie	81.78	29	P	P	03 00 50.8	0.0
CTGM				IAmb	IAmb	03 00 53.3	
	comp=Z,12nm,0.8s						
DAWY	Dawson	81.88	26	P	P	03 00 51.6	+0.4
DAWY	Dawson	81.88	26	P	P	03 00 51.9	+0.8
	baz=285,SNR=5.1						
I29M	Ogilvie Camp,	81.99	25	P	P	03 00 51.8	+0.1
I29M				IAmb	IAmb	03 00 53.4	
	comp=Z,9.0nm,0.9s						
I29M	Ogilvie Camp,	81.99	25	P	P	03 00 53.0	+1.4
	baz=286						
YUK3	Moose Creek	81.99	28	P	P	03 00 53.1	+1.1
	baz=284						
EPYK	Eagle Plains	82.33	23	P	P	03 00 53.6	+0.2
EPYK	Eagle Plains	82.33	23	P	P	03 00 54.3	+0.9
	baz=287,SNR=8.8						
G30M	tAoh Zraii Nji	82.33	23	P	P	03 00 54.2	+0.7
	baz=287						
VSVD	Vaisvydziai	82.36	326	*e*P	P	03 00 53.7	0.0
O28M	Mount Upton	82.36	29	P	P	03 00 54.6	+0.5
	baz=285						
YUK8	Steele Glacier	82.43	29	P	P	03 00 54.7	+0.3
	baz=285						
PABE	Paberze	82.44	325	P	P	03 00 53.3	-0.9
PABE				IAmb	IAmb	03 00 55.0	
	comp=Z,11nm,0.7s						
PABE	Paberze	82.44	325	*e*P	P	03 00 53.7	-0.5
ELL	Elmali	82.46	306	P	P	03 00 54.5	-0.3
L29M	L29M	82.68	27	P	P	03 00 56.0	+0.6
	baz=286						
M29M	Somme Creek	82.72	27	P	P	03 00 55.9	+0.3
	baz=286						
K29M	Barlow Dome	82.74	26	P	P	03 00 56.2	+0.5
	baz=287						
TESR	Tescani	82.81	316	⇓P	P	03 00 56.3	0.0
INK	Inuvik	82.89	21	P	P	03 00 56.5	+0.3
	comp=Z,11nm,0.9s,baz=296,slow=5.2,SNR=39						
	comp=Z,11nm,0.9s						
INK	Inuvik	82.89	21	P	P	03 00 55.7	-0.6
INK				IAmb	IAmb	03 00 57.5	
	comp=Z,9.8nm,0.8s						
INK	Inuvik	82.89	21	P	P	03 00 56.7	+0.5
	baz=290,SNR=13						
STEI	Steigen	82.92	338	*e*P	P	03 00 55.9	-0.5
YUK4	Talbot Arm	82.94	29	P	P	03 00 57.2	+0.3
	baz=286						
FAUS	Fauske	83.09	338	*e*P	P	03 00 56.5	-0.8
F31M	Tsiigehtchic	83.11	22	P	P	03 00 57.9	+0.5
	baz=290,SNR=18						
O29M	Mount Kennedy	83.26	30	P	P	03 00 58.6	+0.1
	baz=286						
M30M	Minto, Yukon	83.42	27	P	P	03 01 00.2	+1.0
M30M	Minto, Yukon	83.42	27	P	P	03 00 59.3	+0.1
	baz=287						
PBUR	Paburge	83.43	326	*e*P	P	03 00 58.8	-0.5
MLR	Muntele Rosu	83.52	315	⇑P	P	03 01 00.8	+0.7
MLR	Muntele Rosu	83.52	315	P	P	03 01 00.6	+0.5
MLR				IAmb	IAmb	03 01 01.1	
	comp=Z,6.5nm,0.8s						
BURAR	Bucovina Array	83.52	317	⇓P	P	03 01 00.4	+0.4
BURAR	Bucovina Array	83.52	317	P	P	03 00 58.5	-1.5
BURAR				IAmb	IAmb	03 01 01.3	
	comp=Z,6.1nm,0.7s						
BUR08	Bucovina Ar. S	83.52	317	P	P	03 00 58.6	-1.5
BUR08				IAmb	IAmb	03 01 01.1	
	comp=Z,5.1nm,0.7s						
HYT	Haines Junctio	83.62	29	P	P	03 01 00.1	-0.2
HYT				IAmb	IAmb	03 01 02.9	
	comp=Z,11nm,1.1s						
HYT	Haines Junctio	83.62	29	P	P	03 01 00.5	+0.2
	baz=287						
N30M	Aishikik Lake	83.62	28	P	P	03 01 00.3	+0.1
	baz=287						
MOR8	Moi Rana	83.82	337	*e*P	P	03 00 59.5	-1.6
A36M	Sachs Harbour	84.03	17	P	P	03 01 01.7	-0.3
A36M				IAmb	IAmb	03 01 02.9	
	comp=Z,9.7nm,0.7s						
A36M	Sachs Harbour	84.03	17	P	P	03 01 02.1	+0.2
	baz=297,SNR=13						
P30M	Million Dollar	84.08	29	P	P	03 01 02.5	-0.1
	baz=288						
N31M	Braeburn, Yuko	84.21	28	P	P	03 01 03.5	+0.3
	baz=288						
O30N	Mendenhall	84.30	29	P	P	03 01 03.7	+0.1
	baz=288						
ARR	Arges	84.44	315	⇑P	P	03 01 04.7	-0.1
ALN	Alexandroupoli	84.50	311	P	P	03 01 04.3	-0.7
ALN				IAmb	IAmb	03 01 42.0	
	comp=Z,7.4nm,1.1s						
PLBC	Pleasant Camp	84.57	30	P	P	03 01 05.1	+0.1
	baz=288						
M31M	Drury Creek, Y	84.60	27	P	P	03 01 04.8	-0.3
M31M				IAmb	IAmb	03 01 07.2	
	comp=Z,7.3nm,0.8s						
M31M	Drury Creek, Y	84.60	27	P	P	03 01 05.4	+0.2
	baz=290						
RDO	Rodhopi	84.82	311	P	P	03 01 05.7	-0.9
RDO				IAmb	IAmb	03 01 06.7	
	comp=Z,5.9nm,0.8s						
KARP	Karpathos	84.89	305	P	P	03 01 05.1	-2.1
PLVB	Pleven	84.94	313	⇑P	P	03 01 07.4	+0.3
FARO	Faro, Yukon	85.05	27	P	P	03 01 07.9	+0.5
FARO				IAmb	IAmb	03 01 10.1	
	comp=Z,16nm,0.9s						
FARO	Faro, Yukon	85.05	27	P	P	03 01 07.7	+0.3
	baz=290						
SKAG	Skagway	85.07	30	P	P	03 01 07.7	+0.3
	baz=289						
S31K	Pelican	85.11	31	P	P	03 01 08.5	+0.8
	baz=288						
MARR	Marisel-Cluj	85.14	317	⇓P	P	03 01 08.6	+0.4
TRPA	Tarpa	85.14	318	⇑P	P	03 01 08.1	+0.1
DRGR		85.38	317	⇓P	P	03 01 09.7	+0.4
NSS	Namsos	85.39	336	*e*P	P	03 01 07.7	-1.2
C36M	Paulatuk	85.61	19	P	P	03 01 09.9	+0.1
C36M	Paulatuk	85.61	19	P	P	03 01 10.2	+0.3
	baz=298,SNR=27						
VTS	Vitosha	86.11	313	⇑P	P	03 01 15.1	+1.9
VTS	Vitosha	86.11	313	P	P	03 01 13.6	+0.4
OJC	Ojcow	86.28	321	P	P	03 01 12.1	-1.6
OJC				IAmb	IAmb	03 01 14.6	
	comp=Z,10nm,0.8s						
NC405	NORSAR Array S	86.83	333	P	P	03 01 15.0	-1.1
NC602	NORSAR Array S	87.06	332	*e*P	P	03 01 16.1	-1.1
NB2	NORSAR Subarra	87.08	333	P	P	03 01 15.8	-1.6
	comp=Z,8.2nm,1.1s,baz=67,slow=4.6						
NB2	NORSAR Subarra	87.08	333	P	P	03 01 15.8	-1.6

	baz=67,slow=4.6						
NOA	NORSAR Array B	87.08	333	P	P	03 01 16.2	-1.2
	comp=Z,3.7nm,0.9s,baz=67,slow=4.6,SNR=9.6						
	comp=Z,3.7nm,0.9s						
VYHS	Vyhne	87.40	319	*e*P	P	03 01 19.7	+0.6
DOMB	Dombas	87.61	334	*e*P	P	03 01 17.9	-1.9
KONO	Kongsberg	88.39	332	*e*P	P	03 01 21.9	-1.6
RES	Resolute Bay	88.82	9	P	P	03 01 25.7	+0.5
	comp=Z,5.8nm,0.8s,baz=310,slow=5.1,SNR=29						
	comp=Z,5.8nm,0.8s						
RES	Resolute Bay	88.82	9	P	P	03 01 24.8	-0.5
RES				IAmb	IAmb	03 01 26.4	
	comp=Z,6.3nm,0.8s						
CLL	Collm	89.97	323	*e*P	P	03 01 31.0	-0.1
GERES	GERESS Array B	90.48	321	P	P	03 01 33.2	-0.5
	comp=Z,0.7nm,0.7s,baz=72,slow=4.3,SNR=6.3						
	comp=Z,0.7nm,0.7s						
YKA	Yellowknife Ar	92.57	22	P	P	03 01 43.6	+0.7
	comp=Z,2.4nm,0.8s,baz=306,slow=4.3,SNR=40						
	comp=Z,2.4nm,0.8s						
SCZ2	Santa Cruz Isl	105.43	49	P	PKiKP	03 06 54.7	+0.3
	baz=299						
TXAR	Lajitas Array	119.31	44	PKP	PKiKP	03 07 21.5	+0.5
	comp=Z,0.3nm,0.5s,baz=231,slow=0.6,SNR=7.4						
PLCA	Paso Flores	151.52	162	PKPbc	PKiKP	03 08 26.1	+0.3
	comp=Z,1.6nm,0.7s,baz=301,slow=2.5,SNR=5.8						

IDC 13 02:57:39.3±6.2**, 2°.46S**×**102°.33E, h0^{km}, mb3.5**/3**, mbtmp3.5**/3**, MS2.8**/1**, Error ellipse: s-maj=336.6km s-min=30.3km az=52.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	17.57	99	LR	LR	03 10 22.4	
	comp=Z,30nm,18.0s,baz=262,slow=43						
WRA	Warramunga Arr	35.76	121	P	P	03 04 39.7	-0.6
	0.1nm,0.3s,baz=296,slow=9.0,SNR=6.8						
	0.1nm,0.3s						
ASAR	Alice Springs	37.11	127	P	P	03 04 52.2	+0.3
	0.6nm,0.4s,baz=300,slow=7.6,SNR=16						
	0.6nm,0.4s						
MKAR	Makanchi Array	52.13	343	P	P	03 06 51.3	-0.1
	0.2nm,0.6s,baz=160,slow=9.0,SNR=2.2						
	0.2nm,0.6s						

ROM 13 02:58:08.9±0.0**, 42°.765N**±0°.002×**13°.061E**±0°.002**, h11^{km}, ML1.3**/9**, 5C-3D, Error ellipse: s-maj=0.2km s-min=0.2km az=286.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	Cascia, Frazio	0.02	222	P	Pg	02 58 11.2	+0.2
T1212				S	Sg	02 58 12.4	+0.1
T1212				AML	AML		
	comp=E,622μm,0.6s						
T1212				AML	AML		
	comp=N,968μm,0.2s						
T1212				AML	AML		
	comp=E,672μm,0.6s						
T1212				AML	AML		
	comp=N,957μm,0.2s						
T1218	Civita (PG)	0.10	157	P	Pg	02 58 12.2	+0.5
T1218				S	Sg	02 58 14.3	+0.5
T1218				AML	AML		
	comp=E,214μm,0.7s						
T1218				AML	AML		
	comp=N,387μm,0.4s						
T1218				AML	AML		
	comp=N,366μm,1.0s						
T1218				AML	AML		
	comp=N,388μm,0.3s						
T1218				AML	AML		
	comp=E,206μm,0.3s						
T1214	Arquata del Tr	0.11	93	P	Pg	02 58 12.3	+0.5
T1214				S	Sg	02 58 14.4	+0.4
T1214				AML	AML		
	comp=E,480μm,0.5s						
T1214				AML	AML		
	comp=E,470μm,0.5s						
T1214				AML	AML		
	comp=N,407μm,0.1s						
T1214				AML	AML		
	comp=N,432μm,0.4s						
T1217	Poggiodomo (PG	0.11	241	⇑P	Pg	02 58 12.3	+0.5
T1217				S	Sg	02 58 14.3	+0.5
T1217				AML	AML		
	comp=E,113μm,0.9s						
T1217				AML	AML		
	comp=N,134μm,1.1s						
T1217				AML	AML		
	comp=N,134μm,0.9s						
T1217				AML	AML		
	comp=E,113μm,1.1s						
T1216	Preci, Frazion	0.13	346	P	Pg	02 58 12.7	+0.7
T1216				S	Sg	02 58 15.0	+0.7
T1215	Vallo di Nera,	0.15	285	⇑P	Pg	02 58 12.9	+0.6
T1215				S	Sg	02 58 15.5	+0.8
MC2	Monte Cornacci	0.17	33	⇑P	Pg	02 58 13.4	+0.5
MC2				S	Sg	02 58 16.7	+1.1
MMO1	Montemonaco	0.24	55	⇑P	Pg	02 58 14.3	+0.4
MMO1				S	Sg	02 58 18.2	+1.0
T1256	Bolognola (MC)	0.27	27	P	Pb	02 58 15.2	-0.7
FDMO	Fiordimonte	0.27	4	⇓P	Pg	02 58 15.1	+0.6
FDMO				S	Sg	02 58 19.2	+1.0
FDMO				AML	AML		
	comp=E,42μm,0.3s						
FDMO				AML	AML		
	comp=N,51μm,0.9s						
T1211	Morro Reatino	0.28	213	⇓P	Pg	02 58 15.2	+0.6
T1211				S	Sb	02 58 19.7	-1.0
RM33	Pellescritta (	0.28	156	P	Pg	02 58 15.1	+0.4
RM33				S	Sb	02 58 19.7	-1.1
ARRO	Arrone	0.29	230	P	Pg	02 58 15.3	+0.6
ARRO				AML	AML		
	comp=E,29μm,1.4s						
ARRO				AML	AML		
	comp=N,28μm,1.5s						
ARRO				AML	AML		
	comp=N,28μm,0.5s						
ARRO				AML	AML		
	comp=E,29μm,0.6s						
T1241	Roccafluvione,	0.29	71	⇑P	Pg	02 58 15.2	+0.4
T1241				S	Sb	02 58 19.9	-1.0
T1241				AML	AML		
	comp=E,86μm,0.3s						
T1241				AML	AML		
	comp=N,50μm,1.4s						
T1241				AML	AML		
	comp=N,50μm,1.4s						
T1241				AML	AML		
	comp=E,86μm,0.3s						
T1219	Muccia, Frazio	0.29	352	⇓P	Pg	02 58 15.4	+0.5
T1220	Camerino, Fraz	0.34	3	P	Pg	02 58 16.4	+0.6
CESX	Cesi	0.39	247	P	Pg	02 58 17.2	+0.6
ASSB	Assisi San Ben	0.41	313	P	Pb	02 58 17.6	-0.5
TERO	Teramo	0.42	109	P	Pg	02 58 17.4	+0.1
TERO				AML	AML		
	comp=N,57μm,1.1s						
TERO				AML	AML		
	comp=E,34μm,0.8s						
ARVD	Arcevia	0.74	353	S	Sb	02 58 35.1	+1.2

ROM 13 02:59:02.6±0.0**, 42°.799N**±0°.002×**13°.085E**±0°.003**, h11^{km}, ML1.3**/2**, 3C-3D, Error ellipse: s-maj=0.3km s-min=0.2km az=225.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	Cascia, Frazio	0.06	212	⇑P	Pg	02 59 05.3	+0.5
T1212				S	Sg	02 59 07.0	+0.5
T1212				AML	AML		
	comp=E,258μm,0.1s						
T1212				AML	AML		
	comp=E,242μm,0.4s						
T1212				AML	AML		
	comp=N,364μm,0.2s						
T1212				AML	AML		
	comp=N,348μm,0.2s						
T1214	Arquata del Tr	0.10	113	⇓P	Pg	02 59 05.8	+0.4
T1214				S	Sg	02 59 07.8	+0.4
T1216	Preci, Frazion	0.10	332	⇓P	Pg	02 59 05.9	+0.5
T1216				S	Sg	02 59 08.0	+0.5
T1218	Civita (PG)	0.13	170	⇑P	Pg	02 59 06.2	+0.4
T1218				S	Sg	02 59 08.7	+0.6
T1218				AML	AML		
	comp=E,155μm,0.4s						
T1218				AML	AML		
	comp=N,238μm,0.2s						
T1218				AML	AML		
	comp=E,116μm,0.5s						
T1218				AML	AML		
	comp=E,155μm,1.6s						
T1218				AML	AML		
	comp=E,116μm,1.5s						
T1218				AML	AML		
	comp=N,221μm,0.2s						
T1217	Poggiodomo (PG	0.14	233	⇓P	Pg	02 59 06.5	+0.6
T1217				S	Sg	02 59 09.2	+0.8
T1215	Vallo di Nera,	0.16	271	P	Pg	02 59 06.8	+0.6
T1215				S	Sg	02 59 09.7	+1.0
MMO1	Montemonaco	0.20	60	P	Pg	02 59 07.6	+0.6
MMO1				S	Sg	02 59 11.1	+1.1
FDMO	Fiordimonte	0.24	0	P	Pg	02 59 08.1	+0.5
SMA1	SAN MARTINO	0.25	132	P	Pg	02 59 08.4	+0.7
T1241	Roccafluvione,	0.26	77	P	Pg	02 59 08.3	+0.4
T1219	Muccia, Frazio	0.26	347	P	Pg	02 59 08.4	+0.4
RM33	Pellescritta (	0.30	162	P	Pg	02 59 08.9	+0.2
T1220	Camerino, Fraz	0.31	0	⇑P	Pg	02 59 09.4	+0.5

*IDC **13** 03:02:20.5±1.1, 46°.53N×112°.53W, h0^{km}, mbtmp2.7/5, ML3.3/5, Error ellipse: s-maj=15.3km s-min=7.9km az=57.0*

*NEIC **13** 03:02:23.0±1.8, 46°.60N±0°.03×112°.51W±0°.04, h10^{km}±6^{km}, ML3.5/65, ML3.8/27(BUT), Error ellipse: s-maj=4.7km s-min=2.9km az=225.0*

*BUT **13** 03:02:24.0±1.6, 46°.57N±0°.04×112°.55W±0°.05, h20^{km}±7^{km}, Error ellipse: s-maj=6.0km s-min=4.2km az=137.0*

ISC 13 03:02:22.1±0.8**, 46°.58N**±0°.04×**112°.57W**±0°.04**, h10^{km}, n80, σ1^{s}.17**/84**, Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HRY	Holter Researc	0.52	76	Pg	Pb	03 02 34.0	+0.6
LRM	Limekiln Ridge	0.77	174		Pb	03 02 38.4	+0.7
LRM				Sg	Sg	03 02 47.8	+1.0
MSO	Missoula	0.98	285		Pb	03 02 42.6	+1.5
MSO				Sg	Sb	03 02 55.6	+1.4
MSO				IAML		03 02 57.3	
	2μm,0.4s						
MSO				IAML		03 02 57.4	
	2μm,0.3s						
NQMA	Gallatin River	1.09	128		Pn	03 02 44.4	+0.9
BOZ	Bozeman (W)	1.18	146	Pn	Pb	03 02 45.1	+0.5
BOZ				Sn	Sg	03 02 60.0	-0.2
BOZ				IAML		03 03 02.4	
	762nm,0.4s						
BOZ				IAML		03 03 02.4	
	938nm,0.3s						
DLMT	Dillon	1.22	181	Pn	Pn	03 02 46.0	+0.7
DLMT					Sb	03 03 01.6	+0.4
DLMT				IAML		03 03 03.1	
	1μm,0.7s						
DLMT				IAML		03 03 04.6	
	1μm,0.5s						
MCMT	McKenzie Canyo	1.77	187		Pn	03 02 53.4	+0.5
QLMT	Earthquake Lak	1.93	155		Pn	03 02 56.6	+1.5
GCR	Grayling Creek	2.06	150		Pg	03 03 01.3	-0.3
YHB	Horse Butte	2.07	152		Pn	03 02 58.4	+1.3
YPDC	Denny Creek	2.09	153		Pn	03 02 58.8	+1.4
YMC	Maple Creek	2.13	148		Pn	03 02 59.0	+1.2
YHH	Holmes Hill	2.16	146		Pn	03 02 59.2	+0.8
CMI	Centennial Mou	2.16	162		Pn	03 03 00.2	+1.8
GCMT	Greycliff	2.17	110	Pn	Pn	03 02 58.5	+0.2
YPWB	West Boundary	2.23	152		Pg	03 03 05.0	+0.2
YPM	Purple Mountai	2.27	148		Pg	03 03 05.5	0.0
ICI	Italian Canyon	2.27	187		Pn	03 03 00.2	+0.3
YNM	Yellowstone No	2.27	144	Pn	Pn	03 03 00.9	+1.0
YNR	Norris Junctio	2.29	144	Pn	Pn	03 03 01.2	+1.1
YNR				IAML		03 03 36.0	
	comp=E,175nm,0.3s						
YUF	Upper Falls	2.36	142	Pn	Pn	03 03 01.2	0.0
YUF				IAML		03 03 37.6	
	comp=E,183nm,0.4s						
YUF				IAML		03 03 39.4	
	comp=N,183nm,0.2s						
YML	Mary Lake	2.40	145		Pg	03 03 08.5	+0.5
EGMT	Eagleton	2.40	52	Pn	Pn	03 02 60.0	-1.5
YJC	Joseph's Coat	2.40	139		Pg	03 03 08.0	0.0
YMP	Mirror Lake Pl	2.50	137	Pn	Pn	03 03 04.0	+1.0
YMP				IAML		03 03 47.4	
	comp=E,164nm,0.4s						
EMI	Eightmile Cany	2.52	186		Pn	03 03 03.9	+0.7
LKWY	Lake	2.53	142	Pn	Pn	03 03 04.1	+0.7
H17A	Grant Village	2.60	147	Pn	Pn	03 03 05.4	+1.0
MKRVA	Milk River, Al	2.62	11		Pn	03 03 06.8	+2.4
YPK	Parker Peak, Y	2.62	134		Pg	03 03 11.2	-1.1
YPP	Pitchstone Pla	2.62	151		Pb	03 03 10.8	+1.4
WALA	Waterton Lakes	2.64	340	Pn	Pn	03 03 05.1	+0.3
WALA				IAML		03 03 47.0	
	comp=N,298nm,0.5s						
WALA				IAML		03 03 47.5	
	comp=E,247nm,0.7s						
RLMT	Red Lodge	2.73	121	Pn	Pn	03 03 07.3	+1.1
RLMT				IAML		03 03 50.0	
	comp=E,181nm,0.4s						
RLMT				IAML		03 03 51.8	
	comp=E,183nm,0.3s						
FLWY	Flagg Ranch	2.83	152	Pn	Pn	03 03 08.9	+1.4
FLWY				IAML		03 03 53.6	
	comp=E,110nm,0.6s						
FLWY				IAML		03 03 53.6	
	comp=E,126nm,0.6s						
PLID	Pearl Lake	2.83	239	Pn	Pn	03 03 08.1	+0.6
PLID				IAML		03 03 53.7	
	comp=E,156nm,0.3s						
PLID				IAML		03 03 58.0	
	comp=E,157nm,0.6s						
HSPGA	Hill Springs,	2.87	346		Pn	03 03 10.0	+2.0
IMW	Indian Meadow	2.92	156	Pn	Pn	03 03 09.8	+1.0
IMW				IAML		03 03 56.8	
	comp=E,322nm,0.5s						
MOOW	Moose Ponds	3.11	155	Pn	Pn	03 03 11.8	+0.3
FXWY	Fox Creek	3.14	159	Pn	Pn	03 03 13.0	+1.2
HLID	Hailey	3.29	204		Pn	03 03 14.5	+0.7
SNOW	Snow King Moun	3.38	157	Pn	Pn	03 03 15.7	+0.7
SNOW				IAML		03 04 14.3	
	comp=E,90nm,0.7s						
REDW	Red Top Meadow	3.44	159	Pn	Pn	03 03 17.6	+1.6
REDW				IAML		03 04 15.2	
	comp=E,95nm,1.3s						
REDW				IAML		03 04 18.0	
	comp=E,102nm,0.7s						
NEW	Newport	3.52	300	Pn	Pn	03 03 17.6	+0.8
	comp=E,0.9nm,0.3s,baz=117,slow=11,SNR=19						
NEW				Sn	Sn	03 03 57.8	-0.8
	comp=E,7.2nm,0.3s,baz=312,slow=22,SNR=11						
NEW				Lg	Lg	03 04 13.2	
	comp=E,28nm,0.3s,baz=19,slow=20,SNR=12						
	comp=E,3.2nm,0.3s						
NEW	Newport	3.52	300	Pn	Pn	03 03 17.4	+0.6
NEW				IAML		03 04 19.1	
	comp=E,113nm,0.3s						
NEW				IAML		03 04 26.1	
	comp=E,71nm,0.5s						
BMO	Blue Mountains	3.74	244	Pn	Pn	03 03 20.3	+0.3
BMO				IAML		03 04 25.1	
	comp=E,70nm,0.4s						
BMO				IAML		03 04 28.5	
	comp=E,80nm,0.6s						
E09A	Wood Farm, Sta	3.85	271	Pn	Pn	03 03 22.7	+1.4
E09A				IAML		03 04 33.4	
	comp=E,102nm,0.3s						
MFID	Camas Ranch	3.92	217	Pn	Pn	03 03 22.8	+0.4
AHID	Auburn Hatcher	3.96	164	Pn	Pn	03 03 24.0	+1.0
AHID				IAML		03 04 29.1	
	comp=E,45nm,0.7s						
AHID				IAML		03 04 30.4	
	comp=E,49nm,1.4s						
C09A	Chrisman Ranch	4.08	289	Pn	Pn	03 03 25.1	+0.6
LAO	LASA Array	4.37	86	Pn	Pn	03 03 29.3	+0.7
PDAR	Pinedale Array	4.38	150	Pn	Pn	03 03 29.5	+0.7
	comp=E,0.5nm,0.3s,baz=342,slow=14,SNR=9.2						
PDAR				Lg	Lg	03 04 38.4	
	comp=E,0.5nm,0.3s,baz=347,slow=28,SNR=3.6						
	comp=E,0.1nm,0.3s						
PDAR	Pinedale Array	4.38	150	Pn	Pn	03 03 28.7	-0.1
D08A	Wollman Farm,	4.39	279	Pn	Pn	03 03 29.4	+0.6
D08A				IAML		03 04 44.8	
	comp=E,60nm,0.5s						
E08A	Dider Farm, El	4.48	271	Pn	Pn	03 03 29.5	-0.5
E08A				IAML		03 04 52.0	
	comp=E,86nm,1.0s						
G08A	Pilot Rock	4.64	256	Pn	Pn	03 03 33.1	+0.7
HAWA	Hanford	4.81	270	Pn	Pn	03 03 35.3	+0.7
HAWA				IAML		03 05 03.1	
	comp=E,48nm,0.8s						
B08A	Colville Reser	4.92	294	Pn	Pn	03 03 35.7	-0.3
B08A				IAML		03 05 00.3	
	comp=E,62nm,0.6s						
HWUT	Hardware Ranch	5.03	171	Pn	Pn	03 03 37.8	+0.1
J08A	Circle Bar Ran	5.29	235	Pn	Pn	03 03 41.0	-0.2
I07A	Izee	5.49	245	Pn	Pn	03 03 44.6	+0.6
LTY	Liberty	5.59	280	Pn	Pn	03 03 45.7	+0.4
G06A	Carlson Farm,	5.79	259	Pn	Pn	03 03 47.5	-0.6
DGMT	Dagmar	5.98	69	Pn	Pn	03 03 50.2	-0.4
WVOR	Wild Horse Val	6.00	228	Pn	Pn	03 03 52.3	+1.3
ELK	Elko	6.15	199	Pg	Pb	03 04 06.8	-2.6
	comp=E,0.1nm,0.3s,baz=13,slow=23,SNR=1.8						
ELK				Lg	Lg	03 05 32.0	
	comp=E,2.0nm,0.3s,baz=162,slow=18,SNR=9.5						
G05A	Wamic	6.25	261	Pn	Pn	03 03 54.4	0.0
LON	Longmire	6.36	275	Pn	Pn	03 03 56.3	+0.4
PINE	Pine Mountain	6.54	248	Pn	Pn	03 03 58.0	-0.5
I05D	Terrebonne, OR	6.56	253	Pn	Pn	03 03 58.3	-0.4
J05D	Fort Rock, OR	6.98	245	Pn	Pn	03 04 05.6	+1.2
BUCK	Buck Mountain	7.71	256	Pn	Pn	03 04 14.4	0.0
I03D	Drain, OR	8.15	253	Pn	Pn	03 04 21.1	+0.8
I02E	Swisshome, OR	8.32	257	Pn	Pn	03 04 24.4	+1.7
DBO	Dodson Butte	8.34	249	Pn	Pn	03 04 25.5	+2.5
HUMO	Hull Mountain	8.41	246	Pn	Pn	03 04 25.7	+1.8
YBH	Yreka Blue Hor	8.75	240	Pn	Pn	03 04 31.0	+2.2
	comp=E,0.1nm,0.3s,baz=73,slow=11,SNR=2.1						
	comp=E,0.3nm,0.3s						
YBH	Yreka Blue Hor	8.75	240	Pn	Pn	03 04 30.9	+2.2
NVAR	Mina Array Bea	9.18	209	Pn	Pn	03 04 36.6	+1.9
	comp=E,0.1nm,0.3s,baz=52,slow=13,SNR=2.6						
NVAR				Lg	Lg	03 07 07.9	
	comp=E,0.1nm,0.3s,baz=25,slow=32,SNR=2.3						
	comp=E,0.2nm,0.6s						
ULM	Lac du Bonnet	11.68	66	Lg	Lg	03 08 20.1	
	comp=E,0.5nm,0.3s,baz=171,slow=23,SNR=3.8						
YKA	Yellowknife Ar	15.99	357	Pn	Pn	03 06 02.9	-3.9
	comp=E,0.1nm,0.3s,baz=170,slow=13,SNR=8.2						
YKA				Lg	Lg	03 10 38.0	
	comp=E,0.1nm,0.3s,baz=171,slow=25,SNR=1.8						

*UPA **13** 03:47:14.1±0.7, 8°.87N×82°.84W, h16^{km}±1^{km}, MW3.6*

*UCR **13** 03:47:14.0±1.7, 8°.87N×82°.89W, h22^{km}±3^{km}, MW3.6*

ISC 13 03:47:13.8±0.9**, 8°.88N**±0°.03×**82°.88W**±0°.02**, h19^{km}**±2^{km}**, n33, σ0^{s}.72**/56**, 9C-1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLIR3	Monte Lirio, C	0.10	150	⇑*i*P	Pg	03 47 18.3	+0.5
MLIR3				*e*S	Sg	03 47 20.5	+0.1
VITO	San Vito	0.11	236	*e*P	Pg	03 47 18.3	+0.4
EDSV	San Vito	0.11	237	⇑*e*P	Pg	03 47 18.4	+0.5
EDSV				*e*S	Sg	03 47 22.5	+1.8
BRU2	Volcan	0.20	115	⇑*i*P	Pg	03 47 19.2	+0.2
BRU2				*i* S	Sg	03 47 23.6	+1.0
BRU2	Volcan	0.20	115	*e*P	Pg	03 47 19.2	+0.2
BRU2				*e*S	Sg	03 47 23.6	+1.0
BC3P	Paso Ancho	0.27	104	⇑*i*P	Pb	03 47 20.1	0.0
BC3P				*e*S	Sg	03 47 24.6	+0.2
POTG	Potrero Grande	0.29	305	*e*P	Pg	03 47 20.0	-0.4
CDITO	Canoas	0.31	179	*e*P	Pb	03 47 20.7	0.0
CDITO				*e*S	Sg	03 47 25.0	-0.2
EDP2	Potrero Grande	0.33	294	*e*P	Pg	03 47 20.9	+0.1
EDP2				*e*S	Sb	03 47 26.8	+0.9
EDAD	Golfito	0.37	231	*e*P	Pg	03 47 21.0	-0.6
EDAD				*e*S	Sg	03 47 26.8	-0.1
BCO2	Palmira	0.38	115	⇑*i*P	Pb	03 47 22.0	-0.1
BCO2				*i* S	Sb	03 47 28.5	+0.8
PTAR3	Potrerillos Ar	0.42	116	⇑*i*P	Pg	03 47 22.6	+0.1
LNBQ3	Los Naranjos,	0.44	102	⇑*i*P	Pg	03 47 22.5	-0.5
LNBQ3				*i* S	Sb	03 47 29.3	-0.1
LESP3	La Esperanza,	0.48	170	*e*P	Pg	03 47 23.5	-0.1
LESP3				*e*S	Sb	03 47 30.8	+0.5
CCOL	Caracol de Cor	0.48	192	*e*P	Pg	03 47 23.4	-0.2
EDBA	Buenos Aires	0.48	305	⇑*i*P	Pg	03 47 23.9	+0.3
EDBA				*e*S	Sb	03 47 31.8	+1.3
EDPN	Palmar Norte	0.58	278	*e*P	Pb	03 47 24.8	-0.5
EDPN				*e*S	Sb	03 47 33.1	0.0
DVD	David	0.61	136	*e*P	Pb	03 47 25.7	-0.1
DVD				*i* S	Sg	03 47 34.8	+0.6
LOCO3	Loma Colorada,	0.65	136	*e*P	Pb	03 47 26.4	-0.2
LOCO3				*e*S	Sg	03 47 35.8	+0.3
CNI2	El Empalme, Bo	0.67	37	⇓*i*P	Pb	03 47 25.9	-1.0
CNI2				*i* S	Sb	03 47 35.5	-0.2
BUS1	Rivas	1.09	308	*e*P	Pb	03 47 33.0	-1.3
MRVA	Moravia de Chi	1.09	329	*e*P	Pn	03 47 33.1	-1.1
CDM	Cerro de Muert	1.10	307	*e*P	Pb	03 47 33.2	-1.4
REME3	Remedios, Chir	1.22	122	*e*P	Pn	03 47 35.5	-0.4
REME3				*e*S	Sb	03 47 50.2	-1.4
BATAN	Batan	1.30	338	*e*P	Pn	03 47 37.1	+0.1
BATAN				*e*S	Sn	03 47 54.3	+0.4
RIMA	Rio Macho	1.31	312	*e*P	Pn	03 47 36.5	-0.8
RVSTA	Santa Teresita	1.33	325	*e*P	Pn	03 47 37.7	+0.3
RVSTA				*e*S	Sb	03 47 56.1	+1.3
LLNJ	Naranjito	1.34	296	*e*P	Pn	03 47 36.8	-0.7
LLNJ				*e*S	Sn	03 47 54.4	-0.5
LCOCO	El Coco	1.37	331	⇑*e*P	Pn	03 47 38.2	+0.3
LCOCO				*e*S	Sb	03 47 57.8	+1.8
LCR2	La Lucha 2	1.40	308	*e*P	Pn	03 47 37.9	-0.7
RVLA	Villa Bonita	1.41	330	*e*P	Pn	03 47 38.7	+0.3
RVLA				*e*S	Sg	03 47 59.7	+0.3
ABE2	San Pablo	1.42	305	*i* P	Pn	03 47 38.4	-0.4
ABE2				*e*S	Sn	03 47 57.4	+0.2
ICR3	Volcano Irazu	1.44	319	*e*P	Pn	03 47 39.8	+0.5

ROM 13 04:27:09.8±0.1**, 43°.035N**±0°.003×**13°.019E**±0°.005**, h7^{km}, ML1.1**/5**, 4C-4D, Error ellipse: s-maj=0.3km s-min=0.1km az=86.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	Muccia, Frazio	0.02	337	P	Pg	04 27 11.0	-0.2
T1219				S	Sg	04 27 11.6	-0.6
FDMO	Fiordimonte	0.05	88	P	Pg	04 27 11.7	+0.2
FDMO				S	Sg	04 27 12.7	+0.1
FDMO				AML	AML		
	comp=E,392μm,1.5s						
FDMO				AML	AML		
	comp=N,434μm,0.2s						
CESI	CESI - Serrava	0.09	250	P	Pg	04 27 12.6	+0.6
CESI				S	Sg	04 27 14.3	+0.8
CESI				AML	AML		
	comp=E,122μm,1.5s						
CESI				AML	AML		
	comp=N,114μm,1.2s						
CESI				AML	AML		
	comp=E,122μm,0.5s						
CESI				AML	AML		
	comp=N,114μm,0.8s						
T1220	Camerino, Fraz	0.09	34	⇑P	Pg	04 27 12.5	+0.5
T1220				S	Sg	04 27 14.4	+0.9
T1220				AML	AML		
	comp=E,861μm,0.4s						
T1220				AML	AML		
	comp=N,526μm,0.3s						
T1216	Preci, Frazion	0.14	180	⇑P	Pg	04 27 13.6	+0.7
T1216				S	Sg	04 27 16.2	+1.3
T1216				AML	AML		
	comp=E,128μm,0.3s						
T1216				AML	AML		
	comp=N,138μm,1.5s						
T1216				AML	AML		
	comp=E,128μm,0.3s						
T1216				AML	AML		
	comp=N,139μm,1.5s						
T1216				AML	AML		
	comp=N,139μm,0.5s						
T1216				AML	AML		
	comp=E,128μm,1.7s						
MC2	Monte Cornacci	0.17	134	P	Pg	04 27 14.2	+0.8
MC2				S	Sg	04 27 17.2	+1.3

SNTG	**Esanatoglia**	**0.23**	**345**	⇓P	Pg	04 27 15.0	+0.7
SNTG				S	Sg	04 27 18.9	+1.5
T1215	**Vallo di Nera,**	**0.26**	**206**	P	Pg	04 27 15.7	+0.8
T1215				S	Sb	04 27 20.2	-1.3
MMO1	**Montemonaco**	**0.26**	**121**	⇑P	Pg	04 27 15.7	+0.7
MMO1				S	Sb	04 27 20.4	-1.3
ASSB	**Assisi San Ben**	**0.26**	**272**	⇑P	Pg	04 27 15.7	+0.7
ASSB				S	Sb	04 27 20.2	-1.5
ASSB				AML	AML		
	comp=E,67µm,0.3s						
ASSB				AML	AML		
	comp=N,58µm,1.0s						
T1212	**Cascia, Frazio**	**0.28**	**176**	⇓P	Pg	04 27 16.1	+0.7
T1212				S	Sb	04 27 21.1	-1.1
EL6	**Elcito**	**0.30**	**12**	P	Pg	04 27 16.5	+0.8
EL6				S	Sb	04 27 21.7	-1.1
T1214	**Arquata del Tr**	**0.31**	**153**	P	Pg	04 27 16.6	+0.7
T1214				S	Sb	04 27 21.8	-1.3
CING	**Cingoli**	**0.36**	**21**	⇓P	Pg	04 27 17.6	+0.6
CING				S	Sb	04 27 23.9	-0.6
CING				AML	AML		
	comp=E,48µm,1.1s						
CING				AML	AML		
	comp=N,47µm,0.9s						
T1218	**Civita (PG)**	**0.37**	**169**	P	Pg	04 27 17.6	+0.6
T1218				S	Sb	04 27 23.8	-1.0
ARVD	**Arcevia**	**0.47**	**353**	⇓P	Pg	04 27 19.4	+0.5
ARVD				S	Sb	04 27 27.4	-0.1

ROM 13 04:27:27.3±0.1**, 43°.58N**±0°.01×**10°.97E**±0°.01**, h7**^{km}±2^{km}**, ML0.5**/8**, 2D, Error ellipse: s-maj=1.6km s-min=0.8km az=32.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OSSC	**Osservatorio P**	**0.21**	**106**	P	Pg	04 27 32.4	+1.0
OSSC				S	Sg	04 27 35.5	+1.4
OSSC				AML	AML		
	comp=E,22µm,0.5s						
OSSC				AML	AML		
	comp=N,21µm,1.4s						
OSSC				AML	AML		
	comp=N,125µm,0.6s						
OSSC				AML	AML		
	comp=E,21µm,0.2s						
OSSC				AML	AML		
	comp=N,19µm,0.2s						
CRMI	**Carmignano**	**0.21**	**360**	P	Pg	04 27 32.5	+1.0
CRMI				S	Sg	04 27 35.5	+1.2
CRMI				AML	AML		
	comp=N,12µm,0.1s						
CRMI				AML	AML		
	comp=E,16µm,0.2s						
CSNT	**Castellina Chi**	**0.26**	**115**	P	Pg	04 27 33.1	+0.8
CSNT				S	Sg	04 27 36.9	+1.2
PII	**Pisa**	**0.35**	**294**	⇓P	Pb	04 27 35.6	-0.3
PII				S	Sb	04 27 40.5	-1.2
PII				AML	AML		
	comp=N,16µm,0.2s						
PII				AML	AML		
	comp=E,12µm,0.2s						
FROS	**Frosini**	**0.39**	**160**	P	Pb	04 27 36.3	-0.3
FROS				S	Sb	04 27 41.9	-0.9
FROS				AML	AML		
	comp=E,23µm,0.2s						
MSSA	**Maissana**	**1.28**	**306**	S	Sn	04 28 11.5	+2.3
SRES	**S.Oreste - Sor**	**1.75**	**139**	S	Sg	04 28 24.8	+1.2
CANO	**Canova, Maglio**	**2.07**	**289**	P	Pg	04 28 10.7	+3.7
EUCT	**Pavia**	**2.09**	**322**	⇓P	Pg	04 28 07.7	+0.4
MILN	**Milano**	**2.27**	**327**	S	Sn	04 28 34.5	+1.0
LIK	**San Giovanni I**	**2.82**	**136**	S	Sg	04 29 01.1	+3.2
MODR	**Mondragone**	**3.25**	**137**	P	Pg	04 28 29.7	+0.2
MODR				S	Sb	04 29 06.0	+1.0
T1101	**Santa Maria De**	**3.37**	**127**	P	Pn	04 28 19.0	-1.4
PTRJ	**Pietraroja**	**3.44**	**129**	P	Pn	04 28 21.7	+0.3

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*IDC **13** 04:33:41.6±2.7, 8°.12S×119°.88E, h0^{km}, mb3.2/2, mbtmp3.2/3, ML3.1/1, Error ellipse: s-maj=262.3km s-min=29.7km az=53.0*

*DJA **13** 04:33:43.6±0.4, 8°S±3°×12°0E±°, h10^{km}, M3.2/7, MLv3.2/7*

ISC 13 04:33:43.2±1.0**, 7°.89S**±0°.05×**120°.08E**±0°.07**, h10**^{km}**, n9,** σ**0^{s}.66**/11**, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSSI	**Bau Bau, Buton**	**1.78**	**13**	P	**Pn**	**04 34 14.2**	**+0.2**
BSSI				S	**Sn**	**04 34 36.0**	**-0.7**
MMRI	**Maumere**	**2.26**	**109**	P	**Pn**	**04 34 21.3**	**+0.6**
BASI	**Baing, Sumba**	**2.37**	**168**	P	**Pn**	**04 34 22.6**	**+0.4**
PLAI	**Plampang**	**2.47**	**248**	P	**Pn**	**04 34 23.9**	**+0.4**
BKSI	**Bulukumba**	**2.55**	**1**	P	**Pn**	**04 34 25.2**	**+0.6**
BKSI				S	**Sn**	**04 34 55.4**	**-0.3**
TWSI	**Taliwang, Sumb**	**3.28**	**255**	P	**Pn**	**04 34 34.7**	**0.0**
WRA	**Warramunga Arr**	**18.29**	**132**	P	**Pn**	**04 37 56.2**	**-1.1**
	0.1nm,0.3s,baz=306,slow=13,SNR=4.6						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**20.54**	**141**	P	**P**	**04 38 21.8**	**-0.3**
	0.6nm,0.5s,baz=315,slow=9.2,SNR=9.4						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**63.97**	**332**	P	**P**	**04 44 17.5**	**+0.7**
	0.2nm,0.5s,baz=122,slow=6.7,SNR=1.9						
	0.2nm,0.5s						

ROM 13 04:39:23.1±0.1**, 42°.761N**±0°.004×**13°.195E**±0°.007**, h13**^{km}**, ML1.3**/5**, 4C-4D, Error ellipse: s-maj=0.6km s-min=0.1km az=260.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.01**	**100**	P	Pg	04 39 26.0	+0.3
T1214				S	Sg	04 39 27.6	+0.1
T1214				AML	AML		
	comp=E,316µm,0.4s						
T1214				AML	AML		
	comp=N,320µm,0.1s						
T1214				AML	AML		
	comp=E,311µm,1.1s						
T1214				AML	AML		
	comp=N,298µm,1.2s						
T1214				AML	AML		
	comp=E,312µm,1.1s						
T1214				AML	AML		
	comp=N,298µm,1.2s						
T1214				AML	AML		
	comp=N,320µm,0.1s						
T1214				AML	AML		
	comp=E,312µm,0.9s						
T1214				AML	AML		
	comp=N,298µm,0.8s						
T1214				AML	AML		
	comp=E,316µm,0.4s						
T1212	**Cascia, Frazio**	**0.11**	**265**	⇑P	Pb	04 39 27.0	-0.1
T1212				S	Sg	04 39 29.0	+0.4
MC2	**Monte Cornacci**	**0.15**	**359**	⇑P	Pg	04 39 27.4	+0.4
MC2				S	Sg	04 39 29.9	+0.2
SMA1	**SAN MARTINO**	**0.17**	**142**	⇑P	Pg	04 39 26.9	-0.3
SMA1				AML	AML		
	comp=E,206µm,1.3s						
SMA1				AML	AML		
	comp=N,148µm,0.4s						
SMA1				AML	AML		
	comp=E,206µm,0.7s						
MMO1	**Montemonaco**	**0.17**	**35**	P	Pb	04 39 27.9	-0.3
MMO1				S	Sg	04 39 30.7	+0.7
T1216	**Preci, Frazion**	**0.18**	**315**	⇓P	Pg	04 39 27.8	+0.4
T1216				S	Sg	04 39 30.9	+0.6
T1256	**Bolognola (MC)**	**0.25**	**5**	⇑P	Pg	04 39 29.0	+0.5
T1256				S	Sb	04 39 33.0	-0.8
RM33	**Pellescritta (**	**0.25**	**177**	AML	AML		
	comp=N,57µm,1.0s						
RM33				AML	AML		
	comp=N,57µm,1.0s						
RM33				AML	AML		
	comp=E,62µm,1.0s						
RM33				AML	AML		
	comp=E,62µm,1.0s						
RM33				AML	AML		
	comp=N,57µm,1.0s						
FDMO	**Fiordimonte**	**0.29**	**344**	⇓P	Pg	04 39 29.6	+0.5
FDMO				S	Sg	04 39 34.0	+0.8
T1219	**Muccia, Frazio**	**0.33**	**335**	⇓P	Pg	04 39 30.2	+0.4
T1219				S	Sg	04 39 35.0	+0.7
T1247	**Pizzolo (AQ)**	**0.33**	**167**	AML	AML		
	comp=N,68µm,0.7s						
T1247				AML	AML		
	comp=E,66µm,1.4s						
T1220	**Camerino, Fraz**	**0.36**	**347**	⇓P	Pg	04 39 30.8	+0.5
T1220				S	Sb	04 39 36.1	-0.7
MURB	**Monte Urbino**	**0.70**	**316**	AML	AML		
	comp=N,382µm,1.0s						
MURB				AML	AML		
	comp=E,456µm,1.0s						

ROM 13 04:39:59.1±0.1**, 42°.766N**±0°.003×**13°.054E**±0°.005**, h11**^{km}**, ML0.9**/2**, 3C-2D, Error ellipse: s-maj=0.4km s-min=0.3km az=260.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.02**	**206**	P	Pg	04 40 01.4	+0.3
T1212				S	Sg	04 40 02.6	+0.1
T1212				AML	AML		
	comp=N,206µm,0.2s						
T1212				AML	AML		
	comp=E,135µm,0.6s						
T1217	**Poggiodomo (PG**	**0.10**	**239**	⇑P	Pg	04 40 02.5	+0.6
T1217				S	Sg	04 40 04.6	+0.6
T1218	**Civita (PG)**	**0.11**	**155**	⇓P	Pg	04 40 02.4	+0.4
T1218				S	Sg	04 40 04.4	+0.4
T1218				AML	AML		
	comp=N,79µm,1.5s						
T1218				AML	AML		
	comp=E,53µm,0.2s						
T1216	**Preci, Frazion**	**0.13**	**348**	⇓P	Pg	04 40 02.8	+0.5
T1216				S	Sg	04 40 05.2	+0.7
T1216				AML	AML		
	comp=E,130µm,1.1s						
T1216				AML	AML		
	comp=E,130µm,1.1s						
T1216				AML	AML		
	comp=N,180µm,0.2s						
T1215	**Vallo di Nera,**	**0.14**	**285**	⇑P	Pg	04 40 03.1	+0.7
T1215				S	Sg	04 40 05.7	+0.9
MC2	**Monte Cornacci**	**0.18**	**34**	P	Pg	04 40 03.6	+0.5
MC2				S	Sg	04 40 07.2	+1.2
MMO1	**Montemonaco**	**0.24**	**56**	P	Pg	04 40 04.5	+0.4
MMO1				S	Sg	04 40 08.6	+1.0
FDMO	**Fiordimonte**	**0.27**	**5**	P	Pg	04 40 05.3	+0.6
FDMO				S	Sg	04 40 09.5	+1.0
FDMO				AML	AML		
	comp=E,364µm,0.6s						
FDMO				AML	AML		
	comp=N,458µm,0.2s						
T1256	**Bolognola (MC)**	**0.27**	**28**	P	Pb	04 40 05.6	-0.5
RM33	**Pellescritta (**	**0.28**	**155**	⇑P	Pg	04 40 05.2	+0.4
RM33				S	Sb	04 40 09.9	-1.1
T1219	**Muccia, Frazio**	**0.29**	**353**	P	Pb	04 40 05.9	-0.6
T1219				S	Sg	04 40 10.0	+0.9
T1219				AML	AML		
	comp=E,278µm,0.3s						
T1219				AML	AML		
	comp=N,348µm,0.2s						
T1220	**Camerino, Fraz**	**0.34**	**4**	AML	AML		
	comp=N,483µm,0.3s						
T1220				AML	AML		
	comp=E,516µm,0.3s						

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*NEIC **13** 04:57:19.7±1.1, 10°.81S±0°.09×161°.81E±0°.09, h44^{km}±8^{km}, mb4.5/35, Error ellipse: s-maj=17.3km s-min=4.4km az=223.0*

*NOU **13** 04:57:20.7, 10°.80S×161°.82E, h117^{km}, mb4.6/10, Solomon Islands*

*IDC **13** 04:57:21.0±2.8, 10°.86S×161°.72E, h58^{km}±24^{km}, mb3.9/11, mbtmp4.2/13, ML4.3/2, MS3.7/14, Error ellipse: s-maj=24.3km s-min=18.7km az=113.0*

ISC 13 04:57:19.9±0.5**, 10°.89S**±0°.06×**161°.83E**±0°.08**, h50**^{km}**, n73,** σ**1^{s}.18**/68**, mb4.4**/29**, MS3.7**/10**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.36**	**308**	P	**Pn**	**04 57 55.9**	**-0.3**
	7µm,0.4s,baz=199,slow=3.1,SNR=19						
HNR				S	**Sn**	**04 58 29.2**	**+5.2**
	27µm,0.4s,baz=349,slow=24,SNR=9.1						
HNR				LR	LR	04 58 53.0	
	comp=Z,9µm,20.9s,baz=97,slow=41						
HNR	**Honiara**	**2.36**	**308**		**Pn**	**04 57 55.1**	**-1.1**
HNR	**Honiara**	**2.36**	**308**	P	**Pn**	**04 57 56.5**	**+0.3**
DVP	**Devils Point**	**9.17**	**139**	P	**Pn**	**04 59 31.3**	**+1.7**
KOUNC	**Koumac, New Ca**	**9.89**	**166**	Pn	**Pn**	**04 59 39.4**	**-0.1**
KOUNC	**Koumac, New Ca**	**9.89**	**166**	P	**Pn**	**04 59 40.8**	**+1.3**
LIFNC	**LIFOU**	**11.12**	**153**	Pn	**Pn**	**04 59 55.8**	**-0.5**
LIFNC	**LIFOU**	**11.12**	**153**	P	**Pn**	**04 59 55.8**	**-0.5**
NOUC	**Port Laguerre**	**11.94**	**160**	P	**Pn**	**05 00 09.3**	**+1.8**
DZM	**Mont Dzumac**	**11.96**	**159**	P	**Pn**	**05 00 09.9**	**+2.0**
	1.7nm,0.3s,baz=322,slow=15,SNR=15						
DZM				S	**Sn**	**05 02 17.7**	**-2.2**
	3.7nm,0.5s,baz=313,slow=22,SNR=2.1						
	4.7nm,0.3s						
DZM	**Mont Dzumac**	**11.96**	**159**	Pn	**Pn**	**05 00 08.7**	**+0.8**
DZM	**Mont Dzumac**	**11.96**	**159**	P	**Pn**	**05 00 09.1**	**+1.2**
YATNC	**Mamie plateau,**	**12.11**	**157**	P	**Pn**	**05 00 11.1**	**+1.2**
ONTNC	**Ouen Toro**	**12.18**	**159**	Pn	**Pn**	**05 00 11.3**	**+0.5**
OUENC	**Ouen Island, N**	**12.42**	**158**	Pn	**Pn**	**05 00 14.9**	**+0.8**
OUENC	**Ouen Island, N**	**12.42**	**158**	P	**Pn**	**05 00 16.3**	**+2.2**
PINNC	**Pines Island,**	**12.83**	**156**	Pn	**Pn**	**05 00 20.2**	**+0.5**
PMG	**Port Moresby**	**14.52**	**275**	LR	LR	05 05 46.7	
	comp=Z,329nm,19.9s,baz=120,slow=35						
MSVF	**Nonsavu**	**17.11**	**115**	LR	LR	05 07 28.0	
	comp=Z,109nm,20.4s,baz=128,slow=35						
CTA	**Charters Tower**	**17.57**	**237**	P	**Pn**	**05 01 21.3**	**0.0**
	0.7nm,0.3s,baz=71,slow=13,SNR=6.6						
CTA				LR	LR	05 07 22.5	
	comp=Z,134nm,21.1s,baz=72,slow=34						
	2.9nm,0.2s						
EIDS	**Eidsvold**	**17.64**	**214**		**Pn**	**05 01 22.7**	**+0.5**
PATS	**Pohnpei**	**17.96**	**349**		**Pn**	**05 01 24.4**	**-1.7**
COEN	**Coen**	**18.47**	**259**	P	**P**	**05 01 31.6**	**-0.3**
ARMA	**Armidale**	**21.62**	**205**	P	**P**	**05 02 07.6**	**+1.5**
ARMA				IAmb	IAmb	05 02 46.3	
	comp=Z,27nm,1.5s						
AFI	**Afiamalu**	**25.94**	**99**	LR	LR	05 11 43.3	
	comp=Z,92nm,18.3s,baz=272,slow=33						
WB0	**Warramunga Arr**	**27.86**	**248**	P	**P**	**05 03 04.4**	**-0.7**
WB0				IAmb	IAmb	05 03 07.5	
	comp=Z,8.5nm,1.1s						
WRAB	**Tennant Creek**	**27.94**	**248**	P	**P**	**05 03 04.9**	**-1.0**
WB2	**Warramunga Arr**	**27.94**	**248**	P	**P**	**05 03 04.8**	**-1.0**
WB2				IAmb	IAmb	05 03 24.0	
	comp=Z,8.0nm,1.3s						
WRA	**Warramunga Arr**	**27.95**	**248**	P	**P**	**05 03 05.6**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=75,slow=9.4,SNR=13						
WRA				PcP	**PcP**	**05 06 21.1**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=76,slow=3.2,SNR=2.3						
WRA				LR	LR	05 14 11.6	
	comp=Z,231nm,18.4s,baz=74,slow=36						
	comp=Z,2.3nm,0.8s						
WRA	**Warramunga Arr**	**27.95**	**248**	P	**P**	**05 03 04.5**	**-1.4**
STKA	**Stephens Creek**	**28.03**	**219**	P	**P**	**05 03 06.2**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=54,slow=14,SNR=1.8						
STKA				LR	LR	05 14 21.1	
	comp=Z,262nm,18.0s,baz=24,slow=36						
	comp=Z,0.6nm,0.4s						
STKA	**Stephens Creek**	**28.03**	**219**	P	**P**	**05 03 06.8**	**+0.3**
AS31	**Alice Springs**	**29.47**	**241**	P	**P**	**05 03 18.6**	**-0.8**
ASAR	**Alice Springs**	**29.47**	**241**	P	**P**	**05 03 18.4**	**-1.0**
	comp=Z,1.2nm,0.5s,baz=63,slow=9.9,SNR=15						
ASAR				LR	LR	05 14 35.6	
	comp=Z,162nm,19.7s,baz=54,slow=35						
	comp=Z,1.2nm,0.5s						
GUMO	**Guam**	**29.58**	**325**	LR	LR	05 14 21.8	
	comp=Z,76nm,21.7s,baz=144,slow=35						
TOO	**Toolangi**	**30.36**	**206**	P	**P**	**05 03 28.4**	**+1.3**
TOO				IAmb	IAmb	05 03 59.9	
	comp=Z,12nm,1.2s						
BKZ	**Black Stump Fm**	**31.04**	**158**	P	**P**	**05 03 34.9**	**+1.7**
BKZ				IAmb	IAmb	05 03 50.2	
	comp=Z,12nm,1.2s						
BBOO	**Buckleboo**	**32.21**	**223**	P	**P**	**05 03 43.8**	**+0.3**
KNRA	**Kununurra**	**32.51**	**258**	P	**P**	**05 03 45.5**	**-0.8**
RPZ	**Rata Peaks**	**33.66**	**168**	LR	LR	05 16 12.2	
	comp=Z,70nm,18.8s,baz=297,slow=34						
FITZ	**Fitzroy Crossi**	**35.72**	**254**	P	**P**	**05 04 12.8**	**-1.3**
PSA00	**Pilbara Seismi**	**41.57**	**250**	P	**P**	**05 05 02.0**	**-1.1**
MBWA	**Marble Bar**	**41.62**	**250**	P	**P**	**05 05 02.7**	**-0.8**
MBWA				IAmb	IAmb	05 05 03.0	
	comp=Z,7.5nm,1.1s						
KAPI	**Kappang**	**42.05**	**275**	P	**P**	**05 05 06.3**	**-0.9**
KAPI				IAmb	IAmb	05 05 31.5	
	comp=Z,10nm,1.1s						
MORW	**Morawa**	**46.35**	**240**	P	**P**	**05 05 40.2**	**-1.1**
ASAJ	**Asahikawa**	**57.47**	**344**	LR	LR	05 32 35.8	
	comp=Z,83nm,18.9s,baz=158,slow=37						
KSRS	**Korea Array**	**57.66**	**328**	P	**P**	**05 07 04.7**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=154,slow=8.9,SNR=2.5						
KSRS				LR	LR	05 31 29.9	
	comp=Z,21nm,18.2s,baz=25,slow=36						
	comp=Z,0.8nm,0.4s						
USRK	**Ussuriysk Ar.**	**61.16**	**336**	P	**P**	**05 07 29.4**	**+0.2**
	comp=Z,2.7nm,0.8s,baz=127,slow=6.3,SNR=4.5						
	comp=Z,2.7nm,0.8s						
PETK	**Petropavlovsk-**	**63.84**	**357**	LR	LR	05 32 40.1	
	comp=Z,80nm,20.4s,baz=10,slow=33						
VNDA	**Vanda**	**66.61**	**180**	P	**P**	**05 08 05.9**	**+1.2**
CMAR	**Chiang Mai Arr**	**68.55**	**295**	P	**P**	**05 08 17.7**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=123,slow=4.6,SNR=5.8						
	comp=Z,1.0nm,0.3s						
ULN	**Ulaanbaatar**	**75.96**	**325**	P	**P**	**05 09 01.3**	**-0.4**
ULN				IAmb	IAmb	05 09 04.8	
	comp=Z,4.1nm,1.0s						
SONM	**Songino Array**	**76.31**	**325**	P	**P**	**05 09 03.5**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=140,slow=5.5,SNR=13						
	comp=Z,2.9nm,0.7s						
SONM	**Songino Array**	**76.31**	**325**	P	**P**	**05 09 03.3**	**-0.4**
SONM				IAmb	IAmb	05 09 03.7	
	comp=Z,2.6nm,0.8s						
P18K	**Big Mountain,**	**78.07**	**21**	P	**P**	**05 09 13.6**	**+0.4**
QSPA	**South Pole Qui**	**79.11**	**180**	P	**P**	**05 09 19.0**	**0.0**
QSPA				IAmb	IAmb	05 09 23.1	
	comp=Z,7.3nm,1.1s						
M19K	**Big River Lodg**	**80.19**	**19**	P	**P**	**05 09 24.8**	**+0.1**
M19K				IAmb	IAmb	05 09 27.2	
	comp=Z,8.6nm,1.1s						
CAST	**Castle Rocks**	**82.02**	**19**	P	**P**	**05 09 33.3**	**-1.2**
CAST				IAmb	IAmb	05 09 36.8	
	comp=Z,4.1nm,1.0s						
KTH	**Kantishna Hill**	**82.49**	**19**	P	**P**	**05 09 36.0**	**-0.9**
KTH				IAmb	IAmb	05 09 48.5	
	comp=Z,7.7nm,1.2s						
SCM	**Sheep Creek Mo**	**82.58**	**22**	P	**P**	**05 09 38.3**	**+0.8**
TRF	**Thorofare Moun**	**82.63**	**20**	P	**P**	**05 09 36.9**	**-0.9**
TRF				IAmb	IAmb	05 10 01.9	
	comp=Z,8.0nm,1.4s						
GLB	**Gilahina Butte**	**83.66**	**23**	P	**P**	**05 09 43.4**	**+0.4**
GLB				IAmb	IAmb	05 09 46.0	
	comp=Z,6.1nm,1.0s						
VRDI	**Verde Repeater**	**83.67**	**23**	P	**P**	**05 09 43.4**	**+0.1**
VRDI				IAmb	IAmb	05 09 53.2	
	comp=Z,8.8nm,1.2s						
M26K	**Nabesna, AK**	**84.54**	**23**	P	**P**	**05 09 47.9**	**+0.4**
M26K				IAmb	IAmb	05 09 51.3	
	comp=Z,2.8nm,0.8s						
ILAR	**Eielson Array**	**84.62**	**20**	P	**P**	**05 09 47.4**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=246,slow=5.2,SNR=20						
	comp=Z,0.9nm,0.7s						
RIDG	**Independent Ri**	**84.67**	**21**	P	**P**	**05 09 48.1**	**+0.1**
RIDG				IAmb	IAmb	05 10 24.7	
	comp=Z,7.5nm,1.3s						
DOT	**Dot Lake**	**84.89**	**21**	P	**P**	**05 09 49.5**	**+0.3**
DOT				IAmb	IAmb	05 09 52.8	
	comp=Z,3.3nm,0.8s						
M27K	**Edge Creek, AK**	**84.94**	**23**	P	**P**	**05 09 50.2**	**+0.6**
NVAR	**Mina Array Bea**	**88.88**	**51**	P	**P**	**05 10 10.5**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=242,slow=7.2,SNR=11						
	comp=Z,0.8nm,0.6s						
PFO	**Pinyon Flats O**	**89.15**	**56**	LR	LR	05 42 25.3	
	comp=Z,59nm,19.7s,baz=17,slow=30						
MKAR	**Makanchi Array**	**90.80**	**317**	P	**P**	**05 10 16.6**	**-1.3**
	comp=Z,1.3nm,0.6s,baz=91,slow=6.6,SNR=23						
	comp=Z,1.3nm,0.6s						
YKA	**Yellowknife Ar**	**96.61**	**28**	P	**P**	**05 10 43.6**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=257,slow=4.5,SNR=10.0						
	comp=Z,0.5nm,0.7s						
ARCES	**ARCESS Array B**	**115.19**	**344**	PKP	**PKiKP**	**05 15 54.7**	**-0.5**
	comp=Z,4.7nm,1.1s,baz=67,slow=3.0,SNR=1.5						

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*CNRM **13** 05:08:26.4, 36°.54N×7°.27W, h30^{km}, ml2.6*

*SFS **13** 05:08:30.9, 36°.82N×6°.95W, h45^{km}, ML2.5/10, ML2.5/6, MLv2.5/10*

*MDD **13** 05:08:30.6±0.8, 36°.82N×6°.96W, h47^{km}±10^{km}, mb_Lg2.5/6, Error ellipse: s-maj=7.5km s-min=3.6km az=7.0*

*IGIL **13** 05:08:31.1, 36°.80N×6°.97W, h41^{km}, ML1.7*

*INMG **13** 05:08:31.3±1.3, 36°.81N×6°.97W, h41^{km}±10^{km}, ML1.9, Error ellipse: s-maj=3.4km s-min=3.1km az=176.0*

ISC 13 05:08:27.8±1.2**, 36°.73N**±0°.03×**6°.96W**±0°.03**, h32**^{km}±12^{km}**, n44,** σ**1^{s}.63**/75**, 1D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARNO	**Arenosillo**	**0.41**	**26**	S	**Sn**	**05 08 46.0**	**+2.0**
ARNO				P	**Pn**	**05 08 39.4**	**+1.9**
ESPR	**Espera**	**0.89**	**80**	S	**Sb**	**05 08 57.5**	**+1.1**
ESPR				P	**Pn**	**05 08 46.0**	**+2.0**
ESPR	**Espera**	**0.89**	**80**	P	**Pb**	**05 08 45.4**	**+0.6**
ESPR				S	**Sb**	**05 08 57.5**	**+1.1**
ESPR				*i* Vmb_Lg		05 08 58.8	
EGRO	**El Granado**	**0.91**	**333**	P	**Pn**	**05 08 45.6**	**+1.3**
EGRO				S	**Sn**	**05 08 56.3**	**-0.1**
EGRO				*i* Vmb_Lg		05 08 57.0	
PVAQ	**Vaqueiros**	**0.91**	**318**	P	**Pn**	**05 08 45.3**	**+1.0**
PVAQ				S	**Sb**	**05 08 54.6**	**-2.3**
PVAQ	**Vaqueiros**	**0.91**	**318**	⇓*e*P	**Pn**	**05 08 45.6**	**+1.3**
PVAQ				*i* S	**Sn**	**05 08 56.6**	**+0.3**
PVAQ				A	A	05 08 56.9	
	32nm,0.1s						
PBDV	**Barranco-do-Ve**	**0.94**	**304**	*e*P	**Pn**	**05 08 46.3**	**+1.6**
PBDV				*e*S	**Sn**	**05 08 57.5**	**+0.5**
PBDV				A	A	05 08 58.1	
	9.7nm,0.2s						
EMIN	**Mina Concepcio**	**1.06**	**12**	P	**Pb**	**05 08 47.5**	**-0.2**
EMIN				S	**Sb**	**05 08 59.3**	**-2.0**
EMIN				*i* Vmb_Lg		05 09 00.9	
PCVE	**Castro Verde**	**1.25**	**317**	P	**Pn**	**05 08 50.3**	**+1.3**
PCVE				S	**Sn**	**05 09 04.5**	**-0.3**
PCVE	**Castro Verde**	**1.25**	**317**	*e*P	**Pb**	**05 08 50.4**	**-0.4**
PCVE				*e*S	**Sn**	**05 09 04.9**	**+0.1**
PCVE				A	A	05 09 09.8	
	4.9nm,0.2s						
PBAR	**Barrancos**	**1.45**	**357**	P	**Pn**	**05 08 53.0**	**+1.3**
PBAR				S	**Sn**	**05 09 10.0**	**+0.4**
PBAR	**Barrancos**	**1.45**	**357**	*e*P	**Pn**	**05 08 53.1**	**+1.4**
PBAR				*e*S	**Sn**	**05 09 09.0**	**-0.6**
PBAR				A	A	05 09 10.6	
	6.8nm,0.2s						
MORF	**Marmelete**	**1.48**	**294**	*e*S	**Sn**	**05 09 10.7**	**+0.4**
MORF				A	A	05 09 11.9	
	6.9nm,0.2s						
MORF	**Marmelete**	**1.48**	**294**	*e*S	**Sn**	**05 09 10.3**	**-0.1**
MORF				IAML		05 09 11.9	
	comp=N,9.1nm,0.2s						
PBEJ	**Beja**	**1.49**	**331**	*e*S	**Sn**	**05 09 10.1**	**-0.5**
PBEJ				A	A	05 09 17.3	
	comp=N,3.3nm,0.2s						
MESJ	**Messejana**	**1.50**	**318**	*e*P	**Pn**	**05 08 53.9**	**+1.4**
MESJ				*e*S	**Sn**	**05 09 10.4**	**-0.5**
MESJ				A	A	05 09 14.4	
	comp=N,5.0nm,0.5s						
MESJ	**Messejana**	**1.50**	**318**	*e*P	**Pn**	**05 08 53.8**	**+1.4**
MESJ				*e*S	**Sn**	**05 09 10.2**	**-0.7**
MESJ				IAML		05 09 11.9	
	comp=E,6.5nm,0.1s						
PFVI	**Vila Bisbo**	**1.55**	**286**	*e*P	Pb	05 09 03.6	+7.7
PFVI				*e*S	**Sn**	**05 09 12.3**	**+0.1**
PTEO	**Sao Teotonio**	**1.63**	**301**	*e*S	**Sn**	**05 09 14.5**	**+0.4**
PTEO				A	A	05 09 15.4	
	comp=E,2.1nm,0.2s						
ECAB	**El Cabril**	**1.82**	**42**	P	**Pn**	**05 08 57.9**	**+1.0**
ECAB				S	**Sn**	**05 09 17.7**	**-1.1**
ECAB	**El Cabril**	**1.82**	**42**	P	**Pn**	**05 08 58.4**	**+1.6**
ECAB				S	**Sn**	**05 09 17.6**	**-1.2**
ECAB				*i* Vmb_Lg		05 09 20.0	
PNCL	**Nicolau / Gran**	**1.87**	**318**	P	**Pn**	**05 08 58.7**	**+1.2**
PNCL				S	**Sn**	**05 09 19.1**	**-0.8**
PNCL	**Nicolau / Gran**	**1.87**	**318**	*e*P	**Pn**	**05 08 58.9**	**+1.5**
PNCL				*e*S	**Sn**	**05 09 19.3**	**-0.6**

PNCL				A	A	05 09 21.1	
	comp=E,3.5nm,0.1s						
EVO	**Evora**	**1.99**	**335**	S	**Sn**	**05 09 22.8**	**-0.1**
EVO	**Evora**	**1.99**	**335**	*e*P	**Pn**	**05 09 00.6**	**+1.5**
EVO				*e*S	**Sn**	**05 09 23.0**	**+0.1**
EVO				A	A	05 09 23.4	
	comp=E,13nm,0.4s						
EBAD	**Badajoz**	**2.03**	**359**	P	**Pn**	**05 09 00.7**	**+1.0**
EBAD				S	**Sn**	**05 09 22.8**	**-1.1**
EBAD	**Badajoz**	**2.03**	**359**	P	**Pn**	**05 09 00.7**	**+1.0**
EBAD				S	**Sn**	**05 09 22.4**	**-1.4**
EBAD				*i* Vmb_Lg		05 09 25.4	
PESTR	**Estremoz**	**2.20**	**347**	P	**Pn**	**05 09 03.4**	**+1.4**
PESTR				S	**Sn**	**05 09 29.3**	**+1.2**
PESTR	**Estremoz**	**2.20**	**347**	*e*P	**Pn**	**05 09 03.2**	**+1.2**
PESTR				*e*S	**Sn**	**05 09 26.8**	**-1.3**
PESTR				A	A	05 09 33.1	
	comp=E,2.7nm,0.9s						
EADA	**Adamuz**	**2.38**	**52**	P	**Pn**	**05 09 05.3**	**+0.8**
EADA				S	**Sn**	**05 09 31.0**	**-1.5**
EADA				*i* Vmb_Lg		05 09 36.3	
PMTG	**Montargil**	**2.55**	**337**	*e*P	**Pn**	**05 09 08.1**	**+1.3**
PMTG				*e*S	**Sn**	**05 09 36.3**	**-0.4**
PMTG				A	A	05 09 39.1	
	comp=E,2.8nm,0.2s						
PMRV	**Marv??o**	**2.72**	**353**	*e*P	**Pn**	**05 09 10.6**	**+1.4**
PMRV				*e*S	**Sn**	**05 09 38.9**	**-2.1**
PMRV				A	A	05 09 41.4	
	comp=E,4.5nm,0.2s						
PSBE	**So Bento**	**3.14**	**333**	*e*P	**Pn**	**05 09 17.3**	**+2.3**
PSBE				*e*S	**Sn**	**05 09 50.6**	**-0.8**
AVE	**Averroes**	**3.44**	**186**	S	**Sn**	**05 10 01.3**	**+2.6**
IFR	**Ifrane**	**3.54**	**154**	P	**Pn**	**05 09 23.7**	**+3.1**
MTE	**Manteigas**	**3.70**	**353**	*e*S	**Sn**	**05 10 03.6**	**-1.6**
MTE				A	A	05 10 04.8	
	comp=E,4.1nm,0.8s						
PVIS	**Viseu**	**4.05**	**350**	*e*S	**Sn**	**05 10 12.9**	**-1.0**
MD31	**MD31**	**4.25**	**154**	P	**Pn**	**05 09 31.0**	**+0.7**
MD31				S	**Sn**	**05 10 15.8**	**-3.1**
MDT	**Midelt**	**4.36**	**153**	P	**Pn**	**05 09 32.2**	**+0.4**
MDT				S	**Sn**	**05 10 18.4**	**-3.0**
MVO	**Moncorvo**	**4.43**	**359**	*e*P	**Pn**	**05 09 34.5**	**+1.7**
MVO				*e*S	**Sn**	**05 10 20.4**	**-2.9**
MVO				A	A	05 10 22.9	
	comp=E,4.4nm,0.3s						
PVRL	**Vila Real**	**4.58**	**353**	*e*S	**Sn**	**05 10 23.3**	**-3.6**
PVRL				A	A	05 10 26.6	
	comp=E,3.4nm,0.3s						
POLO	**Lamas de Olo**	**4.69**	**352**	*e*P	**Pn**	**05 09 37.8**	**+1.5**
POLO				*e*S	**Sn**	**05 10 26.1**	**-3.5**
POLO				A	A	05 10 29.2	
	comp=E,2.7nm,0.3s						
OUK	**Oukaimeden**	**5.56**	**188**	P	**Pn**	**05 09 46.7**	**-1.8**
OUK				S	**Sn**	**05 10 46.7**	**-4.8**
TTIG	**Tnine Tigouga,**	**6.29**	**192**	P	Pn	05 09 55.9	-2.5
TTIG				S	Sn	05 11 00.4	-8.7

IDC ***13*** *05:13:19.5±0.9, 35°.76N×141°.15E, h0^{km}, mb3.4/8, mbtmp3.5/11, ML2.9/2, Error ellipse: s-maj=21.6km s-min=17.2km az=88.0*

NIED ***13*** *05:13:23.8, 35°.80N×140°.99E, h30^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.26; $M_{\theta\theta}$-4.25; $M_{\phi\phi}$-0.01; $M_{r\theta}$3.67; $M_{\theta\phi}$-0.54; $M_{\phi r}$-2.30; Fault plane solution: $M_0$6.05000×10^{14} NP1: ϕ_s108.00000°, δ68.00000°, λ109.00000°. NP2: ϕ_s245.00000°, δ28.00000°, λ51.00000°.*

JMA ***13*** *05:13:23.8±0.2, 35°.8N±0°.6×14°1E±°, h30^{km}±1^{km}, MV3.6/35, NEAR CHOSHI CITY*

JMA Felt II J1 at NEAR CHOSHI CITY .

ISC 13 05:13:23.0±1.3**, 35°.81N**±0°.05×**141°.10E**±0°.07**, h24**^{km}±8^{km}**, n29, σ1^{s}05**/27**, mb3.4**/8**, 3D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.22**	**243**	P	**Pb**	**05 13 29.3**	**+0.5**
CHOJ				S	**Sb**	**05 13 33.0**	**+0.2**
JIHU	**Itakohorinouch**	**0.49**	**289**	P	**Pb**	**05 13 33.3**	**+0.2**
JIHU				S	**Sb**	**05 13 40.1**	**+0.2**
JSMT	**Sammumatsuo**	**0.56**	**253**	P	**Pb**	**05 13 33.9**	**-0.2**
JSMT				S	**Sb**	**05 13 41.5**	**-0.2**
JHYU	**Hitachinakayam**	**0.68**	**322**	⇓P	**Pb**	**05 13 36.3**	**+0.1**
JHYU				⇓S	**Sb**	**05 13 44.9**	**-0.2**
JYT	**Yasato**	**0.85**	**300**	P	**Pb**	**05 13 37.9**	**-1.2**
JYT				S	**Sb**	**05 13 47.2**	**-2.9**
JHO	**Hitachi**	**0.91**	**332**	⇓P	**Pb**	**05 13 39.6**	**-0.6**
BSO4	**Boso 4**	**1.03**	**218**	P	**Pn**	**05 13 41.8**	**0.0**
BSO3	**Boso 3**	**1.11**	**206**	P	**Pn**	**05 13 42.4**	**-0.5**
BSO1	**Boso 1**	**1.15**	**185**	P	**Pn**	**05 13 42.8**	**-0.3**
MJAR	**Matsushiro Arr**	**2.45**	**288**	Pn	**Pn**	**05 14 01.2**	**-0.3**
	1.0nm,0.3s,baz=94,slow=13,SNR=22						
MJAR				Sn	**Sn**	**05 14 31.0**	**+0.1**
	1.2nm,0.3s,baz=145,slow=13,SNR=2.4						
	4.4nm,0.4s						
JHJ	**Hachijo jima 2**	**2.89**	**203**	Pn	**Pn**	**05 14 06.2**	**-1.4**
	11nm,0.3s,baz=37,slow=20,SNR=6.1						
JHJ				Sn	**Sn**	**05 14 41.8**	**+0.2**
	21nm,0.3s,baz=75,slow=22,SNR=2.4						
	92nm,0.8s						
JCJ	**Chichijima**	**8.73**	**174**	Pn	**Pn**	**05 15 24.7**	**-3.1**
	19nm,0.4s,baz=282,slow=20,SNR=1.1						
H11N2	**WAKE ISLAND Hy**	**27.76**	**118**	T	T	05 48 17.1	
	baz=311,slow=75,SNR=135						
H11N1	**WAKE ISLAND Hy**	**27.77**	**118**	T	T	05 48 13.7	
	baz=311,slow=75,SNR=106						
H11N3	**WAKE ISLAND Hy**	**27.78**	**118**	T	T	05 48 18.4	
	baz=311,slow=75,SNR=124						
SONM	**Songino Array**	**28.28**	**306**	P	**P**	**05 19 15.4**	**+0.8**
	0.2nm,0.5s,baz=111,slow=7.9,SNR=1.9						
	0.2nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**28.43**	**121**	T	T	05 49 03.3	
	baz=312,slow=75,SNR=141						
H11S1	**WAKE ISLAND Hy**	**28.43**	**121**	T	T	05 49 06.1	
	baz=312,slow=75,SNR=222						
H11S2	**WAKE ISLAND Hy**	**28.44**	**121**	T	T	05 49 05.8	
	baz=312,slow=75,SNR=126						
ZALV	**Zalesovo Beam**	**42.57**	**313**	P	**P**	**05 21 17.6**	**+1.0**
	0.5nm,0.5s,baz=81,slow=8.9,SNR=2.3						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**44.57**	**303**	P	**P**	**05 21 33.2**	**+0.2**
	0.8nm,0.7s,baz=88,slow=9.5,SNR=11						
	0.8nm,0.7s						
ILAR	**Eielson Array**	**50.67**	**32**	P	**P**	**05 22 20.9**	**+0.9**
	0.4nm,0.7s,baz=264,slow=5.8,SNR=5.9						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**55.81**	**188**	P	**P**	**05 22 58.2**	**-0.1**
	0.8nm,0.7s,baz=2.3,slow=7.4,SNR=7.9						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**59.54**	**188**	P	**P**	**05 23 25.0**	**+0.5**
	0.1nm,0.4s,baz=20,slow=11,SNR=1.7						
	0.1nm,0.4s						
YKA	**Yellowknife Ar**	**65.00**	**30**	P	**P**	**05 23 59.9**	**-0.7**
	0.2nm,0.9s,baz=307,slow=7.1,SNR=2.6						
	0.2nm,0.9s						
PDAR	**Pinedale Array**	**78.71**	**45**	P	**P**	**05 25 24.0**	**+0.4**
	0.1nm,0.5s,baz=231,slow=0.9,SNR=2.0						
	0.1nm,0.5s						
H03N2	**Juan Fernandez**	**147.13**	**98**	T	T	08 17 29.5	
	baz=289,slow=76,SNR=16						
H03N3	**Juan Fernandez**	**147.14**	**98**	T	T	08 17 32.7	
	baz=289,slow=76,SNR=23						
H03N1	**Juan Fernandez**	**147.14**	**98**	T	T	08 17 33.2	
	baz=289,slow=76,SNR=19						

NOU 13 05:25:42.6, 16°.97S×**167°.12E, h0**^{km}**, MLv3.8**/8**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.27**	**127**	P	Pg	05 26 06.5	-0.4
RTV	**Rentapao**	**1.49**	**123**	P	Pn	05 26 09.7	-1.0
YATNC	**Mamie plateau,**	**5.07**	**182**	P	Pn	05 26 58.9	-1.0
NOUC	**Port Laguerre**	**5.16**	**188**	P	Pn	05 27 01.4	+0.2
OUENC	**Ouen Island, N**	**5.43**	**183**	P	Pn	05 27 05.2	+0.4

NNC ***13*** *05:28:50.1±3.6, 47°.70N×89°.27E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=32.9km s-min=23.1km az=56.0*

SOME ***13*** *05:28:53.4, 47°.07N×88°.77E, h15^{km}*

ASRS ***13*** *05:28:54.8±0.8, 48°N±3°×8°9E±°, h9^{km}, MLh3.9/7, Error ellipse: s-maj=10.6km s-min=5.2km az=104.0, confirmed*

ISC 13 05:28:52.3±2.2**, 47°.71N**±0°.07×**89°.3E**±0°.1**, h11**^{km}**, n14, σ1^{s}71**/28**, 4C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGZ	**Jazzator, Alta**	**2.33**	**329**	Pg	**Pb**	**05 29 35.2**	**+0.8**
DGZ				Sg	**Sg**	**05 30 08.4**	**+1.1**
CUR	**Chagan-Uzun**	**2.47**	**346**	Pg	**Pb**	**05 29 37.7**	**+1.0**
CUR				Sg	**Sg**	**05 30 11.6**	**+0.1**
CHBI	**Chibit, Altay**	**2.85**	**337**	Pg	**Pg**	**05 29 47.5**	**+0.6**
CHBI				Sg	**Sg**	**05 30 24.9**	**+1.0**
ZSN	**Zaisan**	**2.99**	**267**	*e*Pg	**Pb**	**05 29 46.6**	**+1.1**
	3.6nm,0.1s						
ZSN				*e*Lg	Lg	05 30 25.0	
	19nm,0.2s						
ULGR	**Ulagan, Altay**	**3.04**	**344**	Pg	**Pg**	**05 29 50.6**	**+0.1**
ULGR				Sg	**Sg**	**05 30 29.3**	**-0.6**
ARTR	**Artybash**	**4.29**	**343**	Pn	**Pn**	**05 29 53.0**	**-4.5**
ARTR				Pg	**Pb**	**05 30 10.4**	**+2.7**
ARTR				Sg	**Sg**	**05 31 07.4**	**-2.6**
UKR	**Ust'-Kan**	**4.37**	**319**	Pn	**Pn**	**05 30 01.1**	**+2.5**
UKR				Pg	**Pg**	**05 30 13.5**	**-2.4**
UKR				Sg	**Sg**	**05 31 11.5**	**-0.9**
GALT	**Gorno-Altaysk,**	**4.76**	**334**	Pg	**Pg**	**05 30 24.4**	**+0.9**
GALT				Sg	**Sg**	**05 31 25.3**	**+0.1**
MK31	**Makanchi Array**	**4.84**	**262**	⇑Pn	**Pn**	**05 30 04.8**	**-0.2**
	0.3nm,0.2s,baz=90,slow=14,SNR=26						
MK31				⇑Pg	**Pb**	**05 30 19.4**	**+2.4**
	2.1nm,0.4s,baz=85,slow=16,SNR=17						
MK31				⇓Lg	Lg	05 31 20.8	
	6.0nm,0.4s,baz=82,slow=32,SNR=11						
MAKZ	**Makanchi**	**5.04**	**262**	Pn	**Pn**	**05 30 06.8**	**-1.0**
MAKZ				S	**Sn**	**05 31 04.9**	**-1.2**
TASR	**Tashtagol**	**5.13**	**351**	Pg	**Pg**	**05 30 30.9**	**+0.4**
TASR				Sg	**Sg**	**05 31 36.1**	**-0.9**
SEM	**Semipalatinsk**	**6.51**	**298**	*e*Pg	**Pg**	**05 30 55.2**	**-1.7**
	2.8nm,0.1s						
SEM				*e*Lg	Lg	05 32 23.5	
	15nm,0.1s						
KURK	**Kurchatov**	**7.59**	**297**	⇓Pn	**Pn**	**05 30 42.2**	**-0.6**
	4.0nm,0.6s						
KURK				⇑Sn	**Sn**	**05 32 10.5**	**+1.7**
	2.0nm,0.4s						
KURK				⇓Lg	Lg	05 32 54.1	
	13nm,0.6s						
KURBB	**Kurchatov Arra**	**7.62**	**296**	⇓Pn	**Pn**	**05 30 41.0**	**-2.2**
	1.4nm,0.4s						
KURBB				⇓Sn	**Sn**	**05 32 09.9**	**+0.6**
	7.8nm,0.6s						
KURBB				⇑Lg	Lg	05 32 56.8	
	20nm,0.7s						

NIED ***13*** *05:33:05.6, 33°.69N×130°.28E, h15^{km}, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.15; $M_{\theta\theta}$1.36; $M_{\phi\phi}$-1.22; $M_{r\theta}$-0.01; $M_{\theta\phi}$0.07; $M_{\phi r}$-0.29; Fault plane solution: $M_0$1.33000×10^{14} NP1:ϕ_s44.00000°, δ81.00000°, λ-169.00000°. NP2:ϕ_s313.00000°, δ80.00000°, λ-10.00000°.*

JMA 13 05:33:05.6±0.0**, 33°.7N**±0°.1×**130°.28E**±0°.09**, h15**^{km}**, MV3.5**/40**, 4D, CENTRAL FUKUOKA PREF, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFI	**Itaya**	**0.27**	**161**	*i* P	Pg	05 33 11.4	0.0
JFI				S	Sg	05 33 15.4	0.0
JFA	**Akaike**	**0.43**	**86**	⇓*i*P	Pg	05 33 14.0	-0.2
JFA				⇓S	Sg	05 33 20.3	+0.3
JII	**Iki**	**0.47**	**284**	⇓*i*P	Pg	05 33 15.1	0.0
JII				⇓S	Sg	05 33 21.6	+0.2
JTA	**Tamana**	**0.75**	**164**	*i* P	Pg	05 33 19.6	-0.6
JTA				S	Sg	05 33 29.4	-0.7
JTSM	**Tsushimamitsus**	**0.99**	**311**	P	Pb	05 33 23.8	-0.7
JTSM				S	Sb	05 33 36.9	-0.5

IDC 13 05:34:53.7±66.0**, 15°.80S**×**179°.69E, h0**^{km}**, mb3.7**/3**, mbtmp3.7**/3**, Error ellipse: s-maj=1197.0km s-min=164.3km az=75.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.11**	**238**	P	P	05 42 15.9	+1.3
	0.8nm,0.4s,baz=76,slow=11,SNR=5.3						
	0.8nm,0.4s						
WRA	**Warramunga Arr**	**43.26**	**258**	P	P	05 42 56.0	-1.4
	0.3nm,0.9s,baz=100,slow=8.2,SNR=2.6						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**43.65**	**252**	P	P	05 43 00.1	-0.4
	1.1nm,0.5s,baz=82,slow=8.3,SNR=19						
	1.1nm,0.5s						

DJA ***13*** *05:45:26.8±0.8, 0°N±6°×12°2E±°, h171^{km}±6^{km}, M3.7/7, MLv3.7/7*

IDC ***13*** *05:45:28.4±13.0, 0°.20N×121°.89E, h205^{km}±137^{km}, mb3.3/4, mbtmp3.8/4, Error ellipse: s-maj=119.0km s-min=18.2km az=69.0*

ISC 13 05:45:26.2±0.9**, 0°.3N**±0°.1×**122°.0E**±0°.1**, h183**^{km}±7^{km}**, n11, σ0^{s}67**/12**, mb3.7**/4**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.17**	**323**	P	**Pn**	**05 45 50.1**	**-0.3**
MRSI				S	**Sn**	**05 46 08.3**	**-0.8**
GTOI	**Gorontalo**	**1.01**	**73**	P	**Pn**	**05 45 54.8**	**+0.5**
LUWI	**Luwuk**	**1.56**	**152**	P	**Pn**	**05 45 59.7**	**+0.7**
LUWI				S	**Sn**	**05 46 24.7**	**+0.3**
MPSI	**Mapaga**	**2.14**	**270**	P	**Pn**	**05 46 05.1**	**+0.1**
SANI	**Sanana**	**4.61**	**121**	P	**Pn**	**05 46 34.5**	**-0.7**
KSI	**Kapahiang**	**19.84**	**258**	P	Pn	05 49 59.8	+13
WRA	**Warramunga Arr**	**23.49**	**150**	P	**P**	**05 50 19.3**	**-0.2**
	0.9nm,0.8s,baz=325,slow=11,SNR=16						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**26.50**	**155**	P	**P**	**05 50 46.8**	**0.0**
	0.4nm,0.8s,baz=340,slow=7.9,SNR=8.2						
	0.4nm,0.8s						
SONM	**Songino Array**	**49.22**	**346**	P	**P**	**05 53 56.7**	**+0.7**
	2.7nm,0.6s,baz=166,slow=8.9,SNR=14						
	2.7nm,0.6s						
MKAR	**Makanchi Array**	**57.82**	**329**	P	**P**	**05 54 58.8**	**+0.2**
	1.1nm,0.3s,baz=125,slow=8.9,SNR=20						
	1.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**119.39**	**285**	PKP	**PKPdf**	**06 03 53.9**	**-1.0**
	0.2nm,0.4s,baz=97,slow=1.2,SNR=1.4						

IDC ***13*** *05:49:29.9±3.9, 30°.28S×70°.78W, h0^{km}, mb3.5/2, mbtmp3.5/3, ML3.9/1, Error ellipse: s-maj=150.7km s-min=43.2km az=14.0*

SJA ***13*** *05:49:46.6±1.6, 28°.87S×70°.30W, h96^{km}±6^{km}, ML3.6, MW3.7, Hypocentre not reviewed by the ISC*

NEIC ***13*** *05:49:46.5±1.2, 28°.89S±0°.04×70°.28W±0°.08, h105^{km}±3^{km}, mb4.4/5, ML3.6(GUC), Error ellipse: s-maj=10.3km s-min=5.6km az=88.0*

GUC ***13*** *05:49:47.4±0.8, 28°.94S×70°.31W, h87^{km}±4^{km}, ML3.6*

ISC 13 05:49:46.3±0.7**, 28°.88S**±0°.04×**70°.23W**±0°.06**, h99**^{km}±6^{km}**, n66, σ0^{s}89**/78**, mb3.3**/3**, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC05	**El Transito**	**0.06**	**317**	Pn	**Pn**	**05 50 00.8**	**+0.4**
AC05				Sn	**Sn**	**05 50 10.8**	**0.0**
AC05	**El Transito**	**0.06**	**317**	*e*P	**Pn**	**05 50 00.8**	**+0.4**
AC05				*i* S	**Sn**	**05 50 10.7**	**0.0**
AC05				IAML		05 50 11.3	
	comp=N,6µm,0.2s						
AC05	**El Transito**	**0.06**	**317**	*e*P		05 50 00.7	
AC05				*e*S		05 50 10.9	
AC05				IAML		05 50 11.8	
	comp=Z,2µm,0.2s						
LCO	**Las Campanas**	**0.43**	**252**	Pn	**Pn**	**05 50 02.4**	**+0.5**
LCO				Sn	**Sn**	**05 50 13.9**	**+0.3**
LCO	**Las Campanas**	**0.43**	**252**	*e*P	**Pn**	**05 50 01.7**	**-0.2**
LCO				*i* S	**Sn**	**05 50 13.5**	**-0.1**
LCO	**Las Campanas**	**0.43**	**252**	*e*P		05 50 02.4	
LCO				*e*S		05 50 13.8	
LCO				IAML		05 50 14.4	
	comp=Z,5µm,0.2s						
AC04	**Llanos de Chal**	**1.00**	**312**	Pn	**Pn**	**05 50 07.9**	**+1.2**
AC04				Sn	**Sn**	**05 50 22.7**	**+0.6**
AC04	**Llanos de Chal**	**1.00**	**312**	*e*P	**Pn**	**05 50 07.9**	**+1.2**
AC04				*i* S	**Sn**	**05 50 23.0**	**+0.9**
AC04				IAML		05 50 24.8	
	comp=E,3µm,0.2s						
AC04	**Llanos de Chal**	**1.00**	**312**	*e*P		05 50 07.7	
AC04				*e*S		05 50 22.6	
AC04				IAML		05 50 26.4	
	comp=Z,1µm,0.5s						
CO01	**Juntas del Tor**	**1.10**	**174**		**Pn**	**05 50 09.5**	**+1.4**
CO01				Sn	**Sn**	**05 50 25.4**	**+0.9**
CO01	**Juntas del Tor**	**1.10**	**174**	*e*P	**Pn**	**05 50 09.6**	**+1.4**
CO01				*i* S	**Sn**	**05 50 26.1**	**+1.7**
CO01				IAML		05 50 28.4	
	comp=N,688nm,0.5s						
CO01	**Juntas del Tor**	**1.10**	**174**	*e*P		05 50 09.6	
CO01				*e*S		05 50 26.1	
CO01				IAML		05 50 27.2	
	comp=Z,880nm,0.3s						
GO03	**Copiap**	**1.28**	**360**		**Pn**	**05 50 10.8**	**+0.8**
GO03	**Copiap**	**1.28**	**360**	*e*P	**Pn**	**05 50 10.9**	**+0.8**
GO03				*i* S	**Sn**	**05 50 28.6**	**+0.8**
GO03				IAML		05 50 31.2	
	comp=N,1µm,0.1s						
GO03	**Copiap**	**1.28**	**360**	*e*P		05 50 10.9	
GO03				*e*S		05 50 28.8	
CO05	**La Serena**	**1.36**	**220**		**Pn**	**05 50 11.4**	**+0.6**
CO05				Sn	**Sn**	**05 50 29.5**	**+0.1**
CO05	**La Serena**	**1.36**	**220**	*e*P	**Pn**	**05 50 11.4**	**+0.6**
CO05				*i* S	**Sn**	**05 50 29.3**	**0.0**
CO05				IAML		05 50 36.6	
	comp=N,1µm,0.2s						
GO04	**Tololo Observa**	**1.38**	**201**	*e*P		05 50 12.2	
GO04				*e*S		05 50 31.3	
GO04	**Tololo Observa**	**1.38**	**201**		**Pn**	**05 50 12.3**	**+0.9**
GO04				Sn	**Sn**	**05 50 30.2**	**-0.1**
GO04	**Tololo Observa**	**1.38**	**201**	*e*P	**Pn**	**05 50 12.2**	**+0.9**
GO04				*i* S	**Sn**	**05 50 31.0**	**+0.8**
CO03	**El Pedregal**	**1.99**	**191**		**Pn**	**05 50 19.5**	**+0.6**
CO03	**El Pedregal**	**1.99**	**191**	*e*P	**Pn**	**05 50 20.0**	**+1.1**
CO03				*i* S	**Sn**	**05 50 44.5**	**+0.8**
CO03				IAML		05 50 46.8	
	comp=N,944nm,0.5s						
CO03	**El Pedregal**	**1.99**	**191**	*e*P		05 50 20.1	
CO03				*e*S		05 50 42.1	
CO03				IAML		05 50 47.2	
	comp=Z,440nm,0.6s						
CO06	**Fray Jorge**	**2.17**	**214**	Pn	**Pn**	**05 50 21.5**	**+0.5**
CO06	**Fray Jorge**	**2.17**	**214**	*e*P	**Pn**	**05 50 21.4**	**+0.3**
AC02	**Maricunga**	**2.26**	**26**	Pn	**Pn**	**05 50 24.3**	**+1.6**
AC02	**Maricunga**	**2.26**	**26**	*e*P		05 50 24.6	
AC02				*e*S		05 50 53.2	
AC02				IAML		05 50 57.3	
	comp=Z,181nm,0.7s						
CO02	**Combarbal**	**2.41**	**196**		**Pn**	**05 50 25.1**	**+0.7**
CO02	**Combarbal**	**2.41**	**196**	*e*P	**Pn**	**05 50 25.1**	**+0.7**
CO02				*i* S	**Sn**	**05 50 53.9**	**+0.4**
CO02	**Combarbal**	**2.41**	**196**	*e*P		05 50 25.2	
CO02				*e*S		05 50 49.3	
CO02				IAML		05 50 55.1	
	comp=Z,359nm,0.5s						
TINO	**Tinogasta**	**2.48**	**71**	*e*P		05 50 28.4	
TINO				*e*S		05 50 57.7	
AC01	**Pan de Azucar**	**2.74**	**353**	Pn	**Pn**	**05 50 29.4**	**+0.7**
AC01	**Pan de Azucar**	**2.74**	**353**	*e*P		05 50 29.4	
AC01				*e*S		05 50 55.0	
AC01				IAML		05 51 09.7	
	comp=Z,146nm,0.7s						
ZON	**Zonda**	**2.98**	**154**	Pn	**Pn**	**05 50 32.1**	**+0.3**
ZON	**Zonda**	**2.98**	**154**	*i* P		05 50 35.6	
ZON				*e*S		05 51 08.5	
RTLS	**Leoncito**	**3.02**	**165**	*e*P		05 50 35.5	
RTLS				*e*S		05 51 02.8	
RTLS				IAML		05 51 16.4	
	comp=Z,166nm,0.7s						
CFA	**Coronel Fontan**	**3.22**	**148**	*e*P		05 50 36.9	
CFA				*e*S		05 51 16.7	
GO02	**Mina Guanaco**	**3.75**	**9**	Pn	**Pn**	**05 50 43.1**	**+0.7**
GO02	**Mina Guanaco**	**3.75**	**9**	*e*P		05 50 43.5	
GO02				*e*S		05 51 10.9	
VA06	**Catapilco**	**3.78**	**194**		**Pn**	**05 50 42.8**	**+0.3**
VA03	**San Esteban**	**3.88**	**184**	*i* P		05 50 45.7	
VA03				*e*S		05 51 29.9	
VA03				IAML		05 51 43.7	
	comp=Z,119nm,0.6s						
VA03	**San Esteban**	**3.88**	**184**		**Pn**	**05 50 43.8**	**-0.2**
ASAL	**Salagasta**	**3.89**	**162**	*e*P		05 50 46.8	
ASAL				*e*S		05 51 17.8	
ROC1	**El Roble**	**4.14**	**189**	Pn	**Pn**	**05 50 47.8**	**+0.2**
PB14	**IPOC Station P**	**4.24**	**358**	Pn	**Pn**	**05 50 48.4**	**-0.7**
PEL	**Peldehue**	**4.27**	**185**	Pn	**Pn**	**05 50 49.3**	**+0.1**
AAGR	**Agrelo**	**4.36**	**164**	*e*P		05 50 54.0	
MT02	**Curacav**	**4.43**	**190**	Pn	**Pn**	**05 50 50.8**	**-0.6**
MT02	**Curacav**	**4.43**	**190**	*e*P		05 50 51.4	
MT02				IAML		05 52 17.0	
	comp=Z,48nm,1.1s						
MT05	**Renca**	**4.52**	**185**	Pn	**Pn**	**05 50 52.0**	**-0.5**
MT05	**Renca**	**4.52**	**185**	*e*P		05 50 54.5	
MT05				IAML		05 52 14.0	
	comp=Z,73nm,0.9s						
MT08	**Bocatoma Ro**	**4.55**	**178**	Pn	**Pn**	**05 50 50.5**	**-2.7**
MT03	**Universidad Ad**	**4.61**	**183**	Pn	**Pn**	**05 50 51.2**	**-2.5**
VA05	**Santo Domingo**	**4.91**	**194**	Pn	**Pn**	**05 50 56.7**	**-1.0**
MT09	**Talagante**	**4.92**	**187**		**Pn**	**05 50 57.8**	**-0.3**
MT01	**Popeta**	**5.04**	**190**		**Pn**	**05 50 58.5**	**-1.1**
PB10	**IPOC Station P**	**5.35**	**357**	Pn	**Pn**	**05 51 03.5**	**-0.4**
BO01	**Tunca**	**5.54**	**187**	Pn	**Pn**	**05 51 05.5**	**-0.9**
PB15	**IPOC Station P**	**5.69**	**7**		**Pn**	**05 51 08.5**	**-0.1**
BO02	**Sierra Bellavi**	**5.91**	**184**	Pn	**Pn**	**05 51 11.4**	**-0.1**
GO05	**Huala**	**6.28**	**193**	Pn	**Pn**	**05 51 16.1**	**-0.3**
LVC	**Limon Verde**	**6.36**	**11**	Pn	**Pn**	**05 51 16.9**	**-0.9**
PB03	**IPOC Station P**	**6.82**	**4**	Pn	**Pn**	**05 51 25.4**	**+1.5**
PB09	**IPOC Station P**	**7.11**	**7**	Pn	**Pn**	**05 51 27.9**	**+0.1**
PB07	**IPOC Station P**	**7.13**	**3**	Pn	**Pn**	**05 51 28.2**	**+0.1**
PB02	**IPOC Station P**	**7.53**	**2**	Pn	**Pn**	**05 51 32.8**	**-0.8**
H03N1	**Juan Fernandez**	**8.72**	**236**	T	T	05 59 35.2	
	baz=64,slow=72,SNR=98						
H03N2	**Juan Fernandez**	**8.73**	**236**	T	T	05 59 36.5	
	baz=64,slow=72,SNR=55						
H03N3	**Juan Fernandez**	**8.73**	**236**	T	T	05 59 34.6	
	baz=64,slow=72,SNR=81						
PB11	**IPOC Station P**	**9.09**	**3**	Pn	**Pn**	**05 51 54.6**	**-0.3**
PSGCX	**Pisagua**	**9.24**	**1**	Pn	**Pn**	**05 51 56.4**	**-0.4**
MNMC	**Minye Minye**	**9.72**	**4**	Pn	**Pn**	**05 52 03.2**	**-0.3**
PB12	**IPOC Station P**	**10.22**	**359**	Pn	**Pn**	**05 52 10.1**	**-0.1**
PB16	**IPOC Station P**	**10.52**	**4**	Pn	**Pn**	**05 52 15.8**	**+1.2**
CPUP	**Villa Florida**	**11.72**	**81**	Pn	**Pn**	**05 52 29.9**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=249,slow=14,SNR=3.7						
	comp=Z,1.3nm,0.7s						
CPUP	**Villa Florida**	**11.72**	**81**	Pn	**Pn**	**05 52 30.9**	**+0.7**
PLCA	**Paso Flores**	**11.83**	**181**	Pn	**Pn**	**05 52 31.2**	**-0.5**
ITQB	**Itaqui**	**11.90**	**97**	Pn	**Pn**	**05 52 32.7**	**0.0**
ITAB	**Concordia**	**16.06**	**88**		**P**	**05 53 26.8**	**-1.0**
ITAB				IAmb	IAmb	05 53 39.1	
	comp=Z,27nm,1.5s						
COYC	**Coyhaique**	**16.73**	**185**		**P**	**05 53 34.9**	**-0.2**
COYC				IAmb	IAmb	05 53 50.1	
	comp=Z,39nm,1.4s						
NNA	**Nana**	**17.91**	**338**	P	**Pn**	**05 53 47.9**	**-1.1**
BOAV	**Boa Vista**	**32.46**	**18**	P	**P**	**05 56 07.1**	**-0.2**
BOAV				IAmb	IAmb	05 56 07.8	
	comp=Z,8.7nm,1.2s						
QSPA	**South Pole Qui**	**61.34**	**180**	P	**P**	**05 59 50.1**	**-1.2**
TXAR	**Lajitas Array**	**66.12**	**328**	P	**P**	**06 00 25.1**	**+2.1**
	comp=Z,0.2nm,0.6s,baz=159,slow=7.7,SNR=3.6						
	comp=Z,0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**81.00**	**70**	P	**P**	**06 01 50.9**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=247,slow=3.8,SNR=2.5						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**152.09**	**43**	PKPbc	**PKiKP**	**06 09 30.9**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=316,slow=2.6,SNR=2.3						

IDC 13 05:51:47.7±2.9**, 55°.47N**×**86°.47E, h0**^{km}**, mbtmp2.8**/3**, ML2.3**/3**, Error ellipse: s-maj=26.2km s-min=20.0km az=66.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.80**	**213**	I	I	06 04 19.0	
	0.1nm,1.3s,baz=27,slow=346,SNR=17						
ZALV	**Zalesovo Beam**	**1.80**	**213**	Pn	Pn	05 52 19.4	-0.6
	2.9nm,0.3s,baz=31,slow=16,SNR=27						
ZALV				Lg	Lg	05 52 45.1	
	2.8nm,0.3s,baz=33,slow=25,SNR=10						
KURBB	**Kurchatov Arra**	**6.82**	**228**	Pn	Pn	05 53 28.1	-0.7

	baz=44,slow=14,SNR=5.0						
KURBB				Lg	Lg	05 55 25.2	
	0.1nm,0.3s,baz=42,slow=29,SNR=1.6						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	9.08	199	Pn	Pn	05 54 00.0	+0.2
	baz=16,slow=12,SNR=1.9						
MKAR				Lg	Lg	05 56 35.5	
	baz=21,slow=28						
	0.1nm,0.5s						
BVAR	**Borovoye Array**	9.73	262	Pn	Pn	05 54 08.8	0.0
	baz=66,slow=14,SNR=2.1						
	0.4nm,0.3s						

ROM 13 05:53:58.2±0.0**, 42°.767N**±0°.002×**13°.066E**±0°.003**, h11^{km}, ML1.6**/13**, 7C-2D, Error ellipse: s-maj=0.2km s-min=0.2km az=264.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
T1212	**Cascia, Frazio**	0.02	225	⇑P	Pg	05 54 00.4	+0.1
T1212				S	Sg	05 54 01.7	0.0
T1212				AML	AML		
	comp=E,932μm,0.5s						
T1212				AML	AML		
	comp=N,1498μm,0.2s						
T1212				AML	AML		
	comp=E,922μm,0.6s						
T1212				AML	AML		
	comp=N,1520μm,0.2s						
T1212				AML	AML		
	comp=N,1520μm,1.8s						
T1212				AML	AML		
	comp=N,1498μm,1.8s						
T1212				AML	AML		
	comp=E,932μm,1.5s						
T1212				AML	AML		
	comp=E,922μm,1.4s						
T1218	**Civita (PG)**	0.10	160	⇓P	Pg	05 54 01.4	+0.4
T1218				S	Sg	05 54 03.5	+0.4
T1218				AML	AML		
	comp=E,580μm,0.2s						
T1218				AML	AML		
	comp=N,872μm,0.4s						
T1218				AML	AML		
	comp=E,564μm,0.2s						
T1218				AML	AML		
	comp=N,863μm,0.4s						
T1218				AML	AML		
	comp=N,872μm,1.6s						
T1218				AML	AML		
	comp=N,863μm,1.6s						
T1218				AML	AML		
	comp=E,564μm,1.8s						
T1218				AML	AML		
	comp=E,580μm,1.8s						
T1214	**Arquata del Tr**	0.10	94	⇓P	Pg	05 54 01.5	+0.4
T1214				S	Sg	05 54 03.7	+0.4
T1214				AML	AML		
	comp=E,713μm,0.2s						
T1214				AML	AML		
	comp=N,701μm,0.1s						
T1214				AML	AML		
	comp=E,675μm,0.2s						
T1214				AML	AML		
	comp=E,713μm,1.8s						
T1214				AML	AML		
	comp=E,675μm,1.8s						
T1214				AML	AML		
	comp=N,660μm,0.1s						
T1217	**Poggiodomo (PG**	0.11	241	P	Pg	05 54 01.6	+0.4
T1217				S	Sg	05 54 04.2	+0.9
T1217				AML	AML		
	comp=E,156μm,0.1s						
T1217				AML	AML		
	comp=N,127μm,0.1s						
T1217				AML	AML		
	comp=N,126μm,1.0s						
T1217				AML	AML		
	comp=N,126μm,1.0s						
T1217				AML	AML		
	comp=E,155μm,0.2s						
T1216	**Preci, Frazion**	0.13	344	P	Pg	05 54 01.9	+0.5
T1216				AML	AML		
	comp=N,233μm,0.2s						
T1216				AML	AML		
	comp=E,224μm,0.1s						
T1215	**Vallo di Nera,**	0.15	283	P	Pg	05 54 02.2	+0.5
T1215				S	Sg	05 54 05.0	+0.8
T1215				AML	AML		
	comp=E,142μm,0.2s						
T1215				AML	AML		
	comp=N,133μm,0.9s						
T1215				AML	AML		
	comp=E,141μm,0.2s						
T1215				AML	AML		
	comp=N,132μm,0.9s						
T1215				AML	AML		
	comp=N,132μm,1.1s						
T1215				AML	AML		
	comp=E,141μm,1.8s						
MC2	**Monte Cornacci**	0.17	32	⇑P	Pg	05 54 02.7	+0.5
MC2				S	Sg	05 54 06.1	+1.1
MMO1	**Montemonaco**	0.23	55	⇑P	Pg	05 54 03.6	+0.5
MMO1				S	Sg	05 54 07.5	+1.0
SMA1	**SAN MARTINO**	0.24	124	⇑P	Pb	05 54 04.1	-0.6
SMA1				S	Sg	05 54 08.1	+1.5
SMA1				AML	AML		
	comp=E,472μm,0.3s						
SMA1				AML	AML		
	comp=E,472μm,1.7s						
SMA1				AML	AML		
	comp=N,376μm,0.4s						
T1256	**Bolognola (MC)**	0.27	26	P	Pg	05 54 04.3	+0.5
T1256				S	Sb	05 54 08.8	-1.0
FDMO	**Fiordimonte**	0.27	3	P	Pg	05 54 04.2	+0.4
FDMO				S	Sg	05 54 08.6	+1.1
FDMO				AML	AML		
	comp=E,60μm,0.3s						
FDMO				AML	AML		
	comp=N,79μm,0.2s						
RM33	**Pellescritta (**	0.28	157	P	Pg	05 54 04.4	+0.5
RM33				S	Sg	05 54 08.9	+1.1
RM33				AML	AML		
	comp=E,730μm,1.5s						
RM33				AML	AML		
	comp=E,210μm,1.2s						
RM33				AML	AML		
	comp=N,246μm,0.3s						
RM33				AML	AML		
	comp=N,700μm,0.6s						
RM33				AML	AML		
	comp=E,210μm,0.8s						
T1211	**Morro Reatino**	0.28	214	P	Pg	05 54 04.4	+0.5
T1211				S	Sb	05 54 09.3	-0.8
T1211				AML	AML		
	comp=E,106μm,0.1s						
T1211				AML	AML		
	comp=N,121μm,1.4s						
T1211				AML	AML		
	comp=N,121μm,1.4s						
T1211				AML	AML		
	comp=E,106μm,0.1s						
T1211				AML	AML		
	comp=N,121μm,0.6s						
T1241	**Roccafluvione,**	0.28	72	⇑P	Pg	05 54 04.5	+0.4
T1241				S	Sg	05 54 09.0	+1.1
T1241				AML	AML		
	comp=E,152μm,1.6s						
T1241				AML	AML		
	comp=N,126μm,0.3s						
T1241				AML	AML		
	comp=E,152μm,0.4s						
T1219	**Muccia, Frazio**	0.29	352	⇑P	Pg	05 54 04.6	+0.4
T1219				S	Sg	05 54 09.2	+1.1
T1220	**Camerino, Fraz**	0.34	3	⇑P	Pg	05 54 05.6	+0.5
T1220				S	Sb	05 54 11.0	-0.9
T1220				AML	AML		
	comp=N,174μm,1.5s						
T1220				AML	AML		
	comp=E,168μm,0.5s						
T1220				AML	AML		
	comp=N,174μm,0.5s						

ROM 13 05:54:48.7±0.1**, 42°.574N**±0°.003×**13°.226E**±0°.004**, h10^{km}, ML1.3**/4**, 1C-4D, Error ellipse: s-maj=0.3km s-min=0.2km az=186.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	0.07	188	⇓P	Pg	05 54 51.2	+0.3
RM33				S	Sg	05 54 52.7	+0.2
RM33				AML	AML		
	comp=E,211μm,1.2s						
RM33				AML	AML		
	comp=N,246μm,0.3s						
RM33				AML	AML		
	comp=E,210μm,1.2s						
RM33				AML	AML		
	comp=E,210μm,0.8s						
SMA1	**SAN MARTINO**	0.10	55	⇓P	Pg	05 54 51.9	+0.6
SMA1				S	Sg	05 54 53.9	+0.7
SMA1				AML	AML		
	comp=E,472μm,0.3s						
SMA1				AML	AML		
	comp=E,472μm,1.7s						
SMA1				AML	AML		
	comp=N,376μm,0.4s						
T1218	**Civita (PG)**	0.13	320	P	Pg	05 54 52.3	+0.5
T1218				S	Sg	05 54 54.5	+0.6
T1218				AML	AML		
	comp=E,169μm,1.3s						
T1218				AML	AML		
	comp=N,178μm,1.4s						
T1218				AML	AML		
	comp=N,158μm,0.3s						
T1218				AML	AML		
	comp=E,142μm,1.3s						
T1218				AML	AML		
	comp=E,142μm,0.7s						
T1218				AML	AML		
	comp=E,169μm,0.7s						
T1218				AML	AML		
	comp=N,158μm,1.7s						
T1218				AML	AML		
	comp=N,178μm,0.6s						
CAMP	**Campotosto**	0.14	106	P	Pg	05 54 52.4	+0.5
CAMP				S	Sg	05 54 55.0	+0.8
T1214	**Arquata del Tr**	0.19	356	P	Pg	05 54 53.4	+0.7
T1214				S	Sg	05 54 56.7	+1.2
T1246	**Crognaleto (TE**	0.20	87	P	Pg	05 54 53.4	+0.5
T1246				S	Sg	05 54 56.5	+0.8
T1222	**Castel Sant’An**	0.22	219	⇓P	Pg	05 54 54.2	+0.9
T1222				S	Sg	05 54 57.9	+1.6
T1212	**Cascia, Frazio**	0.22	323	⇑P	Pg	05 54 53.9	+0.6
T1212				S	Sg	05 54 57.6	+1.1
T1211	**Morro Reatino**	0.28	262	⇓P	Pb	05 54 55.4	-0.5
T1211				S	Sb	05 54 59.5	-1.1
T1215	**Vallo di Nera,**	0.35	311	P	Pg	05 54 56.2	+0.6
T1215				S	Sb	05 55 01.8	-0.9

IDC 13 06:09:32.5±3.1**, 6°.11S**×**147°.46E, h0^{km}, mb3.4**/1**, mbtmp3.5**/3**, ML2.8**/2**, MS3.1**/2**, Error ellipse: s-maj=74.0km s-min=34.3km az=93.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	3.29	185	Pn	Pn	06 10 27.5	+2.2
	12nm,0.3s,baz=7.5,slow=7.1,SNR=32						
PMG				Sn	Sn	06 11 05.3	+0.1
	5.4nm,0.3s,baz=42,slow=18,SNR=2.7						
	68nm,0.6s						
WRA	**Warramunga Arr**	18.75	222	P	P	06 13 52.5	-0.8
	0.1nm,0.3s,baz=48,slow=11,SNR=7.3						
	0.3nm,0.3s						
GUMO	**Guam**	19.74	353	LR	LR	06 21 04.1	
	comp=Z,16nm,20.3s,baz=16,slow=35						
ASAR	**Alice Springs**	21.79	215	P	P	06 14 26.2	-0.1
	1.0nm,0.6s,baz=54,slow=8.8,SNR=22						
	1.0nm,0.6s						
MSVF	**Nonsavu**	32.02	114	LR	LR	06 25 17.3	
	comp=Z,113nm,22.0s,baz=188,slow=30						
TORD	**Torodi Ar. Bea**	145.56	284	PKPbc	PKPdf	06 29 12.8	-1.1
	0.4nm,0.4s,baz=92,slow=4.0,SNR=4.3						

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*JMA **13** 06:13:37.4±0.3, 31°N±3°×13°8E±°, h448^{km}, MV3.4/23, NEAR TORISHIMA IS*

*IDC **13** 06:13:38.5±0.8, 31°.13N×138°.07E, h396^{km}±9^{km}, mb2.8/10, mbtmp3.7/13, Error ellipse: s-maj=20.5km s-min=10.4km az=70.0*

ISC 13 06:13:39.0±0.7**, 31°.18N**±0°.07×**138°.34E**±0°.09**, h400^{km}, n26,** σ1^{s}.**95**/32**, mb3.2**/10**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	2.29	32	P	**Pn**	**06 14 39.0**	**+2.2**
	93nm,0.4s,baz=306,slow=18,SNR=26						
JHJ				S	**S**	**06 15 24.9**	**+1.4**
	100nm,0.2s,baz=85,slow=24,SNR=6.5						
JHJ2	**Mitsune**	2.30	33	P	**Pn**	**06 14 39.8**	**+3.0**
TTO1	**TONANKAI O.B.S**	2.77	332	P	**Pn**	**06 14 42.9**	**+3.1**
JIE	**Ise**	3.49	337	P	**Pn**	**06 14 48.6**	**+2.4**
JTNC	**Tanabenakahech**	3.50	320	P	**Pn**	**06 14 48.2**	**+1.9**
JWY	**Kouya**	3.81	323	P	**Pn**	**06 14 51.6**	**+2.3**
BSO1	**Boso 1**	4.12	32	P	**Pn**	**06 14 52.7**	**+1.2**
BSO1				S	**S**	**06 15 51.5**	**+1.0**
JOD2	**Odawara 2**	4.12	9	P	**Pn**	**06 14 54.0**	**+1.9**
JAI	**Aioi**	4.19	309	P	**Pn**	**06 14 54.5**	**+1.7**
JYN	**Shimob**	4.31	2	P	**Pn**	**06 14 56.4**	**+2.4**
JMN	**Monobe**	4.55	305	P	**Pn**	**06 14 58.2**	**+1.8**
JRY	**Ryogami san**	4.85	5	S	**S**	**06 16 02.6**	**-2.2**
CBIJ	**Chichi jima**	5.28	139	P	**Pn**	**06 15 05.0**	**+1.1**
CBIJ				S	**S**	**06 16 11.3**	**-1.7**
JCJ	**Chichijima**	5.28	139	P	**Pn**	**06 15 05.2**	**+1.3**
	61nm,0.7s,baz=290,slow=23,SNR=12						
JCJ				S	**S**	**06 16 12.8**	**-0.2**
	59nm,0.3s,baz=276,slow=22,SNR=11						
MJAR	**Matsushiro Arr**	5.35	359	P	**Pn**	**06 15 05.4**	**+0.9**
	5.2nm,0.7s,baz=175,slow=10,SNR=11						
MJAR				S	**S**	**06 16 14.0**	**-0.3**
	0.9nm,0.3s,baz=176,slow=16,SNR=4.2						
JMK	**Ichinoseki**	8.11	16	S	**S**	**06 17 05.1**	**-5.1**
SONM	**Songino Array**	29.46	314	P	**P**	**06 19 06.8**	**-1.2**
	0.3nm,0.4s,baz=90,slow=7.2,SNR=2.9						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	44.22	317	P	**P**	**06 21 09.8**	**-0.4**
	0.5nm,0.4s,baz=84,slow=16,SNR=1.3						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	45.32	307	P	**P**	**06 21 17.2**	**-1.8**
	1.0nm,0.7s,baz=90,slow=9.3,SNR=11						
	1.0nm,0.7s						
KURBB	**Kurchatov Arra**	47.80	312	P	**P**	**06 21 35.9**	**-2.0**
	0.6nm,0.5s,baz=93,slow=6.7,SNR=14						
	0.6nm,0.5s						
WRA	**Warramunga Arr**	50.97	185	P	**P**	**06 22 01.1**	**-0.7**
	0.2nm,0.3s,baz=0.3,slow=7.7,SNR=8.0						
WRA				PcP	**PcP**	**06 23 11.6**	**+0.1**
	0.3nm,1.1s,baz=359,slow=4.0,SNR=1.5						
	0.2nm,0.3s						
BVAR	**Borovoye Array**	52.78	315	P	**P**	**06 22 13.6**	**-1.0**
	0.9nm,0.4s,baz=90,slow=8.4,SNR=3.7						
	0.9nm,0.4s						
ASAR	**Alice Springs**	54.70	185	P	**P**	**06 22 28.4**	**-0.2**
	0.2nm,0.5s,baz=11,slow=11,SNR=2.6						
	0.2nm,0.5s						
INK	**Inuvik**	60.75	25	P	**P**	**06 23 10.3**	**+0.7**
	0.3nm,0.4s,baz=297,slow=3.3,SNR=4.8						
	0.3nm,0.4s						
YKA	**Yellowknife Ar**	70.15	28	P	**P**	**06 24 09.5**	**+0.4**
	0.3nm,0.6s,baz=300,slow=6.1,SNR=6.0						
	0.3nm,0.6s						
NVAR	**Mina Array Bea**	80.60	51	P	**P**	**06 25 10.7**	**+2.1**
	0.2nm,0.4s,baz=270,slow=6.1,SNR=2.9						
	0.2nm,0.4s						

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*BJI **13** 06:25:35.9±0.0, 40°.31N×143°.41E, h8^{km}, mb4.6/55, mB4.9/41, Ms4.6/48, Ms7 4.5/48*

*JMA **13** 06:25:37.8±0.3, 40°.3N±0°.6×14°3E±°, h14^{km}±3^{km}, MD4.7/33, MW4.7/33, FAR E OFF SANRIKU*

JMA Felt I J1 at FAR E OFF SANRIKU .

*NIED **13** 06:25:37.8, 40°.29N×143°.48E, h14^{km}, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.79; M$_{\theta\theta}$0.19; M$_{\phi\phi}$-0.97; M$_{r\theta}$0.47; M$_{\theta\phi}$-0.41; M$_{\phi r}$0.71; Fault plane solution: M$_0$1.28000×10^{16} NP1:φ$_s$31.00000°, δ67.00000°, λ104.00000°. NP2:φ$_s$179.00000°, δ27.00000°, λ61.00000°.*

*MOS **13** 06:25:38.7±1.2, 40°.31N×143°.42E, h28^{km}, mb4.8/26, MS4.1/7 Error ellipse: s-maj=7.3km s-min=4.6km az=101.4*

*NEIC **13** 06:25:40.5±2.0, 40°.22N±0°.06×143°.6E±0°.1, h35^{km}±2^{km}, mb4.6/64, Mwr4.6/11, Error ellipse: s-maj=13.5km s-min=9.0km az=111.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.53; M$_{\theta\theta}$0.36; M$_{\phi\phi}$-0.89; M$_{r\theta}$0.23; M$_{\theta\phi}$0.20; M$_{\phi r}$0.66; Fault plane solution: M$_0$1.07000×10^{16} NP1:φ$_s$16.72000°, δ70.80000°, λ118.01000°. NP2:φ$_s$138.44000°, δ33.51000°, λ36.56000°. Principal axes: T 0.9358, Plg55.0000°, Azm322.0000°; N 0.2240, Plg26.0000°, Azm187.0000°; P -1.1598, Plg21.0000°, Azm86.0000°;*

*NEIC **13** 06:25:40.5, 40°.22N×143°.59E, h35^{km}*

*IDC **13** 06:25:41.0±4.0, 40°.24N×143°.43E, h31^{km}±29^{km}, mb4.1/30, mbtmp4.2/39, ML3.7/7, MS4.1/58, Error ellipse: s-maj=14.5km s-min=11.4km az=122.0*

ISC 13 06:25:37.0±0.6**, 40°.26N**±0°.04×**143°.56E**±0°.04**, h13^{km}**±3^{km}**, h13^{km}:pP-P, n347,** σ1^{s}.**67**/303**, mb4.6**/103**, MS4.3**/71**, 18C-4D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	1.34	257	P	**Pg**	**06 26 01.0**	**-1.7**
JTH				*e*S	**Sb**	**06 26 18.9**	**-0.3**
JTH	**Tanohata**	1.34	257	A	A	06 26 01.0	
	comp=E,13nm,3.1s,comp=E,9.0nm,1.8s						
JKEN	**Kujiedanarisaw**	1.42	268	P	**Pn**	**06 26 02.1**	**-0.5**
JKEN				S	**Sb**	**06 26 20.1**	**-1.2**
JKEN	**Kujiedanarisaw**	1.42	268	A	A	06 26 02.1	
	comp=E,27nm,1.9s,comp=E,26nm,0.7s						
MIYJ	**Miyakonagasawa**	1.50	244	P	**Pn**	**06 26 03.8**	**+0.1**
MIYJ				*e*S	**Sb**	**06 26 21.7**	**-2.1**
JANG	**Nango**	1.57	275	P	**Pn**	**06 26 04.5**	**-0.1**
JANG	**Nango**	1.57	275	A	A	06 26 04.5	
	comp=E,8.0nm,0.7s,comp=E,8.0nm,3.8s						
JKZ	**Kuzumaki**	1.73	262	A	A	06 26 07.1	
	comp=E,8.0nm,1.1s,comp=E,10.0nm,0.9s						
ERM	**Erimo**	1.78	350	Pn	**Pn**	**06 26 07.5**	**+0.1**
ERM	**Erimo**	1.78	350	*ce*P	**Pb**	**06 26 08.0**	**-1.5**
ERM				pmax	pmax		
	comp=Z,156nm,1.0s						
JEM	**Erimo**	1.78	350	P	**Pn**	**06 26 07.8**	**+0.3**
JEM	**Erimo**	1.78	350	A	A	06 26 07.8	
	comp=Z,8.0nm,4.4s,comp=Z,8.0nm,3.7s						
JARK	**Aomorirokkasho**	1.83	295	A	A	06 26 08.4	
	comp=Z,11nm,2.6s,comp=Z,13nm,0.5s						
OFUJ	**Ofunato**	1.88	232	A	A	06 26 09.6	
	comp=Z,8.0nm,2.8s,comp=Z,12nm,2.0s						
JOM	**Ohasama**	1.92	247	P	**Pn**	**06 26 10.3**	**+1.0**
JOM	**Ohasama**	1.92	247	A	A	06 26 10.3	
	comp=Z,17nm,1.2s,comp=Z,14nm,3.1s						
JAHD	**Aomorihigashid**	1.97	301	A	A	06 26 10.4	
	comp=Z,24nm,1.0s,comp=Z,26nm,0.9s						
JTM	**Tenmabayashi**	1.97	286	Pn	**Pb**	**06 26 10.9**	**-1.8**
JTM	**Tenmabayashi**	1.97	286	P	**Pb**	**06 26 10.9**	**-1.8**
JTM				*e*S	**Sb**	**06 26 35.5**	**-1.8**
JTM	**Tenmabayashi**	1.97	286	A	A	06 26 10.9	
	comp=Z,9.0nm,1.5s,comp=Z,9.0nm,0.6s						
JSZI	**Iwateshizukuis**	2.07	256	A	A	06 26 12.6	
	comp=Z,41nm,3.6s,comp=Z,50nm,5.2s						
JNBK	**Urakawa-nobuka**	2.11	343	P	**Pb**	**06 26 13.2**	**-1.9**
JNBK				*e*S	**Sb**	**06 26 39.5**	**-1.7**
JNBK	**Urakawa-nobuka**	2.11	343	A	A	06 26 13.2	
	comp=Z,10.0nm,2.3s,comp=Z,8.0nm,2.8s						
JKMT	**Kesennumamotoy**	2.17	229	A	A	06 26 13.9	
	comp=Z,7.0nm,3.4s,comp=Z,8.0nm,8.4s						
JOT	**Ohata**	2.21	301	P	**Pn**	**06 26 14.1**	**+0.6**
JOT	**Ohata**	2.21	301	A	A	06 26 14.1	
	comp=Z,9.0nm,3.0s,comp=Z,8.0nm,2.8s						
JMK	**Ichinoseki**	2.23	235	P	**Pn**	**06 26 14.7**	**+1.0**
JMK				*e*S	**Sn**	**06 26 41.4**	**+0.3**
JMK	**Ichinoseki**	2.23	235	A	A	06 26 14.7	
	comp=Z,7.0nm,1.1s,comp=Z,9.0nm,3.1s						
JAH	**Hinai**	2.24	269	P	**Pb**	**06 26 15.1**	**-2.2**
JAH	**Hinai**	2.24	269	A	A	06 26 15.1	
	comp=Z,14nm,1.6s,comp=Z,15nm,2.2s						
JSHD	**Hidakashinhida**	2.30	339	A	A	06 26 15.5	
	comp=Z,17nm,1.6s,comp=Z,14nm,1.5s						
JCH	**Churui**	2.36	356	P	**Pn**	**06 26 15.9**	**+0.5**
JCH				S	**Sn**	**06 26 44.7**	**+0.5**
JCH	**Churui**	2.36	356	A	A	06 26 15.9	
	comp=Z,6.0nm,4.6s,comp=Z,4.0nm,2.0s						
JRG	**Rokugo**	2.42	250	A	A	06 26 17.2	
	comp=Z,15nm,0.9s,comp=Z,17nm,0.7s						
JHHS	**Hirosakihyakuz**	2.48	280	A	A	06 26 17.8	
	comp=Z,30nm,2.9s,comp=Z,22nm,1.9s						
JKB	**Kayabe**	2.51	311	A	A	06 26 18.3	
	comp=Z,7.0nm,5.0s,comp=Z,9.0nm,4.0s						
JSI2	**Shiura 2**	2.53	289	A	A	06 26 18.5	
	comp=Z,19nm,1.8s,comp=Z,16nm,0.7s						
JNTW	**Noshirotokiwa**	2.60	271	A	A	06 26 19.6	
	comp=Z,54nm,2.1s,comp=Z,50nm,2.3s						
JOFO	**Osakifurukawao**	2.64	232	A	A	06 26 20.6	
	comp=Z,38nm,2.3s,comp=Z,51nm,2.4s						
JOB	**Onbets**	2.65	4	A	A	06 26 21.0	
	comp=Z,7.0nm,2.7s,comp=Z,9.0nm,2.6s						
JIAM	**Iburiatsuma**	2.67	333	A	A	06 26 20.7	
	comp=Z,13nm,5.3s,comp=Z,17nm,5.0s						
JBT2	**Biratori 2**	2.67	341	A	A	06 26 20.9	
	comp=Z,6.0nm,2.4s,comp=Z,5.0nm,4.1s						
JYW	**Yuwa**	2.68	256	A	A	06 26 20.9	
	comp=Z,25nm,2.7s,comp=Z,34nm,2.4s						
JSR	**Shiriuchi**	2.70	299	A	A	06 26 21.0	
	comp=Z,8.0nm,2.7s,comp=Z,7.0nm,1.9s						
JIW	**Iwasaki**	2.73	278	A	A	06 26 21.5	
	comp=Z,9.0nm,2.0s,comp=Z,9.0nm,1.7s						
JYK	**Kaneyama**	2.81	243	P	**Pn**	**06 26 23.1**	**+1.4**
JYK	**Kaneyama**	2.81	243	A	A	06 26 23.1	
	comp=Z,8.0nm,2.1s,comp=Z,8.0nm,5.5s						
JAK	**Akkeshi**	2.86	17	A	A	06 26 24.2	
	comp=Z,6.0nm,2.3s,comp=Z,5.0nm,2.7s						
JOMM	**Oshimamatsumae**	2.98	296	A	A	06 26 24.9	
	comp=Z,4.0nm,4.4s,comp=Z,5.0nm,5.6s						
JEW	**Eniwo**	3.03	329	A	A	06 26 25.9	
	comp=Z,11nm,4.5s,comp=Z,14nm,2.1s						
JYM2	**Yakumo 2**	3.04	309	A	A	06 26 25.9	
	comp=Z,4.0nm,0.6s,comp=Z,5.0nm,2.4s						
JYYZ	**Yamagatayuza**	3.07	247	A	A	06 26 26.5	
	comp=Z,12nm,2.9s,comp=Z,21nm,4.1s						
JMM	**Marumori**	3.22	223		**Pn**	**06 26 27.6**	**+0.3**
JAB	**Ashibetsu**	3.39	343	A	A	06 26 31.3	
	comp=Z,7.0nm,4.5s,comp=Z,7.0nm,2.8s						
JYS	**Shirataka**	3.39	234	A	A	06 26 31.3	
	comp=Z,10.0nm,2.8s,comp=Z,14nm,3.4s						
JYA	**Atsumi**	3.41	242	A	A	06 26 31.5	
	comp=Z,13nm,3.4s,comp=Z,11nm,2.1s						
NMR	**Nemuro--Hokkai**	3.50	27	*e*P	**Pn**	**06 26 31.4**	**+0.3**
NMR				*e*S	**Sn**	**06 27 10.1**	**-2.4**
JYAR	**Yonezawaarcadi**	3.55	230	A	A	06 26 33.6	
	comp=Z,12nm,1.1s,comp=Z,10.0nm,1.2s						
JFK	**Kawauchi**	3.57	217	A	A	06 26 34.1	
	comp=Z,3.0nm,5.3s,comp=Z,2.0nm,5.1s						
JNSB	**Nemuroshibetsu**	3.67	17	A	A	06 26 35.7	
	comp=Z,4.0nm,4.8s,comp=Z,6.0nm,3.0s						
JHR	**Hokuryu**	3.74	339	A	A	06 26 36.1	
	comp=Z,7.0nm,2.1s,comp=Z,7.0nm,4.0s						
JKA	**Kamikawa-asahi**	3.92	350	Pn	**Pn**	**06 26 37.9**	**+1.0**
ASAJ	**Asahikawa**	3.92	350	Pn	**Pn**	**06 26 39.6**	**+2.7**
	comp=Z,5.7nm,0.3s,baz=214,slow=9.6,SNR=13						
ASAJ				Sn	**Sn**	**06 27 23.1**	**+0.3**
	comp=Z,19nm,0.3s,baz=202,slow=28,SNR=5.9						
ASAJ				LR	LR	06 28 39.4	
	comp=Z,1μm,20.0s,baz=130,slow=45						
	comp=Z,11nm,0.3s						
RUSJ	**Misakicho**	4.04	17	*e*P	**Pn**	**06 26 40.5**	**+2.0**
RUSJ				*e*S	**Sn**	**06 27 26.1**	**+0.4**
JNS	**Sasagawa**	4.11	235	A	A	06 26 41.4	
	comp=Z,2.0nm,7.7s,comp=Z,4.0nm,4.5s						
YUK	**Yuzh-Kuril'sk**	4.14	24	*e*P	**Pn**	**06 26 42.2**	**+2.3**
YUK				*e*S	**Sn**	**06 27 27.1**	**-1.1**
YUK				pmax	pmax		
	comp=Z,388nm,0.2s						
YUK				pmax	pmax		
	comp=E,221nm,0.4s						
YUK				pmax	pmax		
	comp=N,210nm,0.2s						
YUK				smax	smax		
	comp=N,1μm,0.4s						
YUK				smax	smax		
	comp=E,893nm,0.3s						
JFY	**Yanaizu**	4.15	228	A	A	06 26 42.1	
	comp=E,3.0nm,3.5s,comp=E,3.0nm,4.2s						
JSS	**Shosan**	4.33	344	A	A	06 26 44.5	

	comp=E,5.0nm,5.3s,comp=E,3.0nm,3.2s						
SHO	**Shikotan**	**4.35**	**33**	*e*P	**Pn**	**06 26 42.8**	**0.0**
SHO				*e*S	**Sn**	**06 27 29.3**	**-4.1**
SHO				pmax	pmax		
	comp=N,110nm,0.4s						
SHO				pmax	pmax		
	comp=E,127nm,0.4s						
SHO				pmax	pmax		
	comp=Z,131nm,0.4s						
SHO				smax	smax		
	comp=E,477nm,0.3s						
SHO				smax	smax		
	comp=N,694nm,0.5s						
JSB	**Shiboa**	**4.35**	**222**	A	A	06 26 45.1	
	comp=N,6.0nm,4.0s,comp=N,6.0nm,5.7s						
JIZZ	**Izumozaki**	**4.66**	**236**	A	A	06 26 49.3	
	comp=N,9.0nm,3.5s,comp=N,10.0nm,3.9s						
JSD	**Sado**	**4.68**	**243**	Pn	**Pn**	**06 26 48.6**	**+1.3**
MJAR	**Matsushiro Arr**	**5.61**	**230**	Pn	**Pn**	**06 27 02.4**	**+2.2**
	comp=N,1.0nm,0.3s,baz=39,slow=12,SNR=66						
MJAR				LR	LR	06 29 34.1	
	comp=N,1µm,18.2s,baz=175,slow=42						
	comp=N,32nm,0.7s						
MAJO	**Matsushiro**	**5.61**	**230**	Pn	**Pn**	**06 27 01.2**	**+1.1**
MAJO	**Matsushiro**	**5.61**	**230***c*	*i*P	**Pn**	**06 27 02.2**	**+2.1**
MJB9	**Matsu-Tunnel**	**5.61**	**230**		**Pn**	**06 27 01.7**	**+1.6**
KUR	**Kuril'sk**	**5.89**	**31**	*e*P	**Pn**	**06 27 04.0**	**0.0**
YSS	**Yuzh-Sakhalins**	**6.72**	**355**	Pn	**Pn**	**06 27 16.4**	**+1.1**
YSS	**Yuzh-Sakhalins**	**6.72**	**355**	*e*P	**Pn**	**06 27 17.3**	**+2.0**
YSS				*e*S	**Sn**	**06 28 33.5**	**+1.8**
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				MLR	MLR		
	comp=Z,2µm,16.0s						
YSS				MLR	MLR		
	comp=N,2µm,17.0s						
YSS				MLR	MLR		
	comp=E,800nm,15.0s						
JGF	**Kuroka**	**6.76**	**228**	Pn	**Pn**	**06 27 15.4**	**-0.6**
TEY	**Ternei**	**7.01**	**315**	*e*P	**Pn**	**06 27 18.5**	**-0.8**
INU	**Inuyama**	**7.13**	**229**	Pn	**Pn**	**06 27 19.5**	**-1.6**
JHJ2	**Mitsune**	**7.74**	**204**	Pn	**Pn**	**06 27 28.8**	**-0.6**
JHJ	**Hachijo jima 2**	**7.75**	**204**	Pn	**Pn**	**06 27 29.0**	**-0.5**
	comp=E,13nm,0.3s,baz=346,slow=19,SNR=9.5						
JHJ				Sn	**Sn**	**06 28 51.8**	**-5.3**
	comp=E,12nm,0.3s,baz=243,slow=23,SNR=1.5						
JHJ				LR	LR	06 30 33.9	
	comp=E,725nm,21.4s,baz=80,slow=38						
	comp=E,56nm,0.5s						
USA0B	**Ussuriysk Arra**	**9.44**	**298**	Pn	**Pn**	**06 27 55.0**	**+2.3**
USA0B	**Ussuriysk Arra**	**9.44**	**298**	*i* P	**Pn**	**06 27 54.2**	**+1.5**
USRK	**Ussuriysk Ar.**	**9.44**	**298**	Pn	**Pn**	**06 27 53.8**	**+1.1**
	comp=E,0.9nm,0.3s,baz=100,slow=11,SNR=43						
USRK				LR	LR	06 31 34.7	
	comp=E,2µm,18.8s,baz=107,slow=38						
	comp=E,25nm,0.7s						
USRK	**Ussuriysk Ar.**	**9.44**	**298**	Pn	**Pn**	**06 27 54.2**	**+1.5**
USRK	**Ussuriysk Ar.**	**9.44**	**298**	P	**Pn**	**06 27 54.2**	**+1.5**
JHS	**Saijyo**	**9.81**	**241**	Pn	**Pn**	**06 28 00.6**	**+2.9**
TYV	**Tymovskoe**	**10.62**	**357**	*e*P	Pn	06 28 23.1	+14
TYV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TYV				pmax	pmax		
	comp=Z,200nm,3.8s						
MDJ	**Mudanjiang**	**11.20**	**297**	P	**Pn**	**06 28 17.3**	**+0.5**
MDJ				pP		06 28 19.6	
MDJ				sP		06 28 21.1	
MDJ				S	**Sn**	**06 30 26.6**	**+4.7**
MDJ				PcS	**PcS**	**06 37 44.3**	**-1.6**
MDJ				ScS	**ScS**	**06 41 18.3**	**-1.4**
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,220nm,7.3s						
MDJ				LR	LR		
	comp=Z,3µm,14.8s						
MDJ	**Mudanjiang**	**11.20**	**297**	Pn	**Pn**	**06 28 16.8**	**0.0**
KLR	**Kul'dur**	**12.27**	**321**	Pn	**Pn**	**06 28 32.4**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=129,slow=12,SNR=7.0						
KLR				LR	LR	06 33 39.6	
	comp=Z,975nm,18.9s,baz=134,slow=39						
	comp=Z,3.4nm,1.0s						
KLR	**Kul'dur**	**12.27**	**321***ce*	P	**Pn**	**06 28 32.9**	**+1.5**
KLR				pmax	pmax		
	comp=Z,9.0nm,1.3s						
JNU	**Nakatsue**	**12.42**	**239**	Pn	**Pn**	**06 28 34.5**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=333,slow=3.2,SNR=4.3						
JNU				Sn	**Sn**	**06 30 52.1**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=90,slow=18,SNR=1.1						
JNU				LR	LR	06 33 37.9	
	comp=Z,1µm,19.0s,baz=48,slow=39						
	comp=Z,5.5nm,0.7s						
KSRS	**Korea Array**	**12.51**	**262**	Pn	**Pn**	**06 28 36.6**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=80,slow=13,SNR=2.0						
KSRS				LR	LR	06 33 05.5	
	comp=Z,2µm,18.4s,baz=70,slow=36						
	comp=Z,0.9nm,0.6s						
KS19	**Wonju Array Si**	**12.54**	**262**	Pn	**Pn**	**06 28 33.9**	**-1.2**
KSAR	**Wonju Array Be**	**12.54**	**262**	Pn	**Pn**	**06 28 34.1**	**-1.0**
KSAR	**Wonju Array Be**	**12.54**	**262**	P	**Pn**	**06 28 34.1**	**-1.0**
BNX	**BinXian**	**13.03**	**300**	⇑P	**Pn**	**06 28 43.8**	**+2.1**
BNX				pmax	pmax		
	comp=Z,13nm,0.9s						
BNX				pmax	pmax		
	comp=Z,150nm,5.6s						
OKH	**Okha**	**13.30**	**358***de*	P	**Pn**	**06 28 45.9**	**+0.5**
OKH				MLR	MLR		
	comp=N,1µm,15.0s						
OKH				MLR	MLR		
	comp=Z,700nm,15.0s						
OKH				MLR	MLR		
	comp=E,2µm,14.0s						
HEH	**HeiHe**	**15.11**	**317**	*e*P	**Pn**	**06 29 10.3**	**+0.3**
HEH				pmax	pmax		
	comp=E,5.0nm,1.4s						
HEH				pmax	pmax		
	comp=E,210nm,5.4s						
HEH				LR	LR		
	comp=E,690nm,17.4s						
HEH				LR	LR		
	comp=E,2µm,15.0s						
HEH				LR	LR		
	comp=E,2µm,14.8s						
PETK	**Petropavlovsk-**	**16.06**	**32**	Pn	**P**	**06 29 26.4**	**+0.7**
	comp=E,2.4nm,0.9s,baz=194,slow=12,SNR=2.8						
PETK				LR	LR	06 36 22.3	
	comp=E,321nm,19.2s,baz=218,slow=40						
ZEA	**Zeya**	**17.42**	**326**	*e*P	**Pn**	**06 29 38.1**	**-1.5**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA				MLR	MLR		
	comp=E,500nm,16.0s						
ZEA				MLR	MLR		
	comp=N,500nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,13.0s						
JMZ	**Minamidaito 2**	**17.70**	**219**	Pn	**Pn**	**06 29 41.3**	**-1.9**
HIA	**Hailar**	**19.10**	**306**	P	**P**	**06 29 58.9**	**-0.5**
HIA	**Hailar**	**19.10**	**306**	P	**P**	**06 29 58.9**	**-0.5**
HIA				pmax	pmax		
	comp=Z,11nm,0.7s						
MA2	**Magadan**	**19.86**	**11**	P	**Pn**	**06 30 10.5**	**+1.3**
	comp=Z,5.0nm,0.7s,baz=195,slow=11,SNR=5.0						
MA2				LR	LR	06 39 26.2	
	comp=Z,284nm,18.2s,baz=199,slow=42						
MA2	**Magadan**	**19.86**	**11**	P	**P**	**06 30 07.4**	**-0.2**
XLT	**XiLinHaoTe**	**20.68**	**289**	⇓*i*P	**P**	**06 30 15.6**	**-1.1**
XLT				pP	pwP	06 30 20.8	-1.5
XLT				sP	Pn	06 30 23.6	+4.5
XLT				S	Sn	06 34 09.8	-2.4
XLT				pmax	pmax		
	comp=Z,11nm,1.4s						
XLT				pmax	pmax		
	comp=Z,130nm,4.5s						
XLT				LR	LR		
	comp=Z,620nm,16.3s						
XLT				LR	LR		
	comp=Z,630nm,15.2s						
BJI	**Beijing**	**20.91**	**278**	P	**P**	**06 30 17.6**	**-1.5**
BJI				pP	Pn	06 30 21.4	-0.3
BJI				pmax	pmax		
	comp=Z,75nm,7.3s						
BJI				LR	LR		
	comp=Z,270nm,14.0s						
BJI				LR	LR		
	comp=Z,300nm,16.5s						
BJI				LR	LR		
	comp=Z,380nm,17.9s						
BJT	**Baijiatuau**	**20.92**	**278**	P	**P**	**06 30 17.7**	**-1.5**
BJT	**Baijiatuau**	**20.92**	**278**	P	**P**	**06 30 17.7**	**-1.5**
BJT				pmax	pmax		
	comp=Z,12nm,0.9s						
NJ2	**Nanjing**	**21.52**	**255**	*e*P	**P**	**06 30 26.0**	**+0.3**
NJ2				pP	**pwP**	**06 30 29.3**	**-1.7**
NJ2				sP	**sP**	**06 30 30.5**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,22nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,450nm,6.4s						
NJ2				LR	LR		
	comp=Z,640nm,16.2s						
NJ2				LR	LR		
	comp=Z,1µm,16.2s						
NJ2				LR	LR		
	comp=Z,1µm,19.1s						
HNS	**HongShan**	**22.62**	**272**	⇓P	**P**	**06 30 36.3**	**-1.2**
HNS				LR	LR		
	comp=Z,520nm,14.3s						
HNS				LR	LR		
	comp=Z,700nm,17.5s						
HNS				LR	LR		
	comp=Z,840nm,15.9s						
SEY	**Seymchan**	**23.31**	**10**	P	**P**	**06 30 44.8**	**+0.4**
	comp=Z,5.8nm,0.7s,baz=190,slow=7.6,SNR=20						
SEY				LR	LR	06 41 27.8	
	comp=Z,444nm,18.0s,baz=136,slow=40						
	comp=Z,5.8nm,0.7s						
SEY	**Seymchan**	**23.31**	**10***ce*	P	**P**	**06 30 44.4**	**0.0**
SEY				pmax	pmax		
	comp=Z,3.0nm,0.4s						
YAK	**Yakutsk**	**23.37**	**343**	P	**P**	**06 30 44.6**	**-0.4**
	comp=Z,19nm,0.6s,baz=169,slow=2.1,SNR=1.6						
YAK				LR	LR	06 41 05.3	
	comp=Z,476nm,18.8s,baz=152,slow=40						
	comp=Z,19nm,0.6s						
YAK	**Yakutsk**	**23.37**	**343***c*	*i*P	**P**	**06 30 46.4**	**+1.4**
YAK				*e**PP	pwP	06 30 56.3	+5.4
YAK				*e*		06 31 11.9	
YAK				*e*S	**S**	**06 34 53.2**	**-4.3**
YAK				*e**SS	Sn	06 35 08.9	-7.3
YAK				pmax	pmax		
	comp=Z,22nm,0.8s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,7.0nm,0.3s						
YAK				pmax	pmax		
	comp=N,11nm,1.0s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.6s						
YAK				smax	smax		
	comp=E,19nm,1.1s						
YAK				smax	smax		
	comp=N,43nm,1.5s						
YAK				MLR	MLR		
	comp=Z,537nm,16.0s						
YAK				MLR	MLR		
	comp=N,368nm,15.0s						
YAK				MLR	MLR		
	comp=E,223nm,18.0s						
CIT	**Chita**	**23.71**	**310**	*e*P	**P**	**06 30 47.4**	**-1.1**
CIT				*e*		06 30 58.4	
CIT				*e*		06 31 19.8	
CIT				pmax	pmax		
	comp=Z,77nm,2.1s						
HHC	**Hu-ho-hao-te**	**24.25**	**282**	*e*P	**P**	**06 30 53.4**	**-0.4**
HHC				pmax	pmax		
	comp=Z,19nm,0.7s						
HHC				pmax	pmax		
	comp=Z,200nm,6.9s						
HHC				LR	LR		
	comp=Z,530nm,15.2s						
HHC				LR	LR		
	comp=Z,1µm,17.8s						
HHC				LR	LR		
	comp=Z,2µm,16.5s						
LYN	**LuoYang**	**25.27**	**267**	*e*P	**P**	**06 31 03.8**	**+0.8**
LYN				S	**S**	**06 35 35.3**	**+6.9**
LYN				pmax	pmax		
	comp=Z,13nm,1.0s						
LYN				pmax	pmax		
	comp=Z,200nm,4.8s						
LYN				LR	LR		
	comp=Z,400nm,15.6s						
LYN				LR	LR		
	comp=Z,800nm,16.2s						
LYN				LR	LR		
	comp=Z,980nm,14.7s						
BTO	**Baotou**	**25.45**	**282**	⇑*i*P	**P**	**06 31 04.8**	**+0.1**
BTO				pP	**pwP**	**06 31 07.8**	**-2.6**
BTO				sP	**sP**	**06 31 11.3**	**+2.2**
BTO				PcP	**PcP**	**06 34 33.6**	**-2.8**
BTO				S	**S**	**06 35 31.8**	**+0.4**
BTO				pmax	pmax		
	comp=Z,26nm,0.6s						
BTO				pmax	pmax		
	comp=Z,430nm,5.1s						
BTO				LR	LR		
	comp=Z,2µm,13.5s						
BTO				LR	LR		
	comp=Z,3µm,18.6s						
BTO				LR	LR		
	comp=Z,4µm,18.5s						
BOD	**Bodaibo**	**25.84**	**323**	*e*P	**P**	**06 31 09.6**	**+1.7**
BOD				pmax	pmax		
	comp=Z,19nm,1.8s						
GUMO	**Guam**	**26.59**	**177**	LR	LR	06 40 23.3	
	comp=Z,133nm,21.7s,baz=0.5,slow=33						
ULN	**Ulaanbaatar**	**27.12**	**298**	P	**P**	**06 31 20.6**	**+0.9**
ULN	**Ulaanbaatar**	**27.12**	**298***ce*	P	**P**	**06 31 21.0**	**+1.3**
ULN				pmax	pmax		
	comp=Z,20nm,2.5s						
SONM	**Songino Array**	**27.56**	**298**	P	**P**	**06 31 24.7**	**+1.0**
	comp=Z,4.2nm,0.7s,baz=101,slow=8.6,SNR=19						
SONM				LR	LR	06 43 01.3	
	comp=Z,825nm,19.5s,baz=104,slow=38						
	comp=Z,4.2nm,0.7s						
SONM	**Songino Array**	**27.56**	**298**	P	**P**	**06 31 24.7**	**+1.0**
SONM				IAmb	IAmb	06 31 25.4	
	comp=Z,14nm,1.4s						
XAN	**Xi'an**	**28.18**	**268**	P	**P**	**06 31 28.4**	**-0.8**
XAN				pP	pwP	06 31 33.1	-1.9
XAN				sP	sP	06 31 38.1	+4.4
XAN				S	**S**	**06 36 13.5**	**-1.0**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,110nm,4.1s						
XAN				LR	LR		
	comp=Z,500nm,13.5s						
XAN				LR	LR		
	comp=Z,470nm,15.5s						
XAN				LR	LR		
	comp=Z,700nm,16.1s						
H11N2	**WAKE ISLAND Hy**	**28.60**	**129**	T	T	07 01 40.4	
	baz=318,slow=75,SNR=334						
H11N1	**WAKE ISLAND Hy**	**28.61**	**129**	T	T	07 01 40.4	
	baz=318,slow=75,SNR=290						
H11N3	**WAKE ISLAND Hy**	**28.62**	**129**	T	T	07 01 42.0	
	baz=318,slow=75,SNR=231						
ENH	**Enshi**	**29.40**	**261**	P	**P**	**06 31 39.0**	**-1.1**
ENH				IAmb	IAmb	06 31 42.9	
	comp=Z,13nm,0.7s						
H11S1	**WAKE ISLAND Hy**	**29.44**	**131**	T	T	07 02 45.8	
	baz=322,slow=76,SNR=80						
H11S3	**WAKE ISLAND Hy**	**29.44**	**131**	T	T	07 02 49.5	
	baz=322,slow=76,SNR=55						
H11S2	**WAKE ISLAND Hy**	**29.46**	**131**	T	T	07 02 45.5	
	baz=322,slow=76,SNR=64						
ZAK	**Zakamensk**	**29.74**	**303**	*e*P	**P**	**06 31 43.5**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GSTR	**Great Sitkin T**	**29.97**	**53**	P	**P**	**06 31 43.2**	**-1.7**
BILL	**Bilibino**	**30.46**	**17**	P	**P**	**06 31 48.9**	**-0.2**
BILL				IAmb	IAmb	06 32 06.6	
	comp=Z,7.6nm,0.8s						
BILL	**Bilibino**	**30.46**	**17**	⇑*e*P	**P**	**06 31 50.7**	**+1.6**
BILL				*e*		06 32 47.5	
BILL				*e*S	**S**	**06 36 52.5**	**+3.0**
BILL				*e*SS	**SS**	**06 38 53.9**	**-5.3**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,234nm,16.0s						
HKPS	**Hong Kong Po S**	**30.68**	**243**	P	**P**	**06 31 49.3**	**-2.1**
LZH	**Lanzhou**	**31.32**	**275**	⇑P	**P**	**06 31 59.0**	**+1.8**
LZH				pP	pwP	06 32 03.9	+0.9
LZH				sP	sP	06 32 07.8	+6.2
LZH				pmax	pmax		
	comp=Z,18nm,1.5s						
LZH				pmax	pmax		
	comp=Z,200nm,5.2s						
LZH				LR	LR		
	comp=Z,470nm,14.8s						
LZH				LR	LR		
	comp=Z,210nm,14.8s						
LZH				LR	LR		
	comp=Z,430nm,14.8s						
TIXI	**Tiksi**	**32.32**	**351**	P	**P**	**06 32 06.2**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=270,slow=24,SNR=5.3						
TIXI				LR	LR	06 46 27.4	
	comp=Z,154nm,19.1s,baz=272,slow=39						
	comp=Z,1.7nm,0.7s						
TIXI	**Tiksi**	**32.32**	**351**	P	**P**	**06 32 05.1**	**-0.3**
TIXI	**Tiksi**	**32.32**	**351***ce*	P	**P**	**06 32 05.4**	**0.0**
TIXI				pmax	pmax		
	comp=Z,7.0nm,2.5s						
GTA	**Gaotai**	**33.35**	**283**	⇑P	**P**	**06 32 16.0**	**+1.0**
GTA				pP	pwP	06 32 19.1	-1.6
GTA				sP	sP	06 32 22.6	+3.2
GTA				pmax	pmax		
	comp=Z,11nm,1.0s						
GTA				pmax	pmax		
	comp=Z,70nm,6.5s						
GTA				LR	LR		
	comp=Z,370nm,17.4s						
GTA				LR	LR		
	comp=Z,810nm,18.9s						
GTA				LR	LR		
	comp=Z,1µm,17.5s						
CD2	**Chengdu**	**33.45**	**266**	*e*P	**P**	**06 32 16.0**	**+0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
QIZ	**Qiongzhong**	**35.83**	**244**	P	**P**	**06 32 37.3**	**+0.9**
QIZ				S	**S**	**06 38 15.4**	**+1.7**
QIZ				LR	LR		
	comp=Z,560nm,13.2s						
QIZ				LR	LR		
	comp=Z,240nm,14.2s						
QIZ				LR	LR		
	comp=Z,430nm,13.3s						
PZH	**PanZhiHua**	**37.18**	**261**	P	**P**	**06 32 49.9**	**+1.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PZH				pmax	pmax		
	comp=Z,100nm,5.4s						
KMI	**Kunming**	**37.18**	**259**	⇓P	**P**	**06 32 49.6**	**+1.5**
KMI				pmax	pmax		
	comp=Z,17nm,0.8s						
KMI				LR	LR		
	comp=Z,840nm,15.4s						
KMI				LR	LR		
	comp=Z,650nm,16.2s						
KMI				LR	LR		
	comp=Z,1µm,16.3s						
GOMU	**GeErMu**	**38.13**	**280**	P	**P**	**06 32 57.8**	**+1.6**
GOMU				pP	pwP	06 33 01.0	-1.0
GOMU				sP	sP	06 33 05.0	+4.3
GOMU				S	**S**	**06 38 44.9**	**-4.3**
GOMU				pmax	pmax		
	comp=Z,25nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,110nm,4.5s						
GOMU				LR	LR		
	comp=Z,180nm,14.5s						
GOMU				LR	LR		
	comp=Z,170nm,14.3s						
GOMU				LR	LR		
	comp=Z,200nm,14.5s						
DGZ	**Jazzator, Alta**	**39.96**	**303***c*	*i*P	**P**	**06 33 13.1**	**+1.9**
DGZ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ	**Urumqi**	**40.98**	**294**	*e*P	**P**	**06 33 20.6**	**+1.0**
WMQ				pP	pwP	06 33 26.8	+0.9
WMQ				sP	sP	06 33 31.6	+7.5
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
WMQ				LR	LR		
	comp=Z,390nm,16.3s						
WMQ				LR	LR		
	comp=Z,330nm,17.1s						
WMQ				LR	LR		
	comp=Z,370nm,21.5s						
ZAA0	**Zalesovo Array**	**41.07**	**310**	P	**P**	**06 33 20.2**	**+0.2**
ZAA0				IAmb	IAmb	06 33 33.9	
	comp=Z,7.0nm,0.6s						
ZALV	**Zalesovo Beam**	**41.07**	**310**	P	**P**	**06 33 21.1**	**+1.0**
	comp=Z,3.2nm,0.6s,baz=88,slow=8.0,SNR=15						
ZALV				PcP	**PcP**	**06 35 20.5**	**+1.0**
	comp=Z,2.0nm,0.6s,baz=86,slow=3.7,SNR=2.4						
ZALV				LR	LR	06 51 20.7	
	comp=Z,403nm,18.9s,baz=78,slow=38						
	comp=Z,3.2nm,0.6s						
ZALV	**Zalesovo Beam**	**41.07**	**310**	P	**P**	**06 33 20.2**	**+0.2**
NRIK	**Noril'sk**	**41.09**	**333**	P	**P**	**06 33 20.5**	**+0.4**
	comp=Z,1.9nm,0.4s,baz=126,slow=14,SNR=1.7						
NRIK				LR	LR	06 50 56.6	
	comp=Z,351nm,20.1s,baz=100,slow=37						
	comp=Z,1.9nm,0.4s						
NRIK	**Noril'sk**	**41.09**	**333**	*i* P	**P**	**06 33 20.4**	**+0.4**
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CRAI	**Chiangrai**	**41.82**	**255**	P	**P**	**06 33 26.1**	**-0.6**
CRAI				IAmb	IAmb	06 34 02.2	
	comp=Z,8.4nm,0.9s						
K20K	**Telida**	**42.73**	**36**	P	**P**	**06 33 34.5**	**+1.0**
A21K	**Barrow**	**42.83**	**24**	P	**P**	**06 33 35.5**	**+1.3**
A21K				IAmb	IAmb	06 33 55.9	
	comp=Z,19nm,1.4s						
PHRA	**Phrae**	**43.01**	**253**	P	**P**	**06 33 36.2**	**-0.1**
IMAR	**Indian Mountai**	**43.03**	**32**	P	**P**	**06 33 37.7**	**+1.8**
H21K	**Melozitna Rive**	**43.39**	**33**	P	**P**	**06 33 39.0**	**+0.2**
PPLA	**Purkeypile**	**43.57**	**37**	P	**P**	**06 33 41.3**	**+0.8**
PPLA				IAmb	IAmb	06 34 06.0	
	comp=Z,11nm,1.2s						
CAST	**Castle Rocks**	**43.62**	**36**	P	**P**	**06 33 41.0**	**+0.2**
MK31	**Makanchi Array**	**43.91**	**300**	P	**P**	**06 33 44.1**	**+0.7**
MK31				IAmb	IAmb	06 34 00.3	
	comp=Z,7.6nm,0.8s						
MK31	**Makanchi Array**	**43.91**	**300**	*i* P	**P**	**06 33 44.3**	**+1.0**
MKAR	**Makanchi Array**	**43.91**	**300**	P	**P**	**06 33 44.1**	**+0.8**
	comp=Z,3.2nm,0.7s,baz=82,slow=9.4,SNR=35						
MKAR				LR	LR	06 53 07.5	
	comp=Z,550nm,18.1s,baz=75,slow=38						
	comp=Z,3.2nm,0.7s						
MKAR	**Makanchi Array**	**43.91**	**300**	P	**P**	**06 33 43.9**	**+0.6**
CMAR	**Chiang Mai Arr**	**43.98**	**254**	P	**P**	**06 33 45.6**	**+1.5**
	comp=Z,1.9nm,0.6s,baz=44,slow=6.4,SNR=8.6						
CMAR				LR	LR	06 53 08.9	
	comp=Z,164nm,18.5s,baz=60,slow=38						
	comp=Z,1.9nm,0.6s						
MAKZ	**Makanchi**	**44.11**	**300**	P	**P**	**06 33 45.7**	**+0.7**
MAKZ				IAmb	IAmb	06 34 02.1	
	comp=Z,11nm,0.8s						
MAKZ	**Makanchi**	**44.11**	**300**	P	**P**	**06 33 45.7**	**+0.7**
MAKZ				pmax	pmax		
	comp=Z,11nm,0.8s						
RC01	**Rabbit Creek A**	**44.79**	**39**	P	**P**	**06 33 48.8**	**-1.3**
RC01				IAmb	IAmb	06 34 17.2	
	comp=Z,15nm,1.5s						
KRVT	**Keravat (AS076**	**45.02**	**168**	LR	LR	06 48 25.9	
	comp=Z,70nm,21.9s,baz=167,slow=30						
KURK	**Kurchatov**	**45.34**	**306**	P	**P**	**06 33 54.4**	**-0.2**
KURK	**Kurchatov**	**45.34**	**306***ce*	P	**P**	**06 33 55.0**	**+0.4**
KURK				pmax	pmax		
	comp=Z,15nm,0.7s						
KURBB	**Kurchatov Arra**	**45.41**	**306**	P	**P**	**06 33 56.3**	**+1.1**
	comp=Z,19nm,0.8s,baz=78,slow=8.4,SNR=69						
	comp=Z,19nm,0.8s						
COLA	**College**	**45.46**	**34**	*i* P	**P**	**06 33 55.5**	**+0.1**
COLA				pmax	pmax		
	comp=Z,22nm,3.2s						
IL31		**45.88**	**34**	P	**P**	**06 33 59.0**	**+0.3**
ILAR	**Eielson Array**	**45.88**	**34**	P	**P**	**06 34 00.9**	**+2.3**
	comp=Z,1.1nm,0.7s,baz=267,slow=6.7,SNR=14						
ILAR				LR	LR	06 55 37.9	
	comp=Z,133nm,18.7s,baz=312,slow=39						
	comp=Z,1.1nm,0.7s						

ILAR	Eielson Array	45.88	34	P	P	06 33 59.0	+0.3
ILAR	Eielson Array	45.88	34	P	P	06 34 01.0	+2.3
BRDH	Bariadhala	46.95	264	LR	LR	06 54 23.2	
	comp=Z,109nm,20.3s,baz=168,slow=37						
SCRK	Sand Creek	47.20	35	P	P	06 34 09.0	-0.2
SCRK				IAmb	IAmb	06 34 37.0	
	comp=Z,6.1nm,1.1s						
GLB	Gilahina Butte	47.60	38	P	P	06 34 11.6	-0.7
JIRN	Jiri	48.45	273	*e*P	P	06 34 21.1	+1.4
RAMN	Ramite	48.50	272	*e*P	P	06 34 21.2	+1.2
	comp=Z,29nm,1.1s						
TARG	Taragay, Kyrgy	48.54	294	P	P	06 34 22.0	+1.7
TARG	Taragay, Kyrgy	48.54	294	P	P	06 34 22.0	+1.7
TARG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
GUN	Gumba	48.56	274	*e*P	P	06 34 21.6	+1.1
	comp=Z,34nm,1.0s						
PKIN	Phulchoki	49.10	274	*e*P	P	06 34 25.7	+1.1
	comp=Z,14nm,0.5s						
DMN	Daman	49.31	274	*e*P	P	06 34 27.5	+1.4
	comp=Z,51nm,1.1s						
I29M	Ogilvie Camp,	49.43	33	P	P	06 34 27.3	+1.1
I29M				IAmb	IAmb	06 34 54.5	
	comp=Z,4.3nm,0.9s						
GKN	Gorkha	49.47	275	*e*P	P	06 34 28.8	+1.6
	comp=Z,17nm,0.5s						
TKM2	Tokmak 2	49.63	297	P	P	06 34 29.9	+1.4
	SNR=23						
BVAR	Borovoye Array	49.70	311	P	P	06 34 29.8	+1.3
	comp=Z,6.0nm,0.7s,baz=81,slow=8.2,SNR=18						
BVAR				LR	LR	06 56 48.1	
	comp=Z,378nm,18.1s,baz=73,slow=38						
	comp=Z,6.0nm,0.7s						
BRVK	Borovoye	49.75	311	P	P	06 34 28.8	-0.1
BRVK				IAmb	IAmb	06 34 59.9	
	comp=Z,7.6nm,0.8s						
BRVK	Borovoye	49.75	311	*ce*P	P	06 34 29.3	+0.4
BRVK				pmax	pmax		
	comp=Z,20nm,2.5s						
DANN	Dangsing	49.96	276	*e*P	P	06 34 32.4	+1.2
	comp=Z,38nm,0.6s						
KAPI	Kappang	50.09	212	LR	LR	06 57 25.8	
	comp=Z,49nm,18.9s,baz=16,slow=38						
KBK	Karagaybulak	50.18	297	P	P	06 34 34.1	+1.7
	SNR=10						
USP	Ospenovka	50.26	297	P	P	06 34 33.9	+1.0
	SNR=6.1						
AAK	Ala-Archa	50.49	297	P	P	06 34 36.1	+1.2
	comp=Z,2.1nm,0.6s,baz=70,slow=19,SNR=2.2						
AAK				LR	LR	06 56 54.7	
	comp=Z,394nm,20.5s,baz=71,slow=37						
	comp=Z,2.1nm,0.6s						
AAK	Ala-Archa	50.49	297	*i* P	P	06 34 35.2	+0.3
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PYUN	Piuthan	50.67	276	*e*P	P	06 34 38.9	+2.4
	comp=Z,31nm,0.8s						
KSH	Kashi	50.68	292	P	P	06 34 41.3	+5.0
KSH				pP	pwP	06 34 46.8	+4.1
KSH				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KSH				LR	LR		
	comp=Z,730nm,15.8s						
KSH				LR	LR		
	comp=Z,720nm,14.8s						
KSH				LR	LR		
	comp=Z,980nm,15.8s						
HYT	Haines Junctio	50.72	38	P	P	06 34 38.5	+2.2
HYT				IAmb	IAmb	06 35 11.0	
	comp=Z,10nm,0.9s						
INK	Inuvik	50.75	28	P	P	06 34 38.5	+2.4
	comp=Z,1.8nm,0.7s,baz=295,slow=6.3,SNR=17						
	comp=Z,1.8nm,0.7s						
INK	Inuvik	50.75	28	P	P	06 34 38.3	+2.1
INK				IAmb	IAmb	06 34 48.2	
	comp=Z,3.1nm,0.6s						
EKS2	Erkin-Say	50.97	297	P	P	06 34 39.7	+1.2
	SNR=6.5						
AML	Almayashu	51.23	296	P	P	06 34 42.5	+1.8
	SNR=5.6						
HNR	Honiara	51.71	159	LR	LR	06 54 18.2	
	comp=Z,1µm,21.3s,baz=338,slow=33						
A36M	Sachs Harbour	52.64	23	P	P	06 34 49.5	-0.7
A36M				IAmb	IAmb	06 35 23.6	
	comp=Z,5.4nm,0.9s						
KK31	Karatay Array	53.01	299	P	P	06 34 53.7	+0.2
KK31				IAmb	IAmb	06 35 13.8	
	comp=Z,6.8nm,1.1s						
KK31	Karatay Array	53.01	299	P	P	06 34 53.7	+0.2
KK31				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KKAR	Karatay Array	53.01	299	P	P	06 34 54.0	+0.5
KKAR	Karatay Array	53.01	299	P	P	06 34 54.0	+0.5
C36M	Paulatuk	53.80	26	P	P	06 35 01.0	+2.2
C36M				IAmb	IAmb	06 35 11.3	
	comp=Z,4.6nm,0.8s						
GAR	Garm	54.88	294	P	P	06 35 07.5	+0.2
ARU	Arti	55.09	318	P	P	06 35 09.5	+1.1
	comp=Z,4.5nm,0.2s,baz=51,slow=3.5,SNR=5.6						
ARU				LR	LR	07 01 29.9	
	comp=Z,707nm,18.2s,baz=69,slow=39						
	comp=Z,4.5nm,0.2s						
ARU	Arti	55.09	318	P	P	06 35 09.2	+0.8
ARU				IAmb	IAmb	06 35 29.5	
	comp=Z,7.4nm,0.7s						
ARU	Arti	55.09	318	*c i*P	P	06 35 08.7	+0.3
ARU				S	S	06 42 51.6	+1.1
ARU				SS	SS	06 46 30.2	-3.6
ARU				pmax	pmax		
	comp=Z,27nm,1.8s						
ARU				MLR	MLR		
	comp=Z,821nm,16.0s						
CHGR	Chuyangaron	55.84	294	P	P	06 35 15.1	+0.9
CHGR	Chuyangaron	55.84	294	P	P	06 35 15.1	+0.9
CHGR				pmax	pmax		
	comp=Z,21nm,0.8s						
ABKAR	Akbulak array	57.18	309	P	P	06 35 23.8	+0.4
ABKAR				IAmb	IAmb	06 35 35.1	
	comp=Z,6.7nm,0.8s						
SPITS	Spitsbergen Ar	57.69	349	LR	LR	07 02 29.3	
	comp=Z,131nm,18.0s,baz=348,slow=38						
AKTO	Aktyubinsk	57.80	311	P	P	06 35 29.4	+1.6
	comp=Z,5.0nm,0.7s,baz=70,slow=9.9,SNR=12						
AKTO				LR	LR	07 01 45.8	
	comp=Z,340nm,18.0s,baz=96,slow=38						
	comp=Z,5.0nm,0.7s						
KBL	Kabul	57.86	290	P	P	06 35 28.7	-0.1
KBL	Kabul	57.86	290	P	P	06 35 28.7	-0.1
KBL				pmax	pmax		
	comp=Z,17nm,1.1s						
RES	Resolute Bay	59.06	15	LR	LR	07 04 41.4	
	comp=Z,164nm,18.1s,baz=358,slow=40						
RES	Resolute Bay	59.06	15	P	P	06 35 37.7	+1.5
RES				IAmb	IAmb	06 36 01.9	
	comp=Z,3.7nm,0.8s						
RES	Resolute Bay	59.06	15	P	P	06 35 37.7	+1.5
RES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YKA	Yellowknife Ar	60.18	32	P	P	06 35 45.9	+1.8
	comp=Z,0.5nm,0.9s,baz=301,slow=6.5,SNR=7.1						
	comp=Z,0.5nm,0.9s						
YKA	Yellowknife Ar	60.18	32	P	P	06 35 44.4	+0.3
YKA	Yellowknife Ar	60.18	32	*i* P	P	06 35 46.0	+1.9
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WB0	Warramunga Arr	60.32	190	P	P	06 35 44.9	-0.7
WB0				IAmb	IAmb	06 35 55.8	
	comp=Z,5.2nm,0.8s						
WRAB	Tennant Creek	60.49	190	*i* P	P	06 35 48.4	+1.7
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WB2	Warramunga Arr	60.50	190	P	P	06 35 46.5	-0.3
WB2				IAmb	IAmb	06 36 23.6	
	comp=Z,4.1nm,0.8s						
WRA	Warramunga Arr	60.50	190	P	P	06 35 47.1	+0.3
	comp=Z,2.1nm,0.7s,baz=8.4,slow=6.9,SNR=15						
	comp=Z,2.1nm,0.7s						
WRA	Warramunga Arr	60.50	190	P	P	06 35 47.1	+0.3
ARCES	ARCESS Array B	61.58	339	P	P	06 35 53.3	-0.2
	comp=Z,11nm,1.1s,baz=58,slow=8.6,SNR=3.0						
ARCES				LR	LR	07 07 46.3	
	comp=Z,244nm,18.1s,baz=55,slow=41						
	comp=Z,11nm,1.1s						
BELG	Belogornoye	62.60	317	LR	LR	07 05 53.0	
	comp=Z,561nm,18.2s,baz=103,slow=39						
BELG	Belogornoye	62.60	317	*i* P	P	06 36 01.1	+0.5
BELG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
DAG	Danmarks Havn	62.70	355	*i* P	P	06 36 02.1	+1.1
DAG				IAmb	IAmb	06 36 03.9	
	comp=Z,4.1nm,0.8s						
GEYT	Alibeck	63.76	299	P	P	06 36 07.9	-0.8
	comp=Z,2.1nm,0.5s,baz=69,slow=18,SNR=4.1						
GEYT				LR	LR	07 06 01.1	
	comp=Z,318nm,18.1s,baz=70,slow=38						
	comp=Z,2.1nm,0.5s						
ASAR	Alice Springs	64.23	190	P	P	06 36 12.2	+0.6
	comp=Z,0.8nm,0.8s,baz=9.3,slow=6.1,SNR=8.4						
	comp=Z,0.8nm,0.8s						
PALK	Pallekele	64.71	258	LR	LR	07 07 19.8	
	comp=Z,99nm,18.4s,baz=155,slow=39						
DBG	Daneborg	65.20	355	*i* P	P	06 36 18.5	+1.1
DBG				IAmb	IAmb	06 36 20.2	
	comp=Z,1.7nm,1.0s						
DZM	Mont Dzumac	65.57	157	*e*LR	LR	06 55 59.4	
	comp=Z,167nm,22.4s						
DZM	Mont Dzumac	65.57	157	LR	LR	07 07 42.9	
	comp=Z,79nm,18.0s,baz=30,slow=38						
MSVF	Nonsavu	66.03	144	LR	LR	07 01 39.4	
	comp=Z,68nm,19.9s,baz=140,slow=33						
NEW	Newport	66.66	46	LR	LR	07 07 46.3	
	comp=Z,117nm,18.6s,baz=39,slow=38						
FIA1	FINESS Array S	66.74	332	P	P	06 36 27.5	0.0
FINES	FINESS Array B	66.75	332	P	P	06 36 28.7	+1.2
	comp=Z,4.0nm,0.7s,baz=39,slow=7.6,SNR=11						
FINES				LR	LR	07 08 52.7	
	comp=Z,320nm,19.1s,baz=31,slow=39						
	comp=Z,4.0nm,0.7s						
FINES	FINESS Array B	66.75	332	P	P	06 36 27.3	-0.2
KHMM	Horse Mountain	66.91	55	P	P	06 36 29.9	+0.7
KHMM				IAmb	IAmb	06 36 59.3	
	comp=Z,10nm,1.4s						
YBH	Yreka Blue Hor	67.07	54	LR	LR	07 04 32.3	
	comp=Z,54nm,19.0s,baz=19,slow=35						
JMIC	Jan Mayen	67.26	350	LR	LR	07 05 30.9	
	comp=Z,84nm,20.0s,baz=271,slow=36						
G08A	Pilot Rock	67.31	49	P	P	06 36 32.8	+1.2
SUMG	Summit	67.45	1	*i* P	P	06 36 33.0	+0.6
SUMG				IAmb	IAmb	06 36 36.1	
	comp=Z,4.4nm,0.6s						
AFI	Afiamalu	67.99	133	LR	LR	07 02 16.3	
	comp=Z,59nm,19.9s,baz=316,slow=32						
ZEI	Tsey	70.05	309	*e*P	P	06 36 48.9	0.0
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV	Kislovodsk	70.06	311	*e*P	P	06 36 50.3	+1.5
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
KIV				MLR	MLR		
	comp=Z,325nm,18.0s						
KBZ	Khabaz	70.08	311	P	P	06 36 49.2	+0.5
	comp=Z,5.9nm,0.8s,baz=59,slow=5.2,SNR=12						
	comp=Z,5.9nm,0.8s						
KBZ	Khabaz	70.08	311	*ce*P	P	06 36 49.0	+0.3
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SHA1	Shidzhatmaz	70.21	311	*i* P	P	06 36 51.1	+1.3
ONI	Oni	70.44	310	P	P	06 36 52.0	+1.0
ONI				IAmb	IAmb	06 37 17.7	
	comp=Z,7.2nm,1.1s						
ONI	Oni	70.44	310	P	P	06 36 52.0	+1.0
ONI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HRY	Holter Researc	70.47	45	P	P	06 36 51.5	+0.3
MNK	Minsk	70.76	326	*i* P	P	06 36 50.9	-1.8
	comp=E,2.0nm,1.2s						
MNK				*i* P	P	06 36 50.9	-1.8
	comp=N,27nm,1.0s						
MNK				*i* P	P	06 36 50.9	-1.8
	comp=Z,15nm,0.8s,baz=47						
MNK				*i* PP	PP	06 39 26.6	-2.3
MNK				*i* PPP	PPP	06 41 09.8	
MNK				*i* S	S	06 46 03.0	-3.8
MNK				*i* SS	SS	06 50 38.1	+0.2
MNK				*i* SSS	SSS	06 53 55.6	
MNK				*i* LQ	LQ	07 03 05.2	
MNK				*i* LR	LR	07 07 39.8	
MNK				*i* LRM	MLR	07 10 21.6	
	comp=N,2µm,22.6s						
MNK				*i* LRM	MLR	07 11 01.6	
	comp=E,46nm,18.1s						
MNK				*i* LRM	MLR	07 11 05.4	
	comp=Z,247nm,13.5s						
MNK	Minsk	70.76	326	*i* P	P	06 36 50.9	-1.8
MNK				*i*		06 39 26.6	
MNK				*i* PPP	PPP	06 41 09.8	
MNK				*i* S	S	06 46 03.0	-3.8
MNK				*i* SS	SS	06 50 38.1	+0.2
MNK				pmax	pmax		
	comp=E,2.0nm,1.2s						
MNK				pmax	pmax		
	comp=N,27nm,1.0s						
MNK				pmax	pmax		
	comp=Z,15nm,0.8s						
MNK				MLR	MLR		
	comp=N,2µm,23.0s						
MNK				MLR	MLR		
	comp=E,46nm,18.0s						
MNK				MLR	MLR		
	comp=Z,247nm,14.0s						
ICESG	Greenland Ices	70.94	1	*e*P	P	06 36 54.8	+0.8
ICESG				IAmb	IAmb	06 36 56.7	
	comp=Z,4.7nm,0.7s						
NACGM	Naroch	70.95	327	*e*P	P	06 36 55.0	+1.2
	comp=Z,14nm,0.7s,baz=46						
GNI	Garni	71.13	307	LR	LR	07 11 15.0	
	comp=Z,130nm,19.2s,baz=38,slow=38						
BOZ	Bozeman (W)	71.27	46	P	P	06 36 57.2	+1.0
BOZ	Bozeman (W)	71.27	46	P	P	06 36 57.2	+1.0
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NC405	NORSAR Array S	71.65	338	P	P	06 36 58.2	+0.2
WSAR	Wadi Sarin	71.66	285	LR	LR	07 12 30.5	
	comp=Z,75nm,19.5s,baz=50,slow=39						
PABE	Paberze	71.68	329	P	P	06 36 59.1	+0.9
MDPB	Devils Postpil	71.72	56	P	P	06 36 59.2	0.0
NVAR	Mina Array Bea	71.73	55	P	P	06 37 02.1	+2.9
	comp=Z,0.5nm,0.7s,baz=280,slow=7.2,SNR=5.3						
NVAR				LR	LR	07 11 51.2	
	comp=Z,56nm,18.5s,baz=358,slow=38						
	comp=Z,0.5nm,0.7s						
NB201	NORSAR Array S	71.82	338	P	P	06 36 59.3	+0.2
HFS	Hagfors	71.83	336	LR	LR	07 10 55.2	
	comp=Z,158nm,21.4s,baz=28,slow=38						
NB2	NORSAR Subarra	71.85	338	P	P	06 37 00.4	+1.2
	comp=Z,5.6nm,0.9s,baz=38,slow=6.2						
NOA	NORSAR Array B	71.85	338	P	P	06 37 00.5	+1.2
	comp=Z,1.8nm,0.7s,baz=38,slow=6.1,SNR=9.5						
NOA				LR	LR	07 14 24.2	
	comp=Z,142nm,18.2s,baz=30,slow=41						
	comp=Z,1.8nm,0.7s						
SOC	Sochi	71.99	312	*e*P	P	06 36 58.7	-1.6
SOC				*e*		06 39 38.5	
SOC				*e*S	S	06 46 18.2	-3.2
SOC				*e*SS	SS	06 50 51.4	-6.0
AKASG	Malin Array Be	72.77	323	P	P	06 37 06.0	+1.2
	comp=Z,4.1nm,0.7s,baz=42,slow=5.6,SNR=31						
AKASG				LR	LR	07 12 44.0	
	comp=Z,119nm,18.2s,baz=38,slow=39						
	comp=Z,4.1nm,0.7s						
AKASG	Malin Array Be	72.77	323	P	P	06 37 04.7	-0.2
AKASG	Malin Array Be	72.77	323	P	P	06 37 06.0	+1.2
AKBB	Malin Array Si	72.77	323	P	P	06 37 05.2	+0.4
AKBB				IAmb	IAmb	06 37 07.3	
	comp=Z,9.6nm,0.9s						
AKBB	Malin Array Si	72.77	323	*ce*P	P	06 37 05.9	+1.1
AKBB				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DY2G	Dye2	73.33	4	*i* P	P	06 37 09.3	+1.1
DY2G				IAmb	IAmb	06 37 12.2	
	comp=Z,6.5nm,0.6s						
PDAR	Pinedale Array	74.22	47	P	P	06 37 16.2	+2.3
	comp=Z,0.5nm,0.7s,baz=279,slow=1.7,SNR=7.3						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	74.22	47	P	P	06 37 12.0	-1.9
BORG	Borgarnes	74.66	353	LR	LR	07 11 21.4	
	comp=Z,123nm,18.2s,baz=292,slow=37						
PFO	Pinyon Flats O	75.88	58	LR	LR	07 02 43.9	
	comp=Z,66nm,21.6s,baz=9.0,slow=29						
BUR08	Bucovina Ar. S	76.80	322	P	P	06 37 29.9	+1.5
BUR08				IAmb	IAmb	06 37 31.9	
	comp=Z,5.4nm,0.9s						
BURAR	Bucovina Array	76.81	322	P	P	06 37 29.7	+1.3
BURAR				IAmb	IAmb	06 37 31.9	
	comp=Z,4.6nm,0.8s						
BRTR	Keskin Array B	77.96	312	P	P	06 37 36.1	+1.0
	comp=Z,0.9nm,0.7s,baz=38,slow=4.0,SNR=4.2						
BRTR				LR	LR	07 18 56.8	
	comp=Z,157nm,18.7s,baz=16,slow=41						
	comp=Z,0.9nm,0.7s						
MLR	Muntele Rosu	78.00	320	LR	LR	07 14 24.9	
	comp=Z,159nm,19.4s,baz=62,slow=38						
LANS	Liptovska Anna	78.24	326	*e*P	P	06 37 40.8	+4.5
LANS	Liptovska Anna	78.24	326	*e*P	P	06 37 40.8	+4.5
MORC	Moravsky Berou	78.56	328	P	P	06 37 37.3	-0.8
MORC				IAmb	IAmb	06 37 40.5	
	comp=Z,3.8nm,0.8s						
MORC	Moravsky Berou	78.56	328	P	P	06 37 37.3	-0.8
MORC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DPC	Dobruska-Polom	78.60	329	*e*P	P	06 37 40.4	+2.1
DPC	Dobruska-Polom	78.60	329	*e*P	P	06 37 40.4	+2.1
VYHS	Vyhne	79.01	326	*e*P	P	06 37 43.0	+2.5
VYHS	Vyhne	79.01	326	*e*P	P	06 37 43.0	+2.5
CLL	Collm	79.12	331	*e*P	P	06 37 43.0	+2.0
	comp=Z,6.0nm,0.9s						
CLL				AMS	AMS	07 16 00.0	
	comp=Z,200nm,18.7s						
CLL				AMS	AMS	08 25 00.0	
	comp=Z,200nm,19.4s						
CLL	Collm	79.12	331	*e*P	P	06 37 43.0	+2.0
CLL				*e**PP	pwP	06 37 46.0	-1.4
CLL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VRAC	Vranov	79.31	328	LR	LR	07 15 24.5	
	comp=Z,156nm,19.6s,baz=12,slow=38						
GOPC	GO Pecny, Ondr	79.56	329	*e*P	P	06 37 45.7	+2.2
GOPC	GO Pecny, Ondr	79.56	329	*e*P	P	06 37 45.7	+2.2
MODS	Modra-Piesok	79.76	327	*e*P	P	06 37 48.5	+3.9
MODS	Modra-Piesok	79.76	327	*e*P	P	06 37 48.5	+3.9
KHC	Kasperske Hory	80.66	329	P	P	06 37 48.5	-1.0
KHC				IAmb	IAmb	06 37 55.5	
	comp=Z,4.9nm,0.9s						
KHC	Kasperske Hory	80.66	329	*e*P	P	06 37 51.3	+1.8
KHC	Kasperske Hory	80.66	329	*e*P	P	06 37 51.3	+1.8
CONA	Conrad Observa	80.70	327	*e*pP	P	06 37 52.0	+2.2
	comp=Z,3.1nm,0.8s						
RONA	Rosalia, Austr	80.70	327	*e*pP	P	06 37 52.1	+2.4
	comp=Z,4.0nm,0.6s						
RAR	Rarotonga	80.74	128	LR	LR	07 09 24.4	
	comp=Z,158nm,21.0s,baz=284,slow=32						
GEC2	GERESS Array S	80.84	329	P	P	06 37 50.2	-0.4
GERES	GERESS Array B	80.84	329	P	P	06 37 51.8	+1.2
	comp=Z,1.2nm,0.7s,baz=33,slow=5.1,SNR=8.0						
GERES				LR	LR	07 15 54.9	
	comp=Z,189nm,18.2s,baz=6.5,slow=37						
	comp=Z,1.2nm,0.7s						
ARSA	Arzberg	81.37	327	*e*pP	P	06 37 55.4	+2.1
	comp=Z,3.3nm,0.7s						
SCHQ	Schefferville	81.77	17	P	P	06 37 55.0	-0.2
	comp=Z,2.6nm,0.9s,baz=346,slow=8.3,SNR=1.9						
SCHQ				LR	LR	07 19 47.7	
	comp=Z,103nm,18.6s,baz=38,slow=40						
	comp=Z,2.6nm,0.9s						
SOKA	Soboth	82.03	327	*e*pP	P	06 37 58.4	+1.5
	comp=Z,5.2nm,0.7s						
OBKA	Obir	82.37	327	*e*pP	P	06 38 00.2	+1.5
	comp=Z,3.3nm,0.7s						
KBA	Koelnbreinsper	82.40	328	*e*pP	P	06 38 01.5	+2.6
	comp=Z,2.4nm,0.6s						
MYKA	Terra Mystica	82.64	328	*e*P	P	06 38 01.1	+1.1
	comp=Z,5.2nm,1.0s						
PRED	Cave del Predi	82.83	328	P	P	06 38 02.0	+1.0
PRED				IAmb	IAmb	06 38 03.5	
	comp=Z,4.2nm,0.8s						
WATA	Walderalm	82.89	329	*e*pP	P	06 38 02.9	+1.4
	comp=Z,3.5nm,0.4s						
MOTA	Moosalm	83.07	330	*e*pP	P	06 38 04.6	+2.2
	comp=Z,3.4nm,0.5s						
FETA	Feichten	83.48	330	*e*P	P	06 38 05.3	+0.7
	comp=Z,4.4nm,1.0s						
FUORN	Ofenpass-Fuorn	83.99	330	P	P	06 38 07.9	+0.6
DAVOX	Davos/Dischmat	84.01	330	LR	LR	07 19 40.8	
	comp=Z,209nm,19.8s,baz=52,slow=39						
PPT	Papeete	84.62	118	LR	LR	07 09 12.3	
	comp=Z,123nm,20.3s,baz=302,slow=31						
PPT2	Papeete2	84.64	118	*e*LR	LR	07 04 48.6	
	comp=Z,209nm,21.2s						
PPT2				*e*LR	LR	07 04 49.1	
	comp=Z,217nm,23.0s						
TAOE	Nuku Hiva Isla	85.36	106	*e*S	S	06 48 45.0	-0.3
	comp=Z,41nm,24.6s						
TAOE	Nuku Hiva Isla	85.36	106	*e*LR	LR	07 05 08.7	
	comp=Z,212nm,20.8s						
TXAR	Lajitas Array	86.84	54	P	P	06 38 23.8	+2.2
	comp=Z,0.4nm,0.7s,baz=299,slow=2.9,SNR=6.0						
	comp=Z,0.4nm,0.7s						
TBI	Tubuai	88.77	122	*e*LR	LR	07 06 43.6	
	comp=Z,2µm,25.2s						
TBI				*e*LR	LR	07 06 44.0	
	comp=Z,402nm,24.8s						
TBI	Tubuai	88.77	122	*e*T	T	08 17 56.4	
	comp=Z,7.2nm,0.4s						
VAE	Valguarnera	89.68	322	LR	LR	07 24 54.0	
	comp=Z,91nm,20.2s,baz=4.5,slow=40						
ESDC	Sonseca Array	95.10	335	LR	LR	07 26 18.7	
	comp=Z,145nm,18.3s,baz=358,slow=38						

KRNET ***13*** *06:25:37.1±0.1, 40°.88N×71°.10E, h15^{km}, mb2.9*
ISU ***13*** *06:25:38.5, 40°.86N×71°.21E, h13^{km}*
SOME ***13*** *06:25:40.1, 41°.12N×71°.27E, h0^{km}*
NNC ***13*** *06:25:42.2±4.7, 41°.12N×71°.35E, h0^{km}, mb3.5, mpv3.1,*
Error ellipse: s-maj=40.6km s-min=14.0km az=6.0
ISC 13 06:25:38.1±0.8**, 40°.89N**±0°.02×**71°.11E**±0°.02**, h10^{km}, n36,**
σ**1^{s}.77**/57**, 19C-5D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSNS	Kasansay	0.41	49	P	Pg	06 25 45.3	-1.0
KSNS				S	Sg	06 25 51.3	-0.5
NAM	Namangan	0.43	76	P	Pg	06 25 46.3	-0.3
NAM				S	Sg	06 25 52.0	-0.2
TRKS	Terek-Say	0.64	2	⇑*i*P	Pg	06 25 48.4	-2.3
	baz=6.0						
TRKS				⇑*i*S	Sg	06 25 56.8	-2.4
	baz=6.0						
CHMI	Chimion	0.69	153	P	Pg	06 25 51.0	-0.5
CHMI				S	Sg	06 26 00.5	-0.1
FRG	Fergana	0.72	135	P	Pn	06 25 54.2	-0.3
BTK	Batken	0.86	195	⇑*i*P	Pg	06 25 53.4	-1.3
	baz=95						
BTK				⇑*i*S	Sg	06 26 05.3	-0.5
	baz=95						
ANR	Andizhan	0.96	97	P	Sn	06 26 14.8	+3.4
CHMG	Chimgan	1.06	309	P	Pg	06 25 57.7	-0.9
CHMG				S	Sn	06 26 13.9	-0.3
ARK	Arkit	1.11	35	⇑*i*P	Pg	06 25 58.5	-1.1
	baz=35						
ARK				⇑*i*S	Sb	06 26 14.2	0.0
	baz=35						
ARK	Arkit	1.11	35	P	Pg	06 25 58.5	-1.1
ARK				S	Sb	06 26 14.2	0.0
OHH	Osh	1.32	105	⇓*i*P	Pn	06 26 02.1	-0.7
	baz=5.0						
OHH				⇓*i*S	Sn	06 26 20.5	0.0
	baz=5.0						
TAS	Tashkent	1.44	288	⇓*i*P	Pn	06 26 03.9	-0.4
	baz=89						
TAS				⇓*i*S	Sg	06 26 23.5	-1.0
	baz=89						
KUMR	Kumaryk	1.44	285	P	Sn	06 26 28.5	+5.2
IUG	Iuzhnay	1.50	328	P	Pg	06 26 06.7	-0.2
	220nm,0.2s						
IUG				S	Sg	06 26 26.5	+0.1
	73nm,0.4s						
IUG	Iuzhnay	1.50	328	*e*P	Pg	06 26 06.7	-0.2
	220nm,0.1s						
IUG				*e*S	Sg	06 26 26.5	+0.1
	74nm,0.3s						
NZBK	Nazarbek	1.54	283	P	Sn	06 26 30.0	+4.1
MNAS	Manas	1.91	33	⇑*i*P	Pb	06 26 12.7	-0.5
	baz=33						
MNAS				⇑*i*S	Sg	06 26 38.7	-0.9
	baz=33						
GAR	Garm	1.98	198	⇑*i*P	Pb	06 26 13.7	-0.6
	baz=98						
GAR				⇑*i*S	Sg	06 26 40.3	-1.5
	baz=98						

DZA	**Taraz** 45nm,0.1s	2.01	5	*e*P	Pg	06 26 15.8	-0.9
DZA	184nm,0.2s			*e*S	Sg	06 26 41.7	-1.1
KK31	**Karatay Array** 5.6nm,0.5s,baz=151,slow=14,SNR=92	2.26	349	Pn	Pb	06 26 17.2	-1.8
KK31	12nm,0.3s,baz=148,slow=26,SNR=17			Sn	Sg	06 26 49.0	-1.8
KKAR	**Karatay Array** baz=49	2.26	349	⇑*i*P	Pb	06 26 17.6	-1.5
KKAR	baz=49			⇑*i*S	Sb	06 26 47.3	+0.2
AML	**Almayashu** 0.2nm,0.4s	2.31	56	⇑Pn	Pn	06 26 16.6	0.0
AML	2.6nm,0.5s			⇓Sn	Sn	06 26 46.2	+1.0
MRKS	**Merke** 13nm,0.3s	2.44	40	Pg	Pb	06 26 22.6	+0.4
MRKS	48nm,0.5s			Lg	Lg	06 26 53.6	
MRKS	**Merke** 5.2nm,0.1s	2.44	40	*e*Pg	Pb	06 26 22.6	+0.4
MRKS	48nm,0.5s			*e*Lg	Lg	06 26 53.5	
ARLS	**Aral** baz=67	2.61	67	⇑*i*P	Pb	06 26 22.6	-2.5
ARLS	baz=67			⇑*i*S	Sb	06 26 55.8	-1.4
EKS2	**Erkin-Say** baz=48	2.67	47	⇑*i*P	Pb	06 26 23.5	-2.6
EKS2	baz=48			⇑*i*S	Sb	06 26 57.4	-1.6
UCH	**Uchtor** baz=61	2.88	61	⇑*i*P	Pn	06 26 26.6	+2.0
UCH	baz=61			⇑*i*S	Sb	06 27 03.0	-2.5
SGDS	**Sogindy** 1.8nm,0.3s	3.66	44	Pg	Pb	06 26 43.7	+0.7
SGDS	8.1nm,0.4s			Lg	Lg	06 27 30.1	
DGS	**Degeres** 1.9nm,0.4s	4.19	54	Pg	Pb	06 26 54.6	+2.6
DGS	6.5nm,0.5s			Lg	Lg	06 27 47.9	
DGS	**Degeres** 2.1nm,0.3s	4.19	54	*e*Pg	Pb	06 26 54.4	+2.4
DGS	8.0nm,0.3s			*e*Lg	Lg	06 27 47.9	
KST	**Kastek** 1.0nm,0.2s	4.21	58	Pg	Pb	06 26 55.2	+2.8
KST	6.1nm,0.4s			Lg	Lg	06 27 48.9	
KST	**Kastek** 0.8nm,0.1s	4.21	58	*e*Pg	Pb	06 26 55.1	+2.7
KST	9.3nm,0.2s			*e*Lg	Lg	06 27 48.9	
BTLS	**Baital** 1.3nm,0.4s	4.68	26	Pg	Pb	06 27 03.3	+3.0
BTLS	8.3nm,0.5s			Lg	Lg	06 28 02.4	
BTLS	**Baital** 1.5nm,0.3s	4.68	26	*e*Pg	Pb	06 27 03.3	+3.0
BTLS	8.3nm,0.3s			*e*Lg	Lg	06 28 02.4	
KUU	**Kurty** 0.6nm,0.3s	4.90	50	Pg	Pb	06 27 05.6	+1.6
KUU	7.0nm,0.3s			Lg	Lg	06 28 06.8	
KUU	**Kurty** 0.7nm,0.1s	4.90	50	*e*Pg	Pb	06 27 05.6	+1.6
KUU	7.0nm,0.3s			*e*Lg	Lg	06 28 06.8	

ROM 13 06:29:04.6±0.1, 42°.972N±0°.004×13°.255E±0°.006, h5^{km}, ML1.2/5, 3D, Error ellipse: s-maj=0.5km s-min=0.2km az=241.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	0.08	219	P	Pg	06 29 06.3	-0.1
MMO1	**Montemonaco**	0.09	144	⇓P	Pg	06 29 06.9	+0.4
MMO1				S	Sg	06 29 08.7	+0.8
GUMA	**Gualdo di Mace**	0.11	33	P	Pg	06 29 06.9	0.0
FDMO	**Fiordimonte**	0.14	298	⇓P	Pg	06 29 08.1	+0.7
FDMO				S	Sg	06 29 10.3	+1.0
FDMO	comp=E,10µm,0.2s			AML	AML		
T1216	**Preci, Frazion**	0.19	245	P	Pg	06 29 08.7	+0.3
T1219	**Muccia, Frazio**	0.20	295	⇓P	Pg	06 29 09.0	+0.5
T1219				S	Sg	06 29 12.5	+1.3
T1219	comp=N,76µm,0.9s			AML	AML		
T1219	comp=N,21µm,0.2s			AML	AML		
T1214	**Arquata del Tr**	0.21	189	S	Sg	06 29 10.5	-1.1
T1212	**Cascia, Frazio**	0.27	215	P	Pb	06 29 11.0	-1.0
T1212				S	Sg	06 29 14.8	+1.4
T1212	comp=E,141µm,0.4s			AML	AML		
T1212	comp=E,142µm,0.4s			AML	AML		
T1212	comp=N,178µm,0.2s			AML	AML		
T1212	comp=E,111µm,0.1s			AML	AML		
T1212	comp=N,171µm,0.2s			AML	AML		
T1212	comp=N,178µm,0.2s			AML	AML		
T1218	**Civita (PG)**	0.32	199	P	Pg	06 29 11.6	+0.8
T1218				S	Sg	06 29 16.7	+1.7
T1218	comp=N,105µm,0.2s			AML	AML		
T1218	comp=N,116µm,0.2s			AML	AML		
T1218	comp=E,62µm,0.2s			AML	AML		
T1215	**Vallo di Nera,**	0.33	239	P	Pb	06 29 12.5	-0.6
T1215				S	Sb	06 29 17.7	-1.0
T1215	comp=E,16µm,0.2s			AML	AML		
T1217	**Poggiodomo (PG**	0.35	223	P	Pb	06 29 12.9	-0.6
T1217	comp=N,16µm,0.1s			AML	AML		
RM33	**Pellescritta (**	0.46	184	P	Pb	06 29 14.8	-0.5
RM33				S	Sb	06 29 22.2	-0.3
PP3	**Marolino**	0.48	32	P	Pg	06 29 13.4	-0.5
PP3	comp=E,790µm,1.6s			AML	AML		
PP3	comp=N,1655µm,1.6s			AML	AML		
PP3	comp=E,775µm,1.0s			AML	AML		
PP3	comp=N,1324µm,1.6s			AML	AML		
PP3	comp=E,794µm,1.6s			AML	AML		
PP3	comp=N,1655µm,1.6s			AML	AML		
PP3	comp=E,776µm,1.0s			AML	AML		
PP3	comp=N,1326µm,1.6s			AML	AML		

DJA 13 06:29:21.8±0.8, 0°S±3°×12°3E±°, h13^{km}±9^{km}, M3.6/6, MLv3.6/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	**Luwuk**	0.86	215	P	Pb	06 29 39.1	+0.5
LUWI				S	Sb	06 29 50.1	+0.1
MRSI	**Marisa**	1.54	301	P	Pn	06 29 47.8	-1.2
SANI	**Sanana**	3.22	122	P	Pn	06 30 12.1	0.0
MPSI	**Mapaga**	3.43	281	P	Pn	06 30 15.9	+0.9
SGSI	**Sangihe**	4.59	30	P	Pn	06 30 30.6	-0.4
SPSI	**Sidrap Palu**	5.02	224	P	Pn	06 30 37.6	+0.7

ROM 13 06:29:36.0±0.0, 42°.768N±0°.002×13°.063E±0°.003, h11^{km}, ML0.9/11, 2C-3D, Error ellipse: s-maj=0.2km s-min=0.2km az=271.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	0.02	220	⇓P	Pg	06 29 38.2	+0.3
T1212				S	Sg	06 29 39.4	+0.1
T1212	comp=E,420µm,0.6s			AML	AML		
T1212	comp=N,613µm,0.2s			AML	AML		
T1212	comp=E,405µm,0.2s			AML	AML		
T1212	comp=N,598µm,0.2s			AML	AML		
T1212	comp=E,420µm,0.6s			AML	AML		
T1212	comp=N,613µm,0.2s			AML	AML		
T1212	comp=N,599µm,0.2s			AML	AML		
T1212	comp=E,333µm,0.1s			AML	AML		
T1212	comp=E,348µm,0.1s			AML	AML		
T1218	**Civita (PG)**	0.10	158	⇓P	Pg	06 29 39.2	+0.4
T1218				S	Sg	06 29 41.4	+0.5
T1218	comp=E,248µm,1.0s			AML	AML		
T1218	comp=N,412µm,0.2s			AML	AML		
T1218	comp=E,222µm,0.3s			AML	AML		
T1218	comp=N,394µm,0.4s			AML	AML		
T1218	comp=N,413µm,0.2s			AML	AML		
T1218	comp=N,382µm,0.2s			AML	AML		
T1218	comp=E,214µm,0.3s			AML	AML		
T1218	comp=E,222µm,0.3s			AML	AML		
T1214	**Arquata del Tr**	0.11	94	⇓P	Pg	06 29 39.3	+0.4
T1214				S	Sg	06 29 41.4	+0.4
T1214	comp=N,218µm,0.1s			AML	AML		
T1214	comp=N,220µm,0.1s			AML	AML		
T1214	comp=E,266µm,0.5s			AML	AML		
T1214	comp=E,262µm,0.5s			AML	AML		
T1214	comp=E,253µm,0.2s			AML	AML		
T1214	comp=E,254µm,0.2s			AML	AML		
T1214	comp=N,220µm,0.1s			AML	AML		
T1214	comp=N,217µm,0.1s			AML	AML		
T1217	**Poggiodomo (PG**	0.11	240	P	Pg	06 29 39.4	+0.5
T1217				S	Sg	06 29 41.7	+0.8
T1217	comp=N,68µm,0.1s			AML	AML		
T1217	comp=N,64µm,0.1s			AML	AML		
T1217	comp=E,62µm,0.1s			AML	AML		
T1217	comp=E,56µm,0.1s			AML	AML		
T1216	**Preci, Frazion**	0.13	345	P	Pg	06 29 39.6	+0.5
T1216				S	Sg	06 29 42.0	+0.7
T1216	comp=N,99µm,0.1s			AML	AML		
T1216	comp=E,99µm,0.1s			AML	AML		
T1215	**Vallo di Nera,**	0.15	283	⇑P	Pg	06 29 39.9	+0.6
T1215				S	Sg	06 29 42.5	+0.8
T1215	comp=E,76µm,0.2s			AML	AML		
T1215	comp=N,55µm,0.1s			AML	AML		
T1215	comp=E,68µm,0.2s			AML	AML		
T1215	comp=N,50µm,0.1s			AML	AML		
MC2	**Monte Cornacci**	0.17	33	P	Pg	06 29 40.4	+0.5
MC2				S	Sg	06 29 43.6	+1.0
MMO1	**Montemonaco**	0.23	56	⇑P	Pg	06 29 41.3	+0.4
MMO1				S	Sg	06 29 45.2	+1.1
SMA1	**SAN MARTINO**	0.24	124	P	Pg	06 29 41.6	+0.6
SMA1				S	Sg	06 29 45.8	+1.4
SMA1	comp=E,73µm,1.2s			AML	AML		
SMA1	comp=N,51µm,0.6s			AML	AML		
SMA1	comp=E,42µm,0.3s			AML	AML		
SMA1	comp=N,41µm,0.8s			AML	AML		
FDMO	**Fiordimonte**	0.27	4	P	Pg	06 29 42.0	+0.5
FDMO				S	Sg	06 29 46.3	+1.1
FDMO	comp=E,33µm,1.4s			AML	AML		
FDMO	comp=N,42µm,1.2s			AML	AML		
FDMO	comp=N,39µm,0.1s			AML	AML		
FDMO	comp=E,30µm,0.3s			AML	AML		
T1211	**Morro Reatino**	0.28	213	P	Pg	06 29 42.2	+0.5
T1211				S	Sb	06 29 47.0	-0.9
T1211	comp=N,76µm,0.6s			AML	AML		
T1211	comp=E,52µm,0.1s			AML	AML		
T1211	comp=E,51µm,0.1s			AML	AML		
T1211	comp=N,44µm,0.1s			AML	AML		
RM33	**Pellescritta (**	0.28	157	P	Pg	06 29 42.2	+0.5
RM33				S	Sg	06 29 46.7	+1.1
RM33	comp=E,25µm,0.4s			AML	AML		
RM33	comp=N,19µm,0.2s			AML	AML		
T1241	**Roccafluvione,**	0.28	72	P	Pg	06 29 42.3	+0.5
T1241				S	Sb	06 29 47.0	-0.9
T1241	comp=N,193µm,1.0s			AML	AML		
T1241	comp=E,64µm,0.3s			AML	AML		
T1241	comp=N,58µm,0.3s			AML	AML		
T1219	**Muccia, Frazio**	0.29	352	P	Pg	06 29 42.4	+0.5
T1219				S	Sb	06 29 47.1	-1.1
T1219	comp=N,20µm,0.1s			AML	AML		
T1219	comp=E,25µm,0.2s			AML	AML		
CSP1	**Cessapalombo**	0.34	18	P	Pg	06 29 43.4	+0.6
CSP1				S	Sb	06 29 48.7	-0.9
CSP1	comp=N,25µm,0.2s			AML	AML		
CSP1	comp=E,15µm,0.2s			AML	AML		
MNTP	**Montappone**	0.47	39	P	Pn	06 29 47.7	-1.1

ROM 13 06:30:01.6±0.1, 42°.769N±0°.002×13°.061E±0°.001, h9^{km}, ML0.6/4, 1C-1D, Error ellipse: s-maj=0.2km s-min=0.1km az=336.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	0.02	214	P	Pg	06 30 03.6	+0.2
T1212				S	Sg	06 30 04.8	+0.3
T1212	comp=E,59µm,0.1s			AML	AML		
T1212	comp=E,137µm,0.5s			AML	AML		
T1212	comp=N,95µm,0.2s			AML	AML		
T1212	comp=N,101µm,0.2s			AML	AML		
T1218	**Civita (PG)**	0.11	158	⇑P	Pg	06 30 04.6	+0.3
T1218				S	Sg	06 30 06.8	+0.6
T1218	comp=N,84µm,0.7s			AML	AML		
T1218	comp=E,76µm,0.6s			AML	AML		
T1218	comp=N,44µm,0.2s			AML	AML		
T1218	comp=E,31µm,0.2s			AML	AML		
T1214	**Arquata del Tr**	0.11	95	⇓P	Pg	06 30 04.7	+0.3
T1214				S	Sg	06 30 06.7	+0.4
T1214	comp=N,44µm,0.1s			AML	AML		
T1214	comp=E,47µm,0.2s			AML	AML		
T1217	**Poggiodomo (PG**	0.11	239	P	Pg	06 30 04.8	+0.4
T1217				S	Sg	06 30 06.9	+0.7
T1215	**Vallo di Nera,**	0.14	283	P	Pg	06 30 05.4	+0.5
T1215				S	Sg	06 30 07.9	+0.8
T1215	comp=E,40µm,0.1s			AML	AML		
MC2	**Monte Cornacci**	0.17	34	P	Pg	06 30 05.8	+0.4
MC2				S	Sg	06 30 09.0	+1.0

IDC 13 06:36:12.9±2.9, 54°.17N×86°.40E, h0^{km}, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=22.0km s-min=12.7km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=76,slow=339,SNR=0.7	0.96	257	I	I	06 42 50.0	
ZALV	**Zalesovo Beam** 1.3nm,0.3s,baz=72,slow=16,SNR=10	0.96	257	Pg	Pg	06 36 30.1	-1.2
ZALV	2.1nm,0.3s,baz=78,slow=30,SNR=12			Lg	Lg	06 36 45.2	
KURBB	**Kurchatov Arra** baz=52,slow=13,SNR=4.3 0.4nm,0.3s	5.99	237	Pn	Pn	06 37 43.4	+0.7
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=22,slow=12,SNR=1.6	7.84	201	Pn	Pn	06 38 09.7	+1.6
MKAR	baz=24,slow=25,SNR=2.8 0.1nm,0.4s			Lg	Lg	06 40 20.8	

ROM 13 07:08:28.2±0.1, 42°.799N±0°.004×13°.077E±0°.005, h10^{km}, ML1.0/4, 1D, Error ellipse: s-maj=0.5km s-min=0.4km az=184.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	0.05	207	P	Pg	07 08 30.8	+0.3
T1212				S	Sg	07 08 32.0	0.0
T1212	comp=E,162µm,0.2s			AML	AML		
T1212	comp=E,161µm,0.2s			AML	AML		
T1212	comp=N,176µm,0.2s			AML	AML		
T1212	comp=E,178µm,0.3s			AML	AML		
T1212	comp=N,176µm,0.2s			AML	AML		
T1212	comp=N,176µm,0.2s			AML	AML		
T1212	comp=E,161µm,0.2s			AML	AML		
T1216	**Preci, Frazion**	0.10	335	P	Pg	07 08 31.5	+0.6
T1216				S	Sg	07 08 33.5	+0.6
T1216	comp=N,150µm,0.7s			AML	AML		
T1216	comp=E,85µm,0.3s			AML	AML		
T1214	**Arquata del Tr**	0.10	112	P	Pg	07 08 31.6	+0.5
T1214				S	Sg	07 08 33.7	+0.5
T1214	comp=N,74µm,0.5s			AML	AML		
T1214	comp=N,65µm,0.5s			AML	AML		
T1218	**Civita (PG)**	0.13	168	P	Pg	07 08 31.9	+0.4
T1215	**Vallo di Nera,**	0.15	271	P	Pg	07 08 32.4	+0.6
MMO1	**Montemonaco**	0.21	61	P	Pg	07 08 33.0	+0.3
MMO1				S	Sg	07 08 37.1	+1.4
FDMO	**Fiordimonte**	0.24	2	P	Pg	07 08 33.9	+0.7
FDMO				S	Sg	07 08 37.8	+1.3
T1219	**Muccia, Frazio**	0.26	349	P	Pg	07 08 34.1	+0.5
T1219	comp=E,464µm,1.4s			AML	AML		
T1219	comp=E,462µm,1.4s			AML	AML		
T1219	comp=N,406µm,1.4s			AML	AML		
AQU	**L'Aquila**	0.51	152	S	Sg	07 08 41.6	-3.1
AQU	comp=N,97µm,0.9s			AML	AML		
IFIL	**Filicudi I Eol**	4.38	165	⇓P	Pn	07 09 27.2	-7.5

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*IDC **13** 07:11:15.4±5.8, 36°.20N×70°.77E, h83^{km}±46^{km}, mb3.2/2, mbtmp3.7/6, ML3.7/4, Error ellipse: s-maj=64.1km s-min=19.9km az=152.0*

*NNC **13** 07:11:23.7±2.0, 36°.76N×70°.84E, h140^{km}±34^{km}, mb2.8, mpv3.2, Error ellipse: s-maj=17.4km s-min=15.5km az=25.0*

ISC 13 07:11:15.5±0.9, 36°.22N±0°.08×70°.85E±0°.07, h100^{km}, n27, σ2^{s}.06/31, 5C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu** SNR=42	6.30	20	P	Pn	07 12 48.0	+1.8
AML	**Almayashu** 0.1nm,0.2s	6.30	20	⇑P	Pn	07 12 47.6	+1.4
AML	7.4nm,0.8s			⇓S	Sn	07 13 54.6	-2.3
UCH	**Uchtor** SNR=8.3	6.64	24	P	Pn	07 12 52.8	+2.0
EKS2	**Erkin-Say** SNR=15	6.82	19	P	Pn	07 12 55.6	+2.6
KK31	**Karatay Array** 1.4nm,0.3s,baz=184,slow=12,SNR=62	6.88	358	⇑P	Pn	07 12 55.2	+1.6
KK31	5.3nm,0.4s,baz=184,slow=22,SNR=21			⇑S	Sn	07 14 06.4	-4.0
AAK	**Ala-Archa** SNR=9.2	7.00	23	P	Pn	07 12 57.8	+2.4
AAK	**Ala-Archa** 4.5nm,0.3s,baz=188,slow=5.5,SNR=36	7.00	23	P	Pn	07 12 57.4	+2.0
AAK	3.0nm,0.4s,baz=334,slow=22,SNR=1.6 8.7nm,0.4s			S	Sn	07 14 12.5	-1.0
CHMS	**Chumysh** SNR=5.5	7.41	23	P	Pn	07 13 03.1	+2.2
USP	**Ospenovka** SNR=5.6	7.58	21	P	Pn	07 13 04.7	+1.5
TKM2	**Tokmak 2** SNR=6.4	7.63	27	P	Pn	07 13 06.0	+2.0
TKM2	**Tokmak 2** 1.5nm,0.4s	7.63	27	⇑P	Pn	07 13 05.8	+1.7
TKM2				⇑S	Sn	07 14 26.3	-2.6
GEYT	**Alibeck** 1.1nm,0.3s,baz=102,slow=17,SNR=4.9	10.31	283	P	Pn	07 13 40.1	-0.3
GEYT	1.4nm,0.4s,baz=204,slow=36,SNR=1.5 1.5nm,0.3s			S	Sn	07 15 32.7	-1.4
PYUN	**Piuthan** 6.5nm,0.2s	13.08	125	*e*P	Pn	07 14 15.7	-2.0
DANN	**Dangsing** 9.6nm,0.4s	13.44	122	*e*P	Pn	07 14 18.0	-4.5
MKAR	**Makanchi Array** baz=221,slow=10,SNR=1.8 0.1nm,0.4s	13.59	35	P	Pn	07 14 25.8	+1.9
GKN	**Gorkha** 13nm,0.3s	14.26	121	*e*P	Pn	07 14 29.3	-3.7
DMN	**Daman** 12nm,0.5s	14.83	121	*e*P	Pn	07 14 38.1	-2.3
PKIN	**Phulchoki** 4.9nm,0.2s	15.05	121	*e*P	Pn	07 14 40.8	-2.4
PKI	**Pulchoki** 6.7nm,0.3s	15.07	121	*e*P	Pn	07 14 40.9	-2.5
AB31	**Akbulak array** 1.8nm,0.6s,baz=147,slow=13,SNR=71	15.27	332	P	Pn	07 14 45.5	+0.1
JIRN	**Jiri** 12nm,0.3s	15.56	119	*e*P	Pn	07 14 48.8	-0.8
RAMN	**Ramite** 5.1nm,0.3s	16.28	120	*e*P	Pn	07 14 58.6	+0.1
TAPN	**Taplejung** 13nm,0.5s	16.83	117	*e*P	P	07 15 07.4	+1.6
AKTO	**Aktyubinsk** 0.3nm,0.3s,baz=150,slow=11,SNR=6.9 3.6nm,0.9s	16.96	331	P	P	07 15 07.2	+0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AKTO	Aktyubinsk	16.96	331	⇓P	P	07 15 06.9	+0.1
	4.1nm,1.1s						
ZALV	Zalesovo Beam	20.22	24	P	P	07 15 43.8	+1.5
	1.0nm,0.4s,baz=229,slow=9.7,SNR=5.9						
	1.0nm,0.4s						
TORD	Torodi Ar. Bea	65.59	269	P	P	07 21 50.3	+1.3
	0.4nm,0.8s,baz=38,slow=5.4,SNR=2.4						
	0.4nm,0.8s						

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*IDC **13** 07:15:49.5±0.5, 2°.06S×140°.41E, h0^{km}, mb4.5/21, mbtmp4.5/23, ML4.3/2, MS4.1/56, Error ellipse: s-maj=19.4km s-min=10.0km az=89.0*

*MOS **13** 07:15:52.0±1.1, 2°.06S×140°.46E, h28^{km}, mb5.1/27, Error ellipse: s-maj=11.9km s-min=5.9km az=103.5*

*GCMT **13** 07:15:53.8±0.2, 1°.90S±0°.01×140°.52E±0°.02, h15^{km}, MW5.0/105, Moment Tensor Solution. s50,c57; s105,c146; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.90±.13; $M_{\theta\theta}$3.10±.09; $M_{\phi\phi}$-0.19±.09; $M_{r\theta}$2.15±.29; $M_{\theta\phi}$0.22±.07; $M_{\phi r}$0.61±.31; Best double couple: $M_0$3.74900×10^{16} NP1:ϕ_s259.00000°, δ63.00000°, λ-97.00000°. NP2:ϕ_s94.00000°, δ27.00000°, λ-76.00000°. Principal axes: T 3.8300, Plg18.0000°, Azm354.0000°; N -0.1560, Plg6.0000°, Azm262.0000°; P -3.6680, Plg71.0000°, Azm153.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **13** 07:15:53.8±2.1, 2°.03S±0°.08×140°.67E±0°.07, h28^{km}±4^{km}, mb5.1/96 Error ellipse: s-maj=14.4km s-min=6.2km az=215.0*

*DJA **13** 07:15:55.3±0.5, 2°S±3°×14°1E±°, h31^{km}±3^{km}, M4.9/45, mb4.9/45, mB5.4/22, MLv5.0/4, Mw(mB)4.9/22, MwMwp5.6/1, Mwp5.8/1*

*BJI **13** 07:15:55.0±0.0, 2°.00S×140°.70E, h20^{km}, mb4.9/56, mB5.2/32, Ms4.5/18, Ms7 4.3/22*

ISC 13 07:15:54.5±0.5**, 2°.10S**±0°.04×**140°.57E**±0°.05**, h30^{km}**±3^{km}**, h30^{km}:pP-P, n360, σ1^s.73**/334**, mb5.0**/104**, MS4.2**/63**, 10C-14D, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	Genyem	0.63	220	P	Pn	07 16 08.7	+1.3
GENI				S	Sn	07 16 20.7	+4.2
SMPI	Sarmi	1.86	273	P	Pn	07 16 24.7	+0.3
SRPI	Serui, Papua	4.33	273	P	Pn	07 16 59.5	+1.1
FAKI	Fak Fak	8.35	264	Pn	Pn	07 17 54.7	+1.1
FAKI	Fak Fak	8.35	264	P	Pn	07 17 53.9	+0.3
	85nm,1.1s						
SIJI	Sorong	9.38	277	Pn	Pn	07 18 08.1	+0.3
	1.1nm,0.3s,baz=233,slow=23,SNR=3.0						
SIJI				LR	LR	07 22 09.3	
	comp=Z,1µm,18.8s,baz=100,slow=41						
PMG	Port Moresby	9.78	138	Pn	Pn	07 18 16.2	+3.1
	0.8nm,0.3s,baz=298,slow=9.4,SNR=3.1						
PMG				LR	LR	07 22 32.1	
	comp=Z,1µm,20.5s,baz=308,slow=41						
PMG	Port Moresby	9.78	138	Pn	Pn	07 18 11.1	-2.0
PMG	Port Moresby	9.78	138	P	Pn	07 18 11.1	-2.0
KRVT	Keravat (AS076	11.64	101	LR	LR	07 21 51.2	
	comp=Z,278nm,21.5s,baz=60,slow=31						
COEN	Coen	12.06	168	P	P	07 18 55.7	-1.2
LBMI	Labuha	13.15	276	P	Pn	07 19 00.4	+1.1
	78nm,1.3s,1µm						
NLAI	Namlea	13.50	265	P	P	07 19 15.8	+2.8
TNTI	Ternate	13.51	282	P	P	07 19 14.3	+1.2
MTN	Manton Dam	14.18	221	Pn	Pn	07 19 12.4	-1.0
MTN	Manton Dam	14.18	221	P	Pn	07 19 13.4	-0.1
SANI	Sanana	14.57	270	P	P	07 19 22.1	-2.8
SANI	Sanana	14.57	270	P	Pn	07 19 17.6	-1.2
	35nm,0.8s,739nm						
GUMO	Guam	16.16	15	LR	LR	07 25 18.5	
	comp=Z,564nm,19.6s,baz=214,slow=35						
MTSU	Mount Surprise	16.35	167	P	P	07 19 45.7	+1.0
DAV	Davao City (W)	17.52	301	LR	LR	07 27 05.1	
	comp=Z,423nm,18.9s,baz=140,slow=39						
KNRA	Kununurra	17.81	220	P	P	07 20 01.3	+0.5
KNRA	Kununurra	17.81	220	P	P	07 20 01.1	+0.2
LUWI	Luwuk	17.82	273		Pn	07 20 00.2	-0.2
LUWI				IAmb	IAmb	07 20 04.1	
	comp=Z,108nm,0.8s						
LUWI	Luwuk	17.82	273	P	P	07 20 02.8	+1.8
LUWI	Luwuk	17.82	273	P	Pn	07 20 00.3	-0.2
	comp=Z,138nm,0.8s,comp=Z,3µm						
SOEI	Soe	17.90	244	P	P	07 20 03.0	+1.1
SOEI	Soe	17.90	244	P	P	07 20 03.1	+1.1
SOEI	Soe	17.90	244	P	P	07 20 02.3	+0.3
	comp=Z,247nm,0.8s,comp=Z,3µm						
QIS	Mount Isa	18.37	183	P	Pn	07 20 07.3	+0.2
WB0	Warramunga Arr	18.57	199		P	07 20 09.4	+0.3
CTA	Charters Tower	18.72	163	P	Pn	07 20 12.3	+0.9
	comp=Z,0.3nm,0.3s,baz=335,slow=10,SNR=11						
CTA				LR	LR	07 28 34.0	
	comp=Z,728nm,18.2s,baz=348,slow=41						
	comp=Z,20nm,1.1s						
CTA	Charters Tower	18.72	163	P	Pn	07 20 15.3	+3.9
CTAO	Charters Tower	18.72	163		P	07 20 09.0	-1.8
CTAO	Charters Tower	18.72	163	P	Pn	07 20 15.3	+3.9
CTAO	Charters Tower	18.72	163	P	P	07 20 09.0	-1.8
CTAO				pmax	pmax		
	comp=Z,22nm,1.1s						
WRAB	Tennant Creek	18.73	199	P	P	07 20 09.3	-1.7
WRAB	Tennant Creek	18.73	199	P	P	07 20 11.4	+0.4
WRAB	Tennant Creek	18.73	199	*d i*P	Pn	07 20 11.9	+0.3
WRAB				pmax	pmax		
	comp=Z,48nm,1.1s						
WB2	Warramunga Arr	18.74	198	P	P	07 20 09.6	-1.5
WRA	Warramunga Arr	18.75	199	P	P	07 20 09.9	-1.2
	comp=Z,1.9nm,0.3s,baz=19,slow=12,SNR=130						
WRA				S	Sn	07 23 32.2	-8.6
	comp=Z,16nm,0.9s,baz=17,slow=21,SNR=5.3						
WRA				LR	LR	07 28 28.0	
	comp=Z,2µm,18.0s,baz=12,slow=40						
	comp=Z,25nm,0.8s						
WRA	Warramunga Arr	18.75	199	P	P	07 20 10.2	-0.9
WRA	Warramunga Arr	18.75	199	*i* P	P	07 20 09.8	-1.3
WRA				pmax	pmax		
	comp=Z,26nm,0.8s						
MRSI	Marisa	18.80	278	P	P	07 20 12.1	+0.3
	comp=Z,103nm,0.8s,comp=Z,1µm						
MMRI	Maumere	19.36	250	P	Pn	07 20 20.1	+0.9
	comp=Z,64nm,0.7s						
TOLI2	Tolitoli	20.04	279	P	P	07 20 24.8	-0.5
TOLI2				IAmb	IAmb	07 20 40.4	
	comp=Z,71nm,1.0s						
TOLI2	Tolitoli	20.04	279	P	Pn	07 20 26.5	-0.8
BSSI	Bau Bau, Buton	20.42	258	P	P	07 20 29.9	+0.4
	comp=Z,99nm,1.3s						
HNR	Honiara	20.60	111	LR	LR	07 28 38.5	
	comp=Z,5µm,19.4s,baz=304,slow=37						
BKSI	Bulukumba	20.65	261	P	P	07 20 32.5	+0.5
	comp=Z,42nm,1.0s,comp=Z,523nm						
MPSI	Mapaga	20.81	276	P	Pn	07 20 35.2	-1.0
	comp=Z,84nm,1.0s,comp=Z,880nm						
SPSI	Sidrap Palu	20.85	264	P	Pn	07 20 35.9	-0.8
	comp=Z,55nm,1.1s,comp=Z,950nm						
KAPI	Kappang	20.98	262	P	P	07 20 32.0	-3.5
	comp=Z,3.7nm,0.2s,baz=81,slow=14,SNR=1.8						
	comp=Z,3.7nm,0.2s						
KAPI	Kappang	20.98	262	P	P	07 20 32.0	-3.5
FITZ	Fitzroy Crossi	21.62	222	P	P	07 20 41.9	-0.4
AS01	Alice Springs	22.37	196	P	P	07 20 50.9	+0.5
AS31	Alice Springs	22.39	196	P	P	07 20 50.1	-0.5
ASAR	Alice Springs	22.39	196	P	P	07 20 49.1	-1.5
	comp=Z,12nm,0.7s,baz=30,slow=9.8,SNR=110						
ASAR				S	S	07 24 55.9	+0.9
	comp=Z,7.0nm,1.1s,baz=18,slow=23,SNR=5.8						
ASAR				LR	LR	07 30 33.2	
	comp=Z,2µm,18.0s,baz=18,slow=40						
	comp=Z,12nm,0.7s						
MYLDM	Lahad Datu	23.20	288	P	P	07 20 56.7	-2.5
MYLDM				IAmb	IAmb	07 21 23.7	
	comp=Z,86nm,1.1s						
RK1H	Rockhampton Ha	23.24	156	P	P	07 21 02.2	+2.8
QLP	Quilpie	24.59	172	P	P	07 21 14.2	+2.1
EIDS	Eidsvold	25.25	157	P	P	07 21 15.9	-2.3
EIDS				IAmb	IAmb	07 21 23.1	
	comp=Z,65nm,0.9s						
EIDS	Eidsvold	25.25	157	P	P	07 21 20.7	+2.6
RMQ	Roma	25.49	163	P	P	07 21 23.6	+3.3
INKA	Innaminka	25.49	180	P	P	07 21 22.2	+1.9
KKM	Kota Kinabalu	25.63	289	P	P	07 21 18.8	-3.1
KKM				IAmb	IAmb	07 21 32.8	
	comp=Z,57nm,1.0s						
WRKA	Warakurna	25.69	206	P	P	07 21 23.2	+1.0
BBKI	Banjar Baru	25.73	266	P	P	07 21 24.2	+1.5
	comp=Z,171nm,0.4s,comp=Z,24µm						
OOD	Oodnadatta	25.97	190	P	P	07 21 26.0	+1.4
MBWA	Marble Bar	27.77	225	P	P	07 21 39.6	-1.3
MBWA	Marble Bar	27.77	225	P	P	07 21 40.6	-0.3
PSA00	Pilbara Seismi	27.95	225	P	P	07 21 42.1	-0.5
AULRC	Lightning Ridg	28.08	166	P	P	07 21 45.0	+1.5
LCRK	Leigh Creek	28.28	184	P	P	07 21 46.7	+1.4
MULG	Mulgathing	28.70	192	P	P	07 21 50.6	+1.5
SBUM	Sibu	28.70	279	P	P	07 21 48.6	-0.7
KOUNC	Koumac, New Ca	29.52	130	P	P	07 21 54.9	-1.6
STKA	Stephens Creek	29.63	178	P	P	07 21 58.0	+0.7
	comp=Z,14nm,0.8s,baz=348,slow=9.3,SNR=28						
STKA				LR	LR	07 34 25.8	
	comp=Z,678nm,19.6s,baz=4.2,slow=38						
	comp=Z,14nm,0.8s						
STKA	Stephens Creek	29.63	178	P	P	07 21 58.4	+1.0
STKA	Stephens Creek	29.63	178	P	P	07 21 58.5	+1.2
CMSA	Cobar Meteorol	29.67	171	P	P	07 22 00.3	+2.6
ARMA	Armidale	30.05	161	P	P	07 21 59.0	-2.2
ARMA				IAmb	IAmb	07 22 04.8	
	comp=Z,61nm,1.9s						
ARMA	Armidale	30.05	161	P	P	07 22 03.5	+2.3
AUPHS	Peel High Scho	30.45	162	P	P	07 22 06.8	+2.2
KSM	Kuching	30.46	276	P	P	07 22 05.6	+0.6
KSM				IAmb	IAmb	07 22 15.5	
	comp=Z,41nm,0.9s						
KSM	Kuching	30.46	276	P	P	07 22 07.3	+2.3
BBOO	Buckleboo	30.84	187	P	P	07 22 06.7	-1.3
BBOO				IAmb	IAmb	07 22 11.6	
	comp=Z,27nm,1.0s						
BBOO	Buckleboo	30.84	187	P	P	07 22 08.7	+0.7
FORT	Forrest	30.88	201	P	P	07 22 08.1	-0.3
FORT				IAmb	IAmb	07 22 10.4	
	comp=Z,33nm,0.8s						
FORT	Forrest	30.88	201	P	P	07 22 09.7	+1.3
JOW	Kunigami	31.12	338	LR	LR	07 31 52.0	
	comp=Z,327nm,21.7s,baz=121,slow=31						
HTT	Hallett	31.20	183	P	P	07 22 12.4	+1.1
YOJ	Yonaguni jima	31.43	328	P	P	07 22 11.9	-1.5
YOJ	Yonaguni jima	31.43	328	P	P	07 22 11.9	-1.5
YOJ				pmax	pmax		
	comp=Z,427nm,1.7s						
KPJI	Karang Pucung	31.95	260	P	P	07 22 18.1	+0.1
	comp=Z,15nm,0.8s						
LIFNC	LIFOU	31.95	127	P	P	07 22 17.2	-0.8
NACB	Ninganchiao	31.98	326	P	P	07 22 18.2	+0.1
DZM	Mont Dzumac	32.04	130	*e*P	P	07 22 18.7	-0.2
	comp=Z,51nm,1.1s						
DZM				*e*LR	LR	07 30 46.8	
	comp=Z,469nm,23.5s						
DZM	Mont Dzumac	32.04	130	P	P	07 22 18.2	-0.6
	comp=Z,17nm,1.0s,baz=144,slow=20,SNR=5.3						
DZM				LR	LR	07 35 17.8	
	comp=Z,311nm,19.7s,baz=16,slow=36						
	comp=Z,17nm,1.0s						
DZM	Mont Dzumac	32.04	130	P	P	07 22 18.0	-0.9
DZM				IAmb	IAmb	07 22 21.1	
	comp=Z,18nm,1.0s						
DZM	Mont Dzumac	32.04	130	P	P	07 22 17.9	-0.9
YHNB	Yeheng	32.49	326	P	P	07 22 20.6	-2.1
YNG	Young	32.85	168	P	P	07 22 27.6	+1.9
H11S3	WAKE ISLAND Hy	32.86	50	T	T	07 58 05.0	
	baz=232,slow=75,SNR=54						
H11S2	WAKE ISLAND Hy	32.87	50	T	T	07 58 04.3	
	baz=232,slow=75,SNR=37						
H11S1	WAKE ISLAND Hy	32.88	50	T	T	07 58 02.7	
	baz=232,slow=75,SNR=38						
PINNC	Pines Island,	33.11	130	P	P	07 22 25.4	-2.7
BBJI	Bungbulang	33.22	260	P	P	07 22 27.6	-1.7
H11N1	WAKE ISLAND Hy	33.73	49	T	T	07 58 33.5	
	baz=233,slow=74						
H11N2	WAKE ISLAND Hy	33.75	49	T	T	07 58 37.1	
	baz=233,slow=74						
H11N3	WAKE ISLAND Hy	33.75	49	T	T	07 58 42.9	
	baz=233						
CAN	Canberra	33.97	168	P	P	07 22 38.4	+2.9
CAN	Canberra	33.97	168	P	P	07 22 36.2	+0.7
CAN				pP	pwP	07 22 46.0	-0.7
LHI	Lord Howe Isla	34.07	151	P	P	07 22 35.7	-0.6
KNMB	Chin-men Tao	34.08	322	P	P	07 22 33.2	-3.3
PPBI	Pangkal Pinang	34.41	269	P	P	07 22 40.7	+1.1
ARPS	Mount Arapiles	34.52	178	P	P	07 22 41.9	+1.8
JHJ	Hachijo jima 2	35.04	359	LR	LR	07 33 44.9	
	comp=Z,516nm,21.4s,baz=230,slow=31						
MORW	Morawa	35.56	219	P	P	07 22 48.6	-0.6
MORW	Morawa	35.56	219	P	P	07 22 50.2	+0.9
TOO	Toolangi	35.59	173	P	P	07 22 50.1	+0.7
TOO				IAmb	IAmb	07 22 53.2	
	comp=Z,21nm,1.1s						
TOO	Toolangi	35.59	173	P	P	07 22 51.7	+2.3
TOO	Toolangi	35.59	173	P	P	07 22 50.1	+0.7
TOO				pmax	pmax		
	comp=Z,21nm,1.1s						
DSRI	Dabo	36.02	272	P	P	07 22 54.3	+0.9
KASI	Kota Agung	36.15	264	P	P	07 22 53.2	-1.3
	comp=Z,23nm,0.6s,comp=Z,647nm						
JMN	Monobe	36.19	351	P	P	07 22 51.2	-3.4
JNU	Nakatsue	36.21	346	LR	LR	07 34 54.8	
	comp=Z,265nm,20.9s,baz=170,slow=32						
JNU	Nakatsue	36.21	346	P	P	07 22 52.0	-2.8
JNU				IAmb	IAmb	07 23 02.4	
	comp=Z,48nm,1.3s						
MDSI	Maura Dua	36.41	265	P	P	07 22 57.0	+0.3
	comp=Z,44nm,1.2s						
QIZ	Qiongzhong	36.79	306	P	P	07 23 01.6	+1.7
QIZ				S	S	07 28 45.5	+3.1
QIZ				LR	LR		
	comp=Z,170nm,10.5s						
QIZ				LR	LR		
	comp=Z,140nm,7.6s						
QIZ				LR	LR		
	comp=Z,170nm,12.0s						
QIZ	Qiongzhong	36.79	306	P	P	07 23 07.6	+7.7
QIZ	Qiongzhong	36.79	306	P	P	07 22 58.9	-1.1
QIZ				pP	pP	07 23 07.5	-0.3
QIZ				sP	pwP	07 23 12.2	+0.6
NWAO	Narrogin (SRO)	37.68	213	LR	LR	07 40 05.6	
	comp=Z,825nm,18.4s,baz=60,slow=39						
MASI	Maura Aman, Be	38.30	268	P	P	07 23 13.7	+0.8
	comp=Z,39nm,1.2s						
MJAR	Matsushiro Arr	38.51	357	P	P	07 23 12.0	-2.2
	comp=Z,2.7nm,0.9s,baz=171,slow=7.1,SNR=4.0						
	comp=Z,2.7nm,0.9s						
MJAR	Matsushiro Arr	38.51	357	P	P	07 23 12.0	-2.2
MAJO	Matsushiro	38.51	357	*de*P	P	07 23 13.6	-0.6
MAJO				pmax	pmax		
	comp=Z,11nm,1.0s						
BKNI	Bangkinang	39.60	273	P	P	07 23 22.8	-0.9
NJ2	Nanjing	39.73	331	*e*P	P	07 23 27.3	+2.9
NJ2				pP	pP	07 23 33.3	+1.1
NJ2				sP	pwP	07 23 38.9	+2.3
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,170nm,3.9s						
MSVF	Nonsavu	39.93	115	LR	LR	07 40 06.6	
	comp=Z,184nm,18.3s,baz=162,slow=36						
JSD	Sado	40.00	357	P	P	07 23 24.2	-2.4
JSD				IAmb	IAmb	07 23 34.2	
	comp=Z,58nm,1.1s						
IPM	Ipoh	40.05	279	P	P	07 23 26.8	-0.7
PDSI	Padang	40.11	271	P	P	07 23 26.9	-1.1
	comp=Z,31nm,1.2s						
KULM	Kulim	40.55	281	P	P	07 23 29.8	-1.8
KULM				IAmb	IAmb	07 23 41.0	
	comp=Z,43nm,1.2s						
WHN	Wuhan	40.97	324	P	P	07 23 37.0	+2.2
WHN				S	S	07 29 47.3	+2.2
KSAR	Wonju Array Be	41.07	345	P	P	07 23 33.7	-1.8
KSAR	Wonju Array Be	41.07	345	P	P	07 23 33.7	-1.8
KSRS	Korea Array	41.07	345	P	P	07 23 33.7	-1.7
	comp=Z,1.0nm,0.4s,baz=157,slow=6.8,SNR=6.6						
KSRS				LR	LR	07 37 45.3	
	comp=Z,228nm,21.8s,baz=155,slow=32						
	comp=Z,1.0nm,0.4s						
RPSI	Rantau Prapat	41.91	276	P	P	07 23 42.4	-0.3
RPSI				IAmb	IAmb	07 23 52.1	
	comp=Z,38nm,0.8s						
PSI	Prapat	41.92	277	P	P	07 23 42.3	-0.7
PSI	Prapat	41.92	277	P	P	07 23 42.4	-0.6
PSI				pmax	pmax		
	comp=Z,38nm,0.8s						
NONG	Nongkai	41.95	300	P	P	07 23 43.4	+0.4
GSI	Gunungsitoli	43.12	274	P	P	07 23 51.4	-1.2
GSI	Gunungsitoli	43.12	274	P	P	07 23 51.8	-0.8
GSI	Gunungsitoli	43.12	274	P	P	07 23 50.6	-2.0
	comp=Z,72nm,0.7s						
KCSI	Kotacane, Aceh	43.14	277	P	P	07 23 51.2	-1.6
	comp=Z,33nm,0.9s						
GYA	Guiyang	43.34	313	*e*P	P	07 24 03.9	+10
GYA				pmax	pmax		
	comp=Z,22nm,1.4s						
ENH	Enshi	43.77	320	P	P	07 24 05.4	+7.8
PHRA	Phrae	44.66	299	P	P	07 24 03.8	-1.1
LYN	LuoYang	45.01	327	⇑P	P	07 24 14.9	+7.5
LYN				pP	pwP	07 24 21.3	+1.8
LYN				S	S	07 30 47.8	+3.5
LYN				pmax	pmax		
	comp=Z,27nm,1.1s						
LYN				pmax	pmax		
	comp=Z,190nm,4.7s						
LYN				LR	LR		
	comp=Z,280nm,19.6s						
LYN				LR	LR		
	comp=Z,160nm,16.5s						
LYN				LR	LR		
	comp=Z,230nm,17.6s						
KMI	Kunming	45.56	309	⇑P	P	07 24 12.5	+0.2
KMI				pP	pP	07 24 21.8	+1.5
KMI				sP	pwP	07 24 26.3	+2.1
KMI				pmax	pmax		
	comp=Z,23nm,1.0s						
CMAR	Chiang Mai Arr	45.77	298	P	P	07 24 13.3	-0.4
	comp=Z,1.1nm,0.3s,baz=116,slow=5.7,SNR=10						
CMAR				LR	LR	07 44 55.7	
	comp=Z,39nm,19.0s,baz=95,slow=38						
	comp=Z,1.1nm,0.3s						
CMAR	Chiang Mai Arr	45.77	298	P	P	07 24 13.4	-0.3
CMAR	Chiang Mai Arr	45.77	298	*i* P	P	07 24 13.8	+0.1
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CHTO	Chiang Mai	45.90	299	P	P	07 24 13.5	-1.3
CHTO	Chiang Mai	45.90	299	P	P	07 24 13.5	-1.3
HNS	HongShan	46.05	331	⇓P	P	07 24 15.1	-0.5
HNS				S	S	07 30 57.5	-1.6
HNS				pmax	pmax		
	comp=Z,37nm,1.3s						
HNS				LR	LR		
	comp=Z,300nm,19.9s						
HNS				LR	LR		
	comp=Z,220nm,16.7s						
JKA	Kamikawa-asahi	46.05	2	P	P	07 24 14.0	-1.5
JKA				IAmb	IAmb	07 24 23.3	
	comp=Z,20nm,0.9s						
ASAJ	Asahikawa	46.05	2	P	P	07 24 13.7	-1.8
	comp=Z,2.7nm,0.4s,baz=216,slow=7.8,SNR=7.5						
ASAJ				LR	LR	07 42 58.1	
	comp=Z,184nm,21.1s,baz=182,slow=35						
	comp=Z,2.7nm,0.4s						
XAN	Xi'an	46.68	323	P	P	07 24 20.1	-0.6
XAN				pP	pP	07 24 27.4	-1.3
XAN				S	S	07 31 05.3	-3.2
XAN				sS	sS	07 31 21.1	-0.5
XAN				SS	SS	07 34 34.8	-0.3
XAN				pmax	pmax		
	comp=Z,15nm,1.3s						
XAN				pmax	pmax		
	comp=Z,93nm,4.2s						
XAN	Xi'an	46.68	323	P	P	07 24 18.7	-2.0
XAN				pP	pP	07 24 28.1	-0.6
XAN				sP	pwP	07 24 32.7	+0.1
USA0B	Ussuriysk Arra	46.73	352	P	P	07 24 20.4	-0.4
USA0B	Ussuriysk Arra	46.73	352	⇑*e*P	P	07 24 20.6	-0.3
USRK	Ussuriysk Ar.	46.73	352	P	P	07 24 20.0	-0.8
	comp=Z,6.7nm,1.1s,baz=170,slow=8.4,SNR=4.2						
USRK				LR	LR	07 40 48.2	
	comp=Z,316nm,20.0s,baz=162,slow=32						
	comp=Z,6.7nm,1.1s						
USRK	Ussuriysk Ar.	46.73	352	P	P	07 24 20.4	-0.4
PZH	PanZhiHua	47.04	310	P	P	07 24 26.6	+2.8
PZH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.6s						
BJT	Baijiatuau	47.50	335	P	P	07 24 25.7	-1.3
BJT	Baijiatuau	47.50	335	P	P	07 24 34.3	+7.3
BJT	Baijiatuau	47.50	335	P	P	07 24 25.7	-1.3
BJT				pmax	pmax		
	comp=Z,50nm,1.5s						
MDJ	Mudanjiang	47.54	349	P	P	07 24 31.0	+3.9
MDJ				pP	pwP	07 24 40.0	+0.7
MDJ				sP	sP	07 24 43.9	+5.6
MDJ				PcP	PcP	07 25 59.3	+2.4
MDJ				PP	PP	07 26 22.6	+3.7
MDJ				ScP	ScP	07 29 51.3	+2.2
MDJ				PcS	PcS	07 29 54.9	+2.8
MDJ				S	S	07 31 26.6	+6.4
MDJ				pmax	pmax		
	comp=Z,17nm,2.1s						
MDJ				pmax	pmax		
	comp=Z,160nm,3.6s						
MDJ				LR	LR		
	comp=Z,260nm,16.6s						
MDJ				LR	LR		
	comp=Z,68nm,6.7s						
MDJ				LR	LR		
	comp=Z,450nm,20.6s						
MDJ	Mudanjiang	47.54	349	P	P	07 24 24.8	-2.3
MDJ				IAmb	IAmb	07 24 35.2	
	comp=Z,13nm,0.9s						
MDJ	Mudanjiang	47.54	349	P	P	07 24 34.8	+7.7
CN2	Changchun	47.67	345	*e*P	P	07 24 25.5	-2.7
CN2				*e*sP	pP	07 24 34.5	-1.7
CN2				*e*S	S	07 31 20.3	-1.9
CN2				*e*sS	pS	07 31 29.4	-2.2
CN2	Changchun	47.67	345	*e*SS	SS	07 34 43.0	-7.9
CN2				LR	LR		
	comp=N,240nm,19.0s						
CN2				LR	LR		
	comp=E,210nm,19.0s						
CN2				LR	LR		
	comp=Z,270nm,20.0s						
RAO	Raoul Island	47.80	129	LR	LR	07 42 10.2	
	comp=Z,109nm,21.7s,baz=318,slow=33						
CD2	Chengdu	48.01	316	*e*P	P	07 24 32.0	+0.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
AFI	Afiamalu	48.52	107	LR	LR	07 43 13.0	
	comp=Z,92nm,19.0s,baz=272,slow=34						
TNCH	TengChong	48.86	306	*e*P	P	07 24 41.3	+3.3
TNCH				pmax	pmax		
	comp=Z,54nm,0.4s						
YSS	Yuzh-Sakhalins	48.89	2	*e*P	P	07 24 35.7	-1.8
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
YSS				MLR	MLR		
	comp=E,100nm,16.0s						
BNX	BinXian	49.05	348	⇓P	P	07 24 37.8	-1.0
BNX				pmax	pmax		
	comp=E,24nm,1.3s						
BNX				pmax	pmax		
	comp=E,170nm,5.7s						
URZ	Urewera	49.11	142	LR	LR	07 45 32.7	
	comp=E,206nm,19.8s,baz=33,slow=36						
RPZ	Rata Peaks	49.49	151	LR	LR	07 44 38.4	
	comp=E,209nm,19.4s,baz=310,slow=35						
HHC	Hu-ho-hao-te	50.26	331	*e*P	P	07 24 51.0	+2.7
HHC				pmax	pmax		
	comp=E,23nm,1.0s						
HHC				pmax	pmax		
	comp=E,250nm,5.1s						
HHC				LR	LR		
	comp=E,290nm,15.2s						
HHC				LR	LR		
	comp=E,490nm,15.2s						
HHC				LR	LR		
	comp=E,510nm,16.5s						
BTO	Baotou	50.83	330	*e*P	P	07 25 01.8	+9.2
BTO				pmax	pmax		
	comp=E,410nm,4.9s						
LZH	Lanzhou	51.14	322	⇓P	P	07 24 56.0	+0.9
LZH				pP	pP	07 25 04.1	+0.9
LZH				sP	pwP	07 25 11.5	+4.5
LZH				S	S	07 32 14.3	+2.8
LZH				sS	sS	07 32 24.6	-0.1

LZH				SS	**SS**	**07 35 47.8**	**+0.6**
LZH				pmax	pmax		
	comp=E,28nm,1.2s						
LZH				pmax	pmax		
	comp=E,200nm,5.8s						
LZH				LR	LR		
	comp=E,170nm,13.1s						
LZH				LR	LR		
	comp=E,140nm,12.0s						
LZH				LR	LR		
	comp=E,230nm,14.4s						
KLR	**Kul'dur**	**51.70**	**353**	P	**P**	**07 24 57.2**	**-1.5**
	comp=E,4.4nm,1.1s,baz=168,slow=6.9,SNR=7.2						
KLR				LR	LR	07 44 13.8	
	comp=E,166nm,19.7s,baz=169,slow=33						
	comp=E,4.4nm,1.1s						
KLR	**Kul'dur**	**51.70**	**353**	*c i*P	**P**	**07 24 57.4**	**-1.3**
KLR				pmax	pmax		
	comp=Z,16nm,1.4s						
GRNR	**Gornyy**	**52.79**	**357**	⇑*i*P	**P**	**07 25 06.5**	**-0.4**
GRNR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TYV	**Tymovskoe**	**52.79**	**2**	*e*P	**P**	**07 25 05.5**	**-1.3**
TYV				*e*S	**S**	**07 32 36.1**	**+2.8**
TYV				pmax	pmax		
	comp=Z,200nm,4.5s						
TYV				pmax	pmax		
	comp=Z,11nm,1.3s						
TYV				smax	smax		
	comp=N,700nm,9.6s						
TYV				smax	smax		
	comp=E,700nm,9.6s						
HEH	**HeiHe**	**53.37**	**350**	*e*P	**P**	**07 25 10.0**	**-1.1**
HEH				pmax	pmax		
	comp=Z,12nm,1.7s						
HEH				pmax	pmax		
	comp=Z,200nm,4.8s						
HEH				LR	LR		
	comp=N,340nm,18.7s						
HEH				LR	LR		
	comp=E,140nm,19.1s						
HEH				LR	LR		
	comp=Z,470nm,17.2s						
HIA	**Hailar**	**54.25**	**343**	P	**P**	**07 25 17.0**	**-0.6**
HIA				IAmb	IAmb	07 25 26.1	
	comp=Z,40nm,1.6s						
HIA	**Hailar**	**54.25**	**343**	P	P	07 25 26.3	+8.7
	comp=Z,18nm,1.2s						
HIA	**Hailar**	**54.25**	**343**	P	**P**	**07 25 17.0**	**-0.6**
HIA				pmax	pmax		
	comp=Z,40nm,1.6s						
GTA	**Gaotai**	**55.71**	**322**	*e*P	**P**	**07 25 29.3**	**+0.8**
GTA				pP	pP	07 25 37.3	+0.6
GTA				sP	pwP	07 25 41.8	+1.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,71nm,4.4s						
GTA				LR	LR		
	comp=Z,170nm,15.3s						
GTA				LR	LR		
	comp=Z,88nm,16.4s						
GTA				LR	LR		
	comp=Z,190nm,15.6s						
ZEA	**Zeya**	**56.74**	**351**	*e*P	P	07 25 42.8	+7.4
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PEA0B	**Petropavlovsk-**	**56.86**	**12**	P	**P**	**07 25 33.2**	**-3.1**
PEA0B	**Petropavlovsk-**	**56.86**	**12**	P	**P**	**07 25 33.2**	**-3.1**
PEA0B				pmax	pmax		
	comp=Z,48nm,1.4s						
PETK	**Petropavlovsk-**	**56.86**	**12**	LR	LR	07 46 47.0	
	comp=Z,136nm,21.4s,baz=201,slow=33						
PETK	**Petropavlovsk-**	**56.86**	**12**	P	**P**	**07 25 34.0**	**-2.3**
PETK	**Petropavlovsk-**	**56.86**	**12**	P	**P**	**07 25 34.0**	**-2.3**
PET	**Petropavlovsk**	**56.99**	**13**	P	**P**	**07 25 34.6**	**-2.5**
GOMU	**GeErMu**	**57.14**	**316**	P	P	07 25 48.3	+9.2
GOMU				pP	pwP	07 25 51.9	+0.7
GOMU				sP	sP	07 25 55.8	+5.4
GOMU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,160nm,6.0s						
ULN	**Ulaanbaatar**	**57.72**	**334**	⇑*e*P	**P**	**07 25 42.4**	**-0.3**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ULN	**Ulaanbaatar**	**57.72**	**334**	P	**P**	**07 25 41.3**	**-1.3**
ULN				pP	**pP**	**07 25 50.8**	**-0.1**
SONM	**Songino Array**	**57.99**	**333**	P	**P**	**07 25 43.9**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=148,slow=7.6,SNR=4.0						
SONM				LR	LR	07 48 54.3	
	comp=Z,177nm,21.9s,baz=144,slow=34						
SONM	**Songino Array**	**57.99**	**333**	P	**P**	**07 25 43.6**	**-0.9**
SONM				IAmb	IAmb	07 25 53.7	
	comp=Z,22nm,1.8s						
SONM	**Songino Array**	**57.99**	**333**	P	**P**	**07 25 43.6**	**-0.9**
SONM				pmax	pmax		
	comp=Z,22nm,1.8s						
PALK	**Pallekele**	**60.46**	**280**	P	**P**	**07 26 00.7**	**-1.4**
	comp=Z,2.9nm,0.7s,baz=123,slow=5.9,SNR=4.6						
PALK				LR	LR	07 55 57.7	
	comp=Z,48nm,18.0s,baz=174,slow=40						
	comp=Z,2.9nm,0.7s						
PALK	**Pallekele**	**60.46**	**280**	P	**P**	**07 26 00.7**	**-1.4**
PALK				IAmb	IAmb	07 26 12.0	
	comp=Z,12nm,1.0s						
ZAK	**Zakamensk**	**61.25**	**334**	*e*P	**P**	**07 26 06.2**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,17nm,1.4s						
SHEM	**Shemya Is, Ala**	**61.47**	**22**	LR	LR	07 47 53.3	
	comp=Z,162nm,21.5s,baz=212,slow=31						
MA2	**Magadan**	**62.02**	**6**	LR	LR	07 51 44.9	
	comp=Z,38nm,20.7s,baz=150,slow=35						
MA2	**Magadan**	**62.02**	**6**	P	**P**	**07 26 09.3**	**-2.5**
MA2				IAmb	IAmb	07 26 20.0	
	comp=Z,23nm,1.3s						
MA2	**Magadan**	**62.02**	**6**	⇓*e*P	**P**	**07 26 11.1**	**-0.7**
MOY	**Mondy**	**63.18**	**334**	*e*P	**P**	**07 26 19.3**	**-0.5**
MOY				pmax	pmax		
	comp=Z,42nm,1.5s						
DRV	**Dumont d’Urvil**	**64.44**	**180**	P	**P**	**07 26 28.6**	**+1.0**
DRV				pP	**pP**	**07 26 38.0**	**+2.0**
YAK	**Yakutsk**	**64.50**	**354**	LR	LR	07 52 10.9	
	comp=Z,73nm,21.4s,baz=236,slow=34						
YAK	**Yakutsk**	**64.50**	**354**	*e*P	P	07 26 36.1	+8.0
YAK				*e**PP	sP	07 26 39.9	+0.3
YAK				*e*S	S	07 35 21.7	+17
YAK				pmax	pmax		
	comp=Z,46nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,23nm,1.3s						
YAK				pmax	pmax		
	comp=Z,7.0nm,0.4s						
YAK				smax	smax		
	comp=N,129nm,13.6s						
SEY	**Seymchan**	**65.48**	**6**	P	**P**	**07 26 34.0**	**-0.5**
	comp=N,0.8nm,0.3s,baz=196,slow=18,SNR=2.4						
SEY				LR	LR	07 56 43.9	
	comp=N,74nm,18.4s,baz=180,slow=38						
	comp=N,0.8nm,0.3s						
WMQ	**Urumqi**	**65.71**	**321**	*e*P	**P**	**07 26 36.8**	**+0.3**
WMQ				pP	pP	07 26 45.4	+0.6
WMQ				PcP	**PcP**	**07 27 08.1**	**+0.4**
WMQ				pmax	pmax		
	comp=N,27nm,0.7s						
WMQ				LR	LR		
	comp=N,120nm,17.9s						
CASY	**Casey**	**67.46**	**193**	P	**P**	**07 26 48.4**	**+1.3**
DGZ	**Jazzator, Alta**	**68.81**	**326**	⇓*e*P	**P**	**07 26 56.7**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
PPT	**Papeete**	**70.17**	**108**	LR	LR	07 54 13.0	
	comp=Z,65nm,20.6s,baz=262,slow=33						
PPT2	**Papeete2**	**70.17**	**108**	*e*S	**S**	**07 36 15.3**	**+0.2**
	comp=Z,29nm,23.2s						
PPT2	**Papeete2**	**70.17**	**108**	*e*LR	LR	07 48 25.5	
	comp=Z,90nm,21.5s						
MK31	**Makanchi Array**	**70.46**	**322**	P	**P**	**07 27 05.5**	**-0.8**
MK31				IAmb	IAmb	07 27 15.7	
	comp=Z,13nm,1.1s						
MK31	**Makanchi Array**	**70.46**	**322**	*de*P	**P**	**07 27 06.9**	**+0.7**
MKAR	**Makanchi Array**	**70.46**	**322**	P	**P**	**07 27 04.9**	**-1.3**
	comp=Z,3.0nm,0.8s,baz=104,slow=7.7,SNR=25						
MKAR				LR	LR	08 00 35.8	
	comp=Z,78nm,18.1s,baz=64,slow=38						
	comp=Z,3.0nm,0.8s						
MKAR	**Makanchi Array**	**70.46**	**322**	P	**P**	**07 27 06.0**	**-0.3**
MAKZ	**Makanchi**	**70.66**	**322**	P	**P**	**07 27 07.0**	**-0.5**
MAKZ				IAmb	IAmb	07 27 16.8	
	comp=Z,18nm,0.9s						
MAKZ	**Makanchi**	**70.66**	**322**	P	**P**	**07 27 07.0**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,18nm,1.0s						
MAKZ	**Makanchi**	**70.66**	**322**	P	**P**	**07 27 06.7**	**-0.7**
MAKZ				pP	**pP**	**07 27 15.8**	**0.0**
MAKZ				sP	**pwP**	**07 27 19.9**	**+0.2**
TBI	**Tubuai**	**70.79**	**114**	*e*LR	LR	07 48 42.8	
	comp=Z,457nm,33.0s						
TARG	**Taragay, Kyrgy**	**71.45**	**315**	P	**P**	**07 27 10.7**	**-2.1**
TARG				IAmb	IAmb	07 27 33.2	
	comp=Z,19nm,1.1s						
TARG	**Taragay, Kyrgy**	**71.45**	**315**	P	**P**	**07 27 10.7**	**-2.1**
TARG				pmax	pmax		
	comp=Z,19nm,1.1s						
KSH	**Kashi**	**72.03**	**313**	P	**P**	**07 27 17.4**	**+1.4**
KSH				pP	sP	07 27 26.6	-0.9
KSH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BILL	**Bilibino**	**72.25**	**10**	⇓*e*P	**P**	**07 27 17.6**	**+1.1**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.9s						
ZAA0	**Zalesovo Array**	**72.36**	**329**	P	**P**	**07 27 16.0**	**-1.5**
ZALV	**Zalesovo Beam**	**72.36**	**329**	P	**P**	**07 27 16.0**	**-1.5**
	comp=Z,2.3nm,0.9s,baz=116,slow=3.4,SNR=4.8						
ZALV				LR	LR	07 59 44.7	
	comp=Z,120nm,19.3s,baz=104,slow=36						
	comp=Z,2.3nm,0.9s						
ZALV	**Zalesovo Beam**	**72.36**	**329**	*i* P	**P**	**07 27 16.6**	**-0.9**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NIL	**Nilore**	**72.46**	**306**	P	**P**	**07 27 17.1**	**-1.5**
NIL				IAmb	IAmb	07 27 28.4	
	comp=Z,21nm,0.7s						
NIL	**Nilore**	**72.46**	**306**	P	**P**	**07 27 17.1**	**-1.5**
NIL				pmax	pmax		
	comp=Z,21nm,0.7s						
TIXI	**Tiksi**	**74.02**	**356**	LR	LR	07 58 40.7	
	comp=Z,99nm,20.3s,baz=178,slow=35						
TIXI	**Tiksi**	**74.02**	**356**	P	**P**	**07 27 25.9**	**-1.1**
TIXI				IAmb	IAmb	07 27 37.0	
	comp=Z,20nm,1.6s						
TIXI	**Tiksi**	**74.02**	**356**	⇓*e*P	**P**	**07 27 26.4**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,14nm,1.7s						
AAK	**Ala-Archa**	**74.07**	**315**	LR	LR	08 00 04.7	
	comp=Z,60nm,20.9s,baz=119,slow=36						
AAK	**Ala-Archa**	**74.07**	**315**	P	**P**	**07 27 26.8**	**-1.3**
AAK				IAmb	IAmb	07 27 38.0	
	comp=Z,31nm,1.9s						
AAK	**Ala-Archa**	**74.07**	**315**	*de*P	**P**	**07 27 28.1**	**0.0**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.7s						
KURK	**Kurchatov**	**74.30**	**324**	P	**P**	**07 27 27.1**	**-1.9**
KURK				IAmb	IAmb	07 27 38.0	
	comp=Z,17nm,1.2s						
KURK	**Kurchatov**	**74.30**	**324**	⇓*e*P	**P**	**07 27 29.1**	**+0.1**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KBL	**Kabul**	**76.06**	**306**	P	**P**	**07 27 37.3**	**-2.5**
KBL				IAmb	IAmb	07 27 48.7	
	comp=Z,8.9nm,0.7s						
KBL	**Kabul**	**76.06**	**306**	P	**P**	**07 27 37.3**	**-2.5**
KBL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
GAR	**Garm**	**76.10**	**311**	P	**P**	**07 27 39.4**	**-0.5**
GAR				IAmb	IAmb	07 27 49.4	
	comp=Z,16nm,0.9s						
VNDA	**Vanda**	**76.22**	**175**	P	**P**	**07 27 40.2**	**+0.6**
	comp=Z,8.9nm,0.8s,baz=316,slow=5.0,SNR=9.3						
VNDA				LR	LR	08 00 37.9	
	comp=Z,144nm,18.9s,baz=336,slow=35						
	comp=Z,8.9nm,0.8s						
CHGR	**Chuyangaron**	**76.90**	**310**	P	**P**	**07 27 42.4**	**-1.9**
CHGR	**Chuyangaron**	**76.90**	**310**	P	**P**	**07 27 42.4**	**-1.9**
CHGR				pmax	pmax		
	comp=Z,27nm,0.8s						
TNA	**Tin City**	**76.96**	**20**	P	**P**	**07 27 42.8**	**-1.1**
KK31	**Karatay Array**	**77.01**	**315**	P	**P**	**07 27 44.0**	**-0.7**
KK31				IAmb	IAmb	07 27 54.3	
	comp=Z,16nm,1.2s						
KK31	**Karatay Array**	**77.01**	**315**	P	**P**	**07 27 44.0**	**-0.7**
KK31				pmax	pmax		
	comp=Z,16nm,1.3s						
KKAR	**Karatay Array**	**77.01**	**315**	P	**P**	**07 27 44.1**	**-0.6**
KKAR	**Karatay Array**	**77.01**	**315**	P	**P**	**07 27 44.1**	**-0.6**
ANM	**Nome**	**77.27**	**21**	P	**P**	**07 27 44.0**	**-1.7**
ANM	**Nome**	**77.27**	**21**	P	**P**	**07 27 44.0**	**-1.7**
ANM				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ANM	**Nome**	**77.27**	**21**	P	**P**	**07 27 48.7**	**+3.0**
	baz=236						
O16K	**Kokwok River B**	**77.73**	**27**	P	**P**	**07 27 52.2**	**+3.8**
	baz=244						
TAOE	**Nuku Hiva Isla**	**79.09**	**99**	*e*LR	LR	07 52 33.4	
	comp=Z,102nm,22.6s						
KDAK	**Kodiak Island**	**79.65**	**30**	LR	LR	07 58 14.3	
	comp=Z,206nm,21.0s,baz=272,slow=32						
NRIK	**Noril'sk**	**79.67**	**343**	P	**P**	**07 27 58.2**	**-0.7**
	comp=Z,4.2nm,0.9s,baz=126,slow=6.2,SNR=5.6						
NRIK				LR	LR	08 03 11.3	
	comp=Z,134nm,20.2s,baz=131,slow=36						
	comp=Z,4.2nm,0.9s						
NRIK	**Noril'sk**	**79.67**	**343**	P	**P**	**07 27 58.8**	**-0.1**
NRIK				IAmb	IAmb	07 28 07.6	
	comp=Z,21nm,1.1s						
NRIK	**Noril'sk**	**79.67**	**343**	*d i*P	**P**	**07 27 58.7**	**-0.1**
NRIK				pmax	pmax		
	comp=Z,11nm,1.3s						
N19K	**Bonanza Creek**	**79.88**	**27**	P	**P**	**07 28 04.0**	**+3.6**
	baz=247						
BRVK	**Borovoye**	**79.96**	**325**	P	**P**	**07 28 00.7**	**0.0**
BRVK				IAmb	IAmb	07 28 10.7	
	comp=Z,13nm,1.1s						
BRVK	**Borovoye**	**79.96**	**325**	⇑*e*P	**P**	**07 28 00.8**	**0.0**
BRVK				pmax	pmax		
	comp=Z,11nm,1.7s						
TTA	**Tatalina**	**80.09**	**25**	P	**P**	**07 28 01.6**	**+0.2**
	baz=245						
L19K	**White Mountain**	**80.27**	**25**	P	**P**	**07 28 01.9**	**-0.3**
L19K	**White Mountain**	**80.27**	**25**	P	**P**	**07 28 02.1**	**-0.1**
	baz=246						
M20K	**Styx River**	**80.90**	**26**	P	**P**	**07 28 06.2**	**+0.4**
K20K	**Telida**	**81.07**	**25**	P	**P**	**07 28 06.5**	**0.0**
K20K	**Telida**	**81.07**	**25**	P	**P**	**07 28 08.0**	**+1.5**
	baz=247						
SKT	**Skwentna**	**81.64**	**26**	P	**P**	**07 28 11.6**	**+2.0**
	baz=249						
CAST	**Castle Rocks**	**81.92**	**25**	P	**P**	**07 28 10.8**	**-0.3**
CAST	**Castle Rocks**	**81.92**	**25**	P	**P**	**07 28 10.9**	**-0.1**
	baz=249						
CHUM	**Lake Minchumin**	**81.99**	**24**	P	**P**	**07 28 11.5**	**+0.1**
	baz=248						
IMAR	**Indian Mountai**	**82.23**	**22**	P	**P**	**07 28 12.3**	**-0.3**
H21K	**Melozitna Rive**	**82.46**	**23**	P	**P**	**07 28 13.5**	**-0.3**
I21K	**Tanana**	**82.60**	**23**	P	**P**	**07 28 17.6**	**+3.1**
	baz=248						
KNK	**Knik Glacier**	**82.83**	**27**	P	**P**	**07 28 14.4**	**-1.4**
KNK				IAmb	IAmb	07 28 24.1	
	comp=Z,25nm,1.1s						
SML	**Sawmill**	**83.01**	**27**	P	**P**	**07 28 16.3**	**-0.5**
SML				IAmb	IAmb	07 28 24.9	
	comp=Z,21nm,1.0s						
SML	**Sawmill**	**83.01**	**27**	P	**P**	**07 28 16.9**	**+0.1**
	baz=252						
MLY	**Manley**	**83.04**	**23**	P	**P**	**07 28 16.9**	**0.0**
MLY				IAmb	IAmb	07 28 25.7	
	comp=Z,21nm,1.8s						
MAW	**Mawson**	**83.38**	**202**	LR	LR	08 04 01.4	
	comp=Z,176nm,18.1s,baz=68,slow=35						
WSAR	**Wadi Sarin**	**83.42**	**294**	LR	LR	08 10 42.1	
	comp=Z,16nm,18.1s,baz=132,slow=40						
I23K	**Minto, Yukon-K**	**83.63**	**24**	P	**P**	**07 28 20.0**	**+0.1**
I23K				IAmb	IAmb	07 28 54.7	
	comp=Z,26nm,1.8s						
MDM	**Murphy Dome**	**84.03**	**24**	P	**P**	**07 28 21.6**	**-0.4**
MDM				IAmb	IAmb	07 28 30.9	
	comp=Z,17nm,1.8s						
CCB	**Clear Creek Bu**	**84.10**	**24**	P	**P**	**07 28 22.9**	**+0.6**
CCB				IAmb	IAmb	07 28 29.4	
	comp=Z,8.1nm,0.9s						
COLA	**College**	**84.15**	**24**	⇓*e*P	**P**	**07 28 24.2**	**+1.7**
COLA				pmax	pmax		
	comp=Z,9.0nm,1.4s						
D23K	**Nanushuk River**	**84.45**	**20**	P	**P**	**07 28 27.0**	**+3.0**
	baz=249						
IL31		**84.52**	**24**	P	**P**	**07 28 22.0**	**-2.3**
ILAR	**Eielson Array**	**84.52**	**24**	P	**P**	**07 28 22.5**	**-1.9**
	comp=Z,1.8nm,0.8s,baz=257,slow=5.0,SNR=16						
ILAR				LR	LR	07 59 33.3	
	comp=Z,97nm,21.4s,baz=248,slow=31						
	comp=Z,1.8nm,0.8s						
ILAR	**Eielson Array**	**84.52**	**24**	P	**P**	**07 28 23.2**	**-1.2**
G24K	**Hadweenzic Riv**	**84.85**	**22**	P	**P**	**07 28 29.9**	**+3.9**
	baz=253						
GLB	**Gilahina Butte**	**84.99**	**28**	P	**P**	**07 28 26.0**	**-0.9**
GLB				IAmb	IAmb	07 28 35.3	
	comp=Z,9.9nm,1.0s						
GEYT	**Alibeck**	**85.33**	**308**	P	**P**	**07 28 27.8**	**-1.3**
	comp=Z,8.6nm,1.0s,baz=198,slow=3.0,SNR=12						
GEYT				LR	LR	08 09 26.0	
	comp=Z,112nm,19.5s,baz=48,slow=38						
	comp=Z,8.6nm,1.0s						
MCARA	**McCarthy VSAT**	**85.35**	**28**	P	**P**	**07 28 28.4**	**-0.2**
DOT	**Dot Lake**	**85.41**	**26**	P	**P**	**07 28 27.4**	**-1.5**
ABKAR	**Akbulak array**	**85.46**	**320**	P	**P**	**07 28 28.4**	**-1.0**
FYU	**Fort Yukon**	**85.67**	**23**	P	**P**	**07 28 28.5**	**-1.6**
FYU				IAmb	IAmb	07 28 45.7	
	comp=Z,19nm,1.3s						
UOSS	**Minazif**	**85.77**	**295**	P	**P**	**07 28 29.5**	**-2.0**
UOSS				IAmb	IAmb	07 28 40.5	
	comp=Z,9.0nm,0.8s						
BARN	**Barnard Glacie**	**85.92**	**28**	P	**P**	**07 28 28.9**	**-2.9**
BARN				IAmb	IAmb	07 29 17.4	
	comp=Z,28nm,1.6s						
D25K	**Kavik River**	**86.02**	**20**	P	**P**	**07 28 34.4**	**+2.5**
	baz=253						
CTG	**Chitna Glacier**	**86.06**	**29**	P	**P**	**07 28 35.7**	**+3.4**
	baz=259						
CTGM	**Chitina Glacie**	**86.06**	**29**	P	**P**	**07 28 30.4**	**-2.0**
CTGM				IAmb	IAmb	07 28 41.3	
	comp=Z,17nm,1.1s						
M27K	**Edge Creek, AK**	**86.09**	**27**	P	**P**	**07 28 31.2**	**-1.3**
M27K				IAmb	IAmb	07 28 41.3	
	comp=Z,13nm,0.9s						
M27K	**Edge Creek, AK**	**86.09**	**27**	P	**P**	**07 28 33.4**	**+0.9**
	baz=258						
BMAR	**Burnt Mountain**	**86.15**	**22**	P	**P**	**07 28 31.9**	**-0.6**
BCAR	**Beaver Creek A**	**86.28**	**26**	P	**P**	**07 28 31.7**	**-1.5**
K27K	**Chicken**	**86.35**	**25**	P	**P**	**07 28 32.6**	**-0.9**
K27K				IAmb	IAmb	07 28 43.0	
	comp=Z,9.3nm,1.1s						
F26K	**Sheenjek River**	**86.38**	**22**	P	**P**	**07 28 34.9**	**+1.3**
	baz=256						
C26K	**Camden Bay**	**86.68**	**19**	P	**P**	**07 28 36.5**	**+1.5**
	baz=255						
C27K	**Jago River**	**87.01**	**20**	P	**P**	**07 28 38.0**	**+1.3**
	baz=256						
ARU	**Arti**	**87.31**	**327**	LR	LR	08 09 01.9	
	comp=Z,92nm,20.0s,baz=165,slow=37						
ARU	**Arti**	**87.31**	**327**	P	**P**	**07 28 42.5**	**+4.1**
E27K	**Coleen River**	**87.43**	**21**	P	**P**	**07 28 39.9**	**+1.2**
	baz=258						
DAWY	**Dawson**	**87.52**	**26**	P	**P**	**07 28 39.2**	**-0.1**
DAWY				IAmb	IAmb	07 28 48.3	
	comp=Z,6.9nm,0.9s						
DAWY	**Dawson**	**87.52**	**26**	P	**P**	**07 28 39.8**	**+0.5**
	baz=260						
QSPA	**South Pole Qui**	**87.84**	**180**	LR	LR	08 08 08.2	
	comp=Z,212nm,19.0s,baz=5.5,slow=36						
QSPA	**South Pole Qui**	**87.84**	**180**	P	**P**	**07 28 41.3**	**+0.4**
I29M	**Ogilvie Camp,**	**88.19**	**24**	P	**P**	**07 28 43.2**	**+0.8**
	baz=261						
G30M	**tAoh Zraii Nji**	**89.26**	**23**	P	**P**	**07 28 50.1**	**+2.6**
	baz=263						
INK	**Inuvik**	**90.42**	**22**	P	**P**	**07 28 53.0**	**+0.2**
	comp=Z,2.4nm,1.1s,baz=289,slow=5.0,SNR=6.0						
INK				LR	LR	08 04 53.5	
	comp=Z,77nm,20.6s,baz=319,slow=33						
	comp=Z,2.4nm,1.1s						
INK	**Inuvik**	**90.42**	**22**	P	**P**	**07 28 53.0**	**+0.2**
RUBB	**Prince Rupert**	**91.21**	**36**	P	**P**	**07 28 56.4**	**-0.3**
DLBC	**Dease Lake**	**91.46**	**32**	LR	LR	08 05 44.9	
	comp=Z,66nm,19.1s,baz=86,slow=33						
KIRV	**Kirov**	**92.38**	**328**	LR	LR	08 11 45.3	
	comp=Z,137nm,20.3s,baz=70,slow=36						
BBB	**Bella Bella**	**92.46**	**38**	LR	LR	08 04 09.6	
	comp=Z,56nm,19.4s,baz=287,slow=31						
BELG	**Belogornoye**	**93.46**	**322**	P	**P**	**07 29 07.5**	**+0.4**
	comp=Z,5.9nm,0.8s,baz=105,slow=18,SNR=3.5						
BELG				LR	LR	08 14 15.4	
	comp=Z,66nm,18.6s,baz=168,slow=38						
	comp=Z,5.9nm,0.8s						
GNI	**Garni**	**95.81**	**310**	LR	LR	08 16 18.6	
	comp=Z,41nm,20.6s,baz=36,slow=38						
YBH	**Yreka Blue Hor**	**96.41**	**48**	LR	LR	08 04 04.1	
	comp=Z,148nm,21.9s,baz=299,slow=30						
YKA	**Yellowknife Ar**	**98.69**	**27**	P	**P**	**07 29 30.7**	**0.0**
	comp=Z,0.9nm,1.0s,baz=279,slow=4.6,SNR=9.5						
YKA				LR	LR	08 07 57.5	
	comp=Z,188nm,21.2s,baz=296,slow=32						
	comp=Z,0.9nm,1.0s						
SPITS	**Spitsbergen Ar**	**98.71**	**350**	LR	LR	08 14 14.4	
	comp=Z,162nm,19.3s,baz=292,slow=36						
NEW	**Newport**	**99.76**	**41**	LR	LR	08 09 07.8	
	comp=Z,70nm,19.1s,baz=28,slow=32						
NVAR	**Mina Array Bea**	**100.02**	**51**	P	**Pdif**	**07 29 38.4**	**+0.8**
	comp=Z,0.1nm,0.5s,baz=277,slow=7.1,SNR=3.5						
TORD	**Torodi Ar. Bea**	**137.86**	**287**	PKP	**PKPdf**	**07 35 15.9**	**-1.3**
	comp=Z,1.0nm,0.9s,baz=95,slow=3.7,SNR=4.3						
ROSC	**El Rosal**	**145.07**	**85**	PKPbc	**PKPab**	**07 35 30.4**	**+0.3**
	comp=Z,2.8nm,0.4s,baz=320,slow=7.9,SNR=4.6						
KIC	**Kosan Boka**	**145.16**	**278**	⇑*i*PKP1	**PKPbc**	**07 35 30.0**	**+0.1**
	comp=Z,2.6nm,0.5s						
DBIC	**Dimbokro**	**145.24**	**279**	PKPbc	**PKPbc**	**07 35 29.5**	**-0.6**
	comp=Z,12nm,1.0s,baz=113,slow=4.5,SNR=10						
TIC	**Toumodi**	**145.41**	**279**	⇑*i*PKP1	**PKPdf**	**07 35 30.9**	**+0.1**
	comp=Z,4.3nm,0.3s						
LIC	**Lamto**	**145.45**	**278**	⇑*i*PKP1	**PKPdf**	**07 35 31.0**	**+0.2**
	comp=Z,47nm,1.0s						
LPAZ	**La Paz**	**146.27**	**124**	PKPbc	**PKPbc**	**07 35 34.5**	**+0.5**
	comp=Z,11nm,1.0s,baz=248,slow=4.4,SNR=17						
CPUP	**Villa Florida**	**146.86**	**150**	PKPbc	**PKPbc**	**07 35 35.0**	**+0.3**
	comp=Z,12nm,0.9s,baz=227,slow=3.5,SNR=14						

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*IDC **13** 07:16:33.0±2.2, 22.°04N×143.°00E, h234^{km}±19^{km}, mb3.2/15, mbtmp3.8/17, Error ellipse: s-maj=21.9km s-min=15.3km az=89.0*

ISC 13 07:16:34.8±0.9**, 22.°11N**±0.°10×**142.°9E**±0.°2**, h250^{km}, n17, σ1.^{s}15**/17**, mb3.3**/13**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.01**	**352**	P	**Pn**	**07 17 51.0**	**+0.4**
	64nm,0.9s,baz=306,slow=22,SNR=5.9						
JCJ				S	**S**	**07 18 48.4**	**-2.9**
	42nm,0.5s,baz=297,slow=24,SNR=1.4						
MJAR	**Matsushiro Arr**	**14.96**	**345**	P	**Pn**	**07 19 54.6**	**+0.2**
	0.6nm,0.3s,baz=262,slow=31,SNR=1.7						
KSRS	**Korea Array**	**20.05**	**323**	P	**P**	**07 20 49.9**	**+0.7**
	0.6nm,0.3s,baz=137,slow=11,SNR=1.9						
	0.6nm,0.3s						
ASAJ	**Asahikawa**	**21.95**	**359**	P	**P**	**07 21 10.2**	**+2.0**
	1.7nm,0.4s,baz=201,slow=18,SNR=1.6						
	1.7nm,0.4s						
KLR	**Kul'dur**	**28.49**	**345**	P	**P**	**07 22 06.5**	**-0.4**
	0.3nm,0.3s,baz=214,slow=3.6,SNR=2.3						
	0.3nm,0.3s						
SONM	**Songino Array**	**38.88**	**320**	P	**P**	**07 23 36.0**	**-0.3**
	0.3nm,0.5s,baz=141,slow=7.9,SNR=2.7						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**42.63**	**192**	P	**P**	**07 24 06.2**	**-0.8**
	2.8nm,0.7s,baz=6.1,slow=7.8,SNR=5.8						
	2.8nm,0.7s						
ASAR	**Alice Springs**	**46.34**	**191**	P	**P**	**07 24 35.2**	**-1.1**
	1.3nm,0.9s,baz=358,slow=11,SNR=1.5						
	1.3nm,0.9s						
MKAR	**Makanchi Array**	**54.26**	**312**	P	**P**	**07 25 36.2**	**+1.0**
	0.1nm,0.3s,baz=97,slow=7.0,SNR=2.2						
	0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**57.07**	**317**	P	**P**	**07 25 55.9**	**+0.9**
	0.6nm,0.4s,baz=93,slow=7.5,SNR=8.6						
	0.6nm,0.4s						
ILAR	**Eielson Array**	**61.78**	**27**	P	**P**	**07 26 27.0**	**+0.1**
	0.4nm,0.8s,baz=257,slow=5.8,SNR=5.5						
	0.4nm,0.8s						
BVAR	**Borovoye Array**	**62.22**	**319**	P	**P**	**07 26 30.2**	**+0.3**
	2.0nm,0.3s,baz=99,slow=8.4,SNR=14						

	2.0nm,0.3s						
YKA	Yellowknife Ar	76.20	28	P	P	07 27 56.0	+0.7
	0.3nm,0.5s,baz=289,slow=5.5,SNR=5.9						
	0.3nm,0.5s						
FINES	FINESS Array B	82.72	334	P	P	07 28 29.4	-0.9
	2.0nm,0.8s,baz=58,slow=5.0,SNR=7.9						
	2.0nm,0.8s						
NVAR	Mina Array Bea	83.06	51	P	P	07 28 32.7	-0.2
	0.3nm,0.6s,baz=279,slow=6.3,SNR=4.1						
	0.3nm,0.6s						
PDAR	Pinedale Array	87.26	45	P	P	07 28 53.2	-0.4
	0.3nm,0.6s,baz=301,slow=7.2,SNR=1.7						
	0.3nm,0.6s						
TXAR	Lajitas Array	97.99	54	P	Pdif	07 29 41.8	-1.3
	0.1nm,0.5s,baz=311,slow=4.7,SNR=1.7						
	0.1nm,0.5s						

NEIC 13 07:32:47.0±0.8**, 32°.17N**±0°.05×**102°.30W**±0°.03**, h5**^{km}±2^{km}**, mb_Lg2.8**/17**, Error ellipse: s-maj=8.5km s-min=4.8km az=172.0, Western Texas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ODSA	Odessa	0.21	257	Pg	Pg	07 32 52.1	+0.9
ODSA				Sg	Sg	07 32 55.6	+1.6
POST	Post	1.12	37	Pn	Pn	07 33 09.4	-0.1
HTMS	Hat Mesa	1.17	285	Pn	Pb	07 33 09.8	+0.1
CLNB	Carlsbad	1.34	274	Pn	Pn	07 33 12.5	0.0
CPRX	Cap Rock	1.57	303	Pn	Pn	07 33 15.6	-0.2
GDL2	Guadalupe Moun	1.75	272	Pn	Pn	07 33 16.5	-1.6
JCT	Junction City	2.72	128		Pn	07 33 31.8	+0.3
TX31	Lajitas Ar. Si	3.06	203	Pn	Pn	07 33 35.6	-0.5
TX32	Lajitas Array	3.06	203		Pn	07 33 35.5	-0.7
TXAR	Lajitas Array	3.06	203	Pn	Pn	07 33 35.8	-0.4
WTFS	Witchita Falls	3.60	63	Pn	Pn	07 33 44.0	+0.5
FW03	Perrin-Whitt E	3.68	75	Pn	Pn	07 33 44.6	0.0
FW03				IAmb_Lg		07 34 48.4	
	comp=Z,25nm,1.1s						
FW07	Weatherford	3.86	81	Pn	Pn	07 33 46.9	-0.1
WMOK	Wichita Mounta	3.90	48	Pn	Pn	07 33 48.0	+0.3
WMOK				IAmb_Lg		07 35 00.9	
	comp=Z,17nm,0.9s						
FW06	Azle	4.09	77	Pn	Pn	07 33 49.7	-0.5
FW06				IAmb_Lg		07 35 08.0	
	comp=Z,11nm,0.7s						
WHTX	Lake Whitney,	4.12	91		Pn	07 33 50.5	-0.1
CRNM	Carthage	4.12	297	Pn	Pn	07 33 50.3	-0.6
FW13	Cleburne	4.13	86	IAmb_Lg		07 35 08.7	
	comp=Z,31nm,1.1s						
435B	Jarrell	4.26	108	Pn	Pn	07 33 52.3	-0.3
Y22D	IRIS PASSCAL I	4.31	297	IAmb_Lg		07 35 13.0	
	comp=Z,32nm,0.8s						
FW14	Alvarado	4.33	86	IAmb_Lg		07 35 14.9	
	comp=Z,18nm,0.8s						
Z35A	Perchaven, San	4.41	73	Pn	Pn	07 33 54.6	0.0
Z35A				IAmb_Lg		07 35 17.9	
	comp=Z,15nm,0.7s						
833A	Chaparral WMA,	4.58	146	IAmb_Lg		07 35 25.0	
	comp=Z,18nm,0.8s						
121A	Cookes Peak, D	4.65	276	IAmb_Lg		07 35 23.1	
	comp=Z,26nm,0.9s						
NOKA	Waynoka	5.25	31	IAmb_Lg		07 35 47.8	
	comp=Z,11nm,0.8s						

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*IDC **13** 07:52:23.9±0.7, 8°.99N×74°.84W, h0^{km}, mb3.7/10, mbtmp3.7/11, ML3.8/1, MS3.2/4, Error ellipse: s-maj=26.5km s-min=17.0km az=59.0*

*NEIC **13** 07:52:28.2±2.2, 9°.44N±0°.06×74°.97W±0°.06, h74^{km}±12^{km}, mb4.1/12, Error ellipse: s-maj=8.4km s-min=8.0km az=212.0*

*RSNC **13** 07:52:29.6±0.9, 9°.31N×75°.00W, h100^{km}±7^{km}, ML3.9, Mw4.4*

ISC 13 07:52:29.0±0.7**, 9°.30N**±0°.03×**74°.95W**±0°.04**, h83**^{km}±8^{km}**, n94, σ2**^{s}**.27**/106**, mb3.8**/12**, 1C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJCC	San Jacinto, C	0.63	339	⇓*i*P	Pn	07 52 46.1	+1.7
SJCC				*e*S	Sn	07 52 58.2	+2.5
SJCC				*i*		07 53 02.8	
	comp=Z,4μm,0.8s						
ARGC	Ariguani, Magd	0.89	51	*i* P	Pn	07 52 48.3	+1.4
ARGC				*e*S	Sn	07 53 00.5	+0.2
ARGC				*i*		07 53 04.5	
	comp=Z,2μm,0.3s						
LL5C	La Loma 5 El P	1.29	70	*e*P	Pn	07 52 54.0	+2.3
LL5C				*e*S	Sn	07 53 12.0	+3.1
LL5C				*i*		07 53 14.3	
	comp=Z,2μm,0.5s						
LL1C	La Loma 1 Cana	1.40	80	*e*S	Sn	07 53 14.2	+2.9
LCBC	Los crdobas,	1.47	253	*e*P	Pn	07 52 54.4	+0.3
LCBC				*e*S	Sn	07 53 13.6	+0.6
LCBC				*i*		07 53 25.6	
	comp=Z,747nm,0.3s						
UREC	San Jos de Ur	1.65	201	*e*P	Pn	07 52 56.2	-0.2
UREC				*e*S	Sn	07 53 18.4	+1.3
UREC				*i*		07 53 21.8	
	comp=Z,2μm,0.3s						
SMRC	Santa Marta, M	1.98	21	*e*P	Pn	07 53 05.4	+4.6
SMRC				*e*S	Sn	07 53 33.5	+8.5
SMRC				*i*		07 53 42.4	
	comp=Z,311nm,0.4s						
APAC	Apartado, Choc	2.13	229	*e*P	Pn	07 53 04.0	+1.2
APAC				*e*S	Sn	07 53 29.9	+1.4
APAC				*i*		07 53 33.4	
	comp=Z,558nm,0.4s						
BRRC	Barranca, Sant	2.50	151	*e*P	Pn	07 53 08.7	+0.9
BRRC				*e*S	Sn	07 53 35.3	-2.2
BRRC				*i*		07 53 44.9	
	comp=Z,430nm,0.5s						
DBBC	Dabeiba	2.59	209	*e*P	Pn	07 53 09.1	0.0
DBBC				*e*S	Sn	07 53 44.0	+4.4
DBBC				*i*		07 53 48.0	
	comp=Z,201nm,0.3s						
CRJC	Cerrejon, Guaj	2.66	50	⇑*i*P	Pn	07 53 12.1	+2.2
CRJC				*e*S	Sn	07 53 42.9	+1.6
CRJC				*i*		07 53 58.3	
	comp=Z,837nm,0.5s						
PTBC	PUERTO BERRIO,	2.79	170	⇓*i*P	Pn	07 53 12.2	+0.5
PTBC				*e*S	Sn	07 53 40.2	-4.2
PTBC				*i*		07 53 56.4	
	comp=Z,672nm,0.5s						
PAMC	Pamplona, Colo	2.96	131	⇓*e*P	Pn	07 53 16.3	+1.9
PAMC				*e*S	Sn	07 53 51.0	+1.8
PAMC				*i*		07 53 56.4	
	comp=Z,338nm,0.2s						
UPD2	Meteti	3.12	256	*e*P	Pn	07 53 17.4	+1.4
UPD2				*e*S	Sn	07 53 53.3	+0.9
UPD2				*i*		07 53 55.2	
	comp=Z,299nm,0.2s						
HELC	Santa Helena	3.15	191	Pn	Pn	07 53 17.7	+1.0
HELC				Sn	Sn	07 53 52.0	-1.5
HELC	Santa Helena	3.15	191	*e*P	Pn	07 53 17.8	+1.0
HELC				*e*S	Sn	07 54 01.9	+8.5
BARC	Barichara	3.21	147	*e*P	Pn	07 53 19.1	+1.6
BARC				*e*S	Sn	07 53 54.7	-0.2
BARC				*i*		07 54 11.0	
	comp=Z,990nm,0.5s						
CBOC	Ciudad Bolivar	3.58	197	*e*P	Pn	07 53 23.9	+1.4
CBOC				*e*S	Sn	07 54 17.2	+14
CBOC				*i*		07 54 25.6	
	comp=Z,145nm,0.7s						
SPBC	San Pablo de B	3.73	166	*e*P	Pn	07 53 24.8	+0.4
SPBC				*e*S	Sn	07 54 04.7	-2.7
SPBC				*i*		07 54 31.0	
	comp=Z,254nm,0.8s						
URIC	Uribia, Colomb	3.76	50	Pn	Pn	07 53 25.1	+0.4
URIC				Sn	Sn	07 54 04.2	-3.7
URIC	Uribia, Colomb	3.76	50	*e*P	Pn	07 53 27.0	+2.2
URIC				*e*S	Sn	07 54 14.7	+6.8
URIC				*i*		07 54 25.7	
	comp=Z,245nm,0.6s						
RUSC	La Rusia	3.86	151		Pn	07 53 28.2	+1.7
RUSC	La Rusia	3.86	151	*e*P	Pn	07 53 28.3	+1.7
RUSC				*e*S	Sn	07 54 10.4	-0.6
RUSC				*i*		07 54 29.8	
	comp=Z,266nm,0.5s						
GUY2C	Guyana, Caldas	4.07	186	*e*P	Pn	07 53 30.5	+1.1
GUY2C				*e*S	Sn	07 54 28.5	+12
GUY2C				IAML		07 54 43.6	
	comp=Z,278nm,0.6s						
TAMC	Tame, Arauca	4.23	132	*e*P	Pn	07 53 33.3	+2.1
TAMC				*e*S	Sn	07 54 21.2	+1.7
TAMC				*i*		07 54 49.1	
	comp=Z,140nm,0.6s						
NIZA	Niza - Manizal	4.25	187	*e*P	Pn	07 53 34.2	+2.5
NIZA				*e*S	Sn	07 54 35.2	+15
SDV	Santo Domingo	4.28	95	Pn	Pn	07 53 34.7	+2.7
	comp=Z,58nm,0.3s,baz=276,slow=10,SNR=415						
SDV				Sn	Sn	07 54 23.7	+2.7
	comp=Z,60nm,0.3s,baz=202,slow=19,SNR=6.2						
SDV				Lg	Lg	07 54 38.4	
	comp=Z,36nm,0.3s,baz=26,slow=17,SNR=3.7						
SDV				LR	LR	07 55 40.8	
	comp=Z,275nm,18.8s,baz=262,slow=47						
SDV	Santo Domingo	4.28	95	Pn	Pn	07 53 34.9	+2.9
RECRC	Villamaria, Ca	4.33	185	*e*S	Sn	07 54 35.3	+13
ROSC	El Rosal	4.48	172	Pn	Pn	07 53 35.6	+0.7
	comp=Z,11nm,0.3s,baz=355,slow=13,SNR=14						
ROSC				Lg	Lg	07 54 38.0	
	comp=Z,44nm,0.3s,baz=318,slow=20,SNR=4.0						
CHIC	Chingaza	4.80	165	*e*P	Pn	07 53 38.8	-0.5
CHIC				*e*S	Sn	07 54 33.0	-0.8
CHIC				*i*		07 54 55.1	
	comp=Z,85nm,0.5s						
ANIL	Santa Ana	4.80	185	*e*P	Pn	07 53 43.1	+3.8
ANIL				*e*S	Sn	07 54 52.3	+19
ANIL				*e*		07 55 02.3	
BCIP	Isla Barro Col	4.83	269	Pn	Pn	07 53 40.4	+1.1
ORTC	Ortega, Tolima	5.37	183	*e*P	Pn	07 53 48.8	+2.1
ORTC				*e*S	Sn	07 55 05.0	+18
PRAC	Prado	5.55	179		Pn	07 53 49.4	+0.1
AUA1	Aruba	5.80	56	Pn	Pn	07 53 50.7	-1.9
HATO	Hato, Curacao	6.54	64	Pn	Pn	07 54 00.8	-1.9
BAUV	El Baul	6.83	92	Pn	Pn	07 54 06.6	0.0
PRVC	Isla de Provid	7.48	303	Pn	Pn	07 54 12.2	-3.2
TUMC	Tumaco	8.33	207	Pn	Pn	07 54 26.6	-0.4
BATAN	Batan	8.35	276	Pn	Pn	07 54 23.7	-3.6
PEZE	Perez Zeledon,	8.61	271	Pn	Pn	07 54 30.1	-1.0
BIRV	Birongo	8.63	82	Pn	Pn	07 54 30.0	-1.2
COVE	Coope Vega, Sa	9.41	279	Pn	Pn	07 54 40.7	-1.2
JACO	JACO, Garabito	9.59	273	Pn	Pn	07 54 43.2	-1.0
OTAV	Otavalo	9.66	201	Pn	Pn	07 54 45.0	-0.6
JTS	Las Juntas de	9.91	277	Pn	Pn	07 54 49.4	+0.8
	comp=Z,0.8nm,0.3s,baz=296,slow=20,SNR=2.3						
JTS				Sn	Sn	07 56 42.2	+4.1
	comp=Z,0.2nm,0.3s,baz=294,slow=21,SNR=1.5						
JTS				LR	LR	08 00 42.6	
	comp=Z,68nm,18.3s,baz=90,slow=50						
	comp=Z,1.7nm,0.3s						
JTS	Las Juntas de	9.91	277	Pn	Pn	07 54 47.3	-1.3
SDDR	Presa de Saban	10.26	20	Pn	Pn	07 54 50.2	-3.1
ACON	Acoyapa	10.39	286	Pn	Pn	07 54 54.6	-0.6
ORTG	Ortega, Santa	10.41	277	Pn	Pn	07 54 54.8	-0.7
GTBY	Guantanamo Bay	10.56	359	Pn	Pn	07 54 53.9	-3.6
DR12	Loma Pena Alta	10.86	29	Pn	Pn	07 54 59.0	-2.7
BOAB	BOACO BROADBAN	10.98	288	Pn	Pn	07 55 00.8	-2.4
PCDR	Punta Cana, DR	11.15	34	Pn	Pn	07 55 02.3	-3.3
CELP	Cerrillos	11.92	42	Pn	Pn	07 55 14.2	-1.8
AOPR	Arecibo Observ	12.00	41	Pn	Pn	07 55 15.5	-1.6
EMPR	Esperanza - Ma	12.24	41	Pn	Pn	07 55 17.2	-3.1
GCPR	Guaynabo City	12.42	43	Pn	Pn	07 55 19.9	-2.8
HUMP	Col San Antoni	12.46	44	Pn	Pn	07 55 20.3	-3.0
CBYP	Canovanas	12.54	44	Pn	Pn	07 55 20.7	-3.7
MTP	Monte Pirata	12.63	45	Pn	Pn	07 55 22.7	-3.0
GRTK	Grand Turk	12.68	16	Pn	Pn	07 55 22.5	-3.8
CUPR	Culebra, Puert	12.96	45	Pn	Pn	07 55 29.0	-1.1
GRGR	Grenville	13.36	77	Pn	Pn	07 55 33.5	-1.9
SVB	Belmont	14.00	72	Pn	Pn	07 55 43.9	+0.2
SABA	Saba	14.06	53	Pn	Pn	07 55 42.6	-1.9
MCRA	Macar, Loja	14.47	200	Pn	Pn	07 55 49.7	-0.1
BOAV	Boa Vista	15.90	115		Pn	07 56 07.8	-0.2
BOAV				IAmb	IAmb	07 56 54.4	
	comp=Z,14nm,1.5s						
CZSB	Cruzeiro do Su	17.07	172	P	P	07 56 23.7	+0.7
CZSB				IAmb	IAmb	07 56 25.4	
	comp=Z,7.0nm,0.6s						
CCIG	Comitan	18.13	294	P	P	07 56 32.8	-2.1
PAYG	Puerto Ayora	18.21	238	P	Pn	07 56 35.4	-0.9
MACA	Manacapuru-AM	18.85	130	P	P	07 56 42.9	+0.3
MACA				IAmb	IAmb	07 57 12.7	
	comp=Z,9.3nm,1.0s						
CMIG	Matias Romero	20.88	294	LR	LR	08 06 18.6	
	comp=Z,62nm,18.1s,baz=78,slow=40						
ETMB	Extrema	20.89	155	P	P	07 57 05.7	+1.0
NNA	Nana	21.23	185	LR	LR	08 06 47.9	
	comp=Z,78nm,20.9s,baz=350,slow=41						
SAML	Samuel	21.59	147	P	P	07 57 13.4	+1.3
LPAZ	La Paz	26.31	165	P	P	07 58 00.1	+2.3
	comp=Z,1.1nm,0.5s,baz=328,slow=9.8,SNR=4.0						
	comp=Z,1.1nm,0.5s						
LPAZ	La Paz	26.31	165	P	P	07 57 57.3	-0.5
LPAZ				IAmb	IAmb	07 58 15.9	
	comp=Z,3.4nm,0.6s						
SIV	San Ignacio	28.64	151	P	P	07 58 19.8	+1.8
	comp=Z,0.5nm,0.5s,baz=297,slow=23,SNR=2.8						
	comp=Z,0.5nm,0.5s						
MNMC	Minye Minye	28.74	169	P	P	07 58 20.5	+1.3
MNMC				IAmb	IAmb	07 58 48.6	
	comp=Z,18nm,1.5s						
TXAR	Lajitas Array	33.48	310	P	P	07 59 07.9	+7.4
	comp=Z,0.2nm,0.5s,baz=135,slow=8.3,SNR=8.0						
	comp=Z,0.2nm,0.5s						
AC02	Maricunga	36.36	171	P	P	07 59 26.6	+0.8
PDAR	Pinedale Array	45.02	324	P	P	08 00 44.8	+8.1
	comp=Z,0.4nm,0.9s,baz=126,slow=10,SNR=2.0						
	comp=Z,0.4nm,0.9s						
SCHQ	Schefferville	45.87	7	P	P	08 00 51.0	+8.1
	comp=Z,3.6nm,1.1s,baz=189,slow=8.3,SNR=5.1						
	comp=Z,3.6nm,1.1s						
NVAR	Mina Array Bea	48.47	314	P	P	08 01 11.3	+7.7
	comp=Z,0.2nm,0.6s,baz=133,slow=6.6,SNR=2.5						
	comp=Z,0.2nm,0.6s						
PLCA	Paso Flores	49.95	176	P	P	08 01 17.2	+2.6
	comp=Z,1.7nm,0.9s,baz=348,slow=9.3,SNR=3.5						
	comp=Z,1.7nm,0.9s						
PLCA	Paso Flores	49.95	176	P	P	08 01 15.0	+0.4
EMB	Emerald Bay	49.97	314	P	P	08 01 15.0	-0.1
EMB				IAmb	IAmb	08 01 54.7	
	comp=Z,2.7nm,1.1s						
YKA	Yellowknife Ar	60.33	340	P	P	08 02 36.0	+7.1
	comp=Z,1.0nm,0.8s,baz=130,slow=7.4,SNR=24						
	comp=Z,1.0nm,0.8s						
TORD	Torodi Ar. Bea	75.03	79	P	P	08 04 07.1	+4.8
	comp=Z,0.5nm,0.5s,baz=282,slow=6.6,SNR=6.1						
	comp=Z,0.5nm,0.5s						
NOA	NORSAR Array B	80.07	30	P	P	08 04 36.8	+7.3
	comp=Z,0.3nm,0.5s,baz=280,slow=5.0,SNR=1.5						
	comp=Z,0.3nm,0.5s						
ASAR	Alice Springs	148.95	239	PKPbc	PKPab	08 12 14.0	+1.5
	comp=Z,2.0nm,0.4s,baz=119,slow=3.7,SNR=47						
WRA	Warramunga Arr	149.80	246	PKPbc	PKPab	08 12 15.9	-0.2
	comp=Z,1.7nm,0.7s,baz=103,slow=2.8,SNR=20						

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*TEH **13** 08:05:13.9, 36°.32N×53°.27E, h22^{km}±18^{km}, ML3.8*

*AZER **13** 08:05:19.9±1.1, 36°.54N×52°.83E, h22^{km}, Error ellipse: s-maj=13.6km s-min=7.7km az=59.0*

ISC 13 08:05:14.8±1.2**, 36°.36N**±0°.04×**53°.28E**±0°.04**, h35**^{km}**, n57, σ1**^{s}**.64**/74**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGLO	Ghaloghah	0.46	72	Pg	Pn	08 05 24.6	-0.6
ISHM	Shahmirzad	0.55	179	Pg	Pn	08 05 24.9	-1.6
IPRN	Peran	0.77	261	Pg	Pn	08 05 28.5	-0.9
IPRN				Sg	Sn	08 05 40.0	+0.1
IFIR	Firoozkooh	0.84	211	Pg	Pn	08 05 29.5	-0.9
ILAS	Lasjerd	1.01	195	Pg	Pn	08 05 32.6	-0.2
IANJ	Anjilo	1.03	150	Pg	Pn	08 05 33.0	0.0
IDMV	Damavand	1.28	233	Pg	Pn	08 05 37.0	+0.5
DAMV	Damavand	1.29	236	Pg	Pn	08 05 37.2	+0.6
MZPU	Pul - Mazandar	1.39	274	Pg	Pn	08 05 38.5	+0.6
TEH	Tehran	1.66	249	Pg	Pn	08 05 44.0	+2.4
KLST	Kelardasht - M	1.80	276	Pg	Pn	08 05 44.9	+1.3
CHTH	Charan	1.80	256	Pg	Pn	08 05 45.7	+2.0
IVRN	Varamin	1.86	223	Pn	Pn	08 05 45.6	+1.3
IHSB	Hasanabad	1.87	241	Pn	Pn	08 05 46.1	+1.6
IMND	Minoodasht	1.93	62	Pn	Pn	08 05 46.7	+1.6
THKV	Tehran--Karaj	2.00	258	Pn	Pn	08 05 48.2	+1.9
QALM	Alamut, Qazvin	2.13	273	Pn	Pn	08 05 50.0	+1.9
ISFB	Sefidab	2.18	203	Pn	Pn	08 05 49.9	+1.2
IMHD	Mahdasht	2.23	253	Pn	Pn	08 05 51.3	+2.0
SHRO	Shahrood	2.24	99	Pn	Pn	08 05 51.6	+2.1
IQOM	Qom	2.35	231	Pn	Pn	08 05 52.1	+0.9
GHVR	GHOM	2.48	221	Pn	Pn	08 05 54.6	+1.8
MRVT	Maraveh tapeh	2.59	59	Pn	Pn	08 05 55.8	+1.4
GIDE	GILAN DEYLAMAN	2.77	283	Pn	Pn	08 05 57.9	+1.1
ANAR	Anarak	3.19	173	Pn	Pn	08 06 03.1	+0.5
ASAO	Ashtian	3.22	237	Pn	Pn	08 06 05.1	+2.0
BJRD	Bojnurd	3.56	67	Pn	Pn	08 06 10.2	+2.4
NASN	Na'in	3.58	186	Pn	Pn	08 06 09.4	+1.3
TNSJ	Nastanj	3.63	130	Pn	Pn	08 06 09.8	+1.2
KHMZ	Khomeyn	3.78	227	Pn	Pn	08 06 12.6	+1.8
YZKH	Yazd	4.11	164	Pn	Pn	08 06 16.4	+1.2
TABS	Tabas	4.15	130	Pn	Pn	08 06 17.7	+1.9
TKDS	Koohdasht(Taba	4.18	130	Pn	Pn	08 06 17.6	+1.4
ASTR	Astara	4.19	303	P	Pn	08 06 16.3	0.0
	SNR=15						
ASTR				S	Sn	08 07 02.2	-1.8
IEMG	Emamgholi	4.43	75	Pn	Pn	08 06 22.0	+2.2
LRK	Lerik	4.54	302	P	Pn	08 06 21.2	0.0
	SNR=16						
LRK				S	Sn	08 07 10.6	-2.3
YRD	Yardimli	4.75	304	P	Pn	08 06 23.8	-0.2
	SNR=12						
YRD				S	Sn	08 07 15.1	-2.8
GLBA	Clilabad	4.82	308	P	Pn	08 06 25.5	+0.6
	SNR=4.3						
GLBA				S	Sn	08 07 17.7	-1.8
ALIB	Äli-Bayra	4.92	318	P	Pn	08 06 26.3	0.0
ALIB				S	Sn	08 07 21.1	-0.9
SNGE	Sanandaj	4.99	257	Pn	Pn	08 06 29.4	+2.0
GBS	Qobustan	5.38	322	P	Pn	08 06 33.7	+1.1
GBS				S	Sn	08 07 34.9	+1.5
ATGJ	Altiaghaj	5.63	324	P	Pn	08 06 37.3	+1.2
ATGJ				S	Sn	08 07 39.1	-0.7
KDMR	Kurdemir	5.67	317	S	Sn	08 07 40.5	+0.3
PQL	Pirkuli	5.75	322	P	Pn	08 06 39.8	+2.0
PQL				S	Sn	08 07 42.2	-0.3
SIZA	Siyzn	5.82	325	S	Sn	08 07 44.0	-0.3
IML	Ismayilli	5.96	319	S	Sn	08 07 45.5	-2.2
AGDM	Agdam	6.13	309	P	Pn	08 06 42.0	-0.9
AGDM				S	Sn	08 07 50.8	-1.1
QUBA	Quba, Azerbaij	6.23	325	P	Pn	08 06 45.8	+1.5
QUBA				S	Sn	08 07 53.1	-1.1
QBL	Gabala	6.25	319	S	Sn	08 07 51.5	-3.3
XNQ	Khinaliq	6.26	322	P	Pn	08 06 45.9	+1.0
	SNR=10						
XNQ				S	Sn	08 07 52.7	-2.6
ORD	Ordubad	6.33	296	P	Pn	08 06 48.2	+2.6
	SNR=5.7						
ORD				S	Sn	08 07 56.6	-0.1
QSAR	Qusar	6.46	324	P	Pn	08 06 48.6	+1.1
	SNR=4.5						
QSAR				S	Sn	08 07 57.4	-2.6
BSRN	Basiran	6.53	130	Pn	Pn	08 06 50.3	+1.7
SEKA	Sheki	6.78	317	P	Pn	08 06 52.7	+0.8
SEKA				S	Sn	08 08 05.2	-2.7
GANJ	Ganja	6.93	310	S	Sn	08 08 07.4	-4.2
GDB	GEDABAY	7.33	309	P	Pn	08 07 00.7	+1.2
GDB				S	Sn	08 08 19.1	-2.5
ZKTA	Zakatala	7.39	317	P	Pn	08 07 00.9	+0.7
ZKTA				S	Sn	08 08 22.3	-0.6

IDC 13 08:16:17.5±4.3**, 6°.14S×128°.85E, h321**^{km}±62^{km}**, mb2.7**/1**, mbtmp3.7**/4**, Error ellipse: s-maj=108.7km s-min=21.1km az=78.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.76	25	P	Pn	08 17 44.9	+0.1
	6.1nm,0.2s,baz=230,slow=23,SNR=7.3						
SIJI				S	S	08 18 53.0	-2.1
	15nm,0.2s,baz=222,slow=23,SNR=14						
WRA	Warramunga Arr	14.72	159	P	P	08 19 30.1	-0.6
	0.8nm,0.4s,baz=340,slow=12,SNR=17						
WRA				S	S	08 22 05.6	-5.4
	0.6nm,0.7s,baz=336,slow=20,SNR=5.6						
ASAR	Alice Springs	18.10	165	P	P	08 20 07.2	0.0
	0.5nm,0.3s,baz=346,slow=11,SNR=18						
ASAR				S	S	08 23 13.2	-4.6
	1.0nm,0.9s,baz=340,slow=17,SNR=8.5						
MKAR	Makanchi Array	66.88	327	P	P	08 26 35.9	+0.1
	0.2nm,0.7s,baz=111,slow=8.0,SNR=2.2						
	0.2nm,0.7s						

ROM 13 08:28:39.0±0.0**, 42°.768N**±0°.002×**13°.066E**±0°.003**, h11**^{km}**, ML1.3**/2**, 1C, Error ellipse: s-maj=0.2km s-min=0.2km az=289.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1212	Cascia, Frazio	0.02	224	P	Pg	08 28 41.3	+0.2
T1212				S	Sg	08 28 42.5	0.0
T1212				AML	AML		
	comp=E,388μm,0.4s						
T1212				AML	AML		
	comp=N,478μm,0.2s						
T1218	Civita (PG)	0.10	160	P	Pg	08 28 42.3	+0.4
T1218				S	Sg	08 28 44.4	+0.4
T1214	Arquata del Tr	0.11	94	P	Pg	08 28 42.3	+0.4
T1214				S	Sg	08 28 44.5	+0.4
T1214				AML	AML		
	comp=E,200μm,0.2s						
T1214				AML	AML		
	comp=N,214μm,0.1s						
T1214				AML	AML		
	comp=N,214μm,0.1s						
T1214				AML	AML		
	comp=E,201μm,0.2s						
T1217	Poggiodomo (PG	0.11	241	P	Pg	08 28 42.4	+0.4
T1216	Preci, Frazion	0.13	344	P	Pg	08 28 42.7	+0.5
T1216				S	Sg	08 28 45.2	+0.8
T1215	Vallo di Nera,	0.15	283	P	Pg	08 28 43.0	+0.5
T1215				S	Sg	08 28 45.7	+0.8
MC2	Monte Cornacci	0.17	32	P	Pg	08 28 43.4	+0.5
MC2				S	Sg	08 28 46.5	+0.8
MMO1	Montemonaco	0.23	55	P	Pg	08 28 44.3	+0.4
MMO1				S	Sg	08 28 48.3	+1.1
RM33	Pellescritta (	0.28	157	P	Pg	08 28 45.2	+0.5
RM33				S	Sg	08 28 49.8	+1.1
T1211	Morro Reatino	0.28	214	P	Pg	08 28 45.4	+0.6
T1211				S	Sb	08 28 50.0	-1.0
T1241	Roccafluvione,	0.28	72	P	Pg	08 28 45.4	+0.6
T1241				S	Sb	08 28 50.1	-0.9
T1219	Muccia, Frazio	0.29	352	P	Pg	08 28 45.5	+0.5
T1219				S	Sg	08 28 50.0	+1.1
TERO	Teramo	0.42	110	P	Pg	08 28 47.5	+0.2
TERO				S	Sb	08 28 54.0	-0.9
LIK	San Giovanni I	1.31	164	⇑P	Pg	08 29 06.3	+2.1

IDC 13 08:33:02.1±348.0**, 64°.66N×23°.95E, h0**^{km}**, Error ellipse: s-maj=145.8km s-min=99.1km az=162.0, Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I37NO	I37NO	4.90	337	I	I	09 05 10.0	
	baz=155,slow=326,SNR=0.8						
I43RU	DUBNA INFRASON	10.26	135	I	I	09 33 40.0	
	baz=330,slow=327,SNR=0.5						
I31KZ	AKTYUBINSK INF	22.82	112	I	I	10 53 00.0	
	baz=325,slow=332,SNR=1.1						

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*WEL **13** 08:41:00, 43°.52S×171°.55E, h15^{km}, ML4.0, Mw3.7, Moment Tensor Solution. s4 Moment tensor: Scale 10^{14} Nm; M_{rr}3.38; $M_{\theta\theta}$-1.54; $M_{\phi\phi}$-1.85; $M_{r\theta}$1.12; $M_{\theta\phi}$-1.09; $M_{\phi r}$4.16; Fault plane solution: $M_0$5.27000×10^{14} NP1: ϕ_s228.00000°, δ19.00000°, λ116.00000°. NP2: ϕ_s21.00000°, δ73.00000°, λ81.00000°. Principal axes: T -48.2500, Plg61.0000°, Azm279.0000°; N -8.8100, Plg8.0000°, Azm23.0000°; P 57.0600, Plg27.0000°, Azm118.0000°;*

*IDC **13** 08:41:30.2±1.6, 43°.42S×171°.76E, h0^{km}, mb4.2/2, mbtmp4.2/2 Error ellipse: s-maj=42.2km s-min=10.7km az=143.0*

*WEL **13** 08:41:33.7, 44°S±3°×17°2E±°, h15^{km}±3^{km}, M4.0/23, ML4.2/23, MLv4.0/23, Error ellipse: s-maj=0.0km s-min=0.0km az=117.0, confirmed*

*NOU **13** 08:41:33.7, 43°.59S×171°.57E, h14^{km}, MLv4.2/9, South Island, New Zealand*

*NEIC **13** 08:41:34.4±1.6, 43°.59S±0°.05×171°.60E±0°.05, h23^{km}±6^{km}, mb4.4/16, Error ellipse: s-maj=8.2km s-min=3.4km*

az=149.0

ISC 13 08:41:33.8±0.8**, 43°.56S**±0°.03×**171°.55E**±0°.03**, h23**^{km}±5^{km}**, n134,** σ**1^{s}42**/142**, mb4.4**/10**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MHCZ	Mount Hutt	0.03	20	P	Pb	08 41 37.4	-0.4
MHCZ				S	Sb	08 41 39.6	-0.9
RPZ	Rata Peaks	0.40	247	Pg	Pb	08 41 42.8	+0.6
	314nm,0.3s,baz=63,slow=5.9,SNR=2799						
RPZ				Lg	Lg	08 41 48.6	
	1μm,0.3s,baz=40,slow=23,SNR=52						
RPZ	Rata Peaks	0.40	247	Pg	Pb	08 41 43.0	+0.8
RPZ				Sg	Sb	08 41 48.8	+0.9
RPZ	Rata Peaks	0.40	247	P	Pb	08 41 42.7	+0.6
RPZ	Rata Peaks	0.40	247	P	Pb	08 41 43.0	+0.8
RPZ				S	Sb	08 41 48.8	+0.9
OXZ	Oxford	0.42	57		Pb	08 41 43.0	+0.4
OXZ				Sg	Sb	08 41 49.0	+0.3
OXZ	Oxford	0.42	57	P	Pb	08 41 43.0	+0.4
OXZ				S	Sb	08 41 49.1	+0.4
WACZ	Wakanui South	0.43	152	P	Pn	08 41 44.8	+0.2
RACZ	Rakaia	0.46	112	P	Pn	08 41 44.8	-0.1
ARCZ	Arundel	0.47	215	P	Pn	08 41 44.9	-0.3
WVZ	Waitaha Valley	0.77	309	P	Pb	08 41 48.7	+0.3
MQZ	McQueen's Vall	0.81	101		Pn	08 41 50.1	+0.4
MQZ					Sn	08 42 01.0	-0.1
MQZ	McQueen's Vall	0.81	101	P	Pn	08 41 50.2	+0.4
MQZ				S	Sn	08 42 02.7	+1.6
INZ	Inchbonnie	0.84	354		Pb	08 41 49.7	+0.1
INZ				Sg	Sb	08 42 00.1	-0.3
INZ	Inchbonnie	0.84	354	P	Pb	08 41 49.7	+0.1
AMCZ	Amberley	0.89	65		Pn	08 41 51.2	+0.4
AMCZ					Sn	08 42 03.0	0.0
AMCZ	Amberley	0.89	65	P	Pn	08 41 51.2	+0.4
TMZ	Timaru	0.91	205	P	Pn	08 41 52.3	+1.0
GCSZ	Gaunt Creek Bo	0.93	285	P	Pn	08 41 51.9	+0.5
LTZ	Lake Taylor	0.94	34	Pn	Pn	08 41 51.7	+0.1
LTZ				Sg	Sn	08 42 04.1	-0.2
LTZ	Lake Taylor	0.94	34	P	Pn	08 41 51.7	+0.1
AKCZ	Akaroa Harbour	1.03	108	P	Pn	08 41 53.4	+0.6
AKCZ				S	Sn	08 42 11.1	+4.5
GVZ	Greta Valley S	1.23	62	Pn	Pn	08 41 55.0	-0.6
GVZ	Greta Valley S	1.23	62	P	Pn	08 41 55.2	-0.5
FOZ	Fox Glacier	1.26	271		Pb	08 41 58.2	+1.3
FOZ	Fox Glacier	1.26	271	P	Pb	08 41 57.8	+0.9
LBZ	Lake Benmore	1.29	230		Pb	08 41 57.2	-0.1
LBZ	Lake Benmore	1.29	230	P	Pb	08 41 57.3	-0.1
ODZ	Otahua Downs	1.62	203		Pn	08 42 01.8	+0.9
ODZ	Otahua Downs	1.62	203	P	Pn	08 42 01.5	+0.6
ODZ	Otahua Downs	1.62	203	P	Pn	08 42 01.8	+0.9
DSZ	Denniston Nort	1.82	6		Pn	08 42 04.7	+0.9
DSZ	Denniston Nort	1.82	6	P	Pn	08 42 04.6	+0.8
KHZ	Kahutara	1.85	53		Pn	08 42 04.5	+0.4
KHZ	Kahutara	1.85	53	P	Pn	08 42 04.2	+0.1
KHZ	Kahutara	1.85	53	P	Pn	08 42 04.3	+0.3
THZ	Tophouse	2.05	29		Pn	08 42 07.8	+0.8
THZ	Tophouse	2.05	29	P	Pn	08 42 07.9	+0.9
JCZ	Jackson Bay	2.07	255	P	Pn	08 42 07.9	+0.7
JCZ	Jackson Bay	2.07	255	P	Pn	08 42 08.2	+1.0
WKZ	Wanaka	2.22	234		Pn	08 42 10.0	+0.8
WKZ	Wanaka	2.22	234	P	Pn	08 42 09.6	+0.3
EAZ	Earnscleugh	2.32	223	P	Pn	08 42 10.6	0.0
MRNZ	Matariki Terra	2.34	23		Pn	08 42 12.2	+1.4
MRNZ	Matariki Terra	2.34	23	P	Pn	08 42 11.9	+1.1
HHSZ	Highcliff Hill	2.42	196	P	Pn	08 42 12.3	+0.3
BSWZ	Blackbirch Sta	2.52	44		Pn	08 42 14.8	+1.5
BSWZ	Blackbirch Sta	2.52	44	P	Pn	08 42 15.3	+2.0
CMWZ	Cape Campbell	2.67	48	P	Pb	08 42 21.4	+0.5
NNZ	Nelson	2.70	31	Pn	Pn	08 42 18.2	+2.4
NNZ	Nelson	2.70	31	P	Pn	08 42 17.6	+1.8
TKNZ	Takaka Hill	2.73	23	Pn	Pn	08 42 17.0	+0.7
TKNZ	Takaka Hill	2.73	23	P	Pn	08 42 16.9	+0.7
TUZ	Tuapeka	2.76	209	P	Pn	08 42 17.7	+1.1
TUWZ	Tuamarina	2.77	41	Pn	Pn	08 42 19.0	+2.3
QRZ	Quartz Range	2.83	15	Pn	Pn	08 42 18.1	+0.6
QRZ	Quartz Range	2.83	15	P	Pn	08 42 18.1	+0.6
QRZ	Quartz Range	2.83	15	P	Pn	08 42 18.0	+0.4
MSZ	Milford Sound	2.84	246	P	Pn	08 42 17.7	0.0
MLZ	Mavora Lakes	3.05	233	Pn	Pn	08 42 21.4	+0.7
MLZ	Mavora Lakes	3.05	233	P	Pn	08 42 20.7	0.0
TCW	Tory Channel	3.10	42	Pn	Pn	08 42 23.2	+2.0
TCW	Tory Channel	3.10	42	P	Pn	08 42 23.4	+2.2
SNZO	South Karori	3.24	47	Pn	Pn	08 42 24.0	+0.8
SNZO	South Karori	3.24	47	P	Pn	08 42 24.1	+0.9
BHW	Baring Head	3.26	50	Pn	Pn	08 42 24.8	+1.3
DUWZ	D'Urville Isla	3.27	33	P	Pn	08 42 26.1	+2.5
PLWZ	Palliser	3.38	55	Pn	Pn	08 42 24.8	-0.4
PLWZ	Palliser	3.38	55	P	Pn	08 42 24.7	-0.4
WHZ	Wether Hill Ro	3.47	227	Pn	Pn	08 42 25.7	-0.7
WHZ	Wether Hill Ro	3.47	227	P	Pn	08 42 25.3	-1.0
KIW	Kapiti Island	3.67	44	P	Pn	08 42 30.0	+0.9
DCZ	Deep Cove	3.68	237	Pn	Pn	08 42 28.8	-0.4
DCZ	Deep Cove	3.68	237	P	Pn	08 42 29.3	+0.1
MTW	Mount Morrison	3.78	52	P	Pn	08 42 30.3	-0.3
OGWZ	Otaki Gorge	3.84	46	P	Pn	08 42 32.1	+0.7
HOWZ	Holdsworth Sta	3.97	49	P	Pn	08 42 33.6	+0.4
TMWZ	Te Maipa	4.04	54	P	Pn	08 42 34.8	+0.6
APZ	The Paps	4.13	216	P	Pn	08 42 35.5	+0.1
MRZ	Mangatainoka R	4.17	47	Pn	Pn	08 42 36.1	+0.1
MRZ	Mangatainoka R	4.17	47	P	Pn	08 42 36.1	+0.1
PYZ	Puysegur Point	4.33	231	Pn	Pn	08 42 38.8	+0.6
PYZ	Puysegur Point	4.33	231	P	Pn	08 42 39.6	+1.4
PRWZ	Pori Road	4.45	49	P	Pn	08 42 41.8	+1.9
NMEZ	Namu Road	4.50	24	P	Pn	08 42 42.5	+2.1
BFZ	Birch Farm	4.52	52	Pn	Pn	08 42 43.6	+2.8
BFZ	Birch Farm	4.52	52	P	Pn	08 42 42.5	+1.7
BFZ	Birch Farm	4.52	52	P	Pn	08 42 40.7	-0.1
WAZ	Wanganui	4.59	35	P	Pn	08 42 46.7	+4.9
NBEZ	Newall Road No	4.63	23	P	Pn	08 42 42.3	0.0
KHEZ	Kahui Hut	4.65	24	P	Pn	08 42 44.7	+2.1
KHEZ	Kahui Hut	4.65	24	P	Pn	08 42 44.5	+1.9
NEZ	North Egmont	4.69	25	P	Pn	08 42 45.4	+2.1
PKE	Pukeiti	4.73	24	P	Pn	08 42 45.4	+1.7
DVHZ	Dannevirke	4.74	48	P	Pn	08 42 46.0	+2.2
TSZ	Takapari Road	4.80	45	P	Pn	08 42 48.8	+4.0
VRZ	Vera Road	5.04	30	P	Pn	08 42 50.4	+2.4
TRVZ	Turoa	5.21	37	P	Pn	08 42 54.5	+4.0
NGZ	Ngauruhoe	5.33	36	P	Pn	08 42 57.3	+5.1
OTVZ	Oturere	5.37	37	P	Pn	08 42 55.9	+3.3
NNVZ	North Ngauruho	5.38	36	P	Pn	08 42 57.7	+5.0
WTVZ	West Tongariro	5.38	36	P	Pn	08 42 56.8	+4.1
ETVZ	East Tongariro	5.41	37	P	Pn	08 42 57.5	+4.3
KAHZ	Kahuranaki	5.48	48	P	Pn	08 42 55.6	+1.5
KWHZ	Kaweka Forest	5.52	43	P	Pn	08 42 57.7	+3.1
HIZ	Hauiti	5.62	27	Pn	Pn	08 42 57.6	+1.6
HIZ	Hauiti	5.62	27	P	Pn	08 42 57.6	+1.6
HIZ	Hauiti	5.62	27	P	Pn	08 42 57.4	+1.4
BKZ	Black Stump Fm	5.75	42	Pn	Pn	08 42 59.9	+2.2
TLZ	Tolley Road	6.03	31	P	Pn	08 43 03.1	+1.5
RTZ	Ruatahuna	6.42	42	Pn	Pn	08 43 08.7	+1.7
TOZ	Tahuroa Road	6.55	29	Pn	Pn	08 43 11.0	+2.4
PINNC	Pines Island,	21.17	349	P	P	08 46 14.6	-2.7
EIDS	Eidsvold	24.67	311	P	P	08 46 51.9	-0.9
EIDS				IAmb	IAmb	08 47 06.9	
	comp=Z,15nm,1.4s						
STKA	Stephens Creek	26.27	286	P	P	08 47 07.7	+0.4
CTAO	Charters Tower	31.55	310	P	P	08 47 54.9	+0.5
CTAO				IAmb	IAmb	08 48 22.4	
	comp=Z,8.1nm,1.4s						
AS31	Alice Springs	36.70	290	P	P	08 48 39.3	+0.2
ASAR	Alice Springs	36.70	290	P	P	08 48 39.8	+0.8
	comp=Z,2.1nm,0.5s,baz=128,slow=7.8,SNR=64						
	comp=Z,2.1nm,0.5s						
ASAR	Alice Springs	36.70	290	P	P	08 48 39.0	0.0
COEN	Coen	38.23	312	P	P	08 48 50.8	-1.3
COEN				IAmb	IAmb	08 49 32.5	
	comp=Z,7.4nm,0.9s						
WB2	Warramunga Arr	38.96	295	P	P	08 48 57.5	-0.7
WB2				IAmb	IAmb	08 48 59.6	
	comp=Z,3.7nm,0.6s						
WRAB	Tennant Creek	38.97	295	P	P	08 48 57.5	-0.8
WRAB				IAmb	IAmb	08 48 59.6	
	comp=Z,4.7nm,0.7s						
WRA	Warramunga Arr	38.97	295	P	P	08 48 59.1	+0.9
	comp=Z,2.2nm,0.6s,baz=133,slow=7.9,SNR=54						
	comp=Z,2.2nm,0.6s						
WRA	Warramunga Arr	38.97	295	P	P	08 48 56.5	-1.8
WB0	Warramunga Arr	39.06	295	P	P	08 48 59.7	+0.7
WB0				IAmb	IAmb	08 49 17.4	
	comp=Z,6.8nm,1.4s						
PMG	Port Moresby	40.11	321	P	P	08 49 06.8	-0.9
KNRA	Kununurra	45.71	294	P	P	08 49 52.8	-0.3
KNRA				IAmb	IAmb	08 50 03.6	
	comp=Z,7.1nm,1.1s						
FITZ	Fitzroy Crossi	46.12	289	P	P	08 49 57.2	+0.9
QSPA	South Pole Qui	46.57	180	P	P	08 49 58.4	-1.1
QSPA				IAmb	IAmb	08 50 15.5	
	comp=Z,7.2nm,1.4s						
PSA00	Pilbara Seismi	47.91	280	P	P	08 50 10.6	+0.3
MBWA	Marble Bar	48.25	280	P	P	08 50 12.8	-0.1
TORD	Torodi Ar. Bea	148.46	199	PKPbc	PKPbc	09 01 19.0	+0.3
	comp=Z,0.8nm,0.7s,baz=180,slow=0.9,SNR=5.3						
BRTR	Keskin Array B	148.56	278	PKPbc	PKPbc	09 01 17.8	-0.8
	comp=Z,0.8nm,0.7s,baz=81,slow=3.4,SNR=3.5						
ARCES	ARCESS Array B	148.75	338	PKPbc	PKPdf	09 01 16.4	+2.3
	comp=Z,2.0nm,0.8s,baz=71,slow=4.9,SNR=4.4						

IDC 13 08:46:13.7±6.0**, 19°.36S**×**177°.63W, h0**^{km}**, mb3.6**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=281.9km s-min=36.6km az=146.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.12	261	P	P	08 54 32.3	+0.1
	0.4nm,0.3s,baz=97,slow=7.5,SNR=18						
	0.4nm,0.3s						
ASAR	Alice Springs	45.13	256	P	P	08 54 32.0	-0.3
	0.6nm,0.5s,baz=91,slow=7.8,SNR=18						
	0.6nm,0.5s						
ILAR	Eielson Array	87.14	13	P	P	08 59 01.7	+0.6
	0.2nm,0.8s,baz=204,slow=6.5,SNR=1.6						
	0.2nm,0.8s						
GERES	GERESS Array B	149.20	345	PKPbc	PKPbc	09 06 02.9	-1.4
	0.5nm,0.6s,baz=23,slow=5.3,SNR=2.0						

BJI ***13*** *08:48:58.8±0.0, 14°.06N×145°.83E, h100^{km}, mb5.4/83, mB5.6/63*

DJA ***13*** *08:49:01.0±0.8, 15°N±6°×14°5E±°, h98^{km}±6^{km}, M5.5/80, mb5.6/80, mB6.0/64, MLv6.1/1, Mw(mB)5.6/64, MwMwp5.3/26, Mwp5.5/26*

MOS ***13*** *08:49:04.6±1.0, 14°.37N×145°.17E, h115^{km}, mb5.5/73, MS4.5/4, Error ellipse: s-maj=6.9km s-min=4.1km az=110.3*

NEIC ***13*** *08:49:05.9, 14°.33N×145°.26E, h104^{km}*

NEIC ***13*** *08:49:05.3±2.1, 14°.39N±0°.08×145°.21E±0°.08, h99^{km}±1^{km}, mb5.5/443, Mwb5.5/27, Mww5.5/16, Error ellipse: s-maj=13.8km s-min=12.3km az=234.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.39; M$_{\theta\theta}$0.76; M$_{\phi\phi}$0.63; M$_{r\theta}$1.26; M$_{\theta\phi}$-0.19; M$_{\phi r}$-1.74; Fault plane solution: M$_0$2.47000×10^{17} NP1:ϕ_s322.23000°, δ76.12000°, λ-87.17000°. NP2:ϕ_s130.59000°, δ14.16000°, λ-101.30000°. Principal axes: T 2.1626, Plg31.0000°, Azm50.0000°; N 0.5276, Plg3.0000°, Azm142.0000°; P -2.6902, Plg59.0000°, Azm236.0000°;*

IDC ***13*** *08:49:05.3±0.4, 14°.43N×145°.32E, h108^{km}±3^{km}, mb5.1/49, mbtmp5.4/52, MS4.4/64 Error ellipse: s-maj=9.4km s-min=5.3km az=77.0*

NEIC ***13*** *08:49:05.3, 14°.33N×145°.27E, h120^{km}*

KLM ***13*** *08:49:05, 14°.34N×145°.34E, h103^{km}, mb5.2*

NEIC ***13*** *08:49:05.3, 14°.53N×146°.09E, h120^{km}, Moment Tensor Solution. Duration: 2^{s}5 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.48; M$_{\theta\theta}$0.49; M$_{\phi\phi}$0.99; M$_{r\theta}$0.60; M$_{\theta\phi}$-0.96; M$_{\phi r}$-1.19; Fault plane solution: M$_0$2.09000×10^{17} NP1: ϕ_s329.93000°, δ65.04000°, λ-82.70000°. NP2: ϕ_s133.04000°, δ25.94000°, λ-105.27000°. Principal axes: T 2.2037, Plg20.0000°, Azm54.0000°; N -0.2245, Plg7.0000°, Azm147.0000°; P -1.9792, Plg69.0000°, Azm255.0000°;*

GCMT ***13*** *08:49:07.3±0.1, 14°.32N±0°.01×145°.31E±0°.01, h108^{km}, MW5.6/164, Moment Tensor Solution. s148,c265; s164,c326; Duration: 1^{s}5 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.55±.03; M$_{\theta\theta}$1.28±.03; M$_{\phi\phi}$0.27±.03; M$_{r\theta}$0.93±.02; M$_{\theta\phi}$-0.82±.03; M$_{\phi r}$-2.02±.02; Best double couple: M$_0$2.76100×10^{17} NP1:ϕ_s326.00000°, δ73.00000°, λ-72.00000°. NP2:ϕ_s98.00000°, δ24.00000°, λ-135.00000°. Principal axes: T 2.6390, Plg26.0000°, Azm42.0000°; N 0.2490, Plg17.0000°, Azm141.0000°; P -2.8830, Plg58.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 08:49:05.6±0.2**, 14°.41N**±0°.03×**145°.31E**±0°.03**, h113**^{km}±1^{km}**, h113**^{km}**:pP-P, n1589,** σ**1^{s}36**/1771**, mb5.4**/399**, 43C-50D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.92	208	P	Pn	08 49 24.4	-1.9
	5μm,0.3s,baz=330,slow=4.1,SNR=1195						
GUMO				S	Sn	08 49 42.2	+0.4
	8μm,0.3s,baz=100,slow=8.1,SNR=7.3						
GUMO	Guam	0.92	208	Pn	Pn	08 49 24.6	-1.7
GUMO	Guam	0.92	208	P	Pn	08 49 24.6	-1.7
GUMO	Guam	0.92	208	P	Pn	08 49 24.6	-1.7
JCJ	Chichijima	12.96	347	P	Pn	08 52 06.8	+1.3
	67nm,0.7s,baz=311,slow=12,SNR=1.6						
JCJ	Chichijima	12.96	347	Pn	Pn	08 52 06.7	+1.1
PATS	Pohnpei	14.83	119	Pn	Pn	08 52 28.6	-1.1
PATS	Pohnpei	14.83	119	P	Pn	08 52 29.1	-0.6
JMZ	Minamidaito 2	17.41	313	P	P	08 52 59.6	-1.6
SMPI	Sarmi	17.55	202	P	Pn	08 53 03.2	-0.2
	258nm,0.8s,6μm7μm						
GENI	Genyem	17.64	197	P	Pn	08 53 04.4	0.0
	382nm,1.3s,8μm10μm						
JHJ2	Mitsune	19.28	346	P	P	08 53 22.5	+1.0
RKPI	Ransiki, Papua	19.28	216	P	P	08 53 22.0	+0.3
	144nm,0.6s,10μm11μm						
JHJ	Hachijo jima 2	19.29	346	P	Pn	08 53 22.8	-1.0
	176nm,1.0s,baz=245,slow=11,SNR=1.9						
JHJ				S	S	08 56 53.0	-1.1
	167nm,0.9s,baz=58,slow=16,SNR=2.0						
JHJ				LR	LR	09 00 06.6	
	comp=Z,2μm,20.7s,baz=160,slow=34						
GLSP	General Luna,	19.30	258	⇑eP	Pn	08 53 23.7	-0.5
RABL	Rabaul	19.69	159	P	Pn	08 53 28.1	-0.6
KRVT	Keravat (AS076	19.75	160	P	P	08 53 27.6	+0.7
	204nm,1.1s,baz=266,slow=5.0,SNR=15						
KRVT				LR	LR	09 00 30.7	
	comp=Z,1μm,19.4s,baz=121,slow=35						
SCPH	Surigao	19.91	259	eP	P	08 53 29.3	+0.8
JOW	Kunigami	20.14	311	P	Pn	08 53 32.5	-1.3
	199nm,0.7s,baz=147,slow=12,SNR=18						
JOW				ScP	ScP	09 01 07.7	+0.1
	61nm,1.0s,baz=307,slow=28,SNR=3.9						
	199nm,0.7s						
JOW	Kunigami	20.14	311	P	P	08 53 32.1	+1.1
JOW	Kunigami	20.14	311	P	Pn	08 53 34.3	+0.5
CNP	Catarman	20.16	267	⇓eP	Pn	08 53 35.5	+1.3
MSLP	Maasin	20.42	260	⇓eP	Pn	08 53 35.7	-1.6
PVCP	Virac	20.54	270	⇓eP	Pn	08 53 37.8	-0.8
SWI	Sorong	20.58	224	P	P	08 53 35.8	0.0
	724nm,1.5s,11μm11μm						
SIJI	Sorong	20.58	224	P	P	08 53 36.5	+0.7
	236nm,0.8s,baz=32,slow=11,SNR=53						
	236nm,0.8s						
DAV	Davao City (W)	20.70	251	P	P	08 53 37.4	+0.4
	139nm,0.3s,baz=96,slow=10,SNR=2.0						
DAV				LR	LR	09 00 25.7	
	comp=Z,566nm,20.9s,baz=80,slow=33						
	139nm,0.3s						
H11S3	WAKE ISLAND Hy	20.90	76	P	P	08 53 40.7	+1.7
H11S3				T	T	09 15 06.8	
	baz=263,slow=75,SNR=57						
H11S1	WAKE ISLAND Hy	20.91	76	P	P	08 53 40.9	+1.7
H11S1				T	T	09 15 07.7	
	baz=263,slow=75,SNR=50						
H11S2	WAKE ISLAND Hy	20.92	76	P	P	08 53 40.9	+1.7
H11S2				T	T	09 15 08.5	
	baz=263,slow=75,SNR=45						
WAKE	Wake Island	20.99	74	P	P	08 53 40.6	+0.5
CGP	Cagayan de Oro	21.04	256	⇓eP	P	08 53 41.9	+1.2
SCSP	San Jose Seism	21.15	271	⇑eP	P	08 53 45.1	+3.2
H11N1	WAKE ISLAND Hy	21.29	73	P	P	08 53 43.7	+0.6
H11N1				T	T	09 15 30.1	
	baz=262						
H11N2	WAKE ISLAND Hy	21.30	73	P	P	08 53 43.8	+0.6
H11N2				T	T	09 15 28.4	
	baz=262						
H11N3	WAKE ISLAND Hy	21.31	73	P	P	08 53 43.9	+0.6
H11N3				T	T	09 15 22.6	
	baz=262						
TBP	Tagbilaran	21.48	260	⇓iP	P	08 53 44.4	-1.0
FAKI	Fak Fak	21.54	218	P	P	08 53 46.5	+0.4
FAKI	Fak Fak	21.54	218	P	P	08 53 46.4	+0.4
FAKI	Fak Fak	21.54	218	P	P	08 53 46.1	+0.1
	1μm,1.0s,16μm9μm						
JSU	Suzuyama	21.79	324	P	P	08 53 47.8	-0.7
JMN	Monobe	21.85	334	P	P	08 53 47.7	-1.5
JMN	Monobe	21.85	334	P	P	08 53 52.2	+3.0
CTBH	Cotabato--PC H	21.87	253	⇑iP	P	08 53 50.5	+1.0
INU	Inuyama	22.14	342	P	P	08 53 51.1	-1.2
INU	Inuyama	22.14	342	P	P	08 53 55.3	+3.1
RCP	Roxas	22.16	265	⇓eP	P	08 53 52.9	+0.3
DCPH	Dipolog City	22.27	257	⇓iP	P	08 53 54.2	+0.5
JGF	Kuroka	22.28	343	P	P	08 53 54.2	+0.5
JGF	Kuroka	22.28	343	P	P	08 53 56.4	+2.7
TNTI	Ternate	22.32	234	P	P	08 53 52.0	-2.3
TNTI	Ternate	22.32	234	P	P	08 53 54.2	0.0
TNTI	Ternate	22.32	234	P	P	08 53 52.7	-1.5
	78nm,1.6s,2μm4μm						
PAGZ	Pagadian	22.47	255	⇑eP	P	08 53 57.2	+1.5
KWAJ	Kwajalein Atol	22.54	102	P	P	08 53 56.3	-0.2
KWAJ	Kwajalein Atol	22.54	102	P	P	08 53 59.0	+2.5
KWAJ	Kwajalein Atol	22.54	102	P	P	08 53 56.3	-0.2
CNOP	Candoni, Negro	22.62	261	⇑eP	P	08 53 57.3	0.0
CAUP	Cauayan	22.75	279	⇑eP	P	08 54 00.9	+2.4
JNU	Nakatsue	22.79	327	P	P	08 54 00.6	+1.8
	111nm,0.7s,baz=107,slow=3.1,SNR=50						
	111nm,0.7s						
JNU	Nakatsue	22.79	327	P	P	08 54 00.5	+1.7
JNU	Nakatsue	22.79	327	P	P	08 54 01.1	+2.3
BOAC	Boac	22.79	271	⇑eP	P	08 54 00.4	+1.5
MJAR	Matsushiro Arr	22.94	345	P	P	08 54 01.1	+0.9
	7.9nm,0.6s,baz=170,slow=9.4,SNR=20						
MJAR				PcP	PcP	08 57 46.8	0.0
	10nm,0.7s,baz=163,slow=3.8,SNR=5.3						
MJAR				ScP	ScP	09 01 12.8	-1.7
	5.8nm,0.6s,baz=174,slow=3.4,SNR=7.2						
MJAR				LR	LR	09 02 14.8	
	comp=Z,3μm,19.2s,baz=154,slow=34						
	7.9nm,0.6s						
MAJO	Matsushiro	22.94	345	P	P	08 54 01.3	+1.1
MAJO	Matsushiro	22.94	345	P	P	08 54 01.7	+1.5
MAJO	Matsushiro	22.94	345	d iP	P	08 54 00.7	+0.5
MAJO				pmax	pmax		
	comp=Z,33nm,0.7s						
MJB9	Matsu-Tunnel	22.94	345	P	P	08 54 02.1	+1.8
BALP	Baler	22.95	276	⇓eP	P	08 54 02.6	+2.1
LQP	Lukban	23.04	272	⇓eP	P	08 53 59.1	-2.4
LBMI	Labuha	23.11	231	P	P	08 54 01.4	-0.6
	comp=Z,108nm,1.0s,comp=Z,3μm						
YOJ	Yonaguni jima	23.25	299	P	P	08 54 04.8	+1.6
YOJ	Yonaguni jima	23.25	299	P	P	08 54 05.5	+2.3
YOJ	Yonaguni jima	23.25	299	P	P	08 54 04.8	+1.6
JHS	Saijyo	23.26	334	P	P	08 54 03.2	0.0
JHS	Saijyo	23.26	334	P	P	08 54 04.8	+1.6
APYP	Conner	23.36	282	⇑eP	P	08 54 05.2	+0.9
JMM	Marumori	23.70	351	P	P	08 54 06.4	-0.8
PMG	Port Moresby	23.73	175	P	P	08 54 06.6	-1.0
	comp=Z,231nm,0.8s,baz=1.5,slow=6.7,SNR=74						
PMG				ScP	ScP	09 01 16.4	-0.5
	comp=Z,12nm,0.9s,baz=20,slow=6.9,SNR=3.6						
	comp=Z,231nm,0.8s						
PMG	Port Moresby	23.73	175	P	P	08 54 06.8	-0.8
PMG	Port Moresby	23.73	175	P	P	08 54 07.1	-0.5
PMG	Port Moresby	23.73	175	d iP	P	08 54 06.7	-0.9
PMG				pmax	pmax		
	comp=Z,315nm,0.9s						
SMPP	San Manuel, Pa	23.82	277	⇓eP	P	08 54 09.7	+1.2
MACP	Maragondon, Ca	23.82	273	⇑eP	P	08 54 10.2	+1.7
ABRA	Dolores	23.85	281	⇓eP	P	08 54 09.3	+0.5
MSAI	Masohi	23.97	224	P	P	08 54 09.5	-0.3
	comp=Z,67nm,0.8s,comp=Z,1μm						
BNDI	Bandanaira	24.23	220	P	P	08 54 11.1	-1.0
BNDI	Bandanaira	24.23	220	P	P	08 54 12.3	+0.2
	comp=Z,320nm,0.9s,comp=Z,18μmcomp=Z,6μm						
LUBP	Lubang	24.32	272	⇓eP	P	08 54 13.3	+0.4
JSD	Sado	24.35	346	P	P	08 54 14.4	+1.4
JSD	Sado	24.35	346	P	P	08 54 14.7	+1.7
NACB	Ninganchiao	24.36	297	P	P	08 54 12.4	-0.9
NACB	Ninganchiao	24.36	297	P	P	08 54 15.5	+2.2
YULB	Yu-li	24.38	295	P	P	08 54 13.6	+0.1
YULB	Yu-li	24.38	295	P	P	08 54 16.5	+3.0
TWGBT	Beinan	24.41	294	P	P	08 54 15.9	+2.2
TWG	Pinlang	24.41	294	P	P	08 54 14.2	+0.4
BOLP	Bolinao	24.56	278	⇓eP	P	08 54 18.6	+3.5
YHNB	Yeheng	24.72	298	P	P	08 54 15.8	-0.8
YHNB	Yeheng	24.72	298	P	P	08 54 18.9	+2.3
AAI	Ambon	24.72	225	P	P	08 54 16.2	-0.4
	comp=Z,521nm,0.9s,comp=Z,5μmcomp=Z,85μm						
SSLB	Suanglung	24.80	296	P	P	08 54 17.5	+0.2
SSLB	Suanglung	24.80	296	P	P	08 54 20.0	+2.7
TPUB	Ta-pu	24.94	294	P	P	08 54 17.6	-1.0
TPUB	Ta-pu	24.94	294	P	P	08 54 19.8	+1.2
	comp=Z,142nm,1.2s						
NLAI	Namlea	25.16	227	P	P	08 54 20.2	-0.4
	comp=Z,21nm,0.6s,comp=Z,7μm						
SANI	Sanana	25.17	231	P	P	08 54 17.9	-2.8
	comp=Z,88nm,0.8s,comp=Z,1μmcomp=Z,5μm						
GTOI	Gorontalo	25.95	240	P	P	08 54 27.4	-0.4
	comp=Z,32nm,1.2s,comp=Z,755nm						
SAUI	Saumlaki	26.23	213	P	P	08 54 29.4	-0.8
JTM	Tenmabayashi	26.54	353	P	P	08 54 32.4	-0.4
JTM				IAmb	IAmb	08 55 03.9	
	comp=Z,118nm,1.2s						
MRSI	Marisa	26.94	241	P	P	08 54 35.8	-0.9
	comp=Z,111nm,0.7s,comp=Z,2μmcomp=Z,5μm						
LUWI	Luwuk	27.08	237	P	P	08 54 36.2	-1.8
LUWI	Luwuk	27.08	237	P	P	08 54 36.5	-1.5
LUWI	Luwuk	27.08	237	P	P	08 54 36.1	-1.9
	comp=Z,359nm,0.9s,comp=Z,3μmcomp=Z,5μm						
TJN	Taejon	27.13	327	P	P	08 54 38.1	0.0
TJN				IAmb	IAmb	08 54 40.9	
	comp=Z,141nm,0.8s						
TJN	Taejon	27.13	327	P	P	08 54 40.4	+2.2
TJN	Taejon	27.13	327	d iP	P	08 54 39.9	+1.7
TOLI2	Tolitoli	27.61	244	P	P	08 54 41.8	-0.9
SSE	Sheshan	27.66	311	P	P	08 54 42.5	-0.5
SSE				S	S	08 59 18.3	+1.5
SSE				pmax	pmax		
	comp=Z,16nm,0.7s						
SSE				pmax	pmax		
	comp=Z,240nm,3.5s						
SSE				LR	LR		
	comp=Z,610nm,16.1s						
SSE				LR	LR		
	comp=Z,550nm,15.5s						
KSRS	Korea Array	27.67	329	P	P	08 54 44.6	+1.6
	comp=Z,34nm,0.8s,baz=143,slow=9.9,SNR=67						
KSRS				pP	pP	08 55 07.9	+1.3
	comp=Z,14nm,0.5s,baz=144,slow=10,SNR=3.9						
KSRS				PcP	PcP	08 57 58.1	+0.7
	comp=Z,6.6nm,0.8s,baz=169,slow=1.5,SNR=5.5						
KSRS				ScP	ScP	09 01 27.9	0.0
	comp=Z,10nm,1.1s,baz=136,slow=3.6,SNR=11						
	comp=Z,34nm,0.8s						
KSAR	Wonju Array Be	27.68	329	P	P	08 54 43.4	+0.3
KSAR	Wonju Array Be	27.68	329	P	P	08 54 43.4	+0.3
KS19	Wonju Array Si	27.74	329	P	P	08 54 43.0	-0.6
KS19				IAmb	IAmb	08 55 14.9	
	comp=Z,104nm,0.9s						
HNR	Honiara	27.78	148	LR	LR	09 05 43.8	
	comp=Z,16μm,19.8s,baz=292,slow=36						
COEN	Coen	28.26	184	P	P	08 54 48.0	-0.4
COEN				IAmb	IAmb	08 54 50.8	
	comp=Z,124nm,1.2s						
COEN	Coen	28.26	184	P	P	08 54 48.4	0.0
	comp=Z,128nm,0.8s						
INCN	Inchon	28.35	328	P	P	08 54 51.9	+2.8
	comp=Z,54nm,0.9s						
MPSI	Mapaga	28.76	243	P	P	08 54 51.9	-1.0
	comp=Z,37nm,1.6s,comp=Z,916nmcomp=Z,3μm						
JKA	Kamikawa-asahi	29.70	356	P	P	08 55 02.5	+1.6
JKA				IAmb	IAmb	08 56 06.6	
	comp=Z,38nm,0.4s						
ASAJ	Asahikawa	29.70	356	P	P	08 55 02.5	+1.7
	comp=Z,6.8nm,0.6s,baz=199,slow=10,SNR=19						
ASAJ				PcP	PcP	08 58 02.7	+0.4
	comp=Z,16nm,0.8s,baz=216,slow=6.7,SNR=3.7						
ASAJ				ScP	ScP	09 01 34.4	+0.2
	comp=Z,2.8nm,0.6s,baz=183,slow=17,SNR=2.0						
	comp=Z,6.8nm,0.6s						

KDU	Kakadu	29.77	206	P	P	08 55 00.9	-0.9
KKM	Kota Kinabalu	29.78	257	P	P	08 55 02.0	-0.1
KKM	Kota Kinabalu	29.78	257	P	P	08 55 02.9	+0.8
NJ2	Nanjing	29.86	311	⇓P	P	08 55 04.8	+2.3
NJ2				pP	pwP	08 55 29.5	-1.4
NJ2				sP	sP	08 55 35.3	-3.5
NJ2				S	S	08 59 53.5	+2.2
NJ2				sS	sS	09 00 37.3	+3.4
NJ2				ScP	ScP	09 01 35.0	+0.1
NJ2				pmax	pmax		
	comp=Z,36nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,480nm,4.4s						
NJ2				LR	LR		
	comp=Z,1μm,15.7s						
NJ2				LR	LR		
	comp=Z,1μm,16.2s						
NJ2				LR	LR		
	comp=Z,2μm,21.6s						
SPMM	Sapulut	29.99	254	P	P	08 55 04.0	+0.1
MTN	Manton Dam	30.50	208	P	P	08 55 07.6	-0.7
MTN	Manton Dam	30.50	208	P	P	08 55 08.3	+0.1
SPSI	Sidrap Palu	31.21	236	P	P	08 55 13.8	-0.8
	comp=Z,40nm,1.4s,comp=Z,1μm						
BKSI	Bulukumba	31.75	234	P	P	08 55 18.5	-0.8
	comp=Z,34nm,1.0s,comp=Z,630nmcomp=Z,2μm						
USA0B	Ussuriysk Arra	31.79	342	P	P	08 55 20.2	+0.9
USA0B	Ussuriysk Arra	31.79	342	⇑eP	P	08 55 21.5	+2.2
USRK	Ussuriysk Ar.	31.79	342	P	P	08 55 19.9	+0.6
	comp=Z,13nm,0.6s,baz=146,slow=8.1,SNR=28						
USRK				PcP	PcP	08 58 07.0	-0.9
	comp=Z,6.1nm,0.6s,baz=164,slow=4.8,SNR=2.6						
USRK				LR	LR	09 07 03.3	
	comp=Z,1μm,21.5s,baz=148,slow=34						
	comp=Z,13nm,0.6s						
SOEI	Soe	31.81	222	P	P	08 55 18.0	-1.9
SOEI				IAmb	IAmb	08 55 51.2	
	comp=Z,123nm,1.0s						
SOEI	Soe	31.81	222	P	P	08 55 19.5	-0.4
SOEI	Soe	31.81	222	P	P	08 55 18.7	-1.2
	comp=Z,117nm,0.8s,comp=Z,2μm						
KAPI	Kappang	31.85	235	P	P	08 55 17.7	-2.5
KAPI	Kappang	31.85	235	P	P	08 55 20.2	0.0
KAPI	Kappang	31.85	235	P	P	08 55 17.7	-2.5
KAPI				pmax	pmax		
	comp=Z,37nm,0.9s						
KAPI	Kappang	31.85	235	P	P	08 55 19.0	-1.2
DL2	Dalian	32.11	324	P	P	08 55 24.8	+2.6
DL2				pP	pwP	08 55 50.0	-0.3
DL2				S	S	09 00 31.5	+5.2
DL2				ScP	ScP	09 01 40.5	-1.8
DL2				pmax	pmax		
	comp=Z,200nm,0.7s						
DL2				pmax	pmax		
	comp=Z,610nm,5.7s						
MTSU	Mount Surprise	32.35	182	P	P	08 55 25.1	+0.6
MMRI	Maumere	32.37	226	P	P	08 55 23.3	-1.4
MMRI	Maumere	32.37	226	P	P	08 55 23.2	-1.5
MMRI	Maumere	32.37	226	P	P	08 55 24.1	-0.6
	comp=Z,193nm,1.4s,comp=Z,3μm						
YSS	Yuzh-Sakhalins	32.52	357	P	P	08 55 26.2	+0.6
YSS	Yuzh-Sakhalins	32.52	357	eP	P	08 55 24.8	-0.8
YSS				eS	S	09 00 34.2	+1.8
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=Z,900nm,16.0s						
YSS				MLR	MLR		
	comp=N,500nm,15.0s						
YSS				MLR	MLR		
	comp=E,400nm,15.0s						
WHN	Wuhan	32.66	305	⇑P	P	08 55 29.8	+2.7
WHN				pP	pwP	08 55 56.5	+0.7
WHN				S	S	09 00 37.5	+2.5
WHN				pmax	pmax		
	comp=E,1μm,3.1s						
WHN				LR	LR		
	comp=E,3μm,14.5s						
MDJ	Mudanjiang	32.94	339	P	P	08 55 31.3	+1.9
MDJ				pP	pP	08 55 54.6	+1.1
MDJ				sP	sP	08 56 07.0	+0.8
MDJ				PP	PnPn	08 56 40.6	-2.1
MDJ				S	S	09 00 39.0	-0.1
MDJ				pmax	pmax		
	comp=E,21nm,1.8s						
MDJ				pmax	pmax		
	comp=E,190nm,9.2s						
MDJ				LR	LR		
	comp=E,1μm,18.7s						
MDJ				LR	LR		
	comp=E,710nm,22.3s						
MDJ				LR	LR		
	comp=E,1μm,15.2s						
MDJ	Mudanjiang	32.94	339	P	P	08 55 28.8	-0.6
MDJ				IAmb	IAmb	08 56 36.6	
	comp=Z,92nm,1.8s						
MDJ	Mudanjiang	32.94	339	P	P	08 55 32.3	+2.9
CNSH	ChangSha	33.01	300	⇓P	P	08 55 32.4	+2.2
CNSH				S	S	09 00 43.6	+3.0
CNSH				LR	LR		
	comp=Z,1μm,14.3s						
CNSH				LR	LR		
	comp=Z,930nm,19.5s						
CNSH				LR	LR		
	comp=Z,990nm,21.5s						
SNY	Shenyang	33.17	330	⇑P	P	08 55 32.9	+1.5
SNY				pP	pwP	08 55 59.3	-0.5
SNY				S	S	09 00 40.8	-1.9
SNY				pmax	pmax		
	comp=Z,33nm,0.9s						
SNY				pmax	pmax		
	comp=Z,390nm,4.3s						
SNY				LR	LR		
	comp=Z,240nm,4.0s						
SNY				LR	LR		
	comp=Z,710nm,15.7s						
TIA	Tai'an	33.26	316	⇑P	P	08 55 33.9	+1.6
TIA				S	S	09 00 45.8	+1.5
TIA				pmax	pmax		
	comp=Z,31nm,1.3s						
TIA				LR	LR		
	comp=Z,1μm,18.6s						
TIA				LR	LR		
	comp=Z,2μm,21.1s						
TIA				LR	LR		
	comp=Z,1μm,37.3s						
TV1H	Townsville Har	33.49	177	P	P	08 55 34.5	+0.2
MTKI	Muara Teweh, K	33.75	246	P	P	08 55 35.5	-1.2
	comp=Z,81nm,0.5s,comp=Z,13μm						
CN2	Changchun	33.86	334	eP	P	08 55 38.5	+1.2
CN2				epP	pP	08 56 03.3	+1.9
CN2				ePP	PP	08 56 55.3	-0.9
CN2				eS	S	09 00 54.5	+1.2
CN2				esS	sS	09 01 37.8	+1.6
CN2				eSS	SnSn	09 03 09.3	-2.0
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
CN2				LR	LR		
	comp=Z,1μm,17.0s						
CN2				LR	LR		
	comp=Z,910nm,17.0s						
CN2				LR	LR		
	comp=Z,1μm,19.0s						
KNRA	Kununurra	34.07	209	P	P	08 55 38.1	-1.3
KNRA	Kununurra	34.07	209	P	P	08 55 38.4	-1.0
QIZ	Qiongzhong	34.23	283	P	P	08 55 40.5	-0.4
QIZ				sP	sP	08 56 14.9	-2.5
QIZ				PP	PP	08 56 59.6	-1.0
QIZ				S	S	09 01 02.0	+2.3
QIZ				sS	sS	09 01 41.6	-1.1
QIZ				pmax	pmax		
	comp=Z,82nm,0.9s						
QIZ				pmax	pmax		
	comp=Z,380nm,4.1s						
QIZ	Qiongzhong	34.23	283	P	P	08 55 40.6	-0.4
QIZ	Qiongzhong	34.23	283	P	P	08 55 42.6	+1.6
QIZ	Qiongzhong	34.23	283	P	P	08 55 42.5	+1.6
QIZ				pP	pwP	08 56 08.1	-1.5
QIZ				sP	sP	08 56 19.6	+2.2
QIZ				ScP	ScP	09 01 52.1	+2.0
CTA	Charters Tower	34.29	178	P	P	08 55 41.2	-0.1
	comp=Z,29nm,0.7s,baz=359,slow=9.8,SNR=32						
CTA				ScP	ScP	09 01 49.8	-0.4
	comp=Z,14nm,0.9s,baz=352,slow=6.4,SNR=7.3						
CTA				LR	LR	09 09 23.6	
	comp=Z,403nm,20.9s,baz=347,slow=36						
	comp=Z,29nm,0.7s						
CTAO	Charters Tower	34.29	178	P	P	08 55 40.2	-1.1
CTAO	Charters Tower	34.29	178	P	P	08 55 41.3	-0.1
CTAO	Charters Tower	34.29	178	P	P	08 55 40.2	-1.1
CTAO				pmax	pmax		
	comp=Z,319nm,1.8s						
CTAO	Charters Tower	34.29	178	P	P	08 55 41.1	-0.2
CTAO				PcP	PcP	08 58 15.7	+0.4
CTAO				ScP	ScP	09 01 50.0	-0.1
GULI	GuiLin	34.50	294	P	P	08 55 50.9	+7.7
GULI				pmax	pmax		
	comp=Z,100nm,1.5s						
GULI				LR	LR		
	comp=N,880nm,14.1s						
GULI				LR	LR		
	comp=E,620nm,19.5s						
GULI				LR	LR		
	comp=Z,650nm,17.9s						
BASI	Baing, Sumba	34.64	226	P	P	08 55 41.8	-2.6
	comp=Z,251nm,1.4s,comp=Z,3μm						
UGL	Uglegorsk	34.67	356	eP	P	08 55 46.6	+2.3
UGL				e		08 56 27.3	
UGL				pmax	pmax		
	comp=Z,20nm,0.5s						
BNX	BinXian	34.69	338	⇑P	P	08 55 46.1	+1.6
BNX				pP	pP	08 56 03.3	-5.5
BNX				S	S	09 01 08.4	+2.3
BNX				sS	sS	09 01 45.8	-3.3
BNX				pmax	pmax		
	comp=Z,52nm,0.7s						
BNX				pmax	pmax		
	comp=Z,130nm,4.0s						
BNX				LR	LR		
	comp=Z,350nm,8.1s						
BNX				LR	LR		
	comp=Z,840nm,14.1s						
BNX				LR	LR		
	comp=Z,790nm,14.5s						
SBUM	Sibu	34.75	253	P	P	08 55 45.0	-0.4
SBUM				IAmb	IAmb	08 55 47.3	
	comp=Z,116nm,1.4s						
SBUM	Sibu	34.75	253	P	P	08 55 46.0	+0.6
QIS	Mount Isa	35.20	189	P	P	08 55 49.0	-0.1
HNS	HongShan	35.54	316	⇓P	P	08 55 53.1	+1.2
HNS				pP	pwP	08 56 19.5	-1.0
HNS				sP	sP	08 56 31.0	+2.5
HNS				PP	PP	08 57 17.0	+2.3
HNS				PcP	PcP	08 58 19.8	+1.1
HNS				S	S	09 01 21.1	+1.9
HNS				ScP	ScP	09 01 54.6	+0.2
HNS				PcS	PcS	09 02 03.6	-2.3
HNS				pmax	pmax		
	comp=Z,130nm,0.9s						
HNS				pmax	pmax		
	comp=Z,780nm,3.5s						
HNS				LR	LR		
	comp=Z,1μm,17.9s						
HNS				LR	LR		
	comp=Z,2μm,20.3s						
HNS				LR	LR		
	comp=Z,990nm,19.6s						
WB0	Warramunga Arr	35.62	198	P	P	08 55 51.6	-1.1
LYN	LuoYang	35.75	310	⇓P	P	08 55 54.8	+1.0
LYN				PcP	PcP	08 58 20.5	+1.1
LYN				S	S	09 01 23.8	+1.2
LYN				pmax	pmax		
	comp=Z,130nm,1.1s						
LYN				pmax	pmax		
	comp=Z,950nm,4.3s						
LYN				LR	LR		
	comp=Z,1μm,13.0s						
LYN				LR	LR		
	comp=Z,740nm,16.1s						
LYN				LR	LR		
	comp=Z,840nm,15.3s						
PLAI	Plampang	35.76	231	P	P	08 55 52.3	-1.7
PLAI	Plampang	35.76	231	P	P	08 55 52.9	-1.1
	comp=Z,59nm,0.5s,comp=Z,954nmcomp=Z,2μm						
WRAB	Tennant Creek	35.79	198	P	P	08 55 53.3	-0.9
WRAB	Tennant Creek	35.79	198	P	P	08 55 53.5	-0.7
WRAB	Tennant Creek	35.79	198	d iP	P	08 55 53.1	-1.0
WRAB				pmax	pmax		
	comp=Z,370nm,0.7s						
WRAB	Tennant Creek	35.79	198	P	P	08 55 53.2	-1.0
WRAB				PcP	PcP	08 58 20.2	+0.6
WRAB				ScP	ScP	09 01 54.8	-0.7
WB2	Warramunga Arr	35.80	198	P	P	08 55 53.3	-0.9
WRA	Warramunga Arr	35.80	198	P	P	08 55 53.6	-0.7
	comp=Z,263nm,0.6s,baz=22,slow=9.8,SNR=944						
WRA				PcP	PcP	08 58 20.8	+1.1
	comp=Z,27nm,0.7s,baz=10,slow=3.2,SNR=8.0						
WRA				ScP	ScP	09 01 54.7	-0.9
	comp=Z,29nm,0.8s,baz=14,slow=3.9,SNR=27						
WRA				PKiKP	PKiKP	09 05 39.2	-0.8
	comp=Z,1.3nm,0.6s,baz=323,slow=1.3,SNR=9.6						
WRA	Warramunga Arr	35.80	198	P	P	08 55 53.1	-1.2
WRA				IAmb	IAmb	08 55 55.3	
	comp=Z,48nm,0.9s						
DLV	T Lat	35.91	271	P	P	08 55 57.1	+1.5
BJT	Baijiatuau	36.07	321	P	P	08 55 58.1	+1.7
BJT	Baijiatuau	36.07	321	P	P	08 55 57.5	+1.1
BJT				pP	pwP	08 56 24.2	-1.0
BJI	Beijing	36.08	321	P	P	08 55 58.1	+1.7
BJI				pP	pwP	08 56 24.3	-0.9
BJI				PcP	PcP	08 58 21.8	+1.6
BJI				S	S	09 01 26.8	-0.6
BJI				ScP	ScP	09 01 56.4	+0.1
BJI				sS	sS	09 02 16.3	+5.7
BJI				pmax	pmax		
	comp=Z,51nm,0.7s						
BJI				pmax	pmax		
	comp=Z,260nm,3.9s						
BJI				LR	LR		
	comp=Z,570nm,18.1s						
BJI				LR	LR		
	comp=Z,220nm,17.8s						
BJI				LR	LR		
	comp=Z,370nm,19.3s						
TWSI	Taliwang, Sumb	36.38	232	P	P	08 55 58.5	-0.8
	comp=Z,116nm,0.9s,comp=Z,1μmcomp=Z,2μm						
TYV	Tymovskoe	36.42	357	eP	P	08 56 01.1	+1.9
TYV				eS	S	09 01 36.5	+4.1
TYV				pmax	pmax		
	comp=Z,21nm,0.9s						
TYV				pmax	pmax		
	comp=Z,100nm,3.4s						
TYV				smax	smax		
	comp=N,13nm,1.8s						
TYV				smax	smax		
	comp=E,7.0nm,1.8s						
TYV				smax	smax		
	comp=N,500nm,3.8s						
TYV				smax	smax		
	comp=E,100nm,3.8s						
KLR	Kul'dur	36.47	345	P	P	08 56 00.1	+0.5
	comp=E,15nm,0.6s,baz=144,slow=6.3,SNR=42						
KLR				PcP	PcP	08 58 21.2	0.0
	comp=E,5.8nm,0.7s,baz=110,slow=2.5,SNR=3.6						
KLR				ScP	ScP	09 01 55.7	-1.9
	comp=E,5.3nm,0.7s,baz=95,slow=2.0,SNR=5.9						
KLR				LR	LR	09 09 52.4	
	comp=E,500nm,21.5s,baz=158,slow=34						
	comp=E,15nm,0.6s						
KLR	Kul'dur	36.47	345	c iP	P	08 55 59.9	+0.3
KLR				pmax	pmax		
	comp=Z,14nm,0.7s						
ENH	Enshi	36.51	302	P	P	08 56 00.6	+0.2
ENH	Enshi	36.51	302	P	P	08 56 02.3	+2.0
ENH	Enshi	36.51	302	P	P	08 56 01.8	+1.5
ENH				pP	pwP	08 56 27.3	-2.0
ENH				PcP	PcP	08 58 21.4	-0.4
KSM	Kuching	36.89	253	P	P	08 56 02.7	-1.0
KSM				IAmb	IAmb	08 56 06.6	
	comp=Z,32nm,0.7s						
KSM					PcP	08 58 21.0	-2.2
KSM	Kuching	36.89	253	P	P	08 56 03.2	-0.5
KSM	Kuching	36.89	253	P	P	08 56 03.0	-0.7
GRNR	Gornyy	36.97	351	⇓iP	P	08 56 04.5	+0.6
GRNR				eS	S	09 01 44.7	+3.9
GRNR				pmax	pmax		
	comp=E,4.0nm,0.9s						
GRNR				pmax	pmax		
	comp=N,1.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GRNR				smax	smax		
	comp=N,3.0nm,0.5s						
TIY	Taiyuan	37.25	315	⇑P	P	08 56 09.3	+2.8
TIY				S	S	09 01 47.8	+2.3
TIY				sS	sS	09 02 26.8	-2.0
TIY				LR	LR		
	comp=N,460nm,10.8s						
TIY				LR	LR		
	comp=N,570nm,21.1s						
TIY				LR	LR		
	comp=N,820nm,17.8s						
DNP	Denpasar	37.65	234	P	P	08 56 09.1	-0.9
	comp=N,508nm,0.9s						
FITZ	Fitzroy Crossi	37.67	212	P	P	08 56 09.2	-1.0
IGBI	Denpasar	37.78	234	P	P	08 56 09.5	-1.7
	comp=N,81nm,0.4s,comp=N,3μm						
ABJI	Asem Bagus	37.90	236	P	P	08 56 11.2	-1.0
	comp=N,210nm,1.9s,comp=N,4μm						
RK1H	Rockhampton Ha	37.91	172	P	P	08 56 12.0	0.0
GYA	Guiyang	38.00	295	⇑P	P	08 56 15.5	+2.4
GYA				pP	pwP	08 56 42.4	+0.5
GYA				PP	PnPn	08 57 48.0	+3.2
GYA				S	S	09 01 57.4	+0.1
GYA				sS	sS	09 02 44.1	+3.4
GYA				pmax	pmax		
	comp=N,130nm,1.2s						
GYA				LR	LR		
	comp=N,630nm,10.7s						
GYA				LR	LR		
	comp=N,590nm,15.4s						
GYA				LR	LR		
	comp=N,670nm,17.8s						
XAN	Xi'an	38.23	307	P	P	08 56 15.3	+0.5
XAN				pP	pwP	08 56 42.5	-1.4
XAN				S	S	09 02 00.8	+0.4
XAN				pmax	pmax		
	comp=N,62nm,0.5s						
XAN				pmax	pmax		
	comp=N,500nm,3.9s						
XAN				LR	LR		
	comp=N,2μm,21.1s						
XAN				LR	LR		
	comp=N,1μm,21.1s						
XAN				LR	LR		
	comp=N,840nm,16.7s						
XAN	Xi'an	38.23	307	P	P	08 56 15.8	+1.0
XAN				pP	pwP	08 56 42.5	-1.4
XAN				PcP	PcP	08 58 27.5	+0.4
JAGI	Jajag, Banyuwa	38.36	236	P	P	08 56 13.6	-2.4
JAGI				IAmb	IAmb	08 56 16.9	
	comp=Z,124nm,1.2s						
JAGI	Jajag, Banyuwa	38.36	236	P	P	08 56 14.1	-2.0
JAGI	Jajag, Banyuwa	38.36	236	P	P	08 56 14.4	-1.7
	comp=Z,77nm,1.0s,comp=Z,1μmcomp=Z,2μm						
BLJI	Banyuglugur	38.39	237	P	P	08 56 15.3	-1.0
	comp=Z,215nm,0.9s,comp=Z,4μm						
GD1S	Gladstone Soft	38.45	171	P	P	08 56 16.7	+0.2
XLT	XiLinHaoTe	38.55	326	⇓iP	P	08 56 19.0	+1.6
XLT				pP	pwP	08 56 44.0	-2.2
XLT				sP	sP	08 56 58.6	+4.3
XLT				PP	PP	08 57 49.4	+1.6
XLT				S	S	09 02 06.3	+1.3
XLT				sS	sS	09 02 52.3	+3.9
XLT				SS	SS	09 04 57.4	-1.8
XLT				ScS	ScS	09 06 11.8	-4.5
XLT				pmax	pmax		
	comp=Z,69nm,0.8s						
XLT				pmax	pmax		
	comp=Z,480nm,4.7s						
XLT				LR	LR		
	comp=Z,830nm,18.0s						
XLT				LR	LR		
	comp=Z,770nm,19.1s						
HEH	HeiHe	38.60	342	eP	P	08 56 18.3	+0.7
HEH				PcP	PcP	08 58 27.1	-0.6
HEH				S	S	09 02 01.5	-3.9
HEH				pmax	pmax		
	comp=Z,73nm,1.1s						
HEH				pmax	pmax		
	comp=Z,410nm,4.8s						
GMJI	Gumukmas	38.82	236	P	P	08 56 18.6	-1.2
	comp=Z,96nm,0.7s,comp=Z,2μm						
DVP	Devils Point	39.10	144	P	P	08 56 22.8	+0.7
KOUNC	Koumac, New Ca	39.43	151	P	P	08 56 24.2	-0.6
KOUNC				IAmb	IAmb	08 56 28.5	
	comp=Z,151nm,1.3s						
KOUNC	Koumac, New Ca	39.43	151	P	P	08 56 26.2	+1.4
AS01	Alice Springs	39.44	197	P	P	08 56 24.1	-0.8
HHC	Hu-ho-hao-te	39.44	318	eP	P	08 56 26.3	+1.4
HHC				pP	pwP	08 56 52.5	-1.5
HHC				PP	PP	08 58 01.4	+3.8
HHC				S	S	09 02 17.9	-0.6
HHC				sS	sS	09 03 00.6	-1.5
HHC				pmax	pmax		
	comp=Z,170nm,0.9s						
HHC				LR	LR		
	comp=Z,780nm,15.2s						
HHC				LR	LR		
	comp=Z,1μm,15.9s						
HHC				LR	LR		
	comp=Z,2μm,15.9s						
AS31	Alice Springs	39.45	197	P	P	08 56 24.3	-0.7
ASAR	Alice Springs	39.45	197	P	P	08 56 24.4	-0.6
	comp=Z,71nm,0.7s,baz=20,slow=12,SNR=737						
ASAR				PcP	PcP	08 58 31.6	+0.7
	comp=Z,30nm,0.8s,baz=17,slow=3.8,SNR=7.2						
ASAR				ScP	ScP	09 02 09.1	-0.2
	comp=Z,13nm,0.7s,baz=20,slow=4.2,SNR=14						
ASAR				LR	LR	09 12 25.4	
	comp=Z,928nm,20.9s,baz=6.5,slow=36						
ASAR				PKPPKP	P'P'df	09 28 34.3	-17
	comp=Z,0.6nm,0.9s,baz=129,slow=2.7,SNR=4.1						
	comp=Z,71nm,0.7s						
ASAR	Alice Springs	39.45	197	P	P	08 56 24.2	-0.8
PEA0B	Petropavlovsk-	39.84	12	P	P	08 56 28.4	+0.5
PEA0B	Petropavlovsk-	39.84	12	⇑eP	P	08 56 28.6	+0.7
PETK	Petropavlovsk-	39.84	12	P	P	08 56 27.8	-0.1
	comp=Z,4.0nm,0.7s,baz=152,slow=7.8,SNR=37						
PETK				PcP	PcP	08 58 31.2	-0.4
	comp=Z,11nm,0.7s,baz=197,slow=7.6,SNR=5.4						
PETK				ScP	ScP	09 02 08.0	-2.3
	comp=Z,9.3nm,0.9s,baz=198,slow=9.3,SNR=4.9						
PETK				PKiKP	PKiKP	09 05 41.3	-1.2
	comp=Z,0.9nm,0.6s,baz=109,slow=8.5,SNR=4.1						
PETK				LR	LR	09 14 11.9	
	comp=Z,207nm,18.2s,baz=196,slow=38						
PETK	Petropavlovsk-	39.84	12	P	P	08 56 29.0	+1.1
PETK	Petropavlovsk-	39.84	12	P	P	08 56 29.0	+1.1
EIDS	Eidsvold	39.94	172	P	P	08 56 27.7	-1.2
EIDS				PcP	PcP	08 58 33.6	+1.2
EIDS	Eidsvold	39.94	172	P	P	08 56 28.9	0.0
NGJI	Ngawi	39.94	239	P	P	08 56 28.1	-1.1
	comp=Z,113nm,0.7s						
PET	Petropavlovsk	39.95	13	eP	P	08 56 26.4	-2.4
PET				eS	S	09 02 25.4	-0.2
PET				eSS	SS	09 05 23.7	-3.1
PWJI	Pagerwojo	40.01	238	P	P	08 56 28.1	-1.7
	comp=Z,320nm,0.6s,comp=Z,4μm						
BTO	Baotou	40.31	317	eP	P	08 56 34.6	+2.5
BTO				pP	pwP	08 57 00.8	-0.5
BTO				sP	sP	08 57 12.0	+2.9
BTO				PP	PP	08 58 06.4	-0.7
BTO				S	S	09 02 36.9	+5.3
BTO				LR	LR		
	comp=Z,6μm,18.3s						
BTO				LR	LR		
	comp=Z,5μm,17.5s						
BTO				LR	LR		
	comp=Z,3μm,18.6s						
NONG	Nongkai	40.58	281	P	P	08 56 35.9	+1.4
HIA	Hailar	40.59	334	P	P	08 56 35.3	+1.1
HIA				IAmb	IAmb	08 57 04.7	
	comp=Z,135nm,1.5s						
HIA	Hailar	40.59	334	P	P	08 56 35.3	+1.1
HIA	Hailar	40.59	334	P	P	08 56 35.3	+1.1
HIA				pmax	pmax		
	comp=Z,135nm,1.5s						
HIA	Hailar	40.59	334	P	P	08 56 35.6	+1.5
HIA				pP	pwP	08 57 01.7	-1.3
HIA				PcP	PcP	08 58 34.3	+0.1
QLP	Quilpie	40.76	181	P	P	08 56 34.6	-1.1
	comp=Z,321nm,0.9s						
RMQ	Roma	40.79	175	P	P	08 56 35.9	-0.1
	comp=Z,80nm,1.3s						

UGM	**Wanagama**	**41.02**	**239**	P	**P**	**08 56 37.0**	**-1.1**
UGM	**Wanagama**	**41.02**	**239**	P	**P**	**08 56 37.2**	**-0.9**
UGM	**Wanagama**	**41.02**	**239**	P	**P**	**08 56 37.7**	**-0.4**
	comp=Z,284nm,1.2s						
KMI	**Kunming**	**41.30**	**292**	⇓P	**P**	**08 56 42.4**	**+1.8**
KMI				sP	pwP	08 57 11.5	+1.6
KMI				S	**S**	**09 02 48.8**	**+2.0**
KMI				sS	sS	09 03 33.3	+2.7
KMI				SS	**SS**	**09 05 55.9**	**+1.2**
KMI				pmax	pmax		
	comp=Z,59nm,1.5s						
KMI				pmax	pmax		
	comp=Z,670nm,4.3s						
KMI				LR	LR		
	comp=Z,910nm,17.5s						
KMI				LR	LR		
	comp=Z,420nm,20.0s						
KMI				LR	LR		
	comp=Z,980nm,37.4s						
CD2	**Chengdu**	**41.44**	**301**	P	**P**	**08 56 42.3**	**+0.9**
CD2				S	**S**	**09 02 52.5**	**+4.1**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				LR	LR		
	comp=Z,950nm,23.0s						
CD2				LR	LR		
	comp=Z,410nm,34.3s						
NOUC	**Port Laguerre**	**41.72**	**150**	P	**P**	**08 56 44.3**	**+0.7**
NOUC	**Port Laguerre**	**41.72**	**150**	P	**P**	**08 56 44.4**	**+0.7**
NOUC				pP	**pwP**	**08 57 10.7**	**-1.8**
NOUC				PcP	**PcP**	**08 58 40.3**	**+2.1**
NOUC				ScP	**ScP**	**09 02 21.4**	**+3.2**
ZEA	**Zeya**	**41.74**	**344**	*e*P	**P**	**08 56 44.0**	**+0.6**
ZEA				*e**PP	**pP**	**08 57 09.0**	**+0.3**
ZEA				*e*S	**S**	**09 02 47.5**	**-4.6**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,100nm,6.8s						
ZEA				smax	smax		
	comp=E,300nm,15.0s						
ZEA				MLR	MLR		
	comp=N,300nm,10.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,14.0s						
DZM	**Mont Dzumac**	**41.76**	**150**	*e*P	**P**	**08 56 44.0**	**-0.1**
	comp=Z,239nm,1.1s						
DZM				*e*S	**S**	**09 02 54.2**	**+1.0**
	comp=Z,210nm,27.6s						
DZM				*e*SS	**SS**	**09 06 04.2**	**+0.5**
	comp=Z,385nm,43.5s						
DZM				*e*LR	LR	09 08 25.3	
	comp=Z,1µm,33.9s						
DZM	**Mont Dzumac**	**41.76**	**150**	P	**P**	**08 56 45.3**	**+1.2**
	comp=Z,70nm,0.6s,baz=330,slow=3.2,SNR=83						
DZM				PcP	**PcP**	**08 58 39.6**	**+1.1**
	comp=Z,18nm,0.5s,baz=251,slow=7.0,SNR=6.9						
DZM				ScP	**ScP**	**09 02 20.1**	**+1.5**
	comp=Z,17nm,1.0s,baz=62,slow=11,SNR=4.1						
DZM				LR	LR	09 12 40.0	
	comp=Z,323nm,18.7s,baz=5.5,slow=34						
	comp=Z,70nm,0.6s						
DZM	**Mont Dzumac**	**41.76**	**150**	P	**P**	**08 56 43.5**	**-0.6**
DZM	**Mont Dzumac**	**41.76**	**150**	P	**P**	**08 56 45.4**	**+1.3**
DZM	**Mont Dzumac**	**41.76**	**150**	P	**P**	**08 56 45.1**	**+1.0**
DZM				pP	**pwP**	**08 57 11.6**	**-1.4**
DZM				PcP	**PcP**	**08 58 40.7**	**+2.2**
DZM				ScP	**ScP**	**09 02 21.8**	**+3.3**
ONTNC	**Ouen Toro**	**41.97**	**150**	P	**P**	**08 56 45.5**	**-0.2**
ONTNC				IAmb	IAmb	08 56 48.0	
	comp=Z,78nm,0.9s						
ONTNC	**Ouen Toro**	**41.97**	**150**	P	**P**	**08 56 46.5**	**+0.9**
YATNC	**Mamie plateau,**	**41.97**	**149**	P	**P**	**08 56 47.5**	**+1.8**
KPJI	**Karang Pucung**	**42.05**	**241**	P	**P**	**08 56 45.6**	**-0.9**
	comp=Z,82nm,0.8s,comp=Z,1µm						
INKA	**Innaminka**	**42.13**	**186**	P	**P**	**08 56 46.0**	**-0.9**
AUWSH	**Wavell State H**	**42.23**	**170**	P	**P**	**08 56 48.9**	**+1.2**
	comp=Z,110nm,0.9s						
OUENC	**Ouen Island, N**	**42.25**	**150**	P	**P**	**08 56 48.3**	**+0.4**
OUENC				IAmb	IAmb	08 56 51.0	
	comp=Z,88nm,0.8s						
OUENC	**Ouen Island, N**	**42.25**	**150**	P	**P**	**08 56 49.6**	**+1.7**
PZH	**PanZhiHua**	**42.36**	**294**	P	**P**	**08 56 50.1**	**+1.0**
PZH				sP	**sP**	**08 57 25.6**	**-0.6**
PZH				PP	**PP**	**08 58 28.9**	**-0.5**
PZH				S	**S**	**09 03 02.5**	**+0.2**
PZH				sS	**sS**	**09 03 47.6**	**+1.3**
PZH				pmax	pmax		
	comp=Z,90nm,0.8s						
PZH				pmax	pmax		
	comp=Z,620nm,5.3s						
NAYO	**Nakonayok**	**42.56**	**276**	P	**P**	**08 56 53.7**	**+3.0**
WRKA	**Warakurna**	**42.57**	**203**	P	**P**	**08 56 50.0**	**-0.6**
PINNC	**Pines Island,**	**42.71**	**149**	P	**P**	**08 56 53.1**	**+1.5**
PINNC				IAmb	IAmb	08 56 54.7	
	comp=Z,85nm,1.0s						
PINNC	**Pines Island,**	**42.71**	**149**	P	**P**	**08 56 52.9**	**+1.2**
LZH	**Lanzhou**	**42.85**	**308**	⇓P	**P**	**08 56 54.8**	**+1.9**
LZH				pP	pwP	08 57 22.3	-0.1
LZH				sP	sP	08 57 31.3	+1.2
LZH				S	**S**	**09 03 09.4**	**+0.2**
LZH				sS	sS	09 03 55.8	+2.5
LZH				SS	**SS**	**09 06 23.0**	**-1.6**
LZH				pmax	pmax		
	comp=Z,220nm,1.4s						
LZH				pmax	pmax		
	comp=Z,650nm,4.1s						
LZH				LR	LR		
	comp=Z,2µm,17.9s						
LZH				LR	LR		
	comp=Z,830nm,16.5s						
LZH				LR	LR		
	comp=Z,820nm,15.5s						
DSRI	**Dabo**	**42.93**	**253**	P	**P**	**08 56 52.3**	**-1.4**
	comp=Z,78nm,0.7s,comp=Z,5µmcomp=Z,2µm						
OOD	**Oodnadatta**	**42.98**	**193**	P	**P**	**08 56 53.1**	**-0.6**
CRAI	**Chiangrai**	**43.18**	**284**	P	**P**	**08 56 56.4**	**+0.7**
CRAI				IAmb	IAmb	08 56 59.4	
	comp=Z,159nm,1.5s						
CRAI				PcP	**PcP**	**08 58 45.2**	**+1.9**
PHRA	**Phrae**	**43.34**	**282**	P	**P**	**08 56 57.1**	**+0.2**
PHRA				PcP	**PcP**	**08 58 45.6**	**+1.8**
MBWA	**Marble Bar**	**43.36**	**216**	P	**P**	**08 56 55.9**	**-1.1**
MBWA	**Marble Bar**	**43.36**	**216**	PcP	**PcP**	**08 58 44.6**	**+0.9**
MBWA	**Marble Bar**	**43.36**	**216**	P	**P**	**08 56 56.0**	**-0.9**
MBWA	**Marble Bar**	**43.36**	**216**	P	**P**	**08 56 55.8**	**-1.1**
MBWA	**Marble Bar**	**43.36**	**216**	P	**P**	**08 56 55.4**	**-1.5**
MBWA				PcP	**PcP**	**08 58 44.0**	**+0.3**
JRMM	**Jerantut**	**43.48**	**260**	P	**P**	**08 56 58.0**	**-0.1**
JOHN	**Johnston Islan**	**43.50**	**81**	P	**P**	**08 56 59.0**	**+0.8**
CNJI	**Cibinong**	**43.59**	**243**	P	**P**	**08 56 57.8**	**-1.1**
	comp=Z,27nm,1.0s						
PSA00	**Pilbara Seismi**	**43.62**	**215**	P	**P**	**08 56 58.1**	**-1.0**
PSA00				PcP	**PcP**	**08 58 45.0**	**+0.3**
PSA00	**Pilbara Seismi**	**43.62**	**215**	P	**P**	**08 56 58.3**	**-0.8**
AULRC	**Lightning Ridg**	**43.66**	**177**	P	**P**	**08 56 58.0**	**-1.2**
CGJI	**Cibinong**	**44.50**	**245**	P	**P**	**08 57 03.6**	**-2.6**
	comp=Z,121nm,0.8s						
SHEM	**Shemya Is, Ala**	**44.55**	**25**	LR	LR	09 13 37.9	
	comp=Z,290nm,20.4s,baz=252,slow=33						
SMY	**Shemya**	**44.55**	**25**	P	**P**	**08 57 07.7**	**+1.7**
SMY				PcP	**PcP**	**08 58 48.4**	**+1.2**
SMY	**Shemya**	**44.55**	**25**	P	**P**	**08 57 07.7**	**+1.7**
SMY						08 58 48.4	
SMY				pmax	pmax		
	comp=Z,100nm,0.6s						
CHTO	**Chiang Mai**	**44.55**	**282**	P	**P**	**08 57 07.5**	**+0.9**
CHTO				PcP	**PcP**	**08 58 45.6**	**-2.4**
CHTO	**Chiang Mai**	**44.55**	**282**	P	**P**	**08 57 07.5**	**+0.9**
CHTO						08 58 45.6	
CHTO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CM31	**Chiang Mai Arr**	**44.56**	**282**	P	**P**	**08 57 07.6**	**+0.8**
CM31				IAmb	IAmb	08 57 10.0	
	comp=Z,118nm,0.9s						
CM31				PcP	**PcP**	**08 58 47.5**	**-0.6**
CM31	**Chiang Mai Arr**	**44.56**	**282**	P	**P**	**08 57 08.5**	**+1.8**
	SNR=38						
CMAR	**Chiang Mai Arr**	**44.56**	**282**	P	**P**	**08 57 07.9**	**+1.2**
	comp=Z,55nm,0.8s,baz=84,slow=5.9,SNR=170						
CMAR				PcP	**PcP**	**08 58 49.2**	**+1.2**
	comp=Z,32nm,0.8s,baz=92,slow=2.0,SNR=12						
CMAR				ScP	**ScP**	**09 02 29.9**	**-0.1**
	comp=Z,1.9nm,0.3s,baz=87,slow=2.1,SNR=5.0						
	comp=Z,55nm,0.8s						
CMAR	**Chiang Mai Arr**	**44.56**	**282**	P	**P**	**08 57 07.7**	**+1.0**
CMAR				PcP	**PcP**	**08 58 49.4**	**+1.3**
IPM	**Ipoh**	**44.70**	**262**	P	**P**	**08 57 07.2**	**-0.7**
IPM				PcP	**PcP**	**08 58 48.6**	**0.0**
IPM	**Ipoh**	**44.70**	**262**	P	**P**	**08 57 09.0**	**+1.1**
KULM	**Kulim**	**44.85**	**263**	P	**P**	**08 57 08.1**	**-0.9**
KULM				PcP	**PcP**	**08 58 49.2**	**+0.2**
KULM				IAmb	IAmb	08 58 50.9	
	comp=Z,61nm,0.6s						
KULM	**Kulim**	**44.85**	**263**	P	**P**	**08 57 10.0**	**+1.0**
MDSI	**Maura Dua**	**44.89**	**248**	P	**P**	**08 57 07.7**	**-1.6**
	comp=Z,65nm,1.0s,comp=Z,1µmcomp=Z,1µm						
SURA	**Surathani**	**44.96**	**269**	P	**P**	**08 57 12.1**	**+2.2**
ARMA	**Armidale**	**44.98**	**172**	P	**P**	**08 57 08.9**	**-1.0**
ARMA				IAmb	IAmb	08 57 11.9	
	comp=Z,76nm,1.1s						
ARMA	**Armidale**	**44.98**	**172**	P	**P**	**08 57 10.1**	**+0.2**
KASI	**Kota Agung**	**45.06**	**247**	P	**P**	**08 57 09.9**	**-0.8**
	comp=Z,95nm,0.7s,comp=Z,2µm						
TNCH	**TengChong**	**45.10**	**291**	⇓P	**P**	**08 57 12.1**	**+1.0**
TNCH				pP	pP	08 57 35.8	-0.3
TNCH				sP	sP	08 57 47.8	-1.1
TNCH				PP	**PP**	**08 58 59.8**	**+1.1**
TNCH				S	**S**	**09 03 42.6**	**+0.4**
TNCH				sS	sS	09 04 24.1	-2.5
TNCH				pmax	pmax		
	comp=Z,220nm,1.2s						
TNCH				pmax	pmax		
	comp=Z,840nm,4.0s						
TNCH				LR	LR		
	comp=Z,380nm,17.6s						
TNCH				LR	LR		
	comp=Z,260nm,11.1s						
TNCH				LR	LR		
	comp=Z,440nm,21.6s						
SRIT	**Nakonsritamara**	**45.10**	**268**	P	**P**	**08 57 12.6**	**+1.6**
SRIT				PcP	**PcP**	**08 58 50.7**	**+0.8**
SRIT				IAmb	IAmb	08 58 52.3	
	comp=Z,86nm,0.8s						
SRIT	**Nakonsritamara**	**45.10**	**268**	P	**P**	**08 57 13.0**	**+2.0**
LCRK	**Leigh Creek**	**45.12**	**189**	P	**P**	**08 57 10.2**	**-0.6**
LWLI	**Liwa**	**45.23**	**248**	P	**P**	**08 57 10.3**	**-1.8**
	comp=Z,241nm,0.8s,comp=Z,26µm						
MA2	**Magadan**	**45.27**	**4**	P	**P**	**08 57 11.3**	**-0.4**
	comp=Z,17nm,0.7s,baz=185,slow=9.0,SNR=8.4						
MA2				LR	LR	09 13 29.7	
	comp=Z,421nm,21.4s,baz=192,slow=32						
	comp=Z,17nm,0.7s						
MA2	**Magadan**	**45.27**	**4**	P	**P**	**08 57 11.8**	**+0.1**
MA2	**Magadan**	**45.27**	**4**	*c i*P	**P**	**08 57 11.5**	**-0.2**
MA2				pmax	pmax		
	comp=Z,24nm,0.9s						
MA2	**Magadan**	**45.27**	**4**	P	**P**	**08 57 10.3**	**-1.3**
MA2				ScP	**ScP**	**09 02 33.3**	**+1.2**
CIT	**Chita**	**45.29**	**333**	*e*P	**P**	**08 57 12.8**	**+0.8**
CIT				*e*		08 57 39.2	
CIT				*e*		08 57 53.0	
CIT				*e*		08 58 51.0	
CIT				*e*		09 03 45.6	
CIT				pmax	pmax		
	comp=Z,261nm,2.4s						
MSVF	**Nonsavu**	**45.42**	**134**	P	**P**	**08 57 14.6**	**+1.1**
	comp=Z,11nm,0.7s,baz=268,slow=8.9,SNR=8.0						
MSVF				PcP	**PcP**	**08 58 52.6**	**+1.6**
	comp=Z,20nm,0.8s,baz=273,slow=2.1,SNR=5.6						
MSVF				LR	LR	09 14 38.7	
	comp=Z,393nm,19.3s,baz=63,slow=34						
	comp=Z,11nm,0.7s						
MSVF	**Nonsavu**	**45.42**	**134**	P	**P**	**08 57 13.2**	**-0.4**
MSVF				IAmb	IAmb	08 57 16.3	
	comp=Z,94nm,1.5s						
MSVF				PcP	**PcP**	**08 58 53.5**	**+2.5**
MSVF	**Nonsavu**	**45.42**	**134**	P	**P**	**08 57 14.8**	**+1.3**
MSVF				PcP	**PcP**	**08 58 53.1**	**+2.1**
MSVF				ScP	**ScP**	**09 02 29.1**	**-4.4**
AUPHS	**Peel High Scho**	**45.56**	**173**	P	**P**	**08 57 14.9**	**+0.6**
CMSA	**Cobar Meteorol**	**45.68**	**180**	P	**P**	**08 57 15.1**	**-0.2**
MULG	**Mulgathing**	**45.73**	**194**	P	**P**	**08 57 15.3**	**-0.4**
AMKA	**Amchitka**	**45.88**	**29**	P	**P**	**08 57 18.3**	**+1.7**
MNAI	**Manna**	**45.94**	**249**	P	**P**	**08 57 14.8**	**-2.9**
MNAI				PcP	**PcP**	**08 58 53.3**	**+0.4**
MNAI	**Manna**	**45.94**	**249**	P	**P**	**08 57 16.2**	**-1.5**
	comp=Z,274nm,1.2s,comp=Z,5µm						
ULN	**Ulaanbaatar**	**45.96**	**325**	P	**P**	**08 57 18.2**	**+0.7**
ULN				PcP	**PcP**	**08 58 53.6**	**+1.0**
ULN	**Ulaanbaatar**	**45.96**	**325**	*d i*P	**P**	**08 57 19.2**	**+1.7**
ULN				pmax	pmax		
	comp=Z,87nm,1.6s						
ULN	**Ulaanbaatar**	**45.96**	**325**	P	**P**	**08 57 19.2**	**+1.7**
ULN	**Ulaanbaatar**	**45.96**	**325**	P	**P**	**08 57 18.9**	**+1.3**
ULN				pP	**pP**	**08 57 44.8**	**+2.2**
ULN				PcP	**PcP**	**08 58 53.5**	**+1.0**
ULN				ScP	**ScP**	**09 02 35.1**	**-0.3**
SDSI	**Sungai Dareh**	**46.02**	**254**	P	**P**	**08 57 16.6**	**-1.7**
	comp=Z,25nm,2.0s						
STKA	**Stephens Creek**	**46.16**	**184**	P	**P**	**08 57 17.9**	**-1.0**
	comp=Z,74nm,0.7s,baz=0.6,slow=8.3,SNR=162						
STKA				LR	LR	09 18 30.4	
	comp=Z,508nm,18.9s,baz=6.7,slow=38						
	comp=Z,74nm,0.7s						
STKA	**Stephens Creek**	**46.16**	**184**	P	**P**	**08 57 18.1**	**-0.9**
STKA	**Stephens Creek**	**46.16**	**184**	P	**P**	**08 57 18.3**	**-0.7**
STKA	**Stephens Creek**	**46.16**	**184**	*d i*P	**P**	**08 57 18.2**	**-0.7**
SONM	**Songino Array**	**46.31**	**324**	P	**P**	**08 57 21.8**	**+1.5**
	comp=Z,24nm,0.7s,baz=141,slow=8.5,SNR=66						
SONM				pP	**pP**	**08 57 45.6**	**+0.2**
	comp=Z,7.3nm,0.6s,baz=140,slow=6.7,SNR=2.0						
SONM				PcP	**PcP**	**08 58 54.7**	**+0.9**
	comp=Z,21nm,0.7s,baz=145,slow=5.6,SNR=6.0						
SONM				ScP	**ScP**	**09 02 36.2**	**-0.7**
	comp=Z,3.6nm,0.7s,baz=144,slow=2.9,SNR=4.5						
SONM				LR	LR	09 16 50.3	
	comp=Z,558nm,20.4s,baz=116,slow=36						
	comp=Z,24nm,0.7s						
SONM	**Songino Array**	**46.31**	**324**	P	**P**	**08 57 21.3**	**+1.0**
SONM				IAmb	IAmb	08 57 24.4	
	comp=Z,120nm,1.6s						
SONM				PcP	**PcP**	**08 58 54.6**	**+0.9**
AUDCS	**Dubbo College**	**46.48**	**176**	P	**P**	**08 57 21.6**	**+0.1**
PDSI	**Padang**	**46.92**	**255**	P	**P**	**08 57 23.2**	**-2.1**
	comp=Z,31nm,0.7s,comp=Z,4µmcomp=Z,913nm						
GTA	**Gaotai**	**46.95**	**311**	⇓P	**P**	**08 57 26.8**	**+1.4**
GTA				pP	pP	08 57 52.4	+1.8
GTA				PP	**PP**	**08 59 21.3**	**+4.3**
GTA				ScP	**ScP**	**09 02 39.4**	**-0.3**
GTA				S	**S**	**09 04 09.4**	**+1.0**
GTA				sS	sS	09 04 51.9	-1.1
GTA				ScS	**ScS**	**09 07 07.9**	**-0.8**
GTA				pmax	pmax		
	comp=Z,70nm,1.4s						
GTA				pmax	pmax		
	comp=Z,510nm,4.5s						
GTA				LR	LR		
	comp=Z,980nm,16.0s						
GTA				LR	LR		
	comp=Z,710nm,16.0s						
GTA				LR	LR		
	comp=Z,710nm,18.5s						
MND	**Mandalay**	**47.17**	**287**	P	**P**	**08 57 28.6**	**+1.4**
PSI	**Prapat**	**47.18**	**260**	P	**P**	**08 57 27.0**	**-0.6**
PSI	**Prapat**	**47.18**	**260**	P	**P**	**08 57 26.9**	**-0.6**
PSI						08 58 57.2	
PSI				pmax	pmax		
	comp=Z,81nm,1.2s						
RPSI	**Rantau Prapat**	**47.22**	**260**	P	**P**	**08 57 26.9**	**-0.7**
RPSI				PcP	**PcP**	**08 58 57.2**	**-0.2**
RPSI				IAmb	IAmb	08 58 58.8	
	comp=Z,81nm,1.2s						
WHYH	**Whyalla**	**47.75**	**189**	P	**P**	**08 57 31.0**	**-0.3**
GIRL	**Giralia**	**47.77**	**220**	P	**P**	**08 57 31.8**	**+0.1**
GIRL				PcP	**PcP**	**08 59 00.9**	**+1.8**
GIRL	**Giralia**	**47.77**	**220**	P	**P**	**08 57 32.5**	**+0.8**
BBOO	**Buckleboo**	**47.78**	**191**	P	**P**	**08 57 30.7**	**-0.9**
BBOO	**Buckleboo**	**47.78**	**191**	P	**P**	**08 57 30.7**	**-0.9**
FORT	**Forrest**	**47.89**	**200**	P	**P**	**08 57 32.0**	**-0.5**
FORT	**Forrest**	**47.89**	**200**	P	**P**	**08 57 32.4**	**-0.1**
KIWB	**Kanaga Island**	**47.90**	**31**	P	**P**	**08 57 33.6**	**+1.3**
HTT	**Hallett**	**47.96**	**187**	P	**P**	**08 57 32.9**	**-0.1**
KCSI	**Kotacane, Aceh**	**48.08**	**262**	P	**P**	**08 57 34.5**	**+0.2**
ADK	**Adak**	**48.15**	**31**	P	**P**	**08 57 35.5**	**+1.3**
ADK	**Adak**	**48.15**	**31**	P	**P**	**08 57 35.3**	**+1.1**
ADK	**Adak**	**48.15**	**31**	P	**P**	**08 57 35.5**	**+1.3**
ADK				pmax	pmax		
	comp=Z,403nm,1.6s						
ADK	**Adak**	**48.15**	**31**	P	**P**	**08 57 35.2**	**+1.0**
ADK				sP	**sP**	**08 58 13.8**	**+0.6**
MEEK	**Meekatharra**	**48.35**	**213**	P	**P**	**08 57 34.9**	**-1.2**
YNG	**Young**	**48.52**	**177**	P	**P**	**08 57 37.5**	**+0.2**
SEY	**Seymchan**	**48.72**	**4**	LR	LR	09 16 14.8	
	comp=Z,448nm,21.7s,baz=174,slow=34						
SEY	**Seymchan**	**48.72**	**4**	⇓*e*P	**P**	**08 57 38.1**	**-0.3**
SEY				pmax	pmax		
	comp=Z,9.0nm,0.6s						
YAK	**Yakutsk**	**48.85**	**350**	P	**P**	**08 57 38.2**	**-1.3**
	comp=Z,36nm,0.6s,baz=188,slow=0.8,SNR=10.0						
YAK				LR	LR	09 19 13.1	
	comp=Z,251nm,19.4s,baz=159,slow=37						
	comp=Z,36nm,0.6s						
YAK	**Yakutsk**	**48.85**	**350**	*e*P	**P**	**08 57 38.8**	**-0.6**
YAK				*e**PP	**pP**	**08 58 08.1**	**+2.6**
YAK				*e*		08 59 31.4	
YAK				*e*S	**S**	**09 04 30.9**	**-3.2**
YAK				*e**SS	**sS**	**09 05 17.5**	**-1.5**
YAK				*e*		09 07 13.7	
YAK				*e*SS	**SS**	**09 08 03.3**	**-2.7**
YAK				*e*SSS	SSS	09 09 37.0	
YAK				pmax	pmax		
	comp=N,3.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,43nm,0.8s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.7s						
YAK				pmax	pmax		
	comp=Z,18nm,0.4s						
YAK				smax	smax		
	comp=E,83nm,1.6s						
YAK				smax	smax		
	comp=N,39nm,1.5s						
GSI	**Gunungsitoli**	**48.92**	**259**	P	**P**	**08 57 39.0**	**-1.7**
GSI				PcP	**PcP**	**08 59 04.5**	**+1.0**
BOD	**Bodaibo**	**49.31**	**338**	*e*P	**P**	**08 57 44.0**	**+1.0**
BOD				pmax	pmax		
	comp=Z,31nm,1.4s						
ZAK	**Zakamensk**	**49.40**	**326**	*e*P	**P**	**08 57 44.7**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,43nm,1.2s						
GHSS	**Government Hou**	**49.47**	**187**	P	**P**	**08 57 45.3**	**+0.9**
CAN	**Canberra**	**49.58**	**176**	P	**P**	**08 57 46.1**	**+0.8**
CAN				IAmb	IAmb	08 57 47.7	
	comp=Z,67nm,1.3s						
CAN	**Canberra**	**49.58**	**176**	P	**P**	**08 57 46.0**	**+0.6**
CAN	**Canberra**	**49.58**	**176**	P	**P**	**08 57 46.2**	**+0.8**
CAN				pmax	pmax		
	comp=Z,67nm,1.3s						
CAN	**Canberra**	**49.58**	**176**	P	**P**	**08 57 45.5**	**+0.2**
CAN				PcP	**PcP**	**08 59 06.5**	**+1.0**
CAN				ScP	**ScP**	**09 02 51.3**	**+0.7**
CNB	**Canberra Magne**	**49.60**	**176**	P	**P**	**08 57 46.4**	**+0.9**
GOMU	**GeErMu**	**49.91**	**305**	P	**P**	**08 57 50.8**	**+2.4**
GOMU				PP	**PP**	**08 59 44.3**	**+0.1**
GOMU				S	**S**	**09 04 50.3**	**-0.2**
GOMU				pmax	pmax		
	comp=Z,22nm,1.1s						
GOMU				LR	LR		
	comp=Z,280nm,16.6s						
GOMU				LR	LR		
	comp=Z,180nm,16.7s						
GOMU				LR	LR		
	comp=Z,270nm,16.1s						
KMBL	**Kambalda**	**50.77**	**206**	P	**P**	**08 57 53.1**	**-1.3**
AFI	**Afiamalu**	**50.95**	**122**	LR	LR	09 17 37.8	
	comp=Z,408nm,18.2s,baz=312,slow=34						
ARPS	**Mount Arapiles**	**51.01**	**184**	P	**P**	**08 57 56.6**	**+0.6**
SHL	**Shillong**	**51.12**	**291**	P	**P**	**08 57 57.1**	**-0.3**
SHL	**Shillong**	**51.12**	**291**	P	**P**	**08 57 57.1**	**-0.3**
SHL				pmax	pmax		
	comp=Z,144nm,0.9s						
SHL	**Shillong**	**51.12**	**291**	P	**P**	**08 57 57.7**	**+0.2**
	SNR=36						
PBA	**Port Blair**	**51.20**	**273**	P	**P**	**08 57 55.5**	**-2.4**
PBA				PcP	**PcP**	**08 59 09.1**	**-2.8**
PBA	**Port Blair**	**51.20**	**273**	P	**P**	**08 57 58.2**	**+0.3**
MOY	**Mondy**	**51.30**	**326**	*e*P	**P**	**08 57 59.2**	**+0.9**
MOY				pmax	pmax		
	comp=Z,79nm,1.8s						
MILA	**Mila**	**51.31**	**176**	P	**P**	**08 57 59.2**	**+0.8**
MORW	**Morawa**	**51.65**	**213**	P	**P**	**08 57 59.5**	**-1.5**
MORW	**Morawa**	**51.65**	**213**	P	**P**	**08 57 59.5**	**-1.5**
TOO	**Toolangi**	**51.70**	**180**	P	**P**	**08 58 01.6**	**+0.3**
TOO	**Toolangi**	**51.70**	**180**	P	**P**	**08 58 02.4**	**+1.1**
TOO	**Toolangi**	**51.70**	**180**	P	**P**	**08 58 01.6**	**+0.3**
TOO				pmax	pmax		
	comp=Z,174nm,1.1s						
MLBS	**Spotswood, Mel**	**51.96**	**180**	P	**P**	**08 58 05.2**	**+2.1**
	comp=Z,105nm,0.6s						
LSA	**Lhasa**	**52.01**	**297**	P	**P**	**08 58 06.4**	**+2.1**
LSA				pmax	pmax		
	comp=Z,170nm,0.6s						
LSA	**Lhasa**	**52.01**	**297**	P	**P**	**08 58 05.8**	**+1.4**
LSA	**Lhasa**	**52.01**	**297**	P	**P**	**08 58 05.8**	**+1.4**
LSA				pmax	pmax		
	comp=Z,119nm,0.8s						
LSA	**Lhasa**	**52.01**	**297**	P	**P**	**08 58 05.8**	**+1.4**
LSA	**Lhasa**	**52.01**	**297**	P	**P**	**08 58 05.9**	**+1.5**
CLES	**Cleveland East**	**52.14**	**33**	P	**P**	**08 58 05.1**	**+0.8**
CLES				IAmb	IAmb	08 58 52.2	
	comp=Z,875nm,1.2s						
AUSSC	**Sale College,**	**52.26**	**178**	P	**P**	**08 58 07.5**	**+2.2**
GEXS	**Deakin Univers**	**52.34**	**181**	P	**P**	**08 58 07.7**	**+1.8**
BLDU	**Ballidu**	**52.55**	**211**	P	**P**	**08 58 06.1**	**-1.5**
NIKH	**Nikolski High**	**52.76**	**33**	P	**P**	**08 58 09.5**	**+0.6**
	baz=241						
KLBR	**Kellerberrin**	**52.83**	**210**	P	**P**	**08 58 08.4**	**-1.3**
MUN	**Mundaring**	**53.90**	**211**	P	**P**	**08 58 16.6**	**-0.9**
KIP	**Kipapa**	**54.15**	**74**	P	**P**	**08 58 22.0**	**+2.4**
KIP	**Kipapa**	**54.15**	**74**	P	**P**	**08 58 22.0**	**+2.4**
KIP				pP	**pwP**	**08 58 49.5**	**-0.6**
NWAO	**Narrogin (SRO)**	**54.18**	**209**	LR	LR	09 23 25.4	
	comp=Z,379nm,18.4s,baz=43,slow=38						
NWAO	**Narrogin (SRO)**	**54.18**	**209**	P	**P**	**08 58 18.5**	**-1.0**
NWAO	**Narrogin (SRO)**	**54.18**	**209**	P	**P**	**08 58 18.6**	**-1.0**
NWAO	**Narrogin (SRO)**	**54.18**	**209**	P	**P**	**08 58 18.5**	**-1.0**
NWAO				pmax	pmax		
	comp=Z,1µm,1.5s						
NWAO	**Narrogin (SRO)**	**54.18**	**209**	P	**P**	**08 58 18.8**	**-0.7**
NWAO	**Narrogin (SRO)**	**54.18**	**209**	P	**P**	**08 58 18.3**	**-1.2**
SPIA	**Saint Paul Isl**	**54.26**	**28**	P	**P**	**08 58 21.4**	**+1.7**
	baz=237						
UNV	**Unalaska Valle**	**54.41**	**33**	P	**P**	**08 58 21.6**	**+0.6**
UNV	**Unalaska Valle**	**54.41**	**33**	P	**P**	**08 58 22.2**	**+1.3**
	baz=243						
TAPN	**Taplejung**	**54.91**	**293**	*e*P	**P**	**08 58 26.4**	**+1.0**
	comp=Z,234nm,0.6s						
AKUT	**Akutan**	**54.93**	**33**	P	**P**	**08 58 25.5**	**+0.8**
GLAD	**Gladstone**	**55.17**	**178**	P	**P**	**08 58 27.3**	**+0.9**
BILL	**Bilibino**	**55.29**	**9**	P	**P**	**08 58 27.0**	**0.0**
BILL				IAmb	IAmb	08 59 57.8	
	comp=Z,32nm,1.0s						
BILL	**Bilibino**	**55.29**	**9**	*c i*P	**P**	**08 58 25.9**	**-1.1**
BILL				*i* *PP	**pP**	**08 58 57.6**	**+4.0**
BILL				*e*		09 00 33.5	
BILL				*e*PPP	PPP	09 01 51.0	
BILL				*i* S	S	09 05 52.0	-10
BILL				*e*SS	**SS**	**09 09 51.0**	**+3.3**
BILL				pmax	pmax		
	comp=Z,25nm,1.0s						
BILL	**Bilibino**	**55.29**	**9**	P	**P**	**08 58 26.3**	**-0.7**
AULHS	**Lilydale High**	**55.40**	**178**	P	**P**	**08 58 29.4**	**+1.3**
AUALB	**St Joseph's Co**	**55.60**	**207**	P	**P**	**08 58 30.3**	**+0.6**
CORO	**Coronation Par**	**55.60**	**178**	P	**P**	**08 58 30.9**	**+1.4**
RKGY	**Rocky Gully**	**55.69**	**208**	P	**P**	**08 58 30.5**	**+0.2**
RAMN	**Ramite**	**55.89**	**293**	*e*P	**P**	**08 58 33.3**	**+0.9**
	comp=Z,246nm,1.0s						
RAO	**Raoul Island**	**56.08**	**141**	LR	LR	09 21 20.2	
	comp=Z,209nm,18.9s,baz=320,slow=34						
JIRN	**Jiri**	**56.27**	**294**	*e*P	**P**	**08 58 36.0**	**+0.8**
	comp=Z,417nm,0.9s						
HPAH	**Hawaii Prepara**	**56.40**	**75**	P	**P**	**08 58 35.9**	**+0.1**
FALS	**False Pass**	**56.48**	**33**	P	**P**	**08 58 34.6**	**-1.1**
FALS	**False Pass**	**56.48**	**33**	P	**P**	**08 58 36.2**	**+0.5**
	baz=245						
GUN	**Gumba**	**56.54**	**294**	*e*P	**P**	**08 58 38.0**	**+0.9**
	comp=Z,668nm,1.1s						
POHA	**Pohakuloa**	**56.57**	**76**	P	**P**	**08 58 39.9**	**+2.6**
POHA	**Pohakuloa**	**56.57**	**76**	P	**P**	**08 58 39.5**	**+2.3**

POHA				pP	pwP	08 59 06.7	-1.3
POHA				sP	sP	08 59 19.1	+3.8
MOO	Moorlands	56.59	178	P	P	08 58 37.8	+1.2
WMQ	Urumqi	56.89	313	eP	P	08 58 40.1	+1.2
WMQ				pP	pwP	08 59 07.1	-1.9
WMQ				PcP	PcP	08 59 33.5	+0.3
WMQ				S	S	09 06 24.5	+0.4
WMQ				sS	sS	09 07 09.3	+0.5
WMQ				ScS	ScS	09 08 15.4	-2.1
WMQ				pmax	pmax		
	comp=Z,110nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,340nm,4.1s						
WMQ				LR	LR		
	comp=Z,1µm,21.9s						
WMQ				LR	LR		
	comp=Z,500nm,21.9s						
WMQ				LR	LR		
	comp=Z,880nm,27.1s						
PKI	Pulchoki	56.96	294	eP	P	08 58 40.2	+0.2
	comp=Z,139nm,0.7s						
PKIN	Phulchoki	56.97	294	eP	P	08 58 40.2	+0.2
	comp=Z,112nm,0.6s						
TAU	Tasmania Unive	57.06	178	P	P	08 58 40.8	+0.9
TAU	Tasmania Unive	57.06	178	P	P	08 58 40.8	+0.9
TAU	Tasmania Unive	57.06	178	P	P	08 58 40.8	+0.9
TAU				pmax	pmax		
	comp=Z,144nm,1.6s						
TAU	Tasmania Unive	57.06	178	P	P	08 58 40.0	+0.1
DMN	Daman	57.23	294	eP	P	08 58 42.7	+0.9
	comp=Z,224nm,0.8s						
H01W1	Cape Leeuwin H	57.26	210	P	P	08 58 41.6	+0.4
	baz=58,slow=6.8,SNR=5.9						
H01W3	Cape Leeuwin H	57.26	210	P	P	08 58 42.0	+0.8
	baz=58,slow=6.8,SNR=4.2						
H01W2	Cape Leeuwin H	57.27	210	P	P	08 58 42.5	+1.2
	baz=58,slow=6.8,SNR=3.5						
S12K	Black Hills	57.54	32	P	P	08 58 43.8	+0.6
	baz=246						
GKN	Gorkha	57.64	294	eP	P	08 58 45.1	+0.5
	comp=Z,248nm,0.8s						
TIXI	Tiksi	58.07	354	P	P	08 58 46.4	-0.2
	comp=Z,6.7nm,0.6s,baz=90,slow=23,SNR=24						
TIXI				S	S	09 06 35.6	-2.9
	comp=Z,2.6nm,0.9s,baz=270,slow=24,SNR=10						
TIXI				LR	LR	09 24 04.6	
	comp=Z,236nm,21.4s,baz=176,slow=36						
	comp=Z,6.7nm,0.6s						
TIXI	Tiksi	58.07	354	P	P	08 58 46.5	-0.1
TIXI	Tiksi	58.07	354	⇓iP	P	08 58 46.3	-0.3
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TIXI	Tiksi	58.07	354	P	P	08 58 46.2	-0.3
SDPT	Sand Point	58.23	33	P	P	08 58 48.8	+0.8
SDPT	Sand Point	58.23	33	P	P	08 58 49.0	+1.0
SDPT	Sand Point	58.23	33	P	P	08 58 48.6	+0.6
	baz=248,SNR=9.0						
DANN	Dangsing	58.42	295	eP	P	08 58 51.2	+1.0
	comp=Z,443nm,0.7s						
DGZ	Jazzator, Alta	58.49	320	d iP	P	08 58 51.2	+1.0
DGZ				pmax	pmax		
	comp=Z,70nm,1.0s						
PYUN	Piuthan	59.10	294	eP	P	08 58 55.3	+0.5
	comp=Z,383nm,0.9s						
ZSN	Zaisan	59.60	317	eP	P	08 58 58.6	+0.9
	comp=Z,58nm,1.5s,baz=317						
ZSN				epP	pP	08 59 25.6	+1.4
	baz=317						
ZSN				eS	S	09 07 01.4	+2.3
	baz=317						
ZSN	Zaisan	59.60	317	eP	P	08 58 58.5	+0.9
ZSN				e*PP	pP	08 59 25.6	+1.4
ZSN				eS	S	09 07 01.3	+2.2
ZSN				pmax	pmax		
	comp=Z,58nm,1.5s						
CHGN	Chignik	59.66	32	P	P	08 58 58.4	+0.6
CHGN	Chignik	59.66	32	P	P	08 58 58.3	+0.5
	baz=249						
TNA	Tin City	59.94	21	P	P	08 58 59.6	0.0
TNA	Tin City	59.94	21	P	P	08 58 59.5	0.0
	baz=235,SNR=15						
URZ	Urewera	60.28	151	P	P	08 59 02.2	-0.1
	comp=Z,17nm,0.5s,baz=193,slow=1.2,SNR=15						
URZ				LR	LR	09 23 26.8	
	comp=Z,423nm,19.2s,baz=62,slow=34						
	comp=Z,17nm,0.5s						
ANM	Nome	60.28	22	P	P	08 59 02.3	+0.3
ANM	Nome	60.28	22	P	P	08 59 02.3	+0.3
ANM				pmax	pmax		
	comp=Z,19nm,0.8s						
ANM	Nome	60.28	22	P	P	08 59 02.0	0.0
	baz=238,SNR=24						
QRZ	Quartz Range	60.47	156	P	P	08 59 02.6	-1.0
QRZ	Quartz Range	60.47	156	P	P	08 59 04.5	+1.0
RTZ	Ruatahuna	60.51	152	P	P	08 59 04.0	0.0
RTZ				IAmb	IAmb	08 59 05.2	
	comp=Z,84nm,1.2s						
R16K	Pilot Point	60.54	31	P	P	08 59 04.8	+0.9
	baz=249						
BKZ	Black Stump Fm	60.73	153	P	P	08 59 05.2	-0.2
BKZ				IAmb	IAmb	08 59 06.7	
	comp=Z,40nm,0.8s						
BKZ	Black Stump Fm	60.73	153	P	P	08 59 05.6	+0.1
TKNZ	Takaka Hill	60.82	156	P	P	08 59 05.9	-0.1
TKNZ	Takaka Hill	60.82	156	P	P	08 59 06.7	+0.8
P16K	Nushagak River	60.88	30	P	P	08 59 07.4	+1.3
	baz=248,SNR=24						
DSZ	Denniston Nort	60.99	158	P	P	08 59 07.9	+0.7
DUWZ	D’Urville Isla	61.00	155	P	P	08 59 06.5	-0.8
O16K	Kokwok River B	61.04	29	P	P	08 59 07.2	0.0
	baz=248						
MRNZ	Matariki Terra	61.05	157	P	P	08 59 06.8	-0.8
N16K	Nishlik Lake	61.07	28	P	P	08 59 08.0	+0.5
	baz=246						
R17K	Ugashik Creek	61.17	31	P	P	08 59 09.6	+1.4
	baz=250						
MK31	Makanchi Array	61.20	316	P	P	08 59 09.1	+0.4
MK31				IAmb	IAmb	08 59 11.4	
	comp=Z,58nm,1.2s						
MK31	Makanchi Array	61.20	316	d iP	P	08 59 09.3	+0.7
MKAR	Makanchi Array	61.20	316	P	P	08 59 09.2	+0.6
	comp=Z,27nm,0.7s,baz=95,slow=7.7,SNR=176						
MKAR				S	S	09 07 21.4	+1.9
	comp=Z,1.0nm,0.8s,baz=94,slow=15,SNR=3.7						
MKAR				LR	LR	09 27 21.6	
	comp=Z,249nm,20.4s,baz=102,slow=38						
MKAR				PKP2bc	P'P'df	09 28 27.6	+3.2
	comp=Z,2.0nm,0.8s,baz=298,slow=2.2,SNR=10						
	comp=Z,27nm,0.7s						
ZAA0	Zalesovo Array	61.21	324	P	P	08 59 08.1	-0.4
ZAA0				IAmb	IAmb	08 59 11.2	
	comp=Z,125nm,1.7s						
ZALV	Zalesovo Beam	61.21	324	P	P	08 59 08.8	+0.3
	comp=Z,22nm,0.8s,baz=110,slow=6.2,SNR=38						
ZALV				S	S	09 07 19.6	+0.3
	comp=Z,4.6nm,0.8s,baz=107,slow=13,SNR=7.7						
ZALV				LR	LR	09 26 04.6	
	comp=Z,286nm,21.3s,baz=104,slow=36						
ZALV				PKP2bc	P'P'df	09 28 26.2	+2.3
	comp=Z,1.1nm,0.4s,baz=225,slow=1.9,SNR=5.0						
	comp=Z,22nm,0.8s						
ZALV	Zalesovo Beam	61.21	324	P	P	08 59 08.7	+0.2
Q16K	King Salmon	61.39	30	P	P	08 59 10.6	+1.0
	baz=250						
MAKZ	Makanchi	61.42	316	P	P	08 59 10.5	+0.4
MAKZ				IAmb	IAmb	08 59 12.8	
	comp=Z,51nm,0.8s						
MAKZ	Makanchi	61.42	316	P	P	08 59 10.5	+0.4
MAKZ				pmax	pmax		
	comp=Z,51nm,0.8s						
MAKZ	Makanchi	61.42	316	P	P	08 59 10.7	+0.6
MAKZ				pP	pP	08 59 37.6	+0.8
KIW	Kapiti Island	61.46	155	P	P	08 59 09.7	-0.6
TCW	Tory Channel	61.49	155	P	P	08 59 10.3	-0.1
TCW	Tory Channel	61.49	155	P	P	08 59 10.0	-0.4
OGWZ	Otaki Gorge	61.53	155	P	P	08 59 10.6	-0.1
TUWZ	Tuamarina	61.54	156	P	P	08 59 10.4	-0.4
TUWZ	Tuamarina	61.54	156	P	P	08 59 10.2	-0.6
MRZ	Mangatainoka R	61.57	154	P	P	08 59 10.4	-0.6
O17K	Koliganek Bris	61.58	29	P	P	08 59 11.3	+0.5
	baz=248,SNR=21						
Q17K	Contact Creek	61.63	31	P	P	08 59 11.3	-0.1
	baz=250						
INZ	Inchbonnie	61.72	158	P	P	08 59 11.2	-0.7
INZ				IAmb	IAmb	08 59 13.7	
	comp=Z,39nm,0.9s						
INZ	Inchbonnie	61.72	158	P	P	08 59 11.4	-0.6
CAW	Cannon Point	61.73	155	P	P	08 59 11.7	-0.3
HOWZ	Holdsworth Sta	61.74	154	P	P	08 59 12.1	0.0
SNZO	South Karori	61.75	155	P	P	08 59 11.5	-0.7
WVZ	Waitaha Valley	61.77	159	P	P	08 59 10.5	-1.8
BFZ	Birch Farm	61.87	154	P	P	08 59 12.8	-0.3
BHW	Baring Head	61.90	155	P	P	08 59 12.6	-0.5
MTW	Mount Morrison	61.95	155	P	P	08 59 14.5	+0.9
LTZ	Lake Taylor	62.06	158	IAmb	IAmb	08 59 15.2	
	comp=Z,33nm,0.9s						
LTZ	Lake Taylor	62.06	158	P	P	08 59 12.9	-1.4
PLWZ	Palliser	62.19	155	P	P	08 59 13.8	-1.4
Q18K	Katmai Hardscr	62.19	31	P	P	08 59 14.8	-0.3
	baz=251,SNR=9.0						
KHZ	Kahutara	62.23	157	P	P	08 59 14.1	-1.2
P18K	Big Mountain,	62.33	30	P	P	08 59 16.7	+0.8
P18K	Big Mountain,	62.33	30	P	P	08 59 15.9	-0.1
	baz=250						
RPZ	Rata Peaks	62.45	159	P	P	08 59 16.1	-0.7
	comp=Z,51nm,0.8s,baz=72,slow=1.4,SNR=13						
RPZ				LR	LR	09 23 27.2	
	comp=Z,325nm,20.8s,baz=326,slow=33						
	comp=Z,51nm,0.8s						
RPZ	Rata Peaks	62.45	159	IAmb	IAmb	08 59 19.4	
	comp=Z,55nm,0.8s						
OXZ	Oxford	62.45	158	IAmb	IAmb	08 59 17.8	
	comp=Z,67nm,0.9s						
OXZ	Oxford	62.45	158	P	P	08 59 15.9	-1.0
O18K	Koktuh Hills	62.50	29	P	P	08 59 18.9	+1.9
O18K				IAmb	IAmb	08 59 19.8	
	comp=Z,39nm,0.8s						
O18K	Koktuh Hills	62.50	29	P	P	08 59 17.5	+0.5
	baz=250,SNR=8.8						
OHAK	Old Harbor	62.63	33	P	P	08 59 19.4	+1.5
OHAK				IAmb	IAmb	08 59 20.5	
	comp=Z,106nm,1.4s						
OHAK	Old Harbor	62.63	33	P	P	08 59 19.6	+1.7
OHAK	Old Harbor	62.63	33	P	P	08 59 18.5	+0.6
	baz=253						
ARCZ	Arundel	62.70	159	P	P	08 59 18.2	-0.3
SHLS	Shalkode	62.70	311	eP	P	08 59 17.5	-1.3
	comp=Z,41nm,1.2s,baz=311						
SHLS	Shalkode	62.70	311	eP	P	08 59 17.5	-1.3
SHLS				pmax	pmax		
	comp=Z,41nm,1.2s						
WUS	Wushi	62.70	309	P	P	08 59 19.9	+1.0
SVW2	Sparrevohn	62.76	28	P	P	08 59 21.3	+2.6
DCZ	Deep Cove	62.79	163	P	P	08 59 18.8	-0.2
DCZ				IAmb	IAmb	08 59 20.2	
	comp=Z,51nm,1.0s						
Q19K	Cape Douglas,	62.96	31	P	P	08 59 20.8	+0.6
Q19K				IAmb	IAmb	08 59 55.5	
	comp=Z,80nm,0.9s						
Q19K	Cape Douglas,	62.96	31	P	P	08 59 20.1	0.0
	baz=252						
RDOG	Red Dog Mine	62.97	19	P	P	08 59 20.5	+0.5
RDOG				IAmb	IAmb	08 59 50.8	
	comp=Z,57nm,1.2s						
RDOG	Red Dog Mine	62.97	19	P	P	08 59 20.2	+0.2
	baz=239,SNR=23						
MLZ	Mavora Lakes	62.98	162	P	P	08 59 20.2	-0.2
MLZ				IAmb	IAmb	08 59 21.7	
	comp=Z,59nm,1.0s						
UZB	Uzynbulak	63.02	311	eP	P	08 59 21.6	+0.6
	comp=Z,31nm,1.0s,baz=311						
UZB				eS	S	09 07 44.5	+1.7
	baz=311						
UZB				esS	sS	09 08 32.2	+4.2
	baz=311						
UZB	Uzynbulak	63.02	311	eP	P	08 59 21.6	+0.6
UZB				eS	S	09 07 44.5	+1.7
UZB				pmax	pmax		
	comp=Z,31nm,1.0s						
O19K	Port Alsworth	63.03	29	P	P	08 59 21.8	+1.3
O19K	Port Alsworth	63.03	29	P	P	08 59 20.8	+0.3
	baz=251						
KDAK	Kodiak Island	63.15	32	S	S	09 07 45.0	+1.4
	comp=Z,13nm,0.9s,baz=252,slow=22,SNR=7.9						
KDAK				LR	LR	09 25 08.1	
	comp=Z,192nm,20.8s,baz=260,slow=34						
KDAK	Kodiak Island	63.15	32	P	P	08 59 22.9	+1.6
KDAK				IAmb	IAmb	08 59 23.3	
	comp=Z,73nm,1.2s						
KDAK	Kodiak Island	63.15	32	P	P	08 59 22.9	+1.6
KDAK				pmax	pmax		
	comp=Z,73nm,1.2s						
KDAK	Kodiak Island	63.15	32	P	P	08 59 22.5	+1.1
N19K	Bonanza Creek	63.16	28	P	P	08 59 22.4	+0.9
N19K	Bonanza Creek	63.16	28	P	P	08 59 21.9	+0.4
	baz=250						
TTA	Tatalina	63.24	26	P	P	08 59 22.6	+0.6
TTA				IAmb	IAmb	08 59 25.2	
	comp=Z,56nm,1.4s						
TTA	Tatalina	63.24	26	P	P	08 59 22.5	+0.6
TTA	Tatalina	63.24	26	P	P	08 59 22.6	+0.6
TTA				pmax	pmax		
	comp=Z,56nm,1.4s						
TTA	Tatalina	63.24	26	P	P	08 59 22.4	+0.4
	baz=248,SNR=19						
KPKS	Kokpek	63.29	312	eP	P	08 59 23.2	+0.4
	baz=312						
KPKS	Kokpek	63.29	312	eP	P	08 59 23.1	+0.4
P19K	Oil Pt	63.38	30	P	P	08 59 23.7	+0.8
P19K	Oil Pt	63.38	30	P	P	08 59 23.1	+0.2
	baz=252						
WHZ	Wether Hill Ro	63.41	163	P	P	08 59 22.5	-0.7
WHZ				IAmb	IAmb	08 59 35.5	
	comp=Z,130nm,1.6s						
ZHN	Zhinishke	63.45	311	eP	P	08 59 24.1	+0.3
	baz=311						
ZHN	Zhinishke	63.45	311	eP	P	08 59 24.0	+0.3
SATY	Saty	63.46	311	eP	P	08 59 24.7	+0.8
	comp=Z,59nm,1.6s,baz=311						
SATY	Saty	63.46	311	eP	P	08 59 24.6	+0.8
SATY				pmax	pmax		
	comp=Z,59nm,1.6s						
L19K	White Mountain	63.47	27	P	P	08 59 24.4	+0.9
L19K				IAmb	IAmb	08 59 26.9	
	comp=Z,86nm,1.4s						
L19K	White Mountain	63.47	27	P	P	08 59 24.2	+0.8
	baz=250						
Q20K	Shuyak Island	63.48	31	P	P	08 59 24.5	+1.0
	baz=254						
M19K	Big River Lodg	63.57	27	P	P	08 59 24.7	+0.6
	baz=250,SNR=14						
GCSA	Galena City Sc	63.59	24	P	P	08 59 24.5	+0.4
	baz=246,SNR=16						
TDK	Taldyqorghan	63.64	313	eP	P	08 59 25.9	+0.9
	baz=313						
TDK	Taldyqorghan	63.64	313	eP	P	08 59 25.8	+0.9
PALK	Pallekele	63.68	271	P	P	08 59 26.1	+0.4
TARG	Taragay, Kyrgy	63.80	310	P	P	08 59 26.8	+0.3
TARG				IAmb	IAmb	08 59 29.5	
	comp=Z,73nm,1.5s						
TARG	Taragay, Kyrgy	63.80	310	P	P	08 59 26.8	+0.3
TARG				pmax	pmax		
	comp=Z,73nm,1.5s						
O20K	Slope Mountain	63.80	30	P	P	08 59 26.3	+0.6
	baz=253						
RSO	Redoubt South	63.86	29	P	P	08 59 26.6	+0.4
HYB	Hyderabad	63.98	283	⇓eP	P	08 59 27.6	0.0
HYB				IVmB_BB		08 59 28.5	
	comp=Z,429nm,1.7s						
HYB				e		08 59 54.2	
HYB				⇑ePcP	PcP	09 00 02.0	-0.1
HYB				eS	S	09 07 56.5	+1.3
L20K	Farewell, AK	63.99	27	P	P	08 59 27.6	+0.7
	baz=250						
M20K	Styx River	64.13	28	P	P	08 59 28.4	+0.6
M20K				IAmb	IAmb	08 59 56.1	
	comp=Z,39nm,0.9s						
M20K	Styx River	64.13	28	P	P	08 59 29.1	+1.3
	baz=251						
HOM	Homer	64.15	30	P	P	08 59 28.3	+0.4
	baz=254						
K20K	Telida	64.22	26	P	P	08 59 29.4	+1.1
K20K				IAmb	IAmb	08 59 58.1	
	comp=Z,33nm,0.8s						
K20K	Telida	64.22	26	P	P	08 59 29.3	+1.0
	baz=250,SNR=32						
KURK	Kurchatov	64.24	320	P	P	08 59 29.1	+0.5
KURK	Kurchatov	64.24	320	d iP	P	08 59 28.9	+0.3
KURK				pmax	pmax		
	comp=Z,139nm,0.9s						
KURK	Kurchatov	64.24	320	P	P	08 59 29.2	+0.5
KURK	Kurchatov	64.24	320	P	P	08 59 28.8	+0.3
KURK				pP	pP	08 59 55.9	+0.4
KURBB	Kurchatov Arra	64.28	319	P	P	08 59 29.4	+0.5
	comp=Z,85nm,0.8s,baz=100,slow=6.8,SNR=366						
KURBB				S	S	09 07 57.3	-0.5
	comp=Z,1.6nm,0.7s,baz=100,slow=11,SNR=7.8						
KURBB				LR	LR	09 28 05.9	
	comp=Z,804nm,20.1s,baz=132,slow=36						
KURBB				PKP2bc	P'P'df	09 28 19.6	+0.5
	comp=Z,1.5nm,0.4s,baz=278,slow=3.5,SNR=8.3						
	comp=Z,85nm,0.8s						
CNPM	China Poot	64.31	30	P	P	08 59 29.5	+0.5
SPCR	Spurr Chakacha	64.34	28	P	P	08 59 29.4	+0.2
	baz=252						
SPU	Mount Spurr	64.40	28	P	P	08 59 30.2	+0.6
MDOK	Medeo	64.46	311	eP	P	08 59 30.9	+0.5
	baz=311						
MDOK				eS	S	09 08 01.6	+0.9
	baz=311						
MDOK	Medeo	64.46	311	eP	P	08 59 30.9	+0.5
MDOK				eS	S	09 08 01.5	+0.9
RAR	Rarotonga	64.49	122	P	P	08 59 32.6	+1.9
	comp=Z,20nm,0.8s,baz=249,slow=7.1,SNR=7.9						
RAR				LR	LR	09 22 43.3	
	comp=Z,213nm,21.1s,baz=284,slow=31						
	comp=Z,20nm,0.8s						
RAR	Rarotonga	64.49	122	P	P	08 59 32.4	+1.7
RAR				IAmb	IAmb	08 59 40.6	
	comp=Z,194nm,2.0s						
BRLK	Bradley Lake	64.55	30	P	P	08 59 30.0	-0.5
BRLK				IAmb	IAmb	09 00 01.1	
	comp=Z,47nm,0.6s						
CHKK	Chushkaly	64.55	312	eP	P	08 59 31.2	+0.3
	baz=312						
CHKK	Chushkaly	64.55	312	eP	P	08 59 31.1	+0.3
AAA	Alma-Ata	64.56	311	eP	P	08 59 32.2	+1.2
	baz=311						
AAA	Alma-Ata	64.56	311	eP	P	08 59 32.1	+1.2
BRSE	Bradley Lake S	64.62	30	P	P	08 59 30.9	0.0
	baz=254,SNR=10						
CAPN	Captain Cook N	64.70	29	P	P	08 59 32.4	+1.0
	baz=254						
PPLA	Purkeypile	64.87	27	P	P	08 59 33.3	+0.6
PPLA				IAmb	IAmb	08 59 36.1	
	comp=Z,40nm,0.7s						
PPLA	Purkeypile	64.87	27	P	P	08 59 32.6	-0.1
	baz=252,SNR=21						
SKT	Skwentna	64.88	28	P	P	08 59 32.1	-0.6
	baz=253,SNR=16						
ULHL	Ulahol	65.00	310	P	P	08 59 34.9	+0.9
	SNR=32						
KUU	Kurty	65.02	312	eP	P	08 59 33.9	0.0
	baz=312						
KUU				eS	S	09 08 08.2	+0.8
	baz=312						
KUU	Kurty	65.02	312	eP	P	08 59 33.9	0.0
KUU				eS	S	09 08 08.1	+0.8
CAST	Castle Rocks	65.08	26	P	P	08 59 34.6	+0.7
CAST				IAmb	IAmb	09 00 04.7	
	comp=Z,62nm,0.8s						
CAST	Castle Rocks	65.08	26	P	P	08 59 33.8	-0.1
	baz=252,SNR=45						
KSH	Kashi	65.09	307	P	P	08 59 37.8	+3.3
KSH				pP	PcP	09 00 05.8	-0.7
KSH				PP	PP	09 02 03.1	+4.1
KSH				S	S	09 08 14.8	+6.4
KSH				sS	sS	09 09 00.3	+6.4
KSH				pmax	pmax		
	comp=Z,11nm,0.7s						
KSH				pmax	pmax		
	comp=Z,450nm,4.3s						
KSH				LR	LR		
	comp=Z,620nm,15.8s						
KSH				LR	LR		
	comp=Z,380nm,17.5s						
KSH				LR	LR		
	comp=Z,600nm,18.9s						
SUA	Susitna One	65.09	28	P	P	08 59 34.3	+0.2
	baz=254						
CHUM	Lake Minchumin	65.13	26	P	P	08 59 35.2	+1.0
	baz=251,SNR=20						
IMAR	Indian Mountai	65.28	23	P	P	08 59 35.4	+0.2
O22K	Cooper Landing	65.30	30	P	P	08 59 35.8	+0.4
	baz=255,SNR=16						
SEW	Seward	65.34	30	P	P	08 59 36.0	+0.5
SEW				IAmb	IAmb	09 00 05.5	
	comp=Z,56nm,0.7s						
SEW	Seward	65.34	30	P	P	08 59 35.7	+0.2
	baz=256,SNR=9.8						
M22K	Willow	65.45	28	P	P	08 59 36.0	-0.3
M22K	Willow	65.45	28	P	P	08 59 35.7	-0.6
	baz=254,SNR=9.3						
RC01	Rabbit Creek A	65.45	29	P	P	08 59 36.1	-0.2
	baz=255,SNR=21						
NRIK	Noril'sk	65.50	341	P	P	08 59 36.8	+0.3
	comp=Z,38nm,0.6s,baz=114,slow=7.8,SNR=62						
NRIK				pP	pP	09 00 01.8	-1.9
	comp=Z,31nm,0.9s,baz=126,slow=6.7,SNR=3.9						
NRIK				S	S	09 08 10.3	-1.9
	comp=Z,2.7nm,0.9s,baz=229,slow=20,SNR=9.4						
NRIK				LR	LR	09 28 33.0	
	comp=Z,603nm,18.8s,baz=117,slow=36						
	comp=Z,38nm,0.6s						
NRIK	Noril'sk	65.50	341	d iP	P	08 59 36.2	-0.3
NRIK				pmax	pmax		
	comp=Z,43nm,0.7s						
TKM2	Tokmak 2	65.50	311	P	P	08 59 37.9	+0.6
	SNR=65						
H21K	Melozitna Rive	65.53	24	P	P	08 59 37.0	+0.3
H21K	Melozitna Rive	65.53	24	P	P	08 59 37.0	+0.3
	baz=250						
G21K	Allakaket	65.56	23	P	P	08 59 37.6	+0.6
	baz=249						
CUT	Chulitna	65.57	27	IAmb	IAmb	09 00 02.5	
	comp=Z,109nm,1.1s						
CUT	Chulitna	65.57	27	P	P	08 59 36.8	-0.3
	baz=254,SNR=9.1						
KTH	Kantishna Hill	65.62	26	IAmb	IAmb	08 59 39.3	
	comp=Z,46nm,0.7s						
I21K	Tanana	65.69	24	P	P	08 59 38.4	+0.7
I21K				IAmb	IAmb	09 00 07.5	
	comp=Z,38nm,1.0s						
I21K	Tanana	65.69	24	P	P	08 59 37.8	+0.1
	baz=251,SNR=23						
BPAW	Bear Paw Mtn.	65.75	26	P	P	08 59 38.2	0.0
BPAW				IAmb	IAmb	09 00 11.3	
	comp=Z,34nm,0.9s						
BPAW	Bear Paw Mtn.	65.75	26	P	P	08 59 38.3	0.0
	baz=252,SNR=30						
F21K	Alatna River	65.83	22	P	P	08 59 39.0	+0.3
	baz=249						
TRF	Thorofare Moun	65.86	26	IAmb	IAmb	09 00 07.2	
	comp=Z,36nm,0.8s						
TRF	Thorofare Moun	65.86	26	P	P	08 59 38.8	-0.3
	baz=253,SNR=22						
PMR	Palmer	65.87	28	P	P	08 59 38.3	-0.6
PMR				IAmb	IAmb	08 59 40.5	
	comp=Z,38nm,0.7s						
PMR	Palmer	65.87	28	P	P	08 59 38.3	-0.6
PMR				pmax	pmax		
	comp=Z,38nm,0.7s						
PMR	Palmer	65.87	28	P	P	08 59 38.5	-0.4
	baz=255,SNR=17						
KBK	Karagaybulak	65.97	310	P	P	08 59 41.0	+0.8
	SNR=23						
PWL	Port Wells	66.06	29	P	P	08 59 40.7	+0.4
PWL	Port Wells	66.06	29	P	P	08 59 40.5	+0.3
	baz=256,SNR=33						
CHMS	Chumysh	66.13	311	P	P	08 59 42.0	+0.9
	SNR=14						
KNK	Knik Glacier	66.14	29	P	P	08 59 41.1	+0.4
KNK				IAmb	IAmb	09 00 07.7	
	comp=Z,66nm,1.0s						
KNK	Knik Glacier	66.14	29	P	P	08 59 40.6	-0.2
	baz=256,SNR=16						
MLY	Manley	66.14	25	P	P	08 59 41.0	+0.3
MLY				IAmb	IAmb	09 00 11.2	
	comp=Z,32nm,0.8s						
MLY	Manley	66.14	25	P	P	08 59 40.6	-0.1
	baz=252,SNR=34						
H22K	Ishtalitna Cre	66.16	24	P	P	08 59 41.1	+0.3
	baz=251						
SGDS	Sogindy	66.24	311	eP	P	08 59 42.0	+0.2
	baz=311						
SGDS	Sogindy	66.24	311	eP	P	08 59 42.0	+0.2
UCH	Uchtor	66.28	310	P	P	08 59 44.3	+1.8
	SNR=41						

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SML   Sawmill           66.29  28 P       P       08 59 42.0 +0.2
SML                               IAmb    IAmb    09 00 09.2
      comp=Z,89nm,1.0s
SML   Sawmill           66.29  28 P       P       08 59 41.4 -0.3
      baz=256,SNR=15
AAK   Ala-Archa         66.30 310 P       P       08 59 43.1 +0.7
      SNR=12
AAK   Ala-Archa         66.30 310 P       P       08 59 42.9 +0.6
      comp=Z,17nm,0.8s,baz=106,slow=5.6,SNR=22
      comp=Z,17nm,0.8s
AAK   Ala-Archa         66.30 310 P       P       08 59 43.1 +0.7
AAK   Ala-Archa         66.30 310 P       P       08 59 43.1 +0.7
AAK                               pmax    pmax
      comp=Z,31nm,1.0s
AAK   Ala-Archa         66.30 310 iP      P       08 59 42.8 +0.4
      SNR=12
AAK   Ala-Archa         66.30 310 P       P       08 59 43.1 +0.7
AAK   Ala-Archa         66.30 310 P       P       08 59 43.0 +0.6
P23K  Montague Islan    66.31  30 P       P       08 59 42.0 +0.2
      baz=258
USP   Ospenovka         66.32 311 P       P       08 59 43.2 +0.9
      SNR=30
F22K  John River        66.40  22 P       P       08 59 42.7 +0.4
      baz=250
WAT1  Susitna Watana    66.45  27 P       P       08 59 42.4 -0.3
      baz=255
G22K  Bettles           66.45  23 P       P       08 59 42.5 -0.1
      baz=251
RND   Reindeer          66.47  27 P       P       08 59 43.1 +0.2
RND   Reindeer          66.47  27 P       P       08 59 43.1 +0.2
RND                               pmax    pmax
      comp=Z,18nm,0.7s
A21K  Barrow            66.47  17 P       P       08 59 42.9 +0.2
A21K                              IAmb    IAmb    09 00 18.4
      comp=Z,42nm,0.9s
A21K  Barrow            66.47  17 P       P       08 59 42.2 -0.4
      baz=244,SNR=25
MCK   McKinley          66.52  26 P       P       08 59 43.2 +0.1
      baz=254,SNR=11
M23K  Glacier View      66.57  28 P       P       08 59 42.9 -0.6
      baz=256,SNR=9.9
NEA2  Nenana            66.70  25 P       P       08 59 45.0 +0.8
NEA2  Nenana            66.70  25 P       P       08 59 43.2 -1.0
      baz=254
BTLS  Baital            66.73 313 eP      P       08 59 45.2 +0.3
      comp=Z,56nm,1.8s,baz=313
BTLS  Baital            66.73 313 eP      P       08 59 45.1 +0.3
BTLS                              pmax    pmax
      comp=Z,56nm,1.8s
I23K  Minto, Yukon-K    66.73  25 P       P       08 59 45.0 +0.5
I23K  Minto, Yukon-K    66.73  25 P       P       08 59 44.4  0.0
      baz=254,SNR=25
SCM   Sheep Creek Mo    66.76  28 P       P       08 59 45.2 +0.5
SCM   Sheep Creek Mo    66.76  28 P       P       08 59 45.2 +0.5
SCM                               pmax    pmax
      comp=Z,110nm,1.0s
SCM   Sheep Creek Mo    66.76  28 P       P       08 59 45.0 +0.2
      baz=257,SNR=17
EKS2  Erkin-Say         66.83 310 P       P       08 59 46.6 +0.9
      SNR=17
H23K  Yukon River       66.86  24 P       P       08 59 45.7 +0.5
H23K  Yukon River       66.86  24 P       P       08 59 45.5 +0.3
      baz=253,SNR=16
AML   Almayashu         66.88 310 P       P       08 59 47.3 +0.9
      SNR=70
G23K  Bananza Creek     66.94  23 P       P       08 59 45.8  0.0
      baz=252
COLD  Coldfoot          67.03  22 P       P       08 59 46.6 +0.3
      baz=252,SNR=22
WRH   Wood River Hil    67.07  26 IAmb    IAmb    09 00 16.8
      comp=Z,39nm,1.0s
MDM   Murphy Dome       67.14  25 IAmb    IAmb    09 00 16.0
      comp=Z,29nm,0.8s
EYAK  Cordova Ski Ar    67.23  30 IAmb    IAmb    08 59 50.2
      comp=Z,154nm,1.7s
EYAK  Cordova Ski Ar    67.23  30 P       P       08 59 49.5 +1.9
EYAK  Cordova Ski Ar    67.23  30 P       P       08 59 47.6  0.0
      baz=259
PCHI  Peechi            67.23 276⇓eP      P       08 59 47.8 -0.7
PCHI                             eS       S       09 08 33.8 -1.1
TCOL  CIGO, UAF Yank    67.27  25 IAmb    IAmb    09 00 18.1
      comp=Z,31nm,0.7s
TCOL  CIGO, UAF Yank    67.27  25 P       P       08 59 47.5 -0.3
      baz=255
COLA  College           67.28  25 P       P       08 59 48.6 +0.8
COLA                              IAmb    IAmb    09 00 18.1
      comp=Z,31nm,0.7s
COLA  College           67.28  25 P       P       08 59 48.9 +1.1
COLA  College           67.28  25d iP     P       08 59 48.7 +0.9
COLA                              pmax    pmax
      comp=Z,12nm,0.7s
COLA  College           67.28  25 P       P       08 59 47.6 -0.2
      baz=255
COLA  College           67.28  25 P       P       08 59 47.2 -0.6
COLA                              pP      pP      09 00 15.7  0.0
COLA                              sP      sP      09 00 27.8 -0.1
NIL   Nilore            67.33 301 P       P       08 59 49.2 +0.3
NIL   Nilore            67.33 301 P       P       08 59 49.2 +0.3
NIL   Nilore            67.33 301 P       P       08 59 49.8 +0.9
NIL   Nilore            67.33 301 P       P       08 59 49.5 +0.6
DIV   Divide            67.34  29 P       P       08 59 49.3 +0.9
DIV                               IAmb    IAmb    09 00 25.1
      comp=Z,31nm,0.7s
KLU   Klutina           67.34  29 P       P       08 59 49.2 +0.8
KLU                               IAmb    IAmb    09 00 25.2
      comp=Z,41nm,0.8s
KLU   Klutina           67.34  29 P       P       08 59 49.1 +0.6
      baz=258,SNR=7.7
M24K  Tolsona, Glenn    67.35  28 P       P       08 59 49.7 +1.2
M24K                              IAmb    IAmb    09 00 30.9
      comp=Z,65nm,0.9s
M24K  Tolsona, Glenn    67.35  28 P       P       08 59 48.9 +0.4
      baz=258,SNR=7.5
D23K  Nanushuk River    67.43  21 P       P       08 59 49.3 +0.5
      baz=251
E23K  Chandalar         67.51  22 P       P       08 59 50.0 +0.6
      baz=252
POKR  Poker Plat Res    67.51  25 P       P       08 59 49.7 +0.3
POKR  Poker Plat Res    67.51  25 P       P       08 59 49.0 -0.4
      baz=255
H24K  Noodor Dome       67.52  24 P       P       08 59 49.9 +0.4
H24K  Noodor Dome       67.52  24 P       P       08 59 49.6 +0.2
      baz=255
HDA   Harding Lake      67.54  26 P       P       08 59 48.5 -0.9
HDA   Harding Lake      67.54  26 P       P       08 59 48.6 -0.9
      baz=256,SNR=23
IL31                    67.65  25 P       P       08 59 49.0 -1.2
IL31                              IAmb    IAmb    08 59 59.7
      comp=Z,27nm,0.6s
ILAR  Eielson Array     67.65  25 P       P       08 59 49.0 -1.3
      comp=Z,7.4nm,0.4s,baz=253,slow=5.6,SNR=147
ILAR                              pP      PcP     09 00 14.3 -2.1
      comp=Z,16nm,0.7s,baz=259,slow=4.6,SNR=5.5
ILAR                              S       S       09 08 33.5 -4.8
      comp=Z,0.8nm,1.0s,baz=261,slow=12,SNR=4.5
ILAR                              LR      LR      09 27 58.4
      comp=Z,171nm,20.0s,baz=252,slow=34
ILAR                              PKP2bc  P'P'df  09 28 08.1 -4.7
      comp=Z,1.1nm,1.0s,baz=99,slow=2.1,SNR=6.0
      comp=Z,7.4nm,0.4s
ILAR  Eielson Array     67.65  25 P       P       08 59 49.1 -1.1
ILAR  Eielson Array     67.65  25 P       P       08 59 49.1 -1.1
PAX   Paxson            67.85  27 P       P       08 59 51.9 +0.2
PAX                               IAmb    IAmb    09 00 28.1
      comp=Z,28nm,0.6s
PAX   Paxson            67.85  27 P       P       08 59 51.9 +0.2
PAX                               pmax    pmax
      comp=Z,28nm,0.6s
PAX   Paxson            67.85  27 P       P       08 59 51.3 -0.4
      baz=258,SNR=24
HARP  HAARP             67.88  28 P       P       08 59 51.0 -0.8
      baz=258
K24K  Donnelly Dome     67.90  27 P       P       08 59 51.2 -0.6
      baz=257,SNR=18
G24K  Hadweenzic Riv    67.91  23 P       P       08 59 51.5 -0.3
      baz=255
E24K  Your Creek        67.92  22 P       P       08 59 52.0 +0.1
      baz=253
BRZS  Berezniki         67.94 318 eP      P       08 59 52.3  0.0
      baz=318
BRZS  Berezniki         67.94 318 eP      P       08 59 52.3  0.0
F24K  Squaw Lake        67.98  22 P       P       08 59 52.5 +0.2
      baz=254
N25K  Chitina, Valde    67.98  29 P       P       08 59 52.8 +0.3
N25K  Chitina, Valde    67.98  29 P       P       08 59 52.8 +0.3
      baz=259,SNR=10.0
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RIDG  Independent Ri    68.29  27 P       P       08 59 54.4 +0.1
RIDG                              IAmb    IAmb    09 00 36.0
      comp=Z,39nm,0.7s
RIDG  Independent Ri    68.29  27 P       P       08 59 54.4 +0.1
      baz=258,SNR=26
GLB   Gilahina Butte    68.33  29 P       P       08 59 55.4 +0.8
GLB                               IAmb    IAmb    09 00 22.2
      comp=Z,61nm,1.0s
C24K  Franklin Bluff    68.33  20 P       P       08 59 54.5 +0.1
      baz=252
PRP   Porcupine Dome    68.39  25 P       P       08 59 53.4 -1.6
PRP   Porcupine Dome    68.39  25 P       P       08 59 54.6 -0.4
      baz=257
G25K  Bearman Lake      68.45  23 P       P       08 59 55.0 -0.2
      baz=256
DOT   Dot Lake          68.61  27 P       P       08 59 56.4  0.0
DOT                               IAmb    IAmb    09 00 31.0
      comp=Z,44nm,1.0s
MENT  Mentasta          68.63  28 P       P       08 59 57.1 +0.7
MENT  Mentasta          68.63  28 P       P       08 59 57.6 +1.1
DZA   Taraz             68.64 311 eP      P       08 59 57.7 +0.8
      baz=311
DZA   Taraz             68.64 311 eP      P       08 59 57.7 +0.8
MCARA McCarthy VSAT     68.69  29 P       P       08 59 56.4 -0.4
MCARA                             IAmb    IAmb    09 00 25.3
      comp=Z,61nm,0.9s
MCARA McCarthy VSAT     68.69  29 P       P       08 59 56.9 +0.1
      baz=261,SNR=7.7
SCRK  Sand Creek        68.71  27 P       P       08 59 56.5 -0.5
SCRK  Sand Creek        68.71  27 P       P       08 59 56.7 -0.3
      baz=259,SNR=24
FYU   Fort Yukon        68.74  24 P       P       08 59 57.7 +0.7
FYU                               IAmb    IAmb    09 00 33.3
      comp=Z,105nm,1.3s
L26K  Log Cabin Wild    68.81  28 P       P       08 59 58.1 +0.6
L26K  Log Cabin Wild    68.81  28 P       P       08 59 57.7 +0.1
      baz=260,SNR=16
F25K  Christian Rive    68.83  23 P       P       08 59 57.9 +0.3
      baz=256,SNR=30
M26K  Nabesna, AK       68.87  28 P       P       08 59 58.3 +0.4
M26K  Nabesna, AK       68.87  28 P       P       08 59 57.8 -0.2
      baz=260
E25K  Arctic Village    68.98  22 P       P       08 59 58.6 +0.1
      baz=256,SNR=15
J26L  Joseph Creek      68.99  26 P       P       08 59 58.3 -0.4
J26L                              IAmb    IAmb    09 00 28.3
      comp=Z,35nm,0.7s
J26L  Joseph Creek      68.99  26 P       P       08 59 58.5 -0.2
      baz=259,SNR=37
D25K  Kavik River       69.00  21 P       P       08 59 59.1 +0.4
      baz=255
BMAR  Burnt Mountain    69.19  23 P       P       09 00 00.4 +0.6
KK31  Karatay Array     69.24 311 P       P       09 00 00.6  0.0
KK31                              IAmb    IAmb    09 00 02.8
      comp=Z,59nm,0.8s
KK31  Karatay Array     69.24 311 P       P       09 00 00.6  0.0
KK31                              pmax    pmax
      comp=Z,59nm,0.9s
KKAR  Karatay Array     69.24 311 P       P       09 00 00.6  0.0
KKAR  Karatay Array     69.24 311 P       P       09 00 00.6  0.0
I26K  Coal Creek Min    69.31  25 P       P       08 59 59.6 -0.9
I26K  Coal Creek Min    69.31  25 P       P       09 00 00.6 +0.1
      baz=259
M27K  Edge Creek, AK    69.38  28 P       P       09 00 01.9 +0.7
M27K  Edge Creek, AK    69.38  28 P       P       09 00 01.4 +0.2
      baz=262
G26K  Porcupine Rive    69.39  23 P       P       09 00 01.9 +0.9
      baz=258
F26K  Sheenjek River    69.41  23 P       P       09 00 01.2  0.0
      baz=258
CTG   Chitna Glacier    69.44  30 P       P       09 00 02.0 +0.4
      baz=263,SNR=6.2
CTGM  Chitina Glacie    69.44  30 P       P       09 00 02.2 +0.6
GAR   Garm              69.48 307 P       P       09 00 01.8 -0.5
L27K  Beaver Creek,     69.50  28 P       P       09 00 02.1 +0.2
L27K  Beaver Creek,     69.50  28 P       P       09 00 01.8  0.0
      baz=261,SNR=18
BCAR  Beaver Creek A    69.52  28 P       P       09 00 02.6 +0.7
K27K  Chicken           69.55  27 P       P       09 00 02.6 +0.6
      baz=261
BVAR  Borovoye Array    69.55 322 P       P       09 00 02.3  0.0
      comp=Z,84nm,0.7s,baz=100,slow=7.4,SNR=311
BVAR                              PKP2bc  P'P'bc  09 28 05.3 -4.4
      comp=Z,1.6nm,0.8s,baz=305,slow=3.1,SNR=6.8
BVAR                              LR      LR      09 33 54.9
      comp=Z,438nm,18.1s,baz=89,slow=39
      comp=Z,84nm,0.7s
IUG   Iuzhnay           69.61 310 eP      P       09 00 03.5 +0.5
      comp=Z,72nm,1.8s,baz=310
IUG                               eS      S       09 09 03.4 +0.9
      baz=310
IUG   Iuzhnay           69.61 310 eP      P       09 00 03.5 +0.5
IUG                               eS      S       09 09 03.3 +0.9
IUG                               pmax    pmax
      comp=Z,72nm,1.8s
BRVK  Borovoye          69.62 322 P       P       09 00 03.3 +0.6
BRVK                              IAmb    IAmb    09 00 04.7
      comp=Z,80nm,0.8s
BRVK  Borovoye          69.62 322d iP     P       09 00 02.4 -0.3
BRVK                              pmax    pmax
      comp=Z,76nm,0.7s
BRVK  Borovoye          69.62 322 P       P       09 00 03.1 +0.4
BRVK  Borovoye          69.62 322 P       P       09 00 02.8 +0.1
BRVK                              pP      pP      09 00 30.2 +0.1
C26K  Camden Bay        69.65  20 P       P       09 00 03.2 +0.6
      baz=256
BVCY  Beaver Creek      69.85  28 P       P       09 00 04.4 +0.4
      baz=262,SNR=11
PINM  Pinnacle          69.87  31 P       P       09 00 04.2  0.0
      baz=264
YUK3  Moose Creek       69.96  29 P       P       09 00 05.3 +0.4
      baz=263,SNR=18
O28M  Mount Upton       69.97  30 P       P       09 00 05.4 +0.3
      baz=264
C27K  Jago River        69.99  21 P       P       09 00 05.2 +0.5
      baz=257
I27K  Kandik River      70.00  25 P       P       09 00 04.8  0.0
      baz=261
EGAK  Eagle             70.06  26 P       P       09 00 05.6 +0.5
EGAK                              IAmb    IAmb    09 00 08.4
      comp=Z,146nm,1.9s
EGAK  Eagle             70.06  26 P       P       09 00 04.8 -0.3
      baz=261,SNR=19
H27K  Steamboat Moun    70.14  24 P       P       09 00 06.0 +0.3
      baz=260
G27K  Doyon Strip       70.19  24 P       P       09 00 06.4 +0.5
      baz=260
YUK8  Steele Glacier    70.23  30 P       P       09 00 06.6  0.0
      baz=264,SNR=14
PNL   Peninsula         70.25  31 P       P       09 00 06.1 -0.3
      baz=265
CHGR  Chuyangaron       70.40 306 P       P       09 00 08.3 +0.4
CHGR  Chuyangaron       70.40 306 P       P       09 00 08.3 +0.4
CHGR                              pmax    pmax
      comp=Z,169nm,0.8s
E27K  Coleen River      70.45  22 P       P       09 00 08.0 +0.4
      baz=260,SNR=17
O29M  Mount Kennedy     70.72  31 P       P       09 00 09.7 +0.2
      baz=265
DAWY  Dawson            70.72  27 P       P       09 00 10.1 +0.8
DAWY  Dawson            70.72  27 P       P       09 00 09.8 +0.5
      baz=263,SNR=19
KBL   Kabul             70.76 302 P       P       09 00 10.4 +0.1
KBL                               IAmb    IAmb    09 00 13.1
      comp=Z,92nm,1.2s
KBL   Kabul             70.76 302 P       P       09 00 10.4 +0.1
KBL                               pmax    pmax
      comp=Z,92nm,1.3s
KBL   Kabul             70.76 302 P       P       09 00 10.4 +0.1
      SNR=28
YUK4  Talbot Arm        70.78  30 P       P       09 00 11.3 +1.4
      baz=265,SNR=22
YUK6  Outpost Mounta    70.88  30 P       P       09 00 11.1 +0.6
      baz=265,SNR=6.3
M29M  Somme Creek       70.97  29 P       P       09 00 11.8 +1.0
      baz=265
L29M  L29M              71.18  28 P       P       09 00 12.9 +0.8
      baz=265
J29M  Klondike Camp     71.27  26 P       P       09 00 13.8 +1.2
J29M                              IAmb    IAmb    09 00 42.9
      comp=Z,32nm,0.6s
J29M  Klondike Camp     71.27  26 P       P       09 00 13.6 +0.9
      baz=264
HYT   Haines Junctio    71.29  30 P       P       09 00 14.2 +1.3
HYT                               IAmb    IAmb    09 00 41.3
      comp=Z,70nm,0.9s
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HYT   Haines Junctio    71.29  30 P       P       09 00 13.4 +0.6
      baz=266,SNR=11
I29M  Ogilvie Camp,     71.33  25 P       P       09 00 13.2 +0.3
I29M  Ogilvie Camp,     71.33  25 P       P       09 00 13.4 +0.5
      baz=264,SNR=14
P30M  Million Dollar    71.51  31 P       P       09 00 14.7 +0.5
      baz=267
K29M  Barlow Dome       71.52  27 P       P       09 00 14.5 +0.3
      baz=265
N30M  Aishikik Lake     71.53  30 P       P       09 00 14.5 +0.3
      baz=266,SNR=12
PPT   Papeete           71.66 114 P       P       09 00 17.4 +1.8
      comp=Z,41nm,0.7s,baz=334,slow=6.0,SNR=6.1
PPT                               LR      LR      09 24 51.9
      comp=Z,447nm,19.5s,baz=292,slow=30
      comp=Z,41nm,0.7s
PPT2  Papeete2          71.66 114 eP      P       09 00 18.8 +3.1
      comp=Z,48nm,0.9s
PPT2                              eS      S       09 09 27.8 +0.9
      comp=Z,277nm,25.8s
PPT2  Papeete2          71.66 114 eLR     LR      09 22 05.5
      comp=Z,576nm,22.0s
PPT2                              eLR     LR      09 22 15.6
      comp=Z,472nm,22.2s
PPTF  Pamatai, Papee    71.67 114 P       P       09 00 15.8  0.0
PPTF                              IAmb    IAmb    09 00 21.3
      comp=Z,47nm,0.8s
M30M  Minto, Yukon      71.75  28 P       P       09 00 16.4 +0.9
M30M  Minto, Yukon      71.75  28 P       P       09 00 16.4 +0.9
      baz=266,SNR=16
PLBC  Pleasant Camp     71.78  32 P       P       09 00 16.4 +0.7
      baz=268,SNR=6.9
S31K  Pelican           71.79  33 P       P       09 00 16.1 +0.4
      baz=268
O30N  Mendenhall        71.98  30 P       P       09 00 17.9 +1.0
      baz=267
TVO   Taravao           72.02 114 eP      P       09 00 20.3 +2.4
      comp=Z,21nm,0.9s
R31K  City Hall, Gus    72.06  33 P       P       09 00 17.4 +0.1
      baz=268
EPYK  Eagle Plains      72.08  24 P       P       09 00 17.7 +0.3
EPYK  Eagle Plains      72.08  24 P       P       09 00 17.6 +0.2
      baz=265,SNR=18
N31M  Braeburn, Yuko    72.16  30 P       P       09 00 18.9 +0.9
N31M                              IAmb    IAmb    09 00 45.8
      comp=Z,79nm,1.3s
N31M  Braeburn, Yuko    72.16  30 P       P       09 00 18.5 +0.6
      baz=267,SNR=7.0
MAYO  Mayo, Yukon       72.22  27 P       P       09 00 19.2 +1.0
MAYO                              IAmb    IAmb    09 01 09.5
      comp=Z,79nm,0.9s
MAYO  Mayo, Yukon       72.22  27 P       P       09 00 18.5 +0.3
      baz=267,SNR=14
PMOR  Pomariorio Ree    72.23 111 eT      T       10 19 25.9
      comp=Z,9.5nm,0.2s
SIT   Sitka             72.26  34 P       P       09 00 19.3 +0.8
      baz=269
SKAG  Skagway           72.31  32 P       P       09 00 20.7 +1.9
SKAG  Skagway           72.31  32 P       P       09 00 19.5 +0.7
      baz=268
G30M  tAoh Zraii Nji    72.33  24 P       P       09 00 18.8 -0.1
      baz=265,SNR=24
S32K  Killisnoo         72.67  34 P       P       09 00 20.9  0.0
      baz=270
R32K  Eaglecrest        72.71  33 P       P       09 00 21.4 +0.2
      baz=269
M31M  Drury Creek, Y    72.85  29 P       P       09 00 22.8 +0.8
M31M                              IAmb    IAmb    09 00 49.3
      comp=Z,66nm,1.4s
M31M  Drury Creek, Y    72.85  29 P       P       09 00 22.3 +0.3
      baz=268,SNR=13
P32M  Atlin             73.13  32 P       P       09 00 24.4 +0.6
      baz=270
F31M  Tsiigehtchic      73.33  23 P       P       09 00 24.6 -0.1
      baz=267,SNR=19
FARO  Faro, Yukon       73.34  29 P       P       09 00 25.5 +0.7
FARO  Faro, Yukon       73.34  29 P       P       09 00 25.7 +0.8
      baz=269,SNR=10
INK   Inuvik            73.45  23 P       P       09 00 25.3 -0.1
      comp=Z,22nm,0.9s,baz=272,slow=6.4,SNR=58
INK                               S       SKiKP   09 09 41.1 -3.7
      comp=Z,2.1nm,0.8s,baz=41,slow=31,SNR=20
      comp=Z,22nm,0.9s
INK   Inuvik            73.45  23 P       P       09 00 25.0 -0.4
INK   Inuvik            73.45  23 P       P       09 00 24.7 -0.7
      baz=267,SNR=26
U33K  Whale Pass        73.48  35 P       P       09 00 26.6 +0.9
      baz=271
CRAG  Craig             73.49  36 P       P       09 00 26.6 +0.8
      baz=272
T33K  Petersburg        73.56  35 P       P       09 00 27.5 +1.4
      baz=271
P33M  Teslin, Yukon     73.58  31 P       P       09 00 25.7 -0.7
      baz=270,SNR=5.7
Q32M  Nakina River      73.88  32 P       P       09 00 29.0 +0.7
      baz=271
WRAK  Wrangell Islan    73.90  35 P       P       09 00 29.1 +0.9
      baz=272
DIB   Dawson Inlet,     73.95  38 P       P       09 00 29.9 +1.4
H02S1 DAWSON INLET T    73.95  38 P       P       09 00 27.8 -0.8
      SNR=7.2
TBI   Tubuai            74.00 120 eS      S       09 09 54.1 +1.1
      comp=Z,991nm,25.8s
TBI   Tubuai            74.00 120 eLR     LR      09 23 07.0
      comp=Z,7μm,29.0s
TBI                               eLR     LR      09 23 18.9
      comp=Z,3μm,29.5s
TBI   Tubuai            74.00 120 eT      T       10 21 48.4
      comp=Z,36nm,0.3s
V35K  Ketchikan         74.36  36 P       P       09 00 29.7 -1.2
      baz=273
S34M  Telegraph Cree    74.51  33 P       P       09 00 32.5 +0.7
      baz=272,SNR=5.5
T35M  Bob Quinn         75.03  34 P       P       09 00 35.6 +0.8
      baz=273,SNR=6.1
DLBC  Dease Lake        75.07  33 P       P       09 00 36.6 +1.6
DLBC                              IAmb    IAmb    09 01 03.2
      comp=Z,97nm,1.2s
DLBC  Dease Lake        75.07  33 P       P       09 00 36.0 +1.0
      baz=273,SNR=12
SVE   Sverdlovsk        75.17 326ceP      P       09 00 35.9 +0.4
SVE                               pmax    pmax
      comp=Z,91nm,0.9s
GRNB  Grenville Isla    75.41  38 IAmb    IAmb    09 00 39.3
      comp=Z,102nm,1.1s
WTLY  Watson Lake, Y    75.60  31 P       P       09 00 39.4 +1.4
WTLY                              IAmb    IAmb    09 01 06.0
      comp=Z,115nm,1.4s
WTLY  Watson Lake, Y    75.60  31 P       P       09 00 38.8 +0.8
      baz=274,SNR=21
ABKAR Akbulak array     76.22 318 P       P       09 00 41.3 -0.4
A36M  Sachs Harbour     76.24  19 P       P       09 00 41.2 -0.1
A36M                              IAmb    IAmb    09 00 42.5
      comp=Z,35nm,0.7s
A36M  Sachs Harbour     76.24  19 P       P       09 00 40.3 -1.1
      baz=274,SNR=42
ARU   Arti              76.34 325 P       P       09 00 42.6 +0.4
      comp=Z,60nm,0.7s,baz=89,slow=3.4,SNR=91
ARU                               S       S       09 10 14.8 -3.1
      comp=Z,4.3nm,0.2s,baz=290,slow=19,SNR=1.2
ARU                               LR      LR      09 35 37.5
      comp=Z,416nm,19.6s,baz=93,slow=37
      comp=Z,60nm,0.7s
ARU   Arti              76.34 325 P       P       09 00 42.2  0.0
ARU                               IAmb    IAmb    09 00 43.7
      comp=Z,67nm,0.8s
ARU   Arti              76.34 325d iP     P       09 00 41.7 -0.5
ARU                               *PP     pP      09 01 09.0 -0.9
ARU                                               09 03 31.7
ARU                               S       S       09 10 19.8 +1.9
ARU                               SS      SS      09 15 15.8 +1.9
ARU                               pmax    pmax
      comp=Z,76nm,0.8s
C36M  Paulatuk          76.85  21 IAmb    IAmb    09 01 30.6
      comp=Z,197nm,2.0s
C36M  Paulatuk          76.85  21 P       P       09 00 44.2 -0.7
      baz=276,SNR=37
LIRD  Liard River Hi    77.02  32 P       P       09 00 46.3 +0.3
      baz=276,SNR=18
AKTO  Aktyubinsk        77.33 319 P       P       09 00 47.7 -0.2
      comp=Z,16nm,0.6s,baz=93,slow=6.4,SNR=58
AKTO                              S       S       09 10 26.0 -2.9
      comp=Z,1.5nm,0.9s,baz=272,slow=22,SNR=2.7
AKTO                              LR      LR      09 37 46.4
      comp=Z,349nm,18.2s,baz=78,slow=38
      comp=Z,16nm,0.6s
TAOE  Nuku Hiva Isla    77.45 103 eP      P       09 00 51.0 +1.7
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	comp=Z,132nm,27.5s						
TAOE				*e*S	**S**	**09 10 31.9**	**+0.4**
	comp=Z,213nm,26.7s						
TAOE	**Nuku Hiva Isla**	**77.45**	**103**	*e*LR	LR	09 24 33.9	
	comp=Z,1µm,33.1s						
WRGLY	**Wrigley**	**77.82**	**28**	P	**P**	**09 00 51.0**	**+0.6**
	baz=278,SNR=7.9						
KOTAN	**Kotaneelee Air**	**77.96**	**31**	P	**P**	**09 00 51.5**	**+0.3**
	baz=278,SNR=23						
CBB	**Campbell River**	**78.68**	**41**	P	**P**	**09 00 57.3**	**+1.9**
CBB				IAmb	IAmb	09 00 58.0	
	comp=Z,46nm,0.8s						
NGCH	**Negor - Chabah**	**78.79**	**293**	P	**P**	**09 00 57.3**	**+0.8**
GEYT	**Alibeck**	**79.11**	**306**	P	**P**	**09 00 58.5**	**+0.5**
	comp=Z,28nm,0.7s,baz=48,slow=2.2,SNR=36						
GEYT				PP	**PP**	**09 04 02.1**	**+3.5**
	comp=Z,13nm,1.1s,baz=58,slow=11,SNR=4.1						
GEYT				LR	LR	09 40 25.7	
	comp=Z,242nm,19.0s,baz=101,slow=39						
	comp=Z,28nm,0.7s						
CLRS	**Cowichan Lake**	**79.67**	**42**	P	**P**	**09 01 02.5**	**+1.7**
CLRS				IAmb	IAmb	09 01 04.4	
	comp=Z,171nm,2.0s						
NLWA	**Neilton Lookou**	**80.10**	**44**	P	**P**	**09 01 05.2**	**+1.9**
PGC	**Sidney**	**80.15**	**42**	P	**P**	**09 01 05.0**	**+1.7**
WISH	**Wishkah**	**80.22**	**44**	P	**P**	**09 01 06.2**	**+2.4**
WISH				IAmb	IAmb	09 01 06.9	
	comp=Z,76nm,0.7s						
B04A	**Port Angeles**	**80.22**	**43**	P	**P**	**09 01 05.3**	**+1.5**
B04A				IAmb	IAmb	09 01 06.6	
	comp=Z,54nm,0.8s						
E03A	**Lebam**	**80.46**	**44**	P	**P**	**09 01 07.0**	**+1.9**
E03A				IAmb	IAmb	09 01 07.8	
	comp=Z,73nm,0.8s						
F03A	**Seaside**	**80.58**	**45**	P	**P**	**09 01 07.6**	**+1.8**
HEBO	**Mount Hebo**	**80.58**	**46**	IAmb	IAmb	09 01 08.6	
	comp=Z,75nm,0.8s						
I02E	**Swisshome, OR**	**80.72**	**47**	P	**P**	**09 01 08.5**	**+2.0**
LLLB	**Lillooet**	**80.78**	**40**	P	**P**	**09 01 08.4**	**+1.6**
J01E	**Myrtle Point**	**80.85**	**48**	P	**P**	**09 01 09.4**	**+2.2**
J01E				IAmb	IAmb	09 01 10.0	
	comp=Z,43nm,0.9s						
KIRV	**Kirov**	**80.88**	**328**	P	**P**	**09 01 07.6**	**+0.6**
	comp=Z,128nm,0.6s,baz=41,slow=0.9,SNR=34						
KIRV				LR	LR	09 37 33.7	
	comp=Z,312nm,21.0s,baz=72,slow=36						
	comp=Z,128nm,0.6s						
KIRV	**Kirov**	**80.88**	**328**	*d* *i*P	**P**	**09 01 07.2**	**+0.2**
G03D	**McMinnville, O**	**80.92**	**46**	P	**P**	**09 01 09.4**	**+1.8**
G03D				IAmb	IAmb	09 01 10.1	
	comp=Z,52nm,0.7s						
JLN	**Jalan Bani Buh**	**80.97**	**291**	P	**P**	**09 01 08.1**	**-0.2**
	SNR=11						
COR	**Corvallis**	**81.02**	**46**	P	**P**	**09 01 10.4**	**+2.3**
COR	**Corvallis**	**81.02**	**46**	P	**P**	**09 01 10.4**	**+2.3**
COR				pmax	pmax		
	comp=Z,309nm,1.9s						
K02D	**Willamette Mer**	**81.13**	**48**	P	**P**	**09 01 10.4**	**+1.5**
I03D	**Drain, OR**	**81.16**	**47**	P	**P**	**09 01 10.5**	**+1.7**
I03D				IAmb	IAmb	09 01 11.6	
	comp=Z,46nm,0.7s						
KRPM	**Rodgers**	**81.17**	**50**	P	**P**	**09 01 11.2**	**+2.2**
KRPM				IAmb	IAmb	09 01 12.3	
	comp=Z,37nm,0.7s						
JCC	**Jacoby Creek,**	**81.23**	**50**	P	**P**	**09 01 11.3**	**+2.0**
KMPM	**Mount Pierce**	**81.24**	**51**	P	**P**	**09 01 11.8**	**+2.3**
KMPM				IAmb	IAmb	09 01 12.7	
	comp=Z,43nm,0.8s						
WBK	**Wadi Bani Khal**	**81.27**	**291**	P	**P**	**09 01 10.2**	**+0.3**
	SNR=13						
L02F	**Cave Junction**	**81.31**	**49**	P	**P**	**09 01 11.3**	**+1.6**
BUCK	**Buck Mountain**	**81.31**	**47**	P	**P**	**09 01 11.6**	**+1.8**
DBO	**Dodson Butte**	**81.35**	**48**	P	**P**	**09 01 11.8**	**+1.8**
F04A	**Amboy**	**81.36**	**45**	P	**P**	**09 01 11.0**	**+1.2**
F04A				IAmb	IAmb	09 01 12.2	
	comp=Z,49nm,0.8s						
WAPA	**Wapiti River**	**81.38**	**35**	P	**P**	**09 01 10.6**	**+0.7**
WAPA				IAmb	IAmb	09 01 37.4	
	comp=Z,107nm,1.3s						
D05A	**Enumclaw**	**81.39**	**44**	IAmb	IAmb	09 01 12.7	
	comp=Z,40nm,0.8s						
KHMM	**Horse Mountain**	**81.44**	**50**	IAmb	IAmb	09 01 13.8	
	comp=Z,60nm,0.7s						
WSAR	**Wadi Sarin**	**81.45**	**292**	LR	LR	09 42 21.3	
	comp=Z,53nm,19.1s,baz=65,slow=39						
WSAR	**Wadi Sarin**	**81.45**	**292**	P	**P**	**09 01 11.1**	**+0.3**
	SNR=15						
JASK	**Jask - Hormozg**	**81.59**	**295**	P	**P**	**09 01 12.8**	**+1.3**
LON	**Longmire**	**81.61**	**44**	P	**P**	**09 01 11.5**	**+0.2**
LON	**Longmire**	**81.61**	**44**	P	**P**	**09 01 11.5**	**+0.2**
LON				pmax	pmax		
	comp=Z,12nm,0.9s						
HUMO	**Hull Mountain**	**81.66**	**48**	IAmb	IAmb	09 01 16.0	
	comp=Z,38nm,0.7s						
H04A	**Detroit Lake**	**81.78**	**46**	IAmb	IAmb	09 01 14.1	
	comp=Z,49nm,0.7s						
KCPM	**Cahto Peak**	**81.79**	**51**	P	**P**	**09 01 13.3**	**+0.8**
KCPM				IAmb	IAmb	09 01 15.4	
	comp=Z,79nm,0.7s						
I04A	**Tendick Farm,**	**81.80**	**47**	P	**P**	**09 01 12.6**	**+0.2**
BIDO	**Bidbid**	**81.84**	**292**	P	**P**	**09 01 13.2**	**+0.3**
	SNR=32						
YKA	**Yellowknife Ar**	**81.94**	**27**	P	**P**	**09 01 12.1**	**-0.5**
	comp=Z,16nm,0.6s,baz=285,slow=5.2,SNR=285						
YKA				pP	**pP**	**09 01 37.9**	**-3.2**
	comp=Z,13nm,0.6s,baz=287,slow=5.4,SNR=6.3						
YKA				S	**S**	**09 11 14.1**	**-3.0**
	comp=Z,1.1nm,1.0s,baz=287,slow=10,SNR=6.8						
YKA				PKKPbc	**PKKPbc**	**09 19 40.4**	**-3.7**
	comp=Z,0.4nm,0.7s,baz=108,slow=2.5,SNR=6.0						
YKA				LR	LR	09 38 13.6	
	comp=Z,127nm,19.0s,baz=320,slow=36						
	comp=Z,16nm,0.6s						
SMDO	**Samad**	**82.01**	**292**	P	**P**	**09 01 13.7**	**-0.2**
SMDO				P	**PcP**	**09 01 13.8**	**-5.3**
	SNR=11						
HOOD	**Mount Hood Mea**	**82.01**	**45**	IAmb	IAmb	09 01 30.6	
	comp=Z,34nm,0.7s						
YBH	**Yreka Blue Hor**	**82.02**	**49**	S	**S**	**09 11 14.7**	**-4.1**
	comp=Z,0.6nm,0.9s,baz=220,slow=20,SNR=1.4						
YBH				LR	LR	09 30 59.3	
	comp=Z,337nm,20.4s,baz=272,slow=31						
YBH	**Yreka Blue Hor**	**82.02**	**49**	P	**P**	**09 01 14.6**	**+1.0**
YBH				IAmb	IAmb	09 01 16.3	
	comp=Z,49nm,0.8s						
YBH	**Yreka Blue Hor**	**82.02**	**49**	P	**P**	**09 01 14.6**	**+1.0**
YBH				pmax	pmax		
	comp=Z,49nm,0.8s						
JMDO	**Jabal Madar**	**82.11**	**291**	P	**P**	**09 01 14.3**	**0.0**
	SNR=10						
L04D	**Klamath Falls**	**82.21**	**49**	P	**P**	**09 01 15.8**	**+1.1**
LTY	**Liberty**	**82.26**	**43**	P	**P**	**09 01 15.4**	**+0.7**
G05A	**Wamic**	**82.26**	**45**	P	**P**	**09 01 16.0**	**+1.3**
G05A				IAmb	IAmb	09 01 23.5	
	comp=Z,36nm,0.8s						
K04D	**Chiloquin, OR**	**82.52**	**48**	P	**P**	**09 01 17.1**	**+0.9**
MHTO	**MHTO**	**82.53**	**290**	P	**P**	**09 01 16.5**	**0.0**
	SNR=29						
HOQ	**Hoqain**	**82.56**	**292**	P	**P**	**09 01 16.8**	**+0.1**
	SNR=33						
GDXM	**Geysers**	**82.58**	**52**	P	**P**	**09 01 17.7**	**+1.1**
BRLDA	**Berland Lookou**	**82.68**	**36**	P	**P**	**09 01 18.0**	**+1.2**
BRLDA				IAmb	IAmb	09 01 23.2	
	comp=Z,52nm,0.7s						
J05D	**Fort Rock, OR**	**82.75**	**47**	P	**P**	**09 01 18.6**	**+1.1**
BSY	**Bisya**	**82.84**	**292**	P	**P**	**09 01 18.1**	**-0.1**
	SNR=13						
PINE	**Pine Mountain**	**82.84**	**47**	P	**P**	**09 01 19.5**	**+1.5**
B08A	**Colville Reser**	**82.89**	**42**	IAmb	IAmb	09 01 19.7	
	comp=Z,49nm,0.8s						
BANOM	**Banah**	**82.95**	**295**	*i* P	**P**	**09 01 19.8**	**+1.1**
	SNR=31						
BANOM	**Banah**	**82.95**	**295**	P	**P**	**09 01 19.8**	**+1.1**
	SNR=15						
SHME	**Shamm**	**83.07**	**295**	*i* P	**P**	**09 01 19.2**	**0.0**
	SNR=14						
SHME	**Shamm**	**83.07**	**295**	P	**P**	**09 01 19.6**	**+0.4**
	SNR=8.7						
MDH	**Madha**	**83.09**	**294**	*i* P	**P**	**09 01 18.5**	**-0.9**
	SNR=5.9						
MDH	**Madha**	**83.09**	**294**	P	**P**	**09 01 19.3**	**0.0**
K05A	**Summer Lake**	**83.12**	**48**	IAmb	IAmb	09 01 21.9	
	comp=Z,71nm,0.8s						
SOHO	**SOHO**	**83.14**	**293**	*i* P	**P**	**09 01 19.0**	**-0.6**
	SNR=15						
SOHO	**SOHO**	**83.14**	**293**	P	**P**	**09 01 19.8**	**+0.2**
DQM	**DQM**	**83.15**	**289**	P	**P**	**09 01 19.6**	**-0.1**
	SNR=9.6						
MASF	**Masafi**	**83.20**	**294**	P	**P**	**09 01 20.2**	**+0.2**
	SNR=11						
MSFE	**Esma-Masafi**	**83.20**	**294**	*i* P	**P**	**09 01 19.7**	**-0.3**
	SNR=12						
HAWA	**Hanford**	**83.22**	**44**	P	**P**	**09 01 20.6**	**+1.0**
HAWA				IAmb	IAmb	09 01 22.8	
	comp=Z,36nm,0.7s						
UOSS	**Minazif**	**83.25**	**294**	P	**P**	**09 01 20.0**	**-0.2**
UOSS				IAmb	IAmb	09 01 21.6	
	comp=Z,50nm,1.3s						
UOSS	**Minazif**	**83.25**	**294**	*i* P	**P**	**09 01 19.4**	**-0.8**
	SNR=12						
UOSS	**Minazif**	**83.25**	**294**	P	**P**	**09 01 20.0**	**-0.2**
SPA0	**Spitsbergen Ar**	**83.32**	**351**	*e*P	**P**	**09 01 19.4**	**-0.1**
SPA0				IAmb	IAmb	09 01 20.4	
	comp=Z,26nm,1.0s						
SPITS	**Spitsbergen Ar**	**83.32**	**351**	P	**P**	**09 01 19.2**	**-0.3**
	comp=Z,4.6nm,0.5s,baz=93,slow=5.8,SNR=31						
SPITS				LR	LR	09 43 25.4	
	comp=Z,116nm,18.5s,baz=13,slow=39						
	comp=Z,4.6nm,0.5s						
ARQ	**Araqi**	**83.32**	**292**	P	**P**	**09 01 20.9**	**+0.3**
	SNR=11						
BELG	**Belogornoye**	**83.34**	**322**	P	**P**	**09 01 19.9**	**0.0**
	comp=Z,106nm,0.8s,baz=296,slow=0.8,SNR=27						
BELG				LR	LR	09 40 06.8	
	comp=Z,238nm,18.6s,baz=106,slow=37						
	comp=Z,106nm,0.8s						
BELG	**Belogornoye**	**83.34**	**322**	*d* *i*P	**P**	**09 01 19.4**	**-0.6**
BELG				pmax	pmax		
	comp=Z,39nm,1.4s						
HATD	**Hatta, Dubai**	**83.34**	**294**	*i* P	**P**	**09 01 19.8**	**-0.9**
	SNR=14						
HATD	**Hatta, Dubai**	**83.34**	**294**	P	**P**	**09 01 21.2**	**+0.6**
	SNR=9.9						
ORV	**Oroville**	**83.39**	**51**	P	**P**	**09 01 21.6**	**+1.0**
ORV	**Oroville**	**83.39**	**51**	P	**P**	**09 01 21.6**	**+1.0**
ORV				pmax	pmax		
	comp=Z,30nm,1.1s						
ASHO	**Ashiyiah**	**83.44**	**294**	*i* P	**P**	**09 01 20.3**	**-0.9**
	SNR=13						
ASHO	**Ashiyiah**	**83.44**	**294**	P	**P**	**09 01 22.1**	**+0.9**
	SNR=9.8						
KBS	**Kingsbay**	**83.45**	**352**	*e*P	**P**	**09 01 20.1**	**-0.1**
KBS	**Kingsbay**	**83.45**	**352**	*e*P	**P**	**09 01 20.2**	**+0.1**
KBS				IAmb	IAmb	09 01 21.0	
	comp=Z,25nm,0.8s						
D08A	**Wollman Farm,**	**83.47**	**43**	P	**P**	**09 01 22.2**	**+1.4**
UMQ	**Umm Al-Quwin**	**83.60**	**295**	P	**P**	**09 01 23.6**	**+1.7**
RES	**Resolute Bay**	**83.66**	**13**	PKKPbc	PKKPbc	09 19 36.8	-3.8
	comp=Z,1.5nm,0.8s,baz=109,slow=1.3,SNR=5.7						
RES				LR	LR	09 41 50.5	
	comp=Z,105nm,18.8s,baz=355,slow=38						
RES	**Resolute Bay**	**83.66**	**13**	P	**P**	**09 01 21.1**	**-0.2**
RES	**Resolute Bay**	**83.66**	**13**	P	**P**	**09 01 21.1**	**-0.2**
RES				pmax	pmax		
	comp=Z,24nm,0.7s						
C09A	**Chrisman Ranch**	**83.71**	**42**	P	**P**	**09 01 22.9**	**+0.9**
C09A				IAmb	IAmb	09 01 24.4	
	comp=Z,35nm,0.7s						
NAZ	**Nazwa, Dubai**	**83.72**	**294**	*i* P	**P**	**09 01 22.1**	**-0.5**
	SNR=6.1						
NAZ	**Nazwa, Dubai**	**83.72**	**294**	P	**P**	**09 01 23.0**	**+0.4**
	SNR=9.1						
MOD	**Modoc Plateau**	**83.73**	**48**	P	**P**	**09 01 23.6**	**+1.1**
MOD				IAmb	IAmb	09 01 24.7	
	comp=Z,35nm,0.7s						
NOR	**Nord**	**83.74**	**357**	*i* P	**P**	**09 01 21.7**	**+0.1**
NOR				IAmb	IAmb	09 01 50.3	
	comp=Z,9.8nm,1.0s						
I07A	**Izee**	**83.78**	**46**	P	**P**	**09 01 23.9**	**+1.2**
FAQ	**Al Faqa, Dubai**	**83.84**	**294**	*i* P	**P**	**09 01 23.0**	**-0.2**
	SNR=9.7						
FAQ	**Al Faqa, Dubai**	**83.84**	**294**	P	**P**	**09 01 23.3**	**+0.1**
	SNR=11						
ALNE	**Al Ain**	**83.85**	**293**	*i* P	**P**	**09 01 23.4**	**+0.1**
	SNR=7.8						
ALNE	**Al Ain**	**83.85**	**293**	P	**P**	**09 01 23.8**	**+0.5**
	SNR=8.8						
G08A	**Pilot Rock**	**83.87**	**45**	P	**P**	**09 01 23.9**	**+0.8**
SAO	**San Andreas Ge**	**84.07**	**54**	P	**P**	**09 01 25.1**	**+0.9**
SAO	**San Andreas Ge**	**84.07**	**54**	P	**P**	**09 01 25.1**	**+0.9**
SAO				pmax	pmax		
	comp=Z,29nm,1.0s						
ASUD	**Al Ashush, Dub**	**84.10**	**294**	*i* P	**P**	**09 01 24.3**	**-0.2**
	SNR=9.9						
ASUD	**Al Ashush, Dub**	**84.10**	**294**	P	**P**	**09 01 24.9**	**+0.4**
	SNR=9.5						
E09A	**Wood Farm, Sta**	**84.12**	**44**	P	**P**	**09 01 25.6**	**+1.4**
E09A				IAmb	IAmb	09 01 26.8	
	comp=Z,35nm,0.7s						
LVZ	**Lovozero**	**84.29**	**339**	*de*P	**P**	**09 01 24.9**	**+0.3**
LVZ				pmax	pmax		
	comp=Z,142nm,2.9s						
NEW	**Newport**	**84.34**	**42**	S	**S**	**09 11 36.9**	**-5.1**
	comp=Z,1.8nm,0.9s,baz=315,slow=13,SNR=1.9						
NEW	**Newport**	**84.34**	**42**	P	**P**	**09 01 25.9**	**+0.6**
NEW				IAmb	IAmb	09 01 28.1	
	comp=Z,37nm,0.7s						
NEW	**Newport**	**84.34**	**42**	P	**P**	**09 01 25.9**	**+0.6**
NEW				pmax	pmax		
	comp=Z,37nm,0.7s						
NEW	**Newport**	**84.34**	**42**	P	**P**	**09 01 25.0**	**-0.4**
	baz=285,SNR=41						
AJN	**Ajban**	**84.42**	**294**	*i* P	**P**	**09 01 25.9**	**-0.2**
	SNR=15						
AJN	**Ajban**	**84.42**	**294**	P	**P**	**09 01 25.9**	**-0.2**
	SNR=16						
BBGB	**Big Mountain B**	**84.43**	**54**	IAmb	IAmb	09 01 31.0	
	comp=Z,63nm,0.8s						
CASY	**Casey**	**84.50**	**193**	P	**P**	**09 01 26.2**	**+0.7**
MPK	**Martis Peak**	**84.56**	**51**	P	**P**	**09 01 28.2**	**+1.3**
MPK				IAmb	IAmb	09 01 29.4	
	comp=Z,44nm,0.7s						
EMB	**Emerald Bay**	**84.58**	**51**	P	**P**	**09 01 27.9**	**+0.9**
CMB	**Columbia Colle**	**84.59**	**52**	P	**P**	**09 01 28.2**	**+1.4**
CMB				IAmb	IAmb	09 01 31.2	
	comp=Z,35nm,0.8s						
CMB	**Columbia Colle**	**84.59**	**52**	P	**P**	**09 01 28.2**	**+1.4**
CMB				pmax	pmax		
	comp=Z,35nm,0.8s						
PLTX	**Planet X, Gerl**	**84.63**	**49**	P	**P**	**09 01 28.3**	**+1.3**
PLTX				IAmb	IAmb	09 01 29.4	
	comp=Z,63nm,0.7s						
UMZA	**Um Al Zommool**	**84.68**	**292**	P	**P**	**09 01 27.0**	**-0.5**
J08A	**Circle Bar Ran**	**84.69**	**47**	P	**P**	**09 01 28.2**	**+0.9**
J08A				IAmb	IAmb	09 01 29.4	
	comp=Z,29nm,0.7s						
WVOR	**Wild Horse Val**	**84.81**	**48**	IAmb	IAmb	09 01 32.2	
	comp=Z,32nm,0.7s						
APA	**Apatity**	**84.86**	**339**	⇓*i*P	**P**	**09 01 23.8**	**-3.6**
APA				*i* *PP	**pP**	**09 01 50.0**	**-6.0**
APA				pmax	pmax		
	comp=Z,52nm,0.7s						
APA				MLR	MLR		
	comp=Z,1µm,25.0s						
PAHR	**Pah Rah Range**	**84.94**	**50**	P	**P**	**09 01 29.8**	**+1.1**
VADS	**Vadso**	**84.99**	**342**	*e*P	**P**	**09 01 27.9**	**-0.2**
VADS				IAmb	IAmb	09 01 29.8	
	comp=Z,76nm,1.0s						
KLMR	**Klimovskoe**	**85.03**	**332**	*e*P	**P**	**09 01 26.5**	**-2.0**
KLMR				*e*P	**P**	**09 01 26.5**	**-2.0**
KLMR				*e*P	**P**	**09 01 26.5**	**-2.0**
KLMR				AMP		09 01 28.9	
	comp=Z,66nm,0.9s						
KLMR				*e*S	**SKSac**	**09 11 41.1**	**-1.5**
KLMR				*e*S	**SKSac**	**09 11 41.1**	**-1.5**
KLMR	**Klimovskoe**	**85.03**	**332**	*e*P	**P**	**09 01 26.4**	**-2.0**
KLMR				*e*S	**SKSac**	**09 11 41.0**	**-1.5**
KLMR				pmax	pmax		
	comp=Z,66nm,0.9s						
BMO	**Blue Mountains**	**85.11**	**45**	P	**P**	**09 01 30.3**	**+0.9**
BMO				IAmb	IAmb	09 01 31.3	
	comp=Z,46nm,0.8s						
BMO	**Blue Mountains**	**85.11**	**45**	P	**P**	**09 01 30.3**	**+0.9**
BMO				pmax	pmax		
	comp=Z,46nm,0.8s						
SHAO	**Shalim**	**85.34**	**287**	*i* P	**P**	**09 01 30.2**	**-0.7**
	SNR=6.8						
SHAO	**Shalim**	**85.34**	**287**	P	**P**	**09 01 30.6**	**-0.2**
	SNR=5.1						
SMMC	**Simmler**	**85.56**	**55**	P	**P**	**09 01 31.6**	**-0.1**
	baz=284						
VOG	**Valley Oaks Go**	**85.79**	**54**	P	**P**	**09 01 33.1**	**+0.4**
	baz=285						
PKM	**Mcpherson Peak**	**85.81**	**55**	P	**P**	**09 01 33.4**	**+0.3**
	baz=285,SNR=10						
KEV	**Kevo**	**85.88**	**342**	P	**P**	**09 01 31.6**	**-0.8**
KEV				IAmb	IAmb	09 01 33.7	
	comp=Z,46nm,0.9s						
KEV	**Kevo**	**85.88**	**342**	P	**P**	**09 01 31.6**	**-0.8**
KEV				pmax	pmax		
	comp=Z,46nm,0.9s						
PLID	**Pearl Lake**	**85.94**	**45**	P	**P**	**09 01 33.8**	**+0.2**
LHV	**Little Huntoon**	**85.97**	**52**	IAmb	IAmb	09 01 38.0	
	comp=Z,42nm,1.1s						
SBC	**Santa Barbara**	**86.00**	**56**	P	**P**	**09 01 34.7**	**+0.9**
	baz=285						
DMTO	**DMTO**	**86.04**	**287**	P	**P**	**09 01 34.1**	**-0.2**
	SNR=9.1						
KVN	**Kaiserville**	**86.07**	**51**	IAmb	IAmb	09 01 36.6	
	comp=Z,35nm,0.7s						
NVAR	**Mina Array Bea**	**86.08**	**51**	P	**P**	**09 01 35.8**	**+1.3**
	comp=Z,27nm,0.7s,baz=268,slow=5.8,SNR=247						
NVAR				pP	**pP**	**09 02 01.0**	**-1.8**
	comp=Z,13nm,0.7s,baz=264,slow=5.4,SNR=3.9						
NVAR				PKKPbc	**PKKPbc**	**09 19 34.5**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=120,slow=2.1,SNR=7.2						
NVAR				LR	LR	09 33 24.1	
	comp=Z,121nm,21.6s,baz=274,slow=31						
	comp=Z,27nm,0.7s						
NVAR	**Mina Array Bea**	**86.08**	**51**	P	**P**	**09 01 35.7**	**+1.2**
BCW	**Bitter Crk WRg**	**86.12**	**55**	IAmb	IAmb	09 01 39.6	
	comp=Z,83nm,1.5s						
MZR	**Muzera**	**86.12**	**293**	*i* P	**P**	**09 01 34.1**	**-0.6**
	SNR=59						
MZR	**Muzera**	**86.12**	**293**	P	**P**	**09 01 34.4**	**-0.2**
	SNR=42						
AKT	**Akhty**	**86.15**	**312**	*e*P	**P**	**09 01 34.1**	**-0.5**
AKT				*e**PP	**pP**	**09 02 02.6**	**-0.4**
AKT				*e**SP	**sP**	**09 02 15.2**	**+0.4**
AKT				pmax	pmax		
	comp=Z,29nm,0.6s						
VES	**Vestal, Richgr**	**86.15**	**54**	P	**P**	**09 01 35.0**	**+0.5**
	baz=285,SNR=10						
NV11	**Mina Array Sit**	**86.19**	**51**	P	**P**	**09 01 36.4**	**+1.5**
JRN	**Qarnain Island**	**86.22**	**295**	P	**P**	**09 01 34.3**	**-0.7**
	SNR=5.8						
HAMF	**Hammerfest**	**86.35**	**343**	*e*P	**P**	**09 01 34.5**	**-0.2**
RKT	**Rikitea**	**86.41**	**115**	*e*T	T	10 37 23.0	
	comp=Z,2.5nm,0.3s						
GHWR	**Ruwais**	**86.43**	**294**	P	**P**	**09 01 35.4**	**-0.7**
ARA0	**ARCESS Array S**	**86.44**	**342**	*e*P	**P**	**09 01 34.9**	**-0.3**
ARA0				IAmb	IAmb	09 01 36.1	
	comp=Z,50nm,0.7s						
ARCES	**ARCESS Array B**	**86.44**	**342**	P	**P**	**09 01 34.9**	**-0.3**
	comp=Z,38nm,0.6s,baz=66,slow=7.1,SNR=114						
ARCES				LR	LR	09 43 45.8	
	comp=Z,420nm,20.7s,baz=69,slow=38						
	comp=Z,38nm,0.6s						
ARCES	**ARCESS Array B**	**86.44**	**342**	P	**P**	**09 01 34.8**	**-0.5**
TIN	**Tinemaha, Big**	**86.50**	**53**	P	**P**	**09 01 36.5**	**+0.2**
	baz=285						
MFID	**Camas Ranch**	**86.53**	**46**	P	**P**	**09 01 37.3**	**+0.9**
ARVC	**Arvin**	**86.53**	**55**	P	**P**	**09 01 36.4**	**0.0**
	baz=285						
SEKA	**Sheki**	**86.61**	**312**	P	**P**	**09 01 36.8**	**0.0**
DSP	**Deep Springs**	**86.61**	**52**	P	**P**	**09 01 38.1**	**+1.4**
ISA	**Isabella, Lake**	**86.67**	**54**	P	**P**	**09 01 37.4**	**+0.2**
	baz=285						
OSI	**Osito Audit: C**	**86.75**	**55**	P	**P**	**09 01 38.2**	**+0.7**
	baz=285						
CWC	**Cottonwood Cre**	**86.78**	**53**	P	**P**	**09 01 38.0**	**+0.2**
	baz=286						
RBK	**Rabkut**	**86.78**	**287**	P	**P**	**09 01 37.3**	**-0.7**
	SNR=16						
MSO	**Missoula**	**86.81**	**43**	P	**P**	**09 01 38.1**	**+0.4**
MSO	**Missoula**	**86.81**	**43**	P	**P**	**09 01 37.7**	**0.0**
	baz=288,SNR=8.3						
LCH	**Last Change Ra**	**86.90**	**52**	P	**P**	**09 01 39.1**	**+0.7**
TULEG	**Thule**	**86.99**	**8**	P	**P**	**09 01 38.9**	**+1.1**
TULEG	**Thule**	**86.99**	**8**	*i* P	**P**	**09 01 38.4**	**+0.6**
TULEG				IAmb	IAmb	09 01 39.9	
	comp=Z,14nm,0.8s						
GROC	**Groznyy**	**87.04**	**314**	*e*P	**P**	**09 01 38.1**	**-0.6**
GROC				pmax	pmax		
	comp=Z,234nm,1.7s						
WHFO	**Wadi Hawf**	**87.08**	**288**	P	**P**	**09 01 38.3**	**-1.2**
	SNR=7.5						
DECC	**Green Verdugo**	**87.16**	**56**	P	**P**	**09 01 40.0**	**+0.5**
	baz=285						
CCAC	**Calif City Air**	**87.17**	**55**	IAmb	IAmb	09 02 11.3	
	comp=Z,28nm,0.9s						
GRAC	**Grapevine Rang**	**87.18**	**53**	P	**P**	**09 01 41.3**	**+1.7**
GRAC	**Grapevine Rang**	**87.18**	**53**	P	**P**	**09 01 40.4**	**+0.8**
	baz=286,SNR=8.6						
VRH	**Novokhopyorsk**	**87.19**	**322**	*e*P	**P**	**09 01 37.3**	**-1.9**
VRH				pmax	pmax		
	comp=Z,120nm,0.7s						
EDW2	**Edwards Air Fo**	**87.26**	**55**	P	**P**	**09 01 40.6**	**+0.5**
	baz=286,SNR=15						
CIS	**Catalina Islan**	**87.32**	**56**	P	**P**	**09 01 40.9**	**+0.6**
	baz=285						
FMP	**Fort Macarthur**	**87.33**	**56**	P	**P**	**09 01 41.3**	**+1.0**
	baz=286						
MPMC	**Manual Prospec**	**87.34**	**54**	P	**P**	**09 01 41.8**	**+1.3**
	baz=286,SNR=37						
LRMC	**Laurel Mtn Rad**	**87.34**	**54**	P	**P**	**09 01 41.4**	**+0.9**
	baz=286,SNR=19						
GANJ	**Ganja**	**87.40**	**311**	P	**P**	**09 01 39.4**	**-1.2**
KTK1	**Kautokeino**	**87.40**	**342**	*e*P	**P**	**09 01 39.2**	**-0.7**
KTK1				IAmb	IAmb	09 01 40.1	
	comp=Z,21nm,0.9s						
ROCAM	**Rodrigues Isla**	**87.42**	**249**	P	**P**	**09 01 40.8**	**-0.1**
SLWR	**Sila**	**87.45**	**294**	P	**P**	**09 01 40.4**	**-0.6**
HLID	**Hailey**	**87.47**	**46**	IAmb	IAmb	09 01 43.2	
	comp=Z,56nm,0.8s						
HLID	**Hailey**	**87.47**	**46**	P	**P**	**09 01 41.9**	**+0.9**
	baz=287,SNR=133						
SHMA	**Al-Shehemyia**	**87.64**	**296**	P	**P**	**09 01 41.3**	**-0.6**
ABTO	**Aybut**	**87.66**	**287**	P	**P**	**09 01 41.7**	**-0.6**
	SNR=13						
BFSC	**Mount Baldy Ra**	**87.70**	**55**	P	**P**	**09 01 42.5**	**+0.3**
	baz=286						
FURC	**Furnace Creek,**	**87.71**	**53**	P	**P**	**09 01 43.6**	**+1.5**
	baz=286,SNR=30						
ELK	**Elko**	**87.72**	**49**	S	**SKSac**	**09 11 58.3**	**-2.2**
	comp=Z,0.3nm,0.4s,baz=85,slow=22,SNR=9.1						
ELK				PKKPbc	PKKPbc	09 19 30.2	0.0
	comp=Z,0.8nm,0.7s,baz=212,slow=1.8,SNR=4.5						
ELK				LR	LR	09 33 42.6	
	comp=Z,277nm,21.8s,baz=270,slow=30						
ELK	**Elko**	**87.72**	**49**	P	**P**	**09 01 42.5**	**+0.1**
ELK	**Elko**	**87.72**	**49**	P	**P**	**09 01 42.5**	**+0.1**
ELK				pmax	pmax		
	comp=Z,74nm,0.7s						
WCT	**Wildcat Mounta**	**87.81**	**53**	P	**P**	**09 01 43.9**	**+1.3**
WCT				IAmb	IAmb	09 01 45.0	
	comp=Z,30nm,0.8s						
NEEM	**North Greenlan**	**87.83**	**4**	*i* P	**P**	**09 01 39.9**	**-2.3**
NEEM				IAmb	IAmb	09 01 43.6	
	comp=Z,9.7nm,0.7s						
QSM	**Queen of Sheba**	**87.85**	**54**	P	**P**	**09 01 43.9**	**+1.1**
QSM				IAmb	IAmb	09 01 47.6	
	comp=Z,34nm,0.8s						
MOS	**Moscow**	**87.85**	**327**	*e*P	**P**	**09 01 40.8**	**-1.5**
MOS				*e**PP	**pP**	**09 02 08.9**	**-2.0**
MOS				*e*S	**SKSac**	**09 11 57.0**	**-3.1**
MOS				*e*SS	**SS**	**09 17 58.7**	**-5.8**
MOS				pmax	pmax		
	comp=Z,44nm,0.6s						
JETT	**Jettan, Norway**	**87.89**	**343**	*e*P	**P**	**09 01 41.7**	**-0.6**
JETT				IAmb	IAmb	09 01 43.0	
	comp=Z,66nm,0.6s						
GWY	**Greenwater Val**	**87.94**	**53**	IAmb	IAmb	09 01 45.6	
	comp=Z,25nm,0.8s						
SAKB	**Bahrain**	**87.98**	**296**	P	**P**	**09 01 43.2**	**-0.4**
ELS	**Elsinore Mount**	**88.05**	**56**	P	**P**	**09 01 44.8**	**+1.0**
RRX	**Edison Barstow**	**88.05**	**55**	P	**P**	**09 01 45.1**	**+1.4**
	baz=286						
TPNV	**Topopah Spring**	**88.05**	**52**	P	**P**	**09 01 45.3**	**+1.4**
	baz=286,SNR=81						
GSC	**Goldstone, Bar**	**88.08**	**54**	IAmb	IAmb	09 01 48.9	
	comp=Z,32nm,0.8s						
GSC	**Goldstone, Bar**	**88.08**	**54**	P	**P**	**09 01 45.1**	**+1.2**
	baz=286,SNR=31						
LRM	**Limekiln Ridge**	**88.11**	**43**	P	**P**	**09 01 45.1**	**+1.0**
DLMT	**Dillon**	**88.16**	**44**	IAmb	IAmb	09 04 12.4	
	comp=Z,25nm,0.4s						
MCMT	**McKenzie Canyo**	**88.16**	**44**	P	**P**	**09 01 44.9**	**+0.6**

R11A	Troy Canyon, C	88.16	51	P	P	09 01 45.7	+1.3
	baz=287,SNR=46						
HRY	Holter Researc	88.22	42	P	P	09 01 45.4	+1.0
S11A	Rachel	88.24	52	IAmb	IAmb	09 01 47.3	
	comp=Z,51nm,0.8s						
MURC	Murrieta	88.24	56	P	P	09 01 45.7	+1.0
	baz=286,SNR=6.7						
TRO	Tromso	88.26	344	eP	P	09 01 43.3	-0.6
TRO				IAmb	IAmb	09 01 44.2	
	comp=Z,33nm,0.7s						
BBRC	Big Bear Solar	88.28	55	P	P	09 01 45.6	+0.5
	baz=286,SNR=8.0						
LPSR	Galich'ya Gora	88.32	324	eP	P	09 01 43.0	-1.6
LPSR				pmax	pmax		
	comp=Z,110nm,0.7s						
SHOC	Shoshone, Teco	88.33	53	P	P	09 01 45.8	+0.8
	baz=286,SNR=18						
NCK	Nalchik	88.48	315⇑	eP	P	09 01 46.2	+0.6
NCK				pmax	pmax		
	comp=Z,29nm,0.5s						
ZEI	Tsey	88.49	314	eP	P	09 01 43.7	-2.2
ZEI				pmax	pmax		
	comp=Z,12nm,0.7s						
DAG	Danmarks Havn	88.50	356	i P	P	09 01 42.0	-3.0
DAG				IAmb	IAmb	09 01 44.6	
	comp=Z,6.0nm,0.8s						
VORR	Voronezh	88.50	323	eP	P	09 01 44.3	-1.1
VORR				pmax	pmax		
	comp=Z,112nm,0.5s						
109C	Camp Elliot, M	88.51	57	IAmb	IAmb	09 02 16.6	
	comp=Z,74nm,1.4s						
109C	Camp Elliot, M	88.51	57	P	P	09 01 46.8	+0.9
	baz=286,SNR=12						
Q12A	Willow Creek R	88.52	50	P	P	09 01 47.3	+1.3
HEC	Hector,Ludlow	88.58	55	P	P	09 01 47.8	+1.4
	baz=286,SNR=21						
OBN	Obninsk	88.65	327	P	P	09 01 45.0	-1.0
	comp=Z,5.2nm,0.5s,baz=42,slow=2.4,SNR=8.8						
OBN				LR	LR	09 43 50.9	
	comp=Z,53nm,20.6s,baz=33,slow=37						
	comp=Z,5.2nm,0.5s						
OBN	Obninsk	88.65	327⇑	eP	P	09 01 44.8	-1.2
OBN				i *PP	pP	09 02 13.7	-1.0
OBN				e		09 05 12.6	
OBN				i S	SKSac	09 11 59.6	-5.3
OBN				pmax	pmax		
	comp=Z,64nm,1.3s						
VSR	Storozhevoye	88.69	323	eP	P	09 01 44.6	-1.8
VSR				pmax	pmax		
	comp=Z,80nm,0.6s						
GNI	Garni	88.70	311	LR	LR	09 45 55.8	
	comp=Z,183nm,18.3s,baz=84,slow=38						
GNI	Garni	88.70	311c	iP	P	09 01 47.3	+0.4
GNI				pmax	pmax		
	comp=Z,28nm,1.6s						
GNI	Garni	88.70	311	P	P	09 01 46.3	-0.6
GNI	Garni	88.70	311	P	P	09 01 47.1	+0.2
VORD	Divnogorie	88.71	323	eP	P	09 01 44.6	-1.8
VORD				pmax	pmax		
	comp=Z,80nm,0.7s						
BOZ	Bozeman (W)	88.72	43	P	P	09 01 47.7	+0.9
BOZ				IAmb	IAmb	09 02 15.3	
	comp=Z,90nm,2.0s						
BOZ	Bozeman (W)	88.72	43	P	P	09 01 47.7	+0.9
BOZ				pmax	pmax		
	comp=Z,90nm,2.0s						
BOZ	Bozeman (W)	88.72	43	P	P	09 01 47.8	+0.9
	baz=289,SNR=16						
TUQ	Turquoise Moun	88.73	54	P	P	09 01 48.0	+0.9
	baz=287,SNR=32						
PFO	Pinyon Flats O	88.83	56	LR	LR	09 35 20.9	
	comp=Z,209nm,20.4s,baz=252,slow=31						
PFO	Pinyon Flats O	88.83	56	P	P	09 01 48.5	+1.0
PFO				IAmb	IAmb	09 01 51.9	
	comp=Z,27nm,0.9s						
PFO	Pinyon Flats O	88.83	56d	iP	P	09 01 48.6	+1.0
PFO	Pinyon Flats O	88.83	56	P	P	09 01 48.7	+1.2
	baz=286,SNR=26						
PRN	Pahroc Range	88.84	52	P	P	09 01 49.2	+1.6
PRN				IAmb	IAmb	09 01 52.8	
	comp=Z,27nm,0.8s						
TPFO	Pinon Flats	88.84	56	P	P	09 01 48.8	+1.1
	baz=286,SNR=23						
PMD	Palm Desert	88.89	56	IAmb	IAmb	09 01 53.1	
	comp=Z,25nm,0.8s						
KBZ	Khabaz	88.89	315	P	P	09 01 46.5	-0.9
	comp=Z,15nm,0.9s,baz=124,slow=2.6,SNR=20						
KBZ				LR	LR	09 43 12.5	
	comp=Z,314nm,21.9s,baz=57,slow=36						
	comp=Z,15nm,0.9s						
KBZ	Khabaz	88.89	315d	iP	P	09 01 46.6	-0.9
KBZ				pmax	pmax		
	comp=Z,27nm,1.2s						
SPR3	Spring Creek 3	88.90	50	IAmb	IAmb	09 01 50.7	
	comp=Z,25nm,0.8s						
BAR	Barrett	88.92	57	P	P	09 01 48.6	+0.7
BAR				IAmb	IAmb	09 02 18.6	
	comp=Z,29nm,1.2s						
KIV	Kislovodsk	88.96	315	P	P	09 01 47.3	-0.7
KIV				IAmb	IAmb	09 01 48.2	
	comp=Z,32nm,1.1s						
KIV	Kislovodsk	88.96	315	eP	P	09 01 46.4	-1.5
KIV				e		09 12 05.1	
KIV				eSS	SS	09 18 19.0	-2.5
KIV				pmax	pmax		
	comp=Z,26nm,1.0s						
KIV				MLR	MLR		
	comp=Z,202nm,20.0s						
KIV	Kislovodsk	88.96	315	P	P	09 01 46.4	-1.5
KIV	Kislovodsk	88.96	315	P	P	09 01 46.4	-1.5
TKX	Tecate	89.00	57	IAmb	IAmb	09 02 18.9	
	comp=Z,31nm,1.1s						
SHPR	Sheep Range	89.02	53	P	P	09 01 50.1	+1.6
SHPR				IAmb	IAmb	09 01 53.3	
	comp=Z,20nm,0.8s						
MONP2	Monument Peak	89.06	56	P	P	09 01 49.9	+1.1
	baz=286,SNR=27						
BELC	Belle Mtn. Jos	89.09	55	P	P	09 01 49.6	+0.8
	baz=287,SNR=32						
EGMT	Eagleton	89.11	40	P	P	09 01 49.5	+1.0
EGMT				IAmb	IAmb	09 02 16.4	
	comp=Z,87nm,2.0s						
EGMT	Eagleton	89.11	40	P	P	09 01 49.0	+0.5
	baz=291,SNR=6.9						
GMRC	Granite Mounta	89.13	54	P	P	09 01 50.5	+1.5
	baz=287,SNR=52						
NEY	Neytrino	89.17	315⇑	eP	P	09 01 48.7	-0.3
NEY				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HVU	Hansel Valley	89.17	47	P	P	09 01 50.2	+1.2
HVU				IAmb	IAmb	09 01 53.6	
	comp=Z,40nm,0.8s						
HVU	Hansel Valley	89.17	47	P	P	09 01 50.3	+1.2
HVU				pmax	pmax		
	comp=Z,40nm,0.8s						
AKH	Akhalkalaki	89.21	313	P	P	09 01 49.1	-0.2
AKH	Akhalkalaki	89.21	313	P	P	09 01 49.1	-0.2
AKH				pmax	pmax		
	comp=Z,170nm,1.7s						
BGU	Big Grassy Mou	89.26	48	P	P	09 01 50.6	+1.1
IKP	In-Ko-Pah, Jac	89.38	57	P	P	09 01 51.6	+1.5
	baz=287,SNR=15						
YMR	Madison River	89.48	44	P	P	09 01 51.8	+1.3
YMR				IAmb	IAmb	09 01 54.5	
	comp=Z,57nm,1.2s						
V12A	Nelson	89.49	53	P	P	09 01 52.3	+1.7
YUH	Yuha Desert	89.54	56	IAmb	IAmb	09 02 21.6	
	comp=Z,34nm,1.1s						
SWSC	Sam W. Stewart	89.55	56	P	P	09 01 51.9	+1.1
	baz=287,SNR=15						
SPUT	South Promonto	89.55	47	P	P	09 01 52.2	+1.3
SPUT				IAmb	IAmb	09 01 54.3	
	comp=Z,89nm,1.5s						
BC3	Big Chuckawall	89.62	55	P	P	09 01 52.7	+1.4
	baz=287,SNR=29						
PUL	Pulkovo	89.64	333⇓	eP	P	09 01 49.9	-0.7
PUL				pmax	pmax		
	comp=Z,61nm,0.7s						
DUG	Dugway, Tooele	89.65	49	P	P	09 01 52.5	+1.2
	baz=289,SNR=100						
YNR	Norris Junctio	89.65	44	P	P	09 01 54.1	+2.8
YNR				IAmb	IAmb	09 01 55.9	
	comp=Z,37nm,0.9s						
ESJX	Sierra Juarez	89.70	57	P	P	09 01 53.3	+1.6
ESJX				IAmb	IAmb	09 02 22.9	
	comp=Z,34nm,1.1s						
IRM	Iron Mountain	89.72	55	P	P	09 01 53.1	+1.5
	baz=287,SNR=46						
IMW	Indian Meadow	89.75	45	P	P	09 01 53.4	+1.4
IMW				IAmb	IAmb	09 01 55.0	
	comp=Z,29nm,0.7s						
YUF	Upper Falls	89.77	44	P	P	09 01 53.7	+1.8
YUF				IAmb	IAmb	09 02 21.5	
	comp=Z,50nm,1.2s						
FXWY	Fox Creek	89.78	45	P	P	09 01 53.2	+1.2
FXWY				IAmb	IAmb	09 01 54.9	
	comp=Z,17nm,0.7s						
H17A	Grant Village	89.83	44	P	P	09 01 54.2	+2.0
H17A				IAmb	IAmb	09 01 57.3	
	comp=Z,34nm,1.1s						
H17A	Grant Village	89.83	44	P	P	09 01 54.6	+2.3
	baz=290,SNR=22						
FLWY	Flagg Ranch	89.85	44	P	P	09 01 53.9	+1.6
LKWY	Lake	89.89	44	IAmb	IAmb	09 01 57.7	
	comp=Z,68nm,1.6s						
MOOW	Moose Ponds	89.94	45	P	P	09 01 52.9	+0.2
GCMT	Greycliff	89.95	43	P	P	09 01 53.9	+1.3
NEE2	Needles Airpor	89.95	54	P	P	09 01 54.0	+1.3
	baz=288						
REDW	Red Top Meadow	89.99	45	P	P	09 01 53.5	+0.5
REDW				IAmb	IAmb	09 01 56.4	
	comp=Z,80nm,1.8s						
VTX	Valle De La Tr	90.01	58	IAmb	IAmb	09 02 24.2	
	comp=Z,25nm,1.0s						
AHID	Auburn Hatcher	90.02	46	P	P	09 01 54.1	+1.0
AHID				IAmb	IAmb	09 01 55.2	
	comp=Z,27nm,0.8s						
SNOW	Snow King Moun	90.03	45	P	P	09 01 54.5	+1.4
SNOW				IAmb	IAmb	09 01 56.0	
	comp=Z,17nm,0.7s						
HWUT	Hardware Ranch	90.08	47	IAmb	IAmb	09 01 56.5	
	comp=Z,44nm,0.8s						
NLU	North Lily Min	90.26	49	P	P	09 01 55.4	+1.2
NLU				IAmb	IAmb	09 01 56.4	
	comp=Z,21nm,0.8s						
GLA	Glamis	90.30	56	P	P	09 01 55.9	+1.5
GLA				IAmb	IAmb	09 01 57.0	
	comp=Z,34nm,0.8s						
GLA	Glamis	90.30	56	P	P	09 01 55.9	+1.5
GLA				pmax	pmax		
	comp=Z,34nm,0.8s						
GLA	Glamis	90.30	56	P	P	09 01 56.2	+1.8
	baz=287,SNR=9.9						
LCMT	Little Creek M	90.33	52	P	P	09 01 55.8	+1.3
LCMT				IAmb	IAmb	09 01 59.3	
	comp=Z,19nm,0.8s						
BLYC	Blythe	90.33	55	P	P	09 01 55.9	+1.5
BLYC				IAmb	IAmb	09 01 57.0	
	comp=Z,34nm,0.8s						
TCUT	Toone Canyon	90.36	47	P	P	09 01 55.7	+0.9
STEI	Steigen	90.39	343	eP	P	09 01 53.2	-0.7
STEI				IAmb	IAmb	09 01 54.8	
	comp=Z,66nm,0.7s						
W13A	Hualapai Mount	90.43	54	P	P	09 01 56.7	+1.5
W13A				IAmb	IAmb	09 01 57.7	
	comp=Z,23nm,0.7s						
RLMT	Red Lodge	90.45	43	P	P	09 01 55.8	+0.8
RLMT				IAmb	IAmb	09 01 59.8	
	comp=Z,24nm,0.7s						
RLMT	Red Lodge	90.45	43	P	P	09 01 56.5	+1.5
	baz=291,SNR=27						
PDMCI	Parker Dam,Lak	90.47	54	P	P	09 01 55.9	+0.9
	baz=288,SNR=14						
MPU	Maple Canyon	90.56	48	P	P	09 01 56.6	+1.0
MPU				IAmb	IAmb	09 01 58.2	
	comp=Z,15nm,0.6s						
FIA1	FINESS Array S	90.60	335	P	P	09 01 53.7	-1.4
FINES	FINESS Array B	90.60	335	P	P	09 01 53.6	-1.5
	comp=Z,74nm,0.5s,baz=66,slow=4.8,SNR=507						
FINES				LR	LR	09 43 59.5	
	comp=Z,237nm,21.2s,baz=54,slow=36						
	comp=Z,74nm,0.5s						
FINES	FINESS Array B	90.60	335	i P	P	09 01 53.2	-1.8
FINES				pmax	pmax		
	comp=Z,74nm,0.5s						
MSU	Marysvale	90.65	50	P	P	09 01 57.0	+0.9
MSU	Marysvale	90.65	50	P	P	09 01 57.0	+0.9
FAUS	Fauske	90.74	343	eP	P	09 01 55.7	+0.1
MTPU	Mount Pierson	90.80	50	P	P	09 01 58.1	+1.1
SFX	San Felipe	90.88	58	P	P	09 01 58.0	+1.0
SFX				IAmb	IAmb	09 02 27.9	
	comp=Z,34nm,1.0s						
FFC	Flin Flon	90.90	32	P	P	09 01 56.4	-0.2
FFC				IAmb	IAmb	09 01 58.0	
	comp=Z,19nm,0.9s						
FFC	Flin Flon	90.90	32	P	P	09 01 56.4	-0.2
FFC				pmax	pmax		
	comp=Z,19nm,1.0s						
PKCU	Pink Cliffs	90.90	51	P	P	09 01 57.9	+0.5
DBG	Daneborg	91.00	356	eP	P	09 01 55.1	-1.6
DBG				IAmb	IAmb	09 01 58.0	
	comp=Z,2.2nm,0.8s						
BSUT	Blindstream Ca	91.02	48	P	P	09 01 59.2	+1.2
BSUT				IAmb	IAmb	09 02 01.7	
	comp=Z,14nm,0.7s						
BW06	Boulder Array	91.09	45	P	P	09 01 58.5	+0.4
BW06				IAmb	IAmb	09 01 60.0	
	comp=Z,16nm,0.7s						
BW06	Boulder Array	91.09	45	P	P	09 01 58.4	+0.3
	baz=291,SNR=29						
PD31	Pinedale Array	91.09	45	P	P	09 01 57.8	-0.3
PD31				IAmb	IAmb	09 01 60.0	
	comp=Z,14nm,0.7s						
PDAR	Pinedale Array	91.09	45	P	P	09 01 58.6	+0.6
	comp=Z,14nm,0.6s,baz=238,slow=2.8,SNR=167						
PDAR				pP	pP	09 02 24.4	-2.4
	comp=Z,3.1nm,0.6s,baz=246,slow=1.4,SNR=3.4						
PDAR				PKKPbc	PKKPbc	09 19 20.5	-1.4
	comp=Z,0.3nm,0.4s,baz=119,slow=4.4,SNR=4.8						
PDAR				LR	LR	09 36 11.1	
	comp=Z,142nm,19.9s,baz=296,slow=31						
	comp=Z,14nm,0.6s						
PDAR	Pinedale Array	91.09	45	P	P	09 01 58.2	+0.1
SOC	Sochi	91.11	316	eP	P	09 01 55.0	-2.8
SOC				eS	SKSac	09 12 16.2	-3.5
SOC				eSS	SS	09 18 49.5	-2.8
SOC				eSSS	SSS	09 22 29.0	
SOC				pmax	pmax		
	comp=Z,18nm,0.5s						
TMUT	Trail Mountain	91.11	49	P	P	09 01 59.7	+1.3
TMUT				IAmb	IAmb	09 02 01.0	
	comp=Z,18nm,0.8s						
GURO	Guroymak-BITLI	91.20	310	P	P	09 01 58.2	-0.4
113A	Mohawk Valley,	91.23	56	P	P	09 01 59.7	+1.1
113A				IAmb	IAmb	09 02 29.6	
	comp=Z,44nm,1.4s						
U15A	North Rim	91.24	52	P	P	09 02 00.2	+1.2
U15A				IAmb	IAmb	09 02 01.7	
	comp=Z,29nm,0.8s						
Q16A	Castle Valley	91.26	49	IAmb	IAmb	09 02 29.9	
	comp=Z,50nm,1.3s						
P17A	Butcher Ranch,	91.39	49	P	P	09 02 00.2	+0.7
P17A				IAmb	IAmb	09 02 29.2	
	comp=Z,20nm,1.0s						
Y14A	Wickenburg	91.48	55	P	P	09 02 01.0	+1.1
Y14A				IAmb	IAmb	09 02 02.4	
	comp=Z,14nm,0.7s						
P18A	Preston Nutter	91.70	48	P	P	09 02 02.1	+1.1
P18A				IAmb	IAmb	09 02 03.6	
	comp=Z,28nm,0.7s						
MOR8	Moi Rana	91.81	342	eP	P	09 01 59.0	-1.6
KOPT	Kop Dagi	91.82	312	IAmb	IAmb	09 02 04.6	
	comp=Z,34nm,1.3s						
LAO	LASA Array	91.83	41	P	P	09 02 02.0	+0.8
LAO	LASA Array	91.83	41	P	P	09 02 02.1	+0.9
	baz=293,SNR=19						
LAO	LASA Array	91.83	41	P	P	09 02 01.5	+0.2
	baz=293						
RDMU	Red Mountain	91.86	47	P	P	09 02 02.7	+1.1
VSU	Vasula	91.90	332c	iP	P	09 01 59.9	-1.2
VSU				pmax	pmax		
	comp=Z,192nm,0.8s						
VSU	Vasula	91.90	332	eP	P	09 02 00.1	-1.0
MEF	Metsahovi	91.96	335	eP	P	09 01 59.8	-1.5
ANN	Anapa	92.18	317	eP	P	09 01 51.2	-12
ANN				e*PP	pP	09 02 23.0	-8.4
ANN				e		09 05 38.7	
ANN				eSS	SS	09 19 04.5	-3.1
ANN				pmax	pmax		
	comp=Z,26nm,0.9s						
WUAZ	Wupatki	92.24	53	P	P	09 02 04.5	+1.1
	baz=289,SNR=39						
VNDA	Vanda	92.25	176	P	P	09 02 03.5	+1.2
	comp=Z,26nm,0.9s,baz=313,slow=6.0,SNR=19						
VNDA				LR	LR	09 43 41.6	
	comp=Z,193nm,18.1s,baz=340,slow=36						
	comp=Z,26nm,0.9s						
VNDA	Vanda	92.25	176	P	P	09 02 03.2	+1.0
VNDA	Vanda	92.25	176	P	P	09 02 03.3	+1.0
VNDA				pmax	pmax		
	comp=Z,44nm,1.0s						
214A	Organ Pipe Nat	92.26	56	P	P	09 02 04.6	+1.1
214A				IAmb	IAmb	09 02 34.1	
	comp=Z,36nm,1.1s						
214A	Organ Pipe Nat	92.26	56	P	P	09 02 05.1	+1.7
	baz=288,SNR=26						
DGMT	Dagmar	92.36	39	P	P	09 02 03.9	+0.2
DGMT				IAmb	IAmb	09 02 31.0	
	comp=Z,24nm,1.2s						
DGMT	Dagmar	92.36	39	P	P	09 02 03.8	+0.2
	baz=295						
DGMT	Dagmar	92.36	39	P	P	09 02 03.7	+0.1
	baz=295						
RAF	Rauma	92.56	336	eP	P	09 02 02.5	-1.7
FCC	Fort Churchill	92.64	27	P	P	09 02 03.9	-0.6
FCC				IAmb	IAmb	09 02 48.7	
	comp=Z,28nm,1.5s						
FCC	Fort Churchill	92.64	27	P	P	09 02 03.9	-0.6
FCC				pmax	pmax		
	comp=Z,28nm,1.5s						
JMIC	Jan Mayen	92.94	352	LR	LR	09 50 22.9	
	comp=Z,67nm,18.7s,baz=25,slow=40						
O20A	White River Ci	92.96	47	P	P	09 02 07.7	+1.0
O20A				IAmb	IAmb	09 02 08.4	
	comp=Z,16nm,0.8s						
O20A	White River Ci	92.96	47	P	P	09 02 07.0	+0.2
	baz=292,SNR=11						
PV10	Paradox Valley	93.02	49	P	P	09 02 08.2	+1.1
PV10				IAmb	IAmb	09 02 08.9	
	comp=Z,27nm,0.7s						
MTSE	Matsula	93.05	334	eP	P	09 02 05.3	-1.1
RAYN	Ar Rayn	93.06	295	P	P	09 02 06.1	-1.2
RAYN				IAmb	IAmb	09 02 07.3	
	comp=Z,14nm,0.8s						
RAYN	Ar Rayn	93.06	295	P	P	09 02 06.5	-0.8
RAYN	Ar Rayn	93.06	295	i P	P	09 02 05.9	-1.4
	SNR=14						
RWWY	Rawlins	93.11	46	IAmb	IAmb	09 02 10.2	
	comp=Z,22nm,0.8s						
K22A	Casper	93.21	45	P	P	09 02 08.8	+1.0
K22A	Casper	93.21	45	P	P	09 02 08.8	+1.0
	baz=293,SNR=28						
K22A	Casper	93.21	45	P	P	09 02 08.3	+0.5
	baz=293						
PV13	Radium Mtn., P	93.26	49	P	P	09 02 09.1	+0.9
PV13				IAmb	IAmb	09 02 10.3	
	comp=Z,21nm,0.7s						
PV07	Paradox Valley	93.28	49	P	P	09 02 08.8	+0.5
MNK	Minsk	93.41	329	i P	P	09 02 05.8	-2.4
MNK				i P	P	09 02 05.8	-2.4
MNK				i P	P	09 02 05.8	-2.4
	comp=Z,15nm,0.9s,baz=60						
MNK				i pP	pP	09 02 32.1	-4.7
MNK				i PP	PP	09 05 50.9	-2.3
MNK				i PPP	PPP	09 07 52.1	
MNK				i S	SKSac	09 12 28.0	-4.2
MNK				i sS	ScS	09 13 17.1	+9.2
MNK				i SS	SS	09 19 25.1	+0.6
MNK				i SSS	SSS	09 23 07.8	
MNK				i LQ	LQ	09 37 51.6	
MNK				i LR	LR	09 41 11.3	
MNK				i LRM	MLR	09 43 59.0	
	comp=E,58nm,21.7s						
MNK				i LRM	MLR	09 44 07.6	
	comp=Z,399nm,19.8s						
MNK				i LRM	MLR	09 45 20.8	
	comp=N,366nm,12.8s						
MNK	Minsk	93.41	329	i P	P	09 02 05.7	-2.4
MNK				i *PP	pP	09 02 32.1	-4.7
MNK				i		09 05 50.8	
MNK				i PPP	PPP	09 07 52.1	
MNK				i S	SKSac	09 12 27.9	-4.2
MNK				i SS	SS	09 19 25.1	+0.6
MNK				i SSS	SSS	09 23 07.7	
MNK				pmax	pmax		
	comp=Z,15nm,0.9s						
MNK				MLR	MLR		
	comp=E,58nm,22.0s						
MNK				MLR	MLR		
	comp=Z,399nm,20.0s						
MNK				MLR	MLR		
	comp=N,366nm,13.0s						
W18A	Petrified Fore	93.64	53	P	P	09 02 10.8	+0.9
	baz=290						
NSS	Namsos	93.70	342	eP	P	09 02 08.9	-0.5
NACGM	Naroch	93.75	329	eP	P	09 01 51.3	-18
	comp=Z,10.0nm,0.8s,baz=59						
TUC	Tucson	93.77	55	P	P	09 02 11.2	+0.8
TUC	Tucson	93.77	55	P	P	09 02 11.3	+0.8
TUC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TUC	Tucson	93.77	55	P	P	09 02 11.3	+0.8
	baz=290						
AAL	Aland	93.77	336	eP	P	09 02 07.6	-2.1
MVCO	Mesa Verde	93.83	50	P	P	09 02 11.9	+1.0
MVCO				IAmb	IAmb	09 02 39.4	
	comp=Z,58nm,2.0s						
MVCO	Mesa Verde	93.83	50	P	P	09 02 11.5	+0.6
	baz=291						
SMCO	Snowmass	94.22	48	P	P	09 02 13.8	+0.9
SMCO				IAmb	IAmb	09 02 20.3	
	comp=Z,12nm,0.9s						
RSSD	Black Hills	94.28	43	P	P	09 02 12.5	-0.2
RSSD	Black Hills	94.28	43	P	P	09 02 12.5	-0.2
RSSD				pmax	pmax		
	comp=Z,25nm,0.7s						
RSSD	Black Hills	94.28	43	P	P	09 02 13.0	+0.2
	baz=295						
RSSD	Black Hills	94.28	43	P	P	09 02 13.1	+0.3
	baz=295						
N23A	Red Feather La	94.29	46	P	P	09 02 14.0	+1.0
	baz=293,SNR=19						
PHWY	Pilot Hill	94.47	46	P	P	09 02 14.8	+1.1
PHWY				IAmb	IAmb	09 03 02.3	
	comp=Z,37nm,1.6s						
AKASG	Malin Array Be	94.59	325	P	P	09 02 10.9	-2.7
	comp=Z,2.0nm,0.6s,baz=37,slow=5.3,SNR=17						
AKASG				PKKPbc	PKKPdf	09 19 10.4	-1.0
	comp=Z,0.8nm,0.4s,baz=263,slow=2.9,SNR=9.1						
AKASG				LR	LR	09 45 53.6	
	comp=Z,274nm,20.9s,baz=56,slow=36						
AKASG	Malin Array Be	94.59	325	P	P	09 02 12.7	-1.0
AKASG				IAmb	IAmb	09 02 13.4	
	comp=Z,24nm,1.7s						
AKASG	Malin Array Be	94.59	325	i P	P	09 02 11.6	-2.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKBB	Malin Array Si	94.59	325	P	P	09 02 12.4	-1.2
AKBB				IAmb	IAmb	09 02 13.8	
	comp=Z,9.1nm,0.8s						
AKBB	Malin Array Si	94.59	325⇑	eP	P	09 02 12.2	-1.5
AKBB				pmax	pmax		
	comp=Z,11nm,0.8s						
HSIG		94.72	59	P	P	09 02 13.8	-1.0
HSIG				IAmb	IAmb	09 02 45.7	
	comp=Z,18nm,1.2s						
PABE	Paberze	94.78	331	P	P	09 02 13.4	-1.0
PABE				IAmb	IAmb	09 02 15.1	
	comp=Z,31nm,1.2s						
PABE	Paberze	94.78	331	eP	P	09 02 13.9	-0.5
S22A	4UR Ranch, Cre	94.87	49	P	P	09 02 17.0	+1.4
S22A	4UR Ranch, Cre	94.87	49	P	P	09 02 16.8	+1.1
	baz=292,SNR=14						
UPP	Uppsala	94.90	336	eP	P	09 02 13.3	-1.6
ISCO	Idaho Springs	94.95	47	P	P	09 02 17.0	+0.9
ISCO	Idaho Springs	94.95	47	P	P	09 02 17.0	+0.9
ISCO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ISCO	Idaho Springs	94.95	47	P	P	09 02 17.1	+1.1
	baz=293,SNR=7.0						
ISCO	Idaho Springs	94.95	47	P	P	09 02 17.0	+0.9
	baz=293						
DUN6	Lazy B Ranch	95.03	55	P	P	09 02 17.9	+1.6
319A	Douglas	95.29	56	P	P	09 02 18.6	+1.1
E28A	Huff	95.33	39	P	P	09 02 17.8	+0.6
	baz=297						

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MDND  Maddock            95.39  38    P        P        09 02 18.2 +0.7
      baz=298
MDND  Maddock            95.39  38    P        P        09 02 17.8 +0.3
      baz=298
SDCO  Great Sand Dun     95.84  49    P        P        09 02 20.3 +0.2
SDCO  Great Sand Dun     95.84  49    P        P        09 02 21.2 +1.1
      baz=293,SNR=13
SDCO  Great Sand Dun     95.84  49    P        P        09 02 20.8 +0.7
      baz=293
121A  Cookes Peak, D     96.07  54    P        P        09 02 21.1  0.0
121A  Cookes Peak, D     96.07  54    P        P        09 02 22.2 +1.1
      baz=291
121A  Cookes Peak, D     96.07  54    P        P        09 02 21.0  0.0
      baz=291
LENM  Lemitar            96.10  53    P        P        09 02 23.2 +2.0
VIKU  Vikbolandet        96.14 336   eP        P        09 02 19.4 -1.1
Y22D  IRIS PASSCAL I     96.18  53    P        P        09 02 21.9 +0.3
Y22D  IRIS PASSCAL I     96.18  53    P        P        09 02 23.3 +1.7
      baz=292
Y22D  IRIS PASSCAL I     96.18  53    P        P        09 02 22.8 +1.3
      baz=292
Y22F  Passcal Instru     96.18  53    P        P        09 02 23.0 +1.5
      baz=292
Y22A  Socorro            96.19  53    P        P        09 02 22.4 +0.7
      baz=292
HFS   Hagfors            96.20 338    LR       LR       09 45 56.0
      comp=Z,276nm,21.5s,baz=47,slow=36
ANMO  Albuquerque        96.21  52    LR       LR       09 41 32.8
      comp=Z,138nm,18.2s,baz=9.0,slow=33
ANMO  Albuquerque        96.21  52    P        P        09 02 23.2 +1.5
ANMO  Albuquerque        96.21  52⇓  eP        P        09 02 22.7 +1.0
ANMO                                  pmax     pmax
      comp=Z,20nm,2.1s
ANMO  Albuquerque        96.21  52    P        P        09 02 22.8 +1.1
      baz=292
ANMO  Albuquerque        96.21  52    P        P        09 02 22.5 +0.8
      baz=292
NC405 NORSAR Array S     96.22 339    P        P        09 02 19.9 -1.0
NC303 NORSAR Array S     96.25 339    P        P        09 02 20.1 -0.9
NC303                                 IAmb     IAmb     09 02 21.0
      comp=Z,14nm,0.8s
ULM   Lac du Bonnet      96.33  34    P        P        09 02 20.1 -1.5
      comp=Z,8.7nm,0.7s,baz=316,slow=4.7,SNR=11
ULM                                   LR       LR       09 38 40.0
      comp=Z,196nm,21.6s,baz=300,slow=31
      comp=Z,8.7nm,0.7s
ULM   Lac du Bonnet      96.33  34    IAmb     IAmb     09 02 22.3
      comp=Z,8.3nm,0.8s
BNM   Barren Site        96.38  52    P        P        09 02 23.0 +0.5
NB201 NORSAR Array S     96.40 339    P        P        09 02 20.8 -1.0
DOMB  Dombas             96.42 341   eP        P        09 02 21.6 -0.2
NC204 NORSAR Array S     96.42 340    P        P        09 02 20.7 -1.2
NB2   NORSAR Subarra     96.44 339    P        P        09 02 20.1 -1.9
      comp=Z,12nm,0.7s,baz=46,slow=5.1
NB2   NORSAR Subarra     96.44 339    P        P        09 02 20.1 -1.9
      baz=46,slow=5.1
NOA   NORSAR Array B     96.44 339    P        P        09 02 20.4 -1.5
      comp=Z,9.1nm,0.7s,baz=46,slow=5.5,SNR=37
NOA                                   LR       LR       09 47 52.3
      comp=Z,276nm,21.0s,baz=30,slow=37
      comp=Z,9.1nm,0.7s
NC602 NORSAR Array S     96.54 339   eP        P        09 02 21.2 -1.2
NBO00 NORSAR Array S     96.59 340    P        P        09 02 22.3 -0.3
NAO01 NORSAR Array S     96.69 339    P        P        09 02 22.0 -1.1
BR131 Keskin Array S     96.81 314    P        P        09 02 23.1 -1.2
BR131                                 IAmb     IAmb     09 02 23.9
      comp=Z,12nm,0.8s
BR131 Keskin Array S     96.81 314c  iP        P        09 02 23.2 -1.0
BRTR  Keskin Array B     96.81 314    P        P        09 02 23.0 -1.2
      comp=Z,8.3nm,0.8s,baz=82,slow=3.1,SNR=30
BRTR                                  PKKPbc   PKKPbc   09 19 05.5 -1.3
      comp=Z,1.0nm,0.6s,baz=200,slow=4.9,SNR=5.8
BRTR                                  LR       LR       09 51 43.9
      comp=Z,137nm,18.5s,baz=53,slow=39
      comp=Z,8.3nm,0.8s
BRTR  Keskin Array B     96.81 314    P        P        09 02 22.8 -1.4
LPIG  La Paz             96.87  63    LR       LR       09 38 46.6
      comp=Z,202nm,19.5s,baz=318,slow=31
T25A  Trinidad           96.88  49    P        P        09 02 25.8 +1.1
T25A                                  IAmb     IAmb     09 02 27.2
      comp=Z,8.2nm,0.8s
T25A  Trinidad           96.88  49    P        P        09 02 25.9 +1.2
      baz=294,SNR=9.4
AKN   Aaknes             96.96 342   eP        P        09 02 24.2  0.0
OGNE  Ogallala           96.97  45    P        P        09 02 25.3 +0.5
      baz=296
OGNE  Ogallala           96.97  45    P        P        09 02 25.1 +0.3
      baz=296
AGMN  Agassiz Nation     97.35  36    P        Pdif     09 02 26.4  0.0
KSCO  Kaye Shedlock'     97.39  47    IAmb     IAmb     09 02 30.3
      comp=Z,11nm,0.7s
KSCO  Kaye Shedlock'     97.39  47    P        Pdif     09 02 28.4 +1.4
      baz=295
KSCO  Kaye Shedlock'     97.39  47    P        Pdif     09 02 27.9 +1.0
      baz=295
OSL   Oslo               97.40 339   eP        P        09 02 25.8 -0.4
SUSD  Miller             97.40  41    P        Pdif     09 02 27.0 +0.3
SUSD  Miller             97.40  41    P        Pdif     09 02 27.3 +0.6
      baz=298
SUSD  Miller             97.40  41    P        Pdif     09 02 26.7  0.0
      baz=298
SKAR  Skarslia           97.67 340   eP        P        09 02 26.9 -0.6
SFJD  Kangerlussuaq      97.98   6    LR       LR       09 47 36.5
      comp=Z,212nm,20.3s,baz=342,slow=36
MMAI  Mount Meron Ar     98.22 307    LR       LR       09 51 45.7
      comp=Z,168nm,20.5s,baz=225,slow=38
MNTX  Cornudas Mount     98.27  54    P        Pdif     09 02 32.1 +1.3
      baz=293,SNR=9.3
MNTX  Cornudas Mount     98.27  54    P        Pdif     09 02 32.1 +1.2
      baz=293
F33A  5 Mile Ranch,      98.36  38    P        Pdif     09 02 31.4 +0.5
      baz=301
BUR08 Bucovina Ar. S     98.42 324    P        P        09 02 30.6 -0.7
BUR08                                 IAmb     IAmb     09 02 31.6
      comp=Z,13nm,0.9s
BURAR Bucovina Array     98.43 324 ⇓P         P        09 02 30.8 -0.6
BURAR Bucovina Array     98.43 324    P        P        09 02 30.4 -0.9
BURAR                                 IAmb     IAmb     09 02 31.9
      comp=Z,12nm,0.8s
BURAR Bucovina Array     98.43 324    P        P        09 02 30.7 -0.6
VRI   Vrincioaia         98.45 322 ⇑P         P        09 02 30.8 -0.6
VRI   Vrincioaia         98.45 322    P        P        09 02 30.7 -0.6
PLOR  Plostina           98.51 322 ⇑P         P        09 02 30.7 -0.9
PLOR  Plostina           98.51 322    P        P        09 02 30.7 -0.9
B35A  Bob, Littlefor     98.53  35    P        P        09 02 31.2 -0.4
      baz=303
DEL   Delary             98.64 335   eP        P        09 02 29.7 -2.2
ODD1  Odda               98.80 340   eP        Pdif     09 02 32.6  0.0
BSD   Bornholm Skovb     99.11 334   eP        Pdif     09 02 32.1 -1.9
MLR   Muntele Rosu       99.12 322    LR       LR       09 51 03.9
      comp=Z,235nm,19.4s,baz=79,slow=38
DOPR  Dopca              99.20 322 ⇑P         Pdif     09 02 33.7 -1.0
ECSD  EROS Data Cent     99.22  40    P        Pdif     09 02 35.7 +0.9
      baz=300
ECSD  EROS Data Cent     99.22  40    P        Pdif     09 02 35.6 +0.7
      baz=300
AMTX  Amarillo           99.83  50    P        Pdif     09 02 38.8 +1.0
      baz=295
AMTX  Amarillo           99.83  50    P        Pdif     09 02 38.4 +0.6
      baz=295
EIL   Elat               99.88 304    LR       LR       09 54 07.2
      comp=Z,80nm,19.0s,baz=60,slow=39
ARR   Arges              99.97 322 ⇑P         Pdif     09 02 37.0 -1.2
F36A  Milaca            100.00  37    P        Pdif     09 02 38.8 +0.6
      baz=303
MARR  Marisel-Cluj      100.14 324 ⇑P         Pdif     09 02 38.2 -0.7
DRGR                    100.31 324 ⇑P         Pdif     09 02 38.8 -0.9
DRGR                    100.31 324    P        Pdif     09 02 38.8 -0.9
MAW   Mawson            100.34 203    PKKPbc   PKKPbc   09 18 57.1 -1.0
      comp=Z,19nm,0.5s,baz=303,slow=17,SNR=9.0
R32A  Long Quarter,     100.39  46    P        Pdif     09 02 42.3 +2.2
      baz=298
TX31  Lajitas Ar. Si    100.55  56    Pdif     Pdif     09 02 42.4 +1.2
TX31  Lajitas Ar. Si    100.55  56    P        Pdif     09 02 42.3 +1.2
      baz=293
TX32  Lajitas Array     100.55  56    Pdif     Pdif     09 02 42.5 +1.4
TXAR  Lajitas Array     100.55  56    P        Pdif     09 02 42.3 +1.2
      comp=Z,1.0nm,0.7s,baz=267,slow=5.0,SNR=18
TXAR                                  PKiKP    PKiKP    09 07 07.7 +0.4
      comp=Z,0.7nm,0.7s,baz=306,slow=1.8,SNR=4.3
TXAR                                  PKKPbc   PKKPbc   09 18 55.7 -0.3
      comp=Z,1.2nm,0.8s,baz=129,slow=5.4,SNR=9.0
TXAR                                  PKPPKP            09 27 10.7
      comp=Z,0.2nm,0.7s,baz=134,slow=5.4,SNR=3.8
TXAR  Lajitas Array     100.55  56    Pdif     Pdif     09 02 42.5 +1.4
TXAR  Lajitas Array     100.55  56   iP        Pdif     09 02 42.5 +1.4
POST  Post              100.73  52    Pdif     Pdif     09 02 42.6 +0.8
SURR  Surduc            101.23 323 ⇑P         Pdif     09 02 42.8 -0.8
MORC  Moravsky Berou    101.33 328 ⇑P         Pdif     09 02 43.4 -0.8
MORC  Moravsky Berou    101.33 328    P        Pdif     09 02 43.3 -0.8
VYHS  Vyhne             101.45 327   eP        Pdif     09 02 44.4 -0.2
VYHS  Vyhne             101.45 327   ePDIFF    Pdif     09 02 44.4 -0.2
KSU1  Kansas State U    101.52  44    P        Pdif     09 02 45.1  0.0
      baz=299
HERR  Herculane         101.55 322 ⇑P         Pdif     09 02 43.9 -1.2
BZS   Buzias            101.60 323 ⇑P         Pdif     09 02 43.6 -1.7
BZS   Buzias            101.60 323    P        Pdif     09 02 43.6 -1.7
MDVR  Moldovita         102.02 323 ⇑P         Pdif     09 02 46.3 -0.9
WMOK  Wichita Mounta    102.03  49    Pdif     Pdif     09 02 49.5 +2.0
WMOK  Wichita Mounta    102.03  49   iP        Pdif     09 02 49.5 +2.0
WMOK  Wichita Mounta    102.03  49    P        Pdif     09 02 48.8 +1.2
      baz=297
WMOK  Wichita Mounta    102.03  49    P        Pdif     09 02 48.3 +0.7
      baz=297
ABPO  Ambohimpanom      102.06 253    Pdif     Pdif     09 02 47.4 -0.7
ABPO  Ambohimpanom      102.06 253   iP        Pdif     09 02 47.4 -0.7
G40A  Rib Lake          102.26  37    P        Pdif     09 02 49.2 +0.9
      baz=305
COWI  Conover           102.39  35    P        Pdif     09 02 50.1 +1.3
      baz=306
CLL   Collm             102.53 332   ePdif     Pdif     09 02 49.0 -0.3
CLL                                  ex        x        09 02 58.0
CLL                                  eSKKSac   SKKSac   09 14 01.0 +2.8
CLL                                  eSdif     Sdif     09 14 36.0  +12
CLL                                  ePS       PS       09 16 12.0 -0.3
CLL                                  ePPS      PPS      09 17 00.0
CLL                                  ex        x        09 19 54.0
CLL                                  eSS       SS       09 21 24.0 -8.3
CLL                                  eSSS      SSS      09 25 21.0
CLL                                  eSSSS              09 29 18.0
CLL                                   AMS      AMS      09 45 00.0
      comp=N,300nm,18.7s
CLL                                   AMS      AMS      09 45 00.0
      comp=E,200nm,21.0s
CLL                                   AMS      AMS      09 52 00.0
      comp=Z,200nm,21.5s
CLL   Collm             102.53 332   eP        Pdif     09 02 49.0 -0.3
FRGS  Fruska Gora       102.91 324 ⇓P         Pdif     09 02 51.1 -0.1
JCT   Junction City     103.14  54    P        Pdif     09 02 53.5 +1.0
      baz=296
JCT   Junction City     103.14  54    P        Pdif     09 02 52.9 +0.4
      baz=296
GERES GERESS Array B    103.85 329    Pdiff    Pdif     09 02 53.8 -1.6
      comp=Z,0.3nm,0.5s,baz=101,slow=6.9,SNR=4.6
GERES                                 PKiKP    PKiKP    09 07 12.1 -0.5
      comp=Z,0.8nm,0.6s,baz=119,slow=1.2,SNR=4.7
GERES                                 PKKPbc   PKKPbc   09 18 45.2 -1.9
      comp=Z,0.3nm,0.4s,baz=326,slow=0.5,SNR=4.1
L44A  Lake County Fo    105.42  38    P        PKiKP    09 07 16.6 +1.0
      baz=306
SCHQ  Schefferville     105.84  19    PKKPbc   PKKPbc   09 18 38.4 -2.8
      comp=Z,4.1nm,0.8s,baz=67,slow=4.3,SNR=6.3
MIAR  Mount Ida         105.89  47    P        PKiKP    09 07 17.7 +1.0
      baz=300
M53A  WI Miller and     110.07  35    P        PKiKP    09 07 24.1 -0.2
      baz=312
LRAL  Lakeview Retre    111.32  46    P        PKiKP    09 07 27.3 +0.4
      baz=305
KMSC  Kings Mountain    113.80  41    P        PKiKP    09 07 32.0 +0.4
      baz=310
PAL   Palisades         113.99  32    P        PKiKP    09 07 32.2 +0.5
      baz=318
KEST  Kesra             115.02 321    PKKPbc   PKKPbc   09 18 09.9 -1.1
      comp=Z,2.4nm,0.7s,baz=255,slow=3.2,SNR=3.7
NHSC  New Hope          115.83  42    P        PKiKP    09 07 35.4 -0.1
      baz=310
PETF  Flores            117.27  62             PKiKP    09 07 38.8 +0.1
DWPF  Disney Wildern    118.08  47    P        PKiKP    09 07 40.3 +0.3
      baz=307
TROLL Troll, Antarti    118.35 192    P        PKPdf    09 07 39.3 -0.1
ESDC  Sonseca Array     119.05 333    PKP      PKPdf    09 07 41.0 -0.6
      comp=Z,2.6nm,0.7s,baz=30,slow=1.8,SNR=14
ESDC                                  PP       PP       09 08 59.9 -1.7
      comp=Z,2.0nm,0.8s,baz=38,slow=7.2,SNR=6.2
ESDC                                  PKKPbc   PKKPbc   09 17 56.3 -0.7
      comp=Z,1.4nm,0.8s,baz=262,slow=1.9,SNR=6.0
ESDC  Sonseca Array     119.05 333             PKPdf    09 07 41.6 -0.1
MVO   Moncorvo          119.06 336   ePKPdf    PKiKP    09 07 42.1 +0.4
POLO  Lamas de Olo      119.18 337   ePKPdf    PKiKP    09 07 42.3 +0.4
PVRL  Vila Real         119.23 337   ePKPdf    PKiKP    09 07 42.5 +0.5
LSZ   Lusaka            119.41 260    PKIKP    PKiKP    09 07 43.8 +0.8
SNAA  Sanae             119.67 191    P        PKPdf    09 07 41.2 -0.6
SNAA  Sanae             119.67 191    PKPdf    PKPdf    09 07 41.5 -0.3
SNAA  Sanae             119.67 191    PKIKP    PKPdf    09 07 41.5 -0.3
PVIS  Viseu             119.78 337   ePKPdf    PKPdf    09 07 43.0  0.0
MTE   Manteigas         119.92 336   ePKPdf    PKPdf    09 07 43.2 -0.1
SOR   Soroa             119.96  53    PKPdf    PKiKP    09 07 44.6 +0.8
SOR   Soroa             119.96  53    PKIKP    PKiKP    09 07 44.6 +0.8
PCAS  Casmilo, Conde    120.59 337   ePKPdf    PKPdf    09 07 44.2 -0.3
PMRV  Marv??o           120.69 336   ePKPdf    PKiKP    09 07 45.0 +0.1
TGUH  Tegucigalpa,Un    120.78  64             PKPdf    09 07 45.5 -0.1
VNA2  Neumayer--Watz    121.10 190    P        PKPdf    09 07 44.2 -0.3
      baz=136,slow=1.0
PSBE  So Bento          121.17 337   ePKPdf    PKiKP    09 07 45.9 +0.1
VNA3  Neumayer Olymp    121.20 189    P        PKPdf    09 07 44.3 -0.4
PESTR Estremoz          121.25 335    PKPdf    PKPdf    09 07 45.1 -0.7
PESTR Estremoz          121.25 335   ePKPdf    PKPdf    09 07 45.1 -0.7
PMTG  Montargil         121.33 336   ePKPdf    PKPdf    09 07 45.9  0.0
VNA1  Neumayer--Stat    121.49 190    P        PKPdf    09 07 44.8 -0.4
CRIN  San Cristobal     121.57  65    PKPdf    PKiKP    09 07 47.1 -0.1
PBAR  Barrancos         121.62 335   ePKPdf    PKiKP    09 07 46.9 +0.2
PMAFR Mafra             121.84 337   ePKPdf    PKiKP    09 07 47.9 +0.8
GRHM  Grahamstown, E    121.85 240             PKiKP    09 07 47.6 +0.4
PBEJ  Beja              122.08 335   ePKPdf    PKiKP    09 07 47.9 +0.3
PNCL  Nicolau / Gran    122.28 336   ePKPdf    PKiKP    09 07 48.1 +0.1
MESJ  Messejana         122.39 335   ePKPdf    PKPdf    09 07 46.4 -1.6
PCVE  Castro Verde      122.49 335   ePKPdf    PKiKP    09 07 48.5 +0.1
LBTB  Lobatse           122.66 249    PKPdf    PKiKP    09 07 49.6 +0.4
LBTB  Lobatse           122.66 249    PKIKP    PKiKP    09 07 49.6 +0.4
BOAB  BOACO BROADBA122.89  65             PKiKP    09 07 50.2 +0.5
BOSA  Boshof            122.98 245    PKP      PKPdf    09 07 49.4 -0.1
      comp=Z,14nm,0.8s,baz=98,slow=1.9,SNR=20
BOSA  Boshof            122.98 245    PKPdf    PKiKP    09 07 50.3 +0.6
BOSA  Boshof            122.98 245    PKIKP    PKiKP    09 07 50.3 +0.6
JTS   Las Juntas de     124.45  67             PKPdf    09 07 52.4 -0.2
JTS   Las Juntas de     124.45  67    PKIKP    PKPdf    09 07 52.4 -0.2
HDC   Heredia           125.32  66             PKiKP    09 07 54.6 -0.2
HDC   Heredia           125.32  66   eP        PKiKP    09 07 55.4 +0.6
PEZE  Perez Zeledon,    125.98  67             PKiKP    09 07 56.6 +0.5
TAM   Tamanrasset       125.98 313    PKPdf    PKiKP    09 07 56.7 +0.8
TAM   Tamanrasset       125.98 313    PKIKP    PKiKP    09 07 56.7 +0.8
SRBA  San Rafael, Bu    126.32  67             PKiKP    09 07 57.6 +0.8
TSUM  Tsumeb            129.87 257    PKPdf    PKiKP    09 08 03.8 +0.1
APAC  Apartado, Choc    132.91  65   eP        PKPdf    09 08 09.0 +0.3
GR1C  Gorgona, Isla     133.58  72   eP        PKPdf    09 08 09.7 -0.2
UREC  San Jos de Ur     133.89  64   eP        PKiKP    09 08 11.8 -0.1
MALC  Bahia Malaga      133.94  70   eP        PKiKP    09 08 13.2 +1.2
MCRA  Macar, Loja       134.33  82             PKiKP    09 08 12.2 -0.6
OTAV  Otavalo           134.33  75    PKPdf    PKiKP    09 08 13.8 +0.4
OTAV  Otavalo           134.33  75    PKIKP    PKiKP    09 08 13.8 +0.4
OTAV  Otavalo           134.33  75   eP        PKiKP    09 08 13.2 -0.1
OTAV  Otavalo           134.33  75   eP        PKiKP    09 08 13.0 -0.4
CRJC  Cerrejon, Guaj    134.49  58   eP        PKPdf    09 08 11.8 +0.1
TORD  Torodi Ar. Bea    134.74 306    PKhKP    PKPpre   09 07 58.4
      comp=Z,1.5nm,0.8s,baz=37,slow=2.5,SNR=8.3
TORD                                  PKP      PKPdf    09 08 11.9 -0.1
      comp=Z,7.8nm,0.6s,baz=24,slow=2.5,SNR=6.9
TORD                                  PP       PP       09 10 47.1 +0.8
      comp=Z,2.9nm,0.9s,baz=71,slow=4.1,SNR=4.7
TORD                                  SKPbc    SKPbc    09 11 30.5 -1.8
      comp=Z,14nm,0.9s,baz=43,slow=3.9,SNR=15
TORD  Torodi Ar. Bea    134.74 306    PKPdf    PKPdf    09 08 12.0 -0.1
TULM  Tulcn-Chalpat     134.78  74    PKPdf    PKiKP    09 08 14.3  0.0
BBAC  Balboa, Cauca     134.80  72   eP        PKPdf    09 08 13.2 +0.7
URIC  Uribia, Colomb    134.84  57             PKiKP    09 08 13.4 -0.4
YOTC  Yotoco, Valle     134.85  69   eP        PKiKP    09 08 13.7 -0.3
JAMC  Jamundi, Valle    134.86  70   eP        PKiKP    09 08 14.6 +0.5
CELP  Cerrillos         134.94  45    PKPdf    PKPdf    09 08 13.0 +0.6
GCUF  Volcan Galeras    135.01  73   eP        PKiKP    09 08 14.6 -0.2
GCPR  Guaynabo City     135.12  45    PKPdf    PKPdf    09 08 12.2 -0.4
POPC  Popayan, Colom    135.13  71   eP        PKPdf    09 08 13.2  0.0
GUY2C Guyana, Caldas    135.20  67   eP        PKPdf    09 08 13.2 -0.4
CRUC  La Cruz           135.25  73   eP        PKPdf    09 08 13.2 -0.3
HUMP  Col San Antoni    135.39  44    PKPdf    PKiKP    09 08 15.1 +0.3
PTBC  PUERTO BERRIO,135.41  65   eP        PKPdf    09 08 11.1 -2.3
MTP   Monte Pirata      135.63  44    PKPdf    PKPdf    09 08 12.7 -1.0
BRRC  Barranca, Sant    135.78  64   eP        PKPdf    09 08 13.9 -0.2
STVI  Saint Thomas      135.85  43    PKPdf    PKPdf    09 08 14.4 +0.4
ORTC  Ortega, Tolima    135.87  69   eP        PKPdf    09 08 13.2 -1.1
GO07  Milladeo Hill,    136.06 138    PKPdf    PKPdf    09 08 12.8 -0.9
BETC  Betania           136.20  70   eP        PKiKP    09 08 16.0 -0.6
PRAC  Prado             136.28  69    PKPdf    PKPdf    09 08 13.1 -1.9
PRAC  Prado             136.28  69   eP        PKPdf    09 08 12.5 -2.6
ROSC  El Rosal          136.30  67    PKhKP    PKPpre   09 08 11.4
      comp=Z,4.3nm,0.4s,baz=270,slow=20,SNR=2.0
ROSC                                  PKP      PKPdf    09 08 15.7 +0.1
      comp=Z,19nm,0.7s,baz=270,slow=20,SNR=9.9
ROSC                                  SKPbc    SKPbc    09 11 37.1 -0.5
      comp=Z,7.4nm,0.6s,baz=322,slow=6.7,SNR=5.8
ROSC  El Rosal          136.30  67    PKPdf    PKiKP    09 08 16.7 -0.5
ROSC  El Rosal          136.30  67    PKIKP    PKiKP    09 08 16.7 -0.5
GARC  Garzon, Huila     136.35  71   eP        PKPdf    09 08 16.0 +0.5
RUSC  La Rusia          136.91  65   eP        PKPdf    09 08 16.0 -0.8
CHIC  Chingaza          136.92  67   eP        PKPdf    09 08 14.6 -2.1
MACC  Macarena, Meta    137.87  70   eP        PKPdf    09 08 17.4 -0.6
LL04  Puerto Octay      137.92 136             PKPdf    09 08 17.2  0.0
PLCA  Paso Flores       139.25 137    PKhKP    PKPpre   09 08 11.6
      comp=Z,3.8nm,0.8s,baz=251,slow=4.6,SNR=12
PLCA                                  SKPbc    SKPbc    09 11 45.4 +0.5
      comp=Z,6.0nm,0.8s,baz=224,slow=6.3,SNR=6.8
PLCA  Paso Flores       139.25 137    PKPdf    PKiKP    09 08 21.2 -0.9
PLCA  Paso Flores       139.25 137    PKIKP    PKiKP    09 08 21.2 -0.9
PLCA  Paso Flores       139.25 137   eP        PKPdf    09 08 20.8 +1.0
LMEL  Las Melosas       142.51 127    PKPdf    PKPdf    09 08 24.4 -1.6
MT08  Bocatoma Ro       142.81 127    PKPdf    PKPdf    09 08 25.6 -1.1
GO04  Tololo Observa    143.28 121             PKPbc    09 08 25.6 +0.7
LCO   Las Campanas      143.69 120    PKPdf    PKPdf    09 08 27.4 -0.9
LCO   Las Campanas      143.69 120    PKIKP    PKPdf    09 08 27.4 -0.9
DBIC  Dimbokro          143.74 303    PKhKP    PKPpre   09 08 25.3
      comp=Z,22nm,0.4s,baz=57,slow=4.0,SNR=43
DBIC                                  SKPbc    SKPbc    09 11 56.6 -0.5
      comp=Z,19nm,0.9s,baz=54,slow=2.9,SNR=5.3
DBIC  Dimbokro          143.74 303    PKPdf    PKPbc    09 08 26.0 -0.3
DBIC  Dimbokro          143.74 303    PKIKP    PKPbc    09 08 26.0 -0.3
KIC   Kosan Boka        143.82 303⇑ iPKP1    PKPab    09 08 26.0 +0.1
      comp=Z,38nm,0.5s
TBTG  Tabatinga, AM     143.85  77             PKPbc    09 08 27.5 +0.8
TIC   Toumodi           143.89 303⇑ iPKP1    PKPab    09 08 26.1  0.0
      comp=Z,68nm,0.6s
LIC   Lamto             144.14 303⇑ iPKP1    PKPab    09 08 27.0  0.0
      comp=Z,149nm,0.4s
SGCB  S£o Gabriel d     145.01  69   eP        PKPbc    09 08 29.7 -0.6
PSGCX Pisagua           145.77 104    PKPbc    PKPab    09 08 33.4 +0.3
PB02  IPOC Station P    145.85 107    PKPbc    PKPab    09 08 33.4 -0.1
PB03  IPOC Station P    145.91 108    PKPbc    PKPab    09 08 33.6 -0.1
PB15  IPOC Station P    146.01 110    PKPbc    PKPab    09 08 34.2  0.0
PB11  IPOC Station P    146.20 104    PKPbc    PKPbc    09 08 34.1 +0.1
TRQA  Tornquist         146.26 139             PKPab    09 08 34.1 -0.3
TRQA  Tornquist         146.26 139    PKP2     PKPab    09 08 34.1 -0.3
TRQA  Tornquist         146.26 139   eP        PKPbc    09 08 33.5  0.0
MNMC  Minye Minye       146.29 103    PKPbc    PKPbc    09 08 34.8 +0.4
MBO   M'Bour            146.43 328    PKPbc    PKPab    09 08 35.7 +0.2
LVC   Limon Verde       146.61 109    PKPbc    PKPbc    09 08 35.9 +0.5
LVC   Limon Verde       146.61 109    PKP2     PKPbc    09 08 35.9 +0.5
LVC   Limon Verde       146.61 109   eP        PKPbc    09 08 34.9 -0.5
GO01  Chusmiza          146.64 104             PKPbc    09 08 35.5 -0.1
LPAZ  La Paz            147.72  98    PKPbc    PKPbc    09 08 37.5 -1.4
      comp=Z,24nm,0.6s,baz=264,slow=2.7,SNR=33
LPAZ  La Paz            147.72  98   eP        PKPdf    09 08 36.9 +0.9
BOAV  Boa Vista         149.44  59   eP        PKPdf    09 08 38.9 +0.8
SAML  Samuel            151.59  82    PKPdf    PKPdf    09 08 41.2 -0.2
SAML                                  PKPbc    PKiKP    09 08 48.0 -0.1
SAML                                  PKPab    PKPab    09 08 56.3 -0.4
SAML  Samuel            151.59  82    PKIKP    PKPdf    09 08 41.2 -0.2
SAML                                                    09 08 56.3
SAML  Samuel            151.59  82   eP        PKPdf    09 08 41.7 +0.3
MACA  Manacapuru-AM     152.03  69   eP        PKPdf    09 08 42.8 +0.7
VACA  Villa Angela C    152.46 123   eP        PKPdf    09 08 44.2 +1.9
TICA  Tres Isletas      153.19 120   eP        PKPdf    09 08 44.5 +1.1
ITQB  Itaqui            154.69 130    PKPdf    PKPdf    09 08 44.6 -0.8
ITQB                                           PKPbc    09 08 53.2 -0.9
ITQB                                  PKPab    PKPab    09 09 09.3  0.0
BBSD  Serra de San D    154.92 100   eP        PKPdf    09 08 46.8 +0.7
VILB  Vilhena           155.18  90   eP        PKPdf    09 08 48.1 +1.5
VBST  Vila Bela da S    155.48  93   eP        PKPdf    09 08 47.9 +1.0
PLTB  Pedras Altas      155.55 138   eP        PKPdf    09 08 48.2 +1.6
BBRB  Robore, Bolivi    155.60 102   eP        PKPdf    09 08 48.2 +1.2
CPUP  Villa Florida     155.74 123    PKP      PKPdf    09 08 46.4 -0.6
      comp=Z,2.6nm,0.6s,baz=1.5,slow=2.5,SNR=8.1
CPUP                                  PKPab    PKPab    09 09 15.4 +1.5
      comp=Z,2.9nm,0.7s,baz=86,slow=8.0,SNR=3.1
CPUP  Villa Florida     155.74 123    PKPdf    PKPdf    09 08 46.6 -0.4
CPUP                                  PKPab    PKPab    09 09 14.8 +0.9
CPUP  Villa Florida     155.74 123    PKP2     PKPab    09 09 14.8 +0.9
CPUP                                                    10 08 46.6
CPUP  Villa Florida     155.74 123   eP        PKPdf    09 08 47.4 +0.5
PTLB  Pontes e Lacer    156.36  96    PKPdf    PKPdf    09 08 48.0  0.0
PTLB                                  PKPab    PKPab    09 09 17.5 +0.6
PTLB  Pontes e Lacer    156.36  96   eP        PKPdf    09 08 48.9 +0.9
BBLB  La Banda, Boli    156.51 104   eP        PKPdf    09 08 50.0 +1.8
MALB  Monte Alegre      156.99  59   eP        PKPdf    09 08 50.2 +1.2
ITTB  Itaituba          156.99  66   eP        PKPdf    09 08 49.8 +0.8
MURT  Porto Murtinho    157.07 112   eP        PKPdf    09 08 49.6 +0.8
MCPB  Macapa, AP        157.87  52   eP        PKPdf    09 08 50.9 +0.9
PTET  Porto Estrela     158.27  95   eP        PKPdf    09 08 50.4  0.0
PDRB  Porto dos Gac     158.35  85   eP        PKPdf    09 08 51.3 +0.7
NPGB  Novo Progresso    158.43  72   eP        PKPdf    09 08 51.1 +0.3
PANT  Pantanal (Braz    158.52 105   eP        PKPdf    09 08 52.0 +1.3
POCN  Pocone            158.65  99   eP        PKPdf    09 08 52.6 +1.8
AMBA  Amambai (Brazi    159.01 117   eP        PKPdf    09 08 52.6 +1.5
AQDB  Aquidauana        159.08 110    PKPdf    PKPdf    09 08 50.9 -0.4
AQDB                                  PKPab    PKPab    09 09 29.9 +1.4
AQDB  Aquidauana        159.08 110   eP        PKPdf    09 08 53.2 +1.9
NBRS  Nobres            159.57  92   eP        PKPdf    09 08 53.5 +1.5
SALV  Santo Antonio     159.68  97   eP        PKPdf    09 08 53.7 +1.6
PP1B  Ponte de Pedra    160.34 102   eP        PKPdf    09 08 54.3 +1.5
TMAB  Tom-Au,PA,Br      162.16  49   eP        PKPdf    09 08 56.2 +1.4
BDFB  Brasilia          167.07  97    PKP      PKPdf    09 08 59.2  0.0
      comp=Z,19nm,0.8s,baz=195,slow=1.3,SNR=30
BDFB  Brasilia          167.07  97    PKPdf    PKPdf    09 08 59.4 +0.2
BDFB  Brasilia          167.07  97    PKIKP    PKPdf    09 08 59.4 +0.2
BDFB  Brasilia          167.07  97   eP        PKPdf    09 09 00.4 +1.2
GDU01 Guandu, BA        175.21  82   eP        PKPdf    09 09 03.6 +0.4
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JMA ***13*** *08:55:30.6±0.2, 43°.1N±0°.5×145°.3E±0°.8, h97^{km}±1^{km}, MV2.9/40, OFF NEMURO PENINSULA*

SKHL ***13*** *08:55:30.7±0.2, 43°.10N×145°.30E, h97^{km}±3^{km}, mb4.4/5, msha5.4/4*

ISC 13 08:55:30.5±1.9**, 43°.13N**±0°.08×**145°.29E**±0°.05**, h97**^{km}±10^{km}**, n15, σ0^{s}40**/28**, Hokkaido region**

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Code  Station Name       Δ°   AZ°    Phase ID           Time       Res
                                     Op       ISC       h  m  s    ISC
JKHN  Kushirohamanak     0.10 242    P        Pn        08 55 44.4 +0.4
JKHN                                eS        Sn        08 55 54.6 +0.6
AKK   Akkeshi            0.34 251   iP        Pn        08 55 45.0 +0.1
AKK                                  AMB      AMB       08 55 45.7
      50nm,0.2s
AKK                                 iS        Sn        08 55 55.6 -0.1
AKK                                  A        A         08 55 55.9
      550nm,0.4s
AKK                                  A        A         08 55 55.9
      530nm,0.4s
NMR   Nemuro--Hokkai     0.40  54   eP        Pn        08 55 45.1 -0.1
NMR                                 eS        Sn        08 55 55.9 -0.3
NEM2  Nemuro 2           0.41  55    P        Pn        08 55 45.3  0.0
NEM2                                eS        Sn        08 55 56.0 -0.3
JAK   Akkeshi            0.45 253    P        Pn        08 55 45.6 +0.1
JAK                                 eS        Sn        08 55 56.9 +0.1
JNK   Nakash             0.61 318    P        Pn        08 55 46.4 -0.4
JNK                                 eS        Sn        08 55 58.6 -0.4
JRA   Rausu              0.81 352    P        Pn        08 55 48.9 +0.2
JRA                                 eS        Sn        08 56 02.7 +0.4
YUK   Yuzh-Kuril'sk      0.99  25   eP        Pn        08 55 50.7 +0.1
YUK                                  AMB      AMB       08 55 52.4
      100nm,0.2s
YUK                                 eS        Sn        08 56 05.8 +0.1
YUK                                  A        A         08 56 06.3
      480nm,0.4s
YUK                                  A        A         08 56 06.3
      720nm,0.4s
JOB   Onbets             1.09 258    P        Pn        08 55 51.9 +0.2
JOB                                 eS        Sn        08 56 07.6 +0.1
JAR   Ashorobuto         1.12 279    P        Pn        08 55 52.0  0.0
JAR                                 eS        Sn        08 56 07.8 -0.4
JTKR  Abashiri--Toko     1.31 310    P        Pn        08 55 54.4 +0.2
SHO   Shikotan           1.34  56   eP        Pn        08 55 54.5 -0.1
SHO                                  AMB      AMB       08 55 55.4
      60nm,0.2s
SHO                                 eS        Sn        08 56 12.1 -0.8
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Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHO				A	A	08 56 12.7	
	270nm,0.2s						
SHO				A	A	08 56 12.7	
	330nm,0.2s						
JCH	Churui	1.51	251	eP	Pn	08 55 56.8	+0.2
JCH				eS	Sn	08 56 15.6	-0.8
JMP	Maruseppu	1.65	303	eP	Pn	08 55 58.6	+0.2
KUR	Kuril'sk	2.80	41	eP	Pn	08 56 14.3	+0.8
KUR				AMB	AMB	08 56 18.7	
	40nm,0.3s						
KUR				eS	Sn	08 56 45.9	-0.6
KUR				A	A	08 56 56.6	
	40nm,0.3s						
KUR				A	A	08 56 56.6	
	30nm,0.3s						

IDC 13 09:04:24.2±2.6, 6°.71S×129°.02E, h0^{km}, mb3.2/1, mbtmp3.1/3, ML3.3/2, Error ellipse: s-maj=201.9km s-min=33.8km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.13	159	Pn	Pn	09 07 45.9	0.0
	0.2nm,0.3s,baz=333,slow=15,SNR=13						
WRA				Sn	Sn	09 10 10.4	-13
	0.2nm,0.3s,baz=330,slow=23,SNR=5.4						
	0.2nm,0.3s						
ASAR	Alice Springs	17.50	165	P	Pn	09 08 29.9	0.0
	baz=339,slow=10,SNR=1.8						
ASAR				S	Sn	09 11 33.0	-13
	0.1nm,0.2s,baz=309,slow=22,SNR=1.8						
	0.2nm,0.5s						
MKAR	Makanchi Array	67.45	327	P	P	09 15 21.9	0.0
	0.1nm,0.3s,baz=125,slow=7.9,SNR=1.7						
	0.1nm,0.3s						

IDC 13 09:23:31.5±2.5, 31°.99S×177°.36W, h0^{km}, mb3.8/2, mbtmp3.8/3, ML3.2/1, Error ellipse: s-maj=67.1km s-min=35.6km az=125.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.72	214	Pn	Pn	09 25 24.0	-1.2
	0.3nm,0.3s,baz=8.8,slow=4.7,SNR=1.5						
URZ				Sn	Sn	09 26 52.9	-0.5
	2.6nm,0.3s,baz=330,slow=20,SNR=7.5						
	5.9nm,0.8s						
ASAR	Alice Springs	43.59	268	P	P	09 31 37.8	+0.1
	0.9nm,0.8s,baz=107,slow=7.5,SNR=9.7						
	0.9nm,0.8s						
WRA	Warramunga Arr	44.72	273	P	P	09 31 46.8	+0.1
	0.6nm,0.3s,baz=112,slow=7.9,SNR=16						
	0.6nm,0.3s						
FINES	FINESS Array B	146.82	340	PKPbc	PKPdf	09 43 13.4	+0.4
	1.9nm,0.9s,baz=60,slow=3.4,SNR=6.3						
BRTR	Keskin Array B	153.81	296	PKPbc	PKiKP	09 43 33.5	+0.6
	0.4nm,0.8s,baz=62,slow=2.1,SNR=1.8						

IDC 13 09:53:01.8±2.0, 8°.37S×124°.37E, h0^{km}, mb3.5/1, mbtmp3.5/3, ML3.6/2, Error ellipse: s-maj=253.7km s-min=31.8km az=58.0

DJA 13 09:53:15.0±1.4, 9°S±7°×12°4E±°, h80^{km}±23^{km}, M3.3/5, MLv3.3/5

ISC 13 09:53:12.5±1.4, 8°.9S±0°.2×124°.0E±0°.1, h100^{km}, n6, σ1^{s}.88/6, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.89	163	P	Pn	09 53 33.7	+1.7
MMRI	Maumere	1.77	278	P	Pn	09 53 43.0	+0.9
BASI	Baing, Sumba	3.63	248	P	Pn	09 54 06.9	+0.2
WRA	Warramunga Arr	14.85	139	Pn	Pn	09 56 35.1	-2.3
	0.2nm,0.3s,baz=315,slow=14,SNR=19						
WRA				Sn	Sn	09 59 08.3	-13
	0.6nm,0.3s,baz=301,slow=24,SNR=10						
	0.4nm,0.5s						
ASAR	Alice Springs	17.48	148	P	P	09 57 11.0	+1.2
	0.2nm,0.3s,baz=333,slow=14,SNR=18						
ASAR				S	Sn	10 00 12.6	-12
	0.4nm,0.5s,baz=314,slow=22,SNR=5.4						
	1.2nm,0.7s						
MKAR	Makanchi Array	66.72	330	P	P	10 03 53.0	+0.1
	0.3nm,0.5s,baz=132,slow=8.2,SNR=4.6						
	0.3nm,0.5s						

IDC 13 09:59:18.4±3.7, 6°.49S×153°.77E, h0^{km}, mb3.3/4, mbtmp3.4/4, MS3.6/1, Error ellipse: s-maj=121.1km s-min=31.9km az=111.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.13	233	P	P	10 04 25.3	-1.1
	0.2nm,0.8s,baz=58,slow=10,SNR=1.3						
	0.2nm,0.8s						
ASAR	Alice Springs	25.62	226	P	P	10 04 50.6	+0.8
	1.0nm,0.8s,baz=61,slow=8.7,SNR=12						
	1.0nm,0.8s						
MSVF	Nonsavu	26.19	117	LR	LR	10 14 50.8	
	comp=Z,130nm,18.9s,baz=164,slow=36						
SONM	Songino Array	68.27	328	P	P	10 10 21.6	+0.3
	0.2nm,0.4s,baz=139,slow=7.8,SNR=2.3						
	0.2nm,0.4s						
MKAR	Makanchi Array	82.23	319	P	P	10 11 42.0	+0.3
	0.3nm,0.5s,baz=95,slow=7.1,SNR=2.7						
	0.3nm,0.5s						
TORD	Torodi Ar. Bea	151.72	286	PKPbc	PKPbc	10 19 15.2	-0.9
	0.4nm,0.7s,baz=55,slow=2.6,SNR=2.8						

IDC 13 10:08:02.1±1.7, 2°.26N×126°.84E, h0^{km}, mb4.1/3, mbtmp4.1/4, ML3.1/1, MS3.3/4, Error ellipse: s-maj=76.8km s-min=26.3km az=61.0

DJA 13 10:08:08.7±0.9, 2°N±6°×12°7E±°, h15^{km}±8^{km}, M4.1/10, mb4.4/3, mB5.2/2, MLv3.9/10, Mw(mB)4.7/2

NEIC 13 10:08:11.7±0.9, 2°.26N±0°.08×127°.2E±0°.1, h71^{km}±11^{km}, mb4.3/14, Error ellipse: s-maj=17.3km s-min=10.9km az=66.0

ISC 13 10:08:09.3±0.9, 2°.32N±0°.09×127°.2E±0°.1, h53^{km}, n36, σ1^{s}.38/33, mb4.3/9, MS3.2/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.55	173		Pn	10 08 36.7	+2.1
TNTI	Ternate	1.55	173	P	Pn	10 08 36.1	+1.5
SGSI	Sangihe	2.13	310	P	Pn	10 08 43.1	+0.5
SGSI				S	Sn	10 09 07.4	-0.6
LBMI	Labuha	2.95	174	P	Pn	10 08 55.3	+1.5
GTOI	Gorontalo	4.49	248	P	Pn	10 09 16.7	+1.8
SANI	Sanana	4.50	195	P	Pn	10 09 15.1	+0.1
SIJI	Sorong	5.17	128	Pn	Pn	10 09 25.9	+1.7
	0.6nm,0.3s,baz=241,slow=22,SNR=1.2						
	4.0nm,0.3s						
NLAI	Namlea	5.52	181	P	Pn	10 09 30.5	+1.5
MRSI	Marisa	5.55	251	P	Pn	10 09 30.0	+0.6
	85nm,0.6s,1μm0.4nm						
MSAI	Masohi	5.89	163	P	Pn	10 09 29.5	-4.6
TOLI2	Tolitoli	6.50	259	Pn	Pn	10 09 44.0	+1.5
FAKI	Fak Fak	7.26	136	Pn	Pn	10 09 54.6	+1.7
MYLDM	Lahad Datu	9.11	288	Pn	Pn	10 10 19.6	+1.3
MTN	Manton Dam	15.57	165	Pn	Pn	10 11 44.9	-0.6
MTN				IAmb	IAmb	10 11 51.6	
	comp=Z,29nm,1.5s						
KNRA	Kununurra	17.95	175	P	Pn	10 12 15.1	-0.2
KNRA				IAmb	IAmb	10 12 16.2	
	comp=Z,12nm,0.8s						
FITZ	Fitzroy Crossi	20.34	184	P	P	10 12 41.5	0.0
GUMO	Guam	20.77	56	LR	LR	10 19 13.9	
	comp=Z,26nm,19.0s,baz=336,slow=32						
WB0	Warramunga Arr	23.06	162	P	P	10 13 09.6	-0.9
WB0				IAmb	IAmb	10 13 10.3	
	comp=Z,8.9nm,0.9s						
WRAB	Tennant Creek	23.21	163	P	P	10 13 11.2	-0.7
WRA	Warramunga Arr	23.21	163	P	P	10 13 10.9	-1.0
	comp=Z,8.5nm,0.5s,baz=343,slow=10,SNR=108						
	comp=Z,8.5nm,0.5s						
WRA	Warramunga Arr	23.21	163	P	P	10 13 09.9	-2.1
WB2	Warramunga Arr	23.22	163	P	P	10 13 11.1	-0.9
WB2				IAmb	IAmb	10 13 11.8	
	comp=Z,12nm,0.5s						
MBWA	Marble Bar	24.45	197	P	P	10 13 23.5	+0.1
MBWA				IAmb	IAmb	10 13 24.3	
	comp=Z,7.6nm,0.7s						
PSA00	Pilbara Seismi	24.80	196	P	P	10 13 25.9	-0.7
PSA00				IAmb	IAmb	10 13 27.8	
	comp=Z,15nm,1.0s						
AS31	Alice Springs	26.64	166	P	P	10 13 42.9	-0.4
AS31				IAmb	IAmb	10 13 46.4	
	comp=Z,2.8nm,0.3s						
ASAR	Alice Springs	26.64	166	P	P	10 13 42.5	-0.8
	comp=Z,2.3nm,0.4s,baz=348,slow=7.4,SNR=71						
	comp=Z,2.3nm,0.4s						
ASAR	Alice Springs	26.64	166	P	P	10 13 42.7	-0.6
MORW	Morawa	32.98	198	P	P	10 14 39.1	-0.2
MORW				IAmb	IAmb	10 14 46.0	
	comp=Z,17nm,1.4s						
MJAR	Matsushiro Arr	35.55	15	LR	LR	10 30 25.9	
	comp=Z,21nm,19.3s,baz=4.5,slow=38						
BBOO	Buckleboo	35.93	167	P	P	10 15 04.1	-0.7
NWAO	Narrogin (SRO)	36.29	194	P	P	10 15 07.4	-0.5
STKA	Stephens Creek	36.66	159	P	P	10 15 11.1	0.0
MKAR	Makanchi Array	58.96	326	P	P	10 18 02.9	-0.6
	comp=Z,0.2nm,0.5s,baz=131,slow=6.6,SNR=2.6						
	comp=Z,0.2nm,0.5s						
MKAR	Makanchi Array	58.96	326	P	P	10 18 03.9	+0.5
EIL	Elat	90.80	300	LR	LR	11 07 23.2	
	comp=Z,16nm,19.3s,baz=239,slow=39						
QSPA	South Pole Qui	92.23	180	LR	LR	11 02 02.7	
	comp=Z,56nm,20.0s,baz=136,slow=35						

IDC 13 10:22:13.4±0.8, 24°.40N×71°.83E, h0^{km}, mb3.7/10, mbtmp3.7/12, ML3.4/2, MS3.4/2, Error ellipse: s-maj=24.6km s-min=17.7km az=32.0

NDI 13 10:22:17.5±3.7, 24°.54N×72°.09E, h10^{km}, ML4.3

ISC 13 10:22:15.3±0.6, 24°.65N±0°.05×72°.03E±0°.06, h10^{km}, n39, σ2^{s}.19/42, mb3.7/11, Northern India

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JASL	Jaisalmer	2.48	336	eP	Pb	10 22 59.7	-0.3
JASL				IAML		10 23 42.5	
	comp=Z,3μm,0.4s						
BHUJ	Bhuj	2.58	238	eP	Pn	10 22 57.2	+0.1
BHUJ				eS	Sb	10 23 33.0	-0.5
BHUJ				IAML		10 23 38.0	
	comp=N,2μm,0.4s						
BHUJ				IAML		10 23 39.2	
	comp=E,2μm,0.3s						
BHV	Bhavnagar	2.89	178	eP	Pn	10 23 00.5	-0.9
AJM	Ajmer	2.98	52	eP	Pn	10 23 03.8	+1.2
BHPL	Bhopal	5.13	105	eP	Pn	10 23 33.5	+1.3
BHPL				eS	Sn	10 24 30.3	-1.2
BHPL				IAML		10 24 55.1	
	comp=N,420nm,0.5s						
BHPL				IAML		10 24 56.3	
	comp=E,281nm,0.4s						
JHNI	Jhansi	5.96	81	eP	Pn	10 23 45.4	+1.8
AKL	Akola	6.05	130	eP	Pn	10 23 45.9	+1.0
NDI	New Delhi	6.13	48	eP	Pn	10 23 47.5	+1.5
KAD	Karad	7.58	164	eP	Pn	10 24 07.6	+1.7
BHK	Bhakra	7.77	29	eP	Pn	10 24 10.2	+1.7
BHK				eS	Sn	10 25 34.2	-2.4
DDI	Dehra Dun	7.78	42	eP	Pn	10 24 11.4	+2.8
SMLA	Simla	7.89	34	eP	Pn	10 24 10.7	+0.7
THN	Thein Dam	8.40	22	eP	Pn	10 24 20.5	+3.4
DHRM	DHARAMSHALA	8.45	25	eP	Pn	10 24 20.5	+2.6
DHRM				eS	Sn	10 25 54.4	+0.9
DHRM				IAML		10 26 53.1	
	comp=E,714nm,0.5s						
PTH	Pithoragarh	8.77	54	eP	Pn	10 24 23.0	+0.6
CEP	Cherat	9.14	359	P	Pn	10 24 30.0	+2.7
PYUN	Piuthan	10.41	68	eP	Pn	10 24 43.5	-1.3
	comp=E,25nm,0.4s						
DANN	Dangsing	11.13	68	eP	Pn	10 24 53.5	-1.3
	comp=E,1.9nm,0.2s						
GKN	Gorkha	11.79	71	eP	Pn	10 25 02.1	-1.6
	comp=E,4.3nm,0.1s						
WSAR	Wadi Sarin	12.34	266	Pn	Pn	10 25 06.0	-5.1
	comp=E,0.1nm,0.3s,baz=139,slow=8.1,SNR=1.8						
	comp=E,1.5nm,0.7s						
PKIN	Phulchoki	12.36	74	eP	Pn	10 25 09.4	-2.2
	comp=E,19nm,0.4s						
PKI	Pulchoki	12.37	74	eP	Pn	10 25 09.5	-2.2
	comp=E,21nm,0.5s						
BOK	Bokaro	12.67	91	eP	Pn	10 25 14.9	-0.8
RAMN	Ramite	13.32	77	eP	Pn	10 25 21.7	-3.0
	comp=E,18nm,0.4s						
TAPN	Taplejung	14.35	76	eP	Pn	10 25 36.4	-2.5
	comp=E,8.9nm,0.6s						
KSH	Kashi	15.19	12	P	Pn	10 25 48.6	-1.4
KSH				sP	pP	10 25 57.3	-0.6
KSH				S	Sn	10 28 30.1	-8.2
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KSH				LR	LR		
	comp=N,180nm,7.6s						
KSH				LR	LR		
	comp=E,160nm,7.2s						
KSH				LR	LR		
	comp=Z,250nm,10.7s						
PALK	Pallekele	19.17	153	P	P	10 26 36.9	-2.2
	comp=Z,0.2nm,0.3s,baz=247,slow=6.7,SNR=1.8						
	comp=Z,1.3nm,0.4s						
MKAR	Makanchi Array	23.57	18	P	P	10 27 26.6	+0.7
	comp=Z,0.5nm,0.8s,baz=198,slow=9.8,SNR=3.6						
	comp=Z,0.5nm,0.8s						
TNCH	TengChong	24.03	84	eP	P	10 27 32.0	+1.2
TNCH				pP	sP	10 27 34.8	-0.4
TNCH				pmax	pmax		
	comp=Z,21nm,0.5s						
CMAR	Chiang Mai Arr	25.75	99	P	P	10 27 48.7	+2.5
	comp=Z,2.1nm,0.3s,baz=292,slow=10,SNR=9.7						
CMAR				LR	LR	10 38 36.1	
	comp=Z,21nm,18.3s,baz=240,slow=38						
	comp=Z,2.1nm,0.3s						
KURBB	Kurchatov Arra	26.41	9	P	P	10 27 52.9	+1.1
	comp=Z,0.1nm,0.4s,baz=202,slow=9.6,SNR=2.5						
	comp=Z,0.1nm,0.4s						
SONM	Songino Array	35.65	41	P	P	10 29 16.8	+3.2
	comp=Z,0.9nm,0.6s,baz=237,slow=7.8,SNR=8.5						
	comp=Z,0.9nm,0.6s						
AKASG	Malin Array Be	41.87	320	P	P	10 30 05.9	+0.4
	comp=Z,0.8nm,0.6s,baz=108,slow=6.5,SNR=5.6						
	comp=Z,0.8nm,0.6s						
GERES	GERESS Array B	51.17	314	P	P	10 31 19.4	+0.7
	comp=Z,0.6nm,0.6s,baz=130,slow=4.0,SNR=5.8						
	comp=Z,0.6nm,0.6s						
TORD	Torodi Ar. Bea	66.92	274	P	P	10 33 07.5	-0.8
	comp=Z,1.4nm,0.8s,baz=69,slow=4.9,SNR=8.5						
	comp=Z,1.4nm,0.8s						
WRA	Warramunga Arr	75.10	120	P	P	10 33 57.0	-0.8
	comp=Z,0.4nm,0.6s,baz=313,slow=5.9,SNR=4.7						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	76.84	124	P	P	10 34 07.1	-0.6
	comp=Z,0.5nm,0.7s,baz=308,slow=5.9,SNR=7.8						
	comp=Z,0.5nm,0.7s						
RES	Resolute Bay	80.54	357	LR	LR	11 14 07.8	
	comp=Z,66nm,18.0s,baz=10,slow=39						
YKA	Yellowknife Ar	92.99	3	P	P	10 35 29.4	+0.8
	comp=Z,0.1nm,0.7s,baz=349,slow=3.9,SNR=2.4						
	comp=Z,0.1nm,0.7s						

IDC 13 10:36:02.2±1.5, 27°.11N×97°.04E, h0^{km}, mb3.1/3, mbtmp3.1/3, Error ellipse: s-maj=63.7km s-min=28.4km az=68.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	21.95	17	P	P	10 40 57.9	+0.4
	0.4nm,0.7s,baz=195,slow=10,SNR=2.9						
	0.4nm,0.7s						
MKAR	Makanchi Array	22.84	333	P	P	10 41 06.3	-0.6
	0.6nm,0.8s,baz=146,slow=9.0,SNR=6.0						
	0.6nm,0.8s						
ASAR	Alice Springs	61.77	141	P	P	10 46 22.6	-0.2
	0.2nm,0.6s,baz=327,slow=6.5,SNR=5.5						
	0.2nm,0.6s						
BDFB	Brasilia	145.63	282	PKPbc	PKPdf	10 55 43.3	-0.1
	1.5nm,0.4s,baz=80,slow=6.1,SNR=3.4						

IDC 13 11:04:30.9±1.8, 6°.34S×129°.36E, h0^{km}, mb3.6/1, mbtmp4.0/4, ML4.1/3, MS2.6/1, Error ellipse: s-maj=65.6km s-min=28.2km az=80.0

ISC 13 11:04:40.2±1.0, 6°.16S±0°.07×130°.2E±0°.2, h100^{km}, n14, σ2^{s}.10/15, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.37	12	Pn	Pn	11 05 59.0	+0.9
	1.3nm,0.3s,baz=204,slow=20,SNR=11						
SIJI				Sn	Sn	11 06 55.8	-2.9
	2.7nm,0.3s,baz=220,slow=23,SNR=9.1						
SIJI				LR	LR	11 08 42.4	
	comp=Z,55nm,19.4s,baz=121,slow=44						
	3.3nm,0.2s						
MTN	Manton Dam	6.71	172	P	Pn	11 06 16.9	+0.7
KNRA	Kununurra	9.56	188	P	Pn	11 06 54.3	-0.6
WRAB	Tennant Creek	14.29	164	P	Pn	11 07 54.9	-3.0
WRA	Warramunga Arr	14.29	164	Pn	Pn	11 07 54.6	-3.4
	1.2nm,0.3s,baz=346,slow=13,SNR=39						
WRA				Sn	Sn	11 10 23.3	-12
	1.3nm,0.3s,baz=344,slow=21,SNR=11						
	4.1nm,0.5s						
WB1	Warramunga Ar.	14.31	164	P	Pn	11 07 54.9	-3.3
ASAR	Alice Springs	17.78	169	P	Pn	11 08 40.9	-0.5
	1.0nm,0.3s,baz=345,slow=9.5,SNR=95						
ASAR				S	Sn	11 11 48.0	-12
	1.1nm,0.7s,baz=347,slow=26,SNR=7.2						
	2.7nm,0.5s						
AS01	Alice Springs	17.79	169	P	Pn	11 08 41.6	+0.2
MTSU	Mount Surprise	18.24	132	P	Pn	11 08 47.9	+1.0
WRKA	Warakurna	18.86	185	P	Pn	11 08 53.7	-0.5
OOD	Oodnadatta	22.15	167	P	P	11 09 28.4	+0.5
INKA	Innaminka	23.71	156	P	P	11 09 44.5	+1.5
MULG	Mulgathing	24.28	172	P	P	11 09 50.6	+2.4
MKAR	Makanchi Array	67.61	327	P	P	11 15 27.4	+1.2
	0.4nm,0.6s,baz=123,slow=7.7,SNR=5.9						
	0.4nm,0.6s						

GUC 13 11:08:04.9±0.6, 21°.74S×67°.38W, h215^{km}±7^{km}, ML3.5

SCB 13 11:08:05.2±1.3, 21°.76S×67°.23W, h178^{km}±11^{km}, ML3.8/3, MW3.4, Error ellipse: s-maj=5.7km s-min=4.0km az=0.0

ISC 13 11:08:03.7±2.0, 21°.75S±0°.05×67°.25W±0°.05, h197^{km}±16^{km}, n26, σ1^{s}.19/42, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCB	Mochara	1.58	72	Pg	Pn	11 08 38.6	+0.2
MOCB				Sg	Sn	11 09 03.3	-1.9
MOCB				IAML		11 09 04.2	
	291nm,0.3s						
YJA	Yavi	1.67	105	Pg	Pn	11 08 39.7	+0.5
LVC	Limon Verde	1.76	240	Pg	Pn	11 08 41.4	+1.4
PB09	IPOC Station P	1.85	268	eP	Pn	11 08 41.6	+1.0
PB09				i S	Sn	11 09 09.7	+0.4
PB09				IAML		11 09 16.1	
	comp=E,83nm,0.4s						
PB09	IPOC Station P	1.85	268	Pg	Pn	11 08 41.9	+1.3
PB01	IPOC Station P	2.19	288	eP	Pn	11 08 44.6	+0.5
PB01				i S	Sn	11 09 15.5	-0.1
PB01	IPOC Station P	2.19	288	Pg	Pn	11 08 45.1	+1.0
PB01				Sg	Sn	11 09 15.9	+0.3
PB01				IAML		11 09 16.8	
	comp=E,361nm,0.2s						
PB06	IPOC Station P	2.35	246	Pg	Pn	11 08 47.3	+1.4
PB08	IPOC Station P	2.39	312	eP	Pn	11 08 47.7	+1.1
PB08				i S	Sn	11 09 20.5	+0.6
PB08				IAML		11 09 22.1	
	comp=N,112nm,0.4s						
PB08	IPOC Station P	2.39	312	Pg	Pn	11 08 47.8	+1.2
PB07	IPOC Station P	2.45	270	eP	Pn	11 08 47.4	+0.4
PB07				i S	Sn	11 09 19.9	-0.7
PB07				IAML		11 09 21.9	
	comp=E,192nm,0.2s						
PB07	IPOC Station P	2.45	270	Pg	Pn	11 08 47.9	+0.9
PB02	IPOC Station P	2.50	279	eP	Pn	11 08 48.0	+0.5
PB02				i S	Sn	11 09 20.5	-1.1
PB02	IPOC Station P	2.50	279	Pg	Pn	11 08 48.3	+0.8
PB02				Sg	Sn	11 09 20.4	-1.1
PB02				IAML		11 09 25.5	
	comp=E,434nm,0.4s						
PB15	IPOC Station P	2.52	234	eP	Pn	11 08 49.0	+1.3
PB15				i S	Sn	11 09 22.6	+0.5
PB04	IPOC Station P	2.75	257	eP	Pn	11 08 50.5	+0.1
PB04				i S	Sn	11 09 25.3	-1.5
PB04				IAML		11 09 28.2	
	comp=E,106nm,0.3s						
PB04	IPOC Station P	2.75	257	Pg	Pn	11 08 51.2	+0.8
TA01	Diego Aracena	2.97	293	eP	Pn	11 08 52.8	0.0
TA01				i S	Sn	11 09 29.2	-2.0
TA01				IAML		11 09 31.6	
	comp=N,186nm,0.4s						
PB11	IPOC Station P	2.99	311	eP	Pn	11 08 53.4	+0.1
PB11				i S	Sn	11 09 31.1	-0.8
MNMC	Minye Minye	3.40	319	eP	Pn	11 08 59.0	+0.7
MNMC				i S	Sn	11 09 40.3	-0.8
PSGC	Pisagua	3.43	308	eP	Pn	11 08 57.6	-0.9
PSGC				i S	Sn	11 09 38.5	-2.8
PB10	IPOC Station P	3.52	239	eP	Pn	11 08 59.7	+0.3
PB10				i S	Sn	11 09 40.6	-2.5
PB10				IAML		11 09 42.9	
	comp=N,37nm,0.3s						
PB16	IPOC Station P	4.00	328	eP	Pn	11 09 07.0	+1.0
PB16				i S	Sn	11 09 54.1	-0.6
GO02	Mina Guanaco	4.02	212	Pg	Pn	11 09 06.9	+1.0
BBOE	La Paz, Chanca	4.95	352	Pg	Pn	11 09 20.0	+2.0
BBOD	La Paz, Gloria	5.24	346	Pg	Pn	11 09 23.0	+1.4

SKHL 13 11:18:15.1±0.3, 47°.60N×154°.50E, h20^{km}±5^{km}, mb4.6/6

IDC 13 11:18:20.2±3.3, 47°.73N×154°.37E, h76^{km}±30^{km}, mb3.0/5, mbtmp3.5/8, Error ellipse: s-maj=34.3km s-min=23.7km az=137.0

ISC 13 11:18:15.3±1.0, 47°.4N±0°.1×154°.7E±0°.1, h31^{km}, n26, σ1^{s}.63/21, mb3.4/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.41	16	eP	Pn	11 19 06.1	-0.2
SKR				AMB	AMB	11 19 06.7	
	150nm,0.5s						
SKR				eS	Sn	11 19 44.6	-1.0
SKR				A	A	11 20 49.1	
	250nm,0.5s						
SKR				A	A	11 20 49.1	
	290nm,0.5s						
PAU	Pauzhetka	4.30	18	eP	Pn	11 19 19.2	+0.8
PAU				AMB	AMB	11 19 21.1	
	20nm,0.4s						
PAU				eS	Sn	11 20 07.1	-0.3
PAU				A	A	11 20 20.2	
	50nm,0.3s						
PAU				A	A	11 20 20.2	
	60nm,0.3s						
KUR	Kuril'sk	5.18	248	eP	Pn	11 19 32.1	+1.5
KUR				AMB	AMB	11 19 34.3	
	60nm,0.7s						
KUR				eS	Sn	11 20 29.7	+0.5
KUR				A	A	11 20 52.9	
	30nm,0.5s						
KUR				A	A	11 20 52.9	
	90nm,0.5s						
PETK	Petropavlovsk-	6.03	18	P	Pn	11 19 43.2	+0.9
	4.8nm,0.5s,baz=187,slow=12,SNR=34						
PET	Petropavlovsk	6.18	23	eP	Pn	11 19 46.0	+1.8
SHO	Shikotan	6.53	240	eP	Pn	11 19 49.8	+0.7
SHO				AMB	AMB	11 19 50.0	
	40nm,0.5s						
SHO				eS	Sn	11 21 01.1	-1.3
SHO				A	A	11 21 03.6	
	60nm,0.5s						
SHO				A	A	11 21 03.6	
	40nm,0.5s						
YUK	Yuzh-Kuril'sk	7.02	244	eP	Pn	11 19 57.5	+1.7
YUK				AMB	AMB	11 19 59.0	
	30nm,0.3s						
NMR	Nemuro--Hokkai	7.47	240	eP	Pn	11 20 01.0	-1.0
YSS	Yuzh-Sakhalins	8.12	271	eP	Pn	11 20 13.3	+2.4
YSS				AMB	AMB	11 20 15.5	
	30nm,0.7s						
AKK	Akkeshi	8.20	241	eP	Pn	11 20 11.0	-1.0
ASAJ	Asahikawa	9.05	253	P	Pn	11 20 26.7	+3.1
	3.2nm,0.7s,baz=94,slow=17,SNR=8.6						
USRK	Ussuriysk Ar.	16.11	267	P	P	11 22 01.3	-1.1
	1.4nm,0.5s,baz=75,slow=13,SNR=4.3						
H11N2	WAKE ISLAND Hy	29.36	156	T	T	11 55 29.4	
	baz=344,slow=76,SNR=72						
H11N1	WAKE ISLAND Hy	29.38	156	T	T	11 55 28.8	
	baz=344,slow=76,SNR=128						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11N3	WAKE ISLAND Hy	29.38	156	T	T	11 55 28.0	
	baz=344,slow=76,SNR=64						
H11S1	WAKE ISLAND Hy	30.47	157	T	T	11 56 53.3	
	baz=344,slow=76,SNR=542						
H11S3	WAKE ISLAND Hy	30.48	157	T	T	11 56 55.4	
	baz=344,slow=76,SNR=477						
H11S2	WAKE ISLAND Hy	30.49	157	T	T	11 56 52.2	
	baz=344,slow=76,SNR=297						
MKAR	Makanchi Array	47.57	297	P	P	11 26 44.8	-3.0
	0.3nm,0.8s,baz=62,slow=6.7,SNR=2.8						
	0.3nm,0.8s						
KURBB	Kurchatov Arra	47.96	304	P	P	11 26 48.6	-2.1
	0.5nm,0.7s,baz=69,slow=8.2,SNR=2.7						
	0.5nm,0.7s						
WRA	Warramunga Arr	69.49	200	P	P	11 29 21.7	+1.1
	0.1nm,0.5s,baz=14,slow=6.6,SNR=2.1						
	0.1nm,0.5s						
ASAR	Alice Springs	73.18	200	P	P	11 29 44.2	+1.3
	0.3nm,0.7s,baz=16,slow=6.9,SNR=4.6						
	0.3nm,0.7s						
TXAR	Lajitas Array	76.25	62	P	P	11 30 01.1	+0.2
	0.1nm,0.3s,baz=306,slow=6.2,SNR=1.8						
	0.1nm,0.3s						
H03N2	Juan Fernandez	137.71	91	T	T	14 11 22.7	
	baz=309,slow=77,SNR=9.9						
H03N1	Juan Fernandez	137.72	91	T	T	14 11 20.2	
	baz=309,slow=77,SNR=12						
H03N3	Juan Fernandez	137.72	91	T	T	14 11 23.2	
	baz=309,slow=77,SNR=9.9						

FUNV 13 11:18:17.8, 12°.29N×69°.55W, h66^{km}, MW3.7, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JACV	Jacura	1.38	149	*e*P	Pn	11 18 40.6	-0.5
JACV				*e*S	Sn	11 18 58.3	-0.3
TURV	Turiamo	2.48	137	*e*P	Pn	11 18 54.8	-1.1
TURV				*e*S	Sn	11 19 21.8	-3.2
BENV	Beln	3.00	140	*e*P	Pn	11 19 03.8	+0.8
BENV				*e*S	Sn	11 19 35.0	-2.8
CARV	Caracas	3.12	124	*e*S	Sn	11 19 37.2	-3.7
FUNV	FUNVISIS	3.23	124	*e*P	Pn	11 19 05.1	-1.2
FUNV				*e*S	Sn	11 19 40.2	-3.5
TACV	Tcata	3.27	131	*e*P	Pn	11 19 05.7	-0.9
TACV				*e*S	Sn	11 19 41.3	-3.1
BAUV	El Baul	3.64	156	*e*P	Pn	11 19 11.1	-0.6
BAUV				*e*S	Sn	11 19 49.8	-3.7
MCQV	Machiques	3.68	233	*e*P	Pn	11 19 10.8	-1.5
MCQV				*e*S	Sn	11 19 50.1	-4.4
BIRV	Birongo	3.68	119	*e*P	Pn	11 19 11.5	-0.9
BIRV				*e*S	Sn	11 19 50.0	-4.5
MERV	Las Mercedes	4.39	133	*e*P	Pn	11 19 20.9	-1.1
MERV				*e*S	Sn	11 20 06.8	-5.2
CACV	CAICARA DEL OR	5.55	147	*e*P	Pn	11 19 40.9	+3.0
CACV				*e*S	Sn	11 20 42.7	+2.4

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*IDC **13** 11:34:00.3±1.5, 23°.21N×126°.05E, h0^{km}, mb3.2/3, mbtmp3.2/4, ML2.9/1, MS2.7/3, Error ellipse: s-maj=57.8km s-min=27.8km az=79.0*

*JMA **13** 11:34:06.0±0.3, 23°N±1°×12°6E±°, h87^{km}, MV2.6/15, FAR S OFF OKINAWAJIMA*

ISC 13 11:34:03.2±2.8, 23°.17N±0°.10×125°.77E±0°.10, h24^{km}±21^{km}, n18, σ1^{s}.12/23, mb3.1/3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMJ2	Miyako jima3	1.61	346	*e*P	Pb	11 34 32.8	+0.5
JMJ2				*e*S	Sb	11 34 53.9	+1.7
JOGS	Gusukube	1.61	348	*e*P	Pb	11 34 33.3	+0.9
JOGS				*e*S	Sb	11 34 53.9	+1.5
JIRB	Irabujima	1.73	342	*e*P	Pb	11 34 34.4	0.0
JIRB				*e*S	Sb	11 34 56.5	+0.7
JTJ	Tarama	1.76	327	P	Pb	11 34 35.1	+0.3
JTJ				*e*S	Sb	11 34 56.7	+0.3
JIJ	Ishigaki jima	1.90	309	P	Pb	11 34 37.2	0.0
JIJ				*e*S	Sb	11 34 60.0	-0.7
JKRS	Kuro-shima	1.93	304	P	Pb	11 34 38.0	+0.3
JKRS				*e*S	Sb	11 35 01.7	+0.4
JISG	Ishigakijimahi	1.94	317	*e*P	Pb	11 34 38.1	+0.2
JISG				*e*S	Sb	11 35 02.0	+0.4
HATJ	Hateruma jima	2.00	296	*e*S	Sb	11 35 02.6	-0.9
IRIF	Iriomote-Funau	2.19	302	P	Pb	11 34 41.8	-0.5
IRIF				*e*S	Sb	11 35 08.3	-0.7
JKE	Kume jima 2	3.27	16	*e*S	Sn	11 35 30.1	-1.2
JNTH	Nagotoyohara	3.91	31	*e*S	Sn	11 35 45.3	-1.7
JOW	Kunigami	4.30	31	Pn	Pn	11 35 04.7	-2.4
	1.4nm,0.3s,baz=232,slow=12,SNR=1.5						
JOW				Sn	Sn	11 35 47.4	-9.1
	1.7nm,0.3s,baz=96,slow=29,SNR=1.4						
	11nm,0.5s						
KSRS	Korea Array	14.36	7	LR	LR	11 42 34.4	
	comp=Z,26nm,19.7s,baz=350,slow=36						
DAV	Davao City (W)	16.01	181	LR	LR	11 43 12.5	
	comp=Z,26nm,21.1s,baz=274,slow=34						
CMAR	Chiang Mai Arr	25.49	264	LR	LR	11 50 07.2	
	comp=Z,16nm,19.4s,baz=15,slow=38						
MKAR	Makanchi Array	42.00	315	P	P	11 41 54.5	+2.0
	0.1nm,0.4s,baz=106,slow=9.6,SNR=2.3						
	0.1nm,0.4s						
WRA	Warramunga Arr	43.66	168	P	P	11 42 06.7	+0.5
	0.4nm,0.8s,baz=348,slow=8.5,SNR=2.8						
	0.4nm,0.8s						
ASAR	Alice Springs	47.23	170	P	P	11 42 35.1	+0.8
	0.1nm,0.5s,baz=352,slow=13,SNR=4.3						
	0.1nm,0.5s						

HEL 13 12:01:33.6±0.4, 67°.16N×20°.58E, h0^{km}, ML1.1, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERTU	Ertsjaerv	0.88	133	PG	Pg	12 01 49.4	-1.0
ERTU				SB	Sb	12 02 02.9	-1.1
PAJU	Pajala	1.00	96	PG	Pg	12 01 51.8	-1.0
	baz=278						
PAJU				SB	Sg	12 02 04.5	-1.2
LANU	Lannavaara	1.05	31	PB	Pg	12 01 53.0	-0.6
	baz=216						
LANU				SB	Sg	12 02 07.9	+0.7
KLF	Kolari	1.32	85	PG	Pg	12 01 57.2	-1.7
	baz=270						
KLF				MSG		12 02 13.5	
	comp=Z,0.7nm,0.2s						
KLF				SB	Sg	12 02 15.3	-0.7
KALU	Kalix	1.71	138	SN	Sg	12 02 28.9	+0.4
HEF	Hetta	1.72	42	PG	Pn	12 02 03.9	-0.9
HEF				MSG		12 02 24.9	
	comp=Z,1.4nm,0.2s						
HEF				SG	Sn	12 02 26.2	-1.2
TOF	Tornio	1.84	124	PG	Pb	12 02 07.3	-0.8
TOF				MSG		12 02 28.5	
	comp=Z,1.2nm,0.2s						
TOF				SN	Sb	12 02 31.5	-0.2
KIF	Kilpisjarvi	1.86	2	PG	Pb	12 02 07.9	-0.5
KIF				MSG		12 02 30.1	
	comp=Z,1.4nm,0.2s						
KIF				SG	Sg	12 02 33.5	+0.2
KTK1	Kautokeino	2.12	27	PG	Pb	12 02 12.0	-0.7
KTK1				SG	Sb	12 02 38.9	-0.7
RNF	Rovaniemi	2.21	102	PG	Pb	12 02 13.1	-1.4
RNF				SG	Sb	12 02 41.6	-0.7
SGF	Sodankyl	2.33	80	SG	Sb	12 02 45.2	-0.3
OUL	Oulu	3.00	131	PG	Pb	12 02 26.8	-1.0
ARA0	ARCESS Array S	3.01	35	PB	Pn	12 02 24.2	+1.7
	baz=216						
ARA0				SB	Sb	12 03 02.9	-2.3

IDC 13 12:04:02.9±8.4, 10°.38S×160°.84E, h0^{km}, mb3.5/3, mbtmp3.5/3, MS3.2/1, Error ellipse: s-maj=228.1km s-min=46.1km az=116.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	13.52	273	LR	LR	12 11 46.0	
	comp=Z,96nm,18.7s,baz=121,slow=34						
WRA	Warramunga Arr	27.26	246	P	P	12 09 50.1	+1.0
	0.6nm,0.8s,baz=76,slow=9.5,SNR=4.4						
	0.6nm,0.8s						
ASAR	Alice Springs	28.88	239	P	P	12 10 02.6	-1.1
	0.3nm,0.8s,baz=64,slow=9.9,SNR=2.1						
	0.3nm,0.8s						
H11S2	WAKE ISLAND Hy	29.26	11	T	T	12 38 54.3	
	baz=194,slow=76,SNR=8.2						
H11S3	WAKE ISLAND Hy	29.26	11	T	T	12 39 20.8	
	baz=194,slow=76,SNR=7.3						
H11S1	WAKE ISLAND Hy	29.28	11	T	T	12 39 08.9	
	baz=194,slow=76,SNR=5.7						
H11N1	WAKE ISLAND Hy	30.49	11	T	T	12 40 30.9	
	baz=193,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	30.50	11	T	T	12 40 24.7	
	baz=193,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	30.51	11	T	T	12 40 22.3	
	baz=193,slow=76,SNR=16						
SONM	Songino Array	75.33	325	P	P	12 15 48.3	0.0
	0.3nm,0.4s,baz=123,slow=4.3,SNR=2.5						
	0.3nm,0.4s						

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*NNC **13** 12:14:40.2±6.8, 36°.81N×70°.96E, h100^{km}, mb3.1, mpv3.7, Error ellipse: s-maj=62.9km s-min=47.2km az=136.0*

ISC 13 12:14:31.6±2.3, 36°.4N±0°.1×70°.8E±0°.2, h100^{km}, n16, σ2^{s}.06/18, 5C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.19	20	P	Pn	12 16 03.4	+2.5
	SNR=77						
AML	Almayashu	6.19	20	⇑P	Pn	12 16 03.1	+2.3
	1.3nm,0.3s						
AML				⇓S	Sn	12 17 09.9	-0.4
	5.4nm,0.6s						
UCH	Uchtor	6.54	25	P	Pn	12 16 07.9	+2.4
	SNR=30						
EKS2	Erkin-Say	6.71	19	P	Pn	12 16 09.9	+2.3
	SNR=9.1						
KK31	Karatay Array	6.75	358	P	Pn	12 16 09.5	+1.5
	1.6nm,0.2s,baz=177,slow=13,SNR=52						
KK31				⇑S	Sn	12 17 20.1	-3.3
	3.0nm,0.3s,baz=182,slow=25,SNR=12						
AAK	Ala-Archa	6.90	23	P	Pn	12 16 12.6	+2.5
	SNR=5.3						
USP	Ospenovka	7.47	21	P	Pn	12 16 19.7	+1.9
	SNR=6.7						
TKM2	Tokmak 2	7.53	28	P	Pn	12 16 20.8	+2.0
	SNR=6.8						
TKM2	Tokmak 2	7.53	28	⇑P	Pn	12 16 20.3	+1.5
	6.9nm,0.5s						
TKM2				⇑S	Sn	12 17 40.1	-2.5
	3.1nm,0.8s						
DMN	Daman	14.92	122	*e*P	Pn	12 17 56.7	-0.9
	8.9nm,0.3s						
PKIN	Phulchoki	15.14	121	*e*P	Pn	12 18 00.0	-0.4
	13nm,0.5s						
AB31	Akbulak array	15.15	332	⇑P	P	12 18 10.7	+7.9
	0.4nm,0.6s,baz=167,slow=12,SNR=5.4						
PKI	Pulchoki	15.15	121	*e*P	Pn	12 18 00.4	-0.2
	2.9nm,0.2s						
GUN	Gumba	15.27	119	*e*P	Pn	12 18 01.5	-0.6
	5.7nm,0.3s						
JIRN	Jiri	15.64	119	*e*P	Pn	12 18 05.7	-1.1
	12nm,0.3s						
RAMN	Ramite	16.37	120	*e*P	Pn	12 18 13.8	-1.8
	6.7nm,0.5s						

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*HEL **13** 12:19:16.2±0.4, 67°.83N×20°.07E, h0^{km}, ML0.9, Explosion*

*DNK **13** 12:19:16.8±0.5, 67°.83N×20°.21E, h0^{km}, ML2.9(UPP), Suspected explosion*

*UPP **13** 12:19:16.5±0.4, 67°.83N×20°.20E, h1^{km}±5^{km}, ML2.9, Confirmed Induced event*

ISC 13 12:19:15.9±0.8, 67°.81N±0°.03×20°.31E±0°.03, h0^{km}, n25, σ0^{s}.61/37, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATU	Laukkuluspa	0.27	273	P	Pg	12 19 20.9	-0.2
RATU				S	Sg	12 19 24.2	-0.3
RATU	Laukkuluspa	0.27	273	P	Pg	12 19 20.9	-0.2
RATU				S	Sg	12 19 24.2	-0.3
KOVU	Salmi	0.42	353	P	Pg	12 19 24.0	+0.2
KOVU				S	Sg	12 19 29.4	+0.1
KOVU	Salmi	0.42	353	P	Pg	12 19 24.0	+0.2
KOVU				S	Sg	12 19 29.4	+0.1
NIKU	Nikkaluokta	0.48	277	P	Pg	12 19 25.0	-0.1
NIKU	Nikkaluokta	0.48	277	P	Pg	12 19 25.0	-0.1
LANU	Lannavaara	0.68	69	P	Pb	12 19 29.8	-0.8
LANU	Lannavaara	0.68	69	P	Pb	12 19 29.8	-0.8
LANU	Lannavaara	0.68	69	PG	Pb	12 19 30.5	-0.1
LANU				SG	Sb	12 19 39.7	-0.9
MASU	Masugnsbyn	0.74	118	P	Pb	12 19 31.1	-0.5
MASU	Masugnsbyn	0.74	118	P	Pb	12 19 31.1	-0.5
KIF	Kilpisjarvi	1.21	8	PG	Pg	12 19 38.4	-0.6
KIF				MSG		12 19 54.0	
	comp=Z,1.3nm,0.2s						
KIF				SB	Sb	12 19 55.8	0.0
PAJU	Pajala	1.34	125	P	Pg	12 19 41.5	0.0
PAJU	Pajala	1.34	125	P	Pg	12 19 41.5	0.0
PAJU	Pajala	1.34	125	PG	Pg	12 19 41.5	0.0
	baz=302						
PAJU				SB	Sn	12 19 60.0	-0.4
HEF	Hetta	1.39	63	PG	Pb	12 19 42.7	0.0
HEF				MSG		12 20 00.3	
	comp=Z,0.7nm,0.2s						
HEF				SN	Sn	12 20 03.3	+1.7
ERTU	Ertsjaerv	1.46	149	P	Pn	12 19 43.7	+0.2
ERTU	Ertsjaerv	1.46	149	P	Pn	12 19 43.7	+0.2
ERTU	Ertsjaerv	1.46	149	PG	Pb	12 19 44.1	+0.2
ERTU				SN	Sn	12 20 04.8	+1.5
KLF	Kolari	1.52	111	PG	Pg	12 19 45.1	+0.1
KLF				MSG		12 20 04.4	
	comp=Z,0.5nm,0.2s						
KLF				SG	Sn	12 20 06.0	+1.3
KTK1	Kautokeino	1.62	41	PG	Pg	12 19 47.8	+0.9
KTK1				SG	Sn	12 20 07.0	-0.3
HARU	Harads	1.68	171	P	Pb	12 19 47.7	+0.1
HARU	Harads	1.68	171	P	Pb	12 19 47.7	+0.1
TOF	Tornio	2.35	136	MSG		12 20 28.0	
	comp=Z,0.5nm,0.2s						
TOF				SG	Sg	12 20 31.0	-0.3
RNF	Rovaniemi	2.53	116	PG	Pb	12 20 01.8	-0.2
RNF				SG	Sg	12 20 35.8	-1.3

IDC 13 12:28:02.7±990.0, 54°.08N×0°.10E, h0^{km}, Error ellipse: s-maj=476.4km s-min=199.2km az=101.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I26DE	FREYUNG INFRAS	9.97	116	I	I	13 27 30.0	
	0.1nm,1.0s,baz=307,slow=338,SNR=2.3						
I43RU	DUBNA INFRASON	21.07	68	I	I	14 37 10.0	
	baz=279,slow=321,SNR=0.7						
I31KZ	AKTYUBINSK INF	34.81	72	I	I	16 02 10.0	
	baz=302,slow=320,SNR=0.6						

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*IDC **13** 12:32:35.8±0.7, 16°.43S×173°.26W, h38^{km}±4^{km}, mb4.0/12, mbtmp4.3/13, ML3.1/1, MS3.6/22, Error ellipse: s-maj=28.5km s-min=14.0km az=146.0*

*NEIC **13** 12:32:35.0±1.8, 16°.5S±0°.1×173°.2W±0°.1, h28^{km}±6^{km}, mb4.7/19, Error ellipse: s-maj=18.5km s-min=17.9km az=82.0*

ISC 13 12:32:35.7±0.4, 16°.48S±0°.09×173°.24W±0°.07, h35^{km}, n114, σ0^{s}.91/95, mb4.5/22, MS3.7/23, 12C-8D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.92	29	Pn	Pn	12 33 13.8	-5.9
	17nm,0.3s,baz=215,slow=11,SNR=50						
AFI				Sn	Sn	12 33 41.1	-13
	123nm,0.3s,baz=123,slow=18,SNR=11						
AFI				LR	LR	12 34 13.8	
	comp=Z,546nm,18.5s,baz=254,slow=34						
NIUE	Niue	4.07	130		Pn	12 33 35.4	-0.1
MSVF	Nonsavu	8.43	260	LR	LR	12 37 27.9	
	comp=Z,418nm,20.3s,baz=134,slow=35						
RAR	Rarotonga	13.58	112	Pn	Pn	12 35 45.2	-0.7
	0.9nm,0.3s,baz=284,slow=12,SNR=3.0						
	11nm,0.7s						
DZM	Mont Dzumac	19.96	251	*e*P	Pn	12 37 10.2	+3.2
	55nm,1.4s						
DZM				*e*S	S	12 40 45.9	-2.1
	55nm,25.9s						
DZM				*e*LR	LR	12 41 51.5	
	comp=Z,331nm,24.9s						
DZM	Mont Dzumac	19.96	251	LR	LR	12 43 37.0	
	comp=Z,238nm,21.3s,baz=36,slow=33						
DZM	Mont Dzumac	19.96	251	P	Pn	12 37 06.2	-0.8
DZM				IAmb	IAmb	12 37 29.5	
	comp=Z,26nm,1.2s						
KOUNC	Koumac, New Ca	21.69	256	P	P	12 37 22.7	-1.0
KOUNC				IAmb	IAmb	12 37 48.1	
	comp=Z,32nm,1.3s						
PPT2	Papeete2	22.65	96	*e*LR	LR	12 43 04.7	
	comp=Z,178nm,23.2s						
PPT2				*e*LR	LR	12 43 05.3	
	comp=Z,157nm,25.5s						
PPT2	Papeete2	22.65	96	*e*T	T	13 00 48.6	
	comp=Z,1.6nm,0.2s						
PPT	Papeete	22.65	96	LR	LR	12 44 38.1	
	comp=Z,70nm,18.1s,baz=278,slow=32						
URZ	Urewera	23.30	200	P	P	12 37 40.8	+0.4
	comp=Z,11nm,0.8s,baz=4.9,slow=6.2,SNR=2.6						
	comp=Z,11nm,0.8s						
TBI	Tubuai	23.35	111	*e*LR	LR	12 43 24.5	
	comp=Z,888nm,23.2s						
TBI				*e*LR	LR	12 43 24.6	
	comp=Z,4µm,22.8s						
TBI	Tubuai	23.35	111	*e*T	T	13 01 46.4	
	comp=Z,6.4nm,0.3s						
HNR	Honiara	27.04	282	LR	LR	12 47 16.3	
	comp=Z,5µm,21.3s,baz=113,slow=33						
QRZ	Quartz Range	27.21	204	P	P	12 38 15.3	-0.9
KHZ	Kahutara	28.22	201	P	P	12 38 24.8	-0.4
TAOE	Nuku Hiva Isla	33.12	81	*e*LR	LR	12 47 56.6	
	comp=Z,79nm,23.2s						
TAOE	Nuku Hiva Isla	33.12	81	*e*T	T	13 13 46.1	
	comp=Z,20nm,0.2s						
ARMA	Armidale	34.93	240	P	P	12 39 24.6	0.0
ARMA				IAmb	IAmb	12 39 34.6	
	comp=Z,23nm,1.4s						
CTA	Charters Tower	38.57	258	LR	LR	12 54 30.4	
	comp=Z,87nm,18.1s,baz=85,slow=34						
H11N3	WAKE ISLAND Hy	40.93	331	T	T	13 22 58.0	
	baz=150,slow=76						
H11N1	WAKE ISLAND Hy	40.93	331	T	T	13 22 57.9	
	baz=150,slow=76						
H11N2	WAKE ISLAND Hy	40.94	331	T	T	13 22 59.4	
	baz=150,slow=76						
STKA	Stephens Creek	43.64	241	P	P	12 40 36.8	-0.4
	comp=Z,2.6nm,0.7s,baz=90,slow=14,SNR=6.0						
STKA				LR	LR	12 56 19.5	
	comp=Z,28nm,22.0s,baz=203,slow=33						
	comp=Z,2.6nm,0.7s						
STKA	Stephens Creek	43.64	241	P	P	12 40 37.0	-0.1
WB0	Warramunga Arr	49.73	258	P	P	12 41 23.7	-1.2
WB0				IAmb	IAmb	12 41 30.9	
	comp=Z,6.1nm,1.4s						
WB2	Warramunga Arr	49.75	258	P	P	12 41 25.4	+0.3
WRAB	Tennant Creek	49.75	258	P	P	12 41 23.8	-1.3
WRAB				IAmb	IAmb	12 41 25.8	
	comp=Z,7.7nm,1.4s						
WRA	Warramunga Arr	49.76	258	P	P	12 41 23.4	-1.8
	comp=Z,1.1nm,0.7s,baz=93,slow=7.2,SNR=11						
WRA				PcP	PcP	12 42 46.4	+0.5
	comp=Z,1.0nm,0.8s,baz=91,slow=4.0,SNR=4.8						
WRA				LR	LR	13 00 51.2	
	comp=Z,128nm,18.4s,baz=100,slow=34						
	comp=Z,1.1nm,0.7s						
WRA	Warramunga Arr	49.76	258	P	P	12 41 23.8	-1.4
AS31	Alice Springs	49.93	253	P	P	12 41 25.8	-0.7
ASAR	Alice Springs	49.94	253	P	P	12 41 25.0	-1.5
	comp=Z,4.6nm,0.7s,baz=88,slow=8.3,SNR=73						
ASAR				pP	pwP	12 41 38.8	-0.1
	comp=Z,4.7nm,0.7s,baz=88,slow=8.4,SNR=10						
ASAR				LR	LR	13 01 35.1	
	comp=Z,68nm,18.4s,baz=106,slow=35						
	comp=Z,4.6nm,0.7s						
ASAR	Alice Springs	49.94	253	P	P	12 41 25.6	-0.9
GUMO	Guam	51.05	303	LR	LR	13 01 05.5	
	comp=Z,26nm,18.8s,baz=108,slow=34						
JHJ	Hachijo jima 2	66.67	318	LR	LR	13 09 21.7	
	comp=Z,23nm,18.5s,baz=94,slow=33						
SHEM	Shemya Is, Ala	69.79	352	LR	LR	13 08 05.5	
	comp=Z,54nm,20.7s,baz=144,slow=30						
MJAR	Matsushiro Arr	69.86	320	LR	LR	13 08 33.5	
	comp=Z,37nm,21.8s,baz=127,slow=31						
ASAJ	Asahikawa	72.54	328	P	P	12 43 59.0	-0.1
	comp=Z,2.4nm,0.7s,baz=124,slow=7.3,SNR=4.5						
	comp=Z,2.4nm,0.7s						
JNU	Nakatsue	72.65	313	LR	LR	13 09 16.1	
	comp=Z,30nm,21.9s,baz=206,slow=30						
KMRM	Mail Ridge	72.81	38	P	P	12 44 01.7	+0.8
KMRM				IAmb	IAmb	12 44 02.6	
	comp=Z,12nm,0.9s						
PFO	Pinyon Flats O	73.54	47	LR	LR	13 11 10.0	
	comp=Z,71nm,19.2s,baz=30,slow=32						
QSPA	South Pole Qui	73.57	180	P	P	12 44 07.3	+2.2
QSPA				IAmb	IAmb	12 44 08.5	
	comp=Z,5.5nm,0.8s						
NVAR	Mina Array Bea	75.03	42	P	P	12 44 14.2	+0.1
	comp=Z,2.2nm,0.8s,baz=228,slow=9.5,SNR=20						
NVAR				pP	pP	12 44 24.8	+0.5
	comp=Z,1.2nm,0.6s,baz=223,slow=9.7,SNR=7.2						
	comp=Z,2.2nm,0.8s						
KSRS	Korea Array	77.04	316	LR	LR	13 12 27.4	
	comp=Z,13nm,21.6s,baz=15,slow=31						
ELK	Elko	78.29	41	P	P	12 44 32.1	-0.5
	comp=Z,1.4nm,0.8s,baz=235,slow=6.3,SNR=4.5						
ELK				LR	LR	13 12 54.0	
	comp=Z,77nm,18.2s,baz=23,slow=31						
	comp=Z,1.4nm,0.8s						
TXAR	Lajitas Array	81.08	56	P	P	12 44 48.1	+0.4
	comp=Z,1.5nm,1.1s,baz=224,slow=3.8,SNR=7.9						
TXAR				LR	LR	13 13 51.4	
	comp=Z,57nm,18.1s,baz=10.0,slow=30						
	comp=Z,1.5nm,1.1s						
MA2	Magadan	81.24	342	LR	LR	13 18 01.7	
	comp=Z,36nm,19.5s,baz=86,slow=34						
ANMO	Albuquerque	81.37	50	LR	LR	13 17 29.8	
	comp=Z,50nm,18.8s,baz=154,slow=33						
TNA	Tin City	81.89	2	P	P	12 44 51.6	+0.5
TNA				IAmb	IAmb	12 44 52.2	
	comp=Z,4.2nm,0.8s						
S22A	4UR Ranch, Cre	82.39	47	P	P	12 44 54.9	+0.2
S22A				IAmb	IAmb	12 44 56.6	
	comp=Z,6.5nm,0.9s						
PDAR	Pinedale Array	82.96	42	P	P	12 44 57.1	-0.4
	comp=Z,2.3nm,0.8s,baz=219,slow=3.4,SNR=25						
PDAR				pP	pP	12 45 07.1	-0.8
	comp=Z,1.4nm,0.8s,baz=196,slow=3.0,SNR=5.0						
	comp=Z,2.3nm,0.8s						
PDAR	Pinedale Array	82.96	42	P	P	12 44 57.6	0.0
ILAR	Eielson Array	83.47	11	P	P	12 44 58.1	-1.2
	comp=Z,1.3nm,0.7s,baz=219,slow=6.0,SNR=17						
	comp=Z,1.3nm,0.7s						
IMAR	Indian Mountai	83.52	8	P	P	12 44 59.2	-0.3
SEY	Seymchan	83.60	345	P	P	12 44 58.1	-1.9
	comp=Z,3.9nm,0.9s,baz=145,slow=5.2,SNR=8.9						
	comp=Z,3.9nm,0.9s						
DAWY	Dawson	84.43	14	P	P	12 45 03.7	-0.6
DAWY				IAmb	IAmb	12 45 05.1	
	comp=Z,5.7nm,0.9s						
HHC	Hu-ho-hao-te	89.88	313	*e*P	P	12 45 34.3	+3.0
YKA	Yellowknife Ar	91.02	23	P	P	12 45 35.2	-0.7
	comp=Z,1.0nm,1.1s,baz=231,slow=4.1,SNR=8.2						
YKA				pP	pwP	12 45 49.1	-0.3
	comp=Z,0.5nm,0.9s,baz=246,slow=4.5,SNR=3.7						
	comp=Z,1.0nm,1.1s						
SNAA	Sanae	91.82	177	P	P	12 45 40.0	+0.2
PZH	PanZhiHua	92.90	297	P	P	12 45 47.3	+1.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.3s						
CMAR	Chiang Mai Arr	93.10	288	LR	LR	13 21 31.8	
	comp=Z,9.9nm,21.7s,baz=355,slow=32						
ULM	Lac du Bonnet	94.67	39	LR	LR	13 20 57.5	
	comp=Z,84nm,19.5s,baz=272,slow=31						
LVC	Limon Verde	96.41	116	LR	LR	13 19 36.5	
	comp=Z,53nm,19.0s,baz=214,slow=29						
MKAR	Makanchi Array	111.69	314	PKiKP	PKiKP	12 51 06.2	-0.6
	comp=Z,0.4nm,0.7s,baz=70,slow=0.9,SNR=3.6						
OSTC	Ostas	145.17	349	*e*PKP	PKPdf	12 52 10.5	+0.9
DPC	Dobruska-Polom	145.35	349	*e*PKP	PKPdf	12 52 10.0	+0.1
BURAR	Bucovina Array	145.43	338	⇑P	PKPdf	12 52 10.1	-0.1
OKC	Ostrava-Krasne	145.47	347	*e*PKP	PKPbc	12 52 09.6	-0.5
KRLC	Kraliky	145.53	349	*e*PKP	PKPab	12 52 10.5	-0.1
MORC	Moravsky Berou	145.66	348	⇑P	PKPab	12 52 11.0	-0.1
MEM	Membach	145.95	1	*d*PKP	PKPab	12 52 11.9	-0.2

BSTI	Sart Tilman	145.97	1	dPKP	PKPab	12 52 11.9	-0.2
BTNL	Ternell	145.98	1	dPKP	PKPab	12 52 11.8	-0.4
PRU	Pruhonice	145.99	351	ePKP	PKPbc	12 52 11.8	+0.1
NKC	Novy Kostel	146.02	353	ePKP	PKPab	12 52 12.2	-0.2
GOPC	GO Pecny, Ondr	146.03	351	ePKP	PKPbc	12 52 12.0	+0.1
BGES	Gesves	146.16	2	dPKP	PKPbc	12 52 12.0	-0.2
BMRD	Maredsous	146.23	2	dPKP	PKPab	12 52 13.3	+0.2
VRI	Vrincioaia	146.29	335	⇑P	PKPbc	12 52 12.8	0.0
PLOR	Plostina	146.33	335	⇓P	PKPab	12 52 13.3	-0.4
TPGR	Topolog	146.35	332	⇑P	PKPab	12 52 13.3	-0.5
VYHS	Vyhne	146.58	345	ePKP	PKPbc	12 52 13.8	+0.3
DOPR	Dopca	146.74	336	⇓P	PKPab	12 52 15.5	+0.2
MLR	Muntele Rosu	146.91	335	⇑P	PKPab	12 52 15.7	-0.4
KHC	Kasperske Hory	146.97	352	ePKP	PKPbc	12 52 15.1	+0.4
MODS	Modra-Piesok	147.05	347	ePKP	PKPab	12 52 16.0	-0.4
BRTR	Keskin Array B	147.09	320	PKPbc	PKPbc	12 52 15.8	+0.3
	comp=Z,5.3nm,0.8s,baz=87,slow=1.1,SNR=23						
BRTR				pPKPbc	pPKPbc	12 52 26.3	+0.1
	comp=Z,1.5nm,0.7s,baz=118,slow=1.8,SNR=4.7						
GERES	GERESS Array B	147.23	352	PKPbc	PKPbc	12 52 15.6	+0.1
	comp=Z,3.2nm,0.9s,baz=31,slow=2.3,SNR=18						
GERES				pPKPbc	pPKPbc	12 52 25.9	-0.2
	comp=Z,0.3nm,0.3s,baz=320,slow=3.5,SNR=2.9						
VOIR		147.31	336	⇑P	PKPab	12 52 17.1	-0.5
CONA	Conrad Observa	147.76	349	i PKP	PKPbc	12 52 17.6	+0.6
	comp=Z,7.4nm,0.7s						
SIRR	Siria	147.81	340	⇑P	PKPbc	12 52 17.4	+0.3
RONA	Rosalia, Austr	147.89	348	i PKiKP	PKPbc	12 52 18.1	+0.9
	comp=Z,10nm,1.0s						
SURR	Surduc	148.11	339	⇑P	PKPbc	12 52 18.5	+0.7
MOA	Molln	148.12	350	i PKP	PKPbc	12 52 17.9	+0.1
	comp=Z,7.2nm,1.2s						
GZR	Gura Zlata	148.20	338	⇑P	PKiKP	12 52 19.0	-0.9
BZS	Buzias	148.40	340	⇓P	PKPdf	12 52 16.0	+0.9
ARSA	Arzberg	148.47	349	i PKP	PKPbc	12 52 19.3	+0.5
	comp=Z,4.6nm,0.8s						
MORH	Mrgy, Hungar	148.74	344	⇑P	PKPbc	12 52 17.7	-1.8
RETA	Reutte	148.91	355	i PKiKP	PKPbc	12 52 20.4	+0.5
	comp=Z,0.9nm,0.4s						
WATA	Walderalm	148.98	354	ePKP	PKPbc	12 52 20.4	+0.1
	comp=Z,6.8nm,1.0s						
KBA	Koelnbreinsper	149.01	351	i PKP	PKPbc	12 52 20.1	-0.3
	comp=Z,3.6nm,0.7s						
MOTA	Moosalm	149.02	354	i PKP	PKPbc	12 52 20.6	+0.3
	comp=Z,6.7nm,0.8s						
WTTA	Wattenberg	149.04	354	i PKP	PKPbc	12 52 20.5	+0.1
	comp=Z,4.8nm,0.6s						
SOKA	Soboth	149.12	349	ePKP	PKPbc	12 52 20.5	-0.1
	comp=Z,8.1nm,1.1s						
SQTA	Sankt Quirin	149.13	354	i PKiKP	PKPbc	12 52 21.1	+0.5
	comp=Z,8.8nm,0.9s						
DAVA	Damuels	149.18	356	i PKP	PKPbc	12 52 21.0	+0.2
	comp=Z,14nm,1.2s						
OBKA	Obir	149.37	349	ePKP	PKPbc	12 52 19.6	-1.6
	comp=Z,1.5nm,0.6s						
FETA	Feichten	149.37	355	i PKP	PKPbc	12 52 21.3	+0.1
	comp=Z,7.5nm,1.0s						
MYKA	Terra Mystica	149.40	351	i PKP	PKPbc	12 52 20.8	-0.4
	comp=Z,4.4nm,0.7s						
ABTA	Abfaltersbach	149.45	352	i PKP	PKPbc	12 52 20.7	-0.7
	comp=Z,11nm,0.8s						
BOVS	Bovan	150.10	338	⇑P	PKPdf	12 52 19.9	+2.0
VTS	Vitosha	150.38	335	⇑P	PKiKP	12 52 26.1	+1.4
TORD	Torodi Ar. Bea	174.08	123	PKPab	PKPab	12 54 12.9	-1.1
	comp=Z,1.0nm,1.0s,baz=223,slow=4.3,SNR=3.6						

WEL 13 12:38:20.6±0.5**,43˚S**±4˚×**17˚3E**±˚**,h12**km±5km**,ML2.5**/5**, Error ellipse: s-maj=0.0km s-min=0.0km az=135.3, confirmed,South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	Greta Valley S	0.33	168	P	Pb	12 38 28.4	-0.2
GVZ				S	Sb	12 38 34.4	+0.5
KHZ	Kahutara	0.50	63	P	Pg	12 38 30.6	+0.3
KHZ				S	Sb	12 38 38.0	-0.5
LTZ	Lake Taylor	0.51	254	P	Pb	12 38 31.3	-0.4
LTZ				S	Sb	12 38 39.0	-0.1
LTZ	Lake Taylor	0.51	254	P	Pb	12 38 31.8	+0.1
AMCZ	Amberley	0.57	202	P	Pb	12 38 33.1	+0.5
AMCZ				S	Sb	12 38 41.6	+0.7
OXZ	Oxford	0.95	224	P	Pg	12 38 39.0	0.0
OXZ				S	Sb	12 38 52.4	+0.8
OXZ	Oxford	0.95	224	P	Pg	12 38 39.0	0.0
MQZ	McQueen's Vall	1.08	191	P	Pb	12 38 40.4	-0.9
MQZ				S	Sb	12 38 54.8	-0.6
INZ	Inchbonnie	1.11	265	P	Pb	12 38 40.4	-1.3
QRZ	Quartz Range	1.84	350	P	Pb	12 38 53.6	-0.7
QRZ				S	Sn	12 39 16.1	+0.8

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*MOS **13** 12:44:15.2±1.0, 44˚.54N×146˚.48E, h172km, mb3.8/5, Error ellipse: s-maj=12.1km s-min=9.2km az=74.6*

*IDC **13** 12:44:16.9±1.4, 44˚.65N×146˚.39E, h173km±13km, mb3.2/11, mbtmp3.7/17, MS3.2/2, Error ellipse: s-maj=18.0km s-min=11.3km az=134.0*

*SKHL **13** 12:44:16.0±0.1, 44˚.60N×146˚.50E, h150km±8km, mb4.8/4, msha5.5/4*

*JMA **13** 12:44:17.1±0.5, 44˚N±1˚×14˚6E±˚, h164km±3km, MV3.7/39, NEAR KUNASHIRI ISLAND*

ISC 13 12:44:16.2±0.6**,44˚.52N**±0˚.05×**146˚.47E**±0˚.05**,h168**km±5km**, n74,σ0ˢ.90**/85**,mb3.5**/12**,6C-4D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	0.65	222	ePN	Pn	12 44 40.7	+0.4
YUK				eS	Sn	12 44 59.5	+0.8
YUK				smax	smax		
	comp=E,2µm,0.7s						
YUK				smax	smax		
	comp=N,1µm,0.6s						
YUK	Yuzh-Kuril'sk	0.65	222	i P	Pn	12 44 40.7	+0.4
YUK				AMB	AMB	12 44 43.0	
	comp=N,330nm,0.2s						
YUK				eS	Sn	12 44 59.2	+0.5
YUK				A	A	12 45 00.3	
	comp=N,2µm,0.5s						
YUK				A	A	12 45 00.3	
	comp=N,2µm,0.5s						
SHO	Shikotan	0.70	158	ePN	Pn	12 44 40.3	-0.3
SHO				eS	Sn	12 44 58.2	-1.0
SHO				smax	smax		
	comp=E,2µm,0.5s						
SHO				smax	smax		
	comp=N,3µm,0.2s						
SHO	Shikotan	0.70	158	i P	Pn	12 44 40.3	-0.3
SHO				AMB	AMB	12 44 40.7	
	comp=N,160nm,0.2s						
SHO				i S	Sn	12 44 58.4	-0.8
SHO				A	A	12 44 59.5	
	comp=N,3µm,0.4s						
SHO				A	A	12 44 59.5	
	comp=N,2µm,0.4s						
RUSJ	Misakicho	0.97	245	ePN	Pn	12 44 42.5	+0.2
RUSJ				eS	Sn	12 45 02.6	+0.2
JRA	Rausu	1.13	240	P	Pn	12 44 43.8	+0.2
KUR	Kuril'sk	1.23	54	d iPN	Pn	12 44 44.4	-0.1
KUR				eS	Sn	12 45 06.3	0.0
KUR				pmax	pmax		
	comp=Z,585nm,0.3s						
KUR				pmax	pmax		
	comp=N,160nm,0.2s						
KUR				pmax	pmax		
	comp=E,182nm,0.2s						
KUR				smax	smax		
	comp=N,189nm,0.6s						
KUR				smax	smax		
	comp=E,117nm,0.5s						
KUR	Kuril'sk	1.23	54	i P	Pn	12 44 44.4	-0.1
KUR				AMB	AMB	12 44 44.9	
	comp=E,550nm,0.3s						
KUR				eS	Sn	12 45 05.7	-0.6
KUR				A	A	12 45 07.0	
	comp=E,200nm,0.3s						
KUR				A	A	12 45 07.0	
	comp=E,340nm,0.3s						
NEM2	Nemuro 2	1.26	205	P	Pn	12 44 44.8	-0.1
NEM2				eS	Sn	12 45 05.4	-1.5
NMR	Nemuro--Hokkai	1.27	205	ePN	Pn	12 44 44.6	-0.3
NMR				eS	Sn	12 45 05.4	-1.5
NMR	Nemuro--Hokkai	1.27	205	i P	Pn	12 44 44.8	-0.1
NMR				eS	Sn	12 45 05.6	-1.3
JNSB	Nemuroshibetsu	1.29	235	P	Pn	12 44 45.6	+0.5
JNK	Nakash	1.57	234	P	Pn	12 44 48.3	+0.5
JKHN	Kushirohamanak	1.72	214	P	Pn	12 44 49.5	+0.2
JKHN				eS	Sn	12 45 14.1	-0.8
AKK	Akkeshi	1.91	219	eP	Pn	12 44 51.4	+0.1
JTKR	Abashiri--Toko	1.92	254	P	Pn	12 44 51.6	+0.2
JAK	Akkeshi	1.99	221	P	Pn	12 44 52.4	+0.2
JAK				eS	Sn	12 45 19.0	-1.0
JMP	Maruseppu	2.29	258	P	Pn	12 44 55.8	+0.1
JAR	Ashorobuto	2.30	239	P	Pn	12 44 56.6	+0.8
JOB	Onbets	2.50	231	P	Pn	12 44 58.9	+0.8
JOB				eS	Sn	12 45 30.4	-0.2
JKK2	Kamakawa 2	2.75	258	P	Pn	12 45 01.8	+0.6
JSE	Soyaes	2.80	280	P	Pn	12 45 01.7	-0.1
JKA	Kamikawa-asahi	2.80	263	eP	Pn	12 45 02.3	+0.5
ASAJ	Asahikawa	2.81	263	P	Pn	12 45 02.2	+0.4
	comp=E,121nm,0.5s,baz=90,slow=11,SNR=487						
ASAJ				S	Sn	12 45 38.4	+1.1
	comp=E,8.7nm,0.4s,baz=343,slow=28,SNR=4.2						
ASAJ	Asahikawa	2.81	263	P	Pn	12 45 02.5	+0.7
JCH	Churui	2.95	231	P	Pn	12 45 03.9	+0.3
JCH				eS	Sn	12 45 39.1	-1.3
JSS	Shosan	3.30	270	eP	Pn	12 45 09.4	+1.4
JWK2	Keihoku	3.34	285	P	Pn	12 45 09.4	+0.9
ERM	Erimo	3.48	225	c ePN	Pn	12 45 11.1	+0.9
JHR	Hokuryu	3.50	259	eP	Pn	12 45 11.8	+1.3
JNBK	Urakawa-nobuka	3.51	232	eP	Pn	12 45 09.9	-0.6
JNBK				eS	Sn	12 45 49.2	-3.8
YSS	Yuzh-Sakhalins	3.56	314	α ePN	Pn	12 45 10.2	-1.0
YSS				eS	Sn	12 45 52.6	-1.5
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				smax	smax		
	comp=N,20nm,0.9s						
YSS				smax	smax		
	comp=E,20nm,0.9s						
YSS				smax	smax		
	comp=E,100nm,2.3s						
YSS	Yuzh-Sakhalins	3.56	314	i P	Pn	12 45 10.5	-0.7
YSS				AMB	AMB	12 45 10.9	
	comp=E,10.0nm,0.5s						
YSS				eS	Sn	12 45 53.5	-0.6
YSS				A	A	12 45 54.6	
	comp=E,10.0nm,0.9s						
YSS				A	A	12 45 54.6	
	comp=E,10.0nm,0.9s						
JRBN	Rebuntou	3.94	285	P	Pn	12 45 15.9	0.0
SKR	Severo-Kuril's	8.97	43	eP	Pn	12 46 22.9	+0.8
SKR				AMB	AMB	12 46 27.8	
	comp=E,50nm,0.8s						
MJAR	Matsushiro Arr	10.14	221	P	Pn	12 46 38.8	+1.0
	comp=E,1.4nm,0.6s,baz=32,slow=13,SNR=3.8						
USRK	Ussuriysk Ar.	10.38	273	P	Pn	12 46 39.8	-0.9
	comp=E,1.7nm,0.6s,baz=82,slow=12,SNR=5.8						
KLR	Kul'dur	11.12	300	P	Pn	12 46 51.4	+1.1
	comp=E,0.4nm,0.4s,baz=104,slow=12,SNR=2.7						
PEA0B	Petropavlovsk-	11.34	37	⇑ePN	Pn	12 46 53.2	+0.1
PETK	Petropavlovsk-	11.34	37	P	Pn	12 46 51.7	-1.4
	comp=E,0.7nm,0.4s,baz=212,slow=8.6,SNR=12						
ZEA	Zeya	15.55	313	eP	P	12 47 46.8	-0.2
ZEA	Zeya	15.55	313	eP	P	12 47 46.8	-0.2
SEY	Seymchan	18.77	8	P	P	12 48 21.9	-0.2
	comp=E,0.8nm,0.3s,baz=185,slow=17,SNR=4.0						
SEY	Seymchan	18.77	8	⇓iP	Pn	12 48 24.8	+0.3
SEY				pmax	pmax		
	comp=Z,5.0nm,1.5s						
SEY	Seymchan	18.77	8	i P	Pn	12 48 24.8	+0.3
ULN	Ulaanbaatar	27.28	291	⇓eP	P	12 49 45.0	+0.1
ULN				pmax	pmax		
	comp=Z,20nm,5.4s						
ULN	Ulaanbaatar	27.28	291	eP	P	12 49 45.0	+0.1
SONM	Songino Array	27.73	291	P	P	12 49 47.9	-1.0
	comp=Z,0.7nm,0.4s,baz=81,slow=6.8,SNR=4.1						
	comp=Z,0.7nm,0.4s						
SONM	Songino Array	27.73	291	eP	P	12 49 47.2	-1.6
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
H11N2	WAKE ISLAND Hy	30.00	139	T	T	13 21 37.9	
	baz=328						
H11N1	WAKE ISLAND Hy	30.02	139	T	T	13 21 34.1	
	baz=328						
H11N3	WAKE ISLAND Hy	30.02	139	T	T	13 21 35.2	
	baz=328						
H11S1	WAKE ISLAND Hy	30.97	140	T	T	13 22 48.8	
	baz=329,slow=76,SNR=43						
H11S3	WAKE ISLAND Hy	30.98	140	T	T	13 22 46.1	
	baz=329,slow=76,SNR=10						
H11S2	WAKE ISLAND Hy	30.99	140	T	T	13 22 49.0	
	baz=329,slow=76,SNR=34						
DGZ	Jazzator, Alta	39.61	299	⇑eP	P	12 51 31.9	+0.7
DGZ				pmax	pmax		
	comp=Z,7.0nm,3.7s						
ZALV	Zalesovo Beam	40.15	306	PcP	PcP	12 53 35.7	-0.4
	comp=Z,0.8nm,0.6s,baz=70,slow=4.7,SNR=3.5						
ILAR	Eielson Array	41.16	37	P	P	12 51 42.2	-1.3
	comp=Z,0.5nm,0.6s,baz=265,slow=7.3,SNR=8.8						
	comp=Z,0.5nm,0.6s						
ILAR	Eielson Array	41.16	37	eP	P	12 51 43.4	-0.2
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
DAV	Davao City (W)	41.51	212	LR	LR	13 09 40.7	
	comp=Z,19nm,18.4s,baz=358,slow=37						
MK31	Makanchi Array	43.80	297	c iP	P	12 52 04.4	-0.7
MKAR	Makanchi Array	43.80	297	P	P	12 52 03.9	-1.1
	comp=Z,1.0nm,0.6s,baz=79,slow=8.4,SNR=13						
MKAR				PcP	PcP	12 53 48.6	+0.1
	comp=Z,0.1nm,0.3s,baz=58,slow=4.8,SNR=5.7						
	comp=Z,1.0nm,0.6s						
SIJI	Sorong	47.17	201	LR	LR	13 10 36.5	
	comp=Z,49nm,21.3s,baz=162,slow=33						
CMAR	Chiang Mai Arr	47.28	252	P	P	12 52 33.4	+0.7
	comp=Z,1.1nm,0.5s,baz=45,slow=7.5,SNR=8.4						
	comp=Z,1.1nm,0.5s						
CMAR	Chiang Mai Arr	47.28	252	eP	P	12 52 34.0	+1.3
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	Yellowknife Ar	55.44	34	P	P	12 53 32.6	-0.1
	comp=Z,0.4nm,0.7s,baz=302,slow=6.6,SNR=8.8						
	comp=Z,0.4nm,0.7s						
WRA	Warramunga Arr	65.10	193	P	P	12 54 39.4	+0.7
	comp=Z,1.1nm,0.5s,baz=7.8,slow=6.6,SNR=13						
	comp=Z,1.1nm,0.5s						
VSU	Vasula	65.92	330	⇓eP	P	12 54 44.9	+1.3
VSU				pmax	pmax		
	comp=Z,41nm,1.0s						
NVAR	Mina Array Bea	67.59	58	P	P	12 54 55.4	+0.6
	comp=Z,0.6nm,0.9s,baz=303,slow=7.4,SNR=4.5						
	comp=Z,0.6nm,0.9s						
ASAR	Alice Springs	68.82	192	P	P	12 55 03.0	+0.8
	comp=Z,0.3nm,0.6s,baz=6.8,slow=7.4,SNR=11						
	comp=Z,0.3nm,0.6s						
ASAR	Alice Springs	68.82	192	P	P	12 55 03.0	+0.8
PDAR	Pinedale Array	69.79	50	P	P	12 55 08.8	+0.4
	comp=Z,0.3nm,0.7s,baz=294,slow=1.5,SNR=4.7						
	comp=Z,0.3nm,0.7s						
AKASG	Malin Array Be	70.67	323	P	P	12 55 11.3	-1.9
	comp=Z,0.5nm,0.5s,baz=36,slow=6.4,SNR=4.3						
	comp=Z,0.5nm,0.5s						
TXAR	Lajitas Array	82.63	56	P	P	12 56 21.2	+0.4
	comp=Z,0.2nm,0.6s,baz=310,slow=5.6,SNR=3.9						
	comp=Z,0.2nm,0.6s						

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*NEIC **13** 13:11:58.2±1.4, 17˚.5S±0˚.2×179˚.1W±0˚.2, h541km±10km, mb4.0/40, Error ellipse: s-maj=29.2km s-min=19.0km az=132.0*

*IDC **13** 13:11:59.2±1.8, 17˚.37S×179˚.13W, h545km±16km, mb3.1/8, mbtmp3.9/9, Error ellipse: s-maj=53.9km s-min=17.3km az=151.0*

ISC 13 13:11:58.1±0.6**,17˚.6S**±0˚.1×**179˚.0W**±0˚.1**,h539**km**,n69, σ0ˢ.72**/70**,mb3.9**/28**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.78	266	P	P	13 13 12.0	+0.9
	41nm,0.6s,baz=68,slow=3.8,SNR=31						
MSVF	Nonsavu	2.78	266	P	P	13 13 12.4	+1.4
PINNC	Pines Island,	13.64	246	P	P	13 14 52.6	-1.2
OUENC	Ouen Island, N	14.12	248	P	P	13 14 57.8	-0.8
TOZ	Tahuroa Road	20.64	192	P	P	13 16 02.0	+1.6
QRZ	Quartz Range	24.28	196	P	P	13 16 34.0	+1.0
CMWZ	Cape Campbell	24.78	192	P	P	13 16 37.0	-0.3
FOZ	Fox Glacier	27.54	198	P	P	13 16 60.0	-1.6
WKZ	Wanaka	28.96	198	P	P	13 17 12.1	-1.9
MLZ	Mavora Lakes	29.71	198	P	P	13 17 20.1	-0.5
WHZ	Wether Hill Ro	30.24	198	P	P	13 17 24.6	-0.4
TOO	Toolangi	36.91	230	P	P	13 18 22.5	+1.0
BBOO	Buckleboo	43.04	241	P	P	13 19 11.2	+0.6
BBOO				IAmb	IAmb	13 19 40.4	
	comp=Z,14nm,1.2s						
WRA	Warramunga Arr	44.10	259	P	P	13 19 19.0	0.0
	comp=Z,0.2nm,0.3s,baz=96,slow=7.5,SNR=3.0						
WRA				PcP	PcP	13 20 52.8	+0.4
	comp=Z,0.4nm,0.8s,baz=92,slow=3.6,SNR=2.6						
	comp=Z,0.2nm,0.3s						
AS31	Alice Springs	44.30	254	P	P	13 19 20.9	+0.4
ASAR	Alice Springs	44.30	254	P	P	13 19 21.1	+0.5
	comp=Z,1.5nm,0.4s,baz=89,slow=7.9,SNR=77						
ASAR				PcP	PcP	13 20 53.0	-0.1
	comp=Z,0.3nm,0.4s,baz=103,slow=3.8,SNR=9.6						
	comp=Z,1.5nm,0.4s						
ASAR	Alice Springs	44.30	254	P	P	13 19 20.5	0.0
MJAR	Matsushiro Arr	67.28	324	P	P	13 21 59.1	-0.3
	comp=Z,1.0nm,0.5s,baz=133,slow=7.3,SNR=1.8						
	comp=Z,1.0nm,0.5s						
PEA0B	Petropavlovsk-	73.21	346	P	P	13 22 35.1	+1.0
PETK	Petropavlovsk-	73.21	346	P	P	13 22 34.7	+0.6
P18K	Big Mountain,	79.12	12	P	P	13 23 06.2	-0.4
P18K				IAmb	IAmb	13 23 16.3	
	comp=Z,19nm,1.4s						
DSP	Deep Springs	79.27	45	P	P	13 23 08.4	+0.6
DSP				IAmb	IAmb	13 23 46.3	
	comp=Z,5.3nm,1.5s						
LCH	Last Change Ra	79.42	45	P	P	13 23 09.2	+0.4
NVAR	Mina Array Bea	79.61	44	P	P	13 23 09.8	0.0
	comp=Z,0.9nm,0.8s,baz=223,slow=9.8,SNR=8.2						
	comp=Z,0.9nm,0.8s						
NVAR	Mina Array Bea	79.61	44	P	P	13 23 10.5	+0.6
KVN	Kaiserville	80.07	44	P	P	13 23 12.6	+0.4
K05A	Summer Lake	80.33	39	P	P	13 23 14.3	+0.9
K05A				IAmb	IAmb	13 23 52.2	
	comp=Z,7.0nm,1.3s						
J05D	Fort Rock, OR	80.44	39	P	P	13 23 14.6	+0.6
N19K	Bonanza Creek	80.58	12	P	P	13 23 14.0	-0.2
N19K				IAmb	IAmb	13 23 25.0	
	comp=Z,16nm,1.4s						
KNK	Knik Glacier	82.42	14	P	P	13 23 23.4	-0.2
U15A	North Rim	82.75	48	P	P	13 23 27.0	+0.8
K20K	Telida	83.00	11	P	P	13 23 26.5	+0.1
SCM	Sheep Creek Mo	83.06	15	P	P	13 23 26.6	-0.3
CAST	Castle Rocks	83.43	12	P	P	13 23 27.4	-1.2
CAST				IAmb	IAmb	13 23 28.4	
	comp=Z,2.6nm,0.8s						
N25K	Chitina, Valde	83.55	16	P	P	13 23 29.3	0.0
N25K				IAmb	IAmb	13 24 10.4	
	comp=Z,7.8nm,1.3s						
GLB	Gilahina Butte	83.61	16	P	P	13 23 29.6	0.0
GLB				IAmb	IAmb	13 24 05.0	
	comp=Z,9.2nm,1.3s						
TRF	Thorofare Moun	83.82	13	P	P	13 23 30.0	-0.7
TRF				IAmb	IAmb	13 23 31.4	
	comp=Z,3.1nm,0.8s						
MCK	McKinley	84.35	13	P	P	13 23 33.0	-0.1
MCK				IAmb	IAmb	13 23 45.0	
	comp=Z,7.9nm,1.3s						
M27K	Edge Creek, AK	84.89	16	P	P	13 23 36.4	+0.4
M27K				IAmb	IAmb	13 24 18.7	
	comp=Z,5.8nm,1.3s						
I21K	Tanana	85.04	11	P	P	13 23 36.3	-0.1
I21K				IAmb	IAmb	13 23 45.5	
	comp=Z,4.3nm,1.4s						
MLY	Manley	85.14	12	P	P	13 23 36.4	-0.6
WRH	Wood River Hil	85.18	13	P	P	13 23 36.8	-0.3
WRH				IAmb	IAmb	13 23 43.7	
	comp=Z,6.3nm,1.5s						
H21K	Melozitna Rive	85.32	11	P	P	13 23 38.4	+0.6
H21K				IAmb	IAmb	13 23 50.2	
	comp=Z,3.4nm,1.4s						
HDA	Harding Lake	85.38	13	P	P	13 23 38.4	+0.3
HDA				IAmb	IAmb	13 23 38.9	
	comp=Z,3.9nm,1.3s						
CCB	Clear Creek Bu	85.40	13	P	P	13 23 37.3	-0.9
DOT	Dot Lake	85.40	15	P	P	13 23 37.9	-0.3
DOT				IAmb	IAmb	13 23 39.1	
	comp=Z,1.7nm,0.8s						
IMAR	Indian Mountai	85.46	10	P	P	13 23 38.0	-0.4
LENM	Lemitar	85.66	52	P	P	13 23 39.4	-1.0
IL31		85.70	13	P	P	13 23 39.4	-0.1
IL31				IAmb	IAmb	13 23 41.0	
	comp=Z,2.8nm,1.4s						
ILAR	Eielson Array	85.70	13	P	P	13 23 38.9	-0.8
	comp=Z,0.4nm,0.4s,baz=224,slow=5.2,SNR=11						
	comp=Z,0.4nm,0.4s						
ILAR	Eielson Array	85.70	13	P	P	13 23 39.9	+0.2
J26L	Joseph Creek	86.23	15	P	P	13 23 42.4	+0.1
TXAR	Lajitas Array	86.33	58	P	P	13 23 44.7	+1.1
	comp=Z,0.8nm,0.8s,baz=221,slow=5.8,SNR=11						
	comp=Z,0.8nm,0.8s						
M30M	Minto, Yukon	86.51	18	P	P	13 23 43.3	-0.3
M30M				IAmb	IAmb	13 24 19.5	
	comp=Z,3.1nm,1.3s						
I26K	Coal Creek Min	87.00	14	P	P	13 23 45.9	+0.1
I26K				IAmb	IAmb	13 23 49.0	
	comp=Z,5.8nm,1.4s						
EGAK	Eagle	87.05	15	P	P	13 23 46.0	0.0
EGAK				IAmb	IAmb	13 24 23.0	
	comp=Z,3.7nm,1.1s						
BW06	Boulder Array	87.53	44	P	P	13 23 49.2	+0.1
PD31	Pinedale Array	87.53	44	P	P	13 23 49.1	0.0
PDAR	Pinedale Array	87.53	44	P	P	13 23 49.1	0.0
	comp=Z,0.5nm,0.5s,baz=208,slow=3.7,SNR=7.9						
	comp=Z,0.5nm,0.5s						
BMAR	Burnt Mountain	88.47	13	P	P	13 23 53.0	+0.4
RLMT	Red Lodge	88.77	42	P	P	13 23 54.1	-0.6
YKA	Yellowknife Ar	94.28	25	P	P	13 24 18.6	-0.9
	comp=Z,0.2nm,0.7s,baz=255,slow=4.5,SNR=4.2						
	comp=Z,0.2nm,0.7s						
MKAR	Makanchi Array	108.47	314	PKiKP	PKiKP	13 29 24.3	-1.2
	comp=Z,0.3nm,0.7s,baz=14,slow=1.8,SNR=2.9						
BVAR	Borovoye Array	116.21	321	PKP	PKPdf	13 29 38.7	-1.4
	comp=Z,0.5nm,0.3s,baz=105,slow=0.6,SNR=4.7						
BRTR	Keskin Array B	144.12	315	PKP	PKPab	13 30 32.7	-0.1
	comp=Z,0.6nm,0.4s,baz=87,slow=2.5,SNR=5.9						
CLL	Collm	145.01	347	ePKPbc	PKPab	13 30 35.0	-0.5
MMAI	Mount Meron Ar	145.46	303	PKPbc	PKPdf	13 30 35.1	-0.3
	comp=Z,4.4nm,0.7s,baz=36,slow=2.7,SNR=2.4						
GERES	GERESS Array B	147.13	344	PKPbc	PKPbc	13 30 40.8	-0.1
	comp=Z,1.0nm,0.6s,baz=29,slow=3.0,SNR=5.8						
DAVOX	Davos/Dischmat	149.96	348	PKPbc	PKPbc	13 30 47.5	-0.5
	comp=Z,1.1nm,0.3s,baz=0.0,slow=3.0,SNR=4.3						

IDC 13 13:24:07.7±8.0**,4˚.47S**×**141˚.67E,h237**km±84km**,mb3.0**/4**, mbtmp3.7**/5**,Error ellipse: s-maj=67.0km s-min=30.1km az=100.0,New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.96	204	P	P	13 27 48.2	-1.8
	1.3nm,0.3s,baz=27,slow=12,SNR=37						
WRA				S	S	13 30 55.0	+0.3
	0.3nm,0.6s,baz=25,slow=25,SNR=2.1						
ASAR	Alice Springs	20.51	201	P	P	13 28 28.6	+0.4
	3.7nm,0.7s,baz=27,slow=12,SNR=81						
	3.7nm,0.7s						
SONM	Songino Array	60.58	333	P	P	13 33 53.1	-0.5
	0.3nm,0.4s,baz=138,slow=6.2,SNR=2.6						
	0.3nm,0.4s						
MKAR	Makanchi Array	72.98	322	P	P	13 35 12.5	+0.9
	0.2nm,0.4s,baz=114,slow=7.0,SNR=2.6						
	0.2nm,0.4s						
ILAR	Eielson Array	86.21	24	P	P	13 36 21.6	-0.6
	0.2nm,0.6s,baz=251,slow=4.7,SNR=2.3						
	0.2nm,0.6s						

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*IDC **13** 13:28:57.0±1.7, 7˚.26S×155˚.52E, h76km±18km, mb3.4/6, mbtmp3.8/8, MS3.1/4, Error ellipse: s-maj=27.6km s-min=12.4km az=33.0*

ISC 13 13:28:55.2±0.8**,7˚.3S**±0˚.2×**155˚.5E**±0˚.1**,h50**km**,n14, σ1ˢ.94**/10**,mb3.6**/6**,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	4.53	311	P	Pn	13 30 02.3	+1.0
	17nm,0.8s,baz=318,slow=21,SNR=1.2						
KRVT				S	Sn	13 30 56.0	+3.3
	62nm,0.7s,baz=218,slow=17,SNR=2.9						
HNR	Honiara	4.92	116	P	Pn	13 30 07.6	+1.0
	225nm,0.3s,baz=174,slow=10,SNR=2.8						
HNR				S	Sn	13 31 04.5	+2.2

	448nm,0.4s,baz=213,slow=20,SNR=1.6						
HNR	comp=Z,344nm,20.3s,baz=277,slow=30			LR	LR	13 31 22.4	
PMG	**Port Moresby** comp=Z,64nm,21.0s,baz=234,slow=36	**8.47**	**255**	LR	LR	13 34 03.4	
CTA	**Charters Tower** comp=Z,76nm,19.1s,baz=62,slow=32	**15.53**	**214**	LR	LR	13 37 21.8	
WRA	**Warramunga Arr** 1.8nm,0.9s,baz=63,slow=9.7,SNR=3.7 1.8nm,0.9s	**24.03**	**236**	P	**P**	**13 34 05.1**	**-0.6**
ASAR	**Alice Springs** 0.6nm,1.0s,baz=58,slow=11,SNR=1.8 0.6nm,1.0s	**26.32**	**229**	P	**P**	**13 34 26.4**	**-0.2**
H11S3	**WAKE ISLAND Hy** baz=202,slow=75,SNR=33	**27.92**	**23**	T	T	14 03 03.2	
H11S2	**WAKE ISLAND Hy** baz=202,slow=75,SNR=33	**27.93**	**23**	T	T	14 03 07.5	
H11S1	**WAKE ISLAND Hy** baz=202,slow=75,SNR=20	**27.94**	**23**	T	T	14 03 09.5	
RPZ	**Rata Peaks** comp=Z,45nm,19.6s,baz=33,slow=36	**38.76**	**162**	LR	LR	13 51 56.5	
CMAR	**Chiang Mai Arr** 0.6nm,0.3s,baz=125,slow=5.6,SNR=5.5 0.6nm,0.3s	**61.33**	**296**	P	**P**	**13 39 06.6**	**+0.3**
SONM	**Songino Array** 0.5nm,0.5s,baz=145,slow=6.6,SNR=4.7 0.5nm,0.5s	**69.84**	**327**	P	**P**	**13 39 59.4**	**-1.4**
ILAR	**Eielson Array** 0.2nm,0.7s,baz=247,slow=5.9,SNR=1.8 0.2nm,0.7s	**83.49**	**21**	P	**P**	**13 41 15.1**	**-2.2**
MKAR	**Makanchi Array** 0.7nm,0.6s,baz=104,slow=6.1,SNR=10 0.7nm,0.6s	**83.94**	**319**	P	**P**	**13 41 18.9**	**-1.2**

*KRNET **13** 13:30:33.4±0.1, 41.°83N×77.°08E, h19^{km}, mb3.0*
*SOME **13** 13:30:34.0, 41.°90N×77.°07E, h10^{km}*
*NNC **13** 13:30:34.7±0.6, 41.°92N×77.°08E, h0^{km}, mb3.2, mpv3.5, Error ellipse: s-maj=4.5km s-min=2.6km az=179.0*
*KNET **13** 13:30:36.3±0.6, 41.°94N×76.°95E, h17^{km}±2^{km}, ml2.2, Error ellipse: s-maj=9.4km s-min=3.1km az=25.0*
ISC 13 13:30:34.1±1.2**, 41.°89N**±0.°03×**77.°06E**±0.°02**, h7^{km}**±9^{km}**, n80,** σ**0^{s}.78**/134**, 33C-18D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	**Kajisay** baz=17	**0.26**	**20**	⇑*i*P	**Pg**	**13 30 39.6**	**+0.3**
KDJ	baz=17			⇑*i*S	**Sg**	**13 30 44.5**	**+1.8**
ULHL	**Ulahol** 12nm,0.1s,SNR=29	**0.71**	**300**	⇓P	**Pg**	**13 30 47.5**	**-0.3**
ULHL	42nm,0.1s			⇑S	**Sb**	**13 30 58.2**	**-0.7**
ULHL	**Ulahol** baz=4.0	**0.71**	**300**	⇓*i*P	**Pg**	**13 30 47.4**	**-0.4**
ULHL	baz=4.0			⇓*i*S	**Sg**	**13 30 57.8**	**+0.8**
NRN	**Naryn** baz=44	**0.92**	**241**	⇑*i*P	**Pg**	**13 30 50.5**	**-1.3**
NRN	baz=44			⇑*i*S	**Sg**	**13 31 03.2**	**-0.5**
ANVS	**Anan'yevo** baz=25	**1.00**	**26**	⇓*i*P	**Pg**	**13 30 52.9**	**-0.4**
ANVS	baz=25			⇓*i*S	**Sb**	**13 31 07.4**	**+0.1**
TNSS	**Tian-Shan** 42nm,0.2s	**1.15**	**356**	P	**Pb**	**13 30 56.1**	**-0.5**
TNSS	20nm,0.2s			S	**Sb**	**13 31 11.7**	**-0.1**
TNSS	**Tian-Shan** 42nm,0.2s	**1.15**	**356**	*e*P	**Pb**	**13 30 56.1**	**-0.5**
TNSS	28nm,0.1s			*e*S	**Sb**	**13 31 11.7**	**-0.1**
PRZ	**Przheval'sk** baz=56	**1.16**	**59**	⇑*i*P	**Pg**	**13 30 55.2**	**-1.1**
PRZ	baz=56			⇑*i*S	**Sg**	**13 31 11.0**	**-0.3**
IZV	**Izvestkoviy** 14nm,0.1s	**1.19**	**344**	P	**Pn**	**13 30 57.3**	**0.0**
IZV	47nm,0.1s			S	**Sn**	**13 31 13.6**	**-0.3**
IZV	**Izvestkoviy** baz=44	**1.19**	**344**	*e*P	**Pb**	**13 30 56.9**	**-0.3**
IZV	baz=44			*e*S	**Sn**	**13 31 13.0**	**-0.9**
IZV	**Izvestkoviy** 14nm,0.1s	**1.19**	**344**	*e*P	**Pb**	**13 30 56.9**	**-0.3**
IZV	53nm,0.1s			*e*S	**Sn**	**13 31 13.0**	**-0.9**
MDOK	**Medeo** 14nm,0.4s	**1.27**	**359**	Pn	**Pn**	**13 30 58.2**	**-0.2**
MDOK	26nm,0.2s			Pg	**Pn**	**13 30 58.3**	**-0.2**
MDOK	20nm,0.1s			Lg	Lg	13 31 15.3	
MDOK	9.3nm,0.4s			⇓Sn	**Sn**	**13 31 16.9**	**+1.0**
MDOK	**Medeo** baz=59	**1.27**	**359**	*e*P	**Pn**	**13 30 58.3**	**-0.2**
MDOK	baz=59			*e*S	**Sn**	**13 31 15.3**	**-0.6**
MDOK	**Medeo** 30nm,0.2s	**1.27**	**359**	*e*P	**Pn**	**13 30 58.3**	**-0.2**
MDOK	20nm,0.1s			*e*S	**Sn**	**13 31 15.3**	**-0.6**
MTBS	**Maitube** 35nm,0.1s	**1.33**	**339**	P	**Pb**	**13 30 59.1**	**-0.3**
MTBS	26nm,0.2s			S	**Sn**	**13 31 17.2**	**+0.2**
MTBS	**Maitube** baz=40	**1.33**	**339**	*e*P	**Pb**	**13 30 59.1**	**-0.3**
MTBS	baz=40			*e*S	**Sn**	**13 31 17.1**	**0.0**
MTBS	**Maitube** 35nm,0.1s	**1.33**	**339**	*e*P	**Pb**	**13 30 59.1**	**-0.3**
MTBS	29nm,0.1s			*e*S	**Sn**	**13 31 17.0**	**0.0**
KNDC	**Almaty** 24nm,0.2s	**1.33**	**357**	⇓Pn	**Pg**	**13 30 59.6**	**0.0**
KNDC	24nm,0.3s			⇓Sn	**Sn**	**13 31 18.5**	**+1.4**
KOTS	**Kotyrbulak** 71nm,0.1s	**1.34**	**1**	P	**Pg**	**13 30 59.7**	**-0.2**
KOTS	89nm,0.3s			S	**Sn**	**13 31 17.7**	**+0.1**
KOTS	**Kotyrbulak** baz=1.0	**1.34**	**1**	*e*P	**Pg**	**13 30 59.7**	**-0.2**
KOTS	baz=1.0			*e*S	**Sn**	**13 31 17.9**	**+0.3**
KOTS	**Kotyrbulak** 71nm,0.1s	**1.34**	**1**	*e*P	**Pg**	**13 30 59.7**	**-0.2**
KOTS	89nm,0.1s			*e*S	**Sn**	**13 31 17.9**	**+0.3**
KST	**Kastek** 19nm,0.1s	**1.41**	**325**	P	**Pb**	**13 31 00.6**	**-0.2**
KST	23nm,0.1s			S	**Sg**	**13 31 20.1**	**+0.6**
KST	**Kastek** baz=26	**1.41**	**325**	*e*P	**Pb**	**13 31 00.6**	**-0.2**
KST	baz=26			*e*S	**Sg**	**13 31 19.6**	**+0.1**
KST	**Kastek** 20nm,0.1s	**1.41**	**325**	*e*P	**Pb**	**13 31 00.6**	**-0.2**
KST	28nm,0.2s			*e*S	**Sg**	**13 31 19.6**	**+0.1**
TKM2	**Tokmak 2** 30nm,0.2s,SNR=36	**1.50**	**314**	⇑P	**Pb**	**13 31 02.1**	**-0.3**
TKM2	42nm,0.1s			⇑S	**Sg**	**13 31 22.4**	**+0.1**
TKM2	**Tokmak 2** 8.9nm,0.2s	**1.50**	**314**	⇓Pn	**Pb**	**13 31 02.0**	**-0.4**
TKM2	14nm,0.3s			⇑Sn	**Sg**	**13 31 23.1**	**+0.8**
TKM2	**Tokmak 2** baz=15	**1.50**	**314**	⇑*i*P	**Pn**	**13 31 01.4**	**-0.2**
TKM2	baz=15			⇑*i*S	**Sg**	**13 31 22.3**	**0.0**
SATY	**Saty** 4.8nm,0.1s	**1.53**	**40**	P	**Pb**	**13 31 02.5**	**-0.5**
SATY	69nm,0.1s			S	**Sg**	**13 31 22.5**	**-0.9**
SATY	**Saty** 3.0nm,0.1s	**1.53**	**40**	*e*P	**Pb**	**13 31 02.5**	**-0.5**
SATY	69nm,0.1s			*e*S	**Sg**	**13 31 22.5**	**-0.9**
ZHN	**Zhinishke** 4.4nm,0.1s	**1.63**	**38**	P	**Pg**	**13 31 04.8**	**-0.6**
ZHN	104nm,0.3s			S	**Sg**	**13 31 26.6**	**+0.1**
ZHN	**Zhinishke** 6.7nm,0.1s	**1.63**	**38**	*e*P	**Pg**	**13 31 04.8**	**-0.6**
ZHN	104nm,0.1s			*e*S	**Sg**	**13 31 26.6**	**+0.1**
DGS	**Degeres** 20nm,0.2s	**1.66**	**325**	P	**Pb**	**13 31 05.0**	**0.0**
DGS	15nm,0.3s			S	**Sg**	**13 31 27.2**	**-0.1**
DGS	**Degeres** baz=26	**1.66**	**325**	*e*P	**Pb**	**13 31 05.0**	**0.0**
DGS	baz=26			*e*S	**Sg**	**13 31 27.1**	**-0.2**
DGS	**Degeres** 20nm,0.2s	**1.66**	**325**	*e*P	**Pb**	**13 31 05.0**	**0.0**
DGS	20nm,0.1s			*e*S	**Sg**	**13 31 27.0**	**-0.2**
KBK	**Karagaybulak** 5.7nm,0.2s,SNR=5.5	**1.75**	**297**	⇓P	**Pb**	**13 31 06.4**	**-0.2**
KBK	41nm,0.4s			⇑S	**Sg**	**13 31 29.9**	**-0.4**
KBK	**Karagaybulak** baz=98	**1.75**	**297**	⇓*i*P	**Pn**	**13 31 05.8**	**+0.8**
KBK	baz=98			⇓*i*S	**Sg**	**13 31 29.6**	**-0.7**
KURS	**Kuram** 4.1nm,0.1s	**1.79**	**27**	P	**Pb**	**13 31 07.3**	**0.0**
KURS	14nm,0.5s			S	**Sg**	**13 31 30.7**	**-1.1**
KURS	**Kuram** baz=26	**1.79**	**27**	*e*P	**Pb**	**13 31 07.3**	**0.0**
KURS	baz=26			*e*S	**Sg**	**13 31 30.7**	**-1.1**
KURS	**Kuram** 4.1nm,0.1s	**1.79**	**27**	*e*P	**Pb**	**13 31 07.3**	**0.0**
KURS	15nm,0.3s			*e*S	**Sg**	**13 31 30.7**	**-1.1**
KTBS	**Karatobe** 2.9nm,0.1s	**1.84**	**351**	P	**Pg**	**13 31 08.8**	**-0.7**
KTBS	137nm,0.4s			S	**Sg**	**13 31 33.3**	**0.0**
KTBS	**Karatobe** 5.5nm,0.1s	**1.84**	**351**	*e*P	**Pg**	**13 31 08.8**	**-0.7**
KTBS	148nm,0.3s			*e*S	**Sg**	**13 31 33.3**	**0.0**
UZB	**Uzynbulak** 5.1nm,0.2s	**1.92**	**48**	P	**Pb**	**13 31 09.6**	**+0.1**
UZB	29nm,0.2s			S	**Sg**	**13 31 34.5**	**-1.2**
UZB	**Uzynbulak** 5.3nm,0.1s	**1.92**	**48**	*e*P	**Pb**	**13 31 09.6**	**+0.1**
UZB	40nm,0.2s			*e*S	**Sg**	**13 31 34.5**	**-1.2**
UCH	**Uchtor** baz=83	**1.93**	**281**	⇑*i*P	**Pn**	**13 31 08.1**	**+0.4**
UCH	baz=83			⇑*i*S	**Sb**	**13 31 33.7**	**-0.6**
CHKK	**Chushkaly** 5.9nm,0.1s	**1.96**	**358**	Pg	**Pg**	**13 31 11.1**	**-0.6**
CHKK	56nm,0.3s			Lg	Lg	13 31 37.1	
CHKK	**Chushkaly** 5.9nm,0.1s	**1.96**	**358**	*e*P	**Pg**	**13 31 11.1**	**-0.6**
CHKK	56nm,0.3s			*e*S	**Sg**	**13 31 37.1**	**-0.1**
KPKS	**Kokpek** 11nm,0.1s	**1.98**	**37**	Pg	**Pb**	**13 31 10.1**	**-0.4**
KPKS	69nm,0.3s			Lg	Lg	13 31 36.1	
KPKS	**Kokpek** 11nm,0.1s	**1.98**	**37**	*e*P	**Pb**	**13 31 10.4**	**0.0**
KPKS	70nm,0.2s			*e*S	**Sg**	**13 31 36.5**	**-1.2**
CHMS	**Chumysh** 7.9nm,0.3s	**2.04**	**304**	⇑P	**Pb**	**13 31 11.2**	**-0.2**
CHMS	13nm,0.2s			⇑S	**Sb**	**13 31 38.2**	**+1.1**
CHMS	**Chumysh** baz=5.0	**2.04**	**304**	⇑*e*P	**Pn**	**13 31 09.9**	**+1.0**
CHMS	baz=5.0			⇑*i*S	**Sb**	**13 31 36.6**	**-0.4**
ARLS	**Aral** baz=72	**2.05**	**270**	⇑*e*P	**Pn**	**13 31 09.6**	**+0.5**
ARLS	baz=72			⇑*i*S	**Sn**	**13 31 36.0**	**+1.1**
AAK	**Ala-Archa** 3.5nm,0.2s,SNR=7.9	**2.05**	**292**	⇑P	**Pb**	**13 31 11.9**	**+0.2**
AAK	10nm,0.3s			⇓S	**Sg**	**13 31 38.8**	**-1.2**
AAK	**Ala-Archa** baz=94	**2.05**	**292**	⇓*e*P	**Pn**	**13 31 09.9**	**+0.8**
AAK	baz=94			⇓*i*S	**Sb**	**13 31 36.7**	**-0.7**
KUU	**Kurty** 4.0nm,0.1s	**2.07**	**345**	Pg	**Pb**	**13 31 12.3**	**+0.2**
KUU	23nm,0.3s			Lg	Lg	13 31 39.3	
KUU	**Kurty** 4.0nm,0.1s	**2.07**	**345**	*e*Pg	**Pb**	**13 31 12.2**	**+0.2**
KUU	23nm,0.3s			*e*Lg	Lg	13 31 39.3	
KRBS	**Karabastau** 6.3nm,0.1s	**2.08**	**331**	Pg	**Pg**	**13 31 13.0**	**-0.8**
KRBS	31nm,0.2s			Lg	Lg	13 31 40.3	
KRBS	**Karabastau** 10nm,0.1s	**2.08**	**331**	*e*Pg	**Pg**	**13 31 12.8**	**-1.1**
KRBS	34nm,0.1s			*e*Lg	Lg	13 31 40.3	
SHLS	**Shalkode** 3.6nm,0.1s	**2.18**	**54**	Pg	**Pg**	**13 31 18.5**	**+2.6**
SHLS	55nm,0.4s			Lg	Lg	13 31 50.0	
SHLS	**Shalkode** 16nm,0.2s	**2.18**	**54**	*e*Pg	**Pg**	**13 31 18.4**	**+2.6**
SHLS	55nm,0.4s			*e*Lg	Lg	13 31 50.0	
PDGK	**Podgornoye** 1.8nm,0.1s	**2.30**	**50**	Pg	**Pb**	**13 31 16.0**	**+0.1**
PDGK	19nm,0.5s			Lg	Lg	13 31 45.4	
PDGK	**Podgornoye** 1.3nm,0.2s	**2.30**	**50**	⇑Pg	**Pb**	**13 31 14.3**	**-1.6**
PDGK	22nm,0.5s			⇓Lg	Lg	13 31 45.5	
USP	**Ospenovka** 6.5nm,0.2s,SNR=17	**2.34**	**307**	⇑P	**Pb**	**13 31 16.2**	**-0.4**
USP	**Ospenovka** baz=8.0	**2.34**	**307**	⇑*i*P	**Pn**	**13 31 14.1**	**+1.1**
USP	baz=8.0			⇑*i*S	**Sb**	**13 31 43.9**	**-1.8**
SGDS	**Sogindy** 1.1nm,0.1s	**2.38**	**312**	Pg	**Pb**	**13 31 18.2**	**+0.9**
SGDS	34nm,0.3s			Lg	Lg	13 31 49.4	
ARXS	**Arharly** 3.1nm,0.1s	**2.39**	**13**	Pg	**Pb**	**13 31 18.0**	**+0.5**
ARXS	39nm,0.1s			Lg	Lg	13 31 49.4	
ARXS	**Arharly** 3.1nm,0.1s	**2.39**	**13**	*e*Pg	**Pb**	**13 31 18.0**	**+0.5**
ARXS	55nm,0.3s			*e*Lg	Lg	13 31 49.4	
BLB	**Baldybastay** 7.7nm,0.1s	**2.44**	**25**	Pg	**Pb**	**13 31 18.4**	**0.0**
BLB	46nm,0.3s			Lg	Lg	13 31 49.5	
AML	**Almayashu** 0.2nm,0.4s	**2.52**	**277**	⇑Pg	**Pb**	**13 31 20.4**	**+0.5**
AML	0.5nm,0.5s			⇓Lg	Lg	13 31 56.4	
AML	**Almayashu** baz=78	**2.52**	**277**	⇑*e*P	**Pn**	**13 31 16.3**	**+0.5**
AML	baz=78			⇑*e*S	**Sn**	**13 31 47.9**	**+0.9**
EKS2	**Erkin-Say** baz=90	**2.56**	**289**	⇑*e*P	**Pn**	**13 31 16.9**	**+0.8**
EKS2	baz=90			⇑*i*S	**Sn**	**13 31 48.7**	**+1.2**
MRKS	**Merke** 2.9nm,0.1s	**2.97**	**288**	Pg	**Pb**	**13 31 28.6**	**+1.2**
MRKS	5.9nm,0.2s			Lg	Lg	13 32 08.1	
MRKS	**Merke** 2.9nm,0.1s	**2.97**	**288**	*e*Pg	**Pb**	**13 31 28.9**	**+1.5**
MRKS	9.8nm,0.2s			*e*Lg	Lg	13 32 08.1	
DJR	**Jarkent** 0.9nm,0.1s	**3.15**	**38**	Pg	**Pb**	**13 31 30.5**	**0.0**
DJR	5.2nm,0.2s			Lg	Lg	13 32 10.1	
DJR	**Jarkent** 0.9nm,0.1s	**3.15**	**38**	*e*Pg	**Pb**	**13 31 30.5**	**0.0**
DJR	6.7nm,0.1s			*e*Lg	Lg	13 32 10.1	
TDK	**Taldyqorghan** 8.3nm,0.1s	**3.26**	**17**	Pg	**Pb**	**13 31 33.0**	**+0.7**
TDK	44nm,0.4s			Lg	Lg	13 32 14.9	
TDK	**Taldyqorghan** 8.3nm,0.1s	**3.26**	**17**	*e*Pg	**Pb**	**13 31 33.0**	**+0.7**
TDK	45nm,0.2s			*e*Lg	Lg	13 32 14.9	
BTLS	**Baital** 2.8nm,0.2s	**3.84**	**326**	Pg	**Pb**	**13 31 43.9**	**+1.7**
BTLS	2.3nm,0.2s			Lg	Lg	13 32 33.5	
BTLS	**Baital** 2.7nm,0.1s	**3.84**	**326**	*e*Pg	**Pb**	**13 31 43.9**	**+1.7**
BTLS	4.9nm,0.3s			*e*Lg	Lg	13 32 33.5	
KK31	**Karatay Array** 0.2nm,0.3s	**4.99**	**286**	⇑Pg	**Pg**	**13 32 08.1**	**-1.6**
KK31	1.4nm,0.5s			⇑Lg	Lg	13 33 10.6	
MK31	**Makanchi Array** 0.5nm,0.6s,baz=218,slow=25,SNR=4.4	**6.17**	**36**	⇓Lg	Lg	13 33 43.2	

IDC 13 13:35:46.2±898.0**, 53.°81N×0.°38E, h0^{km}, Error ellipse: s-maj=445.0km s-min=184.8km az=103.0, United Kingdom**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS** 0.1nm,0.7s,baz=306,slow=330,SNR=2.1	**9.71**	**115**	I	I	14 32 00.0	
I43RU	**DUBNA INFRASON** baz=278,slow=322,SNR=0.5	**21.03**	**67**	I	I	15 44 30.0	
I31KZ	**AKTYUBINSK INF** baz=302,slow=324,SNR=1.2	**34.74**	**72**	I	I	17 10 40.0	

*VIE **13** 13:56:47.3, 51.°37N×16.°36E, h0^{km}, mb2.0/1, ml2.7/1 55 km NW of Wroclaw Suspected Mining induced.*
*PRU **13** 13:56:47.3±0.0, 51.°42N×16.°03E, h0^{km}*
ISC 13 13:56:46.2±1.3**, 51.°46N**±0.°06×**16.°03E**±0.°03**, h0^{km}, n21,** σ**0^{s}.86**/44**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.64**	**165**	*e*Pg	**Pg**	**13 56 58.2**	**-0.3**
KSP				*e*Sg	**Sg**	**13 57 07.1**	**+0.2**
CHVC	**Chvalec**	**0.88**	**179**	*e*PG	**Pg**	**13 57 03.1**	**+0.1**
CHVC				*e*SG	**Sg**	**13 57 15.2**	**+0.9**
OSTC	**Ostas**	**0.92**	**173**	*e*PG	**Pg**	**13 57 03.6**	**-0.1**
OSTC	comp=Z,21nm,0.4s			*e*SG	**Sg**	**13 57 16.3**	**+0.7**
UPC	**Upice**	**0.96**	**181**	*e*PG	**Pg**	**13 57 04.4**	**-0.1**
UPC	comp=Z,37nm,0.3s			*e*SG	**Sg**	**13 57 17.4**	**+0.5**
DPC	**Dobruska-Polom**	**1.13**	**170**	*e*PG	**Pg**	**13 57 07.0**	**-0.8**
DPC	comp=Z,13nm,0.4s			*e*SG	**Sg**	**13 57 22.5**	**0.0**
PVCC	**Panska Ves**	**1.31**	**225**	*e*PG	**Pn**	**13 57 11.4**	**-0.4**
PVCC				*e*SG	**Sn**	**13 57 30.2**	**+0.2**
BRG	**Berggiesshubel**	**1.44**	**247**	Pg	**Pb**	**13 57 13.5**	**-0.3**
BRG				Sg	**Sn**	**13 57 33.9**	**+0.8**
BRG	comp=Z,19nm,0.3s			Amp		13 57 36.0	
KRLC	**Kraliky**	**1.47**	**161**	*e*PG	**Pn**	**13 57 12.3**	**-1.7**
KRLC	comp=Z,21nm,0.6s			*e*SG	**Sg**	**13 57 32.6**	**-0.8**
GOPC	**GO Pecny, Ondr**	**1.74**	**207**	*e*PG	**Pb**	**13 57 18.4**	**-0.6**
GOPC				*e*SG	**Sg**	**13 57 42.3**	**+0.2**
PRU	**Pruhonice**	**1.75**	**213**	*e*PG	**Pb**	**13 57 18.5**	**-0.7**
PRU	comp=Z,15nm,0.4s			*e*SG	**Sg**	**13 57 42.6**	**+0.1**
MORC	**Moravsky Berou**	**1.94**	**150**	*e*PN	**Pn**	**13 57 18.9**	**-1.6**
MORC				*e*SG	**Sn**	**13 57 46.3**	**+0.7**
VRAC	**Vranov**	**2.19**	**170**	*e*PN	**Pn**	**13 57 23.6**	**-0.2**
VRAC				*e*SG	**Sb**	**13 57 55.1**	**+0.8**
KRUC	**Moravsky**	**2.42**	**174**	*e*PN	**Pn**	**13 57 26.2**	**-0.7**
KRUC				*e*SG	**Sb**	**13 58 02.0**	**+1.2**
NKC	**Novy Kostel**	**2.58**	**243**	*e*PN	**Pn**	**13 57 29.3**	**+0.1**
NKC				*e*PG	**Pg**	**13 57 34.7**	**-0.9**
NKC	comp=Z,14nm,0.3s			*e*SG	**Sg**	**13 58 10.9**	**+1.8**
OJC	**Ojcow**	**2.69**	**116**	*e*Pg	**Pb**	**13 57 34.9**	**-0.3**
OJC				*e*Sg	**Sg**	**13 58 10.9**	**-1.8**
JAVC	**Velka Javorina**	**2.81**	**157**	*e*PN	**Pn**	**13 57 31.8**	**-0.6**
KHC	**Kasperske Hory**	**2.82**	**215**	*e*PN	**Pn**	**13 57 31.9**	**-0.6**
KHC				*e*PG	**Pb**	**13 57 37.5**	**+0.2**
KHC				*e*SN	**Sn**	**13 58 07.0**	**-0.1**
KHC	comp=Z,5.1nm,0.4s			*e*SG	**Sg**	**13 58 16.3**	**-0.3**
CKRC	**Cesky Krumlov**	**2.87**	**203**	*e*PG	**Pb**	**13 57 39.2**	**+1.0**
CKRC	comp=Z,5.3nm,0.4s			*e*SG	**Sg**	**13 58 17.3**	**-1.0**
LANS	**Liptovska Anna**	**3.20**	**135**	*e*PG	**Pg**	**13 57 48.2**	**+0.8**
LANS				*e*SG	**Sg**	**13 58 29.8**	**+1.0**
CONA	**Conrad Observa** comp=Z,0.4nm,0.1s	**3.54**	**182**	*i* Pn	**Pn**	**13 57 42.2**	**-0.3**
CONA	comp=Z,7.8nm,0.6s			*e*Sg	**Sg**	**13 58 38.6**	**-1.3**
STHS	**Stebnicka Huta**	**3.91**	**120**	*e*PG	**Pg**	**13 58 01.4**	**+0.3**
STHS				*e*SG	**Sg**	**13 58 53.8**	**+2.0**

*SKHL **13** 14:10:39.0±0.4, 48.°00N×148.°30E, h378^{km}±6^{km}, mb4.5/7, msha4.7/6*
*IDC **13** 14:10:41.2±1.4, 48.°42N×146.°23E, h483^{km}±20^{km}, mb2.8/9, mbtmp3.7/13, Error ellipse: s-maj=23.0km s-min=14.7km az=158.0*
ISC 13 14:10:37.8±0.7**, 47.°97N**±0.°06×**148.°21E**±0.°09**, h400^{km}, n21,** σ**1^{s}.98**/20**, mb3.2**/9**, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.74**	**185**	*e*P	**Pn**	**14 11 39.2**	**+0.2**
KUR	50nm,0.6s			AMB	AMB	14 11 42.4	
YSS	**Yuzh-Sakhalins**	**3.83**	**257**	*e*P	**Pn**	**14 11 50.5**	**+2.3**
YSS	50nm,0.3s			AMB	AMB	14 11 52.4	
YSS				*e*S	**S**	**14 12 46.0**	**+0.6**
YSS	20nm,0.5s			A	A	14 12 49.0	
YSS	30nm,0.5s			A	A	14 12 49.0	
SHO	**Shikotan**	**4.21**	**194**	*e*P	**Pn**	**14 11 52.6**	**+0.7**
SHO	50nm,0.5s			AMB	AMB	14 11 53.1	
SHO				*e*S	**S**	**14 12 50.5**	**-1.4**
SHO	20nm,0.5s			A	A	14 13 05.3	
SHO	60nm,0.5s			A	A	14 13 05.3	
UGL	**Uglegorsk**	**4.23**	**288**	*e*P	**Pn**	**14 11 53.0**	**+1.1**
YUK	**Yuzh-Kuril'sk**	**4.26**	**203**	*e*S	**S**	**14 12 53.3**	**+0.5**
YUK	80nm,0.6s			A	A	14 13 06.3	
YUK	60nm,0.6s			A	A	14 13 06.3	
TYV	**Tymovskoe**	**4.64**	**311**	*e*P	**Pn**	**14 11 57.1**	**+1.2**
TYV	40nm,0.5s			AMB	AMB	14 11 59.7	
TYV				*e*S	**S**	**14 12 58.2**	**-1.4**
TYV	30nm,0.6s			A	A	14 13 09.3	
TYV	30nm,0.6s			A	A	14 13 09.3	
ASAJ	**Asahikawa** 4.8nm,0.7s,baz=346,slow=4.2,SNR=14	**5.48**	**227**	P	**Pn**	**14 12 07.5**	**+2.7**
AKK	**Akkeshi**	**5.48**	**207**	*e*P	**Pn**	**14 12 08.0**	**+3.1**
AKK				*e*S	**S**	**14 13 18.9**	**+3.2**
SKR	**Severo-Kuril’s**	**5.84**	**59**	*e*P	**Pn**	**14 12 09.5**	**+1.0**
SKR	50nm,0.5s			AMB	AMB	14 12 11.2	
PETK	**Petropavlovsk-** 3.8nm,0.8s,baz=220,slow=10,SNR=4.0	**7.94**	**46**	P	P	14 12 44.5	+12
USRK	**Ussuriysk Ar.**	**11.87**	**258**	P	P	14 13 05.8	-10

	1.5nm,0.6s,baz=63,slow=12,SNR=4.2						
MJAR	**Matsushiro Arr**	**13.59**	**217**	P	**P**	**14 13 32.6**	**-2.4**
	1.8nm,0.7s,baz=13,slow=12,SNR=4.2						
ILAR	**Eielson Array**	**37.70**	**39**	P	**P**	**14 17 17.1**	**+0.6**
	0.8nm,0.8s,baz=280,slow=7.4,SNR=11						
	0.8nm,0.8s						
MKAR	**Makanchi Array**	**43.41**	**294**	P	P	14 17 48.9	-14
	0.4nm,0.5s,baz=66,slow=6.1,SNR=8.6						
	0.4nm,0.5s						
YKA	**Yellowknife Ar**	**51.92**	**36**	P	**P**	**14 19 06.3**	**-0.6**
	0.4nm,0.5s,baz=302,slow=6.7,SNR=9.2						
	0.4nm,0.5s						
FINES	**FINESS Array B**	**61.47**	**332**	P	P	14 20 02.8	-10
	1.1nm,0.5s,baz=48,slow=7.8,SNR=11						
	1.1nm,0.5s						
NVAR	**Mina Array Bea**	**64.77**	**60**	P	**P**	**14 20 37.9**	**+2.6**
	0.8nm,0.7s,baz=301,slow=6.0,SNR=7.6						
	0.8nm,0.7s						
NOA	**NORSAR Array B**	**65.94**	**339**	P	P	14 20 32.3	-10
	0.2nm,0.4s,baz=29,slow=6.5,SNR=1.6						
	0.2nm,0.4s						
PDAR	**Pinedale Array**	**66.67**	**52**	P	**P**	**14 20 47.8**	**+0.6**
	0.5nm,0.5s,baz=282,slow=1.5,SNR=9.0						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**72.45**	**194**	P	**P**	**14 21 18.4**	**-3.5**
	0.2nm,0.8s,baz=6.8,slow=6.2,SNR=1.9						
	0.2nm,0.8s						
TXAR	**Lajitas Array**	**79.73**	**57**	P	**P**	**14 22 03.0**	**+0.4**
	0.3nm,0.6s,baz=281,slow=5.1,SNR=3.6						
	0.3nm,0.6s						

MAN 13 14:18:34.6, 15°.75N×119°.87E, h25^{km}, mb4.3, ML3.1, MS2.8, 3C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.63**	**4**	⇓*e*P	Pn	14 18 47.6	-0.4
BOLP				*e*S	Sn	14 18 58.0	+0.8
PCPH	**Palayan**	**1.19**	**99**	⇑*e*P	Pn	14 18 55.4	-0.3
PCPH				*e*S	Sb	14 19 11.8	+0.2
BALP	**Baler**	**1.64**	**90**	⇑*e*P	Pb	14 19 03.1	-1.1
MACP	**Maragondon, Ca**	**1.69**	**151**	⇓*e*P	Pn	14 19 02.6	+0.1
MACP				*e*S	Sn	14 19 23.4	+0.1
CAUP	**Cauayan**	**2.22**	**57**	⇑*e*P	Pb	14 19 12.9	-1.1

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*BJI **13** 14:19:04.8±0.0, 17°.12N×95°.70E, h24^{km}, mb4.9/69, mB5.1/60, Ms5.5/86, Ms7 5.4/81*

*IDC **13** 14:19:05.3±0.5, 17°.36N×95°.86E, h0^{km}, mb4.5/27, mbtmp4.5/30, ML4.4/3, MS4.8/76, Error ellipse: s-maj=13.8km s-min=10.7km az=8.0*

*NEIC **13** 14:19:06.7±1.1, 17°.40N±0°.06×96°.00E±0°.07, h10^{km}±1^{km}, mb5.1/89, Error ellipse: s-maj=10.7km s-min=10.5km az=119.0*

*GCMT **13** 14:19:07.7±0.1, 17°.23N±0°.01×96°.09E±0°.01, h12^{km}, MW5.2/128, Moment Tensor Solution. s77,c108; s128,c242; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M$_{rr}$-1.08±.12; M$_{\theta\theta}$2.30±.12; M$_{\phi\phi}$-1.22±.12; M$_{r\theta}$0.74±.33; M$_{\theta\phi}$7.40±.10; M$_{\phi r}$0.67±.31; Best double couple: M$_0$7.65900×10^{16} NP1:φ$_s$7.00000°, δ86.00000°, λ175.00000°. NP2:φ$_s$97.00000°, δ85.00000°, λ4.00000°. Principal axes: T 8.2520, Plg6.0000°, Azm322.0000°; N -1.1840, Plg84.0000°, Azm148.0000°; P -7.0670, Plg1.0000°, Azm52.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **13** 14:19:08.9±0.2, 18°N±2°×9°6E±°, h13^{km}±1^{km}, M4.8/36, mB5.3/21, mb4.7/36, MLv5.7/2, Mw(mB)4.7/21, MwMwp4.8/7, Mwp5.2/7*

*MOS **13** 14:19:08.6±1.3, 17°.41N×95°.90E, h32^{km}, mb5.1/58, MS5.1/15, Error ellipse: s-maj=6.6km s-min=3.9km az=113.8*

*NDI **13** 14:19:09.8±4.2, 17°.18N×95°.76E, h10^{km}, ML4.5, mb5.1(NEIC)*

ISC 13 14:19:08.6±0.5**, 17°.34N**±0°.03×**95°.84E**±0°.03**, h18**^{km}±2^{km}**, h18**^{km}**:pP-P, n678,** σ2^s**03**/717**, mb5.0**/182**, MS4.9**/119**, 34C-24D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**3.16**	**69**		**Pn**	**14 19 54.0**	**-3.5**
CM31	**Chiang Mai Arr**	**3.16**	**69**	P	Pn	14 19 52.3	-5.2
CMAR	**Chiang Mai Arr**	**3.16**	**69**	Pn	**Pn**	**14 19 54.9**	**-2.7**
	9.3nm,0.3s,baz=249,slow=15,SNR=198						
CMAR				Pg	**Pb**	**14 20 03.1**	**-1.2**
	60nm,0.3s,baz=289,slow=4.9,SNR=30						
CMAR				Lg	Lg	14 20 43.9	
	59nm,0.3s,baz=246,slow=33,SNR=7.1						
CMAR				LR	LR	14 21 03.1	
	comp=Z,14µm,18.0s,baz=245,slow=38						
	62nm,0.6s						
CMAR	**Chiang Mai Arr**	**3.16**	**69**	Pn	**Pn**	**14 19 53.9**	**-3.7**
CHTO	**Chiang Mai**	**3.30**	**63**	Pn	**Pn**	**14 19 55.7**	**-3.8**
CHTO	**Chiang Mai**	**3.30**	**63**	P	**Pn**	**14 19 55.7**	**-3.8**
PHRA	**Phrae**	**4.34**	**74**	Pn	**Pn**	**14 20 10.5**	**-3.3**
MND	**Mandalay**	**4.66**	**3**	Pn	**Pn**	**14 20 16.0**	**-2.2**
MND	**Mandalay**	**4.66**	**3**	P	**Pn**	**14 20 16.5**	**-1.7**
DGPR	**DIGLIPUR**	**5.00**	**215**	*e*P	**Pn**	**14 20 23.2**	**+0.4**
DGPR				IAML		14 21 26.9	
	comp=N,865nm,0.8s						
CRAI	**Chiangrai**	**5.17**	**55**	Pn	**Pn**	**14 20 22.0**	**-3.2**
SAIH	**SAIHA**	**5.79**	**333**	*e*P	**Pn**	**14 20 34.8**	**+1.0**
SAIH				IAML		14 21 51.9	
	comp=N,470nm,0.9s						
SAIH				IAML		14 21 53.0	
	comp=E,375nm,1.1s						
NAYO	**Nakonayok**	**6.07**	**119**	P	**Pn**	**14 20 40.0**	**+2.4**
PBA	**Port Blair**	**6.39**	**208**	Pn	**Pn**	**14 20 42.7**	**+0.7**
PBA	**Port Blair**	**6.39**	**208**	*e*P	**Pn**	**14 20 44.0**	**+2.0**
PBA	**Port Blair**	**6.39**	**208**	P	**Pn**	**14 20 45.5**	**+3.5**
BRDH	**Bariadhala**	**6.62**	**324**	Pn	**Pn**	**14 20 42.8**	**-2.2**
	comp=E,34nm,0.3s,baz=90,slow=10,SNR=9.5						
BRDH				LR	LR	14 24 29.4	
	comp=E,14µm,19.7s,baz=90,slow=49						
	comp=E,122nm,0.3s						
NONG	**Nongkai**	**7.00**	**83**	P	**Pn**	**14 20 49.1**	**-1.3**
IMP	**Imphal**	**7.66**	**347**	*e*P	**Pn**	**14 21 01.1**	**+1.5**
IMP				*e*S	**Sn**	**14 22 27.9**	**+1.8**
TNCH	**TengChong**	**8.05**	**18**	*e*P	**Pn**	**14 21 07.5**	**+2.5**
TNCH				LR	LR		
	comp=E,22µm,5.5s						
TNCH				LR	LR		
	comp=E,27µm,6.3s						
TNCH				LR	LR		
	comp=E,29µm,10.0s						
KOHI	**KOHIMA**	**8.50**	**349**	*e*P	**Pn**	**14 21 12.4**	**+1.3**
KOHI				IAML		14 22 56.1	
	comp=N,516nm,0.7s						
KOHI				IAML		14 22 59.9	
	comp=E,322nm,0.9s						
SHL	**Shillong**	**8.98**	**336**	Pn	**Pn**	**14 21 15.7**	**-2.0**
SHL	**Shillong**	**8.98**	**336**	P	**Pn**	**14 21 15.7**	**-2.0**
SHL	**Shillong**	**8.98**	**336**	P	**Pn**	**14 21 16.5**	**-1.1**
MOKO	**MOKOCHONG**	**9.03**	**352**	*e*P	**Pn**	**14 21 20.2**	**+2.0**
MOKO				IAML		14 23 08.5	
	comp=N,237nm,0.7s						
MOKO				IAML		14 23 08.6	
	comp=E,237nm,0.5s						
LKP	**Lekhapani**	**9.95**	**0**	*e*P	Pn	14 21 35.8	+5.0
ITAN	**ITANAGAR**	**9.96**	**349**	*e*P	**Pn**	**14 21 30.8**	**-0.1**
ITAN				*e*S	**Sn**	**14 23 22.2**	**0.0**
ITAN				IAML		14 23 28.7	
	comp=N,313nm,0.4s						
KMI	**Kunming**	**10.07**	**39**	P	**Pn**	**14 21 37.3**	**+4.6**
KMI				S	**Sn**	**14 23 23.9**	**-1.5**
KMI				LR	LR		
	comp=N,20µm,10.6s						
KMI				LR	LR		
	comp=N,19µm,11.6s						
KMI				LR	LR		
	comp=N,11µm,12.8s						
ZIRO	**ZIRO**	**10.31**	**350**	*e*S	**Sn**	**14 23 29.7**	**-1.5**
PZH	**PanZhiHua**	**10.64**	**30**	P	**Pn**	**14 21 45.0**	**+4.6**
PZH				S	**Sn**	**14 23 42.1**	**+2.9**
PZH				ScP	**ScP**	**14 31 09.8**	**-5.3**
PZH				pmax	pmax		
	comp=N,210nm,1.3s						
PZH				pmax	pmax		
	comp=N,720nm,6.2s						
PZH				LR	LR		
	comp=N,11µm,7.6s						
PZH				LR	LR		
	comp=N,12µm,7.6s						
PZH				LR	LR		
	comp=N,10µm,8.1s						
BOK	**Bokaro**	**11.32**	**306**	*e*P	**Pn**	**14 21 50.5**	**+0.9**
BOK				*e*S	**Sn**	**14 23 48.0**	**-7.7**
VIS	**Vishakhapatnam**	**11.94**	**274**	*e*P	**Pn**	**14 21 58.3**	**+0.2**
GTK	**Tadong**	**11.98**	**327**	*e*P	**Pn**	**14 21 59.9**	**+1.2**
GTK				*e*S	**Sn**	**14 24 06.4**	**-5.6**
GTK				IAML		14 24 17.8	
	comp=N,221nm,1.7s						
LHMI	**Lhok Sumawe**	**12.08**	**175**	P	**Pn**	**14 22 04.2**	**+4.1**
	comp=N,147nm,1.6s,comp=N,3µm						
TAPN	**Taplejung**	**12.48**	**324**	*e*P	**Pn**	**14 22 04.3**	**-1.4**
	comp=N,118nm,0.5s						
RAMN	**Ramite**	**12.83**	**320**	*e*P	**Pn**	**14 22 08.0**	**-2.5**
	comp=N,47nm,0.3s						
MLSI	**Meulaboh, Aceh**	**13.00**	**177**	P	P	14 22 30.1	+7.1
LSA	**Lhasa**	**13.03**	**342**	P	**Pn**	**14 22 11.0**	**-2.5**
LSA				LR	LR		
	comp=N,8µm,11.6s						
LSA				LR	LR		
	comp=N,12µm,11.8s						
LSA				LR	LR		
	comp=N,10µm,12.8s						
LSA	**Lhasa**	**13.03**	**342**	Pn	**Pn**	**14 22 10.4**	**-3.1**
LSA	**Lhasa**	**13.03**	**342**	P	**Pn**	**14 22 10.4**	**-3.1**
LSA	**Lhasa**	**13.03**	**342**	P	**Pn**	**14 22 12.6**	**-0.8**
QIZ	**Qiongzhong**	**13.42**	**81**	P	**Pn**	**14 22 15.4**	**-2.9**
QIZ				S	**Sn**	**14 24 44.3**	**-2.8**
QIZ				pmax	pmax		
	comp=N,180nm,2.5s						
QIZ				LR	LR		
	comp=N,18µm,11.1s						
QIZ				LR	LR		
	comp=N,5µm,10.9s						
QIZ				LR	LR		
	comp=N,5µm,8.8s						
GYA	**Guiyang**	**13.54**	**46**	⇑P	**Pn**	**14 22 22.6**	**+2.6**
GYA				S	**Sn**	**14 24 56.8**	**+6.7**
GYA				pmax	pmax		
	comp=N,27nm,2.4s						
GYA				pmax	pmax		
	comp=N,460nm,8.6s						
GYA				LR	LR		
	comp=N,10µm,6.8s						
GYA				LR	LR		
	comp=N,9µm,8.3s						
GYA				LR	LR		
	comp=N,10µm,15.5s						
JIRN	**Jiri**	**13.60**	**321**	*e*P	**Pn**	**14 22 18.9**	**-2.1**
	comp=N,61nm,0.5s						
IPM	**Ipoh**	**13.75**	**158**		**Pn**	**14 22 21.0**	**-1.9**
KCSI	**Kotacane, Aceh**	**13.86**	**172**	P	**Pn**	**14 22 27.7**	**+3.3**
	comp=N,43nm,1.6s,comp=N,1µm						
GUN	**Gumba**	**13.96**	**321**	*e*P	**Pn**	**14 22 24.2**	**-1.9**
	comp=N,51nm,0.4s						
PKI	**Pulchoki**	**14.02**	**318**	*e*P	**Pn**	**14 22 24.0**	**-2.7**
PKIN	**Phulchoki**	**14.03**	**318**	*e*P	**Pn**	**14 22 24.2**	**-2.7**
	comp=N,57nm,0.4s						
DMN	**Daman**	**14.23**	**318**	*e*P	**Pn**	**14 22 26.6**	**-3.1**
PSI	**Prapat**	**14.76**	**168**	P	**Pn**	**14 22 39.3**	**+2.5**
PSI	**Prapat**	**14.76**	**168**	P	**Pn**	**14 22 36.6**	**-0.2**
GKN	**Gorkha**	**14.81**	**318**	*e*P	**Pn**	**14 22 34.6**	**-2.8**
	comp=N,71nm,0.4s						
RPSI	**Rantau Prapat**	**14.86**	**168**	Pn	**Pn**	**14 22 36.6**	**-1.4**
CD2	**Chengdu**	**15.32**	**27**	P	**Pn**	**14 22 44.8**	**+0.7**
CD2				S	**S**	**14 25 43.0**	**-6.7**
CD2				pmax	pmax		
	comp=N,470nm,0.9s						
CD2				pmax	pmax		
	comp=N,2µm,2.6s						
CD2				LR	LR		
	comp=N,10µm,9.0s						
CD2				LR	LR		
	comp=N,17µm,9.6s						
CD2				LR	LR		
	comp=N,7µm,9.2s						
DANN	**Dangsing**	**15.61**	**317**	*e*P	**Pn**	**14 22 45.7**	**-2.5**
GULI	**GuiLin**	**15.67**	**57**	P	**P**	**14 22 55.6**	**+2.9**
GULI				S	**S**	**14 25 52.0**	**-5.0**
GULI				pmax	pmax		
	comp=Z,30nm,2.1s						
GULI				LR	LR		
	comp=N,9µm,6.6s						
GULI				LR	LR		
	comp=E,7µm,8.1s						
GULI				LR	LR		
	comp=Z,9µm,10.3s						
PYUN	**Piuthan**	**15.96**	**314**	*e*P	**Pn**	**14 22 50.3**	**-2.3**
	comp=Z,105nm,0.5s						
GSI	**Gunungsitoli**	**16.02**	**174**	Pn	**Pn**	**14 22 51.9**	**-1.3**
GSI	**Gunungsitoli**	**16.02**	**174**	P	**Pn**	**14 22 54.0**	**+0.7**
	comp=Z,32nm,1.9s						
HYB	**Hyderabad**	**16.50**	**273**	*e*P	**Pn**	**14 22 59.8**	**+0.4**
HYB				*e*S	**Sn**	**14 26 05.3**	**+3.1**
HYB				IVMs_BB	IVMs_BB	14 36 24.5	
	comp=Z,1µm,10.2s						
MYKOM	**Kota Tinggi**	**17.34**	**152**		**Pn**	**14 23 09.3**	**-0.6**
PALK	**Pallekele**	**17.84**	**238**	P	**Pn**	**14 23 16.0**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=157,slow=12,SNR=11						
PALK				S	Sn	14 26 22.8	-12
	comp=Z,7.7nm,0.7s,baz=176,slow=15,SNR=3.1						
PALK				LR	LR	14 30 11.7	
	comp=Z,3µm,19.2s,baz=149,slow=37						
	comp=Z,14nm,0.9s						
PALK	**Pallekele**	**17.84**	**238**		**Pn**	**14 23 15.8**	**-0.4**
PALK	**Pallekele**	**17.84**	**238**	*c i*P	**P**	**14 23 17.5**	**+0.7**
PALK				pmax	pmax		
	comp=Z,76nm,1.6s						
PALK	**Pallekele**	**17.84**	**238**	P	**P**	**14 23 20.8**	**+4.0**
ENH	**Enshi**	**17.92**	**42**	Pn	**Pn**	**14 23 12.3**	**-4.7**
ENH	**Enshi**	**17.92**	**42**	P	**P**	**14 23 19.8**	**+2.2**
BHPL	**Bhopal**	**18.24**	**292**	*e*P	**P**	**14 23 24.7**	**+3.5**
PDSI	**Padang**	**18.70**	**165**	P	**Pn**	**14 23 26.9**	**+0.2**
	comp=Z,26nm,1.1s,comp=Z,1µm						
GOMU	**GeErMu**	**18.81**	**357**	P	**P**	**14 23 25.3**	**-2.4**
GOMU				S	**Sn**	**14 26 58.3**	**-0.2**
GOMU				LR	LR		
	comp=Z,4µm,10.9s						
GOMU				LR	LR		
	comp=Z,3µm,10.9s						
GOMU				LR	LR		
	comp=Z,4µm,10.8s						
SDSI	**Sungai Dareh**	**18.97**	**163**	P	**Pn**	**14 23 30.3**	**+0.4**
	comp=Z,8.6nm,1.3s,comp=Z,632nm						
DSRI	**Dabo**	**19.69**	**153**	P	**Pn**	**14 23 39.6**	**+1.1**
	comp=Z,21nm,1.0s,comp=Z,902nm						
LZH	**Lanzhou**	**19.98**	**19**	⇓P	**P**	**14 23 41.1**	**+0.8**
LZH				pP	pP	14 23 44.8	-0.5
LZH				sP	sP	14 23 49.0	+1.4
LZH				PP	**PnPn**	**14 24 04.5**	**+8.0**
LZH				S	**Sn**	**14 27 25.8**	**-0.7**
LZH				SS	**SnSn**	**14 27 48.5**	**+7.2**
LZH				pmax	pmax		
	comp=Z,330nm,1.4s						
LZH				pmax	pmax		
	comp=Z,1µm,5.8s						
LZH				LR	LR		
	comp=Z,5µm,9.6s						
LZH				LR	LR		
	comp=Z,10µm,9.6s						
LZH				LR	LR		
	comp=Z,21µm,9.6s						
XAN	**Xi'an**	**20.36**	**33**	P	**P**	**14 23 43.0**	**-1.3**
XAN				pP	Pn	14 23 47.6	+1.2
XAN				S	Sn	14 27 33.6	-1.8
XAN				sS	pS	14 27 43.3	-1.2
XAN				pmax	pmax		
	comp=Z,88nm,1.1s						
XAN				pmax	pmax		
	comp=Z,990nm,4.0s						
XAN				LR	LR		
	comp=Z,10µm,9.3s						
XAN				LR	LR		
	comp=Z,5µm,8.3s						
XAN				LR	LR		
	comp=Z,7µm,7.6s						
JMBI	**JAMBI**	**20.36**	**157**	P	Pn	14 23 48.2	+1.7
	comp=Z,65nm,1.4s						
KSM	**Kuching**	**21.24**	**136**	P	**P**	**14 23 50.6**	**-3.3**
KSM	**Kuching**	**21.24**	**136**	P	**P**	**14 23 54.5**	**+0.6**
WHN	**Wuhan**	**21.39**	**49**	⇑*i*P	**P**	**14 23 57.1**	**+1.7**
WHN				sP	**sP**	**14 24 06.0**	**+3.3**
WHN				S	Sn	14 27 57.5	-2.6
WHN				pmax	pmax		
	comp=Z,550nm,1.6s						
WHN				LR	LR		
	comp=Z,20µm,9.8s						
WHN				LR	LR		
	comp=Z,10µm,10.0s						
WHN				LR	LR		
	comp=Z,30µm,11.6s						
SBUM	**Sibu**	**21.86**	**131**	P	**P**	**14 23 58.1**	**-2.5**
SBUM				IAmb	IAmb	14 24 17.3	
	comp=Z,107nm,1.7s						
PPBI	**Pangkal Pinang**	**21.88**	**151**	P	**P**	**14 24 00.6**	**-0.2**
PPBI				pP	**pP**	**14 24 04.2**	**-1.6**
PMBI	**Palembang**	**21.98**	**156**	P	**P**	**14 24 05.4**	**+3.5**
GTA	**Gaotai**	**22.27**	**8**	*e*P	**P**	**14 24 03.9**	**-1.0**
GTA				sP	sP	14 24 11.0	-1.2
GTA				S	**S**	**14 28 03.8**	**-5.6**
GTA				pmax	pmax		
	comp=Z,35nm,1.5s						
GTA				pmax	pmax		
	comp=Z,240nm,4.0s						
GTA				LR	LR		
	comp=Z,1µm,13.8s						
GTA				LR	LR		
	comp=Z,6µm,14.5s						
GTA				LR	LR		
	comp=Z,3µm,15.6s						
LYN	**LuoYang**	**22.69**	**38**	*e*P	**P**	**14 24 08.6**	**-0.8**
LYN				S	**S**	**14 28 14.4**	**-2.6**
LYN				SS	**SnSn**	**14 29 01.9**	**+14**
LYN				ScP	**ScP**	**14 31 38.8**	**+0.2**
LYN				pmax	pmax		
	comp=Z,90nm,1.0s						
LYN				pmax	pmax		
	comp=Z,470nm,4.3s						
LYN				LR	LR		
	comp=Z,12µm,12.9s						
LYN				LR	LR		
	comp=Z,12µm,12.8s						
LYN				LR	LR		
	comp=Z,10µm,15.5s						
KKM	**Kota Kinabalu**	**22.86**	**117**	P	**P**	**14 24 08.0**	**-3.5**
KKM				IAmb	IAmb	14 24 25.6	
	comp=Z,93nm,1.5s						
KKM	**Kota Kinabalu**	**22.86**	**117**	P	**P**	**14 24 12.2**	**+0.7**
MDSI	**Maura Dua**	**23.20**	**158**	P	**P**	**14 24 15.1**	**+0.4**
	comp=Z,18nm,1.1s,comp=Z,616nm						
TPUB	**Ta-pu**	**23.98**	**72**	P	**P**	**14 24 23.8**	**+1.4**
TWGBT	**Beinan**	**24.31**	**73**	P	**P**	**14 24 27.9**	**+2.4**
SSLB	**Suanglung**	**24.36**	**71**	P	**P**	**14 24 27.9**	**+2.0**
YULB	**Yu-li**	**24.60**	**72**	P	**P**	**14 24 29.8**	**+1.7**
TIY	**Taiyuan**	**25.00**	**32**	*e*P	**P**	**14 24 33.4**	**+1.8**
TIY				S	**S**	**14 28 55.5**	**+0.7**
TIY				LR	LR		
	comp=Z,6µm,9.8s						
TIY				LR	LR		
	comp=Z,6µm,11.2s						
TIY				LR	LR		
	comp=Z,3µm,9.8s						
NACB	**Ninganchiao**	**25.00**	**70**	P	**P**	**14 24 34.9**	**+3.2**
MYLDM	**Lahad Datu**	**25.26**	**116**	P	**P**	**14 24 31.8**	**-2.3**
NJ2	**Nanjing**	**25.46**	**51**	*e*P	**P**	**14 24 36.8**	**+1.1**
NJ2				pP	**pP**	**14 24 41.6**	**+0.6**
NJ2				sP	**sP**	**14 24 44.3**	**+1.1**
NJ2				S	**S**	**14 29 05.0**	**+2.9**
NJ2				pmax	pmax		
	comp=Z,52nm,1.3s						
NJ2				pmax	pmax		
	comp=Z,520nm,3.8s						
NJ2				LR	LR		
	comp=Z,7µm,11.8s						
NJ2				LR	LR		
	comp=Z,6µm,13.3s						
NJ2				LR	LR		
	comp=Z,10µm,19.8s						
NIL	**Nilore**	**25.98**	**313**	P	**P**	**14 24 40.0**	**-0.5**
NIL				IAmb	IAmb	14 25 08.1	
	comp=Z,37nm,0.8s						
NIL	**Nilore**	**25.98**	**313**	P	**P**	**14 24 40.0**	**-0.5**
NIL				pmax	pmax		
	comp=Z,37nm,0.9s						
NIL	**Nilore**	**25.98**	**313**	P	**P**	**14 24 41.8**	**+1.4**
HNS	**HongShan**	**25.99**	**36**	⇓P	**P**	**14 24 41.8**	**+1.3**
HNS				pmax	pmax		
	comp=Z,100nm,1.1s						
HNS				LR	LR		
	comp=Z,9µm,13.5s						
HNS				LR	LR		
	comp=Z,10µm,13.2s						
HNS				LR	LR		
	comp=Z,6µm,16.7s						
BTO	**Baotou**	**26.23**	**25**	⇓*i*P	**P**	**14 24 44.3**	**+1.5**
BTO				pP	**pP**	**14 24 48.6**	**+0.5**
BTO				sP	**sP**	**14 24 52.0**	**+1.7**
BTO				PP	**PnPn**	**14 25 30.3**	**+8.5**
BTO				S	**S**	**14 29 18.5**	**+4.2**
BTO				pmax	pmax		
	comp=Z,100nm,1.0s						
BTO				pmax	pmax		
	comp=Z,850nm,5.4s						
BTO				LR	LR		
	comp=Z,19µm,12.8s						
BTO				LR	LR		
	comp=Z,21µm,11.6s						
BTO				LR	LR		
	comp=Z,26µm,11.3s						
TIA	**Tai'an**	**26.63**	**41**	⇓P	**P**	**14 24 46.8**	**+0.5**
TIA				S	**S**	**14 29 19.5**	**-1.1**
TIA				pmax	pmax		
	comp=Z,27nm,1.6s						
TIA				pmax	pmax		
	comp=Z,230nm,10.8s						
TIA				LR	LR		
	comp=Z,4µm,18.6s						
TIA				LR	LR		
	comp=Z,2µm,17.2s						
TIA				LR	LR		
	comp=Z,5µm,17.2s						
SSE	**Sheshan**	**26.79**	**55**	P	**P**	**14 24 44.4**	**-3.4**
SSE				S	**S**	**14 29 23.3**	**+0.1**
SSE				pmax	pmax		
	comp=Z,30nm,0.7s						
SSE				pmax	pmax		
	comp=Z,300nm,3.5s						
SSE				LR	LR		
	comp=Z,2µm,9.6s						
SSE				LR	LR		
	comp=Z,2µm,12.0s						
HHC	**Hu-ho-hao-te**	**27.08**	**27**	*e*P	**P**	**14 24 51.4**	**+1.0**
HHC				S	**S**	**14 29 27.4**	**-0.3**
HHC				pmax	pmax		
	comp=Z,35nm,0.7s						
HHC				pmax	pmax		
	comp=Z,360nm,4.8s						
HHC				LR	LR		
	comp=Z,13µm,10.8s						
HHC				LR	LR		
	comp=Z,6µm,10.8s						
HHC				LR	LR		
	comp=Z,8µm,11.4s						
WMQ	**Urumqi**	**27.29**	**347**	*e*P	**P**	**14 24 51.5**	**-0.7**
WMQ				PP	**PnPn**	**14 25 42.5**	**+6.3**
WMQ				pmax	pmax		
	comp=Z,46nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,340nm,5.1s						
WMQ				LR	LR		
	comp=Z,2µm,14.3s						
WMQ				LR	LR		
	comp=Z,3µm,17.3s						
KSH	**Kashi**	**28.05**	**326**	P	**P**	**14 24 58.3**	**-0.8**
KSH				PP	**PnPn**	**14 25 51.3**	**+4.7**
KSH				S	**S**	**14 29 46.3**	**+3.2**
KSH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KSH				LR	LR		
	comp=Z,2µm,21.0s						
KSH				LR	LR		
	comp=Z,2µm,17.9s						
KSH				LR	LR		
	comp=Z,2µm,18.2s						
BJI	**Beijing**	**28.68**	**34**	P	**P**	**14 25 02.3**	**-2.3**
BJI				S	**S**	**14 29 47.0**	**-5.7**
BJI				LR	LR		
	comp=Z,1µm,10.1s						
BJI				LR	LR		

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     comp=Z,2µm,11.0s
BJI                                 LR      LR
     comp=Z,2µm,13.7s
SHLS Shalkode          29.26 335   eP      P       14 25 07.9  -2.0
     comp=Z,14nm,1.0s,baz=336
SHLS Shalkode          29.26 335   eP      P       14 25 07.9  -2.0
SHLS                                pmax    pmax
     comp=Z,14nm,1.0s
XMI  Christmas Isla    29.27 160    P      P       14 25 12.9  +2.8
UZB  Uzynbulak         29.43 334   eP      P       14 25 10.8  -0.7
     baz=334
UZB  Uzynbulak         29.43 334   eP      P       14 25 10.7  -0.7
KBL  Kabul             29.43 311    P      P       14 25 10.5  -1.1
KBL  Kabul             29.43 311    P      P       14 25 10.5  -1.1
KBL                                 pmax    pmax
     comp=Z,111nm,1.9s
SATY Saty              29.61 334   eP      P       14 25 12.8  -0.3
     comp=Z,12nm,0.9s,baz=334
SATY Saty              29.61 334   eP      P       14 25 12.7  -0.3
SATY                                pmax    pmax
     comp=Z,12nm,0.9s
ZHN  Zhinishke         29.69 334   eP      P       14 25 14.2  +0.5
     baz=334
ZHN  Zhinishke         29.69 334   eP      P       14 25 14.2  +0.5
KPKS Kokpek            29.83 334   eP      P       14 25 14.8  -0.2
     baz=334
KPKS Kokpek            29.83 334   eP      P       14 25 14.7  -0.2
TNSS Tian-Shan         30.23 332   eP      P       14 25 18.4  -0.5
     baz=332
TNSS Tian-Shan         30.23 332   eP      P       14 25 18.3  -0.5
MDOK Medeo             30.29 332   eP      P       14 25 19.1   0.0
     baz=332
MDOK                               i S     S       14 30 20.0  +1.6
     baz=332
MDOK Medeo             30.29 332   eP      P       14 25 19.0   0.0
MDOK                               i S     S       14 30 19.9  +1.6
AAA  Alma-Ata          30.38 332   eP      P       14 25 19.6  -0.2
     comp=Z,18nm,0.6s,baz=332
AAA  Alma-Ata          30.38 332   eP      P       14 25 19.6  -0.2
AAA                                 pmax    pmax
     comp=Z,18nm,0.6s
DAV  Davao City (W)    30.76 106    LR     LR      14 38 13.4
     comp=Z,1µm,18.0s,baz=354,slow=37
TKM2 Tokmak 2          30.77 330    P      P       14 25 23.5  +0.1
     SNR=9.5
UCH  Uchtor            30.78 328    P      P       14 25 23.6  -0.2
     SNR=7.6
CHKK Chushkaly         30.86 333   eP      P       14 25 22.8  -1.2
     baz=333
CHKK Chushkaly         30.86 333   eP      P       14 25 22.7  -1.2
KBK  Karagaybulak      30.88 329    P      P       14 25 25.0  +0.6
     SNR=13
GAR  Garm              30.99 319    P      P       14 25 24.7  -0.6
GAR                                 IAmb    IAmb   14 26 24.6
     comp=Z,42nm,1.1s
AAK  Ala-Archa         31.09 329    P      P       14 25 26.3  +0.1
     SNR=16
AAK  Ala-Archa         31.09 329    LR     LR      14 41 36.4
     comp=Z,2µm,19.2s,baz=136,slow=44
AAK  Ala-Archa         31.09 329    P      P       14 25 25.8  -0.4
AAK                                 IAmb    IAmb   14 25 37.6
     comp=Z,22nm,1.0s
AAK  Ala-Archa         31.09 329c iP      P       14 25 26.6  +0.5
AAK                                 pmax    pmax
     comp=Z,39nm,1.7s
AAK  Ala-Archa         31.09 329    P      P       14 25 26.7  +0.5
DL2  Dalian            31.10  41   eP      P       14 25 25.3  -0.8
DL2                                 S      S       14 30 35.6  +4.8
DL2                                 pmax    pmax
     comp=Z,30nm,1.0s
DL2                                 pmax    pmax
     comp=Z,220nm,4.7s
DL2                                 LR      LR
     comp=Z,4µm,11.6s
DL2                                 LR      LR
     comp=Z,2µm,16.0s
DL2                                 LR      LR
     comp=Z,4µm,10.3s
AML  Almayashu         31.13 327    P      P       14 25 27.0  +0.3
     SNR=8.6
KUU  Kurty             31.18 332   eP      P       14 25 27.0  +0.2
     baz=332
KUU  Kurty             31.18 332   eP      P       14 25 26.9  +0.2
TDK  Taldyqorghan      31.21 336   eP      P       14 25 26.9  -0.2
     baz=336
TDK  Taldyqorghan      31.21 336   eP      P       14 25 26.8  -0.2
CHMS Chumysh           31.23 329    P      P       14 25 27.2   0.0
     SNR=6.5
ZSN  Zaisan            31.36 346   eP      P       14 25 28.3   0.0
     baz=346
ZSN                                eS      S       14 30 36.4  +1.7
     baz=346
ZSN  Zaisan            31.36 346   eP      P       14 25 28.3   0.0
ZSN                                eS      S       14 30 36.4  +1.7
JOW  Kunigami          31.43  67    LR     LR      14 41 06.3
     comp=Z,2µm,18.2s,baz=292,slow=42
MK31 Makanchi Array    31.44 342    P      P       14 25 27.5  -1.5
MK31 Makanchi Array    31.44 342c iP      P       14 25 28.0  -1.0
MKAR Makanchi Array    31.44 342    P      P       14 25 28.1  -0.9
     comp=Z,5.5nm,0.6s,baz=153,slow=9.2,SNR=81
MKAR                                LR      LR     14 41 12.9
     comp=Z,1µm,20.8s,baz=162,slow=42
     comp=Z,5.5nm,0.6s
MKAR Makanchi Array    31.44 342    P      P       14 25 27.9  -1.1
EKS2 Erkin-Say         31.47 328    P      P       14 25 30.1  +0.7
     SNR=8.5
GTOI Gorontalo         31.47 119    P      P       14 25 28.3  -1.3
     comp=Z,17nm,1.2s
CHGR Chuyangaron       31.52 318    P      P       14 25 27.8  -2.1
CHGR                                IAmb    IAmb   14 26 21.0
     comp=Z,46nm,1.2s
CHGR Chuyangaron       31.52 318    P      P       14 25 27.8  -2.1
CHGR                                pmax    pmax
     comp=Z,46nm,1.2s
XLT  XiLinHaoTe        31.52  29⇑iP      P       14 25 30.3  +0.5
XLT                                 pP      pP     14 25 34.1  -1.1
XLT                                 PP      PnPn   14 26 34.1  +0.9
XLT                                 S       S      14 30 33.4  -4.1
XLT                                 pmax    pmax
     comp=Z,120nm,4.0s
XLT                                 LR      LR
     comp=Z,3µm,12.3s
XLT                                 LR      LR
     comp=Z,4µm,10.4s
MAKZ Makanchi          31.55 342    P      P       14 25 27.9  -2.0
MAKZ Makanchi          31.55 342    P      P       14 25 27.9  -2.0
MAKZ                                pmax    pmax
     comp=Z,12nm,1.2s
USP  Ospenovka         31.56 329    P      P       14 25 29.8  -0.3
     SNR=14
SONM Songino Array     31.63  14    P      P       14 25 29.4  -1.4
     comp=Z,1.9nm,0.8s,baz=197,slow=12,SNR=12
SONM                                PP      PnPn   14 26 29.8  -4.7
     comp=Z,1.5nm,0.8s,baz=196,slow=9.9,SNR=4.6
SONM                                PcP     PcP    14 28 22.9  +0.2
     comp=Z,1.2nm,0.8s,baz=184,slow=4.3,SNR=2.2
SONM                                LR      LR     14 39 45.3
     comp=Z,4µm,20.2s,baz=196,slow=39
     comp=Z,1.9nm,0.8s
SONM Songino Array     31.63  14    P      P       14 25 28.6  -2.2
SGDS Sogindy           31.63 330   eP      P       14 25 30.6  -0.3
     baz=330
SGDS Sogindy           31.63 330   eP      P       14 25 30.5  -0.3
ULN  Ulaanbaatar       31.81  14    P      P       14 25 30.2  -2.2
ULN  Ulaanbaatar       31.81  14deP      P       14 25 32.2  -0.2
ULN                                 pmax    pmax
     comp=Z,13nm,1.7s
LUWI Luwuk             32.22 122    P      P       14 25 37.8  +1.7
     comp=Z,53nm,1.4s,comp=Z,1µm
DGZ  Jazzator, Alta    32.99 350⇑eP      P       14 25 43.4  +0.7
DGZ                                 pmax    pmax
     comp=Z,5.0nm,1.4s
BTLS Baital            33.11 331   eP      P       14 25 43.1  -0.5
     baz=331
BTLS Baital            33.11 331   eP      P       14 25 43.1  -0.5
IUG  Iuzhnay           33.13 324   eP      P       14 25 44.1  +0.2
     comp=Z,15nm,0.9s,baz=324
IUG  Iuzhnay           33.13 324   eP      P       14 25 44.1  +0.2
IUG                                 pmax    pmax
     comp=Z,15nm,0.9s
NGCH Negor - Chabah    33.22 290    P      P       14 25 46.7  +1.9
KK31 Karatay Array     33.49 325    P      P       14 25 46.0  -1.0
KK31 Karatay Array     33.49 325    P      P       14 25 46.0  -1.0
KK31                                pmax    pmax
     comp=Z,7.0nm,1.2s
KKAR Karatay Array     33.49 325    P      P       14 25 45.9  -1.1
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KKAR Karatay Array     33.49 325    P      P       14 25 45.9  -1.1
ZAK  Zakamensk         33.51   9   eP      P       14 25 45.5  -1.6
ZAK                                e               14 28 29.6
ZAK                                 pmax    pmax
     comp=Z,8.0nm,1.8s
ZAK                                 pmax    pmax
     comp=Z,8.0nm,1.2s
TJN  Taejon            33.70  50    P      P       14 25 49.7  +0.8
TJN  Taejon            33.70  50deP      P       14 25 49.3  +0.4
SNY  Shenyang          34.05  38 ⇑P      P       14 25 52.4  +0.6
SNY                                 S      S       14 31 18.8  +2.2
SNY                                 pmax    pmax
     comp=Z,28nm,1.6s
SNY                                 pmax    pmax
     comp=Z,170nm,4.6s
SNY                                 LR      LR
     comp=Z,3µm,10.4s
SNY                                 LR      LR
     comp=Z,6µm,16.1s
SNY                                 LR      LR
     comp=Z,8µm,14.5s
MOY  Mondy             34.50   6   eP      P       14 25 53.5  -2.3
MOY                                 pmax    pmax
     comp=Z,22nm,1.9s
JLN  Jalan Bani Buh    34.56 284    P      P       14 25 59.3  +2.7
JLN                                 P      P       14 25 59.3  +2.7
KSRS Korea Array       34.58  48    P      P       14 25 55.9  -0.6
     comp=Z,4.7nm,0.8s,baz=239,slow=9.1,SNR=16
KSRS                                LR      LR     14 41 43.3
     comp=Z,3µm,18.6s,baz=240,slow=39
     comp=Z,4.7nm,0.8s
WBK  Wadi Bani Khal    34.98 285    P      P       14 26 04.6  +4.3
JNU  Nakatsue          35.18  57    LR     LR      14 40 56.2
     comp=Z,1µm,21.3s,baz=256,slow=37
WSAR Wadi Sarin        35.32 286    P      P       14 26 04.0  +0.9
     comp=Z,8.1nm,1.2s,baz=162,slow=2.1,SNR=5.4
WSAR                                LR      LR     14 42 11.2
     comp=Z,479nm,20.5s,baz=113,slow=39
     comp=Z,8.1nm,1.2s
WSAR Wadi Sarin        35.32 286    P      P       14 26 07.9  +4.8
IRK  Irkutsk           35.46   9   eP      P       14 26 05.0  +1.1
IRK                                 pmax    pmax
     comp=Z,42nm,2.4s
JMDO Jabal Madar       35.78 284    P      P       14 26 08.0  +0.9
JMDO                                P      P       14 26 08.0  +0.9
BIDO Bidbid            35.80 286    P      P       14 26 09.4  +2.2
SMDO Samad             35.85 285    P      P       14 26 10.5  +2.8
     SNR=6.2
SMDO                                P      P       14 26 10.5  +2.8
     SNR=6.2
MHTO MHTO              35.90 282    P      P       14 26 12.8  +4.7
MHTO                                P      P       14 26 12.8  +4.7
KURBB Kurchatov Arra   35.99 341    LR     LR      14 44 30.8
     comp=Z,2µm,20.5s,baz=157,slow=42
KURK Kurchatov         36.04 341    P      P       14 26 07.7  -1.1
KURK                                IAmb    IAmb   14 26 09.5
     comp=Z,22nm,1.0s
KURK Kurchatov         36.04 341    P      P       14 26 07.7  -1.1
KURK                                pmax    pmax
     comp=Z,22nm,1.0s
KURK Kurchatov         36.04 341    P      P       14 26 07.8  -1.1
KURK                                P      P       14 26 07.8  -1.1
DQM  DQM               36.33 280    P      P       14 26 13.6  +1.8
DQM                                 P      P       14 26 13.6  +1.8
CN2  Changchun         36.34  37   eP      P       14 26 08.8  -2.8
CN2                                eS      S       14 31 46.4  -5.4
CN2                                 pmax    pmax
     comp=Z,20nm,1.4s
CN2                                 LR      LR
     comp=Z,3µm,16.0s
CN2                                 LR      LR
     comp=Z,3µm,16.0s
CN2                                 LR      LR
     comp=Z,4µm,17.0s
HOQ  Hoqain            36.55 286    P      P       14 26 15.6  +2.0
     SNR=6.2
HOQ                                 P      P       14 26 15.6  +2.0
     SNR=6.2
BSY  Bisya             36.62 285    P      P       14 26 17.7  +3.4
     SNR=6.7
MMRI Maumere           36.70 133    P      P       14 26 11.8  -3.1
MMRI                                IAmb    IAmb   14 26 14.3
     comp=Z,50nm,1.2s
HIA  Hailar            37.27  26    P      P       14 26 16.7  -2.8
HIA                                 IAmb    IAmb   14 26 22.0
     comp=Z,53nm,1.6s
HIA  Hailar            37.27  26    P      P       14 26 21.0  +1.5
HIA  Hailar            37.27  26    P      P       14 26 16.7  -2.8
HIA                                 pmax    pmax
     comp=Z,53nm,1.6s
SOHO SOHO              37.28 287    P      P       14 26 22.0  +2.1
SOHO                                P      P       14 26 22.0  +2.1
BRZS Berezniki         37.52 335   eP      P       14 26 21.1  -0.5
     comp=Z,20nm,1.6s,baz=335
BRZS Berezniki         37.52 335   eP      P       14 26 21.1  -0.5
BRZS                                pmax    pmax
     comp=Z,20nm,1.6s
ZAA0 Zalesovo Array    37.53 349    P      P       14 26 20.0  -1.5
ZALV Zalesovo Beam     37.53 349    P      P       14 26 20.4  -1.2
     comp=Z,2.9nm,0.4s,baz=172,slow=8.7,SNR=22
     comp=Z,2.9nm,0.4s
ZALV Zalesovo Beam     37.53 349    P      P       14 26 20.0  -1.5
MDH  Madha             37.57 289    P      P       14 26 25.5  +3.2
     SNR=5.3
BANOM Banah            37.62 290    P      P       14 26 25.8  +3.1
     SNR=7.8
UOSS Minazif           37.63 288    P      P       14 26 26.1  +3.3
HATD Hatta, Dubai      37.69 288    P      P       14 26 25.6  +2.3
HATD                                P      P       14 26 25.6  +2.3
ASHO Ashiyiah          37.74 288    P      P       14 26 27.7  +3.9
     SNR=8.2
ASHO                                P      P       14 26 27.7  +3.9
     SNR=8.2
ALNE Al Ain            37.99 287    P      P       14 26 29.8  +3.9
ALNE                                P      P       14 26 29.8  +3.9
NAZ  Nazwa, Dubai      38.12 289    P      P       14 26 28.3  +1.3
     SNR=5.3
SHAO Shalim            38.27 277    P      P       14 26 30.1  +1.8
BNX  BinXian           38.62  36 ⇓P      P       14 26 31.5  +0.7
BNX                                 pmax    pmax
     comp=Z,28nm,1.1s
BNX                                 pmax    pmax
     comp=Z,210nm,4.0s
GEYT Alibeck           38.86 310    P      P       14 26 32.8  -0.2
     comp=Z,5.7nm,0.8s,baz=116,slow=6.8,SNR=12
GEYT                                LR      LR     14 48 01.6
     comp=Z,1µm,18.3s,baz=141,slow=45
     comp=Z,5.7nm,0.8s
SOEI Soe               38.91 132    P      P       14 26 30.7  -3.1
SOEI                                IAmb    IAmb   14 27 49.7
     comp=Z,33nm,1.0s
SOEI Soe               38.91 132    P      P       14 26 34.7  +0.9
     comp=Z,33nm,1.1s
DMTO DMTO              38.94 277    P      P       14 26 34.9  +1.0
DMTO                                P      P       14 26 34.9  +1.0
MDJ  Mudanjiang        39.25  39    P      P       14 26 33.6  -2.5
MDJ                                 PP      PnPn   14 28 09.3  +0.4
MDJ                                 S       S      14 32 34.8  -1.1
MDJ                                 pmax    pmax
     comp=Z,15nm,1.9s
MDJ                                 pmax    pmax
     comp=Z,200nm,5.1s
MDJ                                 LR      LR
     comp=Z,3µm,15.8s
MDJ                                 LR      LR
     comp=Z,2µm,19.9s
MDJ                                 LR      LR
     comp=Z,3µm,13.5s
SIJI Sorong            39.31 114    LR     LR      14 42 04.5
     comp=Z,264nm,21.3s,baz=261,slow=35
RBK  Rabkut            39.67 277    P      P       14 26 41.3  +1.2
WHFO Wadi Hawf         40.03 277    P      P       14 26 43.5  +0.4
     SNR=6.7
WHFO                                P      P       14 26 43.5  +0.4
     SNR=6.7
USA0B Ussuriysk Arra   40.49  41⇑eP      P       14 26 47.2  +0.7
USRK Ussuriysk Ar.     40.49  41    P      P       14 26 47.4  +0.8
     comp=Z,4.5nm,0.7s,baz=248,slow=9.8,SNR=6.4
USRK                                LR      LR     14 45 29.4
     comp=Z,1µm,19.7s,baz=231,slow=39
     comp=Z,4.5nm,0.7s
ABTO Aybut             40.54 277    P      P       14 26 47.5  +0.2
ABTO                                P      P       14 26 47.5  +0.2
BVAR Borovoye Array    40.80 337    LR     LR      14 45 30.1
     comp=Z,1µm,20.3s,baz=142,slow=39
BRVK Borovoye          40.87 337    P      P       14 26 48.1  -1.4
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BRVK Borovoye          40.87 337⇓iP      P       14 26 48.7  -0.8
BRVK                                pmax    pmax
     comp=Z,9.0nm,1.3s
BRVK Borovoye          40.87 337    P      P       14 26 48.7  -0.8
HEH  HeiHe             41.46  31   eP      P       14 26 53.8  -0.6
HEH                                 S      S       14 33 10.3  +1.5
HEH                                 pmax    pmax
     comp=Z,21nm,1.2s
HEH                                 pmax    pmax
     comp=Z,140nm,3.6s
HEH                                 LR      LR
     comp=Z,1µm,13.8s
HEH                                 LR      LR
     comp=Z,4µm,12.4s
HEH                                 LR      LR
     comp=Z,4µm,16.0s
MAJO Matsushiro        41.94  54d iP      P       14 26 58.9  +0.3
MAJO                                pmax    pmax
     comp=Z,38nm,2.0s
MJAR Matsushiro Arr    41.94  54    P      P       14 26 58.2  -0.3
     comp=Z,5.9nm,1.1s,baz=268,slow=9.0,SNR=9.1
MJAR                                PcP     PcP    14 28 54.6  +0.7
     comp=Z,2.5nm,0.8s,baz=233,slow=3.8,SNR=5.3
MJAR                                LR      LR     14 46 37.6
     comp=Z,1µm,19.4s,baz=250,slow=39
     comp=Z,5.9nm,1.1s
JSD  Sado              42.40  52    P      P       14 26 59.8  -2.4
JSD                                 IAmb    IAmb   14 27 04.3
     comp=Z,95nm,1.5s
JHJ  Hachijo jima 2    42.42  60    LR     LR      14 46 28.2
     comp=Z,775nm,18.0s,baz=276,slow=39
BOD  Bodaibo           42.62  14   eP      P       14 27 04.1  +0.4
BOD                                 pmax    pmax
     comp=Z,20nm,1.6s
KLR  Kul'dur           43.05  34    P      P       14 27 06.9  -0.5
     comp=Z,4.2nm,1.0s,baz=263,slow=7.9,SNR=11
KLR                                 LR      LR     14 47 24.8
     comp=Z,4µm,18.4s,baz=235,slow=40
     comp=Z,4.2nm,1.0s
KLR  Kul'dur           43.05  34⇓iP      P       14 27 07.9  +0.5
KLR                                 pmax    pmax
     comp=Z,17nm,1.3s
ABKAR Akbulak array    43.05 326    P      P       14 27 06.8  -0.6
ZEA  Zeya              43.74  27   eP      P       14 27 12.1  -0.8
ZEA                                eS      S       14 33 44.3  +2.0
ZEA                                 pmax    pmax
     comp=Z,10.0nm,1.0s
ZEA                                 smax    smax
     comp=E,100nm,5.3s
ZEA                                 MLR     MLR
     comp=N,1µm,12.0s
ZEA                                 MLR     MLR
     comp=E,1µm,12.0s
ZEA                                 MLR     MLR
     comp=Z,2µm,12.0s
JCJ  Chichijima        43.78  69    LR     LR      14 47 01.3
     comp=Z,302nm,18.5s,baz=274,slow=38
AKTO Aktyubinsk        44.75 326    LR     LR      14 49 18.3
     comp=Z,3µm,18.2s,baz=118,slow=40
GRNR Gornyy            46.42  35⇑iP      P       14 27 32.8  -1.4
GRNR                               eS      S       14 34 23.2  +2.0
GRNR                                pmax    pmax
     comp=N,1.0nm,1.1s
GRNR                                pmax    pmax
     comp=E,1.0nm,1.1s
GRNR                                pmax    pmax
     comp=Z,1.0nm,0.9s
GRNR                                MLR     MLR
     comp=E,2µm,12.0s
GRNR                                MLR     MLR
     comp=N,1µm,10.0s
GRNR                                MLR     MLR
     comp=Z,2µm,15.0s
GUMO Guam              47.31  87    LR     LR      14 47 41.0
     comp=Z,417nm,19.4s,baz=273,slow=36
RAYN Ar Rayn           47.38 286    P      P       14 27 42.6  +0.4
RAYN                                IAmb    IAmb   14 28 32.0
     comp=Z,16nm,1.3s
RAYN Ar Rayn           47.38 286    P      P       14 27 42.6  +0.4
RAYN                                pmax    pmax
     comp=Z,16nm,1.3s
ASAJ Asahikawa         47.41  45    LR     LR      14 48 27.6
     comp=Z,1µm,18.2s,baz=288,slow=37
SVE  Sverdlovsk        47.43 335   eP      P       14 27 41.9  -0.1
SVE                                 pmax    pmax
     comp=Z,29nm,1.3s
SVE                                 MLR     MLR
     comp=Z,2µm,20.0s
ARU  Arti              48.05 333    LR     LR      14 50 35.7
     comp=Z,2µm,19.5s,baz=124,slow=39
ARU  Arti              48.05 333    P      P       14 27 45.0  -1.8
ARU                                 IAmb    IAmb   14 27 49.0
     comp=Z,16nm,1.1s
ARU  Arti              48.05 333c iP      P       14 27 46.1  -0.7
ARU                                                14 29 14.0
ARU                                                14 29 34.3
ARU                                 S      S       14 34 46.0  +1.8
ARU                                 SS     SS      14 38 10.5  -2.6
ARU                                 pmax    pmax
     comp=Z,22nm,1.2s
ARU                                 MLR     MLR
     comp=Z,2µm,20.0s
MAK  Makhachkala       48.15 313   eP      P       14 27 42.7  -5.1
MAK                                e               14 29 36.2
MAK                                eS      S       14 34 39.8  -6.1
MAK                                eSS     SS      14 38 08.0  -7.1
MAK                                 pmax    pmax
     comp=Z,544nm,1.3s
YSS  Yuzh-Sakhalins    48.50  42    P      P       14 27 51.7  +1.3
YSS  Yuzh-Sakhalins    48.50  42   eP      P       14 27 51.4  +1.0
YSS                                e               14 29 43.0
YSS                                eS      S       14 34 51.7  +0.9
YSS                                ePS             14 35 04.0
YSS                                 pmax    pmax
     comp=Z,10.0nm,0.8s
YSS                                 MLR     MLR
     comp=Z,2µm,16.0s
YSS                                 MLR     MLR
     comp=E,1µm,15.0s
UGL  Uglegorsk         48.88  39   eP      P       14 27 55.0  +1.7
UGL                                eS      S       14 35 02.5  +6.3
UGL                                 pmax    pmax
     comp=Z,450nm,5.0s
UGL                                 pmax    pmax
     comp=Z,40nm,0.9s
UGL                                 MLR     MLR
     comp=E,3µm,14.0s
UGL                                 MLR     MLR
     comp=N,970nm,9.0s
UGL                                 MLR     MLR
     comp=Z,3µm,15.0s
GROC Groznyy           49.41 312   eP      P       14 27 57.8  +0.3
GROC                               e               14 29 19.7
GROC                               eS      S       14 35 00.6  -3.3
GROC                                pmax    pmax
     comp=Z,203nm,1.4s
GNI  Garni             49.46 308    LR     LR      14 51 44.5
     comp=Z,632nm,21.8s,baz=118,slow=40
GNI  Garni             49.46 308⇓eP      P       14 27 59.5  +1.4
GNI                                 pmax    pmax
     comp=Z,28nm,1.5s
TYV  Tymovskoe         49.96  37   eP      P       14 28 02.6  +1.0
TYV                                eS      S       14 35 15.8  +4.5
TYV                                 pmax    pmax
     comp=Z,15nm,1.2s
TYV                                 pmax    pmax
     comp=Z,200nm,8.7s
TYV                                 smax    smax
     comp=N,600nm,10.4s
TYV                                 smax    smax
     comp=E,600nm,10.4s
TYV                                 MLR     MLR
     comp=Z,2µm,17.0s
MORW Morawa            50.09 157    P      P       14 28 02.4  -0.4
MORW Morawa            50.09 157    P      P       14 28 04.3  +1.5
YAK  Yakutsk           50.57  20    LR     LR      14 52 46.4
     comp=Z,1µm,18.2s,baz=225,slow=40
YAK  Yakutsk           50.57  20    P      P       14 28 04.3  -1.6
YAK                                 IAmb    IAmb   14 28 07.2
     comp=Z,20nm,0.9s
YAK  Yakutsk           50.57  20   eP      P       14 28 06.0  +0.1
YAK                                e*PP    pP      14 28 11.5   0.0
YAK                                e               14 30 01.3
YAK                                eS      S       14 35 20.9  +1.6
YAK                                e*SS    pS      14 35 26.6  +0.7
YAK                                eSSS    SSS     14 40 20.7
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YAK                                    pmax   pmax
      comp=Z,18nm,0.9s
YAK                                    pmax   pmax
      comp=N,7.0nm,1.4s
YAK                                    pmax   pmax
      comp=E,9.0nm,1.4s
YAK                                    pmax   pmax
      comp=Z,6.0nm,0.4s
YAK                                    smax   smax
      comp=N,74nm,2.8s
YAK                                    smax   smax
      comp=E,44nm,2.3s
YAK                                    MLR    MLR
      comp=Z,2µm,13.0s
YAK                                    MLR    MLR
      comp=E,680nm,9.0s
YAK                                    MLR    MLR
      comp=N,2µm,14.0s
ZEI   Tsey             50.66 311   eP     P      14 28 07.6 +0.3
ZEI                                    pmax   pmax
      comp=Z,53nm,1.5s
ONI   Oni              50.93 311   P      P      14 28 08.8 -0.4
ONI                                    IAmb   IAmb   14 28 18.8
      comp=Z,43nm,1.7s
ONI   Oni              50.93 311   P      P      14 28 08.8 -0.4
ONI                                    pmax   pmax
      comp=Z,43nm,1.7s
NCK   Nalchik          51.04 312⥥eP    P      14 28 11.8 +1.9
NCK                                    pmax   pmax
      comp=Z,23nm,0.5s
GURO  Guroymak-BITLI   51.24 306   P      P      14 28 11.4 -0.2
GURO                                   IAmb   IAmb   14 29 06.1
      comp=Z,32nm,1.1s
BELG  Belogornoye      51.39 324   LR     LR     14 53 45.4
      comp=Z,2µm,19.0s,baz=130,slow=40
BELG  Belogornoye      51.39 324deP    P      14 28 10.7 -1.6
BELG                                   pmax   pmax
      comp=Z,6.0nm,0.8s
ATD   Arta Tunnel      51.51 271   LR     LR     14 50 19.1
      comp=Z,17nm,19.5s,baz=79,slow=36
KBZ   Khabaz           51.59 312   P      P      14 28 14.3 +0.4
      comp=Z,8.4nm,0.9s,baz=126,slow=4.8,SNR=12
KBZ                                    LR     LR     14 55 14.5
      comp=Z,656nm,18.5s,baz=112,slow=42
      comp=Z,8.4nm,0.9s
KBZ   Khabaz           51.59 312⥥iP    P      14 28 14.6 +0.7
KBZ                                    pmax   pmax
      comp=Z,19nm,1.0s
NEY   Neytrino         51.60 312⥥eP    P      14 28 16.2 +1.9
NEY                                    pmax   pmax
      comp=Z,6.0nm,0.8s
KIV   Kislovodsk       51.79 313   P      P      14 28 14.6 -1.0
KIV   Kislovodsk       51.79 313   eP     P      14 28 16.1 +0.5
KIV                                eS     S      14 35 39.0 +1.9
KIV                                    pmax   pmax
      comp=Z,19nm,3.7s
KIV                                    pmax   pmax
      comp=Z,49nm,1.0s
KIV   Kislovodsk       51.79 313   P      P      14 28 16.7 +1.1
NRIK  Noril'sk         52.24 356   P      P      14 28 16.6 -1.7
      comp=Z,1.3nm,0.5s,baz=163,slow=7.7,SNR=5.4
NRIK                                   LR     LR     14 55 06.1
      comp=Z,740nm,18.0s,baz=172,slow=41
      comp=Z,1.3nm,0.5s
NRIK  Noril'sk         52.24 356   P      P      14 28 16.7 -1.7
NRIK  Noril'sk         52.24 356⥥iP    P      14 28 17.2 -1.2
NRIK                                   pmax   pmax
      comp=Z,13nm,1.8s
MUN   Mundaring        52.78 158   P      P      14 28 23.1 +0.2
      baz=53,SNR=6.6
WB0   Warramunga Arr   52.85 133   P      P      14 28 21.7 -2.0
WRA   Warramunga Arr   52.93 133   P      P      14 28 22.8 -1.4
      comp=Z,3.2nm,0.8s,baz=321,slow=7.6,SNR=12
WRA                                    LR     LR     14 54 37.6
      comp=Z,706nm,19.8s,baz=298,slow=40
      comp=Z,3.2nm,0.8s
WRA   Warramunga Arr   52.93 133   P      P      14 28 22.4 -1.8
WRAB  Tennant Creek    52.93 133   P      P      14 28 24.0 -0.2
WRAB  Tennant Creek    52.93 133ceP    P      14 28 25.1 +0.9
WRAB                                   pmax   pmax
      comp=Z,11nm,1.0s
WB2   Warramunga Arr   52.94 133   P      P      14 28 24.1 -0.1
      baz=53
WB2   Warramunga Arr   52.94 133   P      P      14 28 22.4 -1.9
WC3   Warramunga Arr   52.96 133   P      P      14 28 23.8 -0.6
      baz=53
KIRV  Kirov            53.33 332   LR     LR     14 55 24.5
      comp=Z,2µm,19.7s,baz=128,slow=41
KIRV  Kirov            53.33 332⥥eP    P      14 28 25.7 -0.9
SOC   Sochi            53.82 312   eP     P      14 28 31.7 +1.2
SOC                                ePPP   PPP    14 31 42.4
SOC                                eS     S      14 36 10.8 +6.3
SOC                                eSSS   SSS    14 41 37.0
SOC                                    pmax   pmax
      comp=Z,37nm,1.3s
SOC                                    MLR    MLR
      comp=Z,473nm,20.0s
NWAO  Narrogin (SRO)   54.01 158   P      P      14 28 30.1 -1.7
      comp=Z,19nm,1.1s,baz=320,slow=7.9,SNR=2.4
NWAO                                   LR     LR     14 50 34.2
      comp=Z,807nm,22.0s,baz=348,slow=35
      comp=Z,19nm,1.1s
NWAO  Narrogin (SRO)   54.01 158   P      P      14 28 30.3 -1.5
NWAO  Narrogin (SRO)   54.01 158   P      P      14 28 30.3 -1.5
NWAO                                   pmax   pmax
      comp=Z,208nm,2.0s
VRH   Novokhopyorsk    54.38 321   eP     P      14 28 33.4 -1.0
VRH                                    pmax   pmax
      comp=Z,47nm,1.3s
ASAR  Alice Springs    55.16 136   P      P      14 28 39.3 -1.2
      comp=Z,2.1nm,0.9s,baz=314,slow=7.1,SNR=8.2
ASAR                                   LR     LR     14 56 33.8
      comp=Z,553nm,18.6s,baz=312,slow=41
      comp=Z,2.1nm,0.9s
ASAR  Alice Springs    55.16 136   P      P      14 28 38.5 -2.0
ANN   Anapa            55.65 313   eP     P      14 28 39.6 -4.1
ANN                                e*PP   pP     14 28 44.3 -5.0
ANN                                e             14 30 44.0
ANN                                eS     S      14 36 28.9 -0.2
ANN                                eSS    SS     14 40 11.0 -3.3
ANN                                    pmax   pmax
      comp=Z,31nm,1.3s
VORD  Divnogorie       55.78 320   eP     P      14 28 43.8 -0.7
VORD                                   pmax   pmax
      comp=Z,10.0nm,0.6s
VSR   Storozhevoye     55.92 321   eP     P      14 28 44.3 -1.3
VSR                                    pmax   pmax
      comp=Z,20nm,1.3s
VORR  Voronezh         56.02 321   eP     P      14 28 46.4 +0.2
VORR                                   pmax   pmax
      comp=Z,110nm,0.4s
MMAI  Mount Meron Ar   56.18 298   LR     LR     14 56 34.6
      comp=Z,748nm,20.4s,baz=258,slow=40
LPSR  Galich'ya Gora   56.44 322   eP     P      14 28 48.1 -1.1
LPSR                                   pmax   pmax
      comp=Z,10.0nm,0.6s
EIL   Elat             56.61 294   LR     LR     14 58 22.8
      comp=Z,672nm,18.0s,baz=72,slow=42
QIS   Mount Isa        57.11 129   P      P      14 28 54.4 -0.1
TIXI  Tiksi            57.69  12   P      P      14 28 55.4 -2.3
TIXI                                   IAmb   IAmb   14 28 58.9
      comp=Z,30nm,1.1s
TIXI  Tiksi            57.69  12c iP    P      14 28 55.5 -2.2
TIXI                                   pmax   pmax
      comp=Z,32nm,1.1s
MA2   Magadan          57.71  30   LR     LR     14 53 59.9
      comp=Z,783nm,19.3s,baz=248,slow=36
MA2   Magadan          57.71  30ceP    P      14 28 56.4 -1.7
MA2                                    pmax   pmax
      comp=Z,35nm,1.9s
BZK   Bozkurt          57.75 309   P      P      14 28 56.8 -1.9
BR131 Keskin Array S   57.85 306deP    P      14 28 59.9 +0.2
BR131 Keskin Array S   57.85 306   P      P      14 28 59.2 -0.4
BR131                              P      P      14 28 59.2 -0.4
BRTR  Keskin Array B   57.85 306   P      P      14 28 58.9 -0.8
      comp=Z,3.9nm,0.9s,baz=126,slow=6.3,SNR=15
BRTR                                   LR     LR     14 59 38.8
      comp=Z,516nm,18.3s,baz=114,slow=42
      comp=Z,3.9nm,0.9s
BRTR  Keskin Array B   57.85 306   P      P      14 28 58.2 -1.4
BRTR  Keskin Array B   57.85 306 i P      P      14 29 02.5 +2.8
BRTR                                   pmax   pmax
      comp=Z,4.0nm,0.9s
SIM   Simferopol'      58.00 312   P      P      14 29 03.5 +3.1
SIM                                S      S      14 36 58.6 -1.7
SIM                                    pmax   pmax
      comp=Z,26nm,1.1s
SIM                                    smax   smax
      comp=E,67nm,15.1s
SIM                                    MLR    MLR
      comp=Z,326nm,21.1s
MOS   Moscow           58.08 326   eP     P      14 28 59.1 -1.6
MOS                                e             14 29 49.5
MOS                                e             14 36 59.4
MOS                                    pmax   pmax
      comp=Z,38nm,0.6s
OBN   Obninsk          58.48 325   LR     LR     14 59 58.8
      comp=Z,216nm,18.6s,baz=109,slow=42
OBN   Obninsk          58.48 325⥣eP    P      14 29 04.1 +0.6
OBN                                e             14 29 52.7
OBN                                e             14 31 16.6
OBN                                    pmax   pmax
      comp=Z,53nm,1.7s
ANTO  Ankara           58.51 306   P      P      14 29 04.3 +0.1
ANTO                               P      P      14 29 04.3 +0.1
KLMR  Klimovskoe       58.83 332   eP     P      14 29 03.8 -2.2
KLMR                                   AMP           14 29 08.2
      comp=Z,47nm,1.4s
KLMR                               ePcP   PcP    14 29 53.9 -1.4
KLMR  Klimovskoe       58.83 332   eP     P      14 29 03.7 -2.2
KLMR                               e             14 29 53.9
KLMR                                   pmax   pmax
      comp=Z,47nm,1.4s
PETK  Petropavlovsk-   59.48  38   LR     LR     14 57 39.0
      comp=Z,1µm,18.4s,baz=260,slow=39
OPO   Ambohidratompo   59.68 236   LR     LR     14 51 02.8
      comp=Z,447nm,19.7s,baz=190,slow=32
SEY   Seymchan         59.72  26   LR     LR     14 56 54.2
      comp=Z,1µm,19.8s,baz=266,slow=38
SEY   Seymchan         59.72  26⥥eP    P      14 29 12.0  0.0
SEY                                    pmax   pmax
      comp=Z,8.0nm,1.3s
MDUB  Mudurnu          59.76 307   P      P      14 29 11.6 -1.3
ELL   Elmali           60.70 303   P      P      14 29 18.9 -0.5
ELL   Elmali           60.70 303   P      P      14 29 18.9 -0.5
ELL                                    pmax   pmax
      comp=Z,132nm,1.0s
LODK  Lodwar           60.83 264   P      P      14 29 20.2 -0.4
LODK                                   IAmb   IAmb   14 29 25.3
      comp=Z,18nm,1.5s
LODK  Lodwar           60.83 264   P      P      14 29 21.4 +0.9
AKASG Malin Array Be   61.99 319   P      P      14 29 26.1 -1.5
      comp=Z,1.1nm,0.5s,baz=73,slow=5.0,SNR=16
AKASG                                  LR     LR     15 00 56.2
      comp=Z,703nm,19.3s,baz=94,slow=40
      comp=Z,1.1nm,0.5s
AKASG Malin Array Be   61.99 319 i P      P      14 29 26.6 -1.1
AKASG                                  pmax   pmax
      comp=Z,1.0nm,0.4s
AKBB  Malin Array Si   61.99 319⥣iP    P      14 29 29.4 +1.7
AKBB                                   pmax   pmax
      comp=Z,13nm,1.1s
BALB  Balikesir        62.29 306   P      P      14 29 28.9 -1.0
SORM  Soroca           62.30 316 ⥣P     P      14 29 29.4 -0.5
SORM  Soroca           62.30 316   P      P      14 29 29.3 -0.5
INKA  Innaminka        62.45 135   P      P      14 29 31.6 +0.5
BBOO  Buckleboo        62.97 142   P      P      14 29 34.8 +0.4
      baz=63
VRI   Vrincioaia       63.27 313 ⥣P     P      14 29 36.7 +0.3
VRI   Vrincioaia       63.27 313   P      P      14 29 36.6 +0.3
MNK   Minsk            63.28 323 i P      P      14 29 33.9 -2.3
      comp=E,2.0nm,0.8s
MNK                              i P      P      14 29 33.9 -2.3
      comp=N,50nm,1.0s
MNK                              i P      P      14 29 33.9 -2.3
      comp=Z,20nm,0.8s,baz=98
MNK                              i PP     PP     14 31 50.3 -5.0
MNK                              i PPP    PPP    14 33 19.7
MNK                              i S      S      14 38 07.4 +0.1
MNK                              i SS     SS     14 42 15.3 +1.7
MNK                              i SSS    SSS    14 45 10.4
MNK                              i LQ     LQ     14 53 47.0
MNK                              i LR     LR     14 56 28.5
MNK                              i LRM    MLR    14 59 45.5
      comp=N,1µm,20.4s
MNK                              i LRM    MLR    15 00 32.0
      comp=Z,790nm,16.9s
MNK                              i LRM    MLR    15 00 35.5
      comp=E,93nm,14.3s
MNK   Minsk            63.28 323 i P      P      14 29 33.8 -2.3
MNK                              i               14 31 50.2
MNK                              i S      S      14 38 07.4 +0.1
MNK                              i SS     SS     14 42 15.2 +1.7
MNK                                    pmax   pmax
      comp=Z,20nm,0.8s
MNK                                    pmax   pmax
      comp=E,2.0nm,0.8s
MNK                                    pmax   pmax
      comp=N,50nm,1.0s
MNK                                    MLR    MLR
      comp=N,1µm,20.0s
MNK                                    MLR    MLR
      comp=Z,790nm,17.0s
MNK                                    MLR    MLR
      comp=E,93nm,14.0s
PLOR  Plostina         63.32 313 ⥣P     P      14 29 35.7 -1.0
PLOR  Plostina         63.32 313   P      P      14 29 35.7 -1.0
TESR  Tescani          63.35 314 ⥣P     P      14 29 36.4 -0.5
COVR  Voineasa-Covas   63.63 313 ⥣P     P      14 29 37.5 -1.2
MLR   Muntele Rosu     63.80 313 ⥣P     P      14 29 40.4 +0.3
MLR   Muntele Rosu     63.80 313   LR     LR     15 03 44.5
      comp=E,632nm,20.6s,baz=78,slow=42
MLR   Muntele Rosu     63.80 313   P      P      14 29 39.7 -0.3
MLR   Muntele Rosu     63.80 313   P      P      14 29 40.3 +0.3
NACGM Naroch           63.96 323   eP     P      14 29 43.0 +2.3
      comp=Z,25nm,0.9s,baz=97
RDO   Rodhopi          64.07 308   P      P      14 29 41.1 -0.6
RDO                                    IAmb   IAmb   14 29 46.1
      comp=Z,29nm,1.4s
QLP   Quilpie          64.15 132   P      P      14 29 44.9 +2.6
      comp=Z,25nm,1.8s
DOPR  Dopca            64.20 313 ⥣P     P      14 29 42.9 +0.3
BURAR Bucovina Array   64.37 315 ⥥P     P      14 29 43.4 -0.4
BURAR Bucovina Array   64.37 315   P      P      14 29 43.3 -0.4
BURAR Bucovina Array   64.37 315   P      P      14 29 43.3 -0.4
BUR08 Bucovina Ar. S   64.39 315   P      P      14 29 42.9 -0.9
IDI   Anoyia           64.82 301   LR     LR     15 04 11.9
      comp=Z,109nm,18.7s,baz=91,slow=42
IDI   Anoyia           64.82 301   P      P      14 29 46.0 -0.8
LVV   L'vov            65.24 317   eP     P      14 29 51.9 +2.7
LVV                                e             14 30 22.8
LVV                                e             14 32 12.7
LVV                                ePPP   PPP    14 33 52.0
LVV                                eS     S      14 38 34.5 +2.7
LVV                                ePS    PnS    14 38 52.9 +1.6
LVV                                eSS    SS     14 42 44.5 +0.1
LVV                                    MLR    MLR
      comp=N,400nm,19.0s
LVV                                    MLR    MLR
      comp=E,500nm,19.0s
LVV                                    MLR    MLR
      comp=Z,600nm,19.0s
FIA1  FINESS Array S   65.26 330   P      P      14 29 48.5 -0.5
FINES FINESS Array B   65.26 330   P      P      14 29 47.8 -1.2
      comp=Z,4.2nm,0.7s,baz=90,slow=5.7,SNR=12
FINES                                  LR     LR     15 03 48.2
      comp=Z,1µm,19.1s,baz=101,slow=41
      comp=Z,4.2nm,0.7s
FINES FINESS Array B   65.26 330   P      P      14 29 48.2 -0.8
FINES FINESS Array B   65.26 330 i P      P      14 29 51.0 +1.9
FINES                                  pmax   pmax
      comp=Z,4.0nm,0.7s
PABE  Paberze          65.63 324   P      P      14 29 50.2 -1.4
STKA  Stephens Creek   65.71 138   P      P      14 29 52.0 -0.4
      comp=Z,2.1nm,0.7s,baz=340,slow=8.9,SNR=4.2
STKA                                   LR     LR     15 02 10.4
      comp=Z,678nm,18.7s,baz=297,slow=39
      comp=Z,2.1nm,0.7s
STKA  Stephens Creek   65.71 138⥥eP    P      14 29 52.2 -0.3
VTS   Vitosha          65.76 309 ⥥P     P      14 29 53.7 +0.8
VTS   Vitosha          65.76 309   P      P      14 29 53.7 +0.8
MARR  Marisel-Cluj     65.79 314 ⥣P     P      14 29 52.5 -0.4
GZR   Gura Zlata       66.03 312 ⥥P     P      14 29 54.5  0.0
GZR   Gura Zlata       66.03 312   P      P      14 29 54.5  0.0
DRGR                   66.07 314 ⥣P     P      14 29 54.9 +0.2
DRGR                   66.07 314   P      P      14 29 54.9 +0.2
HERR  Herculane        66.30 312 ⥣P     P      14 29 56.1  0.0
LIT   Litokhoron       66.42 307   P      P      14 29 55.9 -1.2
LIT   Litokhoron       66.42 307   P      P      14 29 55.9 -1.2
LIT                                    pmax   pmax
      comp=Z,40nm,1.7s
MBAR  Mbarara          66.48 262   LR     LR     14 59 19.3
      comp=Z,334nm,18.2s,baz=50,slow=36
MBAR  Mbarara          66.48 262   P      P      14 29 57.1 -0.9
MBAR                                   IAmb   IAmb   14 30 03.2
      comp=Z,34nm,1.4s
MBAR  Mbarara          66.48 262⥣iP    P      14 29 59.3 +1.3
MBAR                                   pmax   pmax
      comp=Z,27nm,1.5s
MBAR  Mbarara          66.48 262   P      P      14 29 58.8 +0.8
MBAR                               P      P      14 29 58.8 +0.8
SURR  Surduc           66.48 313 ⥣P     P      14 29 57.8 +0.5
BILL  Bilibino         66.75  23   P      P      14 29 56.4 -2.1
BILL  Bilibino         66.75  23⥣iP    P      14 29 58.0 -0.6
BILL                               e             14 30 27.1
BILL                               e             14 32 23.0
BILL                             i S      S      14 39 15.2  +26
BILL                                   pmax   pmax
      comp=Z,6.0nm,1.1s
BILL                                   MLR    MLR
      comp=Z,1µm,15.0s
MDVR  Moldovita        66.80 312 ⥣P     P      14 29 59.2 -0.2
BOVS  Bovan            66.84 311 ⥣P     P      14 30 00.1 +0.5
ARCES ARCESS Array B   67.03 339   P      P      14 29 59.7 -0.6
      comp=Z,2.9nm,0.5s,baz=92,slow=6.6,SNR=18
ARCES                                  LR     LR     15 05 09.4
      comp=Z,1µm,19.0s,baz=102,slow=41
      comp=Z,2.9nm,0.5s
ARCES ARCESS Array B   67.03 339   P      P      14 29 59.8 -0.6
ARCES ARCESS Array B   67.03 339   P      P      14 29 59.8 -0.6
ARCES                                  pmax   pmax
      comp=Z,79nm,1.9s
RMQ   Roma             67.37 129   P      P      14 30 06.7 +3.5
      baz=68,SNR=5.5
RMQ   Roma             67.37 129   P      P      14 30 06.7 +3.5
PSZ   Piszkesteto      67.96 315 ⥣P     P      14 30 07.3 +0.6
PSZ   Piszkesteto      67.96 315   P      P      14 30 07.3 +0.6
CMSA  Cobar Meteorol   68.18 135   P      P      14 30 08.2  0.0
VYHS  Vyhne            68.65 316   eP     P      14 30 13.4 +2.4
VYHS  Vyhne            68.65 316   eP     P      14 30 13.4 +2.4
MORH  Mrgy, Hungar     68.89 313 ⥣P     P      14 30 12.5 +0.1
SHEM  Shemya Is, Ala   69.31  40   LR     LR     15 03 46.7
      comp=Z,322nm,19.4s,baz=282,slow=39
JAVC  Velka Javorina   69.41 316   eP     P      14 30 17.5 +1.8
MORC  Moravsky Berou   69.44 317   eP     P      14 30 17.9 +2.0
KRLC  Kraliky          69.92 318   eP     P      14 30 21.6 +2.8
KRLC                               ex     x      14 31 10.5
KRLC                                   AMS    AMS    15 05 00.0
      comp=Z,700nm,16.1s
KRLC  Kraliky          69.92 318   eP     P      14 30 21.6 +2.8
KRLC                                   MLR    MLR
      comp=Z,700nm,16.1s
VRAC  Vranov           70.09 317   LR     LR     15 06 27.1
      comp=Z,446nm,18.3s,baz=104,slow=40
VRAC  Vranov           70.09 317   eP     P      14 30 20.8 +1.0
DPC   Dobruska-Polom   70.20 318   eP     P      14 30 23.1 +2.6
DPC                                    AMS    AMS    15 05 10.0
      comp=Z,700nm,22.0s
DPC   Dobruska-Polom   70.20 318   eP     P      14 30 23.1 +2.6
DPC                                    MLR    MLR
      comp=Z,700nm,22.0s
KRUC  Moravsky         70.23 317   eP     P      14 30 21.5 +0.8
UPC   Upice            70.39 318   AMS    AMS    15 05 30.0
      comp=Z,900nm,14.0s
CONA  Conrad Observa   70.67 315   epP    P      14 30 24.5 +1.0
      comp=Z,12nm,1.3s
ARSA  Arzberg          70.96 315   epP    P      14 30 26.5 +1.3
      comp=Z,3.1nm,0.7s
SPITS Spitsbergen Ar   70.99 348   LR     LR     15 05 47.6
      comp=Z,611nm,21.0s,baz=56,slow=40
GOPC  GO Pecny, Ondr   71.22 318   AMS    AMS    15 06 00.0
      comp=Z,900nm,15.2s
HFS   Hagfors          71.23 328   LR     LR     15 06 16.3
      comp=Z,928nm,18.8s,baz=89,slow=40
PVCC  Panska Ves       71.30 318   AMS    AMS    15 05 50.0
      comp=Z,800nm,16.7s
SOKA  Soboth           71.34 314   epP    P      14 30 28.9 +1.3
      comp=Z,5.4nm,0.8s
PRU   Pruhonice        71.37 318   AMS    AMS    15 06 00.0
      comp=Z,900nm,17.1s
CKRC  Cesky Krumlov    71.62 316   AMS    AMS    15 09 00.0
      comp=Z,600nm,17.7s
BRG   Berggiesshubel   71.67 319   eP     P      14 30 31.9 +2.4
BRG                                    Amp           14 30 33.5
      comp=Z,10nm,0.9s
BRG   Berggiesshubel   71.67 319   eP     P      14 30 31.8 +2.4
BRG                                    pmax   pmax
      comp=Z,10.0nm,0.9s
BRG                                    pmax   pmax
      comp=Z,20nm,1.1s
BRG                                    MLR    MLR
      comp=Z,930nm,13.4s
BRG                                    MLR    MLR
      comp=E,830nm,19.1s
BRG   Berggiesshubel   71.67 319   eP     P      14 30 31.1 +1.7
      comp=E,10nm,0.9s,baz=82,slow=6.1
OBKA  Obir             71.69 314   epP    P      14 30 30.5 +0.7
      comp=E,9.6nm,1.1s
MOA   Molln            71.75 315   eP     P      14 30 29.4 -0.6
      comp=E,9.9nm,1.2s
GEC2  GERESS Array S   72.02 317   P      P      14 30 29.1 -2.6
GEC2                                   IAmb   IAmb   14 31 26.2
      comp=Z,18nm,1.0s
GEC2  GERESS Array S   72.02 317   eP     P      14 30 33.7 +2.0
      comp=Z,41nm,1.8s,baz=82,slow=6.1
GERES GERESS Array B   72.02 317   P      P      14 30 31.4 -0.3
      comp=Z,4.5nm,0.8s,baz=94,slow=5.5,SNR=23
GERES                                  LR     LR     15 09 41.1
      comp=Z,474nm,18.8s,baz=88,slow=42
      comp=Z,4.5nm,0.8s
GERES GERESS Array B   72.02 317   P      P      14 30 29.2 -2.5
FBE   Freiberg         72.04 319   eP     P      14 30 32.3 +0.7
      comp=Z,23nm,1.0s,baz=82,slow=6.1
KHC   Kasperske Hory   72.07 317   eP     P      14 30 33.2 +1.3
KHC                                ex     x      14 31 20.1
KHC                                    AMS    AMS    15 07 00.0
      comp=Z,700nm,18.9s
KHC   Kasperske Hory   72.07 317⥣eP    P      14 30 33.3 +1.3
KHC                                    pmax   pmax
      comp=Z,20nm,1.5s
CLL   Collm            72.22 319   eP     P      14 30 32.0 -0.7
      comp=Z,8.0nm,1.1s
CLL                                ex     x      14 31 23.0
      comp=Z,13nm,1.2s
CLL                                eS     S      14 40 01.0 +6.4
CLL                                ex     x      14 45 18.0
CLL                                ex     x      14 46 00.0
CLL                                eSSS   SSS    14 48 12.0
CLL                                eSSSS         14 49 24.0
CLL                                    AMS    AMS    15 03 00.0
      comp=N,700nm,21.6s
CLL                                    AMS    AMS    15 03 00.0
      comp=E,300nm,21.0s
CLL                                    AMS    AMS    15 08 00.0
      comp=Z,500nm,19.3s
CLL   Collm            72.22 319   eP     P      14 30 32.0 -0.7
CLL                                eS     S      14 40 01.0 +6.4
CLL                                    pmax   pmax
      comp=Z,8.0nm,1.1s
CLL                                    MLR    MLR
      comp=Z,500nm,19.3s
CLL   Collm            72.22 319   eP     P      14 30 33.5 +0.8
      comp=Z,14nm,1.4s,baz=82,slow=6.1
PRED  Cave del Predi   72.38 314   P      P      14 30 33.0 -0.8
PRED                                   IAmb   IAmb   14 31 27.7
      comp=Z,14nm,0.9s
NB2   NORSAR Subarra   72.41 329   P      P      14 30 32.4 -1.3
      comp=Z,8.7nm,1.0s,baz=87,slow=6.2
NOA   NORSAR Array B   72.41 329   P      P      14 30 32.7 -1.0
      comp=Z,3.3nm,0.8s,baz=90,slow=5.8,SNR=8.3
NOA                                    LR     LR     15 08 05.3
      comp=Z,1µm,18.2s,baz=100,slow=41
      comp=Z,3.3nm,0.8s
KBA   Koelnbreinsper   72.45 315   epP    P      14 30 35.4 +1.0
      comp=Z,8.9nm,1.1s
NC204 NORSAR Array S   72.61 330   P      P      14 30 33.8 -1.1
TANN  Tannenbergstha   72.66 318   eP     P      14 30 37.2 +1.8
      comp=Z,9.9nm,1.1s,baz=82,slow=6.1
NKC   Novy Kostel      72.68 318   AMS    AMS    15 06 50.0
      comp=Z,900nm,18.6s
WERN  Wernitzgruen     72.72 318   eP     P      14 30 38.2 +2.4
      comp=Z,13nm,1.3s,baz=82,slow=6.1
GUNZ  Gunzen           72.74 318   eP     P      14 30 37.5 +1.6
      comp=Z,41nm,1.9s,baz=82,slow=6.1
WERD  Werda            72.75 318   eP     P      14 30 38.3 +2.4
      comp=Z,12nm,1.1s,baz=82,slow=6.1
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PLN	Plauen	72.84	318	eP	P	14 30 38.8	+2.4
	comp=Z,37nm,2.0s,baz=82,slow=6.1						
ROTZ	Rotzenmuhle	72.89	318	eP	P	14 30 39.4	+2.7
	comp=Z,5.8nm,1.2s,baz=82,slow=6.1						
MANZ	Manzenberg	72.93	318	eP	P	14 30 39.4	+2.4
	comp=Z,5.0nm,1.4s,baz=82,slow=6.1						
VAE	Valguarnera	72.98	305	LR	LR	15 06 06.2	
	comp=Z,119nm,19.7s,baz=115,slow=39						
NEUB	Neuenburg	73.00	319	eP	P	14 30 40.3	+3.0
	comp=Z,35nm,1.5s,baz=82,slow=6.1						
ABTA	Abfaltersbach	73.06	314	epP	P	14 30 39.6	+1.7
	comp=Z,3.0nm,0.6s						
FDMO	Fiordimonte	73.16	311	P	P	14 30 37.3	-1.2
FDMO				IAmb	IAmb	14 30 41.9	
	comp=Z,31nm,1.1s						
CIMO	Cimolais	73.17	314	P	P	14 30 36.7	-1.8
CIMO				IAmb	IAmb	14 31 33.3	
	comp=Z,29nm,1.1s						
MOX	Moxa	73.17	319	eP	P	14 30 40.7	+2.4
	comp=Z,12nm,1.0s,baz=82,slow=6.1						
MOX				eL	L	15 08 21.5	
	comp=Z,496nm,20.8s						
FLTG	Flechtingen	73.20	320	eP	P	14 30 40.1	+1.7
	comp=Z,27nm,1.8s,baz=82,slow=6.1						
GRA1	Grafenberg Arr	73.54	318	P	P	14 30 39.6	-0.9
GRF	Grafenberg Arr	73.54	318	P	P	14 30 39.7	-0.9
GRF				pmax	pmax		
	comp=Z,19nm,0.6s						
GRF	Grafenberg Arr	73.54	318	eP	P	14 30 43.3	+2.7
	comp=Z,54nm,1.6s,baz=82,slow=6.1						
GRF				eL	L	15 07 44.1	
	comp=Z,974nm,18.6s						
GRFO	Grafenberg	73.54	318	P	P	14 30 39.6	-0.9
GRFO				IAmb	IAmb	14 33 18.1	
	comp=Z,19nm,0.6s						
GRFO	Grafenberg	73.54	318	P	P	14 30 39.7	-0.9
GRFO				pmax	pmax		
	comp=Z,19nm,0.6s						
BSEG	Bad Segeberg	73.56	322	eP	P	14 30 43.3	+2.7
	comp=Z,16nm,1.0s,baz=82,slow=6.1						
ASSE	Asse, Remlinge	73.57	320	eP	P	14 30 42.3	+1.7
	comp=Z,14nm,1.3s,baz=82,slow=6.1						
WTTA	Wattenberg	73.58	315	epP	P	14 30 42.9	+1.8
	comp=Z,11nm,1.3s						
WATA	Walderalm	73.62	315	eP	P	14 30 40.8	-0.5
	comp=Z,9.8nm,1.2s						
CLZ	Clausthal	73.79	320	eP	P	14 30 43.7	+1.7
	comp=Z,37nm,1.7s,baz=82,slow=6.1						
NRDL	Niedersach Rie	73.87	321	eP	P	14 30 45.3	+3.0
	comp=Z,58nm,1.8s,baz=82,slow=6.1						
SQTA	Sankt Quirin	73.88	315	eP	P	14 30 41.5	-1.2
	comp=Z,4.4nm,0.5s						
MOTA	Moosalm	73.93	315	i P	P	14 30 42.6	-0.5
	comp=Z,15nm,1.1s						
GTTG	Gottingen	74.08	320	eP	P	14 30 46.2	+2.5
	comp=Z,9.7nm,0.5s,baz=82,slow=6.1						
RETA	Reutte	74.14	315	epP	P	14 30 46.4	+2.2
	comp=Z,9.5nm,0.8s						
LSZ	Lusaka	74.16	248	LR	LR	15 01 22.0	
	comp=Z,1µm,18.1s,baz=113,slow=34						
LSZ	Lusaka	74.16	248	P	P	14 30 46.4	+1.6
FETA	Feichten	74.23	315	eP	P	14 30 43.8	-1.1
	comp=Z,7.3nm,1.1s						
RETH	Rethem/Aller,	74.29	321	eP	P	14 30 47.3	+2.5
	comp=Z,33nm,1.8s,baz=82,slow=6.1						
DAVA	Damuels	74.77	315	eP	P	14 30 47.1	-0.9
	comp=Z,13nm,0.8s						
DAVOX	Davos/Dischmat	74.85	315	LR	LR	15 11 34.1	
	comp=Z,506nm,18.5s,baz=78,slow=42						
TNS	Taunus Mts	75.23	318	eP	P	14 30 52.9	+2.4
	comp=Z,9.1nm,0.9s,baz=82,slow=6.1						
BFO	Black Forest	75.62	317	eP	P	14 30 55.1	+2.4
	comp=Z,24nm,1.8s,baz=82,slow=6.1						
BUG	Bochum--Univer	75.76	320	eP	P	14 30 55.6	+2.3
	comp=Z,13nm,0.9s,baz=82,slow=6.1						
AHRW	Bad Neuenahr-A	76.04	319	eP	P	14 30 57.5	+2.5
	comp=Z,19nm,1.4s,baz=82,slow=6.1						
NOR	Nord	76.16	352	i P	P	14 30 53.4	-1.8
NOR				IAmb	IAmb	14 30 57.4	
	comp=Z,11nm,1.0s						
WLF	Walferdange	76.79	318	eP	P	14 31 02.3	+3.0
	comp=Z,43nm,1.6s,baz=82,slow=6.1						
TNA	Tin City	76.93	25	P	P	14 30 59.5	-0.2
	baz=283						
KEST	Kesra	77.31	304	P	P	14 31 02.0	-0.6
	comp=Z,9.4nm,1.1s,baz=49,slow=0.3,SNR=4.9						
	comp=Z,9.4nm,1.1s						
KEST	Kesra	77.31	304	P	P	14 31 01.7	-0.9
KEST				IAmb	IAmb	14 31 06.4	
	comp=Z,23nm,1.2s						
KEST	Kesra	77.31	304	P	P	14 31 02.7	+0.1
KEST				P	P	14 31 02.7	+0.1
RDOG	Red Dog Mine	78.21	22	P	P	14 31 05.8	-1.1
	baz=287						
ANM	Nome	78.22	26	P	P	14 31 05.4	-1.6
ANM	Nome	78.22	26	P	P	14 31 05.4	-1.6
ANM				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ANM	Nome	78.22	26	P	P	14 31 06.4	-0.6
	baz=285						
JMIC	Jan Mayen	78.33	341	LR	LR	15 10 53.4	
	comp=Z,357nm,21.4s,baz=69,slow=40						
A21K	Barrow	79.19	18	P	P	14 31 10.6	-1.5
A21K				IAmb	IAmb	14 31 14.7	
	comp=Z,36nm,1.1s						
A21K	Barrow	79.19	18	P	P	14 31 11.7	-0.4
	baz=292						
DZM	Mont Dzumac	79.42	117	eLR	LR	14 55 51.2	
	comp=Z,383nm,23.4s						
NIKH	Nikolski High	79.49	38	P	P	14 31 12.6	-1.6
	baz=285						
LBTB	Lobatse	80.30	240	LR	LR	15 06 45.2	
	comp=Z,382nm,18.5s,baz=52,slow=36						
EKA	Eskdalemuir Ar	80.93	325	LR	LR	15 13 38.4	
	comp=Z,750nm,19.4s,baz=66,slow=40						
GCSA	Galena City Sc	81.62	24	P	P	14 31 25.1	-0.3
	baz=293,SNR=5.3						
F21K	Alatna River	81.87	22	P	P	14 31 26.5	-0.2
	baz=295						
D23K	Nanushuk River	82.02	20	P	P	14 31 27.0	-0.5
	baz=298						
BOSA	Boshof	82.06	237	P	P	14 31 28.4	0.0
	comp=Z,3.0nm,0.6s,baz=61,slow=4.3,SNR=6.1						
BOSA				LR	LR	15 04 14.2	
	comp=Z,283nm,19.2s,baz=36,slow=33						
	comp=Z,3.0nm,0.6s						
G21K	Allakaket	82.17	22	P	P	14 31 27.7	-0.5
	baz=296						
F22K	John River	82.20	21	P	P	14 31 28.0	-0.4
	baz=296						
C24K	Franklin Bluff	82.28	19	P	P	14 31 28.4	-0.3
	baz=299						
IMAR	Indian Mountai	82.31	23	P	P	14 31 28.8	-0.1
N16K	Nishlik Lake	82.43	29	P	P	14 31 29.5	-0.2
	baz=292						
TTA	Tatalina	82.69	26	P	P	14 31 30.8	-0.4
	baz=294						
G22K	Bettles	82.70	22	P	P	14 31 30.5	-0.5
	baz=297						
H21K	Melozitna Rive	82.80	23	P	P	14 31 30.6	-1.0
H21K				IAmb	IAmb	14 31 34.1	
	comp=Z,14nm,1.1s						
H21K	Melozitna Rive	82.80	23	P	P	14 31 31.4	-0.2
	baz=296						
E23K	Chandalar	82.80	20	P	P	14 31 31.5	-0.2
	baz=299						
COLD	Coldfoot	83.00	21	P	P	14 31 31.7	-0.9
COLD				IAmb	IAmb	14 31 35.2	
	comp=Z,25nm,1.8s						
COLD	Coldfoot	83.00	21	P	P	14 31 32.3	-0.3
	baz=298						
O16K	Kokwok River B	83.08	29	P	P	14 31 32.7	-0.4
	baz=292						
E24K	Your Creek	83.16	20	P	P	14 31 33.5	0.0
	baz=300						
D25K	Kavik River	83.18	18	P	P	14 31 33.4	-0.2
	baz=302						
H22K	Ishtalitna Cre	83.22	22	P	P	14 31 33.7	0.0
	baz=297						
C26K	Camden Bay	83.30	18	P	P	14 31 34.5	+0.5
	baz=303						
G23K	Bananza Creek	83.31	21	P	P	14 31 34.1	-0.1
	baz=299						
K20K	Telida	83.31	25	P	P	14 31 32.6	-1.7
K20K				IAmb	IAmb	14 32 22.9	
	comp=Z,25nm,1.7s						
K20K	Telida	83.31	25	P	P	14 31 34.3	0.0
	baz=295						
I21K	Tanana	83.32	23	P	P	14 31 33.5	-0.8
I21K				IAmb	IAmb	14 31 38.6	
	comp=Z,17nm,1.4s						
I21K	Tanana	83.32	23	P	P	14 31 34.3	0.0
	baz=297,SNR=5.9						
NEEM	North Greenlan	83.46	353	i P	P	14 31 35.2	0.0
NEEM				IAmb	IAmb	14 31 37.6	
	comp=Z,5.1nm,0.8s						
L19K	White Mountain	83.49	26	P	P	14 31 35.1	-0.1
	baz=295						
F24K	Squaw Lake	83.64	20	P	P	14 31 36.2	+0.2
	baz=300						
L20K	Farewell, AK	83.77	26	P	P	14 31 36.3	-0.3
	baz=296						
CHUM	Lake Minchumin	83.79	24	P	P	14 31 36.6	0.0
	baz=297						
C27K	Jago River	83.81	18	P	P	14 31 37.0	+0.3
	baz=304						
MLY	Manley	83.86	23	P	P	14 31 36.2	-0.9
MLY	Manley	83.86	23	P	P	14 31 36.7	-0.4
	baz=298,SNR=7.8						
H23K	Yukon River	83.92	22	P	P	14 31 36.7	-0.6
	baz=299						
E25K	Arctic Village	84.08	19	P	P	14 31 38.0	-0.1
	baz=302						
CAST	Castle Rocks	84.09	25	P	P	14 31 36.7	-1.5
CAST				IAmb	IAmb	14 31 40.6	
	comp=Z,13nm,1.1s						
CAST	Castle Rocks	84.09	25	P	P	14 31 38.1	-0.2
	baz=297,SNR=6.1						
Q16K	King Salmon	84.12	30	P	P	14 31 38.6	+0.1
	baz=294						
CHGN	Chignik	84.18	33	P	P	14 31 38.5	-0.3
	baz=292						
G24K	Hadweenzic Riv	84.20	21	P	P	14 31 38.5	-0.2
	baz=301						
BPAW	Bear Paw Mtn.	84.20	24	P	P	14 31 38.8	-0.1
	baz=298,SNR=8.4						
N19K	Bonanza Creek	84.23	28	P	P	14 31 39.5	+0.3
	baz=295						
PPLA	Purkeypile	84.29	25	P	P	14 31 39.6	+0.2
	baz=297						
I23K	Minto, Yukon-K	84.31	23	P	P	14 31 39.3	0.0
	baz=299,SNR=6.6						
O18K	Koktuh Hills	84.31	29	P	P	14 31 39.3	-0.2
	baz=295						
F25K	Christian Rive	84.34	20	P	P	14 31 39.6	+0.1
	baz=302						
M20K	Styx River	84.35	26	P	P	14 31 40.5	+0.8
	baz=296						
H24K	Noodor Dome	84.50	22	P	P	14 31 40.1	-0.3
	baz=301						
O19K	Port Alsworth	84.57	28	P	P	14 31 41.0	+0.3
	baz=295						
G25K	Bearman Lake	84.63	21	P	P	14 31 40.3	-0.6
	baz=302						
Q17K	Contact Creek	84.66	30	P	P	14 31 41.2	-0.2
	baz=294						
NEA2	Nenana	84.70	23	P	P	14 31 40.5	-0.8
NEA2				IAmb	IAmb	14 31 42.4	
	comp=Z,37nm,1.9s						
NEA2	Nenana	84.70	23	P	P	14 31 41.3	0.0
	baz=300						
F26K	Sheenjek River	84.76	19	P	P	14 31 41.4	-0.2
	baz=304						
BMAR	Burnt Mountain	84.77	20	P	P	14 31 41.0	-0.7
MDM	Murphy Dome	84.82	23	P	P	14 31 39.9	-2.0
SKT	Skwentna	84.98	26	P	P	14 31 41.0	-1.9
SKT				IAmb	IAmb	14 31 44.1	
	comp=Z,9.2nm,1.0s						
SKT	Skwentna	84.98	26	P	P	14 31 42.9	+0.1
	baz=298						
TCOL	CIGO, UAF Yank	85.00	23	P	P	14 31 42.7	-0.1
	baz=301						
COLA	College	85.01	23	⇓iP	P	14 31 43.3	+0.5
COLA				pmax	pmax		
	comp=Z,24nm,2.3s						
COLA	College	85.01	23	P	P	14 31 43.7	+0.9
	baz=301						
FYU	Fort Yukon	85.03	21	P	P	14 31 42.0	-0.9
FYU				IAmb	IAmb	14 31 45.9	
	comp=Z,19nm,1.1s						
POKR	Poker Plat Res	85.03	22	P	P	14 31 42.3	-0.7
	baz=301						
MCK	McKinley	85.18	24	P	P	14 31 44.3	+0.6
	baz=300,SNR=7.6						
E27K	Coleen River	85.27	18	P	P	14 31 44.7	+0.6
	baz=306						
G26K	Porcupine Rive	85.30	20	P	P	14 31 45.5	+1.3
	baz=304						
P19K	Oil Pt	85.30	28	P	P	14 31 44.0	-0.5
	baz=296						
BORG	Borgarnes	85.38	337	LR	LR	15 12 11.4	
	comp=Z,426nm,19.5s,baz=60,slow=37						
IL31		85.41	22	P	P	14 31 43.9	-0.9
IL31				IAmb	IAmb	14 31 46.7	
	comp=Z,9.5nm,1.0s						
ILAR	Eielson Array	85.41	22	P	P	14 31 43.5	-1.3
	comp=Z,3.5nm,0.8s,baz=298,slow=4.0,SNR=32						
ILAR				LR	LR	15 13 13.0	
	comp=Z,648nm,18.2s,baz=300,slow=38						
	comp=Z,3.5nm,0.8s						
PRP	Porcupine Dome	85.50	22	P	P	14 31 44.4	-1.1
PRP				IAmb	IAmb	14 31 47.9	
	comp=Z,24nm,1.1s						
PRP	Porcupine Dome	85.50	22	P	P	14 31 45.6	+0.1
	baz=303,SNR=13						
HDA	Harding Lake	85.58	23	P	P	14 31 45.8	+0.1
	baz=302						
M22K	Willow	85.68	26	P	P	14 31 44.0	-2.3
	baz=299						
WAT1	Susitna Watana	85.78	25	P	P	14 31 46.5	-0.3
	baz=300						
TULEG	Thule	85.86	356	P	P	14 31 44.5	-2.4
HOM	Homer	86.02	28	P	P	14 31 47.4	-0.6
	baz=298						
G27K	Doyon Strip	86.06	20	P	P	14 31 47.0	-1.1
	baz=306						
Q20K	Shuyak Island	86.16	29	P	P	14 31 47.9	-0.8
	baz=297						
PMR	Palmer	86.17	26	P	P	14 31 48.7	+0.1
	baz=300						
K24K	Donnelly Dome	86.34	23	P	P	14 31 48.8	-0.7
	baz=303,SNR=9.7						
OHAK	Old Harbor	86.37	31	P	P	14 31 49.1	-0.6
	baz=296						
BRSE	Bradley Lake S	86.38	28	P	P	14 31 48.4	-1.4
	baz=298						
SML	Sawmill	86.39	25	P	P	14 31 49.7	-0.2
	baz=300						
ESDC	Sonseca Array	86.40	310	P	P	14 31 49.5	-0.9
	comp=Z,2.9nm,0.9s,baz=66,slow=4.2,SNR=7.2						
ESDC				LR	LR	15 20 43.0	
	comp=Z,130nm,18.0s,baz=32,slow=43						
	comp=Z,2.9nm,0.9s						
I26K	Coal Creek Min	86.44	21	P	P	14 31 49.5	-0.5
	baz=305						
H27K	Steamboat Moun	86.45	20	P	P	14 31 50.6	+0.6
	baz=306						
KDAK	Kodiak Island	86.45	30	LR	LR	15 14 14.9	
	comp=Z,749nm,18.2s,baz=328,slow=38						
O22K	Cooper Landing	86.47	27	P	P	14 31 48.5	-1.7
	baz=299						
KNK	Knik Glacier	86.54	26	P	P	14 31 49.8	-0.8
	baz=300						
M23K	Glacier View	86.64	25	P	P	14 31 50.6	-0.5
	baz=301						
A36M	Sachs Harbour	86.70	12	P	P	14 31 49.6	-1.4
A36M				IAmb	IAmb	14 31 53.5	
	comp=Z,18nm,0.8s						
A36M	Sachs Harbour	86.70	12	P	P	14 31 51.4	+0.3
	baz=321,SNR=18						
RIDG	Independent Ri	86.72	23	P	P	14 31 50.4	-1.1
	baz=303,SNR=5.7						
J26L	Joseph Creek	86.76	22	P	P	14 31 49.9	-1.8
J26L				IAmb	IAmb	14 31 53.7	
	comp=Z,18nm,1.1s						
J26L	Joseph Creek	86.76	22	P	P	14 31 51.3	-0.3
	baz=304,SNR=11						
SEW	Seward	86.77	27	P	P	14 31 50.9	-0.8
	baz=300						
SCM	Sheep Creek Mo	86.78	25	P	P	14 31 51.8	-0.1
	baz=301						
I27K	Kandik River	86.79	21	P	P	14 31 52.1	+0.4
	baz=306,SNR=8.2						
PWL	Port Wells	86.87	26	P	P	14 31 51.9	-0.3
	baz=300						
SCRK	Sand Creek	86.91	22	P	P	14 31 50.7	-1.7
SCRK				IAmb	IAmb	14 31 55.5	
	comp=Z,12nm,1.0s						
SCRK	Sand Creek	86.91	22	P	P	14 31 52.0	-0.4
	baz=304,SNR=9.6						
PAX	Paxson	86.91	24	P	P	14 31 52.2	-0.2
	baz=303						
DOT	Dot Lake	87.06	23	P	P	14 31 52.2	-0.8
SUR	Sutherland	87.08	235	LR	LR	15 07 21.6	
	comp=Z,326nm,18.0s,baz=52,slow=33						
M24K	Tolsona, Glenn	87.10	25	P	P	14 31 52.7	-0.7
	baz=302						
HARP	HAARP	87.34	24	P	P	14 31 54.0	-0.4
	baz=303						
EGAK	Eagle	87.44	21	P	P	14 31 55.1	+0.3
	baz=307						
INK	Inuvik	87.50	16	LR	LR	15 15 24.0	
	comp=Z,501nm,20.8s,baz=306,slow=39						
INK	Inuvik	87.50	16	P	P	14 31 53.8	-1.2
INK				IAmb	IAmb	14 31 56.8	
	comp=Z,14nm,1.1s						
INK	Inuvik	87.50	16	P	P	14 31 53.8	-1.2
INK				pmax	pmax		
	comp=Z,14nm,1.1s						
INK	Inuvik	87.50	16	P	P	14 31 54.8	-0.2
	baz=313,SNR=11						
KLU	Klutina	87.53	25	P	P	14 31 55.7	+0.2
	baz=303						
K27K	Chicken	87.56	22	P	P	14 31 56.0	+0.5
	baz=306						
G30M	tAoh Zraii Nji	87.63	18	P	P	14 31 55.8	0.0
	baz=311,SNR=7.7						
L26K	Log Cabin Wild	87.68	23	P	P	14 31 55.5	-0.6
	baz=305,SNR=9.8						
EPYK	Eagle Plains	87.88	19	P	P	14 31 57.2	+0.2
	baz=310						
RES	Resolute Bay	87.93	3	LR	LR	15 13 47.0	
	comp=Z,296nm,21.3s,baz=12,slow=37						
N25K	Chitina, Valde	88.00	25	P	P	14 31 57.3	-0.4
	baz=304						
I29M	Ogilvie Camp,	88.03	20	P	P	14 31 58.1	+0.4
	baz=309						
F31M	Tsiigehtchic	88.04	17	P	P	14 31 57.0	-0.6
	baz=313,SNR=7.0						
MAW	Mawson	88.08	192	LR	LR	15 09 01.0	
	comp=Z,299nm,18.2s,baz=6.0,slow=34						
EYAK	Cordova Ski Ar	88.12	26	P	P	14 31 57.4	-0.7
	baz=303						
M26K	Nabesna, AK	88.17	23	P	P	14 31 57.7	-0.8
	baz=305						
L27K	Beaver Creek,	88.22	23	P	P	14 31 56.7	-2.0
L27K				IAmb	IAmb	14 32 01.2	
	comp=Z,13nm,1.4s						
L27K	Beaver Creek,	88.22	23	P	P	14 31 58.8	+0.2
	baz=306						
BCAR	Beaver Creek A	88.24	23	P	P	14 31 57.4	-1.3
GLB	Gilahina Butte	88.41	25	P	P	14 31 57.9	-1.7
GLB				IAmb	IAmb	14 32 02.2	
	comp=Z,12nm,1.0s						
Q23K	Middleton Isla	88.47	27	P	P	14 32 00.6	+0.8
	baz=302						
DAWY	Dawson	88.48	21	P	P	14 32 00.4	+0.5
	baz=308						
M27K	Edge Creek, AK	88.62	23	P	P	14 31 59.9	-0.8
	baz=306						
MCARA	McCarthy VSAT	88.75	24	P	P	14 32 00.8	-0.3
	baz=305						
BVCY	Beaver Creek	88.97	23	P	P	14 32 02.7	+0.5
	baz=307						
C36M	Paulatuk	89.03	13	P	P	14 32 00.6	-1.6
	baz=322,SNR=9.2						
MDT	Midelt	89.20	304	LR	LR	15 20 07.7	
	comp=Z,165nm,18.1s,baz=97,slow=41						
K29M	Barlow Dome	89.27	21	P	P	14 32 02.8	-0.9
	baz=310						
YUK3	Moose Creek	89.51	23	P	P	14 32 04.4	-0.6
	baz=307						
L29M	L29M	89.53	22	P	P	14 32 03.7	-1.1
	baz=309						
CTG	Chitna Glacier	89.66	24	P	P	14 32 04.6	-1.0
	baz=306						
M29M	Somme Creek	89.83	22	P	P	14 32 05.9	-0.4
	baz=309						
TORD	Torodi Ar. Bea	90.02	284	P	P	14 32 07.5	-0.4
	comp=Z,6.9nm,1.3s,baz=79,slow=5.2,SNR=12						
	comp=Z,6.9nm,1.3s						
M30M	Minto, Yukon	90.34	22	P	P	14 32 07.6	-1.0
	baz=310						
YUK6	Outpost Mounta	90.82	23	P	P	14 32 10.0	-1.1
	baz=309						
N30M	Aishikik Lake	90.96	23	P	P	14 32 10.8	-0.7
	baz=310						
N31M	Braeburn, Yuko	91.42	22	P	P	14 32 12.8	-0.9
	baz=311						
M31M	Drury Creek, Y	91.42	21	P	P	14 32 13.9	+0.3
	baz=313						
RPZ	Rata Peaks	91.56	135	LR	LR	15 18 06.8	
	comp=Z,699nm,18.3s,baz=278,slow=39						
FARO	Faro, Yukon	91.76	21	P	P	14 32 15.5	+0.2
	baz=314						
O30N	Mendenhall	91.78	23	P	P	14 32 14.0	-1.4
	baz=311						
P30M	Million Dollar	91.88	24	P	P	14 32 14.4	-1.4
	baz=310						
SFJD	Kangerlussuaq	92.33	347	LR	LR	15 21 24.9	
	comp=Z,778nm,18.5s,baz=32,slow=40						
PLBC	Pleasant Camp	92.54	24	P	P	14 32 17.9	-0.9
	baz=311						
N32M	Quiet Lake	92.60	21	P	P	14 32 19.5	+0.3
	baz=314						
SKAG	Skagway	92.94	23	P	P	14 32 21.5	+0.9
	baz=312						
URZ	Urewera	93.93	129	LR	LR	15 20 26.5	
	comp=Z,589nm,18.0s,baz=16,slow=39						
DLBC	Dease Lake	95.62	22	LR	LR	15 21 46.1	
	comp=Z,665nm,18.2s,baz=308,slow=39						
YKA	Yellowknife Ar	96.89	14	P	P	14 32 37.2	-1.5
	comp=Z,1.4nm,0.8s,baz=326,slow=4.1,SNR=18						
YKA				PP	PP	14 36 29.9	-3.3
	comp=Z,0.2nm,0.6s,baz=330,slow=6.6,SNR=4.3						
YKA				LR	LR	15 22 15.2	
	comp=Z,404nm,18.2s,baz=304,slow=39						
	comp=Z,1.4nm,0.8s						
YKA	Yellowknife Ar	96.89	14	i P	P	14 32 39.4	+0.8
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FRB	Frobisher Bay	98.27	353	LR	LR	15 22 24.2	
	comp=Z,294nm,19.6s,baz=14,slow=39						
PDAR	Pinedale Array	115.79	21	PKP	PKPdf	14 37 51.0	+0.3
	comp=Z,0.3nm,0.7s,baz=336,slow=2.0,SNR=4.9						
NVAR	Mina Array Bea	115.95	29	PKP	PKPdf	14 37 52.0	+0.8
	comp=Z,0.9nm,0.9s,baz=293,slow=2.6,SNR=5.6						
PPT2	Papeete2	117.91	101	eLR	LR	15 13 39.7	
	comp=Z,321nm,30.0s						
PPT2				eLR	LR	15 13 40.3	
	comp=Z,215nm,31.2s						
TBI	Tubuai	118.92	107	eLR	LR	15 14 07.9	
	comp=Z,4µm,22.2s						
TBI				eLR	LR	15 14 08.2	
	comp=Z,920nm,27.2s						
ANMO	Albuquerque	123.86	22	P	PKiKP	14 38 07.4	+0.7
	baz=334						
TUC	Tucson	124.44	27	P	PKiKP	14 38 08.4	+0.6
	baz=329						
TAOE	Nuku Hiva Isla	124.98	89	eLR	LR	15 16 56.0	
	comp=Z,128nm,24.6s						
MIAR	Mount Ida	127.64	10	P	PKPdf	14 38 13.6	+0.2
	baz=348						
TXAR	Lajitas Array	129.93	22	PKP	PKPdf	14 38 18.4	+0.3
	comp=Z,0.5nm,0.5s,baz=238,slow=1.2,SNR=9.7						
PRPB	Parauapebas	144.66	284	eP	PKPdf	14 38 45.9	+0.6
BDFB	Brasilia	145.33	267	PKPbc	PKPbc	14 38 46.1	-0.2
	comp=Z,12nm,1.0s,baz=78,slow=5.0,SNR=9.7						
IPMB	Ipameri, GO	145.77	263	eP	PKPab	14 38 49.4	+1.3
ARAG	Araguaiana, MT	148.96	268	eP	PKPdf	14 38 53.3	+0.8
BOAV	Boa Vista	149.53	308	PKPab	PKiKP	14 38 59.4	+0.2
BOAB	BOACO BROADBAN	150.37	3		PKiKP	14 39 00.6	-0.1
LPAZ	La Paz	164.61	272	eP	PKPdf	14 39 14.8	+1.6

IDC ***13*** *14:22:08.3±1.5, 8.°74S×113.°18E, $h117^{km}\pm11^{km}$, mb3.5/6, mbtmp3.9/7, Error ellipse: s-maj=48.9km s-min=16.6km az=52.0*

NEIC ***13*** *14:22:09.2±1.4, 8.°5S±0.°1×113.°53E±0.°08, $h116^{km}\pm5^{km}$, mb4.0/13, Error ellipse: s-maj=20.3km s-min=10.3km az=200.0*

DJA ***13*** *14:22:09.6±0.3, 9°S±4°×11°3E±°, $h88^{km}\pm5^{km}$, M4.2/19,* *mb4.3/5,mB4.9/1,MLv4.1/19,Mw(mB)4.1/1*

ISC 13 14:22:08.1±0.6,8°.72S±0°.06×113°.46E±0°.05,h116^{km}±6^{km}, n62,σ1^{s}43/73,mb3.8/9,Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMJI	Gumukmas	0.45	359	P	Pn	14 22 25.3	0.0
GMJI				S	Sn	14 22 37.2	-1.1
JAGI	Jajag, Banyuwa	0.73	70	Pn	Pn	14 22 27.3	0.0
JAGI				Sn	Sn	14 22 41.3	-0.6
JAGI	Jajag, Banyuwa	0.73	70	P	Pn	14 22 27.4	0.0
JAGI	Jajag, Banyuwa	0.73	70	P	Pn	14 22 27.3	0.0
JAGI				S	Sn	14 22 40.4	-1.5
BLJI	Banyuglugur	0.98	8	P	Pn	14 22 29.8	+0.2
BLJI				S	Sn	14 22 45.5	-0.4
ABJI	Asem Bagus	1.20	40	P	Pn	14 22 32.7	+0.8
ABJI				S	Sn	14 22 51.4	+1.5
IGBI	Denpasar	1.67	93	P	Pn	14 22 39.0	+1.7
DNP	Denpasar	1.74	89	P	Pn	14 22 42.5	+4.4
PWJI	Pagerwojo	1.78	293	P	Pn	14 22 39.7	+1.1
SRBI	Singaraja	1.85	70	P	Pn	14 22 40.1	+0.6
SRBI				S	Sn	14 23 03.5	0.0
GRJI	Gresik	2.04	332	P	Pn	14 22 43.3	+1.4
GRJI				S	Sn	14 23 07.7	0.0
NGJI	Ngawi	2.39	304	P	Pn	14 22 48.3	+2.0
TBJI	Tambak Boyo	2.47	320	P	Pn	14 22 49.1	+1.7
TBJI				S	Sn	14 23 19.2	+1.6
UGM	Wanagama	3.01	285	Pn	Pn	14 22 55.6	+1.1
UGM	Wanagama	3.01	285	P	Pn	14 22 56.2	+1.7
UGM	Wanagama	3.01	285	P	Pn	14 22 55.6	+1.1
UWJI	Ujung Watu	3.38	312	P	Pn	14 23 00.8	+1.5
TWSI	Taliwang, Sumb	3.39	91	P	Pn	14 23 00.1	+0.7
PLAI	Plampang	4.27	92	P	Pn	14 23 13.1	+1.9
PLAI	Plampang	4.27	92	P	Pn	14 23 12.9	+1.7
KPJI	Karang Pucung	4.69	287	P	Pn	14 23 19.2	+2.4
CMJI	Cimerak	5.04	280	P	Pn	14 23 24.1	+2.5
	41nm,1.0s,0.3nm						
BBJI	Bungbulang	5.88	282	P	Pn	14 23 34.3	+1.3
BKSI	Bulukumba	7.43	63	P	Pn	14 23 56.0	+2.1
	11nm,1.0s,0.1nm						
XMI	Christmas Isla	7.85	257	P	Pn	14 23 58.5	-1.1
CGJI	Cibinong	7.97	285	P	Pn	14 24 03.1	+1.8
	31nm,0.5s,895nm0.2nm						
CGJI	Cibinong	7.97	285	P	Pn	14 24 03.2	+1.9
MMRI	Maumere	8.68	90	Pn	Pn	14 24 12.2	+1.3
SOEI	Soe	10.72	96	Pn	Pn	14 24 39.1	+0.5
SOEI	Soe	10.72	96	P	Pn	14 24 39.5	+0.9
MNAI	Manna	11.29	292	Pn	Pn	14 24 45.5	-0.6
MNAI	Manna	11.29	292	P	Pn	14 24 45.8	-0.3
MNAI	Manna	11.29	292	P	Pn	14 24 45.6	-0.6
MBWA	Marble Bar	13.77	155	Pn	Pn	14 25 16.5	-2.0
GIRL	Giralia	13.86	177	Pn	Pn	14 25 19.4	-0.3
GIRL	Giralia	13.86	177	P	Pn	14 25 20.1	+0.5
MYKOM	Kota Tinggi	14.17	317	Pn	Pn	14 25 21.7	-2.0
PSA00	Pilbara Seismi	14.18	155	Pn	Pn	14 25 23.1	-0.7
KKM	Kota Kinabalu	14.93	11		Pn	14 25 34.3	+1.0
FITZ	Fitzroy Crossi	15.07	129	Pn	P	14 25 36.6	-0.9
KNRA	Kununurra	16.47	116	Pn	Pn	14 25 52.3	-0.2
KNRA				IAmb	IAmb	14 26 06.5	
	comp=Z,26nm,1.4s						
MTN	Manton Dam	17.84	105	P	Pn	14 26 10.1	+1.0
MTN				IAmb	IAmb	14 26 10.2	
	comp=Z,9.8nm,1.1s						
SIJI	Sorong	19.38	67	P	Pn	14 26 28.6	+1.3
	comp=Z,3.5nm,0.3s,baz=348,slow=24,SNR=4.5						
FAKI	Fak Fak	19.56	74	P	P	14 26 26.3	-0.7
FAKI				IAmb	IAmb	14 26 46.3	
	comp=Z,33nm,1.1s						
WB0	Warramunga Arr	23.04	121	P	P	14 27 04.1	+0.6
WB0				IAmb	IAmb	14 27 16.7	
	comp=Z,4.5nm,1.4s						
WRA	Warramunga Arr	23.07	121	P	P	14 27 04.8	+0.9
	comp=Z,1.0nm,0.5s,baz=298,slow=12,SNR=24						
WRA				pP	pwP	14 27 29.9	-0.6
	comp=Z,0.7nm,0.5s,baz=294,slow=12,SNR=3.2						
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	23.07	121	P	P	14 27 04.1	+0.3
WB2	Warramunga Arr	23.08	121	P	P	14 27 04.9	+1.0
WB2				IAmb	IAmb	14 27 05.5	
	comp=Z,3.3nm,0.7s						
ASAR	Alice Springs	24.57	130	P	P	14 27 19.4	+2.0
	comp=Z,1.3nm,0.4s,baz=304,slow=9.2,SNR=64						
ASAR				pP	pwP	14 27 45.0	-1.2
	comp=Z,0.9nm,0.5s,baz=305,slow=9.1,SNR=4.5						
	comp=Z,1.3nm,0.4s						
AS31	Alice Springs	24.57	130	P	P	14 27 19.4	+1.9
CRAI	Chiangrai	31.52	336	P	P	14 28 17.8	-1.6
BBOO	Buckleboo	31.81	142	P	P	14 28 23.9	+2.1
PMG	Port Moresby	33.28	94	P	P	14 28 33.1	-1.8
STKA	Stephens Creek	34.83	135	P	P	14 28 50.4	+2.3
	comp=Z,2.0nm,0.5s,baz=297,slow=7.1,SNR=8.5						
STKA				pP	pP	14 29 14.7	+1.9
	comp=Z,1.4nm,0.7s,baz=211,slow=0.6,SNR=1.9						
	comp=Z,2.0nm,0.5s						
STKA	Stephens Creek	34.83	135	P	P	14 28 50.7	+2.6
STKA				IAmb	IAmb	14 29 25.2	
	comp=Z,1.1nm,1.3s						
SONM	Songino Array	56.66	354	P	P	14 31 38.7	-0.6
	comp=Z,0.4nm,0.5s,baz=173,slow=7.0,SNR=2.0						
	comp=Z,0.4nm,0.5s						
MK31	Makanchi Array	61.85	336	P	P	14 32 14.6	-0.4
MK31				IAmb	IAmb	14 32 50.0	
	comp=Z,4.3nm,1.5s						
MKAR	Makanchi Array	61.85	336	P	P	14 32 14.9	-0.1
	comp=Z,0.4nm,0.3s,baz=149,slow=7.2,SNR=11						
	comp=Z,0.4nm,0.3s						
MKAR	Makanchi Array	61.85	336	P	P	14 32 14.5	-0.5
ZALV	Zalesovo Beam	66.96	342	P	P	14 32 47.1	-0.9
	comp=Z,0.4nm,0.3s,baz=140,slow=5.1,SNR=2.4						
	comp=Z,0.4nm,0.3s						
ZALV	Zalesovo Beam	66.96	342	P	P	14 32 47.0	-1.0
ABKAR	Akbulak array	74.25	327	P	P	14 33 31.9	-0.5

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*SSNC **13** 14:26:12.5±1.6,18°.56N×73°.91W,h3^{km}±7^{km},MD3.2, ML2.9,MW3.1*

*OSPL **13** 14:26:13.3±1.9,18°.71N×73°.85W,h0^{km}±18^{km},ML2.5*

ISC 13 14:26:10.4±2.4,18°.61N±0°.10×73°.87W±0°.06,h17^{km}±17^{km}, n11,σ1^{s}17/20,Haiti region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAPH	Port-au-Prince	1.49	93	*e*P	Pn	14 26 37.3	+0.9
PAPH				*e*S	Sb	14 26 57.1	+0.7
PAPH	Port-au-Prince	1.49	93	*i* P	Pb	14 26 37.8	+0.1
PAPH				*e*S	Sg	14 26 58.0	-0.7
PAPH				IAML		14 26 59.4	
	comp=Z,220nm,0.2s						
MASC	Masc	1.59	348	*e*P	Pb	14 26 38.6	-0.7
MASC				*e*S	Sn	14 26 57.9	-0.1
MASC				IAML		14 26 59.9	
	comp=N,58nm,0.2s						
MASC				IAML		14 27 01.1	
	comp=E,46nm,0.1s						
MASC	Masc	1.59	348	*i* P	Pb	14 26 39.1	-0.2
MASC				IAML		14 27 02.4	
	comp=Z,52nm,0.7s						
GTBY	Guantanamo Bay	1.75	318	*e*P	Pb	14 26 42.2	+0.1
GTBY				*e*S	Sb	14 27 04.2	+0.3
GTBY	Guantanamo Bay	1.75	318	*i* P	Pb	14 26 42.3	+0.2
GTBY				*e*S	Sb	14 27 04.0	+0.2
GTBY				IAML		14 27 09.5	
	comp=Z,34nm,0.8s						
LOPE2	Hotel El Peder	2.10	106	*i* P	Pb	14 26 47.7	-0.4
LOPE2				*e*S	Sb	14 27 14.3	+0.4
LOPE2				IAML		14 27 15.7	
	comp=Z,68nm,0.4s						
RCC	Rio Carpintero	2.20	309	*e*P	Pn	14 26 47.9	+1.6
RCC				*e*S	Sn	14 27 13.9	+0.9
RCC				IAML		14 27 20.2	
	comp=E,37nm,0.1s						
RCC				IAML		14 27 22.0	
	comp=N,56nm,0.2s						
SDDR	Presa de Saban	2.48	81	*i* P	Pb	14 26 53.6	-0.9
SDDR				IAML		14 27 25.4	
	comp=Z,26nm,0.4s						
LMGC	Las Mercedes	3.29	297	*e*P	Pn	14 27 02.5	+1.3
LMGC				*e*S	Sn	14 27 36.6	-3.3
LMGC				IAML		14 27 41.2	
	comp=E,59nm,0.1s						
LMGC				IAML		14 27 41.6	
	comp=N,69nm,0.1s						
CCCC	Cccc	4.48	306	*e*P	Pn	14 27 17.6	+0.1
CCCC				*e*S	Sn	14 28 07.7	-1.5
CCCC				IAML		14 28 08.4	
	comp=E,3.8nm,0.2s						
CCCC				IAML		14 28 08.9	
	comp=N,4.1nm,0.2s						

STR 13 14:27:33.5±1.8,46°N±4°×°±1°6,h0^{km},MLv1.3/3,Error ellipse: s-maj=0.0km s-min=0.0km az=99.6,preliminary, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AIGLE	Aigle	0.12	346	Pg	Pg	14 27 35.8	-0.1
AIGLE				Sg	Sg	14 27 38.1	+0.6
OGSI	Sixt	0.23	227	Pg	Pg	14 27 38.4	+0.6
OGSI				Sg	Sg	14 27 41.8	+1.0
RSL	Roselend	0.59	206	Pg	Pg	14 27 45.5	+0.6
RSL				Sg	Sg	14 27 53.1	+0.6

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*IDC **13** 14:29:47.9±1.3,17°.23N×95°.96E,h0^{km},mb3.6/5, mbtmp3.6/6,ML3.5/1,Error ellipse: s-maj=23.9km s-min=18.3km az=39.0*

ISC 13 14:29:49.5±1.3,17°.2N±0°.2×95°.9E±0°.1,h10^{km},n15, σ0^{s}82/16,mb3.8/5,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	3.17	66	Pn	Pn	14 30 38.2	-1.3
	1.4nm,0.3s,baz=249,slow=15,SNR=26						
CMAR				Pg	Pb	14 30 47.2	+1.2
	27nm,0.3s,baz=248,slow=19,SNR=24						
CMAR				Lg	Lg	14 31 25.8	
	6.9nm,0.3s,baz=248,slow=33,SNR=6.4						
	9.1nm,0.6s						
TAPN	Taplejung	12.63	325	*e*P	Pn	14 32 50.5	+0.9
	9.6nm,0.4s						
RAMN	Ramite	12.98	320	*e*P	Pn	14 32 54.2	-0.1
	9.1nm,0.3s						
JIRN	Jiri	13.74	321	*e*P	Pn	14 33 05.7	+0.9
	8.6nm,0.3s						
GUN	Gumba	14.11	321	*e*P	Pn	14 33 09.3	-0.6
	5.0nm,0.3s						
PKI	Pulchoki	14.16	319	*e*P	Pn	14 33 10.8	+0.3
	4.6nm,0.3s						
PKIN	Phulchoki	14.17	319	*e*P	Pn	14 33 11.1	+0.5
	17nm,0.4s						
GKN	Gorkha	14.95	318	*e*P	Pn	14 33 21.7	+0.6
	22nm,0.4s						
DANN	Dangsing	15.75	317	*e*P	Pn	14 33 32.2	+0.4
	8.7nm,0.4s						
PYUN	Piuthan	16.10	315	*e*P	Pn	14 33 37.7	+1.4
	15nm,0.4s						
MKAR	Makanchi Array	31.60	342	P	P	14 36 11.8	-0.7
	1.2nm,0.6s,baz=159,slow=8.8,SNR=16						
	1.2nm,0.6s						
ZALV	Zalesovo Beam	37.69	349	P	P	14 37 04.6	-0.3
	0.9nm,0.5s,baz=172,slow=8.4,SNR=4.8						
	0.9nm,0.5s						
AKTO	Aktyubinsk	44.90	326	P	P	14 38 04.0	-0.3
	1.2nm,0.6s,baz=135,slow=11,SNR=4.3						
	1.2nm,0.6s						
WRA	Warramunga Arr	52.79	133	P	P	14 39 05.0	-0.2
	0.3nm,0.8s,baz=316,slow=7.3,SNR=2.5						
	0.3nm,0.8s						
ASAR	Alice Springs	55.02	136	P	P	14 39 22.1	+0.5
	0.2nm,0.7s,baz=310,slow=6.8,SNR=1.9						
	0.2nm,0.7s						

MAN 13 14:32:15.5,13°.20N×119°.89E,h48^{km},mb4.2,ML3.0, MS2.7,5C-3D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	Lubang	0.64	33	⇓*e*P	Pn	14 32 30.2	+1.8
LUBP				*e*S	Sn	14 32 34.7	-2.9
MACP	Maragondon, Ca	1.33	37	⇑*e*P	Pn	14 32 38.3	+0.6
MACP				*e*S	Sn	14 32 50.7	-3.6
TGY	Tagaytay City	1.36	48	⇑*e*P	Pn	14 32 38.0	-0.2
LQP	Lukban	1.84	60	⇓*e*P	Pn	14 32 37.1	-7.8
LQP				*e*S	Sn	14 33 05.2	-2.0
PCPH	Palayan	2.63	26	⇑*e*P	Pn	14 32 56.6	+1.2
BALP	Baler	3.01	33	⇑*e*P	Pn	14 33 03.2	+2.4
GUIM	Jordan	3.68	134	⇑*e*P	Pn	14 33 17.0	+7.1
CNOP	Candoni, Negro	4.30	141	⇓*e*P	Pn	14 33 20.4	+1.9

NOU 13 14:32:27.5,16°.69S×167°.63E,h0^{km},MLv4.2/10,Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	1.16	153	P	Pg	14 32 49.4	-0.4
KOUNC	Koumac, New Ca	4.98	219	P	Pn	14 33 43.0	-0.6
DZM	Mont Dzumac	5.47	192	P	Pn	14 33 48.8	-1.6
NOUC	Port Laguerre	5.53	193	P	Pn	14 33 51.8	+0.7
ONTNC	Ouen Toro	5.70	191	P	Pn	14 33 53.8	+0.4
PINNC	Pines Island,	5.89	182	P	Pn	14 33 56.5	+0.4

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*NEIC **13** 14:39:04.3±2.2,35°.89N±0°.02×120°.04W±0°.03,h19^{km}±3^{km}, Error ellipse: s-maj=3.7km s-min=3.4km az=107.0*

*NCEDC **13** 14:39:04.2±1.5,35°.88N±0°.02×120°.06W±0°.02,h15^{km}±2^{km}, Mwr3.5/9,ML3.2/58(NEIC),Error ellipse: s-maj=2.6km s-min=2.4km az=172.0*

*ANF **13** 14:39:04.3±0.5,35°.85N×119°.99W,h12^{km}±2^{km},ML3.6/30, Error ellipse: s-maj=4.0km s-min=2.0km az=116.0*

*NEIC **13** 14:39:04.2,35°.88N×120°.06W,h13^{km}*

*NEIC **13** 14:39:04.2,35°.88N×120°.06W,h18^{km},Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}2.07; $M_{\theta\theta}$-1.45; $M_{\phi\phi}$-0.62; $M_{r\theta}$-1.11; $M_{\theta\phi}$0.63; $M_{\phi r}$0.68; Fault plane solution: $M_0$2.35000×10^{14} NP1:ϕ_s117.25000°, δ28.00000°,λ87.52000°. NP2:ϕ_s300.06000°,δ62.03000°, λ91.32000°. Principal axes: T 2.4741, Plg73.0000°, Azm213.0000°; N -0.2814, Plg1.0000°, Azm119.0000°; P -2.1927, Plg17.0000°, Azm29.0000°;*

ISC 13 14:39:04.3±0.9,35°.88N±0°.02×120°.05W±0°.02,h16^{km}±7^{km}, n145,σ1^{s}05/168,Central California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMRM	Maxey Ranch	0.18	237		Pg	14 39 09.0	+0.1
PSRM	Scobie Ranch	0.19	262		Pg	14 39 09.2	+0.2
PSNM	Stone Corral	0.23	245		Pg	14 39 09.6	+0.1
CTM	Castle Mountai	0.24	281		Pb	14 39 10.5	+0.1
GHC	Gold Hill	0.26	258		Pg	14 39 09.9	-0.1
PKLM	Kerr Lake	0.26	245		Pg	14 39 10.4	+0.2
TRAM	Private Proper	0.28	222		Pg	14 39 10.6	+0.2
TRAM					Sb	14 39 16.7	+1.3
PHFM	Heflinger Ranc	0.29	270		Pg	14 39 10.6	0.0
PHAM	Harlan Ranch	0.29	261		Pg	14 39 10.7	+0.1
TRAY	Twisselman Ran	0.34	191		Pb	14 39 11.8	-0.3
TRAY					Sb	14 39 17.4	+0.3
TCHL	Shandon	0.35	236		Pb	14 39 11.9	-0.3
PSTM	Stockdale Moun	0.38	277		Pg	14 39 12.2	0.0
PVCM	Vineyard Canyo	0.40	276		Pg	14 39 12.3	-0.2
PKD	Bear Valley Ra	0.41	279		Pg	14 39 12.5	-0.2
TSCN	Private Proper	0.42	216		Pb	14 39 13.2	-0.2
PPO	Portuguese Can	0.46	268		Pg	14 39 13.7	0.0
PSMM	Smith Mountain	0.48	293		Pb	14 39 14.8	+0.3
TCAS	Cass Winery, P	0.50	237		Pg	14 39 14.5	+0.1
TSCS	Shell Creek So	0.51	210		Pg	14 39 14.3	-0.2
PDRM	Domengine Ranc	0.52	330		Pb	14 39 15.1	0.0
PWMM	Westland Maint	0.56	346		Pb	14 39 16.3	+0.4
SMMC	Simmler	0.57	176		Pb	14 39 15.9	0.0
SMMC	Simmler	0.57	176	P	Pb	14 39 15.7	-0.2
	baz=355,SNR=49						
SMMC				S	Sb	14 39 24.5	+0.7
	baz=355						
CARC	Carrizo Plain	0.60	164		Pb	14 39 16.4	-0.1
VOG	Valley Oaks Go	0.69	51		Pg	14 39 17.4	-0.6
VOG	Valley Oaks Go	0.69	51	P	Pg	14 39 17.2	-0.7
	baz=231,SNR=21						
VOG				S	Sg	14 39 26.9	-0.2
	baz=231						
CRGC	Crocker Grade	0.69	158		Pb	14 39 18.1	0.0
PMPB	Monarch Peak	0.70	299		Pg	14 39 17.5	-0.6
PMPB				IAML		14 39 39.3	
	comp=N,891nm,1.0s						
PMPB				IAML		14 39 39.9	
	comp=E,823nm,1.1s						
BCH	Branch Mountai	0.70	183		Pg	14 39 17.8	-0.2
PANM	San Antonio Re	0.71	262		Pg	14 39 17.9	-0.3
RAMR	Ramage Ranch	0.71	250		Pg	14 39 17.7	-0.6
PTAM	Tassajara Cree	0.73	228		Pb	14 39 19.0	+0.3
RCTC	Rector, Farmer	0.77	57		Pg	14 39 18.6	-0.9
VES	Vestal, Richgr	0.78	93		Pg	14 39 18.5	-1.1
VES	Vestal, Richgr	0.78	93	P	Pg	14 39 18.5	-1.1
	baz=273,SNR=16						
VES				S	Sg	14 39 28.5	-1.4
	baz=273						
EFD	Emergency Oper	0.79	225		Pg	14 39 19.5	-0.3
PHSB	Hesperia Broad	0.82	266		Pb	14 39 19.7	-0.6
ARDC	Alexander Ranc	0.87	241		Pb	14 39 20.7	-0.3
MRHM	Rocky Hill	0.87	62		Pb	14 39 20.0	-1.1
DPD	Davis Peak	0.89	223		Pb	14 39 21.2	-0.2
PHCM	Hearst Castle	0.92	258		Pb	14 39 21.6	-0.4
PCCM	Crazy Canyon	0.93	283		Pb	14 39 21.1	-0.9
VPDC	Valencia Peak	0.93	227		Pb	14 39 22.0	-0.1
LRV	Little Rabbit	0.95	305		Pb	14 39 21.9	-0.7
PKM	Mcpherson Peak	1.01	169		Pb	14 39 22.9	-0.7
PKM	Mcpherson Peak	1.01	169	P	Pb	14 39 22.6	-1.0
	baz=349,SNR=23						
PKM				S	Sg	14 39 37.2	-0.1
	baz=349						
BBNM	San Benito	1.04	307		Pb	14 39 22.8	-1.2
BBGB	Big Mountain B	1.06	311		Pb	14 39 23.3	-1.1
BBGB				IAML		14 39 42.0	
	comp=N,823nm,0.7s						
BBGB				IAML		14 39 45.3	
	comp=E,782nm,0.8s						
BCW	Bitter Crk WRg	1.07	151		Pb	14 39 24.2	-0.4
BCW				IAML		14 39 46.5	
	comp=N,796nm,0.5s						
SPG2	Springville 2	1.08	73		Pb	14 39 23.2	-1.5
PMLM	Mount Lospe	1.09	205		Pb	14 39 24.1	-0.7
BAVM	Antelope Valle	1.10	314		Pb	14 39 23.8	-1.2
BSGM	Shirttail Gulc	1.11	299		Pb	14 39 23.7	-1.5
FIGC	Figueroa Mtn.	1.15	178		Pb	14 39 25.9	0.0
WASM	Alta Sierra Ca	1.22	96		Pn	14 39 25.6	-1.3
MHDM	Hidden Dam	1.24	6		Pn	14 39 25.2	-1.7
ARVC	Arvin	1.25	127		Pn	14 39 25.9	-1.2
ARVC	Arvin	1.25	127	P	Pn	14 39 26.0	-1.0
	baz=307						
ARVC				S	Sb	14 39 42.7	-0.5
	baz=307						
TEJ	El Tejon	1.28	120		Pn	14 39 25.6	-2.0
ISA	Isabella, Lake	1.30	99	P	Pn	14 39 27.0	-0.8
	baz=280,SNR=48						
ISA				S	Sb	14 39 43.6	-1.2
	baz=280						
SCZ	Santa Cruz	1.31	303		Pn	14 39 26.1	-1.8
HAST	Hastings Reser	1.32	293		Pn	14 39 26.1	-2.1
SYP	Santa Ynez Pea	1.36	178		Pn	14 39 28.6	-0.1
BSLM	Silva Ranch	1.38	311		Pb	14 39 29.9	+0.2
BVYM	Vineyard	1.40	308		Pn	14 39 28.9	-0.3
SAO	San Andreas Ge	1.43	308		Pn	14 39 28.7	-1.0
FRP	Fremont Peak	1.45	307		Pn	14 39 29.1	-0.9
MYLM	Yosemite Lake	1.53	349		Pn	14 39 29.4	-1.5
KCC	Kaiser Creek	1.55	22		Pn	14 39 31.2	-0.1
MMIM	Miami Mountain	1.55	9		Pn	14 39 30.5	-0.9
OSI	Osito Audit: C	1.67	139	P	Pn	14 39 32.9	0.0
	baz=320,SNR=16						
OSI				S	Sn	14 39 53.3	-0.7
	baz=320						
CWC	Cottonwood Cre	1.68	70		Pn	14 39 34.0	+0.7
CWC	Cottonwood Cre	1.68	70	P	Pn	14 39 33.7	+0.5
	baz=251						
CWC				S	Sb	14 39 55.4	-0.7
	baz=251						
CCAC	Calif City Air	1.81	113		Pn	14 39 34.5	-0.4
WCSM	Coso Springs S	1.85	85		Pb	14 39 37.0	-0.9
TIN	Tinemaha, Big	1.87	51		Pn	14 39 37.0	+1.2
TIN	Tinemaha, Big	1.87	51	P	Pn	14 39 36.6	+0.8
	baz=232,SNR=29						
TIN				S	Sb	14 40 00.9	-0.5
	baz=232						
MRDM	Red Cones	1.89	25		Pn	14 39 36.8	+0.7
MTUM	Tungsten Hills	1.89	39		Pn	14 39 36.9	+0.7
MDPB	Devils Postpil	1.91	24		Pn	14 39 36.1	-0.4
SCZ2	Santa Cruz Isl	1.91	170	S	Sn	14 40 00.8	+0.8
	baz=350						
OMMB	Old Mammoth Mi	1.92	26		Pn	14 39 36.3	-0.3
OMMB				IAML		14 40 04.6	
	comp=E,179nm,0.7s						
CGO	Cerro Gordo	1.93	69		Pb	14 39 38.2	-1.1
MINS	Minaret Summit	1.94	24		Pn	14 39 37.5	+0.6
MLCM	Laurel Creek C	1.95	27		Pn	14 39 37.9	+0.9
EDW2	Edwards Air Fo	1.95	120	P	Pn	14 39 36.1	-0.7
	baz=301,SNR=54						
EDW2				S	Sn	14 40 01.4	+0.4
	baz=301						
MDYM	Dry Creek	1.96	25		Pn	14 39 38.2	+1.1
MCVM	Convict Lake	1.96	29		Pn	14 39 38.1	+0.9
LRMC	Laurel Mtn Rad	1.96	101	P	Pn	14 39 37.3	+0.2
	baz=282,SNR=48						
LRMC				Sb	Sb	14 40 03.9	-0.2
	baz=282						
MGPM	Gravel Pit	1.97	27		Pn	14 39 38.3	+1.1
MMLB	Mammoth Lakes	1.97	25		Pn	14 39 38.7	+1.4
MCBM	Casa Benchmark	1.98	27		Pn	14 39 38.6	+1.2
MEMM	East Mammoth H	1.99	26		Pn	14 39 38.2	+0.7
MDCM	Deadman Creek	1.99	24		Pn	14 39 38.2	+0.6
MDRNC	Doe Ridge	2.00	29		Pn	14 39 38.8	+1.1
MFBM	Five Bridges	2.02	40		Pn	14 39 39.2	+1.4
LMCR	Lookout Mounta	2.04	25		Pn	14 39 39.5	+1.2
MLHM	Little Hot Cre	2.04	29		Pb	14 39 39.9	-1.4
POCCA	Poleta Canyon	2.05	43		Pb	14 39 40.2	-1.1
MPMC	Manual Prospec	2.08	84	Pb	Pb	14 39 40.9	-0.9
	baz=266,SNR=63						
MPMC				Sb	Sb	14 40 07.4	-0.1
	baz=266						
MCDM	Chidago Canyon	2.10	37		Pn	14 39 40.4	+1.4
DECC	Green Verdugo	2.15	139	Sb	Sb	14 40 09.6	+0.3
	baz=320						
CMB	Columbia Colle	2.16	353	Pn	Pn	14 39 39.6	-0.1
CMB				IAML		14 40 14.2	
	comp=E,119nm,0.8s						
CMB				IAML		14 40 24.1	
	comp=N,142nm,0.6s						
MRCM	Red Rock Canyo	2.17	34		Pn	14 39 41.5	+1.5
BENR	Benton	2.18	32		Pn	14 39 41.3	+1.1
CCCA	Chr Cany lake	2.21	99		Pn	14 39 40.6	+0.2
DSP	Deep Springs	2.23	48		Pn	14 39 41.2	+0.6
DSP				IAML		14 40 16.4	
	comp=N,178nm,0.7s						
DSP				IAML		14 40 24.0	
	comp=E,147nm,0.9s						
PASC	Pasadena Art C	2.29	138	Pn	Pn	14 39 40.5	-1.0
LCH	Last Change Ra	2.35	54		Pn	14 39 42.4	-0.1
LCH				IAML		14 40 19.5	
	comp=N,187nm,0.9s						
GRAC	Grapevine Rang	2.43	62	Pb	Pb	14 39 47.3	-0.3
	baz=244,SNR=19						
GRAC				Sb	Sb	14 40 18.9	+1.6
	baz=244						
BFSC	Mount Baldy Ra	2.56	129	P	Pn	14 39 44.6	-0.6
	baz=310,SNR=8.3						
QSM	Queen of Sheba	2.58	87		Pn	14 39 45.1	-0.3
QSM				IAML		14 40 29.2	
	comp=E,138nm,0.7s						
QSM				IAML		14 40 31.0	
	comp=N,145nm,0.8s						
FURC	Furnace Creek,	2.64	76	Pb	Pb	14 39 51.2	0.0
	baz=258,SNR=15						
FURC				Sb	Sb	14 40 25.0	+1.7
	baz=258						
RRX	Edison Barstow	2.69	111	Sb	Sb	14 40 26.7	+2.0
	baz=293						
GSC	Goldstone, Bar	2.70	101		Pn	14 39 46.8	-0.4
GSC	Goldstone, Bar	2.70	101	P	Pn	14 39 46.9	-0.3
	baz=283,SNR=14						
GSC				Sb	Sb	14 40 27.5	+2.3
	baz=283						
GWY	Greenwater Val	2.75	83		Pn	14 39 47.5	-0.4
GWY				IAML		14 40 46.0	
	comp=N,108nm,0.8s						
GWY				IAML		14 40 46.2	
	comp=E,106nm,1.0s						
MZP	Montezuma Peak	2.80	49		Pn	14 39 48.7	0.0
CIS	Catalina Islan	2.82	151	P	Pn	14 39 47.7	-1.0
	baz=332						
NVAR	Mina Array Bea	2.90	28	Pn	Pn	14 39 50.3	+0.4
WCT	Wildcat Mounta	2.91	71		Pn	14 39 50.5	+0.6
WCT				IAML		14 40 35.9	
	comp=N,58nm,0.6s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WCT				IAML		14 40 40.1	
	comp=E,53nm,0.8s						
NV11	**Mina Array Sit**	**2.96**	**30**		**Pn**	**14 39 51.3**	**+0.6**
SHOC	**Shoshone, Teco**	**3.06**	**89**	P	**Pn**	**14 39 51.9**	**-0.2**
	baz=271						
SHOC				Sb	**Sb**	**14 40 38.6**	**+3.1**
	baz=271						
ELS	**Elsinore Mount**	**3.10**	**135**	Pn	**Pn**	**14 39 51.8**	**-0.8**
TPH	**Tonopah**	**3.14**	**45**		**Pn**	**14 39 53.3**	**-0.1**
YERR	**Yerington**	**3.16**	**11**		**Pn**	**14 39 53.7**	**+0.1**
YERR				IAML		14 40 47.0	
	comp=N,89nm,0.7s						
HEC	**Hector,Ludlow**	**3.21**	**108**	P	**Pn**	**14 39 54.2**	**0.0**
	baz=290						
HEC				Sb	**Sb**	**14 40 42.9**	**+3.0**
	baz=290						
TPNV	**Topopah Spring**	**3.24**	**70**		**Pn**	**14 39 55.3**	**+0.6**
TPNV				IAML		14 40 48.5	
	comp=N,69nm,0.8s						
TPNV	**Topopah Spring**	**3.24**	**70**	P	**Pn**	**14 39 55.6**	**+0.9**
	baz=252,SNR=42						
TPNV				Sb	**Sb**	**14 40 44.3**	**+3.4**
	baz=252						
TUQ	**Turquoise Moun**	**3.38**	**96**	Sb	**Sb**	**14 40 47.7**	**+2.8**
	baz=279						
KVN	**Kaiserville**	**3.52**	**25**	Pn	**Pn**	**14 39 59.0**	**+0.5**
KVN				IAML		14 41 00.2	
	comp=N,29nm,1.0s						
KVN				IAML		14 41 00.4	
	comp=E,27nm,1.2s						
PFO	**Pinyon Flats O**	**3.72**	**126**		**Pn**	**14 40 01.0**	**-0.2**
PFO				IAML		14 41 06.4	
	comp=E,22nm,0.7s						
PFO	**Pinyon Flats O**	**3.72**	**126**	P	**Pn**	**14 40 01.0**	**-0.2**
	baz=308						
PFO				S	**Sn**	**14 40 44.3**	**-0.5**
	baz=308						
TPFO	**Pinon Flats**	**3.73**	**127**	S	**Sn**	**14 40 44.4**	**-0.6**
	baz=308						
GMRC	**Granite Mounta**	**3.75**	**106**	P	**Pn**	**14 40 01.8**	**+0.2**
	baz=288						
GMRC				Sb	**Sb**	**14 40 58.9**	**+3.5**
	baz=288						
PMD	**Palm Desert**	**3.75**	**125**	Pn	**Pn**	**14 40 01.8**	**+0.2**
PMD				IAML		14 41 13.3	
	comp=E,24nm,0.8s						
SHPR	**Sheep Range**	**4.00**	**80**	Pn	**Pn**	**14 40 05.8**	**+0.7**
MONP2	**Monument Peak**	**4.23**	**134**	S	**Sn**	**14 40 58.5**	**+1.1**
	baz=316						
BAR	**Barrett**	**4.24**	**138**	Pn	**Pn**	**14 40 08.1**	**-0.3**
R11A	**Troy Canyon, C**	**4.33**	**54**	Sb	**Sb**	**14 41 17.0**	**+4.8**
	baz=237						
IRM	**Iron Mountain**	**4.37**	**112**	P	**Pn**	**14 40 10.8**	**+0.6**
	baz=295						
IRM				S	**Sn**	**14 41 00.0**	**-0.8**
	baz=295						
W13A	**Hualapai Mount**	**5.09**	**97**		**Pn**	**14 40 19.8**	**-0.3**
W13A				IAML		14 41 45.1	
	comp=N,17nm,1.5s						
W13A				IAML		14 41 50.3	
	comp=E,9.2nm,0.6s						
ESJX	**Sierra Juarez**	**5.15**	**137**	Pn	**Pn**	**14 40 22.0**	**+1.1**
ESJX				IAML		14 42 15.0	
	comp=N,16nm,0.1s						
SPR3	**Spring Creek 3**	**5.51**	**54**	Pn	**Pn**	**14 40 25.8**	**-0.1**
MVU	**Marysvale**	**6.78**	**65**	Pn	**Pn**	**14 40 44.2**	**+0.9**

ROM 13 14:41:06.2±0.1**, 42°.770N**±0°.001×**13°.290E**±0°.003**, h16^{km}, ML1.2**/4**, 1C-4D, Error ellipse: s-maj=0.2km s-min=0.1km az=92.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.06**	**260**	⇓P	Pg	14 41 09.5	+0.1
T1214				S	Sg	14 41 11.8	+0.2
T1214				AML	AML		
	comp=E,184μm,0.2s						
T1214				AML	AML		
	comp=N,106μm,0.3s						
T1245	**Castelsantange**	**0.11**	**319**	⇓P	Pg	14 41 10.0	+0.1
T1245				S	Sb	14 41 12.7	0.0
T1245				AML	AML		
	comp=E,110μm,0.6s						
T1245				AML	AML		
	comp=N,186μm,0.9s						
T1245				AML	AML		
	comp=E,110μm,1.4s						
MMO1	**Montemonaco**	**0.13**	**12**	⇓P	Pb	14 41 10.2	-0.1
MMO1				S	Sb	14 41 13.0	-0.1
T1241	**Roccafluvione,**	**0.14**	**50**	P	Pb	14 41 10.3	-0.1
T1241				S	Sb	14 41 13.1	-0.1
T1241				AML	AML		
	comp=N,50μm,0.6s						
T1241				AML	AML		
	comp=E,91μm,0.2s						
T1241				AML	AML		
	comp=N,50μm,0.6s						
MC2	**Monte Cornacci**	**0.16**	**333**	⇓P	Pg	14 41 10.7	+0.1
MC2				S	Sb	14 41 13.8	-0.2
T1218	**Civita (PG)**	**0.16**	**232**	P	Pg	14 41 10.6	+0.2
T1218				S	Sb	14 41 13.8	-0.2
T1218				AML	AML		
	comp=E,174μm,0.1s						
T1218				AML	AML		
	comp=N,214μm,0.1s						
T1212	**Cascia, Frazio**	**0.18**	**264**	⇑P	Pg	14 41 10.9	+0.2
T1212				S	Sb	14 41 14.2	-0.3
T1256	**Bolognola (MC)**	**0.24**	**349**	P	Pg	14 41 11.7	+0.1
T1256				S	Sb	14 41 15.9	-0.4
RM33	**Pellescritta (**	**0.27**	**192**	P	Pg	14 41 12.2	+0.2
RM33				S	Sb	14 41 16.7	-0.3
TERO	**Teramo**	**0.27**	**122**	P	Pg	14 41 12.3	+0.2
TERO				S	Sb	14 41 16.8	-0.4
FDMO	**Fiordimonte**	**0.30**	**331**	P	Pg	14 41 12.7	0.0
FDMO				S	Sb	14 41 17.8	-0.3

ROM 13 14:41:58.4±0.4**, 42°.80N**±0°.02×**13°.04E**±0°.01**, h12^{km}**±4^{km}**, ML0.8**/3**, 3C-1D, Error ellipse: s-maj=1.8km s-min=1.4km az=188.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.05**	**172**	⇑P	Pg	14 42 01.2	+0.5
T1212				S	Sg	14 42 03.0	+0.5
T1212				AML	AML		
	comp=E,87μm,0.4s						
T1212				AML	AML		
	comp=N,97μm,0.2s						
T1212				AML	AML		
	comp=E,86μm,0.4s						
T1212				AML	AML		
	comp=N,97μm,0.2s						
T1215	**Vallo di Nera,**	**0.12**	**271**	P	Pg	14 42 02.0	+0.4
T1215				S	Sg	14 42 04.3	+0.4
T1245	**Castelsantange**	**0.12**	**64**	P	Pg	14 42 01.8	0.0
T1245				S	Sg	14 42 04.0	-0.1
T1245				AML	AML		
	comp=E,54μm,0.7s						
T1245				AML	AML		
	comp=N,44μm,0.2s						
T1245				AML	AML		
	comp=N,44μm,0.2s						
T1214	**Arquata del Tr**	**0.13**	**108**	⇑P	Pb	14 42 02.5	-0.5
T1214				S	Sg	14 42 04.8	+0.5
T1214				AML	AML		
	comp=E,54μm,1.6s						
T1214				AML	AML		
	comp=N,50μm,0.8s						
T1214				AML	AML		
	comp=E,54μm,0.4s						
MC2	**Monte Cornacci**	**0.16**	**45**	P	Pg	14 42 02.3	0.0
MC2				S	Sg	14 42 06.5	+1.6
FDMO	**Fiordimonte**	**0.24**	**9**	⇓P	Pg	14 42 03.4	-0.1
APEC	**Apecchio**	**0.88**	**329**	⇑P	Pg	14 42 15.2	-0.2
CAFI	**Castiglion Fio**	**0.94**	**304**	S	Sg	14 42 28.5	-0.5
CAFI				AML	AML		
	comp=E,20μm,1.4s						
CAFI				AML	AML		
	comp=N,19μm,1.3s						

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*NNC **13** 14:47:23.7±9.8, 37°.09N×70°.54E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=90.3km s-min=64.4km az=145.0*

ISC 13 14:47:24.0±3.3**, 36°.8N**±0°.2×**70°.4E**±0°.1**, h100^{km}, n10, σ2^{s}47**/13**, 4C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.91**	**24**	P	**Pn**	**14 48 50.7**	**+1.4**
	SNR=25						
AML	**Almayashu**	**5.91**	**24**	⇑P	**Pn**	**14 48 50.5**	**+1.2**
	0.7nm,0.5s						
AML				⇓S	**Sn**	**14 49 50.5**	**-5.3**
	1.7nm,0.6s						
UCH	**Uchtor**	**6.29**	**29**	P	**Pn**	**14 48 55.5**	**+1.0**
	SNR=11						
KK31	**Karatay Array**	**6.31**	**1**	⇑P	**Pn**	**14 48 55.5**	**+1.1**
	0.6nm,0.3s						
KK31				⇑S	**Sn**	**14 50 07.0**	**+2.1**
	2.0nm,0.4s						
EKS2	**Erkin-Say**	**6.41**	**23**	P	**Pn**	**14 48 57.5**	**+1.6**
	SNR=10						
AAK	**Ala-Archa**	**6.63**	**27**	P	**Pn**	**14 49 01.0**	**+2.0**
	SNR=5.9						
TKM2	**Tokmak 2**	**7.31**	**31**	P	**Pn**	**14 49 09.1**	**+0.9**
	SNR=6.9						
TKM2	**Tokmak 2**	**7.31**	**31**	⇓P	**Pn**	**14 49 07.5**	**-0.6**
	3.2nm,0.5s						
TKM2				⇑S	**Sn**	**14 50 31.8**	**+2.2**
	3.1nm,1.0s						
AB31	**Akbulak array**	**14.60**	**332**	P	**Pn**	**14 50 42.8**	**-2.6**
	0.2nm,0.3s,baz=149,slow=11,SNR=16						
AKTO	**Aktyubinsk**	**16.30**	**331**	⇓P	**P**	**14 51 09.5**	**+1.7**
	1.4nm,0.8s						

IDC 13 14:50:53.2±7.5**, 17°.43S×177°.50E, h0^{km}, mb3.8**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=337.6km s-min=37.4km az=144.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.88**	**259**	P	P	14 58 36.6	-0.8
	0.3nm,0.4s,baz=97,slow=8.4,SNR=7.6						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**41.17**	**254**	P	P	14 58 40.2	+0.5
	1.9nm,0.4s,baz=80,slow=8.9,SNR=90						
	1.9nm,0.4s						
ILAR	**Eielson Array**	**86.35**	**14**	P	P	15 03 36.8	0.0
	0.7nm,1.1s,baz=208,slow=5.6,SNR=4.4						
	0.7nm,1.1s						

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*ISK **13** 15:02:31.9, 36°.96N×36°.01E, h6^{km}, ML2.6/12*

*DDA **13** 15:02:32.3±0.0, 36°.96N×36°.09E, h17^{km}±3^{km}, ML2.6*

ISC 13 15:02:31.9±1.2**, 36°.96N**±0°.03×**36°.07E**±0°.03**, h5^{km}**±12^{km}**, n24, σ0^{s}48**/33**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YURE	**YUREGIR**	**0.37**	**248**	P	**Pb**	**15 02 40.8**	**-0.2**
KAMA	**Osmaniye**	**0.53**	**65**	P	**Pg**	**15 02 42.1**	**+0.1**
KAMA				S	**Sg**	**15 02 48.2**	**-0.8**
KAMA				*i* AML	AML	15 02 49.0	
	comp=N,290nm,0.2s						
KOZT	**Kozan**	**0.55**	**340**	Pg	**Pg**	**15 02 42.9**	**+0.5**
AKO	**Adana**	**0.70**	**315**	P	**Pb**	**15 02 46.2**	**-0.3**
RHAN	**Hatay/Reyhanl**	**0.82**	**148**	P	**Pb**	**15 02 48.8**	**+0.1**
RHAN				S	**Sb**	**15 03 00.5**	**+0.5**
KMRS	**Kahramanmaras**	**0.86**	**51**	Pg	**Pb**	**15 02 49.7**	**+0.5**
KARA	**Karaisali**	**0.86**	**290**	Pg	**Pg**	**15 02 47.8**	**-0.6**
KAHM	**Kahramanmaras,**	**0.92**	**53**	P	**Pb**	**15 02 50.5**	**+0.2**
KAHM				S	**Sb**	**15 03 02.5**	**-0.3**
YAYL	**Yayladag**	**0.93**	**178**	Pg	**Pb**	**15 02 50.3**	**-0.2**
GAZ	**Gaziantep**	**0.94**	**77**	Pg	**Pb**	**15 02 50.9**	**+0.3**
SAIM	**ADANA**	**1.01**	**1**	P	**Pn**	**15 02 52.8**	**0.0**
GZT	**Gaziantep**	**1.26**	**71**	P	**Pn**	**15 02 56.4**	**+0.2**
GZT				S	**Sb**	**15 03 12.6**	**-0.1**
GZT				*i* AML	AML	15 03 14.0	
	comp=E,183nm,0.7s						
GZT				*i* AML	AML	15 03 16.0	
	comp=N,110nm,0.3s						
NZIP	**Nizip/Gaziante**	**1.29**	**86**	P	**Pg**	**15 02 56.8**	**+0.2**
NZIP				S	**Sg**	**15 03 13.5**	**+0.2**
NZIP				*i* AML	AML	15 03 16.0	
	comp=E,104nm,0.4s						
NZIP				*i* AML	AML	15 03 17.0	
	comp=N,129nm,0.8s						
SARI	**SarD1z-Kayseri**	**1.47**	**11**	Pn	**Pb**	**15 02 59.7**	**0.0**
SARI				Sn	**Sg**	**15 03 20.0**	**+1.0**
AKCA	**Adyaman/G¶l**	**1.54**	**57**	P	**Pn**	**15 03 00.2**	**+0.2**
AKCA				S	**Sn**	**15 03 20.2**	**-0.1**
AKCA				*i* AML	AML	15 03 24.0	
	comp=E,71nm,0.4s						
AKCA				*i* AML	AML	15 03 25.0	
	comp=N,81nm,0.4s						
KIZK	**Mersin**	**1.62**	**253**	Pn	**Pn**	**15 03 00.9**	**-0.1**
AZEY	**Adyaman-Merk**	**1.93**	**63**	P	**Pn**	**15 03 05.6**	**+0.2**
AZEY				S	**Sg**	**15 03 34.2**	**+0.2**
DARE	**Darende-Malaty**	**1.96**	**35**	Pn	**Pb**	**15 03 07.2**	**-0.8**
GULA	**Gulagac**	**2.00**	**314**	Pn	**Pn**	**15 03 06.6**	**+0.2**
SURC	**SANLIURFA_SURC**	**2.04**	**92**	P	**Pg**	**15 03 10.9**	**-0.1**
SURC				S	**Sb**	**15 03 35.0**	**-0.1**
SURC				*i* AML	AML	15 03 40.0	
	comp=N,54nm,0.6s						
SURC				*i* AML	AML	15 03 45.0	
	comp=E,50nm,0.5s						
IKL	**Isikli**	**2.05**	**250**	Pn	**Pn**	**15 03 07.2**	**+0.3**
URFA	**Urfa**	**2.25**	**77**	Pn	**Pb**	**15 03 11.5**	**-1.5**
TEKE	**Tekeli-Mersin**	**2.51**	**252**	Pn	**Pn**	**15 03 13.7**	**+0.4**
HDMB	**Hadim**	**2.87**	**271**	Pn	**Pn**	**15 03 18.9**	**+0.5**

IDC 13 15:05:53.4±357.0**, 64°.18N×24°.00E, h0^{km}, Error ellipse: s-maj=149.8km s-min=102.5km az=163.0, Finland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I37NO	**I37NO**	**5.36**	**339**	I	I	15 41 50.0	
	baz=157,slow=326,SNR=1.0						
I43RU	**DUBNA INFRASON**	**9.91**	**133**	I	I	16 06 30.0	
	baz=329,slow=322,SNR=0.5						
I31KZ	**AKTYUBINSK INF**	**22.62**	**111**	I	I	17 23 23.2	
	baz=327,slow=322,SNR=3.1						

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*SJA **13** 15:05:51.8±0.8, 30°.43S×71°.58W, h17^{km}±3^{km}, ML5.4, MW5.0, Hypocentre not reviewed by the ISC*

*NEIC **13** 15:05:54.8, 30°.42S×71°.47W, h34^{km}*

*VAO **13** 15:05:54.8±0.3, 30°.44S×71°.29W, h34^{km}, mb5.5*

*MOS **13** 15:05:54.2±1.2, 30°.37S×71°.12W, h43^{km}, mb5.5/22, Error ellipse: s-maj=14.5km s-min=6.9km az=97.4*

*GUC **13** 15:05:55.7±0.8, 30°.44S×71°.33W, h51^{km}±2^{km}, ML5.3*

*NEIC **13** 15:05:56.1, 30°.53S×71°.64W, h60^{km}, Moment Tensor Solution. Duration: 1^{s}9 Moment tensor: Scale 10^{16}Nm; M_{rr}5.86; $M_{\theta\theta}$1.15; $M_{\phi\phi}$-7.00; $M_{r\theta}$0.28; $M_{\theta\phi}$1.07; $M_{\phi r}$-0.43; Fault plane solution: $M_0$6.52000×10^{16} NP1: ϕ_s169.86000°, δ47.10000°, λ86.17000°. NP2: ϕ_s355.48000°, δ43.03000°, λ94.11000°. Principal axes: T 5.8829, Plg87.0000°, Azm29.0000°; N 1.2747, Plg3.0000°, Azm172.0000°; P -7.1576, Plg2.0000°, Azm263.0000°;*

*NEIC **13** 15:05:56.1, 30°.43S×71°.41W, h60^{km}*

*NEIC **13** 15:05:56±1.6, 30°.43S±0°.04×71°.40W±0°.08, h46^{km}±3^{km}, mb5.3/352, Mwr5.1/66, Mww5.1/21, Mwr5.3(GUC), Error ellipse: s-maj=9.3km s-min=6.2km az=93.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}5.02; $M_{\theta\theta}$-0.28; $M_{\phi\phi}$-4.74; $M_{r\theta}$0.29; $M_{\theta\phi}$0.54; $M_{\phi r}$-2.09; Fault plane solution: $M_0$5.35000×10^{16} NP1: ϕ_s172.79000°, δ56.64000°, λ89.51000°. NP2: ϕ_s353.68000°, δ33.36000°, λ90.74000°. Principal axes: T 5.4575, Plg78.0000°, Azm81.0000°; N -0.2190, Plg0.0000°, Azm173.0000°; P -5.2385, Plg12.0000°, Azm263.0000°;*

*GCMT **13** 15:05:59.0±0.2, 30°.52S±0°.01×71°.50W±0°.02, h48^{km}, MW5.1/98, Moment Tensor Solution. s90,c114; s98,c142; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.96±.15; $M_{\theta\theta}$0.13±.12; $M_{\phi\phi}$-6.09±.12; $M_{r\theta}$0.51±.09; $M_{\theta\phi}$0.49±.09; $M_{\phi r}$-2.50±.12; Best double couple: $M_0$6.56100×10^{16} NP1: ϕ_s173.00000°, δ56.00000°, λ87.00000°. NP2: ϕ_s358.00000°, δ34.00000°, λ95.00000°. Principal axes: T 6.4840, Plg78.0000°, Azm71.0000°; N 0.1540, Plg3.0000°, Azm174.0000°; P -6.6380, Plg11.0000°, Azm265.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **13** 15:06:00.5±1.9, 30°.47S×71°.26W, h93^{km}±16^{km}, mb4.9/18, mbtmp5.2/21, MS4.3/32 Error ellipse: s-maj=18.4km s-min=10.7km az=62.0*

ISC 13 15:05:55.4±0.3**, 30°.45S**±0°.02×**71°.38W**±0°.04**, h49^{km}**±2^{km}**, h49^{km}:pP-P, n902, σ1^{s}28**/831**, mb5.3**/231**, MS4.5**/35**, 47C-18D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.31**	**224**		**Pn**	**15 06 04.9**	**+0.3**
CO06	**Fray Jorge**	**0.31**	**224**	*e*P	**Pn**	**15 06 05.1**	**+0.5**
CO05	**La Serena**	**0.54**	**13**		**Pn**	**15 06 07.5**	**+0.3**
CO05	**La Serena**	**0.54**	**13**	*e*P	**Pn**	**15 06 07.5**	**+0.3**
CO05				*i* S	**Sn**	**15 06 15.9**	**+0.4**
CO05				IAML		15 06 18.6	
	comp=N,91μm,0.7s						
GO04	**Tololo Observa**	**0.57**	**61**		**Pn**	**15 06 07.7**	**-0.1**
GO04	**Tololo Observa**	**0.57**	**61**	⇓*i*P	**Pn**	**15 06 07.9**	**+0.1**
GO04				*i* S	**Sn**	**15 06 16.6**	**0.0**
GO04	**Tololo Observa**	**0.57**	**61**	*e*P		15 06 07.7	
GO04				*e*S		15 06 16.9	
CO03	**El Pedregal**	**0.71**	**123**		**Pn**	**15 06 09.7**	**+0.3**
CO03	**El Pedregal**	**0.71**	**123**	*e*P	**Pn**	**15 06 09.4**	**0.0**
CO03				*i* S	**Sn**	**15 06 19.6**	**0.0**
CO03	**El Pedregal**	**0.71**	**123**	*e*P		15 06 09.2	
CO03				*e*S		15 06 19.9	
CO03				IAML		15 06 21.9	
	comp=Z,89μm,0.3s						
CO02	**Combarbal**	**0.82**	**157**		**Pn**	**15 06 10.8**	**-0.1**
CO02	**Combarbal**	**0.82**	**157**	⇑*i*P	**Pn**	**15 06 11.1**	**+0.2**
CO02				*i* S	**Sn**	**15 06 22.5**	**+0.4**
CO02				IAML		15 06 23.4	
	comp=E,291μm,0.2s						
CO02	**Combarbal**	**0.82**	**157**	*e*S		15 06 22.8	
CO02				IAML		15 06 23.2	
	comp=Z,150μm,0.8s						
CO01	**Juntas del Tor**	**1.21**	**67**		**Pn**	**15 06 16.7**	**+0.5**
CO01	**Juntas del Tor**	**1.21**	**67**	⇓*i*P	**Pn**	**15 06 17.1**	**+0.9**
CO01				*i* S	**Sn**	**15 06 32.1**	**+0.5**
CO01				IAML		15 06 34.1	
	comp=N,91μm,0.3s						
CO01	**Juntas del Tor**	**1.21**	**67**	*e*P		15 06 16.9	
CO01				*e*S		15 06 32.8	
CO01				IAML		15 06 36.2	
	comp=Z,38μm,0.7s						
LCO	**Las Campanas**	**1.55**	**23**		**Pn**	**15 06 21.2**	**+0.3**
LCO	**Las Campanas**	**1.55**	**23**	*e*P	**Pn**	**15 06 21.2**	**+0.3**
LCO				*i* S	**Sn**	**15 06 40.8**	**+0.8**
LCO	**Las Campanas**	**1.55**	**23**	P	**Pn**	**15 06 21.2**	**+0.3**
LCO	**Las Campanas**	**1.55**	**23**	*e*P		15 06 21.2	
LCO				*e*S		15 06 41.1	
LCO				IAML		15 06 44.6	
	comp=Z,185μm,0.3s						
AC05	**El Transito**	**1.87**	**31**		**Pn**	**15 06 26.4**	**+1.2**
AC05	**El Transito**	**1.87**	**31**	⇓*i*P	**Pn**	**15 06 26.4**	**+1.2**
AC05				*e*S	**Sn**	**15 06 49.2**	**+1.4**
AC05				IAML		15 06 56.4	
	comp=N,45μm,0.7s						
AC05	**El Transito**	**1.87**	**31**	*e*P		15 06 26.6	
AC05				*e*S		15 06 52.4	
AC05				IAML		15 06 58.5	
	comp=Z,31μm,0.6s						
VA06	**Catapilco**	**2.11**	**178**	Pn	**Pn**	**15 06 29.2**	**+1.0**
VA06	**Catapilco**	**2.11**	**178**	*e*P	**Pn**	**15 06 29.4**	**+1.2**
VA06				IAML		15 07 05.2	
	comp=E,34μm,0.5s						
RTLS	**Leoncito**	**2.24**	**128**	*e*P		15 06 33.4	
RTLS				*e*S		15 07 02.0	
RTLS				IAML		15 07 08.2	
	comp=Z,29μm,0.3s						
AC04	**Llanos de Chal**	**2.25**	**7**		**Pn**	**15 06 31.3**	**+1.0**
AC04	**Llanos de Chal**	**2.25**	**7**	⇑*i*P	**Pn**	**15 06 31.2**	**+1.0**
AC04				*i* S	**Sn**	**15 06 58.2**	**+1.4**
AC04				IAML		15 07 16.3	
	comp=E,16μm,0.4s						
AC04	**Llanos de Chal**	**2.25**	**7**	*e*P		15 06 31.1	
AC04				*e*S		15 07 05.0	
AC04				IAML		15 07 07.5	
	comp=Z,15μm,0.6s						
VA03	**San Esteban**	**2.41**	**163**		**Pn**	**15 06 33.7**	**+1.2**
VA03	**San Esteban**	**2.41**	**163**	*e*P	**Pn**	**15 06 33.9**	**+1.3**
VA03				*i* S	**Sn**	**15 07 03.2**	**+2.3**
VA03				IAML		15 07 09.5	
	comp=E,38μm,0.6s						
VA03	**San Esteban**	**2.41**	**163**	*e*P		15 06 33.9	
VA03				*e*S		15 07 08.4	
VA03				IAML		15 07 11.3	
	comp=Z,14μm,0.7s						
ROCH	**El Roble**	**2.54**	**173**	*e*P	**Pn**	**15 06 35.6**	**+1.2**
ROCH				⇑*i*P	**Pn**	**15 06 35.5**	**+1.2**
ROCH				*i* S	**Sn**	**15 07 06.3**	**+2.2**
ROCH				*i* S	**Sn**	**15 07 07.0**	**+2.9**
ROCH				IAML		15 07 15.6	
	comp=N,17μm,0.6s						
ROCH				IAML		15 07 18.7	
	comp=E,15μm,0.4s						
ROC1	**El Roble**	**2.54**	**173**		**Pn**	**15 06 35.6**	**+1.2**
ROC1	**El Roble**	**2.54**	**173**	*e*P		15 06 35.7	
ROC1				*e*S		15 07 10.6	
ZON	**Zonda**	**2.56**	**116**		**Pn**	**15 06 37.1**	**+2.5**
ZON	**Zonda**	**2.56**	**116**	P	**Pn**	**15 06 37.1**	**+2.5**
ZON	**Zonda**	**2.56**	**116**	*e*P		15 06 37.2	
ZON				*e*S		15 07 10.9	
ZON				IAML		15 07 21.0	
	comp=Z,11μm,0.5s						
VA01	**Torpederas**	**2.58**	**185**		**Pn**	**15 06 34.9**	**+0.3**
VA01	**Torpederas**	**2.58**	**185**	*e*P	**Pn**	**15 06 35.4**	**+0.7**
VA01				IAML		15 07 17.2	
	comp=E,18μm,0.9s						
VA01	**Torpederas**	**2.58**	**185**	*e*P		15 06 35.0	
SJA	**San Juan**	**2.65**	**115**	*e*P		15 06 38.0	
SJA				IAML		15 07 24.1	
	comp=Z,8μm,0.3s						
PEL	**Peldehue**	**2.75**	**168**		**Pn**	**15 06 38.9**	**+1.8**
PEL	**Peldehue**	**2.75**	**168**	*e*P	**Pn**	**15 06 38.4**	**+1.3**
PEL				*i* S	**Sn**	**15 07 11.6**	**+2.4**
PEL	**Peldehue**	**2.75**	**168**	P	**Pn**	**15 06 38.9**	**+1.8**
PEL	**Peldehue**	**2.75**	**168**	*e*P		15 06 39.5	
PEL				*e*S		15 07 18.8	
MT02	**Curacav**	**2.81**	**176**		**Pn**	**15 06 38.7**	**+0.8**
MT02	**Curacav**	**2.81**	**176**	*e*P	**Pn**	**15 06 38.9**	**+1.0**
MT02				*i* S	**Sn**	**15 07 12.0**	**+1.5**
MT02				IAML		15 07 24.4	
	comp=N,7μm,0.6s						
MT02	**Curacav**	**2.81**	**176**	*e*P		15 06 39.5	
MT02				*e*S		15 07 20.7	
MT02				IAML		15 07 24.3	
	comp=Z,6μm,0.5s						
MT10	**Hacienda Santa**	**2.91**	**166**	*e*P	**Pn**	**15 06 40.8**	**+1.5**
MT10				*i* S	**Sn**	**15 07 17.3**	**+4.2**
CFA	**Coronel Fontan**	**2.93**	**114**	P	**Pn**	**15 06 42.1**	**+2.4**
	comp=Z,3μm,0.4s,baz=301,slow=13,SNR=1131						
CFA				S	**Sn**	**15 07 18.4**	**+4.7**
	comp=Z,11μm,0.5s,baz=75,slow=16,SNR=15						
CFA	**Coronel Fontan**	**2.93**	**114**	*e*P		15 06 42.7	
CFA				*e*S		15 07 20.9	
CFA				IAML		15 07 25.5	
	comp=Z,12μm,0.4s						
MT05	**Renca**	**2.98**	**170**	Pn	**Pn**	**15 06 42.1**	**+1.8**
MT05	**Renca**	**2.98**	**170**	*e*P	**Pn**	**15 06 42.2**	**+1.8**
MT05				*e*S	**Sn**	**15 07 17.1**	**+2.2**
MT05				IAML		15 07 25.7	
	comp=N,19μm,0.4s						
MT05	**Renca**	**2.98**	**170**	*e*P		15 06 42.3	
MT05				*e*S		15 07 23.4	
MT05				IAML		15 07 35.6	
	comp=Z,9μm,0.7s						
GO03	**Copiap**	**3.02**	**20**		**Pn**	**15 06 41.6**	**+0.8**
GO03	**Copiap**	**3.02**	**20**	⇑*i*P	**Pn**	**15 06 41.6**	**+0.8**
GO03				*i* S	**Sn**	**15 07 18.0**	**+2.2**
GO03	**Copiap**	**3.02**	**20**	*e*P		15 06 41.0	
ASAL	**Salagasta**	**3.05**	**135**	*e*P		15 06 44.8	
MT03	**Universidad Ad**	**3.12**	**167**		**Pn**	**15 06 44.0**	**+1.7**
MT03	**Universidad Ad**	**3.12**	**167**	*e*P	**Pn**	**15 06 44.6**	**+2.3**
MT03				*e*S	**Sn**	**15 07 21.4**	**+3.0**
MT03	**Universidad Ad**	**3.12**	**167**	*e*P		15 06 44.6	
MT03				*e*S		15 07 28.7	
MT03				IAML		15 07 40.3	
	comp=Z,13μm,0.7s						
MT04	**Ro Olivares**	**3.13**	**161**	*e*P	**Pn**	**15 06 45.1**	**+2.6**

Sta	Name	Dist	Az	Phase	ISC phase	Time	Res
MT04				i S	Sn	15 07 24.7	+5.9
ARCO	CERRO ARCO	3.17	139	eP		15 06 47.0	
ARCO				eS		15 07 33.2	
MT08	Bocatoma Ro	3.20	159	eP	Pn	15 06 46.4	+2.9
MT08				i S	Sn	15 07 27.7	+7.1
VA05	Santo Domingo	3.21	183		Pn	15 06 43.3	0.0
VA05	Santo Domingo	3.21	183	eP	Pn	15 06 43.7	+0.4
VA05				i S	Sn	15 07 22.7	+2.5
MT09	Talagante	3.33	174		Pn	15 06 46.5	+1.3
MT09	Talagante	3.33	174	eP	Pn	15 06 46.7	+1.5
MT09				i S	Sn	15 07 25.5	+1.8
MT09				IAML		15 07 37.8	
MT12	Pirque	3.35	168	eP	Pn	15 06 46.9	+1.5
MT12				i S	Sn	15 07 26.0	+2.1
MT01	Popeta	3.41	178		Pn	15 06 47.2	+1.2
MT01	Popeta	3.41	178	eP	Pn	15 06 47.2	+1.2
MT01				eS	Sn	15 07 26.2	+0.9
MT01	Popeta	3.41	178	eP		15 06 47.7	
MT01				eS		15 07 34.0	
MT01				IAML		15 07 39.9	
	comp=Z,8µm,0.6s						
AAGR	Agrelo	3.41	141	eP		15 06 49.0	
MT13	San Alfonso	3.41	164		Pn	15 06 48.7	+2.4
MT13	San Alfonso	3.41	164	eP	Pn	15 06 49.2	+2.9
MT13				eS	Sn	15 07 27.2	+1.6
LMEL	Las Melosas	3.53	164		Pn	15 06 50.3	+2.3
LMEL	Las Melosas	3.53	164	⇑iP	Pn	15 06 50.6	+2.6
LMEL				i S	Sn	15 07 29.6	+1.0
BO01	Tunca	3.94	176		Pn	15 06 54.3	+0.9
BO01	Tunca	3.94	176	eP	Pn	15 06 54.2	+0.9
BO01				i S	Sn	15 07 39.1	+0.8
BO01	Tunca	3.94	176	eP		15 06 54.6	
BO01				IAML		15 07 53.6	
	comp=Z,3µm,1.1s						
BO03	Pichilemu	4.07	187	⇓iP	Pn	15 06 54.4	-0.7
TINO	Tinogasta	4.09	55	eP		15 06 58.7	
TINO				eS		15 07 56.2	
AC02	Maricunga	4.11	29	Pn	Pn	15 06 57.0	+0.8
AC02	Maricunga	4.11	29	eP	Pn	15 06 57.4	+1.2
AC02				eS	Sn	15 07 43.2	0.0
AC02	Maricunga	4.11	29	eP		15 06 58.2	
AC02				IAML		15 07 59.4	
	comp=Z,7µm,0.9s						
AC01	Pan de Azucar	4.34	9		Pn	15 06 57.6	-1.3
AC01	Pan de Azucar	4.34	9	⇑iP	Pn	15 06 57.8	-1.2
AC01	Pan de Azucar	4.34	9	eP		15 06 57.7	
AC01				eS		15 08 06.0	
BO02	Sierra Bellavi	4.36	174		Pn	15 07 00.3	+1.1
BO02	Sierra Bellavi	4.36	174	⇓iP	Pn	15 07 00.6	+1.4
BO02				eS	Sn	15 07 49.4	+0.6
BO02	Sierra Bellavi	4.36	174	eP		15 07 00.6	
BO02				IAML		15 08 01.2	
	comp=Z,5µm,0.8s						
H03N1	Juan Fernandez	7.06	243	T	T	15 14 41.0	
	baz=72,slow=72						
H03N2	Juan Fernandez	7.08	243	T	T	15 14 33.9	
	baz=72,slow=72						
H03N3	Juan Fernandez	7.08	243	T	T	15 14 27.2	
	baz=72,slow=72						
VA04	Juan Fernndez	7.08	241		Pn	15 07 35.0	-1.4
PB15	IPOC Station P	7.41	14		Pn	15 07 39.9	-1.3
LVC	Limon Verde	8.11	16	P	Pn	15 07 48.4	-2.6
	comp=Z,16nm,0.3s,baz=184,slow=8.0,SNR=26						
LVC				S	Sn	15 09 26.3	+4.8
	comp=Z,287nm,0.5s,baz=189,slow=16,SNR=5.5						
LVC				LR	LR	15 10 52.3	
	comp=Z,2µm,21.8s,baz=206,slow=36						
LVC	Limon Verde	8.11	16		Pn	15 07 48.6	-2.4
LVC	Limon Verde	8.11	16	P	Pn	15 07 48.6	-2.4
LVC	Limon Verde	8.11	16	eP	Pn	15 07 48.7	-2.4
PLCA	Paso Flores	10.28	176	P	Pn	15 08 20.2	-0.2
	comp=Z,5.2nm,0.6s,baz=338,slow=13,SNR=14						
PLCA				LR	LR	15 12 58.6	
	comp=Z,1µm,18.4s,baz=343,slow=41						
PLCA	Paso Flores	10.28	176		Pn	15 08 20.6	+0.2
PLCA	Paso Flores	10.28	176	P	Pn	15 08 20.6	+0.2
PLCA	Paso Flores	10.28	176	eP	Pn	15 08 20.3	0.0
LL04	Puerto Octay	10.47	184		Pn	15 08 20.9	-1.9
TRQA	Tornquist	10.86	137		Pn	15 08 27.6	-0.7
TRQA	Tornquist	10.86	137	P	Pn	15 08 27.6	-0.7
PSGCX	Pisagua	10.87	6		Pn	15 08 25.0	-3.4
MECA	Mercedes	11.52	88	eP	Pn	15 08 35.1	-2.1
PB12	IPOC Station P	11.82	5		Pn	15 08 38.4	-3.1
PB16	IPOC Station P	12.18	8		Pn	15 08 44.6	-2.3
ESFA	Espinillo Form	12.66	68	eP	Pn	15 08 51.4	-1.5
ITQB	Itaqui	12.81	90		Pn	15 08 52.2	-2.6
ITQB	Itaqui	12.81	90	eP	Pn	15 08 51.9	-2.9
CPUP	Villa Florida	13.03	75	P	Pn	15 08 53.6	-4.3
	comp=Z,15nm,0.6s,baz=244,slow=11,SNR=26						
CPUP				LR	LR	15 14 29.2	
	comp=Z,2µm,19.1s,baz=257,slow=39						
CPUP	Villa Florida	13.03	75		Pn	15 08 54.5	-3.4
CPUP	Villa Florida	13.03	75	P	Pn	15 08 54.5	-3.4
CPUP	Villa Florida	13.03	75	eP	Pn	15 08 55.2	-2.7
AZCA	Azaras, Argent	13.65	84	eP	Pn	15 09 03.4	-2.9
RODS	Rosario do Sul	13.97	94	eP	Pn	15 09 07.4	-3.3
LPAZ	La Paz	14.41	13	P	Pn	15 09 19.2	+2.1
	comp=Z,61nm,0.7s,baz=184,slow=8.9,SNR=127						
MURT	Porto Murtinho	15.15	58	eP	Pn	15 09 24.6	-1.6
PLTB	Pedras Altas	15.29	99	Pn	Pn	15 09 25.7	-2.4
CRSM	Crissiumal (Br	15.46	83	eP	Pn	15 09 28.8	-1.5
ALGR	Alto Alegre (B	16.05	89	eP	Pn	15 09 36.6	-1.3
AMBA	Amambai (Brazi	16.44	67	eP	Pn	15 09 41.3	-1.5
BBSD	Serra de San D	16.46	39	eP	Pn	15 09 40.5	-2.6
MCR1	Marechal Candi	16.50	73	eP	Pn	15 09 42.1	-1.5
FRBT	Francisco Belt	16.75	79	eP	Pn	15 09 45.6	-1.1
ITAB	Concordia	17.17	84	P	P	15 09 53.5	+0.6
ITAB	Concordia	17.17	84	eP	Pn	15 09 49.9	-1.9
SIV	San Ignacio	17.21	36	P	Pn	15 09 49.7	-2.8
	comp=Z,99nm,0.9s,baz=224,slow=12,SNR=39						
SIV				LR	LR	15 17 49.8	
	comp=Z,1µm,20.3s,baz=222,slow=41						
AQDB	Aquidauana	17.28	59	Pn	Pn	15 09 50.5	-2.7
AQDB	Aquidauana	17.28	59	eP	Pn	15 09 50.6	-2.6
CNLB	Canela	17.84	92	eP	Pn	15 09 57.0	-3.1
PTGB	Pitanga	18.04	76	eP	P	15 10 02.0	-0.7
PTLB	Pontes e Lacer	18.68	40	P	P	15 10 08.6	-1.1
PTLB				IAmb	IAmb	15 10 12.1	
	comp=Z,141nm,1.2s						
PTLB	Pontes e Lacer	18.68	40	eP	P	15 10 09.3	-0.3
NNA	Nana	19.06	343	P	Pn	15 10 16.8	+1.9
	comp=Z,22nm,0.8s,baz=191,slow=13,SNR=6.7						
NNA				LR	LR	15 16 08.6	
	comp=Z,465nm,19.8s,baz=172,slow=32						
PP1B	Ponte de Pedra	19.74	53	eP	P	15 10 20.8	-0.4
PCMB	Pacaembu	20.09	69	eP	P	15 10 25.1	+0.1
VILB	Vilhena	20.25	33	P	P	15 10 26.4	-0.4
VILB	Vilhena	20.25	33	eP	P	15 10 26.5	-0.2
SALV	Santo Antonio	20.40	48	eP	P	15 10 28.0	-0.4
TIJ01	Guaruva-PR	20.42	81	eP	P	15 10 25.7	-2.9
C2SB	Chapadao do Su	20.45	60	eP	P	15 10 29.4	+0.5
FRTB	Fartura	20.69	75	eP	P	15 10 30.8	-0.6
ETMB	Extrema	21.09	14	P	P	15 10 36.2	+0.4
ETMB	Extrema	21.09	14	eP	P	15 10 36.4	+0.6
ITRB	Iturama	21.80	65	eP	P	15 10 42.5	-1.0
PET01	Itanhaem-SP	22.25	80	eP	P	15 10 47.4	-0.8
SPB	Sao Paulo	22.38	78	eP	P	15 10 49.3	-0.3
BB19B	Bebedouro	22.57	71	eP	P	15 10 49.7	-2.0
CZSB	Cruzeiro do Su	22.64	357	P	P	15 10 52.8	+0.4
CZSB				IAmb	IAmb	15 10 58.3	
	comp=Z,183nm,1.1s						
CZSB	Cruzeiro do Su	22.64	357	eP	P	15 10 53.6	+1.2
SAML	Samuel	22.72	21	P	P	15 10 52.6	-0.7
SAML				IAmb	IAmb	15 10 55.3	
	comp=Z,65nm,0.9s						
SAML	Samuel	22.72	21	P	P	15 10 52.6	-0.7
SAML				pmax	pmax		
	comp=Z,65nm,0.9s						
SAML	Samuel	22.72	21	eP	P	15 10 52.8	-0.5
RCLB	Rio Claro- Sao	22.77	75	eP	P	15 10 51.9	-1.9
VAO	Valinhos	23.00	77	eP	P	15 10 55.0	-1.3
ARAG	Araguaiana, MT	23.17	55	eP	P	15 10 56.0	-1.8
EFI	East Falkland	23.39	159	⇓eP	P	15 10 59.2	-0.5
EFI				pmax	pmax		
	comp=Z,157nm,1.2s						
PARB	Paraibuna	24.01	79	eP	P	15 11 04.2	-1.6
ATAH	Atahualpa	24.11	343	P	P	15 11 08.3	+1.2
	comp=Z,3.8nm,0.7s,baz=106,slow=15,SNR=2.0						
ATAH				LR	LR	15 19 50.2	
	comp=Z,368nm,19.3s,baz=194,slow=34						
CLDB	Colider	24.28	40	eP	P	15 11 07.9	-0.3
USHA	Ushuaia	24.46	176	P	P	15 11 09.4	-0.1
	comp=Z,38nm,0.7s,baz=348,slow=4.8,SNR=2.8						
	comp=Z,38nm,0.7s						
PMNB	Patos De Minas	25.55	68	eP	P	15 11 19.6	-0.3
BSCB	Bom Sucesso	25.70	75	eP	P	15 11 21.6	+0.4
BDFB	Brasilia	25.99	61	P	P	15 11 22.8	-1.1
	comp=Z,143nm,0.7s,baz=232,slow=9.4,SNR=193						
BDFB				LR	LR	15 22 54.0	
	comp=Z,1µm,19.2s,baz=238,slow=39						
	comp=Z,143nm,0.7s						
BDFB	Brasilia	25.99	61	P	P	15 11 23.3	-0.6
BDFB	Brasilia	25.99	61	P	P	15 11 23.3	-0.6
BDFB				pmax	pmax		
	comp=Z,145nm,0.7s						
BDFB	Brasilia	25.99	61	eP	P	15 11 23.9	0.0
TBTG	Tabatinga, AM	26.16	3	eP	P	15 11 26.1	+0.9
SNDB	Serra Nova Dou	26.16	50	eP	P	15 11 24.9	-0.4
VAS01	Vassouras-RJ	26.27	79	eP	P	15 11 26.3	0.0
DUB01	Friburgo-RJ	27.26	79	eP	P	15 11 34.5	-0.7
TEFE	Tefe	27.54	15	eP	P	15 11 37.8	+0.1
MACA	Manacapuru-AM	28.97	22	P	P	15 11 50.3	-0.1
MACA	Manacapuru-AM	28.97	22	eP	P	15 11 50.5	+0.1
JANB	Januaria	29.18	64	eP	P	15 11 51.9	-0.5
ALF01	Guarapari-ES	29.26	78	eP	P	15 11 52.6	-0.4
SJMB	Sao Joao De Ma	29.75	74	eP	P	15 11 56.6	-0.7
ITTB	Itaituba	29.85	33	eP	P	15 11 57.1	-1.2
SDBA	SAO DESIDERIO	30.37	60	eP	P	15 12 02.2	-0.7
SGCB	S£o Gabriel d	30.44	9	eP	P	15 12 02.6	-0.9
SMTB	Santa Maria do	30.90	51	eP	P	15 12 07.9	+0.3
OTAV	Otavalo	31.25	346	P	P	15 12 11.5	+0.4
OTAV	Otavalo	31.25	346	P	P	15 12 11.5	+0.4
OTAV				pmax	pmax		
	comp=Z,17nm,1.3s						
OTAV	Otavalo	31.25	346	P	P	15 12 11.8	+0.7
OTAV				pP	pP	15 12 24.4	+0.5
OTAV				sP	sP	15 12 30.5	+0.7
OTAV				PcP	PcP	15 15 06.2	+1.3
PRPB	Parauapebas	31.53	44	eP	P	15 12 12.4	-0.7
GUA01	Guaratinga, BA	31.95	72	eP	P	15 12 16.3	-0.4
FLOC	Florencia	32.11	352	eP	P	15 12 20.3	+2.1
ABR01	Abrolhos, BA	32.18	75	eP	P	15 12 17.5	-1.2
MALB	Monte Alegre	32.74	33	eP	P	15 12 22.9	-0.8
BBAC	Balboa, Cauca	32.77	349	eP	P	15 12 25.8	+1.6
BETC	Betania	33.17	353	eP	P	15 12 30.7	+3.2
POPC	Popayan, Colom	33.19	350	eP	P	15 12 29.9	+2.0
RPN	Rapa Nui	33.33	266	LR	LR	15 22 24.8	
	comp=Z,555nm,21.9s,baz=119,slow=29						
GR1C	Gorgona, Isla	33.89	348	eP	P	15 12 36.2	+2.5
BOAV	Boa Vista	34.27	20	P	P	15 12 36.6	-0.3
BOAV	Boa Vista	34.27	20	eP	P	15 12 36.8	-0.1
BOAV	Boa Vista	34.27	20	eP	P	15 12 37.2	+0.3
ORTC	Ortega, Tolima	34.36	353	⇑iP	P	15 12 40.4	+2.5
VILC	Villavicencio,	34.44	356	eP	P	15 12 40.8	+2.2
YOTC	Yotoco, Valle	34.57	351	eP	P	15 12 41.1	+1.4
PMSA	Palmer Station	34.65	174	LR	LR	15 27 06.5	
	comp=Z,671nm,19.4s,baz=350,slow=37						
CHIC	Chingaza	34.95	356	eP	P	15 12 44.9	+1.5
ANIL	Santa Ana	34.95	353	eP	P	15 12 45.3	+2.1
ORCD	Orcadas	35.07	157	P	P	15 12 42.3	-1.2
MCPB	Macapa, AP	35.11	35	eP	P	15 12 44.0	-0.3
ROSC	El Rosal	35.20	355	P	P	15 12 47.3	+1.9
	comp=Z,20nm,0.4s,baz=140,slow=4.5,SNR=10.0						
ROSC				LR	LR	15 28 42.2	
	comp=Z,330nm,19.4s,baz=193,slow=39						
	comp=Z,20nm,0.4s						
ROSC	El Rosal	35.20	355	eP	P	15 12 48.7	+3.3
TMAB	Tom-Au,PA,Br	35.58	43	eP	P	15 12 48.3	-0.1
GUY2C	Guyana, Caldas	35.67	353	eP	P	15 12 51.7	+2.1
NORC	Norcasia	35.96	354	eP	P	15 12 54.1	+2.5
SPBC	San Pablo de B	35.99	355	eP	P	15 12 52.9	+1.1
RUSC	La Rusia	36.17	357	P	P	15 12 54.3	+0.4
RUSC	La Rusia	36.17	357	eP	P	15 12 55.5	+1.7
CBOC	Ciudad Bolivar	36.38	352	eP	P	15 12 56.8	+1.5
HELC	Santa Helena	36.65	353	eP	P	15 12 58.9	+1.1
BARC	Barichara	36.87	357	eP	P	15 12 58.5	-1.0
PTBC	PUERTO BERRIO,	36.90	355	eP	P	15 12 58.9	-0.6
DBBC	Dabeiba	37.54	352	eP	P	15 13 07.8	+2.7
PAMC	Pamplona, Colo	37.59	358	eP	P	15 13 06.4	+0.5
ROSB	Rosrio	37.62	49	eP	P	15 13 04.6	-1.1
ZARC	Zaragoza, Cauc	37.87	354	eP	P	15 13 08.2	+0.4
UREC	San Jos de Ur	38.19	353	eP	P	15 13 11.4	+0.9
APAC	Apartado, Choc	38.45	352	eP	P	15 13 15.8	+3.1
SDV	Santo Domingo	39.12	1	P	P	15 13 18.0	-0.4
SDV				IAmb	IAmb	15 13 23.6	
	comp=Z,30nm,0.8s						
SDV	Santo Domingo	39.12	1	eP	P	15 13 18.4	0.0
MDP	Montagnes des	39.64	30	LR	LR	15 31 52.7	
	comp=Z,608nm,18.1s,baz=209,slow=39						
MPGF	Montagnes des	39.65	30	P	P	15 13 22.1	-0.6
MPGF				pP	pP	15 13 34.5	-1.4
MPGF				sP	sP	15 13 40.4	-1.3
SJCC	San Jacinto, C	40.28	354	eP	P	15 13 28.6	+0.6
NBCL	Cascavel-CE	40.67	57	eP	P	15 13 31.3	+0.1
RCBR	Riachuelo	41.37	61	eP	P	15 13 37.4	+0.4
RCBR	Riachuelo	41.37	61	P	P	15 13 37.0	+0.1
RCBR				pP	pP	15 13 50.6	+0.2
RCBR				sP	sP	15 13 56.2	-0.1
RCBR				PcP	PcP	15 15 34.5	-0.1
JTS	Las Juntas de	42.56	340	c iP	P	15 13 49.0	+2.5
JTS				pmax	pmax		
	comp=Z,14nm,1.0s						
MPOM	Morne Pois Mar	45.77	14	P	P	15 14 10.9	-1.3
BIM	Bigot	45.80	14	P	P	15 14 11.7	-0.8
FDF	Fort de France	45.99	14	P	P	15 14 12.1	-1.9
MLPR	Magueyes Islan	48.32	6	P	P	15 14 31.6	-0.5
CRPR	Cabo Rojo, PR	48.35	5	P	P	15 14 31.8	-0.5
CELP	Cerrillos	48.46	6	P	P	15 14 32.3	-0.9
SJG	San Juan	48.54	7	P	P	15 14 32.7	-1.0
	comp=Z,72nm,0.9s,baz=199,slow=3.1,SNR=17						
	comp=Z,72nm,0.9s						
SJG	San Juan	48.54	7	P	P	15 14 32.4	-1.4
SJG	San Juan	48.54	7	P	P	15 14 33.0	-0.7
SJG				pP	pP	15 14 46.1	-1.0
SJG				sP	sP	15 14 52.7	-0.2
MTP	Monte Pirata	48.59	7	IAmb	IAmb	15 14 34.2	
	comp=Z,54nm,1.1s						
CUPR	Culebra, Puert	48.83	8	IAmb	IAmb	15 14 37.2	
	comp=Z,26nm,0.9s						
SDDR	Presa de Saban	49.15	0	IAmb	IAmb	15 14 42.0	
	comp=Z,17nm,0.8s						
GTBY	Guantanamo Bay	50.21	355	P	P	15 14 46.3	-0.2
GTBY				IAmb	IAmb	15 14 48.1	
	comp=Z,39nm,0.8s						
CMIG	Matias Romero	52.40	331	LR	LR	15 32 27.2	
	comp=Z,187nm,21.7s,baz=3.5,slow=30						
VNA3	Neumayer Olymp	52.45	159	P	P	15 15 03.0	+0.3
TEIG	Tepich	52.94	340	P	P	15 15 06.8	-0.1
TEIG	Tepich	52.94	340	P	P	15 15 07.3	+0.5
TEIG				pP	pP	15 15 20.7	+0.3
TEIG				sP	sP	15 15 27.1	+1.0
VNA2	Neumayer--Watz	53.08	158	P	P	15 15 07.7	+0.3
	baz=279,slow=7.0						
SOR	Soroa	54.10	347	P	P	15 15 15.3	0.0
SOR				IAmb	IAmb	15 15 16.8	
	comp=Z,28nm,1.0s						
SOR	Soroa	54.10	347	P	P	15 15 15.3	0.0
SOR				pmax	pmax		
	comp=Z,28nm,1.0s						
SNAA	Sanae	54.67	159	P	P	15 15 19.3	+0.2
SNAA	Sanae	54.67	159	P	P	15 15 19.2	+0.2
	comp=Z,51nm,1.0s,baz=275,slow=7.1,SNR=54						
SNAA				LR	LR	15 36 31.5	
	comp=Z,165nm,21.5s,baz=300,slow=34						
	comp=Z,51nm,1.0s						
SNAA	Sanae	54.67	159	P	P	15 15 19.1	0.0
SNAA	Sanae	54.67	159	⇑iP	P	15 15 19.0	0.0
TROLL	Troll, Antarti	56.38	159	P	P	15 15 31.6	+0.1
RKT	Rikitea	56.60	261	eLR	LR	15 32 05.3	
	comp=Z,123µm,27.0s						
RKT	Rikitea	56.60	261	eT	T	16 16 24.8	
	comp=Z,4.4nm,0.2s						
NVL	N'lazarevskaya	59.37	158	eP	P	15 15 52.0	-0.1
NVL				pmax	pmax		
	comp=Z,48nm,1.0s						
QSPA	South Pole Qui	59.78	180	LR	LR	15 41 56.3	
	comp=Z,243nm,19.4s,baz=162,slow=36						
QSPA	South Pole Qui	59.78	180	P	P	15 15 56.1	+0.9
QSPA				pP	pP	15 16 10.3	+1.2
BBSR	BB Station	62.80	6	P	P	15 16 15.9	+0.2
BBSR	BB Station	62.80	6	P	P	15 16 16.6	+0.8
BBSR				pP	pP	15 16 29.9	+0.2
NHSC	New Hope	63.76	352	P	P	15 16 23.7	+1.6
	baz=172						
152A	Waverly Hall	64.03	348	P	P	15 16 23.8	-0.1
	baz=167						
833A	Chaparral WMA,	64.27	333	IAmb	IAmb	15 16 28.5	
	comp=Z,36nm,0.8s						
833A	Chaparral WMA,	64.27	333	P	P	15 16 26.4	+0.8
	baz=153						
833A	Chaparral WMA,	64.27	333	P	P	15 16 27.6	+2.0
	baz=153,SNR=9.0						
HKT	Hockley	64.42	337	⇑eP	P	15 16 27.3	+0.9
HKT				pmax	pmax		
	comp=Z,18nm,1.4s						
LRAL	Lakeview Retre	64.85	346	IAmb	IAmb	15 17 03.3	
	comp=Z,23nm,1.3s						
LRAL	Lakeview Retre	64.85	346	P	P	15 16 29.8	+0.6
	baz=165						
Y52A	Lilburn	65.08	348	IAmb	IAmb	15 16 32.8	
	comp=Z,37nm,1.2s						
SLBS	Sierra La Lagu	65.32	321	P	P	15 16 34.9	+2.3
SLBS				pP	pP	15 16 48.5	+1.9
SLBS				sP	sP	15 16 54.0	+1.9
143A	Socs Landing,	65.61	342	P	P	15 16 36.6	+2.4
	baz=161						
PAULI	Pauline	65.66	351	IAmb	IAmb	15 16 37.3	
	comp=Z,50nm,1.4s						
HPIG		65.81	327	IAmb	IAmb	15 16 38.6	
	comp=Z,12nm,0.7s						
LPIG	La Paz	65.85	321	LR	LR	15 39 22.2	
	comp=Z,148nm,19.4s,baz=360,slow=30						
X51A	Calhoun	65.91	348	P	P	15 16 37.0	+0.9
	baz=167,SNR=7.2						
X51A				P	P	15 16 37.0	+0.9
	baz=167,SNR=7.2						
KMSC	Kings Mountain	65.91	351	IAmb	IAmb	15 17 09.3	
	comp=Z,36nm,1.1s						
KMSC	Kings Mountain	65.91	351	P	P	15 16 37.1	+1.0
	baz=171						
KMSC	Kings Mountain	65.91	351	P	P	15 16 36.7	+0.7
	baz=171						
BG3	Lake Jocassee	66.00	350	IAmb	IAmb	15 16 38.5	
	comp=Z,39nm,1.3s						
CASEE	Lake Jocassee	66.00	350	P	P	15 16 37.7	+1.0
	baz=169,SNR=5.8						
X48A	Hartselle	66.22	346	IAmb	IAmb	15 16 39.7	
	comp=Z,29nm,0.9s						
X48A	Hartselle	66.22	346	P	P	15 16 38.7	+0.6
	baz=165,SNR=9.1						
Y45A	Yeager Farm, C	66.23	344	P	P	15 16 39.8	+1.7
	baz=163,SNR=5.6						
W52A	Murphy	66.26	349	IAmb	IAmb	15 16 40.1	
	comp=Z,52nm,1.2s						
W52A	Murphy	66.26	349	P	P	15 16 38.9	+0.5
	baz=168						
V58A	Windy Hill, Pi	66.29	353	IAmb	IAmb	15 16 40.0	
	comp=Z,42nm,1.1s						
V58A	Windy Hill, Pi	66.29	353	P	P	15 16 39.3	+0.8
	baz=173,SNR=5.8						
V58A				P	P	15 16 39.3	+0.8
	baz=173,SNR=5.8						
JCT	Junction City	66.35	333	IAmb	IAmb	15 16 41.5	
	comp=Z,21nm,0.8s						
JCT	Junction City	66.35	333	P	P	15 16 40.3	+1.3
	baz=154						
JCT	Junction City	66.35	333	P	P	15 16 40.8	+1.7
	baz=154,SNR=7.7						
V55A	Taylorsville	66.60	351	IAmb	IAmb	15 16 42.2	
	comp=Z,48nm,1.1s						
V55A	Taylorsville	66.60	351	P	P	15 16 41.4	+0.9
	baz=171,SNR=6.8						
V55A				P	P	15 16 41.4	+0.9
	baz=171,SNR=6.8						
W50A	Signal Mountai	66.61	348	P	P	15 16 41.3	+0.7
	baz=167,SNR=8.0						
V53A	Saluda	66.64	350	IAmb	IAmb	15 16 42.9	
	comp=Z,22nm,0.9s						
V53A	Saluda	66.64	350	P	P	15 16 41.4	+0.5
	baz=169,SNR=7.0						
V53A				P	P	15 16 41.4	+0.5
	baz=169,SNR=7.0						
CPCT	Cooper Cave	66.71	348	IAmb	IAmb	15 16 42.8	
	comp=Z,46nm,1.1s						
U59A	Littleton	66.72	354	P	P	15 16 42.6	+1.4
	baz=174,SNR=7.3						
U59A				P	P	15 16 42.6	+1.4
	baz=174,SNR=7.3						
SWET	Sewanee	66.74	347	IAmb	IAmb	15 17 15.5	
	comp=Z,32nm,1.0s						
OXF	Oxford	66.81	344	P	P	15 16 42.2	+0.3
	baz=163,SNR=5.8						
OXF	Oxford	66.81	344	P	P	15 16 42.7	+0.9
	baz=163,SNR=5.8						
WHTX	Lake Whitney,	66.84	336	IAmb	IAmb	15 16 44.4	
	comp=Z,46nm,1.3s						
WHTX	Lake Whitney,	66.84	336	P	P	15 16 42.9	+0.8
	baz=156						
V52A	Sevierville	66.93	349	IAmb	IAmb	15 16 43.9	
	comp=Z,51nm,1.1s						
V52A	Sevierville	66.93	349	P	P	15 16 43.0	+0.4
	baz=169,SNR=8.5						
TXAR	Lajitas Array	66.94	330	P	P	15 16 43.9	+0.9
	comp=Z,8.1nm,0.8s,baz=153,slow=8.1,SNR=46						
TXAR				LR	LR	15 41 19.7	
	comp=Z,295nm,20.6s,baz=350,slow=32						
	comp=Z,8.1nm,0.8s						
TX31	Lajitas Ar. Si	66.94	330	IAmb	IAmb	15 16 45.4	
	comp=Z,19nm,0.8s						
TX31	Lajitas Ar. Si	66.94	330	P	P	15 16 44.3	+1.3
	baz=150,SNR=21						
PLAL	Pickwick Lake	66.96	345	IAmb	IAmb	15 17 16.7	
	comp=Z,27nm,1.1s						
U56A	King	66.98	352	IAmb	IAmb	15 16 44.8	
	comp=Z,36nm,1.0s						
U56A	King	66.98	352	P	P	15 16 43.6	+0.7
	baz=172						
U56A				P	P	15 16 43.6	+0.7
	baz=172						
V51A	Loudon	67.02	349	IAmb	IAmb	15 16 44.5	
	comp=Z,34nm,1.1s						
V51A	Loudon	67.02	349	P	P	15 16 43.9	+0.8
	baz=168,SNR=6.0						
TAOE	Nuku Hiva Isla	67.28	273	eLR	LR	15 37 02.1	
	comp=Z,427nm,28.2s						
T59A	Double "B" Far	67.32	355	P	P	15 16 46.4	+1.4
	baz=174,SNR=10.0						
T59A				P	P	15 16 46.4	+1.4
	baz=174,SNR=10.0						
U54A	Nelsons Funny	67.33	351	P	P	15 16 45.8	+0.6
	baz=170,SNR=7.3						
U54A				P	P	15 16 45.8	+0.6
	baz=170,SNR=7.3						
W45A	Hickory Valley	67.38	344	IAmb	IAmb	15 16 47.8	
	comp=Z,41nm,1.0s						
V48A	Smith Brothers	67.42	346	IAmb	IAmb	15 16 48.0	
	comp=Z,35nm,0.8s						
V48A	Smith Brothers	67.42	346	P	P	15 16 46.5	+0.8
	baz=166,SNR=10						
T57A	Hurt	67.50	353	IAmb	IAmb	15 16 47.9	
	comp=Z,16nm,0.9s						
T57A	Hurt	67.50	353	P	P	15 16 46.8	+0.6
	baz=173						
T57A				P	P	15 16 46.8	+0.6
	baz=173						
TZTN	Tazewell	67.61	349	IAmb	IAmb	15 16 48.9	
	comp=Z,34nm,1.2s						
TZTN	Tazewell	67.61	349	P	P	15 16 47.7	+0.8
	baz=169						
CLTN	Cedars of Leba	67.66	347	IAmb	IAmb	15 17 20.8	
	comp=Z,26nm,1.0s						
MIAR	Mount Ida	67.95	340	IAmb	IAmb	15 16 51.1	
	comp=Z,24nm,1.4s						
MIAR	Mount Ida	67.95	340	P	P	15 16 49.2	+0.1
	baz=160						
U49A	Red Boiling Sp	67.97	348	IAmb	IAmb	15 16 50.5	
	comp=Z,38nm,1.2s						
U49A	Red Boiling Sp	67.97	348	P	P	15 16 48.8	-0.3
	baz=167,SNR=6.1						
FW03	Perrin-Whitt E	68.01	336	IAmb	IAmb	15 18 59.3	
	comp=Z,27nm,0.6s						
WVT	Waverly	68.01	346	P	P	15 16 49.2	-0.2
WVT				IAmb	IAmb	15 17 23.4	
	comp=Z,36nm,0.8s						
WVT	Waverly	68.01	346	P	P	15 16 49.2	-0.2
WVT				pmax	pmax		
	comp=Z,36nm,0.9s						
WVT	Waverly	68.01	346	P	P	15 16 50.3	+0.9
	baz=165						
WVT	Waverly	68.01	346	P	P	15 16 49.7	+0.3
	baz=165,SNR=16						
WVT	Waverly	68.01	346	P	P	15 16 49.4	+0.1
WVT				pP	pP	15 17 03.9	+0.5

WVT			sP	sP	15 17 09.8 +0.8
S57A	Dark Hollow, R	68.22 354	IAmb	IAmb	15 16 52.7
	comp=Z,30nm,0.8s				
S57A	Dark Hollow, R	68.22 354	P	P	15 16 51.9 +1.2
	baz=173,SNR=8.4				
S57A			P	P	15 16 51.9 +1.2
	baz=173,SNR=8.4				
T50A	Nancy	68.29 348	P	P	15 16 51.3 +0.1
	baz=168				
T50A			P	P	15 16 51.3 +0.1
	baz=168				
R58B	Mineral	68.33 354	IAmb	IAmb	15 16 53.9
	comp=Z,52nm,1.1s				
R58B	Mineral	68.33 354	P	P	15 16 53.0 +1.7
	baz=174,SNR=9.7				
R58B			P	P	15 16 53.0 +1.7
	baz=174,SNR=9.7				
T47A	Sharon Grove	68.69 347	IAmb	IAmb	15 16 55.7
	comp=Z,42nm,0.9s				
T47A	Sharon Grove	68.69 347	P	P	15 16 54.1 +0.5
	baz=166,SNR=12				
S51A	Beattyville	68.69 350	IAmb	IAmb	15 16 55.0
	comp=Z,25nm,0.9s				
S51A	Beattyville	68.69 350	P	P	15 16 54.3 +0.6
	baz=169				
S51A			P	P	15 16 54.3 +0.6
	baz=169				
LCAR	Lake Charles	68.73 343	IAmb	IAmb	15 17 28.5
	comp=Z,33nm,0.8s				
LCAR	Lake Charles	68.73 343	P	P	15 16 55.3 +1.4
	baz=162,SNR=11				
TBI	Tubuai	68.74 255	*e*LR	LR	15 37 42.4
	comp=Z,2µm,27.8s				
TBI			*e*LR	LR	15 37 42.7
	comp=Z,5µm,25.5s				
TBI	Tubuai	68.74 255	*e*T	T	16 31 32.4
	comp=Z,8.3nm,0.2s				
R55A	Marlinton	68.86 353	IAmb	IAmb	15 16 57.0
	comp=Z,31nm,0.9s				
R55A	Marlinton	68.86 353	P	P	15 16 55.0 +0.2
	baz=172,SNR=6.7				
R55A			P	P	15 16 55.0 +0.2
	baz=172,SNR=6.7				
ODSA	Odessa	68.89 332	IAmb	IAmb	15 16 57.1
	comp=Z,54nm,0.7s				
T45B	Paducah	69.04 345	P	P	15 16 56.6 +0.9
	baz=164				
R53A	Hurricane	69.13 351	IAmb	IAmb	15 16 57.7
	comp=Z,34nm,1.1s				
R53A	Hurricane	69.13 351	P	P	15 16 56.7 +0.3
	baz=170				
R53A			P	P	15 16 56.7 +0.3
	baz=170				
POST	Post	69.30 333	IAmb	IAmb	15 17 33.6
	comp=Z,10nm,0.8s				
X34A	Smith Ranch, M	69.34 337	IAmb	IAmb	15 16 60.0
	comp=Z,26nm,0.9s				
R50A	Paris	69.44 349	P	P	15 16 58.6 +0.3
	baz=168				
R50A			P	P	15 16 58.6 +0.3
	baz=168				
U40A	Yellville	69.45 342	P	P	15 16 59.4 +1.1
	baz=160,SNR=8.6				
U40A			P	P	15 16 59.4 +1.1
	baz=160,SNR=8.6				
Q56A	Snyder Ridge,	69.52 354	P	P	15 17 00.3 +1.5
	baz=173				
Q56A			P	P	15 17 00.3 +1.5
	baz=173				
CGM3	Cape Girardeau	69.53 345	IAmb	IAmb	15 17 00.6
	comp=Z,42nm,1.3s				
R49A	Shelbyville	69.59 348	IAmb	IAmb	15 17 14.8
	comp=Z,48nm,1.6s				
R49A	Shelbyville	69.59 348	P	P	15 16 59.5 +0.3
	baz=167				
R49A			P	P	15 16 59.5 +0.3
	baz=167				
Q54A	Coxs Mills	69.64 352	IAmb	IAmb	15 17 00.5
	comp=Z,17nm,0.8s				
Q54A	Coxs Mills	69.64 352	P	P	15 16 59.5 +0.1
	baz=171				
Q54A			P	P	15 16 59.5 +0.1
	baz=171				
HHAR	Hobbs	69.68 341	IAmb	IAmb	15 17 01.5
	comp=Z,21nm,0.8s				
MNTX	Cornudas Mount	69.72 329	P	P	15 17 00.1 0.0
	baz=149				
MNTX	Cornudas Mount	69.72 329	P	P	15 17 00.8 +0.6
	baz=149,SNR=8.5				
WCI	Wyandotte Cave	69.73 348	P	P	15 16 59.8 -0.2
WCI			IAmb	IAmb	15 17 01.0
	comp=Z,30nm,1.0s				
WCI	Wyandotte Cave	69.73 348	P	P	15 16 59.8 -0.2
WCI			pmax	pmax	
	comp=Z,30nm,1.0s				
WCI	Wyandotte Cave	69.73 348	P	P	15 17 01.0 +1.0
	baz=166				
USIN	University of	69.74 346	P	P	15 17 00.4 +0.3
WMOK	Wichita Mounta	69.80 336	P	P	15 17 00.7 +0.1
	baz=155				
WMOK	Wichita Mounta	69.80 336	P	P	15 17 01.4 +0.8
	baz=155,SNR=6.0				
Q52A	Bidwell	69.80 351	IAmb	IAmb	15 17 01.9
	comp=Z,52nm,1.1s				
Q52A	Bidwell	69.80 351	P	P	15 17 01.2 +0.7
	baz=170,SNR=6.6				
Q52A			P	P	15 17 01.2 +0.7
	baz=170,SNR=6.6				
S44A	Carbondale	69.82 345	IAmb	IAmb	15 17 02.2
	comp=Z,66nm,1.2s				
S44A	Carbondale	69.82 345	P	P	15 17 01.3 +0.7
	baz=164,SNR=9.0				
P57A	Homestead Farm	69.85 355	IAmb	IAmb	15 17 03.5
	comp=Z,54nm,0.9s				
P57A	Homestead Farm	69.85 355	P	P	15 17 02.8 +2.1
	baz=174,SNR=11				
P57A			P	P	15 17 02.8 +2.1
	baz=174,SNR=11				
TUL1	Leonard	69.88 339	P	P	15 17 02.1 +1.1
	baz=158				
TUL1	Leonard	69.88 339	P	P	15 17 02.0 +0.9
	baz=158				
MEH	Mehetia	69.93 261	*e*T	T	16 33 09.9
	comp=Z,18nm,0.2s				
U38A	Gravette	69.95 340	P	P	15 17 02.3 +0.8
	baz=159				
GEDE	Greenville	70.02 357	P	P	15 17 03.0 +1.3
	baz=176,SNR=5.1				
WUPA	West Chester U	70.13 357	IAmb	IAmb	15 17 05.0
	comp=Z,30nm,1.0s				
MCWV	Mont Chateau	70.19 353	IAmb	IAmb	15 17 04.8
	comp=Z,29nm,0.9s				
MCWV	Mont Chateau	70.19 353	P	P	15 17 03.4 +0.6
	baz=172				
P53A	Whipple	70.20 352	IAmb	IAmb	15 17 04.5
	comp=Z,30nm,1.0s				
MVL	Millersville	70.24 356	IAmb	IAmb	15 17 05.7
	comp=Z,37nm,1.0s				
OK034	N. Norfolk Rd.	70.27 338	IAmb	IAmb	15 17 05.0
	comp=Z,30nm,1.1s				
OK052	Battle Ridge R	70.28 338	IAmb	IAmb	15 17 05.1
	comp=Z,35nm,1.1s				
OK053	SW of W Deep R	70.29 338	IAmb	IAmb	15 17 05.3
	comp=Z,52nm,1.2s				
TUPA	Temple Univers	70.35 357	P	P	15 17 06.0 +2.3
	baz=176,SNR=5.0				
FVM	French Village	70.37 344	IAmb	IAmb	15 17 38.2
	comp=Z,46nm,1.0s				
FVM	French Village	70.37 344	P	P	15 17 04.6 +0.6
	baz=163,SNR=13				
OK033	Mehan	70.37 338	IAmb	IAmb	15 17 27.4
	comp=Z,20nm,0.7s				
P51A	Williamsport	70.42 350	IAmb	IAmb	15 17 05.4
	comp=Z,37nm,0.8s				
P51A	Williamsport	70.42 350	P	P	15 17 04.6 +0.4
	baz=169,SNR=6.1				
P51A			P	P	15 17 04.6 +0.4
	baz=169,SNR=6.1				
P52A	Corning	70.44 351	IAmb	IAmb	15 17 05.6
	comp=Z,49nm,1.0s				
P52A	Corning	70.44 351	P	P	15 17 04.9 +0.5
	baz=170,SNR=8.5				
OLIL	Olney	70.57 346	IAmb	IAmb	15 17 06.3
	comp=Z,47nm,1.1s				
OLIL	Olney	70.57 346	P	P	15 17 05.3 +0.1
	baz=165,SNR=5.3				
MSTX	Muleshoe	70.60 333	P	P	15 17 05.4 -0.3
MSTX			IAmb	IAmb	15 17 07.5
	comp=Z,27nm,0.8s				
MSTX	Muleshoe	70.60 333	P	P	15 17 05.7 +0.1
	baz=152				
MSTX	Muleshoe	70.60 333	P	P	15 17 06.5 +0.9
	baz=152,SNR=10				
CCM	Cathedral Cave	70.63 343	P	P	15 17 06.2 +0.6
	baz=162				
CCM	Cathedral Cave	70.63 343	P	P	15 17 06.3 +0.7
CCM			pP	pP	15 17 20.0 +0.4
CCM			sP	PcP	15 17 25.9 -0.5
OK046	Pawnee Station	70.68 338	IAmb	IAmb	15 17 07.9
	comp=Z,34nm,1.2s				
BLO	Bloomington	70.69 348	IAmb	IAmb	15 17 07.6
	comp=Z,24nm,0.8s				
P49A	Miami Univ. Ec	70.72 349	IAmb	IAmb	15 17 07.1
	comp=Z,34nm,0.9s				
P49A	Miami Univ. Ec	70.72 349	P	P	15 17 06.5 +0.4
	baz=168				
P49A	Miami Univ. Ec	70.72 349	P	P	15 17 06.1 0.0
	baz=168				
P48A	Milroy	70.77 349	IAmb	IAmb	15 17 07.2
	comp=Z,30nm,0.8s				
P48A	Milroy	70.77 349	P	P	15 17 06.4 0.0
	baz=167,SNR=7.2				
P48A			P	P	15 17 06.4 0.0
	baz=167,SNR=7.2				
LUPA	Lehigh Univers	70.79 357	IAmb	IAmb	15 17 08.9
	comp=Z,26nm,0.8s				
S39A	Bolivar	70.83 342	IAmb	IAmb	15 17 41.3
	comp=Z,20nm,0.9s				
S39A	Bolivar	70.83 342	P	P	15 17 07.6 +0.8
	baz=160,SNR=9.8				
BRNJ	Basking Ridge	70.84 357	P	P	15 17 08.6 +1.9
	baz=177				
Q44A	Meyer Farm, Va	70.93 346	IAmb	IAmb	15 17 08.4
	comp=Z,33nm,1.1s				
Q44A	Meyer Farm, Va	70.93 346	P	P	15 17 07.6 +0.3
	baz=164				
O53A	New Philadelph	70.93 352	IAmb	IAmb	15 17 08.8
	comp=Z,46nm,1.4s				
O53A	New Philadelph	70.93 352	P	P	15 17 08.8 +1.4
	baz=171				
TVO	Taravao	70.98 260	*e*T	T	16 34 22.4
	comp=Z,1.1nm,0.3s				
AMTX	Amarillo	70.98 334	IAmb	IAmb	15 17 10.1
	comp=Z,25nm,1.1s				
AMTX	Amarillo	70.98 334	P	P	15 17 08.4 +0.5
	baz=153				
SSPA	Standing Stone	70.98 355	P	P	15 17 08.5 +0.8
SSPA			IAmb	IAmb	15 17 09.8
	comp=Z,31nm,1.0s				
SSPA	Standing Stone	70.98 355	P	P	15 17 08.8 +1.1
	baz=174				
SSPA	Standing Stone	70.98 355	P	P	15 17 09.2 +1.6
	baz=174,SNR=5.9				
SSPA	Standing Stone	70.98 355	P	P	15 17 07.8 +0.2
SSPA			pP	pP	15 17 22.1 +0.3
SSPA			sP	sP	15 17 27.2 -0.2
FOR	Fordham	70.99 358	P	P	15 17 09.1 +1.5
	baz=178				
T35A	Sooner Cattle	71.03 339		P	15 17 08.5 +0.5
T35A			IAmb	IAmb	15 17 10.2
	comp=Z,32nm,1.2s				
T35B	Sooner Cattle	71.03 339	P	P	15 17 08.8 +0.8
	baz=157				
N58A	Sunbury	71.10 356	IAmb	IAmb	15 17 10.8
	comp=Z,40nm,1.0s				
N58A	Sunbury	71.10 356	P	P	15 17 09.8 +1.5
	baz=175,SNR=7.1				
N58A			P	P	15 17 09.8 +1.5
	baz=175,SNR=7.1				
R40A	Maddies Statio	71.11 343	IAmb	IAmb	15 17 42.8
	comp=Z,48nm,0.9s				
R40A	Maddies Statio	71.11 343	P	P	15 17 09.0 +0.5
	baz=161,SNR=20				
PAL	Palisades	71.14 358	P	P	15 17 09.5 +1.0
	baz=178				
ACSO	Alum Creek Sta	71.14 351	P	P	15 17 09.4 +0.7
	baz=170,SNR=11				
TIAR	Tiarei	71.16 260	*e*T	T	16 34 42.9
	comp=Z,3.2nm,0.2s				
ODNJ	Ogdensburg	71.24 357	P	P	15 17 10.9 +1.7
	baz=177,SNR=5.5				
P46A	Rosedale	71.25 347	IAmb	IAmb	15 17 10.6
	comp=Z,48nm,0.9s				
P46A	Rosedale	71.25 347	P	P	15 17 09.5 +0.3
	baz=166				
TRNY	Table Rock, Ra	71.28 358	IAmb	IAmb	15 17 11.9
	comp=Z,30nm,0.9s				
WSPT	Westport, CT	71.28 358	IAmb	IAmb	15 17 11.9
	comp=Z,34nm,0.9s				
O49A	Covington	71.30 350	IAmb	IAmb	15 17 10.8
	comp=Z,45nm,0.9s				
O49A	Covington	71.30 350	P	P	15 17 09.7 +0.1
	baz=168,SNR=8.1				
O49A			P	P	15 17 09.7 +0.1
	baz=168,SNR=8.1				
PPT2	Papeete2	71.34 260	*e*LR	LR	15 38 54.7
	comp=Z,355nm,27.0s				
PPT2			*e*LR	LR	15 38 54.8
	comp=Z,479nm,24.8s				
O48B	Farmland	71.50 349	P	P	15 17 10.5 -0.3
	baz=168,SNR=5.7				
O48B	Farmland	71.50 349	P	P	15 17 10.8 +0.1
	baz=168,SNR=5.7				
121A	Cookes Peak, D	71.50 328	P	P	15 17 12.7 +1.4
	baz=147				
121A	Cookes Peak, D	71.50 328	P	P	15 17 13.5 +2.3
	baz=147,SNR=6.9				
BRNY	Black Rk. Fore	71.55 358	P	P	15 17 12.5 +1.5
	baz=178				
M57A	Sunshine Farm,	71.62 355	IAmb	IAmb	15 17 13.8
	comp=Z,25nm,0.9s				
M57A	Sunshine Farm,	71.62 355	P	P	15 17 12.7 +1.2
	baz=175,SNR=5.7				
M57A			P	P	15 17 12.7 +1.2
	baz=175,SNR=5.7				
P43A	Skaggs, Pawnee	71.75 345	IAmb	IAmb	15 17 13.6
	comp=Z,46nm,1.1s				
P43A	Skaggs, Pawnee	71.75 345	P	P	15 17 13.0 +0.7
	baz=164				
KSPA	Keystone Colle	71.76 357	IAmb	IAmb	15 17 14.1
	comp=Z,23nm,0.9s				
KSCT	Kent School, K	71.84 358	IAmb	IAmb	15 17 14.7
	comp=Z,25nm,0.8s				
M55A	Ridgway	71.88 354	P	P	15 17 13.7 +0.6
	baz=173,SNR=15				
M55A			P	P	15 17 13.7 +0.6
	baz=173,SNR=15				
NPNY	Mohonk Preserv	71.89 358	P	P	15 17 15.2 +2.1
	baz=178,SNR=5.7				
N49A	Columbus Grove	72.00 350	P	P	15 17 14.2 +0.4
	baz=168,SNR=12				
N49A			P	P	15 17 14.2 +0.4
	baz=168,SNR=12				
O44A	Mansfield	72.01 346	IAmb	IAmb	15 17 14.7
	comp=Z,25nm,0.8s				
M53A	WI Miller and	72.04 353	IAmb	IAmb	15 17 15.5
	comp=Z,39nm,1.0s				
M53A	WI Miller and	72.04 353	P	P	15 17 13.5 -0.6
	baz=172				
DUN6	Lazy B Ranch	72.13 327	IAmb	IAmb	15 17 31.9
	comp=Z,58nm,1.1s				
N47A	Urbana	72.20 349	IAmb	IAmb	15 17 15.8
	comp=Z,51nm,0.9s				
N47A	Urbana	72.20 349	P	P	15 17 14.7 -0.3
	baz=167				
N47A			P	P	15 17 14.7 -0.3
	baz=167				
P40A	Paris	72.23 343	IAmb	IAmb	15 17 17.0
	comp=Z,67nm,1.1s				
P40A	Paris	72.23 343	P	P	15 17 15.9 +0.8
	baz=161,SNR=19				
L59A	Walton	72.36 357	P	P	15 17 17.5 +1.6
	baz=177,SNR=11				
L59A			P	P	15 17 17.5 +1.6
	baz=177,SNR=11				
BINY	Binghamton	72.41 356	IAmb	IAmb	15 17 18.5
	comp=Z,34nm,1.0s				
BINY	Binghamton	72.41 356	P	P	15 17 17.1 +0.8
	baz=176				
BINY	Binghamton	72.41 356	P	P	15 17 17.9 +1.6
	baz=176,SNR=6.3				
L56A	Greenwood	72.45 355	P	P	15 17 17.4 +0.9
	baz=174,SNR=15				
L56A			P	P	15 17 17.4 +0.9
	baz=174,SNR=15				
L61B	Northampton	72.55 359	P	P	15 17 18.0 +1.0
	baz=179				
L61B	Northampton	72.55 359	P	P	15 17 18.1 +1.0
	baz=179,SNR=9.7				
HDIL	Hopedale	72.57 346	P	P	15 17 17.5 +0.3
	baz=164				
HRV	Adam Dziewonsk	72.60 360	P	P	15 17 17.9 +0.6
HRV			IAmb	IAmb	15 17 19.9
	comp=Z,34nm,0.8s				
HRV	Adam Dziewonsk	72.60 360	P	P	15 17 17.9 +0.6
HRV			pmax	pmax	
	comp=Z,34nm,0.8s				
HRV	Adam Dziewonsk	72.60 360	P	P	15 17 18.1 +0.8
	baz=180				
ERPA	Erie	72.64 353	P	P	15 17 16.3 -1.2
ERPA	Erie	72.64 353	P	P	15 17 18.2 +0.6
	baz=172				
P38A	Dawn	72.70 342	P	P	15 17 17.5 -0.5
P38A			IAmb	IAmb	15 17 19.4
	comp=Z,23nm,1.0s				
P38A	Dawn	72.70 342	P	P	15 17 18.5 +0.5
	baz=160,SNR=5.7				
TUC	Tucson	72.73 326	P	P	15 17 18.6 +0.1
TUC	Tucson	72.73 326	P	P	15 17 18.6 +0.1
TUC			pmax	pmax	
	comp=Z,36nm,2.0s				
TUC	Tucson	72.73 326	P	P	15 17 19.1 +0.7
	baz=145				
WVNY	West Valley, N	72.80 354	P	P	15 17 18.7 +0.2
WVNY	West Valley, N	72.80 354	P	P	15 17 19.7 +1.2
	baz=174,SNR=14				
ANMO	Albuquerque	72.96 330	P	P	15 17 20.5 +0.6
ANMO	Albuquerque	72.96 330	⇓*i*P	P	15 17 22.0 +2.1
ANMO			pmax	pmax	
	comp=Z,8.0nm,1.3s				
ANMO	Albuquerque	72.96 330	P	P	15 17 21.1 +1.2
	baz=149				
ANMO	Albuquerque	72.96 330	P	P	15 17 21.7 +1.8
	baz=149,SNR=5.5				
K57A	Scipio Center	72.97 356	P	P	15 17 20.1 +0.5
	baz=175				
N41A	Harden Midland	73.06 345	IAmb	IAmb	15 17 21.4
	comp=Z,62nm,1.1s				
N41A	Harden Midland	73.06 345	P	P	15 17 20.5 +0.4
	baz=163,SNR=7.0				
KSU1	Kansas State U	73.08 340	P	P	15 17 21.0 +0.8
	baz=158				
M44A	Midewin, Midew	73.12 347	P	P	15 17 20.9 +0.5
	baz=165				
LIC	Lamto	73.14 72	⇑*i*P	P	15 17 20.8 -0.4
	comp=Z,121nm,0.8s				
TIC	Toumodi	73.38 72	⇑*i*P	P	15 17 22.4 -0.2
	comp=Z,86nm,0.9s				
J61A	Chester	73.44 359	IAmb	IAmb	15 17 25.1
	comp=Z,39nm,0.9s				
J61A	Chester	73.44 359	P	P	15 17 24.0 +1.8
	baz=179,SNR=7.1				
J61A			P	P	15 17 24.0 +1.8
	baz=179,SNR=7.1				
KIC	Kosan Boka	73.45 72	⇑*i*P	P	15 17 22.8 -0.2
	comp=Z,29nm,0.8s				
214A	Organ Pipe Nat	73.45 324	P	P	15 17 23.7 +1.0
	baz=144,SNR=14				
ACCN	Adirondack Com	73.50 358	IAmb	IAmb	15 17 25.1
	comp=Z,34nm,1.1s				
ACCN	Adirondack Com	73.50 358	P	P	15 17 24.3 +1.7
	baz=178,SNR=6.6				
DBIC	Dimbokro	73.53 72	P	P	15 17 23.0 -0.4
	comp=Z,49nm,0.7s,baz=236,slow=6.3,SNR=78				
DBIC			LR	LR	15 47 40.0
	comp=Z,284nm,19.3s,baz=234,slow=34				
	comp=Z,49nm,0.7s				
DBIC	Dimbokro	73.53 72	P	P	15 17 23.1 -0.4
DBIC	Dimbokro	73.53 72	P	P	15 17 23.1 -0.4
DBIC			pmax	pmax	
	comp=Z,60nm,0.8s				
DBIC	Dimbokro	73.53 72	⇑*i*P	P	15 17 23.3 -0.2
DBIC			IAmb	IAmb	15 17 24.3
	comp=Z,62nm,0.8s				
J56A	Wolcott	73.54 356	P	P	15 17 23.5 +0.7
	baz=175				
J56A			P	P	15 17 23.5 +0.7
	baz=175				
MEDO	Medina	73.54 355	IAmb	IAmb	15 17 24.6
	comp=Z,35nm,0.9s				
J59A	Piesco	73.61 358	IAmb	IAmb	15 17 25.4
	comp=Z,44nm,1.1s				
J59A	Piesco	73.61 358	P	P	15 17 23.8 +0.5
	baz=177,SNR=7.5				
J59A			P	P	15 17 23.8 +0.5
	baz=177,SNR=7.5				
J57A	Williamstown	73.62 356	IAmb	IAmb	15 17 25.2
	comp=Z,57nm,1.0s				
J57A	Williamstown	73.62 356	P	P	15 17 24.3 +1.0
	baz=176,SNR=7.6				
J57A			P	P	15 17 24.3 +1.0
	baz=176,SNR=7.6				
HNH	Hanover	73.80 359	IAmb	IAmb	15 17 27.2
	comp=Z,33nm,0.8s				
HNH	Hanover	73.80 359	P	P	15 17 26.5 +2.2
	baz=179,SNR=6.3				
CBKS	Cedar Bluff	73.80 337	IAmb	IAmb	15 17 26.9
	comp=Z,34nm,0.9s				
CBKS	Cedar Bluff	73.80 337	P	P	15 17 25.6 +1.0
	baz=155				
T25A	Trinidad	74.01 333	IAmb	IAmb	15 17 29.1
	comp=Z,22nm,0.8s				
T25A	Trinidad	74.01 333	P	P	15 17 27.1 +1.0
	baz=151,SNR=20				
NCB	Newcomb	74.11 358	IAmb	IAmb	15 17 31.1
	comp=Z,33nm,1.2s				
I63A	Otisfield	74.14 1	P	P	15 17 28.7 +2.3
	baz=181,SNR=9.5				
I63A			P	P	15 17 28.7 +2.3
	baz=181,SNR=9.5				
X18A	Snowflake	74.16 328	IAmb	IAmb	15 17 44.1
	comp=Z,35nm,1.7s				
WCNY	West Carthage	74.17 357	P	P	15 17 27.8 +1.3
	baz=176,SNR=10				
PECO	Prince Edward	74.20 356	IAmb	IAmb	15 17 28.5
	comp=Z,42nm,1.0s				
ELIM	Elim	74.28 121	*e*P	P	15 17 28.7 +1.0
ELIM			IAmb	IAmb	15 17 29.5
	comp=Z,22nm,0.9s				
LBNH	Lisbon	74.33 360	P	P	15 17 30.3 +2.8
	baz=180				
J47A	Sumner	74.36 350	P	P	15 17 28.2 +0.5
	baz=168				
J47A			P	P	15 17 28.2 +0.5
	baz=168				
N35A	Tabor	74.42 341	IAmb	IAmb	15 17 29.5
	comp=Z,43nm,0.8s				
N35A	Tabor	74.42 341	P	P	15 17 28.8 +0.7
	baz=158				
L40A	Anamosa	74.44 345	P	P	15 17 28.5 +0.4
	baz=162,SNR=7.2				
CER	Ceres	74.48 120	⇑*i*P	P	15 17 29.7 +0.8
CER			IAmb	IAmb	15 17 30.5
	comp=Z,25nm,0.9s				
W18A	Petrified Fore	74.55 328	P	P	15 17 31.0 +1.8
	baz=146,SNR=10				
KOMG	Komaggas	74.68 116	⇑*i*P	P	15 17 31.1 +1.0
KOMG			IAmb	IAmb	15 17 32.5
	comp=Z,49nm,0.9s				
SCIA	State Center	74.76 343	P	P	15 17 31.3 +1.2
	baz=161				
LONY	Lake Ozonia	74.77 358	P	P	15 17 31.8 +1.8
	baz=177				
DELO	Deloro Mine	74.82 355	IAmb	IAmb	15 17 32.1
	comp=Z,28nm,1.2s				
EMMW	East Machias	74.88 3	P	P	15 17 32.1 +1.5
EMMW			IAmb	IAmb	15 17 33.2
	comp=Z,40nm,0.8s				
FRNY	Flat Rock	74.95 358	P	P	15 17 31.8 +0.7
FRNY			IAmb	IAmb	15 17 33.2
	comp=Z,44nm,0.8s				
FRNY	Flat Rock	74.95 358	P	P	15 17 32.6 +1.6
	baz=178,SNR=13				
SDCO	Great Sand Dun	74.97 333	P	P	15 17 32.6 +0.9
SDCO			IAmb	IAmb	15 17 34.5
	comp=Z,50nm,1.8s				
SDCO	Great Sand Dun	74.97 333	P	P	15 17 32.5 +0.8
	baz=150,SNR=12				
SDCO	Great Sand Dun	74.97 333	P	P	15 17 33.5 +1.8
	baz=150,SNR=12				
BMNY	Brushton-Moira	74.98 358	P	P	15 17 32.4 +1.2
	baz=177,SNR=11				
JFWS	Jewell Farm	75.03 346	IAmb	IAmb	15 17 33.3
	comp=Z,43nm,1.2s				

JFWS	Jewell Farm	75.03	346	P	P	15 17 32.8	+1.2
	baz=163						
SADO	Sadowa	75.19	354	P	P	15 17 32.5	+0.1
	comp=Z,35nm,1.0s,baz=188,slow=5.1,SNR=13						
	comp=Z,35nm,1.0s						
SADO	Sadowa	75.19	354	IAmb	IAmb	15 17 33.9	
	comp=Z,32nm,0.9s						
G62A	West of Eustis	75.31	1	P	P	15 17 34.4	+1.3
G62A	West of Eustis	75.31	1	P	P	15 17 34.9	+1.8
	baz=181,SNR=17						
G62A				P	P	15 17 34.9	+1.8
	baz=181,SNR=17						
GLA	Glamis	75.36	323	P	P	15 17 34.8	+1.1
	baz=142						
PKME	Peaks-Kenny Pk	75.38	2	IAmb	IAmb	15 17 35.9	
	comp=Z,27nm,0.8s						
PKME	Peaks-Kenny Pk	75.38	2	P	P	15 17 35.1	+1.6
	baz=182						
MATJ	Matjiesfontein	75.49	120⇑	*i*P	P	15 17 36.1	+1.3
S22A	4UR Ranch, Cre	75.51	332	P	P	15 17 36.2	+1.5
	baz=149,SNR=6.3						
WUAZ	Wupatki	75.64	327	IAmb	IAmb	15 17 38.7	
	comp=Z,22nm,1.0s						
WUAZ	Wupatki	75.64	327	P	P	15 17 37.5	+2.1
	baz=145,SNR=11						
L34A	Svendsen Farm,	75.66	341	IAmb	IAmb	15 17 36.6	
	comp=Z,40nm,0.9s						
BGNE	Belgrade	75.66	340	P	P	15 17 36.6	+1.4
	baz=156						
CVNA	Calvinia	75.68	118⇑	*i*P	P	15 17 37.1	+1.2
CVNA				IAmb	IAmb	15 17 37.8	
	comp=Z,80nm,0.8s						
I42A	Draeger Farm,	75.70	347	IAmb	IAmb	15 17 37.0	
	comp=Z,51nm,1.1s						
IKP	In-Ko-Pah, Jac	75.71	322	P	P	15 17 37.5	+1.7
	baz=141						
MVCO	Mesa Verde	75.75	330	P	P	15 17 37.4	+1.3
	baz=148,SNR=8.0						
SWSC	Sam W. Stewart	75.78	323	P	P	15 17 37.9	+1.8
	baz=142						
F63A	Nahmakanta, Br	75.82	2	P	P	15 17 37.5	+1.5
	baz=182						
F63A				P	P	15 17 37.5	+1.5
	baz=182						
Q24A	Divide	75.89	333	IAmb	IAmb	15 17 39.8	
	comp=Z,22nm,0.8s						
Q24A	Divide	75.89	333	P	P	15 17 38.9	+1.9
	baz=150,SNR=15						
F62A	Pittston Farm,	76.00	1	IAmb	IAmb	15 17 39.7	
	comp=Z,53nm,1.1s						
F62A	Pittston Farm,	76.00	1	P	P	15 17 38.8	+1.8
	baz=181,SNR=8.6						
F62A				P	P	15 17 38.8	+1.8
	baz=181,SNR=8.6						
PDMCI	Parker Dam,Lak	76.00	325	P	P	15 17 38.3	+1.0
	baz=143						
F64A	Sherman	76.00	2	IAmb	IAmb	15 17 39.6	
	comp=Z,44nm,0.8s						
F64A	Sherman	76.00	2	P	P	15 17 38.8	+1.7
	baz=183,SNR=7.2						
F64A				P	P	15 17 38.8	+1.7
	baz=183,SNR=7.2						
I40A	Norwalk	76.05	346	IAmb	IAmb	15 17 38.9	
	comp=Z,51nm,1.4s						
MONP2	Monument Peak	76.06	322	P	P	15 17 39.5	+1.5
	baz=141						
SUR	Sutherland	76.07	119	LR	LR	15 46 32.0	
	comp=Z,130nm,19.8s,baz=234,slow=32						
SUR	Sutherland	76.07	119	P	P	15 17 39.1	+0.9
SUR	Sutherland	76.07	119⇑	*i*P	P	15 17 39.6	+1.3
SUR				IAmb	IAmb	15 17 40.1	
	comp=Z,79nm,0.8s						
BC3	Big Chuckawall	76.15	323	P	P	15 17 40.0	+1.7
	baz=142,SNR=12						
LMN	Caledonia Moun	76.17	5	P	P	15 17 38.8	+0.8
IRM	Iron Mountain	76.39	324	P	P	15 17 41.3	+1.7
	baz=142,SNR=10						
MAW	Mawson	76.42	164	LR	LR	15 52 06.3	
	comp=Z,291nm,20.0s,baz=226,slow=36						
MERW	Merweville	76.47	120⇑	*i*P	P	15 17 41.4	+1.0
MERW				IAmb	IAmb	15 17 41.9	
	comp=Z,117nm,0.9s						
OGNE	Ogallala	76.49	337	P	P	15 17 42.1	+2.0
	baz=153						
E63A	Oxbow	76.56	2	P	P	15 17 41.8	+1.6
	baz=183,SNR=9.3						
E63A				P	P	15 17 41.8	+1.6
	baz=183,SNR=9.3						
TPFO	Pinon Flats	76.63	323	P	P	15 17 42.7	+1.6
	baz=141,SNR=7.7						
PFO	Pinyon Flats O	76.64	323	P	P	15 17 42.2	+1.0
PFO	Pinyon Flats O	76.64	323*c*	*i*P	P	15 17 43.1	+2.0
PFO				pmax	pmax		
	comp=Z,27nm,1.1s						
PFO	Pinyon Flats O	76.64	323	P	P	15 17 42.8	+1.6
	baz=141,SNR=8.9						
PV13	Radium Mtn., P	76.69	330	P	P	15 17 42.4	+1.0
PV13				IAmb	IAmb	15 18 18.0	
	comp=Z,17nm,0.9s						
BELC	Belle Mtn. Jos	76.70	323	P	P	15 17 43.5	+2.0
	baz=142,SNR=5.6						
FRAZ	Fraserburg	76.72	119⇑	*i*P	P	15 17 43.1	+1.3
FRAZ				IAmb	IAmb	15 17 43.6	
	comp=Z,104nm,0.9s						
E62A	Clayton Lake	76.73	1	P	P	15 17 43.0	+1.8
	baz=182,SNR=17						
E62A				P	P	15 17 43.0	+1.8
	baz=182,SNR=17						
SMCO	Snowmass	76.79	332	IAmb	IAmb	15 17 45.5	
	comp=Z,22nm,0.9s						
ISCO	Idaho Springs	76.79	334	P	P	15 17 43.4	+1.4
	baz=150,SNR=7.2						
ISCO	Idaho Springs	76.79	334	P	P	15 17 44.2	+2.1
	baz=150,SNR=7.2						
I37B	Waseca	76.80	344	P	P	15 17 42.4	+0.8
	baz=161,SNR=6.1						
K31A	O'Neill	76.95	340	P	P	15 17 44.0	+1.5
	baz=156,SNR=14						
MURC	Murrieta	77.02	322	P	P	15 17 44.7	+1.5
	baz=141						
GRAN	Grantham	77.12	120⇑	*i*P	P	15 17 44.9	+0.9
GRAN				IAmb	IAmb	15 17 45.8	
	comp=Z,122nm,0.7s						
GMRC	Granite Mounta	77.14	324	P	P	15 17 46.1	+2.2
	baz=142,SNR=16						
ELS	Elsinore Mount	77.18	322	IAmb	IAmb	15 17 47.2	
	comp=Z,16nm,0.8s						
D62A	Allapoint, All	77.20	2	P	P	15 17 45.3	+1.5
	baz=182,SNR=25						
D62A				P	P	15 17 45.3	+1.5
	baz=182,SNR=25						
ARMS	Ukamas	77.24	115	*e*P	P	15 17 45.1	+0.4
ARMS				IAmb	IAmb	15 17 46.3	
	comp=Z,32nm,0.8s						
E46A	Sault Ste Mari	77.35	351	P	P	15 17 45.1	+0.5
	baz=169,SNR=9.9						
ECSD	EROS Data Cent	77.36	342	P	P	15 17 45.5	+0.7
	baz=158,SNR=41						
V12A	Nelson	77.48	325	IAmb	IAmb	15 17 48.5	
	comp=Z,15nm,0.9s						
CIS	Catalina Islan	77.52	321	P	P	15 17 47.6	+1.6
	baz=140						
HEC	Hector,Ludlow	77.52	323	P	P	15 17 47.6	+1.6
	baz=142,SNR=6.0						
WIN	Windhoek	77.67	109⇑	*i*P	P	15 17 48.0	+0.6
WIN				IAmb	IAmb	15 17 48.7	
	comp=Z,42nm,1.3s						
BFSC	Mount Baldy Ra	77.76	322	P	P	15 17 48.9	+1.5
	baz=140,SNR=5.5						
E43A	Lone Tree Farm	77.76	349	IAmb	IAmb	15 17 48.6	
	comp=Z,37nm,0.9s						
TUQ	Turquoise Moun	77.79	324	P	P	15 17 49.5	+1.9
	baz=142,SNR=7.2						
SPMN	Marine on St.	77.80	345	IAmb	IAmb	15 17 48.3	
	comp=Z,26nm,0.9s						
SPMN	Marine on St.	77.80	345	P	P	15 17 49.2	+2.0
	baz=161,SNR=5.3						
SPMN	Marine on St.	77.80	345	P	P	15 17 47.2	0.0
	baz=161,SNR=5.3						
N23A	Red Feather La	77.86	334	P	P	15 17 49.6	+1.6
	baz=150,SNR=6.1						
COWI	Conover	77.87	347	IAmb	IAmb	15 17 49.3	
	comp=Z,32nm,1.1s						
BRAK	Brakfontein	77.91	120⇑	*i*P	P	15 17 48.8	+0.4
BRAK				IAmb	IAmb	15 17 49.4	
	comp=Z,41nm,0.8s						
ROSN	Rosenhof	78.02	122	*e*P	P	15 17 49.4	+0.5
ROSN				IAmb	IAmb	15 17 50.1	
	comp=Z,1µm,0.9s						
PHWY	Pilot Hill	78.03	334	IAmb	IAmb	15 17 51.5	
	comp=Z,35nm,1.5s						
ROOI	Rooidraai Farm	78.06	121⇑	*i*P	P	15 17 50.0	+0.7
ROOI				IAmb	IAmb	15 17 50.5	
	comp=Z,89nm,0.7s						
O20A	White River Ci	78.11	332	IAmb	IAmb	15 17 52.2	
	comp=Z,40nm,1.2s						
O20A	White River Ci	78.11	332	P	P	15 17 50.6	+1.2
	baz=148,SNR=10						
GSC	Goldstone, Bar	78.13	323	P	P	15 17 50.9	+1.5
	baz=141,SNR=5.3						
RAR	Rarotonga	78.23	252	LR	LR	15 44 36.0	
	comp=Z,174nm,18.4s,baz=109,slow=30						
UPI	Upington	78.27	116⇑	*i*P	P	15 17 51.2	+0.7
UPI				IAmb	IAmb	15 17 51.8	
	comp=Z,78nm,0.8s						
EDW2	Edwards Air Fo	78.43	322	P	P	15 17 52.6	+1.6
	baz=140,SNR=10						
BFON	Badsfontein, M	78.50	120⇑	*i*P	P	15 17 52.6	+0.8
BFON				IAmb	IAmb	15 17 53.2	
	comp=Z,66nm,0.6s						
P18A	Preston Nutter	78.52	330	IAmb	IAmb	15 17 54.7	
	comp=Z,30nm,1.1s						
F36A	Milaca	78.57	344	IAmb	IAmb	15 17 52.6	
	comp=Z,30nm,0.9s						
F36A	Milaca	78.57	344	P	P	15 17 51.5	+0.1
	baz=161,SNR=15						
P17A	Butcher Ranch,	78.61	330	IAmb	IAmb	15 17 54.7	
	comp=Z,22nm,1.1s						
OSI	Osito Audit: C	78.61	322	P	P	15 17 54.0	+2.0
	baz=140						
CCAC	Calif City Air	78.65	323	IAmb	IAmb	15 17 55.1	
	comp=Z,22nm,0.7s						
SUSD	Miller	78.67	340	IAmb	IAmb	15 17 53.6	
	comp=Z,38nm,0.9s						
SUSD	Miller	78.67	340	P	P	15 17 52.8	+0.8
	baz=156						
D41A	Chassel	78.69	348	P	P	15 17 52.8	+0.8
	baz=165,SNR=12						
LRMC	Laurel Mtn Rad	78.72	323	P	P	15 17 55.0	+2.3
	baz=141						
PKA	Prieska	78.81	118⇑	*i*P	P	15 17 54.2	+0.7
PKA				IAmb	IAmb	15 17 54.8	
	comp=Z,3.5nm,0.8s						
PRN	Pahroc Range	78.91	326	IAmb	IAmb	15 17 57.1	
	comp=Z,22nm,0.9s						
FURC	Furnace Creek,	79.07	324	P	P	15 17 56.2	+1.8
	baz=141						
MPMC	Manual Prospec	79.07	324	P	P	15 17 56.0	+1.4
	baz=141,SNR=8.2						
TPNV	Topopah Spring	79.14	325	P	P	15 17 56.5	+1.6
	baz=142,SNR=14						
F33A	5 Mile Ranch,	79.22	343	IAmb	IAmb	15 17 56.2	
	comp=Z,22nm,1.0s						
F33A	5 Mile Ranch,	79.22	343	P	P	15 17 55.6	+0.6
	baz=158,SNR=7.9						
BCW	Bitter Crk WRg	79.23	322	IAmb	IAmb	15 17 58.8	
	comp=Z,30nm,0.9s						
ISA	Isabella, Lake	79.28	323	IAmb	IAmb	15 17 58.8	
	comp=Z,17nm,0.8s						
ISA	Isabella, Lake	79.28	323	P	P	15 17 57.3	+1.6
	baz=140,SNR=5.0						
PKM	Mcpherson Peak	79.40	321	P	P	15 17 57.4	+0.9
	baz=139						
SOE	Somerset East	79.44	122	P	P	15 17 56.9	0.0
SOE	Somerset East	79.44	122	*e*P	P	15 17 57.6	+0.8
SOE				IAmb	IAmb	15 17 58.4	
	comp=Z,110nm,0.9s						
K22A	Casper	79.60	334	P	P	15 17 58.5	+1.1
	baz=150,SNR=8.2						
K22A	Casper	79.60	334	P	P	15 17 59.2	+1.8
	baz=150,SNR=8.2						
TSUM	Tsumeb	79.65	106	P	P	15 17 58.6	+0.3
TSUM	Tsumeb	79.65	106⇑	*i*P	P	15 17 58.8	+0.5
CWC	Cottonwood Cre	79.67	323	P	P	15 17 58.6	+0.7
	baz=140						
GRAC	Grapevine Rang	79.73	324	P	P	15 17 59.2	+1.2
GRAC	Grapevine Rang	79.73	324	P	P	15 17 59.4	+1.4
	baz=141						
GRHM	Grahamstown, E	79.76	122	P	P	15 17 58.8	+0.2
GRHM	Grahamstown, E	79.76	122⇑	*i*P	P	15 17 58.6	0.0
GRHM				IAmb	IAmb	15 17 59.9	
	comp=Z,79nm,0.8s						
R11A	Troy Canyon, C	79.91	326	P	P	15 17 59.6	+0.4
R11A	Troy Canyon, C	79.91	326	P	P	15 18 00.4	+1.3
	baz=142,SNR=14						
RSSD	Black Hills	79.99	337	P	P	15 17 59.6	+0.1
RSSD	Black Hills	79.99	337	P	P	15 17 59.6	+0.1
RSSD				pmax	pmax		
	comp=Z,16nm,1.0s						
RSSD	Black Hills	79.99	337	P	P	15 18 00.9	+1.4
	baz=152						
RSSD	Black Hills	79.99	337	P	P	15 18 00.8	+1.4
	baz=152,SNR=12						
EYMN	Ely	80.10	346	IAmb	IAmb	15 18 01.1	
	comp=Z,31nm,1.1s						
EYMN	Ely	80.10	346	P	P	15 18 01.3	+1.6
	baz=162						
DUG	Dugway, Tooele	80.11	329	P	P	15 18 01.8	+1.7
	baz=145,SNR=12						
TIN	Tinemaha, Big	80.22	324	P	P	15 18 02.1	+1.4
	baz=140						
DRLN	Deer Lake	80.31	9	IAmb	IAmb	15 18 02.6	
	comp=Z,45nm,0.8s						
HVD	Gariep Dam	80.43	120⇑	*i*P	P	15 18 03.2	+0.8
HVD				IAmb	IAmb	15 18 03.9	
	comp=Z,118nm,0.9s						
D32A	Dogwood Acres,	80.61	343	IAmb	IAmb	15 18 04.2	
	comp=Z,52nm,0.9s						
HWUT	Hardware Ranch	80.72	331	IAmb	IAmb	15 18 05.6	
	comp=Z,18nm,0.8s						
BW06	Boulder Array	80.87	333	P	P	15 18 05.5	+1.2
	baz=147,SNR=8.2						
PDAR	Pinedale Array	80.87	333	P	P	15 18 04.8	+0.5
	comp=Z,2.6nm,0.6s,baz=152,slow=4.4,SNR=22						
PDAR				LR	LR	15 50 18.2	
	comp=Z,158nm,20.2s,baz=24,slow=33						
	comp=Z,2.6nm,0.6s						
B35A	Bob, Littlefor	80.97	345	IAmb	IAmb	15 18 05.7	
	comp=Z,29nm,0.8s						
B35A	Bob, Littlefor	80.97	345	P	P	15 18 04.6	+0.2
	baz=161,SNR=15						
E28A	Huff	81.12	340	IAmb	IAmb	15 18 07.4	
	comp=Z,43nm,0.8s						
E28A	Huff	81.12	340	P	P	15 18 06.7	+1.4
	baz=155,SNR=5.3						
BOSA	Boshof	81.23	118	P	P	15 18 06.0	-0.6
	comp=Z,74nm,0.8s,baz=244,slow=4.3,SNR=98						
BOSA				LR	LR	15 48 51.6	
	comp=Z,166nm,21.2s,baz=224,slow=32						
	comp=Z,74nm,0.8s						
BOSA	Boshof	81.23	118	P	P	15 18 06.3	-0.3
BOSA	Boshof	81.23	118	*i* P	P	15 18 06.7	+0.1
BOSA	Boshof	81.23	118	P	P	15 18 06.3	-0.3
BOSA				pmax	pmax		
	comp=Z,70nm,0.8s						
BOSA	Boshof	81.23	118	*i* P	P	15 18 06.7	+0.1
BOSA				IAmb	IAmb	15 18 07.3	
	comp=Z,70nm,0.8s						
NVAR	Mina Array Bea	81.31	325	P	P	15 18 08.2	+1.5
	comp=Z,5.9nm,0.8s,baz=158,slow=6.6,SNR=40						
NVAR				PKKPbc	PKKPbc	15 36 41.8	-1.1
	comp=Z,1.0nm,1.0s,baz=236,slow=1.0,SNR=4.1						
	comp=Z,5.9nm,0.8s						
AGMN	Agassiz Nation	81.41	344	IAmb	IAmb	15 18 08.2	
	comp=Z,32nm,0.9s						
AGMN	Agassiz Nation	81.41	344	P	P	15 18 07.3	+0.7
	baz=159,SNR=6.3						
ELK	Elko	81.65	328	LR	LR	15 51 28.4	
	comp=Z,205nm,18.5s,baz=64,slow=33						
MDND	Maddock	81.96	341	P	P	15 18 10.9	+1.3
	baz=156,SNR=10						
SWZ	Schweizer	82.00	117	*e*P	P	15 18 10.0	-0.7
SWZ				IAmb	IAmb	15 18 11.1	
	comp=Z,52nm,0.9s						
FLWY	Flagg Ranch	82.42	333	IAmb	IAmb	15 18 15.0	
	comp=Z,23nm,1.2s						
TORD	Torodi Ar. Bea	82.48	70	P	P	15 18 13.0	-0.1
	comp=Z,71nm,0.9s,baz=259,slow=4.7,SNR=262						
TORD				LR	LR	15 52 06.4	
	comp=Z,329nm,21.4s,baz=242,slow=34						
	comp=Z,71nm,0.9s						
TORD	Torodi Ar. Bea	82.48	70	P	P	15 18 12.9	-0.1
H17A	Grant Village	82.63	333	P	P	15 18 15.1	+1.5
	baz=147						
RLMT	Red Lodge	82.74	334	P	P	15 18 15.6	+1.5
	baz=148,SNR=5.9						
PAHR	Pah Rah Range	82.83	325	IAmb	IAmb	15 18 17.6	
	comp=Z,23nm,1.0s						
MPK	Martis Peak	82.84	324	IAmb	IAmb	15 18 17.9	
	comp=Z,24nm,1.0s						
LAO	LASA Array	82.98	337	IAmb	IAmb	15 18 17.1	
	comp=Z,32nm,1.2s						
LAO	LASA Array	82.98	337	P	P	15 18 15.7	+0.6
	baz=150						
ULM	Lac du Bonnet	83.23	344	P	P	15 18 16.3	+0.2
	comp=Z,34nm,0.9s,baz=154,slow=4.4,SNR=50						
	comp=Z,34nm,0.9s						
ULM	Lac du Bonnet	83.23	344	IAmb	IAmb	15 18 17.4	
	comp=Z,43nm,0.9s						
LBTB	Lobatse	83.29	115	LR	LR	15 49 58.9	
	comp=Z,352nm,21.9s,baz=188,slow=32						
LBTB	Lobatse	83.29	115	*i* P	P	15 18 18.0	+0.6
LBTB	Lobatse	83.29	115⇑	*i*P	P	15 18 17.3	-0.1
LBTB				IAmb	IAmb	15 18 17.9	
	comp=Z,102nm,0.8s						
SNKL	Senekal, Frees	83.31	119	*e*P	P	15 18 17.8	+0.2
SNKL				IAmb	IAmb	15 18 18.5	
	comp=Z,100nm,1.0s						
HLID	Hailey	83.54	330	IAmb	IAmb	15 18 20.9	
	comp=Z,19nm,1.1s						
HLID	Hailey	83.54	330	P	P	15 18 19.7	+1.6
	baz=144,SNR=18						
PRYS	Parys	83.69	117⇑	*i*P	P	15 18 19.4	-0.1
PRYS				IAmb	IAmb	15 18 19.9	
	comp=Z,35nm,0.8s						
KSR	Koster	83.88	116	*e*P	P	15 18 19.9	-0.7
KSR				IAmb	IAmb	15 18 21.7	
	comp=Z,49nm,1.0s						
DGMT	Dagmar	83.88	339	P	P	15 18 20.4	+0.8
	baz=152,SNR=13						
DGMT	Dagmar	83.88	339	P	P	15 18 21.0	+1.4
	baz=152,SNR=13						
WDLM	Western Deep L	83.99	117	*e*P	P	15 18 21.1	0.0
WDLM				IAmb	IAmb	15 18 21.8	
	comp=Z,47nm,0.9s						
BOZ	Bozeman (W)	84.05	333	P	P	15 18 21.0	+0.3
	baz=146						
DLMT	Dillon	84.24	332	IAmb	IAmb	15 18 24.9	
	comp=Z,21nm,1.2s						
HRAO	HartRAO	84.47	117⇑	*i*P	P	15 18 23.3	-0.2
HRAO				IAmb	IAmb	15 18 24.6	
	comp=Z,69nm,1.1s						
SLR	Silverton	85.01	117	*e*P	P	15 18 26.1	0.0
SLR				IAmb	IAmb	15 18 27.1	
	comp=Z,70nm,1.2s						
SCHQ	Schefferville	85.02	3	P	P	15 18 24.9	-0.3
	comp=Z,38nm,1.1s,baz=168,slow=4.3,SNR=20						
	comp=Z,38nm,1.1s						
J08A	Circle Bar Ran	85.19	328	IAmb	IAmb	15 18 29.1	
	comp=Z,26nm,1.0s						
NWCL	Newcastle	85.19	119⇑	*i*P	P	15 18 26.8	-0.3
NWCL				IAmb	IAmb	15 18 27.6	
	comp=Z,23nm,0.8s						
EGMT	Eagleton	85.37	335	IAmb	IAmb	15 18 28.7	
	comp=Z,19nm,1.1s						
EGMT	Eagleton	85.37	335	P	P	15 18 28.0	+0.8
	baz=148						
PLID	Pearl Lake	85.44	330	IAmb	IAmb	15 18 29.9	
	comp=Z,16nm,1.0s						
LEPH	Lephalale, Lim	85.60	115	*e*P	P	15 18 29.5	+0.4
LEPH				IAmb	IAmb	15 18 30.4	
	comp=Z,73nm,1.0s						
K05A	Summer Lake	85.86	326	IAmb	IAmb	15 18 32.8	
	comp=Z,22nm,1.0s						
KHMM	Horse Mountain	85.91	323	IAmb	IAmb	15 18 47.1	
	comp=Z,13nm,1.0s						
MSO	Missoula	85.98	332	P	P	15 18 30.9	+0.7
	baz=144						
K04D	Chiloquin, OR	86.20	325	IAmb	IAmb	15 18 33.9	
	comp=Z,35nm,1.2s						
I07A	Izee	86.22	327	IAmb	IAmb	15 18 34.3	
	comp=Z,17nm,1.1s						
URZ	Urewera	86.46	227	LR	LR	15 47 50.1	
	comp=Z,145nm,21.4s,baz=241,slow=29						
PINE	Pine Mountain	86.68	326	IAmb	IAmb	15 18 36.7	
	comp=Z,20nm,0.9s						
RPZ	Rata Peaks	86.70	220	P	P	15 18 34.0	-0.1
	comp=Z,15nm,0.9s,baz=270,slow=4.0,SNR=3.2						
RPZ				LR	LR	15 50 19.2	
	comp=Z,92nm,20.0s,baz=124,slow=31						
	comp=Z,15nm,0.9s						
L02F	Cave Junction	86.74	324	IAmb	IAmb	15 18 36.8	
	comp=Z,13nm,1.1s						
HAGI	HAGI	87.03	119	*e*P	P	15 18 35.8	-0.4
HAGI				IAmb	IAmb	15 18 37.2	
	comp=Z,31nm,1.3s						
I05D	Terrebonne, OR	87.28	327	IAmb	IAmb	15 18 39.4	
	comp=Z,21nm,0.9s						
G06A	Carlson Farm,	87.63	328	IAmb	IAmb	15 18 41.1	
	comp=Z,16nm,1.2s						
HOED	Hoedspruit, Li	87.74	117	*e*P	P	15 18 38.6	-0.9
HOED				IAmb	IAmb	15 18 38.9	
	comp=Z,17nm,0.8s						
H04A	Detroit Lake	87.94	326	IAmb	IAmb	15 18 41.5	
	comp=Z,17nm,0.8s						
HAWA	Hanford	88.00	329	IAmb	IAmb	15 18 42.5	
	comp=Z,20nm,1.2s						
MUSN	Musina, Limpop	88.04	115	*i* P	P	15 18 41.5	+0.6
MUSN	Musina, Limpop	88.04	115	*e*P	P	15 18 41.5	+0.6
MUSN				IAmb	IAmb	15 18 42.9	
	comp=Z,21nm,0.9s						
RAO	Raoul Island	88.26	237	LR	LR	15 48 09.3	
	comp=Z,118nm,20.1s,baz=322,slow=29						
NEW	Newport	88.42	331	P	P	15 18 41.9	0.0
	comp=Z,2.6nm,0.9s,baz=126,slow=6.6,SNR=3.4						
NEW				LR	LR	15 55 07.2	
	comp=Z,177nm,19.6s,baz=87,slow=33						
	comp=Z,2.6nm,0.9s						
NEW	Newport	88.42	331	P	P	15 18 42.6	+0.6
	baz=142						
C09A	Chrisman Ranch	88.54	331	IAmb	IAmb	15 18 44.4	
	comp=Z,24nm,1.4s						
FFC	Flin Flon	88.83	343	P	P	15 18 43.2	-0.4
FFC				IAmb	IAmb	15 18 44.8	
	comp=Z,16nm,1.0s						
FFC	Flin Flon	88.83	343	P	P	15 18 43.2	-0.4
FFC				pmax	pmax		
	comp=Z,16nm,1.0s						
MDT	Midelt	89.15	51	LR	LR	15 56 15.7	
	comp=Z,111nm,21.3s,baz=170,slow=34						
LON	Longmire	89.30	328	IAmb	IAmb	15 22 01.0	
	comp=Z,44nm,1.9s						
TAM	Tamanrasset	90.78	64	P	P	15 18 53.5	-0.3
TAM				IAmb	IAmb	15 18 55.2	
	comp=Z,13nm,0.9s						
TAM	Tamanrasset	90.78	64	P	P	15 18 53.5	-0.3
TAM				pmax	pmax		
	comp=Z,13nm,0.9s						
AFI	Afiamalu	91.77	253	LR	LR	15 49 42.8	
	comp=Z,206nm,21.1s,baz=109,slow=28						
ESDC	Sonseca Array	93.71	46	P	P	15 19 06.6	-0.2
	comp=Z,4.5nm,1.0s,baz=247,slow=4.1,SNR=11						
ESDC				LR	LR	15 57 58.9	
	comp=Z,191nm,21.2s,baz=238,slow=33						
	comp=Z,4.5nm,1.0s						
WAPA	Wapiti River	94.64	335	P	P	15 19 11.1	+0.4
YKA	Yellowknife Ar	98.88	341	P	P	15 19 29.4	-0.2
	comp=Z,2.7nm,0.7s,baz=142,slow=4.6,SNR=45						
	comp=Z,2.7nm,0.7s						
KOTAN	Kotaneelee Air	100.05	336	P	Pdif	15 19 35.1	+0.3
	baz=136						
DZM	Mont Dzumac	103.78	234	*e*LR	LR	15 53 57.6	
	comp=Z,402nm,24.6s						
GERES	GERESS Array B	109.25	44	PKiKP	PKiKP	15 24 19.0	-0.7
	comp=Z,1.4nm,0.9s,baz=209,slow=3.2,SNR=8.6						
ILAR	Eielson Array	111.28	334	PKiKP	PKiKP	15 24 23.0	0.0
	comp=Z,1.0nm,0.9s,baz=178,slow=1.2,SNR=10						
SKT	Skwentna	112.01	330	P	PKiKP	15 24 24.3	-0.1
	baz=114						
NEA2	Nenana	112.05	333	P	PKiKP	15 24 24.3	-0.1
	baz=114						
TRF	Thorofare Moun	112.07	332	P	PKiKP	15 24 24.6	-0.2
	baz=114						
F25K	Christian Rive	112.08	337	P	PKiKP	15 24 25.4	+0.9
	baz=116						
BPAW	Bear Paw Mtn.	112.62	332	P	PKiKP	15 24 25.9	+0.3
	baz=113						
CAST	Castle Rocks	112.80	331	P	PKiKP	15 24 25.3	-0.7
	baz=112						
F24K	Squaw Lake	112.83	336	P	PKiKP	15 24 25.2	-0.7
	baz=114						
CHUM	Lake Minchumin	113.08	332	P	PKiKP	15 24 25.7	-0.7
	baz=112						
D25K	Kavik River	113.08	338	P	PKiKP	15 24 25.7	-0.6

	baz=115						
L20K	Farewell, AK	113.22	330	P	PKiKP	15 24 24.7	-2.1
	baz=111						
M19K	Big River Lodg	113.23	329	P	PKiKP	15 24 25.3	-1.5
	baz=111						
E24K	Your Creek	113.26	337	P	PKiKP	15 24 26.7	0.0
	baz=114						
G23K	Bananza Creek	113.27	335	P	PKiKP	15 24 27.3	+0.5
	baz=113						
H22K	Ishtalitna Cre	113.46	334	P	PKiKP	15 24 26.7	-0.5
	baz=112						
COLD	Coldfoot	113.53	335	P	PKiKP	15 24 27.3	+0.1
	baz=112						
E23K	Chandalar	113.65	336	P	PKiKP	15 24 26.9	-0.6
	baz=113						
H21K	Melozitna Rive	113.92	333	P	PKiKP	15 24 27.7	-0.4
	baz=111						
SDPT	Sand Point	113.96	321	P	PKiKP	15 24 27.0	-1.3
	baz=109						
C24K	Franklin Bluff	113.99	338	P	PKiKP	15 24 28.7	+0.7
	baz=113						
G21K	Allakaket	114.49	334	P	PKPdf	15 24 28.7	-0.3
	baz=110						
F21K	Alatna River	114.72	335	P	PKiKP	15 24 29.8	+0.2
	baz=110						
A21K	Barrow	117.02	339	P	PKiKP	15 24 34.1	+0.4
	baz=105						
RDOG	Red Dog Mine	118.42	335	P	PKPdf	15 24 36.2	-0.4
	baz=101						
ANM	Nome	118.74	331	P	PKPdf	15 24 37.1	-0.2
	baz=101						
NACGM	Naroch	118.85	41	ePKP	PKPdf	15 24 37.6	-0.2
	comp=Z,15nm,0.8s,baz=257						
AKASG	Malin Array Be	119.36	46	PKP	PKPdf	15 24 37.7	-1.2
	comp=Z,6.1nm,0.7s,baz=263,slow=2.7,SNR=31						
AKBB	Malin Array Si	119.36	46	⇓iPKIKP	PKPdf	15 24 37.9	-1.0
MNK	Minsk	119.39	41	i PKP	PKPdf	15 24 38.5	-0.3
	comp=E,3.0nm,1.6s						
MNK				i PKP	PKPdf	15 24 38.5	-0.3
	comp=N,33nm,1.0s						
MNK				i PKP	PKPdf	15 24 38.5	-0.3
	comp=Z,16nm,0.8s,baz=258						
MNK				i PP	PP	15 26 01.2	0.0
MNK				i PPP	PPP	15 28 30.7	
MNK				i SKS	SKSdf	15 31 47.6	+1.2
MNK				i SS	SS	15 42 19.9	-0.2
MNK				i SSS	SSS	15 46 47.3	
MNK				i LQ	LQ	16 09 05.8	
MNK				i LR	LR	16 13 20.2	
MNK				i LRM	MLR	16 18 24.5	
	comp=Z,81nm,11.8s						
MNK				i LRM	MLR	16 18 58.6	
	comp=E,21nm,21.0s						
MNK				i LRM	MLR	16 19 09.1	
	comp=N,677nm,23.6s						
MNK	Minsk	119.39	41	i PKIKP	PKPdf	15 24 38.5	-0.3
MNK				i		15 26 01.1	
MNK				i PPP	PPP	15 28 30.7	
MNK				i		15 31 47.6	
MNK				i SS	SS	15 42 19.9	-0.2
MNK				i		15 42 31.0	
MNK				i SSS	SSS	15 46 47.3	
MNK				pmax	pmax		
	comp=N,33nm,1.0s						
MNK				pmax	pmax		
	comp=Z,16nm,0.8s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.6s						
VSU	Vasula	119.54	37	⇓iPKIKP	PKPdf	15 24 37.1	-1.9
BR131	Keskin Array S	119.58	59		PKPdf	15 24 39.2	-0.7
BR131	Keskin Array S	119.58	59	⇑iPKIKP	PKPdf	15 24 39.9	0.0
BRTR	Keskin Array B	119.58	59	PKP	PKPdf	15 24 38.9	-1.0
	comp=E,1.8nm,0.8s,baz=163,slow=2.7,SNR=8.4						
FINES	FINESS Array B	119.74	33	PKP	PKPdf	15 24 38.6	-0.7
	comp=E,3.8nm,0.9s,baz=270,slow=3.8,SNR=5.3						
TNA	Tin City	119.97	332	PKPdf	PKiKP	15 24 39.8	+0.1
TNA	Tin City	119.97	332	P	PKPdf	15 24 39.0	-0.5
	baz=98						
ARCES	ARCESS Array B	120.56	24	PKP	PKPdf	15 24 40.2	-0.5
	comp=E,1.4nm,0.6s,baz=305,slow=4.3,SNR=4.5						
ASAR	Alice Springs	120.97	207	PKP	PKPdf	15 24 41.2	-1.8
	comp=E,2.2nm,0.8s,baz=132,slow=1.8,SNR=23						
ASAR				PKKPbc	PKKPbc	15 34 44.4	-1.5
	comp=E,2.1nm,0.8s,baz=336,slow=3.1,SNR=25						
WB2	Warramunga Arr	124.12	210	PKPdf	PKPdf	15 24 48.0	-1.1
WRA	Warramunga Arr	124.12	210	PKP	PKPdf	15 24 47.9	-1.2
	comp=E,4.6nm,0.7s,baz=160,slow=1.6,SNR=61						
WRA				PKKPab	PKKPbc	15 34 34.4	+0.8
	comp=E,2.9nm,0.8s,baz=339,slow=4.4,SNR=20						
WRAB	Tennant Creek	124.12	210		PKPdf	15 24 47.9	-1.3
WRAB	Tennant Creek	124.12	210	d iPKIKP	PKPdf	15 24 48.4	-0.7
WRAB				pmax	pmax		
	comp=Z,13nm,2.5s						
OBN	Obninsk	124.44	42	⇓iPKIKP	PKPdf	15 24 48.6	+0.1
OBN				e		15 26 35.0	
OBN				e		15 31 57.9	
OBN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,108nm,17.0s						
MOS	Moscow	125.09	41	ePKIKP	PKiKP	15 24 51.4	+1.3
MOS				e		15 26 42.4	
ADZR	Andozero	125.50	31	ePKIKP	PKPdf	15 24 49.5	-0.7
ADZR				pmax	pmax		
	comp=Z,18nm,0.7s						
KLMR	Klimovskoe	126.19	35	ePKPdf	PKPdf	15 24 50.6	-1.1
KLMR				AMP		15 24 52.6	
	comp=Z,22nm,0.8s						
KLMR	Klimovskoe	126.19	35	ePKIKP	PKPdf	15 24 50.6	-1.1
KLMR				pmax	pmax		
	comp=Z,22nm,0.8s						
H11S2	WAKE ISLAND Hy	126.31	271	T	T	17 43 43.9	
	baz=114,slow=75						
H11S1	WAKE ISLAND Hy	126.33	271	T	T	17 43 42.3	
	baz=114,slow=75						
H11S3	WAKE ISLAND Hy	126.33	271	T	T	17 43 52.8	
	baz=114,slow=75						
KIV	Kislovodsk	127.09	56	ePKIKP	PKiKP	15 24 55.2	+0.6
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PSA00	Pilbara Seismi	127.16	193		PKPdf	15 24 53.4	-1.5
KBZ	Khabaz	127.21	56	PKP	PKPdf	15 24 53.8	-0.4
	comp=Z,3.5nm,0.9s,baz=211,slow=9.1,SNR=6.1						
KBZ	Khabaz	127.21	56	⇑iPKIKP	PKiKP	15 24 54.9	+0.2
BILL	Bilibino	129.87	336	PKPdf	PKiKP	15 24 59.1	-0.2
BILL	Bilibino	129.87	336	⇑ePKIKP	PKiKP	15 24 59.3	0.0
BILL				e		15 27 12.8	
BILL				i		15 31 57.9	
BILL				pmax	pmax		
	comp=Z,15nm,1.1s						
BELG	Belogornoye	130.93	45	⇓iPKIKP	PKPdf	15 25 01.2	+0.3
KIRV	Kirov	131.39	37	⇓ePKIKP	PKiKP	15 25 02.5	-0.1
ARU	Arti	136.66	38	PKPdf	PKPdf	15 25 12.1	+0.5
ARU	Arti	136.66	38	i PKIKP	PKPdf	15 25 11.8	+0.2
ARU						15 27 50.2	
ARU				SS	SS	15 45 55.8	+1.8
SEY	Seymchan	137.20	332	⇑ePKIKP	PKiKP	15 25 13.4	-0.9
TIXI	Tiksi	137.30	351	d iPKIKP	PKPdf	15 25 12.4	+0.1
GEYT	Alibeck	137.99	66	PKP	PKPdf	15 25 11.5	-3.2
	comp=Z,0.7nm,0.4s,baz=168,slow=8.6,SNR=1.8						
PEA0B	Petropavlovsk-	138.01	317	⇑ePKIKP	PKPdf	15 25 14.0	-0.2
PETK	Petropavlovsk-	138.01	317	PKhKP	PKPpre	15 25 02.7	
	comp=Z,6.8nm,1.1s,baz=90,slow=1.5,SNR=4.0						
PETK				PKP	PKPdf	15 25 12.3	-1.9
	comp=Z,6.3nm,0.9s,baz=145,slow=6.0,SNR=5.2						
ABKAR	Akbulak array	138.99	49	PKPdf	PKPdf	15 25 16.0	-0.1
NRIK	Noril'sk	139.24	11	PKP	PKPdf	15 25 16.0	0.0
	comp=Z,3.2nm,0.7s,baz=50,slow=1.0,SNR=4.1						
NRIK	Noril'sk	139.24	11	PKPdf	PKiKP	15 25 17.2	-1.1
NRIK	Noril'sk	139.24	11	⇓iPKIKP	PKPdf	15 25 16.8	+0.8
MA2	Magadan	139.46	328	PKPdf	PKPdf	15 25 17.8	+1.1
MA2	Magadan	139.46	328	c iPKIKP	PKPdf	15 25 17.6	+0.9
BRVK	Borovoye	144.18	40	c iPKIKP	PKPab	15 25 22.9	-0.2
YAK	Yakutsk	145.55	343	PKPdf	PKPab	15 25 27.8	0.0
YAK	Yakutsk	145.55	343	c iPKIKP	PKPab	15 25 27.9	0.0
YAK				e		15 25 40.9	
YAK				eSS	SS	15 47 32.7	-3.7
YAK				pmax	pmax		
	comp=Z,118nm,0.9s						
YAK				pmax	pmax		
	comp=E,20nm,1.3s						
YAK				pmax	pmax		
	comp=N,32nm,1.4s						
YAK				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KBL	Kabul	146.52	72	PKPdf	PKPdf	15 25 30.5	+0.3
KBL	Kabul	146.52	72	PKP2	PKPdf	15 25 30.5	+0.3
CHGR	Chuyangaron	146.69	65	PKPdf	PKPdf	15 25 30.6	+0.4
CHGR	Chuyangaron	146.69	65	PKP2	PKPdf	15 25 30.6	+0.4
BRZS	Berezniki	146.77	44	ePKPbc	PKPbc	15 25 31.1	-0.6
	baz=44						
BRZS	Berezniki	146.77	44	ePKP2	PKPbc	15 25 31.0	-0.6
IUG	Iuzhnay	147.04	59	ePKPbc	PKPdf	15 25 31.8	+1.1
	baz=59						
IUG	Iuzhnay	147.04	59	ePKP2	PKPdf	15 25 31.8	+1.1
TYV	Tymovskoe	147.52	319	ePKP2	PKPbc	15 25 34.6	+0.9
TYV				pmax	pmax		
	comp=Z,44nm,1.0s						
TYV				pmax	pmax		
	comp=Z,500nm,8.7s						
TOLI2	Tolitoli	148.62	204		PKPbc	15 25 36.2	-1.5
YSS	Yuzh-Sakhalins	148.98	312		PKPbc	15 25 37.7	+0.1
YSS	Yuzh-Sakhalins	148.98	312	ePKIKP	PKPdf	15 25 34.3	+0.7
YSS				pmax	pmax		
	comp=Z,50nm,0.7s						
GSI	Gunungsitoli	149.18	158		PKPbc	15 25 38.9	-0.2
BTLS	Baital	149.29	52	ePKPbc	PKPbc	15 25 38.8	+0.3
	baz=52						
BTLS	Baital	149.29	52	ePKP2	PKPbc	15 25 38.8	+0.3
EKS2	Erkin-Say	149.69	57	P	PKiKP	15 25 40.7	0.0
	SNR=28						
HYB	Hyderabad	149.72	108	ePKPbc	PKPbc	15 25 40.0	-0.4
AML	Almayashu	149.73	58	P	PKiKP	15 25 41.0	-0.2
	SNR=20						
KURK	Kurchatov	149.84	39	PKPdf	PKPdf	15 25 35.0	+0.1
KURK	Kurchatov	149.84	39	c iPKHKP	PKPpre	15 25 34.9	
NIL	Nilore	149.94	75		PKPbc	15 25 40.2	-0.3
NIL	Nilore	149.94	75	PKP2	PKPbc	15 25 40.2	-0.3
JKA	Kamikawa-asahi	149.95	306	PKPdf	PKPdf	15 25 35.2	0.0
ASAJ	Asahikawa	149.95	307	PKIKP	PKPdf	15 25 35.2	0.0
ERM	Erimo	150.04	302	c iPKIKP	PKiKP	15 25 42.8	+1.5
ERM				pmax	pmax		
	comp=Z,72nm,2.5s						
USP	Ospenovka	150.06	55	P	PKPbc	15 25 40.7	+0.1
	SNR=43						
SGDS	Sogindy	150.11	55	ePKPbc	PKPbc	15 25 40.5	-0.2
	baz=55						
SGDS	Sogindy	150.11	55	ePKP2	PKPbc	15 25 40.5	-0.2
AAK	Ala-Archa	150.21	56	P	PKiKP	15 25 42.2	+0.3
	SNR=44						
AAK	Ala-Archa	150.21	56		PKPdf	15 25 36.3	+0.4
AAK	Ala-Archa	150.21	56	⇓ePKHKP	PKPpre	15 25 36.9	
CHMS	Chumysh	150.31	56	P	PKiKP	15 25 41.6	-0.3
	SNR=26						
UCH	Uchtor	150.31	57	P	PKiKP	15 25 42.8	+0.3
	SNR=33						
KBK	Karagaybulak	150.53	56	P	PKiKP	15 25 42.7	+0.2
	SNR=19						
ZALV	Zalesovo Beam	150.90	29	PKP	PKPdf	15 25 36.4	+0.1
	comp=Z,5.1nm,0.6s,baz=276,slow=3.0,SNR=22						
ZALV				PKPbc	PKPbc	15 25 42.2	+0.2
	comp=Z,122nm,0.7s,baz=306,slow=3.3,SNR=168						
RPSI	Rantau Prapat	150.91	160		PKPbc	15 25 42.2	-1.1
TKM2	Tokmak 2	150.93	55	P	PKPbc	15 25 43.1	+0.3
	SNR=23						
GRNR	Gornyy	151.00	322	⇓iPKIKP	PKPdf	15 25 36.9	+0.2
GRNR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
PSI	Prapat	151.01	160	PKIKP	PKPbc	15 25 42.2	-1.6
KUU	Kurty	151.19	53	ePKPbc	PKPbc	15 25 42.5	-0.6
	baz=53						
KUU	Kurty	151.19	53	ePKIKP	PKPbc	15 25 42.5	-0.6
TNSS	Tian-Shan	151.85	55	ePKPbc	PKiKP	15 25 45.7	+0.1
	baz=55						
TNSS	Tian-Shan	151.85	55	ePKIKP	PKiKP	15 25 45.6	+0.1
KSH	Kashi	151.89	62	PKPbc	PKPdf	15 25 39.3	+0.7
KSH				sPKP		15 25 54.1	
MDOK	Medeo	151.89	54	ePKPbc	PKiKP	15 25 45.2	-0.1
	baz=54						
MDOK	Medeo	151.89	54	ePKIKP	PKiKP	15 25 45.2	-0.1
SBUM	Sibu	151.94	188		PKPbc	15 25 44.9	-0.8
BOD	Bodaibo	152.38	354	ePKIKP	PKPbc	15 25 44.8	-0.6
BOD				pmax	pmax		
	comp=Z,55nm,1.0s						
SATY	Saty	152.87	54	ePKPbc	PKPbc	15 25 47.2	+0.1
	baz=54						
SATY	Saty	152.87	54	ePKIKP	PKPbc	15 25 47.1	0.0
KPKS	Kokpek	152.94	53	ePKPbc	PKiKP	15 25 47.4	-0.1
	baz=53						
KPKS	Kokpek	152.94	53	ePKIKP	PKiKP	15 25 47.3	-0.1
ZEA	Zeya	153.09	335	ePKIKP	PKPdf	15 25 39.9	+0.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
IPM	Ipoh	153.19	163		PKPbc	15 25 47.1	-1.5
SHLS	Shalkode	153.58	53	ePKPab	PKPab	15 26 03.0	+1.6
	baz=53						
SHLS	Shalkode	153.58	53	ePKP2	PKPab	15 26 02.9	+1.6
MAKZ	Makanchi	153.72	44	PKPdf	PKPdf	15 25 40.0	-0.9
MAKZ	Makanchi	153.72	44	PKIKP	PKPdf	15 25 40.0	-0.9
MK31	Makanchi Array	153.92	44	c iPKIKP	PKPdf	15 25 40.2	-0.9
MKAR	Makanchi Array	153.92	44	PKP	PKPdf	15 25 40.8	-0.3
	comp=Z,2.6nm,0.9s,baz=321,slow=1.6,SNR=22						
MKAR				PKPbc	PKPbc	15 25 48.9	-0.3
	comp=Z,11nm,0.8s,baz=316,slow=2.1,SNR=59						
MKAR				PKPab	PKPab	15 26 02.5	0.0
	comp=Z,20nm,0.9s,baz=286,slow=4.3,SNR=18						
KLR	Kul'dur	154.34	324	d iPKIKP	PKPdf	15 25 41.3	-0.3
MJAR	Matsushiro Arr	154.65	292	PKP	PKPdf	15 25 42.1	-0.4
	comp=Z,2.3nm,1.0s,baz=248,slow=1.3,SNR=5.8						
MJAR				PKPbc	PKiKP	15 25 51.1	0.0
	comp=Z,2.2nm,0.8s,baz=207,slow=2.4,SNR=5.0						
MJAR				PKPab	PKPab	15 26 06.7	+0.7
	comp=Z,6.0nm,0.8s,baz=114,slow=2.4,SNR=9.7						
HEH	HeiHe	155.70	330	ePKP	PKPdf	15 25 41.6	-1.8
PYUN	Piuthan	157.53	90	eP	PKPab	15 26 17.8	-1.1
	comp=Z,44nm,1.1s						
MOY	Mondy	158.06	13	ePKP2	PKPab	15 26 21.0	+0.8
MOY				pmax	pmax		
	comp=Z,17nm,1.2s						
DANN	Dangsing	158.25	89	eP	PKPab	15 26 20.8	-1.3
	comp=Z,36nm,0.9s						
WMQ	Urumqi	158.71	45	ePKP	PKPdf	15 25 45.8	-1.8
WMQ				PKPab	PKPab	15 26 24.8	+1.5
WMQ				PP	PP	15 30 07.8	+3.8
WMQ				LR	LR		
	comp=Z,120nm,20.5s						
GKN	Gorkha	158.94	91	eP	PKPab	15 26 23.7	-1.2
DMN	Daman	159.25	92	eP	PKPab	15 26 25.5	-0.9
PKIN	Phulchoki	159.50	92	eP	PKPab	15 26 26.1	-1.4
PKI	Pulchoki	159.50	92	eP	PKPab	15 26 25.9	-1.7
ZAK	Zakamensk	159.69	10	ePKP2	PKPab	15 26 27.6	+0.3
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GUN	Gumba	159.99	92	eP	PKPab	15 26 28.0	-1.7
JIRN	Jiri	160.20	92	eP	PKPab	15 26 29.6	-1.1
	comp=Z,7.4nm,0.7s						
RAMN	Ramite	160.38	95	eP	PKPab	15 26 30.1	-1.2
TAPN	Taplejung	161.44	94	eP	PKPab	15 26 34.9	-1.1
KSRS	Korea Array	162.54	299	PKP	PKPdf	15 25 50.4	-1.4
	comp=Z,1.7nm,0.9s,baz=107,slow=1.3,SNR=4.7						
KSRS				PKPab	PKPab	15 26 39.7	-0.4
	comp=Z,1.3nm,0.9s,baz=77,slow=3.7,SNR=2.4						
SONM	Songino Array	162.55	5	PKP	PKPdf	15 25 50.4	-1.3
	comp=Z,1.3nm,0.8s,baz=249,slow=1.2,SNR=9.3						
SONM				PKPab	PKPab	15 26 40.1	+0.3
	comp=Z,8.4nm,1.0s,baz=328,slow=3.9,SNR=22						
SONM				PP	PP	15 30 23.5	-0.2
	comp=Z,5.1nm,1.1s,baz=323,slow=3.7,SNR=14						
CMAR	Chiang Mai Arr	165.17	141	PKP	PKPdf	15 25 53.6	-1.2
	comp=Z,1.7nm,0.9s,baz=266,slow=2.4,SNR=10						
CMAR				PKPab	PKPab	15 26 50.9	-1.1
	comp=Z,3.3nm,1.0s,baz=230,slow=5.2,SNR=10.0						
CHTO	Chiang Mai	165.47	141	PKPab	PKPab	15 26 52.0	-1.3
CHTO	Chiang Mai	165.47	141	PKP2	PKPab	15 26 52.0	-1.3
GTA	Gaotai	168.51	37	ePKP	PKPdf	15 25 57.3	+0.4
GTA				PKPab	PKPab	15 27 07.1	+0.6
GTA				LR	LR		
	comp=Z,260nm,15.6s						
GTA				LR	LR		
	comp=Z,190nm,15.3s						
GTA				LR	LR		
	comp=Z,250nm,15.3s						
HHC	Hu-ho-hao-te	169.35	348	ePKP	PKPdf	15 25 57.3	0.0
HHC				AMB	AMB		
	comp=Z,230nm,5.1s						
HHC				LR	LR		
	comp=Z,350nm,14.0s						
HHC				LR	LR		
	comp=Z,290nm,14.6s						
HHC				LR	LR		
	comp=Z,390nm,13.3s						
NJ2	Nanjing	171.09	283	ePKP	PKPdf	15 25 59.0	+0.6
NJ2				pPKP	pPKPdf	15 26 09.3	-4.4
PZH	PanZhiHua	172.78	121	PKP	PKPdf	15 25 59.8	+0.2
LZH	Lanzhou	173.10	34	ePKP	PKPdf	15 26 00.4	+0.9
CD2	Chengdu	175.79	83	PKP	PKPdf	15 26 00.0	-0.3

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*IDC **13** 15:25:51.3±0.7, 6°.72N×72°.95W, h163km±7km, mb3.1/6, mbtmp3.7/8, Error ellipse: s-maj=26.6km s-min=7.4km az=132.0*

*RSNC **13** 15:25:53.3±1.1, 6°.80N×73°.13W, h152km±4km, ML3.6, Mw4.0*

ISC 13 15:25:51.3±0.7, **6°.81N**±0°.03×**73°.10W**±0°.04, **h164**km±5km, **n47**, σ**1ˢ70**/82, **mb3.2**/6, **6C-3D**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.23	202	⇑iP	Pn	15 26 13.6	-0.1
BARC				eS	Sn	15 26 29.1	-1.7
BARC				i		15 26 30.0	
	comp=Z,2μm,0.7s						
PAMC	Pamplona, Colo	0.66	37	⇑iP	Pn	15 26 16.4	+0.7
PAMC				eS	Sn	15 26 33.8	-0.6
PAMC				i		15 26 38.6	
	comp=Z,669nm,0.5s						
BRRC	Barranca, Sant	0.68	296	⇑iP	Pn	15 26 15.5	+0.3
BRRC				eS	Sn	15 26 33.1	-0.4
BRRC				i		15 26 37.0	
	comp=Z,617nm,0.1s						
RUSC	La Rusia	0.91	179	⇓iP	Pn	15 26 17.4	+0.1
RUSC				eS	Sn	15 26 36.4	-0.9
RUSC				i		15 26 37.5	
	comp=Z,563nm,0.3s						
TAMC	Tame, Arauca	1.35	106	⇓iP	Pn	15 26 21.7	+1.1
TAMC				eS	Sn	15 26 43.3	+0.3
TAMC				i		15 26 49.9	
	comp=Z,141nm,0.4s						
PTBC	PUERTO BERRIO,	1.38	259	⇑iP	Pn	15 26 20.0	-0.8
PTBC				eS	Sn	15 26 41.9	-1.5
PTBC				i		15 26 43.4	
	comp=Z,797nm,0.6s						
SPBC	San Pablo de B	1.50	220	⇑iP	Pn	15 26 22.3	+0.2
SPBC				eS	Sn	15 26 45.1	-0.7
SPBC				i		15 26 47.5	
	comp=Z,2μm,0.3s						
ZARC	Zaragoza, Cauc	1.88	291	eP	Pn	15 26 26.2	+0.2
ZARC				eS	Sn	15 26 52.0	-0.7
ZARC				i		15 26 58.7	
	comp=Z,1μm,0.4s						
NORC	Norcasia	2.15	235	eP	Pn	15 26 29.3	+0.2
NORC				eS	Sn	15 26 57.3	-1.0
NORC				i		15 27 02.2	
	comp=Z,455nm,0.2s						
CHIC	Chingaza	2.25	196	eP	Pn	15 26 31.5	+0.8
CHIC				eS	Sn	15 27 01.9	+0.8
CHIC				i		15 27 10.8	
	comp=Z,168nm,0.4s						
ROSC	El Rosal	2.30	212	P	Pn	15 26 33.0	+1.8
	comp=Z,174nm,0.3s,baz=168,slow=0.1,SNR=52						
ROSC				S	Sn	15 27 02.0	+0.1
	comp=Z,624nm,0.5s,baz=93,slow=16,SNR=17						
ROSC	El Rosal	2.30	212	eP	Pn	15 26 33.1	+1.9
ROSC				eS	Sn	15 27 04.2	+2.2
ROSC				i		15 27 07.2	
	comp=Z,538nm,0.5s						
HELC	Santa Helena	2.49	256	eP	Pn	15 26 34.2	+0.8
HELC				eS	Sn	15 27 06.2	+0.2
HELC				i		15 27 12.2	
	comp=Z,372nm,0.3s						
UREC	San Jos de Ur	2.59	291	eP	Pn	15 26 33.5	-0.8
UREC				eS	Sn	15 27 04.4	-3.1
UREC				i		15 27 14.6	
	comp=Z,397nm,0.3s						
VILC	Villavicencio,	2.74	193	eP	Pn	15 26 37.0	+0.7
VILC				eS	Sn	15 27 12.9	+1.9
VILC				i		15 27 21.0	
	comp=Z,240nm,0.4s						
GUY2C	Guyana, Caldas	2.75	235	eP	Pn	15 26 37.3	+0.6
GUY2C				eS	Sn	15 27 14.2	+2.6
GUY2C				IAML		15 27 21.1	
	comp=Z,314nm,0.3s						
LL1C	La Loma 1 Cana	2.76	351	eP	Pn	15 26 38.2	+2.0
LL1C				eS	Sn	15 27 12.2	+1.0
PTGC	Puerto Gaitan,	2.76	160	⇓iP	Pn	15 26 36.4	0.0
PTGC				eS	Sn	15 27 09.8	-1.5
PTGC				i		15 27 12.8	
	comp=Z,170nm,0.5s						
CBOC	Ciudad Bolivar	3.04	252	eP	Pn	15 26 41.5	+1.5
CBOC				eS	Sn	15 27 17.5	-0.2
CBOC				i		15 27 34.2	
	comp=Z,122nm,0.6s						
DBBC	Dabeiba	3.10	274	eP	Pn	15 26 41.1	+0.5
DBBC				eS	Sn	15 27 17.0	-1.7
DBBC				i		15 27 24.5	
	comp=Z,191nm,0.3s						
SDV	Santo Domingo	3.20	50	P	Pn	15 26 43.0	+1.0
	comp=Z,20nm,0.3s,baz=198,slow=2.2,SNR=18						
SDV				S	Sn	15 27 20.0	-1.2
	comp=Z,46nm,0.5s,baz=266,slow=18,SNR=14						
ARGC	Ariguani, Magd	3.24	340	eP	Pn	15 26 43.8	+1.5
ARGC				eS	Sn	15 27 23.2	+1.3
ARGC				i		15 27 34.5	
	comp=Z,91nm,0.3s						
ANIL	Santa Ana	3.25	225	eP	Pn	15 26 44.8	+2.1
ANIL				eS	Sn	15 27 24.7	+2.1
PRAC	Prado	3.55	210	eP	Pn	15 26 46.8	+0.5
PRAC				eS	Sn	15 27 29.1	+0.1
PRAC				i		15 27 35.5	
	comp=Z,160nm,0.5s						
ORTC	Ortega, Tolima	3.58	217	eP	Pn	15 26 47.6	+0.9
ORTC				eS	Sn	15 27 32.1	+2.3
ORTC				i		15 27 34.9	
	comp=Z,150nm,0.2s						
APAC	Apartado, Choc	3.62	288	eP	Pn	15 26 47.6	+0.5
APAC				eS	Sn	15 27 30.5	-0.1
APAC				i		15 27 34.4	
	comp=Z,260nm,0.8s						
SJCC	San Jacinto, C	3.70	326	eP	Pn	15 26 47.5	-0.7
SJCC				eS	Sn	15 27 29.2	-3.3
SJCC				i		15 27 33.6	
	comp=Z,117nm,0.6s						
LCBC	Los crdobas,	3.83	302	eP	Pn	15 26 59.4	+10
LCBC				eS	Sn	15 27 36.5	+1.2
LCBC				i		15 27 38.8	
	comp=Z,149nm,0.4s						
CRJC	Cerrejon, Guaj	4.19	3	⇑iP	Pn	15 26 53.8	-0.8
CRJC				eS	Sn	15 27 40.5	-3.5
CRJC				i		15 27 47.0	
	comp=Z,114nm,0.4s						
YOTC	Yotoco, Valle	4.28	229	eP	Pn	15 26 56.1	+0.4
YOTC				eS	Sn	15 27 43.1	-2.8
YOTC				i		15 27 57.1	
	comp=Z,20nm,0.4s						
SMRC	Santa Marta, M	4.47	346	eP	Pn	15 26 58.8	+0.7
SMRC				eS	Sn	15 27 45.6	-4.7
SMRC				i		15 27 52.9	
	comp=Z,46nm,0.3s						
MACC	Macarena, Meta	4.69	189	eP	Pn	15 27 00.3	-0.7
MACC				eS	Sn	15 27 51.4	-4.1
MACC				i		15 28 00.2	
	comp=Z,36nm,0.6s						
BETC	Betania	4.71	210	eP	Pn	15 27 01.0	-0.3
BETC				eS	Sn	15 27 49.3	-6.8
BETC				i		15 27 53.1	
	comp=Z,46nm,0.5s						
GARC	Garzon, Huila	5.17	208	eP	Pn	15 27 07.4	-0.1
GARC				eS	Sn	15 28 07.2	+0.1
GARC				i		15 28 13.0	
	comp=Z,46nm,0.2s						
POPC	Popayan, Colom	5.54	220	eP	Pn	15 27 13.2	+0.8
POPC				eS	Sn	15 28 13.0	-2.8
FLOC	Florencia	5.78	206	eP	Pn	15 27 15.7	+0.4
FLOC				i		15 28 54.9	
	comp=Z,8.6nm,0.4s						
BBAC	Balboa, Cauca	6.30	221	eP	Pn	15 27 24.4	+2.0
BBAC				eS	Sn	15 28 31.6	-2.3
TXAR	Lajitas Array	36.49	312	P	P	15 32 42.6	+1.6
	comp=Z,0.3nm,0.5s,baz=136,slow=10,SNR=4.3						
	comp=Z,0.3nm,0.5s						
PDAR	Pinedale Array	48.10	324	P	P	15 34 16.0	+1.1
	comp=Z,0.2nm,0.3s,baz=92,slow=6.3,SNR=2.1						
	comp=Z,0.2nm,0.3s						
SCHQ	Schefferville	48.16	5	P	P	15 34 15.8	+1.0

	comp=Z,1.8nm,0.4s,baz=198,slow=8.2,SNR=4.9						
	comp=Z,1.8nm,0.4s						
YKA	Yellowknife Ar	63.29	340	P	P	15 36 01.6	-0.7
	comp=Z,0.1nm,0.6s,baz=133,slow=7.0,SNR=2.2						
	comp=Z,0.1nm,0.6s						
TORD	Torodi Ar. Bea	73.72	78	P	P	15 37 06.5	-1.5
	comp=Z,0.2nm,0.5s,baz=295,slow=6.4,SNR=1.8						
	comp=Z,0.2nm,0.5s						
NOA	NORSAR Array B	81.33	29	P	P	15 37 48.4	-1.0
	comp=Z,0.4nm,0.6s,baz=255,slow=9.3,SNR=2.2						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	122.33	20	PKP	PKiKP	15 44 27.4	+0.1
	comp=Z,0.2nm,0.4s,baz=311,slow=2.1,SNR=7.2						
SONM	Songino Array	125.59	0	PKP	PKiKP	15 44 34.2	+0.2
	comp=Z,0.2nm,0.5s,baz=78,slow=1.6,SNR=2.0						
ASAR	Alice Springs	149.12	234	PKPbc	PKPbc	15 45 21.4	+0.2
	comp=Z,0.8nm,0.5s,baz=117,slow=3.5,SNR=16						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPbc	15 45 24.4	+0.2
	comp=Z,0.7nm,0.4s,baz=109,slow=2.6,SNR=15						

IDC 13 15:37:27.1±5.2, 3°.79N×127°.99E, h136km±66km, mb3.2/3, mbtmp3.6/4, MS3.8/1, Error ellipse: s-maj=150.0km s-min=21.5km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.67	145	P	Pn	15 38 50.5	+1.1
	5.3nm,0.4s,baz=324,slow=19,SNR=8.7						
SIJI				S	Sn	15 39 53.2	-0.4
	8.4nm,0.2s,baz=199,slow=22,SNR=17						
WRA	Warramunga Arr	24.40	165	P	P	15 42 33.1	+0.1
	0.4nm,0.4s,baz=345,slow=10,SNR=7.5						
	0.4nm,0.4s						
ASAR	Alice Springs	27.89	168	P	P	15 43 04.6	+0.1
	0.4nm,0.5s,baz=352,slow=7.7,SNR=27						
	0.4nm,0.5s						
STKA	Stephens Creek	37.76	161	LR	LR	16 00 44.5	
	comp=Z,132nm,21.4s,baz=198,slow=37						
MKAR	Makanchi Array	58.23	325	P	P	15 47 07.0	-0.2
	0.4nm,0.4s,baz=112,slow=7.8,SNR=14						
	0.4nm,0.4s						

NEIC 13 15:46:00.6±1.1, 12°.70S±0°.05×76°.9W±0°.1, h43km±17km, mb4.1/2, Error ellipse: s-maj=18.2km s-min=4.2km az=69.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	0.71	2		Pn	15 46 14.4	0.0
NNA					Sn	15 46 24.0	-0.3
CZSB	Cruzeiro do Su	6.42	40		Pn	15 47 32.1	-0.6
PB12	IPOC Station P	8.62	134	Pn	Pn	15 48 02.9	0.0
MCRA	Macar, Loja	8.82	340	Pn	Pn	15 48 04.9	-0.8
PB16	IPOC Station P	9.04	129	Pn	Pn	15 48 08.3	-0.8
PSGCX	Pisagua	9.43	137	Pn	Pn	15 48 13.3	-0.8
PB11	IPOC Station P	9.86	136	Pn	Pn	15 48 18.5	-1.5
GO01	Chusmiza	10.12	134	Pn	Pn	15 48 23.6	-0.1
ETMB	Extrema	10.84	76	Pn	Pn	15 48 33.0	-0.3
PORT	Chimborazo Vol	11.32	350	Pn	Pn	15 48 41.0	+0.5
SLOR	San Lorenzo -	12.00	352	Pn	Pn	15 48 50.1	+0.5
TULM	Tulcn-Chalpat	13.36	356	Pn	Pn	15 49 05.7	-2.6
SAML	Samuel	13.95	76	Pn	Pn	15 49 15.1	-0.7
BOAV	Boa Vista	22.11	48		P	15 50 52.2	-0.3
BOAV				IAmb	IAmb	15 51 05.5	
	comp=Z,7.7nm,1.2s						
PLCA	Paso Flores	28.47	170	P	P	15 51 51.1	-0.6
PLCA				IAmb	IAmb	15 52 07.7	
	comp=Z,6.4nm,1.4s						

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*KRNET **13** 15:46:56.6±0.1, 42°.00N×79°.60E, h19km, mb3.4*
*SOME **13** 15:46:56.2, 42°.00N×79°.57E, h15km*
*NNC **13** 15:46:57.2±1.2, 42°.05N×79°.59E, h0km, mb3.8, mpv3.8, Error ellipse: s-maj=8.0km s-min=4.9km az=145.0*
ISC 13 15:46:57.0±2.1, 42°.05N±0°.07×79°.65E±0°.06, h1km±11km, n59, σ1ˢ.20/84, 22C-5D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	1.02	295	⇑iP	Pg	15 47 16.0	-0.7
	baz=0.0						
PRZ				⇑iS	Sg	15 47 30.2	+0.3
	baz=0.0						
SHLS	Shalkode	1.11	353	P	Pg	15 47 18.6	+0.2
	70nm,0.1s						
SHLS				S	Sn	15 47 35.2	-0.7
	303nm,0.2s						
SHLS	Shalkode	1.11	353	eP	Pg	15 47 18.6	+0.2
	baz=10.0						
SHLS				eS	Sn	15 47 35.2	-0.7
	baz=10.0						
SHLS	Shalkode	1.11	353	eP	Pg	15 47 18.6	+0.2
	86nm,0.1s						
SHLS				eS	Sn	15 47 35.2	-0.7
	303nm,0.1s						
UZB	Uzynbulak	1.19	337	P	Pb	15 47 19.4	-1.1
	33nm,0.1s						
UZB				S	Sg	15 47 35.8	+0.6
	61nm,0.1s						
UZB	Uzynbulak	1.19	337	eP	Pb	15 47 19.4	-1.1
	baz=40						
UZB				eS	Sg	15 47 35.9	+0.6
	baz=40						
UZB	Uzynbulak	1.19	337	eP	Pb	15 47 19.4	-1.1
	37nm,0.1s						
UZB				eS	Sg	15 47 35.8	+0.6
	62nm,0.1s						
PDGK	Podgornoye	1.28	355	P	Pn	15 47 20.9	-1.3
	16nm,0.1s						
PDGK				S	Sb	15 47 38.9	-0.1
	33nm,0.2s						
PDGK	Podgornoye	1.28	355	⇑P	Pn	15 47 20.9	-1.3
	8.8nm,0.2s						
PDGK				⇑S	Sb	15 47 38.8	-0.3
	52nm,0.4s						
SATY	Saty	1.36	318	P	Pn	15 47 22.2	-1.1
	32nm,0.1s						
SATY				S	Sb	15 47 41.0	-0.4
	112nm,0.1s						
SATY	Saty	1.36	318	eP	Pn	15 47 22.2	-1.1
	baz=21						
SATY				eS	Sb	15 47 40.9	-0.4
	baz=21						
SATY	Saty	1.36	318	eP	Pn	15 47 22.2	-1.1
	32nm,0.1s						
SATY				eS	Sb	15 47 41.0	-0.4
	112nm,0.1s						
ZHN	Zhinishke	1.43	322	P	Pn	15 47 23.5	-0.7
	59nm,0.1s						
ZHN				S	Sn	15 47 43.3	-0.4
	161nm,0.2s						
ZHN	Zhinishke	1.43	322	eP	Pn	15 47 23.5	-0.7
	baz=24						
ZHN				eS	Sn	15 47 43.3	-0.4
	baz=24						
ZHN	Zhinishke	1.43	322	eP	Pn	15 47 23.5	-0.7
	59nm,0.1s						
ZHN				eS	Sn	15 47 43.3	-0.4
	173nm,0.1s						
KPKS	Kokpek	1.58	334	P	Pn	15 47 26.3	0.0
	98nm,0.1s						
KPKS				S	Sb	15 47 48.2	+0.6
	156nm,0.2s						
KPKS	Kokpek	1.58	334	eP	Pn	15 47 26.3	0.0
	baz=36						
KPKS				eS	Sb	15 47 48.2	+0.6
	baz=36						
KPKS	Kokpek	1.58	334	eP	Pn	15 47 26.3	0.0
	98nm,0.1s						
KPKS				eS	Sb	15 47 48.2	+0.6
	164nm,0.1s						
ANVS	Anan'yevo	1.64	297	⇑iP	Pn	15 47 26.9	-0.3
	baz=99						
ANVS				⇑iS	Sn	15 47 48.8	-0.2
	baz=99						
KDJ	Kajisay	1.84	273	⇑iP	Pn	15 47 29.5	-0.4
	baz=75						
KDJ				⇑iS	Sn	15 47 53.8	-0.1
	baz=75						
KOTS	Kotyrbulak	2.21	303	Pg	Pn	15 47 37.2	+2.2
	9.2nm,0.1s						
KOTS				Lg	Lg	15 48 06.6	
	74nm,0.4s						
KOTS	Kotyrbulak	2.21	303	ePg	Pn	15 47 37.2	+2.2
	19nm,0.1s						
KOTS				eLg	Lg	15 48 06.6	
	141nm,0.1s						
BLB	Baldybastay	2.22	338	Pg	Pb	15 47 37.5	-0.5
	26nm,0.1s						
BLB				Lg	Lg	15 48 06.9	
	157nm,0.3s						
MDOK	Medeo	2.22	301	⇓Pg	Pn	15 47 36.1	+1.0
	20nm,0.4s						
MDOK				Pg	Pn	15 47 37.1	+2.0
	9.2nm,0.1s						
MDOK				Lg	Lg	15 48 06.3	
	66nm,0.6s						
MDOK				Lg	Lg	15 48 06.8	
	55nm,0.6s						
MDOK	Medeo	2.22	301	ePg	Pn	15 47 37.1	+2.0
	15nm,0.2s						
MDOK				eLg	Lg	15 48 06.3	
	66nm,0.6s						
TNSS	Tian-Shan	2.23	297	Pg	Pn	15 47 37.2	+1.7
	4.6nm,0.1s						
TNSS				Lg	Lg	15 48 06.6	
	32nm,0.4s						
TNSS	Tian-Shan	2.23	297	ePg	Pn	15 47 37.2	+1.7
	14nm,0.2s						
TNSS				eLg	Lg	15 48 06.6	
	69nm,0.2s						
DJR	Jarkent	2.28	3	Pg	Pn	15 47 37.9	+2.0
	9.6nm,0.1s						
DJR				Lg	Lg	15 48 08.5	
	36nm,0.2s						
DJR	Jarkent	2.28	3	ePg	Pn	15 47 37.9	+2.0
	10nm,0.1s						
DJR				eLg	Lg	15 48 08.5	
	39nm,0.2s						
KNDC	Almaty	2.30	301	⇑Pg	Pn	15 47 38.3	+2.2
	24nm,0.5s						
KNDC				⇑Lg	Lg	15 48 10.1	
	109nm,0.7s						
AAA	Alma-Ata	2.33	301	Pg	Pb	15 47 39.7	-0.1
	19nm,0.1s						
AAA				Lg	Lg	15 48 10.8	
	101nm,0.5s						
AAA	Alma-Ata	2.33	301	ePg	Pb	15 47 39.7	-0.1
	23nm,0.1s						
AAA				eLg	Lg	15 48 10.8	
	101nm,0.2s						
ARXS	Arharly	2.54	329	Pg	Pb	15 47 42.4	-1.1
	8.8nm,0.2s						
ARXS				Lg	Lg	15 48 15.3	
	44nm,0.5s						
ARXS	Arharly	2.54	329	ePg	Pb	15 47 42.4	-1.1
	5.8nm,0.1s						
ARXS				eLg	Lg	15 48 15.3	
	44nm,0.2s						
ULHL	Ulahol	2.54	275	⇑eP	Pn	15 47 40.0	+0.4
	baz=77						
ULHL				⇑iS	Sn	15 48 11.8	+0.5
	baz=77						
MTBS	Maitube	2.61	295	Pg	Pb	15 47 43.5	-1.1
	4.8nm,0.4s						
MTBS				Lg	Lg	15 48 17.3	
	22nm,0.2s						
MTBS	Maitube	2.61	295	ePg	Pb	15 47 43.5	-1.1
	5.2nm,0.2s						
MTBS				eLg	Lg	15 48 17.3	
	24nm,0.3s						
CHKK	Chushkaly	2.66	314	Pg	Pn	15 47 43.9	+2.9
	12nm,0.3s						
CHKK				Lg	Lg	15 48 18.0	
	67nm,0.3s						
CHKK	Chushkaly	2.66	314	ePg	Pn	15 47 43.9	+2.9
	12nm,0.2s						
CHKK				eLg	Lg	15 48 18.0	
	70nm,0.2s						
KTBS	Karatobe	2.74	308	Pg	Pb	15 47 45.7	-1.2
	13nm,0.2s						
KTBS				Lg	Lg	15 48 21.2	
	100nm,0.2s						
KTBS	Karatobe	2.74	308	ePg	Pb	15 47 45.7	-1.2
	13nm,0.2s						
KTBS				eLg	Lg	15 48 21.2	
	106nm,0.2s						
BOOM	Boomskoye usch	2.79	280	⇓eP	Pn	15 47 43.5	+0.6
	baz=81						
BOOM				⇓iS	Sn	15 48 17.7	+0.4
	baz=81						
NRN	Naryn	2.80	258	⇑iP	Pn	15 47 43.7	+0.4
	baz=59						
NRN				⇑iS	Sn	15 48 18.2	+0.4
	baz=59						
KST	Kastek	2.90	291	Pg	Pb	15 47 48.3	-1.3
	6.4nm,0.3s						
KST				Lg	Lg	15 48 25.5	
	25nm,0.5s						
KST	Kastek	2.90	291	ePg	Pb	15 47 48.3	-1.3
	7.8nm,0.2s						
KST				eLg	Lg	15 48 25.5	
	24nm,0.3s						
KUU	Kurty	3.05	308	Pg	Pb	15 47 51.0	-1.1
	2.3nm,0.1s						
KUU				Lg	Lg	15 48 30.2	
	30nm,0.4s						
KUU	Kurty	3.05	308	ePg	Pb	15 47 51.0	-1.1
	2.9nm,0.1s						
KUU				eLg	Lg	15 48 30.2	
	45nm,0.1s						
DGS	Degeres	3.10	294	Pg	Pn	15 47 50.2	+3.1
	2.2nm,0.1s						
DGS				Lg	Lg	15 48 29.3	
	18nm,0.6s						
DGS	Degeres	3.10	294	ePg	Pn	15 47 50.2	+3.1
	2.9nm,0.1s						
DGS				eLg	Lg	15 48 29.3	
	19nm,0.3s						
TKM2	Tokmak 2	3.12	287	⇑Pn	Pn	15 47 49.4	+1.8
	4.3nm,0.5s						
TKM2				⇑Sn	Sb	15 48 30.9	-1.2
	9.0nm,0.3s						
TKM2	Tokmak 2	3.12	287	⇑eP	Pn	15 47 48.2	+0.6
	baz=89						
TKM2				⇑iS	Sn	15 48 25.8	+0.2
	baz=89						
KRBS	Karabastau	3.35	301	Pg	Pb	15 47 56.4	-0.9
	3.2nm,0.2s						
KRBS				Lg	Lg	15 48 39.4	
	21nm,0.3s						
KRBS	Karabastau	3.35	301	ePg	Pb	15 47 56.4	-0.9
	3.4nm,0.1s						
KRBS				eLg	Lg	15 48 39.4	
	23nm,0.1s						
SGDS	Sogindy	3.95	292	Pg	Pb	15 48 06.9	-0.6
	3.0nm,0.3s						
SGDS				Lg	Lg	15 48 57.9	
	4.9nm,0.3s						
USP	Ospenovka	3.99	289	⇑iP	Pn	15 48 00.1	+0.8
	baz=90						
USP				⇑iS	Sn	15 48 46.7	0.0
	baz=90						
MK31	Makanchi Array	5.10	21	⇑Pn	Pn	15 48 15.0	+0.4
	0.1nm,0.1s,baz=204,slow=14,SNR=5.2						
MK31				⇓Sn	Sn	15 49 15.0	+0.8
	1.1nm,0.3s,baz=207,slow=25,SNR=7.0						
KK31	Karatay Array	6.83	282	Lg	Lg	15 50 31.9	
	0.6nm,0.5s,baz=104,slow=28,SNR=4.3						
OTUK	Ortayu	8.06	323	⇑Lg	Lg	15 51 07.8	
	2.2nm,0.8s						
KURBB	Kurchatov Arra	8.61	355	⇓Lg	Lg	15 51 25.2	
	3.5nm,0.7s						

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*IDC **13** 15:47:32.1±0.7, 28°.73N×143°.19E, h0km, mb3.7/11, mbtmp3.7/12, ML2.8/1, Error ellipse: s-maj=26.8km s-min=14.9km az=94.0*
*JMA **13** 15:47:35.7±0.1, 28°.8N±0°.4×14°2E±°, h16km, MV3.8/17, NEAR CHICHIJIMA ISLAND*
ISC 13 15:47:37.0±0.7, 28°.70N±0°.04×142°.8E±0°.1, h34km, n24, σ2ˢ.42/29, mb3.9/12, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.69	199	eP	Pn	15 48 05.5	+1.4
CBIJ				eS	Sb	15 48 27.2	-1.2
JCJ	Chichijima	1.69	199	Pn	Pb	15 48 05.7	-1.8
	36nm,0.3s,baz=295,slow=23,SNR=24						
JCJ				Sn	Sn	15 48 22.7	-1.9
	38nm,0.3s,baz=284,slow=22,SNR=8.0						
JHH2	Haha-jima-NKT2	2.13	196	eS	Sb	15 48 39.3	-1.8
BSO1	Boso 1	6.14	346	eS	Sn	15 50 12.9	-0.6
JOD2	Odawara 2	7.27	335	eP	Pn	15 49 21.1	+0.3
JHU	Hanno	7.73	338	eS	Sn	15 50 49.0	-4.6
JRY	Ryogami san	8.01	337	eP	Pn	15 49 30.3	-0.7
JRY				eS	Sn	15 50 57.1	-3.3
JHO	Hitachi	8.11	347	eP	Pn	15 49 29.4	-3.0
JAG	Ashikaga	8.21	341	eP	Pn	15 49 32.1	-1.6
JAG				eS	Sn	15 50 59.4	-5.8
MJAR	Matsushiro Arr	8.73	335	Pn	Pn	15 49 40.0	-0.8
	0.1nm,0.3s,baz=159,slow=11,SNR=8.2						
MJAR				Sn	Sn	15 51 15.2	-2.9
	baz=39,slow=41						
	1.1nm,0.4s						
KSRS	Korea Array	15.22	309	Pn	P	15 51 16.4	+2.5
	0.2nm,0.3s,baz=117,slow=11,SNR=6.4						
USRK	Ussuriysk Ar.	17.73	334	Pn	P	15 51 46.8	+5.1
	0.1nm,0.3s,baz=174,slow=29,SNR=2.7						
KLR	Kul'dur	22.19	341	P	P	15 52 31.6	+1.5
	1.5nm,0.9s,baz=137,slow=4.6,SNR=3.5						
	1.5nm,0.9s						
SONM	Songino Array	33.97	314	P	P	15 54 18.7	+1.4
	0.7nm,0.4s,baz=119,slow=10,SNR=5.8						
	0.7nm,0.4s						
WRA	Warramunga Arr	49.04	191	P	P	15 56 21.8	+0.9
	6.5nm,0.7s,baz=13,slow=8.4,SNR=50						
MKAR	Makanchi Array	49.90	309	P	P	15 56 29.6	+2.4
	1.8nm,1.0s,baz=95,slow=8.6,SNR=6.0						
	1.8nm,1.0s						
ASAR	Alice Springs	52.76	190	P	P	15 56 49.1	+0.3
	0.3nm,0.6s,baz=7.2,slow=5.2,SNR=11						
	0.3nm,0.6s						
ILAR	Eielson Array	56.05	29	P	P	15 57 10.6	-1.5
	0.2nm,0.7s,baz=262,slow=6.1,SNR=4.5						
	0.2nm,0.7s						
BVAR	Borovoye Array	57.25	317	P	P	15 57 22.7	+1.7
	0.7nm,0.5s,baz=98,slow=6.5,SNR=2.5						
	0.7nm,0.5s						
STKA	Stephens Creek	60.25	181	P	P	15 57 42.3	+0.4
	1.5nm,0.7s,baz=4.8,slow=12,SNR=3.4						
	1.5nm,0.7s						
INK	Inuvik	61.35	25	P	P	15 57 48.3	-0.6
	0.3nm,0.4s,baz=269,slow=5.4,SNR=4.8						
	0.3nm,0.4s						
YKA	Yellowknife Ar	70.47	29	P	P	15 58 46.9	-0.8
	0.1nm,0.6s,baz=296,slow=6.1,SNR=2.1						
	0.1nm,0.6s						
FINES	FINESS Array B	76.76	334	P	P	15 59 25.7	+1.0
	1.7nm,0.8s,baz=72,slow=6.0,SNR=2.6						
	1.7nm,0.8s						
NVAR	Mina Array Bea	79.10	52	P	P	15 59 38.0	-0.4
	0.5nm,0.7s,baz=285,slow=5.7,SNR=3.9						
	0.5nm,0.7s						

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*IDC **13** 15:49:02.2±1.1, 17°.19N×96°.02E, h0km, mb3.7/8, mbtmp3.7/9, ML3.7/1, MS3.6/9, Error ellipse: s-maj=24.9km s-min=18.6km az=17.0*
ISC 13 15:49:03.7±1.1, 17°.3N±0°.2×95°.9E±0°.1, h10km, n27, σ1ˢ.40/19, mb3.7/8, MS3.6/6, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	3.11	67	Pn	Pn	15 49 52.4	-0.4
	2.6nm,0.3s,baz=249,slow=15,SNR=86						
CMAR				Lg	Lg	15 50 39.5	
	27nm,0.3s,baz=251,slow=20,SNR=1.4						
CMAR				LR	LR	15 50 59.9	
	comp=Z,545nm,18.1s,baz=240,slow=38						
	14nm,0.6s						
BRDH	Bariadhala	6.72	324	LR	LR	15 54 27.5	
	comp=Z,436nm,20.7s,baz=90,slow=48						
TAPN	Taplejung	12.58	324	eP	Pn	15 52 02.6	-0.4
	15nm,0.4s						
RAMN	Ramite	12.93	320	eP	Pn	15 52 05.4	-2.4
	8.0nm,0.4s						
JIRN	Jiri	13.70	321	eP	Pn	15 52 16.5	-1.9
	5.4nm,0.5s						
GUN	Gumba	14.07	321	eP	Pn	15 52 21.4	-2.0
	6.3nm,0.4s						
PKI	Pulchoki	14.12	318	eP	Pn	15 52 22.9	-1.2
	9.7nm,0.4s						
PKIN	Phulchoki	14.13	318	eP	Pn	15 52 22.9	-1.3
	15nm,0.4s						
DMN	Daman	14.34	318	eP	Pn	15 52 25.7	-1.3
GKN	Gorkha	14.91	318	eP	Pn	15 52 33.3	-1.4
	6.2nm,0.4s						
DANN	Dangsing	15.71	317	eP	Pn	15 52 45.5	0.0
	17nm,0.6s						
PYUN	Piuthan	16.07	314	eP	P	15 52 52.0	-1.4
	13nm,0.5s						
PALK	Pallekele	17.87	238	LR	LR	15 59 59.6	
	comp=Z,105nm,18.5s,baz=144,slow=37						
AAK	Ala-Archa	31.19	329	LR	LR	16 11 33.3	
	comp=Z,82nm,18.7s,baz=176,slow=43						
JOW	Kunigami	31.38	67	LR	LR	16 09 32.1	
	comp=Z,440nm,19.5s,baz=306,slow=39						
MKAR	Makanchi Array	31.53	342	P	P	15 55 26.3	+0.4
	0.7nm,0.4s,baz=161,slow=8.2,SNR=16						
	0.7nm,0.4s						
SONM	Songino Array	31.67	13	LR	LR	16 09 42.4	
	comp=Z,134nm,20.1s,baz=194,slow=39						
KSRS	Korea Array	34.56	48	LR	LR	16 11 10.0	
	comp=Z,79nm,19.5s,baz=190,slow=38						
ZALV	Zalesovo Beam	37.60	349	P	P	15 56 19.4	+1.0
	0.5nm,0.4s,baz=165,slow=6.6,SNR=1.5						
	0.5nm,0.4s						
WRA	Warramunga Arr	52.83	133	P	P	15 58 18.5	-1.2
	0.7nm,1.0s,baz=317,slow=7.4,SNR=3.4						
	0.7nm,1.0s						
ASAR	Alice Springs	55.06	137	P	P	15 58 35.4	-0.7
	0.5nm,1.1s,baz=319,slow=7.1,SNR=4.9						
	0.5nm,1.1s						
BRTR	Keskin Array B	57.96	306	P	P	15 58 57.6	+1.0
	0.7nm,0.7s,baz=74,slow=6.6,SNR=4.1						
	0.7nm,0.7s						
ARCES	ARCESS Array B	67.11	339	P	P	15 59 58.7	+1.5
	1.7nm,0.9s,baz=102,slow=6.0,SNR=1.2						
	1.7nm,0.9s						
GERES	GERESS Array B	72.12	317	P	P	16 00 30.1	+1.5
	0.3nm,0.4s,baz=76,slow=8.2,SNR=2.4						
	0.3nm,0.4s						
NOA	NORSAR Array B	72.50	329	LR	LR	16 35 58.3	
	comp=Z,29nm,19.6s,baz=200,slow=39						
ILAR	Eielson Array	85.44	22	P	P	16 01 41.2	-0.1
	0.2nm,0.6s,baz=309,slow=4.0,SNR=2.9						
	0.2nm,0.6s						
MSVF	Nonsavu	87.97	109	LR	LR	16 38 12.9	
	comp=Z,83nm,22.0s,baz=141,slow=34						

IDC 13 16:05:33.1±999.0, 51°.06N×45°.23E, h0km, Error ellipse: s-maj=1270.0km s-min=167.1km az=86.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	8.15	90	I	I	16 53 30.0	
	0.4nm,0.8s,baz=280,slow=325,SNR=5.8						
I46RU	ZALESOVO INFRA	24.06	68	I	I	18 32 50.0	
	baz=279,slow=316,SNR=2.5						
I34MN	SONGINO INFRAS	38.92	70	I	I	20 05 50.0	
	baz=301,slow=329,SNR=0.7						

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*JMA **13** 16:07:28.7±0.2, 29°.2N±0°.5×12°9E±°, h15km±1km, MV3.1/18, NEAR TOKARA ISLANDS*
JMA Felt I J1 at NEAR TOKARA ISLANDS .
*IDC **13** 16:07:33.8±1.8, 29°.04N×129°.24E, h47km±21km, mb3.3/5, mbtmp3.6/8, ML3.2/3, MS3.1/1, Error ellipse: s-maj=30.9km s-min=14.7km az=107.0*
ISC 13 16:07:29.1±1.0, 29°.11N±0°.03×129°.27E±0°.06, h10km±6km, n21, σ1ˢ.07/25, mb3.5/5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTAJ	Takarajima	0.08	306	P	Pg	16 07 31.3	-0.1
JTAJ				eS	Sg	16 07 32.9	-0.1
JAM	Amami Oshima	0.75	157	P	Pg	16 07 43.8	+0.2
JAM				eS	Sb	16 07 54.9	+0.3
JAMN	Amaminishikomi	0.87	186	P	Pg	16 07 45.9	+0.2
JAMN				eS	Sb	16 07 58.2	+0.3
JNN	Nakanoshima	0.90	35	P	Pg	16 07 45.9	-0.6
JZK	Kikaishima	1.00	142	P	Pg	16 07 49.3	+1.0
JTK	Tokunoshima	1.35	192	P	Pn	16 07 52.9	-1.1
JYAK	Yakushimahirau	1.56	43	eP	Pn	16 07 55.1	-1.8
JOKE	Okinoerabujima	1.85	200	P	Pn	16 08 00.4	-0.4
JMTN	Minamitane	1.91	47	eP	Pn	16 08 01.4	-0.3
JTN	Tanegashima 3	2.14	43	eP	Pn	16 08 04.3	-0.5

JYRO	**Yoronjima**	**2.20**	**200**	P	**Pn**	**16 08 05.7**	**+0.1**
JIH	**Iheya**	**2.37**	**210**	*e*P	**Pn**	**16 08 08.3**	**+0.4**
JOW	**Kunigami**	**2.43**	**202**	P	**Pn**	**16 08 09.9**	**+1.0**
	11nm,0.3s,baz=103,slow=23,SNR=14						
JOW				S	**Sn**	**16 08 38.4**	**-0.4**
	28nm,0.5s,baz=51,slow=24,SNR=3.7						
	12nm,0.3s						
JOW	**Kunigami**	**2.43**	**202**	*e*P	**Pn**	**16 08 08.9**	**0.0**
JNU	**Nakatsue**	**4.23**	**19**	P	**Pn**	**16 08 37.0**	**+3.3**
	1.5nm,0.3s,baz=180,slow=14,SNR=9.8						
JNU				LR	LR	16 10 24.5	
	comp=Z,224nm,18.5s,baz=217,slow=40						
	30nm,0.9s						
ASAJ	**Asahikawa**	**18.37**	**32**	P	**P**	**16 11 44.9**	**+0.9**
	0.1nm,0.3s,baz=219,slow=13,SNR=3.6						
	3.8nm,0.9s						
SONM	**Songino Array**	**25.73**	**323**	P	**P**	**16 13 01.3**	**+1.6**
	1.0nm,0.8s,baz=119,slow=8.6,SNR=4.0						
	1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**29.63**	**256**	P	**P**	**16 13 33.6**	**-1.3**
	0.9nm,0.6s,baz=60,slow=4.3,SNR=1.9						
	0.9nm,0.6s						
MKAR	**Makanchi Array**	**40.38**	**309**	P	**P**	**16 15 07.0**	**-0.1**
	0.6nm,0.8s,baz=104,slow=9.1,SNR=6.7						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**49.01**	**174**	P	**P**	**16 16 15.9**	**-0.2**
	0.9nm,1.0s,baz=352,slow=8.2,SNR=5.2						
	0.9nm,1.0s						
YKA	**Yellowknife Ar**	**75.54**	**26**	P	**P**	**16 19 12.8**	**-0.7**
	0.1nm,0.3s,baz=312,slow=6.6,SNR=1.8						
	0.1nm,0.3s						

ROM 13 16:08:52.0±0.1**, 42.°533N**±0.°004×**13.°340E**±0.°004**, h11^{km}, ML1.1**/7**, 4C, Error ellipse: s-maj=0.4km s-min=0.3km az=197.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.05**	**86**	⇑P	Pg	16 08 54.7	+0.3
CAMP				S	Sg	16 08 56.0	-0.1
RM33	**Pellescritta (**	**0.10**	**256**	⇑P	Pg	16 08 55.2	+0.4
RM33				S	Sg	16 08 57.0	+0.2
RM33				AML	AML		
	comp=E,200µm,0.3s						
RM33				AML	AML		
	comp=N,158µm,1.3s						
RM33				AML	AML		
	comp=N,158µm,1.3s						
RM33				AML	AML		
	comp=N,137µm,0.1s						
RM33				AML	AML		
	comp=E,201µm,0.3s						
RM33				AML	AML		
	comp=E,193µm,0.1s						
T1247	**Pizzolo (AQ)**	**0.10**	**199**	P	Pg	16 08 55.3	+0.5
T1247				S	Sg	16 08 57.3	+0.6
T1247				AML	AML		
	comp=N,564µm,0.1s						
T1247				AML	AML		
	comp=E,362µm,0.8s						
SMA1	**SAN MARTINO**	**0.10**	**358**	P	Pg	16 08 55.3	+0.4
SMA1				S	Sg	16 08 57.5	+0.6
SMA1				AML	AML		
	comp=E,424µm,0.7s						
SMA1				AML	AML		
	comp=N,271µm,1.4s						
SMA1				AML	AML		
	comp=E,424µm,1.3s						
SMA1				AML	AML		
	comp=N,271µm,0.6s						
T1246	**Crognaleto (TE**	**0.12**	**66**	⇑P	Pg	16 08 55.7	+0.5
T1246				S	Sg	16 08 58.0	+0.5
GIGS	**Gran Sasso**	**0.19**	**116**	P	Pg	16 08 56.7	+0.6
GIGS				S	Sg	16 08 59.7	+0.7
GIGS				AML	AML		
	comp=E,23µm,0.9s						
GIGS				AML	AML		
	comp=N,16µm,1.1s						
GIGS				AML	AML		
	comp=N,16µm,0.9s						
TERO	**Teramo**	**0.21**	**65**	⇑P	Pg	16 08 57.1	+0.5
TERO				S	Sg	16 09 00.6	+0.9
TERO				AML	AML		
	comp=E,41µm,0.3s						
TERO				AML	AML		
	comp=N,49µm,1.2s						
TERO				AML	AML		
	comp=N,49µm,1.2s						
TERO				AML	AML		
	comp=E,41µm,1.7s						
T1218	**Civita (PG)**	**0.22**	**310**	P	Pg	16 08 57.1	+0.4
T1218				S	Sg	16 09 00.5	+0.7
T1218				AML	AML		
	comp=N,67µm,0.0s						
T1218				AML	AML		
	comp=N,72µm,0.2s						
T1214	**Arquata del Tr**	**0.25**	**337**	P	Pg	16 08 57.8	+0.6
T1214				S	Sg	16 09 01.9	+1.1
T1212	**Cascia, Frazio**	**0.31**	**315**	P	Pg	16 08 58.6	+0.3
T1212				S	Sg	16 09 03.3	+0.8
T1241	**Roccafluvione,**	**0.33**	**12**	P	Pg	16 08 59.1	+0.4
T1241				S	Sb	16 09 04.2	-1.1
T1217	**Poggiodomo (PG**	**0.35**	**301**	P	Pb	16 08 59.7	-0.6
T1217				S	Sg	16 09 04.8	+1.0
FDMO	**Fiordimonte**	**0.54**	**340**	AML	AML		
	comp=N,200µm,0.7s						
FDMO				AML	AML		
	comp=E,163µm,0.6s						
CESI	**CESI - Serrava**	**0.57**	**326**	AML	AML		
	comp=E,243µm,1.6s						
CESI				AML	AML		
	comp=E,243µm,0.4s						
CESI				AML	AML		
	comp=N,228µm,0.1s						
T1219	**Muccia, Frazio**	**0.58**	**335**	AML	AML		
	comp=N,171µm,0.3s						
T1219				AML	AML		
	comp=E,186µm,0.1s						
PTRJ	**Pietraroja**	**1.47**	**142**	P	Pb	16 09 18.9	-0.4
PTRJ				AML	AML		
	comp=E,848µm,1.0s						
PTRJ				AML	AML		
	comp=N,1260µm,0.8s						
PIGN	**Pignataro Magg**	**1.47**	**154**	P	Pg	16 09 19.9	-0.4

ROM 13 16:09:11.0±0.1**, 42.°989N**±0.°005×**13.°044E**±0.°007**, h10**^{km}**, ML1.1**/3**, 2C-2D, Error ellipse: s-maj=0.7km s-min=0.3km az=316.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.10**	**191**	⇑P	Pg	16 09 13.8	+0.2
T1216				S	Sg	16 09 16.3	+0.7
T1216				AML	AML		
	comp=E,176µm,0.4s						
T1216				AML	AML		
	comp=N,123µm,0.3s						
T1216				AML	AML		
	comp=E,176µm,1.6s						
T1256	**Bolognola (MC)**	**0.13**	**82**	⇑P	Pg	16 09 14.7	+0.4
T1245	**Castelsantange**	**0.17**	**141**	P	Pg	16 09 14.6	-0.2
T1245				AML	AML		
	comp=E,638µm,0.9s						
T1245				AML	AML		
	comp=N,686µm,0.8s						
T1215	**Vallo di Nera,**	**0.23**	**215**	⇓P	Pg	16 09 16.4	+0.7
T1215				S	Sg	16 09 20.4	+1.5
T1215				AML	AML		
	comp=E,28µm,1.6s						
T1215				AML	AML		
	comp=N,32µm,1.5s						
T1215				AML	AML		
	comp=E,28µm,0.4s						
T1215				AML	AML		
	comp=N,32µm,0.5s						
T1212	**Cascia, Frazio**	**0.24**	**180**	⇓P	Pg	16 09 16.5	+0.6
T1212				S	Sg	16 09 20.7	+1.4
TERO	**Teramo**	**0.55**	**131**	S	Sb	16 09 30.1	-0.5
PP3	**Marolino**	**0.57**	**47**	S	Sn	16 09 34.0	-0.5
PIEI	**Pieia**	**0.66**	**326**	S	Sb	16 09 35.3	+1.4
AQU	**L'Aquila**	**0.69**	**157**	P	Pb	16 09 25.6	+0.6
AQU				AML	AML		
	comp=E,356µm,0.3s						
AQU				AML	AML		
	comp=N,191µm,0.5s						
AQU				AML	AML		
	comp=E,364µm,0.3s						
AQU				AML	AML		
	comp=N,190µm,0.5s						
AQU				AML	AML		
	comp=N,190µm,1.5s						
AQU				AML	AML		
	comp=N,191µm,1.5s						

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*IDC **13** 16:14:11.4±1.0, 55.°71S×144.°93W, h0^{km}, mb4.1/5, mbtmp4.1/5, MS3.8/13, Error ellipse: s-maj=44.5km s-min=26.4km az=10.0*

ISC 13 16:14:12.6±1.0**, 55.°7S**±0.°3×**144.°9W**±0.°2**, h10**^{km}**, n33,** σ**0^{s}66**/9**, mb4.2**/5**, MS3.9**/16**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**30.71**	**288**	LR	LR	16 30 06.8	
	comp=Z,102nm,19.2s,baz=220,slow=31						
TBI	**Tubuai**	**32.44**	**352**	*e*LR	LR	16 28 54.9	
	comp=Z,1µm,28.2s						
TBI				*e*LR	LR	16 28 55.0	
	comp=Z,5µm,25.0s						
TBI	**Tubuai**	**32.44**	**352**	*e*T	T	16 54 47.8	
	64nm,0.3s						
RKT	**Rikitea**	**33.32**	**17**	*e*T	T	16 55 45.6	
	8.1nm,0.4s						
QSPA	**South Pole Qui**	**34.50**	**180**	P	**P**	**16 21 00.8**	**+0.3**
	1.8nm,0.9s,baz=84,slow=2.4,SNR=5.9						
QSPA				LR	LR	16 33 06.4	
	comp=Z,196nm,19.2s,baz=64,slow=33						
	1.8nm,0.9s						
RAR	**Rarotonga**	**36.15**	**336**	LR	LR	16 33 55.6	
	comp=Z,157nm,18.3s,baz=118,slow=33						
PPT2	**Papeete2**	**38.16**	**353**	*e*LR	LR	16 31 33.2	
	comp=Z,206nm,28.8s						
PPT2				*e*LR	LR	16 31 33.3	
	comp=Z,334nm,26.8s						
PPT	**Papeete**	**38.18**	**353**	LR	LR	16 32 34.0	
	comp=Z,183nm,21.1s,baz=120,slow=29						
VAH	**Vaihoa**	**40.39**	**356**	*e*T	T	17 04 45.0	
	40nm,0.3s						
AFI	**Afiamalu**	**46.55**	**323**	LR	LR	16 36 34.3	
	comp=Z,81nm,19.9s,baz=119,slow=29						
TAOE	**Nuku Hiva Isla**	**46.83**	**6**	*e*LR	LR	16 35 19.4	
	comp=Z,172nm,24.9s						
DZM	**Mont Dzumac**	**49.07**	**293**	*e*LR	LR	16 37 06.9	
	comp=Z,152nm,24.9s						
DZM	**Mont Dzumac**	**49.07**	**293**	LR	LR	16 39 19.6	
	comp=Z,63nm,21.5s,baz=205,slow=31						
H03S2	**Juan Fernandez**	**49.56**	**93**	T	T	17 16 19.5	
	baz=221,slow=74,SNR=5.3						
H03S1	**Juan Fernandez**	**49.56**	**93**	T	T	17 16 20.8	
	baz=221,slow=74,SNR=5.9						
H03S3	**Juan Fernandez**	**49.58**	**93**	T	T	17 16 20.7	
	baz=221,slow=74,SNR=5.7						
H03N3	**Juan Fernandez**	**49.84**	**92**	T	T	17 16 32.4	
	baz=224,slow=72,SNR=18						
H03N2	**Juan Fernandez**	**49.85**	**92**	T	T	17 16 41.4	
	baz=224,slow=72,SNR=17						
H03N1	**Juan Fernandez**	**49.86**	**92**	T	T	17 16 32.8	
	baz=224,slow=72,SNR=16						
STKA	**Stephens Creek**	**55.26**	**263**	P	**P**	**16 23 45.1**	**-0.7**
	1.6nm,1.1s,baz=143,slow=5.1,SNR=1.5						
STKA				LR	LR	16 44 01.8	
	comp=Z,68nm,18.6s,baz=205,slow=32						
	1.6nm,1.1s						
ASAR	**Alice Springs**	**65.89**	**263**	P	**P**	**16 24 58.2**	**-0.2**
	1.9nm,0.8s,baz=142,slow=6.7,SNR=16						
	1.9nm,0.8s						
CPUP	**Villa Florida**	**67.36**	**104**	P	**P**	**16 25 07.2**	**-0.5**
	3.6nm,1.0s,baz=244,slow=6.8,SNR=3.3						
	3.6nm,1.0s						
NNA	**Nana**	**67.84**	**79**	LR	LR	16 47 05.3	
	comp=Z,77nm,21.8s,baz=201,slow=29						
WRA	**Warramunga Arr**	**68.59**	**266**	P	**P**	**16 25 16.1**	**+0.5**
	1.7nm,1.0s,baz=141,slow=5.6,SNR=8.4						
	1.7nm,1.0s						
JTS	**Las Juntas de**	**82.35**	**59**	LR	LR	16 55 44.7	
	comp=Z,55nm,18.5s,baz=96,slow=30						
SUR	**Sutherland**	**91.47**	**168**	LR	LR	17 04 28.9	
	comp=Z,44nm,19.2s,baz=173,slow=33						
BOSA	**Boshof**	**95.65**	**171**	LR	LR	17 08 20.4	
	comp=Z,67nm,18.4s,baz=190,slow=34						
YBH	**Yreka Blue Hor**	**98.83**	**17**	LR	LR	17 05 18.5	
	comp=Z,48nm,18.1s,baz=17,slow=31						
LBTB	**Lobatse**	**99.25**	**171**	LR	LR	17 08 00.0	
	comp=Z,80nm,19.3s,baz=181,slow=32						
ILAR	**Eielson Array**	**120.11**	**359**	PKP	**PKiKP**	**16 33 02.6**	**+0.6**
	0.1nm,0.5s,baz=320,slow=33,SNR=2.6						
MKAR	**Makanchi Array**	**149.68**	**273**	PKPbc	**PKiKP**	**16 34 02.1**	**-0.4**
	3.1nm,0.9s,baz=116,slow=2.8,SNR=12						
ESDC	**Sonseca Array**	**149.72**	**105**	PKPbc	**PKPbc**	**16 34 01.9**	**0.0**
	2.7nm,1.0s,baz=252,slow=2.1,SNR=6.5						
ZALV	**Zalesovo Beam**	**151.78**	**288**	PKPbc	**PKiKP**	**16 34 07.5**	**+1.0**
	1.4nm,0.8s,baz=149,slow=3.1,SNR=6.1						

IDC 13 16:19:16.3±432.0**, 53.°40N×33.°76E, h0**^{km}**, Error ellipse: s-maj=175.7km s-min=82.1km az=31.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**3.87**	**29**	I	I	16 44 20.0	
	0.3nm,0.7s,baz=210,slow=315,SNR=1.4						
I26DE	**FREYUNG INFRAS**	**13.38**	**258**	I	I	17 39 10.0	
	baz=60,slow=341,SNR=0.6						
I31KZ	**AKTYUBINSK INF**	**15.26**	**92**	I	I	17 45 48.0	
	0.1nm,0.6s,baz=290,slow=307,SNR=3.2						
I46RU	**ZALESOVO INFRA**	**29.72**	**68**	I	I	19 22 50.0	
	baz=294,slow=316,SNR=1.1						
I34MN	**SONGINO INFRAS**	**44.61**	**66**	I	I	20 54 30.0	
	baz=312,slow=325,SNR=0.5						

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*IDC **13** 16:27:53.2±5.5, 14.°67N×93.°26W, h0^{km}, mb3.5/4, mbtmp3.4/6, ML3.2/2, MS2.4/1, Error ellipse: s-maj=142.1km s-min=69.0km az=34.0*

*MEX **13** 16:27:55.7±0.3, 14.°33N×93.°87W, h16^{km}±172^{km}, MD4.1*

ISC 13 16:27:53.8±2.5**, 14.°57N**±0.°09×**93.°70W**±0.°09**, h2**^{km}±16^{km}**, n14,** σ**1^{s}62**/21**, mb3.7**/4**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**1.22**	**22**	*i* P	**Pg**	**16 28 18.6**	**+1.4**
PCIG				*e*S	**Sn**	**16 28 36.3**	**+1.2**
PATR	**El Naranjo**	**1.52**	**69**	*e*P	**Pg**	**16 28 22.3**	**-0.5**
PATR				*e*S	**Sg**	**16 28 43.5**	**+0.9**
PAVE	**Pavencul**	**1.60**	**67**	*e*P	**Pg**	**16 28 23.8**	**-0.6**
PAVE				*e*S	**Sg**	**16 28 45.5**	**+0.4**
CHUJ	**Union Juarez**	**1.62**	**71**	*e*P	**Pg**	**16 28 23.8**	**-1.1**
CHUJ				*e*S	**Sg**	**16 28 45.6**	**-0.4**
TGIG		**2.27**	**14**	*e*P	**Pb**	**16 28 35.0**	**-0.5**
TGIG				*e*S	**Sb**	**16 29 04.6**	**+0.5**
CCIG	**Comitan**	**2.27**	**41**	*e*P	**Pb**	**16 28 35.6**	**-0.1**
CCIG				*e*S	**Sg**	**16 29 05.5**	**-1.5**
HUIG	**Huatulco**	**2.62**	**297**	*e*P	Pn	16 28 31.8	-5.4
HUIG				*e*S	Sn	16 29 00.3	-9.3
CMIG	**Matias Romero**	**2.76**	**336**	Pn	**Pn**	**16 28 39.2**	**+0.1**
	2.6nm,0.3s,baz=153,slow=11,SNR=30						
CMIG				Sn	**Sn**	**16 29 07.8**	**-5.2**
	3.8nm,0.3s,baz=146,slow=11,SNR=5.1						
CMIG				LR	LR	16 29 32.8	
	comp=Z,72nm,22.0s,baz=214,slow=35						
	10nm,0.4s						
CMIG	**Matias Romero**	**2.76**	**336**	*e*P	**Pn**	**16 28 38.5**	**-0.6**
CMIG				*e*S	**Sn**	**16 29 12.0**	**-1.1**
TXAR	**Lajitas Array**	**17.35**	**330**	P	**P**	**16 32 00.7**	**+1.9**
	baz=147,slow=10,SNR=1.7						
	0.4nm,0.9s						
NVAR	**Mina Array Bea**	**32.21**	**322**	P	**P**	**16 34 25.3**	**+1.6**
	0.3nm,0.7s,baz=142,slow=10,SNR=2.6						
	0.3nm,0.7s						
YKA	**Yellowknife Ar**	**50.11**	**348**	P	**P**	**16 36 49.5**	**-0.6**
	0.8nm,0.7s,baz=154,slow=7.5,SNR=13						
	0.8nm,0.7s						
INK	**Inuvik**	**59.44**	**344**	P	**P**	**16 37 57.5**	**-0.2**
	0.5nm,0.6s,baz=146,slow=3.6,SNR=3.1						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**61.68**	**337**	P	**P**	**16 38 13.3**	**+0.2**
	0.4nm,1.0s,baz=129,slow=7.1,SNR=4.8						
	0.4nm,1.0s						

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*IDC **13** 16:39:39.0±1.4, 17.°56S×178.°72W, h524^{km}±17^{km}, mb3.5/12, mbtmp4.4/14, Error ellipse: s-maj=24.3km s-min=10.8km az=143.0*

*NEIC **13** 16:39:41.5±1.9, 17.°6S±0.°1×178.°8W±0.°1, h548^{km}±8^{km}, mb4.4/68, Error ellipse: s-maj=19.3km s-min=14.9km az=148.0*

*NOU **13** 16:39:41.4, 17.°23S×178.°67W, h552^{km}, MLv4.6/7, Fiji Islands Region*

ISC 13 16:39:41.0±0.4**, 17.°58S**±0.°09×**178.°71W**±0.°07**, h550**^{km}**, n108,** σ**1^{s}19**/115**, mb4.3**/47**, 1C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**0.66**	**189**	P	**P**	**16 40 47.4**	**+0.8**
TAVE	**Taveuni**	**1.43**	**307**	P	**P**	**16 40 49.2**	**+0.6**
MSVF	**Nonsavu**	**3.09**	**267**	P	**P**	**16 40 57.9**	**+1.1**
	489nm,0.8s,baz=59,slow=2.1,SNR=281						
MSVF	**Nonsavu**	**3.09**	**267**	P	**P**	**16 40 58.0**	**+1.2**
MSVF	**Nonsavu**	**3.09**	**267**	P	**P**	**16 40 57.9**	**+1.1**
YSA	**Yasawairara**	**3.66**	**283**	P	**P**	**16 41 00.5**	**+0.1**
AFI	**Afiamalu**	**7.60**	**62**	P	**P**	**16 41 32.4**	**-2.7**
	64nm,0.6s,baz=125,slow=2.2,SNR=17						
AFI				S	**S**	**16 43 02.8**	**-5.6**
	14nm,0.5s,baz=113,slow=22,SNR=1.7						
NIUE	**Niue**	**8.47**	**102**	P	**P**	**16 41 44.4**	**+0.8**
RAO	**Raoul Island**	**11.65**	**177**	P	**P**	**16 42 15.2**	**-0.6**
PINNC	**Pines Island,**	**13.94**	**247**	P	**P**	**16 42 38.6**	**-1.0**
DZM	**Mont Dzumac**	**14.67**	**250**	P	**P**	**16 42 45.5**	**-1.7**
	8.4nm,0.7s,baz=171,slow=22,SNR=5.8						
DZM	**Mont Dzumac**	**14.67**	**250**	P	**P**	**16 42 46.5**	**-0.7**
ONTNC	**Ouen Toro**	**14.72**	**249**	P	**P**	**16 42 47.0**	**-0.7**
KOUNC	**Koumac, New Ca**	**16.35**	**257**	P	**P**	**16 43 03.5**	**-0.4**
URZ	**Urewera**	**20.93**	**189**	P	**P**	**16 43 43.7**	**-1.7**
	3.7nm,0.3s,baz=328,slow=2.6,SNR=7.3						
	3.7nm,0.3s						
RTZ	**Ruatahuna**	**21.30**	**189**	P	**P**	**16 43 47.3**	**-1.5**
RTZ				IAmb	IAmb	16 43 52.2	
	comp=Z,17nm,1.3s						
BKZ	**Black Stump Fm**	**21.92**	**190**	P	**P**	**16 43 52.3**	**-2.0**
BKZ				IAmb	IAmb	16 44 13.8	
	comp=Z,31nm,1.4s						
QRZ	**Quartz Range**	**24.37**	**196**	P	**P**	**16 44 16.4**	**+0.4**
TKNZ	**Takaka Hill**	**24.45**	**195**	P	**P**	**16 44 16.7**	**-0.1**
THZ	**Tophouse**	**25.16**	**195**	P	**P**	**16 44 22.8**	**-0.3**
LTZ	**Lake Taylor**	**26.27**	**195**	P	**P**	**16 44 31.8**	**-1.1**
RPZ	**Rata Peaks**	**27.46**	**196**	P	**P**	**16 44 43.0**	**-0.3**
	comp=Z,5.7nm,0.5s,baz=44,slow=7.7,SNR=6.6						
	comp=Z,5.7nm,0.5s						
FOZ	**Fox Glacier**	**27.64**	**198**	P	**P**	**16 44 44.8**	**0.0**
EIDS	**Eidsvold**	**29.11**	**249**	P	**P**	**16 44 57.3**	**-0.6**
EIDS				IAmb	IAmb	16 44 58.3	
	comp=Z,7.6nm,0.7s						
MLZ	**Mavora Lakes**	**29.82**	**199**	P	**P**	**16 45 04.1**	**+0.4**
ARMA	**Armidale**	**29.86**	**239**	P	**P**	**16 45 05.1**	**+0.6**
WHZ	**Wether Hill Ro**	**30.34**	**199**	P	**P**	**16 45 08.5**	**+0.3**
WHZ				IAmb	IAmb	16 45 09.6	
	comp=Z,16nm,0.8s						
CTAO	**Charters Tower**	**33.22**	**260**	P	**P**	**16 45 32.5**	**-0.6**
CTAO				IAmb	IAmb	16 45 33.4	
	comp=Z,7.3nm,0.8s						
CAN	**Canberra**	**33.68**	**232**	P	**P**	**16 45 36.7**	**-0.1**
CAN				IAmb	IAmb	16 46 03.3	
	comp=Z,26nm,1.4s						
PMG	**Port Moresby**	**34.12**	**279**	P	**P**	**16 45 41.0**	**+0.2**
PMG				IAmb	IAmb	16 45 42.1	
	comp=Z,16nm,0.8s						
COEN	**Coen**	**36.82**	**270**	P	**P**	**16 46 03.1**	**-0.1**
COEN				IAmb	IAmb	16 46 04.0	
	comp=Z,12nm,0.7s						
TOO	**Toolangi**	**37.16**	**230**	P	**P**	**16 46 06.1**	**+0.4**
TAU	**Tasmania Unive**	**38.30**	**221**	P	**P**	**16 46 15.5**	**+0.7**
TAU				IAmb	IAmb	16 46 39.3	
	comp=Z,17nm,1.3s						
STKA	**Stephens Creek**	**38.54**	**241**	P	**P**	**16 46 17.7**	**+0.7**
	comp=Z,9.5nm,0.5s,baz=88,slow=10.0,SNR=34						
	comp=Z,9.5nm,0.5s						
STKA	**Stephens Creek**	**38.54**	**241**	P	**P**	**16 46 17.5**	**+0.5**
STKA				IAmb	IAmb	16 46 18.5	
	comp=Z,4.6nm,1.1s						
BBOO	**Buckleboo**	**43.32**	**241**	P	**P**	**16 46 55.0**	**+0.1**
HMH	**Humu‘ula Sheep**	**43.42**	**33**	P	**P**	**16 46 57.0**	**+0.8**
WB0	**Warramunga Arr**	**44.38**	**259**	P	**P**	**16 47 01.5**	**-1.8**
WB0				IAmb	IAmb	16 47 03.0	
	comp=Z,13nm,1.1s						
WB2	**Warramunga Arr**	**44.40**	**259**	P	**P**	**16 47 02.1**	**-1.4**
WB2				IAmb	IAmb	16 47 03.3	
	comp=Z,7.4nm,0.7s						
WRAB	**Tennant Creek**	**44.40**	**259**	P	**P**	**16 47 01.9**	**-1.6**
WRAB				IAmb	IAmb	16 47 03.2	
	comp=Z,6.8nm,0.8s						
WRA	**Warramunga Arr**	**44.41**	**259**	P	**P**	**16 47 02.2**	**-1.3**
	comp=Z,4.3nm,0.6s,baz=97,slow=7.2,SNR=82						
WRA				PcP	**PcP**	**16 48 35.4**	**0.0**
	comp=Z,0.9nm,0.7s,baz=94,slow=3.3,SNR=4.1						
WRA				ScP	**ScP**	**16 51 36.8**	**+1.5**
	comp=Z,1.3nm,0.9s,baz=91,slow=3.4,SNR=6.0						
WRA				S	**S**	**16 52 54.9**	**-3.8**
	comp=Z,0.2nm,0.8s,baz=101,slow=15,SNR=1.4						
	comp=Z,4.3nm,0.6s						
AS31	**Alice Springs**	**44.61**	**254**	P	**P**	**16 47 04.4**	**-0.6**
AS31				IAmb	IAmb	16 47 05.3	
	comp=Z,14nm,0.6s						
ASAR	**Alice Springs**	**44.61**	**254**	P	**P**	**16 47 04.7**	**-0.3**
	comp=Z,38nm,0.5s,baz=89,slow=7.9,SNR=1238						
ASAR				PcP	**PcP**	**16 48 35.6**	**-0.4**
	comp=Z,1.8nm,0.9s,baz=93,slow=4.6,SNR=3.1						
ASAR				ScP	**ScP**	**16 51 38.9**	**+2.8**
	comp=Z,1.0nm,0.8s,baz=94,slow=4.6,SNR=6.8						
ASAR				S	**S**	**16 52 59.0**	**-2.5**
	comp=Z,0.7nm,0.9s,baz=90,slow=16,SNR=5.7						
ASAR	**Alice Springs**	**44.61**	**254**	P	**P**	**16 47 04.3**	**-0.7**
MTN	**Manton Dam**	**48.52**	**268**	P	**P**	**16 47 33.6**	**-1.1**
MTN				IAmb	IAmb	16 47 34.6	
	comp=Z,16nm,1.0s						
FORT	**Forrest**	**49.89**	**244**	P	**P**	**16 47 43.9**	**-0.6**
KNRA	**Kununurra**	**50.24**	**264**	P	**P**	**16 47 46.6**	**-0.7**
FITZ	**Fitzroy Crossi**	**52.80**	**260**	P	**P**	**16 48 05.6**	**-0.1**
SOEI	**Soe**	**55.78**	**270**	P	**P**	**16 48 28.0**	**+1.1**
PSA00	**Pilbara Seismi**	**57.72**	**255**	P	**P**	**16 48 39.5**	**-0.5**
PSA00				IAmb	IAmb	16 48 40.3	
	comp=Z,16nm,0.7s						
PSA00	**Pilbara Seismi**	**57.72**	**255**	P	**P**	**16 48 39.5**	**-0.5**
PSA00				IAmb	IAmb	16 48 40.3	
	comp=Z,8.1nm,0.9s						
MBWA	**Marble Bar**	**57.88**	**256**	P	**P**	**16 48 40.5**	**-0.6**
MBWA				IAmb	IAmb	16 48 41.0	
	comp=Z,9.3nm,0.8s						
NWAO	**Narrogin (SRO)**	**59.11**	**242**	P	**P**	**16 48 48.2**	**-1.0**
NWAO				IAmb	IAmb	16 48 57.5	
	comp=Z,54nm,1.4s						
MORW	**Morawa**	**60.35**	**246**	P	**P**	**16 48 56.8**	**-0.7**
MORW				IAmb	IAmb	16 48 57.7	
	comp=Z,9.0nm,0.7s						
GIRL	**Giralia**	**62.72**	**253**	P	**P**	**16 49 13.9**	**+0.9**
UGM	**Wanagama**	**69.37**	**268**	P	**P**	**16 49 54.2**	**-0.3**
KMRM	**Mail Ridge**	**76.94**	**40**	P	**P**	**16 50 38.7**	**+1.4**
KMRM				IAmb	IAmb	16 50 58.9	
	comp=Z,22nm,1.4s						
YBH	**Yreka Blue Hor**	**78.45**	**39**	P	**P**	**16 50 45.1**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=302,slow=2.1,SNR=4.5						
	comp=Z,0.7nm,0.4s						
MPK	**Martis Peak**	**78.73**	**43**	P	**P**	**16 50 47.2**	**0.0**
MPK				IAmb	IAmb	16 50 48.8	
	comp=Z,5.5nm,0.7s						
DSP	**Deep Springs**	**79.04**	**45**	P	**P**	**16 50 49.6**	**+1.0**
YERR	**Yerington**	**79.07**	**43**	P	**P**	**16 50 49.8**	**+0.8**
YERR				IAmb	IAmb	16 50 50.5	
	comp=Z,4.1nm,0.6s						
LCH	**Last Change Ra**	**79.19**	**45**	P	**P**	**16 50 49.6**	**0.0**
PIX	**Pinacate**	**79.36**	**52**	P	**P**	**16 50 51.4**	**+1.1**
NVAR	**Mina Array Bea**	**79.38**	**44**	P	**P**	**16 50 51.4**	**+0.8**
	comp=Z,1.8nm,0.7s,baz=225,slow=8.3,SNR=17						
	comp=Z,1.8nm,0.7s						
NVAR	**Mina Array Bea**	**79.38**	**44**	P	**P**	**16 50 49.7**	**-1.0**
KVN	**Kaiserville**	**79.85**	**44**	P	**P**	**16 50 53.4**	**+0.3**
MOD	**Modoc Plateau**	**80.02**	**40**	P	**P**	**16 50 54.7**	**+0.9**
K05A	**Summer Lake**	**80.12**	**39**	P	**P**	**16 50 55.1**	**+0.7**
K05A				IAmb	IAmb	16 50 56.7	
	comp=Z,7.4nm,1.2s						
J05D	**Fort Rock, OR**	**80.24**	**39**	P	**P**	**16 50 56.1**	**+1.2**
U15A	**North Rim**	**82.51**	**48**	P	**P**	**16 51 07.9**	**+1.0**
U15A				IAmb	IAmb	16 51 09.2	
	comp=Z,5.2nm,0.9s						
BELA	**Belgrano 2**	**82.53**	**173**	P	**P**	**16 51 06.5**	**+0.5**
ELK	**Elko**	**82.61**	**43**	P	**P**	**16 51 06.6**	**-0.7**
	comp=Z,2.0nm,0.8s,baz=252,slow=6.5,SNR=6.9						

	comp=Z,2.0nm,0.8s						
ELK	**Elko**	**82.61**	**43**	P	**P**	**16 51 07.5**	**+0.3**
SML	**Sawmill**	**82.72**	**14**	P	**P**	**16 51 06.7**	**-0.4**
SML				IAmb	IAmb	16 51 19.7	
	comp=Z,23nm,1.5s						
K20K	**Telida**	**82.93**	**11**	P	**P**	**16 51 07.3**	**-0.7**
SCM	**Sheep Creek Mo**	**82.98**	**14**	P	**P**	**16 51 07.3**	**-1.0**
SCM				IAmb	IAmb	16 51 08.5	
	comp=Z,7.2nm,0.9s						
MTPU	**Mount Pierson**	**83.35**	**47**	P	**P**	**16 51 12.7**	**+1.6**
CAST	**Castle Rocks**	**83.36**	**12**	P	**P**	**16 51 08.7**	**-1.5**
CAST				IAmb	IAmb	16 51 09.7	
	comp=Z,4.7nm,0.8s						
GLB	**Gilahina Butte**	**83.53**	**16**	P	**P**	**16 51 10.7**	**-0.3**
GLB				IAmb	IAmb	16 51 11.3	
	comp=Z,4.4nm,0.7s						
LOGN	**Logan Glacier**	**83.79**	**18**	P	**P**	**16 51 12.1**	**-0.4**
LOGN				IAmb	IAmb	16 51 31.1	
	comp=Z,8.8nm,1.3s						
BARN	**Barnard Glacie**	**83.80**	**17**	P	**P**	**16 51 12.2**	**-0.4**
BARN				IAmb	IAmb	16 51 27.4	
	comp=Z,15nm,1.4s						
GSI	**Gunungsitoli**	**84.40**	**273**		**P**	**16 51 17.6**	**+1.1**
HLID	**Hailey**	**84.57**	**41**	P	**P**	**16 51 18.2**	**+1.4**
M27K	**Edge Creek, AK**	**84.80**	**16**	P	**P**	**16 51 18.0**	**+0.5**
M27K				IAmb	IAmb	16 51 18.4	
	comp=Z,7.7nm,1.1s						
MLY	**Manley**	**85.07**	**12**	P	**P**	**16 51 17.6**	**-1.0**
H21K	**Melozitna Rive**	**85.27**	**10**	P	**P**	**16 51 20.0**	**+0.5**
DOT	**Dot Lake**	**85.32**	**15**	P	**P**	**16 51 19.6**	**-0.1**
IMAR	**Indian Mountai**	**85.40**	**10**	P	**P**	**16 51 19.5**	**-0.6**
SCRK	**Sand Creek**	**85.61**	**15**	P	**P**	**16 51 21.5**	**+0.2**
ILAR	**Eielson Array**	**85.63**	**13**	P	**P**	**16 51 20.1**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=222,slow=5.9,SNR=5.6						
	comp=Z,0.6nm,0.4s						
TX31	**Lajitas Ar. Si**	**86.06**	**58**		**P**	**16 51 25.7**	**+1.5**
TX31				IAmb	IAmb	16 51 27.2	
	comp=Z,11nm,0.9s						
TXAR	**Lajitas Array**	**86.06**	**58**	P	**P**	**16 51 26.3**	**+2.1**
	comp=Z,2.0nm,0.8s,baz=217,slow=6.7,SNR=20						
	comp=Z,2.0nm,0.8s						
TXAR	**Lajitas Array**	**86.06**	**58**		**P**	**16 51 25.8**	**+1.5**
MCMT	**McKenzie Canyo**	**86.17**	**41**	P	**P**	**16 51 26.4**	**+1.9**
GO09	**Cerro Castillo**	**86.30**	**143**	P	**P**	**16 51 26.3**	**+1.5**
M30M	**Minto, Yukon**	**86.41**	**18**	P	**P**	**16 51 24.8**	**-0.2**
M30M				IAmb	IAmb	16 51 56.1	
	comp=Z,5.2nm,1.2s						
HHC	**Hu-ho-hao-te**	**86.84**	**315**	*e*P	**P**	**16 51 28.3**	**+0.7**
HHC				pmax	pmax		
	comp=Z,29nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,5.1s						
PDAR	**Pinedale Array**	**87.31**	**44**	P	**P**	**16 51 30.4**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=223,slow=4.0,SNR=9.5						
	comp=Z,1.0nm,0.5s						
PDAR	**Pinedale Array**	**87.31**	**44**	P	**P**	**16 51 29.9**	**0.0**
KMI	**Kunming**	**87.42**	**297**	⇑P	**P**	**16 51 31.8**	**+0.9**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BMAR	**Burnt Mountain**	**88.40**	**13**	P	**P**	**16 51 34.5**	**+0.3**
CMAR	**Chiang Mai Arr**	**88.50**	**290**	P	**P**	**16 51 37.2**	**+1.5**
	comp=Z,0.6nm,0.8s,baz=121,slow=2.6,SNR=4.4						
	comp=Z,0.6nm,0.8s						
PZH	**PanZhiHua**	**88.75**	**298**	P	**P**	**16 51 37.8**	**+0.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.2s						
YKA	**Yellowknife Ar**	**94.15**	**25**	P	**P**	**16 52 00.1**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=242,slow=4.3,SNR=3.6						
	comp=Z,0.7nm,0.7s						
BVAR	**Borovoye Array**	**116.41**	**321**	PKP	**PKPdf**	**16 57 20.9**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=90,slow=4.3,SNR=2.0						
CLL	**Collm**	**145.08**	**347**	*e*PKPbc	**PKPbc**	**16 58 17.0**	**+0.3**
	comp=Z,3.0nm,0.7s						
GERES	**GERESS Array B**	**147.22**	**345**	PKPbc	**PKPbc**	**16 58 22.9**	**0.0**
	comp=Z,0.7nm,0.5s,baz=40,slow=2.3,SNR=6.7						
DAVOX	**Davos/Dischmat**	**150.02**	**348**	PKPbc	**PKPbc**	**16 58 30.5**	**+0.5**
	baz=310,slow=7.8						

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*KRNET **13** 16:49:24.6±0.1,39°.14N×74°.14E,mb3.2*
*NNC **13** 16:49:28.2±1.8,39°.38N×74°.23E,h0^{km},mb3.6,mpv3.3,*
Error ellipse: s-maj=13.4km s-min=10.8km az=150.0
*SOME **13** 16:49:31.4,39°.67N×74°.27E,h5^{km}*
ISC 13 16:49:20.4±1.7,**39°.12N**±0°.07×**74°.34E**±0°.05,**h10**^{km}**,n33,**
σ**1^{s}.73**/48**,24C-10D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
OHH	**Osh**	**1.85**	**320**	⇑*i*P	**Pg**	**16 49 57.0**	**+1.1**
	baz=23						
OHH				⇑*i*S	**Sg**	**16 50 20.5**	**+0.6**
	baz=23						
DRK	**Karamyk**	**2.00**	**281**	⇓*e*P	**Pg**	**16 49 59.0**	**+0.1**
	baz=81						
DRK				⇓*i*S	**Sg**	**16 50 24.2**	**-0.7**
	baz=81						
NRN	**Naryn**	**2.64**	**28**	⇑*e*P	**Pg**	**16 50 11.1**	**0.0**
	baz=31						
NRN				⇑*i*S	**Sg**	**16 50 44.8**	**-0.5**
	baz=31						
ARLS	**Aral**	**2.74**	**360**	⇑*e*P	**Pg**	**16 50 11.5**	**-1.5**
	baz=3.0						
ARLS				⇑*i*S	**Sg**	**16 50 45.8**	**-2.8**
	baz=3.0						
BTK	**Batken**	**2.88**	**290**	⇑*e*P	**Pb**	**16 50 11.7**	**-0.3**
	baz=91						
BTK				⇑*i*S	**Sb**	**16 50 46.1**	**-1.2**
	baz=91						
AML	**Almayashu**	**3.05**	**351**	⇓Pg	**Pg**	**16 50 17.0**	**-1.9**
	0.6nm,0.5s						
AML				⇓Lg	Lg	16 50 56.9	
	2.7nm,0.7s						
AML	**Almayashu**	**3.05**	**351**	⇓*e*P	**Pb**	**16 50 15.8**	**+0.7**
	baz=54						
AML				⇓*i*S	**Sb**	**16 50 53.1**	**+0.5**
	baz=54						
UCH	**Uchtor**	**3.11**	**2**	⇓*e*P	**Pb**	**16 50 17.0**	**+0.8**
	baz=5.0						
UCH				⇓*i*S	**Sb**	**16 50 55.3**	**+1.0**
	baz=5.0						
GAR	**Garm**	**3.13**	**269**	⇑*e*P	**Pb**	**16 50 15.3**	**-1.0**
	baz=68						
GAR				⇑*i*S	**Sb**	**16 50 52.2**	**-2.5**
	baz=68						
ARK	**Arkit**	**3.24**	**327**	⇑*i*P	**Pb**	**16 50 17.3**	**-0.8**
	baz=29						
ARK				⇑*i*S	**Sb**	**16 50 55.9**	**-1.7**
	baz=29						
TRKS	**Terek-Say**	**3.44**	**316**	⇑*i*P	**Pb**	**16 50 19.1**	**-2.4**
	baz=17						
TRKS				⇑*i*S	**Sb**	**16 50 58.8**	**-4.6**
	baz=17						
AAK	**Ala-Archa**	**3.52**	**2**	⇑*i*P	**Pb**	**16 50 22.5**	**-0.5**
	baz=4.0						
AAK				⇑*i*S	**Sb**	**16 51 04.8**	**-1.0**
	baz=4.0						
EKS2	**Erkin-Say**	**3.57**	**353**	⇓*i*P	**Pb**	**16 50 22.9**	**-0.8**
	baz=56						
EKS2				⇓*i*S	**Sb**	**16 51 05.4**	**-1.8**
	baz=56						
MRKS	**Merke**	**3.72**	**347**	Pg	**Pg**	**16 50 31.0**	**-0.7**
	3.3nm,0.2s						
MRKS				Lg	Lg	16 51 16.7	
	8.8nm,0.6s						
MRKS	**Merke**	**3.72**	**347**	*e*Pg	**Pg**	**16 50 30.0**	**-1.8**
	2.5nm,0.2s						
MRKS				*e*Lg	Lg	16 51 16.7	
	11nm,0.2s						
TKM2	**Tokmak 2**	**3.92**	**14**	⇑Pn	**Pb**	**16 50 27.7**	**-2.0**
	1.8nm,0.7s						
TKM2				⇑Pg	**Pg**	**16 50 36.6**	**+1.1**
	3.4nm,0.6s						
TKM2				⇑Sn	**Sn**	**16 51 10.8**	**+3.8**
	3.9nm,0.7s						
TKM2				⇑Lg	Lg	16 51 27.0	
	6.6nm,0.6s						
KST	**Kastek**	**4.11**	**17**	*e*Pg	**Pg**	**16 50 37.4**	**-1.8**
	3.5nm,0.2s						
KST				*e*Lg	Lg	16 51 29.6	
	15nm,0.4s						
DGS	**Degeres**	**4.26**	**14**	Pg	**Pg**	**16 50 41.9**	**-0.2**
	14nm,0.6s						
DGS				Lg	Lg	16 51 35.2	
	13nm,0.6s						
DGS	**Degeres**	**4.26**	**14**	*e*Pg	**Pg**	**16 50 40.1**	**-1.9**
	6.8nm,2.7s						
DGS				*e*Lg	Lg	16 51 34.8	
	13nm,0.6s						
MTBS	**Maitube**	**4.31**	**21**	*e*Pg	**Pg**	**16 50 43.1**	**+0.1**
	5.7nm,0.2s						
MTBS				*e*Lg	Lg	16 51 40.2	
	4.1nm,0.2s						
SGDS	**Sogindy**	**4.34**	**3**	Pg	**Pg**	**16 50 43.0**	**-0.5**
	5.6nm,0.4s						
SGDS				Lg	Lg	16 51 40.1	
	5.5nm,0.8s						
IUG	**Iuzhnay**	**4.46**	**314**	Pg	**Pb**	**16 50 38.7**	**-0.3**
	12nm,0.6s						
IUG				Lg	Lg	16 51 31.1	
	18nm,0.6s						
IUG	**Iuzhnay**	**4.46**	**314**	*e*Pg	**Pg**	**16 50 46.7**	**+0.8**
	22nm,0.4s						
IUG				*e*Lg	Lg	16 51 46.8	
	18nm,0.6s						
KOTS	**Kotyrbulak**	**4.62**	**26**	Pg	**Pg**	**16 50 48.5**	**-0.4**
	6.0nm,0.5s						
KOTS				Lg	Lg	16 51 48.9	
	22nm,0.7s						
KOTS	**Kotyrbulak**	**4.62**	**26**	*e*Pg	**Pg**	**16 50 47.8**	**-1.1**
	6.2nm,0.3s						
KOTS				*e*Lg	Lg	16 51 48.9	
	24nm,0.4s						
KRBS	**Karabastau**	**4.69**	**12**	Pg	**Pg**	**16 50 49.7**	**-0.5**
	4.6nm,0.3s						
KRBS				Lg	Lg	16 51 51.7	
	3.6nm,0.6s						
KRBS	**Karabastau**	**4.69**	**12**	*e*Pg	**Pg**	**16 50 49.4**	**-0.8**
	4.6nm,0.3s						
KRBS				*e*Lg	Lg	16 51 51.7	
	3.8nm,0.3s						
KTBS	**Karatobe**	**4.92**	**20**	Pg	**Pg**	**16 50 54.3**	**-0.3**
	6.7nm,0.4s						
KTBS				Lg	Lg	16 51 58.7	
	9.3nm,0.9s						
KTBS	**Karatobe**	**4.92**	**20**	*e*Pg	**Pg**	**16 50 53.3**	**-1.4**
	6.8nm,0.3s						
KTBS				*e*Lg	Lg	16 51 58.7	
	9.3nm,0.5s						
KK31	**Karatay Array**	**4.92**	**325**	⇑Pn	Pb	16 50 41.0	-5.7
	0.5nm,0.3s,baz=136,slow=13,SNR=11						
KK31				Pg	**Pg**	**16 50 53.6**	**-1.1**
	0.6nm,0.3s,baz=141,slow=16,SNR=3.8						
KK31				⇑Sn	**Sn**	**16 51 36.8**	**+5.3**
	1.0nm,0.5s,baz=150,slow=26,SNR=3.7						
KK31				⇑Lg	Lg	16 51 59.5	
	1.0nm,0.4s						
KUU	**Kurty**	**5.00**	**17**	Pg	**Pg**	**16 50 54.9**	**-1.4**
	5.7nm,0.8s						
KUU				Lg	Lg	16 52 00.6	
	5.6nm,0.6s						
KUU	**Kurty**	**5.00**	**17**	*e*Pg	**Pg**	**16 50 54.4**	**-1.9**
	5.7nm,0.3s						
KUU				*e*Lg	Lg	16 52 00.6	
	6.1nm,0.3s						
AB31	**Akbulak array**	**14.45**	**319**	⇑P	**Pn**	**16 52 46.4**	**+1.5**
	0.1nm,0.5s,baz=126,slow=13,SNR=5.1						

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*IDC **13** 16:53:02.0±1.6,30°.36N×50°.66E,h0^{km},mb3.7/10,*
mbtmp3.7/11,ML3.4/1,MS3.1/1,Error ellipse:
s-maj=30.3km s-min=24.0km az=175.0
*TEH **13** 16:53:04.7,30°.43N×50°.76E,h9^{km}±24^{km},ML3.4*
*OMAN **13** 16:53:09.7±1.1,30°.19N×51°.05E,h20^{km},mb3.7/12,*
ms2.8/1,Error ellipse: s-maj=9.4km s-min=7.6km az=12.0
ISC 13 16:53:05.4±0.6,**30°.42N**±0°.03×**50°.80E**±0°.04,**h19**^{km}**,n77,**
σ**1^{s}.94**/91**,mb3.8**/9**,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ABEH	**Behbahan**	**0.51**	**291**	Pg	**Pg**	**16 53 14.5**	**-1.2**
KLNJ	**Kolanjah**	**0.90**	**49**	Pg	**Pb**	**16 53 22.6**	**0.0**
KAZ1	**Kazerun**	**1.07**	**137**	Pg	**Pg**	**16 53 26.7**	**+0.5**
AHBU	**AHRAM**	**1.61**	**164**	Pg	**Pg**	**16 53 36.3**	**-0.1**
AHBU				Sg	**Sg**	**16 53 58.3**	**+1.0**
SHI	**Shiraz**	**1.67**	**117**	Pg	**Pb**	**16 53 37.0**	**+1.3**
AMIS	**Naft Sefid**	**1.80**	**314**	Pg	**Pb**	**16 53 38.1**	**+0.3**
SHK1	**Shahrekord**	**1.91**	**2**	Pn	**Pb**	**16 53 39.7**	**-0.1**
IRAM	**Ramesheh**	**1.94**	**44**	Pn	**Pb**	**16 53 40.4**	**+0.2**
DSBU	**Dashti - Bushe**	**2.09**	**169**	Pn	**Pb**	**16 53 42.4**	**-0.3**
IGAR	**Gharneh**	**2.25**	**28**	Pn	**Pn**	**16 53 44.3**	**+2.5**
IPIR	**Pirpir**	**2.26**	**2**	Pn	**Pn**	**16 53 44.6**	**+2.6**
IZEF	**Zefreh**	**2.79**	**27**	Pn	**Pn**	**16 53 52.4**	**+3.0**
GHIR	**Ghir-Karzin**	**2.85**	**138**	Pn	**Pn**	**16 53 51.6**	**+1.6**
NASN	**Na'in**	**2.93**	**35**	Pn	**Pn**	**16 53 53.4**	**+2.1**
IKLH	**Kolahrood**	**2.97**	**13**	Pn	**Pn**	**16 53 54.0**	**+2.3**
QAMS	**Qamsar**	**3.35**	**8**	Pn	**Pn**	**16 53 59.6**	**+2.7**
KHMZ	**Khomeyn**	**3.39**	**348**	Pn	**Pn**	**16 53 59.2**	**+1.7**
IMEH	**Mehriz**	**3.42**	**73**	Pn	**Pn**	**16 54 01.0**	**+3.2**
ICHK	**Chekchek**	**3.58**	**59**	Pn	**Pn**	**16 54 02.9**	**+2.7**
KRSH	**Karshahi**	**3.72**	**17**	Pn	**Pn**	**16 54 04.4**	**+2.5**
ANAR	**Anarak**	**3.72**	**41**	Pn	**Pn**	**16 54 04.6**	**+2.7**
YZKH	**Yazd**	**3.79**	**58**	Pn	**Pn**	**16 54 05.8**	**+3.0**
IKFM	**Kafar-mosalman**	**3.99**	**322**	Pn	**Pn**	**16 54 08.1**	**+2.6**
IDOB	**Doab**	**4.03**	**327**	Pn	**Pn**	**16 54 09.0**	**+2.7**
GHVR	**GHOM**	**4.07**	**6**	Pn	**Pn**	**16 54 09.7**	**+2.9**
ISFB	**Sefidab**	**4.11**	**17**	Pn	**Pn**	**16 54 09.3**	**+2.1**
ASAO	**Ashtian**	**4.17**	**351**	Pn	**Pn**	**16 54 11.2**	**+3.0**
HSAM	**Samen**	**4.22**	**334**	Pn	**Pn**	**16 54 10.3**	**+1.4**
IQOM	**Qom**	**4.42**	**3**	Pn	**Pn**	**16 54 13.9**	**+2.2**
SAKB	**Bahrain**	**4.43**	**183**	P	**Pn**	**16 54 10.9**	**-0.7**
SAKB				S	**Sn**	**16 55 04.2**	**+1.6**
SHMA	**Al-Shehemyia**	**4.55**	**178**	P	**Pn**	**16 54 13.6**	**+0.5**
SHMA				S	**Sn**	**16 55 07.0**	**+1.5**
HAGD	**Aghdareh**	**4.61**	**343**	Pn	**Pn**	**16 54 16.2**	**+1.9**
IVRN	**Varamin**	**4.63**	**9**	Pn	**Pn**	**16 54 16.4**	**+2.0**
IKOM	**Komasi**	**4.67**	**324**	Pn	**Pn**	**16 54 17.1**	**+2.0**
KHGB	**Koh Gabri**	**4.90**	**89**	Pn	**Pn**	**16 54 21.3**	**+3.0**
IRAZ	**Razeghan**	**5.03**	**352**	Pn	**Pn**	**16 54 22.1**	**+2.1**
ILBA	**Ilam Banvizeh**	**5.04**	**311**	Pn	**Pn**	**16 54 20.7**	**+0.6**
IDMV	**Damavand**	**5.25**	**11**	Pn	**Pn**	**16 54 25.5**	**+2.4**
DAMV	**Damavand**	**5.29**	**10**	Pn	**Pn**	**16 54 25.5**	**+1.8**
IGHG	**Ghaleghazi**	**5.30**	**319**	Pn	**Pn**	**16 54 26.2**	**+2.5**
IFIR	**Firoozkooh**	**5.46**	**17**	Pn	**Pn**	**16 54 28.1**	**+2.1**
SNGE	**Sanandaj**	**5.50**	**329**	Pn	**Pn**	**16 54 27.1**	**+0.6**
ILIN	**Lien**	**5.53**	**325**	Pn	**Pn**	**16 54 27.9**	**+0.9**
IDHR	**Dehrash**	**5.67**	**320**	Pn	**Pn**	**16 54 30.8**	**+2.0**
TABS	**Tabas**	**6.26**	**57**	Pn	**Pn**	**16 54 39.1**	**+2.4**
BANOM	**Banah**	**6.60**	**131**	P	**Pn**	**16 54 42.2**	**+0.7**
	SNR=5.4						
BANOM				S	**Sn**	**16 55 53.9**	**-2.3**
NAZ	**Nazwa, Dubai**	**6.91**	**140**	P	**Pn**	**16 54 46.6**	**+0.9**
NAZ				S	**Sn**	**16 56 02.3**	**-1.6**
ASUD	**Al Ashush, Dub**	**7.03**	**144**	P	**Pn**	**16 54 47.9**	**+0.6**
	SNR=10						
ASUD				S	**Sn**	**16 56 07.0**	**+0.3**
MDH	**Madha**	**7.05**	**135**	P	**Pn**	**16 54 47.8**	**+0.3**
MDH				S	**Sn**	**16 56 04.3**	**-2.9**
UOSS	**Minazif**	**7.25**	**137**	P	**Pn**	**16 54 50.5**	**+0.1**
UOSS				S	**Sn**	**16 56 08.7**	**-3.6**
HATD	**Hatta, Dubai**	**7.30**	**138**	P	**Pn**	**16 54 51.8**	**+0.7**
HATD				S	**Sn**	**16 56 11.4**	**-2.1**
ASHO	**Ashiyiah**	**7.37**	**140**	P	**Pn**	**16 54 53.1**	**+1.0**
ASHO				S	**Sn**	**16 56 13.2**	**-2.0**
MZR	**Muzera**	**7.76**	**161**	P	**Pn**	**16 54 59.6**	**+2.1**
MZR				S	**Sn**	**16 56 22.6**	**-2.2**
UMZA	**Um Al Zommool**	**8.61**	**152**	P	**Pn**	**16 55 09.6**	**+0.6**
UMZA				S	**Sn**	**16 56 42.0**	**-3.5**
HOQ	**Hoqain**	**8.94**	**138**	P	**Pn**	**16 55 14.5**	**+0.9**
BSY	**Bisya**	**9.55**	**142**	P	**Pn**	**16 55 21.9**	**0.0**
BSY				S	**Sn**	**16 57 05.3**	**-3.4**
SMDO	**Samad**	**9.78**	**137**	P	**Pn**	**16 55 25.5**	**+0.4**
SMDO				S	**Sn**	**16 57 10.8**	**-3.6**
WSAR	**Wadi Sarin**	**10.00**	**134**	Pn	**Pn**	**16 55 26.3**	**-1.7**
	0.3nm,0.3s,baz=326,slow=10,SNR=2.2						
WSAR				Sn	**Sn**	**16 57 13.9**	**-5.8**
	0.3nm,0.3s,baz=142,slow=18,SNR=2.1						
	1.3nm,0.5s						
WBK	**Wadi Bani Khal**	**10.67**	**135**	P	**Pn**	**16 55 37.5**	**+0.2**
JLN	**Jalan Bani Buh**	**11.28**	**135**	P	**Pn**	**16 55 46.1**	**+0.4**
MHTO	**MHTO**	**11.39**	**144**	P	**Pn**	**16 55 47.8**	**+0.7**
DQM	**DQM**	**12.09**	**148**	P	**Pn**	**16 55 56.5**	**-0.2**
WHFO	**Wadi Hawf**	**12.73**	**167**	P	**Pn**	**16 56 05.1**	**-0.4**
	SNR=7.8						
SHAO	**Shalim**	**13.10**	**159**	P	**Pn**	**16 56 12.0**	**+1.5**
	SNR=7.4						
DMTO	**DMTO**	**13.20**	**162**	P	**Pn**	**16 56 11.3**	**-0.5**
ABTO	**Aybut**	**13.20**	**170**	P	**Pn**	**16 56 11.4**	**-0.6**
AKTO	**Aktyubinsk**	**20.72**	**13**	P	**P**	**16 57 44.1**	**-0.4**
	0.8nm,0.5s,baz=194,slow=8.3,SNR=2.1						
	0.8nm,0.5s						
BELG	**Belogornoye**	**22.08**	**355**	P	**P**	**16 57 58.4**	**-0.7**
	1.9nm,0.4s,baz=66,slow=13,SNR=1.9						
	1.9nm,0.4s						
AKASG	**Malin Array Be**	**25.89**	**328**	P	**P**	**16 58 35.4**	**-0.6**
	0.1nm,0.2s,baz=133,slow=8.7,SNR=5.5						
	0.1nm,0.2s						
BVAR	**Borovoye Array**	**26.74**	**27**	P	**P**	**16 58 44.8**	**+1.2**
	1.3nm,0.5s,baz=221,slow=8.4,SNR=10						
	1.3nm,0.5s						
KIRV	**Kirov**	**28.18**	**358**	LR	LR	17 13 08.3	
	comp=Z,41nm,21.8s,baz=336,slow=43						
KURBB	**Kurchatov Arra**	**28.91**	**38**	P	**P**	**16 59 04.4**	**+1.4**
	0.4nm,0.6s,baz=238,slow=9.9,SNR=2.7						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**29.29**	**47**	P	**P**	**16 59 07.2**	**+0.7**
	0.1nm,0.4s,baz=253,slow=9.9,SNR=2.2						
	0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**33.94**	**36**	P	**P**	**16 59 47.3**	**0.0**
	0.6nm,0.5s,baz=253,slow=9.3,SNR=3.5						
	0.6nm,0.5s						
FINES	**FINESS Array B**	**35.03**	**340**	P	**P**	**16 59 55.7**	**-0.8**
	0.6nm,0.4s,baz=140,slow=10,SNR=9.7						
	0.6nm,0.4s						
HFS	**Hagfors**	**38.65**	**331**	P	**P**	**17 00 26.6**	**-0.8**
	0.7nm,0.3s,baz=133,slow=9.0,SNR=15						
	0.7nm,0.3s						
TORD	**Torodi Ar. Bea**	**48.34**	**260**	P	**P**	**17 01 45.0**	**-1.0**
	0.4nm,0.3s,baz=44,slow=8.2,SNR=3.6						
	0.4nm,0.3s						

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*MOS **13** 16:53:21.7±0.0,41°.86N×42°.13E,h4^{km},MPVA3.1*
*TIF **13** 16:53:21.2,41°.83N×42°.06E,h20^{km}±1^{km}*
*NORS **13** 16:53:22.5±0.0,41°.98N×42°.30E,h2^{km},MPVA3.1*
*DDA **13** 16:53:23.0±0.0,41°.72N×42°.11E,h7^{km}±2^{km},ML2.3*
ISC 13 16:53:21.5±1.1,**41°.83N**±0°.02×**42°.11E**±0°.02,**h4**^{km}±10^{km},
n37,σ**0^{s}.80**/71**,Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BATM	**Batumi**	**0.38**	**234**	P	**Pg**	**16 53 29.3**	**+0.4**
BATM				S	**Sg**	**16 53 34.9**	**+1.1**
ABS	**Abastumani**	**0.53**	**98**	P	**Pb**	**16 53 32.8**	**-0.7**
ABS				S	**Sb**	**16 53 41.1**	**-0.5**
DBOC	**Borcka**	**0.59**	**214**	P	**Pg**	**16 53 33.0**	**+0.3**
DBOC				*i* AML	AML	16 53 41.0	
	comp=E,603nm,0.2s						
DBOC				S	**Sg**	**16 53 41.2**	**+0.9**
DAGI	**Agillar**	**0.77**	**191**	P	**Pg**	**16 53 36.5**	**+0.3**
DAGI				S	**Sg**	**16 53 46.0**	**-0.1**
DAGI				*i* AML	AML	16 53 47.0	
	comp=E,133nm,0.3s						
DAGI				*i* AML	AML	16 53 47.0	
	comp=N,138nm,0.5s						
AHAN	**Ardahan-Merkez**	**0.77**	**149**	P	**Pb**	**16 53 37.6**	**0.0**
AHAN				S	**Sg**	**16 53 46.3**	**+0.1**
AHAN				*i* AML	AML	16 53 50.0	
	comp=E,113nm,0.6s						
AHAN				*i* AML	AML	16 53 52.0	
	comp=N,116nm,0.7s						
TKB	**Tkibuli**	**0.84**	**52**	P	**Pb**	**16 53 38.3**	**-0.4**
TKB				S	**Sb**	**16 53 50.0**	**-0.4**
DBAD	**Bademkaya**	**0.87**	**201**	P	**Pg**	**16 53 37.9**	**-0.2**
DBAD				S	**Sg**	**16 53 49.1**	**-0.3**
DBAD				*i* AML	AML	16 53 52.0	
	comp=E,128nm,0.3s						
DBAD				*i* AML	AML	16 53 52.0	
	comp=N,151nm,0.5s						
DDEM	**Demirkent**	**0.97**	**196**	P	**Pg**	**16 53 39.5**	**-0.6**
DDEM				S	**Sg**	**16 53 52.3**	**-0.5**
DDEM				*i* AML	AML	16 53 54.0	
	comp=N,416nm,0.3s						
DDEM				*i* AML	AML	16 53 56.0	
	comp=E,391nm,0.3s						
AKH	**Akhalkalaki**	**1.12**	**112**	*i* Pg	**Pb**	**16 53 43.2**	**-0.4**
AKH				*i* Sg	**Sb**	**16 53 58.5**	**-0.1**
AKH	**Akhalkalaki**	**1.12**	**112**	P	**Pb**	**16 53 43.4**	**-0.1**
AKH				S	**Sb**	**16 53 58.9**	**+0.4**
BGD	**Bogdanovka**	**1.25**	**116**	P	**Pb**	**16 53 45.8**	**-0.1**
ONI	**Oni**	**1.26**	**52**	P	**Pg**	**16 53 45.5**	**-0.1**
ONI				S	**Sn**	**16 54 02.9**	**-0.4**
BRNG	**Burnasheti**	**1.30**	**99**	P	**Pn**	**16 53 46.9**	**+0.2**
BRNG				S	**Sn**	**16 54 04.2**	**-0.4**
BOZK	**Kars-Merkez-Bo**	**1.40**	**152**	P	**Pb**	**16 53 49.1**	**+0.8**
BOZK				S	**Sn**	**16 54 08.9**	**+1.9**
BOZK				*i* AML	AML	16 54 11.0	
	comp=N,28nm,0.7s						
NEY	**Neytrino**	**1.49**	**18**	*e*Pg	**Pb**	**16 53 49.8**	**0.0**
NEY				*e*Sg	**Sn**	**16 54 09.8**	**+0.5**
DOMR	**Dombai**	**1.50**	**346**	*e*Pg	**Pn**	**16 53 49.1**	**-0.3**
DOMR				*e*Sg	**Sg**	**16 54 09.5**	**-0.3**
TRLG	**Trialeti**	**1.52**	**100**	P	**Pn**	**16 53 50.0**	**+0.3**
TRLG				S	**Sn**	**16 54 10.7**	**+0.7**
DIGR	**Digorskoe uzhe**	**1.53**	**45**	*e*Pg	**Pb**	**16 53 50.2**	**-0.3**
DIGR				*e*Sg	**Sn**	**16 54 10.7**	**+0.5**
IZDR	**Rize**	**1.56**	**229**	P	**Pn**	**16 53 48.5**	**-1.6**
IZDR				S	**Sn**	**16 54 07.2**	**-3.7**
IZDR				*i* AML	AML	16 54 10.0	
	comp=E,69nm,0.4s						
IZDR				*i* AML	AML	16 54 10.0	
	comp=N,42nm,0.6s						
EAK	**Akyaka**	**1.61**	**135**	P	**Pb**	**16 53 51.9**	**+0.1**
EAK				S	**Sn**	**16 54 12.3**	**+0.2**
EAK				*i* AML	AML	16 54 13.0	
	comp=N,24nm,0.7s						
ZEI	**Tsey**	**1.64**	**54**	*e*Pg	**Pb**	**16 53 52.0**	**-0.4**
ZEI				*e*Sg	**Sg**	**16 54 14.4**	**+0.2**
DMNI	**Dmanisi**	**1.64**	**107**	P	**Pb**	**16 53 51.9**	**-0.5**
DMNI				S	**Sg**	**16 54 13.8**	**-0.5**
DIGO	**Kars**	**1.71**	**145**	P	**Pb**	**16 53 53.4**	**-0.2**
DIGO				S	**Sg**	**16 54 16.7**	**+0.3**
DIGO				*i* AML	AML	16 54 20.0	
	comp=N,40nm,0.6s						
DIGO				*i* AML	AML	16 54 20.0	
	comp=E,36nm,0.7s						
KRIK	**Erzurum-spir**	**1.74**	**211**	P	**Pb**	**16 53 54.0**	**0.0**
KRIK				S	**Sb**	**16 54 16.5**	**+0.2**
HOMI	**Horasan**	**1.79**	**185**	P	**Pb**	**16 53 54.6**	**-0.3**
HOMI				S	**Sg**	**16 54 20.5**	**+1.5**
HOMI				*i* AML	AML	16 54 26.0	
	comp=N,36nm,0.5s						
HOMI				*i* AML	AML	16 54 26.0	
	comp=E,67nm,0.7s						
ARXR	**Arkhyz**	**1.84**	**341**	*e*Pg	**Pb**	**16 53 55.4**	**-0.4**
ARXR				*i* Sg	**Sn**	**16 54 18.6**	**+0.9**
LACR	**Lac**	**1.91**	**58**	*e*Pg	**Pb**	**16 53 56.5**	**-0.4**
LACR				*e*Sg	**Sg**	**16 54 21.8**	**-0.9**
KORR	**Kora**	**1.92**	**48**	*e*Pg	**Pn**	**16 53 55.6**	**+0.6**
KORR				*e*Sg	**Sg**	**16 54 22.4**	**-0.7**
LSNR	**Lesken**	**1.93**	**41**	*e*Pg	**Pb**	**16 53 56.3**	**-0.9**
LSNR				*e*Sg	**Sb**	**16 54 22.2**	**+0.6**
SHA1	**Shidzhatmaz**	**1.95**	**12**	*e*Pg	**Pg**	**16 53 58.7**	**-0.2**
SHA1				*e*Sg	**Sb**	**16 54 22.5**	**0.0**
KBZ	**Khabaz**	**1.98**	**17**	*e*Pg	**Pb**	**16 53 58.6**	**+0.4**
KBZ				*e*Sg	**Sb**	**16 54 23.7**	**+0.5**
EATA	**Eleskirt**	**1.99**	**171**	P	**Pb**	**16 53 57.9**	**-0.5**
VSLR	**Vesyoloye**	**2.23**	**318**	*e*Pg	**Pb**	**16 54 01.5**	**-0.9**
VSLR				*e*Sg	**Sb**	**16 54 30.8**	**+0.4**
RPOR	**Krasnaya Polya**	**2.31**	**325**	*e*Pn	**Pn**	**16 54 01.0**	**+0.7**
RPOR				*e*Sn	**Sn**	**16 54 30.7**	**+1.5**
SHTL	**Shatili**	**2.41**	**69**	P	**Pb**	**16 54 04.7**	**-0.8**
SOC	**Sochi**	**2.48**	**316**	*e*Pn	**Pn**	**16 54 03.5**	**+0.8**
SOC				*e*Sn	**Sb**	**16 54 36.4**	**-1.2**
GUZR	**Guzeripl'**	**2.61**	**327**	*e*Pn	**Pn**	**16 54 04.6**	**0.0**
GUZR				*e*Sn	**Sn**	**16 54 38.3**	**+1.6**

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*IDC **13** 17:03:13.9±1.1,2°.72N×126°.58E,h0^{km},mb3.6/5,*
mbtmp3.6/6,ML3.4/1,MS3.3/2,Error ellipse: s-maj=72.6km
s-min=16.3km az=67.0
ISC 13 17:03:15.5±1.1,**2°.9N**±0°.2×**126°.9E**±0°.2,**h10**^{km}**,n7,**σ**1^{s}.35**/8**,**
mb3.7/5**,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.72**	**131**	Pn	**Pn**	**17 04 41.6**	**+1.0**
	1.1nm,0.3s,baz=327,slow=22,SNR=5.3						
SIJI				Sn	**Sn**	**17 05 45.2**	**-1.1**
	0.3nm,0.3s,baz=328,slow=22,SNR=1.1						
SIJI				LR	LR	17 07 13.3	
	comp=Z,77nm,18.4s,baz=165,slow=41						
	3.0nm,0.3s						

WRA	**Warramunga Arr**	**23.83**	**163**	P	**P**	**17 08 28.0**	**-1.0**
	1.3nm,0.7s,baz=342,slow=10,SNR=9.8						
WRA				S	**S**	**17 12 47.1**	**+2.1**
	0.4nm,1.0s,baz=332,slow=22,SNR=2.0						
	1.3nm,0.7s						
ASAR	**Alice Springs**	**27.26**	**166**	P	**P**	**17 08 59.2**	**-0.9**
	0.4nm,0.8s,baz=342,slow=7.0,SNR=7.3						
	0.4nm,0.8s						
STKA	**Stephens Creek**	**37.28**	**159**	P	**P**	**17 10 27.4**	**-0.4**
	1.6nm,0.7s,baz=330,slow=7.5,SNR=3.5						
	1.6nm,0.7s						
SONM	**Songino Array**	**48.15**	**341**	P	**P**	**17 11 56.3**	**+0.2**
	0.6nm,0.7s,baz=152,slow=9.4,SNR=5.0						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**58.36**	**325**	P	**P**	**17 13 10.9**	**-0.1**
	0.4nm,0.6s,baz=123,slow=8.8,SNR=6.4						
	0.4nm,0.6s						
PPT	**Papeete**	**84.66**	**108**	LR	LR	17 48 42.4	
	comp=Z,69nm,21.3s,baz=118,slow=32						

ROM 13 17:08:51.5±0.1**, 43°.065N**±0°.004×**13°.045E**±0°.005**,**
h10km, ML1.9/28**, 9C-3D, Error ellipse: s-maj=0.5km**
s-min=0.4km az=38.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.03**	**251**	P	Pg	17 08 53.5	+0.1
T1219				S	Sg	17 08 54.5	-0.1
T1219				AML	AML		
	comp=N,3510µm,0.3s						
T1219				AML	AML		
	comp=N,3520µm,0.3s						
T1219				AML	AML		
	comp=E,1975µm,0.3s						
T1219				AML	AML		
	comp=E,2140µm,0.2s						
FDMO	**Fiordimonte**	**0.04**	**133**	P	Pg	17 08 53.4	+0.1
FDMO				S	Sg	17 08 54.6	-0.1
FDMO				AML	AML		
	comp=E,1640µm,0.1s						
FDMO				AML	AML		
	comp=N,1495µm,0.1s						
T1220	**Camerino, Fraz**	**0.06**	**35**	⇑P	Pg	17 08 53.7	+0.2
T1220				AML	AML		
	comp=E,10100µm,0.2s						
T1220				AML	AML		
	comp=E,14755µm,1.6s						
T1220				AML	AML		
	comp=N,4875µm,1.5s						
T1220				AML	AML		
	comp=E,10050µm,0.2s						
T1220				AML	AML		
	comp=N,4920µm,1.5s						
T1220				AML	AML		
	comp=E,14760µm,1.6s						
T1220				AML	AML		
	comp=N,4875µm,0.5s						
T1220				AML	AML		
	comp=N,4920µm,0.5s						
FEMA	**Monte Fema**	**0.10**	**178**	P	Pg	17 08 54.7	+0.5
FEMA				S	Sg	17 08 56.9	+0.8
SEF1	**Sefro**	**0.11**	**319**	P	Pg	17 08 54.6	+0.4
SEF1				S	Sg	17 08 57.4	+1.3
CESI	**CESI - Serrava**	**0.12**	**240**	⇑P	Pg	17 08 55.1	+0.7
CESI				AML	AML		
	comp=N,680µm,0.6s						
CESI				AML	AML		
	comp=E,346µm,0.4s						
CSP1	**Cessapalombo**	**0.12**	**77**	⇑P	Pg	17 08 54.8	+0.4
CSP1				S	Sg	17 08 57.0	+0.5
CSP1				AML	AML		
	comp=E,784µm,0.2s						
CSP1				AML	AML		
	comp=N,1440µm,0.3s						
T1256	**Bolognola (MC)**	**0.14**	**114**	P	Pg	17 08 55.3	+0.5
T1256				S	Sg	17 08 58.0	+0.8
T1256				AML	AML		
	comp=E,477µm,0.3s						
T1256				AML	AML		
	comp=E,477µm,1.7s						
T1256				AML	AML		
	comp=N,737µm,0.3s						
MDAR	**Monte D'Aria**	**0.15**	**29**	P	Pg	17 08 55.3	+0.5
GAG1	**Gagliole**	**0.17**	**5**	P	Pg	17 08 56.0	+0.8
T1216	**Preci, Frazion**	**0.17**	**186**	P	Pg	17 08 55.9	+0.6
T1216				S	Sg	17 08 59.2	+1.4
T1216				AML	AML		
	comp=E,877µm,0.3s						
T1216				AML	AML		
	comp=N,1086µm,0.4s						
T1216				AML	AML		
	comp=N,1086µm,0.3s						
T1216				AML	AML		
	comp=N,1086µm,1.7s						
SNTG	**Esanatoglia**	**0.20**	**338**	⇓P	Pg	17 08 56.2	+0.5
SNTG				AML	AML		
	comp=E,318µm,0.5s						
SNTG				AML	AML		
	comp=N,314µm,0.7s						
SNTG				AML	AML		
	comp=N,335µm,0.7s						
SNTG				AML	AML		
	comp=E,298µm,0.5s						
GUMA	**Gualdo di Mace**	**0.21**	**91**	P	Pg	17 08 56.8	+0.9
GUMA				S	Sg	17 09 00.8	+1.9
GUMA				AML	AML		
	comp=N,1845µm,0.2s						
GUMA				AML	AML		
	comp=N,1330µm,0.4s						
GUMA				AML	AML		
	comp=E,1520µm,0.2s						
GUMA				AML	AML		
	comp=E,2620µm,0.2s						
GUMA				AML	AML		
	comp=N,1840µm,0.2s						
T1245	**Castelsantange**	**0.23**	**153**	AML	AML		
	comp=E,578µm,0.2s						
T1245				AML	AML		
	comp=N,716µm,0.2s						
T1245				AML	AML		
	comp=N,716µm,0.1s						
T1245				AML	AML		
	comp=E,586µm,0.2s						
T1245				AML	AML		
	comp=N,705µm,0.2s						
MMO1	**Montemonaco**	**0.27**	**129**	P	Pg	17 08 57.4	+0.5
MMO1				S	Sb	17 09 01.9	-1.1
EL6	**Elcito**	**0.27**	**9**	⇑P	Pg	17 08 57.4	+0.5
EL6				AML	AML		
	comp=E,592µm,1.4s						
EL6				AML	AML		
	comp=E,592µm,1.4s						
EL6				AML	AML		
	comp=N,581µm,0.2s						
EL6				AML	AML		
	comp=E,592µm,0.6s						
ASSB	**Assisi San Ben**	**0.28**	**266**	⇑P	Pb	17 08 58.1	-0.7
ASSB				AML	AML		
	comp=E,162µm,1.0s						
ASSB				AML	AML		
	comp=N,456µm,0.2s						
ASSB				AML	AML		
	comp=E,162µm,1.0s						
T1215	**Vallo di Nera,**	**0.29**	**206**	⇑P	Pg	17 08 58.1	+0.7
FOSV	**Fossato di Vic**	**0.31**	**318**	P	Pg	17 08 58.2	+0.5
FOSV				S	Sb	17 09 03.5	-0.9
T1212	**Cascia, Frazio**	**0.31**	**180**	P	Pg	17 08 58.4	+0.7
T1212				S	Sb	17 09 03.8	-0.7
T1212				AML	AML		
	comp=E,368µm,0.9s						
T1212				AML	AML		
	comp=N,352µm,0.6s						
T1212				AML	AML		
	comp=E,364µm,0.9s						
T1212				AML	AML		
	comp=N,328µm,0.6s						
T1212				AML	AML		
	comp=E,368µm,0.9s						
T1212				AML	AML		
	comp=N,351µm,0.6s						
T1212				AML	AML		
	comp=E,364µm,0.9s						
T1212				AML	AML		
	comp=E,364µm,1.1s						
T1212				AML	AML		
	comp=N,328µm,0.6s						
T1212				AML	AML		
	comp=E,368µm,1.1s						
ATCC	**AVT- Casa Cast**	**0.32**	**292**	⇓P	Pb	17 08 58.6	-0.7
ATCC				AML	AML		
	comp=E,532µm,0.3s						
ATCC				AML	AML		
	comp=N,363µm,0.1s						
T1214	**Arquata del Tr**	**0.33**	**158**	P	Pg	17 08 58.6	+0.5
T1214				S	Sb	17 09 04.0	-1.0
T1214				AML	AML		
	comp=E,161µm,1.3s						
T1214				AML	AML		
	comp=N,145µm,0.2s						
T1214				AML	AML		
	comp=E,162µm,1.3s						
T1214				AML	AML		
	comp=N,146µm,0.2s						
T1214				AML	AML		
	comp=E,162µm,0.7s						
CING	**Cingoli**	**0.33**	**19**	⇑P	Pg	17 08 58.5	+0.5
CING				AML	AML		
	comp=E,372µm,0.6s						
CING				AML	AML		
	comp=N,368µm,0.1s						
T1241	**Roccafluvione,**	**0.35**	**126**	S	Sg	17 08 58.9	-4.2
T1241				AML	AML		
	comp=E,67µm,0.5s						
T1241				AML	AML		
	comp=N,79µm,0.3s						
T1217	**Poggiodomo (PG**	**0.36**	**193**	S	Sg	17 08 59.3	-4.2
T1217				AML	AML		
	comp=E,117µm,1.2s						
T1217				AML	AML		
	comp=N,193µm,0.2s						
T1217				AML	AML		
	comp=E,117µm,0.8s						
SSFR	**Montelago di S**	**0.42**	**333**	⇑P	Pg	17 09 00.2	+0.5
SSFR				AML	AML		
	comp=E,324µm,1.1s						
SSFR				AML	AML		
	comp=E,260µm,1.6s						
SSFR				AML	AML		
	comp=E,260µm,0.4s						
SSFR				AML	AML		
	comp=E,324µm,0.9s						
SSFR				AML	AML		
	comp=N,298µm,0.1s						
SSFR				AML	AML		
	comp=N,330µm,0.8s						
MURB	**Monte Urbino**	**0.43**	**298**	P	Pg	17 09 00.1	+0.2
MURB				AML	AML		
	comp=E,307µm,0.2s						
MURB				AML	AML		
	comp=N,198µm,0.3s						
MOMA	**Monte Martano**	**0.44**	**233**	⇑P	Pb	17 09 01.1	-0.3
MOMA				AML	AML		
	comp=N,43µm,1.6s						
MOMA				AML	AML		
	comp=N,43µm,0.4s						
MOMA				AML	AML		
	comp=E,66µm,1.4s						
ATFO	**Monte Foce - G**	**0.46**	**311**	P	Pg	17 09 00.5	+0.1
ATFO				AML	AML		
	comp=E,40µm,1.5s						
ATFO				AML	AML		
	comp=N,43µm,0.5s						
ATFO				AML	AML		
	comp=E,40µm,0.5s						
SMA1	**SAN MARTINO**	**0.48**	**154**	S	Sg	17 09 01.3	-6.0
SMA1				AML	AML		
	comp=N,81µm,0.5s						
SMA1				AML	AML		
	comp=E,78µm,0.7s						
PP3	**Marolino**	**0.52**	**53**	S	Sg	17 09 07.6	-0.8
PIEI	**Pieia**	**0.60**	**322**	P	Pg	17 09 03.3	+0.2
PIEI				S	Sb	17 09 13.6	+0.8
PIEI				AML	AML		
	comp=E,49µm,0.2s						
PIEI				AML	AML		
	comp=N,35µm,1.5s						
PIEI				AML	AML		
	comp=N,35µm,0.5s						
MPAG	**Monte Paganucc**	**0.60**	**340**	⇓P	Pb	17 09 03.7	-0.5
MPAG				AML	AML		
	comp=E,93µm,0.3s						
MPAG				AML	AML		
	comp=N,63µm,0.3s						
MPAG				AML	AML		
	comp=E,93µm,0.3s						
TERO	**Teramo**	**0.60**	**137**	S	Sg	17 09 03.2	-7.9
FSSB	**Fossombrone**	**0.66**	**343**	P	Pb	17 09 04.9	-0.2
FSSB				AML	AML		
	comp=N,134µm,0.3s						
FSSB				AML	AML		
	comp=E,136µm,0.3s						
MGAB	**Montegabbione**	**0.70**	**258**	P	Pg	17 09 04.4	-0.6
MCIV	**Monte Civitell**	**1.04**	**255**	P	Pn	17 09 12.9	+0.6
MCIV				AML	AML		
	comp=E,39µm,0.1s						
MCIV				AML	AML		
	comp=N,34µm,1.1s						
IMOL	**Imola, Italy**	**1.60**	**324**	S	Sg	17 09 46.8	+3.8
MODR	**Mondragone**	**2.02**	**162**	P	Pn	17 09 22.6	-3.0
MODR				S	Sn	17 09 51.1	+0.2

ROM 13 17:09:34.5±0.0**, 42°.869N**±0°.002×**13°.050E**±0°.003**,**
h10km, ML1.6/24**, 12C-4D, Error ellipse: s-maj=0.2km**
s-min=0.1km az=77.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.03**	**313**	P	Pg	17 09 36.9	+0.4
T1216				S	Sg	17 09 38.1	+0.2
T1216				AML	AML		
	comp=E,1380µm,0.4s						
T1216				AML	AML		
	comp=E,1380µm,0.4s						
T1216				AML	AML		
	comp=N,1050µm,1.6s						
T1216				AML	AML		
	comp=N,1050µm,0.4s						
FEMA	**Monte Fema**	**0.09**	**360**	P	Pg	17 09 37.7	+0.5
FEMA				S	Sg	17 09 39.5	+0.4
T1245	**Castelsantange**	**0.10**	**97**	⇓P	Pg	17 09 37.8	+0.5
T1245				S	Sg	17 09 39.9	+0.6
T1245				AML	AML		
	comp=E,1010µm,0.1s						
T1245				AML	AML		
	comp=N,1650µm,0.2s						
T1245				AML	AML		
	comp=N,1615µm,0.2s						
T1245				AML	AML		
	comp=E,941µm,0.1s						
MC2	**Monte Cornacci**	**0.11**	**67**	⇓P	Pg	17 09 38.0	+0.5
MC2				S	Sg	17 09 40.4	+0.7
T1212	**Cascia, Frazio**	**0.12**	**182**	⇑P	Pg	17 09 38.0	+0.6
T1212				S	Sg	17 09 40.3	+0.8
T1212				AML	AML		
	comp=E,470µm,0.2s						
T1212				AML	AML		
	comp=N,546µm,0.4s						
T1212				AML	AML		
	comp=E,464µm,0.2s						
T1212				AML	AML		
	comp=N,562µm,0.4s						
T1215	**Vallo di Nera,**	**0.15**	**243**	P	Pg	17 09 38.5	+0.6
T1215				S	Sg	17 09 41.1	+0.8
T1215				AML	AML		
	comp=N,342µm,0.8s						
T1215				AML	AML		
	comp=E,232µm,0.2s						
T1215				AML	AML		
	comp=N,331µm,0.8s						
T1215				AML	AML		
	comp=E,248µm,0.5s						
T1214	**Arquata del Tr**	**0.16**	**133**	⇑P	Pg	17 09 38.7	+0.6
T1214				S	Sg	17 09 41.4	+0.8
T1214				AML	AML		
	comp=E,627µm,0.8s						
T1214				AML	AML		
	comp=E,626µm,0.8s						
T1214				AML	AML		
	comp=N,651µm,0.1s						
T1214				AML	AML		
	comp=E,626µm,0.8s						
T1214				AML	AML		
	comp=E,626µm,1.2s						
FDMO	**Fiordimonte**	**0.17**	**9**	⇑P	Pg	17 09 38.8	+0.6
FDMO				S	Sg	17 09 41.7	+0.9
FDMO				AML	AML		
	comp=E,838µm,0.2s						
FDMO				AML	AML		
	comp=N,576µm,0.2s						
CESI	**CESI - Serrava**	**0.17**	**322**	⇑P	Pg	17 09 38.9	+0.6
CESI				S	Sg	17 09 42.0	+1.1
CESI				AML	AML		
	comp=N,557µm,0.3s						
CESI				AML	AML		
	comp=E,310µm,0.5s						
T1217	**Poggiodomo (PG**	**0.18**	**209**	⇑P	Pg	17 09 39.0	+0.6
T1217				S	Sg	17 09 42.1	+1.0
T1217				AML	AML		
	comp=E,234µm,0.1s						
T1217				AML	AML		
	comp=N,346µm,0.2s						
T1217				AML	AML		
	comp=N,346µm,0.2s						
T1256	**Bolognola (MC)**	**0.19**	**43**	P	Pg	17 09 39.2	+0.5
T1256				S	Sg	17 09 42.4	+0.9
T1256				AML	AML		
	comp=N,412µm,0.2s						
T1256				AML	AML		
	comp=E,310µm,0.8s						
T1256				AML	AML		
	comp=E,310µm,1.2s						
T1256				AML	AML		
	comp=N,412µm,0.2s						
T1219	**Muccia, Frazio**	**0.19**	**350**	⇑P	Pg	17 09 39.1	+0.5
T1219				S	Sg	17 09 42.2	+0.8
T1219				AML	AML		
	comp=E,184µm,0.8s						
T1219				AML	AML		
	comp=N,182µm,1.3s						
T1219				AML	AML		
	comp=E,184µm,0.7s						
T1219				AML	AML		
	comp=N,182µm,0.7s						
MMO1	**Montemonaco**	**0.20**	**81**	⇓P	Pg	17 09 39.4	+0.6
MMO1				S	Sg	17 09 42.9	+1.1
T1218	**Civita (PG)**	**0.20**	**166**	⇑P	Pg	17 09 39.4	+0.5
T1218				S	Sg	17 09 42.9	+1.0
T1218				AML	AML		
	comp=E,231µm,1.6s						
T1218				AML	AML		
	comp=N,247µm,1.5s						
T1218				AML	AML		
	comp=E,189µm,1.0s						
T1218				AML	AML		
	comp=N,210µm,0.1s						
T1218				AML	AML		
	comp=E,230µm,1.6s						
T1218				AML	AML		
	comp=E,189µm,1.0s						
T1218				AML	AML		
	comp=N,210µm,0.1s						
T1218				AML	AML		
	comp=E,189µm,1.0s						
T1218				AML	AML		
	comp=N,247µm,0.5s						
T1218				AML	AML		
	comp=E,230µm,0.4s						
T1220	**Camerino, Fraz**	**0.24**	**7**	⇑P	Pg	17 09 40.1	+0.5
T1220				S	Sg	17 09 44.1	+1.2
T1241	**Roccafluvione,**	**0.28**	**92**	⇓P	Pg	17 09 40.7	+0.5
T1241				S	Sb	17 09 45.2	-1.2
T1241				AML	AML		
	comp=E,158µm,0.2s						
T1241				AML	AML		
	comp=N,159µm,0.7s						
GUMA	**Gualdo di Mace**	**0.28**	**47**	P	Pb	17 09 41.2	-0.6
GUMA				S	Sb	17 09 46.0	-0.6
GUMA				AML	AML		
	comp=N,312µm,0.6s						
GUMA				AML	AML		
	comp=E,339µm,0.5s						
SMA1	**SAN MARTINO**	**0.32**	**139**	P	Pg	17 09 41.4	+0.4
SMA1				S	Sb	17 09 46.6	-1.0
SMA1				AML	AML		
	comp=E,134µm,0.3s						
SMA1				AML	AML		
	comp=N,107µm,1.0s						
ASSB	**Assisi San Ben**	**0.34**	**301**	P	Pg	17 09 41.6	+0.3
ASSB				S	Sb	17 09 47.0	-1.1
ASSB				AML	AML		
	comp=E,138µm,1.3s						
ASSB				AML	AML		
	comp=N,128µm,0.9s						
ASSB				AML	AML		
	comp=N,128µm,1.1s						
MOMA	**Monte Martano**	**0.36**	**260**	P	Pg	17 09 42.3	+0.6
MOMA				S	Sb	17 09 48.1	-0.7
MOMA				AML	AML		
	comp=E,108µm,0.8s						
MOMA				AML	AML		
	comp=N,85µm,0.2s						
MOMA				AML	AML		
	comp=N,85µm,1.8s						
T1211	**Morro Reatino**	**0.36**	**203**	P	Pg	17 09 42.2	+0.4
T1211				S	Sb	17 09 48.1	-0.8
RM33	**Pellescritta (**	**0.38**	**161**	⇑P	Pg	17 09 42.3	+0.2
RM33				S	Sb	17 09 48.4	-0.9
RM33				AML	AML		
	comp=E,50µm,0.5s						
RM33				AML	AML		
	comp=N,42µm,0.2s						
RM33				AML	AML		
	comp=N,42µm,1.8s						
SNTG	**Esanatoglia**	**0.39**	**348**	⇑P	Pg	17 09 42.6	+0.3
SNTG				S	Sb	17 09 48.9	-0.9
SNTG				AML	AML		
	comp=E,34µm,0.4s						
SNTG				AML	AML		
	comp=N,42µm,0.9s						
ATCC	**AVT- Casa Cast**	**0.44**	**317**	⇑P	Pg	17 09 43.5	+0.4
ATCC				S	Sb	17 09 50.3	-0.6
ATCC				AML	AML		
	comp=E,131µm,0.1s						
ATCC				AML	AML		
	comp=N,104µm,0.1s						
EL6	**Elcito**	**0.46**	**5**	⇑P	Pg	17 09 43.8	+0.3
EL6				S	Sb	17 09 51.2	-0.5
EL6				AML	AML		
	comp=E,73µm,0.2s						
EL6				AML	AML		
	comp=N,62µm,1.6s						
EL6				AML	AML		
	comp=E,73µm,0.2s						
EL6				AML	AML		
	comp=N,62µm,1.6s						
EL6				AML	AML		
	comp=N,62µm,0.4s						
T1222	**Castel Sant'An**	**0.47**	**181**	P	Pg	17 09 44.0	+0.3
T1222				S	Sb	17 09 51.3	-0.5
TERO	**Teramo**	**0.48**	**121**	P	Pg	17 09 43.9	+0.1
TERO				S	Sb	17 09 51.1	-0.9
TERO				AML	AML		
	comp=E,59µm,1.0s						
TERO				AML	AML		
	comp=N,69µm,1.2s						
TERO				AML	AML		
	comp=N,69µm,0.8s						
MURB	**Monte Urbino**	**0.55**	**316**	P	Pg	17 09 45.6	+0.4
MURB				AML	AML		
	comp=E,92µm,0.8s						
MURB				AML	AML		
	comp=N,81µm,1.5s						
MURB				AML	AML		
	comp=N,81µm,0.5s						
SSFR	**Montelago di S**	**0.60**	**341**	P	Pg	17 09 46.3	+0.1
SSFR				AML	AML		
	comp=N,57µm,0.7s						
SSFR				AML	AML		
	comp=E,45µm,1.4s						
SSFR				AML	AML		
	comp=N,57µm,1.3s						

FUNV ***13*** *17:17:02.0, 10°.56N×62°.10W, h21km, MW3.9*
TRN ***13*** *17:17:05.2, 10°.78N×62°.11W, h74km, MD3.9*
TRN Felt in Trinidad MMI II.

ISC 13 17:17:03.9±1.6, 10°.71N±0°.06×62°.25W±0°.05, h84km±18km, n39, σ1s.37/47, 1C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	0.84	94	⇑iP	Pn	17 17 21.4	+0.1
TRN				eS	Sn	17 17 33.0	-1.3
TPP	**Pointe-a-Pierr**	0.88	116	eP	Pn	17 17 23.4	+1.7
CRUV	**Carupano**	0.97	268	eP	Pn	17 17 22.3	-0.4
CRUV				eS	Sn	17 17 36.1	-0.8
TBH	**Brigand Hill**	1.19	101	eP	Pn	17 17 26.8	+1.4
TBH				eS	Sn	17 17 40.7	-0.9
GRGR	**Grenville**	1.53	22	⇓iP	Pn	17 17 30.4	+0.6
GRGR				eS	Sn	17 17 49.2	-0.2
GRHS	**Sauteurs**	1.62	22	eP	Pn	17 17 31.3	+0.3
GRHS				eS	Sn	17 17 51.0	-0.4
TOSP	**Speyside**	1.79	71	eP	Pn	17 17 33.0	0.0
TOSP				eS	Sn	17 17 54.1	-1.1
GCMP	**Grenada, Carri**	1.94	25	eP	Pn	17 17 35.5	+0.4
GCMP				eS	Sn	17 17 58.7	-0.3
SVB	**Belmont**	2.73	21	eP	Pn	17 17 46.7	+1.0
SVB				eS	Sn	17 18 17.4	-0.4
SSV	**Crater Summit**	2.80	22	eP	Pn	17 17 48.3	+1.6
SSV				eS	Sn	17 18 19.5	-0.2
PRGV	**PARIAGUAN**	3.05	231	eP	Pn	17 17 49.6	-0.4
PRGV				eS	Sn	17 18 23.5	-2.1
MCLT	**Moule a Chique**	3.25	23	eP	Pn	17 17 53.3	+0.6
MCLT				eS	Sn	17 18 29.2	-1.2
SLB	**Belfond**	3.32	21	eP	Pn	17 17 55.8	+2.1
SLB				eS	Sn	17 18 31.6	-0.5
SLBI	**Saint Lucia, B**	3.52	21	e	Pn	17 17 44.9	-11
SLBI	**Saint Lucia, B**	3.52	21	eP	Pn	17 17 56.9	+0.5
SLBI				eS	Sn	17 18 35.5	-1.5
SLW	**Petit Monier**	3.53	21	eP	Pn	17 17 58.5	+2.0
MPOM	**Morne Pois Mar**	3.96	20	eP	Pn	17 18 03.1	+0.9
MPOM				eS	Sn	17 18 46.5	-1.0
BIM	**Bigot**	3.96	17	eP	Pn	17 18 03.3	+1.0
BIM				eS	Sn	17 18 45.6	-2.1
TRMF	**Trois Ilets**	3.98	17	eP	Pn	17 18 03.3	+0.7
ZAM	**Aeronautique**	4.02	17	eP	Pn	17 18 04.0	+0.8
MVM	**Montagne Vaucl**	4.05	19	eP	Pn	17 18 04.7	+1.2
FDF	**Fort de France**	4.14	15	eP	Pn	17 18 05.8	+0.9
FDF				eS	Sn	17 18 49.9	-2.3
PML	**Morne Lenard**	4.18	14	eP	Pn	17 18 06.5	+1.2
GBMF	**Grand Be**	4.20	15	eP	Pn	17 18 06.5	+0.9
PCM	**Pelee Case Pet**	4.21	14	eP	Pn	17 18 06.4	+0.7
ILAM	**Ilet Lapin Mar**	4.26	18	eP	Pn	17 18 07.5	+1.1
ILAM	**Ilet Lapin Mar**	4.26	18	eS	Sn	17 18 53.4	-1.5
TACV	**Tcata**	4.73	264	eP	Pn	17 18 12.5	-0.4
TACV				eS	Sn	17 19 05.5	-1.0
CACV	**CAICARA DEL OR**	5.26	234	eP	Pn	17 18 13.2	-6.8
CACV				eS	Sn	17 19 05.1	-14
MAGL	**Barre de l'ile**	5.29	10	eP	Pn	17 18 22.4	+1.9
BENV	**Beln**	5.31	262	eP	Pn	17 18 20.7	-0.1
BENV				eS	Sn	17 19 18.8	-1.9
CBE	**Ff, Capester**	5.37	7	eP	Pn	17 18 23.2	+1.7
CBE	**Ff, Capester**	5.37	7	eS	Sn	17 19 20.2	-1.8
TURV	**Turiamo**	5.50	268	eP	Pn	17 18 22.8	-0.5
TURV				eS	Sn	17 19 22.9	-2.3
ABD	**La Joyeuse, An**	5.78	7	eP	Pn	17 18 29.4	+2.3
BAUV	**El Baul**	5.97	253	eP	Pn	17 18 28.0	-1.6
BAUV				eS	Sn	17 19 31.7	-4.9
MAPV	**Macapo**	6.17	262	eP	Pn	17 18 30.4	-2.0
ANBD	**Bethesda, Anti**	6.32	4	eP	Pn	17 18 36.4	+1.9
ANBD	**Bethesda, Anti**	6.32	4	eS	Sn	17 19 42.3	-3.0

IDC 13 17:25:33.5±3.7, 7°.09S×131°.02E, h113km±54km, mb2.9/1, mbtmp3.5/4, MS2.3/1, Error ellipse: s-maj=123.0km s-min=19.3km az=82.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	6.18	2	P	Pn	17 27 02.9	+0.4
	2.2nm,0.4s,baz=160,slow=19,SNR=11						
SIJI				S	Sn	17 28 12.3	+0.4
	2.3nm,0.3s,baz=208,slow=22,SNR=6.1						
SIJI				LR	LR	17 30 36.1	
	comp=Z,25nm,19.6s,baz=103,slow=49						
WRA	**Warramunga Arr**	13.18	166	P	Pn	17 28 35.6	-0.7
	0.9nm,0.5s,baz=349,slow=13,SNR=14						
WRA				S	Sn	17 30 55.5	-6.1
	1.1nm,0.6s,baz=341,slow=20,SNR=7.0						
ASAR	**Alice Springs**	16.71	171	P	P	17 29 22.0	+0.6
	0.4nm,0.4s,baz=358,slow=14,SNR=35						
ASAR				S	Sn	17 32 21.1	-5.8
	0.2nm,0.5s,baz=259,slow=34,SNR=2.4						
MKAR	**Makanchi Array**	68.86	326	P	P	17 36 25.7	-0.2
	0.2nm,0.6s,baz=114,slow=6.8,SNR=2.3 0.2nm,0.6s						

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*LDG **13** 18:00:52.5±0.1, 42°.92N×1°.62W, h10km, Md2.6/2, Ml2.7/16, Error ellipse: s-maj=2.8km s-min=2.1km az=85.0*
*STR **13** 18:00:53.6±0.6, 43°N±3°×°±°, h2km, MLv2.4/8, Error ellipse: s-maj=0.0km s-min=0.0km az=106.6, preliminary*
*MDD **13** 18:00:54.1±0.2, 42°.89N×1°.60W, h0km, mb_Lg2.7/11, Error ellipse: s-maj=2.0km s-min=1.3km az=156.0*
ISC 13 18:00:53.2±0.9, 42°.96N±0°.02×1°.57W±0°.02, h9km±7km, n45, σ2s.12/85, 1D, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EARA	**Aranguren**	0.19	182	Pg	Pg	18 00 55.5	-1.6
EARA				Sg	Sg	18 00 57.5	-2.3
EARA				i Vmb_Lg		18 00 57.9	
EARA	**Aranguren**	0.19	182	Pg	Pg	18 00 55.5	-1.6
EARA				Sg	Sg	18 00 57.5	-2.3
EORO	**Oroz-Betelu**	0.21	110	Pg	Pg	18 00 56.7	-0.7
EORO				Sg	Sg	18 01 00.1	-0.3
EORO				i Vmb_Lg		18 01 01.4	
EALK	**Alkurruntz**	0.26	11	Pg	Pb	18 00 59.7	-0.4
EALK				Sg	Sg	18 01 04.6	+2.7
EALK				i Vmb_Lg		18 01 07.3	
EALK	**Alkurruntz**	0.26	11	Pg	Pb	18 00 59.7	-0.4
EALK				Sg	Sg	18 01 05.6	+3.6
SJPF	**Ste Jean**	0.29	60	ePg	Pg	18 00 59.7	+0.6
SJPF				eSg	Sg	18 01 04.5	+1.5
	130nm,0.3s						
OSSF	**Osses**	0.37	38	Pg	Pg	18 01 01.2	+0.8
OSSF				Sg	Sg	18 01 05.8	+0.5
ATE	**Arette**	0.65	79	Pg	Pg	18 01 05.7	0.0
ATE				Sg	Sg	18 01 14.6	+0.4
ETSF	**Etsaut**	0.75	95	ePg	Pg	18 01 06.8	-0.8
ETSF				eSg	Sg	18 01 16.9	-0.4
	57nm,0.3s						
TERF	**Tercis-les-Bai**	0.79	25	Pg	Pn	18 01 10.2	-0.2
CANF	**Canfranc**	0.80	104	⇓Pg	Pg	18 01 08.3	-0.3
CANF				Sg	Sg	18 01 18.6	-0.5
PYLO	**Lourdes**	1.13	83	Pg	Pb	18 01 15.7	+0.9
PYLO				Sg	Sb	18 01 30.3	+0.7
VIEF	**Viey**	1.18	93	Pg	Pn	18 01 15.3	-0.6
ECHI	**Chisagues Biel**	1.33	102	Pn	Pn	18 01 18.7	+0.6
ECHI				Sn	Sb	18 01 36.2	+0.5
ECHI				i Vmb_Lg		18 01 40.4	
ECHI	**Chisagues Biel**	1.33	102	Pn	Pn	18 01 17.6	-0.5
ECHI				Pg	Pb	18 01 18.9	+0.5
ECHI				Sg	Sb	18 01 37.1	+1.4
EPF	**Esparros**	1.41	87	ePg	Pn	18 01 19.0	0.0
EPF	**Esparros**	1.41	87	eP	Pn	18 01 20.0	+1.0
EPF				eSg	Sn	18 01 37.2	-0.5
	34nm,0.3s						
ESAC	**San Caprasio**	1.49	146	Pn	Pn	18 01 20.3	+0.1
ESAC				Sn	Sn	18 01 39.1	-0.7
ESAC				i Vmb_Lg		18 01 45.0	
ETOR	**Torete**	2.17	190	Pn	Pn	18 01 30.1	+0.5
ETOR				Sn	Sn	18 01 55.4	-1.3
ETOR				i Vmb_Lg		18 02 03.2	
MONQ	**Montcuq**	2.45	54	Pn	Pn	18 01 35.9	+2.6
ERTA	**Horta de San J**	2.46	144	Pg	Pb	18 01 37.6	+0.1
ERTA				Sn	Sn	18 02 04.3	+0.6
ERTA				i Vmb_Lg		18 02 18.2	
EMIR	**Miracle**	2.52	114	Pg	Pb	18 01 39.6	+1.0
EMIR				Sn	Sn	18 02 05.7	+0.4
EMIR				i Vmb_Lg		18 02 21.7	
EPOB	**Poblet**	2.54	128	Pn	Pn	18 01 35.6	+0.9
LFF	**La Frestale**	2.59	39	eP	Pn	18 01 37.5	+2.3
LFF				eSn	Sn	18 02 03.2	-3.5
LFF				eSg	Sg	18 02 16.3	+0.1
	11nm,0.4s						
EARI	**Arriondas**	2.68	278	Pn	Pn	18 01 38.0	+1.4
EARI				Sn	Sn	18 02 10.1	+0.8
EMOS	**Mosqueruela**	2.73	162	Pg	Pb	18 01 42.3	+0.1
EMOS				Sn	Sn	18 02 10.7	+0.2
EMOS				Sg	Sb	18 02 18.8	+3.0
MTLF	**Montolieu**	2.80	81	eP	Pn	18 01 37.9	-0.2
MTLF				eSn	Sn	18 02 07.1	-4.9
	4.7nm,0.3s						
GUD	**Guadarrama**	3.02	221	Pn	Pn	18 01 41.3	0.0
GUD				Sn	Sn	18 02 16.9	-0.7
GUD				i Vmb_Lg		18 02 40.4	
RJF	**Les Rejaudoux**	3.23	42	eP	Pn	18 01 43.4	-0.6
RJF				eSn	Sn	18 02 19.0	-3.6
	4.6nm,0.2s						
CAF	**Calviac**	3.28	52	eP	Pn	18 01 44.1	-0.6
CAF				eSn	Sn	18 02 21.9	-2.0
	5.0nm,0.3s						
EJON	**La Jonquera**	3.33	97	Pg	Pb	18 01 54.8	+2.4
EJON				Sn	Sn	18 02 27.2	+2.1
EJON				Sg	Sb	18 02 37.3	+4.4
MFF	**Saint Martin d**	3.78	15	eP	Pn	18 01 52.3	+0.7
MFF				eSn	Sn	18 02 32.0	-4.1
MFF				eSg	Sg	18 02 53.8	-0.6
	3.1nm,0.3s						
PAB	**San Pablo**	4.00	212	Sn	Sn	18 02 40.2	-1.7
PAB				Sg	Sb	18 02 54.5	+2.0
LASF	**Ste Croix**	4.10	72	eP	Pn	18 01 55.2	-0.9
LASF				eSn	Sn	18 02 38.8	-5.4
	4.0nm,0.4s						
TCF	**Toulx Ste Croi**	4.28	38	eP	Pn	18 01 59.3	+0.8
TCF				eSn	Sn	18 02 45.3	-3.3
	3.0nm,0.3s						
EPLA	**Plasencia**	4.46	231	Sg	Sb	18 03 06.7	+1.3
PSIM	**Granatula de C**	4.46	203	Pn	Pn	18 02 02.0	+1.0
PSIM				Sn	Sn	18 02 52.7	-0.3
BGF	**Bois d'Agland**	4.78	40	eP	Pn	18 02 05.0	-0.3
BGF				eSn	Sn	18 02 56.2	-4.5
	8.2nm,0.4s						
VIVF	**Saint-Julien-l**	4.89	65	eP	Pn	18 02 07.0	+0.1
VIVF				eSn	Sn	18 02 58.1	-5.6
	1.3nm,0.3s						
QUIF	**Quistinic**	5.08	348	eP	Pn	18 02 10.0	+0.6
QUIF				eSn	Sn	18 03 02.7	-5.4
	2.5nm,0.3s						
AVF	**Avril sur Loir**	5.18	41	eP	Pn	18 02 10.9	0.0
SMF	**Signal de Mont**	5.33	44	eP	Pn	18 02 12.5	-0.4
SGMF	**Saint Gilles**	5.33	353	eP	Pn	18 02 13.9	+0.9
SSF	**Saint Saulge**	5.45	40	eP	Pn	18 02 15.0	+0.4
SSF				eSn	Sn	18 03 12.7	-4.7
	1.1nm,0.2s						
ROSF	**Rostrenen**	5.50	348	eSn	Sn	18 03 13.3	-5.3
	1.4nm,0.3s						

ROM 13 18:02:48.4±0.2, 42°.498N±0°.005×13°.324E±0°.009, h12km±1km, ML1.2/4, 2C, Error ellipse: s-maj=0.6km s-min=0.5km az=242.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1247	**Pizzolo (AQ)**	0.06	199	⇑P	Pg	18 02 51.3	+0.4
T1247				AML	AML		
	comp=E,448µm,0.4s						
T1247				AML	AML		
	comp=N,319µm,1.3s						
RM33	**Pellescritta (**	0.08	278	P	Pg	18 02 51.4	+0.2
RM33				S	Sg	18 02 53.2	-0.1
SMA1	**SAN MARTINO**	0.13	4	⇑P	Pg	18 02 50.1	-1.8
SMA1				AML	AML		
	comp=N,372µm,0.4s						
SMA1				AML	AML		
	comp=E,178µm,0.2s						
GIGS	**Gran Sasso**	0.19	105	P	Pb	18 02 53.4	-0.4
GIGS				S	Sg	18 02 56.4	+0.9
TERO	**Teramo**	0.24	59	P	Pg	18 02 53.9	+0.4
TERO				S	Sg	18 02 57.8	+0.8
T1241	**Roccafluvione,**	0.37	12	P	Pg	18 02 56.0	+0.2
T1241				S	Sb	18 03 01.8	-0.8
T1241				AML	AML		
	comp=N,30µm,1.6s						
T1241				AML	AML		
	comp=N,30µm,1.6s						
T1241				AML	AML		
	comp=N,30µm,0.4s						
T1241				AML	AML		
	comp=E,38µm,1.3s						

ROM 13 18:11:13.0±0.3, 42°.614N±0°.010×13°.25E±0°.03, h7km, ML0.6/1, 2C-1D, Error ellipse: s-maj=2.5km s-min=1.1km az=266.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	0.11	192	⇑P	Pg	18 11 15.8	+0.4
RM33				S	Sg	18 11 17.5	+0.4
RM33				AML	AML		
	comp=N,25µm,0.1s						
RM33				AML	AML		
	comp=E,135µm,0.9s						
RM33				AML	AML		
	comp=E,14µm,0.2s						
RM33				AML	AML		
	comp=N,188µm,0.5s						
T1214	**Arquata del Tr**	0.15	350	P	Pg	18 11 17.0	+0.9
T1214				S	Sg	18 11 18.5	+0.2
T1247	**Pizzolo (AQ)**	0.18	167	P	Pg	18 11 14.8	-1.8
T1247				AML	AML		
	comp=E,116µm,1.6s						
T1247				AML	AML		
	comp=N,112µm,0.1s						
T1247				AML	AML		
	comp=N,112µm,0.1s						
T1247				AML	AML		
	comp=E,110µm,0.1s						
T1212	**Cascia, Frazio**	0.20	313	⇑P	Pg	18 11 18.5	+1.4
T1212				S	Sg	18 11 21.0	+1.2
T1241	**Roccafluvione,**	0.28	29	⇓P	Pg	18 11 19.4	+0.9

ROM 13 18:12:02.1±0.1, 42°.514N±0°.004×13°.365E±0°.005, h11km, ML1.6/17, 10C-6D, Error ellipse: s-maj=0.4km s-min=0.4km az=189.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	**Campotosto**	0.04	56	⇑P	Pg	18 12 04.6	+0.2
CAMP				S	Sg	18 12 05.9	-0.1
CAMP				AML	AML		
	comp=N,1340µm,0.3s						
CAMP				AML	AML		
	comp=E,718µm,0.3s						
T1247	**Pizzolo (AQ)**	0.09	215	⇑P	Pg	18 12 05.3	+0.6
T1247				S	Sg	18 12 07.5	+0.9
T1247				AML	AML		
	comp=N,940µm,0.6s						
T1247				AML	AML		
	comp=E,1455µm,0.3s						
RM33	**Pellescritta (**	0.11	268	P	Pg	18 12 05.4	+0.3
RM33				S	Sg	18 12 07.7	+0.4
RM33				AML	AML		
	comp=E,808µm,0.3s						
RM33				AML	AML		
	comp=N,626µm,0.3s						
RM33				AML	AML		
	comp=E,798µm,0.3s						
RM33				AML	AML		
	comp=N,646µm,0.3s						
RM33				AML	AML		
	comp=E,808µm,0.3s						
SMA1	**SAN MARTINO**	0.12	349	⇓P	Pg	18 12 05.5	+0.3
SMA1				S	Sg	18 12 08.4	+1.0
SMA1				AML	AML		
	comp=E,557µm,0.8s						
SMA1				AML	AML		
	comp=N,364µm,0.4s						
GIGS	**Gran Sasso**	0.16	113	⇓P	Pb	18 12 06.6	-0.7
GIGS				S	Sg	18 12 09.4	+0.9
GIGS				AML	AML		
	comp=N,56µm,1.4s						
GIGS				AML	AML		
	comp=N,56µm,0.6s						
GIGS				AML	AML		
	comp=E,76µm,0.4s						
TERO	**Teramo**	0.21	58	⇑P	Pg	18 12 07.1	+0.5
TERO				S	Sg	18 12 10.4	+0.8
TERO				AML	AML		
	comp=E,201µm,0.4s						
TERO				AML	AML		
	comp=N,231µm,1.0s						
TERO				AML	AML		
	comp=E,200µm,0.4s						
TERO				AML	AML		
	comp=N,231µm,1.0s						
TERO				AML	AML		
	comp=E,200µm,1.6s						
T1218	**Civita (PG)**	0.24	310	⇑P	Pg	18 12 07.5	+0.2
T1218				S	Sg	18 12 11.3	+0.6
T1218				AML	AML		
	comp=E,151µm,0.6s						
T1218				AML	AML		
	comp=N,316µm,0.4s						
T1218				AML	AML		
	comp=N,316µm,0.4s						
T1222	**Castel Sant'An**	0.27	245	P	Pg	18 12 08.0	+0.4
T1222				S	Sb	18 12 13.0	-0.6
T1222				AML	AML		
	comp=E,68µm,0.2s						
T1222				AML	AML		
	comp=N,66µm,0.3s						
T1222				AML	AML		
	comp=N,66µm,0.3s						
T1222				AML	AML		
	comp=E,68µm,0.3s						
T1214	**Arquata del Tr**	0.27	335	⇓P	Pg	18 12 08.3	+0.5
T1214				S	Sb	18 12 12.9	-1.0
FAGN	**Fagnano**	0.30	147	P	Pb	18 12 09.1	-0.4
FAGN				AML	AML		
	comp=N,205µm,0.3s						
FAGN				AML	AML		
	comp=E,258µm,0.3s						
FAGN				AML	AML		
	comp=E,258µm,1.7s						
T1212	**Cascia, Frazio**	0.34	315	⇑P	Pg	18 12 09.1	+0.2
T1212				S	Sg	18 12 14.1	+0.7
T1212				AML	AML		
	comp=E,123µm,1.2s						
T1212				AML	AML		
	comp=N,147µm,1.2s						
T1212				AML	AML		
	comp=N,148µm,1.2s						
T1212				AML	AML		
	comp=E,123µm,0.8s						
T1212				AML	AML		
	comp=N,148µm,0.8s						
T1241	**Roccafluvione,**	0.35	8	⇑P	Pg	18 12 09.4	+0.3
T1241				S	Sb	18 12 15.4	-0.5
T1241				AML	AML		
	comp=N,57µm,0.7s						
T1241				AML	AML		
	comp=E,57µm,1.4s						
T1241				AML	AML		
	comp=N,57µm,0.7s						
T1241				AML	AML		
	comp=N,57µm,1.3s						
T1241				AML	AML		
	comp=E,57µm,0.6s						
T1245	**Castelsantange**	0.37	339	⇓P	Pg	18 12 10.1	+0.5
T1245				S	Sb	18 12 16.1	-0.5
T1245				AML	AML		
	comp=E,112µm,0.2s						
T1245				AML	AML		
	comp=N,111µm,1.0s						
T1245				AML	AML		
	comp=E,112µm,1.8s						
VCEL	**Villa Celiera**	0.37	109	S	Sb	18 12 18.1	+1.5
VCEL				AML	AML		
	comp=E,167µm,1.4s						
VCEL				AML	AML		
	comp=E,167µm,0.6s						
VCEL				AML	AML		
	comp=N,161µm,0.7s						
T1217	**Poggiodomo (PG**	0.38	302	P	Pg	18 12 09.8	+0.1
T1217				S	Sb	18 12 15.8	-1.0
MMO1	**Montemonaco**	0.39	356	S	Sg	18 12 14.9	-0.1
MC2	**Monte Cornacci**	0.42	342	P	Pg	18 12 10.9	+0.4
T0110	**Collepietro**	0.42	133	⇓P	Pb	18 12 11.5	-0.1
T0110				AML	AML		
	comp=E,94µm,0.8s						
T0110				AML	AML		
	comp=N,113µm,0.3s						
T0110				AML	AML		
	comp=N,113µm,0.3s						
T1216	**Preci, Frazion**	0.46	326	P	Pg	18 12 09.6	-1.5
T1215	**Vallo di Nera,**	0.47	308	P	Pg	18 12 11.2	-0.1
T1256	**Bolognola (MC)**	0.50	348	P	Pg	18 12 12.2	+0.2
T1219	**Muccia, Frazio**	0.60	334	⇑P	Pg	18 12 14.0	+0.1
T1219				S	Sb	18 12 22.9	-0.4
T1220	**Camerino, Fraz**	0.63	341	⇑P	Pg	18 12 14.6	+0.2
T1220				S	Sb	18 12 24.4	+0.3
T1220				AML	AML		
	comp=E,27500µm,1.6s						
T1220				AML	AML		
	comp=N,166µm,1.3s						
T1220				AML	AML		
	comp=N,166µm,0.7s						
T1220				AML	AML		
	comp=E,27500µm,1.6s						
MOMA	**Monte Martano**	0.65	297	⇑P	Pg	18 12 14.9	0.0
MOMA				AML	AML		
	comp=N,84µm,0.2s						
MOMA				AML	AML		
	comp=E,67µm,0.6s						
MOMA				AML	AML		
	comp=E,67µm,1.4s						
MOMA				AML	AML		
	comp=N,84µm,0.2s						
EL6	**Elcito**	0.84	347	P	Pg	18 12 18.2	-0.1
BADI	**Badiali**	1.29	321	⇑P	Pg	18 12 28.5	+1.5
SF01	**Poggio Pratacc**	1.36	283	⇓P	Pn	18 12 25.4	-1.8
COLB	**Campi Flegrei**	1.79	161	S	Sn	18 12 55.9	+0.2

WEL 13 18:41:47.5±0.5, 40°S±3°×17°7E±°, h15km±4km, M3.5/13, ML3.9/13, MLv3.5/13, Error ellipse: s-maj=0.0km s-min=0.0km az=138.0, confirmed, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRHZ	**Porangahau**	0.10	47	P	Pg	18 41 51.1	+0.3
PRHZ				S	Sg	18 41 54.5	+1.6
WPHZ	**Waipukurau**	0.28	343	P	Pb	18 41 54.2	0.0
WPHZ				S	Sb	18 42 00.0	+1.3
DVHZ	**Dannevirke**	0.29	276	P	Pb	18 41 54.1	-0.4
DVHZ				S	Sb	18 41 59.5	+0.4
PXZ	**Pawanui**	0.39	39	P	Pb	18 41 56.3	+0.3
PXZ				S	Sn	18 42 04.3	-1.3
BFZ	**Birch Farm**	0.42	213	P	Pb	18 41 56.4	-0.2
PRWZ	**Pori Road**	0.49	243	P	Pb	18 41 58.2	+0.3
PRWZ				S	Sn	18 42 06.7	-1.6
PNHZ	**Pukenui**	0.49	328	P	Pb	18 41 57.8	-0.1
PNHZ				S	Sb	18 42 06.4	+1.5
TSZ	**Takapari Road**	0.52	301	P	Pb	18 41 58.2	-0.2
TSZ				S	Sb	18 42 06.8	+1.0
KAHZ	**Kahuranaki**	0.59	25	P	Pb	18 41 59.9	+0.3
POWZ	**Post Office Ro**	0.60	264	P	Pb	18 41 59.7	+0.1
POWZ				S	Sn	18 42 09.9	-0.9
CPWZ	**Castlepoint**	0.63	204	P	Pb	18 42 00.3	+0.1
TIWZ	**Tintock**	0.67	228	P	Pb	18 42 00.8	-0.1
TIWZ				S	Sn	18 42 12.0	-0.8
CKHZ	**Cape Kidnapper**	0.79	31	P	Pb	18 42 03.3	+0.4
MRZ	**Mangatainoka R**	0.81	246	P	Pg	18 42 02.7	-0.5
MRZ				S	Sn	18 42 15.1	-1.0
MCHZ	**McNeill Hill**	0.89	8	P	Pg	18 42 04.8	0.0
KWHZ	**Kaweka Forest**	0.91	354	P	Pb	18 42 04.9	-0.1
BHHZ	**Black Hill Sta**	0.92	336	P	Pb	18 42 05.1	0.0
TMWZ	**Te Maipa**	0.92	213	P	Pb	18 42 03.7	-1.5
HOWZ	**Holdsworth Sta**	0.97	234	P	Pb	18 42 04.6	-1.3
MOVZ	**Moawhango**	1.11	326	P	Pb	18 42 08.3	-0.1
ARHZ	**Aropaoanui**	1.12	18	P	Pb	18 42 07.7	-0.9
MTW	**Mount Morrison**	1.15	224	P	Pn	18 42 06.6	-2.4
OGWZ	**Otaki Gorge**	1.15	245	P	Pn	18 42 07.6	-1.5
BKZ	**Black Stump Fm**	1.17	358	P	Pn	18 42 08.2	-1.1
WNVZ	**Wahianoa**	1.24	324	P	Pb	18 42 10.6	-0.1
TRWZ	**Traveller**	1.25	211	P	Pn	18 42 07.5	-2.9
NMHZ	**Naumai**	1.25	9	P	Pn	18 42 09.8	-0.7
MTVZ	**Mangateitei**	1.26	318	P	Pb	18 42 11.3	+0.4
TUVZ	**Tukino**	1.27	327	P	Pb	18 42 11.3	+0.2
WHVZ	**Whangaehu Hut**	1.28	325	P	Pb	18 42 11.3	-0.1
TRVZ	**Turoa**	1.29	323	P	Pb	18 42 11.4	-0.1
DRZ	**Dome Shelter**	1.30	324	P	Pg	18 42 12.8	+0.3

FWVZ	**Far West T-bar**	**1.32**	**324**	P	Pb	18 42 11.9	-0.2
WAZ	**Wanganui**	**1.33**	**295**	P	Pb	18 42 12.2	+0.1
SNVZ	**South Ngauruho**	**1.34**	**328**	P	Pb	18 42 12.2	-0.2
OTVZ	**Oturere**	**1.35**	**330**	P	Pb	18 42 12.7	+0.2
KIW	**Kapiti Island**	**1.35**	**246**	P	Pn	18 42 10.4	-1.5
ETVZ	**East Tongariro**	**1.36**	**331**	P	Pb	18 42 12.4	-0.3
CAW	**Cannon Point**	**1.36**	**235**	P	Pn	18 42 10.0	-2.0
NGZ	**Ngauruhoe**	**1.36**	**327**	P	Pn	18 42 12.4	+0.3
TMVZ	**Te Maari**	**1.38**	**332**	P	Pb	18 42 12.7	-0.3
PKVZ	**Pokaka**	**1.39**	**318**	P	Pb	18 42 13.2	0.0
NNVZ	**North Ngauruho**	**1.40**	**329**	P	Pn	18 42 12.9	+0.3
NTVZ	**North Tongarir**	**1.40**	**331**	P	Pn	18 42 13.0	+0.4
KRVZ	**Karewarewa**	**1.42**	**330**	P	Pb	18 42 13.9	+0.2
WTVZ	**West Tongariro**	**1.42**	**328**	P	Pb	18 42 13.8	+0.1
RITZ	**Rihia Road**	**1.45**	**338**	P	Pb	18 42 14.2	-0.1
RAHZ	**Arahi**	**1.47**	**17**	P	Pn	18 42 12.3	-1.2
MTHZ	**Maungataniwha**	**1.50**	**9**	P	Pn	18 42 12.6	-1.3
MRHZ	**Matea Rd**	**1.50**	**356**	P	Pn	18 42 14.1	+0.2
KATZ	**Kakaramea**	**1.51**	**334**	P	Pg	18 42 16.5	+0.1
TWVZ	**Taurewa**	**1.52**	**325**	P	Pb	18 42 15.0	-0.4
PLWZ	**Palliser**	**1.58**	**218**	P	Pn	18 42 11.7	-3.2
RATZ	**Rangitukua**	**1.58**	**338**	P	Pb	18 42 16.8	+0.4
SNGZ	**Shannon Statio**	**1.67**	**22**	P	Pn	18 42 14.7	-1.5
WHTZ	**Whakaora**	**1.72**	**345**	P	Pg	18 42 21.3	+0.7
ALRZ	**Allen Road**	**1.77**	**355**	P	Pg	18 42 22.3	+0.8
VRZ	**Vera Road**	**1.83**	**311**	P	Pn	18 42 19.5	+1.1
TCW	**Tory Channel**	**1.93**	**242**	P	Pn	18 42 17.5	-2.3
HSRZ	**Hossack Road**	**2.03**	**353**	P	Pg	18 42 25.9	-0.5
DUWZ	**D'Urville Isla**	**2.05**	**256**	P	Pn	18 42 21.0	-0.5
TARZ	**Mount Tarawera**	**2.09**	**359**	P	Pn	18 42 22.0	-0.1
URZ	**Urewera**	**2.12**	**12**	P	Pn	18 42 20.4	-1.9
MWZ	**Matawai**	**2.13**	**21**	P	Pn	18 42 20.4	-2.2
TLZ	**Tolley Road**	**2.15**	**338**	P	Pb	18 42 26.6	+0.5
NEZ	**North Egmont**	**2.16**	**299**	P	Pn	18 42 24.3	+1.3
KHEZ	**Kahui Hut**	**2.21**	**297**	P	Pb	18 42 27.2	+0.1
HIZ	**Hauiti**	**2.24**	**324**	P	Pb	18 42 26.6	-1.1
TUWZ	**Tuamarina**	**2.26**	**240**	P	Pn	18 42 21.5	-2.7
CMWZ	**Cape Campbell**	**2.26**	**230**	P	Pb	18 42 28.3	+0.3
PKE	**Pukeiti**	**2.28**	**299**	P	Pb	18 42 26.8	-1.5
NBEZ	**Newall Road No**	**2.32**	**296**	P	Pb	18 42 29.6	+0.6
BSWZ	**Blackbirch Sta**	**2.45**	**235**	P	Pn	18 42 24.0	-2.9
RUGZ	**Raukumara Rang**	**2.52**	**21**	P	Pn	18 42 25.9	-2.1
NNZ	**Nelson**	**2.56**	**249**	P	Pn	18 42 26.9	-1.5
HAZ	**Te Kaha**	**2.75**	**21**	P	Pn	18 42 29.2	-1.8
TKNZ	**Takaka Hill**	**2.81**	**254**	P	Pb	18 42 36.5	-1.0
WMGZ	**Waiomatatini S**	**2.90**	**31**	P	Pn	18 42 30.8	-2.3
MRNZ	**Matariki Terra**	**3.06**	**248**	P	Pn	18 42 33.9	-1.4
QRZ	**Quartz Range**	**3.10**	**260**	P	Pn	18 42 35.3	-0.5
THZ	**Tophouse**	**3.10**	**241**	P	Pn	18 42 32.9	-3.1
RPZ	**Rata Peaks**	**5.30**	**229**	P	Pn	18 43 11.0	+4.8
CTZ	**Chatham Island**	**6.12**	**126**	P	Pn	18 43 15.0	-2.3

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*ISK **13** 18:44:58.1, 38°.54N×44°.22E, h5^{km}, ML2.6/9*
*TEH **13** 18:44:59.6, 38°.59N×44°.27E, h6^{km}±105^{km}, ML2.5*
*DDA **13** 18:44:59.1±0.0, 38°.53N×44°.17E, h7^{km}±3^{km}, ML2.2*
ISC 13 18:44:58.9±1.2**, 38°.56N**±0°.03×**44°.24E**±0°.02**, h4**^{km}±12^{km}**,**
n26, σ0^{s}.70/32**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.22**	**299**	P	**Pg**	**18 45 03.2**	**0.0**
OZAP				S	**Sg**	**18 45 07.1**	**+1.0**
VANB	**Van**	**0.67**	**274**	Pg	**Pg**	**18 45 11.5**	**-0.2**
VMUR	**Van-Muradiye**	**0.68**	**310**	P	**Pg**	**18 45 12.0**	**+0.1**
VMUR				*i* AML	AML	18 45 27.0	
	comp=N,96nm,0.5s						
VMUR				*i* AML	AML	18 45 34.0	
	comp=E,123nm,1.0s						
MAKU	**Maku**	**0.87**	**23**	Pg	**Pg**	**18 45 15.0**	**-0.6**
MAKU				Sg	**Sg**	**18 45 27.4**	**+0.5**
GEVA	**Gevas**	**0.96**	**256**	P	**Pg**	**18 45 16.2**	**-1.1**
GEVA				S	**Sg**	**18 45 29.9**	**+0.3**
GEVA				*i* AML	AML	18 45 38.0	
	comp=E,86nm,0.4s						
GEVA				*i* AML	AML	18 45 39.0	
	comp=N,70nm,0.7s						
YOVA	**Hakkari_Yksek**	**0.97**	**178**	P	**Pb**	**18 45 17.9**	**-0.4**
YOVA				S	**Sn**	**18 45 34.4**	**+0.7**
YOVA				*i* AML	AML	18 45 43.0	
	comp=E,63nm,0.9s						
AKDM	**Akdamar-Van**	**1.01**	**257**	Pg	**Pg**	**18 45 18.3**	**0.0**
AKDM				Sg	**Sb**	**18 45 32.9**	**+0.1**
DYDN	**Diyadin**	**1.07**	**337**	P	**Pg**	**18 45 18.5**	**-1.0**
DYDN				*i* AML	AML	18 45 44.0	
	comp=E,43nm,0.5s						
DYDN				*i* AML	AML	18 45 47.0	
	comp=N,45nm,1.0s						
HAKT	**HAKKARI**	**1.08**	**203**	P	**Pg**	**18 45 18.9**	**-0.6**
HAKT				*i* AML	AML	18 45 43.0	
	comp=N,62nm,0.3s						
ISHB	**Shabestar**	**1.12**	**104**	Pg	**Pg**	**18 45 19.3**	**-1.0**
IMRD	**Marand**	**1.16**	**82**	Pg	**Pg**	**18 45 20.8**	**-0.3**
ADCV	**BITLIS_Adilcev**	**1.21**	**282**	P	**Pg**	**18 45 20.8**	**-1.3**
IGDI	**IGDIR**	**1.32**	**355**	P	**Pn**	**18 45 22.6**	**-1.5**
IGDI				*i* AML	AML	18 45 46.0	
	comp=E,38nm,0.9s						
CUKT	**Cukurca**	**1.40**	**201**	Pn	**Pb**	**18 45 25.3**	**-0.3**
CUKT	**Cukurca**	**1.40**	**201**	P	**Pb**	**18 45 25.3**	**-0.3**
CUKT				*i* AML	AML	18 45 57.0	
	comp=N,62nm,0.7s						
CUKT				*i* AML	AML	18 46 04.0	
	comp=E,78nm,0.6s						
AGRB	**Hanur-Agry**	**1.41**	**317**	Pn	**Pg**	**18 45 25.8**	**0.0**
TASB	**TASBURUN-IGDIR**	**1.43**	**0**	Pn	**Pb**	**18 45 26.0**	**-0.1**
MLAZ	**Malazgirt-MUS**	**1.44**	**294**	Pn	**Pb**	**18 45 26.2**	**-0.2**
PERV	**Siirt/Pervari-**	**1.47**	**246**	P	**Pn**	**18 45 26.2**	**-0.1**
ITBZ	**Tabriz**	**1.54**	**102**	Pg	**Pn**	**18 45 27.5**	**+0.3**
IAZR	**Azarshahr**	**1.63**	**122**	Pg	**Pg**	**18 45 30.8**	**+0.7**
GNI	**Garni**	**1.64**	**14**	Pn	**Pb**	**18 45 29.6**	**-0.1**
GNI				Sn	**Sg**	**18 45 52.3**	**+0.8**
GURO	**Guroymak-BITLI**	**1.73**	**271**	Pn	**Pb**	**18 45 30.4**	**-0.8**
IHRS	**Heris**	**2.22**	**95**	Pn	**Pb**	**18 45 39.2**	**-0.4**
KOPR	**Koprukoy-ERZUR**	**2.34**	**309**	Pn	**Pn**	**18 45 39.0**	**+0.7**
SENK	**Senkaya-Erzuru**	**2.48**	**325**	Pn	**Pn**	**18 45 41.0**	**+0.8**

ROM 13 18:46:10.3±0.1**, 42°.534N**±0°.004×**13°.308E**±0°.005**,**
h11^{km}**, ML1.3**/5**, 5C-1D, Error ellipse: s-maj=0.5km**
s-min=0.4km az=218.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.07**	**250**	⇑P	Pg	18 46 13.2	+0.3
RM33				S	Sg	18 46 14.7	0.0
RM33				AML	AML		
	comp=E,210µm,1.3s						
RM33				AML	AML		
	comp=N,214µm,0.1s						
RM33				AML	AML		
	comp=N,214µm,0.1s						
RM33				AML	AML		
	comp=E,210µm,0.7s						
T1247	**Pizzolo (AQ)**	**0.09**	**184**	P	Pg	18 46 13.6	+0.6
T1247				S	Sg	18 46 15.5	+0.5
T1247				AML	AML		
	comp=N,448µm,0.3s						
T1247				AML	AML		
	comp=E,262µm,1.0s						
T1247				AML	AML		
	comp=E,262µm,1.0s						
SMA1	**SAN MARTINO**	**0.10**	**12**	⇓P	Pg	18 46 13.7	+0.5
SMA1				S	Sg	18 46 15.6	+0.4
SMA1				AML	AML		
	comp=E,800µm,0.2s						
SMA1				AML	AML		
	comp=N,516µm,0.5s						
T1218	**Civita (PG)**	**0.20**	**314**	⇑P	Pg	18 46 15.0	+0.4
T1218				S	Sg	18 46 18.4	+0.7
GIGS	**Gran Sasso**	**0.21**	**113**	P	Pg	18 46 15.3	+0.5
GIGS				S	Sg	18 46 18.7	+0.7
TERO	**Teramo**	**0.24**	**68**	⇑P	Pg	18 46 15.7	+0.4
TERO				S	Sg	18 46 19.3	+0.7
TERO				AML	AML		
	comp=E,49µm,1.4s						
TERO				AML	AML		
	comp=N,65µm,1.3s						
T1214	**Arquata del Tr**	**0.24**	**342**	S	Sg	18 46 18.0	-0.8
T1212	**Cascia, Frazio**	**0.29**	**318**	⇑P	Pg	18 46 16.6	+0.3
T1212				S	Sg	18 46 21.1	+0.8
T1217	**Poggiodomo (PG**	**0.33**	**303**	P	Pg	18 46 17.5	+0.5
T1217				S	Sb	18 46 22.5	-1.1
T1241	**Roccafluvione,**	**0.34**	**16**	P	Pb	18 46 17.9	-0.4
T1241				S	Sb	18 46 22.9	-0.8
MMO1	**Montemonaco**	**0.37**	**2**	P	Pg	18 46 18.2	+0.5
T1215	**Vallo di Nera,**	**0.42**	**310**	⇑P	Pg	18 46 18.8	+0.2
T0110	**Collepietro**	**0.47**	**131**	S	Sb	18 46 28.2	+0.7

ROM 13 18:46:46.6±0.1**, 43°.062N**±0°.004×**13°.069E**±0°.006**,**
h9^{km}**, ML1.1**/4**, 1C-9D, Error ellipse: s-maj=0.5km**
s-min=0.3km az=51.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.03**	**152**	P	Pg	18 46 48.5	+0.1
FDMO				S	Sg	18 46 49.5	-0.1
FDMO				AML	AML		
	comp=N,507µm,0.1s						
FDMO				AML	AML		
	comp=E,418µm,0.8s						
T1220	**Camerino, Fraz**	**0.05**	**17**	⇓P	Pg	18 46 48.9	+0.3
T1220				S	Sg	18 46 50.4	+0.4
T1220				AML	AML		
	comp=E,1084µm,0.2s						
T1220				AML	AML		
	comp=N,1006µm,0.2s						
T1220				AML	AML		
	comp=E,1084µm,0.2s						
T1220				AML	AML		
	comp=N,1006µm,0.2s						
T1256	**Bolognola (MC)**	**0.13**	**116**	⇑P	Pg	18 46 50.2	+0.5
T1256				S	Sg	18 46 52.7	+0.9
CESI	**CESI - Serrava**	**0.13**	**245**	P	Pg	18 46 50.4	+0.8
CESI				AML	AML		
	comp=E,52µm,0.1s						
CESI				AML	AML		
	comp=N,55µm,0.1s						
CESI				AML	AML		
	comp=E,52µm,1.9s						
MC2	**Monte Cornacci**	**0.17**	**149**	P	Pg	18 46 51.2	+0.8
MC2				S	Sg	18 46 54.4	+1.3
SNTG	**Esanatoglia**	**0.21**	**334**	⇓P	Pg	18 46 51.8	+0.7
SNTG				S	Sg	18 46 55.4	+1.3
T1245	**Castelsantange**	**0.22**	**157**	⇓P	Pg	18 46 52.0	+0.7
T1245				S	Sg	18 46 56.0	+1.6
T1245				AML	AML		
	comp=E,47µm,0.7s						
T1245				AML	AML		
	comp=N,75µm,0.5s						
MMO1	**Montemonaco**	**0.25**	**131**	P	Pg	18 46 52.3	+0.6
MMO1				S	Sg	18 46 56.4	+1.3
EL6	**Elcito**	**0.27**	**5**	⇓P	Pg	18 46 52.7	+0.7
T1215	**Vallo di Nera,**	**0.30**	**210**	⇓P	Pg	18 46 53.3	+0.7
T1215				S	Sb	18 46 58.1	-1.1
T1212	**Cascia, Frazio**	**0.31**	**183**	⇓P	Pg	18 46 53.5	+0.7
T1212				S	Sb	18 46 58.6	-1.0
T1214	**Arquata del Tr**	**0.32**	**161**	⇓P	Pg	18 46 53.7	+0.7
T1214				S	Sb	18 46 59.1	-0.8
T1241	**Roccafluvione,**	**0.34**	**128**	P	Pg	18 46 53.9	+0.6
T1241				S	Sb	18 46 59.4	-0.9
T1218	**Civita (PG)**	**0.39**	**175**	⇓P	Pg	18 46 54.9	+0.5
T1218				S	Sb	18 47 01.2	-0.8
T1218				AML	AML		
	comp=E,39µm,1.4s						
T1218				AML	AML		
	comp=N,42µm,0.2s						
T1218				AML	AML		
	comp=E,39µm,0.6s						
CDCA	**Citt' di Caste**	**0.73**	**303**	S	Sg	18 47 10.0	-0.2
RMP	**Rome, Mte Porz**	**1.28**	**192**	⇓P	Pn	18 47 10.5	-0.2
RMP				AML	AML		
	comp=E,294µm,0.3s						
RMP				AML	AML		
	comp=N,388µm,0.1s						

ROM 13 18:51:50.0±0.0**, 42°.766N**±0°.002×**13°.064E**±0°.003**,**
h11^{km}**, ML1.1**/7**, 7C-2D, Error ellipse: s-maj=0.2km**
s-min=0.2km az=264.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.02**	**225**	⇓P	Pg	18 51 52.3	+0.3
T1212				S	Sg	18 51 53.5	0.0
T1212				AML	AML		
	comp=E,268µm,0.4s						
T1212				AML	AML		
	comp=N,336µm,0.2s						
T1212				AML	AML		
	comp=N,306µm,0.2s						
T1218	**Civita (PG)**	**0.10**	**159**	P	Pg	18 51 53.3	+0.4
T1218				S	Sg	18 51 55.4	+0.5
T1218				AML	AML		
	comp=E,122µm,0.2s						
T1218				AML	AML		
	comp=N,216µm,0.4s						
T1218				AML	AML		
	comp=E,120µm,0.2s						
T1218				AML	AML		
	comp=N,219µm,0.3s						
T1214	**Arquata del Tr**	**0.11**	**94**	⇓P	Pg	18 51 53.4	+0.4
T1214				S	Sg	18 51 55.5	+0.5
T1214				AML	AML		
	comp=E,114µm,0.2s						
T1217	**Poggiodomo (PG**	**0.11**	**241**	⇑P	Pg	18 51 53.4	+0.5
T1217				S	Sg	18 51 55.7	+0.7
T1245	**Castelsantange**	**0.13**	**45**	⇑P	Pg	18 51 53.7	+0.4
T1245				S	Sg	18 51 56.1	+0.5
T1245				AML	AML		
	comp=E,137µm,0.7s						
T1245				AML	AML		
	comp=N,258µm,0.7s						
T1216	**Preci, Frazion**	**0.13**	**345**	⇑P	Pg	18 51 53.6	+0.5
T1216				S	Sg	18 51 56.1	+0.7
T1216				AML	AML		
	comp=E,62µm,0.1s						
T1216				AML	AML		
	comp=N,65µm,0.7s						
T1215	**Vallo di Nera,**	**0.15**	**284**	⇑P	Pg	18 51 54.0	+0.6
T1215				S	Sg	18 51 56.6	+0.8
MC2	**Monte Cornacci**	**0.17**	**32**	⇑P	Pg	18 51 54.5	+0.5
MC2				S	Sg	18 51 57.7	+0.9
MMO1	**Montemonaco**	**0.23**	**55**	P	Pg	18 51 55.4	+0.4
MMO1				S	Sg	18 51 59.3	+1.0
FDMO	**Fiordimonte**	**0.27**	**4**	⇑P	Pg	18 51 56.0	+0.4
FDMO				S	Sb	18 52 00.5	-1.1
FDMO				AML	AML		
	comp=E,15µm,0.0s						
FDMO				AML	AML		
	comp=N,20µm,0.0s						
RM33	**Pellescritta (**	**0.28**	**157**	P	Pg	18 51 56.3	+0.5
RM33				S	Sb	18 52 00.8	-1.1
T1220	**Camerino, Fraz**	**0.34**	**3**	P	Pg	18 51 57.2	+0.3
T1220				S	Sb	18 52 03.1	-0.6
TERO	**Teramo**	**0.42**	**110**	P	Pg	18 51 58.5	+0.2
TERO				S	Sb	18 52 05.0	-1.0
TERO				AML	AML		
	comp=N,13µm,0.1s						
ARVD	**Arcevia**	**0.74**	**353**	S	Sg	18 52 14.2	+0.3
ATPI	**Pietralunga -**	**0.84**	**325**	⇑P	Pg	18 52 04.9	-1.2
APEC	**Apecchio**	**0.92**	**329**	P	Pn	18 52 09.1	+0.1

ROM 13 18:52:44.6±0.1**, 42°.764N**±0°.006×**13°.057E**±0°.006**,**
h11^{km}**, ML1.7**/16**, 5C-6D, Error ellipse: s-maj=0.6km**
s-min=0.5km az=349.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.01**	**217**	AML	AML		
	comp=N,1905µm,0.2s						
T1212				AML	AML		
	comp=E,1130µm,0.4s						
T1212				AML	AML		
	comp=E,1120µm,0.4s						
T1212				AML	AML		
	comp=N,1930µm,0.2s						
T1212				AML	AML		
	comp=E,1115µm,0.4s						
T1212				AML	AML		
	comp=N,1925µm,0.2s						
T1212				AML	AML		
	comp=E,1135µm,0.4s						
T1218	**Civita (PG)**	**0.10**	**155**	AML	AML		
	comp=N,1365µm,0.4s						
T1218				AML	AML		
	comp=E,858µm,0.2s						
T1218				AML	AML		
	comp=N,1360µm,0.4s						
T1218				AML	AML		
	comp=E,841µm,0.2s						
T1218				AML	AML		
	comp=E,859µm,0.2s						
T1218				AML	AML		
	comp=E,841µm,0.2s						
T1218				AML	AML		
	comp=N,1360µm,0.4s						
T1217	**Poggiodomo (PG**	**0.11**	**241**	AML	AML		
	comp=N,212µm,0.6s						
T1217				AML	AML		
	comp=E,179µm,0.8s						
T1217				AML	AML		
	comp=E,179µm,1.2s						
T1214	**Arquata del Tr**	**0.11**	**92**	⇓P	Pg	18 52 47.9	+0.3
T1214				S	Sg	18 52 50.1	+0.4
T1214				AML	AML		
	comp=N,1024µm,0.1s						
T1214				AML	AML		
	comp=E,1035µm,0.2s						
T1214				AML	AML		
	comp=N,978µm,0.1s						
T1214				AML	AML		
	comp=E,1080µm,0.2s						
T1216	**Preci, Frazion**	**0.13**	**348**	⇑P	Pg	18 52 48.2	+0.4
T1216				S	Sg	18 52 50.7	+0.7
T1216				AML	AML		
	comp=E,268µm,0.6s						
T1216				AML	AML		
	comp=N,338µm,0.2s						
T1216				AML	AML		
	comp=N,337µm,0.2s						
T1216				AML	AML		
	comp=E,268µm,1.4s						
T1245	**Castelsantange**	**0.13**	**46**	AML	AML		
	comp=N,1208µm,0.7s						
T1245				AML	AML		
	comp=E,1066µm,0.2s						
T1245				AML	AML		
	comp=N,1435µm,0.7s						
T1245				AML	AML		
	comp=E,884µm,0.7s						
T1215	**Vallo di Nera,**	**0.14**	**285**	P	Pg	18 52 48.5	+0.6
T1215				S	Sg	18 52 51.3	+0.9
T1215				AML	AML		
	comp=E,146µm,0.2s						
T1215				AML	AML		
	comp=N,125µm,0.9s						
MC2	**Monte Cornacci**	**0.18**	**33**	⇓P	Pg	18 52 49.0	+0.4
MC2				S	Sg	18 52 53.2	+1.7
MMO1	**Montemonaco**	**0.24**	**56**	⇑P	Pg	18 52 47.9	-1.7
SMA1	**SAN MARTINO**	**0.24**	**123**	P	Pg	18 52 50.3	+0.6
SMA1				S	Sg	18 52 54.5	+1.4
SMA1				AML	AML		
	comp=E,128µm,1.2s						
SMA1				AML	AML		
	comp=N,144µm,0.8s						
SMA1				AML	AML		
	comp=E,128µm,0.8s						
T1256	**Bolognola (MC)**	**0.27**	**27**	⇑P	Pg	18 52 50.6	+0.3
T1256				AML	AML		
	comp=N,62µm,0.4s						
T1256				AML	AML		
	comp=E,93µm,0.4s						
T1256				AML	AML		
	comp=N,62µm,0.4s						
T1256				AML	AML		
	comp=N,62µm,1.6s						
FDMO	**Fiordimonte**	**0.27**	**5**	⇑P	Pg	18 52 50.6	+0.4
FDMO				AML	AML		
	comp=E,87µm,0.3s						
FDMO				AML	AML		
	comp=N,116µm,0.9s						
T1211	**Morro Reatino**	**0.28**	**213**	AML	AML		
	comp=N,157µm,1.4s						
T1211				AML	AML		
	comp=E,150µm,0.6s						
T1211				AML	AML		
	comp=E,150µm,1.4s						
T1211				AML	AML		
	comp=N,157µm,0.6s						
RM33	**Pellescritta (**	**0.28**	**155**	AML	AML		
	comp=E,746µm,1.6s						
RM33				AML	AML		
	comp=N,688µm,1.1s						
RM33				AML	AML		
	comp=E,746µm,1.6s						
RM33				AML	AML		
	comp=E,746µm,0.4s						
RM33				AML	AML		
	comp=N,687µm,1.1s						
ARRO	**Arrone**	**0.28**	**229**	S	Sg	18 52 51.0	-3.2
ARRO				AML	AML		
	comp=E,64µm,0.2s						
ARRO				AML	AML		
	comp=N,57µm,0.2s						
T1241	**Roccafluvione,**	**0.29**	**71**	⇑P	Pg	18 52 50.8	+0.3
T1241				S	Sg	18 52 55.6	+1.1
T1241				AML	AML		
	comp=N,196µm,0.3s						
T1241				AML	AML		
	comp=E,210µm,1.3s						
T1219	**Muccia, Frazio**	**0.29**	**353**	P	Pg	18 52 50.9	+0.3
T1220	**Camerino, Fraz**	**0.35**	**4**	⇓P	Pg	18 52 52.0	+0.4
T1220				AML	AML		
	comp=N,242µm,0.3s						
T1220				AML	AML		
	comp=E,252µm,0.3s						
T1220				AML	AML		
	comp=N,218µm,1.2s						
T1220				AML	AML		
	comp=E,11475µm,1.6s						
T1220				AML	AML		
	comp=N,242µm,1.7s						
T1220				AML	AML		
	comp=N,218µm,0.8s						
GUMA	**Gualdo di Mace**	**0.36**	**34**	⇓P	Pb	18 52 52.5	-0.6
GUMA				AML	AML		
	comp=E,138µm,0.4s						
GUMA				AML	AML		
	comp=N,127µm,0.5s						
GUMA				AML	AML		
	comp=N,127µm,1.5s						
TERO	**Teramo**	**0.43**	**109**	S	Sg	18 52 53.0	-5.7
TERO				AML	AML		
	comp=E,67µm,1.3s						
TERO				AML	AML		
	comp=N,96µm,0.1s						
TERO				AML	AML		
	comp=E,67µm,0.7s						
MNTP	**Montappone**	**0.48**	**39**	⇓P	Pn	18 52 56.8	-0.7
ARVD	**Arcevia**	**0.74**	**353**	⇓P	Pb	18 53 00.2	+0.7

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*IDC **13** 18:54:07.2±1.2, 35°.81N×141°.09E, h0^{km}, mb3.5/6,*
mbtmp3.6/10, ML3.5/3, MS2.8/2, Error ellipse:
s-maj=29.6km s-min=17.6km az=83.0
*JMA **13** 18:54:11.7±0.2, 35°.8N±0°.5×140°.9E±0°.9, h33^{km}±1^{km},*
MV3.8/34, NEAR CHOSHI CITY
JMA Felt II J1 at NEAR CHOSHI CITY .
*NIED **13** 18:54:11.7, 35°.84N×140°.92E, h33^{km}, MW3.9, Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm;
M_{rr}-3.87; $M_{\theta\theta}$-2.15; $M_{\phi\phi}$6.02; $M_{r\theta}$-1.75; $M_{\theta\phi}$0.20; $M_{\phi r}$-4.02;
Fault plane solution: $M_0$6.73000×10^{14} NP1:ϕ_s21.00000°,
δ68.00000°, λ-69.00000°. NP2:ϕ_s155.00000°, δ30.00000°,
λ-132.00000°.
ISC 13 18:54:11.6±1.0**, 35°.85N**±0°.04×**141°.01E**±0°.06**, h28**^{km}±7^{km}**,**
n37, σ1^{s}.28/36**, mb3.5**/6**, 6D, Near east coast of eastern**
Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.19**	**221**	⇓P	**Pb**	**18 54 17.5**	**0.0**
CHOJ				⇓S	**Sb**	**18 54 21.5**	**0.0**
JIHU	**Itakohorinouch**	**0.41**	**287**	P	**Pb**	**18 54 20.4**	**-0.1**
JIHU				S	**Sb**	**18 54 26.8**	**+0.2**
JSMT	**Sammumatsuo**	**0.50**	**246**	P	**Pb**	**18 54 21.5**	**-0.5**
JSMT				S	**Sb**	**18 54 28.0**	**-1.0**
JHYU	**Hitachinakayam**	**0.60**	**325**	⇓P	**Pb**	**18 54 23.3**	**-0.3**
JHYU				⇓S	**Sb**	**18 54 31.4**	**-0.4**
JYT	**Yasato**	**0.76**	**300**	P	**Pn**	**18 54 24.7**	**-1.8**
JYT				S	**Sb**	**18 54 33.6**	**-2.8**

JHO	**Hitachi**	**0.84**	**335**	⇓*i*P	**Pn**	**18 54 26.6**	**-1.0**
JHO				⇓S	**Sb**	**18 54 37.2**	**-1.4**
BSO4	**Boso 4**	**1.02**	**213**	P	**Pb**	**18 54 30.5**	**0.0**
BSO3	**Boso 3**	**1.12**	**202**	P	**Pn**	**18 54 30.8**	**-0.4**
JMM	**Marumori**	**2.02**	**355**	P	**Pn**	**18 54 44.1**	**+0.3**
MJAR	**Matsushiro Arr**	**2.37**	**288**	Pn	**Pn**	**18 54 48.0**	**-0.6**
	2.1nm,0.3s,baz=92,slow=8.6,SNR=114						
MJAR				Sn	**Sn**	**18 55 15.9**	**-0.9**
	1.9nm,0.3s,baz=97,slow=17,SNR=3.4						
MJAR				LR	LR	18 55 50.7	
	comp=Z,208nm,18.4s,baz=49,slow=42						
	40nm,0.8s						
MAJO	**Matsushiro**	**2.37**	**288**	P	**Pn**	**18 54 48.6**	**-0.1**
JSG	**Sagara**	**2.59**	**244**	P	**Pb**	**18 54 56.9**	**-0.5**
JHJ	**Hachijo jima 2**	**2.90**	**201**	Pn	**Pn**	**18 54 56.1**	**+0.2**
	6.8nm,0.3s,baz=64,slow=18,SNR=2.3						
JHJ				Sn	**Sn**	**18 55 29.3**	**-0.7**
	13nm,0.3s,baz=76,slow=22,SNR=1.7						
	124nm,0.8s						
JGF	**Kuroka**	**2.98**	**266**	P	**Pn**	**18 54 59.4**	**+2.3**
JSD	**Sado**	**3.10**	**316**	P	**Pn**	**18 55 02.4**	**+3.7**
INU	**Inuyama**	**3.29**	**262**	P	**Pn**	**18 55 03.7**	**+2.4**
JTM	**Tenmabayashi**	**4.93**	**1**	P	**Pn**	**18 55 26.3**	**+2.5**
ERM	**Erimo**	**6.38**	**15**	P	**Pn**	**18 55 44.1**	**+0.4**
JEM	**Erimo**	**6.38**	**15**	P	**Pn**	**18 55 44.2**	**+0.5**
ASAJ	**Asahikawa**	**8.35**	**8**	Pn	**Pn**	**18 56 10.3**	**-0.4**
	1.8nm,0.3s,baz=214,slow=9.8,SNR=24						
ASAJ				Sn	**Sn**	**18 57 43.5**	**-0.5**
	0.1nm,0.3s,baz=332,slow=26,SNR=1.5						
	4.9nm,0.4s						
KSRS	**Korea Array**	**10.64**	**283**	LR	LR	19 00 36.0	
	comp=Z,49nm,21.7s,baz=115,slow=36						
USRK	**Ussuriysk Ar.**	**10.83**	**323**	Pn	**Pn**	**18 56 46.2**	**+1.5**
	1.8nm,1.0s,baz=149,slow=13,SNR=1.5						
H11N2	**WAKE ISLAND Hy**	**27.85**	**118**	T	T	19 29 04.3	
	baz=311,slow=75,SNR=35						
H11N1	**WAKE ISLAND Hy**	**27.85**	**118**	T	T	19 29 04.3	
	baz=311,slow=75,SNR=29						
H11N3	**WAKE ISLAND Hy**	**27.86**	**118**	T	T	19 29 03.5	
	baz=311,slow=75,SNR=36						
SONM	**Songino Array**	**28.20**	**306**	P	**P**	**19 00 02.2**	**+0.4**
	0.3nm,0.4s,baz=102,slow=8.6,SNR=5.1						
	0.3nm,0.4s						
H11S1	**WAKE ISLAND Hy**	**28.51**	**120**	T	T	19 29 52.0	
	baz=312,slow=75,SNR=58						
H11S3	**WAKE ISLAND Hy**	**28.51**	**121**	T	T	19 29 51.9	
	baz=312,slow=75,SNR=52						
H11S2	**WAKE ISLAND Hy**	**28.53**	**121**	T	T	19 29 53.1	
	baz=312,slow=75,SNR=43						
ZALV	**Zalesovo Beam**	**42.48**	**313**	P	**P**	**19 02 04.5**	**+0.5**
	0.8nm,0.6s,baz=112,slow=6.4,SNR=2.7						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**44.48**	**303**	P	**P**	**19 02 19.9**	**-0.4**
	0.6nm,0.7s,baz=89,slow=9.4,SNR=7.7						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**55.84**	**188**	P	**P**	**19 03 46.1**	**-0.5**
	0.6nm,0.8s,baz=2.0,slow=7.5,SNR=5.4						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**59.57**	**188**	P	**P**	**19 04 12.4**	**-0.3**
	0.3nm,0.8s,baz=359,slow=6.2,SNR=5.4						
	0.3nm,0.8s						
YKA	**Yellowknife Ar**	**65.00**	**30**	P	**P**	**19 04 48.5**	**-0.1**
	0.2nm,0.7s,baz=298,slow=5.5,SNR=3.7						
	0.2nm,0.7s						
H03N2	**Juan Fernandez**	**147.21**	**98**	T	T	21 58 24.1	
	baz=289,slow=76,SNR=4.5						
H03N3	**Juan Fernandez**	**147.22**	**98**	T	T	21 58 25.1	
	baz=289,slow=76,SNR=5.9						
H03N1	**Juan Fernandez**	**147.22**	**98**	T	T	21 58 24.4	
	baz=289,slow=76,SNR=5.9						

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*IDC **13** 19:24:52.4±4.1, 13.°96N×90.°83W, h0^{km}, mb3.4/3, mbtmp3.4/5, ML3.3/2, MS3.7/3, Error ellipse: s-maj=131.0km s-min=55.2km az=31.0*

*GCG **13** 19:25:05.6±0.6, 14.°16N×91.°34W, h50^{km}, MD4.0*

ISC 13 19:25:02.3±2.0**, 14.°0N**±0.°3×**91.°5W**±0.°1**, h61**^{km}**, n12, σ1**^{s}.**00**/10**, mb3.5**/3**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG3	**Santiaguito 3,**	**0.75**	**356**	*e*P	**Pn**	**19 25 18.6**	**+1.1**
FUG	**Fuego 3**	**0.81**	**53**	*e*P	**Pn**	**19 25 17.7**	**-0.5**
NBG	**Las Nubes**	**1.29**	**61**	*e*P	**Pn**	**19 25 25.3**	**+0.8**
CMIG	**Matias Romero**	**4.50**	**314**	Pn	**Pn**	**19 26 08.3**	**+0.3**
	0.9nm,0.3s,baz=138,slow=4.4,SNR=4.9						
CMIG				Sn	**Sn**	**19 26 57.5**	**-1.5**
	0.8nm,0.3s,baz=116,slow=16,SNR=1.6						
	2.8nm,0.4s						
TXAR	**Lajitas Array**	**18.99**	**326**	P	**Pn**	**19 29 20.9**	**+0.5**
	baz=139,slow=13,SNR=2.6						
	0.6nm,0.6s						
NVAR	**Mina Array Bea**	**34.00**	**321**	P	**P**	**19 31 41.8**	**+1.2**
	0.2nm,0.5s,baz=126,slow=9.1,SNR=2.5						
	0.2nm,0.5s						
NEW	**Newport**	**40.24**	**333**	LR	LR	19 52 37.7	
	comp=Z,77nm,18.7s,baz=40,slow=41						
SCHQ	**Schefferville**	**45.10**	**20**	LR	LR	19 54 49.7	
	comp=Z,88nm,18.2s,baz=84,slow=40						
YKA	**Yellowknife Ar**	**51.17**	**346**	P	**P**	**19 33 58.3**	**-0.8**
	0.2nm,0.4s,baz=151,slow=7.7,SNR=6.0						
	0.2nm,0.4s						
SFJD	**Kangerlussuaq**	**59.41**	**17**	LR	LR	20 00 50.6	
	comp=Z,84nm,18.1s,baz=128,slow=36						
ILAR	**Eielson Array**	**63.06**	**337**	P	**P**	**19 35 22.5**	**-0.5**
	0.5nm,0.8s,baz=113,slow=4.4,SNR=5.5						
	0.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**146.18**	**342**	PKPbc	**PKPdf**	**19 44 35.6**	**-0.1**
	0.6nm,0.7s,baz=5.8,slow=1.7,SNR=5.4						

JMA 13 19:29:03.8±0.4**, 25°N**±3°×**12°3E**±°**, h229**^{km}**, MV2.7**/9**, NW OFF ISHIGAKIJIMA IS, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKRS	**Kuro-shima**	**1.75**	**134**	*e*S	S	19 30 13.0	+0.7
JISG	**Ishigakijimahi**	**1.76**	**120**	S	S	19 30 12.2	-0.2
JIJ	**Ishigaki jima**	**1.76**	**128**	P	Pn	19 29 42.6	+0.3
JIJ				S	S	19 30 11.4	-1.0
JTJ	**Tarama**	**2.05**	**113**	*e*S	S	19 30 17.3	+0.1
JIRB	**Irabujima**	**2.39**	**105**	P	Pn	19 29 48.2	-0.2
JMJ2	**Miyako jima3**	**2.55**	**106**	P	Pn	19 29 50.5	+0.4

TAP 13 19:30:01.6, 24.°67N×121.°60E, h15^{km}**, ML0.9, A, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENTT	**Nioudou**	**0.04**	**228**	P	Pg	19 30 04.6	+0.2
	baz=220						
ENTT				S	Sg	19 30 06.7	+0.4
	baz=220						
TWE	**Neicheng**	**0.08**	**49**	*e*P	Pg	19 30 04.9	+0.2
	baz=57						
TWE				*e*S	Sg	19 30 07.8	+1.1
	baz=57						
FUSB	**Fushanzhiwuyua**	**0.09**	**352**	*e*P	Pg	19 30 05.2	+0.3
	baz=352						
FUSB				*e*S	Sg	19 30 07.8	+0.8
	baz=352						
NDS	**Dongshan**	**0.11**	**109**	*e*P	Pb	19 30 05.4	-0.1
	baz=109						
LATG	**Datong**	**0.15**	**207**	P	Pb	19 30 06.0	-0.3
	baz=208						
LATG				S	Sb	19 30 09.0	-0.3
	baz=208						
YHNB	**Yeheng**	**0.21**	**270**	*e*P	Pb	19 30 07.8	+0.6
	baz=270						
ENA	**Nanau**	**0.27**	**152**	*e*P	Pg	19 30 07.1	-0.3
	baz=151						

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*TIR **13** 19:56:30.9, 41.°79N×20.°88E, h10^{km}±3^{km}, Md2.8, Ml2.3*

*SKO **13** 19:56:32.4, 41.°74N×20.°95E, h19^{km}, ML2.2*

*BEO **13** 19:56:33.7±0.3, 41.°79N×20.°93E, h0^{km}, ML1.8/8*

ISC 13 19:56:31.9±1.1**, 41.°76N**±0.°02×**20.°90E**±0.°03**, h4**^{km}±10^{km}**, n19, σ1**^{s}.**23**/37**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.35**	**257**	P	**Pg**	**19 56 38.5**	**-0.1**
	baz=253						
PHP				S	**Sg**	**19 56 43.2**	**-0.1**
	baz=253						
SKO	**Skopje**	**0.46**	**63**	*e*Pg	**Pb**	**19 56 41.7**	**-0.8**
SKO				*e*Sg	**Sg**	**19 56 46.0**	**-0.6**
SKO	**Skopje**	**0.46**	**63**	*i* Pg	**Pb**	**19 56 41.6**	**-0.8**
SKO				*i* Sg	**Sg**	**19 56 47.3**	**+0.7**
SKO				*e*Lg	Lg	19 56 47.6	
	comp=E,7.1nm,0.2s						
OHR	**Ohrid**	**0.66**	**187**	*e*Pg	**Pg**	**19 56 45.4**	**+0.9**
OHR				*e*Sg	**Sb**	**19 56 55.9**	**+0.5**
OHR	**Ohrid**	**0.66**	**187**	*i* Pg	**Pg**	**19 56 45.3**	**+0.8**
OHR				*i* Sg	**Sb**	**19 56 56.3**	**+0.9**
OHR				*e*Lg	Lg	19 56 56.8	
	comp=N,111nm,0.4s						
BCI	**Bajram Curri**	**0.86**	**315**	P	**Pg**	**19 56 47.8**	**-0.6**
	baz=315						
BCI				S	**Sg**	**19 56 59.6**	**-0.1**
	baz=315						
BCI				AMP			
	comp=N,0.5nm,0.6s,baz=315						
STIP	**Stip**	**0.97**	**94**	*i* Pg	**Pn**	**19 56 54.2**	**+2.0**
STIP				*i* Sg	**Sn**	**19 57 09.0**	**+2.5**
STIP				*e*Lg	Lg	19 57 09.3	
	comp=N,6.3nm,0.3s						
FNA	**Florina**	**1.04**	**160**	P	**Pg**	**19 56 51.8**	**-0.1**
	baz=158						
FNA				S	**Sg**	**19 57 01.1**	**-4.3**
	baz=158						
FNA	**Florina**	**1.04**	**160**	*i* Pg	**Pg**	**19 56 51.8**	**-0.1**
FNA				*i* Sg	**Sn**	**19 57 07.7**	**-0.7**
PRVS	**Prvonek**	**1.15**	**49**	*e*Pg	**Pn**	**19 56 54.3**	**-0.5**
PRVS				*e*Sg	**Sn**	**19 57 09.2**	**-1.8**
ULC	**Ulcinj**	**1.25**	**280**	*i* Pg	**Pg**	**19 56 57.0**	**+1.2**
BARS	**Barje**	**1.25**	**33**	*e*Pg	**Pg**	**19 56 56.6**	**+0.7**
BARS				*e*Sg	**Sn**	**19 57 12.9**	**-0.6**
BARS	**Barje**	**1.25**	**33**	*i* Pg	**Pb**	**19 56 55.7**	**-0.4**
BARS				*i* Sg	**Sn**	**19 57 13.0**	**-0.6**
GRG	**Griva**	**1.39**	**125**	*i* Pg	**Pn**	**19 56 58.0**	**-0.1**
GRG				*i* Sg	**Sg**	**19 57 18.2**	**+1.7**
SELS	**Selova**	**1.46**	**6**	*e*Pg	**Pn**	**19 56 58.3**	**-0.8**
SELS				*e*Sg	**Sg**	**19 57 18.8**	**-0.1**
SJES	**Sjenica**	**1.65**	**336**	*e*Pg	**Pb**	**19 57 02.9**	**+0.1**
SJES				*e*Sg	**Sg**	**19 57 26.4**	**+1.7**
IVAS	**Ivanjica**	**1.89**	**343**	*e*Pg	**Pb**	**19 57 06.2**	**-0.8**
IVAS				*e*Sg	**Sg**	**19 57 32.9**	**+0.2**
VTS	**Vitosha**	**1.94**	**63**	*e*Pg	**Pb**	**19 57 08.0**	**+0.2**
VTS				*e*Sg	**Sg**	**19 57 32.5**	**-1.5**
BOVS	**Bovan**	**1.96**	**17**	*e*Pg	**Pb**	**19 57 08.1**	**-0.1**
BOVS				*e*Sg	**Sg**	**19 57 34.5**	**-0.4**

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*IDC **13** 20:03:56.3±1.4, 44.°95N×106.°72W, h0^{km}, mbtmp3.3/2, ML2.9/2, Error ellipse: s-maj=65.0km s-min=9.5km az=137.0*

*NEIC **13** 20:03:58.3±2.9, 45.°11N±0.°03×106.°86W±0.°07, h0^{km}±2^{km}, ML2.9/36, Error ellipse: s-maj=8.9km s-min=4.0km az=256.0*

ISC 13 20:03:54.5±0.9**, 45.°06N**±0.°04×**106.°77W**±0.°07**, h0**^{km}**, n25, σ1**^{s}.**81**/24**, Montana**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAO	**LASA Array**	**1.68**	**13**		**Pg**	**20 04 26.3**	**-0.3**
LAO				IAML		20 04 55.1	
	146nm,1.1s						
LAO				IAML		20 05 12.5	
	134nm,1.0s						
RLMT	**Red Lodge**	**1.77**	**273**		**Pb**	**20 04 26.7**	**-1.3**
RLMT				IAML		20 04 59.1	
	79nm,1.2s						
RSSD	**Black Hills**	**2.16**	**115**		**Pg**	**20 04 35.2**	**-0.7**
RSSD				IAML		20 05 07.6	
	71nm,0.8s						
RSSD				IAML		20 05 12.2	
	68nm,1.1s						
GCMT	**Greycliff**	**2.17**	**291**		**Pb**	**20 04 33.2**	**-1.5**
K22A	**Casper**	**2.41**	**176**		**Pg**	**20 04 39.8**	**-0.9**
K22A				IAML		20 05 14.0	
	comp=E,65nm,1.1s						
K22A				IAML		20 05 17.4	
	comp=N,78nm,0.9s						
YMP	**Mirror Lake Pl**	**2.43**	**264**		**Pb**	**20 04 37.4**	**-1.8**
H17A	**Grant Village**	**2.79**	**258**		**Pb**	**20 04 44.1**	**-1.3**
H17A				IAML		20 05 47.1	
	comp=N,32nm,1.4s						
YNR	**Norris Junctio**	**2.80**	**264**		**Pb**	**20 04 44.3**	**-1.2**
YNR				IAML		20 05 42.0	
	comp=N,32nm,1.4s						
YNM	**Yellowstone No**	**2.82**	**265**	Pn	**Pb**	**20 04 44.9**	**-0.8**
YNM				IAML		20 06 05.6	
	comp=N,52nm,0.1s						
YNM				IAML		20 06 11.8	
	comp=E,56nm,0.2s						
FLWY	**Flagg Ranch**	**2.97**	**252**		**Pb**	**20 04 47.6**	**-0.8**
FLWY				IAML		20 06 07.0	
	comp=E,37nm,2.1s						
YMR	**Madison River**	**3.01**	**264**		**Pb**	**20 04 47.5**	**-1.6**
YMR				IAML		20 05 54.7	
	comp=E,48nm,1.1s						
BW06	**Boulder Array**	**3.05**	**222**		**Pb**	**20 04 48.1**	**-1.6**
PD31	**Pinedale Array**	**3.05**	**222**		**Pb**	**20 04 47.8**	**-1.9**
PDAR	**Pinedale Array**	**3.05**	**222**	Pn	**Pb**	**20 04 48.1**	**-1.6**
	comp=E,1.4nm,0.3s,baz=52,slow=17,SNR=25						
PDAR				Lg	Lg	20 05 29.8	
	comp=E,2.1nm,0.3s,baz=47,slow=24,SNR=11						
	comp=E,1.4nm,0.3s						
PDAR	**Pinedale Array**	**3.05**	**222**		**Pb**	**20 04 47.5**	**-2.2**
MOOW	**Moose Ponds**	**3.13**	**247**		**Pb**	**20 04 49.6**	**-1.6**
IMW	**Indian Meadow**	**3.20**	**250**		**Pb**	**20 04 49.7**	**-2.7**
IMW				IAML		20 05 46.9	
	comp=E,18nm,0.7s						
IMW				IAML		20 05 49.2	
	comp=E,21nm,1.3s						
FXWY	**Fox Creek**	**3.37**	**247**		**Pb**	**20 04 52.3**	**-2.9**
REDW	**Red Top Meadow**	**3.39**	**241**		**Pn**	**20 04 51.1**	**+2.3**
REDW				IAML		20 05 51.5	
	comp=E,28nm,4.6s						
REDW				IAML		20 05 53.4	
	comp=E,26nm,4.0s						
EGMT	**Eagleton**	**3.62**	**326**		**Pn**	**20 04 53.2**	**+1.4**
N23A	**Red Feather La**	**4.20**	**171**		**Pg**	**20 05 15.1**	**+0.1**
N23A				IAML		20 06 17.4	
	comp=E,18nm,1.4s						
RDMU	**Red Mountain**	**4.93**	**206**	Pn	**Pn**	**20 05 11.8**	**+1.7**
P18A	**Preston Nutter**	**6.00**	**207**		**Pn**	**20 05 28.2**	**+3.4**
I10CA	**LAC DU BONNET**	**8.89**	**51**	I	I	20 58 30.0	
	comp=E,0.1nm,1.1s,baz=234,slow=332,SNR=7.9						
ULM	**Lac du Bonnet**	**9.00**	**51**	Pn	**Pn**	**20 06 05.7**	**+0.1**
	comp=E,0.2nm,0.3s,baz=245,slow=10,SNR=3.8						
ULM				Lg	Lg	20 08 37.7	
	comp=E,0.3nm,0.3s,baz=134,slow=5.0,SNR=2.2						
	comp=E,4.7nm,1.1s						

WEL 13 20:06:05.7±0.6**, 42°S**±4°×**17°4E**±°**, h5**^{km}**, M2.2**/5**, ML2.4**/7**, MLv2.2**/5**, Error ellipse: s-maj=0.0km s-min=0.0km az=122.5, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHZ	**Kahutara**	**0.21**	**219**	P	Pg	20 06 09.8	0.0
KHZ				S	Sg	20 06 14.1	+1.3
BSWZ	**Blackbirch Sta**	**0.55**	**12**	P	Pg	20 06 16.0	-0.1
BSWZ				S	Sg	20 06 23.9	+0.7
CMWZ	**Cape Campbell**	**0.62**	**36**	P	Pg	20 06 18.2	+0.6
THZ	**Tophouse**	**0.78**	**308**	P	Pg	20 06 20.6	0.0
THZ				S	Sg	20 06 30.9	+0.2
TUWZ	**Tuamarina**	**0.84**	**12**	P	Pg	20 06 21.5	-0.2
TUWZ				S	Sb	20 06 34.0	-0.2
GVZ	**Greta Valley S**	**0.88**	**215**	P	Pb	20 06 23.0	-0.4
GVZ				S	Sb	20 06 35.0	-0.5
MRNZ	**Matariki Terra**	**1.11**	**319**	P	Pg	20 06 27.2	+0.1
MRNZ				S	Sn	20 06 43.9	+0.2
TCW	**Tory Channel**	**1.12**	**22**	P	Pg	20 06 26.2	-0.8
TCW				S	Sb	20 06 42.6	+0.3
LTZ	**Lake Taylor**	**1.20**	**243**	P	Pg	20 06 27.9	-0.7
LTZ				S	Sb	20 06 44.7	+0.1
DSZ	**Denniston Nort**	**1.52**	**289**	P	Pb	20 06 34.1	-0.1
DSZ				S	Sg	20 06 55.2	+0.9
CAW	**Cannon Point**	**1.52**	**42**	P	Pn	20 06 31.3	-2.2
CAW				S	Sn	20 06 51.5	-2.3
MQZ	**McQueen's Vall**	**1.65**	**208**	P	Pn	20 06 32.6	-2.8
MQZ				S	Sn	20 06 53.5	-3.4
QRZ	**Quartz Range**	**1.68**	**327**	P	Pn	20 06 35.6	-0.2
QRZ				S	Sg	20 06 59.2	-0.4

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*NEIC **13** 20:12:00.8±1.7, 37.°16N±0.°06×70.°97E±0.°07, h82^{km}±7^{km}, mb4.0/5, Error ellipse: s-maj=9.5km s-min=7.6km az=157.0*

*NNC **13** 20:12:01.3±4.2, 37.°56N×70.°79E, h0^{km}, mb3.9, mpv3.3, Error ellipse: s-maj=44.2km s-min=23.1km az=149.0*

*IDC **13** 20:12:04.6±4.9, 37.°33N×71.°24E, h114^{km}±27^{km}, mb3.6/7, mbtmp3.9/14, MS3.4/2, Error ellipse: s-maj=55.6km s-min=21.8km az=154.0*

*SOME **13** 20:12:05.7, 38.°48N×73.°72E, h0^{km}*

ISC 13 20:11:58.1±0.7**, 36.°98N**±0.°06×**70.°98E**±0.°07**, h88**^{km}**, n65, σ2**^{s}.**11**/68**, mb3.9**/9**, 5C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**2.09**	**346**	Pn	**Pn**	**20 12 32.1**	**+0.6**
KBL	**Kabul**	**2.90**	**214**		Pn	20 12 47.9	+5.5
NIL	**Nilore**	**3.80**	**150**		Pn	20 12 59.3	+4.8
IUG	**Iuzhnay**	**5.22**	**352**	*e*Pg	Pn	20 13 32.6	+19
	10.0nm,0.2s						
IUG				*e*Lg	Lg	20 14 42.5	
	46nm,0.5s						
JMU	**Jammu**	**5.33**	**142**	*e*P	**Pn**	**20 13 18.1**	**+2.9**
JMU				*e*S	**Sn**	**20 14 15.2**	**-0.1**
AML	**Almayashu**	**5.56**	**21**	P	**Pn**	**20 13 19.5**	**+0.8**
	SNR=22						
AML	**Almayashu**	**5.56**	**21**	⇑P	**Pn**	**20 13 19.5**	**+0.8**
	0.4nm,0.3s						
AML				⇑S	**Sn**	**20 14 19.0**	**-2.4**
	2.8nm,0.7s						
THN	**Thein Dam**	**5.98**	**138**	*e*P	**Pn**	**20 13 26.8**	**+2.8**
THN				*e*S	**Sn**	**20 14 30.7**	**-0.3**
MRKS	**Merke**	**6.02**	**16**	*e*Pg	**Pn**	**20 13 25.4**	**+0.8**
	5.5nm,0.2s						
MRKS				*e*Lg	Lg	20 14 28.7	
	14nm,0.1s						
EKS2	**Erkin-Say**	**6.07**	**20**	P	**Pn**	**20 13 27.0**	**+1.6**
	SNR=17						
KK31	**Karatay Array**	**6.13**	**357**		**Pn**	**20 13 26.7**	**+0.6**
KK31	**Karatay Array**	**6.13**	**357**	⇑P	**Pn**	**20 13 26.7**	**+0.6**
	2.0nm,0.2s,baz=174,slow=11,SNR=72						
KK31				⇑S	**Sn**	**20 14 31.7**	**-3.1**
	1.5nm,0.3s,baz=182,slow=22,SNR=5.4						
KKAR	**Karatay Array**	**6.13**	**357**		**Pn**	**20 13 26.4**	**+0.3**
KKAR	**Karatay Array**	**6.13**	**357**		**Pn**	**20 13 26.7**	**+0.6**
AAK	**Ala-Archa**	**6.27**	**24**	P	**Pn**	**20 13 29.7**	**+1.6**
	SNR=6.1						
AAK	**Ala-Archa**	**6.27**	**24**	P	**Pn**	**20 13 29.3**	**+1.2**
	2.3nm,0.3s,baz=181,slow=4.6,SNR=20						
AAK				S	**Sn**	**20 14 36.1**	**-2.2**
	1.7nm,0.3s,baz=64,slow=18,SNR=3.8						
AAK	**Ala-Archa**	**6.27**	**24**		**Pn**	**20 13 29.1**	**+1.0**
CHMS	**Chumysh**	**6.68**	**25**	P	**Pn**	**20 13 34.6**	**+1.1**
	SNR=8.4						
USP	**Ospenovka**	**6.84**	**22**	P	**Pn**	**20 13 36.1**	**+0.4**
	SNR=7.7						
TKM2	**Tokmak 2**	**6.92**	**29**	P	**Pn**	**20 13 38.0**	**+1.1**
	SNR=8.3						
TKM2	**Tokmak 2**	**6.92**	**29**	⇓P	**Pn**	**20 13 37.7**	**+0.8**
	2.9nm,0.5s						
TKM2				⇓S	**Sn**	**20 14 55.2**	**+1.0**
	3.9nm,0.8s						
TARG	**Taragay, Kyrgy**	**7.11**	**46**	Pn	**Pn**	**20 13 40.0**	**+0.3**
DGS	**Degeres**	**7.26**	**29**	*e*P	**Pn**	**20 13 40.4**	**-1.1**
DGS				*e*S	**Sn**	**20 14 56.3**	**-6.0**
	4.0nm,0.3s						
SMLA	**Simla**	**7.77**	**137**	*e*P	**Pn**	**20 13 49.3**	**+0.9**
SMLA				*e*S	**Sn**	**20 15 10.6**	**-4.1**
SMLA				IAML		20 15 15.6	
	comp=N,22nm,0.2s						
SMLA				IAML		20 15 16.7	
	comp=E,24nm,0.2s						
GEYT	**Alibeck**	**10.27**	**279**	P	Pn	20 14 31.4	+8.8
	comp=E,1.4nm,0.3s,baz=93,slow=9.0,SNR=9.4						
GEYT				S	**Sn**	**20 16 08.9**	**-6.9**
	comp=E,2.4nm,0.5s,baz=100,slow=21,SNR=4.6						
MK31	**Makanchi Array**	**12.92**	**37**	Pn	**Pn**	**20 14 57.0**	**-1.2**
MKAR	**Makanchi Array**	**12.92**	**37**	P	**Pn**	**20 14 57.7**	**-0.5**
	comp=E,0.3nm,0.6s,baz=226,slow=14,SNR=4.8						
MKAR	**Makanchi Array**	**12.92**	**37**	Pn	**Pn**	**20 14 57.2**	**-1.0**
PYUN	**Piuthan**	**13.44**	**128**	*e*P	**Pn**	**20 15 02.2**	**-3.2**
	comp=E,3.4nm,0.3s						
DANN	**Dangsing**	**13.77**	**125**	*e*P	**Pn**	**20 15 08.5**	**-1.2**
	comp=E,1.4nm,0.3s						
GKN	**Gorkha**	**14.58**	**124**	*e*P	**Pn**	**20 15 18.7**	**-1.4**
	comp=E,2.7nm,0.3s						
AB31	**Akbulak array**	**14.66**	**330**	P	**Pn**	**20 15 18.8**	**-2.1**
	comp=E,0.7nm,0.3s,baz=137,slow=13,SNR=55						
ABKAR	**Akbulak array**	**14.66**	**330**	Pn	**Pn**	**20 15 18.1**	**-2.8**
ABKAR	**Akbulak array**	**14.66**	**330**	Pn	**Pn**	**20 15 18.5**	**-2.4**
KURBB	**Kurchatov Arra**	**14.68**	**19**	P	**P**	**20 15 22.6**	**-2.3**
	comp=E,0.3nm,0.4s,baz=209,slow=10,SNR=8.1						
DMN	**Daman**	**15.15**	**124**	*e*P	**Pn**	**20 15 25.7**	**-1.8**
	comp=E,2.1nm,0.3s						
PKIN	**Phulchoki**	**15.36**	**123**	*e*P	**Pn**	**20 15 28.7**	**-1.5**
	comp=E,0.7nm,0.2s						
PKI	**Pulchoki**	**15.37**	**123**	*e*P	**Pn**	**20 15 28.7**	**-1.7**
GUN	**Gumba**	**15.47**	**121**	*e*P	**Pn**	**20 15 31.9**	**+0.2**
JIRN	**Jiri**	**15.84**	**122**	*e*P	**Pn**	**20 15 35.8**	**-0.6**
	comp=E,3.4nm,0.3s						
BVAR	**Borovoye Array**	**16.05**	**359**	P	**Pn**	**20 15 37.7**	**-0.8**
	comp=E,1.1nm,0.5s,baz=160,slow=8.9,SNR=7.3						
AKTO	**Aktyubinsk**	**16.36**	**329**	P	**P**	**20 15 45.7**	**+2.0**
	comp=E,5.6nm,0.4s,baz=139,slow=11,SNR=16						
AKTO	**Aktyubinsk**	**16.36**	**329**	⇑P	**P**	**20 15 45.0**	**+1.3**
	comp=E,3.0nm,0.5s						
RAMN	**Ramite**	**16.58**	**123**	*e*P	**Pn**	**20 15 41.9**	**-3.5**
TAPN	**Taplejung**	**17.09**	**119**	*e*P	**Pn**	**20 15 49.8**	**-1.9**
	comp=E,1.5nm,0.3s						
ZAA0	**Zalesovo Array**	**19.49**	**25**	P	**P**	**20 16 17.4**	**-0.5**
ZALV	**Zalesovo Beam**	**19.49**	**25**	P	**P**	**20 16 17.9**	**-0.1**
	comp=E,1.6nm,0.4s,baz=212,slow=9.9,SNR=13						
ZALV	**Zalesovo Beam**	**19.49**	**25**	P	**P**	**20 16 17.5**	**-0.4**
ARU	**Arti**	**21.18**	**341**	P	**P**	**20 16 37.7**	**+1.6**
	comp=E,2.0nm,0.4s,baz=154,slow=8.8,SNR=5.2						
	comp=E,2.0nm,0.4s						
ARU	**Arti**	**21.18**	**341**	P	**P**	**20 16 37.0**	**+1.0**
ARU				IAmb	IAmb	20 16 37.9	
	comp=Z,7.7nm,1.4s						
FINES	**FINESS Array B**	**37.08**	**326**	P	**P**	**20 19 01.5**	**+2.0**
	comp=Z,0.5nm,0.3s,baz=119,slow=8.2,SNR=9.5						
	comp=Z,0.5nm,0.3s						
FINES	**FINESS Array B**	**37.08**	**326**	P	**P**	**20 19 02.1**	**+2.7**
ARCES	**ARCESS Array B**	**40.70**	**337**	P	**P**	**20 19 31.6**	**+2.1**
	comp=Z,3.0nm,0.9s,baz=113,slow=8.9,SNR=1.9						
	comp=Z,3.0nm,0.9s						
HFS	**Hagfors**	**42.69**	**322**	P	**P**	**20 19 48.8**	**+3.0**
	comp=Z,1.3nm,0.8s,baz=92,slow=14,SNR=1.4						
	comp=Z,1.3nm,0.8s						
NOA	**NORSAR Array B**	**43.99**	**323**	P	**P**	**20 19 58.0**	**+1.6**
	comp=Z,1.0nm,0.9s,baz=99,slow=7.7,SNR=2.3						
	comp=Z,1.0nm,0.9s						
SPITS	**Spitsbergen Ar**	**47.03**	**347**	P	**P**	**20 20 22.6**	**+2.5**
	comp=Z,14nm,1.1s,baz=123,slow=10,SNR=2.1						
	comp=Z,14nm,1.1s						
JHJ	**Hachijo jima 2**	**55.34**	**72**	LR	LR	20 47 51.8	
	comp=Z,24nm,18.9s,baz=84,slow=39						
IMAR	**Indian Mountai**	**71.73**	**18**	P	**P**	**20 23 11.5**	**+1.3**
BMAR	**Burnt Mountain**	**72.48**	**14**	P	**P**	**20 23 16.8**	**+2.0**
K20K	**Telida**	**73.77**	**19**	P	**P**	**20 23 24.6**	**+2.2**
K20K				IAmb	IAmb	20 23 31.0	
	comp=Z,4.5nm,1.4s						
CAST	**Castle Rocks**	**74.24**	**19**	P	**P**	**20 23 27.1**	**+1.9**
CAST				IAmb	IAmb	20 23 51.5	
	comp=Z,2.9nm,1.3s						
PPLA	**Purkeypile**	**74.64**	**19**	P	**P**	**20 23 29.3**	**+1.6**
BCAR	**Beaver Creek A**	**76.91**	**15**	P	**P**	**20 23 42.8**	**+2.4**
YKA	**Yellowknife Ar**	**80.77**	**3**	P	**P**	**20 24 03.2**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=354,slow=5.4,SNR=5.9						
	comp=Z,0.2nm,0.3s						
NWAO	**Narrogin (SRO)**	**81.85**	**142**	LR	LR	20 58 11.8	
	comp=Z,24nm,20.3s,baz=230,slow=34						

IDC 13 20:16:40.4±49.0**, 22.°81S×173.°55W, h0**^{km}**, mb3.9**/3**, mbtmp3.9**/3**, Error ellipse: s-maj=928.7km s-min=180.5km az=87.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.62**	**247**	P	P	20 24 20.7	-1.6
	0.7nm,0.5s,baz=114,slow=10.0,SNR=3.9						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**48.06**	**258**	P	P	20 25 22.1	0.0
	0.6nm,0.3s,baz=94,slow=7.4,SNR=21						
	0.6nm,0.3s						
WRA	**Warramunga Arr**	**48.41**	**263**	P	P	20 25 25.5	+0.7

1.7nm,0.5s,baz=99,slow=7.0,SNR=27
1.7nm,0.5s

ROM 13 20:29:27.1±0.0**,43°.056N**±0°.003×**13°.075E**±0°.004**,**
h10^{km},ML0.7/7**,Error ellipse: s-maj=0.3km**
s-min=0.2km az=76.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDMO	Fiordimonte	0.02	156	P	Pg	20 29 29.3	+0.3
FDMO				S	Sg	20 29 30.4	0.0
FDMO				AML	AML		
	comp=N,53µm,0.1s						
FDMO				AML	AML		
	comp=E,54µm,0.2s						
FDMO				AML	AML		
	comp=N,53µm,0.1s						
T1220	Camerino, Fraz	0.06	11	P	Pg	20 29 29.6	+0.4
T1220				S	Sg	20 29 31.1	+0.3
T1220				AML	AML		
	comp=E,12565µm,1.6s						
T1220				AML	AML		
	comp=N,394µm,0.2s						
T1220				AML	AML		
	comp=N,378µm,0.2s						
T1220				AML	AML		
	comp=E,426µm,0.2s						
T1256	Bolognola (MC)	0.12	114	P	Pg	20 29 30.7	+0.5
T1256				S	Sg	20 29 33.2	+0.8
T1256				AML	AML		
	comp=N,40µm,0.3s						
CESI	CESI - Serrava	0.14	248	P	Pg	20 29 31.0	+0.7
CESI				S	Sg	20 29 33.5	+1.0
CESI				AML	AML		
	comp=E,33µm,1.0s						
CESI				AML	AML		
	comp=N,30µm,0.2s						
CESI				AML	AML		
	comp=E,33µm,1.0s						
T1216	Preci, Frazion	0.17	194	P	Pg	20 29 31.5	+0.7
T1216				S	Sg	20 29 34.3	+0.9
T1245	Castelsantange	0.22	157	P	Pg	20 29 32.2	+0.6
T1245				S	Sg	20 29 36.1	+1.4
T1245				AML	AML		
	comp=E,19µm,0.0s						
SNTG	Esanatoglia	0.22	334	P	Pg	20 29 32.2	+0.5
SNTG				S	Sg	20 29 36.0	+1.2
SNTG				AML	AML		
	comp=E,8µm,0.1s						
MMO1	Montemonaco	0.24	130	P	Pg	20 29 32.7	+0.6
MMO1				S	Sg	20 29 36.6	+1.1
EL6	Elcito	0.27	4	P	Pg	20 29 33.3	+0.6
EL6				S	Sb	20 29 37.8	-1.1
T1215	Vallo di Nera,	0.30	211	P	Pg	20 29 33.5	+0.4
T1215				S	Sg	20 29 38.1	+1.0
T1212	Cascia, Frazio	0.30	184	P	Pg	20 29 33.9	+0.6
T1212				S	Sb	20 29 38.8	-0.9
ASSB	Assisi San Ben	0.31	268	P	Pg	20 29 33.8	+0.5
ASSB				S	Sb	20 29 38.8	-0.9
ASSB				AML	AML		
	comp=E,21µm,0.5s						
ASSB				AML	AML		
	comp=N,27µm,1.3s						
ASSB				AML	AML		
	comp=N,27µm,0.7s						

ROM 13 20:30:06.8±0.1**,42°.783N**±0°.006×**13°.197E**±0°.009**,**
h8^{km},ML1.1/1**,2C-4D,Error ellipse: s-maj=0.6km**
s-min=0.6km az=174.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1214	Arquata del Tr	0.03	160	P	Pg	20 30 08.1	-0.4
T1214				S	Sg	20 30 09.1	-0.6
T1214				AML	AML		
	comp=E,412µm,0.3s						
T1214				AML	AML		
	comp=N,306µm,1.4s						
T1214				AML	AML		
	comp=E,194µm,0.4s						
T1214				AML	AML		
	comp=N,194µm,1.0s						
T1245	Castelsantange	0.07	355	P	Pg	20 30 09.1	+0.1
T1245				S	Sg	20 30 11.3	+0.7
T1245				AML	AML		
	comp=E,173µm,0.4s						
T1245				AML	AML		
	comp=N,220µm,1.3s						
T1245				AML	AML		
	comp=E,174µm,0.4s						
T1245				AML	AML		
	comp=N,220µm,1.3s						
T1245				AML	AML		
	comp=N,220µm,0.7s						
T1212	Cascia, Frazio	0.12	255	⇑P	Pg	20 30 09.8	+0.3
T1212				S	Sg	20 30 12.0	+0.6
T1218	Civita (PG)	0.13	208	⇓P	Pg	20 30 10.4	+0.8
T1218				S	Sg	20 30 13.2	+1.5
MMO1	Montemonaco	0.15	39	P	Pg	20 30 10.6	+0.6
MMO1				S	Sg	20 30 13.3	+1.0
SMA1	SAN MARTINO	0.18	146	⇑P	Pg	20 30 11.3	+0.7
T1215	Vallo di Nera,	0.24	275	⇓P	Pg	20 30 12.5	+0.8
T1215				S	Sg	20 30 16.3	+1.3
T1219	Muccia, Frazio	0.31	333	S	Sg	20 30 17.8	+0.8
T1219				AML	AML		
	comp=N,16µm,1.6s						
T1219				AML	AML		
	comp=N,16µm,0.4s						
T1219				AML	AML		
	comp=E,21µm,1.6s						
T1220	Camerino, Fraz	0.34	346	⇓P	Pg	20 30 13.9	+0.5
TERO	Teramo	0.34	118	⇓P	Pg	20 30 13.9	+0.4
TERO				S	Sb	20 30 20.0	-0.7
NDIM	Novi di Modena	2.68	322	AML	AML		
	comp=E,570µm,0.3s						
NDIM				AML	AML		
	comp=N,607µm,0.4s						
VENL	Venezia Lido	2.70	348	AML	AML		
	comp=E,1270µm,1.6s						
VENL				AML	AML		
	comp=E,1270µm,0.4s						
VENL				AML	AML		
	comp=N,1120µm,1.2s						
VENL				AML	AML		
	comp=N,1120µm,0.8s						

ROM 13 21:00:59.2±0.1**,42°.896N**±0°.002×**13°.143E**±0°.004**,**
h12^{km},ML1.1/5**,5C-2D,Error ellipse: s-maj=0.3km**
s-min=0.1km az=286.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MC2	Monte Cornacci	0.04	65	P	Pg	21 01 01.8	+0.1
MC2				S	Sg	21 01 03.6	+0.1
T1245	Castelsantange	0.05	140	P	Pg	21 01 01.8	+0.1
T1245				S	Sg	21 01 03.5	0.0
T1245				AML	AML		
	comp=N,232µm,0.1s						
T1245				AML	AML		
	comp=E,189µm,0.6s						
T1245				AML	AML		
	comp=E,189µm,1.4s						
T1216	Preci, Frazion	0.09	267	⇑P	Pg	21 01 02.3	+0.3
T1216				S	Sg	21 01 04.4	+0.4
T1216				AML	AML		
	comp=E,205µm,0.2s						
T1216				AML	AML		
	comp=E,206µm,0.2s						
T1216				AML	AML		
	comp=N,234µm,0.1s						
T1256	Bolognola (MC)	0.13	29	⇑P	Pg	21 01 02.8	+0.3
T1256				S	Sg	21 01 05.6	+0.7
MMO1	Montemonaco	0.14	89	P	Pg	21 01 02.8	+0.2
MMO1				S	Sg	21 01 05.3	+0.3
FDMO	Fiordimonte	0.15	344	P	Pg	21 01 03.1	+0.4
FDMO				S	Sg	21 01 05.9	+0.7
FDMO				AML	AML		
	comp=E,34µm,1.1s						
FDMO				AML	AML		
	comp=N,43µm,0.2s						
T1212	Cascia, Frazio	0.16	207	⇑P	Pg	21 01 03.4	+0.4
T1212				S	Sg	21 01 06.3	+0.7
T1212				AML	AML		
	comp=E,126µm,0.2s						
T1212				AML	AML		
	comp=N,194µm,0.2s						
T1219	Muccia, Frazio	0.19	328	P	Pg	21 01 03.7	+0.3
T1219				S	Sg	21 01 07.1	+0.8
T1241	Roccafluvione,	0.22	101	⇑P	Pg	21 01 04.1	+0.3
T1241				S	Sg	21 01 07.8	+0.8
T1241				AML	AML		
	comp=E,37µm,0.1s						
T1241				AML	AML		
	comp=N,58µm,0.3s						
T1241				AML	AML		
	comp=N,58µm,1.7s						
T1220	Camerino, Fraz	0.22	350	⇓P	Pg	21 01 04.4	+0.5
T1220				S	Sg	21 01 08.3	+1.2
T1215	Vallo di Nera,	0.22	245	⇑P	Pg	21 01 04.3	+0.4
T1215				S	Sg	21 01 08.3	+1.1
T1218	Civita (PG)	0.23	185	⇓P	Pg	21 01 04.3	+0.3
T1218				S	Sg	21 01 08.4	+1.0
T1217	Poggiodomo (PG	0.24	220	P	Pg	21 01 04.7	+0.4
T1217				S	Sg	21 01 09.1	+1.3
TERO	Teramo	0.44	129	P	Pg	21 01 08.1	+0.3
TERO				S	Sb	21 01 15.1	-0.2

ROM 13 21:01:37.7±0.0**,42°.917N**±0°.002×**13°.036E**±0°.003**,**
h11^{km},ML1.0/4**,Error ellipse: s-maj=0.2km**
s-min=0.2km az=85.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1216	Preci, Frazion	0.03	206	P	Pg	21 01 40.2	+0.4
T1216				S	Sg	21 01 41.5	+0.2
T1216				AML	AML		
	comp=E,340µm,0.4s						
T1216				AML	AML		
	comp=N,483µm,0.3s						
FDMO	Fiordimonte	0.12	17	P	Pg	21 01 41.4	+0.5
FDMO				S	Sg	21 01 43.7	+0.6
FDMO				AML	AML		
	comp=E,116µm,0.1s						
FDMO				AML	AML		
	comp=E,116µm,0.1s						
FDMO				AML	AML		
	comp=N,87µm,0.7s						
T1245	Castelsantange	0.13	118	P	Pg	21 01 41.5	+0.5
T1245				S	Sg	21 01 44.0	+0.7
T1245				AML	AML		
	comp=E,82µm,0.4s						
T1245				AML	AML		
	comp=N,103µm,0.2s						
T1219	Muccia, Frazio	0.14	351	P	Pg	21 01 41.6	+0.5
T1219				S	Sg	21 01 44.1	+0.6
T1256	Bolognola (MC)	0.17	57	P	Pg	21 01 42.1	+0.5
T1256				S	Sg	21 01 45.1	+0.8
T1212	Cascia, Frazio	0.17	178	P	Pg	21 01 42.1	+0.6
T1212				S	Sg	21 01 44.9	+0.8
T1215	Vallo di Nera,	0.17	227	P	Pg	21 01 42.2	+0.6
T1215				S	Sg	21 01 45.0	+0.9
T1215				AML	AML		
	comp=E,30µm,1.0s						
T1215				AML	AML		
	comp=N,40µm,1.6s						
T1215				AML	AML		
	comp=E,30µm,1.0s						
T1215				AML	AML		
	comp=N,40µm,1.6s						
T1220	Camerino, Fraz	0.20	11	P	Pg	21 01 42.6	+0.6
T1220				S	Sg	21 01 46.1	+1.2
T1214	Arquata del Tr	0.20	141	P	Pg	21 01 42.6	+0.5
T1214				S	Sg	21 01 46.0	+0.8
MMO1	Montemonaco	0.21	95	P	Pg	21 01 42.9	+0.6
MMO1				S	Sg	21 01 46.5	+1.0
T1217	Poggiodomo (PG	0.22	201	P	Pg	21 01 43.0	+0.6
T1217				S	Sg	21 01 46.8	+1.2
T1218	Civita (PG)	0.25	167	P	Pg	21 01 43.5	+0.5
T1218				S	Sg	21 01 47.6	+1.0
ASSB	Assisi San Ben	0.30	294	P	Pg	21 01 44.5	+0.6
ASSB				S	Sb	21 01 49.2	-1.1
SNTG	Esanatoglia	0.34	348	P	Pg	21 01 44.8	+0.1
SNTG				S	Sb	21 01 50.5	-1.0

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*SNET **13** 21:02:57.3±1.0, 12°.94N×89°.06W, h47^{km}, ML3.8*
*INET **13** 21:02:58.9±0.8, 12°.95N×89°.00W, h29^{km}±12^{km}, MW3.1*
ISC 13 21:02:57.1±1.9**,12°.91N**±0°.09×**89°.08W**±0°.05**,h31**^{km}±13^{km}**,**
n27,σ**0**^{s}**48**/38**,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALJI	Alcalda de J	0.64	50	*e*S	Sb	21 03 19.0	+0.3
TECO	Alcaldia de Te	0.69	25	*e*P	Pb	21 03 10.5	-0.2
TECO				*e*S	Sb	21 03 20.1	+0.2
SJTE	Alcalda de S	0.70	6	*e*S	Sb	21 03 20.0	-0.3
COEG	Centro de Oper	0.73	15	*e*P	Pb	21 03 11.2	-0.2
COEG				*e*S	Sb	21 03 21.4	+0.3
COEB	Comit de Eme	0.79	42	*e*P	Pb	21 03 12.1	-0.3
COEB				*e*S	Sb	21 03 23.4	+0.5
TECA	Tecapa	0.81	44	*e*P	Pb	21 03 12.5	-0.3
PAVA	Las Pavas	0.81	10	*e*P	Pb	21 03 12.7	-0.1
JAYA	Jayaque - finc	0.82	334	*e*P	Pb	21 03 12.8	-0.2
JAYA				*e*S	Sb	21 03 23.5	-0.3
LFU	La Fuente	0.83	358	*e*P	Pb	21 03 12.8	-0.3
BOQS	Boqueron	0.84	347	*e*P	Pb	21 03 13.1	-0.2
SCLA	Alcaldia de Sa	0.86	23	*e*P	Pb	21 03 13.2	-0.3
SCLA				*e*S	Sb	21 03 25.0	+0.4
PQSS	Presa 15 de Se	0.87	35	*e*P	Pn	21 03 13.1	-0.1
LCY	Lacayo	0.92	56	*e*P	Pn	21 03 14.0	0.0
PACA	Pacayal	0.92	53	*e*P	Pn	21 03 14.4	+0.4
PACA				*e*S	Sb	21 03 27.1	+0.5
CEDA	San Andres	0.94	341	*e*S	Sb	21 03 27.4	+0.4
VSM	San Miguel	0.94	57	*e*P	Pn	21 03 14.4	+0.1
CEVE	Cerro Verde	1.05	330	*e*P	Pn	21 03 16.2	+0.3
SBLS	San Blas	1.06	330	*e*P	Pn	21 03 16.4	+0.3
P5NO	Presa 5 de nov	1.11	16	*e*P	Pn	21 03 16.2	-0.3
P5NO				*e*S	Sn	21 03 30.6	-0.2
NUBE	Las Nubes	1.20	325	*e*P	Pn	21 03 18.1	+0.2
NUBE				*e*S	Sn	21 03 33.5	+0.4
LCND	La Caada	1.22	71	*e*P	Pn	21 03 18.1	0.0
LCND				*e*S	Sn	21 03 33.5	-0.1
CNCH	Conchagua	1.27	73	*e*P	Pn	21 03 18.5	-0.3
CNCH				*e*S	Sn	21 03 34.5	-0.3
MTO3	Montecristo	1.50	350	*e*P	Pn	21 03 22.1	0.0
CRIN	San Cristobal	1.99	96	*e*P	Pn	21 03 29.4	+0.7
CRIN				*e*S	Sn	21 03 52.2	-0.4
SOMN	Somoto	2.45	78	*e*P	Pn	21 03 37.1	+1.9
MATN	Matagalpa	3.08	89	*e*P	Pn	21 03 43.0	-0.6
BOAB	BOACO BROADBAN	3.36	97	*e*P	Pn	21 03 46.9	-0.6

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*IDC **13** 21:04:01.4±1.1, 14°.34N×91°.59W, h0^{km}, mb4.4/8,*
mbtmp4.4/10, ML4.3/2, MS3.8/39, Error ellipse:
s-maj=54.0km s-min=18.0km az=46.0
*NEIC **13** 21:04:02.6±2.6, 13°.91N±0°.04×92°.35W±0°.04, h10^{km}±1^{km},*
mb4.7/157, Md4.5/61(MEX), Error ellipse: s-maj=7.1km
s-min=6.2km az=264.0
*MEX **13** 21:04:05.5±0.5, 14°.08N×92°.20W, h89^{km}±14^{km}, MD4.5*
*SNET **13** 21:04:07.1±2.0, 13°.94N×91°.96W, h0^{km}±113^{km}, ML4.3*
*GCG **13** 21:04:11.6±0.3, 14°.35N×91°.91W, h60^{km}±63^{km}, MD4.5*
ISC 13 21:04:02.4±1.4**,13°.94N**±0°.05×**92°.22W**±0°.04**,h12**^{km}±8^{km}**,**
n504,σ**1**^{s}**40**/483**,mb4.7**/74**,MS3.8**/36**,Off coast of**
Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SULM	Suchitepequez,	0.73	60	*e*P	Pn	21 04 22.0	+3.5
RTAL	Retalhuleu	0.77	41	Pn	Pn	21 04 20.6	+1.4
RTAL				Sn	Sn	21 04 32.6	+1.9
THIG		0.96	357		Pg	21 04 21.7	+0.7
THIG					Sg	21 04 34.1	+0.7
THIG		0.96	357	*e*P	Pg	21 04 21.7	+0.7
THIG				*e*S	Sg	21 04 34.1	+0.7
STG3	Santiaguito 3,	0.99	39	*e*P	Pn	21 04 24.2	+1.9
CHUJ	Union Juarez	1.15	5	*e*P	Pg	21 04 24.2	-0.4
CHUJ				*e*S	Sb	21 04 39.2	-0.1
PATR	El Naranjo	1.17	359	*e*P	Pg	21 04 24.1	-0.8
PATR				*e*S	Sg	21 04 39.2	-0.9
PAVE	Pavencul	1.24	2	*e*P	Pg	21 04 25.6	-0.8
PAVE				*e*S	Sg	21 04 39.8	-2.8
FUG	Fuego 3	1.43	69	*e*P	Pn	21 04 30.8	+2.5
HUEH	Huehuetenango	1.53	27	Pn	Pg	21 04 32.0	+0.1
PCG	Pacaya	1.63	74	*e*P	Pg	21 04 34.1	+0.4
NBG	Las Nubes	1.93	70	*e*P	Pg	21 04 39.6	+0.2
PCIG		2.00	331		Pn	21 04 34.9	-1.1
PCIG					Sn	21 04 58.1	-2.8
PCIG		2.00	331	*i* P	Pn	21 04 34.9	-1.1
PCIG				*e*S	Sn	21 04 58.1	-2.8
CCIG	Comitan	2.33	2	Pn	Pn	21 04 42.7	+2.0
CCIG	Comitan	2.33	2	*e*P	Pb	21 04 44.2	-0.2
CCIG				*e*S	Sn	21 05 09.9	+0.6
SLOZ	Alcaldia de Sa	2.37	88	*e*P	Pb	21 04 43.9	-1.1
NUBE	Las Nubes	2.37	91	*e*P	Pb	21 04 43.7	-1.5
NUBE				*e*S	Sb	21 05 10.9	-3.5
CEVE	Cerro Verde	2.52	92	*e*P	Pb	21 04 46.9	-0.9
CEVE				*e*S	Sb	21 05 16.7	-2.2
SBLS	San Blas	2.52	92	*e*P	Pb	21 04 45.9	-1.9
JAYA	Jayaque - finc	2.71	96	*e*P	Pn	21 04 47.9	+1.9
JAYA				*e*S	Sb	21 05 19.7	-4.4
JAYA				IAML		21 05 22.6	
	comp=Z,1µm,0.2s						
PMON	Piamonte	2.83	94	*e*P	Pb	21 04 50.1	-2.9
ESQI	Esquipulas	2.86	77	Pn	Pb	21 04 50.3	-3.1
ESQI	Esquipulas	2.86	77	*e*P	Pb	21 04 52.1	-1.3
BOQS	Boqueron	2.86	94	*e*P	Pn	21 04 50.4	+2.2
SNET	Serv Nac Est T	2.92	95	Pn	Pn	21 04 49.5	+0.8
TGIG		2.95	343		Pn	21 04 50.0	+0.8
TGIG					Sn	21 05 23.7	-0.9
TGIG		2.95	343	*e*P	Pn	21 04 50.0	+0.8
TGIG				*e*S	Sn	21 05 23.7	-0.9
LFRS	El Faro	3.09	96	*e*P	Pn	21 04 53.4	+2.3
SJTE	Alcalda de S	3.14	96	*e*P	Pb	21 04 54.7	-3.5
PAVA	Las Pavas	3.20	94	*e*P	Pn	21 04 55.4	+2.8
COEG	Centro de Oper	3.26	95	*e*P	Pb	21 04 57.0	-3.2
P5NO	Presa 5 de nov	3.36	89	*e*P	Pn	21 04 56.9	+2.2
SCLA	Alcaldia de Sa	3.40	94	*e*P	Pn	21 04 57.4	+2.1
NILT	Santiago Nilte	3.48	319	*e*P	Pn	21 04 55.4	-1.1
NILT				*e*S	Sn	21 05 34.4	-3.2
PETF	Flores	3.73	37	Pn	Pn	21 05 01.2	+1.4
PETF	Flores	3.73	37	*e*P	Pb	21 05 04.0	-4.2
RANC	El Ranchito	3.85	97	*e*P	Pn	21 05 05.8	+4.1
CMIG	Matias Romero	4.05	321	Pn	Pn	21 05 04.8	+0.6
	comp=Z,14nm,0.3s,baz=146,slow=11,SNR=48						
CMIG				Sn	Sn	21 05 48.1	-3.4
	comp=Z,45nm,0.3s,baz=162,slow=11,SNR=4.8						
CMIG				LR	LR	21 06 44.1	
	comp=Z,592nm,19.9s,baz=134,slow=39 comp=Z,126nm,0.6s						
CMIG	Matias Romero	4.05	321		Pn	21 05 03.7	-0.5
CMIG					Sn	21 05 48.0	-3.6
CMIG	Matias Romero	4.05	321	*e*P	Pn	21 05 03.7	-0.5
CMIG				*e*S	Sn	21 05 48.0	-3.6
HUIG	Huatulco	4.17	296		Pn	21 05 05.0	-0.9
HUIG					Sn	21 05 47.1	-7.6
HUIG	Huatulco	4.17	296	*e*P	Pn	21 05 05.0	-0.9
HUIG				*e*S	Sn	21 05 47.1	-7.6
LCND	La Caada	4.26	98	*e*P	Pn	21 05 11.1	+4.1
LCND				*e*S	Sn	21 05 59.5	+2.7
TUIG	Tuzandepetl	4.58	333	*e*P	Pn	21 05 11.3	-0.3
TUIG				*e*S	Sn	21 06 02.4	-2.4
TGUH	Tegucigalpa,Un	4.80	88	Pn	Pn	21 05 16.4	+1.6
NEUV	Arroyo Zacate	5.09	318	*e*P	Pn	21 05 17.2	-1.3
NEUV				*e*S	Sn	21 06 14.0	-3.3
SCIG	Sabancuy	5.09	11	*e*P	Pn	21 05 18.2	-0.4
SCIG				*i* S	Sn	21 06 16.1	-1.2
PEIG	Puerto Escondi	5.18	294		Pn	21 05 19.9	+0.1
PEIG					Sn	21 06 11.6	-7.9
PEIG	Puerto Escondi	5.18	294	*e*P	Pn	21 05 19.9	+0.1
PEIG				*e*S	Sn	21 06 11.6	-7.9
CRIN	San Cristobal	5.18	103	Pn	Pn	21 05 20.0	+0.1
OXIG	Oaxaca	5.35	306		Pn	21 05 21.5	-0.8
OXIG					Sn	21 06 21.4	-2.5
VHO	Vista Hermosa	5.35	306	*e*P	Pn	21 05 21.5	-0.8
VHO				*e*S	Sn	21 06 21.4	-2.5
YOIG	Yosondua	5.90	300		Pn	21 05 32.0	+2.1
YOIG					Sn	21 06 34.5	-3.1
YOIG	Yosondua	5.90	300	*e*P	Pn	21 05 32.0	+2.1
YOIG				*e*S	Sn	21 06 34.5	-3.1
PNIG	Pinotepa	6.20	294		Pn	21 05 34.1	+0.3
PNIG					Sn	21 06 38.9	-5.8
PNIG	Pinotepa	6.20	294	*e*P	Pn	21 05 34.1	+0.3
PNIG				*i* S	Sn	21 06 38.9	-5.8
MATN	Matagalpa	6.21	99	Pn	Pn	21 05 34.3	+0.3
TOIG	Toxpalan	6.22	312		Pn	21 05 35.0	+0.7
TOIG					Sn	21 06 42.4	-3.0
TOIG	Toxpalan	6.22	312	*e*P	Pn	21 05 35.0	+0.7
TOIG				*e*S	Sn	21 06 42.4	-3.0
TXIG	Tlaxiaco	6.28	302		Pn	21 05 37.4	+2.3
TXIG					Sn	21 06 42.7	-4.2
TXIG	Tlaxiaco	6.28	302	*e*P	Pn	21 05 37.4	+2.3
TXIG				*e*S	Sn	21 06 42.7	-4.2
BOAB	BOACO BROADBAN	6.55	102	Pn	Pn	21 05 38.1	-0.6
HLIG	Huajuapan de L	6.62	306		Pn	21 05 40.4	+0.7
HLIG					Sn	21 06 53.0	-2.3
HLIG	Huajuapan de L	6.62	306	*e*P	Pn	21 05 40.4	+0.7
HLIG				*e*S	Sn	21 06 53.0	-2.3
TPIG	Tehuac#an	6.65	313		Pn	21 05 43.5	+3.4
TPIG					Sn	21 06 49.6	-6.3
TPIG	Tehuac#an	6.65	313	*e*P	Pn	21 05 43.5	+3.4
TPIG				*e*S	Sn	21 06 49.6	-6.3
FTIG	Fresnillo de T	6.92	306		Pn	21 05 46.7	+2.9
FTIG					Sn	21 06 58.6	-4.0
FTIG	Fresnillo de T	6.92	306	*e*P	Pn	21 05 46.7	+2.9
FTIG				*e*S	Sn	21 06 58.6	-4.0
TLIG	Tlapa	7.09	301	Pn	Pn	21 05 46.8	+0.6
TLIG	Tlapa	7.09	301	*e*P	Pn	21 05 48.0	+1.9
TLIG				*e*S	Sn	21 07 00.6	-6.2
ACON	Acoyapa	7.14	105	Pn	Pn	21 05 46.0	-0.8
DAIG	Los Arroyos	7.79	294		Pn	21 05 56.0	+0.3
DAIG					Sn	21 07 18.6	-5.2
DAIG	Los Arroyos	7.79	294	*e*P	Pn	21 05 56.0	+0.3
DAIG				*e*S	Sn	21 07 18.6	-5.2
ESPN	Las Esperanzas	7.91	102		Pn	21 05 57.8	+0.4
JTS	Las Juntas de	7.98	116		Pn	21 05 59.1	+0.8
CXUV	Coxquihui	8.04	321	*e*P	Pn	21 05 58.4	-0.7
CXUV				*e*S	Sn	21 07 26.6	-3.5
MEIG	Mezcala	8.14	300		Pn	21 06 02.1	+1.6
MEIG					Sn	21 07 27.6	-5.1
MEIG	Mezcala	8.14	300	*e*P	Pn	21 06 02.1	+1.6
MEIG				*e*S	Sn	21 07 27.6	-5.1
YAIG	Yautepec	8.19	308		Pn	21 06 02.5	+1.2
YAIG					Sn	21 07 29.0	-4.8
YAIG	Yautepec	8.19	308	*e*P	Pn	21 06 02.5	+1.2
YAIG				*e*S	Sn	21 07 29.0	-4.8
PLIG	Platanillo	8.28	303		Pn	21 06 05.8	+3.4
PLIG					Sn	21 07 32.2	-3.7
PLIG	Platanillo	8.28	303	*e*P	Pn	21 06 05.8	+3.4
PLIG				*e*S	Sn	21 07 32.2	-3.7
CAIG	El Cayaco	8.35	293		Pn	21 06 05.0	+1.7
CAIG					Sn	21 07 37.9	+0.3
CAIG	El Cayaco	8.35	293	*e*P	Pn	21 06 05.0	+1.7
CAIG				*e*S	Sn	21 07 37.9	+0.3
ARIG	Puente Sto Nin	8.92	300		Pn	21 06 14.1	+2.9
ARIG					Sn	21 07 46.5	-5.1
ARIG	Puente Sto Nin	8.92	300	*e*P	Pn	21 06 14.1	+2.9
ARIG				*e*S	Sn	21 07 46.5	-5.1
CVTR	Volcan Turrial	9.15	114	Pn	Pn	21 06 14.7	0.0
ZIIG	Zihuatanejo	9.62	293		Pn	21 06 23.3	+2.6
ZIIG	Zihuatanejo	9.62	293	*e*	Pn	21 06 23.3	+2.6
MOIG	Morelia	10.31	305	Pn	Pn	21 06 29.6	-0.8
BRU2	Volcan	10.65	118		Pn	21 06 35.6	+0.5
SOR	Soroa	12.40	43	Pn	Pn	21 07 01.1	+2.2
ZAIG	Zacatecas	13.17	313		Pn	21 07 10.4	+0.8
735A	Kenedy	15.72	342	Pn	Pn	21 07 40.9	-2.8
833A	Chaparral WMA,	15.79	336	Pn	Pn	21 07 42.8	-1.8
833A	Chaparral WMA,	15.79	336	P	Pn	21 07 46.5	+1.9
	baz=154						
DWPF	Disney Wildern	17.31	34	P	P	21 08 05.8	+0.5
	baz=218						
435B	Jarrell	17.47	344		Pn	21 08 06.3	+0.3
435B	Jarrell	17.47	344	P	Pn	21 08 08.8	+2.8
	baz=163						
656A	Willston	17.78	29		P	21 08 11.5	+1.0
BRAL	Brewton	17.79	15	P	P	21 08 13.4	+2.7
	baz=197						
NATX	Nacogdoches	17.88	353		Pn	21 08 11.6	+0.6
NATX				IAmb	IAmb	21 08 16.7	
	comp=Z,60nm,1.2s						
NATX	Nacogdoches	17.88	353	P	P	21 08 14.5	+2.9
	baz=172						
JCT	Junction City	17.88	338		Pn	21 08 11.6	+0.5

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JCT    Junction City      17.88 338  P     Pn     21 08 14.1 +3.0
       baz=156
HPIG                      18.03 318        Pn     21 08 12.6 -0.5
WHTX   Lake Whitney,      18.59 346  P     P      21 08 21.5 +2.0
       baz=164
TXAR   Lajitas Array      18.63 327  P     P      21 08 21.9 +1.9
       comp=Z,0.3nm,0.3s,baz=154,slow=12,SNR=33
TXAR                                 LR    LR     21 16 42.8
       comp=Z,90nm,18.8s,baz=120,slow=41
       comp=Z,9.6nm,0.9s
TXAR   Lajitas Array      18.63 327  P     P      21 08 21.1 +1.1
TX31   Lajitas Ar. Si     18.63 327  P     P      21 08 20.7 +0.7
TX31                                 IAmb  IAmb   21 08 26.9
       comp=Z,40nm,1.0s
TX32   Lajitas Array      18.63 327  P     P      21 08 21.2 +1.2
143A   Socs Landing,      18.69   2  P     P      21 08 20.6 +0.1
GUY2C  Guyana, Caldas     18.73 116  eP    Pn     21 08 25.6 +3.6
FW14   Alvarado           18.93 347  P     P      21 08 24.4 +1.2
FW14                                 IAmb  IAmb   21 08 27.3
       comp=Z,50nm,0.9s
PTBC   PUERTO BERRIO,     18.96 111  eP    Pn     21 08 26.2 +1.8
NORC   Norcasia           19.01 114  eP    Pn     21 08 27.9 +2.9
TIGA   Tifton             19.13  23  P     Pn     21 08 27.9 +1.6
       baz=206
Z41A   Richland Creek     19.23 359  P     P      21 08 26.3 -0.2
FW07   Weatherford        19.35 346  P     P      21 08 27.5 -0.3
FW07                                 IAmb  IAmb   21 08 35.2
       comp=Z,31nm,0.7s
Z38A   Mt. Pleasant       19.39 353  P     P      21 08 27.7 -0.6
Z38A                                 IAmb  IAmb   21 08 36.1
       comp=Z,33nm,0.9s
Z47A   Carrollton         19.54  10  P     P      21 08 29.9 +0.1
Z47A                                 IAmb  IAmb   21 08 34.0
       comp=Z,37nm,0.8s
FW06   Azle               19.56 346  P     P      21 08 31.2 +1.1
FW06                                 IAmb  IAmb   21 08 35.8
       comp=Z,29nm,0.5s
LRAL   Lakeview Retre     19.59  13  P     P      21 08 32.0 +1.5
LRAL   Lakeview Retre     19.59  13  P     Pn     21 08 33.1 +1.3
       baz=195
WLAR   White Oak Lake     19.67 358  P     P      21 08 32.0 +0.7
WLAR                                 IAmb  IAmb   21 08 57.5
       comp=Z,33nm,0.8s
ABTX   Abilene, Hawle     19.79 341  P     P      21 08 33.1 +0.4
ABTX                                 IAmb  IAmb   21 08 36.0
       comp=Z,26nm,0.9s
ABTX   Abilene, Hawle     19.79 341  P     P      21 08 34.5 +1.8
       baz=158,SNR=5.3
ROSC   El Rosal           19.83 115  P     Pn     21 08 36.8 +1.6
       comp=Z,18nm,0.6s,baz=127,slow=11,SNR=6.8
ROSC   El Rosal           19.83 115  P     P      21 08 31.6 -2.0
ROSC                                 IAmb  IAmb   21 08 40.0
       comp=Z,25nm,0.9s
LPIG   La Paz             19.84 303  LR    LR     21 16 29.4
       comp=Z,154nm,20.8s,baz=201,slow=37
ODSA   Odessa             20.41 334  P     P      21 08 40.1 +0.6
ODSA                                 IAmb  IAmb   21 08 42.4
       comp=Z,50nm,0.8s
CHIC   Chingaza           20.44 115  eP    Pn     21 08 44.4 +2.0
LOOK   Love County        20.46 348  P     P      21 08 38.1 -1.9
LOOK                                 IAmb  IAmb   21 08 45.7
       comp=Z,21nm,0.8s
X40A   Basin Creek Fa     20.46 359  P     P      21 08 38.0 -1.9
RUSC   La Rusia           20.46 111  P     P      21 08 38.7 -1.9
RUSC   La Rusia           20.46 111  eP    Pn     21 08 44.0 +1.2
WTFS   Witchita Falls     20.53 345  P     P      21 08 37.6 -3.1
WTFS                                 IAmb  IAmb   21 08 45.8
       comp=Z,15nm,0.7s
MIAR   Mount Ida          20.55 357  P     P      21 08 40.6 -0.3
MIAR   Mount Ida          20.55 357  P     P      21 08 42.8 +1.9
       baz=176,SNR=6.6
OXF    Oxford             20.64   7  P     P      21 08 42.6 +0.8
       baz=188
UALR   University of      20.74 360  P     P      21 08 43.6 +0.7
UALR                                 IAmb  IAmb   21 09 04.5
       comp=Z,26nm,0.8s
X37A   Clayton            20.75 353  P     P      21 08 42.9 -0.2
X37A                                 IAmb  IAmb   21 08 54.6
       comp=Z,36nm,1.1s
POST   Post               20.83 338  P     P      21 08 44.0  0.0
POST                                 IAmb  IAmb   21 08 45.9
       comp=Z,28nm,0.8s
X48A   Hartselle          20.95  12  P     P      21 08 44.5 -0.7
CLNB   Carlsbad           21.12 332  P     P      21 08 49.0 +1.7
HTMS   Hat Mesa           21.19 332  P     P      21 08 48.5 +0.6
GDL2   Guadalupe Moun     21.30 331  P     P      21 08 50.1 +1.0
FPAL   Fort Paine         21.36  15  P     P      21 08 50.0 +0.3
FPAL                                 IAmb  IAmb   21 09 11.2
       comp=Z,30nm,1.0s
MNTX   Cornudas Mount     21.40 328  P     P      21 08 51.3 +1.2
       baz=143,SNR=27
WMOK   Wichita Mounta     21.54 345  P     P      21 08 51.8 +0.2
WMOK   Wichita Mounta     21.54 345  P     P      21 08 52.0 +0.4
       baz=163,SNR=6.3
FNO    Franklin           21.73 348  P     P      21 08 51.8 -1.8
SDV    Santo Domingo      21.74 101  P     P      21 08 53.5 -0.7
       comp=Z,1.9nm,0.3s,baz=293,slow=5.5,SNR=2.0
SDV                                  LR    LR     21 18 11.6
       comp=Z,137nm,18.7s,baz=280,slow=40
SDV    Santo Domingo      21.74 101  P     P      21 08 53.4 -0.7
CPRX   Cap Rock           21.76 333  P     P      21 08 54.5 +0.3
SWET   Sewanee            21.93  14  P     P      21 08 55.5 -0.2
SWET                                 IAmb  IAmb   21 08 57.3
       comp=Z,22nm,0.9s
OK025  Westminster Rd     22.03 349  P     P      21 08 55.6 -1.2
LCAR   Lake Charles       22.05   2  P     P      21 08 57.1  0.0
MSTX   Muleshoe           22.12 336  P     P      21 08 56.8 -1.1
MSTX                                 IAmb  IAmb   21 09 00.0
       comp=Z,27nm,1.1s
MSTX   Muleshoe           22.12 336  P     P      21 08 57.6 -0.3
       baz=152,SNR=13
V48A   Smith Brothers     22.24  12  P     P      21 08 58.2 -0.8
V48A                                 IAmb  IAmb   21 09 00.1
       comp=Z,20nm,0.9s
OK029  Liberty Lake       22.26 349  P     P      21 08 57.5 -1.8
OK029                                IAmb  IAmb   21 09 00.7
       comp=Z,38nm,0.9s
RLO    Rose Lookout       22.27 354  P     P      21 08 59.6 +0.2
RLO                                  IAmb  IAmb   21 09 09.3
       comp=Z,20nm,0.9s
OK052  Battle Ridge R     22.34 350  P     P      21 08 58.4 -1.8
OK052                                IAmb  IAmb   21 09 00.6
       comp=Z,20nm,0.9s
WVT    Waverly            22.44   9  P     P      21 09 01.6 +0.4
       baz=191
U38A   Gravette           22.49 355  P     P      21 09 01.1 -0.7
QUOK   Quay               22.50 350  P     P      21 09 00.1 -1.8
QUOK                                 IAmb  IAmb   21 09 10.6
       comp=Z,25nm,1.1s
AMTX   Amarillo           22.53 339  P     P      21 09 02.0 -0.4
AMTX   Amarillo           22.53 339  P     P      21 09 02.9 +0.6
       baz=156
CLTN   Cedars of Leba     22.68  12  P     P      21 09 03.2 -0.6
CLTN                                 IAmb  IAmb   21 09 05.2
       comp=Z,18nm,0.8s
PARMO  Parma              22.73   5  P     P      21 09 03.3 -1.0
PARMO                                IAmb  IAmb   21 09 06.1
       comp=Z,27nm,0.8s
OK046  Pawnee Station     22.75 350  P     P      21 09 03.0 -1.5
OK046                                IAmb  IAmb   21 09 13.7
       comp=Z,17nm,0.8s
TKL    Tuckaleechee C     22.92  18  P     P      21 09 06.0 -0.3
       comp=Z,4.7nm,0.7s,baz=189,slow=11,SNR=6.4
TKL                                  LR    LR     21 19 50.5
       comp=Z,238nm,18.0s,baz=194,slow=42
HSIG                      22.94 314  P     P      21 09 06.3 -0.4
ELIS   Ellis County       22.96 345  P     P      21 09 06.1 -0.6
ELIS                                 IAmb  IAmb   21 09 07.9
       comp=Z,25nm,0.8s
BLOK   Blackwell          23.16 350  P     P      21 09 06.8 -2.0
BLOK                                 IAmb  IAmb   21 09 09.1
       comp=Z,26nm,0.7s
T35A   Sooner Cattle      23.20 351  P     P      21 09 07.3 -1.8
T35A                                 IAmb  IAmb   21 09 10.2
       comp=Z,21nm,0.8s
U49A   Red Boiling Sp     23.20  13  P     P      21 09 08.3 -0.9
U49A                                 IAmb  IAmb   21 09 09.1
       comp=Z,28nm,1.0s
KMSC   Kings Mountain     23.28  23  P     P      21 09 10.5 +0.5
       baz=208
121A   Cookes Peak, D     23.33 325  P     P      21 09 11.5 +0.8
121A                                 IAmb  IAmb   21 09 15.4
       comp=Z,28nm,0.9s
121A   Cookes Peak, D     23.33 325  P     P      21 09 12.1 +1.3
       baz=139,SNR=13
319A   Douglas            23.37 321  P     P      21 09 11.4 +0.2
319A                                 IAmb  IAmb   21 09 38.0
       comp=Z,14nm,0.9s
NOKA   Waynoka            23.38 346  P     P      21 09 10.3 -0.7
NOKA                                 IAmb  IAmb   21 09 12.5
       comp=Z,30nm,0.8s
OK032  Salt Plains WL     23.39 348  P     P      21 09 08.8 -2.3
OK032                                IAmb  IAmb   21 09 11.8
       comp=Z,18nm,0.8s
T47A   Sharon Grove       23.40  10  P     P      21 09 10.2 -0.9
T47A                                 IAmb  IAmb   21 09 11.3
       comp=Z,15nm,0.8s
OK035  E0210 Rd and N     23.40 347  P     P      21 09 11.6 +0.4
OK035                                IAmb  IAmb   21 09 14.3
       comp=Z,26nm,0.8s
KAN06  Argonia West S     23.75 349  P     P      21 09 12.6 -2.1
KAN06                                IAmb  IAmb   21 09 16.8
       comp=Z,17nm,0.8s
S44A   Carbondale         23.80   6  P     P      21 09 13.9 -1.2
CRNM   Carthage           23.88 329  P     P      21 09 17.8 +1.7
BNM    Barren Site        23.98 329  P     P      21 09 18.8 +1.6
CCM    Cathedral Cave     24.03   2  P     P      21 09 17.5 +0.2
       baz=182
Y22D   IRIS PASSCAL I     24.07 329  P     P      21 09 18.9 +1.0
DUN6   Lazy B Ranch       24.09 323  P     P      21 09 18.3 +0.2
LENM   Lemitar            24.17 329  P     P      21 09 19.5 +0.6
ANMO   Albuquerque        24.55 331  P     P      21 09 23.6 +1.4
       comp=Z,8.6nm,0.8s,baz=235,slow=12,SNR=24
       comp=Z,8.6nm,0.8s
ANMO   Albuquerque        24.55 331  P     P      21 09 23.5 +1.2
ANMO   Albuquerque        24.55 331  P     P      21 09 22.8 +0.5
       baz=145
WCI    Wyandotte Cave     24.75  11  P     P      21 09 22.9 -1.0
WCI    Wyandotte Cave     24.75  11  P     P      21 09 23.6 -0.3
       baz=194
TUC    Tucson             24.94 320  P     P      21 09 23.3 -2.5
OLIL   Olney              24.96   8  P     P      21 09 25.1 -0.6
Q44A   Meyer Farm, Va     25.02   6  P     P      21 09 25.3 -1.0
Q44A                                 IAmb  IAmb   21 09 27.5
       comp=Z,19nm,0.9s
ATAH   Atahualpa          25.04 146  LR    LR     21 18 03.5
       comp=Z,184nm,18.5s,baz=304,slow=34
SJG    San Juan           25.39  77  LR    LR     21 19 23.0
       comp=Z,193nm,21.6s,baz=248,slow=37
T25A   Trinidad           25.53 337  P     P      21 09 31.6 +0.4
T25A                                 IAmb  IAmb   21 09 36.4
       comp=Z,14nm,0.8s
T25A   Trinidad           25.53 337  P     P      21 09 33.6 +2.3
       baz=152,SNR=8.9
CBKS   Cedar Bluff        25.65 346  P     P      21 09 30.9 -1.1
CBKS                                 IAmb  IAmb   21 09 34.6
       comp=Z,14nm,0.8s
CBKS   Cedar Bluff        25.65 346  P     P      21 09 33.7 +1.6
       baz=163
P46A   Rosedale           25.95   9  P     P      21 09 33.4 -1.4
214A   Organ Pipe Nat     26.01 317  P     P      21 09 36.9 +1.4
       baz=129
X18A   Snowflake          26.02 325  P     P      21 09 34.5 -1.2
SDCO   Great Sand Dun     26.49 336  P     P      21 09 41.6 +1.7
       baz=150,SNR=7.4
KSCO   Kaye Shedlock'     26.61 342  P     P      21 09 40.3 -0.6
KSCO                                 IAmb  IAmb   21 09 46.0
       comp=Z,15nm,0.8s
KSCO   Kaye Shedlock'     26.61 342  P     P      21 09 42.2 +1.4
       baz=157
S22A   4UR Ranch, Cre     27.03 334  P     P      21 09 45.5 +0.6
S22A                                 IAmb  IAmb   21 09 48.4
       comp=Z,13nm,1.0s
S22A   4UR Ranch, Cre     27.03 334  P     P      21 09 47.2 +2.3
       baz=148,SNR=14
MVCO   Mesa Verde         27.34 331  P     P      21 09 47.4 -0.2
MVCO   Mesa Verde         27.34 331  P     P      21 09 50.1 +2.4
       baz=144,SNR=16
WUAZ   Wupatki            27.54 325  P     P      21 09 49.1 -0.3
WUAZ   Wupatki            27.54 325  P     P      21 09 51.2 +1.9
       baz=137
PV15   Paradox Valley     28.25 332  P     P      21 09 56.0 +0.3
PV13   Radium Mtn., P     28.26 332  P     P      21 09 56.1 +0.3
ISCO   Idaho Springs      28.32 338  P     P      21 09 57.0 +0.5
ISCO   Idaho Springs      28.32 338  P     P      21 09 58.6 +2.2
       baz=152
PDMCI  Parker Dam,Lak     28.36 319  P     P      21 09 58.4 +1.9
       baz=130
PV11   David Mesa, Pa     28.40 332  P     P      21 09 57.6 +0.6
PV07   Paradox Valley     28.41 332  P     P      21 09 57.7 +0.6
PV07                                 IAmb  IAmb   21 10 00.4
       comp=Z,21nm,1.0s
PV23   Carpenter Ridg     28.59 332  P     P      21 09 59.3 +0.5
IKP    In-Ko-Pah, Jac     28.66 315  P     P      21 10 00.8 +1.6
       baz=125
BC3    Big Chuckawall     28.81 317  P     P      21 10 02.1 +1.5
       baz=128,SNR=5.5
IRM    Iron Mountain      28.91 318  P     P      21 10 03.1 +1.7
       baz=129
MONP2  Monument Peak      29.01 315  P     P      21 10 03.8 +1.2
       baz=125
BELC   Belle Mtn. Jos     29.38 317  P     P      21 10 07.2 +1.5
       baz=127
PFO    Pinyon Flats O     29.45 316  LR    LR     21 22 14.2
       comp=Z,109nm,18.2s,baz=124,slow=37
GMRC   Granite Mounta     29.64 319  P     P      21 10 09.3 +1.3
       baz=129
O20A   White River Ci     29.64 335  P     P      21 10 08.6 +0.6
O20A                                 IAmb  IAmb   21 10 32.7
       comp=Z,19nm,1.4s
O20A   White River Ci     29.64 335  P     P      21 10 09.8 +1.9
       baz=147
V12A   Nelson             29.73 321  P     P      21 10 08.5 -0.2
SRU    San Rafael Swe     29.82 331  P     P      21 10 10.2 +0.6
NNA    Nana               29.94 149  LR    LR     21 20 07.9
       comp=Z,104nm,18.6s,baz=305,slow=32
P18A   Preston Nutter     30.10 332  P     P      21 10 13.2 +1.0
CCUT   Cedar City         30.11 325  P     P      21 10 12.8 +0.5
CCUT                                 IAmb  IAmb   21 10 16.6
       comp=Z,8.0nm,1.0s
MSU    Marysvale          30.18 328  P     P      21 10 11.9 -1.0
TMUT   Trail Mountain     30.30 330  P     P      21 10 14.3 +0.3
TMUT                                 IAmb  IAmb   21 10 20.5
       comp=Z,8.9nm,1.0s
RDMU   Red Mountain       30.56 333  P     P      21 10 16.1 -0.1
RDMU                                 IAmb  IAmb   21 10 18.7
       comp=Z,9.5nm,1.1s
MPU    Maple Canyon       31.06 330  P     P      21 10 21.6 +1.0
MPU                                  IAmb  IAmb   21 10 24.5
       comp=Z,8.0nm,0.8s
LRMC   Laurel Mtn Rad     31.37 318  P     P      21 10 24.1 +0.8
       baz=127
TPNV   Topopah Spring     31.38 321  P     P      21 10 25.0 +1.6
       baz=131
MPMC   Manual Prospec     31.59 319  P     P      21 10 26.8 +1.5
       baz=128
RSSD   Black Hills        31.73 344  P     P      21 10 27.0 +0.6
       baz=158
DUG    Dugway, Tooele     31.78 329  P     P      21 10 27.5 +0.7
DUG    Dugway, Tooele     31.78 329  P     P      21 10 28.3 +1.5
       baz=140
SCZ2   Santa Cruz Isl     31.86 314  P     P      21 10 27.7 +0.2
       baz=122
R11A   Troy Canyon, C     31.92 324  P     P      21 10 29.7 +1.6
       baz=134
HWUT   Hardware Ranch     32.28 332  P     P      21 10 31.1 -0.2
HWUT                                 IAmb  IAmb   21 10 38.5
       comp=Z,14nm,1.1s
BW06   Boulder Array      32.38 336  P     P      21 10 31.6 -0.6
BW06   Boulder Array      32.38 336  P     P      21 10 34.0 +1.8
       baz=148
PDAR   Pinedale Array     32.38 336  P     P      21 10 32.7 +0.5
       comp=Z,3.4nm,1.0s,baz=134,slow=8.9,SNR=8.0
PDAR                                 PcP   PcP    21 13 19.6 -0.2
       comp=Z,0.5nm,0.6s,baz=142,slow=6.8,SNR=4.2
PDAR                                 LR    LR     21 25 37.6
       comp=Z,132nm,18.4s,baz=143,slow=40
       comp=Z,3.4nm,1.0s
BGU    Big Grassy Mou     32.44 330  P     P      21 10 33.0 +0.3
BGU                                  IAmb  IAmb   21 10 38.7
       comp=Z,5.7nm,0.9s
SPUT   South Promonto     32.46 331  P     P      21 10 33.5 +0.6
SPUT                                 IAmb  IAmb   21 10 37.6
       comp=Z,11nm,1.1s
VES    Vestal, Richgr     32.51 317  P     P      21 10 34.7 +1.6
       baz=126
SADO   Sadowa             32.68  17  LR    LR     21 25 22.6
       comp=Z,245nm,18.3s,baz=170,slow=40
HVU    Hansel Valley      32.98 331  P     P      21 10 36.9 -0.4
HVU                                  IAmb  IAmb   21 10 40.4
       comp=Z,15nm,1.0s
AHID   Auburn Hatcher     33.02 334  P     P      21 10 36.3 -1.4
AHID                                 IAmb  IAmb   21 10 42.8
       comp=Z,9.4nm,0.9s
REDW   Red Top Meadow     33.40 335  P     P      21 10 42.2 +1.0
ELK    Elko               33.42 327  LR    LR     21 26 19.2
       comp=Z,157nm,19.4s,baz=150,slow=40
ELK    Elko               33.42 327  P     P      21 10 41.0 -0.3
ELK                                  IAmb  IAmb   21 10 46.5
       comp=Z,6.4nm,0.8s
SNOW   Snow King Moun     33.45 335  P     P      21 10 41.4 -0.1
MDPB   Devils Postpil     33.56 320  P     P      21 10 42.1 -0.5
NVAR   Mina Array Bea     33.58 321  P     P      21 10 44.7 +1.9
       comp=Z,5.3nm,0.8s,baz=135,slow=9.0,SNR=45
NVAR                                 PcP   PcP    21 13 24.1 +0.9
       comp=Z,0.4nm,0.7s,baz=134,slow=3.9,SNR=2.5
NVAR                                 LR    LR     21 26 07.9
       comp=Z,195nm,19.2s,baz=156,slow=40
       comp=Z,5.3nm,0.8s
NVAR   Mina Array Bea     33.58 321  P     P      21 10 43.4 +0.6
LHV    Little Huntoon     33.59 321  P     P      21 10 42.8 +0.3
LHV                                  IAmb  IAmb   21 10 46.6
       comp=Z,5.0nm,0.8s
MOOW   Moose Ponds        33.68 335  P     P      21 10 44.2 +0.6
KVN    Kaiserville        33.86 322  P     P      21 10 46.3 +1.2
KVN                                  IAmb  IAmb   21 10 51.1
       comp=Z,8.3nm,1.0s
H17A   Grant Village      34.15 336  P     P      21 10 49.5 +1.9
       baz=147
RLMT   Red Lodge          34.28 338  P     P      21 10 50.2 +1.5
       baz=150
MDND   Maddock            34.36 351  P     P      21 10 50.8 +1.7
       baz=167
AGMN   Agassiz Nation     34.39 356  P     P      21 10 50.9 +1.6
       baz=174
LAO    LASA Array         34.70 343  P     P      21 10 53.9 +1.8
       baz=156
LBNH   Lisbon             34.81  26  P     P      21 10 54.6 +1.5
       baz=216
QLMT   Earthquake Lak     34.85 336  P     P      21 10 53.1 -0.5
HLID   Hailey             35.12 331  P     P      21 10 56.9 +1.0
HLID                                 IAmb  IAmb   21 11 02.2
       comp=Z,11nm,0.9s
MFID   Camas Ranch        35.68 330  P     P      21 11 00.8  0.0
MFID                                 IAmb  IAmb   21 11 06.1
       comp=Z,8.3nm,0.9s
DLMT   Dillon             35.76 335  P     P      21 11 02.0 +0.6
DLMT                                 IAmb  IAmb   21 11 04.3
       comp=Z,14nm,1.1s
LRM    Limekiln Ridge     36.08 336  P     P      21 11 03.4 -0.8
ULM    Lac du Bonnet      36.33 356  LR    LR     21 28 50.6
       comp=Z,126nm,18.9s,baz=208,slow=41
WVOR   Wild Horse Val     36.42 326  P     P      21 11 08.3 +1.2
WVOR                                 IAmb  IAmb   21 11 13.2
       comp=Z,9.8nm,1.1s
PKME   Peaks-Kenny Pk     36.77  27  P     P      21 11 11.1 +1.2
       baz=219
EGMT   Eagleton           36.97 340  P     P      21 11 12.6 +1.0
       baz=151
J08A   Circle Bar Ran     36.97 328  P     P      21 11 12.1 +0.3
J08A                                 IAmb  IAmb   21 11 17.6
       comp=Z,16nm,0.7s
PLID   Pearl Lake         37.02 332  P     P      21 11 12.2  0.0
PLID                                 IAmb  IAmb   21 11 14.5
       comp=Z,17nm,1.1s
BMO    Blue Mountains     37.46 330  P     P      21 11 15.4 -0.5
MSO    Missoula           37.50 335  P     P      21 11 16.9 +0.8
       baz=144
I07A   Izee               38.01 328  P     P      21 11 21.2 +0.6
YBH    Yreka Blue Hor     38.28 322  LR    LR     21 29 06.2
       comp=Z,166nm,18.5s,baz=148,slow=39
LPAZ   La Paz             38.33 141  LR    LR     21 26 39.5
       comp=Z,91nm,20.9s,baz=310,slow=36
NEW    Newport            39.95 334  LR    LR     21 30 47.0
       comp=Z,194nm,19.3s,baz=137,slow=40
MDP    Montagnes des      39.95  99  LR    LR     21 28 43.3
       comp=Z,89nm,21.2s,baz=332,slow=38
C09A   Chrisman Ranch     40.10 333  P     P      21 11 37.2 -0.7
B08A   Colville Reser     40.99 332  P     P      21 11 46.2 +0.9
LON    Longmire           41.03 329  P     P      21 11 46.3 +0.7
LON                                  IAmb  IAmb   21 11 50.3
       comp=Z,12nm,0.9s
SIV    San Ignacio        42.81 133  P     P      21 12 01.2 +0.7
       comp=Z,2.4nm,0.7s,baz=306,slow=8.4,SNR=13
SIV                                  LR    LR     21 29 03.2
       comp=Z,111nm,19.2s,baz=316,slow=35
       comp=Z,2.4nm,0.7s
LVC    Limon Verde        42.91 148  LR    LR     21 29 17.1
       comp=Z,88nm,18.2s,baz=255,slow=35
LLLB   Lillooet           43.77 333  P     P      21 12 08.8 +1.0
LLLB                                 IAmb  IAmb   21 12 10.7
       comp=Z,11nm,1.0s
SCHQ   Schefferville      45.35  20  LR    LR     21 32 18.8
       comp=Z,228nm,19.5s,baz=222,slow=38
WAPA   Wapiti River       46.20 339  P     P      21 12 26.8 -0.3
CFA    Coronel Fontan     50.80 153  LR    LR     21 30 30.2
       comp=Z,51nm,19.9s,baz=88,slow=31
YKA    Yellowknife Ar     51.03 347  P     P      21 13 03.7 -0.4
       comp=Z,11nm,0.8s,baz=150,slow=7.7,SNR=134
YKA                                  PcP   PcP    21 14 19.8 -0.2
       comp=Z,1.6nm,0.8s,baz=149,slow=4.1,SNR=8.6
       comp=Z,11nm,0.8s
YKA    Yellowknife Ar     51.03 347  P     P      21 13 03.1 -1.0
KOTAN  Kotaneelee Air     51.67 340  P     P      21 13 10.2 +1.2
       baz=139,SNR=8.6
T35M   Bob Quinn          51.75 335  P     P      21 13 11.2 +1.5
       baz=130
LIRD   Liard River Hi     51.83 339  P     P      21 13 11.9 +1.7
       baz=137
FRB    Frobisher Bay      52.42  13  LR    LR     21 37 22.7
       comp=Z,228nm,18.0s,baz=206,slow=39
CPUP   Villa Florida      52.48 140  LR    LR     21 37 13.1
       comp=Z,72nm,18.8s,baz=346,slow=38
DLBC   Dease Lake         52.62 336  P     P      21 13 17.3 +1.2
DLBC                                 IAmb  IAmb   21 13 20.4
       comp=Z,17nm,1.1s
DLBC   Dease Lake         52.62 336  P     P      21 13 17.3 +1.2
       baz=132
S34M   Telegraph Cree     52.72 335  P     P      21 13 18.6 +1.8
       baz=130
P33M   Teslin, Yukon      54.86 337  P     P      21 13 33.9 +1.3
       baz=130
SKAG   Skagway            55.40 335  P     P      21 13 38.4 +2.1
       baz=126
N32M   Quiet Lake         55.56 337  P     P      21 13 38.6 +1.0
       baz=130
MMPY   Sheldon Lake,      55.88 339  P     P      21 13 41.0 +1.2
       baz=132,SNR=6.1
FARO   Faro, Yukon        56.35 338  P     P      21 13 44.7 +1.5
       baz=130
P30M   Million Dollar     56.46 335  P     P      21 13 45.6 +1.6
       baz=125
O30N   Mendenhall         56.48 336  P     P      21 13 45.6 +1.4
       baz=126
M31M   Drury Creek, Y     56.71 338  P     P      21 13 47.3 +1.6
       baz=129
N31M   Braeburn, Yuko     56.79 337  P     P      21 13 47.4 +1.1
       baz=127
HYT    Haines Junctio     57.08 335  P     P      21 13 50.0 +1.5
       baz=125
O29M   Mount Kennedy      57.23 335  P     P      21 13 51.1 +1.6
       baz=123
PNL    Peninsula          57.23 334  P     P      21 13 49.8 +0.3
       baz=122
N30M   Aishikik Lake      57.28 336  P     P      21 13 50.6 +0.8
       baz=126
YUK6   Outpost Mounta     57.49 335  P     P      21 13 52.1 +0.6
       baz=124
PINM   Pinnacle           57.82 334  P     P      21 13 54.6 +0.9
       baz=122
M30M   Minto, Yukon       57.83 337  P     P      21 13 54.0 +0.4
M30M                                 IAmb  IAmb   21 13 55.8
       comp=Z,15nm,1.4s
M30M   Minto, Yukon       57.83 337  P     P      21 13 54.7 +1.1
       baz=126,SNR=5.7
YUK4   Talbot Arm         57.83 336  P     P      21 13 54.7 +0.8
       baz=124
PLCA   Paso Flores        57.99 161  LR    LR     21 34 04.9
       comp=Z,113nm,18.3s,baz=316,slow=31
YUK8   Steele Glacier     58.25 335  P     P      21 13 57.5 +0.6
       baz=123
M29M   Somme Creek        58.38 337  P     P      21 13 58.6 +1.1
       baz=125
L29M   L29M               58.64 338  P     P      21 13 60.0 +0.7
       baz=125
CTG    Chitna Glacier     58.73 334  P     P      21 14 00.6 +0.5
       baz=121
YUK3   Moose Creek        58.80 336  P     P      21 14 01.3 +0.7
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	baz=122						
K29M	Barlow Dome	58.85	338	P	P	21 14 01.4	+0.6
	baz=126						
BVCY	Beaver Creek	59.30	336	P	P	21 14 05.2	+1.3
	baz=122						
J29M	Klondike Camp	59.45	339	P	P	21 14 06.3	+1.4
	baz=126						
SFJD	Kangerlussuaq	59.63	18	LR	LR	21 41 53.6	
	comp=Z,122nm,18.2s,baz=206,slow=38						
DAWY	Dawson	59.65	338	P	P	21 14 06.7	+0.5
	baz=124						
MCARA	McCarthy VSAT	59.65	334	P	P	21 14 07.0	+0.7
	baz=119						
M27K	Edge Creek, AK	59.67	336	P	P	21 14 07.2	+0.6
	baz=121						
F31M	Tsiigehtchic	59.91	343	P	P	21 14 08.6	+0.7
	baz=132,SNR=7.0						
BCAR	Beaver Creek A	60.00	336	P	P	21 14 08.8	+0.1
GLB	Gilahina Butte	60.01	334	P	P	21 14 09.8	+1.0
GLB				IAmb	IAmb	21 14 11.4	
	comp=Z,6.3nm,0.8s						
L27K	Beaver Creek,	60.02	336	P	P	21 14 09.3	+0.5
	baz=122,SNR=6.4						
I29M	Ogilvie Camp,	60.02	340	P	P	21 14 08.6	-0.2
I29M				IAmb	IAmb	21 14 10.2	
	comp=Z,6.9nm,1.0s						
I29M	Ogilvie Camp,	60.02	340	P	P	21 14 09.4	+0.6
	baz=126						
EPYK	Eagle Plains	60.11	341	P	P	21 14 09.8	+0.3
EPYK	Eagle Plains	60.11	341	P	P	21 14 10.1	+0.7
	baz=128						
M26K	Nabesna, AK	60.14	335	P	P	21 14 10.2	+0.5
	baz=120						
Q23K	Middleton Isla	60.23	331	P	P	21 14 11.1	+0.9
	baz=115						
N25K	Chitina, Valde	60.42	334	P	P	21 14 12.5	+0.8
N25K	Chitina, Valde	60.42	334	P	P	21 14 13.1	+1.4
	baz=118,SNR=5.7						
INK	Inuvik	60.43	344	LR	LR	21 44 40.9	
	comp=Z,111nm,18.5s,baz=304,slow=40						
INK	Inuvik	60.43	344	P	P	21 14 11.5	+0.1
INK	Inuvik	60.43	344	P	P	21 14 12.1	+0.6
	baz=133,SNR=12						
EYAK	Cordova Ski Ar	60.44	333	P	P	21 14 12.7	+1.1
	baz=116						
K27K	Chicken	60.62	337	P	P	21 14 14.0	+1.2
	baz=122						
EGAK	Eagle	60.68	338	P	P	21 14 13.4	+0.1
EGAK				IAmb	IAmb	21 14 16.1	
	comp=Z,6.9nm,1.0s						
EGAK	Eagle	60.68	338	P	P	21 14 14.4	+1.1
	baz=123						
KLU	Klutina	60.93	334	P	P	21 14 15.2	0.0
KLU	Klutina	60.93	334	P	P	21 14 16.4	+1.3
	baz=117						
HARP	HAARP	61.02	335	P	P	21 14 17.3	+1.6
	baz=118						
DOT	Dot Lake	61.19	336	P	P	21 14 16.5	-0.3
DOT				IAmb	IAmb	21 14 20.6	
	comp=Z,6.0nm,0.9s						
I27K	Kandik River	61.30	339	P	P	21 14 18.5	+1.0
	baz=123						
M24K	Tolsona, Glenn	61.31	334	P	P	21 14 18.9	+1.2
	baz=117						
SCRK	Sand Creek	61.32	337	P	P	21 14 18.6	+0.9
	baz=120						
PAX	Paxson	61.42	335	P	P	21 14 18.1	-0.4
PAX				IAmb	IAmb	21 14 21.1	
	comp=Z,6.3nm,1.0s						
PAX	Paxson	61.42	335	P	P	21 14 19.2	+0.7
	baz=118						
J26L	Joseph Creek	61.42	337	P	P	21 14 19.4	+1.0
	baz=120						
RIDG	Independent Ri	61.53	336	P	P	21 14 20.2	+1.0
	baz=119						
H27K	Steamboat Moun	61.61	340	P	P	21 14 20.8	+1.2
	baz=123,SNR=9.4						
I26K	Coal Creek Min	61.68	338	P	P	21 14 20.6	+0.6
	baz=121						
SCM	Sheep Creek Mo	61.69	334	P	P	21 14 20.7	+0.5
	baz=115						
M23K	Glacier View	61.84	334	P	P	21 14 21.6	+0.4
	baz=115						
K24K	Donnelly Dome	61.93	336	P	P	21 14 22.8	+1.0
	baz=118						
SEW	Seward	61.94	331	P	P	21 14 22.4	+0.6
	baz=112						
G27K	Doyon Strip	61.97	340	P	P	21 14 22.4	+0.3
	baz=123						
KNK	Knik Glacier	62.00	333	P	P	21 14 22.7	+0.4
KNK	Knik Glacier	62.00	333	P	P	21 14 23.1	+0.8
	baz=114						
SML	Sawmill	62.11	334	P	P	21 14 23.4	+0.4
	baz=114						
GHO	Glory Hole Cre	62.35	333	P	P	21 14 25.1	+0.4
PMR	Palmer	62.37	333	P	P	21 14 25.6	+0.9
	baz=114						
BRSE	Bradley Lake S	62.40	331	P	P	21 14 25.3	+0.3
	baz=111						
RC01	Rabbit Creek A	62.44	332	P	P	21 14 25.9	+0.7
RC01	Rabbit Creek A	62.44	332	P	P	21 14 25.4	+0.2
	baz=113						
PRP	Porcupine Dome	62.65	338	P	P	21 14 26.8	0.0
PRP				IAmb	IAmb	21 14 30.6	
	comp=Z,5.5nm,0.8s						
PRP	Porcupine Dome	62.65	338	P	P	21 14 27.1	+0.4
	baz=119						
KDAK	Kodiak Island	62.65	328	LR	LR	21 44 50.6	
	comp=Z,51nm,18.9s,baz=82,slow=39						
HDA	Harding Lake	62.66	336	P	P	21 14 26.3	-0.4
HDA	Harding Lake	62.66	336	P	P	21 14 27.6	+0.9
	baz=117						
E27K	Coleen River	62.72	341	P	P	21 14 27.7	+0.7
	baz=124						
G26K	Porcupine Rive	62.76	340	P	P	21 14 28.1	+0.8
	baz=121						
HOM	Homer	62.80	331	P	P	21 14 27.4	-0.2
	baz=110						
IL31		62.81	337	P	P	21 14 27.1	-0.4
ILAR	Eielson Array	62.81	337	P	P	21 14 27.9	+0.2
	comp=Z,5.7nm,0.9s,baz=125,slow=4.2,SNR=36						
ILAR				LR	LR	21 44 06.5	
	comp=Z,99nm,18.4s,baz=84,slow=38						
	comp=Z,5.7nm,0.9s						
RND	Reindeer	62.99	335	P	P	21 14 29.4	+0.5
SUA	Susitna One	63.03	333	P	P	21 14 29.2	-0.1
	baz=112						
MCK	McKinley	63.16	335	P	P	21 14 30.0	0.0
	baz=115						
POKR	Poker Plat Res	63.17	337	P	P	21 14 31.1	+1.1
	baz=117						
CUT	Chulitna	63.18	334	P	P	21 14 31.2	+1.1
	baz=113						
COLA	College	63.22	337	P	P	21 14 30.0	-0.3
COLA	College	63.22	337	P	P	21 14 31.4	+1.1
	baz=116						
TCOL	CIGO, UAF Yank	63.23	337	P	P	21 14 29.9	-0.4
TCOL	CIGO, UAF Yank	63.23	337	P	P	21 14 31.1	+0.8
	baz=116						
F26K	Sheenjek River	63.26	340	P	P	21 14 31.3	+0.7
	baz=121						
BMAR	Burnt Mountain	63.27	340	P	P	21 14 30.5	-0.2
O20K	Slope Mountain	63.41	331	P	P	21 14 32.1	+0.3
	baz=109						
G25K	Bearman Lake	63.46	339	P	P	21 14 32.8	+0.9
	baz=119						
BWN	Browne	63.55	336	P	P	21 14 32.2	-0.3
P19K	Oil Pt	63.56	330	P	P	21 14 33.3	+0.6
	baz=109						
NEA2	Nenana	63.57	336	P	P	21 14 33.0	+0.3
NEA2	Nenana	63.57	336	P	P	21 14 32.7	0.0
	baz=115						
SKT	Skwentna	63.57	333	P	P	21 14 32.7	0.0
SKT	Skwentna	63.57	333	P	P	21 14 33.1	+0.3
	baz=111						
TRF	Thorofare Moun	63.60	335	P	P	21 14 32.9	-0.2
TRF	Thorofare Moun	63.60	335	P	P	21 14 33.6	+0.5
	baz=113,SNR=7.2						
SPCR	Spurr Chakacha	63.60	332	P	P	21 14 33.4	+0.4
	baz=110						
RSO	Redoubt South	63.60	331	P	P	21 14 32.8	-0.4
H24K	Noodor Dome	63.66	338	P	P	21 14 34.3	+1.0
	baz=117,SNR=9.2						
F25K	Christian Rive	63.71	340	P	P	21 14 34.7	+1.1
	baz=120						
KTH	Kantishna Hill	63.90	335	P	P	21 14 34.9	-0.1
G24K	Hadweenzic Riv	63.91	339	P	P	21 14 35.6	+0.7
	baz=117						
I23K	Minto, Yukon-K	63.92	337	P	P	21 14 35.0	+0.1
I23K	Minto, Yukon-K	63.92	337	P	P	21 14 35.7	+0.8
	baz=115,SNR=10.0						
E25K	Arctic Village	63.95	340	P	P	21 14 36.3	+1.2
	baz=120,SNR=9.5						
Q18K	Katmai Hardscr	64.14	329	P	P	21 14 36.7	+0.1
	baz=106						
BPAW	Bear Paw Mtn.	64.14	335	P	P	21 14 36.0	-0.4
BPAW				IAmb	IAmb	21 14 38.9	
	comp=Z,6.9nm,1.0s						
BPAW	Bear Paw Mtn.	64.14	335	P	P	21 14 37.3	+0.8
	baz=113						
C27K	Jago River	64.15	342	P	P	21 14 37.5	+1.1
	baz=122						
PPLA	Purkeypile	64.19	334	P	P	21 14 37.4	+0.4
	baz=111						
M20K	Styx River	64.25	333	P	P	21 14 37.4	+0.1
	baz=110						
O19K	Port Alsworth	64.25	331	P	P	21 14 37.6	+0.4
	baz=108						
H23K	Yukon River	64.27	337	P	P	21 14 38.3	+1.0
	baz=115						
CAST	Castle Rocks	64.33	334	P	P	21 14 38.0	+0.3
	baz=111,SNR=5.8						
MLY	Manley	64.40	336	P	P	21 14 38.2	0.0
MLY	Manley	64.40	336	P	P	21 14 38.4	+0.2
	baz=113,SNR=14						
F24K	Squaw Lake	64.43	339	P	P	21 14 39.5	+1.1
	baz=117						
Q17K	Contact Creek	64.47	328	P	P	21 14 39.6	+0.7
	baz=106						
N19K	Bonanza Creek	64.52	331	P	P	21 14 39.6	+0.5
	baz=108						
CHUM	Lake Minchumin	64.60	335	P	P	21 14 39.8	+0.4
	baz=111						
C26K	Camden Bay	64.66	342	P	P	21 14 40.9	+1.2
	baz=121						
PPT	Papeete	64.67	243	LR	LR	21 35 22.7	
	comp=Z,108nm,20.9s,baz=90,slow=29						
L20K	Farewell, AK	64.78	333	P	P	21 14 40.7	+0.1
	baz=109						
D25K	Kavik River	64.80	341	P	P	21 14 41.8	+1.1
	baz=120						
M19K	Big River Lodg	64.82	332	P	P	21 14 41.4	+0.5
	baz=108						
G23K	Bananza Creek	64.82	338	P	P	21 14 41.8	+0.9
	baz=115						
E24K	Your Creek	64.89	340	P	P	21 14 42.0	+0.7
	baz=117						
I21K	Tanana	64.95	336	P	P	21 14 42.1	+0.4
	baz=112						
Q16K	King Salmon	64.97	329	P	P	21 14 42.5	+0.6
	baz=105						
H22K	Ishtalitna Cre	64.99	337	P	P	21 14 42.4	+0.4
	baz=113						
COLD	Coldfoot	65.11	339	P	P	21 14 43.2	+0.5
COLD				IAmb	IAmb	21 14 45.3	
	comp=Z,9.6nm,1.3s						
COLD	Coldfoot	65.11	339	P	P	21 14 43.2	+0.5
	baz=115						
L19K	White Mountain	65.11	333	P	P	21 14 43.1	+0.3
	baz=108						
K20K	Telida	65.15	334	P	P	21 14 43.6	+0.5
	baz=110,SNR=7.4						
E23K	Chandalar	65.26	340	P	P	21 14 44.7	+1.0
	baz=116						
CHGN	Chignik	65.34	326	P	P	21 14 44.7	+0.4
	baz=102						
H21K	Melozitna Rive	65.44	337	P	P	21 14 43.2	-1.8
H21K				IAmb	IAmb	21 14 47.4	
	comp=Z,5.2nm,1.0s						
H21K	Melozitna Rive	65.44	337	P	P	21 14 45.0	+0.1
	baz=112						
G22K	Bettles	65.45	338	P	P	21 14 45.7	+0.8
	baz=114						
O17K	Koliganek Bris	65.47	330	P	P	21 14 45.6	+0.5
	baz=105						
C24K	Franklin Bluff	65.71	341	P	P	21 14 47.4	+0.9
	baz=118						
P16K	Nushagak River	65.73	329	P	P	21 14 47.5	+0.7
	baz=104						
TTA	Tatalina	65.85	333	P	P	21 14 46.9	-0.8
TTA	Tatalina	65.85	333	P	P	21 14 47.9	+0.2
	baz=107,SNR=7.0						
F22K	John River	65.92	339	P	P	21 14 49.0	+1.0
	baz=113						
O16K	Kokwok River B	65.92	329	P	P	21 14 47.7	-0.4
	baz=104						
IMAR	Indian Mountai	65.93	337	P	P	21 14 46.5	-1.5
D23K	Nanushuk River	66.00	340	P	P	21 14 49.8	+1.3
	baz=115						
G21K	Allakaket	66.03	337	P	P	21 14 49.5	+0.9
	baz=111						
F21K	Alatna River	66.28	338	P	P	21 14 51.1	+0.8
	baz=112,SNR=25						
N16K	Nishlik Lake	66.46	330	P	P	21 14 52.0	+0.4
	baz=104						
A21K	Barrow	68.79	342	P	P	21 15 05.8	-0.1
A21K				IAmb	IAmb	21 15 07.6	
	comp=Z,7.3nm,0.8s						
A21K	Barrow	68.79	342	P	P	21 15 06.7	+0.7
	baz=110						
BORG	Borgarnes	69.35	26	LR	LR	21 45 26.5	
	comp=Z,140nm,18.2s,baz=263,slow=36						
RDOG	Red Dog Mine	69.97	338	P	P	21 15 13.0	-0.4
RDOG				IAmb	IAmb	21 15 41.9	
	comp=Z,5.0nm,0.6s						
ANM	Nome	70.28	334	P	P	21 15 15.5	+0.2
	baz=99						
TNA	Tin City	71.49	335	P	P	21 15 23.0	+0.3
	baz=97						
SPIA	Saint Paul Isl	71.91	326	P	P	21 15 25.9	+0.5
	baz=92						
JMIC	Jan Mayen	74.87	20	LR	LR	21 48 23.8	
	comp=Z,100nm,20.2s,baz=250,slow=36						
ESDC	Sonseca Array	79.92	52	P	P	21 16 08.8	-2.8
	comp=Z,0.9nm,1.0s,baz=274,slow=5.0,SNR=2.0						
	comp=Z,0.9nm,1.0s						
SPITS	Spitsbergen Ar	80.19	11	LR	LR	21 52 21.4	
	comp=Z,70nm,20.7s,baz=232,slow=36						
BILL	Bilibino	81.43	338	P	P	21 16 18.9	-0.1
BILL				IAmb	IAmb	21 16 21.8	
	comp=Z,8.2nm,0.8s						
NOA	NORSAR Array B	84.30	28	LR	LR	21 52 03.3	
	comp=Z,34nm,22.0s,baz=285,slow=34						
HFS	Hagfors	85.75	29	LR	LR	21 54 39.6	
	comp=Z,67nm,18.9s,baz=276,slow=36						
ARCES	ARCESS Array B	86.26	18	P	P	21 16 40.0	-3.7
	comp=Z,1.7nm,0.7s,baz=324,slow=5.6,SNR=4.2						
ARCES				LR	LR	21 54 37.1	
	comp=Z,54nm,21.0s,baz=282,slow=35						
	comp=Z,1.7nm,0.7s						
TIXI	Tiksi	90.27	348	LR	LR	22 01 14.3	
	comp=Z,25nm,21.4s,baz=12,slow=38						
TIXI	Tiksi	90.27	348	P	P	21 17 02.0	-0.7
TORD	Torodi Ar. Bea	90.60	76	P	P	21 17 03.1	-2.3
	comp=Z,0.3nm,0.9s,baz=302,slow=6.2,SNR=1.8						
NRIK	Noril'sk	96.93	0	LR	LR	22 06 04.3	
	comp=Z,64nm,18.3s,baz=346,slow=39						
YAK	Yakutsk	97.44	341	LR	LR	22 08 03.5	
	comp=Z,27nm,19.2s,baz=352,slow=40						
MDJ	Mudanjiang	110.44	329	Pdif	Pdif	21 18 32.8	-1.3
MDJ				PP	PP	21 23 20.3	+11
MDJ				AMB	AMB		
	comp=Z,140nm,10.0s						
MKAR	Makanchi Array	119.34	4	PKP	PKPdf	21 22 50.0	-1.9
	comp=Z,0.3nm,0.8s,baz=342,slow=2.6,SNR=2.7						
WRA	Warramunga Arr	135.17	256	PKP	PKPdf	21 23 22.8	0.0
	comp=Z,0.3nm,0.6s,baz=87,slow=1.9,SNR=4.6						
PZH	PanZhiHua	137.56	341	PKP	PKPdf	21 23 24.6	-2.6
CMAR	Chiang Mai Arr	145.97	341	PKPbc	PKPdf	21 23 43.0	+0.7
	comp=Z,12nm,0.8s,baz=341,slow=3.8,SNR=55						

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*IDC **13** 21:10:59.0±1.3, 0.°86N×120.°97E, h0^{km}, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=156.8km s-min=22.4km az=65.0*

*DJA **13** 21:11:00.6±0.3, 1˚N±3˚×12˚1E±˚, h10^{km}, M4.1/10, mb4.2/4, MLv4.0/10*

ISC 13 21:11:00.1±0.9**, 0.°91N**±0.°08×**120.°72E**±0.°05**, h10^{km}, n12, σ1.°92**/16**, mb3.4**/4**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPSI	Mapaga	1.00	235	P	Pg	21 11 17.0	-2.3
MPSI				S	Sg	21 11 29.4	-2.9
MRSI	Marisa	1.30	109	P	Pn	21 11 23.1	-1.2
MRSI				S	Sb	21 11 39.8	-1.6
GTOI	Gorontalo	2.31	97	P	Pn	21 11 37.4	-0.8
LUWI	Luwuk	2.83	133	P	Pn	21 11 47.6	+2.3
LUWI				S	Sn	21 12 21.5	+2.0
SPSI	Sidrap Palu	4.94	191	P	Pn	21 12 16.4	+2.0
SANI	Sanana	6.04	119	P	Pn	21 12 30.1	+0.6
	8.7nm,0.4s,0.1nm						
BKSI	Bulukumba	6.22	185	P	Pn	21 12 34.2	+2.2
	13nm,0.7s,0.1nm						
LBMI	Labuha	6.96	103	P	Pn	21 12 42.9	+0.7
	22nm,0.5s,0.1nm						
WRA	Warramunga Arr	24.66	148	P	P	21 16 19.2	-2.0
	1.2nm,0.8s,baz=325,slow=11,SNR=8.7						
	1.2nm,0.8s						
ASAR	Alice Springs	27.59	153	P	P	21 16 48.0	+0.2
	0.4nm,0.9s,baz=342,slow=15,SNR=5.9						
	0.4nm,0.9s						
SONM	Songino Array	48.36	347	P	P	21 19 44.4	+2.2
	0.4nm,0.8s,baz=168,slow=7.4,SNR=4.0						
SONM				PcP	PcP	21 21 08.1	-0.7
	0.3nm,0.8s,baz=144,slow=2.7,SNR=2.8						
	0.4nm,0.8s						
MKAR	Makanchi Array	56.66	329	P	P	21 20 44.8	+1.2
	0.2nm,0.6s,baz=120,slow=8.5,SNR=2.4						
	0.2nm,0.6s						

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*MEX **13** 21:15:57.6±0.4, 14.°14N×92.°20W, h84^{km}±13^{km}, MD4.0*

*GCG **13** 21:15:58.5±0.8, 14.°11N×92.°24W, h50^{km}±401^{km}, MD3.9*

ISC 13 21:15:56.7±3.1**, 14.°1N**±0.°1×**92.°33W**±0.°07**, h17**^{km}±15^{km}**, n12, σ0.°71**/20**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.76	5	*i* P	Pn	21 16 12.9	+0.2
THIG				*e*S	Sn	21 16 24.7	+0.8
STG3	Santiaguito 3,	0.93	52	*e*P	Pn	21 16 15.2	0.0
CHUJ	Union Juarez	0.97	13	*e*P	Pb	21 16 15.2	-0.1
CHUJ				*e*S	Sn	21 16 29.1	-0.3
PATR	El Naranjo	0.97	6	*e*P	Pb	21 16 15.2	-0.1
PATR				*e*S	Sg	21 16 28.8	+0.2
PAVE	Pavencul	1.06	8	*i* P	Pb	21 16 16.6	-0.1
PAVE				*i* S	Sn	21 16 31.2	-0.2
FUG	Fuego 3	1.48	78	*e*P	Pn	21 16 21.9	-0.8
PCG	Pacaya	1.69	81	*e*P	Pn	21 16 25.4	-0.4
PCIG		1.77	331	*e*P	Pn	21 16 26.1	-0.5
PCIG				*e*S	Sn	21 16 48.7	-0.1
NBG	Las Nubes	1.98	77	*e*P	Pn	21 16 30.6	+1.0
CCIG	Comitan	2.14	5	*e*P	Pb	21 16 35.0	-0.1
CCIG				*i* S	Sn	21 16 59.0	+1.0
TGIG		2.73	344	*e*P	Pn	21 16 39.3	-0.6
TGIG				*e*S	Sn	21 17 11.0	-1.5
CMIG	Matias Romero	3.83	320	*e*P	Pn	21 16 55.2	+0.4
CMIG				*e*S	Sn	21 17 40.7	+1.2

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*GUC **13** 21:26:38.9±0.7, 21.°18S×68.°57W, h123^{km}±4^{km}, ML3.4*

*IDC **13** 21:26:38.5±0.9, 21.°20S×68.°20W, h109^{km}±15^{km}, mb3.8/1, mbtmp3.8/4, Error ellipse: s-maj=42.2km s-min=10.4km az=102.0*

ISC 13 21:26:38.5±0.9**, 21.°15S**±0.°03×**68.°62W**±0.°08**, h125**^{km}±9^{km}**, n25, σ0.°86**/44**, 6C-4D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	IPOC Station P	0.82	278	⇑*i*P	Pn	21 26 59.1	-0.4
PB01				*e*S	Sn	21 27 14.9	-0.5
PB01				IAML		21 27 16.2	
	comp=E,1µm,0.2s						
PB09	IPOC Station P	0.86	222	⇑*i*P	Pn	21 27 00.4	+0.4
PB09				*i* S	Sn	21 27 17.0	+0.8
PB09				IAML		21 27 18.9	
	comp=E,342nm,0.5s						
PB08	IPOC Station P	1.13	333	⇓*i*P	Pn	21 27 03.0	+0.4
PB08				*i* S	Sn	21 27 21.1	+0.2
PB08				IAML		21 27 24.4	
	comp=E,458nm,0.2s						
PB02	IPOC Station P	1.21	262	⇑*i*P	Pn	21 27 03.2	0.0
PB02				*i* S	Sn	21 27 21.7	-0.2
PB02				IAML		21 27 23.6	
	comp=E,1µm,0.2s						
PB07	IPOC Station P	1.31	244	⇑*i*P	Pn	21 27 04.3	-0.1
PB07				*i* S	Sn	21 27 24.1	0.0
PB07				IAML		21 27 25.6	
	comp=E,588nm,0.2s						
PB03	IPOC Station P	1.38	230	⇑*i*P	Pn	21 27 05.1	-0.1
PB03				*i* S	Sn	21 27 25.1	-0.3
PB03				IAML		21 27 25.8	
	comp=E,688nm,0.1s						
LVC	Limon Verde	1.48	191	P	Pn	21 27 06.6	+0.2
	comp=E,103nm,0.4s,baz=14,slow=8.9,SNR=201						
LVC				S	Sn	21 27 27.1	-0.5
	comp=E,81nm,0.3s,baz=90,slow=23,SNR=70						
LVC	Limon Verde	1.48	191	*e*P	Pn	21 27 06.1	-0.3
LVC				*i* S	Sn	21 27 27.4	-0.2
GO01	Chusmiza	1.57	340	⇓*i*P	Pn	21 27 07.9	+0.3
GO01				*i* S	Sn	21 27 30.7	+1.0
TA01	Diego Aracena	1.57	292	*e*P	Pn	21 27 07.0	-0.1
TA01				*i* S	Sn	21 27 28.5	-0.5
TA01				IAML		21 27 29.2	
	comp=N,792nm,0.2s						
PB11	IPOC Station P	1.69	325	⇓*i*P	Pn	21 27 08.6	-0.2
PB11				*i* S	Sn	21 27 31.6	-0.1
PB11				IAML		21 27 34.9	
	comp=N,726nm,0.5s						
PB06	IPOC Station P	1.78	210	⇑*i*P	Pn	21 27 09.8	0.0
PB06				*i* S	Sn	21 27 33.3	-0.3
PB06				IAML		21 27 34.1	
	comp=E,703nm,0.7s						
PB04	IPOC Station P	1.85	230	*e*P	Pn	21 27 10.7	+0.1
PB04				*e*S	Sn	21 27 35.0	0.0
PB04				IAML		21 27 41.9	
	comp=N,430nm,0.5s						
PSGC	Pisagua	2.10	317	*e*P	Pn	21 27 12.9	-0.6
PSGC				*i* S	Sn	21 27 39.6	-0.7
PSGC				IAML		21 27 41.5	
	comp=E,299nm,0.4s						
PB15	IPOC Station P	2.19	201	⇓*i*P	Pn	21 27 15.1	+0.2
PB15				*i* S	Sn	21 27 42.7	0.0
MNMC	Minye Minye	2.21	335	*e*P	Pn	21 27 15.7	+0.5
MNMC				*i* S	Sn	21 27 44.2	+1.0
PB16	IPOC Station P	2.93	343	*e*P	Pn	21 27 25.6	+1.0
PB16				*i* S	Sn	21 28 01.6	+1.6
PB16				IAML		21 28 08.8	
	comp=E,49nm,0.6s						
PB10	IPOC Station P	2.96	217	*e*P	Pn	21 27 23.9	-0.5
PB10				IAML		21 28 12.2	
	comp=N,70nm,0.4s						
PB12	IPOC Station P	3.00	327	*e*P	Pn	21 27 23.7	-1.3
PB12				*i* S	Sn	21 28 00.0	-0.9
GO02	Mina Guanaco	4.09	192	*e*P	Pn	21 27 39.0	-0.7
LPAZ	La Paz	4.86	6	P	Pn	21 27 50.6	+0.3
	comp=N,2.0nm,0.4s,baz=198,slow=2.5,SNR=7.0						
LPAZ				S	Sn	21 28 46.8	+0.7
	comp=N,2.1nm,0.7s,baz=180,slow=14,SNR=4.7						
SIV	San Ignacio	8.80	56	P	Pn	21 28 39.1	-3.8
	comp=N,5.1nm,0.6s,baz=245,slow=13,SNR=18						
PLCA	Paso Flores	19.59	184	P	P	21 30 57.7	+0.8
	comp=N,1.8nm,0.9s,baz=14,slow=14,SNR=1.4						
TORD	Torodi Ar. Bea	76.98	70	P	P	21 38 17.4	-0.6
	comp=N,1.0nm,0.5s,baz=258,slow=5.2,SNR=11						
	comp=N,1.0nm,0.5s						
MKAR	Makanchi Array	145.19	36	PKPbc	PKPdf	21 46 02.5	+1.2
	comp=N,0.4nm,0.6s,baz=299,slow=5.0,SNR=5.8						

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*GCG **13** 21:37:31.6±0.4, 14.°05N×92.°37W, h76^{km}±12^{km}, MD3.7*

*MEX **13** 21:37:34.3±0.3, 14.°04N×92.°35W, h15^{km}, MD4.0*

ISC 13 21:37:31.1±2.4**, 14.°16N**±0.°09×**92.°36W**±0.°06**, h2**^{km}±14^{km}**, n12, σ0.°89**/20**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SULM	Suchitepequez,	0.79	80	*e*P	Pb	21 37 48.3	+0.8
STG3	Santiaguito 3,	0.94	55	*e*P	Pn	21 37 51.3	-0.2
STG3				*e*S	Sn	21 38 06.8	+1.1
PATR	El Naranjo	0.96	7	*e*P	Pn	21 37 51.2	-0.5
PATR				*e*S	Sb	21 38 04.3	+0.6
CHUJ	Union Juarez	0.96	15	*e*P	Pn	21 37 51.1	-0.7
CHUJ				*e*S	Sn	21 38 04.6	-1.6
PAVE	Pavencul	1.04	10	*e*P	Pn	21 37 52.6	-0.3
PAVE				*e*S	Sb	21 38 06.3	+0.1
FUG	Fuego 3	1.50	79	*e*P	Pn	21 37 58.0	-1.2

PCG	**Pacaya**	**1.72**	**82**	*e*P	**Pn**	**21 38 00.9**	**-1.4**
PCIG		**1.74**	**332**	*e*P	**Pn**	**21 38 02.5**	**+0.1**
PCIG				*e*S	**Sn**	**21 38 24.1**	**-1.1**
NBG	**Las Nubes**	**2.00**	**78**	*e*P	**Pn**	**21 38 06.2**	**+0.1**
CCIG	**Comitan**	**2.12**	**6**	*e*P	**Pg**	**21 38 11.9**	**+0.2**
CCIG				*e*S	**Sg**	**21 38 38.5**	**-0.7**
TGIG		**2.70**	**344**	*e*P	**Pb**	**21 38 20.5**	**+0.3**
TGIG				*i* S	**Sn**	**21 38 50.0**	**+1.1**
CMIG	**Matias Romero**	**3.79**	**320**	*e*P	**Pn**	**21 38 29.9**	**-0.7**
CMIG				*e*S	**Sn**	**21 39 16.4**	**+0.6**

*FUNV **13** 21:39:57.7, 12°.22N×69°.73W, h38^{km}, MW3.8*
ISC 13 21:39:57.4±1.1**, 12°.05N**±0°.06×**69°.69W**±0°.04**, h25**^{km}**, n30,**
σ**1^{s}.86**/41**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUA1	**Aruba**	**0.55**	**326**	*e*P	**Pb**	**21 40 07.9**	**-0.6**
JACV	**Jacura**	**1.28**	**138**	*e*P	**Pb**	**21 40 20.9**	**0.0**
JACV				*e*S	**Sb**	**21 40 38.3**	**+1.5**
SIQV	**Siquisique**	**1.40**	**185**	*e*P	**Pn**	**21 40 22.0**	**+0.6**
SIQV				*e*S	**Sb**	**21 40 41.1**	**+0.8**
URIC	**Uribia, Colomb**	**2.28**	**262**	*e*P	**Pn**	**21 40 34.5**	**+1.1**
TURV	**Turiamo**	**2.42**	**131**	*e*P	**Pn**	**21 40 35.0**	**-0.4**
MAPV	**Macapo**	**2.52**	**151**	*e*P	**Pn**	**21 40 36.9**	**+0.1**
MAPV				*e*S	**Sn**	**21 41 06.6**	**-0.1**
BENV	**Beln**	**2.92**	**135**	*e*P	**Pn**	**21 40 43.9**	**+1.5**
BENV				*e*S	**Sn**	**21 41 16.6**	**-0.1**
TACV	**Tcata**	**3.23**	**126**	*e*P	**Pn**	**21 40 46.5**	**-0.2**
TACV				*e*S	**Sn**	**21 41 23.0**	**-1.5**
FUNV	**FUNVISIS**	**3.23**	**119**	*e*P	**Pn**	**21 40 46.5**	**-0.3**
FUNV				*e*S	**Sn**	**21 41 22.6**	**-1.9**
CRJC	**Cerrejon, Guaj**	**3.29**	**252**	*e*P	**Pn**	**21 40 48.2**	**+0.7**
BAUV	**El Baul**	**3.49**	**152**	*e*P	**Pn**	**21 40 50.6**	**+0.5**
BAUV				*e*S	**Sn**	**21 41 29.5**	**-1.2**
BIRV	**Birongo**	**3.71**	**115**	*e*P	**Pn**	**21 40 52.6**	**-0.5**
BIRV				*e*S	**Sn**	**21 41 33.4**	**-2.6**
SOCV	**Socops**	**3.91**	**197**	*e*P	**Pn**	**21 40 57.0**	**+0.9**
SOCV				*e*S	**Sn**	**21 41 40.0**	**-1.2**
MERV	**Las Mercedes**	**4.34**	**129**	*e*P	**Pn**	**21 41 01.6**	**-0.3**
MERV				*e*S	**Sn**	**21 41 48.7**	**-3.2**
SMRC	**Santa Marta, M**	**4.53**	**259**	*e*P	**Pn**	**21 41 06.6**	**+2.2**
CAPV	**Capacho**	**4.89**	**212**	*e*P	**Pn**	**21 41 09.7**	**0.0**
CAPV				*e*S	**Sn**	**21 42 00.6**	**-5.1**
CACV	**CAICARA DEL OR**	**5.43**	**145**	*e*P	Pn	21 41 21.9	+5.0
CACV				*e*S	**Sn**	**21 42 24.2**	**+5.6**
PAMC	**Pamplona, Colo**	**5.54**	**213**	*e*P	**Pn**	**21 41 19.4**	**+0.6**
SJCC	**San Jacinto, C**	**5.80**	**249**	*e*P	**Pn**	**21 41 24.2**	**+2.2**
BARC	**Barichara**	**6.42**	**213**	*e*P	**Pn**	**21 41 31.9**	**+1.2**
ZARC	**Zaragoza, Cauc**	**6.81**	**229**	*e*P	**Pn**	**21 41 38.7**	**+2.8**
RUSC	**La Rusia**	**6.97**	**209**	*e*P	**Pn**	**21 41 39.1**	**+0.6**
UREC	**San Jos de Ur**	**7.16**	**234**	*e*P	**Pn**	**21 41 38.7**	**-2.0**
PTBC	**PUERTO BERRIO,**	**7.21**	**221**	*e*P	**Pn**	**21 41 41.3**	**-0.1**
SPBC	**San Pablo de B**	**7.69**	**215**	*e*P	**Pn**	**21 41 44.5**	**-3.5**
NORC	**Norcasia**	**8.23**	**219**	*e*P	**Pn**	**21 41 56.2**	**+0.8**
CHIC	**Chingaza**	**8.38**	**209**	*e*P	**Pn**	**21 41 57.8**	**0.0**
CBOC	**Ciudad Bolivar**	**8.76**	**226**	*e*P	**Pn**	**21 42 04.1**	**+1.4**
GUY2C	**Guyana, Caldas**	**8.80**	**220**	*e*P	**Pn**	**21 42 04.4**	**+0.9**
PRAC	**Prado**	**9.75**	**212**	*e*P	**Pn**	**21 42 16.9**	**+0.7**

IDC 13 22:11:41.8±2.7**, 6°.97S**×**127°.94E, h0**^{km}**, mb3.3**/1**,**
mbtmp3.1/3**, ML3.0**/2**, Error ellipse: s-maj=325.0km**
s-min=32.7km az=65.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.32**	**155**	Pn	Pn	22 15 07.8	+1.8
	0.1nm,0.3s,baz=335,slow=12,SNR=1.8						
WRA				Sn	Sn	22 17 29.5	-16
	baz=330,slow=18,SNR=1.8						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**17.57**	**162**	P	Pn	22 15 47.0	-1.2
	0.1nm,0.3s,baz=344,slow=9.6,SNR=4.2						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**67.09**	**328**	P	P	22 22 37.2	0.0
	0.1nm,0.4s,baz=123,slow=6.3,SNR=4.9						
	0.1nm,0.4s						

IDC 13 22:21:16.3±1.5**, 5°.29S**×**151°.20E, h0**^{km}**, mb3.6**/2**,**
mbtmp3.7/2**, Error ellipse: s-maj=117.3km**
s-min=17.0km az=131.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.28**	**40**	Pn	Pn	22 21 42.3	+0.8
	113nm,0.3s,baz=202,slow=5.4,SNR=66						
KRVT				Sn	Sn	22 21 59.1	-0.3
	172nm,0.3s,baz=109,slow=23,SNR=22						
WRA	**Warramunga Arr**	**21.93**	**227**	P	P	22 26 11.2	-0.4
	1.4nm,0.5s,baz=52,slow=9.8,SNR=13						
	1.4nm,0.5s						
ASAR	**Alice Springs**	**24.73**	**221**	P	P	22 26 40.4	+0.7
	1.6nm,0.8s,baz=56,slow=9.3,SNR=18						
	1.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**148.93**	**287**	PKPbc	PKPbc	22 41 05.7	-1.6
	0.4nm,0.7s,baz=93,slow=1.9,SNR=2.4						

ROM 13 22:27:26.4±0.1**, 42°.767N**±0°.002×**13°.065E**±0°.003**,**
h10^{km}**, ML1.7**/30**, 20C-6D, Error ellipse: s-maj=0.2km**
s-min=0.1km az=103.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.02**	**225**	P	Pg	22 27 28.4	+0.2
T1212				S	Sg	22 27 29.7	+0.1
T1212				AML	AML		
	comp=E,2815µm,0.2s						
T1212				AML	AML		
	comp=E,2795µm,0.3s						
T1212				AML	AML		
	comp=N,4320µm,0.2s						
T1212				AML	AML		
	comp=N,4295µm,0.2s						
T1212				AML	AML		
	comp=E,2795µm,1.7s						
T1212				AML	AML		
	comp=E,2815µm,1.8s						
T1218	**Civita (PG)**	**0.10**	**159**	⇓P	Pg	22 27 29.4	+0.3
T1218				S	Sg	22 27 31.7	+0.6
T1218				AML	AML		
	comp=E,1665µm,0.2s						
T1218				AML	AML		
	comp=N,2885µm,0.4s						
T1218				AML	AML		
	comp=N,2840µm,0.4s						
T1218				AML	AML		
	comp=E,1605µm,0.2s						
T1218				AML	AML		
	comp=N,2835µm,0.4s						
T1218				AML	AML		
	comp=E,1665µm,0.3s						
T1218				AML	AML		
	comp=N,2885µm,0.4s						
T1218				AML	AML		
	comp=N,2835µm,1.6s						
T1218				AML	AML		
	comp=N,2885µm,1.6s						
T1218				AML	AML		
	comp=E,1665µm,1.7s						
T1218				AML	AML		
	comp=E,1605µm,1.8s						
T1214	**Arquata del Tr**	**0.11**	**94**	⇓P	Pg	22 27 29.6	+0.3
T1214				S	Sg	22 27 31.7	+0.5
T1214				AML	AML		
	comp=E,1770µm,0.2s						
T1214				AML	AML		
	comp=E,1735µm,0.5s						
T1214				AML	AML		
	comp=N,1505µm,0.1s						
T1214				AML	AML		
	comp=N,1575µm,0.1s						
T1214				AML	AML		
	comp=E,1735µm,0.5s						
T1214				AML	AML		
	comp=N,1505µm,0.1s						
T1214				AML	AML		
	comp=E,1770µm,1.8s						
T1214				AML	AML		
	comp=E,1735µm,1.5s						
T1217	**Poggiodomo (PG**	**0.11**	**241**	P	Pg	22 27 29.6	+0.3
T1217				S	Sg	22 27 32.2	+1.0
T1217				AML	AML		
	comp=N,492µm,0.9s						
T1217				AML	AML		
	comp=N,492µm,0.9s						
T1217				AML	AML		
	comp=E,368µm,0.4s						
T1217				AML	AML		
	comp=N,492µm,1.1s						
T1245	**Castelsantange**	**0.13**	**45**	⇑P	Pg	22 27 29.9	+0.3
T1245				S	Sg	22 27 32.3	+0.6
T1245				AML	AML		
	comp=N,2960µm,0.7s						
T1245				AML	AML		
	comp=E,1505µm,0.7s						
T1245				AML	AML		
	comp=E,2000µm,0.2s						
T1245				AML	AML		
	comp=N,2960µm,0.7s						
T1245				AML	AML		
	comp=N,3080µm,0.7s						
T1245				AML	AML		
	comp=N,3080µm,1.3s						
T1245				AML	AML		
	comp=N,2960µm,1.3s						
T1216	**Preci, Frazion**	**0.13**	**345**	P	Pg	22 27 29.8	+0.3
T1216				S	Sg	22 27 32.4	+0.8
T1216				AML	AML		
	comp=E,644µm,0.1s						
T1216				AML	AML		
	comp=N,712µm,0.9s						
T1215	**Vallo di Nera,**	**0.15**	**284**	P	Pg	22 27 30.2	+0.4
T1215				S	Sg	22 27 32.9	+0.7
T1215				AML	AML		
	comp=E,442µm,0.2s						
T1215				AML	AML		
	comp=N,404µm,0.9s						
T1215				AML	AML		
	comp=N,404µm,0.9s						
T1215				AML	AML		
	comp=E,419µm,0.2s						
T1215				AML	AML		
	comp=N,416µm,0.9s						
T1215				AML	AML		
	comp=E,420µm,0.2s						
T1215				AML	AML		
	comp=N,416µm,0.9s						
T1215				AML	AML		
	comp=N,404µm,1.1s						
T1215				AML	AML		
	comp=N,416µm,1.1s						
T1215				AML	AML		
	comp=E,420µm,1.8s						
T1215				AML	AML		
	comp=E,442µm,1.8s						
MC2	**Monte Cornacci**	**0.17**	**32**	⇑P	Pg	22 27 30.7	+0.4
MC2				S	Sg	22 27 34.0	+1.1
MMO1	**Montemonaco**	**0.23**	**55**	⇑P	Pg	22 27 31.6	+0.3
SMA1	**SAN MARTINO**	**0.24**	**124**	⇑P	Pg	22 27 32.0	+0.6
SMA1				AML	AML		
	comp=N,300µm,0.6s						
SMA1				AML	AML		
	comp=E,246µm,0.3s						
SMA1				AML	AML		
	comp=N,300µm,1.4s						
CESI	**CESI - Serrava**	**0.27**	**334**	⇑P	Pg	22 27 32.5	+0.6
CESI				AML	AML		
	comp=E,160µm,0.3s						
CESI				AML	AML		
	comp=N,476µm,0.2s						
CESI				AML	AML		
	comp=N,476µm,1.8s						
CESI				AML	AML		
	comp=E,160µm,1.7s						
T1256	**Bolognola (MC)**	**0.27**	**26**	⇑P	Pg	22 27 32.2	+0.3
FDMO	**Fiordimonte**	**0.27**	**3**	⇑P	Pg	22 27 32.2	+0.3
FDMO				AML	AML		
	comp=N,253µm,0.3s						
FDMO				AML	AML		
	comp=E,173µm,0.3s						
RM33	**Pellescritta (**	**0.28**	**157**	⇓P	Pg	22 27 32.3	+0.2
RM33				AML	AML		
	comp=N,152µm,0.4s						
RM33				AML	AML		
	comp=E,151µm,0.9s						
T1211	**Morro Reatino**	**0.28**	**214**	⇑P	Pg	22 27 32.4	+0.3
T1211				AML	AML		
	comp=E,357µm,1.5s						
T1211				AML	AML		
	comp=N,369µm,1.4s						
T1211				AML	AML		
	comp=N,369µm,1.4s						
T1211				AML	AML		
	comp=N,338µm,0.5s						
T1211				AML	AML		
	comp=E,354µm,0.1s						
T1211				AML	AML		
	comp=N,369µm,0.6s						
T1211				AML	AML		
	comp=E,357µm,0.5s						
T1241	**Roccafluvione,**	**0.28**	**71**	⇑P	Pg	22 27 32.4	+0.3
T1241				AML	AML		
	comp=E,459µm,1.3s						
T1241				AML	AML		
	comp=N,472µm,0.3s						
T1241				AML	AML		
	comp=E,459µm,0.7s						
ARRO	**Arrone**	**0.29**	**230**	⇑P	Pg	22 27 32.6	+0.4
ARRO				AML	AML		
	comp=E,132µm,1.4s						
ARRO				AML	AML		
	comp=N,120µm,0.2s						
T1219	**Muccia, Frazio**	**0.29**	**352**	S	Sg	22 27 37.3	+1.1
T1219				AML	AML		
	comp=N,194µm,1.4s						
T1219				AML	AML		
	comp=N,154µm,0.2s						
T1219				AML	AML		
	comp=E,167µm,0.8s						
T1219				AML	AML		
	comp=E,167µm,1.2s						
T1219				AML	AML		
	comp=N,194µm,0.6s						
T1219				AML	AML		
	comp=E,213µm,0.7s						
CSP1	**Cessapalombo**	**0.34**	**17**	⇑P	Pg	22 27 33.5	+0.2
CSP1				AML	AML		
	comp=E,122µm,1.2s						
CSP1				AML	AML		
	comp=N,157µm,0.4s						
CSP1				AML	AML		
	comp=E,122µm,0.8s						
CSP1				AML	AML		
	comp=N,157µm,1.6s						
CAMP	**Campotosto**	**0.34**	**132**	⇑P	Pg	22 27 33.4	+0.1
CAMP				AML	AML		
	comp=E,48µm,0.2s						
CAMP				AML	AML		
	comp=N,30µm,0.9s						
T1220	**Camerino, Fraz**	**0.34**	**3**	⇑P	Pg	22 27 33.5	+0.2
T1220				AML	AML		
	comp=E,512µm,0.5s						
T1220				AML	AML		
	comp=N,522µm,0.3s						
GUMA	**Gualdo di Mace**	**0.36**	**34**	⇑P	Pg	22 27 34.0	+0.5
GUMA				AML	AML		
	comp=E,274µm,1.6s						
GUMA				AML	AML		
	comp=N,298µm,0.5s						
GUMA				AML	AML		
	comp=N,298µm,1.5s						
GUMA				AML	AML		
	comp=E,274µm,0.4s						
MOMA	**Monte Martano**	**0.37**	**276**	⇑P	Pg	22 27 34.1	+0.4
MOMA				AML	AML		
	comp=E,322µm,0.2s						
MOMA				AML	AML		
	comp=N,206µm,0.9s						
MOMA				AML	AML		
	comp=N,206µm,1.1s						
T1222	**Castel Sant'An**	**0.37**	**183**	⇑P	Pg	22 27 33.7	+0.1
T1222				AML	AML		
	comp=E,92µm,0.3s						
T1222				AML	AML		
	comp=E,92µm,0.4s						
T1222				AML	AML		
	comp=N,90µm,1.4s						
T1222				AML	AML		
	comp=N,90µm,0.6s						
T1247	**Pizzolo (AQ)**	**0.37**	**152**	P	Pb	22 27 34.8	-0.3
T1247				AML	AML		
	comp=N,184µm,0.8s						
T1247				AML	AML		
	comp=E,172µm,0.2s						
T1247				AML	AML		
	comp=N,184µm,1.2s						
CESX	**Cesi**	**0.39**	**247**	⇑P	Pb	22 27 34.9	-0.6
CESX				AML	AML		
	comp=N,88µm,0.4s						
CESX				AML	AML		
	comp=E,76µm,0.2s						
ASSB	**Assisi San Ben**	**0.41**	**313**	⇑P	Pg	22 27 34.7	+0.2
ASSB				AML	AML		
	comp=E,81µm,0.3s						
ASSB				AML	AML		
	comp=N,81µm,1.5s						
TERO	**Teramo**	**0.42**	**110**	⇑P	Pg	22 27 34.6	-0.1
TERO				AML	AML		
	comp=E,142µm,0.1s						
TERO				AML	AML		
	comp=N,157µm,0.1s						
OFFI	**Offida**	**0.49**	**70**	⇓P	Pg	22 27 36.5	+0.6
GIGS	**Gran Sasso**	**0.49**	**130**	⇓P	Pg	22 27 35.9	0.0
SNTG	**Esanatoglia**	**0.50**	**349**	P	Pg	22 27 36.3	+0.2
SNTG				AML	AML		
	comp=E,42µm,0.8s						
SNTG				AML	AML		
	comp=N,55µm,0.7s						
FIAM	**Fiamignano**	**0.50**	**176**	P	Pg	22 27 36.2	+0.1
FIAM				AML	AML		
	comp=E,46µm,1.4s						
FIAM				AML	AML		
	comp=N,47µm,0.9s						
FIAM				AML	AML		
	comp=E,46µm,0.6s						
ATCC	**AVT- Casa Cast**	**0.52**	**323**	P	Pg	22 27 36.8	+0.3
ATCC				AML	AML		
	comp=N,58µm,1.2s						
ATCC				AML	AML		
	comp=E,65µm,0.6s						
ATCC				AML	AML		
	comp=N,58µm,0.8s						
EL6	**Elcito**	**0.56**	**3**	P	Pg	22 27 37.5	+0.1
EL6				S	Sb	22 27 46.7	+0.1
CING	**Cingoli**	**0.62**	**9**	P	Pg	22 27 38.4	0.0
CING				AML	AML		
	comp=E,41µm,0.2s						
CING				AML	AML		
	comp=N,31µm,0.7s						
CING				AML	AML		
	comp=N,31µm,1.3s						
VCEL	**Villa Celiera**	**0.68**	**123**	P	Pg	22 27 40.0	+0.4
MGAB	**Montegabbione**	**0.72**	**282**	⇑P	Pn	22 27 42.9	+0.2
ARVD	**Arcevia**	**0.74**	**353**	S	Sb	22 27 52.4	+0.8
CERT	**Cerreto**	**0.82**	**184**	⇓P	Pg	22 27 42.2	0.0
PIEI	**Pieia**	**0.86**	**333**	S	Sn	22 27 56.9	-0.5
PIEI				AML	AML		
	comp=E,20µm,0.7s						
PIEI				AML	AML		
	comp=N,14µm,1.0s						
PTRJ	**Pietraroja**	**1.78**	**142**	P	Pb	22 27 59.0	-0.1

ROM 13 22:28:23.1±0.1**, 42°.770N**±0°.002×**13°.066E**±0°.003**,**
h9^{km}**, ML1.0**/2**, 3C-9D, Error ellipse: s-maj=0.2km**
s-min=0.0km az=122.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.02**	**221**	⇓P	Pg	22 28 25.1	+0.2
T1212				S	Sg	22 28 26.4	+0.2
T1212				AML	AML		
	comp=E,200µm,0.4s						
T1212				AML	AML		
	comp=N,258µm,0.2s						
T1212				AML	AML		
	comp=E,200µm,0.4s						
T1214	**Arquata del Tr**	**0.10**	**96**	⇓P	Pg	22 28 26.1	+0.3
T1214				S	Sg	22 28 28.3	+0.5
T1214				AML	AML		
	comp=E,92µm,0.5s						
T1214				AML	AML		
	comp=N,92µm,0.1s						
T1214				AML	AML		
	comp=E,92µm,0.5s						
T1214				AML	AML		
	comp=N,92µm,0.1s						
T1218	**Civita (PG)**	**0.11**	**160**	⇓P	Pg	22 28 26.1	+0.2
T1218				S	Sg	22 28 28.5	+0.7
T1217	**Poggiodomo (PG**	**0.12**	**240**	⇑P	Pg	22 28 26.2	+0.3
T1217				S	Sg	22 28 28.6	+0.7
T1245	**Castelsantange**	**0.12**	**46**	P	Pg	22 28 26.5	+0.3
T1245				S	Sg	22 28 29.0	+0.7
T1245				AML	AML		
	comp=E,108µm,0.7s						
T1245				AML	AML		
	comp=N,204µm,0.7s						
T1245				AML	AML		
	comp=E,108µm,1.3s						
T1216	**Preci, Frazion**	**0.13**	**344**	⇓P	Pg	22 28 26.5	+0.4
T1216				S	Sg	22 28 29.2	+1.0
T1215	**Vallo di Nera,**	**0.15**	**283**	P	Pg	22 28 26.8	+0.4
MC2	**Monte Cornacci**	**0.17**	**33**	P	Pg	22 28 27.3	+0.4
MC2				S	Sg	22 28 30.2	+0.7
MMO1	**Montemonaco**	**0.23**	**56**	⇓P	Pg	22 28 28.2	+0.3
FDMO	**Fiordimonte**	**0.27**	**3**	⇓P	Pg	22 28 28.9	+0.4
T1241	**Roccafluvione,**	**0.28**	**72**	⇓P	Pg	22 28 29.1	+0.3
RM33	**Pellescritta (**	**0.28**	**157**	⇓P	Pg	22 28 29.1	+0.2
T1211	**Morro Reatino**	**0.28**	**213**	⇑P	Pg	22 28 29.2	+0.3
T1220	**Camerino, Fraz**	**0.34**	**3**	⇓P	Pg	22 28 29.9	0.0
TERO	**Teramo**	**0.42**	**110**	⇑P	Pg	22 28 31.4	0.0

*NEIC **13** 22:48:10.4±1.3, 78°.2N±0°.1×106°.0W±0°.4, h10^{km}±2^{km},*
mb3.6/14, ML4.1(OTT), Error ellipse: s-maj=22.0km
s-min=13.8km az=357.0
*OTT **13** 22:48:15.9±0.6, 78°.14N×105°.44W, h18^{km}, ML4.1/3, 84km*
southwest from Isachsen, Nu Gustaf-Lougheed Arch
Seismic Zone.
ISC 13 22:48:10.0±1.0**, 78°.08N**±0°.08×**105°.32W**±0°.06**, h10**^{km}**, n35,**
σ**2^{s}.43**/45**, Queen Elizabeth Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RES	**Resolute Bay**	**4.20**	**139**	Pn	**Pn**	**22 49 16.5**	**+2.6**
RES				Sn	**Sn**	**22 50 00.8**	**-2.1**
RES	**Resolute Bay**	**4.20**	**139**	PN	**Pn**	**22 49 18.2**	**+4.3**
RES				SN	**Sn**	**22 50 05.8**	**+2.9**
RES				Trac		22 50 41.0	
	comp=Z,114nm,0.8s						
RES	**Resolute Bay**	**4.20**	**139**	*i* P	**Pn**	**22 49 16.6**	**+2.6**
RES				*i* S	**Sn**	**22 50 03.6**	**+0.8**
A36M	**Sachs Harbour**	**7.94**	**230**	Pn	**Pn**	**22 50 08.1**	**+2.9**
A36M				Sn	**Sn**	**22 51 33.5**	**-1.3**
A36M	**Sachs Harbour**	**7.94**	**230**	Pn	**Pn**	**22 50 05.1**	**-0.1**
A36M	**Sachs Harbour**	**7.94**	**230**	PN	**Pn**	**22 50 08.1**	**+2.9**
A36M				SN	**Sn**	**22 51 33.5**	**-1.3**
A36M				Trac		22 51 41.3	
	comp=Z,16nm,0.7s						
TULEG	**Thule**	**8.08**	**83**	Pn	**Pn**	**22 50 08.9**	**+1.8**
TULEG	**Thule**	**8.08**	**83**	*i* P	**Pn**	**22 50 07.8**	**+0.8**
TULEG				*i* S	Sn	22 51 28.2	-10
TULEG				IAML		22 51 47.8	
	comp=Z,8.4nm,0.8s						
KUKN	**Kugluktuk,NWT**	**10.67**	**200**	Pn	**Pn**	**22 50 46.4**	**+3.8**
KUKN				Sn	**Sn**	**22 52 37.9**	**-4.0**
KUKN	**Kugluktuk,NWT**	**10.67**	**200**	PN	**Pn**	**22 50 46.4**	**+3.8**
KUKN				SN	**Sn**	**22 52 37.9**	**-4.0**
KUKN				Trac		22 53 02.0	
	comp=Z,266nm,3.8s						
ILON	**Igloolik, Nuna**	**10.81**	**131**	Pn	**Pn**	**22 50 48.5**	**+4.0**
ILON				Sn	**Sn**	**22 52 42.7**	**-2.6**
ILON	**Igloolik, Nuna**	**10.81**	**131**	PN	**Pn**	**22 50 48.5**	**+4.0**
ILON				SN	**Sn**	**22 52 42.7**	**-2.6**
ILON				Trac		22 54 16.4	
	comp=Z,216nm,2.8s						
NEEM	**North Greenlan**	**11.18**	**66**	*i* P	**Pn**	**22 50 53.0**	**+3.2**
NEEM				*i* S	**Sn**	**22 52 50.0**	**-4.7**
INK	**Inuvik**	**12.54**	**234**	Pn	**Pn**	**22 51 07.6**	**-0.5**
INK	**Inuvik**	**12.54**	**234**	PN	**Pn**	**22 51 10.9**	**+2.9**
EPYK	**Eagle Plains**	**14.83**	**235**	Pn	**Pn**	**22 51 38.8**	**-0.6**
BMAR	**Burnt Mountain**	**15.32**	**248**	Pn	**Pn**	**22 51 45.3**	**-0.6**

YKA	Yellowknife Ar	15.93	196	Pn	Pn	22 51 53.3	-0.5
SUMG	Summit	16.80	73	*i* P	Pn	22 52 03.7	-1.5
SUMG				IAML		22 52 07.5	
	comp=Z,4.3nm,0.6s						
ILULI	Ilulissat	16.84	92	Pn	Pn	22 52 07.9	+2.5
I26K	Coal Creek Min	16.93	242	Pn	Pn	22 52 04.7	-1.9
EGAK	Eagle	17.05	239	Pn	Pn	22 52 05.8	-2.3
EGAK				IAmb	IAmb	22 52 19.5	
	comp=Z,5.9nm,1.1s						
H24K	Noodor Dome	17.35	249	Pn	Pn	22 52 11.4	-0.5
H24K				IAmb	IAmb	22 52 35.0	
	comp=Z,3.5nm,1.2s						
DAWY	Dawson	17.40	235	Pn	Pn	22 52 09.9	-2.6
H23K	Yukon River	17.69	251		P	22 52 17.4	+0.5
H23K				IAmb	IAmb	22 52 28.2	
	comp=Z,4.5nm,1.1s						
K27K	Chicken	17.90	239		P	22 52 20.1	+0.9
K27K				IAmb	IAmb	22 52 38.5	
	comp=Z,4.9nm,1.4s						
FARO	Faro, Yukon	18.16	225		Pn	22 52 21.8	0.0
FARO				IAmb	IAmb	22 52 57.3	
	comp=Z,6.1nm,1.4s						
I23K	Minto, Yukon-K	18.25	250	P	Pn	22 52 22.5	-0.4
I23K				IAmb	IAmb	22 52 34.5	
	comp=Z,7.3nm,1.4s						
M31M	Drury Creek, Y	18.34	226		P	22 52 24.7	+0.5
M30M	Minto, Yukon	18.36	230		Pn	22 52 24.5	+0.2
M30M				IAmb	IAmb	22 52 37.0	
	comp=Z,12nm,1.5s						
IMAR	Indian Mountai	18.39	256		Pn	22 52 23.3	-1.3
H21K	Melozitna Rive	18.49	255	P	P	22 52 26.0	+0.3
DOT	Dot Lake	18.61	241		P	22 52 26.2	-0.9
DOT				IAmb	IAmb	22 53 06.8	
	comp=Z,6.9nm,1.4s						
BCAR	Beaver Creek A	18.74	237	P	P	22 52 28.6	+0.1
N31M	Braeburn, Yuko	19.23	228	P	P	22 52 34.0	+0.1

IDC 13 22:56:17.3±4.0, 13°.88N×91°.75W, h0km, mb3.7/5, mbtmp3.7/7, ML3.5/2, MS2.1/1, Error ellipse: s-maj=147.0km s-min=22.6km az=37.0

NEIC 13 22:56:24.4±2.1, 14°.17N±0°.04×92°.37W±0°.06, h22km±9km, mb4.0/4, Md4.1/24(MEX), Error ellipse: s-maj=8.3km s-min=5.2km az=68.0

MEX 13 22:56:24.2±0.6, 14°.09N×92°.23W, h74km±22km, MD4.1

GCG 13 22:56:31.2±0.5, 14°.39N×91°.84W, h50km±134km, MD4.1

ISC 13 22:56:21.5±3.1, 14°.05N±0°.06×92°.47W±0°.05, h8km±22km, n52, σ1ˢ.32/69, mb4.0/6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.87	13		Pb	22 56 39.2	+0.3
THIG					Sb	22 56 51.0	+0.3
THIG		0.87	13	*e*P	Pb	22 56 39.2	+0.3
THIG				*e*S	Sb	22 56 51.0	+0.3
RTAL	Retalhuleu	0.89	58		Pb	22 56 38.4	-0.7
SULM	Suchitepequez,	0.91	74	*e*P	Pb	22 56 40.0	+0.4
PATR	El Naranjo	1.08	12	*e*P	Pb	22 56 41.8	-0.8
PATR				*e*S	Sb	22 56 55.5	-1.5
STG3	Santiaguito 3,	1.09	53	*e*P	Pb	22 56 42.1	-0.7
CHUJ	Union Juarez	1.09	19	*i* P	Pb	22 56 42.0	-0.8
CHUJ				*e*S	Sb	22 56 56.0	-1.3
PAVE	Pavencul	1.17	14	*i* P	Pb	22 56 43.4	-0.7
PAVE				*e*S	Sb	22 56 56.8	-2.7
HUEH	Huehuetenango	1.57	37		Pn	22 56 49.4	-0.5
FUG	Fuego 3	1.63	76	*e*P	Pn	22 56 48.8	-1.9
PCIG		1.79	336		Pn	22 56 52.9	+0.2
PCIG					Sn	22 57 15.5	-0.2
PCIG		1.79	336	*i* P	Pn	22 56 52.9	+0.2
PCIG				*i* S	Sn	22 57 15.5	-0.2
PCG	Pacaya	1.84	79	*e*P	Pn	22 56 52.6	-1.0
NBG	Las Nubes	2.12	75	*e*P	Pn	22 56 57.5	-0.1
CCIG	Comitan	2.24	8	Pn	Pn	22 56 59.0	-0.1
CCIG	Comitan	2.24	8	*e*P	Pb	22 57 01.8	-0.5
CCIG				*e*S	Sn	22 57 28.0	+1.0
TGIG		2.78	347		Pn	22 57 07.4	+1.0
TGIG					Sn	22 57 42.3	+2.1
TGIG		2.78	347	*e*P	Pn	22 57 07.4	+1.0
TGIG				*e*S	Sn	22 57 42.3	+2.1
ESQI	Esquipulas	3.07	80	Pn	Pn	22 57 09.8	-0.7
NILT	Santiago Nilte	3.25	321	*e*P	Pn	22 57 12.4	-0.3
NILT				*e*S	Sn	22 57 50.2	-1.4
PETF	Flores	3.79	41	Pn	Pn	22 57 20.7	+0.4
CMIG	Matias Romero	3.81	323	Pn	Pn	22 57 21.2	+0.6
	8.3nm,0.3s,baz=160,slow=13,SNR=46						
CMIG				Sn	Sn	22 58 06.6	+1.0
	8.0nm,0.3s,baz=162,slow=9.8,SNR=4.5						
CMIG				LR	LR	22 58 24.8	
	comp=Z,22nm,19.4s,baz=106,slow=29						
CMIG	Matias Romero	3.81	323		Pn	22 57 21.4	+0.9
CMIG					Sn	22 58 06.8	+1.1
CMIG	Matias Romero	3.81	323	*e*P	Pn	22 57 21.4	+0.9
CMIG				*e*S	Sn	22 58 06.8	+1.1
HUIG	Huatulco	3.91	296		Pn	22 57 22.3	+0.4
HUIG					Sn	22 58 04.4	-3.6
HUIG	Huatulco	3.91	296	*e*P	Pn	22 57 22.3	+0.4
HUIG				*e*S	Sn	22 58 04.4	-3.6
NEUV	Arroyo Zacate	4.85	319	*e*P	Pn	22 57 34.9	+0.1
NEUV				*e*S	Sn	22 58 30.6	-0.5
CRIN	San Cristobal	5.44	104	Pn	Pn	22 57 41.9	-1.2
CNGN	Cerro Negro	5.83	105	Pn	Pn	22 57 48.4	+0.1
MATN	Matagalpa	6.46	99	Pn	Pn	22 57 54.9	-2.2
JAUV	Jalcomulco	6.72	322	*e*P	Pn	22 57 58.7	-1.9
JAUV				*e*S	Sn	22 59 14.8	-2.6
BOAB	BOACO BROADBAN	6.81	103	Pn	Pn	22 58 00.7	-1.1
TLIG	Tlapa	6.83	302	Pn	Pn	22 58 03.2	+1.1
ORTG	Ortega, Santa	7.77	117	Pn	Pn	22 58 14.7	-0.4
DUNO	Dulce Nombre,	7.88	119	Pn	Pn	22 58 15.7	-0.8
JTS	Las Juntas de	8.24	116	Pn	Pn	22 58 09.7	-12
	0.3nm,0.3s,baz=339,slow=22,SNR=1.2						
JTS				Lg	Lg	23 00 15.8	
	0.1nm,0.3s,baz=276,slow=20,SNR=2.4 1.7nm,0.4s						
JTS	Las Juntas de	8.24	116	Pn	Pn	22 58 22.4	+0.9
RIMA	Rio Macho	9.44	116	Pn	Pn	22 58 38.3	+0.3
CDITO	Canoas	10.87	119	Pn	Pn	22 58 57.9	+0.4
SOR	Soroa	12.49	45	Pn	Pn	22 59 19.1	-0.6
TX32	Lajitas Array	18.40	328		P	23 00 37.2	-0.1
TXAR	Lajitas Array	18.40	328	P	Pn	23 00 40.3	+3.1
	0.1nm,0.3s,baz=159,slow=13,SNR=6.6 1.3nm,0.9s						
TX31	Lajitas Ar. Si	18.41	328		P	23 00 37.0	-0.2
TX31				IAmb	IAmb	23 00 43.1	
	comp=Z,6.7nm,1.0s						
CLNB	Carlsbad	20.91	332		P	23 01 05.1	+0.4
GDL2	Guadalupe Moun	21.09	331	P	P	23 01 07.0	+0.4
AMTX	Amarillo	22.35	340	P	P	23 01 20.2	+0.1
CPCT	Cooper Cave	22.48	17	P	P	23 01 18.8	-2.5
CPCT				IAmb	IAmb	23 01 19.0	
	comp=Z,12nm,1.3s						
PDAR	Pinedale Array	32.19	336	P	P	23 02 52.7	+2.5
	comp=Z,0.3nm,0.7s,baz=142,slow=9.0,SNR=2.4 comp=Z,0.3nm,0.7s						
NVAR	Mina Array Bea	33.34	321	P	P	23 03 02.0	+1.6
	comp=Z,0.7nm,0.7s,baz=133,slow=8.7,SNR=5.0 comp=Z,0.7nm,0.7s						
YKA	Yellowknife Ar	50.87	347	P	P	23 05 21.5	-1.1
	comp=Z,1.7nm,0.7s,baz=150,slow=7.5,SNR=26 comp=Z,1.7nm,0.7s						
INK	Inuvik	60.26	344	P	P	23 06 29.6	-0.5
	comp=Z,0.9nm,0.6s,baz=138,slow=5.5,SNR=5.8 comp=Z,0.9nm,0.6s						
ILAR	Eielson Array	62.61	337	P	P	23 06 45.9	-0.2
	comp=Z,0.7nm,0.9s,baz=131,slow=4.7,SNR=7.8 comp=Z,0.7nm,0.9s						

JMA 13 23:03:52.5±0.0, 33°.7N±0°.1×130°.28E±0°.09, h14km, MV3.0/40, CENTRAL FUKUOKA PREF

JMA Felt I J1 at CENTRAL FUKUOKA PREF .

ISC 13 23:03:51.6±1.1, 33°.72N±0°.04×130°.34E±0°.04, h11km±14km, n9, σ0ˢ.60/14, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFI	Itaya	0.30	173	P	Pb	23 03 58.4	-0.7
JFI				S	Sg	23 04 02.1	+0.4
JFA	Akaike	0.38	92	P	Pb	23 04 00.9	+0.5
JFA				S	Sb	23 04 06.9	+0.6
JII	Iki	0.51	278	P	Pg	23 04 02.0	+0.3
JII				S	Sg	23 04 08.6	+0.1
JNU	Nakatsue	0.75	143	P	Pb	23 04 06.9	+0.1
JTA	Tamana	0.78	168	P	Pg	23 04 06.6	0.0
JTA				S	Sg	23 04 16.3	-0.4
JTSM	Tsushimamitsus	1.00	308	P	Pb	23 04 10.7	-0.4
JTSM				S	Sg	23 04 23.6	-0.5
JTU	Tsushima	1.12	316	P	Pn	23 04 13.6	+0.3
JHS	Saijyo	2.62	60	P	Pg	23 04 41.8	-0.1
JMN	Monobe	2.95	89	P	Pb	23 04 43.0	-1.2

ROM 13 23:24:06.2±0.1, 41°.358N±0°.007×14°.75E±0°.01, h9km, ML2.0/25, 5C-1D, Error ellipse: s-maj=0.9km s-min=0.5km az=242.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SACR	S. Croce Del S	0.05	318	⇑*i*P	Pg	23 24 07.8	-0.3
SACR				S	Sg	23 24 09.6	+0.1
SACR				AML	AML		
	comp=N,7440µm,0.2s						
SACR				AML	AML		
	comp=N,6862µm,0.2s						
SACR				AML	AML		
	comp=E,6287µm,0.4s						
SACR				AML	AML		
	comp=E,6220µm,0.4s						
PSB1	Pescosannita	0.14	162	P	Pg	23 24 10.1	+0.8
PSB1				AML	AML		
	comp=E,2850µm,0.8s						
PSB1				AML	AML		
	comp=N,2050µm,0.7s						
PSB1				AML	AML		
	comp=E,2880µm,0.8s						
PSB1				AML	AML		
	comp=N,2045µm,0.7s						
PSB1				AML	AML		
	comp=E,1166µm,1.6s						
PSB1				AML	AML		
	comp=E,1190µm,0.4s						
PSB1				AML	AML		
	comp=N,2046µm,0.7s						
PSB1				AML	AML		
	comp=N,2049µm,0.7s						
PSB1				AML	AML		
	comp=N,1405µm,0.7s						
PSB1				AML	AML		
	comp=N,1340µm,0.7s						
PSB1				AML	AML		
	comp=E,2880µm,0.8s						
PSB1				AML	AML		
	comp=E,2854µm,0.8s						
PSB1				AML	AML		
	comp=E,1166µm,0.4s						
PTRJ	Pietraroja	0.17	272	P	Pg	23 24 11.2	+1.4
GATE	Gambatesa	0.20	37	P	Pg	23 24 11.4	+1.2
GATE				AML	AML		
	comp=E,576µm,1.0s						
GATE				AML	AML		
	comp=E,470µm,1.1s						
GATE				AML	AML		
	comp=E,560µm,1.5s						
GATE				AML	AML		
	comp=N,629µm,0.9s						
GATE				AML	AML		
	comp=N,572µm,0.8s						
GATE				AML	AML		
	comp=E,560µm,1.4s						
GATE				AML	AML		
	comp=N,628µm,0.9s						
GATE				AML	AML		
	comp=E,470µm,1.1s						
GATE				AML	AML		
	comp=E,560µm,0.6s						
GATE				AML	AML		
	comp=E,567µm,0.6s						
GATE				AML	AML		
	comp=E,455µm,0.3s						
GATE				AML	AML		
	comp=E,470µm,0.9s						
GATE				AML	AML		
	comp=N,487µm,0.3s						
GATE				AML	AML		
	comp=N,498µm,0.3s						
GATE				AML	AML		
	comp=N,572µm,1.2s						
VITU	Vitulano (BN)	0.20	208	P	Pg	23 24 11.2	+1.0
VITU				AML	AML		
	comp=E,416µm,1.4s						
VITU				AML	AML		
	comp=N,1705µm,0.5s						
VITU				AML	AML		
	comp=E,1032µm,0.4s						
VITU				AML	AML		
	comp=E,1034µm,0.4s						
VITU				AML	AML		
	comp=E,416µm,0.6s						
VITU				AML	AML		
	comp=N,1670µm,0.5s						
VITU				AML	AML		
	comp=N,1703µm,0.5s						
VITU				AML	AML		
	comp=E,383µm,0.5s						
VITU				AML	AML		
	comp=N,1669µm,0.5s						
T1101	Santa Maria De	0.20	306	P	Pg	23 24 11.9	+1.6
BSSO	Busso	0.22	328	⇑P	Pg	23 24 11.3	+0.6
BSSO				AML	AML		
	comp=E,626µm,0.9s						
BSSO				AML	AML		
	comp=N,864µm,0.9s						
BSSO				AML	AML		
	comp=N,352µm,0.9s						
BSSO				AML	AML		
	comp=N,863µm,0.9s						
BSSO				AML	AML		
	comp=E,234µm,1.2s						
BSSO				AML	AML		
	comp=E,696µm,0.9s						
BSSO				AML	AML		
	comp=E,284µm,0.9s						
BSSO				AML	AML		
	comp=N,370µm,0.9s						
BSSO				AML	AML		
	comp=E,284µm,1.1s						
BSSO				AML	AML		
	comp=E,696µm,1.1s						
BSSO				AML	AML		
	comp=E,233µm,0.2s						
BSSO				AML	AML		
	comp=E,599µm,0.3s						
BSSO				AML	AML		
	comp=N,353µm,0.9s						
BSSO				AML	AML		
	comp=N,864µm,0.9s						
BSSO				AML	AML		
	comp=N,978µm,0.9s						
SGG	Gregorio Mates	0.28	276	⇑*e*P	Pg	23 24 12.5	+0.7
SGG				AML	AML		
	comp=N,402µm,0.4s						
SGG				AML	AML		
	comp=N,1.5nm,0.8s						
SGG				AML	AML		
	comp=N,1.4nm,0.8s						
SGG				AML	AML		
	comp=N,402µm,0.4s						
SGG				AML	AML		
	comp=E,452µm,0.6s						
SGG				AML	AML		
	comp=E,452µm,0.6s						
SGG				AML	AML		
	comp=E,1.5nm,0.6s						
SGG				AML	AML		
	comp=E,1.5nm,0.5s						
MRB1	Monte Rocchett	0.28	144	⇑P	Pg	23 24 12.6	+0.8
MRB1				AML	AML		
	comp=N,968µm,0.5s						
MRB1				AML	AML		
	comp=E,1340µm,0.5s						
MRB1				AML	AML		
	comp=N,964µm,0.5s						
MRB1				AML	AML		
	comp=N,966µm,0.5s						
MRB1				AML	AML		
	comp=E,1355µm,0.6s						
MRB1				AML	AML		
	comp=N,1035µm,0.5s						
MRB1				AML	AML		
	comp=N,1035µm,1.5s						
MRB1				AML	AML		
	comp=N,966µm,1.5s						
MRB1				AML	AML		
	comp=E,1355µm,1.4s						
MRB1				AML	AML		
	comp=N,1035µm,0.5s						
MRB1				AML	AML		
	comp=E,1338µm,0.5s						
MRB1				AML	AML		
	comp=N,966µm,0.5s						
MOCO	Biccari - m.te	0.30	88	⇓*e*P	Pb	23 24 13.6	-0.3
MOCO				AML	AML		
	comp=N,116µm,0.7s						
MOCO				AML	AML		
	comp=E,166µm,0.3s						
MOCO				AML	AML		
	comp=E,164µm,0.3s						
MOCO				AML	AML		
	comp=N,125µm,0.3s						
MOCO				AML	AML		
	comp=N,124µm,0.3s						
MOCO				AML	AML		
	comp=E,164µm,0.3s						
MOCO				AML	AML		
	comp=N,125µm,0.3s						
MOCO				AML	AML		
	comp=N,117µm,0.7s						
MOCO				AML	AML		
	comp=N,116µm,1.3s						
MOCO				AML	AML		
	comp=E,164µm,0.3s						
MOCO				AML	AML		
	comp=E,166µm,0.3s						
CIGN	Sant'Elia a Pi	0.32	21	P	Pb	23 24 13.4	-0.7
CIGN				S	Sb	23 24 19.4	0.0
CIGN				AML	AML		
	comp=E,274µm,0.7s						
CIGN				AML	AML		
	comp=E,274µm,1.3s						
CIGN				AML	AML		
	comp=N,403µm,0.4s						
CIGN				AML	AML		
	comp=E,274µm,0.7s						
CIGN				AML	AML		
	comp=N,402µm,0.4s						
BIOG	Biogem	0.33	119	P	Pb	23 24 14.3	+0.1
PAOL	Paolisi	0.35	203	P	Pg	23 24 13.6	+0.4
VAGA	Valle Agricola	0.40	279	P	Pg	23 24 14.6	+0.7
VAGA				AML	AML		
	comp=N,468µm,0.3s						
VAGA				AML	AML		
	comp=N,486µm,0.3s						
VAGA				AML	AML		
	comp=E,304µm,0.5s						
VAGA				AML	AML		
	comp=N,468µm,0.3s						
VAGA				AML	AML		
	comp=E,316µm,0.5s						
VAGA				AML	AML		
	comp=E,316µm,0.5s						
VAGA				AML	AML		
	comp=E,304µm,0.5s						
VAGA				AML	AML		
	comp=N,486µm,1.7s						
VAGA				AML	AML		
	comp=N,468µm,1.7s						
VAGA				AML	AML		
	comp=N,468µm,0.3s						
VAGA				AML	AML		
	comp=N,486µm,0.3s						
TRIV	Trivento	0.44	340	P	Pg	23 24 15.1	+0.4
TRIV				S	Sb	23 24 23.8	+1.0
TRIV				AML	AML		
	comp=E,292µm,0.4s						
TRIV				AML	AML		
	comp=N,216µm,0.5s						
TRIV				AML	AML		
	comp=N,216µm,0.5s						
TRIV				AML	AML		
	comp=E,292µm,0.4s						
TRIV				AML	AML		
	comp=E,261µm,0.4s						
TRIV				AML	AML		
	comp=N,236µm,0.5s						
MELA	Melanico ??? S	0.45	39	P	Pg	23 24 15.0	+0.1
MELA				S	Sb	23 24 23.4	+0.4
MELA				AML	AML		
	comp=E,420µm,0.4s						
MELA				AML	AML		
	comp=N,450µm,1.3s						
MELA				AML	AML		
	comp=N,450µm,1.3s						
MELA				AML	AML		
	comp=E,336µm,0.3s						
MELA				AML	AML		
	comp=E,420µm,0.4s						
MELA				AML	AML		
	comp=E,335µm,0.3s						
MELA				AML	AML		
	comp=E,420µm,0.4s						
MELA				AML	AML		
	comp=N,312µm,0.2s						
MELA				AML	AML		
	comp=N,314µm,0.2s						
MELA				AML	AML		
	comp=N,312µm,0.2s						
PIGN	Pignataro Magg	0.46	250	P	Pb	23 24 16.3	-0.2
PIGN				AML	AML		
	comp=E,93µm,1.1s						
PIGN				AML	AML		
	comp=N,73µm,0.6s						
PIGN				AML	AML		
	comp=N,73µm,0.6s						
PIGN				AML	AML		
	comp=N,181µm,1.1s						
PIGN				AML	AML		
	comp=E,86µm,0.6s						
PIGN				AML	AML		
	comp=E,187µm,0.9s						
PIGN				AML	AML		
	comp=N,71µm,0.4s						
PIGN				AML	AML		
	comp=E,93µm,0.9s						
MIDA	Miranda	0.47	307	P	Pg	23 24 15.3	0.0
CAFE	Carife	0.49	132	⇑P	Pg	23 24 15.9	+0.2
CAFE				S	Sb	23 24 24.7	+0.3
CAFE				AML	AML		
	comp=E,160µm,0.2s						
CAFE				AML	AML		
	comp=N,102µm,0.8s						
CAFE				AML	AML		
	comp=E,160µm,1.8s						
CAFE				AML	AML		
	comp=E,160µm,0.2s						
CAFE				AML	AML		
	comp=N,93µm,0.2s						
CAFE				AML	AML		
	comp=E,170µm,0.3s						
CAFE				AML	AML		
	comp=N,102µm,1.2s						
CAFE				AML	AML		
	comp=N,212µm,0.9s						
SGTA	Sant Agata di	0.51	116	P	Pg	23 24 16.4	+0.3
SGTA				AML	AML		
	comp=E,100µm,0.7s						
SGTA				AML	AML		
	comp=N,84µm,0.3s						
SGTA				AML	AML		
	comp=E,100µm,1.3s						
SGTA				AML	AML		
	comp=N,84µm,0.3s						
SGTA				AML	AML		
	comp=E,148µm,0.4s						
SGTA				AML	AML		
	comp=E,96µm,0.4s						
SGTA				AML	AML		
	comp=N,212µm,0.6s						
SNAL	S. Angelo Dei	0.55	141	P	Pg	23 24 16.6	-0.3
SNAL				S	Sb	23 24 25.7	-0.4
SNAL				AML	AML		
	comp=N,71µm,1.2s						
SNAL				AML	AML		
	comp=N,67µm,1.1s						
SNAL				AML	AML		
	comp=E,87µm,0.9s						
SNAL				AML	AML		
	comp=E,100µm,0.7s						

RNI2	**Rionero Sannit**	**0.57**	**308**	P	Pg	23 24 16.8	-0.4
RNI2				AML	AML		
	comp=N,126µm,1.5s						
RNI2				AML	AML		
	comp=E,114µm,0.5s						
RNI2				AML	AML		
	comp=N,125µm,1.5s						
RNI2				AML	AML		
	comp=E,114µm,0.5s						
RNI2				AML	AML		
	comp=N,122µm,0.6s						
RNI2				AML	AML		
	comp=N,125µm,0.5s						
RNI2				AML	AML		
	comp=N,122µm,1.4s						
RNI2				AML	AML		
	comp=E,124µm,0.5s						
RNI2				AML	AML		
	comp=E,124µm,0.5s						
RNI2				AML	AML		
	comp=N,122µm,0.6s						
RNI2				AML	AML		
	comp=N,118µm,0.8s						
RNI2				AML	AML		
	comp=E,114µm,0.5s						
VVDG	**Vesuvio Valle**	**0.58**	**206**	P	Pb	23 24 19.4	+0.9
VVDG				AML	AML		
VVDG				AML	AML		
VVDG				AML	AML		
VVDG				AML	AML		
VVDG				AML	AML		
CERA	**Filignano**	**0.60**	**294**	P	Pg	23 24 18.2	+0.4
CERA				AML	AML		
	comp=N,156µm,0.9s						
CERA				AML	AML		
	comp=E,125µm,0.8s						
CERA				AML	AML		
	comp=N,158µm,0.7s						
CERA				AML	AML		
	comp=N,155µm,0.9s						
CERA				AML	AML		
	comp=N,156µm,1.1s						
CERA				AML	AML		
	comp=E,121µm,0.5s						
CERA				AML	AML		
	comp=E,112µm,0.5s						
FRES	**Fresagrandinar**	**0.62**	**354**	P	Pg	23 24 18.1	0.0
FRES				S	Sb	23 24 27.8	-0.2
APRC	**Apricena**	**0.71**	**56**	P	Pg	23 24 18.8	-1.2
APRC				AML	AML		
	comp=E,118µm,1.2s						
APRC				AML	AML		
	comp=N,154µm,0.3s						
APRC				AML	AML		
	comp=E,146µm,0.6s						
APRC				AML	AML		
	comp=N,870µm,0.7s						
APRC				AML	AML		
	comp=E,106µm,0.3s						
APRC				AML	AML		
	comp=E,118µm,0.8s						
APRC				AML	AML		
	comp=N,154µm,0.3s						
VULT	**Monte Vulture**	**0.77**	**121**	P	Pg	23 24 20.6	-0.3
VULT				AML	AML		
	comp=E,121µm,0.6s						
VULT				AML	AML		
	comp=N,160µm,0.9s						
VULT				AML	AML		
	comp=N,141µm,0.2s						
VULT				AML	AML		
	comp=E,186µm,0.8s						
VULT				AML	AML		
	comp=N,204µm,0.6s						
VULT				AML	AML		
	comp=E,117µm,0.1s						
MRLC	**Muro Lucano**	**0.82**	**137**	P	Pg	23 24 21.7	-0.2
MRLC				AML	AML		
	comp=N,54µm,0.3s						
MRLC				AML	AML		
	comp=N,62µm,0.5s						
MRLC				AML	AML		
	comp=E,50µm,0.5s						
MRLC				AML	AML		
	comp=E,34µm,0.5s						
SGRT	**San Giovanni R**	**0.84**	**62**	P	Pg	23 24 21.5	-0.8
SGRT				AML	AML		
	comp=E,88µm,1.5s						
SGRT				AML	AML		
	comp=N,95µm,1.1s						
SGRT				AML	AML		
	comp=E,87µm,0.2s						
SGRT				AML	AML		
	comp=E,88µm,0.5s						
SGRT				AML	AML		
	comp=N,64µm,0.7s						
MSAG	**Monte S. Angel**	**0.94**	**67**	P	Pg	23 24 23.5	-0.7
MSAG				AML	AML		
	comp=N,176µm,0.4s						
MSAG				AML	AML		
	comp=N,176µm,0.5s						
MSAG				AML	AML		
	comp=E,141µm,0.8s						
MSAG				AML	AML		
	comp=E,95µm,0.6s						
CDRU	**Civita di Ruta**	**0.96**	**154**	P	Pg	23 24 24.0	-0.7
CDRU				AML	AML		
	comp=E,44µm,0.3s						
CDRU				AML	AML		
	comp=E,44µm,0.3s						
CDRU				AML	AML		
	comp=N,37µm,0.4s						
CDRU				AML	AML		
	comp=N,37µm,0.4s						
PALZ	**Palazzo San Ge**	**1.00**	**114**	P	Pg	23 24 24.9	-0.5
PALZ				AML	AML		
	comp=E,253µm,2.5s						
PALZ				AML	AML		
	comp=N,168µm,1.4s						
RM33	**Pellescritta (**	**1.62**	**316**	AML	AML		
	comp=E,221µm,1.1s						
RM33				AML	AML		
	comp=E,25µm,1.1s						
RM33				AML	AML		
	comp=N,23µm,1.6s						
RM33				AML	AML		
	comp=E,25µm,0.9s						
RM33				AML	AML		
	comp=N,23µm,0.4s						
RM33				AML	AML		
	comp=N,163µm,0.9s						
T1241	**Roccafluvione,**	**1.79**	**327**	AML	AML		
	comp=E,27000µm,1.6s						
T1241				AML	AML		
	comp=E,74µm,0.6s						
T1241				AML	AML		
	comp=N,18500µm,1.6s						
T1241				AML	AML		
	comp=E,74µm,0.6s						
T1241				AML	AML		
	comp=N,86µm,0.1s						
T1241				AML	AML		
	comp=E,27000µm,1.6s						
T1241				AML	AML		
	comp=N,18500µm,0.4s						
T1241				AML	AML		
	comp=N,49744µm,19.0s						
T1241				AML	AML		
	comp=E,64µm,0.1s						
T1241				AML	AML		
	comp=E,69764µm,21.3s						
T1211	**Morro Reatino**	**1.84**	**310**	AML	AML		
	comp=E,41µm,0.4s						
T1211				AML	AML		
	comp=E,41µm,1.6s						
T1211				AML	AML		
	comp=N,37µm,1.5s						
T1211				AML	AML		
	comp=N,37µm,0.5s						
T1211				AML	AML		
	comp=N,116µm,1.1s						
T1211				AML	AML		
	comp=N,31µm,0.1s						
T1211				AML	AML		
	comp=E,30µm,0.1s						
T1211				AML	AML		
	comp=E,77µm,0.7s						
FDMO	**Fiordimonte**	**2.08**	**324**	AML	AML		
	comp=E,154µm,0.9s						
FDMO				AML	AML		
	comp=E,154µm,1.1s						
FDMO				AML	AML		
	comp=N,138µm,0.1s						
T1220	**Camerino, Fraz**	**2.14**	**325**	AML	AML		
	comp=N,244µm,0.5s						
T1220				AML	AML		
	comp=N,244µm,1.5s						
T1220				AML	AML		
	comp=E,158µm,0.2s						
CESI	**CESI - Serrava**	**2.14**	**321**	AML	AML		
	comp=N,164µm,0.1s						
CESI				AML	AML		
	comp=E,95µm,0.1s						
TOLF	**Tolfa**	**2.18**	**290**	AML	AML		
	comp=E,42µm,1.2s						
TOLF				AML	AML		
	comp=N,59µm,1.4s						
ARVD	**Arcevia**	**2.52**	**329**	AML	AML		
	comp=E,11µm,0.1s						
ARVD				AML	AML		
	comp=N,9µm,0.6s						
NOV	**Novara**	**3.34**	**175**	AML	AML		
	comp=N,65µm,0.1s						
NOV				AML	AML		
	comp=E,91µm,0.1s						

ROM 13 23:24:30.9±0.1**, 42°.768N**±0°.003×**13°.069E**±0°.004**,
h10^{km}, ML1.3**/6**, 6C-5D, Error ellipse: s-maj=0.3km
s-min=0.1km az=324.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.02**	**227**	⇓P	Pg	23 24 33.0	+0.2
T1212				S	Sg	23 24 34.2	+0.1
T1212				AML	AML		
	comp=E,376µm,0.4s						
T1212				AML	AML		
	comp=N,416µm,0.6s						
T1212				AML	AML		
	comp=E,341µm,0.4s						
T1212				AML	AML		
	comp=N,424µm,0.6s						
T1212				AML	AML		
	comp=E,375µm,0.4s						
T1212				AML	AML		
	comp=E,341µm,0.4s						
T1214	**Arquata del Tr**	**0.10**	**95**	⇓P	Pg	23 24 34.1	+0.4
T1214				S	Sg	23 24 36.2	+0.6
T1214				AML	AML		
	comp=E,214µm,0.5s						
T1214				AML	AML		
	comp=N,200µm,0.1s						
T1214				AML	AML		
	comp=E,214µm,0.5s						
T1214				AML	AML		
	comp=N,200µm,0.1s						
T1218	**Civita (PG)**	**0.10**	**161**	⇓P	Pg	23 24 34.0	+0.4
T1218				S	Sg	23 24 36.1	+0.6
T1218				AML	AML		
	comp=E,236µm,0.2s						
T1218				AML	AML		
	comp=N,330µm,1.0s						
T1218				AML	AML		
	comp=E,245µm,0.2s						
T1218				AML	AML		
	comp=N,310µm,0.4s						
T1217	**Poggiodomo (PG**	**0.12**	**241**	P	Pg	23 24 34.2	+0.4
T1245	**Castelsantange**	**0.12**	**45**	⇑P	Pg	23 24 34.4	+0.4
T1245				S	Sg	23 24 36.8	+0.6
T1245				AML	AML		
	comp=E,192µm,0.2s						
T1245				AML	AML		
	comp=E,261µm,0.7s						
T1245				AML	AML		
	comp=N,490µm,0.7s						
T1245				AML	AML		
	comp=N,368µm,0.7s						
T1245				AML	AML		
	comp=N,490µm,1.3s						
T1216	**Preci, Frazion**	**0.13**	**343**	⇑P	Pg	23 24 34.4	+0.4
T1216				S	Sg	23 24 37.1	+1.0
T1216				AML	AML		
	comp=E,110µm,0.6s						
T1216				AML	AML		
	comp=N,102µm,0.2s						
T1216				AML	AML		
	comp=N,102µm,0.2s						
T1216				AML	AML		
	comp=N,102µm,1.8s						
T1216				AML	AML		
	comp=E,110µm,0.6s						
T1215	**Vallo di Nera,**	**0.15**	**283**	P	Pg	23 24 34.8	+0.4
T1215				S	Sg	23 24 37.4	+0.8
MC2	**Monte Cornacci**	**0.17**	**32**	⇑P	Pg	23 24 35.2	+0.5
MC2				S	Sg	23 24 38.4	+1.0
MMO1	**Montemonaco**	**0.23**	**55**	⇑P	Pg	23 24 36.1	+0.4
MMO1				S	Sg	23 24 40.0	+1.1
FDMO	**Fiordimonte**	**0.27**	**3**	⇑P	Pg	23 24 36.8	+0.4
FDMO				AML	AML		
	comp=E,22µm,0.3s						
FDMO				AML	AML		
	comp=N,33µm,0.2s						
FDMO				AML	AML		
	comp=N,33µm,0.2s						
T1219	**Muccia, Frazio**	**0.29**	**351**	⇓P	Pg	23 24 37.2	+0.4
ARRO	**Arrone**	**0.29**	**230**	⇓P	Pg	23 24 37.2	+0.5
T1220	**Camerino, Fraz**	**0.34**	**2**	⇑P	Pg	23 24 38.2	+0.4
TERO	**Teramo**	**0.42**	**110**	P	Pg	23 24 39.3	+0.1
SRES	**S.Oreste - Sor**	**0.67**	**218**	S	Sb	23 24 53.5	-0.7

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*ISK **13** 23:32:02.9, 38°.56N×24°.11E, h5^{km}, ML3.4/7*
*DDA **13** 23:32:06.0±0.0, 38°.01N×23°.95E, h19^{km}, ML3.0*
*ATH **13** 23:32:07.7, 38°.47N×23°.98E, h13^{km}, ML3.3/20, Error
ellipse: s-maj=1.1km s-min=0.7km az=94.0*
*THE **13** 23:32:07.6, 38°.47N×23°.96E, h10^{km}, ML3.5/15, Error
ellipse: s-maj=1.4km s-min=0.6km az=102.0*
ISC 13 23:32:07.1±0.8**, 38°.47N**±0°.02×**23°.99E**±0°.02**, h16**^{km}±4^{km}**,
n105, σ0^{s}.86**/145**, 7C-5D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EREA	**Eretria**	**0.07**	**221**	P	**Pg**	**23 32 09.8**	**-0.4**
EREA				S	**Sg**	**23 32 11.8**	**-0.5**
	132µm,0.2s						
EREA	**Eretria**	**0.07**	**221**	P	**Pg**	**23 32 10.0**	**-0.2**
EREA				S	**Sg**	**23 32 11.7**	**-0.5**
EREA				AML	AML	23 32 12.2	
EREA				AML	AML	23 32 12.5	
KYMI	**Kymi, Euboea I**	**0.18**	**28**	P	**Pg**	**23 32 11.6**	**+0.1**
KYMI				S	**Sg**	**23 32 14.8**	**+0.3**
	22µm,0.4s						
KYMI	**Kymi, Euboea I**	**0.18**	**28**	P	**Pg**	**23 32 11.7**	**+0.1**
KYMI				S	**Sg**	**23 32 14.9**	**+0.3**
KYMI				AML	AML	23 32 15.3	
	comp=N,40411µm,0.2s						
KYMI				AML	AML	23 32 15.6	
	comp=E,30981µm,0.3s						
DION	**Dionisos Attik**	**0.40**	**187**	P	**Pb**	**23 32 16.1**	**+0.3**
DION				S	**Sb**	**23 32 21.9**	**+0.3**
	comp=E,18µm,0.4s						
DION	**Dionisos Attik**	**0.40**	**187**	P	**Pb**	**23 32 16.3**	**+0.5**
DION				S	**Sb**	**23 32 22.1**	**+0.5**
DION				AML	AML	23 32 25.7	
	comp=E,28090µm,0.3s						
DION				AML	AML	23 32 26.1	
	comp=N,18510µm,0.6s						
PTL	**Penteli**	**0.43**	**193**	P	**Pb**	**23 32 16.8**	**+0.4**
PTL				S	**Sb**	**23 32 22.9**	**+0.2**
	comp=N,3µm,0.3s						
PTL	**Penteli**	**0.43**	**193**	P	**Pb**	**23 32 16.9**	**+0.4**
PTL				S	**Sg**	**23 32 22.5**	**+0.7**
PTL				AML	AML	23 32 26.3	
	comp=N,8362µm,0.3s						
PTL				AML	AML	23 32 27.1	
	comp=E,5225µm,0.4s						
ATHU	**Athens Univers**	**0.53**	**198**	P	**Pg**	**23 32 17.3**	**-0.3**
ATHU				S	**Sg**	**23 32 24.5**	**-0.2**
	comp=E,2µm,0.2s						
ATHU	**Athens Univers**	**0.53**	**198**	P	**Pg**	**23 32 17.5**	**-0.1**
ATHU				S	**Sg**	**23 32 24.4**	**-0.2**
ATHU				AML	AML	23 32 28.0	
	comp=E,2590µm,0.2s						
ATHU				AML	AML	23 32 28.2	
	comp=N,6484µm,0.4s						
ATH	**Athens Observa**	**0.54**	**203**	P	**Pg**	**23 32 17.7**	**-0.1**
ATH				S	**Sg**	**23 32 24.2**	**-0.9**
	comp=N,9µm,0.3s						
ATH	**Athens Observa**	**0.54**	**203**	P	**Pg**	**23 32 17.7**	**-0.1**
ATH				S	**Sg**	**23 32 25.1**	**0.0**
ATH				AML	AML	23 32 28.6	
	comp=E,12591µm,0.2s						
ATH				AML	AML	23 32 28.8	
	comp=N,22972µm,0.4s						
VILL	**Villia**	**0.62**	**240**	P	**Pg**	**23 32 18.6**	**-0.6**
VILL				S	**Sg**	**23 32 27.5**	**+0.1**
	comp=N,4µm,0.4s						
VIL2	**Platees**	**0.62**	**246**	P	**Pg**	**23 32 18.7**	**-0.7**
VIL2				S	**Sg**	**23 32 27.1**	**-0.6**
VIL2				AML	AML	23 32 30.3	
	comp=N,7884µm,0.4s						
VIL2				AML	AML	23 32 32.0	
	comp=E,5888µm,0.4s						
VLY	**Voula,Athens**	**0.64**	**194**	P	**Pg**	**23 32 19.3**	**-0.3**
VLY				S	**Sg**	**23 32 28.1**	**0.0**
	comp=E,9µm,0.3s						
VLY	**Voula,Athens**	**0.64**	**194**	P	**Pg**	**23 32 19.4**	**-0.2**
VLY				S	**Sg**	**23 32 28.2**	**+0.1**
VLY				AML	AML	23 32 30.7	
	comp=E,21432µm,0.5s						
VLY				AML	AML	23 32 30.8	
	comp=N,13419µm,0.2s						
ALNA	**Alonissos**	**0.68**	**352**	P	**Pg**	**23 32 20.1**	**-0.3**
ALNA				S	**Sb**	**23 32 31.1**	**+1.3**
ALNA				AML	AML	23 32 34.9	
	comp=E,12414µm,0.5s						
ALNA				AML	AML	23 32 34.9	
	comp=N,16685µm,0.5s						
ATAL	**Atalanti**	**0.79**	**286**	P	**Pg**	**23 32 21.9**	**-0.6**
ATAL				S	**Sb**	**23 32 33.6**	**+0.6**
ATAL				AML	AML	23 32 35.8	
	comp=E,2412µm,0.4s						
ATAL				AML	AML	23 32 35.8	
	comp=N,3360µm,0.4s						
LKR	**Lokris**	**0.80**	**283**	P	**Pg**	**23 32 22.8**	**+0.2**
LKR				S	**Sb**	**23 32 34.0**	**+0.9**
LKR				AML	AML	23 32 35.2	
	comp=N,2098µm,0.3s						
LKR				AML	AML	23 32 35.8	
	comp=E,2458µm,0.2s						
LOUT	**Loutraki**	**0.94**	**239**	P	**Pg**	**23 32 24.7**	**-0.5**
LOUT				S	**Sb**	**23 32 37.9**	**+0.8**
	comp=E,5µm,0.3s						
LOUT	**Loutraki**	**0.94**	**239**	P	**Pg**	**23 32 24.6**	**-0.5**
LOUT				S	**Sb**	**23 32 37.6**	**+0.5**
LOUT				AML	AML	23 32 39.3	
	comp=N,1351µm,0.3s						
LOUT				AML	AML	23 32 40.1	
	comp=E,2578µm,0.3s						
NEO	**Neokhori**	**1.03**	**325**	P	**Pb**	**23 32 26.5**	**0.0**
NEO				S	**Sb**	**23 32 40.3**	**+0.5**
	comp=E,2µm,0.3s						
NEO	**Neokhori**	**1.03**	**325**	P	**Pb**	**23 32 26.5**	**0.0**
NEO				S	**Sb**	**23 32 40.2**	**+0.5**
NEO				AML	AML	23 32 42.7	
	comp=N,5103µm,0.4s						
NEO				AML	AML	23 32 42.9	
	comp=E,4205µm,0.3s						
AXAR	**Agios Charalam**	**1.08**	**286**	P	**Pb**	**23 32 27.7**	**+0.2**
AXAR				AML	AML	23 32 45.5	
	comp=N,2976µm,0.4s						
AXAR				AML	AML	23 32 46.8	
	comp=E,2225µm,0.6s						
XOR	**Xorichti**	**1.09**	**325**	P	**Pb**	**23 32 27.4**	**-0.2**
XOR				AML	AML	23 32 44.1	
	comp=E,1637µm,0.4s						
XOR				AML	AML	23 32 45.4	
	comp=N,1532µm,0.4s						
EPID	**Epidavros**	**1.10**	**219**	P	**Pb**	**23 32 27.7**	**0.0**
EPID				S	**Sb**	**23 32 42.6**	**+0.8**
	comp=N,2µm,0.3s						
EPID	**Epidavros**	**1.10**	**219**	P	**Pb**	**23 32 27.7**	**0.0**
THAL	**Thalero**	**1.13**	**248**	P	**Pb**	**23 32 28.4**	**+0.1**
THAL				S	**Sn**	**23 32 44.8**	**+1.3**
	comp=N,4µm,0.3s						
THAL	**Thalero**	**1.13**	**248**	P	**Pb**	**23 32 28.5**	**+0.3**
THAL				AML	AML	23 32 46.7	
	comp=N,7782µm,0.3s						
THAL				AML	AML	23 32 49.1	
	comp=E,5644µm,0.4s						
DLFA	**Delphi**	**1.17**	**271**	P	**Pb**	**23 32 28.3**	**-0.7**
YDRA	**Hydra**	**1.20**	**201**	P	**Pn**	**23 32 29.3**	**+0.1**
YDRA				S	**Sb**	**23 32 45.0**	**+0.5**
YDRA				AML	AML	23 32 48.0	
	comp=E,5638µm,0.3s						
YDRA				AML	AML	23 32 48.1	
	comp=N,4541µm,0.2s						
KRND	**KRANIDI**	**1.27**	**212**	P	**Pn**	**23 32 29.8**	**-0.4**
KRND				S	**Sb**	**23 32 47.5**	**+0.6**
	comp=N,808nm,0.4s						
KRND	**KRANIDI**	**1.27**	**212**	P	**Pn**	**23 32 30.0**	**-0.3**
KRND				AML	AML	23 32 52.1	
	comp=N,1786µm,0.5s						
KRND				AML	AML	23 32 53.3	
	comp=E,1482µm,0.4s						
TNSA	**Tinos**	**1.31**	**135**	P	**Pn**	**23 32 31.2**	**+0.4**
TNSA				S	**Sb**	**23 32 47.7**	**-0.3**
TNSA				AML	AML	23 32 50.5	
	comp=E,937µm,0.6s						
TNSA				AML	AML	23 32 51.3	
	comp=N,1201µm,0.3s						
GUR	**Goura**	**1.40**	**248**	P	**Pn**	**23 32 31.9**	**-0.2**
GUR				S	**Sn**	**23 32 50.4**	**0.0**
	comp=N,1µm,0.3s						
GUR	**Goura**	**1.40**	**248**	P	**Pn**	**23 32 32.1**	**0.0**
GUR				AML	AML	23 32 55.8	
	comp=N,2890µm,0.4s						
GUR				AML	AML	23 32 58.5	
	comp=E,2600µm,0.3s						
AGG	**Agios Georgios**	**1.41**	**293**	P	**Pn**	**23 32 32.6**	**+0.4**
AGG				S	**Sb**	**23 32 51.4**	**+0.6**
AGG	**Agios Georgios**	**1.41**	**293**	Pn	**Pn**	**23 32 31.8**	**-0.4**
AGG	**Agios Georgios**	**1.41**	**293**	P	**Pn**	**23 32 32.3**	**+0.1**
ALIK	**Aliki, Aigiali**	**1.49**	**262**	P	**Pn**	**23 32 34.2**	**+1.0**
KLV	**Kalavryta, Ach**	**1.51**	**254**	P	**Pn**	**23 32 33.5**	**-0.1**
KLV	**Kalavryta, Ach**	**1.51**	**254**	P	**Pn**	**23 32 33.5**	**-0.1**
SERG	**Sergoula**	**1.52**	**268**	P	**Pn**	**23 32 34.0**	**+0.4**
SERG	**Sergoula**	**1.52**	**268**	P	**Pn**	**23 32 34.1**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.55**	**291**	P	**Pn**	**23 32 35.2**	**+1.1**
MAKR				S	**Sb**	**23 32 55.2**	**+0.3**
	comp=E,328nm,0.4s						
MAKR	**Makrakomi, Fth**	**1.55**	**291**	P	**Pn**	**23 32 34.7**	**+0.6**
LAKA	**Lakka**	**1.60**	**262**	P	**Pn**	**23 32 35.0**	**+0.2**
LAKA	**Lakka**	**1.60**	**262**	P	**Pn**	**23 32 35.1**	**+0.4**
ANX	**Ano Chora**	**1.63**	**275**	P	**Pn**	**23 32 35.7**	**+0.5**
ANX	**Ano Chora**	**1.63**	**275**	P	**Pn**	**23 32 35.4**	**+0.2**
SIGR	**SIGRI**	**1.63**	**63**	P	**Pn**	**23 32 35.9**	**+0.7**
EFP	**Efpalio**	**1.64**	**269**	P	**Pn**	**23 32 35.3**	**+0.1**
LIA	**Limnos Island**	**1.70**	**33**	P	**Pn**	**23 32 35.6**	**-0.5**
TYRN	**Tyrnavos**	**1.84**	**313**	P	**Pn**	**23 32 38.5**	**+0.4**
TYRN	**Tyrnavos**	**1.84**	**313**	P	**Pn**	**23 32 38.5**	**+0.4**
APE	**Apeiranthos**	**1.86**	**138**	⇑P	**Pn**	**23 32 38.0**	**-0.4**
APE	**Apeiranthos**	**1.86**	**138**	P	**Pn**	**23 32 38.3**	**0.0**
APE	**Apeiranthos**	**1.86**	**138**	Pn	**Pn**	**23 32 37.4**	**-0.9**
APE	**Apeiranthos**	**1.86**	**138**	P	**Pn**	**23 32 38.3**	**0.0**
OUR	**Ouranopolis**	**1.86**	**360**	P	**Pn**	**23 32 38.2**	**-0.1**
OUR	**Ouranopolis**	**1.86**	**360**	Pn	**Pn**	**23 32 35.9**	**-2.4**
OUR				Sn	**Sn**	**23 33 00.4**	**-1.1**
OUR	**Ouranopolis**	**1.86**	**360**	P	**Pn**	**23 32 38.3**	**0.0**
DRO	**Drossia**	**1.87**	**255**	P	**Pn**	**23 32 39.1**	**+0.6**
DRO	**Drossia**	**1.87**	**255**	P	**Pn**	**23 32 38.8**	**+0.3**
THL	**Klokotos Trika**	**1.89**	**306**	P	**Pn**	**23 32 39.1**	**+0.5**
KARB	**zmir-Karabur**	**1.91**	**84**	P	**Pn**	**23 32 38.6**	**-0.4**
KARB				S	**Sb**	**23 33 05.9**	**+0.8**
PVO	**Paravola**	**1.94**	**275**	P	**Pn**	**23 32 39.8**	**+0.4**
VLI	**Veliai**	**1.94**	**206**	P	**Pn**	**23 32 39.5**	**+0.1**
VLI	**Veliai**	**1.94**	**206**	P	**Pn**	**23 32 39.5**	**+0.1**
ZEYE	**Izmir, Urla-Ze**	**1.99**	**96**	P	**Pn**	**23 32 40.5**	**+0.5**
LIT	**Litokhoron**	**2.00**	**325**	P	**Pn**	**23 32 40.2**	**-0.1**
RLS	**Riolos of Patr**	**2.03**	**259**	P	**Pn**	**23 32 41.0**	**+0.3**
URLA	**Izmir**	**2.05**	**92**	P	**Pn**	**23 32 41.1**	**+0.1**
ITM	**Ithomi**	**2.08**	**232**	P	**Pn**	**23 32 42.7**	**+1.3**
ITM	**Ithomi**	**2.08**	**232**	Pn	**Pn**	**23 32 42.3**	**+0.9**
ITM	**Ithomi**	**2.08**	**232**	P	**Pn**	**23 32 41.5**	**+0.1**
GOKA	**anakkale-Gk**	**2.27**	**40**	P	**Pn**	**23 32 43.4**	**-0.6**

GOKA				S	**Sg**	**23 33 21.4**	**+1.3**
GOKA				*i* AML	AML	23 33 29.0	
	comp=E,181nm,0.5s						
GOKA				*i* AML	AML	23 33 29.0	
	comp=E,93nm,0.5s						
KTHA	**Kythira Island**	**2.33**	**199**	Pn	**Pn**	**23 32 45.4**	**+0.6**
KTHA	**Kythira Island**	**2.33**	**199**	P	**Pn**	**23 32 45.2**	**+0.4**
KOKK	**Kokkinochori,**	**2.34**	**0**	P	**Pn**	**23 32 44.7**	**-0.3**
BAYC	**CANAKKALE_Bayr**	**2.36**	**57**	P	**Pn**	**23 32 45.0**	**-0.2**
BAYC				S	**Sn**	**23 33 11.9**	**-1.9**
SANT	**Santorini**	**2.40**	**150**	Pn	**Pn**	**23 32 45.5**	**-0.3**
ZEDA	**zmir-Bergama**	**2.46**	**77**	P	**Pn**	**23 32 46.2**	**-0.4**
ZEDA				S	**Sn**	**23 33 12.9**	**-3.5**
BUHA	**Balikesir, Bur**	**2.62**	**66**	P	**Pn**	**23 32 51.3**	**+2.6**
BUHA				S	**Sb**	**23 33 27.4**	**+1.9**
SRS	**Serrai**	**2.66**	**353**	P	**Pn**	**23 32 49.3**	**0.0**
GRG	**Griva**	**2.77**	**334**	Pn	**Pn**	**23 32 49.2**	**-1.6**
GRG				Sn	**Sn**	**23 33 23.3**	**-0.7**
KNT	**Kendrikon**	**2.81**	**343**	Pn	**Pn**	**23 32 49.6**	**-1.9**
RODP	**Rodopos**	**2.91**	**184**	Pn	**Pn**	**23 32 53.6**	**+0.8**
RDO	**Rodhopi**	**2.92**	**24**	Pn	**Pn**	**23 32 50.4**	**-2.5**
IMMV	**Iera Moni Meta**	**3.01**	**180**	Pn	**Pn**	**23 32 54.9**	**+0.8**
STEP	**BALIKESIR_Sava**	**3.04**	**72**	P	**Pb**	**23 33 00.8**	**-0.2**
STEP				S	**Sb**	**23 33 42.2**	**+4.3**
STEP				*i* AML	AML	23 33 52.0	
	comp=E,38nm,1.1s						
STEP				*i* AML	AML	23 33 52.0	
	comp=E,38nm,0.8s						
BALY	**Balya**	**3.09**	**65**	P	**Pn**	**23 32 54.2**	**-1.1**
BALY				S	**Sg**	**23 33 45.4**	**-1.1**
BALY				*i* AML	AML	23 33 58.0	
	comp=E,34nm,0.7s						
IDI	**Anoyia**	**3.26**	**167**	⇓P	**Pn**	**23 32 58.2**	**+0.6**
IDI	**Anoyia**	**3.26**	**167**	Pn	**Pn**	**23 32 58.3**	**+0.6**
STIP	**Stip**	**3.50**	**337**	*i* Pn	**Pn**	**23 33 01.5**	**+0.6**
PLVB	**Pleven**	**4.93**	**5**	⇓P	**Pn**	**23 33 21.3**	**+0.7**
RAZG	**Razgrad**	**5.43**	**20**	⇑P	**Pn**	**23 33 27.1**	**-0.3**
TIP	**Timpagrande**	**5.69**	**279**	⇑P	**Pn**	**23 33 32.5**	**+1.5**
MDVR	**Moldovita**	**6.53**	**346**	⇑P	**Pn**	**23 33 42.9**	**+0.3**
ARR	**Arges**	**6.91**	**4**	⇑P	**Pn**	**23 33 48.4**	**+0.7**
LOT	**Lotru**	**6.97**	**359**	⇑P	**Pn**	**23 33 49.2**	**+0.5**
VOIR		**7.00**	**6**	⇓P	**Pn**	**23 33 49.5**	**+0.5**
BZS	**Buzias**	**7.35**	**347**	⇓P	**Pn**	**23 33 54.0**	**+0.2**
DOPR	**Dopca**	**7.56**	**7**	⇑P	**Pn**	**23 33 57.6**	**+1.0**
VRI	**Vrincioaia**	**7.66**	**14**	⇓P	**Pn**	**23 33 59.6**	**+1.5**

ROM 14 00:02:44.8±0.0, 42.719N±0.003×13.251E±0.005, h11km, ML1.5/20, 9C-10D, Error ellipse: s-maj=0.4km s-min=0.2km az=246.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.05**	**323**	P	Pg	00 02 47.4	+0.2
T1214				S	Sg	00 02 48.9	0.0
T1214				AML	AML		
	comp=N,238µm,1.1s						
T1214				AML	AML		
	comp=E,342µm,1.0s						
T1214				AML	AML		
	comp=E,328µm,1.0s						
T1214				AML	AML		
	comp=N,238µm,1.0s						
T1214				AML	AML		
	comp=N,213µm,1.0s						
SMA1	**SAN MARTINO**	**0.11**	**145**	⇓P	Pg	00 02 48.1	+0.4
SMA1				S	Sg	00 02 50.2	+0.3
SMA1				AML	AML		
	comp=E,669µm,0.2s						
SMA1				AML	AML		
	comp=N,433µm,0.2s						
T1218	**Civita (PG)**	**0.11**	**244**	⇑P	Pg	00 02 48.2	+0.4
T1218				S	Sg	00 02 50.4	+0.5
T1218				AML	AML		
	comp=E,619µm,0.2s						
T1218				AML	AML		
	comp=E,592µm,0.2s						
T1218				AML	AML		
	comp=E,619µm,0.2s						
T1218				AML	AML		
	comp=N,484µm,0.4s						
T1218				AML	AML		
	comp=E,592µm,0.2s						
T1218				AML	AML		
	comp=N,516µm,0.4s						
T1245	**Castelsantange**	**0.15**	**341**	⇓P	Pg	00 02 48.7	+0.4
T1245				S	Sg	00 02 51.4	+0.6
T1245				AML	AML		
	comp=E,262µm,1.2s						
T1245				AML	AML		
	comp=E,262µm,0.8s						
T1245				AML	AML		
	comp=N,402µm,0.9s						
T1212	**Cascia, Frazio**	**0.16**	**282**	⇓P	Pg	00 02 48.9	+0.5
T1212				S	Sg	00 02 51.6	+0.7
T1212				AML	AML		
	comp=E,302µm,0.2s						
T1212				AML	AML		
	comp=N,294µm,0.2s						
T1212				AML	AML		
	comp=N,299µm,0.2s						
T1212				AML	AML		
	comp=E,287µm,0.3s						
MMO1	**Montemonaco**	**0.19**	**17**	⇑P	Pg	00 02 49.4	+0.4
MMO1				S	Sg	00 02 52.6	+0.8
MC2	**Monte Cornacci**	**0.20**	**347**	⇑P	Pg	00 02 49.7	+0.5
MC2				S	Sg	00 02 53.4	+1.1
RM33	**Pellescritta (**	**0.21**	**187**	⇑P	Pg	00 02 49.9	+0.5
RM33				S	Sg	00 02 53.4	+1.0
RM33				AML	AML		
	comp=E,192µm,0.5s						
RM33				AML	AML		
	comp=N,150µm,0.2s						
RM33				AML	AML		
	comp=E,192µm,1.5s						
CAMP	**Campotosto**	**0.22**	**147**	⇓P	Pg	00 02 49.8	+0.4
CAMP				S	Sg	00 02 53.3	+0.7
CAMP				AML	AML		
	comp=N,98µm,0.2s						
CAMP				AML	AML		
	comp=E,276µm,0.2s						
T1217	**Poggiodomo (PG**	**0.24**	**269**	⇑P	Pg	00 02 50.2	+0.5
T1217				AML	AML		
	comp=E,105µm,0.7s						
T1217				AML	AML		
	comp=N,174µm,0.2s						
T1216	**Preci, Frazion**	**0.24**	**315**	⇓P	Pg	00 02 50.2	+0.4
T1216				S	Sg	00 02 54.3	+1.0
T1216				AML	AML		
	comp=N,96µm,1.4s						
T1216				AML	AML		
	comp=N,96µm,0.6s						
T1216				AML	AML		
	comp=E,93µm,0.9s						
TERO	**Teramo**	**0.28**	**110**	⇓P	Pg	00 02 50.7	+0.3
TERO				AML	AML		
	comp=E,95µm,1.3s						
TERO				AML	AML		
	comp=N,122µm,1.3s						
TERO				AML	AML		
	comp=N,122µm,0.7s						
TERO				AML	AML		
	comp=E,95µm,0.7s						
T1247	**Pizzolo (AQ)**	**0.28**	**173**	AML	AML		
	comp=E,200µm,0.2s						
T1247				AML	AML		
	comp=N,224µm,0.1s						
T1215	**Vallo di Nera,**	**0.29**	**287**	P	Pg	00 02 51.1	+0.3
FDMO	**Fiordimonte**	**0.34**	**339**	P	Pg	00 02 51.8	+0.2
FDMO				AML	AML		
	comp=E,38µm,0.2s						
FDMO				AML	AML		
	comp=N,63µm,0.2s						
T1211	**Morro Reatino**	**0.35**	**238**	⇓P	Pg	00 02 52.1	+0.4
GUMA	**Gualdo di Mace**	**0.35**	**10**	⇑P	Pb	00 02 52.6	-0.4
GUMA				AML	AML		
	comp=N,204µm,0.4s						
GUMA				AML	AML		
	comp=E,423µm,0.3s						
T1222	**Castel Sant'An**	**0.35**	**207**	P	Pg	00 02 52.1	+0.3
T1222				AML	AML		
	comp=E,37µm,1.6s						
T1222				AML	AML		
	comp=N,28µm,1.3s						
T1222				AML	AML		
	comp=N,28µm,0.7s						
T1222				AML	AML		
	comp=E,37µm,0.4s						
GIGS	**Gran Sasso**	**0.36**	**139**	⇑P	Pg	00 02 52.0	+0.1
GIGS				AML	AML		
	comp=E,27µm,0.5s						
GIGS				AML	AML		
	comp=N,18µm,1.0s						
T1219	**Muccia, Frazio**	**0.38**	**332**	⇓P	Pg	00 02 52.6	+0.2
ARRO	**Arrone**	**0.38**	**249**	⇑P	Pb	00 02 53.6	0.0
ARRO				AML	AML		
	comp=N,42µm,0.3s						
ARRO				AML	AML		
	comp=E,36µm,0.2s						
T1220	**Camerino, Fraz**	**0.41**	**343**	⇓P	Pg	00 02 53.3	+0.4
T1220				AML	AML		
	comp=N,194µm,1.3s						
T1220				AML	AML		
	comp=N,194µm,0.7s						
T1220				AML	AML		
	comp=E,66450µm,1.6s						
MOMA	**Monte Martano**	**0.51**	**280**	⇑P	Pb	00 02 55.3	-0.5
MOMA				AML	AML		
	comp=E,33µm,1.1s						
MOMA				AML	AML		
	comp=N,31µm,1.3s						
MOMA				AML	AML		
	comp=N,31µm,0.7s						
MOMA				AML	AML		
	comp=E,33µm,0.9s						
FAGN	**Fagnano**	**0.52**	**151**	⇓P	Pb	00 02 55.9	0.0
FAGN				AML	AML		
	comp=E,67µm,0.3s						
FAGN				AML	AML		
	comp=N,51µm,0.5s						
T0110	**Collepietro**	**0.63**	**141**	P	Pg	00 02 57.3	+0.3

ROM 14 00:03:42.1±0.1, 43.046N±0.004×12.998E±0.005, h10km, ML1.6/25, 13C-11D, Error ellipse: s-maj=0.4km s-min=0.4km az=331.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.01**	**36**	P	Pg	00 03 43.4	-0.5
CESI	**CESI - Serrava**	**0.08**	**239**	P	Pg	00 03 44.9	+0.5
CESI				S	Sg	00 03 46.6	+0.5
CESI				AML	AML		
	comp=E,688µm,0.4s						
CESI				AML	AML		
	comp=N,980µm,0.7s						
CESI				AML	AML		
	comp=N,980µm,1.3s						
T1220	**Camerino, Fraz**	**0.09**	**46**	⇑P	Pg	00 03 45.0	+0.4
T1220				S	Sg	00 03 46.9	+0.5
T1220				AML	AML		
	comp=N,1575µm,0.6s						
T1220				AML	AML		
	comp=E,2370µm,0.2s						
T1216	**Preci, Frazion**	**0.16**	**174**	⇓P	Pg	00 03 46.0	+0.5
T1216				S	Sg	00 03 49.1	+1.2
T1216				AML	AML		
	comp=E,542µm,1.1s						
T1216				AML	AML		
	comp=E,543µm,1.1s						
T1216				AML	AML		
	comp=N,652µm,0.2s						
CSP1	**Cessapalombo**	**0.16**	**73**	⇑P	Pg	00 03 46.2	+0.5
CSP1				S	Sg	00 03 48.9	+0.8
CSP1				AML	AML		
	comp=E,450µm,1.5s						
CSP1				AML	AML		
	comp=N,705µm,1.6s						
CSP1				AML	AML		
	comp=E,450µm,0.5s						
CSP1				AML	AML		
	comp=N,705µm,0.4s						
MC2	**Monte Cornacci**	**0.19**	**133**	P	Pg	00 03 46.8	+0.5
SNTG	**Esanatoglia**	**0.21**	**349**	⇑P	Pg	00 03 47.3	+0.8
SNTG				S	Sg	00 03 51.3	+1.7
SNTG				AML	AML		
	comp=N,208µm,0.1s						
SNTG				AML	AML		
	comp=E,247µm,0.2s						
T1245	**Castelsantange**	**0.23**	**144**	P	Pg	00 03 47.5	+0.5
T1245				S	Sg	00 03 52.2	+1.9
T1245				AML	AML		
	comp=E,242µm,0.3s						
T1245				AML	AML		
	comp=N,408µm,0.8s						
T1245				AML	AML		
	comp=E,246µm,0.2s						
T1245				AML	AML		
	comp=N,350µm,0.2s						
T1245				AML	AML		
	comp=N,408µm,1.2s						
GUMA	**Gualdo di Mace**	**0.25**	**86**	⇑P	Pg	00 03 48.1	+1.0
GUMA				S	Sg	00 03 52.7	+2.1
GUMA				AML	AML		
	comp=N,602µm,0.2s						
GUMA				AML	AML		
	comp=E,598µm,0.2s						
GUMA				AML	AML		
	comp=N,864µm,0.3s						
GUMA				AML	AML		
	comp=E,935µm,0.2s						
GUMA				AML	AML		
	comp=E,935µm,1.8s						
GUMA				AML	AML		
	comp=N,864µm,1.7s						
GUMA				AML	AML		
	comp=N,602µm,1.8s						
ASSB	**Assisi San Ben**	**0.25**	**269**	⇑P	Pg	00 03 48.1	+0.9
ASSB				AML	AML		
	comp=N,251µm,0.2s						
ASSB				AML	AML		
	comp=E,141µm,0.7s						
T1215	**Vallo di Nera,**	**0.26**	**201**	⇓P	Pb	00 03 48.2	-0.8
T1215				S	Sb	00 03 52.7	-0.9
T1215				AML	AML		
	comp=E,104µm,1.3s						
T1215				AML	AML		
	comp=N,152µm,0.2s						
T1215				AML	AML		
	comp=E,104µm,1.4s						
MMO1	**Montemonaco**	**0.28**	**121**	⇓P	Pg	00 03 48.3	+0.5
MMO1				S	Sb	00 03 53.1	-1.1
EL6	**Elcito**	**0.29**	**15**	⇑P	Pb	00 03 48.8	-0.8
EL6				AML	AML		
	comp=E,336µm,0.4s						
EL6				AML	AML		
	comp=N,312µm,0.3s						
T1212	**Cascia, Frazio**	**0.30**	**173**	⇓P	Pg	00 03 48.7	+0.6
T1212				S	Sb	00 03 53.8	-0.8
T1212				AML	AML		
	comp=E,145µm,0.3s						
T1212				AML	AML		
	comp=N,150µm,0.3s						
T1212				AML	AML		
	comp=E,145µm,1.7s						
ATCC	**AVT- Casa Cast**	**0.30**	**298**	⇑P	Pb	00 03 49.1	-0.5
ATCC				AML	AML		
	comp=E,174µm,1.1s						
ATCC				AML	AML		
	comp=N,157µm,0.3s						
ATCC				AML	AML		
	comp=E,174µm,0.9s						
T1214	**Arquata del Tr**	**0.33**	**152**	⇓P	Pg	00 03 49.1	+0.4
T1214				S	Sb	00 03 54.5	-1.0
T1214				AML	AML		
	comp=E,106µm,1.6s						
T1214				AML	AML		
	comp=N,120µm,0.3s						
T1214				AML	AML		
	comp=E,107µm,1.6s						
T1214				AML	AML		
	comp=N,121µm,0.3s						
T1214				AML	AML		
	comp=E,107µm,0.4s						
T1217	**Poggiodomo (PG**	**0.34**	**188**	⇑P	Pg	00 03 49.6	+0.7
T1217				S	Sb	00 03 55.3	-0.5
T1217				AML	AML		
	comp=E,91µm,0.7s						
T1217				AML	AML		
	comp=N,97µm,0.7s						
T1217				AML	AML		
	comp=N,97µm,1.3s						
CING	**Cingoli**	**0.36**	**24**	⇑P	Pb	00 03 50.0	-0.7
CING				AML	AML		
	comp=E,140µm,0.2s						
CING				AML	AML		
	comp=N,90µm,1.0s						
CING				AML	AML		
	comp=N,90µm,1.0s						
T1241	**Roccafluvione,**	**0.37**	**121**	⇑P	Pg	00 03 50.0	+0.6
T1218	**Civita (PG)**	**0.39**	**167**	⇓P	Pg	00 03 50.2	+0.5
MOMA	**Monte Martano**	**0.40**	**233**	⇓P	Pb	00 03 51.2	-0.1
MOMA				AML	AML		
	comp=N,68µm,1.1s						
MOMA				AML	AML		
	comp=E,83µm,0.1s						
MOMA				AML	AML		
	comp=N,68µm,0.9s						
ARVD	**Arcevia**	**0.45**	**355**	⇓P	Pb	00 03 51.7	-0.5
ARVD				S	Sb	00 03 59.8	+0.6
ARVD				AML	AML		
	comp=E,110µm,0.3s						
ARVD				AML	AML		
	comp=N,63µm,0.2s						
ARVD				AML	AML		
	comp=N,63µm,1.8s						
SMA1	**SAN MARTINO**	**0.48**	**149**	⇓P	Pg	00 03 52.0	+0.4
SMA1				AML	AML		
	comp=E,54µm,1.6s						
SMA1				AML	AML		
	comp=E,54µm,1.6s						
SMA1				AML	AML		
	comp=E,54µm,0.4s						
SMA1				AML	AML		
	comp=N,50µm,0.5s						
ARRO	**Arrone**	**0.50**	**200**	S	Sb	00 04 00.5	+0.2
ARRO				AML	AML		
	comp=E,63µm,0.2s						
ARRO				AML	AML		
	comp=N,50µm,1.3s						
FRON	**Frontone**	**0.51**	**337**	⇓P	Pb	00 03 52.8	-0.5
FRON				AML	AML		
	comp=E,65µm,0.2s						
FRON				AML	AML		
	comp=N,88µm,0.3s						
FRON				AML	AML		
	comp=E,65µm,1.8s						
T1211	**Morro Reatino**	**0.52**	**192**	S	Sb	00 04 01.6	+0.4
T1211				AML	AML		
	comp=E,70µm,1.1s						
T1211				AML	AML		
	comp=N,74µm,1.3s						
T1211				AML	AML		
	comp=E,70µm,0.9s						
T1211				AML	AML		
	comp=N,74µm,0.7s						
ATVO	**AVT- Monte Val**	**0.55**	**308**	⇑P	Pb	00 03 53.5	-0.4
ATVO				S	Sb	00 04 02.8	+0.9
RM33	**Pellescritta (**	**0.56**	**163**	⇑P	Pg	00 03 53.2	+0.2
RM33				S	Sb	00 04 02.5	+0.3
CAMP	**Campotosto**	**0.59**	**149**	⇑P	Pg	00 03 53.8	+0.1
CAMP				AML	AML		
	comp=E,22µm,1.5s						
CAMP				AML	AML		
	comp=N,23µm,1.6s						
CAMP				AML	AML		
	comp=N,23µm,0.4s						
CAMP				AML	AML		
	comp=E,22µm,0.5s						
PIEI	**Pieia**	**0.59**	**326**	P	Pb	00 03 54.5	-0.2
PIEI				S	Sb	00 04 04.0	+0.7
PIEI				AML	AML		
	comp=E,37µm,0.1s						
PIEI				AML	AML		
	comp=N,26µm,1.0s						
FSSB	**Fossombrone**	**0.67**	**346**	⇓P	Pb	00 03 55.7	-0.2
FSSB				S	Sn	00 04 06.8	-1.4
FSSB				AML	AML		
	comp=E,138µm,1.5s						
FSSB				AML	AML		
	comp=E,138µm,0.5s						
FSSB				AML	AML		
	comp=N,163µm,0.8s						

IDC ***14*** *00:17:55.2±1.3, 33.10N×76.26E, h0km, mb3.7/9, mbtmp3.7/13, ML3.4/4, MS3.6/2, Error ellipse: s-maj=25.2km s-min=22.8km az=89.0*

NDI ***14*** *00:17:58.4±1.6, 33.01N×76.19E, h5km, ML3.3*

NNC ***14*** *00:17:59.0±6.1, 33.56N×76.75E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=127.6km s-min=47.5km az=84.0*

ISC 14 00:17:57.4±1.1, 33.05N±0.03×76.26E±0.05, h19km±3km, n26, σ1.45/34, mb3.7/8, 2C-2D, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	**0.77**	**217**	*e*P	**Pg**	**00 18 10.2**	**-2.2**
THN				*e*S	**Sg**	**00 18 21.8**	**-0.9**
THN				*e*S	**Sb**	**00 18 21.9**	**-0.3**
THN				IAML		00 18 24.2	
	comp=N,1µm,0.6s						
THN				IAML		00 18 25.1	
	comp=E,650nm,0.5s						
JMU	**Jammu**	**1.20**	**254**	*e*P	**Pb**	**00 18 19.8**	**+0.4**
JMU				*e*S	**Sg**	**00 18 37.7**	**+1.5**
SRNI	**Srinagar**	**1.58**	**312**	*e*P	**Pg**	**00 18 27.6**	**-0.2**
SRNI				*e*S	**Sg**	**00 18 49.0**	**+0.7**
BHK	**Bhakra**	**1.64**	**175**	*e*P	**Pg**	**00 18 28.1**	**-0.8**
BHK				*e*S	**Sg**	**00 18 50.6**	**+0.4**
BHK				IAML		00 18 53.5	
	comp=E,410nm,0.2s						
SMLA	**Simla**	**2.06**	**158**	*e*P	**Pb**	**00 18 34.3**	**0.0**
SMLA				*e*S	**Sb**	**00 19 01.0**	**+1.5**
SMLA				IAML		00 19 04.9	
	comp=E,330nm,0.3s						
SMLA				IAML		00 19 05.5	
	comp=N,248nm,0.4s						
KUDL	**Kundal**	**4.89**	**178**	*e*S	**Sn**	**00 20 04.9**	**-1.2**
KHET	**Khetri**	**4.98**	**185**	*e*P	**Pn**	**00 19 12.4**	**+1.3**
KHET				*e*S	**Sn**	**00 20 06.9**	**-1.2**
AML	**Almayashu**	**9.29**	**348**	⇑P	**Pn**	**00 20 10.2**	**-0.4**
	comp=N,0.3nm,0.5s						
AML				⇓S	**Sn**	**00 21 52.1**	**-2.7**
	comp=N,1.2nm,1.0s						
AAK	**Ala-Archa**	**9.67**	**352**	Pn	**Pn**	**00 20 17.0**	**+1.4**
	comp=N,0.5nm,0.3s,baz=166,slow=7.0,SNR=8.4						
AAK				Sn	**Sn**	**00 22 05.2**	**+1.4**
	comp=N,0.1nm,0.3s,baz=86,slow=23,SNR=1.3						
	comp=N,1.8nm,0.6s						
KK31	**Karatay Array**	**11.01**	**337**	⇓P	**Pn**	**00 20 34.8**	**+1.0**
	comp=N,0.5nm,0.3s,baz=143,slow=12,SNR=11						
KK31				⇑S	**Sn**	**00 22 33.6**	**-2.8**
	comp=N,0.9nm,0.3s,baz=148,slow=20						
MKAR	**Makanchi Array**	**14.48**	**17**	Pn	**Pn**	**00 21 22.0**	**+0.8**
	comp=N,0.2nm,0.3s,baz=197,slow=12,SNR=7.7						
MKAR				Sn	**Sn**	**00 23 57.6**	**-3.6**
	comp=N,0.1nm,0.3s,baz=162,slow=32,SNR=1.8						
	comp=N,0.2nm,0.3s						
GEYT	**Alibeck**	**15.56**	**293**	Pn	**Pn**	**00 21 34.8**	**-0.9**
	comp=N,0.2nm,0.3s,baz=44,slow=15,SNR=1.9						
	comp=N,0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**17.64**	**5**	P	**Pn**	**00 22 00.2**	**-1.7**
	comp=N,0.1nm,0.3s,baz=188,slow=11,SNR=7.2						
	comp=N,0.5nm,0.6s						
AB31	**Akbulak array**	**20.25**	**328**	P	Pn	00 22 34.3	+0.8
	comp=N,0.6nm,0.6s,baz=134,slow=11,SNR=14						
BVAR	**Borovoye Array**	**20.41**	**350**	P	**P**	**00 22 33.4**	**+0.2**
	comp=N,2.3nm,0.6s,baz=166,slow=10,SNR=6.1						
	comp=N,2.3nm,0.6s						
ZALV	**Zalesovo Beam**	**21.76**	**14**	P	**P**	**00 22 46.8**	**-0.8**
	comp=N,1.0nm,0.5s,baz=204,slow=11,SNR=5.7						
	comp=N,1.0nm,0.5s						
AKTO	**Aktyubinsk**	**21.97**	**328**	P	**P**	**00 22 49.8**	**-0.2**
	comp=N,1.8nm,0.6s,baz=135,slow=8.1,SNR=6.4						
	comp=N,1.8nm,0.6s						
AKTO	**Aktyubinsk**	**21.97**	**328**	P	**P**	**00 22 50.4**	**+0.5**
SONM	**Songino Array**	**27.06**	**48**	P	**P**	**00 23 40.7**	**+1.9**
	comp=N,0.2nm,0.6s,baz=241,slow=9.7,SNR=2.5						
	comp=N,0.2nm,0.6s						
KBZ	**Khabaz**	**28.07**	**302**	P	**P**	**00 23 48.4**	**+0.8**
	comp=N,2.6nm,0.9s,baz=40,slow=8.6,SNR=4.5						
	comp=N,2.6nm,0.9s						
FINES	**FINESS Array B**	**42.74**	**327**	P	**P**	**00 25 53.0**	**-0.1**
	comp=N,1.0nm,0.7s,baz=91,slow=5.7,SNR=3.6						
	comp=N,1.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**44.17**	**59**	LR	LR	00 45 28.5	

	comp=N,50nm,20.4s,baz=8.9,slow=38						
ARCES	**ARCESS Array B**	**45.97**	**338**	P	**P**	**00 26 18.6**	**-0.3**
	comp=N,3.4nm,1.0s,baz=100,slow=9.2,SNR=1.5						
	comp=N,3.4nm,1.0s						
TORD	**Torodi Ar. Bea**	**70.10**	**273**	P	**P**	**00 29 10.6**	**+1.9**
	comp=N,1.1nm,1.1s,baz=25,slow=2.2,SNR=3.8						
	comp=N,1.1nm,1.1s						
RES	**Resolute Bay**	**72.38**	**358**	LR	LR	01 03 34.7	
	comp=N,49nm,18.1s,baz=3.0,slow=38						
WRA	**Warramunga Arr**	**76.48**	**125**	P	**P**	**00 29 46.6**	**+0.3**
	comp=N,0.2nm,0.9s,baz=319,slow=5.8,SNR=1.9						
	comp=N,0.2nm,0.9s						

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*IDC **14** 00:18:32.2±2.4, 17°.42N×62°.77W, h92km±21km, mb3.8/14, mbtmp4.2/17, MS3.0/1, Error ellipse: s-maj=19.7km s-min=11.2km az=64.0*

*OSPL **14** 00:18:32.6±3.3, 17°.72N×62°.61W, h5km±252km, ML4.3*

*TRN **14** 00:18:33.8, 17°.59N×62°.74W, h106km, MD4.3*

TRN Felt in Sint Maarten MMI III and St. BartholomewMMI III.

*NEIC **14** 00:18:35.1±1.5, 17°.52N±0°.06×62°.80W±0°.05, h107km±4km, mb4.3/71, Error ellipse: s-maj=9.2km s-min=5.6km az=209.0*

ISC 14 00:18:34.3±0.6, **17°.53N**±0°.04×**62°.82W**±0°.04, **h109**km±5km, **n196**, σ1s.**24**/224, **mb4.2**/44, **1C**, **Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SEUS	**St. Eustatius**	**0.16**	**257**		**Pn**	**00 18 49.9**	**+0.5**
SEUS				Sn	**Sn**	**00 19 01.0**	**+0.3**
SEUS	**St. Eustatius**	**0.16**	**257**	*e*P	**Pn**	**00 18 50.2**	**+0.8**
SEUS				*e*S	**Sn**	**00 19 01.4**	**+0.7**
SABA	**Saba**	**0.41**	**283**		**Pn**	**00 18 51.3**	**+0.8**
SABA				Sn	**Sn**	**00 19 03.5**	**+0.9**
SABA	**Saba**	**0.41**	**283**	*e*P	**Pn**	**00 18 51.5**	**+1.1**
SABA				*e*S	**Sn**	**00 19 03.9**	**+1.3**
SMRT	**St. Maarten**	**0.57**	**335**	Pn	**Pn**	**00 18 52.3**	**+0.8**
SMRT				Sn	**Sn**	**00 19 04.1**	**-0.3**
SMRT	**St. Maarten**	**0.57**	**335**	*e*P	**Pn**	**00 18 52.3**	**+0.8**
SMRT				*e*S	**Sn**	**00 19 04.4**	**-0.1**
MBFL	**Flemmings, Mon**	**0.97**	**143**	*e*P	**Pn**	**00 18 56.2**	**+1.1**
MBFL				*e*S	**Sn**	**00 19 12.1**	**+1.3**
ANWB	**Willy Bob**	**1.00**	**82**		**Pn**	**00 18 55.7**	**+0.4**
ANWB				Sn	**Sn**	**00 19 10.9**	**-0.3**
ANWB	**Willy Bob**	**1.00**	**82**	*e*P	**Pn**	**00 18 55.5**	**+0.2**
ANWB				*e*S	**Sn**	**00 19 10.7**	**-0.5**
ANWB	**Willy Bob**	**1.00**	**82**	*e*P	**Pn**	**00 18 55.7**	**+0.4**
ANWB				*e*S	**Sn**	**00 19 11.0**	**-0.1**
MLYT	**Lee's Yard**	**1.00**	**143**	*e*P	**Pn**	**00 18 56.4**	**+0.9**
MLYT				*e*S	**Sn**	**00 19 12.7**	**+1.3**
ANBD	**Bethesda, Anti**	**1.12**	**115**	*e*P	**Pn**	**00 18 56.9**	**+0.4**
ANBD				*e*S	**Sn**	**00 19 12.8**	**-0.6**
GDHS	**Morne Mazeau,**	**1.61**	**141**		**Pn**	**00 19 02.9**	**+0.5**
GDHS				Sn	**Sn**	**00 19 24.0**	**+0.2**
ABD	**La Joyeuse, An**	**1.65**	**129**		**Pn**	**00 19 03.2**	**+0.4**
ABD				Sn	**Sn**	**00 19 24.5**	**0.0**
ABD	**La Joyeuse, An**	**1.65**	**129**	*e*P	**Pn**	**00 19 03.3**	**+0.4**
ABD				*e*S	**Sn**	**00 19 24.6**	**0.0**
CBE	**Ff, Capester**	**1.86**	**141**		**Pn**	**00 19 06.4**	**+0.9**
CBE				Sn	**Sn**	**00 19 30.4**	**+1.1**
CBE	**Ff, Capester**	**1.86**	**141**	*e*P	**Pn**	**00 19 06.4**	**+0.9**
CBE				*e*S	**Sn**	**00 19 30.3**	**+1.1**
TBG	**Guadaloupe-3**	**2.01**	**146**	*e*P	**Pn**	**00 19 07.8**	**+0.4**
H05N1	**Guadeloupe/Mar**	**2.08**	**125**	P	**Pn**	**00 19 08.2**	**0.0**
	SNR=1779						
H05N1				S	**Sn**	**00 19 32.3**	**-1.8**
MAGL	**Barre de l’ile**	**2.15**	**137**		**Pn**	**00 19 10.0**	**+0.8**
MAGL				Sn	**Sn**	**00 19 35.9**	**0.0**
MAGL	**Barre de l’ile**	**2.15**	**137**	*e*P	**Pn**	**00 19 10.1**	**+0.8**
MAGL				*e*S	**Sn**	**00 19 35.5**	**-0.4**
STVI	**Saint Thomas**	**2.19**	**292**	Pn	**Pn**	**00 19 10.2**	**+0.6**
CUPR	**Culebra, Puert**	**2.47**	**289**	Pn	**Pn**	**00 19 14.0**	**+0.8**
DLPL	**La Plaine**	**2.66**	**145**		**Pn**	**00 19 16.2**	**+0.5**
DLPL	**La Plaine**	**2.66**	**145**	*e*P	**Pn**	**00 19 17.0**	**+1.2**
MTP	**Monte Pirata**	**2.66**	**283**		**Pn**	**00 19 16.7**	**+0.9**
HUMP	**Col San Antoni**	**2.95**	**282**		**Pn**	**00 19 20.4**	**+0.8**
CBYP	**Canovanas**	**2.98**	**285**		**Pn**	**00 19 21.1**	**+1.0**
SVN	**Savane Anatole**	**3.11**	**149**		**Pn**	**00 19 22.4**	**+0.6**
GCPR	**Guaynabo City**	**3.20**	**284**		**Pn**	**00 19 23.6**	**+0.6**
FDF	**Fort de France**	**3.21**	**150**		**Pn**	**00 19 23.5**	**+0.4**
FDF	**Fort de France**	**3.21**	**150**	*e*P	**Pn**	**00 19 23.6**	**+0.4**
SJG	**San Juan**	**3.23**	**281**	P	**Pn**	**00 19 20.0**	**-3.3**
	80nm,0.3s,baz=0.7,slow=20,SNR=3.6						
SJG				S	**Sn**	**00 20 01.1**	**+0.1**
	193nm,0.5s,baz=49,slow=20,SNR=17						
SJG	**San Juan**	**3.23**	**281**		**Pn**	**00 19 24.2**	**+1.0**
ILAM	**Ilet Lapin Mar**	**3.32**	**145**	Pn	**Pn**	**00 19 24.5**	**+0.1**
ILAM	**Ilet Lapin Mar**	**3.32**	**145**	*e*P	**Pn**	**00 19 24.6**	**+0.1**
BIM	**Bigot**	**3.44**	**150**	Pn	**Pn**	**00 19 26.9**	**+0.8**
BIM	**Bigot**	**3.44**	**150**	*e*P	**Pn**	**00 19 26.9**	**+0.8**
BIM				*e*S	**Sn**	**00 20 06.5**	**+0.3**
MPOM	**Morne Pois Mar**	**3.60**	**148**		**Pn**	**00 19 28.5**	**+0.2**
MPOM	**Morne Pois Mar**	**3.60**	**148**	*e*P	**Pn**	**00 19 29.2**	**+0.9**
MPOM				*e*S	**Sn**	**00 20 10.8**	**+0.8**
CELP	**Cerrillos**	**3.62**	**279**	Pn	**Pn**	**00 19 29.5**	**+1.0**
H05S1	**Guadeloupe/Mar**	**3.63**	**148**	P	**Pn**	**00 19 29.5**	**+0.8**
	SNR=178						
H05S1				S	**Sn**	**00 20 09.5**	**-1.2**
OBIP	**Obispado Ponce**	**3.64**	**279**		**Pn**	**00 19 28.6**	**-0.3**
EMPR	**Esperanza - Ma**	**3.65**	**286**	Pn	**Pn**	**00 19 29.8**	**+0.9**
UUPR	**Utuado, UPR, P**	**3.78**	**282**		**Pn**	**00 19 31.7**	**+1.0**
AOPR	**Arecibo Observ**	**3.83**	**283**		**Pn**	**00 19 32.1**	**+0.7**
AOPR	**Arecibo Observ**	**3.83**	**283**	*e*P	**Pn**	**00 19 32.6**	**+1.2**
AOPR				*e*S	**Sn**	**00 20 17.1**	**+1.4**
SLBI	**Saint Lucia, B**	**3.91**	**153**	*e*P	**Pn**	**00 19 32.9**	**+0.5**
SLBI				*e*S	**Sn**	**00 20 17.1**	**-0.4**
SLW	**Petit Monier**	**3.93**	**152**	*e*P	**Pn**	**00 19 34.0**	**+1.3**
MLPR	**Magueyes Islan**	**4.05**	**277**	Pn	**Pn**	**00 19 34.4**	**+0.1**
SLB	**Belfond**	**4.06**	**155**	*e*P	**Pn**	**00 19 36.4**	**+1.8**
CRPR	**Cabo Rojo, PR**	**4.12**	**277**	Pn	**Pn**	**00 19 34.7**	**-0.5**
CRPR	**Cabo Rojo, PR**	**4.12**	**277**	*i* P	**Pn**	**00 19 35.5**	**+0.4**
CRPR				*e*S	**Sn**	**00 20 23.6**	**+1.3**
CRPR				IAML		00 20 28.4	
	comp=Z,278nm,0.4s						
PRSN	**Puerto Rico Se**	**4.17**	**280**		**Pn**	**00 19 36.4**	**+0.5**
PRSN				Sn	**Sn**	**00 20 25.2**	**+1.4**
AGPR	**Aguadilla, PR**	**4.19**	**284**	Pn	**Pn**	**00 19 37.1**	**+0.9**
AGPR	**Aguadilla, PR**	**4.19**	**284**	*i* P	**Pn**	**00 19 36.7**	**+0.6**
MCLT	**Moule a Chique**	**4.21**	**154**	Pn	**Pn**	**00 19 38.1**	**+1.7**
MCLT	**Moule a Chique**	**4.21**	**154**	*e*P	**Pn**	**00 19 37.4**	**+0.9**
SVV	**Soufriere Volc**	**4.46**	**160**	*e*P	**Pn**	**00 19 42.0**	**+2.1**
SVB	**Belmont**	**4.50**	**160**		**Pn**	**00 19 40.2**	**-0.1**
SVB	**Belmont**	**4.50**	**160**	*e*P	**Pn**	**00 19 41.4**	**+1.1**
GCMP	**Grenada, Carri**	**5.19**	**165**	*e*P	**Pn**	**00 19 51.5**	**+1.8**
BBGH	**Gun Hill**	**5.38**	**144**	Pn	**Pn**	**00 19 52.5**	**+0.3**
PCDR	**Punta Cana, DR**	**5.38**	**281**	Pn	**Pn**	**00 19 54.4**	**+2.2**
PCDR	**Punta Cana, DR**	**5.38**	**281**	*i* P	**Pn**	**00 19 55.2**	**+2.9**
PCDR				IAML		00 21 00.1	
	comp=Z,124nm,0.7s						
GRGR	**Grenville**	**5.48**	**168**	Pn	**Pn**	**00 19 53.7**	**0.0**
GRGR	**Grenville**	**5.48**	**168**	*e*P	**Pn**	**00 19 54.5**	**+0.8**
DR12	**Loma Pena Alta**	**6.36**	**282**		**Pn**	**00 20 06.4**	**+0.8**
TOSP	**Speyside**	**6.58**	**160**	Pn	**Pn**	**00 20 11.1**	**+2.6**
TOSP	**Speyside**	**6.58**	**160**	*e*P	**Pn**	**00 20 10.7**	**+2.2**
SDD	**Santo Domingo**	**6.81**	**279**	Pn	**Pn**	**00 20 12.0**	**+0.4**
TRN	**Trinidad (W)**	**6.98**	**168**	*e*P	**Pn**	**00 20 14.9**	**+1.0**
SC01	**Santiago de lo**	**7.74**	**285**	*e*S	**Sn**	**00 21 47.3**	**-3.0**
BIRV	**Birongo**	**7.77**	**206**	Pn	**Pn**	**00 20 25.6**	**+0.9**
PODR	**Polo**	**8.08**	**276**	*i* P	**Pn**	**00 20 30.6**	**+1.5**
PODR				*e*S	**Sn**	**00 21 57.2**	**-1.8**
SDDR	**Presa de Saban**	**8.18**	**281**		**Pn**	**00 20 30.1**	**-0.1**
SDDR	**Presa de Saban**	**8.18**	**281**	*e*P	**Pn**	**00 20 31.0**	**+0.7**
SDDR	**Presa de Saban**	**8.18**	**281**	*e*S	**Sn**	**00 21 58.0**	**-3.0**
SDDR	**Presa de Saban**	**8.18**	**281**	*i* P	**Pn**	**00 20 30.9**	**+0.7**
SDDR				*e*S	**Sn**	**00 21 58.8**	**-2.2**
SDDR				IAML		00 22 05.2	
	comp=Z,64nm,0.6s						
GRTK	**Grand Turk**	**8.78**	**298**	Pn	**Pn**	**00 20 36.4**	**-2.0**
BAUV	**El Baul**	**9.93**	**211**		**Pn**	**00 20 55.1**	**+1.0**
URIC	**Uribia, Colomb**	**10.60**	**238**	Pn	**Pn**	**00 21 03.7**	**+0.6**
PAMC	**Pamplona, Colo**	**13.98**	**225**	*e*P	**Pn**	**00 21 50.0**	**+1.8**
SJCC	**San Jacinto, C**	**14.20**	**239**	*e*P	**Pn**	**00 21 51.9**	**+1.3**
BBSR	**BB Station**	**14.88**	**354**	Pn	**Pn**	**00 21 58.4**	**-0.6**
BOAV	**Boa Vista**	**15.21**	**171**		**Pn**	**00 22 04.5**	**+1.2**
RUSC	**La Rusia**	**15.31**	**222**	Pn	**Pn**	**00 22 05.4**	**+0.2**
RUSC				IAmb	IAmb	00 22 11.0	
	comp=Z,15nm,0.7s						
RUSC	**La Rusia**	**15.31**	**222**	*e*P	**Pn**	**00 22 06.4**	**+1.3**
ZARC	**Zaragoza, Cauc**	**15.40**	**231**	*e*P	**Pn**	**00 22 04.5**	**-1.3**
UREC	**San Jos de Ur**	**15.75**	**233**	*e*P	**Pn**	**00 22 09.8**	**-0.3**
PTBC	**PUERTO BERRIO,**	**15.76**	**228**	*e*P	**Pn**	**00 22 09.3**	**-1.0**
MDP	**Montagnes des**	**15.87**	**140**	P	**Pn**	**00 22 08.6**	**-3.0**
	comp=Z,13nm,1.0s,baz=328,slow=15,SNR=6.9						
MDP				S	Sn	00 24 52.5	-15
	comp=Z,17nm,1.0s,baz=44,slow=17,SNR=6.7						
SPBC	**San Pablo de B**	**16.14**	**224**	*e*P	**Pn**	**00 22 14.2**	**-0.9**
CHIC	**Chingaza**	**16.69**	**221**	*e*P	**Pn**	**00 22 21.9**	**-0.2**
DBBC	**Dabeiba**	**16.73**	**233**	*e*P	**P**	**00 22 22.9**	**+0.1**
NORC	**Norcasia**	**16.74**	**226**	*e*P	**Pn**	**00 22 21.5**	**-0.9**
HELC	**Santa Helena**	**16.77**	**229**	⇑*e*P	**Pn**	**00 22 21.9**	**-1.2**
ROSC	**El Rosal**	**16.91**	**223**	P	**Pn**	**00 22 23.6**	**-1.2**
	comp=Z,7.5nm,0.5s,baz=347,slow=14,SNR=2.9						
ROSC	**El Rosal**	**16.91**	**223**	P	**Pn**	**00 22 24.8**	**0.0**
ROSC				IAmb	IAmb	00 22 32.0	
	comp=Z,20nm,0.7s						
GUY2C	**Guyana, Caldas**	**17.33**	**227**	*e*P	**P**	**00 22 25.8**	**-4.0**
CBOC	**Ciudad Bolivar**	**17.34**	**230**	*e*P	**P**	**00 22 29.8**	**+0.2**
PRAC	**Prado**	**18.12**	**222**	*e*P	**P**	**00 22 33.5**	**-4.6**
BCIP	**Isla Barro Col**	**18.52**	**246**	P	**Pn**	**00 22 43.4**	**-0.3**
MACC	**Macarena, Meta**	**18.74**	**217**	*e*P	**P**	**00 22 44.2**	**-0.6**
SOR	**Soroa**	**19.66**	**289**	P	**P**	**00 22 54.8**	**+0.1**
SOR				IAmb	IAmb	00 23 12.8	
	comp=Z,37nm,1.4s						
JAMC	**Jamundi, Valle**	**19.67**	**225**	*e*P	**P**	**00 22 52.9**	**-2.3**
ESPN	**Las Esperanzas**	**21.42**	**259**	P	**P**	**00 23 14.8**	**+1.0**
ESPN				IAmb	IAmb	00 23 18.1	
	comp=Z,9.2nm,0.8s						
656A	**Willston**	**21.55**	**307**	P	**P**	**00 23 18.9**	**+4.0**
SRBA	**San Rafael, Bu**	**21.60**	**250**	P	**P**	**00 23 18.4**	**+2.6**
RIMA	**Rio Macho**	**21.84**	**252**	P	**P**	**00 23 20.1**	**+1.7**
TUMC	**Tumaco**	**22.09**	**227**	P	**P**	**00 23 19.4**	**-1.4**
Y58A	**Scranton**	**22.22**	**320**	P	**P**	**00 23 22.8**	**+0.7**
OTAV	**Otavalo**	**23.06**	**223**	P	**P**	**00 23 32.2**	**+1.1**
TKL	**Tuckaleechee C**	**25.93**	**318**	LR	LR	00 34 57.0	
	comp=Z,37nm,20.3s,baz=50,slow=38						
CZSB	**Cruzeiro do Su**	**26.93**	**202**	P	**P**	**00 24 04.3**	**-1.3**
MCRA	**Macar, Loja**	**27.56**	**219**	P	**P**	**00 24 11.5**	**+0.2**
MCRA				IAmb	IAmb	00 24 11.6	
	comp=Z,4.6nm,0.8s						
ATAH	**Atahualpa**	**28.94**	**213**	P	**P**	**00 24 24.6**	**+0.7**
	comp=Z,11nm,0.8s,baz=100,slow=5.0,SNR=4.9						
	comp=Z,11nm,0.8s						
LPAZ	**La Paz**	**34.01**	**189**	P	**P**	**00 25 06.7**	**-1.9**
	comp=Z,1.5nm,0.7s,baz=349,slow=5.2,SNR=8.3						
	comp=Z,1.5nm,0.7s						
WMOK	**Wichita Mounta**	**36.31**	**305**	P	**P**	**00 25 27.8**	**+0.2**
WMOK				IAmb	IAmb	00 25 29.1	
	comp=Z,3.1nm,0.5s						
ABTX	**Abilene, Hawle**	**36.38**	**301**	P	**P**	**00 25 27.7**	**-0.5**
TXAR	**Lajitas Array**	**39.09**	**295**	P	**P**	**00 25 52.5**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=121,slow=10.0,SNR=7.0						
TXAR				PcP	**PcP**	**00 28 00.1**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=141,slow=6.1,SNR=3.8						
	comp=Z,0.5nm,0.5s						
LVC	**Limon Verde**	**40.34**	**189**	P	**P**	**00 25 59.4**	**-2.4**
	comp=Z,5.2nm,0.4s,baz=17,slow=6.6,SNR=14						
	comp=Z,5.2nm,0.4s						
ULM	**Lac du Bonnet**	**42.02**	**328**	P	**P**	**00 26 13.8**	**-1.1**
	comp=Z,3.0nm,0.3s,baz=123,slow=6.1,SNR=6.3						
	comp=Z,3.0nm,0.3s						
BNM	**Barren Site**	**42.41**	**302**	P	**P**	**00 26 19.5**	**+0.9**
ANMO	**Albuquerque**	**42.44**	**303**	P	**P**	**00 26 19.1**	**+0.4**
ANMO				IAmb	IAmb	00 26 21.1	
	comp=Z,3.9nm,1.1s						
CRNM	**Carthage**	**42.46**	**301**	P	**P**	**00 26 18.8**	**-0.1**
CPUP	**Villa Florida**	**43.92**	**173**	P	**P**	**00 26 28.2**	**-2.1**
	comp=Z,1.3nm,0.4s,baz=12,slow=7.0,SNR=5.2						
	comp=Z,1.3nm,0.4s						
PV13	**Radium Mtn., P**	**45.03**	**307**	P	**P**	**00 26 40.7**	**+1.2**
PV13				IAmb	IAmb	00 26 41.5	
	comp=Z,2.9nm,0.7s						
PV11	**David Mesa, Pa**	**45.11**	**307**	P	**P**	**00 26 41.4**	**+1.3**
PV11				IAmb	IAmb	00 26 41.9	
	comp=Z,4.0nm,0.7s						
WUAZ	**Wupatki**	**46.50**	**303**	P	**P**	**00 26 52.6**	**+1.6**
WUAZ				IAmb	IAmb	00 26 53.3	
	comp=Z,4.7nm,0.8s						
SRU	**San Rafael Swe**	**46.56**	**308**	P	**P**	**00 26 51.6**	**+0.2**
SRU				IAmb	IAmb	00 26 52.6	
	comp=Z,3.5nm,1.0s						
AC05	**El Transito**	**46.65**	**189**	P	**P**	**00 26 51.7**	**-0.4**
BW06	**Boulder Array**	**46.84**	**313**	P	**P**	**00 26 54.3**	**+0.7**
PD31	**Pinedale Array**	**46.84**	**313**	P	**P**	**00 26 54.0**	**+0.3**
PDAR	**Pinedale Array**	**46.84**	**313**	P	**P**	**00 26 54.2**	**+0.5**
	comp=Z,1.4nm,0.5s,baz=119,slow=9.5,SNR=19						
PDAR				PcP	**PcP**	**00 28 25.3**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=98,slow=4.5,SNR=2.7						
	comp=Z,1.4nm,0.5s						
LCO	**Las Campanas**	**46.89**	**189**	P	**P**	**00 26 53.5**	**-0.6**
RLMT	**Red Lodge**	**47.40**	**316**	P	**P**	**00 26 59.2**	**+1.2**
RLMT				IAmb	IAmb	00 26 59.9	
	comp=Z,5.6nm,1.1s						
MTPU	**Mount Pierson**	**47.60**	**306**	P	**P**	**00 27 00.6**	**+0.8**
CO01	**Juntas del Tor**	**47.75**	**189**	P	**P**	**00 27 03.1**	**+2.4**
REDW	**Red Top Meadow**	**47.92**	**313**	P	**P**	**00 27 03.4**	**+1.4**
REDW				IAmb	IAmb	00 27 08.3	
	comp=Z,4.5nm,1.2s						
MOOW	**Moose Ponds**	**47.96**	**314**	P	**P**	**00 27 03.6**	**+1.3**
GO04	**Tololo Observa**	**48.05**	**189**	P	**P**	**00 27 02.4**	**-0.6**
SPUT	**South Promonto**	**48.51**	**310**	P	**P**	**00 27 07.5**	**+1.0**
SPUT				IAmb	IAmb	00 27 11.2	
	comp=Z,5.8nm,1.4s						
CO03	**El Pedregal**	**48.68**	**189**	P	**P**	**00 27 07.4**	**-0.3**
BGU	**Big Grassy Mou**	**48.85**	**309**	P	**P**	**00 27 09.9**	**+0.8**
HVU	**Hansel Valley**	**48.86**	**311**	P	**P**	**00 27 10.2**	**+1.0**
HVU				IAmb	IAmb	00 27 10.7	
	comp=Z,2.7nm,0.8s						
HLID	**Hailey**	**50.47**	**312**	P	**P**	**00 27 22.9**	**+1.5**
TPNV	**Topopah Spring**	**50.61**	**304**	P	**P**	**00 27 23.9**	**+1.4**
TPNV				IAmb	IAmb	00 27 26.6	
	comp=Z,3.1nm,1.2s						
WCT	**Wildcat Mounta**	**50.89**	**303**	P	**P**	**00 27 25.8**	**+1.3**
QSM	**Queen of Sheba**	**50.99**	**302**	P	**P**	**00 27 26.5**	**+1.3**
QSM				IAmb	IAmb	00 27 26.8	
	comp=Z,1.7nm,0.7s						
MT02	**Curacav**	**51.12**	**189**	P	**P**	**00 27 26.7**	**+0.7**
MT09	**Talagante**	**51.61**	**189**	P	**P**	**00 27 29.4**	**-0.4**
NVAR	**Mina Array Bea**	**52.41**	**305**	P	**P**	**00 27 36.3**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=93,slow=6.7,SNR=7.4						
	comp=Z,0.8nm,0.6s						
LHV	**Little Huntoon**	**52.55**	**305**	P	**P**	**00 27 38.2**	**+1.5**
LHV				IAmb	IAmb	00 27 38.7	
	comp=Z,6.6nm,1.4s						
BO02	**Sierra Bellavi**	**52.58**	**188**	P	**P**	**00 27 38.1**	**+1.2**
H10N3	**ASCENSION HYDR**	**53.98**	**114**	T	T	01 25 07.9	
	baz=298,slow=75,SNR=17						
H10N2	**ASCENSION HYDR**	**53.99**	**114**	T	T	01 25 08.4	
	baz=298,slow=75,SNR=20						
H10N1	**ASCENSION HYDR**	**54.00**	**114**	T	T	01 25 09.4	
	baz=298,slow=75,SNR=20						
YKA	**Yellowknife Ar**	**57.37**	**334**	P	**P**	**00 28 11.2**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=110,slow=7.5,SNR=18						
	comp=Z,1.1nm,0.6s						
YKA	**Yellowknife Ar**	**57.37**	**334**	P	**P**	**00 28 11.5**	**+0.5**
DBIC	**Dimbokro**	**57.50**	**93**	P	**P**	**00 28 12.8**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=353,slow=14,SNR=2.4						
	comp=Z,1.2nm,0.5s						
PLCA	**Paso Flores**	**58.41**	**187**	P	**P**	**00 28 17.2**	**-1.3**
	comp=Z,1.1nm,0.9s,baz=304,slow=7.3,SNR=1.9						
	comp=Z,1.1nm,0.9s						
RES	**Resolute Bay**	**59.77**	**351**	P	**P**	**00 28 27.9**	**+0.5**
RES				IAmb	IAmb	00 28 28.8	
	comp=Z,2.8nm,1.3s						
TORD	**Torodi Ar. Bea**	**62.12**	**84**	P	**P**	**00 28 44.9**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=275,slow=8.0,SNR=5.8						
	comp=Z,0.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**62.12**	**84**	P	**P**	**00 28 45.2**	**+0.9**
TORD				IAmb	IAmb	00 29 12.8	
	comp=Z,3.7nm,1.4s						
M31M	**Drury Creek, Y**	**66.06**	**331**	P	**P**	**00 29 11.3**	**+2.0**
M31M				IAmb	IAmb	00 29 11.9	
	comp=Z,2.6nm,0.8s						
INK	**Inuvik**	**66.73**	**338**	P	**P**	**00 29 13.5**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=89,slow=6.0,SNR=12						
	comp=Z,1.4nm,0.6s						
INK	**Inuvik**	**66.73**	**338**	P	**P**	**00 29 13.8**	**+0.4**
INK				IAmb	IAmb	00 29 34.8	
	comp=Z,5.1nm,1.5s						
M30M	**Minto, Yukon**	**67.21**	**331**	P	**P**	**00 29 18.3**	**+1.6**
M30M				IAmb	IAmb	00 30 02.3	
	comp=Z,6.8nm,1.4s						
CTGM	**Chitina Glacie**	**69.27**	**329**	P	**P**	**00 29 29.2**	**-0.4**
EGAK	**Eagle**	**69.32**	**333**	P	**P**	**00 29 31.0**	**+1.3**
EGAK				IAmb	IAmb	00 30 08.1	
	comp=Z,5.0nm,1.4s						
BCAR	**Beaver Creek A**	**69.53**	**332**	P	**P**	**00 29 32.6**	**+1.5**
L27K	**Beaver Creek,**	**69.55**	**332**	P	**P**	**00 29 33.0**	**+1.7**
L27K				IAmb	IAmb	00 29 33.3	
	comp=Z,2.6nm,0.6s						
M27K	**Edge Creek, AK**	**69.56**	**331**	P	**P**	**00 29 32.7**	**+1.3**
M27K				IAmb	IAmb	00 29 33.5	
	comp=Z,4.7nm,1.1s						
K27K	**Chicken**	**69.69**	**333**	P	**P**	**00 29 34.2**	**+2.2**
K27K				IAmb	IAmb	00 29 34.5	
	comp=Z,2.2nm,0.7s						
MCARA	**McCarthy VSAT**	**70.09**	**330**	P	**P**	**00 29 36.6**	**+2.1**
I26K	**Coal Creek Min**	**70.19**	**334**	P	**P**	**00 29 35.7**	**+0.7**
I26K				IAmb	IAmb	00 29 56.5	
	comp=Z,6.0nm,1.4s						
SCRK	**Sand Creek**	**70.53**	**332**	P	**P**	**00 29 38.8**	**+1.5**
BMAR	**Burnt Mountain**	**70.80**	**336**	P	**P**	**00 29 39.5**	**+0.8**
N25K	**Chitina, Valde**	**70.84**	**330**	P	**P**	**00 29 39.3**	**+0.1**
N25K				IAmb	IAmb	00 30 02.6	
	comp=Z,9.9nm,1.4s						
IL31		**71.78**	**333**	P	**P**	**00 29 45.1**	**+0.5**
IL31				IAmb	IAmb	00 29 51.8	
	comp=Z,6.2nm,1.5s						
ILAR	**Eielson Array**	**71.78**	**333**	P	**P**	**00 29 44.8**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=92,slow=4.2,SNR=20						
	comp=Z,0.6nm,0.5s						
ILAR	**Eielson Array**	**71.78**	**333**	P	**P**	**00 29 45.2**	**+0.6**
H24K	**Noodor Dome**	**72.14**	**334**	P	**P**	**00 29 47.9**	**+1.1**
MDM	**Murphy Dome**	**72.34**	**334**	P	**P**	**00 29 48.6**	**+0.5**
MDM				IAmb	IAmb	00 29 55.9	
	comp=Z,4.7nm,1.3s						
MCK	**McKinley**	**72.73**	**332**	P	**P**	**00 29 50.9**	**+0.6**
MCK				IAmb	IAmb	00 30 03.9	
	comp=Z,6.1nm,1.3s						
H23K	**Yukon River**	**72.83**	**335**	P	**P**	**00 29 52.4**	**+1.4**
BPAW	**Bear Paw Mtn.**	**73.60**	**333**	P	**P**	**00 29 56.1**	**+0.6**
KTH	**Kantishna Hill**	**73.63**	**332**	P	**P**	**00 29 56.7**	**+1.0**
KTH				IAmb	IAmb	00 30 31.7	
	comp=Z,9.6nm,1.4s						
PPLA	**Purkeypile**	**74.28**	**332**	P	**P**	**00 30 00.1**	**+0.4**
PPLA				IAmb	IAmb	00 30 30.0	
	comp=Z,13nm,1.5s						
IMAR	**Indian Mountai**	**74.53**	**335**	P	**P**	**00 30 00.9**	**+0.1**
K20K	**Telida**	**75.06**	**332**	P	**P**	**00 30 05.1**	**+1.2**
TNA	**Tin City**	**80.28**	**336**	P	**P**	**00 30 35.0**	**+2.2**
TNA				IAmb	IAmb	00 30 35.9	
	comp=Z,3.6nm,0.8s						
PZH	**PanZhiHua**	**133.73**	**19**	PKP	**PKPdf**	**00 37 39.1**	**-0.1**
ASAR	**Alice Springs**	**163.20**	**246**	PKPab	**PKPab**	**00 39 14.9**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=107,slow=4.1,SNR=7.1						
WRA	**Warramunga Arr**	**163.57**	**259**	PKPab	**PKPab**	**00 39 16.7**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=95,slow=4.5,SNR=6.7						

ROM 14 00:19:21.2±0.1, **42°.907N**±0°.002×**13°.129E**±0°.003, **h9**km, **ML1.8**/40, **21C-12D, Error ellipse: s-maj=0.2km s-min=0.1km az=70.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MC2	**Monte Cornacci**	**0.04**	**83**	⇑P	Pg	00 19 23.1	-0.1
MC2				S	Sg	00 19 24.3	-0.4
T1245	**Castelsantange**	**0.07**	**140**	P	Pg	00 19 23.5	+0.1
T1245				S	Sg	00 19 24.9	0.0
T1245				AML	AML		
	comp=N,6300µm,1.1s						
T1245				AML	AML		
	comp=N,6060µm,1.1s						
T1245				AML	AML		
	comp=E,5570µm,0.2s						
T1245				AML	AML		
	comp=N,6060µm,0.9s						
T1245				AML	AML		
	comp=N,6300µm,0.9s						
T1245				AML	AML		
	comp=E,5840µm,0.2s						
FEMA	**Monte Fema**	**0.08**	**313**	⇑P	Pg	00 19 23.8	+0.2
FEMA				S	Sg	00 19 25.2	0.0
FEMA				AML	AML		
	comp=E,6430µm,0.2s						
FEMA				AML	AML		
	comp=N,5105µm,1.4s						
FEMA				AML	AML		
	comp=N,5105µm,0.6s						
T1216	**Preci, Frazion**	**0.08**	**259**	⇑P	Pg	00 19 23.8	+0.4
T1216				S	Sg	00 19 25.5	+0.4
T1216				AML	AML		
	comp=E,3530µm,1.3s						
T1216				AML	AML		
	comp=E,3530µm,0.7s						
T1216				AML	AML		
	comp=N,2915µm,0.3s						
T1256	**Bolognola (MC)**	**0.12**	**36**	⇑P	Pg	00 19 24.5	+0.3
T1256				S	Sg	00 19 26.9	+0.7
T1256				AML	AML		
	comp=N,584µm,0.2s						
T1256				AML	AML		
	comp=E,530µm,0.3s						
FDMO	**Fiordimonte**	**0.13**	**347**	⇓P	Pg	00 19 24.7	+0.4
FDMO				S	Sg	00 19 27.1	+0.8
FDMO				AML	AML		
	comp=N,1285µm,0.1s						
FDMO				AML	AML		
	comp=E,938µm,0.2s						
MMO1	**Montemonaco**	**0.14**	**93**	⇑P	Pg	00 19 24.9	+0.5
MMO1				S	Sg	00 19 27.5	+0.9
T1212	**Cascia, Frazio**	**0.17**	**202**	⇑P	Pg	00 19 25.6	+0.8
T1212				S	Sg	00 19 28.6	+1.3
T1212				AML	AML		
	comp=E,497µm,0.3s						
T1212				AML	AML		
	comp=N,536µm,0.2s						
T1212				AML	AML		
	comp=N,557µm,0.2s						
T1212				AML	AML		
	comp=E,488µm,0.3s						
T1219	**Muccia, Frazio**	**0.17**	**329**	⇓P	Pg	00 19 25.4	+0.5
T1219				S	Sg	00 19 28.4	+0.9
T1219				AML	AML		
	comp=E,828µm,0.3s						
T1219				AML	AML		
	comp=N,1175µm,0.3s						
T1219				AML	AML		
	comp=E,845µm,0.3s						
T1219				AML	AML		
	comp=E,828µm,0.3s						
T1219				AML	AML		
	comp=N,1135µm,0.3s						
T1219				AML	AML		
	comp=E,846µm,0.3s						
T1219				AML	AML		
	comp=N,1180µm,0.3s						
CESI	**CESI - Serrava**	**0.19**	**301**	P	Pg	00 19 25.9	+0.7
CESI				S	Sg	00 19 29.2	+1.3
CESI				AML	AML		
	comp=E,632µm,0.4s						
CESI				AML	AML		
	comp=N,1130µm,0.3s						
T1220	**Camerino, Fraz**	**0.20**	**352**	⇓P	Pg	00 19 26.0	+0.5
T1220				AML	AML		
	comp=E,2880µm,0.4s						
T1220				AML	AML		
	comp=N,2555µm,0.5s						
GUMA	**Gualdo di Mace**	**0.22**	**44**	⇑P	Pg	00 19 26.6	+0.9
GUMA				S	Sg	00 19 30.7	+2.0
GUMA				AML	AML		
	comp=N,1026µm,0.3s						
GUMA				AML	AML		
	comp=N,836µm,0.4s						
GUMA				AML	AML		
	comp=E,1052µm,0.2s						
GUMA				AML	AML		
	comp=E,1605µm,0.2s						
GUMA				AML	AML		
	comp=N,1026µm,1.7s						
T1215	**Vallo di Nera,**	**0.22**	**241**	⇓P	Pg	00 19 26.4	+0.7
T1215				S	Sg	00 19 30.2	+1.5
T1215				AML	AML		
	comp=E,174µm,0.5s						
T1215				AML	AML		
	comp=N,160µm,0.1s						
T1215				AML	AML		
	comp=N,161µm,0.1s						
T1241	**Roccafluvione,**	**0.23**	**103**	⇑P	Pg	00 19 26.5	+0.6
T1241				AML	AML		
	comp=E,285µm,0.4s						
T1241				AML	AML		
	comp=N,279µm,0.7s						

T1241				AML	AML		
	comp=N,279µm,1.3s						
T1218	**Civita (PG)**	**0.24**	**182**	⇓P	Pg	00 19 26.7	+0.6
T1218				S	Sg	00 19 31.0	+1.7
T1218				AML	AML		
	comp=E,234µm,1.3s						
T1218				AML	AML		
	comp=E,242µm,1.0s						
T1218				AML	AML		
	comp=N,336µm,1.2s						
T1218				AML	AML		
	comp=N,326µm,0.4s						
T1217	**Poggiodomo (PG**	**0.24**	**217**	P	Pg	00 19 26.9	+0.7
T1217				S	Sg	00 19 31.2	+1.7
T1217				AML	AML		
	comp=N,318µm,0.2s						
T1217				AML	AML		
	comp=E,216µm,0.3s						
SMA1	**SAN MARTINO**	**0.32**	**151**	⇑P	Pg	00 19 28.0	+0.5
SMA1				S	Sb	00 19 33.5	-1.0
SMA1				AML	AML		
	comp=E,241µm,1.5s						
SMA1				AML	AML		
	comp=N,247µm,1.6s						
SMA1				AML	AML		
	comp=E,241µm,0.5s						
SMA1				AML	AML		
	comp=N,247µm,0.4s						
ASSB	**Assisi San Ben**	**0.37**	**292**	P	Pg	00 19 29.0	+0.4
ASSB				AML	AML		
	comp=E,218µm,0.2s						
ASSB				AML	AML		
	comp=N,223µm,0.4s						
ASSB				AML	AML		
	comp=E,218µm,1.8s						
SNTG	**Esanatoglia**	**0.37**	**338**	⇓P	Pg	00 19 29.1	+0.4
SNTG				AML	AML		
	comp=E,105µm,0.4s						
SNTG				AML	AML		
	comp=N,146µm,1.6s						
RM33	**Pellescritta (**	**0.40**	**171**	⇑P	Pg	00 19 29.6	+0.4
RM33				AML	AML		
	comp=N,124µm,1.1s						
RM33				AML	AML		
	comp=E,108µm,0.3s						
OFFI	**Offida**	**0.41**	**86**	⇑P	Pb	00 19 30.7	0.0
EL6	**Elcito**	**0.42**	**357**	S	Sb	00 19 37.4	-0.2
EL6				AML	AML		
	comp=E,377µm,0.2s						
EL6				AML	AML		
	comp=N,434µm,0.2s						
ARRO	**Arrone**	**0.42**	**219**	⇓P	Pb	00 19 30.2	-0.7
ARRO				AML	AML		
	comp=E,101µm,0.2s						
ARRO				AML	AML		
	comp=N,83µm,1.4s						
MOMA	**Monte Martano**	**0.42**	**256**	P	Pb	00 19 30.3	-0.7
MOMA				AML	AML		
	comp=E,149µm,0.3s						
MOMA				AML	AML		
	comp=N,140µm,0.3s						
MOMA				AML	AML		
	comp=E,149µm,1.7s						
CAMP	**Campotosto**	**0.42**	**151**	⇑P	Pg	00 19 29.9	+0.3
CAMP				AML	AML		
	comp=E,144µm,0.3s						
CAMP				AML	AML		
	comp=N,80µm,0.3s						
T1211	**Morro Reatino**	**0.42**	**208**	⇓P	Pb	00 19 30.4	-0.6
T1211				AML	AML		
	comp=E,90µm,1.5s						
T1211				AML	AML		
	comp=N,116µm,0.9s						
T1211				AML	AML		
	comp=E,90µm,0.5s						
T1211				AML	AML		
	comp=N,116µm,1.1s						
TERO	**Teramo**	**0.45**	**129**	⇑P	Pg	00 19 30.2	+0.2
TERO				AML	AML		
	comp=E,138µm,1.4s						
TERO				AML	AML		
	comp=N,122µm,1.1s						
TERO				AML	AML		
	comp=E,141µm,1.0s						
TERO				AML	AML		
	comp=E,138µm,1.4s						
TERO				AML	AML		
	comp=N,129µm,1.4s						
TERO				AML	AML		
	comp=N,129µm,0.6s						
TERO				AML	AML		
	comp=E,138µm,0.6s						
TERO				AML	AML		
	comp=N,122µm,0.9s						
ATCC	**AVT- Casa Cast**	**0.45**	**308**	⇑P	Pg	00 19 30.7	+0.6
ATCC				AML	AML		
	comp=E,290µm,1.4s						
ATCC				AML	AML		
	comp=N,238µm,1.4s						
ATCC				AML	AML		
	comp=N,238µm,0.6s						
ATCC				AML	AML		
	comp=E,290µm,0.6s						
CING	**Cingoli**	**0.47**	**6**	P	Pg	00 19 31.0	+0.5
CING				AML	AML		
	comp=E,93µm,0.9s						
CING				AML	AML		
	comp=N,89µm,0.9s						
CING				AML	AML		
	comp=N,89µm,1.1s						
FOSV	**Fossato di Vic**	**0.47**	**325**	⇑P	Pg	00 19 31.0	+0.5
FOSV				AML	AML		
	comp=E,188µm,0.8s						
FOSV				AML	AML		
	comp=N,383µm,0.3s						
FOSV				AML	AML		
	comp=E,188µm,1.2s						
T1247	**Pizzolo (AQ)**	**0.48**	**165**	⇓P	Pg	00 19 31.1	+0.5
T1247				AML	AML		
	comp=E,136µm,0.5s						
T1247				AML	AML		
	comp=N,148µm,0.3s						
T1222	**Castel Sant'An**	**0.51**	**188**	P	Pg	00 19 31.5	+0.3
T1222				S	Sb	00 19 39.5	-0.5
GIGS	**Gran Sasso**	**0.56**	**144**	⇑P	Pg	00 19 32.3	+0.2
GIGS				AML	AML		
	comp=N,28µm,0.2s						
GIGS				AML	AML		
	comp=E,34µm,0.5s						
MURB	**Monte Urbino**	**0.57**	**309**	⇓P	Pg	00 19 32.8	+0.5
MURB				S	Sb	00 19 42.5	+0.8
MURB				AML	AML		
	comp=N,232µm,0.7s						
MURB				AML	AML		
	comp=E,355µm,0.2s						
SSFR	**Montelago di S**	**0.59**	**334**	⇑P	Pg	00 19 33.0	+0.4
SSFR				AML	AML		
	comp=N,266µm,0.2s						
SSFR				AML	AML		
	comp=E,242µm,1.2s						
ARVD	**Arcevia**	**0.61**	**347**	⇑P	Pg	00 19 33.3	+0.3
ARVD				S	Sb	00 19 43.1	+0.3
ARVD				AML	AML		
	comp=E,74µm,0.9s						
ARVD				AML	AML		
	comp=N,51µm,0.8s						
ARVD				AML	AML		
	comp=E,74µm,1.1s						
ARVD				AML	AML		
	comp=N,51µm,1.2s						
FRON	**Frontone**	**0.68**	**334**	P	Pg	00 19 34.5	+0.1
FRON				AML	AML		
	comp=N,102µm,0.5s						
FRON				AML	AML		
	comp=E,52µm,0.8s						
FRON				AML	AML		
	comp=N,102µm,1.5s						
ATVO	**AVT- Monte Val**	**0.71**	**312**	P	Pg	00 19 35.2	+0.3
ATVO				S	Sb	00 19 46.9	+1.1
ATVO				AML	AML		
	comp=E,48µm,1.4s						
ATVO				AML	AML		
	comp=N,44µm,0.6s						
ATVO				AML	AML		
	comp=E,48µm,0.6s						
FAGN	**Fagnano**	**0.72**	**152**	⇑P	Pg	00 19 35.5	+0.3
FAGN				AML	AML		
	comp=E,111µm,0.3s						
FAGN				AML	AML		
	comp=N,114µm,0.4s						
FAGN				AML	AML		
	comp=N,114µm,1.6s						
VCEL	**Villa Celiera**	**0.73**	**134**	⇓P	Pg	00 19 35.8	+0.4
PIEI	**Pieia**	**0.76**	**326**	S	Sn	00 19 48.8	-1.3
PIEI				AML	AML		
	comp=E,55µm,0.9s						
PIEI				AML	AML		
	comp=N,36µm,0.9s						
PIEI				AML	AML		
	comp=N,36µm,1.1s						
MPAG	**Monte Paganucc**	**0.77**	**340**	⇑P	Pb	00 19 36.9	0.0
MPAG				AML	AML		
	comp=E,40µm,0.5s						
MPAG				AML	AML		
	comp=N,39µm,0.4s						
FSSB	**Fossombrone**	**0.83**	**342**	⇓P	Pg	00 19 37.5	+0.3
FSSB				AML	AML		
	comp=N,146µm,0.3s						
FSSB				AML	AML		
	comp=E,128µm,0.3s						
T0110	**Collepietro**	**0.83**	**145**	⇑P	Pg	00 19 37.0	-0.2
T0110				AML	AML		
	comp=N,74µm,1.4s						
T0110				AML	AML		
	comp=E,96µm,0.6s						
T0110				AML	AML		
	comp=N,74µm,0.6s						

ROM 14 00:20:18.8±0.1, 42°.770N±0°.003×13°.061E±0°.004, h11km, ML1.5/16, 12C-4D, Error ellipse: s-maj=0.3km s-min=0.3km az=287.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.02**	**213**	P	Pg	00 20 21.1	+0.2
T1212				S	Sg	00 20 22.3	0.0
T1212				AML	AML		
	comp=E,2010µm,0.4s						
T1212				AML	AML		
	comp=N,2590µm,0.2s						
T1212				AML	AML		
	comp=N,2645µm,0.2s						
T1212				AML	AML		
	comp=E,1975µm,0.4s						
T1216	**Preci, Frazion**	**0.12**	**346**	⇓P	Pg	00 20 22.4	+0.5
T1216				S	Sg	00 20 24.9	+0.8
T1216				AML	AML		
	comp=E,297µm,0.3s						
T1216				AML	AML		
	comp=N,420µm,0.7s						
T1216				AML	AML		
	comp=N,421µm,0.7s						
T1216				AML	AML		
	comp=E,297µm,0.4s						
T1245	**Castelsantange**	**0.13**	**47**	⇑P	Pg	00 20 22.4	+0.4
T1245				S	Sg	00 20 24.8	+0.5
T1245				AML	AML		
	comp=N,1130µm,0.2s						
T1245				AML	AML		
	comp=E,1405µm,0.7s						
T1215	**Vallo di Nera,**	**0.14**	**283**	⇑P	Pg	00 20 22.8	+0.6
T1215				S	Sg	00 20 25.4	+0.8
T1215				AML	AML		
	comp=N,219µm,0.9s						
T1215				AML	AML		
	comp=E,189µm,0.2s						
T1215				AML	AML		
	comp=N,218µm,0.9s						
MC2	**Monte Cornacci**	**0.17**	**34**	⇑P	Pg	00 20 23.2	+0.5
MC2				S	Sg	00 20 26.4	+0.9
MMO1	**Montemonaco**	**0.23**	**56**	⇑P	Pg	00 20 24.1	+0.4
MMO1				S	Sg	00 20 28.0	+1.0
SMA1	**SAN MARTINO**	**0.25**	**125**	⇑P	Pg	00 20 24.6	+0.6
SMA1				S	Sg	00 20 28.6	+1.3
SMA1				AML	AML		
	comp=N,150µm,0.8s						
SMA1				AML	AML		
	comp=E,158µm,0.6s						
SMA1				AML	AML		
	comp=N,150µm,1.2s						
T1256	**Bolognola (MC)**	**0.27**	**27**	⇑P	Pg	00 20 24.8	+0.4
T1256				S	Sb	00 20 29.4	-1.0
FDMO	**Fiordimonte**	**0.27**	**4**	⇑P	Pg	00 20 24.8	+0.5
FDMO				S	Sg	00 20 29.1	+1.1
FDMO				AML	AML		
	comp=E,79µm,0.3s						
FDMO				AML	AML		
	comp=N,140µm,0.2s						
T1211	**Morro Reatino**	**0.28**	**213**	⇑P	Pg	00 20 25.0	+0.4
T1211				AML	AML		
	comp=E,227µm,1.5s						
T1211				AML	AML		
	comp=N,212µm,1.4s						
T1211				AML	AML		
	comp=E,226µm,0.1s						
T1211				AML	AML		
	comp=N,212µm,0.6s						
T1211				AML	AML		
	comp=N,216µm,0.2s						
T1211				AML	AML		
	comp=E,227µm,0.5s						
RM33	**Pellescritta (**	**0.28**	**157**	P	Pg	00 20 24.9	+0.2
RM33				AML	AML		
	comp=E,84µm,1.5s						
RM33				AML	AML		
	comp=E,84µm,1.5s						
RM33				AML	AML		
	comp=N,81µm,0.8s						
RM33				AML	AML		
	comp=E,84µm,0.5s						
RM33				AML	AML		
	comp=N,81µm,1.2s						
T1241	**Roccafluvione,**	**0.28**	**72**	S	Sg	00 20 28.1	-0.5
T1219	**Muccia, Frazio**	**0.29**	**352**	AML	AML		
	comp=N,85µm,0.2s						
T1219				AML	AML		
	comp=E,96µm,0.5s						
ARRO	**Arrone**	**0.29**	**229**	⇑P	Pg	00 20 25.1	+0.5
ARRO				AML	AML		
	comp=N,66µm,1.3s						
ARRO				AML	AML		
	comp=E,87µm,0.2s						
ARRO				AML	AML		
	comp=N,66µm,0.7s						
T1220	**Camerino, Fraz**	**0.34**	**3**	⇓P	Pg	00 20 26.1	+0.5
T1220				S	Sb	00 20 33.5	+1.1
T1220				AML	AML		
	comp=E,252µm,0.5s						
T1220				AML	AML		
	comp=E,252µm,1.5s						
T1220				AML	AML		
	comp=N,297µm,1.2s						
GUMA	**Gualdo di Mace**	**0.35**	**34**	⇑P	Pb	00 20 26.6	-0.6
GUMA				AML	AML		
	comp=N,164µm,1.3s						
GUMA				AML	AML		
	comp=N,164µm,0.7s						
GUMA				AML	AML		
	comp=E,154µm,0.3s						
MOMA	**Monte Martano**	**0.36**	**275**	⇓P	Pg	00 20 26.7	+0.6
MOMA				AML	AML		
	comp=E,155µm,0.3s						
MOMA				AML	AML		
	comp=N,116µm,0.1s						
T1222	**Castel Sant'An**	**0.37**	**183**	⇓P	Pg	00 20 26.3	+0.2
ASSB	**Assisi San Ben**	**0.40**	**313**	P	Pg	00 20 27.4	+0.6
ASSB				AML	AML		
	comp=E,45µm,1.1s						
ASSB				AML	AML		
	comp=N,48µm,0.8s						
ASSB				AML	AML		
	comp=N,48µm,1.2s						
ASSB				AML	AML		
	comp=E,45µm,0.9s						
TERO	**Teramo**	**0.43**	**110**	P	Pg	00 20 27.2	0.0
TERO				AML	AML		
	comp=E,68µm,1.0s						
TERO				AML	AML		
	comp=N,81µm,0.9s						
FIAM	**Fiamignano**	**0.50**	**175**	⇑P	Pg	00 20 29.2	+0.5
ATCC	**AVT- Casa Cast**	**0.52**	**323**	P	Pb	00 20 29.7	-0.3
EL6	**Elcito**	**0.56**	**3**	S	Sb	00 20 39.3	+0.5
CING	**Cingoli**	**0.61**	**9**	⇑P	Pg	00 20 31.1	+0.4
ARVD	**Arcevia**	**0.73**	**353**	S	Sb	00 20 44.8	+1.1

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*IDC **14** 00:48:36.1±1.6, 30°.35S×177°.63W, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=38.6km s-min=22.7km az=97.0*

*NEIC **14** 00:48:41.8±2.4, 30°.20S±0°.07×177°.7W±0°.1, h29km±8km, mb4.4/13, Error ellipse: s-maj=16.7km s-min=10.1km az=89.0*

ISC 14 00:48:41.6±0.7, 30°.24S±0°.07×177°.7W±0°.1, h35km, n31, σ1^{s}46/26, mb4.3/8, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.00**	**347**	Pn	**Pn**	**00 49 00.6**	**+1.5**
	75nm,0.3s,baz=72,slow=20,SNR=2.1						
RAO				Sn	**Sn**	**00 49 15.1**	**+3.0**
	331nm,0.3s,baz=81,slow=19,SNR=8.7						
RAO	**Raoul Island**	**1.00**	**347**		**Pn**	**00 49 00.7**	**+1.5**
RAO				Sn	**Sn**	**00 49 12.9**	**+0.9**
URZ	**Urewera**	**9.10**	**207**	Pn	Pn	00 50 42.1	-8.2
	0.4nm,0.3s,baz=94,slow=14,SNR=1.6						
URZ				Sn	Sn	00 52 18.8	-13
	0.5nm,0.3s,baz=109,slow=18,SNR=1.3						
NIUE	**Niue**	**13.14**	**34**	Pn	**Pn**	**00 51 44.7**	**-1.1**
THZ	**Tophouse**	**13.79**	**211**	Pn	**Pn**	**00 51 55.8**	**+1.2**
INZ	**Inchbonnie**	**15.22**	**212**	Pn	**P**	**00 52 16.3**	**-2.0**
INZ				IAmb	IAmb	00 52 29.6	
	comp=Z,27nm,1.2s						
PINNC	**Pines Island,**	**15.34**	**296**	Pn	**Pn**	**00 52 12.9**	**-2.5**
LIFNC	**LIFOU**	**16.55**	**301**	Pn	**Pn**	**00 52 28.2**	**-2.7**
LIFNC				IAmb	IAmb	00 52 46.6	
	comp=Z,91nm,1.2s						
EIDS	**Eidsvold**	**28.02**	**272**	P	**P**	**00 54 29.9**	**+0.4**
EIDS				IAmb	IAmb	00 54 47.0	
	comp=Z,15nm,1.4s						
TOO	**Toolangi**	**31.29**	**247**	P	**P**	**00 55 00.2**	**+1.8**
TOO				IAmb	IAmb	00 55 05.4	
	comp=Z,4.2nm,1.1s						
CTAO	**Charters Tower**	**34.06**	**279**	P	**P**	**00 55 22.9**	**+0.2**
CTAO				IAmb	IAmb	00 55 25.0	
	comp=Z,5.3nm,0.9s						
STKA	**Stephens Creek**	**34.80**	**257**	P	**P**	**00 55 29.6**	**+0.7**
	comp=Z,3.0nm,0.5s,baz=102,slow=11,SNR=7.8						
	comp=Z,3.0nm,0.5s						
STKA	**Stephens Creek**	**34.80**	**257**	P	**P**	**00 55 30.1**	**+1.1**
BBOO	**Buckleboo**	**39.29**	**254**	P	**P**	**00 56 06.8**	**-0.4**
BBOO				IAmb	IAmb	00 56 08.6	
	comp=Z,15nm,1.4s						
TAOE	**Nuku Hiva Isla**	**40.98**	**67**	P	**P**	**00 56 20.7**	**-0.7**
ASAR	**Alice Springs**	**43.41**	**267**	P	**P**	**00 56 40.8**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=107,slow=7.3,SNR=7.8						
	comp=Z,0.4nm,0.4s						
PATS	**Pohnpei**	**43.47**	**324**	P	**P**	**00 56 40.3**	**-1.2**
WB2	**Warramunga Arr**	**44.37**	**272**	P	**P**	**00 56 48.7**	**-0.2**
WRA	**Warramunga Arr**	**44.38**	**272**	P	**P**	**00 56 48.0**	**-0.9**
	comp=Z,0.9nm,0.4s,baz=111,slow=8.1,SNR=18						
	comp=Z,0.9nm,0.4s						
WRA	**Warramunga Arr**	**44.38**	**272**	P	**P**	**00 56 48.5**	**-0.4**
WB0	**Warramunga Arr**	**44.40**	**272**	P	**P**	**00 56 48.4**	**-0.7**
WB0				IAmb	IAmb	00 56 58.5	
	comp=Z,5.5nm,1.3s						
QSPA	**South Pole Qui**	**59.88**	**180**	P	**P**	**00 58 45.8**	**+2.2**
H03S2	**Juan Fernandez**	**80.31**	**123**	T	T	02 30 04.7	
	baz=237						
H03S1	**Juan Fernandez**	**80.33**	**123**	T	T	02 30 05.7	
	baz=237						
H03S3	**Juan Fernandez**	**80.33**	**123**	T	T	02 30 04.3	
	baz=237						
H03N3	**Juan Fernandez**	**80.50**	**123**	T	T	02 30 24.8	
	baz=233						
H03N2	**Juan Fernandez**	**80.51**	**123**	T	T	02 30 24.1	
	baz=233						
H03N1	**Juan Fernandez**	**80.52**	**123**	T	T	02 30 19.9	
	baz=233						
FINES	**FINESS Array B**	**145.09**	**340**	PKPbc	**PKPbc**	**01 08 13.6**	**-0.4**
	comp=Z,3.4nm,0.7s,baz=63,slow=4.2,SNR=17						
AKASG	**Malin Array Be**	**151.34**	**323**	PKPbc	**PKPbc**	**01 08 30.7**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=35,slow=2.4,SNR=7.5						
TORD	**Torodi Ar. Bea**	**162.99**	**178**	PKPab	**PKPab**	**01 09 29.9**	**-0.2**
	comp=Z,0.3nm,0.8s,baz=173,slow=3.6,SNR=1.7						

ROM 14 01:00:04.6±0.0, 42°.768N±0°.002×13°.161E±0°.003, h13km, ML1.2/4, 5C-2D, Error ellipse: s-maj=0.2km s-min=0.1km az=172.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.04**	**103**	P	Pg	01 00 07.3	+0.1
T1214				S	Sg	01 00 08.9	0.0
T1214				AML	AML		
	comp=E,490µm,0.8s						
T1214				AML	AML		
	comp=N,252µm,1.2s						
T1214				AML	AML		
	comp=E,432µm,0.8s						
T1214				AML	AML		
	comp=N,195µm,0.9s						
T1214				AML	AML		
	comp=N,250µm,1.2s						
T1214				AML	AML		
	comp=N,195µm,1.1s						
T1214				AML	AML		
	comp=N,250µm,0.8s						
T1214				AML	AML		
	comp=E,491µm,0.8s						
T1214				AML	AML		
	comp=E,433µm,0.8s						
T1212	**Cascia, Frazio**	**0.09**	**259**	P	Pg	01 00 07.8	+0.3
T1212				S	Sg	01 00 09.8	+0.3
T1245	**Castelsantange**	**0.09**	**13**	⇑P	Pg	01 00 07.9	+0.2
T1245				S	Sg	01 00 10.0	+0.2
T1245				AML	AML		
	comp=E,340µm,0.2s						
T1245				AML	AML		
	comp=N,360µm,0.2s						
T1218	**Civita (PG)**	**0.10**	**199**	P	Pg	01 00 08.0	+0.3
T1218				S	Sg	01 00 10.4	+0.4
MC2	**Monte Cornacci**	**0.15**	**9**	⇑P	Pg	01 00 08.7	+0.3
MC2				S	Sg	01 00 11.7	+0.6
T1216	**Preci, Frazion**	**0.16**	**320**	⇓P	Pg	01 00 08.9	+0.4
T1216				S	Sg	01 00 11.8	+0.7
T1216				AML	AML		
	comp=N,58µm,0.5s						
T1216				AML	AML		
	comp=E,79µm,0.2s						
T1217	**Poggiodomo (PG**	**0.18**	**252**	P	Pg	01 00 09.1	+0.4
T1217				S	Sg	01 00 12.4	+0.7
MMO1	**Montemonaco**	**0.18**	**43**	⇑P	Pg	01 00 09.1	+0.3
MMO1				S	Sg	01 00 12.3	+0.6
SMA1	**SAN MARTINO**	**0.19**	**137**	P	Pg	01 00 09.2	+0.3
SMA1				S	Sg	01 00 12.5	+0.6
SMA1				AML	AML		
	comp=E,42µm,1.5s						
SMA1				AML	AML		
	comp=N,46µm,1.4s						
SMA1				AML	AML		
	comp=N,46µm,0.6s						
SMA1				AML	AML		
	comp=E,42µm,0.5s						
T1215	**Vallo di Nera,**	**0.22**	**279**	P	Pg	01 00 09.8	+0.4
T1215				S	Sb	01 00 13.5	-0.9
T1241	**Roccafluvione,**	**0.22**	**66**	⇑P	Pg	01 00 09.7	+0.3
RM33	**Pellescritta (**	**0.26**	**171**	P	Pb	01 00 10.8	-0.5
T1220	**Camerino, Fraz**	**0.35**	**351**	⇑P	Pg	01 00 12.1	+0.4
ARRO	**Arrone**	**0.35**	**237**	P	Pg	01 00 12.1	+0.4
TERO	**Teramo**	**0.36**	**114**	⇓P	Pg	01 00 11.9	+0.1
ASSB	**Assisi San Ben**	**0.46**	**307**	P	Pg	01 00 14.0	+0.3

ROM 14 01:00:25.6±0.0, 42°.766N±0°.002×13°.066E±0°.004, h11km, ML1.4/12, 11C-10D, Error ellipse: s-maj=0.3km s-min=0.2km az=268.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.02**	**228**	P	Pg	01 00 27.9	+0.2
T1212				S	Sg	01 00 29.0	0.0
T1212				AML	AML		
	comp=N,972µm,0.2s						
T1212				AML	AML		
	comp=E,720µm,0.4s						
T1212				AML	AML		

	comp=N,988µm,0.2s						
T1212				AML	AML		
	comp=E,735µm,0.4s						
T1218	Civita (PG)	0.10	159	⇓P	Pg	01 00 28.8	+0.4
T1218				S	Sg	01 00 30.9	+0.4
T1218				AML	AML		
	comp=E,596µm,0.4s						
T1218				AML	AML		
	comp=N,726µm,0.3s						
T1218				AML	AML		
	comp=E,595µm,0.2s						
T1218				AML	AML		
	comp=N,724µm,0.4s						
T1218				AML	AML		
	comp=E,594µm,0.2s						
T1218				AML	AML		
	comp=N,724µm,0.4s						
T1214	Arquata del Tr	0.10	93	⇓P	Pg	01 00 28.9	+0.4
T1214				S	Sg	01 00 31.0	+0.4
T1217	Poggiodomo (PG	0.11	241	⇑P	Pg	01 00 29.0	+0.5
T1217				S	Sg	01 00 31.3	+0.6
T1217				AML	AML		
	comp=E,136µm,0.6s						
T1217				AML	AML		
	comp=N,159µm,0.7s						
T1245	Castelsantange	0.13	45	⇑P	Pg	01 00 29.2	+0.4
T1245				S	Sg	01 00 31.6	+0.5
T1216	Preci, Frazion	0.13	344	⇑P	Pg	01 00 29.2	+0.5
T1216				S	Sg	01 00 31.8	+0.8
T1216				AML	AML		
	comp=E,306µm,0.6s						
T1216				AML	AML		
	comp=N,282µm,0.1s						
T1216				AML	AML		
	comp=E,306µm,0.6s						
T1215	Vallo di Nera,	0.15	284	⇑P	Pg	01 00 29.6	+0.5
T1215				AML	AML		
	comp=E,108µm,0.2s						
T1215				AML	AML		
	comp=N,123µm,0.1s						
MC2	Monte Cornacci	0.17	32	⇑P	Pg	01 00 30.1	+0.5
MC2				S	Sg	01 00 33.5	+1.1
MMO1	Montemonaco	0.23	55	⇑P	Pg	01 00 30.9	+0.4
MMO1				S	Sg	01 00 34.9	+1.0
SMA1	SAN MARTINO	0.24	124	P	Pb	01 00 31.5	-0.6
SMA1				S	Sg	01 00 35.4	+1.4
CESI	CESI - Serrava	0.27	334	⇓P	Pg	01 00 31.7	+0.6
CESI				S	Sb	01 00 36.1	-1.0
CESI				AML	AML		
	comp=N,132µm,0.3s						
CESI				AML	AML		
	comp=E,53µm,0.5s						
T1256	Bolognola (MC)	0.27	26	P	Pg	01 00 31.5	+0.4
T1256				S	Sg	01 00 36.0	+1.1
FDMO	Fiordimonte	0.27	3	⇑P	Pg	01 00 31.6	+0.4
FDMO				AML	AML		
	comp=N,80µm,0.2s						
FDMO				AML	AML		
	comp=E,66µm,0.3s						
RM33	Pellescritta (	0.28	157	⇓P	Pg	01 00 31.7	+0.3
RM33				S	Sb	01 00 36.4	-1.1
RM33				AML	AML		
	comp=E,49µm,0.4s						
RM33				AML	AML		
	comp=N,53µm,1.3s						
RM33				AML	AML		
	comp=N,53µm,0.7s						
RM33				AML	AML		
	comp=E,49µm,0.4s						
T1211	Morro Reatino	0.28	214	⇓P	Pg	01 00 31.9	+0.5
T1241	Roccafluvione,	0.28	71	⇑P	Pg	01 00 31.8	+0.4
T1241				AML	AML		
	comp=E,84µm,1.5s						
T1241				AML	AML		
	comp=N,122µm,0.3s						
T1241				AML	AML		
	comp=E,84µm,0.5s						
ARRO	Arrone	0.29	230	P	Pg	01 00 32.0	+0.6
ARRO				AML	AML		
	comp=E,38µm,1.6s						
ARRO				AML	AML		
	comp=N,36µm,1.2s						
ARRO				AML	AML		
	comp=N,36µm,0.8s						
ARRO				AML	AML		
	comp=E,38µm,0.4s						
T1219	Muccia, Frazio	0.29	352	⇑P	Pg	01 00 32.0	+0.4
T1220	Camerino, Fraz	0.34	3	⇑P	Pg	01 00 32.7	+0.2
T1220				AML	AML		
	comp=E,19900µm,1.6s						
T1220				AML	AML		
	comp=N,192µm,1.2s						
T1220				AML	AML		
	comp=N,192µm,0.8s						
T1220				AML	AML		
	comp=E,19900µm,0.4s						
GUMA	Gualdo di Mace	0.36	34	⇑P	Pb	01 00 33.5	-0.6
T1222	Castel Sant'An	0.36	183	⇓P	Pg	01 00 33.3	+0.4
MOMA	Monte Martano	0.37	276	⇓P	Pb	01 00 33.9	-0.4
MOMA				AML	AML		
	comp=E,68µm,0.3s						
MOMA				AML	AML		
	comp=N,56µm,0.9s						
ASSB	Assisi San Ben	0.41	313	⇓P	Pb	01 00 34.4	-0.5
TERO	Teramo	0.42	110	⇓P	Pg	01 00 34.1	+0.2
SNTG	Esanatoglia	0.50	349	S	Sb	01 00 43.9	+0.1
EL6	Elcito	0.56	3	⇓P	Pg	01 00 36.9	+0.3
EL6				S	Sb	01 00 46.1	+0.4

IDC 14 01:08:47.4±3.6, 10°.22S×161°.55E, h91km±24km, mb3.3/3, mbtmp3.7/4, Error ellipse: s-maj=48.7km s-min=24.9km az=55.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.76	296	P	Pn	01 09 16.4	-0.1
	782nm,0.4s,baz=173,slow=16,SNR=1.8						
HNR				S	Sn	01 09 39.0	+0.2
	3µm,0.3s,baz=195,slow=10,SNR=8.0						
DZM	Mont Dzumac	12.68	159	P	Pn	01 11 44.6	0.0
	3.9nm,0.9s,baz=18,slow=19,SNR=1.7						
WRA	Warramunga Arr	27.95	247	P	P	01 14 29.7	+0.1
	0.4nm,0.6s,baz=76,slow=9.0,SNR=5.4						
	0.4nm,0.6s						
SONM	Songino Array	75.60	325	P	P	01 20 23.3	+0.7
	0.8nm,0.7s,baz=134,slow=4.2,SNR=5.4						
	0.8nm,0.7s						
MKAR	Makanchi Array	90.12	318	P	P	01 21 36.2	-1.2
	0.2nm,0.8s,baz=94,slow=5.8,SNR=2.0						
	0.2nm,0.8s						

WEL 14 01:09:11.6±1.2, 31°S±8°×17°8E±1°3, h200km, M4.3/6, mB4.5/6, ML4.8/6, MLv4.7/6, Mw(mB)3.6/6, Error ellipse: s-maj=0.0km s-min=0.0km az=118.7, confirmed, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.41	67	P	Pn	01 10 07.3	+1.2
GLKZ				S	Sn	01 10 48.7	-0.1
HAZ	Te Kaha	7.12	184	P	Pn	01 10 52.1	-1.1
HAZ				S	Sn	01 12 15.2	+1.3
WMGZ	Waiomatatini S	7.15	180	P	Pn	01 10 54.7	+1.0
WMGZ				S	Sn	01 12 15.4	+0.5
PKGZ	Pakihiroa	7.23	183	P	Pn	01 10 55.3	+0.5
PKGZ				S	Sn	01 12 16.1	-0.7
RUGZ	Raukumara Rang	7.33	185	P	Pn	01 10 56.6	+0.5
RUGZ				S	Sn	01 12 18.4	-0.8
TWGZ	Tauwhareparae	7.52	183	P	Pn	01 10 59.3	+0.7
TWGZ				S	Sn	01 12 24.0	+0.3
URZ	Urewera	7.68	188	P	Pn	01 11 00.6	+0.1
URZ				S	Sn	01 12 26.6	-0.6
MWZ	Matawai	7.71	186	P	Pn	01 10 59.9	-1.1
MWZ				S	Sn	01 12 27.9	-0.2
CNGZ	Carnagh Statio	7.82	182	P	Pn	01 11 02.2	-0.1
RAGZ	Rawiri	7.88	186	P	Pn	01 11 03.2	0.0
RAGZ				S	Sn	01 12 32.3	+0.1
MUGZ	Murupara	7.94	190	P	Pn	01 11 02.7	-1.2
MUGZ				S	Sn	01 12 36.6	+3.2
MTHZ	Maungataniwha	8.30	189	P	Pn	01 11 07.2	-1.4
MTHZ				S	Sn	01 12 42.3	+0.3

ROM 14 01:22:45.9±0.0, 42°.768N±0°.002×13°.065E±0°.003, h10km, ML1.5/12, 11C-10D, Error ellipse: s-maj=0.2km s-min=0.2km az=161.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1212	Cascia, Frazio	0.02	222	P	Pg	01 22 48.1	+0.3
T1212				S	Sg	01 22 49.2	0.0
T1212				AML	AML		
	comp=E,742µm,0.4s						
T1212				AML	AML		
	comp=N,1012µm,0.2s						
T1212				AML	AML		
	comp=N,1012µm,0.2s						
T1212				AML	AML		
	comp=E,784µm,0.4s						
T1218	Civita (PG)	0.10	159	⇓P	Pg	01 22 49.0	+0.3
T1218				S	Sg	01 22 51.1	+0.4
T1218				AML	AML		
	comp=E,594µm,0.2s						
T1218				AML	AML		
	comp=E,600µm,0.2s						
T1218				AML	AML		
	comp=N,728µm,0.4s						
T1218				AML	AML		
	comp=N,751µm,0.4s						
T1214	Arquata del Tr	0.11	95	⇓P	Pg	01 22 49.1	+0.4
T1214				S	Sg	01 22 51.2	+0.4
T1214				AML	AML		
	comp=E,540µm,0.5s						
T1214				AML	AML		
	comp=N,482µm,0.1s						
T1214				AML	AML		
	comp=E,513µm,0.5s						
T1214				AML	AML		
	comp=N,456µm,0.1s						
T1214				AML	AML		
	comp=N,482µm,0.1s						
T1217	Poggiodomo (PG	0.11	240	⇑P	Pg	01 22 49.2	+0.5
T1217				S	Sg	01 22 51.5	+0.7
T1217				AML	AML		
	comp=E,133µm,0.6s						
T1217				AML	AML		
	comp=N,146µm,0.7s						
T1217				AML	AML		
	comp=E,133µm,0.6s						
T1217				AML	AML		
	comp=E,133µm,1.4s						
T1216	Preci, Frazion	0.13	345	⇑P	Pg	01 22 49.5	+0.5
T1216				S	Sg	01 22 51.9	+0.8
T1216				AML	AML		
	comp=E,289µm,0.6s						
T1216				AML	AML		
	comp=N,286µm,0.2s						
T1216				AML	AML		
	comp=E,289µm,0.6s						
T1245	Castelsantange	0.13	46	⇑P	Pg	01 22 49.4	+0.4
T1245				S	Sg	01 22 51.8	+0.5
T1245				AML	AML		
	comp=E,656µm,1.2s						
T1245				AML	AML		
	comp=N,845µm,0.7s						
T1245				AML	AML		
	comp=N,863µm,0.6s						
T1245				AML	AML		
	comp=E,447µm,0.2s						
T1245				AML	AML		
	comp=E,656µm,1.2s						
T1215	Vallo di Nera,	0.15	283	⇑P	Pg	01 22 49.8	+0.6
T1215				S	Sg	01 22 52.5	+0.8
T1215				AML	AML		
	comp=E,110µm,0.2s						
T1215				AML	AML		
	comp=N,126µm,0.1s						
MC2	Monte Cornacci	0.17	33	⇑P	Pg	01 22 50.3	+0.5
MC2				S	Sg	01 22 53.5	+1.1
MMO1	Montemonaco	0.23	56	⇑P	Pg	01 22 51.1	+0.4
MMO1				S	Sg	01 22 55.1	+1.1
SMA1	SAN MARTINO	0.24	124	⇑P	Pg	01 22 51.6	+0.7
SMA1				S	Sg	01 22 55.9	+1.6
SMA1				AML	AML		
	comp=E,66µm,1.2s						
SMA1				AML	AML		
	comp=N,67µm,0.6s						
SMA1				AML	AML		
	comp=E,66µm,0.8s						
T1256	Bolognola (MC)	0.27	26	⇓P	Pg	01 22 51.8	+0.5
T1256				S	Sb	01 22 56.5	-1.0
FDMO	Fiordimonte	0.27	4	⇑P	Pg	01 22 51.8	+0.4
RM33	Pellescritta (	0.28	157	⇓P	Pg	01 22 51.9	+0.3
RM33				AML	AML		
	comp=N,48µm,1.3s						
RM33				AML	AML		
	comp=E,49µm,0.4s						
T1211	Morro Reatino	0.28	213	⇓P	Pg	01 22 52.1	+0.5
T1241	Roccafluvione,	0.28	72	⇑P	Pg	01 22 52.0	+0.4
T1241				AML	AML		
	comp=E,94µm,1.5s						
T1241				AML	AML		
	comp=N,124µm,0.3s						
T1241				AML	AML		
	comp=E,94µm,0.5s						
T1241				AML	AML		
	comp=N,124µm,1.7s						
ARRO	Arrone	0.29	230	⇓P	Pg	01 22 52.3	+0.6
ARRO				AML	AML		
	comp=E,36µm,0.8s						
ARRO				AML	AML		
	comp=N,37µm,1.1s						
ARRO				AML	AML		
	comp=N,37µm,0.9s						
T1219	Muccia, Frazio	0.29	352	⇓P	Pg	01 22 52.2	+0.4
T1220	Camerino, Fraz	0.34	3	⇓P	Pg	01 22 53.1	+0.4
GUMA	Gualdo di Mace	0.35	34	⇑P	Pb	01 22 53.6	-0.7
ASSB	Assisi San Ben	0.41	313	⇓P	Pb	01 22 54.5	-0.6
TERO	Teramo	0.42	110	⇑P	Pg	01 22 54.3	+0.1
TERO				AML	AML		
	comp=E,39µm,1.5s						
TERO				AML	AML		
	comp=E,39µm,0.5s						
TERO				AML	AML		
	comp=N,44µm,1.3s						
OFFI	Offida	0.49	70	⇓P	Pb	01 22 56.5	0.0
CING	Cingoli	0.61	9	P	Pb	01 22 58.3	-0.4
ARVD	Arcevia	0.73	353	S	Sb	01 23 11.9	+1.0

ROM 14 01:23:43.5±0.2, 43°.015N±0°.004×13°.009E±0°.007, h5km±1km, ML1.3/3, 4C-3D, Error ellipse: s-maj=0.6km s-min=0.1km az=67.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1219	Muccia, Frazio	0.04	359	P	Pg	01 23 44.9	+0.1
T1219				S	Sg	01 23 45.7	0.0
T1220	Camerino, Fraz	0.11	32	⇑P	Pg	01 23 46.2	+0.3
T1220				S	Sg	01 23 48.2	+0.7
T1220				AML	AML		
	comp=N,416µm,0.2s						
T1220				AML	AML		
	comp=E,298µm,0.3s						
T1256	Bolognola (MC)	0.16	93	P	Pg	01 23 47.4	+0.6
T1256				S	Sg	01 23 49.7	+0.8
MC2	Monte Cornacci	0.17	127	⇑P	Pg	01 23 47.6	+0.7
MC2				S	Sg	01 23 50.6	+1.4
GUMA	Gualdo di Mace	0.24	79	⇑P	Pg	01 23 49.0	+0.7
GUMA				S	Sg	01 23 53.5	+2.0
GUMA				AML	AML		
	comp=N,115µm,0.2s						
GUMA				AML	AML		
	comp=E,199µm,0.2s						
SNTG	Esanatoglia	0.24	348	P	Pg	01 23 49.2	+0.9
SNTG				S	Sg	01 23 53.4	+1.8
ASSB	Assisi San Ben	0.26	276	⇓P	Pg	01 23 49.4	+0.8
ASSB				AML	AML		
	comp=N,31µm,0.1s						
ASSB				AML	AML		
	comp=N,31µm,1.9s						
ASSB				AML	AML		
	comp=E,31µm,1.0s						
MMO1	Montemonaco	0.26	116	⇓P	Pg	01 23 48.9	+0.3
MMO1				S	Sg	01 23 53.2	+1.2
T1212	Cascia, Frazio	0.27	174	⇓P	Pg	01 23 49.4	+0.7
T1212				S	Sb	01 23 54.1	-1.5
EL6	Elcito	0.32	12	P	Pg	01 23 50.3	+0.5
EL6				S	Sb	01 23 55.9	-1.5
T1218	Civita (PG)	0.35	167	⇑P	Pg	01 23 50.8	+0.4
ARVD	Arcevia	0.48	354	S	Sb	01 24 01.6	-0.4

IDC 14 01:28:35.7±1.1, 35°.86N×27°.30E, h0km, mb3.6/6, mbtmp3.5/11, ML3.1/5, MS3.5/2, Error ellipse: s-maj=22.4km s-min=16.9km az=162.0

DDA 14 01:28:36.3±0.0, 35°.78N×27°.17E, h14km±1km, ML3.3

NIC 14 01:28:38.8±0.0, 35°.75N×27°.32E, h24km±7km, Ml4.3/7

ISK 14 01:28:38.6, 35°.80N×27°.26E, h9km, ML3.3/15

ATH 14 01:28:39.5, 35°.75N×27°.33E, h15km±1km, ML3.3/6, Error ellipse: s-maj=2.4km s-min=1.0km az=135.0

THE 14 01:28:39.5, 35°.75N×27°.32E, h5km±1km, ML3.0/4, Error ellipse: s-maj=1.5km s-min=0.3km az=134.0

ISC 14 01:28:38.7±0.7, 35°.73N±0°.03×27°.35E±0°.03, h20km±2km, n97, σ1s.15/127, mb3.5/6, 1D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.24	220	P	Pb	01 28 44.9	+0.3
KARP				S	Sb	01 28 48.7	0.0
KARP	Karpathos	0.24	220	Pg	Pb	01 28 44.9	+0.3
KARP				Sg	Sb	01 28 48.4	-0.4
KARP	Karpathos	0.24	220	⇓*i*P	Pb	01 28 44.8	+0.3
KARP				S	Sb	01 28 48.7	0.0
KARP				AML	AML	01 28 49.0	
	72nm,0.1s						
KARP				AML	AML	01 28 49.0	
	72nm,0.1s						
KARP	Karpathos	0.24	220	P	Pb	01 28 44.9	+0.3
KARP				S	Sb	01 28 48.3	-0.4
KARP				AML	AML	01 28 49.0	
	comp=E,68922µm,0.3s						
KARP				AML	AML	01 28 49.3	
	comp=N,71929µm,0.1s						
ARG	Arkhangelos	0.80	52	P	Pn	01 28 54.7	0.0
ARG				S	Sn	01 29 07.0	+0.9
	comp=N,2µm,0.3s						
ARG	Arkhangelos	0.80	52	Pg	Pn	01 28 54.7	0.0
ARG				Sg	Sn	01 29 06.2	+0.2
ARG	Arkhangelos	0.80	52	P	Pn	01 28 54.7	0.0
ARG				S	Sn	01 29 06.9	+0.9
ARG				AML	AML	01 29 08.5	
	comp=N,3.8nm,0.5s						
ARG				AML	AML	01 29 08.5	
	comp=N,3.8nm,0.5s						
ARG				AML	AML	01 29 09.2	
	comp=N,5.4nm,0.3s						
ARG				AML	AML	01 29 09.2	
	comp=N,5.4nm,0.3s						
ARG	Arkhangelos	0.80	52	P	Pn	01 28 54.7	0.0
ARG				S	Sb	01 29 04.9	+0.7
ARG				AML	AML	01 29 08.8	
	comp=N,3725µm,0.5s						
ARG				AML	AML	01 29 09.5	
	comp=E,5350µm,0.3s						
NISR	Nisiros	0.90	349	P	Pn	01 28 56.2	+0.1
NISR				S	Sn	01 29 09.6	+1.1
	comp=E,858nm,0.6s						
NISR	Nisiros	0.90	349	P	Pn	01 28 56.2	+0.1
NISR				AML	AML	01 29 14.3	
	comp=N,1417µm,0.6s						
NISR				AML	AML	01 29 20.1	
	comp=E,2653µm,0.7s						
DAT	Datca	1.02	10	P	Pn	01 28 58.2	+0.4
DAT				S	Sn	01 29 12.9	+1.3
DAT	Datca	1.02	10	Pg	Pn	01 28 57.9	0.0
DAT	Datca	1.02	10	P	Pn	01 28 58.2	+0.4
DAT				S	Sb	01 29 10.3	-0.3
KOSK	Kos Island	1.06	344	P	Pn	01 28 58.9	+0.5
KOSK				S	Sn	01 29 13.8	+1.2
	comp=E,502nm,0.5s						
KOSK	Kos Island	1.06	344	Pg	Pb	01 28 57.9	-0.5
KOSK	Kos Island	1.06	344	P	Pb	01 28 58.3	-0.1
KOSK				S	Sn	01 29 12.3	-0.2
KOSK				AML	AML	01 29 19.0	
	comp=E,3979µm,0.6s						
KOSK				AML	AML	01 29 24.6	
	comp=N,2410µm,0.7s						
ZKR	Zakros	1.11	237	P	Pb	01 28 59.6	+0.4
ZKR				S	Sn	01 29 15.5	+1.8
	comp=N,995nm,0.6s						
ZKR	Zakros	1.11	237	P	Pb	01 28 59.5	+0.4
ZKR				S	Sn	01 29 14.0	+0.3
ZKR				AML	AML	01 29 21.6	
	comp=E,3212µm,0.5s						
ZKR				AML	AML	01 29 22.9	
	comp=N,1307µm,0.8s						
STIA	Sitia Lasithi	1.15	243	P	Pb	01 29 00.3	+0.4
STIA				S	Sn	01 29 16.6	+1.8
STIA	Sitia Lasithi	1.15	243	P	Pb	01 29 00.3	+0.4
STIA				S	Sn	01 29 15.7	+1.0
STIA				AML	AML	01 29 23.0	
	comp=N,3587µm,0.5s						
STIA				AML	AML	01 29 23.8	
	comp=E,2208µm,0.6s						
TURN	Turunc	1.27	34	Pn	Pb	01 29 02.9	+1.0
TURN	Turunc	1.27	34	P	Pb	01 29 02.4	+0.5
TURN				S	Sb	01 29 19.4	+1.5
TURN				*i* AML	AML	01 29 24.0	
	comp=E,434nm,0.5s						
TURN				*i* AML	AML	01 29 28.0	
	comp=E,374nm,0.3s						
BDRM	Kayabasi	1.34	3	P	Pn	01 29 02.4	+0.2
BDRM				S	Sn	01 29 18.7	-0.7
FRMA	Ierapetra Chan	1.50	242	P	Pn	01 29 04.7	+0.3
DALY	Dalyan (Mula)	1.52	44	Pn	Pb	01 29 06.9	+0.8
YER	Yerkesik	1.59	28	P	Pb	01 29 07.2	-0.2
YER				S	Sb	01 29 28.2	+1.0
YER	Yerkesik	1.59	28	Pn	Pb	01 29 07.3	-0.2
MLSB	Milas	1.60	12	Pn	Pn	01 29 06.5	+0.7
SANT	Santorini	1.66	293	Pn	Pn	01 29 06.8	+0.2
SANT	Santorini	1.66	293	P	Pn	01 29 07.2	+0.6
THR8	Santorini-Mono	1.66	295	P	Pn	01 29 07.2	+0.6
THR8	Santorini-Mono	1.66	295	P	Pn	01 29 07.1	+0.5
FETY	Fethiye	1.67	57	Pn	Pb	01 29 09.5	+0.8
FETY	Fethiye	1.67	57	P	Pb	01 29 09.7	+0.9
FETY				S	Sb	01 29 30.7	+1.3
IZZE	Mula-Seydike	1.68	65	P	Pb	01 29 09.3	+0.4
IZZE				S	Sb	01 29 30.0	+0.4
IZZE				*i* AML	AML	01 29 39.0	
	comp=E,424nm,0.5s						
IZZE				*i* AML	AML	01 29 43.0	
	comp=E,326nm,0.6s						
THR6	Thira Island,	1.70	292	P	Pn	01 29 08.0	+0.8
THR3	Thira Island,	1.72	294	P	Pn	01 29 07.9	+0.6
CMBO	Columbo, Santo	1.74	296	P	Pn	01 29 08.4	+0.7
KSL	Kastellorizon	1.86	76	S	Sn	01 29 33.4	+1.1
HRKL	Herakleio	1.88	258	P	Pn	01 29 09.9	+0.3
AKAS	Kas	1.90	74	Pn	Pb	01 29 12.6	-0.1
AKAS	Kas	1.90	74	P	Pb	01 29 12.8	+0.1
AKAS				*i* AML	AML	01 29 39.0	
	comp=E,203nm,0.4s						
KSTL	Kastelli Herak	1.91	258	P	Pn	01 29 08.8	-1.2
GCAM	G?zelcaml?	1.97	357	Pn	Pb	01 29 12.3	-1.5
GCAM	G?zelcaml?	1.97	357	P	Pn	01 29 11.1	+0.2
AYDN	Tasoluk	1.98	12	P	Pn	01 29 11.8	+0.8
AYDN				S	Sn	01 29 36.2	+1.0
APE	Apeiranthos	1.98	313	P	Pn	01 29 11.4	+0.3
APE	Apeiranthos	1.98	313	Pn	Pn	01 29 11.6	+0.5
APE	Apeiranthos	1.98	313	P	Pn	01 29 11.2	0.0
CAME	Cameli-Denizli	1.99	52	Pn	Pb	01 29 13.3	-1.0
SMG	Samos	2.02	348	P	Pn	01 29 12.0	+0.4
SMG	Samos	2.02	348	P	Pn	01 29 11.9	+0.4
IDI	Anoyia	2.05	258	Pn	Pn	01 29 12.6	+0.6
	comp=E,3.9nm,0.3s,baz=72,slow=21,SNR=23						
	comp=E,19nm,0.3s						
IDI	Anoyia	2.05	258	P	Pn	01 29 12.7	+0.6
IDI	Anoyia	2.05	258	P	Pn	01 29 12.3	+0.3
CAEL	Denizli, Camel	2.11	48	P	Pb	01 29 16.4	0.0
CAEL				*i* AML	AML	01 29 58.0	
	comp=E,359nm,0.6s						
CAEL				*i* AML	AML	01 29 58.0	
	comp=E,445nm,0.7s						
TAVA	DENIZLI_Tavas	2.14	36	P	Pb	01 29 16.5	-0.4
TAVA				S	Sb	01 29 44.3	+1.3
DNIZ	Denizli-Tavas-	2.33	35	P	Pn	01 29 17.5	+1.5
DNIZ				S	Sb	01 29 48.7	+0.2
DNIZ				*i* AML	AML	01 29 58.0	
	comp=E,252nm,0.4s						
DNIZ				*i* AML	AML	01 29 58.0	
	comp=E,477nm,0.3s						

GOLH	Golhisar	2.33	49	P	Pb	01 29 19.5	-0.6
GOLH				S	Sb	01 29 49.7	+1.1
GOLH				*i* AML	AML	01 29 59.0	
	comp=E,185nm,0.5s						
GOLH				*i* AML	AML	01 29 59.0	
	comp=E,206nm,0.4s						
APMY	Acipayam-Deniz	2.34	42	Pn	Pb	01 29 18.8	-1.5
DGB	zmir	2.35	351	P	Pn	01 29 16.7	+0.7
AKUM	Antalya-Kumluc	2.50	75	P	Pn	01 29 20.1	+2.0
AKUM				S	Sn	01 29 49.6	+1.6
BLCB	Balcova	2.66	355	Pn	Pn	01 29 21.2	+0.8
URLA	Izmir	2.69	347	P	Pn	01 29 23.1	+2.2
KORT	Korkueli	2.74	61	P	Pb	01 29 26.6	-0.3
PASA	Karahalli, USA	3.12	33	P	Pn	01 29 29.0	+2.2
ZEDA	zmir-Bergama	3.24	356	P	Pn	01 29 28.9	+0.6
USAK	Uak-Merkez	3.27	24	P	Pn	01 29 30.0	+1.3
KZIL	AFYON_Kizioren	3.37	41	P	Pb	01 29 34.8	-3.0
DEMI	Demirci	3.48	18	P	Pn	01 29 32.7	+0.9
KEPZ	Antalya-Kepez	3.63	70	P	Pn	01 29 37.1	+3.4
STEP	BALIKESIR_Sava	3.65	5	P	Pn	01 29 35.9	+1.9
VLI	Veliai	3.70	287	P	Pn	01 29 35.7	+1.1
BUHA	Balikesir, Bur	3.77	357	P	Pn	01 29 35.5	-0.1
OSC1	CSNet OBS 1	3.93	123	P	Pn	01 29 38.9	+1.1
OSC1				S	Sn	01 30 25.0	+1.7
BKES	Balkesir-Mer	4.02	6	P	Pn	01 29 40.8	+1.7
BAYC	CANAKKALE_Bayr	4.06	351	P	Pn	01 29 40.2	+0.6
AKMS	Akamas	4.14	98	P	Pn	01 29 41.4	+0.7
AKMS				AML	AML	01 30 29.8	
	comp=E,1.0nm,0.2s						
AKMS				AML	AML	01 30 32.1	
	comp=E,0.8nm,0.6s						
ALFC	Alefka	4.33	96	P	Pn	01 29 43.9	+0.6
ALFC				AML	AML	01 30 35.4	
	comp=E,0.9nm,0.3s						
ALFC				AML	AML	01 30 38.1	
	comp=E,0.8nm,0.5s						
NATA	Nata	4.38	101	P	Pn	01 29 45.1	+1.1
NATA				AML	AML	01 30 37.2	
	comp=E,2.5nm,0.6s						
NATA				AML	AML	01 30 37.2	
	comp=E,3.0nm,0.5s						
SZAC	Souni	4.63	101	P	Pn	01 29 48.0	+0.5
SZAC				AML	AML	01 30 43.4	
	comp=E,0.8nm,0.6s						
SZAC				AML	AML	01 30 44.7	
	comp=E,1.2nm,0.3s						
ASGA	Asgata	4.92	99	P	Pn	01 29 52.0	+0.6
ASGA				AML	AML	01 30 50.3	
	comp=E,0.5nm,0.4s						
ASGA				AML	AML	01 30 51.0	
	comp=E,0.4nm,0.5s						
CSS	Mathiatis	4.95	97	P	Pn	01 29 52.9	+1.0
MVOU	Mavrovouni	5.18	96	P	Pn	01 29 56.0	+1.0
BRTR	Keskin Array B	6.38	49	Pn	Pn	01 30 13.4	+1.7
	comp=E,0.1nm,0.3s,baz=225,slow=16,SNR=3.8						
BRTR				Sn	Sn	01 31 24.1	0.0
	comp=E,0.1nm,0.3s,baz=207,slow=15,SNR=1.2						
	comp=E,0.5nm,0.5s						
MMAI	Mount Meron Ar	7.19	110	Pn	Pn	01 30 21.8	-0.8
	comp=E,1.8nm,0.3s,baz=302,slow=13,SNR=26						
MMAI				Sn	Sn	01 31 41.7	-2.1
	comp=E,5.8nm,0.3s,baz=311,slow=23,SNR=13						
	comp=E,0.8nm,0.3s						
ASF	Jabal al Asfar	8.69	111	Pn	Pn	01 30 45.6	+2.3
	comp=E,0.2nm,0.3s,baz=317,slow=21,SNR=1.6						
ASF				Sn	Sn	01 32 18.0	-2.7
	comp=E,0.2nm,0.3s,baz=353,slow=17,SNR=1.6						
	comp=E,0.9nm,0.5s						
EIL	Elat	8.80	131	Pn	Pn	01 30 45.4	+0.6
	comp=E,0.2nm,0.3s,baz=318,slow=21,SNR=2.1						
EIL				Sn	Sn	01 32 17.7	-5.7
	comp=E,0.9nm,0.3s,baz=337,slow=15,SNR=5.8						
	comp=E,1.8nm,0.5s						
GERES	GERESS Array B	16.51	327	Pn	P	01 32 31.5	0.0
	comp=E,0.1nm,0.3s,baz=142,slow=16,SNR=2.5						
ESDC	Sonseca Array	25.02	288	P	P	01 34 00.0	-1.3
	comp=E,0.4nm,0.8s,baz=84,slow=12,SNR=2.1						
	comp=E,0.4nm,0.8s						
FINES	FINESS Array B	25.75	359	P	P	01 34 06.1	-1.4
	comp=E,0.7nm,0.7s,baz=163,slow=14,SNR=3.9						
	comp=E,0.7nm,0.7s						
HFS	Hagfors	25.97	344	P	P	01 34 09.3	-0.3
	comp=E,0.6nm,0.5s,baz=123,slow=11,SNR=1.2						
	comp=E,0.6nm,0.5s						
ARU	Arti	29.54	36	LR	LR	01 48 15.8	
	comp=E,62nm,18.9s,baz=316,slow=40						
TORD	Torodi Ar. Bea	32.23	232	P	P	01 35 06.0	+0.3
	comp=E,0.5nm,0.4s,baz=33,slow=8.5,SNR=7.5						
	comp=E,0.5nm,0.4s						
ARCES	ARCESS Array B	33.88	359	P	P	01 35 17.9	-1.7
	comp=E,2.8nm,1.0s,baz=175,slow=11,SNR=1.7						
	comp=E,2.8nm,1.0s						
MKAR	Makanchi Array	41.97	57	P	P	01 36 28.5	+0.4
	comp=E,0.2nm,0.6s,baz=266,slow=8.4,SNR=2.4						
	comp=E,0.2nm,0.6s						
INK	Inuvik	75.29	353	LR	LR	02 16 57.6	
	comp=E,42nm,18.1s,baz=308,slow=39						

IDC ***14*** *02:12:43.5±10.0, 12.°28S×167.°09E, h130^{km}±92^{km}, mb3.7/9, mbtmp4.0/9, Error ellipse: s-maj=52.4km s-min=27.8km az=138.0*

NEIC ***14*** *02:12:55.0±1.2, 12.°3S±0.°1×167.°1E±0.°2, h234^{km}±8^{km}, mb4.3/26, Error ellipse: s-maj=23.6km s-min=18.9km az=105.0*

ISC 14 02:12:53.7±0.6**, 12.°2S**±0.°1×**167.°0E**±0.°1**, h220**^{km}**, n46, σ0.^{s}90**/48**, mb4.2**/23**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMA	Armidale	23.04	216	P	P	02 17 41.4	+1.4
ARMA				IAmb	IAmb	02 18 04.0	
	comp=Z,22nm,1.4s						
BKZ	Black Stump Fm	28.13	164	P	P	02 18 27.2	+1.8
WB0	Warramunga Arr	32.20	252	P	P	02 19 00.3	-1.2
WB0				IAmb	IAmb	02 19 36.5	
	comp=Z,5.3nm,1.2s						
WRA	Warramunga Arr	32.27	252	P	P	02 18 60.0	-2.2
	comp=Z,0.5nm,0.8s,baz=85,slow=8.8,SNR=5.9						
	comp=Z,0.5nm,0.8s						
ASAR	Alice Springs	33.41	245	P	P	02 19 10.6	-1.4
	comp=Z,1.2nm,0.6s,baz=73,slow=9.6,SNR=14						
	comp=Z,1.2nm,0.6s						
BBOO	Buckleboo	34.97	229	P	P	02 19 24.9	-0.3
BBOO				IAmb	IAmb	02 19 27.7	
	comp=Z,22nm,1.5s						
KNRA	Kununurra	37.25	260	P	P	02 19 44.6	-0.1
KNRA				IAmb	IAmb	02 20 16.9	
	comp=Z,20nm,1.5s						
FORT	Forrest	40.41	237	P	P	02 20 10.8	0.0
PSA00	Pilbara Seismi	45.93	252	P	P	02 20 54.6	-0.4
MBWA	Marble Bar	46.01	252	P	P	02 20 55.3	-0.3
MBWA				IAmb	IAmb	02 21 11.8	
	comp=Z,26nm,1.4s						
MORW	Morawa	50.16	242	P	P	02 21 27.2	-0.1
MORW				IAmb	IAmb	02 21 40.8	
	comp=Z,12nm,1.2s						
KSAR	Wonju Array Be	61.55	325	P	P	02 22 49.1	+1.3
SBA	Scott Base	65.63	180	P	P	02 23 12.8	-1.0
CMAR	Chiang Mai Arr	73.72	293	P	P	02 24 04.3	+0.1
	comp=Z,1.5nm,0.3s,baz=96,slow=3.6,SNR=2.4						
	comp=Z,1.5nm,0.3s						
SEY	Seymchan	75.78	353	P	P	02 24 15.3	+0.4
	comp=Z,2.0nm,0.5s,baz=155,slow=6.2,SNR=12						
	comp=Z,2.0nm,0.5s						
QSPA	South Pole Qui	77.79	180	P	P	02 24 26.1	-0.4
QSPA				IAmb	IAmb	02 25 09.7	
	comp=Z,9.0nm,1.5s						
SONM	Songino Array	80.34	323	P	P	02 24 40.9	+0.3
	comp=Z,0.3nm,0.3s,baz=143,slow=6.1,SNR=5.7						
	comp=Z,0.3nm,0.3s						
SCM	Sheep Creek Mo	82.00	20	P	P	02 24 48.1	-0.9
M24K	Tolsona, Glenn	82.58	20	P	P	02 24 52.9	+1.0
N25K	Chitina, Valde	82.78	21	P	P	02 24 53.0	0.0
N25K				IAmb	IAmb	02 25 13.6	
	comp=Z,6.9nm,1.1s						
I21K	Tanana	83.06	16	P	P	02 24 55.6	+1.4
H21K	Melozitna Rive	83.21	16	P	P	02 24 56.9	+1.9
IMAR	Indian Mountai	83.22	15	P	P	02 24 54.7	-0.3
LOGN	Logan Glacier	83.59	23	P	P	02 24 57.0	-0.2
WRH	Wood River Hil	83.65	18	P	P	02 24 56.7	-0.5
WRH				IAmb	IAmb	02 24 57.9	
	comp=Z,6.2nm,1.4s						
CCB	Clear Creek Bu	83.86	18	P	P	02 24 57.7	-0.6
CCB				IAmb	IAmb	02 25 10.9	
	comp=Z,4.8nm,1.5s						
HDA	Harding Lake	83.96	18	P	P	02 24 59.2	+0.4
HDA				IAmb	IAmb	02 24 59.5	
	comp=Z,3.9nm,0.6s						
IL31		84.23	18	P	P	02 25 00.1	0.0
IL31				IAmb	IAmb	02 25 00.8	
	comp=Z,2.1nm,0.6s						
ILAR	Eielson Array	84.23	18	P	P	02 25 00.1	0.0
	comp=Z,1.6nm,0.6s,baz=245,slow=5.1,SNR=35						
	comp=Z,1.6nm,0.6s						
ILAR	Eielson Array	84.23	18	P	P	02 24 60.0	-0.2
IL03	Eielson Array	84.24	18	P	P	02 25 00.1	-0.2
M27K	Edge Creek, AK	84.25	21	P	P	02 25 01.0	+0.6
M27K				IAmb	IAmb	02 25 14.3	
	comp=Z,9.0nm,1.4s						
SCRK	Sand Creek	84.60	20	P	P	02 25 02.8	+0.6
BCAR	Beaver Creek A	84.74	21	P	P	02 25 03.3	+0.5
I26K	Coal Creek Min	85.75	19	P	P	02 25 07.9	+0.2
NVAR	Mina Array Bea	85.83	49	P	P	02 25 09.6	+0.6
	comp=Z,0.4nm,0.7s,baz=238,slow=6.8,SNR=4.3						
	comp=Z,0.4nm,0.7s						
CCUT	Cedar City	89.30	51	P	P	02 25 22.9	-2.7
MK31	Makanchi Array	95.22	317	P	P	02 25 52.5	+0.1
MK31				IAmb	IAmb	02 25 53.1	
	comp=Z,1.6nm,0.9s						
MKAR	Makanchi Array	95.22	317	P	P	02 25 52.3	-0.1
	comp=Z,1.2nm,0.5s,baz=84,slow=6.3,SNR=18						
	comp=Z,1.2nm,0.5s						
MKAR	Makanchi Array	95.22	317	P	P	02 25 52.1	-0.3
YKA	Yellowknife Ar	95.44	27	P	P	02 25 51.9	-1.1
	comp=Z,0.2nm,0.6s,baz=256,slow=4.8,SNR=3.1						
	comp=Z,0.2nm,0.6s						
ARCES	ARCESS Array B	117.77	346	PKP	PKPdf	02 31 13.0	-0.3
	comp=Z,1.5nm,0.7s,baz=76,slow=2.1,SNR=17						
FINES	FINESS Array B	123.31	339	PKP	PKPdf	02 31 24.0	0.0
	comp=Z,1.7nm,0.9s,baz=64,slow=4.4,SNR=3.7						
KEST	Kesra	149.09	323	PKPbc	PKiKP	02 32 17.4	-0.3
	comp=Z,3.9nm,0.8s,baz=21,slow=4.2,SNR=4.2						
ESDC	Sonseca Array	151.51	345	PKPbc	PKiKP	02 32 22.8	+0.3
	comp=Z,0.5nm,0.8s,baz=358,slow=3.0,SNR=5.8						
ESDC				PKPab	PKPab	02 32 31.3	+0.1
	comp=Z,0.7nm,0.7s,baz=40,slow=2.6,SNR=5.5						
TORD	Torodi Ar. Bea	165.64	275	PKP	PKPdf	02 32 33.2	+0.2
	comp=Z,0.9nm,1.1s,baz=275,slow=0.9,SNR=2.3						
TORD				PKPab	PKPab	02 33 34.6	+1.4
	comp=Z,0.6nm,0.9s,baz=104,slow=3.1,SNR=3.0						

IDC ***14*** *02:17:28.9±2.5, 35.°84N×139.°16E, h110^{km}±43^{km}, mb3.4/2, mbtmp3.7/2, MS3.0/1, Error ellipse: s-maj=76.8km s-min=65.0km az=11.0*

JMA ***14*** *02:17:29.4±0.2, 36.°1N±0.°7×139.°2E±0.°8, h120^{km}±1^{km}, MV3.0/38, WESTERN SAITAMA PREF*

ISC 14 02:17:28.9±1.2**, 36.°11N**±0.°06×**139.°12E**±0.°09**, h125**^{km}±8^{km}**, n15, σ0.^{s}60**/18**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRY	Ryogami san	0.20	242	P	Pn	02 17 46.6	+0.4
JRY				*e*S	Sn	02 17 59.6	+0.5
JAG	Ashikaga	0.42	41	P	Pn	02 17 46.8	-0.2
JAG				S	Sn	02 17 59.8	-0.9
JKT	Katashina	0.66	9	P	Pn	02 17 48.6	0.0
JKT				S	Sn	02 18 03.4	-0.2
JYN	Shimob	0.77	217	P	Pn	02 17 49.6	+0.2
JYN				*e*S	Sn	02 18 05.6	+0.7
JOD2	Odawara 2	0.85	182	P	Pn	02 17 49.7	-0.3
JOD2				S	Sn	02 18 05.9	-0.1
MJAR	Matsushiro Arr	0.85	301	P	Pn	02 17 49.3	-0.8
	16nm,0.3s,baz=132,slow=8.6,SNR=43						
MJAR				S	Sn	02 18 06.8	+0.8
	41nm,0.5s,baz=215,slow=17,SNR=9.4						
MAT	Matsushiro	0.85	301	P	Pn	02 17 50.0	0.0
MAT				*e*S	Sn	02 18 05.7	-0.3
JNS	Sasagawa	1.71	5	P	Pn	02 17 59.2	+0.1
JOTO	OTAMA OYAMA	1.75	34	P	Pn	02 18 00.2	+0.6
H11N2	WAKE ISLAND Hy	29.33	116	T	T	02 53 11.7	
	baz=308,slow=75,SNR=5.4						
H11N1	WAKE ISLAND Hy	29.34	116	T	T	02 53 12.3	
	baz=308,slow=75,SNR=4.5						
H11N3	WAKE ISLAND Hy	29.35	116	T	T	02 53 12.7	
	baz=308,slow=75,SNR=5.3						
DAV	Davao City (W)	31.45	206	LR	LR	02 38 10.4	
	comp=Z,26nm,18.1s,baz=162,slow=40						
WRA	Warramunga Arr	55.93	185	P	P	02 26 53.1	-1.0
	0.8nm,0.4s,baz=0.7,slow=7.5,SNR=24						
	0.8nm,0.4s						
ASAR	Alice Springs	59.66	186	P	P	02 27 20.8	+0.7
	0.2nm,0.3s,baz=16,slow=9.5,SNR=1.6						
	0.2nm,0.3s						

SOME ***14*** *02:18:35.5, 39.°23N×73.°80E, h15^{km}*

ISC 14 02:18:40.5±4.4**, 38.°7N**±0.°2×**73.°9E**±0.°1**, h10**^{km}**, n7, σ0.^{s}45**/9**, 1C-2D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	3.43	358	⇓Pn	Pn	02 19 34.8	+0.3
	0.3nm,0.8s						
AML				⇓Sn	Sn	02 20 15.9	+0.5
	1.7nm,0.6s						
MRKS	Merke	4.08	353	*e*Pg	Pn	02 19 43.0	0.0
	1.6nm,0.3s						
MRKS				*e*Lg	Lg	02 20 31.6	
	14nm,0.5s						
IUG	Iuzhnay	4.53	321	Pg	Pn	02 19 49.6	+0.3
	4.2nm,0.3s						
IUG				Lg	Lg	02 20 42.7	
	12nm,0.5s						
IUG	Iuzhnay	4.53	321	*e*Pg	Pn	02 19 49.6	+0.3
	4.2nm,0.3s						
IUG				*e*Lg	Lg	02 20 42.7	
	12nm,0.2s						
KST	Kastek	4.62	19	Pg	Pn	02 19 50.4	0.0
	2.0nm,0.5s						
KST				Lg	Lg	02 20 44.1	
	6.7nm,0.6s						
KST	Kastek	4.62	19	*e*Pg	Pn	02 19 50.2	-0.3
	2.0nm,0.5s						
KST				*e*Lg	Lg	02 20 43.9	
	6.7nm,0.6s						
KK31	Karatay Array	5.09	331	Pn	Pn	02 19 56.5	-0.3
	1.3nm,0.7s,baz=129,slow=12,SNR=20						
KK31				⇑Sn	Sn	02 20 55.0	-0.7
	0.9nm,0.3s						

IDC 14 02:32:03.6±2.5**, 0.°42N**×**131.°01E, h0**^{km}**, mb3.1**/4**, mbtmp3.2**/4**, Error ellipse: s-maj=200.3km s-min=25.2km az=74.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.50	171	P	P	02 36 42.4	-1.0
	0.3nm,0.9s,baz=350,slow=9.5,SNR=2.0						
	0.3nm,0.9s						
ASAR	Alice Springs	24.11	173	P	P	02 37 21.7	+0.4
	0.3nm,0.4s,baz=357,slow=7.0,SNR=4.5						
	0.3nm,0.4s						
SONM	Songino Array	51.84	339	P	P	02 41 12.9	-0.8
	0.2nm,0.6s,baz=164,slow=7.2,SNR=2.1						
	0.2nm,0.6s						
MKAR	Makanchi Array	62.70	324	P	P	02 42 31.2	+0.7
	0.2nm,0.6s,baz=134,slow=6.2,SNR=2.9						
	0.2nm,0.6s						

MAN 14 02:33:08.4, 7.°45N×**124.°44E, h20**^{km}**, mb4.6, ML3.4, MS3.3, 9C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.30	220	⇑*i*P	Pn	02 33 16.4	-1.2
CTBH				*i* S	Sn	02 33 23.2	-0.3
KCP	Kidapawan	0.78	124	⇑*i*P	Pb	02 33 22.8	-0.6
KCP				*i* S	Sb	02 33 34.0	+0.3
SKMP	Bagumbayan, Su	0.93	174	⇓*e*P	Pb	02 33 25.7	-0.2
SKMP				*e*S	Sn	02 33 39.4	+0.3
CGP	Cagayan de Oro	1.03	14	⇑*i*P	Pb	02 33 24.4	-3.2
CGP				*i* S	Sb	02 33 38.2	-2.5
PAGZ	Pagadian	1.12	291	⇑*e*P	Pn	02 33 27.9	-1.1
PAGZ				*e*S	Sn	02 33 44.4	+0.6
GSPH	General Santos	1.45	159	*e*P	Pb	02 33 39.2	+4.4
DCPH	Dipolog City	1.56	316	⇑*e*P	Pn	02 33 35.0	-0.1
DCPH				*e*S	Sb	02 33 55.4	-0.5
BUTP	Butuan	1.91	38	⇓*e*P	Pb	02 33 42.0	-0.6
BUTP				*e*S	Sb	02 34 09.9	+3.8
BIPH	Bislig	2.04	69	⇑*i*P	Pn	02 33 41.4	-0.3
BIPH				*i* S	Sb	02 34 08.3	-1.6
SNPH	Sibulan	2.23	328	⇑*i*P	Pb	02 33 47.1	-0.9
SNPH				*i* S	Sn	02 34 11.9	+0.7
TBP	Tagbilaran	2.30	346	*e*P	Pn	02 33 44.3	-0.9
TBP				*i* S	Sn	02 34 14.8	+1.8
MSLP	Maasin	2.70	9	⇓*e*P	Pn	02 33 50.8	+0.1
GLSP	General Luna,	2.86	36	⇑*e*P	Pn	02 33 55.0	+2.1
GLSP				*e*S	Sn	02 34 24.9	-1.9
LLP	Lapu-Lapu	2.89	351	*e*P	Pn	02 33 53.2	-0.1
LLP				*e*S	Sn	02 34 30.0	+2.5
CNOP	Candoni, Negro	2.96	323	⇑*e*P	Pb	02 34 00.2	-0.2
CNOP				*e*S	Sb	02 34 35.7	-0.5
RCP	Roxas	4.41	338	⇓*e*P	Pn	02 34 16.6	+2.3

GCG ***14*** *02:35:32.4±0.3, 14.°53N×90.°51W, h168^{km}±3^{km}, MD3.5*

SNET ***14*** *02:35:32.1±1.0, 13.°32N×89.°86W, h33^{km}±4^{km}, ML3.1*

ISC 14 02:35:31.1±2.7**, 13.°3N**±0.°1×**89.°89W**±0.°07**, h32**^{km}±15^{km}**, n12, σ0.^{s}39**/17**, 3D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.58	48	⇓*i*P	Pn	02 35 43.3	0.0
JAYA				IAML		02 35 53.9	
	comp=Z,1μm,0.2s						
CEVE	Cerro Verde	0.62	25	⇓*i*P	Pn	02 35 43.9	-0.1
CEVE				IAML		02 35 56.1	
	comp=Z,1μm,0.3s						
NUBE	Las Nubes	0.64	10	⇓*i*P	Pb	02 35 44.0	-0.1
CEDA	San Andres	0.72	42	*e*P	Pb	02 35 45.4	0.0
CEDA				IAML		02 36 00.6	
	comp=Z,690nm,0.3s						
SLOZ	Alcaldia de Sa	0.76	8	*e*P	Pn	02 35 45.8	+0.1
SLOZ				*e*S	Sb	02 35 56.9	+0.7
SJTE	Alcalda de S	0.93	68	*e*P	Pn	02 35 48.1	0.0
SJTE				*e*S	Sb	02 36 00.4	-0.5
PAVA	Las Pavas	1.03	64	*e*P	Pb	02 35 50.3	-0.3
COEG	Centro de Oper	1.04	70	*e*P	Pn	02 35 50.0	+0.3
COEG				IAML		02 36 07.1	
	comp=Z,357nm,0.2s						
SCLA	Alcaldia de Sa	1.21	69	*e*P	Pn	02 35 52.5	+0.5
PCG	Pacaya	1.32	328	*e*P	Pb	02 35 55.9	+0.4
PCG				*e*S	Sn	02 36 10.3	+0.1
NBG	Las Nubes	1.39	341	*e*P	Pb	02 35 55.9	-0.7
NBG				*e*S	Sb	02 36 14.2	+0.1
FUG	Fuego 3	1.49	322	*e*P	Pn	02 35 55.9	0.0
FUG				*e*S	Sn	02 36 14.2	-0.2

ISK ***14*** *02:50:27.8, 39.°54N×26.°09E, h7^{km}, ML2.5/21*

THE ***14*** *02:50:28.6, 39.°53N×26.°08E, h5^{km}±1^{km}, ML2.3/7, Error ellipse: s-maj=1.1km s-min=0.3km az=155.0*

DDA ***14*** *02:50:28.3±0.0, 39.°55N×26.°14E, h7^{km}±1^{km}, ML2.4*

ATH ***14*** *02:50:28.8, 39.°53N×26.°08E, h12^{km}±1^{km}, ML2.4/5, Error ellipse: s-maj=2.3km s-min=0.8km az=234.0*

ISC 14 02:50:28.2±0.8**, 39.°54N**±0.°01×**26.°10E**±0.°02**, h10**^{km}±5^{km}**, n63, σ0.^{s}52**/98**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.05	135	P	Pg	02 50 30.2	+0.1
KOCA				S	Sg	02 50 31.2	-0.4
GPNR	Gulpinar-Canak	0.08	160	Pg	Pg	02 50 30.4	-0.1
GPNR				Sg	Sg	02 50 32.2	0.0
BOZC	Bozcaada	0.31	354	Pg	Pg	02 50 34.3	-0.1
BOZC				Sg	Sg	02 50 39.2	+0.7
BOZC	Bozcaada	0.31	354	P	Pg	02 50 34.4	+0.1
BOZC				P	Pg	02 50 34.5	+0.1
BOZC				S	Sg	02 50 38.4	-0.1
BOZC				*i* AML	AML	02 50 39.0	
	comp=N,442nm,0.2s						
BOZC				*i* AML	AML	02 50 39.0	
	comp=E,616nm,0.2s						
BOZC				*i* AML	AML	02 50 39.0	
	comp=N,432nm,0.2s						
BOZC				*i* AML	AML	02 50 39.0	
	comp=E,681nm,0.3s						
PRK	Paraskevi	0.32	155	P	Pg	02 50 35.1	+0.5
PRK				S	Sg	02 50 39.8	+1.0
	1μm,0.3s						
PRK	Paraskevi	0.32	155	P	Pg	02 50 35.1	+0.5
PRK				S	Sg	02 50 39.8	+1.0
PRK				AML	AML	02 50 40.3	
	comp=N,3626μm,0.4s						
PRK				AML	AML	02 50 40.6	
	comp=E,2304μm,0.2s						
EZN	Ezine	0.34	31	P	Pg	02 50 35.1	+0.2
EZN				S	Sg	02 50 40.3	+0.8
	comp=E,410nm,0.2s						
EZN	Ezine	0.34	31	Pg	Pg	02 50 35.2	+0.3
EZN				Sg	Sg	02 50 40.1	+0.6
SIGR	SIGRI	0.37	210	P	Pg	02 50 35.7	+0.2
SIGR				S	Sg	02 50 41.2	+0.7
	comp=E,655nm,0.3s						
SIGR	SIGRI	0.37	210	Pg	Pg	02 50 35.8	+0.2
SIGR				Sg	Sg	02 50 41.4	+0.9
SIGR	SIGRI	0.37	210	P	Pg	02 50 35.7	+0.2
SIGR				S	Sg	02 50 41.0	+0.5
SIGR				AML	AML	02 50 43.5	
	comp=E,1230μm,0.2s						
SIGR				AML	AML	02 50 43.5	
	comp=N,1370μm,0.5s						
BAYC	CANAKKALE_Bayr	0.41	59	P	Pg	02 50 36.2	+0.1
BAYC				S	Sg	02 50 41.2	-0.3
ECEA	Canakkale, Ece	0.51	7	P	Pg	02 50 38.5	+0.4
ECEA				S	Sg	02 50 44.8	-0.1
ECEA				*i* AML	AML	02 50 46.0	
	comp=N,252nm,0.3s						
COMU	Canakkale	0.63	27	Pg	Pg	02 50 40.4	-0.1
COMU				Sg	Sb	02 50 50.1	-0.2
GOKA	anakkale-Gk	0.67	348	P	Pg	02 50 41.1	-0.1
GOKA				*i* AML	AML	02 50 51.0	
	comp=N,213nm,0.5s						
GOKA				*i* AML	AML	02 50 51.0	
	comp=N,311nm,0.2s						
GADA	Gvkgeada	0.67	347	Pg	Pg	02 50 41.2	0.0
BUHA	Balikesir, Bur	0.76	92	P	Pg	02 50 42.9	+0.1
BUHA				S	Sg	02 50 52.1	-0.6
DKL	Dikili	0.78	126	Pg	Pg	02 50 43.3	+0.1
LIA	Limnos Island	0.79	298	P	Pg	02 50 43.4	0.0
LIA				S	Sb	02 50 55.1	+0.3
	comp=N,330nm,0.4s						
LIA	Limnos Island	0.79	298	P	Pg	02 50 43.5	+0.1
LIA				S	Sb	02 50 55.3	+0.5
LIA				AML	AML	02 50 57.1	
	comp=E,906μm,0.4s						
LIA				AML	AML	02 50 57.5	
	comp=N,428μm,0.3s						
CANM	Can-anakkale	0.88	57	Pg	Pg	02 50 44.9	-0.2
KARB	zmir-Karabur	0.91	164	P	Pg	02 50 46.0	+0.4
KARB				S	Sg	02 50 57.7	+0.3
KARB				*i* AML	AML	02 51 01.0	
	comp=N,125nm,0.5s						
GELI	Tayfur-Gelibol	0.91	19	Pg	Pg	02 50 45.3	-0.4
ZEDA	zmir-Bergama	0.95	126	P	Pg	02 50 46.0	-0.4
LPK	Lapseki	0.98	31	Pg	Pg	02 50 46.7	-0.3
SMTH	Samothraki Isl	1.03	335	P	Pg	02 50 47.7	-0.3
SMTH				S	Sb	02 51 02.7	+1.0
	comp=N,110nm,0.2s						
SMTH	Samothraki Isl	1.03	335	P	Pg	02 50 47.8	-0.2
SMTH				S	Sg	02 51 01.8	+0.4
SMTH				AML	AML	02 51 03.8	
	comp=E,172μm,0.2s						
SMTH				AML	AML	02 51 04.3	
	comp=N,271μm,0.2s						
PSRA	Psara	1.07	203	P	Pg	02 50 49.2	+0.4
PSRA				S	Sg	02 51 03.2	+0.4
CHOS	Chios island	1.15	182	P	Pg	02 50 49.6	-0.6
CHOS	Chios island	1.15	182	P	Pg	02 50 49.4	-0.8
CAVK	Edirne/Enez-Ca	1.16	3	P	Pg	02 50 50.7	+0.3
CAVK				S	Sg	02 51 04.6	-0.8
ERIK	Erikli-Kesan	1.18	16	Pn	Pg	02 50 49.9	-0.9
BALY	Balya	1.19	80	P	Pg	02 50 51.1	0.0
BALY				S	Sg	02 51 05.6	-1.1
ENEZ	Enez	1.20	2	P	Pg	02 50 51.2	0.0
ENEZ				S	Sn	02 51 08.4	+1.0
	comp=N,118nm,0.4s						
ENEZ	Enez	1.20	2	Pn	Pg	02 50 50.7	-0.5
URLA	Izmir	1.24	161	Pn	Pb	02 50 50.9	-0.7
URLA	Izmir	1.24	161	P	Pb	02 50 51.0	-0.7

URLA				S	Sg	02 51 07.3	-0.7
KRBG	Karabiga-Canak	1.26	47	Pn	Pn	02 50 51.9	+0.1
KRBG				Sn	Sn	02 51 09.7	+0.9
STEP	BALIKESIR_Sava	1.27	97	P	Pn	02 50 52.6	+0.6
STEP				S	Sb	02 51 08.9	+0.4
GONE	Gonen-Balikesi	1.33	67	Pn	Pn	02 50 53.1	+0.3
ZEYE	Izmir, Urla-Ze	1.33	166	P	Pn	02 50 52.2	-0.6
ZEYE				S	Sb	02 51 10.0	-0.3
ZEYE				*i* AML	AML	02 51 14.0	
	comp=N,55nm,0.3s						
ZEYE				*i* AML	AML	02 51 15.0	
	comp=N,53nm,0.3s						
ALN	Alexandroupoli	1.36	358	P	Pn	02 50 53.3	+0.1
ALN				S	Sb	02 51 12.0	+0.8
	comp=N,148nm,0.5s						
ALN	Alexandroupoli	1.36	358	Pn	Pn	02 50 53.4	+0.2
ALN	Alexandroupoli	1.36	358	P	Pn	02 50 53.3	+0.1
ALN				S	Sb	02 51 10.3	-0.8
ALN				AML	AML	02 51 12.3	
	comp=E,399µm,0.6s						
ALN				AML	AML	02 51 13.1	
	comp=N,194µm,0.4s						
BLCB	Balcova	1.36	147	Pn	Pn	02 50 53.8	+0.5
KESN	Edirne-Kesan	1.36	19	P	Pn	02 50 53.7	+0.1
KESN				S	Sb	02 51 11.3	-0.4
KESN				*i* AML	AML	02 51 14.0	
	comp=N,103nm,0.5s						
KESN				*i* AML	AML	02 51 15.0	
	comp=N,64nm,0.4s						
BALB	Balikesir	1.38	85	Pn	Pn	02 50 53.8	+0.3
RKY	Sarkoy-Tekirda	1.42	35	Pn	Pn	02 50 54.4	+0.3
BKES	Balkesir-Mer	1.43	81	P	Pn	02 50 54.8	+0.7
BKES				S	Sb	02 51 13.1	-0.1
THAS	Thassos island	1.50	316	P	Pn	02 50 54.6	-0.6
THAS	Thassos island	1.50	316	P	Pn	02 50 54.5	-0.7
EDC	Edincik	1.58	59	Pn	Pn	02 50 56.8	+0.5
DGB	zmir	1.60	157	P	Pn	02 50 56.1	-0.4
UKOP	Uzunkopru-Edir	1.64	14	Pn	Pn	02 50 57.6	+0.5
RDO	Rodhopi	1.67	345	P	Pn	02 50 57.8	+0.4
RDO				S	Sn	02 51 19.6	+0.8
RDO	Rodhopi	1.67	345	Pn	Pn	02 50 57.9	+0.5
RDO	Rodhopi	1.67	345	P	Pn	02 50 57.7	+0.3
RDO				S	Sn	02 51 18.4	-0.4
KYMI	Kymi, Euboea I	1.79	241	P	Pn	02 50 58.1	-1.1
KAVA	Kavala	1.90	321	P	Pn	02 51 00.0	-0.6
SMG	Samos	1.91	162	P	Pn	02 51 00.6	-0.3
KOKK	Kokkinochori,	2.06	309	P	Pn	02 51 02.2	-0.6
SRS	Serrai	2.48	310	P	Pn	02 51 08.6	0.0
NVR	Nevrokopi	2.49	317	P	Pn	02 51 09.5	+0.7

DJA ***14*** *02:51:05.8±1.0, 8°S±5°×10°7E±°, h16^{km}±7^{km}, M5.0/17, mb5.0/12, mB5.5/7, MLv5.0/17, Mw(mB)4.9/7, MwMwp5.4/3, Mwp5.6/3*

NEIC ***14*** *02:51:08.4±1.5, 7°.76S±0°.08×106°.59E±0°.04, h51^{km}±7^{km}, mb4.9/32, Error ellipse: s-maj=12.5km s-min=1.8km az=205.0*

IDC ***14*** *02:51:19.0±11.0, 6°.90S×107°.27E, h159^{km}±110^{km}, mb4.3/11, mbtmp4.7/11, Error ellipse: s-maj=33.8km s-min=20.1km az=52.0*

ISC 14 02:51:08.6±0.4**, 7°.69S**±0°.06×**106°.59E**±0°.05**, h66**^{km}**, n93, σ1ˢ70**/97**, mb4.9**/23**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNJI	Cibinong	0.66	55	P	Pn	02 51 19.4	-3.4
SKJI	Sukabumi	0.68	357	P	Pn	02 51 20.6	-2.4
CGJI	Cibinong	1.39	320	P	Pn	02 51 30.9	-1.1
SBJI	Serang	1.62	344	P	Pn	02 51 34.2	-0.9
CMJI	Cimerak	1.85	93	P	Pn	02 51 35.8	-2.3
JCJI	Jatiwangi	2.05	55	P	Pn	02 51 37.0	-3.9
KPJI	Karang Pucung	2.35	82	P	Pn	02 51 43.7	-1.3
BLSI	Bandar Lampung	2.66	330	P	Pn	02 51 48.4	-0.8
KASI	Kota Agung	2.99	316	P	Pn	02 51 53.9	+0.2
KLI	Kotabumi	3.29	328	P	Pn	02 51 58.1	+0.3
LWLI	Liwa	3.65	316	P	Pn	02 52 03.0	+0.1
YOGI	Yogyakarta	3.68	92	P	Pn	02 52 02.5	-0.6
SMRI	Semarang	3.88	81	Pn	Pn	02 52 05.5	-0.2
SMRI				Sn	Sn	02 52 49.5	-0.7
SMRI	Semarang	3.88	81	P	Pn	02 52 05.7	-0.1
UGM	Wanagama	3.91	94	Pn	Pn	02 52 05.3	-1.0
UGM				Sn	Sn	02 52 48.8	-2.1
UGM	Wanagama	3.91	94	P	Pn	02 52 05.3	-1.0
MDSI	Maura Dua	3.98	323	P	Pn	02 52 07.7	+0.5
UWJI	Ujung Watu	4.51	74	P	Pn	02 52 12.1	-2.3
MNAI	Manna	4.89	312	Pn	Pn	02 52 20.3	+0.6
MNAI				Sn	Sn	02 53 14.8	-0.4
MNAI	Manna	4.89	312	P	Pn	02 52 19.7	-0.1
PWJI	Pagerwojo	5.18	94	P	Pn	02 52 22.9	-0.7
	193nm,0.6s,3µm1.5nm						
PPBI	Pangkal Pinang	5.51	355	P	Pn	02 52 27.5	-0.6
	126nm,0.8s,24µm1.3nm						
KSI	Kapahiang	5.64	315	P	Pn	02 52 30.4	+0.3
GRJI	Gresik	5.90	83	P	Pn	02 52 32.3	-1.1
	90nm,0.7s,0.4nm						
DSRI	Dabo	7.43	344	P	Pn	02 52 54.5	0.0
	93nm,0.9s,2µm1.4nm						
JAGI	Jajag, Banyuwa	7.53	96		Pn	02 52 56.5	+0.6
JAGI	Jajag, Banyuwa	7.53	96	P	Pn	02 52 55.4	-0.5
	120nm,0.6s,3µm0.5nm						
PPSI	Pulau Pagai	8.17	306	P	Pn	02 53 02.4	-2.2
	462nm,0.4s,10µm						
SDSI	Sungai Dareh	8.45	322	P	Pn	02 53 06.1	-2.4
	13nm,0.7s,997nm17µm						
PDSI	Padang	9.09	318	P	Pn	02 53 15.2	-2.0
TWSI	Taliwang, Sumb	10.24	97	P	Pn	02 53 30.9	-2.0
	38nm,0.7s						
PLAI	Plampang	11.13	97	P	Pn	02 53 43.5	-1.6
	47nm,0.9s						
SBUM	Sibu	11.53	29	Pn	Pn	02 53 51.8	+1.2
GIRL	Giralia	16.59	154	Pn	Pn	02 54 56.5	-0.6
GIRL				IAmb	IAmb	02 55 05.2	
	comp=Z,285nm,1.5s						
KKM	Kota Kinabalu	16.68	35	Pn	Pn	02 54 58.8	+0.5
KKM				IAmb	IAmb	02 55 00.4	
	comp=Z,23nm,0.9s						
MYLDM	Lahad Datu	17.45	43	P	Pn	02 55 08.0	+0.2
MYLDM				IAmb	IAmb	02 55 18.9	
	comp=Z,24nm,1.0s						
SOEI	Soe	17.60	98		Pn	02 55 09.5	-0.2
SOEI				IAmb	IAmb	02 55 20.2	
	comp=Z,36nm,0.7s						
MBWA	Marble Bar	18.46	138	Pn	Pn	02 55 20.9	+0.9
PSA00	Pilbara Seismi	18.82	139	Pn	Pn	02 55 24.7	+0.3
FITZ	Fitzroy Crossi	21.24	121	P	P	02 55 50.0	+0.6
KNRA	Kununurra	23.11	112	P	P	02 56 08.8	-0.4
KNRA				IAmb	IAmb	02 56 23.9	
	comp=Z,18nm,1.0s						
MTN	Manton Dam	24.68	104	P	P	02 56 22.3	-1.3
MTN				IAmb	IAmb	02 56 41.2	
	comp=Z,15nm,0.6s						
WB0	Warramunga Arr	29.50	117	P	P	02 57 07.1	+0.2
WRA	Warramunga Arr	29.52	117	P	P	02 57 06.8	-0.2
	comp=Z,1.5nm,0.8s,baz=290,slow=11,SNR=18						
	comp=Z,1.5nm,0.8s						
WRA	Warramunga Arr	29.52	117	P	P	02 57 06.5	-0.6
WRAB	Tennant Creek	29.52	117	P	P	02 57 07.1	0.0
WRAB				IAmb	IAmb	02 57 17.8	
	comp=Z,14nm,1.5s						
WB2	Warramunga Arr	29.53	117	P	P	02 57 06.8	-0.4
ASAR	Alice Springs	30.63	124	P	P	02 57 16.8	-0.1
	comp=Z,1.3nm,0.5s,baz=304,slow=8.5,SNR=23						
	comp=Z,1.3nm,0.5s						
TPUB	Ta-pu	33.72	24	P	P	02 57 46.4	+2.5
YULB	Yu-li	34.07	25	P	P	02 57 49.9	+2.9
SSLB	Suanglung	34.29	24	P	P	02 57 49.6	+0.8
SSLB				IAmb	IAmb	02 58 10.2	
	comp=Z,65nm,0.8s						
SSLB	Suanglung	34.29	24	P	P	02 57 50.9	+2.1
NACB	Ninganchiao	34.89	24	P	P	02 57 55.9	+1.9
NACB				IAmb	IAmb	02 58 02.4	
	comp=Z,98nm,1.2s						
NACB	Ninganchiao	34.89	24	P	P	02 57 56.0	+2.0
YHNB	Yeheng	35.24	24	P	P	02 57 56.8	-0.3
TATO	Taipei	35.56	24	P	P	02 57 58.5	-1.3
BBOO	Buckleboo	37.03	137	P	P	02 58 12.9	+0.6
BBOO				IAmb	IAmb	02 58 30.0	
	comp=Z,15nm,1.2s						
AIS	Amsterdam Isla	39.85	217	P	P	02 58 35.2	-0.6
AIS				IAmb	IAmb	02 58 52.8	
	comp=Z,93nm,1.2s						
AIS	Amsterdam Isla	39.85	217	P	P	02 58 34.7	-1.1
AIS				pP	pP	02 58 46.6	-4.7
AIS				sP	pwP	02 58 51.9	-3.4
JOW	Kunigami	40.25	31	P	P	02 58 41.8	+2.6
CTAO	Charters Tower	40.32	112	P	P	02 58 40.6	+0.6
STKA	Stephens Creek	40.49	131	P	P	02 58 42.8	+1.6
	comp=Z,10nm,0.4s,baz=309,slow=8.4,SNR=36						
	comp=Z,10nm,0.4s						
STKA	Stephens Creek	40.49	131	P	P	02 58 42.7	+1.4
JNU	Nakatsue	46.70	28	P	P	02 59 24.1	-6.9
	comp=Z,8.0nm,0.8s,baz=195,slow=9.5,SNR=2.4						
	comp=Z,8.0nm,0.8s						
INU	Inuyama	51.53	32	P	P	03 00 11.9	+4.0
JGF	Kuroka	51.90	32	P	P	03 00 14.5	+3.7
MJAR	Matsushiro Arr	53.07	32	P	P	03 00 13.1	-6.2
	comp=Z,2.1nm,0.7s,baz=203,slow=8.5,SNR=2.7						
	comp=Z,2.1nm,0.7s						
WSAR	Wadi Sarin	56.05	305	P	P	03 00 42.5	+1.2
	comp=Z,6.3nm,0.5s,baz=159,slow=8.6,SNR=4.9						
	comp=Z,6.3nm,0.5s						
WSAR	Wadi Sarin	56.05	305		P	03 00 42.5	+1.2
MKAR	Makanchi Array	58.39	341	P	P	03 00 53.1	-4.2
	comp=Z,46nm,0.9s,baz=169,slow=8.4,SNR=1.9						
	comp=Z,46nm,0.9s						
UOSS	Minazif	58.80	305	P	P	03 01 01.0	+0.4
UOSS				IAmb	IAmb	03 01 06.4	
	comp=Z,29nm,0.9s						
NOUC	Port Laguerre	59.12	111	P	P	03 01 04.3	+1.5
NOUC				pP	pP	03 01 16.9	-2.4
NOUC				sP	pwP	03 01 22.0	-0.7
ERM	Erimo	59.70	31	P	P	03 01 06.5	+0.2
MAW	Mawson	66.59	197	P	P	03 01 51.9	+0.3
RAYN	Ar Rayn	67.22	299	P	P	03 01 56.7	+0.2
RAYN				IAmb	IAmb	03 02 04.3	
	comp=Z,22nm,0.9s						
RAYN	Ar Rayn	67.22	299	P	P	03 01 56.5	0.0
CCD	Concordia, Ant	68.05	175	P	P	03 02 04.6	+3.4
CCD				pP	pP	03 02 17.3	-0.6
BKZ	Black Stump Fm	69.62	129	P	P	03 02 11.9	+0.7
BKZ				IAmb	IAmb	03 02 14.1	
	comp=Z,16nm,1.1s						
RTZ	Ruatahuna	69.93	128	P	P	03 02 13.4	+0.2
RTZ				IAmb	IAmb	03 02 14.3	
	comp=Z,14nm,1.0s						
MXZ	Matakaoa Point	70.87	127	P	P	03 02 18.8	0.0
ASF	Jabal al Asfar	77.21	305	P	P	03 02 57.0	+1.0
	comp=Z,11nm,0.7s,baz=79,slow=5.2,SNR=1.5						
	comp=Z,11nm,0.7s						
ASF	Jabal al Asfar	77.21	305	P	P	03 02 57.0	+1.0
GHAJ	Ghor Haditha	78.04	304	P	P	03 03 01.2	+0.7
GHAJ				IAmb	IAmb	03 03 01.8	
	comp=Z,21nm,0.6s						
EIL	Elat	78.09	302	P	P	03 03 01.3	+0.4
	comp=Z,9.6nm,0.7s,baz=160,slow=3.5,SNR=1.1						
	comp=Z,9.6nm,0.7s						
MMAI	Mount Meron Ar	78.67	306	P	P	03 03 05.2	+1.1
	comp=Z,5.1nm,0.5s,baz=93,slow=7.9,SNR=6.3						
	comp=Z,5.1nm,0.5s						
BRTR	Keskin Array B	81.98	312	P	P	03 03 20.9	-0.9
	comp=Z,6.1nm,0.7s,baz=124,slow=7.5,SNR=1.1						
	comp=Z,6.1nm,0.7s						
QSPA	South Pole Qui	82.31	180	P	P	03 03 25.2	+2.2
SMY	Shemya	82.82	34	P	P	03 03 26.1	+0.5
SNAA	Sanae	88.75	197	P	P	03 03 57.0	+2.2
VNA2	Neumayer--Watz	90.40	197	P	P	03 04 15.2	+13
	baz=328,slow=17						
VNA1	Neumayer--Stat	90.78	198	P	P	03 04 12.6	+8.5
PDAR	Pinedale Array	132.79	36	PKP	PKPdf	03 10 11.9	-4.9
	comp=Z,0.2nm,0.6s,baz=336,slow=2.0,SNR=2.0						
TXAR	Lajitas Array	144.32	49	PKP	PKPab	03 10 35.0	-1.2
	comp=Z,1.1nm,0.4s,baz=336,slow=1.8,SNR=29						

MOS ***14*** *02:51:14.2±0.9, 6°.18N×92°.25E, h10^{km}, mb6.0/88, MS5.6/66, Error ellipse: s-maj=5.7km s-min=3.4km az=113.6*

IDC ***14*** *02:51:14.7±0.4, 6°.21N×92°.32E, h0^{km}, mb5.3/54, mbtmp5.3/57, ML5.7/3, MS5.5/66, Error ellipse: s-maj=11.0km s-min=8.5km az=21.0*

BJI ***14*** *02:51:14.2±0.0, 6°.07N×92°.26E, h15^{km}, mb5.7/91, mB5.6/71, Ms5.9/96, Ms7 5.7/92*

DJA ***14*** *02:51:15.6±0.1, 6°N±2°×9°2E±°, h10^{km}, M5.7/124, mb5.9/124, mB6.2/97, MLv6.5/7, Mw5.9/141, Mw(mB)5.8/97, MwMwp5.5/62, Mwp5.7/62*

BGR ***14*** *02:51:16.0, 6°.56N×92°.81E, h26^{km}, mb5.7, Ms5.7*

NEIC ***14*** *02:51:16, 6°.13N×92°.32E, h12^{km}*

NEIC ***14*** *02:51:16.8±1.4, 6°.15N±0°.07×92°.30E±0°.07, h10^{km}±1^{km}, mb5.9/278, Ms_20 5.8/384, Mwb5.9/65, Mww6.0, Error ellipse: s-maj=12.7km s-min=10.3km az=225.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-2.35; $M_{\theta\theta}$-2.70; $M_{\phi\phi}$5.05; $M_{r\theta}$3.06; $M_{\theta\phi}$-5.44; $M_{\phi r}$-0.79; Fault plane solution: $M_0$7.66000×10^{17} NP1: ϕ_s292.00000°, δ78.23000°, λ-150.01000°. NP2: ϕ_s195.29000°, δ60.71000°, λ-13.52000°. Principal axes: T 8.2867, Plg12.0000°, Azm61.0000°; N -1.4527, Plg58.0000°, Azm311.0000°; P -6.8340, Plg29.0000°, Azm157.0000°;*

NEIC ***14*** *02:51:17, 6°.13N×92°.32E, h10^{km}*

GCMT ***14*** *02:51:19.8±0.1, 6°.23N×92°.17E, h17^{km}, MW6.0/164, Moment Tensor Solution. s157,c334; s164,c581; Duration: 2ˢ3 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.33±.01; $M_{\theta\theta}$-0.54±.01; $M_{\phi\phi}$0.86±.01; $M_{r\theta}$0.08±.01; $M_{\theta\phi}$-0.84±.01; $M_{\phi r}$-0.21±.02; Best double couple: $M_0$1.10900×10^{18} NP1: ϕ_s200.00000°, δ86.00000°, λ7.00000°. NP2: ϕ_s110.00000°, δ83.00000°, λ176.00000°. Principal axes: T 1.2880, Plg8.0000°, Azm65.0000°; N -0.3580, Plg82.0000°, Azm231.0000°; P -0.9310, Plg2.0000°, Azm335.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***14*** *02:51:22, 6°.03N×92°.22E, h22^{km}, Moment Tensor Solution. Duration: 12ˢ0 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.30; $M_{\theta\theta}$-0.53; $M_{\phi\phi}$0.83; $M_{r\theta}$0.02; $M_{\theta\phi}$-0.81; $M_{\phi r}$0.29; Fault plane solution: $M_0$1.13000×10^{18} NP1: ϕ_s290.00000°, δ74.00000°, λ-177.00000°. NP2: ϕ_s199.00000°, δ87.00000°, λ-15.00000°. Principal axes: T 1.2495, Plg9.0000°, Azm245.0000°; N -0.3098, Plg74.0000°, Azm10.0000°; P -0.9397, Plg13.0000°, Azm153.0000°;*

KLM ***14*** *02:51:24, 6°.03N×92°.34E, h50^{km}, mb5.8*

ISC 14 02:51:18.6±0.3**, 6°.16N**±0°.03×**92°.30E**±0°.03**, h26**^{km}±1^{km}**, h26**^{km}**:pP-P, n1814, σ1ˢ56**/1853**, mb5.8**/431**, MS5.7**/331**, 42C-98D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	4.50	114	P	Pn	02 52 24.2	-0.9
LHMI	Lhok Sumawe	4.72	101	Pn	Pn	02 52 28.6	+0.5
LHMI				Sn	Sn	02 53 22.2	+0.2
LHMI	Lhok Sumawe	4.72	101	P	Pn	02 52 29.2	+1.1
LHMI	Lhok Sumawe	4.72	101	P	Pn	02 52 28.6	+0.5
SNSI	Sinabang, Aceh	5.48	133	P	Pn	02 52 35.7	-2.8
	1µm,0.9s,27µm55µm36nm						
PBA	Port Blair	5.48	5	Pn	Pn	02 52 38.6	0.0
PBA	Port Blair	5.48	5	*e*P	Pn	02 52 37.4	-1.2
PBA				IAmb	IAmb	02 52 45.5	
	comp=Z,1µm,0.5s						
PBA	Port Blair	5.48	5	P	Pn	02 52 39.2	+0.6
	SNR=41						
KCSI	Kotacane, Aceh	6.05	115	P	Pn	02 52 45.8	-0.6
	comp=Z,2µm,0.8s,comp=Z,18µmcomp=Z,41µmcomp=Z,24nm						
TSI	Tuntungan	6.78	113	P	Pn	02 52 56.0	-0.4
	comp=Z,1µm,0.9s,comp=Z,17µmcomp=Z,23µmcomp=Z,18nm						
DGPR	DIGLIPUR	7.00	5	*e*P	Pn	02 53 00.2	+0.7
DGPR				*e*S	Sn	02 54 10.7	-7.7
GSI	Gunungsitoli	7.14	132	Pn	Pn	02 52 58.4	-3.0
GSI	Gunungsitoli	7.14	132	P	Pn	02 53 00.0	-1.4
GSI	Gunungsitoli	7.14	132	P	Pn	02 52 59.3	-2.1
	comp=Z,1µm,0.6s,comp=Z,16µmcomp=Z,73µmcomp=Z,9.4nm						
PSI	Prapat	7.40	116	P	Pn	02 53 06.0	+1.0
PSI	Prapat	7.40	116	P	Pn	02 53 04.0	-1.0
RPSI	Rantau Prapat	7.45	117	Pn	Pn	02 53 04.0	-1.6
SRIT	Nakonsritamara	7.64	71		Pn	02 53 09.0	+0.8
SRIT	Nakonsritamara	7.64	71	P	Pn	02 53 09.9	+1.7
SURA	Surathani	7.86	67	P	Pn	02 53 12.5	+1.3
KULM	Kulim	8.36	95	Pn	Pn	02 53 17.9	-0.2
PBSI	Pulau Batu	8.59	136	P	Pn	02 53 19.3	-1.9
	comp=Z,2µm,0.8s,comp=Z,25µmcomp=Z,46µm						
IPM	Ipoh	8.85	100	Pn	Pn	02 53 23.9	-1.0
IPM	Ipoh	8.85	100	P	Pn	02 53 25.3	+0.4
JRMM	Jerantut	10.39	102	P	Pn	02 53 46.0	0.0
BKNI	Bangkinang	10.47	123	Pn	Pn	02 53 45.3	-1.9
BKNI	Bangkinang	10.47	123	P	Pn	02 53 47.9	+0.8
BKNI	Bangkinang	10.47	123	P	Pn	02 53 46.8	-0.3
	comp=Z,571nm,0.7s,comp=Z,7µmcomp=Z,21µm						
PDSI	Padang	10.76	130	P	Pn	02 53 49.3	-1.8
	comp=Z,347nm,0.8s,comp=Z,34µm						
SDSI	Sungai Dareh	11.52	127	P	Pn	02 53 59.4	-2.0
	comp=Z,127nm,0.8s,comp=Z,2µmcomp=Z,24µm						
PALK	Pallekele	11.57	276	Pn	Pn	02 53 59.7	-2.5
	comp=Z,47nm,0.3s,baz=196,slow=13,SNR=113						
PALK				Sn	Sn	02 55 54.1	-17
	comp=Z,200nm,0.3s,baz=290,slow=18,SNR=10						
PALK				LR	LR	02 58 13.2	
	comp=Z,22µm,18.4s,baz=196,slow=36						
	comp=Z,248nm,0.3s						
PALK	Pallekele	11.57	276	*ce*P	Pn	02 54 00.2	-2.0
PALK	Pallekele	11.57	276	P	Pn	02 54 00.5	-1.8
PPSI	Pulau Pagai	11.74	139	P	Pn	02 54 02.6	-1.9
	comp=Z,459nm,0.9s,comp=Z,9µm						
NAYO	Nakonayok	12.02	47	P	Pn	02 54 10.4	+2.1
BTDF	Bukit Timah Da	12.40	112	P	Pn	02 54 14.3	+0.8
TPRI	Tanjung Pinang	13.26	113	P	Pn	02 54 24.6	-0.7
	comp=Z,261nm,0.9s,comp=Z,5µmcomp=Z,5µm						
MDRS	Chennai	13.72	301	*e*P	Pn	02 54 29.5	-2.0
MDRS				IAmb	IAmb	02 54 43.8	
	comp=Z,902nm,0.6s						
CM31	Chiang Mai Arr	13.84	27	Pn	Pn	02 54 33.1	-0.1
CM31	Chiang Mai Arr	13.84	27	P	Pn	02 54 33.2	+0.1
	SNR=283						
CM31				P	Pn	02 54 33.2	+0.1
	SNR=283						
CMAR	Chiang Mai Arr	13.84	27	Pn	Pn	02 54 33.0	-0.2
	comp=Z,6.4nm,0.3s,baz=217,slow=14,SNR=460						
CMAR				Sn	Sn	02 56 57.9	-8.2
	baz=0.6,slow=14						
CMAR				LR	LR	03 00 26.1	
	comp=Z,21µm,18.6s,baz=215,slow=40						
	comp=Z,292nm,0.8s						
CMAR	Chiang Mai Arr	13.84	27	P	Pn	02 54 33.0	-0.2
DSRI	Dabo	13.92	118	P	Pn	02 54 34.2	-0.1
	comp=Z,349nm,1.0s,comp=Z,5µmcomp=Z,5µm						
CHTO	Chiang Mai	14.15	27		Pn	02 54 35.7	-1.7
CHTO	Chiang Mai	14.15	27	P	Pn	02 54 35.7	-1.7
KSI	Kapahiang	14.16	133	P	Pn	02 54 37.1	-0.6
VIS	Vishakhapatnam	14.45	323	*e*P	Pn	02 54 39.2	-2.3
VIS				IAmb	IAmb	02 54 42.9	
	comp=Z,5µm,0.6s						
PHRA	Phrae	14.50	32		Pn	02 54 42.5	+0.2
MNAI	Manna	14.91	134	P	Pn	02 54 46.3	-1.5
	comp=Z,573nm,0.8s,comp=Z,10µmcomp=Z,22µm						
SALM	Salem	14.96	292	*e*P	Pn	02 54 47.6	-0.8
LHSI	Lahat	14.97	131	P	Pn	02 54 46.0	-2.5
	comp=Z,66µm,0.8s						
KOD	Kodaikanal	15.23	286	*e*P	Pn	02 54 49.7	-2.6
VJD	Vijayawada	15.37	313	*e*P	Pn	02 54 51.3	-2.5
PMBI	Palembang	15.38	126	P	Pn	02 54 50.9	-3.1
	comp=Z,874nm,0.9s,comp=Z,12µm						
TRD	Trivandrum	15.39	280	*e*P	Pn	02 54 52.6	-1.5
TRD				IAmb	IAmb	02 55 07.8	
	comp=Z,709nm,1.1s						
RAGD	RAYAGADA	15.60	327	*e*P	Pn	02 54 54.2	-2.7
NONG	Nongkai	15.88	41	P	Pn	02 55 00.9	+0.5
MDSI	Maura Dua	15.89	131	P	Pn	02 54 58.7	-1.9
	comp=Z,334nm,1.0s,comp=Z,7µmcomp=Z,18µm						
CRAI	Chiangrai	16.04	29	Pn	Pn	02 55 02.3	-0.2
CRAI				IAmb	IAmb	02 55 10.0	
	comp=Z,1µm,1.0s						
PPBI	Pangkal Pinang	16.10	120	P	P	02 55 05.1	-1.3
	comp=Z,361nm,1.1s						
LWLI	Liwa	16.16	133	P	Pn	02 55 02.6	-1.5
	comp=Z,1µm,0.8s,comp=Z,13µmcomp=Z,18µm						
SAIH	SAIHA	16.25	2	*e*P	Pn	02 55 03.4	-2.0
SAIH				IAmb	IAmb	02 55 08.0	
	comp=Z,914nm,0.6s						
BRDH	Bariadhala	16.44	358	Pn	Pn	02 55 07.3	-0.2
	comp=Z,63nm,0.3s,baz=90,slow=5.3,SNR=16						
BRDH				Sn	Sn	02 57 58.9	-10
	comp=Z,7.5nm,0.3s,baz=270,slow=21,SNR=1.6						
	comp=Z,385nm,0.6s						
KLI	Kotabumi	16.64	131	P	Pn	02 55 09.3	-0.9
	comp=Z,658nm,1.1s						
KASI	Kota Agung	16.82	133	P	Pn	02 55 11.2	-1.2
	comp=Z,762nm,0.8s,comp=Z,8µmcomp=Z,17µm						
DLV	T Lat	16.98	69	P	P	02 55 16.5	+0.1
BLSI	Bandar Lampung	17.27	131	P	Pn	02 55 17.1	-0.9
	comp=Z,292nm,0.6s						
HYB	Hyderabad	17.48	311	*e*P	Pn	02 55 18.5	-2.3
HYB				IAmb	IAmb	02 55 27.2	
	comp=Z,306nm,0.7s						
HYB	Hyderabad	17.48	311	⇓*e*P	Pn	02 55 19.3	-1.5
HYB				*e*		02 58 12.3	
HYB				*e*S	Sn	02 58 34.9	+0.1
HYB				IVMs_BB	IVMs_BB	03 01 39.4	
	comp=Z,5µm,19.5s						
SBJI	Serang	18.42	131	P	P	02 55 31.2	-0.9
	comp=Z,602nm,0.9s,comp=Z,8µm						
CGJI	Cibinong	18.43	133	P	P	02 55 30.5	-1.7
	comp=Z,429nm,0.8s,comp=Z,27µm						
MNGI	Mangalore	18.50	293	*e*P	Pn	02 55 34.5	+1.3
SILR	SILCHAR	18.53	1	*e*P	P	02 55 32.0	-1.2
KSM	Kuching	18.56	104	P	P	02 55 31.9	-1.7
KSM	Kuching	18.56	104	P	Pn	02 55 35.3	+1.4
KSM	Kuching	18.56	104	P	Pn	02 55 38.0	+4.0
BOK	Bokaro	18.59	341	*e*P	P	02 55 31.7	-2.2
BOK				IAmb	IAmb	02 55 42.2	
	comp=Z,1µm,0.6s						
IMP	Imphal	18.64	5	*e*P	P	02 55 32.7	-1.7
IMP				IAmb	IAmb	02 55 46.4	
	comp=Z,925nm,0.9s						
IMP				*e*S	Sn	02 58 54.3	-8.3
COCO	West Island	18.78	166	P	P	02 55 32.5	-3.5
COCO				IAmb	IAmb	02 55 41.1	
	comp=Z,978nm,1.1s						
COCO	West Island	18.78	166	P	P	02 55 32.5	-3.5
COCO				pmax	pmax		
	comp=Z,978nm,1.2s						
HMDM	Hanimaadhoo	19.00	273	P	P	02 55 38.5	0.0
HMDM	Hanimaadhoo	19.00	273	P	Pn	02 55 39.4	0.0
MNCI	Minicoy	19.20	277	P	P	02 55 40.9	+0.2
MNCI				IAmb	IAmb	02 55 54.6	
	comp=Z,1µm,1.5s						
MNCY	Minicoy	19.23	277	*e*P	Pn	02 55 42.3	+0.3
MNCY				IAmb	IAmb	02 56 22.5	
	comp=Z,773nm,1.3s						
SHL	Shillong	19.31	359	*e*P	P	02 55 40.6	-1.3
SHL				IAmb	IAmb	02 55 50.2	
	comp=Z,539nm,0.8s						
SHL	Shillong	19.31	359	P	P	02 55 41.0	-1.0
	SNR=84						
KOHI	KOHIMA	19.53	5	*e*P	P	02 55 42.2	-2.1
KOHI				IAmb	IAmb	02 55 50.5	
	comp=Z,2µm,0.6s						
LATR	Latur	19.60	310	*e*P	Pn	02 55 45.8	-0.6
CNJI	Cibinong	19.95	132	P	P	02 55 47.6	-1.2
	comp=Z,256nm,0.9s,comp=Z,2µm						
KAAM	Kaadhehdhoo	20.07	254	P	P	02 55 47.8	-2.3
KAAM	Kaadhehdhoo	20.07	254	P	Pn	02 55 51.6	-0.4
	SNR=11						
MOKO	MOKOCHONG	20.16	6	*e*P	P	02 55 50.0	-1.3
MOKO				IAmb	IAmb	02 56 04.1	
	comp=Z,4µm,1.0s						
SBUM	Sibu	20.20	100	P	P	02 55 50.7	-0.9
SBUM				IAmb	IAmb	02 55 59.0	
	comp=Z,574nm,1.6s						
SBUM				IAMs_20	IAMs_20	03 04 59.5	
	comp=Z,44µm,18.0s						
JCJI	Jatiwangi	20.30	128	P	P	02 55 53.1	+0.5
	comp=Z,591nm,0.9s						
TEZP	TEZPUR	20.35	1	*e*P	P	02 55 50.9	-2.2
TEZP				IAmb	IAmb	02 56 02.9	
	comp=Z,489nm,0.9s						
GOA	Goa	20.36	299	*e*P	P	02 55 53.8	+0.5
GOA				IAmb	IAmb	02 56 13.3	
	comp=Z,244nm,0.9s						
JORH	JORHAT	20.56	5	*e*P	P	02 55 53.6	-1.8
JORH				IAmb	IAmb	02 56 08.0	
	comp=Z,2µm,0.6s						
JBP	Jabalpur	20.66	326	*e*P	P	02 55 56.8	+0.4
JBP				IAmb	IAmb	02 56 08.2	
	comp=Z,885nm,0.7s						
JBP				*e*S	S	02 59 38.2	-8.0
AKL	Akola	20.71	316	*e*P	P	02 55 58.2	+1.1
ITAN	ITANAGAR	20.92	4	*e*P	P	02 55 59.1	-0.1

ITAN				*e*S	S	02 59 44.6	-6.6
VAR	Varanasi	21.01	336	*e*P	P	02 56 01.1	+0.9
CMJI	Cimerak	21.24	130	P	P	02 56 02.0	-0.8
	comp=Z,263nm,1.0s,comp=Z,3µmcomp=Z,10µm						
PBKI	Pangkalan Bun	21.25	114	P	P	02 56 03.3	+0.3
	comp=Z,844nm,1.0s,comp=Z,10µm						
ZIRO	ZIRO	21.30	4	*e*P	P	02 56 01.5	-2.1
ZIRO				IAmb	IAmb	02 56 12.2	
	comp=Z,2µm,1.1s						
KPJI	Karang Pucung	21.33	129	P	P	02 56 03.1	-0.7
	comp=Z,457nm,0.8s,comp=Z,6µm						
LKP	Lekhapani	21.33	9	*e*P	P	02 56 02.9	-0.8
GTK	Tadong	21.34	351	*e*P	P	02 56 05.2	+1.3
GTK				*e*S	S	02 59 55.0	-4.8
DIBR	DIBRUGARH	21.34	6	*e*P	P	02 56 02.4	-1.3
DIBR				IAmb	IAmb	02 56 15.5	
	comp=Z,1µm,0.8s						
QIZ	Qiongzhong	21.34	52	P	P	02 56 05.0	+1.1
QIZ				S	Sn	03 00 04.4	-3.5
QIZ				pmax	pmax		
	comp=Z,2µm,1.6s						
QIZ				LR	LR		
	comp=Z,43µm,11.6s						
QIZ				LR	LR		
	comp=Z,15µm,12.7s						
QIZ				LR	LR		
	comp=Z,19µm,12.8s						
QIZ	Qiongzhong	21.34	52	P	P	02 56 04.0	+0.1
QIZ	Qiongzhong	21.34	52	P	P	02 56 05.1	+1.1
KMI	Kunming	21.35	27	⇑P	P	02 56 05.1	+0.9
KMI				pP	pP	02 56 07.1	-3.0
KMI				S	S	03 00 00.5	+0.3
KMI				sS	Sn	03 00 08.1	-0.2
KMI				pmax	pmax		
	comp=Z,440nm,1.2s						
KMI				pmax	pmax		
	comp=Z,2µm,9.6s						
KMI				LR	LR		
	comp=Z,20µm,15.8s						
KMI				LR	LR		
	comp=Z,12µm,14.4s						
KMI				LR	LR		
	comp=Z,15µm,16.0s						
RAMN	Ramite	21.38	346	*e*P	P	02 56 07.5	+3.0
	comp=Z,1µm,0.7s						
TAPN	Taplejung	21.52	349	*e*P	P	02 56 06.6	+0.5
	comp=Z,634nm,0.8s						
ALBI	Allahabad	21.53	333	*e*P	P	02 56 05.9	+0.1
POO	Poona	21.79	306	*e*P	P	02 56 08.7	-0.1
POO				IAmb	IAmb	02 56 23.3	
	comp=Z,368nm,0.7s						
PZH	PanZhiHua	22.15	23	⇑P	P	02 56 12.3	-0.3
PZH				S	S	03 00 15.0	-0.5
PZH				sS	pS	03 00 21.6	-2.3
PZH				pmax	pmax		
	comp=Z,590nm,1.2s						
PZH				pmax	pmax		
	comp=Z,2µm,4.8s						
PZH				LR	LR		
	comp=Z,16µm,15.0s						
PZH				LR	LR		
	comp=Z,12µm,13.3s						
PZH				LR	LR		
	comp=Z,14µm,13.6s						
JIRN	Jiri	22.16	346	*e*P	P	02 56 13.5	+0.5
	comp=Z,978nm,0.9s						
BHPL	Bhopal	22.22	321	*e*P	P	02 56 13.2	-0.1
BHPL				IAmb	IAmb	02 56 25.6	
	comp=Z,404nm,0.9s						
PKI	Pulchoki	22.28	344	*e*P	P	02 56 15.3	+1.0
	comp=Z,1µm,0.6s						
PKIN	Phulchoki	22.29	344	*e*P	P	02 56 15.3	+1.0
	comp=Z,4µm,0.8s						
SMRI	Semarang	22.36	126	P	P	02 56 13.2	-1.7
SMRI				IAmb	IAmb	02 56 19.7	
	comp=Z,213nm,0.8s						
SMRI	Semarang	22.36	126	P	P	02 56 14.2	-0.6
	comp=Z,382nm,0.7s,comp=Z,8µm						
DMN	Daman	22.40	343	*e*P	P	02 56 17.3	+1.8
	comp=Z,7µm,0.8s						
UWJI	Ujung Watu	22.41	124	P	P	02 56 15.2	-0.3
	comp=Z,912nm,1.0s,comp=Z,11µm						
GUN	Gumba	22.48	345	*e*P	P	02 56 16.3	-0.1
	comp=Z,923nm,0.7s						
BOM	Bombay	22.82	305	*e*P	P	02 56 20.1	+0.4
GKN	Gorkha	22.91	342	*e*P	P	02 56 20.9	+0.1
	comp=Z,3µm,0.6s						
JHNI	Jhansi	23.28	327	*e*P	P	02 56 23.8	-0.6
NGJI	Ngawi	23.37	125	P	P	02 56 24.6	-0.7
	comp=Z,460nm,1.1s,comp=Z,5µm						
TBJI	Tambak Boyo	23.38	123	P	P	02 56 26.3	+0.9
	comp=Z,1µm,0.8s,comp=Z,14µm						
LSA	Lhasa	23.44	357	P	P	02 56 26.8	+0.3
LSA				S	S	03 00 36.6	-2.1
LSA				pmax	pmax		
	comp=Z,110nm,0.7s						
LSA				LR	LR		
	comp=Z,15µm,17.8s						
LSA				LR	LR		
	comp=Z,10µm,15.7s						
LSA				LR	LR		
	comp=Z,12µm,15.7s						
LSA	Lhasa	23.44	357	P	P	02 56 26.1	-0.4
LSA	Lhasa	23.44	357	P	P	02 56 26.1	-0.4
LSA				pmax	pmax		
	comp=Z,604nm,0.9s						
LSA				MLR	MLR		
	comp=Z,4µm,20.0s						
DANN	Dangsing	23.51	341	*e*P	P	02 56 27.2	+0.3
	comp=Z,2µm,0.7s						
PYUN	Piuthan	23.54	339	*e*P	P	02 56 27.9	+0.7
	comp=Z,4µm,0.8s						
BWJI	Bawean	23.56	120	P	P	02 56 26.8	-0.5
	comp=Z,880nm,0.9s,comp=Z,21µmcomp=Z,10µm						
MTKI	Muara Teweh, K	23.64	107	P	P	02 56 28.3	+0.3
	comp=Z,376nm,0.8s,comp=Z,11µmcomp=Z,8µm						
KKM	Kota Kinabalu	23.78	89	P	P	02 56 28.4	-1.1
KKM				IAmb	IAmb	02 56 35.1	
	comp=Z,435nm,1.3s						
KKM	Kota Kinabalu	23.78	89	P	P	02 56 30.8	+1.3
DGAR	Diego Garcia	23.95	236	P	P	02 56 28.2	-2.7
DGAR	Diego Garcia	23.95	236	P	P	02 56 28.2	-2.7
DGAR				pmax	pmax		
	comp=Z,679nm,1.1s						
DGAR	Diego Garcia	23.95	236	P	P	02 56 32.1	+1.1
DGAR				P	P	02 56 32.1	+1.1
GRJI	Gresik	23.96	122	P	P	02 56 30.3	-0.7
	comp=Z,350nm,0.8s,comp=Z,6µmcomp=Z,6µm						
PWJI	Pagerwojo	24.02	126	P	P	02 56 30.8	-0.7
	comp=Z,107nm,0.7s						
H08S3	Diego Garcia H	24.05	236	T	T	03 22 25.3	
	baz=58,slow=75,SNR=28						
H08S2	Diego Garcia H	24.05	236	T	T	03 22 21.6	
	baz=58,slow=75,SNR=26						
H08S1	Diego Carcia H	24.06	236	T	T	03 22 21.3	
	baz=58,slow=75,SNR=27						
SPMM	Sapulut	24.10	92	P	P	02 56 36.0	+3.6
GYA	Guiyang	24.40	33	⇑P	P	02 56 35.5	+0.4
GYA				S	S	03 00 53.0	-0.5
GYA				pmax	pmax		
	comp=Z,850nm,0.9s						
GYA				pmax	pmax		
	comp=Z,3µm,3.9s						
GYA				LR	LR		
	comp=Z,28µm,14.2s						
GYA				LR	LR		
	comp=Z,24µm,13.2s						
GYA				LR	LR		
	comp=Z,29µm,17.6s						
BBKI	Banjar Baru	24.45	112	P	P	02 56 35.5	-0.1
	comp=Z,1µm,0.9s,comp=Z,15µm						
BLJI	Banyuglugur	25.34	123	P	P	02 56 43.4	-0.2
	comp=Z,683nm,0.7s,comp=Z,7µm						
GMJI	Gumukmas	25.50	124	P	P	02 56 43.4	-1.6
	comp=Z,131nm,0.9s,comp=Z,2µm						
BKB	Balikpapan	25.64	106	P	P	02 56 47.0	+0.7
	comp=Z,231nm,0.8s,comp=Z,7µm						
GULI	GuiLin	25.71	40	⇑P	P	02 56 53.3	+6.4
GULI				S	S	03 01 21.4	+7.1
GULI				pmax	pmax		
	comp=Z,300nm,1.3s						
GULI				LR	LR		
	comp=N,15µm,15.2s						
GULI				LR	LR		
	comp=E,9µm,14.1s						
GULI				LR	LR		
	comp=Z,18µm,16.3s						
LGTI	Lohaghat	25.81	335	*e*P	P	02 56 48.4	+0.7
ABJI	Asem Bagus	25.90	122	P	P	02 56 49.1	+0.4
	comp=Z,780nm,0.8s,comp=Z,8µmcomp=Z,8µm						
PTH	Pithoragarh	25.91	335	*e*P	P	02 56 48.0	-0.9
MYLDM	Lahad Datu	26.09	91	P	P	02 56 50.5	+0.1
MYLDM				IAMs_20	IAMs_20	03 06 13.8	
	comp=Z,22µm,20.0s						
JAGI	Jajag, Banyuwa	26.19	123	P	P	02 56 49.6	-1.8
JAGI				IAmb	IAmb	02 57 24.0	
	comp=Z,153nm,0.7s						
JAGI	Jajag, Banyuwa	26.19	123	P	P	02 56 49.8	-1.5
	comp=Z,222nm,0.9s,comp=Z,3µm						
SONA	Sohna	26.29	328	*e*P	P	02 56 53.0	+1.0
AJM	Ajmer	26.30	322	*e*P	P	02 56 53.6	+1.3
GZH	Guangzhou	26.35	48	P	P	02 56 56.8	+4.1
GZH				S	S	03 01 34.3	+10
GZH				SS	SnSn	03 02 44.6	+19
GZH				pmax	pmax		
	comp=Z,180nm,0.9s						
GZH				LR	LR		
	comp=Z,12µm,14.2s						
GZH				LR	LR		
	comp=Z,9µm,15.1s						
GZH				LR	LR		
	comp=Z,10µm,15.0s						
HKPS	Hong Kong Po S	26.49	51	P	P	02 56 55.1	+1.2
HKPS				IAmb	IAmb	02 56 59.8	
	comp=Z,350nm,1.1s						
HKPS	Hong Kong Po S	26.49	51	P	P	02 56 55.6	+1.6
KUDL	Kundal	26.51	327	*e*P	P	02 56 54.7	+0.6
HKC	Hong Kong Obse	26.53	51	⇑P	P	02 56 56.0	+1.7
NDI	New Delhi	26.57	329	*e*P	P	02 56 55.0	+0.4
KHET	Khetri	26.83	326	*e*P	P	02 56 58.2	+1.2
CD2	Chengdu	26.87	22	P	P	02 56 57.3	-0.1
CD2				S	S	03 01 33.3	+0.7
CD2				sS	sS	03 01 44.3	+1.1
CD2				pmax	pmax		
	comp=Z,820nm,0.8s						
CD2				pmax	pmax		
	comp=Z,720nm,7.2s						
CD2				LR	LR		
	comp=Z,10µm,13.3s						
CD2				LR	LR		
	comp=Z,8µm,11.6s						
CD2				LR	LR		
	comp=Z,5µm,12.0s						
SRBI	Singaraja	26.88	121	P	P	02 56 56.8	-0.7
	comp=Z,760nm,1.1s,comp=Z,8µm						
DNP	Denpasar	27.18	123	P	P	02 56 59.9	-0.4
	comp=Z,2µm,0.6s,comp=Z,92µm						
IGBI	Denpasar	27.20	123	P	P	02 57 00.3	-0.2
	comp=Z,148nm,1.1s						
MPSI	Mapaga	28.14	101	P	P	02 57 09.3	+0.4
	comp=Z,215nm,0.9s,comp=Z,2µmcomp=Z,4µm						
LUBP	Lubang	28.52	73	⇓*e*P	P	02 57 14.0	+1.8
SMLA	Simla	28.61	332	*e*P	P	02 57 13.2	+0.3
SMLA				IAmb	IAmb	02 57 30.2	
	comp=Z,300nm,0.9s						
TWSI	Taliwang, Sumb	28.63	121	P	P	02 57 11.1	-2.1
	comp=Z,142nm,0.8s,comp=Z,2µm						
TOLI2	Tolitoli	28.86	99	P	P	02 57 15.6	+0.3
TOLI2	Tolitoli	28.86	99	P	P	02 57 16.2	+0.9
ENH	Enshi	28.93	32	P	P	02 57 15.0	-0.7
ENH				IAmb	IAmb	02 57 55.6	
	comp=Z,228nm,1.0s						
ENH				IAMs_20	IAMs_20	03 10 01.9	
	comp=Z,20µm,18.0s						
ENH	Enshi	28.93	32	P	P	02 57 16.8	+1.0
MACP	Maragondon, Ca	29.08	72	⇑*e*P	P	02 57 19.3	+2.1
BHK	Bhakra	29.20	331	*e*P	P	02 57 19.1	+0.9
SPSI	Sidrap Palu	29.21	109	P	P	02 57 18.1	-0.3
	comp=Z,56nm,0.9s,comp=Z,2µm						
CNSH	ChangSha	29.37	39	⇑P	P	02 57 17.6	-2.0
CNSH				S	S	03 02 08.3	-3.5
CNSH				pmax	pmax		
	comp=Z,59nm,0.8s						
CNSH				LR	LR		
	comp=Z,10µm,14.7s						
CNSH				LR	LR		
	comp=Z,8µm,13.6s						
CNSH				LR	LR		
	comp=Z,10µm,14.4s						
PLAI	Plampang	29.44	120	P	P	02 57 21.5	+1.1
PLAI	Plampang	29.44	120	P	P	02 57 17.4	-3.0
	comp=Z,105nm,0.9s,comp=Z,1µmcomp=Z,3µm						
KAPI	Kappang	29.57	111	P	P	02 57 21.5	-0.1
	comp=Z,22nm,0.5s,baz=275,slow=8.6,SNR=15						
KAPI				S	S	03 02 12.7	-2.6
	comp=Z,11nm,0.2s,baz=237,slow=5.0,SNR=8.4						
KAPI				LR	LR	03 12 19.0	
	comp=Z,12µm,18.0s,baz=294,slow=43						
	comp=Z,22nm,0.5s						
KAPI	Kappang	29.57	111	P	P	02 57 19.3	-2.3
KAPI				IAmb	IAmb	02 57 49.9	
	comp=Z,121nm,0.8s						
KAPI	Kappang	29.57	111	P	P	02 57 22.1	+0.5
KAPI	Kappang	29.57	111	P	P	02 57 21.5	-0.1
KAPI	Kappang	29.57	111	P	P	02 57 20.3	-1.3
KAPI				P	P	02 57 20.3	-1.3
KAPI				P	P	02 57 20.3	-1.3
LQP	Lukban	29.82	72	⇑*e*P	P	02 57 21.6	-2.4
GOMU	GeErMu	29.99	4	P	P	02 57 26.0	+0.5
GOMU				pP	pP	02 57 28.8	-3.1
GOMU				sP	sP	02 57 32.8	-1.8
GOMU				S	S	03 02 30.9	+8.8
GOMU				pmax	pmax		
	comp=Z,11nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,470nm,5.7s						
GOMU				LR	LR		
	comp=Z,5µm,17.4s						
GOMU				LR	LR		
	comp=Z,3µm,17.6s						
GOMU				LR	LR		
	comp=Z,5µm,17.9s						
BKSI	Bulukumba	30.03	112	P	P	02 57 25.3	-0.3
	comp=Z,286nm,0.8s,comp=Z,3µmcomp=Z,4µm						
MRSI	Marisa	30.11	100	P	P	02 57 26.7	+0.3
	comp=Z,160nm,1.2s,comp=Z,2µmcomp=Z,4µm						
CNOP	Candoni, Negro	30.26	81	⇓*e*P	P	02 57 29.5	+1.8
THN	Thein Dam	30.38	331	*e*P	P	02 57 28.5	0.0
RCP	Roxas	30.54	78	⇑*e*P	P	02 57 31.4	+1.2
SNPH	Sibulan	30.81	82	*e*P	P	02 57 34.3	+1.7
LUWI	Luwuk	31.25	102	P	P	02 57 36.2	-0.3
LUWI	Luwuk	31.25	102	P	P	02 57 37.1	+0.6
LUWI	Luwuk	31.25	102	P	P	02 57 36.8	+0.3
	comp=Z,464nm,0.8s,comp=Z,8µm						
TBP	Tagbilaran	31.45	82	⇑*e*P	P	02 57 39.3	+1.1
LZH	Lanzhou	31.62	18	⇓P	P	02 57 38.3	-1.3
LZH				sP	pP	02 57 45.6	-0.5
LZH				sS	sS	03 02 57.1	-0.9
LZH				SS	SnSn	03 04 39.8	+5.6
LZH				pmax	pmax		
	comp=Z,260nm,1.5s						
LZH				pmax	pmax		
	comp=Z,720nm,6.7s						
LZH				LR	LR		
	comp=Z,13µm,15.1s						
LZH				LR	LR		
	comp=Z,12µm,13.4s						
LZH				LR	LR		
	comp=Z,18µm,14.4s						
XAN	Xi'an	31.73	27	P	P	02 57 39.0	-1.5
XAN				pP	pP	02 57 42.9	-4.1
XAN				S	S	03 02 45.0	-3.9
XAN				sS	sS	03 03 00.8	+1.2
XAN				pmax	pmax		
	comp=Z,180nm,0.8s						
XAN				pmax	pmax		
	comp=Z,470nm,5.3s						
XAN				LR	LR		
	comp=Z,15µm,13.7s						
XAN				LR	LR		
	comp=Z,13µm,14.9s						
XAN				LR	LR		
	comp=Z,21µm,14.7s						
WHN	Wuhan	31.90	38	⇑P	P	02 57 42.8	+0.8
WHN				sP	pP	02 57 49.1	+0.6
WHN				S	S	03 02 53.0	+1.5
WHN				pmax	pmax		
	comp=Z,420nm,1.0s						
WHN				pmax	pmax		
	comp=Z,2µm,4.7s						
WHN				LR	LR		
	comp=Z,16µm,13.5s						
WHN				LR	LR		
	comp=Z,33µm,12.3s						
WHN				LR	LR		
	comp=Z,43µm,17.8s						
TWG	Pinlang	32.31	56	P	P	02 57 45.6	-0.1
TWG				IAmb	IAmb	02 58 05.3	
	comp=Z,131nm,0.7s						
TWGBT	Beinan	32.31	56	P	P	02 57 48.7	+3.0
BASI	Baing, Sumba	32.53	120	P	P	02 57 45.8	-1.8
	comp=Z,310nm,1.3s,comp=Z,6µmcomp=Z,3µm						
NIL	Nilore	32.57	330	P	P	02 57 46.8	-1.1
NIL	Nilore	32.57	330	IAMs_20	IAMs_20	03 10 50.6	
	comp=Z,13µm,20.0s						
NIL	Nilore	32.57	330	P	P	02 57 46.8	-1.1
NIL				pmax	pmax		
	comp=Z,1µm,1.3s						
NIL				MLR	MLR		
	comp=Z,13µm,20.0s						
NIL	Nilore	32.57	330	P	P	02 57 47.5	-0.3
SSLB	Suanglung	32.65	55	IAMs_20	IAMs_20	03 12 58.0	
	comp=Z,14µm,18.0s						
YULB	Yu-li	32.75	55	IAMs_20	IAMs_20	03 13 11.7	
	comp=Z,15µm,18.0s						
YULB	Yu-li	32.75	55	P	P	02 57 51.7	+2.2
DAV	Davao City (W)	33.07	87	P	P	02 57 52.0	-0.4
	comp=Z,237nm,0.4s,baz=98,slow=9.3,SNR=1.9						
DAV				S	S	03 03 12.0	+1.9
	comp=Z,98nm,0.3s,baz=226,slow=19,SNR=1.1						
DAV				LR	LR	03 13 17.8	
	comp=Z,8µm,18.5s,baz=238,slow=40						
MMRI	Maumere	33.27	116	IAMs_20	IAMs_20	03 13 25.9	
	comp=Z,16µm,20.0s						
MMRI	Maumere	33.27	116	P	P	02 57 53.0	-1.2
	comp=Z,94nm,1.2s,comp=Z,4µmcomp=Z,2µm						
NACB	Ninganchiao	33.35	54	IAMs_20	IAMs_20	03 11 22.6	
	comp=Z,17µm,20.0s						
TATO	Taipei	33.64	53	IAMs_20	IAMs_20	03 11 39.5	
	comp=Z,23µm,20.0s						
GLSP	General Luna,	33.68	82	⇑*e*P	P	02 57 58.0	+0.2
GTA	Gaotai	33.79	10	⇑P	P	02 57 58.9	+0.3
GTA				pP	sP	02 58 06.4	-1.4
GTA				sP	pwP	02 58 10.6	-0.1
GTA				S	S	03 03 20.3	-0.7
GTA				sS	sS	03 03 31.5	-0.2
GTA				pmax	pmax		
	comp=Z,240nm,0.8s						
GTA				pmax	pmax		
	comp=Z,1µm,5.5s						
GTA				LR	LR		
	comp=Z,3µm,17.8s						
GTA				LR	LR		
	comp=Z,5µm,18.9s						
GTA				LR	LR		
	comp=Z,5µm,17.1s						
LYN	LuoYang	33.85	31	⇑P	P	02 57 58.8	-0.2
LYN				pP	pP	02 58 01.6	-3.9
LYN				PcP	PcP	03 00 39.3	+1.7
LYN				S	S	03 03 20.8	-0.9
LYN				pmax	pmax		
	comp=Z,440nm,1.0s						
LYN				pmax	pmax		
	comp=Z,370nm,5.6s						
LYN				LR	LR		
	comp=Z,14µm,22.6s						
LYN				LR	LR		
	comp=Z,19µm,21.4s						
LYN				LR	LR		
	comp=Z,19µm,18.2s						
BIPH	Bislig	33.85	85	⇑*e*P	P	02 57 59.3	0.0
SANI	Sanana	34.61	103	P	P	02 58 05.3	-0.6
SANI	Sanana	34.61	103	P	P	02 58 05.2	-0.6
	comp=Z,234nm,1.2s,comp=Z,3µmcomp=Z,2µm						
NGCH	Negor - Chabah	35.40	306	P	P	02 58 15.4	+3.0
	SNR=11						
KBL	Kabul	35.49	326	P	P	02 58 13.3	-0.1
KBL				IAmb	IAmb	02 58 27.9	
	comp=Z,268nm,1.1s						
KBL	Kabul	35.49	326	P	P	02 58 13.3	-0.1
KBL				pmax	pmax		
	comp=Z,268nm,1.2s						
KBL	Kabul	35.49	326	P	P	02 58 13.6	+0.2
	SNR=114						
KBL				P	P	02 58 13.6	+0.2
	SNR=114						
JLN	Jalan Bani Buh	35.51	300	P	P	02 58 14.7	+1.2
	SNR=51						
JLN				P	P	02 58 14.7	+1.2
	SNR=51						
SOEI	Soe	35.56	116	P	P	02 58 11.5	-2.6
SOEI				IAmb	IAmb	02 58 54.1	
	comp=Z,224nm,0.8s						
SOEI				IAMs_20	IAMs_20	03 14 33.5	
	comp=Z,16µm,21.0s						
SOEI	Soe	35.56	116	P	P	02 58 15.4	+1.3
SOEI	Soe	35.56	116	P	P	02 58 11.6	-2.5
	comp=Z,306nm,0.9s,comp=Z,2µm						
NJ2	Nanjing	35.76	41	*e*P	P	02 58 16.3	+0.8
NJ2				sP	pP	02 58 22.8	+0.8
NJ2				PP	PP	02 59 39.4	+2.4
NJ2				S	S	03 03 53.1	+2.0
NJ2				sS	sS	03 04 07.1	+5.2
NJ2				PcS	PcS	03 04 33.6	+3.1
NJ2				pmax	pmax		
	comp=Z,74nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,1µm,7.6s						
NJ2				LR	LR		
	comp=Z,13µm,13.7s						
NJ2				LR	LR		
	comp=Z,15µm,14.7s						
NJ2				LR	LR		
	comp=Z,9µm,12.3s						
GIRL	Giralia	35.78	144	P	P	02 58 16.3	+0.6
	baz=36,SNR=3.1						
LBMI	Labuha	35.78	100	P	P	02 58 16.5	+0.5
	comp=Z,170nm,1.2s,comp=Z,5µm						
NLAI	Namlea	35.98	104	P	P	02 58 17.4	-0.3
	comp=Z,321nm,0.7s						
WBK	Wadi Bani Khal	36.06	300	P	P	02 58 19.6	+1.3
	SNR=33						
WBK				P	P	02 58 19.6	+1.3
	SNR=33						
KSH	Kashi	36.33	338	P	P	02 58 18.0	-2.4
KSH				sP	pP	02 58 27.4	+0.4
KSH				PP	PP	02 59 46.0	+2.6
KSH				S	S	03 03 55.8	-4.2
KSH				pmax	pmax		
	comp=Z,66nm,0.5s						
KSH				pmax	pmax		
	comp=Z,880nm,6.5s						
KSH				LR	LR		
	comp=Z,12µm,18.2s						
KSH				LR	LR		
	comp=Z,10µm,19.2s						
KSH				LR	LR		
	comp=Z,12µm,18.6s						
TIY	Taiyuan	36.37	27	⇑P	P	02 58 23.4	+2.7
TIY				pP	sP	02 58 30.0	+0.1
TIY				PP	PP	02 59 48.3	+4.6
TIY				S	S	03 03 58.3	-2.2
TIY				sS	sS	03 04 12.8	+1.5
TIY				pmax	pmax		
	comp=Z,38nm,0.9s						
TIY				pmax	pmax		
	comp=Z,680nm,5.1s						
TIY				LR	LR		
	comp=Z,12µm,19.4s						
TIY				LR	LR		
	comp=Z,18µm,18.2s						
TIY				LR	LR		
	comp=Z,8µm,18.6s						
MHTO	MHTO	36.37	297	P	P	02 58 21.1	+0.2
	SNR=27						
MHTO				P	P	02 58 21.1	+0.2
	SNR=27						
DQM	DQM	36.42	295	P	P	02 58 21.8	+0.4
	SNR=20						
DQM				P	P	02 58 21.8	+0.4
	SNR=20						
WSAR	Wadi Sarin	36.59	301	P	P	02 58 24.1	+1.4
	comp=Z,24nm,0.9s,baz=133,slow=9.7,SNR=28						
WSAR				S	S	03 04 04.6	+0.5
	comp=Z,1.8nm,0.6s,baz=158,slow=12,SNR=1.1						
WSAR				LR	LR	03 13 34.7	
	comp=Z,8µm,18.3s,baz=126,slow=37						

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      comp=Z,24nm,0.9s
WSAR  Wadi Sarin        36.59 301           S       03 04 04.6 +0.5
WSAR  Wadi Sarin        36.59 301    P      P       02 58 24.4 +1.6
      SNR=24
JMDO  Jabal Madar       36.72 300    P      P       02 58 25.1 +1.2
      SNR=20
SSE   Sheshan           36.72  44    P      P       02 58 24.8 +1.1
SSE                                  sP     pP      02 58 28.6 -1.6
SSE                                  PP     PnPn    02 59 46.5 -1.1
SSE                                  S      S       03 04 04.8 -1.1
SSE                                  sS     pS      03 04 14.5 +1.2
SSE                                  pmax   pmax
      comp=Z,40nm,1.0s
SSE                                  pmax   pmax
      comp=Z,630nm,4.3s
SMDO  Samad             37.01 301    P      P       02 58 27.5 +1.0
      SNR=23
SMDO                                 P      P       02 58 27.5 +1.0
      SNR=23
BIDO  Bidbid            37.12 301    P      P       02 58 28.9 +1.6
      SNR=45
BIDO                                 P      P       02 58 28.9 +1.6
      SNR=45
AAI   Ambon             37.15 104    P      P       02 58 27.1 -0.6
      comp=Z,714nm,0.9s,comp=Z,9µm
HNS   HongShan          37.20  30 ⇑P     P       02 58 28.4 +0.7
HNS                                  S      S       03 04 14.0 +0.9
HNS                                  pmax   pmax
      comp=Z,960nm,0.9s
HNS                                  LR     LR
      comp=Z,5µm,16.9s
HNS                                  LR     LR
      comp=Z,14µm,16.7s
HNS                                  LR     LR
      comp=Z,14µm,16.7s
TIA   Tai'an            37.58  34 ⇑P     P       02 58 31.5 +0.5
TIA                                  S      S       03 04 16.6 -2.4
TIA                                  pmax   pmax
      comp=Z,25nm,0.8s
TIA                                  pmax   pmax
      comp=Z,950nm,6.9s
TIA                                  LR     LR
      comp=Z,6µm,21.1s
TIA                                  LR     LR
      comp=Z,9µm,16.2s
TIA                                  LR     LR
      comp=Z,9µm,14.4s
BSY   Bisya             37.63 300    P      P       02 58 33.3 +1.6
      SNR=55
BSY                                  P      P       02 58 33.3 +1.6
      SNR=55
SHAO  Shalim            37.66 292  i P      P       02 58 33.0 +1.1
      SNR=25
SHAO  Shalim            37.66 292    P      P       02 58 33.0 +1.1
      SNR=21
SHAO                                 P      P       02 58 33.0 +1.1
      SNR=21
SHAO                                 P      P       02 58 33.0 +1.1
      SNR=21
TARG  Taragay, Kyrgy    37.70 342    P      P       02 58 32.4  0.0
TARG                                 IAmb   IAmb    02 58 53.3
      comp=Z,186nm,0.8s
TARG  Taragay, Kyrgy    37.70 342    P      P       02 58 32.4  0.0
TARG                                 pmax   pmax
      comp=Z,186nm,0.8s
WMQ   Urumqi            37.73 355 ⇑P     P       02 58 32.8 +0.6
WMQ                                  pP     pP      02 58 39.3 +0.5
WMQ                                  sP     sP      02 58 42.8 +1.3
WMQ                                  PP     PnPn    03 00 06.1 +6.3
WMQ                                  S      S       03 04 19.9 -1.2
WMQ                                  sS     sS      03 04 31.9  0.0
WMQ                                  ScS    ScS     03 08 39.8 -3.8
WMQ                                  pmax   pmax
      comp=Z,63nm,0.9s
WMQ                                  pmax   pmax
      comp=Z,450nm,4.3s
WMQ                                  LR     LR
      comp=Z,9µm,22.3s
WMQ                                  LR     LR
      comp=Z,7µm,20.5s
WMQ                                  LR     LR
      comp=Z,10µm,27.9s
MSAI  Masohi            37.77 104    P      P       02 58 32.6 -0.3
BTO   Baotou            37.80  22  eP       P       02 58 32.6 -0.3
BTO                                  pP     pP      02 58 37.4 -2.0
BTO                                  sP     sP      02 58 41.3 -0.8
BTO                                  PP     PnPn    03 00 03.4 +2.7
BTO                                  PcP    PcP     03 00 48.8 -0.5
BTO                                  S      S       03 04 24.6 +2.3
BTO                                  pmax   pmax
      comp=Z,130nm,0.9s
BTO                                  pmax   pmax
      comp=Z,2µm,4.4s
BTO                                  LR     LR
      comp=Z,17µm,18.4s
BTO                                  LR     LR
      comp=Z,31µm,23.9s
BTO                                  LR     LR
      comp=Z,17µm,23.9s
HOQ   Hoqain            37.84 301    P      P       02 58 34.9 +1.5
      SNR=44
HOQ                                  P      P       02 58 34.9 +1.5
      SNR=44
DMTO  DMTO              38.22 291    P      P       02 58 37.1 +0.5
      SNR=10
DMTO                                 P      P       02 58 37.1 +0.5
      SNR=10
DMTO                                 P      P       02 58 37.1 +0.5
      SNR=10
MBWA  Marble Bar        38.23 136    P      P       02 58 35.9 -0.8
MBWA  Marble Bar        38.23 136    P      P       02 58 36.4 -0.3
MBWA  Marble Bar        38.23 136    P      P       02 58 36.3 -0.4
MBWA                                 P      P       02 58 36.3 -0.4
GAR   Garm              38.26 332    P      P       02 58 35.7 -1.1
JASK  Jask - Hormozg    38.27 305    P      P       02 58 39.9 +3.0
      SNR=14
ARQ   Araqi             38.42 300    P      P       02 58 39.7 +1.4
      SNR=24
ARQ                                  P      P       02 58 39.7 +1.4
      SNR=24
CHGR  Chuyangaron       38.54 330    P      P       02 58 37.8 -1.4
CHGR  Chuyangaron       38.54 330    P      P       02 58 37.8 -1.4
CHGR                                 pmax   pmax
      comp=Z,803nm,1.1s
SHLS  Shalkode          38.55 345⇓eP       P       02 58 37.9 -1.4
      comp=Z,116nm,1.5s,baz=346
SHLS                               eS       S       03 04 33.8 +0.1
      baz=346
SHLS  Shalkode          38.55 345deP       P       02 58 37.8 -1.4
SHLS                               eS       S       03 04 33.8 +0.1
SHLS                                 pmax   pmax
      comp=Z,116nm,1.5s
PSA00 Pilbara Seismi    38.59 136    P      P       02 58 38.9 -0.8
PSA00 Pilbara Seismi    38.59 136    P      P       02 58 39.0 -0.6
PSA00                                IAmb   IAmb    02 58 42.4
      comp=Z,63nm,1.1s
PSA00 Pilbara Seismi    38.59 136    P      P       02 58 39.5 -0.2
HHC   Hu-ho-hao-te      38.61  24  eP       P       02 58 40.1 +0.4
HHC                                  sP     pP      02 58 47.5 +1.2
HHC                                  S      S       03 04 33.5 -1.0
HHC                                  sS     sS      03 04 47.9 +2.5
HHC                                  pmax   pmax
      comp=Z,100nm,1.1s
HHC                                  pmax   pmax
      comp=Z,1µm,4.4s
HHC                                  LR     LR
      comp=Z,15µm,14.1s
HHC                                  LR     LR
      comp=Z,21µm,14.3s
HHC                                  LR     LR
      comp=Z,22µm,14.9s
UZB   Uzynbulak         38.66 344  eP       P       02 58 39.7 -0.5
      baz=344
UZB                                eS       S       03 04 37.2 +1.7
      baz=344
UZB                                eSS      SS      03 07 27.0 +0.8
      baz=344
UZB   Uzynbulak         38.66 344  eP       P       02 58 39.7 -0.5
UZB                                eS       S       03 04 37.1 +1.7
ULHL  Ulahol            38.66 341    P      P       02 58 41.0 +0.7
      SNR=6.7
SOHO  SOHO              38.70 301  i P      P       02 58 42.1 +1.5
      SNR=13
SOHO  SOHO              38.70 301    P      P       02 58 42.0 +1.4
SOHO                                 P      P       02 58 42.0 +1.4
SATY  Saty              38.75 344  eP       P       02 58 39.9 -1.0
      comp=Z,169nm,1.9s,baz=344
SATY                               eS       S       03 04 37.5 +0.8
      baz=344
SATY  Saty              38.75 344  eP       P       02 58 39.8 -1.0
SATY                               eS       S       03 04 37.4 +0.8
SATY                                 pmax   pmax
      comp=Z,169nm,1.9s
ZHN   Zhinishke         38.84 344  eP       P       02 58 41.3 -0.3
      baz=344
ZHN   Zhinishke         38.84 344  eP       P       02 58 41.3 -0.3
RBK   Rabkut            38.87 290    P      P       02 58 43.3 +1.1
      SNR=15
RBK                                  P      P       02 58 43.3 +1.1
      SNR=15
KPKS  Kokpek            39.05 344  eP       P       02 58 42.9 -0.4
      baz=344
KPKS  Kokpek            39.05 344  eP       P       02 58 42.9 -0.4
TNSS  Tian-Shan         39.15 342  eP       P       02 58 44.5 -0.2
      baz=342
TNSS  Tian-Shan         39.15 342  eP       P       02 58 44.4 -0.2
UCH   Uchtor            39.24 339    P      P       02 58 45.7 +0.3
      SNR=103
MDOK  Medeo             39.24 342  eP       P       02 58 44.6 -0.4
      baz=342
MDOK                               eS       S       03 04 44.5 +0.3
      baz=342
MDOK                                 LR     LR      03 15 39.6
      comp=Z,4µm,16.4s,baz=342
MDOK  Medeo             39.24 342  eP       P       02 58 44.6 -0.4
MDOK                               eS       S       03 04 44.4 +0.3
MDOK                                 MLR    MLR
      comp=Z,4µm,16.0s
UOSS  Minazif           39.28 302    P      P       02 58 45.2 -0.3
UOSS  Minazif           39.28 302  i P      P       02 58 46.4 +0.9
      SNR=13
UOSS  Minazif           39.28 302    P      P       02 58 45.8 +0.3
UOSS                                 P      P       02 58 45.8 +0.3
HATD  Hatta, Dubai      39.30 302  i P      P       02 58 47.4 +1.8
      SNR=20
HATD  Hatta, Dubai      39.30 302    P      P       02 58 47.3 +1.7
      SNR=30
HATD                                 P      P       02 58 47.3 +1.7
      SNR=30
ASHO  Ashiyiah          39.31 302  i P      P       02 58 47.6 +1.9
      SNR=13
ASHO  Ashiyiah          39.31 302    P      P       02 58 47.4 +1.7
      SNR=32
ASHO                                 P      P       02 58 47.4 +1.7
      SNR=32
AAA   Alma-Ata          39.32 342  eP       P       02 58 45.6 -0.1
      baz=342
AAA   Alma-Ata          39.32 342  eP       P       02 58 45.5 -0.1
MDH   Madha             39.34 303  i P      P       02 58 46.4 +0.5
      SNR=15
MDH   Madha             39.34 303    P      P       02 58 46.4 +0.5
      SNR=21
MDH                                  P      P       02 58 46.4 +0.5
      SNR=21
ALNE  Al Ain            39.34 301  i P      P       02 58 47.8 +1.8
      SNR=9.2
ALNE  Al Ain            39.34 301    P      P       02 58 47.8 +1.8
      SNR=58
ALNE                                 P      P       02 58 47.8 +1.8
      SNR=58
WHFO  Wadi Hawf         39.36 291    P      P       02 58 46.7 +0.5
      SNR=43
WHFO                                 P      P       02 58 46.7 +0.5
      SNR=43
UMZA  Um Al Zommool     39.39 299    P      P       02 58 46.6 +0.2
UMZA                                 P      P       02 58 46.6 +0.2
AML   Almayashu         39.45 338    P      P       02 58 47.6 +0.5
      SNR=118
KBK   Karagaybulak      39.46 340    P      P       02 58 47.6 +0.7
      SNR=54
MSFE  Esma-Masafi       39.48 303  i P      P       02 58 48.4 +1.2
      SNR=10.0
TKM2  Tokmak 2          39.48 341    P      P       02 58 47.1  0.0
      SNR=50
MASF  Masafi            39.48 303    P      P       02 58 48.6 +1.5
      SNR=28
MASF                                 P      P       02 58 48.6 +1.5
      SNR=28
SIJI  Sorong            39.52  99    P      P       02 58 46.7 -0.9
      comp=Z,86nm,0.8s,baz=306,slow=6.6,SNR=24
SIJI                                 LR     LR      03 17 03.3
      comp=Z,5µm,21.1s,baz=244,slow=39
      comp=Z,86nm,0.8s
BANOM Banah             39.58 304  i P      P       02 58 50.1 +2.1
      SNR=10
BANOM Banah             39.58 304    P      P       02 58 45.1 -2.9
      SNR=9.9
BANOM                                P      P       02 58 45.1 -2.9
      SNR=9.9
AAK   Ala-Archa         39.60 339    P      P       02 58 49.0 +0.9
      SNR=35
AAK   Ala-Archa         39.60 339    P      P       02 58 48.9 +0.8
      comp=Z,48nm,0.8s,baz=172,slow=7.6,SNR=40
AAK                                  S      S       03 04 50.5 +0.8
      comp=Z,4.2nm,0.7s,baz=252,slow=20,SNR=1.5
AAK                                  LR     LR      03 17 05.1
      comp=Z,13µm,21.6s,baz=158,slow=39
      comp=Z,48nm,0.8s
AAK   Ala-Archa         39.60 339    P      P       02 58 48.6 +0.6
AAK                                  IAmb   IAmb    02 59 08.0
      comp=Z,401nm,1.1s
AAK   Ala-Archa         39.60 339    IAMs_20 IAMs_20 03 16 51.7
      comp=Z,13µm,20.0s
AAK   Ala-Archa         39.60 339d iP       P       02 58 49.2 +1.1
AAK                                  pmax   pmax
      comp=Z,150nm,1.3s
AAK                                  MLR    MLR
      comp=Z,13µm,20.0s
AAK   Ala-Archa         39.60 339  i P      P       02 58 49.4 +1.3
      SNR=36
AAK   Ala-Archa         39.60 339    P      P       02 58 48.9 +0.8
AAK                                  P      P       02 58 48.9 +0.8
ABTO  Aybut             39.69 290    P      P       02 58 49.5 +0.5
      SNR=22
ABTO                                 P      P       02 58 49.5 +0.5
      SNR=22
FAQ   Al Faqa, Dubai    39.72 302  i P      P       02 58 50.7 +1.5
      SNR=6.7
FAQ   Al Faqa, Dubai    39.72 302    P      P       02 58 52.0 +2.8
      SNR=14
FAQ                                  P      P       02 58 52.0 +2.8
      SNR=14
NAZ   Nazwa, Dubai      39.75 302  i P      P       02 58 50.9 +1.5
      SNR=7.4
NAZ   Nazwa, Dubai      39.75 302    P      P       02 58 52.0 +2.6
      SNR=12
NAZ                                  P      P       02 58 52.0 +2.6
      SNR=12
SHME  Shamm             39.76 304    P      P       02 58 51.2 +1.8
CHMS  Chumysh           39.83 340    P      P       02 58 50.1 +0.2
      SNR=20
EKS2  Erkin-Say         39.88 339    P      P       02 58 51.0 +0.7
      SNR=33
CHKK  Chushkaly         39.88 343  eP       P       02 58 50.0 -0.2
      baz=343
CHKK  Chushkaly         39.88 343  eP       P       02 58 50.0 -0.2
ASUD  Al Ashush, Dub    39.90 301  i P      P       02 58 52.5 +1.8
      SNR=23
ASUD  Al Ashush, Dub    39.90 301    P      P       02 58 53.2 +2.5
      SNR=38
ASUD                                 P      P       02 58 53.2 +2.5
      SNR=38
JOW   Kunigami          39.93  55    P      P       02 58 51.3 +0.5
      comp=Z,81nm,0.8s,baz=266,slow=6.1,SNR=5.9
JOW                                  S      S       03 04 50.9 -3.8
      comp=Z,36nm,0.9s,baz=303,slow=26,SNR=2.2
      comp=Z,81nm,0.8s
JOW   Kunigami          39.93  55    P      P       02 58 52.2 +1.4
JOW   Kunigami          39.93  55    P      P       02 58 52.4 +1.5
BJT   Baijiatuau        39.96  29    P      P       02 58 51.5 +0.7
BJT                                  IAmb   IAmb    02 58 54.6
      comp=Z,155nm,0.9s
BJT   Baijiatuau        39.96  29    P      P       02 58 52.4 +1.5
BJT   Baijiatuau        39.96  29    P      P       02 58 51.6 +0.7
BJT                                  pmax   pmax
      comp=Z,155nm,0.9s
BJT                                  MLR    MLR
      comp=Z,5µm,20.0s
BJI   Beijing           39.98  29    P      P       02 58 51.8 +0.8
BJI                                  PP     PnPn    03 00 29.3 +2.6
BJI                                  S      S       03 04 59.3 +4.4
BJI                                  pmax   pmax
      comp=Z,130nm,1.1s
BJI                                  LR     LR
      comp=Z,5µm,21.3s
BJI                                  LR     LR
      comp=Z,6µm,22.2s
BJI                                  LR     LR
      comp=Z,4µm,26.5s
KUU   Kurty             40.12 342  eP       P       02 58 50.8 -1.4
      comp=Z,272nm,1.6s,baz=342
KUU                                eS       S       03 04 57.2 +0.2
      baz=342
KUU                                  LR     LR      03 16 36.4
      baz=342
KUU   Kurty             40.12 342  eP       P       02 58 50.7 -1.4
KUU                                eS       S       03 04 57.2 +0.2
KUU                                  pmax   pmax
      comp=Z,272nm,1.6s
USP   Ospenovka         40.16 340    P      P       02 58 52.6 +0.1
      SNR=32
AJN   Ajban             40.17 301  i P      P       02 58 54.1 +1.2
      SNR=13
AJN   Ajban             40.17 301    P      P       02 58 55.2 +2.3
      SNR=19
AJN                                  P      P       02 58 55.2 +2.3
      SNR=19
SGDS  Sogindy           40.27 340  eP       P       02 58 53.2 -0.4
      baz=340
SGDS                               eS       S       03 05 01.2 +1.7
      baz=340
SGDS  Sogindy           40.27 340  eP       P       02 58 53.1 -0.4
SGDS                               eS       S       03 05 01.1 +1.7
TDK   Taldyqorghan      40.55 345  eP       P       02 58 55.6 -0.1
      baz=345
TDK                                  LR     LR      03 15 55.7
      comp=Z,4µm,18.3s,baz=345
TDK   Taldyqorghan      40.55 345  eP       P       02 58 55.6 -0.1
TDK                                  MLR    MLR
      comp=Z,4µm,18.0s
TAS   Tashkent          40.59 333    P      P       02 58 56.8 +0.7
TAS   Tashkent          40.59 333    P      P       02 58 56.8 +0.7
TAS                                  pmax   pmax
      comp=Z,717nm,1.0s
FITZ  Fitzroy Crossi    40.78 127    P      P       02 58 57.3 -0.7
FAKI  Fak Fak           40.90 102    P      P       02 58 58.3 -0.7
FAKI  Fak Fak           40.90 102    P      P       02 58 58.7 -0.3
FAKI  Fak Fak           40.90 102    P      P       02 58 58.5 -0.5
      comp=Z,190nm,1.1s,comp=Z,3µmcomp=Z,2µm
IUG   Iuzhnay           40.93 335  eP       P       02 58 59.1 +0.1
      comp=Z,81nm,0.6s,baz=335
IUG   Iuzhnay           40.93 335  eP       P       02 58 59.1 +0.1
IUG                                  pmax   pmax
      comp=Z,81nm,0.6s
MZR   Muzera            40.95 298  i P      P       02 59 00.8 +1.4
      SNR=24
MZR   Muzera            40.95 298    P      P       02 59 02.0 +2.6
      SNR=52
DZA   Taraz             41.01 336  eP       P       02 58 58.8 -0.9
      baz=336
DZA   Taraz             41.01 336  eP       P       02 58 58.7 -0.9
CHM   Chimkent          41.25 334  eP       P       02 59 01.4 -0.2
      baz=334
CHM                                  LR     LR      03 15 28.6
      baz=334
CHM   Chimkent          41.25 334  eP       P       02 59 01.3 -0.2
MEEK  Meekatharra       41.39 143    P      P       02 59 03.3 +0.4
      baz=42,SNR=47
MEEK  Meekatharra       41.39 143    P      P       02 59 03.6 +0.7
MK31  Makanchi Array    41.40 350    P      P       02 59 02.0 -0.7
MK31                                 IAmb   IAmb    02 59 17.2
      comp=Z,325nm,1.0s
MK31  Makanchi Array    41.40 350d iP       P       02 59 01.9 -0.7
MKAR  Makanchi Array    41.40 350    P      P       02 59 02.0 -0.7
      comp=Z,30nm,0.5s,baz=169,slow=8.8,SNR=312
MKAR                                 S      S       03 04 56.3  -20
      comp=Z,2.7nm,0.7s,baz=90,slow=4.9,SNR=1.7
MKAR                                 ScS    ScS     03 09 03.3 -1.6
      comp=Z,0.5nm,0.8s,baz=0.0,slow=1.5,SNR=1.3
MKAR                                 LR     LR      03 20 20.1
      comp=Z,8µm,19.1s,baz=174,slow=42
MKAR                                 PKPPKP P'P'df  03 31 13.5 -1.2
      comp=Z,0.2nm,0.4s,baz=354,slow=1.4,SNR=4.6
      comp=Z,30nm,0.5s
MKAR  Makanchi Array    41.40 350    P      P       02 59 02.0 -0.7
MAKZ  Makanchi          41.47 349    P      P       02 59 02.8 -0.5
MAKZ                                 IAmb   IAmb    02 59 16.1
      comp=Z,136nm,0.8s
MAKZ  Makanchi          41.47 349    P      P       02 59 02.8 -0.5
MAKZ                                 pmax   pmax
      comp=Z,136nm,0.8s
MAKZ                                 MLR    MLR
      comp=Z,9µm,22.0s
KK31  Karatay Array     41.52 336    P      P       02 59 03.4 -0.3
KK31                                 IAmb   IAmb    02 59 18.4
      comp=Z,221nm,0.8s
KK31  Karatay Array     41.52 336    P      P       02 59 03.4 -0.3
KK31                                 pmax   pmax
      comp=Z,221nm,0.8s
KKAR  Karatay Array     41.52 336    P      P       02 59 03.4 -0.3
KKAR                                 IAmb   IAmb    02 59 18.4
      comp=Z,221nm,0.8s
KKAR  Karatay Array     41.52 336    P      P       02 59 03.5 -0.3
KKAR  Karatay Array     41.52 336    P      P       02 59 03.5 -0.3
ZSN   Zaisan            41.63 352  eP       P       02 59 04.8 +0.2
      baz=352
ZSN   Zaisan            41.63 352  eP       P       02 59 04.8 +0.2
JAM   Amami Oshima      41.66  53    P      P       02 59 06.0 +1.0
GHWR  Ruwais            41.78 299    P      P       02 59 07.8 +1.7
MORW  Morawa            41.82 148    P      P       02 59 07.5 +1.2
      baz=42,SNR=6.0
MORW  Morawa            41.82 148    P      P       02 59 07.4 +1.1
BTLS  Baital            41.88 341  eP       P       02 59 06.1 -0.5
      baz=341
BTLS  Baital            41.88 341  eP       P       02 59 06.0 -0.5
DL2   Dalian            42.01  35    P      P       02 59 08.9 +1.1
DL2                                  sP     pwP     02 59 21.4 +1.3
DL2                                  S      S       03 05 23.4 -1.9
DL2                                  pmax   pmax
      comp=Z,170nm,1.0s
DL2                                  pmax   pmax
      comp=Z,440nm,4.9s
DL2                                  LR     LR
      comp=Z,6µm,14.9s
DL2                                  LR     LR
      comp=Z,5µm,16.4s
DL2                                  LR     LR
      comp=Z,5µm,14.1s
JRN   Qarnain Island    42.12 301    P      P       02 59 10.7 +1.8
KNRA  Kununurra         42.13 121    P      P       02 59 08.1 -0.9
      baz=42,SNR=23
KNRA  Kununurra         42.13 121    P      P       02 59 08.0 -1.1
KNRA                                 IAmb   IAmb    02 59 12.3
      comp=Z,238nm,1.6s
KNRA  Kununurra         42.13 121    P      P       02 59 08.5 -0.5
RKPI  Ransiki, Papua    42.50  99    P      P       02 59 11.9 -0.3
      comp=Z,135nm,0.7s,comp=Z,10µm
MTN   Manton Dam        42.96 116    P      P       02 59 14.5 -1.3
      baz=43,SNR=4.9
MTN   Manton Dam        42.96 116    P      P       02 59 14.5 -1.3
MTN   Manton Dam        42.96 116    P      P       02 59 16.6 +0.8
XLT   XiLinHaoTe        43.00  25⇑iP       P       02 59 17.0 +1.1
XLT                                  pP     pP      02 59 20.4 -2.1
XLT                                  sP     sP      02 59 24.3 -0.8
XLT                                  PP     PP      03 00 56.8 +0.8
XLT                                  S      S       03 05 40.6 +0.7
XLT                                  sS     sS      03 05 51.0 +0.2
XLT                                  SS     SS      03 08 48.8 -3.6
XLT                                  ScS    ScS     03 09 14.5 -0.5
XLT                                  pmax   pmax
      comp=Z,260nm,0.9s
XLT                                  pmax   pmax
      comp=Z,770nm,4.4s
XLT                                  LR     LR
      comp=Z,19µm,19.0s
XLT                                  LR     LR
      comp=Z,9µm,21.0s
SONM  Songino Array     43.24  14    P      P       02 59 18.0 +0.2
      comp=Z,66nm,0.8s,baz=194,slow=8.1,SNR=146
SONM                                 PcP    PcP     03 01 08.2 +1.4
      comp=Z,14nm,0.7s,baz=195,slow=3.8,SNR=1.8
SONM                                 S      S       03 05 30.4  -13
      comp=Z,1.9nm,0.8s,baz=226,slow=5.1,SNR=2.1
SONM                                 ScS    ScS     03 09 13.9 -2.6
      comp=Z,0.3nm,0.5s,baz=307,slow=46,SNR=2.0
SONM                                 LR     LR      03 20 05.9
      comp=Z,10µm,21.9s,baz=194,slow=40
      comp=Z,66nm,0.8s
SONM  Songino Array     43.24  14    P      P       02 59 18.0 +0.2
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SONM	Songino Array	43.24	14	P	P	02 59 18.0	+0.2
SONM						03 01 08.2	
BLDU	Ballidu	43.40	149	P	P	02 59 20.0	+0.9
	baz=44,SNR=7.2						
BLDU	Ballidu	43.40	149	P	P	02 59 20.1	+0.9
ULN	Ulaanbaatar	43.43	14	P	P	02 59 18.9	-0.5
ULN	Ulaanbaatar	43.43	14	*de*P	P	02 59 19.3	-0.1
ULN				pmax	pmax		
	comp=Z,57nm,1.0s						
ULN				MLR	MLR		
	comp=Z,7µm,14.0s						
ULN	Ulaanbaatar	43.43	14	P	P	02 59 19.5	+0.1
DGZ	Jazzator, Alta	43.59	355	*d i*P	P	02 59 21.6	+1.0
DGZ				pmax	pmax		
	comp=Z,158nm,0.8s						
DGZ				MLR	MLR		
	comp=Z,8µm,20.0s						
JSU	Suzuyama	43.68	50	P	P	02 59 21.0	-0.5
JSU	Suzuyama	43.68	50	P	P	02 59 21.2	-0.3
HJU	Haeju	43.90	39	P	P	02 59 24.5	+1.4
HJU				S	S	03 05 52.5	-0.5
HJU				AmB			
	comp=Z,1µm,2.0s						
HJU				AMS	AMS		
	comp=Z,6µm,12.9s						
TJN	Taejon	43.97	42	P	P	02 59 23.5	-0.1
TJN	Taejon	43.97	42	P	P	02 59 23.6	-0.1
TJN	Taejon	43.97	42	*de*P	P	02 59 24.6	+0.9
KDU	Kakadu	44.10	115	P	P	02 59 24.5	-0.5
	baz=44,SNR=22						
KDU	Kakadu	44.10	115	P	P	02 59 23.7	-1.3
INCN	Inchon	44.13	40	P	P	02 59 25.5	+0.5
INCN	Inchon	44.13	40	IAMs_20	IAMs_20	03 20 27.1	
	comp=Z,12µm,18.0s						
INCN	Inchon	44.13	40	P	P	02 59 26.4	+1.4
INCN	Inchon	44.13	40	P	P	02 59 25.5	+0.5
INCN				pmax	pmax		
	comp=Z,91nm,1.0s						
INCN				MLR	MLR		
	comp=Z,12µm,18.0s						
INCN	Inchon	44.13	40	P	P	02 59 26.5	+1.5
INCN				P	P	02 59 26.5	+1.5
MUN	Mundaring	44.25	150	P	P	02 59 27.6	+1.7
	baz=44,SNR=8.5						
MUN	Mundaring	44.25	150	P	P	02 59 27.3	+1.4
GEYT	Alibeck	44.30	321	P	P	02 59 27.0	+0.6
	comp=Z,58nm,0.9s,baz=148,slow=8.7,SNR=95						
GEYT				S	S	03 05 57.8	-1.2
	comp=Z,1.8nm,0.7s,baz=184,slow=10,SNR=1.5						
GEYT				LR	LR	03 20 13.8	
	comp=Z,10µm,21.2s,baz=148,slow=39						
	comp=Z,58nm,0.9s						
GEYT	Alibeck	44.30	321	P	P	02 59 27.0	+0.6
JTU	Tsushima	44.37	45	P	P	02 59 27.3	+0.4
JTU				IAmb	IAmb	02 59 30.1	
	comp=Z,140nm,1.0s						
JTU	Tsushima	44.37	45	P	P	02 59 28.3	+1.4
JTU	Tsushima	44.37	45	P	P	02 59 28.0	+1.1
SAKB	Bahrain	44.44	301	P	P	02 59 27.9	+0.3
SUJ	Sinuiju	44.46	36	P	P	02 59 28.6	+1.0
SUJ				S	S	03 06 01.0	-0.1
SUJ				AmB			
	comp=Z,374nm,2.0s						
SUJ				AMS	AMS		
	comp=Z,9µm,19.5s						
SRPI	Serui, Papua	44.59	99	P	P	02 59 29.1	+0.1
	comp=Z,182nm,0.9s						
KLBR	Kellerberrin	44.72	149	P	P	02 59 30.8	+1.1
	baz=45,SNR=12						
KLBR	Kellerberrin	44.72	149	P	P	02 59 31.0	+1.3
JNU	Nakatsue	44.75	48	P	P	02 59 29.6	-0.4
	comp=Z,75nm,0.9s,baz=286,slow=1.6,SNR=17						
	comp=Z,75nm,0.9s						
JNU	Nakatsue	44.75	48	P	P	02 59 29.4	-0.7
JNU				IAmb	IAmb	02 59 53.9	
	comp=Z,193nm,1.0s						
JNU	Nakatsue	44.75	48	P	P	02 59 30.8	+0.8
JNU	Nakatsue	44.75	48	P	P	02 59 30.5	+0.5
KSAR	Wonju Array Be	44.92	41	P	P	02 59 30.4	-0.9
KSAR	Wonju Array Be	44.92	41	P	P	02 59 30.4	-0.9
KS19	Wonju Array Si	44.94	41	P	P	02 59 30.7	-0.7
KSRS	Korea Array	44.95	41	P	P	02 59 30.6	-0.9
	comp=Z,17nm,1.0s,baz=222,slow=8.4,SNR=27						
KSRS				ScP	ScP	03 05 05.7	+2.2
	comp=Z,5.4nm,1.1s,baz=234,slow=3.9,SNR=5.0						
	comp=Z,17nm,1.0s						
KSRS	Korea Array	44.95	41	P	P	02 59 30.6	-0.9
ZAK	Zakamensk	45.03	10	*e*P	P	02 59 32.8	+0.7
ZAK				pmax	pmax		
	comp=Z,84nm,1.2s						
SNY	Shenyang	45.10	33	⇑P	P	02 59 33.0	+0.4
SNY				S	S	03 06 12.5	+2.2
SNY				pmax	pmax		
	comp=Z,240nm,1.1s						
SNY				pmax	pmax		
	comp=Z,820nm,5.1s						
SNY				LR	LR		
	comp=Z,8µm,14.9s						
SNY				LR	LR		
	comp=Z,10µm,14.3s						
SNY				LR	LR		
	comp=Z,10µm,15.7s						
SEM	Semipalatinsk	45.24	349	*e*P	P	02 59 33.8	-0.2
	baz=349						
SEM				LR	LR	03 19 21.7	
	comp=Z,4µm,19.8s,baz=349						
SEM	Semipalatinsk	45.24	349	*e*P	P	02 59 33.7	-0.2
SEM				MLR	MLR		
	comp=Z,4µm,20.0s						
NWAO	Narrogin (SRO)	45.52	150	P	P	02 59 36.5	+0.5
	comp=Z,54nm,0.9s,baz=301,slow=6.9,SNR=18						
NWAO				LR	LR	03 17 50.1	
	comp=Z,3µm,18.2s,baz=336,slow=35						
	comp=Z,54nm,0.9s						
NWAO	Narrogin (SRO)	45.52	150	P	P	02 59 38.5	+2.4
	baz=46,SNR=13						
NWAO				P	P	02 59 38.5	+2.4
	baz=46,SNR=13						
NWAO	Narrogin (SRO)	45.52	150	P	P	02 59 35.9	-0.2
NWAO	Narrogin (SRO)	45.52	150	P	P	02 59 37.7	+1.6
NWAO	Narrogin (SRO)	45.52	150	P	P	02 59 36.6	+0.5
NWAO	Narrogin (SRO)	45.52	150	P	P	02 59 37.3	+1.2
H01W3	Cape Leeuwin H	45.72	155	T	T	03 47 16.6	
	baz=331,slow=76,SNR=18						
H01W2	Cape Leeuwin H	45.73	155	T	T	03 47 20.4	
	baz=331,slow=76,SNR=18						
H01W1	Cape Leeuwin H	45.74	155	T	T	03 47 22.1	
	baz=331,slow=76,SNR=23						
KURBB	Kurchatov Arra	45.79	348	P	P	02 59 37.7	-0.3
	comp=Z,36nm,0.7s,baz=172,slow=7.0,SNR=239						
KURBB				PcP	PcP	03 01 15.1	-0.2
	comp=Z,17nm,0.8s,baz=142,slow=3.5,SNR=0.9						
KURBB				S	S	03 06 16.3	-3.8
	comp=Z,1.1nm,0.7s,baz=92,slow=22,SNR=2.0						
KURBB				LR	LR	03 22 14.5	
	comp=Z,13µm,21.9s,baz=160,slow=41						
	comp=Z,36nm,0.7s						
KURK	Kurchatov	45.86	348	P	P	02 59 38.1	-0.4
KURK	Kurchatov	45.86	348	IAMs_20	IAMs_20	03 22 04.1	
	comp=Z,12µm,22.0s						
KURK	Kurchatov	45.86	348	*d i*P	P	02 59 37.8	-0.7
KURK				pmax	pmax		
	comp=Z,163nm,1.7s						
KURK				MLR	MLR		
	comp=Z,14µm,24.0s						
KURK	Kurchatov	45.86	348	P	P	02 59 38.7	+0.2
KURK				P	P	02 59 38.7	+0.2
MOY	Mondy	45.93	8	*e*P	P	02 59 40.8	+1.6
MOY				pmax	pmax		
	comp=Z,178nm,1.4s						
HHU	Hamhung	46.16	38	P	P	02 59 43.0	+2.0
HHU				S	S	03 06 24.4	-1.2
HHU				AmB			
	comp=Z,564nm,2.1s						
SBV	Sambava	46.37	245	P	P	02 59 44.8	+1.7
SBV	Sambava	46.37	245	P	P	02 59 43.9	+0.8
SBV	Sambava	46.37	245	*e*P	P	02 59 43.5	+0.4
BRZS	Berezniki	46.69	343	*e*P	P	02 59 44.4	-0.7
	comp=Z,38nm,1.3s,baz=343						
BRZS	Berezniki	46.69	343	*e*P	P	02 59 44.3	-0.7
BRZS				pmax	pmax		
	comp=Z,38nm,1.3s						
WRKA	Warakurna	46.77	133	P	P	02 59 46.6	+0.4
	baz=47,SNR=42						
WRKA	Warakurna	46.77	133	P	P	02 59 46.6	+0.4
KMBL	Kambalda	46.81	145	P	P	02 59 46.9	+0.7
	baz=47,SNR=20						
KMBL	Kambalda	46.81	145	P	P	02 59 47.5	+1.3
IRK	Irkutsk	46.99	10	*e*P	P	02 59 49.7	+2.3
IRK				*e*S	S	03 06 40.0	+2.7
IRK				pmax	pmax		
	comp=Z,209nm,2.1s						
SMPI	Sarmi	47.04	98	P	P	02 59 48.2	-0.2
	comp=Z,184nm,1.7s,comp=Z,11µm						
JMN	Monobe	47.26	49	P	P	02 59 49.5	-0.4
JMN	Monobe	47.26	49	P	P	02 59 52.3	+2.5
JMN	Monobe	47.26	49	P	P	02 59 52.1	+2.3
JHS	Saijyo	47.27	47	P	P	02 59 47.4	-2.4
JHS	Saijyo	47.27	47	P	P	02 59 51.0	+1.1
JHS	Saijyo	47.27	47	P	P	02 59 47.4	-2.4
CN2	Changchun	47.45	33	⇑P	P	02 59 51.5	+0.4
CN2				sP	pP	02 59 57.0	-0.8
CN2				S	S	03 06 44.9	+0.9
CN2				pmax	pmax		
	comp=Z,600nm,0.6s						
CN2				pmax	pmax		
	comp=Z,700nm,6.0s						
CN2				LR	LR		
	comp=Z,7µm,20.0s						
CN2				LR	LR		
	comp=Z,6µm,20.0s						
CN2				LR	LR		
	comp=Z,4µm,21.0s						
AUALB	St Joseph's Co	47.52	151	P	P	02 59 53.1	+1.4
JAD	Aida	48.01	48	P	P	02 59 57.1	+1.5
ZAA0	Zalesovo Array	48.04	354	P	P	02 59 55.6	+0.2
ZALV	Zalesovo Beam	48.04	354	P	P	02 59 55.1	-0.4
	comp=Z,53nm,0.5s,baz=175,slow=7.2,SNR=198						
ZALV				PcP	PcP	03 01 23.2	+0.1
	comp=Z,27nm,0.7s,baz=179,slow=5.0,SNR=0.6						
ZALV				S	S	03 06 48.2	-3.8
	comp=Z,1.0nm,0.6s,baz=326,slow=23,SNR=1.2						
ZALV				LR	LR	03 24 26.9	
	comp=Z,7µm,19.9s,baz=180,slow=42						
ZALV				PKPPKP	P'P'df	03 31 04.4	-2.0
	comp=Z,1.7nm,0.7s,baz=338,slow=3.4,SNR=4.7						
	comp=Z,53nm,0.5s						
ZALV	Zalesovo Beam	48.04	354	P	P	02 59 55.4	0.0
ZALV	Zalesovo Beam	48.04	354	*i* P	P	02 59 55.0	-0.4
ZALV				pmax	pmax		
	comp=Z,53nm,0.5s						
RAYN	Ar Rayn	48.16	296	P	P	02 59 56.9	-0.1
RAYN				IAmb	IAmb	03 00 11.2	
	comp=Z,88nm,0.7s						
RAYN	Ar Rayn	48.16	296	IAMs_20	IAMs_20	03 19 35.8	
	comp=Z,12µm,20.0s						
RAYN	Ar Rayn	48.16	296	P	P	02 59 57.5	+0.5
RAYN	Ar Rayn	48.16	296	*i* P	P	02 59 57.7	+0.7
	SNR=12						
RAYN	Ar Rayn	48.16	296	P	P	02 59 57.7	+0.7
GENI	Genyem	48.58	99	P	P	03 00 01.6	+1.3
GENI	Genyem	48.58	99	P	P	02 59 59.9	-0.4
	comp=Z,110nm,0.8s,comp=Z,2µm						
WB0	Warramunga Arr	48.77	123	P	P	03 00 01.5	-0.2
WRA	Warramunga Arr	48.81	123	P	P	03 00 01.9	-0.1
	comp=Z,136nm,0.8s,baz=302,slow=8.9,SNR=231						
WRA				PP	PP	03 01 48.2	-7.2
	comp=Z,14nm,0.8s,baz=293,slow=8.2,SNR=1.2						
WRA				S	S	03 07 00.6	-3.4
	comp=Z,9.2nm,1.2s,baz=293,slow=16,SNR=11						
WRA				LR	LR	03 24 16.0	
	comp=Z,4µm,18.2s,baz=296,slow=41						
WRA				PKPPKP	P'P'df	03 31 06.2	+0.5
	comp=Z,0.7nm,0.8s,baz=149,slow=1.6,SNR=2.8						
WRA				P4KPbc		03 37 40.1	
	comp=Z,0.8nm,0.7s,baz=312,slow=3.4,SNR=9.1						
	comp=Z,136nm,0.8s						
WRA	Warramunga Arr	48.81	123	P	P	03 00 01.8	-0.2
WRA	Warramunga Arr	48.81	123	P	P	03 00 01.9	-0.1
HIA	Hailar	48.81	24	P	P	03 00 02.3	+0.7
HIA				IAmb	IAmb	03 00 21.2	
	comp=Z,106nm,0.8s						
HIA	Hailar	48.81	24	IAMs_20	IAMs_20	03 21 42.1	
	comp=Z,8µm,18.0s						
HIA	Hailar	48.81	24	P	P	03 00 03.3	+1.7
HIA	Hailar	48.81	24	P	P	03 00 02.3	+0.7
HIA				pmax	pmax		
	comp=Z,106nm,0.8s						
HIA				MLR	MLR		
	comp=Z,8µm,18.0s						
WRAB	Tennant Creek	48.81	123	P	P	03 00 01.3	-0.7
WRAB	Tennant Creek	48.81	123	P	P	03 00 02.1	+0.1
WRAB	Tennant Creek	48.81	123	*d i*P	P	03 00 01.9	-0.1
WRAB				pmax	pmax		
	comp=Z,557nm,1.7s						
WRAB				MLR	MLR		
	comp=Z,6µm,20.0s						
WB2	Warramunga Arr	48.82	123	P	P	03 00 01.8	-0.3
CIT	Chita	48.98	17	*e*P	P	03 00 04.4	+1.6
CIT				*e*		03 00 07.2	
CIT				*e*		03 00 13.6	
CIT				*e*		03 01 24.0	
CIT				*e*		03 01 56.6	
CIT				pmax	pmax		
	comp=Z,189nm,1.6s						
JWT	Wachi	49.06	48	P	P	03 00 04.5	+0.7
ATD	Arta Tunnel	49.10	280	LR	LR	03 19 27.9	
	comp=Z,137nm,18.1s,baz=94,slow=34						
ATD	Arta Tunnel	49.10	280	P	P	03 00 03.9	-0.5
ATD	Arta Tunnel	49.10	280	*e*P	P	03 00 08.8	+4.4
ATD	Arta Tunnel	49.10	280	P	P	03 00 06.8	+2.4
	SNR=7.9						
BNX	BinXian	49.78	32	⇓P	P	03 00 08.9	-0.1
BNX				PP	PP	03 02 04.5	+0.7
BNX				S	S	03 07 17.0	+0.2
BNX				sS	sS	03 07 26.4	-1.5
BNX				pmax	pmax		
	comp=Z,61nm,0.6s						
BNX				pmax	pmax		
	comp=Z,600nm,6.1s						
BNX				LR	LR		
	comp=Z,3µm,14.4s						
BNX				LR	LR		
	comp=Z,7µm,16.7s						
BNX				LR	LR		
	comp=Z,4µm,19.5s						
BVAR	Borovoye Array	50.05	343	P	P	03 00 09.8	-1.0
	comp=Z,49nm,0.6s,baz=144,slow=8.9,SNR=161						
BVAR				S	S	03 07 12.2	-8.2
	comp=Z,0.6nm,0.5s,baz=232,slow=41,SNR=0.8						
BVAR				LR	LR	03 22 17.6	
	comp=Z,11µm,21.9s,baz=155,slow=37						
	comp=Z,49nm,0.6s						
BVAR	Borovoye Array	50.05	343	P	P	03 00 09.9	-1.0
BRVK	Borovoye	50.11	343	P	P	03 00 10.4	-0.9
BRVK				IAmb	IAmb	03 00 24.4	
	comp=Z,204nm,0.9s						
BRVK	Borovoye	50.11	343	IAMs_20	IAMs_20	03 22 06.6	
	comp=Z,10µm,21.0s						
BRVK	Borovoye	50.11	343	*d i*P	P	03 00 10.0	-1.4
BRVK				MLR	MLR		
	comp=Z,10µm,20.0s						
BRVK	Borovoye	50.11	343	P	P	03 00 10.8	-0.6
FORT	Forrest	50.20	139	P	P	03 00 13.3	+1.0
	baz=50,SNR=81						
FORT	Forrest	50.20	139	P	P	03 00 13.6	+1.3
MDJ	Mudanjiang	50.25	34	P	P	03 00 13.6	+1.1
MDJ				pP	pP	03 00 15.0	-4.3
MDJ				sP	sP	03 00 19.3	-2.6
MDJ				PP	PP	03 02 09.1	+1.0
MDJ				PcS	PcS	03 05 25.6	-2.7
MDJ				S	S	03 07 27.4	+4.0
MDJ				sS	sS	03 07 35.6	+1.2
MDJ				pmax	pmax		
	comp=Z,120nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,640nm,3.6s						
MDJ				LR	LR		
	comp=Z,3µm,13.5s						
MDJ				LR	LR		
	comp=Z,8µm,17.2s						
MDJ				LR	LR		
	comp=Z,8µm,17.2s						
MDJ	Mudanjiang	50.25	34	P	P	03 00 13.2	+0.6
MDJ				IAmb	IAmb	03 00 16.8	
	comp=Z,284nm,1.2s						
MDJ				IAMs_20	IAMs_20	03 23 47.0	
	comp=Z,6µm,18.0s						
MDJ	Mudanjiang	50.25	34	P	P	03 00 14.3	+1.8
AS31	Alice Springs	50.27	128	P	P	03 00 13.0	-0.1
ASAR	Alice Springs	50.27	128	P	P	03 00 13.2	+0.1
	comp=Z,84nm,0.7s,baz=299,slow=7.5,SNR=124						
ASAR				S	S	03 07 22.2	-2.1
	comp=Z,1.4nm,0.8s,baz=292,slow=14,SNR=1.9						
ASAR				LR	LR	03 23 10.8	
	comp=Z,6µm,20.1s,baz=309,slow=38						
ASAR				PKP2bc		03 31 27.2	
	comp=Z,1.4nm,1.0s,baz=129,slow=3.8,SNR=4.2						
ASAR				P4KPbc		03 37 45.6	
	comp=Z,0.6nm,0.8s,baz=290,slow=4.3,SNR=4.6						
	comp=Z,84nm,0.7s						
ASAR	Alice Springs	50.27	128	P	P	03 00 13.2	+0.1
INU	Inuyama	50.29	48	P	P	03 00 12.6	-0.4
INU				IAmb	IAmb	03 00 32.1	
	comp=Z,92nm,0.8s						
INU				IAMs_20	IAMs_20	03 20 42.3	
	comp=Z,5µm,21.0s						
INU	Inuyama	50.29	48	P	P	03 00 13.5	+0.5
AS01	Alice Springs	50.31	128	P	P	03 00 13.5	+0.1
JGF	Kuroka	50.65	48	P	P	03 00 16.3	+0.5
JGF	Kuroka	50.65	48	P	P	03 00 15.0	-0.8
OPO	Ambohidratompo	50.81	240	P	P	03 00 18.6	+1.2
	comp=Z,28nm,0.6s,baz=53,slow=4.4,SNR=31						
	comp=Z,28nm,0.6s						
JGN	Niukaw	50.87	47	P	P	03 00 17.6	+0.1
ABKAR	Akbulak array	50.89	333	P	P	03 00 17.0	-0.3
ABKAR	Akbulak array	50.89	333	P	P	03 00 16.6	-0.7
ABKAR				IAmb	IAmb	03 00 30.5	
	comp=Z,274nm,0.7s						
ABPO	Ambohimpanom	50.96	240	P	P	03 00 18.7	+0.1
ABPO				IAmb	IAmb	03 00 32.5	
	comp=Z,109nm,1.1s						
ABPO	Ambohimpanom	50.96	240	P	P	03 00 18.7	+0.1
ABPO				pmax	pmax		
	comp=Z,109nm,1.1s						
ABPO				MLR	MLR		
	comp=Z,3µm,19.0s						
ABPO	Ambohimpanom	50.96	240	*e*P	P	03 00 19.4	+0.8
ABPO				IAmb	IAmb	03 00 32.0	
	comp=Z,107nm,1.1s						
USA0B	Ussuriysk Arra	51.37	36	P	P	03 00 21.3	+0.3
USA0B	Ussuriysk Arra	51.37	36	*de*P	P	03 00 21.1	+0.1
USRK	Ussuriysk Ar.	51.37	36	P	P	03 00 21.4	+0.4
	comp=Z,37nm,0.8s,baz=244,slow=8.4,SNR=35						
USRK				S	S	03 07 38.8	-0.1
	comp=Z,0.9nm,0.3s,baz=357,slow=32,SNR=4.2						
	comp=Z,37nm,0.8s						
USRK	Ussuriysk Ar.	51.37	36	P	P	03 00 21.1	+0.2
USRK	Ussuriysk Ar.	51.37	36	P	P	03 00 21.4	+0.4
MJB9	Matsu-Tunnel	51.66	48	P	P	03 00 23.7	+0.3
MAJO	Matsushiro	51.66	48	P	P	03 00 22.7	-0.7
MAJO	Matsushiro	51.66	48	P	P	03 00 24.9	+1.5
MAJO	Matsushiro	51.66	48	⇓*e*P	P	03 00 23.8	+0.4
MAJO				pmax	pmax		
	comp=Z,33nm,0.8s						
MAJO				MLR	MLR		
	comp=Z,5µm,18.0s						
MAT	Matsushiro	51.66	48	P	P	03 00 23.1	-0.3
MJAR	Matsushiro Arr	51.66	48	P	P	03 00 23.7	+0.3
	comp=Z,20nm,0.8s,baz=248,slow=8.0,SNR=28						
MJAR				PcP	PcP	03 01 38.2	+1.4
	comp=Z,17nm,0.7s,baz=228,slow=3.2,SNR=5.2						
MJAR				S	S	03 07 42.6	-0.7
	comp=Z,0.7nm,0.5s,baz=173,slow=20,SNR=1.8						
	comp=Z,20nm,0.8s						
MJAR	Matsushiro Arr	51.66	48	P	P	03 00 23.7	+0.3
MJAR						03 01 38.2	
JOD2	Odawara 2	51.80	49	P	P	03 00 23.9	-0.6
ANKE	Ethiopia-Afar	52.14	277	*e*P	P	03 00 30.2	+2.5
ANKE	Ethiopia-Afar	52.14	277	*e*P	P	03 00 34.4	+6.7
GUMO	Guam	52.23	78	P	P	03 00 27.4	-0.5
	comp=Z,14nm,0.3s,baz=279,slow=1.9,SNR=4.4						
GUMO				LR	LR	03 20 47.5	
	comp=Z,2µm,21.5s,baz=254,slow=34						
	comp=Z,14nm,0.3s						
GUMO	Guam	52.23	78	P	P	03 00 27.4	-0.5
DESE	Dese	52.24	279	*e*P	P	03 00 36.8	+8.3
JSD	Sado	52.33	46	P	P	03 00 28.3	0.0
JSD				IAmb	IAmb	03 00 30.7	
	comp=Z,126nm,0.9s						
JSD	Sado	52.33	46	P	P	03 00 29.7	+1.4
VOI	Vohitsoka	52.58	237	P	P	03 00 30.1	-0.4
VOI	Vohitsoka	52.58	237	P	P	03 00 32.7	+2.1
VOI	Vohitsoka	52.58	237	*e*P	P	03 00 32.5	+1.9
AKTO	Aktyubinsk	52.61	333	P	P	03 00 29.4	-0.7
	comp=Z,22nm,0.6s,baz=131,slow=6.5,SNR=66						
AKTO				LR	LR	03 25 10.5	
	comp=Z,6µm,20.5s,baz=142,slow=39						
	comp=Z,22nm,0.6s						
AKTO	Aktyubinsk	52.61	333	P	P	03 00 29.5	-0.7
HEH	HeiHe	52.86	28	*e*P	P	03 00 31.8	-0.2
HEH				PP	PP	03 02 29.6	-2.0
HEH				S	S	03 07 55.0	-4.2
HEH				SS	SS	03 11 33.3	-5.0
HEH				pmax	pmax		
	comp=Z,100nm,0.9s						
HEH				pmax	pmax		
	comp=Z,950nm,8.5s						
HEH				LR	LR		
	comp=Z,3µm,15.9s						
HEH				LR	LR		
	comp=Z,5µm,17.9s						
HEH				LR	LR		
	comp=Z,11µm,17.0s						
AKT	Akhty	52.95	319	⇓*i*P	P	03 00 32.9	-0.1
AKT				*e*		03 01 41.1	
AKT				*e*		03 02 32.8	
AKT				pmax	pmax		
	comp=Z,283nm,1.0s						
AAE	Adis Abeba	53.10	277	*e*P	P	03 00 43.3	+8.5
FURI	Furi	53.19	276	IAMs_20	IAMs_20	03 18 52.3	
	comp=Z,7µm,21.0s						
FURI	Furi	53.19	276	*e*P	P	03 00 44.3	+8.8
QIS	Mount Isa	53.52	121	P	P	03 00 37.2	-0.1
	baz=54,SNR=71						
QIS	Mount Isa	53.52	121	P	P	03 00 37.2	-0.1
DILA	Dilla	53.66	273	*e*P	P	03 00 46.1	+7.3
OOD	Oodnadatta	53.79	131	P	P	03 00 39.2	0.0
MAK	Makhachkala	53.82	320	*e*P	P	03 00 36.4	-2.8
MAK				*e*S	S	03 08 09.3	-3.1
MAK				pmax	pmax		
	comp=Z,310nm,1.4s						
MULG	Mulgathing	53.98	135	P	P	03 00 40.7	+0.2
JMM	Marumori	54.08	47	P	P	03 00 40.7	-0.5
JMM				IAmb	IAmb	03 00 54.6	
	comp=Z,121nm,0.8s						
JMM	Marumori	54.08	47	P	P	03 00 41.5	+0.3
BOD	Bodaibo	54.24	14	*e*P	P	03 00 42.7	+0.7
BOD				pmax	pmax		
	comp=Z,248nm,1.2s						
KLR	Kul'dur	54.28	31	P	P	03 00 42.1	-0.4
	comp=Z,34nm,0.8s,baz=248,slow=8.4,SNR=57						
KLR				S	S	03 08 16.8	-1.8
	comp=Z,1.5nm,0.9s,baz=211,slow=6.4,SNR=0.3						
	comp=Z,34nm,0.8s						
KLR	Kul'dur	54.28	31	*d i*P	P	03 00 43.3	+0.8
KLR				pmax	pmax		
	comp=Z,123nm,1.7s						
KLR				MLR	MLR		
	comp=Z,6µm,14.0s						
COEN	Coen	54.30	112	P	P	03 00 44.0	+0.8
	baz=54,SNR=6.5						
COEN	Coen	54.30	112	P	P	03 00 42.2	-0.9
COEN	Coen	54.30	112	P	P	03 00 42.8	-0.3
GNI	Garni	54.36	316	LR	LR	03 27 01.5	
	comp=Z,4µm,20.1s,baz=116,slow=40						
GNI	Garni	54.36	316	P	P	03 00 43.2	-0.1
GNI	Garni	54.36	316	*d i*P	P	03 00 43.5	+0.2
GNI				pmax	pmax		
	comp=Z,98nm,1.3s						
GNI				MLR	MLR		
	comp=Z,5µm,24.0s						
GNI	Garni	54.36	316	P	P	03 00 43.6	+0.2
GNI	Garni	54.36	316	P	P	03 00 43.7	+0.3
TEY	Ternei	54.57	37	*e*P	P	03 00 43.9	-0.7
TEY				*e*		03 08 21.4	
GEVA	Gevas	54.80	313	P	P	03 00 46.3	-0.3
KIBK	Kibwezi	54.82	263	P	P	03 00 47.1	0.0
GROC	Groznyy	55.03	320	*e*P	P	03 00 47.8	-0.2
GROC				*e*		03 01 52.0	
GROC				*e*S	S	03 08 28.4	-0.4
GROC				pmax	pmax		
	comp=Z,418nm,1.4s						
JOM	Ohasama	55.08	45	P	P	03 00 48.9	+0.5
ZEA	Zeya	55.26	24	*e*P	P	03 00 49.9	+0.4

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ZEA                             eS       S         03 08 33.6 +2.1
ZEA                             e                  03 08 52.2
ZEA                              pmax    pmax
      comp=E,20nm,0.9s
ZEA                              pmax    pmax
      comp=N,30nm,1.0s
ZEA                              pmax    pmax
      comp=Z,50nm,0.9s
ZEA                              pmax    pmax
      comp=N,200nm,5.1s
ZEA                              pmax    pmax
      comp=Z,300nm,4.2s
ZEA                              smax    smax
      comp=E,300nm,5.9s
ZEA                              smax    smax
      comp=N,800nm,12.0s
ZEA                              MLR     MLR
      comp=E,2µm,18.0s
ZEA                              MLR     MLR
      comp=N,4µm,17.0s
ZEA                              MLR     MLR
      comp=Z,5µm,18.0s
KMBO  Kilima Mbogo     55.43 264 P       P         03 00 51.6  -0.1
      comp=Z,0.1nm,0.4s,baz=49,slow=24,SNR=8.3
KMBO                             S       S         03 08 30.6  -4.9
      comp=Z,0.1nm,0.4s,baz=231,slow=24,SNR=1.4
KMBO                             LR      LR        03 20 09.9
      comp=Z,49nm,21.0s,baz=83,slow=31
KMBO  Kilima Mbogo     55.43 264 P       P         03 00 51.7 +0.1
KMBO  Kilima Mbogo     55.43 264 P       P         03 00 51.7 +0.1
KMBO                             pmax    pmax
      comp=Z,46nm,0.9s
KMBO  Kilima Mbogo     55.43 264 eP      P         03 00 55.4 +3.7
KMBO  Kilima Mbogo     55.43 264 P       P         03 00 52.6 +1.0
KMBO                             P       P         03 00 52.6 +1.0
KMBO  Kilima Mbogo     55.43 264 eP      P         03 00 51.8 +0.1
KMBO                             IAmb    IAmb      03 01 05.6
      comp=Z,139nm,0.9s
JSH   Shimam           55.58  41 P       P         03 00 52.8 +0.8
GURO  Guroymak-BITLI   55.63 313 P       P         03 00 52.8 +0.2
GURO                             IAmb    IAmb      03 01 08.8
      comp=Z,103nm,0.9s
KARS  Kars             55.71 316 P       P         03 00 53.3 +0.2
KARS  Kars             55.71 316 P       P         03 00 53.3 +0.2
KARS                             pmax    pmax
      comp=Z,438nm,1.2s
AKH   Akhalkalaki      55.75 317 P       P         03 00 53.5 +0.1
AKH   Akhalkalaki      55.75 317 P       P         03 00 53.6 +0.1
AKH                              pmax    pmax
      comp=Z,252nm,0.9s
ZEI   Tsey             56.08 318 eP      P         03 00 54.9  -0.9
ZEI                              pmax    pmax
      comp=Z,161nm,1.0s
ONI   Oni              56.29 318 P       P         03 00 57.5 +0.4
ONI                              IAmb    IAmb      03 01 16.7
      comp=Z,85nm,0.9s
ONI   Oni              56.29 318 P       P         03 00 57.5 +0.4
ONI                              pmax    pmax
      comp=Z,85nm,0.9s
SVE   Sverdlovsk       56.34 340c iP     P         03 00 57.2 +0.1
SVE                             eS       S         03 08 45.4  -0.4
SVE                              pmax    pmax
      comp=Z,857nm,0.9s
SVE                              MLR     MLR
      comp=E,8µm,19.0s
SVE                              MLR     MLR
      comp=Z,10µm,19.0s
SVE                              MLR     MLR
      comp=N,4µm,18.0s
MTSU  Mount Surprise   56.71 116 P       P         03 01 00.9 +0.5
      baz=57,SNR=32
MTSU  Mount Surprise   56.71 116 P       P         03 01 01.0 +0.5
ARU   Arti             56.77 338 P       P         03 00 59.0  -1.3
      comp=N,12nm,0.4s,baz=145,slow=4.6,SNR=41
ARU                              S       S         03 08 47.3  -4.2
      comp=N,3.0nm,0.4s,baz=291,slow=20,SNR=2.0
ARU                              LR      LR        03 28 06.9
      comp=N,11µm,19.6s,baz=141,slow=39
      comp=N,12nm,0.4s
ARU   Arti             56.77 338 P       P         03 00 59.6  -0.7
ARU   Arti             56.77 338c iP     P         03 00 59.4  -0.8
ARU                                                03 01 54.3
ARU                                                03 03 04.6
ARU                              S       S         03 08 54.5 +2.9
ARU                                                03 10 41.2
ARU                              SS      SS        03 12 38.6  -1.2
ARU                              pmax    pmax
      comp=Z,106nm,1.5s
ARU                              MLR     MLR
      comp=Z,9µm,17.0s
LODK  Lodwar           56.78 270 P       P         03 01 00.8  -0.3
LODK  Lodwar           56.78 270 eP      P         03 01 09.9 +8.8
LODK  Lodwar           56.78 270 P       P         03 01 02.0 +0.8
      SNR=9.5
PMG   Port Moresby     56.81 105 S       S         03 08 49.8  -3.5
      comp=Z,3.0nm,0.3s,baz=254,slow=8.2,SNR=0.8
PMG                              LR      LR        03 30 53.1
      comp=Z,2µm,18.2s,baz=251,slow=42
PMG   Port Moresby     56.81 105 P       P         03 01 00.9  -0.3
PMG                              IAmb    IAmb      03 01 04.3
      comp=Z,100nm,0.8s
PMG   Port Moresby     56.81 105 P       P         03 01 01.7 +0.5
PMG   Port Moresby     56.81 105 P       P         03 01 01.6 +0.4
PMG   Port Moresby     56.81 105d iP     P         03 01 01.3 +0.1
PMG                              pmax    pmax
      comp=Z,113nm,0.8s
PMG                              MLR     MLR
      comp=Z,2µm,19.0s
BBOO  Buckleboo        56.82 136 P       P         03 01 01.0   0.0
      baz=57,SNR=56
BBOO  Buckleboo        56.82 136 P       P         03 01 00.8  -0.2
BBOO                             IAmb    IAmb      03 01 03.8
      comp=Z,99nm,0.9s
BBOO  Buckleboo        56.82 136 P       P         03 01 01.3 +0.3
NEY   Neytrino         57.05 318⇓eP      P         03 01 02.1  -0.6
NEY                              MLR     MLR
      comp=Z,2µm,20.0s
LCRK  Leigh Creek      57.07 132 P       P         03 01 02.7  -0.1
KBZ   Khabaz           57.15 319 P       P         03 01 02.9  -0.2
      comp=Z,22nm,1.0s,baz=98,slow=4.8,SNR=25
KBZ                              S       S         03 09 06.7  +10
      comp=Z,1.5nm,0.7s,baz=81,slow=16,SNR=1.6
      comp=Z,22nm,1.0s
KBZ   Khabaz           57.15 319d iP     P         03 01 02.4  -0.7
KBZ                              pmax    pmax
      comp=Z,60nm,1.0s
KBZ                              MLR     MLR
      comp=Z,3µm,19.0s
KOPT  Kop Dagi         57.29 314 P       P         03 01 03.9  -0.7
KVAR  Kislovodsk Arr   57.38 319 P       P         03 01 05.2 +0.3
      comp=Z,9.0nm,1.0s,baz=73,slow=20,SNR=4.5
KVAR                             LR      LR        03 26 40.0
      comp=Z,2µm,19.4s,baz=182,slow=37
      comp=Z,9.0nm,1.0s
KIV   Kislovodsk       57.38 319 ⇓P      P         03 01 03.7  -1.2
KIV   Kislovodsk       57.38 319 P       P         03 01 04.6  -0.4
KIV   Kislovodsk       57.38 319 eP      P         03 01 04.1  -0.8
KIV                             e                  03 03 10.8
KIV                             eS       S         03 09 01.3 +1.0
KIV                             eSS      SS        03 12 52.4 +2.3
KIV                              pmax    pmax
      comp=Z,140nm,4.4s
KIV                              pmax    pmax
      comp=Z,104nm,1.0s
KIV                              MLR     MLR
      comp=Z,2µm,17.0s
KIV   Kislovodsk       57.38 319 i P     P         03 01 04.7  -0.3
      SNR=18
KIV   Kislovodsk       57.38 319 P       P         03 01 04.8  -0.2
ERM   Erimo            57.40  43 IAMs_20 IAMs_20   03 27 58.3
      comp=Z,7µm,18.0s
ERM   Erimo            57.40  43 P       P         03 01 07.3 +2.4
JEM   Erimo            57.40  43 P       P         03 01 07.2 +2.3
GRNR  Gornyy           57.62  32⇓iP      P         03 01 07.0 +0.6
GRNR                            e                  03 03 12.5
GRNR                            eS       S         03 09 10.1 +7.1
GRNR                            eSS      SS        03 12 57.3 +3.9
GRNR                             pmax    pmax
      comp=E,20nm,1.2s
GRNR                             pmax    pmax
      comp=N,10.0nm,1.1s
GRNR                             pmax    pmax
      comp=Z,30nm,1.2s
GRNR                             smax    smax
      comp=N,3.0nm,0.6s
ASF   Jabal al Asfar   57.64 304 P       P         03 01 08.6 +1.7
      comp=N,21nm,0.9s,baz=106,slow=6.1,SNR=14
ASF                              S       S         03 09 04.7 +0.7
      comp=N,1.8nm,0.7s,baz=94,slow=16,SNR=1.4
      comp=N,21nm,0.9s
ASF   Jabal al Asfar   57.64 304 P       P         03 01 08.6 +1.7
INKA  Innaminka        57.64 128 P       P         03 01 08.2 +1.4
ASAJ  Asahikawa        57.90  41 P       P         03 01 09.4 +1.0
      comp=N,51nm,1.0s,baz=252,slow=11,SNR=15
ASAJ                             S       S         03 09 07.1 +0.3
      comp=N,1.8nm,0.7s,baz=215,slow=33,SNR=0.9
      comp=N,51nm,1.0s
ASAJ  Asahikawa        57.90  41 P       P         03 01 09.6 +1.2
ASAJ  Asahikawa        57.90  41 P       P         03 01 09.2 +0.8
ASAJ                             pmax    pmax
      comp=Z,114nm,1.0s
JKA   Kamikawa-asahi   57.90  41 P       P         03 01 09.2 +0.7
JKA                              IAmb    IAmb      03 01 34.9
      comp=Z,114nm,1.0s
WHYH  Whyalla          58.00 135 P       P         03 01 10.5 +1.3
JMP   Maruseppu        58.35  41 P       P         03 01 12.5 +0.8
PTPS  Port Pirie       58.37 135 P       P         03 01 14.9 +3.1
GHAJ  Ghor Haditha     58.54 303 P       P         03 01 13.1   0.0
GHAJ                             IAmb    IAmb      03 01 29.0
      comp=Z,62nm,0.9s
EIL   Elat             58.71 301 P       P         03 01 15.4 +1.0
      comp=Z,27nm,1.1s,baz=146,slow=4.0,SNR=12
EIL                              LR      LR        03 26 20.7
      comp=Z,8µm,18.4s,baz=101,slow=36
      comp=Z,27nm,1.1s
GAZ   Gaziantep        58.76 310 P       P         03 01 14.9 +0.3
BELG  Belogornoye      58.84 330 LR      LR        03 29 13.1
      comp=Z,8µm,21.5s,baz=136,slow=39
BELG  Belogornoye      58.84 330d iP     P         03 01 13.6  -1.2
BELG                             pmax    pmax
      comp=Z,55nm,1.1s
BELG                             MLR     MLR
      comp=Z,1µm,22.0s
MMAI  Mount Meron Ar   59.07 305 P       P         03 01 18.6 +1.7
      comp=Z,14nm,0.7s,baz=101,slow=8.6,SNR=15
MMAI                             LR      LR        03 28 12.9
      comp=Z,6µm,19.8s,baz=300,slow=38
      comp=Z,14nm,0.7s
CTA   Charters Tower   59.10 118 P       P         03 01 17.7 +0.5
CTAO  Charters Tower   59.10 118 P       P         03 01 17.5 +0.3
CTAO                             IAmb    IAmb      03 01 20.3
      comp=Z,121nm,1.1s
CTAO  Charters Tower   59.10 118 IAMs_20 IAMs_20   03 31 03.5
      comp=Z,7µm,19.0s
CTAO  Charters Tower   59.10 118 P       P         03 01 17.9 +0.7
CTAO  Charters Tower   59.10 118 P       P         03 01 17.5 +0.3
CTAO                             pmax    pmax
      comp=Z,121nm,1.1s
CTAO                             MLR     MLR
      comp=Z,6µm,19.0s
HTT   Hallett          59.16 135 P       P         03 01 17.9 +0.5
      baz=59,SNR=46
HTT   Hallett          59.16 135 P       P         03 01 17.8 +0.4
SOC   Sochi            59.19 318 eP      P         03 01 14.4  -3.0
SOC                             e                  03 03 25.0
SOC                             eS       S         03 09 22.3  -1.3
SOC                             eSSS     SSS       03 15 40.7
SOC                              pmax    pmax
      comp=Z,82nm,0.8s
SOC                              MLR     MLR
      comp=Z,2µm,18.0s
YSS   Yuzh-Sakhalins   59.25  38 P       P         03 01 18.3 +0.6
YSS                              IAMs_20 IAMs_20   03 27 41.4
      comp=Z,5µm,21.0s
YSS   Yuzh-Sakhalins   59.25  38 P       P         03 01 19.7 +1.9
YSS   Yuzh-Sakhalins   59.25  38αeP      P         03 01 18.5 +0.7
YSS                             e                  03 03 35.0
YSS                             eS       S         03 09 23.3  -1.0
YSS                             eSS      SS        03 13 19.7 +0.6
YSS                              pmax    pmax
      comp=N,200nm,4.3s
YSS                              pmax    pmax
      comp=Z,600nm,4.3s
YSS                              pmax    pmax
      comp=Z,260nm,1.1s
YSS                              smax    smax
      comp=N,2µm,10.1s
YSS                              smax    smax
      comp=E,800nm,10.8s
TV1H  Townsville Har   59.30 117 P       P         03 01 19.6 +1.1
UGL   Uglegorsk        59.83  35 eP      P         03 01 23.1 +1.4
UGL                             eS       S         03 09 34.2 +2.5
UGL                              pmax    pmax
      comp=Z,160nm,1.3s
UGL                              smax    smax
      comp=E,2µm,8.7s
UGL                              smax    smax
      comp=N,2µm,8.0s
UGL                              MLR     MLR
      comp=Z,4µm,18.0s
UGL                              MLR     MLR
      comp=E,5µm,21.0s
UGL                              MLR     MLR
      comp=N,3µm,18.0s
QLP   Quilpie          59.90 125 P       P         03 01 23.8 +1.2
      baz=60,SNR=16
QLP   Quilpie          59.90 125 P       P         03 01 23.9 +1.3
YUK   Yuzh-Kuril'sk    60.02  42 eP      P         03 01 20.4  -2.7
YUK                             e                  03 02 06.0
YUK                             e                  03 03 33.0
YUK                             eS       S         03 09 34.3 +0.1
YUK                             eSS      SS        03 13 33.4 +2.2
YUK                              pmax    pmax
      comp=Z,492nm,1.7s
YUK                              pmax    pmax
      comp=Z,492nm,1.0s
YUK                              pmax    pmax
      comp=N,286nm,0.9s
YUK                              pmax    pmax
      comp=E,287nm,1.1s
YUK                              MLR     MLR
      comp=Z,5µm,18.0s
YUK                              MLR     MLR
      comp=N,2µm,17.0s
YUK                              MLR     MLR
      comp=E,6µm,18.0s
STKA  Stephens Creek   60.29 132 P       P         03 01 25.5 +0.3
      comp=E,56nm,0.7s,baz=309,slow=7.0,SNR=36
STKA                             S       S         03 09 36.9  -1.2
      comp=E,0.6nm,0.2s,baz=38,slow=21,SNR=1.5
STKA                             LR      LR        03 29 41.6
      comp=E,4µm,19.9s,baz=302,slow=38
      comp=E,56nm,0.7s
STKA  Stephens Creek   60.29 132 P       P         03 01 25.5 +0.3
      baz=60,SNR=51
STKA  Stephens Creek   60.29 132 P       P         03 01 25.2   0.0
STKA  Stephens Creek   60.29 132 P       P         03 01 25.6 +0.4
STKA  Stephens Creek   60.29 132 P       P         03 01 25.5 +0.3
BNN   Bunyan           60.29 311 P       P         03 01 25.0  -0.3
KRVT  Keravat (AS076   60.53  98 LR      LR        03 29 16.8
      comp=E,1µm,19.8s,baz=45,slow=38
TYV   Tymovskoe        61.02  34 eP      P         03 01 31.2 +1.3
TYV                             eS       S         03 09 51.5 +4.6
TYV                              pmax    pmax
      comp=Z,300nm,2.1s
TYV                              pmax    pmax
      comp=Z,61nm,1.2s
TYV                              smax    smax
      comp=N,1µm,7.7s
TYV                              smax    smax
      comp=E,3µm,7.7s
TYV                              MLR     MLR
      comp=E,5µm,15.0s
TYV                              MLR     MLR
      comp=Z,8µm,15.0s
NKL   Nikolayevsk      61.13  31 eP      P         03 01 28.5  -2.0
NKL                             eS       S         03 09 48.1  -0.1
NKL                              pmax    pmax
      comp=E,236nm,0.8s
NKL                              pmax    pmax
      comp=N,207nm,0.9s
NKL                              pmax    pmax
      comp=Z,776nm,0.9s
NKL                              smax    smax
      comp=E,684nm,9.4s
NKL                              smax    smax
      comp=N,377nm,9.5s
NKL                              MLR     MLR
      comp=N,22µm,15.0s
NKL                              MLR     MLR
      comp=E,14µm,15.0s
NKL                              MLR     MLR
      comp=Z,21µm,16.0s
ANN   Anapa            61.17 318 eP      P         03 01 30.6  -0.3
CSS   Mathiatis        61.20 307 P       P         03 01 31.4   0.0
CSS                              IAMs_20 IAMs_20   03 32 47.9
      comp=Z,7µm,19.0s
VRH   Novokhopyorsk    61.31 326 eP      P         03 01 29.7  -2.1
VRH                              pmax    pmax
      comp=Z,97nm,1.5s
MBAR  Mbarara          61.81 266 LR      LR        03 24 12.0
      comp=Z,6µm,21.2s,baz=70,slow=32
MBAR  Mbarara          61.81 266 P       P         03 01 35.7  -0.4
MBAR  Mbarara          61.81 266 IAMs_20 IAMs_20   03 23 50.0
      comp=Z,7µm,22.0s
MBAR  Mbarara          61.81 266⇓eP      P         03 01 36.9 +0.8
MBAR                             pmax    pmax
      comp=Z,48nm,1.1s
MBAR                             MLR     MLR
      comp=Z,3µm,18.0s
MBAR  Mbarara          61.81 266 eP      P         03 01 51.2  +15
MBAR  Mbarara          61.81 266 P       P         03 01 38.7 +2.6
KIRV  Kirov            61.81 336 LR      LR        03 30 14.4
      comp=Z,7µm,21.7s,baz=143,slow=38
KIRV  Kirov            61.81 336deP      P         03 01 33.9  -1.1
BR131 Keskin Array S   62.18 312 P       P         03 01 37.0  -1.1
BR131 Keskin Array S   62.18 312d iP     P         03 01 37.3  -0.8
BR131 Keskin Array S   62.18 312 P       P         03 01 37.6  -0.5
      SNR=44
BRTR  Keskin Array B   62.18 312 P       P         03 01 36.9  -1.2
      comp=Z,12nm,0.7s,baz=128,slow=6.7,SNR=54
BRTR                             S       S         03 09 58.9  -3.5
      comp=Z,1.1nm,1.1s,baz=352,slow=7.5,SNR=0.7
BRTR                             LR      LR        03 29 46.2
      comp=Z,5µm,19.2s,baz=118,slow=37
      comp=Z,12nm,0.7s
BRTR  Keskin Array B   62.18 312 P       P         03 01 36.9  -1.2
YAK   Yakutsk          62.20  19 P       P         03 01 37.4  -0.2
      comp=Z,44nm,0.7s,baz=238,slow=2.5,SNR=19
YAK                              S       S         03 09 57.9  -3.5
      comp=Z,6.9nm,0.4s,baz=324,slow=0.7,SNR=1.4
YAK                              LR      LR        03 32 17.2
      comp=Z,6µm,18.7s,baz=224,slow=40
      comp=Z,44nm,0.7s
YAK   Yakutsk          62.20  19 P       P         03 01 37.9 +0.4
YAK                              IAMs_20 IAMs_20   03 31 35.8
      comp=Z,7µm,19.0s
YAK   Yakutsk          62.20  19 eP      P         03 01 37.2  -0.3
YAK                             e                  03 02 18.4
YAK                             e                  03 03 54.5
YAK                             eS       S         03 09 58.9  -2.5
YAK                             e*SS     sS        03 10 25.3  +13
YAK                             eSSS     SSS       03 16 49.5
YAK                              pmax    pmax
      comp=Z,143nm,1.1s
YAK                              pmax    pmax
      comp=N,72nm,1.3s
YAK                              pmax    pmax
      comp=E,123nm,1.8s
YAK                              pmax    pmax
      comp=Z,129nm,2.7s
YAK                              pmax    pmax
      comp=N,343nm,6.3s
YAK                              pmax    pmax
      comp=E,119nm,2.8s
YAK                              smax    smax
      comp=N,3µm,10.8s
YAK                              smax    smax
      comp=E,1µm,8.4s
YAK                              MLR     MLR
      comp=Z,4µm,35.0s
YAK                              MLR     MLR
      comp=N,2µm,22.0s
YAK                              MLR     MLR
      comp=E,6µm,24.0s
VORD  Divnogorie       62.56 325 eP      P         03 01 38.6  -1.6
VORD                             pmax    pmax
      comp=Z,70nm,1.7s
VSR   Storozhevoye     62.74 326 eP      P         03 01 39.2  -2.2
VSR                              pmax    pmax
      comp=Z,40nm,1.4s
ANTO  Ankara           62.85 312 P       P         03 01 41.9  -0.5
ANTO  Ankara           62.85 312 P       P         03 01 41.9  -0.5
ANTO                             pmax    pmax
      comp=Z,208nm,1.0s
ANTO                             MLR     MLR
      comp=Z,4µm,22.0s
BR231 Keskin MP Arra   62.85 312 P       P         03 01 42.1  -0.5
VORR  Voronezh         62.92 326 eP      P         03 01 40.8  -1.8
VORR                             pmax    pmax
      comp=Z,66nm,1.4s
ARPS  Mount Arapiles   62.96 137 P       P         03 01 44.2 +1.1
      baz=63,SNR=9.2
ARPS  Mount Arapiles   62.96 137 P       P         03 01 44.8 +1.7
NRIK  Noril'sk         63.17 358 P       P         03 01 43.7  -0.2
      comp=Z,22nm,0.5s,baz=168,slow=5.5,SNR=30
NRIK                             S       S         03 10 09.2  -4.2
      comp=Z,1.7nm,0.4s,baz=148,slow=8.9,SNR=1.4
NRIK                             PKP2bc            03 30 50.7
      comp=Z,2.0nm,0.4s,baz=309,slow=1.8,SNR=4.0
NRIK                             LR      LR        03 34 53.7
      comp=Z,3µm,18.3s,baz=176,slow=42
      comp=Z,22nm,0.5s
NRIK  Noril'sk         63.17 358 P       P         03 01 43.7  -0.2
NRIK  Noril'sk         63.17 358ceP      P         03 01 43.6  -0.3
NRIK                             MLR     MLR
      comp=Z,6µm,24.0s
CMSA  Cobar Meteorol   63.20 130 P       P         03 01 45.6 +0.7
      baz=63,SNR=207
CMSA  Cobar Meteorol   63.20 130 P       P         03 01 45.2 +0.4
LPSR  Galich'ya Gora   63.50 327 eP      P         03 01 44.6  -1.8
LPSR                             pmax    pmax
      comp=Z,70nm,1.4s
RMQ   Roma             63.57 123 P       P         03 01 47.6 +0.2
      baz=64,SNR=14
RMQ   Roma             63.57 123 P       P         03 01 49.4 +2.0
ISP   Isparta          64.06 309 P       P         03 01 50.7 +0.2
ISP   Isparta          64.06 309 P       P         03 01 50.7 +0.2
ISP                              pmax    pmax
      comp=Z,342nm,1.3s
ISP                              MLR     MLR
      comp=Z,4µm,19.0s
MDUB  Mudurnu          64.19 312 P       P         03 01 50.6  -0.7
ELL   Elmali           64.31 308 P       P         03 01 52.2   0.0
ELL   Elmali           64.31 308 P       P         03 01 52.2   0.0
ELL                              pmax    pmax
      comp=Z,2µm,1.1s
EIDS  Eidsvold         65.11 121 P       P         03 01 58.0 +0.5
      baz=65,SNR=6.0
EIDS  Eidsvold         65.11 121 P       P         03 01 58.9 +1.4
PATS  Pohnpei          65.55  85 P       P         03 02 01.4 +0.9
MOS   Moscow           65.61 330 eP      P         03 01 56.8  -3.3
MOS                             e                  03 04 27.2
MOS                             eS       S         03 10 43.6  -0.3
MOS                             e                  03 11 01.1
MOS                              pmax    pmax
      comp=Z,300nm,2.0s
MOS                              pmax    pmax
      comp=Z,168nm,1.4s
MOS                              MLR     MLR
      comp=E,5µm,20.0s
MOS                              MLR     MLR
      comp=Z,8µm,20.0s
MOS                              MLR     MLR
      comp=N,5µm,24.0s
ARG   Arkhangelos      65.61 307 P       P         03 02 00.9 +0.4
ARG   Arkhangelos      65.61 307 P       P         03 02 00.9 +0.4
ARG                              pmax    pmax
      comp=Z,2µm,0.8s
MANT  Manisa           65.72 309 P       P         03 02 01.3  -0.1
OBN   Obninsk          65.87 329 LR      LR        03 36 17.8
      comp=Z,1µm,18.1s,baz=121,slow=41
OBN   Obninsk          65.87 329 P       P         03 02 00.4  -1.4
OBN                              IAMs_20 IAMs_20   03 36 04.8
      comp=Z,7µm,19.0s
OBN   Obninsk          65.87 329c iP     P         03 02 01.4  -0.4
OBN                             i                  03 02 06.6
OBN                             e                  03 04 24.2
OBN                             eS       S         03 10 52.3 +5.2
OBN                             eSS      SS        03 15 02.2 +0.1
OBN                              pmax    pmax
      comp=Z,103nm,1.3s
OBN                              MLR     MLR
      comp=Z,5µm,18.0s
TOO   Toolangi         65.88 136 P       P         03 02 03.8 +1.5
      baz=66,SNR=18
TOO   Toolangi         65.88 136 P       P         03 02 03.0 +0.7
TOO                              IAmb    IAmb      03 02 06.6
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	comp=Z,62nm,1.0s						
TOO	Toolangi	65.88	136	P	P	03 02 04.2	+1.9
TOO	Toolangi	65.88	136	P	P	03 02 03.0	+0.7
TOO				pmax	pmax		
	comp=Z,62nm,1.0s						
KARP	Karpathos	66.26	306	P	P	03 02 04.5	-0.4
KARP				IAMs_20	IAMs_20	03 33 12.0	
	comp=Z,5µm,20.0s						
BALB	Balikesir	66.47	311	P	P	03 02 06.0	0.0
BALB				IAmb	IAmb	03 02 20.2	
	comp=Z,112nm,0.8s						
PURM	Purcari	66.74	318	⇓P	P	03 02 07.0	-0.6
LSZ	Lusaka	66.98	251	LR	LR	03 28 18.4	
	comp=Z,4µm,18.1s,baz=80,slow=33						
LSZ	Lusaka	66.98	251	IAMs_20	IAMs_20	03 27 57.7	
	comp=Z,5µm,18.0s						
LSZ	Lusaka	66.98	251	P	P	03 02 09.5	-0.3
HOED	Hoedspruit, Li	67.01	240	eP	P	03 02 10.4	+0.7
HOED				IAmb	IAmb	03 02 22.5	
	comp=Z,79nm,1.0s						
PSN	Preselentsi	67.16	315	i P	P	03 02 11.2	+0.9
TIRR	Tirgusor	67.18	316	P	P	03 02 10.3	-0.1
TIRR				IAMs_20	IAMs_20	03 36 43.0	
	comp=Z,6µm,21.0s						
TIRR	Tirgusor	67.18	316	P	P	03 02 10.3	-0.1
TIRR				pmax	pmax		
	comp=Z,340nm,1.0s						
TIRR				MLR	MLR		
	comp=Z,6µm,21.0s						
KLMR	Klimovskoe	67.21	335	eP	P	03 02 09.8	-0.5
KLMR				eP	P	03 02 09.8	-0.5
KLMR				eP	P	03 02 09.8	-0.5
KLMR				AMP		03 02 22.3	
	comp=Z,149nm,0.8s						
KLMR				PPP	PPP	03 06 09.2	
KLMR				S	S	03 11 05.5	+2.2
KLMR				S	S	03 11 05.5	+2.2
KLMR				LR	LR	03 28 07.3	
KLMR				AMP		03 33 37.9	
	comp=Z,3µm,16.0s						
KLMR	Klimovskoe	67.21	335	eP	P	03 02 09.8	-0.5
KLMR				S	S	03 11 05.4	+2.2
KLMR				pmax	pmax		
	comp=Z,149nm,0.8s						
KLMR				MLR	MLR		
	comp=Z,3µm,16.0s						
MUSN	Musina, Limpop	67.30	243	i P	P	03 02 14.0	+2.4
MUSN	Musina, Limpop	67.30	243	eP	P	03 02 13.2	+1.6
MUSN				IAmb	IAmb	03 02 25.1	
	comp=Z,120nm,0.9s						
POGA	Pongola	67.32	237	eP	P	03 02 11.7	0.0
HAGI	HAGI	67.34	239	eP	P	03 02 11.5	-0.4
HAGI				IAmb	IAmb	03 02 24.5	
	comp=Z,62nm,0.8s						
CAN	Canberra	67.35	132	P	P	03 02 11.3	-0.4
CAN				IAmb	IAmb	03 02 15.3	
	comp=Z,73nm,0.9s						
CAN				IAMs_20	IAMs_20	03 34 34.6	
	comp=Z,5µm,21.0s						
CAN	Canberra	67.35	132	P	P	03 02 12.5	+0.8
CAN	Canberra	67.35	132	P	P	03 02 11.3	-0.4
CAN				pmax	pmax		
	comp=Z,73nm,0.9s						
CAN				MLR	MLR		
	comp=Z,4µm,21.0s						
PILG	Pilgrimsrest,	67.37	240	eP	P	03 02 13.2	+1.0
PILG				IAmb	IAmb	03 02 25.2	
	comp=Z,103nm,1.0s						
ARMA	Armidale	67.39	126	P	P	03 02 13.8	+1.7
	baz=68,SNR=6.6						
ARMA	Armidale	67.39	126	P	P	03 02 12.7	+0.5
ARMA				IAmb	IAmb	03 02 16.9	
	comp=Z,60nm,0.9s						
ARMA	Armidale	67.39	126	P	P	03 02 13.5	+1.4
MILM	Milestii Mici	67.55	318	⇓iP	P	03 02 11.0	-1.7
	comp=Z,160nm,1.1s						
MILM				eS	S	03 11 04.0	-3.8
MILM				eL	L	03 30 22.0	
MILM				LQM		03 35 10.0	
	comp=Z,2µm,20.0s						
MILM				LRM	MLR	03 37 46.0	
	comp=Z,2µm,17.0s						
KIS	Kishinev	67.57	319	eP	P	03 02 11.0	-1.8
KIS				e		03 02 40.0	
KIS				e		03 04 42.0	
KIS				ePPP	PPP	03 06 21.0	
KIS				pmax	pmax		
	comp=Z,80nm,1.3s						
KIS				MLR	MLR		
	comp=Z,2µm,18.5s						
PRD	Provadia	67.60	314	i P	P	03 02 14.7	+1.6
CNB	Canberra Magne	67.62	132	P	P	03 02 14.2	+0.8
VLDR	Vladesti	67.76	317	⇓P	P	03 02 14.0	-0.1
APE	Apeiranthos	67.81	307	⇓P	P	03 02 14.4	-0.2
APE	Apeiranthos	67.81	307	P	P	03 02 14.4	-0.2
JMB	Yambol	68.02	313	i P	P	03 02 16.8	+1.0
IDI	Anoyia	68.05	305	P	P	03 02 16.4	+0.2
	comp=Z,19nm,0.7s,baz=85,slow=7.6,SNR=17						
IDI				LR	LR	03 36 00.9	
	comp=Z,2µm,19.8s,baz=88,slow=40						
	comp=Z,19nm,0.7s						
IDI	Anoyia	68.05	305	P	P	03 02 16.2	0.0
MGCD	Mangrove Creek	68.06	129	P	P	03 02 16.5	+0.3
	baz=68,SNR=4.8						
ALN	Alexandroupoli	68.10	312	P	P	03 02 15.4	-0.9
ALN	Alexandroupoli	68.10	312	P	P	03 02 15.4	-0.9
ALN				pmax	pmax		
	comp=Z,140nm,1.0s						
VASR	Vaslui	68.16	318	⇓P	P	03 02 16.6	0.0
SORM	Soroca	68.18	320	⇓P	P	03 02 15.6	-1.1
SORM	Soroca	68.18	320	P	P	03 02 15.6	-1.1
CRLN	Carolina, Mapu	68.29	239	eP	P	03 02 19.0	+1.0
CRLN				IAmb	IAmb	03 02 30.8	
	comp=Z,58nm,1.0s						
AKASG	Malin Array Be	68.37	322	P	P	03 02 16.2	-1.6
	comp=Z,6.0nm,0.8s,baz=87,slow=3.8,SNR=60						
AKASG				PP	PP	03 04 48.6	-0.2
	comp=Z,6.4nm,0.8s,baz=113,slow=10.0,SNR=2.2						
AKASG				LR	LR	03 36 44.4	
	comp=Z,4µm,19.3s,baz=110,slow=40						
	comp=Z,6.0nm,0.8s						
AKASG	Malin Array Be	68.37	322	P	P	03 02 15.7	-2.2
AKASG				IAmb	IAmb	03 02 31.1	
	comp=Z,118nm,1.1s						
AKASG	Malin Array Be	68.37	322	i P	P	03 02 16.2	-1.6
AKASG				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AKBB	Malin Array Si	68.37	322	P	P	03 02 16.6	-1.2
AKBB				IAmb	IAmb	03 02 31.0	
	comp=Z,82nm,1.1s						
AKBB	Malin Array Si	68.37	322	P	P	03 02 16.6	-1.2
AKBB				pmax	pmax		
	comp=Z,82nm,1.1s						
RDO	Rodhopi	68.52	312	P	P	03 02 18.6	-0.3
ISR	Istrita	68.64	316	⇑P	P	03 02 20.6	+1.0
ISR	Istrita	68.64	316	P	P	03 02 20.6	+1.0
VRI	Vrincioaia	68.68	317	⇓P	P	03 02 19.8	-0.1
VRI	Vrincioaia	68.68	317	P	P	03 02 20.7	+0.8
KDZ	Kurdzhali	68.71	312	i P	P	03 02 20.6	+0.5
PLOR	Plostina	68.73	317	⇓P	P	03 02 20.9	+0.6
PLOR	Plostina	68.73	317	P	P	03 02 20.8	+0.6
SKR	Severo-Kuril's	68.82	38	eP	P	03 02 21.2	+0.6
SKR				eS	S	03 11 15.7	-7.1
SKR				pmax	pmax		
	comp=Z,60nm,0.9s						
SKR				pmax	pmax		
	comp=Z,100nm,2.3s						
SKR				MLR	MLR		
	comp=Z,1µm,18.0s						
NEHR	Nehoiu	68.88	316	⇑P	P	03 02 21.5	+0.3
TESR	Tescani	68.89	318	⇓P	P	03 02 21.2	0.0
SECR		68.94	316	⇓P	P	03 02 22.1	+0.6
NWCL	Newcastle	68.97	237	eP	P	03 02 23.2	+1.1
NWCL				IAmb	IAmb	03 02 35.2	
	comp=Z,125nm,0.9s						
COVR	Voineasa-Covas	69.03	317	⇑P	P	03 02 21.4	-0.7
MA2	Magadan	69.12	28	P	P	03 02 22.9	+0.5
	comp=Z,190nm,0.8s,baz=227,slow=4.7,SNR=139						
MA2				S	S	03 11 24.3	-1.9
	comp=Z,1.9nm,0.3s,baz=105,slow=22,SNR=7.0						
MA2				LR	LR	03 35 49.0	
	comp=Z,2µm,18.1s,baz=241,slow=39						
	comp=Z,190nm,0.8s						
MA2	Magadan	69.12	28	P	P	03 02 22.9	+0.5
MA2				IAMs_20	IAMs_20	03 36 10.2	
	comp=Z,4µm,20.0s						
MA2	Magadan	69.12	28	P	P	03 02 23.1	+0.8
MA2	Magadan	69.12	28c	iP	P	03 02 22.8	+0.5
MA2				pmax	pmax		
	comp=Z,242nm,0.8s						
MA2				MLR	MLR		
	comp=Z,3µm,17.0s						
MLR	Muntele Rosu	69.13	316	⇓P	P	03 02 23.2	+0.4
MLR	Muntele Rosu	69.13	316	P	P	03 02 22.7	-0.1
	comp=Z,87nm,1.2s,baz=42,slow=2.2,SNR=32						
MLR				S	S	03 11 24.8	-2.2
	comp=Z,2.4nm,0.7s,baz=84,slow=21,SNR=2.0						
MLR				LR	LR	03 38 37.9	
	comp=Z,3µm,19.1s,baz=103,slow=41						
	comp=Z,87nm,1.2s						
MLR	Muntele Rosu	69.13	316	P	P	03 02 22.6	-0.3
MLR				IAMs_20	IAMs_20	03 38 18.5	
	comp=Z,4µm,21.0s						
MLR	Muntele Rosu	69.13	316	P	P	03 02 23.2	+0.4
HNR	Honiara	69.16	102	LR	LR	03 34 25.2	
	comp=Z,18µm,21.1s,baz=273,slow=38						
GLAD	Gladstone	69.24	138	P	P	03 02 25.3	+2.0
TIXI	Tiksi	69.27	12	P	P	03 02 22.2	-0.8
	comp=Z,152nm,0.6s,baz=89,slow=23,SNR=275						
TIXI				S	S	03 11 27.1	-0.3
	comp=Z,0.9nm,0.6s,baz=270,slow=24,SNR=19						
TIXI				LR	LR	03 36 46.2	
	comp=Z,3µm,18.6s,baz=359,slow=40						
	comp=Z,152nm,0.6s						
TIXI	Tiksi	69.27	12	P	P	03 02 22.5	-0.5
TIXI	Tiksi	69.27	12d	iP	P	03 02 21.9	-1.1
TIXI				pmax	pmax		
	comp=Z,120nm,0.6s						
TIXI				MLR	MLR		
	comp=Z,4µm,23.0s						
ADZR	Andozero	69.28	338	eP	P	03 02 21.2	-2.0
ADZR				e		03 04 55.3	
ADZR				pmax	pmax		
	comp=Z,150nm,0.9s						
MOO	Moorlands	69.41	140	P	P	03 02 26.0	+1.6
	baz=70,SNR=3.6						
LEPH	Lephalale, Lim	69.57	242	eP	P	03 02 26.6	+0.7
LEPH				IAmb	IAmb	03 02 38.4	
	comp=Z,82nm,1.0s						
DOPR	Dopca	69.61	317	⇓P	P	03 02 25.1	-0.5
PLVB	Pleven	69.62	314	⇓P	P	03 02 26.2	+0.5
SLR	Silverton	69.70	240	eP	P	03 02 27.2	+0.5
SLR				IAmb	IAmb	03 02 39.7	
	comp=Z,112nm,1.0s						
TAU	Tasmania Unive	69.73	140	P	P	03 02 26.4	+0.1
TAU				IAmb	IAmb	03 02 30.2	
	comp=Z,65nm,0.8s						
TAU	Tasmania Unive	69.73	140	P	P	03 02 27.7	+1.4
TAU	Tasmania Unive	69.73	140	P	P	03 02 26.4	+0.1
TAU				pmax	pmax		
	comp=Z,65nm,0.9s						
MMB	Musomiste	69.94	312	i P	P	03 02 27.5	-0.3
ARR	Arges	70.00	316	⇑P	P	03 02 27.7	-0.4
BURAR	Bucovina Array	70.10	318	⇓P	P	03 02 29.1	+0.3
BURAR	Bucovina Array	70.10	318	P	P	03 02 27.9	-0.8
BURAR				IAmb	IAmb	03 02 43.4	
	comp=Z,62nm,0.8s						
BURAR	Bucovina Array	70.10	318	P	P	03 02 29.0	+0.3
BUR08	Bucovina Ar. S	70.11	319	P	P	03 02 28.2	-0.7
BUR08				IAmb	IAmb	03 03 00.7	
	comp=Z,65nm,0.9s						
MPEP	Malo Peshtene	70.25	314	i P	P	03 02 32.1	+2.5
HRAO	HartRAO	70.26	240	eP	P	03 02 29.3	-0.8
HRAO				IAmb	IAmb	03 02 43.2	
	comp=Z,121nm,0.9s						
MNK	Minsk	70.31	326	i P	P	03 02 28.7	-1.0
	comp=E,17nm,1.1s						
MNK				i P	P	03 02 28.7	-1.0
	comp=N,24nm,0.7s						
MNK				i P	P	03 02 28.7	-1.0
	comp=Z,130nm,1.1s,baz=288						
MNK				i PcP	PcP	03 02 50.2	-1.1
MNK				i PP	PP	03 05 04.0	-1.5
MNK				i PPP	PPP	03 06 46.0	
MNK				i S	S	03 11 41.3	+1.1
MNK				i ScS	ScS	03 12 31.3	+0.6
MNK				i SS	SS	03 16 12.6	+1.7
MNK				i SSS	SSS	03 19 30.7	
MNK				i LQ	LQ	03 28 27.5	
MNK				i LR	LR	03 33 48.5	
MNK				i LRM	MLR	03 37 58.9	
	comp=N,2µm,18.7s						
MNK				i LRM	MLR	03 38 21.9	
	comp=E,613nm,16.1s						
MNK				i LRM	MLR	03 38 24.5	
	comp=Z,5µm,19.3s						
MNK	Minsk	70.31	326	i P	P	03 02 28.6	-1.0
MNK				i		03 02 50.1	
MNK				i		03 05 03.9	
MNK				i PPP	PPP	03 06 46.0	
MNK				i S	S	03 11 41.3	+1.1
MNK				i		03 12 31.3	
MNK				i SS	SS	03 16 12.5	+1.7
MNK				pmax	pmax		
	comp=N,24nm,0.7s						
MNK				pmax	pmax		
	comp=Z,130nm,1.1s						
MNK				pmax	pmax		
	comp=E,17nm,1.0s						
MNK				MLR	MLR		
	comp=N,2µm,19.0s						
MNK				MLR	MLR		
	comp=E,613nm,16.0s						
MNK				MLR	MLR		
	comp=Z,5µm,19.0s						
KSTD	Kokstad	70.41	235	eP	P	03 02 33.0	+2.0
KSTD				IAmb	IAmb	03 02 44.0	
	comp=Z,39nm,0.9s						
PEA0B	Petropavlovsk-	70.46	36	P	P	03 02 30.6	0.0
PEA0B				IAmb	IAmb	03 02 51.6	
	comp=Z,102nm,1.2s						
PEA0B	Petropavlovsk-	70.46	36	⇓eP	P	03 02 31.3	+0.6
PETK	Petropavlovsk-	70.46	36	P	P	03 02 29.8	-0.9
	comp=Z,7.3nm,0.9s,baz=219,slow=3.7,SNR=5.1						
	comp=Z,7.3nm,0.9s						
PETK	Petropavlovsk-	70.46	36	P	P	03 02 31.2	+0.5
PETK	Petropavlovsk-	70.46	36	P	P	03 02 31.2	+0.5
VTS	Vitosha	70.48	313	P	P	03 02 31.7	+0.5
VTS				IAmb	IAmb	03 02 49.3	
	comp=Z,129nm,0.9s						
VTS	Vitosha	70.48	313	P	P	03 02 31.7	+0.5
VTS				pmax	pmax		
	comp=Z,129nm,0.9s						
VTS	Vitosha	70.48	313	i P	P	03 02 30.9	-0.3
AGG	Agios Georgios	70.60	309	P	P	03 02 30.7	-1.2
AGG	Agios Georgios	70.60	309	P	P	03 02 30.7	-1.2
AGG				pmax	pmax		
	comp=Z,11nm,0.9s						
LOT	Lotru	70.62	316	⇓P	P	03 02 31.2	-0.8
LIT	Litokhoron	70.63	310	P	P	03 02 31.2	-0.9
LIT	Litokhoron	70.63	310	P	P	03 02 31.2	-0.9
LIT				pmax	pmax		
	comp=Z,174nm,1.0s						
WDLM	Western Deep L	70.65	239	eP	P	03 02 33.0	+0.5
WDLM				IAmb	IAmb	03 02 45.2	
	comp=Z,61nm,1.0s						
BAIL	Bailesti	70.65	314	⇓P	P	03 02 32.4	+0.4
ITM	Ithomi	70.68	307	P	P	03 02 31.9	-0.5
ITM				IAmb	IAmb	03 02 46.3	
	comp=Z,95nm,0.9s						
PUL	Pulkovo	70.84	332d	eP	P	03 02 32.3	-0.5
PUL				pmax	pmax		
	comp=Z,113nm,0.6s						
PUL				MLR	MLR		
	comp=Z,7µm,20.0s						
PRYS	Parys	70.85	239	eP	P	03 02 33.4	-0.3
PRYS				IAmb	IAmb	03 02 46.0	
	comp=Z,36nm,0.7s						
SNKL	Senekal, Frees	70.92	237	eP	P	03 02 35.0	+0.8
SNKL				IAmb	IAmb	03 02 46.5	
	comp=Z,94nm,0.9s						
KSR	Koster	70.93	240	eP	P	03 02 36.9	+2.7
KSR				IAmb	IAmb	03 03 10.9	
	comp=Z,76nm,0.9s						
CJR	Cluj-Napoca	70.98	317	⇓P	P	03 02 34.8	+0.6
CJR	Cluj-Napoca	70.98	317	P	P	03 02 34.7	+0.6
PET	Petropavlovsk	70.99	36	P	P	03 02 34.4	+0.6
PET	Petropavlovsk	70.99	36	P	P	03 02 34.7	+0.8
PET	Petropavlovsk	70.99	36	eP	P	03 02 34.6	+0.7
PET				eS	S	03 11 46.3	-1.8
PET				eSS	SS	03 16 24.8	+3.5
PET				MLR	MLR		
	comp=Z,3µm,16.0s						
PET				MLR	MLR		
	comp=Z,3µm,17.0s						
PUNG	Punghina	70.99	315	⇓P	P	03 02 34.1	+0.1
NACGM	Naroch	71.04	326	⇓iP	P	03 02 33.9	-0.2
	comp=Z,394nm,1.0s,baz=107						
STIP	Stip	71.10	312	i P	P	03 02 32.2	-2.6
SEY	Seymchan	71.24	25	⇓iP	P	03 02 35.7	+0.5
SEY				pmax	pmax		
	comp=Z,119nm,1.3s						
SEY				MLR	MLR		
	comp=Z,5µm,14.0s						
GZR	Gura Zlata	71.29	316	⇓P	P	03 02 36.7	+0.6
GZR	Gura Zlata	71.29	316	P	P	03 02 36.6	+0.6
DEV	Deva	71.30	316	⇑P	P	03 02 36.0	+0.1
DEV	Deva	71.30	316	P	P	03 02 36.0	+0.1
LVV	L'vov	71.36	321	eP	P	03 02 35.5	-0.7
LVV				e		03 02 58.9	
LVV				e		03 05 08.8	
LVV				eS	S	03 11 54.9	+2.3
LVV				ePS		03 12 29.5	
LVV				pmax	pmax		
	comp=Z,180nm,1.2s						
HERR	Herculane	71.45	315	⇓P	P	03 02 37.0	+0.1
MESR	Meseseni	71.51	318	⇑P	P	03 02 37.4	+0.3
ISAL	Salakas	71.59	327	eP	P	03 02 38.0	+0.5
DRGR		71.60	317	⇓P	P	03 02 37.1	-0.7
DRGR		71.60	317	P	P	03 02 37.1	-0.7
SKO	Skopje	71.69	312	i P	P	03 02 44.0	+5.5
BOVS	Bovan	71.75	314	⇓P	P	03 02 37.6	-1.1
SURR	Surduc	71.81	316	⇓P	P	03 02 38.5	-0.5
LBTB	Lobatse	71.82	241	LR	LR	03 29 14.7	
	comp=Z,3µm,21.6s,baz=80,slow=32						
LBTB	Lobatse	71.82	241	P	P	03 02 39.8	+0.2
LBTB				IAmb	IAmb	03 02 53.3	
	comp=Z,111nm,0.9s						
LBTB	Lobatse	71.82	241	i P	P	03 02 42.1	+2.5
LBTB	Lobatse	71.82	241	P	P	03 02 39.8	+0.2
LBTB				pmax	pmax		
	comp=Z,111nm,0.9s						
LBTB	Lobatse	71.82	241	eP	P	03 02 40.1	+0.6
LBTB				IAmb	IAmb	03 02 53.0	
	comp=Z,108nm,0.9s						
MDVR	Moldovita	71.93	315	⇓P	P	03 02 39.3	-0.5
TRPA	Tarpa	71.97	319	⇓P	P	03 02 40.0	+0.1
KBN	Korca	72.00	311	IAmb	IAmb	03 03 14.2	
	comp=Z,69nm,1.0s						
OHR	Ohrid	72.05	311	i P	P	03 02 39.3	-1.3
VSU	Vasula	72.13	330c	iP	P	03 02 39.0	-1.6
VSU				MLR	MLR		
	comp=Z,17µm,20.0s						
VSU	Vasula	72.13	330	eP	P	03 02 40.3	-0.4
SIRR	Siria	72.22	317	⇑P	P	03 02 41.1	-0.4
LVZ	Lovozero	72.54	340	⇑eP	P	03 02 41.7	-1.3
LVZ				pmax	pmax		
	comp=Z,90nm,1.4s						
LVZ				MLR	MLR		
	comp=Z,9µm,16.0s						
SWZ	Schweizer	72.65	239	eP	P	03 02 44.7	+0.1
SWZ				IAmb	IAmb	03 02 47.6	
	comp=Z,180nm,0.6s						
PABE	Paberze	72.75	326	IAMs_20	IAMs_20	03 38 20.0	
	comp=Z,6µm,19.0s						
PABE	Paberze	72.75	326	eP	P	03 02 44.0	-0.4
TIR	Tirane	72.78	311	⇓P	P	03 02 43.2	-1.7
TIR	Tirane	72.78	311	P	P	03 02 43.2	-1.7
APA	Apatity	72.81	340	⇓iP	P	03 02 48.7	+4.2
APA				i		03 03 00.0	
APA				i		03 05 36.0	
APA				MLR	MLR		
	comp=Z,9µm,20.0s						
AMBH	Ambrzfalva	72.87	317	⇓P	P	03 02 43.8	-1.5
VSVD	Vaisvydziai	72.89	327	eP	P	03 02 45.4	+0.1
SJES	Sjenica	72.94	313	eP	P	03 02 45.9	-0.1
IVA	Berane	72.95	313	⇓iP	P	03 02 45.4	-0.6
DIVS	Divibare	73.05	314	IAmb	IAmb	03 03 31.9	
	comp=Z,64nm,1.0s						
DIVS	Divibare	73.05	314	eP	P	03 02 45.9	-0.7
STHS	Stebnicka Huta	73.05	320	eP	P	03 02 46.3	-0.1
STHS				pmax	pmax		
	comp=Z,57nm,0.9s						
STHS	Stebnicka Huta	73.05	320	eP	P	03 02 46.2	-0.1
BOSA	Boshof	73.13	238	P	P	03 02 47.0	-0.4
	comp=Z,75nm,0.6s,baz=84,slow=5.0,SNR=163						
BOSA				LR	LR	03 33 01.9	
	comp=Z,2µm,18.6s,baz=75,slow=34						
	comp=Z,75nm,0.6s						
BOSA	Boshof	73.13	238	P	P	03 02 47.8	+0.5
BOSA				IAmb	IAmb	03 03 00.7	
	comp=Z,131nm,1.0s						
BOSA	Boshof	73.13	238	i P	P	03 02 48.6	+1.3
BOSA	Boshof	73.13	238	P	P	03 02 47.8	+0.5
BOSA				pmax	pmax		
	comp=Z,131nm,1.0s						
BOSA	Boshof	73.13	238	eP	P	03 02 48.2	+0.9
BOSA				IAmb	IAmb	03 03 00.4	
	comp=Z,129nm,1.0s						
KOME	Kolasin	73.22	313	⇓iP	P	03 02 46.9	-0.7
ULC	Ulcinj	73.31	312	⇓iP	P	03 02 46.5	-1.6
FRGS	Fruska Gora	73.32	315	⇓P	P	03 02 47.4	-0.7
FRGS	Fruska Gora	73.32	315	eP	P	03 02 47.2	-0.9
PDG	Podgorica	73.36	312	⇓P	P	03 02 47.2	-1.1
PDG	Podgorica	73.36	312	IAmb	IAmb	03 03 08.7	
	comp=Z,119nm,1.0s						
PDG	Podgorica	73.36	312	⇓iP	P	03 02 47.5	-0.8
FINES	FINESS Array B	73.38	333	P	P	03 02 47.1	-0.9
	comp=Z,34nm,0.7s,baz=104,slow=8.0,SNR=46						
FINES				LR	LR	03 38 21.7	
	comp=Z,7µm,21.0s,baz=116,slow=38						
	comp=Z,34nm,0.7s						
FINES	FINESS Array B	73.38	333	i P	P	03 02 47.0	-0.9
FINES				pmax	pmax		
	comp=Z,34nm,0.7s						
PLE	Pljevlja	73.38	313	⇓iP	P	03 02 48.6	0.0
DRME	Dracevica, Mon	73.39	312	eP	P	03 02 44.6	-3.9
DRME	Dracevica, Mon	73.39	312	⇓iP	P	03 02 47.5	-1.0
RUDO	Rudo	73.43	314	eP	P	03 02 47.5	-1.2
TEKS	Tekeris	73.44	315	eP	P	03 02 45.8	-3.0
CASY	Casey	73.46	172	P	P	03 02 49.2	+0.9
CASY				IAmb	IAmb	03 02 52.1	
	comp=Z,96nm,1.1s						
CASY	Casey	73.46	172	IAMs_20	IAMs_20	03 28 07.5	
	comp=Z,4µm,19.0s						
HVD	Gariep Dam	73.52	236	⇓iP	P	03 02 51.0	+1.3
HVD				IAmb	IAmb	03 03 02.7	
	comp=Z,91nm,1.0s						
BUM	Brajici-Budva	73.61	312	⇓iP	P	03 02 49.1	-0.8
CEME	Cevo	73.62	312	⇓iP	P	03 02 49.1	-0.9
NKME	Niksic	73.62	313	⇓iP	P	03 02 49.2	-0.7
GRHM	Grahamstown, E	73.64	233	P	P	03 02 49.8	-0.4
GRHM				IAmb	IAmb	03 03 04.4	
	comp=Z,87nm,1.0s						
GRHM	Grahamstown, E	73.64	233	eP	P	03 02 51.4	+1.2
GRHM				IAmb	IAmb	03 03 03.4	
	comp=Z,106nm,1.1s						
NIE	Niedzica	73.66	320	eP	P	03 02 50.8	+0.8
MTSE	Matsula	73.67	330	eP	P	03 02 49.4	-0.4
PSZ	Piszkesteto	73.68	318	IAmb	IAmb	03 03 04.7	
	comp=Z,70nm,1.0s						
SCTE	Santa Cesarea	73.69	310	IAmb	IAmb	03 03 26.5	
	comp=Z,125nm,0.8s						
UPM	Unac-Piva	73.71	313	⇓iP	P	03 02 49.8	-0.8
BEL	Belsk	73.79	322	eP	P	03 02 50.5	-0.1
MEF	Metsahovi	73.80	331	eP	P	03 02 51.9	+1.4
HCY	Herceg Novi	73.92	312	eP	P	03 02 50.1	-1.6
HCY	Herceg Novi	73.92	312	⇓iP	P	03 02 50.8	-0.8
BRY	Bratogost	73.94	313	eP	P	03 02 49.6	-2.3
BRY	Bratogost	73.94	313	⇓iP	P	03 02 51.2	-0.7
PBUR	Paburge	74.00	327	eP	P	03 02 51.6	-0.1
TREB	Trebinje	74.06	313	eP	P	03 02 49.0	-3.4
SOE	Somerset East	74.11	234	P	P	03 02 53.4	+0.4
SOE	Somerset East	74.11	234	eP	P	03 02 53.6	+0.7
SOE				IAmb	IAmb	03 03 23.4	
	comp=Z,72nm,1.2s						
OJC	Ojcow	74.11	320	eP	P	03 02 52.4	-0.2
OJC	Ojcow	74.11	320	IAmb	IAmb	03 03 13.3	
	comp=Z,93nm,1.0s						
LANS	Liptovska Anna	74.15	319	eP	P	03 02 53.3	+0.4
LANS				pmax	pmax		
	comp=Z,24nm,1.1s						
LANS	Liptovska Anna	74.15	319	eP	P	03 02 53.3	+0.4
SLIT	Slitere, Latvi	74.18	328	eP	P	03 02 53.6	+0.9

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MORH   Mrgy, Hungar       74.28 316  ⇓P       P        03 02 53.1  -0.5
NMMU   Nelson Mandela     74.44 232  eP       P        03 02 56.0  +1.3
VYHS   Vyhne              74.47 319  eP       P        03 02 54.8  +0.1
VYHS                                  pmax    pmax
       comp=Z,76nm,1.2s
VYHS   Vyhne              74.47 319  eP       P        03 02 54.8  +0.1
DOB    Doboj              74.47 315  eP       P        03 02 53.5  -1.3
STON   Ston               74.55 313  eP       P        03 02 53.2  -2.1
KLNR   Kaliningrad        74.66 325d iP       P        03 02 54.1  -1.5
KLNR                                  pmax    pmax
       comp=Z,128nm,0.8s
KLNR                                  MLR     MLR
       comp=Z,3µm,16.0s
SRO    Srobarova          74.72 318  eP       P        03 02 56.3  +0.2
SRO                                   pmax    pmax
       comp=Z,101nm,1.0s
SRO    Srobarova          74.72 318  eP       P        03 02 56.3  +0.2
GRAF   Camdeboo Natio     74.84 234  eP       P        03 02 57.9  +0.7
GRAF                                  IAmb    IAmb     03 03 10.6
       comp=Z,97nm,1.1s
A052A  Srbac              74.93 315  eP       P        03 02 56.5  -0.9
TIP    Timpagrande        74.93 309  ⇓P       P        03 02 57.5  -0.1
SRKY   Kupres RS          75.06 314  eP       P        03 02 46.6   -12
MATE   Matera             75.09 310  ⇓P       P        03 02 57.7  -0.7
OKC    Ostrava-Krasne     75.11 320  eP       P        03 02 57.3  -1.0
OKC                                  epP      pP       03 03 05.5  +0.1
OKC                                  eS       S        03 12 44.5  +9.4
OKC                                   AMS     AMS      03 40 40.0
       comp=Z,2µm,17.2s
OKC    Ostrava-Krasne     75.11 320  eP       P        03 02 57.3  -1.0
OKC                                  e                 03 03 05.5
OKC                                  eS       S        03 12 44.5  +9.4
OKC                                   MLR     MLR
       comp=Z,2µm,17.2s
BLY    Banja Luka         75.12 315  eP       P        03 02 58.0  -0.5
MGRS   Mrkonjic Grad      75.16 314  eP       P        03 02 58.3  -0.5
BUFB   Buffelsbos         75.21 232  eP       P        03 03 01.1  +1.8
BUFB                                  IAmb    IAmb     03 03 12.8
       comp=Z,92nm,1.1s
VADS   Vadso              75.23 342  eP       P        03 02 58.8  +0.1
VADS                                  IVmBBB           03 03 11.5
       comp=Z,2µm,1.2s
VADS                                 eS       S        03 12 39.6  +3.8
RAF    Rauma              75.26 332  eP       P        03 02 59.0   0.0
JAVC   Velka Javorina     75.28 319  eP       P        03 02 59.7  +0.2
KROM   Kromhout           75.30 232  eP       P        03 03 01.9  +2.2
A051A  Mrakovica          75.35 315  eP       P        03 02 58.7  -1.2
BFON   Badsfontein, M     75.35 235  eP       P        03 03 01.7  +1.4
BFON                                  IAmb    IAmb     03 03 13.4
       comp=Z,94nm,1.0s
ROSN   Rosenhof           75.36 233  eP       P        03 03 01.8  +1.8
SMOL   Smolenice          75.40 318  eP       P        03 03 00.5  +0.4
SMOL                                  pmax    pmax
       comp=Z,22nm,1.2s
KOUNC  Koumac, New Ca     75.47 113   P       P        03 03 01.1  +0.1
KOUNC                                 IAmb    IAmb     03 03 22.5
       comp=Z,126nm,1.2s
KOUNC  Koumac, New Ca     75.47 113   P       P        03 03 02.4  +1.5
MODS   Modra-Piesok       75.48 318  eP       P        03 03 00.7  +0.1
MODS                                  pmax    pmax
       comp=Z,232nm,1.1s
MODS   Modra-Piesok       75.48 318  eP       P        03 03 00.7  +0.1
PRIJ   Prijedor           75.48 315  eP       P        03 02 56.6  -4.0
MORC   Moravsky Berou     75.49 320  ⇓P       P        03 02 60.0  -0.7
MORC   Moravsky Berou     75.49 320   IAmb    IAmb     03 03 13.4
       comp=Z,100nm,1.3s
MORC   Moravsky Berou     75.49 320  eP       P        03 03 00.2  -0.4
MORC   Moravsky Berou     75.49 320   P       P        03 02 59.9  -0.7
PKA    Prieska            75.52 237  eP       P        03 03 03.4  +2.1
PKA                                   IAmb    IAmb     03 03 20.1
       comp=Z,2.4nm,0.7s
CEL    Celeste            75.54 308   IAmb    IAmb     03 03 14.7
       comp=Z,95nm,1.0s
A050A  Klekovaca          75.56 314  eP       P        03 02 59.3  -1.9
ROOI   Rooidraai Farm     75.66 234  eP       P        03 03 04.2  +2.2
ROOI                                  IAmb    IAmb     03 03 15.4
       comp=Z,86nm,0.9s
KEV    Kevo               75.84 341   P       P        03 03 02.3  +0.1
KEV                                   IAmb    IAmb     03 03 16.8
       comp=Z,149nm,1.0s
KEV    Kevo               75.84 341   P       P        03 03 02.3  +0.1
KEV                                   pmax    pmax
       comp=Z,149nm,1.0s
KEV                                   MLR     MLR
       comp=Z,11µm,21.0s
KOGS   Kog                75.95 316  eP       P        03 03 03.0  -0.3
BRAK   Brakfontein        75.99 235  eP       P        03 03 05.9  +2.0
BRAK                                  IAmb    IAmb     03 03 25.2
       comp=Z,2µm,3.8s
KRLC   Kraliky            76.01 320  eP       P        03 03 03.2  -0.4
KRLC                                 epP      pP       03 03 10.8  +0.2
KRLC                                 eS       S        03 12 48.8  +3.5
KRLC                                  AMS     AMS      03 41 20.0
       comp=Z,2µm,15.5s
KRLC   Kraliky            76.01 320  eP       P        03 03 03.2  -0.4
KRLC                                 e                 03 03 10.8
KRLC                                 eS       S        03 12 48.8  +3.5
KRLC                                  MLR     MLR
       comp=Z,2µm,15.5s
VRAC   Vranov             76.04 319   P       P        03 03 03.3  -0.4
       comp=Z,4.6nm,0.7s,baz=59,slow=4.1,SNR=9.8
VRAC                                  PP      PP       03 06 00.2  +5.7
       comp=Z,10nm,1.1s,baz=84,slow=9.2,SNR=3.0
VRAC                                  LR      LR       03 39 25.3
       comp=Z,2µm,21.9s,baz=92,slow=38
       comp=Z,4.6nm,0.7s
VRAC   Vranov             76.04 319  eP       P        03 03 02.9  -0.8
VRAC   Vranov             76.04 319   P       P        03 03 03.3  -0.4
RONA   Rosalia, Austr     76.05 318  i P      P        03 03 03.5  -0.4
       comp=Z,16nm,1.2s,SNR=7.4
KRUC   Moravsky           76.14 319  eP       P        03 03 03.3  -1.0
GKP    Gorka Klasztor     76.17 323  eP       P        03 03 03.5  -0.8
GKP    Gorka Klasztor     76.17 323  eP       P        03 03 04.7  +0.4
ARA0   ARCESS Array S     76.26 341  eP       P        03 03 04.6   0.0
ARA0                                  IVmBBB           03 03 16.3
       comp=Z,1µm,1.5s
ARA0                                 eS       S        03 12 49.8  +2.6
ARCES  ARCESS Array B     76.26 341   P       P        03 03 03.5  -1.1
       comp=Z,16nm,0.8s,baz=91,slow=5.2,SNR=26
ARCES                                 LR      LR       03 39 54.0
       comp=Z,10µm,20.7s,baz=116,slow=38
       comp=Z,16nm,0.8s
ARCES  ARCESS Array B     76.26 341   IAmb    IAmb     03 03 17.7
       comp=Z,142nm,0.9s
ARCES  ARCESS Array B     76.26 341   P       P        03 03 03.5  -1.1
DPC    Dobruska-Polom     76.34 320  eP       P        03 03 05.0  -0.5
DPC                                  ePCP     pwP      03 03 18.0  -0.1
DPC                                  eS       S        03 12 58.2  +9.3
DPC                                   AMS     AMS      03 41 30.0
       comp=Z,4µm,17.3s
DPC    Dobruska-Polom     76.34 320  eP       P        03 03 05.0  -0.5
DPC                                  e                 03 03 18.0
DPC                                   MLR     MLR
       comp=Z,4µm,17.3s
CONA   Conrad Observa     76.37 318  i P      P        03 03 05.2  -0.5
       comp=Z,18nm,1.2s,SNR=10
KSP    Ksiaz              76.42 321  eP       P        03 03 06.3  +0.5
OSTC   Ostas              76.43 320  eP       P        03 03 05.9  -0.1
OSTC                                 ex       x        03 03 13.5
OSTC                                 eS       S        03 12 56.4  +6.6
OSTC                                  AMS     AMS      03 43 40.0
       comp=Z,4µm,17.1s
OSTC   Ostas              76.43 320  eP       P        03 03 05.9  -0.1
OSTC                                 e                 03 03 13.5
OSTC                                 eS       S        03 12 56.4  +6.6
OSTC                                  MLR     MLR
       comp=Z,4µm,17.1s
UPI    Upington           76.45 239  eP       P        03 03 08.0  +1.5
UPI                                   IAmb    IAmb     03 03 19.4
       comp=Z,34nm,0.9s
ARSA   Arzberg            76.53 317  i P      P        03 03 06.8  +0.2
       comp=Z,67nm,1.6s,SNR=18
CHVC   Chvalec            76.54 320   AMS     AMS      03 41 40.0
       comp=Z,4µm,17.5s
UPC    Upice              76.56 320  eP       P        03 03 06.6   0.0
UPC                                  epP      pP       03 03 13.6   0.0
UPC                                  eS       S        03 12 45.0  -6.1
UPC                                   AMS     AMS      03 41 30.0
       comp=Z,4µm,18.5s
UPC    Upice              76.56 320  eP       P        03 03 06.6   0.0
UPC                                  e                 03 03 13.6
UPC                                  eS       S        03 12 45.0  -6.1
UPC                                   MLR     MLR
       comp=Z,4µm,18.5s
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BOJS   Bojanci            76.56 315  i P      P        03 03 06.3  -0.4
BOJS   Bojanci            76.56 315  eP       P        03 03 06.0  -0.7
VAE    Valguarnera        76.67 307   P       P        03 03 09.0  +1.4
       comp=Z,20nm,0.9s,baz=110,slow=6.3,SNR=4.9
       comp=Z,20nm,0.9s
GRAN   Grantham           76.73 235  eP       P        03 03 09.9  +1.8
GRAN                                  IAmb    IAmb     03 03 21.5
       comp=Z,48nm,0.9s
TREC   Trest              76.76 319  eP       P        03 03 07.6  -0.2
TREC                                 epP      pP       03 03 14.3  -0.5
TREC                                 ePCP     PcP      03 03 19.6  +0.5
TREC                                 eS       S        03 13 00.9  +7.4
TREC                                  AMS     AMS      03 42 00.0
       comp=Z,3µm,24.9s
TREC   Trest              76.76 319  eP       P        03 03 07.6  -0.2
TREC                                 e                 03 03 14.3
TREC                                 e                 03 03 19.6
TREC                                 eS       S        03 13 00.9  +7.4
TREC                                  MLR     MLR
       comp=Z,3µm,24.9s
SOKA   Soboth             76.81 316  i P      P        03 03 08.0  -0.2
       comp=Z,69nm,1.5s,SNR=39
KTK1   Kautokeino         76.86 340  eP       P        03 03 07.7  -0.3
KTK1                                  IVmBBB           03 03 20.5
       comp=Z,2µm,1.3s
KTK1                                 eS       S        03 12 52.2  -1.5
LJU    Ljubljana          77.11 316  i P      P        03 03 09.9  +0.1
LJU                                  e                 03 03 16.2
OBKA   Obir               77.13 316  i P      P        03 03 10.3  +0.2
       comp=Z,41nm,1.2s,SNR=16
OBKA   Obir               77.13 316  eP       P        03 03 09.3  -0.8
CEY    Cerknica           77.15 315  eP       P        03 03 09.4  -0.7
HAMF   Hammerfest         77.21 341  eP       P        03 03 10.2  +0.3
HAMF                                  IVmBBB           03 03 21.6
       comp=Z,2µm,1.5s
HAMF                                 eS       S        03 13 00.7  +3.1
FRAZ   Fraserburg         77.25 235⇓iP        P        03 03 11.9  +0.9
FRAZ                                  IAmb    IAmb     03 03 24.2
       comp=Z,77nm,1.0s
MERW   Merweville         77.36 235  eP       P        03 03 12.7  +1.1
MERW                                  IAmb    IAmb     03 03 24.6
       comp=Z,94nm,0.9s
SKDS   Skadanscina        77.43 315  eP       P        03 03 08.8  -2.9
MOA    Molln              77.43 318  i P      P        03 03 11.2  -0.5
       comp=Z,30nm,1.5s
PRU    Pruhonice          77.44 320  eP       P        03 03 11.7  +0.1
PRU                                  ex       x        03 03 18.7
PRU                                  eS       S        03 13 05.2  +4.4
PRU                                   AMS     AMS      03 42 10.0
       comp=Z,4µm,18.3s
PRU    Pruhonice          77.44 320  eP       P        03 03 11.7  +0.1
PRU                                  e                 03 03 18.7
PRU                                  eS       S        03 13 05.2  +4.4
PRU                                   MLR     MLR
       comp=Z,4µm,18.3s
PVCC   Panska Ves         77.47 320  eP       P        03 03 12.1  +0.3
PVCC                                 epP      pP       03 03 19.3  +0.5
PVCC                                  AMS     AMS      03 42 00.0
       comp=Z,4µm,18.9s
PVCC   Panska Ves         77.47 320  eP       P        03 03 12.1  +0.3
PVCC                                 e                 03 03 19.3
PVCC                                  MLR     MLR
       comp=Z,4µm,18.9s
CKRC   Cesky Krumlov      77.48 319  eP       P        03 03 11.6  -0.3
CKRC                                 ex       x        03 03 18.8
CKRC                                 eS       S        03 13 00.0  -1.4
CKRC   Cesky Krumlov      77.48 319  eP       P        03 03 11.6  -0.3
CKRC                                 e                 03 03 18.8
CKRC                                 eS       S        03 13 00.0  -1.4
VOJS   Vojsko             77.55 316  eP       P        03 03 11.8  -0.6
NOUC   Port Laguerre      77.63 114   P       P        03 03 14.8  +1.6
ARMS   Ukamas             77.67 240  eP       P        03 03 14.6  +1.2
ARMS                                  IAmb    IAmb     03 03 26.5
       comp=Z,55nm,0.8s
AQU    L'Aquila           77.68 312   IAmb    IAmb     03 03 38.9
       comp=Z,84nm,1.0s
TSUM   Tsumeb             77.71 249   P       P        03 03 12.7  -1.2
TSUM   Tsumeb             77.71 249   IAMs_20 IAMs_20  03 37 14.9
       comp=Z,3µm,19.0s
TSUM   Tsumeb             77.71 249  eP       P        03 03 15.1  +1.3
SABO   M.te Sabotino      77.75 316   IAmb    IAmb     03 03 27.5
       comp=Z,72nm,1.0s
DZM    Mont Dzumac        77.75 114  eP       P        03 03 14.4  +0.4
       comp=Z,129nm,1.3s
DZM                                  eS       S        03 13 05.6  +0.3
       comp=Z,918nm,23.7s
DZM                                  eSS      SS       03 18 07.0  +1.0
       comp=Z,1µm,32.2s
DZM                                  eLR      LR       03 27 16.6
       comp=Z,6µm,30.5s
DZM    Mont Dzumac        77.75 114   LR      LR       03 43 13.2
       comp=Z,2µm,18.2s,baz=290,slow=40
DZM    Mont Dzumac        77.75 114   P       P        03 03 13.6  -0.4
DZM                                   IAmb    IAmb     03 03 18.2
       comp=Z,243nm,1.9s
DZM    Mont Dzumac        77.75 114   P       P        03 03 16.1  +2.1
GUMA   Gualdo di Mace     77.76 313   IAmb    IAmb     03 03 28.0
       comp=Z,96nm,0.9s
BSD    Bornholm Skovb     77.76 325  eP       P        03 03 12.9  -0.3
BSD    Bornholm Skovb     77.76 325  i P      P        03 03 12.0  -1.2
BSD                                   IAmb    IAmb     03 03 26.7
       comp=Z,118nm,0.9s
MYKA   Terra Mystica      77.76 316  eP       P        03 03 13.2  -0.3
       comp=Z,49nm,1.7s,SNR=13
PRED   Cave del Predi     77.80 316   IAmb    IAmb     03 03 33.8
       comp=Z,108nm,1.0s
BIOA   Bad Ischl, Aus     77.84 317  i P      P        03 03 13.4  -0.6
       comp=Z,30nm,1.0s,SNR=13
SUR    Sutherland         77.86 235   LR      LR       03 34 52.5
       comp=Z,1µm,18.9s,baz=74,slow=34
SUR    Sutherland         77.86 235   P       P        03 03 14.4  -0.1
SUR                                   IAmb    IAmb     03 03 28.5
       comp=Z,101nm,0.9s
SUR                                   IAMs_20 IAMs_20  03 44 15.9
       comp=Z,3µm,18.0s
SUR    Sutherland         77.86 235   P       P        03 03 16.6  +2.1
SUR    Sutherland         77.86 235⇓iP        P        03 03 15.9  +1.4
SUR                                   IAmb    IAmb     03 03 28.1
       comp=Z,116nm,0.9s
GEC2   GERESS Array S     77.89 319   IAmb    IAmb     03 03 29.4
       comp=Z,111nm,0.9s
GEC2   GERESS Array S     77.89 319  eP       P        03 03 14.1  -0.1
       comp=Z,204nm,1.3s,baz=93,slow=5.4
GEC2                                 epP      pP       03 03 21.5  +0.2
       baz=93,slow=5.3
GEC2                                 esP      pwP      03 03 26.2  -0.7
       comp=Z,204nm,1.3s,baz=93,slow=5.4
GERES  GERESS Array B     77.89 319   P       P        03 03 13.9  -0.3
       comp=Z,22nm,0.7s,baz=90,slow=5.9,SNR=22
GERES                                 LR      LR       03 44 01.3
       comp=Z,1µm,18.5s,baz=96,slow=41
       comp=Z,22nm,0.7s
GERES  GERESS Array B     77.89 319   P       P        03 03 13.9  -0.3
BRG    Berggiesshubel     77.90 321  i P      P        03 03 14.1  -0.1
BRG                                   Amp              03 03 15.4
       comp=Z,43nm,1.3s
BRG    Berggiesshubel     77.90 321   P       P        03 03 21.3  +7.2
BRG                                   Amp              03 03 22.3
       comp=Z,53nm,1.2s
BRG    Berggiesshubel     77.90 321   P       P        03 03 26.9   +13
BRG                                   Amp              03 03 27.8
       comp=Z,107nm,1.2s
BRG    Berggiesshubel     77.90 321   P       P        03 03 34.7   +21
BRG                                   Amp              03 03 39.1
       comp=Z,46nm,1.0s
BRG                                   PP      PP       03 06 01.6  -8.4
BRG                                   Amp              03 06 09.8
       comp=Z,14nm,1.2s
BRG    Berggiesshubel     77.90 321   SKS     S        03 13 13.0  +7.3
BRG    Berggiesshubel     77.90 321   SS      SS       03 18 21.0   +14
BRG                                   Amp              03 42 26.0
       comp=E,1.8nm,19.1s
BRG                                   Amp              03 42 31.0
       comp=Z,4.2nm,20.6s
BRG                                   Amp              03 42 38.0
       comp=N,2.0nm,17.3s
BRG    Berggiesshubel     77.90 321  i P      P        03 03 14.0  -0.1
BRG                                                    03 03 21.3
BRG                                                    03 13 13.0
BRG                                   pmax    pmax
       comp=Z,43nm,1.3s
BRG                                   pmax    pmax
       comp=Z,53nm,1.2s
BRG                                   pmax    pmax
       comp=Z,107nm,1.2s
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BRG                                   pmax    pmax
       comp=Z,46nm,1.0s
BRG                                   pmax    pmax
       comp=Z,14nm,1.2s
BRG                                   MLR     MLR
       comp=E,2µm,19.1s
BRG                                   MLR     MLR
       comp=Z,4µm,20.6s
BRG                                   MLR     MLR
       comp=N,2µm,17.3s
BRG    Berggiesshubel     77.90 321  eP       P        03 03 14.1  -0.1
       comp=N,107nm,1.2s,baz=93,slow=5.4
BRG                                  epP      pP       03 03 21.6  +0.4
       baz=93,slow=5.3
BRG                                  esP      pwP      03 03 26.2  -0.6
       comp=N,107nm,1.2s,baz=93,slow=5.4
JETT   Jettan, Norway     77.97 340  eP       P        03 03 14.8  +0.6
JETT                                  IVmBBB           03 03 21.5
       comp=Z,801nm,0.6s
KHC    Kasperske Hory     77.99 319   IAmb    IAmb     03 03 29.7
       comp=Z,64nm,0.8s
KHC    Kasperske Hory     77.99 319  eP       P        03 03 14.2  -0.6
KHC                                  epP      pP       03 03 21.4  -0.4
KHC                                  ePCP     pwP      03 03 26.0  -1.4
KHC                                  ex       x        03 07 27.0
KHC                                  eS       S        03 13 03.8  -3.1
KHC                                   AMS     AMS      03 40 00.0
       comp=Z,3µm,23.5s
KHC    Kasperske Hory     77.99 319  eP       P        03 03 14.2  -0.6
KHC                                  e                 03 03 21.4
KHC                                  e                 03 03 26.0
KHC                                  eS       S        03 13 03.8  -3.1
KHC                                   MLR     MLR
       comp=Z,3µm,23.5s
KBA    Koelnbreinsper     78.00 317  eP       P        03 03 14.2  -0.8
       comp=Z,38nm,1.5s,SNR=17
RUE    Ruedersdorf        78.15 322  eP       P        03 03 15.7  +0.3
RUE    Ruedersdorf        78.15 322  eP       P        03 03 15.1  -0.4
       comp=Z,287nm,1.4s,baz=93,slow=5.4
RUE                                  epP      pP       03 03 22.5   0.0
       baz=93,slow=5.3
RUE                                  esP      pwP      03 03 27.2  -0.9
       comp=Z,287nm,1.4s,baz=93,slow=5.4
YATNC  Mamie plateau,     78.15 114   P       P        03 03 17.6  +1.5
OUENC  Ouen Island, N     78.18 114   P       P        03 03 16.3  +0.1
OUENC                                 IAmb    IAmb     03 03 20.7
       comp=Z,199nm,1.8s
MATJ   Matjiesfontein     78.28 234  eP       P        03 03 17.6  +0.9
FBE    Freiberg           78.28 321  eP       P        03 03 16.4  +0.2
       comp=Z,218nm,1.3s,baz=93,slow=5.4
FBE                                  epP      pP       03 03 23.8  +0.5
       baz=93,slow=5.3
FBE                                  esP      pwP      03 03 28.4  -0.5
       comp=Z,218nm,1.3s,baz=93,slow=5.4
BILL   Bilibino           78.35  22   P       P        03 03 16.2  -0.1
BILL                                  IAmb    IAmb     03 03 29.9
       comp=Z,126nm,1.2s
BILL                                  IAMs_20 IAMs_20  03 41 35.8
       comp=Z,4µm,18.0s
BILL   Bilibino           78.35  22d iP       P        03 03 16.0  -0.3
BILL                                 i                 03 03 28.7
BILL                                 e                 03 06 14.1
BILL                                 i S      S        03 13 06.8  -3.1
BILL                                 eSS      SS       03 18 20.7  +8.1
BILL                                  pmax    pmax
       comp=Z,81nm,1.4s
BILL                                  MLR     MLR
       comp=Z,5µm,15.0s
MURB   Monte Urbino       78.36 313   IAmb    IAmb     03 03 58.1
       comp=Z,90nm,1.2s
STAL   STALIGIAL          78.38 316   IAmb    IAmb     03 03 31.3
       comp=Z,153nm,0.9s
RJOB   Jochberg           78.41 317  eP       P        03 03 16.2  -0.9
       comp=Z,76nm,1.0s,baz=93,slow=5.4
CVNA   Calvinia           78.49 236  eP       P        03 03 20.4  +2.4
CVNA                                  IAmb    IAmb     03 03 31.2
       comp=Z,107nm,1.4s
TRO    Tromso             78.50 340  eP       P        03 03 16.7  -0.3
TRO                                   IVmBBB           03 03 23.8
       comp=Z,763nm,0.9s
TRO                                  eS       S        03 13 13.6  +2.2
CLL    Collm              78.53 321   IAMs_20 IAMs_20  03 43 38.1
       comp=Z,3µm,19.0s
CLL    Collm              78.53 321  i P      P        03 03 17.0  -0.6
       comp=Z,34nm,1.2s
CLL                                  i x      x        03 03 24.1
CLL                                  i PcP    sP       03 03 28.0  +0.8
       comp=Z,76nm,1.2s
CLL                                  ex       x        03 06 26.0
CLL                                  ePPP     PPP      03 07 59.0
CLL                                  eS       S        03 13 11.0  -1.5
CLL                                  ex       x        03 13 29.0
CLL                                  ePS      PnS      03 13 50.0  -6.2
CLL                                  ex       x        03 15 11.0
CLL                                  ex       x        03 17 54.0
CLL                                  eSS      SS       03 18 26.0   +10
CLL                                  eSSS     SSS      03 21 24.0
CLL                                  eSSSS             03 24 06.0
CLL                                   AMS     AMS      03 45 00.0
       comp=Z,3µm,18.3s
CLL    Collm              78.53 321  i P      P        03 03 17.0  -0.6
CLL                                  i                 03 03 28.0
CLL                                  eS       S        03 13 11.0  -1.5
CLL                                   pmax    pmax
       comp=Z,34nm,1.2s
CLL                                   MLR     MLR
       comp=Z,3µm,18.3s
CLL    Collm              78.53 321  eP       P        03 03 17.0  -0.6
       comp=Z,76nm,1.2s,baz=93,slow=5.4
CLL                                  epP      pP       03 03 24.4  -0.2
       baz=93,slow=5.3
CLL                                  esP      pwP      03 03 29.1  -1.2
       baz=93,slow=5.4
ABTA   Abfaltersbach      78.55 316  i P      P        03 03 17.3  -0.6
       comp=Z,36nm,1.5s,SNR=13
CIMO   Cimolais           78.57 316   IAmb    IAmb     03 03 31.0
       comp=Z,135nm,1.0s
RGN    Rugen              78.62 324  eP       P        03 03 17.7  -0.3
       comp=Z,106nm,1.0s,baz=93,slow=5.4
RGN                                  epP      pP       03 03 25.1  +0.1
       baz=93,slow=5.3
RGN                                  esP      pwP      03 03 29.8  -0.9
       baz=93,slow=5.4
NKC    Novy Kostel        78.80 320  eP       P        03 03 18.1  -1.1
NKC                                  ePCP     pwP      03 03 31.3  -0.6
NKC                                  eS       S        03 13 19.1  +3.6
NKC                                   AMS     AMS      03 42 50.0
       comp=Z,3µm,18.3s
NKC    Novy Kostel        78.80 320  eP       P        03 03 18.1  -1.1
NKC                                  e                 03 03 31.3
NKC                                  eS       S        03 13 19.1  +3.6
NKC                                   MLR     MLR
       comp=Z,3µm,18.3s
WIN    Windhoek           78.81 246   P       P        03 03 19.6  -0.4
WIN                                   IAmb    IAmb     03 03 33.7
       comp=Z,57nm,0.7s
WIN    Windhoek           78.81 246   P       P        03 03 19.6  -0.4
WIN                                   pmax    pmax
       comp=Z,57nm,0.7s
WIN    Windhoek           78.81 246  eP       P        03 03 21.9  +1.9
WIN                                   IAmb    IAmb     03 03 33.5
       comp=Z,22nm,0.7s
TANN   Tannenbergstha     78.81 320  eP       P        03 03 19.0  -0.3
       comp=Z,64nm,1.2s,baz=93,slow=5.4
TANN                                 epP      pP       03 03 26.4  +0.1
       baz=93,slow=5.3
TANN                                 esP      pwP      03 03 31.1  -0.9
       baz=93,slow=5.4
HOPEN  Hopen              78.83 347  eP       P        03 03 19.9  +1.1
WERN   Wernitzgruen       78.85 320  eP       P        03 03 19.4  -0.1
       comp=Z,82nm,1.3s,baz=93,slow=5.4
WERN                                 epP      pP       03 03 26.8  +0.3
       baz=93,slow=5.3
WERN                                 esP      pwP      03 03 31.5  -0.7
       baz=93,slow=5.4
LATE   Laterza            78.87 312   IAmb    IAmb     03 03 52.3
       comp=Z,110nm,1.0s
GUNZ   Gunzen             78.89 320  eP       P        03 03 19.5  -0.1
       comp=Z,109nm,1.3s,baz=93,slow=5.4
GUNZ                                 epP      pP       03 03 26.9  +0.2
       baz=93,slow=5.3
GUNZ                                 esP      pwP      03 03 31.6  -0.8
       baz=93,slow=5.4
WERD   Werda              78.91 320  eP       P        03 03 19.5  -0.3
       comp=Z,89nm,1.2s,baz=93,slow=5.4
WERD                                 epP      pP       03 03 26.9  +0.1
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             baz=93,slow=5.3
WERD                               esP      pwP      03 03 31.6  -0.9
             baz=93,slow=5.4
ROTZ  Rotzenmuhle        78.93 319 eP       P        03 03 20.1 +0.2
             comp=Z,34nm,1.3s,baz=93,slow=5.4
ROTZ                               epP      pP       03 03 27.5 +0.6
             baz=93,slow=5.3
ROTZ                               esP      pwP      03 03 32.1  -0.4
             baz=93,slow=5.4
MANZ  Manzenberg         79.00 320 eP       P        03 03 20.6 +0.3
             comp=Z,50nm,1.3s,baz=93,slow=5.4
MANZ                               epP      pP       03 03 28.0 +0.6
             baz=93,slow=5.3
MANZ                               esP      pwP      03 03 32.6  -0.4
             baz=93,slow=5.4
PLN   Plauen             79.00 320 eP       P        03 03 20.0  -0.2
             comp=Z,87nm,1.4s,baz=93,slow=5.4
PLN                                epP      pP       03 03 27.4 +0.1
             baz=93,slow=5.3
PLN                                esP      pwP      03 03 32.1  -0.9
             baz=93,slow=5.4
HFS   Hagfors            79.01 330  PP      PP       03 06 20.9 +1.8
             comp=Z,24nm,0.9s,baz=103,slow=10,SNR=3.6
HFS                                 LR      LR       03 42 42.8
             comp=Z,7µm,19.2s,baz=98,slow=39
TEOL  Teolo              79.06 315  IAmb    IAmb     03 03 35.3
             comp=Z,120nm,0.9s
CTI   Castel Tesino      79.11 316  IAmb    IAmb     03 03 36.0
             comp=Z,162nm,0.9s
WTTA  Wattenberg         79.17 317 i P      P        03 03 20.5  -1.0
             comp=Z,46nm,1.0s,SNR=22
WATA  Walderalm          79.22 317 i P      P        03 03 20.4  -1.2
             comp=Z,52nm,1.0s,SNR=16
NEUB  Neuenburg          79.29 321 eP       P        03 03 21.3  -0.5
             comp=Z,155nm,1.4s,baz=93,slow=5.4
NEUB                               epP      pP       03 03 28.7  -0.2
             baz=93,slow=5.3
NEUB                               esP      pwP      03 03 33.4  -1.1
             baz=93,slow=5.4
ELIM  Elim               79.30 233 eP       P        03 03 24.4 +2.2
ELIM                                IAmb    IAmb     03 03 26.5
             comp=Z,1µm,3.0s
LLD   Lille Linde        79.32 325 i P      P        03 03 16.2  -5.7
LLD                                 IAmb    IAmb     03 03 37.0
             comp=Z,122nm,0.9s
CER   Ceres              79.34 235 eP       P        03 03 24.4 +1.9
CER                                 IAmb    IAmb     03 03 36.0
             comp=Z,42nm,1.1s
FAUS  Fauske             79.36 337 eP       P        03 03 21.3  -0.5
FAUS                               eS       S        03 13 23.4 +2.7
MOX   Moxa               79.36 320 eP       P        03 03 22.0  -0.2
             comp=Z,125nm,1.4s,baz=93,slow=5.4
MOX                                epP      pP       03 03 29.4 +0.1
             baz=93,slow=5.3
MOX                                esP      pwP      03 03 34.0  -0.9
             baz=93,slow=5.4
MOX                                eL       L        03 45 55.1
             comp=Z,3µm,18.4s
FUR   Furstenfeldbru     79.45 318 eP       P        03 03 22.2  -0.6
             comp=Z,162nm,1.3s,baz=93,slow=5.4
FUR                                epP      pP       03 03 29.6  -0.3
             baz=93,slow=5.3
FUR                                esP      pwP      03 03 34.2  -1.3
             baz=93,slow=5.4
SQTA  Sankt Quirin       79.46 317 i P      P        03 03 22.1  -0.9
             comp=Z,35nm,0.9s,SNR=21
STEI  Steigen            79.47 338 eP       P        03 03 22.0  -0.4
STEI                                IVmB_BB          03 03 30.3
             comp=Z,1µm,1.6s
STEI                               eS       S        03 13 24.9 +3.1
MOR8  Moi Rana           79.50 336 eP       P        03 03 22.0  -0.6
MOR8                               eS       S        03 13 23.6 +1.4
ZCCA  Zocca              79.52 314  IAmb    IAmb     03 04 08.9
             comp=Z,142nm,0.8s
MOTA  Moosalm            79.54 317 i P      P        03 03 22.4  -1.0
             comp=Z,42nm,1.0s,SNR=16
GRA1  Grafenberg Arr     79.56 319  IAmb    IAmb     03 03 37.1
             comp=Z,118nm,1.0s
GRA1                                IAMs_20 IAMs_20  03 43 44.5
             comp=Z,3µm,19.0s
GRF   Grafenberg Arr     79.56 319 eP       P        03 03 23.6 +0.2
             comp=Z,175nm,1.2s,baz=93,slow=5.4
GRF                                epP      PcP      03 03 30.9  -0.3
             baz=93,slow=5.3
GRF                                esP      pwP      03 03 35.6  -0.4
             baz=93,slow=5.4
GRF                                eL       L        03 43 44.9
             comp=Z,3µm,19.0s
GRFO  Grafenberg         79.56 319  P       P        03 03 23.6 +0.3
GRFO                                IAmb    IAmb     03 03 37.1
             comp=Z,126nm,1.1s
GRFO                                IAMs_20 IAMs_20  03 43 44.5
             comp=Z,3µm,18.0s
GRFO  Grafenberg         79.56 319  P       P        03 03 23.6 +0.3
GRFO                                pmax    pmax
             comp=Z,126nm,1.1s
BJO1  Bjornoya           79.66 345 eS       S        03 13 27.6 +4.0
FLTG  Flechtingen        79.69 322 eP       P        03 03 22.7  -1.2
             comp=Z,40nm,1.2s,baz=93,slow=5.4
FLTG                               epP      pP       03 03 30.1  -0.9
             baz=93,slow=5.3
FLTG                               esP      sP       03 03 34.8 +1.2
             baz=93,slow=5.4
RETA  Reutte             79.77 317 i P      P        03 03 23.9  -0.7
             comp=Z,102nm,1.6s,SNR=33
FETA  Feichten           79.78 317 i P      P        03 03 24.2  -0.5
             comp=Z,31nm,1.0s,SNR=19
SALO  Salr               79.88 315  IAmb    IAmb     03 03 40.7
             comp=Z,189nm,1.2s
KOMG  Komaggas           80.00 238 eP       P        03 03 28.4 +2.3
KOMG                                IAmb    IAmb     03 03 39.4
             comp=Z,53nm,0.9s
PRMA  PARMA              80.01 314  IAmb    IAmb     03 03 57.1
             comp=Z,182nm,1.3s
ASSE  Asse, Remlinge     80.03 322 eP       P        03 03 25.1  -0.6
             comp=Z,47nm,1.2s,baz=93,slow=5.4
ASSE                               epP      pP       03 03 32.5  -0.2
             baz=93,slow=5.3
ASSE                               esP      pwP      03 03 37.2  -1.2
             baz=93,slow=5.4
LOF   Lofoten            80.13 338 eP       P        03 03 25.9  -0.1
LOF                                eS       S        03 13 32.1 +3.3
NC602 NORSAR Array S     80.14 331  IAmb    IAmb     03 03 40.1
             comp=Z,166nm,1.0s
NC602 NORSAR Array S     80.14 331 eP       P        03 03 25.6  -0.6
NC602                               IVmB_BB          03 03 39.4
             comp=Z,1µm,1.0s
NC602                              eS       S        03 13 35.6 +6.4
SMY   Shemya             80.17  38  P       P        03 03 27.7 +1.2
CLZ   Clausthal          80.20 321 eP       P        03 03 26.4  -0.4
             comp=Z,104nm,0.8s,baz=93,slow=5.4
CLZ                                epP      pP       03 03 33.8  -0.1
             baz=93,slow=5.3
CLZ                                esP      pwP      03 03 38.5  -1.1
             baz=93,slow=5.4
UBR   Ueberruh           80.22 317 eP       P        03 03 26.3  -0.8
             comp=Z,148nm,1.0s,baz=93,slow=5.4
UBR                                epP      pP       03 03 33.7  -0.4
             baz=93,slow=5.3
UBR                                esP      pwP      03 03 38.3  -1.4
             baz=93,slow=5.4
NC303 NORSAR Array S     80.27 331  IAmb    IAmb     03 03 48.1
             comp=Z,184nm,1.7s
NB201 NORSAR Array S     80.29 331  IAmb    IAmb     03 03 41.1
             comp=Z,259nm,1.5s
NSS   Namsos             80.31 334 eP       P        03 03 26.2  -0.8
NSS                                 IVmBBB           03 03 33.8
             comp=Z,1µm,1.4s
NB2   NORSAR Subarra     80.32 331  P       P        03 03 26.0  -1.3
             comp=Z,59nm,0.9s,baz=94,slow=5.9
NB2   NORSAR Subarra     80.32 331  P       P        03 03 26.0  -1.3
             slow=5.9
NOA   NORSAR Array B     80.32 331  P       P        03 03 26.2  -1.1
             comp=Z,5.9nm,0.7s,baz=95,slow=5.4,SNR=18
NOA                                 LR      LR       03 43 43.3
             comp=Z,5µm,18.6s,baz=100,slow=39
             comp=Z,5.9nm,0.7s
NOA   NORSAR Array B     80.32 331  P       P        03 03 26.2  -1.1
BSEG  Bad Segeberg       80.33 324 eP       P        03 03 27.1  -0.3
             comp=Z,134nm,1.3s,baz=93,slow=5.4
BSEG                               epP      PcP      03 03 34.6 +0.1
             baz=93,slow=5.3
BSEG                               esP      pwP      03 03 39.2  -0.8
             baz=93,slow=5.4
DAVA  Damuels            80.37 317 i P      P        03 03 28.1 +0.2
             comp=Z,60nm,1.0s,SNR=24
NRDL  Niedersach Rie     80.39 322 eP       P        03 03 27.8 +0.1
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             comp=Z,120nm,1.4s,baz=93,slow=5.4
NRDL                               epP      PcP      03 03 35.2 +0.6
             baz=93,slow=5.3
NRDL                               esP      pwP      03 03 39.9  -0.4
             baz=93,slow=5.4
GTTG  Gottingen          80.44 321 eP       P        03 03 27.7  -0.3
             comp=Z,111nm,1.3s,baz=93,slow=5.4
GTTG                               epP      pP       03 03 35.1   0.0
             baz=93,slow=5.3
GTTG                               esP      pwP      03 03 39.8  -0.9
             baz=93,slow=5.4
NAO01 NORSAR Array S     80.47 331  IAmb    IAmb     03 03 41.4
             comp=Z,234nm,1.4s
OSL   Oslo               80.48 330 eS       S        03 13 35.4 +2.7
NBO00 NORSAR Array S     80.54 331  IAmb    IAmb     03 03 40.3
             comp=Z,248nm,1.4s
NC204 NORSAR Array S     80.56 331  IAmb    IAmb     03 03 53.6
             comp=Z,247nm,1.5s
TUE   Stuetta            80.72 316  IAmb    IAmb     03 03 47.8
             comp=Z,100nm,0.9s
KEST  Kesra              80.72 305  P       P        03 03 30.0   0.0
             comp=Z,14nm,0.9s,baz=116,slow=2.9,SNR=10
             comp=Z,14nm,0.9s
KEST  Kesra              80.72 305  P       P        03 03 30.9 +0.9
RETH  Rethem/Aller,      80.86 322 eP       P        03 03 29.8  -0.3
             comp=Z,86nm,1.3s,baz=93,slow=5.4
RETH                               epP      pP       03 03 37.3   0.0
             baz=93,slow=5.3
RETH                               esP      pwP      03 03 42.0  -0.9
             baz=93,slow=5.4
STU   Stuttgart          80.86 318  IAMs_20 IAMs_20  03 44 39.9
             comp=Z,3µm,19.0s
STU   Stuttgart          80.86 318 eP       P        03 03 30.1  -0.2
             comp=Z,130nm,1.1s,baz=93,slow=5.4
STU                                epP      pP       03 03 37.3  -0.1
             baz=93,slow=5.3
STU                                esP      pwP      03 03 42.2  -0.9
             baz=93,slow=5.4
KONO  Kongsberg          81.03 329  P       P        03 03 31.7 +0.7
KONO                                IAmb    IAmb     03 03 44.3
             comp=Z,101nm,1.1s
KONO  Kongsberg          81.03 329  IAMs_20 IAMs_20  03 44 53.7
             comp=Z,5µm,20.0s
KONO  Kongsberg          81.03 329deP       P        03 03 30.2  -0.8
KONO                                pmax    pmax
             comp=Z,80nm,1.2s
KONO  Kongsberg          81.03 329 eP       P        03 03 30.9   0.0
KONO                               eS       S        03 13 40.8 +2.3
KONO                                IVMs_BB IVMs_BB  03 41 33.4
             comp=Z,2µm,4.2s
MUD   Monsted U'grnd     81.10 326 i P      P        03 03 31.0  -0.4
MUD                                 IAmb    IAmb     03 03 46.2
             comp=Z,98nm,1.0s
SPA0  Spitsbergen Ar     81.14 348 eP       P        03 03 32.0 +0.8
SPA0                                IVmBBB           03 03 43.0
             comp=Z,2µm,1.4s
SPA0                               eS       S        03 13 41.7 +2.6
SPITS Spitsbergen Ar     81.14 348  LR      LR       03 47 09.6
             comp=Z,5µm,19.8s,baz=80,slow=41
TNS   Taunus Mts         81.37 320 eP       P        03 03 32.8  -0.3
             comp=Z,103nm,1.4s,baz=93,slow=5.4
TNS                                epP      pP       03 03 40.2   0.0
             baz=93,slow=5.3
TNS                                esP      pwP      03 03 44.9  -1.0
             baz=93,slow=5.4
KASTN Kahler Asten       81.40 321 eP       P        03 03 32.8  -0.4
             comp=Z,53nm,1.1s,baz=93,slow=5.4
KASTN                              epP      pP       03 03 40.2  -0.1
             baz=93,slow=5.3
KASTN                              esP      pwP      03 03 44.9  -1.0
             baz=93,slow=5.4
DOMB  Dombas             81.42 332 eP       P        03 03 32.7  -0.4
DOMB                                IVmBBB           03 03 34.9
             comp=Z,1µm,4.0s
DOMB                               eS       S        03 13 42.7 +0.1
DOMB                                IVMs_BB IVMs_BB  03 43 07.8
             comp=Z,3µm,21.8s
BFO   Black Forest       81.43 318  P       P        03 03 33.2  -0.2
BFO   Black Forest       81.43 318  P       P        03 03 33.2  -0.2
BFO                                 pmax    pmax
             comp=Z,44nm,0.9s
BFO   Black Forest       81.43 318 eP       P        03 03 32.7  -0.7
             comp=Z,74nm,1.3s,baz=93,slow=5.4
BFO                                epP      pP       03 03 40.1  -0.4
             baz=93,slow=5.3
BFO                                esP      pwP      03 03 44.8  -1.4
             baz=93,slow=5.4
SKAR  Skarslia           81.72 330 eP       P        03 03 35.4 +0.7
SKAR                                IVmB_BB          03 03 47.2
             comp=Z,3µm,3.4s
SKAR                               eS       S        03 13 48.7 +2.8
SKAR                                IVMs_BB IVMs_BB  03 44 12.2
             comp=Z,2µm,9.6s
HLG   Helgoland          81.77 324 eP       P        03 03 34.7  -0.3
             comp=Z,258nm,1.4s,baz=93,slow=5.4
HLG                                esP      pwP      03 03 46.7  -1.0
             baz=93,slow=5.4
IBBN  Ibbenburen         81.83 322 eP       P        03 03 35.1  -0.3
             comp=Z,38nm,1.0s,baz=93,slow=5.4
IBBN                               epP      pP       03 03 42.5 +0.1
             baz=93,slow=5.3
IBBN                               esP      pwP      03 03 47.2  -0.9
             baz=93,slow=5.4
BUG   Bochum--Univer     82.12 321 eP       P        03 03 36.6  -0.4
             comp=Z,74nm,1.0s,baz=93,slow=5.4
BUG                                epP      pP       03 03 44.0   0.0
             baz=93,slow=5.3
BUG                                esP      pwP      03 03 48.6  -1.0
             baz=93,slow=5.4
KBS   Kingsbay           82.14 349  P       P        03 03 36.0  -0.5
KBS                                 IAmb    IAmb     03 03 49.7
             comp=Z,157nm,1.0s
KBS   Kingsbay           82.14 349  P       P        03 03 36.0  -0.5
KBS                                 pmax    pmax
             comp=Z,157nm,1.0s
KBS                                 MLR     MLR
             comp=Z,7µm,21.0s
KBS   Kingsbay           82.14 349 i P      P        03 03 36.8 +0.3
KBS   Kingsbay           82.14 349 eP       P        03 03 37.0 +0.5
KBS                                 IVmBBB           03 03 43.5
             comp=Z,718nm,1.2s
KBS                                eS       S        03 13 51.1 +1.7
KBS                                 IVMs_BB IVMs_BB  03 43 37.0
             comp=Z,2µm,24.0s
MOL   Molde              82.15 332 eP       P        03 03 37.1 +0.3
MOL                                 IVMs_BB IVMs_BB  03 48 29.0
             comp=Z,3µm,4.7s
SNART Snartemo           82.22 328 eP       P        03 03 38.5 +1.2
AHRW  Bad Neuenahr-A     82.25 320 eP       P        03 03 37.6   0.0
             comp=Z,84nm,1.3s,baz=93,slow=5.4
AHRW                               epP      pP       03 03 45.0 +0.3
             baz=93,slow=5.3
AHRW                               esP      pwP      03 03 49.6  -0.7
             baz=93,slow=5.4
AKN   Aaknes             82.40 332 eP       P        03 03 39.2 +1.0
AKN                                eSS      SS       03 19 15.7 +2.3
AKN                                 IVMs_BB IVMs_BB  03 41 55.1
             comp=Z,4µm,4.1s
ODD1  Odda               82.54 330 eP       P        03 03 39.9 +0.9
ODD1                                IVmB_BB          03 03 41.2
             comp=Z,2µm,4.2s
ODD1                               eS       S        03 13 59.0 +4.8
ODD1                               eSS      SS       03 19 20.8 +5.2
ODD1                                IVMs_BB IVMs_BB  03 42 26.2
             comp=Z,3µm,4.2s
BNI   Bardonecchia       82.59 315  IAmb    IAmb     03 03 54.1
             comp=Z,68nm,0.9s
BNI                                 IAMs_20 IAMs_20  03 44 17.9
             comp=Z,3µm,19.0s
BLS5  Blasjo             82.62 329 eP       P        03 03 40.0 +0.5
HYA   Hoyanger           82.77 331 eP       P        03 03 40.7 +0.6
BTNL  Ternell            82.85 320 dP       P        03 03 40.7  -0.1
             comp=Z,34nm,1.0s
WLF   Walferdange        82.85 319  IAmb    IAmb     03 03 56.1
             comp=Z,113nm,1.2s
WLF   Walferdange        82.85 319 dP       P        03 03 41.0 +0.2
             comp=Z,47nm,1.1s
WLF   Walferdange        82.85 319 eP       P        03 03 40.9 +0.1
             comp=Z,85nm,1.0s,baz=93,slow=5.4
WLF                                epP      pP       03 03 48.2 +0.3
             baz=93,slow=5.3
WLF                                esP      pwP      03 03 53.0  -0.6
             baz=93,slow=5.4
MEM   Membach            82.93 320 dP       P        03 03 41.0  -0.1
             comp=Z,34nm,0.9s
BHOU  Houvegnez          82.94 320 dP       P        03 03 41.4 +0.1
             comp=Z,19nm,1.0s
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CASM  Ain Smara          83.02 306  P       P        03 03 43.7 +1.6
BCLA  Clavier            83.38 320 dP       P        03 03 44.0 +0.4
             comp=Z,22nm,1.1s
RCHB  Rochefort          83.44 320 dP       P        03 03 42.9  -0.9
             comp=Z,23nm,1.0s
DFRA  Djebel Bou Aff     83.50 306  P       P        03 03 46.6 +2.0
BGES  Gesves             83.52 320 dP       P        03 03 43.8  -0.5
             comp=Z,25nm,0.9s
BMRD  Maredsous          83.73 320 dP       P        03 03 45.5 +0.2
             comp=Z,20nm,1.2s
DOU   Dourbes            83.85 320 dP       P        03 03 45.8  -0.1
             comp=Z,24nm,1.0s
DCZ   Deep Cove          83.85 137  IAmb    IAmb     03 03 48.9
             comp=Z,124nm,1.7s
SNF   Seneffe            84.03 320 dP       P        03 03 46.4  -0.4
             comp=Z,50nm,1.0s
SSB   Saint Sauveur      84.09 315  IAmb    IAmb     03 04 02.2
             comp=Z,65nm,0.9s
MLZ   Mavora Lakes       84.48 137  IAMs_20 IAMs_20  03 42 32.9
             comp=Z,4µm,21.0s
WHZ   Wether Hill Ro     84.50 137  IAMs_20 IAMs_20  03 42 47.3
             comp=Z,5µm,21.0s
MAHO  Mahon              84.59 309  P       P        03 03 50.5 +0.6
JCZ   Jackson Bay        84.63 135  P       P        03 03 50.7 +0.6
TAM   Tamanrasset        84.68 292  IAMs_20 IAMs_20  03 41 40.6
             comp=Z,4µm,18.0s
WKZ   Wanaka             84.97 136  IAMs_20 IAMs_20  03 41 45.8
             comp=Z,4µm,21.0s
FOZ   Fox Glacier        85.23 135  IAMs_20 IAMs_20  03 42 32.7
             comp=Z,4µm,20.0s
CLF   Chambon-Foret      85.50 318  IAmb    IAmb     03 04 09.1
             comp=Z,94nm,0.8s
CLF                                 IAMs_20 IAMs_20  03 44 21.6
             comp=Z,3µm,20.0s
LBZ   Lake Benmore       85.68 135  IAMs_20 IAMs_20  03 47 02.6
             comp=Z,3µm,20.0s
ETOS  Mallorca           85.71 309  P       P        03 03 54.8  -0.8
ODZ   Otahua Downs       86.14 136  IAMs_20 IAMs_20  03 43 44.9
             comp=Z,3µm,19.0s
RPZ   Rata Peaks         86.14 135  LR      LR       03 44 53.4
             comp=Z,2µm,18.0s,baz=282,slow=37
RPZ   Rata Peaks         86.14 135  IAMs_20 IAMs_20  03 44 33.0
             comp=Z,4µm,19.0s
INZ   Inchbonnie         86.22 134  IAMs_20 IAMs_20  03 42 53.0
             comp=Z,3µm,21.0s
DSZ   Denniston Nort     86.28 132  IAMs_20 IAMs_20  03 44 33.7
             comp=Z,4µm,20.0s
QRZ   Quartz Range       86.64 131  IAmb    IAmb     03 04 04.1
             comp=Z,112nm,1.0s
QRZ                                 IAMs_20 IAMs_20  03 43 45.2
             comp=Z,4µm,22.0s
NOR   Nord               86.69 352 i P      P        03 03 59.2  -0.3
NOR                                 IAmb    IAmb     03 04 13.3
             comp=Z,114nm,1.1s
OXZ   Oxford             86.77 134  IAMs_20 IAMs_20  03 45 11.5
             comp=Z,3µm,21.0s
LTZ   Lake Taylor        86.83 133  IAmb    IAmb     03 04 03.2
             comp=Z,160nm,1.7s
LTZ                                 IAMs_20 IAMs_20  03 43 36.1
             comp=Z,5µm,22.0s
THZ   Tophouse           87.09 132  IAmb    IAmb     03 04 04.4
             comp=Z,58nm,0.8s
THZ                                 IAMs_20 IAMs_20  03 43 34.2
             comp=Z,3µm,20.0s
CWF   Charnwood Fore     87.33 323 eP       P        03 04 03.2   0.0
CWF                                 IAmb    IAmb     03 04 11.6
             comp=Z,33nm,1.0s
NNZ   Nelson             87.34 132  IAMs_20 IAMs_20  03 44 05.8
             comp=Z,5µm,22.0s
HPK   Haverah Park       87.38 324 eP       P        03 04 03.7 +0.3
HPK                                 IAmb    IAmb     03 04 11.5
             comp=Z,124nm,1.2s
GVZ   Greta Valley S     87.41 134  IAMs_20 IAMs_20  03 44 46.6
             comp=Z,3µm,20.0s
EDMD  Edmundbyers        87.47 325 eP       P        03 04 04.1 +0.2
EDMD                                IAmb    IAmb     03 04 11.3
             comp=Z,75nm,1.0s
LBWR  Ladybower, Pea     87.50 323 eP       P        03 04 04.1 +0.1
LBWR                                IAmb    IAmb     03 04 12.0
             comp=Z,82nm,0.9s
KHZ   Kahutara           87.68 133  IAMs_20 IAMs_20  03 44 46.6
             comp=Z,5µm,21.0s
JMIC  Jan Mayen          87.73 341  LR      LR       03 45 22.8
             comp=Z,2µm,21.6s,baz=82,slow=37
MSVF  Nonsavu            87.83 108  LR      LR       03 45 11.3
             comp=Z,888nm,18.8s,baz=284,slow=37
MSVF  Nonsavu            87.83 108  P       P        03 04 06.0  -0.3
MSVF                                IAmb    IAmb     03 04 31.2
             comp=Z,54nm,1.0s
MSVF  Nonsavu            87.83 108  P       P        03 04 08.1 +1.7
MSVF  Nonsavu            87.83 108  P       P        03 04 06.0  -0.3
MSVF                                pmax    pmax
             comp=Z,54nm,1.0s
STNC  Stoke              87.83 323 eP       P        03 04 06.1 +0.5
STNC                                IAmb    IAmb     03 04 12.4
             comp=Z,266nm,1.9s
HIZ   Hauiti             88.00 129  IAMs_20 IAMs_20  03 44 57.3
             comp=Z,4µm,20.0s
EKA   Eskdalemuir Ar     88.09 325  PP      PP       03 07 33.7 +0.3
             comp=Z,4.9nm,0.8s,baz=85,slow=7.9,SNR=3.5
EKA                                 LR      LR       03 47 47.0
             comp=Z,3µm,20.8s,baz=71,slow=38
ESK   Eskdalemuir        88.11 325 eP       P        03 04 07.2 +0.4
ESK   Eskdalemuir        88.11 325  P       P        03 04 07.3 +0.4
ESK                                 IAmb    IAmb     03 04 21.8
             comp=Z,71nm,0.9s
ESK   Eskdalemuir        88.11 325  P       P        03 04 07.3 +0.4
ESK                                 pmax    pmax
             comp=Z,71nm,1.0s
HLM1  Long Mynd          88.31 322 eP       P        03 04 08.5 +0.6
HLM1                                IAmb    IAmb     03 04 10.2
             comp=Z,136nm,2.0s
SNZO  South Karori       88.34 132  IAMs_20 IAMs_20  03 44 37.3
             comp=Z,4µm,22.0s
TOZ   Tahuroa Road       88.37 128  IAMs_20 IAMs_20  03 42 53.3
             comp=Z,5µm,21.0s
FOEL  Foel Wylfa         88.45 323 eP       P        03 04 09.0 +0.4
TNA   Tin City           88.47  24  IAmb    IAmb     03 04 22.7
             comp=Z,56nm,0.9s
TNA   Tin City           88.47  24  P       P        03 04 08.8 +0.5
             baz=281
BHW   Baring Head        88.48 132  IAMs_20 IAMs_20  03 44 52.0
             comp=Z,4µm,21.0s
ECHE  Chera              88.63 309  P       P        03 04 10.8 +1.0
DAG   Danmarks Havn      88.75 348 i P      P        03 04 09.3  -0.2
DAG                                 IAmb    IAmb     03 04 23.0
             comp=Z,69nm,0.6s
MRZ   Mangatainoka R     88.89 131  IAmb    IAmb     03 04 41.6
             comp=Z,68nm,0.9s
MRZ                                 IAMs_20 IAMs_20  03 45 17.8
             comp=Z,4µm,20.0s
CART  Cartagena          88.90 308  P       P        03 04 11.5 +0.5
SPIA  Saint Paul Isl     88.91  33  P       P        03 04 11.7 +1.2
             baz=280
EMUR  La Murta           89.06 308  P       P        03 04 12.0 +0.2
LPW   Lampeter           89.09 322 eP       P        03 04 12.0 +0.5
ETOB  Tobarra            89.20 309  P       P        03 04 14.0 +1.5
TORD  Torodi Ar. Bea     89.20 283  P       P        03 04 13.7 +0.8
             comp=Z,7.8nm,0.7s,baz=32,slow=2.5,SNR=48
TORD                                PP      PP       03 07 43.6 +0.1
             comp=Z,2.5nm,0.9s,baz=87,slow=8.2,SNR=2.5
TORD                                PKKPbc  PKKPbc   03 21 50.9 +1.4
             comp=Z,1.2nm,0.5s,baz=303,slow=2.6,SNR=19
TORD                                LR      LR       03 42 24.4
             comp=Z,2µm,20.6s,baz=83,slow=34
             comp=Z,7.8nm,0.7s
DYA   Yadsworthy         89.26 321 eP       P        03 04 12.8 +0.4
BKZ   Black Stump Fm     89.36 129  IAmb    IAmb     03 04 43.3
             comp=Z,56nm,1.0s
BKZ                                 IAMs_20 IAMs_20  03 45 52.3
             comp=Z,5µm,21.0s
BKZ   Black Stump Fm     89.36 129  P       P        03 04 12.8  -0.3
BFZ   Birch Farm         89.40 131  IAMs_20 IAMs_20  03 48 28.2
             comp=Z,4µm,19.0s
HTL   Hartland           89.52 321 eP       P        03 04 14.2 +0.6
RSBS  Rosebush, Pemb     89.53 322 eP       P        03 04 14.2 +0.6
RSBS                                IAmb    IAmb     03 04 21.3
             comp=Z,71nm,1.2s
URZ   Urewera            89.71 128  LR      LR       03 45 54.7
             comp=Z,4µm,20.5s,baz=18,slow=37
SBD   Saint Breward      89.72 321 eP       P        03 04 14.7 +0.1
ANM   Nome               89.75  25  IAmb    IAmb     03 04 28.8
             comp=Z,134nm,1.3s
ANM   Nome               89.75  25  P       P        03 04 15.3 +0.9
             baz=284
RDOG  Red Dog Mine       89.81  21  IAmb    IAmb     03 04 28.9
             comp=Z,63nm,0.8s
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RDOG	**Red Dog Mine**	**89.81**	**21**	P	**P**	**03 04 15.0**	**+0.4**
	baz=286						
DBG	**Daneborg**	**90.06**	**345**	*i* P	**P**	**03 04 15.8**	**+0.2**
DBG				IAmb	IAmb	03 04 33.0	
	comp=Z,59nm,1.1s						
NIKH	**Nikolski High**	**90.44**	**37**	P	**P**	**03 04 18.1**	**+0.2**
	baz=281						
MXZ	**Matakaoa Point**	**90.55**	**128**	IAMs_20	IAMs_20	03 44 38.1	
	comp=Z,4µm,22.0s						
A21K	**Barrow**	**90.82**	**17**	IAMs_20	IAMs_20	03 50 24.4	
	comp=Z,4µm,19.0s						
A21K	**Barrow**	**90.82**	**17**	P	**P**	**03 04 19.6**	**+0.4**
	baz=292						
LKBA	**Tubou, Lakemba**	**90.85**	**108**	P	**P**	**03 04 23.0**	**+2.6**
ESBB	**Sonseca Array**	**90.91**	**310**	IAmb	IAmb	03 04 35.4	
	comp=Z,33nm,0.8s						
ESDC	**Sonseca Array**	**90.91**	**310**	P	**P**	**03 04 21.1**	**+0.6**
	comp=Z,8.9nm,0.8s,baz=58,slow=4.2,SNR=46						
ESDC				PP	**PP**	**03 07 58.5**	**+2.0**
	comp=Z,3.8nm,1.1s,baz=58,slow=3.2,SNR=3.5						
	comp=Z,8.9nm,0.8s						
ESDC	**Sonseca Array**	**90.91**	**310**	IAmb	IAmb	03 04 35.8	
	comp=Z,38nm,1.0s						
PAB	**San Pablo**	**91.23**	**310**	P	**P**	**03 04 21.9**	**-0.1**
PAB				IAmb	IAmb	03 04 37.4	
	comp=Z,33nm,0.8s						
PAB	**San Pablo**	**91.23**	**310**	P	**P**	**03 04 21.9**	**-0.1**
PAB				pmax	pmax		
	comp=Z,33nm,0.8s						
VNDA	**Vanda**	**91.63**	**168**	P	**P**	**03 04 23.9**	**+1.1**
	comp=Z,8.1nm,1.1s,baz=277,slow=8.1,SNR=2.6						
VNDA				LR	LR	03 40 54.6	
	comp=Z,1µm,18.8s,baz=302,slow=32						
	comp=Z,8.1nm,1.1s						
VNDA	**Vanda**	**91.63**	**168**	P	**P**	**03 04 23.9**	**+1.1**
UNV	**Unalaska Valle**	**91.64**	**36**	P	**P**	**03 04 23.7**	**+0.4**
	baz=283						
SCO	**Scoresbysund**	**92.11**	**342**	IAMs_20	IAMs_20	03 47 25.0	
	comp=Z,5µm,22.0s						
MDT	**Midelt**	**92.48**	**303**	P	**P**	**03 04 29.2**	**+1.3**
	comp=Z,7.7nm,0.8s,baz=93,slow=7.0,SNR=7.0						
MDT				PP	PP	03 08 19.3	+10
	comp=Z,15nm,1.0s,baz=79,slow=9.0,SNR=4.0						
	comp=Z,7.7nm,0.8s						
NVL	**N'lazarevskaya**	**92.63**	**199**	*e*P	**P**	**03 04 29.1**	**+1.5**
NVL				*e*S	**SKSac**	**03 15 00.9**	**+1.8**
NVL				pmax	pmax		
	comp=Z,71nm,0.9s						
NVL				MLR	MLR		
	comp=Z,2µm,17.0s						
RAO	**Raoul Island**	**92.78**	**119**	LR	LR	03 48 18.8	
	comp=Z,826nm,19.6s,baz=269,slow=37						
MVO	**Moncorvo**	**92.97**	**312**	*e*P	**P**	**03 04 31.0**	**+1.0**
GCSA	**Galena City Sc**	**93.17**	**24**	P	**P**	**03 04 31.0**	**+0.7**
	baz=291						
F21K	**Alatna River**	**93.48**	**21**	P	**P**	**03 04 31.6**	**-0.1**
	baz=295						
MTE	**Manteigas**	**93.50**	**311**	*e*P	**P**	**03 04 34.9**	**+2.5**
PBAR	**Barrancos**	**93.53**	**309**	*e*P	**P**	**03 04 33.5**	**+1.0**
D23K	**Nanushuk River**	**93.66**	**19**	P	**P**	**03 04 33.3**	**+0.8**
	baz=297						
S12K	**Black Hills**	**93.67**	**33**	P	**P**	**03 04 32.9**	**+0.2**
	baz=286						
G21K	**Allakaket**	**93.77**	**21**	P	**P**	**03 04 32.8**	**-0.2**
	baz=295						
F22K	**John River**	**93.81**	**20**	P	**P**	**03 04 33.4**	**+0.2**
	baz=296						
N16K	**Nishlik Lake**	**93.86**	**28**	P	**P**	**03 04 34.3**	**+0.8**
	baz=290						
C24K	**Franklin Bluff**	**93.91**	**18**	P	**P**	**03 04 33.3**	**-0.2**
	baz=299						
NEEM	**North Greenlan**	**94.05**	**352**	*i* P	**P**	**03 04 34.0**	**-0.4**
NEEM				IAmb	IAmb	03 04 47.7	
	comp=Z,90nm,0.7s						
TTA	**Tatalina**	**94.21**	**25**	IAmb	IAmb	03 04 49.8	
	comp=Z,55nm,1.2s						
TTA	**Tatalina**	**94.21**	**25**	P	**P**	**03 04 37.2**	**+2.0**
TTA	**Tatalina**	**94.21**	**25**	P	**P**	**03 04 35.7**	**+0.5**
	baz=292,SNR=7.9						
BORG	**Borgarnes**	**94.28**	**337**	LR	LR	03 48 34.0	
	comp=Z,4µm,21.9s,baz=74,slow=36						
G22K	**Bettles**	**94.31**	**21**	P	**P**	**03 04 35.7**	**+0.3**
	baz=296						
H21K	**Melozitna Rive**	**94.39**	**22**	IAmb	IAmb	03 05 09.3	
	comp=Z,30nm,0.9s						
H21K				IAMs_20	IAMs_20	03 50 38.8	
	comp=Z,3µm,22.0s						
H21K	**Melozitna Rive**	**94.39**	**22**	P	**P**	**03 04 36.5**	**+0.6**
	baz=295,SNR=19						
E23K	**Chandalar**	**94.43**	**19**	P	**P**	**03 04 36.2**	**+0.1**
	baz=298						
O16K	**Kokwok River B**	**94.47**	**29**	P	**P**	**03 04 36.1**	**-0.2**
	baz=290						
COLD	**Coldfoot**	**94.62**	**20**	P	**P**	**03 04 37.2**	**+0.3**
	baz=298,SNR=8.0						
SDPT	**Sand Point**	**94.63**	**33**	P	**P**	**03 04 37.0**	**-0.2**
	baz=288						
P16K	**Nushagak River**	**94.72**	**29**	P	**P**	**03 04 37.3**	**-0.1**
	baz=290						
E24K	**Your Creek**	**94.79**	**19**	P	**P**	**03 04 37.9**	**+0.1**
	baz=299,SNR=12						
H22K	**Ishtalitna Cre**	**94.82**	**22**	P	**P**	**03 04 37.9**	**0.0**
	baz=297						
D25K	**Kavik River**	**94.82**	**18**	P	**P**	**03 04 38.3**	**+0.5**
	baz=302						
K20K	**Telida**	**94.85**	**24**	IAmb	IAmb	03 05 03.4	
	comp=Z,45nm,0.8s						
K20K				IAMs_20	IAMs_20	03 54 08.2	
	comp=Z,2µm,18.0s						
K20K	**Telida**	**94.85**	**24**	P	**P**	**03 04 39.2**	**+1.1**
	baz=294,SNR=24						
O17K	**Koliganek Bris**	**94.89**	**28**	P	**P**	**03 04 38.7**	**+0.5**
	baz=291						
I21K	**Tanana**	**94.91**	**22**	IAMs_20	IAMs_20	03 50 42.5	
	comp=Z,3µm,22.0s						
I21K	**Tanana**	**94.91**	**22**	P	**P**	**03 04 38.2**	**0.0**
	baz=296						
G23K	**Bananza Creek**	**94.93**	**21**	P	**P**	**03 04 38.7**	**+0.4**
	baz=298,SNR=11						
C26K	**Camden Bay**	**94.94**	**17**	P	**P**	**03 04 39.3**	**+1.1**
	baz=303						
L19K	**White Mountain**	**94.99**	**26**	IAmb	IAmb	03 04 54.6	
	comp=Z,44nm,1.1s						
L19K				IAMs_20	IAMs_20	03 54 57.9	
	comp=Z,3µm,18.0s						
L19K	**White Mountain**	**94.99**	**26**	P	**P**	**03 04 39.4**	**+0.6**
	baz=293						
F24K	**Squaw Lake**	**95.27**	**20**	P	**P**	**03 04 40.6**	**+0.7**
	baz=300,SNR=13						
L20K	**Farewell, AK**	**95.29**	**25**	P	**P**	**03 04 40.4**	**+0.3**
	baz=294						
M19K	**Big River Lodg**	**95.30**	**26**	IAmb	IAmb	03 04 55.8	
	comp=Z,34nm,1.2s						
M19K				IAMs_20	IAMs_20	03 53 27.1	
	comp=Z,3µm,18.0s						
M19K	**Big River Lodg**	**95.30**	**26**	P	**P**	**03 04 41.1**	**+1.0**
	baz=294						
CHUM	**Lake Minchumin**	**95.34**	**24**	P	**P**	**03 04 40.4**	**+0.2**
	baz=296						
SUMG	**Summit**	**95.39**	**347**	*i* P	**P**	**03 04 41.7**	**+0.9**
SUMG				IAmb	IAmb	03 04 55.7	
	comp=Z,143nm,1.5s						
P17K	**Kvichak River**	**95.41**	**29**	P	**P**	**03 04 40.8**	**+0.2**
	baz=291						
R16K	**Pilot Point**	**95.43**	**31**	P	**P**	**03 04 41.1**	**+0.4**
	baz=290						
C27K	**Jago River**	**95.44**	**17**	P	**P**	**03 04 41.3**	**+0.7**
	baz=304						
MLY	**Manley**	**95.45**	**22**	IAMs_20	IAMs_20	03 51 20.7	
	comp=Z,3µm,21.0s						
MLY	**Manley**	**95.45**	**22**	P	**P**	**03 04 41.5**	**+0.7**
	baz=297,SNR=7.7						
Q16K	**King Salmon**	**95.49**	**29**	P	**P**	**03 04 41.2**	**+0.2**
	baz=291						
H23K	**Yukon River**	**95.52**	**21**	IAmb	IAmb	03 04 55.4	
	comp=Z,37nm,1.2s						
H23K	**Yukon River**	**95.52**	**21**	P	**P**	**03 04 40.7**	**-0.3**
	baz=298						
CAST	**Castle Rocks**	**95.64**	**24**	IAmb	IAmb	03 05 09.6	
	comp=Z,35nm,0.9s						
CAST				IAMs_20	IAMs_20	03 54 40.9	
	comp=Z,3µm,18.0s						
CAST	**Castle Rocks**	**95.64**	**24**	P	**P**	**03 04 42.9**	**+1.2**
	baz=296,SNR=18						
N19K	**Bonanza Creek**	**95.70**	**27**	IAMs_20	IAMs_20	03 48 30.6	
	comp=Z,3µm,20.0s						
N19K	**Bonanza Creek**	**95.70**	**27**	P	**P**	**03 04 42.9**	**+0.8**
	baz=293						
E25K	**Arctic Village**	**95.71**	**19**	P	**P**	**03 04 41.6**	**-0.3**
	baz=302,SNR=7.7						
TROLL	**Troll, Antarti**	**95.74**	**198**	P	**P**	**03 04 44.2**	**+2.2**
O18K	**Koktuh Hills**	**95.74**	**28**	IAMs_20	IAMs_20	03 54 22.8	
	comp=Z,2µm,19.0s						
O18K	**Koktuh Hills**	**95.74**	**28**	P	**P**	**03 04 41.4**	**-0.8**
	baz=293						
BPAW	**Bear Paw Mtn.**	**95.77**	**23**	IAmb	IAmb	03 05 13.8	
	comp=Z,38nm,1.0s						
BPAW				IAMs_20	IAMs_20	03 52 35.5	
	comp=Z,2µm,18.0s						
BPAW	**Bear Paw Mtn.**	**95.77**	**23**	P	**P**	**03 04 42.4**	**+0.2**
	baz=297,SNR=7.1						
G24K	**Hadweenzic Riv**	**95.82**	**20**	P	**P**	**03 04 42.9**	**+0.5**
	baz=300						
PPLA	**Purkeypile**	**95.82**	**25**	P	**P**	**03 04 43.2**	**+0.6**
	baz=296						
M20K	**Styx River**	**95.86**	**26**	IAmb	IAmb	03 05 01.4	
	comp=Z,22nm,0.8s						
M20K				IAMs_20	IAMs_20	03 50 02.7	
	comp=Z,3µm,20.0s						
M20K	**Styx River**	**95.86**	**26**	P	**P**	**03 04 43.4**	**+0.6**
	baz=295						
I23K	**Minto, Yukon-K**	**95.91**	**22**	IAMs_20	IAMs_20	03 51 04.9	
	comp=Z,3µm,21.0s						
I23K	**Minto, Yukon-K**	**95.91**	**22**	P	**P**	**03 04 43.4**	**+0.6**
	baz=298,SNR=6.6						
P18K	**Big Mountain,**	**95.91**	**28**	P	**P**	**03 04 42.8**	**-0.1**
	baz=292						
F25K	**Christian Rive**	**95.97**	**19**	P	**P**	**03 04 43.6**	**+0.5**
	baz=302,SNR=19						
R17K	**Ugashik Creek**	**96.00**	**30**	P	**P**	**03 04 43.6**	**+0.2**
	baz=291						
O19K	**Port Alsworth**	**96.02**	**27**	P	**P**	**03 04 43.4**	**+0.1**
	baz=293						
Q17K	**Contact Creek**	**96.02**	**30**	P	**P**	**03 04 43.5**	**-0.1**
	baz=292						
KTH	**Kantishna Hill**	**96.05**	**24**	IAMs_20	IAMs_20	03 52 41.7	
	comp=Z,3µm,19.0s						
QSPA	**South Pole Qui**	**96.07**	**180**	LR	LR	03 44 54.5	
	comp=Z,1µm,18.3s,baz=308,slow=34						
QSPA	**South Pole Qui**	**96.07**	**180**	IAMs_20	IAMs_20	03 46 06.7	
	comp=Z,3µm,20.0s						
H24K	**Noodor Dome**	**96.11**	**21**	IAMs_20	IAMs_20	03 54 05.3	
	comp=Z,4µm,20.0s						
H24K	**Noodor Dome**	**96.11**	**21**	P	**P**	**03 04 44.3**	**+0.5**
	baz=300						
G25K	**Bearman Lake**	**96.25**	**20**	P	**P**	**03 04 45.0**	**+0.7**
	baz=302						
KIC	**Kosan Boka**	**96.28**	**277**⇑	*i*PKP2	**P**	**03 04 47.2**	**+1.6**
	comp=Z,6.5nm,0.6s						
NEA2	**Nenana**	**96.28**	**22**	IAMs_20	IAMs_20	03 54 52.9	
	comp=Z,3µm,19.0s						
NEA2	**Nenana**	**96.28**	**22**	P	**P**	**03 04 44.4**	**-0.1**
	baz=299						
Q18K	**Katmai Hardscr**	**96.30**	**29**	P	**P**	**03 04 44.7**	**-0.2**
	baz=293						
BWN	**Browne**	**96.33**	**23**	IAmb	IAmb	03 05 14.9	
	comp=Z,26nm,0.9s						
TRF	**Thorofare Moun**	**96.35**	**24**	IAMs_20	IAMs_20	03 53 10.6	
	comp=Z,2µm,20.0s						
TRF	**Thorofare Moun**	**96.35**	**24**	P	**P**	**03 04 44.9**	**-0.2**
	baz=297						
DBIC	**Dimbokro**	**96.36**	**277**	P	**P**	**03 04 46.8**	**+0.9**
	comp=Z,9.3nm,0.9s,baz=89,slow=4.6,SNR=13						
DBIC				PKKPbc	**PKKPbc**	**03 21 30.3**	**-0.7**
	comp=Z,2.2nm,0.8s,baz=239,slow=3.1,SNR=5.8						
DBIC				LR	LR	03 47 43.6	
	comp=Z,2µm,18.4s,baz=86,slow=35						
	comp=Z,9.3nm,0.9s						
DBIC	**Dimbokro**	**96.36**	**277**	IAmb	IAmb	03 05 00.2	
	comp=Z,75nm,1.9s						
DBIC	**Dimbokro**	**96.36**	**277**	P	**P**	**03 04 46.8**	**+0.9**
DBIC	**Dimbokro**	**96.36**	**277**	*e*P	**P**	**03 04 45.1**	**-0.8**
DBIC				IAmb	IAmb	03 04 47.5	
	comp=Z,14nm,0.9s						
F26K	**Sheenjek River**	**96.39**	**19**	P	**P**	**03 04 45.4**	**+0.4**
	baz=304						
MDM	**Murphy Dome**	**96.42**	**22**	IAMs_20	IAMs_20	03 51 19.4	
	comp=Z,3µm,22.0s						
SKT	**Skwentna**	**96.50**	**25**	IAmb	IAmb	03 05 07.1	
	comp=Z,39nm,1.2s						
SKT				IAMs_20	IAMs_20	03 52 35.7	
	comp=Z,3µm,19.0s						
SKT	**Skwentna**	**96.50**	**25**	P	**P**	**03 04 45.9**	**+0.3**
	baz=296,SNR=5.9						
TIC	**Toumodi**	**96.52**	**277**⇓	*e*PKP2	**P**	**03 04 48.0**	**+1.3**
	comp=Z,17nm,0.7s						
LIC	**Lamto**	**96.58**	**277**⇑	*i*PKP2	**P**	**03 04 48.5**	**+1.6**
	comp=Z,22nm,0.7s						
COLA	**College**	**96.60**	**22**	P	**P**	**03 04 48.4**	**+2.5**
POKR	**Poker Plat Res**	**96.63**	**22**	IAMs_20	IAMs_20	03 51 40.1	
	comp=Z,3µm,21.0s						
POKR	**Poker Plat Res**	**96.63**	**22**	P	**P**	**03 04 46.6**	**+0.5**
	baz=300						
TULEG	**Thule**	**96.71**	**356**	IAmb	IAmb	03 05 00.9	
	comp=Z,25nm,0.9s						
TULEG	**Thule**	**96.71**	**356**	*i* P	**P**	**03 04 45.6**	**-0.7**
TULEG				IAmb	IAmb	03 05 00.5	
	comp=Z,24nm,0.9s						
WRH	**Wood River Hil**	**96.71**	**22**	IAMs_20	IAMs_20	03 55 06.2	
	comp=Z,3µm,19.0s						
P19K	**Oil Pt**	**96.74**	**28**	IAMs_20	IAMs_20	03 52 24.2	
	comp=Z,3µm,19.0s						
P19K	**Oil Pt**	**96.74**	**28**	P	**P**	**03 04 47.1**	**+0.4**
	baz=294						
MCK	**McKinley**	**96.75**	**23**	IAmb	IAmb	03 05 14.7	
	comp=Z,32nm,1.1s						
MCK	**McKinley**	**96.75**	**23**	P	**P**	**03 04 46.9**	**+0.2**
	baz=299						
CUT	**Chulitna**	**96.84**	**25**	IAMs_20	IAMs_20	03 55 21.7	
	comp=Z,2µm,18.0s						
Q19K	**Cape Douglas,**	**96.84**	**28**	IAMs_20	IAMs_20	03 53 36.0	
	comp=Z,2µm,21.0s						
E27K	**Coleen River**	**96.90**	**18**	P	**P**	**03 04 48.1**	**+0.8**
	baz=306						
G26K	**Porcupine Rive**	**96.92**	**19**	P	**P**	**03 04 48.4**	**+1.0**
	baz=304						
ILAR	**Eielson Array**	**97.01**	**22**	P	**P**	**03 04 46.9**	**-0.9**
	comp=Z,1.1nm,0.7s,baz=297,slow=4.5,SNR=21						
ILAR				PP	**PP**	**03 08 41.1**	**-2.1**
	comp=Z,7.2nm,1.0s,baz=306,slow=8.2,SNR=5.6						
ILAR				PKKPbc	**PKKPbc**	**03 21 29.4**	**-1.5**
	comp=Z,1.8nm,0.6s,baz=140,slow=2.0,SNR=24						
ILAR				LR	LR	03 53 54.5	
	comp=Z,2µm,18.2s,baz=296,slow=39						
	comp=Z,1.1nm,0.7s						
ILAR	**Eielson Array**	**97.01**	**22**	P	**P**	**03 04 46.9**	**-0.9**
SUA	**Susitna One**	**97.06**	**26**	IAMs_20	IAMs_20	03 56 22.7	
	comp=Z,2µm,19.0s						
PRP	**Porcupine Dome**	**97.11**	**21**	IAmb	IAmb	03 05 08.4	
	comp=Z,27nm,1.0s						
PRP				IAMs_20	IAMs_20	03 54 26.7	
	comp=Z,3µm,20.0s						
PRP	**Porcupine Dome**	**97.11**	**21**	P	Pdif	03 04 49.1	+0.6
	baz=302						
HDA	**Harding Lake**	**97.17**	**22**	P	Pdif	03 04 48.7	+0.1
	baz=301						
AFI	**Afiamalu**	**97.19**	**103**	LR	LR	03 51 28.3	
	comp=Z,460nm,19.7s,baz=280,slow=37						
CAPN	**Captain Cook N**	**97.20**	**26**	P	Pdif	03 04 49.2	+0.4
	baz=296						
KULLO	**Kullorsuaq**	**97.27**	**352**	*i* P	**P**	**03 04 48.8**	**0.0**
KULLO				IAmb	IAmb	03 05 02.2	
	comp=Z,74nm,0.9s						
SNAA	**Sanae**	**97.42**	**199**	P	Pdif	03 04 50.9	+1.3
SNAA	**Sanae**	**97.42**	**199**	P	Pdif	03 04 50.4	+0.7
SNAA				IAmb	IAmb	03 04 53.1	
	comp=Z,24nm,1.2s						
SNAA	**Sanae**	**97.42**	**199**⇓	*e*P	Pdif	03 04 50.5	+0.9
SNAA				pmax	pmax		
	comp=Z,26nm,1.3s						
SNAA				MLR	MLR		
	comp=Z,940nm,17.0s						
HOM	**Homer**	**97.47**	**27**	P	Pdif	03 04 50.6	+0.6
	baz=296						
RC01	**Rabbit Creek A**	**97.67**	**26**	IAMs_20	IAMs_20	03 56 50.7	
	comp=Z,2µm,19.0s						
RC01	**Rabbit Creek A**	**97.67**	**26**	P	Pdif	03 04 51.2	+0.2
	baz=298						
PMR	**Palmer**	**97.69**	**25**	P	Pdif	03 04 52.5	+1.5
PMR	**Palmer**	**97.69**	**25**	P	Pdif	03 04 51.8	+0.9
	baz=298						
G27K	**Doyon Strip**	**97.69**	**19**	P	Pdif	03 04 51.4	+0.4
	baz=306						
OHAK	**Old Harbor**	**97.71**	**30**	P	Pdif	03 04 51.7	+0.6
	baz=294						
BRLK	**Bradley Lake**	**97.77**	**27**	IAMs_20	IAMs_20	03 55 32.2	
	comp=Z,2µm,18.0s						
KDAK	**Kodiak Island**	**97.83**	**29**	IAMs_20	IAMs_20	03 50 20.0	
	comp=Z,3µm,22.0s						
BRSE	**Bradley Lake S**	**97.84**	**27**	P	Pdif	03 04 52.5	+0.8
	baz=297						
SML	**Sawmill**	**97.92**	**25**	IAmb	IAmb	03 05 27.6	
	comp=Z,27nm,0.8s						
SML	**Sawmill**	**97.92**	**25**	P	Pdif	03 04 52.6	+0.5
	baz=299						
K24K	**Donnelly Dome**	**97.93**	**22**	P	Pdif	03 04 52.7	+0.7
	baz=302						
O22K	**Cooper Landing**	**97.96**	**26**	IAMs_20	IAMs_20	03 57 02.3	
	comp=Z,3µm,19.0s						
O22K	**Cooper Landing**	**97.96**	**26**	P	Pdif	03 04 53.7	+1.5
	baz=298						
ICESG	**Greenland Ices**	**98.00**	**344**	*i* P	**P**	**03 04 50.4**	**-2.3**
ICESG				IAmb	IAmb	03 05 05.7	
	comp=Z,21nm,1.0s						
I26K	**Coal Creek Min**	**98.06**	**20**	IAMs_20	IAMs_20	03 56 44.7	
	comp=Z,3µm,21.0s						
I26K	**Coal Creek Min**	**98.06**	**20**	P	Pdif	03 04 53.3	+0.8
	baz=304						
KNK	**Knik Glacier**	**98.06**	**25**	IAmb	IAmb	03 05 27.8	
	comp=Z,25nm,1.0s						
KNK				IAMs_20	IAMs_20	03 56 03.9	
	comp=Z,3µm,18.0s						
KNK	**Knik Glacier**	**98.06**	**25**	P	Pdif	03 04 53.5	+0.8
	baz=299						
H27K	**Steamboat Moun**	**98.08**	**19**	P	Pdif	03 04 53.7	+1.0
	baz=306,SNR=8.3						
M23K	**Glacier View**	**98.18**	**25**	P	Pdif	03 04 53.6	+0.4
	baz=300						
SEW	**Seward**	**98.25**	**26**	P	Pdif	03 04 54.4	+0.9
	baz=298						
A36M	**Sachs Harbour**	**98.28**	**11**	P	**P**	**03 04 53.3**	**0.0**
	baz=322,SNR=46						
RIDG	**Independent Ri**	**98.31**	**22**	IAMs_20	IAMs_20	03 58 33.5	
	comp=Z,2µm,18.0s						
RIDG	**Independent Ri**	**98.31**	**22**	P	Pdif	03 04 53.9	+0.1
	baz=302						
SCM	**Sheep Creek Mo**	**98.33**	**24**	P	Pdif	03 04 54.3	+0.4
	baz=300						
J26L	**Joseph Creek**	**98.37**	**21**	P	Pdif	03 04 54.6	+0.5
	baz=304						
PWL	**Port Wells**	**98.38**	**26**	P	Pdif	03 04 55.1	+1.0
	baz=299						
I27K	**Kandik River**	**98.42**	**20**	P	Pdif	03 04 55.0	+0.8
	baz=306						
SCRK	**Sand Creek**	**98.50**	**22**	IAMs_20	IAMs_20	03 52 45.5	
	comp=Z,3µm,22.0s						
SCRK	**Sand Creek**	**98.50**	**22**	P	**P**	**03 04 54.6**	**-0.1**
	baz=303						
M24K	**Tolsona, Glenn**	**98.66**	**24**	IAMs_20	IAMs_20	03 55 24.7	
	comp=Z,2µm,18.0s						
M24K	**Tolsona, Glenn**	**98.66**	**24**	P	Pdif	03 04 56.7	+1.3
	baz=301						
UPNV	**Upernavik**	**98.66**	**351**	*i* P	**P**	**03 04 54.8**	**-0.2**
UPNV				IAmb	IAmb	03 05 09.6	
	comp=Z,24nm,0.9s						
HARP	**HAARP**	**98.91**	**23**	P	**P**	**03 04 56.0**	**-0.5**
	baz=302						
EGAK	**Eagle**	**99.06**	**20**	IAMs_20	IAMs_20	03 57 57.1	
	comp=Z,3µm,21.0s						
EGAK	**Eagle**	**99.06**	**20**	P	**Pdif**	**03 04 57.4**	**+0.4**
	baz=306						
KLU	**Klutina**	**99.08**	**24**	IAMs_20	IAMs_20	03 47 39.8	
	comp=Z,3µm,22.0s						
KLU	**Klutina**	**99.08**	**24**	P	**Pdif**	**03 04 57.3**	**0.0**
	baz=301						
INK	**Inuvik**	**99.13**	**16**	P	**Pdif**	**03 04 57.7**	**+0.5**
	comp=Z,4.3nm,0.8s,baz=338,slow=4.0,SNR=27						
INK				PP	**PP**	**03 08 59.4**	**+0.1**
	comp=Z,3.5nm,0.8s,baz=290,slow=7.1,SNR=6.0						
INK				LR	LR	03 56 34.6	
	comp=Z,2µm,18.1s,baz=296,slow=40						
	comp=Z,4.3nm,0.8s						
INK	**Inuvik**	**99.13**	**16**	IAmb	IAmb	03 05 11.2	
	comp=Z,41nm,1.3s						
INK	**Inuvik**	**99.13**	**16**	P	**Pdif**	**03 04 57.7**	**+0.5**
INK	**Inuvik**	**99.13**	**16**	P	**Pdif**	**03 04 57.1**	**-0.1**
	baz=314,SNR=7.0						
K27K	**Chicken**	**99.17**	**21**	P	**Pdif**	**03 04 58.3**	**+0.8**
	baz=305						
MENT	**Mentasta**	**99.17**	**23**	IAmb	IAmb	03 05 24.1	
	comp=Z,21nm,0.7s						
MENT	**Mentasta**	**99.17**	**23**	P	**Pdif**	**03 04 59.2**	**+1.6**
RES	**Resolute Bay**	**99.17**	**2**	LR	LR	03 53 41.0	
	comp=Z,1µm,21.4s,baz=357,slow=38						
RES	**Resolute Bay**	**99.17**	**2**	IAmb	IAmb	03 05 29.1	
	comp=Z,21nm,0.9s						
G30M	**tAoh Zraii Nji**	**99.27**	**17**	P	**Pdif**	**03 04 58.1**	**+0.1**
	baz=311						
L26K	**Log Cabin Wild**	**99.27**	**22**	IAMs_20	IAMs_20	03 59 11.8	
	comp=Z,3µm,18.0s						
L26K	**Log Cabin Wild**	**99.27**	**22**	P	**Pdif**	**03 04 57.4**	**-0.6**
	baz=304						
EPYK	**Eagle Plains**	**99.52**	**18**	P	**Pdif**	**03 04 59.1**	**0.0**
	baz=310,SNR=8.3						
N25K	**Chitina, Valde**	**99.56**	**24**	P	**Pdif**	**03 04 59.5**	**+0.1**
	baz=302						
F31M	**Tsiigehtchic**	**99.67**	**16**	P	**Pdif**	**03 05 00.3**	**+0.7**
	baz=313						
M26K	**Nabesna, AK**	**99.75**	**23**	IAMs_20	IAMs_20	03 54 51.6	
	comp=Z,3µm,19.0s						
M26K	**Nabesna, AK**	**99.75**	**23**	P	**Pdif**	**03 05 00.5**	**+0.2**
	baz=304						
L27K	**Beaver Creek,**	**99.82**	**22**	IAMs_20	IAMs_20	03 59 09.3	
	comp=Z,2µm,18.0s						
L27K	**Beaver Creek,**	**99.82**	**22**	P	**Pdif**	**03 05 00.9**	**+0.4**
	baz=305						
Q23K	**Middleton Isla**	**99.95**	**26**	IAMs_20	IAMs_20	03 51 18.2	
	comp=Z,3µm,18.0s						
GLB	**Gilahina Butte**	**99.96**	**24**	IAMs_20	IAMs_20	03 55 07.2	
	comp=Z,2µm,21.0s						
DAWY	**Dawson**	**100.10**	**21**	P	**Pdif**	**03 05 02.3**	**+0.6**
	baz=308						
M27K	**Edge Creek, AK**	**100.21**	**23**	IAMs_20	IAMs_20	03 59 48.6	
	comp=Z,3µm,18.0s						
M27K	**Edge Creek, AK**	**100.21**	**23**	P	**Pdif**	**03 05 03.3**	**+0.9**
	baz=305						
VRDI	**Verde Repeater**	**100.22**	**24**	IAMs_20	IAMs_20	03 55 25.1	
	comp=Z,2µm,20.0s						
MCARA	**McCarthy VSAT**	**100.31**	**24**	IAMs_20	IAMs_20	03 57 52.4	
	comp=Z,3µm,20.0s						
MCARA	**McCarthy VSAT**	**100.31**	**24**	P	**Pdif**	**03 05 03.4**	**+0.7**
	baz=304						
C36M	**Paulatuk**	**100.63**	**12**	IAMs_20	IAMs_20	03 59 28.4	
	comp=Z,3µm,19.0s						
C36M	**Paulatuk**	**100.63**	**12**	P	**Pdif**	**03 05 04.2**	**+0.3**
	baz=323						
ILULI	**Ilulissat**	**100.69**	**347**	IAMs_20	IAMs_20	03 59 15.2	
	comp=Z,3µm,19.0s						
K29M	**Barlow Dome**	**100.89**	**20**	P	**Pdif**	**03 05 06.2**	**+0.8**
	baz=309						
BARN	**Barnard Glacie**	**101.04**	**24**	IAMs_20	IAMs_20	03 56 01.6	
	comp=Z,2µm,19.0s						
L29M	**L29M**	**101.14**	**21**	P	**Pdif**	**03 05 07.7**	**+1.3**
	baz=309						
CTG	**Chitna Glacier**	**101.22**	**24**	P	**Pdif**	**03 05 08.1**	**+1.2**
	baz=305						
CTGM	**Chitina Glacie**	**101.22**	**24**	IAMs_20	IAMs_20	03 57 33.5	
	comp=Z,2µm,18.0s						
M29M	**Somme Creek**	**101.43**	**22**	P	**Pdif**	**03 05 08.9**	**+1.1**
	baz=308						
LOGN	**Logan Glacier**	**101.44**	**24**	IAMs_20	IAMs_20	03 51 45.2	
	comp=Z,2µm,22.0s						
DY2G	**Dye2**	**101.63**	**344**	*i* P	**Pdif**	**03 05 15.2**	**+6.5**
DY2G				IAmb	IAmb	03 05 22.0	
	comp=Z,75nm,1.5s						
M30M	**Minto, Yukon**	**101.95**	**21**	IAMs_20	IAMs_20	04 00 17.6	
	comp=Z,3µm,19.0s						
BCPM	**Bancas Point**	**102.50**	**24**	IAMs_20	IAMs_20	03 59 36.3	
	comp=Z,3µm,19.0s						
N31M	**Braeburn, Yuko**	**103.02**	**21**	IAMs_20	IAMs_20	04 00 53.9	
	comp=Z,2µm,21.0s						
M31M	**Drury Creek, Y**	**103.04**	**20**	IAMs_20	IAMs_20	03 56 00.4	
	comp=Z,3µm,22.0s						
M31M	**Drury Creek, Y**	**103.04**	**20**	P	**Pdif**	**03 05 14.7**	**-0.1**
	baz=312						
O30N	**Mendenhall**	**103.37**	**22**	P	**Pdif**	**03 05 15.7**	**-0.7**
	baz=310						
P33M	**Teslin, Yukon**	**104.95**	**21**	IAMs_20	IAMs_20	03 58 10.1	
	comp=Z,2µm,21.0s						
JIS	**Juneau Island**	**105.66**	**24**	IAMs_20	IAMs_20	03 55 45.9	
	comp=Z,2µm,21.0s						
YKA	**Yellowknife Ar**	**108.50**	**13**	Pdiff	**Pdif**	**03 05 40.6**	**+1.5**
	comp=Z,0.4nm,0.8s,baz=323,slow=4.3,SNR=5.6						
YKA				PKiKP	**PKiKP**	**03 09 44.3**	**-0.3**

	comp=Z,0.7nm,0.5s,baz=334,slow=2.1,SNR=7.5						
YKA				PP	PP	03 10 06.6	-2.4
	comp=Z,4.0nm,0.9s,baz=331,slow=7.4,SNR=6.6						
YKA				PKKPbc	PKKPbc	03 20 54.1	-2.9
	comp=Z,1.7nm,0.7s,baz=147,slow=3.9,SNR=4.3						
YKA				PKKPab	PKKPab	03 21 08.4	-1.0
	comp=Z,3.1nm,0.7s,baz=151,slow=5.0,SNR=19						
SACV	Santiago Islan	113.11	289	IAMs_20	IAMs_20	03 59 01.1	
	comp=Z,2μm,18.0s						
SCHQ	Schefferville	116.78	347	PKP	PKiKP	03 10 00.7	0.0
	comp=Z,2.4nm,0.8s,baz=28,slow=5.6,SNR=6.7						
SCHQ				PP	PP	03 11 08.3	+0.2
	comp=Z,4.9nm,0.7s,baz=20,slow=10.0,SNR=4.7						
SCHQ				PKKPbc	PKKPbc	03 20 27.2	-1.9
	comp=Z,3.3nm,0.7s,baz=188,slow=2.7,SNR=13						
FFC	Flin Flon	118.18	9	PKPdf	PKiKP	03 10 03.8	+0.4
FFC	Flin Flon	118.18	9	PKIKP	PKiKP	03 10 03.8	+0.4
TBI	Tubuai	118.32	113	*e*LR	LR	03 46 03.8	
	comp=Z,6μm,22.8s						
TBI				*e*LR	LR	03 46 03.8	
	comp=Z,35μm,22.2s						
PPT2	Papeete2	118.62	107	*e*LR	LR	03 46 12.8	
	comp=Z,1μm,30.5s						
PPT2				*e*LR	LR	03 46 12.8	
	comp=Z,2μm,26.8s						
B08A	Colville Reser	119.03	24	PKPdf	PKiKP	03 10 05.3	0.0
NEW	Newport	119.96	22	P	PKPdf	03 10 06.7	-0.4
	baz=326						
MSO	Missoula	122.34	21	P	PKPdf	03 10 11.2	-0.6
	baz=329						
EGMT	Eagleton	122.66	17	IAMs_20	IAMs_20	04 10 20.1	
	comp=Z,2μm,22.0s						
EGMT	Eagleton	122.66	17	P	PKPdf	03 10 12.3	+0.1
	baz=334,SNR=16						
PLID	Pearl Lake	123.02	24	IAMs_20	IAMs_20	04 11 34.1	
	comp=Z,2μm,20.0s						
ULM	Lac du Bonnet	123.38	6	PKP	PKPdf	03 10 12.8	-0.7
	comp=Z,7.7nm,0.6s,baz=8.7,slow=2.4,SNR=18						
ULM				PP	PP	03 11 53.6	+0.4
	comp=Z,18nm,1.1s,baz=349,slow=5.7,SNR=5.6						
ULM				PKKPbc	PKKPbc	03 20 05.0	+0.5
	comp=Z,1.1nm,0.5s,baz=184,slow=1.4,SNR=4.2						
ULM	Lac du Bonnet	123.38	6	PKIKP	PKPdf	03 10 12.8	-0.7
MOD	Modoc Plateau	123.67	29	IAMs_20	IAMs_20	04 15 26.6	
	comp=Z,2μm,21.0s						
DGMT	Dagmar	123.71	13	P	PKPdf	03 10 14.3	+0.1
	baz=340						
DLMT	Dillon	124.08	21	IAMs_20	IAMs_20	04 14 18.8	
	comp=Z,2μm,19.0s						
BOZ	Bozeman (W)	124.21	20	IAMs_20	IAMs_20	04 12 41.3	
	comp=Z,2μm,19.0s						
BOZ	Bozeman (W)	124.21	20	P	PKPdf	03 10 15.5	+0.1
	baz=331,SNR=8.7						
HOPS	Hopland Field	124.41	33	IAMs_20	IAMs_20	04 04 26.5	
	comp=Z,2μm,21.0s						
LAO	LASA Array	124.87	15	IAMs_20	IAMs_20	04 12 18.5	
	comp=Z,3μm,21.0s						
LAO	LASA Array	124.87	15	P	PKiKP	03 10 17.0	+0.1
	baz=337						
HLID	Hailey	124.92	23	IAMs_20	IAMs_20	04 15 13.4	
	comp=Z,2μm,22.0s						
HLID	Hailey	124.92	23	P	PKiKP	03 10 17.5	+0.2
	baz=327						
MDND	Maddock	125.21	10	P	PKiKP	03 10 17.3	-0.1
	baz=346						
AGMN	Agassiz Nation	125.31	7	P	PKPdf	03 10 17.0	-0.2
	baz=350						
RLMT	Red Lodge	125.41	19	P	PKiKP	03 10 18.4	+0.2
	baz=333,SNR=9.1						
H17A	Grant Village	125.62	20	P	PKiKP	03 10 19.1	+0.4
	baz=332,SNR=7.4						
IMW	Indian Meadow	125.94	21	IAMs_20	IAMs_20	04 12 42.0	
	comp=Z,3μm,21.0s						
EYMN	Ely	126.03	3	IAMs_20	IAMs_20	04 11 55.7	
	comp=Z,2μm,20.0s						
EYMN	Ely	126.03	3	P	PKiKP	03 10 19.1	0.0
	baz=355,SNR=6.4						
PKME	Peaks-Kenny Pk	126.22	344	IAMs_20	IAMs_20	04 14 25.5	
	comp=Z,2μm,20.0s						
PKME	Peaks-Kenny Pk	126.22	344	P	PKPdf	03 10 18.3	-0.7
	baz=23						
AHID	Auburn Hatcher	126.86	21	IAMs_20	IAMs_20	04 16 25.6	
	comp=Z,2μm,19.0s						
WVL	Waterville	126.96	344	IAMs_20	IAMs_20	04 07 30.2	
	comp=Z,3μm,22.0s						
NVAR	Mina Array Bea	127.32	30	PKP	PKiKP	03 10 22.8	+0.6
	comp=Z,9.5nm,0.6s,baz=312,slow=2.3,SNR=73						
BW06	Boulder Array	127.41	20	P	PKPdf	03 10 21.2	-0.6
	baz=332						
PDAR	Pinedale Array	127.41	20	PKP	PKPdf	03 10 21.1	-0.6
	comp=Z,9.5nm,0.7s,baz=103,slow=2.6,SNR=47						
PDAR				PP	PP	03 12 21.3	+0.6
	comp=Z,5.4nm,1.0s,baz=339,slow=2.2,SNR=2.1						
HWUT	Hardware Ranch	127.69	23	IAMs_20	IAMs_20	04 15 07.6	
	comp=Z,2μm,20.0s						
RSSD	Black Hills	127.83	15	PKPdf	PKPdf	03 10 22.4	-0.1
RSSD	Black Hills	127.83	15	IAMs_20	IAMs_20	04 10 54.7	
	comp=Z,3μm,22.0s						
RSSD	Black Hills	127.83	15	PKIKP	PKPdf	03 10 22.4	-0.1
RSSD	Black Hills	127.83	15	P	PKPdf	03 10 21.9	-0.5
	baz=339						
LBNH	Lisbon	127.86	346	IAMs_20	IAMs_20	04 16 55.3	
	comp=Z,2μm,19.0s						
TAOE	Nuku Hiva Isla	127.97	96	*e*SS	SS	03 29 39.2	+0.1
	comp=Z,375nm,32.3s						
TAOE	Nuku Hiva Isla	127.97	96	*e*LR	LR	03 50 32.5	
	comp=Z,2μm,24.0s						
LONY	Lake Ozonia	128.09	348	P	PKiKP	03 10 23.1	-0.2
	baz=17						
DUG	Dugway, Tooele	128.40	25	P	PKiKP	03 10 24.3	+0.1
	baz=328,SNR=33						
HNH	Hanover	128.45	346	IAMs_20	IAMs_20	04 18 43.4	
	comp=Z,2μm,20.0s						
K22A	Casper	128.49	18	P	PKPdf	03 10 23.2	-0.5
	baz=336						
RCBR	Riachuelo	128.50	267	PKIKP	PKiKP	03 10 36.9	+12
RCBR	Riachuelo	128.50	267	*e*P	PKPdf	03 10 23.9	-0.4
SUSD	Miller	128.62	10	P	PKPdf	03 10 23.4	-0.3
	baz=346						
SPMN	Marine on St.	128.65	5	P	PKPdf	03 10 23.9	+0.2
	baz=354						
R11A	Troy Canyon, C	128.70	28	P	PKiKP	03 10 24.9	-0.1
	baz=324,SNR=36						
VES	Vestal, Richgr	128.87	33	P	PKiKP	03 10 25.1	0.0
	baz=318,SNR=6.1						
GRAC	Grapevine Rang	128.90	31	P	PKiKP	03 10 25.7	+0.5
	baz=321						
CWC	Cottonwood Cre	128.96	32	P	PKPdf	03 10 24.8	0.0
	baz=320						
PKM	Mcpherson Peak	129.17	34	P	PKiKP	03 10 26.5	+0.5
	baz=317						
GLMI	Grayling	129.18	357	P	PKiKP	03 10 25.6	+0.1
	baz=3.9						
ISA	Isabella, Lake	129.33	33	P	PKiKP	03 10 26.0	-0.2
	baz=319						
HRV	Adam Dziewonsk	129.39	345	IAMs_20	IAMs_20	04 09 07.3	
	comp=Z,2μm,20.0s						
HRV	Adam Dziewonsk	129.39	345	P	PKiKP	03 10 25.7	-0.2
	baz=21						
WES	Weston	129.44	344	IAMs_20	IAMs_20	04 18 11.6	
	comp=Z,2μm,19.0s						
BCX	Boston College	129.44	344	IAMs_20	IAMs_20	04 19 31.8	
	comp=Z,3μm,22.0s						
TPNV	Topopah Spring	129.49	30	P	PKiKP	03 10 26.2	-0.3
	baz=322,SNR=9.5						
ARVC	Arvin	129.54	33	P	PKiKP	03 10 26.5	0.0
	baz=318						
MPMC	Manual Prospec	129.55	31	P	PKiKP	03 10 26.9	+0.2
	baz=320,SNR=19						
FURC	Furnace Creek,	129.56	31	P	PKiKP	03 10 26.9	+0.5
	baz=321						
ECSD	EROS Data Cent	129.69	8	P	PKiKP	03 10 26.4	-0.2
	baz=348,SNR=13						
L61B	Northampton	129.73	346	IAMs_20	IAMs_20	04 17 31.3	
	comp=Z,2μm,20.0s						
L61B	Northampton	129.73	346	P	PKiKP	03 10 26.9	+0.3
	baz=20						
LRMC	Laurel Mtn Rad	129.89	32	P	PKiKP	03 10 27.4	0.0
	baz=320						
BRYW	Bryant College	129.93	344	IAMs_20	IAMs_20	04 14 00.7	
	comp=Z,2μm,19.0s						
M65A	Busby, Falmout	130.01	343	IAMs_20	IAMs_20	04 19 56.0	
	comp=Z,2μm,20.0s						
PHWY	Pilot Hill	130.05	17	IAMs_20	IAMs_20	04 15 21.6	
	comp=Z,2μm,21.0s						
EDW2	Edwards Air Fo	130.18	33	P	PKiKP	03 10 27.7	-0.2
	baz=319,SNR=11						
O20A	White River Ci	130.20	21	P	PKPdf	03 10 27.3	+0.2
	baz=333						
N23A	Red Feather La	130.27	18	P	PKPdf	03 10 27.4	+0.2
	baz=336						
SHOC	Shoshone, Teco	130.30	31	P	PKiKP	03 10 28.3	+0.3
	baz=322,SNR=7.2						
DECC	Green Verdugo	130.47	34	P	PKiKP	03 10 28.3	-0.1
	baz=318						
GSC	Goldstone, Bar	130.49	32	P	PKiKP	03 10 29.5	+1.0
	baz=321,SNR=11						
SNCC	San Nicolas Is	130.53	36	P	PKiKP	03 10 29.3	+0.9
	baz=316						
BINY	Binghamton	130.70	349	P	PKiKP	03 10 28.3	-0.4
	baz=15						
RRX	Edison Barstow	130.72	32	P	PKiKP	03 10 28.9	+0.1
	baz=320						
NBCL	Cascavel-CE	130.77	270	*e*P	PKPdf	03 10 28.4	-0.1
TUQ	Turquoise Moun	130.84	31	P	PKPdf	03 10 28.5	+0.1
	baz=322,SNR=6.3						
BFSC	Mount Baldy Ra	130.84	33	P	PKiKP	03 10 29.2	-0.1
	baz=319						
YLE	Yale	130.86	345	IAMs_20	IAMs_20	04 16 04.9	
	comp=Z,2μm,21.0s						
FMP	Fort Macarthur	130.89	34	P	PKiKP	03 10 29.5	+0.3
	baz=318						
WVNY	West Valley, N	130.96	351		PKPdf	03 10 28.3	+0.1
BRIGG	Briggsdale	131.04	17	IAMs_20	IAMs_20	04 14 21.9	
	comp=Z,2μm,20.0s						
CIS	Catalina Islan	131.05	35	P	PKiKP	03 10 29.2	-0.4
	baz=318						
L56A	Greenwood	131.06	350	PKPdf	PKPdf	03 10 28.6	+0.2
WSPT	Westport, CT	131.09	346	IAMs_20	IAMs_20	04 10 58.4	
	comp=Z,2μm,21.0s						
HEC	Hector,Ludlow	131.10	32	P	PKPdf	03 10 28.4	-0.4
	baz=321						
JFWS	Jewell Farm	131.11	2	P	PKPdf	03 10 27.9	-0.6
	baz=357						
BBRC	Big Bear Solar	131.22	33	P	PKPdf	03 10 29.5	+0.3
	baz=320						
OGNE	Ogallala	131.32	14	P	PKPdf	03 10 29.2	+0.1
	baz=341						
ISCO	Idaho Springs	131.37	18	IAMs_20	IAMs_20	04 19 43.7	
	comp=Z,2μm,20.0s						
ISCO	Idaho Springs	131.37	18	P	PKPdf	03 10 29.6	+0.2
	baz=336						
PAL	Palisades	131.39	346	P	PKPdf	03 10 28.9	-0.1
	baz=18						
ERPA	Erie	131.44	352	P	PKPdf	03 10 29.2	+0.1
	baz=10						
GMRC	Granite Mounta	131.48	31	P	PKiKP	03 10 30.3	-0.2
	baz=322,SNR=12						
RKT	Rikitea	131.51	115	*e*LR	LR	03 52 11.0	
	comp=Z,387μm,39.2s						
MURC	Murrieta	131.58	33	P	PKPdf	03 10 29.8	+0.1
	baz=319						
BGNE	Belgrade	131.71	11	P	PKPdf	03 10 29.2	-0.4
	baz=346						
BELC	Belle Mtn. Jos	131.91	32	P	PKPdf	03 10 30.8	+0.4
	baz=321,SNR=7.2						
PFO	Pinyon Flats O	131.97	33	IAMs_20	IAMs_20	04 20 59.7	
	comp=Z,1μm,20.0s						
PFO	Pinyon Flats O	131.97	33	P	PKiKP	03 10 31.5	-0.1
	baz=320						
TPFO	Pinon Flats	131.98	33	P	PKiKP	03 10 31.2	-0.4
	baz=320,SNR=6.2						
109C	Camp Elliot, M	132.16	34	IAMs_20	IAMs_20	04 10 22.0	
	comp=Z,2μm,22.0s						
M53A	WI Miller and	132.20	353	P	PKPdf	03 10 30.8	+0.3
	baz=9.4						
IRM	Iron Mountain	132.24	31	P	PKiKP	03 10 32.0	0.0
	baz=322,SNR=12						
Q24A	Divide	132.28	18	P	PKPdf	03 10 31.0	-0.2
	baz=336						
BC3	Big Chuckawall	132.47	32	P	PKPdf	03 10 31.0	-0.5
	baz=321,SNR=7.1						
MONP2	Monument Peak	132.54	33	P	PKPdf	03 10 30.8	-1.0
	baz=320,SNR=7.1						
SSPA	Standing Stone	132.57	350	IAMs_20	IAMs_20	04 15 53.3	
	comp=Z,3μm,21.0s						
SSPA	Standing Stone	132.57	350	P	PKPdf	03 10 31.0	-0.3
	baz=13						
PDMCI	Parker Dam,Lak	132.63	30	P	PKPdf	03 10 31.4	-0.2
	baz=323,SNR=8.1						
MVCO	Mesa Verde	132.68	23	IAMs_20	IAMs_20	04 17 60.0	
	comp=Z,2μm,22.0s						
MVCO	Mesa Verde	132.68	23	P	PKPdf	03 10 31.5	-0.5
	baz=331,SNR=7.2						
S22A	4UR Ranch, Cre	132.82	21	P	PKPdf	03 10 31.9	-0.3
	baz=334						
SWSC	Sam W. Stewart	132.83	33	P	PKPdf	03 10 31.7	-0.3
	baz=320						
IKP	In-Ko-Pah, Jac	132.89	33	P	PKPdf	03 10 31.9	-0.4
	baz=320,SNR=6.6						
WUAZ	Wupatki	132.94	27	IAMs_20	IAMs_20	04 21 18.8	
	comp=Z,2μm,22.0s						
WUAZ	Wupatki	132.94	27	P	PKPdf	03 10 32.3	-0.1
	baz=327						
KSCO	Kaye Shedlock’	132.98	16	P	PKPdf	03 10 32.4	+0.1
	baz=340						
GLA	Glamis	133.27	32	P	PKPdf	03 10 32.6	-0.3
	baz=322,SNR=6.1						
SDCO	Great Sand Dun	133.28	19	IAMs_20	IAMs_20	04 19 41.2	
	comp=Z,2μm,20.0s						
SDCO	Great Sand Dun	133.28	19	P	PKPdf	03 10 32.4	-0.7
	baz=335						
O53A	New Philadelph	133.44	353	P	PKPdf	03 10 33.0	+0.1
	baz=8.8						
DUB01	Friburgo-RJ	133.49	245	*e*P	PKPdf	03 10 33.0	-0.5
HDIL	Hopedale	133.50	2	P	PKPdf	03 10 32.7	-0.3
	baz=358						
ACSO	Alum Creek Sta	133.64	355	IAMs_20	IAMs_20	04 12 40.3	
	comp=Z,2μm,21.0s						
ACSO	Alum Creek Sta	133.64	355	P	PKPdf	03 10 33.1	-0.2
	baz=6.4						
SFIN	Lafayette	133.69	359	P	PKPdf	03 10 33.1	-0.3
	baz=0.8						
O48B	Farmland	133.76	357	P	PKPdf	03 10 32.5	-1.0
	baz=3.5						
CBKS	Cedar Bluff	133.88	13	P	PKPdf	03 10 32.4	-1.5
	baz=343						
W18A	Petrified Fore	133.99	25	P	PKPdf	03 10 33.7	-0.7
	baz=329,SNR=6.4						
P52A	Corning	134.15	354	IAMs_20	IAMs_20	04 13 08.8	
	comp=Z,2μm,22.0s						
P52A	Corning	134.15	354	P	PKPdf	03 10 33.8	-0.5
	baz=7.7						
T25A	Trinidad	134.19	19	P	PKPdf	03 10 33.3	-1.4
	baz=337						
KSU1	Kansas State U	134.22	10	P	PKPdf	03 10 34.1	-0.4
	baz=348						
P49A	Miami Univ. Ec	134.46	357	P	PKPdf	03 10 34.9	+0.1
	baz=4.1						
214A	Organ Pipe Nat	135.17	31	P	PKPdf	03 10 36.2	-0.2
	baz=323						
ANMO	Albuquerque	135.46	22	IAMs_20	IAMs_20	04 19 49.0	
	comp=Z,2μm,20.0s						
ANMO	Albuquerque	135.46	22	P	PKPdf	03 10 37.0	-0.1
	baz=333						
WCI	Wyandotte Cave	135.82	358	P	PKPdf	03 10 38.1	+0.7
	baz=2.0						
TUC	Tucson	135.88	28	IAMs_20	IAMs_20	04 11 34.8	
	comp=Z,1μm,20.0s						
TUC	Tucson	135.88	28	P	PKPdf	03 10 38.3	+0.5
	baz=326						
CCM	Cathedral Cave	135.89	4	PKPdf	PKPdf	03 10 37.8	+0.2
CCM	Cathedral Cave	135.89	4	IAMs_20	IAMs_20	04 21 45.8	
	comp=Z,2μm,20.0s						
CCM	Cathedral Cave	135.89	4	PKIKP	PKPdf	03 10 37.8	+0.2
CCM	Cathedral Cave	135.89	4	P	PKPdf	03 10 37.5	-0.1
	baz=355						
Y22D	IRIS PASSCAL I	136.05	23	IAMs_20	IAMs_20	04 22 49.8	
	comp=Z,2μm,19.0s						
Y22D	IRIS PASSCAL I	136.05	23	P	PKPdf	03 10 38.3	+0.1
	baz=332						
Y22F	Passcal Instru	136.05	23	P	PKPdf	03 10 38.0	-0.2
	baz=332						
BLA	Blacksburg	136.32	352	P	PKPdf	03 10 38.4	-0.1
	baz=10						
121A	Cookes Peak, D	137.04	25	P	PKPdf	03 10 39.6	-0.5
	baz=330						
AMTX	Amarillo	137.10	17	P	PKPdf	03 10 40.0	-0.1
	baz=339						
PET01	Itanhaem-SP	137.25	241	*e*P	PKPdf	03 10 39.7	-0.7
VAO	Valinhos	137.36	243	*e*P	PKPdf	03 10 40.1	-0.7
TUL1	Leonard	137.47	10	P	PKPdf	03 10 37.6	-3.0
	baz=348						
SPB	Sao Paulo	137.59	242	IAMs_20	IAMs_20	04 05 34.6	
	comp=Z,2μm,19.0s						
MSTX	Muleshoe	137.62	19	P	PKPdf	03 10 39.3	-1.7
	baz=338						
CNNC	Cliffs of the	137.80	348	P	PKPdf	03 10 40.5	-0.7
	baz=14						
WVT	Waverly	137.94	0		PKPdf	03 10 41.1	-0.3
WVT	Waverly	137.94	0	PKIKP	PKPdf	03 10 41.1	-0.3
WVT	Waverly	137.94	0	P	PKPdf	03 10 40.9	-0.5
	baz=360						
RCLB	Rio Claro- Sao	138.03	243	*e*P	PKPdf	03 10 41.6	-0.4
EPT	El Paso	138.23	24	IAMs_20	IAMs_20	04 21 40.8	
	comp=Z,2μm,21.0s						
CNLB	Canela	138.31	232	*e*P	PKPdf	03 10 41.6	-0.8
TIJ01	Guaruva-PR	138.38	238	*e*P	PKPdf	03 10 42.2	-0.4
KMSC	Kings Mountain	138.49	352	P	PKPdf	03 10 42.1	-0.3
	baz=9.5						
MNTX	Cornudas Mount	138.75	23	P	PKPdf	03 10 42.5	-0.5
	baz=333						
MIAR	Mount Ida	139.14	7	P	PKPdf	03 10 42.4	-1.2
	baz=351						
PLTB	Pedras Altas	139.22	227	*e*P	PKPdf	03 10 43.5	-0.4
OXF	Oxford	139.52	2	P	PKPdf	03 10 43.2	-1.1
	baz=357						
FRTB	Fartura	139.53	241	*e*P	PKPdf	03 10 44.1	-0.6
BDFB	Brasilia	139.97	253	PKhKP	PKPpre	03 10 38.2	
	comp=Z,2.4nm,0.5s,baz=229,slow=4.0,SNR=4.7						
BDFB				PKP	PKiKP	03 10 47.1	-1.1
	comp=Z,10nm,0.7s,baz=135,slow=4.6,SNR=10						
BDFB				PP	PP	03 13 44.0	+1.3
	comp=Z,2.7nm,0.7s,baz=131,slow=11,SNR=1.6						
BDFB	Brasilia	139.97	253	PKPdf	PKPdf	03 10 44.3	-1.5
BDFB	Brasilia	139.97	253	PKIKP	PKPdf	03 10 44.3	-1.5
BDFB	Brasilia	139.97	253	*e*P	PKPdf	03 10 44.7	-1.1
SMTB	Santa Maria do	140.15	264	*e*P	PKPdf	03 10 45.3	-0.7
ITAB	Concordia	140.23	234	*e*P	PKPdf	03 10 45.5	-0.3
ALGR	Alto Alegre (B	140.24	231	*e*P	PKPdf	03 10 45.3	-0.6
TMAB	Tom-Au,PA,Br	140.34	274	*e*P	PKPdf	03 10 46.0	-0.4
LRAL	Lakeview Retre	141.02	359	P	PKPdf	03 10 46.8	-0.3
	baz=1.1						
RODS	Rosario do Sul	141.12	228	*e*P	PKPdf	03 10 47.0	-0.3
PTGB	Pitanga	141.19	238	*e*P	PKPdf	03 10 47.4	-0.3
FRBT	Francisco Belt	141.52	235	*e*P	PKPdf	03 10 47.4	-0.8
TXAR	Lajitas Array	141.52	23	PKhKP	PKPpre	03 10 45.5	
	comp=Z,2.1nm,0.6s,baz=13,slow=2.2,SNR=13						
TXAR				PP	PP	03 13 51.4	+1.3
	comp=Z,1.6nm,0.8s,baz=28,slow=4.2,SNR=2.3						
PCMB	Pacaembu	141.57	243	*e*P	PKPdf	03 10 48.1	-0.4
CRSM	Crissiumal (Br	141.64	232	*e*P	PKPdf	03 10 48.3	-0.1
JCT	Junction City	141.77	17	P	PKPdf	03 10 49.2	+0.5
	baz=340						
435B	Jarrell	142.07	14	P	PKPdf	03 10 49.3	+0.2
	baz=344						
PLCA	Paso Flores	142.30	201	PKhKP	PKPpre	03 10 45.9	
	comp=Z,8.6nm,0.7s,baz=186,slow=1.9,SNR=33						
PLCA	Paso Flores	142.30	201	*e*P	PKPdf	03 10 48.5	-0.8
PRPB	Parauapebas	142.34	268	*e*P	PKPdf	03 10 49.3	-0.7
ITQB	Itaqui	142.53	228	PKPdf	PKPdf	03 10 49.9	0.0
ITQB	Itaqui	142.53	228	*e*P	PKPdf	03 10 49.3	-0.6
AZCA	Azaras, Argent	142.87	230	*e*P	PKPdf	03 10 49.9	-0.6
MCR1	Marechal Candi	142.94	237	*e*P	PKPdf	03 10 50.3	-0.5
HKT	Hockley	143.26	12	PKPdf	PKPbc	03 10 48.5	+0.4
HKT	Hockley	143.26	12	PKIKP	PKPbc	03 10 48.5	+0.5
ARAG	Araguaiana, MT	143.56	252	*e*P	PKPdf	03 10 51.8	-0.2
SNDB	Serra Nova Dou	143.61	258	*e*P	PKPdf	03 10 52.0	-0.2
C2SB	Chapadao do Su	143.81	247	*e*P	PKPdf	03 10 52.0	-0.4
MECA	Mercedes	143.86	227	*e*P	PKPdf	03 10 51.6	-0.6
MCPB	Macapa, AP	143.97	278	*e*P	PKPbc	03 10 50.8	0.0
LR04	Corral	144.05	199	PKPdf	PKPdf	03 10 51.5	-0.8
AMBA	Amambai (Brazi	144.35	239	*e*P	PKPbc	03 10 52.4	+0.8
CPUP	Villa Florida	144.77	232	PKP	PKPbc	03 10 52.9	+0.1
	comp=Z,64nm,0.7s,baz=107,slow=3.4,SNR=147						
CPUP	Villa Florida	144.77	232	PKIKP	PKPbc	03 10 52.9	0.0
CPUP	Villa Florida	144.77	232	*e*P	PKPab	03 10 51.2	-1.6
KVTX	Kingsville	145.08	16	IAMs_20	IAMs_20	04 22 57.4	
	comp=Z,2μm,20.0s						
ANWB	Willy Bob	145.14	313	IAMs_20	IAMs_20	04 18 08.8	
	comp=Z,1μm,20.0s						
ANWB	Willy Bob	145.14	313	*e*	PKPbc	03 10 51.1	-3.1
DWPF	Disney Wildern	145.40	350	P	PKPdf	03 10 55.4	+0.4
	baz=11						
ANBD	Bethesda, Anti	145.52	312	*e*	PKPdf	03 10 54.9	-0.5
ABD	La Joyeuse, An	145.68	311	IAMs_20	IAMs_20	04 19 19.4	
	comp=Z,1μm,20.0s						
ABD	La Joyeuse, An	145.68	311	*e*	PKiKP	03 10 59.0	-0.8
SMRT	St. Maarten	145.80	315	IAMs_20	IAMs_20	04 15 24.3	
	comp=Z,2μm,21.0s						
SMRT	St. Maarten	145.80	315	*e*	PKiKP	03 11 00.9	+0.8
MAGL	Barre de l’ile	145.84	310	IAMs_20	IAMs_20	04 15 26.0	
	comp=Z,2μm,21.0s						
MAGL	Barre de l’ile	145.84	310	*e*	PKiKP	03 10 59.0	-1.2
AQDB	Aquidauana	145.85	242	*e*P	PKPdf	03 10 55.4	-0.6
PP1B	Ponte de Pedra	145.99	248	*e*P	PKPdf	03 10 55.8	-0.5
CBE	Ff, Capester	146.02	311	*e*	PKPbc	03 10 57.4	+0.2
MBFL	Flemmings, Mon	146.04	312	*e*	PKPab	03 10 58.2	+0.5
MLYT	Lee's Yard	146.04	312	*e*	PKiKP	03 10 59.7	-0.8
SABA	Saba	146.21	315	IAMs_20	IAMs_20	04 13 55.1	
	comp=Z,2μm,22.0s						
SABA	Saba	146.21	315	*e*	PKiKP	03 11 00.9	0.0
ILAM	Ilet Lapin Mar	146.24	308	*e*	PKPdf	03 10 45.9	-11
ESFA	Espinillo Form	146.35	233	*e*P	PKPdf	03 10 56.2	-0.5
MALB	Monte Alegre	146.38	276	*e*P	PKPdf	03 10 56.4	-0.6
MPOM	Morne Pois Mar	146.42	308	IAMs_20	IAMs_20	04 15 02.4	
	comp=Z,2μm,22.0s						
MPOM	Morne Pois Mar	146.42	308	*e*	PKPdf	03 10 56.2	-0.8
SVN	Savane Anatole	146.43	309	IAMs_20	IAMs_20	04 12 56.6	
	comp=Z,2μm,22.0s						
FDF	Fort de France	146.47	308	IAMs_20	IAMs_20	04 20 00.8	
	comp=Z,1μm,20.0s						
FDF	Fort de France	146.47	308	*e*	PKiKP	03 11 00.8	-0.7
BIM	Bigot	146.54	308	IAMs_20	IAMs_20	04 14 54.6	
	comp=Z,1μm,21.0s						
BIM	Bigot	146.54	308	*e*	PKPdf	03 10 51.1	-6.1
SLBI	Saint Lucia, B	146.75	307	*e*	PKPdf	03 10 53.6	-3.9
MCLT	Moule a Chique	146.90	307	*e*	PKPab	03 11 01.2	+0.1
SLB	Belfond	146.92	307	*e*	PKiKP	03 11 01.9	-0.5
MURT	Porto Murtinho	147.07	239	*e*P	PKPdf	03 10 57.0	-0.9
PANT	Pantanal (Braz	147.16	244	*e*P	PKPdf	03 10 59.1	+0.9
SALV	Santo Antonio	147.17	250	*e*P	PKPdf	03 10 59.3	+1.1
SVB	Belmont	147.40	306	*e*	PKiKP	03 11 04.1	+0.7
SJG	San Juan	147.85	319	IAMs_20	IAMs_20	04 17 29.9	
	comp=Z,2μm,22.0s						
NPGB	Novo Progresso	147.86	267	*e*P	PKPdf	03 10 59.5	0.0
TOSP	Speyside	147.88	303	*e*	PKPab	03 11 05.1	+0.1
GCMP	Grenada, Carri	147.98	305	*e*	PKPab	03 11 05.9	+0.6
GRTK	Grand Turk	148.06	330	IAMs_20	IAMs_20	04 16 40.1	
	comp=Z,2μm,20.0s						
CLDB	Colider	148.11	259	*e*P	PKPdf	03 11 00.4	+0.5
ITTB	Itaituba	148.12	272	*e*P	PKPdf	03 11 00.4	+0.4
OBIP	Obispado Ponce	148.19	319		PKPdf	03 10 58.8	-1.1
GRHS	Sauteurs	148.30	305	*e*	PKPab	03 11 06.2	-0.4
GRGR	Grenville	148.36	305	IAMs_20	IAMs_20	04 26 18.4	
	comp=Z,1μm,20.0s						
GRGR	Grenville	148.36	305	*e*P	PKPdf	03 11 00.6	+0.3
GRGR	Grenville	148.36	305	*e*	PKiKP	03 11 05.4	+0.1
CRPR	Cabo Rojo, PR	148.54	320		PKPdf	03 11 00.1	-0.4
PEL	Peldehue	148.83	208	IAMs_20	IAMs_20	04 23 52.4	
	comp=Z,1μm,19.0s						
TRN	Trinidad (W)	148.95	302	*e*	PKiKP	03 11 07.6	+1.0
SDDR	Presa de Saban	150.24	327	IAMs_20	IAMs_20	04 20 45.2	
	comp=Z,2μm,22.0s						
PTLB	Pontes e Lacer	150.50	249	*e*P	PKPdf	03 11 02.9	-0.7
BBSD	Serra de San D	151.34	245	*e*P	PKPdf	03 11 04.7	-0.2
BOAV	Boa Vista	151.56	287	*e*P	PKPbc	03 11 11.2	-0.4
BOAV	Boa Vista	151.56	287	*e*P	PKPdf	03 11 01.9	-3.5
VILB	Vilhena	152.07	254	*e*P	PKPdf	03 11 06.1	0.0
LCO	Las Campanas	152.16	213	IAMs_20	IAMs_20	04 29 38.3	
	comp=Z,2μm,19.0s						
UNM	Universidad Na	152.27	24	IAMs_20	IAMs_20	04 29 22.4	
	comp=Z,2μm,21.0s						
MACA	Manacapuru-AM	152.91	275	*e*P	PKPdf	03 11 07.3	0.0
TEIG	Tepich	153.78	1		PKiKP	03 11 16.4	+0.1
TEIG				IAMs_20	IAMs_20	04 29 00.5	
	comp=Z,1μm,20.0s						
TEIG	Tepich	153.78	1	*e*P	PKPbc	03 11 16.0	-0.2
HATO	Hato, Curacao	153.94	314	IAMs_20	IAMs_20	04 22 31.9	
	comp=Z,1μm,21.0s						
SAML	Samuel	155.54	262	PKPdf	PKPdf	03 11 10.3	-0.7
SAML	Samuel	155.54	262	PKIKP	PKPdf	03 11 10.3	-0.7
SAML	Samuel	155.54	262	*e*P	PKPdf	03 11 10.7	-0.3
LVC	Limon Verde	155.58	226	*e*P	PKPdf	03 11 10.7	-0.7
TEFE	Tefe	156.87	275	*e*P	PKPdf	03 11 11.9	-0.9
SDV	Santo Domingo	157.35	311	PKPdf	PKPdf	03 11 12.6	-1.1
SDV				IAMs_20	IAMs_20	04 34 06.9	
	comp=Z,1μm,20.0s						
SDV	Santo Domingo	157.35	311	*e*P	PKPdf	03 11 13.2	-0.5

LPAZ	La Paz	158.35	241	PKP	PKPdf	03 11 15.7	+0.4
	comp=Z,11nm,0.6s,baz=87,slow=0.4,SNR=43						
LPAZ	La Paz	158.35	241	PKIKP	PKPdf	03 11 15.7	+0.4
LPAZ	La Paz	158.35	241	eP	PKPdf	03 11 14.1	-1.2
ETMB	Extrema	158.41	259	eP	PKPdf	03 11 13.6	-1.1
SGCB	S£o Gabriel d	158.52	285	eP	PKPdf	03 11 14.0	-0.8
TGUH	Tegucigalpa,Un	159.91	359	IAMs_20	IAMs_20	04 31 44.1	
	comp=Z,2µm,20.0s						
BRRC	Barranca, Sant	160.81	313	eP	PKPdf	03 11 18.0	+0.5
RUSC	La Rusia	161.13	309	eP	PKPdf	03 11 16.0	-2.4
PTGC	Puerto Gaitan,	161.36	303	eP	PKPdf	03 11 16.0	-2.0
PTBC	PUERTO BERRIO,	161.73	313	eP	PKPdf	03 11 17.0	-1.5
ACON	Acoyapa	161.82	352	eP	PKPdf	03 11 18.0	-0.5
SPBC	San Pablo de B	162.04	311	eP	PKPdf	03 11 18.0	-0.9
APAC	Apartado, Choc	162.17	321⇑	eP	PKPdf	03 11 18.9	0.0
TBTG	Tabatinga, AM	162.17	275	eP	PKPdf	03 11 18.6	-0.3
ROSC	El Rosal	162.74	309	PKP	PKPdf	03 11 20.5	+0.5
	comp=Z,14nm,0.6s,baz=191,slow=23,SNR=8.1						
ROSC	El Rosal	162.74	309	PKIKP	PKPdf	03 11 20.5	+0.5
ROSC	El Rosal	162.74	309	eP	PKPdf	03 11 18.0	-2.0
HDC	Heredia	163.56	347	eP	PKPdf	03 11 19.4	-0.9
PRAC	Prado	163.88	307	eP	PKPdf	03 11 18.9	-1.7
MACC	Macarena, Meta	163.90	300	eP	PKPdf	03 11 18.0	-2.6
ORTC	Ortega, Tolima	164.04	308	eP	PKPdf	03 11 19.9	-0.9
AZU	Azuero	164.29	332	eP	PKPdf	03 11 18.9	-2.0
CZSB	Cruzeiro do Su	165.03	263	eP	PKPdf	03 11 21.1	-0.4
GARC	Garzon, Huila	165.26	304	eP	PKPdf	03 11 21.8	-0.3
JAMC	Jamundi, Valle	165.58	310	eP	PKPdf	03 11 20.9	-1.5
POPC	Popayan, Colom	166.01	308	eP	PKPdf	03 11 21.8	-0.9
BBAC	Balboa, Cauca	166.77	308	eP	PKPdf	03 11 22.8	-0.5
BONI	La Bonita	167.91	303	eP	PKPdf	03 11 24.7	+0.6
OTAV	Otavalo	168.79	304	eP	PKPdf	03 11 24.5	-0.5

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*IDC **14** 03:03:33.4±1.8, 36°.14N×28°.33E, h62^{km}±24^{km}, mb3.8/6, mbtmp4.0/12, ML4.0/6, Error ellipse: s-maj=21.5km s-min=16.6km az=154.0*

*DDA **14** 03:03:33.4±0.0, 36°.25N×28°.34E, h58^{km}±2^{km}, MW3.8*

*ISK **14** 03:03:33.1, 36°.12N×28°.27E, h30^{km}, ML3.8/9*

*ATH **14** 03:03:34.4, 36°.24N×28°.29E, h57^{km}±2^{km}, ML3.8/1, Error ellipse: s-maj=3.1km s-min=1.4km az=3.0*

*THE **14** 03:03:34.9, 36°.21N×28°.29E, h54^{km}±1^{km}, ML3.6/9, Error ellipse: s-maj=1.2km s-min=0.5km az=93.0*

*NIC **14** 03:03:34.3±0.0, 35°.93N×28°.39E, h30^{km}±1^{km}, Ml3.6/7*

*GII **14** 03:03:34.4±0.6, 36°.05N×28°.53E, h60^{km}, Mm3.6/7*

ISC 14 03:03:33.0±0.7**, 36°.13N**±0°.03×**28°.35E**±0°.02**, h58**^{km}±6^{km}**, n137, **σ1^{s}**.34**/190**, mb3.9**/6**, 1C-2D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.20	295	P	Pn	03 03 42.9	+0.6
ARG				S	Sn	03 03 49.3	+0.3
	15µm,0.4s						
ARG	Arkhangelos	0.20	295⇓	iP	Pn	03 03 42.9	+0.6
ARG				S	Sn	03 03 49.3	+0.3
ARG				AML	AML	03 03 49.5	
	13nm,0.3s						
ARG				AML	AML	03 03 49.5	
	13nm,0.3s						
ARG				AML	AML	03 03 49.7	
	47nm,0.4s						
ARG				AML	AML	03 03 49.7	
	47nm,0.4s						
ARG	Arkhangelos	0.20	295	P	Pn	03 03 42.8	+0.6
ARG				S	Sn	03 03 49.1	+0.1
ARG				AML	AML	03 03 49.8	
	comp=N,13192µm,0.3s						
ARG				AML	AML	03 03 50.0	
	comp=E,46252µm,0.4s						
TURN	Turunc	0.65	352	Pg	Pn	03 03 47.0	+0.4
TURN				Sg	Sn	03 03 56.3	-0.1
TURN	Turunc	0.65	352	SPECP		03 03 46.0	
TURN				P	Pn	03 03 47.0	+0.4
TURN				S	Sn	03 03 56.1	-0.3
DALY	Dalyan (Mula)	0.73	19	Pg	Pn	03 03 48.1	+0.6
DALY				Sg	Sn	03 03 58.3	+0.2
IZZE	Mula-Seydike	0.77	66	SPECP		03 03 48.0	
IZZE				P	Pn	03 03 48.9	+0.9
IZZE				S	Sn	03 03 59.1	+0.1
FETY	Fethiye	0.78	49	Pg	Pn	03 03 48.7	+0.6
FETY				Sg	Sn	03 04 00.7	+1.5
FETY	Fethiye	0.78	49	P	Pn	03 03 48.8	+0.6
FETY				S	Sn	03 03 59.7	+0.5
DAT	Datca	0.86	314	P	Pn	03 03 49.3	0.0
DAT				S	Sn	03 04 00.6	-0.8
DAT	Datca	0.86	314	Pg	Pn	03 03 49.3	0.0
DAT				Sg	Sn	03 04 00.6	-0.8
DAT	Datca	0.86	314	P	Pn	03 03 49.3	0.0
DAT				S	Sn	03 03 59.6	-1.7
KSL	Kastellorizon	1.00	88	P	Pn	03 03 52.8	+1.9
KSL				S	Sn	03 04 06.4	+2.3
	comp=E,4µm,0.5s						
KSL	Kastellorizon	1.00	88⇑	eP	Pn	03 03 52.7	+1.9
KSL				S	Sn	03 04 05.3	+1.1
KSL				AML	AML	03 04 07.3	
	comp=E,11nm,0.9s						
KSL				AML	AML	03 04 07.3	
	comp=E,11nm,0.9s						
KSL				AML	AML	03 04 08.8	
	comp=E,6.9nm,0.6s						
KSL				AML	AML	03 04 08.8	
	comp=E,6.9nm,0.6s						
KSL	Kastellorizon	1.00	88	P	Pn	03 03 52.6	+1.7
KSL				S	Sn	03 04 06.5	+2.3
YER	Yerkesik	1.00	357	P	Pn	03 03 51.6	+0.5
YER				S	Sn	03 04 03.6	-0.9
YER	Yerkesik	1.00	357	Pg	Pn	03 03 51.9	+0.8
YER				Sg	Sn	03 04 05.1	+0.6
AKAS	Kas	1.02	84	Pn	Pn	03 03 53.1	+1.8
AKAS	Kas	1.02	84	P	Pn	03 03 52.9	+1.5
NISR	Nisiros	1.10	296	P	Pn	03 03 52.2	0.0
NISR				S	Sn	03 04 05.5	-1.1
	comp=E,2µm,0.5s						
NISR	Nisiros	1.10	296	P	Pn	03 03 52.2	0.0
NISR				S	Sn	03 04 05.5	-1.1
KARP	Karpathos	1.13	239	P	Pn	03 03 53.8	+1.1
KARP				S	Sn	03 04 08.6	+1.2
	comp=E,2µm,0.1s						
KARP	Karpathos	1.13	239⇓	iP	Pn	03 03 53.9	+1.1
KARP				S	Sn	03 04 07.6	+0.2
KARP				AML	AML	03 04 09.1	
	comp=E,5.6nm,0.4s						
KARP				AML	AML	03 04 09.1	
	comp=E,5.6nm,0.4s						
KARP				AML	AML	03 04 09.2	
	comp=E,5.2nm,0.1s						
KARP				AML	AML	03 04 09.2	
	comp=E,5.2nm,0.1s						
KARP	Karpathos	1.13	239	P	Pn	03 03 53.9	+1.2
KARP	Karpathos	1.13	239	P	Pn	03 03 54.0	+1.2
BDRM	Kayabasi	1.19	322	P	Pn	03 03 53.1	-0.3
BDRM				S	Sn	03 04 06.2	-2.4
MLSB	Milas	1.25	338	Pn	Pn	03 03 54.3	-0.1
CAEL	Denizli, Camel	1.26	38	SPECP		03 03 56.0	
CAEL				P	Pn	03 03 56.1	+1.6
KOSK	Kos Island	1.27	300	P	Pn	03 03 54.3	-0.2
KOSK				S	Sn	03 04 09.8	-0.8
	comp=E,2µm,0.5s						
KOSK	Kos Island	1.27	300	Pn	Pn	03 03 54.3	-0.2
KOSK				Sn	Sn	03 04 09.6	-1.0
KOSK	Kos Island	1.27	300	P	Pn	03 03 54.4	-0.1
ELL	Elmali	1.40	63	P	Pn	03 03 58.4	+2.0
ELL				S	Sn	03 04 17.4	+3.5
TAVA	DENIZLI_Tavas	1.41	18	SPECP		03 03 57.0	
TAVA				P	Pn	03 03 57.2	+0.7
TAVA				S	Sn	03 04 13.3	-0.8
GOLH	Golhisar	1.47	41	SPECP		03 03 58.0	
GOLH				P	Pn	03 03 58.7	+1.4
AYDN	Tasoluk	1.57	346	SPECP		03 03 58.0	
AYDN				P	Pn	03 03 59.0	+0.2
DNIZ	Denizli-Tavas-	1.59	20	P	Pn	03 03 59.5	+0.5
DNIZ				S	Sn	03 04 18.0	-0.5
DDIM	Aydin, Didim	1.60	326	SPECP		03 03 58.0	
DDIM				P	Pn	03 03 58.9	-0.1
AKUM	Antalya-Kumluc	1.62	83	P	Pn	03 04 01.1	+1.9
AKUM				S	Sn	03 04 18.2	-0.9
GCAM	G?zelcaml?	1.81	331	P	Pn	03 04 01.2	-0.6
KORT	Korkueli	1.83	61	SPECP		03 04 04.0	
KORT				P	Pn	03 04 04.6	+2.4
KORT				S	Sn	03 04 25.0	+0.6
SMG	Samos	1.99	323	P	Pn	03 04 03.6	-0.7
SMG				S	Sn	03 04 26.9	-1.2
	comp=E,888nm,0.3s						
ZKR	Zakros	2.01	240	P	Pn	03 04 06.7	+2.1
ZKR				S	Sn	03 04 29.7	+1.0
	comp=E,695nm,0.6s						
ZKR	Zakros	2.01	240	Pn	Pn	03 04 06.0	+1.4
STIA	Sitia Lasithi	2.06	244	P	Pn	03 04 06.5	+1.2
STIA				S	Sn	03 04 30.6	+0.8
STIA	Sitia Lasithi	2.06	244	P	Pn	03 04 07.2	+1.9
BRDR	BURDUR-Merkez	2.08	41	SPECP		03 04 06.0	
BRDR				P	Pn	03 04 06.5	+0.9
DGB	zmir	2.25	329	P	Pn	03 04 06.7	-1.1
THR8	Santorini-Mono	2.34	278	P	Pn	03 04 09.4	+0.4
SANT	Santorini	2.35	277	Pn	Pn	03 04 09.7	+0.4
MANT	Manisa	2.36	4	P	Pn	03 04 09.1	-0.5
PASA	Karahalli, USA	2.39	22	P	Pn	03 04 09.8	-0.1
PASA				S	Sn	03 04 34.9	-3.2
KULA	Kula-Manisa	2.39	6	P	Pn	03 04 09.7	-0.2
THR6	Thira Island,	2.40	276	P	Pn	03 04 10.5	+0.6
THR3	Thira Island,	2.40	278	P	Pn	03 04 10.3	+0.4
CMBO	Columbo, Santo	2.41	279	P	Pn	03 04 09.9	0.0
FRMA	Ierapetra Chan	2.41	243	P	Pn	03 04 10.4	+0.4
FRMA				S	Sn	03 04 37.4	-0.9
FRMA	Ierapetra Chan	2.41	243	P	Pn	03 04 10.6	+0.6
ISP	Isparta	2.42	45	Pn	Pn	03 04 11.2	+0.9
ISP	Isparta	2.42	45	P	Pn	03 04 11.1	+0.8
APE	Apeiranthos	2.46	293	P	Pn	03 04 10.9	+0.2
APE				S	Sn	03 04 38.8	-0.8
	comp=E,428nm,0.8s						
APE	Apeiranthos	2.46	293	Pn	Pn	03 04 10.9	+0.2
APE	Apeiranthos	2.46	293	Pn	Pn	03 04 10.8	+0.1
BLCB	Balcova	2.48	335	P	Pn	03 04 10.3	-0.7
KZIL	AFYON_Kizioren	2.56	33	SPECP		03 04 11.0	
KZIL				P	Pn	03 04 11.9	-0.2
ZEYE	Izmir, Urla-Ze	2.57	325	SPECP		03 04 10.0	
ZEYE				P	Pn	03 04 10.9	-1.3
URLA	Izmir	2.63	328	P	Pn	03 04 10.8	-2.3
URLA				S	Sn	03 04 34.7	-9.1
USAK	Uak-Merkez	2.63	11	P	Pn	03 04 12.6	-0.6
KEPZ	Antalya-Kepez	2.73	73	SPECP		03 04 16.0	
KEPZ				P	Pn	03 04 16.1	+1.7
HRKL	Herakleio	2.77	254	Pn	Pn	03 04 15.9	+1.0
HRKL	Herakleio	2.77	254	P	Pn	03 04 15.8	+0.9
AKHS	Akhisar	2.78	351	SPECP		03 04 14.0	
AKHS				P	Pn	03 04 14.7	-0.4
DEMI	Demirci	2.92	6	P	Pn	03 04 16.6	-0.4
IDI	Anoyia	2.94	254	P	Pn	03 04 17.8	+0.5
	comp=E,24nm,0.3s,baz=53,slow=6.6,SNR=200						
IDI				S	Sn	03 04 48.8	-2.6
	comp=E,238nm,0.5s,baz=262,slow=13,SNR=15						
	comp=E,78nm,0.4s						
IDI	Anoyia	2.94	254	P	Pn	03 04 17.6	+0.3
IDI				S	Sn	03 04 51.7	+0.2
	comp=E,408nm,0.4s						
IDI	Anoyia	2.94	254	Pn	Pn	03 04 17.9	+0.5
IDI	Anoyia	2.94	254	P	Pn	03 04 17.8	+0.5
KARB	zmir-Karabur	2.96	329	SPECP		03 04 17.0	
KARB				P	Pn	03 04 17.1	-0.4
ZEDA	zmir-Bergama	3.01	341	SPECP		03 04 17.0	
ZEDA				P	Pn	03 04 17.5	-0.6
AFYO	Afyonkarahisar	3.07	30	SPECP		03 04 18.0	
AFYO				P	Pn	03 04 18.9	-0.3
STEP	BALIKESIR_Sava	3.28	351	SPECP		03 04 21.0	
STEP				P	Pn	03 04 22.0	0.0
AKMS	Akamas	3.43	108	P	Pn	03 04 24.9	+0.9
AKMS				AML	AML	03 05 05.7	
	comp=E,3.4nm,0.5s						
AKMS				AML	AML	03 05 06.2	
	comp=E,3.3nm,0.3s						
DURS	Dursunbey	3.47	2	P	Pn	03 04 24.3	-0.3
DURS				S	Sn	03 04 55.7	-8.7
OSC1	CSNet OBS 1	3.56	137	P	Pn	03 04 25.2	-0.6
ALFC	Alefka	3.59	104	P	Pn	03 04 27.2	+1.0
ALFC				AML	AML	03 05 08.8	
	comp=E,2.0nm,0.3s						
ALFC				AML	AML	03 05 16.6	
	comp=E,1.6nm,0.3s						
NATA	Nata	3.70	110	P	Pn	03 04 28.4	+0.7
NATA				AML	AML	03 05 11.7	
	comp=E,8.8nm,0.6s						
NATA				AML	AML	03 05 19.8	
	comp=E,6.5nm,0.6s						
GVD	Gavdhos	3.71	251	P	Pn	03 04 29.5	+1.7
GVD				S	Sn	03 05 10.3	0.0
SZAC	Souni	3.94	109	P	Pn	03 04 32.2	+1.2
SZAC				AML	AML	03 05 18.3	
	comp=E,3.6nm,0.2s						
SZAC				AML	AML	03 05 21.2	
	comp=E,2.6nm,0.4s						
ASGA	Asgata	4.21	107	P	Pn	03 04 35.6	+0.9
CSS	Mathiatis	4.22	105	P	Pn	03 04 35.5	+0.6
CSS	Mathiatis	4.22	105	Pn	Pn	03 04 35.5	+0.6
CSS				Sn	Sn	03 05 20.6	-2.3
ATHAL	Athalassa	4.22	102	S	Sn	03 05 24.7	+1.8
MVOU	Mavrovouni	4.44	103	S	Sn	03 05 28.6	+0.4
BRTR	Keskin Array B	5.51	48	P	Pn	03 04 53.5	+1.0
	comp=E,1.1nm,0.3s,baz=226,slow=16,SNR=26						
BRTR				S	Sn	03 05 53.0	-1.5
	comp=E,7.6nm,0.6s,baz=214,slow=26,SNR=6.8						
	comp=E,3.3nm,0.6s						
OFRI	\`Ofer	6.50	121	Pn	Pn	03 05 04.8	-1.3
OFRI				Sn	Sn	03 06 15.9	-3.1
MMA0B	Mount Meron ar	6.59	116	Pn	Pn	03 05 07.3	-0.1
MMAI	Mount Meron Ar	6.59	116	P	Pn	03 05 07.1	-0.2
	comp=E,12nm,0.3s,baz=300,slow=13,SNR=73						
MMAI				S	Sn	03 06 16.8	-4.4
	comp=E,27nm,0.5s,baz=306,slow=25,SNR=18						
	comp=E,14nm,0.4s						
GEM	Giv'at Ha'Em	6.69	114	Pn	Pn	03 05 08.4	-0.2
GEM				Sn	Sn	03 06 20.9	-2.5
GEM	Giv'at Ha'Em	6.69	114	P	Pn	03 05 11.6	+3.0
SLTI	Sal'it	6.76	123	Pn	Pn	03 05 08.7	-0.9
SLTI				Sn	Sn	03 06 23.2	-2.1
SLTI	Sal'it	6.76	123	P	Pn	03 05 10.7	+1.1
MMLI	Mount Malkishu	6.91	120	Pn	Pn	03 05 11.0	-0.7
MMLI				Sn	Sn	03 06 26.4	-2.6
SALP	Salfit	6.97	124	Pn	Pn	03 05 12.3	-0.2
SALP				Sn	Sn	03 06 27.7	-2.7
SHMJ	Saham	7.00	117	P	Pn	03 05 15.0	+2.1
QRNJ	Al-Qirein	7.08	120	P	Pn	03 05 15.4	+1.5
HMDT	Nahal Hemdat	7.09	121	Pn	Pn	03 05 13.7	-0.4
HMDT				Sn	Sn	03 06 30.9	-2.4
AMAZ	Amatzia	7.13	128	Pn	Pn	03 05 13.6	-1.1
AMAZ				Sn	Sn	03 06 32.2	-2.1
UJAP	Al Uja	7.22	123	Sn	Sn	03 06 33.9	-2.6
KZIT	Kziot	7.25	134	Pn	Pn	03 05 16.6	+0.3
YTIR	Yattir	7.37	128	Pn	Pn	03 05 16.9	-1.1
YTIR				Sn	Sn	03 06 37.7	-2.6
YTIR	Yattir	7.37	128	P	Pn	03 05 18.6	+0.6
DSI	Dead Sea	7.41	126	Pn	Pn	03 05 18.0	-0.4
DSI				Sn	Sn	03 06 38.9	-2.1
MDBI	Mazsada	7.56	127	Pn	Pn	03 05 19.8	-0.7
MDBI				Sn	Sn	03 06 41.9	-2.8
MDBI	Mazsada	7.56	127	P	Pn	03 05 20.5	0.0
MSBI	Mazada	7.56	127	Pn	Pn	03 05 20.7	+0.2
MSBI				Sn	Sn	03 06 42.2	-2.5
KARJ	KARJ	7.87	127	P	Pn	03 05 15.3	-10
ZFRI	Zfri	7.97	132	Pn	Pn	03 05 26.0	-0.1
ZFRI				Sn	Sn	03 06 52.2	-2.6
PRNI	Paran	8.01	134	Pn	Pn	03 05 26.2	-0.6
KRMI	Paran Flat	8.03	136	Pn	Pn	03 05 26.7	-0.3
ASF	Jabal al Asfar	8.11	117	P	Pn	03 05 28.7	+0.6
	comp=E,1.3nm,0.3s,baz=323,slow=6.6,SNR=11						
ASF				S	Sn	03 06 55.9	-2.4
	comp=E,3.7nm,0.4s,baz=137,slow=20,SNR=1.8						
	comp=E,3.1nm,0.3s						
HRFI	Mount Harif	8.27	135	Pn	Pn	03 05 30.5	+0.2
HRFI				Sn	Sn	03 07 00.2	-2.0
MBRI	Mt Berech	8.38	137	Pn	Pn	03 05 31.8	-0.1
MBRI	Mt Berech	8.38	137	P	Pn	03 05 32.1	+0.2
EIL	Elat	8.50	137	P	Pn	03 05 33.4	0.0
	comp=E,3.8nm,0.3s,baz=335,slow=2.6,SNR=52						
EIL				S	Sn	03 07 02.7	-5.2
	comp=E,33nm,0.5s,baz=323,slow=19,SNR=11						
	comp=E,12nm,0.5s						
EIL	Elat	8.50	137	Pn	Pn	03 05 32.8	-0.6
AQBJ	Aqaba	8.51	137	P	Pn	03 05 34.1	+0.6
MILM	Milestii Mici	10.79	2	eP	Pn	03 06 10.0	+5.5
MILM				LQM		03 11 18.0	
	comp=E,800nm,14.0s						
VAE	Valguarnera	11.26	281	S	Sn	03 08 04.7	-11
	comp=E,11nm,0.9s,baz=145,slow=22,SNR=1.9						
KRUC	Moravsky	15.61	330	ePN	P	03 07 12.8	+0.4
VRAC	Vranov	15.72	331	P	P	03 07 14.0	+0.3
	comp=E,7.5nm,0.7s,baz=158,slow=13,SNR=5.2						
VRAC	Vranov	15.72	331	ePN	P	03 07 14.3	+0.7
GERES	GERESS Array B	16.64	324	P	Pn	03 07 23.7	+1.4
	comp=E,0.2nm,0.3s,baz=144,slow=10,SNR=4.6						
	comp=E,1.0nm,0.6s						
FINES	FINESS Array B	25.38	357	P	P	03 08 53.6	-0.8
	comp=E,3.1nm,0.8s,baz=162,slow=10,SNR=1.4						
	comp=E,3.1nm,0.8s						
ESDC	Sonseca Array	25.67	288	P	P	03 08 57.0	-0.5
	comp=E,2.2nm,0.8s,baz=82,slow=9.2,SNR=12						
	comp=E,2.2nm,0.8s						
TORD	Torodi Ar. Bea	33.13	233	P	P	03 10 04.1	+0.4
	comp=E,1.8nm,0.8s,baz=34,slow=8.5,SNR=10						
	comp=E,1.8nm,0.8s						
ARCES	ARCESS Array B	33.50	358	P	P	03 10 05.5	-0.9
	comp=E,10nm,1.2s,baz=177,slow=9.7,SNR=2.7						
	comp=E,10nm,1.2s						
MKAR	Makanchi Array	41.06	58	P	P	03 11 11.7	+1.0
	comp=E,0.4nm,0.6s,baz=281,slow=6.3,SNR=1.8						
	comp=E,0.4nm,0.6s						
DBIC	Dimbokro	42.22	234	P	P	03 11 20.0	-0.5
	comp=E,1.1nm,0.4s,baz=56,slow=7.9,SNR=1.6						
	comp=E,1.1nm,0.4s						

IDC 14 03:16:15.0±1.6**, 5°.72N×92°.07E, h0**^{km}**, mb3.5**/4**, mbtmp3.6**/5**, ML3.5**/1**, Error ellipse: s-maj=58.3km s-min=25.2km az=49.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	11.40	278	Pn	Pn	03 18 59.3	-0.1
	0.3nm,0.3s,baz=276,slow=6.5,SNR=1.7						
PALK				Sn	Sn	03 20 53.5	-14
	1.5nm,0.3s,baz=257,slow=12,SNR=6.8						
	1.5nm,0.3s						
MKAR	Makanchi Array	41.78	350	P	P	03 24 06.1	-0.2
	0.2nm,0.5s,baz=150,slow=8.0,SNR=2.6						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	48.44	354	P	P	03 24 59.0	-0.1
	0.4nm,0.3s,baz=167,slow=7.2,SNR=2.8						
	0.4nm,0.3s						
WRA	Warramunga Arr	48.77	123	P	P	03 25 02.0	-0.2
	0.8nm,0.9s,baz=299,slow=9.4,SNR=5.3						
	0.8nm,0.9s						
ASAR	Alice Springs	50.19	127	P	P	03 25 13.0	0.0
	0.3nm,0.6s,baz=296,slow=7.1,SNR=4.3						
	0.3nm,0.6s						

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*SJA **14** 03:27:34.4±0.8, 34°.82S×71°.88W, h20^{km}±3^{km}, ML4.0, MW3.7, Hypocentre not reviewed by the ISC*

*IDC **14** 03:27:37.5±3.4, 34°.71S×72°.22W, h64^{km}±29^{km}, mb3.5/4, mbtmp3.7/7, ML3.8/3, Error ellipse: s-maj=38.1km s-min=19.9km az=108.0*

*NEIC **14** 03:27:37.8±1.2, 34°.83S±0°.04×71°.78W±0°.07, h52^{km}±10^{km}, mb4.3/5, ML4.0(GUC), Error ellipse: s-maj=8.7km s-min=4.8km az=113.0*

*GUC **14** 03:27:37.6±0.8, 34°.80S×71°.77W, h48^{km}±2^{km}, ML4.0*

ISC 14 03:27:36.6±0.7**, 34°.83S**±0°.04×**71°.84W**±0°.05**, h45**^{km}±6^{km}**, n69, **σ1^{s}**.49**/85**, mb4.0**/7**, 3C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	Huala	0.19	202	eP	Pn	03 27 45.6	+1.2
GO05				eS	Sn	03 27 51.6	+1.7
GO05				IAML		03 27 52.4	
	comp=E,9µm,0.4s						
GO05	Huala	0.19	202	eP		03 27 44.0	
BO03	Pichilemu	0.35	344⇑	iP	Pn	03 27 46.9	+1.1
BO03				eS	Sn	03 27 53.0	+0.8
BO01	Tunca	0.77	55		Pn	03 27 51.3	+0.2
BO01				Sn	Sn	03 28 00.8	-0.7
BO01	Tunca	0.77	55⇓	iP	Pn	03 27 51.5	+0.5
BO01				eS	Sn	03 28 01.3	-0.2
BO01				IAML		03 28 02.1	
	comp=E,6µm,0.1s						
BO01	Tunca	0.77	55	eP		03 27 50.0	
BO01				eS		03 28 01.5	
BO01				IAML		03 28 02.0	
	comp=Z,5µm,0.2s						
BO02	Sierra Bellavi	0.88	88		Pn	03 27 52.5	-0.1
BO02				Sn	Sn	03 28 04.3	0.0
BO02	Sierra Bellavi	0.88	88⇓	iP	Pn	03 27 53.0	+0.4
BO02				eS	Sn	03 28 04.3	0.0
BO02				IAML		03 28 05.0	
	comp=N,21µm,0.2s						
BO02	Sierra Bellavi	0.88	88	eP		03 27 52.9	
BO02				eS		03 28 05.0	
BO02				IAML		03 28 05.6	
	comp=Z,14µm,0.2s						
MT01	Popeta	1.08	27		Pn	03 27 56.1	+0.7
MT01				Sn	Sn	03 28 10.4	+1.2
MT01	Popeta	1.08	27	i P	Pn	03 27 56.1	+0.7
MT01				eS	Sn	03 28 10.2	+1.0
MT01	Popeta	1.08	27	eP		03 27 55.0	
MT01				eS		03 28 10.7	
MT01				IAML		03 28 11.4	
	comp=Z,3µm,0.6s						
VA05	Santo Domingo	1.19	9		Pn	03 27 57.3	+0.5
VA05	Santo Domingo	1.19	9	eP	Pn	03 27 57.2	+0.4
VA05				IAML		03 28 21.7	
	comp=N,2µm,0.4s						
MT09	Talagante	1.27	34		Pn	03 27 59.1	+1.0
MT09	Talagante	1.27	34	eP	Pn	03 27 59.3	+1.2
MT09				eS	Sn	03 28 15.6	+1.6
MT09				IAML		03 28 18.9	
	comp=N,7µm,0.2s						
MT12	Pirque	1.53	45	i P	Pn	03 28 02.6	+1.0
MT12				eS	Sn	03 28 21.6	+1.3
MT12				IAML		03 28 25.8	
	comp=E,5µm,0.3s						
MT02	Curacav	1.68	21		Pn	03 28 04.3	+0.9
MT02	Curacav	1.68	21⇑	iP	Pn	03 28 04.5	+1.1
MT02	Curacav	1.68	21	eP		03 28 04.7	
MT02				eS		03 28 25.8	
LMEL	Las Melosas	1.68	55		Pn	03 28 04.3	+0.7
LMEL	Las Melosas	1.68	55	eP	Pn	03 28 04.6	+1.0
LMEL				eS	Sn	03 28 25.7	+1.7
LMEL				IAML		03 28 31.2	
	comp=N,4µm,0.1s						
MT13	San Alfonso	1.69	50		Pn	03 28 04.6	+0.8
MT13	San Alfonso	1.69	50	i P	Pn	03 28 04.8	+1.0
MT13				eS	Sn	03 28 25.8	+1.6
MT13				IAML		03 28 29.3	
	comp=E,3µm,0.5s						
MT05	Renca	1.71	33		Pn	03 28 05.1	+1.1
MT05	Renca	1.71	33	eP	Pn	03 28 05.4	+1.5
MT05				eS	Sn	03 28 25.9	+1.3
MT05				IAML		03 28 30.5	
	comp=E,4µm,0.3s						
MT05	Renca	1.71	33	eP		03 28 05.6	
MT05				eP		03 28 05.6	
MT05				eS		03 28 28.3	
MT05				IAML		03 28 30.9	
	comp=Z,1µm,0.1s						
MT03	Universidad Ad	1.73	40		Pn	03 28 05.5	+1.1
MT03	Universidad Ad	1.73	40	i P	Pn	03 28 05.6	+1.2
MT03				eS	Sn	03 28 27.2	+1.8
MT03				IAML		03 28 32.4	
	comp=N,4µm,0.2s						
MT03	Universidad Ad	1.73	40	eP		03 28 05.6	
MT03				eS		03 28 29.0	
MT03				IAML		03 28 32.6	
	comp=Z,2µm,0.1s						
VA01	Torpederas	1.81	5		Pn	03 28 06.4	+1.0
VA01	Torpederas	1.81	5	eP	Pn	03 28 06.3	+1.0
VA01	Torpederas	1.81	5	eP		03 28 07.3	
VA01				eS		03 28 31.8	
MT10	Hacienda Santa	1.90	35⇑	iP	Pn	03 28 08.1	+1.5
MT10				eS	Sn	03 28 32.3	+2.9
MT10				IAML		03 28 36.3	
	comp=E,4µm,0.5s						
PEL	Peldehue	1.94	30		Pn	03 28 07.9	+0.7
PEL	Peldehue	1.94	30	eP	Pn	03 28 08.8	+1.7
PEL				eS	Sn	03 28 33.4	+3.0
PEL				IAML		03 28 39.3	
	comp=N,2µm,0.2s						
PEL	Peldehue	1.94	30	eP		03 28 08.8	
PEL				eS		03 28 35.3	

ROC1	El Roble	1.98	21		Pn	03 28 09.1	+1.3
ROC1	El Roble	1.98	21	*e*P		03 28 05.2	
ROC1				*e*S		03 28 37.0	
FCH	Farellones	1.98	41	*e*P	Pn	03 28 08.9	+1.0
FCH				*e*S	Sn	03 28 33.6	+1.9
FCH				IAML		03 28 37.7	
	comp=N,2μm,0.2s						
ROCH	El Roble	1.98	21	*e*P	Pn	03 28 09.3	+1.5
ROCH				*e*P		03 28 09.5	
ROCH				IAML		03 28 40.4	
	comp=N,2μm,0.2s						
MT04	Ro Olivares	2.01	45	*e*P	Pn	03 28 09.8	+1.6
MT04				*e*S	Sn	03 28 35.3	+3.0
MT04				IAML		03 28 40.6	
	comp=E,1μm,0.2s						
MT08	Bocatoma Ro	2.05	48		Pn	03 28 09.5	+0.6
BI05	Punta Hualpn	2.20	209		Pn	03 28 12.1	+1.4
BI05	Punta Hualpn	2.20	209	*e*P	Pn	03 28 12.2	+1.5
EDS3	Malargue	2.21	116	*e*P		03 28 14.8	
VA06	Catapilco	2.31	12		Pn	03 28 13.1	+1.0
VA06	Catapilco	2.31	12	*i* P	Pn	03 28 13.2	+1.0
VA06				IAML		03 28 54.8	
	comp=N,867nm,0.6s						
VA03	San Esteban	2.33	28		Pn	03 28 13.7	+1.1
VA03	San Esteban	2.33	28	*e*P	Pn	03 28 14.1	+1.6
VA03				*e*S	Sn	03 28 42.4	+2.4
VA03				IAML		03 28 47.9	
	comp=E,2μm,0.1s						
VA03	San Esteban	2.33	28	*e*P		03 28 13.0	
VA03				*e*S		03 28 44.3	
VA03				IAML		03 28 49.7	
	comp=Z,708nm,0.5s						
AAGR	Agrelo	3.05	56	*e*P		03 28 25.0	
CANA	Caviahue	3.11	169	*e*P		03 28 29.9	
ARCO	CERRO ARCO	3.13	51	*e*P		03 28 29.3	
ASAL	Salagasta	3.36	49	*e*P		03 28 30.0	
ASAL				*e*S		03 29 15.8	
CO02	Combarbal	3.69	11		Pn	03 28 32.0	+0.8
CO02	Combarbal	3.69	11	*e*P	Pn	03 28 32.1	+0.8
CO02	Combarbal	3.69	11	*e*P		03 28 31.0	
CO02				*e*S		03 29 23.3	
CO02				IAML		03 29 31.6	
	comp=Z,158nm,0.3s						
RTLS	Leoncito	3.70	36	*e*P		03 28 34.0	
RTLS				*e*S		03 29 23.8	
RTLS				IAML		03 29 36.7	
	comp=Z,359nm,0.7s						
CO03	El Pedregal	4.10	14		Pn	03 28 37.8	+1.0
CO03	El Pedregal	4.10	14	*e*P	Pn	03 28 38.0	+1.1
CO03	El Pedregal	4.10	14	*e*P		03 28 37.0	
CO03				*e*S		03 29 30.8	
CO03				IAML		03 29 44.3	
	comp=Z,116nm,0.8s						
CO06	Fray Jorge	4.15	2	Pn	Pn	03 28 37.5	+0.1
CO06	Fray Jorge	4.15	2	*e*P	Pn	03 28 37.6	+0.1
CFA	Coronel Fontan	4.42	44	P	Pn	03 28 43.4	+2.3
	comp=Z,2.2nm,0.3s,baz=229,slow=12,SNR=17						
CFA				S	Sn	03 29 36.2	+4.9
	comp=Z,40nm,0.5s,baz=250,slow=6.1,SNR=4.3						
	comp=Z,5.4nm,0.3s						
GO04	Tololo Observa	4.73	11		Pn	03 28 46.3	+0.6
GO04	Tololo Observa	4.73	11	*e*P	Pn	03 28 46.3	+0.6
GO04	Tololo Observa	4.73	11	*e*P		03 28 45.0	
GO04				*e*S		03 29 45.3	
GO06	Curarrehue	4.75	177		Pn	03 28 48.5	+2.7
LR03	Panguipulli	4.81	185		Pn	03 28 48.0	+1.6
CO01	Juntas del Tor	5.06	17		Pn	03 28 50.4	+0.2
H03S1	Juan Fernandez	5.92	278	T	T	03 35 02.0	
	baz=97,slow=75,SNR=130						
H03S3	Juan Fernandez	5.93	278	T	T	03 35 04.3	
	baz=97,slow=75,SNR=117						
H03S2	Juan Fernandez	5.94	278	T	T	03 35 01.4	
	baz=97,slow=75,SNR=119						
PLCA	Paso Flores	5.98	171	P	Pn	03 29 06.2	+3.6
	comp=Z,0.7nm,0.3s,baz=332,slow=11,SNR=26						
	comp=Z,2.0nm,0.4s						
H03N1	Juan Fernandez	6.02	281	T	T	03 35 11.3	
	baz=102						
H03N3	Juan Fernandez	6.03	281	T	T	03 35 08.8	
	baz=102						
H03N2	Juan Fernandez	6.04	281	T	T	03 35 12.1	
	baz=102						
AC05	El Transito	6.12	13		Pn	03 29 05.0	+0.2
LPAZ	La Paz	18.77	11	P	Pn	03 31 53.3	-0.1
	comp=Z,0.1nm,0.3s,baz=166,slow=9.3,SNR=3.9						
	comp=Z,1.4nm,0.8s						
AQDB	Aquidauana	20.18	49	P	P	03 32 06.0	-1.5
SIV	San Ignacio	21.11	30	P	P	03 32 16.8	-0.7
	comp=Z,1.9nm,0.7s,baz=208,slow=9.4,SNR=9.2						
	comp=Z,1.9nm,0.7s						
ETMB	Extrema	25.43	13	P	P	03 32 59.5	-0.7
ETMB				IAmb	IAmb	03 33 04.0	
	comp=Z,4.4nm,0.8s						
RUSC	La Rusia	40.52	358	P	P	03 35 13.5	+1.5
RUSC				IAmb	IAmb	03 35 31.2	
	comp=Z,7.0nm,1.3s						
BOAB	BOACO BROADBAN	48.82	342	P	P	03 36 17.1	-0.3
SNAA	Sanae	50.76	158	P	P	03 36 31.8	0.0
SNAA				IAmb	IAmb	03 37 11.7	
	comp=Z,9.5nm,1.3s						
TXAR	Lajitas Array	70.54	331	P	P	03 38 43.8	-3.1
	comp=Z,0.1nm,0.4s,baz=148,slow=8.6,SNR=2.5						
TXAR				pP	pP	03 38 57.2	-2.7
	comp=Z,0.2nm,0.5s,baz=148,slow=8.6,SNR=2.1						
	comp=Z,0.1nm,0.4s						
BOSA	Boshof	79.54	117	P	P	03 39 39.4	+0.2
	comp=Z,1.9nm,0.9s,baz=256,slow=4.2,SNR=1.7						
	comp=Z,1.9nm,0.9s						
TORD	Torodi Ar. Bea	84.34	70	P	P	03 40 04.5	+0.2
	comp=Z,1.0nm,0.9s,baz=226,slow=3.0,SNR=3.9						
TORD				pP	pP	03 40 17.7	0.0
	comp=Z,0.5nm,0.8s,baz=278,slow=4.7,SNR=2.1						
	comp=Z,1.0nm,0.9s						

ROM 14 03:30:56.9±0.2**, 43°.040N**±0°.004×**13°.016E**±0°.007**,**
h3^{km}±1^{km}**, ML1.4**/20**, 11C-5D, Error ellipse: s-maj=0.6km**
s-min=0.2km az=74.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1219	Muccia, Frazio	0.02	337	P	Pg	03 30 57.5	-0.2
T1219				S	Sg	03 30 58.0	-0.2
FDMO	Fiordimonte	0.05	94	P	Pg	03 30 58.0	-0.1
FDMO				S	Sg	03 30 59.2	+0.3
FDMO				AML	AML		
	comp=E,1006μm,0.1s						
FDMO				AML	AML		
	comp=N,976μm,0.1s						
T1220	Camerino, Fraz	0.09	37	⇑P	Pg	03 30 58.9	+0.2
T1220				S	Sg	03 31 01.0	+1.0
T1220				AML	AML		
	comp=E,3230μm,0.4s						
T1220				AML	AML		
	comp=N,2590μm,0.3s						
CESI	CESI - Serrava	0.09	247	P	Pg	03 30 58.9	+0.2
CESI				S	Sg	03 31 01.0	+1.0
CESI				AML	AML		
	comp=E,302μm,0.8s						
CESI				AML	AML		
	comp=N,271μm,0.7s						
CESI				AML	AML		
	comp=N,271μm,1.3s						
CESI				AML	AML		
	comp=E,302μm,1.2s						
T1216	Preci, Frazion	0.15	179	⇓P	Pg	03 30 59.9	+0.1
T1216				S	Sg	03 31 02.9	+1.0
T1216				AML	AML		
	comp=E,292μm,1.0s						
T1216				AML	AML		
	comp=N,367μm,0.7s						
MC2	Monte Cornacci	0.18	135	⇑P	Pg	03 31 00.7	+0.2
MC2				S	Sg	03 31 04.5	+1.7
SNTG	Esanatoglia	0.22	346	P	Pg	03 31 01.4	+0.2
SNTG				S	Sg	03 31 05.7	+1.6
SNTG				AML	AML		
	comp=N,116μm,0.1s						
SNTG				AML	AML		
	comp=E,112μm,0.3s						
SNTG				AML	AML		
	comp=N,116μm,0.1s						
SNTG				AML	AML		
	comp=N,116μm,1.9s						
T1245	Castelsantange	0.22	145	⇓P	Pg	03 31 01.4	+0.1
T1245				S	Sg	03 31 05.5	+1.3
T1245				AML	AML		
	comp=E,218μm,1.1s						
T1245				AML	AML		
	comp=N,277μm,0.5s						
GUMA	Gualdo di Mace	0.23	84	⇑P	Pg	03 31 02.0	+0.6
GUMA				AML	AML		
	comp=E,724μm,0.2s						
GUMA				AML	AML		
	comp=N,672μm,0.2s						
ASSB	Assisi San Ben	0.26	271	⇑P	Pg	03 31 02.1	+0.1
ASSB				AML	AML		
	comp=E,131μm,1.0s						
ASSB				AML	AML		
	comp=N,124μm,0.7s						
ASSB				AML	AML		
	comp=E,131μm,1.0s						
ASSB				AML	AML		
	comp=N,124μm,1.3s						
T1215	Vallo di Nera,	0.26	205	⇑P	Pg	03 31 02.2	+0.2
T1215				AML	AML		
	comp=E,90μm,1.1s						
T1215				AML	AML		
	comp=N,91μm,0.1s						
MMO1	Montemonaco	0.27	122	P	Pg	03 31 02.2	+0.1
T1212	Cascia, Frazio	0.29	176	⇓P	Pg	03 31 02.6	+0.1
T1212				AML	AML		
	comp=N,116μm,0.5s						
T1212				AML	AML		
	comp=N,116μm,1.5s						
T1212				AML	AML		
	comp=E,94μm,0.6s						
EL6	Elcito	0.30	12	⇑P	Pg	03 31 02.8	+0.1
EL6				AML	AML		
	comp=E,218μm,0.2s						
EL6				AML	AML		
	comp=N,262μm,0.2s						
EL6				AML	AML		
	comp=E,218μm,0.2s						
T1214	Arquata del Tr	0.31	153	⇑P	Pg	03 31 03.0	0.0
FOSV	Fossato di Vic	0.32	324	⇓P	Pg	03 31 03.5	+0.4
FOSV				AML	AML		
	comp=E,43μm,0.8s						
FOSV				AML	AML		
	comp=N,61μm,0.3s						
T1217	Poggiodomo (PG	0.33	191	P	Pg	03 31 03.5	+0.1
T1217				AML	AML		
	comp=E,68μm,0.7s						
T1217				AML	AML		
	comp=E,68μm,1.3s						
T1217				AML	AML		
	comp=N,60μm,0.3s						
T1241	Roccafluvione,	0.36	121	⇑P	Pg	03 31 03.9	+0.1
T1241				AML	AML		
	comp=E,71μm,1.5s						
T1241				AML	AML		
	comp=N,58μm,1.2s						
T1241				AML	AML		
	comp=E,71μm,0.5s						
CING	Cingoli	0.36	21	⇓P	Pg	03 31 04.0	+0.1
CING				AML	AML		
	comp=E,121μm,1.4s						
CING				AML	AML		
	comp=E,121μm,0.6s						
CING				AML	AML		
	comp=N,85μm,1.4s						
T1218	Civita (PG)	0.38	169	⇑P	Pg	03 31 04.1	-0.1
MOMA	Monte Martano	0.40	234	S	Sb	03 31 11.8	-1.6
MOMA				AML	AML		
	comp=E,61μm,0.2s						
MOMA				AML	AML		
	comp=N,59μm,1.6s						
MOMA				AML	AML		
	comp=N,59μm,0.4s						
ARVD	Arcevia	0.46	353	⇑P	Pg	03 31 05.8	0.0
ARVD				S	Sb	03 31 13.8	-1.1
ARVD				AML	AML		
	comp=E,40μm,0.2s						
ARVD				AML	AML		
	comp=N,44μm,0.8s						
SMA1	SAN MARTINO	0.47	150	P	Pg	03 31 05.9	-0.1
SMA1				AML	AML		
	comp=N,161μm,0.4s						
SMA1				AML	AML		
	comp=E,121μm,1.4s						
SMA1				AML	AML		
	comp=E,121μm,0.6s						
T1211	Morro Reatino	0.52	193	S	Sb	03 31 15.7	-1.0
FRON	Frontone	0.52	336	P	Pg	03 31 06.9	-0.1
TERO	Teramo	0.60	134	P	Pg	03 31 08.1	-0.3
TERO				AML	AML		
	comp=N,121μm,0.1s						
TERO				AML	AML		
	comp=E,117μm,1.1s						
PIEI	Pieia	0.61	325	⇑P	Pg	03 31 08.6	0.0
FSSB	Fossombrone	0.68	345	S	Sb	03 31 21.4	+0.3
FSSB				AML	AML		
	comp=E,52μm,0.3s						
FSSB				AML	AML		
	comp=N,59μm,1.4s						

ROM 14 03:31:20.8±0.1**, 42°.828N**±0°.002×**13°.218E**±0°.004**,**
h14^{km}, ML1.5/8**, 3C-3D, Error ellipse: s-maj=0.3km**
s-min=0.1km az=112.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1245	Castelsantange	0.04	322	P	Pg	03 31 23.6	0.0
T1245				S	Sg	03 31 25.6	0.0
T1245				AML	AML		
	comp=E,812μm,0.4s						
T1245				AML	AML		
	comp=N,1230μm,0.4s						
T1214	Arquata del Tr	0.07	186	P	Pg	03 31 23.9	+0.1
T1214				S	Sg	03 31 26.1	+0.2
T1214				AML	AML		
	comp=N,241μm,0.6s						
T1214				AML	AML		
	comp=E,243μm,0.3s						
MC2	Monte Cornacci	0.09	347	P	Pg	03 31 24.2	+0.1
MC2				S	Sg	03 31 26.6	+0.3
MMO1	Montemonaco	0.11	48	P	Pg	03 31 24.3	+0.1
MMO1				S	Sg	03 31 26.7	+0.3
T1212	Cascia, Frazio	0.15	239	⇓P	Pg	03 31 25.0	+0.3
T1212				S	Sb	03 31 27.9	-0.5
T1212				AML	AML		
	comp=E,247μm,0.5s						
T1212				AML	AML		
	comp=N,331μm,1.0s						
T1212				AML	AML		
	comp=E,211μm,0.7s						
T1212				AML	AML		
	comp=E,211μm,1.3s						
T1212				AML	AML		
	comp=E,247μm,1.5s						
T1212				AML	AML		
	comp=N,312μm,1.0s						
T1216	Preci, Frazion	0.16	293	⇑P	Pg	03 31 25.0	+0.2
T1216				S	Sg	03 31 28.1	+0.6
T1241	Roccafluvione,	0.16	80	P	Pg	03 31 25.0	+0.2
T1218	Civita (PG)	0.17	206	⇓P	Pg	03 31 25.3	+0.3
T1218				AML	AML		
	comp=E,182μm,1.3s						
T1218				AML	AML		
	comp=E,144μm,0.2s						
T1218				AML	AML		
	comp=N,243μm,0.7s						
T1218				AML	AML		
	comp=E,182μm,1.3s						
T1218				AML	AML		
	comp=N,262μm,0.7s						
T1218				AML	AML		
	comp=E,144μm,0.2s						
T1218				AML	AML		
	comp=N,242μm,0.7s						
T1218				AML	AML		
	comp=E,182μm,0.7s						
T1218				AML	AML		
	comp=N,242μm,1.3s						
T1218				AML	AML		
	comp=N,262μm,1.3s						
T1256	Bolognola (MC)	0.18	2	⇑P	Pg	03 31 25.4	+0.2
T1256				S	Sg	03 31 28.7	+0.6
SMA1	SAN MARTINO	0.21	156	⇑P	Pg	03 31 25.9	+0.2
SMA1				AML	AML		
	comp=E,122μm,0.5s						
SMA1				AML	AML		
	comp=N,161μm,0.4s						
FDMO	Fiordimonte	0.23	335	P	Pg	03 31 26.1	+0.2
FDMO				S	Sb	03 31 30.2	-0.6
T1217	Poggiodomo (PG	0.24	241	P	Pg	03 31 26.3	+0.3
T1215	Vallo di Nera,	0.26	264	P	Pg	03 31 26.6	+0.2
T1219	Muccia, Frazio	0.28	326	P	Pg	03 31 25.6	-1.1
CESI	CESI - Serrava	0.29	308	P	Pg	03 31 27.2	+0.3
T1220	Camerino, Fraz	0.30	341	P	Pg	03 31 27.3	+0.3
RM33	Pellescritta (	0.32	180	P	Pg	03 31 27.7	+0.3
RM33				AML	AML		
	comp=N,81μm,0.3s						
RM33				AML	AML		
	comp=E,95μm,0.7s						
RM33				AML	AML		
	comp=E,95μm,1.3s						
TERO	Teramo	0.35	126	⇓P	Pg	03 31 28.0	+0.1
TERO				AML	AML		
	comp=E,117μm,1.1s						
TERO				AML	AML		
	comp=N,121μm,0.1s						
T1247	Pizzolo (AQ)	0.39	171	S	Sb	03 31 35.6	+0.2
GIGS	Gran Sasso	0.46	145	P	Pg	03 31 29.7	-0.2

ROM 14 03:44:50.5±0.2**, 39°.221N**±0°.008×**16°.681E**±0°.008**,**
h23^{km}±1^{km}**, ML1.8**/20**, 1C-1D, Error ellipse: s-maj=0.8km**
s-min=0.3km az=11.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIP	Timpagrande	0.07	125	⇑P	Pb	03 44 54.9	+0.1
TIP				S	Sb	03 44 58.0	+0.3
TIP				AML	AML		
	comp=E,186μm,0.4s						
TIP				AML	AML		
	comp=N,354μm,0.5s						
TIP				AML	AML		
	comp=E,163μm,0.4s						
TIP				AML	AML		
	comp=N,276μm,0.5s						
CELI	Celico	0.23	324	P	Pb	03 44 56.3	-0.2
CELI				S	Sb	03 45 00.9	+0.5
CELI				AML	AML		
	comp=E,200μm,0.4s						
CELI				AML	AML		
	comp=N,1240μm,0.3s						
CELI				AML	AML		
	comp=E,516μm,0.4s						
CELI				AML	AML		
	comp=N,518μm,0.3s						
LADO	San Nicola del	0.24	75	P	Pb	03 44 56.3	-0.2
LADO				S	Sb	03 45 01.1	+0.5
SPS2	Spezzano della	0.28	285	P	Pb	03 44 56.9	-0.2
SPS2				S	Sb	03 45 01.8	+0.3
SPS2				AML	AML		
	comp=E,156μm,0.4s						
SPS2				AML	AML		
	comp=N,164μm,0.8s						
PIPA	Pietrapaola	0.28	22	⇓P	Pb	03 44 57.1	-0.1
PIPA				S	Sb	03 45 03.0	+1.3
PIPA				AML	AML		
	comp=N,214μm,0.7s						
PIPA				AML	AML		
	comp=E,400μm,0.2s						
PIPA				AML	AML		
	comp=N,214μm,1.3s						
CAR1	CAROLEI	0.37	275	P	Pb	03 44 58.3	-0.1
CAR1				S	Sb	03 45 04.6	+0.7
CAR1				AML	AML		
	comp=N,370μm,0.4s						
CAR1				AML	AML		
	comp=N,397μm,0.2s						
CAR1				AML	AML		
	comp=E,308μm,0.4s						
CAR1				AML	AML		
	comp=E,324μm,0.4s						
GRI	Girifalco	0.45	207	P	Pb	03 45 00.2	+0.4
TDS	Terranova Siba	0.51	329	P	Pb	03 45 00.5	-0.4
TDS				S	Sb	03 45 09.2	+1.3
TDS				AML	AML		
	comp=E,87μm,0.4s						
TDS				AML	AML		
	comp=N,86μm,0.3s						
PLAC	Placanica	0.79	194	P	Pn	03 45 06.2	-0.2
CUC	Castrocucco	1.02	319	P	Pb	03 45 09.6	+0.1
CUC				AML	AML		
	comp=N,42μm,1.6s						
CUC				AML	AML		
	comp=N,42μm,0.4s						
CUC				AML	AML		
	comp=E,40μm,1.1s						

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*MRB **14** 03:45:17.9±0.2, 42°.51N×2°.17E, h6^{km}±2^{km}, ML2.3/28,*
Error ellipse: s-maj=0.7km s-min=0.5km az=182.0
*LDG **14** 03:45:18.0±0.1, 42°.49N×2°.18E, h6^{km}, Md2.7/2, Ml2.8/34,*
Error ellipse: s-maj=1.3km s-min=1.0km az=134.0
*MDD **14** 03:45:18.1±0.2, 42°.52N×2°.20E, h0^{km}, mb_Lg2.8/14, Error*
ellipse: s-maj=1.8km s-min=1.3km az=168.0
*STR **14** 03:45:18.4±0.6, 43°N±5°×°±°, h5^{km}, MLv2.6/13, Error*
ellipse: s-maj=0.0km s-min=0.0km az=17.5, preliminary
ISC 14 03:45:17.1±0.8**, 42°.54N**±0°.01×**2°.24E**±0°.01**, h12^{km}**±6^{km}**,**
n103, σ1°.14/201**, 7C, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLLI	Llivia	0.20	254	P	Pg	03 45 21.1	-0.5
CLLI				S	Sg	03 45 23.5	-1.3
	706nm,0.1s						
CARF	Carcanieres	0.21	331	⇑Pg	Pg	03 45 22.4	+0.7
CARF				Sg	Sg	03 45 25.4	+0.6
FILF	Fillols	0.24	84	P	Pg	03 45 21.7	-0.5
FILF				S	Sg	03 45 24.5	-1.1
	232nm,0.1s						
FILF	Fillols	0.24	84	⇑Pg	Pg	03 45 21.8	-0.3
FILF				Sg	Sg	03 45 24.5	-1.1
CBRU	Bruguera	0.25	190	P	Pg	03 45 22.6	+0.1
CBRU				S	Sg	03 45 25.9	-0.2
	891nm,0.2s						
CBEU	Beuda	0.43	131	P	Pb	03 45 26.6	0.0
CBEU				S	Sb	03 45 32.8	-0.2
	70nm,0.2s						
SJAF	Saint Jean de	0.48	96	P	Pb	03 45 27.8	+0.4
SJAF				S	Sb	03 45 35.0	+0.6
	68nm,0.1s						
SJAF	Saint Jean de	0.48	96	⇑Pg	Pb	03 45 27.8	+0.4
SJAF				Sg	Sb	03 45 34.8	+0.4
EJON	La Jonquera	0.49	100	⇑Pg	Pb	03 45 28.1	+0.5
EJON				Sg	Sb	03 45 34.6	-0.1
EJON				*i* Vmb_Lg		03 45 35.8	
EJON	La Jonquera	0.49	100	Pg	Pb	03 45 28.1	+0.5
ARBS	La Rabassa	0.52	260	P	Pg	03 45 27.1	-0.2
ARBS				S	Sg	03 45 33.9	-0.4
	330nm,0.4s						
CORI	Orista	0.58	194	P	Pg	03 45 28.3	-0.1
CORI				S	Sg	03 45 35.8	-0.3
	82nm,0.1s						
CPAL	Palau Saverder	0.72	108	P	Pb	03 45 32.0	+0.5
CPAL				S	Sb	03 45 42.5	+1.1
	90nm,0.1s						
CEST	Esterri de Car	0.73	275	P	Pg	03 45 30.5	-0.8
CEST				S	Sg	03 45 40.3	-0.6
	62nm,0.1s						
CORG	Organya	0.75	246	P	Pg	03 45 30.9	-0.7
CORG				S	Sg	03 45 40.8	-0.6
	31nm,0.1s						
CFON	Fontmartina	0.79	169	P	Pg	03 45 32.5	+0.1
CFON				S	Sb	03 45 43.0	-0.4
	282nm,0.1s						
MTLF	Montolieu	0.81	359	*e*Pg	Pb	03 45 33.5	+0.5
MTLF				*e*Sg	Sb	03 45 45.2	+1.3
	56nm,0.2s						
MTLF	Montolieu	0.81	359	Pg	Pb	03 45 33.5	+0.5
MTLF				Sg	Sb	03 45 45.2	+1.3
MTLF	Montolieu	0.81	359	⇑Pg	Pb	03 45 33.5	+0.5
MTLF				Sg	Sb	03 45 44.5	+0.6
SALF	Salau	0.81	286	Pg	Pg	03 45 32.3	-0.4
SALF				Sg	Sg	03 45 42.3	-1.0
CCAS	Cassa de la Se	0.82	143	P	Pb	03 45 33.4	+0.2
CCAS				S	Sb	03 45 44.6	+0.5
	38nm,0.2s						
EMIR	Miracle	0.82	221	⇑Pg	Pg	03 45 32.7	-0.2
EMIR				Sg	Sg	03 45 43.8	+0.2

EMIR				*i* Vmb_Lg		03 45 47.8	
EMIR	Miracle	0.82	221	P	Pg	03 45 32.4	-0.5
EMIR				S	Sg	03 45 43.0	-0.6
	113nm,0.2s						
CSOR	Sort	0.83	259	P	Pg	03 45 32.4	-0.8
CSOR				S	Sg	03 45 43.9	-0.3
	38nm,0.2s						
MLS	Moulis	0.94	297	P	Pg	03 45 34.6	-0.7
MLS				S	Sg	03 45 47.4	-0.2
	16nm,0.2s						
MLS	Moulis	0.94	297	Pg	Pg	03 45 35.3	0.0
MLS				Sg	Sg	03 45 47.4	-0.2
CARA	Val d'Aran	1.06	280	P	Pg	03 45 36.7	-0.9
CARA				S	Sg	03 45 50.5	-1.0
	63nm,0.3s						
CTRE	Tremp	1.11	259	P	Pg	03 45 37.1	-1.3
CTRE				S	Sg	03 45 51.8	-1.0
	37nm,0.2s						
CGAR	Garraf	1.27	191	P	Pn	03 45 40.4	-0.2
CGAR				S	Sb	03 45 57.1	0.0
	48nm,0.3s						
CAVN	Les Avellanes	1.28	240	P	Pn	03 45 40.4	-0.5
CAVN				S	Sb	03 45 57.2	-0.5
	154nm,0.2s						
EPOB	Poblet	1.47	217	⇑Pg	Pb	03 45 44.5	+0.2
EPOB				Sg	Sn	03 46 02.4	-0.1
EPOB				*i* Vmb_Lg		03 46 04.4	
EPOB	Poblet	1.47	217	P	Pn	03 45 43.7	+0.3
EPOB				S	Sn	03 46 03.0	+0.5
	70nm,0.1s						
EPF	Esparros	1.48	290	*e*Pn	Pn	03 45 44.1	+0.5
EPF	Esparros	1.48	290	*e*Pg	Pg	03 45 46.0	+0.4
EPF				*e*Sg	Sg	03 46 05.1	+0.2
	12nm,0.2s						
EPF	Esparros	1.48	290	Pn	Pn	03 45 44.1	+0.5
EPF				Sg	Sg	03 46 05.1	+0.2
ECHI	Chisagues Biel	1.52	276	Pn	Pb	03 45 45.4	+0.1
ECHI				Sn	Sn	03 46 04.5	+0.6
ECHI				*i* Vmb_Lg		03 46 09.5	
ECHI	Chisagues Biel	1.52	276	P	Pn	03 45 44.4	+0.3
ECHI				S	Sn	03 46 04.2	+0.3
	30nm,0.2s						
ECHI	Chisagues Biel	1.52	276	Pn	Pb	03 45 45.3	+0.1
ECHI	Chisagues Biel	1.52	276	Sn	Sg	03 46 06.7	+0.8
VIEF	Viey	1.67	283	Pn	Pb	03 45 48.3	+0.5
VIEF				Sn	Sg	03 46 10.6	-0.3
PYLO	Lourdes	1.77	289	S	Sn	03 46 10.6	+0.6
LASF	Ste Croix	1.94	37	*e*Pn	Pn	03 45 50.3	+0.4
LASF	Ste Croix	1.94	37	*e*Pg	Pg	03 45 54.7	+0.4
LASF				*e*Sn	Sn	03 46 14.5	+0.3
LASF				*e*Sg	Sg	03 46 20.2	+0.7
	12nm,0.3s						
MONQ	Montcuq	1.98	338	Pn	Pn	03 45 52.0	+1.6
MONQ				Sg	Sg	03 46 20.9	+0.1
CANF	Canfranc	2.05	277	Pn	Pg	03 45 56.4	+0.1
CANF				Sg	Sg	03 46 24.0	+1.0
ETSF	Etsaut	2.10	281	*e*Pg	Pg	03 45 56.7	-0.6
ETSF				*e*Sg	Sg	03 46 23.6	-0.8
	36nm,0.3s						
CBUD	Illa de Buda	2.12	211	S	Sn	03 46 18.4	+0.1
ERTA	Horta de San J	2.13	223	Pn	Pn	03 45 53.6	+1.2
ERTA				Pg	Pb	03 45 56.7	+1.2
ERTA				Sn	Sn	03 46 20.0	+1.3
ERTA				Sg	Sb	03 46 22.5	+0.6
ERTA				*i* Vmb_Lg		03 46 30.9	
ERTA	Horta de San J	2.13	223	P	Pn	03 45 52.9	+0.4
ERTA				S	Sn	03 46 18.9	+0.1
	17nm,0.2s						
EBR	Ebro Roquetas	2.16	218	S	Sn	03 46 19.6	+0.2
	63nm,0.5s						
ESAC	San Caprasio	2.17	249	Pn	Pn	03 45 53.8	+0.7
ESAC				Pg	Pb	03 45 57.4	+1.1
ESAC				Sn	Sn	03 46 20.7	+0.8
ESAC				Sg	Sb	03 46 24.8	+1.6
ESAC				*i* Vmb_Lg		03 46 28.5	
ATE	Arette	2.23	285	P	Pn	03 45 54.6	+0.7
ATE				S	Sn	03 46 21.7	+0.3
	14nm,0.3s						
CMAS	Mas de Barbera	2.31	219	P	Pn	03 45 55.6	+0.6
CMAS				S	Sn	03 46 23.6	+0.3
	18nm,0.1s						
ALCN	Alcanar	2.38	214	P	Pn	03 45 56.3	+0.3
ALCN				S	Sn	03 46 25.2	+0.1
	25nm,0.6s						
CAF	Calviac	2.39	357	*e*Pn	Pn	03 45 56.9	+0.8
CAF	Calviac	2.39	357	*e*Pg	Pg	03 46 03.1	+0.1
CAF				*e*Sn	Sn	03 46 25.5	+0.1
CAF				*e*Sg	Sg	03 46 34.1	+0.1
	21nm,0.2s						
SJPF	Ste Jean	2.61	284	*e*Pn	Pn	03 45 59.2	+0.1
SJPF	Ste Jean	2.61	284	*e*Pg	Pg	03 46 06.5	-0.7
SJPF				*e*Sg	Sg	03 46 40.6	-0.5
	6.5nm,0.2s						
LFF	La Frestale	2.64	336	*e*Pn	Pn	03 46 00.3	+0.9
LFF	La Frestale	2.64	336	*e*Pg	Pg	03 46 07.4	-0.2
LFF				*e*Sn	Sn	03 46 31.2	-0.1
LFF				*e*Sg	Sg	03 46 42.0	+0.2
	43nm,0.4s						
EORO	Oroz-Betelu	2.64	279	Pn	Pn	03 46 01.1	+1.6
EORO				Sn	Sn	03 46 31.9	+0.4
EORO				Sg	Sb	03 46 39.8	+3.1
EORO				*i* Vmb_Lg		03 46 46.7	
ALCX	Castello	2.71	214	S	Sn	03 46 33.4	+0.1
	15nm,0.5s						
LEPF	PUYLOUBIER	2.72	68	Pn	Pn	03 46 03.3	+2.7
RUSF	Rustrel	2.75	58	Pn	Pn	03 46 02.9	+1.8
RUSF				Pg	Pg	03 46 11.0	+1.1
RUSF				Sn	Sn	03 46 36.6	+2.3
ETOS	Mallorca	2.80	171	Pn	Pn	03 46 02.2	+0.5
ETOS				*i* Vmb_Lg		03 46 33.3	
ETOS				Sn	Sn	03 46 33.6	-1.8
ARTF	Artigues	2.82	67	Pn	Pn	03 46 04.4	+2.5
ARTF				Sn	Sn	03 46 36.6	+0.9
RJF	Les Rejaudoux	2.82	350	*e*Pn	Pn	03 46 02.6	+0.7
RJF	Les Rejaudoux	2.82	350	*e*Pg	Pg	03 46 10.8	-0.3
RJF				*e*Sn	Sn	03 46 35.4	-0.4
RJF				*e*Sg	Sg	03 46 47.6	0.0
	7.4nm,0.2s						
SMRF	Simiane la Rot	2.83	58	*e*Pn	Pn	03 46 02.9	+0.8
SMRF	Simiane la Rot	2.83	58	*e*Pg	Pg	03 46 11.9	+0.6
SMRF				*e*Sn	Sn	03 46 35.8	-0.3
SMRF				*e*Sg	Sg	03 46 48.0	0.0
	5.1nm,0.5s						
EALK	Alkurruntz	2.84	285	Pg	Pb	03 46 09.4	+1.7
EALK				Sn	Sn	03 46 36.8	+0.4
EALK				Sg	Sb	03 46 45.8	+3.4
EALK				*i* Vmb_Lg		03 46 55.3	
EALK	Alkurruntz	2.84	285	Pn	Pb	03 46 05.7	-2.0
VIVF	Saint-Julien-l	2.91	36	*e*Pn	Pn	03 46 03.8	+0.5
VIVF	Saint-Julien-l	2.91	36	*e*Pg	Pg	03 46 12.6	-0.3
VIVF				*e*Sn	Sn	03 46 37.9	-0.3
VIVF				*e*Sg	Sg	03 46 51.1	+0.4
	7.8nm,0.3s						
EMOS	Mosqueruela	2.98	224	Pn	Pn	03 46 06.2	+1.9
EMOS				Pg	Pg	03 46 12.4	-1.7
EMOS				Sn	Sn	03 46 40.3	+0.4
EMOS				Sg	Sg	03 46 50.3	-2.4
EMOS				*i* Vmb_Lg		03 46 54.2	
EMOS	Mosqueruela	2.98	224	S	Sn	03 46 39.8	-0.2
	2.2nm,0.2s						
LMR	La Mourre	3.23	74	*e*Pn	Pn	03 46 08.5	+0.9
LMR				*e*Sn	Sn	03 46 45.2	-0.8
	3.8nm,0.2s						
ORIF	Oris-en-Rattie	3.55	47	*e*Pn	Pn	03 46 12.2	+0.1
ORIF	Oris-en-Rattie	3.55	47	*e*Pg	Pg	03 46 25.9	+0.7
ORIF				*e*Sn	Sn	03 46 53.1	-1.0
	1.5nm,0.4s						
CALF	Calern	3.63	69	Pn	Pn	03 46 15.0	+1.7
CALF				Sn	Sn	03 46 56.8	+0.7
ETOR	Torete	3.65	243	Pn	Pn	03 46 15.4	+2.0
ETOR				Sn	Sn	03 46 57.3	+1.0
ETOR				Sg	Sg	03 47 10.4	-3.8
ETOR				*i* Vmb_Lg		03 47 18.5	
TCF	Toulx Ste Croi	3.75	360	*e*Pn	Pn	03 46 15.4	+0.6
TCF	Toulx Ste Croi	3.75	360	*e*Pg	Pg	03 46 28.2	-0.7
TCF				*e*Sg	Sg	03 47 16.7	-0.8
	11nm,0.4s						
MBDF	Montbardon	3.95	55	*e*Pn	Pn	03 46 18.3	+0.7
MBDF				*e*Sn	Sn	03 47 02.7	-1.3
	0.7nm,0.3s						
SBF	Sospel	4.02	69	*e*Pn	Pn	03 46 18.9	+0.4
SBF				*e*Sn	Sn	03 47 04.2	-1.4
	4.9nm,0.4s						
BGF	Bois d'Agland	4.04	6	*e*Pg	Pg	03 46 33.5	-1.0
BGF				*e*Sg	Sg	03 47 26.3	-0.6
	16nm,0.3s						
SMF	Signal de Mont	4.26	15	*e*Pn	Pn	03 46 22.7	+0.9
SMF	Signal de Mont	4.26	15	*e*Pg	Pg	03 46 37.7	-1.1
SMF				*e*Sn	Sn	03 47 10.4	-1.1
SMF				*e*Sg	Sg	03 47 33.0	-1.0
	2.5nm,0.3s						
AVF	Avril sur Loir	4.33	10	*e*Pn	Pn	03 46 23.4	+0.8
AVF	Avril sur Loir	4.33	10	*e*Pg	Pg	03 46 38.5	-1.5
AVF				*e*Sn	Sn	03 47 11.9	-1.1
AVF				*e*Sg	Sg	03 47 35.0	-1.0
	3.5nm,0.3s						
MFF	Saint Martin d	4.41	338	*e*Pn	Pn	03 46 24.1	+0.3
MFF	Saint Martin d	4.41	338	*e*Pg	Pg	03 46 39.9	-1.6
MFF				*e*Sn	Sn	03 47 13.5	-1.5
MFF				*e*Sg	Sg	03 47 37.3	-1.3
	2.9nm,0.2s						
SSF	Saint Saulge	4.61	11	*e*Pn	Pn	03 46 25.8	-0.8
SSF	Saint Saulge	4.61	11	*e*Pg	Pg	03 46 44.4	-1.0
SSF				*e*Sg	Sg	03 47 43.9	-1.3
	1.4nm,0.2s						
LOR	Lormes	4.87	13	*e*Pn	Pn	03 46 31.0	+0.9
LOR	Lormes	4.87	13	*e*Pg	Pg	03 46 48.7	-1.6
	baz=194						
LOR				*e*Sg	Sg	03 47 52.0	-1.4
	2.4nm,0.3s,baz=192						
CABF	La Chapelle	4.91	33	*e*Pg	Pg	03 46 49.7	-1.5
CABF				*e*Sg	Sg	03 47 53.2	-1.6
	1.2nm,0.3s						
PGF	Pioggiola	4.99	88	*e*Pn	Pn	03 46 32.0	+0.1
PGF				*e*Sn	Sn	03 47 26.7	-2.9
	1.7nm,0.2s						
GRR	Gorron	6.25	341	*e*Sn	Sn	03 47 57.4	-2.8
GRR				*e*Sg	Sg	03 48 34.5	-2.9
	1.4nm,0.3s						
LDF	La Druitiere	6.28	346	*e*Pn	Pn	03 46 50.0	+0.5
LDF				*e*Sn	Sn	03 47 58.4	-2.7
LDF				*e*Sg	Sg	03 48 35.7	-2.9
	0.9nm,0.3s						
QUIF	Quistinic	6.60	327	*e*Pn	Pn	03 46 53.8	0.0
QUIF				*e*Sn	Sn	03 48 05.6	-3.2
	0.5nm,0.3s						
SGMF	Saint Gilles	6.64	331	*e*Pn	Pn	03 46 54.5	+0.1
SGMF				*e*Sn	Sn	03 48 06.7	-3.2
	0.4nm,0.2s						
ROSF	Rostrenen	6.98	328	*e*Pn	Pn	03 46 59.6	+0.6
ROSF				*e*Sn	Sn	03 48 14.7	-3.5
	0.7nm,0.2s						

ROM 14 03:45:45.3±0.2**,39°.215N**±0°.010×**16°.679E**±0°.007**,**
h25^{km}±1^{km}**,ML1.4**/2**,2C,Error ellipse: s-maj=0.9km s-min=0.8km az=173.0,Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIP	Timpagrande	0.07	120	⇑P	Pb	03 45 49.9	+0.1
TIP				S	Sb	03 45 53.0	+0.2
CELI	Celico	0.23	325	⇑P	Pb	03 45 51.3	-0.1
CELI				S	Sb	03 45 55.9	+0.3
SPS2	Spezzano della	0.28	287	P	Pb	03 45 51.9	-0.1
SPS2				S	Sb	03 45 56.8	+0.3
PIPA	Pietrapaola	0.29	21	P	Pb	03 45 52.1	-0.1
PIPA				S	Sb	03 45 57.7	+0.8
CAR1	CAROLEI	0.36	276	P	Pb	03 45 53.6	+0.3
CAR1				S	Sb	03 45 59.6	+0.8
CAR1				AML	AML		
	comp=N,72µm,0.4s						
CAR1				AML	AML		
	comp=N,72µm,1.6s						
CAR1				AML	AML		
	comp=E,67µm,0.4s						

JMA 14 03:55:44.4±0.3**,37°.9N**±0°.5×**14°2E**±°**,h32**^{km}**,MV1.8**/15**,SE OFF MIYAGI PREF,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.69	307	*e*S	Sn	03 56 07.7	0.0
JIO	Ouri	0.86	311	S	Sn	03 56 11.5	-0.2
JKMT	Kesennumamotoy	1.07	329	*e*P	Pn	03 56 03.4	+0.3
JKMT				S	Sn	03 56 16.2	-0.6
JMM	Marumori	1.09	269	*e*P	Pn	03 56 03.6	+0.1

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*BJI **14** 03:56:47.2±0.0, 42°.66N×142°.47E, h86^{km}, mb4.7/56, mB5.2/27, Ms4.6/5, Ms7 4.3/5*

*SKHL **14** 03:56:48.6±0.3, 42°.70N×142°.70E, h105^{km}±6^{km}, mb5.8/6, msha6.7/6*

*MOS **14** 03:56:48.1±1.0, 42°.76N×142°.61E, h105^{km}, mb5.0/42, Error ellipse: s-maj=5.9km s-min=4.2km az=93.2*

*NEIC **14** 03:56:48.5±1.4, 42°.72N±0°.03×142°.7E±0°.1, h90^{km}±5^{km}, mb5.0/403, Mwr4.7/15, Error ellipse: s-maj=12.4km s-min=4.0km az=92.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.39; $M_{\theta\theta}$-0.34; $M_{\phi\phi}$-0.05; $M_{r\theta}$1.18; $M_{\theta\phi}$-0.08; $M_{\phi r}$-0.45; Fault plane solution: $M_0$1.32000×10^{16} NP1:ϕ_s109.03000°,δ82.69000°, λ96.80000°. NP2:ϕ_s245.86000°,δ9.97000°,λ47.27000°. Principal axes: T 1.3836, Plg52.0000°, Azm27.0000°; N -0.1305, Plg7.0000°, Azm288.0000°; P -1.2531, Plg37.0000°, Azm193.0000°;*

*NEIC **14** 03:56:48.8, 42°.70N×142°.71E, h92^{km}*

*IDC **14** 03:56:49.0±0.9, 42°.81N×142°.66E, h97^{km}±6^{km}, mb4.5/44, mbtmp4.8/50, MS3.7/6, Error ellipse: s-maj=10.1km s-min=8.1km az=129.0*

*JMA **14** 03:56:50.2±0.2, 42°.8N±0°.5×142°.7E±0°.7, h82^{km}±2^{km}, MD4.7/39, MW4.7/39, HIDAKA MOUNTAINS REGION*

JMA Felt III J1 at HIDAKA MOUNTAINS REGION .

*NIED **14** 03:56:50.2, 42°.82N×142°.70E, h82^{km}, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.22; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$0.29; $M_{r\theta}$1.31; $M_{\theta\phi}$-0.38; $M_{\phi r}$-0.41; Fault plane solution: $M_0$1.44000×10^{16} NP1: ϕ_s289.00000°,δ86.00000°,λ-107.00000°. NP2: ϕ_s185.00000°,δ17.00000°,λ-15.00000°.*

*BGR **14** 03:56:57.4, 43°.86N×141°.31E, h103^{km}, mb5.1*

ISC 14 03:56:48.8±0.4**,42°.79N**±0°.03×**142°.65E**±0°.03**,h96**^{km}±2^{km}**,**
h96^{km}**:pP-P,n1037,**σ**1**^{s}**.06**/903**,mb4.9**/346**,33C-53D,**
Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JBT2	Biratori 2	0.21	267	P	Pn	03 57 02.4	-0.2
JBT2	Biratori 2	0.21	267	A	A	03 57 02.4	
	comp=E,88nm,2.2s,comp=E,88nm,0.7s						
JFR	Furan	0.37	354	⇓*e*P	Pn	03 57 03.1	-0.3
JFR	Furan	0.37	354	A	A	03 57 03.1	
	comp=E,36nm,0.8s,comp=E,68nm,1.0s						
JSHD	Hidakashinhida	0.40	199	*i* P	Pn	03 57 04.0	+0.4
JSHD	Hidakashinhida	0.40	199	A	A	03 57 04.0	
	comp=E,139nm,1.6s,comp=E,178nm,1.5s						
JNBK	Urakawa-nobuka	0.52	171	*e*P	Pn	03 57 04.9	+0.6
JNBK	Urakawa-nobuka	0.52	171	A	A	03 57 04.9	
	comp=E,453nm,0.7s,comp=E,249nm,1.3s						
JCH	Churui	0.56	108	⇓*e*P	Pn	03 57 04.1	-0.5
JCH				⇓*e*S	Sn	03 57 14.8	-1.6
JCH	Churui	0.56	108	A	A	03 57 04.1	
	comp=E,31nm,0.8s,comp=E,29nm,3.3s						
JIAM	Iburiatsuma	0.56	253	*i* P	Pn	03 57 05.3	+0.7
JIAM	Iburiatsuma	0.56	253	A	A	03 57 05.3	
	comp=E,148nm,0.4s,comp=E,280nm,1.0s						
JTHR	Tokachihiroo	0.69	136	A	A	03 57 06.0	
	comp=E,53nm,0.7s,comp=E,33nm,0.6s						
JAB	Ashibetsu	0.78	337	⇓*e*P	Pn	03 57 06.9	+0.2
JAB	Ashibetsu	0.78	337	A	A	03 57 06.9	
	comp=E,33nm,1.0s,comp=E,31nm,0.7s						
JEM	Erimo	0.86	154	P	Pn	03 57 08.7	+1.2
JEM	Erimo	0.86	154	⇓*e*P	Pn	03 57 07.8	+0.4
JEM	Erimo	0.86	154	A	A	03 57 07.8	
	comp=E,63nm,4.2s,comp=E,68nm,1.2s						
ERM	Erimo	0.86	154	Pn	Pn	03 57 07.3	-0.2
ERM				Sn	Sn	03 57 21.6	+0.2
ERM	Erimo	0.86	154	P	Pn	03 57 08.6	+1.1
ERM	Erimo	0.86	154	*de*PN	Pn	03 57 07.8	+0.3
JEW	Eniwo	0.88	274	P	Pn	03 57 07.6	-0.1
JEW				*e*S	Sn	03 57 21.4	-0.5
JEW	Eniwo	0.88	274	A	A	03 57 07.6	
	comp=E,41nm,2.0s,comp=E,102nm,2.6s						
JOB	Onbets	0.88	82	⇓*e*P	Pn	03 57 08.1	+0.4
JOB	Onbets	0.88	82	A	A	03 57 08.1	
	comp=E,93nm,1.2s,comp=E,134nm,0.8s						
JAR	Ashorobuto	0.97	58	*e*P	Pn	03 57 08.7	+0.1
JAR	Ashorobuto	0.97	58	A	A	03 57 08.7	
	comp=E,51nm,0.5s,comp=E,61nm,0.7s						
JISS	Ishikarishitsu	1.02	299	⇓P	Pn	03 57 09.4	+0.2
JISS				⇓*e*S	Sn	03 57 24.9	+0.5
JISS	Ishikarishitsu	1.02	299	A	A	03 57 09.4	
	comp=E,97nm,0.6s,comp=E,113nm,0.7s						
JKK2	Kamakawa 2	1.08	4	*e*P	Pn	03 57 10.5	+0.6
JKK2	Kamakawa 2	1.08	4	A	A	03 57 10.5	
	comp=E,17nm,0.6s,comp=E,33nm,0.7s						
JHR	Hokuryu	1.17	325	⇓*e*P	Pn	03 57 11.4	+0.6
JHR	Hokuryu	1.17	325	A	A	03 57 11.4	
	comp=E,47nm,0.8s,comp=E,25nm,0.8s						
JNB	Noboribetsu	1.23	255	A	A	03 57 13.0	
	comp=E,19nm,0.6s,comp=E,26nm,0.4s						
JMP	Maruseppu	1.32	23	A	A	03 57 13.1	
	comp=E,13nm,0.9s,comp=E,23nm,1.8s						
JKA	Kamikawa-asahi	1.32	359	Pn	Pn	03 57 13.6	+0.9
JKA	Kamikawa-asahi	1.32	359	*e*P	Pn	03 57 13.6	+0.9
ASAJ	Asahikawa	1.33	358	P	Pn	03 57 13.6	+0.9
	4µm,0.3s,baz=218,slow=9.6,SNR=5233						
ASAJ				S	Sn	03 57 30.7	-0.1
	2µm,0.5s,baz=310,slow=29,SNR=6.4						
ASAJ	Asahikawa	1.33	358	A	A	03 57 13.4	
	comp=E,7.0nm,2.5s,comp=E,15nm,3.0s						
JTKR	Abashiri--Toko	1.50	38	⇓P	Pn	03 57 15.7	+1.0
JTKR	Abashiri--Toko	1.50	38	A	A	03 57 15.7	
	comp=E,16nm,1.3s,comp=E,18nm,2.6s						
JKB	Kayabe	1.50	233	A	A	03 57 16.6	
	comp=E,71nm,1.4s,comp=E,43nm,1.8s						
JAK	Akkeshi	1.52	82	⇓*e*P	Pn	03 57 15.0	-0.1
JAK				⇓*e*S	Sn	03 57 34.8	-0.2
JAK	Akkeshi	1.52	82	A	A	03 57 15.0	
	comp=E,33nm,0.4s,comp=E,45nm,0.8s						
AKK	Akkeshi	1.63	81	*e*P	Pn	03 57 16.5	0.0
JSK	Shakotan	1.69	290	A	A	03 57 18.9	
	comp=E,12nm,4.0s,comp=E,13nm,1.5s						
JSS	Shosan	1.71	341	A	A	03 57 18.6	
	comp=E,16nm,0.8s,comp=E,20nm,1.4s						
JNK	Nakash	1.71	62	A	A	03 57 18.1	
	comp=E,31nm,1.0s,comp=E,17nm,0.7s						
JAHD	Aomorihigashid	1.81	213	A	A	03 57 20.7	
	comp=E,65nm,0.9s,comp=E,62nm,1.1s						
JYM2	Yakumo 2	1.81	249	A	A	03 57 20.8	
	comp=E,13nm,1.3s,comp=E,27nm,0.9s						
JOT	Ohata	1.84	221	A	A	03 57 21.1	
	comp=E,16nm,0.8s,comp=E,12nm,1.2s						
JYG	Yagishiri	1.86	332	A	A	03 57 20.8	
	comp=E,9.0nm,3.1s,comp=E,11nm,1.3s						
JKHN	Kushirohamanak	1.87	80	A	A	03 57 20.3	
	comp=E,37nm,0.8s,comp=E,29nm,1.3s						
JSH	Shimam	1.92	266	A	A	03 57 22.2	
	comp=E,5.0nm,3.1s,comp=E,7.0nm,4.0s						
JNSB	Nemuroshibetsu	1.98	59	A	A	03 57 21.8	
	comp=E,40nm,2.7s,comp=E,75nm,1.6s						
JARK	Aomorirokkasho	2.02	209	A	A	03 57 23.5	
	comp=E,16nm,0.5s,comp=E,23nm,6.4s						
JHST	Hiyamasetana	2.08	261	A	A	03 57 24.3	
	comp=E,13nm,3.5s,comp=E,26nm,1.9s						
JSR	Shiriuchi	2.08	233	A	A	03 57 24.4	
	comp=E,8.0nm,2.4s,comp=E,9.0nm,1.3s						
JRA	Rausu	2.14	57	A	A	03 57 23.9	
	comp=E,16nm,1.1s,comp=E,13nm,1.2s						
RUSJ	Misakicho	2.31	54*c*	*i*PN	Pn	03 57 29.1	+3.9
RUSJ				*i* S	Sn	03 57 59.5	+6.4
JTM	Tenmabayashi	2.32	211	Pn	Pn	03 57 24.5	-1.0
JTM	Tenmabayashi	2.32	211	P	Pn	03 57 25.2	-0.3
JTM	Tenmabayashi	2.32	211	A	A	03 57 27.7	
	comp=E,10.0nm,2.2s,comp=E,7.0nm,1.1s						
NMR	Nemuro--Hokkai	2.33	75*c*	*i*PN	Pn	03 57 25.5	0.0
NMR				*i* S	Sn	03 57 52.7	-1.0
NMR	Nemuro--Hokkai	2.33	75	*i* P	Pn	03 57 25.5	0.0
NMR				*i* S	Sn	03 57 52.9	-0.8
JOMM	Oshimamatsumae	2.33	238	A	A	03 57 27.9	
	comp=E,7.0nm,1.8s,comp=E,5.0nm,1.8s						
NEM2	Nemuro 2	2.34	75	A	A	03 57 26.7	
	comp=E,9.0nm,1.2s,comp=E,13nm,0.5s						
JSI2	Shiura 2	2.40	225	A	A	03 57 28.9	
	comp=E,13nm,0.9s,comp=E,19nm,0.9s						
JRR	Rishiri	2.54	338	A	A	03 57 30.0	
	comp=E,12nm,3.3s,comp=E,12nm,4.9s						
JANG	Nango	2.56	200	A	A	03 57 30.9	
	comp=E,9.0nm,1.6s,comp=E,9.0nm,1.3s						
JWK2	Keihoku	2.58	348	A	A	03 57 30.5	
	comp=E,5.0nm,4.8s,comp=E,5.0nm,2.6s						
YUK	Yuzh-Kuril'sk	2.65	61*d*	*i*PN	Pn	03 57 31.9	+2.1
YUK				*i* S	Sn	03 58 04.0	+2.7
YUK				pmax	pmax		
	comp=Z,1µm,0.4s						
YUK				pmax	pmax		
	comp=E,1µm,0.6s						
YUK				pmax	pmax		
	comp=N,1µm,0.5s						
YUK				smax	smax		
	comp=E,11µm,0.5s						
YUK				smax	smax		
	comp=N,14µm,0.6s						
YUK	Yuzh-Kuril'sk	2.65	61	*e*P	Pn	03 57 31.2	+1.4
YUK				AMB	AMB	03 57 33.8	
	comp=N,1µm,0.4s						
YUK				*i* S	Sn	03 58 03.2	+1.9
YUK				A	A	03 58 10.3	
	comp=N,14µm,0.7s						
YUK				A	A	03 58 10.3	
	comp=N,11µm,0.7s						
JKEN	Kujiedanarisaw	2.68	196	A	A	03 57 32.5	
	comp=N,26nm,1.2s,comp=N,24nm,1.0s						
JHHS	Hirosakihyakuz	2.74	219	A	A	03 57 33.5	
	comp=N,20nm,0.9s,comp=N,22nm,1.6s						
JIW	Iwasaki	2.95	223	A	A	03 57 36.5	
	comp=N,9.0nm,2.0s,comp=N,10.0nm,1.6s						
JKZ	Kuzumaki	2.97	200	A	A	03 57 36.6	
	comp=N,8.0nm,0.6s,comp=N,8.0nm,2.3s						
JAH	Hinai	3.01	211	A	A	03 57 37.1	
	comp=N,8.0nm,6.3s,comp=N,8.0nm,2.4s						
JNTW	Noshirotokiwa	3.13	217	A	A	03 57 38.9	
	comp=N,16nm,6.9s,comp=N,15nm,2.0s						
SHO	Shikotan	3.24	69*c*	*i*PN	Pn	03 57 38.0	+0.4
SHO				*i* S	Sn	03 58 14.9	-0.4
SHO				pmax	pmax		
	comp=E,373nm,0.4s						
SHO				pmax	pmax		
	comp=Z,544nm,0.4s						
SHO				pmax	pmax		
	comp=N,284nm,0.3s						
SHO				smax	smax		
	comp=N,5µm,0.4s						
SHO				smax	smax		
	comp=E,6µm,0.4s						
SHO	Shikotan	3.24	69	*i* P	Pn	03 57 38.0	+0.4
SHO				AMB	AMB	03 57 47.0	
	comp=E,540nm,0.4s						
SHO				*i* S	Sn	03 58 14.9	-0.4
SHO				A	A	03 58 21.0	
	comp=E,5µm,0.5s						
SHO				A	A	03 58 21.0	
	comp=E,6µm,0.5s						
MIYJ	Miyakonagasawa	3.27	191	A	A	03 57 40.7	
	comp=E,10.0nm,2.6s,comp=E,10.0nm,1.0s						
JSZI	Iwateshizukuis	3.30	203	A	A	03 57 41.7	
	comp=E,11nm,1.9s,comp=E,15nm,1.7s						
JOM	Ohasama	3.47	198	A	A	03 57 43.4	
	comp=E,7.0nm,1.0s,comp=E,7.0nm,0.8s						
JRG	Rokugo	3.72	205	A	A	03 57 46.9	
	comp=E,7.0nm,0.7s,comp=E,7.0nm,2.8s						
JYW	Yuwa	3.73	210	A	A	03 57 47.2	
	comp=E,8.0nm,1.2s,comp=E,9.0nm,2.2s						
OFUJ	Ofunato	3.78	192	A	A	03 57 47.7	
	comp=E,5.0nm,1.5s,comp=E,4.0nm,1.5s						
JOG3	Oga3	3.93	224	A	A	03 57 45.1	
	comp=E,5.0nm,2.7s,comp=E,6.0nm,5.0s						
YSS	Yuzh-Sakhalins	4.16	1	Pn	Pn	03 57 51.9	+1.9
YSS	Yuzh-Sakhalins	4.16	1	P	Pn	03 57 52.6	+2.5
YSS	Yuzh-Sakhalins	4.16	1κ	*i*PN	Pn	03 57 52.3	+2.2
YSS				*e*S	Sn	03 58 40.4	+2.8
YSS				pmax	pmax		
	comp=Z,700nm,0.8s						
YSS				pmax	pmax		
	comp=N,530nm,0.9s						
YSS				smax	smax		
	comp=N,420nm,1.2s						
YSS				smax	smax		
	comp=N,2µm,2.4s						
YSS				smax	smax		

	comp=E,1µm,2.3s						
YSS	**Yuzh-Sakhalins**	**4.16**	**1**	*i* P	**Pn**	**03 57 52.2**	**+2.2**
YSS				AMB	AMB	03 57 53.4	
	comp=E,700nm,0.8s						
YSS				*e*S	**Sn**	**03 58 39.9**	**+2.3**
YSS				A	A	03 58 41.6	
	comp=E,140nm,0.8s						
YSS				A	A	03 58 41.6	
	comp=E,220nm,0.8s						
YSS				A	A	03 58 42.4	
	comp=E,2µm,2.4s						
YSS				A	A	03 58 42.4	
	comp=E,1µm,2.4s						
JYK	**Kaneyama**	**4.24**	**205**	A	A	03 57 54.2	
	comp=E,5.0nm,7.0s,comp=E,3.0nm,2.1s						
JYYZ	**Yamagatayuza**	**4.29**	**210**	A	A	03 57 55.0	
	comp=E,7.0nm,6.5s,comp=E,9.0nm,4.7s						
JOFO	**Osakifurukawao**	**4.39**	**198**	A	A	03 57 56.2	
	comp=E,19nm,1.5s,comp=E,15nm,2.9s						
KUR	**Kuril'sk**	**4.49**	**55**	⇑*i*PN	**Pn**	**03 57 56.6**	**+2.1**
KUR				pmax	pmax		
	comp=Z,931nm,0.9s						
KUR				pmax	pmax		
	comp=N,187nm,0.6s						
KUR				pmax	pmax		
	comp=E,168nm,0.6s						
KUR	**Kuril'sk**	**4.49**	**55**	*e*P	**Pn**	**03 57 55.6**	**+1.1**
KUR				AMB	AMB	03 57 59.5	
	comp=E,930nm,0.9s						
KUR				*e*S	**Sn**	**03 58 46.2**	**+0.7**
KUR				A	A	03 59 03.6	
	comp=E,2µm,0.7s						
KUR				A	A	03 59 03.6	
	comp=E,2µm,0.7s						
JOU	**Okura**	**4.67**	**199**	A	A	03 58 00.2	
	comp=E,4.0nm,2.7s,comp=E,5.0nm,1.1s						
JYA	**Atsumi**	**4.75**	**209**	A	A	03 58 01.3	
	comp=E,4.0nm,3.1s,comp=E,4.0nm,2.3s						
TEY	**Ternei**	**4.91**	**299**	*e*PN	**Pn**	**03 57 58.6**	**-1.5**
TEY	**Ternei**	**4.91**	**299**	*e*P	**Pn**	**03 58 00.5**	**+0.4**
TEY				AMB	AMB	03 58 02.7	
	comp=E,20nm,0.4s						
JMM	**Marumori**	**5.12**	**197**		**Pn**	**03 58 00.5**	**-2.6**
JMM	**Marumori**	**5.12**	**197**	P	**Pn**	**03 58 00.8**	**-2.3**
JYAR	**Yonezawaarcadi**	**5.23**	**202**	A	A	03 58 08.0	
	comp=E,7.0nm,1.2s,comp=E,8.0nm,1.2s						
JSD	**Sado**	**5.81**	**217**	Pn	**Pn**	**03 58 11.8**	**-0.7**
JSD	**Sado**	**5.81**	**217**	P	**Pn**	**03 58 11.8**	**-0.7**
UGL	**Uglegorsk**	**6.30**	**357**	*e*PN	**Pn**	**03 58 21.2**	**+2.2**
UGL				*e*S	**Sn**	**03 59 32.5**	**+3.0**
UGL				pmax	pmax		
	comp=Z,200nm,0.9s						
UGL				smax	smax		
	comp=E,1µm,3.2s						
UGL				smax	smax		
	comp=N,900nm,2.7s						
UGL	**Uglegorsk**	**6.30**	**357**	*e*P	**Pn**	**03 58 21.2**	**+2.2**
UGL				AMB	AMB	03 58 22.0	
	comp=N,200nm,0.9s						
UGL				*e*S	**Sn**	**03 59 32.5**	**+3.0**
UGL				A	A	03 59 35.0	
	comp=N,900nm,3.0s						
UGL				A	A	03 59 35.0	
	comp=N,1µm,3.0s						
MJB9	**Matsu-Tunnel**	**7.11**	**210**		**Pn**	**03 58 29.6**	**-0.6**
MAJO	**Matsushiro**	**7.12**	**210**	Pn	**Pn**	**03 58 29.4**	**-0.8**
MAJO	**Matsushiro**	**7.12**	**210**	P	**Pn**	**03 58 29.9**	**-0.4**
MAJO	**Matsushiro**	**7.12**	**210**	*d i*PN	**Pn**	**03 58 30.4**	**+0.1**
MJAR	**Matsushiro Arr**	**7.12**	**210**	P	**Pn**	**03 58 29.4**	**-0.9**
	comp=N,22nm,0.4s,baz=17,slow=16,SNR=90						
MJAR				S	**Sn**	**03 59 51.5**	**+2.0**
	comp=N,26nm,0.8s,baz=286,slow=9.0,SNR=4.2						
MJAR				LR	LR	04 01 38.1	
	comp=N,479nm,20.5s,baz=16,slow=40						
USA0B	**Ussuriysk Arra**	**7.88**	**284**		**Pn**	**03 58 41.4**	**+0.9**
USA0B	**Ussuriysk Arra**	**7.88**	**284**	PN	**Pn**	**03 58 41.4**	**+0.9**
USRK	**Ussuriysk Ar.**	**7.88**	**284**	P	**Pn**	**03 58 42.3**	**+1.8**
	comp=N,15nm,0.6s,baz=89,slow=14,SNR=15						
USRK	**Ussuriysk Ar.**	**7.88**	**284**	Pn	**Pn**	**03 58 41.2**	**+0.7**
TYV	**Tymovskoe**	**8.07**	**0**	*e*PN	**Pn**	**03 58 45.8**	**+2.6**
TYV				*e*S	**Sn**	**04 00 13.7**	**+1.0**
TYV				pmax	pmax		
	comp=Z,300nm,3.1s						
TYV				pmax	pmax		
	comp=Z,145nm,0.9s						
TYV				smax	smax		
	comp=N,15nm,1.3s						
TYV				smax	smax		
	comp=E,11nm,1.3s						
TYV				smax	smax		
	comp=N,400nm,4.6s						
TYV				smax	smax		
	comp=E,200nm,4.6s						
TYV	**Tymovskoe**	**8.07**	**0**	*e*S	**Sn**	**04 00 13.5**	**+0.8**
TYV				A	A	03 00 14.5	
	comp=E,20nm,0.8s						
TYV				A	A	03 00 14.5	
	comp=E,10.0nm,0.8s						
TYV				A	A	03 00 23.7	
	comp=E,400nm,4.9s						
TYV				A	A	03 00 23.7	
	comp=E,200nm,4.9s						
TYV	**Tymovskoe**	**8.07**	**0**	*e*P	**Pn**	**03 58 45.8**	**+2.6**
TYV				AMB	AMB	03 58 46.9	
	comp=E,300nm,3.1s						
TYV				AMB	AMB	03 58 47.0	
	comp=E,150nm,0.9s						
JGF	**Kuroka**	**8.27**	**211**	Pn	**Pn**	**03 58 45.0**	**-0.9**
JGF	**Kuroka**	**8.27**	**211**	P	**Pn**	**03 58 45.5**	**-0.5**
INU	**Inuyama**	**8.62**	**212**	Pn	**Pn**	**03 58 49.8**	**-1.0**
INU	**Inuyama**	**8.62**	**212**	P	**Pn**	**03 58 50.3**	**-0.4**
JSG	**Sagara**	**8.82**	**205**		**Pn**	**03 58 51.4**	**-2.0**
JSG	**Sagara**	**8.82**	**205**	P	**Pn**	**03 58 53.4**	**0.0**
GRNR	**Gornyy**	**9.05**	**334**	⇑*i*PN	**Pn**	**03 58 58.1**	**+1.7**
GRNR				*e*S	**Sn**	**04 00 41.6**	**+5.2**
GRNR				pmax	pmax		
	comp=E,20nm,0.7s						
GRNR				pmax	pmax		
	comp=N,20nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,20nm,0.7s						
GRNR				smax	smax		
	comp=N,4.0nm,0.6s						
GRNR				MLR	MLR		
	comp=E,350nm,15.0s						
GRNR				MLR	MLR		
	comp=N,310nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,360nm,17.0s						
GRNR	**Gornyy**	**9.05**	**334**	AMS	AMS	03 03 47.0	
	comp=Z,300nm,16.0s						
GRNR				AMS	AMS	03 03 47.0	
	comp=Z,400nm,16.0s						
GRNR				AMS	AMS	03 03 47.0	
	comp=Z,400nm,16.0s						
GRNR				*i* P	**Pn**	**03 58 58.1**	**+1.7**
GRNR				AMB	AMB	03 58 59.0	
	comp=Z,20nm,0.7s						
GRNR				AMB	AMB	03 58 59.0	
	comp=Z,20nm,0.7s						
GRNR				AMB	AMB	03 58 59.0	
	comp=Z,20nm,0.7s						
MDJ	**Mudanjiang**	**9.63**	**285**	P	**Pn**	**03 59 04.1**	**-0.3**
MDJ				sP		03 59 31.4	
MDJ				PcP	**PcP**	**04 05 11.0**	**-0.3**
MDJ				pmax	pmax		
	comp=Z,14nm,1.8s						
MDJ				pmax	pmax		
	comp=Z,480nm,11.3s						
MDJ	**Mudanjiang**	**9.63**	**285**	Pn	**Pn**	**03 59 04.8**	**+0.5**
MDJ	**Mudanjiang**	**9.63**	**285**	P	**Pn**	**03 59 06.5**	**+2.1**
JHJ	**Hachijo jima 2**	**9.92**	**194**	P	**Pn**	**03 59 03.8**	**-4.5**
	comp=Z,104nm,0.3s,baz=335,slow=14,SNR=8.9						
JHJ				S	Sn	04 00 45.8	-12
	comp=Z,146nm,0.3s,baz=56,slow=23,SNR=6.9						
KLR	**Kul'dur**	**9.94**	**314**	P	**Pn**	**03 59 10.3**	**+1.7**
	comp=Z,19nm,0.8s,baz=124,slow=14,SNR=64						
KLR	**Kul'dur**	**9.94**	**314**	*ce*PN	**Pn**	**03 59 09.5**	**+0.9**
KLR				pmax	pmax		
	comp=Z,28nm,0.9s						
KLR	**Kul'dur**	**9.94**	**314**	*e*P	**Pn**	**03 59 09.5**	**+0.9**
KLR				AMB	AMB	03 59 11.5	
	comp=Z,30nm,0.9s						
JHS	**Saijyo**	**10.75**	**227**	Pn	**Pn**	**03 59 18.6**	**-1.1**
BNX	**BinXian**	**11.32**	**290**	⇑P	**Pn**	**03 59 28.1**	**+0.8**
BNX				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BNX				pmax	pmax		
	comp=Z,230nm,3.8s						
SKR	**Severo-Kuril's**	**12.14**	**45**	⇓*e*PN	**Pn**	**03 59 39.0**	**+0.8**
SKR	**Severo-Kuril's**	**12.14**	**45**	*e*P	**Pn**	**03 59 37.6**	**-0.6**
KSRS	**Korea Array**	**12.46**	**250**	P	**Pn**	**03 59 42.8**	**+0.2**
	comp=Z,18nm,0.9s,baz=62,slow=12,SNR=28						
KSRS				LR	LR	04 03 51.4	
	comp=Z,201nm,18.9s,baz=45,slow=34						
KS19	**Wonju Array Si**	**12.48**	**250**		**Pn**	**03 59 42.4**	**-0.4**
KSAR	**Wonju Array Be**	**12.49**	**250**	Pn	**Pn**	**03 59 41.0**	**-2.0**
KSAR	**Wonju Array Be**	**12.49**	**250**	PN	**Pn**	**03 59 41.0**	**-2.0**
CN2	**Changchun**	**12.57**	**280**	*e*P	**Pn**	**03 59 43.5**	**-0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HEH	**HeiHe**	**12.86**	**311**	*e*P	**Pn**	**03 59 47.5**	**-0.3**
HEH				sP	P	04 00 11.3	+16
HEH				S	**Sn**	**04 02 06.3**	**-2.7**
HEH				SS	**S**	**04 02 31.5**	**+3.3**
HEH				pmax	pmax		
	comp=Z,21nm,0.8s						
HEH				pmax	pmax		
	comp=Z,240nm,5.0s						
JNU	**Nakatsue**	**13.38**	**228**	P	**Pn**	**03 59 52.9**	**-1.9**
	comp=Z,30nm,1.0s,baz=27,slow=10,SNR=8.5						
JNU				LR	LR	04 05 35.4	
	comp=Z,358nm,19.0s,baz=334,slow=39						
JNU	**Nakatsue**	**13.38**	**228**	Pn	**Pn**	**03 59 53.1**	**-1.7**
TJN	**Taejon**	**13.41**	**247**	⇓*e*PN	**Pn**	**03 59 56.4**	**+1.4**
PEA0B	**Petropavlovsk-**	**14.40**	**39**		**Pn**	**04 00 06.5**	**-1.3**
PEA0B	**Petropavlovsk-**	**14.40**	**39**	*de*P	**Pn**	**04 00 06.3**	**-1.5**
PETK	**Petropavlovsk-**	**14.40**	**39**	P	**Pn**	**04 00 06.1**	**-1.7**
	comp=Z,29nm,0.7s,baz=215,slow=10,SNR=26						
PETK	**Petropavlovsk-**	**14.40**	**39**		**Pn**	**04 00 06.6**	**-1.2**
PETK	**Petropavlovsk-**	**14.40**	**39**	P	**Pn**	**04 00 06.6**	**-1.2**
PET	**Petropavlovsk**	**14.80**	**41**		**Pn**	**04 00 12.2**	**-0.6**
PET	**Petropavlovsk**	**14.80**	**41**	*e*P	**Pn**	**04 00 12.4**	**-0.5**
PET				pmax	pmax		
	comp=Z,79nm,0.8s						
PET	**Petropavlovsk**	**14.80**	**41**	*e*P	**Pn**	**04 00 11.6**	**-1.3**
PET				AMB	AMB	04 00 15.6	
	comp=Z,80nm,0.8s						
JSU	**Suzuyama**	**14.86**	**225**	P	**Pn**	**04 00 11.5**	**-2.4**
ZEA	**Zeya**	**14.96**	**322**	*e*P	**Pn**	**04 00 16.2**	**+1.2**
ZEA				pmax	pmax		
	comp=E,20nm,0.7s						
ZEA				pmax	pmax		
	comp=N,20nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.9s						
ZEA	**Zeya**	**14.96**	**322**	*e*P	**Pn**	**04 00 14.5**	**-0.5**
ZEA				AMB	AMB	04 00 19.0	
	comp=Z,30nm,0.6s						
HIA	**Hailar**	**17.14**	**300**	P	**Pn**	**04 00 40.8**	**-1.3**
HIA	**Hailar**	**17.14**	**300**	P	**Pn**	**04 00 40.8**	**-1.3**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MA2	**Magadan**	**17.54**	**14**	P	**P**	**04 00 45.4**	**-1.1**
	comp=Z,28nm,0.6s,baz=202,slow=11,SNR=44						
MA2	**Magadan**	**17.54**	**14**		**P**	**04 00 45.8**	**-0.8**
MA2				IAmb	IAmb	04 00 48.5	
	comp=Z,203nm,1.4s						
MA2	**Magadan**	**17.54**	**14**	P	**P**	**04 00 46.4**	**-0.2**
MA2	**Magadan**	**17.54**	**14**	*ce*P	**P**	**04 00 45.2**	**-1.4**
MA2				pmax	pmax		
	comp=Z,223nm,1.7s						
MA2	**Magadan**	**17.54**	**14**	*e*P	**P**	**04 00 45.2**	**-1.4**
XLT	**XiLinHaoTe**	**19.33**	**282**	*e*P	**P**	**04 01 06.3**	**-0.1**
XLT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,570nm,11.0s						
JOW	**Kunigami**	**19.77**	**221**	LR	LR	04 08 41.4	
	comp=Z,71nm,18.4s,baz=296,slow=36						
BJI	**Beijing**	**20.01**	**271**	P	**P**	**04 01 12.8**	**-0.9**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BJT	**Baijiatuau**	**20.03**	**271**	P	**P**	**04 01 12.7**	**-1.2**
BJT	**Baijiatuau**	**20.03**	**271**	P	**P**	**04 01 13.5**	**-0.4**
BJT	**Baijiatuau**	**20.03**	**271**	P	**P**	**04 01 12.7**	**-1.2**
BJT				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YAK	**Yakutsk**	**20.75**	**343**	P	**P**	**04 01 20.9**	**-0.5**
	comp=Z,13nm,0.4s,baz=210,slow=0.2,SNR=2.0						
	comp=Z,13nm,0.4s						
YAK	**Yakutsk**	**20.75**	**343**	P	**P**	**04 01 20.0**	**-1.4**
YAK				IAmb	IAmb	04 01 26.8	
	comp=Z,57nm,0.8s						
YAK	**Yakutsk**	**20.75**	**343**	*e*P	**P**	**04 01 18.2**	**-3.3**
YAK				*e*S	**S**	**04 05 00.1**	**-7.4**
YAK				*e*		04 05 24.1	
YAK				*e**SS	**sS**	**04 05 36.7**	**-2.0**
YAK				*e*		04 12 30.6	
YAK				pmax	pmax		
	comp=Z,80nm,1.1s						
YAK				pmax	pmax		
	comp=N,53nm,1.4s						
YAK				pmax	pmax		
	comp=E,13nm,1.4s						
YAK				smax	smax		
	comp=E,152nm,3.1s						
YAK				smax	smax		
	comp=N,125nm,2.8s						
SEY	**Seymchan**	**20.97**	**12**	P	**P**	**04 01 22.2**	**-1.6**
	comp=N,40nm,0.8s,baz=197,slow=7.9,SNR=85						
	comp=N,40nm,0.8s						
NJ2	**Nanjing**	**21.65**	**248**	*e*P	**P**	**04 01 31.0**	**-0.4**
NJ2				pmax	pmax		
	comp=N,15nm,1.2s						
HHC	**Hu-ho-hao-te**	**23.18**	**276**	*e*P	**P**	**04 01 46.8**	**-0.3**
HHC				pmax	pmax		
	comp=N,28nm,0.5s						
SHEM	**Shemya Is, Ala**	**23.19**	**54**	P	**P**	**04 01 46.5**	**-0.4**
	comp=N,65nm,0.9s,baz=281,slow=7.3,SNR=2.2						
SHEM				LR	LR	04 10 41.1	
	comp=N,476nm,20.6s,baz=324,slow=36						
	comp=N,65nm,0.9s						
LYN	**LuoYang**	**24.86**	**261**	*e*P	**P**	**04 02 00.3**	**-1.9**
ULN	**Ulaanbaatar**	**25.38**	**294**	P	**P**	**04 02 06.1**	**-1.0**
ULN	**Ulaanbaatar**	**25.38**	**294**	*de*P	**P**	**04 02 07.0**	**-0.1**
ULN				pmax	pmax		
	comp=Z,11nm,1.5s						
ULN	**Ulaanbaatar**	**25.38**	**294**	*e*P	**P**	**04 02 07.0**	**-0.1**
WHN	**Wuhan**	**25.65**	**251**	P	**P**	**04 02 08.6**	**-0.8**
SONM	**Songino Array**	**25.82**	**294**	P	**P**	**04 02 11.2**	**+0.1**
	comp=Z,9.2nm,1.1s,baz=88,slow=7.6,SNR=27						
	comp=Z,9.2nm,1.1s						
SONM	**Songino Array**	**25.82**	**294**	P	**P**	**04 02 11.0**	**-0.1**
XAN	**Xi'an**	**27.68**	**263**	P	**P**	**04 02 27.1**	**-0.7**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZAK	**Zakamensk**	**27.83**	**300**	*e*P	**P**	**04 02 27.9**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BILL	**Bilibino**	**28.26**	**19**	P	**P**	**04 02 31.5**	**-1.0**
BILL	**Bilibino**	**28.26**	**19**	⇓*e*P	**P**	**04 02 30.7**	**-1.7**
BILL				*e*		04 03 25.7	
BILL				*e*		04 05 44.5	
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ENH	**Enshi**	**29.23**	**256**	P	**P**	**04 02 40.6**	**-0.9**
ENH				IAmb	IAmb	04 02 42.5	
	comp=Z,24nm,0.9s						
ENH	**Enshi**	**29.23**	**256**	P	**P**	**04 02 42.1**	**+0.5**
TIXI	**Tiksi**	**29.72**	**351**	P	**P**	**04 02 45.6**	**+0.3**
	comp=Z,2.2nm,0.5s,baz=270,slow=22,SNR=5.0						
	comp=Z,2.2nm,0.5s						
TIXI	**Tiksi**	**29.72**	**351**	P	**P**	**04 02 46.0**	**+0.7**
TIXI	**Tiksi**	**29.72**	**351**	⇓*e*P	**P**	**04 02 45.7**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,18nm,4.2s						
LZH	**Lanzhou**	**30.50**	**270**	⇓P	**P**	**04 02 54.8**	**+1.9**
LZH				pP	pP	04 03 17.5	+2.9
LZH				sP	sP	04 03 29.6	+3.8
LZH				pmax	pmax		
	comp=Z,10.0nm,1.5s						
H11S1	**WAKE ISLAND Hy**	**31.63**	**132**	T	T	04 35 46.2	
	baz=327,slow=76,SNR=1015						
H11S3	**WAKE ISLAND Hy**	**31.64**	**133**	T	T	04 35 51.4	
	baz=327,slow=76,SNR=760						
H11S2	**WAKE ISLAND Hy**	**31.65**	**132**	T	T	04 35 47.5	
	baz=327,slow=76,SNR=495						
GTA	**Gaotai**	**32.20**	**279**	⇓P	**P**	**04 03 08.5**	**+0.8**
GTA				pP	pP	04 03 33.3	+3.8
GTA				pmax	pmax		
	comp=Z,12nm,0.9s						
NIKH	**Nikolski High**	**33.48**	**55**	P	**P**	**04 03 19.0**	**+0.4**
	baz=272						
UNV	**Unalaska Valle**	**34.85**	**54**	P	**P**	**04 03 30.2**	**-0.1**
	baz=272						
TNA	**Tin City**	**35.44**	**33**	P	**P**	**04 03 35.4**	**+0.2**
TNA	**Tin City**	**35.44**	**33**	P	**P**	**04 03 35.2**	**0.0**
	baz=254,SNR=41						
ANM	**Nome**	**36.27**	**35**	P	**P**	**04 03 42.5**	**+0.2**
ANM				IAmb	IAmb	04 03 44.1	
	comp=Z,37nm,1.3s						
ANM	**Nome**	**36.27**	**35**	P	**P**	**04 03 42.5**	**+0.2**
ANM				pmax	pmax		
	comp=Z,37nm,1.3s						
ANM	**Nome**	**36.27**	**35**	P	**P**	**04 03 42.8**	**+0.4**
	baz=258,SNR=23						
PZH	**PanZhiHua**	**36.97**	**257**	P	**P**	**04 03 49.8**	**+0.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
GOMU	**GeErMu**	**37.09**	**276**	P	**P**	**04 03 51.0**	**+0.9**
GOMU				pmax	pmax		
	comp=Z,12nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,130nm,7.4s						
KMI	**Kunming**	**37.09**	**255**	⇓P	**P**	**04 03 50.3**	**+0.2**
KMI				pP	pP	04 04 10.6	-1.6
KMI				sP	sP	04 04 22.8	-0.5
KMI				pmax	pmax		
	comp=Z,28nm,1.0s						
RDOG	**Red Dog Mine**	**37.99**	**30**	P	**P**	**04 03 55.1**	**-1.8**
RDOG				IAmb	IAmb	04 03 57.5	
	comp=Z,22nm,1.0s						
RDOG	**Red Dog Mine**	**37.99**	**30**	P	**P**	**04 03 56.4**	**-0.4**
	baz=256						
DGZ	**Jazzator, Alta**	**38.05**	**300**	*ce*P	**P**	**04 03 58.9**	**+1.1**
DGZ				pmax	pmax		
	comp=Z,23nm,1.1s						
NRIK	**Noril'sk**	**38.53**	**332**	P	**P**	**04 03 59.5**	**-1.8**
	comp=Z,1.8nm,0.4s,baz=120,slow=6.7,SNR=3.0						
NRIK				ScP	**ScP**	**04 09 51.1**	**0.0**
	comp=Z,3.3nm,0.6s,baz=119,slow=1.9,SNR=5.5						
	comp=Z,1.8nm,0.4s						
NRIK	**Noril'sk**	**38.53**	**332**	⇓*i*P	**P**	**04 03 59.1**	**-2.2**
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
N16K	**Nishlik Lake**	**38.92**	**42**	P	**P**	**04 04 05.6**	**+0.9**
	baz=270						
ZAA0	**Zalesovo Array**	**38.95**	**307**	P	**P**	**04 04 04.6**	**-0.5**
ZAA0				pP	**pP**	**04 04 26.9**	**-0.6**
ZAA0				IAmb	IAmb	04 04 28.5	
	comp=Z,13nm,1.0s						
ZAA0				PcP	**PcP**	**04 06 13.8**	**+0.2**
ZALV	**Zalesovo Beam**	**38.95**	**307**	P	**P**	**04 04 05.1**	**0.0**
	comp=Z,6.5nm,0.7s,baz=89,slow=7.9,SNR=21						
ZALV				PcP	**PcP**	**04 06 13.9**	**+0.3**
	comp=Z,6.6nm,0.7s,baz=94,slow=2.5,SNR=7.3						
ZALV				ScP	**ScP**	**04 09 52.9**	**-0.1**
	comp=Z,8.4nm,0.7s,baz=86,slow=3.8,SNR=21						
	comp=Z,6.5nm,0.7s						
ZALV	**Zalesovo Beam**	**38.95**	**307**	P	**P**	**04 04 04.8**	**-0.2**
ZALV				pP	**pP**	**04 04 27.6**	**+0.1**
ZALV				PcP	**PcP**	**04 06 12.7**	**-1.0**
ZALV	**Zalesovo Beam**	**38.95**	**307**	*i* P	**P**	**04 04 05.0**	**-0.1**
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.5s						
O16K	**Kokwok River B**	**39.27**	**44**	P	**P**	**04 04 08.6**	**+0.9**
	baz=272						
WMQ	**Urumqi**	**39.38**	**291**	*e*P	**P**	**04 04 08.5**	**-0.3**
WMQ				PcP	**PcP**	**04 06 16.1**	**+0.8**
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
O17K	**Koliganek Bris**	**39.77**	**43**	P	**P**	**04 04 12.8**	**+1.0**
	baz=272						
GCSA	**Galena City Sc**	**39.91**	**36**	P	**P**	**04 04 12.8**	**0.0**
	baz=266						
Q16K	**King Salmon**	**40.06**	**45**	P	**P**	**04 04 14.5**	**+0.3**
	baz=274						
TTA	**Tatalina**	**40.24**	**38**	P	**P**	**04 04 16.7**	**+1.0**
TTA	**Tatalina**	**40.24**	**38**	P	**P**	**04 04 16.5**	**+0.8**
	comp=Z,14nm,1.4s						
TTA	**Tatalina**	**40.24**	**38**	P	**P**	**04 04 16.7**	**+1.0**
TTA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TTA	**Tatalina**	**40.24**	**38**	P	**P**	**04 04 16.2**	**+0.5**
	baz=270,SNR=10						
R17K	**Ugashik Creek**	**40.29**	**47**	P	**P**	**04 04 16.1**	**-0.1**
	baz=275						
Q17K	**Contact Creek**	**40.50**	**46**	P	**P**	**04 04 18.4**	**+0.4**
	baz=275						
O18K	**Koktuh Hills**	**40.72**	**43**	P	**P**	**04 04 20.0**	**+0.3**
	baz=274						
P18K	**Big Mountain,**	**40.74**	**44**	P	**P**	**04 04 19.5**	**-0.4**
P18K				IAmb	IAmb	04 04 22.8	
	comp=Z,28nm,1.0s						
P18K	**Big Mountain,**	**40.74**	**44**	P	**P**	**04 04 20.2**	**+0.3**
	baz=274,SNR=7.8						
L19K	**White Mountain**	**40.78**	**40**	P	**P**	**04 04 19.7**	**-0.4**
L19K	**White Mountain**	**40.78**	**40**	P	**P**	**04 04 21.0**	**+0.8**
	baz=271						
A21K	**Barrow**	**40.83**	**25**	P	**P**	**04 04 19.6**	**-0.7**
A21K	**Barrow**	**40.83**	**25**	P	**P**	**04 04 19.9**	**-0.5**
	baz=259						
Q18K	**Katmai Hardscr**	**40.92**	**45**	P	**P**	**04 04 21.5**	**+0.1**
	baz=275						
M19K	**Big River Lodg**	**41.01**	**40**	P	**P**	**04 04 21.9**	**-0.1**
M19K				IAmb	IAmb	04 04 24.4	
	comp=Z,14nm,0.9s						
M19K	**Big River Lodg**	**41.01**	**40**	P	**P**	**04 04 22.9**	**+0.9**
	baz=272						
N19K	**Bonanza Creek**	**41.02**	**42**	P	**P**	**04 04 22.4**	**+0.2**
N19K				IAmb	IAmb	04 04 24.6	
	comp=Z,16nm,0.8s						
N19K	**Bonanza Creek**	**41.02**	**42**	P	**P**	**04 04 23.3**	**+1.1**
	baz=273						
K20K	**Telida**	**41.12**	**38**	P	**P**	**04 04 23.8**	**+0.9**
K20K				IAmb	IAmb	04 04 25.2	
	comp=Z,44nm,1.4s						
K20K	**Telida**	**41.12**	**38**	P	**P**	**04 04 23.8**	**+0.9**
	baz=271,SNR=17						
O19K	**Port Alsworth**	**41.14**	**43**	P	**P**	**04 04 24.1**	**+1.0**
O19K				IAmb	IAmb	04 04 27.1	
	comp=Z,12nm,0.8s						
O19K	**Port Alsworth**	**41.14**	**43**	P	**P**	**04 04 24.1**	**+1.0**
	baz=274						
L20K	**Farewell, AK**	**41.23**	**39**	P	**P**	**04 04 24.9**	**+1.1**
	baz=272						
IMAR	**Indian Mountai**	**41.28**	**34**	P	**P**	**04 04 23.8**	**-0.3**
G21K	**Allakaket**	**41.40**	**33**	P	**P**	**04 04 25.3**	**+0.1**
	baz=268						
F21K	**Alatna River**	**41.44**	**32**	P	**P**	**04 04 25.3**	**-0.2**
	baz=267,SNR=18						
NONG	**Nongkai**	**41.50**	**246**	P	**P**	**04 04 28.1**	**+1.6**
Q19K	**Cape Douglas,**	**41.60**	**44**	P	**P**	**04 04 26.8**	**-0.1**
	baz=276						
M20K	**Styx River**	**41.60**	**40**	P	**P**	**04 04 27.0**	**0.0**
M20K				IAmb	IAmb	04 04 29.6	
	comp=Z,16nm,0.8s						
M20K	**Styx River**	**41.60**	**40**	P	**P**	**04 04 28.5**	**+1.5**
	baz=273						
H21K	**Melozitna Rive**	**41.66**	**34**	P	**P**	**04 04 27.2**	**-0.1**
H21K				IAmb	IAmb	04 04 28.8	
	comp=Z,25nm,1.2s						
H21K	**Melozitna Rive**	**41.66**	**34**	P	**P**	**04 04 27.5**	**+0.2**
	baz=269,SNR=21						
CHUM	**Lake Minchumin**	**41.89**	**37**	P	**P**	**04 04 30.4**	**+1.2**
	baz=272,SNR=18						
RSO	**Redoubt South**	**41.90**	**42**	P	**P**	**04 04 29.9**	**+0.4**
CRAI	**Chiangrai**	**41.91**	**251**	P	**P**	**04 04 29.2**	**-0.6**
F22K	**John River**	**41.95**	**31**	P	**P**	**04 04 29.8**	**+0.1**
	baz=268						
PPLA	**Purkeypile**	**41.99**	**38**	P	**P**	**04 04 31.2**	**+1.0**
PPLA				IAmb	IAmb	04 04 32.4	
	comp=Z,24nm,0.8s						
PPLA	**Purkeypile**	**41.99**	**38**	P	**P**	**04 04 31.6**	**+1.5**
	baz=273,SNR=12						
O20K	**Slope Mountain**	**42.00**	**43**	P	**P**	**04 04 30.5**	**+0.3**
	baz=276						
I21K	**Tanana**	**42.01**	**35**	P	**P**	**04 04 29.3**	**-0.7**
I21K				IAmb	IAmb	04 04 32.1	
	comp=Z,26nm,1.2s						
I21K	**Tanana**	**42.01**	**35**	P	**P**	**04 04 30.8**	**+0.7**
	baz=270,SNR=14						
OHAK	**Old Harbor**	**42.01**	**47**	P	**P**	**04 04 30.0**	**-0.1**
	baz=278						

Code	Station	Dist	Azi	Phase	ISC phase	Time	Res
CAST	Castle Rocks	42.01	38	P	P	04 04 30.8	+0.7
CAST				IAmb	IAmb	04 04 32.0	
	comp=Z,24nm,0.7s						
CAST	Castle Rocks	42.01	38	P	P	04 04 31.0	+0.8
	baz=272,SNR=27						
SPCR	Spurr Chakacha	42.09	41	P	P	04 04 31.8	+0.8
	baz=275,SNR=7.3						
MK31	Makanchi Array	42.10	297	P	P	04 04 30.8	-0.3
MK31				IAmb	IAmb	04 04 32.0	
	comp=Z,13nm,0.8s						
MK31	Makanchi Array	42.10	297c	iP	P	04 04 31.3	+0.1
MKAR	Makanchi Array	42.10	297	P	P	04 04 31.1	-0.1
	comp=Z,8.8nm,0.5s,baz=82,slow=9.5,SNR=120						
MKAR				PcP	PcP	04 06 24.3	+0.3
	comp=Z,1.3nm,0.4s,baz=66,slow=4.6,SNR=7.1						
MKAR				ScP	ScP	04 10 05.4	-0.2
	comp=Z,0.9nm,0.7s,baz=56,slow=4.5,SNR=5.4						
	comp=Z,8.8nm,0.5s						
MKAR	Makanchi Array	42.10	297	P	P	04 04 31.0	-0.2
SPU	Mount Spurr	42.17	41	P	P	04 04 32.5	+0.9
H22K	Ishtalitna Cre	42.25	34	P	P	04 04 33.0	+0.9
	baz=270						
Q20K	Shuyak Island	42.28	45	P	P	04 04 32.3	-0.2
	baz=278						
KDAK	Kodiak Island	42.30	46	P	P	04 04 32.3	-0.2
	comp=Z,29nm,0.7s,baz=297,slow=4.7,SNR=45						
	comp=Z,29nm,0.7s						
MAKZ	Makanchi	42.30	297	P	P	04 04 33.0	+0.2
MAKZ				IAmb	IAmb	04 04 33.7	
	comp=Z,16nm,0.8s						
MAKZ	Makanchi	42.30	297	P	P	04 04 33.0	+0.2
MAKZ				pmax	pmax		
	comp=Z,16nm,0.8s						
SKT	Skwentna	42.35	40	P	P	04 04 33.4	+0.4
	baz=274						
BPAW	Bear Paw Mtn.	42.47	37	P	P	04 04 34.9	+1.0
BPAW				IAmb	IAmb	04 04 35.9	
	comp=Z,20nm,1.1s						
BPAW	Bear Paw Mtn.	42.47	37	P	P	04 04 34.5	+0.7
	baz=273,SNR=11						
KTH	Kantishna Hill	42.52	37	P	P	04 04 34.3	-0.1
MLY	Manley	42.53	35	P	P	04 04 35.2	+0.7
MLY				IAmb	IAmb	04 04 36.5	
	comp=Z,37nm,1.3s						
MLY	Manley	42.53	35	P	P	04 04 34.9	+0.5
	baz=272,SNR=23						
D23K	Nanushuk River	42.57	29	P	P	04 04 34.8	+0.2
	baz=268						
DLV	T Lat	42.67	234	P	P	04 04 38.7	+2.5
	comp=Z,8.9nm,0.9s						
COLD	Coldfoot	42.72	32	P	P	04 04 36.2	+0.4
COLD				IAmb	IAmb	04 04 37.1	
	comp=Z,32nm,1.2s						
COLD	Coldfoot	42.72	32	P	P	04 04 35.8	-0.1
	baz=270,SNR=14						
SUA	Susitna One	42.77	40	P	P	04 04 36.4	-0.1
	baz=276						
G23K	Bananza Creek	42.79	33	P	P	04 04 36.5	0.0
	baz=271,SNR=37						
TRF	Thorofare Moun	42.81	38	P	P	04 04 38.0	+1.2
TRF				IAmb	IAmb	04 04 39.1	
	comp=Z,18nm,0.9s						
TRF	Thorofare Moun	42.81	38	P	P	04 04 37.1	+0.2
	baz=274,SNR=9.4						
BRLK	Bradley Lake	42.90	43	P	P	04 04 37.9	+0.5
CUT	Chulitna	42.91	39	P	P	04 04 38.1	+0.7
CUT	Chulitna	42.91	39	P	P	04 04 37.6	+0.2
	baz=275,SNR=6.2						
E23K	Chandalar	42.94	31	P	P	04 04 37.9	+0.2
	baz=270,SNR=27						
BRSE	Bradley Lake S	42.98	43	P	P	04 04 38.1	+0.1
	baz=278						
H23K	Yukon River	43.01	34	P	P	04 04 39.2	+1.0
H23K				IAmb	IAmb	04 04 40.4	
	comp=Z,21nm,0.9s						
H23K	Yukon River	43.01	34	P	P	04 04 39.1	+0.8
	baz=272						
I23K	Minto, Yukon-K	43.11	35	P	P	04 04 39.9	+0.9
I23K				IAmb	IAmb	04 04 41.1	
	comp=Z,23nm,1.0s						
I23K	Minto, Yukon-K	43.11	35	P	P	04 04 39.7	+0.7
	baz=273,SNR=22						
BWN	Browne	43.13	36	P	P	04 04 40.7	+1.5
PHRA	Phrae	43.18	249	P	P	04 04 40.5	+0.3
NEA2	Nenana	43.27	36	P	P	04 04 41.2	+0.9
NEA2	Nenana	43.27	36	P	P	04 04 40.7	+0.4
	baz=274,SNR=29						
C24K	Franklin Bluff	43.30	28	P	P	04 04 40.1	-0.4
	baz=269						
RC01	Rabbit Creek A	43.30	41	P	P	04 04 41.1	+0.5
RC01	Rabbit Creek A	43.30	41	P	P	04 04 40.8	+0.2
	baz=277,SNR=8.0						
KURK	Kurchatov	43.33	304	P	P	04 04 41.0	+0.1
KURK				IAmb	IAmb	04 05 05.6	
	comp=Z,41nm,1.1s						
KURK	Kurchatov	43.33	304c	iP	P	04 04 40.6	-0.3
KURK				pmax	pmax		
	comp=Z,41nm,1.3s						
KURK	Kurchatov	43.33	304	eP	P	04 04 40.6	-0.3
E24K	Your Creek	43.37	31	P	P	04 04 41.2	+0.1
	baz=271,SNR=49						
O22K	Cooper Landing	43.38	42	P	P	04 04 40.7	-0.5
O22K	Cooper Landing	43.38	42	P	P	04 04 41.0	-0.2
	baz=278,SNR=5.8						
MCK	McKinley	43.40	37	P	P	04 04 41.8	+0.4
MCK				IAmb	IAmb	04 04 42.9	
	comp=Z,28nm,0.9s						
MCK	McKinley	43.40	37	P	P	04 04 41.8	+0.4
MCK				pmax	pmax		
	comp=Z,28nm,0.9s						
MCK	McKinley	43.40	37	P	P	04 04 41.5	+0.1
	baz=275,SNR=17						
KURBB	Kurchatov Arra	43.41	303	P	P	04 04 41.6	0.0
	comp=Z,24nm,0.7s,baz=75,slow=8.7,SNR=122						
	comp=Z,24nm,0.7s						
KKM	Kota Kinabalu	43.42	220	P	P	04 04 41.2	-1.0
RND	Reindeer	43.46	38	P	P	04 04 41.5	-0.4
RND				IAmb	IAmb	04 04 43.1	
	comp=Z,18nm,0.9s						
RND	Reindeer	43.46	38	P	P	04 04 41.5	-0.4
RND				pmax	pmax		
	comp=Z,18nm,0.9s						
PMR	Palmer	43.53	40	P	P	04 04 42.0	-0.3
PMR				IAmb	IAmb	04 04 44.0	
	comp=Z,27nm,0.8s						
PMR	Palmer	43.53	40	P	P	04 04 43.3	+0.9
PMR	Palmer	43.53	40	P	P	04 04 42.1	-0.3
PMR				pmax	pmax		
	comp=Z,27nm,0.8s						
PMR	Palmer	43.53	40	P	P	04 04 42.4	0.0
	baz=277,SNR=12						
SEW	Seward	43.57	42	P	P	04 04 42.5	-0.2
SEW				IAmb	IAmb	04 04 43.9	
	comp=Z,44nm,1.2s						
SEW	Seward	43.57	42	P	P	04 04 42.6	-0.2
	baz=278,SNR=5.4						
MDM	Murphy Dome	43.60	35	P	P	04 04 43.9	+0.9
MDM				IAmb	IAmb	04 04 44.9	
	comp=Z,40nm,1.2s						
GHO	Glory Hole Cre	43.60	40	P	P	04 04 43.7	+0.5
F24K	Squaw Lake	43.61	31	P	P	04 04 43.0	-0.1
	baz=272,SNR=27						
H24K	Noodor Dome	43.69	34	P	P	04 04 44.9	+1.2
H24K				IAmb	IAmb	04 04 46.0	
	comp=Z,44nm,1.2s						
H24K	Noodor Dome	43.69	34	P	P	04 04 44.4	+0.7
	baz=274						
WRH	Wood River Hil	43.70	36	P	P	04 04 44.7	+0.9
WRH				IAmb	IAmb	04 04 48.9	
	comp=Z,16nm,0.9s						
TCOL	CIGO, UAF Yank	43.77	35	P	P	04 04 44.7	+0.4
TCOL	CIGO, UAF Yank	43.77	35	P	P	04 04 44.5	+0.2
	baz=274,SNR=9.3						
COLA	College	43.77	35	P	P	04 04 44.8	+0.6
COLA	College	43.77	35	P	P	04 04 45.4	+1.1
COLA	College	43.77	35c	iP	P	04 04 45.2	+0.9
COLA				pmax	pmax		
	comp=Z,69nm,1.2s						
COLA	College	43.77	35	P	P	04 04 44.6	+0.3
	baz=274						
G24K	Hadweenzic Riv	43.80	33	P	P	04 04 45.2	+0.7
	baz=273						
CCB	Clear Creek Bu	43.81	36	IAmb	IAmb	04 04 49.4	
	comp=Z,14nm,1.0s						
CHTO	Chiang Mai	43.86	251	P	P	04 04 45.1	-0.5
CHTO	Chiang Mai	43.86	251	P	P	04 04 45.1	-0.5
KNK	Knik Glacier	43.87	40	IAmb	IAmb	04 04 46.3	
	comp=Z,26nm,0.8s						
KNK	Knik Glacier	43.87	40	P	P	04 04 45.6	+0.4
	baz=278						
SML	Sawmill	43.88	40	P	P	04 04 45.9	+0.6
	baz=277,SNR=27						
POKR	Poker Plat Res	43.93	35	P	P	04 04 46.6	+1.0
	baz=275,SNR=19						
PWL	Port Wells	44.01	41	IAmb	IAmb	04 04 48.3	
	comp=Z,36nm,0.8s						
PWL	Port Wells	44.01	41	P	P	04 04 47.3	+1.0
	baz=278,SNR=5.5						
CMAR	Chiang Mai Arr	44.10	250	P	P	04 04 47.7	+0.2
	comp=Z,1.6nm,0.4s,baz=47,slow=5.5,SNR=7.5						
CMAR				ScP	ScP	04 10 15.1	+1.1
	comp=Z,1.0nm,0.3s,baz=30,slow=3.5,SNR=4.5						
	comp=Z,1.6nm,0.4s						
CMAR	Chiang Mai Arr	44.10	250	iP	P	04 04 48.5	+1.0
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
D25K	Kavik River	44.12	29	P	P	04 04 46.5	-0.6
	baz=271						
M23K	Glacier View	44.16	40	P	P	04 04 47.8	+0.3
	baz=278,SNR=7.0						
IL31		44.19	35	IAmb	IAmb	04 04 48.9	
	comp=Z,40nm,1.1s						
ILAR	Eielson Array	44.19	35	P	P	04 04 47.5	-0.1
	comp=Z,20nm,0.9s,baz=262,slow=5.4,SNR=164						
	comp=Z,20nm,0.9s						
HDA	Harding Lake	44.20	36	IAmb	IAmb	04 04 48.7	
	comp=Z,35nm,1.2s						
HDA	Harding Lake	44.20	36	P	P	04 04 47.4	-0.4
	baz=276,SNR=23						
G25K	Bearman Lake	44.34	33	P	P	04 04 49.5	+0.7
	baz=274,SNR=10						
SCM	Sheep Creek Mo	44.35	40	P	P	04 04 49.7	+0.7
	baz=278,SNR=12						
E25K	Arctic Village	44.46	31	P	P	04 04 50.2	+0.4
	baz=273,SNR=19						
F25K	Christian Rive	44.46	31	P	P	04 04 50.6	+0.7
	baz=274,SNR=27						
P23K	Montague Islan	44.60	42	P	P	04 04 51.4	+0.4
	baz=280						
C26K	Camden Bay	44.61	28	P	P	04 04 51.1	+0.1
	baz=272,SNR=29						
PRP	Porcupine Dome	44.69	34	P	P	04 04 52.3	+0.5
	baz=276,SNR=32						
FYU	Fort Yukon	44.70	33	P	P	04 04 52.8	+1.1
FYU				IAmb	IAmb	04 04 54.0	
	comp=Z,39nm,1.0s						
SMPI	Sarmi	44.72	186	P	P	04 04 53.0	+0.6
	comp=Z,55nm,1.2s,comp=Z,6µm						
K24K	Donnelly Dome	44.78	37	P	P	04 04 52.4	-0.1
	baz=277,SNR=16						
M24K	Tolsona, Glenn	44.84	39	P	P	04 04 54.1	+1.1
	baz=279,SNR=8.2						
F26K	Sheenjek River	45.03	31	P	P	04 04 55.1	+0.8
	baz=275						
PAX	Paxson	45.04	38	P	P	04 04 54.8	+0.2
PAX	Paxson	45.04	38	P	P	04 04 54.8	+0.2
PAX				pmax	pmax		
	comp=Z,11nm,1.1s						
PAX	Paxson	45.04	38	P	P	04 04 56.4	+1.9
	baz=278,SNR=5.6						
C27K	Jago River	45.04	28	P	P	04 04 54.6	+0.2
	baz=273						
KLU	Klutina	45.06	40	P	P	04 04 55.7	+0.9
KLU	Klutina	45.06	40	P	P	04 04 55.4	+0.6
	baz=280,SNR=22						
RIDG	Independent Ri	45.20	37	IAmb	IAmb	04 04 58.5	
	comp=Z,14nm,0.6s						
RIDG	Independent Ri	45.20	37	P	P	04 04 55.7	-0.1
	baz=278,SNR=16						
G26K	Porcupine Rive	45.24	32	P	P	04 04 56.9	+0.9
	baz=276,SNR=36						
HARP	HAARP	45.27	39	P	P	04 04 57.6	+1.3
	baz=279,SNR=21						
EYAK	Cordova Ski Ar	45.31	41	P	P	04 04 57.3	+0.7
EYAK	Cordova Ski Ar	45.31	41	P	P	04 04 57.3	+0.7
	baz=281,SNR=7.8						
GTOI	Gorontalo	45.52	208	P	P	04 04 58.0	-0.7
	comp=Z,18nm,0.8s						
SCRK	Sand Creek	45.54	36	IAmb	IAmb	04 04 59.6	
	comp=Z,36nm,1.0s						
SCRK	Sand Creek	45.54	36	P	P	04 04 58.6	+0.1
	baz=279,SNR=52						
DOT	Dot Lake	45.56	37	P	P	04 04 57.8	-0.8
DOT				IAmb	IAmb	04 05 02.8	
	comp=Z,20nm,1.2s						
J26L	Joseph Creek	45.64	36	P	P	04 04 58.8	-0.5
	baz=279						
N25K	Chitina, Valde	45.67	40	IAmb	IAmb	04 05 16.5	
	comp=Z,11nm,0.8s						
N25K	Chitina, Valde	45.67	40	P	P	04 05 00.0	+0.5
	baz=280,SNR=6.8						
I26K	Coal Creek Min	45.70	34	IAmb	IAmb	04 05 00.9	
	comp=Z,14nm,1.1s						
I26K	Coal Creek Min	45.70	34	P	P	04 04 59.0	-0.6
	baz=278						
MENT	Mentasta	45.83	38	P	P	04 05 01.8	+1.0
MENT				IAmb	IAmb	04 05 08.4	
	comp=Z,17nm,0.8s						
MENT	Mentasta	45.83	38	P	P	04 05 02.8	+2.1
E27K	Coleen River	45.93	30	P	P	04 05 01.6	+0.1
	baz=277						
L26K	Log Cabin Wild	45.98	38	P	P	04 05 03.1	+1.2
L26K	Log Cabin Wild	45.98	38	P	P	04 05 02.9	+1.0
	baz=280,SNR=37						
MRSI	Marisa	46.04	209	P	P	04 05 03.5	+0.7
	comp=Z,95nm,0.9s						
GLB	Gilahina Butte	46.07	40	P	P	04 05 03.3	+0.6
GLB				IAmb	IAmb	04 05 08.3	
	comp=Z,15nm,0.6s						
G27K	Doyon Strip	46.09	32	P	P	04 05 03.8	+1.1
	baz=278						
H27K	Steamboat Moun	46.23	33	P	P	04 05 05.1	+1.3
	baz=279,SNR=29						
M26K	Nabesna, AK	46.26	38	P	P	04 05 05.7	+1.6
	baz=281,SNR=30						
I27K	Kandik River	46.29	34	P	P	04 05 05.3	+1.0
	baz=279						
K27K	Chicken	46.36	36	P	P	04 05 05.5	+0.7
	baz=280						
MCARA	McCarthy VSAT	46.45	40	P	P	04 05 06.7	+1.2
MCARA	McCarthy VSAT	46.45	40	P	P	04 05 07.0	+1.4
	baz=282,SNR=18						
FAKI	Fak Fak	46.46	194	P	P	04 05 06.0	-0.1
EGAK	Eagle	46.62	35	IAmb	IAmb	04 05 08.2	
	comp=Z,29nm,0.9s						
EGAK	Eagle	46.62	35	P	P	04 05 06.9	+0.1
	baz=280,SNR=21						
L27K	Beaver Creek,	46.66	37	P	P	04 05 08.5	+1.3
	baz=281						
M27K	Edge Creek, AK	46.78	38	P	P	04 05 09.8	+1.5
	baz=282,SNR=29						
BARN	Barnard Glacie	47.17	40	P	P	04 05 12.4	+1.1
BVCY	Beaver Creek	47.23	38	P	P	04 05 12.6	+0.9
	baz=283,SNR=18						
CTG	Chitna Glacier	47.34	40	P	P	04 05 13.3	+0.6
	baz=284,SNR=16						
DAWY	Dawson	47.51	36	P	P	04 05 14.1	+0.3
	baz=282,SNR=8.7						
LOGN	Logan Glacier	47.53	40	P	P	04 05 15.3	+1.1
LOGN				IAmb	IAmb	04 05 22.0	
	comp=Z,36nm,1.2s						
BVAR	Borovoye Array	47.55	309	P	P	04 05 14.6	+0.3
	comp=Z,10nm,0.4s,baz=72,slow=9.0,SNR=53						
BVAR				PcP	PcP	04 06 43.1	+0.4
	comp=Z,6.8nm,0.5s,baz=80,slow=3.5,SNR=7.3						
	comp=Z,10nm,0.4s						
YUK3	Moose Creek	47.56	39	P	P	04 05 15.1	+0.7
	baz=284,SNR=13						
BRVK	Borovoye	47.60	309	P	P	04 05 14.9	+0.3
BRVK				IAmb	IAmb	04 05 39.1	
	comp=Z,36nm,1.4s						
BRVK	Borovoye	47.60	309c	iP	P	04 05 14.5	-0.1
BRVK				pmax	pmax		
	comp=Z,15nm,1.3s						
BRVK	Borovoye	47.60	309	eP	P	04 05 14.5	-0.1
JIRN	Jiri	47.67	271	eP	P	04 05 16.8	+0.8
	comp=Z,5.9nm,0.2s						
I29M	Ogilvie Camp,	47.69	34	P	P	04 05 16.0	+0.8
	baz=282,SNR=6.5						
GUN	Gumba	47.76	271	eP	P	04 05 17.2	+0.6
	comp=Z,31nm,0.4s						
RAMN	Ramite	47.77	270	eP	P	04 05 17.0	+0.4
J29M	Klondike Camp	47.93	35	P	P	04 05 18.7	+1.6
J29M				IAmb	IAmb	04 05 20.1	
	comp=Z,12nm,0.8s						
J29M	Klondike Camp	47.93	35	P	P	04 05 18.1	+1.0
	baz=283						
O28M	Mount Upton	47.93	40	P	P	04 05 18.1	+0.7
	baz=285						
YUK8	Steele Glacier	48.00	39	P	P	04 05 18.5	+0.5
	baz=285						
PINM	Pinnacle	48.08	41	P	P	04 05 19.2	+0.9
	baz=285						
EPYK	Eagle Plains	48.11	32	P	P	04 05 19.2	+0.8
	baz=283,SNR=29						
G30M	tAoh Zraii Nji	48.17	31	P	P	04 05 19.5	+0.6
	baz=282						
L29M	L29M	48.29	37	P	P	04 05 21.6	+1.8
	baz=284,SNR=46						
PKI	Pulchoki	48.30	271	eP	P	04 05 20.9	+0.2
	comp=Z,6.8nm,0.3s						
PKIN	Phulchoki	48.30	271	eP	P	04 05 20.7	0.0
	comp=Z,12nm,0.5s						
M29M	Somme Creek	48.30	38	P	P	04 05 21.4	+1.4
	baz=285						
K29M	Barlow Dome	48.37	36	P	P	04 05 21.6	+1.0
	baz=284						
SBUM	Sibu	48.48	223	P	P	04 05 22.3	+0.5
DMN	Daman	48.50	271	eP	P	04 05 22.5	+0.3
	comp=Z,14nm,0.5s						
YUK4	Talbot Arm	48.51	39	P	P	04 05 22.4	+0.7
	baz=285,SNR=12						
GKN	Gorkha	48.63	272	eP	P	04 05 23.4	+0.3
	comp=Z,9.4nm,0.3s						
YUK6	Outpost Mounta	48.75	40	P	P	04 05 25.0	+1.3
	baz=286,SNR=5.3						
O29M	Mount Kennedy	48.83	40	P	P	04 05 25.6	+1.5
	baz=286,SNR=12						
INK	Inuvik	48.87	29	P	P	04 05 24.4	+0.2
	comp=Z,12nm,0.6s,baz=289,slow=7.6,SNR=26						
	comp=Z,12nm,0.6s						
INK	Inuvik	48.87	29	IAmb	IAmb	04 05 25.6	
	comp=Z,33nm,1.2s						
INK	Inuvik	48.87	29	P	P	04 05 24.5	+0.4
	baz=284,SNR=18						
F31M	Tsiigehtchic	49.00	31	P	P	04 05 25.2	+0.1
	baz=284,SNR=32						
M30M	Minto, Yukon	49.02	37	IAmb	IAmb	04 05 28.3	
	comp=Z,20nm,0.9s						
M30M	Minto, Yukon	49.02	37	P	P	04 05 26.8	+1.4
	baz=286,SNR=17						
DANN	Dangsing	49.08	273	eP	P	04 05 27.6	+0.9
KSH	Kashi	49.12	290	P	P	04 05 35.9	+9.2
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MAYO	Mayo, Yukon	49.13	36	P	P	04 05 27.8	+1.5
	baz=286						
HYT	Haines Junctio	49.19	40	P	P	04 05 29.1	+2.3
	baz=287,SNR=104						
N30M	Aishikik Lake	49.20	39	P	P	04 05 28.2	+1.3
	baz=286						
P30M	Million Dollar	49.65	40	P	P	04 05 32.4	+2.1
	baz=288						
PYUN	Piuthan	49.78	273	eP	P	04 05 32.4	+0.5
	comp=Z,12nm,0.3s						
N31M	Braeburn, Yuko	49.79	38	P	P	04 05 33.1	+1.8
	baz=288,SNR=22						
O30N	Mendenhall	49.86	39	P	P	04 05 33.3	+1.4
	baz=288,SNR=15						
PLBC	Pleasant Camp	50.15	41	P	P	04 05 35.6	+1.7
	baz=289,SNR=13						
MTKI	Muara Teweh, K	50.19	217	P	P	04 05 35.9	+1.1
M31M	Drury Creek, Y	50.20	37	IAmb	IAmb	04 05 36.8	
	comp=Z,15nm,0.8s						
M31M	Drury Creek, Y	50.20	37	P	P	04 05 35.7	+1.4
	baz=288,SNR=13						
KSM	Kuching	50.28	224	P	P	04 05 36.0	+0.5
KSM	Kuching	50.28	224	P	P	04 05 36.9	+1.4
	comp=Z,40nm,1.0s						
A36M	Sachs Harbour	50.59	24	P	P	04 05 37.8	+0.7
	baz=288,SNR=46						
SKAG	Skagway	50.65	41	IAmb	IAmb	04 06 05.4	
	comp=Z,25nm,1.1s						
SKAG	Skagway	50.65	41	P	P	04 05 38.7	+1.0
SKAG	Skagway	50.65	41	P	P	04 05 39.3	+1.6
	baz=289,SNR=5.2						
FARO	Faro, Yukon	50.65	37	IAmb	IAmb	04 05 40.1	
	comp=Z,20nm,1.0s						
FARO	Faro, Yukon	50.65	37	P	P	04 05 39.0	+1.2
	baz=289,SNR=14						
SRIT	Nakonsritamara	50.76	241	P	P	04 05 41.8	+2.6
N32M	Quiet Lake	51.13	38	P	P	04 05 42.2	+0.8
	baz=290						
P32M	Atlin	51.38	40	P	P	04 05 44.2	+0.9
	baz=290						
MMPY	Sheldon Lake,	51.44	36	P	P	04 05 45.1	+1.4
	baz=290,SNR=12						
R32K	Eaglecrest	51.45	42	P	P	04 05 45.5	+1.7
	baz=291						
SIT	Sitka	51.49	44	P	P	04 05 44.6	+0.6
	baz=291						
JIS	Juneau Island	51.52	42	P	P	04 05 44.3	+0.1
SVE	Sverdlovsk	51.56	316	eP	P	04 05 45.0	+0.4
SVE				pmax	pmax		
	comp=Z,28nm,0.9s						
SVE	Sverdlovsk	51.56	316	eP	P	04 05 45.0	+0.4
P33M	Teslin, Yukon	51.58	39	P	P	04 05 46.4	+1.5
	baz=291,SNR=26						
S32K	Killisnoo	51.72	43	P	P	04 05 46.5	+0.8
	baz=291						
C36M	Paulatuk	51.84	27	P	P	04 05 46.8	+0.3
	baz=291,SNR=41						
Q32M	Nakina River	52.30	41	P	P	04 05 51.7	+1.4
	baz=292						
KULM	Kulim	52.64	237	P	P	04 05 52.4	-0.7
KULM				IAmb	IAmb	04 05 55.5	
	comp=Z,18nm,0.9s						
ARU	Arti	52.77	316	P	P	04 05 53.4	-0.2
	comp=Z,8.8nm,0.3s,baz=57,slow=2.4,SNR=18						
	comp=Z,8.8nm,0.3s						
ARU	Arti	52.77	316	P	P	04 05 53.3	-0.2
ARU				IAmb	IAmb	04 05 54.3	
	comp=Z,21nm,0.9s						
ARU	Arti	52.77	316d	iP	P	04 05 53.2	-0.4
ARU				*PP	pP	04 06 15.8	-1.4
ARU						04 06 56.1	
ARU				S	S	04 13 15.7	+1.5
ARU				SS	SS	04 16 51.2	-2.2
ARU				pmax	pmax		
	comp=Z,19nm,0.8s						
CRAG	Craig	53.23	45	P	P	04 05 58.2	+1.2
	baz=294						
WRAK	Wrangell Islan	53.25	44	P	P	04 05 56.8	-0.2
	baz=294						
S34M	Telegraph Cree	53.26	42	P	P	04 05 58.3	+1.2
	baz=294,SNR=5.2						
WTLY	Watson Lake, Y	53.48	39	P	P	04 05 59.4	+0.7
WTLY				IAmb	IAmb	04 06 01.1	
	comp=Z,18nm,0.7s						
WTLY	Watson Lake, Y	53.48	39	P	P	04 05 59.8	+1.0
	baz=294,SNR=9.1						
DLBC	Dease Lake	53.58	41	P	P	04 06 01.0	+1.4
DLBC	Dease Lake	53.58	41	P	P	04 06 01.6	+2.0
	baz=294,SNR=10.0						
T35M	Bob Quinn	54.07	42	P	P	04 06 05.1	+2.0
	baz=295,SNR=9.5						
MMRI	Maumere	54.46	205	P	P	04 06 08.5	+2.2
	comp=Z,51nm,0.5s						
DSRI	Dabo	54.98	229	P	P	04 06 13.1	+3.0
	comp=Z,26nm,1.1s						
LIRD	Liard River Hi	55.01	39	P	P	04 06 11.6	+1.7
	baz=296						
SPA0	Spitsbergen Ar	55.07	348	eP	P	04 06 09.6	-0.4
SPA0				IAmb	IAmb	04 06 11.9	
	comp=Z,25nm,1.1s						
NOR	Nord	55.37	356	iP	P	04 06 11.4	-0.7
NOR				IAmb	IAmb	04 06 12.5	
	comp=Z,695nm,4.4s						
PPBI	Pangkal Pinang	55.54	226	P	P	04 06 15.5	+1.4
KOTAN	Kotaneelee Air	55.62	37	P	P	04 06 15.3	+1.1
	baz=297,SNR=5.1						
AKTO	Aktyubinsk	55.64	310	P	P	04 06 13.9	-0.5
	comp=Z,5.7nm,0.7s,baz=63,slow=6.3,SNR=25						
	comp=Z,5.7nm,0.7s						
AKTO	Aktyubinsk	55.64	310	P	P	04 06 14.0	-0.5
PSI	Prapat	55.65	237	P	P	04 06 15.6	+0.5
RPSI	Rantau Prapat	55.73	237	IAmb	IAmb	04 06 16.6	
	comp=Z,14nm,0.9s						
KDU	Kakadu	55.99	192	P	P	04 06 17.4	+0.2
KIRV	Kirov	56.30	321	P	P	04 06 18.8	-0.2

	comp=Z,11nm,0.4s,baz=46,slow=5.3,SNR=7.5						
	comp=Z,11nm,0.4s						
KIRV	Kirov	56.30	321	c iP	P	04 06 18.6	-0.4
BKNI	Bangkinang	56.34	233	P	P	04 06 22.2	+2.3
	comp=Z,84nm,0.9s						
MTN	Manton Dam	56.36	194	P	P	04 06 19.0	-0.9
MTN	Manton Dam	56.36	194	P	P	04 06 20.1	+0.2
TWSI	Taliwang, Sumb	56.41	211	P	P	04 06 19.2	-1.1
	comp=Z,15nm,1.0s						
COEN	Coen	56.47	179	P	P	04 06 20.9	+0.2
COEN				IAmb	IAmb	04 06 22.6	
	comp=Z,17nm,1.0s						
SRBI	Singaraja	56.47	213	P	P	04 06 20.9	+0.2
	comp=Z,44nm,1.2s						
SDSI	Sungai Dareh	57.13	232	P	P	04 06 26.4	+0.9
	comp=Z,49nm,1.2s,comp=Z,3µm						
VADS	Vadso	57.55	338	eP	P	04 06 28.0	+0.3
GSI	Gunungsitoli	57.65	237	P	P	04 06 31.4	+2.2
	comp=Z,32nm,0.8s						
PWJI	Pagerwojo	57.85	217	P	P	04 06 30.4	-0.1
	comp=Z,45nm,0.9s						
YKA	Yellowknife Ar	58.40	32	P	P	04 06 32.9	-0.8
	comp=Z,18nm,0.7s,baz=304,slow=6.3,SNR=326						
	comp=Z,18nm,0.7s						
YKA	Yellowknife Ar	58.40	32	i P	P	04 06 34.0	+0.3
YKA				pmax	pmax		
	comp=Z,18nm,0.7s						
MDSI	Maura Dua	58.53	227	P	P	04 06 35.4	+0.2
	comp=Z,31nm,1.2s,comp=Z,791nm						
KPJI	Karang Pucung	58.56	220	P	P	04 06 35.0	-0.4
	comp=Z,37nm,1.1s						
KSI	Kapahiang	58.70	229	P	P	04 06 37.1	+0.6
ARA0	ARCESS Array S	58.97	339	eP	P	04 06 38.1	+0.5
ARCES	ARCESS Array B	58.97	339	P	P	04 06 37.6	0.0
	comp=Z,1.1nm,0.5s,baz=52,slow=8.1,SNR=13						
	comp=Z,1.1nm,0.5s						
TULEG	Thule	59.27	8	i P	P	04 06 38.9	-0.7
TULEG				IAmb	IAmb	04 06 39.5	
	comp=Z,121nm,1.9s						
KLMR	Klimovskoe	59.44	326	eP	P	04 06 39.1	-1.9
KLMR				AMP		04 06 44.0	
	comp=Z,21nm,1.5s						
KLMR				epP	pP	04 07 04.0	-1.1
KLMR	Klimovskoe	59.44	326	eP	P	04 06 39.1	-1.9
KLMR				e*PP	pP	04 07 03.9	-1.1
KLMR				pmax	pmax		
	comp=Z,21nm,1.5s						
KNRA	Kununurra	59.56	196	P	P	04 06 41.4	-0.8
KNRA	Kununurra	59.56	196	P	P	04 06 42.9	+0.7
NEEM	North Greenlan	59.73	3	i P	P	04 06 42.9	-0.2
KTK1	Kautokeino	59.92	339	eP	P	04 06 44.2	0.0
DAG	Danmarks Havn	60.13	355	i P	P	04 06 45.0	-0.4
DAG				IAmb	IAmb	04 06 45.6	
	comp=Z,80nm,1.6s						
JETT	Jettan, Norway	60.28	340	IAmb	IAmb	04 06 46.4	
	comp=Z,47nm,1.0s						
JETT				eP	P	04 06 46.5	-0.2
BELG	Belogornoye	60.30	315	P	P	04 06 46.6	-0.4
	comp=Z,34nm,0.8s,baz=272,slow=1.9,SNR=9.8						
	comp=Z,34nm,0.8s						
BELG	Belogornoye	60.30	315	c iP	P	04 06 47.0	0.0
BELG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TRO	Tromso	60.59	340	eP	P	04 06 48.5	-0.2
MTSU	Mount Surprise	60.64	178	P	P	04 06 49.8	+0.2
LLLB	Lillooet	61.51	46	P	P	04 06 56.4	+1.1
KULLO	Kullorsuaq	62.16	6	i P	P	04 06 58.5	-0.7
KULLO				IAmb	IAmb	04 06 59.2	
	comp=Z,20nm,0.8s						
DBG	Daneborg	62.62	355	i P	P	04 07 01.8	-0.4
DBG				IAmb	IAmb	04 07 03.8	
	comp=Z,45nm,1.7s						
WB0	Warramunga Arr	62.71	189	IAmb	IAmb	04 07 07.3	
	comp=Z,10nm,0.8s						
STEI	Steigen	62.76	340	eP	P	04 07 03.0	-0.3
WRAB	Tennant Creek	62.88	189	P	P	04 07 04.1	-0.4
WRAB				IAmb	IAmb	04 07 05.7	
	comp=Z,9.3nm,1.0s						
WRAB	Tennant Creek	62.88	189	P	P	04 07 04.2	-0.4
WRAB	Tennant Creek	62.88	189	⇓iP	P	04 07 03.8	-0.8
WRAB				pmax	pmax		
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	62.89	189	P	P	04 07 03.9	-0.7
	comp=Z,5.2nm,0.7s,baz=6.6,slow=6.9,SNR=48						
WRA				LR	LR	04 35 14.3	
	comp=Z,103nm,18.3s,baz=16,slow=37						
	comp=Z,5.2nm,0.7s						
LOF	Lofoten	63.02	341	eP	P	04 07 04.5	-0.5
QIS	Mount Isa	63.09	183	P	P	04 07 06.8	+0.8
FAUS	Fauske	63.16	340	eP	P	04 07 05.8	-0.1
FAUS				IAmb	IAmb	04 07 06.5	
	comp=Z,21nm,0.6s						
MOS	Moscow	63.23	322	eP	P	04 07 05.5	-1.1
MOS				e		04 07 29.3	
MOS				pmax	pmax		
	comp=Z,34nm,0.9s						
MOS	Moscow	63.23	322	eP	P	04 07 05.5	-1.1
LON	Longmire	63.73	50	IAmb	IAmb	04 07 12.4	
	comp=Z,17nm,1.2s						
UPNV	Upernavik	63.98	6	i P	P	04 07 10.6	-0.7
UPNV				IAmb	IAmb	04 07 11.3	
	comp=Z,26nm,1.0s						
VRH	Novokhopyorsk	64.00	317	eP	P	04 07 10.2	-1.5
VRH				pmax	pmax		
	comp=Z,13nm,1.5s						
LTY	Liberty	64.08	49	IAmb	IAmb	04 07 14.4	
	comp=Z,22nm,1.1s						
OBN	Obninsk	64.09	322	P	P	04 07 11.9	-0.3
	comp=Z,5.8nm,0.5s,baz=100,slow=7.4,SNR=5.4						
	comp=Z,5.8nm,0.5s						
OBN	Obninsk	64.09	322	c eP	P	04 07 11.8	-0.4
OBN				pmax	pmax		
	comp=Z,26nm,0.7s						
OBN	Obninsk	64.09	322	eP	P	04 07 11.8	-0.4
B08A	Colville Reser	64.16	47	P	P	04 07 12.8	-0.1
FIA1	FINESS Array S	64.19	331	IAmb	IAmb	04 07 12.7	
	comp=Z,15nm,0.7s						
FINES	FINESS Array B	64.19	331	P	P	04 07 12.1	-0.6
	comp=Z,12nm,0.5s,baz=52,slow=7.3,SNR=168						
	comp=Z,12nm,0.5s						
MOR8	Moi Rana	64.31	339	eP	P	04 07 11.9	-1.6
MOR8				IAmb	IAmb	04 07 12.7	
	comp=Z,18nm,0.7s						
LPSR	Galich'ya Gora	64.54	319	eP	P	04 07 13.2	-2.0
LPSR				e		04 09 37.7	
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
H04A	Detroit Lake	64.72	52	IAmb	IAmb	04 07 18.8	
	comp=Z,45nm,1.3s						
G05A	Wamic	64.89	51	IAmb	IAmb	04 07 25.6	
	comp=Z,23nm,1.0s						
SUMG	Summit	64.93	0	i P	P	04 07 18.6	+0.7
SUMG				IAmb	IAmb	04 07 19.2	
	comp=Z,40nm,0.8s						
VORR	Voronezh	64.97	318	eP	P	04 07 16.8	-1.2
VORR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
HAWA	Hanford	65.22	49	P	P	04 07 20.3	+0.6
HAWA				IAmb	IAmb	04 07 22.0	
	comp=Z,21nm,1.0s						
VSR	Storozhevoye	65.27	318	eP	P	04 07 17.4	-2.6
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
G06A	Carlson Farm,	65.28	51	IAmb	IAmb	04 07 22.8	
	comp=Z,23nm,1.3s						
NEW	Newport	65.40	46	IAmb	IAmb	04 07 22.9	
	comp=Z,25nm,0.9s						
NEW	Newport	65.40	46	P	P	04 07 21.6	+0.6
	baz=307,SNR=20						
I05D	Terrebonne, OR	65.41	52	IAmb	IAmb	04 07 22.9	
	comp=Z,10nm,0.7s						
E08A	Dider Farm, El	65.42	49	IAmb	IAmb	04 07 23.2	
	comp=Z,28nm,0.9s						
J04A	Umpqua Nationa	65.61	53	IAmb	IAmb	04 07 25.0	
	comp=Z,18nm,0.6s						
MEF	Metsahovi	65.64	331	eP	P	04 07 22.3	+0.2
MAK	Makhachkala	65.72	307	eP	P	04 07 18.6	-4.4
MAK				pmax	pmax		
	comp=Z,322nm,1.5s						
RAF	Rauma	65.97	333	eP	P	04 07 23.7	-0.6
VSU	Vasula	66.00	329	c eP	P	04 07 24.1	-0.4
VSU				pmax	pmax		
	comp=Z,90nm,1.1s						
VSU	Vasula	66.00	329	eP	P	04 07 24.6	+0.1
KHMM	Horse Mountain	66.05	56	IAmb	IAmb	04 07 27.7	
	comp=Z,13nm,0.9s						
NSS	Namsos	66.24	339	eP	P	04 07 26.7	+0.7
AKT	Akhty	66.47	305	eP	P	04 07 26.8	-1.2
AKT				e*PP	pP	04 07 53.3	+0.8
AKT				e		04 07 56.4	
AKT				pmax	pmax		
	comp=Z,20nm,0.7s						
SCO	Scoresbysund	66.48	354	i P	P	04 07 27.6	+0.2
SCO				IAmb	IAmb	04 07 28.9	
	comp=Z,7.3nm,0.9s						
GROC	Groznyy	66.58	308	eP	P	04 07 28.3	-0.2
GROC				e*PP	pP	04 07 52.7	-0.3
GROC				e		04 07 57.0	
GROC				pmax	pmax		
	comp=Z,70nm,1.3s						
ASAR	Alice Springs	66.61	189	P	P	04 07 29.3	+0.5
	comp=Z,6.8nm,0.8s,baz=8.0,slow=5.7,SNR=49						
	comp=Z,6.8nm,0.8s						
ASAR	Alice Springs	66.61	189	P	P	04 07 28.6	-0.2
MTSE	Matsula	66.91	330	eP	P	04 07 30.2	-0.1
BMO	Blue Mountains	67.39	49	IAmb	IAmb	04 07 36.1	
	comp=Z,24nm,1.4s						
J08A	Circle Bar Ran	67.66	51	IAmb	IAmb	04 07 38.0	
	comp=Z,14nm,1.1s						
NCK	Nalchik	67.67	309	⇓eP	P	04 07 36.3	+0.9
NCK				pmax	pmax		
	comp=Z,18nm,0.6s						
ILULI	Ilulissat	67.85	5	IAmb	IAmb	04 07 36.8	
	comp=Z,28nm,0.8s						
ILULI	Ilulissat	67.85	5	i P	P	04 07 36.1	+0.1
ILULI				IAmb	IAmb	04 07 36.5	
	comp=Z,27nm,0.8s						
GDXM	Geysers	67.87	57	IAmb	IAmb	04 07 39.4	
	comp=Z,14nm,1.1s						
KVAR	Kislovodsk Arr	67.89	310	P	P	04 07 38.2	+1.3
	comp=Z,9.9nm,0.7s,baz=259,slow=22,SNR=6.7						
	comp=Z,9.9nm,0.7s						
KIV	Kislovodsk	67.90	310	⇓P	P	04 07 38.5	+1.6
KIV	Kislovodsk	67.90	310	P	P	04 07 37.3	+0.4
KIV	Kislovodsk	67.90	310	eP	P	04 07 37.6	+0.6
KIV				pmax	pmax		
	comp=Z,43nm,1.0s						
KIV	Kislovodsk	67.90	310	eP	P	04 07 37.6	+0.6
KBZ	Khabaz	67.92	310	P	P	04 07 38.0	+1.1
	comp=Z,15nm,0.7s,baz=58,slow=3.2,SNR=37						
	comp=Z,15nm,0.7s						
KBZ	Khabaz	67.92	310	c iP	P	04 07 37.3	+0.4
KBZ				pmax	pmax		
	comp=Z,17nm,0.8s						
KBZ	Khabaz	67.92	310	eP	P	04 07 37.3	+0.4
ZEI	Tsey	67.93	308	eP	P	04 07 34.5	-2.8
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PLID	Pearl Lake	67.97	49	IAmb	IAmb	04 07 39.4	
	comp=Z,34nm,1.5s						
MSO	Missoula	67.99	46	IAmb	IAmb	04 07 39.3	
	comp=Z,20nm,1.2s						
MSO	Missoula	67.99	46	P	P	04 07 38.0	+0.6
	baz=309,SNR=12						
WVOR	Wild Horse Val	68.13	52	IAmb	IAmb	04 07 40.9	
	comp=Z,26nm,1.5s						
ORV	Oroville	68.21	56	IAmb	IAmb	04 07 42.2	
	comp=Z,11nm,0.7s						
ISAL	Salakas	68.26	327	eP	P	04 07 39.3	+0.5
MNK	Minsk	68.29	325	i P	P	04 07 39.9	+0.8
	comp=E,4.0nm,1.1s						
MNK				i P	P	04 07 39.9	+0.8
	comp=N,30nm,0.8s						
MNK				i P	P	04 07 39.9	+0.8
	comp=Z,37nm,0.9s,baz=226						
MNK				i pP	PcP	04 08 05.0	+1.0
MNK				i PP	PP	04 10 11.6	+1.4
MNK				i PPP	PPP	04 11 51.5	
MNK				i S	S	04 16 33.5	+1.5
MNK				i sS	sS	04 17 17.2	+3.6
MNK				i ScS	ScS	04 17 29.8	+0.5
MNK				i SS	SS	04 20 59.5	+3.8
MNK				i SSS	SSS	04 24 16.5	
MNK				i LR	LR	04 38 12.4	
MNK				i LRM	MLR	04 40 21.8	
MNK				i LRM	MLR	04 40 21.8	
MNK				i LRM	MLR	04 40 21.8	
MNK	Minsk	68.29	325	i P	P	04 07 39.8	+0.8
MNK				i *PP	PcP	04 08 05.0	+1.0
MNK				i		04 10 11.6	
MNK				i PPP	PPP	04 11 51.5	
MNK				i S	S	04 16 33.4	+1.5
MNK				i *SS	sS	04 17 17.2	+3.6
MNK				i		04 17 29.7	
MNK				i SS	SS	04 20 59.5	+3.8
MNK				pmax	pmax		
	comp=Z,37nm,0.9s						
MNK				pmax	pmax		
	comp=E,4.0nm,1.1s						
MNK				pmax	pmax		
	comp=N,30nm,0.8s						
ONI	Oni	68.31	308	P	P	04 07 40.0	+0.5
ONI				IAmb	IAmb	04 08 07.8	
	comp=Z,15nm,1.0s						
ONI	Oni	68.31	308	P	P	04 07 40.0	+0.5
ONI				pmax	pmax		
	comp=Z,15nm,1.0s						
NEY	Neytrino	68.32	309	⇑eP	P	04 07 40.9	+1.2
NEY				pmax	pmax		
	comp=Z,3.0nm,1.1s						
FFC	Flin Flon	68.39	34	P	P	04 07 39.8	+0.1
FFC	Flin Flon	68.39	34	P	P	04 07 39.8	+0.1
FFC				pmax	pmax		
	comp=Z,37nm,0.9s						
ICESG	Greenland Ices	68.43	1	i P	P	04 07 40.7	+0.6
ICESG				IAmb	IAmb	04 07 41.1	
	comp=Z,48nm,0.8s						
NACGM	Naroch	68.46	326	eP	P	04 07 40.0	-0.1
	comp=N,668nm,0.8s						
VSVD	Vaisvydziai	68.83	328	eP	P	04 07 42.0	-0.4
PABE	Paberze	69.16	328	IAmb	IAmb	04 07 45.2	
	comp=Z,29nm,0.8s						
PABE	Paberze	69.16	328	eP	P	04 07 44.6	+0.1
NB2	NORSAR Subarra	69.25	337	P	P	04 07 44.8	-0.2
	comp=Z,7.4nm,0.7s,baz=36,slow=6.5						
NB2	NORSAR Subarra	69.25	337	P	P	04 07 44.8	-0.2
	slow=6.5						
NOA	NORSAR Array B	69.25	337	P	P	04 07 44.5	-0.5
	comp=Z,14nm,0.8s,baz=36,slow=6.1,SNR=41						
	comp=Z,14nm,0.8s						
MPK	Martis Peak	69.26	55	IAmb	IAmb	04 07 47.9	
	comp=Z,36nm,1.4s						
EGMT	Eagleton	69.37	43	P	P	04 07 46.6	+0.5
	baz=311,SNR=31						
NC602	NORSAR Array S	69.41	337	eP	P	04 07 45.4	-0.4
EMB	Emerald Bay	69.42	56	IAmb	IAmb	04 07 48.2	
	comp=Z,9.4nm,0.7s						
PBUR	Paburge	69.57	329	eP	P	04 07 46.9	-0.1
DLMT	Dillon	69.64	47	IAmb	IAmb	04 07 49.9	
	comp=Z,32nm,1.1s						
HLID	Hailey	69.82	49	P	P	04 07 50.0	+1.0
	baz=310,SNR=8.8						
YERR	Yerington	69.93	55	IAmb	IAmb	04 07 51.4	
	comp=Z,10nm,0.6s						
BOZ	Bozeman (W)	70.01	46	IAmb	IAmb	04 07 52.1	
	comp=Z,21nm,1.1s						
BOZ	Bozeman (W)	70.01	46	P	P	04 07 50.7	+0.7
	baz=311,SNR=29						
SFJD	Kangerlussuaq	70.07	6	i P	P	04 07 49.5	-0.4
SFJD				IAmb	IAmb	04 07 50.4	
	comp=Z,41nm,1.2s						
INKA	Innaminka	70.20	182	P	P	04 07 52.1	+1.1
ANN	Anapa	70.26	313	eP	P	04 07 47.2	-4.1
ANN				eS	S	04 16 51.5	-3.8
ANN				pmax	pmax		
	comp=Z,89nm,1.4s						
AKASG	Malin Array Be	70.35	322	P	P	04 07 51.4	-0.5
	comp=Z,5.7nm,0.5s,baz=40,slow=5.9,SNR=45						
	comp=Z,5.7nm,0.5s						
AKBB	Malin Array Si	70.35	322	IAmb	IAmb	04 07 52.3	
	comp=Z,14nm,0.8s						
AKBB	Malin Array Si	70.35	322	⇑eP	P	04 07 51.2	-0.6
AKBB				pmax	pmax		
	comp=Z,16nm,0.9s						
WSAR	Wadi Sarin	70.36	284	P	P	04 07 53.1	+0.7
	comp=Z,1.9nm,0.7s,baz=213,slow=11,SNR=1.6						
	comp=Z,1.9nm,0.7s						
HYA	Hoyanger	70.53	339	eP	P	04 07 53.1	+0.4
KVN	Kaiserville	70.58	55	IAmb	IAmb	04 07 55.4	
	comp=Z,9.3nm,0.7s						
LHV	Little Huntoon	70.84	55	IAmb	IAmb	04 07 57.4	
	comp=Z,11nm,0.8s						
NVAR	Mina Array Bea	70.85	55	P	P	04 07 56.7	+1.3
	comp=Z,5.0nm,0.6s,baz=292,slow=5.9,SNR=66						
	comp=Z,5.0nm,0.6s						
DY2G	Dye2	70.85	4	i P	P	04 07 55.0	+0.1
DY2G				IAmb	IAmb	04 07 55.8	
	comp=Z,42nm,0.7s						
KLNR	Kaliningrad	71.29	329	c eP	P	04 07 56.2	-1.2
KLNR				pmax	pmax		
	comp=Z,51nm,0.7s						
H17A	Grant Village	71.36	46	IAmb	IAmb	04 08 02.2	
	comp=Z,21nm,1.1s						
H17A	Grant Village	71.36	46	P	P	04 08 00.7	+2.2
	baz=312,SNR=18						
RLMT	Red Lodge	71.56	45	P	P	04 08 00.6	+1.0
	baz=312,SNR=7.5						
FXWY	Fox Creek	71.63	47	IAmb	IAmb	04 08 02.7	
	comp=Z,34nm,1.5s						
MOOW	Moose Ponds	71.70	47	IAmb	IAmb	04 08 03.2	
	comp=Z,28nm,1.4s						
DGMT	Dagmar	71.79	40	P	P	04 08 01.1	+0.5
	baz=315,SNR=12						
SMMC	Simmler	71.80	59	P	P	04 08 01.4	+0.5
	baz=310						
REDW	Red Top Meadow	71.91	47	IAmb	IAmb	04 08 04.3	
	comp=Z,26nm,1.5s						
ANGG	Ammassalik, Gr	71.93	0	i P	P	04 08 00.1	-0.9
ANGG				IAmb	IAmb	04 08 00.8	
	comp=Z,15nm,0.5s						
ISOG	Isortoq, Green	71.99	1	i P	P	04 08 01.2	-0.3
ISOG				IAmb	IAmb	04 08 02.2	
	comp=Z,59nm,1.0s						
VES	Vestal, Richgr	72.03	58	P	P	04 08 02.5	+0.3
	baz=310						
LAO	LASA Array	72.05	42	IAmb	IAmb	04 08 04.3	
	comp=Z,31nm,1.1s						
LAO	LASA Array	72.05	42	P	P	04 08 03.0	+0.8
	baz=314,SNR=5.2						
PKM	Mcpherson Peak	72.18	59	P	P	04 08 04.4	+1.0
	baz=310						
GRAC	Grapevine Rang	72.34	56	IAmb	IAmb	04 08 06.4	
	comp=Z,20nm,0.6s						
GRAC	Grapevine Rang	72.34	56	P	P	04 08 05.2	+1.1
	baz=310,SNR=15						
BCW	Bitter Crk WRg	72.40	59	IAmb	IAmb	04 08 07.4	
	comp=Z,13nm,0.7s						
R11A	Troy Canyon, C	72.53	54	P	P	04 08 06.3	+0.8
	baz=311,SNR=12						
SORM	Soroca	72.56	320	⇑P	P	04 08 04.9	-0.3
SORM	Soroca	72.56	320	P	P	04 08 04.8	-0.3
HWUT	Hardware Ranch	72.69	49	IAmb	IAmb	04 08 08.7	
	comp=Z,17nm,1.3s						
NUUK	Nuuk	72.77	7	i P	P	04 08 06.3	+0.2
NUUK				IAmb	IAmb	04 08 07.2	
	comp=Z,55nm,0.9s						
BSD	Bornholm Skovb	72.83	332	eP	P	04 08 06.6	0.0
BSD	Bornholm Skovb	72.83	332	i P	P	04 08 05.7	-0.9
BSD				IAmb	IAmb	04 08 07.3	
	comp=Z,24nm,1.1s						
MPMC	Manual Prospec	72.88	57	P	P	04 08 07.9	+0.4
	baz=311,SNR=13						
S11A	Rachel	72.90	54	IAmb	IAmb	04 08 09.4	
	comp=Z,13nm,0.7s						
DUG	Dugway, Tooele	72.93	51	IAmb	IAmb	04 08 09.5	
	comp=Z,9.5nm,0.7s						
DUG	Dugway, Tooele	72.93	51	P	P	04 08 08.9	+1.2
	baz=312,SNR=16						
FURC	Furnace Creek,	72.99	56	P	P	04 08 08.8	+0.9
	baz=311,SNR=5.4						
BW06	Boulder Array	73.01	47	IAmb	IAmb	04 08 09.9	
	comp=Z,36nm,1.4s						
BW06	Boulder Array	73.01	47	P	P	04 08 08.5	+0.2
	baz=313,SNR=14						
PD31	Pinedale Array	73.01	47	IAmb	IAmb	04 08 09.9	
	comp=Z,32nm,1.4s						
PDAR	Pinedale Array	73.01	47	P	P	04 08 08.8	+0.5
	comp=Z,6.2nm,0.6s,baz=251,slow=1.4,SNR=89						
	comp=Z,6.2nm,0.6s						
TPNV	Topopah Spring	73.05	55	IAmb	IAmb	04 08 10.5	
	comp=Z,13nm,0.9s						
TPNV	Topopah Spring	73.05	55	P	P	04 08 09.5	+1.0
	baz=311,SNR=16						
TCUT	Toone Canyon	73.11	49	IAmb	IAmb	04 08 11.0	
	comp=Z,13nm,0.9s						
MILM	Milestii Mici	73.21	319	eP	P	04 08 08.0	-1.0
	comp=Z,17nm,5.5s						
MILM	Milestii Mici	73.21	319	eP	P	04 08 08.0	-1.0
MILM				pmax	pmax		
	comp=Z,20nm,0.6s						
GWY	Greenwater Val	73.29	56	IAmb	IAmb	04 08 11.3	
	comp=Z,9.3nm,0.6s						
QSM	Queen of Sheba	73.32	56	IAmb	IAmb	04 08 11.9	
	comp=Z,19nm,1.0s						
EDW2	Edwards Air Fo	73.33	58	P	P	04 08 10.9	+0.9
	baz=311,SNR=9.0						
GKP	Gorka Klasztor	73.44	329	eP	P	04 08 10.1	-0.1
GKP	Gorka Klasztor	73.44	329	eP	P	04 08 11.0	+0.8
SHOC	Shoshone, Teco	73.72	56	P	P	04 08 13.1	+0.9
	baz=311						
GSC	Goldstone, Bar	73.79	57	P	P	04 08 13.3	+0.5
	baz=311,SNR=5.6						
RGN	Rugen	73.84	332	eP	P	04 08 13.1	+0.6
	comp=Z,91nm,1.4s,baz=35,slow=5.7						
BFSC	Mount Baldy Ra	73.96	58	P	P	04 08 14.3	+0.5
	baz=311,SNR=5.8						
CIS	Catalina Islan	74.03	59	P	P	04 08 14.6	+0.5
	baz=311						
ULM	Lac du Bonnet	74.20	35	P	P	04 08 14.6	-0.2
	comp=Z,16nm,0.8s,baz=316,slow=7.3,SNR=28						
	comp=Z,16nm,0.8s						
ULM	Lac du Bonnet	74.20	35	IAmb	IAmb	04 08 15.6	
	comp=Z,21nm,0.9s						
TUQ	Turquoise Moun	74.24	56	P	P	04 08 16.4	+0.9
	baz=312,SNR=12						
STKA	Stephens Creek	74.31	181	P	P	04 08 15.8	+0.4
	comp=Z,4.1nm,0.8s,baz=340,slow=6.5,SNR=9.8						
	comp=Z,4.1nm,0.8s						
STKA	Stephens Creek	74.31	181	P	P	04 08 15.0	-0.4
STKA	Stephens Creek	74.31	181	P	P	04 08 16.3	+0.9
STKA	Stephens Creek	74.31	181	⇑iP	P	04 08 15.5	+0.1
MDND	Maddock	74.37	38	P	P	04 08 16.4	+0.6
	baz=317,SNR=6.0						
BUR08	Bucovina Ar. S	74.38	321	IAmb	IAmb	04 08 17.2	
	comp=Z,9.4nm,0.7s						
HEC	Hector,Ludlow	74.39	57	P	P	04 08 16.9	+0.6
	baz=311,SNR=5.9						
BURAR	Bucovina Array	74.39	321	⇓P	P	04 08 16.7	+0.6
BURAR	Bucovina Array	74.39	321	IAmb	IAmb	04 08 17.6	
	comp=Z,14nm,0.7s						
BURAR	Bucovina Array	74.39	321	P	P	04 08 16.6	+0.6
BBRC	Big Bear Solar	74.40	58	P	P	04 08 17.0	+0.5
	baz=311						
MVU	Marysvale	74.41	52	IAmb	IAmb	04 08 18.9	
	comp=Z,39nm,1.0s						
RDMU	Red Mountain	74.50	49	IAmb	IAmb	04 08 19.1	
	comp=Z,28nm,0.8s						
TESR	Tescani	74.53	320	⇑P	P	04 08 16.9	+0.1
P17A	Butcher Ranch,	74.59	50	IAmb	IAmb	04 08 19.6	
	comp=Z,16nm,0.7s						
MURC	Murrieta	74.67	58	P	P	04 08 18.2	+0.4
	baz=311						
K22A	Casper	74.70	46	P	P	04 08 18.4	+0.3
	baz=314,SNR=6.0						
MTPU	Mount Pierson	74.74	52	IAmb	IAmb	04 08 21.2	
	comp=Z,9.0nm,0.7s						
P18A	Preston Nutter	74.77	50	IAmb	IAmb	04 08 20.9	
	comp=Z,30nm,1.5s						
CFR	Carcaliu	74.78	318	⇑P	P	04 08 18.8	+0.5
CFR	Carcaliu	74.78	318	P	P	04 08 18.7	+0.5
OJC	Ojcow	74.80	326	eP	P	04 08 18.5	+0.3
OJC	Ojcow	74.80	326	IAmb	IAmb	04 08 19.6	
	comp=Z,27nm,0.9s						
STHS	Stebnicka Huta	74.81	325	eP	P	04 08 18.4	+0.1
STHS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
STHS	Stebnicka Huta	74.81	325	eP	P	04 08 18.4	+0.1
GMRC	Granite Mounta	74.84	57	P	P	04 08 19.7	+0.8
	baz=312,SNR=7.3						
RSSD	Black Hills	74.95	43	P	P	04 08 19.9	+0.4
RSSD	Black Hills	74.95	43	P	P	04 08 19.9	+0.4
RSSD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
RSSD	Black Hills	74.95	43	P	P	04 08 19.8	+0.4
	baz=316						
SRU	San Rafael Swe	74.96	50	IAmb	IAmb	04 08 21.5	
	comp=Z,24nm,0.9s						
PFO	Pinyon Flats O	75.12	58	P	P	04 08 21.1	+0.5
PFO	Pinyon Flats O	75.12	58	P	P	04 08 21.1	+0.5

PFO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PFO	Pinyon Flats O	75.12	58	P	P	04 08 20.9	+0.3
	baz=312,SNR=5.8						
BNN	Bunyan	75.12	309	IAmb	IAmb	04 08 22.1	
	comp=Z,33nm,0.9s						
TPFO	Pinon Flats	75.12	58	P	P	04 08 20.9	+0.3
	baz=312,SNR=6.1						
BELC	Belle Mtn. Jos	75.15	57	P	P	04 08 20.9	+0.2
	baz=312,SNR=5.9						
ARCR	ARCALIA	75.18	322	⇓P	P	04 08 21.6	+1.1
NIE	Niedzica	75.20	325	*e*P	P	04 08 22.0	+1.4
TRPA	Tarpa	75.22	323	⇓P	P	04 08 21.8	+1.1
OZUR		75.25	320	⇑P	P	04 08 22.1	+1.1
BSEG	Bad Segeberg	75.36	333	*e*P	P	04 08 21.8	+0.4
	comp=Z,20nm,0.8s,baz=35,slow=5.7						
DOPR	Dopca	75.53	320	⇓P	P	04 08 23.8	+1.3
O20A	White River Ci	75.53	48	P	P	04 08 23.5	+0.5
	baz=314						
IRM	Iron Mountain	75.57	57	P	P	04 08 24.0	+1.0
	baz=312,SNR=5.9						
MLR	Muntele Rosu	75.61	320	P	P	04 08 24.4	+1.2
	comp=Z,3.1nm,0.6s,baz=221,slow=12,SNR=3.1						
	comp=Z,3.1nm,0.6s						
MONP2	Monument Peak	75.62	59	P	P	04 08 23.7	+0.2
	baz=312						
AGMN	Agassiz Nation	75.70	36	IAmb	IAmb	04 08 24.1	
	comp=Z,18nm,1.0s						
AGMN	Agassiz Nation	75.70	36	P	P	04 08 23.1	-0.4
	baz=320,SNR=8.7						
KSP	Ksiaz	75.71	328	*e*P	P	04 08 23.9	+0.5
BC3	Big Chuckawall	75.72	57	P	P	04 08 24.1	+0.2
	baz=312						
LANS	Liptovska Anna	75.76	325	*e*P	P	04 08 24.9	+1.1
LANS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LANS	Liptovska Anna	75.76	325	*e*P	P	04 08 24.9	+1.1
BR131	Keskin Array S	75.76	311	*ce*P	P	04 08 24.2	+0.1
BRTR	Keskin Array B	75.76	311	P	P	04 08 24.3	+0.1
	comp=Z,2.9nm,0.7s,baz=66,slow=3.8,SNR=15						
	comp=Z,2.9nm,0.7s						
OSTC	Ostas	75.97	328	*e*P	P	04 08 24.8	-0.2
OSTC	Ostas	75.97	328	*e*P	P	04 08 24.8	-0.2
SWSC	Sam W. Stewart	75.97	58	P	P	04 08 25.6	+0.4
	baz=312						
IKP	In-Ko-Pah, Jac	75.98	59	P	P	04 08 25.7	+0.3
	baz=312						
MARR	Marisel-Cluj	76.05	322	⇑P	P	04 08 25.9	+0.3
MORC	Moravsky Berou	76.06	327	⇑P	P	04 08 26.3	+0.8
MORC	Moravsky Berou	76.06	327	IAmb	IAmb	04 08 27.0	
	comp=Z,14nm,0.9s						
MORC	Moravsky Berou	76.06	327	*e*P	P	04 08 26.0	+0.5
MORC	Moravsky Berou	76.06	327	P	P	04 08 26.3	+0.8
VOIR		76.08	320	⇓P	P	04 08 26.6	+0.8
VOIR		76.08	320	P	P	04 08 26.6	+0.8
UPC	Upice	76.09	328	*e*P	P	04 08 26.3	+0.7
UPC	Upice	76.09	328	*e*P	P	04 08 26.3	+0.7
PDMCI	Parker Dam,Lak	76.09	56	P	P	04 08 26.6	+0.7
	baz=312,SNR=8.1						
DPC	Dobruska-Polom	76.09	328	*e*P	P	04 08 26.3	+0.6
DPC				*e*pP	pP	04 08 49.3	-1.4
DPC	Dobruska-Polom	76.09	328	*e*P	P	04 08 26.3	+0.6
DPC				*e*		04 08 49.3	
KRLC	Kraliky	76.13	327	*e*P	P	04 08 26.2	+0.3
KRLC				*e*pP	pP	04 08 53.9	+3.0
KRLC	Kraliky	76.13	327	*e*P	P	04 08 26.2	+0.3
KRLC				*e*		04 08 53.9	
DRGR		76.15	322	⇑P	P	04 08 26.7	+0.5
DRGR		76.15	322	P	P	04 08 26.6	+0.5
BLYC	Blythe	76.23	57	IAmb	IAmb	04 08 28.2	
	comp=Z,7.9nm,0.7s						
N23A	Red Feather La	76.25	47	IAmb	IAmb	04 08 29.4	
	comp=Z,25nm,1.4s						
N23A	Red Feather La	76.25	47	P	P	04 08 28.0	+1.0
	baz=315,SNR=5.5						
PV23	Carpenter Ridg	76.27	50	IAmb	IAmb	04 08 29.2	
	comp=Z,38nm,1.1s						
ARR	Arges	76.33	320	⇑P	P	04 08 28.4	+1.3
FLTG	Flechtingen	76.37	332	*e*P	P	04 08 26.9	-0.2
	comp=Z,25nm,0.8s,baz=35,slow=5.7						
PV11	David Mesa, Pa	76.46	50	IAmb	IAmb	04 08 30.2	
	comp=Z,19nm,0.6s						
PV07	Paradox Valley	76.49	50	IAmb	IAmb	04 08 30.2	
	comp=Z,12nm,0.9s						
GLA	Glamis	76.51	57	P	P	04 08 29.2	+0.9
	baz=312						
VYHS	Vyhne	76.53	325	*e*P	P	04 08 28.7	+0.5
VYHS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VYHS	Vyhne	76.53	325	*e*P	P	04 08 28.7	+0.5
B35A	Bob, Littlefor	76.56	35	IAmb	IAmb	04 08 29.1	
	comp=Z,24nm,0.8s						
CLL	Collm	76.58	330	IAmb	IAmb	04 08 29.1	
	comp=Z,28nm,1.1s						
CLL	Collm	76.58	330	*i* P	P	04 08 28.1	-0.2
	comp=Z,25nm,1.1s						
CLL				*e*pP	pP	04 08 52.0	-1.3
CLL				*e*sP	sP	04 09 03.0	-0.9
CLL	Collm	76.58	330	*i* P	P	04 08 28.1	-0.2
CLL				*e**PP	pP	04 08 52.0	-1.3
CLL				pmax	pmax		
	comp=Z,25nm,1.1s						
CLL	Collm	76.58	330	*e*P	P	04 08 28.2	-0.2
	comp=Z,25nm,1.1s,baz=35,slow=5.7						
BRG	Berggiesshubel	76.58	329	*e*P	P	04 08 28.3	-0.1
	comp=Z,5.6nm,0.7s,baz=35,slow=5.7						
PV13	Radium Mtn., P	76.58	50	IAmb	IAmb	04 08 31.0	
	comp=Z,19nm,0.9s						
PVCC	Panska Ves	76.62	329	*e*P	P	04 08 29.0	+0.4
PVCC	Panska Ves	76.62	329	*e*P	P	04 08 29.0	+0.4
PV15	Paradox Valley	76.65	50	IAmb	IAmb	04 08 31.1	
	comp=Z,12nm,0.8s						
RETH	Rethem/Aller,	76.67	333	*e*P	P	04 08 28.8	0.0
	comp=Z,12nm,0.6s,baz=35,slow=5.7						
JAVC	Velka Javorina	76.73	326	*e*P	P	04 08 30.8	+1.5
ASSE	Asse, Remlinge	76.73	332	*e*P	P	04 08 29.4	+0.3
	comp=Z,7.8nm,0.9s,baz=35,slow=5.7						
FBE	Freiberg	76.76	330	*e*P	P	04 08 29.6	+0.2
	comp=Z,13nm,0.7s,baz=35,slow=5.7						
VRAC	Vranov	76.81	327	⇓P	P	04 08 30.5	+0.8
VRAC	Vranov	76.81	327	P	P	04 08 30.2	+0.5
	comp=Z,7.2nm,0.7s,baz=40,slow=6.6,SNR=9.2						
	comp=Z,7.2nm,0.7s						
VRAC	Vranov	76.81	327	*e*P	P	04 08 30.3	+0.6
WUAZ	Wupatki	76.93	54	P	P	04 08 32.0	+1.1
	baz=313,SNR=6.7						
PRU	Pruhonice	77.07	329	*e*P	P	04 08 31.5	+0.4
PRU				*e*pP	pP	04 08 56.2	0.0
PRU	Pruhonice	77.07	329	*e*P	P	04 08 31.5	+0.4
PRU				*e*		04 08 56.2	
CLZ	Clausthal	77.08	332	*e*P	P	04 08 31.5	+0.3
	comp=Z,48nm,1.6s,baz=35,slow=5.7						
KRUC	Moravsky	77.08	327	*e*P	P	04 08 31.8	+0.6
NEUB	Neuenburg	77.10	331	*e*P	P	04 08 31.3	0.0
	comp=Z,20nm,0.9s,baz=35,slow=5.7						
SUSD	Miller	77.20	40	P	P	04 08 32.3	+0.3
	baz=318						
ISCO	Idaho Springs	77.20	47	P	P	04 08 33.3	+0.9
	baz=316,SNR=6.4						
TREC	Trest	77.26	328	*e*P	P	04 08 32.3	+0.1
TREC	Trest	77.26	328	*e*P	P	04 08 32.3	+0.1
MODS	Modra-Piesok	77.27	326	*e*P	P	04 08 33.2	+0.9
MODS	Modra-Piesok	77.27	326	*e*P	P	04 08 33.2	+0.9
SRO	Srobarova	77.28	325	*e*P	P	04 08 33.6	+1.3
SRO				pmax	pmax		
	comp=Z,13nm,0.9s						
SRO	Srobarova	77.28	325	*e*P	P	04 08 33.6	+1.3
MVCO	Mesa Verde	77.43	51	IAmb	IAmb	04 08 35.2	
	comp=Z,10nm,0.8s						
MVCO	Mesa Verde	77.43	51	P	P	04 08 34.6	+0.9
	baz=314,SNR=10						
GTTG	Gottingen	77.46	332	*e*P	P	04 08 33.4	+0.1
	comp=Z,16nm,0.8s,baz=35,slow=5.7						
TANN	Tannenbergstha	77.50	330	*e*P	P	04 08 33.7	+0.1
	baz=35,slow=5.7						
BZS	Buzias	77.53	322	⇓P	P	04 08 33.7	-0.1
BZS	Buzias	77.53	322	P	P	04 08 33.7	-0.1
WERD	Werda	77.53	330	*e*P	P	04 08 33.9	+0.1
	comp=Z,4.5nm,0.8s,baz=35,slow=5.7						
PLN	Plauen	77.56	330	*e*P	P	04 08 34.0	+0.1
	baz=35,slow=5.7						
IBBN	Ibbenburen	77.57	334	*e*P	P	04 08 34.0	+0.2
	baz=35,slow=5.7						
GUNZ	Gunzen	77.59	330	*e*P	P	04 08 34.4	+0.3
	baz=35,slow=5.7						
MOX	Moxa	77.62	331	*e*P	P	04 08 34.3	+0.1
	baz=35,slow=5.7						
WERN	Wernitzgruen	77.64	330	*e*P	P	04 08 34.6	+0.3
	baz=35,slow=5.7						
NKC	Novy Kostel	77.66	330	*e*P	P	04 08 34.2	-0.3
NKC	Novy Kostel	77.66	330	*e*P	P	04 08 34.2	-0.3
EYMN	Ely	77.81	34	IAmb	IAmb	04 08 36.2	
	comp=Z,29nm,1.0s						
EYMN	Ely	77.81	34	P	P	04 08 35.2	-0.2
	baz=322,SNR=10						
PLVB	Pleven	77.81	319	⇓P	P	04 08 35.4	0.0
MANZ	Manzenberg	77.99	330	*e*P	P	04 08 36.3	0.0
	baz=35,slow=5.7						
S22A	4UR Ranch, Cre	77.99	49	P	P	04 08 38.2	+1.3
	baz=315,SNR=10						
Q24A	Divide	78.05	48	P	P	04 08 37.8	+0.6
	baz=316						
CKRC	Cesky Krumlov	78.10	328	*e*P	P	04 08 37.0	+0.1
CKRC				*e*x	x	04 09 03.0	
CKRC	Cesky Krumlov	78.10	328	*e*P	P	04 08 37.0	+0.1
CKRC				*e*		04 09 03.0	
ROTZ	Rotzenmuhle	78.13	330	*e*P	P	04 08 37.3	+0.2
	baz=35,slow=5.7						
KHC	Kasperske Hory	78.13	329	P	P	04 08 37.6	+0.5
KHC				IAmb	IAmb	04 08 38.5	
	comp=Z,13nm,0.6s						
KHC	Kasperske Hory	78.13	329	*e*P	P	04 08 37.7	+0.5
KHC				*e*pP	pP	04 09 02.0	-0.2
KHC	Kasperske Hory	78.13	329	*ce*P	P	04 08 37.6	+0.5
KHC				pmax	pmax		
	comp=Z,28nm,0.7s						
W18A	Petrified Fore	78.17	53	P	P	04 08 38.6	+0.8
	baz=314						
CONA	Conrad Observa	78.20	327	*i* P	P	04 08 38.0	+0.4
	comp=Z,2.7nm,0.6s						
RONA	Rosalia, Austr	78.21	326	*i* P	P	04 08 38.2	+0.6
	comp=Z,6.6nm,0.7s						
OGNE	Ogallala	78.27	44	IAmb	IAmb	04 08 39.6	
	comp=Z,31nm,0.8s						
OGNE	Ogallala	78.27	44	P	P	04 08 38.5	+0.4
	baz=317						
KASTN	Kahler Asten	78.28	333	*e*P	P	04 08 37.9	0.0
	baz=35,slow=5.7						
GEC2	GERESS Array S	78.32	328	*e*P	P	04 08 38.4	+0.2
	baz=35,slow=5.7						
GERES	GERESS Array B	78.32	328	P	P	04 08 38.4	+0.2
	comp=Z,2.6nm,0.6s,baz=36,slow=5.8,SNR=26						
	comp=Z,2.6nm,0.6s						
MORH	Mrgy, Hungar	78.39	324	⇓P	P	04 08 38.3	-0.2
BUG	Bochum--Univer	78.46	333	*e*P	P	04 08 39.0	+0.2
	baz=35,slow=5.7						
214A	Organ Pipe Nat	78.50	57	P	P	04 08 40.4	+0.9
	baz=313						
GRA1	Grafenberg Arr	78.56	330	IAmb	IAmb	04 08 40.9	
	comp=Z,24nm,0.7s						
GRF	Grafenberg Arr	78.56	330	*e*P	P	04 08 39.8	+0.4
	baz=35,slow=5.7						
GRF				*e*pP	pP	04 09 06.2	+1.6
GRFO	Grafenberg	78.56	330	P	P	04 08 39.9	+0.5
GRFO				IAmb	IAmb	04 08 40.9	
	comp=Z,22nm,0.7s						
GRFO	Grafenberg	78.56	330	P	P	04 08 39.9	+0.5
GRFO				pmax	pmax		
	comp=Z,22nm,0.7s						
FRGS	Fruska Gora	78.70	323	⇓P	P	04 08 40.3	0.0
SDCO	Great Sand Dun	78.73	49	P	P	04 08 41.5	+0.5
SDCO	Great Sand Dun	78.73	49	P	P	04 08 41.5	+0.5
	baz=316,SNR=9.5						
ECSD	EROS Data Cent	78.84	39	IAmb	IAmb	04 08 42.2	
	comp=Z,22nm,1.1s						
ECSD	EROS Data Cent	78.84	39	P	P	04 08 40.9	-0.1
	baz=320,SNR=14						
E38A	The Farm, Brul	78.85	35	P	P	04 08 40.6	-0.5
E38A				IAmb	IAmb	04 08 41.9	
	comp=Z,41nm,1.2s						
ARSA	Arzberg	78.88	326	*i* P	P	04 08 41.9	+0.7
	comp=Z,2.2nm,0.7s						
MOA	Molln	78.90	327	*i* P	P	04 08 41.7	+0.3
	comp=Z,2.2nm,0.6s						
RDO	Rodhopi	79.03	317	IAmb	IAmb	04 08 43.6	
	comp=Z,14nm,1.0s						
ASF	Jabal al Asfar	79.09	304	P	P	04 08 43.6	+0.8
	comp=Z,4.1nm,0.7s,baz=81,slow=6.9,SNR=5.1						
	comp=Z,4.1nm,0.7s						
TNS	Taunus Mts	79.10	332	*e*P	P	04 08 42.5	+0.1
	baz=35,slow=5.7						
BIOA	Bad Ischl, Aus	79.28	328	*i* P	P	04 08 44.1	+0.6
	comp=Z,5.3nm,0.6s						
AHRW	Bad Neuenahr-A	79.29	333	*e*P	P	04 08 44.0	+0.7
	baz=35,slow=5.7						
RAYN	Ar Rayn	79.36	292	P	P	04 08 44.5	+0.2
RAYN	Ar Rayn	79.36	292	P	P	04 08 44.5	+0.2
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KSCO	Kaye Shedlock'	79.37	46	P	P	04 08 44.5	+0.2
	baz=317						
SPMN	Marine on St.	79.41	36	P	P	04 08 43.7	-0.4
	baz=322						
MMAI	Mount Meron Ar	79.41	305	P	P	04 08 45.4	+0.9
	comp=Z,11nm,0.7s,baz=46,slow=7.1,SNR=10						
	comp=Z,11nm,0.7s						
TUC	Tucson	79.50	56	P	P	04 08 45.1	+0.2
TUC	Tucson	79.50	56	P	P	04 08 45.1	+0.2
TUC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TUC	Tucson	79.50	56	P	P	04 08 45.5	+0.5
	baz=314						
GROS	Grobnik	79.52	326	*i* P	P	04 08 44.8	-0.1
GROS				*e*PcP	PcP	04 08 51.5	-1.0
SOKA	Soboth	79.54	326	*i* P	P	04 08 45.0	+0.1
	comp=Z,8.3nm,0.7s,SNR=8.2						
SCHQ	Schefferville	79.55	17	P	P	04 08 44.9	+0.1
	comp=Z,12nm,0.8s,baz=351,slow=6.1,SNR=20						
	comp=Z,12nm,0.8s						
SCHQ	Schefferville	79.55	17	IAmb	IAmb	04 08 45.9	
	comp=Z,16nm,0.8s						
BTNL	Ternell	79.57	334	*d*P	P	04 08 44.4	-0.5
	comp=Z,8.8nm,0.8s						
RJOB	Jochberg	79.57	328	*e*P	P	04 08 45.6	+0.5
	baz=35,slow=5.7						
MEM	Membach	79.59	334	*d*P	P	04 08 44.6	-0.4
	comp=Z,12nm,0.9s						
BSTI	Sart Tilman	79.75	334	*d*P	P	04 08 45.9	0.0
	comp=Z,3.7nm,0.6s						
BSTI				*d*pP	pP	04 09 11.2	+0.2
T25A	Trinidad	79.77	48	IAmb	IAmb	04 08 48.2	
	comp=Z,15nm,0.8s						
T25A	Trinidad	79.77	48	P	P	04 08 47.1	+0.5
	baz=316,SNR=13						
FUR	Furstenfeldbru	79.80	329	*e*P	P	04 08 46.8	+0.6
	baz=35,slow=5.7						
BHOU	Houvegnez	79.81	333	*d*P	P	04 08 46.4	+0.2
BGNE	Belgrade	79.87	42	IAmb	IAmb	04 08 47.6	
	comp=Z,37nm,0.9s						
BGNE	Belgrade	79.87	42	P	P	04 08 46.5	-0.2
	baz=319						
OBKA	Obir	79.87	326	*i* P	P	04 08 46.9	+0.1
	comp=Z,6.9nm,0.7s						
KBA	Koelnbreinsper	79.89	328	*i* P	P	04 08 47.0	0.0
	comp=Z,13nm,1.0s,SNR=7.1						
BCLA	Clavier	79.98	334	*d*P	P	04 08 46.9	-0.2
	comp=Z,8.2nm,0.7s						
BCLA				*d*pP	pP	04 09 12.8	+0.5
STU	Stuttgart	80.06	331	*e*P	P	04 08 47.8	+0.3
	baz=35,slow=5.7						
BGES	Gesves	80.08	334	*d*P	P	04 08 47.5	-0.1
MYKA	Terra Mystica	80.14	327	*i* P	P	04 08 47.7	-0.5
	comp=Z,3.6nm,0.6s						
ANMO	Albuquerque	80.20	51	P	P	04 08 49.5	+0.7
ANMO	Albuquerque	80.20	51	P	P	04 08 49.5	+0.7
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ANMO	Albuquerque	80.20	51	P	P	04 08 49.0	+0.2
	baz=316						
SNF	Seneffe	80.23	335	*d*P	P	04 08 48.8	+0.3
	comp=Z,9.6nm,0.7s						
BMRD	Maredsous	80.26	334	*d*P	P	04 08 48.4	-0.2
	comp=Z,13nm,0.8s						
BMRD				*d*pP	pP	04 09 14.4	+0.7
VISS	Visnje	80.33	326	*i* P	P	04 08 48.8	-0.3
DUN6	Lazy B Ranch	80.35	54	IAmb	IAmb	04 08 52.0	
	comp=Z,50nm,1.3s						
WLF	Walferdange	80.35	333	*e*P	P	04 08 50.7	+1.5
	baz=35,slow=5.7						
WATA	Walderalm	80.37	329	*i* P	P	04 08 49.7	+0.2
	comp=Z,6.6nm,0.5s						
WTTA	Wattenberg	80.41	329	*i* P	P	04 08 50.1	+0.4
	comp=Z,5.8nm,0.7s,SNR=5.9						
LENM	Lemitar	80.46	52	P	P	04 08 51.5	+1.3
DOU	Dourbes	80.49	334	*d*P	P	04 08 49.6	-0.3
ABTA	Abfaltersbach	80.49	328	*i* P	P	04 08 49.9	-0.1
	comp=Z,8.5nm,1.4s						
MOTA	Moosalm	80.54	329	*i* P	P	04 08 50.7	+0.3
	comp=Z,16nm,0.7s,SNR=11						
CEY	Cerknica	80.55	326	*i* P	P	04 08 49.8	-0.5
CEY				*e*PcP	PcP	04 08 56.4	-0.6
Y22D	IRIS PASSCAL I	80.55	52	P	P	04 08 50.0	-0.7
	baz=316						
Y22F	Passcal Instru	80.55	52	P	P	04 08 49.8	-0.8
	baz=316						
RETA	Reutte	80.56	329	*i* P	P	04 08 50.6	+0.2
	comp=Z,12nm,0.9s,SNR=5.4						
SQTA	Sankt Quirin	80.61	329	*i* P	P	04 08 50.8	+0.1
	comp=Z,9.7nm,0.7s						
BFO	Black Forest	80.74	331	P	P	04 08 51.6	+0.4
BFO	Black Forest	80.74	331	P	P	04 08 51.7	+0.4
BFO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BFO	Black Forest	80.74	331	*e*P	P	04 08 51.1	-0.1
	baz=35,slow=5.7						
CRNM	Carthage	80.75	52	P	P	04 08 51.7	0.0
STAL	STALIGIAL	80.81	327	IAmb	IAmb	04 08 51.3	
	comp=Z,11nm,0.7s						
CIMO	Cimolais	80.88	328	IAmb	IAmb	04 08 51.7	
	comp=Z,2.6nm,0.6s						
FETA	Feichten	80.95	329	*i* P	P	04 08 53.0	+0.3
	comp=Z,7.2nm,0.8s						
CBKS	Cedar Bluff	81.03	44	IAmb	IAmb	04 08 53.2	
	comp=Z,17nm,0.7s						
CBKS	Cedar Bluff	81.03	44	P	P	04 08 52.6	-0.4
	baz=319						
DAVA	Damuels	81.05	330	*e*P	P	04 08 53.3	+0.2
	comp=Z,6.8nm,0.6s						
319A	Douglas	81.06	55	P	P	04 08 53.8	+0.4
PDG	Podgorica	81.08	321	⇑P	P	04 08 53.1	0.0
PDG	Podgorica	81.08	321	IAmb	IAmb	04 08 53.9	
	comp=Z,16nm,0.7s						
121A	Cookes Peak, D	81.14	54	P	P	04 08 54.8	+0.9
	baz=316,SNR=7.7						
FUORN	Ofenpass-Fuorn	81.47	329	IAmb	IAmb	04 08 56.8	
	comp=Z,14nm,0.8s						
N35A	Tabor	81.51	41	IAmb	IAmb	04 08 56.8	
	comp=Z,27nm,0.7s						
KBN	Korca	81.76	319	IAmb	IAmb	04 08 57.7	
	comp=Z,17nm,0.8s						
SCIA	State Center	81.83	39	P	P	04 08 57.5	+0.3
	baz=322						
EIL	Elat	82.03	303	P	P	04 08 59.1	+0.7
	comp=Z,5.3nm,0.7s,baz=4.2,slow=8.3,SNR=4.5						
	comp=Z,5.3nm,0.7s						
SALO	Salr	82.20	328	IAmb	IAmb	04 08 59.9	
	comp=Z,25nm,0.8s						
JFWS	Jewell Farm	82.36	36	P	P	04 09 00.0	+0.1
	baz=324						
KSU1	Kansas State U	82.39	42	IAmb	IAmb	04 09 00.6	
	comp=Z,17nm,0.7s						
KSU1	Kansas State U	82.39	42	P	P	04 08 59.7	-0.4
	baz=320						
N38A	Joes South For	82.70	39	IAmb	IAmb	04 09 02.8	
	comp=Z,26nm,0.8s						
AMTX	Amarillo	82.92	48	IAmb	IAmb	04 09 04.8	
	comp=Z,18nm,1.1s						
AMTX	Amarillo	82.92	48	P	P	04 09 03.5	+0.5
	baz=318						
MSTX	Muleshoe	83.00	50	P	P	04 09 04.1	+0.7
	baz=318						
NOKA	Waynoka	83.09	45	P	P	04 09 03.9	+0.1
NOKA				IAmb	IAmb	04 09 05.3	
	comp=Z,22nm,1.1s						
GLMI	Grayling	83.11	32	P	P	04 09 03.9	+0.2
	baz=327						
MNTX	Cornudas Mount	83.16	53	P	P	04 09 05.3	+1.1
	baz=317,SNR=9.6						
U32A	Winter Ranch,	83.25	46	IAmb	IAmb	04 09 06.2	
	comp=Z,12nm,0.8s						
ELIS	Ellis County	83.26	46	P	P	04 09 04.6	-0.1
FDMO	Fiordimonte	83.31	325	IAmb	IAmb	04 09 05.5	
	comp=Z,12nm,0.7s						
OK038	West end E0370	83.31	45		P	04 09 05.1	+0.2
OK038				IAmb	IAmb	04 09 06.5	
	comp=Z,18nm,0.9s						
MURB	Monte Urbino	83.36	326	IAmb	IAmb	04 09 07.0	
	comp=Z,24nm,1.1s						
KAN09	Caldwell North	83.39	44	P	P	04 09 05.6	+0.2
KAN09				IAmb	IAmb	04 09 06.1	
	comp=Z,23nm,1.2s						
P38A	Dawn	83.48	40	IAmb	IAmb	04 09 07.0	
	comp=Z,20nm,0.8s						
CAMP	Campotosto	83.58	325	IAmb	IAmb	04 09 07.4	
	comp=Z,14nm,0.9s						
CLNB	Carlsbad	83.62	51	P	P	04 09 07.7	+1.0
CROK	Carrier	83.68	45	IAmb	IAmb	04 09 08.2	
	comp=Z,28nm,0.9s						
IDI	Anoyia	83.75	313	P	P	04 09 06.6	-0.7
	comp=Z,13nm,0.6s,baz=45,slow=8.7,SNR=19						
	comp=Z,13nm,0.6s						
INTR	Introdacqua	83.80	324	IAmb	IAmb	04 09 07.5	
	comp=Z,8.0nm,0.6s						
T35A	Sooner Cattle	84.12	44	IAmb	IAmb	04 09 10.2	
	comp=Z,15nm,0.8s						
BNI	Bardonecchia	84.13	330	P	P	04 09 09.4	+0.3
BNI				IAmb	IAmb	04 09 10.8	
	comp=Z,13nm,1.2s						
BNI	Bardonecchia	84.13	330	P	P	04 09 09.4	+0.3
BNI				pmax	pmax		
	comp=Z,13nm,1.2s						
P40A	Paris	84.26	39	IAmb	IAmb	04 09 10.4	
	comp=Z,12nm,0.7s						
OK050	Pawnee Station	84.29	44	P	P	04 09 10.1	+0.2
OK050				IAmb	IAmb	04 09 11.3	
	comp=Z,20nm,0.9s						
OK046	Pawnee Station	84.32	44	IAmb	IAmb	04 09 11.4	
	comp=Z,13nm,0.9s						
POST	Post	84.38	49	IAmb	IAmb	04 09 12.1	
	comp=Z,14nm,0.8s						
OK044	Pawnee Station	84.40	44	P	P	04 09 10.8	+0.4
OK044				IAmb	IAmb	04 09 11.9	
	comp=Z,21nm,0.9s						
ODSA	Odessa	84.48	51	IAmb	IAmb	04 09 12.7	
	comp=Z,20nm,1.0s						
QUOK	Quay	84.60	44	P	P	04 09 12.0	+0.5
QUOK				IAmb	IAmb	04 09 13.0	
	comp=Z,17nm,1.0s						
WMOK	Wichita Mounta	84.61	47	IAmb	IAmb	04 09 13.0	
	comp=Z,14nm,1.2s						
WMOK	Wichita Mounta	84.61	47	P	P	04 09 12.0	+0.4
	baz=320						
OK053	SW of W Deep R	84.68	45	IAmb	IAmb	04 09 13.4	
	comp=Z,15nm,1.0s						
HDIL	Hopedale	84.69	37	IAmb	IAmb	04 09 12.8	
	comp=Z,21nm,0.7s						
HDIL	Hopedale	84.69	37	P	P	04 09 11.8	0.0
	baz=324						
OK052	Battle Ridge R	84.69	45	IAmb	IAmb	04 09 13.4	
	comp=Z,13nm,0.8s						
OK031	S. Brethren Rd	84.70	45	IAmb	IAmb	04 09 13.4	
	comp=Z,13nm,0.8s						
OK034	N. Norfolk Rd.	84.72	44	IAmb	IAmb	04 09 13.5	
	comp=Z,21nm,1.0s						
OK030	Cody Creek RV	84.75	45	P	P	04 09 12.5	+0.3
OK030				IAmb	IAmb	04 09 13.7	
	comp=Z,12nm,0.9s						
TIP	Timpagrande	84.81	321	P	P	04 09 12.8	+0.2
TIP				IAmb	IAmb	04 09 13.7	
	comp=Z,26nm,1.3s						
FNO	Franklin	84.94	45	IAmb	IAmb	04 09 14.9	
	comp=Z,18nm,0.8s						
S39A	Bolivar	85.11	41	IAmb	IAmb	04 09 14.4	
	comp=Z,11nm,0.8s						
X34A	Smith Ranch, M	85.22	46	IAmb	IAmb	04 09 16.5	
	comp=Z,13nm,0.9s						
TUL1	Leonard	85.27	44	IAmb	IAmb	04 09 16.2	
	comp=Z,13nm,0.8s						
TUL1	Leonard	85.27	44	P	P	04 09 15.2	+0.3
	baz=321,SNR=5.5						
TRQ	Mont Tremblant	85.41	25	IAmb	IAmb	04 09 16.1	
	comp=Z,22nm,0.9s						
LMQ	La Malbaie	85.44	22	IAmb	IAmb	04 09 16.3	
	comp=Z,31nm,1.4s						
RLO	Rose Lookout	85.46	43	IAmb	IAmb	04 09 16.4	
	comp=Z,9.9nm,0.7s						
U38A	Gravette	85.57	43	IAmb	IAmb	04 09 17.2	
	comp=Z,9.1nm,0.8s						
AAM	Ann Arbor	85.61	33	P	P	04 09 16.3	-0.1

	baz=328						
ABTX	Abilene, Hawle	85.74	49	IAmb	IAmb	04 09 18.8	
	comp=Z,22nm,1.4s						
ABTX	Abilene, Hawle	85.74	49	P	P	04 09 17.6	+0.3
	baz=319						
SFIN	Lafayette	85.79	36	P	P	04 09 17.6	+0.3
	baz=326						
CCM	Cathedral Cave	85.81	40	P	P	04 09 17.7	+0.2
CCM				IAmb	IAmb	04 09 18.5	
	comp=Z,16nm,0.8s						
CCM	Cathedral Cave	85.81	40	P	P	04 09 17.7	+0.2
CCM				pmax	pmax		
	comp=Z,15nm,0.8s						
CCM	Cathedral Cave	85.81	40	P	P	04 09 17.6	+0.1
	baz=323						
TX31	Lajitas Ar. Si	85.89	53	IAmb	IAmb	04 09 19.4	
	comp=Z,19nm,0.8s						
TXAR	Lajitas Array	85.89	53	P	P	04 09 19.1	+0.9
	comp=Z,5.1nm,0.6s,baz=291,slow=3.6,SNR=70						
	comp=Z,5.1nm,0.6s						
HHAR	Hobbs	85.92	43	IAmb	IAmb	04 09 18.7	
	comp=Z,7.7nm,0.8s						
D62A	Allapoint, All	86.21	21	IAmb	IAmb	04 09 20.1	
	comp=Z,9.6nm,0.6s						
FVM	French Village	86.25	39	IAmb	IAmb	04 09 20.3	
	comp=Z,8.6nm,0.7s						
O48B	Farmland	86.72	35	P	P	04 09 21.9	0.0
	baz=327						
BATG	Bathurst New B	86.78	19	IAmb	IAmb	04 09 23.4	
	comp=Z,16nm,1.0s						
LONY	Lake Ozonia	86.83	26	P	P	04 09 22.4	0.0
	baz=334						
F62A	Pittston Farm,	87.05	22	IAmb	IAmb	04 09 24.6	
	comp=Z,24nm,1.1s						
FCAR	Ozark Folk Cen	87.12	42	IAmb	IAmb	04 09 24.6	
	comp=Z,12nm,0.9s						
JCT	Junction City	87.27	50	P	P	04 09 25.0	+0.2
	baz=319						
MIAR	Mount Ida	87.46	43	IAmb	IAmb	04 09 27.0	
	comp=Z,11nm,0.9s						
MIAR	Mount Ida	87.46	43	P	P	04 09 26.0	+0.5
	baz=322,SNR=5.8						
M53A	WI Miller and	87.50	31	P	P	04 09 26.0	+0.3
	baz=330						
P49A	Miami Univ. Ec	87.50	35	IAmb	IAmb	04 09 26.3	
	comp=Z,14nm,0.6s						
P49A	Miami Univ. Ec	87.50	35	P	P	04 09 25.7	0.0
	baz=327						
ACSO	Alum Creek Sta	87.63	33	P	P	04 09 26.2	0.0
	baz=328						
PKME	Peaks-Kenny Pk	87.82	22	P	P	04 09 27.4	+0.4
	baz=337						
WCI	Wyandotte Cave	87.92	36	P	P	04 09 28.0	+0.3
	baz=326						
O53A	New Philadelph	88.32	32	P	P	04 09 30.5	+1.0
	baz=329,SNR=5.4						
P52A	Corning	88.48	33	P	P	04 09 30.3	0.0
	baz=329						
BINY	Binghamton	88.53	28	P	P	04 09 30.8	+0.3
	baz=333						
WVT	Waverly	88.96	39	P	P	04 09 32.7	+0.1
	baz=325						
833A	Chaparral WMA,	89.13	51	P	P	04 09 33.7	+0.1
	baz=320						
SSPA	Standing Stone	89.24	30	P	P	04 09 34.5	+0.7
SSPA	Standing Stone	89.24	30	P	P	04 09 33.7	-0.1
	baz=331						
MCWV	Mont Chateau	89.36	31	P	P	04 09 35.1	+0.7
	baz=330						
L61B	Northampton	89.39	25	P	P	04 09 35.0	+0.4
	baz=335						
OXF	Oxford	89.54	41	P	P	04 09 35.5	+0.1
	baz=325						
HRV	Adam Dziewonsk	89.69	25	P	P	04 09 36.5	+0.6
	baz=336						
PAL	Palisades	90.29	27	P	P	04 09 39.0	+0.3
	baz=334						
TZTN	Tazewell	90.52	36	P	P	04 09 40.0	0.0
	baz=328						
BLA	Blacksburg	91.25	33	P	P	04 09 43.4	+0.1
	baz=330						
ESDC	Sonseca Array	92.52	335	P	P	04 09 49.1	-0.1
	comp=Z,2.6nm,0.8s,baz=14,slow=3.8,SNR=14						
	comp=Z,2.6nm,0.8s						
TORD	Torodi Ar. Bea	113.82	318	PKiKP	PKiKP	04 15 15.8	-0.8
	comp=Z,0.3nm,0.4s,baz=11,slow=0.8,SNR=6.6						
TORD				PP	PP	04 16 08.4	-1.6
	comp=Z,2.7nm,1.2s,baz=26,slow=6.9,SNR=6.0						
DBIC	Dimbokro	122.59	321	PKP	PKPdf	04 15 32.7	-0.8
	comp=Z,1.7nm,0.5s,baz=145,slow=0.7,SNR=4.2						
LPAZ	La Paz	142.75	54	PKP	PKPdf	04 16 09.4	-2.4
	comp=Z,1.2nm,0.7s,baz=23,slow=5.1,SNR=2.8						
PTLB	Pontes e Lacer	146.97	41	*e*P	PKPbc	04 16 20.6	+0.1
NBRS	Nobres	147.50	35	*e*P	PKiKP	04 16 23.4	-0.7
BBSD	Serra de San D	147.70	45	*e*P	PKiKP	04 16 23.8	-0.6
BDFB	Brasilia	151.44	22	PKPbc	PKPbc	04 16 31.6	-0.2
	comp=Z,6.1nm,0.7s,baz=214,slow=4.8,SNR=14						
PLTB	Pedras Altas	163.05	55	*e*P	PKPdf	04 16 44.0	+4.3

NNC ***14*** *04:05:20.9±10.0, 38°.71N×55°.13E, h0^{km}, mb4.3, Error ellipse: s-maj=118.5km s-min=31.8km az=50.0*
IDC ***14*** *04:05:21.5±0.9, 38°.26N×55°.37E, h0^{km}, mb3.7/18, mbtmp3.9/25, ML4.0/6, MS3.9/3, Error ellipse: s-maj=18.0km s-min=8.1km az=179.0*
TEH ***14*** *04:05:22.3, 38°.35N×55°.45E, h17^{km}±27^{km}, ML4.1*
NEIC ***14*** *04:05:27.2±2.0, 38°.5N±0°.1×55°.58E±0°.09, h31^{km}±7^{km}, mb4.4/25, Error ellipse: s-maj=15.9km s-min=9.6km az=184.0*
AZER ***14*** *04:05:28.7±1.1, 38°.19N×55°.00E, h10^{km}, Error ellipse: s-maj=15.8km s-min=8.9km az=27.0*
ISC 14 04:05:22.7±0.4**, 38°.41N**±0°.04×**55°.54E**±0°.03**, h10^{km}, n177, σ2^{s}.16**/211**, mb4.1**/27**, 8C-4D, Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRVT	Maraveh tapeh	0.87	150	Pg	Pg	04 05 37.8	-1.7
MRVT				Sg	Sg	04 05 49.2	-1.6
IMND	Minoodasht	1.16	185	Pg	Pb	04 05 43.2	-1.6
BJRD	Bojnurd	1.64	115	Pg	Pn	04 05 51.7	0.0
GEYT	Alibeck	2.09	103	Pn	Pn	04 05 58.9	+1.0
	118nm,0.3s,baz=278,slow=19,SNR=165						
GEYT				Lg	Lg	04 06 32.3	
	20nm,0.3s,baz=304,slow=19,SNR=2.2						
	403nm,0.5s						
GYA0B	ALIBECK ARRAY	2.09	103	⇑P	Pb	04 06 01.0	+0.2
GYA0B				⇓S	Sg	04 06 34.7	+4.8
IGLO	Ghaloghah	2.34	216	Pn	Pn	04 06 01.2	-0.3
SHRO	Shahrood	2.45	171	Pn	Pn	04 06 03.1	+0.3
SBZV	Sabzevar	2.61	140	Pn	Pn	04 06 06.4	+1.3
IEMG	Emamgholi	2.66	111	Pn	Pn	04 06 07.8	+1.9
IAKL	Akhelmad	3.13	124	Pn	Pn	04 06 14.1	+1.7
ISHM	Shahmirzad	3.16	215	Pn	Pn	04 06 13.5	+0.7
IANJ	Anjilo	3.21	204	Pn	Pn	04 06 14.0	+0.5
IPRN	Peran	3.34	231	Pn	Pn	04 06 14.7	-0.5
IPAY	Payeh	3.38	124	Pn	Pn	04 06 16.8	+1.0
IFIR	Firoozkooh	3.55	220	Pn	Pn	04 06 19.1	+0.9
IKRD	Kardeh	3.56	116	Pn	Pn	04 06 19.1	+0.8
IMOG	Moghan	3.81	126	Pn	Pn	04 06 24.4	+2.7
DAMV	Damavand	3.98	227	Pn	Pn	04 06 25.6	+1.6
IDMV	Damavand	3.98	226	Pn	Pn	04 06 25.5	+1.4
IMYA	Miami	4.18	118	Pn	Pn	04 06 27.3	+0.5
CHTH	Charan	4.32	236	Pn	Pn	04 06 30.2	+1.5
QALM	Alamut, Qazvin	4.37	245	Pn	Pn	04 06 29.3	0.0
THKV	Tehran--Karaj	4.48	238	Pn	Pn	04 06 32.3	+1.5
TNSJ	Nastanj	4.52	169	Pn	Pn	04 06 33.2	+1.8
IVRN	Varamin	4.58	223	Pn	Pn	04 06 34.1	+2.0
IGZV	Ghazvin	4.69	246	Pn	Pn	04 06 34.6	+0.7
GIDE	GILAN DEYLAMAN	4.70	253	Pn	Pn	04 06 36.1	+2.1
ISFB	Sefidab	4.85	214	Pn	Pn	04 06 37.9	+2.1
GOBA	Gobu	4.91	296	S	Sn	04 07 40.0	+6.4
TABS	Tabas	4.92	164	Pn	Pn	04 06 37.8	+1.0
TKDS	Koohdasht(Taba	4.96	164	Pn	Pn	04 06 38.2	+0.8
TBJM	Torbat-e-JAM	4.96	128	Pn	Pn	04 06 39.0	+1.5
GHVR	GHOM	5.20	222	Pn	Pn	04 06 42.7	+2.0
ASTR	Astara	5.29	274	P	Pn	04 06 41.3	-0.5
	SNR=5.5						
ASTR				S	Sn	04 07 39.0	-3.9
ASTR	Astara	5.29	274	Pn	Pn	04 06 41.3	-0.5
ALIB	Äli-Bayra	5.30	289	P	Pn	04 06 45.1	+3.1
	SNR=5.9						
ALIB				S	Sn	04 07 45.7	+2.6
ALIB	Äli-Bayra	5.30	289	Pn	Pn	04 06 45.0	+3.1
LKRN	Lenkeran, Azer	5.30	275	P	Pn	04 06 43.3	+1.2
	SNR=4.0						
LKRN				S	Sn	04 07 39.0	-4.1
LKRN	Lenkeran, Azer	5.30	275	Pn	Pn	04 06 43.2	+1.2
IRAZ	Razeghan	5.40	238	Pn	Pn	04 06 45.6	+2.1
TPRV	Parvadeh(Tabas	5.45	170	Pn	Pn	04 06 45.8	+1.7
GLBA	Clilabad	5.64	281	P	Pn	04 06 46.7	0.0
	SNR=11						
GLBA				S	Sn	04 07 48.1	-3.3
GLBA	Clilabad	5.64	281	Pn	Pn	04 06 46.6	0.0
LRK	Lerik	5.65	275	P	Pn	04 06 45.8	-1.1
	SNR=14						
LRK				S	Sn	04 07 47.9	-4.0
LRK	Lerik	5.65	275	Pn	Pn	04 06 45.7	-1.1
ATGJ	Altiaghaj	5.65	298	P	Pn	04 06 50.2	+3.4
ATGJ				S	Sn	04 07 52.1	+0.3
ATGJ	Altiaghaj	5.65	298	Pn	Pn	04 06 50.2	+3.4
ZNJK	Zanjan	5.71	254	Pn	Pn	04 06 48.3	+0.4
SAAT	Saatly	5.72	287	S	Sn	04 07 54.8	+1.6
AFRZ	Afriz	5.72	149	Pn	Pn	04 06 49.4	+1.5
YRD	Yardimli	5.73	277	P	Pn	04 06 46.9	-1.2
	SNR=10.0						
YRD				S	Sn	04 07 49.2	-4.8
YRD	Yardimli	5.73	277	Pn	Pn	04 06 46.9	-1.2
SIZA	Siyzn	5.77	300	P	Pn	04 06 51.2	+2.8
SIZA				S	Sn	04 07 56.1	+1.5
SIZA	Siyzn	5.77	300	Pn	Pn	04 06 51.2	+2.8
PQL	Pirkuli	5.86	296	P	Pn	04 06 51.5	+1.7
	SNR=6.5						
PQL				S	Sn	04 07 59.0	+1.8
PQL	Pirkuli	5.86	296	Pn	Pn	04 06 49.4	-0.4
ASAO	Ashtian	5.88	231	Pn	Pn	04 06 52.8	+2.6
KDMR	Kurdemir	6.02	291	S	Sn	04 08 00.6	-0.2
NASN	Na'in	6.03	202	Pn	Pn	04 06 53.5	+1.2
YZKH	Yazd	6.06	188	Pn	Pn	04 06 53.8	+1.3
IZEF	Zefreh	6.09	206	Pn	Pn	04 06 55.5	+2.4
ITEG	Tejag	6.09	154	Pn	Pn	04 06 54.2	+1.2
SHRT	Shahrakht	6.12	140	Pn	Pn	04 06 54.7	+1.4
IML	Ismayilli	6.16	295	P	Pn	04 06 55.8	+2.1
	SNR=4.9						
IML				S	Sn	04 08 03.4	-0.9
IML	Ismayilli	6.16	295	Pn	Pn	04 06 55.8	+2.1
QUBA	Quba, Azerbaij	6.16	301	P	Pn	04 06 56.6	+2.8
QUBA				S	Sn	04 08 04.6	+0.2
ISRB	Sarab	6.23	267	Pn	Pn	04 06 55.0	0.0
QUB	Quba	6.26	300	Pn	Pn	04 06 56.6	+1.3
XNQ	Khinaliq	6.33	298	P	Pn	04 06 58.9	+2.7
XNQ				S	Sn	04 08 09.3	+0.6
XNQ	Khinaliq	6.33	298	Pn	Pn	04 06 58.9	+2.7
BLQ	Beylaqan	6.34	284	P	Pn	04 06 57.6	+1.3
	SNR=11						
BLQ				S	Sn	04 08 05.2	-3.6
BLQ	Beylaqan	6.34	284	Pn	Pn	04 06 57.6	+1.3
ZRD	Zardab	6.37	289	P	Pn	04 06 57.8	+1.2
ZRD				S	Sn	04 08 08.1	-1.1
ZRD	Zardab	6.37	289	Pn	Pn	04 06 57.7	+1.2
QSAR	Qusar	6.39	301	P	Pn	04 07 00.1	+3.1
	SNR=4.1						
QSAR				S	Sn	04 08 10.1	+0.2
QSAR	Qusar	6.39	301	Pn	Pn	04 07 00.0	+3.1
KHMZ	Khomeyn	6.49	226	Pn	Pn	04 06 59.4	+0.9
QRD	Qoradiz	6.49	282	P	Pn	04 06 59.2	+0.9
	SNR=14						
QRD				S	Sn	04 08 08.0	-4.4
QRD	Qoradiz	6.49	282	Pn	Pn	04 06 59.2	+0.9
IHRS	Heris	6.67	272	Pn	Pn	04 07 00.9	-0.2
BRDA	Brd	6.74	289	S	Sn	04 08 16.9	-1.5
AGDM	Agdam	6.76	287	P	Pn	04 07 03.3	+1.4
	SNR=6.1						
AGDM				S	Sn	04 08 15.8	-3.1
MNGR	Mingechevir, A	6.94	293	S	Sn	04 08 21.6	-1.8
SEKA	Sheki	7.00	296	P	Pn	04 07 07.2	+1.8
SEKA				⇑S	Sn	04 08 23.8	-1.2
BSRN	Basiran	7.07	154	Pn	Pn	04 07 07.6	+1.2
IRAM	Ramesheh	7.08	202	Pn	Pn	04 07 07.5	+0.9
SNGE	Sanandaj	7.36	246	Pn	Pn	04 07 12.0	+1.6
GANJ	Ganja	7.46	290	P	Pn	04 07 11.5	-0.2
	SNR=8.3						
GANJ				S	Sn	04 08 30.3	-6.1
ORD	Ordubad	7.48	277	P	Pn	04 07 12.8	+0.8
	SNR=18						
ORD				S	Sn	04 08 32.1	-4.8
ZKTA	Zakatala	7.56	298	P	Pn	04 07 15.0	+2.0
ZKTA				S	Sn	04 08 39.6	+0.9
IMRD	Marand	7.71	275	Pn	Pn	04 07 16.0	+0.7
ISHB	Shabestar	7.80	272	Pn	Pn	04 07 16.5	0.0
SBZ	Shahbuz	7.85	280	P	Pn	04 07 18.2	+1.1
	SNR=20						
SBZ				S	Sn	04 08 46.3	+0.3
NAX	Nakhchivan	7.88	279	P	Pn	04 07 18.9	+1.4
	SNR=8.4						
NAX				S	Sn	04 08 46.6	-0.1
GDB	GEDABAY	7.90	290	P	Pn	04 07 18.4	+0.6
	SNR=19						
GDB				S	Sn	04 08 46.3	-1.0
QZX	Qazax, Azerbai	8.27	292	P	Pn	04 07 23.6	+0.9
QZX				S	Sn	04 08 52.7	-3.4
KRBR	Kerman	8.47	173	Pn	Pn	04 07 26.4	+0.6
MAKU	Maku	8.52	280	Pn	Pn	04 07 26.1	-0.2
GNI	Garni	8.55	285	Pn	Pn	04 07 27.8	+1.1
	1.1nm,0.3s,baz=3.1,slow=4.6,SNR=17						
GNI				Sn	Sn	04 09 04.4	+1.1
	2.6nm,0.3s,baz=102,slow=22,SNR=6.1						
	24nm,0.9s						
GNI	Garni	8.55	285		Pn	04 07 28.1	+1.4
GNI				Sn	Sn	04 09 03.8	+0.4
GEVA	Gevas	9.80	273	Pn	Pn	04 07 46.8	+2.9
KARS	Kars	9.88	287	Pn	Pn	04 07 48.0	+3.1
KARS	Kars	9.88	287	P	Pn	04 07 48.0	+3.1
GURO	Guroymak-BITLI	10.59	275	Pn	Pn	04 07 56.9	+2.2
KBZ	Khabaz	10.92	303	Pn	Pn	04 07 59.4	+0.4
	0.4nm,0.3s,baz=111,slow=7.2,SNR=6.3						
KBZ				Sn	Sn	04 09 54.4	-6.7
	1.0nm,0.3s,baz=306,slow=17,SNR=4.0						
KBZ				LR	LR	04 12 58.1	
	comp=Z,423nm,19.5s,baz=312,slow=42						
	7.7nm,0.8s						
KVAR	Kislovodsk Arr	11.14	304	Pn	Pn	04 08 01.5	-0.7
	baz=86,slow=22						
KVAR				Sn	Sn	04 09 57.7	-9.2
	baz=108,slow=15						
	5.2nm,0.7s						
KIV	Kislovodsk	11.15	304	Pn	Pn	04 08 01.9	-0.3
AB31	Akbulak array	11.29	15	⇑P	Pn	04 08 02.3	-1.8
	4.0nm,0.6s,baz=206,slow=12,SNR=34						
AB31				⇑S	Sn	04 10 04.4	-5.9
	23nm,0.8s,baz=200,slow=22						
ABKAR	Akbulak array	11.29	15	Pn	Pn	04 08 04.6	+0.4
ABKAR	Akbulak array	11.29	15	Pn	Pn	04 08 04.5	+0.4
KBL	Kabul	11.54	105	Pn	Pn	04 08 07.6	-0.1
GAR	Garm	11.57	82	Pn	Pn	04 08 09.1	+1.1
AKTO	Aktyubinsk	12.15	8	Pn	Pn	04 08 15.1	-0.8
	1.9nm,0.3s,baz=195,slow=9.7,SNR=13						
AKTO				Sn	Sn	04 10 27.8	-3.4
	0.8nm,0.3s,baz=49,slow=7.9,SNR=3.9						
	11nm,0.6s						
AKTO	Aktyubinsk	12.15	8	⇑P	Pn	04 08 12.8	-3.0
	13nm,1.0s						
AKTO				⇓S	Sn	04 10 26.8	-4.5
KK31	Karatay Array	12.28	63		Pn	04 08 20.1	+2.5
KK31	Karatay Array	12.28	63	⇑P	Pn	04 08 16.4	-1.2
	2.2nm,0.6s,baz=270,slow=9.0,SNR=10						
KK31				⇓S	Sn	04 10 28.1	-6.5
	3.2nm,0.6s,baz=274,slow=22						
KKAR	Karatay Array	12.28	63		Pn	04 08 19.9	+2.2
KKAR	Karatay Array	12.28	63	Pn	Pn	04 08 16.7	-1.0
AAK	Ala-Archa	15.02	68	Pn	Pn	04 08 54.9	-0.2
	0.5nm,0.3s,baz=52,slow=23,SNR=1.8						
AAK				Sn	Sn	04 11 38.0	-3.6
	baz=70,slow=23						
AAK				Lg	Lg	04 13 32.8	
	0.1nm,0.3s,baz=39,slow=2.0,SNR=3.9						
	1.2nm,0.3s						
AAK	Ala-Archa	15.02	68	Pn	Pn	04 08 55.5	+0.4
BELG	Belogornoye	15.03	341	Pn	Pn	04 08 53.6	-1.4
	0.2nm,0.3s,baz=60,slow=17,SNR=1.7						
BELG				Sn	Sn	04 11 29.4	-12
	0.4nm,0.3s,baz=55,slow=17,SNR=1.9						
OTUK	Ortayu	15.65	46	⇑P	Pn	04 09 02.1	-1.2
	7.2nm,1.1s						
OTUK				S	Sn	04 11 47.6	-9.2
KSH	Kashi	15.94	80	P	P	04 09 10.6	-0.2
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KSH				LR	LR		
	comp=N,590nm,13.7s						
KSH				LR	LR		
	comp=E,920nm,14.4s						
KSH				LR	LR		
	comp=Z,810nm,13.4s						
BZK	Bozkurt	16.82	289	Pn	Pn	04 09 18.5	+0.2
BRTR	Keskin Array B	17.05	281	Pn	Pn	04 09 21.2	-0.1
	comp=Z,0.6nm,0.6s,baz=98,slow=12,SNR=2.0						
BRVK	Borovoye	17.85	30	P	P	04 09 32.3	+0.6
BVAR	Borovoye Array	17.86	30	P	Pn	04 09 30.7	-0.5
	comp=Z,2.4nm,0.7s,baz=215,slow=11,SNR=7.0						
BVAR				S	Sn	04 12 43.2	-7.1
	comp=Z,3.5nm,0.8s,baz=225,slow=23,SNR=5.0						
ARU	Arti	18.14	5	P	Pn	04 09 34.1	-0.5
	comp=Z,4.8nm,0.2s,baz=211,slow=8.0,SNR=5.2						
ARU				LR	LR	04 17 31.7	
	comp=Z,428nm,19.3s,baz=243,slow=40						
ARU	Arti	18.14	5		Pn	04 09 33.6	-1.0
ARU				IAmb	IAmb	04 09 56.2	
	comp=Z,39nm,1.4s						
MDUB	Mudurnu	18.90	284	P	Pn	04 09 46.4	+2.4
MDUB				IAmb	IAmb	04 09 48.5	
	comp=Z,74nm,1.1s						
EIL	Elat	19.13	249	LR	LR	04 18 36.9	
	comp=Z,352nm,19.5s,baz=54,slow=42						
KURBB	Kurchatov Arra	20.34	46	P	Pn	04 10 01.6	+0.6
	comp=Z,1.4nm,0.9s,baz=239,slow=12,SNR=8.8						
	comp=Z,1.4nm,0.9s						
KURK	Kurchatov	20.44	46	P	P	04 10 01.2	+1.1
KIRV	Kirov	20.57	351	P	P	04 10 02.8	+1.4
	comp=Z,8.6nm,0.6s,baz=151,slow=13,SNR=5.0						
	comp=Z,8.6nm,0.6s						
OBN	Obninsk	21.05	329	P	P	04 10 07.2	+0.6
OBN				IAmb	IAmb	04 10 19.1	
	comp=Z,18nm,0.9s						
MAKZ	Makanchi	21.12	58		P	04 10 09.1	+1.6
MAKZ				IAmb	IAmb	04 10 16.5	
	comp=Z,7.8nm,0.9s						
MAKZ	Makanchi	21.12	58	⇓P	P	04 10 09.7	+2.2
	comp=Z,9.8nm,0.9s						
MK31	Makanchi Array	21.32	58	P	P	04 10 10.4	+0.7
MK31	Makanchi Array	21.32	58	⇑P	P	04 10 11.9	+2.1
	comp=Z,12nm,1.2s,baz=251,slow=7.7,SNR=16						
MKAR	Makanchi Array	21.32	58	P	P	04 10 12.3	+2.6
	comp=Z,1.7nm,0.7s,baz=255,slow=9.4,SNR=14						
	comp=Z,1.7nm,0.7s						
MKAR	Makanchi Array	21.32	58		P	04 10 11.6	+1.8
AK05	Malin Array Si	22.26	312	P	P	04 10 20.2	+0.6
AK05				IAmb	IAmb	04 10 34.3	
	comp=Z,18nm,0.8s						
AKASG	Malin Array Be	22.28	312	P	P	04 10 20.8	+0.9
	comp=Z,8.8nm,0.9s,baz=115,slow=9.9,SNR=15						
	comp=Z,8.8nm,0.9s						
AKASG	Malin Array Be	22.28	312	P	P	04 10 19.5	-0.4
AKBB	Malin Array Si	22.28	312	P	P	04 10 19.4	-0.5
AKBB				IAmb	IAmb	04 10 38.5	
	comp=Z,21nm,0.8s						
MLR	Muntele Rosu	23.03	297	P	P	04 10 28.4	+0.4
	comp=Z,1.7nm,0.6s,baz=320,slow=22,SNR=1.6						
	comp=Z,1.7nm,0.6s						
MLR	Muntele Rosu	23.03	297	P	P	04 10 29.3	+1.3
MLR				IAmb	IAmb	04 10 49.2	
	comp=Z,20nm,1.0s						
BURAR	Bucovina Array	23.87	302	P	P	04 10 36.2	-0.1
BUR08	Bucovina Ar. S	23.89	303	P	P	04 10 38.1	+1.6
BUR08				IAmb	IAmb	04 10 56.2	
	comp=Z,7.5nm,1.2s						
IDI	Anoyia	24.67	272	P	P	04 10 44.0	+0.2
	comp=Z,16nm,1.0s,baz=67,slow=20,SNR=3.3						
	comp=Z,16nm,1.0s						
IDI	Anoyia	24.67	272	P	P	04 10 44.1	+0.4
ZAA0	Zalesovo Array	25.30	43	P	P	04 10 49.6	+0.5
ZAA0				IAmb	IAmb	04 11 28.5	
	comp=Z,4.0nm,0.9s						
ZALV	Zalesovo Beam	25.30	43	P	P	04 10 51.7	+2.6
	comp=Z,1.2nm,0.4s,baz=269,slow=7.2,SNR=2.2						
	comp=Z,1.2nm,0.4s						
ZALV	Zalesovo Beam	25.30	43	P	P	04 10 49.4	+0.2
LIT	Litokhoron	25.57	284	P	P	04 10 53.5	+1.7
LIT				IAmb	IAmb	04 10 54.2	
	comp=Z,20nm,1.1s						
AGG	Agios Georgios	25.84	282	P	P	04 10 54.3	0.0
ITM	Ithomi	26.51	278	P	P	04 11 01.2	+0.9
ITM				IAmb	IAmb	04 11 37.0	
	comp=Z,11nm,0.9s						
SCTE	Santa Cesarea	28.63	285	P	P	04 11 21.2	+1.9
ATD	Arta Tunnel	29.07	206	P	P	04 11 25.4	+1.9
ATD				IAmb	IAmb	04 11 46.0	
	comp=Z,8.6nm,1.0s						
FIA0	FINESS Array S	29.39	331	P	P	04 11 26.5	+0.7
FINES	FINESS Array B	29.39	331	P	P	04 11 27.3	+1.5
	comp=Z,1.4nm,0.8s,baz=123,slow=10,SNR=1.7						
	comp=Z,1.4nm,0.8s						
FINES	FINESS Array B	29.39	331	P	P	04 11 25.4	-0.4
GERES	GERESS Array B	31.66	303	P	P	04 11 46.2	0.0
	comp=Z,0.1nm,0.2s,baz=75,slow=11,SNR=1.2						
	comp=Z,0.1nm,0.2s						
LVZ	Lovozero	31.73	345	P	P	04 11 47.4	+0.9
CLL	Collm	32.33	307	*e*PP	PP	04 13 04.0	-0.7
CLL				*e*x	x	04 13 30.0	
ARCES	ARCESS Array B	35.07	342	P	P	04 12 16.7	+1.2
	comp=Z,1.6nm,0.8s,baz=140,slow=11,SNR=1.2						
	comp=Z,1.6nm,0.8s						
NC405	NORSAR Array S	35.30	324	P	P	04 12 18.5	+0.9
NOA	NORSAR Array B	35.51	324	P	P	04 12 19.8	+0.4
	comp=Z,0.4nm,0.6s,baz=109,slow=8.4,SNR=1.5						
	comp=Z,0.4nm,0.6s						
SONM	Songino Array	37.69	59	P	P	04 12 39.4	+1.0
	comp=Z,0.6nm,0.8s,baz=240,slow=8.0,SNR=2.3						
	comp=Z,0.6nm,0.8s						
ULN	Ulaanbaatar	38.13	59	P	P	04 12 41.5	-0.6
ULN				IAmb	IAmb	04 12 51.3	
	comp=Z,3.2nm,1.1s						
SPB2	Spitsbergen Ar	43.02	349	P	P	04 13 22.0	+0.1
ESDC	Sonseca Array	45.48	291	P	P	04 13 41.8	-0.4
	comp=Z,0.4nm,0.7s,baz=64,slow=6.9,SNR=2.3						
	comp=Z,0.4nm,0.7s						
TIXI	Tiksi	48.83	24	P	P	04 14 09.8	+2.0
	comp=Z,1.0nm,0.3s,baz=90,slow=24,SNR=2.8						
	comp=Z,1.0nm,0.3s						
TORD	Torodi Ar. Bea	53.75	257	P	P	04 14 44.5	-0.9
	comp=Z,0.3nm,0.6s,baz=46,slow=9.0,SNR=1.8						
	comp=Z,0.3nm,0.6s						
INK	Inuvik	73.38	4	P	P	04 16 55.8	+1.4
	comp=Z,0.7nm,0.8s,baz=106,slow=14,SNR=1.4						
	comp=Z,0.7nm,0.8s						
ILAR	Eielson Array	75.65	10	P	P	04 17 08.8	+1.2
	comp=Z,0.2nm,0.7s,baz=335,slow=4.1,SNR=2.9						
	comp=Z,0.2nm,0.7s						
YKA	Yellowknife Ar	79.13	355	P	P	04 17 27.2	+0.1
	comp=Z,0.2nm,0.8s,baz=3.9,slow=6.2,SNR=4.2						
	comp=Z,0.2nm,0.8s						

IDC 14 04:10:36.1±3.7**, 5°.90S**×**146°.47E, h0^{km}, mb2.8**/1**, mbtmp3.3**/3**, ML2.6**/2**, Error ellipse: s-maj=68.7km s-min=52.8km az=94.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.55	169	Pn	Pn	04 11 33.8	+1.3
	6.5nm,0.3s,baz=347,slow=14,SNR=3.6						
PMG				Sn	Sn	04 12 09.7	-5.5
	6.8nm,0.3s,baz=19,slow=13,SNR=4.6						
	12nm,0.3s						
WRA	Warramunga Arr	18.27	219	P	P	04 14 51.6	+0.1
	0.1nm,0.3s,baz=48,slow=12,SNR=5.3						
	0.7nm,0.9s						
ASAR	Alice Springs	21.41	213	P	P	04 15 25.5	-0.3
	0.1nm,0.3s,baz=49,slow=11,SNR=2.5						
	0.1nm,0.3s						
TORD	Torodi Ar. Bea	144.56	284	PKP	PKPab	04 30 14.2	0.0
	0.4nm,0.8s,baz=85,slow=2.8,SNR=2.4						

IDC ***14*** *04:26:43.5±1.1, 16°.91N×85°.62W, h0^{km}, mb3.5/6, mbtmp3.6/9, ML3.6/3, MS4.2/1, Error ellipse: s-maj=32.0km s-min=21.7km az=73.0*
NEIC ***14*** *04:26:45.5±1.7, 16°.90N±0°.06×85°.74W±0°.03, h10^{km}±2^{km}, mb4.4/20, Error ellipse: s-maj=9.9km s-min=4.1km az=7.0*
ISC 14 04:26:46.9±0.6**, 16°.91N**±0°.05×**85°.81W**±0°.07**, h29^{km}, n43, σ1^{s}.72**/46**, mb3.9**/5**, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGUH	Tegucigalpa,Un	3.17	207	Pn	Pn	04 27 36.3	+1.4

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TGUH                              Sn      Sn         04 28 12.2 +0.4
PETF  Flores             3.88 271 Pn      Pn         04 27 46.2 +1.5
PETF                              Sn      Sn         04 28 30.1 +0.8
MATN  Matagalpa          3.96 182 Pn      Pn         04 27 46.2 +0.4
MATN                              Sn      Sn         04 28 30.4  -0.9
TEIG  Tepich             4.04 325         Pn         04 27 48.3 +1.4
CRIN  San Cristobal      4.35 196 Pn      Pn         04 27 52.4 +1.2
BOAB  BOACO BROADBAN4.44 178              Pn         04 27 53.0 +0.7
CNGN  Cerro Negro        4.47 191 Pn      Pn         04 27 54.0 +1.2
ESPN  Las Esperanzas     4.91 162 Pn      Pn         04 27 58.5  -0.4
CCIG  Comitan            6.09 265 Pn      Pn         04 28 16.0 +0.8
SOR   Soroa              6.42  24         Pn         04 28 18.9  -0.6
JTS   Las Juntas de      6.63 173 Pn      Pn         04 28 23.3 +0.7
      0.9nm,0.3s,baz=314,slow=23,SNR=8.4
JTS                               Sn      Sn         04 29 35.8  -1.4
      1.0nm,0.3s,baz=239,slow=16,SNR=3.7
JTS                               Lg      Lg         04 30 03.9
      0.6nm,0.3s,baz=289,slow=21,SNR=2.4
      2.2nm,0.3s
CMIG  Matias Romero      8.68 273 Pn      Pn         04 28 52.5 +1.8
      0.8nm,0.3s,baz=92,slow=8.7,SNR=12
CMIG                              Sn      Sn         04 30 25.1  -2.5
      0.8nm,0.3s,baz=82,slow=15,SNR=3.5
      2.1nm,0.4s
060A  Indiantown        11.27  26 Pn      Pn         04 29 27.1 +1.0
TLIG  Tlapa             12.20 275 Pn      Pn         04 29 41.1 +2.1
250A  Grady             15.01 359 Pn      Pn         04 30 17.0  -0.1
255A  Hazlehurst        15.26  11 Pn      Pn         04 30 20.0  -0.3
146A  Union             15.93 350 Pn      Pn         04 30 29.3 +0.2
146A                              IAmb    IAmb       04 30 32.4
      comp=Z,17nm,0.6s
LRAL  Lakeview Retre    16.09 356 Pn      Pn         04 30 31.6 +0.5
LRAL                              IAmb    IAmb       04 30 34.4
      comp=Z,8.0nm,0.3s
Z47A  Carrollton        16.35 353 Pn      Pn         04 30 33.9  -0.5
Z47A                              IAmb    IAmb       04 30 39.3
      comp=Z,15nm,0.5s
Z51A  Franklin          16.35   2 Pn      Pn         04 30 35.6 +1.2
Z51A                              IAmb    IAmb       04 30 38.2
      comp=Z,48nm,1.5s
Y49A  Blount Mountai    16.89 358 Pn      Pn         04 30 41.5 +0.3
833A  Chaparral WMA,    16.90 315 Pn      Pn         04 30 42.7 +1.3
833A                              IAmb    IAmb       04 30 46.6
      comp=Z,16nm,0.9s
Y58A  Scranton          17.80  17         Pn         04 30 52.3  -0.3
PAYG  Puerto Ayora      18.02 195 Pn      Pn         04 30 53.5  -1.9
PAYG                              IAmb    IAmb       04 31 08.9
      comp=Z,44nm,1.3s
BG3   Lake Jocassee     18.19   8 P       Pn         04 30 57.2  -0.3
BG3                               IAmb    IAmb       04 31 37.7
      comp=Z,29nm,1.5s
WHTX  Lake Whitney,     18.36 327 P       P          04 30 59.2   0.0
WHTX                              IAmb    IAmb       04 31 06.0
      comp=Z,17nm,0.5s
CPCT  Cooper Cave       18.50   3         Pn         04 31 01.8 +0.7
TKL   Tuckaleechee C    18.76   5 P       Pn         04 31 04.5 +0.2
      comp=Z,0.2nm,0.3s,baz=184,slow=13,SNR=1.5
TKL                               S       Sn         04 34 20.8   -13
      comp=Z,4.3nm,0.9s,baz=154,slow=5.4,SNR=1.9
      comp=Z,2.9nm,0.7s
TKL   Tuckaleechee C    18.76   5 P       P          04 31 02.6  -1.1
SJG   San Juan          18.79  83 LR      LR         04 38 52.4
      comp=Z,660nm,18.7s,baz=258,slow=39
W57A  Gilead            18.90  15         Pn         04 31 05.8  -0.1
V55A  Taylorsville      19.31  11 P       P          04 31 08.5  -1.1
V55A                              IAmb    IAmb       04 31 25.6
      comp=Z,47nm,1.5s
V58A  Windy Hill, Pi    19.73  16 P       P          04 31 14.3   0.0
V58A                              IAmb    IAmb       04 31 38.6
      comp=Z,32nm,1.5s
T45A  Paducah           20.19 353 P       P          04 31 17.0  -2.2
TXAR  Lajitas Array     20.52 310 P       Pn         04 31 26.2 +0.8
      comp=Z,1.0nm,0.6s,baz=128,slow=12,SNR=13
TXAR                              S       S          04 35 02.7  -8.7
      comp=Z,0.1nm,0.3s,baz=285,slow=20,SNR=4.1
      comp=Z,1.0nm,0.6s
TXAR  Lajitas Array     20.52 310 P       P          04 31 24.5 +1.4
TX31  Lajitas Ar. Si    20.52 310 P       P          04 31 24.6 +1.5
TX32  Lajitas Array     20.52 310 P       Pn         04 31 25.7 +0.3
SCHQ  Schefferville     40.58  17 P       P          04 34 24.2 +0.4
      comp=Z,1.8nm,0.7s,baz=214,slow=8.6,SNR=6.4
      comp=Z,1.8nm,0.7s
YKA   Yellowknife Ar    49.79 343 P       P          04 35 37.5 +0.7
      comp=Z,0.1nm,0.5s,baz=140,slow=7.8,SNR=1.5
      comp=Z,0.1nm,0.5s
PLCA  Paso Flores       59.07 167 P       P          04 36 44.8 +0.2
      comp=Z,1.6nm,1.0s,baz=323,slow=12,SNR=2.1
      comp=Z,1.6nm,1.0s
ILAR  Eielson Array     62.64 335 P       P          04 37 09.5 +1.1
      comp=Z,0.3nm,0.7s,baz=110,slow=4.8,SNR=4.7
      comp=Z,0.3nm,0.7s
TORD  Torodi Ar. Bea    83.92  78 P       P          04 39 15.4 +0.5
      comp=Z,1.1nm,1.2s,baz=309,slow=7.1,SNR=1.9
      comp=Z,1.1nm,1.2s
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MOS ***14*** *04:36:28.4±0.8, 5°.51S×110°.19E, h545^{km}, mb5.1/64, Error ellipse: s-maj=8.3km s-min=4.3km az=118.8*

DJA ***14*** *04:36:29.1±0.1, 6°S±2°×11°0E±°, h538^{km}±1^{km}, M4.9/86, mb5.1/86, mB5.4/51, MLv5.2/33, Mw5.0/125, Mw(mB)4.9/51*

IDC ***14*** *04:36:29.6±0.5, 5°.60S×110°.23E, h547^{km}±4^{km}, mb4.6/44, mbtmp5.4/45, Error ellipse: s-maj=8.6km s-min=5.1km az=54.0*

NEIC ***14*** *04:36:30.1±1.9, 5°.62S±0°.08×110°.18E±0°.07, h546^{km}±4^{km}, mb5.1/142, Error ellipse: s-maj=12.1km s-min=9.9km az=151.0*

KLM ***14*** *04:36:34, 5°.27S×110°.08E, h572^{km}, mb5.9*

ISC 14 04:36:29.3±0.3**, 5°.69S**±0°.03×**110°.09E**±0°.04**, h548**^{km}±2^{km}**, h549**^{km}**:pP-P, n1193,** σ1ˢ**28**/1326**, mb5.1**/191**, 33C-82D, Java Sea**

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Code  Station Name        Δ°  AZ°   Phase ID            Time     Res
                                  Op      ISC         h  m  s    ISC
UWJI  Ujung Watu         1.12 130 P       P          04 37 35.6   0.0
UWJI                              S       S          04 38 28.8  -0.7
SMRI  Semarang           1.39 166 P       P          04 37 37.1 +0.7
SMRI  Semarang           1.39 166 P       P          04 37 37.4 +0.9
SMRI  Semarang           1.39 166 P       P          04 37 36.9 +0.4
SMRI                              S       S          04 38 32.2 +1.1
JCJI  Jatiwangi          1.98 246 P       P          04 37 39.5 +0.8
JCJI                              S       S          04 38 36.1 +1.1
KPJI  Karang Pucung      2.00 215 P       P          04 37 39.1 +0.3
KPJI                              S       S          04 38 35.5 +0.3
TBJI  Tambak Boyo        2.08 123 P       P          04 37 39.7 +0.6
TBJI                              S       S          04 38 36.0 +0.1
YOGI  Yogyakarta         2.12 175 P       P          04 37 38.5  -0.9
YOGI                              S       S          04 38 34.3  -2.0
NGJI  Ngawi              2.15 141 P       P          04 37 40.9 +1.4
UGM   Wanagama           2.25 169 P       P          04 37 39.5  -0.6
UGM   Wanagama           2.25 169 P       P          04 37 39.7  -0.3
UGM   Wanagama           2.25 169 P       P          04 37 39.4  -0.6
UGM                               S       S          04 38 35.2  -2.3
BWJI  Bawean             2.56  94 P       P          04 37 40.9  -0.7
BWJI                              S       S          04 38 39.4  -0.9
CMJI  Cimerak            2.64 218 P       P          04 37 40.6  -1.4
CMJI                              S       S          04 38 36.2  -5.0
GRJI  Gresik             2.67 117 P       P          04 37 42.7 +0.5
GRJI                              S       S          04 38 40.7  -0.7
PWJI  Pagerwojo          2.87 144 P       P          04 37 42.5  -0.9
PWJI                              S       S          04 38 40.9  -2.7
BBJI  Bungbulang         3.00 234 P       P          04 37 43.9  -0.3
CBJI  Citeko             3.30 257 P       P          04 37 46.2 +0.1
CBJI                              S       S          04 38 47.0  -1.6
CNJI  Cibinong           3.35 241 P       P          04 37 45.4  -1.0
CNJI                              S       S          04 38 44.8  -4.4
PBKI  Pangkalan Bun      3.36  28 P       P          04 37 46.9 +0.4
PBKI                              S       S          04 38 49.5 +0.2
SBJI  Serang             3.96 264 P       P          04 37 50.5  -0.2
SBJI                              S       S          04 38 54.5  -2.6
BLJI  Banyuglugur        4.03 121 P       P          04 37 51.4 +0.1
BLJI                              S       S          04 38 57.1  -1.0
GMJI  Gumukmas           4.20 128 P       P          04 37 51.6  -0.9
GMJI                              S       S          04 38 57.1  -3.3
CGJI  Cibinong           4.47 258 P       P          04 37 54.1  -0.5
CGJI                              S       S          04 38 58.2  -6.0
ABJI  Asem Bagus         4.62 117 P       P          04 37 56.4 +0.6
ABJI                              S       S          04 39 05.0  -1.4
BLSI  Bandar Lampung     4.83 274 P       P          04 37 57.8 +0.2
BLSI                              S       S          04 39 06.8  -2.9
JAGI  Jajag, Banyuwa     4.88 125 P       P          04 37 56.9  -1.1
JAGI  Jajag, Banyuwa     4.88 125 P       P          04 37 57.2  -0.9
JAGI  Jajag, Banyuwa     4.88 125 P       P          04 37 56.7  -1.4
JAGI                              S       S          04 39 06.6  -3.9
BBKI  Banjar Baru        5.23  65 P       P          04 38 00.7  -0.3
      773nm,0.8s,27µm6.2nm
BBKI                              S       S          04 39 15.4  -0.4
      773nm,0.8s,27µm6.2nm
KLI   Kotabumi           5.28 279 P       P          04 38 01.7 +0.3
      568nm,0.8s,2.2nm
KLI                               S       S          04 39 14.2  -2.4
      568nm,0.8s,2.2nm
PPBI  Pangkal Pinang     5.28 311 P       P          04 38 02.9 +1.5
      249nm,0.7s,76µm3.2nm
KASI  Kota Agung         5.57 271 P       P          04 38 03.6  -0.4
      1µm,0.5s,20µm5.8nm
SRBI  Singaraja          5.61 115 P       P          04 38 04.7 +0.4
      2µm,0.9s,22µm6.0nm
DNP   Denpasar           5.88 121 P       P          04 38 06.1  -0.6
      2µm,0.9s,42µm13nm
IGBI  Denpasar           5.90 122 P       P          04 38 05.5  -1.4
      425nm,0.6s,8µm3.6nm
MDSI  Maura Dua          6.01 281 P       P          04 38 08.0 +0.1
      303nm,1.0s,4µm1.2nm
LWLI  Liwa               6.04 276 P       P          04 38 08.2  -0.2
      2µm,0.6s,10nm
XMI   Christmas Isla     6.43 222 P       P          04 38 12.8 +1.0
MTKI  Muara Teweh, K     6.73  46 P       P          04 38 15.4 +0.7
      2µm,1.1s,22µm5.9nm
KSM   Kuching            7.12   2 P       P          04 38 19.0 +0.6
KSM   Kuching            7.12   2 P       P          04 38 19.2 +0.8
KSM   Kuching            7.12   2 P       P          04 38 20.0 +1.6
MNAI  Manna              7.23 280 P       P          04 38 18.9  -0.5
MNAI  Manna              7.23 280 P       P          04 38 19.4  -0.1
MNAI  Manna              7.23 280 P       P          04 38 19.1  -0.4
      4µm,0.6s,44µm15nm
TWSI  Taliwang, Sumb     7.39 115 P       P          04 38 19.6  -1.4
KSI   Kapahiang          7.74 285 P       P          04 38 24.9 +0.4
      651nm,0.7s,12µm6.2nm
BKB   Balikpapan         8.09  57 P       P          04 38 30.9 +2.9
BKB   Balikpapan         8.09  57 P       P          04 38 31.0 +3.1
BKB   Balikpapan         8.09  57 P       P          04 38 30.7 +2.8
      4µm,0.8s,35µm
PLAI  Plampang           8.24 113 P       P          04 38 27.4  -1.9
PLAI  Plampang           8.24 113 P       P          04 38 27.1  -2.2
      179nm,0.5s,3µm
SBUM  Sibu               8.36  15 P       P          04 38 31.7 +1.0
SBUM  Sibu               8.36  15 P       P          04 38 32.0 +1.4
KAPI  Kappang            9.64  86 P       P          04 38 42.6  -1.0
      204nm,0.5s,baz=260,slow=4.7,SNR=157
KAPI                              S       S          04 40 32.2  -1.7
      24nm,1.0s,baz=248,slow=22,SNR=1.4
KAPI  Kappang            9.64  86 P       P          04 38 43.2  -0.4
KAPI  Kappang            9.64  86 P       P          04 38 43.1  -0.5
MYKOM Kota Tinggi        9.70 320 P       P          04 38 46.0 +1.8
SPSI  Sidrap Palu        9.80  80 P       P          04 38 44.2  -1.0
      227nm,0.9s
SDSI  Sungai Dareh       9.85 298 P       P          04 38 46.2 +0.4
      52nm,1.0s,801nm
BKSI  Bulukumba          9.99  88 P       P          04 38 46.3  -0.9
      189nm,0.6s,2µm
BSSI  Bau Bau, Buton    10.36  93 P       P          04 38 49.3  -1.6
      503nm,0.8s,4µm
PPSI  Pulau Pagai       10.46 286 P       P          04 38 51.6  -0.4
PDSI  Padang            10.72 296 P       P          04 38 53.2  -1.5
      172nm,0.8s,6µm
BKNI  Bangkinang        10.84 303 P       P          04 38 57.4 +1.5
BKNI  Bangkinang        10.84 303 P       P          04 38 56.4 +0.5
      130nm,0.9s,2µm
BASI  Baing, Sumba      11.32 114 P       P          04 38 59.3  -1.5
      592nm,0.6s,6µm
MPSI  Mapaga            11.48  59 P       P          04 39 03.2 +0.7
      501nm,1.2s,6µm
JRMM  Jerantut          12.18 321 P       P          04 39 11.0 +1.2
MMRI  Maumere           12.40 104 P       P          04 39 09.3  -2.8
MMRI  Maumere           12.40 104 P       P          04 39 09.4  -2.7
      115nm,0.5s,7µm
TOLI2 Tolitoli          12.64  58 P       P          04 39 14.5 +0.1
TOLI2 Tolitoli          12.64  58 P       P          04 39 14.4  -0.1
PBSI  Pulau Batu        13.05 295 P       P          04 39 17.7  -1.1
      95nm,0.8s
KKM   Kota Kinabalu     13.16  28 P       P          04 39 19.2  -0.8
KKM   Kota Kinabalu     13.16  28 P       P          04 39 19.1  -1.0
MRSI  Marisa            13.32  63 P       P          04 39 20.1  -1.5
      170nm,0.6s,2µm
LUWI  Luwuk             13.47  70 P       P          04 39 22.5  -0.6
LUWI  Luwuk             13.47  70 P       P          04 39 22.7  -0.4
LUWI  Luwuk             13.47  70 P       P          04 39 22.5  -0.6
      485nm,0.9s,7µm
IPM   Ipoh              13.57 318 P       P          04 39 25.3 +1.2
IPM   Ipoh              13.57 318 P       P          04 39 25.4 +1.3
IPM   Ipoh              13.57 318 P       P          04 39 26.0 +1.9
MYLDM Lahad Datu        13.68  38 P       P          04 39 27.3 +2.1
RPSI  Rantau Prapat     13.92 306 P       P          04 39 28.0 +0.2
PSI   Prapat            13.98 307 P       P          04 39 28.4  -0.2
PSI   Prapat            13.98 307 P       P          04 39 28.0  -0.6
GSI   Gunungsitoli      14.30 299 P       P          04 39 31.7   0.0
GSI   Gunungsitoli      14.30 299 P       P          04 39 32.6 +0.9
GSI   Gunungsitoli      14.30 299 P       P          04 39 31.0  -0.7
      47nm,0.6s
GTOI  Gorontalo         14.35  64 P       P          04 39 28.7  -3.5
      93nm,0.6s,1µm
KULM  Kulim             14.42 319 P       P          04 39 32.9   0.0
KULM  Kulim             14.42 319 P       P          04 39 33.0 +0.1
COCO  West Island       14.59 243 P       P          04 39 36.1 +1.4
COCO  West Island       14.59 243 P       P          04 39 36.1 +1.4
SOEI  Soe               14.62 107 P       P          04 39 31.0  -4.1
SOEI  Soe               14.62 107 P       P          04 39 31.3  -3.8
SOEI  Soe               14.62 107 P       P          04 39 31.1  -4.0
      96nm,0.6s,1µm
TSI   Tuntungan         14.69 308 P       P          04 39 36.2 +0.5
      1µm,0.8s,24µm
KCSI  Kotacane, Aceh    15.33 306 P       P          04 39 41.9  -0.5
      170nm,0.7s,2µm
SNSI  Sinabang, Aceh    15.93 300 P       P          04 39 50.1 +1.8
      216nm,0.8s,2µm
SANI  Sanana            16.27  78 P       P          04 39 50.7  -0.8
SANI  Sanana            16.27  78 P       P          04 39 50.7  -0.8
      291nm,0.9s,2µm
MLSI  Meulaboh, Aceh    16.87 306 P       P          04 39 57.9 +0.8
      420nm,0.4s,7µm
LHMI  Lhok Sumawe       17.03 309 P       P          04 39 59.9 +1.4
LHMI  Lhok Sumawe       17.03 309 P       P          04 39 59.6 +1.1
LHMI  Lhok Sumawe       17.03 309 P       P          04 39 59.8 +1.4
      2µm,0.8s,15µm
NLAI  Namlea            17.13  83 P       P          04 39 59.5 +0.1
      58nm,0.5s
GIRL  Giralia           17.32 167 P       P          04 40 03.2 +2.2
      baz=18,SNR=8.0
DLV   T  Lat            17.59 355 P       P          04 40 05.1 +1.3
SRIT  Nakonsritamara    17.63 324 P       P          04 40 05.0 +1.0
SRIT  Nakonsritamara    17.63 324 P       P          04 40 05.3 +1.3
MBWA  Marble Bar        17.99 150 P       P          04 40 08.0 +0.8
MBWA                              IAmb    IAmb       04 40 08.9
      comp=Z,55nm,0.8s
MBWA  Marble Bar        17.99 150 P       P          04 40 07.9 +0.7
MBWA  Marble Bar        17.99 150 P       P          04 40 08.0 +0.8
SGSI  Sangihe           18.01  59 P       P          04 40 07.3  -0.2
      comp=Z,198nm,0.7s
SURA  Surathani         18.07 325 P       P          04 40 09.2 +1.2
LBMI  Labuha            18.09  74 P       P          04 40 09.1 +0.9
      comp=Z,644nm,1.0s,comp=Z,5µm
AAI   Ambon             18.15  84 P       P          04 40 08.1  -0.7
      comp=Z,97nm,0.8s
PSA00 Pilbara Seismi    18.40 150 P       P          04 40 11.6 +0.6
PSA00                             IAmb    IAmb       04 40 13.9
      comp=Z,54nm,0.9s
PSA00 Pilbara Seismi    18.40 150 P       P          04 40 11.7 +0.8
PSA00                             IAmb    IAmb       04 40 14.4
      comp=Z,32nm,1.0s
PSA00 Pilbara Seismi    18.40 150 P       P          04 40 11.5 +0.6
TNTI  Ternate           18.41  70 P       P          04 40 10.6  -0.5
TNTI  Ternate           18.41  70 P       P          04 40 10.8  -0.3
TNTI  Ternate           18.41  70 P       P          04 40 11.0  -0.1
      comp=Z,263nm,0.7s,comp=Z,3µm
FITZ  Fitzroy Crossi    19.56 130 P       P          04 40 21.8 +0.3
FITZ  Fitzroy Crossi    19.56 130 P       P          04 40 21.9 +0.3
KNRA  Kununurra         20.84 120 P       P          04 40 32.6  -0.5
      baz=21,SNR=18
KNRA  Kununurra         20.84 120 P       P          04 40 32.8  -0.4
KNRA                              IAmb    IAmb       04 40 36.0
      comp=Z,23nm,0.6s
KNRA  Kununurra         20.84 120 P       P          04 40 32.7  -0.4
NAYO  Nakonayok         21.70 336 P       P          04 40 42.1 +1.2
MTN   Manton Dam        21.94 110 P       P          04 40 43.3 +0.3
      baz=22,SNR=27
MTN   Manton Dam        21.94 110 P       P          04 40 42.9  -0.2
MTN   Manton Dam        21.94 110 P       P          04 40 43.4 +0.3
FAKI  Fak Fak           22.27  84 P       P          04 40 45.9  -0.2
FAKI                              IAmb    IAmb       04 40 48.7
      comp=Z,36nm,0.7s
FAKI  Fak Fak           22.27  84 P       P          04 40 46.1   0.0
      comp=Z,54nm,0.8s
MEEK  Meekatharra       22.36 160 P       P          04 40 47.7 +0.9
      baz=22,SNR=20
MEEK  Meekatharra       22.36 160 P       P          04 40 47.8 +1.0
KDU   Kakadu            23.15 109 P       P          04 40 48.8  -5.1
      baz=23,SNR=13
KDU   Kakadu            23.15 109 P       P          04 40 56.4 +2.5
MORW  Morawa            23.92 167 P       P          04 41 02.0 +1.4
      baz=24,SNR=13
MORW  Morawa            23.92 167 P       P          04 41 02.0 +1.4
MORW                              IAmb    IAmb       04 41 03.1
      comp=Z,56nm,0.9s
MORW  Morawa            23.92 167 P       P          04 41 01.9 +1.3
QIZ   Qiongzhong        24.57 359 P       P          04 41 08.8 +2.4
QIZ                               pmax    pmax
      comp=Z,24nm,0.8s
NONG  Nongkai           24.58 344 P       P          04 41 07.6 +1.1
      comp=Z,291nm,0.7s
BLDU  Ballidu           25.56 167 P       P          04 41 16.2 +1.2
      baz=26,SNR=33
BLDU  Ballidu           25.56 167 P       P          04 41 16.4 +1.3
PHRA  Phrae             25.93 338 P       P          04 41 20.3 +1.8
WRKA  Warakurna         25.98 140 P       P          04 41 19.3 +0.4
      baz=26,SNR=18
CM31  Chiang Mai Arr    26.39 336 P       P          04 41 24.3 +1.7
CMAR  Chiang Mai Arr    26.39 336 P       P          04 41 23.9 +1.4
      comp=Z,104nm,0.8s,baz=171,slow=8.0,SNR=392
CMAR                              PcP     PcP        04 44 31.4 +1.5
      comp=Z,12nm,0.8s,baz=199,slow=3.1,SNR=12
CMAR                              ScP     ScP        04 47 19.9 +1.7
      comp=Z,4.3nm,0.7s,baz=189,slow=3.2,SNR=12
CMAR                              PKiKP   PKiKP      04 52 07.4  -0.6
      comp=Z,2.0nm,0.3s,baz=216,slow=0.6,SNR=5.9
      comp=Z,104nm,0.8s
CMAR  Chiang Mai Arr    26.39 336 P       P          04 41 24.4 +1.8
CMAR  Chiang Mai Arr    26.39 336 P       P          04 41 24.4 +1.8
CHTO  Chiang Mai        26.71 336 P       P          04 41 26.9 +1.5
CHTO  Chiang Mai        26.71 336 P       P          04 41 26.9 +1.5
CHTO                              pmax    pmax
      comp=Z,2.0nm,0.7s
KLBR  Kellerberrin      26.75 165 P       P          04 41 26.6 +1.1
      baz=27,SNR=15
KLBR  Kellerberrin      26.75 165 P       P          04 41 26.6 +1.1
MUN   Mundaring         26.77 168 P       P          04 41 27.0 +1.3
      baz=27,SNR=8.3
WB0   Warramunga Arr    27.47 123 P       P          04 41 31.7  -0.3
CRAI  Chiangrai         27.47 340 P       P          04 41 33.9 +1.9
CRAI                              IAmb    IAmb       04 41 34.7
      comp=Z,81nm,1.1s
CRAI                                      PcP        04 44 33.8 +1.3
WRA   Warramunga Arr    27.50 123 P       P          04 41 32.2  -0.1
      comp=Z,4.4nm,0.5s,baz=300,slow=9.4,SNR=61
WRA                               PcP     PcP        04 44 33.1 +0.4
      comp=Z,7.8nm,0.6s,baz=298,slow=2.2,SNR=14
WRA                               S       S          04 45 30.4  -4.8
      comp=Z,8.3nm,0.8s,baz=295,slow=18,SNR=12
WRA                               ScP     ScP        04 47 21.6   0.0
      comp=Z,4.1nm,0.7s,baz=313,slow=2.6,SNR=8.1
WRA                               PKiKP   PKiKP      04 52 07.4  -1.3
      comp=Z,0.4nm,0.6s,baz=290,slow=1.6,SNR=2.6
WRA                               P3KPbc             05 13 46.2
      comp=Z,1.8nm,0.9s,baz=116,slow=4.1,SNR=12
WRA   Warramunga Arr    27.50 123 P       P          04 41 31.9  -0.4
WRAB  Tennant Creek     27.51 123 P       P          04 41 32.3  -0.1
WRAB  Tennant Creek     27.51 123 P       P          04 41 32.5 +0.1
WRAB  Tennant Creek     27.51 123 P       P          04 41 32.3  -0.1
WRAB                              pmax    pmax
      comp=Z,8.0nm,1.0s
WB2   Warramunga Arr    27.51 123 P       P          04 41 32.4  -0.1
NWAO  Narrogin (SRO)    27.90 167 P       P          04 41 36.0 +0.4
      comp=Z,16nm,0.4s,baz=330,slow=8.1,SNR=24
      comp=Z,16nm,0.4s
NWAO  Narrogin (SRO)    27.90 167 P       P          04 41 36.9 +1.3
      baz=28,SNR=17
NWAO                              P       P          04 41 36.9 +1.3
      baz=28,SNR=17
NWAO  Narrogin (SRO)    27.90 167 P       P          04 41 36.8 +1.2
AS31  Alice Springs     29.07 130 P       P          04 41 45.5  -0.5
ASAR  Alice Springs     29.07 130 P       P          04 41 46.0 +0.1
      comp=Z,4.7nm,0.5s,baz=308,slow=8.3,SNR=63
ASAR                              PcP     PcP        04 44 36.8 +0.2
      comp=Z,9.4nm,0.6s,baz=317,slow=2.5,SNR=23
ASAR                              S       S          04 45 56.4  -3.1
      comp=Z,2.2nm,0.7s,baz=340,slow=24,SNR=6.1
ASAR                              ScP     ScP        04 47 26.8 +0.2
      comp=Z,9.2nm,0.9s,baz=317,slow=2.8,SNR=18
ASAR                              PKiKP   PKiKP      04 52 08.5  -1.1
      comp=Z,0.6nm,0.6s,baz=5.7,slow=0.9,SNR=3.5
ASAR                              P3KPbc             05 13 34.8
      comp=Z,0.2nm,0.5s,baz=134,slow=4.1,SNR=1.4
ASAR  Alice Springs     29.07 130 P       P          04 41 45.6  -0.3
ASAR                                      PcP        04 44 37.3 +0.8
AS01  Alice Springs     29.10 130 P       P          04 41 46.7 +0.5
FORT  Forrest           30.13 148 P       P          04 41 56.2 +1.2
      baz=30,SNR=12
FORT  Forrest           30.13 148 P       P          04 41 56.1 +1.2
FORT                              IAmb    IAmb       04 41 57.2
      comp=Z,53nm,0.8s
FORT  Forrest           30.13 148 P       P          04 41 56.2 +1.2
TPUB  Ta-pu             30.60  19 P       P          04 41 59.2 +0.1
TPUB                              IAmb    IAmb       04 42 00.6
      comp=Z,73nm,1.1s
MND   Mandalay          30.75 334 P       P          04 42 01.3 +0.9
YULB  Yu-li             30.91  20 P       P          04 42 01.6  -0.2
YULB                              IAmb    IAmb       04 42 05.5
      comp=Z,53nm,0.7s
YULB  Yu-li             30.91  20 P       P          04 42 01.5  -0.2
YULB  Yu-li             30.91  20 eP      P          04 42 01.1  -0.7
      baz=62
SSLB  Suanglung         31.16  19 P       P          04 42 04.8 +0.9
SSLB  Suanglung         31.16  19 P       P          04 42 04.6 +0.7
SSLB  Suanglung         31.16  19 eP      P          04 42 04.8 +0.9
      baz=353
KMI   Kunming           31.45 347 ⇓P      P          04 42 09.5 +2.8
KMI                               PcP     PcP        04 44 44.5 +1.4
KMI                               pmax    pmax
      comp=Z,67nm,1.0s
KMI                               pmax    pmax
      comp=Z,240nm,4.3s
KMI   Kunming           31.45 347 P       P          04 42 09.4 +2.8
PALK  Pallekele         32.03 293 P       P          04 42 12.4 +0.9
      comp=Z,9.6nm,0.5s,baz=209,slow=8.1,SNR=11
PALK                              PcP     sP         04 44 45.8  -0.6
      comp=Z,8.1nm,0.7s,baz=87,slow=1.8,SNR=6.6
PALK                              ScP     ScP        04 47 37.3 +0.7
      comp=Z,5.8nm,0.8s,baz=190,slow=0.4,SNR=5.0
      comp=Z,9.6nm,0.5s
PALK  Pallekele         32.03 293 P       P          04 42 12.4 +0.9
PALK  Pallekele         32.03 293 P       P          04 42 12.4 +0.9
YHNB  Yeheng            32.12  20 P       P          04 42 12.6 +0.4
YHNB                              IAmb    IAmb       04 42 14.7
      comp=Z,60nm,1.1s
GYA   Guiyang           32.13 354 ⇓P      P          04 42 13.9 +1.6
GYA                               pP      pP         04 43 43.3  -0.6
GYA                               pmax    pmax
      comp=Z,120nm,0.7s
GYA                               pmax    pmax
      comp=Z,260nm,3.5s
QIS   Mount Isa         32.23 120 P       P          04 42 13.4 +0.2
      baz=32,SNR=4.6
OOD   Oodnadatta        32.78 135 P       P          04 42 18.2 +0.6
PZH   PanZhiHua         33.01 346 P       P          04 42 24.0 +4.3
PZH                               pmax    pmax
      comp=Z,100nm,4.2s
MULG  Mulgathing        33.28 140 P       P          04 42 22.6 +0.8
BRDH  Bariadhala        33.48 328 P       P          04 42 24.0 +0.5
      comp=Z,176nm,0.4s,baz=90,slow=5.6,SNR=14
BRDH                              PcP     PcP        04 44 49.0 +0.5
      comp=Z,59nm,0.3s,baz=90,slow=4.6,SNR=4.4
      comp=Z,176nm,0.4s
COEN  Coen              33.58 107 P       P          04 42 24.7 +0.1
CNSH  ChangSha          33.79   5 ⇓P      P          04 42 27.6 +1.5
CNSH                              pmax    pmax
      comp=Z,110nm,0.7s
MTSU  Mount Surprise    35.62 113 P       P          04 42 41.9 +0.3
      baz=36,SNR=15
MTSU  Mount Surprise    35.62 113 P       P          04 42 42.2 +0.6
SHL   Shillong          35.76 331 P       P          04 42 43.6 +0.8
SHL   Shillong          35.76 331 P       P          04 42 43.6 +0.8
SHL                               pmax    pmax
      comp=Z,478nm,0.6s
SHL   Shillong          35.76 331 P       P          04 42 43.8 +1.1
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	SNR=80						
ENH	**Enshi**	35.76	359	P	P	04 42 43.0	+0.4
ENH	**Enshi**	35.76	359	P	P	04 42 42.6	0.0
ENH	**Enshi**	35.76	359	P	P	04 42 43.1	+0.4
LCRK	**Leigh Creek**	36.14	136	P	P	04 42 46.2	+0.5
BBOO	**Buckleboo**	36.24	141	P	P	04 42 46.7	+0.2
	baz=36,SNR=28						
BBOO	**Buckleboo**	36.24	141	P	P	04 42 46.6	+0.1
BBOO				PcP	PcP	04 44 57.2	+0.5
BBOO	**Buckleboo**	36.24	141	P	P	04 42 46.7	+0.2
WHN	**Wuhan**	36.26	6	⇑iP	P	04 42 48.3	+1.7
WHN				pmax	pmax		
	comp=Z,210nm,0.7s						
INKA	**Innaminka**	36.45	130	P	P	04 42 49.4	+1.1
CD2	**Chengdu**	36.90	351	P	P	04 42 52.8	+0.9
CD2				pmax	pmax		
	comp=Z,970nm,1.3s						
PMG	**Port Moresby**	36.92	98	d iP	P	04 42 53.0	+0.7
PMG				pmax	pmax		
	comp=Z,25nm,0.9s						
PCHI	**Peechi**	37.27	296	⇓eP	P	04 42 55.8	+0.6
WHYH	**Whyalla**	37.34	140	P	P	04 42 56.3	+0.8
KAAM	**Kaadhehdhoo**	37.54	278	P	P	04 42 58.6	+1.2
KAAM	**Kaadhehdhoo**	37.54	278	P	P	04 42 59.0	+1.5
CTA	**Charters Tower**	37.93	116	P	P	04 43 01.1	+0.6
	comp=Z,2.0nm,0.7s,baz=293,slow=8.1,SNR=6.3						
CTA				pP	pP	04 44 35.6	+0.2
	comp=Z,3.7nm,0.7s,baz=264,slow=3.7,SNR=2.8						
CTA				PcP	PcP	04 45 02.4	+0.2
	comp=Z,1.7nm,0.5s,baz=274,slow=3.6,SNR=8.0						
CTA				ScP	ScP	04 47 58.1	+0.1
	comp=Z,1.1nm,0.3s,baz=223,slow=7.2,SNR=3.8						
CTAO	**Charters Tower**	37.93	116	P	P	04 43 01.2	+0.6
CTAO				pP	pP	04 44 37.6	+2.2
CTAO				PcP	PcP	04 45 02.8	+0.6
NJ2	**Nanjing**	38.45	12	⇓iP	P	04 43 05.6	+1.1
NJ2				pP	pP	04 44 43.1	+3.3
NJ2				PcP	PcP	04 45 04.4	+0.9
NJ2				ScP	ScP	04 47 59.9	+0.2
NJ2				S	S	04 48 20.9	+0.1
NJ2				pmax	pmax		
	comp=Z,110nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,660nm,4.9s						
HTT	**Hallett**	38.46	140	P	P	04 43 05.4	+0.8
	baz=39,SNR=15						
HTT	**Hallett**	38.46	140	P	P	04 43 05.5	+0.8
HYB	**Hyderabad**	38.70	307	⇓eP	P	04 43 07.2	+0.3
HYB				IVmB_BB		04 43 07.5	
	comp=Z,887nm,0.6s						
HYB				e		04 48 24.3	
STKA	**Stephens Creek**	39.32	135	P	P	04 43 12.3	+0.7
	comp=Z,22nm,0.5s,baz=313,slow=8.4,SNR=89						
STKA				pP	pP	04 44 47.7	+1.1
	comp=Z,3.1nm,0.4s,baz=316,slow=10,SNR=1.8						
STKA				PcP	PcP	04 45 06.3	-0.1
	comp=Z,9.0nm,0.5s,baz=312,slow=5.8,SNR=5.7						
STKA				ScP	ScP	04 48 02.4	-0.8
	comp=Z,1.7nm,0.5s,baz=316,slow=7.2,SNR=2.9						
STKA				S	S	04 48 33.1	-0.6
	comp=Z,7.9nm,1.0s,baz=231,slow=23,SNR=8.3						
	comp=Z,22nm,0.5s						
STKA	**Stephens Creek**	39.32	135	P	P	04 43 12.4	+0.7
	baz=39,SNR=50						
STKA	**Stephens Creek**	39.32	135	P	P	04 43 12.3	+0.7
STKA	**Stephens Creek**	39.32	135	P	P	04 43 12.1	+0.5
TAPN	**Taplejung**	39.34	328	eP	P	04 43 13.4	+1.3
	comp=Z,827nm,0.7s						
MNCI	**Minicoy**	39.45	290	P	P	04 43 13.8	+0.9
MNCI				IAmb	IAmb	04 43 17.3	
	comp=Z,78nm,0.9s						
XAN	**Xi'an**	39.53	358	⇓iP	P	04 43 13.5	+0.2
XAN				pP	pP	04 44 48.6	-0.6
XAN				S	S	04 48 38.8	+2.1
XAN				pmax	pmax		
	comp=Z,290nm,0.6s						
XAN				pmax	pmax		
	comp=Z,220nm,5.1s						
XAN	**Xi'an**	39.53	358	P	P	04 43 13.5	+0.2
LSA	**Lhasa**	39.61	334	P	P	04 43 16.3	+1.8
LSA	**Lhasa**	39.61	334	P	P	04 43 16.3	+1.8
LSA				pmax	pmax		
	comp=Z,181nm,0.8s						
LSA	**Lhasa**	39.61	334	P	P	04 43 16.0	+1.5
LSA	**Lhasa**	39.61	334	P	P	04 43 16.4	+1.8
LSA	**Lhasa**	39.61	334	P	P	04 43 16.2	+1.8
RAMN	**Ramite**	39.62	326	eP	P	04 43 15.1	+0.7
	comp=Z,84nm,0.3s						
LYN	**LuoYang**	40.09	3	⇓iP	P	04 43 18.5	+0.8
LYN				pP	pP	04 44 55.5	+1.5
LYN				PP	PcP	04 45 09.5	+0.7
LYN				ScP	ScP	04 48 07.4	+1.4
LYN				S	S	04 48 44.4	-0.3
LYN				pmax	pmax		
	comp=Z,140nm,0.6s						
LYN				pmax	pmax		
	comp=Z,77nm,4.9s						
JIRN	**Jiri**	40.40	326	eP	P	04 43 21.6	+0.8
GUN	**Gumba**	40.77	326	eP	P	04 43 24.5	+0.8
	comp=Z,609nm,0.5s						
PKI	**Pulchoki**	40.77	325	eP	P	04 43 23.8	+0.2
PKIN	**Phulchoki**	40.78	325	eP	P	04 43 23.8	+0.1
	comp=Z,113nm,0.4s						
DMN	**Daman**	40.97	325	eP	P	04 43 25.7	+0.5
	comp=Z,499nm,0.6s						
GKN	**Gorkha**	41.54	325	eP	P	04 43 30.0	+0.5
	comp=Z,248nm,0.3s						
JSU	**Suzuyama**	41.79	26	P	P	04 43 31.1	-0.2
JSU				IAmb	IAmb	04 43 31.6	
	comp=Z,43nm,0.6s						
LZH	**Lanzhou**	41.97	352	⇓P	P	04 43 34.4	+1.6
LZH				PcP	PcP	04 45 16.5	+1.3
LZH				ScP	ScP	04 48 15.5	+1.7
LZH				pmax	pmax		
	comp=Z,270nm,1.5s						
CMSA	**Cobar Meteorol**	42.08	132	P	P	04 43 34.9	+1.3
	baz=42,SNR=16						
CMSA	**Cobar Meteorol**	42.08	132	P	P	04 43 34.9	+1.3
TIA	**Tai'an**	42.20	8	⇓P	P	04 43 34.0	-0.4
TIA				pmax	pmax		
	comp=Z,100nm,0.7s						
RMQ	**Roma**	42.26	124	P	P	04 43 36.8	+1.6
	baz=42,SNR=5.2						
RMQ	**Roma**	42.26	124	P	P	04 43 36.5	+1.4
DANN	**Dangsing**	42.31	324	eP	P	04 43 36.0	+0.3
	comp=Z,571nm,0.6s						
ARPS	**Mount Arapiles**	42.42	141	P	P	04 43 37.1	+1.0
	baz=42,SNR=7.3						
ARPS	**Mount Arapiles**	42.42	141	P	P	04 43 37.0	+0.9
PYUN	**Piuthan**	42.57	323	eP	P	04 43 37.8	+0.1
	comp=Z,168nm,0.4s						
HNS	**HongShan**	43.08	5	⇓P	P	04 43 41.3	+0.1
HNS				pP	pP	04 45 19.8	+0.3
HNS				eS	S	04 49 28.8	+1.1
HNS				ScS	ScS	04 52 43.9	+3.7
HNS				pmax	pmax		
	comp=Z,47nm,1.0s						
TIY	**Taiyuan**	43.24	3	⇓P	P	04 43 42.8	+0.2
TIY				pmax	pmax		
	comp=Z,65nm,0.6s						
JNU	**Nakatsue**	43.35	26	P	P	04 43 42.4	-1.1
	comp=Z,31nm,0.8s,baz=153,slow=3.1,SNR=13						
	comp=Z,31nm,0.8s						
JNU	**Nakatsue**	43.35	26	P	P	04 43 42.6	-0.9
JNU				IAmb	IAmb	04 43 45.1	
	comp=Z,41nm,0.9s						
JNU	**Nakatsue**	43.35	26	P	P	04 43 42.6	-0.9
EIDS	**Eidsvold**	43.82	121	P	P	04 43 48.2	+0.9
	baz=44,SNR=4.5						
GOMU	**GeErMu**	44.06	342	P	P	04 43 50.6	+1.2
GOMU				pmax	pmax		
	comp=Z,35nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,57nm,4.5s						
TJN	**Taejon**	44.87	20	ceP	P	04 43 54.7	-0.4
JMN	**Monobe**	45.22	28	P	P	04 43 57.9	0.0
JMN				IAmb	IAmb	04 43 58.4	
	comp=Z,39nm,0.7s						
TOO	**Toolangi**	45.22	140	P	P	04 44 00.1	+2.2
	baz=45,SNR=4.4						
BJT	**Baijiatuau**	45.83	7	P	P	04 44 02.7	+0.4
BJT				IAmb	IAmb	04 44 03.0	
	comp=Z,63nm,0.6s						
BJT	**Baijiatuau**	45.83	7	P	P	04 44 02.4	+0.1
BJT	**Baijiatuau**	45.83	7	P	P	04 44 02.7	+0.4
BJT				pmax	pmax		
	comp=Z,63nm,0.6s						
BJT	**Baijiatuau**	45.83	7	P	P	04 44 02.6	+0.3
BJT				PcP	PcP	04 45 29.1	+0.8
BJI	**Beijing**	45.85	7	P	P	04 44 02.6	+0.1
BJI				PcP	PcP	04 45 29.6	+1.3
BJI				S	S	04 50 06.4	-0.2
BJI				pmax	pmax		
	comp=Z,58nm,0.8s						
GTA	**Gaotai**	45.87	349	⇓P	P	04 44 04.4	+1.5
GTA				PcP	PcP	04 45 29.6	+0.9
GTA				pP	pP	04 45 45.4	+2.5
GTA				ScP	ScP	04 48 30.3	+0.6
GTA				PcS	PcS	04 49 22.6	-1.5
GTA				S	S	04 50 08.6	+1.3
GTA				pmax	pmax		
	comp=Z,93nm,0.6s						
GTA				pmax	pmax		
	comp=Z,140nm,6.5s						
JHS	**Saijyo**	45.92	27	P	P	04 44 02.9	-0.3
JHS				IAmb	IAmb	04 44 03.7	
	comp=Z,70nm,0.7s						
JHS	**Saijyo**	45.92	27	P	P	04 44 02.9	-0.3
KSAR	**Wonju Array Be**	46.01	20	P	P	04 44 03.9	+0.1
KSAR	**Wonju Array Be**	46.01	20	P	P	04 44 03.9	+0.1
KSRS	**Korea Array**	46.03	20	P	P	04 44 03.9	-0.1
	comp=Z,11nm,0.8s,baz=191,slow=8.5,SNR=23						
KSRS				PcP	PcP	04 45 29.2	+0.2
	comp=Z,4.6nm,0.8s,baz=196,slow=2.1,SNR=7.9						
	comp=Z,11nm,0.8s						
KS19	**Wonju Array Si**	46.06	20	P	P	04 44 04.2	0.0
BTO	**Baotou**	46.07	360	⇓iP	P	04 44 05.9	+1.6
BTO				PcP	PcP	04 45 30.5	+1.2
BTO				pP	pP	04 45 46.0	+1.5
BTO				sP	sP	04 46 43.1	-2.3
BTO				S	S	04 50 12.9	+2.9
BTO				sS	sS	04 53 09.5	-2.0
BTO				pmax	pmax		
	comp=Z,390nm,0.7s						
BTO				pmax	pmax		
	comp=Z,360nm,8.1s						
ARMA	**Armidale**	46.13	127	P	P	04 44 07.3	+2.3
	baz=46,SNR=6.3						
HHC	**Hu-ho-hao-te**	46.33	2	eP	P	04 44 07.0	+0.7
HHC				pmax	pmax		
	comp=Z,94nm,1.0s						
HHC				pmax	pmax		
	comp=Z,230nm,5.6s						
INU	**Inuyama**	48.04	30	P	P	04 44 18.1	-1.0
INU				IAmb	IAmb	04 44 18.6	
	comp=Z,28nm,0.7s						
INU	**Inuyama**	48.04	30	P	P	04 44 17.9	-1.2
INU	**Inuyama**	48.04	30	P	P	04 44 17.7	-1.4
JGF	**Kuroka**	48.41	30	P	P	04 44 20.4	-1.5
JGF				IAmb	IAmb	04 44 21.2	
	comp=Z,27nm,0.5s						
JGF	**Kuroka**	48.41	30	P	P	04 44 20.6	-1.3
MAJO	**Matsushiro**	49.58	30	P	P	04 44 29.0	-1.5
MAJO				IAmb	IAmb	04 44 29.1	
	comp=Z,19nm,0.5s						
MAJO	**Matsushiro**	49.58	30	P	P	04 44 28.8	-1.7
MAJO	**Matsushiro**	49.58	30	d iP	P	04 44 28.6	-1.9
MAJO				pmax	pmax		
	comp=Z,72nm,1.9s						
MAJO	**Matsushiro**	49.58	30	P	P	04 44 28.8	-1.7
MAJO				PcP	PcP	04 45 43.1	+1.1
MAJO				pP	pP	04 46 12.6	-0.3
MJAR	**Matsushiro Arr**	49.58	30	P	P	04 44 28.8	-1.7
	comp=Z,24nm,0.7s,baz=203,slow=7.6,SNR=37						
MJAR				PcP	PcP	04 45 42.5	+0.4
	comp=Z,11nm,0.7s,baz=199,slow=4.2,SNR=12						
MJAR				ScP	ScP	04 48 46.2	+0.8
	comp=Z,5.3nm,0.7s,baz=195,slow=4.6,SNR=6.3						
	comp=Z,24nm,0.7s						
MJB9	**Matsu-Tunnel**	49.58	30	P	P	04 44 30.0	-0.6
XLT	**XiLinHaoTe**	49.66	6	⇑iP	P	04 44 31.5	+0.5
XLT				PcP	PcP	04 45 43.0	+0.7
XLT				pmax	pmax		
	comp=Z,59nm,0.8s						
XLT				pmax	pmax		
	comp=Z,140nm,4.6s						
JSD	**Sado**	50.78	29	P	P	04 44 38.0	-1.3
JSD				IAmb	IAmb	04 44 38.9	
	comp=Z,69nm,0.7s						
CN2	**Changchun**	51.18	14	⇓P	P	04 44 40.8	-1.2
CN2				pP	pP	04 46 25.3	-0.1
CN2				S	S	04 51 19.8	+0.2
CN2				pmax	pmax		
	comp=Z,40nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
JMM	**Marumori**	51.91	31	P	P	04 44 46.3	-1.0
JMM				IAmb	IAmb	04 44 47.0	
	comp=Z,68nm,1.1s						
NIL	**Nilore**	52.41	321	P	P	04 44 50.8	-0.3
NIL	**Nilore**	52.41	321	P	P	04 44 50.8	-0.3
NIL				pmax	pmax		
	comp=Z,144nm,0.8s						
NIL	**Nilore**	52.41	321	P	P	04 44 50.7	-0.4
NIL	**Nilore**	52.41	321	P	P	04 44 50.4	-0.8
MDJ	**Mudanjiang**	53.06	17	P	P	04 44 54.3	-1.2
MDJ				PcP	PcP	04 45 54.6	-0.4
MDJ				pP	pP	04 46 42.0	+2.1
MDJ				ScS	ScS	04 53 41.8	-5.7
MDJ				sS	sS	04 54 55.3	+2.9
MDJ				pmax	pmax		
	comp=Z,35nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,250nm,3.8s						
MDJ	**Mudanjiang**	53.06	17	P	P	04 44 55.7	+0.2
MDJ	**Mudanjiang**	53.06	17	P	P	04 44 55.2	-0.3
MDJ	**Mudanjiang**	53.06	17	P	P	04 44 54.6	-0.9
WMQ	**Urumqi**	53.27	340	eP	P	04 44 57.9	+0.8
WMQ				pmax	pmax		
	comp=Z,200nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,200nm,4.5s						
ULN	**Ulaanbaatar**	53.40	357	P	P	04 44 58.6	+0.5
ULN				IAmb	IAmb	04 44 59.2	
	comp=Z,71nm,0.7s						
ULN	**Ulaanbaatar**	53.40	357	d iP	P	04 44 58.1	+0.1
ULN				pmax	pmax		
	comp=Z,83nm,0.8s						
ULN	**Ulaanbaatar**	53.40	357	P	P	04 44 58.5	+0.5
ULN				P	P	04 44 58.5	+0.5
ULN	**Ulaanbaatar**	53.40	357	P	P	04 44 58.4	+0.4
SONM	**Songino Array**	53.40	357	P	P	04 44 58.1	+0.1
	comp=Z,61nm,0.6s,baz=178,slow=8.4,SNR=339						
SONM				PcP	PcP	04 45 56.3	-0.1
	comp=Z,18nm,0.8s,baz=177,slow=3.8,SNR=8.9						
SONM				ScP	ScP	04 49 01.2	-0.6
	comp=Z,1.8nm,0.6s,baz=169,slow=4.9,SNR=3.8						
	comp=Z,61nm,0.6s						
SONM	**Songino Array**	53.40	357	P	P	04 44 58.7	+0.7
SONM				IAmb	IAmb	04 44 59.3	
	comp=Z,57nm,0.6s						
SONM	**Songino Array**	53.40	357	P	P	04 44 58.7	+0.7
SONM				pmax	pmax		
	comp=Z,57nm,0.6s						
USA0B	**Ussuriysk Arra**	53.44	20	P	P	04 44 57.8	-0.4
USA0B	**Ussuriysk Arra**	53.44	20	d iP	P	04 44 57.7	-0.5
USRK	**Ussuriysk Ar.**	53.44	20	P	P	04 44 57.7	-0.5
	comp=Z,30nm,0.6s,baz=186,slow=7.4,SNR=32						
	comp=Z,30nm,0.6s						
USRK	**Ussuriysk Ar.**	53.44	20	P	P	04 44 58.0	-0.2
USRK	**Ussuriysk Ar.**	53.44	20	P	P	04 44 58.0	-0.2
BNX	**BinXian**	53.49	15	⇓P	P	04 44 57.8	-0.7
BNX				pmax	pmax		
	comp=Z,110nm,0.6s						
BNX				pmax	pmax		
	comp=Z,220nm,4.9s						
WUS	**Wushi**	54.56	332	P	P	04 45 06.9	+0.6
KSH	**Kashi**	54.91	328	P	P	04 45 08.0	-0.8
KSH				PcP	PcP	04 46 03.3	+0.8
KSH				ScP	ScP	04 49 09.1	+0.4
KSH				pmax	pmax		
	comp=Z,93nm,0.6s						
HIA	**Hailar**	55.38	8	P	P	04 45 12.3	+0.6
HIA	**Hailar**	55.38	8	P	P	04 45 11.3	-0.4
HIA	**Hailar**	55.38	8	P	P	04 45 10.7	-1.1
TARG	**Taragay, Kyrgy**	55.64	331	P	P	04 45 15.3	+1.1
TARG	**Taragay, Kyrgy**	55.64	331	P	P	04 45 15.3	+1.1
TARG				pmax	pmax		
	comp=Z,40nm,0.8s						
KBL	**Kabul**	55.67	319	P	P	04 45 13.8	-0.6
KBL				IAmb	IAmb	04 45 14.4	
	comp=Z,67nm,0.8s						
KBL	**Kabul**	55.67	319	P	P	04 45 13.8	-0.6
KBL				pmax	pmax		
	comp=Z,67nm,0.8s						
KBL	**Kabul**	55.67	319	P	P	04 45 13.7	-0.6
	SNR=29						
KBL				P	P	04 45 13.7	-0.6
	SNR=29						
SHLS	**Shalkode**	55.98	333	⇓iP	P	04 45 16.0	-0.2
	comp=Z,78nm,0.6s,baz=333						
SHLS	**Shalkode**	55.98	333	d iP	P	04 45 16.0	-0.2
SHLS				pmax	pmax		
	comp=Z,78nm,0.6s						
ZAK	**Zakamensk**	56.16	355	eP	P	04 45 16.9	-0.3
ZAK				e		04 46 07.4	
ZAK				pmax	pmax		
	comp=Z,20nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,15nm,1.1s						
UZB	**Uzynbulak**	56.17	333	⇓iP	P	04 45 18.4	+0.9
	comp=Z,40nm,0.4s,baz=333						
UZB				eS	S	04 52 26.2	+0.5
	baz=333						
UZB	**Uzynbulak**	56.17	333	d iP	P	04 45 18.4	+0.9
UZB				eS	S	04 52 26.1	+0.5
UZB				pmax	pmax		
	comp=Z,40nm,0.4s						
SATY	**Saty**	56.38	332	⇓iP	P	04 45 19.8	+0.7
	comp=Z,20nm,0.4s,baz=332						
SATY	**Saty**	56.38	332	d iP	P	04 45 19.7	+0.7
SATY				pmax	pmax		
	comp=Z,20nm,0.4s						
ZHN	**Zhinishke**	56.45	333	⇓iP	P	04 45 20.0	+0.5
	baz=332						
ZHN	**Zhinishke**	56.45	333	d iP	P	04 45 19.9	+0.5
KPKS	**Kokpek**	56.57	333	⇓iP	P	04 45 20.8	+0.6
	comp=Z,31nm,0.5s,baz=333						
KPKS	**Kokpek**	56.57	333	d iP	P	04 45 20.8	+0.6
KPKS				pmax	pmax		
	comp=Z,31nm,0.5s						
NGCH	**Negor - Chabah**	56.68	305	P	P	04 45 22.1	+0.9
JLN	**Jalan Bani Buh**	56.79	301	P	P	04 45 22.1	+0.1
	SNR=8.0						
ULHL	**Ulahol**	56.79	330	P	P	04 45 22.6	+0.6
	SNR=5.8						
TNSS	**Tian-Shan**	57.05	331	i P	P	04 45 24.3	+0.4
	baz=331						
TNSS	**Tian-Shan**	57.05	331	i P	P	04 45 24.2	+0.4
MDOK	**Medeo**	57.10	332	i P	P	04 45 24.5	+0.5
	baz=332						
MDOK				eS	S	04 52 37.6	+0.1
	baz=332						
MDOK	**Medeo**	57.10	332	i P	P	04 45 24.4	+0.5
MDOK				eS	S	04 52 37.6	+0.1
WBK	**Wadi Bani Khal**	57.35	301	P	P	04 45 26.2	+0.3
	SNR=8.9						
ZSN	**Zaisan**	57.41	340	⇓iP	P	04 45 26.6	+0.8
	baz=340						
ZSN				eS	S	04 52 41.8	+0.7
	baz=340						
ZSN	**Zaisan**	57.41	340	d iP	P	04 45 26.5	+0.8
ZSN				eS	S	04 52 41.7	+0.7
ASAJ	**Asahikawa**	57.58	27	P	P	04 45 26.5	-0.5
ASAJ				pmax	pmax		
	comp=Z,22nm,0.8s						
JKA	**Kamikawa-asahi**	57.58	27	P	P	04 45 26.5	-0.4
DQM	**DQM**	57.59	298	P	P	04 45 28.0	+0.4
	SNR=8.4						
MHTO	**MHTO**	57.60	299	P	P	04 45 27.4	-0.1
	SNR=16						
TKM2	**Tokmak 2**	57.61	330	P	P	04 45 28.0	+0.5
	SNR=40						
UCH	**Uchtor**	57.64	329	P	P	04 45 28.5	+0.5
	SNR=45						
CHKK	**Chushkaly**	57.65	332	⇓iP	P	04 45 27.4	-0.1
	baz=332						
CHKK	**Chushkaly**	57.65	332	⇓iP	P	04 45 27.4	-0.1
MOY	**Mondy**	57.66	353	eP	P	04 45 28.1	+0.6
MOY				pmax	pmax		
	comp=Z,65nm,1.5s						
HEH	**HeiHe**	57.70	13	eP	P	04 45 27.3	-0.4
HEH				pmax	pmax		
	comp=Z,150nm,0.7s						
KBK	**Karagaybulak**	57.74	330	P	P	04 45 29.3	+1.0
	SNR=111						
MK31	**Makanchi Array**	57.78	338	P	P	04 45 29.0	+0.7
MK31				IAmb	IAmb	04 45 29.5	
	comp=Z,96nm,0.6s						
MK31	**Makanchi Array**	57.78	338	d iP	P	04 45 28.6	+0.3
MKAR	**Makanchi Array**	57.78	338	P	P	04 45 28.7	+0.4
	comp=Z,154nm,0.5s,baz=151,slow=7.5,SNR=2603						
MKAR				ScP	ScP	04 49 22.1	+1.0
	comp=Z,1.2nm,0.7s,baz=131,slow=6.7,SNR=2.1						
MKAR				S	S	04 52 45.4	-0.4
	comp=Z,0.2nm,0.7s,baz=172,slow=14,SNR=1.2						
	comp=Z,154nm,0.5s						
KLR	**Kul'dur**	57.87	17	d iP	P	04 45 28.0	-0.8
KLR				pmax	pmax		
	comp=Z,51nm,0.5s						
WSAR	**Wadi Sarin**	57.88	302	P	P	04 45 29.7	+0.3
	comp=Z,39nm,0.8s,baz=137,slow=6.8,SNR=38						
	comp=Z,39nm,0.8s						
WSAR	**Wadi Sarin**	57.88	302	P	P	04 45 29.9	+0.5
	SNR=17						
TDK	**Taldyqorghan**	57.90	334	⇓iP	P	04 45 29.7	+0.5
	baz=334						
TDK	**Taldyqorghan**	57.90	334	d iP	P	04 45 29.7	+0.5
MAKZ	**Makanchi**	57.91	338	P	P	04 45 29.4	+0.2
MAKZ				IAmb	IAmb	04 45 30.3	
	comp=Z,43nm,0.7s						
MAKZ	**Makanchi**	57.91	338	P	P	04 45 29.4	+0.2
MAKZ				pmax	pmax		
	comp=Z,43nm,0.7s						
MAKZ	**Makanchi**	57.91	338	⇓P	P	04 45 29.3	+0.1
AAK	**Ala-Archa**	57.95	330	P	P	04 45 30.5	+0.7
	SNR=12						
AAK	**Ala-Archa**	57.95	330	P	P	04 45 30.5	+0.7
	comp=Z,40nm,0.6s,baz=165,slow=5.4,SNR=36						
	comp=Z,40nm,0.6s						
AAK	**Ala-Archa**	57.95	330	P	P	04 45 30.7	+0.9
AAK				IAmb	IAmb	04 45 31.0	
	comp=Z,46nm,0.8s						
AAK	**Ala-Archa**	57.95	330	d iP	P	04 45 30.1	+0.4
AAK				pmax	pmax		
	comp=Z,105nm,1.3s						
AAK	**Ala-Archa**	57.95	330	i P	P	04 45 30.4	+0.6
	SNR=16						
AAK	**Ala-Archa**	57.95	330	P	P	04 45 30.6	+0.9
AAK	**Ala-Archa**	57.95	330	⇓P	P	04 45 30.5	+0.7
KUU	**Kurty**	57.99	332	⇓iP	P	04 45 29.2	-0.6
	comp=Z,75nm,0.5s,baz=332						
KUU	**Kurty**	57.99	332	d iP	P	04 45 29.1	-0.6
KUU				pmax	pmax		
	comp=Z,75nm,0.5s						
AML	**Almayashu**	57.99	329	P	P	04 45 30.9	+0.5
	SNR=82						
JMDO	**Jabal Madar**	57.99	301	P	P	04 45 30.3	+0.1
	SNR=13						
CHMS	**Chumysh**	58.09	330	P	P	04 45 30.4	-0.1
	SNR=12						
CHGR	**Chuyangaron**	58.17	323	P	P	04 45 29.8	-1.4
CHGR				IAmb	IAmb	04 45 30.1	
	comp=Z,91nm,0.5s						
CHGR	**Chuyangaron**	58.17	323	P	P	04 45 29.8	-1.4
CHGR				pmax	pmax		
	comp=Z,91nm,0.5s						
SMDO	**Samad**	58.30	301	P	P	04 45 32.6	+0.2
	SNR=10						
EKS2	**Erkin-Say**	58.33	329	P	P	04 45 33.1	+0.8
	SNR=16						
USP	**Ospenovka**	58.41	330	P	P	04 45 33.0	+0.4
	SNR=27						
BIDO	**Bidbid**	58.42	302	P	P	04 45 33.6	+0.5
	SNR=22						
SGDS	**Sogindy**	58.48	330	⇓iP	P	04 45 33.4	+0.1
	baz=330						
SGDS	**Sogindy**	58.48	330	d iP	P	04 45 33.3	+0.1
DGZ	**Jazzator, Alta**	58.58	343	d iP	P	04 45 34.8	+1.0
DGZ				pmax	pmax		
	comp=Z,233nm,0.7s						
SHAO	**Shalim**	58.66	295	i P	P	04 45 34.8	0.0
	SNR=6.6						
SHAO	**Shalim**	58.66	295	P	P	04 45 35.1	+0.2
	SNR=6.7						

BSY	Bisya	58.91	301	P	P	04 45 36.7	+0.3
	SNR=7.8						
HOQ	Hoqain	59.13	302	P	P	04 45 38.2	+0.4
	SNR=11						
DMTO	DMTO	59.18	294	P	P	04 45 38.4	+0.1
	SNR=9.4						
JASK	Jask - Hormozg	59.57	304	P	P	04 45 41.9	+1.2
ARQ	Araqi	59.71	301	P	P	04 45 41.8	+0.1
	SNR=5.0						
DZA	Taraz	59.77	328	eP	P	04 45 41.3	-0.5
	baz=328						
DZA	Taraz	59.77	328	eP	P	04 45 41.3	-0.5
RBK	Rabkut	59.79	294	P	P	04 45 42.8	+0.4
	SNR=11						
YSS	Yuzh-Sakhalins	59.86	25	P	P	04 45 42.1	-0.1
YSS				IAmb	IAmb	04 45 42.9	
	comp=Z,96nm,1.1s						
YSS	Yuzh-Sakhalins	59.86	25	P	P	04 45 42.0	-0.2
YSS	Yuzh-Sakhalins	59.86	25	eP	P	04 45 41.8	-0.4
YSS				e		04 47 35.0	
YSS				pmax	pmax		
	comp=Z,90nm,1.1s						
YSS	Yuzh-Sakhalins	59.86	25	P	P	04 45 41.9	-0.2
BTLS	Baital	59.94	331	⇓iP	P	04 45 42.5	-0.3
	baz=331						
BTLS	Baital	59.94	331	d iP	P	04 45 42.4	-0.3
IUG	Iuzhnay	59.96	326	⇓iP	P	04 45 43.4	+0.2
	baz=326						
IUG	Iuzhnay	59.96	326	d iP	P	04 45 43.3	+0.1
SOHO	SOHO	60.00	302	i P	P	04 45 43.1	-0.5
	SNR=9.7						
SOHO	SOHO	60.00	302	P	P	04 45 43.5	-0.1
WHFO	Wadi Hawf	60.31	294	P	P	04 45 45.4	-0.5
	SNR=7.8						
CHM	Chimkent	60.31	326	eP	P	04 45 45.5	0.0
	comp=Z,33nm,0.5s,baz=326						
CHM	Chimkent	60.31	326	eP	P	04 45 45.4	0.0
CHM				pmax	pmax		
	comp=Z,33nm,0.5s						
KK31	Karatay Array	60.35	328	P	P	04 45 45.5	-0.1
KK31				IAmb	IAmb	04 45 47.2	
	comp=Z,36nm,0.7s						
KK31	Karatay Array	60.35	328	P	P	04 45 45.5	-0.1
KK31				pmax	pmax		
	comp=Z,36nm,0.7s						
KKAR	Karatay Array	60.35	328	P	P	04 45 45.4	-0.2
KKAR	Karatay Array	60.35	328	P	P	04 45 45.5	-0.2
KKAR				IAmb	IAmb	04 45 47.2	
	comp=Z,36nm,0.7s						
KKAR	Karatay Array	60.35	328	P	P	04 45 45.5	-0.1
KKAR				pmax	pmax		
	comp=Z,36nm,0.7s						
ABTO	Aybut	60.58	293	P	P	04 45 47.7	+0.1
	SNR=11						
UOSS	Minazif	60.59	303	P	P	04 45 47.3	-0.2
UOSS	Minazif	60.59	303	i P	P	04 45 46.7	-0.8
	SNR=14						
UOSS	Minazif	60.59	303	P	P	04 45 47.3	-0.2
UOSS	Minazif	60.59	303	P	P	04 45 46.5	-1.0
HATD	Hatta, Dubai	60.60	303	i P	P	04 45 47.5	-0.1
	SNR=24						
HATD	Hatta, Dubai	60.60	303	P	P	04 45 48.0	+0.4
	SNR=13						
ASHO	Ashiyiah	60.61	302	i P	P	04 45 47.7	0.0
	SNR=24						
ASHO	Ashiyiah	60.61	302	P	P	04 45 47.8	0.0
	SNR=5.9						
ALNE	Al Ain	60.63	302	i P	P	04 45 47.7	-0.1
	SNR=6.3						
ALNE	Al Ain	60.63	302	P	P	04 45 48.0	+0.2
	SNR=9.5						
MDH	Madha	60.64	303	i P	P	04 45 46.6	-1.2
	SNR=10						
MDH	Madha	60.64	303	P	P	04 45 46.8	-1.1
	SNR=5.3						
GRNR	Gornyy	60.64	19	⇓iP	P	04 45 47.2	-0.1
GRNR				pmax	pmax		
	comp=Z,20nm,1.1s						
GRNR				MLR	MLR		
	comp=E,170nm,17.0s						
GRNR				MLR	MLR		
	comp=N,130nm,13.0s						
GRNR				MLR	MLR		
	comp=Z,110nm,15.0s						
UMZA	Um Al Zommool	60.65	300	P	P	04 45 47.7	-0.2
MSFE	Esma-Masafi	60.78	303	i P	P	04 45 48.8	0.0
	SNR=10						
MASF	Masafi	60.79	303	P	P	04 45 49.4	+0.5
	SNR=7.9						
BANOM	Banah	60.89	304	i P	P	04 45 49.0	-0.5
	SNR=16						
BANOM	Banah	60.89	304	P	P	04 45 49.4	-0.1
ZEA	Zeya	60.95	12	eP	P	04 45 49.6	+0.3
ZEA				pmax	pmax		
	comp=E,20nm,1.1s						
ZEA				pmax	pmax		
	comp=N,20nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,50nm,0.9s						
FAQ	Al Faqa, Dubai	61.02	302	i P	P	04 45 50.3	-0.1
	SNR=39						
FAQ	Al Faqa, Dubai	61.02	302	P	P	04 45 50.5	+0.2
	SNR=15						
NAZ	Nazwa, Dubai	61.06	302	i P	P	04 45 50.2	-0.3
	SNR=19						
NAZ	Nazwa, Dubai	61.06	302	P	P	04 45 50.6	0.0
	SNR=9.3						
SHME	Shamm	61.07	304	i P	P	04 45 50.6	0.0
	SNR=9.7						
SHME	Shamm	61.07	304	P	P	04 45 50.7	0.0
SHME				P	P	04 45 50.7	0.0
ASUD	Al Ashush, Dub	61.20	302	i P	P	04 45 51.9	+0.4
	SNR=16						
ASUD	Al Ashush, Dub	61.20	302	P	P	04 45 52.0	+0.4
	SNR=7.6						
AJN	Ajban	61.47	302	P	P	04 45 53.0	-0.2
	SNR=5.3						
SEM	Semipalatinsk	61.54	339	i P	P	04 45 53.3	-0.2
	comp=Z,57nm,0.6s,baz=339						
SEM	Semipalatinsk	61.54	339	i P	P	04 45 53.2	-0.2
SEM				pmax	pmax		
	comp=Z,57nm,0.6s						
MZWR	Madinat Zayed	62.12	301	P	P	04 45 57.6	0.0
MZR	Muzera	62.20	300	i P	P	04 45 58.1	0.0
	SNR=11						
MZR	Muzera	62.20	300	P	P	04 45 58.5	+0.4
	SNR=5.9						
KURBB	Kurchatov Arra	62.34	338	P	P	04 45 58.4	0.0
	comp=Z,44nm,0.5s,baz=154,slow=5.4,SNR=329						
KURBB				PcP	PcP	04 46 31.8	-0.1
	comp=Z,21nm,0.7s,baz=152,slow=3.4,SNR=14						
KURBB				PP	PP	04 48 25.0	0.0
	comp=Z,2.4nm,0.8s,baz=146,slow=8.9,SNR=4.6						
	comp=Z,44nm,0.5s						
KURK	Kurchatov	62.38	338	P	P	04 45 59.1	+0.4
KURK				IAmb	IAmb	04 45 59.7	
	comp=Z,91nm,0.9s						
KURK	Kurchatov	62.38	338	d iP	P	04 45 58.8	+0.1
KURK				pmax	pmax		
	comp=Z,108nm,1.0s						
KURK	Kurchatov	62.38	338	P	P	04 45 59.1	+0.4
KURK	Kurchatov	62.38	338	P	P	04 45 58.7	+0.1
OPO	Ambohidratompo	62.54	252	P	P	04 46 01.8	+1.2
	comp=Z,12nm,0.7s,baz=96,slow=6.1,SNR=8.0						
	comp=Z,12nm,0.7s						
GHWR	Ruwais	63.05	300	P	P	04 46 03.6	+0.1
ZAA0	Zalesovo Array	63.10	344	P	P	04 46 03.1	-0.1
ZAA0				IAmb	IAmb	04 46 03.8	
	comp=Z,96nm,0.8s						
ZALV	Zalesovo Beam	63.10	344	P	P	04 46 02.9	-0.3
	comp=Z,73nm,0.4s,baz=152,slow=4.7,SNR=348						
ZALV				PcP	PcP	04 46 34.0	-0.8
	comp=Z,18nm,0.6s,baz=145,slow=5.0,SNR=6.1						
ZALV				pP	pP	04 47 53.6	+0.7
	comp=Z,3.3nm,0.5s,baz=156,slow=4.4,SNR=2.5						
ZALV				S	S	04 53 44.1	-7.5
	comp=Z,0.8nm,0.6s,baz=129,slow=11,SNR=2.3						
ZALV				PKPPKP	P'P'df	05 14 54.4	+1.0
	comp=Z,0.4nm,0.3s,baz=345,slow=5.1,SNR=0.9						
	comp=Z,73nm,0.4s						
ZALV	Zalesovo Beam	63.10	344	P	P	04 46 03.1	-0.1
VOI	Vohitsoka	63.14	248	P	P	04 46 05.7	+1.4
BOD	Bodaibo	63.38	2	eP	P	04 46 04.2	-0.7
BOD				pmax	pmax		
	comp=Z,63nm,1.1s						
JRN	Qarnain Island	63.42	301	P	P	04 46 05.6	-0.3
BRZS	Berezniki	64.21	334	⇓iP	P	04 46 10.9	+0.4
	comp=Z,39nm,0.9s,baz=334						
BRZS	Berezniki	64.21	334	d iP	P	04 46 10.8	+0.4
BRZS				pmax	pmax		
	comp=Z,39nm,0.9s						
DRV	Dumont d'Urvil	64.28	167	P	P	04 46 11.1	+0.6
RPZ	Rata Peaks	65.29	136	P	P	04 46 17.6	+0.2
	comp=Z,20nm,0.8s,baz=25,slow=18,SNR=4.0						
	comp=Z,20nm,0.8s						
SAKB	Bahrain	65.73	302	P	P	04 46 20.3	-0.2
MSVF	Nonsavu	67.31	107	P	P	04 46 30.3	-0.2
	comp=Z,7.9nm,0.8s,baz=106,slow=7.4,SNR=3.8						
	comp=Z,7.9nm,0.8s						
BVAR	Borovoye Array	67.42	335	P	P	04 46 30.1	-0.2
	comp=Z,63nm,0.6s,baz=141,slow=8.6,SNR=281						
BVAR				PcP	PcP	04 46 53.0	0.0
	comp=Z,18nm,0.8s,baz=143,slow=5.4,SNR=8.6						
	comp=Z,63nm,0.6s						
BRVK	Borovoye	67.49	335	P	P	04 46 30.9	+0.1
BRVK				IAmb	IAmb	04 46 31.5	
	comp=Z,59nm,1.1s						
BRVK	Borovoye	67.49	335	d iP	P	04 46 30.2	-0.6
BRVK				pmax	pmax		
	comp=Z,39nm,0.8s						
BRVK	Borovoye	67.49	335	P	P	04 46 30.8	+0.1
BRVK	Borovoye	67.49	335	⇓P	P	04 46 30.6	-0.2
BKZ	Black Stump Fm	68.18	130	P	P	04 46 35.4	0.0
BKZ				IAmb	IAmb	04 46 35.8	
	comp=Z,33nm,0.5s						
BKZ	Black Stump Fm	68.18	130	P	P	04 46 35.5	0.0
RTZ	Ruatahuna	68.46	129	P	P	04 46 37.0	-0.1
URZ	Urewera	68.49	129	P	P	04 46 36.4	-0.8
	comp=Z,8.3nm,0.4s,baz=330,slow=5.0,SNR=10						
	comp=Z,8.3nm,0.4s						
ATD	Arta Tunnel	69.04	285	P	P	04 46 41.6	+0.5
	comp=Z,0.2nm,0.4s,baz=284,slow=11,SNR=3.9						
YAK	Yakutsk	69.20	10	P	P	04 46 40.8	-0.1
YAK	Yakutsk	69.20	10	eP	P	04 46 40.0	-0.9
YAK				e		04 46 58.7	
YAK				e*PP	pP	04 48 31.8	-1.6
YAK				ePPP	PPP	04 51 07.0	
YAK				eS	S	04 54 59.6	-3.7
YAK				e		04 55 43.8	
YAK				pmax	pmax		
	comp=Z,230nm,1.0s						
YAK				pmax	pmax		
	comp=N,63nm,1.3s						
YAK				pmax	pmax		
	comp=E,25nm,1.3s						
YAK				pmax	pmax		
	comp=Z,153nm,3.5s						
YAK				pmax	pmax		
	comp=N,28nm,1.6s						
YAK				pmax	pmax		
	comp=E,97nm,4.7s						
YAK				smax	smax		
	comp=E,44nm,1.8s						
YAK				smax	smax		
	comp=N,81nm,2.2s						
YAK	Yakutsk	69.20	10	P	P	04 46 40.0	-0.9
RAYN	Ar Rayn	69.34	298	P	P	04 46 42.5	-0.2
RAYN				IAmb	IAmb	04 46 43.4	
	comp=Z,43nm,1.1s						
RAYN	Ar Rayn	69.34	298	P	P	04 46 42.5	-0.2
RAYN				pmax	pmax		
	comp=Z,43nm,1.1s						
RAYN	Ar Rayn	69.34	298	i P	P	04 46 42.3	-0.4
	SNR=22						
RAYN	Ar Rayn	69.34	298	P	P	04 46 42.4	-0.3
RAYN	Ar Rayn	69.34	298	⇓P	P	04 46 42.3	-0.4
CCD	Concordia, Ant	69.77	176	P	P	04 46 46.3	+1.6
CCD				pP	pwP	04 48 42.5	+2.8
ABKAR	Akbulak array	69.92	328	P	P	04 46 45.9	+0.4
ABKAR	Akbulak array	69.92	328	P	P	04 46 45.9	+0.4
ABKAR				IAmb	IAmb	04 46 46.5	
	comp=Z,228nm,0.7s						
PEA0B	Petropavlovsk-	70.98	28	P	P	04 46 51.7	-0.1
PEA0B				IAmb	IAmb	04 46 52.4	
	comp=Z,27nm,0.7s						
PEA0B	Petropavlovsk-	70.98	28	⇓eP	P	04 46 51.6	-0.1
PETK	Petropavlovsk-	70.98	28	P	P	04 46 50.8	-1.0
	comp=Z,19nm,0.6s,baz=199,slow=4.2,SNR=33						
	comp=Z,19nm,0.6s						
PETK	Petropavlovsk-	70.98	28	P	P	04 46 51.0	-0.6
PETK	Petropavlovsk-	70.98	28	P	P	04 46 51.1	-0.6
PET	Petropavlovsk	71.38	29	eP	P	04 46 53.5	-0.5
PET				pmax	pmax		
	comp=Z,78nm,0.7s						
PET	Petropavlovsk	71.38	29	P	P	04 46 53.7	-0.3
AKTO	Aktyubinsk	71.61	328	P	P	04 46 55.5	0.0
	comp=Z,48nm,0.6s,baz=79,slow=1.8,SNR=157						
	comp=Z,48nm,0.6s						
KIBK	Kibwezi	71.91	269	P	P	04 46 58.9	+0.8
KIBK	Kibwezi	71.91	269	P	P	04 46 58.2	+0.1
MA2	Magadan	72.58	20	P	P	04 47 01.2	+0.3
MA2				IAmb	IAmb	04 47 02.0	
	comp=Z,42nm,0.8s						
MA2	Magadan	72.58	20	P	P	04 47 01.1	+0.2
MA2	Magadan	72.58	20	d iP	P	04 47 00.9	0.0
MA2				pmax	pmax		
	comp=Z,61nm,1.0s						
KMBO	Kilima Mbogo	72.81	271	P	P	04 47 04.5	+1.0
KMBO	Kilima Mbogo	72.81	271	P	P	04 47 04.5	+1.0
KMBO				pmax	pmax		
	comp=Z,11nm,0.7s						
KMBO	Kilima Mbogo	72.81	271	P	P	04 47 03.4	-0.1
AKT	Akhty	73.63	316	eP	P	04 47 07.7	+0.3
AKT				pmax	pmax		
	comp=Z,33nm,0.6s						
AKT				pmax	pmax		
	comp=N,108nm,0.4s						
SVE	Sverdlovsk	74.14	334	⇑eP	P	04 47 09.8	0.0
SVE				pmax	pmax		
	comp=Z,69nm,0.9s						
MAK	Makhachkala	74.37	317	eP	P	04 47 11.5	+0.1
MAK				e*PP	pP	04 49 04.8	-1.3
MAK				e*SP	sP	04 50 03.7	+1.0
MAK				ePPP	PPP	04 51 55.1	
MAK				eS	S	04 56 01.1	-0.7
MAK				pmax	pmax		
	comp=Z,259nm,1.4s						
ARU	Arti	74.81	333	P	P	04 47 13.2	-0.3
	comp=Z,20nm,0.6s,baz=120,slow=2.8,SNR=35						
	comp=Z,20nm,0.6s						
ARU	Arti	74.81	333	P	P	04 47 13.6	+0.1
LODK	Lodwar	75.18	275	P	P	04 47 17.3	+0.6
LODK	Lodwar	75.18	275	P	P	04 47 16.8	+0.1
GNI	Garni	75.23	314	P	P	04 47 16.9	+0.3
GNI				IAmb	IAmb	04 47 24.2	
	comp=Z,30nm,0.7s						
GNI	Garni	75.23	314	deP	P	04 47 16.8	+0.3
GNI				pmax	pmax		
	comp=Z,26nm,0.6s						
SEY	Seymchan	75.57	19	d iP	P	04 47 17.7	0.0
SEY				pmax	pmax		
	comp=Z,54nm,1.4s						
GROC	Groznyy	75.62	317	eP	P	04 47 16.6	-1.8
GROC				e		04 50 14.7	
GROC				eS	S	04 56 12.6	-2.7
GROC				pmax	pmax		
	comp=Z,256nm,1.2s						
GEVA	Gevas	75.84	312	P	P	04 47 20.4	+0.4
GEVA				IAmb	IAmb	04 47 21.3	
	comp=Z,46nm,0.8s						
NRIK	Noril'sk	76.46	352	P	P	04 47 21.9	-0.5
	comp=Z,12nm,0.4s,baz=145,slow=5.4,SNR=26						
NRIK				PP	PP	04 50 23.6	-0.8
	comp=Z,21nm,1.0s,baz=148,slow=8.6,SNR=9.5						
	comp=Z,12nm,0.4s						
NRIK	Noril'sk	76.46	352	P	P	04 47 22.1	-0.3
NRIK	Noril'sk	76.46	352	d iP	P	04 47 21.8	-0.7
NRIK				pmax	pmax		
	comp=Z,42nm,1.0s						
KARS	Kars	76.59	314	P	P	04 47 24.2	+0.2
KARS	Kars	76.59	314	P	P	04 47 24.2	+0.2
KARS				pmax	pmax		
	comp=Z,384nm,0.8s						
GURO	Guroymak-BITLI	76.68	312	P	P	04 47 25.1	+0.6
GURO				IAmb	IAmb	04 47 26.2	
	comp=Z,88nm,1.1s						
VNDA	Vanda	76.69	170	P	P	04 47 24.6	+0.9
	comp=Z,8.2nm,0.6s,baz=319,slow=7.2,SNR=10						
	comp=Z,8.2nm,0.6s						
ZEI	Tsey	76.76	316	eP	P	04 47 21.9	-3.0
ZEI				pmax	pmax		
	comp=Z,73nm,1.4s						
ONI	Oni	77.00	316	P	P	04 47 25.9	-0.2
ONI	Oni	77.00	316	P	P	04 47 25.9	-0.2
ONI				pmax	pmax		
	comp=Z,20nm,0.9s						
NCK	Nalchik	77.22	317	⇓eP	P	04 47 27.7	+0.5
NCK				pmax	pmax		
	comp=Z,60nm,0.8s						
NEY	Neytrino	77.73	316	deP	P	04 47 31.5	+1.3
NEY				pmax	pmax		
	comp=Z,18nm,0.9s						
KBZ	Khabaz	77.77	317	P	P	04 47 30.9	+0.8
	comp=Z,58nm,0.9s,baz=110,slow=4.1,SNR=55						
	comp=Z,58nm,0.9s						
KBZ	Khabaz	77.77	317	d iP	P	04 47 30.6	+0.5
KBZ				pmax	pmax		
	comp=Z,78nm,0.9s						
KIV	Kislovodsk	78.00	317	⇓P	P	04 47 31.6	+0.1
KIV	Kislovodsk	78.00	317	P	P	04 47 31.9	+0.3
KIV				IAmb	IAmb	04 47 33.7	
	comp=Z,38nm,0.7s						
KIV	Kislovodsk	78.00	317	eP	P	04 47 31.8	+0.3
KIV				pmax	pmax		
	comp=Z,53nm,1.0s						
KIV	Kislovodsk	78.00	317	i P	P	04 47 31.8	+0.3
	SNR=10						
KIV	Kislovodsk	78.00	317	P	P	04 47 31.5	0.0
TIXI	Tiksi	78.17	6	P	P	04 47 30.9	-0.8
TIXI				IAmb	IAmb	04 47 31.8	
	comp=Z,95nm,0.8s						
TIXI	Tiksi	78.17	6	ceP	P	04 47 30.6	-1.1
TIXI				pmax	pmax		
	comp=Z,80nm,0.6s						
BELG	Belogornoye	78.23	326	P	P	04 47 32.3	-0.1
	comp=Z,88nm,0.5s,baz=324,slow=1.1,SNR=63						
	comp=Z,88nm,0.5s						
KOPT	Kop Dagi	78.27	313	P	P	04 47 34.0	+0.7
KOPT				IAmb	IAmb	04 47 41.3	
	comp=Z,65nm,0.8s						
ASF	Jabal al Asfar	78.94	304	P	P	04 47 38.2	+1.5
	comp=Z,56nm,0.8s,baz=125,slow=3.4,SNR=10						
	comp=Z,56nm,0.8s						
MBAR	Mbarara	79.34	270	P	P	04 47 40.9	+1.5
	comp=Z,46nm,0.7s,baz=84,slow=7.4,SNR=22						
	comp=Z,46nm,0.7s						
MBAR	Mbarara	79.34	270	P	P	04 47 40.2	+0.8
MBAR				IAmb	IAmb	04 47 41.6	
	comp=Z,47nm,0.7s						
MBAR	Mbarara	79.34	270	P	P	04 47 39.0	-0.4
SOC	Sochi	79.91	316	eP	P	04 47 40.9	-0.6
SOC				e*PP	pP	04 49 34.3	-4.1
SOC				e*SP	sP	04 50 32.9	-1.6
SOC				e		04 50 50.7	
SOC				ePPP	PPP	04 52 44.2	
SOC				eS	S	04 56 59.9	-0.5
SOC				eSSS	SSS	05 05 54.1	
SOC				pmax	pmax		
	comp=Z,105nm,0.6s						
GAZ	Gaziantep	79.94	309	P	P	04 47 43.0	+1.1
GAZ				IAmb	IAmb	04 47 43.9	
	comp=Z,81nm,1.1s						
EIL	Elat	80.00	301	P	P	04 47 43.2	+0.9
	comp=Z,40nm,0.8s,baz=122,slow=1.9,SNR=30						
	comp=Z,40nm,0.8s						
BEIL	Beino	80.09	306	eP	P	04 47 44.2	+1.4
RCY	Rachaya	80.12	305	eP	P	04 47 44.5	+1.4
KIRV	Kirov	80.13	332	P	P	04 47 42.4	+0.1
	comp=Z,82nm,0.7s,baz=122,slow=2.0,SNR=26						
	comp=Z,82nm,0.7s						
KIRV	Kirov	80.13	332	ceP	P	04 47 42.3	0.0
HWQ	Hawqa	80.22	306	eP	P	04 47 44.4	+0.9
BHL	Bhannes	80.36	306	eP	P	04 47 45.3	+1.1
MMAI	Mount Meron Ar	80.36	305	P	P	04 47 45.5	+1.2
	comp=Z,33nm,0.6s,baz=96,slow=7.9,SNR=43						
	comp=Z,33nm,0.6s						
LSZ	Lusaka	80.73	255	P	P	04 47 47.3	+0.7
LSZ	Lusaka	80.73	255	P	P	04 47 47.3	+0.7
LSZ				pmax	pmax		
	comp=Z,24nm,0.8s						
VRH	Novokhopyorsk	81.13	324	eP	P	04 47 47.1	-0.5
VRH				pmax	pmax		
	comp=Z,73nm,1.5s						
TOKA	Tokat	81.31	312	P	P	04 47 50.1	+1.2
TOKA				IAmb	IAmb	04 47 51.6	
	comp=Z,93nm,0.8s						
BNN	Bunyan	81.41	311	P	P	04 47 50.4	+0.8
AMKA	Amchitka	81.69	36	P	P	04 47 50.5	0.0
ANN	Anapa	81.84	317	eP	P	04 47 51.5	+0.1
ANN				eS	S	04 57 19.6	-0.2
ANN				pmax	pmax		
	comp=Z,93nm,1.0s						
CSS	Mathiatis	82.47	306	P	P	04 47 55.4	+0.5
DIKM	Dikmen	82.54	313	⇓P	P	04 47 56.2	+1.1
LBTB	Lobatse	82.64	246	P	P	04 47 56.3	+0.2
LBTB	Lobatse	82.64	246	P	P	04 47 56.3	+0.2
LBTB				pmax	pmax		
	comp=Z,20nm,1.1s						
VSR	Storozhevoye	82.65	323	eP	P	04 47 54.7	-0.7
VSR				pmax	pmax		
	comp=Z,60nm,0.6s						
VORR	Voronezh	82.77	324	eP	P	04 47 55.9	-0.1
VORR				pmax	pmax		
	comp=Z,70nm,1.4s						
BOSA	Boshof	82.78	242	P	P	04 47 57.5	+0.8
	comp=Z,6.2nm,0.6s,baz=108,slow=3.5,SNR=15						
	comp=Z,6.2nm,0.6s						
BOSA	Boshof	82.78	242	P	P	04 47 57.6	+0.8
LPSR	Galich'ya Gora	83.23	324	eP	P	04 47 58.1	-0.1
LPSR				pmax	pmax		
	comp=Z,90nm,0.8s						
BR131	Keskin Array S	83.28	311	P	P	04 47 59.4	+0.4
BR131				IAmb	IAmb	04 48 00.2	
	comp=Z,86nm,0.8s						
BR131	Keskin Array S	83.28	311	P	P	04 47 59.4	+0.4
BR131				pmax	pmax		
	comp=Z,86nm,0.8s						
BR131	Keskin Array S	83.28	311	P	P	04 47 59.0	0.0
	SNR=26						
BRTR	Keskin Array B	83.28	311	P	P	04 47 59.1	+0.1
	comp=Z,48nm,0.8s,baz=128,slow=6.7,SNR=217						
BRTR				pP	pP	04 49 56.3	-0.9
	comp=Z,3.5nm,0.9s,baz=121,slow=6.2,SNR=4.2						
	comp=Z,48nm,0.8s						
BRTR	Keskin Array B	83.28	311	P	P	04 47 59.3	+0.4
BILL	Bilibino	83.28	18	P	P	04 47 57.6	-0.6
BILL	Bilibino	83.28	18	c iP	P	04 47 57.7	-0.5
BILL				i *PP	pP	04 49 57.8	+1.4
BILL				eS	S	04 57 29.9	-3.3
BILL				pmax	pmax		
	comp=Z,17nm,0.7s						
BZK	Bozkurt	83.52	313	P	P	04 47 57.9	-2.1
KIWB	Kanaga Island	83.94	37	P	P	04 48 01.7	-0.1
ANTO	Ankara	83.94	311	P	P	04 48 02.8	+0.6
ANTO				IAmb	IAmb	04 48 03.8	
	comp=Z,46nm,1.1s						
ANTO	Ankara	83.94	311	P	P	04 48 02.8	+0.6
ANTO				pmax	pmax		
	comp=Z,47nm,1.1s						
BR231	Keskin MP Arra	83.95	311	P	P	04 48 02.9	+0.6
BR231				IAmb	IAmb	04 48 03.9	
	comp=Z,58nm,1.1s						
QSPA	South Pole Qui	84.29	180	P	P	04 48 04.5	+1.0
	comp=Z,15nm,0.6s,baz=284,slow=1.0,SNR=26						
	comp=Z,15nm,0.6s						
QSPA	South Pole Qui	84.29	180	P	P	04 48 04.1	+0.6
QSPA					pP	04 50 03.3	+1.4
MOS	Moscow	84.93	327	eP	P	04 48 05.3	-1.3
MOS				pmax	pmax		
	comp=Z,200nm,1.0s						
MOS				pmax	pmax		
	comp=Z,141nm,0.8s						
MDUB	Mudurnu	85.27	311	P	P	04 48 09.3	+0.6
ISP	Isparta	85.27	309	P	P	04 48 08.6	-0.2
ISP				IAmb	IAmb	04 48 10.9	
	comp=Z,29nm,0.5s						
ISP	Isparta	85.27	309	P	P	04 48 08.6	-0.2
ISP				pmax	pmax		
	comp=Z,29nm,0.5s						
OBN	Obninsk	85.32	326	⇑P	P	04 48 08.4	0.0
OBN	Obninsk	85.32	326	P	P	04 48 07.9	-0.6
	comp=Z,38nm,0.7s,baz=90,slow=2.9,SNR=38						
OBN				pP	pP	04 50 08.2	+0.9
	comp=Z,4.5nm,0.4s,baz=157,slow=23,SNR=2.1						
	comp=Z,38nm,0.7s						
OBN	Obninsk	85.32	326	P	P	04 48 08.8	+0.3

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OBN   Obninsk           85.32 326d iP      P        04 48 08.5  0.0
OBN                               e*PP     pP       04 50 08.6 +1.2
OBN                               e                 04 51 35.8
OBN                                pmax    pmax
      comp=Z,195nm,0.8s
ELL   Elmali            85.55 307  P       P        04 48 10.2  0.0
ELL   Elmali            85.55 307  P       P        04 48 10.2  0.0
ELL                                pmax    pmax
      comp=Z,157nm,0.6s
KLMR  Klimovskoe        85.63 332⇓iP      P        04 48 09.4 -0.4
KLMR                              eP       P        04 48 09.4 -0.4
KLMR                              eP       P        04 48 09.4 -0.4
KLMR                               AMP              04 48 10.8
      comp=Z,164nm,1.3s
KLMR                              epP      pP       04 50 07.5 -1.4
KLMR  Klimovskoe        85.63 332d iP      P        04 48 09.4 -0.4
KLMR                              e*PP     pP       04 50 07.4 -1.4
KLMR                               pmax    pmax
      comp=Z,164nm,1.3s
AKAS  Kas               85.70 307  P       P        04 48 10.0 -1.0
BORA  Eskisehir         85.71 311  P       P        04 48 11.4 +0.5
BORA                               IAmb    IAmb     04 48 12.0
      comp=Z,64nm,0.8s
SUR   Sutherland        86.38 238  P       P        04 48 14.7 +0.3
ARG   Arkhangelos       86.87 307  P       P        04 48 17.2 +0.9
ARG   Arkhangelos       86.87 307  P       P        04 48 17.2 +0.9
ARG                                pmax    pmax
      comp=Z,88nm,1.1s
MANT  Manisa            86.91 309  P       P        04 48 17.3 +0.6
MANT                               IAmb    IAmb     04 48 18.3
      comp=Z,65nm,0.9s
ADZR  Andozero          87.20 335 eP       P        04 48 15.3 -1.8
ADZR                               pmax    pmax
      comp=Z,21nm,0.6s
PURM  Purcari           87.39 317 ⇓P       P        04 48 18.7 +0.2
KARP  Karpathos         87.54 306  P       P        04 48 20.6 +1.1
BALB  Balikesir         87.62 310  P       P        04 48 19.9 +0.2
TLCR                    87.87 316 ⇑P       P        04 48 21.1 +0.4
TLCR                    87.87 316  P       P        04 48 21.1 +0.4
TIRR  Tirgusor          88.03 315 ⇓P       P        04 48 21.8 +0.3
TIRR  Tirgusor          88.03 315  P       P        04 48 21.8 +0.3
CFR   Carcaliu          88.35 316 ⇑P       P        04 48 23.4 +0.4
CFR   Carcaliu          88.35 316  P       P        04 48 23.3 +0.4
AKASG Malin Array Be    88.60 321  P       P        04 48 23.3 -0.7
      comp=Z,18nm,0.6s,baz=74,slow=3.8,SNR=190
AKASG                              pP      pP       04 50 23.8 -0.3
      comp=Z,2.0nm,0.7s,baz=67,slow=4.2,SNR=3.2
AKASG                              PP      PP       04 52 01.3 -1.4
      comp=Z,5.2nm,0.8s,baz=82,slow=5.9,SNR=5.1
      comp=Z,18nm,0.6s
AKBB  Malin Array Si    88.60 321  P       P        04 48 23.5 -0.6
AKBB  Malin Array Si    88.60 321ceP       P        04 48 23.2 -0.8
SORM  Soroca            88.70 318 ⇓P       P        04 48 24.0 -0.5
SORM  Soroca            88.70 318  P       P        04 48 24.0 -0.5
NIKH  Nikolski High     89.13  37  P       P        04 48 27.7 +1.2
      baz=259
ALN   Alexandroupoli    89.20 311  P       P        04 48 27.2 +0.2
ALN                                IAmb    IAmb     04 48 27.7
      comp=Z,15nm,0.7s
ALN   Alexandroupoli    89.20 311  P       P        04 48 27.2 +0.2
ALN                                pmax    pmax
      comp=Z,15nm,0.7s
IDI   Anoyia            89.34 305  P       P        04 48 28.3 +0.4
      comp=Z,9.6nm,0.4s,baz=347,slow=4.4,SNR=16
      comp=Z,9.6nm,0.4s
VRI   Vrincioaia        89.43 316 ⇑P       P        04 48 28.3 +0.2
VRI   Vrincioaia        89.43 316  P       P        04 48 28.3 +0.2
PLOR  Plostina          89.48 316 ⇑P       P        04 48 28.9 +0.6
PLOR  Plostina          89.48 316  P       P        04 48 28.9 +0.6
TESR  Tescani           89.58 317 ⇓P       P        04 48 28.7  0.0
RDO   Rodhopi           89.61 311  P       P        04 48 29.0  0.0
RDO                                IAmb    IAmb     04 48 29.6
      comp=Z,13nm,0.8s
COVR  Voineasa-Covas    89.79 316 ⇓P       P        04 48 29.4 -0.4
MLR   Muntele Rosu      89.92 316 ⇑P       P        04 48 30.9 +0.4
MLR   Muntele Rosu      89.92 316  P       P        04 48 30.3 -0.2
      comp=Z,11nm,0.7s,baz=201,slow=1.6,SNR=12
MLR                                PP      PP       04 52 13.2 -0.2
      comp=Z,19nm,0.9s,baz=248,slow=3.3,SNR=8.8
      comp=Z,11nm,0.7s
MLR   Muntele Rosu      89.92 316  P       P        04 48 30.7 +0.2
MLR                                IAmb    IAmb     04 48 31.5
      comp=Z,18nm,0.9s
MLR   Muntele Rosu      89.92 316  P       P        04 48 30.9 +0.4
MNK   Minsk             90.08 325 i P      P        04 48 31.4 +0.6
      comp=E,2.0nm,0.8s
MNK                               i P      P        04 48 31.4 +0.6
      comp=N,20nm,0.7s
MNK                               i P      P        04 48 31.4 +0.6
      comp=Z,41nm,0.9s,baz=99
MNK                               i pP     pP       04 50 31.8 +0.7
MNK                               i PP     PP       04 52 14.2 +0.1
MNK                               i PPP    PPP      04 54 16.8
MNK                               i S      SKSac    04 58 09.0 -0.3
MNK                               i sS     sS       05 01 57.4  -15
MNK                               i SS     SS       05 04 53.9 +0.9
MNK                               i SSS    SSS      05 08 38.2
MNK   Minsk             90.08 325 i P      P        04 48 31.3 +0.6
MNK                               i *PP    pP       04 50 31.8 +0.7
MNK                               i                 04 52 14.1
MNK                               i PPP    PPP      04 54 16.8
MNK                               i S      SKSac    04 58 09.0 -0.3
MNK                               i SS     SS       05 04 53.9 +0.9
MNK                               i SSS    SSS      05 08 38.1
MNK                                pmax    pmax
      comp=E,2.0nm,0.8s
MNK                                pmax    pmax
      comp=Z,41nm,0.9s
MNK                                pmax    pmax
      comp=N,20nm,0.7s
COPA  Copaceanca        90.25 314 ⇓P       P        04 48 31.8  0.0
DOPR  Dopca             90.37 316 ⇑P       P        04 48 32.5 +0.1
VOIR                    90.54 315 ⇑P       P        04 48 32.5 -0.8
VOIR                    90.54 315  P       P        04 48 32.4 -0.8
PLVB  Pleven            90.58 313 ⇓P       P        04 48 33.6 +0.2
UNV   Unalaska Valle    90.67  36  P       P        04 48 33.2 -0.3
      baz=261
BURAR Bucovina Array    90.71 318 ⇑P       P        04 48 34.9 +0.9
BURAR Bucovina Array    90.71 318  P       P        04 48 34.8 +0.8
BURAR                              IAmb    IAmb     04 48 36.2
      comp=Z,17nm,0.8s
BURAR Bucovina Array    90.71 318  P       P        04 48 34.9 +0.8
BUR08 Bucovina Ar. S    90.72 318  P       P        04 48 34.8 +0.7
BUR08                              IAmb    IAmb     04 48 36.0
      comp=Z,14nm,0.8s
NACGM Naroch            90.77 325 eP       P        04 48 34.6 +0.6
      comp=Z,59nm,1.0s,baz=98
ARR   Arges             90.82 315 ⇑P       P        04 48 34.5 -0.1
ISAL  Salakas           91.24 326 eP       P        04 48 38.1 +2.0
VSU   Vasula            91.33 329 eP       P        04 48 36.9 +0.4
LOT   Lotru             91.43 315 ⇓P       P        04 48 37.8 +0.4
VTS   Vitosha           91.50 312  P       P        04 48 40.5 +2.7
VTS                                IAmb    IAmb     04 48 42.1
      comp=Z,14nm,0.9s
VTS   Vitosha           91.50 312  P       P        04 48 40.5 +2.7
VTS                                pmax    pmax
      comp=Z,14nm,0.9s
LVV   L'vov             91.76 320 eP       P        04 48 37.9 -0.8
LIT   Litokhoron        91.79 310  P       P        04 48 38.5 -0.6
LIT   Litokhoron        91.79 310  P       P        04 48 38.5 -0.6
LIT                                pmax    pmax
      comp=Z,43nm,0.7s
AGG   Agios Georgios    91.80 309  P       P        04 48 38.4 -0.8
AGG   Agios Georgios    91.80 309  P       P        04 48 38.4 -0.8
AGG                                pmax    pmax
      comp=Z,3.0nm,0.6s
TNA   Tin City          91.83  24  P       P        04 48 39.1 +0.6
TNA   Tin City          91.83  24  P       P        04 48 39.2 +0.6
      baz=260,SNR=9.8
ITM   Ithomi            91.94 307  P       P        04 48 39.7 -0.2
ITM                                IAmb    IAmb     04 48 51.8
      comp=Z,13nm,0.8s
MARR  Marisel-Cluj      92.02 317 ⇑P       P        04 48 40.5 +0.4
FIA1  FINESS Array S    92.09 331  P       P        04 48 40.1 +0.2
FIA1                               IAmb    IAmb     04 48 41.5
      comp=Z,14nm,0.8s
FINES FINESS Array B    92.09 331  P       P        04 48 39.8 -0.1
      comp=Z,11nm,0.6s,baz=116,slow=6.8,SNR=85
FINES                              PKiKP   PKiKP    04 53 26.0 +0.1
      comp=Z,3.2nm,1.0s,baz=122,slow=3.2,SNR=7.7
FINES                              PKKP    PKKPdf   05 05 52.9 +0.6
      comp=Z,2.1nm,1.0s,baz=225,slow=1.9,SNR=9.2
      comp=Z,11nm,0.6s
FINES FINESS Array B    92.09 331  P       P        04 48 40.1 +0.2
FINES FINESS Array B    92.09 331  P       P        04 48 40.1 +0.2
GZR   Gura Zlata        92.12 315 ⇑P       P        04 48 41.6 +1.1
GZR   Gura Zlata        92.12 315  P       P        04 48 41.6 +1.1
VADS  Vadso             92.16 340 eP       P        04 48 39.3 -0.7
DRGR                    92.31 317 ⇑P       P        04 48 41.4  0.0
DRGR                    92.31 317  P       P        04 48 41.4  0.0
HERR  Herculane         92.33 315 ⇑P       P        04 48 41.2 -0.2
PABE  Paberze           92.45 325  P       P        04 48 42.1 +0.5
PABE  Paberze           92.45 325 eP       P        04 48 41.6  0.0
VSVD  Vaisvydziai       92.52 326 eP       P        04 48 42.3 +0.3
TRPA  Tarpa             92.56 318 ⇑P       P        04 48 42.3 -0.1
BOVS  Bovan             92.72 313 ⇑P       P        04 48 42.5 -0.7
ANM   Nome              92.75  25  P       P        04 48 43.7 +0.9
ANM   Nome              92.75  25  P       P        04 48 43.7 +0.9
ANM                                pmax    pmax
      comp=Z,5.0nm,0.8s
ANM   Nome              92.75  25  P       P        04 48 43.8 +0.9
      baz=263,SNR=6.9
MEF   Metsahovi         92.75 330 eP       P        04 48 43.6 +0.7
MDVR  Moldovita         92.81 315 ⇓P       P        04 48 43.6 -0.1
MTSE  Matsula           92.88 329 eP       P        04 48 43.8 +0.2
BZS   Buzias            92.96 315 ⇓P       P        04 48 43.9 -0.4
BZS   Buzias            92.96 315  P       P        04 48 43.8 -0.4
SIRR  Siria             92.98 316 ⇑P       P        04 48 44.1 -0.3
ARA0  ARCESS Array S    93.39 339 eP       P        04 48 45.1 -0.6
ARA0                               IAmb    IAmb     04 48 45.5
      comp=Z,30nm,1.2s
ARCES ARCESS Array B    93.39 339  P       P        04 48 44.8 -1.0
      comp=Z,11nm,0.8s,baz=99,slow=6.3,SNR=31
ARCES                              PKiKP   PKiKP    04 53 27.9 -0.2
      comp=Z,2.9nm,0.9s,baz=84,slow=2.8,SNR=4.7
      comp=Z,11nm,0.8s
ARCES ARCESS Array B    93.39 339  P       P        04 48 44.9 -0.8
ARCES                              IAmb    IAmb     04 48 45.7
      comp=Z,18nm,1.1s
ARCES ARCESS Array B    93.39 339  P       P        04 48 44.9 -0.8
ARCES                              pmax    pmax
      comp=Z,18nm,1.1s
STHS  Stebnicka Huta    93.53 319 eP       P        04 48 47.0 +0.2
STHS                               pmax    pmax
      comp=Z,9.0nm,0.7s
STHS  Stebnicka Huta    93.53 319 eP       P        04 48 47.0 +0.2
DIVS  Divibare          93.99 314  P       P        04 48 48.8 -0.3
DIVS                               IAmb    IAmb     04 48 49.8
      comp=Z,10nm,0.8s
RDOG  Red Dog Mine      94.11  22  P       P        04 48 50.3 +1.3
      baz=265
RAF   Rauma             94.12 331 eP       P        04 48 46.6 -2.6
FRGS  Fruska Gora       94.19 315 ⇑P       P        04 48 50.1 +0.1
PSZ   Piszkesteto       94.31 318 ⇑P       P        04 48 49.9 -0.6
PSZ   Piszkesteto       94.31 318  P       P        04 48 50.1 -0.4
PSZ   Piszkesteto       94.31 318  P       P        04 48 50.1 -0.4
PSZ                                pmax    pmax
      comp=Z,6.0nm,0.8s
HOPEN Hopen             94.34 346 eP       P        04 48 49.3 -0.6
PDG   Podgorica         94.41 312 ⇑P       P        04 48 50.8 -0.2
PDG   Podgorica         94.41 312  P       P        04 48 50.3 -0.6
VYHS  Vyhne             95.05 318 eP       P        04 48 53.3 -0.5
VYHS  Vyhne             95.05 318 ePDIFF   P        04 48 53.3 -0.5
MORH  Mrgy, Hungar      95.07 316 ⇓P       P        04 48 53.2 -0.6
JETT  Jettan, Norway    95.18 339 eP       P        04 48 52.9 -1.0
JETT                               IAmb    IAmb     04 48 54.3
      comp=Z,15nm,0.6s
N16K  Nishlik Lake      95.47  30  P       P        04 48 56.4 +1.0
      baz=268
TRO   Tromso            95.70 339 eP       P        04 48 55.6 -0.5
O16K  Kokwok River B    95.79  31  P       P        04 48 57.4 +0.6
      baz=269
JAVC  Velka Javorina    95.84 318 eP       P        04 48 57.8 +0.4
MORC  Moravsky Berou    95.95 319 ⇑P       P        04 48 58.1 +0.3
MORC  Moravsky Berou    95.95 319  P       P        04 48 57.0 -0.8
MORC                               IAmb    IAmb     04 48 58.9
      comp=Z,8.2nm,1.0s
MORC  Moravsky Berou    95.95 319 eP       P        04 48 57.8  0.0
MORC  Moravsky Berou    95.95 319  P       P        04 48 58.1 +0.3
MODS  Modra-Piesok      96.08 318 eP       P        04 48 58.3 -0.1
MODS  Modra-Piesok      96.08 318 ePDIFF   P        04 48 58.3 -0.1
SPB2  Spitsbergen Ar    96.30 348  P       P        04 48 58.1 -0.7
O17K  Koliganek Bris    96.30  31  P       P        04 48 59.8 +0.7
      baz=270
SPA0  Spitsbergen Ar    96.30 348 eP       P        04 48 58.1 -0.7
SPA0                               IAmb    IAmb     04 48 58.6
      comp=Z,30nm,0.8s
SPITS Spitsbergen Ar    96.30 348  P       P        04 48 58.1 -0.7
SPITS                              pmax    pmax
      comp=Z,36nm,0.8s
GCSA  Galena City Sc    96.41  26  P       P        04 49 00.6 +1.2
      baz=270
KRLC  Kraliky           96.45 320 eP       P        04 49 00.2 +0.1
KRLC  Kraliky           96.45 320 eP       P        04 49 00.2 +0.1
VRAC  Vranov            96.56 319  P       P        04 49 00.2 -0.3
      comp=Z,1.4nm,0.4s,baz=26,slow=5.8,SNR=2.3
      comp=Z,1.4nm,0.4s
DPC   Dobruska-Polom    96.75 320 eP       P        04 49 01.6 +0.2
DPC   Dobruska-Polom    96.75 320 eP       P        04 49 01.6 +0.2
TTA   Tatalina          96.81  27  P       P        04 49 02.1 +0.7
      baz=271
OSTC  Ostas             96.82 320 eP       P        04 49 01.7  0.0
OSTC  Ostas             96.82 320 eP       P        04 49 01.7  0.0
CONA  Conrad Observa    97.02 317 ePdiff   Pdif     04 49 03.2 +0.4
      comp=Z,1.6nm,0.7s
CONA                              ePP      PP       04 53 07.2 -0.5
      comp=Z,9.7nm,1.5s
STEI  Steigen           97.06 338 eP       Pdif     04 49 01.3 -1.0
STEI                               IAmb    IAmb     04 49 02.6
      comp=Z,38nm,1.0s
FAUS  Fauske            97.07 337 eP       Pdif     04 49 01.6 -0.7
FAUS                               IAmb    IAmb     04 49 01.9
      comp=Z,38nm,1.1s
KBS   Kingsbay          97.12 349ceP       P        04 49 02.8 +0.4
KBS                                pmax    pmax
      comp=Z,63nm,2.5s
KBS   Kingsbay          97.12 349 eP       Pdif     04 49 01.5 -0.9
ARSA  Arzberg           97.25 317 ePdiff   Pdif     04 49 03.5 -0.2
      comp=Z,2.0nm,0.6s
ARSA                              ePP      PP       04 53 02.7 -6.7
      comp=Z,2.8nm,1.0s
O18K  Koktuh Hills      97.25  30  P       P        04 49 04.9 +1.5
      baz=271
L19K  White Mountain    97.36  28  P       P        04 49 04.0 +0.2
L19K                               IAmb    IAmb     04 49 05.9
      comp=Z,7.9nm,1.1s
L19K  White Mountain    97.36  28  P       P        04 49 05.1 +1.2
      baz=272
BOJS  Bojanci           97.42 315 i P      Pdif     04 49 04.0 -0.4
MOR8  Moi Rana          97.46 336 eP       Pdif     04 49 02.9 -1.3
SOKA  Soboth            97.58 316 ePdiff   Pdif     04 49 04.5 -0.7
      comp=Z,4.1nm,1.3s
SOKA                              ePP      PP       04 53 11.1 -0.9
      comp=Z,6.0nm,1.5s
N19K  Bonanza Creek     97.58  29  P       Pdif     04 49 04.3 -0.7
N19K                               IAmb    IAmb     04 49 08.0
      comp=Z,12nm,1.1s
N19K  Bonanza Creek     97.58  29  P       P        04 49 06.4 +1.4
      baz=272
M19K  Big River Lodg    97.59  28  P       P        04 49 06.1 +1.2
      baz=272
K20K  Telida            97.68  27  P       P        04 49 06.0 +0.8
K20K                               IAmb    IAmb     04 49 07.1
      comp=Z,5.6nm,0.9s
K20K  Telida            97.68  27  P       P        04 49 06.4 +1.1
      baz=273
O19K  Port Alsworth     97.69  30  P       P        04 49 06.6 +1.4
      baz=272
F21K  Alatna River      97.71  23  P       P        04 49 06.7 +1.5
      baz=274
G21K  Allakaket         97.74  24  P       P        04 49 06.6 +1.1
      baz=274
L20K  Farewell, AK      97.81  28  P       P        04 49 06.7 +0.9
      baz=273
OBKA  Obir              97.91 316 ePdiff   P        04 49 06.8  0.0
      comp=Z,6.2nm,1.3s
OBKA                              ePP      PP       04 53 08.1 -6.4
      comp=Z,4.3nm,1.1s
LJU   Ljubljana         97.92 316 i P      Pdif     04 49 06.6 -0.1
CKRC  Cesky Krumlov     98.06 318 eP       Pdif     04 49 06.4 -0.8
CKRC  Cesky Krumlov     98.06 318 eP       Pdif     04 49 06.4 -0.8
H21K  Melozitna Rive    98.09  25  P       P        04 49 08.1 +1.1
      baz=274
MOA   Molln             98.10 317 ePdiff   Pdif     04 49 06.9 -0.6
      comp=Z,1.5nm,0.8s
MOA                               ePP      PP       04 53 13.4 -2.4
      comp=Z,6.1nm,1.3s
CRNS  Crni Vrh          98.11 316 i P      Pdif     04 49 07.0 -0.5
M20K  Styx River        98.19  28  P       P        04 49 08.5 +0.9
      baz=273
F22K  John River        98.19  23  P       P        04 49 08.8 +1.3
      baz=275
CHUM  Lake Minchumin    98.43  26  P       P        04 49 10.2 +1.7
      baz=274
GERES GERESS Array B    98.46 318  P       Pdif     04 49 08.6 -0.5
      comp=Z,1.1nm,0.8s,baz=96,slow=2.7,SNR=9.4
GERES                              PP      PP       04 53 18.4 -0.2
      comp=Z,0.6nm,0.6s,baz=119,slow=4.7,SNR=5.1
      comp=Z,1.1nm,0.8s
I21K  Tanana            98.47  25  P       P        04 49 09.9 +1.2
      baz=275
KHC   Kasperske Hory    98.53 319 eP       Pdif     04 49 09.0 -0.4
KHC   Kasperske Hory    98.53 319 eP       Pdif     04 49 09.0 -0.4
O20K  Slope Mountain    98.54  30  P       P        04 49 09.7 +0.5
      baz=273
PPLA  Purkeypile        98.56  27  P       P        04 49 09.8 +0.4
      baz=274
CAST  Castle Rocks      98.57  27  P       P        04 49 10.1 +0.8
      baz=274
D23K  Nanushuk River    98.60  21  P       P        04 49 10.2 +1.0
      baz=276
NSS   Namsos            98.61 334 eP       Pdif     04 49 09.2 -0.1
H22K  Ishtalitna Cre    98.65  24  P       P        04 49 10.6 +1.0
      baz=275
SPCR  Spurr Chakacha    98.67  29  P       P        04 49 10.1 +0.2
      baz=274
KBA   Koelnbreinsper    98.73 317 ePdiff   P        04 49 12.2 +1.6
      comp=Z,3.4nm,1.1s
KBA                               ePP      PP       04 53 18.0 -2.8
      comp=Z,7.0nm,1.2s
CLL   Collm             98.84 321 i Pdif   Pdif     04 49 10.4 -0.2
CLL                               ex       x        04 53 12.0
CLL                               ePP      PP       04 53 20.0 -1.2
CLL   Collm             98.84 321 i P      Pdif     04 49 10.4 -0.2
COLD  Coldfoot          98.98  23  P       P        04 49 11.9 +0.9
      baz=277
BPAW  Bear Paw Mtn.     98.99  26  P       P        04 49 11.7 +0.6
      baz=276
MLY   Manley            99.00  25  P       Pdif     04 49 11.9 +0.8
      baz=276
E23K  Chandalar         99.10  22  P       Pdif     04 49 12.9 +1.4
      baz=277
G23K  Bananza Creek     99.11  23  P       Pdif     04 49 12.8 +1.3
      baz=277
NC602 NORSAR Array S    99.12 331 eP       Pdif     04 49 11.5 -0.1
NB2   NORSAR Subarra    99.25 331  P       Pdif     04 49 12.0 -0.3
      comp=Z,3.3nm,0.7s,baz=83,slow=4.6
NB2                                PP      PP       04 53 21.9 -2.1
      comp=Z,5.1nm,1.1s,baz=74,slow=9.3
NB2   NORSAR Subarra    99.25 331  P       Pdif     04 49 12.0 -0.3
      slow=4.6
NOA   NORSAR Array B    99.25 331  P       Pdif     04 49 12.1 -0.3
      comp=Z,4.1nm,0.8s,baz=83,slow=4.6,SNR=10
NOA                                PP      PP       04 53 24.9 +0.8
      comp=Z,0.6nm,0.6s,baz=103,slow=7.3,SNR=4.2
      comp=Z,4.1nm,0.8s
ABTA  Abfaltersbach     99.31 316 ePdiff   Pdif     04 49 13.8 +0.8
      comp=Z,3.7nm,1.1s
ABTA                              i PP     PP       04 53 19.7 -5.3
      comp=Z,4.5nm,1.1s
SUA   Susitna One       99.35  29  P       Pdif     04 49 13.2 +0.4
      baz=275
TRF   Thorofare Moun    99.37  27  P       Pdif     04 49 13.5 +0.6
      baz=276
H23K  Yukon River       99.41  24  P       Pdif     04 49 13.9 +1.0
      baz=277
BRSE  Bradley Lake S    99.51  30  P       Pdif     04 49 14.5 +1.0
      baz=275
E24K  Your Creek        99.52  22  P       Pdif     04 49 14.5 +1.2
      baz=278
I23K  Minto, Yukon-K    99.57  25  P       Pdif     04 49 15.0 +1.4
      baz=277
NEA2  Nenana            99.77  25  P       Pdif     04 49 15.5 +1.0
      baz=277
F24K  Squaw Lake        99.83  22  P       Pdif     04 49 15.8 +1.0
      baz=279
RC01  Rabbit Creek A    99.88  29  P       Pdif     04 49 15.5 +0.5
      baz=276
WTTA  Wattenberg        99.89 317 ePdiff   Pdif     04 49 16.3 +0.6
      comp=Z,9.4nm,1.5s
WTTA                              i PKiKP  PKiKP    04 53 40.6 +0.2
      comp=Z,4.6nm,0.6s
MCK   McKinley          99.94  26  P       Pdif     04 49 15.5 +0.3
      baz=277
D25K  Kavik River      100.07  21  P       Pdif     04 49 16.9 +1.2
      baz=281
H24K  Noodor Dome      100.09  24  P       Pdif     04 49 17.0 +1.1
      baz=279
G24K  Hadweenzic Riv   100.11  23  P       Pdif     04 49 17.0 +1.0
      baz=279
SEW   Seward           100.12  30  P       Pdif     04 49 17.0 +1.0
      baz=276
SQTA  Sankt Quirin     100.18 317 ePdiff   Pdif     04 49 16.7 -0.1
      comp=Z,2.3nm,0.6s
SQTA                              i PKiKP  PKiKP    04 53 38.2 -2.6
      comp=Z,4.7nm,1.2s
MOTA  Moosalm          100.25 317 ePdiff   Pdif     04 49 17.1 -0.1
      comp=Z,5.4nm,1.0s
MOTA                              i PKiKP  PKiKP    04 53 38.7 -2.3
      comp=Z,1.7nm,0.5s
KNK   Knik Glacier     100.45  29  P       Pdif     04 49 18.2 +0.5
      baz=277
C26K  Camden Bay       100.45  20  P       Pdif     04 49 18.6 +1.3
      baz=282
SML   Sawmill          100.46  28  P       Pdif     04 49 18.4 +0.7
      baz=278
RETA  Reutte           100.47 317 ePdiff   Pdif     04 49 18.9 +0.8
      comp=Z,5.3nm,0.0s
RETA                              i PKiKP  PKiKP    04 53 39.1 -2.2
      comp=Z,2.4nm,0.8s
FETA  Feichten         100.52 317 ePdiff   Pdif     04 49 19.3 +0.8
      comp=Z,4.1nm,1.2s
FETA                              i PKiKP  PKiKP    04 53 40.2 -1.2
      comp=Z,4.4nm,1.3s
PWL   Port Wells       100.58  29  P       Pdif     04 49 18.7 +0.5
      baz=277
E25K  Arctic Village   100.59  22  P       Pdif     04 49 18.8 +0.7
      baz=281
G25K  Bearman Lake     100.64  23  P       Pdif     04 49 18.3  0.0
      baz=280
F25K  Christian Rive   100.66  22  P       Pdif     04 49 19.1 +0.6
      baz=281
NOR   Nord             100.66 353 i P      Pdif     04 49 17.2 -1.0
NOR                                IAmb    IAmb     04 49 21.4
      comp=Z,0.9nm,0.6s
ILAR  Eielson Array    100.67  25  P       Pdif     04 49 17.2 -1.2
      comp=Z,0.3nm,0.9s,baz=279,slow=4.2,SNR=3.2
ILAR                               PKKPbc  PKKPbc   05 05 30.9 -2.0
      comp=Z,0.6nm,0.6s,baz=101,slow=1.4,SNR=7.1
M23K  Glacier View     100.75  28  P       Pdif     04 49 19.8 +0.9
      baz=278
C27K  Jago River       100.92  20  P       Pdif     04 49 21.0 +1.4
      baz=283
DAVA  Damuels          101.08 317 ePdiff   Pdif     04 49 21.4 +0.5
      comp=Z,6.8nm,1.3s
DAVA                              i PP     PP       04 53 34.6 -3.6
      comp=Z,8.5nm,0.9s
K24K  Donnelly Dome    101.31  26  P       Pdif     04 49 22.8 +1.4
      baz=280
M24K  Tolsona, Glenn   101.42  28  P       Pdif     04 49 22.9 +0.9
      baz=280
G26K  Porcupine Rive   101.50  23  P       Pdif     04 49 23.3 +1.2
      baz=283
PAX   Paxson           101.60  27  P       Pdif     04 49 23.6 +0.8
      baz=280
RIDG  Independent Ri   101.73  26  P       Pdif     04 49 23.7 +0.4
      baz=281
BLS5  Blasjo           101.81 329 eP       Pdif     04 49 23.7  0.0
HARP  HAARP            101.84  27  P       Pdif     04 49 24.5 +0.8
      baz=280
E27K  Coleen River     102.02  21  P       Pdif     04 49 25.4 +1.0
      baz=285
SCRK  Sand Creek       102.06  26  P       Pdif     04 49 25.6 +0.8
      baz=282
I26K  Coal Creek Min   102.12  24  P       Pdif     04 49 25.6 +0.7
      baz=283
J26L  Joseph Creek     102.12  25  P       Pdif     04 49 26.0 +0.9
      baz=282
N25K  Chitina, Valde   102.25  28  P       Pdif     04 49 26.2 +0.5
      baz=281
G27K  Doyon Strip      102.35  23  P       Pdif     04 49 26.9 +0.9
      baz=285
L26K  Log Cabin Wild   102.53  27  P       Pdif     04 49 27.9 +1.1
      baz=282
H27K  Steamboat Moun   102.55  23  P       Pdif     04 49 28.0 +1.1
      baz=285
I27K  Kandik River     102.67  24  P       Pdif     04 49 28.9 +1.4
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	baz=284						
M26K	Nabesna, AK	102.83	27	P	Pdif	04 49 29.8	+1.6
	baz=282						
K27K	Chicken	102.86	25	P	Pdif	04 49 29.6	+1.4
	baz=284						
MCARA	McCarthy VSAT	103.03	28	P	Pdif	04 49 30.4	+1.3
	baz=282						
L27K	Beaver Creek,	103.20	26	P	Pdif	04 49 31.6	+1.7
	baz=284						
M27K	Edge Creek, AK	103.34	27	P	Pdif	04 49 31.7	+1.1
	baz=283						
BVCY	Beaver Creek	103.79	27	P	Pdif	04 49 34.0	+1.6
	baz=284						
DAG	Danmarks Havn	103.85	349	iP	Pdif	04 49 32.0	-0.3
DAG				IAmb	IAmb	04 49 35.5	
	comp=Z,1.8nm,0.8s						
CTG	Chitna Glacier	103.92	28	P	Pdif	04 49 34.5	+1.3
	baz=284						
YUK3	Moose Creek	104.14	28	P	Pdif	04 49 34.4	+0.2
	baz=285						
G30M	tAoh Zraii Nji	104.35	22	P	Pdif	04 49 35.4	+0.5
	baz=290						
INK	Inuvik	104.83	20	P	Pdif	04 49 36.9	+0.1
	baz=293						
K29M	Barlow Dome	104.85	25	P	Pdif	04 49 37.7	+0.5
	baz=288						
F31M	Tsiigehtchic	105.08	21	P	PKiKP	04 53 49.6	+0.6
	baz=292						
M30M	Minto, Yukon	105.56	26	P	PKiKP	04 53 50.9	+0.8
	baz=288						
N30M	Aishikik Lake	105.77	27	P	PKiKP	04 53 51.4	+0.9
	baz=288						
N31M	Braeburn, Yuko	106.36	27	P	PKiKP	04 53 52.0	+0.4
	baz=289						
FARO	Faro, Yukon	107.19	26	P	PKiKP	04 53 53.6	+0.5
	baz=291						
C36M	Paulatuk	107.39	18	P	PKiKP	04 53 53.4	+0.2
	baz=302						
NEEM	North Greenlan	107.59	356	iP	Pdif	04 49 49.5	+0.1
NEEM				IAmb	IAmb	04 49 50.5	
	comp=Z,5.9nm,0.8s						
N32M	Quiet Lake	107.70	27	P	PKiKP	04 53 54.6	+0.5
	baz=291						
EKA	Eskdalemuir Ar	107.78	327	PKiKP	PKiKP	04 53 54.3	0.0
	comp=Z,1.6nm,0.8s,baz=29,slow=2.4,SNR=3.9						
P32M	Atlin	107.96	29	P	PKiKP	04 53 55.5	+0.9
	baz=290						
R32K	Eaglecrest	108.01	30	P	PKiKP	04 53 55.6	+0.9
	baz=289						
P33M	Teslin, Yukon	108.16	28	P	PKiKP	04 53 56.1	+1.0
	baz=291						
SCO	Scoresbysund	108.47	345	eP	Pdif	04 49 51.1	-1.9
SCO				IAmb	IAmb	04 49 53.9	
	comp=Z,5.8nm,1.1s						
TORD	Torodi Ar. Bea	109.16	282	PKiKP	PKiKP	04 53 57.9	-0.2
	comp=Z,2.8nm,0.6s,baz=51,slow=2.0,SNR=32						
U33K	Whale Pass	109.44	32	P	PKiKP	04 53 58.4	+1.0
	baz=290						
WRGLY	Wrigley	110.83	23	P	PKiKP	04 54 01.0	+1.1
	baz=301						
LIRD	Liard River Hi	111.58	27	P	PKiKP	04 54 02.5	+1.1
	baz=297						
ESDC	Sonseca Array	112.07	310	PKiKP	PKiKP	04 54 03.4	+0.4
	comp=Z,1.1nm,0.5s,baz=22,slow=2.8,SNR=13						
ESDC				PP	PP	04 54 58.4	+0.8
	comp=Z,0.9nm,1.0s,baz=79,slow=7.4,SNR=4.1						
KOTAN	Kotaneelee Air	112.15	26	P	PKiKP	04 54 03.8	+1.3
	baz=299						
MDT	Midelt	113.78	303	PKiKP	PKiKP	04 54 07.2	+0.6
	comp=Z,2.9nm,0.8s,baz=36,slow=1.9,SNR=6.3						
YKA	Yellowknife Ar	114.56	21	PKiKP	PKPdf	04 54 06.8	-0.2
	comp=Z,5.7nm,0.6s,baz=330,slow=1.8,SNR=105						
YKA				SKP		04 56 49.6	
	comp=Z,1.4nm,0.8s,baz=309,slow=1.8,SNR=8.6						
YKA				PKKPbc	PKKPbc	05 04 47.0	-2.8
	comp=Z,0.4nm,0.7s,baz=136,slow=2.9,SNR=6.8						
KIC	Kosan Boka	115.23	274	⇑iPKIKP	PKPdf	04 54 09.6	-0.1
	comp=Z,4.6nm,0.6s						
DBIC	Dimbokro	115.36	275	PKP	PKPdf	04 54 09.5	-0.5
	comp=Z,5.4nm,0.6s,baz=118,slow=3.2,SNR=10						
LIC	Lamto	115.50	274	⇑iPKIKP	PKPdf	04 54 10.1	-0.2
	comp=Z,25nm,0.7s						
TIC	Toumodi	115.52	275	⇓iPKIKP	PKPdf	04 54 09.9	-0.4
	comp=Z,8.5nm,0.6s						
J05D	Fort Rock, OR	121.43	42	PKPdf	PKiKP	04 54 21.8	+0.6
NEW	Newport	121.67	35	P	PKiKP	04 54 22.1	+0.7
	baz=301						
PLID	Pearl Lake	123.95	38		PKiKP	04 54 26.3	0.0
MSO	Missoula	124.25	35	P	PKiKP	04 54 27.0	+0.3
	baz=303						
FFC	Flin Flon	124.71	22	PKPdf	PKiKP	04 54 27.3	+0.2
FFC	Flin Flon	124.71	22	PKIKP	PKiKP	04 54 27.3	+0.2
SMMC	Simmler	125.37	50	P	PKiKP	04 54 29.6	+0.5
	baz=291						
NVAR	Mina Array Bea	125.45	46	PKP	PKiKP	04 54 30.2	+0.8
	comp=Z,7.2nm,0.8s,baz=243,slow=2.9,SNR=51						
NVAR				PKKPbc	PKKPbc	05 04 10.2	+0.5
	comp=Z,1.0nm,0.7s,baz=112,slow=5.8,SNR=8.3						
PKM	Mcpherson Peak	125.66	51	P	PKiKP	04 54 30.0	+0.1
	baz=290,SNR=7.2						
HLID	Hailey	125.70	39	P	PKiKP	04 54 30.5	+0.7
	baz=301,SNR=13						
EGMT	Eagleton	125.87	32	P	PKiKP	04 54 30.4	+0.6
	baz=308,SNR=22						
VES	Vestal, Richgr	125.88	49	P	PKiKP	04 54 30.6	+0.5
	baz=292						
SBC	Santa Barbara	125.89	51	P	PKiKP	04 54 31.2	+1.1
	baz=290						
TIN	Tinemaha, Big	126.05	48	P	PKiKP	04 54 31.4	+0.8
	baz=293						
SCZ2	Santa Cruz Isl	126.11	52	P	PKiKP	04 54 31.6	+1.0
	baz=290						
DSP	Deep Springs	126.12	47	PKPdf	PKiKP	04 54 31.8	+1.3
BOZ	Bozeman (W)	126.28	35	P	PKiKP	04 54 31.3	+0.5
	baz=305,SNR=18						
ARVC	Arvin	126.33	50	P	PKiKP	04 54 32.0	+1.0
	baz=291						
CWC	Cottonwood Cre	126.40	48	P	PKiKP	04 54 32.2	+0.9
	baz=293						
ISA	Isabella, Lake	126.40	49	P	PKiKP	04 54 32.0	+0.8
	baz=292						
GRAC	Grapevine Rang	126.71	47	P	PKiKP	04 54 32.8	+1.0
	baz=294,SNR=6.1						
MPMC	Manual Prospec	126.99	48	P	PKiKP	04 54 33.3	+0.8
	baz=293,SNR=19						
EDW2	Edwards Air Fo	127.06	50	P	PKiKP	04 54 33.8	+1.3
	baz=292,SNR=12						
LRMC	Laurel Mtn Rad	127.07	49	P	PKiKP	04 54 33.6	+1.0
	baz=293						
CIS	Catalina Islan	127.27	52	P	PKiKP	04 54 33.8	+0.8
	baz=291,SNR=6.8						
FURC	Furnace Creek,	127.29	48	P	PKiKP	04 54 34.3	+1.4
	baz=294						
R11A	Troy Canyon, C	127.42	45	P	PKiKP	04 54 34.5	+1.2
	baz=296,SNR=18						
TPNV	Topopah Spring	127.54	47	P	PKiKP	04 54 34.6	+1.0
	baz=295,SNR=5.7						
BFSC	Mount Baldy Ra	127.55	51	P	PKiKP	04 54 34.3	+0.7
	baz=292,SNR=5.1						
H17A	Grant Village	127.58	36	P	PKiKP	04 54 35.0	+1.4
	baz=305						
GSC	Goldstone, Bar	127.80	49	P	PKiKP	04 54 35.2	+1.1
	baz=293,SNR=12						
RRX	Edison Barstow	127.82	50	P	PKiKP	04 54 35.5	+1.4
	baz=293						
RLMT	Red Lodge	127.90	35	P	PKiKP	04 54 35.2	+1.0
	baz=307						
SHOC	Shoshone, Teco	127.96	48	P	PKiKP	04 54 35.8	+1.5
	baz=294						
MURC	Murrieta	128.15	51	P	PKiKP	04 54 35.8	+1.0
	baz=292						
HEC	Hector,Ludlow	128.34	49	P	PKiKP	04 54 36.0	+0.8
	baz=293						
DGMT	Dagmar	128.37	29	P	PKiKP	04 54 35.8	+1.1
	baz=314						
TUQ	Turquoise Moun	128.41	49	P	PKiKP	04 54 36.5	+1.1
	baz=294,SNR=12						
DUG	Dugway, Tooele	128.44	42	P	PKiKP	04 54 36.3	+1.0
	baz=300						
109C	Camp Elliot, M	128.48	52	P	PKiKP	04 54 36.1	+0.7
	baz=291						
LAO	LASA Array	128.57	31	P	PKiKP	04 54 36.4	+1.2
	baz=311,SNR=9.8						
PFO	Pinyon Flats O	128.71	51	P	PKiKP	04 54 37.3	+1.3
	baz=292,SNR=7.7						
TPFO	Pinon Flats	128.72	51	P	PKiKP	04 54 37.4	+1.3
	baz=292,SNR=7.8						
GMRC	Granite Mounta	128.87	49	P	PKiKP	04 54 38.0	+1.7
	baz=294,SNR=24						
BELC	Belle Mtn. Jos	128.92	50	P	PKiKP	04 54 37.9	+1.5
	baz=293,SNR=12						
MONP2	Monument Peak	129.01	52	P	PKiKP	04 54 38.0	+1.3
	baz=292,SNR=8.6						
BW06	Boulder Array	129.12	37	P	PKiKP	04 54 38.0	+1.3
	baz=305,SNR=7.0						
PDAR	Pinedale Array	129.12	37	PKP	PKiKP	04 54 36.5	-0.1
	comp=Z,2.6nm,0.6s,baz=21,slow=0.2,SNR=34						
PDAR				SKPbc	SKPbc	04 57 06.5	+0.2
	comp=Z,7.1nm,0.9s,baz=282,slow=1.4,SNR=24						
IKP	In-Ko-Pah, Jac	129.34	52	P	PKiKP	04 54 38.7	+1.5
	baz=292,SNR=5.3						
BC3	Big Chuckawall	129.47	50	P	PKiKP	04 54 39.0	+1.5
	baz=293,SNR=5.9						
SWSC	Sam W. Stewart	129.47	51	P	PKiKP	04 54 38.9	+1.5
	baz=292,SNR=6.1						
IRM	Iron Mountain	129.51	50	P	PKiKP	04 54 38.9	+1.5
	baz=294,SNR=6.9						
NEE2	Needles Airpor	129.66	49	P	PKiKP	04 54 38.6	+0.9
	baz=295						
GLA	Glamis	130.19	51	P	PKiKP	04 54 39.9	+1.0
	baz=293						
PDMCI	Parker Dam,Lak	130.21	49	P	PKiKP	04 54 39.7	+0.9
	baz=295						
ULM	Lac du Bonnet	130.53	22	PKP	PKPdf	04 54 38.0	0.0
	comp=Z,8.3nm,0.7s,baz=324,slow=3.6,SNR=17						
ULM				SKPbc	SKPbc	04 57 10.3	-0.6
	comp=Z,9.9nm,0.7s,baz=330,slow=5.9,SNR=15						
ULM	Lac du Bonnet	130.53	22	PKIKP	PKPdf	04 54 38.0	0.0
SCHQ	Schefferville	130.94	358	PKP	PKiKP	04 54 39.2	-0.5
	comp=Z,9.2nm,0.6s,baz=12,slow=4.0,SNR=32						
SCHQ				SKPbc	SKPab	04 57 13.0	0.0
	comp=Z,9.8nm,0.6s,baz=22,slow=5.7,SNR=16						
K22A	Casper	130.98	36	P	PKiKP	04 54 40.1	-0.2
	baz=308						
K22A	Casper	130.98	36	P	PKPdf	04 54 39.5	+0.1
	baz=308						
RSSD	Black Hills	131.43	33	PKPdf	PKPdf	04 54 40.7	+0.5
RSSD	Black Hills	131.43	33	PKIKP	PKPdf	04 54 40.7	+0.5
RSSD	Black Hills	131.43	33	P	PKiKP	04 54 41.3	0.0
	baz=312						
O20A	White River Ci	131.43	39	P	PKiKP	04 54 42.3	+0.9
	baz=305,SNR=22						
WUAZ	Wupatki	131.71	46	P	PKiKP	04 54 42.8	+0.7
	baz=298,SNR=8.6						
AGMN	Agassiz Nation	132.13	23	P	PKiKP	04 54 42.3	+0.1
	baz=324						
214A	Organ Pipe Nat	132.19	51	P	PKiKP	04 54 43.7	+0.8
	baz=294						
N23A	Red Feather La	132.40	37	P	PKiKP	04 54 43.6	+0.2
	baz=308						
MVCO	Mesa Verde	132.87	43	P	PKiKP	04 54 44.9	+0.4
	baz=302						
B35A	Bob, Littlefor	132.89	22	P	PKPdf	04 54 41.1	-1.5
	baz=327						
W18A	Petrified Fore	133.07	46	P	PKiKP	04 54 45.4	+0.6
	baz=299						
ISCO	Idaho Springs	133.26	38	P	PKiKP	04 54 45.0	-0.3
	baz=307						
TUC	Tucson	133.60	50	P	PKiKP	04 54 46.1	+0.3
	baz=296						
S22A	4UR Ranch, Cre	133.69	41	P	PKiKP	04 54 45.8	-0.4
	baz=304						
SUSD	Miller	133.78	29	P	PKiKP	04 54 45.3	-0.4
	baz=318						
PLCA	Paso Flores	133.80	179	PKP	PKiKP	04 54 45.8	-0.3
	comp=Z,1.4nm,0.6s,baz=211,slow=3.1,SNR=10						
PLCA				SKPbc	SKPbc	04 57 21.4	-1.1
	comp=Z,5.3nm,0.8s,baz=202,slow=3.6,SNR=8.4						
F33A	5 Mile Ranch,	133.92	26	P	PKPdf	04 54 44.8	+0.2
	baz=322						
EYMN	Ely	134.03	20	P	PKiKP	04 54 46.2	+0.1
	baz=329						
Q24A	Divide	134.05	39	P	PKiKP	04 54 46.6	-0.3
	baz=307						
SDCO	Great Sand Dun	134.55	40	P	PKiKP	04 54 47.7	-0.2
	baz=306,SNR=6.7						
F36A	Milaca	135.04	23	P	PKPdf	04 54 47.0	+0.4
	baz=326						
E38A	The Farm, Brul	135.16	21	P	PKPdf	04 54 46.9	+0.1
	baz=329						
K31A	O'Neill	135.22	30	P	PKPdf	04 54 47.6	+0.5
	baz=317						
ECSD	EROS Data Cent	135.42	28	P	PKiKP	04 54 49.6	+0.5
	baz=320,SNR=9.4						
ANMO	Albuquerque	135.47	44	P	PKiKP	04 54 49.8	+0.1
	baz=302						
T25A	Trinidad	135.61	40	P	PKiKP	04 54 51.0	+1.1
	baz=306,SNR=6.6						
Y22A	Socorro	135.64	46	P	PKiKP	04 54 49.9	-0.2
	baz=301,SNR=9.9						
121A	Cookes Peak, D	135.75	48	P	PKiKP	04 54 51.3	+1.0
	baz=299						
BGNE	Belgrade	136.42	31	P	PKiKP	04 54 51.0	-0.2
	baz=317,SNR=6.1						
BGNE	Belgrade	136.42	31	P	PKPdf	04 54 49.7	+0.3
	baz=317						
CBKS	Cedar Bluff	137.39	35	P	PKiKP	04 54 53.0	-0.3
	baz=313						
MNTX	Cornudas Mount	137.93	48	P	PKiKP	04 54 54.6	0.0
	baz=300						
KSU1	Kansas State U	138.91	32	P	PKiKP	04 54 56.6	+0.2
	baz=317,SNR=5.7						
KSU1	Kansas State U	138.91	32	P	PKPdf	04 54 48.1	-5.9
	baz=317,SNR=5.7						
F64A	Sherman	139.96	358		PKPdf	04 54 56.0	+0.3
TXAR	Lajitas Array	140.39	50	PKhKP	PKPpre	04 54 51.3	
	comp=Z,3.2nm,0.6s,baz=252,slow=1.1,SNR=39						
TXAR				SKPbc	SKiKP	04 57 43.5	-0.7
	comp=Z,5.4nm,0.7s,baz=244,slow=1.2,SNR=19						
TXAR				SKKPbc	SKKPbc	05 06 12.4	-0.7
	comp=Z,0.2nm,0.8s,baz=92,slow=5.4,SNR=3.5						
T35B	Sooner Cattle	140.54	34	P	PKPdf	04 54 51.9	-5.1
	baz=316						
WMOK	Wichita Mounta	140.68	39	P	PKiKP	04 55 00.3	+0.1
	baz=311,SNR=11						
WMOK	Wichita Mounta	140.68	39	P	PKPdf	04 54 52.0	-5.4
	baz=311,SNR=11						
BMNY	Brushton-Moira	140.80	5	P	PKPdf	04 54 52.0	-5.2
	baz=353						
P40A	Paris	140.84	27	P	PKPdf	04 54 51.8	-5.7
	baz=324						
FRNY	Flat Rock	140.88	4	P	PKPdf	04 54 52.1	-5.2
	baz=354						
ABTX	Abilene, Hawle	141.45	42	PKPdf	PKPdf	04 54 55.6	-3.2
ABTX	Abilene, Hawle	141.45	42	P	PKiKP	04 55 02.0	+0.3
	baz=308						
ABTX	Abilene, Hawle	141.45	42	P	PKPdf	04 54 55.6	-3.2
	baz=308						
RODS	Rosario do Sul	141.49	201	eP	PKPdf	04 54 55.7	-3.2
TUL1	Leonard	141.66	35	P	PKiKP	04 55 02.6	+0.6
	baz=316,SNR=6.6						
TUL1	Leonard	141.66	35	P	PKPdf	04 54 55.0	-4.0
	baz=316,SNR=6.6						
S39A	Bolivar	141.67	31	P	PKPdf	04 54 54.3	-4.7
	baz=320,SNR=22						
NCB	Newcomb	141.69	5	P	PKPdf	04 54 54.5	-4.4
	baz=353,SNR=6.6						
R40A	Maddies Statio	141.72	29	P	PKPdf	04 54 54.8	-4.2
	baz=322,SNR=24						
I63A	Otisfield	141.79	1	P	PKPdf	04 54 55.6	-3.4
	baz=359						
I63A				P	PKPdf	04 54 55.6	-3.4
	baz=359						
MCVT	Middlebury Col	141.80	4	P	PKPdf	04 54 55.5	-3.5
	baz=355						
O44A	Mansfield	141.85	23	P	PKPdf	04 54 55.2	-4.0
	baz=329						
P43A	Skaggs, Pawnee	141.85	25	P	PKPdf	04 54 55.6	-3.6
	baz=327						
MAN01	Angra dos Reis	141.93	221	eP	PKPdf	04 54 58.3	-1.7
VAS01	Vassouras-RJ	142.00	222	eP	PKPdf	04 54 57.7	-2.4
ALGR	Alto Alegre (B	142.05	204	eP	PKPdf	04 54 57.8	-2.3
J57A	Williamstown	142.05	7	P	PKPdf	04 54 56.2	-3.3
	baz=350						
J57A				P	PKPdf	04 54 56.2	-3.3
	baz=350						
U38A	Gravette	142.06	33	P	PKPdf	04 54 56.3	-3.4
	baz=318,SNR=17						
J59A	Piesco	142.16	5	P	PKPdf	04 54 56.9	-2.8
	baz=352						
J59A				P	PKPdf	04 54 56.9	-2.8
	baz=352						
SFIN	Lafayette	142.17	22	P	PKPdf	04 54 56.7	-3.1
	baz=331						
J58A	Remsen	142.19	6	P	PKPdf	04 54 56.5	-3.3
	baz=351						
J58A				P	PKPdf	04 54 56.5	-3.3
	baz=351						
N47A	Urbana	142.22	20	P	PKPdf	04 54 56.4	-3.5
	baz=334						
N47A				P	PKPdf	04 54 56.4	-3.5
	baz=334						
ACCN	Adirondack Com	142.31	4	P	PKPdf	04 54 56.7	-3.3
	baz=354,SNR=7.4						
CCM	Cathedral Cave	142.39	28	PKPdf	PKPdf	04 54 57.0	-3.2
CCM	Cathedral Cave	142.39	28	PKIKP	PKPdf	04 54 57.1	-3.2
CCM	Cathedral Cave	142.39	28	P	PKPdf	04 54 56.8	-3.4
	baz=324,SNR=14						
BSFB	Barra de Sao F	142.40	229	eP	PKPdf	04 54 58.3	-2.5
J61A	Chester	142.43	3	P	PKPdf	04 54 57.6	-2.5
	baz=356,SNR=9.4						
J61A				P	PKPdf	04 54 57.6	-2.5
	baz=356,SNR=9.4						
NAN01	Guarapari, ES	142.43	231	eP	PKPdf	04 54 58.8	-2.1
Z35A	Perchaven, San	142.55	39	P	PKPdf	04 54 58.4	-2.2
	baz=311,SNR=8.8						
ITQB	Itaqui	142.59	199	eP	PKPdf	04 54 59.6	-1.3
JCT	Junction City	142.61	45	P	PKiKP	04 55 04.4	+0.1
	baz=305,SNR=25						
WVNY	West Valley, N	142.63	11	P	PKPdf	04 54 58.0	-2.6
	baz=346,SNR=10						
PARB	Paraibuna	142.65	219	eP	PKPdf	04 55 00.3	-0.9
K57A	Scipio Center	142.65	8	P	PKPdf	04 54 57.6	-3.0
	baz=349,SNR=8.8						
Q44A	Meyer Farm, Va	142.69	25	P	PKPdf	04 54 58.2	-2.5
	baz=328,SNR=8.6						
UNH	University of	142.74	1	P	PKPdf	04 54 58.4	-2.2
	baz=358						
FVM	French Village	142.83	27	P	PKPdf	04 54 58.7	-2.4
	baz=325,SNR=12						
X37A	Clayton	142.84	36	P	PKPdf	04 54 58.9	-2.2
	baz=315,SNR=9.7						
M52A	Chesterland	142.87	14	P	PKPdf	04 54 58.7	-2.3
	baz=341						
M52A				P	PKPdf	04 54 58.7	-2.3
	baz=341						
CFA	Coronel Fontan	142.88	182	PKP	PKPdf	04 54 59.9	-1.5
	comp=Z,37nm,0.5s,baz=176,slow=3.0,SNR=107						
CFA				SKPbc	SKPbc	04 57 48.6	+0.4
	comp=Z,2.8nm,0.6s,baz=134,slow=3.8,SNR=3.8						
GUA01	Guaratinga, BA	142.90	233	eP	PKPdf	04 54 58.5	-3.2
PET01	Itanhaem-SP	142.92	216	eP	PKPdf	04 54 58.5	-3.1
U40A	Yellville	142.93	31	P	PKPdf	04 54 58.9	-2.4
	baz=320,SNR=48						
U40A				P	PKPdf	04 54 58.9	-2.4
	baz=320,SNR=48						
HCNY	Howe Caverns	142.94	5	P	PKPdf	04 54 58.9	-2.1
	baz=352,SNR=16						
O48B	Farmland	142.96	20	P	PKiKP	04 55 05.2	+0.6
	baz=334,SNR=5.9						
O48B	Farmland	142.96	20	P	PKPdf	04 54 58.7	-2.5
	baz=334,SNR=5.9						
ITAB	Concordia	143.02	207	eP	PKPab	04 54 58.6	-0.5
ALLY	Alegheny Colle	143.05	13	P	PKPbc	04 54 59.4	+0.1
	baz=343						
TIJ01	Guaruva-PR	143.07	213	eP	PKPab	04 54 58.3	-1.2
L56A	Greenwood	143.08	9	P	PKPbc	04 54 59.4	-0.1
	baz=347,SNR=21						
L56A				P	PKPbc	04 54 59.4	-0.1
	baz=347,SNR=21						
K62A	Royalston	143.12	3	P	PKPbc	04 55 00.0	+0.5
	baz=356,SNR=11						
K62A				P	PKPbc	04 55 00.0	+0.5
	baz=356,SNR=11						
M53A	WI Miller and	143.13	14	P	PKiKP	04 55 05.4	+0.5
	baz=342,SNR=17						
N51A	Ashland	143.19	16	P	PKPab	04 54 59.5	+0.1
	baz=339,SNR=5.6						
N51A				P	PKPab	04 54 59.5	+0.1
	baz=339,SNR=5.6						
OLIL	Olney	143.21	24	P	PKPbc	04 55 00.1	+0.1
	baz=329,SNR=11						
BINY	Binghamton	143.25	8	P	PKiKP	04 55 05.8	+0.6
	baz=350,SNR=24						
BINY	Binghamton	143.25	8	P	PKPbc	04 55 00.0	0.0
	baz=350,SNR=24						
O49A	Covington	143.29	19	P	PKPab	04 54 59.9	+0.1
	baz=336,SNR=10.0						
O49A				P	PKPab	04 54 59.9	+0.1
	baz=336,SNR=10.0						
T42A	Van Buren	143.29	29	P	PKPbc	04 55 00.5	+0.3
	baz=323						
WHTX	Lake Whitney,	143.29	41	P	PKPbc	04 55 00.7	+0.3
	baz=310,SNR=17						
WHTX	Lake Whitney,	143.29	41	P	PKPdf	04 55 01.5	-0.5
	baz=310,SNR=17						
HRV	Adam Dziewonsk	143.31	2		PKPbc	04 55 00.3	+0.1
HRV	Adam Dziewonsk	143.31	2	PKIKP	PKPbc	04 55 00.3	+0.2
HRV	Adam Dziewonsk	143.31	2	P	PKPbc	04 55 00.3	+0.2
	baz=357,SNR=13						
L61B	Northampton	143.31	3	P	PKPab	04 54 59.7	0.0
	baz=355,SNR=10						
L61B	Northampton	143.31	3	P	PKPab	04 54 59.8	0.0
	baz=355,SNR=10						
CMC01	Camacan, BA	143.34	235	eP	PKPbc	04 55 01.6	+0.7
L59A	Walton	143.37	6	P	PKPbc	04 55 00.4	+0.1
	baz=351,SNR=21						
L59A				P	PKPbc	04 55 00.4	+0.1
	baz=351,SNR=21						
WES	Weston	143.44	2	P	PKPbc	04 55 00.5	0.0
	baz=358,SNR=6.0						
M55A	Ridgway	143.51	11	P	PKPbc	04 55 00.8	0.0
	baz=345,SNR=24						
M55A				P	PKPbc	04 55 00.8	0.0
	baz=345,SNR=24						
P48A	Milroy	143.58	20	P	PKPab	04 55 00.8	-0.1
	baz=333,SNR=20						
P48A				P	PKPab	04 55 00.8	-0.1
	baz=333,SNR=20						
S44A	Carbondale	143.59	26	P	PKPbc	04 55 01.4	+0.2
	baz=326,SNR=21						
ACSO	Alum Creek Sta	143.66	17	P	PKPab	04 55 01.1	-0.1
	baz=338,SNR=32						
ACSO	Alum Creek Sta	143.66	17	P	PKPbc	04 55 01.4	+0.2
	baz=338,SNR=32						
N53A	Lisbon	143.69	14	P	PKPbc	04 55 01.7	+0.3
	baz=341,SNR=22						
N53A				P	PKPbc	04 55 01.7	+0.3
	baz=341,SNR=22						
CGM3	Cape Girardeau	143.74	27		PKPab	04 55 01.5	-0.1
P49A	Miami Univ. Ec	143.75	20	P	PKPab	04 55 01.4	-0.2
	baz=334,SNR=45						
P49A	Miami Univ. Ec	143.75	20	P	PKPbc	04 55 01.7	+0.1
	baz=334,SNR=45						
NPNY	Mohonk Preserv	143.89	5	P	PKPab	04 55 02.2	+0.2
	baz=353,SNR=20						
MIAR	Mount Ida	143.90	34	P	PKPab	04 55 02.6	+0.3
	baz=317,SNR=92						
MIAR	Mount Ida	143.90	34	P	PKPdf	04 55 02.7	-0.3
	baz=317,SNR=92						
L64A	Middleborough	143.90	1	P	PKPab	04 55 02.1	+0.1
	baz=358,SNR=9.6						
L64A				P	PKPab	04 55 02.1	+0.1
	baz=358,SNR=9.6						
KSPA	Keystone Colle	143.91	7	P	PKPab	04 55 02.3	+0.2
	baz=350,SNR=27						
M57A	Sunshine Farm,	143.93	9	P	PKPab	04 55 02.5	+0.3
	baz=348,SNR=46						
M57A				P	PKPab	04 55 02.5	+0.3
	baz=348,SNR=46						
435B	Jarrell	143.96	43	P	PKPdf	04 55 03.7	+0.4
	baz=308,SNR=12						
Z38A	Mt. Pleasant	144.00	37	P	PKPab	04 55 02.9	+0.2
	baz=314,SNR=10						
LCAR	Lake Charles	144.02	30	P	PKPbc	04 55 02.5	0.0
	baz=322,SNR=113						
O52A	Adamsville	144.09	16	P	PKPbc	04 55 02.3	-0.4
	baz=339,SNR=22						
O52A				P	PKPbc	04 55 02.3	-0.4
	baz=339,SNR=22						
833A	Chaparral WMA,	144.12	48	P	PKPbc	04 55 02.4	-0.7
	baz=303,SNR=64						
833A	Chaparral WMA,	144.12	48	P	PKPdf	04 55 04.5	+1.0
	baz=303						
O53A	New Philadelph	144.12	15	P	PKPbc	04 55 02.8	+0.1
	baz=340,SNR=16						
BRNY	Black Rk. Fore	144.24	5	P	PKPbc	04 55 02.0	-1.1
	baz=353,SNR=17						
P51A	Williamsport	144.33	18	P	PKPbc	04 55 03.0	-0.4
	baz=337,SNR=36						
P51A				P	PKPbc	04 55 03.0	-0.4
	baz=337,SNR=36						
237A	Washetta, Mont	144.34	40	P	PKPab	04 55 05.6	+1.5
	baz=312,SNR=19						

WCI	**Wyandotte Cave**	**144.35**	**22**		**PKPdf**	**04 55 03.7**	**+0.1**
WCI	**Wyandotte Cave**	**144.35**	**22**	PKIKP	**PKPdf**	**04 55 03.7**	**+0.1**
WCI	**Wyandotte Cave**	**144.35**	**22**	P	**PKPdf**	**04 55 03.6**	**0.0**
	baz=331						
WCI	**Wyandotte Cave**	**144.35**	**22**	P	**PKPab**	**04 55 03.8**	**0.0**
	baz=331,SNR=51						
X40A	**Basin Creek Fa**	**144.35**	**34**	P	PKPbc	04 55 03.4	-0.2
	baz=318,SNR=9.4						
X40A				P	PKPbc	04 55 03.4	-0.2
	baz=318,SNR=9.4						
M63A	**Gales Ferry**	**144.39**	**3**	P	**PKPab**	**04 55 03.9**	**0.0**
	baz=356,SNR=5.3						
M63A				P	**PKPab**	**04 55 03.9**	**0.0**
	baz=356,SNR=5.3						
O54A	**Avella**	**144.39**	**14**	P	**PKPdf**	**04 55 03.7**	**0.0**
	baz=342						
O54A				P	**PKPdf**	**04 55 03.7**	**0.0**
	baz=342						
T45B	**Paducah**	**144.43**	**26**	P	**PKPab**	**04 55 04.2**	**0.0**
	baz=327,SNR=9.3						
P52A	**Corning**	**144.46**	**16**	P	PKPbc	04 55 03.4	-0.4
	baz=339,SNR=26						
N58A	**Sunbury**	**144.48**	**9**	P	PKPbc	04 55 03.9	+0.1
	baz=348,SNR=21						
N58A				P	PKPbc	04 55 03.9	+0.1
	baz=348,SNR=21						
SSPA	**Standing Stone**	**144.48**	**10**		**PKPdf**	**04 55 03.7**	**-0.2**
SSPA	**Standing Stone**	**144.48**	**10**	P	PKPbc	04 55 03.9	+0.1
	baz=346						
SSPA	**Standing Stone**	**144.48**	**10**	P	**PKPab**	**04 55 04.1**	**-0.2**
	baz=346,SNR=23						
ODNJ	**Ogdensburg**	**144.51**	**6**	P	PKPbc	04 55 04.0	+0.1
	baz=352,SNR=26						
PAL	**Palisades**	**144.66**	**5**	P	PKPbc	04 55 04.3	0.0
	baz=353,SNR=18						
PAL	**Palisades**	**144.66**	**5**	P	PKPbc	04 55 04.4	+0.1
	baz=353,SNR=18						
R49A	**Shelbyville**	**144.71**	**21**	P	PKPbc	04 55 04.5	-0.1
	baz=333,SNR=18						
R49A				P	PKPbc	04 55 04.5	-0.1
	baz=333,SNR=18						
P53A	**Whipple**	**144.79**	**15**	P	PKPbc	04 55 05.1	+0.3
	baz=340,SNR=15						
P53A				P	PKPbc	04 55 05.1	+0.3
	baz=340,SNR=15						
BRNJ	**Basking Ridge**	**144.91**	**6**	P	PKPbc	04 55 05.1	0.0
	baz=352,SNR=7.6						
R50A	**Paris**	**145.01**	**20**	P	**PKPdf**	**04 55 04.9**	**+0.1**
	baz=334,SNR=16						
R50A				P	**PKPdf**	**04 55 04.9**	**+0.1**
	baz=334,SNR=16						
MCWV	**Mont Chateau**	**145.02**	**13**	P	**PKPbc**	**04 55 05.9**	**+0.4**
	baz=342,SNR=14						
MCWV	**Mont Chateau**	**145.02**	**13**	P	**PKPab**	**04 55 06.0**	**-0.4**
	baz=342,SNR=14						
Q52A	**Bidwell**	**145.04**	**17**	P	**PKPdf**	**04 55 04.9**	**+0.1**
	baz=338,SNR=10						
Q52A				P	**PKPdf**	**04 55 04.9**	**+0.1**
	baz=338,SNR=10						
T47A	**Sharon Grove**	**145.10**	**24**	P	**PKPbc**	**04 55 05.7**	**-0.2**
	baz=329,SNR=34						
NATX	**Nacogdoches**	**145.23**	**39**	P	**PKPab**	**04 55 07.3**	**-0.1**
	baz=313,SNR=9.9						
NATX	**Nacogdoches**	**145.23**	**39**	P	**PKPab**	**04 55 07.6**	**+0.1**
	baz=313,SNR=9.9						
Z41A	**Richland Creek**	**145.28**	**35**	P	**PKPab**	**04 55 07.7**	**+0.1**
	baz=317,SNR=9.7						
Z41A				P	**PKPab**	**04 55 07.7**	**+0.1**
	baz=317,SNR=9.7						
TUPA	**Temple Univers**	**145.35**	**7**	P	**PKPbc**	**04 55 06.6**	**+0.2**
	baz=351,SNR=11						
Q54A	**Coxs Mills**	**145.41**	**15**	P	**PKPdf**	**04 55 05.4**	**-0.1**
	baz=340,SNR=23						
Q54A				P	**PKPdf**	**04 55 05.4**	**-0.1**
	baz=340,SNR=23						
LCO	**Las Campanas**	**145.49**	**179**	PKPab	**PKPab**	**04 55 08.5**	**-0.3**
LCO	**Las Campanas**	**145.49**	**179**	PKP2	**PKPab**	**04 55 08.5**	**-0.3**
WVT	**Waverly**	**145.53**	**26**	PKPdf	**PKPdf**	**04 55 06.1**	**+0.4**
WVT	**Waverly**	**145.53**	**26**	PKIKP	**PKPdf**	**04 55 06.1**	**+0.4**
WVT	**Waverly**	**145.53**	**26**	P	**PKPbc**	**04 55 07.5**	**+0.4**
	baz=327						
WVT	**Waverly**	**145.53**	**26**	P	**PKPbc**	**04 55 07.6**	**+0.5**
	baz=327,SNR=70						
P57A	**Homestead Farm**	**145.57**	**11**	P	**PKPbc**	**04 55 07.1**	**0.0**
	baz=346,SNR=12						
P57A				P	**PKPbc**	**04 55 07.1**	**0.0**
	baz=346,SNR=12						
GEDE	**Greenville**	**145.64**	**8**	P	**PKPdf**	**04 55 06.5**	**+0.7**
	baz=350,SNR=16						
HKT	**Hockley**	**145.66**	**42**		**PKPbc**	**04 55 07.6**	**0.0**
HKT	**Hockley**	**145.66**	**42**	PKP2	**PKPbc**	**04 55 07.6**	**0.0**
AC05	**El Transito**	**145.67**	**179**	PKPab	**PKPab**	**04 55 09.2**	**-0.2**
W45A	**Hickory Valley**	**145.71**	**29**	P	**PKPdf**	**04 55 06.0**	**0.0**
	baz=324,SNR=17						
R53A	**Hurricane**	**145.72**	**17**	P	**PKPdf**	**04 55 06.3**	**+0.3**
	baz=338,SNR=18						
R53A				P	**PKPdf**	**04 55 06.3**	**+0.3**
	baz=338,SNR=18						
S51A	**Beattyville**	**145.84**	**20**	P	**PKPdf**	**04 55 06.7**	**+0.4**
	baz=335,SNR=18						
S51A				P	**PKPdf**	**04 55 06.7**	**+0.4**
	baz=335,SNR=18						
SDMD	**Soldier's Deli**	**145.85**	**10**	P	**PKPbc**	**04 55 07.9**	**0.0**
	baz=348,SNR=7.4						
CPUP	**Villa Florida**	**145.91**	**200**	PKPbc	**PKPbc**	**04 55 08.8**	**+0.4**
	comp=Z,17nm,0.5s,baz=155,slow=1.7,SNR=72						
CPUP				pPKPbc	pPKPbc	04 57 14.8	+0.2
	comp=Z,5.9nm,1.1s,baz=124,slow=2.7,SNR=3.3						
CPUP	**Villa Florida**	**145.91**	**200**	PKPbc	**PKPbc**	**04 55 09.3**	**+0.8**
T50A	**Nancy**	**145.96**	**22**	P	**PKPdf**	**04 55 06.7**	**+0.3**
	baz=333						
T50A				P	**PKPdf**	**04 55 06.7**	**+0.3**
	baz=333						
U49A	**Red Boiling Sp**	**146.05**	**23**	P	**PKPdf**	**04 55 07.0**	**+0.4**
	baz=331,SNR=26						
OXF	**Oxford**	**146.12**	**30**	P	**PKPbc**	**04 55 09.1**	**+0.2**
	baz=323,SNR=19						
OXF	**Oxford**	**146.12**	**30**	P	**PKPbc**	**04 55 09.1**	**+0.2**
	baz=323,SNR=19						
R55A	**Marlinton**	**146.26**	**15**	P	**PKPbc**	**04 55 08.8**	**-0.4**
	baz=341						
R55A				P	**PKPbc**	**04 55 08.8**	**-0.4**
	baz=341						
V48A	**Smith Brothers**	**146.29**	**25**	P	**PKPbc**	**04 55 09.0**	**-0.3**
	baz=328,SNR=18						
S54A	**Dingess, Beckl**	**146.39**	**16**	P	**PKPbc**	**04 55 09.4**	**-0.1**
	baz=339,SNR=5.8						
S54A				P	**PKPbc**	**04 55 09.4**	**-0.1**
	baz=339,SNR=5.8						
Y45A	**Yeager Farm, C**	**146.57**	**30**	P	**PKPdf**	**04 55 08.4**	**+0.8**
	baz=323,SNR=26						
TZTN	**Tazewell**	**146.85**	**20**	P	**PKPbc**	**04 55 10.8**	**+0.1**
	baz=335,SNR=9.2						
TZTN	**Tazewell**	**146.85**	**20**	P	**PKPbc**	**04 55 11.2**	**+0.4**
	baz=335,SNR=9.2						
342B	**Flagon Creek P**	**146.92**	**37**	P	**PKiKP**	**04 55 12.9**	**-0.1**
	baz=316,SNR=9.2						
CBN	**Corbin Frederi**	**146.93**	**11**	P	**PKPbc**	**04 55 11.5**	**+0.6**
	baz=346						
S57A	**Dark Hollow, R**	**147.03**	**13**	P	**PKPbc**	**04 55 10.8**	**-0.4**
	baz=343,SNR=6.1						
S57A				P	**PKPbc**	**04 55 10.8**	**-0.4**
	baz=343,SNR=6.1						
R58B	**Mineral**	**147.07**	**12**	P	**PKPbc**	**04 55 11.0**	**-0.2**
	baz=345,SNR=8.6						
R58B				P	**PKPbc**	**04 55 11.0**	**-0.2**
	baz=345,SNR=8.6						
BLA	**Blacksburg**	**147.19**	**16**	P	**PKPbc**	**04 55 12.1**	**+0.4**
	baz=340						
V51A	**Loudon**	**147.22**	**22**	P	**PKPbc**	**04 55 12.0**	**+0.2**
	baz=333,SNR=14						
X48A	**Hartselle**	**147.28**	**27**	P	**PKPdf**	**04 55 08.7**	**0.0**
	baz=327,SNR=14						
VBMS	**Vicksburg**	**147.33**	**34**	P	**PKPbc**	**04 55 12.8**	**+0.7**
	baz=320						
W50A	**Signal Mountai**	**147.38**	**24**	P	**PKPdf**	**04 55 08.9**	**-0.1**
	baz=331,SNR=11						
U54A	**Nelsons Funny**	**147.43**	**18**	P	**PKPbc**	**04 55 12.0**	**-0.4**
	baz=338,SNR=5.4						
U54A				P	**PKPbc**	**04 55 12.0**	**-0.4**
	baz=338,SNR=5.4						
V52A	**Sevierville**	**147.46**	**21**	P	**PKPdf**	**04 55 09.8**	**+0.8**
	baz=334,SNR=22						
TKL	**Tuckaleechee C**	**147.56**	**21**	P	**PKPdf**	**04 55 09.9**	**+0.7**
	baz=334						
146A	**Union**	**147.79**	**31**	P	**PKiKP**	**04 55 14.5**	**-0.3**
	baz=322,SNR=22						
344A	**Westbrook Farm**	**147.79**	**35**	P	**PKiKP**	**04 55 14.5**	**-0.3**
	baz=318,SNR=8.6						
Z47A	**Carrollton**	**147.83**	**29**	P	**PKPbc**	**04 55 13.7**	**+0.3**
	baz=324,SNR=24						
V53A	**Saluda**	**147.89**	**20**	P	**PKPbc**	**04 55 14.0**	**+0.4**
	baz=335,SNR=23						
V53A				P	**PKPbc**	**04 55 14.0**	**+0.4**
	baz=335,SNR=23						
W52A	**Murphy**	**148.01**	**22**	P	**PKPbc**	**04 55 14.3**	**+0.4**
	baz=333,SNR=17						
U56A	**King**	**148.01**	**16**	P	**PKPbc**	**04 55 13.4**	**-0.4**
	baz=340,SNR=6.8						
U56A				P	**PKPbc**	**04 55 13.4**	**-0.4**
	baz=340,SNR=6.8						
Y49A	**Blount Mountai**	**148.06**	**27**	P	**PKPbc**	**04 55 14.1**	**+0.1**
	baz=328,SNR=35						
T59A	**Double "B" Far**	**148.09**	**12**	P	**PKPbc**	**04 55 14.3**	**+0.4**
	baz=345,SNR=14						
T59A				P	**PKPbc**	**04 55 14.3**	**+0.4**
	baz=345,SNR=14						
X51A	**Calhoun**	**148.11**	**24**	P	**PKPbc**	**04 55 14.5**	**+0.4**
	baz=331,SNR=12						
X51A				P	**PKPbc**	**04 55 14.5**	**+0.4**
	baz=331,SNR=12						
V55A	**Taylorsville**	**148.23**	**18**	P	**PKPbc**	**04 55 14.6**	**+0.2**
	baz=338,SNR=6.6						
V55A				P	**PKPbc**	**04 55 14.6**	**+0.2**
	baz=338,SNR=6.6						
CASEE	**Lake Jocassee**	**148.46**	**21**	P	**PKiKP**	**04 55 15.7**	**-0.5**
	baz=335,SNR=10.0						
LRAL	**Lakeview Retre**	**148.48**	**28**	P	**PKPbc**	**04 55 15.1**	**+0.1**
	baz=326						
LRAL	**Lakeview Retre**	**148.48**	**28**	P	**PKPbc**	**04 55 15.4**	**+0.3**
	baz=326,SNR=16						
KMSC	**Kings Mountain**	**148.85**	**18**	P	**PKPbc**	**04 55 15.9**	**+0.1**
	baz=338						
KMSC	**Kings Mountain**	**148.85**	**18**	P	**PKPbc**	**04 55 16.0**	**+0.1**
	baz=338,SNR=8.2						
PAULI	**Pauline**	**149.00**	**19**	P	**PKPbc**	**04 55 16.6**	**+0.3**
	baz=336,SNR=9.4						
Y52A	**Lilburn**	**149.04**	**23**	P	**PKPbc**	**04 55 16.8**	**+0.4**
	baz=332,SNR=19						
Y52A				P	**PKPbc**	**04 55 16.8**	**+0.4**
	baz=332,SNR=19						
Z51A	**Franklin**	**149.06**	**25**	P	**PKPbc**	**04 55 16.1**	**-0.3**
	baz=329,SNR=7.3						
W57A	**Gilead**	**149.24**	**16**	P	**PKPbc**	**04 55 16.7**	**-0.2**
	baz=340,SNR=6.4						
W57A				P	**PKPbc**	**04 55 16.7**	**-0.2**
	baz=340,SNR=6.4						
HODGE	**Hodges**	**149.38**	**20**	P	**PKiKP**	**04 55 17.7**	**-0.3**
	baz=335,SNR=6.2						
BIRD	**Birdtown, Kers**	**149.58**	**17**	P	**PKPbc**	**04 55 18.0**	**+0.4**
	baz=339,SNR=8.1						
JSC	**Jenkinsville**	**149.67**	**19**	P	**PKiKP**	**04 55 18.6**	**0.0**
	baz=337,SNR=8.7						
BDFB	**Brasilia**	**149.68**	**225**	PKPbc	**PKiKP**	**04 55 19.4**	**+0.2**
	comp=Z,34nm,0.6s,baz=129,slow=2.4,SNR=37						
CNNC	**Cliffs of the**	**149.69**	**13**	P	**PKiKP**	**04 55 18.4**	**-0.2**
	baz=344						
250A	**Grady**	**149.70**	**28**	P	**PKiKP**	**04 55 18.5**	**-0.2**
	baz=326,SNR=11						
152A	**Waverly Hall**	**149.81**	**25**	P	**PKiKP**	**04 55 18.8**	**-0.2**
	baz=330,SNR=16						
BRAL	**Brewton**	**149.98**	**30**	P	**PKiKP**	**04 55 19.8**	**+0.4**
	baz=324						
BRAL	**Brewton**	**149.98**	**30**	P	**PKiKP**	**04 55 20.2**	**+0.9**
	baz=324,SNR=8.0						
Y57A	**Sumter**	**150.19**	**18**	P	**PKiKP**	**04 55 19.6**	**-0.1**
	baz=339,SNR=7.1						
Y57A				P	**PKiKP**	**04 55 19.6**	**-0.1**
	baz=339,SNR=7.1						
HAW	**Hawthorne Fire**	**150.40**	**20**	P	**PKiKP**	**04 55 20.4**	**+0.2**
	baz=336,SNR=8.1						
AQDB	**Aquidauana**	**150.48**	**208**	PKPdf	**PKPdf**	**04 55 14.2**	**0.0**
154A	**Montrose**	**150.52**	**23**	P	**PKiKP**	**04 55 20.2**	**-0.2**
	baz=332,SNR=5.1						
352A	**Blakely**	**150.74**	**27**	P	**PKiKP**	**04 55 21.2**	**+0.3**
	baz=328,SNR=6.0						
NHSC	**New Hope**	**151.09**	**18**	P	**PKPbc**	**04 55 20.8**	**-0.4**
	baz=338						
TIGA	**Tifton**	**151.35**	**25**	P	**PKiKP**	**04 55 22.4**	**+0.2**
	baz=331						
TIGA	**Tifton**	**151.35**	**25**	P	**PKiKP**	**04 55 22.5**	**+0.4**
	baz=331						
LVC	**Limon Verde**	**151.85**	**182**	PKPbc	**PKiKP**	**04 55 25.4**	**+1.4**
	comp=Z,11nm,0.6s,baz=304,slow=1.1,SNR=18						
SIV	**San Ignacio**	**156.75**	**202**	PKP	**PKPdf**	**04 55 23.0**	**-0.1**
	comp=Z,3.2nm,0.8s,baz=193,slow=0.9,SNR=16						
SIV				PKPab	**PKPab**	**04 55 57.2**	**+1.3**
	comp=Z,3.8nm,0.8s,baz=169,slow=8.1,SNR=9.0						
LPAZ	**La Paz**	**158.09**	**185**	PKP	**PKPdf**	**04 55 25.4**	**-0.1**
	comp=Z,2.4nm,1.0s,baz=355,slow=0.5,SNR=6.0						
LPAZ				PKPab	**PKPab**	**04 56 03.7**	**+1.3**
	comp=Z,2.5nm,0.7s,baz=147,slow=2.2,SNR=5.4						
BOAB	**BOACO BROADBAN**	**163.06**	**66**		**PKPdf**	**04 55 28.9**	**-1.2**
DR12	**Loma Pena Alta**	**166.97**	**358**		**PKPab**	**04 56 39.6**	**-1.0**
HUMP	**Col San Antoni**	**167.01**	**343**		**PKPdf**	**04 55 32.3**	**-1.0**
OTAV	**Otavalo**	**169.90**	**122**	*e*P	**PKPdf**	**04 55 33.7**	**-2.3**
BOAV	**Boa Vista**	**170.08**	**251**		**PKPdf**	**04 55 35.3**	**-0.1**
BOAV	**Boa Vista**	**170.08**	**251**	*e*P	**PKPdf**	**04 55 33.7**	**-1.8**
GR1C	**Gorgona, Isla**	**171.34**	**108**	*e*P	**PKPdf**	**04 55 32.1**	**-4.0**
POPC	**Popayan, Colom**	**172.56**	**115**	*e*P	**PKPdf**	**04 55 35.3**	**-1.7**
JAMC	**Jamundi, Valle**	**172.82**	**110**	*e*P	**PKPdf**	**04 55 36.9**	**-0.2**
YOTC	**Yotoco, Valle**	**173.37**	**105**	*e*P	**PKPdf**	**04 55 33.7**	**-3.5**
MACC	**Macarena, Meta**	**174.72**	**132**	⇑*e*P	**PKPdf**	**04 55 32.1**	**-5.4**
ZARC	**Zaragoza, Cauc**	**174.77**	**70**	*e*P	**PKPdf**	**04 55 35.3**	**-2.2**
PTBC	**PUERTO BERRIO,**	**175.40**	**79**	*e*P	**PKPdf**	**04 55 33.7**	**-4.0**
ROSC	**El Rosal**	**175.53**	**101**	PKP	**PKPdf**	**04 55 38.0**	**-0.1**
	comp=Z,3.5nm,0.5s,baz=117,slow=20,SNR=5.2						
SPBC	**San Pablo de B**	**175.86**	**90**	*e*P	**PKPdf**	**04 55 36.9**	**-1.0**
SDV	**Santo Domingo**	**176.75**	**13**	PKP	**PKPdf**	**04 55 37.8**	**-0.4**
	comp=Z,3.8nm,0.7s,baz=104,slow=18,SNR=3.9						
SDV				PP	**PP**	**05 01 18.2**	**+2.0**
	comp=Z,2.0nm,0.4s,baz=26,slow=11,SNR=4.2						
RUSC	**La Rusia**	**176.84**	**86**		**PKPdf**	**04 55 37.1**	**-1.4**
RUSC	**La Rusia**	**176.84**	**86**	*e*P	**PKPdf**	**04 55 36.9**	**-1.7**

TAP 14 04:41:52.9, 23°.26N×121°.02E, h22^{km}±1^{km}, ML1.8, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDTW	**Lidau**	**0.07**	**184**	P	Pb	04 41 57.5	+0.5
	baz=178						
ELDTW				S	Sb	04 42 00.4	+0.6
	baz=178						
EHD	**Haiduan**	**0.20**	**124**	P	Pb	04 41 59.3	+0.7
	baz=123						
EHD				S	Sb	04 42 03.5	+0.9
	baz=123						
STYH	**Taoyuan**	**0.24**	**248**	P	Pb	04 41 59.6	+0.6
	baz=249						
STYH				*e*S	Sb	04 42 04.5	+1.4
	baz=249						
FULB	**Fuli**	**0.26**	**104**	*e*P	Pn	04 42 02.0	+0.6
	baz=104						
FULB				S	Sb	04 42 04.2	+0.8
	baz=104						
YULB	**Yu-li**	**0.28**	**63**	S	Sb	04 42 04.9	+0.9
	baz=62						
EYUL	**Yuli**	**0.28**	**73**	S	Sb	04 42 05.2	+1.2
	baz=72						
ALS	**Alishan**	**0.32**	**321**	P	Pb	04 42 00.2	0.0
	baz=321						
ALS				*i* S	Sb	04 42 06.0	+0.8
	baz=321						
TPUB	**Ta-pu**	**0.36**	**276**	*e*P	Pb	04 42 00.0	-0.7
	baz=276						
WTP	**Ta-pu**	**0.38**	**268**	*e*P	Pb	04 41 59.8	-1.1
	baz=267						
WTP				*e*S	Sb	04 42 06.4	+0.1
	baz=267						
HGSD	**Ruisui**	**0.43**	**58**	*e*P	Pn	04 42 03.3	-0.5
	baz=58						
HGSD				*e*S	Sb	04 42 09.4	+1.5
	baz=58						
TWGBT	**Beinan**	**0.45**	**173**	P	Pb	04 42 02.6	+0.6
	baz=173						
TWGBT				S	Sb	04 42 09.6	+1.4
	baz=173						
WHYT	**Xinyi Township**	**0.46**	**340**	*e*P	Pn	04 42 03.8	-0.5
	baz=340						
WHYT				*e*S	Sb	04 42 09.7	+1.0
	baz=340						
CHN5	**Tsauling**	**0.46**	**317**	P	Pb	04 42 02.5	+0.2
	baz=316						
VWDT	**VWDT**	**0.50**	**12**	*e*P	Pn	04 42 05.1	+0.3
	baz=12						
VWDT				S	Sn	04 42 11.3	-1.4
	baz=12						
SSLB	**Suanglung**	**0.53**	**353**	S	Sn	04 42 12.7	-0.8
	baz=353						
SMLT	**Sun Moon Lake**	**0.63**	**350**	*e*P	Pn	04 42 06.4	-0.2
	baz=350						
SMLT				*i* S	Sn	04 42 15.4	-0.7
	baz=350						
TYC	**Yuchr**	**0.66**	**347**	*i* P	Pn	04 42 06.3	-0.6
	baz=347						
TYC				*i* S	Sn	04 42 16.2	-0.4
	baz=347						
OWD	**Renai**	**0.70**	**11**	*e*P	Pn	04 42 07.3	-0.4
	baz=11						
WUSB	**Renai**	**0.73**	**7**	*e*P	Pb	04 42 07.0	0.0
	baz=6.0						
CHGB	**Renai**	**0.81**	**10**	*e*P	Pb	04 42 07.9	-0.5
	baz=9.0						
CHGB				S	Sn	04 42 20.1	-0.5
	baz=9.0						

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*SNET **14** 04:42:31.0±1.1, 13°.20N×90°.04W, h28^{km}±6^{km}, ML4.0*
*GCG **14** 04:42:34.2±0.3, 13°.28N×90°.30W, h50^{km}±999^{km}, MD3.9*

ISC 14 04:42:31.0±2.0, 13°.17N±0°.09×89°.94W±0°.07, h29^{km}, n30, σ0^{s}.58/34, 1C-7D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	**Jayaque - finc**	**0.68**	**45**	⇓*e*P	**Pn**	**04 42 44.7**	**-0.1**
JAYA				*e*S	**Sn**	**04 42 55.0**	**+0.5**
CEVE	**Cerro Verde**	**0.72**	**25**	⇓*i*P	**Pb**	**04 42 45.2**	**0.0**
SBLS	**San Blas**	**0.73**	**25**	⇓*i*P	**Pb**	**04 42 45.3**	**-0.1**
NUBE	**Las Nubes**	**0.74**	**12**	⇓*e*P	**Pb**	**04 42 45.0**	**-0.5**
NUBE				*e*S	**Sb**	**04 42 54.9**	**-0.5**
RTR	**El Retiro**	**0.78**	**22**	⇓*i*P	**Pb**	**04 42 46.0**	**-0.1**
CEDA	**San Andres**	**0.82**	**40**	*e*P	**Pn**	**04 42 46.6**	**-0.1**
BOQS	**Boqueron**	**0.85**	**49**	*e*P	**Pn**	**04 42 47.7**	**+0.4**
SNET	**Serv Nac Est T**	**0.86**	**53**	*e*P	**Pn**	**04 42 47.5**	**+0.2**
SNET				*e*S	**Sn**	**04 42 59.3**	**+0.4**
SLOZ	**Alcaldia de Sa**	**0.86**	**10**	⇓*e*P	**Pn**	**04 42 46.9**	**-0.4**
UEES	**Universidad Ev**	**0.87**	**52**	*e*P	**Pn**	**04 42 47.7**	**+0.2**
LFRS	**El Faro**	**0.97**	**62**	*e*P	**Pb**	**04 42 48.9**	**-0.4**
SJTE	**Alcalda de S**	**1.01**	**64**	⇓*e*P	**Pb**	**04 42 49.5**	**-0.5**
PAVA	**Las Pavas**	**1.12**	**61**	*e*P	**Pb**	**04 42 51.6**	**-0.1**
COEG	**Centro de Oper**	**1.13**	**67**	*e*P	**Pb**	**04 42 51.2**	**-0.7**
TECO	**Alcaldia de Te**	**1.19**	**72**	*e*P	**Pn**	**04 42 51.9**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.29**	**66**	*e*P	**Pb**	**04 42 54.1**	**-0.7**
MTO3	**Montecristo**	**1.34**	**25**	*e*P	**Pn**	**04 42 54.1**	**+0.1**
ALJI	**Alcalda de J**	**1.34**	**83**	*e*P	**Pn**	**04 42 53.4**	**-0.4**
PCG	**Pacaya**	**1.37**	**332**	*e*P	**Pn**	**04 42 54.7**	**+0.2**
P5NO	**Presa 5 de nov**	**1.41**	**55**	*e*P	**Pn**	**04 42 55.1**	**+0.4**
COEB	**Comit de Eme**	**1.41**	**77**	*e*P	**Pn**	**04 42 55.4**	**+0.6**
PQSS	**Presa 15 de Se**	**1.42**	**71**	*e*P	**Pb**	**04 42 55.7**	**-1.1**
TECA	**Tecapa**	**1.44**	**77**	*e*P	**Pn**	**04 42 55.8**	**+0.5**
NBG	**Las Nubes**	**1.46**	**344**	*e*P	**Pn**	**04 42 56.9**	**+1.2**
NBG				*e*S	**Sn**	**04 43 14.6**	**+0.6**
ESQI	**Esquipulas**	**1.50**	**23**	*e*P	**Pn**	**04 42 56.4**	**+0.3**
FUG	**Fuego 3**	**1.54**	**326**	*e*P	**Pn**	**04 42 56.2**	**-0.5**
PACA	**Pacayal**	**1.60**	**79**	*e*P	**Pb**	**04 42 59.4**	**-0.7**
FAGO	**Alcalda de S**	**1.86**	**74**	*e*P	**Pn**	**04 43 01.5**	**+0.5**
LCND	**La Caada**	**2.00**	**86**	⇑*i*P	**Pn**	**04 43 04.0**	**+1.1**
CNCH	**Conchagua**	**2.06**	**87**	*e*P	**Pn**	**04 43 04.8**	**+1.0**

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*TEH **14** 04:44:37.7, 38°.32N×55°.48E, h11^{km}±35^{km}, ML4.0*
*IDC **14** 04:44:37.8±1.2, 38°.43N×55°.44E, h0^{km}, mb3.6/6, mbtmp3.9/13, ML3.6/6, MS3.3/2, Error ellipse: s-maj=33.2km s-min=9.0km az=7.0*
*AZER **14** 04:44:44.3±0.7, 38°.13N×55°.00E, h10^{km}, Error ellipse: s-maj=10.5km s-min=5.6km az=8.0*

ISC 14 04:44:38.8±0.6, 38°.35N±0°.05×55°.48E±0°.04, h10^{km}, n97, σ1^{s}.88/125, mb3.7/6, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRVT	**Maraveh tapeh**	**0.84**	**145**	Pg	**Pg**	**04 44 54.0**	**-1.0**
MRVT				Sg	**Sg**	**04 45 06.2**	**+0.3**
IMND	**Minoodasht**	**1.09**	**183**	Pg	**Pg**	**04 44 59.7**	**0.0**
GEYT	**Alibeck**	**2.12**	**101**	Pn	**Pn**	**04 45 15.4**	**+1.1**
	123nm,0.3s,baz=284,slow=17,SNR=202						
GEYT				Lg	Lg	04 45 46.0	
	12nm,0.3s,baz=117,slow=8.6,SNR=1.1						
	318nm,0.4s						
IGLO	**Ghaloghah**	**2.26**	**216**	Pn	**Pn**	**04 45 18.3**	**+1.8**
SHRO	**Shahrood**	**2.39**	**170**	Pn	**Pn**	**04 45 18.4**	**+0.2**
SBZV	**Sabzevar**	**2.59**	**138**	Pn	**Pn**	**04 45 22.8**	**+1.8**
IEMG	**Emamgholi**	**2.68**	**109**	Pn	**Pn**	**04 45 23.4**	**+1.2**
ISHM	**Shahmirzad**	**3.08**	**215**	Pn	**Pn**	**04 45 29.8**	**+2.0**
IAKL	**Akhelmad**	**3.13**	**123**	Pn	**Pn**	**04 45 30.7**	**+2.2**
IANJ	**Anjilo**	**3.14**	**204**	Pn	**Pn**	**04 45 30.2**	**+1.7**
IPRN	**Peran**	**3.27**	**231**	Pn	**Pn**	**04 45 31.5**	**+1.3**
IPAY	**Payeh**	**3.38**	**123**	Pn	**Pn**	**04 45 33.8**	**+2.0**
IFIR	**Firoozkooh**	**3.47**	**220**	Pn	**Pn**	**04 45 36.3**	**+3.1**
IMOG	**Moghan**	**3.81**	**125**	Pn	**Pn**	**04 45 39.9**	**+2.2**
DAMV	**Damavand**	**3.91**	**227**	Pn	**Pn**	**04 45 39.5**	**+0.4**
IDMV	**Damavand**	**3.91**	**226**	Pn	**Pn**	**04 45 41.9**	**+2.8**
IMYA	**Miami**	**4.19**	**117**	Pn	**Pn**	**04 45 44.0**	**+1.0**
CHTH	**Charan**	**4.25**	**236**	Pn	**Pn**	**04 45 44.8**	**+1.0**
QALM	**Alamut, Qazvin**	**4.30**	**245**	Pn	**Pn**	**04 45 45.2**	**+0.7**
THKV	**Tehran--Karaj**	**4.41**	**238**	Pn	**Pn**	**04 45 46.9**	**+1.0**
TNSJ	**Nastanj**	**4.47**	**168**	Pn	**Pn**	**04 45 48.7**	**+2.0**
JRKH	**Jarkhoshk**	**4.59**	**121**	Pn	**Pn**	**04 45 49.3**	**+1.0**
GIDE	**GILAN DEYLAMAN**	**4.64**	**254**	Pn	**Pn**	**04 45 50.5**	**+1.3**
TKDS	**Koohdasht(Taba**	**4.91**	**164**	Pn	**Pn**	**04 45 55.6**	**+2.8**
TBJM	**Torbat-e-JAM**	**4.96**	**127**	Pn	**Pn**	**04 45 55.7**	**+2.2**
GHVR	**GHOM**	**5.13**	**222**	Pn	**Pn**	**04 45 57.0**	**+1.2**
ASTR	**Astara**	**5.25**	**274**	P	**Pn**	**04 45 57.1**	**-0.2**
	SNR=6.4						
ASTR				S	**Sn**	**04 46 55.1**	**-2.9**
ASTR	**Astara**	**5.25**	**274**	Pn	**Pn**	**04 45 57.1**	**-0.2**
LKRN	**Lenkeran, Azer**	**5.27**	**276**	P	**Pn**	**04 45 59.0**	**+1.5**
LKRN				S	**Sn**	**04 46 55.9**	**-2.4**
LKRN	**Lenkeran, Azer**	**5.27**	**276**	Pn	**Pn**	**04 45 59.0**	**+1.5**
ANAR	**Anarak**	**5.34**	**196**	Pn	**Pn**	**04 45 60.0**	**+1.3**
TPRV	**Parvadeh(Tabas**	**5.40**	**169**	Pn	**Pn**	**04 46 01.5**	**+2.0**
GBS	**Qobustan**	**5.51**	**295**	P	**Pn**	**04 46 03.6**	**+2.6**
GBS				S	**Sn**	**04 47 06.8**	**+2.3**
GBS	**Qobustan**	**5.51**	**295**	Pn	**Pn**	**04 46 03.6**	**+2.6**
GLBA	**Clilabad**	**5.61**	**281**	P	**Pn**	**04 46 03.0**	**+0.8**
	SNR=15						
GLBA				S	**Sn**	**04 47 05.3**	**-1.4**
GLBA	**Clilabad**	**5.61**	**281**	Pn	**Pn**	**04 46 03.0**	**+0.8**
LRK	**Lerik**	**5.61**	**275**	P	**Pn**	**04 46 02.2**	**-0.3**
	SNR=38						
LRK				S	**Sn**	**04 47 04.6**	**-2.4**
LRK	**Lerik**	**5.61**	**275**	Pn	**Pn**	**04 46 02.1**	**-0.3**
ATGJ	**Altiaghaj**	**5.64**	**298**	P	**Pn**	**04 46 04.7**	**+1.9**
ATGJ				S	**Sn**	**04 47 09.6**	**+2.0**
ATGJ	**Altiaghaj**	**5.64**	**298**	Pn	**Pn**	**04 46 04.7**	**+1.9**
ZNJK	**Zanjan**	**5.66**	**255**	Pn	**Pn**	**04 46 04.4**	**+1.3**
YRD	**Yardimli**	**5.70**	**278**	P	**Pn**	**04 46 03.3**	**-0.3**
	SNR=32						
YRD				S	**Sn**	**04 47 05.8**	**-3.3**
YRD	**Yardimli**	**5.70**	**278**	Pn	**Pn**	**04 46 03.3**	**-0.3**
SIZA	**Siyzn**	**5.76**	**300**	P	**Pn**	**04 46 06.1**	**+1.6**
	SNR=4.4						
SIZA				S	**Sn**	**04 47 11.6**	**+1.0**
SIZA	**Siyzn**	**5.76**	**300**	Pn	**Pn**	**04 46 06.0**	**+1.6**
PQL	**Pirkuli**	**5.85**	**297**	P	**Pn**	**04 46 08.1**	**+2.4**
PQL				S	**Sn**	**04 47 14.6**	**+1.6**
PQL	**Pirkuli**	**5.85**	**297**	Pn	**Pn**	**04 46 08.1**	**+2.4**
YZKH	**Yazd**	**5.99**	**187**	Pn	**Pn**	**04 46 08.8**	**+1.2**
IML	**Ismayilli**	**6.14**	**296**	P	**Pn**	**04 46 12.3**	**+2.7**
IML				S	**Sn**	**04 47 19.6**	**-0.4**
IML	**Ismayilli**	**6.14**	**296**	Pn	**Pn**	**04 46 12.3**	**+2.7**
QUBA	**Quba, Azerbaij**	**6.16**	**301**	P	**Pn**	**04 46 12.8**	**+3.0**
	SNR=8.1						
QUBA				S	**Sn**	**04 47 20.8**	**+0.5**
QUB	**Quba**	**6.26**	**301**	Pn	**Pn**	**04 46 12.7**	**+1.5**
BLQ	**Beylaqan**	**6.32**	**285**	P	**Pn**	**04 46 13.7**	**+1.7**
	SNR=6.9						
BLQ				S	**Sn**	**04 47 22.3**	**-1.8**
BLQ	**Beylaqan**	**6.32**	**285**	Pn	**Pn**	**04 46 13.6**	**+1.7**
XNQ	**Khinaliq**	**6.32**	**299**	P	**Pn**	**04 46 13.3**	**+1.0**
	SNR=8.2						
XNQ				S	**Sn**	**04 47 24.6**	**+0.1**
XNQ	**Khinaliq**	**6.32**	**299**	Pn	**Pn**	**04 46 13.2**	**+1.0**
ZRD	**Zardab**	**6.34**	**290**	P	**Pn**	**04 46 14.4**	**+2.1**
ZRD				S	**Sn**	**04 47 24.4**	**-0.4**
ZRD	**Zardab**	**6.34**	**290**	Pn	**Pn**	**04 46 14.4**	**+2.1**

QSAR	Qusar	6.38	302	P	Pn	04 46 15.8	+2.9
	SNR=5.0						
QSAR				S	Sn	04 47 27.1	+1.2
QSAR	Qusar	6.38	302	Pn	Pn	04 46 15.8	+2.9
QRD	Qoradiz	6.46	282	P	Pn	04 46 15.4	+1.4
	SNR=4.9						
QRD				S	Sn	04 47 25.8	-1.9
QRD	Qoradiz	6.46	282	Pn	Pn	04 46 15.3	+1.4
BRDA	Brd	6.71	289	P	Pn	04 46 19.6	+2.1
BRDA				S	Sn	04 47 34.4	+0.4
BRDA	Brd	6.71	289	Pn	Pn	04 46 19.5	+2.1
AGDM	Agdam	6.73	288	P	Pn	04 46 18.9	+1.2
	SNR=4.2						
AGDM				S	Sn	04 47 32.1	-2.3
SEKA	Sheki	6.99	297	P	Pn	04 46 23.2	+1.9
	SNR=5.0						
SEKA				S	Sn	04 47 40.4	-0.4
SEKA	Sheki	6.99	297	Pn	Pn	04 46 23.2	+1.9
IRAM	Ramesheh	7.00	202	Pn	Pn	04 46 23.4	+1.8
IBRJ	Brojen	7.29	210	Pn	Pn	04 46 28.8	+3.1
GANJ	Ganja	7.44	291	P	Pn	04 46 28.5	+1.0
	SNR=6.6						
GANJ				S	Sn	04 47 47.7	-4.2
GANJ	Ganja	7.44	291	Pn	Pn	04 46 28.5	+1.0
ORD	Ordubad	7.45	277	P	Pn	04 46 29.2	+1.6
	SNR=14						
ORD				S	Sn	04 47 51.1	-1.1
ORD	Ordubad	7.45	277	Pn	Pn	04 46 29.2	+1.6
ZKT	Zaqatala	7.53	299	Pn	Pn	04 46 31.4	+2.8
ZKTA	Zakatala	7.55	299	P	Pn	04 46 31.5	+2.5
ZKTA				S	Sn	04 47 54.9	+0.3
IMRD	Marand	7.67	276	Pn	Pn	04 46 32.4	+1.6
SBZ	Shahbuz	7.81	281	P	Pn	04 46 34.4	+1.8
	SNR=25						
SBZ				S	Sn	04 48 01.8	+0.6
NAX	Nakhchivan	7.85	279	P	Pn	04 46 34.6	+1.6
	SNR=8.1						
NAX				S	Sn	04 48 01.2	-0.7
GDB	GEDABAY	7.88	291	P	Pn	04 46 33.6	0.0
	SNR=12						
GDB				S	Sn	04 47 58.9	-4.1
QZX	Qazax, Azerbai	8.25	292	P	Pn	04 46 39.6	+1.0
	SNR=5.5						
QZX				S	Sn	04 48 07.2	-4.6
MAKU	Maku	8.48	280	Pn	Pn	04 46 43.4	+1.5
GNI	Garni	8.52	286	Pn	Pn	04 46 44.4	+2.0
	3.1nm,0.3s,baz=111,slow=2.3,SNR=6.8						
GNI				Sn	Sn	04 48 19.2	+0.5
	1.1nm,0.3s,baz=225,slow=13,SNR=1.5						
GNI				LR	LR	04 51 23.5	
	comp=Z,164nm,18.0s,baz=80,slow=48						
	24nm,0.8s						
KBZ	Khabaz	10.91	303	Pn	Pn	04 47 13.8	-1.1
	0.3nm,0.3s,baz=128,slow=2.1,SNR=6.9						
KBZ				Sn	Sn	04 49 12.1	-5.0
	0.2nm,0.3s,baz=310,slow=23,SNR=0.9						
	1.2nm,0.4s						
KVAR	Kislovodsk Arr	11.14	304	Pn	Pn	04 47 18.2	-0.1
	baz=143,slow=19						
KVAR				Sn	Sn	04 49 15.2	-7.7
	baz=213,slow=13						
	1.5nm,0.6s						
AKTO	Aktyubinsk	12.22	8	Pn	Pn	04 47 33.5	+0.7
	0.7nm,0.3s,baz=221,slow=8.3,SNR=1.5						
AKTO				Sn	Sn	04 49 40.2	-8.8
	0.6nm,0.3s,baz=62,slow=20,SNR=2.1						
BELG	Belogornoye	15.08	341	LR	LR	04 54 22.2	
	comp=Z,150nm,20.9s,baz=6.9,slow=39						
AAK	Ala-Archa	15.08	67	Pn	Pn	04 48 08.9	-3.1
	0.2nm,0.3s,baz=222,slow=16,SNR=1.3						
	2.4nm,0.5s						
KSH	Kashi	15.99	79	P	Pn	04 48 20.3	-3.6
KSH				pP	P	04 48 26.5	-1.0
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BRTR	Keskin Array B	17.02	281	Pn	P	04 48 40.2	+1.3
	comp=Z,1.9nm,0.6s,baz=116,slow=10,SNR=1.1						
BVAR	Borovoye Array	17.94	30	P	Pn	04 48 48.6	+0.3
	baz=357,slow=30,SNR=2.9						
	comp=Z,2.3nm,0.6s						
KURBB	Kurchatov Arra	20.42	46	P	P	04 49 16.1	+0.1
	comp=Z,0.7nm,0.7s,baz=246,slow=10,SNR=1.1						
	comp=Z,0.7nm,0.7s						
MKAR	Makanchi Array	21.39	58	P	P	04 49 27.0	+0.4
	comp=Z,0.9nm,0.5s,baz=247,slow=10,SNR=3.3						
	comp=Z,0.9nm,0.5s						
AKASG	Malin Array Be	22.29	312	P	P	04 49 36.0	-0.1
	comp=Z,1.3nm,0.4s,baz=91,slow=7.9,SNR=5.6						
	comp=Z,1.3nm,0.4s						
IDI	Anoyia	24.62	272	P	P	04 49 59.2	-0.2
	comp=Z,5.2nm,0.5s,baz=74,slow=18,SNR=1.6						
	comp=Z,5.2nm,0.5s						
ZALV	Zalesovo Beam	25.37	43	P	P	04 50 07.1	+1.2
	comp=Z,0.7nm,0.5s,baz=249,slow=12,SNR=1.4						
	comp=Z,0.7nm,0.5s						
ESDC	Sonseca Array	45.46	291	P	P	04 52 58.3	+0.2
	comp=Z,0.4nm,0.6s,baz=90,slow=5.6,SNR=5.0						
	comp=Z,0.4nm,0.6s						
JOW	Kunigami	60.97	77	P	P	04 54 52.5	+0.1
	comp=Z,29nm,0.6s,baz=209,slow=11,SNR=2.6						

ROM 14 04:47:11.1±0.1**,42°.793N**±0°.003×**13°.249E**±0°.004**,**
h16^{km}**,ML0.6**/1**,7C-1D,Error ellipse: s-maj=0.3km**
s-min=0.0km az=193.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	Arquata del Tr	0.04	221	⇑P	Pg	04 47 14.2	+0.1
T1214				S	Sg	04 47 16.3	+0.2
T1245	Castelsantange	0.08	325	⇓P	Pg	04 47 14.5	+0.1
T1245				S	Sg	04 47 16.8	+0.3
T1245				AML	AML		
	comp=E,33µm,0.2s						
T1245				AML	AML		
	comp=N,48µm,1.2s						
T1245				AML	AML		
	comp=N,48µm,0.8s						
MMO1	Montemonaco	0.12	28	P	Pg	04 47 14.9	+0.1
MMO1				S	Sb	04 47 17.6	-0.1
T1241	Roccafluvione,	0.15	65	P	Pb	04 47 15.5	-0.1
T1241				S	Sb	04 47 18.2	-0.3
T1212	Cascia, Frazio	0.16	255	⇑P	Pg	04 47 15.4	+0.2
T1212				S	Sb	04 47 18.4	-0.4
T1218	Civita (PG)	0.16	219	⇑P	Pg	04 47 15.4	+0.2
T1218				S	Sb	04 47 18.8	0.0
SMA1	SAN MARTINO	0.17	159	⇑P	Pg	04 47 15.7	+0.2
SMA1				S	Sg	04 47 18.8	+0.4
T1216	Preci, Frazion	0.20	300	P	Pg	04 47 15.9	+0.2
T1216				S	Sb	04 47 19.4	-0.4
FDMO	Fiordimonte	0.27	334	⇑P	Pn	04 47 19.2	-1.3
T1215	Vallo di Nera,	0.28	272	P	Pb	04 47 17.7	-0.1
CSP1	Cessapalombo	0.30	354	⇑P	Pg	04 47 17.7	+0.2
TERO	Teramo	0.31	123	⇑P	Pg	04 47 17.8	+0.1
FOSV	Fossato di Vic	0.62	325	S	Sb	04 47 31.7	-0.3

IDC 14 04:58:42.1±2.3**,6°.93S**×**129°.14E,h0**^{km}**,mb3.2**/1**,**
mbtmp3.2/3**,ML3.4**/2**,Error ellipse: s-maj=118.9km**
s-min=33.4km az=67.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.88	159	Pn	Pn	05 01 59.5	-0.9
	0.2nm,0.3s,baz=338,slow=13,SNR=10						
WRA				Sn	Sn	05 04 19.6	-16
	0.3nm,0.3s,baz=333,slow=22,SNR=8.2						
	0.2nm,0.3s						
ASAR	Alice Springs	17.25	165	P	Pn	05 02 45.5	+0.7
	0.2nm,0.3s,baz=343,slow=9.0,SNR=8.5						
	0.3nm,0.5s						
MKAR	Makanchi Array	67.71	327	P	P	05 09 41.4	0.0
	0.1nm,0.5s,baz=111,slow=7.9,SNR=2.2						
	0.1nm,0.5s						

NEIC ***14*** *05:06:54.0±0.9, 34°.03N±0°.03×117°.25W±0°.03, h20^{km}±4^{km},*
Error ellipse: s-maj=4.1km s-min=3.5km az=193.0
ANF ***14*** *05:06:53.4±0.1, 34°.02N×117°.24W, h19^{km}±1^{km}, ML3.7/36,*
Error ellipse: s-maj=0.9km s-min=0.8km az=72.0
PAS ***14*** *05:06:54.5±1.1, 34°.04N±0°.03×117°.24W±0°.03, h18^{km}±4^{km},*
ML3.7/364, ML3.5/88(NEIC), Error ellipse: s-maj=5.0km
s-min=3.7km az=194.0
ISC 14 05:06:54.0±0.9**,34°.03N**±0°.01×**117°.24W**±0°.01**,h18**^{km}±2^{km}**,**
n140,σ0^{s}.**99**/191**,Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CFSC	Central Fire S	0.08	334		Pb	05 06 57.8	+0.1
CFSC					Sb	05 07 00.7	+0.7
CLTC	Calectric	0.09	314		Pb	05 06 58.1	+0.4
CLTC					Sb	05 07 01.2	+1.2
RSBC	Riverside Bore	0.09	232		Pb	05 06 57.9	+0.2
RSBC					Sb	05 07 00.5	+0.5
RSBC	Riverside Bore	0.09	232		Pb	05 06 57.9	+0.2
RSBC					Sb	05 07 00.6	+0.6
HLNC	Highland	0.09	10		Pb	05 06 57.7	-0.1
HLNC					Sb	05 07 00.3	+0.2
CFT	Crafton Hills	0.11	87		Pb	05 06 58.1	+2.3
CFT					Sb	05 07 00.9	+4.2
RVR	Riverside	0.12	252		Pb	05 06 58.0	+1.9
RVR					Sb	05 07 00.8	+3.5
SVD	Seven Oaks Dam	0.14	57		Pb	05 06 58.3	+1.3
SVD					Sb	05 07 01.3	+2.6
PEC	Perris	0.15	155		Pb	05 07 01.8	+4.5
FON	Fontana	0.18	293		Pb	05 07 02.0	+3.9
BBSC	Beaumont Base	0.24	117		Pb	05 07 04.0	+4.3
MLSC	Mira Loma	0.27	265		Pn	05 07 04.2	+1.2
CRNC	Corona	0.31	240		Pn	05 07 05.6	+2.0
BBRC	Big Bear Solar	0.35	49		Sb	05 07 06.5	-0.8
BBRC	Big Bear Solar	0.35	49	P	Pb	05 07 01.4	-0.5
	baz=230,SNR=1000						
BBRC				S	Sb	05 07 06.5	-0.8
	baz=230						
CHNC	Chino	0.37	265		Sb	05 07 07.1	-0.4
HMTC	Hemet	0.38	148		Pb	05 07 01.8	-0.4
HMTC					Sb	05 07 07.2	-0.5
BFSC	Mount Baldy Ra	0.41	301		Sb	05 07 07.7	-1.1
BFSC	Mount Baldy Ra	0.41	301	P	Pb	05 07 02.0	-0.8
	baz=120,SNR=418						
BFSC				S	Sb	05 07 07.7	-1.1
	baz=120						
ELS	Elsinore Mount	0.41	202	Pg	Pb	05 07 02.5	-0.3
ELS				IAML		05 07 09.2	
	comp=E,4µm,0.3s						
ELS				IAML		05 07 10.2	
	comp=N,2µm,0.3s						
ELS	Elsinore Mount	0.41	202		Sb	05 07 09.0	+0.1
DGR	Domenigoni Val	0.42	153		Sb	05 07 08.6	-0.6
MURC	Murrieta	0.43	175	P	Pb	05 07 02.9	-0.3
	baz=355,SNR=602						
MURC				S	Sb	05 07 09.2	-0.1
	baz=355						
POB	Polly Butte	0.43	142		Pb	05 07 02.8	-0.4
POB					Sb	05 07 08.8	-0.6
BACC	Bachelor Mtn.	0.45	158		Sb	05 07 09.3	-0.5
SIL	Silver Peak	0.47	47		Sb	05 07 09.7	-0.8
VTV	Victorville	0.54	352		Sb	05 07 11.3	-0.9
DEVC	Devers	0.56	99		Pb	05 07 05.0	-0.1
DEVC					Sb	05 07 13.0	+0.2
FULC	Fullerton	0.59	255		Pb	05 07 06.4	+0.7
FULC					Sn	05 07 15.7	-0.8
GVDA	Garner Valley	0.59	127		Pb	05 07 05.4	-0.5
GVDA					Sb	05 07 13.5	-0.4
CRY	Cary Ranch	0.62	138		Sb	05 07 14.4	-0.4
SANC	Santa Ana	0.63	239		Pb	05 07 06.8	+0.5
SANC					Sn	05 07 16.6	-0.9
RHC	Rose Hills Cem	0.64	268		Pb	05 07 06.4	-0.2
RHC					Sb	05 07 15.6	+0.4
BREC	Barre Substati	0.66	250		Sn	05 07 17.7	-0.5
HOLC	Holcomb Ridge	0.66	311		Pb	05 07 06.4	-0.7
HOLC					Sb	05 07 15.4	-0.4
DNR	Dunn Ranch,Anz	0.69	132		Sb	05 07 17.2	+0.6
EW2	E Wide Canyon	0.70	97		Pb	05 07 07.5	-0.2
EW2					Sb	05 07 16.8	0.0
MWC	Mount Wilson	0.71	286		Sb	05 07 17.1	-0.2
SNDA	J Saunders Pla	0.71	132		Sb	05 07 17.6	+0.4
BLAC	Blackrock camp	0.71	87		Pb	05 07 07.5	-0.3
BLAC					Sb	05 07 17.0	-0.3
BZNA	Buzz No.’s Pla	0.72	138		Sb	05 07 17.2	-0.4
CHFC	Chilao Flat St	0.72	295		Sb	05 07 16.9	-0.8
JNH	Juniper Hills	0.72	305		Pb	05 07 07.4	-0.8
JNH					Sb	05 07 17.1	-0.7
GVRC	Garvey Reservo	0.73	272		Pb	05 07 07.8	-0.4
GVRC					Sb	05 07 18.3	+0.5
DLAC	Del Amo	0.73	256		Pn	05 07 09.0	-0.4
DLAC					Sn	05 07 20.3	+0.2
CACC	Caltech Cellar	0.74	279		Pb	05 07 07.8	-0.5
CACC					Sb	05 07 17.8	-0.3
PLM	Palomar	0.74	155		Sb	05 07 18.1	-0.4
CBCC	Caltech Broad	0.74	279		Sb	05 07 18.0	-0.3
CRPC	Caltech Rob’n	0.74	278		Pb	05 07 08.1	-0.4
CRPC					Sb	05 07 18.3	0.0
GSA	Caltech--GSA	0.75	278		Pb	05 07 08.1	-0.4
GSA					Sb	05 07 18.4	+0.1
FRD	Ford Ranch, An	0.75	135		Sb	05 07 18.2	-0.3
FRD	Ford Ranch, An	0.75	135		Sb	05 07 18.3	-0.3
PFO	Pinyon Flats O	0.77	122	Pg	Pb	05 07 08.5	-0.5
PFO				IAML		05 07 19.7	
	comp=N,3µm,0.3s						
PFO				IAML		05 07 19.8	
	comp=N,3µm,0.1s						
PFO	Pinyon Flats O	0.77	122		Sb	05 07 18.5	-0.6
PFO	Pinyon Flats O	0.77	122	P	Pb	05 07 08.5	-0.5
	baz=304,SNR=927						
PFO				S	Sb	05 07 18.6	-0.6
	baz=304						
XPFO	Pion Flat	0.78	122		Sb	05 07 18.7	-0.6
GTM	Goat Mountain	0.78	70		Pb	05 07 08.4	-0.7
GTM					Sb	05 07 18.4	-0.9
PASC	Pasadena Art C	0.80	280		Pb	05 07 08.6	-0.8
PASC					Sb	05 07 19.4	-0.4
PASC	Pasadena Art C	0.80	280		Pb	05 07 08.8	-0.6
PASC				IAML		05 07 21.3	
	comp=N,3µm,0.6s						
PASC				IAML		05 07 21.5	
	comp=E,4µm,0.4s						
PMD	Palm Desert	0.81	118		Pb	05 07 09.2	-0.4
PMD				IAML		05 07 20.8	
	comp=E,3µm,0.2s						
PMD				IAML		05 07 20.8	
	comp=N,2µm,0.2s						
PMD	Palm Desert	0.81	118		Sb	05 07 19.8	-0.4
SBB	Saddle Back Bu	0.82	324		Sb	05 07 19.6	-0.9
LRRC	Littlerock Res	0.82	307		Pb	05 07 09.2	-0.5
LRRC					Sb	05 07 20.3	-0.1
WTT2	Watts, South G	0.85	265		Pb	05 07 09.8	-0.4
WTT2					Sn	05 07 23.6	+0.7
RRX	Edison Barstow	0.87	13		Sb	05 07 22.2	+0.3
RRX	Edison Barstow	0.87	13	P	Pb	05 07 10.4	-0.1
	baz=194,SNR=73						
RRX				S	Sb	05 07 22.1	+0.3
	baz=194						
USC	University of	0.87	270		Sn	05 07 23.1	-0.3
GORC	Green Oak Ranc	0.87	179		Sb	05 07 21.3	-0.7
HYS	Haystack Butte	0.88	342		Pb	05 07 10.3	-0.4
HYS					Sb	05 07 21.7	-0.4
GR2C	Griffith Obs.	0.89	276		Pb	05 07 10.1	-0.8
GR2C					Sb	05 07 22.0	-0.3
CJV	Casa Juvan	0.90	304		Pb	05 07 10.5	-0.7
CJV					Sb	05 07 22.5	-0.4
FMP	Fort Macarthur	0.93	250	P	Pb	05 07 11.1	-0.5
	baz=69,SNR=21						
FMP				S	Sb	05 07 23.5	-0.2
	baz=69						
DECC	Green Verdugo	0.94	284	P	Pb	05 07 11.2	-0.6
	baz=103,SNR=39						
DECC				S	Sb	05 07 23.8	0.0
	baz=103						
BELC	Belle Mtn. Jos	1.03	91	P	Pb	05 07 13.3	-0.1
	baz=272,SNR=1000						
BELC				S	Sb	05 07 26.7	0.0
	baz=272						
EDW2	Edwards Air Fo	1.05	324	P	Pb	05 07 13.3	-0.5
	baz=143,SNR=412						
EDW2				S	Sb	05 07 27.0	-0.3
	baz=143						
HEC	Hector,Ludlow	1.09	43	P	Pn	05 07 13.9	-0.6
	baz=224,SNR=297						
HEC				S	Sb	05 07 28.4	0.0
	baz=224						
109C	Camp Elliot, M	1.14	174		Pn	05 07 14.4	-0.7
109C	Camp Elliot, M	1.14	174	P	Pn	05 07 14.3	-0.8
	baz=354,SNR=55						
109C				S	Sb	05 07 29.0	-0.7
	baz=354						
CIS	Catalina Islan	1.16	238	P	Pn	05 07 14.3	-1.1
	baz=57,SNR=195						
CIS				S	Sn	05 07 30.7	-0.1
	baz=57						
CCAC	Calif City Air	1.29	330		Pn	05 07 17.0	-0.2
CCAC				IAML		05 07 36.9	
	comp=E,1µm,0.4s						
GSC	Goldstone, Bar	1.32	16	Pn	Pn	05 07 17.4	-0.2
GSC	Goldstone, Bar	1.32	16	P	Pn	05 07 17.4	-0.2
	baz=196,SNR=295						
GSC				S	Sb	05 07 35.3	+0.4
	baz=196						
MONP2	Monument Peak	1.32	149	P	Pn	05 07 17.8	0.0
	baz=330,SNR=442						
MONP2				S	Sn	05 07 34.8	-0.3
	baz=330						
OSI	Osito Audit: C	1.36	296	P	Pn	05 07 18.1	-0.1
	baz=115,SNR=35						
OSI				S	Sb	05 07 35.9	-0.1
	baz=115						
BAR	Barrett	1.43	160		Pn	05 07 19.0	-0.1
LRMC	Laurel Mtn Rad	1.49	346	P	Pn	05 07 19.9	-0.1
	baz=166,SNR=133						
LRMC				Sb	Sb	05 07 40.7	+0.7
	baz=166						
GMRC	Granite Mounta	1.51	60	P	Pn	05 07 19.5	-0.7
	baz=241,SNR=198						
GMRC				Sb	Sb	05 07 41.2	+0.8
	baz=241						
TJX	Tijuana	1.52	174		Pn	05 07 20.9	+0.6
BC3	Big Chuckawall	1.53	104	P	Pn	05 07 19.8	-0.7
	baz=285,SNR=661						
BC3				Sb	Sb	05 07 41.5	+0.5
	baz=285						
TKX	Tecate	1.55	160		Pn	05 07 21.0	+0.2
SWSC	Sam W. Stewart	1.62	132	P	Pn	05 07 20.5	-1.1
	baz=313,SNR=94						
IKP	In-Ko-Pah, Jac	1.67	145	P	Pn	05 07 22.1	-0.4
	baz=326,SNR=253						
IKP				Sb	Sb	05 07 45.7	+0.7
	baz=326						
ARVC	Arvin	1.71	310	P	Pn	05 07 22.5	-0.4
	baz=129,SNR=76						
ARVC				Sb	Sb	05 07 47.2	+1.1
	baz=129						
RMX	La Rumorosa	1.72	145		Pb	05 07 24.7	-0.5
RMX				IAML		05 07 50.4	
	comp=N,319nm,0.3s						
RMX				IAML		05 07 51.2	
	comp=E,569nm,0.3s						
IRM	Iron Mountain	1.74	85	P	Pn	05 07 22.8	-0.6
	baz=267,SNR=159						
YUH	Yuha Desert	1.76	141		Pn	05 07 23.0	-0.6
TUQ	Turquoise Moun	1.77	37	P	Pn	05 07 23.3	-0.6
	baz=218,SNR=267						
TUQ				Sb	Sb	05 07 49.3	+1.3
	baz=218						
CBX	Cerro Bola	1.78	164		Pn	05 07 24.5	+0.5
CBX				IAML		05 07 50.1	
	comp=N,607nm,0.5s						
CBX				IAML		05 07 50.2	
	comp=E,838nm,0.6s						
ISA	Isabella, Lake	1.92	328		Pn	05 07 25.5	-0.4
ISA	Isabella, Lake	1.92	328	P	Pn	05 07 25.5	-0.4
	baz=148,SNR=53						
ISA				Sb	Sb	05 07 53.6	+1.4
	baz=148						
QSM	Queen of Sheba	1.96	9		Pn	05 07 26.2	0.0
SCZ2	Santa Cruz Isl	1.99	270	P	Pn	05 07 26.1	-0.7
	baz=88,SNR=12						
SCZ2				S	Sn	05 07 51.0	-0.2
	baz=88						
BCW	Bitter Crk WRg	2.01	297	IAML		05 08 00.7	
	comp=N,663nm,0.3s						
SHOC	Shoshone, Teco	2.03	23	P	Pn	05 07 27.0	-0.2
	baz=203,SNR=156						
SHOC				Sb	Sb	05 07 56.9	+1.7
	baz=203						
MPMC	Manual Prospec	2.03	354	P	Pn	05 07 27.4	-0.1
	baz=174,SNR=208						
MPMC				Sb	Sb	05 07 57.4	+1.8
	baz=174						
SNCC	San Nicolas Is	2.06	248		Pn	05 07 26.8	-1.0
SNCC				IAML		05 08 06.9	
	comp=E,251nm,0.8s						
SNCC				IAML		05 08 12.4	
	comp=N,175nm,0.4s						
SNCC	San Nicolas Is	2.06	248	P	Pn	05 07 26.7	-1.0
	baz=67						
SNCC				Sb	Sb	05 07 57.5	+1.4
	baz=67						
SBC	Santa Barbara	2.09	282	S	Sn	05 07 54.0	+0.4
	baz=100						
CCX	Cicese	2.21	167		Pn	05 07 30.5	+0.8
CCX				IAML		05 08 03.9	
	comp=N,373nm,0.5s						
CCX				IAML		05 08 06.0	
	comp=E,342nm,0.6s						
GLA	Glamis	2.24	115		Pn	05 07 29.4	-0.8
GLA				IAML		05 08 05.8	
	comp=E,485nm,0.6s						
GLA				IAML		05 08 07.0	
	comp=N,278nm,0.5s						
GLA	Glamis	2.24	115	P	Pn	05 07 29.3	-0.9
	baz=297,SNR=44						
BLYC	Blythe	2.28	96	IAML		05 08 07.2	
	comp=E,479nm,0.3s						
BLYC				IAML		05 08 10.8	
	comp=N,391nm,0.5s						
NEE2	Needles Airpor	2.29	71	P	Pn	05 07 30.2	-0.7
	baz=252,SNR=11						
ESJX	Sierra Juarez	2.29	151		Pn	05 07 31.5	+0.5
ESJX				IAML		05 08 05.6	
	comp=E,234nm,0.2s						
ESJX				IAML		05 08 06.6	
	comp=N,148nm,0.5s						
PKM	Mcpherson Peak	2.29	293	P	Pn	05 07 31.4	+0.3
	baz=111,SNR=24						
VES	Vestal, Richgr	2.36	321	P	Pn	05 07 31.6	-0.2
	baz=139						
PDMCI	Parker Dam,Lak	2.58	83	P	Pn	05 07 35.1	+0.2
	baz=265						
V12A	Nelson	2.59	49		Pn	05 07 35.0	-0.1
V12A				IAML		05 08 16.1	
	comp=E,179nm,0.4s						
V12A				IAML		05 08 17.3	
	comp=N,158nm,0.4s						
WCT	Wildcat Mounta	2.80	10		Pn	05 07 38.3	+0.3
WCT				IAML		05 08 25.6	
	comp=E,228nm,0.6s						
WCT				IAML		05 08 26.0	
	comp=N,108nm,0.5s						
VTX	Valle De La Tr	2.90	155		Pn	05 07 40.2	+0.8
VTX				IAML		05 08 24.0	
	comp=E,108nm,0.6s						
GRAC	Grapevine Rang	2.96	358	P	Pn	05 07 41.2	+1.0
	baz=178						
W13A	Hualapai Mount	2.97	68	IAML		05 08 15.8	
	comp=E,116nm,0.3s						
W13A				IAML		05 08 31.9	
	comp=N,108nm,0.5s						
SHPR	Sheep Range	3.00	34		Pn	05 07 41.1	+0.3
TPNV	Topopah Spring	3.02	15	P	Pn	05 07 41.9	+0.8
	baz=196						
113A	Mohawk Valley,	3.17	112		Pn	05 07 42.2	-0.7
LCH	Last Change Ra	3.21	354		Pn	05 07 44.7	+1.0
DSP	Deep Springs	3.39	350		Pn	05 07 47.2	+1.3
Y14A	Wickenburg	3.52	90	IAML		05 08 29.3	
	comp=N,100nm,0.3s						
Y14A				IAML		05 08 52.0	
	comp=E,75nm,0.6s						
PMPB	Monarch Peak	3.64	308		Pn	05 07 49.8	+0.2
PMPB				IAML		05 08 53.9	
	comp=E,81nm,0.9s						
PMPB				IAML		05 09 10.1	
	comp=N,58nm,1.0s						
PRN	Pahroc Range	3.81	27	IAML		05 09 02.1	
	comp=N,117nm,0.4s						
PRN				IAML		05 09 08.2	
	comp=E,102nm,1.1s						
OMMB	Old Mammoth Mi	3.85	339	Pn	Pn	05 07 54.9	+2.2
BBGB	Big Mountain B	4.02	310	Pn	Pn	05 07 54.1	-0.6
PIX	Pinacate	4.02	127	Pn	Pn	05 07 54.0	-0.7
214A	Organ Pipe Nat	4.26	118	Pn	Pn	05 07 57.9	0.0
LCMT	Little Creek M	4.41	46		Pn	05 08 00.9	+0.7
R11A	Troy Canyon, C	4.51	17	IAML		05 09 17.6	
	comp=E,27nm,0.6s						
X16A	Lo Mia Camp, P	4.82	84	Pn	Pn	05 08 06.2	+0.4
WUAZ	Wupatki	5.05	71		Pn	05 08 10.0	+1.0
WUAZ				IAML		05 09 08.6	

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	comp=E,26nm,0.5s						
WUAZ				IAML		05 09 36.4	
	comp=E,32nm,0.6s						
SPR3	**Spring Creek 3**	**5.48**	**24**	Pn	**Pn**	**05 08 15.2**	**+0.1**
MVU	**Marysvale**	**6.03**	**41**	Pn	**Pn**	**05 08 24.6**	**+2.0**

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*PAS **14** 05:08:22.1±1.2, 34°.037N±0°.009×116°.87W±0°.01, h9^{km}±2^{km}, ML2.8/128, ML2.6/24(NEIC), Error ellipse: s-maj=1.6km s-min=1.3km az=78.0*

NEIC 14 05:08:21.6±0.8**, 34°.03N**±0°.02×**116°.87W**±0°.01**, h18**^{km}±1^{km}**, Error ellipse: s-maj=2.8km s-min=1.2km az=149.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBSC	**Beaumont Base**	**0.14**	**220**		Pg	05 08 25.7	-0.1
BBSC					Sg	05 08 28.5	-0.1
CFT	**Crafton Hills**	**0.20**	**273**		Pg	05 08 29.6	+3.1
SVD	**Seven Oaks Dam**	**0.20**	**293**		Pb	05 08 26.2	0.0
SVD					Sb	05 08 29.5	+0.2
BBRC	**Big Bear Solar**	**0.24**	**351**		Pb	05 08 26.8	-0.5
BBRC					Sb	05 08 30.4	-0.7
BTL	**Butler Peak**	**0.25**	**335**		Pg	05 08 27.2	-0.4
DEVC	**Devers**	**0.26**	**110**		Pg	05 08 27.5	0.0
DEVC					Sg	05 08 31.4	-0.2
PEC	**Perris**	**0.27**	**241**		Pn	05 08 31.9	+1.2
HLNC	**Highland**	**0.30**	**288**		Pg	05 08 28.2	0.0
HLNC					Sg	05 08 32.7	0.0
SIL	**Silver Peak**	**0.32**	**7**		Pg	05 08 28.2	-0.5
SIL					Sg	05 08 33.2	-0.3
HMTC	**Hemet**	**0.33**	**199**		Pg	05 08 28.8	+0.1
HMTC					Sg	05 08 33.6	0.0
POB	**Polly Butte**	**0.34**	**187**		Pb	05 08 29.1	-0.1
POB					Sg	05 08 34.0	+0.2
CFSC	**Central Fire S**	**0.35**	**283**		Pg	05 08 28.9	-0.1
CFSC					Sb	05 08 34.3	-0.2
CFSC	**Central Fire S**	**0.35**	**283**		Pg	05 08 28.8	-0.1
CLTC	**Calectric**	**0.37**	**280**		Sg	05 08 33.8	-0.9
RSBC	**Riverside Bore**	**0.38**	**262**		Pg	05 08 29.4	-0.1
RSBC					Sg	05 08 34.9	0.0
DGR	**Domenigoni Val**	**0.39**	**197**		Sg	05 08 35.3	+0.1
GVDA	**Garner Valley**	**0.39**	**155**		Pg	05 08 29.7	-0.1
GVDA					Sg	05 08 35.1	-0.2
EW2	**E Wide Canyon**	**0.40**	**102**		Sg	05 08 35.1	-0.2
BLAC	**Blackrock camp**	**0.41**	**84**		Sg	05 08 35.5	-0.2
RVR	**Riverside**	**0.42**	**266**		Sg	05 08 35.8	-0.2
BACC	**Bachelor Mtn.**	**0.43**	**199**		Sg	05 08 36.7	+0.2
CRY	**Cary Ranch**	**0.47**	**166**		Sb	05 08 38.4	+0.3
FON	**Fontana**	**0.47**	**279**		Sg	05 08 37.8	+0.1
CSP	**Cedar Springs**	**0.48**	**304**		Pg	05 08 31.3	-0.2
DNR	**Dunn Ranch,Anz**	**0.50**	**156**		Sb	05 08 39.1	+0.2
MURC	**Murrieta**	**0.50**	**212**		Sg	05 08 38.5	0.0
GTM	**Goat Mountain**	**0.51**	**58**		Pg	05 08 31.2	-0.6
GTM					Sg	05 08 37.8	-0.9
SNDA	**J Saunders Pla**	**0.52**	**155**		Sg	05 08 39.2	+0.1
PFO	**Pinyon Flats O**	**0.54**	**140**		Pg	05 08 32.3	-0.1
PFO					Sg	05 08 39.4	-0.4
PFO	**Pinyon Flats O**	**0.54**	**140**	Pg	Pg	05 08 32.3	-0.1
PFO				IAML		05 08 40.1	
	325nm,0.2s						
PFO				IAML		05 08 41.8	
	358nm,0.1s						
XPFO	**Pion Flat**	**0.54**	**140**		Sg	05 08 39.5	-0.3
SS2	**San Sevaine**	**0.55**	**289**		Pb	05 08 32.7	+0.1
PMD	**Palm Desert**	**0.56**	**132**		Pb	05 08 32.4	-0.3
PMD					Sg	05 08 39.7	-0.5
PMD	**Palm Desert**	**0.56**	**132**	IAML		05 08 39.9	
	comp=N,319nm,0.5s						
PMD				IAML		05 08 39.9	
	comp=E,700nm,0.3s						
BZNA	**Buzz No.'s Pla**	**0.56**	**162**		Pb	05 08 32.9	+0.1
BZNA					Sg	05 08 40.4	0.0
MLSC	**Mira Loma**	**0.57**	**268**		Pb	05 08 32.8	-0.2
MLSC					Sg	05 08 40.2	-0.5
FRD	**Ford Ranch, An**	**0.58**	**157**		Sb	05 08 41.0	+0.1
FRD	**Ford Ranch, An**	**0.58**	**157**		Sb	05 08 40.9	0.0
CRNC	**Corona**	**0.59**	**255**		Sb	05 08 41.0	-0.3
ELS	**Elsinore Mount**	**0.59**	**231**		Pb	05 08 33.3	-0.1
ELS					Sb	05 08 41.2	-0.2
ELS	**Elsinore Mount**	**0.59**	**231**	IAML		05 08 41.5	
	comp=N,375nm,0.3s						
VTV	**Victorville**	**0.65**	**325**		Sb	05 08 42.5	-0.7
CHNC	**Chino**	**0.67**	**268**		Pb	05 08 34.5	-0.1
CHNC					Sb	05 08 43.5	-0.1
PLM	**Palomar**	**0.67**	**179**		Sg	05 08 44.3	+0.5
BFSC	**Mount Baldy Ra**	**0.69**	**288**		Pb	05 08 34.8	-0.2
BFSC					Sb	05 08 44.1	0.0
TPC	**Twentynine Pal**	**0.69**	**83**		Pb	05 08 34.8	-0.2
ADO	**Adelanto Recei**	**0.70**	**319**		Pb	05 08 35.2	0.0
ADO					Sb	05 08 44.3	-0.2
SSK	**Sunset Peak**	**0.70**	**285**		Pb	05 08 35.3	-0.1
BELC	**Belle Mtn. Jos**	**0.73**	**92**		Pb	05 08 35.7	-0.1
BELC					Sb	05 08 45.2	-0.2
CTCC	**Cactus City**	**0.82**	**116**		Pb	05 08 37.5	+0.1
CTCC					Sg	05 08 49.1	+0.5
BORC	**Borrego Spring**	**0.85**	**153**		Pg	05 08 37.9	-0.1
BORC					Sb	05 08 48.8	+0.1
MATG	**Mataguay Scout**	**0.85**	**167**		Pg	05 08 38.1	0.0
MATG					Sg	05 08 49.2	-0.2
RRX	**Edison Barstow**	**0.85**	**353**		Pb	05 08 37.9	+0.1
RRX					Sg	05 08 49.4	-0.2
XTL	**Crystal Lake,**	**0.86**	**288**		Pb	05 08 38.0	-0.1
CTW	**Cottonwood Mou**	**0.90**	**112**		Pg	05 08 38.9	-0.2
CTW					Sg	05 08 51.1	0.0
HEC	**Hector,Ludlow**	**0.92**	**29**		Pb	05 08 38.9	0.0
GORC	**Green Oak Ranc**	**0.92**	**199**		Pb	05 08 38.7	-0.3
JNH	**Juniper Hills**	**0.99**	**295**		Pn	05 08 40.5	-0.2
SBB	**Saddle Back Bu**	**1.03**	**310**		Pb	05 08 40.9	+0.1
PASC	**Pasadena Art C**	**1.10**	**278**	Pg	Pn	05 08 42.4	+0.4
PASC				IAML		05 08 58.4	
	comp=N,151nm,0.5s						
109C	**Camp Elliot, M**	**1.15**	**190**		Pn	05 08 42.5	-0.2
109C				IAML		05 08 57.8	
	comp=E,129nm,0.2s						
109C				IAML		05 08 57.9	
	comp=N,127nm,0.2s						
GSC	**Goldstone, Bar**	**1.27**	**3**	Pn	Pb	05 08 45.0	-0.1
GSC					Pg	05 08 45.6	-0.7
GSC				IAML		05 09 04.7	
	comp=E,143nm,0.4s						
GSC				IAML		05 09 07.9	
	comp=N,106nm,0.7s						
BAR	**Barrett**	**1.35**	**173**	Pn	Pb	05 08 46.1	-0.2
BAR					Pn	05 08 46.4	+0.8
BAR				IAML		05 09 04.3	
	comp=N,103nm,0.2s						
BAR				IAML		05 09 05.4	
	comp=E,118nm,0.1s						
CCAC	**Calif City Air**	**1.47**	**320**	Pn	Pb	05 08 48.8	+0.4
CCAC					Pg	05 08 49.0	-0.9
CCAC				IAML		05 09 10.1	
	comp=N,129nm,0.7s						
TKX	**Tecate**	**1.47**	**171**	Pn	Pb	05 08 48.2	-0.1
TKX				IAML		05 09 08.2	
	comp=N,101nm,0.1s						
YUH	**Yuha Desert**	**1.59**	**150**	Pn	Pb	05 08 50.9	+0.6
CBX	**Cerro Bola**	**1.72**	**174**	Pn	Pb	05 08 52.5	-0.1
SPR3	**Spring Creek 3**	**5.37**	**22**	Pn	Pn	05 09 41.5	+0.5

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*IDC **14** 05:10:06.3±2.2, 5°.45S×150°.69E, h55^{km}±22^{km}, mb3.5/7, mbtmp3.8/8, ML1.8/1, Error ellipse: s-maj=54.3km s-min=15.5km az=129.0*

ISC 14 05:10:05.9±0.7**, 5°.4S**±0°.2×**150°.5E**±0°.2**, h50**^{km}**, n10, σ1^{s}67**/13**, mb3.7**/7**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.86**	**54**	P	**Pn**	**05 10 34.5**	**-0.9**
	1µm,0.4s,baz=231,slow=1.7,SNR=114						
KRVT				S	**Sn**	**05 11 00.1**	**+2.4**
	2µm,0.5s,baz=292,slow=22,SNR=8.8						
KRVT				LR	LR	05 11 04.9	
	comp=Z,123nm,19.2s,baz=11,slow=34						
PMG	**Port Moresby**	**5.18**	**220**	P	**Pn**	**05 11 23.2**	**+2.2**
	2.3nm,0.3s,baz=22,slow=12,SNR=3.9						
PMG				S	**Sn**	**05 12 16.3**	**-3.2**
	5.9nm,0.3s,baz=21,slow=10.0,SNR=1.5						
	4.9nm,0.2s						
WRA	**Warramunga Arr**	**21.36**	**226**	P	**P**	**05 14 49.2**	**-0.1**
	1.7nm,0.7s,baz=53,slow=10,SNR=24						
WRA				PcP	**PcP**	**05 18 52.0**	**0.0**
	0.5nm,0.8s,baz=41,slow=1.8,SNR=2.8						
	1.7nm,0.7s						
ASAR	**Alice Springs**	**24.20**	**220**	P	**P**	**05 15 18.1**	**0.0**
	2.5nm,0.8s,baz=55,slow=9.5,SNR=29						
	2.5nm,0.8s						
STKA	**Stephens Creek**	**27.62**	**197**	P	**P**	**05 15 49.9**	**+1.1**
	0.7nm,0.3s,baz=356,slow=15,SNR=1.9						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**79.31**	**320**	P	**P**	**05 22 07.4**	**+1.0**
	0.1nm,0.4s,baz=123,slow=4.5,SNR=1.9						
	0.1nm,0.4s						
ILAR	**Eielson Array**	**83.58**	**23**	P	**P**	**05 22 27.1**	**-1.4**
	0.5nm,0.6s,baz=246,slow=4.6,SNR=14						
	0.5nm,0.6s						
NVAR	**Mina Array Bea**	**94.25**	**52**	P	**P**	**05 23 19.3**	**-1.0**
	0.7nm,0.7s,baz=263,slow=6.8,SNR=7.2						
	0.7nm,0.7s						
YKA	**Yellowknife Ar**	**97.02**	**28**	P	**P**	**05 23 31.7**	**-0.4**
	0.1nm,0.7s,baz=277,slow=4.9,SNR=2.2						
	0.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**148.32**	**286**	PKPbc	**PKPbc**	**05 29 48.8**	**+0.9**
	2.5nm,0.6s,baz=41,slow=3.3,SNR=27						

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*IDC **14** 05:22:44.1±7.3, 7°.63S×127°.91E, h110^{km}±75^{km}, mb3.6/3, mbtmp4.2/6, ML4.3/3, Error ellipse: s-maj=118.1km s-min=18.9km az=74.0*

ISC 14 05:22:48.1±0.8**, 7°.54S**±0°.06×**128°.58E**±0°.09**, h151**^{km}**, n21, σ2^{s}33**/23**, mb3.6**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**4.80**	**242**	P	**Pn**	**05 24 00.8**	**+1.7**
MTN	**Manton Dam**	**5.84**	**155**	P	**Pn**	**05 24 14.9**	**+2.1**
FAKI	**Fak Fak**	**5.86**	**39**	P	**Pn**	**05 24 13.8**	**+0.7**
SANI	**Sanana**	**6.03**	**334**	P	**Pn**	**05 24 17.0**	**+1.7**
KDU	**Kakadu**	**6.39**	**144**	P	**Pn**	**05 24 21.9**	**+1.8**
SIJI	**Sorong**	**7.14**	**22**	P	**Pn**	**05 24 30.8**	**+0.6**
	11nm,0.3s,baz=221,slow=19,SNR=34						
SIJI				S	**Sn**	**05 25 48.1**	**-2.1**
	12nm,0.3s,baz=234,slow=23,SNR=1.8						
	22nm,0.3s						
KNRA	**Kununurra**	**8.09**	**179**	P	**Pn**	**05 24 43.1**	**+0.3**
PLAI	**Plampang**	**10.77**	**262**	P	**Pn**	**05 25 16.9**	**-1.5**
WRA	**Warramunga Arr**	**13.54**	**156**	P	**Pn**	**05 25 53.4**	**-0.8**
	0.9nm,0.3s,baz=326,slow=15,SNR=42						
WRA				S	Sn	05 28 16.6	-7.7
	3.2nm,0.3s,baz=329,slow=23,SNR=8.3						
	1.7nm,0.5s						
QIS	**Mount Isa**	**16.78**	**142**	P	**Pn**	**05 26 36.0**	**+1.6**
ASAR	**Alice Springs**	**16.83**	**163**	P	**P**	**05 26 36.5**	**+1.8**
	1.6nm,0.3s,baz=338,slow=11,SNR=70						
ASAR				S	**S**	**05 29 34.5**	**-7.8**
	0.6nm,0.4s,baz=317,slow=19,SNR=3.3						
	6.2nm,0.5s						
AS01	**Alice Springs**	**16.85**	**163**	P	**Pn**	**05 26 37.0**	**+1.8**
WRKA	**Warakurna**	**17.41**	**181**	P	**Pn**	**05 26 43.0**	**+1.1**
FORT	**Forrest**	**23.13**	**181**	P	**P**	**05 27 42.0**	**+1.0**
INKA	**Innaminka**	**23.16**	**152**	P	**P**	**05 27 43.4**	**+2.0**
MULG	**Mulgathing**	**23.20**	**168**	P	**P**	**05 27 43.0**	**+1.3**
BBOO	**Buckleboo**	**26.09**	**166**	P	**P**	**05 28 09.0**	**+1.1**
STKA	**Stephens Creek**	**27.09**	**155**	P	**P**	**05 28 18.0**	**+1.2**
	2.4nm,0.5s,baz=329,slow=10,SNR=8.1						
	2.4nm,0.5s						
HTT	**Hallett**	**27.49**	**161**	P	**P**	**05 28 22.3**	**+1.9**
MKAR	**Makanchi Array**	**67.91**	**328**	P	**P**	**05 33 29.7**	**-0.8**
	0.5nm,0.5s,baz=122,slow=7.7,SNR=8.2						
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**71.45**	**334**	P	**P**	**05 33 50.3**	**-1.6**
	0.5nm,0.5s,baz=123,slow=4.4,SNR=2.5						
	0.5nm,0.5s						

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*SOME **14** 05:42:38.2, 39°.85N×75°.12E, h10^{km}*

*NNC **14** 05:42:38.8±2.6, 39°.72N×75°.86E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=19.5km s-min=12.0km az=153.0*

*KRNET **14** 05:42:39.9±0.1, 39°.87N×75°.41E, mb3.0*

ISC 14 05:42:41.7±2.6**, 39°.86N**±0°.07×**75°.42E**±0°.04**, h2**^{km}±17^{km}**, n49, σ0^{s}97**/66**, 20C-13D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.64**	**16**	⇓*e*P	**Pn**	**05 43 10.3**	**-1.5**
	baz=15						
NRN				⇓*e*S	**Sn**	**05 43 32.1**	**-1.5**
	baz=15						
OHH	**Osh**	**2.12**	**289**	⇑*i*P	**Pn**	**05 43 18.6**	**+0.3**
	baz=89						
OHH				⇑*i*S	**Sb**	**05 43 46.6**	**-1.2**
	baz=89						
ARLS	**Aral**	**2.17**	**338**	⇑*e*P	**Pn**	**05 43 18.8**	**-0.2**
	baz=38						
ARLS				⇑*e*S	**Sb**	**05 43 47.2**	**-1.9**
	baz=38						
UCH	**Uchtor**	**2.46**	**344**	P	**Pn**	**05 43 24.1**	**+0.7**
	SNR=11						
UCH	**Uchtor**	**2.46**	**344**	⇓*e*P	**Pn**	**05 43 23.2**	**-0.1**
	baz=44						
UCH				⇓*e*S	**Sn**	**05 43 55.0**	**+0.8**
	baz=44						
TARG	**Taragay, Kyrgy**	**2.60**	**43**	⇑*e*P	**Pn**	**05 43 25.2**	**0.0**
	baz=44						
TARG				⇑*e*S	**Sn**	**05 43 58.4**	**+0.8**
	baz=44						
AML	**Almayashu**	**2.62**	**331**	P	**Pn**	**05 43 26.0**	**+0.6**
	SNR=5.7						
AML	**Almayashu**	**2.62**	**331**	⇑Pn	**Pn**	**05 43 25.4**	**0.0**
	0.7nm,0.7s						
AML				⇓Sn	**Sg**	**05 44 06.1**	**+0.2**
	5.5nm,0.8s						
AML	**Almayashu**	**2.62**	**331**	⇑*e*P	**Pn**	**05 43 25.5**	**+0.1**
	baz=31						
AML				⇑*i*S	**Sn**	**05 43 58.8**	**+0.8**
	baz=31						
KDJ	**Kajisay**	**2.63**	**30**	⇑*i*P	**Pn**	**05 43 25.6**	**+0.2**
	baz=30						
KDJ				⇑*i*S	**Sn**	**05 43 59.1**	**+1.1**
	baz=30						
DRK	**Karamyk**	**2.82**	**263**	⇓*i*P	**Pn**	**05 43 28.1**	**+0.1**
	baz=63						
DRK				⇓*i*S	**Sn**	**05 44 03.2**	**+0.5**
	baz=63						
KBK	**Karagaybulak**	**2.82**	**353**	P	**Pb**	**05 43 33.6**	**+0.7**
	SNR=10						
KBK	**Karagaybulak**	**2.82**	**353**	⇑*e*P	**Pn**	**05 43 28.1**	**+0.2**
	baz=53						
KBK				⇑*e*S	**Sn**	**05 44 03.2**	**+0.6**
	baz=53						
AAK	**Ala-Archa**	**2.86**	**346**	P	**Pb**	**05 43 33.9**	**+0.2**
	SNR=8.3						
AAK	**Ala-Archa**	**2.86**	**346**	⇓*i*P	**Pn**	**05 43 28.7**	**+0.2**
	baz=46						
AAK				⇓*i*S	**Sn**	**05 44 04.4**	**+0.7**
	baz=46						
EKS2	**Erkin-Say**	**3.06**	**337**	⇑*e*P	**Pn**	**05 43 31.4**	**+0.2**
	baz=37						
EKS2				⇑*e*S	**Sn**	**05 44 09.1**	**+0.6**
	baz=37						
TKM2	**Tokmak 2**	**3.06**	**2**	P	**Pb**	**05 43 37.1**	**0.0**
	SNR=5.3						
TKM2	**Tokmak 2**	**3.06**	**2**	⇑Pn	**Pn**	**05 43 32.2**	**+0.8**
	6.9nm,1.1s						
TKM2				⇓Sn	**Sb**	**05 44 17.8**	**+2.8**
	28nm,0.8s						
TKM2	**Tokmak 2**	**3.06**	**2**	⇓*e*P	**Pn**	**05 43 31.4**	**+0.1**
	baz=3.0						
TKM2				⇓*e*S	**Sn**	**05 44 09.1**	**+0.4**
	baz=3.0						
KST	**Kastek**	**3.21**	**7**	Pg	**Pb**	**05 43 39.1**	**-0.4**
	5.6nm,0.6s						
KST				Lg	Lg	05 44 22.4	
	37nm,0.9s						
KST	**Kastek**	**3.21**	**7**	*e*Pg	**Pb**	**05 43 39.1**	**-0.4**
	5.6nm,0.6s						
KST				*e*Lg	Lg	05 44 22.4	
	37nm,0.9s						
IZV	**Izvestkoviy**	**3.30**	**15**	Pg	**Pb**	**05 43 40.7**	**-0.3**
	6.8nm,0.5s						
IZV				Lg	Lg	05 44 25.5	
	10.0nm,0.6s						
IZV	**Izvestkoviy**	**3.30**	**15**	*e*Pg	**Pb**	**05 43 39.7**	**-1.3**
	6.8nm,0.5s						
IZV				*e*Lg	Lg	05 44 23.4	
	10.0nm,0.6s						
MRKS	**Merke**	**3.32**	**331**	*e*Pg	**Pn**	**05 43 36.5**	**+1.7**
	1.1nm,3.7s						
MRKS				*e*Lg	Lg	05 44 17.9	
	4.7nm,0.6s						
MTBS	**Maitube**	**3.36**	**13**	Pg	**Pb**	**05 43 42.4**	**+0.5**
	7.6nm,0.6s						
MTBS				Lg	Lg	05 44 27.6	
	18nm,0.4s						
MTBS	**Maitube**	**3.36**	**13**	*e*Pg	**Pb**	**05 43 42.1**	**+0.2**
	7.6nm,0.6s						
MTBS				*e*Lg	Lg	05 44 27.8	
	18nm,0.4s						
ANVS	**Anan'yevo**	**3.38**	**29**	⇑*i*P	**Pn**	**05 43 36.0**	**+0.4**
	baz=29						
ANVS				⇑*i*S	**Sn**	**05 44 16.8**	**+0.4**
	baz=29						
TNSS	**Tian-Shan**	**3.38**	**19**	Pg	**Pb**	**05 43 41.8**	**-0.7**
	4.7nm,0.4s						
TNSS				Lg	Lg	05 44 26.8	
	9.0nm,0.7s						
TNSS	**Tian-Shan**	**3.38**	**19**	*e*Pg	**Pb**	**05 43 41.1**	**-1.4**
	4.7nm,0.4s						
TNSS				*e*Lg	Lg	05 44 25.9	
	9.0nm,0.7s						
DGS	**Degeres**	**3.39**	**4**	Pg	**Pb**	**05 43 42.5**	**-0.1**
	7.8nm,0.5s						
DGS				Lg	Lg	05 44 28.2	
	15nm,0.5s						
DGS	**Degeres**	**3.39**	**4**	*e*Pg	**Pb**	**05 43 42.0**	**-0.6**
	7.8nm,0.5s						
DGS				*e*Lg	Lg	05 44 27.5	
	15nm,0.5s						
MNAS	**Manas**	**3.43**	**321**	⇑*i*P	**Pn**	**05 43 36.4**	**+0.1**
	baz=21						
MNAS				⇑*i*S	**Sn**	**05 44 17.8**	**+0.3**
	baz=21						
USP	**Ospenovka**	**3.48**	**349**	P	**Pb**	**05 43 44.8**	**+0.8**
	SNR=5.8						
MDOK	**Medeo**	**3.52**	**20**	Pg	**Pb**	**05 43 44.6**	**-0.2**
	7.7nm,0.8s						
MDOK				Lg	Lg	05 44 31.4	
	16nm,0.6s						
MDOK	**Medeo**	**3.52**	**20**	*e*Pg	**Pb**	**05 43 44.1**	**-0.7**
	7.7nm,0.8s						
MDOK				*e*Lg	Lg	05 44 31.0	
	16nm,0.6s						
KOTS	**Kotyrbulak**	**3.60**	**20**	Pg	**Pb**	**05 43 46.3**	**+0.1**
	4.9nm,0.6s						
KOTS				Lg	Lg	05 44 34.5	
	28nm,0.7s						
KOTS	**Kotyrbulak**	**3.60**	**20**	*e*Pg	**Pb**	**05 43 46.2**	**-0.1**
	4.9nm,0.6s						
KOTS				*e*Lg	Lg	05 44 34.6	
	28nm,0.7s						
SGDS	**Sogindy**	**3.64**	**351**	Pg	**Pb**	**05 43 47.4**	**+0.6**
	6.5nm,0.3s						
SGDS				Lg	Lg	05 44 36.1	
	6.6nm,0.4s						
KRBS	**Karabastau**	**3.84**	**3**	Pg	**Pb**	**05 43 50.5**	**+0.4**
	4.2nm,0.4s						
KRBS				Lg	Lg	05 44 41.7	
	6.7nm,0.6s						
KRBS	**Karabastau**	**3.84**	**3**	*e*Pg	**Pb**	**05 43 50.5**	**+0.4**
	4.2nm,0.4s						
KRBS				*e*Lg	Lg	05 44 42.0	
	6.7nm,0.6s						
KTBS	**Karatobe**	**3.96**	**13**	Pg	**Pb**	**05 43 52.8**	**+0.4**
	4.8nm,0.4s						
KTBS				Lg	Lg	05 44 45.5	
	19nm,0.6s						
KTBS	**Karatobe**	**3.96**	**13**	*e*Pg	**Pb**	**05 43 52.7**	**+0.4**
	4.8nm,0.4s						
KTBS				*e*Lg	Lg	05 44 45.8	
	19nm,0.6s						
KUU	**Kurty**	**4.09**	**9**	Pg	**Pb**	**05 43 54.4**	**-0.1**
	1.5nm,0.3s						
KUU				Lg	Lg	05 44 48.2	
	18nm,0.6s						
KUU	**Kurty**	**4.09**	**9**	*e*Pg	**Pb**	**05 43 54.5**	**+0.1**
	1.5nm,0.3s						
KUU				*e*Lg	Lg	05 44 49.0	
	18nm,0.6s						
CHKK	**Chushkaly**	**4.16**	**16**	Pg	**Pb**	**05 43 56.0**	**+0.3**
	4.1nm,0.3s						
CHKK				Lg	Lg	05 44 51.5	
	21nm,0.4s						
KPKS	**Kokpek**	**4.36**	**33**	Pg	**Pb**	**05 43 59.1**	**+0.1**
	2.8nm,0.3s						
KPKS				Lg	Lg	05 44 56.2	
	10.0nm,0.4s						
KPKS	**Kokpek**	**4.36**	**33**	*e*Pg	**Pb**	**05 43 59.3**	**+0.3**
	2.8nm,0.3s						
KPKS				*e*Lg	Lg	05 44 57.1	
	10.0nm,0.4s						
IUG	**Iuzhnay**	**4.67**	**301**	Pg	**Pb**	**05 44 06.0**	**+1.6**
	4.2nm,0.4s						
IUG				Lg	Lg	05 45 08.4	
	8.7nm,0.7s						
KK31	**Karatay Array**	**4.91**	**313**	P	**Pn**	**05 43 54.9**	**-1.6**
	1.1nm,0.8s,baz=132,slow=13,SNR=5.0						
KK31				⇓S	**Sb**	**05 45 03.6**	**-4.2**
	1.0nm,0.5s						

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*ATH **14** 05:49:06.1, 35°.64N×21°.95E, h8^{km}±4^{km}, ML2.6/2, Error ellipse: s-maj=8.9km s-min=2.3km az=162.0*

*IDC **14** 05:49:06.9±3.6, 36°.39N×22°.38E, h0^{km}, mb3.8/7, mbtmp3.8/7, ML1.9/1, Error ellipse: s-maj=78.0km s-min=25.0km az=35.0*

*THE **14** 05:49:07.3, 35°.81N×21°.97E, h0^{km}±4^{km}, ML2.5/4, Error ellipse: s-maj=5.2km s-min=1.8km az=200.0*

ISC 14 05:49:05.2±2.6**, 35°.65N**±0°.08×**21°.90E**±0°.08**, h14**^{km}±13^{km}**, n17, σ1^{s}45**/20**, mb4.0**/7**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTHA	**Kythira Island**	**1.12**	**57**	P	**Pg**	**05 49 26.1**	**-0.7**
KTHA				S	**Sg**	**05 49 41.7**	**+0.3**
	335nm,0.6s						
KTHA	**Kythira Island**	**1.12**	**57**	P	**Pg**	**05 49 26.7**	**-0.1**
KTHA				S	**Sg**	**05 49 41.4**	**-0.1**
KTHA				AML	AML	05 49 46.0	
	comp=N,286µm,0.4s						
KTHA				AML	AML	05 49 47.5	
	comp=E,926µm,0.6s						
PYL	**PYLOS**	**1.25**	**354**	P	**Pn**	**05 49 28.2**	**-0.1**
PYL				S	**Sb**	**05 49 44.1**	**-0.5**
	comp=E,170nm,0.8s						
PYL	**PYLOS**	**1.25**	**354**	P	**Pn**	**05 49 28.4**	**+0.1**
PYL				S	**Sb**	**05 49 46.5**	**+1.9**
VLI	**Veliai**	**1.36**	**38**	P	**Pn**	**05 49 30.3**	**+0.6**
VLI				S	**Sb**	**05 49 46.9**	**-0.7**
	comp=E,280nm,0.9s						
VLI	**Veliai**	**1.36**	**38**	P	**Pn**	**05 49 30.8**	**+1.1**
VLI				S	**Sb**	**05 49 47.8**	**+0.2**
VLI				AML	AML	05 49 58.2	
	comp=N,443µm,0.9s						
VLI				AML	AML	05 49 58.5	
	comp=E,288µm,0.5s						
RODP	**Rodopos**	**1.51**	**93**	P	**Pn**	**05 49 34.4**	**+2.5**
ITM	**Ithomi**	**1.53**	**1**	P	**Pn**	**05 49 32.6**	**+0.5**
ITM				S	**Sn**	**05 49 53.8**	**+2.0**
	comp=E,188nm,0.7s						
ITM	**Ithomi**	**1.53**	**1**	P	**Pn**	**05 49 33.3**	**+1.2**
IDI	**Anoyia**	**2.46**	**97**	Pn	**Pn**	**05 49 46.5**	**+1.5**
	comp=E,0.3nm,0.3s,baz=272,slow=22,SNR=1.8						
IDI				Sn	**Sn**	**05 50 12.2**	**-2.7**
	comp=E,1.4nm,0.3s,baz=283,slow=20,SNR=1.8						
HFS	**Hagfors**	**25.07**	**350**	P	**P**	**05 54 26.6**	**-2.3**
	comp=E,3.3nm,1.0s,baz=163,slow=10,SNR=2.6						
	comp=E,3.3nm,1.0s						
EKA	**Eskdalemuir Ar**	**26.14**	**327**	P	**P**	**05 54 39.2**	**+0.5**
	comp=E,0.4nm,0.4s,baz=131,slow=8.6,SNR=1.5						
	comp=E,0.4nm,0.4s						
ARCES	**ARCESS Array B**	**34.00**	**2**	P	P	05 55 46.2	-1.9
	comp=E,1.0nm,0.5s,baz=185,slow=10.0,SNR=7.6						
	comp=E,1.0nm,0.5s						
SPITS	**Spitsbergen Ar**	**42.70**	**358**	P	P	05 56 58.1	-3.1
	comp=E,4.9nm,0.8s,baz=156,slow=11,SNR=1.4						
	comp=E,4.9nm,0.8s						
KURBB	**Kurchatov Arra**	**42.89**	**51**	P	P	05 57 01.1	-1.9
	comp=E,0.2nm,0.6s,baz=274,slow=9.3,SNR=2.2						
	comp=E,0.2nm,0.6s						
MKAR	**Makanchi Array**	**45.73**	**57**	P	P	05 57 23.6	-2.3
	comp=E,0.7nm,0.5s,baz=272,slow=7.2,SNR=12						
	comp=E,0.7nm,0.5s						
ZALV	**Zalesovo Beam**	**46.59**	**46**	P	P	05 57 30.1	-2.4
	comp=E,0.6nm,0.3s,baz=278,slow=9.8,SNR=4.0						
	comp=E,0.6nm,0.3s						

BJI **14** *05:55:17.2±0.0, 0°.29N×121°.45E, h86^{km}, mb5.5/87, mB5.4/60, Ms4.8/50, Ms7 4.4/50*
MOS **14** *05:55:18.4±0.9, 0°.64N×121°.21E, h74^{km}, mb5.8/49, MS4.2/5, Error ellipse: s-maj=8.2km s-min=4.2km az=114.2*
GCMT **14** *05:55:21.5±0.1, 0°.70N±0°.01×121°.14E±0°.01, h88^{km}±1^{km}, MW5.4/138, Moment Tensor Solution. s126,c191; s138,c266; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.51±.02; $M_{\theta\theta}$-1.10±.02; $M_{\phi\phi}$1.61±.02; $M_{r\theta}$-0.94±.01; $M_{\theta\phi}$0.21±.02; $M_{\phi r}$-0.14±.02; Best double couple: $M_0$1.72200×10^{17} NP1:ϕ_s44.00000°, δ70.00000°, λ-32.00000°. NP2:ϕ_s146.00000°, δ60.00000°, λ-157.00000°. Principal axes: T 1.6510, Plg7.0000°, Azm97.0000°; N 0.1460, Plg53.0000°, Azm196.0000°; P -1.7930, Plg36.0000°, Azm2.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC **14** *05:55:21.3, 0°.76N×121°.16E, h60^{km}, Moment Tensor Solution. Duration: 2^{s}7 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.11; $M_{\theta\theta}$-1.26; $M_{\phi\phi}$1.37; $M_{r\theta}$-0.99; $M_{\theta\phi}$0.17; $M_{\phi r}$-0.06; Fault plane solution: $M_0$1.61000×10^{17} NP1:ϕ_s45.71000°, δ74.29000°, λ-26.60000°. NP2:ϕ_s143.43000°, δ64.47000°, λ-162.54000°. Principal axes: T 1.3917, Plg7.0000°, Azm96.0000°; N 0.4398, Plg59.0000°, Azm197.0000°; P -1.8316, Plg30.0000°, Azm2.0000°;*
NEIC **14** *05:55:21.5±2.4, 0°.65N±0°.06×121°.15E±0°.06, h75^{km}±4^{km}, mb5.6/185, Mww5.4/12 Error ellipse: s-maj=9.8km s-min=7.7km az=45.0*
NEIC **14** *05:55:21.3, 0°.66N×121°.16E, h60^{km}*
DJA **14** *05:55:21.4±0.1, 1°N±1°×12°1E±°, h79^{km}±2^{km}, M5.5/113, mb5.6/113, mB5.9/89, MLv6.0/18, Mw5.4/136, Mw(mB)5.5/89, MwMwp5.2/29, Mwp5.4/29*
IDC **14** *05:55:22.9±1.4, 0°.60N×121°.18E, h101^{km}±12^{km}, mb4.9/46, mbtmp5.2/49, MS4.1/58, Error ellipse: s-maj=10.3km s-min=6.4km az=59.0*
KLM **14** *05:55:30, 0°.96N×120°.64E, h98^{km}, mb5.9*
ISC 14 05:55:21.0±0.2**, 0°.57N**±0°.03×**121°.15E**±0°.03**, h84**^{km}±1^{km}**, h84**^{km}**:pP-P, n1048,** σ**1^{s}43**/1140**, mb5.5**/219**, 18C-69D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOLI2	Tolitoli	0.65	326		Pn	05 55 35.6	-0.8
TOLI2				Sn	Sn	05 55 46.1	-1.9
TOLI2	Tolitoli	0.65	326	P	Pn	05 55 35.7	-0.8
MRSI	Marisa	0.80	97	P	Pn	05 55 38.0	0.0
MRSI				S	Sn	05 55 50.8	+0.2
MPSI	Mapaga	1.27	260	P	Pn	05 55 43.5	-0.1
GTOI	Gorontalo	1.86	88	P	Pn	05 55 50.5	-0.7
LUWI	Luwuk	2.28	135		Pn	05 55 59.0	+2.3
LUWI	Luwuk	2.28	135	P	Pn	05 55 58.8	+2.0
LUWI	Luwuk	2.28	135	P	Pn	05 55 59.3	+2.5
BKB	Balikpapan	4.62	247		Pn	05 56 28.1	-0.4
BKB	Balikpapan	4.62	247	P	Pn	05 56 28.8	+0.3
BKB	Balikpapan	4.62	247	P	Pn	05 56 28.3	-0.2
SPSI	Sidrap Palu	4.71	197	P	Pn	05 56 30.6	+0.9
MYLDM	Lahad Datu	5.29	330	Pn	Pn	05 56 37.6	+0.1
SGSI	Sangihe	5.36	55	P	Pn	05 56 36.7	-1.9
	1μm,0.6s,20μm18nm						
SANI	Sanana	5.49	118	P	Pn	05 56 40.7	+0.3
SANI	Sanana	5.49	118	P	Pn	05 56 39.4	-1.0
	991nm,0.9s,15μm6μm7.6nm						
KAPI	Kappang	5.72	194	P	Pn	05 56 44.0	+0.5
	236nm,0.5s,baz=354,slow=7.3,SNR=66						
KAPI				S	Sn	05 57 44.1	-3.7
	314nm,0.6s,baz=169,slow=21,SNR=1.6						
KAPI				LR	LR	05 59 18.9	
	comp=Z,5μm,21.2s,baz=350,slow=41						
KAPI	Kappang	5.72	194	Pn	Pn	05 56 44.1	+0.7
KAPI	Kappang	5.72	194	P	Pn	05 56 44.7	+1.2
KAPI	Kappang	5.72	194	P	Pn	05 56 44.9	+1.5
BKSI	Bulukumba	5.94	190	P	Pn	05 56 46.9	+0.4
	1μm,1.0s,10μm6μm4.0nm						
TNTI	Ternate	6.22	88	Pn	Pn	05 56 50.7	+0.4
TNTI	Ternate	6.22	88	P	Pn	05 56 51.8	+1.5
TNTI	Ternate	6.22	88	P	Pn	05 56 50.7	+0.4
	799nm,1.1s,9μm7μm3.7nm						
SPMM	Sapulut	6.23	311	P	Pn	05 56 51.0	+0.6
ZCP	Zamboanga City	6.39	8	⇓*i*P	Pn	05 56 52.0	-0.6
MTKI	Muara Teweh, K	6.43	256	P	Pn	05 56 53.2	0.0
	2μm,1.0s,20μm11μm6.0nm						
LBMI	Labuha	6.46	101	P	Pn	05 56 53.5	-0.1
	7μm,0.9s,56μm53nm						
GSPH	General Santos	6.66	35	⇑*e*P	Pn	05 56 54.3	-2.1
GSPH				*i* S	Sn	05 58 09.4	-1.7
BSSI	Bau Bau, Buton	6.70	186	P	Pn	05 56 58.0	+1.1
	718nm,0.8s,8μm5μm1.9nm						
NLAI	Namlea	7.05	122	P	Pn	05 57 02.8	+1.2
	675nm,0.8s,8μm4.5nm						
CTBH	Cotabato--PC H	7.29	25	⇑*i*P	Pn	05 57 03.0	-1.9
KKM	Kota Kinabalu	7.34	318		Pn	05 57 05.0	-0.6
KKM	Kota Kinabalu	7.34	318	P	Pn	05 57 06.3	+0.7
BBKI	Banjar Baru	7.47	238	P	Pn	05 57 07.8	+0.4
	791nm,0.9s,9μm6.4nm						
KCP	Kidapawan	7.51	31	⇑*i*P	Pn	05 57 07.2	-0.7
KCP				*i* S	Sn	05 58 29.6	-2.0
DAV	Davao City (W)	7.82	34	P	Pn	05 57 12.9	+0.8
	359nm,0.4s,baz=189,slow=1.5,SNR=14						
DAV				S	Sn	05 58 41.7	+2.5
	2μm,0.8s,baz=262,slow=22,SNR=11						
DAV				LR	LR	06 00 42.1	
	comp=Z,1μm,18.4s,baz=176,slow=41						
DAV	Davao City (W)	7.82	34	Pn	Pn	05 57 12.8	+0.6
DAV	Davao City (W)	7.82	34	P	Pn	05 57 17.1	+4.9
AAI	Ambon	8.21	121	P	Pn	05 57 20.0	+2.5
	1μm,0.8s,9μm						
DCPH	Dipolog City	8.26	15	⇓*i*P	Pn	05 57 21.8	+3.7
CGP	Cagayan de Oro	8.59	24	⇓*e*P	Pn	05 57 23.4	+0.7
MSAI	Masohi	8.70	117	P	Pn	05 57 26.5	+2.4
	112nm,0.9s,5μm						
SNPH	Sibulan	8.96	13	*e*P	Pn	05 57 28.8	+1.1
SBUM	Sibu	9.12	282	Pn	Pn	05 57 30.4	+0.6
SBUM	Sibu	9.12	282	P	Pn	05 57 32.0	+2.1
BIPH	Bislig	9.18	34	⇓*e*P	Pn	05 57 30.8	+0.2
BIPH				*e*S	Sn	05 59 05.9	-6.3
MMRI	Maumere	9.21	173	Pn	Pn	05 57 31.9	+0.8
MMRI	Maumere	9.21	173	P	Pn	05 57 32.6	+1.5
	391nm,1.5s,6μm4μm						
TBP	Tagbilaran	9.45	17	*e*P	Pn	05 57 39.3	+4.9
TBP				*i* S	Sn	05 59 19.4	+0.3
PLAI	Plampang	9.92	200	P	Pn	05 57 42.0	+1.2
PLAI	Plampang	9.92	200	P	Pn	05 57 42.0	+1.2
	125nm,0.9s,2μm4μm						
PBKI	Pangkalan Bun	10.02	251	P	Pn	05 57 41.9	-0.3
	331nm,1.1s,36μm						
BNDI	Bandanaira	10.11	120	P	Pn	05 57 45.3	+2.0
BNDI	Bandanaira	10.11	120	P	Pn	05 57 44.7	+1.4
	3μm,1.1s,24μm5μm						
SCPH	Surigao	10.12	25	*e*P	Pn	05 57 45.0	+1.5
TWSI	Taliwang, Sumb	10.18	205	P	Pn	05 57 45.7	+1.4
	130nm,1.2s,1μm						
SIJI	Sorong	10.22	98	P	Pn	05 57 45.1	+0.2
	630nm,0.8s,baz=299,slow=10.0,SNR=126						
SIJI				S	Sn	05 59 39.2	+1.4
	56nm,0.9s,baz=109,slow=21,SNR=1.0						
SRBI	Singaraja	10.44	214	P	Pn	05 57 49.4	+1.6
	183nm,1.0s						
SOEI	Soe	10.72	163	Pn	Pn	05 57 56.3	+4.5
SOEI	Soe	10.72	163	P	Pn	05 57 55.2	+3.4
	509nm,0.9s,4μm4μm						
BASI	Baing, Sumba	10.73	183	P	Pn	05 57 53.5	+1.6
	412nm,1.1s,7μm5μm						
ABJI	Asem Bagus	10.80	220	P	Pn	05 57 56.0	+3.2
	76nm,0.8s,2μm						
KSM	Kuching	10.88	275	Pn	Pn	05 57 54.3	+0.5
KSM	Kuching	10.88	275	P	Pn	05 57 56.0	+2.2
RCP	Roxas	11.03	8	⇑*e*P	Pn	05 57 57.2	+1.2
IGBI	Denpasar	11.08	213	P	Pn	05 57 58.7	+2.1
	122nm,1.1s,3μm						
BLJI	Banyuglugur	11.18	222	P	Pn	05 57 59.5	+1.6
	58nm,0.7s,2μm						
JAGI	Jajag, Banyuwa	11.37	218		Pn	05 58 03.1	+2.6
JAGI	Jajag, Banyuwa	11.37	218	P	Pn	05 58 01.6	+1.0
JAGI	Jajag, Banyuwa	11.37	218	P	Pn	05 58 02.9	+2.3
	316nm,1.0s,3μm						
GRJI	Gresik	11.41	229	P	Pn	05 58 03.3	+2.3
	437nm,1.1s,4μm						
FAKI	Fak Fak	11.62	107	Pn	Pn	05 58 02.7	-1.3
FAKI	Fak Fak	11.62	107	P	Pn	05 58 03.3	-0.7
FAKI	Fak Fak	11.62	107	P	Pn	05 58 02.5	-1.5
	347nm,0.9s,4μm3μm						
GMJI	Gumukmas	11.67	221	P	Pn	05 58 07.2	+2.6
	183nm,1.1s,2μm						
TBJI	Tambak Boyo	11.83	232	P	Pn	05 58 10.7	+3.9
	258nm,1.0s,5μm						
UWJI	Ujung Watu	12.32	236	P	Pn	05 58 15.5	+2.0
	122nm,1.5s,12μm						
NGJI	Ngawi	12.47	231	P	Pn	05 58 19.2	+3.7
	156nm,0.9s						
PWJI	Pagerwojo	12.63	227	P	Pn	05 58 19.9	+2.2
	119nm,0.9s,3μm						
SMRI	Semarang	13.09	234		Pn	05 58 24.8	+1.0
SMRI	Semarang	13.09	234	P	Pn	05 58 26.5	+2.7
	317nm,1.0s,5μm						
RKPI	Ransiki, Papua	13.19	99	P	Pn	05 58 25.6	+0.5
	521nm,1.2s,14μm						
SAUI	Saumlaki	13.21	130		Pn	05 58 27.5	+2.1
SAUI	Saumlaki	13.21	130	P	Pn	05 58 27.5	+2.1
	1μm,1.1s,15μm						
GQP	Guinayangan	13.31	5	⇓*e*P	Pn	05 58 28.8	+2.2
TGY	Tagaytay City	13.45	359	⇑*e*P	P	05 58 33.7	-1.1
UGM	Wanagama	13.54	231	P	P	05 58 33.8	-2.0
UGM	Wanagama	13.54	231	P	P	05 58 33.5	-2.3
	239nm,1.9s,7μm						
YOGI	Yogyakarta	13.66	232	P	P	05 58 34.7	-2.5
	574nm,0.9s,5μm						
KPJI	Karang Pucung	14.50	237	P	P	05 58 44.4	-2.1
	295nm,1.0s,4μm						
PCPH	Palayan	14.90	360	⇑*e*P	P	05 58 50.1	-0.8
I39PW	PALAU INFRASON	15.04	62	I	I	07 28 05.5	
	baz=246,slow=301,SNR=1.1						
CMJI	Cimerak	15.14	237	P	P	05 58 54.3	+0.7
	626nm,1.5s,9μm						
PPBI	Pangkal Pinang	15.25	260	P	Pn	05 58 52.1	+0.3
	154nm,1.1s,4μm						
SRPI	Serui, Papua	15.28	99	P	Pn	05 58 52.6	+0.4
	1μm,1.0s,10μm						
BBJI	Bungbulang	15.65	239	P	P	05 58 59.3	-0.1
CBJI	Citeko	15.87	244	P	P	05 59 02.4	+0.7
	327nm,1.2s,11μm						
CNJI	Cibinong	16.03	241	P	P	05 59 04.0	+0.6
	249nm,1.3s,4μm						
SBJI	Serang	16.40	246	P	P	05 59 08.4	+0.8
	234nm,0.9s,9μm						
DSRI	Dabo	16.60	266	P	Pn	05 59 08.8	0.0
	236nm,1.3s,5μm5μm						
MTN	Manton Dam	16.60	144	P	P	05 59 10.1	+0.2
	baz=17,SNR=51						
MTN	Manton Dam	16.60	144		P	05 59 09.6	-0.2
MTN	Manton Dam	16.60	144	P	P	05 59 09.9	+0.1
TPRI	Tanjung Pinang	16.62	271	P	Pn	05 59 09.1	+0.1
	93nm,1.7s						
CGJI	Cibinong	17.00	245	P	P	05 59 15.7	+1.5
	484nm,1.5s,7μm						
KLI	Kotabumi	17.15	251	P	P	05 59 17.3	+1.4
	359nm,1.4s						
KDU	Kakadu	17.31	140	P	P	05 59 17.9	+0.3
	baz=17,SNR=88						
KDU	Kakadu	17.31	140	P	P	05 59 18.2	+0.5
MYKOM	Kota Tinggi	17.34	274	P	Pn	05 59 17.6	-0.1
MDSI	Maura Dua	17.68	253	P	Pn	05 59 22.3	+0.3
	244nm,1.9s,4μm5μm						
KASI	Kota Agung	17.70	250	P	Pn	05 59 24.5	+2.3
	245nm,1.0s,5μm4μm						
SMPI	Sarmi	17.74	98	P	Pn	05 59 23.6	+0.9
	724nm,1.2s						
KNRA	Kununurra	17.81	155	P	Pn	05 59 24.8	+1.3
	baz=18,SNR=26						
KNRA	Kununurra	17.81	155	P	Pn	05 59 24.6	+1.1
KNRA	Kununurra	17.81	155	P	Pn	05 59 24.3	+0.8
LWLI	Liwa	17.95	252	P	Pn	05 59 26.8	+1.4
	541nm,1.4s						
MNAI	Manna	18.83	255	P	Pn	05 59 35.8	0.0
MNAI	Manna	18.83	255	P	Pn	05 59 36.3	+0.5
	582nm,1.2s,15μm10μm						
JRMM	Jerantut	18.94	280	P	Pn	05 59 39.0	+1.8
KSI	Kapahiang	19.01	257	P	Pn	05 59 38.6	+0.5
	421nm,0.9s,21μm						
FITZ	Fitzroy Crossi	19.07	167	P	Pn	05 59 38.2	-0.4
GENI	Genyem	19.27	99	P	Pn	05 59 40.7	-0.3
	668nm,1.3s,10μm6μm						
SDSI	Sungai Dareh	19.78	266	P	Pn	05 59 46.0	-1.0
	156nm,1.4s,8μm6μm						
BKNI	Bangkinang	20.11	269	P	Pn	05 59 50.0	-0.9
BKNI	Bangkinang	20.11	269	P	Pn	05 59 50.4	-0.5
	1μm,1.7s,17μm8μm						
IPM	Ipoh	20.47	281	P	P	05 59 52.6	+0.4
IPM	Ipoh	20.47	281	P	Pn	05 59 54.0	-1.1
PDSI	Padang	20.74	266	P	P	05 59 56.4	+1.2
	527nm,1.3s,4μm						
KULM	Kulim	21.00	283	P	P	05 59 58.2	+0.4
KULM				IAmb	IAmb	06 00 16.6	
	comp=Z,210nm,0.9s						
KULM	Kulim	21.00	283	P	P	05 59 59.0	+1.1
PPSI	Pulau Pagai	21.39	261	P	P	06 00 04.6	+2.5
	comp=Z,580nm,1.4s,comp=Z,12μm						
QIZ	Qiongzhong	21.44	330	P	P	06 00 02.8	+0.3
QIZ				pP	pP	06 00 19.3	+0.3
QIZ				sP	sP	06 00 29.3	0.0
QIZ				S	S	06 03 56.5	+0.6
QIZ				sS	sS	06 04 24.5	+0.8
QIZ				pmax	pmax		
	comp=Z,870nm,1.9s						
QIZ	Qiongzhong	21.44	330	IAmb	IAmb	06 00 04.3	
	comp=Z,375nm,1.7s						
MBWA	Marble Bar	21.64	184	P	P	06 00 05.0	+0.4
MBWA	Marble Bar	21.64	184	P	P	06 00 05.7	+1.1
MBWA	Marble Bar	21.64	184	P	P	06 00 05.8	+1.1
PSA00	Pilbara Seismi	22.05	183	P	P	06 00 08.6	-0.3
PSA00				IAmb	IAmb	06 00 32.4	
	comp=Z,155nm,0.9s						
PSA00	Pilbara Seismi	22.05	183	P	P	06 00 08.7	-0.3
PSA00				IAmb	IAmb	06 00 32.4	
	comp=Z,80nm,1.0s						
PSA00	Pilbara Seismi	22.05	183	P	P	06 00 09.3	+0.3
TWG	Pinlang	22.12	360	P	P	06 00 07.8	-2.0
TWG				IAmb	IAmb	06 00 26.8	
	comp=Z,170nm,0.8s						
RPSI	Rantau Prapat	22.31	276	P	P	06 00 11.9	-0.1
RPSI				IAmb	IAmb	06 00 34.6	
	comp=Z,182nm,1.2s						
PSI	Prapat	22.32	276	P	P	06 00 11.9	-0.3
PSI				pmax	pmax		
	comp=Z,182nm,1.2s						
TPUB	Ta-pu	22.60	359	P	P	06 00 13.5	-1.4
YULB	Yu-li	22.69	0	P	P	06 00 15.2	-0.6
YULB	Yu-li	22.69	0	P	P	06 00 16.8	+1.0
TSI	Tuntungan	22.75	278	P	P	06 00 17.2	+0.6
	comp=Z,784nm,1.5s,comp=Z,20μmcomp=Z,8μm						
SRIT	Nakonsritamara	22.89	291	P	P	06 00 19.8	+1.8
SRIT				IAmb	IAmb	06 00 38.6	
	comp=Z,237nm,1.3s						
SSLB	Suanglung	23.08	360	P	P	06 00 18.8	-0.9
SSLB	Suanglung	23.08	360	P	P	06 00 19.7	-0.1
NACB	Ninganchiao	23.47	1	P	P	06 00 21.6	-1.8
KCSI	Kotacane, Aceh	23.54	277	P	P	06 00 24.0	-0.2
	comp=Z,334nm,1.0s,comp=Z,9μm						
GSI	Gunungsitoli	23.58	272	P	P	06 00 24.0	-0.5
GSI	Gunungsitoli	23.58	272	P	P	06 00 25.2	+0.7
GSI	Gunungsitoli	23.58	272	P	P	06 00 24.7	+0.2
	comp=Z,1μm,1.2s,comp=Z,15μm						
GZH	Guangzhou	23.63	342	P	P	06 00 29.8	+5.0
GZH				sP	sP	06 00 56.8	+3.3
GZH				S	S	06 04 42.8	+10
GZH				pmax	pmax		
	comp=Z,240nm,1.3s						
YOJ	Yonaguni jima	23.82	4	P	P	06 00 27.5	+1.1
YOJ	Yonaguni jima	23.82	4	P	P	06 00 27.5	+1.1
YOJ				pmax	pmax		
	comp=Z,928nm,1.3s						
YHNB	Yeheng	23.96	1	P	P	06 00 26.7	-1.1
YHNB				IAmb	IAmb	06 00 35.2	
	comp=Z,530nm,1.4s						
YHNB	Yeheng	23.96	1	P	P	06 00 29.3	+1.5
WB0	Warramunga Arr	24.02	148	P	P	06 00 27.6	-0.8
WB0				IAmb	IAmb	06 00 57.1	
	comp=Z,251nm,1.1s						
GIRL	Giralia	24.04	196	P	P	06 00 29.9	+1.6
	baz=24,SNR=4.6						
GIRL	Giralia	24.04	196	P	P	06 00 29.0	+0.6
GIRL				IAmb	IAmb	06 00 52.6	
	comp=Z,402nm,1.2s						
GIRL	Giralia	24.04	196	P	P	06 00 30.0	+1.6
	comp=Z,301nm,1.2s						
WRAB	Tennant Creek	24.14	148	P	P	06 00 28.9	-0.5
WRAB				IAmb	IAmb	06 00 58.4	
	comp=Z,192nm,1.0s						
WRAB	Tennant Creek	24.14	148	P	P	06 00 29.4	0.0
WRAB	Tennant Creek	24.14	148	*ce*P	P	06 00 29.2	-0.2
WRAB				pmax	pmax		
	comp=Z,164nm,1.3s						
WRA	Warramunga Arr	24.14	148	P	P	06 00 29.4	0.0
	comp=Z,74nm,0.9s,baz=327,slow=10,SNR=206						
WRA				S	S	06 04 36.9	-4.7
	comp=Z,7.4nm,1.1s,baz=327,slow=18,SNR=1.8						
WRA				ScP	ScP	06 07 37.6	-2.3
	comp=Z,5.0nm,1.1s,baz=316,slow=3.0,SNR=3.5						
	comp=Z,74nm,0.9s						
WB2	Warramunga Arr	24.15	148	P	P	06 00 28.5	-0.9
WB2				IAmb	IAmb	06 00 58.4	
	comp=Z,273nm,1.2s						
TATO	Taipei	24.26	1	P	P	06 00 30.5	+0.1
LHMI	Lhok Sumawe	24.60	281	P	P	06 00 36.8	+3.1
	comp=Z,615nm,1.9s,comp=Z,13μm						
SNSI	Sinabang, Aceh	24.88	274	P	P	06 00 37.7	+1.5
	comp=Z,362nm,1.5s,comp=Z,6μmcomp=Z,4μm						
MLSI	Meulaboh, Aceh	24.99	279	P	P	06 00 37.9	+0.7
	comp=Z,374nm,1.1s,comp=Z,4μm						
COEN	Coen	26.16	124	P	P	06 00 50.1	+2.3
	baz=26,SNR=5.0						
COEN	Coen	26.16	124	P	P	06 00 50.4	+2.6
WRKA	Warakurna	26.38	165	P	P	06 00 50.3	+0.5
	baz=26,SNR=68						
WRKA	Warakurna	26.38	165	P	P	06 00 50.2	+0.5
GUMO	Guam	26.81	60	P	P	06 00 54.7	+1.1
	comp=Z,13nm,0.4s,baz=146,slow=13,SNR=1.8						
GUMO				LR	LR	06 10 00.4	
	comp=Z,427nm,21.8s,baz=240,slow=33						
	comp=Z,13nm,0.4s						
JOW	Kunigami	27.00	14	P	P	06 00 54.9	-0.3
	comp=Z,38nm,0.7s,baz=182,slow=13,SNR=3.6						
JOW				LR	LR	06 12 58.7	
	comp=Z,192nm,19.3s,baz=246,slow=39						
	comp=Z,38nm,0.7s						
AS31	Alice Springs	27.09	154	P	P	06 00 56.2	+0.1
ASAR	Alice Springs	27.09	154	P	P	06 00 56.5	+0.3
	comp=Z,10nm,0.8s,baz=329,slow=7.5,SNR=110						
ASAR				PcP	PcP	06 04 14.8	-0.5
	comp=Z,3.5nm,0.7s,baz=335,slow=2.0,SNR=1.8						
ASAR				S	S	06 05 28.1	-0.3
	comp=Z,8.6nm,1.1s,baz=347,slow=24,SNR=3.5						
ASAR				ScP	ScP	06 07 46.0	-2.4
	comp=Z,3.6nm,0.9s,baz=344,slow=2.2,SNR=4.2						
ASAR				LR	LR	06 12 07.5	
	comp=Z,845nm,21.3s,baz=334,slow=37						
	comp=Z,10nm,0.8s						
AS01	Alice Springs	27.11	154	P	P	06 00 57.5	+1.2
	comp=Z,48nm,0.9s						
MEEK	Meekatharra	27.16	185	P	P	06 00 56.9	+0.2
	baz=27,SNR=15						
MEEK	Meekatharra	27.16	185	P	P	06 00 57.9	+1.2
PHRA	Phrae	27.19	312	P	P	06 00 58.0	+0.9
QIS	Mount Isa	27.70	140	P	P	06 01 01.7	+0.1
	baz=28,SNR=18						
QIS	Mount Isa	27.70	140	P	P	06 01 02.3	+0.7
PMG	Port Moresby	27.73	112	P	P	06 01 02.8	+0.8
	comp=Z,8.3nm,0.5s,baz=337,slow=8.4,SNR=10						
	comp=Z,8.3nm,0.5s						
PMG	Port Moresby	27.73	112	P	P	06 01 01.6	-0.3
PMG	Port Moresby	27.73	112	*ce*P	P	06 01 02.0	+0.1
PMG				pmax	pmax		
	comp=Z,24nm,1.7s						
CMAR	Chiang Mai Arr	28.13	310	P	P	06 01 05.7	+0.3
	comp=Z,12nm,1.0s,baz=140,slow=7.8,SNR=54						
CMAR				LR	LR	06 12 22.4	
	comp=Z,914nm,21.5s,baz=115,slow=36						
	comp=Z,12nm,1.0s						
CMAR	Chiang Mai Arr	28.13	310	P	P	06 01 05.3	-0.2
CMAR	Chiang Mai Arr	28.13	310	*i* P	P	06 01 06.6	+1.1
CMAR				pmax	pmax		
	comp=Z,13nm,1.0s						
CRAI	Chiangrai	28.19	315	P	P	06 01 06.5	+0.5
CHTO	Chiang Mai	28.34	311	P	P	06 01 08.2	+0.8
CHTO	Chiang Mai	28.34	311	P	P	06 01 08.2	+0.8
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.3s						
CNSH	ChangSha	28.56	345	⇑P	P	06 01 10.4	+1.3
CNSH				S	S	06 05 53.3	+2.0
CNSH				pmax	pmax		
	comp=Z,23nm,1.7s						
CNSH				LR	LR		
	comp=Z,600nm,20.7s						
CNSH				LR	LR		
	comp=Z,1μm,14.8s						
GYA	Guiyang	29.27	333	⇑*i*P	P	06 01 16.9	+1.3
GYA				S	S	06 06 04.0	+1.2
GYA				pmax	pmax		
	comp=Z,62nm,1.5s						
GYA				pmax	pmax		
	comp=Z,540nm,3.5s						
GYA				LR	LR		
	comp=Z,400nm,13.4s						
MTSU	Mount Surprise	29.41	130	P	P	06 01 17.9	+1.1
	baz=30,SNR=17						
MORW	Morawa	29.87	189	P	P	06 01 20.9	+0.1
	baz=30,SNR=9.2						
MORW	Morawa	29.87	189	P	P	06 01 20.8	0.0
MORW				IAmb	IAmb	06 01 44.4	
	comp=Z,159nm,1.0s						
MORW	Morawa	29.87	189	P	P	06 01 22.1	+1.3
KMI	Kunming	30.20	325	⇓P	P	06 01 25.9	+1.9
KMI				pP	pP	06 01 44.0	+0.4
KMI				sP	sP	06 01 52.8	-0.7
KMI				S	S	06 06 20.0	+2.3
KMI				sS	sS	06 06 52.1	+1.0
KMI				pmax	pmax		
	comp=Z,53nm,1.4s						
KMI				pmax	pmax		
	comp=Z,340nm,7.9s						
KMI				LR	LR		
	comp=Z,400nm,15.7s						
KMI				LR	LR		
	comp=Z,710nm,20.0s						
KMI				LR	LR		
	comp=Z,1μm,35.9s						
SSE	Sheshan	30.36	0	P	P	06 01 26.0	+1.0
SSE				pmax	pmax		
	comp=Z,42nm,0.9s						
WHN	Wuhan	30.50	348	⇓P	P	06 01 28.1	+1.9
WHN				sP	sP	06 01 58.3	+2.6
WHN				pmax	pmax		
	comp=Z,160nm,1.2s						
WHN				pmax	pmax		
	comp=Z,2μm,3.8s						
KRVT	Keravat (AS076	31.23	99	P	P	06 01 33.6	+0.7
	comp=Z,441nm,1.0s,baz=289,slow=5.2,SNR=12						
BLDU	Ballidu	31.30	187	P	P	06 01 33.1	-0.2
	baz=32,SNR=8.6						
BLDU	Ballidu	31.30	187	P	P	06 01 35.0	+1.7
NJ2	Nanjing	31.39	356	⇓*i*P	P	06 01 35.9	+1.9
NJ2				pP	pP	06 01 53.5	-0.1
NJ2				sP	sP	06 02 02.6	-0.9
NJ2				pmax	pmax		
	comp=Z,85nm,1.8s						
OOD	Oodnadatta	31.47	155	P	P	06 01 36.6	+1.8
ENH	Enshi	31.55	340	IAmb	IAmb	06 01 38.1	
	comp=Z,147nm,1.1s						
ENH	Enshi	31.55	340	P	P	06 01 36.6	+1.1
ENH				pP	pP	06 01 57.7	+2.5
KMBL	Kambalda	31.77	179	P	P	06 01 37.9	+0.5
	baz=32,SNR=5.1						
KMBL	Kambalda	31.77	179	P	P	06 01 39.5	+2.0
	comp=Z,114nm,1.2s						
PZH	PanZhiHua	31.84	326	⇓P	P	06 01 38.9	+0.6
PZH				S	S	06 06 44.6	+1.6
PZH				pmax	pmax		
	comp=Z,80nm,1.4s						
PZH				pmax	pmax		
	comp=Z,400nm,4.7s						
PZH				LR	LR		
	comp=Z,2μm,18.2s						
PZH				LR	LR		
	comp=Z,1μm,18.0s						
PZH				LR	LR		
	comp=Z,2μm,18.6s						
FORT	Forrest	31.86	169	P	P	06 01 38.8	+0.5
	baz=32,SNR=48						
FORT	Forrest	31.86	169	P	P	06 01 37.4	-0.9
FORT				IAmb	IAmb	06 02 00.2	

	comp=Z,96nm,0.8s						
FORT	Forrest	31.86	169	P	P	06 01 39.6	+1.4
CTA	Charters Tower	32.04	131	P	P	06 01 40.5	+0.6
	comp=Z,38nm,1.0s,baz=312,slow=9.3,SNR=34						
CTA				LR	LR	06 15 33.0	
	comp=Z,597nm,20.9s,baz=300,slow=38						
	comp=Z,38nm,1.0s						
CTAO	Charters Tower	32.04	131	P	P	06 01 40.1	+0.1
CTAO				IAmb	IAmb	06 02 09.2	
	comp=Z,61nm,0.9s						
CTAO	Charters Tower	32.04	131	P	P	06 01 40.1	+0.1
CTAO				pmax	pmax		
	comp=Z,61nm,1.0s						
CTAO	Charters Tower	32.04	131	P	P	06 01 40.8	+0.9
CTAO				pP	pP	06 02 02.0	+3.0
CTAO				pwP	sP	06 02 07.6	-1.1
KLBR	Kellerberrin	32.15	185	P	P	06 01 41.7	+1.0
	baz=32,SNR=6.4						
MULG	Mulgathing	33.05	159	P	P	06 01 50.3	+1.6
JCJ	Chichijima	33.23	36	P	P	06 01 49.2	-1.0
	comp=Z,210nm,0.6s,baz=292,slow=22,SNR=2.8						
JCJ				LR	LR	06 18 31.8	
	comp=Z,210nm,18.3s,baz=126,slow=42						
NWAO	Narrogin (SRO)	33.52	186	P	P	06 01 53.0	+0.3
	comp=Z,27nm,0.7s,baz=4.8,slow=7.7,SNR=12						
	comp=Z,27nm,0.7s						
NWAO	Narrogin (SRO)	33.52	186	P	P	06 01 54.1	+1.4
	baz=34,SNR=7.1						
NWAO				P	P	06 01 54.1	+1.4
	baz=34,SNR=7.1						
NWAO	Narrogin (SRO)	33.52	186	P	P	06 01 54.1	+1.4
NWAO	Narrogin (SRO)	33.52	186	P	P	06 01 54.2	+1.4
NWAO	Narrogin (SRO)	33.52	186	P	P	06 01 51.6	-1.1
NWAO				pP	pP	06 02 11.8	0.0
NWAO				sP	sP	06 02 20.9	-0.5
JNU	Nakatsue	33.65	15	P	P	06 01 53.4	-0.5
	comp=Z,33nm,1.0s,baz=162,slow=6.9,SNR=7.0						
JNU				LR	LR	06 14 23.4	
	comp=Z,162nm,21.6s,baz=172,slow=34						
	comp=Z,33nm,1.0s						
JNU	Nakatsue	33.65	15	P	P	06 01 53.1	-0.8
JNU				IAmb	IAmb	06 01 54.5	
	comp=Z,79nm,1.3s						
CD2	Chengdu	34.39	333	P	P	06 02 01.0	+0.7
CD2				S	S	06 07 24.1	+1.8
CD2				pmax	pmax		
	comp=Z,40nm,0.9s						
CD2				LR	LR		
	comp=Z,730nm,18.2s						
CD2				LR	LR		
	comp=Z,1µm,17.0s						
CD2				LR	LR		
	comp=Z,260nm,16.2s						
LYN	LuoYang	34.77	347	⇓iP	P	06 02 04.4	+0.9
LYN				pP	pP	06 02 24.8	+1.5
LYN				sP	sP	06 02 33.8	+0.7
LYN				S	S	06 07 28.8	+0.9
LYN				sS	ScP	06 08 10.3	-3.2
LYN				pmax	pmax		
	comp=Z,110nm,1.2s						
LYN				pmax	pmax		
	comp=Z,590nm,3.5s						
LYN				LR	LR		
	comp=Z,470nm,16.5s						
LYN				LR	LR		
	comp=Z,810nm,18.2s						
LYN				LR	LR		
	comp=Z,570nm,19.0s						
LCRK	Leigh Creek	34.86	154	P	P	06 02 05.7	+1.3
QLP	Quilpie	34.98	142	P	P	06 02 06.7	+1.2
	baz=35,SNR=11						
QLP	Quilpie	34.98	142	P	P	06 02 07.9	+2.4
XAN	Xi'an	35.21	342	⇓P	P	06 02 07.6	+0.2
XAN				pP	pP	06 02 25.5	-1.7
XAN				S	S	06 07 35.5	+0.6
XAN				pmax	pmax		
	comp=Z,48nm,1.5s						
XAN				pmax	pmax		
	comp=Z,170nm,3.6s						
XAN				LR	LR		
	comp=Z,380nm,13.3s						
XAN				LR	LR		
	comp=Z,290nm,10.3s						
XAN				LR	LR		
	comp=Z,560nm,14.7s						
XAN	Xi'an	35.21	342	P	P	06 02 07.7	+0.3
XAN				pP	pP	06 02 28.9	+1.6
RKGY	Rocky Gully	35.21	186	P	P	06 02 08.7	+1.4
	baz=35,SNR=5.2						
TIA	Tai'an	35.66	354	⇓P	P	06 02 11.8	+0.7
TIA				pmax	pmax		
	comp=Z,64nm,1.1s						
TIA				pmax	pmax		
	comp=Z,500nm,3.5s						
TIA				LR	LR		
	comp=Z,400nm,17.1s						
TIA				LR	LR		
	comp=Z,310nm,20.0s						
TIA				LR	LR		
	comp=Z,730nm,20.4s						
BBOO	Buckleboo	36.06	158	P	P	06 02 15.3	+0.7
	baz=36,SNR=10.0						
BBOO	Buckleboo	36.06	158	P	P	06 02 14.9	+0.3
BBOO				IAmb	IAmb	06 02 40.9	
	comp=Z,58nm,0.8s						
BBOO	Buckleboo	36.06	158	P	P	06 02 15.8	+1.2
TJN	Taejon	36.09	9	⇑iP	P	06 02 14.9	+0.1
BRDH	Bariadhala	36.14	310	P	P	06 02 16.1	+0.7
	comp=Z,62nm,0.3s,baz=90,slow=8.0,SNR=17						
BRDH				LR	LR	06 21 06.1	
	comp=Z,392nm,18.6s,baz=82,slow=43						
	comp=Z,62nm,0.3s						
HNS	HongShan	37.13	351	⇓P	P	06 02 24.4	+0.8
HNS				pP	pP	06 02 44.5	+0.9
HNS				sP	sP	06 02 51.8	-1.6
HNS				S	S	06 08 03.1	-0.8
HNS				pmax	pmax		
	comp=Z,57nm,1.7s						
HNS				LR	LR		
	comp=Z,410nm,17.7s						
HNS				LR	LR		
	comp=Z,400nm,14.7s						
KSAR	Wonju Array Be	37.21	9	P	P	06 02 23.9	-0.4
KSAR	Wonju Array Be	37.21	9	P	P	06 02 23.9	-0.4
KSRS	Korea Array	37.23	9	P	P	06 02 25.1	+0.6
	comp=Z,28nm,0.8s,baz=185,slow=10,SNR=60						
KSRS				LR	LR	06 18 38.0	
	comp=Z,220nm,21.5s,baz=195,slow=38						
	comp=Z,28nm,0.8s						
KS19	Wonju Array Si	37.27	9	P	P	06 02 24.2	-0.6
KS19				IAmb	IAmb	06 02 26.2	
	comp=Z,55nm,1.0s						
SHL	Shillong	37.62	314	P	P	06 02 28.3	+0.1
SHL	Shillong	37.62	314	P	P	06 02 28.3	+0.1
SHL				pmax	pmax		
	comp=Z,410nm,1.1s						
SHL	Shillong	37.62	314	P	P	06 02 29.0	+0.9
	SNR=118						
INU	Inuyama	37.63	21	P	P	06 02 26.9	-1.0
INU				pP	pP	06 02 48.4	+0.7
INU				sP	sP	06 02 57.9	+0.6
STKA	Stephens Creek	37.63	151	P	P	06 02 28.2	+0.3
	comp=Z,12nm,0.9s,baz=314,slow=7.9,SNR=27						
STKA				LR	LR	06 18 48.5	
	comp=Z,412nm,20.3s,baz=317,slow=37						
	comp=Z,12nm,0.9s						
STKA	Stephens Creek	37.63	151	P	P	06 02 28.8	+0.8
	baz=38,SNR=14						
STKA	Stephens Creek	37.63	151	P	P	06 02 28.3	+0.3
STKA	Stephens Creek	37.63	151	P	P	06 02 28.9	+0.9
STKA	Stephens Creek	37.63	151	⇓eP	P	06 02 27.4	-0.6
HTT	Hallett	37.73	155	P	P	06 02 29.9	+1.0
	baz=38,SNR=21						
HTT	Hallett	37.73	155	P	P	06 02 30.3	+1.4
TIY	Taiyuan	37.82	349	⇓P	P	06 02 30.6	+1.0
TIY				S	S	06 08 09.8	-4.8
TIY				sS	sS	06 08 54.3	+5.6
TIY				pmax	pmax		
	comp=Z,56nm,0.9s						
TIY				pmax	pmax		
	comp=Z,300nm,5.1s						
TIY				LR	LR		
	comp=Z,250nm,11.8s						
TIY				LR	LR		
	comp=Z,480nm,11.3s						
TIY				LR	LR		
	comp=Z,460nm,14.7s						
RMQ	Roma	37.84	137	P	P	06 02 30.6	+0.8
	baz=38,SNR=5.2						
DL2	Dalian	38.15	1	P	P	06 02 32.4	+0.2
DL2				sP	sP	06 03 02.0	+0.1
DL2				S	S	06 08 21.8	+2.4
DL2				pmax	pmax		
	comp=Z,100nm,1.1s						
DL2				pmax	pmax		
	comp=Z,370nm,4.3s						
LZH	Lanzhou	38.82	337	⇓P	P	06 02 39.6	+1.5
LZH				pP	pP	06 02 54.8	-3.4
LZH				sP	sP	06 03 08.3	+0.3
LZH				PP	PnPn	06 04 14.5	+2.8
LZH				PcP	PcP	06 04 47.9	0.0
LZH				S	S	06 08 31.8	+1.9
LZH				pmax	pmax		
	comp=Z,48nm,1.4s						
LZH				pmax	pmax		
	comp=Z,240nm,6.5s						
LZH				LR	LR		
	comp=Z,600nm,13.7s						
LZH				LR	LR		
	comp=Z,430nm,13.1s						
LZH				LR	LR		
	comp=Z,510nm,14.8s						
MAJO	Matsushiro	39.13	22	P	P	06 02 38.7	-1.8
MAJO	Matsushiro	39.13	22	P	P	06 02 38.7	-1.8
MAJO				pmax	pmax		
	comp=Z,38nm,1.0s						
MAJO	Matsushiro	39.13	22	P	P	06 02 38.6	-1.8
MAJO				pP	pP	06 03 00.0	-0.3
MJAR	Matsushiro Arr	39.13	22	P	P	06 02 38.7	-1.8
	comp=Z,22nm,0.9s,baz=193,slow=8.6,SNR=34						
MJAR				ScP	ScP	06 08 28.8	-1.0
	comp=Z,6.6nm,1.1s,baz=195,slow=4.9,SNR=5.4						
MJAR				LR	LR	06 17 45.9	
	comp=Z,205nm,20.7s,baz=210,slow=34						
	comp=Z,22nm,0.9s						
MJB9	Matsu-Tunnel	39.13	22	P	P	06 02 39.8	-0.7
CMSA	Cobar Meteorol	39.51	146	P	P	06 02 44.9	+1.2
	baz=40,SNR=27						
CMSA	Cobar Meteorol	39.51	146	P	P	06 02 45.4	+1.7
BJT	Baijiatuau	39.52	354	IAmb	IAmb	06 02 45.9	
	comp=Z,106nm,1.1s						
BJT	Baijiatuau	39.52	354	P	P	06 02 44.5	+0.8
BJT				pP	pP	06 03 05.7	+2.1
BJT				sP	sP	06 03 13.3	-0.1
BJI	Beijing	39.55	354	P	P	06 02 44.6	+0.8
BJI				PP	PP	06 04 17.3	+1.1
BJI				S	S	06 08 43.8	+3.5
BJI				sS	sS	06 09 15.4	+0.9
BJI				pmax	pmax		
	comp=Z,56nm,1.2s						
HNR	Honiara	39.89	105	P	P	06 02 45.8	-1.3
	comp=Z,583nm,0.4s,baz=228,slow=2.6,SNR=8.6						
LSA	Lhasa	40.68	318	P	P	06 02 56.0	+2.0
LSA				pmax	pmax		
	comp=Z,160nm,0.9s						
LSA	Lhasa	40.68	318	IAmb	IAmb	06 02 57.3	
	comp=Z,119nm,0.9s						
LSA	Lhasa	40.68	318	P	P	06 02 55.8	+1.8
LSA	Lhasa	40.68	318	P	P	06 02 56.0	+2.0
LSA				pP	pP	06 03 15.5	+1.5
PALK	Pallekele	40.87	280	P	P	06 02 55.5	+0.2
	comp=Z,7.5nm,0.6s,baz=208,slow=13,SNR=9.2						
PALK				LR	LR	06 20 12.3	
	comp=Z,951nm,21.5s,baz=200,slow=36						
	comp=Z,7.5nm,0.6s						
PALK	Pallekele	40.87	280	P	P	06 02 55.6	+0.4
PALK				IAmb	IAmb	06 03 25.6	
	comp=Z,144nm,1.2s						
PALK	Pallekele	40.87	280	P	P	06 02 55.7	+0.4
PALK				pmax	pmax		
	comp=Z,144nm,1.2s						
PALK	Pallekele	40.87	280	P	P	06 02 56.6	+1.3
HHC	Hu-ho-hao-te	41.03	349	eP	P	06 02 57.3	+1.1
HHC				pmax	pmax		
	comp=Z,150nm,1.2s						
HHC				pmax	pmax		
	comp=Z,940nm,4.5s						
BTO	Baotou	41.11	347	⇓iP	P	06 02 58.5	+1.6
BTO				pP	pP	06 03 18.1	+1.0
BTO				sP	sP	06 03 24.6	-2.2
BTO				PP	PnPn	06 04 42.1	+3.6
BTO				S	S	06 09 06.3	+2.4
BTO				pmax	pmax		
	comp=Z,230nm,1.5s						
BTO				pmax	pmax		
	comp=Z,910nm,5.6s						
BTO				LR	LR		
	comp=Z,1µm,14.5s						
BTO				LR	LR		
	comp=Z,3µm,18.0s						
BTO				LR	LR		
	comp=Z,1µm,18.1s						
SNY	Shenyang	41.13	3	⇓P	P	06 02 56.6	-0.3
SNY				S	S	06 09 05.3	+1.5
SNY				pmax	pmax		
	comp=Z,170nm,1.1s						
SNY				pmax	pmax		
	comp=Z,670nm,4.4s						
SNY				LR	LR		
	comp=Z,310nm,4.3s						
SNY				LR	LR		
	comp=Z,370nm,4.3s						
SNY				LR	LR		
	comp=Z,520nm,14.2s						
TAPN	Taplejung	41.69	313	eP	P	06 03 03.3	+1.2
	comp=Z,486nm,1.1s						
ARPS	Mount Arapiles	41.82	155	P	P	06 03 04.4	+1.8
	baz=42,SNR=6.3						
ARPS	Mount Arapiles	41.82	155	P	P	06 03 05.0	+2.4
	comp=Z,168nm,1.0s						
RAMN	Ramite	42.30	311	eP	P	06 03 08.3	+1.3
	comp=Z,1000nm,1.3s						
ARMA	Armidale	42.32	139	P	P	06 03 08.9	+2.0
	baz=42,SNR=6.9						
ARMA	Armidale	42.32	139	P	P	06 03 08.1	+1.2
ARMA	Armidale	42.32	139	P	P	06 03 09.0	+2.1
JIRN	Jiri	42.99	312	eP	P	06 03 13.8	+1.1
GOMU	GeErMu	43.05	328	P	P	06 03 14.6	+1.5
GOMU				S	S	06 09 39.8	+6.6
GOMU				pmax	pmax		
	comp=Z,24nm,1.3s						
GOMU				pmax	pmax		
	comp=Z,200nm,5.4s						
GOMU				LR	LR		
	comp=Z,210nm,14.9s						
GOMU				LR	LR		
	comp=Z,200nm,14.1s						
GOMU				LR	LR		
	comp=Z,250nm,14.8s						
CN2	Changchun	43.21	5	eP	P	06 03 12.6	-1.2
CN2				epP	pP	06 03 33.0	-1.0
CN2				eS	S	06 09 33.9	-0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
GTA	Gaotai	43.30	336	⇓P	P	06 03 16.1	+1.4
GTA				pP	pP	06 03 38.8	+3.6
GTA				sP	sP	06 03 50.1	+5.2
GTA				S	S	06 09 37.3	+1.2
GTA				SS	SS	06 12 49.8	-2.9
GTA				pmax	pmax		
	comp=Z,58nm,1.2s						
GTA				pmax	pmax		
	comp=Z,260nm,5.1s						
GTA				LR	LR		
	comp=Z,470nm,17.8s						
GTA				LR	LR		
	comp=Z,490nm,14.9s						
GTA				LR	LR		
	comp=Z,370nm,19.6s						
GUN	Gumba	43.36	312	eP	P	06 03 16.7	+1.0
XLT	XiLinHaoTe	43.38	355	⇓iP	P	06 03 16.0	+0.7
XLT				pP	pP	06 03 35.8	+0.2
XLT				sP	sP	06 03 41.8	-3.4
XLT				PP	PP	06 04 59.5	+1.8
XLT				S	S	06 09 36.9	-0.2
XLT				sS	sS	06 10 11.8	+0.1
XLT				SS	SS	06 12 45.4	-8.6
XLT				pmax	pmax		
	comp=Z,140nm,1.2s						
XLT				pmax	pmax		
	comp=Z,750nm,4.2s						
XLT				LR	LR		
	comp=Z,28nm,18.7s						
XLT				LR	LR		
	comp=Z,270nm,16.7s						
XLT				LR	LR		
	comp=Z,420nm,17.9s						
PKI	Pulchoki	43.53	311	eP	P	06 03 17.3	+0.3
	comp=Z,182nm,1.1s						
PKIN	Phulchoki	43.54	311	eP	P	06 03 17.6	+0.5
	comp=Z,18nm,0.5s						
DMN	Daman	43.77	311	eP	P	06 03 19.8	+0.9
	comp=Z,574nm,1.3s						
CAN	Canberra	44.17	147	P	P	06 03 21.5	-0.2
CAN				IAmb	IAmb	06 03 52.8	
	comp=Z,104nm,0.7s						
CAN	Canberra	44.17	147	P	P	06 03 23.4	+1.7
CAN	Canberra	44.17	147	P	P	06 03 21.5	-0.2
CAN				pmax	pmax		
	comp=Z,104nm,0.7s						
CAN	Canberra	44.17	147	P	P	06 03 23.0	+1.3
CAN				pP	pP	06 03 43.1	+1.5
CAN				sP	sP	06 03 51.9	+0.9
GKN	Gorkha	44.34	311	eP	P	06 03 24.1	+0.8
CNB	Canberra Magne	44.36	146	P	P	06 03 24.7	+1.4
MDJ	Mudanjiang	44.49	9	P	P	06 03 24.8	+0.7
MDJ				pP	pP	06 03 46.3	+1.9
MDJ				sP	sP	06 03 53.9	-0.1
MDJ				PcP	PcP	06 05 01.1	-5.0
MDJ				PP	PP	06 05 14.0	+4.5
MDJ				PcS	PcS	06 09 01.1	+1.6
MDJ				S	S	06 09 54.1	+1.0
MDJ				sS	sS	06 10 30.1	+2.3
MDJ				pmax	pmax		
	comp=Z,160nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,570nm,6.3s						
MDJ				LR	LR		
	comp=Z,830nm,22.8s						
MDJ	Mudanjiang	44.49	9	IAmb	IAmb	06 03 54.9	
	comp=Z,151nm,1.0s						
MDJ	Mudanjiang	44.49	9	P	P	06 03 24.3	+0.2
MDJ				pP	pP	06 03 46.2	+1.8
USA0B	Ussuriysk Arra	44.50	11	IAmb	IAmb	06 03 55.7	
	comp=Z,66nm,0.8s						
USA0B	Ussuriysk Arra	44.50	11	diP	P	06 03 24.1	0.0
USRK	Ussuriysk Ar.	44.50	11	P	P	06 03 23.3	-0.8
	comp=Z,44nm,0.9s,baz=185,slow=7.1,SNR=26						
USRK				LR	LR	06 23 28.8	
	comp=Z,55nm,18.7s,baz=169,slow=38						
	comp=Z,44nm,0.9s						
USRK	Ussuriysk Ar.	44.50	11	P	P	06 03 23.7	-0.4
USRK	Ussuriysk Ar.	44.50	11	P	P	06 03 23.7	-0.4
HYB	Hyderabad	45.11	294	eP	P	06 03 30.2	+0.7
HYB				IVmB_BB		06 03 30.5	
	comp=Z,236nm,1.4s						
HYB				epP	pP	06 03 49.2	-0.6
HYB				esP	sP	06 03 58.2	-1.0
HYB				eS	S	06 10 04.2	+1.2
HYB				e		06 13 55.5	
DANN	Dangsing	45.18	311	eP	P	06 03 30.9	+0.8
BNX	BinXian	45.32	6	⇓P	P	06 03 29.8	-0.8
BNX				pmax	pmax		
	comp=Z,25nm,1.1s						
BNX				pmax	pmax		
	comp=Z,210nm,5.3s						
PCHI	Peechi	45.61	284	eP	P	06 03 35.0	+1.6
PCHI				eS	S	06 10 11.0	+0.8
PYUN	Piuthan	45.63	310	eP	P	06 03 34.6	+0.9
	comp=Z,213nm,0.9s						
TEY	Ternei	46.34	15	eP	P	06 03 37.7	-0.9
ASAJ	Asahikawa	47.37	21	P	P	06 03 46.6	-0.1
	comp=Z,24nm,0.9s,baz=239,slow=16,SNR=7.6						
ASAJ				LR	LR	06 23 36.3	
	comp=Z,159nm,21.7s,baz=147,slow=36						
	comp=Z,24nm,0.9s						
JKA	Kamikawa-asahi	47.38	21	P	P	06 03 46.0	-0.7
JKA				IAmb	IAmb	06 04 21.6	
	comp=Z,46nm,0.8s						
HIA	Hailar	48.52	359	IAmb	IAmb	06 03 57.2	
	comp=Z,69nm,1.2s						
HIA	Hailar	48.52	359	P	P	06 03 55.8	+0.3
HIA				pP	pP	06 04 17.9	+1.6
ULN	Ulaanbaatar	48.67	347	P	P	06 03 57.2	+0.3
ULN	Ulaanbaatar	48.67	347	diP	P	06 03 57.8	+0.9
ULN				pmax	pmax		
	comp=Z,240nm,1.3s						
ULN	Ulaanbaatar	48.67	347	P	P	06 03 58.2	+1.3
ULN	Ulaanbaatar	48.67	347	⇓P	P	06 03 57.9	+1.0
ULN				pP	pP	06 04 18.9	+1.3
ULN				sP	sP	06 04 26.6	-0.6
SONM	Songino Array	48.79	347	P	P	06 03 58.6	+0.8
	comp=Z,75nm,1.0s,baz=171,slow=7.4,SNR=281						
SONM				LR	LR	06 26 06.2	
	comp=Z,247nm,19.2s,baz=166,slow=38						
	comp=Z,75nm,1.0s						
SONM	Songino Array	48.79	347	P	P	06 03 58.6	+0.8
TAU	Tasmania Unive	49.26	155	P	P	06 04 02.7	+1.5
TAU				pP	pP	06 04 23.2	+1.7
KLR	Kul'dur	49.32	9	P	P	06 04 01.1	-0.6
	comp=Z,68nm,1.3s,baz=208,slow=6.0,SNR=34						
KLR				LR	LR	06 25 59.0	
	comp=Z,126nm,19.5s,baz=209,slow=37						
	comp=Z,68nm,1.3s						
KLR	Kul'dur	49.32	9	diP	P	06 04 00.8	-0.8
KLR				pmax	pmax		
	comp=Z,75nm,1.4s						
NOUC	Port Laguerre	49.44	120	P	P	06 04 04.9	+1.9
NOUC				pP	pP	06 04 26.6	+3.2
DZM	Mont Dzumac	49.55	120	eP	P	06 04 04.8	+0.9
	comp=Z,72nm,1.0s						
DZM	Mont Dzumac	49.55	120	eSS	SS	06 14 41.5	+2.2
	comp=Z,628nm,36.6s						
DZM				eLR	LR	06 18 20.3	
	comp=Z,770nm,35.0s						
DZM	Mont Dzumac	49.55	120	P	P	06 04 04.1	+0.2
	comp=Z,9.7nm,0.9s,baz=264,slow=12,SNR=10						
	comp=Z,9.7nm,0.9s						
DZM	Mont Dzumac	49.55	120	P	P	06 04 03.1	-0.8
DZM	Mont Dzumac	49.55	120	P	P	06 04 06.9	+3.0
DZM	Mont Dzumac	49.55	120	P	P	06 04 06.2	+2.2
DZM				pP	pP	06 04 27.8	+3.5
HEH	HeiHe	49.79	5	eP	P	06 04 04.9	-0.2
HEH				sP	sP	06 04 31.8	-3.5
HEH				S	S	06 11 13.8	+5.6
HEH				SS	SS	06 14 43.4	+1.5
HEH				pmax	pmax		
	comp=Z,170nm,1.2s						
HEH				pmax	pmax		
	comp=Z,310nm,4.9s						
YSS	Yuzh-Sakhalins	49.90	19	P	P	06 04 04.8	-1.2
YSS	Yuzh-Sakhalins	49.90	19	eP	P	06 04 04.9	-1.2
YSS				e		06 06 03.4	
YSS				e		06 16 08.0	
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
YSS				pmax	pmax		
	comp=Z,200nm,4.4s						
OUENC	Ouen Island, N	50.02	120	P	P	06 04 10.1	+2.7
UGL	Uglegorsk	51.56	17	eP	P	06 04 18.5	0.0
UGL				e		06 04 39.5	
UGL				eS	S	06 11 31.6	-1.2
UGL				pmax	pmax		
	comp=Z,180nm,1.2s						
UGL				pmax	pmax		
	comp=Z,350nm,3.0s						
UGL				smax	smax		
	comp=N,580nm,5.0s						
UGL				smax	smax		
	comp=E,490nm,5.0s						
CIT	Chita	51.66	354	eP	P	06 04 20.2	+0.9
CIT				e		06 04 49.3	
CIT				e		06 05 28.6	
CIT				pmax	pmax		
	comp=Z,189nm,1.9s						
GRNR	Gornyy	51.67	12	⇓iP	P	06 04 19.3	0.0
GRNR				pmax	pmax		
	comp=E,5.0nm,1.2s						
GRNR				pmax	pmax		
	comp=N,20nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,30nm,1.1s						
ZAK	Zakamensk	51.91	346	eP	P	06 04 21.1	-0.1
ZAK				pmax	pmax		

	comp=Z,68nm,1.3s						
WMQ	**Urumqi**	**52.36**	**330**	⇓P	**P**	**06 04 25.8**	**+1.2**
WMQ				sP	sP	06 04 55.3	+0.3
WMQ				pmax	pmax		
	comp=Z,130nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,690nm,4.5s						
WMQ				LR	LR		
	comp=Z,270nm,18.9s						
WMQ				LR	LR		
	comp=Z,410nm,23.7s						
WMQ				LR	LR		
	comp=Z,410nm,26.5s						
ZEA	**Zeya**	**53.23**	**5**	eP	**P**	**06 04 30.7**	**0.0**
ZEA				e		06 04 58.6	
ZEA				pmax	pmax		
	comp=N,30nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.0s						
ZEA				pmax	pmax		
	comp=N,100nm,4.2s						
ZEA				pmax	pmax		
	comp=Z,100nm,3.9s						
TYV	**Tymovskoe**	**53.33**	**17**	eP	**P**	**06 04 31.1**	**-0.4**
TYV				pmax	pmax		
	comp=Z,20nm,1.6s						
TYV				pmax	pmax		
	comp=Z,200nm,4.0s						
IRK	**Irkutsk**	**53.40**	**347**	eP	**P**	**06 04 32.5**	**+0.4**
IRK				pmax	pmax		
	comp=Z,145nm,1.7s						
MOY	**Mondy**	**53.67**	**345**	eP	**P**	**06 04 34.9**	**+0.7**
MOY				pmax	pmax		
	comp=Z,201nm,2.6s						
WUS	**Wushi**	**55.40**	**322**	P	**P**	**06 04 48.1**	**+1.1**
WUS				pP	**pP**	**06 05 09.6**	**+1.7**
WUS				sP	**sP**	**06 05 19.5**	**+2.2**
NIL	**Nilore**	**55.62**	**311**	P	**P**	**06 04 48.6**	**+0.1**
NIL				IAmb	IAmb	06 05 17.9	
	comp=Z,65nm,0.8s						
NIL	**Nilore**	**55.62**	**311**	P	**P**	**06 04 48.6**	**+0.1**
NIL				pmax	pmax		
	comp=Z,65nm,0.8s						
NIL	**Nilore**	**55.62**	**311**	P	**P**	**06 04 48.7**	**+0.2**
NIL				pP	**pP**	**06 05 11.1**	**+1.5**
ZSN	**Zaisan**	**56.34**	**331**	⇓iP	**P**	**06 04 54.3**	**+1.0**
	comp=Z,76nm,1.3s,baz=331						
ZSN	**Zaisan**	**56.34**	**331**	d iP	**P**	**06 04 54.3**	**+1.0**
ZSN				pmax	pmax		
	comp=Z,76nm,1.3s						
SHLS	**Shalkode**	**56.41**	**324**	⇓iP	**P**	**06 04 54.0**	**-0.1**
	comp=Z,74nm,0.9s,baz=324						
SHLS	**Shalkode**	**56.41**	**324**	d iP	**P**	**06 04 54.0**	**-0.1**
SHLS				pmax	pmax		
	comp=Z,74nm,0.9s						
KSH	**Kashi**	**56.53**	**319**	P	**P**	**06 04 56.8**	**+1.8**
KSH				sP	sP	06 05 26.0	+0.6
KSH				S	**S**	**06 12 46.4**	**+6.0**
KSH				ScS	**ScS**	**06 14 38.3**	**+1.6**
KSH				pmax	pmax		
	comp=Z,78nm,1.2s						
KSH				LR	LR		
	comp=Z,310nm,14.1s						
KSH				LR	LR		
	comp=Z,260nm,12.0s						
KSH				LR	LR		
	comp=Z,320nm,11.3s						
UZB	**Uzynbulak**	**56.66**	**324**	⇓iP	**P**	**06 04 57.4**	**+1.4**
	comp=Z,78nm,1.5s,baz=324						
UZB	**Uzynbulak**	**56.66**	**324**	d iP	**P**	**06 04 57.3**	**+1.4**
UZB				pmax	pmax		
	comp=Z,78nm,1.5s						
DGZ	**Jazzator, Alta**	**56.80**	**334**	d iP	**P**	**06 04 57.8**	**+1.0**
DGZ				pmax	pmax		
	comp=Z,147nm,1.1s						
SATY	**Saty**	**56.98**	**324**	⇓iP	**P**	**06 04 59.7**	**+1.6**
	comp=Z,106nm,1.1s,baz=324						
SATY	**Saty**	**56.98**	**324**	d iP	**P**	**06 04 59.7**	**+1.6**
SATY				pmax	pmax		
	comp=Z,106nm,1.1s						
KPKS	**Kokpek**	**57.05**	**324**	⇓iP	**P**	**06 04 60.0**	**+1.3**
	comp=Z,73nm,1.0s,baz=324						
KPKS	**Kokpek**	**57.05**	**324**	d iP	**P**	**06 04 59.9**	**+1.3**
KPKS				pmax	pmax		
	comp=Z,73nm,1.0s						
MK31	**Makanchi Array**	**57.17**	**329**	d iP	**P**	**06 05 00.0**	**+0.7**
MKAR	**Makanchi Array**	**57.17**	**329**	P	**P**	**06 05 00.2**	**+1.0**
	comp=Z,106nm,1.0s,baz=130,slow=7.7,SNR=385						
MKAR				LR	LR	06 31 21.4	
	comp=Z,190nm,21.5s,baz=128,slow=38						
	comp=Z,106nm,1.0s						
MKAR	**Makanchi Array**	**57.17**	**329**	P	**P**	**06 05 00.1**	**+0.8**
MAKZ	**Makanchi**	**57.34**	**329**	P	**P**	**06 05 01.1**	**+0.6**
MAKZ	**Makanchi**	**57.34**	**329**	P	**P**	**06 05 01.1**	**+0.6**
MAKZ				pmax	pmax		
	comp=Z,192nm,1.3s						
MAKZ	**Makanchi**	**57.34**	**329**	P	**P**	**06 05 01.3**	**+0.9**
MAKZ				pP	**pP**	**06 05 22.6**	**+1.0**
MAKZ				sP	**sP**	**06 05 31.5**	**+0.5**
BOD	**Bodaibo**	**57.36**	**355**	eP	**P**	**06 05 00.5**	**+0.1**
BOD				pmax	pmax		
	comp=Z,208nm,1.1s						
TNSS	**Tian-Shan**	**57.84**	**323**	i P	**P**	**06 05 06.2**	**+1.7**
	baz=323						
TNSS	**Tian-Shan**	**57.84**	**323**	i P	**P**	**06 05 06.2**	**+1.7**
MDOK	**Medeo**	**57.85**	**323**	i P	**P**	**06 05 05.9**	**+1.6**
	baz=323						
MDOK	**Medeo**	**57.85**	**323**	i P	**P**	**06 05 05.9**	**+1.6**
AAA	**Alma-Ata**	**57.95**	**323**	eP	**P**	**06 05 05.0**	**+0.1**
	baz=323						
AAA	**Alma-Ata**	**57.95**	**323**	eP	**P**	**06 05 05.0**	**+0.1**
TDK	**Taldyqorghan**	**58.13**	**325**	⇓iP	**P**	**06 05 07.6**	**+1.5**
	baz=325						
TDK	**Taldyqorghan**	**58.13**	**325**	d iP	**P**	**06 05 07.6**	**+1.5**
CHKK	**Chushkaly**	**58.28**	**324**	i P	**P**	**06 05 07.8**	**+0.7**
	baz=324						
CHKK	**Chushkaly**	**58.28**	**324**	i P	**P**	**06 05 07.8**	**+0.7**
TKM2	**Tokmak 2**	**58.59**	**322**	P	**P**	**06 05 10.9**	**+1.4**
	SNR=22						
KUU	**Kurty**	**58.69**	**323**	⇓iP	**P**	**06 05 11.2**	**+1.2**
	baz=323						
KUU	**Kurty**	**58.69**	**323**	d iP	**P**	**06 05 11.1**	**+1.2**
MSVF	**Nonsavu**	**58.84**	**111**	P	**P**	**06 05 13.2**	**+1.6**
	comp=Z,15nm,0.7s,baz=305,slow=8.1,SNR=6.8						
MSVF				LR	LR	06 31 40.6	
	comp=Z,151nm,19.2s,baz=335,slow=37						
	comp=Z,15nm,0.7s						
MSVF	**Nonsavu**	**58.84**	**111**	P	**P**	**06 05 13.4**	**+1.9**
MSVF				pP	**pP**	**06 05 34.3**	**+1.7**
KBK	**Karagaybulak**	**58.85**	**322**	P	**P**	**06 05 13.1**	**+1.8**
	SNR=49						
UCH	**Uchtor**	**58.90**	**321**	P	**P**	**06 05 13.4**	**+1.4**
	SNR=37						
AAK	**Ala-Archa**	**59.13**	**321**	P	**P**	**06 05 14.9**	**+1.7**
	SNR=30						
AAK	**Ala-Archa**	**59.13**	**321**	P	**P**	**06 05 14.8**	**+1.7**
	comp=Z,53nm,1.1s,baz=132,slow=5.0,SNR=47						
	comp=Z,53nm,1.1s						
AAK	**Ala-Archa**	**59.13**	**321**	P	**P**	**06 05 14.6**	**+1.4**
AAK	**Ala-Archa**	**59.13**	**321**	d iP	**P**	**06 05 14.2**	**+1.0**
AAK				pmax	pmax		
	comp=Z,153nm,1.4s						
AAK	**Ala-Archa**	**59.13**	**321**	i P	**P**	**06 05 14.9**	**+1.7**
	SNR=33						
AAK	**Ala-Archa**	**59.13**	**321**	P	**P**	**06 05 15.1**	**+1.9**
AAK	**Ala-Archa**	**59.13**	**321**	P	**P**	**06 05 14.8**	**+1.7**
AAK				pP	**pP**	**06 05 36.6**	**+2.3**
AAK				sP	**sP**	**06 05 44.6**	**+0.9**
CHMS	**Chumysh**	**59.16**	**322**	P	**P**	**06 05 14.3**	**+1.0**
	SNR=12						
KBL	**Kabul**	**59.16**	**311**	P	**P**	**06 05 13.7**	**0.0**
KBL	**Kabul**	**59.16**	**311**	P	**P**	**06 05 13.7**	**0.0**
KBL				pmax	pmax		
	comp=Z,150nm,0.9s						
KBL	**Kabul**	**59.16**	**311**	P	**P**	**06 05 14.4**	**+0.8**
	SNR=53						
AML	**Almayashu**	**59.37**	**320**	P	**P**	**06 05 16.7**	**+1.5**
	SNR=46						
USP	**Ospenovka**	**59.46**	**322**	P	**P**	**06 05 16.5**	**+1.1**
	SNR=48						
SGDS	**Sogindy**	**59.48**	**322**	⇓iP	**P**	**06 05 16.4**	**+0.9**
	comp=Z,60nm,1.5s,baz=322						
SGDS	**Sogindy**	**59.48**	**322**	d iP	**P**	**06 05 16.4**	**+0.9**
SGDS				pmax	pmax		
	comp=Z,60nm,1.5s						
EKS2	**Erkin-Say**	**59.59**	**321**	P	**P**	**06 05 18.0**	**+1.6**
	SNR=32						
PEA0B	**Petropavlovsk-**	**60.52**	**24**	d eP	**P**	**06 05 22.4**	**+0.1**
PETK	**Petropavlovsk-**	**60.52**	**24**	P	**P**	**06 05 22.1**	**-0.2**
	comp=Z,23nm,0.9s,baz=224,slow=6.2,SNR=16						
PETK				LR	LR	06 30 10.2	
	comp=Z,105nm,21.6s,baz=207,slow=34						
	comp=Z,23nm,0.9s						
SEM	**Semipalatinsk**	**60.58**	**331**	eP	**P**	**06 05 23.1**	**0.0**
	comp=Z,89nm,1.6s,baz=331						
SEM	**Semipalatinsk**	**60.58**	**331**	eP	**P**	**06 05 23.1**	**0.0**
SEM				pmax	pmax		
	comp=Z,89nm,1.6s						
BTLS	**Baital**	**60.69**	**323**	⇓iP	**P**	**06 05 24.3**	**+0.6**
	comp=Z,64nm,1.6s,baz=323						
BTLS	**Baital**	**60.69**	**323**	d iP	**P**	**06 05 24.2**	**+0.6**
BTLS				pmax	pmax		
	comp=Z,64nm,1.6s						
PET	**Petropavlovsk**	**60.85**	**25**	eP	**P**	**06 05 23.9**	**-0.6**
PET				eS	**S**	**06 13 35.5**	**-0.2**
PET				pmax	pmax		
	comp=Z,88nm,1.3s						
PET				MLR	MLR		
	comp=Z,100nm,16.0s						
PET	**Petropavlovsk**	**60.85**	**25**	P	**P**	**06 05 25.1**	**+0.6**
PET				pP	**pP**	**06 05 46.8**	**+1.0**
PET				sP	**sP**	**06 05 56.3**	**+1.2**
ZALV	**Zalesovo Beam**	**61.04**	**336**	P	**P**	**06 05 25.6**	**-0.3**
	comp=Z,75nm,1.0s,baz=123,slow=5.5,SNR=160						
ZALV				LR	LR	06 32 48.3	
	comp=Z,132nm,18.6s,baz=122,slow=37						
	comp=Z,75nm,1.0s						
DZA	**Taraz**	**61.26**	**320**	eP	**P**	**06 05 27.9**	**+0.3**
	baz=320						
DZA	**Taraz**	**61.26**	**320**	eP	**P**	**06 05 27.9**	**+0.3**
KURBB	**Kurchatov Arra**	**61.55**	**331**	P	**P**	**06 05 29.8**	**+0.4**
	comp=Z,105nm,1.1s,baz=129,slow=6.7,SNR=362						
	comp=Z,105nm,1.1s						
KURK	**Kurchatov**	**61.57**	**331**	P	**P**	**06 05 30.0**	**+0.6**
KURK	**Kurchatov**	**61.57**	**331**	d iP	**P**	**06 05 29.9**	**+0.4**
KURK				pmax	pmax		
	comp=Z,338nm,1.3s						
KURK	**Kurchatov**	**61.57**	**331**	P	**P**	**06 05 30.3**	**+0.9**
KURK	**Kurchatov**	**61.57**	**331**	P	**P**	**06 05 30.1**	**+0.6**
KURK				pP	**pP**	**06 05 53.1**	**+2.3**
KURK				sP	**sP**	**06 06 01.3**	**+1.2**
YAK	**Yakutsk**	**61.65**	**5**	P	**P**	**06 05 29.5**	**-0.2**
	comp=Z,106nm,0.8s,baz=192,slow=2.1,SNR=31						
YAK				LR	LR	06 33 48.4	
	comp=Z,100nm,19.2s,baz=174,slow=37						
	comp=Z,106nm,0.8s						
YAK	**Yakutsk**	**61.65**	**5**	P	**P**	**06 05 29.3**	**-0.4**
YAK	**Yakutsk**	**61.65**	**5**	d iP	**P**	**06 05 29.1**	**-0.6**
YAK				e		06 06 07.6	
YAK				e		06 07 44.6	
YAK				eS	**S**	**06 13 37.9**	**-7.5**
YAK				e*SS	**sS**	**06 14 15.6**	**-4.3**
YAK				e		06 15 07.4	
YAK				pmax	pmax		
	comp=Z,336nm,1.2s						
YAK				pmax	pmax		
	comp=N,122nm,1.3s						
YAK				pmax	pmax		
	comp=E,47nm,1.5s						
YAK				pmax	pmax		
	comp=Z,300nm,4.3s						
YAK				pmax	pmax		
	comp=N,164nm,4.4s						
YAK				pmax	pmax		
	comp=E,112nm,5.2s						
YAK				smax	smax		
	comp=E,293nm,5.6s						
YAK				smax	smax		
	comp=N,153nm,4.2s						
YAK	**Yakutsk**	**61.65**	**5**	P	**P**	**06 05 29.2**	**-0.5**
YAK				pP	**pP**	**06 05 51.2**	**+0.2**
KKAR	**Karatay Array**	**61.89**	**320**	P	**P**	**06 05 32.1**	**+0.3**
KKAR	**Karatay Array**	**61.89**	**320**	IAmb	IAmb	06 05 34.6	
	comp=Z,96nm,1.1s						
KKAR	**Karatay Array**	**61.89**	**320**	P	**P**	**06 05 32.1**	**+0.3**
CHM	**Chimkent**	**62.11**	**319**	eP	**P**	**06 05 33.9**	**+0.6**
	comp=Z,89nm,1.1s,baz=319						
CHM	**Chimkent**	**62.11**	**319**	eP	**P**	**06 05 33.9**	**+0.6**
CHM				pmax	pmax		
	comp=Z,89nm,1.1s						
RPZ	**Rata Peaks**	**62.60**	**141**	LR	LR	06 33 37.4	
	comp=Z,413nm,19.1s,baz=299,slow=37						
RPZ	**Rata Peaks**	**62.60**	**141**	P	**P**	**06 05 37.5**	**+1.0**
RPZ	**Rata Peaks**	**62.60**	**141**	P	**P**	**06 05 38.7**	**+2.1**
MA2	**Magadan**	**63.20**	**16**	LR	LR	06 35 28.9	
	comp=Z,35nm,19.0s,baz=219,slow=38						
MA2	**Magadan**	**63.20**	**16**	P	**P**	**06 05 40.4**	**+0.3**
MA2				IAmb	IAmb	06 06 15.1	
	comp=Z,76nm,0.9s						
MA2	**Magadan**	**63.20**	**16**	d iP	**P**	**06 05 40.2**	**0.0**
MA2				pmax	pmax		
	comp=Z,151nm,1.7s						
MA2	**Magadan**	**63.20**	**16**	P	**P**	**06 05 40.5**	**+0.3**
MA2				sP	**sP**	**06 06 10.4**	**-0.4**
BKZ	**Black Stump Fm**	**64.16**	**135**	P	**P**	**06 05 47.0**	**+0.1**
BKZ				pP	**pP**	**06 06 07.5**	**-0.7**
BKZ	**Black Stump Fm**	**64.16**	**135**	P	**P**	**06 05 49.2**	**+2.2**
BRZS	**Berezniki**	**64.18**	**328**	⇓iP	**P**	**06 05 47.7**	**+0.9**
	comp=Z,102nm,1.2s,baz=328						
BRZS	**Berezniki**	**64.18**	**328**	d iP	**P**	**06 05 47.7**	**+0.9**
BRZS				pmax	pmax		
	comp=Z,102nm,1.2s						
WBK	**Wadi Bani Khal**	**64.21**	**295**	P	**P**	**06 05 48.0**	**+0.4**
	SNR=6.7						
URZ	**Urewera**	**64.25**	**134**	LR	LR	06 36 08.8	
	comp=Z,133nm,18.4s,baz=20,slow=38						
RTZ	**Ruatahuna**	**64.29**	**134**	IAmb	IAmb	06 06 17.3	
	comp=Z,55nm,0.7s						
WSAR	**Wadi Sarin**	**64.64**	**295**	P	**P**	**06 05 50.0**	**-0.4**
	comp=Z,34nm,1.3s,baz=130,slow=6.5,SNR=16						
WSAR				LR	LR	06 35 01.3	
	comp=Z,175nm,20.9s,baz=118,slow=37						
	comp=Z,34nm,1.3s						
WSAR	**Wadi Sarin**	**64.64**	**295**	P	**P**	**06 05 50.3**	**-0.1**
	SNR=9.5						
MHTO	**MHTO**	**64.84**	**293**	P	**P**	**06 05 52.0**	**+0.3**
	SNR=9.4						
JMDO	**Jabal Madar**	**64.96**	**294**	P	**P**	**06 05 52.8**	**+0.4**
	SNR=7.6						
DQM	**DQM**	**65.07**	**292**	P	**P**	**06 05 53.4**	**+0.2**
	SNR=7.4						
SMDO	**Samad**	**65.13**	**295**	P	**P**	**06 05 53.8**	**+0.2**
	SNR=5.9						
BIDO	**Bidbid**	**65.15**	**296**	P	**P**	**06 05 54.0**	**+0.3**
	SNR=11						
RAO	**Raoul Island**	**65.18**	**123**	LR	LR	06 32 20.9	
	comp=Z,128nm,21.9s,baz=208,slow=34						
BSY	**Bisya**	**65.84**	**295**	P	**P**	**06 05 58.7**	**+0.5**
	SNR=6.1						
HOQ	**Hoqain**	**65.89**	**296**	P	**P**	**06 05 59.0**	**+0.5**
	SNR=6.8						
SEY	**Seymchan**	**66.43**	**15**	⇓eP	**P**	**06 06 01.1**	**0.0**
SEY				pmax	pmax		
	comp=Z,74nm,1.7s						
ARQ	**Araqi**	**66.56**	**295**	P	**P**	**06 06 03.3**	**+0.5**
	SNR=5.0						
SHAO	**Shalim**	**66.59**	**289**	i P	**P**	**06 06 02.2**	**-0.8**
	SNR=9.7						
SHAO	**Shalim**	**66.59**	**289**	P	**P**	**06 06 03.5**	**+0.5**
	SNR=6.6						
SOHO	**SOHO**	**66.69**	**296**	P	**P**	**06 06 02.3**	**-1.3**
SOHO	**SOHO**	**66.69**	**296**	P	**P**	**06 06 03.7**	**+0.2**
BVAR	**Borovoye Array**	**67.05**	**329**	P	**P**	**06 06 05.6**	**+0.4**
	comp=Z,110nm,1.0s,baz=139,slow=7.7,SNR=273						
BVAR				LR	LR	06 38 09.7	
	comp=Z,155nm,19.9s,baz=122,slow=38						
	comp=Z,110nm,1.0s						
BRVK	**Borovoye**	**67.12**	**329**	P	**P**	**06 06 05.8**	**+0.2**
BRVK	**Borovoye**	**67.12**	**329**	d iP	**P**	**06 06 05.9**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,267nm,1.3s						
BRVK	**Borovoye**	**67.12**	**329**	P	**P**	**06 06 06.5**	**+0.8**
BRVK	**Borovoye**	**67.12**	**329**	P	**P**	**06 06 06.2**	**+0.5**
BRVK				pP	**pP**	**06 06 28.9**	**+1.6**
UOSS	**Minazif**	**67.13**	**297**	P	**P**	**06 06 05.6**	**-0.8**
UOSS				pP	**pP**	**06 06 26.6**	**-1.7**
UOSS				IAmb	IAmb	06 06 36.5	
	comp=Z,80nm,1.8s						
UOSS	**Minazif**	**67.13**	**297**	P	**P**	**06 06 04.7**	**-1.6**
CASY	**Casey**	**67.14**	**185**	P	**P**	**06 06 02.4**	**-3.1**
CASY				pP	**pP**	**06 06 26.2**	**-0.5**
CASY				sP	**sP**	**06 06 35.3**	**-0.5**
HATD	**Hatta, Dubai**	**67.18**	**297**	i P	**P**	**06 06 06.1**	**-0.6**
	SNR=6.8						
HATD	**Hatta, Dubai**	**67.18**	**297**	P	**P**	**06 06 07.7**	**+1.1**
	SNR=7.1						
DMTO	**DMTO**	**67.19**	**289**	P	**P**	**06 06 06.3**	**-0.5**
	SNR=5.4						
ASHO	**Ashiyiah**	**67.22**	**297**	P	**P**	**06 06 06.5**	**-0.4**
ASHO	**Ashiyiah**	**67.22**	**297**	P	**P**	**06 06 08.3**	**+1.4**
BANOM	**Banah**	**67.23**	**298**	P	**P**	**06 06 07.2**	**+0.2**
MSFE	**Esma-Masafi**	**67.25**	**297**	P	**P**	**06 06 08.7**	**+1.6**
ALNE	**Al Ain**	**67.38**	**296**	i P	**P**	**06 06 07.7**	**-0.3**
	SNR=11						
ALNE	**Al Ain**	**67.38**	**296**	P	**P**	**06 06 08.7**	**+0.7**
	SNR=15						
FAQ	**Al Faqa, Dubai**	**67.64**	**296**	i P	**P**	**06 06 08.7**	**-0.8**
	SNR=5.5						
ASUD	**Al Ashush, Dub**	**67.86**	**296**	i P	**P**	**06 06 11.1**	**+0.1**
	SNR=7.2						
ASUD	**Al Ashush, Dub**	**67.86**	**296**	P	**P**	**06 06 11.8**	**+0.9**
	SNR=7.8						
RBK	**Rabkut**	**67.87**	**289**	P	**P**	**06 06 12.0**	**+0.8**
	SNR=8.9						
AFI	**Afiamalu**	**67.92**	**105**	LR	LR	06 34 51.9	
	comp=Z,64nm,20.7s,baz=280,slow=35						
AJN	**Ajban**	**68.16**	**296**	i P	**P**	**06 06 12.1**	**-0.6**
	SNR=5.2						
AJN	**Ajban**	**68.16**	**296**	P	**P**	**06 06 13.2**	**+0.5**
	SNR=5.9						
WHFO	**Wadi Hawf**	**68.33**	**289**	P	**P**	**06 06 13.5**	**-0.5**
	SNR=6.3						
DRV	**Dumont d'Urvil**	**68.42**	**172**	P	**P**	**06 06 12.8**	**-0.8**
DRV				pP	**pP**	**06 06 34.7**	**-0.1**
DRV				sP	**sP**	**06 06 44.0**	**+0.2**
GEYT	**Alibeck**	**68.61**	**311**	P	**P**	**06 06 16.4**	**+1.0**
	comp=Z,56nm,1.0s,baz=142,slow=5.1,SNR=57						
GEYT				LR	LR	06 43 14.8	
	comp=Z,78nm,18.6s,baz=114,slow=42						
	comp=Z,56nm,1.0s						
ABTO	**Aybut**	**68.72**	**288**	P	**P**	**06 06 16.3**	**-0.2**
	SNR=10						
MZWR	**Madinat Zayed**	**69.02**	**295**	P	**P**	**06 06 18.9**	**+0.7**
MZR	**Muzera**	**69.27**	**294**	i P	**P**	**06 06 19.6**	**-0.2**
	SNR=7.7						
MZR	**Muzera**	**69.27**	**294**	P	**P**	**06 06 20.5**	**+0.7**
	SNR=9.0						
JRN	**Qarnain Island**	**70.14**	**296**	P	**P**	**06 06 25.3**	**+0.3**
TIXI	**Tiksi**	**71.14**	**3**	P	**P**	**06 06 28.9**	**-1.3**
	comp=Z,101nm,1.0s,baz=271,slow=23,SNR=224						
TIXI				LR	LR	06 39 32.3	
	comp=Z,94nm,20.8s,baz=1.0,slow=37						
	comp=Z,101nm,1.0s						
TIXI	**Tiksi**	**71.14**	**3**	P	**P**	**06 06 28.8**	**-1.3**
TIXI	**Tiksi**	**71.14**	**3**	d iP	**P**	**06 06 28.6**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,158nm,1.0s						
TIXI	**Tiksi**	**71.14**	**3**	P	**P**	**06 06 28.9**	**-1.3**
TIXI				pP	**pP**	**06 06 51.3**	**-0.8**
TIXI				sP	**sP**	**06 07 00.6**	**-0.7**
ABKAR	**Akbulak array**	**71.15**	**323**	P	**P**	**06 06 30.9**	**+0.2**
ABKAR	**Akbulak array**	**71.15**	**323**	IAmb	IAmb	06 06 32.4	
	comp=Z,183nm,1.4s						
NRIK	**Noril'sk**	**72.25**	**348**	P	**P**	**06 06 36.7**	**-0.2**
	comp=Z,40nm,0.9s,baz=132,slow=5.8,SNR=61						
NRIK				LR	LR	06 39 43.1	
	comp=Z,171nm,21.6s,baz=147,slow=37						
	comp=Z,40nm,0.9s						
NRIK	**Noril'sk**	**72.25**	**348**	IAmb	IAmb	06 06 37.9	
	comp=Z,111nm,1.3s						
NRIK	**Noril'sk**	**72.25**	**348**	d iP	**P**	**06 06 36.2**	**-0.7**
NRIK				pmax	pmax		
	comp=Z,118nm,1.5s						
AKTO	**Aktyubinsk**	**72.75**	**323**	P	**P**	**06 06 40.6**	**+0.3**
	comp=Z,70nm,1.0s,baz=106,slow=5.4,SNR=113						
AKTO				LR	LR	06 41 06.9	
	comp=Z,150nm,18.1s,baz=82,slow=38						
	comp=Z,70nm,1.0s						
SVE	**Sverdlovsk**	**73.81**	**330**	c iP	**P**	**06 06 46.5**	**+0.2**
SVE				pmax	pmax		
	comp=Z,209nm,1.4s						
BILL	**Bilibino**	**74.06**	**16**	P	**P**	**06 06 46.4**	**-1.2**
BILL	**Bilibino**	**74.06**	**16**	c iP	**P**	**06 06 46.6**	**-1.0**
BILL				e		06 09 30.9	
BILL				eS	**SKiKP**	**06 16 03.1**	**-4.7**
BILL				pmax	pmax		
	comp=Z,50nm,1.4s						
BILL				MLR	MLR		
	comp=Z,65nm,19.0s						
ARU	**Arti**	**74.69**	**329**	P	**P**	**06 06 51.0**	**-0.4**
	comp=Z,47nm,0.9s,baz=114,slow=3.4,SNR=64						
ARU				LR	LR	06 41 53.1	
	comp=Z,160nm,22.0s,baz=112,slow=37						
	comp=Z,47nm,0.9s						
ARU	**Arti**	**74.69**	**329**	P	**P**	**06 06 51.0**	**-0.4**
ARU				IAmb	IAmb	06 06 52.4	
	comp=Z,130nm,1.2s						
ABPO	**Ambohimpanom**	**75.00**	**250**		pP	06 07 16.1	0.0
VOI	**Vohitsoka**	**75.72**	**247**	P	**P**	**06 06 57.1**	**-1.2**
VOI				pP	**pP**	**06 07 19.9**	**-0.3**
VOI				IAmb	IAmb	06 07 24.1	
	comp=Z,48nm,1.0s						
RAYN	**Ar Rayn**	**76.62**	**294**	P	**P**	**06 07 01.9**	**-1.3**
RAYN				IAmb	IAmb	06 07 33.5	
	comp=Z,156nm,1.7s						
RAYN	**Ar Rayn**	**76.62**	**294**	P	**P**	**06 07 01.9**	**-1.3**
RAYN				pmax	pmax		
	comp=Z,156nm,1.7s						
RAYN	**Ar Rayn**	**76.62**	**294**	i P	**P**	**06 07 02.7**	**-0.5**
	SNR=19						
RAYN	**Ar Rayn**	**76.62**	**294**	P	**P**	**06 07 02.8**	**-0.5**
AKT	**Akhty**	**77.24**	**312**	eP	**P**	**06 07 06.9**	**+0.5**
AKT				e		06 07 16.8	
AKT				e*PP	**pP**	**06 07 25.6**	**-3.0**
AKT				e*SP	**sP**	**06 07 34.1**	**-3.7**
AKT				pmax	pmax		
	comp=Z,70nm,1.1s						
NIKH	**Nikolski High**	**77.60**	**36**	P	**P**	**06 07 06.6**	**-1.4**
	baz=254						
MAK	**Makhachkala**	**77.68**	**314**	eP	**P**	**06 07 06.9**	**-1.8**
MAK				e*PP	**pP**	**06 07 27.4**	**-3.5**
MAK				e*SP	**sP**	**06 07 36.7**	**-3.4**
MAK				e		06 10 05.8	
MAK				ePPP	PPP	06 11 48.9	
MAK				eS	**S**	**06 16 52.3**	**-1.8**
MAK				e*SS	**sS**	**06 17 29.6**	**-1.9**
MAK				pmax	pmax		
	comp=Z,359nm,1.2s						
SPIA	**Saint Paul Isl**	**78.06**	**31**	P	**P**	**06 07 10.3**	**-0.2**
	baz=252						
GROC	**Groznyy**	**78.95**	**314**	eP	**P**	**06 07 16.5**	**+0.8**
GROC				e		06 07 25.1	
GROC				e*PP	**pP**	**06 07 37.7**	**-0.3**
GROC				e		06 10 13.6	
GROC				eS	**S**	**06 17 08.6**	**+0.8**
GROC				e*SS	**sS**	**06 17 45.0**	**-0.1**
GROC				pmax	pmax		
	comp=Z,318nm,1.4s						
UNV	**Unalaska Valle**	**79.18**	**35**	P	**P**	**06 07 16.0**	**-0.7**
	baz=256						
GNI	**Garni**	**79.25**	**311**	P	**P**	**06 07 18.9**	**+1.2**
	comp=Z,14nm,0.7s,baz=180,slow=11,SNR=13						
GNI				LR	LR	06 51 14.9	
	comp=Z,73nm,18.0s,baz=85,slow=42						
	comp=Z,14nm,0.7s						
GNI	**Garni**	**79.25**	**311**	P	**P**	**06 07 18.7**	**+1.0**
GNI				IAmb	IAmb	06 07 47.5	
	comp=Z,112nm,1.1s						
GNI	**Garni**	**79.25**	**311**	d iP	**P**	**06 07 18.5**	**+0.8**
GNI				pmax	pmax		
	comp=Z,65nm,1.4s						
GNI	**Garni**	**79.25**	**311**	P	**P**	**06 07 18.2**	**+0.6**
GNI	**Garni**	**79.25**	**311**	P	**P**	**06 07 19.0**	**+1.2**
BELG	**Belogornoye**	**79.54**	**323**	P	**P**	**06 07 18.2**	**-0.4**
	comp=Z,41nm,0.9s,baz=259,slow=1.6,SNR=16						
BELG				LR	LR	06 48 23.4	
	comp=Z,108nm,18.1s,baz=127,slow=40						
	comp=Z,41nm,0.9s						
BELG	**Belogornoye**	**79.54**	**323**	d iP	**P**	**06 07 18.0**	**-0.7**
BELG				pmax	pmax		
	comp=Z,19nm,1.3s						
KIRV	**Kirov**	**80.06**	**330**	P	**P**	**06 07 20.8**	**-0.5**
	comp=Z,29nm,0.7s,baz=131,slow=2.5,SNR=19						
KIRV				LR	LR	06 45 11.1	
	comp=Z,240nm,21.5s,baz=110,slow=37						
	comp=Z,29nm,0.7s						
KIRV	**Kirov**	**80.06**	**330**	d iP	**P**	**06 07 20.7**	**-0.7**
ZEI	**Tsey**	**80.26**	**313**	eP	**P**	**06 07 21.6**	**-1.5**

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ZEI                                 pmax    pmax
      comp=Z,36nm,1.4s
GEVA  Gevas              80.30 309  P       P        06 07 23.8 +0.4
ONI   Oni                80.56 313  IAmb    IAmb     06 07 59.2
      comp=Z,52nm,1.0s
VNDA  Vanda              81.07 172  P       P        06 07 26.1 -0.3
      comp=Z,4.8nm,0.8s,baz=153,slow=2.3,SNR=2.0
VNDA                                LR      LR       06 44 36.1
      comp=Z,191nm,18.4s,baz=327,slow=36
      comp=Z,4.8nm,0.8s
KBZ   Khabaz             81.12 314  P       P        06 07 27.6 +0.3
      comp=Z,12nm,1.0s,baz=72,slow=4.5,SNR=14
      comp=Z,12nm,1.0s
KBZ   Khabaz             81.12 314d iP      P        06 07 27.1 -0.2
KBZ                                 pmax    pmax
      comp=Z,29nm,1.3s
FALS  False Pass         81.17  34  P       P        06 07 27.3 -0.1
      baz=258
NEY   Neytrino           81.18 314ceP       P        06 07 29.6 +1.6
NEY                                 pmax    pmax
      comp=Z,12nm,1.7s
KIV   Kislovodsk         81.30 314  P       P        06 07 29.3 +0.9
KIV                                 pP      pP       06 07 50.2 -0.6
KIV                                 IAmb    IAmb     06 08 09.3
      comp=Z,49nm,0.9s
KIV   Kislovodsk         81.30 314 eP       P        06 07 28.4 -0.1
KIV                                 pmax    pmax
      comp=Z,12nm,1.1s
KIV   Kislovodsk         81.30 314  P       P        06 07 28.2 -0.3
TNA   Tin City           81.67  23  P       P        06 07 29.7 -0.1
      baz=253
S12K  Black Hills        82.10  34  P       P        06 07 32.4 +0.1
      baz=259
ANM   Nome               82.43  25  P       P        06 07 34.3 +0.4
      baz=255,SNR=24
KOPT  Kop Dagi           82.47 310  IAmb    IAmb     06 08 06.3
      comp=Z,84nm,1.1s
SDPT  Sand Point         82.92  34  P       P        06 07 35.6 -0.9
      baz=261
VRH   Novokhopyorsk      82.93 321 eP       P        06 07 36.1 -0.6
VRH                                e*SP     pP       06 07 58.1 -1.0
VRH                                 pmax    pmax
      comp=Z,70nm,2.0s
KIBK  Kibwezi            83.13 268  P       P        06 07 37.8 -0.9
KIBK                                        pP       06 07 59.9 -1.1
KIBK                                IAmb    IAmb     06 08 10.4
      comp=Z,47nm,1.1s
SOC   Sochi              83.39 314 eP       P        06 07 36.8 -2.5
SOC                                e*PP     pP       06 07 59.3 -2.4
SOC                                e*SP     sP       06 08 07.1 -3.7
SOC                                e                 06 10 52.0
SOC                                ePPP     PPP      06 12 40.5
SOC                                eS       S        06 17 51.9 -1.9
SOC                                eSS      SS       06 23 21.9 +0.9
SOC                                eSSS     SSS      06 26 48.0
SOC                                 MLR     MLR
      comp=Z,129nm,18.0s
MLH   Mauna Loa          83.65  71  P       P        06 07 42.6 +1.2
KMBO  Kilima Mbogo       83.91 269  P       P        06 07 42.0 -0.8
KMBO                                pP      pP       06 08 04.1 -1.1
KMBO                                IAmb    IAmb     06 08 14.8
      comp=Z,68nm,1.4s
KMBO  Kilima Mbogo       83.91 269  P       P        06 07 42.0 -0.8
KMBO                                *PP     pP       06 08 04.1 -1.1
KMBO                                pmax    pmax
      comp=Z,68nm,1.4s
KMBO  Kilima Mbogo       83.91 269  P       P        06 07 42.4 -0.5
CHGN  Chignik            84.21  34  P       P        06 07 43.5 +0.3
      baz=262
RDOG  Red Dog Mine       84.23  21  P       P        06 07 43.7 +0.6
      baz=257
VORD  Divnogorie         84.42 321 eP       P        06 07 43.2 -1.1
VORD                               e*SP     pP       06 08 05.7 -1.1
VORD                                pmax    pmax
      comp=Z,40nm,0.8s
VSR   Storozhevoye       84.53 321 eP       P        06 07 43.7 -1.1
VSR                                e*SP     pP       06 08 06.1 -1.3
VSR                                 pmax    pmax
      comp=Z,90nm,1.4s
VORR  Voronezh           84.55 322 eP       P        06 07 44.4 -0.5
VORR                               e*SP     pP       06 08 06.9 -0.5
VORR                                pmax    pmax
      comp=Z,90nm,1.4s
N16K  Nishlik Lake       84.61  29  P       P        06 07 45.8 +0.7
      baz=262
P16K  Nushagak River     84.80  31  P       P        06 07 46.3 +0.3
      baz=262
LPSR  Galich'ya Gora     84.81 323 eP       P        06 07 45.4 -0.9
LPSR                               i *SP    pP       06 08 07.8 -1.0
LPSR                                pmax    pmax
      comp=Z,100nm,1.1s
O16K  Kokwok River B     84.83  30  P       P        06 07 46.3 +0.1
      baz=262
R16K  Pilot Point        84.83  32  P       P        06 07 45.4 -0.8
      baz=263
ANN   Anapa              85.13 315 eP       P        06 07 47.1 -0.9
ANN                                e*PP     pP       06 08 03.9 -6.6
ANN                                eS       S        06 18 04.1 -7.0
ANN                                 pmax    pmax
      comp=Z,52nm,0.9s
O17K  Koliganek Bris     85.35  30  P       P        06 07 48.0 -0.8
      baz=263
KLMR  Klimovskoe         85.42 331⇓iP       P        06 07 47.9 -1.2
KLMR                               eP       P        06 07 47.9 -1.2
KLMR                               eP       P        06 07 47.9 -1.2
KLMR                                AMP              06 07 49.5
      comp=Z,223nm,1.4s
KLMR                               epP      pP       06 08 08.1 -3.7
KLMR                               ePP      PP       06 11 07.5 -0.7
KLMR  Klimovskoe         85.42 331d iP      P        06 07 47.8 -1.3
KLMR                               e*PP     pP       06 08 08.0 -3.7
KLMR                               e                 06 11 07.4
KLMR                                pmax    pmax
      comp=Z,223nm,1.4s
Q16K  King Salmon        85.45  31  P       P        06 07 48.8 -0.4
      baz=264
R17K  Ugashik Creek      85.48  32  P       P        06 07 48.7 -0.7
      baz=264
LODK  Lodwar             85.76 273  P       P        06 07 52.1 +0.2
LODK  Lodwar             85.76 273  P       P        06 07 53.1 +1.2
Q17K  Contact Creek      85.81  32  P       P        06 07 50.1 -1.1
      baz=264,SNR=6.3
MOS   Moscow             85.87 326 eP       P        06 07 48.2 -3.3
MOS                                e*PP     pP       06 08 10.3 -3.8
MOS                                e                 06 11 08.3
MOS                                e                 06 18 20.9
MOS                                 pmax    pmax
      comp=Z,500nm,2.4s
MOS                                 pmax    pmax
      comp=Z,134nm,1.6s
GCSA  Galena City Sc     86.05  25  P       P        06 07 52.0 -0.1
      baz=263
MMAI  Mount Meron Ar     86.12 303  LR      LR       06 51 05.4
      comp=Z,147nm,20.5s,baz=174,slow=39
TTA   Tatalina           86.23  27  P       P        06 07 52.5 -0.7
      baz=264,SNR=9.5
P18K  Big Mountain,      86.25  31  P       P        06 07 51.8 -1.6
      baz=265
Q18K  Katmai Hardscr     86.30  31  P       P        06 07 51.9 -1.8
      baz=265
O18K  Koktuh Hills       86.31  30  P       P        06 07 52.8 -0.8
      baz=265
EIL   Elat               86.41 300  LR      LR       06 48 30.6
      comp=Z,184nm,21.9s,baz=96,slow=37
OBN   Obninsk            86.42 325  P       P        06 07 53.6 -0.6
      comp=Z,6.5nm,0.5s,baz=104,slow=1.9,SNR=17
      comp=Z,6.5nm,0.5s
OBN   Obninsk            86.42 325  P       P        06 07 53.1 -1.1
OBN                                 pP      pP       06 08 15.7 -1.1
OBN   Obninsk            86.42 325d iP      P        06 07 53.0 -1.1
OBN                                i                 06 08 15.6
OBN                                eS       S        06 18 15.7 -7.6
OBN                                 pmax    pmax
      comp=Z,132nm,1.3s
OBN                                 MLR     MLR
      comp=Z,178nm,20.0s
L19K  White Mountain     86.69  28  P       P        06 07 55.1 -0.3
      baz=265,SNR=10
N19K  Bonanza Creek      86.75  29  IAmb    IAmb     06 08 21.9
      comp=Z,36nm,0.9s
N19K  Bonanza Creek      86.75  29  P       P        06 07 55.6 -0.2
      baz=265
O19K  Port Alsworth      86.78  30  P       P        06 07 55.0 -0.8
      baz=266
M19K  Big River Lodg     86.88  28  P       P        06 07 56.5 +0.2
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      baz=265
A21K  Barrow             86.97  19  P       P        06 07 56.9 +0.4
      baz=263,SNR=29
Q19K  Cape Douglas,      87.03  31  P       P        06 07 56.7 -0.5
      baz=266
OHAK  Old Harbor         87.11  33  P       P        06 07 57.3 -0.2
      baz=267
K20K  Telida             87.14  27  P       P        06 07 57.4 -0.2
      baz=266,SNR=16
L20K  Farewell, AK       87.16  28  P       P        06 07 57.6 -0.1
      baz=266
P19K  Oil Pt             87.29  30  P       P        06 07 58.7 +0.3
      baz=267
M20K  Styx River         87.47  28  P       P        06 07 58.8 -0.5
      baz=266
G21K  Allakaket          87.62  24  P       P        06 07 59.4 -0.3
      baz=266
O20K  Slope Mountain     87.62  30  P       P        06 07 59.5 -0.5
      baz=267
Q20K  Shuyak Island      87.66  32  P       P        06 07 59.0 -1.1
      baz=267
F21K  Alatna River       87.68  23  P       P        06 07 59.4 -0.7
      baz=266
BR131 Keskin Array S     87.72 310  IAmb    IAmb     06 08 29.0
      comp=Z,45nm,0.9s
BR131 Keskin Array S     87.72 310d iP      P        06 07 59.9 -1.1
BR131 Keskin Array S     87.72 310  P       P        06 08 01.2 +0.2
      SNR=5.7
BRTR  Keskin Array B     87.72 310  P       P        06 07 59.7 -1.3
      comp=Z,7.9nm,1.0s,baz=116,slow=5.6,SNR=29
BRTR                                LR      LR       06 53 49.1
      comp=Z,85nm,20.6s,baz=102,slow=40
      comp=Z,7.9nm,1.0s
BRTR  Keskin Array B     87.72 310 i P      P        06 08 00.4 -0.6
BRTR                                pmax    pmax
      comp=Z,8.0nm,1.0s
H21K  Melozitna Rive     87.85  24  P       P        06 08 00.6 -0.2
      baz=267
SPCR  Spurr Chakacha     87.88  29  P       P        06 08 00.9 -0.3
      baz=267,SNR=5.4
CSS   Mathiatis          87.89 305  P       P        06 08 00.2 -1.5
CSS                                 pP      pP       06 08 24.1 -0.5
CSS                                 IAmb    IAmb     06 08 34.9
      comp=Z,53nm,1.0s
CHUM  Lake Minchumin     87.96  26  P       P        06 08 01.1 -0.3
      baz=267,SNR=18
PPLA  Purkeypile         87.97  27  IAmb    IAmb     06 08 02.2
      comp=Z,58nm,1.5s
PPLA  Purkeypile         87.97  27  P       P        06 08 00.8 -0.9
      baz=267,SNR=6.3
CAST  Castle Rocks       88.04  27  P       P        06 08 01.5 -0.3
      baz=267,SNR=11
HOM   Homer              88.09  30  P       P        06 08 00.7 -1.5
      baz=268
LVZ   Lovozero           88.15 338⇑eP       P        06 08 01.2 -1.1
LVZ                                 pmax    pmax
      comp=Z,69nm,1.2s
I21K  Tanana             88.17  25  P       P        06 08 02.3  0.0
      baz=267,SNR=13
SKT   Skwentna           88.23  28  IAmb    IAmb     06 08 27.3
      comp=Z,47nm,1.6s
SKT   Skwentna           88.23  28  P       P        06 08 00.9 -1.9
      baz=268,SNR=6.9
CAPN  Captain Cook N     88.38  29  P       P        06 08 03.7 +0.3
      baz=268
H22K  Ishtalitna Cre     88.45  24  P       P        06 08 03.9 +0.2
      baz=268,SNR=15
BRLK  Bradley Lake       88.48  30  P       P        06 08 04.4 +0.3
BRLK                                pP      pP       06 08 25.4 -1.4
BRLK                                IAmb    IAmb     06 08 36.7
      comp=Z,58nm,1.1s
BPAW  Bear Paw Mtn.      88.55  26  P       P        06 08 03.7 -0.6
      baz=268,SNR=18
BRSE  Bradley Lake S     88.55  30  P       P        06 08 03.3 -1.1
      baz=269
KTH   Kantishna Hill     88.57  27  IAmb    IAmb     06 08 04.6
      comp=Z,31nm,1.2s
SUA   Susitna One        88.59  29  P       P        06 08 03.5 -1.2
      baz=269
APA   Apatity            88.61 337⇓iP       P        06 07 59.8 -4.6
APA                                 pmax    pmax
      comp=Z,72nm,1.1s
APA                                 MLR     MLR
      comp=Z,800nm,19.0s
MLY   Manley             88.69  25  P       P        06 08 04.5 -0.4
      baz=269,SNR=32
D23K  Nanushuk River     88.81  21  P       P        06 08 05.8 +0.4
      baz=268,SNR=21
CUT   Chulitna           88.84  28  P       P        06 08 04.0 -1.6
      baz=269
TRF   Thorofare Moun     88.85  27  P       P        06 08 04.7 -1.2
      baz=269,SNR=12
COLD  Coldfoot           88.95  23  P       P        06 08 05.6 -0.5
      baz=269,SNR=11
G23K  Bananza Creek      89.01  23  P       P        06 08 06.1 -0.3
      baz=269,SNR=31
RC01  Rabbit Creek A     89.08  29  IAmb    IAmb     06 08 38.9
      comp=Z,22nm,1.0s
RC01  Rabbit Creek A     89.08  29  P       P        06 08 05.2 -1.6
      baz=270
O22K  Cooper Landing     89.08  30  P       P        06 08 05.4 -1.3
      baz=270
E23K  Chandalar          89.19  22  P       P        06 08 06.7 -0.6
      baz=270
H23K  Yukon River        89.20  24  IAmb    IAmb     06 08 41.1
      comp=Z,21nm,0.9s
H23K  Yukon River        89.20  24  P       P        06 08 06.2 -1.1
      baz=270
SEW   Seward             89.21  30  P       P        06 08 05.4 -1.9
      baz=270
BWN   Browne             89.22  26  IAmb    IAmb     06 08 40.7
      comp=Z,36nm,0.9s
I23K  Minto, Yukon-K     89.27  25  IAmb    IAmb     06 08 31.5
      comp=Z,30nm,0.8s
I23K  Minto, Yukon-K     89.27  25  P       P        06 08 07.0 -0.6
      baz=270,SNR=36
PMR   Palmer             89.37  29  P       P        06 08 06.1 -2.0
      baz=270
NEA2  Nenana             89.39  26  P       P        06 08 06.5 -1.7
      baz=270,SNR=10
MCK   McKinley           89.45  26  IAmb    IAmb     06 08 08.5
      comp=Z,45nm,1.2s
MCK   McKinley           89.45  26  P       P        06 08 07.0 -1.5
      baz=270,SNR=15
PPT   Papeete            89.48 107  LR      LR       06 49 59.1
      comp=Z,92nm,18.8s,baz=310,slow=37
PPT2  Papeete2           89.48 107 eS       S        06 18 52.6 -1.4
      comp=Z,285nm,24.5s
PPT2  Papeete2           89.48 107 eLR      LR       06 36 49.1
      comp=Z,349nm,35.2s
PPT2                               eLR      LR       06 36 49.3
      comp=Z,199nm,34.2s
C24K  Franklin Bluff     89.52  20  P       P        06 08 08.3 -0.3
      baz=270
E24K  Your Creek         89.61  22  P       P        06 08 08.7 -0.5
      baz=271
TBI   Tubuai             89.66 113 eS       S        06 18 54.1 -1.3
      comp=Z,701nm,26.8s
TBI   Tubuai             89.66 113 eLR      LR       06 36 54.3
      comp=Z,1µm,31.5s
TBI                                eLR      LR       06 36 54.4
      comp=Z,2µm,28.8s
KNK   Knik Glacier       89.69  29  IAmb    IAmb     06 08 35.0
      comp=Z,62nm,1.3s
KNK   Knik Glacier       89.69  29  P       P        06 08 08.6 -1.1
      baz=271
SML   Sawmill            89.75  28  IAmb    IAmb     06 08 34.6
      comp=Z,38nm,0.8s
SML   Sawmill            89.75  28  P       P        06 08 09.1 -0.9
      baz=271,SNR=9.0
PWL   Port Wells         89.76  29  P       P        06 08 08.7 -1.3
      baz=271
WRH   Wood River Hil     89.82  26  IAmb    IAmb     06 08 32.9
      comp=Z,22nm,0.9s
F24K  Squaw Lake         89.85  23  P       P        06 08 08.6 -1.7
      baz=271
H24K  Noodor Dome        89.88  24  P       P        06 08 09.7 -0.8
      baz=271,SNR=18
TCOL  CIGO, UAF Yank     89.91  25  P       P        06 08 08.9 -1.6
      baz=271
COLA  College            89.92  25⇓eP       P        06 08 08.8 -1.8
COLA                                pmax    pmax
      comp=Z,7.0nm,1.0s
COLA  College            89.92  25  P       P        06 08 09.3 -1.3
      baz=271
G24K  Hadweenzic Riv     90.03  23  P       P        06 08 10.8 -0.3
      baz=272
M23K  Glacier View       90.04  28  P       P        06 08 10.3 -1.0
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      baz=271
POKR  Poker Plat Res     90.09  25  P       P        06 08 09.6 -1.8
      baz=272
SCM   Sheep Creek Mo     90.22  28  IAmb    IAmb     06 08 45.2
      comp=Z,36nm,0.9s
SCM   Sheep Creek Mo     90.22  28  P       P        06 08 10.8 -1.4
      baz=272
P23K  Montague Islan     90.24  30  P       P        06 08 09.5 -2.6
      baz=272
HDA   Harding Lake       90.32  26  P       P        06 08 10.7 -1.8
      baz=272,SNR=11
ILAR  Eielson Array      90.33  25  P       P        06 08 10.6 -2.0
      comp=Z,2.3nm,0.7s,baz=250,slow=4.1,SNR=30
      comp=Z,2.3nm,0.7s
D25K  Kavik River        90.35  21  P       P        06 08 11.7 -0.9
      baz=273
MBAR  Mbarara            90.42 269  LR      LR       06 47 35.4
      comp=Z,172nm,19.0s,baz=69,slow=35
QSPA  South Pole Qui     90.50 180  LR      LR       06 52 02.9
      comp=Z,141nm,18.0s,baz=302,slow=38
G25K  Bearman Lake       90.57  23  P       P        06 08 13.6  0.0
      baz=273
E25K  Arctic Village     90.70  22  P       P        06 08 14.2 -0.1
      baz=273,SNR=21
F25K  Christian Rive     90.71  23  P       P        06 08 14.4 +0.1
      baz=273,SNR=8.9
M24K  Tolsona, Glenn     90.76  28  P       P        06 08 14.6 -0.1
      baz=273,SNR=8.1
AKASG Malin Array Be     90.79 321  P       P        06 08 13.3 -1.6
      comp=Z,7.6nm,1.0s,baz=67,slow=3.8,SNR=32
AKASG                               LR      LR       06 53 49.0
      comp=Z,181nm,20.8s,baz=76,slow=39
      comp=Z,7.6nm,1.0s
AKASG Malin Array Be     90.79 321 i P      P        06 08 13.3 -1.6
AKASG                               pmax    pmax
      comp=Z,9.0nm,1.0s
AKBB  Malin Array Si     90.79 321  IAmb    IAmb     06 08 37.0
      comp=Z,26nm,0.8s
AKBB  Malin Array Si     90.79 321⇓iP       P        06 08 13.1 -1.8
AKBB                                pmax    pmax
      comp=Z,15nm,1.1s
Q23K  Middleton Isla     90.79  31  P       P        06 08 14.1 -0.7
      baz=272
C26K  Camden Bay         90.83  20  P       P        06 08 14.6 -0.1
      baz=274
K24K  Donnelly Dome      90.86  26  P       P        06 08 14.0 -1.1
      baz=273
PRP   Porcupine Dome     90.87  25  P       P        06 08 14.0 -1.2
      baz=273
KLU   Klutina            90.91  29  P       P        06 08 14.4 -1.0
      baz=273
FYU   Fort Yukon         90.93  24  IAmb    IAmb     06 08 17.6
      comp=Z,57nm,1.5s
DIV   Divide             91.00  29  IAmb    IAmb     06 08 16.7
      comp=Z,78nm,1.5s
EYAK  Cordova Ski Ar     91.04  30  P       P        06 08 15.6 -0.3
      baz=273
PAX   Paxson             91.04  27  IAmb    IAmb     06 08 16.8
      comp=Z,69nm,1.6s
PAX   Paxson             91.04  27  P       P        06 08 15.1 -1.0
      baz=273,SNR=12
HARP  HAARP              91.22  28  P       P        06 08 15.5 -1.2
      baz=274
C27K  Jago River         91.27  20  P       P        06 08 17.1 +0.3
      baz=275
F26K  Sheenjek River     91.27  22  P       P        06 08 17.1 +0.2
      baz=275
RIDG  Independent Ri     91.27  26  P       P        06 08 16.1 -0.9
      baz=274,SNR=13
MNK   Minsk              91.44 324 i P      P        06 08 17.7 -0.2
      comp=E,3.0nm,0.8s
MNK                                i P      P        06 08 17.7 -0.2
      comp=N,46nm,0.8s
MNK                                i P      P        06 08 17.7 -0.2
      comp=Z,29nm,1.1s,baz=267
MNK                                i pP     pP       06 08 37.0 -3.6
MNK                                i PP     PP       06 11 55.9 -0.6
MNK                                i PPP    PPP      06 13 54.5
MNK                                i S      SKSac    06 18 43.2 +0.4
MNK                                i sS     ScS      06 19 18.0 +4.9
MNK                                i SS     SS       06 25 34.4  +17
MNK                                i SSS    SSS      06 28 58.0
MNK                                i LQ     LQ       06 43 44.0
MNK                                i LR     LR       06 45 38.7
MNK                                i LRM    MLR      06 50 55.9
      comp=N,592nm,15.3s
MNK                                i LRM    MLR      06 50 59.1
      comp=Z,124nm,11.5s
MNK                                i LRM    MLR      06 51 00.3
      comp=E,222nm,15.3s
MNK   Minsk              91.44 324 i P      P        06 08 17.6 -0.2
MNK                                i *PP    pP       06 08 37.0 -3.6
MNK                                i                 06 11 55.9
MNK                                i PPP    PPP      06 13 54.5
MNK                                i S      SKSac    06 18 43.2 +0.4
MNK                                i *SS    ScS      06 19 18.0 +4.9
MNK                                i SSS    SSS      06 28 57.9
MNK                                 pmax    pmax
      comp=E,3.0nm,0.8s
MNK                                 pmax    pmax
      comp=Z,29nm,1.1s
MNK                                 pmax    pmax
      comp=N,46nm,0.8s
MNK                                 MLR     MLR
      comp=N,592nm,15.0s
MNK                                 MLR     MLR
      comp=Z,124nm,12.0s
MNK                                 MLR     MLR
      comp=E,222nm,15.0s
ARCES ARCESS Array B     91.45 340  P       P        06 08 15.3 -2.3
      comp=E,7.9nm,0.8s,baz=67,slow=3.2,SNR=8.1
      comp=E,7.9nm,0.8s
G26K  Porcupine Rive     91.47  23  P       P        06 08 17.7 -0.1
      baz=275
N25K  Chitina, Valde     91.53  28  IAmb    IAmb     06 08 19.4
      comp=Z,46nm,1.4s
N25K  Chitina, Valde     91.53  28  P       P        06 08 17.9 -0.4
      baz=274,SNR=10
DOT   Dot Lake           91.63  26  IAmb    IAmb     06 08 19.2
      comp=Z,30nm,1.5s
SCRK  Sand Creek         91.64  26  IAmb    IAmb     06 08 19.5
      comp=Z,44nm,1.6s
SCRK  Sand Creek         91.64  26  P       P        06 08 17.8 -1.0
      baz=275,SNR=9.6
J26L  Joseph Creek       91.78  26  IAmb    IAmb     06 08 19.9
      comp=Z,46nm,1.6s
J26L  Joseph Creek       91.78  26  P       P        06 08 18.1 -1.3
      baz=275
VSU   Vasula             91.84 328⇑eP       P        06 08 17.8 -1.8
VSU                                 pmax    pmax
      comp=Z,87nm,1.1s
VSU   Vasula             91.84 328 eP       P        06 08 18.4 -1.2
MENT  Mentasta           91.84  27          pP       06 08 40.3 -2.1
I26K  Coal Creek Min     91.88  25  IAmb    IAmb     06 08 20.3
      comp=Z,42nm,1.2s
I26K  Coal Creek Min     91.88  25  P       P        06 08 19.0 -0.7
      baz=275
GLB   Gilahina Butte     91.92  29  IAmb    IAmb     06 08 21.0
      comp=Z,52nm,1.4s
FINES FINESS Array B     91.94 331  P       P        06 08 18.1 -2.0
      comp=Z,2.7nm,0.7s,baz=129,slow=5.2,SNR=8.9
FINES                               LR      LR       06 53 36.4
      comp=Z,153nm,18.8s,baz=58,slow=38
      comp=Z,2.7nm,0.7s
L26K  Log Cabin Wild     92.00  27  IAmb    IAmb     06 08 21.5
      comp=Z,26nm,1.6s
L26K                                        pP       06 08 42.9 -0.3
L26K  Log Cabin Wild     92.00  27  P       P        06 08 20.0 -0.3
      baz=275,SNR=5.5
NACGM Naroch             92.06 325⇑iP       P        06 08 20.5 -0.3
      comp=Z,40nm,1.1s,baz=86
E27K  Coleen River       92.18  22  P       P        06 08 20.8 -0.3
      baz=277
M26K  Nabesna, AK        92.22  28          pP       06 08 43.8 -0.5
M26K                                IAmb    IAmb     06 09 05.4
      comp=Z,22nm,1.1s
M26K  Nabesna, AK        92.22  28  P       P        06 08 20.7 -0.7
      baz=276
MCARA McCarthy VSAT      92.30  29  IAmb    IAmb     06 09 12.2
      comp=Z,31nm,1.1s
MCARA McCarthy VSAT      92.30  29  P       P        06 08 21.7  0.0
      baz=275,SNR=5.0
G27K  Doyon Strip        92.32  23  P       P        06 08 21.3 -0.5
      baz=277
ISAL  Salakas            92.38 326 eP       P        06 08 23.6 +1.4
H27K  Steamboat Moun     92.44  24  P       P        06 08 22.3 -0.1
      baz=277
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K27K  Chicken           92.47  26  P         P         06 08 23.0 +0.5
      baz=276
I27K  Kandik River      92.48  24  P         P         06 08 22.6  0.0
      baz=277
L27K  Beaver Creek,     92.69  27  IAmb      IAmb      06 08 25.1
      comp=Z,48nm,1.4s
L27K  Beaver Creek,     92.69  27  P         P         06 08 23.6 +0.1
      baz=277
M27K  Edge Creek, AK    92.74  28  P         P         06 08 23.9 -0.1
      baz=276
EGAK  Eagle             92.78  25  IAmb      IAmb      06 08 24.6
      comp=Z,41nm,1.6s
EGAK  Eagle             92.78  25  P         P         06 08 23.1 -0.7
      baz=277,SNR=9.3
KARP  Karpathos         92.92 305  pP        pP        06 08 49.1 +0.9
LSZ   Lusaka            93.01 255  LR        LR        06 46 32.5
      comp=Z,208nm,20.3s,baz=138,slow=33
LSZ   Lusaka            93.01 255            pP        06 08 47.4 -1.4
CTG   Chitna Glacier    93.16  29  P         P         06 08 26.0 +0.1
      baz=277,SNR=13
BVCY  Beaver Creek      93.21  27  P         P         06 08 25.9 -0.1
      baz=277,SNR=14
MLR   Muntele Rosu      93.25 315  P         P         06 08 24.4 -2.3
      comp=Z,2.8nm,0.9s,baz=28,slow=10.0,SNR=4.0
MLR                                LR        LR        07 00 03.2
      comp=Z,115nm,18.2s,baz=85,slow=42
      comp=Z,2.8nm,0.9s
LOGN  Logan Glacier     93.34  29  IAmb      IAmb      06 09 00.6
      comp=Z,21nm,0.9s
YUK3  Moose Creek       93.48  28  P         P         06 08 27.3 -0.2
      baz=278,SNR=5.8
BURAR Bucovina Array    93.59 318  IAmb      IAmb      06 08 51.7
      comp=Z,15nm,0.8s
BUR08 Bucovina Ar. S    93.60 318  IAmb      IAmb      06 08 51.5
      comp=Z,14nm,0.9s
PABE  Paberze           93.61 326  P         P         06 08 26.9 -0.9
PABE                                         pP        06 08 49.1 -1.6
PABE  Paberze           93.61 326  eP        P         06 08 27.3 -0.5
DAWY  Dawson            93.63  26  IAmb      IAmb      06 08 28.9
      comp=Z,35nm,1.4s
DAWY  Dawson            93.63  26  P         P         06 08 27.6 -0.3
      baz=279,SNR=14
O28M  Mount Upton       93.74  29  P         P         06 08 28.9 +0.1
      baz=278
PINM  Pinnacle          93.81  30  P         P         06 08 28.9 +0.1
      baz=278
YUK8  Steele Glacier    93.88  29  P         P         06 08 29.4 +0.1
      baz=278,SNR=6.7
I29M  Ogilvie Camp,     93.88  24  IAmb      IAmb      06 08 29.8
      comp=Z,38nm,1.2s
I29M  Ogilvie Camp,     93.88  24  P         P         06 08 28.1 -0.9
      baz=280,SNR=11
RAF   Rauma             94.06 331  eP        P         06 08 30.6 +0.8
J29M  Klondike Camp     94.08  25  P         P         06 08 30.2 +0.2
      baz=280,SNR=5.3
PNL   Peninsula         94.29  30  P         P         06 08 30.9 -0.1
      baz=278
M29M  Somme Creek       94.31  27  P         P         06 08 31.0 -0.1
      baz=280
EPYK  Eagle Plains      94.34  23  IAmb      IAmb      06 08 31.5
      comp=Z,24nm,1.1s
EPYK  Eagle Plains      94.34  23  P         P         06 08 30.2 -0.8
      baz=281,SNR=11
L29M  L29M              94.35  27  P         P         06 08 31.5 +0.3
      baz=280,SNR=25
YUK4  Talbot Arm        94.40  28  P         P         06 08 32.0 +0.3
      baz=279,SNR=6.5
G30M  tAoh Zraii Nji    94.41  23  P         P         06 08 30.0 -1.4
      baz=282
K29M  Barlow Dome       94.49  26  P         P         06 08 31.6 -0.3
      baz=280
YUK6  Outpost Mounta    94.60  29  P         P         06 08 32.7 +0.1
      baz=280
O29M  Mount Kennedy     94.60  29  P         P         06 08 32.6 +0.1
      baz=279
IDI   Anoyia            94.79 305  LR        LR        07 01 51.8
      comp=Z,60nm,18.5s,baz=74,slow=42
HYT   Haines Junctio    95.04  29  IAmb      IAmb      06 09 00.3
      comp=Z,20nm,0.7s
HYT   Haines Junctio    95.04  29  P         P         06 08 34.5 -0.1
      baz=280,SNR=11
M30M  Minto, Yukon      95.05  27  P         P         06 08 34.4  0.0
      baz=281,SNR=13
INK   Inuvik            95.11  21  LR        LR        06 53 56.2
      comp=Z,48nm,20.5s,baz=298,slow=37
INK   Inuvik            95.11  21  IAmb      IAmb      06 08 34.8
      comp=Z,29nm,1.4s
INK   Inuvik            95.11  21  P         P         06 08 33.4 -1.1
      baz=284,SNR=17
N30M  Aishikik Lake     95.12  28  P         P         06 08 34.9 +0.1
      baz=281
MAYO  Mayo, Yukon       95.25  26  P         P         06 08 35.0 -0.2
      baz=282,SNR=7.0
F31M  Tsiigehtchic      95.25  22  P         P         06 08 33.7 -1.4
      baz=284,SNR=15
LBTB  Lobatse           95.28 245  LR        LR        06 47 42.9
      comp=Z,198nm,18.7s,baz=94,slow=33
P30M  Million Dollar    95.43  29  P         P         06 08 36.0 -0.2
      baz=281
BOSA  Boshof            95.45 241  LR        LR        06 51 08.4
      comp=Z,87nm,18.3s,baz=100,slow=35
NOR   Nord              95.69 354  i P       P         06 08 35.1 -1.9
NOR                                IAmb      IAmb      06 08 36.3
      comp=Z,6.3nm,0.9s
O30N  Mendenhall        95.73  29  P         P         06 08 37.8 +0.2
      baz=282,SNR=6.3
N31M  Braeburn, Yuko    95.73  28  P         P         06 08 37.8 +0.3
      baz=282,SNR=9.6
PLBC  Pleasant Camp     95.85  30  P         P         06 08 37.5 -0.6
      baz=281
STHS  Stebnicka Huta    96.02 320  e         pP        06 09 00.4 -1.4
S31K  Pelican           96.20  32  P         P         06 08 39.4 -0.3
      baz=281
M31M  Drury Creek, Y    96.22  27  IAmb      IAmb      06 08 40.7
      comp=Z,40nm,1.6s
M31M  Drury Creek, Y    96.22  27  P         P         06 08 38.9 -0.9
      baz=283,SNR=7.2
SKAG  Skagway           96.37  30  P         P         06 08 40.1 -0.3
      baz=282,SNR=7.6
R31K  City Hall, Gus    96.37  31  P         P         06 08 39.9 -0.5
      baz=282
A36M  Sachs Harbour     96.61  17  P         P         06 08 41.1 -0.1
      baz=293,SNR=9.0
FARO  Faro, Yukon       96.69  27  P         P         06 08 41.6 -0.2
      baz=284,SNR=26
SIT   Sitka             96.86  32  P         P         06 08 42.5 -0.2
      baz=282
R32K  Eaglecrest        97.03  31  P         P         06 08 43.0 -0.5
      baz=283
N32M  Quiet Lake        97.07  28  P         P         06 08 43.5 -0.2
      baz=284
JIS   Juneau Island     97.10  31  IAmb      IAmb      06 09 17.8
      comp=Z,30nm,1.1s
P32M  Atlin             97.14  30  P         Pdif      06 08 44.1 +0.1
      baz=284
S32K  Killisnoo         97.17  32  P         Pdif      06 08 44.2 +0.1
      baz=282
P33M  Teslin, Yukon     97.43  29  IAmb      IAmb      06 08 46.5
      comp=Z,18nm,1.1s
P33M  Teslin, Yukon     97.43  29  P         P         06 08 45.3  0.0
      baz=284,SNR=6.1
MMPY  Sheldon Lake,     97.52  26  P         Pdif      06 08 45.7  0.0
      baz=286,SNR=9.2
Q32M  Nakina River      98.01  30  P         P         06 08 47.3 -0.8
      baz=285
C36M  Paulatuk          98.02  19  IAmb      IAmb      06 09 20.6
      comp=Z,13nm,0.8s
C36M  Paulatuk          98.02  19  P         P         06 08 46.8 -0.9
      baz=294,SNR=12
HFS   Hagfors           98.14 331  LR        LR        06 56 52.9
      comp=Z,164nm,18.7s,baz=74,slow=38
T33K  Petersburg        98.19  32  P         P         06 08 47.9 -0.7
      baz=284
U33K  Whale Pass        98.26  33  P         P         06 08 48.8 -0.2
      baz=284
MORC  Moravsky Berou    98.34 320  P         P         06 08 49.1 -0.5
MORC                               pP        pP        06 09 11.2 -1.1
MORC  Moravsky Berou    98.34 320  P         P         06 08 49.1 -0.5
MORC                               *PP       pP        06 09 11.2 -1.1
MORC                               pmax      pmax
      comp=Z,8.0nm,0.9s
CRAG  Craig             98.41  34  P         Pdif      06 08 50.0 +0.3
      baz=283
JAVC  Velka Javorina    98.42 320  ePDIFF    Pdif      06 08 50.3 +0.3
JAVC                               epPDIFF             06 09 12.8
TAOE  Nuku Hiva Isla    98.69  99  eLR       LR        06 41 04.3
      comp=Z,114nm,24.8s
KRLC  Kraliky           98.76 321  ePDIFF    P         06 08 50.6 -0.9
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KRLC                               epP       pP        06 09 11.6 -2.7
KRLC  Kraliky           98.76 321  eP        P         06 08 50.6 -0.9
KRLC                               e                   06 09 11.6
S34M  Telegraph Cree    98.86  31  P         Pdif      06 08 52.1 +0.4
      baz=286
DPC   Dobruska-Polom    98.99 321  ePDIFF    P         06 08 52.4 -0.1
DPC                                epP       pP        06 09 14.9 -0.4
DPC   Dobruska-Polom    98.99 321  eP        P         06 08 52.4 -0.1
DPC                                e                   06 09 14.9
OSTC  Ostas             99.02 321  ePDIFF    Pdif      06 08 53.0 +0.4
OSTC                               epP       pP        06 09 15.0 -0.4
OSTC  Ostas             99.02 321  eP        Pdif      06 08 53.0 +0.4
OSTC                               e                   06 09 15.0
VRAC  Vranov            99.03 320  LR        LR        06 58 02.1
      comp=Z,126nm,19.1s,baz=54,slow=38
VRAC  Vranov            99.03 320  ePDIFF    Pdif      06 08 52.2 -0.5
VRAC                               epPDIFF             06 09 14.7
SUR   Sutherland        99.04 237  LR        LR        06 46 28.2
      comp=Z,74nm,20.3s,baz=111,slow=31
NB2   NORSAR Subarra    99.05 332  P         Pdif      06 08 50.4 -2.1
      comp=Z,18nm,1.2s,baz=73,slow=4.6
NB2   NORSAR Subarra    99.05 332  P         Pdif      06 08 50.4 -2.1
      baz=73,slow=4.6
NOA   NORSAR Array B    99.05 332  P         Pdif      06 08 50.5 -2.1
      comp=Z,4.2nm,1.0s,baz=73,slow=4.6,SNR=6.5
NOA                                PP        PP        06 12 55.5 +0.2
      comp=Z,3.4nm,1.0s,baz=74,slow=7.7,SNR=3.5
NOA                                LR        LR        06 56 56.7
      comp=Z,103nm,19.0s,baz=255,slow=37
      comp=Z,4.2nm,1.0s
KRUC  Moravsky          99.21 320  ePDIFF    Pdif      06 08 53.1 -0.3
KRUC                               epPDIFF             06 09 15.9
DLBC  Dease Lake        99.28  30  LR        LR        06 47 29.9
      comp=Z,70nm,21.6s,baz=290,slow=32
DLBC  Dease Lake        99.28  30  P         Pdif      06 08 54.1 +0.4
      baz=286
WTLY  Watson Lake, Y    99.39  28  IAmb      IAmb      06 09 28.3
      comp=Z,27nm,1.2s
WTLY  Watson Lake, Y    99.39  28  P         Pdif      06 08 54.3 +0.3
      baz=288
DAG   Danmarks Havn     99.57 351  i P       Pdif      06 08 52.0 -2.5
DAG                                IAmb      IAmb      06 08 53.5
      comp=Z,38nm,1.6s
BRG   Berggiesshubel   100.36 322  eP        Pdif      06 08 58.4 -0.1
BRG                                Amp                 06 08 59.3
      comp=Z,8.4nm,1.1s
BRG                                pP        pPdif     06 09 21.0 -0.3
BRG                                Amp                 06 09 21.9
      comp=Z,12nm,1.1s
BRG                                PP        PP        06 13 09.0 +3.5
BRG                                Amp                 06 13 10.3
      comp=Z,14nm,1.3s
BRG   Berggiesshubel   100.36 322  eP        Pdif      06 08 58.4 -0.1
BRG                                                    06 13 09.0
BRG                                pmax      pmax
      comp=Z,8.0nm,1.1s
BRG                                pmax      pmax
      comp=Z,12nm,1.1s
BRG                                pmax      pmax
      comp=Z,14nm,1.3s
WRGLY Wrigley          100.68  25  P         Pdif      06 08 59.4 -0.2
      baz=293
CLL   Collm            100.82 323  ePdif     Pdif      06 09 00.0 -0.6
CLL                                epPdif    pPdif     06 09 22.0 -1.3
CLL                                esPdif    sPdif     06 09 28.0 -4.3
CLL                                ex        x         06 13 06.0
CLL                                ePP       PP        06 13 09.0  0.0
CLL                                i x       x         06 13 12.2
      comp=Z,13nm,1.3s
CLL                                e(pPP)              06 13 31.0
CLL                                ePPP      PPP       06 15 17.0
CLL                                epPPS               06 23 12.0
CLL                                eSS       SS        06 27 24.0 -6.4
CLL                                eSSS      SSS       06 31 18.0
CLL                                eSSSS               06 35 06.0
CLL   Collm            100.82 323  eP        Pdif      06 09 00.0 -0.6
LIRD  Liard River Hi   100.91  29  P         Pdif      06 09 00.6 -0.2
      baz=290
GERES GERESS Array B   100.99 320  P         Pdif      06 09 00.8 -0.8
      comp=Z,0.2nm,0.3s,baz=34,slow=2.5,SNR=4.7
GERES                              PP        PP        06 13 10.0 -0.5
      comp=Z,0.3nm,0.3s,baz=99,slow=6.9,SNR=3.5
KHC   Kasperske Hory   101.00 320  ePDIFF    Pdif      06 09 00.6 -0.9
KHC   Kasperske Hory   101.00 320  eP        Pdif      06 09 00.6 -0.9
KOTAN Kotaneelee Air   101.62  28  P         Pdif      06 09 03.2 -0.7
      baz=292
DBG   Daneborg         101.72 350  i P       Pdif      06 09 02.1 -2.0
DBG                                IAmb      IAmb      06 09 03.8
      comp=Z,8.0nm,1.2s
NEEM  North Greenlan   101.95 358  i P       Pdif      06 09 05.5 +0.1
GRF   Grafenberg Arr   102.35 321  ePdiff    Pdif      06 09 07.0 -0.5
      baz=74,slow=3.6
GRF                                epPdiff   pPdif     06 09 29.1 -1.1
      baz=74,slow=3.6
GRF                                ePP       PP        06 13 23.8 +3.2
      baz=77,slow=6.4
YKA   Yellowknife Ar   104.63  23  Pdiff     Pdif      06 09 16.3 -0.9
      comp=Z,0.7nm,0.8s,baz=301,slow=4.6,SNR=13
YKA                                PKiKP     PKiKP     06 13 31.9 -0.6
      comp=Z,0.3nm,0.5s,baz=314,slow=1.6,SNR=4.1
YKA                                PKKP      PKKPdf    06 25 15.5 +2.1
      comp=Z,0.4nm,1.0s,baz=120,slow=2.6,SNR=3.0
NEW   Newport          110.12  37  P         PKiKP     06 13 43.8 +0.5
      baz=295
NVAR  Mina Array Bea   113.14  47  PKiKP     PKiKP     06 13 49.4 -0.1
      comp=Z,0.5nm,0.7s,baz=290,slow=2.7,SNR=5.7
NVAR                               PP        PP        06 14 37.8 -2.2
      comp=Z,0.8nm,0.7s,baz=229,slow=1.7,SNR=3.5
NVAR                               PKKP      PKKPdf    06 24 57.6 +0.2
      comp=Z,0.7nm,0.8s,baz=125,slow=4.4,SNR=4.2
PKM   Mcpherson Peak   113.16  51  P         PKiKP     06 13 49.1 -0.6
      baz=288
HLID  Hailey           113.85  41  P         PKiKP     06 13 51.2 +0.5
      baz=296
ARVC  Arvin            113.86  51  P         PKiKP     06 13 50.4 -0.3
      baz=289
SNCC  San Nicolas Is   113.89  53  P         PKiKP     06 13 51.6 +0.8
      baz=288
CWC   Cottonwood Cre   114.00  49  P         PKiKP     06 13 51.2  0.0
      baz=290
GRAC  Grapevine Rang   114.34  49  P         PKPdf     06 13 51.4 -0.2
      baz=291
MPMC  Manual Prospec   114.58  50  P         PKPdf     06 13 52.2 -0.1
      baz=290
EGMT  Eagleton         114.58  35  P         PKiKP     06 13 51.1 -0.7
      baz=302
EDW2  Edwards Air Fo   114.58  51  P         PKiKP     06 13 52.2  0.0
      baz=289
BOZ   Bozeman (W)      114.69  38  P         PKPdf     06 13 52.8 +0.6
      baz=299
FURC  Furnace Creek,   114.91  49  P         PKPdf     06 13 52.7 +0.1
      baz=291
R11A  Troy Canyon, C   115.16  47  P         PKiKP     06 13 52.6 -0.8
      baz=293,SNR=7.6
TPNV  Topopah Spring   115.19  48  P         PKPdf     06 13 53.8 +0.4
      baz=292
GSC   Goldstone, Bar   115.36  50  P         PKiKP     06 13 53.3 -0.5
      baz=290
SHOC  Shoshone, Teco   115.55  49  P         PKPdf     06 13 54.2 +0.2
      baz=291
BBRC  Big Bear Solar   115.62  51  P         PKiKP     06 13 53.7 -0.8
      baz=290
MURC  Murrieta         115.63  52  P         PKiKP     06 13 53.9 -0.3
      baz=289
HEC   Hector,Ludlow    115.89  50  P         PKPdf     06 13 54.5 -0.2
      baz=291
H17A  Grant Village    115.92  39  P         PKPdf     06 13 55.4 +0.6
      baz=299
ESDC  Sonseca Array    115.95 315  PKP       PKPdf     06 13 53.3 -1.4
      comp=Z,0.3nm,0.6s,baz=48,slow=1.9,SNR=1.5
ESDC                               PP        PP        06 14 59.4 -0.1
      comp=Z,0.9nm,0.8s,baz=60,slow=7.6,SNR=2.9
ESDC                               PKKP      PKKPdf    06 24 51.6 -0.4
      comp=Z,1.7nm,1.0s,baz=234,slow=7.5,SNR=4.0
TUQ   Turquoise Moun   115.99  50  P         PKiKP     06 13 55.1 +0.1
      baz=291
PFO   Pinyon Flats O   116.20  52  P         PKiKP     06 13 55.5  0.0
      baz=290
TPFO  Pinon Flats      116.21  52  P         PKiKP     06 13 55.8 +0.3
      baz=290
RLMT  Red Lodge        116.37  38  P         PKiKP     06 13 56.1 +0.6
      baz=301
DUG   Dugway, Tooele   116.38  44  P         PKiKP     06 13 55.7 +0.1
      baz=296,SNR=6.2
GMRC  Granite Mounta   116.42  50  P         PKiKP     06 13 56.2 +0.4
      baz=291,SNR=5.8
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BELC  Belle Mtn. Jos   116.43  51  P         PKiKP     06 13 56.4 +0.4
      baz=290
MONP2 Monument Peak    116.47  52  P         PKiKP     06 13 56.3 +0.2
      baz=290
IKP   In-Ko-Pah, Jac   116.80  53  P         PKiKP     06 13 56.7 +0.1
      baz=290
SWSC  Sam W. Stewart   116.95  52  P         PKiKP     06 13 56.8 +0.1
      baz=290
BC3   Big Chuckawall   116.98  51  P         PKiKP     06 13 56.9  0.0
      baz=291
IRM   Iron Mountain    117.04  51  P         PKiKP     06 13 57.4 +0.5
      baz=291
LAO   LASA Array       117.32  35  P         PKPdf     06 13 56.7 -0.5
      baz=304
LAO   LASA Array       117.32  35  P         PKiKP     06 13 58.0 +0.8
      baz=304,SNR=12
BW06  Boulder Array    117.36  40  P         PKiKP     06 13 58.0 +0.5
      baz=300
PDAR  Pinedale Array   117.36  40  PKP       PKPdf     06 13 55.6 -1.9
      comp=Z,2.9nm,1.1s,baz=301,slow=0.9,SNR=11
PDAR                               PKKP      PKKPdf    06 24 49.1 -0.4
      comp=Z,1.1nm,0.8s,baz=120,slow=5.8,SNR=5.7
DGMT  Dagmar           117.41  32  P         PKiKP     06 13 57.7 +0.5
      baz=307
GLA   Glamis           117.68  52  P         PKiKP     06 13 58.6 +0.4
      baz=291
PDMCI Parker Dam,Lak   117.76  50  P         PKiKP     06 13 58.3 +0.1
      baz=292
TORD  Torodi Ar. Bea   118.47 285  PKP       PKPdf     06 13 58.8 -1.3
      comp=Z,2.6nm,0.7s,baz=68,slow=1.7,SNR=16
TORD                               PKKP      PKKPdf    06 24 47.8 +1.0
      comp=Z,2.5nm,0.8s,baz=274,slow=3.5,SNR=8.0
TORD  Torodi Ar. Bea   118.47 285            PKPdf     06 13 58.1 -2.0
K22A  Casper           119.35  39  P         PKiKP     06 14 01.4  0.0
      baz=302
K22A  Casper           119.35  39  P         PKPdf     06 14 00.7 -0.6
      baz=302
WUAZ  Wupatki          119.38  48  P         PKPdf     06 14 00.9 -0.6
      baz=295,SNR=5.1
O20A  White River Ci   119.52  42  P         PKPdf     06 14 01.0 -0.7
      baz=299,SNR=10.0
214A  Organ Pipe Nat   119.66  52  P         PKiKP     06 14 02.2 +0.1
      baz=292
RSSD  Black Hills      120.05  36  PKPdf     PKPdf     06 14 00.8 -1.9
RSSD  Black Hills      120.05  36  PKIKP     PKPdf     06 14 00.8 -1.9
RSSD  Black Hills      120.05  36  P         PKPdf     06 14 01.7 -1.0
      baz=305
MDND  Maddock          120.19  31  P         PKPdf     06 14 01.6 -1.0
      baz=311
ULM   Lac du Bonnet    120.33  27  PKP       PKPdf     06 14 01.5 -1.2
      comp=Z,1.4nm,0.3s,baz=283,slow=4.1,SNR=5.9
N23A  Red Feather La   120.64  40  P         PKPdf     06 14 03.0 -0.9
      baz=302
MVCO  Mesa Verde       120.73  45  P         PKiKP     06 14 04.3  0.0
      baz=298,SNR=8.6
W18A  Petrified Fore   120.76  48  P         PKPdf     06 14 04.3  0.0
      baz=296
TUC   Tucson           121.12  51  PKPdf     PKiKP     06 14 05.0  0.0
TUC   Tucson           121.12  51  PKIKP     PKiKP     06 14 05.0  0.0
TUC   Tucson           121.12  51  P         PKiKP     06 14 05.2 +0.2
      baz=293
ISCO  Idaho Springs    121.43  41  P         PKPdf     06 14 04.9 -0.7
      baz=302
S22A  4UR Ranch, Cre   121.64  44  P         PKPdf     06 14 05.7 -0.4
      baz=299
Q24A  Divide           122.17  42  P         PKPdf     06 14 06.1 -0.9
      baz=302
SDCO  Great Sand Dun   122.56  43  P         PKiKP     06 14 08.0  0.0
      baz=301
SUSD  Miller           122.75  33  P         PKPdf     06 14 07.5 -0.1
      baz=310
OGNE  Ogallala         123.08  38  P         PKPdf     06 14 08.0 -0.4
      baz=305
F33A  5 Mile Ranch,    123.23  31  P         PKPdf     06 14 07.7 -0.7
      baz=314,SNR=5.9
ANMO  Albuquerque      123.24  47  PKPdf     PKPdf     06 14 08.8 -0.2
ANMO  Albuquerque      123.24  47  PKIKP     PKPdf     06 14 08.9 -0.2
ANMO  Albuquerque      123.24  47  P         PKiKP     06 14 09.5 +0.3
      baz=298
Y22D  IRIS PASSCAL I   123.31  48  P         PKPdf     06 14 09.0 -0.1
      baz=297
Y22F  Passcal Instru   123.31  48  P         PKiKP     06 14 09.6 +0.2
      baz=297
Y22A  Socorro          123.34  48  P         PKiKP     06 14 10.1 +0.6
      baz=297
121A  Cookes Peak, D   123.34  50  P         PKPdf     06 14 09.0 -0.3
      baz=296
T25A  Trinidad         123.61  43  P         PKPdf     06 14 08.8 -0.9
      baz=301
KSCO  Kaye Shedlock’   123.80  40  P         PKPdf     06 14 10.0 +0.1
      baz=304
EYMN  Ely              123.97  26  P         PKPdf     06 14 09.4 -0.4
      baz=320,SNR=6.6
K31A  O'Neill          124.02  35  P         PKPdf     06 14 09.9 -0.2
      baz=310
SCHQ  Schefferville    124.39   6  PKP       PKPdf     06 14 10.1 -0.3
      comp=Z,6.0nm,1.0s,baz=62,slow=5.4,SNR=5.2
ECSD  EROS Data Cent   124.49  33  P         PKPdf     06 14 10.5 -0.4
      baz=312,SNR=9.0
F36A  Milaca           124.58  29  P         PKPdf     06 14 10.3 -0.8
      baz=316
E38A  The Farm, Brul   124.96  27  P         PKPdf     06 14 11.0 -0.8
      baz=319
BGNE  Belgrade         125.14  36  P         PKPdf     06 14 11.0 -1.3
      baz=309
BGNE  Belgrade         125.14  36  P         PKPdf     06 14 11.8 -0.5
      baz=309
SPMN  Marine on St.    125.39  29  P         PKPdf     06 14 12.4 -0.2
      baz=317
SPMN  Marine on St.    125.39  29  P         PKPdf     06 14 12.5 -0.1
      baz=317
MNTX  Cornudas Mount   125.54  49  P         PKPdf     06 14 13.1 -0.2
      baz=297
MNTX  Cornudas Mount   125.54  49  P         PKiKP     06 14 13.7  0.0
      baz=297,SNR=12
DBIC  Dimbokro         125.64 279  PKP       PKPdf     06 14 13.0 -0.9
      comp=Z,12nm,1.2s,baz=355,slow=2.9,SNR=6.2
DBIC  Dimbokro         125.64 279  PKIKP     PKPdf     06 14 13.0 -0.9
CBKS  Cedar Bluff      125.76  39  P         PKPdf     06 14 12.9 -0.7
      baz=306
D41A  Chassel          125.91  25  P         PKPdf     06 14 13.6 +0.1
      baz=322
I37B  Waseca           125.97  30  P         PKPdf     06 14 13.7 -0.1
      baz=316
MSTX  Muleshoe         126.38  46  P         PKPdf     06 14 14.0 -1.0
      baz=301
R32A  Long Quarter,    126.64  39  P         PKPdf     06 14 15.4 +0.1
      baz=307
AMTX  Amarillo         126.67  44  P         PKPdf     06 14 15.0 -0.5
      baz=302
K38A  Parkersburg      127.27  31  P         PKPdf     06 14 16.3  0.0
      baz=316
KSU1  Kansas State U   127.51  37  P         PKPdf     06 14 15.9 -1.0
      baz=310,SNR=5.7
SCIA  State Center     127.56  32  P         PKPdf     06 14 15.6 -1.3
      baz=315
TX31  Lajitas Ar. Si   127.92  51  P         PKPdf     06 14 17.9 -0.2
      baz=297
TXAR  Lajitas Array    127.92  51  PKP       PKPdf     06 14 17.9 -0.1
      comp=Z,1.3nm,0.8s,baz=282,slow=2.3,SNR=14
E46A  Sault Ste Mari   128.18  22  P         PKPdf     06 14 17.9 +0.1
      baz=327
JFWS  Jewell Farm      128.34  29  P         PKPdf     06 14 18.2 -0.1
      baz=318
L40A  Anamosa          128.48  31  P         PKPdf     06 14 18.0 -0.6
      baz=317
WMOK  Wichita Mounta   128.75  43  P         PKPdf     06 14 19.2 -0.2
      baz=305
P38A  Dawn             128.96  34  P         PKPdf     06 14 19.5  0.0
      baz=313
ABTX  Abilene, Hawle   129.31  45  P         PKPdf     06 14 20.1 -0.4
      baz=303
GLMI  Grayling         129.34  24  P         PKPdf     06 14 19.4 -0.7
      baz=326
P40A  Paris            129.86  33  P         PKPdf     06 14 21.3  0.0
      baz=315
TUL1  Leonard          130.02  40  P         PKPdf     06 14 21.6 -0.1
      baz=308
TUL1  Leonard          130.02  40  P         PKiKP     06 14 22.7 +0.2
      baz=308
JCT   Junction City    130.32  48  P         PKPdf     06 14 22.4 -0.1
      baz=301
JCT   Junction City    130.32  48  P         PKPdf     06 14 22.5  0.0
      baz=301,SNR=5.6
S39A  Bolivar          130.39  36  P         PKPdf     06 14 21.9 -0.4
      baz=312,SNR=6.1
U38A  Gravette         130.57  38  P         PKPdf     06 14 22.4 -0.4
      baz=310
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HDIL  Hopedale          130.57  31  P        PKPdf    06 14 22.8 +0.2
      baz=318
R40A  Maddies Statio    130.59  35  P        PKPdf    06 14 22.2  -0.5
      baz=314,SNR=5.8
WHTX  Lake Whitney,     131.21  45  P        PKPdf    06 14 23.6  -0.5
      baz=304
CCM   Cathedral Cave    131.34  34           PKPdf    06 14 22.6  -1.5
CCM   Cathedral Cave    131.34  34  PKIKP    PKPdf    06 14 22.7  -1.5
CCM   Cathedral Cave    131.34  34  P        PKiKP    06 14 24.6  -0.4
      baz=315
833A  Chaparral WMA,    131.70  50  P        PKPdf    06 14 25.4 +0.3
      baz=300
435B  Jarrell           131.78  46  P        PKPdf    06 14 24.7  -0.5
      baz=303
SFIN  Lafayette         131.80  29  P        PKPdf    06 14 25.1 +0.2
      baz=321
AAM   Ann Arbor         131.82  25  P        PKPdf    06 14 25.4 +0.5
      baz=326
T42A  Van Buren         132.14  35  P        PKPdf    06 14 24.8  -0.8
      baz=314
MIAR  Mount Ida         132.28  39  P        PKPdf    06 14 26.5 +0.4
      baz=310
MIAR  Mount Ida         132.28  39  P        PKPdf    06 14 26.4 +0.4
      baz=310,SNR=6.3
LONY  Lake Ozonia       132.88  15  P        PKPdf    06 14 25.8  -1.0
      baz=338
NATX  Nacogdoches       133.28  43  P        PKPdf    06 14 28.1 +0.1
      baz=307
PKME  Peaks-Kenny Pk    133.43  10  P        PKPdf    06 14 28.1 +0.3
      baz=346
ACSO  Alum Creek Sta    133.81  26  P        PKPdf    06 14 28.6  -0.1
      baz=326
WCI   Wyandotte Cave    133.85  30  P        PKPdf    06 14 28.6  -0.2
      baz=320
O53A  New Philadelph    134.54  24  P        PKPdf    06 14 30.3 +0.2
      baz=328
WVT   Waverly           134.62  33  PKPdf    PKPdf    06 14 29.8  -0.6
WVT   Waverly           134.62  33  PKIKP    PKPdf    06 14 29.8  -0.6
WVT   Waverly           134.62  33  P        PKPdf    06 14 30.5 +0.2
      baz=317
P52A  Corning           134.67  25  P        PKPdf    06 14 29.9  -0.5
      baz=326
BINY  Binghamton        134.70  18  P        PKPdf    06 14 30.5 +0.1
      baz=336
OXF   Oxford            134.87  36  P        PKPdf    06 14 30.2  -0.6
      baz=314
L61B  Northampton       135.40  15  P        PKPdf    06 14 32.0 +0.3
      baz=340
V48A  Smith Brothers    135.46  33  P        PKPdf    06 14 32.1 +0.2
      baz=318
SSPA  Standing Stone    135.48  21  P        PKPdf    06 14 32.5 +0.7
      baz=332
HRV   Adam Dziewonsk    135.62  13  P        PKPdf    06 14 32.0   0.0
      baz=342
TZTN  Tazewell          136.53  29  P        PKPdf    06 14 34.2 +0.2
      baz=323
LRAL  Lakeview Retre    137.33  36  P        PKPdf    06 14 35.7 +0.2
      baz=316
BRAL  Brewton           138.62  38  P        PKPdf    06 14 38.0 +0.1
      baz=315
PLCA  Paso Flores       138.64 167  PKP      PKPdf    06 14 38.5 +0.7
      comp=Z,5.0nm,1.1s,baz=209,slow=8.1,SNR=4.7
PLCA  Paso Flores       138.64 167  eP       PKPdf    06 14 38.3 +0.5
TEIG  Tepich            144.54  53  PKPdf    PKPbc    06 14 47.6   0.0
MT13  San Alfonso       145.30 163           PKPbc    06 14 49.7  -0.1
CFA   Coronel Fontan    147.88 165  PKPbc    PKPbc    06 14 56.9  -0.4
      comp=Z,9.4nm,0.4s,baz=196,slow=1.6,SNR=16
PLTB  Pedras Altas      148.58 189  eP       PKPdf    06 14 55.4   0.0
CRIN  San Cristobal     149.07  64  eP       PKPab    06 15 06.1 +0.9
LCO   Las Campanas      149.54 159           PKPbc    06 15 01.2  -0.7
LCO   Las Campanas      149.54 159  PKP2     PKPbc    06 15 01.2  -0.7
CPSB  Cacapava Do Su    149.89 189  eP       PKPdf    06 14 57.1  -0.3
RODS  Rosario do Sul    150.18 186  eP       PKPdf    06 14 57.5  -0.4
CNLB  Canela            150.41 194  eP       PKPdf    06 14 58.8 +0.4
ITQB  Itaqui            150.98 184  eP       PKPdf    06 14 59.2   0.0
ACON  Acoyapa           151.04  64  eP       PKiKP    06 15 06.1 +0.1
ALGR  Alto Alegre (B    151.38 191  eP       PKPdf    06 14 60.0 +0.1
MECA  Mercedes          151.43 181  eP       PKPdf    06 14 59.6  -0.3
JTS   Las Juntas de     151.88  67  PKP      PKPdf    06 14 59.7  -1.3
      comp=Z,3.1nm,0.7s,baz=320,slow=23,SNR=2.3
JTS                                 PKPbc    PKPbc    06 15 06.7  -0.8
      comp=Z,2.4nm,0.5s,baz=151,slow=3.0,SNR=4.7
JTS   Las Juntas de     151.88  67  PKPdf    PKPdf    06 15 01.1 +0.2
JTS                                          PKPbc    06 15 07.3  -0.1
JTS   Las Juntas de     151.88  67  PKIKP    PKPdf    06 15 01.1 +0.2
AZCA  Azaras, Argent    152.51 185  eP       PKPdf    06 15 02.0 +0.5
ITAB  Concordia         152.71 193  eP       PKPdf    06 15 01.2  -0.6
HDC   Heredia           152.75  67  eP       PKPdf    06 15 02.0  -0.3
DUB01 Friburgo-RJ       153.26 216  eP       PKPdf    06 15 03.3 +0.4
GO02  Mina Guanaco      153.44 158  PKPdf    PKPdf    06 15 05.9 +2.6
TIJ01 Guaruva-PR        153.62 200  eP       PKPdf    06 15 03.3  -0.1
VAS01 Vassouras-RJ      153.72 214  eP       PKPdf    06 15 03.7 +0.2
PET01 Itanhaem-SP       153.89 205  eP       PKPdf    06 15 02.9  -0.7
FRBT  Francisco Belt    154.13 192  eP       PKPdf    06 15 03.7  -0.3
CPUP  Villa Florida     154.35 183  PKP      PKPdf    06 15 03.1  -1.1
      comp=Z,2.0nm,1.0s,baz=89,slow=3.4,SNR=3.7
CPUP                                PKPbc    PKiKP    06 15 12.6   0.0
      comp=Z,4.4nm,1.1s,baz=359,slow=4.0,SNR=3.0
CPUP                                PKPab    PKPab    06 15 25.7  -0.9
      comp=Z,3.2nm,0.9s,baz=173,slow=3.3,SNR=4.3
CPUP  Villa Florida     154.35 183  eP       PKPdf    06 15 04.9 +0.7
SPB   Sao Paulo         154.57 205  eP       PKPdf    06 15 04.5  -0.1
VAO   Valinhos          154.89 207  eP       PKPdf    06 15 04.9  -0.2
SJMB  Sao Joao De Ma    154.99 223  eP       PKPdf    06 15 05.3 +0.1
PTGB  Pitanga           155.11 195  eP       PKPdf    06 15 04.9  -0.5
GUA01 Guaratinga, BA    155.39 229  eP       PKPdf    06 15 04.9  -0.9
BSCB  Bom Sucesso       155.48 213  eP       PKPdf    06 15 06.2 +0.2
FRTB  Fartura           155.63 201  eP       PKPdf    06 15 06.2 +0.1
RCLB  Rio Claro- Sao    155.65 206  eP       PKPdf    06 15 06.2   0.0
MCR1  Marechal Candi    155.80 191  eP       PKPdf    06 15 06.6 +0.3
LVC   Limon Verde       156.01 157  PKP      PKPdf    06 15 06.1  -0.9
      comp=Z,2.9nm,1.0s,baz=24,slow=8.7,SNR=2.0
LVC                                 PKPab    PKPab    06 15 33.7  -0.6
      comp=Z,4.1nm,0.9s,baz=196,slow=6.9,SNR=3.7
LVC   Limon Verde       156.01 157  eP       PKPdf    06 15 07.0   0.0
NBCL  Cascavel-CE       159.14 260  eP       PKPdf    06 15 09.9  -0.8
MTP   Monte Pirata      160.31  19           PKPab    06 15 52.6   0.0
OTAV  Otavalo           160.38  88  eP       PKPdf    06 15 12.7   0.0
CMBC  Cumbal            160.97  85⥣eP       PKPdf    06 15 14.1 +0.8
BDFB  Brasilia          161.60 215  PKP      PKPdf    06 15 13.1  -0.4
      comp=Z,0.9nm,0.4s,baz=204,slow=21,SNR=1.8
LPAZ  La Paz            161.90 150  PKP      PKPdf    06 15 14.5 +0.1
      comp=Z,3.4nm,1.1s,baz=227,slow=3.0,SNR=6.5
LPAZ  La Paz            161.90 150  eP       PKPdf    06 15 14.0  -0.4
YOTC  Yotoco, Valle     161.94  75  eP       PKPdf    06 15 10.7  -3.3
ZARC  Zaragoza, Cauc    162.14  63  eP       PKPdf    06 15 14.9 +0.9
PP1B  Ponte de Pedra    162.63 193  eP       PKPdf    06 15 14.8 +0.5
GARC  Garzon, Huila     163.14  81  eP       PKPdf    06 15 30.0  +15
CHIC  Chingaza          164.26  71  eP       PKPdf    06 15 14.1  -2.4
SIV   San Ignacio       164.52 172  PKP      PKPdf    06 15 15.6  -0.6
      comp=Z,0.5nm,0.6s,baz=263,slow=2.6,SNR=4.6
SIV                                 PKPab    PKPab    06 16 10.8  -0.2
      comp=Z,2.2nm,0.7s,baz=160,slow=4.1,SNR=5.5
SDV   Santo Domingo     164.97  51  PKP      PKPdf    06 15 15.7  -1.1
      comp=Z,1.3nm,0.2s,baz=78,slow=4.6,SNR=5.1
SDV   Santo Domingo     164.97  51           PKPdf    06 15 15.9  -0.9
```

IDC 14 06:01:50.1±3.6**, 55°.58N×86°.18E, h0km, mbtmp2.7**/2**,**
ML2.4/2**, Error ellipse: s-maj=30.4km s-min=24.8km**
az=42.0, Southwestern Siberia

```
Code  Station Name        Δ°   AZ°   Phase ID            Time       Res
                                    Op       ISC        h  m  s     ISC
I46RU ZALESOVO INFRA    1.81 206    I        I          06 15 35.3
      baz=27,slow=337,SNR=2.3
ZALV  Zalesovo Beam     1.81 206    Pg       Pn         06 02 21.8  -0.8
      1.4nm,0.3s,baz=21,slow=16,SNR=10
ZALV                                Lg       Lg         06 02 47.9
      1.4nm,0.3s,baz=21,slow=29,SNR=9.2
KURBB Kurchatov Arra    6.77 226    Pn       Pn         06 03 31.6 +0.9
      0.1nm,0.3s,baz=44,slow=14,SNR=6.2
      0.6nm,0.4s
MKAR  Makanchi Array    9.13 197    Pn       Pn         06 04 02.2  -0.8
      baz=10,slow=9.7,SNR=1.5
      0.1nm,0.5s
```

IDC 14 06:13:40.1±1.4**, 27°.19N×141°.10E, h0km, mb3.5**/3**,**
mbtmp3.8/4**, ML4.5**/1**, MS3.7**/2**, Error ellipse:**
s-maj=29.7km s-min=21.2km az=92.0, Bonin Islands
region

```
Code  Station Name        Δ°   AZ°   Phase ID            Time       Res
                                    Op       ISC        h  m  s     ISC
JCJ   Chichijima         0.97  96   Pn       Pn         06 14 00.5  -0.5
      583nm,0.3s,baz=281,slow=21,SNR=34
JCJ                                 Sn       Sg         06 14 08.9  -2.3
      655nm,0.3s,baz=273,slow=23,SNR=38
JHJ   Hachijo jima 2     6.01 349   Pn       Pn         06 15 08.3  -2.1
      38nm,0.3s,baz=281,slow=23,SNR=5.3
      152nm,0.5s
H11N2 WAKE ISLAND Hy    24.77 102   T        T          06 43 44.9
      baz=292,slow=75,SNR=5.5
H11N1 WAKE ISLAND Hy    24.77 102   T        T          06 43 44.8
      baz=292,slow=75,SNR=5.7
H11N3 WAKE ISLAND Hy    24.78 102   T        T          06 43 46.7
      baz=292,slow=75,SNR=7.4
H11S3 WAKE ISLAND Hy    25.08 105   T        T          06 44 09.4
      baz=294,slow=74,SNR=6.5
H11S1 WAKE ISLAND Hy    25.08 105   T        T          06 44 09.0
      baz=294,slow=74,SNR=6.5
H11S2 WAKE ISLAND Hy    25.10 105   T        T          06 44 10.4
      baz=294,slow=74,SNR=5.6
WRA   Warramunga Arr    47.31 189   P        P          06 22 15.0  -0.7
      0.3nm,0.4s,baz=11,slow=8.7,SNR=8.8
      0.3nm,0.4s
KDAK  Kodiak Island     54.86  37   LR       LR         06 43 03.5
      comp=Z,136nm,21.8s,baz=265,slow=32
ILAR  Eielson Array     58.09  29   P        P          06 23 36.0 +1.0
      0.4nm,0.8s,baz=274,slow=5.3,SNR=4.5
      0.4nm,0.8s
YKA   Yellowknife Ar    72.51  28   P        P          06 25 09.0 +0.5
      0.2nm,0.5s,baz=300,slow=6.3,SNR=4.5
YKA                                 LR       LR         06 59 20.9
      comp=Z,21nm,19.1s,baz=318,slow=38
      0.2nm,0.5s
```

NNC 14 06:16:35.9±2.0**, 54°.34N×86°.78E, h0km, mb3.9, mpv3.7,**
10C-10D, Error ellipse: s-maj=19.0km s-min=10.7km
az=179.0, Suspected Mining explosion., Southwestern
Siberia

```
Code  Station Name        Δ°   AZ°   Phase ID            Time       Res
                                    Op       ISC        h  m  s     ISC
ZAA0  Zalesovo Array     1.22 252  ⥥P        Pg         06 16 58.3  -0.9
      2.7nm,0.2s
ZAA0                               ⥣S        Sb         06 17 15.9  -0.1
      6.4nm,0.3s
KURK  Kurchatov          6.16 237  ⥣Pn       Pn         06 18 09.6 +1.5
      6.4nm,0.7s
KURK                               ⥣Sn       Sn         06 19 21.0 +1.8
      2.8nm,0.5s
KURK                               ⥥Lg       Lg         06 19 56.1
      12nm,0.8s
KURBB Kurchatov Arra     6.26 237  ⥣Pn       Pn         06 18 11.1 +1.6
      12nm,0.2s
KURBB                              ⥥Sn       Sn         06 19 22.3 +0.6
      11nm,0.5s
KURBB                              ⥥Lg       Lg         06 19 54.6
      23nm,0.8s
MK31  Makanchi Array     8.07 203  ⥥Pn       Pn         06 18 35.7 +1.3
      1.1nm,0.3s,baz=29,slow=14,SNR=89
MK31                               ⥥Sn       Sn         06 20 06.3   0.0
      1.2nm,0.6s,baz=26,slow=26,SNR=3.8
MK31                               ⥥Lg       Lg         06 20 50.5
      16nm,1.4s
MAKZ  Makanchi           8.13 204  ⥥Pn       Pn         06 18 36.6 +1.4
      1.0nm,0.3s
MAKZ                               ⥥Sn       Sn         06 20 07.4  -0.3
      3.8nm,0.7s
MAKZ                               ⥣Lg       Lg         06 20 50.4
      4.7nm,0.8s
BVA0  Borovoye Array     9.82 269  ⥣P        Pn         06 19 00.5 +2.3
      0.9nm,0.3s,baz=80,slow=15,SNR=20
BVA0                               ⥣S        Sn         06 20 44.0  -5.1
      2.1nm,0.5s,baz=66,slow=26,SNR=2.5
BRVK  Borovoye           9.87 269  ⥣P        Pn         06 19 00.0 +1.1
      1.7nm,0.7s
BRVK                               ⥣S        Sn         06 20 43.7  -6.7
      1.6nm,0.8s
OTUK  Ortayu            10.90 242  ⥣P        Pn         06 19 11.8  -1.2
      1.5nm,0.5s
OTUK                               ⥥S        Sn         06 21 11.5  -4.1
      2.0nm,0.7s
```

IDC 14 06:18:52.9±9.6**, 22°.12S×69°.21E, h0km, mb3.5**/6**,**
mbtmp3.5/6**, MS3.7**/3**, Error ellipse: s-maj=314.1km**
s-min=33.3km az=53.0, Mid-Indian Ridge

```
Code  Station Name        Δ°   AZ°   Phase ID            Time       Res
                                    Op       ISC        h  m  s     ISC
H08S1 Diego Carcia H    14.73  13   T        T          06 37 27.1
      baz=193,slow=76,SNR=11
H08S2 Diego Garcia H    14.74  13   T        T          06 37 25.6
      baz=193,slow=76,SNR=19
H08S3 Diego Garcia H    14.76  13   T        T          06 37 28.3
      baz=193,slow=76,SNR=22
CMAR  Chiang Mai Arr    49.73  38   LR       LR         06 45 18.6
      comp=Z,32nm,20.7s,baz=85,slow=32
ASAR  Alice Springs     59.15 105   P        P          06 28 56.0 +0.1
      0.4nm,0.7s,baz=259,slow=6.5,SNR=5.8
      0.4nm,0.7s
WRA   Warramunga Arr    60.41 101   P        P          06 29 04.4  -0.2
      0.4nm,0.9s,baz=256,slow=6.7,SNR=2.3
WRA                                 LR       LR         06 53 06.0
      comp=Z,35nm,18.0s,baz=166,slow=34
      0.4nm,0.9s
MKAR  Makanchi Array    69.61  10   P        P          06 30 03.5  -0.3
      0.3nm,0.7s,baz=180,slow=4.9,SNR=3.8
      0.3nm,0.7s
KURBB Kurchatov Arra    72.89   6   P        P          06 30 23.7 +0.2
      0.2nm,0.7s,baz=205,slow=6.2,SNR=2.2
      0.2nm,0.7s
TORD  Torodi Ar. Bea    74.88 291   LR       LR         07 02 46.9
      comp=Z,156nm,21.7s,baz=80,slow=35
ZALV  Zalesovo Beam     76.95   9   P        P          06 30 47.3 +0.3
      0.6nm,0.5s,baz=197,slow=4.4,SNR=2.2
      0.6nm,0.5s
SONM  Songino Array     77.23  25   P        P          06 30 48.8   0.0
      0.1nm,0.5s,baz=221,slow=5.7,SNR=1.5
      0.1nm,0.5s
```

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*DDA **14** 06:42:10.9±0.0, 37°.64N×38°.46E, h7km±1km, ML2.5*
*ISK **14** 06:42:11.1, 37°.61N×38°.44E, h8km, ML2.9/12*
ISC 14 06:42:11.4±0.9**, 37°.64N**±0°.03×**38°.44E**±0°.02**, h9**km±8km**,**
n23, σ0.84/39**, Turkey**

```
Code  Station Name        Δ°   AZ°   Phase ID            Time       Res
                                    Op       ISC        h  m  s     ISC
ATAB  Bozova             0.20 213   P        Pg         06 42 15.6   0.0
ATAB                              i AML      AML        06 42 19.0
      comp=N,3µm,0.2s
ATAB                              i AML      AML        06 42 19.0
      comp=E,3µm,0.2s
ATAB                                S        Sg         06 42 19.2 +0.8
AZEY  Adyaman-Merk       0.23 319   P        Pg         06 42 15.8  -0.2
AZEY                                S        Sg         06 42 20.2 +1.1
AZEY                              i AML      AML        06 42 21.0
      comp=E,640nm,0.5s
NARI  Adyaman-Kaht       0.35  47   P        Pg         06 42 16.9  -1.5
NARI                                S        Sg         06 42 22.7  -0.4
NARI                              i AML      AML        06 42 23.0
      comp=N,437nm,0.4s
NARI                              i AML      AML        06 42 29.0
      comp=E,303nm,0.7s
HANM  anlurfa/Hi         0.36 100   P        Pg         06 42 17.7  -0.8
HANM                                S        Sg         06 42 22.9  -0.3
HANM                              i AML      AML        06 42 25.0
      comp=N,926nm,0.6s
HANM                              i AML      AML        06 42 25.0
      comp=E,397nm,0.3s
URFA  Urfa               0.36 123   Pg       Pg         06 42 18.4  -0.2
URFA                                Sg       Sg         06 42 23.5 +0.1
AKCA  Adyaman/G¶l        0.61 285   P        Pg         06 42 23.4 +0.2
AKCA                                S        Sb         06 42 32.5  -0.6
AKCA                              i AML      AML        06 42 35.0
      comp=N,257nm,0.5s
AKCA                              i AML      AML        06 42 37.0
      comp=E,191nm,0.4s
GZT   Gaziantep          0.75 248   P        Pb         06 42 26.1  -0.6
GZT                               i AML      AML        06 42 40.0
      comp=N,911nm,0.5s
GZT                               i AML      AML        06 42 40.0
      comp=E,580nm,0.3s
AKCD  Akcadag            0.77 328   P        Pg         06 42 24.8  -1.4
AKCD                              i AML      AML        06 42 37.0
      comp=N,221nm,0.4s
AKCD                              i AML      AML        06 42 37.0
      comp=E,162nm,0.3s
AKCD                                S        Sg         06 42 37.2 +0.9
NZIP  Nizip/Gaziante     0.85 226   P        Pg         06 42 27.6  -0.2
NZIP                                S        Sn         06 42 41.0  -1.2
NZIP                              i AML      AML        06 42 42.0
      comp=E,338nm,0.5s
NZIP                              i AML      AML        06 42 43.0
      comp=N,179nm,0.2s
ELZG  Elazig             0.96  27   P        Pg         06 42 29.0  -0.8
ELZG                                S        Sb         06 42 44.0 +0.9
ELZG                              i AML      AML        06 42 45.0
      comp=E,147nm,0.3s
ELZG                              i AML      AML        06 42 47.0
      comp=N,154nm,0.3s
GAZ   Gaziantep          1.08 245   Pg       Pn         06 42 32.4  -0.4
GAZ                                 Sg       Sn         06 42 47.4  -0.5
KAHM  Kahramanmaras,     1.16 264   P        Pg         06 42 32.2  -1.4
KAHM                                S        Sb         06 42 48.9 +0.2
KAHM                              i AML      AML        06 42 51.0
      comp=E,61nm,0.3s
DARE  Darende-Malaty     1.20 321   Pn       Pn         06 42 35.1 +0.7
DARE                                Sn       Sn         06 42 52.1 +1.3
KMRS  Kahramanmaras      1.23 264   Pn       Pg         06 42 34.9   0.0
KMRS                                Sn       Sn         06 42 52.1 +0.6
ELBS  KAHRAMANMARAS1.24 304   P        Pn         06 42 33.1  -1.8
ELBS                                S        Sn         06 42 52.6 +0.8
ELBS                              i AML      AML        06 42 54.0
      comp=E,93nm,0.4s
ELBS                              i AML      AML        06 42 57.0
      comp=N,81nm,0.5s
DYBB  Diyarbakir         1.39  76   Pn       Pg         06 42 37.6  -0.3
DYBB                                Sn       Sg         06 42 56.0 +0.1
ARPR  Arapgir-MALATY     1.45 357   Pn       Pb         06 42 38.6  -0.1
KEMA  Kemaliye           1.63   2   P        Pn         06 42 40.6 +0.4
KEMA                                S        Sb         06 43 02.6 +0.3
KEMA                              i AML      AML        06 43 06.0
      comp=N,31nm,0.4s
SARI  SarD1z-Kayseri     1.77 296   Pn       Pb         06 42 43.4  -0.7
KOZT  Kozan              2.08 266   Pn       Pn         06 42 47.1 +0.7
BNGB  Bingl              2.22  52   Pn       Pn         06 42 49.8 +1.3
SVAN  Silvan-Diyarba     2.24  76   Pn       Pn         06 42 49.6 +0.9
YAYL  Yayladag           2.46 230   Pn       Pn         06 42 52.3 +0.5
```

IDC 14 06:54:43.2±3.0**, 53°.56N×87°.80E, h0km, mbtmp2.8**/2**,**
ML2.2/2**, Error ellipse: s-maj=24.7km s-min=15.2km**
az=61.0, Southwestern Siberia

```
Code  Station Name        Δ°   AZ°   Phase ID            Time       Res
                                    Op       ISC        h  m  s     ISC
I46RU ZALESOVO INFRA    1.81 284    I        I          07 08 20.0
      baz=98,slow=342,SNR=8.7
ZALV  Zalesovo Beam     1.81 284    Pg       Pn         06 55 15.4  -0.2
      0.6nm,0.3s,baz=100,slow=12,SNR=9.6
ZALV                                Lg       Lg         06 55 41.5
      2.0nm,0.3s,baz=97,slow=23,SNR=9.0
KURBB Kurchatov Arra    6.42 246    Pn       Pn         06 56 19.9 +0.9
      baz=62,slow=14,SNR=6.4
KURBB                               Sn       Sn         06 57 31.4  -1.5
      baz=61,slow=31,SNR=1.5
KURBB                               Lg       Lg         06 58 05.4
      baz=61,slow=32,SNR=4.2
      0.8nm,0.6s
MKAR  Makanchi Array    7.64 210    Pn       Pn         06 56 37.1 +1.4
      0.1nm,0.3s,baz=23,slow=13,SNR=4.5
MKAR                                Sn       Sn         06 58 02.4  -0.5
      baz=27,slow=23,SNR=2.4
MKAR                                Lg       Lg         06 58 44.3
      baz=22,slow=34,SNR=3.7
      0.2nm,0.3s
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*BJI **14** 06:56:35.7±0.0, 31°.67N×141°.84E, h9km, mb4.7/58,*
mB4.8/31, Ms4.4/33, Ms7 4.2/36
*IDC **14** 06:56:36.9±0.5, 31°.65N×141°.73E, h0km, mb4.5/35,*
mbtmp4.5/43, ML3.7/7, MS3.8/26, Error ellipse:
s-maj=13.9km s-min=11.1km az=65.0
*MOS **14** 06:56:36.9±1.0, 31°.64N×141°.70E, h10km, mb5.0/32, Error*
ellipse: s-maj=10.2km s-min=4.8km az=111.9
*NEIC **14** 06:56:38.7±2.1, 31°.63N±0°.07×141°.73E±0°.09, h10km±1km,*
mb4.7/97, Error ellipse: s-maj=13.5km s-min=10.6km
az=56.0
*JMA **14** 06:56:45.3±0.8, 32°N±2°×14°2E±°, h14km, MV4.0/29, E*
OFF HACHIJOJIMA ISLAND
*NIED **14** 06:56:45.3, 32°.16N×141°.54E, h14km, MW4.7, Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm;
M_{rr}0.52; $M_{\theta\theta}$-0.09; $M_{\phi\phi}$-0.43; $M_{r\theta}$-1.08; $M_{\theta\phi}$0.13; $M_{\phi r}$0.28;
Fault plane solution: $M_0$1.19000×10^{16} NP1:
ϕ_s291.00000°, δ81.00000°, λ79.00000°. NP2:
ϕ_s161.00000°, δ15.00000°, λ139.00000°.
ISC 14 06:56:39.9±0.5**, 31°.79N**±0°.06×**141°.72E**±0°.06**, h10km, n299,**
σ**1.97**/234**, mb4.7**/114**, MS4.0**/34**, 18C-6D, Southeast of**
Honshu

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Code  Station Name        Δ°   AZ°   Phase ID            Time       Res
                                    Op       ISC        h  m  s     ISC
JHCJ  Hachijojimakas     2.07 309   eP       Pn         06 57 15.4 +0.8
JHJ2  Mitsune            2.08 310   Pn       Pn         06 57 16.1 +1.3
JHJ2  Mitsune            2.08 310   P        Pn         06 57 15.9 +1.1
JHJ   Hachijo jima 2     2.11 310   Pn       Pn         06 57 15.4 +0.2
      46nm,0.3s,baz=148,slow=13,SNR=2.9
JHJ                                 Sn       Sg         06 57 42.1  -5.5
      38nm,0.3s,baz=332,slow=23,SNR=4.8
      278nm,0.7s
BSO1  Boso 1             2.92 348   P        Pn         06 57 27.0 +1.1
BSO3  Boso 3             3.17 342   P        Pn         06 57 31.0 +1.4
JOD2  Odawara 2          4.10 328   eP       Pn         06 57 43.2 +0.5
JCJ   Chichijima         4.69 175   Pn       Pn         06 57 48.0  -2.7
      30nm,0.3s,baz=280,slow=22,SNR=2.1
JCJ                                 Sn       Sn         06 58 36.8  -8.5
      50nm,0.3s,baz=287,slow=22,SNR=1.8
      90nm,0.3s
JRY   Ryogami san        4.82 332   P        Pn         06 57 55.5 +2.9
JHO   Hitachi            4.90 349   eP       Pn         06 57 54.0 +0.4
JAG   Ashikaga           4.99 339   P        Pn         06 57 56.7 +1.8
JGF   Kuroka             5.26 317            Pn         06 57 58.9 +0.3
INU   Inuyama            5.29 313            Pn         06 58 01.2 +2.2
MJAR  Matsushiro Arr     5.56 329   Pn       Pn         06 58 02.8 +0.1
      0.7nm,0.3s,baz=150,slow=11,SNR=23
MJAR                                Sn       Sb         06 59 10.3   -14
      0.1nm,0.3s,baz=278,slow=30,SNR=1.2
MJAR                                LR       LR         07 00 30.0
      comp=Z,719nm,18.6s,baz=130,slow=41
      9.9nm,0.7s
MAJO  Matsushiro         5.56 329            Pn         06 58 05.3 +2.5
MAJO  Matsushiro         5.56 329 i P        Pn         06 58 04.8 +2.0
MAT   Matsushiro         5.56 329   eP       Pn         06 58 06.7 +3.9
MJB9  Matsu-Tunnel       5.57 329            Pn         06 58 05.8 +3.0
JFK   Kawauchi           5.61 353   eS       Sn         06 59 04.5  -3.4
JOTO  OTAMA OYAMA        5.87 349   P        Pn         06 58 07.9 +1.0
JOTO                                eS       Sn         06 59 11.1  -3.2
JMM   Marumori           6.11 353            Pn         06 58 09.7  -0.5
JMN   Monobe             6.88 288   Pn       Pn         06 58 24.1 +3.3
JMK   Ichinoseki         7.16 357   eS       Sn         06 59 41.4  -4.6
JTM   Tenmabayashi       9.00 357   Pn       Pn         06 58 50.9 +1.1
JNU   Nakatsue           9.26 281   Pn       Pn         06 58 53.4  -0.1
      0.3nm,0.3s,baz=181,slow=8.5,SNR=1.6
JNU                                 LR       LR         07 02 26.5
      comp=Z,326nm,18.8s,baz=119,slow=38
      5.2nm,0.9s
JNU   Nakatsue           9.26 281   Pn       Pn         06 58 53.1  -0.3
ERM   Erimo             10.27   6   Pn       Pn         06 59 05.6  -1.7
ERM   Erimo             10.27   6 i P        Pn         06 59 08.0 +0.7
ASAJ  Asahikawa         12.33   3   Pn       Pn         06 59 33.6  -1.8
      0.9nm,0.3s,baz=306,slow=32,SNR=1.5
ASAJ                                Sn       Sn         07 01 46.9  -6.0
      0.4nm,0.3s,baz=85,slow=30,SNR=7.6
ASAJ                                LR       LR         07 05 36.1
      comp=Z,381nm,18.8s,baz=162,slow=43
      3.0nm,0.3s
KSRS  Korea Array       12.69 300   Pn       Pn         06 59 40.5 +0.1
      0.1nm,0.3s,baz=111,slow=13,SNR=1.2
KSRS                                LR       LR         07 04 36.7
      comp=Z,496nm,18.9s,baz=110,slow=38
      0.5nm,0.3s
JOW   Kunigami          12.72 251   LR       LR         07 04 31.0
      comp=Z,266nm,18.2s,baz=280,slow=37
USA0B Ussuriysk Arra    14.56 331 i P        Pn         07 00 06.5 +0.6
USRK  Ussuriysk Ar.     14.56 331   Pn       Pn         07 00 06.1 +0.2
      5.1nm,1.0s,baz=138,slow=12,SNR=2.2
YSS   Yuzh-Sakhalins    15.17   3   eP       Pn         07 00 13.2  -0.9
YSS                                 pmax     pmax
      comp=Z,20nm,1.0s
YSS                                 MLR      MLR
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      comp=N,500nm,14.0s
YSS                                 MLR   MLR
      comp=Z,700nm,14.0s
MDJ   Mudanjiang        15.94 327   P     Pn     07 00 25.3 +1.1
MDJ                                 pP    P      07 00 28.3 +0.5
MDJ                                 sP    pP     07 00 30.3 +1.5
MDJ                                 S     Sn     07 03 23.1 +2.2
MDJ                                 sS    S      07 03 27.3 -7.8
MDJ                                 SS    SnSn   07 03 36.8 +2.9
MDJ                                 PcP   PcP    07 05 21.8  0.0
MDJ                                 PcS   PcS    07 08 55.3 -1.9
MDJ                                 ScP   ScP    07 08 58.6 +2.4
MDJ                                 pmax  pmax
      comp=Z,10.0nm,0.7s
MDJ                                 pmax  pmax
      comp=Z,160nm,4.3s
MDJ                                 LR    LR
      comp=Z,580nm,13.8s
MDJ                                 LR    LR
      comp=Z,300nm,14.1s
MDJ                                 LR    LR
      comp=Z,670nm,15.6s
MDJ   Mudanjiang        15.94 327   Pn    Pn     07 00 23.3 -0.9
UGL   Uglegorsk         17.27   1  eP     P      07 00 47.1 +4.6
UGL                                 pmax  pmax
      comp=Z,60nm,0.8s
SNY   Shenyang          17.61 310  ⇓P     Pn     07 00 34.8  -11
SNY                                 pmax  pmax
      comp=Z,32nm,1.1s
BNX   BinXian           17.81 326  ⇓P     Pn     07 00 46.6 -1.2
BNX                                 pmax  pmax
      comp=Z,7.0nm,0.8s
BNX                                 pmax  pmax
      comp=Z,140nm,3.6s
YOJ   Yonaguni jima     18.03 251   Pn    Pn     07 00 46.7 -3.9
YOJ   Yonaguni jima     18.03 251   P     Pn     07 00 46.7 -3.9
YOJ                                 pmax  pmax
      comp=Z,456nm,1.3s
GUMO  Guam              18.34 170   P     P      07 00 51.4 -3.1
      comp=Z,100nm,0.7s,baz=5.1,slow=4.0,SNR=6.3
GUMO  Guam              18.34 170   P     P      07 00 52.9 -1.7
GUMO  Guam              18.34 170   P     P      07 00 52.9 -1.7
GUMO                                pmax  pmax
      comp=Z,246nm,1.1s
KLR   Kul'dur           18.97 340   P     P      07 00 59.3 -1.9
      comp=Z,0.5nm,0.3s,baz=139,slow=12,SNR=19
      comp=Z,11nm,1.0s
KLR   Kul'dur           18.97 340 i P     P      07 01 02.2 +1.0
KLR                                 pmax  pmax
      comp=Z,13nm,0.9s
TYV   Tymovskoe         19.07   2  eP     Pn     07 01 04.6 +1.5
TYV                                 pmax  pmax
      comp=Z,100nm,3.9s
TYV                                 pmax  pmax
      comp=Z,9.0nm,1.0s
YHNB  Yeheng            19.26 253   P     P      07 01 02.6 -2.1
YHNB                                IAmb  IAmb   07 01 27.5
      comp=Z,84nm,1.4s
GRNR  Gornyy            19.37 350 ⇑iP     P      07 01 05.4 -0.2
GRNR                                pmax  pmax
      comp=Z,2.0nm,0.7s
NJ2   Nanjing           19.41 277  eP     P      07 01 05.4 -0.8
NJ2                                 pmax  pmax
      comp=Z,17nm,0.5s
SSLB  Suanglung         20.00 252   P     P      07 01 12.0 -0.8
SSLB                                IAmb  IAmb   07 01 13.1
      comp=Z,92nm,1.3s
TIA   Tai'an            20.84 289  ⇓P     P      07 01 19.9 -1.9
TIA                                 pmax  pmax
      comp=Z,4.0nm,0.4s
TIA                                 LR    LR
      comp=Z,290nm,7.4s
TIA                                 LR    LR
      comp=Z,680nm,14.5s
TIA                                 LR    LR
      comp=Z,630nm,14.5s
HEH   HeiHe             21.30 334  eP     P      07 01 26.5 -0.1
HEH                                 pP    pP     07 01 29.0 +1.3
HEH                                 S     Sn     07 05 27.3 -3.1
HEH                                 sS    pS     07 05 32.3 +4.1
HEH                                 SS    SnSn   07 05 56.1  +11
HEH                                 pmax  pmax
      comp=Z,23nm,0.9s
HEH                                 pmax  pmax
      comp=Z,160nm,5.4s
HEH                                 LR    LR
      comp=Z,350nm,12.1s
HEH                                 LR    LR
      comp=Z,350nm,13.5s
HEH                                 LR    LR
      comp=Z,330nm,17.3s
BJI   Beijing           22.21 299   P     P      07 01 35.8 -0.7
BJI                                 pmax  pmax
      comp=Z,10.0nm,1.1s
BJT   Baijiatuau        22.21 299   P     P      07 01 34.3 -2.2
BJT                                 IAmb  IAmb   07 01 36.7
      comp=Z,24nm,1.3s
BJT   Baijiatuau        22.21 299   P     P      07 01 34.3 -2.2
BJT                                 pmax  pmax
      comp=Z,24nm,1.3s
HNS   HongShan          22.89 292  ⇑P     P      07 01 41.6 -2.1
HNS                                 S     S      07 05 54.0 +0.6
HNS                                 LR    LR
      comp=Z,410nm,15.9s
WHN   Wuhan             23.43 274   P     P      07 01 47.8 -1.5
XLT   XiLinHaoTe        23.48 308  eP     P      07 01 48.8 -1.0
XLT                                 pP    pP     07 01 52.3 +1.5
XLT                                 sP    sP     07 01 54.5 +3.2
XLT                                 PP    PnPn   07 02 22.0 +5.8
XLT                                 S     S      07 05 59.1 -4.3
XLT                                 sS    sS     07 06 05.9 -0.3
XLT                                 pmax  pmax
      comp=Z,10.0nm,0.9s
XLT                                 pmax  pmax
      comp=Z,160nm,4.4s
XLT                                 LR    LR
      comp=Z,26nm,19.1s
XLT                                 LR    LR
      comp=Z,200nm,9.8s
XLT                                 LR    LR
      comp=Z,210nm,13.3s
HIA   Hailar            24.02 323   P     P      07 01 54.1 -0.8
HIA                                 IAmb  IAmb   07 01 56.6
      comp=Z,34nm,0.8s
HIA   Hailar            24.02 323   P     P      07 01 54.1 -0.8
HIA                                 pmax  pmax
      comp=Z,34nm,0.8s
PETK  Petropavlovsk-    24.24  24   LR    LR     07 12 16.7
      comp=Z,169nm,20.4s,baz=223,slow=39
LYN   LuoYang           24.60 284  ⇓P     P      07 01 58.3 -2.0
LYN                                 S     S      07 06 13.5 -7.9
LYN                                 pmax  pmax
      comp=Z,28nm,1.0s
LYN                                 pmax  pmax
      comp=Z,170nm,4.9s
LYN                                 LR    LR
      comp=Z,540nm,13.0s
LYN                                 LR    LR
      comp=Z,440nm,13.0s
HHC   Hu-ho-hao-te      25.82 299  eP     P      07 02 10.4 -1.0
HHC                                 pmax  pmax
      comp=Z,43nm,0.9s
HHC                                 pmax  pmax
      comp=Z,230nm,4.5s
HHC                                 LR    LR
      comp=Z,670nm,14.4s
HHC                                 LR    LR
      comp=Z,740nm,12.4s
HHC                                 LR    LR
      comp=Z,850nm,11.2s
BTO   Baotou            26.93 298  eP     P      07 02 21.9 +0.4
BTO                                 pP    sP     07 02 26.6 +3.6
BTO                                 sP    pwP    07 02 29.0 -2.1
BTO                                 S     S      07 07 05.5 +6.9
BTO                                 SS    SnSn   07 08 14.4  +11
BTO                                 pmax  pmax
      comp=Z,130nm,1.0s
BTO                                 pmax  pmax
      comp=Z,360nm,4.6s
BTO                                 LR    LR
      comp=Z,1µm,15.5s
BTO                                 LR    LR
      comp=Z,980nm,20.4s
BTO                                 LR    LR
      comp=Z,2µm,19.7s
XAN   Xi'an             27.56 284   P     P      07 02 25.1 -2.0
XAN                                 pP    pP     07 02 29.0 +0.3
XAN                                 S     S      07 07 08.3 -0.2
XAN                                 sS    sS     07 07 14.4 +3.1
XAN                                 pmax  pmax
      comp=Z,36nm,0.9s
XAN                                 pmax  pmax
      comp=Z,170nm,4.1s
MA2   Magadan           28.45  10   P     P      07 02 34.6 -0.1
      comp=Z,1.3nm,0.3s,baz=134,slow=21,SNR=1.5
      comp=Z,1.3nm,0.3s
MA2   Magadan           28.45  10 ceP     P      07 02 33.9 -0.8
MA2                                 pmax  pmax
      comp=Z,18nm,2.5s
DAV   Davao City (W)    28.84 215   LR    LR     07 12 28.8
      comp=Z,108nm,21.5s,baz=338,slow=33
ULN   Ulaanbaatar       30.77 312   P     P      07 02 56.1 +0.5
ULN                                 IAmb  IAmb   07 02 59.5
      comp=Z,11nm,0.8s
ULN   Ulaanbaatar       30.77 312 ceP     P      07 02 56.0 +0.4
ULN                                 pmax  pmax
      comp=Z,24nm,1.3s
ULN   Ulaanbaatar       30.77 312   P     P      07 02 57.1 +1.4
ULN                                 P     P      07 02 57.1 +1.4
SONM  Songino Array     31.18 311   P     P      07 02 59.5 +0.3
      comp=Z,7.1nm,0.8s,baz=120,slow=8.6,SNR=37
SONM                                LR    LR     07 16 03.0
      comp=Z,184nm,19.6s,baz=40,slow=37
      comp=Z,7.1nm,0.8s
SONM  Songino Array     31.18 311   P     P      07 02 58.7 -0.5
SONM                                IAmb  IAmb   07 03 01.6
      comp=Z,21nm,1.4s
YAK   Yakutsk           31.25 349   P     P      07 02 59.0 -0.3
      comp=Z,11nm,0.3s,baz=217,slow=0.2,SNR=2.3
      comp=Z,11nm,0.3s
YAK   Yakutsk           31.25 349 i P     P      07 02 58.5 -0.9
YAK                                 pmax  pmax
      comp=Z,10.0nm,0.9s
LZH   Lanzhou           31.58 288  eP     P      07 02 56.4 -6.5
LZH                                 pP    pP     07 03 00.3 -4.2
LZH                                 pmax  pmax
      comp=Z,14nm,1.5s
LZH                                 LR    LR
      comp=N,270nm,15.8s
LZH                                 LR    LR
      comp=E,230nm,15.1s
LZH                                 LR    LR
      comp=Z,370nm,15.5s
SEY   Seymchan          31.90   9   P     P      07 03 05.9 +0.8
      comp=Z,2.7nm,0.8s,baz=206,slow=5.5,SNR=8.7
      comp=Z,2.7nm,0.8s
SEY   Seymchan          31.90   9 ceP     P      07 03 05.0 -0.1
SEY                                 pmax  pmax
      comp=Z,5.0nm,1.3s
BOD   Bodaibo           32.19 332  eP     P      07 03 07.3 -0.5
BOD                                 pmax  pmax
      comp=Z,11nm,1.3s
CD2   Chengdu           32.32 279  eP     P      07 03 07.0 -2.3
ZAK   Zakamensk         33.93 315  eP     P      07 03 23.2  0.0
ZAK                                 pmax  pmax
      comp=Z,6.0nm,1.2s
GTA   Gaotai            34.66 295  eP     P      07 03 28.6 -1.1
GTA                                 sP    pwP    07 03 40.3 +1.0
GTA                                 pmax  pmax
      comp=Z,5.0nm,1.0s
GTA                                 pmax  pmax
      comp=Z,42nm,4.4s
GTA                                 LR    LR
      comp=Z,260nm,14.2s
GTA                                 LR    LR
      comp=Z,340nm,15.3s
GTA                                 LR    LR
      comp=Z,290nm,17.1s
KMI   Kunming           34.77 269  ⇑P     P      07 03 30.0 -0.9
KMI                                 pP    pP     07 03 32.8 +0.3
KMI                                 pmax  pmax
      comp=Z,12nm,0.8s
KMI                                 LR    LR
      comp=Z,190nm,12.1s
KMI                                 LR    LR
      comp=Z,370nm,15.9s
KMI                                 LR    LR
      comp=Z,330nm,15.8s
PZH   PanZhiHua         35.17 272   P     P      07 03 34.6 +0.4
PZH                                 pmax  pmax
      comp=Z,10.0nm,0.7s
PZH                                 pmax  pmax
      comp=Z,100nm,4.3s
MOY   Mondy             35.70 316  eP     P      07 03 38.7 +0.2
SANI  Sanana            36.82 207   P     P      07 03 43.4 -4.8
      comp=Z,25nm,1.0s
CRAI  Chiangrai         38.69 263   P     P      07 04 02.0 -2.1
GOMU  GeErMu            38.84 290   P     P      07 04 04.8 -0.9
GOMU                                pP    pP     07 04 08.3 +1.5
GOMU                                sP    sP     07 04 11.9 +4.7
GOMU                                pmax  pmax
      comp=Z,23nm,0.9s
BILL  Bilibino          39.01  14   P     P      07 04 04.2 -1.9
BILL  Bilibino          39.01  14  eP     P      07 04 08.2 +2.0
BILL                                pmax  pmax
      comp=Z,5.0nm,1.3s
BILL                                MLR   MLR
      comp=Z,114nm,17.0s
TIXI  Tiksi             40.52 354   P     P      07 04 18.0 -0.7
      comp=Z,1.6nm,0.6s,baz=270,slow=23,SNR=6.7
      comp=Z,1.6nm,0.6s
TIXI  Tiksi             40.52 354   P     P      07 04 17.4 -1.3
TIXI  Tiksi             40.52 354 ceP     P      07 04 19.4 +0.8
TIXI                                pmax  pmax
      comp=Z,9.0nm,2.5s
CMAR  Chiang Mai Arr    40.69 261   P     P      07 04 19.4 -1.3
      comp=Z,0.9nm,0.4s,baz=34,slow=8.7,SNR=1.6
CMAR                                LR    LR     07 22 40.2
      comp=Z,78nm,18.2s,baz=75,slow=38
      comp=Z,0.9nm,0.4s
WMQ   Urumqi            43.63 302  eP     P      07 04 45.4 +0.8
WMQ                                 sP    pwP    07 04 56.8 +2.7
WMQ                                 pmax  pmax
      comp=Z,20nm,1.5s
WMQ                                 pmax  pmax
      comp=Z,270nm,5.9s
WMQ                                 LR    LR
      comp=Z,140nm,15.3s
DGZ   Jazzator, Alta    43.83 310c iP     P      07 04 46.1 -0.1
DGZ                                 pmax  pmax
      comp=Z,39nm,0.8s
BRDH  Bariadhala        45.11 271   LR    LR     07 26 39.3
      comp=Z,120nm,18.7s,baz=54,slow=40
TNA   Tin City          45.35  27   P     P      07 04 57.7 -0.2
ZAA0  Zalesovo Array    45.76 316   P     P      07 04 59.0 -2.2
ZAA0                                IAmb  IAmb   07 05 02.1
      comp=Z,7.3nm,1.0s
ZALV  Zalesovo Beam     45.76 316   P     P      07 05 01.2 -0.1
      comp=Z,2.9nm,0.5s,baz=103,slow=6.9,SNR=14
ZALV                                PcP   PcP    07 06 37.7 -1.2
      comp=Z,3.1nm,0.7s,baz=97,slow=4.1,SNR=4.0
ZALV                                LR    LR     07 24 58.2
      comp=Z,126nm,18.9s,baz=82,slow=37
      comp=Z,2.9nm,0.5s
ZALV  Zalesovo Beam     45.76 316   P     P      07 04 59.8 -1.4
ZALV  Zalesovo Beam     45.76 316 i P     P      07 05 01.3  0.0
ZALV                                pmax  pmax
      comp=Z,5.0nm,0.8s
ANM   Nome              46.00  29   P     P      07 05 03.4 +0.3
ANM   Nome              46.00  29   P     P      07 05 03.4 +0.3
ANM                                 pmax  pmax
      comp=Z,4.0nm,0.9s
TAPN  Taplejung         46.79 279  eP     P      07 05 08.8 -1.3
MK31  Makanchi Array    47.27 306   P     P      07 05 12.4 -0.9
MK31                                IAmb  IAmb   07 05 14.5
      comp=Z,11nm,1.1s
MK31  Makanchi Array    47.27 306c iP     P      07 05 13.0 -0.4
MKAR  Makanchi Array    47.27 306   P     P      07 05 12.4 -1.0
      comp=Z,6.8nm,0.8s,baz=89,slow=9.4,SNR=54
MKAR                                LR    LR     07 26 03.6
      comp=Z,120nm,19.2s,baz=62,slow=37
      comp=Z,6.8nm,0.8s
MKAR  Makanchi Array    47.27 306 i P     P      07 05 13.1 -0.3
MKAR                                pmax  pmax
      comp=Z,7.0nm,0.8s
MAKZ  Makanchi          47.49 306   P     P      07 05 14.6 -0.4
MAKZ                                IAmb  IAmb   07 05 16.3
      comp=Z,11nm,1.1s
MAKZ  Makanchi          47.49 306   P     P      07 05 14.6 -0.4
MAKZ                                pmax  pmax
      comp=Z,11nm,1.1s
RAMN  Ramite            47.85 279  eP     P      07 05 16.6 -1.8
      comp=Z,54nm,0.8s
JIRN  Jiri              47.96 280  eP     P      07 05 18.5 -0.9
      comp=Z,80nm,0.8s
GUN   Gumba             48.14 281  eP     P      07 05 19.8 -0.9
      comp=Z,60nm,0.8s
NRIK  Noril'sk          48.16 337   P     P      07 05 19.3 -0.6
      comp=Z,16nm,1.0s,baz=109,slow=8.6,SNR=13
NRIK                                LR    LR     07 27 00.2
      comp=Z,106nm,18.5s,baz=334,slow=38
      comp=Z,16nm,1.0s
NRIK  Noril'sk          48.16 337   P     P      07 05 19.3 -0.6
NRIK  Noril'sk          48.16 337 ceP     P      07 05 19.9 +0.1
NRIK                                pmax  pmax
      comp=Z,18nm,1.1s
PKI   Pulchoki          48.65 280  eP     P      07 05 23.0 -1.6
GKN   Gorkha            49.15 281  eP     P      07 05 27.2 -1.1
KURK  Kurchatov         49.49 312   P     P      07 05 29.9 -0.5
KURK  Kurchatov         49.49 312 ceP     P      07 05 30.2 -0.1
KURK                                pmax  pmax
      comp=Z,56nm,1.3s
KURK  Kurchatov         49.49 312   P     P      07 05 30.0 -0.3
KURBB Kurchatov Arra    49.55 312   P     P      07 05 30.6 -0.2
      comp=Z,22nm,0.9s,baz=87,slow=7.1,SNR=91
KURBB                               LR    LR     07 27 22.0
      comp=Z,208nm,19.8s,baz=175,slow=37
      comp=Z,22nm,0.9s
DANN  Dangsing          49.77 282  eP     P      07 05 31.5 -1.7
      comp=Z,27nm,0.6s
SDSI  Sungai Dareh      50.13 237   P     P      07 05 33.3 -2.3
      comp=Z,7.3nm,1.1s
PYUN  Piuthan           50.49 282  eP     P      07 05 37.0 -1.6
      comp=Z,43nm,0.5s
K20K  Telida            50.58  32   IAmb  IAmb   07 06 15.6
      comp=Z,7.1nm,1.0s
MDSI  Maura Dua         50.77 232   P     P      07 05 37.8 -2.6
      comp=Z,31nm,1.1s
H21K  Melozitna Rive    51.42  29   P     P      07 05 44.8  0.0
H21K                                IAmb  IAmb   07 06 06.2
      comp=Z,8.2nm,1.2s
GSI   Gunungsitoli      51.48 243   P     P      07 05 43.1 -2.7
      comp=Z,34nm,1.0s
CAST  Castle Rocks      51.48  32   IAmb  IAmb   07 06 09.1
      comp=Z,8.4nm,1.1s
WB0   Warramunga Arr    51.74 189   P     P      07 05 44.1 -3.5
WRAB  Tennant Creek     51.91 189   P     P      07 05 44.3 -4.5
WRAB  Tennant Creek     51.91 189 ceP     P      07 05 45.9 -2.9
WRAB                                pmax  pmax
      comp=Z,33nm,1.3s
WB2   Warramunga Arr    51.92 189   P     P      07 05 45.1 -3.8
WRA   Warramunga Arr    51.92 189   P     P      07 05 45.6 -3.3
      comp=Z,17nm,0.9s,baz=7.1,slow=7.9,SNR=138
      comp=Z,17nm,0.9s
MLY   Manley            52.21  30   IAmb  IAmb   07 06 00.9
      comp=Z,13nm,1.5s
H23K  Yukon River       52.78  29   IAmb  IAmb   07 06 27.7
      comp=Z,9.0nm,1.2s
NEA2  Nenana            52.89  30   IAmb  IAmb   07 06 06.1
      comp=Z,12nm,1.1s
KSH   Kashi             52.93 298   P     P      07 06 00.6 +4.1
KSH                                 sP    pwP    07 06 12.3 +6.3
KSH                                 pmax  pmax
      comp=Z,16nm,0.8s
KSH                                 LR    LR
      comp=Z,220nm,11.3s
KSH                                 LR    LR
      comp=Z,220nm,14.1s
KSH                                 LR    LR
      comp=Z,270nm,8.9s
MDM   Murphy Dome       53.27  30   P     P      07 05 57.2 -1.3
MDM                                 IAmb  IAmb   07 06 22.5
      comp=Z,10nm,1.0s
AAK   Ala-Archa         53.34 302   P     P      07 05 57.4 -2.1
      comp=Z,1.8nm,0.3s,baz=99,slow=5.3,SNR=3.4
AAK                                 LR    LR     07 27 50.2
      comp=Z,120nm,21.8s,baz=48,slow=35
      comp=Z,1.8nm,0.3s
AAK   Ala-Archa         53.34 302   P     P      07 05 57.4 -2.1
AAK                                 IAmb  IAmb   07 06 03.8
      comp=Z,5.3nm,0.8s
AAK   Ala-Archa         53.34 302 ceP     P      07 05 58.4 -1.1
AAK                                 pmax  pmax
      comp=Z,4.0nm,0.7s
IL31                    53.84  30   IAmb  IAmb   07 06 13.0
      comp=Z,6.7nm,1.1s
ILAR  Eielson Array     53.84  30   P     P      07 06 01.8 -0.9
      comp=Z,3.1nm,1.1s,baz=269,slow=6.0,SNR=16
      comp=Z,3.1nm,1.1s
BVAR  Borovoye Array    54.38 315   P     P      07 06 06.4 -0.4
      comp=Z,10nm,0.9s,baz=92,slow=7.6,SNR=36
      comp=Z,10nm,0.9s
BRVK  Borovoye          54.44 315   P     P      07 06 06.1 -1.1
BRVK                                IAmb  IAmb   07 06 08.3
      comp=Z,12nm,1.1s
BRVK  Borovoye          54.44 315 ceP     P      07 06 07.1 -0.1
BRVK                                pmax  pmax
      comp=Z,10.0nm,0.8s
BRVK  Borovoye          54.44 315   P     P      07 06 07.5 +0.3
RIDG  Independent Ri    54.73  31   P     P      07 06 08.5 -0.7
RIDG                                IAmb  IAmb   07 06 33.7
      comp=Z,14nm,1.3s
SCRK  Sand Creek        55.10  31   IAmb  IAmb   07 06 39.6
      comp=Z,4.5nm,0.9s
J26L  Joseph Creek      55.27  31   IAmb  IAmb   07 06 40.9
      comp=Z,5.0nm,0.9s
AS31  Alice Springs     55.64 189   P     P      07 06 12.5 -3.7
AS31                                IAmb  IAmb   07 06 16.3
      comp=Z,3.6nm,0.6s
ASAR  Alice Springs     55.65 189   P     P      07 06 13.3 -2.9
      comp=Z,7.9nm,0.8s,baz=17,slow=13,SNR=92
ASAR                                LR    LR     07 28 36.2
      comp=Z,84nm,21.0s,baz=34,slow=35
      comp=Z,7.9nm,0.8s
ASAR  Alice Springs     55.65 189   P     P      07 06 13.1 -3.1
KKAR  Karatay Array     56.09 303   P     P      07 06 19.4 +0.1
KKAR  Karatay Array     56.09 303   P     P      07 06 18.6 -0.7
KKAR                                IAmb  IAmb   07 06 20.9
      comp=Z,20nm,0.8s
KKAR  Karatay Array     56.09 303   P     P      07 06 19.4 +0.1
L27K  Beaver Creek,     56.12  32   IAmb  IAmb   07 06 48.1
      comp=Z,11nm,1.3s
NIL   Nilore            56.64 292   P     P      07 06 22.4 -1.0
NIL   Nilore            56.64 292   P     P      07 06 22.4 -1.0
NIL                                 pmax  pmax
      comp=Z,20nm,0.9s
NIL   Nilore            56.64 292   P     P      07 06 24.0 +0.6
NIL                                 P     P      07 06 24.0 +0.6
CHGR  Chuyangaron       58.27 299   P     P      07 06 34.4 -0.5
CHGR  Chuyangaron       58.27 299   P     P      07 06 34.4 -0.5
CHGR                                pmax  pmax
      comp=Z,73nm,0.9s
INK   Inuvik            58.96  26   P     P      07 06 38.6 -0.4
      comp=Z,2.6nm,0.8s,baz=275,slow=6.1,SNR=13
      comp=Z,2.6nm,0.8s
INK   Inuvik            58.96  26   IAmb  IAmb   07 06 57.3
      comp=Z,3.2nm,0.8s
M31M  Drury Creek, Y    59.63  33   P     P      07 06 45.1 +1.3
M31M                                IAmb  IAmb   07 07 00.6
      comp=Z,7.0nm,0.8s
ARU   Arti              60.51 321   P     P      07 06 48.6 -1.3
      comp=Z,9.0nm,0.7s,baz=101,slow=3.0,SNR=15
ARU                                 LR    LR     07 36 20.5
      comp=Z,99nm,18.9s,baz=40,slow=39
      comp=Z,9.0nm,0.7s
ARU   Arti              60.51 321   P     P      07 06 49.0 -0.9
ARU   Arti              60.51 321c iP     P      07 06 49.5 -0.4
ARU                                              07 07 32.5
ARU                                 S     S      07 15 08.5 +3.2
ARU                                 SS    SS     07 19 04.2 +1.4
ARU                                 pmax  pmax
      comp=Z,14nm,0.8s
A36M  Sachs Harbour     61.04  21   P     P      07 06 53.5 +0.2
A36M                                IAmb  IAmb   07 07 20.6
      comp=Z,4.8nm,0.8s
ABKAR Akbulak array     61.59 312   P     P      07 06 57.1 -0.2
ABKAR Akbulak array     61.59 312   P     P      07 06 56.6 -0.8
PALK  Pallekele         61.62 261   LR    LR     07 35 39.7
      comp=Z,78nm,18.8s,baz=168,slow=38
C36M  Paulatuk          62.10  24   P     P      07 06 59.4 -1.1
C36M                                IAmb  IAmb   07 07 01.8
      comp=Z,3.8nm,0.8s
AKTO  Aktyubinsk        62.44 314   P     P      07 07 02.1 -1.0
      comp=Z,6.6nm,0.9s,baz=64,slow=7.2,SNR=12
      comp=Z,6.6nm,0.9s
STKA  Stephens Creek    63.32 180   P     P      07 07 07.2 -1.7
      comp=Z,1.2nm,0.4s,baz=337,slow=8.8,SNR=2.8
STKA                                LR    LR     07 34 00.0
      comp=Z,124nm,19.0s,baz=27,slow=36
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	comp=Z,1.2nm,0.4s						
AFI	Afiamalu	63.64	128	LR	LR	07 31 30.6	
	comp=Z,50nm,20.6s,baz=284,slow=33						
KIRV	Kirov	64.62	325	P	P	07 07 15.6	-1.7
	comp=Z,7.1nm,0.4s,baz=156,slow=0.2,SNR=4.9						
	comp=Z,7.1nm,0.4s						
KIRV	Kirov	64.62	325	ceP	P	07 07 17.6	+0.3
GEYT	Alibeck	66.67	301	P	P	07 07 30.3	-0.7
	comp=Z,20nm,1.2s,baz=29,slow=3.4,SNR=9.7						
	comp=Z,20nm,1.2s						
BELG	Belogornoye	67.85	319	P	P	07 07 37.7	-0.4
	comp=Z,16nm,0.8s,baz=116,slow=1.1,SNR=5.9						
	comp=Z,16nm,0.8s						
YKA	Yellowknife Ar	68.23	29	P	P	07 07 39.0	-1.3
	comp=Z,1.9nm,0.9s,baz=293,slow=6.2,SNR=18						
	comp=Z,1.9nm,0.9s						
KLMR	Klimovskoe	68.34	329	eP	P	07 07 38.3	-2.8
KLMR				AMP		07 07 50.0	
	comp=Z,20nm,1.5s						
KLMR	Klimovskoe	68.34	329	eP	P	07 07 38.3	-2.8
KLMR				pmax	pmax		
	comp=Z,20nm,1.5s						
ARCES	ARCESS Array B	69.00	340	P	P	07 07 44.8	-0.2
	comp=Z,3.5nm,0.9s,baz=61,slow=7.5,SNR=4.5						
	comp=Z,3.5nm,0.9s						
DAG	Danmarks Havn	71.01	355	iP	P	07 07 56.9	-0.4
DAG				IAmb	IAmb	07 07 58.5	
	comp=Z,7.9nm,1.2s						
JLN	Jalan Bani Buh	72.41	285	P	P	07 08 06.5	-0.2
OBN	Obninsk	72.47	324	LR	LR	07 42 41.7	
	comp=Z,36nm,19.0s,baz=350,slow=38						
OBN	Obninsk	72.47	324	⇑eP	P	07 08 06.5	+0.1
OBN				pmax	pmax		
	comp=Z,10.0nm,0.4s						
WSAR	Wadi Sarin	72.55	287	P	P	07 08 08.0	+0.5
WBK	Wadi Bani Khal	72.56	286	P	P	07 08 07.6	0.0
BIDO	Bidbid	72.83	287	P	P	07 08 09.5	+0.4
SMDO	Samad	73.10	287	P	P	07 08 11.6	+0.7
BANOM	Banah	73.19	290	P	P	07 08 11.3	0.0
SHME	Shamm	73.26	291	P	P	07 08 13.1	+1.4
	SNR=6.7						
JMDO	Jabal Madar	73.38	286	P	P	07 08 12.4	0.0
HOQ	Hoqain	73.46	288	P	P	07 08 14.0	+1.1
	SNR=5.9						
MASF	Masafi	73.56	290	P	P	07 08 14.0	+0.5
FINES	FINESS Array B	73.58	333	P	P	07 08 12.2	-0.7
	comp=Z,3.6nm,0.6s,baz=98,slow=4.0,SNR=13						
	comp=Z,3.6nm,0.6s						
FINES	FINESS Array B	73.58	333	iP	P	07 08 11.1	-1.8
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
UOSS	Minazif	73.72	289	P	P	07 08 12.3	-2.1
UOSS	Minazif	73.72	289	P	P	07 08 14.6	+0.2
NEW	Newport	73.75	43	P	P	07 08 13.7	-0.5
NEW	Newport	73.75	43	P	P	07 08 13.7	-0.5
NEW				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SOHO	SOHO	73.83	289	P	P	07 08 14.6	-0.4
SOHO				P	P	07 08 14.6	-0.4
HATD	Hatta, Dubai	73.83	289	P	P	07 08 16.0	+0.9
	SNR=5.9						
BSY	Bisya	73.94	287	P	P	07 08 18.0	+2.2
	SNR=5.3						
ASHO	Ashiyiah	73.96	289	P	P	07 08 17.0	+1.2
	SNR=5.3						
K05A	Summer Lake	74.12	49	IAmb	IAmb	07 08 33.9	
	comp=Z,7.7nm,0.9s						
MHTO	MHTO	74.14	285	P	P	07 08 16.6	-0.3
ARQ	Araqi	74.21	288	P	P	07 08 18.1	+0.8
	SNR=7.1						
FAQ	Al Faqa, Dubai	74.30	290	P	P	07 08 17.4	-0.4
ALNE	Al Ain	74.50	289	P	P	07 08 19.0	+0.1
	SNR=6.5						
KBZ	Khabaz	74.55	312	P	P	07 08 18.0	-0.8
	comp=Z,6.5nm,0.8s,baz=128,slow=3.7,SNR=9.9						
	comp=Z,6.5nm,0.8s						
KBZ	Khabaz	74.55	312	ceP	P	07 08 19.1	+0.2
KBZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KVAR	Kislovodsk Arr	74.56	312	P	P	07 08 17.6	-1.5
	comp=Z,2.5nm,0.3s,baz=168,slow=9.3,SNR=1.4						
	comp=Z,2.5nm,0.3s						
ASUD	Al Ashush, Dub	74.57	290	P	P	07 08 19.8	+0.5
KIV	Kislovodsk	74.57	312	eP	P	07 08 18.8	-0.4
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SHA1	Shidzhatmaz	74.70	312	iP	P	07 08 19.9	-0.2
WALA	Waterton Lakes	75.18	41	IAmb	IAmb	07 08 42.1	
	comp=Z,12nm,1.3s						
SUMG	Summit	75.92	0	iP	P	07 08 26.0	-0.8
SOC	Sochi	76.62	313	eP	P	07 08 28.1	-2.7
SOC				e		07 11 17.1	
SOC				ePPP	PPP	07 13 06.9	
SOC				eS	S	07 18 15.7	-1.5
SOC				eSS	SS	07 23 13.0	+1.3
SOC				pmax	pmax		
	comp=Z,33nm,0.8s						
CMB	Columbia Colle	76.75	53	P	P	07 08 29.6	-2.0
CMB				IAmb	IAmb	07 08 47.6	
	comp=Z,5.0nm,0.9s						
CMB	Columbia Colle	76.75	53	P	P	07 08 29.7	-2.0
CMB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MZR	Muzera	76.83	289	P	P	07 08 32.0	-0.3
	SNR=5.1						
MFID	Camas Ranch	76.99	47	IAmb	IAmb	07 09 02.2	
	comp=Z,4.1nm,0.9s						
NACGM	Naroch	77.25	328	eP	P	07 08 34.1	0.0
	comp=Z,21nm,1.2s,baz=52						
SHAO	Shalim	77.50	283	P	P	07 08 35.4	-0.8
HRY	Holter Researc	77.62	43	P	P	07 08 36.7	+0.2
HLID	Hailey	77.78	46	P	P	07 08 36.4	-1.2
LHV	Little Huntoon	77.92	53	IAmb	IAmb	07 08 59.4	
	comp=Z,4.7nm,0.9s						
NVAR	Mina Array Bea	77.96	52	P	P	07 08 38.1	-0.6
	comp=Z,1.7nm,0.8s,baz=286,slow=5.3,SNR=12						
	comp=Z,1.7nm,0.8s						
DMTO	DMTO	78.21	284	P	P	07 08 39.3	-0.8
DMTO				P	P	07 08 39.3	-0.8
AKASG	Malin Array Be	78.61	323	P	P	07 08 40.8	-1.0
	comp=Z,1.6nm,0.5s,baz=36,slow=5.5,SNR=16						
	comp=Z,1.6nm,0.5s						
AKASG	Malin Array Be	78.61	323	iP	P	07 08 41.2	-0.6
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKBB	Malin Array Si	78.61	323	P	P	07 08 40.8	-1.0
AKBB				IAmb	IAmb	07 08 42.0	
	comp=Z,14nm,1.1s						
AKBB	Malin Array Si	78.61	323	P	P	07 08 40.8	-1.0
AKBB				pmax	pmax		
	comp=Z,14nm,1.1s						
RBK	Rabkut	78.93	284	P	P	07 08 44.2	0.0
WHFO	Wadi Hawf	79.08	284	P	P	07 08 43.7	-1.3
NB2	NORSAR Subarra	79.12	338	P	P	07 08 43.5	-0.9
	comp=Z,12nm,1.1s,baz=43,slow=5.3						
NOA	NORSAR Array B	79.12	338	P	P	07 08 43.7	-0.7
	comp=Z,4.1nm,0.9s,baz=41,slow=5.4,SNR=6.5						
NOA				LR	LR	07 47 07.8	
	comp=Z,104nm,18.9s,baz=255,slow=38						
	comp=Z,4.1nm,0.9s						
ICESG	Greenland Ices	79.42	0	iP	P	07 08 49.2	+3.0
ABTO	Aybut	79.76	284	P	P	07 08 47.9	-0.8
	SNR=5.7						
TPNV	Topopah Spring	80.12	53	IAmb	IAmb	07 09 06.4	
	comp=Z,6.0nm,0.9s						
HWUT	Hardware Ranch	80.61	47	P	P	07 08 51.5	-1.6
PDAR	Pinedale Array	81.18	45	P	P	07 08 55.5	-0.7
	comp=Z,1.4nm,0.9s,baz=279,slow=2.2,SNR=11						
	comp=Z,1.4nm,0.9s						
MPU	Maple Canyon	81.47	48	IAmb	IAmb	07 09 14.1	
	comp=Z,5.4nm,1.0s						
PPT	Papeete	82.08	116	LR	LR	07 46 15.0	
	comp=Z,70nm,18.1s,baz=353,slow=36						
LCMT	Little Creek M	82.11	51	IAmb	IAmb	07 09 17.4	
	comp=Z,4.7nm,1.0s						
MTPU	Mount Pierson	82.23	50	IAmb	IAmb	07 09 10.5	
	comp=Z,5.8nm,1.3s						
P17A	Butcher Ranch,	82.34	48	IAmb	IAmb	07 09 19.2	
	comp=Z,6.2nm,1.0s						
KNB	Kanab	82.38	51	IAmb	IAmb	07 09 20.1	
	comp=Z,5.2nm,1.0s						
RDMU	Red Mountain	82.44	47	IAmb	IAmb	07 09 19.4	
	comp=Z,8.1nm,0.9s						
BR131	Keskin Array S	82.54	312	IAmb	IAmb	07 09 05.1	
	comp=Z,9.3nm,1.1s						
BRTR	Keskin Array B	82.54	312	P	P	07 09 02.5	-0.8
	comp=Z,3.9nm,1.0s,baz=90,slow=3.7,SNR=12						
BRTR				LR	LR	07 49 47.3	
	comp=Z,96nm,18.7s,baz=330,slow=39						
	comp=Z,3.9nm,1.0s						
BRTR	Keskin Array B	82.54	312	iP	P	07 09 03.2	0.0
BRTR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
P18A	Preston Nutter	82.57	48	IAmb	IAmb	07 09 36.6	
	comp=Z,7.5nm,1.2s						
SRU	San Rafael Swe	82.69	48	P	P	07 09 02.9	-1.2
SRU				IAmb	IAmb	07 09 20.6	
	comp=Z,6.0nm,0.9s						
SRU	San Rafael Swe	82.69	48	P	P	07 09 02.9	-1.2
SRU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
RAYN	Ar Rayn	82.91	293	P	P	07 09 04.5	-0.8
RAYN	Ar Rayn	82.91	293	P	P	07 09 04.6	-0.8
RAYN				pmax	pmax		
	comp=Z,12nm,0.8s						
RAYN	Ar Rayn	82.91	293	P	P	07 09 05.3	-0.1
STHS	Stebnicka Huta	83.40	325	eP	P	07 09 07.3	-0.1
STHS				pmax	pmax		
	comp=Z,9.0nm,1.2s						
STHS	Stebnicka Huta	83.40	325	eP	P	07 09 07.3	-0.1
OJC	Ojcow	83.54	327	P	P	07 09 07.2	-0.9
OJC				IAmb	IAmb	07 09 08.9	
	comp=Z,8.6nm,0.9s						
OJC	Ojcow	83.54	327	P	P	07 09 07.2	-0.9
OJC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ULM	Lac du Bonnet	83.75	33	P	P	07 09 08.4	-0.7
	comp=Z,1.1nm,0.4s,baz=345,slow=20,SNR=2.3						
ULM				LR	LR	07 47 58.9	
	comp=Z,75nm,19.3s,baz=14,slow=37						
	comp=Z,1.1nm,0.4s						
PV13	Radium Mtn., P	84.33	48	IAmb	IAmb	07 09 40.5	
	comp=Z,5.3nm,1.0s						
LANS	Liptovska Anna	84.43	326	eP	P	07 09 15.5	+2.8
LANS	Liptovska Anna	84.43	326	eP	P	07 09 15.5	+2.8
MORC	Moravsky Berou	84.89	327	eP	P	07 09 14.3	-0.7
OSTC	Ostas	84.94	329	eP	P	07 09 15.4	+0.2
OSTC	Ostas	84.94	329	eP	P	07 09 15.4	+0.2
KRLC	Kraliky	85.03	328	eP	P	07 09 15.2	-0.5
KRLC	Kraliky	85.03	328	eP	P	07 09 15.2	-0.5
DPC	Dobruska-Polom	85.04	328	eP	P	07 09 15.5	-0.2
DPC	Dobruska-Polom	85.04	328	eP	P	07 09 15.5	-0.2
VYHS	Vyhne	85.19	326	eP	P	07 09 16.9	+0.4
VYHS				pmax	pmax		
	comp=Z,14nm,1.3s						
VYHS	Vyhne	85.19	326	eP	P	07 09 16.9	+0.4
VYHS				e		07 37 54.6	
JAVC	Velka Javorina	85.48	327	eP	P	07 09 18.5	+0.5
VRAC	Vranov	85.66	328	eP	P	07 09 18.4	-0.4
CLL	Collm	85.77	331	P	P	07 09 17.3	-2.0
CLL	Collm	85.77	331	⇓iP	P	07 09 18.7	-0.6
	comp=Z,18nm,1.2s						
CLL				ex	x	07 09 24.0	
CLL	Collm	85.77	331	⇓iP	P	07 09 18.7	-0.6
CLL				e		07 09 24.0	
CLL				pmax	pmax		
	comp=Z,18nm,1.2s						
KRUC	Moravsky	85.93	327	eP	P	07 09 19.2	-0.9
KHC	Kasperske Hory	87.14	329	eP	P	07 09 25.0	-1.1
KHC	Kasperske Hory	87.14	329	eP	P	07 09 25.0	-1.1
GERES	GERESS Array B	87.30	329	P	P	07 09 27.2	+0.2
	comp=Z,0.5nm,0.5s,baz=42,slow=3.1,SNR=2.8						
	comp=Z,0.5nm,0.5s						
FUORN	Ofenpass-Fuorn	90.50	329	IAmb	IAmb	07 09 42.5	
	comp=Z,6.6nm,0.9s						
LPIG	La Paz	91.56	60	LR	LR	07 45 18.4	
	comp=Z,66nm,19.4s,baz=340,slow=32						
TX32	Lajitas Array	93.11	53	IAmb	IAmb	07 10 11.5	
	comp=Z,8.6nm,1.3s						
TXAR	Lajitas Array	93.11	53	P	P	07 09 53.9	-0.7
	comp=Z,1.8nm,0.8s,baz=299,slow=2.8,SNR=16						
	comp=Z,1.8nm,0.8s						
TORD	Torodi Ar. Bea	121.14	313	PKP	PKPdf	07 15 31.7	-1.9
	comp=Z,0.3nm,0.5s,baz=26,slow=2.8,SNR=3.0						
LPAZ	La Paz	148.81	67	PKPbc	PKPdf	07 16 27.9	+2.8
	comp=Z,1.3nm,0.7s,baz=4.5,slow=2.2,SNR=5.0						
LPAZ	La Paz	148.81	67	PKP2	PKPdf	07 16 28.0	+2.8
PLCA	Paso Flores	152.62	118	PKPbc	PKPdf	07 16 35.5	+5.7
	comp=Z,1.0nm,0.7s,baz=100,slow=1.9,SNR=3.6						

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*IDC **14** 07:18:12.4±1.4, 23°07S×170°01E, h0km, mb4.0/5, mbtmp3.9/6, ML3.7/1, MS3.3/3, Error ellipse: s-maj=49.5km s-min=26.4km az=161.0*

*NOU **14** 07:18:15.1, 23°04S×170°07E, h120km, MLv4.4/10, Southeast of Loyalty Islands*

ISC 14 07:18:15.7±0.9, **23°1S**±0°1×**170°1E**±0°1, **h25**km, **n32**, σ**0s64**/30, **mb4.0**/6, **Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUENC	Ouen Island, N	3.04	282	P	Pn	07 19 01.9	-0.3
YATNC	Mamie plateau,	3.10	288	P	Pn	07 19 02.3	-0.7
ONTNC	Ouen Toro	3.42	282	P	Pn	07 19 07.1	-0.3
LIFNC	LIFOU	3.47	310	P	Pn	07 19 07.4	-0.7
DZM	Mont Dzumac	3.49	286	Pn	Pn	07 19 08.1	-0.4
	7.1nm,0.3s,baz=97,slow=8.6,SNR=228						
DZM				Sn	Sn	07 19 49.8	+0.8
	11nm,0.3s,baz=347,slow=23,SNR=5.9						
	30nm,0.6s						
DZM	Mont Dzumac	3.49	286	P	Pn	07 19 07.9	-0.6
NOUC	Port Laguerre	3.60	285	P	Pn	07 19 09.4	-0.6
RTV	Rentapao	5.46	343	P	Pn	07 19 34.5	-1.0
NFK	Norfolk Island	6.25	197	P	Pn	07 19 45.2	-1.2
MSVF	Nonsavu	9.17	56	LR	LR	07 23 34.8	
	comp=Z,175nm,19.5s,baz=192,slow=35						
RPZ	Rata Peaks	20.61	178	LR	LR	07 30 20.9	
	comp=Z,60nm,18.1s,baz=47,slow=35						
STKA	Stephens Creek	26.68	245	P	P	07 23 53.1	+0.3
	2.4nm,0.7s,baz=97,slow=11,SNR=5.7						
	2.4nm,0.7s						
ASAR	Alice Springs	33.15	262	P	P	07 24 50.3	0.0
	3.2nm,0.8s,baz=100,slow=10,SNR=37						
	3.2nm,0.8s						
WRA	Warramunga Arr	33.33	268	P	P	07 24 50.9	-1.0
	0.4nm,0.5s,baz=100,slow=8.3,SNR=9.3						
	0.4nm,0.5s						
SIJI	Sorong	43.65	295	LR	LR	07 43 51.5	
	comp=Z,57nm,21.1s,baz=158,slow=35						
MBWA	Marble Bar	46.49	262	P	P	07 26 41.1	0.0
	6.0nm,1.9s						
SONM	Songino Array	90.72	323	P	P	07 31 17.5	+1.1
	0.7nm,0.7s,baz=144,slow=4.8,SNR=5.2						
	0.7nm,0.7s						
ILAR	Eielson Array	93.64	17	P	P	07 31 29.2	-0.2
	0.4nm,0.9s,baz=252,slow=6.0,SNR=5.3						
	0.4nm,0.9s						
ARCES	ARCESS Array B	128.94	345	PKP	PKiKP	07 37 21.1	0.0
	6.0nm,1.1s,baz=29,slow=3.0,SNR=4.1						
RONA	Rosalia, Austr	147.70	326	iPKP	PKPbc	07 37 58.3	+0.2
	2.9nm,0.5s						
GERES	GERESS Array B	148.19	330	PKPbc	PKPbc	07 38 00.2	+0.7
	1.9nm,0.8s,baz=47,slow=2.5,SNR=12						
SOKA	Soboth	149.02	326	ePKP	PKPbc	07 38 00.2	-1.5
	2.0nm,0.7s						
KBA	Koelnbreinsper	149.60	328	ePKP	PKPbc	07 38 02.7	-0.5
	6.1nm,1.2s						
MYKA	Terra Mystica	149.77	327	ePKP	PKPbc	07 38 03.5	0.0
	1.6nm,0.5s						
ABTA	Abfaltersbach	150.24	328	iPKP	PKPbc	07 38 04.5	-0.2
	5.0nm,0.6s						
WTTA	Wattenberg	150.29	330	iPKP	PKPbc	07 38 05.2	+0.4
	4.7nm,0.8s						
MOTA	Moosalm	150.48	330	iPKP	PKiKP	07 38 05.9	-0.1
	9.3nm,0.9s						
SQTA	Sankt Quirin	150.52	330	iPKP	PKPbc	07 38 05.7	+0.3
	7.5nm,0.6s						
RETA	Reutte	150.53	331	iPKP	PKiKP	07 38 06.5	+0.5
	5.0nm,1.1s						
FETA	Feichten	150.89	330	iPKP	PKiKP	07 38 07.0	+0.1
	7.6nm,0.9s						
DAVA	Damuels	151.07	332	iPKP	PKiKP	07 38 07.3	+0.1
	1.9nm,0.5s						
TORD	Torodi Ar. Bea	165.19	230	PKPab	PKPab	07 39 16.1	+0.3
	1.6nm,1.2s,baz=132,slow=3.9,SNR=3.2						

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*IDC **14** 07:23:03.9±1.4, 8°90S×127°80E, h0km, mb3.9/5, mbtmp3.9/7, ML4.1/2, Error ellipse: s-maj=174.7km s-min=28.6km az=64.0*

ISC 14 07:23:09.5±0.9, **8°60S**±0°10×**128°4E**±0°2, **h35**km, **n12**, σ**1s34**/12, **mb4.0**/5, **Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTN	Manton Dam	5.01	148	P	Pn	07 24 23.6	+1.4
	68nm,0.6s						
KDU	Kakadu	5.72	136	P	Pn	07 24 32.8	+0.9
	18nm,0.7s						
FAKI	Fak Fak	6.83	35	P	Pn	07 24 47.0	-0.3
	36nm,1.5s						
KNRA	Kununurra	7.04	177	P	Pn	07 24 51.6	+1.5
	26nm,0.8s						
WRA	Warramunga Arr	12.66	154	Pn	Pn	07 26 04.8	-2.4
	1.2nm,0.3s,baz=325,slow=14,SNR=37						
WRA				Sn	Sn	07 28 18.4	-8.7
	1.6nm,0.3s,baz=329,slow=22,SNR=16						
	1.2nm,0.3s						
ASAR	Alice Springs	15.89	161	Pn	Pn	07 26 48.9	-1.7
	0.6nm,0.3s,baz=336,slow=9.8,SNR=31						
ASAR				Sn	Sn	07 29 28.2	-17
	0.1nm,0.3s,baz=319,slow=18,SNR=2.9						
	0.9nm,0.5s						
QIS	Mount Isa	16.09	139	P	Pn	07 26 54.5	+1.3
	6.6nm,2.0s						
SONM	Songino Array	59.47	343	P	P	07 33 09.4	+0.4
	0.2nm,0.6s,baz=168,slow=8.8,SNR=2.0						
	0.2nm,0.6s						
MKAR	Makanchi Array	68.70	328	P	P	07 34 09.4	-0.1
	0.7nm,0.5s,baz=124,slow=7.8,SNR=18						
	0.7nm,0.5s						
ZALV	Zalesovo Beam	72.32	335	P	P	07 34 30.8	-0.6
	1.3nm,0.6s,baz=138,slow=4.5,SNR=5.3						
	1.3nm,0.6s						
KURBB	Kurchatov Arra	73.04	329	P	P	07 34 35.6	-0.1
	1.1nm,0.5s,baz=133,slow=5.1,SNR=20						
	1.1nm,0.5s						
BVAR	Borovoye Array	78.57	328	P	P	07 35 07.5	+0.2
	0.7nm,0.6s,baz=131,slow=6.3,SNR=4.1						
	0.7nm,0.6s						

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*JMA **14** 07:35:56.9±0.2, 24°N±1°×122°0E±0°8, h31km±3km, TAIWAN REGION*

*TAP **14** 07:35:58.3, 23°86N×122°03E, h37km, ML3.3, C*

ISC 14 07:35:57.9±1.0, **23°83N**±0°03×**122°02E**±0°03, **h32**km±8km, **n69**, σ**0s48**/112, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	EOS4	0.40	43	eP	Pn	07 36 06.8	-0.3
	baz=46						
HWA	Hwalien	0.41	291	P	Pn	07 36 07.5	0.0
	baz=280						
TWD	Chiawan	0.46	303	iP	Pb	07 36 07.8	-0.1
	baz=293						
TWD				iS	Sb	07 36 14.8	+0.2
	baz=293						
ETL	Fush Village	0.49	312	iP	Pb	07 36 08.2	-0.1
	baz=302						
ETL				S	Sb	07 36 15.8	+0.3
	baz=302						
NACB	Ninganchiao	0.52	311	P	Pb	07 36 08.3	-0.4
NACB	Ninganchiao	0.52	311	iP	Pb	07 36 08.3	-0.4
	baz=308						
NACB				S	Sb	07 36 16.0	-0.2
	baz=308						
ESL	Shilin	0.54	268	P	Pn	07 36 08.7	-0.6
	baz=265						
EGFH	Guangfu	0.56	254	eP	Pb	07 36 09.5	0.0
	baz=243						
EGFH				eS	Sn	07 36 18.2	+0.3
	baz=243						
ETLH	Xiulin Townshi	0.62	307	P	Pn	07 36 10.0	-0.5
	baz=304						
ETLH				eS	Sb	07 36 18.9	-0.1
	baz=304						
HGSD	Ruisui	0.64	238	eP	Pb	07 36 10.7	-0.1
	baz=236						
ENA	Nanau	0.65	337	P	Pn	07 36 10.5	-0.4
	baz=325						
ENA				eS	Sb	07 36 20.1	+0.4
	baz=325						
EWUT	Wuta	0.65	340	P	Pn	07 36 10.8	-0.1
	baz=326						
EWUT				S	Sb	07 36 20.1	+0.3
	baz=326						
EHY	Hungye	0.72	243	eP	Pn	07 36 11.6	-0.2
	baz=254						
EHY				eS	Sb	07 36 21.4	-0.2
	baz=254						
OWD	Renai	0.78	279	eP	Pn	07 36 12.6	-0.2
	baz=276						
OWD				eS	Sn	07 36 23.3	-0.2
	baz=276						
TWC	Suao	0.79	349	eP	Pn	07 36 12.9	+0.1
	baz=348						
TWC				eS	Sn	07 36 23.6	+0.1
	baz=348						
YULB	Yu-li	0.79	237	P	Pn	07 36 12.6	-0.3
YULB	Yu-li	0.79	237	eP	Pn	07 36 12.8	-0.1
	baz=249						
CHGB	Renai	0.81	287	P	Pn	07 36 13.3	0.0
	baz=284						
CHGB				eS	Sn	07 36 24.3	+0.1
	baz=284						
VWDT	VWDT	0.81	265	P	Pb	07 36 13.5	-0.1
	baz=262						
VWDT				eS	Sb	07 36 24.2	+0.1
	baz=262						
NNSB	Datong	0.83	316	P	Pn	07 36 13.4	-0.1
	baz=313						
NNSB				eS	Sb	07 36 25.2	+0.2
	baz=313						
LATG	Datong	0.83	327	P	Pn	07 36 13.3	-0.2
	baz=325						
LATG				eS	Sn	07 36 24.4	-0.4
	baz=325						
WUSB	Renai	0.84	281	eP	Pb	07 36 13.8	-0.3
	baz=279						
NDS	Dongshan	0.84	341	eP	Pb	07 36 14.0	-0.2
	baz=339						
NNS	Nan Shan	0.85	316	eP	Pn	07 36 13.8	+0.2
	baz=314						
NNS				eS	Sb	07 36 25.6	+0.2
	baz=314						
TWT	Tachien	0.88	299	eP	Pb	07 36 14.7	-0.2
	baz=296						
TDCB	Techi	0.89	298	eP	Pb	07 36 14.7	-0.3
	baz=296						
ENTT	Nioudou	0.91	333	eP	Pn	07 36 14.5	+0.1
	baz=332						
TWE	Neicheng	0.94	340	eP	Pn	07 36 15.1	+0.2
	baz=339						
SSLB	Suanglung	0.98	268	P	Pn	07 36 15.6	+0.2
SSLB	Suanglung	0.98	268	eP	Pn	07 36 15.6	+0.2
	baz=266						
FUSB	Fushanzhiwuyua	1.00	337	eP	Pn	07 36 16.1	+0.2
	baz=335						
FUSB				eS	Sn	07 36 29.5	+0.6
	baz=335						
YHNB	Yeheng	1.02	325	P	Pn	07 36 16.5	+0.4
YHNB	Yeheng	1.02	325	eP	Pn	07 36 16.3	+0.3
	baz=312						
YHNB				eS	Sn	07 36 29.3	0.0
	baz=312						
SMLT	Sun Moon Lake	1.03	273	eP	Pb	07 36 16.8	-0.5
	baz=271						
SMLT				eS	Sb	07 36 30.4	-0.1
	baz=271						
NSK	Sanguang	1.03	324	eP	Pn	07 36 16.4	+0.2
	baz=312						
NSK				eS	Sn	07 36 29.7	0.0
	baz=312						
WCS	Beigang Elemen	1.04	283	eP	Pb	07 36 17.1	-0.3
	baz=286						
NWLT	Wulai	1.05	334	eP	Pn	07 36 16.8	+0.3
	baz=320						
NWLT				eS	Sn	07 36 30.3	+0.3
	baz=320						
TYC	Yuchr	1.07	274	eP	Pb	07 36 17.3	-0.5
	baz=272						
WHP	Taichung City	1.08	295	P	Pb	07 36 18.0	-0.1
	baz=292						
WHP				eS	Sb	07 36 31.5	-0.4
	baz=292						
YOJ	Yonaguni jima	1.10	55	P	Pn	07 36 17.1	0.0
YOJ				S	Sn	07 36 31.1	-0.1
ELDTW	Lidau	1.12	235	eP	Pn	07 36 17.1	-0.3
	baz=224						
TIPB	Shuangxi	1.15	351	eP	Pb	07 36 18.8	-0.5

	baz=2.0						
TIPB				*e*S	**Sn**	**07 36 33.0**	**+0.6**
	baz=2.0						
ALS	**Alishan**	**1.16**	**254**	*e*P	**Pb**	**07 36 19.2**	**-0.4**
	baz=252						
ALS				*e*S	**Sb**	**07 36 34.2**	**-0.3**
	baz=252						
TWB1	**Santiao Chiao**	**1.17**	**359**	*e*P	**Pb**	**07 36 19.9**	**+0.2**
	baz=359						
TWA	**Mucha**	**1.21**	**341**	*e*P	**Pb**	**07 36 19.9**	**-0.4**
	baz=340						
TWA				*e*S	**Sb**	**07 36 35.2**	**-0.5**
	baz=340						
LIOB	**Emei**	**1.22**	**312**	*e*P	**Pb**	**07 36 20.5**	**0.0**
	baz=310						
LIOB				*e*S	**Sb**	**07 36 36.6**	**+0.5**
	baz=310						
WNT	**Mingjian**	**1.22**	**272**	*e*P	**Pb**	**07 36 20.8**	**+0.3**
	baz=270						
WNT				*e*S	**Sb**	**07 36 36.9**	**+1.0**
	baz=270						
NSTT	**Nanjuang**	**1.22**	**311**	*e*P	**Pb**	**07 36 20.5**	**-0.1**
	baz=309						
NSTT				*e*S	**Sb**	**07 36 35.9**	**-0.1**
	baz=309						
TATO	**Taipei**	**1.24**	**337**	P	**Pn**	**07 36 18.8**	**-0.2**
TWQ1	**Liyutan**	**1.25**	**295**	*e*P	**Pb**	**07 36 21.0**	**+0.1**
	baz=293						
CHN5	**Tsauling**	**1.25**	**260**	*e*P	**Pb**	**07 36 21.0**	**0.0**
	baz=258						
SXI1	**Grass Mountain**	**1.26**	**354**	*e*P	**Pn**	**07 36 20.1**	**+0.7**
	baz=8.0						
SXI1				*e*S	**Sn**	**07 36 35.3**	**0.0**
	baz=8.0						
STYH	**Taoyuan**	**1.32**	**240**	*e*P	**Pb**	**07 36 21.4**	**-0.6**
	baz=231						
STYH				*e*S	**Sn**	**07 36 37.1**	**+0.7**
	baz=231						
NMLH	**Miaoli**	**1.32**	**302**	*e*P	**Pb**	**07 36 23.1**	**+0.9**
	baz=301						
WCKO	**Fanlu**	**1.35**	**254**	*e*P	**Pb**	**07 36 23.0**	**+0.2**
	baz=251						
WCKO				*e*S	**Sb**	**07 36 40.8**	**+1.0**
	baz=251						
NCUH	**Zhongli**	**1.36**	**326**	*e*P	**Pb**	**07 36 21.9**	**-1.0**
	baz=325						
NCUH				*e*S	**Sb**	**07 36 39.1**	**-0.9**
	baz=325						
WDLH	**Douliu**	**1.36**	**264**	*e*P	**Pb**	**07 36 23.0**	**+0.1**
	baz=263						
YM01	**YM01**	**1.37**	**343**	*e*P	**Pb**	**07 36 22.0**	**-1.1**
	baz=326						
YM01				*e*S	**Sn**	**07 36 38.9**	**+0.9**
	baz=326						
TPUB	**Ta-pu**	**1.38**	**248**	*e*P	**Pb**	**07 36 22.7**	**-0.5**
	baz=246						
TPUB				*e*S	**Sb**	**07 36 40.8**	**+0.4**
	baz=246						
CHN4	**Tsaushan**	**1.39**	**250**	*e*P	**Pb**	**07 36 23.2**	**-0.2**
	baz=248						
CHN4				*e*S	**Sb**	**07 36 42.2**	**+1.4**
	baz=248						
WRL	**Guolierlin Hig**	**1.50**	**273**	*e*P	**Pb**	**07 36 24.5**	**-0.7**
	baz=271						
WRL				*e*S	**Sb**	**07 36 44.2**	**+0.2**
	baz=271						
CHN1	**Nanshi**	**1.51**	**245**	*e*P	**Pb**	**07 36 25.0**	**-0.4**
	baz=243						
CHN1				*e*S	**Sb**	**07 36 45.0**	**+0.8**
	baz=243						
TWK	**Hsinying**	**1.51**	**249**	*e*P	**Pb**	**07 36 25.0**	**-0.4**
	baz=246						
TWK				*e*S	**Sb**	**07 36 44.1**	**-0.2**
	baz=246						
HATJ	**Hateruma jima**	**1.65**	**82**	P	**Pn**	**07 36 24.5**	**-0.1**
HATJ				S	**Sn**	**07 36 44.7**	**0.0**
WSL	**Shuilin Townsh**	**1.67**	**260**	*e*P	**Pb**	**07 36 26.8**	**-1.2**
	baz=258						
WSL				*e*S	**Sb**	**07 36 47.5**	**-1.3**
	baz=258						
JKRS	**Kuro-shima**	**1.86**	**77**	P	**Pn**	**07 36 28.0**	**+0.5**
JIJ	**Ishigaki jima**	**2.01**	**74**	P	**Pn**	**07 36 29.3**	**-0.3**
JIJ				S	**Sn**	**07 36 52.8**	**-0.9**
JISG	**Ishigakijimahi**	**2.22**	**70**	P	**Pn**	**07 36 32.4**	**-0.2**
JISG				*e*S	**Sn**	**07 36 59.0**	**+0.1**
JTJ	**Tarama**	**2.58**	**71**	P	**Pn**	**07 36 38.2**	**+0.8**
JTJ				S	**Sn**	**07 37 09.0**	**+1.3**

IDC ***14*** *08:23:48.4±0.8, 6°.78N×73°.00W, h154km±11km, mb2.8/2, mbtmp3.4/4, MS3.1/1, Error ellipse: s-maj=40.7km s-min=7.8km az=131.0*

RSNC ***14*** *08:23:51.1±0.9, 6°.78N×73°.14W, h139km±4km, ML3.2, Mw3.6*

ISC 14 08:23:49.0±0.9**, 6°.82N**±0°.03×**73°.09W**±0°.04**, h149**km±6km**, n30, σ1s.17**/52**, 5C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**202**	⇑*i*P	**Pn**	**08 24 09.9**	**+0.3**
BARC				*e*S	**Sn**	**08 24 24.5**	**-0.7**
BARC				*i*		08 24 26.1	
	comp=Z,414nm,0.2s						
PAMC	**Pamplona, Colo**	**0.64**	**37**	⇓*e*P	**Pn**	**08 24 12.8**	**+1.1**
PAMC				*e*S	**Sn**	**08 24 29.6**	**+0.8**
PAMC				*i*		08 24 31.9	
	comp=Z,406nm,0.5s						
BRRC	**Barranca, Sant**	**0.68**	**295**	⇑*i*P	**Pn**	**08 24 11.8**	**+0.5**
BRRC				*e*S	**Sn**	**08 24 28.1**	**-0.1**
BRRC				*i*		08 24 32.6	
	comp=Z,296nm,0.2s						
RUSC	**La Rusia**	**0.92**	**180**	⇑*e*P	**Pn**	**08 24 13.7**	**+0.1**
RUSC				*e*S	**Sn**	**08 24 31.5**	**-0.8**
RUSC				*i*		08 24 33.0	
	comp=Z,135nm,0.4s						
TAMC	**Tame, Arauca**	**1.34**	**106**	⇑*i*P	**Pn**	**08 24 18.2**	**+1.3**
TAMC				*e*S	**Sn**	**08 24 38.1**	**-0.2**
TAMC				*i*		08 24 40.3	
	comp=Z,71nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.39**	**258**	*e*P	**Pn**	**08 24 16.6**	**-0.7**
PTBC				*e*S	**Sn**	**08 24 37.5**	**-1.4**
PTBC				*i*		08 24 43.4	
	comp=Z,197nm,0.4s						
SPBC	**San Pablo de B**	**1.52**	**220**	⇑*e*P	**Pn**	**08 24 18.8**	**0.0**
SPBC				*e*S	**Sn**	**08 24 41.2**	**-0.4**
SPBC				*i*		08 24 43.5	
	comp=Z,364nm,0.1s						
ZARC	**Zaragoza, Cauc**	**1.88**	**291**	*e*P	**Pn**	**08 24 22.8**	**+0.2**
ZARC				*e*S	**Sn**	**08 24 47.7**	**-0.8**
ZARC				*i*		08 24 54.4	
	comp=Z,285nm,0.4s						
CHIC	**Chingaza**	**2.27**	**196**	*e*P	**Pn**	**08 24 28.2**	**+0.5**
CHIC				*e*S	**Sn**	**08 24 56.5**	**-1.0**
CHIC				*i*		08 25 04.2	
	comp=Z,53nm,0.4s						
ROSC	**El Rosal**	**2.32**	**212**	P	**Pn**	**08 24 29.7**	**+1.4**
	comp=Z,31nm,0.4s,baz=286,slow=18,SNR=57						
ROSC				S	**Sn**	**08 24 58.5**	**+0.1**
	comp=Z,129nm,0.3s,baz=112,slow=18,SNR=9.1						
ROSC	**El Rosal**	**2.32**	**212**	*e*P	**Pn**	**08 24 29.7**	**+1.4**
ROSC				*e*S	**Sn**	**08 24 58.1**	**-0.3**
ROSC				*i*		08 25 05.8	
	comp=Z,158nm,0.4s						
HELC	**Santa Helena**	**2.50**	**256**	*e*P	**Pn**	**08 24 31.8**	**+1.3**
HELC				*e*S	**Sn**	**08 25 02.2**	**-0.2**
HELC				*i*		08 25 11.1	
	comp=Z,60nm,0.2s						
VILC	**Villavicencio,**	**2.76**	**193**	*e*P	**Pn**	**08 24 33.7**	**+0.2**
VILC				*e*S	**Sn**	**08 25 07.4**	**-0.4**
VILC				*i*		08 25 12.2	
	comp=Z,93nm,0.3s						
GUY2C	**Guyana, Caldas**	**2.76**	**235**	*e*P	**Pn**	**08 24 34.5**	**+0.6**
GUY2C				*e*S	**Sn**	**08 25 08.3**	**-0.1**
GUY2C				IAML		08 25 16.6	
	comp=Z,91nm,0.5s						
PTGC	**Puerto Gaitan,**	**2.77**	**160**	*e*P	**Pn**	**08 24 33.0**	**-0.5**
PTGC				*e*S	**Sn**	**08 25 06.0**	**-1.9**
PTGC				*i*		08 25 08.7	
	comp=Z,87nm,0.4s						
NIZA	**Niza - Manizal**	**2.95**	**234**	*e*S	**Sn**	**08 25 14.2**	**+2.0**
CBOC	**Ciudad Bolivar**	**3.06**	**252**	*e*P	**Pn**	**08 24 38.2**	**+0.9**
CBOC				*e*S	**Sn**	**08 25 13.6**	**-0.9**
CBOC				*i*		08 25 19.2	
	comp=Z,29nm,0.4s						
DBBC	**Dabeiba**	**3.10**	**274**	*e*P	**Pn**	**08 24 38.7**	**+0.9**
DBBC				*e*S	**Sn**	**08 25 14.9**	**-0.6**
DBBC				*i*		08 25 23.5	
	comp=Z,26nm,0.2s						
SDV	**Santo Domingo**	**3.18**	**50**	P	**Pn**	**08 24 39.7**	**+0.8**
	comp=Z,25nm,0.2s,baz=249,slow=13,SNR=30						
SDV				S	**Sn**	**08 25 16.2**	**-1.2**
	comp=Z,31nm,0.5s,baz=83,slow=23,SNR=13						
ARGC	**Ariguani, Magd**	**3.23**	**339**	*e*P	**Pn**	**08 24 41.3**	**+2.0**
ARGC				*e*S	**Sn**	**08 25 19.6**	**+1.4**
ANIL	**Santa Ana**	**3.27**	**225**	*e*P	**Pn**	**08 24 41.5**	**+1.4**
ANIL				*e*S	**Sn**	**08 25 19.7**	**+0.2**
ANIL				*i*		08 25 24.1	
	comp=Z,176nm,0.4s						
ORTC	**Ortega, Tolima**	**3.60**	**217**	*e*P	**Pn**	**08 24 44.2**	**0.0**
ORTC				*e*S	**Sn**	**08 25 26.9**	**0.0**
ORTC				*i*		08 25 31.9	
	comp=Z,61nm,0.3s						
APAC	**Apartado, Choc**	**3.62**	**287**	*e*P	**Pn**	**08 24 44.3**	**-0.1**
APAC				*e*S	**Sn**	**08 25 27.0**	**-0.3**
APAC				*i*		08 25 35.6	
	comp=Z,24nm,0.6s						
SJCC	**San Jacinto, C**	**3.69**	**326**	*e*P	**Pn**	**08 24 44.1**	**-1.2**
SJCC				*e*S	**Sn**	**08 25 25.2**	**-3.7**
SJCC				*i*		08 25 30.1	
	comp=Z,38nm,0.5s						
LCBC	**Los crdobas,**	**3.83**	**302**	*e*P	**Pn**	**08 24 48.5**	**+1.5**
MDP	**Montagnes des**	**20.41**	**94**	LR	LR	08 35 42.5	
	comp=Z,53nm,18.7s,baz=264,slow=35						
TXAR	**Lajitas Array**	**36.48**	**312**	P	**P**	**08 30 40.5**	**+0.3**
	comp=Z,0.1nm,0.5s,baz=126,slow=10,SNR=2.0						
	comp=Z,0.1nm,0.5s						
YKA	**Yellowknife Ar**	**63.27**	**340**	P	**P**	**08 34 00.3**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=130,slow=7.0,SNR=9.1						
	comp=Z,0.3nm,0.5s						
ASAR	**Alice Springs**	**149.14**	**234**	PKPbc	**PKPdf**	**08 43 19.1**	**+2.6**
	comp=Z,0.2nm,0.4s,baz=110,slow=3.6,SNR=6.1						
WRA	**Warramunga Arr**	**150.36**	**241**	PKPbc	**PKPbc**	**08 43 22.4**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=109,slow=2.6,SNR=6.3						

IDC ***14*** *08:26:09.2±1.6, 5°.87S×152°.36E, h0km, mb3.7/3, mbtmp3.8/4, ML1.6/1, Error ellipse: s-maj=44.7km s-min=17.8km az=110.0*

ISC 14 08:26:14.3±1.6**, 5°.9S**±0°.1×**152°.4E**±0°.2**, h38**km**, n6, σ0s.97**/8**,** **mb3.6**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.59**	**347**	Pn	**Pn**	**08 26 38.8**	**-1.2**
	54nm,0.3s,baz=157,slow=13,SNR=36						
KRVT				Sn	**Sn**	**08 27 00.7**	**+1.3**
	103nm,0.3s,baz=98,slow=23,SNR=14						
PMG	**Port Moresby**	**6.25**	**235**	Pn	**Pn**	**08 27 43.9**	**-0.1**
	0.8nm,0.3s,baz=24,slow=8.0,SNR=5.5						
PMG				Sn	**Sn**	**08 28 54.3**	**+0.2**
	0.6nm,0.3s,baz=24,slow=12,SNR=2.0						
	15nm,0.8s						
WRA	**Warramunga Arr**	**22.43**	**230**	P	**P**	**08 31 09.6**	**-0.4**
	1.1nm,0.7s,baz=55,slow=10,SNR=9.9						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**25.08**	**223**	P	**P**	**08 31 35.5**	**0.0**
	2.1nm,0.8s,baz=55,slow=9.3,SNR=32						
	2.1nm,0.8s						
ILAR	**Eielson Array**	**83.31**	**22**	P	**P**	**08 38 37.8**	**+0.9**
	0.4nm,0.7s,baz=250,slow=5.3,SNR=7.9						
	0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**150.22**	**286**	PKPbc	**PKiKP**	**08 46 02.5**	**-0.7**
	0.3nm,0.6s,baz=57,slow=2.7,SNR=2.8						

ANF ***14*** *08:32:34.0±0.4, 37°.29N×98°.17W, h5km, ML2.7/8, Error ellipse: s-maj=4.8km s-min=3.2km az=81.0*

NEIC ***14*** *08:32:34.4±0.9, 37°.27N±0°.03×98°.16W±0°.02, h5km±2km, mb_Lg2.0/10, ML2.5/44, Error ellipse: s-maj=4.5km s-min=3.1km az=2.0*

ISC 14 08:32:34.1±1.2**, 37°.28N**±0°.03×**98°.17W**±0°.03**, h3**km±10km**, n44, σ0s.52**/49**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN12	**Harper NE Stat**	**0.14**	**84**	Pg	**Pg**	**08 32 37.3**	**+0.5**
KAN12				Sg	**Sg**	**08 32 39.0**	**+0.3**
KAN12				IAML		08 32 39.9	
	comp=E,1μm,0.3s						
KAN08	**Anthony NE Sta**	**0.17**	**109**	Pg	**Pg**	**08 32 37.7**	**+0.3**
KAN08				Sg	**Sg**	**08 32 39.6**	**0.0**
KAN08				IAML		08 32 40.0	
	comp=N,1μm,0.2s						
KAN08				IAML		08 32 40.0	
	comp=E,2μm,0.1s						
KAN06	**Argonia West S**	**0.25**	**98**		**Pg**	**08 32 39.2**	**+0.3**
KAN06				Sg	**Sg**	**08 32 41.9**	**-0.3**
KAN06				IAML		08 32 42.6	
	comp=N,972nm,0.2s						
KAN05	**Bluff City Nor**	**0.29**	**126**		**Pg**	**08 32 40.0**	**+0.2**
KAN01	**Argonia South**	**0.35**	**111**	Pg	**Pg**	**08 32 41.2**	**+0.3**
KAN01				IAML		08 32 45.7	
	comp=E,627nm,0.2s						
KAN14	**Manchester OK**	**0.36**	**153**	Pg	**Pg**	**08 32 41.4**	**+0.3**
KAN17	**Caldwell West**	**0.40**	**126**	Pg	**Pg**	**08 32 42.0**	**+0.2**
KAN17				IAML		08 32 47.3	
	comp=E,520nm,0.3s						
KAN17				IAML		08 32 50.6	
	comp=N,427nm,0.3s						
KS21	**Milan North St**	**0.41**	**89**	Pg	**Pg**	**08 32 42.2**	**+0.3**
KAN09	**Caldwell North**	**0.47**	**108**		**Pg**	**08 32 43.2**	**+0.2**
KAN09				IAML		08 32 49.8	
	comp=N,425nm,0.2s						
KAN09				IAML		08 32 50.3	
	comp=E,420nm,0.2s						
OK032	**Salt Plains WL**	**0.48**	**184**	Pg	**Pg**	**08 32 43.8**	**+0.6**
OK032				IAML		08 32 50.8	
	comp=E,467nm,0.2s						
OK032				IAML		08 32 52.2	
	comp=E,395nm,0.2s						
KS20	**Mayfield South**	**0.49**	**96**		**Pg**	**08 32 43.8**	**+0.2**
GC02	**Grant County #**	**0.50**	**150**	Pg	**Pg**	**08 32 43.2**	**-0.4**
KAN13	**South Haven SW**	**0.62**	**116**		**Pg**	**08 32 45.9**	**+0.1**
KAN13				IAML		08 32 53.9	
	comp=E,219nm,0.3s						
OK035	**E0210 Rd and N**	**0.72**	**217**	Pg	**Pg**	**08 32 48.4**	**+0.6**
NOKA	**Waynoka**	**0.89**	**224**		**Pb**	**08 32 51.9**	**-0.2**
NOKA				IAML		08 33 10.4	
	comp=E,136nm,0.3s						
OK038	**West end E0370**	**0.93**	**210**	Pg	**Pg**	**08 32 52.0**	**+0.3**
OK038				IAML		08 33 12.7	
	comp=E,201nm,0.3s						
BLOK	**Blackwell**	**0.93**	**124**	Pg	**Pg**	**08 32 51.5**	**-0.3**
BLOK				IAML		08 33 06.1	
	comp=N,137nm,0.2s						
BLOK				IAML		08 33 10.9	
	comp=E,156nm,0.2s						
U32A	**Winter Ranch,**	**1.12**	**217**	Pg	**Pg**	**08 32 55.2**	**-0.3**
U32A	**Winter Ranch,**	**1.12**	**217**	P	**Pg**	**08 32 55.6**	**+0.1**
	baz=37						
U32A				S	**Sb**	**08 33 10.9**	**-0.2**
	baz=37						
R32A	**Long Quarter,**	**1.22**	**340**		**Pb**	**08 32 57.8**	**+0.1**
R32A				IAML		08 33 14.0	
	comp=E,76nm,0.3s						
R32A				IAML		08 33 18.6	
	comp=N,78nm,0.3s						
R32A	**Long Quarter,**	**1.22**	**340**	P	**Pb**	**08 32 57.7**	**0.0**
	baz=159						
R32A				S	**Sb**	**08 33 13.8**	**0.0**
	baz=159						
OK045	**Pawnee Station**	**1.30**	**129**		**Pn**	**08 32 58.1**	**-1.0**
OK050	**Pawnee Station**	**1.30**	**133**		**Pn**	**08 32 58.2**	**-0.9**
OK050				IAML		08 33 18.7	
	comp=N,108nm,0.2s						
OK050				IAML		08 33 21.9	
	comp=N,115nm,0.2s						
OK046	**Pawnee Station**	**1.34**	**131**	Pn	**Pn**	**08 32 58.3**	**-1.4**
T35A	**Sooner Cattle**	**1.38**	**105**	Pn	**Pn**	**08 32 59.5**	**-0.7**
T35B	**Sooner Cattle**	**1.38**	**105**	P	**Pn**	**08 32 59.5**	**-0.7**
	baz=286						
QUOK	**Quay**	**1.62**	**133**		**Pn**	**08 33 03.4**	**-0.1**
OK053	**SW of W Deep R**	**1.69**	**138**		**Pn**	**08 33 04.7**	**+0.3**
OK053				IAmb_Lg		08 33 27.2	
	comp=Z,4.3nm,1.0s						
CSTR	**Hydro, Custer**	**1.69**	**194**		**Pb**	**08 33 05.2**	**-0.5**
OK052	**Battle Ridge R**	**1.69**	**139**		**Pn**	**08 33 04.7**	**+0.2**
OK052				IAmb_Lg		08 33 27.1	
	comp=Z,3.9nm,0.8s						
OK031	**S. Brethren Rd**	**1.71**	**141**	Pn	**Pn**	**08 33 04.2**	**-0.5**
OK034	**N. Norfolk Rd.**	**1.73**	**137**	Pn	**Pn**	**08 33 04.5**	**-0.5**
OK030	**Cody Creek RV**	**1.75**	**140**		**Pn**	**08 33 05.0**	**-0.3**
CBKS	**Cedar Bluff**	**1.97**	**322**	P	**Pb**	**08 33 09.6**	**-1.0**
	baz=141						
DEOK	**Depew**	**1.97**	**136**		**Pn**	**08 33 08.0**	**-0.3**
KSU1	**Kansas State U**	**2.19**	**34**	IAmb_Lg		08 33 48.9	
	comp=Z,12nm,0.9s						
KSU1	**Kansas State U**	**2.19**	**34**	P	**Pn**	**08 33 10.6**	**-0.8**
	baz=214						
KSU1				S	**Sn**	**08 33 40.0**	**+1.0**
	baz=214						
TUL1	**Leonard**	**2.35**	**125**	P	**Pn**	**08 33 13.5**	**-0.1**
	baz=306						
TUL1				S	**Sn**	**08 33 43.9**	**+0.8**
	baz=306						
WMOK	**Wichita Mounta**	**2.59**	**191**	P	**Pn**	**08 33 17.1**	**+0.3**
	baz=11						
WMOK				S	**Sn**	**08 33 49.5**	**+0.7**
	baz=11						
U38A	**Gravette**	**3.15**	**104**	P	**Pn**	**08 33 24.5**	**-0.1**
	baz=287						
X37A	**Clayton**	**3.52**	**139**	P	**Pn**	**08 33 29.8**	**+0.2**
	baz=321						
HHAR	**Hobbs**	**3.54**	**105**	IAmb_Lg		08 34 28.7	
	comp=Z,5.2nm,0.9s						
HHAR	**Hobbs**	**3.54**	**105**	P	**Pn**	**08 33 30.0**	**0.0**
	baz=288						
JCT	**Junction City**	**6.92**	**192**	IAmb_Lg		08 36 15.5	
	comp=Z,3.0nm,0.9s						

IDC ***14*** *08:39:13.3±6.5, 36°.92N×142°.34E, h0km, mb3.8/5, mbtmp3.8/6, ML2.6/1, Error ellipse: s-maj=120.3km s-min=44.2km az=146.0*

JMA ***14*** *08:39:21.5±0.2, 37°.4N±0°.3×141°.6E±0°.9, h30km±1km, MV3.6/38, E OFF FUKUSHIMA PREF*

NIED ***14*** *08:39:21.5, 37°.36N×141°.57E, h30km, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.09; $M_{\theta\theta}$0.08; $M_{\phi\phi}$1.00; $M_{r\theta}$-0.14; $M_{\theta\phi}$0.64; $M_{\phi r}$-0.28; Fault plane solution: $M_0$1.25000×10^{14} NP1:ϕ_s27.00000°, δ52.00000°, λ-90.00000°. NP2:ϕ_s207.00000°, δ38.00000°, λ-90.00000°.*

ISC 14 08:39:19.4±2.7**, 37°.34N**±0°.06×**141°.7E**±0°.1**, h7**km±12km**, n22, σ0s.75**/23**, mb3.7**/5**, 5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.64**	**272**	P	**Pb**	**08 39 32.5**	**-0.4**
JFK				S	**Sg**	**08 39 40.4**	**+0.4**
JMST	**Minamisoumatoc**	**0.73**	**302**	P	**Pg**	**08 39 34.1**	**+0.6**
JMST				*e*S	**Sg**	**08 39 42.8**	**-0.2**
ONAJ	**Iwakimizuishiy**	**0.74**	**251**	P	**Pb**	**08 39 34.1**	**-0.5**
ONAJ				S	**Sg**	**08 39 43.5**	**+0.3**
JMM	**Marumori**	**0.87**	**307**	⇓P	**Pg**	**08 39 36.3**	**+0.1**
JMM				⇓S	**Sg**	**08 39 46.9**	**-0.6**
JFFD	**Fukushimafurud**	**0.92**	**254**	⇓P	**Pb**	**08 39 37.0**	**-0.8**
JOTO	**OTAMA OYAMA**	**1.09**	**282**	P	**Pn**	**08 39 40.3**	**-0.8**
JOTO				*e*S	**Sg**	**08 39 53.5**	**-0.9**
JIO	**Ouri**	**1.14**	**347**	⇓P	**Pb**	**08 39 40.9**	**-0.5**
JHO	**Hitachi**	**1.15**	**231**	P	**Pn**	**08 39 40.2**	**-1.7**
JOU	**Okura**	**1.30**	**322**	P	**Pb**	**08 39 44.0**	**-0.2**
JOU				S	**Sn**	**08 40 00.2**	**-1.4**
JFY	**Yanaizu**	**1.57**	**273**	⇓P	**Pn**	**08 39 47.6**	**-0.2**
MJAR	**Matsushiro Arr**	**2.89**	**255**	Pn	**Pn**	**08 40 06.7**	**+0.8**
	0.7nm,0.3s,baz=83,slow=17,SNR=12						
MJAR				Sn	**Sb**	**08 40 47.5**	**+0.7**
	0.7nm,0.3s,baz=276,slow=25,SNR=5.8						
	4.8nm,0.4s						
SONM	**Songino Array**	**27.79**	**303**	P	**P**	**08 45 09.8**	**+0.8**
	0.5nm,0.5s,baz=114,slow=9.6,SNR=3.2						
	0.5nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**28.13**	**122**	T	T	09 14 41.8	
	baz=314,slow=75,SNR=63						
H11N1	**WAKE ISLAND Hy**	**28.14**	**122**	T	T	09 14 42.4	
	baz=314,slow=75,SNR=64						
H11N3	**WAKE ISLAND Hy**	**28.15**	**122**	T	T	09 14 43.1	
	baz=314,slow=75,SNR=58						
H11S1	**WAKE ISLAND Hy**	**28.86**	**124**	T	T	09 15 34.4	
	baz=316,slow=76,SNR=42						
H11S3	**WAKE ISLAND Hy**	**28.86**	**124**	T	T	09 15 37.6	
	baz=316,slow=76,SNR=52						
H11S2	**WAKE ISLAND Hy**	**28.87**	**124**	T	T	09 15 34.4	
	baz=316,slow=76,SNR=38						
ZALV	**Zalesovo Beam**	**41.86**	**312**	P	**P**	**08 47 10.2**	**+0.3**
	0.5nm,0.3s,baz=87,slow=9.1,SNR=4.2						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**44.13**	**302**	P	**P**	**08 47 28.8**	**+0.3**
	0.9nm,0.6s,baz=88,slow=9.8,SNR=13						
	0.9nm,0.6s						
KURBB	**Kurchatov Arra**	**45.98**	**308**	P	**P**	**08 47 43.0**	**-0.1**
	0.9nm,0.3s,baz=83,slow=8.1,SNR=11						
	0.9nm,0.3s						
BVAR	**Borovoye Array**	**50.52**	**312**	P	**P**	**08 48 18.5**	**+0.4**
	0.5nm,0.5s,baz=91,slow=7.5,SNR=2.6						
	0.5nm,0.5s						

IDC ***14*** *08:40:50.8±6.6, 21°.69N×144°.30E, h164km±62km, mb3.5/16, mbtmp3.9/16, Error ellipse: s-maj=23.1km s-min=12.3km az=85.0*

ISC 14 08:40:45.5±0.8**, 21°.7N**±0°.1×**144°.4E**±0°.2**, h114**km**, n19, σ0s.83**/17**, mb3.8**/16**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy**	**21.19**	**95**	T	T	09 08 13.3	
	baz=280						
H11S1	**WAKE ISLAND Hy**	**21.20**	**95**	T	T	09 08 06.2	
	baz=280						
H11S2	**WAKE ISLAND Hy**	**21.20**	**95**	T	T	09 07 54.1	
	baz=280						
KSRS	**Korea Array**	**21.22**	**321**	P	**P**	**08 45 24.2**	**+2.2**
	3.8nm,0.7s,baz=147,slow=9.0,SNR=11						
	3.8nm,0.7s						
KLR	**Kul'dur**	**29.28**	**343**	P	**P**	**08 46 37.2**	**+0.4**
	0.5nm,0.4s,baz=153,slow=14,SNR=2.4						
	0.5nm,0.4s						
SONM	**Songino Array**	**40.07**	**320**	P	**P**	**08 48 09.3**	**-0.4**
	0.4nm,0.4s,baz=124,slow=8.0,SNR=2.8						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**42.51**	**194**	P	**P**	**08 48 29.9**	**+0.2**
	2.3nm,0.3s,baz=14,slow=8.6,SNR=84						
	2.3nm,0.3s						
ASAR	**Alice Springs**	**46.20**	**193**	P	**P**	**08 48 59.2**	**+0.1**
	0.5nm,0.6s,baz=14,slow=8.4,SNR=11						
	0.5nm,0.6s						
STKA	**Stephens Creek**	**53.31**	**183**	P	**P**	**08 49 52.9**	**+0.2**
	0.6nm,0.4s,baz=36,slow=8.4,SNR=4.2						
	0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**54.92**	**321**	P	**P**	**08 50 03.5**	**-0.7**
	0.4nm,0.3s,baz=91,slow=6.3,SNR=2.1						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**55.53**	**313**	P	**P**	**08 50 08.6**	**-0.3**
	0.4nm,0.7s,baz=89,slow=8.6,SNR=4.5						
MKAR				PcP	**PcP**	**08 51 07.2**	**-0.3**
	0.4nm,0.4s,baz=75,slow=4.2,SNR=7.6						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**58.30**	**317**	P	**P**	**08 50 27.6**	**-0.6**
	1.0nm,0.4s,baz=95,slow=7.6,SNR=7.1						
	1.0nm,0.4s						
ILAR	**Eielson Array**	**61.56**	**27**	P	**P**	**08 50 49.7**	**-0.6**
	0.7nm,0.8s,baz=241,slow=7.2,SNR=8.9						
	0.7nm,0.8s						
BVAR	**Borovoye Array**	**63.41**	**320**	P	**P**	**08 51 02.3**	**-0.5**
	1.6nm,0.4s,baz=86,slow=7.2,SNR=11						
	1.6nm,0.4s						
INK	**Inuvik**	**67.15**	**24**	P	**P**	**08 51 26.2**	**-0.4**
	0.6nm,0.6s,baz=289,slow=6.6,SNR=5.8						
	0.6nm,0.6s						
YKA	**Yellowknife Ar**	**75.96**	**28**	P	**P**	**08 52 19.6**	**+0.1**
	0.5nm,0.6s,baz=291,slow=5.5,SNR=9.5						
	0.5nm,0.6s						
ARCES	**ARCESS Array B**	**79.30**	**342**	P	**P**	**08 52 38.0**	**0.0**
	1.7nm,0.8s,baz=56,slow=6.6,SNR=1.3						
	1.7nm,0.8s						
NVAR	**Mina Array Bea**	**82.29**	**52**	P	**P**	**08 52 55.7**	**+0.9**
	0.9nm,0.6s,baz=279,slow=5.6,SNR=10						
	0.9nm,0.6s						
FINES	**FINESS Array B**	**83.68**	**335**	P	**P**	**08 52 59.9**	**-1.4**
	1.1nm,0.4s,baz=69,slow=5.1,SNR=2.2						
	1.1nm,0.4s						

IDC ***14*** *08:47:22.7±1.8, 1°.10N×122°.03E, h0km, mb3.1/3, mbtmp3.1/3, Error ellipse: s-maj=219.1km s-min=29.2km*

az=61.0
DJA ***14*** *08:47:33.2±0.5, 1°N±7°×12°1E±°, h33^{km}±14^{km}, M4.0/6, mb4.2/1, MLv4.0/6*
ISC 14 08:47:30.3±1.9, **0°.8N**±0°.2×**121°.12E**±0°.07, **h35^{km}**, **n8**, σ**3^s.38**/8, **mb3.1**/3, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	0.88	111	P	Pn	08 47 48.5	+2.2
MRSI				S	Sn	08 48 00.1	+2.2
MPSI	Mapaga	1.30	250	P	Pn	08 47 54.6	+2.6
GTOI	Gorontalo	1.90	95	P	Pn	08 48 01.0	+0.7
LUWI	Luwuk	2.46	138	P	Pn	08 48 10.5	+2.5
SPSI	Sidrap Palu	4.91	196	P	Pn	08 48 42.5	+0.8
WRA	Warramunga Arr	24.34	149	P	P	08 52 40.2	-5.0
	0.2nm,0.4s,baz=327,slow=11,SNR=4.6						
	0.2nm,0.4s						
ASAR	Alice Springs	27.30	154	P	P	08 53 09.1	-2.9
	0.1nm,0.3s,baz=342,slow=15,SNR=1.4						
	0.1nm,0.3s						
MKAR	Makanchi Array	56.96	329	P	P	08 57 11.1	-1.2
	0.2nm,0.4s,baz=147,slow=8.4,SNR=2.8						
	0.2nm,0.4s						

OSPL ***14*** *08:58:31.7±2.8, 19°.96N×71°.92W, h0^{km}±26^{km}, ML2.3*
SSNC ***14*** *08:58:31.7±2.3, 20°.10N×71°.51W, h5^{km}±31^{km}, MD2.9, ML2.0*
ISC 14 08:58:30.9±1.5, **20°.02N**±0°.05×**71°.76W**±0°.05, **h1^{km}**±13^{km}, **n10**, σ**1^s.29**/18, **Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LODA1	ITESIL, Dajabo	0.47	174	*i* P	Pg	08 58 40.5	+0.5
LODA1				*e*S	Sg	08 58 46.7	+0.6
LODA1				IAML		08 58 47.9	
	comp=Z,924nm,0.8s						
SDDR	Presa de Saban	1.12	157	*e*P	Pg	08 58 51.8	-0.6
SDDR				*e*S	Sg	08 59 07.7	+0.8
SDDR	Presa de Saban	1.12	157	*i* P	Pg	08 58 51.5	-0.9
SDDR				*e*S	Sg	08 59 06.5	-0.4
SDDR				IAML		08 59 11.1	
	comp=Z,32nm,0.4s						
SC01	Santiago de lo	1.13	121	*i* P	Pb	08 58 53.5	+0.2
SC01				*e*S	Sn	08 59 10.7	+0.6
SC01				IAML		08 59 15.7	
	comp=Z,35nm,1.2s						
PAPH	Port-au-Prince	1.57	199	*e*P	Pn	08 58 59.5	-0.5
PAPH				*e*S	Sn	08 59 20.7	-0.3
GRTK	Grand Turk	1.60	21	*e*S	Sg	08 59 22.3	+0.1
MASC	Masc	2.33	274	*e*P	Pn	08 59 12.3	+1.9
MASC				*e*S	Sb	08 59 43.0	-0.1
MASC				IAML		08 59 45.5	
	comp=N,5.6nm,0.3s						
MASC				IAML		08 59 45.5	
	comp=E,3.5nm,0.2s						
MASC	Masc	2.33	274	*i* P	Pn	08 59 08.1	-2.3
MASC				IAML		08 59 44.7	
	comp=Z,26nm,1.1s						
GTBY	Guantanamo Bay	3.16	269	*e*P	Pn	08 59 20.8	-0.9
GTBY				*e*S	Sn	08 59 58.1	-2.0
RCC	Rio Carpintero	3.71	270	*e*P	Pn	08 59 30.2	+0.9
RCC				*e*S	Sn	09 00 16.0	+2.3
RCC				IAML		09 00 17.8	
	comp=N,1.5nm,0.3s						
RCC				IAML		09 00 17.9	
	comp=E,1.6nm,0.2s						

NEIC ***14*** *09:10:40.3±1.7, 54°.55N±0°.02×133°.99W±0°.07, h8^{km}±4^{km}, ML2.7/14, ML2.7(OTT), Error ellipse: s-maj=5.9km s-min=2.4km az=87.0*
PGC ***14*** *09:10:42.6±0.2, 54°.45N×133°.92W, h23^{km}±2^{km}, ML2.7/4, 124km Wnw of Masset, Bc Haida Gwaii Region*
ISC 14 09:10:43.1±1.9, **54°.48N**±0°.04×**133°.81W**±0°.08, **h24^{km}**±15^{km}, **n21**, σ**2^s.42**/27, **Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIB	Langara Island	0.49	117		Pn	09 10 52.8	-1.9
LIB					Sn	09 11 00.9	-1.6
LIB	Langara Island	0.49	117	P	Pn	09 10 52.8	-1.9
LIB				S	Sn	09 11 00.9	-1.6
NDB	Naden	0.73	136		Pn	09 10 56.7	-1.3
NDB	Naden	0.73	136	P	Pn	09 10 56.7	-1.3
CRAG	Craig	1.06	22	Pg	Pn	09 11 00.4	-2.2
CRAG					Sn	09 11 15.8	-0.8
DIB	Dawson Inlet,	1.51	148	Pn	Pn	09 11 08.5	-0.1
DIB				IAML		09 11 41.7	
	comp=E,45nm,3.7s						
DIB	Dawson Inlet,	1.51	148	Pn	Pn	09 11 08.6	-0.1
DIB				Sn	Sn	09 11 27.0	-0.5
MOBC	Moresby Island	1.73	140		Sb	09 11 37.3	+1.9
MOBC	Moresby Island	1.73	140	Pn	Pb	09 11 12.1	-2.1
MOBC				IAML		09 11 60.0	
	comp=N,68nm,3.4s						
MOBC				IAML		09 12 08.7	
	comp=E,66nm,3.3s						
MOBC	Moresby Island	1.73	140	Pn	Pn	09 11 11.6	-0.2
MOBC				Sg	Sb	09 11 37.3	+1.9
RUBB	Prince Rupert	2.08	93	Pn	Pb	09 11 16.7	-3.5
RUBB				IAML		09 12 03.2	
	comp=N,29nm,4.0s						
RUBB				IAML		09 12 03.5	
	comp=E,34nm,3.9s						
RUBB	Prince Rupert	2.08	93	Pg	Pb	09 11 20.0	-0.2
RUBB				Sg	Sb	09 11 48.2	+2.6
GRNB	Grenville Isla	2.35	104	Pn	Pb	09 11 21.7	-3.0
GRNB				IAML		09 11 41.0	
	comp=E,36nm,1.5s						
GRNB				IAML		09 11 52.0	
	comp=N,73nm,4.2s						
HG4B	Hotspring	2.69	143	Sg	Sb	09 12 05.9	+2.8
HG4B	Hotspring	2.69	143	Pn	Pn	09 11 23.9	-1.0
HG4B				IAML		09 12 49.7	
	comp=N,60nm,4.7s						
HG4B	Hotspring	2.69	143	Sg	Sb	09 12 05.9	+2.8
KITB	Kitimat	3.06	96	Sg	Sb	09 12 18.0	+4.4
T35M	Bob Quinn	3.21	37	Sg	Sb	09 12 23.2	+5.1
BESE	Bessie Mountai	4.15	352	Pn	Pn	09 11 42.6	-2.4
SKAG	Skagway	5.06	351	Pn	Pn	09 11 56.5	-0.9
LZH	Lanzhou	77.09	315	*e*P	P	09 22 36.9	+2.4
LZH				sP	sP	09 22 44.4	-0.3
LZH				pmax	pmax		
	comp=Z,19nm,1.5s						

NEIC ***14*** *09:13:25.8±1.8, 3°.28S±0°.08×137°.56E±0°.08, h50^{km}±7^{km}, mb5.0/70, Error ellipse: s-maj=13.4km s-min=10.7km az=223.0*
GCMT ***14*** *09:13:26.8±0.4, 2°.94S±0°.03×137°.73E±0°.03, h54^{km}±2^{km}, MW4.9/55, Moment Tensor Solution. s28,c33; s55,c75; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.14±.21; $M_{\theta\theta}$-1.81±.13; $M_{\phi\phi}$-0.32±.16; $M_{r\theta}$-0.66±.09; $M_{\theta\phi}$0.93±.09; $M_{\phi r}$1.25±.10; Best double couple: $M_0$2.61600×10^{16} NP1:ϕ_s314.00000°,δ61.00000°,λ108.00000°. NP2: ϕ_s99.00000°,δ34.00000°,λ60.00000°. Principal axes: T 2.6780, Plg68.0000°, Azm261.0000°; N -0.1220, Plg16.0000°, Azm125.0000°; P -2.5540, Plg14.0000°, Azm30.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DJA ***14*** *09:13:26.2±0.3, 3°S±3°×13°8E±°, h67^{km}±3^{km}, M4.8/45, mb4.9/45, mB5.2/17, MLv5.1/7, Mw4.7/53, Mw(mB)4.6/17*
IDC ***14*** *09:13:26.6±2.2, 3°.22S×137°.53E, h58^{km}±19^{km}, mb4.1/18, mbtmp4.4/21, ML4.4/2, MS3.9/27, Error ellipse: s-maj=15.4km s-min=7.6km az=74.0*
BJI ***14*** *09:13:27.0±0.0, 3°.30S×137°.60E, h70^{km}, mb4.6/34, mB5.2/14, Ms4.6/2, Ms7 4.2/4*
ISC 14 09:13:25.5±0.3, **3°.25S**±0°.04×**137°.59E**±0°.05, **h50^{km}**, **n216**, σ**1^s.12**/210, **mb4.8**/59, **MS4.0**/24, **1D**, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	1.68	42	P	Pn	09 13 51.0	-1.5
SRPI	Serui, Papua	1.92	315	P	Pn	09 13 56.9	+1.1
GENI	Genyem	2.66	76	P	Pn	09 14 06.0	+0.1
GENI	Genyem	2.66	76	P	Pn	09 14 06.0	+0.1
FAKI	Fak Fak	5.34	273	Pn	Pn	09 14 41.7	-1.1
FAKI	Fak Fak	5.34	273	P	Pn	09 14 42.2	-0.6
FAKI	Fak Fak	5.34	273	P	Pn	09 14 43.2	+0.4
	154nm,0.8s,2µm1.6nm						
SIJI	Sorong	6.74	290	P	Pn	09 15 02.9	+0.8
	5.3nm,0.3s,baz=53,slow=14,SNR=9.1						
SIJI				S	Sn	09 16 17.2	-0.3
	29nm,0.5s,baz=134,slow=24,SNR=0.9						
	26nm,0.6s						
BNDI	Bandanaira	7.77	260	P	Pn	09 15 20.4	+4.3
	368nm,1.0s,3.0nm						
SAUI	Saumlaki	7.83	233	Pn	Pn	09 15 15.0	-1.9
SAUI	Saumlaki	7.83	233	P	Pn	09 15 19.3	+2.4
	387nm,0.8s,1.4nm						
MSAI	Masohi	8.64	269	P	Pn	09 15 30.5	+2.4
	17nm,0.6s						
AAI	Ambon	9.39	267	P	Pn	09 15 40.1	+1.9
	97nm,0.7s						
LBMI	Labuha	10.41	284	P	Pn	09 15 54.2	+2.0
	125nm,1.1s						
NLAI	Namlea	10.47	270	P	Pn	09 15 55.0	+1.9
	27nm,0.7s,4µm						
KDU	Kakadu	10.66	208	P	Pn	09 15 56.3	+0.7
PMG	Port Moresby	11.31	123	P	Pn	09 16 06.6	+2.1
	22nm,0.7s,baz=307,slow=10,SNR=8.6						
PMG				S	Sn	09 18 09.7	+0.2
	8.7nm,0.6s,baz=308,slow=19,SNR=1.0						
PMG				LR	LR	09 22 11.9	
	comp=Z,421nm,18.2s,baz=338,slow=46						
PMG	Port Moresby	11.31	123	Pn	Pn	09 16 03.5	-1.1
MTN	Manton Dam	11.47	213	Pn	Pn	09 16 06.8	0.0
MTN	Manton Dam	11.47	213	P	Pn	09 16 07.9	+1.1
SANI	Sanana	11.65	276	P	Pn	09 16 09.2	0.0
SANI	Sanana	11.65	276	P	Pn	09 16 08.5	-0.7
	55nm,0.6s						
COEN	Coen	11.99	153	Pn	Pn	09 16 13.3	-0.6
COEN	Coen	11.99	153	P	Pn	09 16 13.6	-0.2
SOEI	Soe	14.72	243	Pn	Pn	09 16 50.6	-0.4
SOEI	Soe	14.72	243	P	Pn	09 16 51.9	+0.9
	144nm,1.0s,1µm						
LUWI	Luwuk	14.96	278	Pn	Pn	09 16 52.8	-1.2
KNRA	Kununurra	15.10	215	Pn	Pn	09 16 54.8	-1.0
KNRA				IAmb	IAmb	09 16 58.5	
	comp=Z,132nm,1.1s						
KNRA	Kununurra	15.10	215	P	Pn	09 16 55.0	-0.8
MRSI	Marisa	16.07	283	P	Pn	09 17 07.9	-0.4
	comp=Z,62nm,1.1s						
MTSU	Mount Surprise	16.20	156	P	Pn	09 17 10.3	+0.4
WB0	Warramunga Arr	16.71	191		Pn	09 17 14.4	-1.9
WRAB	Tennant Creek	16.88	191		Pn	09 17 16.9	-1.6
WRAB	Tennant Creek	16.88	191	P	Pn	09 17 17.6	-0.9
WB2	Warramunga Arr	16.89	191		Pn	09 17 16.5	-2.1
WRA	Warramunga Arr	16.89	191	P	Pn	09 17 19.4	+0.7
	comp=Z,1.4nm,0.3s,baz=6.2,slow=11,SNR=28						
WRA				S	Sn	09 20 14.1	-11
	comp=Z,17nm,0.6s,baz=12,slow=22,SNR=6.0						
WRA				LR	LR	09 24 19.6	
	comp=Z,792nm,21.1s,baz=351,slow=39						
WRA	Warramunga Arr	16.89	191		Pn	09 17 16.7	-2.0
QIS	Mount Isa	17.32	174	P	Pn	09 17 23.4	-0.5
TOLI2	Tolitoli	17.35	284	Pn	Pn	09 17 22.0	-2.2
BKSI	Bulukumba	17.54	263	P	P	09 17 29.2	+2.0
	comp=Z,22nm,1.1s						
SPSI	Sidrap Palu	17.80	267	P	P	09 17 31.1	+1.1
	comp=Z,14nm,1.0s,comp=Z,1µm						
MPSI	Mapaga	18.04	281	P	Pn	09 17 33.5	+0.8
	comp=Z,25nm,1.1s,comp=Z,693nm						
GUMO	Guam	18.22	23	LR	LR	09 23 47.2	
	comp=Z,358nm,21.1s,baz=222,slow=34						
TV1H	Townsville Har	18.29	151	P	Pn	09 17 38.2	+2.5
CTA	Charters Tower	18.75	154	P	Pn	09 17 42.0	+0.6
	comp=Z,33nm,0.5s,baz=333,slow=11,SNR=45						
CTA				S	S	09 21 12.0	+0.5
	comp=Z,5.0nm,0.7s,baz=64,slow=17,SNR=2.4						
CTA				LR	LR	09 25 16.0	
	comp=Z,359nm,18.0s,baz=336,slow=38						
CTA	Charters Tower	18.75	154	P	Pn	09 17 41.4	0.0
CTAO	Charters Tower	18.75	154	P	P	09 17 39.1	-1.4
CTAO				IAmb	IAmb	09 17 45.2	
	comp=Z,35nm,0.6s						
CTAO	Charters Tower	18.75	154	P	Pn	09 17 41.3	-0.1
FITZ	Fitzroy Crossi	18.84	218	P	P	09 17 39.0	-2.5
PLAI	Plampang	20.46	253	P	P	09 17 56.5	-2.7
	comp=Z,37nm,1.2s						
AS01	Alice Springs	20.60	190	P	Pn	09 18 02.3	-1.0
AS31	Alice Springs	20.61	190	P	Pn	09 18 02.4	-1.1
AS31				IAmb	IAmb	09 18 05.5	
	comp=Z,85nm,0.6s						
ASAR	Alice Springs	20.61	190	P	P	09 18 02.3	+1.5
	comp=Z,183nm,0.8s,baz=15,slow=10,SNR=1139						
ASAR				S	S	09 21 49.6	+1.0
	comp=Z,99nm,0.9s,baz=13,slow=23,SNR=16						
ASAR				LR	LR	09 26 52.5	
	comp=Z,309nm,18.1s,baz=8.0,slow=39						
ASAR	Alice Springs	20.61	190	P	P	09 18 02.2	+1.4
MYLDM	Lahad Datu	20.82	294	P	P	09 18 03.8	+0.7
MYLDM				IAmb	IAmb	09 18 10.0	
	comp=Z,71nm,1.1s						
BBKI	Banjar Baru	22.71	269	P	P	09 18 24.5	+1.1
	comp=Z,38nm,0.7s						
WRKA	Warakurna	23.44	202	P	P	09 18 29.9	-0.7
JAGI	Jajag, Banyuwa	23.88	256	P	P	09 18 33.1	-1.6
JAGI				IAmb	IAmb	09 18 59.2	
	comp=Z,102nm,1.6s						
JAGI	Jajag, Banyuwa	23.88	256	P	P	09 18 32.8	-1.9
	comp=Z,32nm,0.9s						
QLP	Quilpie	24.06	165	P	P	09 18 37.5	+1.2
OOD	Oodnadatta	24.48	184	P	P	09 18 40.5	+0.5
INKA	Innaminka	24.54	173	P	P	09 18 40.7	+0.1
MBWA	Marble Bar	24.88	223	P	P	09 18 43.8	+0.1
MBWA				IAmb	IAmb	09 18 46.4	
	comp=Z,28nm,0.8s						
MBWA	Marble Bar	24.88	223	P	P	09 18 44.4	+0.6
PSA00	Pilbara Seismi	25.08	222	P	P	09 18 44.1	-1.5
PSA00				IAmb	IAmb	09 18 48.2	
	comp=Z,30nm,0.7s						
PSA00	Pilbara Seismi	25.08	222	P	P	09 18 46.0	+0.4
EIDS	Eidsvold	25.54	151	P	P	09 18 48.5	-1.3
EIDS				IAmb	IAmb	09 18 52.4	
	comp=Z,20nm,0.7s						
SBUM	Sibu	25.98	282	P	P	09 18 53.2	-0.6
LCRK	Leigh Creek	27.06	179	P	P	09 19 02.7	-0.7
MULG	Mulgathing	27.10	187	P	P	09 19 03.4	-0.3
SMRI	Semarang	27.29	261	P	P	09 19 04.0	-1.7
STKA	Stephens Creek	28.73	173	P	P	09 19 17.8	-0.5
	comp=Z,5.7nm,0.5s,baz=343,slow=9.8,SNR=22						
	comp=Z,5.7nm,0.5s						
STKA	Stephens Creek	28.73	173	P	P	09 19 17.4	-0.8
STKA	Stephens Creek	28.73	173	P	P	09 19 17.8	-0.5
FORT	Forrest	28.83	197	P	P	09 19 17.5	-1.7
FORT	Forrest	28.83	197	P	P	09 19 19.9	+0.7
CMSA	Cobar Meteorol	29.16	166	P	P	09 19 23.1	+1.0
BBOO	Buckleboo	29.45	183	P	P	09 19 23.2	-1.5
BBOO				IAmb	IAmb	09 20 20.9	
	comp=Z,36nm,1.2s						
BBOO	Buckleboo	29.45	183	P	P	09 19 23.5	-1.1
MEEK	Meekatharra	29.52	216	P	P	09 19 25.2	-0.2
HTT	Hallett	30.05	178	P	P	09 19 29.8	-0.3
ARMA	Armidale	30.11	155	P	P	09 19 30.9	+0.2
ARMA	Armidale	30.11	155	P	P	09 19 31.8	+1.1
JOW	Kunigami	31.23	344	LR	LR	09 30 24.2	
	comp=Z,156nm,21.7s,baz=326,slow=33						
KMBL	Kambalda	31.65	206	P	P	09 19 43.4	-0.7
MORW	Morawa	32.84	216	P	P	09 19 53.1	-1.6
MORW				IAmb	IAmb	09 20 11.9	
	comp=Z,22nm,1.1s						
MORW	Morawa	32.84	216	P	P	09 19 54.7	+0.1
MDSI	Maura Dua	33.35	267	P	P	09 19 58.9	-0.4
	comp=Z,6.7nm,1.1s,comp=Z,1µm						
ARPS	Mount Arapiles	33.59	174	P	P	09 20 01.5	+0.5
BLDU	Ballidu	33.62	214	P	P	09 20 01.4	0.0
CAN	Canberra	33.62	163	P	P	09 19 59.0	-2.4
CAN				IAmb	IAmb	09 20 26.6	
	comp=Z,28nm,1.2s						
CAN	Canberra	33.62	163	P	P	09 20 03.5	+2.1
CAN	Canberra	33.62	163	P	P	09 20 03.1	+1.7
CAN				pP	pP	09 20 15.8	+0.8
CAN				sP	sP	09 20 22.6	+1.4
DZM	Mont Dzumac	33.68	126	LR	LR	09 33 39.1	
	comp=Z,82nm,21.8s,baz=234,slow=36						
CNB	Canberra Magne	33.73	163	P	P	09 20 04.0	+1.7
KLBR	Kellerberrin	33.82	211	P	P	09 20 03.1	0.0
TOO	Toolangi	34.92	169	P	P	09 20 12.6	0.0
TOO				IAmb	IAmb	09 20 33.3	
	comp=Z,8.6nm,0.8s						
TOO	Toolangi	34.92	169	P	P	09 20 14.3	+1.7
NWAO	Narrogin (SRO)	35.15	211	P	P	09 20 14.4	-0.1
	comp=Z,17nm,0.7s,baz=47,slow=4.9,SNR=9.5						
NWAO				LR	LR	09 35 55.7	
	comp=Z,467nm,18.9s,baz=56,slow=38						
	comp=Z,17nm,0.7s						
NWAO	Narrogin (SRO)	35.15	211	P	P	09 20 14.1	-0.4
NWAO				IAmb	IAmb	09 20 57.9	
	comp=Z,35nm,0.9s						
NWAO	Narrogin (SRO)	35.15	211	P	P	09 20 14.3	-0.3
NWAO				IAmb	IAmb	09 20 30.3	
	comp=Z,449nm,1.7s						
NWAO	Narrogin (SRO)	35.15	211	P	P	09 20 14.7	+0.2
SDSI	Sungai Dareh	36.20	273	P	P	09 20 22.8	-1.1
	comp=Z,8.6nm,1.3s,comp=Z,997nm						
JHJ	Hachijo jima 2	36.23	3	LR	LR	09 32 41.1	
	comp=Z,255nm,21.2s,baz=2.0,slow=32						
JNU	Nakatsue	36.72	351	LR	LR	09 33 35.5	
	comp=Z,137nm,20.6s,baz=162,slow=33						
JMN	Monobe	36.94	355	P	P	09 20 30.8	+0.9
IPM	Ipoh	37.33	282	P	P	09 20 32.6	-0.9
IPM				IAmb	IAmb	09 20 33.3	
	comp=Z,12nm,1.0s						
KULM	Kulim	37.86	283	P	P	09 20 36.9	-1.1
KULM				IAmb	IAmb	09 20 38.1	
	comp=Z,14nm,1.0s						
INU	Inuyama	38.40	359	P	P	09 20 41.7	-0.4
GLAD	Gladstone	38.73	167	P	P	09 20 46.2	+1.4
RPSI	Rantau Prapat	39.09	278	P	P	09 20 47.0	-1.3
RPSI				IAmb	IAmb	09 20 48.2	
	comp=Z,10nm,0.8s						
NJ2	Nanjing	39.36	335	*e*P	P	09 20 53.3	+3.1
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
MJAR	Matsushiro Arr	39.59	1	P	P	09 20 53.7	+1.6
	comp=Z,0.9nm,0.7s,baz=144,slow=7.8,SNR=1.6						
	comp=Z,0.9nm,0.7s						
SRIT	Nakonsritamara	39.66	288	P	P	09 20 52.2	-0.8
SRIT				IAmb	IAmb	09 20 53.8	
	comp=Z,33nm,0.9s						
MOO	Moorlands	39.96	169	P	P	09 20 57.4	+2.3
KSRS	Korea Array	41.48	348	LR	LR	09 37 49.0	
	comp=Z,76nm,19.4s,baz=170,slow=35						
PHRA	Phrae	42.66	302	P	P	09 21 17.7	0.0
CRAI	Chiangrai	43.34	304	P	P	09 21 23.6	+0.5
CRAI				IAmb	IAmb	09 21 24.5	
	comp=Z,23nm,1.4s						
CM31	Chiang Mai Arr	43.74	301	P	P	09 21 26.6	+0.3
CM31				IAmb	IAmb	09 21 27.5	
	comp=Z,19nm,0.9s						
CMAR	Chiang Mai Arr	43.74	301	P	P	09 21 26.4	+0.1
	comp=Z,9.4nm,0.8s,baz=126,slow=6.6,SNR=44						
	comp=Z,9.4nm,0.8s						
CMAR	Chiang Mai Arr	43.74	301	P	P	09 21 26.0	-0.3
CHTO	Chiang Mai	43.89	301	P	P	09 21 27.2	-0.4
PZH	PanZhiHua	45.55	313	P	P	09 21 42.6	+1.8
PZH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.6s						
CD2	Chengdu	46.84	319	*e*P	P	09 21 51.0	+0.2
ASAJ	Asahikawa	47.36	5	P	P	09 21 54.4	-0.2
	comp=Z,7.6nm,0.8s,baz=275,slow=10,SNR=3.8						
	comp=Z,7.6nm,0.8s						
USRK	Ussuriysk Ar.	47.50	355	P	P	09 21 55.5	-0.2
	comp=Z,2.5nm,0.6s,baz=142,slow=5.7,SNR=4.6						
	comp=Z,2.5nm,0.6s						
BNX	BinXian	49.61	351	⇓P	P	09 22 11.8	0.0
BNX				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BNX				pmax	pmax		
	comp=Z,180nm,4.0s						
HHC	Hu-ho-hao-te	49.91	334	*e*P	P	09 22 17.3	+2.9
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,220nm,6.0s						
RPZ	Rata Peaks	50.01	149	P	P	09 22 17.0	+2.0
	comp=Z,16nm,0.9s,baz=308,slow=5.1,SNR=5.5						
	comp=Z,16nm,0.9s						
URZ	Urewera	50.14	139	LR	LR	09 44 15.0	
	comp=Z,166nm,18.4s,baz=22,slow=37						
MRZ	Mangatainoka R	50.57	143	P	P	09 22 18.3	-0.9
KLR	Kul'dur	52.51	355	LR	LR	09 42 15.3	
	comp=Z,107nm,21.5s,baz=182,slow=33						
SHL	Shillong	52.73	306	P	P	09 22 35.8	-0.1
SHL				IAmb	IAmb	09 22 36.9	
	comp=Z,22nm,1.0s						
GTA	Gaotai	54.84	325	*e*P	P	09 22 51.3	+0.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LSA	Lhasa	55.19	310	P	P	09 22 54.0	-0.1
TAPN	Taplejung	56.87	306	*e*P	P	09 23 06.0	+0.1
	comp=Z,38nm,0.9s						
RAMN	Ramite	57.61	305	*e*P	P	09 23 11.3	+0.2
SONM	Songino Array	57.73	336	P	P	09 23 12.0	+0.5
	comp=Z,0.4nm,0.5s,baz=158,slow=7.9,SNR=4.1						
SONM				LR	LR	09 47 44.8	
	comp=Z,72nm,20.7s,baz=132,slow=36						
	comp=Z,0.4nm,0.5s						
JIRN	Jiri	58.23	305	*e*P	P	09 23 15.6	0.0
GUN	Gumba	58.58	306	*e*P	P	09 23 18.1	+0.1
	comp=Z,40nm,0.8s						
PEA0B	Petropavlovsk-	58.65	14	P	P	09 23 15.8	-1.7
PETK	Petropavlovsk-	58.65	14	P	P	09 23 17.7	+0.2
	comp=Z,5.2nm,0.9s,baz=182,slow=10,SNR=4.6						
PETK				LR	LR	09 45 45.3	
	comp=Z,40nm,21.6s,baz=194,slow=33						
	comp=Z,5.2nm,0.9s						
PETK	Petropavlovsk-	58.65	14	P	P	09 23 16.5	-1.1
DMN	Daman	59.09	305	*e*P	P	09 23 21.6	+0.1
	comp=Z,11nm,0.3s						
GKN	Gorkha	59.63	305	*e*P	P	09 23 24.9	-0.1
	comp=Z,5.9nm,0.3s						
DANN	Dangsing	60.47	305	*e*P	P	09 23 30.4	-0.6
PYUN	Piuthan	61.01	305	*e*P	P	09 23 34.5	-0.1
	comp=Z,79nm,0.9s						
DRV	Dumont d'Urvil	63.32	179	P	P	09 23 48.8	-0.2
DRV				pP	pP	09 24 01.8	-1.5
DRV				sP	sP	09 24 08.2	-0.9
MA2	Magadan	63.49	7	P	P	09 23 50.3	+0.1
	comp=Z,3.2nm,0.8s,baz=143,slow=6.2,SNR=5.1						
MA2				LR	LR	09 49 47.8	
	comp=Z,17nm,21.6s,baz=174,slow=34						
	comp=Z,3.2nm,0.8s						
MA2	Magadan	63.49	7	P	P	09 23 50.6	+0.4
MA2	Magadan	63.49	7	P	P	09 23 50.3	+0.1
MA2				pP	pP	09 24 04.4	+0.1
MA2				sP	sP	09 24 10.6	+0.6
SHEM	Shemya Is, Ala	63.68	24	LR	LR	09 46 48.3	
	comp=Z,124nm,21.9s,baz=247,slow=31						
WMQ	Urumqi	64.74	322	*e*P	P	09 23 58.6	-0.3
WMQ				pP	sP	09 24 18.1	-0.5
WMQ				PcP	PcP	09 24 32.8	+0.7
WMQ				ScP		09 28 27.6	
WMQ				pmax	pmax		
	comp=Z,11nm,1.3s						
WMQ				LR	LR		
	comp=Z,100nm,21.1s						
YAK	Yakutsk	65.38	356	LR	LR	09 49 50.6	
	comp=Z,140nm,22.0s,baz=162,slow=33						
CASY	Casey	65.72	192	P	P	09 24 04.8	+0.1
CASY	Casey	65.72	192	P	P	09 24 05.0	+0.3
MK31	Makanchi Array	69.53	323	P	P	09 24 28.8	-0.3
MKAR	Makanchi Array	69.53	323	P	P	09 24 28.9	-0.3
	comp=Z,3.7nm,0.9s,baz=115,slow=8.1,SNR=20						
	comp=Z,3.7nm,0.9s						
MKAR	Makanchi Array	69.53	323	P	P	09 24 29.1	-0.1
MAKZ	Makanchi	69.73	323	P	P	09 24 29.3	-1.0
MAKZ	Makanchi	69.73	323	P	P	09 24 30.0	-0.4
MAKZ				pP	pP	09 24 43.4	-1.2
MAKZ				sP	sP	09 24 49.2	-1.1
KSH	Kashi	70.64	314	P	P	09 24 37.8	+1.6
KSH				PcP	PcP	09 24 57.0	0.0
KSH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NIL	Nilore	70.75	307	P	P	09 24 37.0	+0.1
ZAA0	Zalesovo Array	71.84	330	P	P	09 24 41.5	-1.5
ZALV	Zalesovo Beam	71.84	330	P	P	09 24 41.8	-1.2
	comp=Z,0.7nm,0.5s,baz=116,slow=6.8,SNR=3.9						
	comp=Z,0.7nm,0.5s						
ZALV	Zalesovo Beam	71.84	330	P	P	09 24 41.6	-1.3
AAK	Ala-Archa	72.82	316	P	P	09 24 48.8	-0.4
	comp=Z,2.2nm,0.8s,baz=332,slow=4.8,SNR=4.1						
	comp=Z,2.2nm,0.8s						
KURK	Kurchatov	73.51	325	P	P	09 24 52.1	-0.9
KURBB	Kurchatov Arra	73.52	325	P	P	09 24 52.3	-0.8

	comp=Z,1.8nm,0.9s,baz=105,slow=10,SNR=5.9						
	comp=Z,1.8nm,0.9s						
GAR	**Garm**	74.61	312	P	**P**	**09 24 59.8**	**-0.1**
GAR				IAmb	IAmb	09 25 00.8	
	comp=Z,15nm,1.0s						
VNDA	**Vanda**	75.35	175	P	**P**	**09 25 03.5**	**+0.3**
	comp=Z,4.9nm,0.5s,baz=335,slow=7.6,SNR=7.2						
VNDA				LR	LR	09 57 42.2	
	comp=Z,172nm,19.6s,baz=317,slow=35						
	comp=Z,4.9nm,0.5s						
VNDA	**Vanda**	75.35	175	P	**P**	**09 25 03.3**	**+0.1**
CHGR	**Chuyangaron**	75.38	311	P	**P**	**09 25 03.0**	**-1.2**
CHGR				IAmb	IAmb	09 25 23.5	
	comp=Z,13nm,1.1s						
KK31	**Karatay Array**	75.73	316	P	**P**	**09 25 05.7**	**-0.4**
KKAR	**Karatay Array**	75.73	316	P	**P**	**09 25 05.5**	**-0.5**
BVAR	**Borovoye Array**	79.11	325	P	**P**	**09 25 24.2**	**-0.5**
	comp=Z,2.4nm,0.6s,baz=111,slow=6.5,SNR=12						
	comp=Z,2.4nm,0.6s						
BRVK	**Borovoye**	79.18	325	P	**P**	**09 25 24.2**	**-0.9**
NRIK	**Noril'sk**	79.92	344	P	**P**	**09 25 27.6**	**-1.1**
	comp=Z,52nm,0.6s,baz=134,slow=7.5,SNR=39						
KDAK	**Kodiak Island**	82.13	31	LR	LR	09 58 37.3	
	comp=Z,102nm,21.0s,baz=265,slow=33						
CAST	**Castle Rocks**	84.21	25		**P**	**09 25 51.9**	**+0.5**
CAST				IAmb	IAmb	09 27 22.2	
	comp=Z,24nm,1.9s						
ABKAR	**Akbulak array**	84.41	320	P	**P**	**09 25 50.6**	**-2.1**
H21K	**Melozitna Rive**	84.66	23	P	**P**	**09 25 54.4**	**+0.7**
H21K				IAmb	IAmb	09 26 17.0	
	comp=Z,24nm,2.0s						
MLY	**Manley**	85.28	24	P	**P**	**09 25 57.0**	**+0.2**
MLY				IAmb	IAmb	09 28 09.0	
	comp=Z,16nm,2.0s						
SML	**Sawmill**	85.38	27	P	**P**	**09 25 57.7**	**+0.3**
MCK	**McKinley**	85.64	25	P	**P**	**09 25 59.1**	**+0.5**
MCK				IAmb	IAmb	09 27 04.5	
	comp=Z,16nm,1.4s						
AKTO	**Aktyubinsk**	85.85	321	P	**P**	**09 25 59.4**	**-0.5**
	comp=Z,1.4nm,0.8s,baz=286,slow=0.7,SNR=3.9						
	comp=Z,1.4nm,0.8s						
I23K	**Minto, Yukon-K**	85.87	24	P	**P**	**09 26 00.1**	**+0.5**
I23K				IAmb	IAmb	09 28 52.4	
	comp=Z,28nm,2.0s						
CCB	**Clear Creek Bu**	86.37	25	P	**P**	**09 26 01.0**	**-1.1**
CCB				IAmb	IAmb	09 26 22.1	
	comp=Z,19nm,1.5s						
ARU	**Arti**	86.63	327	LR	LR	10 06 22.8	
	comp=Z,91nm,20.0s,baz=292,slow=37						
QSPA	**South Pole Qui**	86.70	180	LR	LR	10 06 01.0	
	comp=Z,176nm,18.2s,baz=292,slow=36						
QSPA	**South Pole Qui**	86.70	180	P	**P**	**09 26 03.9**	**-0.1**
ILAR	**Eielson Array**	86.78	25	P	**P**	**09 26 03.1**	**-1.1**
	comp=Z,1.2nm,0.9s,baz=267,slow=4.3,SNR=10						
ILAR				LR	LR	10 00 08.4	
	comp=Z,70nm,20.4s,baz=266,slow=32						
	comp=Z,1.2nm,0.9s						
ILAR	**Eielson Array**	86.78	25	P	**P**	**09 26 04.6**	**+0.4**
DOT	**Dot Lake**	87.73	26	P	**P**	**09 26 09.7**	**+0.9**
DOT				IAmb	IAmb	09 27 05.4	
	comp=Z,25nm,1.9s						
SCRK	**Sand Creek**	87.83	26	P	**P**	**09 26 08.7**	**-0.7**
SCRK				IAmb	IAmb	09 28 34.9	
	comp=Z,19nm,1.8s						
FYU	**Fort Yukon**	87.88	23	P	**P**	**09 26 10.0**	**+0.7**
L26K	**Log Cabin Wild**	87.92	27	P	**P**	**09 26 09.4**	**-0.3**
L26K				IAmb	IAmb	09 28 25.2	
	comp=Z,32nm,2.0s						
J26L	**Joseph Creek**	88.12	25	P	**P**	**09 26 10.9**	**+0.2**
J26L				IAmb	IAmb	09 26 31.7	
	comp=Z,11nm,1.3s						
BMAR	**Burnt Mountain**	88.32	22	P	**P**	**09 26 11.8**	**+0.3**
K27K	**Chicken**	88.67	26	P	**P**	**09 26 14.8**	**+1.6**
K27K				IAmb	IAmb	09 26 35.9	
	comp=Z,17nm,1.3s						
EGAK	**Eagle**	89.19	25	P	**P**	**09 26 15.9**	**+0.3**
EGAK				IAmb	IAmb	09 26 53.9	
	comp=Z,14nm,1.5s						
VOI	**Vohitsoka**	89.54	248	P	**P**	**09 26 18.4**	**0.0**
DAWY	**Dawson**	89.84	26	P	**P**	**09 26 19.1**	**+0.4**
DAWY				IAmb	IAmb	09 26 38.9	
	comp=Z,31nm,1.9s						
DLBC	**Dease Lake**	94.00	32	LR	LR	10 06 18.9	
	comp=Z,71nm,19.1s,baz=294,slow=34						
BBB	**Bella Bella**	95.19	38	LR	LR	10 00 29.7	
	comp=Z,77nm,22.0s,baz=260,slow=30						
SPITS	**Spitsbergen Ar**	99.31	350	LR	LR	10 17 42.8	
	comp=Z,65nm,18.0s,baz=194,slow=39						
YBH	**Yreka Blue Hor**	99.40	48	LR	LR	10 02 53.2	
	comp=Z,76nm,21.7s,baz=314,slow=30						
PLCA	**Paso Flores**	129.23	152	PKP	**PKiKP**	**09 32 29.9**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=270,slow=3.3,SNR=4.8						
TORD	**Torodi Ar. Bea**	135.32	285	PKP	**PKPdf**	**09 32 40.3**	**-0.6**
	comp=Z,1.1nm,0.9s,baz=73,slow=2.1,SNR=4.7						
DBIC	**Dimbokro**	142.44	277	PKhKP	PKPpre	09 32 49.4	
	comp=Z,1.5nm,0.7s,baz=42,slow=4.4,SNR=3.3						
POPC	**Popayan, Colom**	145.78	90	*e*P	**PKPdf**	**09 32 59.9**	**-0.2**
YOTC	**Yotoco, Valle**	146.13	88	*e*P	**PKPdf**	**09 33 00.3**	**-0.2**
GUY2C	**Guyana, Caldas**	147.08	85	*e*P	**PKPab**	**09 33 06.6**	**+0.3**
CPUP	**Villa Florida**	147.25	155	PKPbc	**PKPbc**	**09 33 04.5**	**+0.4**
	comp=Z,10nm,1.1s,baz=214,slow=5.1,SNR=10						
LPAZ	**La Paz**	148.01	128	PKPbc	**PKPbc**	**09 33 08.0**	**+0.7**
	comp=Z,4.9nm,0.9s,baz=290,slow=3.4,SNR=11						
RUSC	**La Rusia**	149.32	84	*e*P	**PKPbc**	**09 33 09.6**	**-1.1**

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*DJA **14** 09:17:37.9±0.2,2°S±2°×12°8E±°,h10^{km},M4.6/14,mb5.0/8, mB5.1/7,MLv4.5/14,Mw(mB)4.4/7*

*NEIC **14** 09:17:37.9±2.1,2°.35S±0°.07×127°.99E±0°.07,h46^{km}±8^{km}, mb4.6/23,Error ellipse: s-maj=10.2km s-min=9.3km az=200.0*

*IDC **14** 09:17:41.6±2.3,2°.29S×128°.23E,h44^{km}±25^{km},mb3.9/8, mbtmp4.2/9,ML4.9/2,MS4.0/5,Error ellipse: s-maj=19.9km s-min=15.0km az=114.0*

ISC 14 09:17:37.0±0.5**,2°.34S**±0°.06×**128°.02E**±0°.05**,h32^{km},n63, σ2^{s}.04**/56**,mb4.5**/16**,MS4.0**/4**,Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLAI	**Namlea**	1.28	226	P	**Pb**	**09 18 01.5**	**+0.8**
MSAI	**Masohi**	1.35	138	P	**Pb**	**09 18 05.1**	**+3.4**
AAI	**Ambon**	1.35	173	P	**Pb**	**09 18 04.5**	**+2.7**
LBMI	**Labuha**	1.77	343	P	**Pn**	**09 18 06.4**	**+0.9**
BNDI	**Bandanaira**	2.87	139	P	**Pb**	**09 18 26.2**	**-1.4**
TNTI	**Ternate**	3.16	348		**Pn**	**09 18 26.9**	**+2.2**
TNTI	**Ternate**	3.16	348	P	**Pn**	**09 18 26.1**	**+1.5**
SIJI	**Sorong**	3.56	66	P	**Pn**	**09 18 31.4**	**+1.4**
	95nm,0.3s,baz=194,slow=22,SNR=137						
SIJI				S	**Sn**	**09 19 10.6**	**-0.4**
	539nm,0.5s,baz=325,slow=23,SNR=20						
FAKI	**Fak Fak**	4.26	98		**Pn**	**09 18 41.0**	**+1.2**
FAKI	**Fak Fak**	4.26	98	P	**Pn**	**09 18 41.5**	**+1.8**
LUWI	**Luwuk**	5.41	284	Pn	**Pn**	**09 18 55.1**	**-0.4**
LUWI	**Luwuk**	5.41	284	P	**Pn**	**09 18 57.4**	**+1.9**
	134nm,0.7s,2µm0.6nm						
GTOI	**Gorontalo**	5.82	300	P	**Pn**	**09 19 04.1**	**+2.9**
	33nm,0.6s,413nm0.2nm						
MRSI	**Marisa**	6.70	295	P	**Pn**	**09 19 15.0**	**+1.8**
	51nm,0.6s,1µm0.5nm						
TOLI2	**Tolitoli**	8.01	295		**Pn**	**09 19 29.3**	**-2.0**
SOEI	**Soe**	8.26	207	Pn	**Pn**	**09 19 34.9**	**+0.1**
SOEI	**Soe**	8.26	207	P	Pn	09 19 41.5	+6.7
	88nm,0.9s						
SPSI	**Sidrap Palu**	8.40	259	P	Pn	09 19 42.8	+6.2
	50nm,0.8s						
BKSI	**Bulukumba**	8.42	249	P	Pn	09 19 43.1	+6.2
	95nm,0.7s,1µm						
MPSI	**Mapaga**	8.55	288	P	**Pn**	**09 19 40.8**	**+2.1**
	36nm,0.7s,616nm						
KAPI	**Kappang**	8.67	252	P	Pn	09 19 47.3	+7.0
	15nm,0.3s,baz=94,slow=7.4,SNR=64						
KAPI				LR	LR	09 23 02.0	
	comp=Z,479nm,20.2s,baz=72,slow=36						
MYLDM	**Lahad Datu**	12.10	308	Pn	**Pn**	**09 20 26.1**	**-1.2**
WB0	**Warramunga Arr**	18.41	161	P	**P**	**09 21 49.4**	**-0.3**
WB0				IAmb	IAmb	09 22 16.5	
	comp=Z,39nm,0.8s						
WRAB	**Tennant Creek**	18.55	161	P	**P**	**09 21 50.0**	**-1.2**
WRAB				IAmb	IAmb	09 21 59.2	
	comp=Z,34nm,0.9s						
WRA	**Warramunga Arr**	18.55	161	P	**Pn**	**09 21 54.7**	**+3.1**
	comp=Z,9.9nm,0.8s,baz=343,slow=12,SNR=1.4						
WRA	**Warramunga Arr**	18.55	161	P	**P**	**09 21 49.2**	**-2.1**
WB2	**Warramunga Arr**	18.55	161	P	**P**	**09 21 49.9**	**-1.4**
WB2				IAmb	IAmb	09 22 00.6	
	comp=Z,36nm,0.8s						
COEN	**Coen**	18.91	128	P	**P**	**09 21 54.4**	**-0.9**
COEN				IAmb	IAmb	09 22 10.2	
	comp=Z,31nm,0.8s						
PMG	**Port Moresby**	20.28	111	P	Pn	09 22 17.6	+5.3
	comp=Z,12nm,0.8s,baz=286,slow=12,SNR=3.7						
PMG	**Port Moresby**	20.28	111	P	**P**	**09 22 08.0**	**-2.2**
MBWA	**Marble Bar**	20.38	203	P	**P**	**09 22 10.4**	**-0.8**
MBWA				IAmb	IAmb	09 22 24.4	
	comp=Z,14nm,0.7s						
PSA00	**Pilbara Seismi**	20.71	202	P	**P**	**09 22 14.3**	**-0.5**
ASAR	**Alice Springs**	21.95	165	P	**P**	**09 22 31.0**	**+2.8**
	comp=Z,8.7nm,0.5s,baz=347,slow=12,SNR=6.4						
ASAR				S	**S**	**09 26 28.9**	**-0.1**
	comp=Z,5.4nm,0.9s,baz=350,slow=21,SNR=5.5						
	comp=Z,8.7nm,0.5s						
KRVT	**Keravat (AS076**	24.04	95	LR	LR	09 32 00.4	
	comp=Z,374nm,20.9s,baz=53,slow=36						
CTAO	**Charters Tower**	25.06	136	P	**P**	**09 22 55.9**	**-2.9**
CTAO				IAmb	IAmb	09 23 02.3	
	comp=Z,14nm,0.9s						
MNAI	**Manna**	25.10	265	P	**P**	**09 22 56.5**	**-2.8**
TPUB	**Ta-pu**	26.48	345	P	**P**	**09 23 10.1**	**-1.5**
SSLB	**Suanglung**	26.87	346	P	**P**	**09 23 12.1**	**-3.0**
SSLB				IAmb	IAmb	09 23 24.6	
	comp=Z,26nm,1.0s						
BBOO	**Buckleboo**	31.23	167	P	**P**	**09 23 51.5**	**-2.3**
BBOO				IAmb	IAmb	09 23 52.5	
	comp=Z,11nm,1.1s						
STKA	**Stephens Creek**	32.04	158	P	**P**	**09 24 04.1**	**+3.2**
	comp=Z,1.9nm,0.3s,baz=310,slow=8.9,SNR=4.7						
	comp=Z,1.9nm,0.3s						
STKA	**Stephens Creek**	32.04	158	P	**P**	**09 24 00.5**	**-0.4**
HNR	**Honiara**	32.50	104	LR	LR	09 38 42.2	
	comp=Z,1µm,21.3s,baz=202,slow=39						
CM31	**Chiang Mai Arr**	35.30	307	P	**P**	**09 24 29.1**	**-0.4**
TOO	**Toolangi**	38.56	158	P	**P**	**09 24 56.7**	**-0.3**
TOO				IAmb	IAmb	09 25 07.9	
	comp=Z,12nm,1.1s						
KSAR	**Wonju Array Be**	39.58	360	P	**P**	**09 25 03.4**	**-2.0**
KS19	**Wonju Array Si**	39.64	360	P	**P**	**09 25 04.3**	**-1.6**
KS19				IAmb	IAmb	09 25 08.1	
	comp=Z,39nm,1.4s						
MJAR	**Matsushiro Arr**	39.83	13	P	**P**	**09 25 09.1**	**+1.6**
	comp=Z,3.6nm,0.9s,baz=183,slow=9.1,SNR=4.8						
	comp=Z,3.6nm,0.9s						
USRK	**Ussuriysk Ar.**	46.47	4	P	**P**	**09 26 03.5**	**+2.5**
	comp=Z,3.0nm,0.6s,baz=203,slow=6.5,SNR=4.4						
	comp=Z,3.0nm,0.6s						
PALK	**Pallekele**	48.18	282	LR	LR	09 49 17.7	
	comp=Z,73nm,18.5s,baz=226,slow=39						
SONM	**Songino Array**	53.43	342	P	**P**	**09 26 56.2**	**+2.2**
	comp=Z,1.2nm,0.8s,baz=160,slow=9.1,SNR=6.1						
	comp=Z,1.2nm,0.8s						
BKZ	**Black Stump Fm**	57.28	136	P	**P**	**09 27 20.4**	**-1.5**
RTZ	**Ruatahuna**	57.37	135	P	**P**	**09 27 20.5**	**-2.1**
MK31	**Makanchi Array**	63.28	327	P	**P**	**09 28 01.9**	**-0.8**
MK31				IAmb	IAmb	09 28 17.7	
	comp=Z,3.5nm,0.9s						
MKAR	**Makanchi Array**	63.28	327	P	**P**	**09 28 06.5**	**+3.8**
	comp=Z,1.1nm,0.6s,baz=130,slow=7.5,SNR=5.4						
	comp=Z,1.1nm,0.6s						
KURBB	**Kurchatov Arra**	67.53	328	P	**P**	**09 28 33.9**	**+3.7**
	comp=Z,1.3nm,0.6s,baz=126,slow=5.7,SNR=7.0						
	comp=Z,1.3nm,0.6s						
KURK	**Kurchatov**	67.54	329	P	**P**	**09 28 30.4**	**+0.2**
KURK				IAmb	IAmb	09 28 45.5	
	comp=Z,11nm,1.0s						
KK31	**Karatay Array**	68.56	318	P	**P**	**09 28 36.7**	**-0.1**
KKAR	**Karatay Array**	68.56	318	P	**P**	**09 28 35.8**	**-1.1**
BVAR	**Borovoye Array**	73.10	328	P	**P**	**09 29 08.7**	**+4.6**
	comp=Z,1.1nm,0.8s,baz=123,slow=7.1,SNR=2.2						
	comp=Z,1.1nm,0.8s						
ABKAR	**Akbulak array**	77.66	322	P	**P**	**09 29 29.1**	**-1.3**
QSPA	**South Pole Qui**	87.61	180	P	**P**	**09 30 21.8**	**-0.3**
QSPA				IAmb	IAmb	09 30 41.3	
	comp=Z,8.6nm,1.4s						
ARCES	**ARCESS Array B**	96.55	340	LR	LR	10 20 17.7	
	comp=Z,84nm,18.3s,baz=272,slow=39						
CPUP	**Villa Florida**	151.03	170	PKPbc	**PKiKP**	**09 37 30.4**	**+2.2**
	comp=Z,1.4nm,0.7s,baz=104,slow=4.2,SNR=2.8						

ROM 14 09:23:08.4±0.0**,42°.816N**±0°.002×**13°.121E**±0°.003**, h10^{km},ML1.6**/13**,10C-7D,Error ellipse: s-maj=0.2km s-min=0.2km az=112.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1245	**Castelsantange**	0.06	51	⇓P	Pg	09 23 11.2	+0.3
T1245				S	Sg	09 23 12.6	+0.1
T1245				AML	AML		
	comp=E,1780µm,0.7s						
T1245				AML	AML		
	comp=N,1930µm,0.2s						
T1245				AML	AML		
	comp=E,1775µm,0.7s						
T1245				AML	AML		
	comp=N,2010µm,0.2s						
T1245				AML	AML		
	comp=E,1635µm,0.7s						
T1245				AML	AML		
	comp=E,1635µm,1.3s						
T1245				AML	AML		
	comp=E,1775µm,1.3s						
T1212	**Cascia, Frazio**	0.09	221	P	Pg	09 23 11.4	+0.4
T1212				S	Sg	09 23 13.1	+0.3
T1214	**Arquata del Tr**	0.09	131	⇓P	Pg	09 23 11.4	+0.4
T1214				S	Sg	09 23 13.1	+0.2
T1214				AML	AML		
	comp=E,695µm,0.5s						
T1214				AML	AML		
	comp=N,935µm,0.2s						
T1214				AML	AML		
	comp=E,671µm,0.8s						
T1214				AML	AML		
	comp=N,872µm,0.2s						
T1214				AML	AML		
	comp=E,695µm,1.5s						
T1216	**Preci, Frazion**	0.11	315	⇑P	Pg	09 23 11.7	+0.5
T1216				S	Sg	09 23 13.8	+0.6
T1216				AML	AML		
	comp=N,846µm,1.4s						
T1216				AML	AML		
	comp=E,798µm,0.3s						
T1218	**Civita (PG)**	0.15	182	P	Pg	09 23 12.3	+0.5
T1218				S	Sg	09 23 14.9	+0.7
T1218				AML	AML		
	comp=E,261µm,0.7s						
T1218				AML	AML		
	comp=N,376µm,0.2s						
T1218				AML	AML		
	comp=N,402µm,0.4s						
T1218				AML	AML		
	comp=E,249µm,0.7s						
MMO1	**Montemonaco**	0.17	61	⇑P	Pg	09 23 12.8	+0.5
MMO1				S	Sg	09 23 15.8	+0.9
T1217	**Poggiodomo (PG**	0.17	233	P	Pg	09 23 12.8	+0.5
T1217				S	Sg	09 23 15.8	+0.8
T1217				AML	AML		
	comp=E,137µm,1.5s						
T1217				AML	AML		
	comp=N,110µm,1.0s						
T1215	**Vallo di Nera,**	0.19	266	⇑P	Pg	09 23 13.0	+0.6
T1215				S	Sg	09 23 16.4	+1.2
FDMO	**Fiordimonte**	0.22	354	⇑P	Pg	09 23 13.7	+0.7
FDMO				S	Sg	09 23 17.4	+1.2
FDMO				AML	AML		
	comp=E,130µm,0.3s						
FDMO				AML	AML		
	comp=N,160µm,0.4s						
T1241	**Roccafluvione,**	0.23	80	⇑P	Pg	09 23 13.8	+0.5
T1241				S	Sg	09 23 17.7	+1.2
SMA1	**SAN MARTINO**	0.24	140	P	Pg	09 23 14.1	+0.6
SMA1				AML	AML		
	comp=E,120µm,0.6s						
SMA1				AML	AML		
	comp=N,148µm,0.2s						
CESI	**CESI - Serrava**	0.25	320	P	Pg	09 23 14.2	+0.6
CESI				S	Sg	09 23 18.3	+1.3
CESI				AML	AML		
	comp=E,157µm,0.2s						
CESI				AML	AML		
	comp=N,354µm,0.3s						
T1219	**Muccia, Frazio**	0.25	341	⇑P	Pg	09 23 14.2	+0.6
T1219				S	Sb	09 23 18.4	-1.2
T1219				AML	AML		
	comp=E,158µm,0.2s						
T1219				AML	AML		
	comp=N,210µm,0.1s						
T1219				AML	AML		
	comp=N,210µm,0.1s						
T1219				AML	AML		
	comp=E,158µm,0.2s						
CSP1	**Cessapalombo**	0.28	13	P	Pg	09 23 14.8	+0.6
GUMA	**Gualdo di Mace**	0.29	32	P	Pb	09 23 15.3	-0.4
GUMA				AML	AML		
	comp=E,240µm,0.5s						
GUMA				AML	AML		
	comp=E,240µm,1.5s						
GUMA				AML	AML		
	comp=N,341µm,1.1s						
T1220	**Camerino, Fraz**	0.29	355	P	Pg	09 23 15.0	+0.6
RM33	**Pellescritta (**	0.32	167	⇑P	Pg	09 23 13.1	-1.7
RM33				AML	AML		
	comp=E,60µm,1.3s						
RM33				AML	AML		
	comp=N,51µm,0.9s						
T1211	**Morro Reatino**	0.34	215	⇓P	Pg	09 23 15.8	+0.5
T1211				AML	AML		
	comp=N,176µm,0.3s						
T1211				AML	AML		
	comp=E,94µm,1.2s						
T1211				AML	AML		
	comp=E,94µm,0.8s						
TERO	**Teramo**	0.41	118	⇑P	Pg	09 23 15.2	-1.2
MOMA	**Monte Martano**	0.41	268	P	Pg	09 23 17.0	+0.6
MOMA				AML	AML		
	comp=E,80µm,0.2s						
MOMA				AML	AML		
	comp=N,47µm,0.5s						
MOMA				AML	AML		
	comp=E,80µm,1.8s						
ASSB	**Assisi San Ben**	0.41	304	⇓P	Pg	09 23 16.9	+0.4
ASSB				AML	AML		
	comp=E,66µm,1.1s						
ASSB				AML	AML		
	comp=N,60µm,0.5s						
ASSB				AML	AML		
	comp=N,60µm,1.5s						
GAG1	**Gagliole**	0.42	355	S	Sg	09 23 22.9	+0.5
OFFI	**Offida**	0.43	74	⇓P	Pb	09 23 18.2	+0.1
SNTG	**Esanatoglia**	0.46	343	⇑P	Pg	09 23 17.9	+0.5
EL6	**Elcito**	0.51	358	⇓P	Pg	09 23 18.9	+0.4
EL6				S	Sb	09 23 27.6	+0.5
CING	**Cingoli**	0.56	6	P	Pg	09 23 19.8	+0.4
PE3	**Peglio**	0.99	333	⇑P	Pg	09 23 27.2	-0.3
LIK	**San Giovanni I**	1.35	166	⇓P	Pg	09 23 34.9	+0.6

ROM 14 09:24:02.1±0.1**,42°.700N**±0°.002×**13°.143E**±0°.002**, h11^{km},ML1.3**/8**,5C-3D,Error ellipse: s-maj=0.2km s-min=0.1km az=354.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1218	**Civita (PG)**	0.04	214	P	Pg	09 24 04.7	+0.3
T1218				S	Sg	09 24 06.2	+0.2
T1218				AML	AML		
	comp=N,968µm,0.1s						
T1218				AML	AML		
	comp=N,970µm,0.1s						
T1218				AML	AML		
	comp=E,800µm,1.0s						
T1218				AML	AML		
	comp=E,811µm,1.0s						
T1214	**Arquata del Tr**	0.08	39	P	Pg	09 24 05.0	+0.2
T1212	**Cascia, Frazio**	0.09	306	⇑P	Pg	09 24 05.2	+0.4
T1212				S	Sg	09 24 07.3	+0.5
T1212				AML	AML		
	comp=E,198µm,0.3s						
T1212				AML	AML		
	comp=N,264µm,0.3s						
T1217	**Poggiodomo (PG**	0.16	275	⇑P	Pg	09 24 06.3	+0.5
T1217				S	Sg	09 24 09.2	+0.8
SMA1	**SAN MARTINO**	0.16	116	⇓P	Pg	09 24 06.4	+0.6
SMA1				S	Sg	09 24 09.4	+1.0
SMA1				AML	AML		
	comp=E,294µm,0.2s						
SMA1				AML	AML		
	comp=N,212µm,0.3s						
T1245	**Castelsantange**	0.16	12	P	Pg	09 24 06.3	+0.4
T1245				S	Sg	09 24 09.4	+0.8
T1245				AML	AML		
	comp=E,110µm,0.3s						
T1245				AML	AML		
	comp=N,155µm,0.2s						
RM33	**Pellescritta (**	0.20	164	⇑P	Pg	09 24 06.9	+0.4
RM33				S	Sg	09 24 10.2	+0.8
RM33				AML	AML		
	comp=E,62µm,1.4s						
RM33				AML	AML		
	comp=N,55µm,0.9s						
RM33				AML	AML		
	comp=E,62µm,1.4s						
RM33				AML	AML		
	comp=N,55µm,0.9s						
RM33				AML	AML		
	comp=E,62µm,0.6s						
T1216	**Preci, Frazion**	0.21	335	P	Pg	09 24 07.2	+0.5
T1216				S	Sg	09 24 11.1	+1.3
T1215	**Vallo di Nera,**	0.23	297	⇑P	Pg	09 24 07.3	+0.4
T1215				S	Sg	09 24 11.2	+1.0
MMO1	**Montemonaco**	0.24	34	⇓P	Pg	09 24 07.6	+0.4
MMO1				S	Sg	09 24 11.7	+1.0
T1241	**Roccafluvione,**	0.26	54	⇓P	Pg	09 24 08.0	+0.4
T1241				S	Sg	09 24 12.2	+0.9
T1241				AML	AML		
	comp=N,55µm,1.3s						
T1241				AML	AML		
	comp=E,47µm,1.0s						
T1241				AML	AML		
	comp=E,47µm,1.0s						
T1241				AML	AML		
	comp=N,55µm,0.7s						
T1211	**Morro Reatino**	0.27	232	⇑P	Pg	09 24 08.1	+0.4
T1211				S	Sg	09 24 12.5	+1.0
T1211				AML	AML		
	comp=E,116µm,0.1s						
T1211				AML	AML		
	comp=N,114µm,1.1s						
TERO	**Teramo**	0.35	103	P	Pg	09 24 09.2	+0.1

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*ISK **14** 09:33:05.6,38°.85N×45°.00E,h2^{km},ML2.4/6*

*TEH **14** 09:33:07.7,38°.88N×44°.82E,h8^{km},ML2.6*

*DDA **14** 09:33:11.9±0.0,38°.80N×44°.64E,h7^{km}±4^{km},ML1.9*

ISC 14 09:33:08.9±1.1**,38°.89N**±0°.03×**44°.88E**±0°.03**,h9^{km}**±10^{km}**, n18,σ0^{s}.92**/28**,Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKU	**Maku**	0.48	342	Pg	**Pg**	**09 33 18.1**	**-0.3**
MAKU				Sg	**Sg**	**09 33 24.8**	**0.0**
IMRD	**Marand**	0.67	105	Sg	**Sb**	**09 33 33.5**	**+1.2**
OZAP	**Van, Ozalp-Mer**	0.73	252	P	**Pg**	**09 33 22.4**	**-0.6**
OZAP				S	**Sg**	**09 33 33.5**	**+0.9**
OZAP				*i* AML	AML	09 33 35.0	
	comp=N,78nm,0.8s						
OZAP				*i* AML	AML	09 33 35.0	
	comp=E,79nm,0.4s						
ISHB	**Shabestar**	0.84	136	Pg	**Pg**	**09 33 24.5**	**-0.6**
VMUR	**Van-Muradiye**	1.02	276	P	**Pb**	**09 33 28.0**	**-0.8**
VMUR				S	**Sb**	**09 33 41.0**	**-1.5**
VMUR				*i* AML	AML	09 33 47.0	
	comp=N,60nm,0.9s						
DYDN	**Diyadin**	1.13	306	P	**Pb**	**09 33 31.2**	**+0.5**
DYDN				S	**Sn**	**09 33 48.0**	**+1.2**
DYDN				*i* AML	AML	09 33 52.0	
	comp=N,58nm,0.6s						
DYDN				*i* AML	AML	09 33 58.0	
	comp=E,56nm,0.7s						
ITBZ	**Tabriz**	1.19	123	Pg	**Pb**	**09 33 30.6**	**-1.2**
TASB	**TASBURUN-IGDIR**	1.20	336	Pn	**Pn**	**09 33 30.9**	**-1.0**
TASB				Sn	**Sn**	**09 33 49.3**	**+1.0**
VANB	**Van**	1.20	256	Pn	**Pn**	**09 33 31.1**	**-0.9**
GNI	**Garni**	1.26	355	Pn	**Pn**	**09 33 31.8**	**-1.0**
GNI				Sn	**Sg**	**09 33 50.6**	**+1.2**
YOVA	**Hakkari_Yksek**	1.38	200	P	**Pg**	**09 33 36.1**	**+0.7**
YOVA				S	**Sg**	**09 33 54.0**	**+0.6**
YOVA				*i* AML	AML	09 34 05.0	

	comp=E,25nm,1.0s						
YOVA				*i* AML	AML	09 34 10.0	
	comp=N,13nm,0.6s						
IAZR	Azarshahr	1.49	144	Pg	Pb	09 33 37.0	+0.1
AKDM	Akdamar-Van	1.59	250	Pn	Pn	09 33 37.1	-0.3
AKDM				Sn	Sb	09 33 59.8	+1.0
AGRB	Hanur-Agry	1.61	296	Pn	Pn	09 33 37.6	-0.1
AGRB				Sn	Sg	09 34 00.9	+0.1
HAKT	HAKKARI	1.62	215	P	Pb	09 33 39.9	+0.8
HAKT				S	Sn	09 33 58.5	-0.4
HAKT				*i* AML	AML	09 34 07.0	
	comp=E,22nm,0.7s						
HAKT				*i* AML	AML	09 34 13.0	
	comp=N,15nm,1.0s						
IHRS	Heris	1.79	108	Pn	Pb	09 33 42.6	+0.7
CUKT	Cukurca	1.92	212	Pn	Pn	09 33 40.3	-1.6
SVAN	Silvan-Diyarba	2.98	257	Pn	Pn	09 33 55.7	-0.6

DDA ***14*** *09:34:57.1±0.0, 39°.55N×26°.11E, h7^{km}±1^{km}, ML1.4*

ISK 14 09:34:57.0, 39°.56N×26°.12E, h6^{km}, ML2.0/15, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.06	165	P	Pg	09 34 59.1	+0.6
KOCA				S	Sg	09 35 00.2	+0.6
GPNR	Gulpinar-Canak	0.10	174	Pg	Pg	09 34 59.3	+0.1
GPNR				Sg	Sg	09 35 01.7	+1.0
BOZC	Bozcaada	0.29	350	Pg	Pg	09 35 03.2	+0.5
BOZC				Sg	Sg	09 35 07.6	+1.0
BOZC	Bozcaada	0.29	350	P	Pg	09 35 03.2	+0.5
BOZC				*i* AML	AML	09 35 07.0	
	comp=E,63nm,0.4s						
BOZC				S	Sg	09 35 07.4	+0.8
BOZC				*i* AML	AML	09 35 08.0	
	comp=N,45nm,0.2s						
EZN	Ezine	0.31	30	Pg	Pg	09 35 03.9	+0.8
EZN				Sg	Sg	09 35 08.6	+1.3
BAYC	CANAKKALE_Bayr	0.38	61	P	Pg	09 35 04.9	+0.6
BAYC				*i* AML	AML	09 35 10.0	
	comp=N,31nm,0.2s						
BAYC				S	Sg	09 35 10.4	+1.0
BAYC				*i* AML	AML	09 35 12.0	
	comp=E,25nm,0.1s						
SIGR	SIGRI	0.40	211	Pg	Pg	09 35 05.4	+0.6
SIGR				Sg	Sb	09 35 11.5	-1.3
ECEA	Canakkale, Ece	0.49	5	P	Pb	09 35 08.2	+0.2
ECEA				S	Sg	09 35 14.1	+1.2
ECEA				*i* AML	AML	09 35 20.0	
	comp=E,62nm,0.9s						
ECEA				*i* AML	AML	09 35 21.0	
	comp=N,92nm,1.1s						
COMU	Canakkale	0.61	27	Pg	Pb	09 35 09.6	-0.4
BUHA	Balikesir, Bur	0.74	94	P	Pg	09 35 11.2	-0.1
BUHA				S	Sg	09 35 15.9	-5.0
DKL	Dikili	0.78	128	Pg	Pg	09 35 11.6	-0.3
GELI	Tayfur-Gelibol	0.88	18	Pg	Pb	09 35 14.4	-0.3
GELI				Sg	Sb	09 35 26.5	-0.2
LPK	Lapseki	0.95	31	Pg	Pb	09 35 15.9	0.0
ERIK	Erikli-Kesan	1.15	15	Pn	Pn	09 35 19.7	+0.1
CHOS	Chios island	1.17	182	Pn	Pb	09 35 19.6	0.0
BALY	Balya	1.17	80	P	Pn	09 35 21.7	+1.8
BALY				S	Sg	09 35 25.3	-9.4
BALY				*i* AML	AML	09 35 37.0	
	comp=N,8.7nm,0.3s						
ENEZ	Enez	1.18	1	Pn	Pn	09 35 20.3	+0.3
KRBG	Karabiga-Canak	1.23	47	Pn	Pn	09 35 21.0	+0.3
URLA	Izmir	1.25	163	Pn	Pb	09 35 20.7	-0.3
GONE	Gonen-Balikesi	1.30	67	Pn	Pg	09 35 22.2	+0.2
ALN	Alexandroupoli	1.34	358	Pn	Pn	09 35 22.3	+0.1
EDC	Edincik	1.56	59	Pn	Pb	09 35 26.0	-0.2

DJA 14 09:45:13.9±0.6, **2°S**±4°×**12°8E**±°, **h109**^{km}±12^{km}, **M3.8**/11, **mb3.8**/2, **mB5.6**/1, **MLv3.7**/11, **Mw(mB)5.2**/1, **Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLAI	Namlea	1.33	218	P	Pn	09 45 39.2	+0.6
AAI	Ambon	1.51	170	P	Pn	09 45 41.4	+0.6
MSAI	Masohi	1.53	139	P	Pn	09 45 41.4	+0.4
LBMI	Labuha	1.60	345	P	Pn	09 45 43.8	+1.9
SANI	Sanana	1.94	274	P	Pn	09 45 46.2	+0.2
BNDI	Bandanaira	3.05	140	P	Pn	09 46 00.3	-0.2
FAKI	Fak Fak	4.38	100	P	Pn	09 46 18.2	-0.2
LUWI	Luwuk	5.27	282	P	Pn	09 46 30.5	+0.1
	25nm,0.8s,8μm0.5nm						
GTOI	Gorontalo	5.65	300	P	Pn	09 46 37.4	+1.8

IDC 14 10:05:24.6±2.2, **0°.41S**×**136°.30E, h0**^{km}, **mb3.2**/2, **mbtmp3.1**/3, **ML2.8**/1, **Error ellipse: s-maj=154.8km s-min=31.3km az=102.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.50	186	P	P	10 09 52.5	-1.0
	baz=6.8,slow=12,SNR=2.3						
	0.3nm,0.9s						
ASAR	Alice Springs	23.23	186	P	P	10 10 34.4	+0.8
	0.6nm,1.0s,baz=16,slow=11,SNR=5.4						
	0.6nm,1.0s						
ILAR	Eielson Array	84.76	25	P	P	10 18 00.3	-0.1
	0.2nm,0.5s,baz=262,slow=5.0,SNR=5.1						
	0.2nm,0.5s						

IDC 14 10:06:32.6±4.0, **13°.73S**×**173°.36E, h586**^{km}±73^{km}, **mb2.9**/4, **mbtmp4.0**/6, **Error ellipse: s-maj=103.2km s-min=60.8km az=160.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.02	132	P	P	10 08 13.3	0.0
	11nm,0.6s,baz=343,slow=14,SNR=11						
DZM	Mont Dzumac	10.58	217	P	P	10 08 57.1	+0.1
	4.0nm,0.5s,baz=66,slow=17,SNR=9.7						
CTA	Charters Tower	26.67	253	P	P	10 11 27.1	+0.7
	1.5nm,0.6s,baz=67,slow=7.7,SNR=2.0						
	1.5nm,0.6s						
STKA	Stephens Creek	34.22	233	P	P	10 12 30.4	-0.4
	0.4nm,0.4s,baz=72,slow=9.6,SNR=3.0						
	0.4nm,0.4s						
WRA	Warramunga Arr	37.79	255	P	P	10 13 00.2	-0.2
	2.0nm,0.6s,baz=88,slow=8.5,SNR=23						
	2.0nm,0.6s						
ASAR	Alice Springs	38.54	249	P	P	10 13 06.3	-0.2
	2.1nm,0.5s,baz=78,slow=9.2,SNR=38						
	2.1nm,0.5s						

JMA ***14*** *10:13:45.8±0.2, 29°.2N±0°.7×12°9E±°, h18^{km}±2^{km}, MV3.4/18, NEAR TOKARA ISLANDS*

JMA Felt I J1 at NEAR TOKARA ISLANDS .

NIED ***14*** *10:13:45.8, 29°.17N×129°.27E, h18^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.59; $M_{\theta\theta}$0.48; $M_{\phi\phi}$0.11; $M_{r\theta}$0.91; $M_{\theta\phi}$-0.14; $M_{\phi r}$3.68; Fault plane solution: $M_0$3.80000×10^{15} NP1: ϕ_s194.00000°, δ88.00000°, λ-89.00000°. NP2: ϕ_s1.00000°, δ3.00000°, λ-103.00000°.*

IDC ***14*** *10:13:50.6±2.0, 29°.02N×129°.32E, h41^{km}±20^{km}, mb3.4/8, mbtmp3.6/11, ML3.5/3, MS3.2/12 Error ellipse: s-maj=27.9km s-min=11.9km az=95.0*

ISC 14 10:13:46.2±1.0, **29°.15N**±0°.04×**129°.34E**±0°.05, **h11**^{km}±6^{km}, **n35**, σ**1^{s}.05**/26, **mb3.5**/8, **MS3.1**/6, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTAJ	Takarajima	0.12	270	*i* P	Pg	10 13 49.1	0.0
JTAJ				*e*S	Sg	10 13 51.1	-0.1
JAM	Amami Oshima	0.78	162	*e*P	Pb	10 14 00.3	-1.4
JNN	Nakanoshima	0.83	34	*e*P	Pb	10 14 01.9	-0.7
JAMN	Amaminishikomi	0.92	189	*i* P	Pb	10 14 03.1	-1.0
JZK	Kikaishima	1.00	146	P	Pg	10 14 06.1	+0.6
JZK				*e*S	Sg	10 14 20.7	+2.1
JTK	Tokunoshima	1.41	194	P	Pn	10 14 10.3	-1.4
JYAK	Yakushimahirau	1.48	43	*e*P	Pn	10 14 11.6	-1.3
JKC	Kuchinoerabu	1.50	30	*e*P	Pn	10 14 12.0	-1.0
JOKE	Okinoerabujima	1.91	201	P	Pn	10 14 18.2	-0.5
JTN	Tanegashima 3	2.07	43	*e*P	Pn	10 14 20.5	-0.4
JYRO	Yoronjima	2.26	200	P	Pn	10 14 23.1	-0.5
JIH	Iheya	2.43	210	*e*P	Pn	10 14 25.7	-0.2
JOW	Kunigami	2.50	202	P	Pn	10 14 26.6	-0.2
	34nm,0.3s,baz=17,slow=13,SNR=21						
JOW				S	Sn	10 14 54.9	-2.3
	59nm,0.6s,baz=92,slow=29,SNR=1.6						
	35nm,0.3s						
JNTH	Nagotoyohara	2.87	204	*e*P	Pn	10 14 32.1	+0.2
JKE	Kume jima 2	3.61	219	*e*P	Pn	10 14 43.2	+1.0
JNU	Nakatsue	4.17	18	P	Pb	10 14 53.7	-5.9
	2.4nm,0.3s,baz=193,slow=6.7,SNR=20						
JNU				LR	LR	10 16 42.0	
	comp=Z,290nm,21.2s,baz=214,slow=40						
	54nm,0.8s						
KSRS	Korea Array	8.36	352	P	Pn	10 15 52.2	+4.9
	0.2nm,0.3s,baz=168,slow=14,SNR=4.9						
KSRS				LR	LR	10 19 09.0	
	comp=Z,103nm,19.4s,baz=170,slow=38						
	2.5nm,0.9s						
JHJ	Hachijo jima 2	9.78	64	LR	LR	10 19 44.0	
	comp=Z,104nm,18.5s,baz=96,slow=36						
MJAR	Matsushiro Arr	10.48	43	LR	LR	10 21 07.6	
	comp=Z,140nm,18.1s,baz=225,slow=41						
USRK	Ussuriysk Ar.	15.16	7	LR	LR	10 22 42.3	
	comp=Z,80nm,19.5s,baz=171,slow=35						
ASAJ	Asahikawa	18.30	32	LR	LR	10 25 23.7	
	comp=Z,47nm,18.4s,baz=296,slow=38						
DAV	Davao City (W)	22.25	190	LR	LR	10 29 11.3	
	comp=Z,40nm,18.2s,baz=348,slow=42						
SONM	Songino Array	25.73	323	P	P	10 19 18.0	+1.3
	0.9nm,0.7s,baz=140,slow=11,SNR=5.8						
	0.9nm,0.7s						
CMAR	Chiang Mai Arr	29.70	256	LR	LR	10 31 28.5	
	comp=Z,32nm,20.0s,baz=60,slow=36						
SIJI	Sorong	29.91	176	LR	LR	10 30 56.9	
	comp=Z,44nm,19.3s,baz=179,slow=34						
YAK	Yakutsk	32.88	0	LR	LR	10 33 50.2	
	comp=Z,41nm,18.5s,baz=299,slow=36						
MA2	Magadan	33.74	20	LR	LR	10 34 19.6	
	comp=Z,45nm,18.2s,baz=356,slow=36						
MKAR	Makanchi Array	40.39	309	P	P	10 21 25.1	+0.9
	0.7nm,0.8s,baz=104,slow=10,SNR=2.2						
	0.7nm,0.8s						
TIXI	Tiksi	42.54	360	LR	LR	10 40 05.4	
	comp=Z,62nm,18.5s,baz=354,slow=37						
KURBB	Kurchatov Arra	43.47	314	P	P	10 21 50.2	+1.0
	0.2nm,0.3s,baz=106,slow=8.5,SNR=1.0						
	0.2nm,0.3s						
BVAR	Borovoye Array	48.79	317	P	P	10 22 31.7	+0.6
	0.6nm,0.6s,baz=90,slow=7.2,SNR=2.9						
	0.6nm,0.6s						
WRA	Warramunga Arr	49.05	174	P	P	10 22 32.8	-0.6
	3.5nm,1.0s,baz=354,slow=8.3,SNR=17						
	3.5nm,1.0s						
ASAR	Alice Springs	52.70	175	P	P	10 23 00.7	-0.2
	0.9nm,0.9s,baz=9.9,slow=11,SNR=13						
	0.9nm,0.9s						
ILAR	Eielson Array	61.41	29	P	P	10 24 01.9	-0.3
	0.2nm,0.7s,baz=270,slow=6.3,SNR=2.7						
	0.2nm,0.7s						
YKA	Yellowknife Ar	75.47	26	P	P	10 25 30.3	+0.2
	0.3nm,0.8s,baz=302,slow=5.5,SNR=5.6						
	0.3nm,0.8s						

IDC ***14*** *10:20:23.9±2.0, 15°.14S×173°.21W, h0^{km}, mb3.6/7, mbtmp3.6/7, MS3.1/3, Error ellipse: s-maj=124.0km s-min=20.5km az=149.0*

ISC 14 10:20:28.7±1.9, **15°.0S**±0°.7×**173°.2W**±0°.4, **h29**^{km}, **n17**, σ**0^{s}.91**/9, **mb3.5**/7, **Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	1.74	52	Pn	Pn	10 20 57.1	0.0
	157nm,0.3s,baz=203,slow=2.2,SNR=334						
AFI				Sn	Sn	10 21 16.9	-1.4
	316nm,0.3s,baz=264,slow=19,SNR=20						
AFI				LR	LR	10 21 35.4	
	comp=Z,334nm,18.9s,baz=229,slow=39						
MSVF	Nonsavu	8.84	251	LR	LR	10 25 23.2	
	comp=Z,65nm,19.5s,baz=160,slow=34						
DZM	Mont Dzumac	20.54	247	LR	LR	10 31 33.0	
	comp=Z,82nm,21.1s,baz=152,slow=33						
H11S2	WAKE ISLAND Hy	38.72	329	T	T	11 08 42.2	
	baz=146,slow=76,SNR=9.6						
H11S3	WAKE ISLAND Hy	38.73	329	T	T	11 08 40.1	
	baz=146,slow=76,SNR=10						
H11S1	WAKE ISLAND Hy	38.74	329	T	T	11 08 44.1	
	baz=146,slow=76,SNR=8.2						
H11N3	WAKE ISLAND Hy	39.66	330	T	T	11 10 49.5	
	baz=150,slow=76,SNR=4.3						
H11N1	WAKE ISLAND Hy	39.66	330	T	T	11 10 19.5	
	baz=150,slow=76,SNR=7.2						
H11N2	WAKE ISLAND Hy	39.68	330	T	T	11 10 51.2	
	baz=150,slow=76,SNR=4.8						
WRA	Warramunga Arr	50.13	256	P	P	10 29 21.1	-0.8
	0.4nm,0.8s,baz=95,slow=6.4,SNR=2.4						
	0.4nm,0.8s						
ASAR	Alice Springs	50.43	252	P	P	10 29 23.1	-1.0
	1.6nm,0.6s,baz=89,slow=7.7,SNR=28						
	1.6nm,0.6s						
SHEM	Shemya Is, Ala	68.33	352	LR	LR	10 56 02.1	
	comp=Z,20nm,21.3s,baz=162,slow=31						
NVAR	Mina Array Bea	73.89	42	P	P	10 32 02.0	+0.7
	0.3nm,0.7s,baz=228,slow=9.5,SNR=3.9						
	0.3nm,0.7s						
TXAR	Lajitas Array	80.22	56	P	P	10 32 37.4	+0.3
	0.5nm,0.9s,baz=243,slow=5.5,SNR=4.4						
	0.5nm,0.9s						
PDAR	Pinedale Array	81.83	42	P	P	10 32 46.0	+0.5
	0.3nm,0.7s,baz=212,slow=3.2,SNR=4.1						
	0.3nm,0.7s						
ILAR	Eielson Array	82.01	11	P	P	10 32 46.3	+0.7
	0.3nm,0.7s,baz=234,slow=5.3,SNR=4.6						
	0.3nm,0.7s						
YKA	Yellowknife Ar	89.64	23	P	P	10 33 23.6	+0.2
	0.3nm,0.7s,baz=237,slow=4.2,SNR=7.6						
	0.3nm,0.7s						

DNK ***14*** *10:21:21.6±0.5, 59°.00N×18°.21E, h0^{km}, ML2.2(UPP), Explosion*

HEL ***14*** *10:21:21.9±0.3, 59°.00N×18°.16E, h0^{km}, ML1.8, Explosion*

UPP ***14*** *10:21:21.2±0.1, 59°.00N×18°.21E, h0^{km}, ML2.2, Suspected explosion*

BER ***14*** *10:21:22.5±1.6, 59°.01N×18°.24E, h0^{km}, ML1.7, ML2.2(UPP), Suspected explosion*

IDC ***14*** *10:21:23.3±2.7, 59°.01N×18°.31E, h0^{km}, mbtmp3.0/4, ML1.8/4, Error ellipse: s-maj=36.8km s-min=9.1km az=170.0*

ISC 14 10:21:20.5±0.8, **58°.99N**±0°.02×**18°.18E**±0°.03, **h0**^{km}, **n55**, σ**0^{s}.79**/74, **Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRTU	Norrtaelje	0.73	18	P	Pg	10 21 34.6	+0.2
NRTU				S	Sg	10 21 43.8	0.0
NRTU	Norrtaelje	0.73	18	P	Pg	10 21 34.6	+0.2
NRTU				S	Sg	10 21 43.8	0.0
NRTU	Norrtaelje	0.73	18	P	Pg	10 21 34.6	+0.2
NRTU				S	Sg	10 21 43.8	0.0
NRTU	Norrtaelje	0.73	18	*e*P	Pg	10 21 34.6	+0.2
NRTU				*e*S	Sg	10 21 43.9	0.0
VIKU	Vikbolandet	0.92	238	P	Pb	10 21 38.9	-0.3
VIKU				S	Sb	10 21 51.0	-0.9
VIKU	Vikbolandet	0.92	238	P	Pb	10 21 38.9	-0.3
VIKU				S	Sb	10 21 51.0	-0.9
VIKU	Vikbolandet	0.92	238	P	Pb	10 21 38.9	-0.3
VIKU				S	Sb	10 21 51.0	-0.9
UPP	Uppsala	0.92	342	P	Pg	10 21 38.3	+0.3
UPP	Uppsala	0.92	342	P	Pg	10 21 38.3	+0.3
ESKU	Eskilstuna	0.95	286	P	Pg	10 21 39.0	+0.3
ESKU	Eskilstuna	0.95	286	P	Pg	10 21 39.0	+0.3
ESKU	Eskilstuna	0.95	286	P	Pg	10 21 39.0	+0.3
FIBU	Brunna	1.01	335	P	Pg	10 21 40.0	+0.2
FIBU				S	Sg	10 21 53.5	+0.6
FIBU	Brunna	1.01	335	P	Pg	10 21 40.0	+0.2
FIBU				S	Sg	10 21 53.5	+0.6
FIBU	Brunna	1.01	335	P	Pg	10 21 40.0	+0.2
FIBU				S	Sg	10 21 53.5	+0.6
BACU	Backbrunna	1.03	328	P	Pg	10 21 40.3	+0.1
BACU	Backbrunna	1.03	328	P	Pg	10 21 40.3	+0.1
BACU	Backbrunna	1.03	328	P	Pg	10 21 40.3	+0.1
FLYU	Flymyra	1.15	353	P	Pg	10 21 42.5	0.0
FLYU	Flymyra	1.15	353	P	Pg	10 21 42.5	0.0
FLYU	Flymyra	1.15	353	P	Pg	10 21 42.5	0.0
GOTU	Gotland	1.32	171	P	Pg	10 21 45.6	-0.2
GOTU	Gotland	1.32	171	P	Pg	10 21 45.6	-0.2
GOTU	Gotland	1.32	171	P	Pg	10 21 45.6	-0.2
GOTU	Gotland	1.32	171	*e*P	Pg	10 21 45.6	-0.2
GOTU				*e*S	Sn	10 22 03.9	-0.6
OSTU	Oestervaala	1.35	337	P	Pg	10 21 46.1	-0.3
OSTU	Oestervaala	1.35	337	P	Pg	10 21 46.1	-0.3
OSTU	Oestervaala	1.35	337	P	Pg	10 21 46.1	-0.3
GRAU	Graesoe	1.36	7	P	Pg	10 21 46.3	-0.3
GRAU	Graesoe	1.36	7	P	Pg	10 21 46.3	-0.3
GRAU	Graesoe	1.36	7	P	Pg	10 21 46.3	-0.3
FORU	Forsmark	1.40	360	P	Pn	10 21 47.1	-0.2
FORU				S	Sg	10 22 05.0	-0.6
FORU	Forsmark	1.40	360	P	Pn	10 21 47.1	-0.2
FORU				S	Sg	10 22 05.0	-0.6
FORU	Forsmark	1.40	360	P	Pn	10 21 47.1	-0.2
FORU				S	Sg	10 22 05.0	-0.6
AAL	Aland	1.51	37	P	Pb	10 21 48.7	-0.6
AAL	Aland	1.51	37	*e*P	Pn	10 21 48.6	-0.1
AAL				*e*S	Sg	10 22 08.0	-0.9
VSTU	Vaestervik	1.59	214	P	Pg	10 21 50.9	-0.1
VSTU	Vaestervik	1.59	214	P	Pg	10 21 50.9	-0.1
VSTU	Vaestervik	1.59	214	P	Pg	10 21 50.9	-0.1
HFS	Hagfors	2.56	299	Pn	Pb	10 22 05.5	-1.7
	0.5nm,0.3s,baz=116,slow=16,SNR=18						
HFS				Sn	Sb	10 22 38.1	-1.1
	1.5nm,0.3s,baz=112,slow=27,SNR=17						
	1.2nm,0.3s						
SLIT	Slitere, Latvi	2.56	120	*e*SG	Sb	10 22 39.8	+0.6
RAF	Rauma	2.72	40	*e*P	Pn	10 22 07.0	+1.6
RAF				*e*S	Sn	10 22 40.8	+1.9
RAF				MSG		10 22 46.9	
	comp=Z,3.7nm,0.1s						
ARNU	Arnoeviken	2.74	352	*e*P	Pn	10 22 06.4	+0.7
MEF	Metsahovi	3.39	66	*e*S	Sn	10 22 54.0	-1.4
MEF				MSG		10 23 07.9	
	comp=Z,1.9nm,0.1s						
KPF	Kankaanpaa	3.44	32	*e*P	Pn	10 22 17.6	+2.3
KPF				*e*S	Sn	10 22 56.8	+0.1
STRU	Stroemstad	3.62	274	*e*P	Pn	10 22 19.0	+1.2
NC602	NORSAR Array S	3.78	300	*e*P	Pn	10 22 21.1	+1.1
NC602				IAML		10 23 22.9	
	comp=Z,3.4nm,0.6s						
NB201	NORSAR Array S	4.03	304	*e*P	Pn	10 22 24.9	+1.5
NB201				IAML		10 23 28.6	
	comp=Z,4.6nm,0.6s						
NOA	NORSAR Array B	4.06	303	Pn	Pn	10 22 25.3	+1.5
	baz=185,slow=16,SNR=2.1						
NOA				Lg	Lg	10 23 26.7	
	comp=Z,0.1nm,0.3s,baz=136,slow=19,SNR=6.9						
	comp=Z,1.2nm,1.0s						
NC303	NORSAR Array S	4.08	306	*e*P	Pn	10 22 25.7	+1.6
NBO00	NORSAR Array S	4.25	302	*e*P	Pn	10 22 27.1	+0.8
NC204	NORSAR Array S	4.36	305	*e*P	Pn	10 22 28.9	+0.9
FINES	FINESS Array B	4.64	55	Pn	Pn	10 22 33.6	+1.9
	comp=Z,0.1nm,0.3s,baz=239,slow=12,SNR=3.8						
FINES				Sn	Sn	10 23 27.5	+1.3
	comp=Z,0.6nm,0.3s,baz=242,slow=20,SNR=13						
FINES				Lg	Lg	10 23 44.4	
	comp=Z,0.8nm,0.3s,baz=232,slow=27,SNR=9.6						
	comp=Z,2.8nm,1.0s						
SKAR	Skarslia	5.26	293	*e*P	Pn	10 22 40.9	+0.5
SKAR				IAML		10 23 43.2	
	comp=Z,2.6nm,0.8s						
ARCES	ARCESS Array B	11.04	14	Pn	Pn	10 23 58.2	-1.2
	comp=Z,0.1nm,0.3s,baz=190,slow=14,SNR=5.5						
	comp=Z,1.4nm,0.7s						

ROM 14 10:24:59.1±0.0, **42°.765N**±0°.003×**13°.066E**±0°.004, **h10**^{km}, **ML1.5**/15, **7C-4D, Error ellipse: s-maj=0.3km s-min=0.2km az=299.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	Cascia, Frazio	0.02	229	⇓P	Pg	10 25 01.4	+0.3
T1212				S	Sg	10 25 02.6	+0.1
T1212				AML	AML		
	comp=E,1245μm,0.5s						
T1212				AML	AML		
	comp=N,1985μm,0.2s						
T1212				AML	AML		
	comp=E,1280μm,0.6s						
T1212				AML	AML		
	comp=N,2040μm,0.2s						
T1218	Civita (PG)	0.10	159	⇓P	Pg	10 25 02.3	+0.4
T1218				S	Sg	10 25 04.5	+0.6
T1218				AML	AML		
	comp=N,1165μm,0.4s						
T1218				AML	AML		
	comp=N,1165μm,0.4s						
T1218				AML	AML		
	comp=N,1165μm,1.6s						
T1218				AML	AML		
	comp=N,1165μm,1.6s						
T1218				AML	AML		
	comp=E,770μm,0.2s						
T1218				AML	AML		
	comp=E,721μm,0.2s						
T1217	Poggiodomo (PG	0.11	242	⇑P	Pg	10 25 02.5	+0.5
T1217				AML	AML		
	comp=E,159μm,0.7s						
T1217				AML	AML		
	comp=N,168μm,0.6s						
T1217				AML	AML		
	comp=N,168μm,1.4s						
T1217				AML	AML		
	comp=E,158μm,0.7s						
T1245	Castelsantange	0.13	44	⇑P	Pg	10 25 02.8	+0.4
T1245				S	Sg	10 25 05.2	+0.6
T1245				AML	AML		
	comp=N,1250μm,0.7s						
T1245				AML	AML		
	comp=E,1034μm,0.2s						
T1245				AML	AML		
	comp=N,1325μm,0.7s						
T1245				AML	AML		
	comp=E,848μm,0.6s						
T1245				AML	AML		
	comp=N,1325μm,1.3s						
T1245				AML	AML		
	comp=N,1250μm,1.3s						
T1216	Preci, Frazion	0.13	345	⇑P	Pg	10 25 02.8	+0.5
T1216				S	Sg	10 25 05.2	+0.7
T1216				AML	AML		
	comp=E,290μm,0.1s						
T1216				AML	AML		
	comp=N,318μm,0.2s						
T1216				AML	AML		
	comp=E,290μm,0.1s						
T1216				AML	AML		
	comp=N,318μm,0.2s						
T1215	Vallo di Nera,	0.15	284	⇑P	Pg	10 25 03.1	+0.5
T1215				S	Sg	10 25 05.8	+0.8
T1215				AML	AML		
	comp=E,176μm,0.4s						
T1215				AML	AML		
	comp=N,156μm,0.9s						
T1215				AML	AML		
	comp=E,176μm,0.4s						
T1215				AML	AML		
	comp=N,156μm,0.9s						
T1215				AML	AML		
	comp=N,156μm,1.1s						
T1215				AML	AML		
	comp=E,176μm,1.6s						
MC2	Monte Cornacci	0.17	32	⇑P	Pg	10 25 03.6	+0.5
MC2				S	Sg	10 25 06.9	+1.1
T1256	Bolognola (MC)	0.27	26	⇓P	Pg	10 25 05.1	+0.5
T1256				S	Sg	10 25 09.4	+1.0
T1256				AML	AML		
	comp=E,87μm,0.3s						
T1256				AML	AML		
	comp=E,87μm,0.3s						
T1256				AML	AML		
	comp=N,70μm,0.4s						
FDMO	Fiordimonte	0.27	3	AML	AML		
	comp=N,110μm,0.3s						
FDMO				AML	AML		
	comp=E,83μm,0.3s						
RM33	Pellescritta (	0.28	157	P	Pg	10 25 05.3	+0.5
RM33				S	Sg	10 25 09.8	+1.2
RM33				AML	AML		
	comp=N,72μm,0.5s						
RM33				AML	AML		
	comp=E,72μm,0.3s						
T1241	Roccafluvione,	0.28	71	⇑P	Pg	10 25 05.3	+0.4
T1241				S	Sb	10 25 10.2	-1.0
T1241				AML	AML		

	comp=N,171µm,0.3s						
T1241				AML	AML		
	comp=E,200µm,0.2s						
ARRO	**Arrone**	**0.29**	**230**	⇓P	Pg	10 25 05.6	+0.6
ARRO				AML	AML		
	comp=N,48µm,1.3s						
ARRO				AML	AML		
	comp=E,68µm,0.2s						
ARRO				AML	AML		
	comp=N,48µm,0.7s						
T1219	**Muccia, Frazio**	**0.29**	**352**	AML	AML		
	comp=N,71µm,1.1s						
T1219				AML	AML		
	comp=E,70µm,1.3s						
T1219				AML	AML		
	comp=E,70µm,0.7s						
T1219				AML	AML		
	comp=N,71µm,0.9s						
MOMA	**Monte Martano**	**0.37**	**276**	P	Pg	10 25 06.8	+0.3
MOMA				S	Sb	10 25 13.3	-0.3
MOMA				AML	AML		
	comp=E,146µm,0.3s						
MOMA				AML	AML		
	comp=N,95µm,1.4s						
MOMA				AML	AML		
	comp=N,95µm,0.6s						
TERO	**Teramo**	**0.42**	**110**	⇑P	Pg	10 25 07.6	+0.2
TERO				AML	AML		
	comp=E,70µm,1.2s						
TERO				AML	AML		
	comp=N,89µm,0.1s						
TERO				AML	AML		
	comp=E,70µm,0.8s						

ROM 14 10:25:32.5±0.1**,43°.045N**±0°.003×**13°.009E**±0°.005**,**
h4^{km},ML1.3/6**,4C-4D,Error ellipse: s-maj=0.4km**
s-min=0.1km az=267.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.01**	**355**	P	Pg	10 25 33.2	-0.2
T1219				S	Sg	10 25 33.6	-0.4
FDMO	**Fiordimonte**	**0.06**	**98**	P	Pg	10 25 34.1	+0.2
FDMO				S	Sg	10 25 35.3	+0.5
FDMO				AML	AML		
	comp=E,564µm,0.5s						
FDMO				AML	AML		
	comp=N,696µm,0.2s						
CESI	**CESI - Serrava**	**0.09**	**242**	P	Pg	10 25 34.7	+0.4
CESI				S	Sg	10 25 36.6	+1.0
CESI				AML	AML		
	comp=N,275µm,1.2s						
CESI				AML	AML		
	comp=N,275µm,0.8s						
CESI				AML	AML		
	comp=E,227µm,0.4s						
T1220	**Camerino, Fraz**	**0.09**	**42**	⇑P	Pg	10 25 34.8	+0.5
T1220				AML	AML		
	comp=N,604µm,1.2s						
T1220				AML	AML		
	comp=E,922µm,0.2s						
T1216	**Preci, Frazion**	**0.15**	**177**	⇓P	Pg	10 25 35.9	+0.4
T1216				S	Sg	10 25 38.9	+1.3
T1216				AML	AML		
	comp=E,199µm,1.0s						
T1216				AML	AML		
	comp=N,292µm,1.4s						
T1216				AML	AML		
	comp=E,200µm,1.0s						
T1216				AML	AML		
	comp=N,292µm,1.4s						
T1216				AML	AML		
	comp=N,292µm,0.6s						
MC2	**Monte Cornacci**	**0.19**	**135**	P	Pg	10 25 36.8	+0.6
SNTG	**Esanatoglia**	**0.22**	**347**	P	Pg	10 25 37.4	+0.7
SNTG				S	Sg	10 25 41.3	+1.7
SNTG				AML	AML		
	comp=E,75µm,1.6s						
SNTG				AML	AML		
	comp=N,88µm,0.2s						
SNTG				AML	AML		
	comp=E,75µm,0.4s						
T1245	**Castelsantange**	**0.23**	**145**	⇓P	Pg	10 25 37.4	+0.4
T1245				S	Sg	10 25 41.9	+1.9
T1245				AML	AML		
	comp=E,100µm,0.3s						
T1245				AML	AML		
	comp=N,111µm,1.3s						
T1245				AML	AML		
	comp=E,100µm,1.7s						
T1245				AML	AML		
	comp=N,111µm,0.7s						
ASSB	**Assisi San Ben**	**0.26**	**270**	⇓P	Pg	10 25 37.9	+0.5
ASSB				S	Sg	10 25 42.4	+1.5
T1215	**Vallo di Nera,**	**0.26**	**203**	P	Pg	10 25 38.1	+0.5
T1215				S	Sg	10 25 42.6	+1.5
MMO1	**Montemonaco**	**0.28**	**122**	⇑P	Pg	10 25 38.2	+0.4
MMO1				S	Sg	10 25 43.1	+1.6
EL6	**Elcito**	**0.29**	**13**	⇑P	Pg	10 25 38.7	+0.5
EL6				S	Sg	10 25 43.8	+1.8
EL6				AML	AML		
	comp=E,144µm,0.5s						
EL6				AML	AML		
	comp=N,156µm,1.3s						
EL6				AML	AML		
	comp=N,156µm,0.7s						
T1212	**Cascia, Frazio**	**0.29**	**175**	⇑P	Pg	10 25 38.6	+0.4
T1212				S	Sg	10 25 43.8	+1.8
T1217	**Poggiodomo (PG**	**0.34**	**190**	⇓P	Pg	10 25 39.6	+0.6

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*ISK **14** 10:30:07.3, 37°.53N×38°.48E, h12^{km}, ML3.7/20*
*DDA **14** 10:30:07.2±0.0, 37°.59N×38°.50E, h7^{km}±2^{km}, MW3.6*
ISC 14 10:30:07.6±0.9**,37°.56N**±0°.03×**38°.50E**±0°.02**,h10^{km}**±7^{km}**,**
n30,σ0^{s}76/44**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	**Bozova**	**0.18**	**239**	P	**Pg**	**10 30 11.8**	**+0.2**
ATAB				S	**Sg**	**10 30 14.8**	**+0.5**
URFA	**Urfa**	**0.29**	**115**	Pg	**Pg**	**10 30 13.8**	**+0.3**
URFA				Sg	**Sb**	**10 30 18.2**	**-1.6**
HANM	**anlurfa/Hi**	**0.31**	**87**	SPECP		10 30 13.0	
HANM				P	**Pg**	**10 30 13.4**	**-0.4**
HANM				S	**Sg**	**10 30 17.6**	**-0.3**
AZEY	**Adyaman-Merk**	**0.31**	**322**	P	**Pg**	**10 30 13.7**	**-0.3**
AZEY				S	**Sg**	**10 30 18.2**	**-0.1**
NARI	**Adyaman-Kaht**	**0.38**	**33**	SPECP		10 30 14.0	
NARI				P	**Pg**	**10 30 14.7**	**-0.6**
NARI				S	**Sg**	**10 30 19.6**	**-0.7**
SANL	**SANLIURFA_Merk**	**0.56**	**135**	SPECP		10 30 18.0	
SANL				P	**Pg**	**10 30 18.4**	**0.0**
SANL				S	**Sg**	**10 30 26.0**	**+0.3**
AKCA	**Adyaman/G¶l**	**0.68**	**290**	SPECP		10 30 20.0	
AKCA				P	**Pg**	**10 30 20.7**	**-0.1**
AKCA				S	**Sb**	**10 30 30.2**	**-1.0**
SURC	**SANLIURFA_SURC**	**0.69**	**172**	P	**Pb**	**10 30 21.4**	**-0.4**
SURC				S	**Sb**	**10 30 32.0**	**+0.6**
GZT	**Gaziantep**	**0.77**	**255**	SPECP		10 30 22.0	
GZT				P	**Pb**	**10 30 22.6**	**-0.6**
GZT				S	**Sn**	**10 30 35.6**	**-0.8**
NZIP	**Nizip/Gaziante**	**0.84**	**232**	SPECP		10 30 24.0	
NZIP				P	**Pb**	**10 30 24.1**	**-0.1**
NZIP				S	**Sb**	**10 30 36.1**	**+0.5**
GAZ	**Gaziantep**	**1.09**	**249**	Pg	**Pn**	**10 30 28.7**	**-0.4**
GAZ				Sg	**Sn**	**10 30 43.8**	**-0.5**
KMRS	**Kahramanmaras**	**1.27**	**268**	Pn	**Pn**	**10 30 30.8**	**-0.7**
KMRS				Sn	**Sn**	**10 30 48.8**	**+0.2**
DARE	**Darende-Malaty**	**1.28**	**322**	Pn	**Pg**	**10 30 31.9**	**-0.4**
DARE				Sn	**Sn**	**10 30 50.1**	**+1.1**
DYBB	**Diyarbakir**	**1.36**	**73**	Pn	**Pn**	**10 30 32.7**	**0.0**
DYBB				Sn	**Sg**	**10 30 52.3**	**+0.9**
ARPR	**Arapgir-MALATY**	**1.53**	**355**	Pn	**Pb**	**10 30 35.6**	**-0.6**
KOZT	**Kozan**	**2.12**	**269**	Pn	**Pn**	**10 30 42.9**	**-0.3**
SVAN	**Silvan-Diyarba**	**2.22**	**74**	Pn	**Pn**	**10 30 44.9**	**+0.4**
BNGB	**Bingl**	**2.23**	**50**	Pn	**Pn**	**10 30 45.1**	**+0.3**
CEYT	**Ceyhan**	**2.26**	**257**	Pn	**Pn**	**10 30 45.5**	**+0.5**
BNN	**Bunyan**	**2.45**	**302**	Pn	**Pn**	**10 30 49.1**	**+1.3**
YAYL	**Yayladag**	**2.45**	**232**	Pn	**Pn**	**10 30 48.2**	**+0.4**
YEDI	**Yedisu-Bingol**	**2.47**	**40**	Pn	**Pn**	**10 30 49.4**	**+1.4**
SVSK	**Karacayir**	**2.62**	**334**	Pn	**Pn**	**10 30 51.4**	**+1.4**
KARA	**Karaisali**	**2.76**	**265**	Pn	**Pn**	**10 30 52.2**	**+0.3**
VRTB	**Varto-Mus**	**2.82**	**55**	Pn	**Pn**	**10 30 53.6**	**+0.7**
GURO	**Guroymak-BITLI**	**2.96**	**69**	Pn	**Pn**	**10 30 55.7**	**+0.9**
RSDY	**Resadiye-TOKAT**	**2.97**	**343**	Pn	**Pn**	**10 30 55.9**	**+1.0**
TOKT	**Tokat**	**3.14**	**332**	Pn	**Pn**	**10 30 58.6**	**+1.4**
YOZ	**Yozgat**	**3.24**	**311**	Pn	**Pn**	**10 30 59.6**	**+1.0**
KOZK	**Kozakli-Nevseh**	**3.29**	**301**	Pn	**Pn**	**10 31 00.5**	**+1.2**

WEL 14 10:43:51.9±0.8**,31°S**±8°×**18°0W**±2°3**,h368^{km}**±13^{km}**,**
M4.3/9**,mB4.4**/6**,MLv4.8**/9**,Mw(mB)3.6**/6**,Error ellipse:**
s-maj=0.0km s-min=0.0km az=107.8,confirmed,
Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.46**	**35**	P	Pn	10 44 47.3	-1.0
GLKZ				S	S	10 45 33.8	+0.2
MXZ	**Matakaoa Point**	**6.50**	**195**	P	P	10 45 31.0	+0.9
MXZ				S	S	10 46 51.9	+4.0
WMGZ	**Waiomatatini S**	**6.73**	**194**	P	P	10 45 32.0	-0.6
WMGZ				S	S	10 46 55.7	+3.1
HAZ	**Te Kaha**	**6.82**	**198**	P	Pn	10 45 32.0	-0.5
HAZ				S	S	10 46 53.6	-0.8
PKGZ	**Pakihiroa**	**6.87**	**196**	P	Pn	10 45 32.5	-0.7
PKGZ				S	S	10 46 55.3	-0.3
WCZ	**Waipu Caves**	**6.89**	**226**	P	Pn	10 45 33.6	+0.2
PUZ	**Puketiti**	**7.00**	**194**	P	P	10 45 35.9	+0.1
PUZ				S	S	10 46 57.8	-0.7
RUGZ	**Raukumara Rang**	**7.04**	**198**	P	Pn	10 45 35.5	+0.3
OPRZ	**Ohinepanea**	**7.29**	**205**	P	P	10 45 40.2	+1.2
CNGZ	**Carnagh Statio**	**7.41**	**194**	P	P	10 45 40.1	-0.3
CNGZ				S	S	10 47 09.3	+2.3
MWZ	**Matawai**	**7.43**	**198**	P	Pn	10 45 39.6	0.0
MWZ				S	S	10 47 07.3	-0.2
TKGZ	**Te Karaka**	**7.45**	**196**	P	P	10 45 41.0	+0.2
TKGZ				S	S	10 47 06.8	-1.0
URZ	**Urewera**	**7.48**	**201**	P	Pn	10 45 39.4	-0.7
URZ				S	S	10 47 06.5	-1.9
TOZ	**Tahuroa Road**	**7.62**	**211**	P	P	10 45 44.7	+2.0
RIGZ	**Rimuhau**	**7.72**	**196**	P	Pn	10 45 41.1	-2.0
MUGZ	**Murupara**	**7.78**	**202**	P	Pn	10 45 44.0	+0.3
RTZ	**Ruatahuna**	**7.84**	**200**	P	Pn	10 45 43.9	-0.6
SNGZ	**Shannon Statio**	**7.90**	**198**	P	P	10 45 46.7	+0.7
SNGZ				S	S	10 47 17.7	+0.2
PRRZ	**Plateau Road**	**7.93**	**204**	P	Pn	10 45 44.5	-0.9
RAHZ	**Arahi**	**8.09**	**199**	P	Pn	10 45 47.3	0.0
RAHZ				S	S	10 47 21.7	0.0
MRHZ	**Matea Rd**	**8.22**	**203**	P	Pn	10 45 47.5	-1.4
NMHZ	**Naumai**	**8.34**	**200**	P	Pn	10 45 50.8	+0.5
NMHZ				S	S	10 47 26.6	-0.6
HIZ	**Hauiti**	**8.55**	**211**	P	P	10 45 54.5	+0.2
MCHZ	**McNeill Hill**	**8.70**	**200**	P	Pn	10 45 51.8	-2.6
MCHZ				S	S	10 47 33.6	-1.1
WNVZ	**Wahianoa**	**8.95**	**205**	P	Pn	10 45 55.4	-2.1

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*IDC **14** 10:52:00.6±1.5, 5°.49S×151°.34E, h69^{km}±11^{km}, mb3.5/5,*
mbtmp3.8/6, Error ellipse: s-maj=63.0km s-min=9.8km
az=128.0
ISC 14 10:51:59.6±1.2**,5°.5S**±0°.3×**151°.4E**±0°.3**,h57^{km},n9,**
σ1^{s}14/10**,mb3.6**/5**,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.33**	**29**	P	**Pn**	**10 52 21.8**	**-0.2**
	779nm,0.4s,baz=323,slow=3.0,SNR=127						
KRVT				S	**Sn**	**10 52 41.1**	**+2.4**
	1µm,0.4s,baz=331,slow=23,SNR=20						
PMG	**Port Moresby**	**5.72**	**227**	P	**Pn**	**10 53 22.5**	**+0.5**
	18nm,0.8s,baz=26,slow=11,SNR=5.5						
PMG				S	**Sn**	**10 54 27.3**	**+1.1**
	13nm,0.4s,baz=157,slow=21,SNR=2.6						
GUMO	**Guam**	**20.01**	**341**	LR	LR	11 05 04.8	
	comp=Z,14nm,18.9s,baz=145,slow=39						
WRA	**Warramunga Arr**	**21.94**	**228**	P	**P**	**10 56 48.0**	**-0.5**
	3.2nm,0.6s,baz=53,slow=10,SNR=33 3.2nm,0.6s						
ASAR	**Alice Springs**	**24.70**	**221**	P	**P**	**10 57 15.9**	**+0.3**
	1.8nm,0.8s,baz=59,slow=8.3,SNR=30 1.8nm,0.8s						
SONM	**Songino Array**	**66.15**	**329**	P	**P**	**11 02 40.8**	**-0.4**
	0.3nm,0.6s,baz=143,slow=4.7,SNR=2.4 0.3nm,0.6s						
ILAR	**Eielson Array**	**83.32**	**22**	P	**P**	**11 04 18.9**	**-1.1**
	0.5nm,0.7s,baz=249,slow=4.8,SNR=13 0.5nm,0.7s						
NVAR	**Mina Array Bea**	**93.62**	**52**	P	**P**	**11 05 10.6**	**+0.3**
	0.5nm,0.7s,baz=267,slow=5.3,SNR=4.9 0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**149.15**	**286**	PKPbc	**PKPbc**	**11 11 42.2**	**-0.5**
	0.7nm,0.3s,baz=80,slow=2.5,SNR=12						

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*IDC **14** 11:07:08.4±0.4, 39°.17N×73°.48E, h0^{km}, mb4.8/42,*
mbtmp4.8/50, ML4.0/7, MS4.1/63, Error ellipse:
s-maj=8.8km s-min=8.2km az=167.0
*MOS **14** 11:07:08.6±1.0, 39°.04N×73°.47E, h10^{km}, mb5.2/79,*
MS4.3/24, Error ellipse: s-maj=3.8km s-min=2.8km
az=91.1
MOS Felt (IV-V) at Bordobo, (III-IV) at Nura, Sary-Tash.
*BJI **14** 11:07:10.7±0.0, 39°.19N×73°.51E, h12^{km}, mb4.8/60,*
mB5.0/39, ML5.1/6, Ms4.8/57, Ms7 4.5/57
*KRNET **14** 11:07:10.8±0.1, 39°.31N×73°.39E, mb5.5*
*BGR **14** 11:07:10.5, 39°.06N×74°.04E, h33^{km}, mb4.8, Ms4.5*
*NNC **14** 11:07:13.2±1.6, 39°.32N×73°.69E, h0^{km}, mb5.6, mpv5.2,*
Error ellipse: s-maj=11.2km s-min=10.3km az=169.0
*GCMT **14** 11:07:14.3±0.2, 39°.28N±0°.01×73°.47E±0°.02, h17^{km}±1^{km},*
MW5.0/98, Moment Tensor Solution. s37,c42; s98,c143;
Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.61±.13;
$M_{\theta\theta}$-1.59±.13; $M_{\phi\phi}$2.21±.12; $M_{r\theta}$-1.33±.33; $M_{\theta\phi}$-3.34±.10;
$M_{\phi r}$0.13±.28; Best double couple: $M_0$4.09000×10^{16}
NP1:ϕ_s106.00000°, δ84.00000°, λ-160.00000°. NP2:
ϕ_s14.00000°, δ70.00000°, λ-7.00000°. Principal axes: T
4.2820, Plg9.0000°, Azm239.0000°; N -0.3790,
Plg69.0000°, Azm123.0000°; P -3.8980, Plg19.0000°,
Azm332.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function
*NEIC **14** 11:07:15.3±1.2, 39°.25N±0°.06×73°.47E±0°.06, h41^{km}±4^{km},*
mb5.0/236 Error ellipse: s-maj=8.2km s-min=7.1km
az=165.0
ISC 14 11:07:11.0±0.3**,39°.12N**±0°.02×**73°.42E**±0°.02**,h15^{km}**±1^{km}**,**
h16^{km}:pP-P,n1023,σ1^{s}65/1107**,mb5.0**/295**,MS4.3**/90**,**
74C-55D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	**Osh**	**1.48**	**341**	⇓*e*P	**Pn**	**11 07 35.7**	**-1.5**
	baz=39						
OHH				⇓*e*S	**Sn**	**11 07 53.8**	**-2.5**
	baz=39						
OHH	**Osh**	**1.48**	**341**	*e*PN	**Pn**	**11 07 35.7**	**-1.5**
OHH				*e*S	**Sn**	**11 07 53.8**	**-2.5**
KSH	**Kashi**	**2.02**	**78**	Pn	**Pn**	**11 07 39.9**	**-4.7**
KSH				Sn	**Sn**	**11 08 03.9**	**-5.7**
KSH				smax	smax		
	comp=N,58µm,1.0s						
KSH				smax	smax		
	comp=E,22µm,1.0s						
BTK	**Batken**	**2.22**	**296**	⇓*e*P	**Pb**	**11 07 49.9**	**-0.9**
	baz=91						
BTK				⇓*e*S	**Sb**	**11 08 18.2**	**+0.1**
	baz=91						
BTK	**Batken**	**2.22**	**296**	*e*PN	**Pb**	**11 07 49.9**	**-0.9**
BTK				*e*S	**Sb**	**11 08 18.7**	**+0.6**
GAR	**Garm**	**2.42**	**268**		**Pb**	**11 07 53.6**	**-0.7**
GAR	**Garm**	**2.42**	**268**	⇑*e*P	**Pb**	**11 07 54.2**	**-0.1**
	baz=64						
GAR				⇑*e*S	**Sb**	**11 08 25.2**	**+1.2**
	baz=64						
GAR	**Garm**	**2.42**	**268**	*e*PN	**Pb**	**11 07 54.2**	**-0.1**
GAR				*e*S	**Sb**	**11 08 25.2**	**+1.2**
ARLS	**Aral**	**2.82**	**14**	⇓*e*P	**Pn**	**11 07 57.2**	**+1.6**
	baz=15						
ARLS				⇓*e*S	**Sn**	**11 08 30.8**	**+1.4**
	baz=15						
ARLS	**Aral**	**2.82**	**14**	*e*PN	**Pn**	**11 07 57.2**	**+1.6**
ARLS				*e*S	**Sn**	**11 08 30.8**	**+1.4**
ARK	**Arkit**	**2.90**	**338**	⇓*e*P	**Pn**	**11 07 58.2**	**+1.6**
	baz=37						
ARK				⇓*i*S	**Sn**	**11 08 32.5**	**+1.3**
	baz=37						
ARK	**Arkit**	**2.90**	**338**	*e*PN	**Pn**	**11 07 58.2**	**+1.6**
ARK				*i* S	**Sn**	**11 08 32.5**	**+1.3**
TRKS	**Terek-Say**	**2.97**	**325**	⇑*e*P	**Pn**	**11 07 58.6**	**+0.9**
	baz=22						
TRKS				⇑*e*S	**Sn**	**11 08 33.1**	**0.0**
	baz=22						
TRKS	**Terek-Say**	**2.97**	**325**	*e*PN	**Pn**	**11 07 58.6**	**+0.9**
TRKS				*e*S	**Sn**	**11 08 33.1**	**0.0**
AML	**Almayashu**	**3.01**	**4**	P	**Pn**	**11 08 00.4**	**+1.9**
	SNR=2912						
AML	**Almayashu**	**3.01**	**4**	Pn	**Pn**	**11 07 59.2**	**+0.7**
	90nm,0.5s						
AML				Sn	**Sb**	**11 08 39.2**	**-2.1**
	942nm,0.8s						
AML	**Almayashu**	**3.01**	**4**	⇑*e*P	**Pn**	**11 08 00.1**	**+1.6**
	baz=5.0						
AML				⇑*e*S	**Sn**	**11 08 35.5**	**+1.0**
	baz=5.0						
AML	**Almayashu**	**3.01**	**4**	*e*PN	**Pn**	**11 08 00.1**	**+1.6**
AML				*e*S	**Sn**	**11 08 35.5**	**+1.0**
NRN	**Naryn**	**3.04**	**40**	⇑*e*P	**Pb**	**11 08 00.8**	**-4.1**
	baz=42						
NRN				⇑*e*S	**Sn**	**11 08 36.7**	**+1.7**
	baz=42						
NRN	**Naryn**	**3.04**	**40**	*e*PN	**Pb**	**11 08 00.8**	**-4.1**
NRN				*e*S	**Sn**	**11 08 36.7**	**+1.7**
UCH	**Uchtor**	**3.21**	**15**	P	**Pn**	**11 08 03.5**	**+2.2**
	SNR=2371						
UCH	**Uchtor**	**3.21**	**15**	⇑*i*P	**Pn**	**11 08 03.2**	**+1.9**
	baz=16						
UCH				⇑*e*S	**Sn**	**11 08 40.5**	**+1.0**
	baz=16						
UCH	**Uchtor**	**3.21**	**15**	*i* PN	**Pn**	**11 08 03.2**	**+1.9**
UCH				*e*S	**Sn**	**11 08 40.5**	**+1.0**
CHGR	**Chuyangaron**	**3.36**	**263**	Pn	**Pb**	**11 08 06.5**	**-3.8**
CHGR	**Chuyangaron**	**3.36**	**263**	⇑*e*P	**Pb**	**11 08 07.4**	**-2.9**
	baz=60						
CHGR				⇑*e*S	**Sb**	**11 08 48.2**	**-2.8**
	baz=60						
CHGR	**Chuyangaron**	**3.36**	**263**	PN	**Pb**	**11 08 06.5**	**-3.8**
MNAS	**Manas**	**3.43**	**349**	⇓*i*P	**Pn**	**11 08 05.4**	**+1.4**
	baz=48						
MNAS				⇓*i*S	**Sn**	**11 08 45.6**	**+1.1**
	baz=48						
EKS2	**Erkin-Say**	**3.54**	**4**	P	**Pn**	**11 08 08.1**	**+2.5**
	SNR=324						
EKS2	**Erkin-Say**	**3.54**	**4**	⇓*e*P	**Pn**	**11 08 07.3**	**+1.7**
	baz=5.0						
EKS2				⇓*e*S	**Sn**	**11 08 48.0**	**+0.7**
	baz=5.0						
EKS2	**Erkin-Say**	**3.54**	**4**	*e*PN	**Pn**	**11 08 07.3**	**+1.7**
EKS2				*e*S	**Sn**	**11 08 48.0**	**+0.7**
AAK	**Ala-Archa**	**3.60**	**13**	P	**Pn**	**11 08 09.3**	**+2.9**
	SNR=1758						
AAK	**Ala-Archa**	**3.60**	**13**	Pn	**Pn**	**11 08 09.3**	**+2.9**
	1µm,0.7s,baz=193,slow=14						
AAK				Sn	**Sn**	**11 08 52.4**	**+3.6**
	68nm,0.3s,baz=155,slow=12,SNR=5.5						
AAK				Lg	Lg	11 08 59.4	
	132nm,0.3s,baz=15,slow=19,SNR=6.9						
AAK				LR	LR	11 09 21.9	
	comp=Z,620nm,19.3s,baz=216,slow=38						
AAK	**Ala-Archa**	**3.60**	**13**	Pn	**Pn**	**11 08 08.4**	**+2.0**
AAK	**Ala-Archa**	**3.60**	**13**	⇑*e*P	**Pn**	**11 08 08.3**	**+1.9**
	baz=14						
AAK				⇑*e*S	**Sn**	**11 08 49.8**	**+1.0**
	baz=14						
AAK	**Ala-Archa**	**3.60**	**13**	P	**Pn**	**11 08 09.0**	**+2.6**
MRKS	**Merke**	**3.62**	**358**	Pg	**Pb**	**11 08 13.4**	**-1.3**
	478nm,0.7s						
MRKS				Lg	Lg	11 08 58.5	
	1µm,1.1s						
KBK	**Karagaybulak**	**3.71**	**18**	P	**Pn**	**11 08 10.9**	**+3.0**
	SNR=169						
KBK	**Karagaybulak**	**3.71**	**18**	⇑*e*P	**Pn**	**11 08 09.9**	**+2.0**
	baz=19						
KBK				⇑*i*S	**Sn**	**11 08 52.4**	**+0.9**
	baz=19						
KBK	**Karagaybulak**	**3.71**	**18**	*e*PN	**Pn**	**11 08 09.9**	**+2.0**
KBK				*i* S	**Sn**	**11 08 52.4**	**+0.9**
ULHL	**Ulahol**	**3.79**	**34**	P	**Pn**	**11 08 11.0**	**+2.1**
	SNR=9.4						
ULHL	**Ulahol**	**3.79**	**34**	⇓*e*P	**Pn**	**11 08 11.3**	**+2.4**
	baz=35						
ULHL				⇓*e*S	**Sn**	**11 08 55.0**	**+1.7**
	baz=35						
ULHL	**Ulahol**	**3.79**	**34**	*e*PN	**Pn**	**11 08 11.3**	**+2.4**
ULHL				*e*S	**Sn**	**11 08 55.0**	**+1.7**
FRU1	**Bishkek**	**3.79**	**14**	⇑*e*P	**Pn**	**11 08 11.1**	**+2.1**
	baz=15						
FRU1				⇑*e*S	**Sn**	**11 08 54.6**	**+1.3**
	baz=15						
FRU1	**Bishkek**	**3.79**	**14**	*e*PN	**Pn**	**11 08 11.1**	**+2.1**
FRU1				*e*S	**Sn**	**11 08 54.6**	**+1.3**
TAS	**Tashkent**	**3.85**	**306**	Pn	**Pn**	**11 08 12.7**	**+3.1**
TAS	**Tashkent**	**3.85**	**306**	⇑*e*P	**Pn**	**11 08 12.1**	**+2.5**
	baz=4.0						
TAS				⇑*e*S	**Sn**	**11 08 56.7**	**+2.1**
	baz=4.0						
TAS	**Tashkent**	**3.85**	**306**	PN	**Pn**	**11 08 12.7**	**+3.1**
IUG	**Iuzhnay**	**3.97**	**321**	⇓*i*Pn	**Pn**	**11 08 14.0**	**+2.6**
	baz=319						
IUG				*i* Pg	**Pg**	**11 08 26.0**	**-1.1**
	baz=319						
IUG				*e*Sn	**Sn**	**11 09 01.5**	**+3.7**
	baz=319						
IUG				*i* Sg	**Sg**	**11 09 23.6**	**+5.1**
	baz=319						
IUG	**Iuzhnay**	**3.97**	**321**	*d i*PN	**Pn**	**11 08 14.0**	**+2.6**
IUG				*i*		11 08 25.9	
IUG				*e*		11 09 01.5	
IUG				*i*		11 09 23.6	
CHMS	**Chumysh**	**4.00**	**14**	P	**Pn**	**11 08 14.4**	**+2.6**
	SNR=327						
CHMS	**Chumysh**	**4.00**	**14**	⇑*e*P	**Pn**	**11 08 13.7**	**+2.0**
	baz=15						
CHMS				⇑*e*S	**Sn**	**11 08 59.0**	**+0.7**
	baz=15						
CHMS	**Chumysh**	**4.00**	**14**	*e*PN	**Pn**	**11 08 13.7**	**+2.0**
CHMS				*e*S	**Sn**	**11 08 59.0**	**+0.7**
DZA	**Taraz**	**4.08**	**338**	*e*Pn	**Pn**	**11 08 14.8**	**+1.9**
	baz=337						
DZA				*i* Pg	**Pg**	**11 08 26.1**	**-3.1**
	baz=337						
DZA	**Taraz**	**4.08**	**338**	*e*PN	**Pn**	**11 08 14.7**	**+1.9**
DZA				*i*		11 08 26.1	
TKM2	**Tokmak 2**	**4.13**	**23**	P	**Pn**	**11 08 16.3**	**+2.5**
	SNR=117						
TKM2	**Tokmak 2**	**4.13**	**23**	⇑Pn	**Pn**	**11 08 16.2**	**+2.5**
	300nm,0.7s						
TKM2	**Tokmak 2**	**4.13**	**23**	⇓*i*P	**Pn**	**11 08 15.8**	**+2.0**
	baz=24						
TKM2				⇓*i*S	**Sn**	**11 09 02.8**	**+0.9**
	baz=24						
TKM2	**Tokmak 2**	**4.13**	**23**	*i* PN	**Pn**	**11 08 15.8**	**+2.0**
TKM2				*i* S	**Sn**	**11 09 02.8**	**+0.9**
KDJ	**Kajisay**	**4.15**	**42**	⇓*e*P	**Pn**	**11 08 16.5**	**+2.6**
	baz=45						
KDJ				⇓*i*S	**Sn**	**11 09 04.2**	**+2.0**
	baz=45						
KDJ	**Kajisay**	**4.15**	**42**	*e*PN	**Pn**	**11 08 16.5**	**+2.6**
KDJ				*i* S	**Sn**	**11 09 04.2**	**+2.0**
USP	**Ospenovka**	**4.22**	**11**	P	**Pn**	**11 08 17.1**	**+2.4**
	SNR=99						
USP	**Ospenovka**	**4.22**	**11**	⇓*e*P	**Pn**	**11 08 16.5**	**+1.7**
	baz=12						
USP				⇓*e*S	**Sn**	**11 09 04.2**	**+0.4**
	baz=12						
USP	**Ospenovka**	**4.22**	**11**	*e*PN	**Pn**	**11 08 16.5**	**+1.7**
USP				*e*S	**Sn**	**11 09 04.2**	**+0.4**
TARG	**Taragay, Kyrgy**	**4.24**	**51**	Pn	**Pn**	**11 08 15.7**	**+0.3**
TARG	**Taragay, Kyrgy**	**4.24**	**51**	⇑*e*P	**Pn**	**11 08 17.5**	**+2.1**
	baz=53						
TARG				⇑*e*S	**Sn**	**11 09 06.9**	**+2.1**
	baz=53						
TARG	**Taragay, Kyrgy**	**4.24**	**51**	PN	**Pn**	**11 08 15.7**	**+0.3**
CHM	**Chimkent**	**4.31**	**319**	*e*Pn	**Pn**	**11 08 18.5**	**+2.5**
	baz=318						
CHM	**Chimkent**	**4.31**	**319**	*e*PN	**Pn**	**11 08 18.5**	**+2.5**
KST	**Kastek**	**4.36**	**25**	Pg	**Pb**	**11 08 28.3**	**+0.9**
	295nm,0.8s						
KST				Lg	Lg	11 09 23.8	
	2µm,0.9s						
SGDS	**Sogindy**	**4.42**	**11**	Pg	**Pb**	**11 08 28.3**	**0.0**
	363nm,1.1s						

SGDS				Lg	Lg	11 09 24.4	
	2µm,1.7s						
SGDS	Sogindy	4.42	11	*i* Pn	Pn	11 08 19.4	+1.9
	baz=12						
SGDS				*i* Pg	Pg	11 08 31.6	-4.0
	baz=12						
SGDS	Sogindy	4.42	11	*i* PN	Pn	11 08 19.4	+1.9
SGDS				*i*		11 08 31.6	
DGS	Degeres	4.48	23	Pg	Pb	11 08 30.1	+0.7
	316nm,0.7s						
DGS				Lg	Lg	11 09 27.4	
	1µm,1.0s						
KK31	Karatay Array	4.54	332	Pn	Pn	11 08 21.0	+1.8
KK31	Karatay Array	4.54	332	PN	Pn	11 08 21.0	+1.8
KKAR	Karatay Array	4.54	332	Pn	Pn	11 08 21.0	+1.8
KKAR	Karatay Array	4.54	332	PN	Pn	11 08 21.0	+1.8
MTBS	Maitube	4.60	29	Pg	Pb	11 08 32.2	+0.8
	295nm,1.1s						
MTBS				Lg	Lg	11 09 31.3	
	1µm,1.2s						
TNSS	Tian-Shan	4.73	33	Pg	Pb	11 08 34.5	+0.6
	438nm,1.6s						
TNSS				Lg	Lg	11 09 35.2	
	666nm,1.0s						
TNSS	Tian-Shan	4.73	33	⇓*i*Pn	Pn	11 08 24.2	+2.0
	baz=34						
TNSS				*i* Pg	Pb	11 08 34.0	+0.2
	baz=34						
TNSS				*e*Sn	Sn	11 09 14.0	-2.8
	baz=34						
TNSS				*e*Lg	Lg	11 09 36.1	
	baz=34						
TNSS	Tian-Shan	4.73	33	⇓*i*PN	Pn	11 08 24.1	+2.0
TNSS				*i*		11 08 34.0	
TNSS				*e*		11 09 36.1	
AAA	Alma-Ata	4.86	32	Pg	Pb	11 08 37.2	+1.4
	1µm,0.8s						
AAA				Lg	Lg	11 09 39.5	
	5µm,1.3s						
AAA	Alma-Ata	4.86	32	*e*Pn	Pn	11 08 26.4	+2.8
	baz=32						
AAA				*e*Pg	Pb	11 08 37.1	+1.3
	baz=32						
AAA	Alma-Ata	4.86	32	*e*PN	Pn	11 08 26.4	+2.8
AAA				*e*		11 08 37.1	
ANVS	Anan'yevo	4.87	40	⇑*e*P	Pn	11 08 26.3	+2.5
	baz=42						
ANVS				⇑*e*S	Sn	11 09 21.3	+1.3
	baz=42						
ANVS	Anan'yevo	4.87	40	*e*PN	Pn	11 08 26.3	+2.5
ANVS				*e*S	Sn	11 09 21.3	+1.3
KRBS	Karabastau	4.87	20	Pg	Pb	11 08 36.7	+0.6
	232nm,0.8s						
KRBS				Lg	Lg	11 09 38.7	
	2µm,1.2s						
MDOK	Medeo	4.88	33	⇓Pg	Pb	11 08 36.2	+0.1
	682nm,0.8s						
MDOK				Pg	Pg	11 08 37.0	-7.4
	416nm,1.1s						
MDOK				Lg	Lg	11 09 39.2	
	1µm,1.8s						
MDOK	Medeo	4.88	33	*i* Pn	Pn	11 08 26.0	+2.1
	baz=34						
MDOK				*i* Pg	Pb	11 08 36.7	+0.6
	baz=34						
MDOK	Medeo	4.88	33	*i* PN	Pn	11 08 26.0	+2.1
MDOK				*i*		11 08 36.7	
KNDC	Almaty	4.89	32	⇑Pg	Pb	11 08 37.6	+1.3
	2µm,0.8s						
KOTS	Kotyrbulak	4.96	33	Pg	Pb	11 08 38.9	+1.3
	630nm,1.1s						
KOTS				Lg	Lg	11 09 42.4	
	5µm,1.0s						
PRZ	Przheval'sk	5.05	47	⇓*e*P	Pn	11 08 29.4	+3.1
	baz=48						
PRZ				⇓*e*S	Sn	11 09 26.5	+2.0
	baz=48						
PRZ	Przheval'sk	5.05	47	*e*PN	Pn	11 08 29.4	+3.1
PRZ				*e*S	Sn	11 09 26.5	+2.0
KTBS	Karatobe	5.20	27	Pg	Pb	11 08 42.9	+1.3
	206nm,0.9s						
KTBS				Lg	Lg	11 09 49.2	
	2µm,0.9s						
KUU	Kurty	5.25	24	Pg	Pb	11 08 43.3	+1.0
	245nm,1.1s						
KUU				Lg	Lg	11 09 49.7	
	2µm,1.9s						
KUU	Kurty	5.25	24	*e*Pn	Pn	11 08 30.0	+1.1
	baz=24						
KUU				*i* Pg	Pb	11 08 43.0	+0.7
	baz=24						
KUU	Kurty	5.25	24	*e*PN	Pn	11 08 29.9	+1.1
KUU				*i*		11 08 43.0	
CEP	Cherat	5.43	193	P	Pb	11 08 38.3	-7.3
CHKK	Chushkaly	5.43	28	Pg	Pb	11 08 46.8	+1.2
	202nm,0.8s						
CHKK				Lg	Lg	11 09 56.0	
	854nm,0.9s						
CHKK	Chushkaly	5.43	28	*e*Pn	Pn	11 08 32.5	+1.0
	baz=29						
CHKK				*i* Pg	Pb	11 08 46.2	+0.7
	baz=29						
CHKK	Chushkaly	5.43	28	*e*PN	Pn	11 08 32.4	+1.0
CHKK				*i*		11 08 46.2	
SATY	Saty	5.44	42	Pg	Pb	11 08 47.7	+1.9
	746nm,1.2s						
SATY				Lg	Lg	11 09 57.6	
	1µm,1.4s						
SATY	Saty	5.44	42	*i* Pn	Pn	11 08 33.0	+1.3
	baz=43						
SATY				*e*Pg	Pb	11 08 46.9	+1.0
	baz=43						
SATY	Saty	5.44	42	*i* PN	Pn	11 08 32.9	+1.3
SATY				*e*		11 08 46.8	
CHCP	Chirah Chowk	5.46	181	P	Pb	11 08 37.9	-8.1
NIL	Nilore	5.46	181	Pn	Pb	11 08 37.1	-9.0
NIL	Nilore	5.46	181	PN	Pb	11 08 37.1	-9.0
NIL	Nilore	5.46	181	P	Pb	11 08 36.2	-10
ZHN	Zhinishke	5.54	42	Pg	Pb	11 08 48.1	+0.8
	431nm,1.0s						
ZHN				Lg	Lg	11 09 57.8	
	622nm,0.9s						
ZHN	Zhinishke	5.54	42	*i* Pn	Pn	11 08 34.2	+1.3
	baz=42						
ZHN				*i* Pg	Pb	11 08 48.2	+0.8
	baz=42						
ZHN	Zhinishke	5.54	42	*i* PN	Pn	11 08 34.2	+1.3
ZHN				*i*		11 08 48.2	
KURS	Kuram	5.64	38	Pg	Pb	11 08 49.9	+0.8
	300nm,1.5s						
KURS				Lg	Lg	11 10 01.1	
	787nm,2.0s						
KBL	Kabul	5.76	219	Pn	Pn	11 08 40.0	+3.8
KBL	Kabul	5.76	219	PN	Pn	11 08 40.0	+3.8
KBL	Kabul	5.76	219	P	Pn	11 08 40.3	+4.1
	SNR=69						
UZB	Uzynbulak	5.83	45	Pg	Pb	11 08 55.7	+3.2
	387nm,0.8s						
UZB				Lg	Lg	11 10 10.6	
	508nm,1.6s						
UZB	Uzynbulak	5.83	45	*i* Pn	Pn	11 08 38.4	+1.3
	baz=46						
UZB				*e*Pg	Pb	11 08 54.0	+1.5
	baz=46						
UZB	Uzynbulak	5.83	45	*i* PN	Pn	11 08 38.3	+1.3
UZB				*e*		11 08 53.9	
KPKS	Kokpek	5.88	41	Pg	Pb	11 08 55.8	+2.6
	616nm,0.9s						
KPKS				Lg	Lg	11 10 11.4	
	599nm,1.1s						
KPKS	Kokpek	5.88	41	*i* Pn	Pn	11 08 39.3	+1.7
	baz=42						
KPKS				*e*Pg	Pb	11 08 54.3	+1.2
	baz=42						
KPKS	Kokpek	5.88	41	*i* PN	Pn	11 08 39.2	+1.7
KPKS				*e*		11 08 54.2	
BTLS	Baital	5.93	4	Pg	Pb	11 08 56.9	+2.8
	169nm,1.4s						
BTLS				Lg	Lg	11 10 13.5	
	645nm,1.5s						
BTLS	Baital	5.93	4	⇓*i*Pn	Pn	11 08 39.8	+1.6
	baz=4.2						
BTLS				*i* Pg	Pb	11 08 55.1	+1.1
	baz=4.2						
BTLS	Baital	5.93	4	*d i*PN	Pn	11 08 39.8	+1.6
BTLS				*i*		11 08 55.0	
ARXS	Arharly	6.06	32	Pg	Pb	11 08 58.6	+2.3
	327nm,0.8s						
ARXS				Lg	Lg	11 10 16.2	
	931nm,1.0s						
SHLS	Shalkode	6.08	47	Pg	Pg	11 09 05.2	-2.3
	779nm,0.9s						
SHLS				Lg	Lg	11 10 27.1	
	1µm,2.1s						
SHLS	Shalkode	6.08	47	*i* Pn	Pn	11 08 45.4	+5.0
	baz=49						
SHLS				*e*Pg	Pg	11 09 03.2	-4.2
	baz=49						
SHLS	Shalkode	6.08	47	*i* PN	Pn	11 08 45.4	+4.9
SHLS				*e*		11 09 03.2	
PDGK	Podgornoye	6.21	45	Pg	Pb	11 09 00.6	+1.8
	190nm,1.8s						
PDGK				Lg	Lg	11 10 19.8	
	338nm,2.6s						
PDGK	Podgornoye	6.21	45	⇑Pn	Pn	11 08 42.8	+0.6
	60nm,0.6s						
PDGK	Podgornoye	6.21	45	PN	Pn	11 08 42.8	+0.6
THW	Thamme Wali	6.46	193	P	Pn	11 08 52.0	+6.4
JMU	Jammu	6.50	169	*e*P	Pn	11 08 50.6	+4.5
THN	Thein Dam	6.93	164	*e*P	Pn	11 08 55.8	+3.8
THN				*e*S	Sn	11 10 14.4	+3.9
THN				IAML		11 10 25.4	
	comp=N,2µm,1.2s						
TDK	Taldyqorghan	6.95	31	Pg	Pb	11 09 14.4	+3.1
	comp=N,863nm,1.3s						
TDK				Lg	Lg	11 10 42.7	
	comp=N,2µm,1.5s						
TDK	Taldyqorghan	6.95	31	*e*Pn	Pn	11 08 53.5	+1.4
	baz=31						
TDK				*e*Pg	Pb	11 09 14.1	+2.8
	baz=31						
TDK	Taldyqorghan	6.95	31	*e*PN	Pn	11 08 53.5	+1.4
TDK				*e*		11 09 14.0	
DJR	Jarkent	7.05	40	Pg	Pb	11 09 17.7	+4.5
	comp=N,98nm,0.8s						
DJR				Lg	Lg	11 10 48.7	
	comp=N,553nm,1.5s						
SARP	Sargodha	7.21	185	P	Pn	11 09 00.1	+4.3
BHK	Bhakra	8.07	161	*e*P	Pn	11 09 11.3	+3.7
BHK				*e*S	Sn	11 10 42.4	+3.8
SMLA	Simla	8.54	158	*e*P	Pn	11 09 14.9	+0.8
SMLA				*e*S	Sn	11 10 51.9	+1.6
SMLA				IAML		11 11 05.5	
	comp=N,924nm,0.9s						
SMLA				IAML		11 11 05.8	
	comp=E,905nm,0.6s						
OTUK	Ortayu	9.15	355	⇑P	Pn	11 09 22.2	-0.2
	comp=E,70nm,0.7s						
OTUK	Ortayu	9.15	355	P	Pn	11 09 22.2	-0.2
DDI	Dehra Dun	9.57	155	*e*P	Pn	11 09 29.9	+1.7
MAKZ	Makanchi	9.91	36		Pn	11 09 34.6	+1.8
MAKZ	Makanchi	9.91	36	P	Pn	11 09 34.6	+1.8
MK31	Makanchi Array	10.04	37		Pn	11 09 35.1	+0.4
MK31	Makanchi Array	10.04	37	*i* P	Pn	11 09 35.6	+0.9
MKAR	Makanchi Array	10.04	37	Pn	Pn	11 09 34.9	+0.3
	comp=E,0.5nm,0.3s,baz=207,slow=11,SNR=67						
MKAR				Sn	Sn	11 11 31.8	+4.7
	comp=E,0.5nm,0.3s,baz=264,slow=34,SNR=1.1						
MKAR				Lg	Lg	11 12 22.8	
	comp=E,0.9nm,0.3s,baz=229,slow=26,SNR=3.3						
MKAR				LR	LR	11 13 08.1	
	comp=E,1µm,18.7s,baz=234,slow=36						
	comp=E,12nm,0.9s						
MKAR	Makanchi Array	10.04	37	Pn	Pn	11 09 34.8	+0.1
MKAR	Makanchi Array	10.04	37	P	Pn	11 09 34.8	+0.1
BRZS	Berezniki	10.87	357	⇓*i*Pn	Pn	11 09 45.4	-0.6
	baz=357						
BRZS				*e*Sn	Sn	11 11 46.0	-1.3
	baz=357						
BRZS	Berezniki	10.87	357	*d i*P	Pn	11 09 45.3	-0.6
BRZS				*e*		11 11 45.9	
NDI	New Delhi	10.88	162	*e*P	Pn	11 09 47.0	+0.9
NDI				*e*P		11 09 47.5	
NDI				*e*S	Sn	11 11 44.5	-3.0
NDI				*e*S		11 11 51.0	
PTH	Pithoragarh	11.07	148	*e*P	Pn	11 09 48.7	-0.3
PTH				*e*S	Sn	11 11 49.0	-3.6
LGTI	Lohaghat	11.17	148	*e*P	Pn	11 09 48.6	-1.5
LGTI				*e*S	Sn	11 11 48.5	-6.2
LGTI				IAML		11 11 58.0	
	comp=N,450nm,1.0s						
LGTI				IAML		11 11 58.5	
	comp=E,216nm,1.0s						
KUDL	Kundal	11.24	166	*e*P	Pn	11 09 52.0	+0.9
KUDL				*e*S	Sn	11 11 53.7	-2.8
SONA	Sohna	11.26	163	*e*P	Pn	11 09 51.5	+0.1
SONA				*e*S	Sn	11 11 53.2	-3.7
WMQ	Urumqi	11.69	62	*e*P	Pn	11 09 56.5	-0.7
WMQ				sP		11 10 04.5	
WMQ				S	Sn	11 12 05.3	-2.1
WMQ				pmax	pmax		
	comp=E,220nm,4.7s						
WMQ				LR	LR		
	comp=E,2µm,10.9s						
WMQ				LR	LR		
	comp=E,2µm,8.1s						
WMQ				LR	LR		
	comp=E,740nm,23.3s						
GEYT	Alibeck	12.05	269	Pn	Pn	11 10 00.7	-1.5
	comp=E,7.4nm,0.3s,baz=96,slow=10,SNR=40						
GEYT				Sn	Sn	11 12 13.1	-3.2
	comp=E,3.6nm,0.3s,baz=113,slow=29,SNR=2.8						
GEYT				LR	LR	11 14 49.6	
	comp=E,338nm,20.1s,baz=68,slow=38						
	comp=E,30nm,0.5s						
GYA0	ALIBECK ARRAY	12.05	269	P	Pn	11 10 01.8	-0.3
GYA0				S	Sn	11 12 12.6	-3.6
KURBB	Kurchatov Arra	12.05	16	Pn	Pn	11 10 00.4	-1.6
	comp=E,0.3nm,0.3s,baz=208,slow=12,SNR=60						
KURBB				Lg	Lg	11 13 22.4	
	comp=E,0.4nm,0.3s,baz=203,slow=28,SNR=4.0						
	comp=E,12nm,0.8s						
KURBB	Kurchatov Arra	12.05	16	P	Pn	11 10 00.6	-1.4
KURK	Kurchatov	12.16	16	Pn	Pn	11 10 02.7	-0.8
KURK	Kurchatov	12.16	16	*de*P	Pn	11 10 02.0	-1.5
KURK				pmax	pmax		
	comp=Z,20nm,0.8s						
KURK				MLR	MLR		
	comp=Z,1µm,11.0s						
KURK	Kurchatov	12.16	16	P	Pn	11 10 02.8	-0.8
SEM	Semipalatinsk	12.28	21	*e*Pn	Pn	11 10 06.3	+0.9
	baz=21						
SEM	Semipalatinsk	12.28	21	*e*P	Pn	11 10 06.2	+0.9
AJM	Ajmer	12.65	175	*e*P	Pn	11 10 10.6	+0.2
PYUN	Piuthan	13.57	141	*e*P	Pn	11 10 19.9	-3.2
	comp=Z,315nm,0.7s						
DANN	Dangsing	13.75	138	*e*P	Pn	11 10 21.7	-4.0
	comp=Z,188nm,0.6s						
AB31	Akbulak array	13.98	321	P	Pn	11 10 26.2	-2.2
ABKAR	Akbulak array	13.98	321		Pn	11 10 26.6	-1.8
BVA0	Borovoye Array	14.06	352	P	Pn	11 10 26.9	-2.6
BVAR	Borovoye Array	14.06	352	Pn	Pn	11 10 26.4	-3.1
	comp=Z,0.3nm,0.3s,baz=165,slow=12,SNR=186						
BVAR				Lg	Lg	11 14 28.2	
	comp=Z,0.2nm,0.3s,baz=169,slow=33,SNR=5.4						
BVAR				LR	LR	11 16 01.2	
	comp=Z,309nm,19.4s,baz=167,slow=38						
	comp=Z,67nm,1.0s						
BRVK	Borovoye	14.11	352		Pn	11 10 27.8	-2.2
BRVK	Borovoye	14.11	352	*de*P	Pn	11 10 27.5	-2.6
BRVK				pmax	pmax		
	comp=Z,158nm,1.7s						
BRVK				MLR	MLR		
	comp=Z,1µm,11.0s						
BRVK	Borovoye	14.11	352	P	Pn	11 10 30.4	+0.4
KOLN	Koldanda	14.14	140	*e*P	Pn	11 10 27.6	-3.3
	comp=Z,15nm,0.9s						
JHNI	Jhansi	14.28	161	*e*P	Pn	11 10 30.1	-2.5
JHNI				IAML		11 13 15.7	
	comp=N,64nm,1.8s						
JHNI				IAML		11 13 15.8	
	comp=E,97nm,1.0s						
GKN	Gorkha	14.49	137	*e*P	Pn	11 10 31.1	-4.6
	comp=E,102nm,0.8s						
DGZ	Jazzator, Alta	14.54	39	*d i*P	Pn	11 10 36.4	+0.2
DGZ				pmax	pmax		
	comp=Z,53nm,1.4s						
DGZ				MLR	MLR		
	comp=Z,1µm,12.0s						
VLK	Valmikinagar	14.65	140	*e*P	Pn	11 10 33.2	-4.5
KKN	Kakani	15.01	135	*e*P	Pn	11 10 37.0	-5.7
DMN	Daman	15.05	136	*e*P	Pn	11 10 38.9	-4.5
PKIN	Phulchoki	15.24	136	*e*P	Pn	11 10 40.6	-5.2
	comp=Z,59nm,0.7s						
GUN	Gumba	15.25	133	*e*P	Pn	11 10 40.7	-5.3
	comp=Z,39nm,0.4s						
PKI	Pulchoki	15.25	135	*e*P	Pn	11 10 40.8	-5.2
JIRN	Jiri	15.61	133	*e*P	Pn	11 10 46.0	-4.8
	comp=Z,108nm,0.6s						
AKTO	Aktyubinsk	15.70	321	Pn	Pn	11 10 48.8	-2.6
	comp=Z,3.5nm,0.3s,baz=134,slow=12,SNR=229						
AKTO				Sn	Sn	11 13 35.6	-9.4
	comp=Z,0.8nm,0.3s,baz=127,slow=3.8,SNR=2.3						
AKTO				Lg	Lg	11 15 27.7	
	comp=Z,0.4nm,0.3s,baz=69,slow=16,SNR=1.4						
AKTO				LR	LR	11 17 50.6	
	comp=Z,396nm,21.9s,baz=252,slow=41						
	comp=Z,106nm,0.7s						
BHUJ	Bhuj	16.14	193	*e*P	P	11 10 58.1	-2.4
BHUJ				*e*S	Sn	11 13 53.1	-2.9
BHPL	Bhopal	16.20	167	*e*P	Pn	11 10 56.5	-1.6
BHPL				*e*S	Sn	11 13 52.9	-4.6
RAMN	Ramite	16.39	134	*e*P	Pn	11 10 56.0	-4.7
TAPN	Taplejung	16.73	130	*e*P	Pn	11 11 00.8	-4.3
	comp=Z,40nm,0.6s						
ZAA0	Zalesovo Array	16.74	24	Pn	Pn	11 11 02.9	-1.8
ZALV	Zalesovo Beam	16.74	24	Pn	Pn	11 11 03.0	-1.7
	comp=Z,1.6nm,0.3s,baz=206,slow=9.9,SNR=53						
ZALV				Sn	Sn	11 14 13.6	+3.3
	comp=Z,0.1nm,0.3s,baz=226,slow=12,SNR=1.6						
ZALV				Lg	Lg	11 15 59.2	
	comp=Z,0.2nm,0.3s,baz=200,slow=25,SNR=6.0						
	comp=Z,21nm,0.6s						
ZALV	Zalesovo Beam	16.74	24	Pn	Pn	11 11 02.8	-1.9
ZALV	Zalesovo Beam	16.74	24	*i* P	Pn	11 11 03.4	-1.3
ZALV				pmax	pmax		
	comp=Z,21nm,0.6s						
JBP	Jabalpur	16.86	159	*e*S	Sn	11 14 05.1	-8.3
GOMU	GeErMu	17.19	93	P	Pn	11 11 08.9	-1.9
GOMU				pP	pP	11 11 13.3	-4.6
GOMU				sP	sP	11 11 17.1	-3.3
GOMU				pmax	pmax		
	comp=Z,18nm,0.9s						
GOMU				LR	LR		
	comp=Z,630nm,12.5s						
GOMU				LR	LR		
	comp=Z,760nm,12.9s						
GOMU				LR	LR		
	comp=Z,920nm,12.0s						
NGCH	Negor - Chabah	17.19	221	P	P	11 11 12.9	+0.8
LSA	Lhasa	17.36	117	P	P	11 11 15.4	+0.9
LSA				LR	LR		
	comp=Z,2µm,24.9s						
LSA				LR	LR		
	comp=Z,1µm,19.8s						
LSA				LR	LR		
	comp=Z,230nm,5.7s						
LSA	Lhasa	17.36	117	P	P	11 11 14.1	-0.4
BOK	Bokaro	18.59	142	*e*P	Pn	11 11 27.1	-0.6
BOK				*e*S	Sn	11 14 42.2	-13
JASK	Jask - Hormozg	18.59	229	P	Pn	11 11 29.0	+1.2
LKRN	Lenkeran, Azer	19.17	277	P	Pn	11 11 36.5	+1.8
BANOM	Banah	19.49	233	P	Pn	11 11 39.3	+0.5
SHME	Shamm	19.50	233	P	Pn	11 11 40.3	+1.5
SVE	Sverdlovsk	19.61	339	*e*P	P	11 11 38.5	0.0
SVE				pmax	pmax		
	comp=Z,141nm,1.4s						
AKT	Akhty	19.72	285	*e*P	Pn	11 11 43.1	+1.7
AKT				*e*S	Sn	11 15 23.2	+0.6
AKT				pmax	pmax		
	comp=Z,34nm,0.5s						
AKT				smax	smax		
	comp=N,32nm,0.6s						
AKT				smax	smax		
	comp=E,20nm,0.9s						
MAK	Makhachkala	19.89	289	*e*P	P	11 11 39.8	-1.9
MAK				*e*S	S	11 15 23.8	-1.2
MAK				pmax	pmax		
	comp=Z,303nm,1.2s						
MAK				MLR	MLR		
	comp=Z,1µm,13.0s						
ARU	Arti	19.91	335	P	P	11 11 41.2	-0.6
	baz=158,slow=7.3,SNR=46						
ARU				Lg	Lg	11 17 41.2	
	baz=143,slow=20,SNR=1.9						
ARU				LR	LR	11 20 06.5	
	comp=Z,650nm,19.3s,baz=148,slow=39						
	comp=Z,250nm,1.0s						
ARU	Arti	19.91	335		P	11 11 41.2	-0.6
ARU	Arti	19.91	335	*c i*P	Pn	11 11 42.6	-0.9
ARU						11 11 57.1	
ARU				S	Sn	11 15 28.5	+1.7
ARU				SS	SnSn	11 15 45.4	+4.2
ARU				pmax	pmax		
	comp=Z,171nm,0.8s						
ARU				MLR	MLR		
	comp=Z,653nm,12.0s						
MDH	Madha	19.95	231	P	Pn	11 11 45.4	+1.3
MDH				P	Pn	11 11 45.4	+1.3
MASF	Masafi	19.98	232	P	Pn	11 11 45.7	+1.2
SEKA	Sheki	20.13	284	P	Pn	11 11 45.0	-1.2
WSAR	Wadi Sarin	20.23	223	P	Pn	11 11 46.8	-0.6
	comp=Z,14nm,0.6s,baz=48,slow=6.5,SNR=19						
WSAR				LR	LR	11 21 49.9	
	comp=Z,396nm,20.6s,baz=86,slow=43						
	comp=Z,14nm,0.6s						
WSAR	Wadi Sarin	20.23	223	P	Pn	11 11 48.0	+0.6
	SNR=10						
MNGR	Mingechevir, A	20.24	283	P	Pn	11 11 47.4	0.0
BIDO	Bidbid	20.27	224	P	Pn	11 11 49.0	+1.1
BIDO				P	Pn	11 11 49.0	+1.1
UOSS	Minazif	20.27	231	P	Pn	11 11 47.2	-0.7
UOSS	Minazif	20.27	231	P	Pn	11 11 49.2	+1.3
UOSS				P	Pn	11 11 49.2	+1.3
HATD	Hatta, Dubai	20.40	231	P	Pn	11 11 50.9	+1.4
HATD				P	Pn	11 11 50.9	+1.4
GTA	Gaotai	20.42	81	⇑P	Pn	11 11 49.0	-0.7
GTA				pP	sP	11 11 54.6	-1.0
GTA				sP	pP	11 11 57.9	+4.8
GTA				S	Sn	11 15 39.3	-0.2
GTA				pmax	pmax		
	comp=Z,46nm,0.9s						
GTA				pmax	pmax		
	comp=Z,260nm,5.1s						
GTA				LR	LR		
	comp=Z,1µm,12.4s						
GTA				LR	LR		
	comp=Z,1µm,12.4s						
GTA				LR	LR		
	comp=Z,1µm,15.6s						
TEZP	TEZPUR	20.45	122	*e*P	Pn	11 11 48.7	-1.4
ASHO	Ashiyiah	20.55	231	P	Pn	11 11 51.7	+0.5
	SNR=14						
ASHO				P	Pn	11 11 51.7	+0.5
	SNR=14						
WBK	Wadi Bani Khal	20.57	221	P	Pn	11 11 51.7	+0.3
	SNR=11						
WBK				P	Pn	11 11 51.7	+0.3
	SNR=11						
SHL	Shillong	20.59	126	P	Pn	11 11 49.4	-2.4
SHL				IAmb	IAmb	11 11 58.0	
	comp=Z,59nm,0.9s						
SHL	Shillong	20.59	126	P	Pn	11 11 49.4	-2.4
SHL				pmax	pmax		
	comp=Z,59nm,0.9s						
SHL	Shillong	20.59	126	P	Pn	11 11 51.0	-0.8
	SNR=33						
HOQ	Hoqain	20.67	226	P	Pn	11 11 53.1	+0.5
HOQ				P	Pn	11 11 53.1	+0.5
SMDO	Samad	20.68	224	P	Pn	11 11 53.2	+0.3
SMDO				P	Pn	11 11 53.2	+0.3
SOHO	SOHO	20.69	229	P	Pn	11 11 53.3	+0.5
SOHO				P	Pn	11 11 53.3	+0.5
ITAN	ITANAGAR	20.73	119	*e*P	Pn	11 11 53.7	+0.4
JLN	Jalan Bani Buh	20.73	219	P	Pn	11 11 53.1	-0.2
	SNR=20						
FAQ	Al Faqa, Dubai	20.79	232	P	Pn	11 11 54.4	+0.4
FAQ				P	Pn	11 11 54.4	+0.4
GANJ	Ganja	20.83	283	P	Pn	11 11 53.5	-0.9
ASUD	Al Ashush, Dub	21.04	232	P	P	11 11 57.2	+3.0
GROC	Groznyy	21.15	290	*e*P	P	11 11 57.6	+2.2
GROC				*e*S	S	11 15 52.1	+2.0
ALNE	Al Ain	21.21	230	P	P	11 11 59.1	+3.0
	SNR=14						
ALNE				P	P	11 11 59.1	+3.0
	SNR=14						

JMDO	**Jabal Madar**	**21.21 223**	P	**P**	**11 11 59.0 +2.8**
	SNR=11				
JMDO			P	**P**	**11 11 59.0 +2.8**
	SNR=11				
ARQ	**Araqi**	**21.31 227**	P	**P**	**11 12 02.4 +5.2**
	SNR=8.8				
ARQ			P	**P**	**11 12 02.4 +5.2**
	SNR=8.8				
BSY	**Bisya**	**21.40 225**	P	**P**	**11 12 02.6 +4.5**
BSY			P	**P**	**11 12 02.6 +4.5**
NAX	**Nakhchivan**	**21.63 279**	P	**P**	**11 12 03.0 +2.4**
MOKO	**MOKOCHONG**	**21.80 120**	*e*P	**P**	**11 12 04.9 +2.4**
GNI	**Garni**	**22.08 282**	P	**P**	**11 12 05.5 0.0**
	comp=Z,8.1nm,0.5s,baz=54,slow=16,SNR=3.8				
GNI			S	Sn	11 16 14.9 -4.4
	comp=Z,2.7nm,0.4s,baz=48,slow=24,SNR=1.4				
	comp=Z,8.1nm,0.5s				
GNI	**Garni**	**22.08 282**	P	**P**	**11 12 05.7 +0.2**
GNI	**Garni**	**22.08 282**	*de*P	**P**	**11 12 07.6 +2.1**
GNI			pmax	pmax	
	comp=Z,182nm,1.3s				
GNI			MLR	MLR	
	comp=Z,236nm,21.0s				
GNI	**Garni**	**22.08 282**	P	**P**	**11 12 08.0 +2.5**
HYB	**Hyderabad**	**22.09 167**	⇑*e*P	**P**	**11 12 07.3 +1.7**
HYB			IVmBBB		11 12 15.8
	comp=Z,338nm,0.9s				
HYB			*e*		11 16 20.6
HYB			IVMs_BB	IVMs_BB	11 20 42.0
	comp=Z,554nm,11.5s				
BELG	**Belogornoye**	**22.21 315**	P	**P**	**11 12 05.4 -1.2**
	comp=Z,171nm,0.7s,baz=63,slow=4.5,SNR=48				
BELG			S	**S**	**11 16 10.4 -0.1**
	comp=Z,39nm,1.0s,baz=135,slow=19,SNR=2.1				
BELG			LR	LR	11 22 23.5
	comp=Z,336nm,18.4s,baz=119,slow=41				
	comp=Z,171nm,0.7s				
BELG	**Belogornoye**	**22.21 315**	*i* P	**P**	**11 12 05.7 -0.9**
BELG			pmax	pmax	
	comp=Z,61nm,0.9s				
BELG			MLR	MLR	
	comp=Z,79nm,8.0s				
MHTO	**MHTO**	**22.43 221**	P	**P**	**11 12 12.6 +3.4**
	SNR=8.4				
MHTO			P	**P**	**11 12 12.6 +3.4**
	SNR=8.4				
ZEI	**Tsey**	**22.54 289**	*e*P	**P**	**11 12 09.5 -1.0**
ZEI			pmax	pmax	
	comp=Z,22nm,0.7s				
UMZA	**Um Al Zommool**	**22.58 229**	P	**P**	**11 12 14.7 +3.9**
UMZA			P	**P**	**11 12 14.7 +3.9**
BRDH	**Bariadhala**	**22.58 131**	P	**P**	**11 12 11.4 +0.6**
	comp=Z,67nm,0.3s,baz=89,slow=6.3,SNR=6.3				
BRDH			LR	LR	11 22 29.1
	comp=Z,547nm,18.2s,baz=90,slow=41				
	comp=Z,67nm,0.3s				
ONI	**Oni**	**22.87 288**	P	**P**	**11 12 14.8 +0.9**
ONI	**Oni**	**22.87 288**	P	**P**	**11 12 14.8 +0.9**
ONI			pmax	pmax	
	comp=Z,130nm,1.0s				
AKH	**Akhalkalaki**	**22.90 285**	P	**P**	**11 12 15.1 +0.8**
AKH	**Akhalkalaki**	**22.90 285**	P	**P**	**11 12 15.1 +0.8**
AKH			pmax	pmax	
	comp=Z,125nm,1.0s				
MOY	**Mondy**	**22.91 48**	*e*P	**P**	**11 12 14.3 +0.1**
MOY			pmax	pmax	
	comp=Z,75nm,2.0s				
SAKB	**Bahrain**	**23.24 242**	P	**P**	**11 12 19.8 +2.1**
KBZ	**Khabaz**	**23.27 291**	P	**P**	**11 12 17.7 -0.1**
	comp=Z,5.1nm,0.7s,baz=116,slow=7.4,SNR=11				
KBZ			S	**S**	**11 16 33.5 +4.1**
	comp=Z,7.6nm,1.1s,baz=169,slow=15,SNR=1.2				
KBZ			LR	LR	11 23 29.6
	comp=Z,724nm,18.7s,baz=98,slow=42				
	comp=Z,5.1nm,0.7s				
KBZ	**Khabaz**	**23.27 291**	*ce*P	**P**	**11 12 17.5 -0.3**
KBZ			pmax	pmax	
	comp=Z,38nm,0.9s				
KBZ			MLR	MLR	
	comp=Z,741nm,15.0s				
KARS	**Kars**	**23.28 283**	P	**P**	**11 12 19.3 +1.1**
KARS	**Kars**	**23.28 283**	P	**P**	**11 12 19.3 +1.1**
KARS			pmax	pmax	
	comp=Z,217nm,1.1s				
MZR	**Muzera**	**23.37 232**	P	**P**	**11 12 20.7 +1.7**
MZR			P	**P**	**11 12 20.7 +1.7**
NEY	**Neytrino**	**23.40 290**	*i* P	**P**	**11 12 19.8 +0.5**
NEY			pmax	pmax	
	comp=Z,7.0nm,0.8s				
KVAR	**Kislovodsk Arr**	**23.42 292**	P	**P**	**11 12 20.6 +1.1**
	comp=Z,5.2nm,0.6s,baz=248,slow=21,SNR=9.2				
KVAR			S	**S**	**11 16 40.4 +8.2**
	comp=Z,13nm,0.7s,baz=177,slow=10.0,SNR=3.5				
KVAR			LR	LR	11 21 59.2
	comp=Z,1µm,21.9s,baz=230,slow=38				
	comp=Z,5.2nm,0.6s				
KIV	**Kislovodsk**	**23.43 292**	⇑P	**P**	**11 12 21.2 +1.7**
KIV	**Kislovodsk**	**23.43 292**	P	**P**	**11 12 21.2 +1.7**
KIV	**Kislovodsk**	**23.43 292**	*e*P	**P**	**11 12 21.1 +1.5**
KIV			*e*S	**S**	**11 16 35.3 +3.0**
KIV			pmax	pmax	
	comp=Z,57nm,1.1s				
KIV			MLR	MLR	
	comp=Z,513nm,14.0s				
KIV	**Kislovodsk**	**23.43 292**	P	**P**	**11 12 22.0 +2.5**
KIV			P	**P**	**11 12 22.0 +2.5**
SHA1	**Shidzhatmaz**	**23.45 291**	*i* P	**P**	**11 12 20.1 +0.2**
DQM	**DQM**	**23.53 220**	P	**P**	**11 12 22.9 +2.4**
DQM			P	**P**	**11 12 22.9 +2.4**
GEVA	**Gevas**	**23.66 278**	P	**P**	**11 12 23.1 +1.2**
GEVA			IAmb	IAmb	11 12 35.6
	comp=Z,36nm,1.0s				
SLWR	**Sila**	**23.74 237**	P	**P**	**11 12 24.5 +1.9**
ZAK	**Zakamensk**	**23.84 52**	*e*P	**P**	**11 12 23.3 -0.2**
ZAK			pmax	pmax	
	comp=Z,25nm,1.0s				
LZH	**Lanzhou**	**24.24 88**	⇓P	**P**	**11 12 29.3 +1.9**
LZH			pP	sP	11 12 34.8 -1.0
LZH			PP	**PnPn**	**11 13 02.8 +5.8**
LZH			S	**S**	**11 16 46.3 +0.8**
LZH			SS	**SnSn**	**11 17 35.9 +8.2**
LZH			pmax	pmax	
	comp=Z,49nm,1.5s				
LZH			pmax	pmax	
	comp=Z,340nm,5.2s				
LZH			LR	LR	
	comp=Z,3µm,15.8s				
LZH			LR	LR	
	comp=Z,1µm,15.1s				
LZH			LR	LR	
	comp=Z,990nm,16.1s				
GURO	**Guroymak-BITLI**	**24.40 279**	P	**P**	**11 12 29.4 +0.6**
KIRV	**Kirov**	**24.84 330**	P	**P**	**11 12 31.8 -0.5**
	comp=Z,44nm,0.7s,baz=112,slow=2.7,SNR=12				
KIRV			LR	LR	11 23 39.3
	comp=Z,215nm,19.3s,baz=130,slow=40				
	comp=Z,44nm,0.7s				
KIRV	**Kirov**	**24.84 330**	*ce*P	**P**	**11 12 32.1 -0.3**
IRK	**Irkutsk**	**25.01 48**	*e*P	**P**	**11 12 34.0 -0.1**
IRK			pmax	pmax	
	comp=Z,46nm,1.8s				
VRH	**Novokhopyorsk**	**25.20 309**	*e*P	**P**	**11 12 34.6 -1.1**
VRH			pmax	pmax	
	comp=Z,42nm,1.5s				
SONM	**Songino Array**	**25.30 59**	P	**P**	**11 12 36.6 -0.3**
	comp=Z,23nm,0.8s,baz=263,slow=8.9,SNR=88				
SONM			PP	**PnPn**	**11 13 09.7 -1.8**
	comp=Z,11nm,0.9s,baz=275,slow=9.6,SNR=4.8				
SONM			ScP	**ScP**	**11 19 49.4 +1.3**
	comp=Z,1.1nm,0.9s,baz=198,slow=4.2,SNR=3.6				
SONM			LR	LR	11 23 46.4
	comp=Z,480nm,20.9s,baz=249,slow=40				
	comp=Z,23nm,0.8s				
SONM	**Songino Array**	**25.30 59**	P	**P**	**11 12 37.0 +0.1**
SONM			IAmb	IAmb	11 12 39.6
	comp=Z,27nm,0.8s				
KOPT	**Kop Dagi**	**25.32 283**	P	**P**	**11 12 39.5 +2.2**
TNCH	**TengChong**	**25.39 116**	*e*P	**P**	**11 12 39.6 +1.7**
TNCH			pP	sP	11 12 42.4 -3.9
TNCH			S	**S**	**11 17 03.3 -0.8**
TNCH			pmax	pmax	
	comp=Z,300nm,4.1s				
TNCH			LR	LR	
	comp=Z,420nm,14.5s				
SOC	**Sochi**	**25.58 291**	*e*P	**P**	**11 12 41.1 +1.8**
SOC			*e*PPP	PPP	11 13 21.7
SOC			*e*S	**S**	**11 17 11.9 +5.3**
SOC			*e*SSS	SSS	11 18 15.7
SOC			pmax	pmax	
	comp=Z,22nm,0.6s				
SOC			MLR	MLR	
	comp=Z,455nm,16.0s				
ULN	**Ulaanbaatar**	**25.75 59**	P	**P**	**11 12 41.0 0.0**
ULN	**Ulaanbaatar**	**25.75 59**	*ce*P	**P**	**11 12 41.3 +0.3**
ULN			pmax	pmax	
	comp=Z,48nm,1.7s				
ULN	**Ulaanbaatar**	**25.75 59**	P	**P**	**11 12 41.7 +0.7**
MND	**Mandalay**	**25.82 125**	P	**P**	**11 12 42.4 +0.8**
CD2	**Chengdu**	**26.07 99**	P	**P**	**11 12 47.6 +3.7**
CD2			S	**S**	**11 17 19.4 +4.8**
CD2			pmax	pmax	
	comp=Z,10.0nm,0.5s				
CD2			LR	LR	
	comp=Z,2µm,21.2s				
SHAO	**Shalim**	**26.10 221**	P	**P**	**11 12 45.5 +1.3**
SHAO			P	**P**	**11 12 45.5 +1.3**
VORD	**Divnogorie**	**26.62 308**	*e*P	**P**	**11 12 48.5 -0.1**
VORD			pmax	pmax	
	comp=Z,60nm,0.6s				
DMTO	**DMTO**	**26.71 222**	P	**P**	**11 12 51.0 +1.3**
DMTO			P	**P**	**11 12 51.0 +1.3**
VSR	**Storozhevoye**	**26.75 308**	*e*P	**P**	**11 12 49.7 -0.1**
VSR			pmax	pmax	
	comp=Z,60nm,0.6s				
PZH	**PanZhiHua**	**26.80 109**	P	**P**	**11 12 55.4 +4.7**
PZH			S	**S**	**11 17 28.0 +1.6**
PZH			pmax	pmax	
	comp=Z,10.0nm,0.7s				
PZH			pmax	pmax	
	comp=Z,150nm,5.3s				
PZH			LR	LR	
	comp=Z,790nm,20.4s				
PZH			LR	LR	
	comp=Z,580nm,18.1s				
PZH			LR	LR	
	comp=Z,670nm,19.3s				
VORR	**Voronezh**	**26.84 309**	*e*P	**P**	**11 12 51.4 +0.8**
VORR			pmax	pmax	
	comp=Z,45nm,1.5s				
WHFO	**Wadi Hawf**	**27.17 225**	P	**P**	**11 12 55.1 +1.2**
WHFO			P	**P**	**11 12 55.1 +1.2**
ANN	**Anapa**	**27.20 294**	*e*P	**P**	**11 12 54.4 +0.5**
ANN			*e*		11 13 49.6
ANN			*e*S	**S**	**11 17 33.6 +1.5**
ANN			pmax	pmax	
	comp=Z,76nm,1.2s				
ANN			MLR	MLR	
	comp=Z,440nm,9.0s				
LPSR	**Galich'ya Gora**	**27.25 311**	*e*P	**P**	**11 12 54.2 -0.1**
LPSR			pmax	pmax	
	comp=Z,50nm,0.6s				
ABTO	**Aybut**	**27.89 225**	P	**P**	**11 13 03.2 +2.8**
	SNR=7.6				
ABTO			P	**P**	**11 13 03.2 +2.8**
	SNR=7.6				
BTO	**Baotou**	**28.01 75**	*e*P	**P**	**11 13 01.4 +0.1**
BTO			pP	**sP**	**11 13 06.0 -3.7**
BTO			sP	**pP**	**11 13 08.3 +1.1**
BTO			S	**S**	**11 17 47.8 +2.7**
BTO			sS	**sS**	**11 17 51.0 -4.1**
BTO			pmax	pmax	
	comp=Z,50nm,0.7s				
BTO			pmax	pmax	
	comp=Z,620nm,3.7s				
BTO			LR	LR	
	comp=Z,6µm,17.2s				
BTO			LR	LR	
	comp=Z,3µm,15.2s				
BTO			LR	LR	
	comp=Z,4µm,15.4s				
RAYN	**Ar Rayn**	**28.32 245**	P	**P**	**11 13 05.5 +1.3**
RAYN			IAmb	IAmb	11 13 07.2
	comp=Z,31nm,0.7s				
RAYN	**Ar Rayn**	**28.32 245**	P	**P**	**11 13 05.5 +1.3**
RAYN			pmax	pmax	
	comp=Z,31nm,0.7s				
RAYN	**Ar Rayn**	**28.32 245**	P	**P**	**11 13 06.3 +2.1**
KMI	**Kunming**	**28.34 111**	⇑P	P	11 13 07.3 +2.7
KMI			S	S	11 17 58.0 +7.2
KMI			pmax	pmax	
	comp=Z,13nm,1.3s				
KMI			LR	LR	
	comp=Z,600nm,16.4s				
KMI			LR	LR	
	comp=Z,800nm,18.3s				
KMI			LR	LR	
	comp=Z,390nm,16.6s				
GAZ	**Gaziantep**	**28.43 278**	P	**P**	**11 13 06.6 +1.5**
GAZ			IAmb	IAmb	11 13 50.8
	comp=Z,43nm,1.5s				
XAN	**Xi'an**	**28.83 89**	P	**P**	**11 13 09.4 +0.7**
XAN			pP	sP	11 13 13.4 -3.7
XAN			S	**S**	**11 18 00.1 +2.0**
XAN			sS	sS	11 18 06.6 -1.8
XAN			pmax	pmax	
	comp=Z,6.0nm,0.9s				
XAN			pmax	pmax	
	comp=Z,130nm,4.7s				
XAN			LR	LR	
	comp=Z,2µm,16.5s				
XAN			LR	LR	
	comp=Z,1µm,18.0s				
XAN			LR	LR	
	comp=Z,730nm,17.9s				
MOS	**Moscow**	**28.94 317**	*e*P	**P**	**11 13 05.6 -3.7**
MOS			pmax	pmax	
	comp=Z,43nm,0.8s				
MOS			MLR	MLR	
	comp=Z,600nm,17.0s				
BNN	**Bunyan**	**29.07 282**	P	**P**	**11 13 11.8 +0.9**
BNN			IAmb	IAmb	11 14 17.3
	comp=Z,36nm,1.0s				
HHC	**Hu-ho-hao-te**	**29.13 74**	*e*P	**P**	**11 13 12.0 +0.7**
HHC			pmax	pmax	
	comp=Z,20nm,0.9s				
HHC			pmax	pmax	
	comp=Z,270nm,6.7s				
HHC			LR	LR	
	comp=Z,1µm,14.2s				
HHC			LR	LR	
	comp=Z,1µm,12.7s				
HHC			LR	LR	
	comp=Z,2µm,13.5s				
OBN	**Obninsk**	**29.31 315**	P	**P**	**11 13 12.6 0.0**
	comp=Z,4.6nm,0.3s,baz=94,slow=19,SNR=5.0				
OBN			LR	LR	11 25 53.7
	comp=Z,90nm,18.8s,baz=167,slow=38				
	comp=Z,4.6nm,0.3s				
OBN	**Obninsk**	**29.31 315**	P	**P**	**11 13 12.4 -0.2**
OBN	**Obninsk**	**29.31 315**	*ce*P	**P**	**11 13 12.9 +0.3**
OBN			*e*		11 14 05.8
OBN			pmax	pmax	
	comp=Z,38nm,1.3s				
OBN			MLR	MLR	
	comp=Z,914nm,14.0s				
CRAI	**Chiangrai**	**29.87 121**	P	**P**	**11 13 18.7 +0.8**
BZK	**Bozkurt**	**29.91 288**	P	**P**	**11 13 17.1 -1.0**
CHTO	**Chiang Mai**	**29.96 125**	P	**P**	**11 13 18.4 -0.3**
CHTO	**Chiang Mai**	**29.96 125**	P	**P**	**11 13 18.4 -0.3**
CM31	**Chiang Mai Arr**	**30.22 126**	P	**P**	**11 13 22.6 +1.6**
CMAR	**Chiang Mai Arr**	**30.22 126**	P	**P**	**11 13 20.3 -0.8**
	comp=Z,3.5nm,0.9s,baz=315,slow=8.7,SNR=17				
	comp=Z,3.5nm,0.9s				
CMAR	**Chiang Mai Arr**	**30.22 126**	P	**P**	**11 13 22.7 +1.6**
CMAR	**Chiang Mai Arr**	**30.22 126**	*i* P	**P**	**11 13 22.2 +1.1**
CMAR			pmax	pmax	
	comp=Z,3.0nm,0.8s				
KLMR	**Klimovskoe**	**30.23 327**	*e*P	**P**	**11 13 18.6 -2.1**
KLMR			AMP		11 13 21.4
	comp=Z,39nm,1.3s				
KLMR			*e*		11 13 52.4
KLMR			LQ	LQ	11 24 27.6
KLMR			LQ	LQ	11 24 27.6
KLMR			LR	LR	11 24 41.9
KLMR	**Klimovskoe**	**30.23 327**	*e*P	**P**	**11 13 18.6 -2.1**
KLMR			pmax	pmax	
	comp=Z,39nm,1.3s				
ILGA	**Ilgaz**	**30.26 287**	P	**P**	**11 13 20.3 -1.2**
ILGA			IAmb	IAmb	11 13 35.4
	comp=Z,59nm,1.0s				
ASF	**Jabal al Asfar**	**30.33 268**	PP	**PnPn**	**11 14 19.0 -1.1**
	comp=Z,4.8nm,0.4s,baz=311,slow=3.6,SNR=9.4				
GYA	**Guiyang**	**30.49 104**	*e*P	P	11 13 28.8 +5.3
GYA			PP	**PP**	**11 14 30.1 -2.2**
GYA			S	S	11 18 33.8 +9.4
GYA			pmax	pmax	
	comp=Z,11nm,0.7s				
GYA			LR	LR	
	comp=Z,580nm,12.1s				
GYA			LR	LR	
	comp=Z,600nm,19.5s				
GYA			LR	LR	
	comp=Z,440nm,14.2s				
BR131	**Keskin Array S**	**30.57 284**	P	**P**	**11 13 25.3 +1.2**
BR131			IAmb	IAmb	11 13 31.0
	comp=Z,39nm,0.8s				
BR131	**Keskin Array S**	**30.57 284**	P	**P**	**11 13 25.3 +1.2**
BR131			pmax	pmax	
	comp=Z,39nm,0.8s				
BRTR	**Keskin Array B**	**30.57 284**	P	**P**	**11 13 25.2 +1.2**
	comp=Z,19nm,1.0s,baz=90,slow=7.7,SNR=34				
BRTR			LR	LR	11 28 10.9
	comp=Z,346nm,19.7s,baz=98,slow=41				
	comp=Z,19nm,1.0s				
BRTR	**Keskin Array B**	**30.57 284**	P	**P**	**11 13 25.5 +1.5**
BRTR	**Keskin Array B**	**30.57 284**	*i* P	**P**	**11 13 25.6 +1.5**
BRTR			pmax	pmax	
	comp=Z,21nm,0.7s				
MNCI	**Minicoy**	**30.71 181**	P	**P**	**11 13 26.4 +1.1**
ENH	**Enshi**	**30.78 96**	P	**P**	**11 13 27.4 +1.5**
ENH			IAmb	IAmb	11 13 33.8
	comp=Z,20nm,0.9s				
PHRA	**Phrae**	**31.02 124**	P	**P**	**11 13 28.7 +0.7**
ANTO	**Ankara**	**31.17 284**	P	**P**	**11 13 30.1 +0.7**
ANTO			IAmb	IAmb	11 13 36.3
	comp=Z,34nm,1.1s				
ANTO	**Ankara**	**31.17 284**	P	**P**	**11 13 30.1 +0.7**
ANTO			pmax	pmax	
	comp=Z,34nm,1.2s				
NRIK	**Noril'sk**	**31.21 10**	P	**P**	**11 13 29.4 +0.2**
	comp=Z,14nm,1.0s,baz=200,slow=7.6,SNR=9.9				
	comp=Z,14nm,1.0s				
NRIK	**Noril'sk**	**31.21 10**	P	**P**	**11 13 28.9 -0.3**
NRIK	**Noril'sk**	**31.21 10**	*ce*P	**P**	**11 13 29.5 +0.2**
NRIK			pmax	pmax	
	comp=Z,19nm,1.1s				
LYN	**LuoYang**	**31.41 86**	⇓P	**P**	**11 13 33.4 +2.0**
LYN			pmax	pmax	
	comp=Z,13nm,0.8s				
LYN			LR	LR	
	comp=Z,1µm,16.7s				
LYN			LR	LR	
	comp=Z,760nm,19.8s				
LYN			LR	LR	
	comp=Z,660nm,12.9s				
BOD	**Bodaibo**	**32.11 41**	*e*P	**P**	**11 13 36.7 -0.6**
BOD			pmax	pmax	
	comp=Z,25nm,0.9s				
MDUB	**Mudurnu**	**32.25 286**	P	**P**	**11 13 38.3 -0.6**
HNS	**HongShan**	**32.27 80**	⇓P	**P**	**11 13 40.4 +1.5**
HNS			pmax	pmax	
	comp=Z,13nm,1.2s				
PBA	**Port Blair**	**32.30 143**	P	**P**	**11 13 40.7 +1.4**
PALK	**Pallekele**	**32.38 166**	LR	LR	11 26 32.1
	comp=Z,327nm,20.7s,baz=100,slow=36				
PALK	**Pallekele**	**32.38 166**	P	**P**	**11 13 41.7 +1.6**
PALK	**Pallekele**	**32.38 166**	P	**P**	**11 13 41.7 +1.6**
PALK			pmax	pmax	
	comp=Z,12nm,1.0s				
BJT	**Baijiatuau**	**32.73 75**	P	**P**	**11 13 42.3 -0.7**
BJT			IAmb	IAmb	11 13 45.0
	comp=Z,11nm,0.7s				
BJT	**Baijiatuau**	**32.73 75**	P	**P**	**11 13 42.3 -0.7**
BJT			pmax	pmax	
	comp=Z,11nm,0.7s				
BJT	**Baijiatuau**	**32.73 75**	P	**P**	**11 13 44.0 +1.0**
BJI	**Beijing**	**32.73 75**	P	**P**	**11 13 44.0 +1.1**
BJI			PcS	**PcS**	**11 20 14.8 +1.5**
BJI			pmax	pmax	
	comp=Z,11nm,0.7s				
BJI			LR	LR	
	comp=Z,770nm,14.8s				
BJI			LR	LR	
	comp=Z,360nm,13.7s				
BJI			LR	LR	
	comp=Z,470nm,18.9s				
AKASG	**Malin Array Be**	**32.90 305**	P	**P**	**11 13 44.0 -0.2**
	comp=Z,3.1nm,0.4s,baz=74,slow=6.9,SNR=96				
AKASG			PP	**PnPn**	**11 14 48.4 -4.6**
	comp=Z,14nm,0.8s,baz=85,slow=11,SNR=8.0				
AKASG			LR	LR	11 28 40.0
	comp=Z,479nm,18.1s,baz=80,slow=39				
	comp=Z,3.1nm,0.4s				
AKASG	**Malin Array Be**	**32.90 305**	P	**P**	**11 13 44.5 +0.2**
AKBB	**Malin Array Si**	**32.90 305**	P	**P**	**11 13 44.6 +0.3**
AKBB	**Malin Array Si**	**32.90 305**	*ce*P	**P**	**11 13 44.5 +0.3**
AKBB			pmax	pmax	
	comp=Z,36nm,0.7s				
EIL	**Elat**	**32.91 265**	P	**P**	**11 13 43.0 -1.7**
	comp=Z,7.3nm,0.7s,baz=67,slow=15,SNR=1.9				
EIL			PP	**PnPn**	**11 14 54.5 +0.9**
	comp=Z,7.6nm,0.4s,baz=99,slow=13,SNR=6.4				
EIL			LR	LR	11 29 20.9
	comp=Z,236nm,18.8s,baz=71,slow=40				
	comp=Z,7.3nm,0.7s				
BORA	**Eskisehir**	**32.93 285**	P	**P**	**11 13 45.1 +0.2**
BORA			IAmb	IAmb	11 13 51.0
	comp=Z,19nm,0.7s				
MILM	**Milestii Mici**	**33.16 298**	*e*P	**P**	**11 13 47.0 +0.4**
	comp=Z,20nm,0.4s				
MILM	**Milestii Mici**	**33.16 298**	*e*P	**P**	**11 13 47.0 +0.4**
MILM			pmax	pmax	
	comp=Z,20nm,0.4s				
NONG	**Nongkai**	**33.25 121**	P	**P**	**11 13 48.5 +0.9**
ISP	**Isparta**	**33.38 282**	P	**P**	**11 13 49.7 +0.9**
ISP			IAmb	IAmb	11 14 29.0
	comp=Z,26nm,0.8s				
ISP	**Isparta**	**33.38 282**	P	**P**	**11 13 49.7 +0.9**
ISP			pmax	pmax	
	comp=Z,27nm,0.8s				
SORM	**Soroca**	**33.43 301**	⇑P	**P**	**11 13 49.2 +0.3**
TPGR	**Topolog**	**33.60 295**	⇑P	**P**	**11 13 51.6 +1.1**
TIRR	**Tirgusor**	**33.65 294**	P	**P**	**11 13 51.6 +0.7**
TIRR	**Tirgusor**	**33.65 294**	P	**P**	**11 13 51.6 +0.7**
TIRR			pmax	pmax	
	comp=Z,71nm,1.1s				
CFR	**Carcaliu**	**33.76 295**	⇑P	**P**	**11 13 53.5 +1.6**
CFR	**Carcaliu**	**33.76 295**	P	**P**	**11 13 53.5 +1.6**
PUL	**Pulkovo**	**33.96 322**	*ce*P	**P**	**11 13 53.9 +0.5**
PUL			pmax	pmax	
	comp=Z,82nm,0.4s				
MNK	**Minsk**	**34.08 312**	*i* P	**P**	**11 13 52.2 -2.4**
	comp=E,3.0nm,0.9s				
MNK			*i* P	**P**	**11 13 52.2 -2.4**
	comp=N,22nm,0.7s				
MNK			*i* P	**P**	**11 13 52.2 -2.4**
	comp=Z,26nm,0.9s,baz=278				
MNK			*i* PP	**PnPn**	**11 15 05.3 -2.6**
MNK			*i* PPP	PPP	11 15 16.6
MNK			*i* S	**S**	**11 19 18.3 -1.2**
MNK			*i* SS	**SnSn**	**11 21 26.1 -0.7**
MNK			*i* SSS	SSS	11 21 41.9
MNK			*i* LR	LR	11 26 32.0
MNK			*i* LRM	MLR	11 30 10.5
	comp=Z,641nm,17.2s				
MNK			*i* LRM	MLR	11 30 11.8
	comp=E,71nm,19.8s				
MNK			*i* LRM	MLR	11 30 27.1
	comp=N,584nm,18.7s				
MNK	**Minsk**	**34.08 312**	*i* P	**P**	**11 13 52.1 -2.4**
MNK			*i*		11 15 05.3
MNK			*i*		11 16 29.7
MNK			*i* S	**S**	**11 19 18.3 -1.2**
MNK			*i* SS	**SnSn**	**11 21 26.1 -0.7**
MNK			*i*		11 24 16.6
MNK			pmax	pmax	
	comp=N,22nm,0.7s				
MNK			pmax	pmax	
	comp=E,3.0nm,0.9s				
MNK			pmax	pmax	
	comp=Z,26nm,0.9s				
MNK			MLR	MLR	
	comp=Z,641nm,17.0s				
MNK			MLR	MLR	
	comp=E,71nm,20.0s				
MNK			MLR	MLR	
	comp=N,584nm,19.0s				

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WHN   Wuhan            34.43  92 ⇑P      P      11 14 03.3 +5.5
WHN                              sP      sP     11 14 10.8 +4.6
WHN                              S       S      11 19 29.1 +3.7
WHN                              LR      LR
      comp=N,2µm,13.1s
TIA   Tai'an           34.47  81 ⇓P      P      11 13 59.5 +1.3
TIA                              pmax    pmax
      comp=N,16nm,0.7s
TIA                              LR      LR
      comp=N,610nm,12.3s
TIA                              LR      LR
      comp=N,510nm,12.8s
TIA                              LR      LR
      comp=N,530nm,18.3s
TESR  Tescani          34.67 298 ⇓P      P      11 14 01.0 +1.2
VRI   Vrincioaia       34.68 297 ⇑P      P      11 14 01.2 +1.3
VRI   Vrincioaia       34.68 297  P      P      11 14 01.1 +1.3
MANT  Manisa           34.70 283  P      P      11 13 59.7 -0.7
MANT                             IAmb    IAmb   11 14 06.4
      comp=Z,22nm,1.0s
PLOR  Plostina         34.73 297 ⇓P      P      11 14 02.7 +2.3
PLOR  Plostina         34.73 297  P      P      11 14 02.6 +2.3
NACGM Naroch           34.77 313 eP      P      11 14 01.0 +0.6
      comp=E,1µm,0.9s
ISR   Istrita          34.89 295 ⇑P      P      11 14 03.9 +2.1
ISR   Istrita          34.89 295  P      P      11 14 03.8 +2.1
BALB  Balikesir        34.91 286  P      P      11 14 02.2 +0.3
BALB                             IAmb    IAmb   11 14 31.0
      comp=Z,28nm,1.1s
COVR  Voineasa-Covas   35.04 297 ⇑P      P      11 14 05.3 +2.3
MLR   Muntele Rosu     35.26 296 ⇑P      P      11 14 07.6 +2.5
MLR   Muntele Rosu     35.26 296  P      P      11 14 05.9 +0.8
      comp=Z,38nm,0.9s,baz=92,slow=4.2,SNR=23
MLR                              PP      PnPn   11 15 21.8 -1.2
      comp=Z,25nm,1.1s,baz=60,slow=7.1,SNR=1.6
MLR                              LR      LR     11 31 11.7
      comp=Z,358nm,19.0s,baz=82,slow=41
      comp=Z,38nm,0.9s
MLR   Muntele Rosu     35.26 296  P      P      11 14 05.4 +0.3
MLR   Muntele Rosu     35.26 296  P      P      11 14 05.4 +0.3
MLR                              pmax    pmax
      comp=Z,44nm,0.9s
VSU   Vasula           35.40 319 i P     P      11 14 05.5 -0.4
VSU                              pmax    pmax
      comp=Z,97nm,0.8s
VSU   Vasula           35.40 319 eP      P      11 14 06.0 +0.2
BURAR Bucovina Array   35.56 300 ⇑P      P      11 14 08.7 +1.2
BURAR Bucovina Array   35.56 300  P      P      11 14 08.1 +0.6
BURAR Bucovina Array   35.56 300  P      P      11 14 08.7 +1.2
BUR08 Bucovina Ar. S   35.57 300  P      P      11 14 08.2 +0.6
BUR08                            IAmb    IAmb   11 14 11.7
      comp=Z,13nm,1.0s
DOPR  Dopca            35.60 297 ⇑P      P      11 14 09.8 +2.0
LVZ   Lovozero         35.79 336  P      P      11 14 09.2  0.0
LVZ   Lovozero         35.79 336ceP      P      11 14 10.0 +0.8
LVZ                              pmax    pmax
      comp=Z,92nm,1.7s
LVZ   Lovozero         35.79 336  P      P      11 14 08.8 -0.3
VOIR                   35.90 296 ⇑P      P      11 14 12.0 +1.6
VOIR                   35.90 296  P      P      11 14 12.0 +1.6
ALN   Alexandroupoli   35.98 288  P      P      11 14 09.8 -1.3
ALN                              IAmb    IAmb   11 14 39.7
      comp=Z,17nm,1.2s
ALN   Alexandroupoli   35.98 288  P      P      11 14 09.8 -1.3
ALN                              pmax    pmax
      comp=Z,17nm,1.2s
ARCR  ARCALIA          36.19 299 ⇑P      P      11 14 15.0 +2.2
ARR   Arges            36.20 296 ⇑P      P      11 14 14.3 +1.4
LVV   L'vov            36.22 304 eP      P      11 14 13.4 +0.3
LVV                              e              11 16 37.0
LVV                              eS      S      11 19 52.7 +0.1
LVV                              pmax    pmax
      comp=Z,100nm,1.2s
LVV                              MLR     MLR
      comp=E,400nm,14.0s
LVV                              MLR     MLR
      comp=N,200nm,11.0s
LVV                              MLR     MLR
      comp=Z,600nm,15.0s
RDO   Rodhopi          36.30 289  P      P      11 14 13.6 -0.2
PABE  Paberze          36.44 313  P      P      11 14 14.8 +0.1
PABE  Paberze          36.44 313 eP      P      11 14 15.8 +1.1
FIA1  FINESS Array S   36.45 324  P      P      11 14 14.5 -0.3
FINES FINESS Array B   36.45 324  P      P      11 14 12.8 -2.0
      comp=Z,28nm,0.5s,baz=107,slow=9.0,SNR=179
FINES                            LR      LR     11 29 57.3
      comp=Z,172nm,20.0s,baz=139,slow=38
      comp=Z,28nm,0.5s
FINES FINESS Array B   36.45 324  P      P      11 14 14.8  0.0
KARP  Karpathos        36.65 279  P      P      11 14 17.7 +0.8
LOT   Lotru            36.79 296 ⇑P      P      11 14 20.0 +1.9
MEF   Metsahovi        36.95 321 eP      P      11 14 19.9 +0.8
MTSE  Matsula          36.95 319 eP      P      11 14 19.6 +0.4
MARR  Marisel-Cluj     37.08 299 ⇓P      P      11 14 22.5 +2.0
QIZ   Qiongzhong       37.27 112  P      P      11 14 23.8 +1.5
QIZ                              S       S      11 20 11.6 +2.5
QIZ                              LR      LR
      comp=Z,570nm,12.6s
QIZ                              LR      LR
      comp=Z,500nm,12.2s
QIZ                              LR      LR
      comp=Z,680nm,12.6s
NJ2   Nanjing          37.30  87 eP      P      11 14 22.8 +0.3
NJ2                              pmax    pmax
      comp=Z,17nm,0.8s
NJ2                              LR      LR
      comp=Z,2µm,17.5s
NJ2                              LR      LR
      comp=Z,830nm,15.6s
NJ2                              LR      LR
      comp=Z,820nm,16.1s
TRPA  Tarpa            37.31 301 ⇑P      P      11 14 23.3 +1.0
DRGR                   37.34 299 ⇓P      P      11 14 24.6 +1.9
DRGR                   37.34 299  P      P      11 14 24.6 +1.9
GZR   Gura Zlata       37.49 296 ⇑P      P      11 14 25.7 +1.7
GZR   Gura Zlata       37.49 296  P      P      11 14 25.6 +1.7
SLIT  Slitere, Latvi   37.59 317 eP      P      11 14 24.7 +0.1
PBUR  Paburge          37.63 314 eP      P      11 14 24.6 -0.4
VTS   Vitosha          37.66 292 ⇑P      P      11 14 27.9 +2.3
VTS   Vitosha          37.66 292  P      P      11 14 24.2 -1.4
VTS   Vitosha          37.66 292  P      P      11 14 24.2 -1.4
VTS                              pmax    pmax
      comp=Z,9.0nm,0.7s
SANT  Santorini        37.68 281  P      P      11 14 25.3 -0.4
HERR  Herculane        37.82 296 ⇑P      P      11 14 27.7 +1.0
SURR  Surduc           37.88 297 ⇑P      P      11 14 29.5 +2.3
STHS  Stebnicka Huta   38.05 303 eP      P      11 14 29.0 +0.3
STHS                             pmax    pmax
      comp=Z,7.0nm,0.8s
STHS  Stebnicka Huta   38.05 303 eP      P      11 14 29.0 +0.3
SIRR  Siria            38.13 298 ⇑P      P      11 14 31.5 +2.2
BZS   Buzias           38.26 297 ⇓P      P      11 14 32.4 +2.0
BZS   Buzias           38.26 297  P      P      11 14 32.4 +2.0
MDVR  Moldovita        38.33 296 ⇓P      P      11 14 32.6 +1.5
RAF   Rauma            38.38 322 eP      P      11 14 30.5 -0.7
SRIT  Nakonsritamara   38.41 135  P      P      11 14 32.8 +0.9
SRIT                             IAmb    IAmb   11 14 41.4
      comp=Z,10nm,0.6s
SRIT  Nakonsritamara   38.41 135  P      P      11 14 33.5 +1.6
IDI   Anoyia           38.48 280  P      P      11 14 32.5  0.0
      comp=Z,13nm,0.9s,baz=69,slow=4.1,SNR=2.9
IDI                              LR      LR     11 34 34.9
      comp=Z,208nm,18.5s,baz=72,slow=43
      comp=Z,13nm,0.9s
BOVS  Bovan            38.55 294 ⇓P      P      11 14 34.0 +1.1
VADS  Vadso            38.58 338 eP      P      11 14 33.4 +0.6
VADS                             IAmb    IAmb   11 14 36.0
      comp=Z,21nm,0.7s
STIP  Stip             38.63 291 i P     P      11 14 33.7 +0.1
ATD   Arta Tunnel      38.63 233  LR     LR     11 32 28.6
      comp=Z,11nm,19.9s,baz=356,slow=39
NIE   Niedzica         38.67 303 eP      P      11 14 36.1 +2.3
LIT   Litokhoron       38.81 288  P      P      11 14 35.0 -0.1
LIT   Litokhoron       38.81 288  P      P      11 14 35.0 -0.1
LIT                              pmax    pmax
      comp=Z,16nm,1.1s
ZEA   Zeya             38.90  50 eP      P      11 14 36.8 +1.2
ZEA                              pmax    pmax
      comp=E,10.0nm,0.8s
ZEA                              pmax    pmax
      comp=N,10.0nm,0.7s
ZEA                              pmax    pmax
      comp=Z,20nm,0.8s
ZEA                              MLR     MLR
      comp=E,300nm,13.0s
ZEA                              MLR     MLR
      comp=Z,400nm,11.0s
OJC   Ojcow            38.92 305 eP      P      11 14 36.7 +0.8
OJC   Ojcow            38.92 305  P      P      11 14 36.3 +0.4
OJC                              IAmb    IAmb   11 14 38.0
      comp=Z,22nm,0.8s
OJC   Ojcow            38.92 305  P      P      11 14 36.3 +0.4
OJC                              pmax    pmax
      comp=Z,22nm,0.8s
KEV   Kevo             39.12 336  P      P      11 14 37.5 +0.2
KEV                              sP      sP     11 14 53.3 +7.6
HEH   HeiHe            39.16  55 eP      P      11 14 38.0 +0.2
HEH                              pmax    pmax
      comp=Z,86nm,0.7s
HEH                              LR      LR
      comp=Z,730nm,15.5s
HEH                              LR      LR
      comp=Z,440nm,12.2s
HEH                              LR      LR
      comp=Z,900nm,14.6s
AGG   Agios Georgios   39.23 287  P      P      11 14 37.4 -1.2
AGG   Agios Georgios   39.23 287  P      P      11 14 37.4 -1.2
AGG                              pmax    pmax
      comp=Z,3.0nm,0.8s
LANS  Liptovska Anna   39.24 303 eP      P      11 14 40.3 +1.7
LANS                             pmax    pmax
      comp=Z,4.0nm,1.0s
LANS  Liptovska Anna   39.24 303 eP      P      11 14 40.3 +1.7
FNA   Florina          39.45 290  P      P      11 14 41.3 +0.8
FNA   Florina          39.45 290  P      P      11 14 41.3 +0.8
FNA                              pmax    pmax
      comp=Z,6.0nm,1.1s
ARA0  ARCESS Array S   39.50 336 eP      P      11 14 40.8 +0.3
ARA0                             IAmb    IAmb   11 14 41.4
      comp=Z,21nm,0.6s
ARCES ARCESS Array B   39.50 336  P      P      11 14 39.9 -0.6
      comp=Z,19nm,0.6s,baz=110,slow=9.1,SNR=93
ARCES                            LR      LR     11 30 56.4
      comp=Z,215nm,18.1s,baz=104,slow=36
      comp=Z,19nm,0.6s
ARCES ARCESS Array B   39.50 336  P      P      11 14 40.9 +0.4
ARCES                            IAmb    IAmb   11 14 41.2
      comp=Z,19nm,0.8s
FRGS  Fruska Gora      39.59 297 ⇑P      P      11 14 43.5 +1.9
DIVS  Divibare         39.67 295  P      P      11 14 43.9 +1.5
DIVS                             IAmb    IAmb   11 14 52.4
      comp=Z,30nm,1.1s
VYHS  Vyhne            39.73 302 eP      P      11 14 44.1 +1.4
VYHS                             pmax    pmax
      comp=Z,13nm,1.2s
VYHS  Vyhne            39.73 302 eP      P      11 14 44.1 +1.4
BNX   BinXian          39.74  62 ⇓P      P      11 14 43.4 +0.6
BNX                              pmax    pmax
      comp=Z,12nm,0.7s
BNX                              pmax    pmax
      comp=Z,220nm,4.5s
KTK1  Kautokeino       40.03 335 eP      P      11 14 44.9 -0.1
KTK1                             IAmb    IAmb   11 14 45.3
      comp=Z,31nm,0.7s
ITM   Ithomi           40.10 284  P      P      11 14 45.2 -0.7
MORH  Mrgy, Hungar     40.20 299 ⇓P      P      11 14 48.1 +1.5
MORC  Moravsky Berou   40.42 304  P      P      11 14 48.2 -0.2
MORC  Moravsky Berou   40.42 304 eP      P      11 14 49.0 +0.6
MORC  Moravsky Berou   40.42 304  P      P      11 14 48.2 -0.2
MORC                             pmax    pmax
      comp=Z,19nm,1.3s
JAVC  Velka Javorina   40.45 303 eP      P      11 14 50.7 +2.0
HAMF  Hammerfest       40.53 337 eP      P      11 14 49.5 +0.6
HAMF                             IAmb    IAmb   11 14 54.0
      comp=Z,115nm,1.4s
PDG   Podgorica        40.57 293 ⇑P      P      11 14 51.8 +2.1
PDG   Podgorica        40.57 293  P      P      11 14 50.1 +0.4
PDG                              IAmb    IAmb   11 14 58.0
      comp=Z,24nm,0.8s
YAK   Yakutsk          40.72  37  LR     LR     11 31 53.5
      comp=Z,345nm,18.5s,baz=267,slow=36
YAK   Yakutsk          40.72  37  P      P      11 14 50.7  0.0
YAK   Yakutsk          40.72  37 eP      P      11 14 49.8 -0.9
YAK                              e*PP    sP     11 14 56.3 -3.0
YAK                              eS      S      11 20 58.6 -1.5
YAK                              eSS     SS     11 23 56.8 -3.7
YAK                              pmax    pmax
      comp=Z,80nm,1.1s
YAK                              pmax    pmax
      comp=N,4.0nm,1.3s
YAK                              pmax    pmax
      comp=E,10.0nm,1.3s
YAK                              pmax    pmax
      comp=Z,146nm,5.0s
YAK                              pmax    pmax
      comp=N,80nm,4.8s
YAK                              pmax    pmax
      comp=E,70nm,4.3s
YAK                              smax    smax
      comp=N,89nm,2.1s
YAK                              smax    smax
      comp=E,41nm,1.9s
YAK                              MLR     MLR
      comp=Z,421nm,22.0s
YAK                              MLR     MLR
      comp=N,133nm,17.0s
YAK                              MLR     MLR
      comp=E,252nm,21.0s
KRLC  Kraliky          40.87 305  AMS    AMS    11 32 20.0
BLEU  Blekinge         41.06 314 i P     P      11 14 52.9 -0.6
VRAC  Vranov           41.09 304 ⇑P      P      11 14 55.8 +1.9
VRAC  Vranov           41.09 304  P      P      11 14 54.0 +0.1
      comp=E,4.7nm,0.6s,baz=93,slow=9.5,SNR=7.6
VRAC                             LR      LR     11 33 13.1
      comp=E,325nm,21.2s,baz=82,slow=38
      comp=E,4.7nm,0.6s
VRAC  Vranov           41.09 304 eP      P      11 14 55.1 +1.2
DPC   Dobruska-Polom   41.13 305 eP      P      11 14 55.6 +1.3
DPC                              AMS     AMS    11 33 50.0
      comp=E,900nm,8.2s
DPC   Dobruska-Polom   41.13 305 eP      P      11 14 55.6 +1.3
DPC                              MLR     MLR
      comp=Z,900nm,8.2s
JETT  Jettan, Norway   41.17 335 eP      P      11 14 54.6 +0.2
JETT                             IAmb    IAmb   11 14 55.1
      comp=Z,37nm,0.5s
OSTC  Ostas            41.17 305 eP      P      11 14 55.6 +1.0
OSTC  Ostas            41.17 305 eP      P      11 14 55.6 +1.0
DLV   T  Lat           41.21 121  P      P      11 14 57.7 +2.2
KRUC  Moravsky         41.25 303 eP      P      11 14 56.6 +1.4
UPC   Upice            41.31 305 eP      P      11 14 56.8 +1.1
UPC                              AMS     AMS    11 32 40.0
      comp=Z,800nm,17.8s
UPC   Upice            41.31 305 eP      P      11 14 56.8 +1.1
UPC                              MLR     MLR
      comp=Z,800nm,17.8s
MDJ   Mudanjiang       41.48  64  P      P      11 14 56.8 -0.4
MDJ                              PcP     PcP    11 16 55.8 +1.1
MDJ                              ScP     ScP    11 20 40.4 -3.7
MDJ                              PcS     PcS    11 20 47.1 +1.3
MDJ                              S       S      11 21 11.3 -0.6
MDJ                              SS      SS     11 24 17.3 +1.1
MDJ                              pmax    pmax
      comp=Z,8.0nm,0.9s
MDJ                              pmax    pmax
      comp=Z,97nm,5.3s
MDJ                              LR      LR
      comp=Z,360nm,12.3s
MDJ                              LR      LR
      comp=Z,440nm,14.0s
MDJ                              LR      LR
      comp=Z,720nm,11.7s
MDJ   Mudanjiang       41.48  64  P      P      11 14 56.8 -0.4
MDJ   Mudanjiang       41.48  64  P      P      11 14 57.4 +0.2
MDJ                              pP      sP     11 15 08.1 +2.5
RONA  Rosalia, Austr   41.53 301 i pP    pP     11 14 59.1 -4.5
      comp=Z,8.0nm,0.7s
BSD   Bornholm Skovb   41.60 312 eP      P      11 14 57.8 -0.1
BSD   Bornholm Skovb   41.60 312 i P     P      11 14 57.0 -0.9
BSD                              IAmb    IAmb   11 14 57.7
      comp=Z,23nm,0.9s
TRO   Tromso           41.68 335 eP      P      11 14 58.8 +0.3
KULM  Kulim            41.73 137  P      P      11 14 59.7 +0.2
CONA  Conrad Observa   41.78 302 i P     P      11 15 00.8 +1.1
      comp=Z,13nm,0.8s,SNR=9.2
KLR   Kul'dur          42.07  56  LR     LR     11 32 43.6
      comp=Z,348nm,18.2s,baz=278,slow=37
KLR   Kul'dur          42.07  56ceP      P      11 15 01.9 -0.1
KLR                              pmax    pmax
      comp=Z,26nm,1.7s
KLR                              MLR     MLR
      comp=Z,237nm,14.0s
ARSA  Arzberg          42.13 301 i P     P      11 15 03.4 +0.9
      comp=Z,9.0nm,1.0s
DEL   Delary           42.14 315 i P     P      11 15 02.0 -0.4
PVCC  Panska Ves       42.22 306  AMS    AMS    11 33 10.0
      comp=Z,1µm,8.5s
HFS   Hagfors          42.24 320  P      P      11 15 02.6 -0.6
      comp=Z,65nm,0.5s,baz=99,slow=9.8,SNR=243
      comp=Z,65nm,0.5s
KSAR  Wonju Array Be   42.24  74  P      P      11 15 02.1 -1.4
KSAR  Wonju Array Be   42.24  74  P      P      11 15 02.1 -1.4
KSRS  Korea Array      42.27  74  P      P      11 15 02.5 -1.1
      comp=Z,4.0nm,0.8s,baz=278,slow=6.6,SNR=8.3
KSRS                             LR      LR     11 35 15.0
      comp=Z,637nm,18.5s,baz=285,slow=40
      comp=Z,4.0nm,0.8s
GROS  Grobnik          42.30 299 i P     P      11 15 04.2 +0.3
PRU   Pruhonice        42.31 305 eP      P      11 15 05.5 +1.6
PRU   Pruhonice        42.31 305 eP      P      11 15 05.5 +1.6
DOBS  Dobrina          42.38 299 i P     P      11 15 05.4 +0.9
FAUS  Fauske           42.41 331 eP      P      11 15 04.6 +0.2
FAUS                             IAmb    IAmb   11 15 05.1
      comp=Z,25nm,0.6s
LUNU  Lund             42.41 313 i P     P      11 15 04.7 +0.1
MOR8  Moi Rana         42.52 329 eP      P      11 15 04.5 -0.8
MOR8                             IAmb    IAmb   11 15 05.2
      comp=Z,33nm,0.7s
STEI  Steigen          42.54 332 eP      P      11 15 05.6 +0.1
STEI                             IAmb    IAmb   11 15 13.4
      comp=Z,252nm,1.9s
RGN   Rugen            42.55 312  P      P      11 15 04.8 -1.0
RGN   Rugen            42.55 312 eP      P      11 15 06.6 +0.8
      comp=Z,122nm,1.1s,baz=80,slow=7.9
BRG   Berggiesshubel   42.57 306 i P     P      11 15 07.2 +1.2
BRG                              Amp            11 15 08.6
      comp=Z,12nm,0.9s
BRG   Berggiesshubel   42.57 306 i P     P      11 15 07.1 +1.2
BRG                                             11 16 48.9
BRG                              pmax    pmax
      comp=Z,12nm,0.9s
BRG                              pmax    pmax
      comp=Z,18nm,1.0s
BRG                              pmax    pmax
      comp=Z,9.0nm,0.9s
BRG                              pmax    pmax
      comp=Z,16nm,1.4s
BRG                              MLR     MLR
      comp=E,586nm,19.6s
BRG                              MLR     MLR
      comp=Z,669nm,24.5s
BRG                              MLR     MLR
      comp=N,998nm,18.6s
BRG   Berggiesshubel   42.57 306 eP      P      11 15 07.2 +1.2
      comp=N,27nm,1.4s,baz=80,slow=7.9
SOKA  Soboth           42.57 300 i P     P      11 15 07.3 +1.1
      comp=N,21nm,1.0s,SNR=9.5
IPM   Ipoh             42.61 137  P      P      11 15 07.3 +0.6
IPM   Ipoh             42.61 137  P      P      11 15 06.9 +0.2
TIXI  Tiksi            42.62  23  LR     LR     11 32 27.0
      comp=N,414nm,18.3s,baz=12,slow=36
TIXI  Tiksi            42.62  23  P      P      11 15 05.6 -0.5
TIXI                             IAmb    IAmb   11 15 09.9
      comp=Z,19nm,0.7s
TIXI  Tiksi            42.62  23ceP      P      11 15 05.8 -0.3
TIXI                             pmax    pmax
      comp=Z,28nm,1.0s
TIXI                             MLR     MLR
      comp=Z,366nm,15.0s
TIXI  Tiksi            42.62  23  P      P      11 15 05.8 -0.3
TIXI                             pP      sP     11 15 17.3 +2.5
TIXI                             sP      pP     11 15 22.9  +11
BJUU  Bjuv             42.62 314 i P     P      11 15 05.7 -0.7
CKRC  Cesky Krumlov    42.65 303 eP      P      11 15 07.1 +0.4
CKRC  Cesky Krumlov    42.65 303 eP      P      11 15 07.1 +0.4
BORU  Boraas           42.71 316 i P     P      11 15 06.6 -0.3
FABU  Falkenberg       42.75 315 i P     P      11 15 06.4 -1.0
MOA   Molln            42.85 302 i P     P      11 15 09.1 +0.7
      comp=Z,14nm,1.0s
FBE   Freiberg         42.93 306 eP      P      11 15 09.6 +0.7
      comp=Z,15nm,0.7s,baz=80,slow=7.9
OBKA  Obir             42.93 300 i P     P      11 15 10.1 +1.0
      comp=Z,10.0nm,0.8s
HOPEN Hopen            42.94 345 eP      P      11 15 10.2 +1.5
HOPEN                            IAmb    IAmb   11 15 15.4
      comp=Z,175nm,1.9s
PSI   Prapat           42.97 141  P      P      11 15 11.1 +1.4
PSI                              pmax    pmax
      comp=Z,11nm,0.9s
GEC2  GERESS Array S   43.04 303  P      P      11 15 10.5 +0.6
GEC2  GERESS Array S   43.04 303 eP      P      11 15 10.9 +0.9
      comp=Z,15nm,0.9s,baz=80,slow=7.9
GERES GERESS Array B   43.04 303  P      P      11 15 10.6 +0.6
      comp=Z,6.8nm,0.8s,baz=75,slow=5.8,SNR=38
GERES                            PP      PP     11 16 46.2 -3.5
      comp=Z,1.8nm,0.9s,baz=74,slow=10,SNR=2.1
      comp=Z,6.8nm,0.8s
GERES GERESS Array B   43.04 303  P      P      11 15 10.3 +0.3
GERES GERESS Array B   43.04 303  P      P      11 15 10.3 +0.3
RPSI  Rantau Prapat    43.06 141  P      P      11 15 11.1 +0.8
KHC   Kasperske Hory   43.07 304  P      P      11 15 10.0 -0.2
KHC   Kasperske Hory   43.07 304 eP      P      11 15 11.2 +1.1
KHC   Kasperske Hory   43.07 304 i P     P      11 15 10.5 +0.4
KHC                              pmax    pmax
      comp=Z,31nm,1.0s
CLL   Collm            43.09 307  P      P      11 15 09.8 -0.4
CLL   Collm            43.09 307 i P     P      11 15 10.4 +0.2
      comp=Z,12nm,0.9s
CLL                              ex      x      11 15 13.0
CLL                              ePP     PP     11 16 51.0 +0.8
CLL                              epPcP          11 17 14.0
CLL                              ePPPP          11 17 32.0
CLL                              ex      x      11 22 06.0
CLL                              eSSSS          11 25 54.0
CLL   Collm            43.09 307 i P     P      11 15 10.4 +0.2
CLL                              e              11 15 13.0
CLL                              pmax    pmax
      comp=Z,12nm,0.9s
CLL   Collm            43.09 307 eP      P      11 15 10.4 +0.2
      comp=Z,11nm,0.8s,baz=80,slow=7.9
KONS  Konsvik          43.09 329 eP      P      11 15 10.2 +0.2
KONS                             IAmb    IAmb   11 15 11.5
      comp=Z,21nm,0.7s
STOK  Stokkvaagen      43.11 329 eP      P      11 15 10.3 +0.2
NACB  Ninganchiao      43.14  96  P      P      11 15 10.7 -0.2
CRNS  Crni Vrh         43.22 299 i P     P      11 15 12.3 +0.9
NC405 NORSAR Array S   43.25 321  P      P      11 15 11.7 +0.4
USA0B Ussuriysk Arra   43.25  64  P      P      11 15 11.4 -0.1
USA0B                            IAmb    IAmb   11 16 17.7
      comp=Z,64nm,1.9s
USA0B Ussuriysk Arra   43.25  64 i P     P      11 15 11.2 -0.4
USRK  Ussuriysk Ar.    43.25  64  P      P      11 15 10.7 -0.8
      comp=Z,4.8nm,0.6s,baz=269,slow=7.9,SNR=8.3
USRK                             LR      LR     11 35 24.3
      comp=Z,420nm,18.8s,baz=269,slow=39
      comp=Z,4.8nm,0.6s
USRK  Ussuriysk Ar.    43.25  64  P      P      11 15 09.9 -1.7
USRK  Ussuriysk Ar.    43.25  64  P      P      11 15 09.9 -1.7
BIOA  Bad Ischl, Aus   43.30 302 i P     P      11 15 12.8 +0.8
      comp=Z,6.0nm,0.5s
TIP   Timpagrande      43.31 289  P      P      11 15 11.9 -0.3
NC602 NORSAR Array S   43.33 321  P      P      11 15 11.8 -0.1
NC602 NORSAR Array S   43.33 321 eP      P      11 15 11.7 -0.2
YULB  Yu-li            43.33  97  P      P      11 15 10.9 -1.5
YULB                             IAmb    IAmb   11 15 23.4
      comp=Z,81nm,1.5s
NSS   Namsos           43.33 326 eP      P      11 15 12.1 +0.1
BJO1  Bjornoya         43.37 341 eP      P      11 15 12.5 +0.4
BJO1                             IAmb    IAmb   11 15 12.8
      comp=Z,69nm,0.7s
NC303 NORSAR Array S   43.42 322  P      P      11 15 13.2 +0.4
NB201 NORSAR Array S   43.45 321  P      P      11 15 13.1 +0.1
NB201                            IAmb    IAmb   11 15 13.7
      comp=Z,44nm,0.8s
NB2   NORSAR Subarra   43.49 321  P      P      11 15 13.0 -0.3
      comp=Z,27nm,0.6s,baz=91,slow=7.9
NB2   NORSAR Subarra   43.49 321  P      P      11 15 13.0 -0.3
      slow=7.9
NOA   NORSAR Array B   43.49 321  P      P      11 15 12.6 -0.8
      comp=Z,24nm,0.6s,baz=91,slow=7.9,SNR=102
NOA                              PP      PP     11 16 53.0 -1.3
      comp=Z,3.4nm,0.8s,baz=103,slow=9.3,SNR=3.6
NOA                              LR      LR     11 34 17.3
      comp=Z,201nm,21.4s,baz=105,slow=38
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              comp=Z,24nm,0.6s
MYKA  Terra Mystica     43.52 300  i P    P      11 15 14.8 +1.0
              comp=Z,3.9nm,0.6s
NKC   Novy Kostel       43.61 305   AMS   AMS    11 34 00.0
              comp=Z,1µm,24.1s
PRED  Cave del Predi    43.61 300   P     P      11 15 13.8  -0.7
KBA   Koelnbreinsper    43.62 301  i P    P      11 15 15.5 +0.8
              comp=Z,4.4nm,0.6s
GSI   Gunungsitoli      43.63 144   P     P      11 15 16.3 +1.4
GSI                                 IAmb  IAmb   11 15 18.8
              comp=Z,34nm,0.8s
GSI   Gunungsitoli      43.63 144   P     P      11 15 17.2 +2.3
TRI   Trieste           43.64 299   P     P      11 15 13.6  -1.1
TRI                                 IAmb  IAmb   11 15 16.4
              comp=Z,28nm,0.7s
TRI   Trieste           43.64 299   P     P      11 15 13.6  -1.1
WERN  Wernitzgruen      43.64 306  eP     P      11 15 15.3 +0.6
              comp=Z,6.4nm,1.4s,baz=80,slow=7.9
NAO01 NORSAR Array S    43.65 321   P     P      11 15 13.8  -0.8
GUNZ  Gunzen            43.66 306  eP     P      11 15 15.6 +0.7
              comp=Z,14nm,1.2s,baz=80,slow=7.9
WERD  Werda             43.66 306  eP     P      11 15 15.5 +0.7
              comp=Z,13nm,1.3s,baz=80,slow=7.9
SABO  M.te Sabotino     43.69 299   P     P      11 15 15.9 +0.8
SABO                                IAmb  IAmb   11 15 16.7
              comp=Z,38nm,0.8s
NBO00 NORSAR Array S    43.70 321   P     P      11 15 14.9  -0.1
NC204 NORSAR Array S    43.71 322   P     P      11 15 15.2 +0.1
CUC   Castrocucco       43.74 290   P     P      11 15 17.2 +1.5
CUC                                 IAmb  IAmb   11 15 19.4
              comp=Z,22nm,0.7s
PLN   Plauen            43.75 306  eP     P      11 15 16.1 +0.5
              comp=Z,7.0nm,0.9s,baz=80,slow=7.9
ROTZ  Rotzenmuhle       43.84 305  eP     P      11 15 17.3 +1.0
              comp=Z,2.6nm,1.4s,baz=80,slow=7.9
RJOB  Jochberg          43.84 302  eP     P      11 15 17.1 +0.7
              comp=Z,9.4nm,0.8s,baz=80,slow=7.9
MANZ  Manzenberg        43.86 305  eP     P      11 15 17.4 +0.9
              comp=Z,2.8nm,1.1s,baz=80,slow=7.9
NEUB  Neuenburg         43.87 307  eP     P      11 15 16.8 +0.3
              comp=Z,15nm,0.8s,baz=80,slow=7.9
FLTG  Flechtingen       44.03 309  eP     P      11 15 17.8   0.0
              comp=Z,23nm,0.7s,baz=80,slow=7.9
MOX   Moxa              44.06 306  eP     P      11 15 18.7 +0.7
              comp=Z,8.0nm,0.9s,baz=80,slow=7.9
MOX                                eL     L      11 34 39.1
              comp=Z,504nm,20.5s
CLUD  Cludinico         44.07 300   P     P      11 15 17.8  -0.4
YOJ   Yonaguni jima     44.09  94   P     P      11 15 17.9  -0.6
YOJ   Yonaguni jima     44.09  94   P     P      11 15 17.9  -0.6
YOJ                                 pmax  pmax
              comp=Z,167nm,1.0s
STAL  STALIGIAL         44.23 300   P     P      11 15 19.6 +0.2
ABTA  Abfaltersbach     44.25 301  i P    P      11 15 19.7   0.0
              comp=Z,3.8nm,0.7s
CEL   Celeste           44.25 288   P     P      11 15 20.6 +0.8
KONO  Kongsberg         44.30 319   P     P      11 15 19.9   0.0
KONO                                IAmb  IAmb   11 15 20.5
              comp=Z,31nm,0.6s
KONO  Kongsberg         44.30 319ceP      P      11 15 20.6 +0.8
KONO                                pmax  pmax
              comp=Z,23nm,0.8s
KONO  Kongsberg         44.30 319  eP     P      11 15 20.0 +0.2
KONO  Kongsberg         44.30 319   P     P      11 15 19.6  -0.3
PAOL  Paolisi           44.33 292   P     P      11 15 19.9  -0.5
PAOL                                IAmb  IAmb   11 16 11.5
              comp=Z,58nm,1.8s
BSEG  Bad Segeberg      44.37 311  eP     P      11 15 21.3 +0.9
              comp=Z,29nm,0.8s,baz=80,slow=7.9
CIMO  Cimolais          44.40 300   P     P      11 15 21.1 +0.3
CIMO                                IAmb  IAmb   11 15 21.8
              comp=Z,9.1nm,0.8s
GRA1  Grafenberg Arr    44.48 305   P     P      11 15 21.0  -0.4
GRA1                                IAmb  IAmb   11 15 42.2
              comp=Z,28nm,1.0s
GRF   Grafenberg Arr    44.48 305   P     P      11 15 21.0  -0.4
GRF                                 pmax  pmax
              comp=Z,28nm,1.0s
GRF   Grafenberg Arr    44.48 305  eP     P      11 15 22.7 +1.3
              comp=Z,29nm,1.0s,baz=80,slow=7.9
GRF                                eL     L      11 34 52.7
              comp=Z,647nm,19.2s
GRFO  Grafenberg        44.48 305   P     P      11 15 21.3  -0.1
GRFO                                IAmb  IAmb   11 15 42.1
              comp=Z,26nm,1.0s
GRFO  Grafenberg        44.48 305   P     P      11 15 21.3  -0.1
GRFO                                pmax  pmax
              comp=Z,26nm,1.0s
INTR  Introdacqua       44.51 294   P     P      11 15 21.5  -0.4
INTR                                IAmb  IAmb   11 15 46.2
              comp=Z,19nm,1.1s
DOMB  Dombas            44.53 323  eP     P      11 15 21.7 +0.1
DOMB                                IAmb  IAmb   11 15 22.3
              comp=Z,43nm,0.8s
GUMA  Gualdo di Mace    44.61 295   P     P      11 15 22.3  -0.3
GUMA                                IAmb  IAmb   11 16 10.4
              comp=Z,47nm,1.1s
CLZ   Clausthal         44.64 308  eP     P      11 15 23.0 +0.4
              comp=Z,7.6nm,0.8s,baz=80,slow=7.9
NRDL  Niedersach Rie    44.69 309  eP     P      11 15 23.8 +0.9
              comp=Z,24nm,1.0s,baz=80,slow=7.9
CAMP  Campotosto        44.71 295   P     P      11 15 23.1  -0.4
CAMP                                IAmb  IAmb   11 15 31.4
              comp=Z,34nm,1.2s
WTTA  Wattenberg        44.72 301  i P    P      11 15 23.8 +0.2
              comp=Z,14nm,0.7s
WATA  Walderalm         44.74 302  i P    P      11 15 24.1 +0.4
              comp=Z,0.1nm,0.2s
AQU   L'Aquila          44.77 294   P     P      11 15 23.5  -0.4
AQU                                 IAmb  IAmb   11 16 36.4
              comp=Z,42nm,1.3s
AQU   L'Aquila          44.77 294   P     P      11 15 23.5  -0.4
AQU                                 pmax  pmax
              comp=Z,42nm,1.3s
GRNR  Gornyy            44.79  53⇑iP      P      11 15 24.4 +0.5
GRNR                               eS     S      11 22 04.1 +3.8
GRNR                                pmax  pmax
              comp=E,2.0nm,1.1s
GRNR                                pmax  pmax
              comp=N,2.0nm,0.9s
GRNR                                pmax  pmax
              comp=Z,6.0nm,1.0s
GRNR                                smax  smax
              comp=N,2.0nm,0.8s
GRNR                                MLR   MLR
              comp=E,290nm,15.0s
GRNR                                MLR   MLR
              comp=N,440nm,19.0s
GRNR                                MLR   MLR
              comp=Z,430nm,17.0s
FDMO  Fiordimonte       44.80 295   P     P      11 15 24.0   0.0
FDMO                                IAmb  IAmb   11 15 32.1
              comp=Z,17nm,0.8s
SKAR  Skarslia          44.92 321  eP     P      11 15 26.1 +1.3
GTTG  Gottingen         44.94 308  eP     P      11 15 25.7 +0.7
              comp=Z,34nm,0.8s,baz=80,slow=7.9
HOMB  Homborsund        44.95 317  i P    P      11 15 24.0  -0.9
HOMB  Homborsund        44.95 317  eP     P      11 15 25.3 +0.4
CTI   Castel Tesino     44.99 300   P     P      11 15 25.5  -0.2
CTI   Castel Tesino     44.99 300   P     P      11 15 25.5  -0.2
CTI                                 pmax  pmax
              comp=Z,10.0nm,0.8s
SQTA  Sankt Quirin      45.01 301  i P    P      11 15 26.1 +0.3
              comp=Z,10nm,1.0s
MOTA  Moosalm           45.05 302  i P    P      11 15 25.9  -0.2
              comp=Z,13nm,0.7s,SNR=7.8
RETH  Rethem/Aller,     45.10 309  eP     P      11 15 26.8 +0.6
              comp=Z,8.2nm,0.8s,baz=80,slow=7.9
MURB  Monte Urbino      45.13 296   P     P      11 15 27.4 +0.7
TEOL  Teolo             45.15 299   P     P      11 15 26.8  -0.1
MOL   Molde             45.23 323  eP     P      11 15 27.5 +0.3
RETA  Reutte            45.24 302  i P    P      11 15 28.8 +1.2
              comp=Z,6.2nm,1.1s
CESX  Cesi              45.28 295   P     P      11 15 27.3  -0.6
CESX                                IAmb  IAmb   11 15 36.2
              comp=Z,20nm,1.0s
FETA  Feichten          45.37 301  i P    P      11 15 28.8 +0.1
              comp=Z,8.3nm,1.0s
SPB2  Spitsbergen Ar    45.40 346   P     P      11 15 27.9  -0.5
SPA0  Spitsbergen Ar    45.40 346  eP     P      11 15 29.6 +1.2
SPA0                                IAmb  IAmb   11 15 36.5
              comp=Z,35nm,1.0s
SPITS Spitsbergen Ar    45.40 346   P     P      11 15 28.2  -0.1
              comp=Z,11nm,0.7s,baz=125,slow=12,SNR=16
SPITS                               LR    LR     11 40 33.7
              comp=Z,288nm,18.1s,baz=66,slow=44
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              comp=Z,11nm,0.7s
AKN   Aaknes            45.50 323  eP     P      11 15 29.9 +0.5
SNART Snartemo          45.62 318  i P    P      11 15 29.0  -1.3
SNART Snartemo          45.62 318  eP     P      11 15 30.8 +0.5
UBR   Ueberruh          45.63 302  eP     P      11 15 31.0 +0.4
              comp=Z,34nm,1.1s,baz=80,slow=7.9
RAFF  Raffo Rosso       45.75 287   P     P      11 15 32.9 +1.2
FUORN Ofenpass-Fuorn    45.78 301   P     P      11 15 32.4 +0.3
FUORN                               IAmb  IAmb   11 15 40.6
              comp=Z,11nm,0.8s
ODD1  Odda              45.79 320  eP     P      11 15 32.5 +0.8
ODD1                                IAmb  IAmb   11 15 33.0
              comp=Z,25nm,0.8s
LATE  Laterza           45.82 295   P     P      11 15 32.2  -0.1
LATE                                IAmb  IAmb   11 15 44.9
              comp=Z,42nm,1.1s
SALO  Salr              45.86 299   P     P      11 15 33.5 +1.0
SALO                                IAmb  IAmb   11 15 38.7
              comp=Z,20nm,0.9s
DAVA  Damuels           45.87 302  i P    P      11 15 33.4 +0.7
              comp=Z,20nm,0.7s,SNR=15
ZCCA  Zocca             45.90 298   P     P      11 15 33.1 +0.3
ZCCA                                IAmb  IAmb   11 15 49.9
              comp=Z,21nm,0.9s
BLS5  Blasjo            45.92 319  eP     P      11 15 33.5 +0.8
OSSC  Osservatorio P    45.95 296   P     P      11 15 33.4 +0.2
OSSC                                IAmb  IAmb   11 15 39.3
              comp=Z,23nm,0.9s
KASTN Kahler Asten      45.95 308  eP     P      11 15 33.8 +0.7
              comp=Z,6.9nm,1.0s,baz=80,slow=7.9
STU   Stuttgart         45.97 304   P     P      11 15 34.2 +1.0
STU                                 IAmb  IAmb   11 15 38.5
              comp=Z,14nm,0.7s
STU   Stuttgart         45.97 304   P     P      11 15 34.2 +1.0
STU                                 pmax  pmax
              comp=Z,14nm,0.7s
STU   Stuttgart         45.97 304  eP     P      11 15 34.0 +0.7
              comp=Z,36nm,0.8s,baz=80,slow=7.9
JNU   Nakatsue          46.14  79   LR    LR     11 37 26.1
              comp=Z,282nm,19.0s,baz=298,slow=39
JNU   Nakatsue          46.14  79   P     P      11 15 35.0 +0.2
JNU                                 IAmb  IAmb   11 15 42.5
              comp=Z,36nm,1.1s
IBBN  Ibbenburen        46.15 309  eP     P      11 15 35.0 +0.4
              comp=Z,18nm,0.7s,baz=80,slow=7.9
BKNI  Bangkinang        46.15 140   P     P      11 15 35.8 +0.8
FOO   Floro             46.45 322  eP     P      11 15 37.3 +0.5
KBS   Kingsbay          46.50 346   P     P      11 15 37.0   0.0
KBS   Kingsbay          46.50 346   P     P      11 15 37.0   0.0
KBS                                 pmax  pmax
              comp=Z,61nm,1.2s
KBS   Kingsbay          46.50 346  i P    P      11 15 36.5  -0.4
KBS   Kingsbay          46.50 346  eP     P      11 15 38.0 +1.0
KBS   Kingsbay          46.50 346   P     P      11 15 37.2 +0.2
BFO   Black Forest      46.63 304   P     P      11 15 39.1 +0.6
BFO   Black Forest      46.63 304   P     P      11 15 39.1 +0.6
BFO                                 pmax  pmax
              comp=Z,9.0nm,0.9s
BFO   Black Forest      46.63 304  eP     P      11 15 38.8 +0.3
              comp=Z,15nm,1.1s,baz=80,slow=7.9
BFO   Black Forest      46.63 304   P     P      11 15 38.9 +0.4
MSSA  Maissana          46.91 298   P     P      11 15 40.5  -0.3
MSSA                                IAmb  IAmb   11 15 43.3
              comp=Z,19nm,0.7s
AHRW  Bad Neuenahr-A    46.92 307  eP     P      11 15 41.3 +0.6
              comp=Z,14nm,0.9s,baz=80,slow=7.9
PDSI  Padang            46.94 142   P     P      11 15 41.5 +0.3
              comp=Z,51nm,1.0s,comp=Z,3µm
JOW   Kunigami          46.98  88   LR    LR     11 39 25.4
              comp=Z,324nm,18.3s,baz=324,slow=41
ECH   Echery            47.42 304   P     P      11 15 45.0 +0.4
ECH   Echery            47.42 304   P     P      11 15 45.1 +0.4
ECH                                 pmax  pmax
              comp=Z,6.0nm,1.0s
ECH   Echery            47.42 304   P     P      11 15 45.0 +0.4
BTNL  Ternell           47.50 307  dP     P      11 15 46.1 +0.9
              comp=Z,10.0nm,1.0s
MEM   Membach           47.57 307  dP     P      11 15 46.5 +0.8
              comp=Z,11nm,0.8s
WLF   Walferdange       47.70 306   P     P      11 15 45.6  -1.2
WLF                                 IAmb  IAmb   11 15 48.8
              comp=Z,22nm,1.0s
WLF   Walferdange       47.70 306   P     P      11 15 45.6  -1.2
WLF                                 pmax  pmax
              comp=Z,22nm,1.0s
WLF   Walferdange       47.70 306  dP     P      11 15 48.2 +1.4
              comp=Z,16nm,0.9s
WLF   Walferdange       47.70 306  eP     P      11 15 47.7 +1.0
              comp=Z,25nm,1.0s,baz=80,slow=7.9
SENIN Lac Senin/Sane    47.82 301   P     P      11 15 48.2 +0.2
BMRD  Maredsous         48.41 307  dP     P      11 15 53.2 +1.0
              comp=Z,8.1nm,1.0s
BNI   Bardonecchia      48.62 300   P     P      11 15 54.0  -0.2
BNI                                 IAmb  IAmb   11 16 00.5
              comp=Z,29nm,0.9s
BNI   Bardonecchia      48.62 300   P     P      11 15 54.0  -0.2
BNI                                 pmax  pmax
              comp=Z,29nm,1.0s
TYV   Tymovskoe         48.63  52  eP     P      11 15 54.7 +0.8
TYV                                 pmax  pmax
              comp=Z,6.0nm,1.0s
TYV                                 pmax  pmax
              comp=Z,300nm,4.2s
UGL   Uglegorsk         48.72  55  eP     P      11 15 54.9 +0.3
UGL                                 pmax  pmax
              comp=Z,50nm,0.8s
LODK  Lodwar            49.56 234   P     P      11 16 02.0 +0.5
LODK                                IAmb  IAmb   11 16 06.5
              comp=Z,11nm,0.9s
LODK  Lodwar            49.56 234   P     P      11 16 04.7 +3.2
              SNR=5.5
YSS   Yuzh-Sakhalins    49.77  57   P     P      11 16 02.5  -0.1
YSS                                 IAmb  IAmb   11 16 08.5
              comp=Z,20nm,1.0s
YSS   Yuzh-Sakhalins    49.77  57  eP     P      11 16 03.6 +0.9
YSS                                e             11 16 08.0
YSS                                 MLR   MLR
              comp=Z,500nm,14.0s
YSS                                 MLR   MLR
              comp=E,300nm,15.0s
INU   Inuyama           49.85  73   P     P      11 16 03.4  -0.1
INU   Inuyama           49.85  73   P     P      11 16 03.8 +0.3
SSB   Saint Sauveur     49.99 301   P     P      11 16 04.5   0.0
SSB                                 IAmb  IAmb   11 16 06.0
              comp=Z,21nm,1.1s
SSB   Saint Sauveur     49.99 301   P     P      11 16 04.5   0.0
SSB                                 pmax  pmax
              comp=Z,21nm,1.1s
SSB   Saint Sauveur     49.99 301   P     P      11 16 05.1 +0.6
JGF   Kuroka            50.00  73   P     P      11 16 05.1 +0.4
KEST  Kesra             50.05 287   P     P      11 16 06.6 +1.5
              comp=Z,16nm,0.9s,baz=11,slow=2.1,SNR=8.8
KEST                                LR    LR     11 41 50.3
              comp=Z,129nm,19.0s,baz=276,slow=42
              comp=Z,16nm,0.9s
KEST  Kesra             50.05 287   P     P      11 16 05.6 +0.5
KEST                                IAmb  IAmb   11 16 26.3
              comp=Z,21nm,1.0s
KEST  Kesra             50.05 287   P     P      11 16 06.0 +0.9
MJB9  Matsu-Tunnel      50.25  71   P     P      11 16 06.9 +0.4
MJB9                                IAmb  IAmb   11 16 08.5
              comp=Z,15nm,0.8s
MAJO  Matsushiro        50.25  71   P     P      11 16 06.0  -0.5
MAJO  Matsushiro        50.25  71   P     P      11 16 05.8  -0.7
MAJO  Matsushiro        50.25  71  i P    P      11 16 06.5   0.0
MAJO                                pmax  pmax
              comp=Z,14nm,0.8s
MAJO  Matsushiro        50.25  71   P     P      11 16 05.8  -0.7
MAJO                                pP    sP     11 16 17.2 +2.2
MJAR  Matsushiro Arr    50.25  71   P     P      11 16 06.5  -0.1
              comp=Z,12nm,0.7s,baz=290,slow=9.4,SNR=24
MJAR                                LR    LR     11 39 45.1
              comp=Z,226nm,18.1s,baz=300,slow=39
              comp=Z,12nm,0.7s
WACR  West Acre         50.30 311  eP     P      11 16 06.1  -0.5
WACR                                IAmb  IAmb   11 16 07.7
              comp=Z,109nm,0.9s
KSI   Kapahiang         50.35 141   P     P      11 16 07.7 +0.2
              comp=Z,68nm,0.4s
KSM   Kuching           50.36 129   P     P      11 16 07.4  -0.1
KSM                                 IAmb  IAmb   11 16 15.6
              comp=Z,18nm,1.0s
ASAJ  Asahikawa         50.57  61   LR    LR     11 39 50.0
              comp=Z,282nm,18.6s,baz=300,slow=39
ASAJ  Asahikawa         50.57  61   P     P      11 16 07.9  -0.9
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ASAJ                                pmax  pmax
              comp=Z,39nm,1.3s
JKA   Kamikawa-asahi    50.57  61   P     P      11 16 07.9  -0.9
JKA                                 IAmb  IAmb   11 16 41.8
              comp=Z,39nm,1.3s
CLF   Chambon-Foret     50.62 305   P     P      11 16 07.3  -1.8
CLF   Chambon-Foret     50.62 305   P     P      11 16 09.0  -0.1
CLF                                 pP    sP     11 16 20.2 +2.6
KKM   Kota Kinabalu     50.70 119   P     P      11 16 10.4 +0.2
SBUM  Sibu              50.77 126   P     P      11 16 10.7   0.0
SBUM                                IAmb  IAmb   11 16 15.4
              comp=Z,12nm,1.0s
PPBI  Pangkal Pinang    50.91 136   P     P      11 16 12.9 +1.2
MA2   Magadan           51.12  40   P     P      11 16 12.6  -0.1
MA2                                 IAmb  IAmb   11 16 16.9
              comp=Z,15nm,0.9s
MA2   Magadan           51.12  40ceP      P      11 16 12.4  -0.3
MA2                                 pmax  pmax
              comp=Z,21nm,1.0s
MA2   Magadan           51.12  40   P     P      11 16 12.6  -0.1
MA2                                 sP    sP     11 16 29.0 +7.8
SEY   Seymchan          51.17  35   P     P      11 16 11.9  -1.1
              comp=Z,6.8nm,0.9s,baz=284,slow=9.9,SNR=22
              comp=Z,6.8nm,0.9s
SEY   Seymchan          51.17  35ceP      P      11 16 13.1   0.0
SEY                                 pmax  pmax
              comp=Z,9.0nm,1.0s
SEY                                 MLR   MLR
              comp=Z,432nm,17.0s
EDMD  Edmundbyers       51.23 314  eP     P      11 16 13.6  -0.1
HPK   Haverah Park      51.27 313  eP     P      11 16 13.9  -0.1
BIGH  Upper Bighouse    51.36 319  eP     P      11 16 15.0 +0.5
NOR   Nord              51.58 349  i P    P      11 16 16.0 +0.1
NOR                                 IAmb  IAmb   11 16 18.3
              comp=Z,3.4nm,0.8s
EKA   Eskdalemuir Ar    51.77 315   LR    LR     11 38 51.5
              comp=Z,383nm,19.7s,baz=6.5,slow=37
ESK   Eskdalemuir       51.80 315  eP     P      11 16 17.3  -0.6
ESK   Eskdalemuir       51.80 315   P     P      11 16 16.6  -1.2
ESK   Eskdalemuir       51.80 315   P     P      11 16 16.6  -1.2
ESK                                 pmax  pmax
              comp=Z,34nm,0.9s
ESK   Eskdalemuir       51.80 315   P     P      11 16 17.7  -0.1
KMBO  Kilima Mbogo      52.01 228   P     P      11 16 20.5 +0.3
KMBO  Kilima Mbogo      52.01 228   P     P      11 16 20.5 +0.3
KMBO                                pmax  pmax
              comp=Z,10.0nm,1.2s
KMBO  Kilima Mbogo      52.01 228   P     P      11 16 23.0 +2.8
KMBO  Kilima Mbogo      52.01 228   P     P      11 16 21.6 +1.5
PGBU  Glenifferbraes    52.36 316  eP     P      11 16 22.4 +0.5
PGBU                                IAmb  IAmb   11 16 23.8
              comp=Z,41nm,0.7s
HLM1  Long Mynd         52.41 311  eP     P      11 16 22.3  -0.2
NEWG  New Galloway      52.41 315  eP     P      11 16 22.5 +0.1
NEWG                                IAmb  IAmb   11 16 23.9
              comp=Z,45nm,1.0s
KIBK  Kibwezi           52.54 227   P     P      11 16 24.9 +1.0
KIBK                                IAmb  IAmb   11 16 40.9
              comp=Z,12nm,1.0s
KIBK  Kibwezi           52.54 227   P     P      11 16 27.0 +3.1
LAWE  Loch Awe, Argy    52.72 317  eP     P      11 16 24.9 +0.2
LAWE                                IAmb  IAmb   11 16 25.9
              comp=Z,150nm,1.6s
DAG   Danmarks Havn     52.77 343  i P    P      11 16 24.5  -0.2
DAG                                 IAmb  IAmb   11 16 25.5
              comp=Z,20nm,0.7s
MYLDM Lahad Datu        52.88 118   P     P      11 16 25.0  -1.4
MYLDM                               IAmb  IAmb   11 16 48.9
              comp=Z,34nm,1.1s
LPW   Lampeter          53.23 311  eP     P      11 16 28.8 +0.3
DBG   Daneborg          53.75 340  i P    P      11 16 32.1 +0.1
DBG                                 IAmb  IAmb   11 16 34.0
              comp=Z,5.5nm,0.7s
BILL  Bilibino          55.41  27   P     P      11 16 43.6  -0.5
BILL                                IAmb  IAmb   11 16 50.0
              comp=Z,26nm,1.6s
BILL  Bilibino          55.41  27⇑eP      P      11 16 44.9 +0.8
BILL                               e             11 18 47.9
BILL                               eS     S      11 24 31.4 +3.6
BILL                                pmax  pmax
              comp=Z,12nm,1.3s
BILL                                MLR   MLR
              comp=Z,319nm,14.0s
BILL  Bilibino          55.41  27   P     P      11 16 43.3  -0.9
BILL                                pP    sP     11 16 54.2 +1.5
BILL                                sP    pP     11 16 59.4 +8.8
MBAR  Mbarara           55.58 235   LR    LR     11 43 01.6
              comp=Z,190nm,18.9s,baz=21,slow=39
MBAR  Mbarara           55.58 235   P     P      11 16 47.7 +1.4
MBAR                                IAmb  IAmb   11 16 49.5
              comp=Z,19nm,0.9s
MBAR  Mbarara           55.58 235ceP      P      11 16 47.9 +1.6
MBAR                                pmax  pmax
              comp=Z,18nm,0.8s
MBAR  Mbarara           55.58 235   P     P      11 16 48.5 +2.2
MBAR  Mbarara           55.58 235   P     P      11 16 47.7 +1.4
MBAR                                pP    sP     11 16 58.9 +4.1
ALE   Alert             56.65 354   P     P      11 16 52.8  -0.1
PETK  Petropavlovsk-    56.76  46   LR    LR     11 42 19.1
              comp=Z,277nm,18.9s,baz=292,slow=37
PETK  Petropavlovsk-    56.76  46   P     P      11 16 53.8  -0.3
PETK  Petropavlovsk-    56.76  46   P     P      11 16 53.8  -0.3
BORG  Borgarnes         57.31 329   LR    LR     11 41 45.6
              comp=Z,219nm,18.3s,baz=107,slow=36
PET   Petropavlovsk     57.32  46  eP     P      11 16 55.9  -2.1
PET                                 MLR   MLR
              comp=Z,300nm,18.0s
MPSI  Mapaga            57.36 121   P     P      11 17 01.7 +3.0
              comp=Z,25nm,1.0s,comp=Z,670nm
TOLI2 Tolitoli          57.39 119   P     P      11 16 59.3 +0.3
TOLI2                               IAmb  IAmb   11 17 02.0
              comp=Z,11nm,1.0s
ESBB  Sonseca Array     57.94 297   P     P      11 17 02.0  -0.7
ESDC  Sonseca Array     57.95 297   P     P      11 17 02.5  -0.1
              comp=Z,6.9nm,0.7s,baz=57,slow=7.2,SNR=38
ESDC                                LR    LR     11 46 33.1
              comp=Z,124nm,19.7s,baz=186,slow=41
              comp=Z,6.9nm,0.7s
ESDC  Sonseca Array     57.95 297   P     P      11 17 03.0 +0.3
PAB   San Pablo         58.27 297   P     P      11 17 05.4 +0.4
NEEM  North Greenlan    58.88 348  i P    P      11 17 09.9 +1.0
NEEM                                IAmb  IAmb   11 17 11.4
              comp=Z,26nm,1.1s
SUMG  Summit            59.21 341  i P    P      11 17 11.8 +0.4
SUMG                                IAmb  IAmb   11 17 12.7
              comp=Z,19nm,0.8s
MVO   Moncorvo          59.37 300  eP     P      11 17 14.0 +1.4
PGAV  Gavieira, Arco    59.84 301  eP     P      11 17 17.2 +1.4
PVIS  Viseu             60.16 300  eP     P      11 17 19.7 +1.7
PMRV  Marv??o           60.41 298  eP     P      11 17 21.2 +1.5
PBAR  Barrancos         60.77 297  eP     P      11 17 22.5 +0.4
KAPI  Kappang           61.28 125   LR    LR     11 46 15.7
              comp=Z,74nm,20.7s,baz=311,slow=38
KAPI  Kappang           61.28 125   P     P      11 17 26.8 +1.0
KAPI  Kappang           61.28 125   P     P      11 17 26.8 +1.0
KAPI                                pmax  pmax
              comp=Z,31nm,1.2s
PBEJ  Beja              61.41 297  eP     P      11 17 28.5 +2.0
ICESG Greenland Ices    61.50 338  i P    P      11 17 27.1 +0.1
ICESG                               IAmb  IAmb   11 17 28.2
              comp=Z,34nm,0.9s
MDT   Midelt            61.65 291   LR    LR     11 48 24.3
              comp=Z,59nm,18.3s,baz=56,slow=40
TULEG Thule             62.17 351   P     P      11 17 30.2  -0.8
ANGG  Ammassalik, Gr    62.89 334   P     P      11 17 35.7  -0.2
ANGG  Ammassalik, Gr    62.89 334  i P    P      11 17 36.3 +0.4
ANGG                                IAmb  IAmb   11 17 37.0
              comp=Z,14nm,0.6s
A21K  Barrow            64.28  16   P     P      11 17 45.2 +0.2
A21K                                IAmb  IAmb   11 19 15.1
              comp=Z,8.6nm,0.8s
A21K  Barrow            64.28  16   P     P      11 17 45.4 +0.4
              baz=319
ILULI Ilulissat         64.56 341   P     P      11 17 47.2 +0.3
ILULI                               IAmb  IAmb   11 17 47.8
              comp=Z,13nm,0.7s
ILULI Ilulissat         64.56 341   P     P      11 17 47.2 +0.3
ILULI                               pmax  pmax
              comp=Z,13nm,0.7s
ILULI Ilulissat         64.56 341  i P    P      11 17 47.1 +0.3
ILULI                               IAmb  IAmb   11 17 47.6
              comp=Z,13nm,0.6s
DY2G  Dye2              65.11 337  i P    P      11 17 51.0 +0.2
DY2G                                IAmb  IAmb   11 17 51.8
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	comp=Z,16nm,0.6s						
TNA	Tin City	65.40	24	P	P	11 17 51.9	-0.5
TNA	Tin City	65.40	24	P	P	11 17 53.0	+0.6
	baz=311						
VOI	Vohitsoka	65.63	207	P	P	11 17 55.7	+1.2
SHEM	Shemya Is, Ala	65.72	41	LR	LR	11 47 16.0	
	comp=Z,159nm,18.9s,baz=297,slow=37						
SFJD	Kangerlussuaq	66.00	339	P	P	11 17 56.3	+0.1
SFJD				IAmb	IAmb	11 17 56.9	
	comp=Z,11nm,0.8s						
SFJD	Kangerlussuaq	66.00	339	P	P	11 17 56.3	+0.1
SFJD				pmax	pmax		
	comp=Z,11nm,0.9s						
SFJD	Kangerlussuaq	66.00	339	*i* P	P	11 17 55.4	-0.9
SFJD				IAmb	IAmb	11 17 56.6	
	comp=Z,10nm,0.8s						
SFJD	Kangerlussuaq	66.00	339	P	P	11 17 56.1	-0.2
SFJD				sP	sP	11 18 12.9	+8.1
SIJI	Sorong	66.14	112	LR	LR	11 48 32.1	
	comp=Z,65nm,21.0s,baz=64,slow=38						
RES	Resolute Bay	66.21	357	LR	LR	11 49 11.5	
	comp=Z,153nm,19.2s,baz=16,slow=38						
RES	Resolute Bay	66.21	357	P	P	11 17 57.7	+0.2
RES	Resolute Bay	66.21	357	P	P	11 17 57.7	+0.2
RES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ANM	Nome	66.87	24	P	P	11 18 02.5	+0.6
ANM	Nome	66.87	24	P	P	11 18 02.5	+0.6
ANM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ANM	Nome	66.87	24	P	P	11 18 02.8	+0.9
	baz=314						
C24K	Franklin Bluff	67.18	15	P	P	11 18 04.4	+0.6
	baz=326						
D23K	Nanushuk River	67.39	16	P	P	11 18 05.5	+0.3
	baz=324						
TORD	Torodi Ar. Bea	67.69	269	P	P	11 18 07.5	-0.3
	comp=Z,12nm,0.8s,baz=45,slow=5.7,SNR=61						
TORD				LR	LR	11 52 13.9	
	comp=Z,134nm,18.1s,baz=54,slow=40						
	comp=Z,12nm,0.8s						
TORD	Torodi Ar. Bea	67.69	269	P	P	11 18 07.7	-0.1
C26K	Camden Bay	67.73	13	P	P	11 18 08.2	+0.9
	baz=329						
E22K	Anaktuvuk Pass	67.82	17	P	P	11 18 07.8	-0.1
	baz=323						
F21K	Alatna River	68.17	18	P	P	11 18 10.0	-0.1
	baz=322						
C27K	Jago River	68.19	13	P	P	11 18 11.0	+0.8
	baz=330						
F22K	John River	68.24	17	P	P	11 18 10.9	+0.3
	baz=323						
E23K	Chandalar	68.36	16	P	P	11 18 11.4	0.0
	baz=325						
A36M	Sachs Harbour	68.41	6	P	P	11 18 11.6	+0.2
A36M				IAmb	IAmb	11 18 17.2	
	comp=Z,16nm,0.8s						
A36M	Sachs Harbour	68.41	6	P	P	11 18 11.8	+0.3
	baz=344						
E24K	Your Creek	68.59	16	P	P	11 18 13.0	+0.2
	baz=326						
LSZ	Lusaka	68.65	227	LR	LR	11 48 19.1	
	comp=Z,121nm,20.0s,baz=22,slow=36						
G21K	Allakaket	68.72	18	P	P	11 18 13.3	-0.3
	baz=322						
G22K	Bettles	68.87	17	P	P	11 18 14.4	-0.1
	baz=324						
COLD	Coldfoot	68.92	17	P	P	11 18 14.9	+0.1
COLD				IAmb	IAmb	11 18 20.2	
	comp=Z,14nm,1.0s						
COLD	Coldfoot	68.92	17	P	P	11 18 14.9	+0.1
	baz=325						
IMAR	Indian Mountai	69.09	19	P	P	11 18 15.2	-0.6
E25K	Arctic Village	69.14	15	P	P	11 18 16.2	0.0
	baz=328						
F24K	Squaw Lake	69.18	16	P	P	11 18 16.7	+0.2
	baz=327						
GCSA	Galena City Sc	69.23	21	P	P	11 18 17.2	+0.5
	baz=320						
G23K	Bananza Creek	69.39	17	P	P	11 18 18.5	+0.8
	baz=325						
F25K	Christian Rive	69.58	15	P	P	11 18 19.7	+0.8
	baz=328						
H21K	Melozitna Rive	69.58	19	P	P	11 18 18.8	-0.1
H21K	Melozitna Rive	69.58	19	P	P	11 18 18.8	-0.1
	baz=323						
E27K	Coleen River	69.83	13	P	P	11 18 20.9	+0.5
	baz=332						
BMAR	Burnt Mountain	69.93	15	P	P	11 18 21.8	+0.8
G24K	Hadweenzic Riv	69.96	16	P	P	11 18 21.8	+0.5
	baz=327						
I21K	Tanana	70.17	19	P	P	11 18 22.6	+0.1
I21K	Tanana	70.17	19	P	P	11 18 22.5	+0.1
	baz=324						
G25K	Bearman Lake	70.20	16	P	P	11 18 23.6	+1.0
	baz=328						
H23K	Yukon River	70.23	17	P	P	11 18 23.5	+0.6
H23K				IAmb	IAmb	11 18 28.9	
	comp=Z,12nm,1.1s						
H23K	Yukon River	70.23	17	P	P	11 18 23.3	+0.4
	baz=326						
G26K	Porcupine Rive	70.51	15	P	P	11 18 25.0	+0.5
	baz=330						
FYU	Fort Yukon	70.55	15	P	P	11 18 25.7	+0.9
FYU				IAmb	IAmb	11 18 40.9	
	comp=Z,50nm,1.9s						
H24K	Noodor Dome	70.60	17	P	P	11 18 25.6	+0.4
H24K	Noodor Dome	70.60	17	P	P	11 18 25.7	+0.4
	baz=327						
MLY	Manley	70.60	18	P	P	11 18 25.1	-0.1
MLY				IAmb	IAmb	11 19 08.1	
	comp=Z,26nm,1.8s						
MLY	Manley	70.60	18	P	P	11 18 25.2	-0.1
	baz=325						
I23K	Minto, Yukon-K	70.83	18	P	P	11 18 26.8	+0.2
I23K	Minto, Yukon-K	70.83	18	P	P	11 18 26.9	+0.3
	baz=326						
INK	Inuvik	71.00	10	P	P	11 18 27.6	+0.1
	comp=Z,6.5nm,0.5s,baz=349,slow=6.6,SNR=95						
INK				LR	LR	11 51 35.4	
	comp=Z,165nm,21.6s,baz=330,slow=38						
	comp=Z,6.5nm,0.5s						
INK	Inuvik	71.00	10	P	P	11 18 27.8	+0.3
INK				IAmb	IAmb	11 18 39.7	
	comp=Z,10.0nm,0.7s						
INK	Inuvik	71.00	10	P	P	11 18 27.6	+0.1
	baz=338						
G27K	Doyon Strip	71.04	14	P	P	11 18 28.4	+0.6
	baz=332						
C36M	Paulatuk	71.07	6	P	P	11 18 27.5	-0.4
C36M				IAmb	IAmb	11 18 34.0	
	comp=Z,14nm,0.7s						
C36M	Paulatuk	71.07	6	P	P	11 18 27.1	-0.8
	baz=346						
K20K	Telida	71.10	21	P	P	11 18 28.5	+0.3
K20K	Telida	71.10	21	P	P	11 18 28.8	+0.6
	baz=323						
CHUM	Lake Minchumin	71.14	20	P	P	11 18 28.7	+0.3
	baz=324						
MDM	Murphy Dome	71.26	17	P	P	11 18 29.2	0.0
MDM				IAmb	IAmb	11 18 39.4	
	comp=Z,22nm,1.6s						
BPAW	Bear Paw Mtn.	71.30	19	P	P	11 18 29.2	-0.3
BPAW				IAmb	IAmb	11 19 25.3	
	comp=Z,38nm,1.9s						
BPAW	Bear Paw Mtn.	71.30	19	P	P	11 18 29.2	-0.3
	baz=325						
POKR	Poker Plat Res	71.31	17	P	P	11 18 29.9	+0.5
POKR				IAmb	IAmb	11 18 35.2	
	comp=Z,18nm,1.1s						
POKR	Poker Plat Res	71.31	17	P	P	11 18 30.0	+0.5
	baz=328						
NEA2	Nenana	71.37	18	P	P	11 18 29.5	-0.3
NEA2	Nenana	71.37	18	P	P	11 18 29.5	-0.3
	baz=326						
TCOL	CIGO, UAF Yank	71.42	17	P	P	11 18 29.8	-0.3
TCOL				IAmb	IAmb	11 18 36.7	
	comp=Z,12nm,0.7s						
TCOL	CIGO, UAF Yank	71.42	17	P	P	11 18 30.1	+0.1
	baz=327						
COLA	College	71.42	17	P	P	11 18 30.1	0.0
COLA				IAmb	IAmb	11 18 36.7	
	comp=Z,12nm,0.7s						
COLA	College	71.42	17	P	P	11 18 30.1	0.0
COLA				pmax	pmax		
	comp=Z,12nm,0.7s						
COLA	College	71.42	17	P	P	11 18 30.1	0.0
	baz=327						
COLA	College	71.42	17	P	P	11 18 29.8	-0.2
COLA				pP	sP	11 18 41.2	+2.5
COLA				sP	PcP	11 18 46.0	-3.6
H27K	Steamboat Moun	71.58	14	P	P	11 18 31.6	+0.5
	baz=332						
CAST	Castle Rocks	71.58	20	P	P	11 18 31.2	+0.1
CAST	Castle Rocks	71.58	20	P	P	11 18 31.2	+0.1
	baz=324						
BWN	Browne	71.62	18	P	P	11 18 31.4	0.0
WRH	Wood River Hil	71.70	18	P	P	11 18 31.1	-0.7
WRH				IAmb	IAmb	11 20 16.1	
	comp=Z,20nm,1.7s						
IL31		71.72	17	P	P	11 18 31.1	-0.8
ILAR	Eielson Array	71.72	17	P	P	11 18 31.0	-1.0
	comp=Z,3.4nm,0.8s,baz=321,slow=4.9,SNR=57						
ILAR				PKKP	PKKPdf	11 38 01.9	-1.5
	comp=Z,0.1nm,0.8s,baz=342,slow=5.7,SNR=3.9						
ILAR				LR	LR	11 52 37.3	
	comp=Z,142nm,19.2s,baz=299,slow=38						
	comp=Z,3.4nm,0.8s						
KTH	Kantishna Hill	71.77	19	P	P	11 18 31.5	-0.9
KTH				IAmb	IAmb	11 18 40.2	
	comp=Z,13nm,0.9s						
F31M	Tsiigehtchic	71.78	11	P	P	11 18 32.3	+0.1
	baz=338						
G30M	tAoh Zraii Nji	71.83	12	P	P	11 18 32.4	-0.2
	baz=336						
HDA	Harding Lake	72.02	17	P	P	11 18 32.3	-1.4
HDA	Harding Lake	72.02	17	P	P	11 18 32.4	-1.3
	baz=328						
I26K	Coal Creek Min	72.07	15	P	P	11 18 34.2	+0.2
I26K	Coal Creek Min	72.07	15	P	P	11 18 34.2	+0.2
	baz=331						
I27K	Kandik River	72.11	15	P	P	11 18 34.8	+0.4
	baz=332						
MCK	McKinley	72.12	18	P	P	11 18 33.5	-0.9
MCK				IAmb	IAmb	11 19 25.2	
	comp=Z,41nm,1.9s						
MCK	McKinley	72.12	18	P	P	11 18 33.5	-0.9
MCK				pmax	pmax		
	comp=Z,41nm,1.9s						
MCK	McKinley	72.12	18	P	P	11 18 34.4	0.0
	baz=327						
EPYK	Eagle Plains	72.30	12	P	P	11 18 34.3	-1.2
EPYK				IAmb	IAmb	11 19 39.7	
	comp=Z,19nm,1.5s						
EPYK	Eagle Plains	72.30	12	P	P	11 18 35.2	-0.2
	baz=336						
RND	Reindeer	72.41	19	P	P	11 18 35.1	-1.1
RND				IAmb	IAmb	11 20 16.3	
	comp=Z,37nm,2.0s						
RND	Reindeer	72.41	19	P	P	11 18 35.1	-1.1
RND				pmax	pmax		
	comp=Z,37nm,2.0s						
J26L	Joseph Creek	72.69	16	P	P	11 18 37.4	-0.4
J26L	Joseph Creek	72.69	16	P	P	11 18 37.7	-0.1
	baz=331						
K24K	Donnelly Dome	72.81	17	P	P	11 18 37.9	-0.6
	baz=329						
SKT	Skwentna	72.90	20	P	P	11 18 38.3	-0.8
SKT				IAmb	IAmb	11 18 43.0	
	comp=Z,43nm,1.5s						
SKT	Skwentna	72.90	20	P	P	11 18 38.6	-0.5
	baz=325						
I29M	Ogilvie Camp,	72.95	13	P	P	11 18 39.0	-0.4
I29M	Ogilvie Camp,	72.95	13	P	P	11 18 38.9	-0.4
	baz=335						
SCRK	Sand Creek	73.06	16	P	P	11 18 40.0	-0.1
SCRK	Sand Creek	73.06	16	P	P	11 18 39.9	-0.1
	baz=330						
RIDG	Independent Ri	73.07	17	P	P	11 18 39.4	-0.7
RIDG				IAmb	IAmb	11 19 44.0	
	comp=Z,16nm,1.2s						
RIDG	Independent Ri	73.07	17	P	P	11 18 39.4	-0.7
	baz=330						
FRB	Frobisher Bay	73.12	343	LR	LR	11 55 11.9	
	comp=Z,116nm,18.3s,baz=24,slow=40						
DOT	Dot Lake	73.33	16	P	P	11 18 40.7	-0.9
DOT				IAmb	IAmb	11 19 48.1	
	comp=Z,19nm,1.5s						
K27K	Chicken	73.42	15	P	P	11 18 42.4	+0.3
K27K	Chicken	73.42	15	P	P	11 18 42.3	+0.3
	baz=332						
PAX	Paxson	73.60	17	P	P	11 18 42.8	-0.5
PAX	Paxson	73.60	17	P	P	11 18 42.8	-0.5
PAX				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PAX	Paxson	73.60	17	P	P	11 18 42.8	-0.5
	baz=329						
SML	Sawmill	73.89	19	P	P	11 18 44.6	-0.2
SML				IAmb	IAmb	11 18 49.9	
	comp=Z,33nm,1.1s						
SML	Sawmill	73.89	19	P	P	11 18 44.7	-0.2
	baz=327						
DAWY	Dawson	73.92	14	P	P	11 18 45.0	-0.1
DAWY	Dawson	73.92	14	P	P	11 18 44.9	-0.1
	baz=334						
MBWA	Marble Bar	73.98	135	P	P	11 18 46.5	+0.7
MBWA				IAmb	IAmb	11 19 31.0	
	comp=Z,26nm,1.3s						
L26K	Log Cabin Wild	74.03	16	P	P	11 18 45.5	-0.2
M23K	Glacier View	74.06	19	P	P	11 18 45.6	-0.3
	baz=328						
SCM	Sheep Creek Mo	74.12	19	P	P	11 18 46.0	-0.3
SCM				IAmb	IAmb	11 18 52.5	
	comp=Z,20nm,0.9s						
SCM	Sheep Creek Mo	74.12	19	P	P	11 18 46.0	-0.3
SCM				pmax	pmax		
	comp=Z,20nm,0.9s						
SCM	Sheep Creek Mo	74.12	19	P	P	11 18 46.2	-0.1
	baz=328						
RC01	Rabbit Creek A	74.13	20	P	P	11 18 46.0	-0.2
RC01				IAmb	IAmb	11 19 05.0	
	comp=Z,25nm,1.3s						
HARP	HAARP	74.16	18	P	P	11 18 47.1	+0.7
	baz=330						
M24K	Tolsona, Glenn	74.17	18	P	P	11 18 47.1	+0.5
M24K				IAmb	IAmb	11 18 55.3	
	comp=Z,24nm,0.7s						
L27K	Beaver Creek,	74.33	16	P	P	11 18 46.8	-0.7
L27K				IAmb	IAmb	11 19 17.8	
	comp=Z,20nm,1.6s						
BCAR	Beaver Creek A	74.33	16	P	P	11 18 47.6	+0.1
PSA00	Pilbara Seismi	74.37	136	P	P	11 18 49.1	+1.0
PSA00				IAmb	IAmb	11 18 53.4	
	comp=Z,10nm,0.8s						
K29M	Barlow Dome	74.48	14	P	P	11 18 48.6	+0.2
	baz=336						
M27K	Edge Creek, AK	74.94	16	P	P	11 18 51.2	0.0
M27K				IAmb	IAmb	11 19 07.2	
	comp=Z,17nm,1.2s						
MAYO	Mayo, Yukon	75.00	13	P	P	11 18 51.5	+0.2
MAYO				IAmb	IAmb	11 20 41.3	
	comp=Z,17nm,1.1s						
KNRA	Kununurra	75.09	125	P	P	11 18 51.7	-0.6
KNRA				IAmb	IAmb	11 18 57.8	
	comp=Z,19nm,0.8s						
M30M	Minto, Yukon	75.77	14	P	P	11 18 55.8	0.0
M30M				IAmb	IAmb	11 19 47.5	
	comp=Z,30nm,1.9s						
KDAK	Kodiak Island	76.04	23	P	P	11 18 56.5	-0.8
	comp=Z,7.2nm,0.9s,baz=311,slow=9.3,SNR=1.3						
KDAK				LR	LR	11 54 29.2	
	comp=Z,192nm,18.9s,baz=336,slow=37						
	comp=Z,7.2nm,0.9s						
LOGN	Logan Glacier	76.50	17	P	P	11 18 59.6	-0.5
LOGN				IAmb	IAmb	11 20 55.3	
	comp=Z,35nm,1.4s						
DBIC	Dimbokro	76.73	268	P	P	11 19 01.7	-0.2
	comp=Z,7.7nm,0.9s,baz=41,slow=6.7,SNR=12						
DBIC				LR	LR	11 56 57.0	
	comp=Z,79nm,19.2s,baz=35,slow=39						
	comp=Z,7.7nm,0.9s						
DBIC	Dimbokro	76.73	268	P	P	11 19 02.0	0.0
KIC	Kosan Boka	76.83	267	⇓ *i* P	P	11 19 03.0	+0.5
	comp=Z,3.1nm,0.4s						
TIC	Toumodi	76.88	268	⇓ *i* P	P	11 19 03.2	+0.4
	comp=Z,5.2nm,0.3s						
N31M	Braeburn, Yuko	76.97	14	P	P	11 19 01.9	-0.6
N31M				IAmb	IAmb	11 19 45.9	
	comp=Z,50nm,1.8s						
WRGLY	Wrigley	77.10	8	P	P	11 19 04.1	+0.9
	baz=347						
LIC	Lamto	77.14	268	⇓ *i* P	P	11 19 04.7	+0.4
	comp=Z,29nm,0.7s						
HYT	Haines Junctio	77.24	15	P	P	11 19 05.0	+0.7
HYT				IAmb	IAmb	11 19 11.8	
	comp=Z,8.2nm,0.7s						
HYT	Haines Junctio	77.24	15	P	P	11 19 04.9	+0.6
	baz=336						
TSUM	Tsumeb	78.03	233	LR	LR	11 58 35.8	
	comp=Z,126nm,19.0s,baz=160,slow=40						
TSUM	Tsumeb	78.03	233	P	P	11 19 09.5	+0.3
TSUM				IAmb	IAmb	11 19 19.2	
	comp=Z,18nm,1.5s						
YKA	Yellowknife Ar	78.52	4	P	P	11 19 10.2	-0.9
	comp=Z,7.5nm,0.9s,baz=349,slow=5.5,SNR=123						
YKA				PKKP	PKKPdf	11 37 51.5	-1.5
	comp=Z,0.1nm,0.7s,baz=50,slow=5.6,SNR=3.6						
YKA				LR	LR	11 55 50.4	
	comp=Z,196nm,19.9s,baz=314,slow=37						
	comp=Z,7.5nm,0.9s						
YKA	Yellowknife Ar	78.52	4	P	P	11 19 11.0	-0.2
YKA	Yellowknife Ar	78.52	4	*i* P	P	11 19 10.8	-0.3
YKA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SCHQ	Schefferville	80.41	338	P	P	11 19 21.0	-0.7
	comp=Z,4.9nm,0.8s,baz=63,slow=5.4,SNR=9.5						
SCHQ				LR	LR	11 56 41.7	
	comp=Z,65nm,19.3s,baz=40,slow=37						
	comp=Z,4.9nm,0.8s						
SCHQ	Schefferville	80.41	338	P	P	11 19 21.6	0.0
BOSA	Boshof	80.98	222	P	P	11 19 25.4	+0.4
	comp=Z,6.3nm,0.9s,baz=58,slow=5.8,SNR=8.3						
	comp=Z,6.3nm,0.9s						
BOSA	Boshof	80.98	222	P	P	11 19 25.9	+0.9
BOSA				IAmb	IAmb	11 19 35.9	
	comp=Z,14nm,1.1s						
WB0	Warramunga Arr	81.71	124	P	P	11 19 28.0	-0.9
WB0				IAmb	IAmb	11 19 34.3	
	comp=Z,24nm,1.3s						
WRA	Warramunga Arr	81.80	124	P	P	11 19 28.9	-0.6
	comp=Z,8.2nm,0.8s,baz=326,slow=5.2,SNR=49						
	comp=Z,8.2nm,0.8s						
WRA	Warramunga Arr	81.80	124	P	P	11 19 30.2	+0.8
WRA	Warramunga Arr	81.80	124	*i* P	P	11 19 29.7	+0.3
WRA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WRAB	Tennant Creek	81.80	124	P	P	11 19 29.1	-0.3
WRAB				IAmb	IAmb	11 19 33.6	
	comp=Z,12nm,0.8s						
WRAB	Tennant Creek	81.80	124	P	P	11 19 29.1	-0.3
WRAB				pmax	pmax		
	comp=Z,12nm,0.9s						
WB2	Warramunga Arr	81.81	124	P	P	11 19 29.9	+0.4
WB2				IAmb	IAmb	11 19 33.6	
	comp=Z,11nm,0.8s						
DRLN	Deer Lake	81.90	330	P	P	11 19 29.3	-0.3
FCC	Fort Churchill	81.92	353	P	P	11 19 29.6	+0.2
FCC				IAmb	IAmb	11 19 30.5	
	comp=Z,12nm,1.1s						
FCC	Fort Churchill	81.92	353	P	P	11 19 29.7	+0.2
FCC				pmax	pmax		
	comp=Z,12nm,1.1s						
PMG	Port Moresby	83.52	108	LR	LR	12 01 05.1	
	comp=Z,49nm,18.1s,baz=308,slow=39						
COEN	Coen	83.64	114	P	P	11 19 39.0	-0.1
COEN				IAmb	IAmb	11 19 44.3	
	comp=Z,23nm,1.1s						
AS31	Alice Springs	84.23	127	P	P	11 19 42.9	+0.9
ASAR	Alice Springs	84.23	127	P	P	11 19 41.8	-0.2
	comp=Z,3.7nm,0.8s,baz=314,slow=4.8,SNR=46						
ASAR				LR	LR	12 01 36.9	
	comp=Z,67nm,19.0s,baz=306,slow=39						
	comp=Z,3.7nm,0.8s						
ASAR	Alice Springs	84.23	127	P	P	11 19 42.2	+0.2
FORT	Forrest	86.13	135	P	P	11 19 52.3	+1.1
SUR	Sutherland	86.29	222	LR	LR	12 00 41.8	
	comp=Z,120nm,18.7s,baz=92,slow=37						
FFC	Flin Flon	86.44	357	P	P	11 19 52.2	-0.4
FFC				IAmb	IAmb	11 19 53.8	
	comp=Z,22nm,1.4s						
FFC	Flin Flon	86.44	357	P	P	11 19 52.2	-0.4
FFC				pmax	pmax		
	comp=Z,22nm,1.4s						
BATG	Bathurst New B	86.70	334	P	P	11 19 55.5	+1.5
BATG				IAmb	IAmb	11 19 56.3	
	comp=Z,8.5nm,0.7s						
BBB	Bella Bella	87.15	13	LR	LR	12 03 44.2	
	comp=Z,91nm,18.3s,baz=341,slow=39						
LMQ	La Malbaie	87.86	336	P	P	11 19 59.6	-0.1
LMQ				IAmb	IAmb	11 20 01.2	
	comp=Z,10nm,1.0s						
ULM	Lac du Bonnet	90.51	353	P	P	11 20 10.6	-1.4
	comp=Z,4.3nm,0.9s,baz=326,slow=3.6,SNR=5.8						
	comp=Z,4.3nm,0.9s						
ULM	Lac du Bonnet	90.51	353	P	P	11 20 11.4	-0.6
ULM				IAmb	IAmb	11 20 12.6	
	comp=Z,5.0nm,0.9s						
WALA	Waterton Lakes	91.96	5	P	P	11 20 18.9	0.0
WALA				IAmb	IAmb	11 20 26.1	
	comp=Z,8.7nm,1.0s						
B35A	Bob, Littlefor	92.15	351	P	P	11 20 19.3	-0.4
B35A				IAmb	IAmb	11 20 20.4	
	comp=Z,17nm,1.5s						
B08A	Colville Reser	92.16	8	P	P	11 20 20.0	+0.2
B08A				IAmb	IAmb	11 20 26.6	
	comp=Z,9.4nm,1.3s						
BBOO	Buckleboo	92.17	132	P	P	11 20 20.7	+0.9
EYMN	Ely	92.28	350	P	P	11 20 20.6	+0.3
NEW	Newport	92.49	7	LR	LR	12 04 45.9	
	comp=Z,180nm,19.7s,baz=359,slow=37						
NEW	Newport	92.49	7	P	P	11 20 20.4	-0.9
NEW				IAmb	IAmb	11 20 28.9	
	comp=Z,5.4nm,0.9s						
NEW	Newport	92.49	7	P	P	11 20 20.4	-0.9
NEW				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SADO	Sadowa	92.91	341	LR	LR	12 06 45.6	
	comp=Z,152nm,19.1s,baz=54,slow=38						
EGMT	Eagleton	93.19	2	P	P	11 20 25.4	+0.8
	baz=358						
LAO	LASA Array	94.57	360	P	P	11 20 32.4	+1.5
	baz=0.2						
STKA	Stephens Creek	94.83	128	P	P	11 20 31.2	-0.8
	comp=Z,1.6nm,0.7s,baz=328,slow=5.4,SNR=4.4						
STKA				LR	LR	12 08 00.7	
	comp=Z,101nm,18.5s,baz=291,slow=38						
	comp=Z,1.6nm,0.7s						
BOZ	Bozeman (W)	95.54	4	P	P	11 20 36.0	+0.5
	baz=356						
RLMT	Red Lodge	96.10	2	P	P	11 20 38.7	+0.5
	baz=358						
ECSD	EROS Data Cent	97.03	353	P	Pdif	11 20 42.8	+0.5
	baz=7.7						
RSSD	Black Hills	97.11	358	P	Pdif	11 20 43.5	+0.7
	baz=1.9						
PDAR	Pinedale Array	98.45	2	P	Pdif	11 20 49.6	+0.8
	comp=Z,0.2nm,0.4s,baz=90,slow=3.0,SNR=3.4						
PDAR				LR	LR	12 10 19.9	
	comp=Z,79nm,18.7s,baz=4.0,slow=38						
	comp=Z,0.2nm,0.4s						
NVAR	Mina Array Bea	102.08	9	Pdiff	Pdif	11 21 10.4	+5.4
	comp=Z,0.2nm,0.5s,baz=60,slow=5.3,SNR=2.6						
NVAR				PKiKP	PKiKP	11 25 29.5	+2.1
	comp=Z,0.1nm,0.3s,baz=3.4,slow=3.0,SNR=3.8						
TXAR	Lajitas Array	111.84	357	PP	PP	11 26 26.9	-0.1
	comp=Z,0.1nm,0.6s,baz=90,slow=8.3,SNR=2.0						
TXAR				PKKP	PKKPdf	11 36 53.7	-1.4
	comp=Z,0.5nm,0.9s,baz=196,slow=7.8,SNR=4.9						
LPAZ	La Paz	139.48	293	PKP	PKiKP	11 26 39.0	-2.3
	comp=Z,0.9nm,0.5s,baz=277,slow=5.2,SNR=2.3						
LPAZ	La Paz	139.48	293	PKIKP	PKiKP	11 26 39.0	-2.3
TRQA	Tornquist	145.39	257	PKPbc	PKiKP	11 26 49.2	-2.8
TRQA	Tornquist	145.39	257	PKIKP	PKiKP	11 26 49.2	-2.8
AC02	Maricunga	146.51	280	PKPbc	PKiKP	11 26 53.4	-1.8
GO03	Copiap	147.74	280	PKPbc	PKiKP	11 26 55.2	-2.0
AC05	El Transito	148.38	278	PKPbc	PKiKP	11 26 58.0	-0.6
CO01	Juntas del Tor	148.77	276	PKPbc	PKiKP	11 26 58.0	-1.5
VA06	Catapilco	150.79	272	PKPdf	PKPdf	11 26 55.5	-1.5
VA06				PKPab	PKPab	11 27 09.6	-0.3
PLCA	Paso Flores	152.44	255	PKPbc	PKiKP	11 27 07.2	+0.7
	comp=Z,2.2nm,0.7s,baz=37,slow=1.3,SNR=8.1						
LL04	Puerto Octay	153.86	255	PKPdf	PKPdf	11 26 59.6	-1.8
LL04				PKPab	PKPab	11 27 22.6	+0.1
GO07	Milladeo Hill,	154.98	250	PKPdf	PKPdf	11 27 01.8	-1.0
GO07				PKPab	PKPab	11 27 26.3	-0.9
RPN	Rapa Nui	167.82	12	PKPdf	PKPdf	11 27 14.9	-1.9
RPN				PKPab	PKPab	11 28 23.7	+0.3
RPN	Rapa Nui	167.82	12	PKIKP	PKPdf	11 27 14.9	-1.9
RPN						11 28 23.7	

VA02	Isla de Pascua	167.83	12	PKPdf	PKPdf	11 27 12.9	-3.9
VA02				PKPab	PKPab	11 28 21.6	-1.8

INET ***14*** *11:23:58.6±0.5, 12°.34N×87°.32W, h76^{km}±3^{km}, MW2.6*
SNET ***14*** *11:24:00.9±1.1, 12°.55N×87°.27W, h77^{km}±16^{km}, ML3.0*
ISC 14 11:23:59.2±1.7**, 12°.3N**±0°.1×**87°.27W**±0°.06**, h75**^{km}±15^{km}**,**
n20, σ**0^{s}.50**/30**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.42	31	*e*P	Pn	11 24 11.9	0.0
CRIN				*e*S	Sn	11 24 22.0	+0.8
TELN	Telica	0.51	58	*e*P	Pn	11 24 13.0	+0.4
CNGN	Cerro Negro	0.58	74	*e*P	Pn	11 24 13.2	-0.1
COPN	Copaltepe	0.68	103	*e*P	Pn	11 24 13.6	-0.6
MOMN	Momotombo	0.72	84	*e*P	Pn	11 24 14.5	-0.2
TISN	Laguna Tiscapa	1.00	101	*e*P	Pn	11 24 18.2	+0.3
WILN	Americas 2	1.07	99	*e*P	Pn	11 24 18.6	-0.2
CNCH	Conchagua	1.08	330	*e*P	Pn	11 24 18.8	-0.4
CNCH				*e*S	Sn	11 24 33.4	-0.6
CNCH				IAML		11 24 39.9	
	comp=Z,398nm,0.2s						
MATN	Matagalpa	1.44	66	*e*P	Pn	11 24 23.8	+0.1
MATN				*e*S	Sn	11 24 42.3	+0.3
RANC	El Ranchito	1.48	318	*e*P	Pn	11 24 24.2	0.0
RANC				*e*S	Sn	11 24 42.9	0.0
PACA	Pacayal	1.52	318	*e*P	Pn	11 24 25.2	+0.4
PACA				*e*S	Sn	11 24 44.1	0.0
PACA				IAML		11 24 47.3	
	comp=Z,798nm,0.2s						
BOAB	BOACO BROADBAN	1.57	86	*e*S	Sn	11 24 44.9	0.0
FAGO	Alcalda de S	1.58	329	*e*P	Pn	11 24 25.0	-0.4
FAGO				*e*S	Sn	11 24 44.0	-1.1
FAGO				*e*S		11 24 45.4	
PQSS	Presa 15 de Se	1.79	316	*e*P	Pn	11 24 28.9	+0.7
PQSS				*e*S	Sn	11 24 49.9	-0.4
PQSS				IAML		11 24 53.1	
	comp=Z,27nm,0.2s						
SCLA	Alcaldia de Sa	1.97	314	*e*P	Pn	11 24 31.4	+0.9
SCLA				*e*S	Sn	11 24 55.2	+0.8
COEG	Centro de Oper	2.02	309	*e*P	Pn	11 24 31.6	+0.2
SJTE	Alcalda de S	2.12	307	*e*P	Pn	11 24 32.5	-0.1
SJTE				*e*S	Sn	11 24 57.6	-0.5
P5NO	Presa 5 de nov	2.19	319	*e*P	Pn	11 24 33.4	-0.2
JAYA	Jayaque - finc	2.50	302	*e*P	Pn	11 24 38.2	+0.4
JAYA				IAML		11 25 10.3	
	comp=Z,65nm,0.2s						
NUBE	Las Nubes	2.90	303	*e*P	Pn	11 24 43.8	+0.5
NUBE				*e*S	Sn	11 25 16.7	-0.5

IDC ***14*** *11:27:12.4±0.8, 50°.33N×176°.80E, h0^{km}, mb4.0/15,*
mbtmp4.0/19, ML4.1/3, MS3.8/4, Error ellipse:
s-maj=20.1km s-min=14.5km az=178.0
NEIC ***14*** *11:27:16.6±1.4, 50°.65N±0°.09×176°.92E±0°.08, h13^{km}±4^{km},*
mb4.4/153, ML3.9(AEIC), Error ellipse: s-maj=13.3km
s-min=7.5km az=179.0
AEIC ***14*** *11:27:19.3±2.8, 50°.29N±0°.10×177°.0E±0°.1, h11^{km}±4^{km},*
Error ellipse: s-maj=14.9km s-min=9.3km az=158.0
ISC 14 11:27:15.5±0.5**, 50°.52N**±0°.08×**176°.99E**±0°.05**, h10**^{km}**, n395,**
σ**0^{s}.83**/388**, mb4.4**/91**, MS3.9**/3**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	Amchitka	1.70	59		Pn	11 27 45.0	-0.1
AMKA				Sn	Sb	11 28 06.4	-1.7
SHEM	Shemya Is, Ala	2.85	322	Pn	Pn	11 28 01.1	+0.1
	15nm,0.3s,baz=186,slow=4.8,SNR=29						
SHEM				Sn	Sn	11 28 35.5	+0.2
	16nm,0.3s,baz=109,slow=3.4,SNR=4.9						
	30nm,0.3s						
SMY	Shemya	2.85	322	Pn	Pn	11 27 58.9	-2.1
KIWB	Kanaga Island	3.92	68		Pn	11 28 16.3	+0.7
ADK	Adak	4.21	69	Pn	Pn	11 28 20.1	+0.5
GSTR	Great Sitkin T	4.64	67	Pn	Pn	11 28 26.2	+0.6
NIKH	Nikolski High	9.12	69	Pn	Pn	11 29 26.5	-0.4
NIKH	Nikolski High	9.12	69	P	Pn	11 29 26.6	-0.4
	baz=260						
SPIA	Saint Paul Isl	10.05	44	Pn	Pn	11 29 39.4	-0.4
UNV	Unalaska Valle	10.67	65	Pn	Pn	11 29 48.2	+0.1
UNV	Unalaska Valle	10.67	65	P	Pn	11 29 48.0	-0.2
	baz=258						
PEA0B	Petropavlovsk-	12.21	290	Pn	Pn	11 30 09.8	+0.4
PETK	Petropavlovsk-	12.21	290	Pn	Pn	11 30 06.9	-2.4
	1.6nm,0.8s,baz=101,slow=16,SNR=7.0						
PETK				Sn	Sn	11 32 17.9	-7.4
	0.4nm,0.3s,baz=269,slow=31,SNR=5.7						
PETK	Petropavlovsk-	12.21	290	Pn	Pn	11 30 10.2	+0.9
CHGN	Chignik	15.72	59	P	Pn	11 30 55.3	-1.4
	baz=258						
P16K	Nushagak River	16.67	50	P	Pn	11 31 08.1	-0.8
	baz=250						
O16K	Kokwok River B	16.82	48	P	Pn	11 31 11.5	+0.7
	baz=248						
N16K	Nishlik Lake	16.86	45	P	Pn	11 31 11.3	-0.1
	baz=244						
ANM	Nome	16.87	27	Pn	Pn	11 31 10.8	-0.5
ANM	Nome	16.87	27	P	P	11 31 12.6	-0.9
	baz=222						
TNA	Tin City	16.98	22	Pn	Pn	11 31 11.9	-0.9
TNA	Tin City	16.98	22	P	P	11 31 13.5	-1.2
	baz=214						
R17K	Ugashik Creek	17.09	55	P	Pn	11 31 14.4	+0.2
	baz=256						
O17K	Koliganek Bris	17.36	48	P	Pn	11 31 17.5	0.0
	baz=249						
MA2	Magadan	17.44	311	P	Pn	11 31 18.7	+0.1
	0.2nm,0.3s,baz=345,slow=23,SNR=1.7						
	0.9nm,0.4s						
MA2	Magadan	17.44	311		Pn	11 31 18.2	-0.3
Q17K	Contact Creek	17.50	53	P	Pn	11 31 18.2	-1.2
	baz=255						
Q18K	Katmai Hardscr	18.04	52	P	Pn	11 31 25.0	-1.1
	baz=255						
P18K	Big Mountain,	18.13	50	P	Pn	11 31 26.1	-1.1
	baz=253						
SEY	Seymchan	18.20	322	P	Pn	11 31 25.8	-2.0
	0.1nm,0.3s,baz=205,slow=22,SNR=8.2						
SEY				LR	LR	11 37 18.2	
	comp=Z,429nm,21.8s,baz=299,slow=33						
	0.7nm,0.2s						
O18K	Koktuh Hills	18.29	49	Pn	Pn	11 31 27.0	-2.0
O18K				IAmb	IAmb	11 31 48.3	
	comp=Z,31nm,1.3s						
O18K	Koktuh Hills	18.29	49	P	Pn	11 31 27.9	-1.2
	baz=251						
BILL	Bilibino	18.35	347	P	P	11 31 30.4	+0.6
Q19K	Cape Douglas,	18.80	52	P	P	11 31 33.6	-1.2
O19K	Port Alsworth	18.82	48	P	P	11 31 34.1	-0.8
O19K				IAmb	IAmb	11 31 45.4	
	comp=Z,32nm,1.4s						
O19K	Port Alsworth	18.82	48	P	P	11 31 34.5	-0.4
	baz=252						
N19K	Bonanza Creek	18.94	46	P	P	11 31 35.9	-0.6
N19K	Bonanza Creek	18.94	46	P	Pn	11 31 37.0	-0.1
	baz=250						
KDAK	Kodiak Island	19.12	56	P	P	11 31 35.7	-2.5
	comp=Z,6.9nm,0.8s,baz=278,slow=5.7,SNR=13						
KDAK	Kodiak Island	19.12	56	P	P	11 31 37.5	-0.7
KDAK				IAmb	IAmb	11 31 54.7	
	comp=Z,63nm,1.4s						
TTA	Tatalina	19.15	39	P	P	11 31 38.3	-0.4
TTA	Tatalina	19.15	39	P	P	11 31 37.6	-1.0
	baz=242						
L19K	White Mountain	19.30	42	P	P	11 31 40.0	-0.2
	baz=245						
Q20K	Shuyak Island	19.36	54	P	P	11 31 40.1	-0.9
	baz=258						
M19K	Big River Lodg	19.39	43	P	P	11 31 41.4	+0.2
	baz=247						
O20K	Slope Mountain	19.59	49	P	P	11 31 43.7	+0.1
	baz=254						
RSO	Redoubt South	19.64	48	P	P	11 31 43.4	-0.7
GCSA	Galena City Sc	19.75	34	P	Pn	11 31 46.0	-0.6
	baz=236,SNR=6.1						
L20K	Farewell, AK	19.83	42	P	Pn	11 31 47.0	-0.7
	baz=246						
M20K	Styx River	19.93	44	P	P	11 31 47.0	-0.2
M20K	Styx River	19.93	44	P	Pn	11 31 48.4	-0.5
	baz=249						
SPCR	Spurr Chakacha	20.12	46	P	P	11 31 49.1	-0.2
	baz=252						
K20K	Telida	20.13	39	P	P	11 31 47.8	-1.5
K20K	Telida	20.13	39	P	P	11 31 49.8	+0.5
	baz=244						
CNPM	China Poot	20.14	51	P	P	11 31 48.8	-0.6
CNPM				IAmb	IAmb	11 32 13.1	
	comp=Z,37nm,1.2s						
RDOG	Red Dog Mine	20.18	22	P	P	11 31 49.3	-0.4
RDOG				IAmb	IAmb	11 31 53.1	
	comp=Z,17nm,0.7s						
RDOG	Red Dog Mine	20.18	22	P	Pn	11 31 51.1	-0.6
	baz=219,SNR=6.7						
SPU	Mount Spurr	20.18	46	P	P	11 31 48.6	-1.3
BRLK	Bradley Lake	20.36	51	P	P	11 31 51.0	-1.0
BRLK				IAmb	IAmb	11 31 58.5	
	comp=Z,26nm,1.4s						
BRSE	Bradley Lake S	20.43	51	P	Pn	11 31 53.5	-1.2
	baz=257						
SKT	Skwentna	20.67	44	P	P	11 31 56.1	+0.8
SKT				IAmb	IAmb	11 31 59.8	
	comp=Z,9.5nm,0.9s						
SKT	Skwentna	20.67	44	P	P	11 31 55.8	+0.6
	baz=250						
PPLA	Purkeypile	20.71	42	P	P	11 31 54.5	-1.4
CAST	Castle Rocks	20.96	40	P	P	11 31 59.2	+0.8
CAST	Castle Rocks	20.96	40	P	P	11 31 59.1	+0.8
	baz=246						
CHUM	Lake Minchumin	21.06	39	P	P	11 31 59.7	+0.4
	baz=245,SNR=7.2						
SEW	Seward	21.14	50	P	P	11 32 00.2	0.0
CUT	Chulitna	21.37	44	P	P	11 32 03.2	+0.5
	baz=251						
KTH	Kantishna Hill	21.50	40	P	P	11 32 02.9	-1.3
KTH				IAmb	IAmb	11 32 08.1	
	comp=Z,9.1nm,0.9s						
IMAR	Indian Mountai	21.52	33	P	P	11 32 04.8	+0.4
PMR	Palmer	21.65	46	P	P	11 32 06.0	+0.3
	baz=254						
BPAW	Bear Paw Mtn.	21.68	39	P	P	11 32 07.1	+1.0
BPAW	Bear Paw Mtn.	21.68	39	P	P	11 32 06.3	+0.2
	baz=246						
H21K	Melozitna Rive	21.69	34	P	P	11 32 06.8	+0.7
H21K	Melozitna Rive	21.69	34	P	P	11 32 06.8	+0.7
	baz=240						
TRF	Thorofare Moun	21.72	41	P	P	11 32 06.1	-0.5
TRF				IAmb	IAmb	11 32 09.4	
	comp=Z,16nm,1.4s						
TRF	Thorofare Moun	21.72	41	P	P	11 32 07.3	+0.7
	baz=249						
I21K	Tanana	21.77	36	P	P	11 32 07.5	+0.6
I21K	Tanana	21.77	36	P	P	11 32 07.8	+0.9
	baz=242						
PWL	Port Wells	21.84	48	P	P	11 32 08.2	+0.3
	baz=257						
G21K	Allakaket	21.89	32	P	P	11 32 08.5	+0.2
	baz=237,SNR=12						
SML	Sawmill	22.07	46	P	P	11 32 10.2	-0.1
SML				IAmb	IAmb	11 32 54.2	
	comp=Z,17nm,1.2s						
MLY	Manley	22.17	37	P	P	11 32 11.8	+0.5
MLY	Manley	22.17	37	P	P	11 32 11.3	0.0
	baz=244						
F21K	Alatna River	22.29	30	P	P	11 32 12.4	-0.1
	baz=236,SNR=14						
H22K	Ishtalitna Cre	22.32	35	P	P	11 32 13.4	+0.5
	baz=242						
BWN	Browne	22.33	40	P	P	11 32 14.5	+1.5
BWN				IAmb	IAmb	11 32 17.5	
	comp=Z,9.9nm,1.0s						
M23K	Glacier View	22.35	46	P	P	11 32 12.5	-0.7
	baz=256						
MCK	McKinley	22.39	41	P	P	11 32 12.8	-0.8
MCK	McKinley	22.39	41	P	P	11 32 13.1	-0.5
	baz=250						
SCM	Sheep Creek Mo	22.54	46	P	P	11 32 14.1	-1.3
SCM				IAmb	IAmb	11 32 40.3	
	comp=Z,11nm,1.1s						
SCM	Sheep Creek Mo	22.54	46	P	P	11 32 15.3	0.0
	baz=256						
NEA2	Nenana	22.65	39	P	P	11 32 15.8	-0.6
NEA2				IAmb	IAmb	11 32 17.1	
	comp=Z,6.3nm,0.8s						
NEA2	Nenana	22.65	39	P	P	11 32 16.3	0.0
	baz=248,SNR=6.7						
I23K	Minto, Yukon-K	22.75	37	P	P	11 32 17.9	+0.5
	baz=246						
F22K	John River	22.87	30	P	P	11 32 19.0	+0.3
	baz=237						
H23K	Yukon River	22.96	36	P	P	11 32 19.3	-0.4
H23K				IAmb	IAmb	11 32 26.7	
	comp=Z,11nm,1.4s						
H23K	Yukon River	22.96	36	P	P	11 32 20.0	+0.3
	baz=244						
WRH	Wood River Hil	23.00	39	P	P	11 32 19.0	-1.0
MDM	Murphy Dome	23.12	38	P	P	11 32 21.1	-0.2
KLU	Klutina	23.12	47	P	P	11 32 21.0	-0.4
	baz=258						
M24K	Tolsona, Glenn	23.13	46	P	P	11 32 21.6	+0.1
M24K				IAmb	IAmb	11 32 26.5	
	comp=Z,21nm,1.1s						
CCB	Clear Creek Bu	23.17	39	P	P	11 32 21.4	-0.4
G23K	Bananza Creek	23.19	33	P	P	11 32 22.0	-0.1
	baz=242,SNR=10						
E22K	Anaktuvuk Pass	23.33	29	P	P	11 32 24.2	+0.7
	baz=236						
COLD	Coldfoot	23.38	32	P	P	11 32 24.2	+0.3
	baz=240						
HDA	Harding Lake	23.44	40	P	P	11 32 23.2	-1.3
HDA	Harding Lake	23.44	40	P	P	11 32 23.4	-1.1
	baz=251						
POKR	Poker Plat Res	23.49	38	P	P	11 32 24.0	-1.0
POKR	Poker Plat Res	23.49	38	P	P	11 32 24.0	-1.0
	baz=248						
IL31		23.59	39	P	P	11 32 25.4	-0.5
ILAR	Eielson Array	23.59	39	P	P	11 32 24.8	-1.2
	comp=Z,1.2nm,0.8s,baz=232,slow=8.1,SNR=26						
	comp=Z,1.2nm,0.8s						
H24K	Noodor Dome	23.59	36	P	P	11 32 26.2	+0.1
H24K	Noodor Dome	23.59	36	P	P	11 32 25.1	-1.0
	baz=246						
PAX	Paxson	23.66	44	P	P	11 32 25.4	-1.3
	baz=256						
HARP	HAARP	23.66	45	P	P	11 32 26.2	-0.6
	baz=257						
K24K	Donnelly Dome	23.74	42	P	P	11 32 26.7	-0.8
	baz=253						
N25K	Chitina, Valde	23.77	47	P	P	11 32 27.2	-0.7
	baz=260						
E23K	Chandalar	23.99	31	P	P	11 32 30.2	+0.2
	baz=240						
A21K	Barrow	24.09	21	P	P	11 32 31.0	+0.4
A21K				IAmb	IAmb	11 32 31.7	
	comp=Z,7.6nm,0.7s						
A21K	Barrow	24.09	21	P	P	11 32 31.0	+0.4
	baz=224						
G24K	Hadweenzic Riv	24.09	34	P	P	11 32 31.3	+0.5
	baz=245						
RIDG	Independent Ri	24.12	42	P	P	11 32 30.5	-0.7
RIDG	Independent Ri	24.12	42	P	P	11 32 30.4	-0.7
	baz=255						
D23K	Nanushuk River	24.14	28	P	P	11 32 31.7	+0.5
	baz=236						
F24K	Squaw Lake	24.31	33	P	P	11 32 33.1	+0.3
	baz=243						
E24K	Your Creek	24.37	31	P	P	11 32 33.6	+0.2
	baz=241						
PRP	Porcupine Dome	24.38	38	P	P	11 32 33.5	-0.1
	baz=250						
MENT	Mentasta	24.43	44	P	P	11 32 33.4	-0.6
MENT				IAmb	IAmb	11 33 01.3	
	comp=Z,9.1nm,1.4s						
DOT	Dot Lake	24.44	43	P	P	11 32 33.7	-0.3
DOT				IAmb	IAmb	11 32 34.7	
	comp=Z,5.2nm,0.8s						
MCARA	McCarthy VSAT	24.48	48	P	P	11 32 34.4	+0.1
	baz=262						
SCRK	Sand Creek	24.55	42	P	P	11 32 34.4	-0.8
SCRK				IAmb	IAmb	11 32 35.8	
	comp=Z,7.5nm,1.1s						
SCRK	Sand Creek	24.55	42	P	P	11 32 34.7	-0.4
	baz=255,SNR=5.1						
L26K	Log Cabin Wild	24.61	44	P	P	11 32 36.6	+1.0
L26K	Log Cabin Wild	24.61	44	P	P	11 32 36.1	+0.5
	baz=258						
G25K	Bearman Lake	24.62	35	P	P	11 32 35.5	-0.1
	baz=247						
FYU	Fort Yukon	24.86	36	P	P	11 32 38.0	+0.2
FYU				IAmb	IAmb	11 32 44.2	
	comp=Z,16nm,1.4s						
J26L	Joseph Creek	24.87	41	P	P	11 32 37.5	-0.5
J26L				IAmb	IAmb	11 32 39.0	
	comp=Z,7.8nm,0.7s						
J26L	Joseph Creek	24.87	41	P	P	11 32 38.4	+0.5
	baz=254						
F25K	Christian Rive	25.12	33	P	P	11 32 41.5	+1.3
	baz=246,SNR=8.2						
C24K	Franklin Bluff	25.14	28	P	P	11 32 40.6	+0.4
	baz=238						
M27K	Edge Creek, AK	25.16	46	P	P	11 32 40.0	-0.6
M27K	Edge Creek, AK	25.16	46	P	P	11 32 40.4	-0.3
	baz=261						
CTG	Chitna Glacier	25.24	50	P	P	11 32 42.0	+0.6
	baz=264						
I26K	Coal Creek Min	25.26	39	P	P	11 32 41.2	-0.1
I26K	Coal Creek Min	25.26	39	P	P	11 32 41.1	-0.3
	baz=253						
L27K	Beaver Creek,	25.30	45	P	P	11 32 41.7	-0.1
L27K				IAmb	IAmb	11 32 44.5	
	comp=Z,5.4nm,0.9s						
L27K	Beaver Creek,	25.30	45	P	P	11 32 42.3	+0.5
	baz=259						
BCAR	Beaver Creek A	25.32	45	P	P	11 32 42.3	+0.3
E25K	Arctic Village	25.36	32	P	P	11 32 43.5	+1.2
	baz=245,SNR=7.7						
K27K	Chicken	25.38	42	P	P	11 32 41.7	-0.8
K27K				IAmb	IAmb	11 32 53.1	
	comp=Z,10nm,1.5s						
K27K	Chicken	25.38	42	P	P	11 32 42.9	+0.3
	baz=257						
LOGN	Logan Glacier	25.39	50	P	P	11 32 42.4	-0.3
LOGN				IAmb	IAmb	11 32 45.2	
	comp=Z,8.3nm,1.0s						
BMAR	Burnt Mountain	25.43	34	P	P	11 32 41.9	-1.1
G26K	Porcupine Rive	25.54	35	P	P	11 32 45.0	+1.2
	baz=249,SNR=10						
D25K	Kavik River	25.64	29	P	P	11 32 45.7	+0.8
	baz=242						
F26K	Sheenjek River	25.68	34	P	P	11 32 45.2	0.0
	baz=247						
YUK3	Moose Creek	25.74	48	P	P	11 32 46.0	-0.1
	baz=264						
O28M	Mount Upton	25.78	50	P	P	11 32 46.5	0.0
	baz=266						
EGAK	Eagle	25.94	41	P	P	11 32 47.3	-0.3
EGAK				IAmb	IAmb	11 32 50.6	
	comp=Z,9.6nm,1.2s						
EGAK	Eagle	25.94	41	P	P	11 32 48.0	+0.5
	baz=257						
I27K	Kandik River	25.96	39	P	P	11 32 48.1	+0.3
	baz=254						
BCPM	Bancas Point	26.02	52	P	P	11 32 48.5	+0.3
YUK8	Steele Glacier	26.03	49	P	P	11 32 48.9	+0.2
	baz=265						
H27K	Steamboat Moun	26.17	38	P	P	11 32 48.7	-0.9
	baz=253						
G27K	Doyon Strip	26.29	36	P	P	11 32 50.4	-0.3
	baz=252						
C26K	Camden Bay	26.38	29	P	P	11 32 53.1	+1.7
	baz=242						
DAWY	Dawson	26.55	43	P	P	11 32 52.2	-0.9
DAWY				IAmb	IAmb	11 33 15.2	
	comp=Z,7.3nm,1.2s						
DAWY	Dawson	26.55	43	P	P	11 32 53.8	+0.6
	baz=260						
YUK4	Talbot Arm	26.57	49	P	P	11 32 54.0	+0.5
	baz=266						
C27K	Jago River	26.62	30	P	P	11 32 54.5	+0.8
	baz=244						
M29M	Somme Creek	26.75	46	P	P	11 32 55.4	+0.4
	baz=264						
E27K	Coleen River	26.76	33	P	P	11 32 56.1	+1.1
	baz=250						
L29M	L29M	26.97	45	P	P	11 32 57.1	+0.1
	baz=263						
HYT	Haines Junctio	27.10	50	P	P	11 32 59.9	+1.7
	baz=268						
N30M	Aishikik Lake	27.32	49	P	P	11 33 01.0	+0.8
	baz=267						
K29M	Barlow Dome	27.33	44	P	P	11 33 00.2	-0.1
	baz=262						
EPYK	Eagle Plains	28.09	38	P	P	11 33 06.9	0.0
EPYK				IAmb	IAmb	11 33 20.1	
	comp=Z,12nm,1.5s						
EPYK	Eagle Plains	28.09	38	P	P	11 33 06.4	-0.5
	baz=258						
SKAG	Skagway	28.20	53	P	P	11 33 08.1	+0.2
	baz=273						
KLR	Kul'dur	28.84	285	P	P	11 33 10.6	-3.1
	comp=Z,1.1nm,0.8s,baz=53,slow=19,SNR=2.7						
	comp=Z,1.1nm,0.8s						
FARO	Faro, Yukon	29.12	47	P	P	11 33 16.2	+0.1
	baz=269						
P33M	Teslin, Yukon	29.43	51	P	P	11 33 18.9	0.0
	baz=273						
F31M	Tsiigehtchic	29.44	37	P	P	11 33 18.4	-0.4
	baz=260						
INK	Inuvik	29.68	35	P	P	11 33 20.4	-0.6
	comp=Z,0.9nm,0.5s,baz=267,slow=8.5,SNR=12						
	comp=Z,0.9nm,0.5s						
INK	Inuvik	29.68	35	P	P	11 33 20.2	-0.8
	baz=258						
T33K	Petersburg	29.74	58	P	P	11 33 20.4	-1.2
	baz=279						
MMPY	Sheldon Lake,	30.09	46	P	P	11 33 24.0	-0.7
	baz=270						
WRAK	Wrangell Islan	30.14	59	P	P	11 33 24.5	-0.6
	baz=280						
USRK	Ussuriysk Ar.	30.75	276	LR	LR	11 45 52.4	
	comp=Z,81nm,20.9s,baz=310,slow=36						
A36M	Sachs Harbour	33.12	29	P	P	11 33 52.7	+1.6
A36M	Sachs Harbour	33.12	29	P	P	11 33 52.1	+0.9
	baz=261,SNR=17						
C36M	Paulatuk	33.23	34	P	P	11 33 52.8	+0.7
C36M	Paulatuk	33.23	34	P	P	11 33 51.2	-0.9
	baz=266						
KOTAN	Kotaneelee Air	33.78	50	P	P	11 33 56.9	-0.2
	baz=280						
CLRS	Cowichan Lake	37.28	69	P	P	11 34 28.6	+1.4
YKA	Yellowknife Ar	37.74	45	P	P	11 34 31.5	+0.5
	comp=Z,0.7nm,0.5s,baz=281,slow=7.9,SNR=19						
YKA				PcP	PcP	11 36 47.5	-0.1
	comp=Z,0.4nm,0.7s,baz=294,slow=3.4,SNR=6.8						
	comp=Z,0.7nm,0.5s						
YKA	Yellowknife Ar	37.74	45	P	P	11 34 31.2	+0.2
LLLB	Lillooet	37.85	65	P	P	11 34 32.7	+0.6
LLLB				IAmb	IAmb	11 34 59.4	
	comp=Z,4.1nm,1.0s						
LON	Longmire	39.62	71	P	P	11 34 48.0	+1.0
LON				IAmb	IAmb	11 35 04.1	
	comp=Z,14nm,1.5s						
LTY	Liberty	40.06	70	P	P	11 34 51.6	+0.9
KMPM	Mount Pierce	41.50	81	P	P	11 35 04.5	+1.8
KMPM				IAmb	IAmb	11 35 05.5	
	comp=Z,11nm,1.0s						
RES	Resolute Bay	41.61	24	P	P	11 35 04.6	+1.6
NEW	Newport	41.67	67	P	P	11 35 04.5	+0.6
NEW				IAmb	IAmb	11 35 06.2	
	comp=Z,4.0nm,0.8s						
NEW	Newport	41.67	67	P	P	11 35 03.7	-0.3
	baz=299						
G08A	Pilot Rock	42.06	71	P	P	11 35 07.5	+0.2
MOD	Modoc Plateau	43.06	76	P	P	11 35 15.9	+0.5
WALA	Waterton Lakes	43.15	64	P	P	11 35 16.5	+0.5
WALA				IAmb	IAmb	11 35 17.3	
	comp=Z,5.7nm,0.9s						
MSO	Missoula	44.26	67	P	P	11 35 24.1	-0.9
MSO				IAmb	IAmb	11 35 26.7	
	comp=Z,3.8nm,0.9s						
MSO	Missoula	44.26	67	P	P	11 35 23.9	-1.1
	baz=301						
MPK	Martis Peak	44.72	79	P	P	11 35 28.3	-0.6
MPK				IAmb	IAmb	11 35 30.4	
	comp=Z,6.1nm,1.0s						
EMB	Emerald Bay	44.86	80	P	P	11 35 30.6	+0.5
EMB				IAmb	IAmb	11 35 33.9	
	comp=Z,3.2nm,0.7s						
PAHR	Pah Rah Range	44.88	78	P	P	11 35 30.4	+0.3
PAHR				IAmb	IAmb	11 35 31.5	
	comp=Z,4.6nm,1.0s						
MFID	Camas Ranch	44.97	72	P	P	11 35 31.6	+0.9
CMB	Columbia Colle	45.24	81	P	P	11 35 33.4	+0.5
CMB				IAmb	IAmb	11 35 35.1	
	comp=Z,3.8nm,1.1s						
HHC	Hu-ho-hao-te	45.34	284	*e*P	P	11 35 35.3	+1.7
HHC				pmax	pmax		

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       comp=Z,14nm,0.8s
HHC                                 pmax   pmax
       comp=Z,290nm,5.5s
YERR   Yerington          45.40  79 P      P      11 35 35.0 +0.7
YERR                                IAmb   IAmb   11 35 35.7
       comp=Z,3.8nm,0.9s
HRY    Holter Researc     45.55  66 P      P      11 35 34.8 -0.5
WAKR   Walker             45.56  80 P      P      11 35 36.1 +0.5
WAKR                                IAmb   IAmb   11 35 37.2
       comp=Z,3.7nm,0.8s
LRM    Limekiln Ridge     45.67  67 P      P      11 35 36.1 -0.3
BBGB   Big Mountain B     45.72  83 P      P      11 35 35.9 -0.8
HLID   Hailey             45.74  71 P      P      11 35 34.9 -2.0
       baz=304
MCMT   McKenzie Canyo     45.98  69 P      P      11 35 38.7 -0.1
EGMT   Eagleton           46.05  63 P      P      11 35 38.0 -1.2
       baz=302
KVN    Kaiserville        46.07  78 P      P      11 35 40.2 +0.6
KVN                                 IAmb   IAmb   11 35 40.4
       comp=Z,2.8nm,0.9s
BOZ    Bozeman (W)        46.27  67 P      P      11 35 41.1  0.0
BOZ                                 IAmb   IAmb   11 35 42.7
       comp=Z,3.9nm,0.8s
BOZ    Bozeman (W)        46.27  67 P      P      11 35 40.3 -0.7
       baz=303,SNR=7.7
LHV    Little Huntoon     46.30  79 IAmb   IAmb   11 35 43.2
       comp=Z,5.6nm,0.9s
MDPB   Devils Postpil     46.31  80 P      P      11 35 41.8 +0.2
MDPB                                IAmb   IAmb   11 35 43.2
       comp=Z,5.3nm,0.8s
NVAR   Mina Array Bea     46.32  79 P      P      11 35 41.7 +0.1
       comp=Z,3.9nm,0.9s,baz=290,slow=7.3,SNR=28
       comp=Z,3.9nm,0.9s
NVAR   Mina Array Bea     46.32  79 P      P      11 35 42.2 +0.6
OMMB   Old Mammoth Mi     46.37  80 P      P      11 35 42.7 +0.6
OMMB                                IAmb   IAmb   11 35 43.8
       comp=Z,3.8nm,1.0s
NV11   Mina Array Sit     46.41  79 P      P      11 35 42.7 +0.5
NV11                                IAmb   IAmb   11 35 52.5
       comp=Z,3.0nm,1.1s
TULEG  Thule              46.60  17 eP     P      11 35 44.1 +1.1
TULEG                               IAmb   IAmb   11 35 44.7
       comp=Z,3.8nm,0.6s
YHL    Hebgen Lake        46.95  68 IAmb   IAmb   11 35 49.1
       comp=Z,4.2nm,0.9s
DSP    Deep Springs       47.17  80 P      P      11 35 46.8 -1.1
DSP                                 IAmb   IAmb   11 35 49.8
       comp=Z,6.2nm,1.1s
TPH    Tonopah            47.21  79 P      P      11 35 48.8 +0.3
YNR    Norris Junctio     47.32  68 P      P      11 35 49.8 +0.4
YNR                                 IAmb   IAmb   11 35 52.4
       comp=Z,4.5nm,1.0s
VES    Vestal, Richgr     47.41  82 P      P      11 35 49.1 -0.8
       baz=309
LCH    Last Change Ra     47.46  80 P      P      11 35 50.9 +0.5
LCH                                 IAmb   IAmb   11 35 51.2
       comp=Z,2.0nm,0.7s
PKM    Mcpherson Peak     47.55  84 P      P      11 35 51.7 +0.5
       baz=310
H17A   Grant Village      47.56  68 P      P      11 35 51.9 +0.7
       baz=304
CWC    Cottonwood Cre     47.67  81 P      P      11 35 52.2 +0.1
       baz=309
NOR    Nord               47.92   3 i P    P      11 35 54.8 +1.6
NOR                                 IAmb   IAmb   11 35 56.2
       comp=Z,0.7nm,0.7s
RLMT   Red Lodge          47.92  66 P      P      11 35 54.7 +0.7
RLMT   Red Lodge          47.92  66 P      P      11 35 53.9 -0.1
       baz=304
R11A   Troy Canyon, C     48.06  77 IAmb   IAmb   11 35 56.0
       comp=Z,2.5nm,0.9s
R11A   Troy Canyon, C     48.06  77 P      P      11 35 54.9 -0.3
       baz=308,SNR=5.0
SCZ2   Santa Cruz Isl     48.24  85 P      P      11 35 55.3 -1.0
       baz=310
MPMC   Manual Prospec     48.29  81 P      P      11 35 56.9  0.0
       baz=309
S11A   Rachel             48.40  78 P      P      11 35 56.8 -0.8
FURC   Furnace Creek,     48.42  80 P      P      11 35 58.2 +0.6
       baz=309,SNR=5.1
SPR3   Spring Creek 3     48.45  76 P      P      11 35 59.0 +0.8
TPNV   Topopah Spring     48.51  79 P      P      11 35 58.7 +0.1
TPNV   Topopah Spring     48.51  79 P      P      11 35 58.9 +0.3
       baz=308,SNR=16
LRMC   Laurel Mtn Rad     48.53  82 P      P      11 35 58.4 -0.3
       baz=309
DUG    Dugway, Tooele     48.66  74 P      P      11 35 59.7  0.0
       baz=307
EDW2   Edwards Air Fo     48.71  83 P      P      11 36 00.0  0.0
       baz=310
GWY    Greenwater Val     48.72  80 IAmb   IAmb   11 36 08.9
       comp=Z,3.1nm,1.0s
QSM    Queen of Sheba     48.74  81 P      P      11 35 59.7 -0.4
QSM                                 IAmb   IAmb   11 36 02.3
       comp=Z,3.1nm,0.7s
LAO    LASA Array         48.79  63 P      P      11 36 01.4 +0.9
LAO                                 IAmb   IAmb   11 36 12.5
       comp=Z,4.1nm,0.9s
LAO    LASA Array         48.79  63 P      P      11 36 01.0 +0.5
       baz=304
NEEM   North Greenlan     48.87  12 i P    P      11 36 02.2 +1.3
NEEM                                IAmb   IAmb   11 36 03.5
       comp=Z,15nm,0.9s
BW06   Boulder Array      49.11  69 P      P      11 36 03.6 +0.4
BW06                                IAmb   IAmb   11 36 06.4
       comp=Z,2.2nm,0.9s
BW06   Boulder Array      49.11  69 P      P      11 36 02.9 -0.3
       baz=306
PD31   Pinedale Array     49.11  69 P      P      11 36 03.3 +0.2
PDAR   Pinedale Array     49.11  69 P      P      11 36 02.8 -0.4
       comp=Z,1.1nm,0.7s,baz=306,slow=3.7,SNR=16
       comp=Z,1.1nm,0.7s
PDAR   Pinedale Array     49.11  69 P      P      11 36 03.2  0.0
SHOC   Shoshone, Teco     49.15  80 P      P      11 36 03.8 +0.5
       baz=309,SNR=7.3
GSC    Goldstone, Bar     49.19  81 P      P      11 36 03.8  0.0
GSC    Goldstone, Bar     49.19  81 P      P      11 36 04.0 +0.2
       baz=310,SNR=9.8
BFSC   Mount Baldy Ra     49.33  83 P      P      11 36 04.5 -0.4
       baz=310
CIS    Catalina Islan     49.39  84 P      P      11 36 03.6 -1.6
       baz=311
TUQ    Turquoise Moun     49.66  81 P      P      11 36 06.4 -1.0
       baz=310
BBRC   Big Bear Solar     49.79  83 P      P      11 36 08.1 -0.4
       baz=310
HEC    Hector,Ludlow      49.79  82 P      P      11 36 07.6 -0.7
       baz=310,SNR=5.4
MURC   Murrieta           50.04  83 P      P      11 36 09.5 -0.7
       baz=311
GMRC   Granite Mounta     50.25  81 P      P      11 36 11.0 -0.8
       baz=310
LCMT   Little Creek M     50.35  77 P      P      11 36 13.3 +0.8
LCMT                                IAmb   IAmb   11 36 14.0
       comp=Z,4.9nm,0.9s
RDMU   Red Mountain       50.41  71 P      P      11 36 13.8 +0.7
RDMU                                IAmb   IAmb   11 36 14.8
       comp=Z,4.6nm,0.9s
PFO    Pinyon Flats O     50.50  83 P      P      11 36 13.0 -0.7
PFO                                 IAmb   IAmb   11 36 14.5
       comp=Z,4.0nm,1.1s
PFO    Pinyon Flats O     50.50  83 P      P      11 36 12.8 -0.9
       baz=311
TPFO   Pinon Flats        50.51  83 P      P      11 36 12.3 -1.5
       baz=311
PMD    Palm Desert        50.53  83 P      P      11 36 13.6 -0.2
PMD                                 IAmb   IAmb   11 36 14.7
       comp=Z,4.1nm,1.1s
BELC   Belle Mtn. Jos     50.54  82 P      P      11 36 13.0 -1.1
       baz=310
KNB    Kanab              50.61  77 P      P      11 36 15.3 +0.7
KNB                                 IAmb   IAmb   11 36 15.7
       comp=Z,3.1nm,0.8s
IRM    Iron Mountain      50.98  81 P      P      11 36 16.6 -0.6
       baz=310,SNR=5.1
MONP2  Monument Peak      50.99  84 P      P      11 36 17.0 -0.6
       baz=311
BC3    Big Chuckawall     51.11  82 P      P      11 36 17.2 -1.1
       baz=311
W13A   Hualapai Mount     51.16  80 P      P      11 36 18.6 -0.2
W13A                                IAmb   IAmb   11 36 19.5
       comp=Z,2.7nm,0.8s
U15A   North Rim          51.31  77 P      P      11 36 20.5 +0.5
U15A                                IAmb   IAmb   11 36 21.3
       comp=Z,7.7nm,0.9s
IKP    In-Ko-Pah, Jac     51.35  84 P      P      11 36 18.8 -1.3
       baz=311
O20A   White River Ci     51.48  71 P      P      11 36 20.5 -0.7
       baz=308
PDMCI  Parker Dam,Lak     51.51  81 P      P      11 36 20.9 -0.3
       baz=310
RSSD   Black Hills        51.54  65 P      P      11 36 21.7 +0.1
       baz=307
BLYC   Blythe             51.63  81 P      P      11 36 22.3 +0.2
BLYC                                IAmb   IAmb   11 36 22.9
       comp=Z,9.0nm,1.2s
MDND   Maddock            51.81  58 P      P      11 36 24.4 +1.1
MDND   Maddock            51.81  58 P      P      11 36 23.0 -0.2
       baz=306
GLA    Glamis             51.90  82 P      P      11 36 23.5 -0.6
       baz=311
PV13   Radium Mtn., P     52.36  73 P      P      11 36 28.1 +0.3
PV13                                IAmb   IAmb   11 36 28.5
       comp=Z,6.4nm,0.8s
ULM    Lac du Bonnet      52.36  54 P      P      11 36 27.2 -0.1
       comp=Z,3.2nm,0.5s,baz=307,slow=9.7,SNR=5.1
       comp=Z,3.2nm,0.5s
WUAZ   Wupatki            52.47  78 P      P      11 36 29.2 +0.7
WUAZ                                IAmb   IAmb   11 36 29.7
       comp=Z,4.8nm,0.8s
WUAZ   Wupatki            52.47  78 P      P      11 36 28.6 +0.1
       baz=310
DAG    Danmarks Havn      52.59   4 i P    P      11 36 29.5 +0.9
DAG                                 IAmb   IAmb   11 36 30.2
       comp=Z,2.6nm,0.7s
X16A   Lo Mia Camp, P     53.13  79 P      P      11 36 33.6 +0.1
X16A                                IAmb   IAmb   11 36 34.9
       comp=Z,3.4nm,0.8s
MVCO   Mesa Verde         53.16  74 P      P      11 36 33.0 -0.7
       baz=310
ISCO   Idaho Springs      53.27  70 P      P      11 36 34.3 -0.2
       baz=309
AGMN   Agassiz Nation     53.54  56 P      P      11 36 36.6 +0.6
AGMN   Agassiz Nation     53.54  56 P      P      11 36 35.4 -0.7
       baz=308
W18A   Petrified Fore     53.74  77 P      P      11 36 38.1 +0.2
       baz=311
S22A   4UR Ranch, Cre     53.84  72 P      P      11 36 37.0 -1.7
       baz=310
214A   Organ Pipe Nat     53.90  82 P      P      11 36 38.4 -0.5
       baz=312
X18A   Snowflake          53.99  78 P      P      11 36 40.5 +0.8
X18A                                IAmb   IAmb   11 36 41.0
       comp=Z,2.8nm,0.9s
B35A   Bob, Littlefor     54.63  55 P      P      11 36 43.5 -0.5
B35A                                IAmb   IAmb   11 36 45.1
       comp=Z,4.8nm,0.8s
OGNE   Ogallala           54.67  67 P      P      11 36 44.4 -0.1
       baz=309
SUMG   Summit             54.74  12 i P    P      11 36 46.6 +1.7
SUMG                                IAmb   IAmb   11 36 47.1
       comp=Z,7.3nm,0.8s
DBG    Daneborg           54.92   6 i P    P      11 36 46.6 +0.9
DBG                                 IAmb   IAmb   11 36 47.9
       comp=Z,8.3nm,1.0s
TUC    Tucson             54.94  80 P      P      11 36 46.8 +0.2
TUC                                 IAmb   IAmb   11 36 47.6
       comp=Z,3.9nm,0.9s
TUC    Tucson             54.94  80 P      P      11 36 46.2 -0.3
       baz=312
T25A   Trinidad           55.70  71 P      P      11 36 52.0 -0.1
       baz=311
ANMO   Albuquerque        55.88  75 P      P      11 36 52.4 -1.1
       baz=312
ECSD   EROS Data Cent     55.99  61 P      P      11 36 52.9 -0.9
       baz=310
EYMN   Ely                56.05  54 P      P      11 36 54.5 +0.3
EYMN   Ely                56.05  54 P      P      11 36 53.6 -0.6
       baz=310
319A   Douglas            56.51  80 P      P      11 36 58.5 +0.6
319A                                IAmb   IAmb   11 36 59.5
       comp=Z,6.0nm,1.1s
121A   Cookes Peak, D     56.67  78 P      P      11 36 59.3 +0.3
       baz=312
SPMN   Marine on St.      57.11  57 P      P      11 37 01.5 -0.3
       baz=310
CBKS   Cedar Bluff        57.39  67 P      P      11 37 03.9  0.0
       baz=311
WMQ    Urumqi             57.53 301 eP     P      11 37 08.6 +3.7
KURK   Kurchatov          57.65 312 P      P      11 37 05.1 -0.4
KURK                                IAmb   IAmb   11 37 08.2
       comp=Z,5.7nm,1.2s
ICESG  Greenland Ices     57.69  15 i P    P      11 37 06.3 +0.4
ICESG                               IAmb   IAmb   11 37 07.2
       comp=Z,4.8nm,0.8s
N35A   Tabor              58.41  63 P      P      11 37 11.7 +0.7
MKAR   Makanchi Array     58.44 307 P      P      11 37 09.2 -2.0
       comp=Z,0.4nm,0.7s,baz=49,slow=6.5,SNR=2.7
       comp=Z,0.4nm,0.7s
MKAR   Makanchi Array     58.44 307 P      P      11 37 10.7 -0.4
ARCES  ARCESS Array B     58.45 349 P      P      11 37 11.1 +0.3
       comp=Z,5.0nm,0.9s,baz=28,slow=14,SNR=4.4
       comp=Z,5.0nm,0.9s
MNTX   Cornudas Mount     58.73  77 P      P      11 37 12.9 -0.4
       baz=313,SNR=6.7
MSTX   Muleshoe           58.80  73 P      P      11 37 13.2 -0.7
       baz=313
GDL2   Guadalupe Moun     59.02  76 P      P      11 37 15.7 +0.2
BRVK   Borovoye           59.80 318 P      P      11 37 21.6 +1.1
BRVK                                IAmb   IAmb   11 37 22.3
       comp=Z,2.7nm,0.7s
WMOK   Wichita Mounta     60.69  70 P      P      11 37 26.1 -0.8
       baz=313
PZH    PanZhiHua          60.84 277 P      P      11 37 29.6 +1.6
PZH                                 pmax   pmax
       comp=Z,10.0nm,0.7s
PZH                                 pmax   pmax
       comp=Z,100nm,5.3s
TX31   Lajitas Ar. Si     61.43  78 P      P      11 37 31.8 -0.2
TX32   Lajitas Array      61.43  78 P      P      11 37 32.0  0.0
TX32                                IAmb   IAmb   11 37 32.5
       comp=Z,2.9nm,0.8s
TXAR   Lajitas Array      61.43  78 P      P      11 37 31.6 -0.4
       comp=Z,1.6nm,0.6s,baz=303,slow=5.6,SNR=23
       comp=Z,1.6nm,0.6s
TXAR   Lajitas Array      61.43  78 P      P      11 37 32.2 +0.2
TUL1   Leonard            61.66  67 P      P      11 37 33.6 +0.2
       baz=314
HDIL   Hopedale           62.16  59 P      P      11 37 34.6 -2.0
       baz=314
SCHQ   Schefferville      62.30  36 P      P      11 37 37.7 +0.3
       comp=Z,2.7nm,0.8s,baz=299,slow=6.9,SNR=5.9
       comp=Z,2.7nm,0.8s
SCHQ   Schefferville      62.30  36 P      P      11 37 38.4 +1.1
CCM    Cathedral Cave     62.81  63 P      P      11 37 39.0 -2.0
       baz=314
JCT    Junction City      63.02  74 P      P      11 37 41.7 -0.9
       baz=315
SFIN   Lafayette          63.48  58 P      P      11 37 45.2 -0.2
       baz=315
FCAR   Ozark Folk Cen     63.82  65 P      P      11 37 47.4 -0.3
MIAR   Mount Ida          63.91  67 P      P      11 37 48.8 +0.4
       baz=315
O48B   Farmland           64.61  57 P      P      11 37 52.5 -0.4
       baz=316
833A   Chaparral WMA,     64.79  76 P      P      11 37 54.2  0.0
       baz=316
WCI    Wyandotte Cave     65.45  59 P      P      11 37 57.9 -0.4
       baz=316
WVT    Waverly            66.10  62 P      P      11 38 02.0 -0.6
       baz=316
M53A   WI Miller and      66.11  53 P      P      11 38 01.6 -1.0
       baz=317
OXF    Oxford             66.36  64 P      P      11 38 05.1 +0.8
OXF    Oxford             66.36  64 P      P      11 38 03.8 -0.4
       baz=316
MMNY   Mt. Morris Dam     66.55  51 P      P      11 38 06.1 +0.7
KSH    Kashi              66.83 304 P      P      11 38 12.6 +5.2
KSH                                 pmax   pmax
       comp=Z,3.0nm,0.8s
KK31   Karatay Array      66.95 310 P      P      11 38 07.9 -0.1
KKAR   Karatay Array      66.95 310 P      P      11 38 08.7 +0.7
ABKAR  Akbulak array      66.96 321 P      P      11 38 08.3 +0.4
BINY   Binghamton         67.90  50 P      P      11 38 14.4 +0.4
BINY   Binghamton         67.90  50 P      P      11 38 13.5 -0.5
       baz=319
M57A   Sunshine Farm,     67.98  51 P      P      11 38 15.1 +0.7
NC204  NORSAR Array S     68.01 353 P      P      11 38 15.6 +1.2
NC405  NORSAR Array S     68.09 352 P      P      11 38 16.0 +1.2
SSPA   Standing Stone     68.12  52 P      P      11 38 15.9 +0.6
SSPA   Standing Stone     68.12  52 P      P      11 38 15.0 -0.4
       baz=318
G62A   West of Eustis     68.16  45 P      P      11 38 15.6 +0.1
NB201  NORSAR Array S     68.19 353 P      P      11 38 14.9 -0.6
NB2    NORSAR Subarra     68.20 353 P      P      11 38 16.6 +1.0
       comp=Z,1.4nm,0.6s,baz=8.2,slow=6.2
NOA    NORSAR Array B     68.20 353 P      P      11 38 16.5 +0.9
       comp=Z,2.5nm,0.7s,baz=9.4,slow=6.3,SNR=8.0
       comp=Z,2.5nm,0.7s
H62A   Milan              68.37  46 P      P      11 38 17.5 +0.6
F63A   Nahmakanta, Br     68.42  44 P      P      11 38 17.4 +0.3
KSPA   Keystone Colle     68.49  50 P      P      11 38 18.4 +0.7
F64A   Sherman            68.62  43 P      P      11 38 18.9 +0.5
PKME   Peaks-Kenny Pk     68.68  44 P      P      11 38 18.3 -0.4
       baz=321
TKL    Tuckaleechee C     68.70  60 LR     LR     12 09 12.0
       comp=Z,120nm,19.9s,baz=21,slow=37
LMN    Caledonia Moun     70.14  41 P      P      11 38 28.5 +0.7
KMSC   Kings Mountain     70.42  58 P      P      11 38 29.3 -0.4
       baz=318
TIGA   Tifton             71.93  62 P      P      11 38 37.4 -1.5
       baz=319
ONTNC  Ouen Toro          73.10 190 P      P      11 38 46.1 +0.4
OUENC  Ouen Island, N     73.17 190 P      P      11 38 47.3 +1.2
WB0    Warramunga Arr     79.41 220 P      P      11 39 21.5 -0.1
WB0                                 IAmb   IAmb   11 39 28.2
       comp=Z,2.2nm,0.8s
WRA    Warramunga Arr     79.59 220 P      P      11 39 19.4 -3.2
       comp=Z,1.0nm,0.7s,baz=31,slow=5.9,SNR=8.7
       comp=Z,1.0nm,0.7s
ASAR   Alice Springs      83.10 219 P      P      11 39 39.0 -2.3
       comp=Z,0.8nm,0.9s,baz=22,slow=5.5,SNR=7.6
       comp=Z,0.8nm,0.9s
ASAR   Alice Springs      83.10 219 P      P      11 39 40.1 -1.1
BRTR   Keskin Array B     84.55 332 P      P      11 39 48.3 -0.5
       comp=Z,1.6nm,0.9s,baz=37,slow=6.4,SNR=5.7
       comp=Z,1.6nm,0.9s
MSSA   Maissana           84.92 351 P      P      11 39 50.4  0.0
JTS    Las Juntas de      87.22  77 LR     LR     12 22 07.0
       comp=Z,39nm,18.1s,baz=349,slow=38
```

IDC 14 11:35:34.0±59.0**, 20°.55S**×**177°.37W, h0**km**, mb3.9**/3**,**
mbtmp3.9/3**, Error ellipse: s-maj=1084.0km**
s-min=167.7km az=83.0, Fiji Islands region

```
Code   Station Name        Δ°   AZ°   Phase ID          Time     Res
                                  Op     ISC        h  m  s   ISC
STKA   Stephens Creek     38.30 244 P      P      11 42 54.4 -2.1
       1.1nm,0.6s,baz=70,slow=6.8,SNR=3.8
       1.1nm,0.6s
ASAR   Alice Springs      45.08 257 P      P      11 43 52.1 -0.1
       1.2nm,0.8s,baz=99,slow=6.7,SNR=16
       1.2nm,0.8s
WRA    Warramunga Arr     45.18 262 P      P      11 43 54.1 +1.1
       1.1nm,0.6s,baz=91,slow=8.3,SNR=20
       1.1nm,0.6s
```

DDA ***14*** *11:41:42.3±0.0, 37°.61N×38°.47E, h7km±2km, ML3.5*
ISK ***14*** *11:41:42.7, 37°.53N×38°.51E, h22km, ML3.9/15*
ISC 14 11:41:42.5±0.9**, 37°.58N**±0°.03×**38°.49E**±0°.02**, h13**km±8km**,**
n36, σ0ˢ.58/54**, Turkey**

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Code   Station Name        Δ°   AZ°   Phase ID          Time     Res
                                  Op     ISC        h  m  s   ISC
URFA   Urfa                0.30 118 Pg     Pb     11 41 49.5 -0.2
URFA                                Sg     Sb     11 41 54.1 -0.4
AZEY   Adyaman-Merk        0.30 320 P      Pg     11 41 48.5 -0.3
AZEY                              i AML    AML    11 41 54.0
       comp=E,7µm,0.6s
HANM   anlurfa/Hi          0.31  90 P      Pg     11 41 48.9  0.0
HANM                                S      Sg     11 41 53.6 +0.4
HANM                              i AML    AML    11 41 54.0
       comp=N,5µm,0.2s
NARI   Adyaman-Kaht        0.37  35 P      Pg     11 41 49.4 -0.6
NARI                                S      Sg     11 41 54.9 -0.1
NARI                              i AML    AML    11 42 03.0
       comp=E,6µm,1.2s
NARI                              i AML    AML    11 42 06.0
       comp=N,6µm,0.7s
AKCA   Adyaman/G¶l         0.67 289 P      Pg     11 41 55.0 -0.6
AKCA                                S      Sg     11 42 04.4 -0.1
AKCA                              i AML    AML    11 42 09.0
       comp=N,4µm,0.4s
AKCA                              i AML    AML    11 42 12.0
       comp=E,2µm,0.5s
SURC   SANLIURFA_SURC 0.71 172 P      Pb     11 41 57.1 +0.4
SURC                                S      Sn     11 42 07.6 -1.4
SURC                              i AML    AML    11 42 13.0
       comp=N,1µm,0.6s
SURC                              i AML    AML    11 42 18.0
       comp=E,2µm,0.6s
MAYA   Malatya/Merkez      0.74 356 P      Pg     11 41 55.9 -1.1
GZT    Gaziantep           0.77 253 P      Pn     11 41 59.0 -0.2
GZT                                 S      Sn     11 42 10.5 -0.2
GZT                               i AML    AML    11 42 11.0
       comp=N,4µm,0.3s
GZT                               i AML    AML    11 42 15.0
       comp=E,3µm,0.8s
NZIP   Nizip/Gaziante      0.84 231 P      Pb     11 41 59.3 +0.2
NZIP                                S      Sb     11 42 10.6 +0.3
NZIP                              i AML    AML    11 42 13.0
       comp=E,4µm,0.7s
NZIP                              i AML    AML    11 42 21.0
       comp=N,2µm,0.5s
ELZG   Elazig              0.99  23 P      Pb     11 42 01.3 -0.3
ELZG                              i AML    AML    11 42 19.0
       comp=N,1µm,0.8s
ELZG                              i AML    AML    11 42 20.0
       comp=E,1µm,0.3s
GAZ    Gaziantep           1.10 249 Pn     Pg     11 42 03.5 -0.2
GAZ                                 Sn     Sn     11 42 18.3 -0.4
KAHM   Kahramanmaras,      1.20 267 P      Pn     11 42 04.6 -0.3
KAHM                                S      Sg     11 42 21.1 -0.1
KAHM                              i AML    AML    11 42 29.0
       comp=N,884nm,0.7s
KMRS   Kahramanmaras       1.27 267 Pn     Pn     11 42 05.6 -0.3
KMRS                                Sn     Sn     11 42 22.8  0.0
DARE   Darende-Malaty      1.27 321 Pn     Pb     11 42 06.4 +0.1
DARE                                Sn     Sg     11 42 24.2 +0.7
ELBS   KAHRAMANMARAS_1.30 305 P      Pg     11 42 07.7  0.0
ELBS                                S      Sg     11 42 24.4 -0.2
ELBS                              i AML    AML    11 42 26.0
       comp=E,938nm,0.6s
ELBS                              i AML    AML    11 42 30.0
       comp=N,888nm,0.5s
DIYA   Diyarbakir          1.33  75 P      Pg     11 42 07.9 -0.3
DIYA                              i AML    AML    11 42 28.0
       comp=N,2µm,0.3s
DIYA                              i AML    AML    11 42 41.0
       comp=E,681nm,0.8s
DYBB   Diyarbakir          1.36  74 Pn     Pn     11 42 07.0 -0.2
DYBB                                Sn     Sn     11 42 24.8 -0.3
KUZU   Kuzuini             1.39 235 P      Pg     11 42 09.5 +0.3
KUZU                                S      Sg     11 42 28.4 +1.1
CUGUR  Gurin_SVAS          1.49 320 P      Pg     11 42 11.2  0.0
CUGUR                               S      Sg     11 42 31.9 +1.3
CUGUR                             i AML    AML    11 42 38.0
       comp=E,2µm,0.6s
CUGUR                             i AML    AML    11 42 39.0
       comp=N,2µm,0.7s
KAMA   Osmaniye            1.51 255 P      Pn     11 42 08.9 -0.3
KAMA                                S      Sn     11 42 28.0 -0.7
ARPR   Arapgir-MALATY      1.51 355 Pn     Pn     11 42 10.0 +0.6
KOVA   Elazig, Kovanc      1.53  42 P      Pg     11 42 11.8 -0.1
KOVA                                S      Sg     11 42 32.5 +0.6
KEMA   Kemaliye            1.69   0 P      Pb     11 42 12.7 -0.7
HANI   Diyarbakir_Han      1.72  61 P      Pb     11 42 13.5 -0.5
HANI                                S      Sb     11 42 36.9 +1.3
HANI                              i AML    AML    11 42 42.0
       comp=N,1µm,1.0s
HANI                              i AML    AML    11 42 43.0
       comp=E,811nm,0.5s
TNCL   Tunceli-Merkez      1.74  28 P      Pb     11 42 14.8 +0.4
SARI   SarD1z-Kayseri      1.83 297 Pn     Pn     11 42 14.4 +0.6
CUKAN  kangal_SIVAS        1.91 335 P      Pb     11 42 16.3 -1.0
SAIM   ADANA               1.95 282 P      Pn     11 42 16.2 +0.9
KOZT   Kozan               2.12 268 Pn     Pn     11 42 17.9 +0.3
SVAN   Silvan-Diyarba      2.22  74 Pn     Pn     11 42 18.8 -0.2
ERZN   Erzincan            2.22  25 Pn     Pn     11 42 19.7 +0.6
BNGB   Bingl               2.22  50 Pn     Pn     11 42 19.3 +0.2
CEYT   Ceyhan              2.26 256 Pn     Pn     11 42 19.6 +0.1
YEDI   Yedisu-Bingol       2.46  40 Pn     Pn     11 42 23.0 +0.6
YAYL   Yayladag            2.46 232 Pn     Pn     11 42 21.9 -0.5
VRTB   Varto-Mus           2.81  55 Pn     Pn     11 42 28.0 +0.7
```

DJA **14** *11:47:43.6±0.5, 2˚S±5˚×12˚6E±˚, h20^{km}±5^{km}, M3.9/11, mb4.6/1, MLv3.6/11*
IDC **14** *11:47:47.2±1.7, 2°.66S×126°.34E, h0^{km}, mb3.7/2, mbtmp3.8/4, ML3.7/2, Error ellipse: s-maj=35.6km s-min=27.8km az=73.0*
NEIC **14** *11:47:48.9±2.6, 2°.71S±0°.05×126°.16E±0°.07, h35^{km}±2^{km}, mb4.3/18, Error ellipse: s-maj=11.9km s-min=8.0km az=249.0*
ISC 14 11:47:46.6±0.6**, 2°.73S**±0°.06×**126°.15E**±0°.06**, h20^{km}, n44, σ1^{s}52**/39**, mb4.4**/8**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANI	Sanana	0.69	347	P	Pb	11 47 49.9	-10
NLAI	Namlea	1.08	118	P	Pb	11 48 12.7	+6.1
AAI	Ambon	2.25	115	P	Pb	11 48 28.8	+2.1
LBMI	Labuha	2.48	33	P	Pn	11 48 18.1	-7.8
MSAI	Masohi	2.84	103	P	Pb	11 48 35.8	-1.0
TNTI	Ternate	3.68	19	Pn	Pn	11 48 40.9	-1.6
LUWI	Luwuk	3.77	296	Pn	Pn	11 48 42.0	-1.6
LUWI	Luwuk	3.77	296	P	Pn	11 48 32.7	-11
GTOI	Gorontalo	4.58	317	P	Pn	11 48 45.5	-9.4
MRSI	Marisa	5.28	307	P	Pn	11 48 51.9	-12
SIJI	Sorong	5.44	70	Pn	Pn	11 49 07.2	+0.5
	1.4nm,0.3s,baz=239,slow=19,SNR=9.7						
SIJI				Sn	Sn	11 50 08.2	-0.5
	2.6nm,0.3s,baz=307,slow=20,SNR=8.0						
	3.4nm,0.3s						
FAKI	Fak Fak	6.10	92	Pn	Pn	11 49 14.4	-1.3
BKSI	Bulukumba	6.54	247	P	Pn	11 49 18.7	-3.1
TOLI2	Tolitoli	6.58	305	Pn	Pn	11 49 23.2	+0.8
KAPI	Kappang	6.77	250	Pn	Pn	11 49 25.4	+0.4
MMRI	Maumere	7.04	213	Pn	Pn	11 49 29.6	+0.9
SOEI	Soe	7.23	195	Pn	Pn	11 49 31.1	-0.3
KNRA	Kununurra	13.12	169	Pn	Pn	11 50 51.8	-0.3
WB0	Warramunga Arr	18.75	155	P	Pn	11 52 05.3	+0.2
WRA	Warramunga Arr	18.89	156	P	Pn	11 52 09.5	+2.8
	0.3nm,0.3s,baz=332,slow=12,SNR=39						
	2.2nm,0.6s						
WRA	Warramunga Arr	18.89	156	P	P	11 52 04.3	-1.7
WB2	Warramunga Arr	18.89	156	P	P	11 52 05.9	-0.2
WB2				IAmb	IAmb	11 52 13.5	
	comp=Z,3.9nm,0.7s						
MBWA	Marble Bar	19.36	198	P	Pn	11 52 12.3	0.0
MBWA				IAmb	IAmb	11 52 24.7	
	comp=Z,19nm,1.5s						
PSA00	Pilbara Seismi	19.71	198	P	Pn	11 52 15.9	-0.6
PSA00				IAmb	IAmb	11 52 50.0	
	comp=Z,13nm,1.2s						
COEN	Coen	20.18	125	P	P	11 52 18.6	-1.6
COEN				IAmb	IAmb	11 52 41.7	
	comp=Z,6.1nm,1.1s						
AS31	Alice Springs	22.13	161	P	P	11 52 43.6	+2.5
ASAR	Alice Springs	22.13	161	P	P	11 52 44.5	+3.3
	comp=Z,1.4nm,0.7s,baz=345,slow=12,SNR=36						
	comp=Z,1.4nm,0.7s						
ASAR	Alice Springs	22.13	161	P	P	11 52 42.0	+0.8
NWAO	Narrogin (SRO)	31.18	195	P	P	11 54 03.4	-1.2
BBOO	Buckleboo	31.34	164	P	P	11 54 05.4	-0.5
BBOO				IAmb	IAmb	11 54 16.7	
	comp=Z,13nm,1.4s						
STKA	Stephens Creek	32.44	155	P	P	11 54 16.4	+0.9
EIDS	Eidsvold	32.90	135	P	P	11 54 18.9	-0.8
EIDS				IAmb	IAmb	11 54 49.7	
	comp=Z,14nm,1.1s						
KSAR	Wonju Array Be	40.00	2	P	P	11 55 19.4	-0.7
KS19	Wonju Array Si	40.06	2	P	P	11 55 20.4	-0.3
MAJO	Matsushiro	40.66	15	P	P	11 55 25.6	0.0
DZM	Mont Dzumac	43.58	120	P	P	11 55 50.5	+0.7
DZM				IAmb	IAmb	11 56 15.8	
	comp=Z,24nm,1.4s						
PEA0B	Petropavlovsk-	61.61	21	P	P	11 58 04.4	+1.7
PETK	Petropavlovsk-	61.61	21	P	P	11 58 04.0	+1.3
MK31	Makanchi Array	62.58	328	P	P	11 58 07.8	-1.6
MK31				IAmb	IAmb	11 58 16.9	
	comp=Z,1.2nm,0.9s						
MKAR	Makanchi Array	62.58	328	P	P	11 58 13.3	+3.9
	comp=Z,1.2nm,0.8s,baz=116,slow=6.5,SNR=2.1						
	comp=Z,1.2nm,0.8s						
MKAR	Makanchi Array	62.58	328	P	P	11 58 08.7	-0.7
KK31	Karatay Array	67.62	319	P	P	11 58 42.3	+0.1
KK31				IAmb	IAmb	11 59 14.7	
	comp=Z,3.8nm,1.4s						
KKAR	Karatay Array	67.62	319	P	P	11 58 42.9	+0.7
QSPA	South Pole Qui	87.22	180	P	P	12 00 31.0	-0.5
QSPA				IAmb	IAmb	12 00 43.3	
	comp=Z,3.7nm,1.2s						

DJA **14** *11:47:50.5±2.3, 10˚N±5˚×12˚6E±˚, h15^{km}±14^{km}, M5.1/21, mB5.5/3, mb4.9/21, MLv5.2/2, Mw(mB)4.9/3*
MAN **14** *11:47:52.6, 9°.70N×125°.38E, h7^{km}, mb5.5, ML4.5, MS4.8*
BJI **14** *11:47:56.9±0.0, 9°.58N×125°.47E, h72^{km}, mb4.5/24, mB5.1/14*
NEIC **14** *11:47:56.4±2.2, 9°.76N±0°.07×125°.38E±0°.08, h41^{km}±7^{km}, mb4.7/91, Error ellipse: s-maj=12.1km s-min=10.1km az=69.0*
IDC **14** *11:47:57.0±2.7, 9°.77N×125°.44E, h54^{km}±25^{km}, mb4.2/31, mbtmp4.4/33, ML4.5/2, MS3.4/7, Error ellipse: s-maj=18.9km s-min=9.8km az=68.0*
ISC 14 11:47:52.4±1.0**, 9°.71N**±0°.03×**125°.42E**±0°.03**, h16^{km}**±6^{km}**, n197, σ1^{s}26**/205**, mb4.6**/82**, MS3.3**/6**, 11C-11D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLSP	General Luna,	0.70	84	⇓eP	Pg	11 48 05.7	-0.4
GLSP				eS	Sg	11 48 15.3	0.0
MSLP	Maasin	0.70	308	⇓eP	Pg	11 48 05.5	-0.7
MSLP				eS	Sg	11 48 15.2	-0.2
BUTP	Butuan	0.76	165	⇑eP	Pb	11 48 08.1	+0.8
BUTP				eS	Sn	11 48 23.8	+4.1
CGP	Cagayan de Oro	1.44	210	⇓iP	Pn	11 48 17.7	-0.2
CGP				i S	Sb	11 48 38.1	+1.2
TBP	Tagbilaran	1.54	270	⇑iP	Pn	11 48 19.4	+0.1
TBP				i S	Sn	11 48 39.6	+0.6
LLP	Lapu-Lapu	1.56	293	⇓eP	Pn	11 48 19.4	-0.1
LLP				eS	Sb	11 48 40.5	0.0
OCLP	Ormoc	1.56	329	⇑eP	Pg	11 48 21.5	-1.0
OCLP				eS	Sg	11 48 44.7	+1.9
BIPH	Bislig	1.77	148	⇓iP	Pn	11 48 23.2	+0.7
BIPH				i S	Sb	11 48 47.6	+1.0
SNPH	Sibulan	2.19	261	⇑eP	Pn	11 48 28.8	+0.6
SNPH				eS	Sb	11 49 00.6	+2.0
DCPH	Dipolog City	2.33	242	⇑iP	Pn	11 48 30.6	+0.5
DCPH				i S	Sn	11 48 59.5	+1.0
DAV	Davao City (W)	2.62	177	P	Pb	11 48 39.2	+0.1
	82nm,0.3s,baz=340,slow=1.1,SNR=2.8						
DAV				S	Sg	11 49 15.7	-1.1
	1µm,0.9s,baz=307,slow=20,SNR=3.7						
DAV				LR	LR	11 50 13.2	
	comp=Z,1µm,19.8s,baz=27,slow=51						
	663nm,0.6s						
DAV	Davao City (W)	2.62	177		Pb	11 48 37.6	-1.5
KCP	Kidapawan	2.70	187	⇓eP	Pn	11 48 37.1	+1.8
KCP				i S	Sn	11 48 53.7	-14
CTBH	Cotabato--PC H	2.73	205	⇓iP	Pn	11 48 37.2	+1.6
CNOP	Candoni, Negro	2.75	273	⇓eP	Pn	11 48 37.0	+1.1
MATI	Mati	2.86	163	⇑eP	Pb	11 48 42.7	-0.5
MATI				eS	Sb	11 49 21.4	+3.3
CNP	Catarman	2.89	345	⇑eP	Pn	11 48 40.3	+2.5
CNP				eS	Sb	11 49 18.8	+0.1
GUIM	Jordan	2.94	288	⇑eP	Pn	11 48 39.1	+0.6
GUIM				eS	Sn	11 49 16.1	+2.6
RCP	Roxas	3.21	305	⇑eP	Pn	11 48 43.7	+1.3
RCP				eS	Sn	11 49 23.1	+2.7
SKMP	Bagumbayan, Su	3.28	195	⇑eP	Pb	11 48 50.0	-0.3
IPIL	Ipil	3.40	236	⇓eP	Pn	11 48 46.5	+1.5
GSPH	General Santos	3.63	187	eP	Pb	11 48 56.5	+0.2
IBAJ	Ibajay, Aklan	3.82	304	⇑eP	Pn	11 48 53.8	+3.1
OTRP	Odiongan	4.26	309	⇓eP	Pn	11 49 00.5	+3.8
LQP	Lukban	5.80	319	⇓eP	Pb	11 49 25.9	-7.5
SGSI	Sangihe	5.98	179	P	Pn	11 49 25.3	+4.9
	247nm,0.7s,6µm1.0nm						
MYLDM	Lahad Datu	8.21	237	Pn	Pn	11 49 53.5	+2.5
TNTI	Ternate	9.08	168	Pn	Pn	11 50 04.3	+1.3
TNTI	Ternate	9.08	168	P	Pn	11 50 08.4	+5.4
	46nm,1.0s						
I39PW	PALAU INFRASON	9.28	103	I	I	12 46 50.0	
	baz=286,slow=301,SNR=0.7						
GTOI	Gorontalo	9.32	195	P	Pn	11 50 13.6	+7.3
	31nm,0.6s						
TOLI2	Tolitoli	9.71	209	Pn	Pn	11 50 12.1	+0.5
MRSI	Marisa	9.80	201	P	Pn	11 50 24.4	+12
	21nm,1.2s						
KKM	Kota Kinabalu	9.82	249	Pn	Pn	11 50 14.2	+1.0
LUWI	Luwuk	11.00	194	Pn	Pn	11 50 31.5	+2.2
SIJI	Sorong	12.01	151	P	Pn	11 50 45.9	+2.7
	2.4nm,0.3s,baz=272,slow=0.5,SNR=6.2						
	22nm,0.6s						
TWG	Pinlang	13.69	343	Pn	Pn	11 51 04.6	-1.5
FAKI	Fak Fak	14.27	151	P	P	11 51 18.2	-3.0
	75nm,0.7s						
TPUB	Ta-pu	14.28	342	Pn	Pn	11 51 13.1	-1.0
SBUM	Sibu	14.97	242	Pn	Pn	11 51 24.6	+1.0
KSM	Kuching	17.11	242	Pn	Pn	11 51 50.3	-0.8
QIZ	Qiongzhong	17.70	303	P	P	11 52 01.0	+1.7
QIZ				S	Sn	11 55 16.1	+0.6
SAUI	Saumlaki	18.52	161	P	P	11 52 07.8	-0.5
SOEI	Soe	19.37	183	P	P	11 52 16.3	-1.5
SOEI				IAmb	IAmb	11 52 49.8	
	comp=Z,43nm,0.8s						
JAGI	Jajag, Banyuwa	21.26	212	P	P	11 52 37.3	-0.9
JAGI				IAmb	IAmb	11 52 43.6	
	comp=Z,18nm,0.9s						
UGM	Wanagama	22.95	221	P	P	11 52 56.7	+0.4
NJ2	Nanjing	23.05	346	eP	P	11 53 00.6	+3.4
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
MTN	Manton Dam	23.11	166	P	P	11 52 58.2	+0.3
MTN				IAmb	IAmb	11 53 17.3	
	comp=Z,20nm,0.6s						
JNU	Nakatsue	23.84	11	LR	LR	12 03 01.6	
	comp=Z,51nm,19.3s,baz=275,slow=38						
JNU	Nakatsue	23.84	11	P	P	11 53 04.3	-0.8
JNU				IAmb	IAmb	11 53 15.3	
	comp=Z,54nm,1.5s						
IPM	Ipoh	24.75	260	P	P	11 53 12.5	-1.2
IPM				IAmb	IAmb	11 53 15.5	
	comp=Z,13nm,0.7s						
KULM	Kulim	24.94	262	P	P	11 53 13.6	-1.7
KNRA	Kununurra	25.43	172	P	P	11 53 18.6	-1.1
KNRA				IAmb	IAmb	11 53 28.9	
	comp=Z,18nm,0.8s						
CRAI	Chiangrai	26.32	296	P	P	11 53 26.9	-0.9
JHJ	Hachijo jima 2	26.80	27	P	P	11 53 32.1	+0.1
	comp=Z,233nm,0.4s,baz=229,slow=22,SNR=8.3						
CMAR	Chiang Mai Arr	27.09	292	P	P	11 53 34.4	-0.4
	comp=Z,3.5nm,1.0s,baz=111,slow=7.2,SNR=16						
CMAR				LR	LR	12 05 01.3	
	comp=Z,71nm,18.4s,baz=90,slow=38						
	comp=Z,3.5nm,1.0s						
CMAR	Chiang Mai Arr	27.09	292	P	P	11 53 32.2	-2.6
CHTO	Chiang Mai	27.18	292	P	P	11 53 33.9	-1.7
RPSI	Rantau Prapat	27.23	257	P	P	11 53 34.9	-1.2
FITZ	Fitzroy Crossi	27.63	180	P	P	11 53 39.2	-0.3
KSRS	Korea Array	27.72	4	P	P	11 53 38.5	-1.7
	comp=Z,1.3nm,0.8s,baz=187,slow=10,SNR=5.0						
KSRS				LR	LR	12 03 50.8	
	comp=Z,34nm,21.7s,baz=200,slow=34						
	comp=Z,1.3nm,0.8s						
PZH	PanZhiHua	27.95	310	P	P	11 53 44.6	+2.1
PZH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.2s						
XAN	Xi'an	28.57	330	P	P	11 53 46.3	-1.6
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PMG	Port Moresby	28.79	131	P	P	11 53 48.8	-1.1
	comp=Z,4.6nm,0.5s,baz=313,slow=16,SNR=2.1						
	comp=Z,4.6nm,0.5s						
MJAR	Matsushiro Arr	29.12	21	LR	LR	12 04 27.4	
	comp=Z,68nm,20.1s,baz=218,slow=34						
COEN	Coen	29.38	143	P	P	11 53 55.6	+0.4
COEN				IAmb	IAmb	11 54 01.4	
	comp=Z,22nm,0.8s						
WB0	Warramunga Arr	30.59	163	P	P	11 54 06.5	+0.7
WB0				IAmb	IAmb	11 54 17.4	
	comp=Z,16nm,1.5s						
WRAB	Tennant Creek	30.74	163	P	P	11 54 06.9	-0.3
WRAB				IAmb	IAmb	11 54 26.7	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	30.74	163	P	P	11 54 07.2	0.0
	comp=Z,1.4nm,0.7s,baz=348,slow=9.4,SNR=13						
	comp=Z,1.4nm,0.7s						
WRA	Warramunga Arr	30.74	163	P	P	11 54 06.9	-0.3
WB2	Warramunga Arr	30.75	163	P	P	11 54 08.6	+1.4
PSA00	Pilbara Seismi	31.56	190	P	P	11 54 14.8	+0.4
HHC	Hu-ho-hao-te	33.36	341	eP	P	11 54 32.0	+1.9
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,230nm,5.2s						
AS31	Alice Springs	34.19	166	P	P	11 54 39.1	+1.7
ASAR	Alice Springs	34.19	166	P	P	11 54 37.9	+0.5
	comp=Z,1.0nm,0.5s,baz=359,slow=7.1,SNR=22						
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	34.19	166	P	P	11 54 37.7	+0.3
USA0B	Ussuriysk Arra	34.84	8	P	P	11 54 42.9	+0.2
USA0B				IAmb	IAmb	11 55 04.4	
	comp=Z,12nm,0.8s						
USRK	Ussuriysk Ar.	34.84	8	P	P	11 54 43.6	+0.9
	comp=Z,6.1nm,0.7s,baz=157,slow=4.2,SNR=3.9						
	comp=Z,6.1nm,0.7s						
USRK	Ussuriysk Ar.	34.84	8	P	P	11 54 40.5	-2.2
MDJ	Mudanjiang	34.97	5	P	P	11 54 46.6	+2.7
MDJ				pP	sP	11 55 00.0	+9.3
MDJ				PP	PP	11 56 04.0	+0.7
MDJ				PcP	PcP	11 57 15.6	-0.5
MDJ				S	S	12 00 16.5	+1.4
MDJ				pmax	pmax		
	comp=Z,13nm,2.4s						
MDJ				pmax	pmax		
	comp=Z,360nm,3.8s						
CTA	Charters Tower	36.01	145	P	P	11 54 52.8	-0.4
	comp=Z,7.8nm,0.7s,baz=325,slow=9.6,SNR=19						
	comp=Z,7.8nm,0.7s						
CTAO	Charters Tower	36.01	145	P	P	11 54 54.6	+1.4
CTAO				IAmb	IAmb	11 54 55.2	
	comp=Z,9.9nm,0.8s						
ASAJ	Asahikawa	37.38	21	LR	LR	12 09 51.6	
	comp=Z,54nm,19.8s,baz=162,slow=35						
JKA	Kamikawa-asahi	37.38	21	P	P	11 55 05.4	+0.8
TAPN	Taplejung	39.62	301	eP	P	11 55 23.4	-0.6
	comp=Z,10nm,0.5s						
KLR	Kul'dur	39.75	6	P	P	11 55 23.1	-1.3
	comp=Z,2.0nm,0.6s,baz=187,slow=4.2,SNR=10						
	comp=Z,2.0nm,0.6s						
FORT	Forrest	40.33	176	P	P	11 55 29.8	+0.4
FORT				IAmb	IAmb	11 55 52.3	
	comp=Z,16nm,0.8s						
RAMN	Ramite	40.44	300	eP	P	11 55 30.3	-0.4
	comp=Z,11nm,0.7s						
HEH	HeiHe	40.46	2	eP	P	11 55 30.6	+0.4
HEH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
JIRN	Jiri	41.00	301	eP	P	11 55 36.1	+0.6
H11N1	WAKE ISLAND Hy	41.23	71	T	T	12 38 57.0	
	baz=265,slow=75						
H11N2	WAKE ISLAND Hy	41.23	71	T	T	12 39 01.1	
	baz=265,slow=75						
H11N3	WAKE ISLAND Hy	41.24	71	T	T	12 38 59.7	
	baz=265,slow=75						
SONM	Songino Array	41.26	341	P	P	11 55 35.7	-1.3
	comp=Z,0.3nm,0.3s,baz=142,slow=7.3,SNR=1.9						
	comp=Z,0.3nm,0.3s						
GUN	Gumba	41.34	301	eP	P	11 55 38.6	+0.3
	comp=Z,26nm,0.7s						
EIDS	Eidsvold	42.90	145	P	P	11 55 50.4	-0.1
EIDS				IAmb	IAmb	11 55 58.0	
	comp=Z,37nm,1.4s						
NWAO	Narrogin (SRO)	43.11	190	P	P	11 55 52.4	+0.3
	comp=Z,11nm,0.8s,baz=12,slow=6.9,SNR=8.4						
	comp=Z,11nm,0.8s						
NWAO	Narrogin (SRO)	43.11	190	P	P	11 55 52.3	+0.3
DANN	Dangsing	43.26	301	eP	P	11 55 54.8	+1.0
BBOO	Buckleboo	43.48	167	P	P	11 55 56.3	+1.2
BBOO				IAmb	IAmb	11 55 59.2	
	comp=Z,12nm,0.7s						
PYUN	Piuthan	43.84	301	eP	P	11 55 59.7	+1.3
STKA	Stephens Creek	44.15	160	P	P	11 56 01.8	+1.2
	comp=Z,3.8nm,0.5s,baz=330,slow=8.2,SNR=15						
STKA				PP	PcP	11 57 46.4	+1.0
	comp=Z,2.4nm,0.7s,baz=320,slow=13,SNR=3.4						
STKA				LR	LR	12 17 01.3	
	comp=Z,99nm,18.5s,baz=355,slow=40						
	comp=Z,3.8nm,0.5s						
STKA	Stephens Creek	44.15	160	P	P	11 56 00.2	-0.3
WMQ	Urumqi	47.16	323	eP	P	11 56 27.0	+2.7
ARMA	Armidale	47.18	149	P	P	11 56 26.0	+1.4
ARMA				IAmb	IAmb	11 57 05.3	
	comp=Z,16nm,1.3s						
CAN	Canberra	50.02	155	P	P	11 56 48.1	+1.7
PEA0B	Petropavlovsk-	50.49	25	P	P	11 56 51.0	+1.3
PETK	Petropavlovsk-	50.49	25	P	P	11 56 50.6	+0.9
	comp=Z,2.4nm,0.5s,baz=223,slow=4.7,SNR=5.6						
	comp=Z,2.4nm,0.5s						
TOO	Toolangi	50.65	159	P	P	11 56 52.0	+0.9
TOO				IAmb	IAmb	11 56 55.0	
	comp=Z,7.3nm,0.8s						
LIFNC	LIFOU	51.06	127	P	P	11 56 53.9	-0.5
DZM	Mont Dzumac	51.14	129	P	P	11 56 54.9	-0.2
	comp=Z,14nm,0.8s,baz=285,slow=20,SNR=3.6						
	comp=Z,14nm,0.8s						
MK31	Makanchi Array	51.97	323	P	P	11 57 01.1	+0.1
MKAR	Makanchi Array	51.97	323	P	P	11 57 00.9	-0.1
	comp=Z,1.1nm,0.5s,baz=123,slow=8.0,SNR=24						
	comp=Z,1.1nm,0.5s						
MKAR	Makanchi Array	51.97	323	P	P	11 57 01.4	+0.4
MAKZ	Makanchi	52.17	323	P	P	11 57 01.9	-0.5
KSH	Kashi	52.99	313	P	P	11 57 11.6	+2.8
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,270nm,5.2s						
MA2	Magadan	53.30	16	P	P	11 57 11.3	+0.8
MA2				IAmb	IAmb	11 57 12.2	
	comp=Z,4.1nm,0.9s						
NIL	Nilore	53.36	305	P	P	11 57 11.8	+0.3
NIL				IAmb	IAmb	11 57 13.8	
	comp=Z,8.8nm,0.7s						
ZAA0	Zalesovo Array	54.72	332	P	P	11 57 20.2	-0.8
ZALV	Zalesovo Beam	54.72	332	P	P	11 57 19.5	-1.5
	comp=Z,0.8nm,0.4s,baz=133,slow=6.3,SNR=4.0						
	comp=Z,0.8nm,0.4s						
ZALV	Zalesovo Beam	54.72	332	P	P	11 57 19.7	-1.3
AAK	Ala-Archa	55.14	316	P	P	11 57 23.2	-1.2
KURK	Kurchatov	56.06	326	P	P	11 57 30.9	+0.2
KURK				IAmb	IAmb	11 57 33.8	
	comp=Z,11nm,1.1s						
KURBB	Kurchatov Arra	56.06	326	P	P	11 57 30.4	-0.3
	comp=Z,2.8nm,0.7s,baz=124,slow=7.0,SNR=22						
	comp=Z,2.8nm,0.7s						
KBL	Kabul	56.97	305	P	P	11 57 38.4	+0.7
KBL				IAmb	IAmb	11 57 39.1	
	comp=Z,6.3nm,0.7s						
GAR	Garm	57.01	310	P	P	11 57 38.4	+0.5
CHGR	Chuyangaron	57.80	310	P	P	11 57 43.5	+0.1
KK31	Karatay Array	58.05	315	P	P	11 57 43.5	-1.5
KK31				IAmb	IAmb	11 57 46.7	
	comp=Z,5.7nm,0.9s						
KKAR	Karatay Array	58.05	315	P	P	11 57 45.2	+0.1
BVAR	Borovoye Array	61.66	326	P	P	11 58 09.1	-0.5
	comp=Z,1.1nm,0.5s,baz=113,slow=6.9,SNR=7.9						
	comp=Z,1.1nm,0.5s						
BRVK	Borovoye	61.73	326	P	P	11 58 08.7	-1.3
BRVK				IAmb	IAmb	11 58 12.1	
	comp=Z,3.2nm,0.8s						
TIXI	Tiksi	61.93	1	P	P	11 58 10.1	-0.9
TIXI				IAmb	IAmb	11 58 12.7	
	comp=Z,8.5nm,1.5s						
ADK	Adak	62.86	36	P	P	11 58 16.8	-0.8
BILL	Bilibino	64.17	16	P	P	11 58 25.5	-0.5
GEYT	Alibeck	66.22	307	P	P	11 58 40.6	+0.7
	comp=Z,6.3nm,0.7s,baz=134,slow=4.3,SNR=10						
	comp=Z,6.3nm,0.7s						
ABKAR	Akbulak array	66.76	320	P	P	11 58 42.8	-0.3
AKTO	Aktyubinsk	68.22	321	P	P	11 58 52.6	+0.2
	comp=Z,3.3nm,0.9s,baz=96,slow=5.3,SNR=6.3						
	comp=Z,3.3nm,0.9s						
ARU	Arti	69.24	327	P	P	11 58 57.7	-0.8
	comp=Z,3.2nm,0.4s,baz=125,slow=7.4,SNR=7.4						
	comp=Z,3.2nm,0.4s						
ARU	Arti	69.24	327	P	P	11 58 58.2	-0.4
ARU				IAmb	IAmb	11 58 59.7	
	comp=Z,4.0nm,0.6s						
TNA	Tin City	71.65	24	P	P	11 59 11.8	-1.3
ANM	Nome	72.41	25	P	P	11 59 16.5	-1.2
KEKH	Kekaha	72.47	70	P	P	11 59 17.7	-1.2
RDOG	Red Dog Mine	74.23	22	P	P	11 59 28.6	+0.2
RDOG				IAmb	IAmb	11 59 48.6	
	comp=Z,5.3nm,0.6s						
CHGN	Chignik	74.31	34	P	P	11 59 28.9	-0.1
KIRV	Kirov	74.48	328	P	P	11 59 29.5	-0.5
	comp=Z,22nm,0.7s,baz=19,slow=1.6,SNR=5.8						
	comp=Z,22nm,0.7s						
BELG	Belogornoye	74.93	322	P	P	11 59 31.6	-1.1
	comp=Z,21nm,0.8s,baz=105,slow=19,SNR=7.9						
	comp=Z,21nm,0.8s						
RAYN	Ar Rayn	77.01	292	P	P	11 59 44.0	-1.2
RAYN				IAmb	IAmb	11 59 46.3	
	comp=Z,7.3nm,1.0s						
A21K	Barrow	77.01	19	P	P	11 59 43.6	-0.6
IMAR	Indian Mountai	77.46	24	P	P	11 59 47.7	+0.8
ONI	Oni	77.61	312	P	P	11 59 49.5	+1.3
ONI				IAmb	IAmb	11 59 51.3	
	comp=Z,4.8nm,0.9s						
H21K	Melozitna Rive	77.83	25	P	P	11 59 50.3	+1.3
H21K				IAmb	IAmb	11 59 51.2	
	comp=Z,4.7nm,1.0s						
KBZ	Khabaz	77.97	313	P	P	11 59 50.2	+0.1
	comp=Z,5.3nm,1.0s,baz=92,slow=4.0,SNR=8.4						
	comp=Z,5.3nm,1.0s						
GEVA	Gevas	78.08	307	P	P	11 59 51.8	+0.6
GEVA				IAmb	IAmb	11 59 55.0	
	comp=Z,8.4nm,0.9s						
I21K	Tanana	78.14	25	P	P	11 59 51.6	+1.0
I21K				IAmb	IAmb	11 59 53.4	
	comp=Z,5.5nm,0.8s						
MLY	Manley	78.66	25	P	P	11 59 54.4	+0.7
MLY				IAmb	IAmb	11 59 55.0	
	comp=Z,5.2nm,1.0s						
GURO	Guroymak-BITLI	78.88	307	P	P	11 59 55.3	-0.2
GURO				IAmb	IAmb	11 59 57.9	
	comp=Z,13nm,0.9s						
COLD	Coldfoot	78.94	23	P	P	11 59 54.9	-0.1
H23K	Yukon River	79.18	25	P	P	11 59 57.7	+1.3
I23K	Minto, Yukon-K	79.25	25	P	P	11 59 56.9	+0.2
I23K				IAmb	IAmb	12 00 03.7	
	comp=Z,4.0nm,0.7s						
KLMR	Klimovskoe	79.60	330	eP	P	11 59 56.6	-2.1
KLMR				AMP		11 59 58.6	
	comp=Z,10.0nm,0.7s						
KNK	Knik Glacier	79.69	29	P	P	11 59 58.2	-1.1
KNK				IAmb	IAmb	12 00 03.2	
	comp=Z,10nm,1.0s						
MDM	Murphy Dome	79.73	26	P	P	11 59 57.7	-1.7
MDM				IAmb	IAmb	12 00 00.8	
	comp=Z,7.2nm,1.0s						
PWL	Port Wells	79.77	30	P	P	11 59 59.8	0.0
WRH	Wood River Hil	79.80	26	P	P	12 00 00.0	+0.3
WRH				IAmb	IAmb	12 00 01.7	
	comp=Z,4.8nm,0.8s						
CCB	Clear Creek Bu	79.92	26	P	P	12 00 00.0	-0.4
CCB				IAmb	IAmb	12 00 03.3	
	comp=Z,8.7nm,1.4s						
POKR	Poker Plat Res	80.06	25	P	P	12 00 00.2	-1.0
SCM	Sheep Creek Mo	80.22	29	P	P	12 00 01.8	-0.4
HDA	Harding Lake	80.30	26	P	P	12 00 03.0	+0.5
HDA				IAmb	IAmb	12 00 04.9	
	comp=Z,4.5nm,0.7s						
BMAR	Burnt Mountain	81.11	23	P	P	12 00 07.9	+1.0
K27K	Chicken	82.45	26	P	P	12 00 14.7	+0.8
K27K				IAmb	IAmb	12 00 43.6	
	comp=Z,7.2nm,1.2s						
L27K	Beaver Creek,	82.67	27	P	P	12 00 14.6	-0.6
L27K				IAmb	IAmb	12 00 35.6	
	comp=Z,9.3nm,1.5s						
BCAR	Beaver Creek A	82.69	27	P	P	12 00 14.0	-1.2
CTGM	Chitina Glacie	83.17	29	P	P	12 00 16.3	-1.6
SPB2	Spitsbergen Ar	84.40	349	P	P	12 00 24.5	+0.8
ARCES	ARCESS Array B	84.43	340	P	P	12 00 23.4	-0.7
	comp=Z,3.6nm,0.7s,baz=78,slow=6.4,SNR=17						
	comp=Z,3.6nm,0.7s						
ARCES	ARCESS Array B	84.43	340	P	P	12 00 23.5	-0.5
M30M	Minto, Yukon	85.03	27	P	P	12 00 26.9	-0.3
M30M				IAmb	IAmb	12 01 01.3	
	comp=Z,8.2nm,1.4s						
HYT	Haines Junctio	85.04	29	P	P	12 00 26.7	-0.7
INK	Inuvik	85.11	21	P	P	12 00 28.0	+0.6
INK				IAmb	IAmb	12 00 30.2	
	comp=Z,4.7nm,1.1s						

BRTR	Keskin Array B	85.24	309	P	P	12 00 28.1	-0.8
	comp=Z,1.8nm,0.8s,baz=86,slow=5.1,SNR=8.7						
	comp=Z,1.8nm,0.8s						
BRTR	Keskin Array B	85.24	309	P	P	12 00 27.9	-1.0
FINES	FINESS Array B	85.99	332	P	P	12 00 30.8	-1.1
	comp=Z,4.2nm,0.5s,baz=76,slow=5.1,SNR=22						
	comp=Z,4.2nm,0.5s						
AKASG	Malin Array Be	86.47	321	P	P	12 00 33.2	-1.3
	comp=Z,0.3nm,0.3s,baz=56,slow=4.0,SNR=8.9						
	comp=Z,0.3nm,0.3s						
AKASG	Malin Array Be	86.47	321	P	P	12 00 34.0	-0.6
AKASG				IAmb	IAmb	12 00 35.0	
	comp=Z,4.3nm,1.2s						
AKBB	Malin Array Si	86.47	321	P	P	12 00 34.0	-0.6
AKBB				IAmb	IAmb	12 00 34.8	
	comp=Z,6.6nm,1.0s						
FARO	Faro, Yukon	86.67	27	P	P	12 00 35.5	+0.1
A36M	Sachs Harbour	86.69	17	P	P	12 00 35.8	+0.6
A36M				IAmb	IAmb	12 01 06.8	
	comp=Z,7.1nm,0.9s						
C36M	Paulatuk	88.05	19	P	P	12 00 41.9	+0.1
BURAR	Bucovina Array	89.70	318	P	P	12 00 49.5	-0.7
BURAR				IAmb	IAmb	12 00 51.8	
	comp=Z,2.4nm,1.0s						
HFS	Hagfors	92.16	332	P	P	12 00 59.4	-1.8
	comp=Z,3.4nm,0.7s,baz=106,slow=3.1,SNR=6.3						
	comp=Z,3.4nm,0.7s						
RES	Resolute Bay	92.19	10	P	P	12 01 01.1	+0.1
RES				IAmb	IAmb	12 01 03.7	
	comp=Z,2.3nm,0.9s						
NOA	NORSAR Array B	92.89	334	P	P	12 01 02.0	-2.6
	comp=Z,0.9nm,0.6s,baz=63,slow=4.6,SNR=3.4						
	comp=Z,0.9nm,0.6s						
YKA	Yellowknife Ar	94.61	24	P	P	12 01 11.7	-0.7
	comp=Z,1.1nm,0.8s,baz=299,slow=4.5,SNR=22						
	comp=Z,1.1nm,0.8s						
GERES	GERESS Array B	96.62	322	P	P	12 01 21.6	-0.4
	comp=Z,0.5nm,0.5s,baz=87,slow=6.1,SNR=2.8						
	comp=Z,0.5nm,0.5s						
TXAR	Lajitas Array	118.82	49	PKP	PKPdf	12 06 40.2	-0.8
	comp=Z,0.1nm,0.6s,baz=358,slow=3.2,SNR=1.8						
TORD	Torodi Ar. Bea	119.70	291	PKP	PKPdf	12 06 41.2	-1.7
	comp=Z,1.2nm,0.6s,baz=58,slow=1.6,SNR=7.5						
PLCA	Paso Flores	146.01	158	PKPbc	PKPab	12 07 32.5	-0.1
	comp=Z,1.5nm,0.7s,baz=269,slow=3.1,SNR=5.8						

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*IDC **14** 11:52:16.8±0.7, 17°.60S×172°.66W, h0^{km}, mb4.5/14, mbtmp4.5/14, ML6.2/1, MS3.9/5, Error ellipse: s-maj=26.3km s-min=16.1km az=142.0*

*NEIC **14** 11:52:18.5±2.6, 17°.8S±0°.1×172°.25W±0°.08, h10^{km}±1^{km}, mb4.8/73, Error ellipse: s-maj=19.4km s-min=11.6km az=194.0*

ISC 14 11:52:19.3±0.4**, 17°.82S**±0°.09×**172°.35W**±0°.07**, h21^{km}, n166, σ1^{s}05**/162**, mb4.8**/56**, MS3.6**/8**, 5C, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	2.61	119		Pn	11 53 00.7	+0.3
AFI	Afiamalu	3.93	8	Pn	Pn	11 53 07.4	-11
	6.4nm,0.3s,baz=80,slow=0.8,SNR=14						
AFI				Sn	Sn	11 53 49.1	-15
	21nm,0.3s,baz=46,slow=16,SNR=6.6						
MSVF	Nonsavu	9.15	269	Pn	Pn	11 54 32.8	+2.5
	0.6nm,0.3s,baz=114,slow=14,SNR=14						
RAR	Rarotonga	12.32	108	Pn	Pn	11 55 13.6	0.0
	2.9nm,0.3s,baz=225,slow=2.9,SNR=3.1						
RAR				LR	LR	11 59 24.5	
	comp=Z,232nm,18.5s,baz=283,slow=34						
RAR	Rarotonga	12.32	108	Pn	Pn	11 55 12.7	-0.9
RAO	Raoul Island	12.47	203	Pn	Pn	11 55 16.0	+0.4
	134nm,0.3s,baz=73,slow=19,SNR=2.9						
OUENC	Ouen Island, N	20.07	253	P	P	11 56 51.4	-0.1
OUENC				IAmb	IAmb	11 57 29.9	
	comp=Z,43nm,1.2s						
DZM	Mont Dzumac	20.38	255	*e*LR	LR	12 01 46.5	
	comp=Z,216nm,24.8s						
DZM	Mont Dzumac	20.38	255	P	Pn	11 56 56.1	-1.0
ONTNC	Ouen Toro	20.40	254		P	11 56 54.2	-0.9
ONTNC				IAmb	IAmb	11 57 02.7	
	comp=Z,48nm,1.1s						
PPT2	Papeete2	21.69	93	*e*LR	LR	12 02 14.6	
	comp=Z,109nm,27.0s						
PPT2				*e*LR	LR	12 02 19.2	
	comp=Z,143nm,34.0s						
PPT	Papeete	21.69	93	LR	LR	12 03 51.1	
	comp=Z,160nm,18.0s,baz=262,slow=32						
TBI	Tubuai	22.11	108	*e*LR	LR	12 02 30.4	
	comp=Z,2µm,34.8s						
TBI				*e*LR	LR	12 02 30.4	
	comp=Z,1µm,36.8s						
URZ	Urewera	22.36	202	P	P	11 57 18.9	+2.9
	comp=Z,41nm,0.9s,baz=52,slow=3.6,SNR=12						
	comp=Z,41nm,0.9s						
HNR	Honiara	28.16	284	LR	LR	12 08 46.7	
	comp=Z,2µm,19.6s,baz=80,slow=36						
TAOE	Nuku Hiva Isla	32.52	78	*e*LR	LR	12 07 17.0	
	comp=Z,68nm,21.4s						
CTA	Charters Tower	39.15	260	P	P	11 59 43.2	-2.7
	comp=Z,3.1nm,0.9s,baz=92,slow=11,SNR=3.6						
CTA				LR	LR	12 15 24.9	
	comp=Z,126nm,18.2s,baz=104,slow=36						
	comp=Z,3.1nm,0.9s						
BBOO	Buckleboo	48.52	242	P	P	12 00 59.9	-1.1
BBOO				IAmb	IAmb	12 01 02.2	
	comp=Z,14nm,1.2s						
WB0	Warramunga Arr	50.29	259	P	P	12 01 12.9	-1.8
WB2	Warramunga Arr	50.31	259	P	P	12 01 12.2	-2.7
WB2				IAmb	IAmb	12 01 12.8	
	comp=Z,7.9nm,1.0s						
WRA	Warramunga Arr	50.32	259	P	P	12 01 12.1	-2.9
	comp=Z,3.7nm,0.9s,baz=93,slow=7.1,SNR=17						
WRA				PcP	PcP	12 02 34.1	+0.5
	comp=Z,0.4nm,1.0s,baz=96,slow=4.0,SNR=4.1						
WRA				LR	LR	12 22 31.7	
	comp=Z,89nm,18.7s,baz=144,slow=36						
	comp=Z,3.7nm,0.9s						
WRA	Warramunga Arr	50.32	259	P	P	12 01 12.2	-2.8
AS31	Alice Springs	50.37	254	P	P	12 01 13.5	-1.8
ASAR	Alice Springs	50.37	254	P	P	12 01 13.2	-2.1
	comp=Z,13nm,0.8s,baz=86,slow=8.6,SNR=111						
ASAR				PcP	PcP	12 02 34.2	+0.4
	comp=Z,1.7nm,0.9s,baz=92,slow=4.9,SNR=4.8						
	comp=Z,13nm,0.8s						
ASAR	Alice Springs	50.37	254	P	P	12 01 13.8	-1.6
MTN	Manton Dam	54.57	267	P	P	12 01 45.9	-0.6
MTN				IAmb	IAmb	12 01 56.6	
	comp=Z,14nm,1.4s						
SIJI	Sorong	57.87	280	P	P	12 02 08.4	-1.7
	comp=Z,20nm,0.8s,baz=84,slow=9.2,SNR=3.9						
	comp=Z,20nm,0.8s						
MJAR	Matsushiro Arr	71.43	320	P	P	12 03 36.9	-1.4
	comp=Z,3.5nm,1.0s,baz=163,slow=5.3,SNR=4.1						
	comp=Z,3.5nm,1.0s						
MDPB	Devils Postpil	74.49	41	P	P	12 03 54.9	-1.8
OMMB	Old Mammoth Mi	74.53	41	P	P	12 03 55.8	-1.2
GSC	Goldstone, Bar	74.58	44	P	P	12 03 56.2	-0.8
PETK	Petropavlovsk-	75.23	342	P	P	12 03 59.7	-0.6
	comp=Z,7.2nm,1.0s,baz=118,slow=12,SNR=4.8						
	comp=Z,7.2nm,1.0s						
NVAR	Mina Array Bea	75.46	41	P	P	12 04 02.5	+0.3
	comp=Z,1.7nm,0.9s,baz=228,slow=9.7,SNR=12						
	comp=Z,1.7nm,0.9s						
NVAR	Mina Array Bea	75.46	41	P	P	12 04 03.4	+1.2
NV11	Mina Array Sit	75.55	41	P	P	12 04 03.9	+1.2
NV11				IAmb	IAmb	12 04 04.7	
	comp=Z,8.7nm,1.3s						
MZP	Montezuma Peak	75.61	42	P	P	12 04 03.0	-0.2
TPH	Tonopah	75.93	42	P	P	12 04 05.5	+0.6
KVN	Kaiserville	75.96	41	P	P	12 04 05.2	+0.1
KVN				IAmb	IAmb	12 04 07.4	
	comp=Z,7.1nm,1.3s						
YSS	Yuzh-Sakhalins	76.08	330	P	P	12 04 05.4	+0.1
MOD	Modoc Plateau	76.41	37	P	P	12 04 07.8	+0.4
MOD				IAmb	IAmb	12 04 09.2	
	comp=Z,7.6nm,1.3s						
J05D	Fort Rock, OR	76.77	36	P	P	12 04 10.2	+0.7
PRN	Pahroc Range	76.94	43	P	P	12 04 10.4	-0.2
PRN				IAmb	IAmb	12 04 13.2	
	comp=Z,7.9nm,1.4s						
R11A	Troy Canyon, C	77.14	42	P	P	12 04 11.4	-0.3
TUC	Tucson	77.15	50	P	P	12 04 12.0	+0.2
WVOR	Wild Horse Val	77.70	38	P	P	12 04 15.4	+0.7
CCUT	Cedar City	78.14	44	P	P	12 04 18.3	+1.0
SPR3	Spring Creek 3	78.31	42	P	P	12 04 19.2	+0.8
J08A	Circle Bar Ran	78.37	37	P	P	12 04 18.4	+0.1
J08A				IAmb	IAmb	12 04 20.2	
	comp=Z,7.0nm,1.4s						
KSM	Kuching	78.41	275	P	P	12 04 19.0	-0.2
KSRS	Korea Array	78.58	315	P	P	12 04 20.0	+0.5
	comp=Z,7.8nm,1.1s,baz=135,slow=6.4,SNR=10						
	comp=Z,7.8nm,1.1s						
KSAR	Wonju Array Be	78.60	315	P	P	12 04 20.1	+0.5
ELK	Elko	78.74	41	P	P	12 04 21.3	+0.6
HLID	Hailey	80.86	39	P	P	12 04 32.4	+0.4
TX31	Lajitas Ar. Si	81.13	55	P	P	12 04 33.7	+0.1
TX31				IAmb	IAmb	12 04 36.9	
	comp=Z,19nm,1.3s						
TXAR	Lajitas Array	81.13	55	P	P	12 04 35.8	+2.1
	comp=Z,2.0nm,1.1s,baz=224,slow=5.2,SNR=10						
	comp=Z,2.0nm,1.1s						
TCUT	Toone Canyon	81.35	42	P	P	12 04 35.4	+0.6
TCUT				IAmb	IAmb	12 04 38.3	
	comp=Z,9.3nm,1.2s						
MDJ	Mudanjiang	81.55	322	P	P	12 04 36.8	+1.4
MDJ				pmax	pmax		
	comp=Z,19nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,180nm,3.7s						
GDL2	Guadalupe Moun	81.87	53	P	P	12 04 37.8	+0.3
NJ2	Nanjing	82.42	307	*e*P	P	12 04 42.0	+1.7
NJ2				pmax	pmax		
	comp=Z,12nm,1.1s						
MCMT	McKenzie Canyo	82.51	38	P	P	12 04 41.4	+0.6
S22A	4UR Ranch, Cre	82.67	47	P	P	12 04 42.4	+0.6
S22A				IAmb	IAmb	12 04 44.5	
	comp=Z,12nm,1.3s						
REDW	Red Top Meadow	82.91	40	P	P	12 04 44.2	+1.4
REDW				IAmb	IAmb	12 04 45.5	
	comp=Z,9.5nm,1.3s						
IMW	Indian Meadow	83.14	40	P	P	12 04 45.2	+1.0
IMW				IAmb	IAmb	12 04 46.3	
	comp=Z,6.4nm,1.3s						
TNA	Tin City	83.19	2	P	P	12 04 43.9	+0.4
TNA				IAmb	IAmb	12 04 44.6	
	comp=Z,3.9nm,1.1s						
M26K	Nabesna, AK	83.25	13	P	P	12 04 43.8	-0.2
M26K				IAmb	IAmb	12 04 45.5	
	comp=Z,10.0nm,1.2s						
MCK	McKinley	83.31	10	P	P	12 04 44.0	-0.2
AY02	Valle Explorad	83.38	137	P	P	12 04 45.1	0.0
FLWY	Flagg Ranch	83.39	40	P	P	12 04 45.8	+0.5
FLWY				IAmb	IAmb	12 04 47.7	
	comp=Z,4.8nm,1.0s						
BW06	Boulder Array	83.40	41	P	P	12 04 44.6	-0.8
BW06				IAmb	IAmb	12 04 46.6	
	comp=Z,4.3nm,1.2s						
PD31	Pinedale Array	83.40	41	P	P	12 04 44.3	-1.1
PDAR	Pinedale Array	83.40	41	P	P	12 04 45.9	+0.5
	comp=Z,1.7nm,1.0s,baz=204,slow=3.3,SNR=11						
	comp=Z,1.7nm,1.0s						
PDAR	Pinedale Array	83.40	41	P	P	12 04 44.4	-1.0
BNX	BinXian	83.46	322	⇑P	P	12 04 45.3	0.0
BNX				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BNX				pmax	pmax		
	comp=Z,240nm,4.7s						
M27K	Edge Creek, AK	83.46	14	P	P	12 04 44.6	-0.6
YHL	Hebgen Lake	83.51	39	P	P	12 04 46.4	+0.4
H17A	Grant Village	83.63	39	P	P	12 04 46.6	0.0
H17A				IAmb	IAmb	12 04 50.1	
	comp=Z,8.2nm,1.4s						
BOZ	Bozeman (W)	83.65	38	P	P	12 04 47.3	+0.7
BOZ				IAmb	IAmb	12 04 48.4	
	comp=Z,6.2nm,1.2s						
LKWY	Lake	83.83	39	P	P	12 04 47.4	-0.2
LKWY				IAmb	IAmb	12 04 50.8	
	comp=Z,7.3nm,1.2s						
NEA2	Nenana	84.08	10	P	P	12 04 48.0	-0.1
NEA2				IAmb	IAmb	12 05 06.9	
	comp=Z,6.3nm,1.2s						
BCAR	Beaver Creek A	84.10	13	P	P	12 04 48.3	0.0
WRH	Wood River Hil	84.13	10	P	P	12 04 48.0	-0.3
DOT	Dot Lake	84.14	12	P	P	12 04 48.6	+0.1
HRY	Holter Researc	84.15	37	P	P	12 04 48.3	-0.7
MLY	Manley	84.23	9	P	P	12 04 48.1	-0.8
MLY				IAmb	IAmb	12 04 49.5	
	comp=Z,6.7nm,1.2s						
HDA	Harding Lake	84.28	11	P	P	12 04 48.5	-0.6
HDA				IAmb	IAmb	12 04 49.0	
	comp=Z,7.9nm,1.3s						
CCB	Clear Creek Bu	84.34	10	P	P	12 04 49.0	-0.4
SCRK	Sand Creek	84.44	12	P	P	12 04 50.0	-0.1
SCRK				IAmb	IAmb	12 04 51.0	
	comp=Z,7.8nm,1.2s						
H21K	Melozitna Rive	84.53	8	P	P	12 04 50.6	+0.2
H21K				IAmb	IAmb	12 04 52.7	
	comp=Z,6.1nm,1.1s						
TCOL	CIGO, UAF Yank	84.54	10	P	P	12 04 50.1	-0.3
COLA	College	84.55	10	P	P	12 04 50.0	-0.4
I23K	Minto, Yukon-K	84.55	10	P	P	12 04 49.6	-0.8
I23K				IAmb	IAmb	12 04 55.2	
	comp=Z,10nm,1.2s						
MDM	Murphy Dome	84.56	10	P	P	12 04 50.1	-0.5
IL31		84.62	11	P	P	12 04 50.1	-0.7
IL31				IAmb	IAmb	12 04 52.0	
	comp=Z,7.4nm,1.2s						
ILAR	Eielson Array	84.62	11	P	P	12 04 49.8	-1.1
	comp=Z,2.5nm,1.1s,baz=224,slow=5.2,SNR=13						
	comp=Z,2.5nm,1.1s						
ILAR	Eielson Array	84.62	11	P	P	12 04 50.2	-0.6
IMAR	Indian Mountai	84.72	8	P	P	12 04 51.5	+0.2
POKR	Poker Plat Res	84.84	10	P	P	12 04 51.9	-0.1
J26L	Joseph Creek	85.00	12	P	P	12 04 53.6	+0.8
J26L				IAmb	IAmb	12 04 54.4	
	comp=Z,11nm,1.1s						
DAWY	Dawson	85.51	14	P	P	12 04 55.6	+0.2
DAWY				IAmb	IAmb	12 04 56.6	
	comp=Z,11nm,1.1s						
PRP	Porcupine Dome	85.54	11	P	P	12 04 55.8	+0.2
I26K	Coal Creek Min	85.80	12	P	P	12 04 57.2	+0.5
I26K				IAmb	IAmb	12 04 58.0	
	comp=Z,13nm,1.3s						
MAYO	Mayo, Yukon	85.96	15	P	P	12 04 56.9	-0.7
COLD	Coldfoot	86.37	8	P	P	12 04 59.7	+0.2
COLD				IAmb	IAmb	12 05 01.8	
	comp=Z,7.8nm,1.2s						
I29M	Ogilvie Camp,	86.86	14	P	P	12 05 01.9	-0.1
I29M				IAmb	IAmb	12 05 03.4	
	comp=Z,7.8nm,1.0s						
BILL	Bilibino	87.03	352	P	P	12 05 02.0	-0.7
BILL				IAmb	IAmb	12 05 06.7	
	comp=Z,7.8nm,1.3s						
BMAR	Burnt Mountain	87.43	10	P	P	12 05 05.7	+1.0
HNS	HongShan	87.79	310	⇑P	P	12 05 08.5	+1.4
HNS				pmax	pmax		
	comp=Z,10.0nm,1.5s						
BJT	Baijiatuau	87.85	313	P	P	12 05 08.5	+1.2
BJI	Beijing	87.86	313	P	P	12 05 08.5	+1.2
BJI	Beijing	87.86	313	S	S	12 15 53.8	+4.7
BJI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
LYN	LuoYang	88.32	307	⇑*i*P	P	12 05 11.3	+1.6
LYN				pmax	pmax		
	comp=Z,13nm,1.2s						
ENH	Enshi	89.06	302	P	P	12 05 14.3	+1.0
HHC	Hu-ho-hao-te	91.40	313	*e*P	P	12 05 25.9	+1.8
HHC				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC				pmax	pmax		
	comp=Z,190nm,6.5s						
YKA	Yellowknife Ar	91.91	23	P	P	12 05 25.5	-0.2
	comp=Z,1.9nm,1.2s,baz=236,slow=4.5,SNR=10						
	comp=Z,1.9nm,1.2s						
KMI	Kunming	92.97	295	⇑P	P	12 05 31.3	-0.6
KMI				pmax	pmax		
	comp=Z,13nm,1.0s						
PZH	PanZhiHua	94.25	296	P	P	12 05 39.6	+2.0
PZH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,90nm,4.3s						
CMAR	Chiang Mai Arr	94.32	288	P	P	12 05 39.1	+1.2
	comp=Z,1.8nm,0.9s,baz=103,slow=1.9,SNR=8.7						
	comp=Z,1.8nm,0.9s						
CMAR	Chiang Mai Arr	94.32	288	P	P	12 05 39.3	+1.3
BVAR	Borovoye Array	120.40	322	PKP	PKiKP	12 11 09.7	+0.6
	comp=Z,2.0nm,0.9s,baz=0.0,slow=2.2,SNR=6.5						
AKASG	Malin Array Be	142.95	337	PKPdf	PKiKP	12 11 52.6	-2.0
AKBB	Malin Array Si	142.95	337	PKPdf	PKPdf	12 11 52.0	+0.7
ATD	Arta Tunnel	145.43	264	PKPdf	PKPbc	12 11 56.4	-0.4
OJC	Ojcow	146.24	346	PKPbc	PKPab	12 11 59.3	+0.4
CLL	Collm	146.32	354	PKPbc	PKPab	12 11 59.4	+0.2
CLL	Collm	146.32	354	⇑*i*PKPbc	PKPab	12 11 59.3	+0.2
	comp=Z,17nm,0.9s						
OSTC	Ostas	146.63	350	*e*PKP	PKPab	12 11 59.5	-0.9
BRG	Berggiesshubel	146.64	353	*e*PKP	PKPab	12 12 00.2	-0.2
BRG				Amp		12 12 02.0	
	comp=Z,19nm,1.4s						
UPC	Upice	146.71	350	*e*PKP	PKPab	12 12 00.8	+0.1
DPC	Dobruska-Polom	146.81	350	*e*PKP	PKPab	12 12 01.1	0.0
BURAR	Bucovina Array	146.98	338	PKPbc	PKiKP	12 12 02.1	-0.9
MORC	Moravsky Berou	147.14	348	PKPbc	PKPab	12 12 01.4	-1.0
MORC	Moravsky Berou	147.14	348	*e*PKP	PKPab	12 12 01.8	-0.7
PRU	Pruhonice	147.44	352	*e*PKP	PKPab	12 12 02.4	-1.1
BNN	Bunyan	147.74	316	PKPbc	PKPab	12 12 04.8	-0.5
VRAC	Vranov	147.77	349	*e*PKP	PKiKP	12 12 03.9	-0.7
ILGA	Ilgaz	147.80	321	PKPbc	PKiKP	12 12 04.2	-1.0
JAVC	Velka Javorina	147.99	347	*e*PKP	PKiKP	12 12 04.5	-0.6
KRUC	Moravsky	148.04	349	*e*PKP	PKiKP	12 12 04.6	-0.5
VYHS	Vyhne	148.08	346	*e*PKP	PKiKP	12 12 05.1	-0.1
PSZ	Piszkesteto	148.35	344	PKPbc	PKiKP	12 12 04.9	-1.0
KHC	Kasperske Hory	148.40	353	PKPbc	PKiKP	12 12 05.3	-0.6
KHC	Kasperske Hory	148.40	353	*e*PKP	PKiKP	12 12 05.6	-0.3
MLR	Muntele Rosu	148.48	335	PKPbc	PKiKP	12 12 05.1	-1.1
	comp=Z,7.3nm,1.1s,baz=27,slow=4.3,SNR=4.1						
MODS	Modra-Piesok	148.53	348	*e*PKP	PKPab	12 12 06.7	-1.3
BRTR	Keskin Array B	148.66	319		PKiKP	12 12 05.9	-1.0
GEC2	GERESS Array S	148.67	352	PKPbc	PKiKP	12 12 06.4	-0.1
GERES	GERESS Array B	148.67	352	PKPbc	PKiKP	12 12 06.7	+0.1
	comp=Z,3.3nm,1.1s,baz=22,slow=4.3,SNR=8.6						
GERES	GERESS Array B	148.67	352	PKPbc	PKiKP	12 12 06.0	-0.5
CONA	Conrad Observa	149.23	349	*i* PKiKP	PKiKP	12 12 08.2	+0.5
	comp=Z,13nm,1.3s						
RONA	Rosalia, Austr	149.37	349	*e*PKiKP	PKiKP	12 12 08.5	+0.5
	comp=Z,5.8nm,0.8s						
BIOA	Bad Ischl, Aus	149.81	352	*e*PKP	PKiKP	12 12 09.1	+0.3
	comp=Z,4.5nm,0.9s						
RETA	Reutte	150.30	356	*e*PKP	PKiKP	12 12 10.3	+0.4
	comp=Z,8.8nm,1.1s						
WATA	Walderalm	150.39	355	*e*PKP	PKiKP	12 12 10.0	-0.2
	comp=Z,4.9nm,0.7s						
MOTA	Moosalm	150.42	355	*e*PKP	PKiKP	12 12 10.5	+0.2
	comp=Z,15nm,1.4s						
WTTA	Wattenberg	150.45	354	*e*PKP	PKiKP	12 12 10.1	-0.3
	comp=Z,10nm,1.3s						
SQTA	Sankt Quirin	150.53	355	*e*PKiKP	PKiKP	12 12 11.1	+0.7
	comp=Z,12nm,1.4s						
DAVA	Damuels	150.56	357	*e*PKiKP	PKiKP	12 12 11.3	+0.8
	comp=Z,14nm,1.4s						
SOKA	Soboth	150.58	350	*i* PKP	PKiKP	12 12 10.7	+0.2
	comp=Z,8.8nm,1.3s						
MYKA	Terra Mystica	150.85	352	*e*PKP	PKiKP	12 12 11.2	+0.1
	comp=Z,5.4nm,1.0s						
ABTA	Abfaltersbach	150.88	353	*e*PKP	PKiKP	12 12 11.1	0.0
	comp=Z,4.9nm,0.6s						
FUORN	Ofenpass-Fuorn	151.20	356		PKiKP	12 12 12.8	+0.8
CIMO	Cimolais	151.31	353	PKPbc	PKiKP	12 12 11.9	0.0
STAL	STALIGIAL	151.33	353	PKPbc	PKiKP	12 12 12.2	+0.2
DIVS	Divibare	151.82	341	PKPdf	PKPdf	12 12 06.8	+0.5
COI	Coimbra	153.72	29	PKPdf	PKPdf	12 12 07.9	-1.2
COI				PKPab	PKPab	12 12 28.7	-1.0
TORD	Torodi Ar. Bea	172.61	128	PKP	PKPdf	12 12 27.0	-0.8
	comp=Z,0.6nm,1.0s,baz=186,slow=1.5,SNR=3.6						
TORD				PKPab	PKPab	12 13 55.4	+2.3
	comp=Z,2.1nm,1.1s,baz=260,slow=1.7,SNR=5.7						

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*IDC **14** 11:54:05.7±1.0, 8°.61S×157°.74E, h0^{km}, mb3.6/6, mbtmp3.7/7, ML4.9/1, Error ellipse: s-maj=35.0km s-min=23.2km az=143.0*

ISC 14 11:54:07.2±0.9**, 8°.6S**±0°.2×**157°.76E**±0°.10**, h10^{km}, n7, σ1^{s}56**/8**, mb3.7**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.31	111	Pn	Pn	11 54 43.4	-1.9
	320nm,0.3s,baz=277,slow=3.0,SNR=3.6						
HNR				Sn	Sb	11 55 18.7	+1.1
	2µm,0.3s,baz=240,slow=20,SNR=13						
	1µm,0.4s						
WRA	Warramunga Arr	25.29	241	P	P	11 59 32.7	-1.4
	0.9nm,0.7s,baz=66,slow=9.3,SNR=5.7						
	0.9nm,0.7s						
ASAR	Alice Springs	27.29	234	P	P	11 59 53.4	+1.2
	0.3nm,0.7s,baz=65,slow=11,SNR=1.7						
	0.3nm,0.7s						
STKA	Stephens Creek	27.59	211	P	P	11 59 55.4	+0.7
	1.5nm,0.7s,baz=32,slow=13,SNR=3.2						
	1.5nm,0.7s						
SONM	Songino Array	72.18	326	P	P	12 05 31.7	-0.8
	0.1nm,0.3s,baz=116,slow=9.8,SNR=1.8						
	0.1nm,0.3s						
ILAR	Eielson Array	83.89	21	P	P	12 06 37.0	+0.1
	0.3nm,0.4s,baz=255,slow=5.2,SNR=9.0						
	0.3nm,0.4s						
NVAR	Mina Array Bea	90.59	51	P	P	12 07 11.9	+1.6
	0.7nm,0.9s,baz=227,slow=5.8,SNR=4.3						
	0.7nm,0.9s						

ROM 14 11:57:04.0±0.0**, 42°.858N**±0°.002×**12°.907E**±0°.003**, h11^{km}, ML1.5**/17**, 8C-7D, Error ellipse: s-maj=0.2km s-min=0.1km az=262.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1215	Vallo di Nera,	0.06	207	P	Pg	11 57 06.7	+0.4
T1215				S	Sg	11 57 08.3	+0.4
T1215				AML	AML		
	comp=E,514µm,0.4s						
T1215				AML	AML		
	comp=N,959µm,0.1s						
T1215				AML	AML		
	comp=N,1022µm,0.1s						
T1215				AML	AML		
	comp=E,450µm,0.4s						
T1215				AML	AML		
	comp=N,1026µm,0.1s						
T1216	Preci, Frazion	0.09	68	P	Pg	11 57 06.9	+0.4
T1216				S	Sg	11 57 09.1	+0.6
T1216				AML	AML		
	comp=E,734µm,0.7s						
T1216				AML	AML		
	comp=N,772µm,0.2s						
CESI	CESI - Serrava	0.15	359	⇑P	Pg	11 57 07.9	+0.5
CESI				S	Sg	11 57 10.8	+0.9
CESI				AML	AML		
	comp=N,580µm,0.5s						
CESI				AML	AML		
	comp=E,197µm,1.0s						
CESI				AML	AML		
	comp=N,580µm,1.5s						
CESI				AML	AML		
	comp=E,197µm,1.0s						
T1212	Cascia, Frazio	0.15	136	⇓P	Pg	11 57 07.9	+0.5
T1212				S	Sg	11 57 10.7	+0.9
T1212				AML	AML		
	comp=E,459µm,1.2s						
T1212				AML	AML		
	comp=N,372µm,0.1s						
T1212				AML	AML		
	comp=E,458µm,1.2s						
T1212				AML	AML		
	comp=N,372µm,0.1s						
T1212				AML	AML		
	comp=E,458µm,0.8s						
T1217	Poggiodomo (PG	0.15	173	⇑P	Pg	11 57 07.9	+0.5
T1217				S	Sg	11 57 10.7	+0.9
T1219	Muccia, Frazio	0.21	20	⇑P	Pg	11 57 08.9	+0.5
T1219				S	Sg	11 57 12.5	+1.0
T1219				AML	AML		
	comp=E,220µm,0.2s						
T1219				AML	AML		
	comp=N,191µm,0.2s						
MC2	Monte Cornacci	0.21	75	⇑P	Pg	11 57 09.1	+0.5
FDMO	Fiordimonte	0.22	37	⇑P	Pg	11 57 09.1	+0.5
FDMO				S	Sg	11 57 12.9	+1.1
FDMO				AML	AML		
	comp=E,166µm,1.0s						
FDMO				AML	AML		
	comp=N,162µm,0.1s						
FDMO				AML	AML		
	comp=N,163µm,0.1s						
T1214	Arquata del Tr	0.24	114	⇓P	Pg	11 57 09.5	+0.4
T1214				S	Sg	11 57 13.6	+1.1

T1214				AML	AML		
	comp=E,158µm,0.2s						
T1214				AML	AML		
	comp=N,144µm,0.5s						
T1218	**Civita (PG)**	**0.24**	**141**	⇓P	Pg	11 57 09.5	+0.5
T1218				S	Sg	11 57 13.7	+1.2
T1218				AML	AML		
	comp=N,321µm,0.2s						
T1218				AML	AML		
	comp=E,174µm,0.2s						
MOMA	**Monte Martano**	**0.25**	**258**	P	Pg	11 57 09.7	+0.5
MOMA				S	Sb	11 57 14.2	-0.8
MOMA				AML	AML		
	comp=N,100µm,1.1s						
MOMA				AML	AML		
	comp=E,144µm,0.2s						
MOMA				AML	AML		
	comp=N,100µm,0.9s						
ASSB	**Assisi San Ben**	**0.26**	**315**	P	Pg	11 57 09.6	+0.3
ASSB				S	Sg	11 57 14.0	+1.1
ASSB				AML	AML		
	comp=E,175µm,0.8s						
ASSB				AML	AML		
	comp=N,192µm,0.4s						
T1220	**Camerino, Fraz**	**0.28**	**28**	⇑P	Pg	11 57 10.2	+0.5
T1220				S	Sb	11 57 15.1	-0.9
T1220				AML	AML		
	comp=E,620µm,0.2s						
T1220				AML	AML		
	comp=N,572µm,0.2s						
ARRO	**Arrone**	**0.30**	**201**	⇓P	Pg	11 57 10.5	+0.5
ARRO				AML	AML		
	comp=N,55µm,1.5s						
ARRO				AML	AML		
	comp=E,69µm,0.2s						
MMO1	**Montemonaco**	**0.31**	**82**	⇓P	Pg	11 57 10.6	+0.4
MMO1				S	Sb	11 57 15.8	-1.0
T1211	**Morro Reatino**	**0.33**	**187**	⇑P	Pg	11 57 10.9	+0.4
CESX	**Cesi**	**0.35**	**224**	⇓P	Pg	11 57 11.3	+0.5
CESX				S	Sb	11 57 16.6	-1.0
CESX				AML	AML		
	comp=E,93µm,0.4s						
CESX				AML	AML		
	comp=N,98µm,1.4s						
CESX				AML	AML		
	comp=N,98µm,0.6s						
ATCC	**AVT- Casa Cast**	**0.38**	**329**	⇓P	Pg	11 57 11.9	+0.3
ATCC				S	Sb	11 57 18.2	-0.5
ATCC				AML	AML		
	comp=E,95µm,0.2s						
ATCC				AML	AML		
	comp=N,84µm,0.6s						
ATCC				AML	AML		
	comp=E,95µm,1.8s						
T1241	**Roccafluvione,**	**0.39**	**90**	P	Pg	11 57 12.0	+0.4
T1241				S	Sb	11 57 18.3	-0.5
SNTG	**Esanatoglia**	**0.40**	**4**	P	Pg	11 57 12.0	+0.2
SNTG				AML	AML		
	comp=E,27µm,1.4s						
SNTG				AML	AML		
	comp=N,32µm,1.3s						
SNTG				AML	AML		
	comp=E,27µm,0.6s						
RM33	**Pellescritta (**	**0.42**	**147**	AML	AML		
	comp=E,45µm,1.5s						
RM33				AML	AML		
	comp=N,49µm,0.6s						
RM33				AML	AML		
	comp=E,45µm,0.5s						
EL6	**Elcito**	**0.49**	**17**	⇑P	Pg	11 57 13.8	+0.2
EL6				AML	AML		
	comp=E,56µm,1.2s						
EL6				AML	AML		
	comp=N,69µm,0.8s						
EL6				AML	AML		
	comp=N,69µm,1.2s						
EL6				AML	AML		
	comp=E,56µm,0.8s						
LRP	**Arpino**	**1.31**	**157**	AML	AML		
	comp=E,97µm,0.1s						
LRP				AML	AML		
	comp=N,73µm,0.2s						

ROM 14 11:58:03.7±0.1**, 42°.362N**±0°.004×**13°.345E**±0°.005**,**
h10km, ML1.9/22**, 8C-7D, Error ellipse: s-maj=0.4km**
s-min=0.3km az=52.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.04**	**101**	⇓P	Pg	11 58 06.3	+0.5
AQU				S	Sg	11 58 07.8	+0.6
AQU				AML	AML		
	comp=N,4925µm,0.4s						
AQU				AML	AML		
	comp=N,4655µm,0.4s						
AQU				AML	AML		
	comp=E,3305µm,0.2s						
AQU				AML	AML		
	comp=N,4920µm,0.4s						
AQU				AML	AML		
	comp=E,3690µm,0.2s						
AQU				AML	AML		
	comp=N,4655µm,1.6s						
AQU				AML	AML		
	comp=N,4920µm,1.6s						
AQU				AML	AML		
	comp=E,3690µm,1.8s						
AQU				AML	AML		
	comp=E,3305µm,1.8s						
T1247	**Pizzolo (AQ)**	**0.09**	**336**	⇑P	Pg	11 58 06.7	+0.5
T1247				S	Sg	11 58 08.6	+0.5
T1247				AML	AML		
	comp=E,2505µm,0.4s						
T1247				AML	AML		
	comp=N,3030µm,0.7s						
RM33	**Pellescritta (**	**0.18**	**327**	P	Pg	11 58 08.1	+0.5
RM33				S	Sg	11 58 11.6	+1.3
RM33				AML	AML		
	comp=E,578µm,0.3s						
RM33				AML	AML		
	comp=N,488µm,0.6s						
RM33				AML	AML		
	comp=N,488µm,1.4s						
CAMP	**Campotosto**	**0.18**	**15**	⇑P	Pg	11 58 08.1	+0.4
CAMP				S	Sg	11 58 11.2	+0.7
CAMP				AML	AML		
	comp=E,342µm,0.6s						
CAMP				AML	AML		
	comp=N,626µm,0.3s						
CAMP				AML	AML		
	comp=N,626µm,1.7s						
GIGS	**Gran Sasso**	**0.19**	**62**	⇑P	Pg	11 58 08.2	+0.4
GIGS				S	Sg	11 58 11.4	+0.8
GIGS				AML	AML		
	comp=E,216µm,1.3s						
GIGS				AML	AML		
	comp=E,216µm,1.3s						
GIGS				AML	AML		
	comp=N,231µm,0.2s						
GIGS				AML	AML		
	comp=E,216µm,0.7s						
FIAM	**Fiamignano**	**0.19**	**241**	P	Pg	11 58 08.5	+0.6
FIAM				S	Sg	11 58 11.8	+1.0
FIAM				AML	AML		
	comp=N,726µm,0.4s						
FIAM				AML	AML		
	comp=E,648µm,0.7s						
FIAM				AML	AML		
	comp=N,726µm,1.6s						
FAGN	**Fagnano**	**0.20**	**118**	P	Pb	11 58 08.8	-0.7
FAGN				S	Sg	11 58 12.4	+1.4
FAGN				AML	AML		
	comp=N,1635µm,0.3s						
FAGN				AML	AML		
	comp=E,1710µm,0.4s						
T1222	**Castel Sant'An**	**0.23**	**280**	P	Pg	11 58 09.0	+0.5
T1222				S	Sg	11 58 13.1	+1.3
T1222				AML	AML		
	comp=E,509µm,1.6s						
T1222				AML	AML		
	comp=N,321µm,0.6s						
T1222				AML	AML		
	comp=E,509µm,0.4s						
T1222				AML	AML		
	comp=N,321µm,1.4s						
TERO	**Teramo**	**0.32**	**36**	⇑P	Pg	11 58 10.2	0.0
TERO				AML	AML		
	comp=N,441µm,0.9s						
TERO				AML	AML		
	comp=E,494µm,0.5s						
TERO				AML	AML		
	comp=E,466µm,0.5s						
TERO				AML	AML		
	comp=N,453µm,0.9s						
PTQR	**Pietraquaria**	**0.34**	**173**	⇓P	Pg	11 58 11.0	+0.4
PTQR				S	Sb	11 58 16.4	-1.1
PTQR				AML	AML		
	comp=E,220µm,0.3s						
PTQR				AML	AML		
	comp=N,274µm,0.3s						
PTQR				AML	AML		
	comp=E,220µm,1.7s						
T0110	**Collepietro**	**0.35**	**113**	⇓P	Pb	11 58 11.5	-0.6
T0110				AML	AML		
	comp=E,258µm,0.7s						
T0110				AML	AML		
	comp=N,316µm,0.3s						
T1218	**Civita (PG)**	**0.35**	**331**	P	Pg	11 58 11.3	+0.6
T1218				S	Sb	11 58 17.1	-0.7
T1218				AML	AML		
	comp=N,254µm,0.8s						
T1218				AML	AML		
	comp=E,189µm,0.7s						
T1218				AML	AML		
	comp=N,239µm,0.8s						
T1218				AML	AML		
	comp=E,246µm,1.3s						
T1218				AML	AML		
	comp=E,189µm,0.7s						
T1218				AML	AML		
	comp=N,239µm,0.8s						
T1218				AML	AML		
	comp=N,239µm,1.2s						
T1218				AML	AML		
	comp=N,254µm,1.2s						
VCEL	**Villa Celiera**	**0.37**	**85**	P	Pb	11 58 12.2	-0.2
VCEL				AML	AML		
	comp=E,501µm,0.6s						
VCEL				AML	AML		
	comp=N,528µm,1.5s						
VCEL				AML	AML		
	comp=E,500µm,0.6s						
VCEL				AML	AML		
	comp=E,500µm,1.4s						
VCEL				AML	AML		
	comp=N,528µm,0.5s						
T1211	**Morro Reatino**	**0.40**	**295**	P	Pg	11 58 12.1	+0.4
T1211				AML	AML		
	comp=E,134µm,0.5s						
T1211				AML	AML		
	comp=N,232µm,0.3s						
T1214	**Arquata del Tr**	**0.41**	**346**	P	Pg	11 58 12.2	+0.3
T1212	**Cascia, Frazio**	**0.45**	**330**	⇓P	Pg	11 58 12.8	+0.2
T1212				S	Sb	11 58 20.0	-0.5
T1212				AML	AML		
	comp=E,92µm,0.2s						
T1212				AML	AML		
	comp=N,113µm,0.2s						
T1212				AML	AML		
	comp=N,113µm,0.2s						
T1212				AML	AML		
	comp=E,92µm,0.2s						
T1217	**Poggiodomo (PG**	**0.46**	**319**	⇓P	Pg	11 58 13.2	+0.4
CERT	**Cerreto**	**0.49**	**213**	⇑P	Pg	11 58 13.5	+0.1
CERT				AML	AML		
	comp=N,106µm,0.3s						
CERT				AML	AML		
	comp=N,106µm,0.3s						
CERT				AML	AML		
	comp=E,164µm,0.4s						
CERT				AML	AML		
	comp=N,106µm,1.7s						
T1241	**Roccafluvione,**	**0.50**	**7**	P	Pg	11 58 13.3	-0.1
T1241				AML	AML		
	comp=E,118µm,0.7s						
T1241				AML	AML		
	comp=N,95µm,0.6s						
T1241				AML	AML		
	comp=E,118µm,0.7s						
T1241				AML	AML		
	comp=N,95µm,0.6s						
T1241				AML	AML		
	comp=E,118µm,1.3s						
MMO1	**Montemonaco**	**0.54**	**359**	⇑P	Pg	11 58 14.5	+0.3
INTR	**Introdacqua**	**0.54**	**130**	P	Pg	11 58 14.5	+0.2
INTR				AML	AML		
	comp=E,79µm,1.1s						
INTR				AML	AML		
	comp=N,114µm,0.4s						
INTR				AML	AML		
	comp=E,79µm,0.9s						
T1215	**Vallo di Nera,**	**0.56**	**321**	⇓P	Pg	11 58 14.9	+0.2
OFFI	**Offida**	**0.62**	**24**	⇓P	Pb	11 58 16.9	+0.1
OFFI				AML	AML		
	comp=E,378µm,0.7s						
OFFI				AML	AML		
	comp=N,382µm,0.8s						
OFFI				AML	AML		
	comp=N,382µm,1.2s						
FDMO	**Fiordimonte**	**0.70**	**344**	AML	AML		
	comp=N,64µm,0.2s						
FDMO				AML	AML		
	comp=E,96µm,0.5s						
CSP1	**Cessapalombo**	**0.74**	**352**	⇑P	Pg	11 58 17.6	-0.4
CSP1				S	Sb	11 58 29.9	+1.1
T1219	**Muccia, Frazio**	**0.74**	**340**	⇑P	Pg	11 58 17.9	0.0
T1219				AML	AML		
	comp=E,55µm,0.3s						
T1219				AML	AML		
	comp=N,72µm,1.5s						
T1219				AML	AML		
	comp=N,72µm,1.5s						
T1219				AML	AML		
	comp=E,55µm,1.7s						
T1219				AML	AML		
	comp=N,72µm,0.5s						
T1220	**Camerino, Fraz**	**0.77**	**346**	AML	AML		
	comp=N,229µm,0.2s						
T1220				AML	AML		
	comp=E,321µm,0.3s						
APEC	**Apecchio**	**1.38**	**331**	AML	AML		
	comp=E,110µm,1.6s						
APEC				AML	AML		
	comp=E,110µm,0.4s						
APEC				AML	AML		
	comp=N,87µm,0.4s						

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*INET **14** 12:00:09.4±1.1, 13°.08N×86°.72W, h3km±10km, MW2.6*
*SNET **14** 12:00:10.9±0.6, 13°.09N×86°.71W, h13km±23km, ML2.7*
ISC 14 12:00:09.5±0.9**, 13°.09N**±0°.06×**86°.70W**±0°.04**, h10km, n7,**
σ**0ˢ.50**/12**, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.52**	**222**	*e*P	**Pg**	**12 00 19.7**	**0.0**
MATN	**Matagalpa**	**0.77**	**102**	*e*P	**Pg**	**12 00 24.8**	**+0.5**
TGUH	**Tegucigalpa,Un**	**1.11**	**330**	*e*P	**Pg**	**12 00 30.4**	**-0.5**
TGUH				*e*S	**Sg**	**12 00 45.8**	**+0.4**
CNCH	**Conchagua**	**1.12**	**280**	*e*P	**Pg**	**12 00 30.6**	**-0.6**
CNCH				IAML		12 00 48.2	
	comp=Z,329nm,0.1s						
LCND	**La Caada**	**1.18**	**281**	*e*P	**Pb**	**12 00 31.8**	**-0.3**
LCND				*e*S	**Sb**	**12 00 47.6**	**+0.2**
LCND				IAML		12 00 50.1	
	comp=Z,66nm,0.2s						
BOAB	**BOACO BROADBAN**	**1.19**	**122**	*e*P	**Pn**	**12 00 31.7**	**-0.6**
BOAB				*e*P	**Pb**	**12 00 31.8**	**-0.3**
BOAB				*e*S	**Sb**	**12 00 47.6**	**0.0**
FAGO	**Alcalda de S**	**1.50**	**294**	*e*P	**Pn**	**12 00 37.0**	**+0.5**
FAGO				*e*S	**Sn**	**12 00 56.9**	**+0.7**

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*SOME **14** 12:01:49.1, 39°.38N×73°.10E, h10km*
*KRNET **14** 12:01:52.0±0.1, 39°.35N×73°.33E, mb3.0*
*NNC **14** 12:01:52.5±2.8, 39°.24N×73°.71E, h0km, mb3.5, mpv3.1,*
Error ellipse: s-maj=20.6km s-min=14.7km az=166.0
ISC 14 12:01:55.0±1.3**, 39°.40N**±0°.06×**73°.22E**±0°.04**, h10km, n42,**
σ1ˢ.**53**/58**, 22C-11D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**1.10**	**275**	⇑*e*P	**Pg**	**12 02 14.8**	**-1.4**
	baz=77						
DRK				⇑*e*S	**Sb**	**12 02 31.5**	**+0.6**
	baz=77						
OHH	**Osh**	**1.17**	**344**	⇓*i*P	**Pn**	**12 02 15.8**	**-1.8**
	baz=41						
OHH				⇓*i*S	**Sg**	**12 02 33.1**	**+0.3**
	baz=41						
BTK	**Batken**	**1.97**	**290**	⇑*e*P	**Pb**	**12 02 30.1**	**-0.9**
	baz=91						
BTK				⇑*i*S	**Sg**	**12 02 57.9**	**-0.3**
	baz=91						
GAR	**Garm**	**2.29**	**261**	⇑*e*P	**Pb**	**12 02 34.4**	**-2.1**
	baz=63						
GAR				⇑*e*S	**Sb**	**12 03 04.8**	**-0.1**
	baz=63						
ARK	**Arkit**	**2.58**	**339**	⇑*i*P	**Pn**	**12 02 38.6**	**+1.6**
	baz=38						
ARK				⇑*i*S	**Sb**	**12 03 12.3**	**-1.0**
	baz=38						
ARLS	**Aral**	**2.60**	**18**	⇑*e*P	**Pn**	**12 02 38.2**	**+0.9**
	baz=17						
ARLS				⇑*e*S	**Sb**	**12 03 11.3**	**-2.6**
	baz=17						
TRKS	**Terek-Say**	**2.66**	**324**	⇑*e*P	**Pn**	**12 02 38.9**	**+0.9**
	baz=23						
TRKS				⇑*i*S	**Sn**	**12 03 12.7**	**+2.3**
	baz=23						
AML	**Almayashu**	**2.75**	**7**	⇓Pn	**Pn**	**12 02 40.8**	**+1.2**
	0.5nm,0.6s						
AML				⇑Sn	**Sb**	**12 03 18.7**	**+0.1**
	5.2nm,0.7s						
AML	**Almayashu**	**2.75**	**7**	⇑*i*P	**Pn**	**12 02 40.2**	**+0.6**
	baz=6.0						
AML				⇑*i*S	**Sb**	**12 03 15.6**	**-2.9**
	baz=6.0						
NRN	**Naryn**	**2.94**	**45**	⇓*i*P	**Pn**	**12 02 41.5**	**-0.6**
	baz=43						
NRN				⇓*i*S	**Sn**	**12 03 17.9**	**+0.3**
	baz=43						
UCH	**Uchtor**	**2.99**	**19**	⇓*e*P	**Pn**	**12 02 43.4**	**+0.5**
	baz=17						
UCH				⇓*e*S	**Sn**	**12 03 21.1**	**+2.0**
	baz=17						
MNAS	**Manas**	**3.13**	**350**	⇑*i*P	**Pn**	**12 02 45.8**	**+1.2**
	baz=49						
MNAS				⇑*i*S	**Sn**	**12 03 25.2**	**+3.1**
	baz=49						
EKS2	**Erkin-Say**	**3.29**	**7**	⇓*e*P	**Pn**	**12 02 47.5**	**+0.8**
	baz=6.0						
EKS2				⇓*e*S	**Sn**	**12 03 28.3**	**+2.4**
	baz=6.0						
MRKS	**Merke**	**3.34**	**0**	Pg	**Pb**	**12 02 51.1**	**-3.3**
	1.9nm,0.3s						
MRKS				Lg	Lg	12 03 35.5	
	8.4nm,0.6s						
MRKS	**Merke**	**3.34**	**0**	*e*Pg	**Pb**	**12 02 51.1**	**-3.3**
	1.9nm,0.0s						
MRKS				*e*Lg	Lg	12 03 35.5	
	8.5nm,0.1s						
AAK	**Ala-Archa**	**3.38**	**16**	⇑*e*P	**Pn**	**12 02 48.6**	**+0.7**
	baz=15						
AAK				⇑*e*S	**Sn**	**12 03 30.3**	**+2.1**
	baz=15						
IUG	**Iuzhnay**	**3.66**	**320**	Pg	**Pn**	**12 02 54.4**	**+2.6**
	14nm,0.5s						
IUG				Lg	Lg	12 03 41.2	
	7.0nm,0.9s						
IUG	**Iuzhnay**	**3.66**	**320**	*e*Pg	**Pn**	**12 02 54.4**	**+2.6**
	14nm,0.5s						
IUG				*e*Lg	Lg	12 03 41.2	
	7.9nm,0.1s						
TKM2	**Tokmak 2**	**3.95**	**26**	⇑Pn	**Pn**	**12 02 58.1**	**+2.2**
	8.0nm,1.4s						
TKM2				⇓Sn	**Sb**	**12 03 53.1**	**+0.4**
	5.9nm,0.6s						
SGDS	**Sogindy**	**4.19**	**14**	Pg	**Pb**	**12 03 08.3**	**-0.4**
	1.5nm,0.7s						
SGDS				Lg	Lg	12 04 04.9	
	5.0nm,0.8s						
KST	**Kastek**	**4.19**	**29**	Pg	**Pb**	**12 03 07.4**	**-1.4**
	4.0nm,0.8s						
KST				Lg	Lg	12 04 03.4	
	11nm,0.7s						
KST	**Kastek**	**4.19**	**29**	*e*Pg	**Pb**	**12 03 07.4**	**-1.4**
	4.0nm,0.2s						
KST				*e*Lg	Lg	12 04 03.5	
	11nm,0.2s						
KK31	**Karatay Array**	**4.23**	**332**	⇑Pn	**Pn**	**12 03 01.8**	**+2.3**
	0.6nm,0.3s,baz=138,slow=13,SNR=18						
KK31				⇑Sn	**Sb**	**12 03 58.0**	**-2.6**
	1.0nm,0.3s						
DGS	**Degeres**	**4.29**	**26**	Pg	**Pb**	**12 03 10.1**	**-0.5**
	3.1nm,0.7s						
DGS				Lg	Lg	12 04 08.4	
	7.9nm,0.9s						
DGS	**Degeres**	**4.29**	**26**	*e*Pg	**Pb**	**12 03 10.2**	**-0.5**
	3.1nm,0.7s						
DGS				*e*Lg	Lg	12 04 08.4	
	9.1nm,0.1s						
IZV	**Izvestkoviy**	**4.44**	**34**	Pg	**Pb**	**12 03 12.5**	**-0.7**
	1.9nm,0.4s						
IZV				Lg	Lg	12 04 12.3	
	10nm,0.7s						
IZV	**Izvestkoviy**	**4.44**	**34**	*e*Pg	**Pb**	**12 03 12.5**	**-0.7**
	1.9nm,0.2s						
IZV				*e*Lg	Lg	12 04 12.3	
	10nm,0.7s						
MTBS	**Maitube**	**4.44**	**32**	Pg	**Pb**	**12 03 13.2**	**0.0**
	2.4nm,0.4s						
MTBS				Lg	Lg	12 04 13.2	
	7.9nm,0.6s						
MTBS	**Maitube**	**4.44**	**32**	*e*Pg	**Pb**	**12 03 13.2**	**0.0**
	2.4nm,0.4s						
MTBS				*e*Lg	Lg	12 04 13.2	
	7.9nm,0.6s						
TNSS	**Tian-Shan**	**4.59**	**37**	Pg	**Pb**	**12 03 14.9**	**-1.0**
	3.4nm,0.6s						
TNSS				Lg	Lg	12 04 16.1	
	4.3nm,0.5s						
TNSS	**Tian-Shan**	**4.59**	**37**	*e*Pg	**Pb**	**12 03 14.9**	**-1.0**
	2.9nm,0.1s						
TNSS				*e*Lg	Lg	12 04 16.1	
	4.7nm,0.4s						
KRBS	**Karabastau**	**4.67**	**22**	Pg	**Pb**	**12 03 16.5**	**-0.6**
	1.6nm,0.4s						
KRBS				Lg	Lg	12 04 19.5	
	8.3nm,1.0s						
KRBS	**Karabastau**	**4.67**	**22**	*e*Pg	**Pb**	**12 03 16.5**	**-0.6**
	1.6nm,0.4s						
KRBS				*e*Lg	Lg	12 04 19.5	
	8.3nm,1.0s						
MDOK	**Medeo**	**4.74**	**36**	Pg	**Pb**	**12 03 17.5**	**-0.8**
	2.1nm,0.4s						
MDOK				Lg	Lg	12 04 20.4	
	6.9nm,1.2s						
MDOK	**Medeo**	**4.74**	**36**	*e*Pg	**Pb**	**12 03 17.5**	**-0.8**
	2.1nm,0.4s						
MDOK				*e*Lg	Lg	12 04 20.4	
	6.8nm,0.2s						
KOTS	**Kotyrbulak**	**4.82**	**36**	Pg	**Pb**	**12 03 19.4**	**-0.3**
	2.9nm,0.6s						
KOTS				Lg	Lg	12 04 23.9	
	25nm,0.5s						
KOTS	**Kotyrbulak**	**4.82**	**36**	*e*Pg	**Pb**	**12 03 19.4**	**-0.3**
	2.9nm,0.6s						
KOTS				*e*Lg	Lg	12 04 23.9	
	25nm,0.5s						
KTBS	**Karatobe**	**5.03**	**30**	Pg	**Pb**	**12 03 22.4**	**-0.7**
	1.6nm,0.7s						
KTBS				Lg	Lg	12 04 29.9	
	11nm,0.9s						
KTBS	**Karatobe**	**5.03**	**30**	*e*Pg	**Pb**	**12 03 22.4**	**-0.7**
	1.6nm,0.2s						
KTBS				*e*Lg	Lg	12 04 29.9	
	11nm,0.1s						
KUU	**Kurty**	**5.06**	**26**	Pg	**Pb**	**12 03 23.6**	**0.0**
	1.4nm,1.1s						
KUU				Lg	Lg	12 04 31.2	
	4.9nm,0.6s						
KUU	**Kurty**	**5.06**	**26**	*e*Pg	**Pb**	**12 03 23.6**	**0.0**
	1.1nm,0.1s						
KUU				*e*Lg	Lg	12 04 31.2	
	4.4nm,0.2s						
AB31	**Akbulak array**	**13.67**	**320**	⇓P	**Pn**	**12 05 09.2**	**+0.4**
	0.5nm,0.6s,baz=126,slow=13,SNR=5.5						

IDC **14** *12:07:56.2±1.6, 6°.95N×104°.35W, h0^{km}, mb3.8/9, mbtmp3.8/9, MS3.8/11, Error ellipse: s-maj=70.0km s-min=20.7km az=56.0*

NEIC **14** *12:07:58.8±0.9, 6°.9N±0°.1×104°.3W±0°.2, h10^{km}±2^{km}, mb4.3/32, Error ellipse: s-maj=27.2km s-min=18.2km az=241.0*

ISC 14 12:07:57.5±1.2**, 6°.9N**±0°.1×**104°.4W**±0°.2**, h10^{km}, n55, σ0^{s}.67**/47**, mb4.3**/23**, MS3.9**/9**, Galapagos Triple Junction region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	12.06	27	Pn	Pn	12 10 49.4	-0.2
CMIG	Matias Romero	13.76	41	LR	LR	12 15 17.1	
	comp=Z,236nm,21.0s,baz=260,slow=32						
CCIG	Comitan	15.20	51	Pn	Pn	12 11 33.0	+0.4
PAYG	Puerto Ayora	15.92	117	Pn	Pn	12 11 41.5	-0.2
ZAIG	Zacatecas	15.92	6	Pn	Pn	12 11 42.2	+0.2
LPIG	La Paz	18.07	342	LR	LR	12 16 38.7	
	comp=Z,104nm,18.3s,baz=141,slow=29						
HPIG		20.01	357	P	P	12 12 30.9	+0.2
KVTX	Kingsville	21.48	16	P	P	12 12 47.2	+0.9
833A	Chaparral WMA,	21.87	12	P	P	12 12 50.9	+0.4
833A				IAmb	IAmb	12 12 57.2	
	comp=Z,15nm,1.4s						
TXAR	Lajitas Array	22.37	2	P	P	12 12 56.8	+0.7
	comp=Z,0.7nm,0.9s,baz=185,slow=11,SNR=7.6						
TXAR				LR	LR	12 21 02.1	
	comp=Z,524nm,18.0s,baz=186,slow=35						
	comp=Z,0.7nm,0.9s						
TXAR	Lajitas Array	22.37	2	P	P	12 12 55.5	-0.6
TX31	Lajitas Ar. Si	22.37	2	P	P	12 12 54.8	-1.3
TX31				IAmb	IAmb	12 12 59.8	
	comp=Z,19nm,1.5s						
TX32	Lajitas Array	22.37	2	P	P	12 12 55.3	-0.7
JCT	Junction City	23.89	10	P	P	12 13 11.7	+0.2
JCT				IAmb	IAmb	12 13 14.2	
	comp=Z,12nm,1.3s						
HKT	Hockley	24.34	18	P	P	12 13 17.1	+1.5
319A	Douglas	24.83	350	P	P	12 13 20.7	+0.6
319A				IAmb	IAmb	12 13 22.8	
	comp=Z,10nm,1.2s						
GDL2	Guadalupe Moun	25.22	0	P	P	12 13 23.9	+0.3
HTMS	Hat Mesa	25.50	1	P	P	12 13 26.5	+0.3
121A	Cookes Peak, D	25.75	353	P	P	12 13 29.1	+0.5
121A				IAmb	IAmb	12 13 31.8	
	comp=Z,11nm,1.4s						
DUN6	Lazy B Ranch	25.95	351	P	P	12 13 31.1	+0.8
PIX	Pinacate	26.01	342	P	P	12 13 30.6	-0.1
TUC	Tucson	26.02	348	P	P	12 13 31.9	+1.0
TUC				IAmb	IAmb	12 13 34.8	
	comp=Z,8.9nm,1.2s						
214A	Organ Pipe Nat	26.19	344	P	P	12 13 33.1	+0.7
214A				IAmb	IAmb	12 13 36.2	
	comp=Z,9.5nm,1.5s						
113A	Mohawk Valley,	27.23	342	P	P	12 13 42.1	+0.4
113A				IAmb	IAmb	12 13 44.0	
	comp=Z,8.2nm,1.3s						
ANMO	Albuquerque	28.02	356	LR	LR	12 23 31.0	
	comp=Z,133nm,20.8s,baz=244,slow=34						
PFO	Pinyon Flats O	28.89	339	P	P	12 13 56.6	-0.1
	comp=Z,2.3nm,1.0s,baz=170,slow=8.9,SNR=4.2						
	comp=Z,2.3nm,1.0s						
PFO	Pinyon Flats O	28.89	339	P	P	12 13 56.8	+0.1
PFO				IAmb	IAmb	12 13 58.6	
	comp=Z,11nm,1.5s						
KNB	Kanab	31.00	347	P	P	12 14 15.8	+0.4
LCMT	Little Creek M	31.09	346	P	P	12 14 16.6	+0.4
RUSC	La Rusia	31.10	90	P	P	12 14 16.6	-0.4
PV13	Radium Mtn., P	31.43	353	P	P	12 14 19.3	+0.1
PV13				IAmb	IAmb	12 14 20.8	
	comp=Z,6.2nm,1.2s						
DSP	Deep Springs	32.80	340	P	P	12 14 30.9	-0.2
DSP				IAmb	IAmb	12 14 33.0	
	comp=Z,4.3nm,1.4s						
P17A	Butcher Ranch,	32.98	351	P	P	12 14 33.2	+0.4
P17A				IAmb	IAmb	12 14 36.0	
	comp=Z,4.6nm,1.1s						
MPU	Maple Canyon	33.66	350	P	P	12 14 38.5	-0.2
NVAR	Mina Array Bea	33.87	340	P	P	12 14 41.8	+1.2
	comp=Z,0.8nm,1.1s,baz=151,slow=2.1,SNR=2.9						
NVAR				LR	LR	12 27 28.2	
	comp=Z,82nm,18.1s,baz=115,slow=35						
	comp=Z,0.8nm,1.1s						
RPN	Rapa Nui	34.12	188	LR	LR	12 25 15.5	
	comp=Z,199nm,18.3s,baz=356,slow=30						
SPUT	South Promonto	35.06	349	P	P	12 14 52.1	+1.3
SPUT				IAmb	IAmb	12 14 53.5	
	comp=Z,5.3nm,1.1s						
ELK	Elko	35.12	346	LR	LR	12 26 55.2	
	comp=Z,126nm,18.3s,baz=66,slow=32						
BW06	Boulder Array	36.06	354	P	P	12 14 59.3	-0.2
PD31	Pinedale Array	36.06	354	P	P	12 14 59.2	-0.3
PD31				IAmb	IAmb	12 15 05.5	
	comp=Z,9.7nm,1.5s						
PDAR	Pinedale Array	36.06	354	P	P	12 14 58.3	-1.2
	comp=Z,2.9nm,1.1s,baz=160,slow=6.1,SNR=12						
	comp=Z,2.9nm,1.1s						
MFID	Camas Ranch	37.78	346	P	P	12 15 14.5	+0.5
ETMB	Extrema	41.46	113	P	P	12 15 44.7	-0.2
ETMB				IAmb	IAmb	12 15 45.5	
	comp=Z,4.4nm,0.9s						
AGMN	Agassiz Nation	41.93	9	P	P	12 15 48.2	0.0
LPAZ	La Paz	42.60	123	P	P	12 15 56.1	+1.2
	comp=Z,0.7nm,0.5s,baz=311,slow=9.3,SNR=2.1						
	comp=Z,0.7nm,0.5s						
LPAZ	La Paz	42.60	123	P	P	12 15 55.0	+0.2
LTY	Liberty	42.61	344	P	P	12 15 54.6	+0.7
LTY				IAmb	IAmb	12 16 22.3	
	comp=Z,9.3nm,1.5s						
SADO	Sadowa	43.70	26	LR	LR	12 34 46.0	
	comp=Z,108nm,18.5s,baz=128,slow=37						
SIV	San Ignacio	48.50	118	P	P	12 16 40.9	-0.1
	comp=Z,0.9nm,0.9s,baz=282,slow=9.9,SNR=4.3						
	comp=Z,0.9nm,0.9s						
YKA	Yellowknife Ar	56.04	354	P	P	12 17 35.3	-0.9
	comp=Z,1.8nm,1.1s,baz=164,slow=7.5,SNR=16						
YKA				LR	LR	12 40 33.2	
	comp=Z,128nm,19.2s,baz=242,slow=35						
	comp=Z,1.8nm,1.1s						
PLCA	Paso Flores	56.64	150	LR	LR	12 36 00.9	
	comp=Z,128nm,21.1s,baz=154,slow=30						
FRB	Frobisher Bay	62.34	17	LR	LR	12 44 15.3	
	comp=Z,69nm,18.2s,baz=23,slow=35						
INK	Inuvik	64.38	348	P	P	12 18 32.9	-0.4
	comp=Z,3.3nm,1.1s,baz=141,slow=8.4,SNR=7.0						
	comp=Z,3.3nm,1.1s						
ILAR	Eielson Array	65.12	341	P	P	12 18 37.0	-1.2
	comp=Z,1.8nm,1.0s,baz=153,slow=5.5,SNR=15						
	comp=Z,1.8nm,1.0s						
CMAR	Chiang Mai Arr	145.92	318	PKPbc	PKPbc	12 27 38.5	+0.3
	comp=Z,3.4nm,1.1s,baz=23,slow=2.9,SNR=19						

LVSN **14** *12:10:44.9±6.9, 57°.43N×23°.26E, h0^{km}±83^{km}, ML2.4*

HEL 14 12:10:50.1±0.6**, 60°.97N**×**29°.21E, h0^{km}, ML1.5, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUF	Ruokolahti	0.47	345	PG	Pg	12 10 58.4	-0.7
RUF				SG	Sg	12 11 04.2	-1.2
RUF				MSG		12 11 05.7	
	comp=Z,9.7nm,0.2s						
VJF	Virojoki	0.92	243	PG	Pg	12 11 06.5	-1.2
VJF				MSG		12 11 18.4	
	comp=Z,8.0nm,0.2s						
VJF				SB	Sb	12 11 21.3	-0.2
FIA0	FINESS Array S	1.59	289	PG	Pn	12 11 18.4	-1.0
	baz=104						
FIA0				MSG		12 11 37.8	
	comp=Z,3.8nm,0.2s						
FIA0				SG	Sn	12 11 38.7	-1.9
PVF	Pernaja	1.70	257	PG	Pn	12 11 20.4	-0.5
PVF				MSG		12 11 40.9	
	comp=Z,4.9nm,0.2s						
PVF				SN	Sg	12 11 44.6	+0.1
KAF	Kangasniemi	1.80	311	PG	Pb	12 11 23.2	-0.8
KAF				MSG		12 11 43.8	
	comp=Z,5.3nm,0.2s						
KAF				SN	Sn	12 11 45.8	-0.1
JOF	Joensuu	2.20	26	PB	Pn	12 11 28.5	+0.7
JOF				SB	Sn	12 11 55.7	+0.1
ARBE	Arbavere	2.23	228	eP	Pn	12 11 29.0	+0.9
ARBE				eS	Sg	12 12 01.7	+0.2
ARBE				AML	AML	12 12 39.0	
	comp=N,47nm,0.5s						
ARBE				AML	AML	12 12 45.3	
	comp=E,82nm,0.7s						
ARBE				AML	AML	12 12 46.3	
	comp=Z,71nm,0.6s						
NUR	Nurmijrvi	2.29	260	PG	Pn	12 11 29.9	+0.9
	baz=76						
NUR				MSG		12 11 57.7	
	comp=Z,1.5nm,0.2s						
KEF	Keuruu	2.40	302	MSG		12 12 01.1	
	comp=Z,2.0nm,0.2s						
KEF				SG	Sb	12 12 03.0	-1.2
MEF	Metsahovi	2.49	254	eP	Pb	12 11 33.8	-1.8
MEF				eS	Sb	12 12 08.0	+1.2
MEF	Metsahovi	2.49	254	PG	Pb	12 11 34.0	-1.6
MEF				MSG		12 12 03.7	
	comp=Z,2.7nm,0.2s						
VSU	Vasula	2.81	208	eS	Sn	12 11 53.8	-17
VSU				AML	AML	12 11 56.2	
	comp=Z,24nm,0.1s						
VSU				AML	AML	12 12 13.1	
	comp=N,34nm,0.4s						
VSU				AML	AML	12 12 30.9	
	comp=E,30nm,0.3s						
RAF	Rauma	3.62	274	eS	Sn	12 12 33.1	+2.3

IDC **14** *12:16:29.7±1.0, 21°.59S×67°.81W, h119^{km}±13^{km}, mb3.7/2, mbtmp3.9/4, Error ellipse: s-maj=38.5km s-min=15.4km az=131.0*

GUC **14** *12:16:31.0±0.6, 21°.57S×68°.29W, h147^{km}±5^{km}, ML3.8*

ISC 14 12:16:30.0±0.9**, 21°.49S**±0°.04×**68°.14W**±0°.08**, h132^{km}**±10^{km}**, n21, σ1^{s}.59**/38**, 9C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	1.07	253	⇑iP	Pn	12 16 54.5	+0.6
PB09				eS	Sn	12 17 12.9	+0.9
LVC	Limon Verde	1.32	212	P	Pn	12 16 56.7	0.0
	132nm,0.3s,baz=33,slow=8.9,SNR=504						
LVC				S	Sn	12 17 16.9	-0.1
	95nm,0.4s,baz=108,slow=20,SNR=4.7						
LVC	Limon Verde	1.32	212	eP	Pn	12 16 56.4	-0.3
LVC				eS	Sn	12 17 16.7	-0.3
PB01	IPOC Station P	1.33	289	⇑iP	Pn	12 16 56.8	+0.4
PB01				eS	Sn	12 17 16.7	+0.1
PB01				IAML		12 17 18.1	
	comp=N,2μm,0.3s						
PB03	IPOC Station P	1.60	249	⇑eP	Pn	12 16 59.1	-0.3
PB03				eS	Sn	12 17 20.9	-1.1
PB03				IAML		12 17 22.1	
	comp=E,1μm,0.1s						
PB07	IPOC Station P	1.64	261	⇑iP	Pn	12 16 59.9	-0.1
PB07				eS	Sn	12 17 22.0	-0.8
PB07				IAML		12 17 22.8	
	comp=E,1μm,0.1s						
PB08	IPOC Station P	1.64	325	⇓iP	Pn	12 17 02.1	+1.9
PB08				eS	Sn	12 17 25.6	+2.4
PB08				IAML		12 17 26.6	
	comp=N,471nm,0.2s						
PB02	IPOC Station P	1.64	276	⇑iP	Pn	12 16 59.9	-0.1
PB02				eS	Sn	12 17 22.5	-0.3
PB02				IAML		12 17 25.8	
	comp=E,893nm,0.1s						
PB06	IPOC Station P	1.80	227	⇑iP	Pn	12 17 01.5	-0.3
PB06				eS	Sn	12 17 25.1	-1.0
PB06				IAML		12 17 26.4	
	comp=E,469nm,0.2s						
PB04	IPOC Station P	2.04	245	⇑eP	Pn	12 17 04.1	-0.7
PB04				eS	Sn	12 17 29.1	-2.3
PB04				IAML		12 17 31.4	
	comp=N,677nm,0.1s						
PB15	IPOC Station P	2.11	215	eP	Pn	12 17 05.8	+0.2
PB15				eS	Sn	12 17 31.9	-0.9
TA01	Diego Aracena	2.12	295	⇑eP	Pn	12 17 05.3	-0.2
TA01				eS	Sn	12 17 31.5	-1.1
TA01				IAML		12 17 32.7	
	comp=N,931nm,0.2s						
TA02	Huaiquique	2.22	303	eP	Pn	12 17 06.6	-0.2
TA02				eS	Sn	12 17 34.0	-0.9
TA02				IAML		12 17 35.7	
	comp=N,1μm,0.1s						
PB11	IPOC Station P	2.23	320	⇑eP	Pn	12 17 07.5	+0.5
PB11				eS	Sn	12 17 35.5	+0.1
PB11				IAML		12 17 38.2	
	comp=E,870nm,0.2s						
PSGC	Pisagua	2.64	315	eP	Pn	12 17 11.7	-0.5
PSGC				eS	Sn	12 17 42.7	-2.0
PSGC				IAML		12 17 44.9	
	comp=E,236nm,0.4s						
MNMC	Minye Minye	2.71	330	eP	Pn	12 17 14.3	+1.0
MNMC				eS	Sn	12 17 48.0	+1.4
MNMC				IAML		12 17 53.8	
	comp=N,610nm,0.1s						
LPAZ	La Paz	5.17	0	P	Pn	12 17 48.2	+2.1
	comp=N,3.6nm,0.4s,baz=174,slow=5.8,SNR=19						
SIV	San Ignacio	8.64	52	P	Pn	12 18 30.9	-1.3
	comp=N,0.9nm,0.3s,baz=230,slow=10,SNR=7.4						
SIV				S	Sn	12 20 01.3	-6.9
	comp=N,2.1nm,0.7s,baz=184,slow=19,SNR=6.6						
TORD	Torodi Ar. Bea	76.68	70	P	P	12 28 06.8	-0.2
	comp=N,2.1nm,0.4s,baz=255,slow=5.5,SNR=29						
	comp=N,2.1nm,0.4s						
YKA	Yellowknife Ar	91.42	340	P	P	12 29 21.3	+0.7
	comp=N,0.2nm,0.6s,baz=135,slow=4.5,SNR=5.1						
	comp=N,0.2nm,0.6s						
MKAR	Makanchi Array	145.20	36	PKPbc	PKPab	12 35 53.2	+1.1
	comp=N,0.4nm,0.6s,baz=327,slow=4.5,SNR=5.3						

BGR **14** *12:36:40.5, 21°.99S×171°.33E, h139^{km}*

MOS **14** *12:36:42.3±0.9, 20°.97S×170°.02E, h135^{km}, mb5.8/64, MS4.5/4, Error ellipse: s-maj=7.1km s-min=6.1km az=98.0*

BJI **14** *12:36:42.1±0.0, 20°.79S×169°.86E, h133^{km}, mb5.9/88, mB5.7/53*

NEIC **14** *12:36:43.3, 21°.00S×170°.02E, h140^{km}, Moment Tensor Solution. Duration: 3^{s}.3 Moment tensor: Scale 10^{17}Nm; M_{rr}2.42; $M_{\theta\theta}$-0.05; $M_{\phi\phi}$-2.38; $M_{r\theta}$1.77; $M_{\theta\phi}$1.43; $M_{\phi r}$-0.04; Fault plane solution: $M_0$3.30000×10^{17} NP1: ϕ_s127.64000°, δ60.00000°, λ56.65000°. NP2:ϕ_s0.41000°, δ43.66000°, λ133.59000°. Principal axes: T 3.4167, Plg60.0000°, Azm347.0000°; N -0.2362, Plg28.0000°, Azm146.0000°; P -3.1805, Plg9.0000°, Azm241.0000°;*

NEIC **14** *12:36:43.3±1.9, 21°.01S±0°.07×170°.07E±0°.07, h127^{km}±1^{km}, mb5.8/449, Mwb5.7/33, Mww5.6/16 Error ellipse: s-maj=12.8km s-min=11.2km az=158.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.68; $M_{\theta\theta}$0.19; $M_{\phi\phi}$-2.87; $M_{r\theta}$1.70; $M_{\theta\phi}$1.84; $M_{\phi r}$0.80; Fault plane solution: $M_0$3.82000×10^{17} NP1:ϕ_s126.13000°, δ53.75000°, λ47.10000°. NP2:ϕ_s3.66000°, δ53.79000°, λ132.87000°. Principal axes: T 3.9103, Plg57.0000°, Azm335.0000°; N -0.1805, Plg33.0000°, Azm155.0000°; P -3.7298, Plg0.0000°, Azm65.0000°;*

NEIC **14** *12:36:43.3, 21°.00S×170°.02E, h140^{km}*

IDC **14** *12:36:43.1±0.8, 21°.03S×170°.05E, h134^{km}±6^{km}, mb5.5/24, mbtmp5.8/27, MS4.3/26, Error ellipse: s-maj=10.4km s-min=7.9km az=157.0*

NEIC **14** *12:36:43.3, 21°.00S×170°.02E, h123^{km}*

NOU **14** *12:36:44.8, 20°.96S×169°.95E, h140^{km}, ML5.8/150, Vanuatu Islands*

GCMT **14** *12:36:46.3±0.1, 21°.04S±0°.01×169°.89E±0°.01, h146^{km}, MW5.6/157, Moment Tensor Solution. s146,c246; s157,c322; Duration: 1^{s}.6 Moment tensor: Scale 10^{17} Nm; M_{rr}1.89±.03; $M_{\theta\theta}$0.67±.04; $M_{\phi\phi}$-2.56±.04; $M_{r\theta}$1.74±.03; $M_{\theta\phi}$1.71±.04; $M_{\phi r}$0.54±.03; Best double couple: $M_0$3.39200×10^{17} NP1:ϕ_s123.00000°, δ60.00000°, λ41.00000°. NP2:ϕ_s10.00000°, δ56.00000°, λ143.00000°. Principal axes: T 3.4790, Plg49.0000°, Azm339.0000°; N -0.1730, Plg41.0000°, Azm154.0000°; P -3.3060, Plg2.0000°, Azm246.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 12:36:43.5±0.2**, 21°.04S**±0°.03×**170°.03E**±0°.03**, h140^{km}**±1^{km}**, h140^{km}:pP-P, n2039, σ1^{s}.13**/2165**, mb5.8**/371**, 156C-46D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIFNC	LIFOU	2.62	275		Pn	12 37 25.1	-0.6
LIFNC	LIFOU	2.62	275	P	Pn	12 37 25.2	-0.5
PINNC	Pines Island,	2.87	236		Pn	12 37 28.8	0.0
PINNC	Pines Island,	2.87	236	P	Pn	12 37 28.6	-0.1
YATNC	Mamie plateau,	3.10	250	P	Pn	12 37 30.6	-1.1
I22FR	PORTLAGUERRE I	3.18	248	P	Pn	12 37 35.0	+2.3
	baz=70,slow=16,SNR=5.2						
OUENC	Ouen Island, N	3.27	245		Pn	12 37 34.3	+0.4
OUENC	Ouen Island, N	3.27	245	P	Pn	12 37 34.1	+0.2
DZM	Mont Dzumac	3.49	252	ePn	Pn	12 37 35.6	-1.4
	36μm,1.2s						
DZM				eSn	Sn	12 38 17.1	-1.2
	28μm,1.1s						
DZM	Mont Dzumac	3.49	252	P	Pn	12 37 36.8	-0.2
	9μm,1.0s,baz=72,slow=10,SNR=2886						
DZM				S	Sn	12 38 18.1	-0.2
	6μm,1.0s,baz=355,slow=19,SNR=6.4						
DZM				LR	LR	12 38 41.9	
	comp=Z,11μm,21.2s,baz=26,slow=34						
DZM	Mont Dzumac	3.49	252		Pn	12 37 37.2	+0.3
DZM	Mont Dzumac	3.49	252	P	Pn	12 37 37.2	+0.3
ONTNC	Ouen Toro	3.56	249		Pn	12 37 38.0	+0.3
ONTNC	Ouen Toro	3.56	249	P	Pn	12 37 37.6	-0.1
RTV	Rentapao	3.57	335	P	Pn	12 37 38.4	+0.5
NOUC	Port Laguerre	3.63	252	P	Pn	12 37 38.9	+0.3
DVP	Devils Point	3.73	332	P	Pn	12 37 39.7	-0.3
KOUNC	Koumac, New Ca	5.40	274		Pn	12 38 03.3	+1.2
KOUNC	Koumac, New Ca	5.40	274	P	Pn	12 38 03.0	+0.9
NFK	Norfolk Island	8.19	193	P	Pn	12 38 40.1	+0.7
	baz=8.3						
NFK				S	Sn	12 40 08.3	-2.2
	baz=8.3						
NFK	Norfolk Island	8.19	193	P	Pn	12 38 40.4	+0.9
MSVF	Nonsavu	8.25	68	P	Pn	12 38 42.6	+2.1
	727nm,1.0s,baz=221,slow=11,SNR=153						
MSVF	Nonsavu	8.25	68		Pn	12 38 42.9	+2.5
MSVF	Nonsavu	8.25	68	P	Pn	12 38 43.7	+3.3
MSVF	Nonsavu	8.25	68	d iP	Pn	12 38 43.6	+3.2
MSVF				pmax	pmax		
	comp=Z,1μm,1.1s						
YSA	Yasawairara	8.35	60	P	Pn	12 38 44.3	+2.7
TAVE	Taveuni	10.45	67	P	Pn	12 39 11.8	+2.0
LKBA	Tubou, Lakemba	10.87	77	P	Pn	12 39 17.7	+2.4
RAO	Raoul Island	13.63	129	LR	LR	12 43 22.6	
	comp=Z,962nm,21.3s,baz=304,slow=29						
RAO	Raoul Island	13.63	129	P	P	12 39 54.1	-1.1
LHI	Lord Howe Isla	14.33	221	P	Pn	12 40 00.5	+0.5
	baz=14,SNR=14						
LHI	Lord Howe Isla	14.33	221	Pn	Pn	12 40 00.7	+0.7
LHI	Lord Howe Isla	14.33	221	P	P	12 40 02.9	-0.1
HNR	Honiara	15.09	318	P	Pn	12 40 10.1	+0.5
	comp=Z,29μm,0.9s,baz=198,slow=4.8,SNR=75						
HNR				S	Sn	12 42 48.4	-8.6
	comp=Z,1μm,0.4s,baz=135,slow=9.1,SNR=1.9						
HNR	Honiara	15.09	318	P	Pn	12 40 10.5	+0.9
FUNA	Funafuti	15.27	37	P	Pn	12 40 12.2	+0.4
KUZ	Kuaotunu	16.41	164	P	P	12 40 27.6	+1.6
OPRZ	Ohinepanea	17.67	163	P	Pn	12 40 42.8	+1.8
HIZ	Hauiti	17.90	168	P	P	12 40 42.2	-0.1
HIZ	Hauiti	17.90	168	P	Pn	12 40 45.2	+1.5
HIZ	Hauiti	17.90	168	P	Pn	12 40 44.8	+1.1
EIDS	Eidsvold	17.94	253	P	Pn	12 40 44.9	+0.6
	baz=18,SNR=80						
EIDS	Eidsvold	17.94	253	P	Pn	12 40 43.6	-0.7
EIDS	Eidsvold	17.94	253	P	Pn	12 40 45.4	+1.1
HAZ	Te Kaha	17.96	160	P	Pn	12 40 46.5	+2.2
MXZ	Matakaoa Point	17.96	158	P	P	12 40 43.0	+0.1
MXZ	Matakaoa Point	17.96	158	P	Pn	12 40 45.8	+1.5
MXZ	Matakaoa Point	17.96	158	P	Pn	12 40 44.4	0.0
RUGZ	Raukumara Rang	18.12	160	P	Pn	12 40 48.4	+2.0
PKGZ	Pakihiroa	18.18	159	P	Pn	12 40 49.0	+2.1
URZ	Urewera	18.22	162	P	P	12 40 46.5	+0.7
	comp=Z,64nm,0.8s,baz=55,slow=6.6,SNR=18						
URZ				LR	LR	12 46 56.6	
	comp=Z,394nm,20.4s,baz=58,slow=34						
URZ	Urewera	18.22	162	P	Pn	12 40 48.6	+1.2
URZ	Urewera	18.22	162	P	Pn	12 40 48.8	+1.4
RK1H	Rockhampton Ha	18.24	259	P	Pn	12 40 48.9	+1.1
PUZ	Puketiti	18.40	159	P	P	12 40 47.7	-0.1
TWGZ	Tauwhareparae	18.41	160	P	Pn	12 40 51.4	+1.7
MWZ	Matawai	18.41	161	P	Pn	12 40 51.0	+1.3
VRZ	Vera Road	18.48	168	P	Pn	12 40 52.3	+1.9
TKGZ	Te Karaka	18.61	160	P	Pn	12 40 52.5	+0.5
SNVZ	South Ngauruho	18.72	166	P	Pn	12 40 60.0	+6.6
AFI	Afiamalu	18.73	71	P	P	12 40 51.6	-0.1
	comp=Z,504nm,0.9s,baz=209,slow=4.2,SNR=49						
AFI				S	S	12 44 19.1	+1.3
	comp=Z,32nm,0.8s,baz=242,slow=22,SNR=2.8						
AFI				ScP	ScP	12 48 37.2	+0.8
	comp=Z,30nm,1.1s,baz=239,slow=5.9,SNR=4.1						
AFI	Afiamalu	18.73	71	P	P	12 40 52.0	+0.3
CNGZ	Carnagh Statio	18.76	160	P	Pn	12 40 54.0	+0.3
RIGZ	Rimuhau	18.82	161	P	P	12 40 52.2	-0.3
WNVZ	Wahianoa	18.84	167	P	Pn	12 40 57.5	+2.7
BKZ	Black Stump Fm	18.90	164	P	Pn	12 40 54.9	-0.6
BKZ	Black Stump Fm	18.90	164	P	Pn	12 40 55.6	+0.2
BKZ	Black Stump Fm	18.90	164	P	Pn	12 40 55.7	+0.3
NIUE	Niue	18.93	88	P	P	12 40 53.9	+0.2
	baz=19,SNR=5.3						
NIUE	Niue	18.93	88	P	P	12 40 54.2	+0.5
NIUE	Niue	18.93	88	P	P	12 40 53.9	+0.2
ARMA	Armidale	19.01	237	P	Pn	12 40 57.8	+1.0
	baz=19,SNR=181						
ARMA	Armidale	19.01	237	P	Pn	12 40 57.2	+0.4
ARMA	Armidale	19.01	237	P	Pn	12 40 57.5	+0.6
BHHZ	Black Hill Sta	19.10	166	P	Pn	12 40 58.1	+0.3
KWHZ	Kaweka Forest	19.12	165	P	Pn	12 40 58.6	+0.5
PNHZ	Pukenui	19.54	166	P	Pn	12 41 02.2	-0.7
KAHZ	Kahuranaki	19.59	164	P	Pn	12 41 02.8	-0.7
PXZ	Pawanui	19.81	164	P	Pn	12 41 04.5	-1.5
QRZ	Quartz Range	19.84	174	P	Pn	12 41 06.1	-0.2
DVHZ	Dannevirke	19.90	166	P	Pn	12 41 05.6	-1.4
MRZ	Mangatainoka R	20.12	168	P	Pn	12 41 08.1	-1.5
MRZ	Mangatainoka R	20.12	168	P	P	12 41 07.7	+1.3
NTLH	Newcastle Hard	20.12	230	P	Pn	12 41 09.5	-0.3
RMQ	Roma	20.20	250	P	Pn	12 41 10.6	-0.2
	baz=20,SNR=128						
RMQ	Roma	20.20	250	P	Pn	12 41 10.2	-0.6
BFZ	Birch Farm	20.28	166	P	P	12 41 09.2	+1.1
BFZ	Birch Farm	20.28	166	P	P	12 41 09.7	+1.6
MGCD	Mangrove Creek	20.71	230	P	Pn	12 41 15.6	-1.1
	baz=21,SNR=27						
MGCD	Mangrove Creek	20.71	230	P	P	12 41 14.1	+1.3
RIV	Riverview	21.00	229	P	P	12 41 17.6	+1.8
	baz=21,SNR=8.5						
RIV	Riverview	21.00	229	P	P	12 41 18.4	+2.5
SYDH	Sydney Hard Ro	21.26	229	P	P	12 41 21.0	+2.3
INZ	Inchbonnie	21.65	177		P	12 41 22.7	-0.1
TV1H	Townsville Har	21.88	271	P	P	12 41 26.2	+0.8
CTA	Charters Tower	22.28	268	P	P	12 41 30.3	+0.9
	comp=Z,112nm,0.8s,baz=91,slow=10,SNR=155						
CTA				LR	LR	12 49 24.4	
	comp=Z,1μm,20.1s,baz=73,slow=34						
	comp=Z,112nm,0.8s						
CTAO	Charters Tower	22.28	268	P	P	12 41 30.4	+0.9
CTAO	Charters Tower	22.28	268	P	P	12 41 30.1	+0.6
CTAO	Charters Tower	22.28	268	P	P	12 41 30.4	+0.9
OXZ	Oxford	22.28	176	P	P	12 41 28.5	-0.7
TARA	Tarawa	22.44	8	P	P	12 41 29.3	-1.7
RPZ	Rata Peaks	22.63	178	P	P	12 41 33.4	+0.9
	comp=Z,14nm,0.7s,baz=1.9,slow=8.1,SNR=4.5						
RPZ	Rata Peaks	22.63	178	P	P	12 41 32.7	+0.1
RPZ	Rata Peaks	22.63	178	P	P	12 41 34.5	+1.9
JCZ	Jackson Bay	22.99	182	P	P	12 41 38.6	+2.5
CNB	Canberra Magne	23.05	228	P	P	12 41 38.7	+2.0
YNG	Young	23.21	231	P	P	12 41 40.0	+1.8
RNDA	Aranda	23.21	228	⇓iP	P	12 41 40.0	+1.8
RNDA				epP	pwP	12 42 11.0	+4.1
CAN	Canberra	23.30	228	P	P	12 41 39.9	+0.9
CAN				IAmb	IAmb	12 41 42.7	
	comp=Z,496nm,0.8s						
CAN	Canberra	23.30	228	P	P	12 41 40.5	+1.5
CAN	Canberra	23.30	228	P	P	12 41 39.9	+0.9
CAN				pmax	pmax		
	comp=Z,496nm,0.8s						
WKZ	Wanaka	23.74	182	P	P	12 41 44.2	+1.4
ODZ	Otahua Downs	23.94	179	P	P	12 41 47.0	+2.4
RABL	Rabaul	24.13	312	P	P	12 41 46.8	+0.1
RABL	Rabaul	24.13	312	P	P	12 41 46.8	+0.1

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KRVT  Keravat (AS076   24.14 311   P       P       12 41 46.7  0.0
      comp=Z,2µm,0.9s,baz=153,slow=1.8,SNR=63
KRVT                               LR      LR      12 50 26.7
      comp=Z,176nm,18.8s,baz=278,slow=34
CMSA  Cobar Meteorol   24.15 239   P       P       12 41 48.0 +1.4
      baz=24,SNR=306
CMSA  Cobar Meteorol   24.15 239   P       P       12 41 47.6 +0.9
MILA  Mila             24.16 224   P       P       12 41 47.5 +0.7
      baz=24,SNR=13
MILA  Mila             24.16 224   P       P       12 41 48.1 +1.3
QLP   Quilpie          24.22 252   P       P       12 41 48.3 +0.9
      baz=24,SNR=82
QLP   Quilpie          24.22 252   P       P       12 41 48.0 +0.6
MTSU  Mount Surprise   24.39 272   P       P       12 41 50.6 +1.6
      baz=24,SNR=1000
MTSU  Mount Surprise   24.39 272   P       P       12 41 50.1 +1.1
DCZ   Deep Cove        24.47 185           P       12 41 51.1 +1.6
WHZ   Wether Hill Ro   24.85 183   P       P       12 41 54.4 +1.5
PMG   Port Moresby     24.88 294   P       P       12 41 54.3 +0.8
      comp=Z,844nm,0.8s,baz=111,slow=5.6,SNR=268
PMG                                ScP     ScP     12 48 53.3 +1.5
      comp=Z,16nm,0.9s,baz=56,slow=5.0,SNR=6.8
PMG                                LR      LR      12 49 25.1
      comp=Z,1µm,19.8s,baz=134,slow=31
      comp=Z,844nm,0.8s
PMG   Port Moresby     24.88 294   P       P       12 41 54.3 +0.8
PMG   Port Moresby     24.88 294   P       P       12 41 54.1 +0.6
PMG   Port Moresby     24.88 294   P       P       12 41 54.0 +0.6
PMG   Port Moresby     24.88 294ceP        P       12 41 54.1 +0.6
PMG                                pmax    pmax
      comp=Z,821nm,0.9s
SYZ   Scrubby Hill     25.44 181   P       P       12 42 00.2 +2.0
COEN  Coen             26.54 281   P       P       12 42 10.2 +1.7
      baz=26,SNR=41
COEN  Coen             26.54 281   P       P       12 42 10.1 +1.7
COEN                               IAmb    IAmb    12 42 11.5
      comp=Z,665nm,1.6s
COEN  Coen             26.54 281   P       P       12 42 09.7 +1.2
TOO   Toolangi         26.89 227   P       P       12 42 12.8 +1.4
      baz=27,SNR=34
TOO   Toolangi         26.89 227   P       P       12 42 13.2 +1.8
TOO   Toolangi         26.89 227   P       P       12 42 13.0 +1.6
TOO   Toolangi         26.89 227   P       P       12 42 13.2 +1.8
TOO                                pmax    pmax
      comp=Z,101nm,0.9s
GLAD  Gladstone        27.28 218   P       P       12 42 16.1 +1.3
GVL   Greenvale        27.31 227⇓eP        P       12 42 16.2 +1.1
INKA  Innaminka        27.45 250   P       P       12 42 17.1 +0.6
STKA  Stephens Creek   27.57 241   P       P       12 42 18.9 +1.4
      comp=Z,60nm,0.7s,baz=83,slow=10,SNR=193
STKA                               PcP     PcP     12 45 32.9 +1.0
      comp=Z,64nm,0.8s,baz=40,slow=2.8,SNR=12
STKA                               ScP     ScP     12 49 01.8 +2.2
      comp=Z,6.4nm,0.8s,baz=343,slow=7.4,SNR=3.4
STKA                               LR      LR      12 52 59.7
      comp=Z,2µm,18.6s,baz=81,slow=35
      comp=Z,60nm,0.7s
STKA  Stephens Creek   27.57 241   P       P       12 42 18.7 +1.2
      baz=28,SNR=101
STKA  Stephens Creek   27.57 241   P       P       12 42 19.0 +1.5
STKA  Stephens Creek   27.57 241   P       P       12 42 18.5 +1.0
STKA  Stephens Creek   27.57 241 i P       P       12 42 17.6 +0.1
QIS   Mount Isa        28.43 265   P       P       12 42 25.7 +0.4
      baz=28,SNR=48
QIS   Mount Isa        28.43 265   P       P       12 42 25.3  0.0
MOO   Moorlands        28.69 217   P       P       12 42 28.9 +1.6
      baz=29,SNR=15
MOO   Moorlands        28.69 217   P       P       12 42 29.0 +1.6
TAU   Tasmania Unive   28.93 216   P       P       12 42 30.5 +1.1
TAU   Tasmania Unive   28.93 216   P       P       12 42 30.8 +1.4
TAU   Tasmania Unive   28.93 216   P       P       12 42 30.5 +1.1
TAU                                pmax    pmax
      comp=Z,67nm,1.1s
ARKL  Arkaroola        29.08 245⇑iP        P       12 42 32.0 +1.1
ARKL                             ex        x       12 43 00.4
ARKL                             i PCP     PcP     12 45 36.0 +0.4
ARPS  Mount Arapiles   29.09 231   P       P       12 42 32.0 +1.1
      baz=29,SNR=33
ARPS  Mount Arapiles   29.09 231   P       P       12 42 32.2 +1.2
PATS  Pohnpei          30.00 336   P       P       12 42 39.9 +0.7
      baz=30,SNR=4.9
PATS  Pohnpei          30.00 336   P       P       12 42 38.6 -0.5
PATS                               IAmb    IAmb    12 42 41.4
      comp=Z,167nm,1.0s
PATS  Pohnpei          30.00 336   P       P       12 42 39.4 +0.3
HKER  Hawker           30.05 243⇑eP        P       12 42 40.3 +0.8
LCRK  Leigh Creek      30.07 245   P       P       12 42 40.5 +0.9
WKA   Willalooka       30.07 233⇓iP        P       12 42 41.1 +1.5
SDAN  Sedan            30.16 237⇑eP        P       12 42 41.5 +1.1
SDAN                             i PCP     PcP     12 45 39.1 +0.8
HTT   Hallett          30.17 239⇑eP        P       12 42 41.6 +1.0
HTT                              ex        x       12 43 09.8
HTT                              ex        x       12 43 39.7
HTT   Hallett          30.17 239   P       P       12 42 41.6 +1.0
      baz=30,SNR=58
HTT   Hallett          30.17 239   P       P       12 42 41.4 +0.8
MGBR  Mount Gambier    30.41 230⇑eP        P       12 42 44.3 +1.7
THS   The Heights Sc   30.67 237⇑eP        P       12 42 46.2 +1.2
NAPP  Napperby         30.73 240⇑eP        P       12 42 46.6 +1.2
UTT   Tea Tree Gully   30.73 237⇓iP        P       12 42 46.5 +1.1
NBK   Nectar Brook     30.74 241  eP       P       12 42 46.4 +0.8
STR2  Strathalbyn      30.79 236⇓iP        P       12 42 47.2 +1.3
HMV1  Hindmarsh Vall   31.02 236⇓iP        P       12 42 49.3 +1.4
TPSO  The Peters Sei   31.13 236  eP       P       12 42 48.8 -0.1
WHYH  Whyalla          31.16 241   P       P       12 42 50.3 +1.1
MRAT  Mt Rat           31.54 238⇓iP        P       12 42 53.8 +1.2
OOD   Oodnadatta       31.91 251   P       P       12 42 56.7 +0.8
BBOO  Buckleboo        32.34 242   P       P       12 43 00.2 +0.5
      baz=32,SNR=59
BBOO  Buckleboo        32.34 242   P       P       12 43 00.1 +0.5
BBOO  Buckleboo        32.34 242   P       P       12 42 59.9 +0.3
KELC  Kelly Hill Cav   32.51 236⇑eP        P       12 43 01.8 +0.8
WC3   Warramunga Arr   33.38 265   P       P       12 43 08.8  0.0
      baz=33
WB0   Warramunga Arr   33.39 266   P       P       12 43 08.2 -0.6
WB0                                IAmb    IAmb    12 43 09.4
      comp=Z,171nm,1.1s
WB2   Warramunga Arr   33.40 265   P       P       12 43 08.5 -0.5
WB2                                IAmb    IAmb    12 43 09.7
      comp=Z,209nm,1.3s
WRAB  Tennant Creek    33.40 265   P       P       12 43 08.4 -0.7
WRAB                               IAmb    IAmb    12 43 09.6
      comp=Z,400nm,1.8s
WRAB  Tennant Creek    33.40 265   P       P       12 43 08.3 -0.7
WRAB  Tennant Creek    33.40 265ceP        P       12 43 08.2 -0.8
WRAB                               pmax    pmax
      comp=Z,103nm,1.1s
WRAB  Tennant Creek    33.40 265 ⇑P        P       12 43 08.3 -0.7
WRAB                               PcP     PcP     12 45 47.5 +0.1
WRA   Warramunga Arr   33.41 265   P       P       12 43 08.4 -0.7
      comp=Z,34nm,0.4s,baz=100,slow=7.8,SNR=320
WRA                                PcP     PcP     12 45 47.6 +0.1
      comp=Z,37nm,1.0s,baz=92,slow=2.5,SNR=8.6
WRA                                S       S       12 48 14.6 -5.6
      comp=Z,9.3nm,1.0s,baz=105,slow=18,SNR=7.6
WRA                                ScP     ScP     12 49 20.4 +1.5
      comp=Z,14nm,1.0s,baz=83,slow=3.8,SNR=6.4
WRA                                PKiKP   PKiKP   12 53 12.3 -0.4
      comp=Z,1.5nm,0.7s,baz=43,slow=0.7,SNR=6.7
WRA                                LR      LR      12 56 12.9
      comp=Z,1µm,20.4s,baz=91,slow=35
      comp=Z,34nm,0.4s
WRA   Warramunga Arr   33.41 265   P       P       12 43 08.5 -0.7
AS01  Alice Springs    33.42 259   P       P       12 43 09.1  0.0
AS31  Alice Springs    33.46 259   P       P       12 43 09.5  0.0
AS31                               IAmb    IAmb    12 43 11.2
      comp=Z,51nm,0.4s
ASAR  Alice Springs    33.46 259   P       P       12 43 09.4 -0.1
      comp=Z,89nm,0.7s,baz=86,slow=8.4,SNR=1618
ASAR                               PcP     PcP     12 45 47.6 +0.1
      comp=Z,36nm,0.8s,baz=105,slow=3.0,SNR=13
ASAR                               S       S       12 48 19.2 -1.7
      comp=Z,15nm,1.0s,baz=85,slow=16,SNR=10
ASAR                               ScP     ScP     12 49 20.8 +1.6
      comp=Z,14nm,1.0s,baz=107,slow=3.6,SNR=9.4
ASAR                               PKiKP   PKiKP   12 53 11.3 -1.4
      comp=Z,1.7nm,0.9s,baz=147,slow=1.2,SNR=5.6
ASAR                               LR      LR      12 56 13.8
      comp=Z,652nm,19.4s,baz=100,slow=35
ASAR                               P3KPbc          13 14 19.6
      comp=Z,0.5nm,0.7s,baz=278,slow=4.2,SNR=13
      comp=Z,89nm,0.7s
MULG  Mulgathing       33.59 247   P       P       12 43 11.0 +0.5
GENI  Genyem           34.38 298   P       P       12 43 18.2 +0.7
GENI  Genyem           34.38 298   P       P       12 43 17.6 +0.1

      comp=Z,2µm,1.1s,comp=Z,19µmcomp=Z,3µm
KDU   Kakadu           36.82 277   P       P       12 43 38.4 +0.1
      baz=37,SNR=143
KDU   Kakadu           36.82 277   P       P       12 43 38.3 +0.1
TBI   Tubuai           37.49 101  eS       S       12 49 24.9 +2.4
      comp=Z,2µm,28.0s
TBI                               eSS      SnSn    12 52 15.5 -0.9
      comp=Z,4µm,27.5s
MTN   Manton Dam       38.01 276   P       P       12 43 48.3 -0.1
      baz=38,SNR=445
MTN   Manton Dam       38.01 276   P       P       12 43 48.3 -0.1
MTN   Manton Dam       38.01 276   P       P       12 43 48.2 -0.1
SRPI  Serui, Papua     38.05 296   P       P       12 43 48.9 +0.2
      comp=Z,529nm,0.9s,comp=Z,5µm
PAE   Paea             38.19  92  eP       P       12 43 51.0 +1.2
      comp=Z,8.5nm,0.7s
PPT2  Papeete2         38.20  92  eS       S       12 49 35.8 +2.3
      comp=Z,497nm,25.2s
PPT2                              eSS      SS      12 52 30.2 +2.9
      comp=Z,2µm,26.5s
WRKA  Warakurna        38.51 256   P       P       12 43 52.6 +0.2
      baz=38,SNR=48
WRKA  Warakurna        38.51 256   P       P       12 43 52.2 -0.3
FORT  Forrest          38.79 247   P       P       12 43 54.8 +0.2
      baz=39,SNR=50
FORT  Forrest          38.79 247   P       P       12 43 54.9 +0.2
FORT  Forrest          38.79 247   P       P       12 43 54.6 -0.1
XMAS  Kiritimati       39.24  58   P       P       12 43 58.7 +0.1
XMAS                               IAmb    IAmb    12 44 01.6
      comp=Z,179nm,1.1s
KNRA  Kununurra        39.45 271   P       P       12 44 00.3  0.0
      baz=39,SNR=175
KNRA  Kununurra        39.45 271   P       P       12 44 00.4  0.0
KNRA  Kununurra        39.45 271   P       P       12 44 00.0 -0.3
SAUI  Saumlaki         39.56 283   P       P       12 44 02.7 +1.5
SAUI  Saumlaki         39.56 283   P       P       12 44 02.7 +1.5
SAUI  Saumlaki         39.56 283   P       P       12 44 02.2 +0.9
      comp=Z,843nm,1.0s,comp=Z,9µm
RKPI  Ransiki, Papua   39.99 294   P       P       12 44 05.3 +0.5
      comp=Z,288nm,1.0s,comp=Z,4µm
PMOR  Pomariorio Ree   40.37  89  eP       P       12 44 08.9 +1.0
      comp=Z,64nm,0.9s
PMOR                              epP      pP      12 44 37.7 -0.4
      comp=Z,190nm,1.4s
VAH   Vaihoa           40.56  89  eP       P       12 44 09.6 +0.1
      comp=Z,52nm,0.9s
VAH                               epP      pP      12 44 38.3 -1.4
      comp=Z,122nm,1.3s
FAKI  Fak Fak          40.94 291   P       P       12 44 12.8 +0.1
FAKI  Fak Fak          40.94 291   P       P       12 44 12.4 -0.2
FAKI  Fak Fak          40.94 291   P       P       12 44 12.5 -0.2
      comp=Z,542nm,1.2s,comp=Z,6µm
FITZ  Fitzroy Crossi   41.83 266   P       P       12 44 20.5 +0.7
BNDI  Bandanaira       42.27 287   P       P       12 44 23.6 +0.2
BNDI  Bandanaira       42.27 287   P       P       12 44 23.6 +0.2
      comp=Z,749nm,1.0s,comp=Z,8µm
GUMO  Guam             42.37 322   LR      LR      12 59 26.1
      comp=Z,216nm,21.8s,baz=147,slow=32
GUMO  Guam             42.37 322   P       P       12 44 24.7 +0.5
GUMO  Guam             42.37 322   P       P       12 44 24.5 +0.3
GUMO  Guam             42.37 322   P       P       12 44 24.7 +0.5
GUMO                               pmax    pmax
      comp=Z,2µm,1.8s
GUMO  Guam             42.37 322 ⇑P        P       12 44 24.5 +0.3
GUMO                               PcP     PcP     12 46 11.1 -3.9
MSAI  Masohi           43.66 288   P       P       12 44 36.1 +1.4
      comp=Z,26nm,0.8s,comp=Z,523nm
KMBL  Kambalda         44.11 246   P       P       12 44 37.9 -0.2
      baz=44,SNR=28
KMBL  Kambalda         44.11 246   P       P       12 44 37.9 -0.2
AAI   Ambon            44.16 287   P       P       12 44 38.2 -0.5
      comp=Z,347nm,0.9s,comp=Z,3µm
NLAI  Namlea           45.34 287   P       P       12 44 48.6 +0.6
      comp=Z,370nm,1.6s
SOEI  Soe              45.38 277   P       P       12 44 49.4 +1.0
SOEI                               IAmb    IAmb    12 44 56.0
      comp=Z,228nm,0.8s
SOEI  Soe              45.38 277   P       P       12 44 49.5 +1.0
SOEI  Soe              45.38 277   P       P       12 44 49.4 +1.0
      comp=Z,360nm,1.0s,comp=Z,4µm
LBMI  Labuha           46.19 290   P       P       12 44 56.1 +1.4
      comp=Z,324nm,1.2s,comp=Z,2µm
PSA00 Pilbara Seismi   46.59 260   P       P       12 44 57.0 -0.8
PSA00                              PcP     PcP     12 46 29.9 +0.3
PSA00 Pilbara Seismi   46.59 260   PcP     PcP     12 46 30.0 +0.4
PSA00 Pilbara Seismi   46.59 260   P       P       12 44 58.1 +0.3
MBWA  Marble Bar       46.76 260   P       P       12 44 59.5 +0.4
MBWA                               IAmb    IAmb    12 45 00.6
      comp=Z,212nm,0.9s
MBWA                               PcP     PcP     12 46 29.6 -0.7
MBWA  Marble Bar       46.76 260   P       P       12 44 59.4 +0.3
MBWA  Marble Bar       46.76 260 ⇑P        P       12 44 59.5 +0.4
SANI  Sanana           46.87 288   P       P       12 45 00.5 +0.6
SANI  Sanana           46.87 288   P       P       12 45 00.1 +0.2
      comp=Z,1µm,0.9s,comp=Z,10µmcomp=Z,2µm
TNTI  Ternate          47.00 292   P       P       12 45 01.3 +0.4
TNTI                               IAmb    IAmb    12 45 06.2
      comp=Z,147nm,1.2s
TNTI  Ternate          47.00 292   P       P       12 45 05.6 +4.7
MEEK  Meekatharra      47.11 253   P       P       12 45 01.8  0.0
      baz=47,SNR=74
MEEK  Meekatharra      47.11 253   P       P       12 45 01.6 -0.2
KLBR  Kellerberrin     47.64 246   P       P       12 45 05.5 -0.2
      baz=48,SNR=47
KLBR  Kellerberrin     47.64 246   P       P       12 45 05.1 -0.7
MMRI  Maumere          47.64 278   P       P       12 45 06.2 +0.3
MMRI                               PcP     PcP     12 46 34.1 +0.7
MMRI  Maumere          47.64 278   P       P       12 45 06.1 +0.1
MMRI  Maumere          47.64 278   P       P       12 45 05.9 -0.1
      comp=Z,641nm,0.8s,comp=Z,6µm
NWAO  Narrogin (SRO)   48.08 244   LR      LR      13 05 38.9
      comp=Z,2µm,18.5s,baz=70,slow=36
NWAO  Narrogin (SRO)   48.08 244   P       P       12 45 09.3 +0.2
      baz=48,SNR=70
NWAO                               P       P       12 45 09.3 +0.2
      baz=48,SNR=70
NWAO  Narrogin (SRO)   48.08 244   P       P       12 45 09.4 +0.3
NWAO  Narrogin (SRO)   48.08 244   P       P       12 45 09.1  0.0
NWAO  Narrogin (SRO)   48.08 244   P       P       12 45 09.0  0.0
NWAO  Narrogin (SRO)   48.08 244   P       P       12 45 09.4 +0.3
NWAO                               pmax    pmax
      comp=Z,430nm,0.7s
NWAO  Narrogin (SRO)   48.08 244   P       P       12 45 09.1  0.0
NWAO                               pP      pP      12 45 38.5 -1.1
NWAO                               PcP     PcP     12 46 34.5 -0.2
RKGY  Rocky Gully      48.32 242   P       P       12 45 11.2 +0.3
      baz=48,SNR=15
RKGY  Rocky Gully      48.32 242   P       P       12 45 11.7 +0.7
BLDU  Ballidu          48.56 247   P       P       12 45 12.5 -0.3
      baz=48,SNR=29
BLDU  Ballidu          48.56 247   P       P       12 45 12.1 -0.7
BASI  Baing, Sumba     48.65 275   P       P       12 45 15.1 +1.4
      comp=Z,1µm,1.0s,comp=Z,9µm
MUN   Mundaring        48.95 245   P       P       12 45 15.9 +0.1
      baz=49,SNR=7.8
MUN   Mundaring        48.95 245   P       P       12 45 15.3 -0.5
MORW  Morawa           49.21 249   P       P       12 45 17.7 -0.1
      baz=49,SNR=32
MORW  Morawa           49.21 249   P       P       12 45 17.7 -0.1
MORW                               IAmb    IAmb    12 45 18.9
      comp=Z,113nm,0.8s
MORW  Morawa           49.21 249   P       P       12 45 17.7 -0.1
TAOE  Nuku Hiva Isla   49.44  84  eP       P       12 45 20.0 +0.1
      comp=Z,196nm,0.9s
TAOE                              eS       S       12 52 17.9 +1.1
      comp=Z,545nm,25.9s
TAOE                              eLQ      LQ      12 57 33.3
      comp=Z,2µm,31.6s
TAOE                              eLR      LR      12 59 38.4
      comp=Z,794nm,33.4s
TAOE  Nuku Hiva Isla   49.44  84   P       P       12 45 20.5 +0.6
TAOE                               IAmb    IAmb    12 45 21.7
      comp=Z,87nm,0.8s
TAOE  Nuku Hiva Isla   49.44  84   P       P       12 45 20.8 +0.9
DRV   Dumont d'Urvil   49.49 195   P       P       12 45 19.2 -0.1
DRV                                pP      pP      12 45 49.8 -0.3
DRV                                PcP     PcP     12 46 38.5 -0.7
SGSI  Sangihe          50.05 294   P       P       12 45 24.8 +0.5
      comp=Z,251nm,0.8s,comp=Z,4µm
LUWI  Luwuk            50.19 287   P       P       12 45 26.8 +1.4
LUWI  Luwuk            50.19 287   P       P       12 45 26.6 +1.2
LUWI  Luwuk            50.19 287   P       P       12 45 26.3 +0.9
      comp=Z,884nm,1.2s,comp=Z,11µmcomp=Z,2µm
MIDW  Midway           50.46  14   P       P       12 45 27.2 +0.2
MIDW                               IAmb    IAmb    12 45 28.4

      comp=Z,258nm,1.3s
BKSI  Bulukumba        50.81 281   P       P       12 45 30.0  0.0
      comp=Z,429nm,0.9s,comp=Z,3µmcomp=Z,1µm
KAPI  Kappang          51.27 281   P       P       12 45 34.7 +1.2
KAPI  Kappang          51.27 281   P       P       12 45 34.5 +1.1
KAPI  Kappang          51.27 281c iP       P       12 45 34.6 +1.2
KAPI                               pmax    pmax
      comp=Z,223nm,0.8s
KAPI  Kappang          51.27 281   P       P       12 45 34.6 +1.1
KAPI                               sP      sP      12 46 21.6 +1.8
GIRL  Giralia          51.56 257   P       P       12 45 36.7 +1.1
      baz=52,SNR=7.7
GIRL  Giralia          51.56 257   P       P       12 45 37.0 +1.5
MRSI  Marisa           51.61 288   P       P       12 45 35.6 -0.4
      comp=Z,179nm,1.0s,comp=Z,3µmcomp=Z,2µm
SPSI  Sidrap Palu      51.66 282   P       P       12 45 36.0 -0.4
      comp=Z,189nm,0.9s,comp=Z,2µm
PLAI  Plampang         51.72 275   P       P       12 45 37.3 +0.5
PLAI  Plampang         51.72 275   P       P       12 45 37.1 +0.3
      comp=Z,292nm,1.2s,comp=Z,3µm
DAV   Davao City (W)   51.82 298   P       P       12 45 38.6 +1.0
KEKH  Kekaha           51.97  36   P       P       12 45 39.4 +0.9
KEKH                               IAmb    IAmb    12 45 40.3
      comp=Z,162nm,0.9s
AIN   Ainahou          52.48  42   P       P       12 45 41.9 -0.6
KIP   Kipapa           52.49  38   P       P       12 45 43.0 +0.6
KIP   Kipapa           52.49  38ceP        P       12 45 42.6 +0.3
KIP                                pmax    pmax
      comp=Z,46nm,0.9s
KIP   Kipapa           52.49  38   P       P       12 45 42.8 +0.5
KIP                                PcP     PcP     12 46 52.1 +1.1
MLOA  Mauna Loa Obse   52.53  42   P       P       12 45 44.5 +1.3
HMH   Humu‘ula Sheep   52.64  42   P       P       12 45 45.0 +1.2
HMH                                IAmb    IAmb    12 45 47.7
      comp=Z,160nm,0.9s
OPA   Opana            52.70  38   P       P       12 45 44.0 +0.1
OPA                                IAmb    IAmb    12 45 45.6
      comp=Z,88nm,0.8s
OPA   Opana            52.70  38   P       P       12 45 44.0 +0.1
OPA                                pmax    pmax
      comp=Z,88nm,0.8s
POHA  Pohakuloa        52.72  42   P       P       12 45 45.6 +1.3
HPAH  Hawaii Prepara   52.82  42   P       P       12 45 45.5 +0.6
HPAH                               IAmb    IAmb    12 45 48.5
      comp=Z,116nm,1.0s
TOLI2 Tolitoli         52.93 288   P       P       12 45 45.9 +0.1
TOLI2 Tolitoli         52.93 288   P       P       12 45 46.1 +0.3
HLK   Haleakala        53.03  41   P       P       12 45 47.3 +0.7
HLK                                IAmb    IAmb    12 45 50.7
      comp=Z,134nm,1.1s
MPSI  Mapaga           53.37 287   P       P       12 45 49.1 +0.1
      comp=Z,448nm,1.0s,comp=Z,4µm
DNP   Denpasar         54.16 274   P       P       12 45 55.8 +1.1
      comp=Z,885nm,0.7s,comp=Z,25µm
IGBI  Denpasar         54.17 274   P       P       12 45 55.6 +0.8
      comp=Z,568nm,1.1s,comp=Z,6µm
JCJ   Chichijima       54.93 329   P       P       12 46 00.1 +0.1
      comp=Z,437nm,1.0s,baz=180,slow=2.0,SNR=5.2
      comp=Z,437nm,1.0s
JCJ   Chichijima       54.93 329   P       P       12 45 59.5 -0.4
JAGI  Jajag, Banyuwa   55.21 274   P       P       12 46 02.0 -0.3
JAGI  Jajag, Banyuwa   55.21 274   P       P       12 46 01.7 -0.6
JAGI  Jajag, Banyuwa   55.21 274   P       P       12 46 01.6 -0.7
      comp=Z,393nm,1.0s,comp=Z,4µm
ABJI  Asem Bagus       55.36 275   P       P       12 46 04.0 +0.6
      comp=Z,342nm,0.9s,comp=Z,4µm
BKB   Balikpapan       55.38 284   P       P       12 46 05.3 +1.7
BKB   Balikpapan       55.38 284   P       P       12 46 07.5 +3.9
GMJI  Gumukmas         55.94 274   P       P       12 46 07.3 -0.2
      comp=Z,198nm,0.9s,comp=Z,2µm
BLJI  Banyuglugur      55.97 275   P       P       12 46 07.9 +0.1
      comp=Z,268nm,0.8s,comp=Z,3µm
BBKI  Banjar Baru      56.38 280   P       P       12 46 11.5 +0.8
      comp=Z,385nm,1.3s
VNDA  Vanda            56.66 182   P       P       12 46 12.0 +0.3
      comp=Z,11nm,0.9s,baz=21,slow=2.9,SNR=6.6
VNDA  Vanda            56.66 182   P       P       12 46 12.0 +0.3
MYLDM Lahad Datu       56.86 291   P       P       12 46 16.1 +2.2
SBA   Scott Base       56.88 181   P       P       12 46 14.7 +1.5
SBA                                IAmb    IAmb    12 47 09.5
      comp=Z,264nm,1.6s
SBA   Scott Base       56.88 181   P       P       12 46 14.7 +1.5
SBA                                pmax    pmax
      comp=Z,264nm,1.6s
SBA   Scott Base       56.88 181   P       P       12 46 15.0 +1.8
GRJI  Gresik           57.30 275   P       P       12 46 18.4 +1.3
      comp=Z,302nm,0.9s,comp=Z,2µm
PWJI  Pagerwojo        57.55 274   P       P       12 46 19.1 +0.2
      comp=Z,237nm,0.9s,comp=Z,2µm
TBJI  Tambak Boyo      57.92 275   P       P       12 46 22.8 +1.3
      comp=Z,971nm,1.1s,comp=Z,8µm
NGJI  Ngawi            58.09 274   P       P       12 46 27.7 +5.0
UGM   Wanagama         58.78 273   P       P       12 46 27.7 +0.2
UGM   Wanagama         58.78 273   P       P       12 46 27.6 +0.1
UGM   Wanagama         58.78 273   P       P       12 46 28.3 +0.8
      comp=Z,472nm,0.9s
CASY  Casey            58.78 204   P       P       12 46 26.7 +0.1
UWJI  Ujung Watu       58.90 275   P       P       12 46 29.1 +0.8
      comp=Z,660nm,0.8s,comp=Z,6µm
YOGI  Yogyakarta       59.02 273   P       P       12 46 30.7 +1.5
      comp=Z,329nm,1.2s
SMRI  Semarang         59.15 274   P       P       12 46 31.1 +1.1
SMRI  Semarang         59.15 274   P       P       12 46 33.3 +3.3
KKM   Kota Kinabalu    59.26 291   P       P       12 46 31.8 +0.9
CCD   Concordia, Ant   59.31 193 ⇑P        P       12 46 30.7 +0.1
CCD                                pP      pP      12 47 00.6 -2.0
PBKI  Pangkalan Bun    59.59 280   P       P       12 46 34.6 +1.6
      comp=Z,277nm,1.0s
JMZ   Minamidaito 2    59.91 319   P       P       12 46 35.8 +1.0
KPJI  Karang Pucung    60.46 273   P       P       12 46 39.5 +0.5
      comp=Z,254nm,0.9s,comp=Z,3µm
CMJI  Cimerak          60.76 273   P       P       12 46 40.6 -0.4
      comp=Z,264nm,0.9s,comp=Z,3µm
SBUM  Sibu             61.18 285   P       P       12 46 44.9 +1.1
SBUM                               IAmb    IAmb    12 46 45.8
      comp=Z,117nm,1.3s
JCJI  Jatiwangi        61.36 274   P       P       12 46 45.3 +0.2
      comp=Z,683nm,0.9s,comp=Z,7µm
BBJI  Bungbulang       61.61 273   P       P       12 46 46.2 -0.6
CNJI  Cibinong         62.15 273   P       P       12 46 49.9 -0.4
      comp=Z,262nm,0.8s,comp=Z,2µm
JOW   Kunigami         62.46 318   P       P       12 46 53.2 +1.1
JOW   Kunigami         62.46 318   P       P       12 46 52.7 +0.6
XMI   Christmas Isla   62.47 269   P       P       12 46 53.1 +0.6
KSM   Kuching          62.50 283   P       P       12 46 53.5 +0.8
JSG   Sagara           63.14 331   P       P       12 46 56.1 -0.3
SBJI  Serang           63.49 274   P       P       12 46 59.7 +0.5
      comp=Z,651nm,1.1s,comp=Z,6µm
CGJI  Cibinong         63.72 273   P       P       12 47 00.1 -0.7
      comp=Z,478nm,0.9s,comp=Z,5µm
INU   Inuyama          64.23 330   P       P       12 47 04.1 +0.5
INU   Inuyama          64.23 330   P       P       12 47 03.7 +0.1
INU   Inuyama          64.23 330   P       P       12 47 03.9 +0.3
JGF   Kuroka           64.28 331   P       P       12 47 04.4 +0.4
JGF                                IAmb    IAmb    12 47 06.5
      comp=Z,116nm,0.9s
JGF   Kuroka           64.28 331   P       P       12 47 03.7 -0.3
YOJ   Yonaguni jima    64.32 312   P       P       12 47 04.4  0.0
YOJ   Yonaguni jima    64.32 312   P       P       12 47 04.4  0.0
YOJ                                pmax    pmax
      comp=Z,695nm,1.1s
JMN   Monobe           64.45 327   P       P       12 47 06.1 +1.1
JMN   Monobe           64.45 327   P       P       12 47 05.8 +0.7
BLSI  Bandar Lampung   64.57 274   P       P       12 47 06.0 -0.3
      comp=Z,398nm,1.0s,comp=Z,4µm
JSU   Suzuyama         64.57 323   P       P       12 47 06.2 +0.3
JSU   Suzuyama         64.57 323   P       P       12 47 06.3 +0.4
TWGBT Beinan           64.64 310   P       P       12 47 05.8 -0.7
TWG   Pinlang          64.64 310   P       P       12 47 05.6 -1.0
TWG                                IAmb    IAmb    12 47 20.1
      comp=Z,105nm,0.9s
MJAR  Matsushiro Arr   64.69 332   P       P       12 47 06.5  0.0
      comp=Z,184nm,0.9s,baz=165,slow=6.6,SNR=193
MJAR                               LR      LR      13 10 07.3
      comp=Z,108nm,21.9s,baz=124,slow=31
      comp=Z,184nm,0.9s
MAJO  Matsushiro       64.69 332   P       P       12 47 06.3 -0.2
MAJO  Matsushiro       64.69 332   P       P       12 47 06.8 +0.2
MAJO  Matsushiro       64.69 332c iP       P       12 47 06.6 +0.1
MAJO                               pmax    pmax
      comp=Z,271nm,1.0s
MAJO  Matsushiro       64.69 332   P       P       12 47 06.7 +0.2
MJB9  Matsu-Tunnel     64.69 332   P       P       12 47 07.3 +0.7
JMM   Marumori         64.73 335   P       P       12 47 07.5 +0.8
JMM   Marumori         64.73 335   P       P       12 47 07.5 +0.8
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YULB  Yu-li            64.84 310   P       P       12 47 07.4  -0.4
YULB                               IAmb    IAmb    12 47 15.6
      comp=Z,80nm,0.9s
YULB  Yu-li            64.84 310   P       P       12 47 07.4  -0.4
PPBI  Pangkal Pinang   64.91 278   P       P       12 47 08.9  +0.4
      comp=Z,211nm,1.0s,comp=Z,5µm
KLI   Kotabumi         65.11 274   P       P       12 47 09.2  -0.6
      comp=Z,295nm,1.1s
NACB  Ninganchiao      65.12 311   P       P       12 47 09.9  +0.2
NACB  Ninganchiao      65.12 311   P       P       12 47 09.8  +0.2
KASI  Kota Agung       65.22 274   P       P       12 47 09.7  -0.8
      comp=Z,488nm,1.0s,comp=Z,4µm
TPUB  Ta-pu            65.26 310   P       P       12 47 10.2  -0.3
TPUB  Ta-pu            65.26 310   P       P       12 47 09.9  -0.6
SSLB  Suanglung        65.33 310   P       P       12 47 10.6  -0.5
SSLB  Suanglung        65.33 310   P       P       12 47 10.5  -0.5
JNU   Nakatsue         65.56 324   P       P       12 47 12.8  +0.5
JNU   Nakatsue         65.56 324   P       P       12 47 12.6  +0.3
YHNB  Yeheng           65.59 311   P       P       12 47 13.4  +0.7
YHNB  Yeheng           65.59 311   P       P       12 47 13.4  +0.7
TATO  Taipei           65.71 312   P       P       12 47 13.5  +0.2
TATO  Taipei           65.71 312   P       P       12 47 13.9  +0.6
TATO  Taipei           65.71 312   P       P       12 47 13.9  +0.6
LWLI  Liwa             65.80 274   P       P       12 47 13.8  -0.6
      comp=Z,511nm,0.8s
JHS   Saijyo           65.84 327   P       P       12 47 14.7  +0.7
JHS   Saijyo           65.84 327   P       P       12 47 14.4  +0.4
MDSI  Maura Dua        65.88 275   P       P       12 47 13.4  -1.3
      comp=Z,235nm,1.0s,comp=Z,2µm
PMBI  Palembang        65.89 276   P       P       12 47 15.4  +0.6
PMBI  Palembang        65.89 276   P       P       12 47 16.1  +1.3
      comp=Z,712nm,1.0s,comp=Z,26µm
JSD   Sado             65.92 333   P       P       12 47 15.1  +0.8
JSD   Sado             65.92 333   P       P       12 47 15.2  +0.8
DSRI  Dabo             66.98 279   P       P       12 47 22.4  +0.6
      comp=Z,184nm,1.1s,comp=Z,2µm
MNAI  Manna            67.06 274   P       P       12 47 21.5  -0.8
MNAI  Manna            67.06 274   P       P       12 47 21.9  -0.4
MNAI  Manna            67.06 274   P       P       12 47 23.6  +1.3
      comp=Z,712nm,1.4s,comp=Z,7µm
JTM   Tenmabayashi     67.15 336   P       P       12 47 22.8  +0.6
JTM                                IAmb    IAmb    12 47 24.4
      comp=Z,174nm,1.0s
JTM   Tenmabayashi     67.15 336   P       P       12 47 22.2   0.0
JTU   Tsushima         67.42 324   P       P       12 47 25.3  +1.3
JTU                                IAmb    IAmb    12 47 53.4
      comp=Z,192nm,1.4s
JTU   Tsushima         67.42 324   P       P       12 47 24.7  +0.7
ERM   Erimo            67.49 339   P       P       12 47 24.6  +0.4
ERM   Erimo            67.49 339   P       P       12 47 26.3  +2.1
ERM   Erimo            67.49 339   P       P       12 47 24.6  +0.4
ERM                                pmax    pmax
      comp=Z,36nm,0.8s
JEM   Erimo            67.49 339   P       P       12 47 26.3  +2.1
KNMB  Chin-men Tao     67.59 309   P       P       12 47 25.6  +0.3
KNMB                               IAmb    IAmb    12 47 27.2
      comp=Z,204nm,0.9s
KSI   Kapahiang        67.65 275   P       P       12 47 25.7  -0.3
      comp=Z,224nm,0.7s,comp=Z,19µm
MYKOM Kota Tinggi      68.53 281   P       P       12 47 32.5  +1.1
MYKOM                              IAmb    IAmb    12 47 33.6
      comp=Z,128nm,1.0s
QSPA  South Pole Qui   69.02 180   P       P       12 47 34.6  +0.8
QSPA                               IAmb    IAmb    12 47 35.4
      comp=Z,137nm,1.0s
QSPA  South Pole Qui   69.02 180 ⇑P       P       12 47 34.2  +0.5
QSPA                               pP      pP      12 48 07.1  +0.3
QSPA                               sP      sP      12 48 22.6  +1.1
HKPS  Hong Kong Po S   69.47 305   P       P       12 47 38.0  +0.9
JKA   Kamikawa-asahi   69.54 339   P       P       12 47 38.2  +1.2
JKA                                IAmb    IAmb    12 47 41.5
      comp=Z,128nm,0.9s
ASAJ  Asahikawa        69.54 339   LR      LR      13 12 51.2
      comp=Z,174nm,22.0s,baz=158,slow=31
ASAJ  Asahikawa        69.54 339   P       P       12 47 38.2  +1.2
ASAJ                               pmax    pmax
      comp=Z,128nm,0.9s
SDSI  Sungai Dareh     69.73 277   P       P       12 47 37.6  -1.2
      comp=Z,96nm,1.0s,comp=Z,1µm
TJN   Taejon           69.91 324   P       P       12 47 39.9  +0.4
TJN   Taejon           69.91 324ceP       P       12 47 39.8  +0.4
COCO  West Island      70.19 264   P       P       12 47 40.7  -0.9
COCO                               IAmb    IAmb    12 47 44.5
      comp=Z,259nm,1.1s
COCO  West Island      70.19 264   P       P       12 47 40.7  -0.9
COCO                               pmax    pmax
      comp=Z,259nm,1.2s
PPSI  Pulau Pagai      70.38 275   P       P       12 47 44.1  +1.3
      comp=Z,365nm,1.5s,comp=Z,4µm
KSRS  Korea Array      70.41 325   P       P       12 47 43.2  +0.8
      comp=Z,67nm,1.0s,baz=144,slow=6.4,SNR=83
KSRS                               PP      PP      12 50 18.9  -1.5
      comp=Z,6.1nm,0.9s,baz=147,slow=9.4,SNR=4.7
      comp=Z,67nm,1.0s
KSAR  Wonju Array Be   70.42 325   P       P       12 47 43.1  +0.6
KSAR  Wonju Array Be   70.42 325   P       P       12 47 43.1  +0.6
KS19  Wonju Array Si   70.47 325   P       P       12 47 43.6  +0.8
KS19                               IAmb    IAmb    12 47 44.7
      comp=Z,170nm,1.1s
GZH   Guangzhou        70.53 305   P       P       12 47 44.5  +1.0
GZH                                sP      sP      12 48 34.6  +2.8
GZH                                S       S       12 56 49.3  +3.4
GZH                                pmax    pmax
      comp=Z,160nm,1.1s
BKNI  Bangkinang       70.56 278   P       P       12 47 45.0  +1.1
BKNI  Bangkinang       70.56 278   P       P       12 47 45.9  +2.0
      comp=Z,418nm,0.9s,comp=Z,5µm
PDSI  Padang           70.63 277   P       P       12 47 43.2  -1.2
      comp=Z,107nm,0.7s,comp=Z,3µm
INCN  Inchon           71.12 325   P       P       12 47 47.8  +1.0
INCN  Inchon           71.12 325   P       P       12 47 47.8  +1.0
INCN                               pmax    pmax
      comp=Z,424nm,1.1s
INCN  Inchon           71.12 325   P       P       12 47 47.6  +0.9
QIZ   Qiongzhong       71.12 300   P       P       12 47 48.3  +1.2
QIZ                                sP      sP      12 48 34.5  -1.0
QIZ                                S       S       12 56 57.8  +5.0
QIZ                                sS      sS      12 57 51.8  +3.3
QIZ                                pmax    pmax
      comp=Z,190nm,0.8s
QIZ                                pmax    pmax
      comp=Z,670nm,3.9s
QIZ                                LR      LR
      comp=Z,230nm,9.0s
QIZ                                LR      LR
      comp=Z,300nm,9.6s
QIZ                                LR      LR
      comp=Z,160nm,7.5s
QIZ   Qiongzhong       71.12 300   P       P       12 47 48.8  +1.7
QIZ                                IAmb    IAmb    12 47 49.9
      comp=Z,202nm,0.9s
QIZ   Qiongzhong       71.12 300   P       P       12 47 48.6  +1.5
NJ2   Nanjing          72.02 316⇑iP       P       12 47 52.9  +0.7
NJ2                                pP      pwP     12 48 28.3  +0.1
NJ2                                sP      sP      12 48 39.9  -0.8
NJ2                                pmax    pmax
      comp=Z,140nm,1.2s
NJ2                                pmax    pmax
      comp=Z,1µm,3.5s
YSS   Yuzh-Sakhalins   72.02 341   P       P       12 47 53.6  +1.7
YSS                                IAmb    IAmb    12 47 54.8
      comp=Z,181nm,1.0s
YSS   Yuzh-Sakhalins   72.02 341⇑eP       P       12 47 53.6  +1.7
YSS                               eS       S       12 57 06.0  +4.0
YSS                               eSS      SS      13 01 45.7  +3.3
YSS                                pmax    pmax
      comp=Z,1µm,4.5s
YSS                                pmax    pmax
      comp=N,600nm,3.7s
YSS                                pmax    pmax
      comp=Z,160nm,1.0s
IPM   Ipoh             72.18 282   P       P       12 47 54.2  +0.5
IPM                                IAmb    IAmb    12 47 55.3
      comp=Z,214nm,0.9s
IPM   Ipoh             72.18 282   P       P       12 47 54.2  +0.5
SKR   Severo-Kuril’s   72.46 351  eP       P       12 47 55.2  +0.8
SKR                               e                12 48 06.1
SKR                               eS       SKSac   12 57 41.5  -4.2
SKR                                pmax    pmax
      comp=Z,22nm,0.8s
SKR                                pmax    pmax
      comp=Z,200nm,3.7s
SKR                                MLR     MLR
      comp=Z,100nm,14.0s
AMKA  Amchitka         72.56   6   P       P       12 47 55.5  +0.5
RPN   Rapa Nui         72.70 113   LR      LR      13 12 44.4
      comp=Z,168nm,19.0s,baz=260,slow=30
KULM  Kulim            72.85 283   P       P       12 47 58.0  +0.4
KULM                               IAmb    IAmb    12 47 59.3
      comp=Z,179nm,1.1s
VLA   Vladivostok      72.86 332c iP       P       12 47 57.3  +0.4
VLA                                pmax    pmax
      comp=Z,127nm,0.9s
PBSI  Pulau Batu       72.97 277   P       P       12 47 59.1  +0.8
      comp=Z,271nm,1.3s,comp=Z,4µm
RPSI  Rantau Prapat    73.41 280   P       P       12 48 00.8  -0.2
RPSI                               IAmb    IAmb    12 48 02.0
      comp=Z,199nm,1.0s
KIWB  Kanaga Island    73.44   8   P       P       12 48 00.8  +0.6
PSI   Prapat           73.45 280   P       P       12 48 00.8  -0.5
PSI                                pmax    pmax
      comp=Z,199nm,1.0s
ADK   Adak             73.54   9   P       P       12 48 01.0  +0.2
ADK                                IAmb    IAmb    12 48 02.1
      comp=Z,305nm,1.1s
ADK   Adak             73.54   9   P       P       12 48 00.9  +0.2
ADK   Adak             73.54   9   P       P       12 48 01.0  +0.2
ADK                                pmax    pmax
      comp=Z,305nm,1.1s
SHEM  Shemya Is, Ala   73.54   3   P       P       12 48 00.9  +0.1
      comp=Z,768nm,1.4s,baz=63,slow=4.5,SNR=11
SHEM                               LR      LR      13 12 44.0
      comp=Z,172nm,21.3s,baz=148,slow=29
      comp=Z,768nm,1.4s
SMY   Shemya           73.54   3   P       P       12 48 01.6  +0.9
SMY                                IAmb    IAmb    12 48 02.4
      comp=Z,246nm,1.0s
SMY   Shemya           73.54   3   P       P       12 48 01.4  +0.7
SMY   Shemya           73.54   3   P       P       12 48 01.6  +0.9
SMY                                pmax    pmax
      comp=Z,246nm,1.0s
SKLT  Songkhla         73.64 285   P       P       12 48 03.5  +1.3
USA0B Ussuriysk Arra   73.67 332   P       P       12 48 02.9  +1.2
USA0B                              IAmb    IAmb    12 48 04.2
      comp=Z,349nm,1.1s
USA0B Ussuriysk Arra   73.67 332c iP       P       12 48 02.4  +0.7
USRK  Ussuriysk Ar.    73.67 332   P       P       12 48 02.6  +0.9
      comp=Z,139nm,0.9s,baz=148,slow=4.0,SNR=98
      comp=Z,139nm,0.9s
CNSH  ChangSha         73.73 309 ⇑P       P       12 48 01.1  -1.3
CNSH                               pmax    pmax
      comp=Z,98nm,1.2s
GULI  GuiLin           74.01 306 ⇑P       P       12 48 11.8  +7.6
GULI                               S       S       12 57 36.8  +11
GULI                               pmax    pmax
      comp=Z,290nm,1.1s
GULI                               LR      LR
      comp=N,1µm,19.0s
GULI                               LR      LR
      comp=E,1µm,16.2s
GULI                               LR      LR
      comp=Z,2µm,17.3s
WHN   Wuhan            74.11 312⇑iP       P       12 48 05.0  +0.4
WHN                                pP      pP      12 48 39.0  +0.5
WHN                                S       S       12 57 27.6  +1.3
WHN                                pmax    pmax
      comp=Z,540nm,1.2s
WHN                                pmax    pmax
      comp=Z,2µm,2.9s
UGL   Uglegorsk        74.12 341⇑iP       P       12 48 05.4  +1.2
UGL                                pmax    pmax
      comp=Z,1µm,4.5s
UGL                                pmax    pmax
      comp=Z,90nm,0.8s
GSI   Gunungsitoli     74.13 278   P       P       12 48 06.1  +1.0
GSI   Gunungsitoli     74.13 278   P       P       12 48 06.0  +0.9
GSI   Gunungsitoli     74.13 278   P       P       12 48 05.7  +0.6
      comp=Z,533nm,1.1s,comp=Z,5µm
PET   Petropavlovsk    74.41 353   P       P       12 48 06.5  +0.8
PET                                IAmb    IAmb    12 48 07.5
      comp=Z,162nm,1.3s
PET   Petropavlovsk    74.41 353  eP       P       12 48 06.4  +0.6
PET                               e*PP     pP      12 48 40.0  +0.4
PET                               e                12 50 54.7
PET                               eS       S       12 57 30.9  +2.2
PET                                pmax    pmax
      comp=Z,133nm,1.2s
PET                                pmax    pmax
      comp=Z,400nm,7.8s
PET                                pmax    pmax
      comp=Z,600nm,6.1s
PET                                MLR     MLR
      comp=Z,200nm,16.0s
PEA0B Petropavlovsk-   74.61 352   P       P       12 48 07.7  +0.7
PEA0B                              IAmb    IAmb    12 48 09.2
      comp=Z,339nm,1.2s
PEA0B Petropavlovsk-   74.61 352ceP       P       12 48 07.6  +0.7
PETK  Petropavlovsk-   74.61 352   P       P       12 48 07.1  +0.1
      comp=Z,95nm,0.9s,baz=165,slow=6.2,SNR=64
      comp=Z,95nm,0.9s
PETK  Petropavlovsk-   74.61 352   P       P       12 48 07.3  +0.3
PETK  Petropavlovsk-   74.61 352   P       P       12 48 07.3  +0.3
KCSI  Kotacane, Aceh   74.79 280   P       P       12 48 08.1  -0.9
      comp=Z,134nm,1.0s,comp=Z,2µm
DL2   Dalian           74.89 323⇑iP       P       12 48 09.9  +1.0
DL2                                S       S       12 57 34.8  +0.1
DL2                                sS      sS      12 58 31.5  -2.0
DL2                                pmax    pmax
      comp=Z,680nm,1.0s
DL2                                pmax    pmax
      comp=Z,140nm,5.0s
MDJ   Mudanjiang       75.06 331   P       P       12 48 11.3  +1.6
MDJ                                pP      pP      12 48 45.3  +1.4
MDJ                                sP      sP      12 48 57.8  -0.8
MDJ                                PP      PP      12 51 04.8  +4.9
MDJ                                pmax    pmax
      comp=Z,370nm,1.3s
MDJ                                pmax    pmax
      comp=Z,500nm,5.0s
SRIT  Nakonsritamara   75.14 285   IAmb    IAmb    12 48 13.7
      comp=Z,183nm,1.0s
TYV   Tymovskoe        75.55 342  eP       P       12 48 13.7  +1.3
TYV                               eS       S       12 57 42.5  +1.1
TYV                                pmax    pmax
      comp=Z,800nm,4.6s
TYV                                pmax    pmax
      comp=Z,157nm,1.2s
TYV                                smax    smax
      comp=N,100nm,7.8s
TYV                                smax    smax
      comp=E,300nm,7.8s
SNSI  Sinabang, Aceh   75.70 278   P       P       12 48 15.3  +1.2
      comp=E,464nm,1.1s,comp=E,4µm
TIA   Tai'an           75.78 318 ⇑P       P       12 48 14.8  +0.7
TIA                                pmax    pmax
      comp=E,470nm,0.8s
TIA                                pmax    pmax
      comp=E,630nm,3.5s
TIA                                LR      LR
      comp=E,1µm,17.1s
TIA                                LR      LR
      comp=E,910nm,14.7s
TIA                                LR      LR
      comp=E,2µm,17.1s
SNY   Shenyang         75.89 326 ⇑P       P       12 48 14.8  +0.3
SNY                                sP      sP      12 49 03.3  +0.1
SNY                                S       S       12 57 40.9  -4.6
SNY                                pmax    pmax
      comp=E,130nm,0.9s
SNY                                pmax    pmax
      comp=E,840nm,4.1s
SNY                                LR      LR
      comp=E,320nm,4.1s
SNY                                LR      LR
      comp=E,310nm,3.9s
SNY                                LR      LR
      comp=E,170nm,5.7s
NIKH  Nikolski High    75.95  13   P       P       12 48 15.0  +0.3
NIKH  Nikolski High    75.95  13   P       P       12 48 14.3  -0.4
      baz=200,SNR=15
NAYO  Nakonayok        76.05 291   P       P       12 48 17.8  +1.8
LHMI  Lhok Sumawe      76.21 281   P       P       12 48 17.4  +0.4
LHMI                               IAmb    IAmb    12 48 19.0
      comp=Z,260nm,1.0s
LHMI  Lhok Sumawe      76.21 281   P       P       12 48 18.5  +1.5
      comp=Z,311nm,1.1s,comp=Z,3µm
MLSI  Meulaboh, Aceh   76.34 280   P       P       12 48 17.8  +0.1
      comp=Z,308nm,1.0s,comp=Z,3µm
CN2   Changchun        76.38 328 ⇑P       P       12 48 18.1  +0.8
CN2                                pP      pP      12 48 53.0  +1.5
CN2                                S       S       12 57 50.6  -0.3
CN2                                pmax    pmax
      comp=Z,400nm,0.8s
CN2                                pmax    pmax
      comp=Z,1µm,4.0s
BNX   BinXian          76.91 331 ⇑P       P       12 48 20.1  -0.1
BNX                                pmax    pmax
      comp=Z,330nm,0.9s
BNX                                pmax    pmax
      comp=Z,290nm,4.2s
MAW   Mawson           77.05 202   P       P       12 48 22.4  +1.6
      comp=Z,50nm,0.5s,baz=103,slow=15,SNR=2.8
MAW                                LR      LR      13 16 40.5
      comp=Z,481nm,21.0s,baz=33,slow=31
      comp=Z,50nm,0.5s
UNV   Unalaska Valle   77.28  14   IAmb    IAmb    12 48 22.8
      comp=Z,184nm,0.8s
UNV   Unalaska Valle   77.28  14   P       P       12 48 21.8  -0.3
      baz=202,SNR=10
ENH   Enshi            77.39 309   P       P       12 48 23.6  +0.3
GRNR  Gornyy           77.39 339⇑iP       P       12 48 24.6  +1.8
GRNR                              eS       S       12 58 06.6  +5.0
GRNR                               pmax    pmax
      comp=N,60nm,1.1s
GRNR                               pmax    pmax
      comp=E,50nm,1.1s
GRNR                               pmax    pmax
      comp=Z,230nm,1.1s
GRNR                               smax    smax
      comp=N,1.0nm,0.8s
GYA   Guiyang          77.46 305⇑iP       P       12 48 24.8  +0.9
GYA                                pP      pwP     12 49 00.5  +0.1
GYA                                S       S       12 57 58.1  -5.5
GYA                                pmax    pmax
      comp=N,190nm,1.1s
GYA                                pmax    pmax
      comp=N,780nm,3.5s
GYA                                LR      LR
      comp=N,260nm,11.4s
LYN   LuoYang          77.76 315⇑iP       P       12 48 26.3  +1.1
LYN                                pP      pP      12 49 02.0  +2.5
LYN                                sP      sP      12 49 15.5  +1.3
LYN                                PP      PP      12 51 24.6  +1.7
LYN                                S       S       12 58 05.4  -0.8
LYN                                pmax    pmax
      comp=N,440nm,1.0s
KLR   Kul'dur          77.81 335   P       P       12 48 26.2  +1.0
      comp=N,115nm,0.7s,baz=125,slow=3.4,SNR=200
      comp=N,115nm,0.7s
KLR   Kul'dur          77.81 335ceP       P       12 48 26.3  +1.2
KLR                                pmax    pmax
      comp=Z,205nm,1.0s
HNS   HongShan         78.03 318 ⇑P       P       12 48 27.8  +1.2
HNS                                sP      sP      12 49 12.3  -3.3
HNS                                S       S       12 58 11.4  +2.4
HNS                                pmax    pmax
      comp=Z,220nm,1.3s
BJT   Baijiatuau       78.79 321   P       P       12 48 31.8  +1.0
BJT                                IAmb    IAmb    12 48 32.8
      comp=Z,181nm,0.8s
BJT   Baijiatuau       78.79 321   P       P       12 48 31.8  +1.0
BJT                                pmax    pmax
      comp=Z,181nm,0.8s
BJI   Beijing          78.80 321   P       P       12 48 31.8  +1.0
BJI                                S       S       12 58 22.8  +5.7
BJI                                pmax    pmax
      comp=Z,160nm,0.8s
BJI                                LR      LR
      comp=Z,530nm,15.9s
BJI                                LR      LR
      comp=Z,610nm,16.5s
BJI                                LR      LR
      comp=Z,470nm,14.9s
PHRA  Phrae            78.84 295   P       P       12 48 33.2  +1.7
FALS  False Pass       78.93  15   P       P       12 48 30.1  -1.0
      baz=205
SPIA  Saint Paul Isl   79.66  11   IAmb    IAmb    12 48 36.7
      comp=Z,252nm,1.1s
SPIA  Saint Paul Isl   79.66  11   P       P       12 48 35.5  +0.5
      baz=199
TIY   Taiyuan          79.66 317  eP       P       12 48 36.8  +1.2
TIY                                S       S       12 58 30.8  +4.3
TIY                                pmax    pmax
      comp=Z,170nm,1.0s
TIY                                pmax    pmax
      comp=Z,630nm,3.7s
KMI   Kunming          79.85 302 ⇑P       P       12 48 39.0  +1.8
KMI                                pP      pP      12 49 10.9  -0.5
KMI                                S       S       12 58 31.8  +2.5
KMI                                sS      sS      12 59 25.3  -1.2
KMI                                pmax    pmax
      comp=Z,260nm,1.1s
KMI                                pmax    pmax
      comp=Z,1µm,3.4s
XAN   Xi'an            79.87 312⇑iP       P       12 48 37.6  +0.8
XAN                                pP      pP      12 49 09.6  -1.5
XAN                                S       S       12 58 31.0  +2.2
XAN                                pmax    pmax
      comp=Z,380nm,0.9s
XAN                                pmax    pmax
      comp=Z,1µm,3.6s
CM31  Chiang Mai Arr   79.92 294   P       P       12 48 39.5  +2.1
CMAR  Chiang Mai Arr   79.92 294   P       P       12 48 38.9  +1.5
      comp=Z,156nm,0.8s,baz=133,slow=4.1,SNR=711
CMAR                               PKiKP   PKiKP   12 54 07.0   0.0
      comp=Z,1.5nm,0.6s,baz=225,slow=1.6,SNR=4.9
CMAR                               PKKPbc  PKKPbc  13 07 21.8  -0.2
      comp=Z,2.7nm,0.8s,baz=289,slow=4.3,SNR=13
CMAR                               PKPPKP  P'P'df  13 15 19.9  -6.6
      comp=Z,0.6nm,0.7s,baz=304,slow=3.1,SNR=5.5
      comp=Z,156nm,0.8s
CMAR  Chiang Mai Arr   79.92 294   P       P       12 48 39.3  +2.0
CMAR  Chiang Mai Arr   79.92 294 i P       P       12 48 39.4  +2.0
CMAR                               pmax    pmax
      comp=Z,169nm,0.8s
S12K  Black Hills      80.04  16   P       P       12 48 37.1   0.0
      baz=206,SNR=7.3
CHTO  Chiang Mai       80.08 295   P       P       12 48 40.0  +1.8
CHTO  Chiang Mai       80.08 295   P       P       12 48 40.0  +1.8
CHTO                               pmax    pmax
      comp=Z,10.0nm,0.9s
SDPT  Sand Point       80.13  17   P       P       12 48 37.2  -0.4
SDPT                               IAmb    IAmb    12 48 38.0
      comp=Z,188nm,1.0s
SDPT  Sand Point       80.13  17   P       P       12 48 37.4  -0.2
      baz=208
BELA  Belgrano 2       80.25 175   P       P       12 48 37.7  -0.4
BELA                               IAmb    IAmb    12 48 38.7
      comp=Z,115nm,0.9s
HEH   HeiHe            80.35 334  eP       P       12 48 38.8  -0.1
HEH                                sP      sP      12 49 25.6  -2.5
HEH                                S       S       12 58 32.0  -1.0
HEH                                pmax    pmax
      comp=Z,260nm,1.1s
HEH                                pmax    pmax
      comp=Z,900nm,6.2s
PZH   PanZhiHua        81.30 303 ⇑P       P       12 48 45.4  +0.7
PZH                                pP      pP      12 49 17.3  -1.8
PZH                                sP      sP      12 49 33.1  -0.5
PZH                                PP      PP      12 51 57.6  +5.0
PZH                                S       S       12 58 45.9  +1.7
PZH                                pmax    pmax
      comp=Z,210nm,0.9s
PZH                                pmax    pmax
      comp=Z,270nm,5.8s
PZH                                LR      LR
      comp=Z,2µm,16.6s
PZH                                LR      LR
      comp=Z,2µm,18.4s
PZH                                LR      LR
      comp=Z,2µm,19.2s
XLT   XiLinHaoTe       81.33 324⇑iP       P       12 48 45.3  +0.9
XLT                                pP      pP      12 49 14.3  -4.7
XLT                                PP      PP      12 51 53.9  +1.4
XLT                                S       S       12 58 47.1  +3.4
XLT                                sS      sS      12 59 40.1  -3.5
XLT                                pmax    pmax
      comp=Z,150nm,1.2s
XLT                                pmax    pmax
      comp=Z,830nm,3.8s
CHGN  Chignik          81.53  17   IAmb    IAmb    12 48 46.1
      comp=Z,110nm,0.9s
CHGN  Chignik          81.53  17   P       P       12 48 45.1  +0.1
      baz=210,SNR=5.3
MA2   Magadan          81.86 350   LR      LR      13 18 37.0
      comp=Z,92nm,19.7s,baz=192,slow=31
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MA2	**Magadan**	81.86	350	P	**P**	**12 48 46.3**	**-0.5**
MA2	**Magadan**	81.86	350	*ce*P	**P**	**12 48 46.1**	**-0.6**
MA2				pmax	pmax		
	comp=Z,92nm,1.7s						
CD2	**Chengdu**	81.92	307	P	**P**	**12 48 48.5**	**+0.7**
CD2				pmax	pmax		
	comp=Z,50nm,0.8s						
HHC	**Hu-ho-hao-te**	82.07	319	⇑*i*P	**P**	**12 48 49.6**	**+1.2**
HHC				S	**S**	**12 58 57.0**	**+5.6**
HHC				pmax	pmax		
	comp=Z,410nm,1.0s						
HHC				pmax	pmax		
	comp=Z,600nm,4.9s						
PBA	**Port Blair**	82.55	285	P	**P**	**12 48 49.9**	**-1.4**
PBA				IAmb	IAmb	12 48 53.1	
	comp=Z,131nm,0.8s						
R16K	**Pilot Point**	82.86	17	P	**P**	**12 48 52.3**	**+0.4**
	baz=210,SNR=11						
BTO	**Baotou**	82.87	318	⇑*i*P	**P**	**12 48 54.3**	**+1.7**
BTO				pP	**pwP**	**12 49 29.5**	**0.0**
BTO				sP	**sP**	**12 49 44.8**	**+3.1**
BTO				S	**S**	**12 58 58.8**	**-0.8**
BTO				pmax	pmax		
	comp=Z,370nm,0.9s						
BTO				pmax	pmax		
	comp=Z,3µm,7.6s						
BTO				LR	LR		
	comp=Z,3µm,22.6s						
BTO				LR	LR		
	comp=Z,6µm,22.4s						
BTO				LR	LR		
	comp=Z,6µm,21.3s						
HIA	**Hailar**	83.04	329	P	**P**	**12 48 53.4**	**+0.3**
HIA	**Hailar**	83.04	329	P	**P**	**12 48 53.4**	**+0.3**
HIA				pmax	pmax		
	comp=Z,65nm,1.2s						
ZEA	**Zeya**	83.10	336	*ce*P	**P**	**12 48 54.6**	**+1.3**
ZEA				pmax	pmax		
	comp=N,130nm,1.2s						
ZEA				pmax	pmax		
	comp=E,30nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,230nm,1.3s						
TNCH	**TengChong**	83.19	300	P	**P**	**12 48 56.1**	**+1.4**
TNCH				pP	pP	12 49 29.3	+0.2
TNCH				sP	sP	12 49 43.3	-0.4
TNCH				S	**S**	**12 59 03.9**	**+0.3**
TNCH				pmax	pmax		
	comp=Z,230nm,1.0s						
TNCH				pmax	pmax		
	comp=Z,820nm,4.1s						
R17K	**Ugashik Creek**	83.25	17	P	**P**	**12 48 54.6**	**+0.7**
	baz=211						
OHAK	**Old Harbor**	83.80	19	P	**P**	**12 48 57.8**	**+1.0**
OHAK	**Old Harbor**	83.80	19	P	**P**	**12 48 57.6**	**+0.9**
OHAK	**Old Harbor**	83.80	19	P	**P**	**12 48 57.7**	**+0.9**
	baz=214						
MND	**Mandalay**	83.85	296	P	**P**	**12 48 58.7**	**+0.8**
Q17K	**Contact Creek**	83.92	17	P	**P**	**12 48 57.6**	**+0.1**
	baz=212,SNR=53						
P16K	**Nushagak River**	84.02	16	P	**P**	**12 48 57.6**	**-0.2**
	baz=210,SNR=27						
Q16K	**King Salmon**	84.06	17	P	**P**	**12 48 58.4**	**+0.4**
	baz=211,SNR=46						
KDAK	**Kodiak Island**	84.48	19	P	**P**	**12 49 01.1**	**+0.9**
	comp=Z,126nm,1.0s,baz=228,slow=3.8,SNR=17						
	comp=Z,126nm,1.0s						
KDAK	**Kodiak Island**	84.48	19	P	**P**	**12 49 01.4**	**+1.2**
KDAK				IAmb	IAmb	12 49 03.2	
	comp=Z,251nm,1.1s						
KDAK	**Kodiak Island**	84.48	19	P	**P**	**12 49 01.4**	**+1.2**
KDAK				pmax	pmax		
	comp=Z,251nm,1.2s						
O16K	**Kokwok River B**	84.48	16	P	**P**	**12 48 59.7**	**-0.4**
	baz=210						
LZH	**Lanzhou**	84.48	312	⇑P	**P**	**12 49 02.8**	**+1.8**
LZH				pP	pP	12 49 35.0	-0.6
LZH				sP	sP	12 49 47.1	-3.1
LZH				PP	**PP**	**12 52 19.1**	**+0.6**
LZH				S	**S**	**12 59 17.8**	**+1.7**
LZH				pmax	pmax		
	comp=Z,190nm,1.5s						
LZH				pmax	pmax		
	comp=Z,280nm,6.5s						
LZH				LR	LR		
	comp=Z,1µm,17.9s						
LZH				LR	LR		
	comp=Z,1µm,17.2s						
LZH				LR	LR		
	comp=Z,220nm,15.5s						
Q18K	**Katmai Hardscr**	84.49	18	P	**P**	**12 49 00.7**	**+0.3**
	baz=212,SNR=35						
SEY	**Seymchan**	84.85	352	LR	LR	13 23 03.9	
	comp=Z,73nm,19.8s,baz=88,slow=33						
SEY	**Seymchan**	84.85	352	*ce*P	**P**	**12 49 01.9**	**0.0**
SEY				pmax	pmax		
	comp=Z,73nm,1.0s						
O17K	**Koliganek Bris**	84.89	16	P	**P**	**12 49 02.3**	**+0.1**
	baz=211,SNR=20						
P18K	**Big Mountain,**	85.06	17	P	**P**	**12 49 03.6**	**+0.5**
P18K	**Big Mountain,**	85.06	17	P	**P**	**12 49 03.2**	**+0.1**
	baz=212						
N16K	**Nishlik Lake**	85.08	15	P	**P**	**12 49 04.4**	**+1.2**
	baz=209						
Q19K	**Cape Douglas,**	85.11	18	P	**P**	**12 49 04.1**	**+0.7**
	baz=214,SNR=8.8						
Q20K	**Shuyak Island**	85.22	19	P	**P**	**12 49 04.6**	**+0.8**
	baz=215,SNR=5.7						
O18K	**Koktuh Hills**	85.46	17	P	**P**	**12 49 05.4**	**+0.4**
O18K				IAmb	IAmb	12 49 06.7	
	comp=Z,106nm,0.9s						
O18K	**Koktuh Hills**	85.46	17	P	**P**	**12 49 05.3**	**+0.2**
	baz=212,SNR=15						
P19K	**Oil Pt**	85.84	18	P	**P**	**12 49 07.5**	**+0.6**
P19K				IAmb	IAmb	12 49 10.8	
	comp=Z,203nm,0.9s						
P19K	**Oil Pt**	85.84	18	P	**P**	**12 49 06.6**	**-0.3**
	baz=214						
O19K	**Port Alsworth**	85.99	17	P	**P**	**12 49 07.6**	**0.0**
O19K				IAmb	IAmb	12 49 10.8	
	comp=Z,168nm,1.0s						
O19K	**Port Alsworth**	85.99	17	P	**P**	**12 49 07.1**	**-0.5**
	baz=213,SNR=42						
ILSW	**Iliamna Southw**	86.14	18	P	**P**	**12 49 08.6**	**+0.1**
ILSW				IAmb	IAmb	12 49 12.5	
	comp=Z,144nm,1.0s						
SNCC	**San Nicolas Is**	86.14	52	P	**P**	**12 49 09.8**	**+0.7**
SNCC				IAmb	IAmb	12 49 11.8	
	comp=Z,112nm,1.1s						
SNCC	**San Nicolas Is**	86.14	52	P	**P**	**12 49 10.1**	**+1.0**
	baz=242,SNR=10						
MCCM	**Marconi Confer**	86.15	47	P	**P**	**12 49 10.2**	**+1.3**
MCCM				IAmb	IAmb	12 49 11.3	
	comp=Z,100nm,0.9s						
HOM	**Homer**	86.30	18	P	**P**	**12 49 10.3**	**+1.1**
	baz=216						
O20K	**Slope Mountain**	86.36	18	P	**P**	**12 49 09.6**	**0.0**
	baz=215						
SCZ2	**Santa Cruz Isl**	86.41	52	P	**P**	**12 49 11.6**	**+1.2**
	baz=242,SNR=13						
SVW2	**Sparrevohn**	86.42	16	P	**P**	**12 49 10.8**	**+1.1**
SVW2				IAmb	IAmb	12 49 13.7	
	comp=Z,72nm,1.1s						
HOPS	**Hopland Field**	86.45	46	P	**P**	**12 49 11.3**	**+0.9**
HOPS				IAmb	IAmb	12 49 13.2	
	comp=Z,138nm,1.1s						
SAO	**San Andreas Ge**	86.45	48	IAmb	IAmb	12 49 13.2	
	comp=Z,74nm,0.9s						
KCPM	**Cahto Peak**	86.46	45	P	**P**	**12 49 11.6**	**+1.0**
N19K	**Bonanza Creek**	86.46	17	P	**P**	**12 49 09.1**	**-0.9**
	baz=213,SNR=6.1						
KMPM	**Mount Pierce**	86.49	44	IAmb	IAmb	12 49 13.9	
	comp=Z,251nm,1.3s						
GDXM	**Geysers**	86.54	46	P	**P**	**12 49 12.2**	**+1.2**
GDXM				IAmb	IAmb	12 49 14.1	
	comp=Z,94nm,1.3s						
SBC	**Santa Barbara**	86.57	51	P	**P**	**12 49 12.0**	**+0.9**
	baz=242						
BRLK	**Bradley Lake**	86.61	19	P	**P**	**12 49 10.3**	**-0.4**
BRLK				IAmb	IAmb	12 49 12.9	
	comp=Z,70nm,0.9s						
PMPB	**Monarch Peak**	86.64	49	P	**P**	**12 49 13.0**	**+1.5**
PMPB				IAmb	IAmb	12 49 14.5	
	comp=Z,93nm,1.0s						
BRSE	**Bradley Lake S**	86.64	19	P	**P**	**12 49 11.6**	**+0.8**
	baz=216,SNR=6.7						
RSO	**Redoubt South**	86.64	17	P	**P**	**12 49 10.7**	**-0.4**
BBGB	**Big Mountain B**	86.64	49	IAmb	IAmb	12 49 16.9	
	comp=Z,142nm,1.0s						
KMRM	**Mail Ridge**	86.65	45	P	**P**	**12 49 13.5**	**+2.0**
KMRM				IAmb	IAmb	12 49 14.6	
	comp=Z,162nm,0.9s						
PKM	**Mcpherson Peak**	86.71	51	P	**P**	**12 49 13.3**	**+1.3**
	baz=242,SNR=20						
JCC	**Jacoby Creek,**	86.75	44	P	**P**	**12 49 13.6**	**+1.8**
JCC				IAmb	IAmb	12 49 14.9	
	comp=Z,120nm,1.2s						
SMMC	**Simmler**	86.78	50	P	**P**	**12 49 13.8**	**+1.6**
	baz=242,SNR=15						
TROLL	**Troll, Antarti**	86.80	184	P	**P**	**12 49 11.6**	**-0.2**
KRPM	**Rodgers**	86.93	44	P	**P**	**12 49 14.2**	**+1.4**
KRPM				IAmb	IAmb	12 49 16.2	
	comp=Z,119nm,1.0s						
KHMM	**Horse Mountain**	86.98	44	IAmb	IAmb	12 49 16.3	
	comp=Z,150nm,0.9s						
BCW	**Bitter Crk WRg**	87.02	51	P	**P**	**12 49 14.1**	**+0.6**
BCW				IAmb	IAmb	12 49 16.4	
	comp=Z,95nm,1.0s						
CIS	**Catalina Islan**	87.04	53	P	**P**	**12 49 14.3**	**+0.8**
	baz=242,SNR=14						
NVL	**N'lazarevskaya**	87.17	187	⇓*i*P	**P**	**12 49 13.5**	**+0.1**
NVL				*e**PP	**pP**	**12 49 49.0**	**+1.0**
NVL				pmax	pmax		
	comp=Z,87nm,1.0s						
FMP	**Fort Macarthur**	87.27	52	P	**P**	**12 49 15.6**	**+1.1**
	baz=243,SNR=7.3						
SEW	**Seward**	87.32	19	P	**P**	**12 49 14.9**	**+0.9**
SEW	**Seward**	87.32	19	P	**P**	**12 49 15.8**	**+1.7**
	baz=217						
CAPN	**Captain Cook N**	87.35	18	P	**P**	**12 49 16.1**	**+2.0**
	baz=216						
OSI	**Osito Audit: C**	87.37	51	P	**P**	**12 49 16.1**	**+1.0**
	baz=242						
SNAA	**Sanae**	87.40	182	P	**P**	**12 49 14.1**	**-0.5**
SNAA	**Sanae**	87.40	182	P	**P**	**12 49 14.1**	**-0.5**
SNAA	**Sanae**	87.40	182	P	**P**	**12 49 14.1**	**-0.5**
SNAA				pmax	pmax		
	comp=Z,40nm,0.8s						
SPCR	**Spurr Chakacha**	87.40	17	P	**P**	**12 49 15.5**	**+0.9**
	baz=215						
M19K	**Big River Lodg**	87.41	16	P	**P**	**12 49 14.5**	**0.0**
M19K	**Big River Lodg**	87.41	16	P	**P**	**12 49 14.6**	**+0.1**
	baz=213,SNR=19						
ANM	**Nome**	87.43	10	P	**P**	**12 49 15.3**	**+0.8**
ANM	**Nome**	87.43	10	P	**P**	**12 49 15.3**	**+0.8**
ANM				pmax	pmax		
	comp=Z,34nm,1.1s						
ANM	**Nome**	87.43	10	P	**P**	**12 49 15.4**	**+0.8**
	baz=203,SNR=28						
DECC	**Green Verdugo**	87.49	52	P	**P**	**12 49 16.4**	**+0.8**
	baz=242						
L19K	**White Mountain**	87.52	16	P	**P**	**12 49 15.5**	**+0.4**
L19K				IAmb	IAmb	12 49 16.7	
	comp=Z,67nm,1.1s						
L19K	**White Mountain**	87.52	16	P	**P**	**12 49 15.5**	**+0.4**
	baz=213						
ARVC	**Arvin**	87.53	51	P	**P**	**12 49 16.8**	**+1.1**
	baz=242,SNR=16						
O22K	**Cooper Landing**	87.54	19	P	**P**	**12 49 15.3**	**+0.2**
O22K				IAmb	IAmb	12 49 24.2	
	comp=Z,128nm,0.8s						
O22K	**Cooper Landing**	87.54	19	P	**P**	**12 49 14.4**	**-0.7**
	baz=217						
PASC	**Pasadena Art C**	87.56	52	P	**P**	**12 49 16.8**	**+0.9**
CCX	**Cicese**	87.66	55	P	**P**	**12 49 16.2**	**-0.2**
CCX				IAmb	IAmb	12 50 32.0	
	comp=Z,42nm,0.4s						
VES	**Vestal, Richgr**	87.68	50	P	**P**	**12 49 17.2**	**+0.8**
	baz=242,SNR=15						
VOG	**Valley Oaks Go**	87.69	50	P	**P**	**12 49 17.4**	**+1.0**
	baz=242						
M20K	**Styx River**	87.72	17	P	**P**	**12 49 15.9**	**-0.2**
M20K	**Styx River**	87.72	17	P	**P**	**12 49 16.8**	**+0.7**
	baz=214						
L02F	**Cave Junction**	87.72	43	P	**P**	**12 49 16.9**	**+0.4**
L02F				IAmb	IAmb	12 49 19.6	
	comp=Z,191nm,1.7s						
Q23K	**Middleton Isla**	87.77	21	P	**P**	**12 49 17.3**	**+1.1**
	baz=220						
109C	**Camp Elliot, M**	87.78	54	P	**P**	**12 49 16.9**	**-0.1**
109C	**Camp Elliot, M**	87.78	54	P	**P**	**12 49 17.6**	**+0.7**
	baz=243,SNR=5.4						
ORV	**Oroville**	87.78	46	P	**P**	**12 49 17.6**	**+0.8**
ORV				IAmb	IAmb	12 49 19.3	
	comp=Z,118nm,1.2s						
ORV	**Oroville**	87.78	46	P	**P**	**12 49 17.6**	**+0.8**
ORV				pmax	pmax		
	comp=Z,117nm,1.2s						
CMB	**Columbia Colle**	87.80	48	P	**P**	**12 49 18.2**	**+1.2**
CMB				IAmb	IAmb	12 49 19.4	
	comp=Z,82nm,0.9s						
CMB	**Columbia Colle**	87.80	48	P	**P**	**12 49 18.2**	**+1.2**
CMB				pmax	pmax		
	comp=Z,82nm,0.9s						
CIT	**Chita**	87.81	329	*e*P	**P**	**12 49 17.4**	**+0.7**
CIT				*e*		12 50 03.8	
CIT				pmax	pmax		
	comp=Z,464nm,1.8s						
P23K	**Montague Islan**	87.87	20	P	**P**	**12 49 18.0**	**+1.3**
	baz=219						
TTA	**Tatalina**	87.88	15	P	**P**	**12 49 17.0**	**+0.2**
TTA	**Tatalina**	87.88	15	P	**P**	**12 49 17.0**	**+0.2**
TTA				pmax	pmax		
	comp=Z,40nm,1.0s						
TTA	**Tatalina**	87.88	15	P	**P**	**12 49 17.0**	**+0.2**
	baz=212,SNR=21						
ELS	**Elsinore Mount**	87.88	53	P	**P**	**12 49 17.9**	**+0.4**
BRDH	**Bariadhala**	87.89	295	P	**P**	**12 49 19.3**	**+1.6**
	comp=Z,159nm,0.3s,baz=90,slow=5.5,SNR=29						
	comp=Z,159nm,0.3s						
TNA	**Tin City**	87.96	9	P	**P**	**12 49 17.5**	**+0.6**
TNA	**Tin City**	87.96	9	P	**P**	**12 49 17.7**	**+0.7**
	baz=201,SNR=59						
K02D	**Willamette Mer**	87.96	42	P	**P**	**12 49 19.2**	**+1.5**
VNA3	**Neumayer Olymp**	87.96	180	P	**P**	**12 49 16.6**	**-0.7**
BFSC	**Mount Baldy Ra**	87.98	52	P	**P**	**12 49 18.6**	**+0.5**
	baz=243,SNR=35						
TKX	**Tecate**	88.02	54	IAmb	IAmb	12 49 20.6	
	comp=Z,91nm,1.6s						
L20K	**Farewell, AK**	88.02	16	P	**P**	**12 49 17.4**	**-0.1**
	baz=213						
RC01	**Rabbit Creek A**	88.02	18	IAmb	IAmb	12 49 19.8	
	comp=Z,68nm,1.0s						
RC01	**Rabbit Creek A**	88.02	18	P	**P**	**12 49 16.7**	**-0.7**
	baz=217,SNR=14						
EDW2	**Edwards Air Fo**	88.03	51	P	**P**	**12 49 19.4**	**+1.3**
	baz=243,SNR=44						
SUA	**Susitna One**	88.03	18	P	**P**	**12 49 17.7**	**+0.1**
	baz=216						
J01E	**Myrtle Point**	88.03	42	IAmb	IAmb	12 49 20.6	
	comp=Z,141nm,1.0s						
MURC	**Murrieta**	88.03	53	P	**P**	**12 49 19.1**	**+0.9**
	baz=243,SNR=13						
ISA	**Isabella, Lake**	88.04	51	P	**P**	**12 49 19.6**	**+1.4**
ISA				IAmb	IAmb	12 49 20.9	
	comp=Z,104nm,1.1s						
ISA	**Isabella, Lake**	88.04	51	P	**P**	**12 49 19.6**	**+1.4**
ISA				pmax	pmax		
	comp=Z,104nm,1.1s						
ISA	**Isabella, Lake**	88.04	51	P	**P**	**12 49 19.3**	**+1.1**
	baz=242,SNR=20						
YBH	**Yreka Blue Hor**	88.08	44	LR	LR	13 22 31.9	
	comp=Z,136nm,20.2s,baz=236,slow=31						
YBH	**Yreka Blue Hor**	88.08	44	IAmb	IAmb	12 49 21.2	
	comp=Z,87nm,1.1s						
VTX	**Valle De La Tr**	88.13	55	P	**P**	**12 49 20.2**	**+1.5**
CCAC	**Calif City Air**	88.13	51	P	**P**	**12 49 19.7**	**+1.0**
PWL	**Port Wells**	88.25	19	P	**P**	**12 49 18.3**	**-0.3**
PWL				IAmb	IAmb	12 49 21.8	
	comp=Z,71nm,1.0s						
PWL	**Port Wells**	88.25	19	P	**P**	**12 49 17.6**	**-0.9**
	baz=218						
VNA2	**Neumayer--Watz**	88.26	181	P	**P**	**12 49 18.4**	**-0.3**
	baz=181,slow=6.0						
ESJX	**Sierra Juarez**	88.27	55	P	**P**	**12 49 20.7**	**+1.2**
ESJX				IAmb	IAmb	12 49 22.5	
	comp=Z,94nm,1.7s						
MONP2	**Monument Peak**	88.30	54	P	**P**	**12 49 20.9**	**+1.2**
	baz=244,SNR=47						
HUMO	**Hull Mountain**	88.36	43	IAmb	IAmb	12 49 22.6	
	comp=Z,109nm,0.9s						
IKP	**In-Ko-Pah, Jac**	88.43	54	P	**P**	**12 49 21.4**	**+1.2**
	baz=244,SNR=30						
RMX	**La Rumorosa**	88.43	54	P	**P**	**12 49 21.7**	**+1.4**
RMX				IAmb	IAmb	12 49 23.0	
	comp=Z,66nm,1.1s						
DBO	**Dodson Butte**	88.44	42	P	**P**	**12 49 21.2**	**+1.3**
DBO				IAmb	IAmb	12 49 22.7	
	comp=Z,71nm,1.0s						
EMB	**Emerald Bay**	88.45	47	P	**P**	**12 49 21.4**	**+1.1**
EMB				IAmb	IAmb	12 49 22.7	
	comp=Z,75nm,1.1s						
MDPB	**Devils Postpil**	88.52	49	IAmb	IAmb	12 49 23.3	
	comp=Z,101nm,1.1s						
LRMC	**Laurel Mtn Rad**	88.53	51	P	**P**	**12 49 21.8**	**+1.2**
	baz=243,SNR=51						
BBRC	**Big Bear Solar**	88.54	52	P	**P**	**12 49 21.7**	**+0.9**
	baz=243,SNR=10						
VNA1	**Neumayer--Stat**	88.55	181	P	**P**	**12 49 19.8**	**-0.1**
YUH	**Yuha Desert**	88.57	54	P	**P**	**12 49 21.8**	**+1.1**
YUH				IAmb	IAmb	12 49 23.3	
	comp=Z,64nm,1.2s						
OMMB	**Old Mammoth Mi**	88.57	49	IAmb	IAmb	12 49 23.6	
	comp=Z,105nm,1.3s						
I02E	**Swisshome, OR**	88.58	41	IAmb	IAmb	12 49 28.4	
	comp=Z,165nm,1.2s						
L04D	**Klamath Falls**	88.58	43	P	**P**	**12 49 21.8**	**+1.0**
PFO	**Pinyon Flats O**	88.59	53	P	**P**	**12 49 21.2**	**+0.3**
PFO				IAmb	IAmb	12 49 23.4	
	comp=Z,71nm,1.3s						
PFO	**Pinyon Flats O**	88.59	53	*c i*P	**P**	**12 49 21.8**	**+0.8**
PFO				pmax	pmax		
	comp=Z,62nm,1.1s						
PFO	**Pinyon Flats O**	88.59	53	P	**P**	**12 49 21.8**	**+0.8**
	baz=244,SNR=38						
TPFO	**Pinon Flats**	88.59	53	P	**P**	**12 49 21.8**	**+0.9**
	baz=244,SNR=38						
PMR	**Palmer**	88.60	18	P	**P**	**12 49 20.1**	**+0.1**
PMR				IAmb	IAmb	12 49 23.2	
	comp=Z,101nm,1.8s						
PMR	**Palmer**	88.60	18	P	**P**	**12 49 20.2**	**+0.1**
PMR				pmax	pmax		
	comp=Z,101nm,1.8s						
PMR	**Palmer**	88.60	18	P	**P**	**12 49 19.5**	**-0.6**
	baz=218,SNR=12						
KNK	**Knik Glacier**	88.65	19	P	**P**	**12 49 19.7**	**-0.8**
	baz=218,SNR=9.1						
MPK	**Martis Peak**	88.65	47	P	**P**	**12 49 22.2**	**+0.9**
MPK				IAmb	IAmb	12 49 24.0	
	comp=Z,132nm,1.1s						
PMD	**Palm Desert**	88.67	53	IAmb	IAmb	12 49 23.5	
	comp=Z,82nm,1.2s						
I03D	**Drain, OR**	88.67	42	P	**P**	**12 49 22.3**	**+1.4**
I03D				IAmb	IAmb	12 49 23.5	
	comp=Z,86nm,0.9s						
CWC	**Cottonwood Cre**	88.68	50	P	**P**	**12 49 22.7**	**+1.4**
	baz=243						
WAKR	**Walker**	88.68	48	IAmb	IAmb	12 49 24.2	
	comp=Z,122nm,1.0s						
K20K	**Telida**	88.71	15	P	**P**	**12 49 20.6**	**-0.1**
K20K	**Telida**	88.71	15	P	**P**	**12 49 20.7**	**0.0**
	baz=213						
ULN	**Ulaanbaatar**	88.75	323	P	**P**	**12 49 22.1**	**+0.7**
ULN	**Ulaanbaatar**	88.75	323	*ce*P	**P**	**12 49 21.9**	**+0.5**
ULN				pmax	pmax		
	comp=Z,269nm,1.4s						
RRX	**Edison Barstow**	88.75	52	P	**P**	**12 49 22.5**	**+0.9**
	baz=243						
SWSC	**Sam W. Stewart**	88.79	54	P	**P**	**12 49 22.9**	**+1.2**
	baz=244,SNR=25						
PPLA	**Purkeypile**	88.80	16	P	**P**	**12 49 21.1**	**-0.1**
YAK	**Yakutsk**	88.81	342	P	**P**	**12 49 20.9**	**-0.2**
	comp=Z,45nm,0.4s,baz=46,slow=1.4,SNR=3.8						
	comp=Z,45nm,0.4s						
YAK	**Yakutsk**	88.81	342	P	**P**	**12 49 21.1**	**+0.1**
YAK	**Yakutsk**	88.81	342	*e*P	**P**	**12 49 21.3**	**+0.2**
YAK				*e**PP	**pP**	**12 49 52.8**	**-3.4**
YAK				*e*S	**SKSac**	**12 59 36.0**	**-1.0**
YAK				*e*SS	**SS**	**13 05 47.9**	**-4.2**
YAK				*e*SSS	SSS	13 09 23.7	
YAK				pmax	pmax		
	comp=Z,213nm,1.0s						
YAK				pmax	pmax		
	comp=N,36nm,1.3s						
YAK				pmax	pmax		
	comp=E,22nm,1.5s						
YAK				pmax	pmax		
	comp=Z,86nm,2.0s						
YAK				pmax	pmax		
	comp=E,100nm,3.3s						
YAK				pmax	pmax		
	comp=N,85nm,2.7s						
YAK				smax	smax		
	comp=E,107nm,4.1s						
YAK				smax	smax		
	comp=N,93nm,3.7s						
EYAK	**Cordova Ski Ar**	88.82	20	P	**P**	**12 49 20.8**	**-0.3**
	baz=221						
SHL	**Shillong**	88.85	298	P	**P**	**12 49 22.9**	**+0.5**
SHL	**Shillong**	88.85	298	P	**P**	**12 49 22.9**	**+0.5**
SHL				pmax	pmax		
	comp=Z,221nm,0.9s						
TIN	**Tinemaha, Big**	88.85	49	P	**P**	**12 49 23.3**	**+1.2**
	baz=242,SNR=28						
BILL	**Bilibino**	88.86	359	P	**P**	**12 49 21.5**	**+0.2**
BILL	**Bilibino**	88.86	359	*de*P	**P**	**12 49 21.3**	**+0.1**
BILL				*e*		12 52 53.1	
BILL				*i* SS	SS	13 05 51.7	-1.1
BILL				pmax	pmax		
	comp=Z,205nm,1.1s						
GTA	**Gaotai**	88.90	313	⇑P	**P**	**12 49 23.3**	**+1.0**
GTA				pmax	pmax		
	comp=Z,140nm,1.0s						
GTA				pmax	pmax		
	comp=Z,230nm,6.5s						
GTA				LR	LR		
	comp=Z,460nm,16.7s						
GTA				LR	LR		
	comp=Z,630nm,16.7s						
GTA				LR	LR		
	comp=Z,640nm,16.4s						
CUT	**Chulitna**	88.92	17	P	**P**	**12 49 20.6**	**-1.0**
CUT				IAmb	IAmb	12 49 21.8	
	comp=Z,72nm,0.9s						
CUT	**Chulitna**	88.92	17	P	**P**	**12 49 20.4**	**-1.2**
	baz=217,SNR=14						
MPMC	**Manual Prospec**	88.93	51	P	**P**	**12 49 23.6**	**+1.0**
	baz=243,SNR=98						
SML	**Sawmill**	89.00	18	P	**P**	**12 49 21.5**	**-0.6**
SML	**Sawmill**	89.00	18	P	**P**	**12 49 23.4**	**+1.3**
	baz=218						
DIB	**Dawson Inlet,**	89.03	30	P	**P**	**12 49 23.3**	**+1.0**
DIB				IAmb	IAmb	12 49 24.9	
	comp=Z,159nm,1.1s						
YERR	**Yerington**	89.05	47	P	**P**	**12 49 24.1**	**+1.1**
YERR				IAmb	IAmb	12 49 25.5	
	comp=Z,108nm,1.1s						
GSC	**Goldstone, Bar**	89.08	52	IAmb	IAmb	12 49 25.7	
	comp=Z,62nm,1.2s						
GSC	**Goldstone, Bar**	89.08	52	P	**P**	**12 49 24.3**	**+1.1**
	baz=243,SNR=38						
SONM	**Songino Array**	89.10	323	P	**P**	**12 49 23.5**	**+0.5**
	comp=Z,109nm,1.0s,baz=141,slow=5.2,SNR=324						
SONM				PKKPbc	**PKKPbc**	**13 07 00.2**	**-1.9**
	comp=Z,2.2nm,0.8s,baz=271,slow=2.9,SNR=9.5						
SONM				PKPPKP	**P'P'df**	**13 15 06.6**	**-1.1**
	comp=Z,0.7nm,0.8s,baz=48,slow=2.1,SNR=3.2						
	comp=Z,109nm,1.0s						
SONM	**Songino Array**	89.10	323	P	**P**	**12 49 23.5**	**+0.5**
BELC	**Belle Mtn. Jos**	89.11	53	P	**P**	**12 49 24.7**	**+1.4**
	baz=244,SNR=126						
K04D	**Chiloquin, OR**	89.14	43	IAmb	IAmb	12 49 25.9	
	comp=Z,113nm,1.0s						
COR	**Corvallis**	89.16	41	P	**P**	**12 49 24.2**	**+1.0**
COR				IAmb	IAmb	12 49 26.1	
	comp=Z,105nm,1.0s						
COR	**Corvallis**	89.16	41	P	**P**	**12 49 24.2**	**+1.0**
COR				pmax	pmax		
	comp=Z,105nm,1.0s						
M23K	**Glacier View**	89.17	19	P	**P**	**12 49 22.1**	**-0.8**
	baz=219,SNR=6.9						
DSP	**Deep Springs**	89.18	49	IAmb	IAmb	12 49 26.3	
	comp=Z,138nm,1.0s						
LHV	**Little Huntoon**	89.21	48	P	**P**	**12 49 25.2**	**+1.7**
LHV				IAmb	IAmb	12 49 26.5	
	comp=Z,122nm,1.0s						
SRIG	**Santa Rosalia**	89.21	60	P	**P**	**12 49 24.5**	**+0.7**
SRIG				IAmb	IAmb	12 49 26.3	

	comp=Z,84nm,1.3s						
HEC	Hector,Ludlow	89.22	52	P	P	12 49 24.9	+1.1
	baz=244,SNR=72						
GCSA	Galena City Sc	89.24	14	P	P	12 49 23.6	+0.6
	baz=211,SNR=33						
DIV	Divide	89.26	20	P	P	12 49 23.0	-0.4
GO10	Punta Arenas	89.26	148	P	P	12 49 24.6	+0.9
CAST	Castle Rocks	89.26	16	P	P	12 49 22.0	-1.2
CAST				IAmb	IAmb	12 49 22.9	
	comp=Z,46nm,0.8s						
CAST	Castle Rocks	89.26	16	P	P	12 49 21.7	-1.6
	baz=215,SNR=38						
PAHR	Pah Rah Range	89.29	47	IAmb	IAmb	12 49 26.6	
	comp=Z,116nm,1.0s						
SCM	Sheep Creek Mo	89.32	19	P	P	12 49 23.1	-0.5
SCM				IAmb	IAmb	12 49 25.7	
	comp=Z,52nm,0.8s						
SCM	Sheep Creek Mo	89.32	19	P	P	12 49 23.1	-0.5
SCM				pmax	pmax		
	comp=Z,52nm,0.8s						
SCM	Sheep Creek Mo	89.32	19	P	P	12 49 23.3	-0.3
	baz=219,SNR=12						
QSM	Queen of Sheba	89.34	51	IAmb	IAmb	12 49 26.6	
	comp=Z,78nm,1.0s						
LCH	Last Change Ra	89.35	50	P	P	12 49 25.4	+0.9
LCH				IAmb	IAmb	12 49 26.7	
	comp=Z,64nm,1.1s						
BC3	Big Chuckawall	89.36	54	P	P	12 49 25.9	+1.3
	baz=244,SNR=61						
NVAR	Mina Array Bea	89.44	48	P	P	12 49 26.1	+1.2
	comp=Z,61nm,0.8s,baz=226,slow=8.6,SNR=417						
NVAR				PKKP	PKKPdf	13 06 55.6	-0.9
	comp=Z,0.1nm,0.3s,baz=278,slow=6.3,SNR=2.2						
NVAR				PKKPbc	PKKPbc	13 07 01.2	+0.4
	comp=Z,1.4nm,1.0s,baz=121,slow=2.4,SNR=6.2						
NVAR				PKPPKP	P'P'df	13 15 06.0	-1.9
	comp=Z,1.8nm,0.8s,baz=80,slow=3.0,SNR=7.7						
NVAR				LR	LR	13 21 25.1	
	comp=Z,206nm,21.5s,baz=223,slow=30						
	comp=Z,61nm,0.8s						
NVAR	Mina Array Bea	89.44	48	P	P	12 49 25.5	+0.6
GRAC	Grapevine Rang	89.44	50	P	P	12 49 26.2	+1.4
GRAC				IAmb	IAmb	12 49 27.5	
	comp=Z,144nm,0.9s						
GRAC	Grapevine Rang	89.44	50	P	P	12 49 26.5	+1.7
	baz=243,SNR=19						
KLU	Klutina	89.49	19	P	P	12 49 24.2	-0.2
KLU	Klutina	89.49	19	P	P	12 49 24.1	-0.3
	baz=220,SNR=12						
G03D	McMinnville, O	89.50	40	IAmb	IAmb	12 49 27.5	
	comp=Z,148nm,1.0s						
NV11	Mina Array Sit	89.54	48	P	P	12 49 26.4	+1.1
NV11				IAmb	IAmb	12 49 27.8	
	comp=Z,105nm,0.9s						
FURC	Furnace Creek,	89.56	50	P	P	12 49 26.6	+1.4
	baz=243,SNR=77						
GLA	Glamis	89.57	54	P	P	12 49 26.7	+1.2
GLA				IAmb	IAmb	12 49 28.4	
	comp=Z,125nm,1.0s						
GLA	Glamis	89.57	54	P	P	12 49 26.7	+1.2
GLA				pmax	pmax		
	comp=Z,125nm,1.0s						
GLA	Glamis	89.57	54	P	P	12 49 27.3	+1.8
	baz=244,SNR=42						
GWY	Greenwater Val	89.58	51	IAmb	IAmb	12 49 27.8	
	comp=Z,85nm,1.0s						
CHUM	Lake Minchumin	89.58	16	P	P	12 49 23.9	-0.7
	baz=215,SNR=19						
SLBS	Sierra La Lagu	89.67	65	P	P	12 49 26.4	+0.2
SLBS				IAmb	IAmb	12 49 29.6	
	comp=Z,87nm,1.5s						
GO09	Cerro Castillo	89.68	146	P	P	12 49 26.9	+1.2
HOLB	Holberg	89.69	34	P	P	12 49 25.4	-0.1
HOLB				IAmb	IAmb	12 49 28.1	
	comp=Z,137nm,1.0s						
F03A	Seaside	89.70	40	P	P	12 49 26.7	+1.0
GMRC	Granite Mounta	89.70	52	P	P	12 49 27.3	+1.2
	baz=244,SNR=41						
MOD	Modoc Plateau	89.72	44	P	P	12 49 27.1	+1.0
MOD				IAmb	IAmb	12 49 28.5	
	comp=Z,110nm,0.9s						
SHOC	Shoshone, Teco	89.74	51	P	P	12 49 27.3	+1.1
	baz=244,SNR=41						
K05A	Summer Lake	89.74	43	IAmb	IAmb	12 49 28.9	
	comp=Z,140nm,0.9s						
TRF	Thorofare Moun	89.76	17	P	P	12 49 25.2	-0.6
TRF				IAmb	IAmb	12 49 27.0	
	comp=Z,63nm,0.9s						
TRF	Thorofare Moun	89.76	17	P	P	12 49 24.6	-1.1
	baz=217,SNR=28						
TUQ	Turquoise Moun	89.79	52	P	P	12 49 27.6	+1.1
	baz=244,SNR=80						
J05D	Fort Rock, OR	89.80	43	P	P	12 49 28.0	+1.6
IRM	Iron Mountain	89.81	53	P	P	12 49 28.0	+1.5
	baz=244,SNR=102						
KVN	Kaiserville	89.86	48	P	P	12 49 28.0	+1.1
KVN				IAmb	IAmb	12 49 29.2	
	comp=Z,105nm,0.9s						
KVN	Kaiserville	89.86	48	P	P	12 49 28.0	+1.1
KVN				pmax	pmax		
	comp=Z,105nm,0.9s						
M24K	Tolsona, Glenn	89.88	19	P	P	12 49 26.8	+0.6
M24K				IAmb	IAmb	12 49 31.7	
	comp=Z,58nm,0.8s						
M24K	Tolsona, Glenn	89.88	19	P	P	12 49 26.2	0.0
	baz=220						
WCT	Wildcat Mounta	89.88	50	P	P	12 49 28.1	+1.2
WCT				IAmb	IAmb	12 49 29.4	
	comp=Z,99nm,1.0s						
H04A	Detroit Lake	89.89	41	IAmb	IAmb	12 49 28.7	
	comp=Z,113nm,0.9s						
N25K	Chitina, Valde	89.99	20	P	P	12 49 26.8	0.0
N25K				IAmb	IAmb	12 49 27.9	
	comp=Z,114nm,1.4s						
N25K	Chitina, Valde	89.99	20	P	P	12 49 26.4	-0.3
	baz=222,SNR=17						
PIX	Pinacate	89.99	56	P	P	12 49 28.3	+0.9
E03A	Lebam	90.01	39	P	P	12 49 28.8	+1.7
TPH	Tonopah	90.03	49	P	P	12 49 28.9	+1.2
TPH	Tonopah	90.03	49	P	P	12 49 28.9	+1.2
TPH				pmax	pmax		
	comp=Z,570nm,1.1s						
VRDI	Verde Repeater	90.08	21	P	P	12 49 27.1	-0.2
VRDI				IAmb	IAmb	12 49 28.4	
	comp=Z,114nm,1.4s						
BPAW	Bear Paw Mtn.	90.10	16	P	P	12 49 25.7	-1.4
	baz=216,SNR=12						
BLYC	Blythe	90.10	54	IAmb	IAmb	12 49 30.6	
	comp=Z,102nm,1.0s						
RND	Reindeer	90.11	17	P	P	12 49 26.6	-0.7
RND	Reindeer	90.11	17	P	P	12 49 26.6	-0.7
RND				pmax	pmax		
	comp=Z,39nm,1.0s						
GLB	Gilahina Butte	90.12	20	P	P	12 49 27.1	-0.2
GLB				IAmb	IAmb	12 49 28.3	
	comp=Z,101nm,1.2s						
CRAG	Craig	90.14	28	P	P	12 49 27.3	-0.2
	baz=231						
C03A	Quillayute Air	90.16	38	P	P	12 49 28.1	+0.3
WISH	Wishkah	90.19	39	P	P	12 49 29.5	+1.7
SIT	Sitka	90.21	26	P	P	12 49 28.5	+0.8
SIT				IAmb	IAmb	12 49 30.0	
	comp=Z,104nm,1.2s						
SIT	Sitka	90.21	26	P	P	12 49 28.5	+0.8
SIT				pmax	pmax		
	comp=Z,104nm,1.2s						
SIT	Sitka	90.21	26	P	P	12 49 28.6	+0.9
	baz=230						
TPNV	Topopah Spring	90.22	50	P	P	12 49 29.4	+0.9
TPNV				IAmb	IAmb	12 49 31.1	
	comp=Z,118nm,1.0s						
TPNV	Topopah Spring	90.22	50	P	P	12 49 29.4	+0.9
TPNV				pmax	pmax		
	comp=Z,118nm,1.0s						
TPNV	Topopah Spring	90.22	50	P	P	12 49 29.8	+1.3
	baz=244,SNR=124						
I05D	Terrebonne, OR	90.25	42	P	P	12 49 29.6	+1.3
I05D				IAmb	IAmb	12 49 30.8	
	comp=Z,116nm,1.0s						
113A	Mohawk Valley,	90.26	55	P	P	12 49 29.8	+1.2
113A				IAmb	IAmb	12 49 31.2	
	comp=Z,64nm,1.1s						
NLWA	Neilton Lookou	90.27	38	P	P	12 49 29.8	+1.4
NLWA				IAmb	IAmb	12 49 31.2	
	comp=Z,120nm,1.0s						
MCARA	McCarthy VSAT	90.33	21	IAmb	IAmb	12 49 30.2	
	comp=Z,129nm,1.2s						
MCARA	McCarthy VSAT	90.33	21	P	P	12 49 28.4	+0.1
	baz=223,SNR=19						
MCK	McKinley	90.35	17	P	P	12 49 27.5	-0.8
MCK	McKinley	90.35	17	P	P	12 49 27.5	-0.8
MCK				pmax	pmax		
	comp=Z,35nm,0.9s						
MCK	McKinley	90.35	17	P	P	12 49 27.5	-0.8
	baz=218,SNR=21						
PCA	Pinnacle	90.36	22	P	P	12 49 28.7	+0.2
PINM	Pinnacle	90.36	22	P	P	12 49 28.4	-0.1
	baz=225,SNR=13						
PNL	Peninsula	90.37	23	P	P	12 49 28.5	0.0
	baz=226,SNR=5.3						
Q09A	Carvers	90.40	48	P	P	12 49 30.8	+1.4
HARP	HAARP	90.41	19	P	P	12 49 28.7	0.0
	baz=221,SNR=5.9						
S31K	Pelican	90.43	25	P	P	12 49 29.7	+1.0
	baz=229,SNR=12						
NEE2	Needles Airpor	90.47	53	P	P	12 49 30.9	+1.4
	baz=245,SNR=5.9						
BCPM	Bancas Point	90.48	23	P	P	12 49 29.1	+0.1
BCPM				IAmb	IAmb	12 49 29.7	
	comp=Z,77nm,0.9s						
HOOD	Mount Hood Mea	90.54	41	IAmb	IAmb	12 49 32.0	
	comp=Z,126nm,1.0s						
U33K	Whale Pass	90.55	28	P	P	12 49 30.7	+1.4
	baz=231,SNR=8.4						
BARN	Barnard Glacie	90.56	21	P	P	12 49 29.7	+0.2
BWN	Browne	90.56	17	IAmb	IAmb	12 49 30.7	
	comp=Z,81nm,0.9s						
BBB	Bella Bella	90.57	33	LR	LR	13 25 13.3	
	comp=Z,95nm,18.4s,baz=247,slow=32						
CTG	Chitna Glacier	90.60	21	P	P	12 49 29.5	-0.2
	baz=224,SNR=43						
CTGM	Chitina Glacie	90.60	21	P	P	12 49 30.0	+0.3
LOGN	Logan Glacier	90.61	22	IAmb	IAmb	12 49 31.0	
	comp=Z,109nm,0.8s						
GRNB	Grenville Isla	90.62	31	P	P	12 49 30.7	+0.9
GRNB				IAmb	IAmb	12 49 32.7	
	comp=Z,136nm,1.2s						
PDMCI	Parker Dam,Lak	90.62	53	P	P	12 49 31.1	+0.8
	baz=245,SNR=75						
214A	Organ Pipe Nat	90.66	56	P	P	12 49 31.6	+1.1
214A	Organ Pipe Nat	90.66	56	P	P	12 49 31.8	+1.2
	baz=246						
V12A	Nelson	90.70	52	P	P	12 49 31.7	+0.9
V12A				IAmb	IAmb	12 49 33.3	
	comp=Z,55nm,1.0s						
G05A	Wamic	90.71	41	IAmb	IAmb	12 49 38.3	
	comp=Z,59nm,0.9s						
I21K	Tanana	90.73	15	P	P	12 49 30.0	0.0
I21K				IAmb	IAmb	12 49 32.4	
	comp=Z,56nm,1.1s						
I21K	Tanana	90.73	15	P	P	12 49 29.8	-0.2
	baz=215						
V35K	Ketchikan	90.73	29	P	P	12 49 31.4	+1.2
	baz=233,SNR=9.5						
PAX	Paxson	90.75	19	P	P	12 49 30.2	-0.1
PAX	Paxson	90.75	19	P	P	12 49 30.2	-0.1
PAX				pmax	pmax		
	comp=Z,53nm,1.4s						
PAX	Paxson	90.75	19	P	P	12 49 29.2	-1.1
	baz=221,SNR=11						
RUBB	Prince Rupert	90.77	30	P	P	12 49 31.9	+1.6
RUBB				IAmb	IAmb	12 49 33.2	
	comp=Z,96nm,1.2s						
S32K	Killisnoo	90.78	26	P	P	12 49 31.3	+0.9
	baz=230,SNR=7.2						
SHPR	Sheep Range	90.81	51	P	P	12 49 32.2	+0.9
B04A	Port Angeles	90.83	38	P	P	12 49 32.7	+1.8
B04A				IAmb	IAmb	12 49 33.7	
	comp=Z,114nm,0.9s						
O28M	Mount Upton	90.86	22	P	P	12 49 31.2	+0.1
	baz=226						
CLRS	Cowichan Lake	90.87	37	IAmb	IAmb	12 49 33.5	
	comp=Z,94nm,1.0s						
S11A	Rachel	90.89	50	IAmb	IAmb	12 49 33.9	
	comp=Z,98nm,0.9s						
MLY	Manley	90.92	16	P	P	12 49 30.1	-0.9
MLY	Manley	90.92	16	P	P	12 49 30.2	-0.7
	baz=216,SNR=12						
R31K	City Hall, Gus	90.92	25	P	P	12 49 31.7	+0.7
	baz=229						
H21K	Melozitna Rive	90.93	15	P	P	12 49 31.2	+0.2
H21K	Melozitna Rive	90.93	15	P	P	12 49 31.3	+0.4
	baz=214,SNR=26						
HSIG		90.94	59	IAmb	IAmb	12 49 34.1	
	comp=Z,50nm,1.0s						
GOMU	GeErMu	90.98	309	P	P	12 49 33.5	+1.1
GOMU				pmax	pmax		
	comp=Z,48nm,1.2s						
GOMU				pmax	pmax		
	comp=Z,92nm,5.3s						
GOMU				LR	LR		
	comp=Z,420nm,16.9s						
GOMU				LR	LR		
	comp=Z,250nm,15.9s						
GOMU				LR	LR		
	comp=Z,410nm,16.9s						
IMAR	Indian Mountai	90.99	14	P	P	12 49 31.4	+0.2
NEA2	Nenana	91.00	16	P	P	12 49 29.8	-1.5
	baz=218,SNR=17						
RDOG	Red Dog Mine	91.04	10	P	P	12 49 32.4	+1.1
RDOG				IAmb	IAmb	12 49 33.9	
	comp=Z,50nm,1.0s						
RDOG	Red Dog Mine	91.04	10	P	P	12 49 31.9	+0.5
	baz=205,SNR=17						
T33K	Petersburg	91.06	27	P	P	12 49 32.4	+0.8
	baz=232,SNR=8.7						
WVOR	Wild Horse Val	91.07	45	P	P	12 49 33.5	+1.2
WVOR				IAmb	IAmb	12 49 34.8	
	comp=Z,88nm,1.0s						
WVOR	Wild Horse Val	91.07	45	P	P	12 49 33.5	+1.2
WVOR				pmax	pmax		
	comp=Z,88nm,1.0s						
WRAK	Wrangell Islan	91.08	28	P	P	12 49 32.7	+0.9
	baz=232,SNR=8.8						
M26K	Nabesna, AK	91.09	20	P	P	12 49 31.6	-0.2
M26K				IAmb	IAmb	12 49 33.0	
	comp=Z,92nm,1.2s						
M26K	Nabesna, AK	91.09	20	P	P	12 49 31.8	-0.1
	baz=223,SNR=32						
LSA	Lhasa	91.10	301	P	P	12 49 33.6	+0.4
LSA	Lhasa	91.10	301	P	P	12 49 33.8	+0.6
LSA				pmax	pmax		
	comp=Z,59nm,0.9s						
LSA				LR	LR		
	comp=Z,86nm,5.6s						
LSA				LR	LR		
	comp=Z,92nm,4.9s						
LSA	Lhasa	91.10	301	P	P	12 49 34.0	+0.8
LSA				IAmb	IAmb	12 49 35.1	
	comp=Z,94nm,1.0s						
LSA	Lhasa	91.10	301	P	P	12 49 34.0	+0.8
LSA				pmax	pmax		
	comp=Z,94nm,1.0s						
O29M	Mount Kennedy	91.11	23	P	P	12 49 32.0	0.0
	baz=227						
G06A	Carlson Farm,	91.12	41	IAmb	IAmb	12 49 34.5	
	comp=Z,60nm,1.0s						
W13A	Hualapai Mount	91.15	53	P	P	12 49 34.2	+1.2
W13A				IAmb	IAmb	12 49 35.5	
	comp=Z,50nm,0.9s						
LON	Longmire	91.16	40	P	P	12 49 33.1	+0.6
LON	Longmire	91.16	40	P	P	12 49 33.1	+0.6
LON				pmax	pmax		
	comp=Z,27nm,0.9s						
PGC	Sidney	91.16	37	P	P	12 49 33.5	+1.2
PGC				IAmb	IAmb	12 49 35.4	
	comp=Z,114nm,1.0s						
WRH	Wood River Hil	91.16	17	IAmb	IAmb	12 49 33.4	
	comp=Z,65nm,1.2s						
MENT	Mentasta	91.26	19	P	P	12 49 32.7	+0.1
MENT				IAmb	IAmb	12 49 33.9	
	comp=Z,105nm,1.5s						
D05A	Enumclaw	91.27	39	P	P	12 49 34.0	+1.1
BOD	Bodaibo	91.27	334	*e*P	P	12 49 31.8	-0.9
BOD				pmax	pmax		
	comp=Z,113nm,1.5s						
I07A	Izee	91.28	43	IAmb	IAmb	12 49 35.7	
	comp=Z,72nm,0.9s						
K24K	Donnelly Dome	91.29	18	P	P	12 49 32.4	-0.3
	baz=221,SNR=27						
R11A	Troy Canyon, C	91.31	49	P	P	12 49 34.3	+0.8
R11A	Troy Canyon, C	91.31	49	P	P	12 49 34.4	+0.8
	baz=244,SNR=82						
R32K	Eaglecrest	91.32	26	P	P	12 49 33.9	+0.9
	baz=230,SNR=7.6						
PLBC	Pleasant Camp	91.36	24	P	P	12 49 33.5	+0.4
	baz=229,SNR=22						
I23K	Minto, Yukon-K	91.36	16	P	P	12 49 31.7	-1.2
	baz=218,SNR=12						
YUK8	Steele Glacier	91.36	22	P	P	12 49 33.7	+0.3
	baz=226,SNR=78						
CCB	Clear Creek Bu	91.38	17	P	P	12 49 31.9	-1.1
JIS	Juneau Island	91.38	26	P	P	12 49 34.2	+1.1
JIS				IAmb	IAmb	12 49 35.4	
	comp=Z,101nm,1.1s						
M27K	Edge Creek, AK	91.42	20	P	P	12 49 33.6	+0.2
M27K				IAmb	IAmb	12 49 35.0	
	comp=Z,137nm,1.2s						
M27K	Edge Creek, AK	91.42	20	P	P	12 49 33.7	+0.2
	baz=224						
HDA	Harding Lake	91.43	17	P	P	12 49 32.4	-0.9
HDA				IAmb	IAmb	12 49 34.9	
	comp=Z,105nm,1.1s						
HDA	Harding Lake	91.43	17	P	P	12 49 32.6	-0.7
	baz=220,SNR=61						
L26K	Log Cabin Wild	91.44	19	P	P	12 49 33.3	-0.1
L26K				IAmb	IAmb	12 49 34.6	
	comp=Z,59nm,1.1s						
L26K	Log Cabin Wild	91.44	19	P	P	12 49 33.4	0.0
	baz=223,SNR=27						
H22K	Ishtalitna Cre	91.47	15	P	P	12 49 33.4	0.0
	baz=216						
YUK3	Moose Creek	91.47	21	P	P	12 49 33.9	+0.1
	baz=225,SNR=72						
G21K	Allakaket	91.49	14	P	P	12 49 33.9	+0.4
	baz=214						
MDM	Murphy Dome	91.51	16	P	P	12 49 32.6	-1.1
RIDG	Independent Ri	91.52	18	P	P	12 49 33.5	-0.3
RIDG				IAmb	IAmb	12 49 35.7	
	comp=Z,78nm,1.0s						
RIDG	Independent Ri	91.52	18	P	P	12 49 33.2	-0.6
	baz=222,SNR=26						
TCOL	CIGO, UAF Yank	91.54	17	IAmb	IAmb	12 49 34.0	
	comp=Z,187nm,1.7s						
TCOL	CIGO, UAF Yank	91.54	17	P	P	12 49 32.6	-1.2
	baz=219,SNR=15						
COLA	College	91.54	17	P	P	12 49 32.9	-0.9
COLA				IAmb	IAmb	12 49 34.0	
	comp=Z,185nm,1.7s						
COLA	College	91.54	17*c*	*i*P	P	12 49 32.7	-1.0
COLA				pmax	pmax		
	comp=Z,109nm,1.8s						
COLA	College	91.54	17	P	P	12 49 32.7	-1.0
	baz=219						
P30M	Million Dollar	91.58	24	P	P	12 49 34.8	+0.6
	baz=228						
J08A	Circle Bar Ran	91.60	44	P	P	12 49 35.8	+1.1
J08A				IAmb	IAmb	12 49 37.0	
	comp=Z,97nm,0.9s						
YUK6	Outpost Mounta	91.62	23	P	P	12 49 34.6	0.0
	baz=227,SNR=18						
DOT	Dot Lake	91.68	19	IAmb	IAmb	12 49 35.7	
	comp=Z,184nm,1.7s						
IL31		91.72	17	P	P	12 49 33.5	-1.1
IL31				IAmb	IAmb	12 49 35.1	
	comp=Z,213nm,1.9s						
ILAR	Eielson Array	91.72	17	P	P	12 49 33.5	-1.1
	comp=Z,10nm,0.7s,baz=234,slow=4.9,SNR=174						
ILAR				PKiKP	PKiKP	12 54 26.6	+1.7
	comp=Z,1.1nm,0.8s,baz=260,slow=3.1,SNR=4.7						
ILAR				PKKP	PKKPdf	13 06 51.1	-2.1
	comp=Z,2.1nm,0.9s,baz=356,slow=2.6,SNR=11						
ILAR				PKPPKP	P'P'df	13 15 02.4	+0.9
	comp=Z,0.7nm,0.9s,baz=5.6,slow=2.4,SNR=5.0						
ILAR				LR	LR	13 28 45.4	
	comp=Z,99nm,18.2s,baz=216,slow=34						
	comp=Z,10nm,0.7s						
SKAG	Skagway	91.77	25	P	P	12 49 36.2	+1.3
SKAG	Skagway	91.77	25	P	P	12 49 35.9	+1.0
	baz=230,SNR=23						
BVCY	Beaver Creek	91.79	21	P	P	12 49 35.0	-0.1
	baz=225,SNR=34						
YUK4	Talbot Arm	91.80	22	P	P	12 49 35.9	+0.6
	baz=227,SNR=37						
POKR	Poker Plat Res	91.84	17	P	P	12 49 34.2	-1.0
POKR				IAmb	IAmb	12 49 44.8	
	comp=Z,36nm,0.9s						
POKR	Poker Plat Res	91.84	17	P	P	12 49 33.9	-1.3
	baz=219,SNR=7.7						
HYT	Haines Junctio	91.85	23	P	P	12 49 35.6	+0.1
HYT				IAmb	IAmb	12 49 36.9	
	comp=Z,101nm,0.9s						
HYT	Haines Junctio	91.85	23	P	P	12 49 36.0	+0.5
	baz=228,SNR=35						
H23K	Yukon River	91.86	15	P	P	12 49 34.6	-0.7
H23K				IAmb	IAmb	12 49 36.4	
	comp=Z,111nm,2.0s						
H23K	Yukon River	91.86	15	P	P	12 49 34.9	-0.3
	baz=217						
F07A	Phinny Hill Vi	91.88	41	IAmb	IAmb	12 49 38.0	
	comp=Z,44nm,0.8s						
L27K	Beaver Creek,	91.94	20	P	P	12 49 36.1	+0.4
L27K				IAmb	IAmb	12 49 37.0	
	comp=Z,61nm,1.1s						
L27K	Beaver Creek,	91.94	20	P	P	12 49 35.5	-0.2
	baz=224						
SCRK	Sand Creek	91.95	19	P	P	12 49 36.0	+0.2
SCRK				IAmb	IAmb	12 49 37.2	
	comp=Z,112nm,1.4s						
SCRK	Sand Creek	91.95	19	P	P	12 49 35.4	-0.4
	baz=222,SNR=44						
PALK	Pallekele	91.95	277	P	P	12 49 37.5	+0.6
PALK				IAmb	IAmb	12 49 39.5	
	comp=Z,99nm,1.1s						
PALK	Pallekele	91.95	277*c*	*i*P	P	12 49 38.1	+1.1
PALK				pmax	pmax		
	comp=Z,146nm,1.4s						
BCAR	Beaver Creek A	91.96	20	P	P	12 49 35.7	-0.2
F21K	Alatna River	92.08	13	P	P	12 49 36.4	+0.2
	baz=214						
LTY	Liberty	92.09	40	P	P	12 49 37.2	+0.4
LTY				IAmb	IAmb	12 49 38.9	
	comp=Z,90nm,1.6s						
Q12A	Willow Creek R	92.14	49	IAmb	IAmb	12 49 44.2	
	comp=Z,55nm,1.1s						
ZAK	Zakamensk	92.19	324	*e*P	P	12 49 36.9	-0.4
ZAK				pmax	pmax		
	comp=Z,131nm,1.3s						
G08A	Pilot Rock	92.19	42	P	P	12 49 38.4	+1.0
G08A				IAmb	IAmb	12 49 39.5	
	comp=Z,67nm,0.9s						
G22K	Bettles	92.27	14	P	P	12 49 37.7	+0.6
	baz=216						
H24K	Noodor Dome	92.29	16	P	P	12 49 37.5	+0.2
	baz=219						
O30N	Mendenhall	92.33	23	P	P	12 49 38.0	+0.4
	baz=229,SNR=29						
T35M	Bob Quinn	92.34	28	P	P	12 49 39.0	+1.3
	baz=234,SNR=10						
HAWA	Hanford	92.36	41	P	P	12 49 38.8	+0.8
HAWA				IAmb	IAmb	12 49 40.4	
	comp=Z,63nm,1.0s						
TUC	Tucson	92.37	56	P	P	12 49 39.0	+0.5
TUC	Tucson	92.37	56	P	P	12 49 39.0	+0.5
TUC				pmax	pmax		
	comp=Z,29nm,1.0s						
TUC	Tucson	92.37	56	P	P	12 49 39.8	+1.2
	baz=247						
LCMT	Little Creek M	92.42	51	P	P	12 49 39.2	+0.5
LCMT				IAmb	IAmb	12 49 41.2	
	comp=Z,42nm,1.0s						
N30M	Aishikik Lake	92.43	23	P	P	12 49 37.8	-0.2
	baz=228						
G23K	Bananza Creek	92.45	15	P	P	12 49 38.3	+0.3
	baz=217						
J26L	Joseph Creek	92.46	18	IAmb	IAmb	12 49 39.9	
	comp=Z,96nm,1.1s						
J26L	Joseph Creek	92.46	18	P	P	12 49 38.5	+0.4
	baz=223						
SPR3	Spring Creek 3	92.47	49	P	P	12 49 39.9	+0.7
SPR3				IAmb	IAmb	12 49 41.2	
	comp=Z,81nm,1.6s						
P32M	Atlin	92.48	25	P	P	12 49 39.0	+0.7
	baz=231						
S34M	Telegraph Cree	92.51	27	P	P	12 49 39.2	+0.8
	baz=233,SNR=28						
CCUT	Cedar City	92.56	51	P	P	12 49 40.3	+0.8
CCUT				IAmb	IAmb	12 49 42.3	
	comp=Z,37nm,1.1s						

K27K	Chicken	92.56	19	P	P	12 49 39.2	+0.7
	baz=224						
ELK	Elko	92.59	47	P	P	12 49 39.0	-0.5
ELK	Elko	92.59	47	P	P	12 49 39.0	-0.5
ELK				pmax	pmax		
	comp=Z,32nm,1.0s						
F22K	John River	92.60	14	P	P	12 49 39.5	+0.9
	baz=215						
M29M	Somme Creek	92.61	21	P	P	12 49 38.9	0.0
	baz=227						
IRK	Irkutsk	92.62	326	eP	P	12 49 38.4	-0.7
IRK				pmax	pmax		
	comp=Z,102nm,1.8s						
PRP	Porcupine Dome	92.67	17	P	P	12 49 39.2	0.0
	baz=221,SNR=20						
Q32M	Nakina River	92.67	26	P	P	12 49 40.3	+0.9
	baz=232,SNR=17						
E08A	Dider Farm, El	92.69	41	IAmb	IAmb	12 49 41.7	
	comp=Z,58nm,0.9s						
X16A	Lo Mia Camp, P	92.71	54	P	P	12 49 41.5	+1.3
X16A				IAmb	IAmb	12 49 42.9	
	comp=Z,56nm,1.0s						
KNB	Kanab	92.73	51	P	P	12 49 41.3	+1.1
KNB				IAmb	IAmb	12 49 43.0	
	comp=Z,105nm,1.6s						
KNB	Kanab	92.73	51	P	P	12 49 41.3	+1.1
KNB				pmax	pmax		
	comp=Z,105nm,1.6s						
SZCU	Shurtz Canyon	92.78	51	P	P	12 49 41.0	+0.6
SZCU				IAmb	IAmb	12 53 16.1	
	comp=Z,122nm,1.5s						
COLD	Coldfoot	92.82	14	P	P	12 49 40.6	+0.9
COLD				IAmb	IAmb	12 49 41.7	
	comp=Z,72nm,0.9s						
COLD	Coldfoot	92.82	14	P	P	12 49 40.5	+0.8
	baz=217,SNR=93						
U15A	North Rim	92.88	52	IAmb	IAmb	12 49 43.9	
	comp=Z,81nm,1.1s						
N31M	Braeburn, Yuko	92.92	23	P	P	12 49 40.6	+0.3
N31M	Braeburn, Yuko	92.92	23	P	P	12 49 40.2	0.0
	baz=229,SNR=33						
TAPN	Taplejung	92.99	298	eP	P	12 49 41.9	+0.1
	comp=Z,198nm,1.0s						
COYC	Coyhaique	93.03	142	P	P	12 49 42.1	+0.8
COYC				IAmb	IAmb	12 50 16.3	
	comp=Z,49nm,1.2s						
BMO	Blue Mountains	93.03	43	P	P	12 49 41.8	+0.5
BMO	Blue Mountains	93.03	43	P	P	12 49 41.8	+0.5
BMO				pmax	pmax		
	comp=Z,21nm,1.0s						
D08A	Wollman Farm,	93.04	40	P	P	12 49 42.1	+0.9
G24K	Hadweenzic Riv	93.07	16	P	P	12 49 40.5	-0.3
	baz=219						
ODAN	Odare	93.07	297	eP	P	12 49 41.0	-1.1
	comp=Z,49nm,1.0s						
I26K	Coal Creek Min	93.17	18	P	P	12 49 41.5	+0.2
I26K	Coal Creek Min	93.17	18	P	P	12 49 41.5	+0.2
	baz=223,SNR=74						
L29M	L29M	93.18	21	P	P	12 49 41.9	+0.4
	baz=227						
319A	Douglas	93.19	58	P	P	12 49 42.1	-0.3
319A				IAmb	IAmb	12 49 45.0	
	comp=Z,32nm,0.9s						
WUAZ	Wupatki	93.19	53	IAmb	IAmb	12 49 44.9	
	comp=Z,63nm,1.0s						
WUAZ	Wupatki	93.19	53	P	P	12 49 43.3	+0.9
	baz=246						
E22K	Anaktuvuk Pass	93.20	13	P	P	12 49 42.1	+0.6
	baz=215,SNR=93						
P33M	Teslin, Yukon	93.22	25	P	P	12 49 41.8	+0.1
P33M				IAmb	IAmb	12 49 43.4	
	comp=Z,52nm,1.1s						
P33M	Teslin, Yukon	93.22	25	P	P	12 49 41.7	0.0
	baz=232,SNR=23						
E09A	Wood Farm, Sta	93.26	41	IAmb	IAmb	12 49 43.9	
	comp=Z,31nm,1.0s						
M30M	Minto, Yukon	93.28	22	P	P	12 49 41.9	0.0
M30M	Minto, Yukon	93.28	22	P	P	12 49 42.0	+0.1
	baz=228,SNR=84						
PKCU	Pink Cliffs	93.28	51	IAmb	IAmb	12 49 45.5	
	comp=Z,31nm,1.0s						
DLBC	Dease Lake	93.30	27	LR	LR	13 24 26.5	
	comp=Z,212nm,20.2s,baz=264,slow=31						
DLBC	Dease Lake	93.30	27	P	P	12 49 43.4	+1.3
DLBC				IAmb	IAmb	12 49 44.5	
	comp=Z,103nm,1.2s						
DLBC	Dease Lake	93.30	27	P	P	12 49 42.8	+0.7
	baz=234,SNR=26						
EGAK	Eagle	93.38	19	P	P	12 49 42.2	-0.1
EGAK	Eagle	93.38	19	P	P	12 49 42.4	+0.1
	baz=225,SNR=123						
B08A	Colville Reser	93.40	39	P	P	12 49 42.5	-0.3
DAWY	Dawson	93.42	20	P	P	12 49 42.7	+0.1
DAWY	Dawson	93.42	20	P	P	12 49 42.7	+0.1
	baz=226,SNR=83						
G25K	Bearman Lake	93.47	16	P	P	12 49 42.8	+0.2
	baz=220,SNR=15						
FYU	Fort Yukon	93.54	16	P	P	12 49 42.9	0.0
FYU				IAmb	IAmb	12 49 44.5	
	comp=Z,28nm,0.9s						
F24K	Squaw Lake	93.60	15	P	P	12 49 44.0	+0.7
	baz=219						
MTPU	Mount Pierson	93.61	51	P	P	12 49 44.8	+0.4
E23K	Chandalar	93.63	14	P	P	12 49 44.1	+0.7
	baz=217						
RAMN	Ramite	93.76	297	eP	P	12 49 45.5	+0.3
	comp=Z,206nm,1.2s						
C09A	Chrisman Ranch	93.77	40	P	P	12 49 44.8	+0.2
MVU	Marysvale	93.78	50	IAmb	IAmb	12 49 47.2	
	comp=Z,68nm,1.1s						
DUN6	Lazy B Ranch	93.79	57	P	P	12 49 46.4	+1.2
DUN6				IAmb	IAmb	12 50 22.6	
	comp=Z,62nm,1.2s						
ORCD	Orcadas	93.79	164	P	P	12 49 44.0	-0.4
MSU	Marysvale	93.81	50	P	P	12 49 45.2	0.0
MSU	Marysvale	93.81	50	P	P	12 49 45.2	0.0
I27K	Kandik River	93.83	18	P	P	12 49 44.5	+0.1
	baz=224						
K29M	Barlow Dome	93.88	21	P	P	12 49 44.4	-0.3
	baz=228						
M31M	Drury Creek, Y	93.88	23	P	P	12 49 44.6	0.0
M31M				IAmb	IAmb	12 49 45.5	
	comp=Z,41nm,1.0s						
M31M	Drury Creek, Y	93.88	23	P	P	12 49 44.0	-0.7
	baz=231,SNR=18						
E24K	Your Creek	93.90	14	P	P	12 49 45.2	+0.5
	baz=218						
DUG	Dugway, Tooele	94.04	48	P	P	12 49 46.8	+0.7
DUG	Dugway, Tooele	94.04	48	P	P	12 49 46.8	+0.7
DUG				pmax	pmax		
	comp=Z,12nm,1.1s						
DUG	Dugway, Tooele	94.04	48	P	P	12 49 46.4	+0.3
	baz=246,SNR=9.7						
J29M	Klondike Camp	94.06	20	P	P	12 49 46.6	+1.1
J29M	Klondike Camp	94.06	20	P	P	12 49 45.9	+0.4
	baz=227						
MOY	Mondy	94.08	324	eP	P	12 49 45.4	-0.6
MOY				pmax	pmax		
	comp=Z,113nm,3.3s						
D23K	Nanushuk River	94.12	13	P	P	12 49 46.8	+1.2
	baz=216,SNR=156						
BGU	Big Grassy Mou	94.18	48	P	P	12 49 47.2	+0.4
G26K	Porcupine Rive	94.21	17	P	P	12 49 46.8	+0.8
	baz=222						
F25K	Christian Rive	94.21	16	P	P	12 49 46.9	+0.8
	baz=221						
MAYO	Mayo, Yukon	94.26	21	P	P	12 49 47.3	+1.0
MAYO	Mayo, Yukon	94.26	21	P	P	12 49 46.8	+0.4
	baz=229,SNR=16						
W18A	Petrified Fore	94.27	54	P	P	12 49 47.9	+0.5
W18A	Petrified Fore	94.27	54	P	P	12 49 48.3	+0.9
	baz=247						
FARO	Faro, Yukon	94.28	23	P	P	12 49 46.6	+0.1
FARO				IAmb	IAmb	12 49 47.5	
	comp=Z,72nm,1.5s						
FARO	Faro, Yukon	94.28	23	P	P	12 49 46.0	-0.5
	baz=232,SNR=14						
H27K	Steamboat Moun	94.31	18	P	P	12 49 47.0	+0.4
	baz=224						
HLID	Hailey	94.34	45	P	P	12 49 48.3	+0.9
HLID	Hailey	94.34	45	P	P	12 49 48.4	+0.9
	baz=245,SNR=26						
JIRN	Jiri	94.36	298	eP	P	12 49 48.4	+0.3
BMAR	Burnt Mountain	94.36	16	P	P	12 49 47.7	+0.9
NLU	North Lily Min	94.46	49	P	P	12 49 49.0	+0.9
HPIG		94.48	63	P	P	12 49 47.4	-1.1
LL02	Futaleuf	94.51	140	P	P	12 49 48.6	+0.5
LL02				IAmb	IAmb	12 49 49.8	
	comp=Z,51nm,1.4s						
E25K	Arctic Village	94.63	15	P	P	12 49 48.4	+0.4
	baz=221,SNR=57						
I29M	Ogilvie Camp,	94.66	19	P	P	12 49 48.2	+0.1
I29M	Ogilvie Camp,	94.66	19	P	P	12 49 47.7	-0.5
	baz=227,SNR=34						
F26K	Sheenjek River	94.67	16	P	P	12 49 48.9	+0.7
	baz=222,SNR=16						
NEW	Newport	94.67	40	LR	LR	13 23 43.3	
	comp=Z,117nm,21.4s,baz=238,slow=30						
NEW	Newport	94.67	40	P	P	12 49 48.6	-0.1
NEW	Newport	94.67	40	P	P	12 49 48.6	-0.1
NEW				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NEW	Newport	94.67	40	P	P	12 49 48.9	+0.2
	baz=244,SNR=5.5						
G27K	Doyon Strip	94.69	17	P	P	12 49 48.6	+0.3
	baz=224,SNR=44						
GUN	Gumba	94.70	298	eP	P	12 49 49.7	0.0
	comp=Z,174nm,1.0s						
HVU	Hansel Valley	94.71	47	P	P	12 49 49.8	+0.7
HVU	Hansel Valley	94.71	47	P	P	12 49 49.8	+0.7
HVU				pmax	pmax		
	comp=Z,17nm,0.9s						
SPUT	South Promonto	94.74	48	P	P	12 49 50.0	+0.7
WTLY	Watson Lake, Y	94.78	26	IAmb	IAmb	12 49 51.1	
	comp=Z,130nm,1.8s						
WTLY	Watson Lake, Y	94.78	26	P	P	12 49 49.5	+0.6
	baz=235,SNR=17						
121A	Cookes Peak, D	94.80	57	P	P	12 49 50.7	+0.9
121A	Cookes Peak, D	94.80	57	P	P	12 49 50.7	+0.9
	baz=248						
121A	Cookes Peak, D	94.80	57	P	P	12 49 51.3	+1.5
	baz=248,SNR=9.0						
A21K	Barrow	94.96	10	P	P	12 49 49.9	+0.5
A21K	Barrow	94.96	10	P	P	12 49 49.6	+0.3
	baz=211						
PKI	Pulchoki	94.97	297	eP	P	12 49 50.9	0.0
	comp=Z,298nm,1.0s						
PKIN	Phulchoki	94.98	297	eP	P	12 49 50.6	-0.3
	comp=Z,216nm,0.9s						
C24K	Franklin Bluff	95.15	13	P	P	12 49 51.1	+0.9
	baz=218						
KKN	Kakani	95.16	298	eP	P	12 49 50.6	-1.0
SRU	San Rafael Swe	95.23	50	P	P	12 49 52.5	+0.9
SRU	San Rafael Swe	95.23	50	P	P	12 49 52.5	+0.9
SRU				pmax	pmax		
	comp=Z,11nm,0.7s						
DMN	Daman	95.23	297	eP	P	12 49 52.3	+0.3
	comp=Z,411nm,0.9s						
MMPY	Sheldon Lake,	95.29	23	P	P	12 49 51.5	+0.3
	baz=233,SNR=22						
D25K	Kavik River	95.36	14	P	P	12 49 51.5	+0.2
	baz=220						
TCUT	Toone Canyon	95.39	48	P	P	12 49 52.5	+0.2
LL04	Puerto Octay	95.44	138	P	P	12 49 52.9	+0.4
LL04				IAmb	IAmb	12 49 53.9	
	comp=Z,33nm,1.1s						
HWUT	Hardware Ranch	95.47	48	P	P	12 49 52.9	+0.2
HWUT				IAmb	IAmb	12 49 54.0	
	comp=Z,47nm,1.9s						
LIRD	Liard River Hi	95.53	27	P	P	12 49 52.4	+0.2
	baz=237,SNR=9.2						
BSUT	Blindstream Ca	95.61	49	P	P	12 49 54.5	+1.0
BSUT				IAmb	IAmb	12 49 57.3	
	comp=Z,19nm,0.8s						
P18A	Preston Nutter	95.63	50	P	P	12 49 54.3	+0.7
E27K	Coleen River	95.69	16	P	P	12 49 53.6	+0.7
	baz=225						
GKN	Gorkha	95.76	298	eP	P	12 49 53.9	-0.4
	comp=Z,201nm,0.9s						
EPYK	Eagle Plains	95.82	19	P	P	12 49 53.4	0.0
EPYK	Eagle Plains	95.82	19	P	P	12 49 53.5	0.0
	baz=229,SNR=63						
MCMT	McKenzie Canyo	95.89	44	P	P	12 49 55.0	+0.4
Y22A	Socorro	95.95	56	P	P	12 49 56.0	+1.0
	baz=249						
MVCO	Mesa Verde	95.99	53	P	P	12 49 54.6	-0.6
	baz=248						
MSO	Missoula	96.01	42	P	P	12 49 55.0	+0.1
MSO	Missoula	96.01	42	P	P	12 49 54.2	-0.6
	baz=246						
Y22D	IRIS PASSCAL I	96.04	56	P	P	12 49 56.3	+0.9
	baz=249						
Y22F	Passcal Instru	96.04	56	P	P	12 49 56.3	+0.9
	baz=249						
PV23	Carpenter Ridg	96.07	51	P	P	12 49 55.0	-0.6
PV23				IAmb	IAmb	12 49 59.6	
	comp=Z,22nm,1.0s						
PV13	Radium Mtn., P	96.10	52	P	P	12 49 55.7	0.0
C26K	Camden Bay	96.14	14	P	P	12 49 56.2	+1.4
	baz=222						
C27K	Jago River	96.21	15	P	P	12 49 56.1	+0.9
	baz=223						
AHID	Auburn Hatcher	96.24	47	P	P	12 49 56.8	+0.7
DLMT	Dillon	96.27	44	P	P	12 49 56.8	+0.6
DLMT				IAmb	IAmb	12 53 32.8	
	comp=Z,35nm,1.1s						
G30M	tAoh Zraii Nji	96.37	19	P	P	12 49 55.9	0.0
	baz=229						
MNTX	Cornudas Mount	96.40	59	P	P	12 49 57.4	+0.5
	baz=249						
MNTX	Cornudas Mount	96.40	59	P	P	12 49 57.6	+0.7
	baz=249,SNR=12						
RDMU	Red Mountain	96.46	49	P	P	12 49 58.1	+0.9
KOLN	Koldanda	96.54	297	eP	P	12 49 56.4	-1.5
	comp=Z,18nm,1.0s						
LRM	Limekiln Ridge	96.54	43	P	P	12 49 57.8	+0.2
DANN	Dangsing	96.61	298	eP	P	12 49 57.3	-1.0
	comp=Z,164nm,0.9s						
FXWY	Fox Creek	96.62	46	P	P	12 49 58.5	+0.5
WAPA	Wapiti River	96.63	33	P	P	12 49 57.8	+0.4
REDW	Red Top Meadow	96.64	46	P	P	12 49 57.5	-0.4
REDW				IAmb	IAmb	12 50 01.5	
	comp=Z,28nm,1.2s						
TIXI	Tiksi	96.65	348	P	P	12 49 56.2	-0.9
TIXI	Tiksi	96.65	348	ceP	P	12 49 55.9	-1.1
TIXI				pmax	pmax		
	comp=Z,15nm,1.0s						
PLCA	Paso Flores	96.70	138	P	P	12 49 58.9	+0.6
	comp=Z,5.8nm,0.9s,baz=242,slow=3.6,SNR=9.8						
PLCA				PKKP	PKKPdf	13 06 42.1	+0.5
	comp=Z,6.0nm,1.0s,baz=137,slow=1.1,SNR=7.0						
	comp=Z,5.8nm,0.9s						
PLCA	Paso Flores	96.70	138	P	P	12 49 58.9	+0.6
PLCA	Paso Flores	96.70	138	eP	P	12 49 59.3	+1.0
ANMO	Albuquerque	96.71	55	P	P	12 49 58.9	+0.4
ANMO	Albuquerque	96.71	55	ceP	P	12 49 57.0	-1.5
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ANMO	Albuquerque	96.71	55	P	P	12 49 58.8	+0.3
	baz=249						
SNOW	Snow King Moun	96.74	46	P	P	12 49 59.0	+0.5
GO06	Curarrehue	96.77	137	P	P	12 49 58.1	-0.6
GO06				IAmb	IAmb	12 50 00.2	
	comp=Z,27nm,1.2s						
IMW	Indian Meadow	96.78	46	P	P	12 49 59.4	+0.6
KOTAN	Kotaneelee Air	96.79	27	P	P	12 49 58.6	+0.7
	baz=239						
MOOW	Moose Ponds	96.86	46	P	P	12 49 59.5	+0.5
WALA	Waterton Lakes	96.94	40	P	P	12 49 58.8	-0.3
WALA				IAmb	IAmb	12 50 21.9	
	comp=Z,40nm,1.9s						
TX31	Lajitas Ar. Si	96.97	61	P	P	12 49 59.9	+0.2
TX31				IAmb	IAmb	12 50 02.0	
	comp=Z,33nm,1.2s						
TX31	Lajitas Ar. Si	96.97	61	P	P	12 50 00.8	+1.2
	baz=250,SNR=10						
TXAR	Lajitas Array	96.97	61	P	P	12 49 58.2	-1.4
	comp=Z,4.4nm,1.0s,baz=234,slow=4.7,SNR=31						
TXAR				PKKPbc	PKKPbc	13 06 37.0	-3.4
	comp=Z,0.7nm,0.7s,baz=112,slow=2.2,SNR=5.9						
TXAR				PKKP	PKKPdf	13 06 41.5	-1.0
	comp=Z,5.0nm,0.8s,baz=98,slow=3.4,SNR=34						
	comp=Z,4.4nm,1.0s						
BOZ	Bozeman (W)	96.98	44	P	P	12 49 59.9	+0.5
	baz=247,SNR=12						
YHL	Hebgen Lake	96.99	45	P	P	12 50 00.5	+0.9
FLWY	Flagg Ranch	97.01	46	P	Pdif	12 50 00.7	+1.0
YMR	Madison River	97.06	45	P	Pdif	12 50 00.4	+0.5
BRLDA	Berland Lookou	97.10	34	P	P	12 49 58.5	-1.1
PCHI	Peechi	97.12	279	eP	Pdif	12 50 01.1	+0.5
PYUN	Piuthan	97.16	297	eP	P	12 49 59.9	-0.8
	comp=Z,149nm,1.0s						
H17A	Grant Village	97.21	45	P	P	12 49 59.3	-1.3
H17A	Grant Village	97.21	45	P	Pdif	12 50 01.9	+1.2
	baz=248,SNR=7.2						
O20A	White River Ci	97.25	50	P	Pdif	12 50 00.8	0.0
O20A	White River Ci	97.25	50	P	P	12 50 00.7	-0.1
	baz=249						
HRY	Holter Researc	97.29	43	P	Pdif	12 50 01.0	+0.2
BW06	Boulder Array	97.29	47	P	P	12 50 00.7	-0.3
BW06	Boulder Array	97.29	47	P	P	12 50 00.9	-0.1
	baz=248,SNR=9.5						
PD31	Pinedale Array	97.29	47	P	P	12 50 00.5	-0.4
PDAR	Pinedale Array	97.29	47	P	P	12 50 00.3	-0.6
	comp=Z,4.4nm,1.0s,baz=207,slow=3.0,SNR=17						
PDAR				PKKPbc	PKKPbc	13 06 38.7	-1.7
	comp=Z,5.2nm,0.8s,baz=82,slow=5.0,SNR=36						
PDAR				PKPPKP	P'P'df	13 14 51.4	-1.8
	comp=Z,1.2nm,1.0s,baz=104,slow=3.7,SNR=6.4						
PDAR				LR	LR	13 26 34.7	
	comp=Z,112nm,20.1s,baz=267,slow=31						
	comp=Z,4.4nm,1.0s						
PDAR	Pinedale Array	97.29	47	P	P	12 50 00.6	-0.4
GDL2	Guadalupe Moun	97.39	58	P	Pdif	12 50 01.9	+0.4
F31M	Tsiigehtchic	97.41	19	P	P	12 50 00.5	-0.1
	baz=232,SNR=97						
S22A	4UR Ranch, Cre	97.42	53	P	Pdif	12 50 02.5	+0.7
S22A	4UR Ranch, Cre	97.42	53	P	Pdif	12 50 02.5	+0.7
	baz=249						
HYB	Hyderabad	97.42	286	⇑eP	Pdif	12 50 02.0	+0.1
HYB				IVmB_BB		12 50 02.4	
	comp=Z,333nm,1.4s						
HYB				ePP	PP	12 54 01.8	+0.9
HYB				eSKSac	SKSac	13 00 26.9	+0.4
INK	Inuvik	98.01	18	P	P	12 50 02.8	-0.4
	comp=Z,55nm,1.1s,baz=228,slow=5.2,SNR=128						
INK				PKiKP	PKiKP	12 54 35.3	-0.4
	comp=Z,5.8nm,1.0s,baz=330,slow=2.0,SNR=4.4						
INK				LR	LR	13 32 02.4	
	comp=Z,85nm,18.4s,baz=218,slow=34						
	comp=Z,55nm,1.1s						
INK	Inuvik	98.01	18	P	P	12 50 02.8	-0.4
INK	Inuvik	98.01	18	P	P	12 50 02.8	-0.4
	baz=232						
GCMT	Greycliff	98.33	44	P	Pdif	12 50 06.1	+0.7
RLMT	Red Lodge	98.35	45	P	Pdif	12 50 05.8	+0.2
RLMT	Red Lodge	98.35	45	P	Pdif	12 50 06.8	+1.1
	baz=249,SNR=5.6						
SDCO	Great Sand Dun	98.41	53	P	P	12 50 05.9	-0.3
	baz=250						
RWWY	Rawlins	98.53	49	P	P	12 50 05.9	-0.7
WRGLY	Wrigley	98.61	25	P	Pdif	12 50 06.7	+0.7
	baz=240						
WMQ	Urumqi	98.98	313	eP	Pdif	12 50 08.8	+0.5
WMQ				PP	PP	12 54 11.8	-0.6
WMQ				pmax	pmax		
	comp=Z,44nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,360nm,9.5s						
WMQ				LR	LR		
	comp=Z,340nm,19.5s						
WMQ				LR	LR		
	comp=Z,570nm,21.3s						
WMQ				LR	LR		
	comp=Z,420nm,21.3s						
T25A	Trinidad	99.02	54	P	Pdif	12 50 09.0	+0.1
	baz=251						
ISCO	Idaho Springs	99.02	51	P	Pdif	12 50 09.3	+0.4
	baz=250						
Q24A	Divide	99.08	52	P	Pdif	12 50 08.5	-0.6
Q24A	Divide	99.08	52	P	Pdif	12 50 09.1	-0.1
	baz=250						
EGMT	Eagleton	99.09	42	P	Pdif	12 50 08.4	-0.3
EGMT				IAmb	IAmb	12 50 17.1	
	comp=Z,51nm,1.9s						
EGMT	Eagleton	99.09	42	P	Pdif	12 50 09.5	+0.8
	baz=249						
N23A	Red Feather La	99.15	50	P	Pdif	12 50 10.0	+0.7
	baz=250						
HILA	High Level	99.23	31	P	Pdif	12 50 09.3	+0.4
MSTX	Muleshoe	99.24	57	P	Pdif	12 50 10.1	+0.4
	baz=251						
K22A	Casper	99.34	48	P	Pdif	12 50 10.4	+0.4
	baz=250						
MT01	Popeta	100.11	132	Pdif	Pdif	12 50 14.0	+0.4
LAO	LASA Array	100.89	44	Pdif	Pdif	12 50 17.8	+1.1
LAO	LASA Array	100.89	44	P	Pdif	12 50 17.9	+1.2
	baz=251						
DGZ	Jazzator, Alta	101.15	319	i P	Pdif	12 50 17.9	0.0
DGZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
C36M	Paulatuk	101.44	19	Pdif	Pdif	12 50 18.7	+0.2
C36M	Paulatuk	101.44	19	P	Pdif	12 50 18.6	+0.1
	baz=240						
RSSD	Black Hills	101.53	47	Pdif	Pdif	12 50 19.1	-0.7
RSSD	Black Hills	101.53	47	i P	Pdif	12 50 19.1	-0.7
RSSD	Black Hills	101.53	47	P	Pdif	12 50 19.7	-0.2
	baz=252						
CO02	Combarbal	101.75	130	Pdif	Pdif	12 50 23.2	+2.1
YKA	Yellowknife Ar	101.92	27	Pdiff	Pdif	12 50 20.8	0.0
	comp=Z,8.6nm,0.9s,baz=252,slow=4.6,SNR=32						
YKA				PKiKP	PKiKP	12 54 41.6	-1.2
	comp=Z,2.9nm,0.8s,baz=245,slow=1.5,SNR=16						
YKA				PKKPbc	PKKPbc	13 06 25.1	-2.5
	comp=Z,0.6nm,0.7s,baz=64,slow=2.8,SNR=5.8						
YKA				PKKPab	PKKPdf	13 06 47.5	+13
	comp=Z,2.8nm,1.1s,baz=70,slow=4.8,SNR=12						
YKA				PKPPKP	P'P'df	13 14 44.3	+1.7
	comp=Z,0.3nm,0.9s,baz=88,slow=3.7,SNR=4.6						
YKA	Yellowknife Ar	101.92	27	Pdif	Pdif	12 50 21.1	+0.3
YKA	Yellowknife Ar	101.92	27	i P	Pdif	12 50 21.1	+0.3
ZSN	Zaisan	102.05	316	eP	Pdif	12 50 20.3	-1.5
	baz=316						
ZSN				ePKiKP	PKiKP	12 54 42.5	-1.1
	baz=316						
ZSN	Zaisan	102.05	316	eP	Pdif	12 50 20.2	-1.5
ZSN				i		12 54 42.5	
A36M	Sachs Harbour	102.42	17	Pdif	Pdif	12 50 23.7	+0.9
A36M	Sachs Harbour	102.42	17	P	Pdif	12 50 23.3	+0.4
	baz=240						
RER	Riviere de l'E	103.33	241	P	PKiKP	12 54 36.3	-11
MKAR	Makanchi Array	103.54	315	Pdiff	Pdif	12 50 28.5	+0.1
	comp=Z,9.2nm,0.7s,baz=106,slow=5.3,SNR=58						
MKAR				PKiKP	PKiKP	12 54 45.3	-1.0
	comp=Z,28nm,1.1s,baz=98,slow=5.0,SNR=17						
MKAR				PKKPbc	PKKPbc	13 06 20.8	-1.5
	comp=Z,1.1nm,0.7s,baz=338,slow=2.9,SNR=4.6						
MKAR				PKKPab	PKKPdf	13 06 40.0	+9.1
	comp=Z,4.5nm,0.8s,baz=296,slow=3.9,SNR=14						
MKAR				PKPPKP	P'P'df	13 14 38.5	-2.3
	comp=Z,0.9nm,0.9s,baz=337,slow=3.3,SNR=6.0						
ZAA0	Zalesovo Array	104.00	323	Pdif	Pdif	12 50 29.5	-0.7
ZALV	Zalesovo Beam	104.00	323	Pdiff	Pdif	12 50 29.2	-1.0
	comp=Z,4.5nm,0.6s,baz=112,slow=4.5,SNR=24						
ZALV				PKiKP	PKiKP	12 54 46.4	-0.5
	comp=Z,4.7nm,0.8s,baz=132,slow=2.1,SNR=9.2						
ZALV	Zalesovo Beam	104.00	323	Pdif	Pdif	12 50 29.5	-0.7
ZALV	Zalesovo Beam	104.00	323	i P	Pdif	12 50 29.5	-0.7
SHLS	Shalkode	104.48	311	ePdif	Pdif	12 50 30.4	-2.4
	baz=311						
SHLS				ePP	PKiKP	12 54 49.5	+1.2
	baz=311						
SHLS	Shalkode	104.48	311	i P	Pdif	12 50 30.4	-2.4
SHLS				e		12 54 49.5	
UZB	Uzynbulak	104.79	311	ePP	PP	12 54 54.1	-2.0
	baz=311						
KPKS	Kokpek	105.11	311	ePdif	Pdif	12 50 34.2	-1.4
	baz=311						
KPKS	Kokpek	105.11	311	i P	Pdif	12 50 34.2	-1.4
SATY	Saty	105.20	311	ePdif	Pdif	12 50 34.8	-1.3
	baz=311						
SATY				ePKiKP	PKiKP	12 54 48.5	-1.2
	baz=311						
SATY				ePP	PP	12 54 57.3	-1.8
	baz=311						
SATY	Saty	105.20	311	i P	Pdif	12 50 34.7	-1.3
SATY				e		12 54 57.3	
ZHN	Zhinishke	105.21	311	ePKiKP	PKiKP	12 54 48.1	-1.6
	baz=311						
TARG	Taragay, Kyrgy	105.30	309	Pdif	Pdif	12 50 37.1	+0.2
TARG	Taragay, Kyrgy	105.30	309	i P	Pdif	12 50 37.1	+0.2
SEM	Semipalatinsk	105.79	318	ePdif	Pdif	12 50 37.0	-1.6
	baz=318						
SEM				ePKiKP	PKiKP	12 54 49.1	-1.5
	baz=318						
SEM	Semipalatinsk	105.79	318	⇑i P	Pdif	12 50 36.9	-1.6
MDOK	Medeo	106.19	310	ePdif	Pdif	12 50 38.7	-1.8
	baz=310						

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MDOK                                  ePKiKP   PKiKP    12 54 49.6 -2.0
      baz=310
MDOK                                  ePP      PP       12 55 03.1 -3.3
      baz=310
MDOK  Medeo               106.19 310  i P      Pdif     12 50 38.7 -1.8
MDOK                                  e                 12 55 03.0
TNSS  Tian-Shan           106.24 310  ePKiKP   PKiKP    12 54 49.7 -2.2
      baz=310
AAA   Alma-Ata            106.30 310  ePKiKP   PKiKP    12 54 50.7 -0.9
      baz=310
CHKK  Chushkaly           106.40 311  ePdif    Pdif     12 50 39.6 -1.7
      baz=311
CHKK                                  ePKiKP   PKiKP    12 54 50.4 -1.3
      baz=311
CHKK  Chushkaly           106.40 311  eP       Pdif     12 50 39.5 -1.7
KUU   Kurty               106.86 311  ePdif    Pdif     12 50 42.1 -1.2
      baz=311
KUU   Kurty               106.86 311  i P      Pdif     12 50 42.1 -1.2
KURK  Kurchatov           106.87 318   Pdif    Pdif     12 50 43.9 +0.8
KURK  Kurchatov           106.87 318  i P      Pdif     12 50 43.9 +0.8
NRIK  Noril'sk            106.88 338   Pdiff   Pdif     12 50 42.2 -0.5
      comp=Z,10nm,1.0s,baz=111,slow=3.9,SNR=14
NRIK                                   PKiKP   PKiKP    12 54 51.6 -0.2
      comp=Z,10nm,0.9s,baz=92,slow=2.9,SNR=9.7
KURBB Kurchatov Arra      106.90 318   Pdiff   Pdif     12 50 43.0 -0.3
      comp=Z,2.7nm,0.9s,baz=109,slow=3.7,SNR=15
KURBB                                  PKiKP   PKiKP    12 54 51.9 -0.5
      comp=Z,12nm,0.8s,baz=107,slow=1.8,SNR=29
KURBB                                  PKKPbc  PKKPbc   13 06 09.9 -2.2
      comp=Z,2.0nm,0.2s,baz=286,slow=14,SNR=5.5
AAK   Ala-Archa           107.90 309   PKiKP   PKiKP    12 54 53.9 -0.9
      comp=Z,5.1nm,0.7s,baz=90,slow=3.0,SNR=4.3
ULM   Lac du Bonnet       108.45  42   PKiKP   PKiKP    12 54 53.8 -1.5
      comp=Z,3.4nm,0.6s,baz=277,slow=4.5,SNR=5.6
ULM                                    PKKPbc  PKKPbc   13 06 05.7 -1.6
      comp=Z,3.7nm,0.8s,baz=95,slow=1.2,SNR=4.5
BTLS  Baital              108.71 312  ePdif    Pdif     12 50 50.6 -0.9
      baz=312
BTLS                                  ePKiKP   PKiKP    12 54 55.5 -0.5
      baz=312
BTLS                                  ePP      PP       12 55 22.5 -2.1
      baz=312
BTLS  Baital              108.71 312  eP       Pdif     12 50 50.5 -0.9
BTLS                                  e                 12 55 22.5
CCM   Cathedral Cave      109.33  56   P       PKiKP    12 54 56.9 -0.4
      baz=258
DZA   Taraz               110.24 309  ePKiKP   PKiKP    12 54 58.2 -0.7
      baz=309
DZA                                   ePP      PP       12 55 33.6 -2.1
      baz=309
DZA   Taraz               110.24 309  i PKIKP  PKiKP    12 54 58.1 -0.8
DZA                                   e                 12 55 33.6
BRZS  Berezniki           110.47 317  ePKiKP   PKiKP    12 54 58.1 -1.0
      baz=317
BRZS  Berezniki           110.47 317  i PKIKP  PKiKP    12 54 58.1 -1.0
FCC   Fort Churchill      110.76  34   Pdif    Pdif     12 51 02.9 +2.7
FCC   Fort Churchill      110.76  34  i P      Pdif     12 51 02.9 +2.7
KKAR  Karatay Array       110.87 309   Pdif    Pdif     12 51 01.6 +0.5
KKAR  Karatay Array       110.87 309  i P      Pdif     12 51 01.6 +0.5
JFWS  Jewell Farm         110.98  51   P       PKiKP    12 54 58.4 -1.9
      baz=260
IUG   Iuzhnay             111.06 308  ePKiKP   PKiKP    12 54 59.7 -0.9
      baz=308
IUG                                   i PP     PP       12 55 39.5 -2.2
      baz=308
IUG   Iuzhnay             111.06 308  i PKIKP  PKiKP    12 54 59.7 -0.9
IUG                                   i                 12 55 39.5
CHM   Chimkent            111.40 308  ePKiKP   PKiKP    12 54 60.0 -1.2
      baz=308
CHM                                   ePP      PP       12 55 41.3 -2.7
      baz=308
CHM   Chimkent            111.40 308  i PKIKP  PKiKP    12 54 59.9 -1.2
CHM                                   e                 12 55 41.3
RES   Resolute Bay        111.47  17   Pdif    Pdif     12 51 04.5 +1.5
RES   Resolute Bay        111.47  17  i P      Pdif     12 51 04.5 +1.5
OPO   Ambohidratompo111.57 239         PKiKP   PKiKP    12 55 01.6 -0.8
      comp=Z,7.1nm,0.8s,baz=90,slow=1.1,SNR=5.0
LRAL  Lakeview Retre      111.70  62   P       PKiKP    12 54 59.9 -2.0
      baz=258
LPAZ  La Paz              111.95 118   PKiKP   PKiKP    12 55 03.2 -0.5
      comp=Z,2.4nm,1.1s,baz=134,slow=4.4,SNR=4.8
LPAZ                                   PKKPbc  PKKPbc   13 05 54.4 -1.3
      comp=Z,3.7nm,0.8s,baz=74,slow=3.3,SNR=10
BVAR  Borovoye Array      112.27 320   Pdiff   Pdif     12 51 06.8 -0.2
      comp=Z,2.0nm,0.7s,baz=100,slow=6.2,SNR=9.8
BVAR                                   PKiKP   PKiKP    12 55 01.9 -0.5
      comp=Z,24nm,0.8s,baz=94,slow=1.5,SNR=49
BVAR                                   PKKPbc  PKKPbc   13 05 53.0 -1.9
      comp=Z,3.3nm,0.9s,baz=316,slow=4.1,SNR=7.6
BRVK  Borovoye            112.34 320c iPKIKP   PKiKP    12 55 02.2 -0.3
BRVK                                   pmax    pmax
      comp=Z,38nm,1.3s
L44A  Lake County Fo      112.57  52   P       PKiKP    12 55 02.5 -0.8
      baz=262
CPUP  Villa Florida       114.23 134   PKP     PKPdf    12 55 05.5 -1.5
      comp=Z,4.2nm,0.9s,baz=196,slow=2.8,SNR=6.7
CPUP                                   PKKPbc  PKKPbc   13 05 47.8 +0.2
      comp=Z,2.1nm,1.0s,baz=26,slow=9.2,SNR=3.1
CPUP                                   PKKP    PKKPdf   13 06 09.6 +0.3
      comp=Z,2.1nm,0.8s,baz=141,slow=5.3,SNR=3.7
W52A  Murphy              114.58  60   P       PKPdf    12 55 06.3 -1.2
      baz=261
S51A  Beattyville         115.22  57   P       PKPdf    12 55 07.7 -0.8
      baz=262
S51A                                   P       PKPdf    12 55 07.7 -0.8
      baz=262
E46A  Sault Ste Mari      115.60  48           PKPdf    12 55 08.0 -1.0
E46A  Sault Ste Mari      115.60  48   P       PKPdf    12 55 07.9 -1.0
      baz=266
P51A  Williamsport        115.87  55   PKPdf   PKPdf    12 55 08.7 -1.0
ACSO  Alum Creek Sta      116.01  55   P       PKPdf    12 55 08.9 -1.1
      baz=264
JLN   Jalan Bani Buh      116.03 285   P       PKPdf    12 55 10.4 -0.2
WBK   Wadi Bani Khal      116.53 285   P       PKiKP    12 55 12.1 +0.5
P52A  Corning             116.60  55   P       PKPdf    12 55 10.1 -1.1
      baz=264
KMSC  Kings Mountain      116.69  60   P       PKPdf    12 55 11.1 -0.4
      baz=262
ETMB  Extrema             116.81 113   PKPdf   PKPdf    12 55 11.2 -1.2
WSAR  Wadi Sarin          116.97 286   PKKPbc  PKKPbc   13 05 34.6 -3.3
      comp=Z,4.0nm,0.8s,baz=239,slow=5.3,SNR=5.3
WSAR  Wadi Sarin          116.97 286   P       PKiKP    12 55 12.9 +0.5
MHTO  MHTO                117.06 283   P       PKiKP    12 55 12.9 +0.3
P53A  Whipple             117.15  56   PKPdf   PKPdf    12 55 10.9 -1.3
RUSC  La Rusia            117.17  94   PKPdf   PKPdf    12 55 12.0 -1.6
DQM   DQM                 117.20 282   P       PKPdf    12 55 12.7 -0.2
JMDO  Jabal Madar         117.26 285   P       PKPdf    12 55 12.6 -0.4
      SNR=6.9
O53A  New Philadelph      117.36  55   PKPdf   PKPdf    12 55 11.5 -1.1
O53A  New Philadelph      117.36  55   P       PKPdf    12 55 11.9 -0.7
      baz=265
TULEG Thule               117.40  13   PKPdf   PKPdf    12 55 11.0 -0.7
TULEG Thule               117.40  13  i P      PKPdf    12 55 11.1 -0.5
SMDO  Samad               117.46 286   P       PKPdf    12 55 13.4  0.0
      SNR=12
BIDO  Bidbid              117.49 286   P       PKiKP    12 55 13.4 +0.1
BLA   Blacksburg          117.68  58   P       PKPdf    12 55 12.4 -0.9
      baz=264
SVE   Sverdlovsk          117.95 324  i PKIKP  PKPdf    12 55 12.8 -0.4
SVE                                    pmax    pmax
      comp=Z,55nm,0.9s
O54A  Avella              117.99  55   PKPdf   PKPdf    12 55 13.6 -0.2
R55A  Marlinton           118.02  57   PKPdf   PKPdf    12 55 13.7 -0.3
BSY   Bisya               118.15 285   P       PKPdf    12 55 14.2 -0.4
      SNR=8.2
HOQ   Hoqain              118.23 286   P       PKPdf    12 55 14.6 -0.1
SHAO  Shalim              118.49 280  i P      PKPdf    12 55 15.4  0.0
      SNR=7.1
SHAO  Shalim              118.49 280   P       PKiKP    12 55 15.9 +0.4
T57A  Hurt                118.58  59   P       PKPdf    12 55 14.2 -0.8
      baz=264
T57A                                   P       PKPdf    12 55 14.2 -0.8
      baz=264
ABKAR Akbulak array       118.68 315   PKPdf   PKPdf    12 55 14.5 -0.3
ARQ   Araqi               118.89 286   P       PKiKP    12 55 16.1  0.0
SOHO  SOHO                119.04 287  i P      PKPdf    12 55 16.0 -0.3
      SNR=45
SOHO  SOHO                119.04 287   P       PKPdf    12 55 16.2 -0.1
DMTO  DMTO                119.04 279   P       PKiKP    12 55 17.0 +0.5
      SNR=5.9
ARU   Arti                119.13 324   PKP     PKPdf    12 55 15.1 -0.3
      comp=Z,66nm,0.6s,baz=94,slow=1.2,SNR=109
ARU                                    SKP              12 58 38.5
      comp=Z,3.0nm,0.5s,baz=153,slow=9.0,SNR=3.8
ARU                                    PKKPbc  PKKPab   13 05 28.8 -1.8
      comp=Z,1.1nm,0.3s,baz=310,slow=6.2,SNR=4.9
ARU   Arti                119.13 324  i PKIKP  PKPdf    12 55 15.0 -0.5
ARU                                                     13 02 14.6
ARU                                    SS      SS       13 12 40.5 -7.1
SUR   Sutherland          119.26 210   PKP     PKiKP    12 55 17.3 +0.4
      comp=Z,25nm,1.1s,baz=185,slow=2.3,SNR=6.9
M55A  Ridgway             119.30  53   PKPdf   PKPdf    12 55 15.7 -0.6
M55A  Ridgway             119.30  53   P       PKPdf    12 55 15.5 -0.8
      baz=267
M55A                                   P       PKPdf    12 55 15.5 -0.8
      baz=267
NOR   Nord                119.31   1  i P      PKPdf    12 55 14.2 -1.0
WVNY  West Valley, N      119.46  52   PKPdf   PKPdf    12 55 16.5 -0.1
MDH   Madha               119.47 288   P       PKPdf    12 55 16.2 -0.9
UOSS  Minazif             119.49 287   PKPdf   PKPdf    12 55 16.1 -1.0
UOSS  Minazif             119.49 287  i P      PKPdf    12 55 16.3 -0.9
      SNR=15
UOSS  Minazif             119.49 287   P       PKPdf    12 55 16.8 -0.4
HATD  Hatta, Dubai        119.53 287  i P      PKPdf    12 55 17.0 -0.3
      SNR=28
HATD  Hatta, Dubai        119.53 287   P       PKPdf    12 55 17.0 -0.3
      SNR=11
ASHO  Ashiyiah            119.57 287  i P      PKPdf    12 55 17.0 -0.4
      SNR=26
ASHO  Ashiyiah            119.57 287   P       PKPdf    12 55 17.1 -0.3
      SNR=8.2
MSFE  Esma-Masafi         119.61 288  i P      PKPdf    12 55 17.4  0.0
      SNR=12
MASF  Masafi              119.61 288   P       PKPdf    12 55 17.3 -0.1
      SNR=5.8
GEYT  Alibeck             119.62 302   PKP     PKPdf    12 55 17.1  0.0
      comp=Z,46nm,0.8s,baz=228,slow=1.8,SNR=70
GEYT                                   PP      PP       12 56 41.7 -0.1
      comp=Z,18nm,1.2s,baz=60,slow=8.8,SNR=4.9
GEYT                                   PKKPbc  PKKPbc   13 05 28.6 -0.2
      comp=Z,5.2nm,0.9s,baz=274,slow=5.8,SNR=4.9
PTLB  Pontes e Lacer      119.64 123   PKPdf   PKPdf    12 55 16.6 -1.1
RBK   Rabkut              119.67 279   P       PKiKP    12 55 18.0 +0.2
      SNR=15
ALNE  Al Ain              119.72 286  i P      PKPdf    12 55 17.4 -0.2
      SNR=8.7
ALNE  Al Ain              119.72 286   P       PKPdf    12 55 17.4 -0.2
      SNR=8.4
SHME  Shamm               119.75 289   P       PKPdf    12 55 16.4 -1.2
R58B  Mineral             119.76  58   P       PKPdf    12 55 15.5 -1.8
      baz=266
R58B                                   P       PKPdf    12 55 15.5 -1.8
      baz=266
SAML  Samuel              119.83 114   PKPdf   PKPdf    12 55 17.2 -0.9
SAML  Samuel              119.83 114   PKIKP   PKPdf    12 55 17.2 -0.9
SAML  Samuel              119.83 114  eP       PKPdf    12 55 17.8 -0.4
AKTO  Aktyubinsk          119.89 317   PKP     PKPdf    12 55 16.8 -0.3
      comp=Z,49nm,0.8s,baz=93,slow=2.0,SNR=102
AKTO                                   PKKPbc  PKKPab   13 05 26.1 -1.5
      comp=Z,4.4nm,0.8s,baz=253,slow=6.5,SNR=5.3
SSPA  Standing Stone      119.92  54   PKPdf   PKPdf    12 55 16.4 -1.1
SSPA  Standing Stone      119.92  54   P       PKPdf    12 55 16.3 -1.1
      baz=267
NAZ   Nazwa, Dubai        119.98 287  i P      PKPdf    12 55 18.0 -0.1
      SNR=8.9
NAZ   Nazwa, Dubai        119.98 287   P       PKPdf    12 55 16.8 -1.3
UMZA  Um Al Zommool       119.99 285   P       PKPdf    12 55 17.6 -0.5
MMNY  Mt. Morris Dam      119.99  52   PKPdf   PKPdf    12 55 16.4 -1.2
FAQ   Al Faqa, Dubai      120.00 287  i P      PKPdf    12 55 18.0 -0.1
      SNR=7.4
FAQ   Al Faqa, Dubai      120.00 287   P       PKPdf    12 55 18.0 -0.1
BOSA  Boshof              120.06 216   PKP     PKiKP    12 55 18.8 +0.3
      comp=Z,5.1nm,0.5s,baz=156,slow=1.6,SNR=14
BOSA                                   PKKPbc  PKKPbc   13 05 25.1 -2.2
      comp=Z,3.9nm,0.9s,baz=352,slow=2.5,SNR=4.2
BOSA  Boshof              120.06 216   PKPdf   PKiKP    12 55 18.5  0.0
NEEM  North Greenlan      120.15  10  i P      PKPdf    12 55 16.6 -0.7
WHFO  Wadi Hawf           120.18 279   P       PKiKP    12 55 19.0 +0.2
      SNR=11
VILB  Vilhena             120.20 120   PKPdf   PKPdf    12 55 17.9 -0.9
VILB  Vilhena             120.20 120  eP       PKiKP    12 55 19.5 +0.5
ASUD  Al Ashush, Dub      120.21 287  i P      PKPdf    12 55 18.5  0.0
      SNR=9.1
ASUD  Al Ashush, Dub      120.21 287   P       PKiKP    12 55 19.1 +0.5
L56A  Greenwood           120.23  53   PKPdf   PKPdf    12 55 17.3 -0.8
L56A  Greenwood           120.23  53   P       PKPdf    12 55 17.3 -0.8
      baz=268
L56A                                   P       PKPdf    12 55 17.3 -0.8
      baz=268
TIJ01 Guaruva-PR          120.32 139  eP       PKiKP    12 55 19.3 +0.2
SDV   Santo Domingo       120.46  92   PKPdf   PKPdf    12 55 18.0 -1.6
SDV   Santo Domingo       120.46  92  eP       PKPdf    12 55 18.7 -0.8
SGCB  S£o Gabriel d       120.47 103  eP       PKPdf    12 55 18.6 -0.7
ABTO  Aybut               120.47 278   P       PKiKP    12 55 19.4  0.0
      SNR=15
M57A  Sunshine Farm,      120.52  54   PKPdf   PKPdf    12 55 18.2 -0.4
M57A  Sunshine Farm,      120.52  54   P       PKPdf    12 55 17.5 -1.2
      baz=268
M57A                                   P       PKPdf    12 55 17.5 -1.2
      baz=268
RVDE  Rio Verde (Bra      120.63 129  eP       PKiKP    12 55 20.3 +0.6
J56A  Wolcott             120.77  51   PKPdf   PKPdf    12 55 17.7 -1.3
N58A  Sunbury             120.82  54   PKPdf   PKPdf    12 55 18.7 -0.6
KULLO Kullorsuaq          120.90  13  i P      PKPdf    12 55 17.2 -1.2
K57A  Scipio Center       121.01  52   PKPdf   PKPdf    12 55 18.2 -1.4
K57A  Scipio Center       121.01  52   P       PKPdf    12 55 18.8 -0.8
      baz=269
TEFE  Tefe                121.17 108  eP       PKPdf    12 55 20.0 -0.7
KBS   Kingsbay            121.18 355c iPKIKP   PKiKP    12 55 19.8 +0.8
KBS                                    pmax    pmax
      comp=Z,112nm,2.5s
KBS   Kingsbay            121.18 355  i P      PKPdf    12 55 17.9 -1.0
KBS   Kingsbay            121.18 355  ePKPdf   PKPdf    12 55 18.7 -0.2
KBS                                    IAmb    IAmb     12 55 19.8
      comp=Z,50nm,0.9s
FRTB  Fartura             121.39 137  eP       PKiKP    12 55 21.1  0.0
BINY  Binghamton          121.40  53   P       PKPdf    12 55 19.1 -1.2
      baz=269
J57A  Williamstown        121.40  51   PKPdf   PKPdf    12 55 19.8 -0.5
SPA0  Spitsbergen Ar      121.46 354  ePKPdf   PKPdf    12 55 18.8 -0.6
SPA0                                   IAmb    IAmb     12 55 19.7
      comp=Z,126nm,0.9s
SPITS Spitsbergen Ar      121.46 354   PKP     PKPdf    12 55 18.5 -1.0
      comp=Z,77nm,0.8s,baz=94,slow=5.4,SNR=68
SPITS Spitsbergen Ar      121.46 354   PKIKP   PKPdf    12 55 19.3 -0.1
SPB2  Spitsbergen Ar      121.46 354           PKPdf    12 55 19.2 -0.2
PCMB  Pacaembu            121.50 134  eP       PKiKP    12 55 21.3  0.0
MZR   Muzera              121.56 285  i P      PKiKP    12 55 21.7 +0.3
      SNR=21
MZR   Muzera              121.56 285   P       PKiKP    12 55 21.6 +0.3
      SNR=6.6
PP1B  Ponte de Pedra      121.58 128  eP       PKiKP    12 55 21.9 +0.4
WCNY  West Carthage       121.64  51   P       PKPdf    12 55 19.2 -1.5
      baz=271
J58A  Remsen              121.92  51   P       PKPdf    12 55 20.2 -1.0
      baz=270
J58A                                   P       PKPdf    12 55 20.2 -1.0
      baz=270
SALV  Santo Antonio       122.02 126  eP       PKiKP    12 55 22.7 +0.2
PET01 Itanhaem-SP         122.14 139  eP       PKiKP    12 55 23.2 +0.7
UPNV  Upernavik           122.24  15  i P      PKPdf    12 55 20.1 -0.9
C2SB  Chapadao do Su      122.31 130  eP       PKiKP    12 55 23.4 +0.4
LONY  Lake Ozonia         122.40  50   P       PKPdf    12 55 21.2 -0.9
      baz=272
BMNY  Brushton-Moira      122.45  50   P       PKPdf    12 55 20.6 -1.6
      baz=272
J59A  Piesco              122.49  51           PKPdf    12 55 21.6 -0.8
J59A  Piesco              122.49  51   P       PKPdf    12 55 21.4 -1.0
      baz=271
J59A                                   P       PKPdf    12 55 21.4 -1.0
      baz=271
SPB   Sao Paulo           122.56 139  eP       PKiKP    12 55 24.0 +0.7
HCNY  Howe Caverns        122.58  52   P       PKPdf    12 55 22.1 -0.4
      baz=271
LBTB  Lobatse             122.64 219   PKP     PKiKP    12 55 23.6  0.0
      comp=Z,14nm,0.8s,baz=151,slow=4.3,SNR=15
LBTB  Lobatse             122.64 219   PKPdf   PKPdf    12 55 23.3 -0.1
SDDR  Presa de Saban      122.66  80           PKPdf    12 55 22.9 -0.5
NCB   Newcomb             122.68  51   P       PKPdf    12 55 21.7 -1.0
      baz=272
BAUV  El Baul             122.90  93           PKPdf    12 55 22.9 -1.1
PAL   Palisades           122.95  54   P       PKPdf    12 55 22.0 -1.3
      baz=270
VAO   Valinhos            123.28 138  eP       PKiKP    12 55 24.9  0.0
RCLB  Rio Claro- Sao      123.35 138  eP       PKiKP    12 55 25.2 +0.1
ITRB  Iturama             123.41 133  eP       PKiKP    12 55 25.7 +0.5
LATQ  La Tuque            123.50  46           PKPdf    12 55 23.6 -0.5
KIRV  Kirov               123.59 327   PKP     PKPdf    12 55 24.0  0.0
      comp=Z,96nm,0.8s,baz=128,slow=0.9,SNR=32
BB19B Bebedouro           123.69 136  eP       PKiKP    12 55 26.2 +0.5
NUUG  Nuugaatsiaq         123.72  15  i P      PKPdf    12 55 22.9 -1.0
PDRB  Porto dos Gac       123.75 121  eP       PKPdf    12 55 25.8 +0.1
L61B  Northampton         123.85  52   P       PKPdf    12 55 24.4 -0.6
      baz=272
L61B  Northampton         123.85  52   P       PKPdf    12 55 24.5 -0.5
      baz=272
PARB  Paraibuna           123.85 140  eP       PKiKP    12 55 25.9 -0.1
J61A  Chester             123.91  51   PKPdf   PKPdf    12 55 24.7 -0.3
J61A  Chester             123.91  51   P       PKPdf    12 55 24.8 -0.3
      baz=272
J61A                                   P       PKPdf    12 55 24.8 -0.3
      baz=272
DAG   Danmarks Havn       124.06   2  i P      PKPdf    12 55 22.9 -1.5
HRV   Adam Dziewonsk124.68  52         P       PKPdf    12 55 26.5 -0.1
      baz=273
BRYW  Bryant College      124.71  53           PKPdf    12 55 26.5 -0.2
SAKB  Bahrain             124.72 288   P       PKPdf    12 55 24.2 -2.9
MACA  Manacapuru-AM       124.82 110           PKPdf    12 55 27.1 -0.6
MACA  Manacapuru-AM       124.82 110  eP       PKPdf    12 55 27.1 -0.6
H62A  Milan               124.85  50   P       PKPdf    12 55 26.9 +0.1
      baz=274
H62A                                   P       PKPdf    12 55 26.9 +0.1
      baz=274
CLDB  Colider             124.92 121  eP       PKPdf    12 55 27.4 -0.5
ARAG  Araguaiana, MT      125.04 128  eP       PKPdf    12 55 27.9 -0.2
LMQ   La Malbaie          125.14  46           PKPdf    12 55 26.1 -1.2
G62A  West of Eustis      125.24  49           PKPdf    12 55 26.9 -0.7
G62A  West of Eustis      125.24  49   P       PKPdf    12 55 26.7 -0.9
      baz=275,SNR=6.5
G62A                                   P       PKPdf    12 55 26.7 -0.9
      baz=275,SNR=6.5
I63A  Otisfield           125.30  50   PKPdf   PKPdf    12 55 27.4 -0.3
I63A  Otisfield           125.30  50   P       PKPdf    12 55 26.5 -1.2
      baz=274
I63A                                   P       PKPdf    12 55 26.5 -1.2
      baz=274
F62A  Pittston Farm,      125.57  48   P       PKPdf    12 55 27.9 -0.3
      baz=276,SNR=6.0
F62A                                   P       PKPdf    12 55 27.9 -0.3
      baz=276,SNR=6.0
LVZ   Lovozero            125.59 341   PKPdf   PKPdf    12 55 27.2 -0.4
LVZ   Lovozero            125.59 341c iPKIKP   PKPdf    12 55 27.6  0.0
LVZ                                    pmax    pmax
      comp=Z,193nm,2.5s
VADS  Vadso               125.63 345  ePKPdf   PKPdf    12 55 27.3 -0.2
ILULI Ilulissat           125.77  17   PKPdf   PKPdf    12 55 27.6 -0.2
ILULI Ilulissat           125.77  17   PKIKP   PKPdf    12 55 27.6 -0.2
ILULI Ilulissat           125.77  17  i P      PKPdf    12 55 27.1 -0.7
E62A  Clayton Lake        125.79  47   PKPdf   PKPdf    12 55 28.0 -0.6
E62A  Clayton Lake        125.79  47   P       PKPdf    12 55 28.0 -0.6
      baz=277,SNR=15
E62A                                   P       PKPdf    12 55 28.0 -0.6
      baz=277,SNR=15
SCHQ  Schefferville       125.91  37   PKP     PKPdf    12 55 27.5 -1.1
      comp=Z,19nm,0.9s,baz=338,slow=2.0,SNR=24
VAS01 Vassouras-RJ        125.95 141  eP       PKiKP    12 55 30.0 -0.2
SUMG  Summit              126.00  10  i P      PKPdf    12 55 27.9 -0.9
D62A  Allapoint, All      126.06  46   P       PKPdf    12 55 27.9 -1.1
      baz=278,SNR=14
D62A                                   P       PKPdf    12 55 27.9 -1.1
      baz=278,SNR=14
IPMB  Ipameri, GO         126.07 133  eP       PKPdf    12 55 30.2 +0.1
BELG  Belogornoye         126.08 320   PKP     PKPdf    12 55 28.8 -0.1
      comp=Z,391nm,0.9s,baz=131,slow=0.6,SNR=78
PKME  Peaks-Kenny Pk      126.11  49           PKPdf    12 55 29.3 +0.1
PKME  Peaks-Kenny Pk      126.11  49   P       PKPdf    12 55 28.7 -0.5
      baz=276,SNR=11
BSCB  Bom Sucesso         126.12 139  eP       PKPdf    12 55 30.2  0.0
APA   Apatity             126.17 341⇓iPKIKP    PKPdf    12 55 25.5 -3.2
APA                                    pmax    pmax
      comp=Z,5.0nm,0.9s
F63A  Nahmakanta, Br      126.19  48           PKPdf    12 55 29.1 -0.3
F63A  Nahmakanta, Br      126.19  48   P       PKPdf    12 55 28.3 -1.1
      baz=277,SNR=8.4
F63A                                   P       PKPdf    12 55 28.3 -1.1
      baz=277,SNR=8.4
CRPR  Cabo Rojo, PR       126.30  83   PKPdf   PKPdf    12 55 28.9 -1.4
MLPR  Magueyes Islan      126.35  83   PKPdf   PKPdf    12 55 29.4 -1.0
DBG   Daneborg            126.42   3  i P      PKPdf    12 55 28.6 -0.4
KEV   Kevo                126.47 345           PKiKP    12 55 29.9 +0.3
KEV   Kevo                126.47 345   PKIKP   PKiKP    12 55 29.9 +0.3
ADZR  Andozero            126.52 336  ePKIKP   PKPdf    12 55 27.4 -2.0
ADZR                                   pmax    pmax
      comp=Z,72nm,1.0s
HAMF  Hammerfest          126.57 347  ePKPdf   PKPdf    12 55 28.6 -0.8
E63A  Oxbow               126.57  47   P       PKPdf    12 55 28.7 -1.4
      baz=278,SNR=7.5
E63A                                   P       PKPdf    12 55 28.7 -1.4
      baz=278,SNR=7.5
F64A  Sherman             126.69  48   PKPdf   PKPdf    12 55 29.6 -0.7
F64A  Sherman             126.69  48   P       PKPdf    12 55 29.2 -1.1
      baz=277,SNR=7.0
F64A                                   P       PKPdf    12 55 29.2 -1.1
      baz=277,SNR=7.0
UUPR  Utuado, UPR, P      126.71  82   PKPdf   PKPdf    12 55 30.4 -0.8
DUB01 Friburgo-RJ         126.73 142  eP       PKPdf    12 55 31.2 -0.1
CELP  Cerrillos           126.80  83   PKPdf   PKPdf    12 55 30.3 -1.0
PMNB  Patos De Minas      126.86 135  eP       PKPdf    12 55 31.6  0.0
ARA0  ARCESS Array S 126.99 345       ePKPdf   PKPdf    12 55 29.5 -0.8
ARA0                                   IAmb    IAmb     12 55 30.8
      comp=Z,85nm,0.8s
ARCES ARCESS Array B 126.99 345        PKP     PKPdf    12 55 29.9 -0.3
      comp=Z,54nm,0.7s,baz=74,slow=1.5,SNR=121
ARCES ARCESS Array B 126.99 345        PKPdf   PKiKP    12 55 30.6 -0.1
ARCES ARCESS Array B 126.99 345        PKIKP   PKiKP    12 55 30.6 -0.1
SJG   San Juan            127.21  83           PKPdf    12 55 31.3 -0.8
SJG   San Juan            127.21  83   PKIKP   PKPdf    12 55 31.3 -0.8
G65A  Princeton           127.33  49   P       PKPdf    12 55 31.2 -0.3
      baz=277,SNR=9.3
G65A                                   P       PKPdf    12 55 31.2 -0.3
      baz=277,SNR=9.3
SFJD  Kangerlussuaq       127.36  19   PKPdf   PKPdf    12 55 30.2 -0.7
SFJD  Kangerlussuaq       127.36  19   PKIKP   PKPdf    12 55 30.2 -0.7
SFJD  Kangerlussuaq       127.36  19  i P      PKPdf    12 55 29.0 -2.0
NPGB  Novo Progresso      127.42 117  eP       PKPdf    12 55 32.5 -0.3
BOAV  Boa Vista           127.43 104   PKPdf   PKPdf    12 55 32.2 -0.5
BOAV  Boa Vista           127.43 104  eP       PKPdf    12 55 32.5 -0.3
KLMR  Klimovskoe          127.47 332⇓iPKPdf    PKPdf    12 55 31.2 -0.1
KLMR                                  ePKPdf   PKPdf    12 55 31.2 -0.1
KLMR                                  ePKPdf   PKPdf    12 55 31.2 -0.1
KLMR                                   AMP              12 55 32.6
      comp=Z,293nm,1.5s
KLMR  Klimovskoe          127.47 332d iPKIKP   PKPdf    12 55 31.2 -0.1
KLMR                                   pmax    pmax
      comp=Z,293nm,1.5s
HUMP  Col San Antoni      127.50  83           PKPdf    12 55 32.0 -0.6
AKT   Akhty               127.63 307  ePKIKP   PKiKP    12 55 33.1 +0.1
AKT                                   e                 12 56 05.0
AKT                                   e                 12 57 33.1
AKT                                    pmax    pmax
      comp=Z,88nm,1.0s
MTP   Monte Pirata        127.76  83           PKPdf    12 55 32.4 -0.8
SNDB  Serra Nova Dou      127.80 125  eP       PKPdf    12 55 32.9 -0.5
BDFB  Brasilia            127.81 131   PKP     PKPdf    12 55 32.9 -0.6
      comp=Z,21nm,0.8s,baz=210,slow=2.3,SNR=27
BDFB  Brasilia            127.81 131   PKPdf   PKPdf    12 55 33.1 -0.4
BDFB  Brasilia            127.81 131   PKIKP   PKPdf    12 55 33.1 -0.4
BDFB  Brasilia            127.81 131  eP       PKPdf    12 55 32.9 -0.6
GGN   Saint George        127.84  49           PKPdf    12 55 32.1 -0.4
KTK1  Kautokeino          127.92 346  ePKPdf   PKPdf    12 55 31.4 -0.5
KTK1                                   IAmb    IAmb     12 55 32.5
      comp=Z,46nm,0.8s
LSZ   Lusaka              127.98 229   PKP     PKPdf    12 55 34.2 +0.3
      comp=Z,19nm,0.9s,baz=159,slow=2.2,SNR=20
LSZ   Lusaka              127.98 229   PKIKP   PKiKP    12 55 34.5  0.0
BATG  Bathurst New B      128.04  46           PKPdf    12 55 32.4 -0.5
JETT  Jettan, Norway      128.12 347  ePKPdf   PKPdf    12 55 32.4  0.0
TRO   Tromso              128.37 348  ePKPdf   PKPdf    12 55 32.1 -0.7
TRO                                    IAmb    IAmb     12 55 33.3
      comp=Z,105nm,1.1s
ITTB  Itaituba            128.52 114  eP       PKPdf    12 55 34.7 -0.1
ICESG Greenland Ices      128.65  13  i P      PKPdf    12 55 32.1 -1.7
NUUK  Nuuk                128.76  22  i P      PKPdf    12 55 33.2 -0.5
ALF01 Guarapari-ES        128.83 142  eP       PKiKP    12 55 36.0 +0.1
KMBO  Kilima Mbogo        128.85 250   PKP     PKPdf    12 55 35.0 -0.7
      comp=Z,0.2nm,0.8s,baz=27,slow=23,SNR=8.3
KMBO  Kilima Mbogo        128.85 250   PKPdf   PKiKP    12 55 37.1 +0.6
KMBO  Kilima Mbogo        128.85 250   PKIKP   PKiKP    12 55 37.1 +0.6
KMBO  Kilima Mbogo        128.85 250  i P      PKiKP    12 55 37.1 +0.6
      SNR=13
RAYN  Ar Rayn             128.88 284   PKPdf   PKiKP    12 55 36.0 +0.1
RAYN  Ar Rayn             128.88 284   PKIKP   PKiKP    12 55 36.0 +0.1
RAYN  Ar Rayn             128.88 284  i P      PKiKP    12 55 36.5 +0.6
      SNR=30
DY2G  Dye2                128.99  18  i P      PKPdf    12 55 33.2 -1.2
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VRH   Novokhopyorsk    129.92 320  ePKIKP  PKPdf   12 55 35.8 -0.5
VRH                                 pmax   pmax
      comp=Z,100nm,1.5s
GNI   Garni            130.01 305   PKP    PKPdf   12 55 35.8 -1.2
      comp=Z,45nm,0.8s,baz=150,slow=1.2,SNR=30
GNI   Garni            130.01 305   PKPdf  PKiKP   12 55 38.1 +0.3
GNI   Garni            130.01 305c iPKIKP  PKPdf   12 55 37.4 +0.3
GNI                                 pmax   pmax
      comp=Z,138nm,1.7s
SCO   Scoresbysund     130.04   5  i P     PKPdf   12 55 34.7 -1.3
SJMB  Sao Joao De Ma   130.05 140  eP      PKPdf   12 55 36.8 -0.8
HAL   Halifax          130.20  49   PKIKP  PKPdf   12 55 37.0  0.0
ZEI   Tsey             130.32 309  i PKIKP PKPdf   12 55 37.2 -0.4
ZEI                                 pmax   pmax
      comp=Z,33nm,1.0s
STEI  Steigen          130.53 348  ePKPdf  PKPdf   12 55 36.1 -0.9
STEI                                IAmb   IAmb    12 55 38.0
      comp=Z,103nm,1.0s
MOS   Moscow           130.59 327  i PKIKP PKPdf   12 55 35.0 -2.4
MOS                                e               12 57 52.6
MOS                                 pmax   pmax
      comp=Z,100nm,0.9s
MOS                                 pmax   pmax
      comp=Z,163nm,0.9s
JANB  Januaria         130.77 134  eP      PKPdf   12 55 39.1  0.0
AKH   Akhalkalaki      130.81 307   PKPdf  PKiKP   12 55 40.0 +0.6
AKH   Akhalkalaki      130.81 307   PKIKP  PKiKP   12 55 40.0 +0.6
KBZ   Khabaz           130.90 310   PKP    PKPdf   12 55 36.9 -1.4
      comp=Z,17nm,0.9s,baz=104,slow=2.9,SNR=16
KBZ                                 SKPbc  SKPbc   12 58 49.1 -0.7
      comp=Z,7.7nm,0.9s,baz=86,slow=4.5,SNR=5.6
KBZ   Khabaz           130.90 310c iPKIKP  PKiKP   12 55 39.0 -0.3
KVAR  Kislovodsk Arr   131.00 310   PKP    PKPdf   12 55 38.7  0.0
      comp=Z,2.6nm,0.3s,baz=88,slow=21,SNR=7.9
KIV   Kislovodsk       131.01 310 ⇑P       PKPdf   12 55 37.9 -0.9
KIV   Kislovodsk       131.01 310   PKPdf  PKPdf   12 55 39.1 +0.3
KIV   Kislovodsk       131.01 310  i PKIKP PKPdf   12 55 39.1 +0.3
KIV                                 pmax   pmax
      comp=Z,28nm,1.0s
KIV                                 MLR    MLR
      comp=Z,152nm,23.0s
KIV   Kislovodsk       131.01 310  i P     PKiKP   12 55 40.8 +1.2
      SNR=5.5
MALB  Monte Alegre     131.05 112  eP      PKiKP   12 55 40.1 -0.4
SHA1  Shidzhatmaz      131.06 310  i PKIKP PKPdf   12 55 38.8 -0.2
BIM   Bigot            131.07  89   PKPdf  PKPdf   12 55 38.7 -0.9
NEY   Neytrino         131.10 310  i PKIKP PKPdf   12 55 38.9 -0.2
NEY                                 pmax   pmax
      comp=Z,17nm,1.0s
LPSR  Galich'ya Gora   131.10 322  ePKIKP  PKPdf   12 55 38.5  0.0
LPSR                                pmax   pmax
      comp=Z,140nm,1.2s
VORR  Voronezh         131.27 321  ePKIKP  PKPdf   12 55 37.7 -1.1
VORR                                pmax   pmax
      comp=Z,160nm,1.5s
OBN   Obninsk          131.40 326   PKP    PKPdf   12 55 37.9 -1.0
      comp=Z,11nm,0.7s,baz=31,slow=1.8,SNR=20
OBN                                 SKPbc  SKPab   12 58 51.5 -0.3
      comp=Z,5.4nm,0.4s,baz=6.7,slow=4.7,SNR=14
OBN   Obninsk          131.40 326   PKPdf  PKPdf   12 55 39.1 +0.2
OBN   Obninsk          131.40 326⇑iPKIKP   PKPdf   12 55 38.4 -0.5
OBN                                e               12 57 59.4
OBN                                 pmax   pmax
      comp=Z,198nm,1.7s
VSR   Storozhevoye     131.45 321  ePKIKP  PKPdf   12 55 38.3 -0.9
VSR                                 pmax   pmax
      comp=Z,30nm,0.6s
VORD  Divnogorie       131.45 320  ePKIKP  PKPdf   12 55 39.1 -0.1
VORD                                pmax   pmax
      comp=Z,30nm,0.6s
GEVA  Gevas            131.48 303          PKiKP   12 55 40.5 -0.4
TSUM  Tsumeb           131.76 216   PKP    PKPdf   12 55 40.4 -0.6
      comp=Z,12nm,0.9s,baz=126,slow=2.8,SNR=9.9
TSUM                                SKPbc  SKPab   12 58 54.9 +0.2
      comp=Z,3.7nm,0.8s,baz=104,slow=4.2,SNR=3.2
TSUM  Tsumeb           131.76 216   PKPdf  PKPdf   12 55 41.1 +0.1
IVI   Ivigtut          131.89  24  i P     PKPdf   12 55 37.8 -1.9
PUL   Pulkovo          131.94 334c iPKIKP  PKiKP   12 55 40.8 -0.1
PUL                                 pmax   pmax
      comp=Z,76nm,0.5s
ABR01 Abrolhos, BA     132.09 142  eP      PKiKP   12 55 42.2 -0.3
KONS  Konsvik          132.19 348  ePKPdf  PKiKP   12 55 41.1 -0.1
MOR8  Moi Rana         132.20 347  ePKPdf  PKPdf   12 55 39.9 -0.3
MOR8                                IAmb   IAmb    12 55 40.6
      comp=Z,26nm,0.8s
SDBA  SAO DESIDERIO    132.22 131  eP      PKPdf   12 55 42.0 +0.1
GURO  Guroymak-BITLI   132.26 303          PKiKP   12 55 42.4  0.0
PRPB  Parauapebas      132.45 120  eP      PKPdf   12 55 42.4 +0.1
GUA01 Guaratinga, BA   132.51 140  eP      PKPdf   12 55 42.6 +0.3
FIA1  FINESS Array S   132.53 337   PKPdf  PKPdf   12 55 41.1 +0.2
FINES FINESS Array B   132.53 337   PKP    PKPdf   12 55 40.5 -0.4
      comp=Z,53nm,0.9s,baz=100,slow=4.5,SNR=47
FINES                               SKPbc  SKPbc   12 58 54.9 -0.2
      comp=Z,31nm,0.8s,baz=83,slow=6.0,SNR=19
FINES FINESS Array B   132.53 337   PKPdf  PKPdf   12 55 40.8 -0.1
FINES FINESS Array B   132.53 337   PKIKP  PKPdf   12 55 40.8 -0.1
SMTB  Santa Maria do   132.57 125  eP      PKPdf   12 55 43.0 +0.5
LODK  Lodwar           132.59 255   PKPdf  PKiKP   12 55 43.6 -0.1
NRS   Narsarsuaq       132.93  23  i P     PKPdf   12 55 40.2 -1.5
SOC   Sochi            133.19 311  i PKIKP PKPdf   12 55 41.8 -0.9
SOC                                e               12 58 08.0
SOC                                ePPP    PPP     13 01 03.0
SOC                                e               13 02 40.2
SOC                                ePS     PS      13 08 29.8 -1.2
SOC                                eSS     SS      13 15 46.0 +2.3
SOC                                eSSS    SSS     13 20 42.2
SOC                                 pmax   pmax
      comp=Z,29nm,0.9s
KOPT  Kop Dagi         133.26 306   PKPdf  PKPdf   12 55 42.0 -1.4
MCPB  Macapa, AP       133.71 112  eP      PKPdf   12 55 45.1 +0.5
MEF   Metsahovi        133.97 337  eP      PKPdf   12 55 43.1 -0.5
NSS   Namsos           134.15 347  ePKPdf  PKiKP   12 55 44.6 -0.6
NSS                                 IAmb   IAmb    12 55 45.2
      comp=Z,1μm,2.6s
VSU   Vasula           134.21 334  i PKIKP PKPdf   12 55 44.7 +0.6
VSU                                 pmax   pmax
      comp=Z,182nm,0.7s
VSU   Vasula           134.21 334  eP      PKPdf   12 55 44.4 +0.2
RAF   Rauma            134.32 339  eP      PKPdf   12 55 43.9 -0.3
ANN   Anapa            134.49 313  i PKIKP PKPdf   12 55 44.6 -0.5
ANN                                e               12 58 17.3
ANN                                 pmax   pmax
      comp=Z,61nm,0.9s
MBAR  Mbarara          134.78 247   PKP    PKPdf   12 55 47.2 +0.3
      comp=Z,16nm,0.8s,baz=99,slow=3.6,SNR=14
MBAR  Mbarara          134.78 247          PKPdf   12 55 46.2 -0.6
MBAR  Mbarara          134.78 247c iPKIKP  PKiKP   12 55 48.3  0.0
MBAR                                pmax   pmax
      comp=Z,37nm,1.3s
MTSE  Matsula          135.21 336  eP      PKPdf   12 55 45.4 -0.6
TBLU  Trondheim        135.64 347  ePKPdf  PKPdf   12 55 47.4 +0.7
TMAB  Tom-Au,PA,Br     136.02 117  eP      PKPdf   12 55 49.5 +0.5
MNK   Minsk            136.07 329  i PKP   PKPdf   12 55 46.1 -1.6
      comp=E,7.0nm,1.0s
MNK                                i PKP   PKPdf   12 55 46.1 -1.6
      comp=N,26nm,0.7s
MNK                                i PKP   PKPdf   12 55 46.1 -1.6
      comp=Z,140nm,1.0s,baz=236
MNK                                i pPKP  pPKPdf  12 56 21.0 -3.7
MNK                                i PP    PP      12 58 27.2 -1.6
MNK                                i SKP           12 59 08.8
MNK                                i PKS   PKSdf   12 59 22.4 -1.4
MNK                                i PPP   PPP     13 01 25.2
MNK                                i SKS   SKSdf   13 02 44.7 -0.8
MNK                                i PS    PS      13 08 52.0 -2.8
MNK                                i SS    SS      13 16 17.5 +0.5
MNK                                i SSS   SSS     13 21 21.8
MNK                                i LRM   MLR     13 54 24.1
      comp=E,21nm,13.6s
MNK                                i LRM   MLR     13 54 47.3
      comp=N,410nm,18.7s
MNK                                i LRM   MLR     13 55 12.0
      comp=Z,193nm,16.1s
MNK   Minsk            136.07 329  i PKIKP PKPdf   12 55 46.1 -1.6
MNK                                i               12 56 20.9
MNK                                i               12 58 27.1
MNK                                i PPP   PPP     13 01 25.1
MNK                                i               13 02 44.6
MNK                                i PS    PS      13 08 52.0 -2.8
MNK                                i SS    SS      13 16 17.5 +0.4
MNK                                i SSS   SSS     13 21 21.8
MNK                                 pmax   pmax
      comp=N,26nm,0.7s
MNK                                 pmax   pmax
      comp=E,7.0nm,1.0s
MNK                                 pmax   pmax
      comp=Z,140nm,1.0s
MNK                                 MLR    MLR
      comp=E,21nm,14.0s
MNK                                 MLR    MLR
      comp=N,410nm,19.0s
MNK                                 MLR    MLR
      comp=Z,193nm,16.0s
ISAL  Salakas          136.26 331  eP      PKPdf   12 55 48.4 +0.4
NACGM Naroch           136.36 330⇑ePKP     PKPdf   12 55 48.0 -0.3
      comp=N,3μm,1.4s,baz=27
MOL   Molde            136.79 348  ePKPdf  PKiKP   12 55 49.8 -0.8
DIKM  Dikmen           136.84 309 ⇑P       PKPdf   12 55 48.6 -1.0
DOMB  Dombas           136.97 347  ePKPdf  PKPdf   12 55 49.9 +0.6
VSVD  Vaisvydziai      136.97 333  eP      PKPdf   12 55 49.9 +0.6
BNN   Bunyan           137.00 305   PKPdf  PKPdf   12 55 49.4 -0.8
NC303 NORSAR Array S   137.17 345   PKPdf  PKPdf   12 55 49.9 +0.3
AKN   Aaknes           137.26 348  ePKPdf  PKPdf   12 55 49.6 -0.1
PABE  Paberze          137.26 332  eP      PKPdf   12 55 50.1 +0.2
NC204 NORSAR Array S   137.27 345          PKPdf   12 55 49.5 -0.3
NB2   NORSAR Subarra   137.37 345   PKPdf  PKPdf   12 55 49.8 -0.3
      comp=Z,49nm,0.9s,baz=30,slow=1.9
NB2                                 pPKP   SKPab   12 59 18.4 +0.6
      comp=Z,1.3nm,0.8s,baz=35,slow=4.6
NB2   NORSAR Subarra   137.37 345   PKPdf  PKPdf   12 55 49.8 -0.3
      slow=1.9
NOA   NORSAR Array B   137.37 345   PKP    PKPdf   12 55 49.8 -0.3
      comp=Z,23nm,0.8s,baz=32,slow=1.9,SNR=24
NOA                                 SKPbc  SKPbc   12 59 09.4 -1.1
      comp=Z,2.9nm,0.8s,baz=18,slow=4.3,SNR=6.6
AKASG Malin Array Be   137.38 324   PKhKP  PKPpre  12 55 41.4
      comp=Z,2.2nm,0.5s,baz=43,slow=2.4,SNR=8.7
AKASG                               PKP    PKPdf   12 55 49.4 -0.9
      comp=Z,27nm,0.7s,baz=39,slow=2.7,SNR=22
AKASG                               PP     PP      12 58 28.7 -8.4
      comp=Z,0.6nm,0.3s,baz=46,slow=6.4,SNR=5.5
AKASG                               SKPbc  SKPbc   12 59 11.1 +0.3
      comp=Z,8.3nm,0.7s,baz=33,slow=2.5,SNR=22
AKBB  Malin Array Si   137.38 324  i PKIKP PKPdf   12 55 49.3 -1.0
AKBB                                pmax   pmax
      comp=Z,70nm,1.0s
HFS   Hagfors          137.50 343   PKhKP  PKPpre  12 55 41.1
      comp=Z,5.4nm,0.8s,baz=75,slow=2.3,SNR=5.7
HFS                                 PKP    PKPdf   12 55 50.7 +0.5
      comp=Z,33nm,0.8s,baz=90,slow=1.5,SNR=24
HFS                                 SKPbc  SKPbc   12 59 10.3 -0.5
      comp=Z,7.8nm,0.8s,baz=108,slow=4.8,SNR=5.4
NC602 NORSAR Array S   137.55 345          PKPdf   12 55 50.3  0.0
NC602 NORSAR Array S   137.55 345  ePKPdf  PKPdf   12 55 49.7 -0.7
PBUR  Paburge          137.79 334  eP      PKiKP   12 55 52.1 -0.8
ILGA  Ilgaz            138.11 309          PKiKP   12 55 53.4 -0.9
HYA   Hoyanger         138.34 348  ePKPdf  PKPdf   12 55 52.1 +0.4
SKAR  Skarslia         138.36 347  ePKPdf  PKPdf   12 55 52.0 +0.2
OSL   Oslo             138.45 344  ePKPdf  PKPdf   12 55 52.4 +0.4
BR131 Keskin Array S   138.49 307  i PKIKP PKPdf   12 55 52.5 -0.4
BRTR  Keskin Array B   138.49 307   PKhKP  PKPpre  12 55 44.1
      comp=Z,2.6nm,0.7s,baz=134,slow=1.8,SNR=9.1
BRTR                                PKP    PKPdf   12 55 52.6 -0.3
      comp=Z,21nm,0.9s,baz=140,slow=3.0,SNR=25
BRTR                                PP     PP      12 58 41.8 -3.0
      comp=Z,3.2nm,1.0s,baz=149,slow=2.6,SNR=4.0
BRTR                                SKPbc  SKPbc   12 59 15.3 +0.7
      comp=Z,10.0nm,1.1s,baz=146,slow=2.4,SNR=6.4
EIL   Elat             138.72 291   SKPbc  SKPbc   12 59 15.3  0.0
      comp=Z,15nm,1.1s,baz=71,slow=1.7,SNR=5.5
ROSB  Rosrio           138.95 121  eP      PKPdf   12 55 54.4 +0.1
KONO  Kongsberg        138.98 345  ePKPdf  PKPdf   12 55 50.3 -2.7
ANTO  Ankara           139.09 307 ⇑P       PKPdf   12 55 54.7 +0.8
ANTO  Ankara           139.09 307   PKPdf  PKPdf   12 55 53.9 -0.1
ANTO  Ankara           139.09 307 ⇑PKIKP   PKPdf   12 55 54.7 +0.8
SORM  Soroca           139.11 321 ⇑P       PKPdf   12 55 52.7 -0.8
SORM  Soroca           139.11 321 ⇑PKIKP   PKPdf   12 55 52.7 -0.8
BR231 Keskin MP Arra   139.11 307   PKPdf  PKPdf   12 55 53.9 -0.1
ASK   Askoy            139.16 349  ePKPdf  PKPdf   12 55 54.1 +0.9
BER   Bergen           139.23 348  ePKPdf  PKPdf   12 55 54.1 +0.8
KIS   Kishinev         139.34 319  ePKIKP  PKPdf   12 55 55.0 +1.0
KIS                                 pmax   pmax
      comp=Z,20nm,0.6s
MILM  Milestii Mici    139.38 319  ePKP    PKPdf   12 55 53.0 -1.1
      comp=Z,140nm,0.8s
MILM  Milestii Mici    139.38 319  ePKIKP  PKPdf   12 55 53.0 -1.1
MILM                                pmax   pmax
      comp=Z,140nm,0.8s
ODD1  Odda             139.41 347  ePKPdf  PKPdf   12 55 54.3 +0.5
CSS   Mathiatis        139.64 300   PKPdf  PKPdf   12 55 54.7 -0.3
BLS5  Blasjo           139.89 347  ePKPdf  PKPdf   12 55 54.9 +0.2
MDUB  Mudurnu          140.11 308   PKPdf  PKPdf   12 55 56.4 +0.6
DEL   Delary           140.45 339  i P     PKPdf   12 55 50.0 -5.7
TPGR  Topolog          140.50 316 ⇑P       PKPdf   12 55 53.8 -2.5
CFR   Carcaliu         140.56 317 ⇑P       PKPdf   12 55 57.0 +0.7
CFR   Carcaliu         140.56 317 ⇑PKIKP   PKPdf   12 55 57.0 +0.7
GHRR                   140.63 318 ⇑P       PKPdf   12 55 51.3 -5.1
TIRR  Tirgusor         140.67 315 ⇑P       PKPdf   12 55 53.8 -2.7
TIRR  Tirgusor         140.67 315   PKPdf  PKPdf   12 55 56.7 +0.2
TIRR  Tirgusor         140.67 315 ⇑PKIKP   PKPdf   12 55 53.8 -2.7
LVV   L'vov            140.68 325  ePKHKP  PKPpre  12 55 51.1
SNART Snartemo         140.71 346  ePKPdf  PKiKP   12 55 58.0 -0.8
BORA  Eskisehir        140.82 308   PKPdf  PKPdf   12 55 57.3 +0.2
HARR  Harsova          140.89 316 ⇑P       PKPdf   12 55 52.8 -4.1
HARR  Harsova          140.89 316 ⇑PKIKP   PKPdf   12 55 52.8 -4.1
BIZ   Bicaz            141.02 320 ⇑P       PKiKP   12 56 00.1 +0.2
VRI   Vrincioaia       141.14 318 ⇑P       PKPdf   12 55 52.3 -5.1
VRI   Vrincioaia       141.14 318 ⇑PKHKP   PKPpre  12 55 52.3
BSD   Bornholm Skovb   141.17 337  eP      PKPdf   12 55 56.8 -0.3
BSD   Bornholm Skovb   141.17 337  i P     PKPdf   12 55 57.0 -0.1
BURAR Bucovina Array   141.20 322 ⇓P       PKPdf   12 55 54.2 -3.4
BURAR Bucovina Array   141.20 322 ⇓PKIKP   PKPdf   12 55 54.2 -3.4
GKP   Gorka Klasztor   141.66 334  eP      PKPdf   12 55 58.7 +0.7
LEHL  Lehliu           141.70 316 ⇑P       PKPdf   12 55 58.2 -0.1
MLR   Muntele Rosu     141.80 318 ⇑P       PKPdf   12 55 53.9 -4.8
MLR   Muntele Rosu     141.80 318   PP     PP      12 59 01.4 -3.2
      comp=Z,9.2nm,0.9s,baz=197,slow=18,SNR=3.4
MLR                                 SKPbc  SKPbc   12 59 23.6 +0.4
      comp=Z,22nm,1.1s,baz=12,slow=1.8,SNR=6.2
MLR   Muntele Rosu     141.80 318 ⇑PKHKP   PKPpre  12 55 53.9
DOPR  Dopca            141.92 319 ⇑P       PKPdf   12 55 54.3 -4.5
ARCR  ARCALIA          141.98 321 ⇑P       PKPdf   12 55 55.8 -3.1
RAZG  Razgrad          142.29 315 ⇑P       PKPdf   12 55 58.0 -1.5
STHS  Stebnicka Huta   142.38 326  ePKIKP  PKPdf   12 55 59.7 +0.2
STHS  Stebnicka Huta   142.38 326  ePKP    PKPdf   12 55 59.6 +0.1
VOIR                   142.38 319 ⇑P       PKPdf   12 55 56.1 -3.6
VOIR                   142.38 319 ⇑PKIKP   PKPdf   12 55 56.1 -3.6
TRPA  Tarpa            142.44 324 ⇑P       PKPdf   12 55 56.5 -3.1
OJC   Ojcow            142.60 328  ePKPdf  PKPdf   12 55 57.4 -2.5
CJR   Cluj-Napoca      142.62 321 ⇑P       PKPdf   12 55 57.6 -2.4
CJR   Cluj-Napoca      142.62 321 ⇑PKIKP   PKPdf   12 55 57.6 -2.4
ARR   Arges            142.67 319 ⇑P       PKPdf   12 55 57.7 -2.5
NIE   Niedzica         142.86 327  ePKPdf  PKPdf   12 55 58.0 -2.4
COPA  Copaceanca       142.88 317 ⇑P       PKPdf   12 55 58.2 -2.3
DRGR                   143.09 322 ⇑P       PKPbc   12 55 58.8 +0.6
DRGR                   143.09 322 ⇑PKIKP   PKPbc   12 55 58.8 +0.6
LOT   Lotru            143.16 319 ⇑P       PKPbc   12 55 57.9 -0.5
YER   Yerkesik         143.21 304   P      PKPab   12 55 57.9 +0.5
KECS  Kecovo           143.34 326  ePKIKP  PKPdf   12 56 01.4 +0.2
KECS  Kecovo           143.34 326  ePKP    PKPdf   12 56 01.4 +0.2
LANS  Liptovska Anna   143.46 327  ePKIKP  PKPdf   12 56 02.2 +0.8
LANS  Liptovska Anna   143.46 327  ePKP    PKPdf   12 56 02.2 +0.8
DEV   Deva             143.46 320 ⇑P       PKPbc   12 55 58.9 -0.3
DEV   Deva             143.46 320 ⇑PKIKP   PKPbc   12 55 58.9 -0.2
VLAD  Vladila          143.47 317 ⇑P       PKPbc   12 55 59.7 +0.6
ARG   Arkhangelos      143.56 303   P      PKPbc   12 55 59.9 +0.2
DIM   Dimitrovgrad     143.57 313  i P     PKPbc   12 56 00.0 +0.5
PLVB  Pleven           143.61 316 ⇑P       PKPbc   12 55 59.4 -0.2
RUE   Ruedersdorf      143.64 335  eP      PKPbc   12 55 59.5 +0.2
RUE   Ruedersdorf      143.64 335  ePKPbc  PKPbc   12 55 59.2 -0.2
      baz=35,slow=2.9
ENEZ  Enez             143.65 311   P      PKPab   12 55 58.9  0.0
OKC   Ostrava-Krasne   143.66 329  ePKP    PKPbc   12 55 59.6 +0.1
OKC   Ostrava-Krasne   143.66 329  ePKIKP  PKPbc   12 55 59.6 +0.1
ALN   Alexandroupoli   143.67 311   P      PKPab   12 55 59.1 +0.1
BSEG  Bad Segeberg     143.70 340  ePKPbc  PKPbc   12 55 59.3 -0.2
      baz=35,slow=2.9
GZR   Gura Zlata       143.79 320 ⇑P       PKPbc   12 56 00.4 +0.2
GZR   Gura Zlata       143.79 320 ⇑PKHKP   PKPpre  12 56 00.4
BLCB  Balcova          143.80 307   P      PKPab   12 55 59.6  0.0
KDZ   Kurdzhali        143.81 313  i P     PKPbc   12 56 00.0 -0.3
KSP   Ksiaz            143.82 332  ePKPdf  PKPab   12 55 59.1 -0.1
EZN   Ezine            143.85 309   P      PKPbc   12 56 00.3 -0.1
DAT   Datca            143.86 304   P      PKPab   12 55 59.1 -0.9
SRE   Strehaia         143.90 318 ⇑P       PKPbc   12 56 01.2 +0.7
SRE   Strehaia         143.90 318 ⇑PKIKP   PKPbc   12 56 01.2 +0.8
RDO   Rodhopi          143.93 312   P      PKPab   12 56 00.1 +0.1
RDO   Rodhopi          143.93 312   PKPdf  PKPab   12 56 00.2 +0.2
SIRR  Siria            143.99 322 ⇑P       PKPbc   12 56 01.3 +0.7
MORC  Moravsky Berou   143.99 329 ⇑P       PKPbc   12 56 00.4 -0.2
MORC  Moravsky Berou   143.99 329   PKPdf  PKPbc   12 56 00.9 +0.3
MORC  Moravsky Berou   143.99 329  ePKP    PKPab   12 56 00.2 +0.2
MORC  Moravsky Berou   143.99 329 ⇑PKIKP   PKPbc   12 56 00.4 -0.2
SURR  Surduc           143.99 321 ⇑P       PKPbc   12 56 00.7  0.0
PSZ   Piszkesteto      144.00 325 ⇑P       PKPbc   12 56 00.8 +0.1
PSZ   Piszkesteto      144.00 325 ⇑PKIKP   PKPbc   12 56 00.8 +0.1
OSTC  Ostas            144.06 331  ePKP    PKPbc   12 56 00.5 -0.2
OSTC                               eSKP    SKPbc   12 59 28.6 +0.2
OSTC  Ostas            144.06 331  ePKIKP  PKPbc   12 56 00.5 -0.2
PRK   Paraskevi        144.09 308   P      PKPbc   12 56 01.0 -0.2
PLD   Plovdiv          144.11 314  i P     PKPbc   12 56 01.0 -0.1
BAIL  Bailesti         144.13 317 ⇑P       PKPdf   12 56 02.3 -0.4
KRLC  Kraliky          144.14 330  ePKP    PKPbc   12 56 01.2 +0.2
KRLC                               eSKP    SKPbc   12 59 29.5 +0.9
KRLC  Kraliky          144.14 330  ePKIKP  PKPbc   12 56 01.2 +0.2
SMG   Samos            144.16 306   P      PKPab   12 56 01.2 +0.2
DPC   Dobruska-Polom   144.16 331  ePKP    PKPab   12 56 00.8 +0.2
DPC                                eSKP    SKPbc   12 59 14.7  -14
DPC   Dobruska-Polom   144.16 331  ePKIKP  PKPab   12 56 00.8 +0.2
DPC                                e               12 59 14.7
BSZH  Besenyszg        144.18 324 ⇑P       PKPdf   12 56 02.8 +0.1
UPC   Upice            144.18 331  ePKP    PKPbc   12 56 01.4 +0.3
UPC                                eSKP    SKPbc   12 59 29.3 +0.7
UPC   Upice            144.18 331  ePKIKP  PKPbc   12 56 01.4 +0.3
SMTH  Samothraki Isl   144.19 311   P      PKPab   12 56 01.0  0.0
VYHS  Vyhne            144.19 327  ePKIKP  PKPbc   12 56 01.9 +0.7
VYHS                               e               12 59 16.9
VYHS  Vyhne            144.19 327  ePKP    PKPbc   12 56 01.9 +0.7
VYHS                               ePP     PP      12 59 16.9 -1.6
HLG   Helgoland        144.23 342  ePKPbc  PKPbc   12 56 01.4 +0.3
      baz=35,slow=2.9
PUNG  Punghina         144.26 318 ⇑P       PKPbc   12 56 01.9 +0.4
RZN   Rozhen           144.28 313  i P     PKPbc   12 56 02.0 +0.1
HERR  Herculane        144.28 319 ⇑P       PKPbc   12 56 01.9 +0.3
DJES  Djerdap          144.32 319 ⇑P       PKPbc   12 56 01.6 -0.1
BZS   Buzias           144.37 321 ⇑P       PKPbc   12 56 02.1 +0.3
BZS   Buzias           144.37 321 ⇑PKIKP   PKPbc   12 56 02.1 +0.3
INVG  Invergeldie, C   144.39 354  eP      PKPab   12 56 00.4 -0.9
SIGR  SIGRI            144.41 309   P      PKPab   12 56 01.9 +0.1
AMBH  Ambrzfalva       144.47 323 ⇑P       PKPdf   12 56 03.2 +0.1
KARP  Karpathos        144.48 302   P      PKPbc   12 56 02.7 +0.1
KARP  Karpathos        144.48 302   PKPdf  PKPbc   12 56 02.8 +0.3
JAVC  Velka Javorina   144.54 328  ePKP    PKPdf   12 56 03.6 +0.3
LIA   Limnos Island    144.65 310   P      PKPab   12 56 02.5 -0.2
LAWE  Loch Awe, Argy   144.67 356  eP      PKPab   12 56 01.9 -0.3
KAVA  Kavala           144.70 312   P      PKPab   12 56 02.8 -0.1
THAS  Thassos island   144.71 311   P      PKPab   12 56 02.6 -0.3
FLTG  Flechtingen      144.71 337  ePKPbc  PKPbc   12 56 02.6  0.0
      baz=35,slow=2.9
MDVR  Moldovita        144.76 320 ⇓P       PKPbc   12 56 03.1  0.0
VRAC  Vranov           144.76 330 ⇑P       PKPdf   12 56 03.7  0.0
VRAC  Vranov           144.76 330  ePKP    PKPbc   12 56 03.2 +0.3
VRAC  Vranov           144.76 330 ⇑PKIKP   PKPdf   12 56 03.7  0.0
BANR  Banloc           144.78 321 ⇑P       PKPdf   12 56 04.3 +0.5
PVCC  Panska Ves       144.80 333  ePKP    PKPdf   12 56 03.5 -0.1
PVCC  Panska Ves       144.80 333  ePKIKP  PKPdf   12 56 03.5 -0.1
BRG   Berggiesshubel   144.81 334  i PKP   PKPdf   12 56 03.4 -0.3
BRG                                 Amp            12 56 04.7
      comp=Z,448nm,1.2s
BRG   Berggiesshubel   144.81 334   P      PKiKP   12 56 13.1 +5.7
BRG                                 Amp            12 56 14.5
      comp=Z,86nm,1.1s
BRG   Berggiesshubel   144.81 334   Amp            12 59 32.8
      comp=Z,30nm,1.0s
BRG   Berggiesshubel   144.81 334  i PKIKP PKPbc   12 56 03.3 +0.3
BRG                                                12 59 30.9
BRG                                 pmax   pmax
      comp=Z,448nm,1.2s
BRG                                 pmax   pmax
      comp=Z,86nm,1.1s
BRG                                 pmax   pmax
      comp=Z,31nm,1.0s
BRG   Berggiesshubel   144.81 334  ePKPbc  PKPbc   12 56 03.2 +0.2
      baz=35,slow=2.9
BRG   Berggiesshubel   144.81 334   P      SKPbc   12 59 31.0 +0.9
CLL   Collm            144.86 335  eSKPbc  SKiKP   12 59 31.0 +0.2
      comp=Z,28nm,0.9s
CLL   Collm            144.86 335⇑iPKIKP   PKPab   12 56 03.2 +0.1
CLL                                e               12 59 31.0
CLL                                 pmax   pmax
      comp=Z,379nm,1.1s
CLL   Collm            144.86 335  ePKPbc  PKPbc   12 56 03.1 -0.1
      baz=35,slow=2.9
CLL   Collm            144.86 335⇑iPKPbc   PKPab   12 56 03.2 +0.1
      comp=Z,379nm,1.1s
VTS   Vitosha          144.86 315 ⇑P       PKiKP   12 56 08.3 +0.2
VTS   Vitosha          144.86 315 ⇑PKIKP   PKiKP   12 56 08.3 +0.2
SMOL  Smolenice        144.89 328  ePKIKP  PKPdf   12 56 04.4 +0.5
SRO   Srobarova        144.90 326  ePKIKP  PKPdf   12 56 04.3 +0.4
SRO   Srobarova        144.90 326  ePKP    PKPdf   12 56 04.3 +0.4
NRDL  Niedersach Rie   144.97 339  ePKPbc  PKPdf   12 56 03.6 -0.1
      baz=35,slow=2.9
NVR   Nevrokopi        145.00 313   P      PKPdf   12 56 05.0 +0.7
FBE   Freiberg         145.01 334  ePKPbc  PKPdf   12 56 04.2 +0.2
      baz=35,slow=2.9
RETH  Rethem/Aller,    145.02 339  ePKPbc  PKPdf   12 56 03.8 -0.1
      baz=35,slow=2.9
KRUC  Moravsky         145.02 329  ePKP    PKPbc   12 56 03.8  0.0
PGBU  Glenifferbraes   145.04 355  eP      PKPdf   12 56 03.9  0.0
MODS  Modra-Piesok     145.06 328  ePKIKP  PKPdf   12 56 04.7 +0.5
MODS  Modra-Piesok     145.06 328  ePKP    PKPdf   12 56 04.7 +0.5
ASSE  Asse, Remlinge   145.08 338  ePKPbc  PKPdf   12 56 03.9  0.0
      baz=35,slow=2.9
KOKK  Kokkinochori,    145.13 312   P      PKPbc   12 56 03.4 -0.9
PRU   Pruhonice        145.21 332  ePKP    PKPbc   12 56 04.2 -0.1
PRU                                eSKP    SKPbc   12 59 31.1 +0.1
PRU   Pruhonice        145.21 332  ePKIKP  PKPbc   12 56 04.2 -0.1
PRU                                e               12 59 31.1
SRS   Serrai           145.28 313   P      PKPdf   12 56 04.3 -0.5
TREC  Trest            145.29 330  ePKP    PKPbc   12 56 04.6  0.0
TREC  Trest            145.29 330  ePKIKP  PKPbc   12 56 04.6  0.0
KKB   Krupnik          145.30 314  i P     PKPab   12 56 05.5 +0.3
OUR   Ouranopolis      145.33 311   P      PKPdf   12 56 04.6 -0.3
ZKR   Zakros           145.34 302   P      PKPab   12 56 05.5  0.0
APE   Apeiranthos      145.34 305 ⇑P       PKPdf   12 56 03.8 -1.3
APE   Apeiranthos      145.34 305 ⇑PKIKP   PKPdf   12 56 03.8 -1.3
BOVS  Bovan            145.35 318 ⇑P       PKPdf   12 56 03.9 -0.9
ESK   Eskdalemuir      145.40 353  eP      PKPdf   12 56 04.4 -0.1
ESK   Eskdalemuir      145.40 353   PKPdf  PKPdf   12 56 04.4 -0.1
ESK   Eskdalemuir      145.40 353   PKP2   PKPdf   12 56 04.4 -0.1
STIA  Sitia Lasithi    145.41 302   P      PKPab   12 56 05.9 +0.1
NEUB  Neuenburg        145.41 336  ePKPbc  PKPab   12 56 05.4 +0.2
      baz=35,slow=2.9
CLZ   Clausthal        145.42 338  ePKPdf  PKPdf   12 56 04.6 -0.1
      baz=38,slow=1.6
CLZ                                ePKPbc  PKPab   12 56 05.7 +0.4
      baz=35,slow=2.9
SOH   Sokhos           145.57 312   P      PKPdf   12 56 05.2 -0.2
THR8  Santorini-Mono   145.57 304   P      PKPdf   12 56 05.3 -0.1
THR3  Thira Island,    145.63 304   P      PKPdf   12 56 05.0 -0.5
THR6  Thira Island,    145.65 304   P      PKPdf   12 56 05.3 -0.2
THR5  Thira Island,    145.67 304   P      PKPdf   12 56 05.3 -0.3
FRGS  Fruska Gora      145.68 321 ⇑P       PKPbc   12 56 05.9 -0.1
FRGS  Fruska Gora      145.68 321  eP      PKPdf   12 56 04.7 -0.7
NEWG  New Galloway     145.70 354  eP      PKPdf   12 56 05.0  0.0
MORH  Mrgy, Hungar     145.72 324 ⇑P       PKPdf   12 56 05.2 -0.2
EDMD  Edmundbyers      145.72 352  eP      PKPdf   12 56 05.1  0.0
KNT   Kendrikon        145.74 313   P      PKPdf   12 56 04.7 -0.9
FRMA  Ierapetra Chan   145.75 302   P      PKPdf   12 56 05.7  0.0
WERD  Werda            145.80 334  ePKPdf  PKPdf   12 56 05.4  0.0
      baz=38,slow=1.6
WERD                               ePKPbc  PKPbc   12 56 06.4 +0.2
      baz=35,slow=2.9
GTTG  Gottingen        145.81 338  ePKPdf  PKPdf   12 56 05.4 +0.1
      baz=38,slow=1.6
GTTG                               ePKPbc  PKPab   12 56 06.5 -0.2
      baz=35,slow=2.9
PLN   Plauen           145.83 335  ePKPdf  PKPdf   12 56 05.4  0.0
      baz=38,slow=1.6
PLN                                ePKPbc  PKPab   12 56 06.6 -0.3
      baz=35,slow=2.9
HORT  Hortiatis        145.84 312   P      PKPdf   12 56 04.7 -1.2
GUNZ  Gunzen           145.86 334  ePKPdf  PKPdf   12 56 05.5  0.0
      baz=38,slow=1.6
GUNZ                               ePKPbc  PKPab   12 56 06.8 -0.2
      baz=35,slow=2.9
KYMI  Kymi, Euboea I   145.89 309   P      PKPdf   12 56 05.8 -0.1
WERN  Wernitzgruen     145.90 334  ePKPdf  PKPdf   12 56 05.8 +0.2
      baz=38,slow=1.6
```

WERN				ePKPbc	PKPab	12 56 07.2	0.0
	baz=35,slow=2.9						
IBBN	**Ibbenburen**	**145.90**	**341**	ePKPdf	**PKPdf**	**12 56 05.3**	**-0.1**
	baz=38,slow=1.6						
IBBN				ePKPbc	**PKPbc**	**12 56 06.6**	**+0.3**
	baz=35,slow=2.9						
NKC	**Novy Kostel**	**145.91**	**334**	ePKP	**PKPdf**	**12 56 05.5**	**-0.1**
NKC				eSKP	**SKPbc**	**12 59 32.8**	**+0.2**
NKC	**Novy Kostel**	**145.91**	**334**	ePKP2	**PKPdf**	**12 56 05.5**	**-0.1**
NKC				e		12 59 32.8	
THE	**Thessaloniki**	**145.92**	**312**	P	**PKPdf**	**12 56 04.8**	**-1.1**
MOX	**Moxa**	**145.92**	**335**	ePKPdf	**PKPdf**	**12 56 05.4**	**-0.1**
	baz=38,slow=1.6						
MOX				ePKPbc	**PKPbc**	**12 56 06.6**	**+0.1**
	baz=35,slow=2.9						
GDLE	**Glaisdale, N Y**	**145.96**	**350**	eP	**PKPdf**	**12 56 05.9**	**+0.4**
STIP	**Stip**	**145.98**	**315**	i P	**PKPdf**	**12 56 04.7**	**-1.3**
GAL1	**Galloway**	**145.99**	**355**	eP	**PKPdf**	**12 56 05.6**	**0.0**
RONA	**Rosalia, Austr**	**146.00**	**328**	i PKP	**PKPdf**	**12 56 05.4**	**-0.5**
	comp=Z,283nm,1.0s,SNR=96						
RONA				eSKP	**SKPbc**	**12 59 29.6**	**-3.4**
	comp=Z,30nm,1.3s						
CONA	**Conrad Observa**	**146.06**	**328**	i PKP	**PKPdf**	**12 56 05.5**	**-0.5**
	comp=Z,362nm,1.0s,SNR=152						
CONA				eSKP	**SKPbc**	**12 59 29.4**	**-3.7**
	comp=Z,23nm,1.3s						
EREA	**Eretria**	**146.09**	**308**	P	**PKPdf**	**12 56 06.5**	**+0.2**
KESW	**Keswick, Cumbr**	**146.10**	**353**	eP	**PKPdf**	**12 56 06.1**	**+0.3**
DIVS	**Divibare**	**146.16**	**320**	eP	**PKPdf**	**12 56 05.8**	**-0.5**
GRG	**Griva**	**146.16**	**313**	P	**PKPdf**	**12 56 05.7**	**-0.6**
CKRC	**Cesky Krumlov**	**146.17**	**331**	ePKP	**PKPdf**	**12 56 05.8**	**-0.3**
CKRC				eSKP	**SKPbc**	**12 59 33.9**	**+0.6**
CKRC	**Cesky Krumlov**	**146.17**	**331**	ePKIKP	**PKPdf**	**12 56 05.8**	**-0.3**
CKRC				e		12 59 33.9	
TEKS	**Tekeris**	**146.19**	**321**	eP	**PKPdf**	**12 56 05.6**	**-0.7**
DION	**Dionisos Attik**	**146.21**	**308**	P	**PKPdf**	**12 56 06.7**	**+0.2**
MANZ	**Manzenberg**	**146.24**	**334**	ePKPdf	**PKPdf**	**12 56 06.0**	**-0.2**
	baz=38,slow=1.6						
MANZ				ePKPbc	**PKPbc**	**12 56 07.9**	**+0.4**
	baz=35,slow=2.9						
KHC	**Kasperske Hory**	**146.27**	**332**		**PKPdf**	**12 56 06.1**	**-0.2**
KHC	**Kasperske Hory**	**146.27**	**332**	ePKP	**PKPdf**	**12 56 06.1**	**-0.2**
KHC				eSKP	**SKPbc**	**12 59 32.8**	**-0.7**
KHC	**Kasperske Hory**	**146.27**	**332**	PKIKP	**PKPdf**	**12 56 06.1**	**-0.2**
PTL	**Penteli**	**146.27**	**308**	P	**PKPab**	**12 56 08.7**	**-0.3**
XOR	**Xorichti**	**146.27**	**310**	P	**PKPdf**	**12 56 05.7**	**-0.9**
SKO	**Skopje**	**146.34**	**315**	i P	**PKPdf**	**12 56 06.0**	**-0.5**
IDI	**Anoyia**	**146.34**	**302**	⇑P	**PKPbc**	**12 56 07.8**	**-0.5**
IDI	**Anoyia**	**146.34**	**302**	P	**PKPdf**	**12 56 07.2**	**+0.3**
ATHU	**Athens Univers**	**146.36**	**308**	P	**PKPbc**	**12 56 07.5**	**-0.7**
ROTZ	**Rotzenmuhle**	**146.37**	**334**	ePKPdf	**PKPdf**	**12 56 06.2**	**-0.2**
	baz=38,slow=1.6						
ROTZ				ePKPbc	**PKPab**	**12 56 08.4**	**-0.5**
	baz=35,slow=2.9						
ROTZ				epPKPbc	pPKPab	12 56 45.0	+0.2
VLY	**Voula,Athens**	**146.39**	**307**	P	**PKPdf**	**12 56 07.1**	**+0.3**
ATH	**Athens Observa**	**146.41**	**308**	P	**PKPbc**	**12 56 07.7**	**-0.6**
GEC2	**GERESS Array S**	**146.42**	**331**		**PKPdf**	**12 56 06.4**	**-0.2**
GEC2	**GERESS Array S**	**146.42**	**331**	ePKPdf	**PKPdf**	**12 56 06.3**	**-0.4**
	baz=38,slow=1.6						
GEC2				ePKPbc	**PKPbc**	**12 56 08.4**	**+0.3**
	baz=35,slow=2.9						
GERES	**GERESS Array B**	**146.42**	**331**	PKPbc	**PKPbc**	**12 56 08.2**	**0.0**
	comp=Z,201nm,0.9s,baz=47,slow=2.5,SNR=176						
GERES				SKPbc	**SKiKP**	**12 59 34.4**	**+0.2**
	comp=Z,5.4nm,0.8s,baz=90,slow=1.3,SNR=5.4						
LIT	**Litokhoron**	**146.47**	**312**	P	**PKPdf**	**12 56 05.5**	**-1.4**
LIT	**Litokhoron**	**146.47**	**312**	PKPdf	**PKPdf**	**12 56 05.7**	**-1.2**
LIT	**Litokhoron**	**146.47**	**312**	PKIKP	**PKPdf**	**12 56 05.7**	**-1.2**
TMBK	**Timbaki Herakl**	**146.50**	**302**	P	**PKPab**	**12 56 09.4**	**-0.5**
IOMK	**Kirk Michael**	**146.58**	**354**	eP	**PKPdf**	**12 56 06.8**	**+0.2**
KTI	**Kastanea**	**146.60**	**313**	P	**PKPdf**	**12 56 06.7**	**-0.5**
SJES	**Sjenica**	**146.62**	**318**	⇑iP	**PKPdf**	**12 56 06.9**	**-0.3**
PRNS	**Prines Rethymn**	**146.63**	**303**	P	**PKPbc**	**12 56 09.6**	**+0.6**
KASTN	**Kahler Asten**	**146.63**	**339**	ePKPdf	**PKPdf**	**12 56 06.7**	**-0.1**
	baz=38,slow=1.6						
KASTN				ePKPbc	**PKPbc**	**12 56 09.0**	**+0.4**
	baz=35,slow=2.9						
VILL	**Villia**	**146.64**	**308**	P	**PKPdf**	**12 56 07.9**	**+0.6**
ATAL	**Atalanti**	**146.66**	**309**	P	**PKPdf**	**12 56 05.9**	**-1.3**
ARSA	**Arzberg**	**146.69**	**328**	i PKP	**PKPdf**	**12 56 06.1**	**-0.9**
	comp=Z,100nm,1.4s,SNR=30						
ARSA				eSKP	**SKPbc**	**12 59 30.3**	**-4.2**
	comp=Z,18nm,1.3s						
WIM	**Isle of Man**	**146.70**	**354**	eP	**PKPdf**	**12 56 07.1**	**+0.3**
HAPS	**Han Pijesak,Bl**	**146.79**	**320**	eP	**PKPdf**	**12 56 07.2**	**-0.2**
BUG	**Bochum--Univer**	**146.80**	**340**	ePKPdf	**PKPdf**	**12 56 06.7**	**-0.3**
	baz=38,slow=1.6						
BUG				ePKPbc	**PKPbc**	**12 56 09.2**	**+0.2**
	baz=35,slow=2.9						
BUG				ePKPab	**PKiKP**	**12 56 12.8**	**+1.3**
	baz=39,slow=3.6						
RUDO	**Rudo**	**146.80**	**319**	eP	**PKPdf**	**12 56 06.4**	**-0.9**
LMK	**Market Rasen**	**146.81**	**349**	eP	**PKPdf**	**12 56 06.8**	**-0.2**
TYRN	**Tyrnavos**	**146.81**	**311**	P	**PKPdf**	**12 56 06.1**	**-1.3**
GRA1	**Grafenberg Arr**	**146.83**	**335**		**PKPbc**	**12 56 09.8**	**+0.6**
GRF	**Grafenberg Arr**	**146.83**	**335**	PKP2	**PKPbc**	**12 56 09.8**	**+0.6**
GRF	**Grafenberg Arr**	**146.83**	**335**	ePKPdf	**PKPdf**	**12 56 07.1**	**-0.1**
	baz=38,slow=1.6						
GRF				ePKPbc	**PKPbc**	**12 56 09.5**	**+0.3**
	baz=35,slow=2.9						
GRFO	**Grafenberg**	**146.83**	**335**	PKPbc	**PKPbc**	**12 56 09.8**	**+0.6**
GRFO	**Grafenberg**	**146.83**	**335**	PKP2	**PKPbc**	**12 56 09.8**	**+0.6**
IVA	**Berane**	**146.88**	**318**	⇓iPKP	**PKPdf**	**12 56 07.2**	**-0.4**
KZN	**Kozani**	**146.88**	**313**	P	**PKPdf**	**12 56 07.8**	**+0.2**
MOA	**Molln**	**146.88**	**330**	i PKP	**PKPdf**	**12 56 06.6**	**-0.7**
	comp=Z,230nm,1.7s						
AXAR	**Agios Charalam**	**146.89**	**310**	P	**PKPbc**	**12 56 09.3**	**-0.4**
FNA	**Florina**	**146.94**	**314**	P	**PKPdf**	**12 56 06.7**	**-1.0**
PLE	**Pljevlja**	**146.95**	**319**	⇓iPKP	**PKPdf**	**12 56 07.2**	**-0.5**
LOUT	**Loutraki**	**146.95**	**308**	P	**PKPdf**	**12 56 08.6**	**+0.9**
PVY	**Plav**	**146.98**	**317**	⇑iPKP	**PKPdf**	**12 56 07.7**	**-0.1**
IMMV	**Iera Moni Meta**	**147.01**	**303**	P	**PKPbc**	**12 56 10.4**	**+0.3**
AGG	**Agios Georgios**	**147.02**	**310**	P	**PKPdf**	**12 56 07.1**	**-0.8**
A052A	**Srbac**	**147.03**	**323**	⇑iP	**PKPbc**	**12 56 09.8**	**0.0**
THL	**Klokotos Trika**	**147.03**	**311**	P	**PKPdf**	**12 56 06.2**	**-1.6**
KRND	**KRANIDI**	**147.03**	**307**	P	**PKPbc**	**12 56 09.0**	**-1.1**
LBWR	**Ladybower, Pea**	**147.08**	**351**	eP	**PKPdf**	**12 56 07.9**	**+0.4**
GVDS	**Gavdos**	**147.09**	**302**	P	**PKPbc**	**12 56 10.4**	**0.0**
GVD	**Gavdhos**	**147.10**	**302**	P	**PKPbc**	**12 56 10.4**	**0.0**
KOME	**Kolasin**	**147.13**	**318**	⇓iPKP	**PKPdf**	**12 56 08.1**	**+0.1**
PHP	**Peshkopia**	**147.13**	**316**	P	**PKPbc**	**12 56 10.2**	**-0.1**
RODP	**Rodopos**	**147.15**	**303**	P	**PKPbc**	**12 56 11.4**	**+0.9**
THAL	**Thalero**	**147.16**	**308**	P	**PKPbc**	**12 56 09.8**	**-0.6**
MAKR	**Makrakomi, Fth**	**147.17**	**310**	P	**PKPdf**	**12 56 07.9**	**-0.2**
OHR	**Ohrid**	**147.17**	**315**	i P	**PKPdf**	**12 56 08.3**	**+0.2**
BIOA	**Bad Ischl, Aus**	**147.29**	**330**	i PKP	**PKPdf**	**12 56 06.9**	**-1.2**
	comp=Z,91nm,0.9s,SNR=31						
BIOA				eSKP	**SKPbc**	**12 59 35.7**	**-0.1**
	comp=Z,26nm,1.2s						
KNDR	**Palaiochora Ch**	**147.30**	**303**	P	**PKPbc**	**12 56 09.9**	**-1.0**
UPM	**Unac-Piva**	**147.31**	**319**	eP	**PKPbc**	**12 56 09.8**	**-1.2**
UPM	**Unac-Piva**	**147.31**	**319**	⇓iPKP	**PKPdf**	**12 56 07.7**	**-0.7**
PERS	**Pernice**	**147.31**	**327**	i PKPdf	**PKPdf**	**12 56 07.4**	**-0.7**
KPRO	**Kipourio**	**147.31**	**312**	P	**PKPdf**	**12 56 07.8**	**-0.6**
SOKA	**Soboth**	**147.33**	**327**	ePKP	**PKPdf**	**12 56 07.4**	**-0.8**
	comp=Z,224nm,1.0s,SNR=150						
SOKA				eSKP	**SKPbc**	**12 59 37.5**	**+1.5**
	comp=Z,23nm,1.9s						
WACR	**West Acre**	**147.33**	**348**	eP	**PKPdf**	**12 56 08.8**	**+1.0**
KBN	**Korca**	**147.41**	**314**	P	**PKPbc**	**12 56 11.1**	**0.0**
KBN	**Korca**	**147.41**	**314**	PKPbc	**PKPbc**	**12 56 11.2**	**0.0**
KBN	**Korca**	**147.41**	**314**	PKP2	**PKPbc**	**12 56 11.2**	**0.0**
WME	**Myndd Eilian**	**147.41**	**354**	eP	**PKPdf**	**12 56 08.2**	**+0.2**
A051A	**Mrakovica**	**147.42**	**323**	⇑iP	**PKPdf**	**12 56 07.8**	**-0.6**
VLI	**Veliai**	**147.42**	**306**	P	**PKPbc**	**12 56 10.2**	**-1.0**
WPS	**Cemaes, Angles**	**147.43**	**354**	eP	**PKPbc**	**12 56 10.1**	**-0.6**
BLY	**Banja Luka**	**147.43**	**323**	⇑iP	**PKPbc**	**12 56 11.4**	**+0.4**
GUR	**Goura**	**147.43**	**308**	P	**PKPbc**	**12 56 11.1**	**-0.3**
EVR	**Evrytania**	**147.44**	**310**	P	**PKiKP**	**12 56 12.4**	**-1.0**
TNS	**Taunus Mts**	**147.44**	**338**	ePKPdf	**PKPdf**	**12 56 07.7**	**-0.6**
	baz=38,slow=1.6						
TNS				ePKPbc	**PKPbc**	**12 56 11.3**	**+0.4**
	baz=35,slow=2.9						
STNC	**Stoke**	**147.45**	**351**	eP	**PKPdf**	**12 56 08.9**	**+0.9**
SERG	**Sergoula**	**147.46**	**309**	P	**PKPbc**	**12 56 11.1**	**-0.2**
TRIZ	**Trizonia**	**147.47**	**309**	P	**PKPbc**	**12 56 11.3**	**0.0**
KTHA	**Kythira Island**	**147.48**	**305**	P	**PKPbc**	**12 56 11.1**	**-0.3**
ANX	**Ano Chora**	**147.49**	**310**	P	**PKPdf**	**12 56 08.7**	**0.0**
PDG	**Podgorica**	**147.51**	**318**	⇑P	**PKPbc**	**12 56 11.1**	**-0.2**
PDG	**Podgorica**	**147.51**	**318**	PKPbc	**PKPbc**	**12 56 11.7**	**+0.5**
PDG	**Podgorica**	**147.51**	**318**	⇓iPKP	**PKPdf**	**12 56 09.0**	**+0.5**
NKME	**Niksic**	**147.52**	**318**	⇓iPKP	**PKPdf**	**12 56 08.3**	**-0.3**
WLF1	**Llynfaes**	**147.52**	**354**	eP	**PKPdf**	**12 56 09.2**	**+1.1**
KLV	**Kalavryta, Ach**	**147.53**	**309**	P	**PKPbc**	**12 56 11.4**	**-0.2**
PRIJ	**Prijedor**	**147.55**	**324**	eP	**PKPbc**	**12 56 11.1**	**-0.2**
YRC	**Rhoscolyn**	**147.58**	**354**	eP	**PKPbc**	**12 56 09.9**	**-1.1**
LAKA	**Lakka**	**147.58**	**309**	P	**PKPbc**	**12 56 11.4**	**-0.3**
AHRW	**Bad Neuenahr-A**	**147.64**	**340**	ePKPdf	**PKPdf**	**12 56 08.1**	**-0.3**
	baz=38,slow=1.6						
AHRW				ePKPbc	**PKPbc**	**12 56 11.8**	**+0.5**
	baz=35,slow=2.9						
RJOB	**Jochberg**	**147.65**	**331**	ePKPdf	**PKPdf**	**12 56 07.8**	**-0.8**
	baz=38,slow=1.6						
RJOB				ePKPbc	**PKPbc**	**12 56 11.7**	**+0.1**
	baz=35,slow=2.9						
CWF	**Charnwood Fore**	**147.66**	**350**	eP	**PKPdf**	**12 56 08.7**	**+0.3**
CEME	**Cevo**	**147.66**	**318**	⇓iPKP	**PKPdf**	**12 56 08.8**	**0.0**
TIR	**Tirane**	**147.68**	**316**	⇑P	**PKPbc**	**12 56 11.6**	**-0.1**
TIR	**Tirane**	**147.68**	**316**	P	**PKPbc**	**12 56 12.0**	**+0.2**
TIR	**Tirane**	**147.68**	**316**		**PKPbc**	**12 56 12.2**	**+0.4**
TIR	**Tirane**	**147.68**	**316**	⇑PKP2	**PKPbc**	**12 56 11.6**	**-0.1**
DRME	**Dracevica, Mon**	**147.69**	**317**	⇑iP	**PKPbc**	**12 56 11.6**	**-0.2**
DRME	**Dracevica, Mon**	**147.69**	**317**	⇓iPKP	**PKPdf**	**12 56 09.2**	**+0.4**
MGRS	**Mrkonjic Grad**	**147.69**	**322**	⇑iP	**PKPbc**	**12 56 12.1**	**+0.4**
OBKA	**Obir**	**147.69**	**328**	i PKP	**PKPdf**	**12 56 07.9**	**-0.9**
	comp=Z,108nm,0.9s,SNR=26						
OBKA				eSKP	**SKPbc**	**12 59 32.4**	**-4.4**
	comp=Z,19nm,1.4s						
OBKA	**Obir**	**147.69**	**328**	⇑iP	**PKPdf**	**12 56 07.6**	**-1.2**
BRY	**Bratogost**	**147.70**	**319**	eP	**PKPdf**	**12 56 07.6**	**-1.4**
BRY	**Bratogost**	**147.70**	**319**	⇓iPKP	**PKPdf**	**12 56 07.9**	**-1.1**
DSB	**Dublin**	**147.73**	**356**		**PKPbc**	**12 56 11.4**	**-0.1**
LSK	**Leskovik**	**147.75**	**313**	P	**PKPbc**	**12 56 12.6**	**+0.5**
PVO	**Paravola**	**147.76**	**310**	P	**PKPbc**	**12 56 11.8**	**-0.3**
ULC	**Ulcinj**	**147.76**	**317**	⇑iPKP	**PKPdf**	**12 56 08.5**	**-0.5**
FOEL	**Foel Wylfa**	**147.78**	**352**	eP	**PKPdf**	**12 56 09.0**	**+0.3**
JAN	**Janina**	**147.80**	**312**	P	**PKPbc**	**12 56 12.7**	**+0.5**
BUM	**Brajici-Budva**	**147.81**	**318**	⇑iPKP	**PKPdf**	**12 56 09.1**	**0.0**
SRKY	**Kupres RS**	**147.85**	**322**	eP	**PKPbc**	**12 56 11.5**	**-0.8**
BEBN	**Eben Emael**	**147.86**	**341**	dPKP	**PKPbc**	**12 56 12.1**	**+0.2**
KBA	**Koelnbreinsper**	**147.87**	**329**	i PKP	**PKPdf**	**12 56 07.7**	**-1.5**
	comp=Z,205nm,0.9s,SNR=95						
KBA				eSKP	**SKPbc**	**12 59 40.4**	**+3.2**
	comp=Z,22nm,1.2s						
LLW	**Llanuwychllyn**	**147.88**	**353**	eP	**PKPdf**	**12 56 08.9**	**+0.1**
DRO	**Drossia**	**147.89**	**309**	P	**PKPbc**	**12 56 13.0**	**+0.5**
BTNL	**Ternell**	**147.90**	**341**	dPKPdf	**PKPdf**	**12 56 08.8**	**-0.1**
BTNL				dPKP	**PKPbc**	**12 56 12.2**	**+0.1**
MEM	**Membach**	**147.92**	**341**	dPKP	**PKPbc**	**12 56 12.1**	**0.0**
MEM				dPKiKP	**PKiKP**	**12 56 14.1**	**+0.2**
TREB	**Trebinje**	**147.92**	**319**	eP	**PKPbc**	**12 56 11.3**	**-1.1**
A050A	**Klekovaca**	**147.96**	**323**	⇑iP	**PKPdf**	**12 56 08.4**	**-0.9**
HCY	**Herceg Novi**	**147.98**	**318**	eP	**PKPbc**	**12 56 12.0**	**-0.5**
HCY	**Herceg Novi**	**147.98**	**318**	⇑iPKP	**PKPdf**	**12 56 08.7**	**-0.6**
FUR	**Furstenfeldbru**	**148.00**	**333**	ePKPdf	**PKPdf**	**12 56 08.9**	**-0.3**
	baz=38,slow=1.6						
FUR				ePKPbc	**PKPbc**	**12 56 12.6**	**+0.2**
	baz=35,slow=2.9						
FUR				ePKPab	**PKPab**	**12 56 16.4**	**+0.9**
	baz=39,slow=3.6						
BOJS	**Bojanci**	**148.00**	**326**	i PKPdf	**PKPdf**	**12 56 09.2**	**-0.1**
BOJS				i PKPbc	**PKPbc**	**12 56 13.0**	**+0.5**
BOJS	**Bojanci**	**148.00**	**326**	⇑iP	**PKPdf**	**12 56 09.0**	**-0.2**
LJU	**Ljubljana**	**148.02**	**327**	i PKPdf	**PKPdf**	**12 56 09.1**	**-0.2**
LJU				ePKPbc	**PKPbc**	**12 56 12.6**	**+0.1**
ITM	**Ithomi**	**148.02**	**307**	P	**PKPbc**	**12 56 12.6**	**-0.2**
ITM	**Ithomi**	**148.02**	**307**	PKPbc	**PKPbc**	**12 56 12.5**	**-0.4**
MYKA	**Terra Mystica**	**148.05**	**329**	i PKP	**PKPdf**	**12 56 08.3**	**-1.1**
	comp=Z,154nm,0.8s,SNR=56						
MYKA				eSKP	**SKPbc**	**12 59 39.2**	**+1.7**
	comp=Z,23nm,1.1s						
BSTI	**Sart Tilman**	**148.08**	**341**	dPKP	**PKPbc**	**12 56 12.3**	**-0.2**
HLM1	**Long Mynd**	**148.10**	**352**	eP	**PKPdf**	**12 56 09.1**	**-0.1**
BHOU	**Houvegnez**	**148.14**	**340**	dPKPdf	**PKPdf**	**12 56 09.8**	**+0.5**
BHOU				dPKP	**PKPbc**	**12 56 13.0**	**+0.3**
IGT	**Igoumenitsa**	**148.21**	**312**	P	**PKPbc**	**12 56 12.9**	**-0.3**
STON	**Ston**	**148.23**	**320**	eP	**PKPdf**	**12 56 08.9**	**-0.7**
PYL	**PYLOS**	**148.26**	**307**	P	**PKPbc**	**12 56 12.7**	**-0.7**
CEY	**Cerknica**	**148.28**	**327**	⇑iP	**PKPdf**	**12 56 09.3**	**-0.4**
SRN	**Sarande**	**148.28**	**313**	P	**PKPbc**	**12 56 12.4**	**-1.0**
CADS	**Cadrg**	**148.29**	**328**	i PKPdf	**PKPdf**	**12 56 08.8**	**-0.9**
CADS				i PKPbc	**PKPbc**	**12 56 12.6**	**-0.6**
TSLK	**Tsoukalades, L**	**148.30**	**311**	P	**PKPbc**	**12 56 13.8**	**+0.3**
BCLA	**Clavier**	**148.30**	**341**	dPKP	**PKPbc**	**12 56 12.4**	**-0.7**
LKD2	**Lefkada island**	**148.31**	**311**	P	**PKPbc**	**12 56 13.8**	**+0.2**
NYDR	**Nydri-Lefkada**	**148.31**	**311**	P	**PKPbc**	**12 56 13.9**	**+0.4**
VLO	**Vlora**	**148.35**	**314**		**PKiKP**	**12 56 14.7**	**-0.4**
VLO	**Vlora**	**148.35**	**314**	PKP2	**PKiKP**	**12 56 14.7**	**-0.4**
STU	**Stuttgart**	**148.37**	**336**	PKPbc	**PKiKP**	**12 56 14.4**	**-0.5**
STU	**Stuttgart**	**148.37**	**336**	PKP2	**PKiKP**	**12 56 14.4**	**-0.5**
STU	**Stuttgart**	**148.37**	**336**	ePKPdf	**PKPdf**	**12 56 09.6**	**-0.1**
	baz=38,slow=1.6						
STU				ePKPbc	**PKPbc**	**12 56 13.6**	**+0.2**
	baz=35,slow=2.9						
EVGI	**Lefkada island**	**148.38**	**310**	P	**PKPbc**	**12 56 14.0**	**+0.3**
BGES	**Gesves**	**148.40**	**342**	dPKP	**PKPbc**	**12 56 13.3**	**0.0**
DRAG	**Dragano-Lefkad**	**148.41**	**311**	P	**PKPbc**	**12 56 14.0**	**+0.2**
KEK	**Kerkira**	**148.50**	**313**	P	**PKiKP**	**12 56 15.0**	**-0.4**
KEK	**Kerkira**	**148.50**	**313**	PKPbc	**PKiKP**	**12 56 15.0**	**-0.4**
WATA	**Walderalm**	**148.50**	**331**	i PKP	**PKPdf**	**12 56 09.2**	**-1.0**
	comp=Z,186nm,1.0s,SNR=52						
WATA				eSKP	**SKPbc**	**12 59 38.7**	**+0.1**
	comp=Z,5.5nm,0.6s						
ABTA	**Abfaltersbach**	**148.51**	**330**	i PKP	**PKPdf**	**12 56 08.9**	**-1.2**
	comp=Z,222nm,0.8s,SNR=104						
FSK	**Fiskardo**	**148.52**	**310**	P	**PKPbc**	**12 56 13.8**	**-0.2**
WTTA	**Wattenberg**	**148.53**	**331**	i PKP	**PKPdf**	**12 56 09.6**	**-0.7**
	comp=Z,285nm,1.0s,SNR=94						
WTTA				eSKP	**SKPbc**	**12 59 38.7**	**0.0**
	comp=Z,16nm,1.1s						
SABO	**M.te Sabotino**	**148.53**	**328**	PKPbc	**PKPbc**	**12 56 14.3**	**+0.5**
CLUD	**Cludinico**	**148.54**	**329**	PKPbc	**PKPbc**	**12 56 13.6**	**-0.3**
RCHB	**Rochefort**	**148.56**	**341**	dPKPdf	**PKPdf**	**12 56 10.2**	**+0.3**
RCHB				dPKP	**PKPbc**	**12 56 13.9**	**+0.1**
BMRD	**Maredsous**	**148.56**	**342**	dPKP	**PKPbc**	**12 56 13.9**	**+0.1**
BMRD				dPKiKP	**PKiKP**	**12 56 15.7**	**+0.5**
SKDS	**Skadanscina**	**148.62**	**327**	⇑iP	**PKPdf**	**12 56 09.4**	**-0.9**
LTHK	**Lithakia**	**148.62**	**309**	P	**PKPbc**	**12 56 13.9**	**-0.4**
TRI	**Trieste**	**148.63**	**327**	PKPbc	**PKPbc**	**12 56 13.9**	**-0.2**
TRI	**Trieste**	**148.63**	**327**	PKP2	**PKPbc**	**12 56 13.9**	**-0.2**
LPW	**Lampeter**	**148.65**	**353**	eP	**PKPdf**	**12 56 10.2**	**+0.2**
WLF	**Walferdange**	**148.70**	**340**	PKPbc	**PKiKP**	**12 56 15.1**	**-0.5**
WLF	**Walferdange**	**148.70**	**340**	PKP2	**PKiKP**	**12 56 15.1**	**-0.5**
WLF	**Walferdange**	**148.70**	**340**	dPKPdf	**PKPdf**	**12 56 11.0**	**+0.7**
WLF				dPKP	**PKiKP**	**12 56 15.0**	**-0.5**
WLF	**Walferdange**	**148.70**	**340**	ePKPdf	**PKPdf**	**12 56 10.8**	**+0.6**
	baz=38,slow=1.6						
WLF				ePKPbc	**PKiKP**	**12 56 14.9**	**-0.6**
	baz=35,slow=2.9						
WLF				ePKPab	**PKPab**	**12 56 19.4**	**+1.2**
	baz=39,slow=3.6						
KEF4	**Livadi, Kephal**	**148.70**	**310**	P	**PKPbc**	**12 56 14.3**	**-0.2**
MOTA	**Moosalm**	**148.70**	**332**	ePKP	**PKPdf**	**12 56 09.7**	**-0.8**
	comp=Z,326nm,0.9s,SNR=132						
MOTA				eSKP	**SKPbc**	**12 59 40.5**	**+1.5**
	comp=Z,25nm,1.3s						
STRD	**Stroud**	**148.72**	**351**	eP	**PKPdf**	**12 56 11.8**	**+1.7**
RETA	**Reutte**	**148.74**	**332**	ePKP	**PKPdf**	**12 56 09.8**	**-0.6**
	comp=Z,137nm,0.9s,SNR=41						
RETA				eSKP	**SKPbc**	**12 59 42.3**	**+3.3**
	comp=Z,22nm,1.7s						
DMLN	**Damoulianata-K**	**148.74**	**310**	P	**PKPbc**	**12 56 14.7**	**0.0**
SQTA	**Sankt Quirin**	**148.75**	**332**	i PKP	**PKPdf**	**12 56 09.8**	**-0.7**
	comp=Z,306nm,0.8s,SNR=100						
SQTA				eSKP	**SKPbc**	**12 59 42.2**	**+3.1**
	comp=Z,16nm,1.0s						
MONM	**Monmouth**	**148.76**	**351**	eP	**PKPbc**	**12 56 12.5**	**-1.7**
DOU	**Dourbes**	**148.80**	**342**	dPKPdf	**PKPdf**	**12 56 10.5**	**+0.1**
DOU				dPcP	**PKPbc**	**12 56 14.6**	**+0.3**
CIMO	**Cimolais**	**148.86**	**329**	PKPbc	**PKPbc**	**12 56 14.7**	**-0.1**
UBR	**Ueberruh**	**148.87**	**333**	ePKPdf	**PKPdf**	**12 56 10.0**	**-0.7**
	baz=38,slow=1.6						
UBR				ePKPbc	**PKPbc**	**12 56 14.9**	**+0.1**
	baz=35,slow=2.9						
RSBS	**Rosebush, Pemb**	**148.88**	**354**	eP	**PKPdf**	**12 56 10.4**	**0.0**
WOL	**Wolverton**	**149.02**	**349**	eP	**PKPbc**	**12 56 14.4**	**-0.5**
BFO	**Black Forest**	**149.06**	**336**	PKPdf	**PKPdf**	**12 56 10.7**	**-0.1**
BFO				PKPbc	**PKPbc**	**12 56 15.2**	**+0.1**
BFO				PKPab	**PKPab**	**12 56 21.1**	**+1.4**
BFO	**Black Forest**	**149.06**	**336**	PKP2	**PKPab**	**12 56 21.1**	**+1.4**
BFO	**Black Forest**	**149.06**	**336**	ePKPdf	**PKPdf**	**12 56 10.3**	**-0.6**
	baz=38,slow=1.6						
BFO				ePKPbc	**PKPbc**	**12 56 15.1**	**0.0**
	baz=35,slow=2.9						
BFO				ePKPab	**PKPab**	**12 56 20.6**	**+0.8**
	baz=39,slow=3.6						
FETA	**Feichten**	**149.11**	**332**	i PKP	**PKPdf**	**12 56 10.6**	**-0.6**
	comp=Z,340nm,1.1s,SNR=133						
HMNX	**Herstmonceux**	**149.15**	**347**	eP	**PKPbc**	**12 56 13.8**	**-1.4**
DAVA	**Damuels**	**149.27**	**333**	i PKP	**PKPdf**	**12 56 10.5**	**-0.9**
	comp=Z,221nm,1.1s,SNR=76						
DAVA				eSKP	SKPbc	12 59 41.9	
	comp=Z,40nm,1.2s						
CTI	**Castel Tesino**	**149.43**	**330**		**PKPdf**	**12 56 10.9**	**-0.7**
CTI				PKPbc	**PKPbc**	**12 56 16.4**	**+0.2**
CTI				PKPab	**PKPab**	**12 56 21.8**	**+0.4**
CTI	**Castel Tesino**	**149.43**	**330**	PKP2	**PKPbc**	**12 56 16.4**	**+0.2**
ECH	**Echery**	**149.59**	**337**	PKPdf	**PKPdf**	**12 56 10.8**	**-0.9**
ECH				PKPbc	**PKPbc**	**12 56 16.5**	**0.0**
ECH				PKPab	**PKPab**	**12 56 22.6**	**+0.7**
ECH	**Echery**	**149.59**	**337**	PKP2	**PKPbc**	**12 56 16.5**	**0.0**
SGRT	**San Giovanni R**	**150.06**	**319**		**PKPdf**	**12 56 12.2**	**-0.6**
SGRT					**PKPbc**	**12 56 17.8**	**-0.1**
SGRT				PKPab	**PKPab**	**12 56 25.2**	**+1.0**
MATE	**Matera**	**150.08**	**317**	⇑P	**PKPbc**	**12 56 18.0**	**+0.2**
SBD	**Saint Breward**	**150.24**	**353**	eP	**PKPdf**	**12 56 12.8**	**+0.1**
CCA1	**Carnmenellis**	**150.67**	**354**	eP	**PKPbc**	**12 56 16.2**	**-2.7**
TIP	**Timpagrande**	**150.82**	**314**	PKPdf	**PKPdf**	**12 56 13.4**	**-0.6**
TIP				PKPbc	**PKiKP**	**12 56 20.4**	**0.0**
TIP				PKPab	**PKPab**	**12 56 27.3**	**-0.1**
INTR	**Introdacqua**	**151.00**	**322**		**PKPdf**	**12 56 13.7**	**-0.5**
INTR				PKPbc	**PKPbc**	**12 56 20.1**	**0.0**
INTR				PKPab	**PKPab**	**12 56 26.8**	**-1.3**
SENIN	**Lac Senin/Sane**	**151.07**	**335**	PKPdf	**PKPdf**	**12 56 14.1**	**-0.3**
SENIN				PKPbc	**PKPbc**	**12 56 20.2**	**-0.1**
SENIN				PKPab	**PKPab**	**12 56 28.1**	**-0.2**
JSA	**Saint Aubin**	**151.23**	**349**	eP	**PKPdf**	**12 56 14.5**	**+0.3**
CLF	**Chambon-Foret**	**151.33**	**343**	PKPdf	**PKPdf**	**12 56 14.4**	**+0.1**
CLF				PKPbc	**PKiKP**	**12 56 21.4**	**+0.4**
CLF				PKPab	**PKPab**	**12 56 29.4**	**+0.4**
LATE	**Laterza**	**151.78**	**325**		**PKPdf**	**12 56 14.5**	**-0.8**
LATE				PKPbc	**PKiKP**	**12 56 22.1**	**-0.1**
LATE				PKPab	**PKPab**	**12 56 30.8**	**-0.4**
SSB	**Saint Sauveur**	**153.03**	**337**	PKPdf	**PKPdf**	**12 56 16.9**	**-0.2**
SSB				PKPbc	**PKiKP**	**12 56 24.7**	**+0.1**
SSB				PKPab	**PKPab**	**12 56 37.3**	**+0.9**
KEST	**Kesra**	**157.63**	**315**	PKP	**PKPdf**	**12 56 22.9**	**-0.7**
	comp=Z,8.3nm,0.9s,baz=0.0,slow=5.1,SNR=5.2						
KEST				PKPab	**PKPab**	**12 56 57.5**	**+1.1**
	comp=Z,50nm,0.8s,baz=56,slow=4.3,SNR=16						
KEST	**Kesra**	**157.63**	**315**	PKPdf	**PKPdf**	**12 56 22.6**	**-1.0**
KEST				PKPab	**PKPab**	**12 56 57.7**	**+1.2**
PGAV	**Gavieira, Arco**	**159.09**	**356**	ePKPdf	**PKPdf**	**12 56 25.3**	**+0.1**
PGAV	**Gavieira, Arco**	**159.09**	**356**	ePKPab	**PKPab**	**12 57 02.7**	**+0.2**
PBRG	**Braganca**	**159.12**	**353**	ePKPab	**PKPab**	**12 57 02.5**	**0.0**
PCAB	**Cabril**	**159.33**	**356**	ePKPdf	**PKPdf**	**12 56 25.4**	**0.0**
PCAB	**Cabril**	**159.33**	**356**	ePKPab	**PKPab**	**12 57 03.9**	**+0.5**
POLO	**Lamas de Olo**	**159.65**	**355**	ePKPdf	**PKPdf**	**12 56 26.1**	**+0.2**
POLO	**Lamas de Olo**	**159.65**	**355**	ePKPab	**PKPab**	**12 57 04.8**	**-0.1**
PVRL	**Vila Real**	**159.74**	**355**	ePKPdf	**PKPdf**	**12 56 26.0**	**+0.1**
PVRL	**Vila Real**	**159.74**	**355**	ePKPab	**PKPab**	**12 57 05.8**	**+0.6**
MVO	**Moncorvo**	**159.78**	**354**	ePKPdf	**PKPdf**	**12 56 26.1**	**+0.1**
MVO	**Moncorvo**	**159.78**	**354**	ePKPab	**PKPab**	**12 57 05.0**	**-0.5**
PVIS	**Viseu**	**160.31**	**355**	ePKPab	**PKPab**	**12 57 07.8**	**+0.1**
MTE	**Manteigas**	**160.59**	**354**	ePKPdf	**PKPdf**	**12 56 26.6**	**-0.3**
MTE	**Manteigas**	**160.59**	**354**	ePKPab	**PKPab**	**12 57 09.4**	**+0.4**
ESDC	**Sonseca Array**	**160.73**	**346**	PKP	**PKPdf**	**12 56 26.4**	**-0.6**
	comp=Z,5.4nm,1.1s,baz=334,slow=2.8,SNR=12						
ESDC				PKPab	**PKPab**	**12 57 08.9**	**-0.7**
	comp=Z,14nm,0.9s,baz=10.0,slow=3.4,SNR=22						
ESDC				PP	**PP**	**13 00 52.3**	**+0.6**
	comp=Z,3.5nm,1.0s,baz=17,slow=4.7,SNR=6.3						
ESDC	**Sonseca Array**	**160.73**	**346**		**PKPdf**	**12 56 26.2**	**-0.9**
ESDC					**PKPab**	**12 57 09.6**	**0.0**
COI	**Coimbra**	**160.85**	**356**	PKPdf	**PKPdf**	**12 56 26.4**	**-0.7**
COI				PKPab	**PKPab**	**12 57 10.3**	**+0.3**
COI	**Coimbra**	**160.85**	**356**	PKIKP	**PKPdf**	**12 56 26.4**	**-0.7**
COI						12 57 10.3	
PAB	**San Pablo**	**160.94**	**347**	PKPdf	**PKPdf**	**12 56 27.6**	**+0.3**
PAB				PKPab	**PKPab**	**12 57 10.5**	**0.0**
PAB	**San Pablo**	**160.94**	**347**	PKIKP	**PKPdf**	**12 56 27.6**	**+0.3**
PAB						12 57 10.5	
PCAS	**Casmilo, Conde**	**161.01**	**357**	ePKPab	**PKPab**	**12 57 11.2**	**+0.4**
PCBR	**Castelo Branco**	**161.14**	**354**	ePKPdf	**PKPdf**	**12 56 27.9**	**+0.5**
PCBR	**Castelo Branco**	**161.14**	**354**	ePKPab	**PKPab**	**12 57 11.2**	**-0.1**
PMRV	**Marv??o**	**161.54**	**354**	ePKPdf	**PKPdf**	**12 56 27.3**	**-0.6**
PMRV	**Marv??o**	**161.54**	**354**	ePKPab	**PKPab**	**12 57 13.6**	**+0.5**
PMTG	**Montargil**	**161.97**	**356**	ePKPab	**PKPab**	**12 57 15.3**	**+0.3**
PESTR	**Estremoz**	**162.12**	**354**	ePKPdf	**PKPdf**	**12 56 28.6**	**+0.1**
PESTR	**Estremoz**	**162.12**	**354**	ePKPab	**PKPab**	**12 57 16.0**	**+0.4**
PBAR	**Barrancos**	**162.74**	**352**	PKP	**PKPdf**	**12 56 26.6**	**-2.5**
PBAR	**Barrancos**	**162.74**	**352**	ePKPdf	**PKPdf**	**12 56 28.4**	**-0.7**
PBAR	**Barrancos**	**162.74**	**352**	ePKPab	**PKPab**	**12 57 18.0**	**-0.4**
PNCL	**Nicolau / Gran**	**162.94**	**356**	ePKPdf	**PKPdf**	**12 56 29.2**	**-0.1**
PBEJ	**Beja**	**162.98**	**354**	ePKPdf	**PKPdf**	**12 56 28.5**	**-0.9**
PBEJ	**Beja**	**162.98**	**354**	ePKPab	**PKPab**	**12 57 19.6**	**+0.2**
MESJ	**Messejana**	**163.19**	**355**	ePKPdf	**PKPdf**	**12 56 28.7**	**-0.9**
PCVE	**Castro Verde**	**163.38**	**355**	ePKPdf	**PKPdf**	**12 56 30.0**	**+0.2**
PCVE	**Castro Verde**	**163.38**	**355**	ePKPab	**PKPab**	**12 57 21.7**	**+0.5**
MORF	**Marmelete**	**163.75**	**356**	ePKPab	**PKPab**	**12 57 23.5**	**+0.6**
LIC	**Lamto**	**164.51**	**199**	⇑iPKIKP	**PKPdf**	**12 56 30.9**	**-0.6**
	comp=Z,14nm,0.4s						
LIC	**Lamto**	**164.51**	**199**	⇓iPKP1	**PKPab**	**12 57 27.5**	**+0.8**
	comp=Z,201nm,1.1s						
KIC	**Kosan Boka**	**164.55**	**200**	⇓iPKIKP	**PKPdf**	**12 56 30.5**	**-1.0**
	comp=Z,0.5nm,0.3s						
KIC	**Kosan Boka**	**164.55**	**200**	⇓iPKP1	**PKPab**	**12 57 27.7**	**+0.8**
	comp=Z,22nm,0.7s						
DBIC	**Dimbokro**	**164.88**	**200**	PKP	**PKPdf**	**12 56 31.1**	**-0.7**
	comp=Z,8.5nm,0.9s,baz=162,slow=3.4,SNR=12						
DBIC				PKPab	**PKPab**	**12 57 29.2**	**+0.9**
	comp=Z,54nm,0.9s,baz=164,slow=4.5,SNR=36						
DBIC	**Dimbokro**	**164.88**	**200**		**PKPdf**	**12 56 30.2**	**-1.6**
DBIC				PKPab	**PKPab**	**12 57 28.8**	**+0.4**
TIC	**Toumodi**	**164.91**	**199**	⇑iPKIKP	**PKPdf**	**12 56 31.2**	**-0.7**
	comp=Z,6.0nm,0.3s						
TIC	**Toumodi**	**164.91**	**199**	⇑iPKP1	**PKPab**	**12 57 28.7**	**+0.2**
	comp=Z,120nm,0.9s						
TAM	**Tamanrasset**	**165.52**	**280**		**PKPdf**	**12 56 32.2**	**0.0**
TAM				PKPab	**PKPab**	**12 57 32.4**	**+0.9**
TAM	**Tamanrasset**	**165.52**	**280**	PKP2	**PKPab**	**12 57 32.4**	**+0.9**
TAM						13 56 32.2	
SACV	**Santiago Islan**	**165.69**	**113**	PKPdf	**PKPdf**	**12 56 30.3**	**-2.1**
SACV				PKPab	**PKPab**	**12 57 30.5**	**-1.7**
TORD	**Torodi Ar. Bea**	**166.37**	**237**	PKP	**PKPdf**	**12 56 32.2**	**-0.7**
	comp=Z,15nm,1.1s,baz=153,slow=0.7,SNR=35						
TORD				PKPab	**PKPab**	**12 57 35.2**	**+0.1**
	comp=Z,16nm,1.0s,baz=131,slow=4.7,SNR=12						
TORD				PP	**PP**	**13 01 20.8**	**-2.0**
	comp=Z,4.7nm,1.0s,baz=130,slow=5.7,SNR=5.5						
TORD	**Torodi Ar. Bea**	**166.37**	**237**		**PKPdf**	**12 56 32.2**	**-0.7**
TORD				PKPab	**PKPab**	**12 57 34.4**	**-0.7**
IFR	**Ifrane**	**166.85**	**342**	PKP	**PKPdf**	**12 56 32.3**	**-0.7**
MDT	**Midelt**	**167.34**	**339**	PP	**PP**	**13 01 27.8**	**+1.3**
	comp=Z,2.9nm,0.8s,baz=61,slow=5.7,SNR=3.7						
BBTS	**Babate**	**171.09**	**134**	PKP	**PKPdf**	**12 56 35.9**	**0.0**
	comp=Z,25nm,0.5s,baz=143,slow=19,SNR=2.7						

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*IDC **14** 12:39:42.1±2.2, 30.°39S×178.°79W, h0^{km}, mb4.1/4, mbtmp4.1/4, MS4.1/4, Error ellipse: s-maj=77.3km s-min=21.1km az=143.0*

ISC 14 12:39:28.9±3.1**, 31.°27S**±0.°06×**177.°0W**±0.°4**, h10^{km}, n30, σ1.s61**/38**, mb4.1**/4**, MS4.3**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.14**	**339**	P	**Pn**	**12 40 04.3**	**-0.3**
GLKZ				S	**Sn**	**12 40 29.6**	**-1.5**
RAO	**Raoul Island**	**2.15**	**339**	Pn	**Pb**	**12 40 07.7**	**-0.1**
	108nm,0.3s,baz=154,slow=8.4,SNR=5.2						
RAO				Sn	**Sn**	**12 40 29.4**	**-2.0**
	480nm,0.3s,baz=270,slow=20,SNR=11						
RIZ	**Raoul Island**	**2.15**	**339**	P	**Pn**	**12 40 05.1**	**+0.3**
RIZ				S	**Sn**	**12 40 31.5**	**-0.1**
MXZ	**Matakaoa Point**	**7.36**	**210**	P	**Pn**	**12 41 15.3**	**-1.1**
MXZ				S	**Sn**	**12 42 40.3**	**+0.4**
WMGZ	**Waiomatatini S**	**7.53**	**209**	P	**Pn**	**12 41 18.9**	**+0.2**
WMGZ				S	**Sn**	**12 42 45.3**	**+1.1**
PKGZ	**Pakihiroa**	**7.73**	**210**	P	**Pn**	**12 41 21.6**	**0.0**
PKGZ				S	**Sn**	**12 42 50.3**	**+1.1**
HAZ	**Te Kaha**	**7.75**	**212**	P	**Pn**	**12 41 22.8**	**+1.1**
HAZ				S	**Sn**	**12 42 50.5**	**+1.0**
PUZ	**Puketiti**	**7.81**	**208**	P	**Pn**	**12 41 20.8**	**-1.8**
PUZ				S	**Sn**	**12 42 51.2**	**+0.1**
RUGZ	**Raukumara Rang**	**7.97**	**212**	P	**Pn**	**12 41 25.7**	**+0.9**
RUGZ				S	**Sn**	**12 42 56.1**	**+1.0**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWGZ	**Tauwhareparae**	**8.02**	**209**	P	**Pn**	**12 41 27.4**	**+2.0**
TWGZ				S	**Sn**	**12 42 57.0**	**+0.8**
CNGZ	**Carnagh Statio**	**8.19**	**207**	P	**Pn**	**12 41 26.8**	**-0.9**
TKGZ	**Te Karaka**	**8.29**	**209**	P	**Pn**	**12 41 28.5**	**-0.6**
TKGZ				S	**Sn**	**12 43 02.1**	**-0.8**
MWZ	**Matawai**	**8.34**	**211**	P	**Pn**	**12 41 29.2**	**-0.7**
MWZ				S	**Sn**	**12 43 02.8**	**-1.3**
OPRZ	**Ohinepanea**	**8.42**	**217**	P	**Pn**	**12 41 31.2**	**+0.3**
URZ	**Urewera**	**8.47**	**213**	Pn	**Pn**	**12 41 31.3**	**-0.3**
	1.9nm,0.3s,baz=343,slow=4.7,SNR=9.2						
URZ				Sn	**Sn**	**12 43 06.3**	**-0.9**
	3.3nm,0.3s,baz=154,slow=22,SNR=12						
URZ	**Urewera**	**8.47**	**213**	P	**Pn**	**12 41 31.5**	**0.0**
URZ				S	**Sn**	**12 43 06.8**	**-0.5**
RIGZ	**Rimuhau**	**8.56**	**208**	S	**Sn**	**12 43 08.3**	**-1.1**
RAHZ	**Arahi**	**9.02**	**211**	S	**Sn**	**12 43 20.4**	**-0.3**
BKZ	**Black Stump Fm**	**9.49**	**212**	P	**Pn**	**12 41 41.2**	**-4.4**
KWHZ	**Kaweka Forest**	**9.73**	**211**	S	**Sn**	**12 43 34.1**	**-4.2**
KAHZ	**Kahuranaki**	**9.84**	**209**	S	**Sn**	**12 43 39.1**	**-1.9**
RPZ	**Rata Peaks**	**15.59**	**214**	Pn	**Pn**	**12 43 06.0**	**-2.6**
	2.0nm,0.3s,baz=360,slow=2.6,SNR=6.6						
RAR	**Rarotonga**	**18.43**	**61**	LR	LR	12 52 29.1	
	comp=Z,191nm,18.6s,baz=264,slow=40						
ASAR	**Alice Springs**	**43.89**	**267**	P	**P**	**12 47 38.9**	**+3.1**
	1.3nm,0.7s,baz=109,slow=7.0,SNR=1.0						
	1.3nm,0.7s						
WRA	**Warramunga Arr**	**44.95**	**273**	P	**P**	**12 47 46.7**	**+2.3**
	1.4nm,0.6s,baz=113,slow=8.1,SNR=1.1						
	1.4nm,0.6s						
NVAR	**Mina Array Bea**	**88.32**	**42**	P	P	12 52 39.3	+18
	1.7nm,0.9s,baz=210,slow=5.2,SNR=3.4						
	1.7nm,0.9s						
CMIG	**Matias Romero**	**92.24**	**71**	LR	LR	13 25 43.1	
	comp=Z,144nm,22.0s,baz=212,slow=30						
NNA	**Nana**	**92.40**	**105**	LR	LR	13 27 12.8	
	comp=Z,80nm,20.0s,baz=245,slow=30						
PDAR	**Pinedale Array**	**96.20**	**43**	P	P	12 53 12.3	+15
	0.8nm,0.9s,baz=224,slow=3.8,SNR=3.3						
	0.8nm,0.9s						
JTS	**Las Juntas de**	**97.03**	**82**	LR	LR	13 29 12.9	
	comp=Z,111nm,20.6s,baz=164,slow=30						

ROM 14 12:53:18.4±0.1**, 42.°574N**±0.°003×**13.°208E**±0.°004**, h15^{km}, ML1.5**/14**, 1C, Error ellipse: s-maj=0.3km s-min=0.1km az=25.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.07**	**176**	P	Pg	12 53 21.6	+0.1
RM33				S	Sg	12 53 23.5	0.0
RM33				AML	AML		
	comp=N,494µm,0.6s						
RM33				AML	AML		
	comp=E,821µm,0.3s						
RM33				AML	AML		
	comp=N,494µm,0.6s						
RM33				AML	AML		
	comp=E,822µm,0.3s						
RM33				AML	AML		
	comp=N,476µm,0.6s						
RM33				AML	AML		
	comp=E,821µm,1.7s						
RM33				AML	AML		
	comp=E,822µm,1.7s						
RM33				AML	AML		
	comp=N,494µm,1.4s						
RM33				AML	AML		
	comp=N,476µm,1.4s						
SMA1	**SAN MARTINO**	**0.11**	**59**	P	Pb	12 53 22.4	0.0
SMA1				S	Sb	12 53 25.0	0.0
SMA1				AML	AML		
	comp=N,398µm,0.2s						
SMA1				AML	AML		
	comp=E,1210µm,0.3s						
SMA1				AML	AML		
	comp=N,398µm,0.2s						
T1218	**Civita (PG)**	**0.12**	**325**	P	Pg	12 53 22.2	+0.1
T1218				S	Sb	12 53 24.9	-0.4
T1218				AML	AML		
	comp=N,326µm,0.3s						
T1218				AML	AML		
	comp=N,326µm,1.7s						
T1218				AML	AML		
	comp=E,239µm,0.9s						
T1247	**Pizzolo (AQ)**	**0.15**	**153**	P	Pb	12 53 23.4	+0.4
T1247				S	Sb	12 53 26.1	+0.1
T1247				AML	AML		
	comp=E,276µm,0.1s						
T1247				AML	AML		
	comp=N,272µm,1.0s						
CAMP	**Campotosto**	**0.15**	**104**	P	Pg	12 53 22.7	+0.2
CAMP				S	Sg	12 53 25.7	+0.5
CAMP				AML	AML		
	comp=E,77µm,0.4s						
CAMP				AML	AML		
	comp=N,93µm,0.8s						
T1214	**Arquata del Tr**	**0.19**	**0**	P	Pg	12 53 23.2	+0.2
T1214				S	Sg	12 53 26.6	+0.6
T1214				AML	AML		
	comp=E,128µm,1.5s						
T1214				AML	AML		
	comp=N,168µm,0.3s						
T1222	**Castel Sant'An**	**0.21**	**216**	P	Pg	12 53 23.5	+0.2
T1222				S	Sg	12 53 27.0	+0.4
T1222				AML	AML		
	comp=N,98µm,0.6s						
T1222				AML	AML		
	comp=N,98µm,1.4s						
T1222				AML	AML		
	comp=E,172µm,0.2s						
T1212	**Cascia, Frazio**	**0.21**	**326**	P	Pg	12 53 23.6	+0.2
T1212				S	Sg	12 53 27.3	+0.6
T1212				AML	AML		
	comp=E,145µm,1.2s						
T1212				AML	AML		
	comp=N,122µm,0.3s						
T1212				AML	AML		
	comp=E,145µm,1.2s						
T1212				AML	AML		
	comp=N,122µm,0.3s						
T1212				AML	AML		
	comp=E,145µm,0.8s						
T1211	**Morro Reatino**	**0.26**	**261**	P	Pg	12 53 24.3	+0.1
T1211				S	Sg	12 53 28.7	+0.6
T1211				AML	AML		
	comp=N,428µm,0.3s						
T1211				AML	AML		
	comp=E,318µm,0.1s						
T1211				AML	AML		
	comp=N,391µm,0.3s						
T1211				AML	AML		
	comp=E,324µm,0.2s						
T1211				AML	AML		
	comp=N,428µm,0.3s						
T1211				AML	AML		
	comp=N,428µm,1.7s						
T1211				AML	AML		
	comp=N,391µm,1.7s						
GIGS	**Gran Sasso**	**0.29**	**115**	P	Pg	12 53 24.7	+0.1
GIGS				S	Sg	12 53 29.5	+0.5
TERO	**Teramo**	**0.30**	**80**	P	Pg	12 53 24.7	0.0
TERO				S	Sg	12 53 29.4	+0.4
TERO				AML	AML		
	comp=E,182µm,0.3s						
TERO				AML	AML		
	comp=N,132µm,0.4s						
ARRO	**Arrone**	**0.33**	**271**	P	Pg	12 53 25.3	+0.1
ARRO				S	Sb	12 53 30.6	-0.4
ARRO				AML	AML		
	comp=N,63µm,1.5s						
ARRO				AML	AML		
	comp=E,37µm,0.2s						
ARRO				AML	AML		
	comp=N,63µm,0.5s						
T1241	**Roccafluvione,**	**0.33**	**30**	P	Pg	12 53 25.4	+0.2
T1241				S	Sb	12 53 30.8	-0.4
T1241				AML	AML		
	comp=E,142µm,0.4s						
T1241				AML	AML		
	comp=N,80µm,0.6s						
T1241				AML	AML		
	comp=N,80µm,1.4s						
T1241				AML	AML		
	comp=E,142µm,1.6s						
MMO1	**Montemonaco**	**0.34**	**15**	P	Pg	12 53 25.6	+0.1
MMO1				S	Sb	12 53 31.1	-0.4
T1215	**Vallo di Nera,**	**0.34**	**312**	P	Pg	12 53 25.5	+0.1
T1215				S	Sb	12 53 31.0	-0.5
T1216	**Preci, Frazion**	**0.35**	**336**	⇑P	Pg	12 53 23.6	-2.0
FDMO	**Fiordimonte**	**0.47**	**349**	P	Pg	12 53 28.0	+0.2
T1219	**Muccia, Frazio**	**0.50**	**343**	S	Sb	12 53 36.5	+0.2
MOMA	**Monte Martano**	**0.52**	**296**	P	Pb	12 53 29.2	-0.2
MOMA				S	Sb	12 53 37.2	+0.3
MOMA				AML	AML		
	comp=E,42µm,1.1s						
MOMA				AML	AML		
	comp=N,76µm,0.2s						
MOMA				AML	AML		
	comp=E,42µm,0.9s						
MOMA				AML	AML		
	comp=N,76µm,1.8s						

DDA 14 12:54:22.5±0.0**, 36.°05N**×**29.°29E, h1^{km}**±4^{km}**, ML2.1, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKAS	**Kas**	**0.32**	**54**	P	Pb	12 54 29.9	-1.1
AKAS				*i* AML	AML	12 54 35.0	
	comp=N,461nm,0.3s						
AKAS				*i* AML	AML	12 54 35.0	
	comp=E,556nm,0.5s						
AKAS				S	Sb	12 54 35.2	-1.6
IZZE	**Mula-Seydike**	**0.39**	**353**	P	Pb	12 54 31.3	-0.9
IZZE				S	Sg	12 54 36.6	+1.5
IZZE				*i* AML	AML	12 54 37.0	
	comp=E,238nm,0.5s						
IZZE				*i* AML	AML	12 54 37.0	
	comp=N,159nm,0.2s						
AKUM	**Antalya-Kumluc**	**0.90**	**72**	P	Pg	12 54 38.9	-0.8
AKUM				*i* AML	AML	12 54 50.0	
	comp=N,70nm,2.2s						
AKUM				S	Sg	12 54 51.2	-0.1
TURN	**Turunc**	**1.11**	**311**	P	Pg	12 54 43.7	-0.1
TURN				S	Sg	12 54 58.2	0.0
GOLH	**Golhisar**	**1.21**	**10**	P	Pg	12 54 44.6	-1.0
GOLH				S	Sg	12 54 59.8	-1.6
KORT	**Korkueli**	**1.28**	**42**	P	Pg	12 54 45.5	-1.5
TAVA	**DENIZLI_Tavas**	**1.45**	**348**	P	Pn	12 54 48.8	-1.1
TAVA				S	Sg	12 55 05.2	-3.8
DNIZ	**Denizli-Tavas-**	**1.59**	**353**	P	Pn	12 54 51.2	-0.6

ROM 14 12:57:32.3±0.0**, 42.°770N**±0.°002×**13.°067E**±0.°004**, h11^{km}, ML1.4**/1**, 6C, Error ellipse: s-maj=0.3km s-min=0.2km az=123.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.02**	**222**	P	Pg	12 57 34.6	+0.2
T1212				S	Sg	12 57 35.7	0.0
T1214	**Arquata del Tr**	**0.10**	**96**	⇑P	Pg	12 57 35.7	+0.5
T1214				S	Sg	12 57 37.7	+0.4
T1218	**Civita (PG)**	**0.11**	**160**	⇑P	Pg	12 57 35.6	+0.5
T1218				S	Sg	12 57 37.8	+0.6
T1218				AML	AML		
	comp=E,242µm,0.4s						
T1218				AML	AML		
	comp=N,332µm,1.0s						
T1218				AML	AML		
	comp=E,242µm,1.6s						
T1217	**Poggiodomo (PG**	**0.12**	**240**	P	Pg	12 57 35.8	+0.5
T1217				S	Sg	12 57 38.0	+0.6
T1216	**Preci, Frazion**	**0.13**	**344**	P	Pg	12 57 36.0	+0.6
T1216				S	Sg	12 57 38.5	+0.9
T1215	**Vallo di Nera,**	**0.15**	**282**	⇑P	Pg	12 57 36.4	+0.6
T1215				S	Sg	12 57 39.0	+0.9
MC2	**Monte Cornacci**	**0.17**	**32**	P	Pg	12 57 36.8	+0.6
MC2				S	Sg	12 57 39.9	+0.9
MMO1	**Montemonaco**	**0.23**	**56**	⇑P	Pg	12 57 37.7	+0.5
MMO1				S	Sg	12 57 41.6	+1.1
FDMO	**Fiordimonte**	**0.27**	**3**	P	Pg	12 57 38.3	+0.5
FDMO				S	Sg	12 57 42.6	+1.2
T1211	**Morro Reatino**	**0.28**	**213**	⇑P	Pg	12 57 38.7	+0.6
T1211				S	Sb	12 57 43.4	-0.9
T1219	**Muccia, Frazio**	**0.29**	**351**	⇑P	Pg	12 57 38.7	+0.5
T1219				S	Sb	12 57 43.4	-1.1

NNC ***14*** *12:57:37.6±1.4, 50.°14N×77.°81E, h0^{km}, mb3.0, mpv2.7, Error ellipse: s-maj=15.8km s-min=5.5km az=114.0, Suspected Mining explosion.*

IDC ***14*** *12:57:39.9±0.8, 50.°07N×78.°84E, h0^{km}, mbtmp2.9/3, ML2.4/3, Error ellipse: s-maj=11.0km s-min=6.0km az=58.0*

ISC 14 12:57:39.9±0.9**, 50.°02N**±0.°05×**78.°68E**±0.°09**, h0^{km}, n17, σ0.s94**/30**, 14C-10D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.58**	**350**	⇑P	**Pg**	**12 57 50.4**	**-0.6**
KUR07				⇓S	**Sg**	**12 57 59.3**	**+0.8**
KUR06	**Kurchatov Arra**	**0.60**	**350**	⇑P	**Pg**	**12 57 50.7**	**-0.6**
KUR06				⇑S	**Sg**	**12 58 00.4**	**+1.3**
KUR14	**Kurchatov Arra**	**0.60**	**355**	⇓P	**Pg**	**12 57 50.8**	**-0.7**
KUR14				⇓S	**Sg**	**12 57 59.6**	**+0.3**
KUR15	**Kurchatov Arra**	**0.61**	**353**	⇑P	**Pg**	**12 57 50.9**	**-0.6**
KUR15				⇓S	**Sg**	**12 58 00.2**	**+0.8**
KURBB	**Kurchatov Arra**	**0.61**	**351**	Pg	**Pg**	**12 57 51.0**	**-0.7**
	1.7nm,0.3s,baz=164,slow=17,SNR=16						
KURBB				Lg	Lg	12 57 59.9	
	1.7nm,0.3s,baz=159,slow=37,SNR=8.6						
KURBB	**Kurchatov Arra**	**0.61**	**351**	⇑P	**Pg**	**12 57 51.1**	**-0.6**
	12nm,0.3s						
KURBB				⇑S	**Sg**	**12 58 00.4**	**+0.8**
	36nm,0.5s						
KUR16	**Kurchatov Arra**	**0.62**	**349**	⇓P	**Pg**	**12 57 51.3**	**-0.6**
KUR16				⇑S	**Sg**	**12 58 00.1**	**+0.2**
KUR17	**Kurchatov Arra**	**0.63**	**348**	⇓P	**Pg**	**12 57 51.4**	**-0.6**
KUR17				⇓S	**Sg**	**12 58 00.7**	**+0.6**
KUR05	**Kurchatov Arra**	**0.63**	**352**	⇑P	**Pg**	**12 57 51.3**	**-0.8**
KUR05				⇑S	**Sg**	**12 58 00.3**	**0.0**
KUR04	**Kurchatov Arra**	**0.65**	**352**	⇑P	**Pg**	**12 57 51.7**	**-0.7**
KUR04				⇓S	**Sg**	**12 58 01.1**	**+0.2**
KURK	**Kurchatov**	**0.70**	**357**	⇑P	**Pg**	**12 57 52.3**	**-1.0**
	4.6nm,0.3s						
KURK				⇑S	**Sg**	**12 58 02.7**	**+0.3**
	19nm,0.6s						
MAKZ	**Makanchi**	**3.89**	**144**	⇓Pn	**Pn**	**12 58 41.5**	**+0.6**
	0.9nm,0.8s						
MAKZ				⇓Sn	**Sb**	**12 59 37.7**	**+0.7**
	3.3nm,0.8s						
MK31	**Makanchi Array**	**4.02**	**142**	⇑Pn	**Pn**	**12 58 43.1**	**+0.3**
	0.1nm,0.1s,baz=315,slow=10,SNR=23						
MK31				⇑Sn	**Sb**	**12 59 43.6**	**+2.8**
	6.3nm,0.8s,baz=323,slow=24,SNR=9.4						
MKAR	**Makanchi Array**	**4.02**	**142**	Pn	**Pn**	**12 58 42.8**	**0.0**
	0.4nm,0.3s,baz=329,slow=11,SNR=32						
MKAR				Pg	**Pb**	**12 58 49.5**	**-2.2**
	0.9nm,0.3s,baz=331,slow=15,SNR=21						
MKAR				Sn	**Sn**	**12 59 30.8**	**+0.2**
	0.2nm,0.3s,baz=331,slow=14,SNR=2.0						
MKAR				Lg	Lg	12 59 44.7	
	1.0nm,0.3s,baz=332,slow=26,SNR=7.4						
	0.3nm,0.3s						
I46RU	**ZALESOVO INFRA**	**5.47**	**42**	I	I	13 30 40.0	
	baz=225,slow=314,SNR=1.2						
ZALV	**Zalesovo Beam**	**5.47**	**42**	Pn	**Pn**	**12 59 03.1**	**+0.6**
	0.9nm,0.3s,baz=229,slow=14,SNR=7.1						
	1.5nm,0.3s						
BVAR	**Borovoye Array**	**5.99**	**303**	Pn	**Pn**	**12 59 10.3**	**+0.6**
	baz=117,slow=14,SNR=1.3						
	0.3nm,0.2s						

IDC ***14*** *12:59:29.2±0.9, 39.°16N×73.°48E, h0^{km}, mb3.8/10, mbtmp3.8/17, ML3.0/6, Error ellipse: s-maj=16.5km s-min=14.1km az=116.0*

KRNET ***14*** *12:59:30.9±0.1, 39.°28N×73.°41E, mb4.1*

SOME ***14*** *12:59:31.3, 39.°40N×73.°40E, h5^{km}*

MOS ***14*** *12:59:35.9±0.8, 39.°32N×73.°40E, h55^{km}, mb4.0/5, Error ellipse: s-maj=8.0km s-min=4.4km az=82.8*

NEIC ***14*** *12:59:37.1±1.9, 39.°30N±0.°07×73.°36E±0.°09, h48^{km}±2^{km}, mb4.6/22, Error ellipse: s-maj=10.3km s-min=8.9km az=130.0*

NNC ***14*** *12:59:37.4±1.5, 39.°59N×73.°35E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=12.3km s-min=6.3km az=178.0*

ISC 14 12:59:31.5±1.3**, 39.°15N**±0.°03×**73.°29E**±0.°02**, h10^{km}**±8^{km}**, n183, σ1.s72**/224**, mb4.4**/25**, 25C-26D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	**Osh**	**1.42**	**344**	⇓*i*P	**Pn**	**12 59 56.0**	**-1.4**
	baz=39						
OHH				⇓*i*S	**Sn**	**13 00 14.7**	**-1.5**
	baz=39						
OHH	**Osh**	**1.42**	**344**	*i* P	**Pn**	**12 59 56.0**	**-1.4**
OHH				*i* S	**Sn**	**13 00 14.7**	**-1.5**
KSH	**Kashi**	**2.11**	**79**	Pn	Pn	13 00 01.3	-5.6
KSH				Sn	**Sn**	**13 00 26.0**	**-7.3**
KSH				pmax	pmax		
	comp=Z,500nm,0.6s						
KSH				smax	smax		
	comp=N,490nm,0.5s						
KSH				smax	smax		
	comp=E,380nm,0.8s						
BTK	**Batken**	**2.11**	**296**	⇑*i*P	**Pb**	**13 00 10.2**	**+0.3**
	baz=92						
BTK				⇑*i*S	**Sg**	**13 00 38.6**	**-0.8**
	baz=92						
BTK	**Batken**	**2.11**	**296**	*i* PN	**Pb**	**13 00 10.2**	**+0.3**
BTK				*i* S	**Sg**	**13 00 38.6**	**-0.8**
GAR	**Garm**	**2.32**	**267**		**Pg**	**13 00 15.0**	**-1.0**
GAR	**Garm**	**2.32**	**267**	⇑*i*P	**Pb**	**13 00 14.0**	**+0.6**
	baz=64						
GAR				⇑*i*S	**Sg**	**13 00 45.3**	**-0.7**
	baz=64						
GAR	**Garm**	**2.32**	**267**	*i* PN	**Pb**	**13 00 14.0**	**+0.6**
GAR				*i* S	**Sg**	**13 00 45.3**	**-0.7**
ARLS	**Aral**	**2.82**	**16**	⇓*i*P	**Pn**	**13 00 17.4**	**+0.7**
	baz=15						
ARLS				⇓*i*S	**Sn**	**13 00 50.8**	**+0.1**
	baz=15						
ARLS	**Aral**	**2.82**	**16**	*i* PN	**Pn**	**13 00 17.4**	**+0.7**
ARLS				*i* S	**Sn**	**13 00 50.8**	**+0.1**
ARK	**Arkit**	**2.83**	**339**	⇓*i*P	**Pn**	**13 00 18.5**	**+1.7**
	baz=37						
ARK				⇓*i*S	**Sn**	**13 00 53.1**	**+2.1**
	baz=37						
ARK	**Arkit**	**2.83**	**339**	*i* PN	**Pn**	**13 00 18.5**	**+1.7**
ARK				*i* S	**Sn**	**13 00 53.1**	**+2.1**
TRKS	**Terek-Say**	**2.89**	**326**	⇑*i*P	**Pn**	**13 00 18.8**	**+1.2**
	baz=23						
TRKS				⇑*i*S	**Sn**	**13 00 53.5**	**+1.0**
	baz=23						
TRKS	**Terek-Say**	**2.89**	**326**	*i* PN	**Pn**	**13 00 18.8**	**+1.2**
TRKS				*i* S	**Sn**	**13 00 53.5**	**+1.0**
AML	**Almayashu**	**2.99**	**6**	P	**Pn**	**13 00 21.2**	**+2.0**
	SNR=124						
AML	**Almayashu**	**2.99**	**6**	⇑Pn	**Pn**	**13 00 21.3**	**+2.0**
	comp=E,5.0nm,0.6s						
AML				Sn	**Sb**	**13 01 02.9**	**+1.2**
	comp=E,19nm,0.6s						
AML	**Almayashu**	**2.99**	**6**	⇓*i*P	**Pn**	**13 00 20.3**	**+1.0**
	baz=4.0						
AML				⇓*i*S	**Sn**	**13 00 55.8**	**+0.5**
	baz=4.0						
AML	**Almayashu**	**2.99**	**6**	*i* PN	**Pn**	**13 00 20.3**	**+1.0**
AML				*i* S	**Sn**	**13 00 55.8**	**+0.5**
NRN	**Naryn**	**3.08**	**41**	⇑*i*P	**Pn**	**13 00 20.6**	**+0.2**
	baz=42						
NRN				⇑*i*S	**Sn**	**13 00 56.7**	**-0.7**
	baz=42						
NRN	**Naryn**	**3.08**	**41**	*i* PN	**Pn**	**13 00 20.6**	**+0.2**
NRN				*i* S	**Sn**	**13 00 56.8**	**-0.7**
UCH	**Uchtor**	**3.21**	**16**	P	**Pn**	**13 00 24.4**	**+2.1**
	SNR=55						
UCH	**Uchtor**	**3.21**	**16**	⇑*i*P	**Pn**	**13 00 22.8**	**+0.5**
	baz=16						
UCH				⇑*i*S	**Sn**	**13 01 00.7**	**-0.1**
	baz=16						
UCH	**Uchtor**	**3.21**	**16**	*e*PN	**Pn**	**13 00 22.8**	**+0.5**
CHGR	**Chuyangaron**	**3.26**	**263**		**Pb**	**13 00 27.3**	**-2.2**
CHGR	**Chuyangaron**	**3.26**	**263**	⇑*i*P	**Pb**	**13 00 26.9**	**-2.6**
	baz=61						
CHGR				⇑*i*S	**Sb**	**13 01 08.0**	**-1.3**
	baz=61						
CHGR	**Chuyangaron**	**3.26**	**263**	PN	**Pb**	**13 00 27.3**	**-2.2**
MNAS	**Manas**	**3.38**	**350**	⇓*i*P	**Pn**	**13 00 26.0**	**+1.6**
	baz=48						
MNAS				⇓*i*S	**Sn**	**13 01 05.6**	**+0.9**
	baz=48						
EKS2	**Erkin-Say**	**3.52**	**6**	P	**Pn**	**13 00 28.8**	**+2.4**
	SNR=41						
EKS2	**Erkin-Say**	**3.52**	**6**	⇓*e*P	**Pn**	**13 00 27.0**	**+0.7**
	baz=5.0						
EKS2				⇓*i*S	**Sn**	**13 01 08.2**	**+0.1**
	baz=5.0						
EKS2	**Erkin-Say**	**3.52**	**6**	*e*PN	**Pn**	**13 00 27.0**	**+0.7**
MRKS	**Merke**	**3.59**	**359**	Pg	**Pb**	**13 00 32.1**	**-2.9**
	comp=E,14nm,0.3s						
MRKS	**Merke**	**3.59**	**359**	*e*Pg	**Pb**	**13 00 31.6**	**-3.4**
	comp=E,13nm,0.1s						
MRKS				*e*Lg	Lg	13 01 14.9	
	comp=E,45nm,0.4s						
AAK	**Ala-Archa**	**3.60**	**14**	P	**Pn**	**13 00 29.7**	**+2.3**
	SNR=25						
AAK	**Ala-Archa**	**3.60**	**14**	Pn	**Pn**	**13 00 29.6**	**+2.2**
	comp=E,6.4nm,0.3s,baz=167,slow=6.2,SNR=65						
AAK				Sn	**Sn**	**13 01 13.2**	**+3.2**
	comp=E,6.2nm,0.3s,baz=111,slow=17,SNR=14						
AAK				Lg	Lg	13 01 20.0	
	comp=E,12nm,0.3s,baz=73,slow=18,SNR=4.3						
	comp=E,28nm,0.5s						
AAK	**Ala-Archa**	**3.60**	**14**	⇓*e*P	**Pn**	**13 00 28.1**	**+0.7**
	baz=13						
AAK				⇓*i*S	**Sn**	**13 01 09.7**	**-0.3**
	baz=13						
AAK	**Ala-Archa**	**3.60**	**14**	*i* PN	**Pn**	**13 00 29.3**	**+1.9**
KBK	**Karagaybulak**	**3.72**	**19**	P	**Pn**	**13 00 31.9**	**+2.8**
	SNR=7.8						
KBK	**Karagaybulak**	**3.72**	**19**	⇑*i*P	**Pn**	**13 00 29.8**	**+0.7**
	baz=19						
KBK				⇑*i*S	**Sn**	**13 01 12.9**	**-0.1**
	baz=19						
KBK	**Karagaybulak**	**3.72**	**19**	*i* PN	**Pn**	**13 00 29.8**	**+0.7**
KBK				*i* S	**Sn**	**13 01 12.9**	**-0.1**
TAS	**Tashkent**	**3.75**	**307**	⇓*i*P	**Pn**	**13 00 32.0**	**+2.7**
	baz=4.0						
TAS				⇓*i*S	**Sn**	**13 01 17.1**	**+3.6**
	baz=4.0						
TAS	**Tashkent**	**3.75**	**307**	*i* PN	**Pn**	**13 00 32.0**	**+2.7**
TAS				*i* S	**Sn**	**13 01 17.1**	**+3.6**
FRU1	**Bishkek**	**3.79**	**15**	⇑*i*P	**Pn**	**13 00 30.9**	**+0.9**
	baz=14						
FRU1				⇑*i*S	**Sn**	**13 01 14.8**	**+0.2**
	baz=14						
FRU1	**Bishkek**	**3.79**	**15**	*i* PN	**Pn**	**13 00 30.9**	**+0.9**
FRU1				*i* S	**Sn**	**13 01 14.8**	**+0.2**
ULHL	**Ulahol**	**3.82**	**35**	⇓*i*P	**Pn**	**13 00 31.1**	**+0.6**
	baz=35						
ULHL				⇓*i*S	**Sn**	**13 01 15.2**	**-0.3**
	baz=35						
ULHL	**Ulahol**	**3.82**	**35**	*i* PN	**Pn**	**13 00 31.1**	**+0.6**
ULHL				*i* S	**Sn**	**13 01 15.2**	**-0.3**
IUG	**Iuzhnay**	**3.88**	**321**	Pg	**Pb**	**13 00 40.7**	**+0.6**
	comp=E,128nm,1.4s						
IUG				Lg	Lg	13 01 28.5	
	comp=E,48nm,0.8s						
IUG	**Iuzhnay**	**3.88**	**321**	*e*Pg	**Pb**	**13 00 40.9**	**+0.8**
	comp=E,45nm,0.6s						
IUG				*e*Lg	Lg	13 01 31.7	
	comp=E,48nm,0.8s						
CHMS	**Chumysh**	**4.00**	**16**	P	**Pn**	**13 00 35.3**	**+2.6**
	SNR=20						
CHMS	**Chumysh**	**4.00**	**16**	⇑*i*P	**Pn**	**13 00 33.6**	**+0.8**
	baz=15						
CHMS				⇑*i*S	**Sn**	**13 01 19.5**	**-0.1**
	baz=15						
CHMS	**Chumysh**	**4.00**	**16**	*e*PN	**Pn**	**13 00 33.6**	**+0.8**
TKM2	**Tokmak 2**	**4.15**	**24**	P	**Pn**	**13 00 37.4**	**+2.4**
	SNR=16						
TKM2	**Tokmak 2**	**4.15**	**24**	⇓Pn	**Pn**	**13 00 37.4**	**+2.4**
	comp=E,7.2nm,0.7s						
TKM2				⇑Sn	**Sb**	**13 01 36.0**	**+1.2**
	comp=E,32nm,0.6s						
TKM2	**Tokmak 2**	**4.15**	**24**	⇓*i*P	**Pn**	**13 00 35.5**	**+0.5**
	baz=24						
TKM2				⇓*i*S	**Sn**	**13 01 22.9**	**-0.7**
	baz=24						
TKM2	**Tokmak 2**	**4.15**	**24**	*e*PN	**Pn**	**13 00 35.5**	**+0.5**
KDJ	**Kajisay**	**4.19**	**44**	⇓*i*P	**Pn**	**13 00 36.2**	**+0.6**

	baz=44						
KDJ				⇓iS	Sn	13 01 23.9	-0.8
	baz=44						
KDJ	Kajisay	4.19	44	i PN	Pn	13 00 36.2	+0.6
KDJ				i S	Sn	13 01 23.9	-0.8
USP	Ospenovka	4.21	12	P	Pn	13 00 38.7	+3.0
	SNR=17						
USP	Ospenovka	4.21	12	⇑iP	Pn	13 00 36.7	+1.0
	baz=11						
USP				⇑iS	Sn	13 01 24.6	-0.3
	baz=11						
USP	Ospenovka	4.21	12	ePN	Pn	13 00 36.7	+1.0
TARG	Taragay, Kyrgy	4.30	52		Pn	13 00 38.3	+1.1
TARG	Taragay, Kyrgy	4.30	52	PN	Pn	13 00 38.3	+1.1
KST	Kastek	4.38	27	Pg	Pb	13 00 49.8	+1.3
	comp=E,11nm,0.6s						
KST				Lg	Lg	13 01 44.0	
	comp=E,55nm,0.8s						
KST	Kastek	4.38	27	ePg	Pb	13 00 48.3	-0.2
	comp=E,11nm,0.6s						
KST				eLg	Lg	13 01 44.0	
	comp=E,55nm,0.8s						
SGDS	Sogindy	4.41	13	Pg	Pb	13 00 50.6	+1.6
	comp=E,11nm,0.8s						
SGDS				Lg	Lg	13 01 45.1	
	comp=E,33nm,1.1s						
KK31	Karatay Array	4.47	333		Pn	13 00 41.0	+1.8
KK31	Karatay Array	4.47	333	Pn	Pn	13 00 41.1	+1.8
	comp=E,7.5nm,0.5s,baz=139,slow=12,SNR=98						
KK31				⇑Sn	Sn	13 01 32.9	+1.6
	comp=E,14nm,0.5s,baz=147,slow=29,SNR=3.8						
KK31	Karatay Array	4.47	333	PN	Pn	13 00 41.0	+1.8
KKAR	Karatay Array	4.47	333		Pn	13 00 41.0	+1.8
KKAR	Karatay Array	4.47	333		Pn	13 00 41.9	+2.7
KKAR	Karatay Array	4.47	333	⇑iP	Pn	13 00 41.2	+2.0
	baz=31						
KKAR				⇑iS	Sn	13 01 32.8	+1.5
	baz=31						
KKAR	Karatay Array	4.47	333	PN	Pn	13 00 41.9	+2.7
DGS	Degeres	4.49	24	Pg	Pb	13 00 52.2	+1.7
	comp=E,20nm,0.8s						
DGS				Lg	Lg	13 01 48.3	
	comp=E,53nm,0.7s						
DGS	Degeres	4.49	24	ePg	Pb	13 00 51.0	+0.5
	comp=E,12nm,0.1s						
DGS				eLg	Lg	13 01 48.3	
	comp=E,53nm,0.7s						
IZV	Izvestkoviy	4.62	32	Pg	Pb	13 00 54.4	+1.7
	comp=E,11nm,1.0s						
IZV				Lg	Lg	13 01 52.2	
	comp=E,69nm,0.8s						
IZV	Izvestkoviy	4.62	32	ePg	Pb	13 00 53.0	+0.3
	comp=E,11nm,0.3s						
IZV				eLg	Lg	13 01 51.3	
	comp=E,68nm,0.3s						
MTBS	Maitube	4.62	30	Pg	Pb	13 00 54.7	+2.0
	comp=E,10nm,0.6s						
MTBS				Lg	Lg	13 01 52.5	
	comp=E,32nm,0.4s						
MTBS	Maitube	4.62	30	ePg	Pb	13 00 53.6	+0.9
	comp=E,9.9nm,0.1s						
MTBS				eLg	Lg	13 01 52.5	
	comp=E,32nm,0.4s						
TNSS	Tian-Shan	4.76	34	Pg	Pb	13 00 57.0	+1.8
	comp=E,17nm,0.5s						
TNSS				Lg	Lg	13 01 56.6	
	comp=E,21nm,1.0s						
TNSS	Tian-Shan	4.76	34	ePg	Pb	13 00 55.4	+0.2
	comp=E,17nm,0.5s						
TNSS				eLg	Lg	13 01 55.7	
	comp=E,21nm,0.1s						
KRBS	Karabastau	4.88	21	Pg	Pb	13 00 58.6	+1.6
	comp=E,9.0nm,0.5s						
KRBS				Lg	Lg	13 01 59.8	
	comp=E,51nm,0.8s						
KRBS	Karabastau	4.88	21	ePg	Pb	13 00 57.7	+0.7
	comp=E,9.0nm,1.9s						
KRBS				eLg	Lg	13 01 59.8	
	comp=E,53nm,0.3s						
MDOK	Medeo	4.91	34	Pn	Pn	13 00 49.6	+4.2
	comp=E,3.5nm,0.7s						
MDOK				Pg	Pb	13 00 58.7	+1.2
	comp=E,9.1nm,0.8s						
MDOK				⇓Sn	Sb	13 01 58.2	+1.6
	comp=E,100nm,1.4s						
MDOK				Lg	Lg	13 01 59.7	
	comp=E,28nm,3.9s						
MDOK	Medeo	4.91	34	ePg	Pb	13 00 57.9	+0.3
	comp=E,10.0nm,0.2s						
MDOK				eLg	Lg	13 01 59.7	
	comp=E,28nm,0.3s						
MDOK	Medeo	4.91	34	PN	Pn	13 00 49.6	+4.2
ANVS	Anan'yevo	4.91	41	⇓iP	Pn	13 00 46.2	+0.7
	baz=41						
ANVS				⇓iS	Sn	13 01 41.5	-0.9
	baz=41						
KOTS	Kotyrbulak	4.99	34	Pg	Pb	13 01 00.8	+1.8
	comp=E,17nm,0.8s						
KOTS				Lg	Lg	13 02 03.1	
	comp=E,116nm,0.8s						
KOTS	Kotyrbulak	4.99	34	ePg	Pb	13 00 59.9	+0.9
	comp=E,11nm,0.1s						
KOTS				eLg	Lg	13 02 03.1	
	comp=E,116nm,0.8s						
KTBS	Karatobe	5.22	28	Pg	Pb	13 01 05.1	+2.3
	comp=E,7.7nm,0.8s						
KTBS				Lg	Lg	13 02 10.3	
	comp=E,59nm,1.0s						
KTBS	Karatobe	5.22	28	ePg	Pb	13 01 03.9	+1.1
	comp=E,7.7nm,0.8s						
KTBS				eLg	Lg	13 02 10.3	
	comp=E,59nm,1.0s						
KUU	Kurty	5.26	25	Pg	Pb	13 01 05.8	+2.4
	comp=E,7.8nm,0.6s						
KUU				Lg	Lg	13 02 11.3	
	comp=E,68nm,0.7s						
KUU	Kurty	5.26	25	ePg	Pb	13 01 05.0	+1.5
	comp=E,7.8nm,0.6s						
KUU				eLg	Lg	13 02 11.3	
	comp=E,68nm,0.7s						
CHKK	Chushkaly	5.45	29	ePg	Pb	13 01 07.7	+1.0
	comp=E,6.3nm,0.1s						
CHKK				eLg	Lg	13 02 16.2	
	comp=E,39nm,0.2s						
SATY	Saty	5.49	43	Pg	Pb	13 01 09.7	+2.2
	comp=E,10nm,1.1s						
SATY				Lg	Lg	13 02 18.4	
	comp=E,26nm,1.4s						
SATY	Saty	5.49	43	ePg	Pb	13 01 08.7	+1.2
	comp=E,10nm,1.1s						
SATY				eLg	Lg	13 02 18.4	
	comp=E,26nm,1.4s						
NIL	Nilore	5.49	180		Pb	13 01 00.3	-7.2
NIL	Nilore	5.49	180	PN	Pb	13 01 00.3	-7.2
UZB	Uzynbulak	5.88	45	Pg	Pb	13 01 16.7	+2.5
	comp=E,5.8nm,0.7s						
UZB				Lg	Lg	13 02 30.1	
	comp=E,19nm,1.0s						
UZB	Uzynbulak	5.88	45	ePg	Pb	13 01 14.9	+0.7
	comp=E,5.8nm,0.1s						
UZB				eLg	Lg	13 02 29.6	
	comp=E,19nm,0.3s						
KPKS	Kokpek	5.92	42	Pg	Pb	13 01 18.7	+4.0
	comp=E,1.4nm,0.5s						
KPKS				Lg	Lg	13 02 33.4	
	comp=E,27nm,0.7s						
KPKS	Kokpek	5.92	42	ePg	Pb	13 01 17.6	+2.9
	comp=E,3.5nm,0.0s						
KPKS				eLg	Lg	13 02 33.4	
	comp=E,27nm,0.2s						
ARXS	Arharly	6.09	32	Pg	Pb	13 01 20.3	+2.7
	comp=E,10nm,0.7s						
ARXS				Lg	Lg	13 02 36.5	
	comp=E,22nm,0.8s						
ARXS	Arharly	6.09	32	ePg	Pb	13 01 19.4	+1.7
	comp=E,10nm,0.7s						
ARXS				eLg	Lg	13 02 36.5	
	comp=E,22nm,0.8s						
SHLS	Shalkode	6.14	47	Pg	Pg	13 01 28.8	-0.1
	comp=E,14nm,0.7s						
SHLS	Shalkode	6.14	47	ePg	Pg	13 01 27.2	-1.8
	comp=E,14nm,0.7s						
SHLS				eLg	Lg	13 02 50.6	
	comp=E,24nm,1.0s						
PDGK	Podgornoye	6.26	46	Pg	Pb	13 01 25.4	+4.8
	comp=E,2.8nm,0.8s						
PDGK				Lg	Lg	13 02 45.3	
	comp=E,6.7nm,1.3s						
BLB	Baldybastay	6.28	37	Pg	Pb	13 01 23.2	+2.3
	comp=E,14nm,1.2s						
BLB				Lg	Lg	13 02 42.2	
	comp=E,20nm,0.7s						
TDK	Taldyqorghan	6.97	31	Pg	Pb	13 01 37.3	+4.7
	comp=E,33nm,0.4s						
TDK				Lg	Lg	13 03 05.2	
	comp=E,30nm,1.4s						
TDK	Taldyqorghan	6.97	31	ePg	Pb	13 01 36.2	+3.6
	comp=E,33nm,0.4s						
TDK				eLg	Lg	13 03 05.2	
	comp=E,29nm,0.4s						
THN	Thein Dam	6.99	163	eP	Pn	13 01 20.2	+6.4
THN				eS	Sn	13 02 39.0	+5.7
THN				IAML		13 02 45.5	
	comp=E,74nm,0.6s						
THN				IAML		13 02 46.3	
	comp=N,52nm,0.4s						
BHK	Bhakra	8.13	161	eP	Pn	13 01 33.8	+4.3
BHK				eS	Sn	13 03 03.7	+2.2
BHK				eS	Sb	13 03 04.8	-24
SMLA	Simla	8.61	157	eP	Pn	13 01 40.1	+4.0
SMLA				eS	Sn	13 03 11.9	-1.4
SMLA				IAML		13 03 20.7	
	comp=E,30nm,0.4s						
MAKZ	Makanchi	9.95	37	Pn	Pn	13 01 55.3	+1.0
MAKZ	Makanchi	9.95	37	P	Pn	13 01 55.3	+1.0
MK31	Makanchi Array	10.08	38	Pn	Pn	13 01 57.6	+1.4
MK31	Makanchi Array	10.08	38	P	Pn	13 01 57.6	+1.4
MKAR	Makanchi Array	10.08	38	Pn	Pn	13 01 57.1	+0.9
	comp=E,0.5nm,0.8s,baz=220,slow=13,SNR=2.8						
MKAR				Sn	Sn	13 03 39.6	-10
	comp=E,0.1nm,0.3s,baz=314,slow=28,SNR=1.2						
MKAR				Lg	Lg	13 04 46.0	
	comp=E,0.1nm,0.3s,baz=236,slow=26,SNR=5.2						
MKAR	Makanchi Array	10.08	38	Pn	Pn	13 01 57.4	+1.2
KUDL	Kundal	11.30	165	eP	Pn	13 02 15.6	+2.7
KUDL				eS	Sn	13 04 14.6	-4.6
KUDL				eS		13 04 15.2	
GEYT	Alibeck	11.95	269	Pn	Pn	13 02 21.1	-0.7
	comp=E,0.3nm,0.3s,baz=109,slow=7.9,SNR=1.5						
GEYT				Sn	Sn	13 04 37.9	+2.7
	comp=E,0.3nm,0.3s,baz=51,slow=25,SNR=1.4						
	comp=E,0.8nm,0.3s						
KURBB	Kurchatov Arra	12.05	16	Lg	Lg	13 05 46.6	
	comp=E,0.3nm,0.3s,baz=203,slow=27,SNR=8.6						
AB31	Akbulak array	13.89	321	P	Pn	13 02 46.9	-1.4
	comp=E,1.8nm,0.5s,baz=130,slow=12,SNR=36						
AB31	Akbulak array	13.89	321	P	Pn	13 02 46.9	-1.4
ABKAR	Akbulak array	13.89	321		Pn	13 02 47.4	-0.9
BVAR	Borovoye Array	14.02	353	Pn	Pn	13 02 46.8	-3.2
	baz=146,slow=14,SNR=3.3						
	comp=E,0.4nm,0.4s						
BRVK	Borovoye	14.06	353	Pn	Pn	13 02 51.9	+1.4
BRVK	Borovoye	14.06	353	P	Pn	13 02 51.9	+1.4
AKTO	Aktyubinsk	15.61	321	Pn	Pn	13 03 09.9	-1.4
	comp=E,0.1nm,0.3s,baz=134,slow=12,SNR=4.8						
	comp=E,2.1nm,0.8s						
AKTO	Aktyubinsk	15.61	321	P	Pn	13 03 10.0	-1.4
ZAA0	Zalesovo Array	16.75	24		P	13 03 27.2	-1.0
ZALV	Zalesovo Beam	16.75	24	Pn	Pn	13 03 25.3	-0.7
	comp=E,0.2nm,0.3s,baz=218,slow=9.6,SNR=6.3						
	comp=E,1.4nm,0.5s						
ZALV	Zalesovo Beam	16.75	24	P	Pn	13 03 26.9	+0.9
ZALV	Zalesovo Beam	16.75	24	eP	Pn	13 03 26.5	+0.5
ARU	Arti	19.84	335	P	P	13 04 01.5	-0.7
	baz=142,slow=17,SNR=2.0						
	comp=E,1.5nm,0.3s						
ARU	Arti	19.84	335	i P	Pn	13 04 03.8	0.0
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GNI	Garni	21.97	282	i P	P	13 04 27.8	+2.3
GNI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BELG	Belogornoye	22.12	315	P	P	13 04 27.9	+1.1
	comp=Z,20nm,1.0s,baz=207,slow=2.5,SNR=3.5						
	comp=Z,20nm,1.0s						
BELG	Belogornoye	22.12	315	i P	P	13 04 28.6	+1.8
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KIV	Kislovodsk	23.32	292	eP	P	13 04 41.7	+2.0
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SONM	Songino Array	25.38	59	P	P	13 04 57.6	-1.1
	comp=Z,1.0nm,0.7s,baz=257,slow=10,SNR=6.6						
	comp=Z,1.0nm,0.7s						
SONM	Songino Array	25.38	59	P	P	13 04 58.8	0.0
SONM	Songino Array	25.38	59	eP	P	13 04 58.9	+0.1
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ULN	Ulaanbaatar	25.82	59	i P	P	13 05 01.1	-1.8
ULN				pmax	pmax		
	comp=Z,7.0nm,2.1s						
BRTR	Keskin Array B	30.46	284	P	P	13 05 45.5	+1.1
	comp=Z,0.6nm,0.7s,baz=104,slow=12,SNR=1.5						
	comp=Z,0.6nm,0.7s						
FIA1	FINESS Array S	36.36	324	P	P	13 06 34.7	-0.6
FIA1				IAmb	IAmb	13 06 57.6	
	comp=Z,15nm,1.3s						
FINES	FINESS Array B	36.36	324	P	P	13 06 35.8	+0.5
	comp=Z,2.7nm,0.9s,baz=118,slow=10,SNR=9.9						
	comp=Z,2.7nm,0.9s						
FINES	FINESS Array B	36.36	324	P	P	13 06 36.0	+0.7
KARP	Karpathos	36.55	279	P	P	13 06 36.8	-0.4
ARCES	ARCESS Array B	39.43	336	P	P	13 07 01.1	0.0
	comp=Z,8.4nm,1.2s,baz=44,slow=4.0,SNR=5.8						
	comp=Z,8.4nm,1.2s						
ARCES	ARCESS Array B	39.43	336	P	P	13 07 02.0	+0.9
ARCES				IAmb	IAmb	13 07 19.9	
	comp=Z,24nm,1.4s						
HFS	Hagfors	42.15	320	P	P	13 07 23.7	0.0
	comp=Z,0.9nm,0.3s,baz=93,slow=10,SNR=4.5						
	comp=Z,0.9nm,0.3s						
KS19	Wonju Array Si	42.30	74	P	P	13 07 24.5	-0.7
KS19				IAmb	IAmb	13 07 47.1	
	comp=Z,32nm,1.3s						
KSAR	Wonju Array Be	42.33	74	P	P	13 07 24.8	-0.7
KSAR	Wonju Array Be	42.33	74	P	P	13 07 24.8	-0.7
NC405	NORSAR Array S	43.16	321	P	P	13 07 31.8	-0.1
NC405				IAmb	IAmb	13 07 38.8	
	comp=Z,36nm,1.3s						
NBO00	NORSAR Array S	43.61	321	P	P	13 07 35.2	-0.4
NC204	NORSAR Array S	43.62	322	P	P	13 07 34.9	-0.8
CLUD	Cludinico	43.96	300	P	P	13 07 37.9	-0.7
CLUD				IAmb	IAmb	13 07 40.6	
	comp=Z,3.5nm,0.7s						
AQU	L'Aquila	44.66	294	P	P	13 07 44.0	-0.3
AQU	L'Aquila	44.66	294	P	P	13 07 44.0	-0.3
AQU				pmax	pmax		
	comp=Z,20nm,0.8s						
NRS	Narsarsuaq	68.35	333	P	P	13 10 31.7	-0.9
NRS	Narsarsuaq	68.35	333	P	P	13 10 31.7	-0.9
NRS				pmax	pmax		
	comp=Z,102nm,1.5s						
A36M	Sachs Harbour	68.39	6	P	P	13 10 32.0	-0.6
A36M				IAmb	IAmb	13 10 38.2	
	comp=Z,2.4nm,0.9s						
IMAR	Indian Mountai	69.09	19	P	P	13 10 35.6	-1.5
BMAR	Burnt Mountain	69.93	15	P	P	13 10 42.4	+0.1
C36M	Paulatuk	71.06	6	P	P	13 10 48.2	-0.9
K20K	Telida	71.10	21	P	P	13 10 49.0	-0.5
K20K				IAmb	IAmb	13 11 15.5	
	comp=Z,7.4nm,1.5s						
MDM	Murphy Dome	71.26	17	P	P	13 10 49.7	-0.8
MDM				IAmb	IAmb	13 11 02.4	
	comp=Z,8.5nm,1.4s						
ILAR	Eielson Array	71.73	17	P	P	13 10 51.4	-1.9
	comp=Z,0.4nm,0.8s,baz=318,slow=3.7,SNR=4.6						
	comp=Z,0.4nm,0.8s						
ILAR	Eielson Array	71.73	17	P	P	13 10 51.8	-1.4
ILAR	Eielson Array	71.73	17	P	P	13 10 51.8	-1.4
PPLA	Purkeypile	71.98	20	P	P	13 10 54.0	-1.0
PPLA				IAmb	IAmb	13 11 09.0	
	comp=Z,13nm,1.4s						
SPU	Mount Spurr	73.42	21	P	P	13 11 01.8	-1.7
KNK	Knik Glacier	74.20	19	P	P	13 11 08.1	+0.2
KNK				IAmb	IAmb	13 11 35.0	
	comp=Z,18nm,1.4s						
L27K	Beaver Creek,	74.33	16	P	P	13 11 09.2	+0.5
BCAR	Beaver Creek A	74.33	16	P	P	13 11 08.0	-0.7
YKA	Yellowknife Ar	78.50	4	P	P	13 11 31.5	-0.8
	comp=Z,0.1nm,0.5s,baz=355,slow=5.4,SNR=4.4						
	comp=Z,0.1nm,0.5s						
WB0	Warramunga Arr	81.81	124	P	P	13 11 50.9	+0.1
WB0				IAmb	IAmb	13 12 16.6	
	comp=Z,4.3nm,1.2s						
WRA	Warramunga Arr	81.90	124	P	P	13 11 49.5	-1.7
	comp=Z,0.4nm,0.8s,baz=326,slow=5.1,SNR=5.9						
	comp=Z,0.4nm,0.8s						
WRA	Warramunga Arr	81.90	124	P	P	13 11 52.5	+1.2
WRA	Warramunga Arr	81.90	124	eP	P	13 11 49.7	-1.5
WB2	Warramunga Arr	81.91	124	P	P	13 11 50.0	-1.3
WB2				IAmb	IAmb	13 11 59.1	
	comp=Z,10nm,1.5s						
ASAR	Alice Springs	84.33	127	P	P	13 12 01.9	-1.8
	comp=Z,0.3nm,0.9s,baz=324,slow=5.0,SNR=2.6						
	comp=Z,0.3nm,0.9s						
PLCA	Paso Flores	152.35	255	PKP	PKPdf	13 19 20.6	0.0
	comp=Z,1.7nm,0.9s,baz=96,slow=6.3,SNR=3.3						

HEL 14 12:59:50.5±0.2, 61°.05N×27°.99E, h0^{km}, ML1.3, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
VJF	Virojoki	0.55	203	PG	Pg	13 00 00.3	-0.7
VJF				SG	Sg	13 00 07.9	-0.3
VJF				MSG		13 00 08.2	
	comp=Z,3.7nm,0.2s						
RUF	Ruokolahti	0.60	51	PG	Pg	13 00 01.5	-0.5
RUF				SG	Sg	13 00 09.2	-0.5
RUF				MSG		13 00 09.7	
	comp=Z,1.9nm,0.2s						
FIA0	FINESS Array S	1.00	294	PG	Pg	13 00 09.2	-0.5
FIA0				MSG		13 00 21.4	
	comp=Z,2.6nm,0.2s						
FIA0				SB	Sg	13 00 22.3	-0.4
PVF	Pernaja	1.16	245	PG	Pg	13 00 11.3	-1.4
PVF				MSG		13 00 25.8	
	comp=Z,2.6nm,0.2s						
PVF				SN	Sg	13 00 28.1	+0.5
KAF	Kangasniemi	1.34	324	PN	Pg	13 00 15.8	-0.3
KAF				MSG		13 00 30.7	
	comp=Z,2.1nm,0.2s						
KEF	Keuruu	1.86	308	PG	Pb	13 00 25.4	0.0
KEF				MSG		13 00 46.0	
	comp=Z,0.9nm,0.2s						
ARBE	Arbavere	1.90	213	SB	Sn	13 00 45.5	-3.2
JOF	Joensuu	2.45	38	PG	Pb	13 00 34.3	-1.0
JOF				SG	Sb	13 01 05.5	-0.5
AAL	Aland	4.04	261	SN	Sn	13 01 36.1	-5.2
SLIT	Slitere, Latvi	4.50	223	PN	Pn	13 00 58.9	-0.9

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*BJI **14** 13:13:35.6±0.0, 3°.63N×95°.76E, h52^{km}, mb5.4/82, mB5.1/56, Ms4.9/81, Ms7 4.8/76*

*MOS **14** 13:13:35.7±1.0, 3°.81N×95°.91E, h39^{km}, mb5.6/103, MS4.9/15, Error ellipse: s-maj=6.3km s-min=3.6km az=118.4*

*IDC **14** 13:13:37.8±1.5, 3°.80N×95°.87E, h45^{km}±13^{km}, mb4.9/31, mbtmp5.1/33, ML4.6/2, MS4.6/67, Error ellipse: s-maj=13.0km s-min=10.4km az=56.0*

*BGR **14** 13:13:37.2, 3°.63N×95°.46E, h30^{km}, mb5.6*

*DJA **14** 13:13:37.7±0.2, 4°N±1°×9°6E±°, h47^{km}±2^{km}, M5.2/91, mb5.3/91, mB5.7/54, MLv5.5/13, Mw5.2, Mw(mB)5.2/54, MwMwp5.2/7, Mwp5.4/7*

*NEIC **14** 13:13:38.1, 3°.64N×95°.86E, h41^{km}*

*NEIC **14** 13:13:38.1, 3°.84N×96°.26E, h40^{km}, Moment Tensor Solution. Duration: 1^{s}1.0 Moment tensor: Scale 10^{16} Nm; M_{rr}3.40; $M_{\theta\theta}$-0.97; $M_{\phi\phi}$-2.44; $M_{r\theta}$2.71; $M_{\theta\phi}$2.77; $M_{\phi r}$-5.21; Fault plane solution: $M_0$7.11000×10^{16} NP1: ϕ_s151.76000°, δ73.23000°, λ97.24000°. NP2: ϕ_s307.99000°, δ18.23000°, λ67.29000°. Principal axes: T 6.5952, Plg61.0000°, Azm72.0000°; N 1.0333, Plg7.0000°, Azm330.0000°; P -7.6285, Plg28.0000°, Azm236.0000°;*

*NEIC **14** 13:13:38.3±2.1, 3°.64N±0°.06×95°.86E±0°.07, h45^{km}±4^{km}, mb5.5/228, Mww5.2/10 Error ellipse: s-maj=10.3km s-min=8.5km az=77.0*

*GCMT **14** 13:13:40.3±0.2, 3°.59N±0°.01×95°.71E±0°.01, h39^{km}, MW5.3/110, Moment Tensor Solution. s73,c113; s110,c175; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.64±.02; $M_{\theta\theta}$-0.20±.01; $M_{\phi\phi}$-0.43±.02; $M_{r\theta}$0.22±.02; $M_{\theta\phi}$0.40±.01; $M_{\phi r}$-0.65±.02; Best double couple: $M_0$0.97200×10^{17} NP1: ϕ_s157.00000°, δ68.00000°, λ102.00000°. NP2: ϕ_s308.00000°, δ25.00000°, λ64.00000°. Principal axes: T 0.9440, Plg65.0000°, Azm86.0000°; N 0.0550, Plg11.0000°, Azm332.0000°; P -1.0000, Plg22.0000°, Azm238.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 13:13:37.0±0.2, 3°.63N±0°.03×95°.81E±0°.03, h45^{km}±1^{km}, h45^{km}:pP-P, n1395, σ1^{s}32/1525, mb5.4/318, MS4.7/107, 84C-45D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	0.87	43	P	Pn	13 13 54.1	+1.2
MLSI				S	Sn	13 14 07.0	+2.6
SNSI	Sinabang, Aceh	1.31	157	P	Pn	13 13 58.9	-0.1
SNSI				S	Sn	13 14 14.7	-0.6
LHMI	Lhok Sumawe	1.95	35		Pn	13 14 09.1	+1.4
LHMI	Lhok Sumawe	1.95	35	P	Pn	13 14 10.3	+2.6
LHMI				S	Sn	13 14 35.8	+4.8
KCSI	Kotacane, Aceh	1.96	93	P	Pn	13 14 10.9	+3.1
KCSI				S	Sn	13 14 33.5	+2.3
TSI	Tuntungan	2.75	93	P	Pn	13 14 20.7	+2.1
TSI				S	Sn	13 14 52.7	+2.1
GSI	Gunungsitoli	2.90	143		Pn	13 14 20.5	-0.3
GSI	Gunungsitoli	2.90	143	P	Pn	13 14 20.5	-0.3
GSI				S	Sn	13 14 52.7	-1.8
PSI	Prapat	3.21	105	P	Pn	13 14 26.2	+1.1
RPSI	Rantau Prapat	3.24	107		Pn	13 14 26.2	+0.8
PBSI	Pulau Batu	4.41	146	P	Pn	13 14 41.3	-0.2
PBSI				S	Sn	13 15 27.2	-4.4
KULM	Kulim	5.10	71	Pn	Pn	13 14 52.1	+1.2
IPM	Ipoh	5.27	81	Pn	Pn	13 14 54.0	+0.7
BKNI	Bangkinang	6.17	122	Pn	Pn	13 15 06.4	+0.7
BKNI	Bangkinang	6.17	122	P	Pn	13 15 07.2	+1.6
	521nm,0.8s,7µm4.3nm						
BKNI				S	Sn	13 16 13.8	-1.1
	521nm,0.8s,7µm4.3nm						
SRIT	Nakonsritamara	6.21	37		Pn	13 15 07.8	+1.6
PDSI	Padang	6.47	134	P	Pn	13 15 10.1	+0.2
	174nm,0.9s,3µm1.0nm						
SDSI	Sungai Dareh	7.21	129	P	Pn	13 15 20.1	+0.1
	72nm,0.7s,2µm0.8nm						
PPSI	Pulau Pagai	7.61	146	P	Pn	13 15 24.5	-0.9
	159nm,0.5s,3µm1.5nm						
MYKOM	Kota Tinggi	8.23	103	Pn	Pn	13 15 35.2	+1.3
PBA	Port Blair	8.54	339	Pn	Pn	13 15 40.5	+2.3
TPRI	Tanjung Pinang	9.11	107	P	Pn	13 15 45.8	-0.2
	110nm,0.6s,3µm						
DSRI	Dabo	9.66	115	P	Pn	13 15 55.1	+1.5
	31nm,0.8s						
DGPR	DIGLIPUR	9.91	343	eP	Pn	13 15 54.5	-2.4
KSI	Kapahiang	9.91	137	P	Pn	13 15 56.9	-0.1
	407nm,1.0s						
MNAI	Manna	10.67	138	Pn	Pn	13 16 06.6	-0.8
MNAI	Manna	10.67	138	P	Pn	13 16 06.2	-1.2
	445nm,1.0s,6µm						
MDSI	Maura Dua	11.61	134	P	Pn	13 16 18.3	-1.9
	198nm,0.8s,2µm						
PPBI	Pangkal Pinang	11.81	119	P	Pn	13 16 24.3	+1.3
LWLI	Liwa	11.90	136	P	Pn	13 16 23.7	-0.6
	271nm,0.5s,19µm						
KASI	Kota Agung	12.56	136	P	Pn	13 16 30.7	-2.6
	115nm,0.7s,1µm						
CGJI	Cibinong	14.17	136	P	Pn	13 16 54.3	-0.9
	54nm,0.7s,1µm33µm						
KSM	Kuching	14.64	98	P	P	13 17 07.1	+0.3
CM31	Chiang Mai Arr	15.05	12	P	P	13 17 12.0	+0.5
CM31	Chiang Mai Arr	15.05	12	P	P	13 17 12.6	+1.2
	SNR=58						
CMAR	Chiang Mai Arr	15.05	12	P	Pn	13 17 07.0	+0.1
	0.9nm,0.3s,baz=201,slow=12,SNR=69						
CMAR				LR	LR	13 23 33.1	
	comp=Z,3µm,18.3s,baz=190,slow=40						
CMAR				ScP	ScP	13 25 45.4	+1.7
	2.3nm,0.8s,baz=212,slow=3.1,SNR=4.7						
	17nm,1.1s						
CMAR	Chiang Mai Arr	15.05	12	Pn	Pn	13 17 07.6	+0.7
CMAR				P	P	13 17 11.9	+0.5
CMAR	Chiang Mai Arr	15.05	12	i P	Pn	13 17 08.3	+1.4
CMAR				pmax	pmax		
	comp=Z,59nm,0.8s						

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PHRA  Phrae           15.40  16   Pn      Pn      13 17 12.2 +0.8
PHRA                              IAmb    IAmb    13 17 18.8
      comp=Z,675nm,1.2s
CHTO  Chiang Mai      15.40  11   Pn      Pn      13 17 12.2 +0.8
CHTO  Chiang Mai      15.40  11   P       Pn      13 17 12.2 +0.8
CHTO                              pmax    pmax
      comp=Z,2.0nm,0.9s
PALK  Pallekele       15.47 284   P       Pn      13 17 13.2 +0.8
      comp=Z,2.0nm,0.3s,baz=200,slow=14,SNR=20
PALK                              S       Sn      13 19 49.3  -14
      comp=Z,71nm,0.7s,baz=299,slow=21,SNR=10
PALK                              LR      LR      13 22 35.2
      comp=Z,4µm,21.6s,baz=204,slow=35
      comp=Z,19nm,0.7s
PALK  Pallekele       15.47 284           Pn      13 17 13.4 +1.0
PALK                              IAmb    IAmb    13 17 20.5
      comp=Z,271nm,0.8s
PALK  Pallekele       15.47 284   P       Pn      13 17 13.4 +1.0
PALK                              pmax    pmax
      comp=Z,271nm,0.9s
CNJI  Cibinong        15.67 134   P       Pn      13 17 10.7 -4.2
      comp=Z,27nm,1.0s
SBUM  Sibu            16.43  94   P       Pn      13 17 25.3 +0.8
CMJI  Cimerak         16.95 132   P       Pn      13 17 28.1 -3.0
      comp=Z,43nm,0.6s
KPJI  Karang Pucung   17.03 130   P       Pn      13 17 29.2 -2.9
      comp=Z,47nm,0.6s
PBKI  Pangkalan Bun   17.05 111   P       Pn      13 17 32.3 -0.1
      comp=Z,332nm,1.1s,comp=Z,5µm
CRAI  Chiangrai       17.09  15           P       13 17 34.4 +0.4
MDRS  Chennai         18.02 302  eP       P       13 17 45.7 +1.4
SMRI  Semarang        18.05 126   P       Pn      13 17 44.4 -0.3
UWJI  Ujung Watu      18.11 123   P       Pn      13 17 46.3 +0.9
      comp=Z,124nm,1.6s,comp=Z,2µm
VIS   Vishakhapatnam  18.60 320  eP       Pn      13 17 53.9 +2.6
VIS                               IAmb    IAmb    13 18 03.7
      comp=Z,191nm,1.4s
UGM   Wanagama        18.62 128   P       P       13 17 48.5 -2.5
      comp=Z,125nm,1.3s
SAIH  SAIHA           18.95 352  eP       P       13 17 51.3 -3.4
SAIH                              IAML            13 18 12.3
      comp=Z,71nm,0.9s
SAIH                             eS       Sn      13 21 19.7 -7.4
NGJI  Ngawi           19.06 125   P       Pn      13 17 58.3 +1.4
      comp=Z,113nm,1.8s
TRD   Trivandrum      19.36 285  eP       Pn      13 18 00.4 -0.1
TRD                               IAmb    IAmb    13 18 02.8
      comp=Z,94nm,1.1s
GRJI  Gresik          19.66 122   P       P       13 18 02.7 +0.4
      comp=Z,80nm,1.2s,comp=Z,2µmcomp=Z,2µm
BBKI  Banjar Baru     20.28 110   P       Pn      13 18 10.4 -1.0
      comp=Z,350nm,1.0s,comp=Z,4µm
KKM   Kota Kinabalu   20.47  82           P       13 18 11.1 -0.2
KKM                               IAmb    IAmb    13 18 14.5
      comp=Z,114nm,0.7s
PCHI  Peechi          20.49 291⇓eP       Pn      13 18 13.5 -0.4
PCHI  Peechi          20.49 291  eS       S       13 21 48.1  -10
QIZ   Qiongzhong      20.55  41   P       P       13 18 13.1 +1.1
QIZ                               sP      sP      13 18 29.0 +0.5
QIZ                               S       Sn      13 22 03.1 -2.5
QIZ                               sS      sS      13 22 19.0 +2.5
QIZ                               pmax    pmax
      comp=Z,110nm,0.7s
QIZ                               pmax    pmax
      comp=Z,500nm,3.1s
QIZ                               LR      LR
      comp=Z,4µm,17.3s
QIZ                               LR      LR
      comp=Z,3µm,16.1s
QIZ                               LR      LR
      comp=Z,4µm,17.1s
QIZ   Qiongzhong      20.55  41   P       P       13 18 12.9 +0.9
QIZ                               IAmb    IAmb    13 18 14.1
      comp=Z,91nm,0.7s
BLJI  Banyuglugur     21.03 123   P       P       13 18 18.6 +1.4
      comp=Z,102nm,1.1s,comp=Z,2µm
IMP   Imphal          21.16 355  eP       P       13 18 16.5 -2.1
IMP                               IAmb    IAmb    13 18 35.4
      comp=Z,86nm,1.1s
IMP                              eS       S       13 22 06.8 -4.8
TNCH  TengChong       21.44   7 ⇑P       P       13 18 21.6 -0.1
TNCH                              pP      pP      13 18 31.9 -0.7
TNCH                              S       S       13 22 11.8 -5.6
TNCH                              sS      Sn      13 22 27.6 +0.6
TNCH                              PcS     PcS     13 26 01.3 -1.2
TNCH                              pmax    pmax
      comp=Z,170nm,0.9s
TNCH                              pmax    pmax
      comp=Z,240nm,4.0s
TNCH                              LR      LR
      comp=Z,610nm,10.5s
TNCH                              LR      LR
      comp=Z,950nm,17.4s
TNCH                              LR      LR
      comp=Z,2µm,19.6s
ABJI  Asem Bagus      21.60 122   P       P       13 18 23.9 +0.6
      comp=Z,131nm,1.1s,comp=Z,2µm
BKB   Balikpapan      21.62 103   P       P       13 18 23.8 +0.1
BKB                               IAmb    IAmb    13 18 41.4
      comp=Z,226nm,0.9s
BKB   Balikpapan      21.62 103   P       P       13 18 25.6 +2.0
      comp=Z,214nm,0.7s,comp=Z,3µmcomp=Z,4µm
HYB   Hyderabad       21.78 310  eP       P       13 18 27.7 +2.5
HYB                               IAmb    IAmb    13 18 43.1
      comp=Z,106nm,0.9s
HYB   Hyderabad       21.78 310  eP       P       13 18 26.9 +1.6
HYB                               IVmBBB          13 18 42.8
      comp=Z,627nm,0.9s
HYB                              eS       S       13 22 26.3 +2.4
HYB                               IVMs_BB IVMs_BB 13 26 57.2
      comp=Z,415nm,23.4s
JAGI  Jajag, Banyuwa  21.88 123   P       P       13 18 24.9 -1.4
JAGI  Jajag, Banyuwa  21.88 123   P       P       13 18 25.1 -1.3
      comp=Z,68nm,1.1s
KOHI  KOHIMA          22.03 356  eP       P       13 18 24.4 -3.6
KOHI                              IAmb    IAmb    13 18 34.6
      comp=Z,92nm,0.6s
KOHI                             eS       S       13 22 23.0 -5.7
SHL   Shillong        22.14 351   P       P       13 18 25.0 -4.2
SHL                               IAmb    IAmb    13 18 47.2
      comp=Z,84nm,0.8s
SHL   Shillong        22.14 351  eP       P       13 18 25.2 -4.0
SHL   Shillong        22.14 351   P       P       13 18 25.0 -4.2
SHL                               pmax    pmax
      comp=Z,84nm,0.8s
BOK   Bokaro          22.23 335  eP       P       13 18 27.6 -2.3
BOK                               IAmb    IAmb    13 18 35.2
      comp=Z,290nm,0.7s
BOK                              eS       S       13 22 32.7 +0.6
KMI   Kunming         22.39  17 ⇑P       P       13 18 33.1 +1.1
KMI                               pP      pP      13 18 43.9 +1.1
KMI                               sP      sP      13 18 48.3 -0.2
KMI                               S       S       13 22 33.0 -2.4
KMI                               pmax    pmax
      comp=Z,110nm,1.1s
KMI                               pmax    pmax
      comp=Z,450nm,6.3s
KMI                               LR      LR
      comp=Z,4µm,16.1s
KMI                               LR      LR
      comp=Z,1µm,17.5s
KMI                               LR      LR
      comp=Z,4µm,16.0s
SRBI  Singaraja       22.58 121   P       P       13 18 34.0 +0.2
      comp=Z,208nm,0.9s,comp=Z,2µm
MOKO  MOKOCHONG       22.60 357  eP       P       13 18 31.3 -2.8
MOKO                              IAML            13 18 46.1
      comp=Z,80nm,0.7s
MOKO                             eS       S       13 22 35.1 -3.8
MYLDM Lahad Datu      22.67  85   P       P       13 18 34.4 -0.5
MYLDM                             IAmb    IAmb    13 18 49.5
      comp=Z,201nm,1.0s
TEZP  TEZPUR          23.04 353  eP       P       13 18 34.2 -4.3
PZH   PanZhiHua       23.45  13 ⇑P       P       13 18 42.3 -0.3
PZH                               pP      sP      13 18 57.5 -2.0
PZH                               pmax    pmax
      comp=Z,2µm,1.3s
PZH                               pmax    pmax
      comp=Z,320nm,4.3s
PZH                               LR      LR
      comp=Z,6µm,16.7s
PZH                               LR      LR
      comp=Z,6µm,20.4s
PZH                               LR      LR
      comp=Z,5µm,18.6s
ITAN  ITANAGAR        23.47 355  eP       P       13 18 41.0 -1.7
LKP   Lekhapani       23.57   0  eP       P       13 18 41.9 -1.8
LKP                              eS       S       13 22 51.5 -3.3
ZIRO  ZIRO            23.84 356  eP       P       13 18 43.6 -2.7
ZIRO                              IAmb    IAmb    13 18 49.2
      comp=Z,47nm,0.7s
MPSI  Mapaga          24.29  97   P       P       13 18 51.8 +1.3
      comp=Z,203nm,1.4s,comp=Z,3µm
TWSI  Taliwang, Sumb  24.33 120   P       P       13 18 50.5 -0.4
      comp=Z,81nm,1.2s,comp=Z,1µm
ODAN  Odare           24.47 342  eP       P       13 18 52.0 -0.2
      comp=Z,23nm,0.9s
GTK   Tadong          24.55 344  eP       P       13 18 53.0 +0.1
GTK                               IAmb    IAmb    13 18 55.1
      comp=Z,82nm,0.8s
RAMN  Ramite          24.81 340  eP       P       13 18 55.6 +0.2
      comp=Z,494nm,0.8s
TAPN  Taplejung       24.83 343  eP       P       13 18 55.7 +0.1
GYA   Guiyang         24.97  24 ⇓P       P       13 18 56.9 +0.2
GYA                               pmax    pmax
      comp=Z,93nm,1.0s
GYA                               pmax    pmax
      comp=Z,380nm,3.5s
GYA                               LR      LR
      comp=Z,2µm,17.4s
GYA                               LR      LR
      comp=Z,2µm,16.4s
GYA                               LR      LR
      comp=Z,4µm,17.9s
TOLI2 Tolitoli        25.07  95   P       P       13 18 57.5 -0.1
SPSI  Sidrap Palu     25.10 107   P       P       13 18 57.9 +0.1
      comp=Z,52nm,1.0s,comp=Z,1µm
PLAI  Plampang        25.15 120   P       P       13 18 56.2 -2.1
      comp=Z,128nm,1.0s,comp=Z,1µm
KAPI  Kappang         25.41 110   P       P       13 19 01.2 +0.6
      comp=Z,59nm,0.7s,baz=290,slow=7.1,SNR=18
KAPI                              LR      LR      13 30 05.2
      comp=Z,3µm,18.9s,baz=280,slow=39
      comp=Z,59nm,0.7s
KAPI  Kappang         25.41 110   P       P       13 19 00.5 -0.2
KAPI                              IAmb    IAmb    13 19 14.0
      comp=Z,266nm,1.3s
KAPI  Kappang         25.41 110 i P       P       13 19 01.4 +0.8
KAPI                              pmax    pmax
      comp=Z,127nm,1.1s
KAPI  Kappang         25.41 110   P       P       13 19 02.6 +2.0
JIRN  Jiri            25.60 340  eP       P       13 19 03.0 +0.3
HKPS  Hong Kong Po S  25.68  42   P       P       13 19 03.4 +0.4
HKPS                              IAmb    IAmb    13 19 04.8
      comp=Z,105nm,1.0s
GZH   Guangzhou       25.73  40   P       P       13 19 09.3 +5.9
GZH                               pP      sP      13 19 23.3 +2.8
GZH                               S       S       13 23 38.8 +9.4
GZH                               pmax    pmax
      comp=Z,57nm,1.1s
GZH                               LR      LR
      comp=Z,770nm,17.1s
GZH                               LR      LR
      comp=Z,760nm,14.9s
GZH                               LR      LR
      comp=Z,2µm,16.7s
DGAR  Diego Garcia    25.76 245ceP       P       13 19 08.3 +4.5
DGAR                              pmax    pmax
      comp=Z,81nm,1.3s
PKI   Pulchoki        25.80 338  eP       P       13 19 04.1 -0.3
      comp=Z,122nm,0.5s
PKIN  Phulchoki       25.81 338  eP       P       13 19 04.3 -0.1
      comp=Z,144nm,0.5s
H08S2 Diego Garcia H  25.82 244   T       T       13 45 21.9
      baz=64,slow=75,SNR=1410
H08S3 Diego Garcia H  25.82 244   T       T       13 45 23.7
      baz=64,slow=75,SNR=1074
H08S1 Diego Carcia H  25.84 244   T       T       13 45 12.4
      baz=64,slow=75,SNR=836
BKSI  Bulukumba       25.86 110   P       P       13 19 05.5 +0.8
      comp=Z,295nm,0.8s,comp=Z,3µm
GUN   Gumba           25.94 340  eP       P       13 19 05.8 +0.1
      comp=Z,508nm,0.6s
DMN   Daman           25.95 338  eP       P       13 19 05.7  0.0
      comp=Z,224nm,0.7s
KKN   Kakani          26.05 338  eP       P       13 19 06.5  0.0
      comp=Z,38nm,0.8s
MRSI  Marisa          26.29  96   P       P       13 19 08.7  0.0
      comp=Z,197nm,1.1s,comp=Z,2µmcomp=Z,2µm
LSA   Lhasa           26.31 351   P       P       13 19 09.3 +0.2
LSA                               S       S       13 23 43.1 +3.8
LSA                               pmax    pmax
      comp=Z,47nm,1.1s
LSA                               LR      LR
      comp=Z,570nm,24.2s
LSA                               LR      LR
      comp=Z,640nm,22.8s
LSA   Lhasa           26.31 351   P       P       13 19 08.9 -0.2
LSA                               IAmb    IAmb    13 19 27.0
      comp=Z,63nm,0.7s
LSA   Lhasa           26.31 351   P       P       13 19 08.9 -0.2
LSA                               pmax    pmax
      comp=Z,63nm,0.7s
LSA   Lhasa           26.31 351   P       P       13 19 12.0 +2.9
BHPL  Bhopal          26.39 319  eP       P       13 19 11.2 +1.7
BHPL                              IAmb    IAmb    13 19 33.8
      comp=Z,40nm,0.8s
GKN   Gorkha          26.48 337  eP       P       13 19 10.6 +0.2
      comp=Z,1µm,0.8s
KOLN  Koldanda        26.69 335  eP       P       13 19 13.0 +0.7
      comp=Z,124nm,0.8s
DANN  Dangsing        27.14 336  eP       P       13 19 16.7 +0.3
      comp=Z,1µm,0.7s
PYUN  Piuthan         27.23 335  eP       P       13 19 17.6 +0.4
GTOI  Gorontalo       27.34  96   P       P       13 19 17.3 -0.8
      comp=Z,56nm,1.2s,comp=Z,745nm
LUWI  Luwuk           27.34  99   P       P       13 19 17.9 -0.2
LUWI  Luwuk           27.34  99   P       P       13 19 18.6 +0.5
      comp=Z,215nm,1.1s,comp=Z,3µm
CD2   Chengdu         28.16  15   P       P       13 19 24.5 -0.7
CD2                               S       S       13 24 08.6 +1.0
CD2                               pmax    pmax
      comp=Z,110nm,0.6s
CD2                               LR      LR
      comp=Z,1µm,18.2s
CD2                               LR      LR
      comp=Z,1µm,18.2s
CD2                               LR      LR
      comp=Z,750nm,17.2s
BASI  Baing, Sumba    28.24 119   P       P       13 19 25.5 -0.6
      comp=Z,161nm,1.0s,comp=Z,2µm
MMRI  Maumere         29.03 115   P       P       13 19 30.4 -2.7
      comp=Z,39nm,0.9s
CNSH  ChangSha        29.36  32 ⇑P       P       13 19 35.9  0.0
CNSH                              pmax    pmax
      comp=Z,56nm,0.8s
ENH   Enshi           29.49  25   P       P       13 19 35.8 -1.3
DAV   Davao City (W)  29.83  82   LR      LR      13 34 17.7
      comp=Z,1µm,18.8s,baz=271,slow=42
SANI  Sanana          30.68 100   P       P       13 19 48.6 +0.8
      comp=Z,30nm,1.4s,comp=Z,704nm
SOEI  Soe             31.31 115   P       P       13 19 50.7 -2.7
SOEI                              IAmb    IAmb    13 20 05.2
      comp=Z,97nm,0.8s
SOEI  Soe             31.31 115   P       P       13 19 50.7 -2.7
      comp=Z,139nm,0.8s,comp=Z,1µm
SOEI                              pP      pP      13 20 04.5 -0.8
      comp=Z,139nm,0.8s,comp=Z,1µm
YULB  Yu-li           31.51  49   P       P       13 19 55.4 +0.4
TNTI  Ternate         31.65  94   P       P       13 19 56.0 -0.4
      comp=Z,31nm,0.8s,comp=Z,3µm
LBMI  Labuha          31.95  97   P       P       13 19 59.5 +0.5
      comp=Z,92nm,1.0s,comp=Z,2µm
WHN   Wuhan           31.99  31   P       P       13 19 59.6 +0.5
WHN                               sP      pP      13 20 13.4 +2.3
WHN                               S       S       13 25 08.6 +0.9
WHN                               pmax    pmax
      comp=Z,210nm,1.0s
WHN                               pmax    pmax
      comp=Z,970nm,4.5s
WHN                               LR      LR
      comp=Z,3µm,12.1s
WHN                               LR      LR
      comp=Z,4µm,14.4s
WHN                               LR      LR
      comp=Z,7µm,17.7s
NLAI  Namlea          32.00 102   P       P       13 20 00.3 +0.9
      comp=Z,30nm,1.0s
YHNB  Yeheng          32.31  47   P       P       13 20 02.5 +0.4
YHNB                              IAmb    IAmb    13 20 40.7
      comp=Z,108nm,1.4s
GOMU  GeErMu          32.43 358   P       P       13 20 02.8 -0.5
GOMU                              pmax    pmax
      comp=Z,17nm,0.9s
GOMU                              pmax    pmax
      comp=Z,94nm,4.6s
GOMU                              LR      LR
      comp=Z,420nm,16.6s
GOMU                              LR      LR
      comp=Z,250nm,16.7s
GOMU                              LR      LR
      comp=Z,430nm,16.1s
SMLA  Simla           32.52 329  eP       P       13 20 04.4 +0.7
XAN   Xi'an           32.63  20 ⇑P       P       13 20 03.8 -0.9
XAN                               pP      pP      13 20 17.9 +1.2
XAN                               S       S       13 25 12.8 -4.9
XAN                               pmax    pmax
      comp=Z,110nm,0.9s
XAN                               pmax    pmax
      comp=Z,200nm,3.6s
XAN                               LR      LR
      comp=Z,850nm,14.1s
XAN                               LR      LR
      comp=Z,500nm,14.1s
XAN                               LR      LR
      comp=Z,1µm,15.2s
XAN   Xi'an           32.63  20   P       P       13 20 03.7 -1.0
XAN                               pP      pP      13 20 15.0 -1.7
XAN                               PcP     PcP     13 22 51.0 +0.8
LZH   Lanzhou         33.14  12 ⇑P       P       13 20 08.4 -0.9
LZH                               pP      pP      13 20 23.3 +2.0
LZH                               sP      sP      13 20 28.9 +2.2
LZH                               PP      PnPn    13 21 19.0 -1.3
LZH                               PcP     PcP     13 22 53.8 +2.1
LZH                               S       S       13 25 20.6 -5.2
LZH                               SS      SnSn    13 27 28.0 -0.1
LZH                               pmax    pmax
      comp=Z,100nm,1.5s
LZH                               pmax    pmax
      comp=Z,110nm,6.2s
LZH                               LR      LR
      comp=Z,1µm,20.3s
LZH                               LR      LR
      comp=Z,1µm,16.1s
LZH                               LR      LR
      comp=Z,1µm,16.8s
AAI   Ambon           33.16 102   P       P       13 20 09.5 -0.1
      comp=Z,51nm,1.3s,comp=Z,1µm
MSAI  Masohi          33.81 101   P       P       13 20 15.0 -0.3
      comp=Z,8.3nm,0.6s
MBWA  Marble Bar      34.00 137   P       P       13 20 16.8  0.0
MBWA  Marble Bar      34.00 137   P       P       13 20 17.1 +0.3
PSA00 Pilbara Seismi  34.37 138   P       P       13 20 19.8 -0.2
LYN   LuoYang         34.44  25⇑iP       P       13 20 20.8 +0.4
LYN                               pP      sP      13 20 35.9 -1.9
LYN                               PcP     PcP     13 22 56.5 +1.3
LYN                               S       S       13 25 47.1 +1.4
LYN                               pmax    pmax
      comp=Z,120nm,0.8s
LYN                               pmax    pmax
      comp=Z,100nm,6.3s
LYN                               LR      LR
      comp=Z,1µm,22.0s
LYN                               LR      LR
      comp=Z,1µm,17.5s
LYN                               LR      LR
      comp=Z,2µm,17.9s
NJ2   Nanjing         35.60  35⇓iP       P       13 20 31.3 +0.8
NJ2                               pP      pP      13 20 43.9 +1.4
NJ2                               sP      sP      13 20 47.9 +0.1
NJ2                               pmax    pmax
      comp=Z,35nm,1.0s
NJ2                               LR      LR
      comp=Z,1µm,13.3s
NJ2                               LR      LR
      comp=Z,960nm,11.4s
NJ2                               LR      LR
      comp=Z,2µm,14.2s
GTA   Gaotai          35.80   5 ⇑P       P       13 20 31.4 -0.9
GTA                               pP      pP      13 20 45.8 +1.4
GTA                               sP      sP      13 20 54.5 +4.8
GTA                               PcP     PcP     13 23 00.3 +1.0
GTA                               ScP     ScP     13 26 43.3 +1.4
GTA                               ScS     ScS     13 30 45.6 -1.5
GTA                               pmax    pmax
      comp=Z,28nm,1.2s
GTA                               pmax    pmax
      comp=Z,160nm,5.5s
GTA                               LR      LR
      comp=Z,460nm,16.7s
GTA                               LR      LR
      comp=Z,630nm,16.7s
GTA                               LR      LR
      comp=Z,640nm,17.1s
FITZ  Fitzroy Crossi  36.48 127   P       P       13 20 37.2 -0.9
NIL   Nilore          36.54 327   P       P       13 20 38.3 -0.2
NIL   Nilore          36.54 327   P       P       13 20 38.3 -0.2
NIL                               pmax    pmax
      comp=Z,185nm,0.6s
NIL   Nilore          36.54 327   P       P       13 20 38.5  0.0
FAKI  Fak Fak         36.99 100   P       P       13 20 42.3 -0.3
FAKI                              IAmb    IAmb    13 21 05.5
      comp=Z,80nm,1.0s
FAKI  Fak Fak         36.99 100   P       P       13 20 42.5 -0.1
      comp=Z,87nm,1.1s
TIY   Taiyuan         37.18  22  eP       P       13 20 44.1 +0.1
MEEK  Meekatharra     37.30 145   P       P       13 20 46.6 +1.6
      baz=38,SNR=4.6
HNS   HongShan        37.81  25 ⇑P       P       13 20 50.3 +1.1
HNS                               sP      sP      13 21 09.6 +2.9
HNS                               PcP     PcP     13 23 06.8 +1.6
HNS                               S       S       13 26 44.8 +7.7
HNS                               pmax    pmax
      comp=Z,280nm,0.9s
HNS                               LR      LR
      comp=Z,920nm,17.5s
HNS                               LR      LR
      comp=Z,1µm,18.3s
HNS                               LR      LR
      comp=Z,2µm,17.5s
KNRA  Kununurra       37.83 121   P       P       13 20 48.7 -0.9
      baz=38,SNR=15
KNRA  Kununurra       37.83 121   P       P       13 20 48.3 -1.3
KNRA                              IAmb    IAmb    13 20 49.8
      comp=Z,58nm,1.2s
MORW  Morawa          37.87 150   P       P       13 20 51.9 +2.2
      baz=38,SNR=5.1
MORW  Morawa          37.87 150   P       P       13 20 49.9 +0.2
JOW   Kunigami        38.68  50   LR      LR      13 36 46.9
      comp=Z,439nm,20.6s,baz=341,slow=36
JOW   Kunigami        38.68  50   P       P       13 20 56.8 +0.1
RKPI  Ransiki, Papua  38.68  97   P       P       13 20 56.7 -0.2
      comp=Z,154nm,0.9s,comp=Z,2µm
MTN   Manton Dam      38.71 116   P       P       13 20 56.1 -1.0
      baz=39,SNR=36
MTN   Manton Dam      38.71 116   P       P       13 20 56.1 -1.0
MTN                               IAmb    IAmb    13 20 57.4
      comp=Z,154nm,1.4s
BTO   Baotou          38.98  17⇑iP       P       13 20 59.9 +0.8
BTO                               pP      sP      13 21 15.0 -1.6
BTO                               sP      pP      13 21 21.8  +10
BTO                               S       S       13 26 54.8 -0.1
BTO                               sS      sS      13 27 21.4 +6.6
BTO                               pmax    pmax
      comp=Z,2µm,5.0s
BTO                               LR      LR
      comp=Z,3µm,15.3s
KBL   Kabul           39.55 324   P       P       13 21 03.8 -0.3
KBL   Kabul           39.55 324   P       P       13 21 03.8 -0.3
KBL                               pmax    pmax
      comp=Z,15nm,0.6s
HHC   Hu-ho-hao-te    39.68  19  eP       P       13 21 05.9 +0.9
HHC                               sP      sP      13 21 20.9 -1.6
HHC                               S       S       13 27 06.9 +1.5
HHC                               sS      sS      13 27 28.3 +3.0
HHC                               pmax    pmax
      comp=Z,170nm,0.8s
HHC                               pmax    pmax
      comp=Z,350nm,5.8s
HHC                               LR      LR
      comp=Z,4µm,16.0s
HHC                               LR      LR
      comp=Z,1µm,15.3s
HHC                               LR      LR
      comp=Z,5µm,16.5s
JLN   Jalan Bani Buh  39.80 301   P       P       13 21 09.5 +3.4
      SNR=5.4
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KSH	**Kashi**	40.00	336	P	P	13 21 06.6	-1.1
KSH				pP	pP	13 21 18.4	-1.4
KSH				S	S	13 27 06.0	-4.4
KSH				pmax	pmax		
	comp=Z,58nm,0.8s						
KSH				LR	LR		
	comp=Z,430nm,11.3s						
KSH				LR	LR		
	comp=Z,380nm,17.9s						
KSH				LR	LR		
	comp=Z,510nm,17.9s						
WUS	**Wushi**	40.27	341	P	P	13 21 10.1	+0.2
WUS				pP	pP	13 21 21.3	-0.7
WBK	**Wadi Bani Khal**	40.35	301	P	P	13 21 14.0	+3.3
MUN	**Mundaring**	40.37	153	P	P	13 21 12.5	+1.8
	baz=41,SNR=6.9						
BJT	**Baijiatuau**	40.64	24	P	P	13 21 13.5	+0.7
BJT	**Baijiatuau**	40.64	24	P	P	13 21 13.5	+0.7
BJT				pmax	pmax		
	comp=Z,139nm,0.8s						
BJT	**Baijiatuau**	40.64	24	P	P	13 21 14.1	+1.3
BJT				sP	sP	13 21 29.3	-1.0
MHTO	**MHTO**	40.64	298	P	P	13 21 17.0	+4.0
BJI	**Beijing**	40.66	24	P	P	13 21 13.9	+1.0
BJI				PcP	PcP	13 23 15.3	+1.2
BJI				pmax	pmax		
	comp=Z,130nm,0.8s						
BJI				LR	LR		
	comp=Z,490nm,15.5s						
BJI				LR	LR		
	comp=Z,610nm,16.3s						
BJI				LR	LR		
	comp=Z,470nm,14.6s						
WMQ	**Urumqi**	40.67	351	⇑P	P	13 21 12.9	-0.1
WMQ				pP	pP	13 21 25.0	-0.3
WMQ				sP	sP	13 21 30.9	+0.4
WMQ				pmax	pmax		
	comp=Z,29nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,260nm,4.7s						
WMQ				LR	LR		
	comp=Z,420nm,22.3s						
WMQ				LR	LR		
	comp=Z,570nm,18.5s						
WMQ				LR	LR		
	comp=Z,390nm,25.9s						
DQM	**DQM**	40.67	297	P	P	13 21 17.4	+4.0
WSAR	**Wadi Sarin**	40.88	302	LR	LR	13 38 27.9	
	comp=Z,607nm,18.6s,baz=127,slow=36						
WSAR	**Wadi Sarin**	40.88	302	P	P	13 21 18.5	+3.4
JMDO	**Jabal Madar**	41.01	300	P	P	13 21 19.0	+2.9
SMDO	**Samad**	41.31	301	P	P	13 21 21.8	+3.1
BIDO	**Bidbid**	41.42	302	P	P	13 21 22.8	+3.3
	SNR=7.4						
NWAO	**Narrogin (SRO)**	41.63	152	LR	LR	13 39 01.3	
	comp=Z,652nm,19.7s,baz=320,slow=36						
NWAO	**Narrogin (SRO)**	41.63	152	P	P	13 21 21.6	+0.5
NWAO				IAmb	IAmb	13 21 35.8	
	comp=Z,245nm,2.0s						
NWAO	**Narrogin (SRO)**	41.63	152	P	P	13 21 21.7	+0.6
NWAO				IAmb	IAmb	13 21 35.8	
	comp=Z,726nm,1.9s						
NWAO	**Narrogin (SRO)**	41.63	152	P	P	13 21 21.7	+0.6
NWAO				pmax	pmax		
	comp=Z,726nm,2.0s						
SHAO	**Shalim**	41.86	293	P	P	13 21 26.3	+3.1
BSY	**Bisya**	41.92	300	P	P	13 21 26.9	+3.2
	SNR=5.4						
SHLS	**Shalkode**	41.96	342	eP	P	13 21 23.3	-0.4
	baz=342						
SHLS	**Shalkode**	41.96	342	eP	P	13 21 23.3	-0.4
UZB	**Uzynbulak**	42.09	342	eP	P	13 21 25.3	+0.5
	baz=342						
UZB				eS	S	13 27 41.2	-0.1
	baz=342						
UZB	**Uzynbulak**	42.09	342	eP	P	13 21 25.3	+0.5
UZB				eS	S	13 27 41.2	-0.1
HOQ	**Hoqain**	42.13	302	P	P	13 21 28.6	+3.2
GAR	**Garm**	42.16	330	P	P	13 21 25.1	-0.3
SATY	**Saty**	42.21	341	⇑iP	P	13 21 26.4	+0.7
	baz=341						
SATY	**Saty**	42.21	341	c iP	P	13 21 26.4	+0.7
DL2	**Dalian**	42.24	30	P	P	13 21 26.8	+0.9
DL2				S	S	13 27 47.6	+4.3
DL2				pmax	pmax		
	comp=Z,72nm,0.9s						
DL2				pmax	pmax		
	comp=Z,250nm,6.0s						
DL2				LR	LR		
	comp=Z,980nm,16.9s						
DL2				LR	LR		
	comp=Z,650nm,12.8s						
DL2				LR	LR		
	comp=Z,1µm,18.5s						
ZHN	**Zhinishke**	42.29	341	eP	P	13 21 27.0	+0.5
	baz=341						
ZHN	**Zhinishke**	42.29	341	eP	P	13 21 27.0	+0.5
DMTO	**DMTO**	42.41	292	P	P	13 21 30.6	+3.0
KPKS	**Kokpek**	42.48	341	eP	P	13 21 28.4	+0.4
	baz=341						
KPKS	**Kokpek**	42.48	341	eP	P	13 21 28.3	+0.4
CHGR	**Chuyangaron**	42.49	329	P	P	13 21 27.3	-0.8
CHGR	**Chuyangaron**	42.49	329	P	P	13 21 27.3	-0.8
CHGR				pmax	pmax		
	comp=Z,119nm,0.7s						
WRKA	**Warakurna**	42.50	134	P	P	13 21 28.4	+0.1
	baz=43,SNR=32						
TNSS	**Tian-Shan**	42.68	340	eP	P	13 21 30.5	+0.5
	baz=339						
TNSS	**Tian-Shan**	42.68	340	eP	P	13 21 30.4	+0.5
ARQ	**Araqi**	42.72	301	P	P	13 21 34.0	+3.9
KMBL	**Kambalda**	42.75	146	P	P	13 21 32.2	+2.1
	baz=43,SNR=5.0						
MDOK	**Medeo**	42.76	340	i P	P	13 21 31.3	+1.0
	baz=340						
MDOK				eS	S	13 27 51.7	+0.5
	baz=340						
MDOK	**Medeo**	42.76	340	i P	P	13 21 31.2	+1.0
MDOK				eS	S	13 27 51.6	+0.5
JSU	**Suzuyama**	42.78	46	P	P	13 21 29.8	-0.6
JSU				IAmb	IAmb	13 22 58.6	
	comp=Z,133nm,1.7s						
AAA	**Alma-Ata**	42.84	340	eP	P	13 21 31.8	+0.9
	comp=Z,26nm,0.6s,baz=340						
AAA	**Alma-Ata**	42.84	340	eP	P	13 21 31.7	+0.9
AAA				pmax	pmax		
	comp=Z,26nm,0.6s						
UCH	**Uchtor**	42.89	337	P	P	13 21 32.6	+1.0
	SNR=98						
SOHO	**SOHO**	43.00	302	P	P	13 21 35.9	+3.6
RBK	**Rabkut**	43.04	292	P	P	13 21 37.0	+4.2
	SNR=5.8						
TKM2	**Tokmak 2**	43.06	338	P	P	13 21 33.6	+0.8
	SNR=17						
KBK	**Karagaybulak**	43.08	337	P	P	13 21 34.4	+1.5
	SNR=37						
AML	**Almayashu**	43.14	336	P	P	13 21 34.8	+1.2
	SNR=92						
SMPI	**Sarmi**	43.24	97	P	P	13 21 33.7	-0.7
	comp=Z,53nm,1.0s						
AAK	**Ala-Archa**	43.24	337	P	P	13 21 35.5	+1.3
	SNR=19						
AAK	**Ala-Archa**	43.24	337	LR	LR	13 41 14.8	
	comp=Z,678nm,21.2s,baz=160,slow=38						
AAK	**Ala-Archa**	43.24	337	P	P	13 21 34.8	+0.6
AAK	**Ala-Archa**	43.24	337	i P	P	13 21 35.3	+1.1
AAK				pmax	pmax		
	comp=Z,93nm,2.6s						
AAK	**Ala-Archa**	43.24	337	P	P	13 21 36.9	+2.7
AAK	**Ala-Archa**	43.24	337	P	P	13 21 35.3	+1.1
AAK				PcP	PcP	13 23 24.8	+2.0
CHKK	**Chushkaly**	43.38	340	eP	P	13 21 34.9	-0.3
	baz=340						
CHKK	**Chushkaly**	43.38	340	eP	P	13 21 34.8	-0.3
CHMS	**Chumysh**	43.45	337	P	P	13 21 36.3	+0.6
	SNR=12						
WHFO	**Wadi Hawf**	43.54	292	P	P	13 21 38.9	+2.1
	SNR=6.8						
EKS2	**Erkin-Say**	43.55	336	P	P	13 21 38.0	+1.4
	SNR=66						
HATD	**Hatta, Dubai**	43.60	303	P	P	13 21 40.4	+3.2
ASHO	**Ashiyiah**	43.61	302	P	P	13 21 41.3	+4.0
ALNE	**Al Ain**	43.64	302	P	P	13 21 40.7	+3.2
KUU	**Kurty**	43.64	340	eP	P	13 21 37.2	-0.1
	baz=339						
KUU	**Kurty**	43.64	340	eP	P	13 21 37.1	-0.1
MDH	**Madha**	43.64	303	P	P	13 21 40.3	+2.8
TJN	**Taejon**	43.66	38	P	P	13 21 37.1	-0.4
TJN	**Taejon**	43.66	38	ceP	P	13 21 37.6	+0.2
USP	**Ospenovka**	43.77	337	P	P	13 21 39.2	+0.9
	SNR=88						
ABTO	**Aybut**	43.85	291	P	P	13 21 41.7	+2.4
	SNR=7.8						
SGDS	**Sogindy**	43.88	338	⇑iP	P	13 21 39.8	+0.5
	baz=338						
SGDS	**Sogindy**	43.88	338	c iP	P	13 21 39.7	+0.5
BANOM	**Banah**	43.89	304	P	P	13 21 42.4	+2.8
XLT	**XiLinHaoTe**	43.93	21	⇑iP	P	13 21 40.3	+0.7
XLT				pP	pP	13 21 52.3	+0.3
XLT				sP	sP	13 21 57.0	-0.3
XLT				PcP	PcP	13 23 26.3	+1.3
XLT				S	S	13 28 07.5	-0.6
XLT				sS	sS	13 28 32.0	+3.8
XLT				pmax	pmax		
	comp=Z,45nm,0.8s						
XLT				pmax	pmax		
	comp=Z,260nm,7.0s						
XLT				LR	LR		
	comp=Z,180nm,16.7s						
XLT				LR	LR		
	comp=Z,900nm,17.4s						
XLT				LR	LR		
	comp=Z,3µm,17.0s						
TDK	**Taldyqorghan**	43.95	342	eP	P	13 21 39.8	+0.1
	baz=342						
TDK	**Taldyqorghan**	43.95	342	eP	P	13 21 39.8	+0.1
JNU	**Nakatsue**	43.97	44	LR	LR	13 41 07.9	
	comp=Z,954nm,19.8s,baz=224,slow=38						
FAQ	**Al Faqa, Dubai**	44.02	302	P	P	13 21 43.8	+3.2
ASUD	**Al Ashush, Dub**	44.20	302	P	P	13 21 45.7	+3.7
WB0	**Warramunga Arr**	44.47	123	P	P	13 21 44.0	-0.2
WB0				IAmb	IAmb	13 21 44.9	
	comp=Z,70nm,0.6s						
WRA	**Warramunga Arr**	44.50	123	P	P	13 21 44.7	+0.2
	comp=Z,53nm,0.9s,baz=300,slow=9.3,SNR=456						
WRA				ScP	ScP	13 27 16.8	+0.8
	comp=Z,1.2nm,1.1s,baz=316,slow=4.7,SNR=4.2						
WRA				S	S	13 28 13.3	-3.6
	comp=Z,2.0nm,1.2s,baz=298,slow=16,SNR=5.0						
WRA				LR	LR	13 40 51.0	
	comp=Z,619nm,21.5s,baz=293,slow=37						
	comp=Z,53nm,0.9s						
WRA	**Warramunga Arr**	44.50	123	P	P	13 21 44.3	-0.2
WRAB	**Tennant Creek**	44.51	123	P	P	13 21 44.5	0.0
WRAB				IAmb	IAmb	13 21 45.9	
	comp=Z,157nm,1.3s						
WRAB	**Tennant Creek**	44.51	123	ceP	P	13 21 44.7	+0.2
WRAB				pmax	pmax		
	comp=Z,93nm,1.0s						
WRAB	**Tennant Creek**	44.51	123	P	P	13 21 44.9	+0.4
WRAB				sP	sP	13 22 01.9	0.0
WB2	**Warramunga Arr**	44.51	123	P	P	13 21 44.9	+0.3
	baz=45						
WB2	**Warramunga Arr**	44.51	123	P	P	13 21 44.5	-0.1
WB2				IAmb	IAmb	13 21 46.0	
	comp=Z,137nm,1.3s						
MK31	**Makanchi Array**	44.57	347	P	P	13 21 44.1	-0.6
MK31	**Makanchi Array**	44.57	347	P	P	13 21 44.1	-0.6
MK31				pmax	pmax		
	comp=Z,39nm,1.1s						
MKAR	**Makanchi Array**	44.57	347	P	P	13 21 44.2	-0.4
	comp=Z,29nm,0.5s,baz=158,slow=8.3,SNR=557						
MKAR				LR	LR	13 43 10.0	
	comp=Z,650nm,21.9s,baz=170,slow=40						
	comp=Z,29nm,0.5s						
MKAR	**Makanchi Array**	44.57	347	P	P	13 21 44.1	-0.5
MAKZ	**Makanchi**	44.66	346	P	P	13 21 44.6	-0.7
MAKZ				IAmb	IAmb	13 21 45.7	
	comp=Z,55nm,0.6s						
MAKZ	**Makanchi**	44.66	346	P	P	13 21 44.6	-0.7
MAKZ				pmax	pmax		
	comp=Z,55nm,0.6s						
MAKZ	**Makanchi**	44.66	346	P	P	13 21 44.8	-0.5
KSAR	**Wonju Array Be**	44.67	37	P	P	13 21 45.0	-0.5
KSAR	**Wonju Array Be**	44.67	37	P	P	13 21 45.0	-0.5
ZSN	**Zaisan**	44.67	349	⇑iP	P	13 21 45.8	+0.3
	comp=Z,22nm,0.5s,baz=349						
ZSN	**Zaisan**	44.67	349	c iP	P	13 21 45.7	+0.3
ZSN				pmax	pmax		
	comp=Z,22nm,0.5s						
KS19	**Wonju Array Si**	44.70	37	P	P	13 21 45.7	0.0
KS19				IAmb	IAmb	13 21 47.2	
	comp=Z,41nm,0.8s						
KSRS	**Korea Array**	44.70	37	P	P	13 21 45.2	-0.6
	comp=Z,24nm,0.8s,baz=228,slow=8.8,SNR=51						
KSRS				PcP	PcP	13 23 28.2	+0.5
	comp=Z,4.3nm,0.7s,baz=208,slow=2.8,SNR=6.6						
KSRS				LR	LR	13 42 42.8	
	comp=Z,2µm,18.4s,baz=230,slow=39						
	comp=Z,24nm,0.8s						
IUG	**Iuzhnay**	44.74	333	⇑iP	P	13 21 47.4	+1.2
	baz=332						
IUG				eS	S	13 28 20.5	+0.4
	baz=332						
IUG	**Iuzhnay**	44.74	333	c iP	P	13 21 47.3	+1.1
IUG				eS	S	13 28 20.4	+0.4
DZA	**Taraz**	44.76	334	eP	P	13 21 46.6	+0.4
	comp=Z,39nm,0.8s,baz=334						
DZA	**Taraz**	44.76	334	eP	P	13 21 46.6	+0.4
DZA				pmax	pmax		
	comp=Z,39nm,0.8s						
SONM	**Songino Array**	44.98	10	P	P	13 21 47.3	-0.6
	comp=Z,48nm,0.8s,baz=189,slow=8.9,SNR=219						
SONM				PcP	PcP	13 23 29.4	+0.9
	comp=Z,20nm,0.8s,baz=191,slow=3.6,SNR=7.7						
SONM				ScP	ScP	13 27 18.6	+1.0
	comp=Z,4.1nm,1.1s,baz=192,slow=4.0,SNR=6.2						
SONM				LR	LR	13 42 47.5	
	comp=Z,1µm,19.0s,baz=188,slow=39						
	comp=Z,48nm,0.8s						
SONM	**Songino Array**	44.98	10	P	P	13 21 47.4	-0.6
SONM				IAmb	IAmb	13 21 48.8	
	comp=Z,45nm,0.8s						
SONM	**Songino Array**	44.98	10	P	P	13 21 47.4	-0.6
SONM				pmax	pmax		
	comp=Z,45nm,0.8s						
CHM	**Chimkent**	45.07	332	eP	P	13 21 49.5	+0.8
	baz=332						
CHM	**Chimkent**	45.07	332	eP	P	13 21 49.4	+0.8
ULN	**Ulaanbaatar**	45.12	11	P	P	13 21 48.5	-0.7
ULN	**Ulaanbaatar**	45.12	11	ceP	P	13 21 48.7	-0.5
ULN				pmax	pmax		
	comp=Z,26nm,0.7s						
ULN	**Ulaanbaatar**	45.12	11	P	P	13 21 48.8	-0.3
ULN				pP	pP	13 21 59.7	-1.9
ULN				PcP	PcP	13 23 29.9	+0.8
MZR	**Muzera**	45.23	299	P	P	13 21 53.3	+3.0
KK31	**Karatay Array**	45.28	334	P	P	13 21 50.4	+0.1
KK31				IAmb	IAmb	13 21 52.6	
	comp=Z,76nm,1.0s						
KK31	**Karatay Array**	45.28	334	P	P	13 21 50.4	+0.1
KK31				pmax	pmax		
	comp=Z,76nm,1.0s						
KKAR	**Karatay Array**	45.28	334	P	P	13 21 50.5	+0.2
KKAR				IAmb	IAmb	13 21 52.6	
	comp=Z,76nm,1.0s						
KKAR	**Karatay Array**	45.28	334	P	P	13 21 50.6	+0.2
KKAR	**Karatay Array**	45.28	334	P	P	13 21 50.6	+0.2
KKAR				pmax	pmax		
	comp=Z,76nm,1.0s						
SNY	**Shenyang**	45.43	29	⇑P	P	13 21 51.5	0.0
SNY				S	S	13 28 25.1	-4.6
SNY				pmax	pmax		
	comp=Z,57nm,0.7s						
SNY				pmax	pmax		
	comp=Z,370nm,4.8s						
SNY				LR	LR		
	comp=Z,2µm,17.9s						
SNY				LR	LR		
	comp=Z,850nm,18.8s						
SNY				LR	LR		
	comp=Z,2µm,16.7s						
BTLS	**Baital**	45.46	338	⇑iP	P	13 21 51.9	+0.2
	comp=Z,19nm,0.9s,baz=338						
BTLS	**Baital**	45.46	338	c iP	P	13 21 51.8	+0.1
BTLS				pmax	pmax		
	comp=Z,19nm,0.9s						
AS31	**Alice Springs**	45.96	128	P	P	13 21 55.9	-0.1
ASAR	**Alice Springs**	45.96	128	P	P	13 21 56.4	+0.3
	comp=Z,25nm,0.6s,baz=299,slow=8.1,SNR=626						
ASAR				PcP	PcP	13 23 33.4	+1.0
	comp=Z,6.6nm,0.9s,baz=305,slow=5.1,SNR=4.7						
ASAR				LR	LR	13 44 13.9	
	comp=Z,424nm,20.0s,baz=300,slow=40						
	comp=Z,25nm,0.6s						
ASAR	**Alice Springs**	45.96	128	P	P	13 21 56.0	0.0
FORT	**Forrest**	46.01	140	P	P	13 21 57.6	+1.3
	baz=46,SNR=40						
FORT	**Forrest**	46.01	140	P	P	13 21 57.4	+1.2
RER	**Riviere de l'E**	46.34	236	P	P	13 22 00.8	+1.7
RER	**Riviere de l'E**	46.34	236	P	P	13 22 00.8	+1.7
JMN	**Monobe**	46.40	45	P	P	13 22 00.0	+0.6
JMN				IAmb	IAmb	13 22 15.7	
	comp=Z,48nm,0.9s						
DGZ	**Jazzator, Alta**	46.46	352	c iP	P	13 21 59.5	-0.2
DGZ				pmax	pmax		
	comp=Z,19nm,0.8s						
JHS	**Saijyo**	46.56	43	P	P	13 22 01.1	+0.5
ZAK	**Zakamensk**	47.02	7	eP	P	13 22 03.0	-1.0
ZAK				pmax	pmax		
	comp=Z,13nm,1.1s						
CN2	**Changchun**	47.82	29	⇑P	P	13 22 09.9	-0.3
CN2				pP	pP	13 22 24.0	+1.5
CN2				S	S	13 29 01.8	-2.1
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
CN2				pmax	pmax		
	comp=Z,500nm,6.0s						
CN2				LR	LR		
	comp=Z,700nm,17.0s						
CN2				LR	LR		
	comp=Z,800nm,17.0s						
CN2				LR	LR		
	comp=Z,1µm,18.0s						
MOY	**Mondy**	48.07	4	eP	P	13 22 11.5	-0.7
MOY				pmax	pmax		
	comp=Z,25nm,3.1s						
SEM	**Semipalatinsk**	48.44	347	eP	P	13 22 14.6	-0.5
	baz=347						
SEM	**Semipalatinsk**	48.44	347	eP	P	13 22 14.6	-0.5
GEYT	**Alibeck**	48.48	320	P	P	13 22 16.2	+0.8
	comp=Z,35nm,0.8s,baz=148,slow=8.6,SNR=59						
GEYT				LR	LR	13 46 55.7	
	comp=Z,335nm,18.5s,baz=154,slow=41						
	comp=Z,35nm,0.8s						
IRK	**Irkutsk**	48.96	7	eP	P	13 22 11.9	-7.0
IRK				pmax	pmax		
	comp=Z,53nm,1.8s						
KURBB	**Kurchatov Arra**	49.05	345	ScP	ScP	13 27 36.0	+1.6
	comp=Z,2.1nm,0.7s,baz=154,slow=3.6,SNR=7.8						
KURBB				S	S	13 29 20.1	-0.8
	comp=Z,0.4nm,0.6s,baz=153,slow=14,SNR=6.3						
KURBB				LR	LR	13 45 44.5	
	comp=Z,393nm,19.9s,baz=160,slow=39						
KURK	**Kurchatov**	49.11	346	P	P	13 22 20.1	+0.1
KURK				IAmb	IAmb	13 22 20.7	
	comp=Z,35nm,0.9s						
KURK	**Kurchatov**	49.11	346	ceP	P	13 22 19.9	-0.1
KURK				pmax	pmax		
	comp=Z,57nm,1.3s						
KURK	**Kurchatov**	49.11	346	P	P	13 22 20.1	+0.1
QIS	**Mount Isa**	49.22	121	P	P	13 22 21.9	+0.6
	baz=49,SNR=40						
GUMO	**Guam**	49.41	75	LR	LR	13 42 01.9	
	comp=Z,766nm,21.6s,baz=234,slow=35						
GUMO	**Guam**	49.41	75	P	P	13 22 22.0	-0.9
GUMO	**Guam**	49.41	75	P	P	13 22 22.0	-0.9
GUMO				pmax	pmax		
	comp=Z,116nm,1.1s						
GUMO	**Guam**	49.41	75	P	P	13 22 21.9	-0.9
JGF	**Kuroka**	49.82	45	P	P	13 22 25.3	-0.5
HIA	**Hailar**	49.83	20	P	P	13 22 25.8	+0.3
HIA				IAmb	IAmb	13 22 27.1	
	comp=Z,55nm,0.9s						
HIA	**Hailar**	49.83	20	P	P	13 22 25.8	+0.3
HIA				pmax	pmax		
	comp=Z,55nm,0.9s						
HIA	**Hailar**	49.83	20	P	P	13 22 25.9	+0.4
HIA				PcP	PcP	13 23 46.4	+0.7
JCJ	**Chichijima**	50.03	57	LR	LR	13 41 53.3	
	comp=Z,261nm,21.9s,baz=238,slow=34						
COEN	**Coen**	50.11	111	P	P	13 22 28.2	0.0
	baz=50,SNR=4.3						
COEN	**Coen**	50.11	111	P	P	13 22 27.5	-0.7
COEN				IAmb	IAmb	13 22 45.2	
	comp=Z,48nm,1.4s						
BRZS	**Berezniki**	50.17	341	⇑iP	P	13 22 28.5	+0.3
	comp=Z,28nm,1.0s,baz=341						
BRZS				eS	S	13 29 36.8	0.0
	baz=341						
BRZS	**Berezniki**	50.17	341	c iP	P	13 22 28.4	+0.3
BRZS				eS	S	13 29 36.8	0.0
BRZS				pmax	pmax		
	comp=Z,28nm,1.0s						
BNX	**BinXian**	50.19	29	⇑P	P	13 22 28.1	-0.2
BNX				pmax	pmax		
	comp=Z,110nm,0.7s						
BNX				pmax	pmax		
	comp=Z,260nm,4.8s						
MDJ	**Mudanjiang**	50.47	31	P	P	13 22 31.5	+1.0
MDJ				pP	pP	13 22 44.9	+1.9
MDJ				sP	sP	13 22 48.9	+0.7
MDJ				PcP	PcP	13 23 46.8	-1.3
MDJ				ScP	ScP	13 27 38.8	-1.9
MDJ				PcS	PcS	13 27 44.3	-1.0
MDJ				S	S	13 29 40.0	-1.1
MDJ				sS	sS	13 30 03.8	+2.3
MDJ				pmax	pmax		
	comp=Z,66nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,350nm,4.9s						
MDJ				LR	LR		
	comp=Z,480nm,17.9s						
MDJ				LR	LR		
	comp=Z,540nm,19.7s						
MDJ				LR	LR		
	comp=Z,720nm,21.2s						
MDJ	**Mudanjiang**	50.47	31	P	P	13 22 30.7	+0.2
MDJ	**Mudanjiang**	50.47	31	P	P	13 22 31.2	+0.8
MDJ				PcP	PcP	13 23 50.0	+1.8
MAJO	**Matsushiro**	50.89	44	P	P	13 22 34.3	+0.5
MAJO				IAmb	IAmb	13 23 52.1	
	comp=Z,26nm,0.8s						
MAJO	**Matsushiro**	50.89	44	i P	P	13 22 34.0	+0.2
MAJO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MAJO	**Matsushiro**	50.89	44	P	P	13 22 34.2	+0.4
MAJO				pP	pP	13 22 45.6	-0.7
MAJO				sP	sP	13 22 50.2	-1.3
MAJO				PcP	PcP	13 23 50.9	+1.0
MJB9	**Matsu-Tunnel**	50.89	44	P	P	13 22 35.1	+1.3
MJB9				IAmb	IAmb	13 23 53.1	
	comp=Z,27nm,0.9s						
MJAR	**Matsushiro Arr**	50.89	44	P	P	13 22 33.3	-0.5
	comp=Z,6.4nm,0.8s,baz=238,slow=8.6,SNR=11						
MJAR				PcP	PcP	13 23 51.0	+1.1
	comp=Z,23nm,0.9s,baz=247,slow=3.2,SNR=16						
MJAR				LR	LR	13 44 38.9	
	comp=Z,841nm,21.8s,baz=238,slow=37						
	comp=Z,6.4nm,0.8s						
ZAA0	**Zalesovo Array**	50.97	352	P	P	13 22 33.6	-0.4
ZAA0				IAmb	IAmb	13 22 34.4	
	comp=Z,46nm,0.7s						
ZALV	**Zalesovo Beam**	50.97	352	P	P	13 22 33.8	-0.3
	comp=Z,41nm,0.5s,baz=175,slow=7.4,SNR=253						
ZALV				S	S	13 29 45.6	-2.0
	comp=Z,2.3nm,0.7s,baz=179,slow=5.9,SNR=5.6						
ZALV				LR	LR	13 48 40.3	
	comp=Z,272nm,19.1s,baz=180,slow=41						
	comp=Z,41nm,0.5s						
ZALV	**Zalesovo Beam**	50.97	352	P	P	13 22 33.5	-0.5
ZALV	**Zalesovo Beam**	50.97	352	i P	P	13 22 33.7	-0.3
ZALV				pmax	pmax		
	comp=Z,40nm,0.5s						
USA0B	**Ussuriysk Arra**	51.46	33	P	P	13 22 37.8	-0.1
USA0B				IAmb	IAmb	13 22 39.8	
	comp=Z,59nm,1.4s						
USA0B	**Ussuriysk Arra**	51.46	33	P	P	13 22 37.8	-0.1
USA0B				pmax	pmax		
	comp=Z,59nm,1.4s						
USRK	**Ussuriysk Ar.**	51.46	33	P	P	13 22 38.0	+0.2
	comp=Z,6.3nm,0.4s,baz=239,slow=5.3,SNR=18						
USRK				LR	LR	13 48 13.6	
	comp=Z,452nm,18.1s,baz=219,slow=40						
	comp=Z,6.3nm,0.4s						
USRK	**Ussuriysk Ar.**	51.46	33	P	P	13 22 37.6	-0.2
RAYN	**Ar Rayn**	52.41	297	P	P	13 22 46.4	+1.0

RAYN	**Ar Rayn**	**52.41**	**297**	P	**P**	**13 22 46.4**	**+1.0**
RAYN				pmax	pmax		
	comp=Z,18nm,0.9s						
RAYN	**Ar Rayn**	**52.41**	**297**	P	**P**	**13 22 47.8**	**+2.3**
RAYN	**Ar Rayn**	**52.41**	**297**	P	**P**	**13 22 46.9**	**+1.5**
RAYN				pP	**pP**	**13 22 58.2**	**+0.6**
RAYN				sP	**sP**	**13 23 03.3**	**+0.5**
RAYN				PcP	**PcP**	**13 23 53.8**	**-2.1**
MTSU	**Mount Surprise**	**52.45**	**116**	P	**P**	**13 22 46.0**	**+0.3**
	baz=52,SNR=17						
BBOO	**Buckleboo**	**52.58**	**137**	P	**P**	**13 22 46.7**	**+0.3**
	baz=53,SNR=13						
BBOO	**Buckleboo**	**52.58**	**137**	P	**P**	**13 22 46.5**	**0.0**
PMG	**Port Moresby**	**52.78**	**105**	LR	LR	13 48 39.7	
	comp=Z,294nm,19.8s,baz=278,slow=40						
PMG	**Port Moresby**	**52.78**	**105**	P	**P**	**13 22 48.2**	**+0.1**
PMG				IAmb	IAmb	13 22 49.5	
	comp=Z,63nm,0.8s						
PMG	**Port Moresby**	**52.78**	**105**	*ce*P	**P**	**13 22 48.4**	**+0.2**
PMG				pmax	pmax		
	comp=Z,59nm,0.9s						
PMG	**Port Moresby**	**52.78**	**105**	P	**P**	**13 22 48.2**	**+0.1**
PMG				sP	**sP**	**13 23 04.2**	**-1.5**
ABPO	**Ambohimpanom**	**52.83**	**243**	P	**P**	**13 22 50.3**	**+1.6**
ABPO				IAmb	IAmb	13 23 04.1	
	comp=Z,79nm,1.6s						
ABPO	**Ambohimpanom**	**52.83**	**243**	P	**P**	**13 22 50.3**	**+1.6**
ABPO				pmax	pmax		
	comp=Z,79nm,1.7s						
ABPO	**Ambohimpanom**	**52.83**	**243**	P	**P**	**13 22 50.1**	**+1.5**
ATD	**Arta Tunnel**	**53.02**	**282**	LR	LR	13 42 31.8	
	comp=Z,19nm,20.5s,baz=97,slow=33						
JMM	**Marumori**	**53.34**	**44**	P	**P**	**13 22 51.7**	**-0.2**
HEH	**HeiHe**	**53.57**	**25**	*e*P	**P**	**13 22 53.5**	**+0.1**
HEH				pP	**pP**	**13 23 05.1**	**-0.8**
HEH				PP	**PP**	**13 24 53.0**	**-1.4**
HEH				S	**S**	**13 30 24.1**	**+0.7**
HEH				SS	**SS**	**13 34 02.1**	**-2.3**
HEH				pmax	pmax		
	comp=Z,71nm,1.1s						
HEH				pmax	pmax		
	comp=Z,240nm,5.7s						
HEH				LR	LR		
	comp=Z,530nm,18.7s						
HEH				LR	LR		
	comp=Z,530nm,17.1s						
HEH				LR	LR		
	comp=Z,880nm,14.5s						
BRVK	**Borovoye**	**53.58**	**341**	P	**P**	**13 22 53.1**	**-0.4**
BRVK	**Borovoye**	**53.58**	**341**	P	**P**	**13 22 53.1**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,87nm,0.8s						
BRVK	**Borovoye**	**53.58**	**341**	P	**P**	**13 22 53.3**	**-0.1**
ABKAR	**Akbulak array**	**54.73**	**332**	P	**P**	**13 23 02.1**	**+0.2**
KLR	**Kul'dur**	**54.75**	**28**	LR	LR	13 49 30.0	
	comp=Z,818nm,18.0s,baz=220,slow=39						
KLR	**Kul'dur**	**54.75**	**28**	*ce*P	**P**	**13 23 02.7**	**+0.7**
KLR				pmax	pmax		
	comp=Z,91nm,1.0s						
KLR				MLR	MLR		
	comp=Z,802nm,17.0s						
CTA	**Charters Tower**	**54.83**	**118**	LR	LR	13 48 44.2	
	comp=Z,396nm,18.9s,baz=284,slow=38						
CTAO	**Charters Tower**	**54.83**	**118**	P	**P**	**13 23 03.7**	**+0.6**
CTAO				IAmb	IAmb	13 23 05.2	
	comp=Z,74nm,1.1s						
CTAO	**Charters Tower**	**54.83**	**118**	P	**P**	**13 23 03.7**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,74nm,1.1s						
CTAO	**Charters Tower**	**54.83**	**118**	P	**P**	**13 23 03.8**	**+0.6**
CTAO				pP	**pP**	**13 23 15.3**	**-0.3**
CTAO				sP	**sP**	**13 23 20.1**	**-0.6**
HTT	**Hallett**	**54.91**	**136**	P	**P**	**13 23 04.3**	**+0.8**
	baz=55,SNR=14						
JTM	**Tenmabayashi**	**54.95**	**41**	P	**P**	**13 23 04.3**	**+0.7**
QLP	**Quilpie**	**55.59**	**126**	P	**P**	**13 23 09.6**	**+1.1**
	baz=56,SNR=12						
BOD	**Bodaibo**	**55.91**	**12**	*e*P	**P**	**13 23 09.8**	**-0.4**
BOD				pmax	pmax		
	comp=Z,66nm,1.2s						
STKA	**Stephens Creek**	**56.01**	**133**	P	**P**	**13 23 12.0**	**+0.7**
	comp=Z,21nm,1.0s,baz=315,slow=6.7,SNR=38						
STKA				LR	LR	13 49 36.7	
	comp=Z,337nm,21.3s,baz=320,slow=38						
	comp=Z,21nm,1.0s						
STKA	**Stephens Creek**	**56.01**	**133**	P	**P**	**13 23 12.1**	**+0.7**
	baz=56,SNR=14						
STKA	**Stephens Creek**	**56.01**	**133**	P	**P**	**13 23 11.8**	**+0.5**
ZEA	**Zeya**	**56.19**	**22**	*e*P	**P**	**13 23 13.1**	**+0.8**
ZEA				*e*		13 23 28.0	
ZEA				pmax	pmax		
	comp=Z,80nm,0.8s						
ZEA				pmax	pmax		
	comp=E,30nm,0.6s						
ZEA				pmax	pmax		
	comp=N,40nm,0.8s						
ZEA				MLR	MLR		
	comp=N,400nm,15.0s						
ZEA				MLR	MLR		
	comp=E,200nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,16.0s						
AKTO	**Aktyubinsk**	**56.45**	**332**	S	**S**	**13 30 58.9**	**-3.2**
	comp=Z,1.0nm,0.7s,baz=70,slow=22,SNR=1.5						
AKTO				LR	LR	13 48 39.1	
	comp=Z,415nm,20.9s,baz=316,slow=37						
KRVT	**Keravat (AS076**	**56.72**	**98**	LR	LR	13 49 02.5	
	comp=Z,170nm,21.1s,baz=50,slow=38						
RABL	**Rabaul**	**56.84**	**97**	P	**P**	**13 23 18.3**	**+0.6**
ERM	**Erimo**	**56.92**	**41**	P	**P**	**13 23 18.2**	**+0.5**
ERM				IAmb	IAmb	13 23 27.0	
	comp=Z,45nm,0.9s						
ERM	**Erimo**	**56.92**	**41**	*i* P	**P**	**13 23 18.5**	**+0.8**
ERM				pmax	pmax		
	comp=Z,44nm,1.2s						
AKT	**Akhty**	**57.15**	**318**	*e*P	**P**	**13 23 20.1**	**+0.6**
AKT				*e**PP	**pP**	**13 23 33.0**	**+1.0**
AKT				*e**SP	**sP**	**13 23 38.6**	**+1.5**
AKT				*e*		13 24 13.1	
AKT				pmax	pmax		
	comp=Z,21nm,0.8s						
ASAJ	**Asahikawa**	**57.60**	**38**	LR	LR	13 49 16.4	
	comp=Z,902nm,19.7s,baz=229,slow=37						
ASAJ	**Asahikawa**	**57.60**	**38**	P	**P**	**13 23 22.9**	**+0.4**
ASAJ				pmax	pmax		
	comp=Z,69nm,0.9s						
JKA	**Kamikawa-asahi**	**57.60**	**38**	P	**P**	**13 23 22.9**	**+0.4**
GRNR	**Gornyy**	**58.02**	**29**	⇑*i*P	**P**	**13 23 25.9**	**+0.6**
GRNR				pmax	pmax		
	comp=Z,20nm,1.1s						
GRNR				MLR	MLR		
	comp=E,280nm,18.0s						
GRNR				MLR	MLR		
	comp=N,310nm,17.0s						
GRNR				MLR	MLR		
	comp=Z,500nm,17.0s						
KIBK	**Kibwezi**	**58.04**	**265**	P	**P**	**13 23 27.2**	**+1.0**
KIBK	**Kibwezi**	**58.04**	**265**	P	**P**	**13 23 28.8**	**+2.5**
GNI	**Garni**	**58.60**	**316**	LR	LR	13 51 31.9	
	comp=Z,144nm,19.3s,baz=122,slow=39						
GNI	**Garni**	**58.60**	**316**	P	**P**	**13 23 29.9**	**+0.1**
GNI				IAmb	IAmb	13 23 51.4	
	comp=Z,36nm,0.8s						
GNI	**Garni**	**58.60**	**316**	*ce*P	**P**	**13 23 30.1**	**+0.3**
GNI				pmax	pmax		
	comp=Z,17nm,0.8s						
GNI	**Garni**	**58.60**	**316**	P	**P**	**13 23 32.0**	**+2.2**
GNI	**Garni**	**58.60**	**316**	P	**P**	**13 23 30.6**	**+0.8**
KMBO	**Kilima Mbogo**	**58.72**	**266**	LR	LR	13 46 53.9	
	comp=Z,10nm,18.4s,baz=90,slow=34						
KMBO	**Kilima Mbogo**	**58.72**	**266**	P	**P**	**13 23 32.1**	**+0.9**
KMBO	**Kilima Mbogo**	**58.72**	**266**	*ce*P	**P**	**13 23 32.0**	**+0.9**
KMBO	**Kilima Mbogo**	**58.72**	**266**	P	**P**	**13 23 33.4**	**+2.3**
KMBO	**Kilima Mbogo**	**58.72**	**266**	P	**P**	**13 23 33.0**	**+1.9**
KMBO				pP	**pP**	**13 23 44.8**	**+1.3**
KMBO				sP	**sP**	**13 23 49.7**	**+1.1**
ARPS	**Mount Arapiles**	**58.74**	**137**	P	**P**	**13 23 32.1**	**+1.6**
	baz=59,SNR=5.5						
CMSA	**Cobar Meteorol**	**58.91**	**130**	P	**P**	**13 23 32.7**	**+0.9**
	baz=59,SNR=7.8						
GEVA	**Gevas**	**59.07**	**313**	P	**P**	**13 23 33.1**	**0.0**
YSS	**Yuzh-Sakhalins**	**59.17**	**36**	P	**P**	**13 23 33.6**	**+0.3**
YSS	**Yuzh-Sakhalins**	**59.17**	**36**	*αe*P	**P**	**13 23 34.1**	**+0.8**
YSS				*e*S	**S**	**13 31 35.1**	**-2.6**
YSS				pmax	pmax		
	comp=Z,180nm,0.9s						
YSS				pmax	pmax		
	comp=Z,300nm,5.2s						
YSS				MLR	MLR		
	comp=Z,1µm,17.0s						
YSS	**Yuzh-Sakhalins**	**59.17**	**36**	P	**P**	**13 23 33.8**	**+0.5**
YSS				pP	**pP**	**13 23 46.3**	**+0.2**
GROC	**Groznyy**	**59.22**	**319**	*e*P	**P**	**13 23 34.1**	**+0.3**
GROC				*e*S	**S**	**13 31 37.5**	**-1.0**
RMQ	**Roma**	**59.26**	**124**	P	**P**	**13 23 36.0**	**+1.7**
	baz=59,SNR=6.8						
GURO	**Guroymak-BITLI**	**59.91**	**313**	P	**P**	**13 23 39.5**	**+0.7**
GURO				IAmb	IAmb	13 23 42.1	
	comp=Z,20nm,0.7s						
UGL	**Uglegorsk**	**59.93**	**33**	*e*P	**P**	**13 23 38.6**	**+0.1**
UGL				*e*		13 23 48.9	
UGL				pmax	pmax		
	comp=Z,60nm,0.7s						
SVE	**Sverdlovsk**	**59.94**	**339**	*d i*P	**P**	**13 23 38.8**	**+0.3**
SVE				pmax	pmax		
	comp=Z,111nm,0.9s						
AKH	**Akhalkalaki**	**59.98**	**317**	P	**P**	**13 23 40.0**	**+0.7**
AKH				IAmb	IAmb	13 23 56.6	
	comp=Z,52nm,0.8s						
AKH	**Akhalkalaki**	**59.98**	**317**	P	**P**	**13 23 40.0**	**+0.7**
AKH				pmax	pmax		
	comp=Z,52nm,0.8s						
ZEI	**Tsey**	**60.28**	**318**	*e*P	**P**	**13 23 41.3**	**-0.1**
ZEI				pmax	pmax		
	comp=Z,25nm,0.8s						
LODK	**Lodwar**	**60.33**	**272**	P	**P**	**13 23 43.4**	**+1.4**
LODK	**Lodwar**	**60.33**	**272**	P	**P**	**13 23 45.0**	**+2.9**
	SNR=5.7						
ARU	**Arti**	**60.42**	**337**	LR	LR	13 51 41.6	
	comp=Z,413nm,21.2s,baz=134,slow=38						
ARU	**Arti**	**60.42**	**337**	P	**P**	**13 23 41.4**	**-0.4**
ARU				IAmb	IAmb	13 23 42.5	
	comp=Z,44nm,0.9s						
ARU	**Arti**	**60.42**	**337**	*c i*P	**P**	**13 23 41.5**	**-0.3**
ARU				*PP	**pP**	**13 23 53.8**	**-0.5**
ARU						13 24 24.2	
ARU				S	**S**	**13 31 55.0**	**+1.5**
ARU				SS	**SS**	**13 35 47.6**	**-4.4**
ARU				pmax	pmax		
	comp=Z,49nm,0.9s						
ARU	**Arti**	**60.42**	**337**	P	**P**	**13 23 41.5**	**-0.3**
ARU				pP	**pP**	**13 23 53.1**	**-1.2**
ARU				sP	**sP**	**13 23 57.2**	**-2.2**
ONI	**Oni**	**60.50**	**318**	P	**P**	**13 23 43.5**	**+0.8**
ONI	**Oni**	**60.50**	**318**	P	**P**	**13 23 43.5**	**+0.8**
ONI				pmax	pmax		
	comp=Z,21nm,1.1s						
EIDS	**Eidsvold**	**60.81**	**122**	P	**P**	**13 23 45.2**	**+0.1**
	baz=61,SNR=7.4						
EIDS	**Eidsvold**	**60.81**	**122**	P	**P**	**13 23 45.3**	**+0.3**
EIDS				IAmb	IAmb	13 24 01.7	
	comp=Z,32nm,1.1s						
TYV	**Tymovskoe**	**61.23**	**32**	*e*P	**P**	**13 23 48.5**	**+1.1**
TYV				*e*S	**S**	**13 32 06.2**	**+2.1**
TYV				pmax	pmax		
	comp=Z,26nm,1.4s						
TYV				pmax	pmax		
	comp=Z,100nm,3.3s						
TYV				smax	smax		
	comp=N,200nm,6.5s						
TYV				smax	smax		
	comp=E,400nm,6.5s						
TYV				MLR	MLR		
	comp=Z,1µm,21.0s						
NEY	**Neytrino**	**61.26**	**318**	*i* P	**P**	**13 23 49.1**	**+1.1**
NEY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBZ	**Khabaz**	**61.34**	**319**	P	**P**	**13 23 48.5**	**+0.3**
	comp=Z,17nm,0.8s,baz=116,slow=6.4,SNR=44						
	comp=Z,17nm,0.8s						
KBZ	**Khabaz**	**61.34**	**319**	*ce*P	**P**	**13 23 49.0**	**+0.7**
KBZ				pmax	pmax		
	comp=Z,18nm,0.9s						
KUR	**Kuril'sk**	**61.44**	**39**	*e*P	**P**	**13 23 49.1**	**+0.2**
KUR				S	**S**	**13 32 09.4**	**+2.6**
KUR				pmax	pmax		
	comp=Z,174nm,1.0s						
SHA1	**Shidzhatmaz**	**61.51**	**319**	*c i*P	**P**	**13 23 50.1**	**+0.4**
KIV	**Kislovodsk**	**61.58**	**319**	P	**P**	**13 23 49.8**	**-0.2**
KIV				IAmb	IAmb	13 23 53.1	
	comp=Z,35nm,0.8s						
KIV	**Kislovodsk**	**61.58**	**319**	*e*P	**P**	**13 23 50.4**	**+0.4**
KIV				pmax	pmax		
	comp=Z,46nm,1.0s						
KIV				MLR	MLR		
	comp=Z,119nm,17.0s						
KIV	**Kislovodsk**	**61.58**	**319**	P	**P**	**13 23 51.1**	**+1.1**
KIV	**Kislovodsk**	**61.58**	**319**	P	**P**	**13 23 50.5**	**+0.4**
KIV				sP	**sP**	**13 24 07.3**	**-0.4**
TOO	**Toolangi**	**61.64**	**136**	P	**P**	**13 23 52.3**	**+1.8**
	baz=62,SNR=4.7						
TOO	**Toolangi**	**61.64**	**136**	P	**P**	**13 23 51.8**	**+1.3**
TOO	**Toolangi**	**61.64**	**136**	P	**P**	**13 23 51.8**	**+1.3**
TOO				pmax	pmax		
	comp=Z,22nm,1.1s						
BELG	**Belogornoye**	**62.78**	**329**	LR	LR	13 55 30.0	
	comp=Z,361nm,20.8s,baz=138,slow=40						
BELG	**Belogornoye**	**62.78**	**329**	*c i*P	**P**	**13 23 56.7**	**-1.0**
BELG				pmax	pmax		
	comp=Z,18nm,0.9s						
EIL	**Elat**	**63.01**	**301**	LR	LR	13 51 44.4	
	comp=Z,924nm,19.2s,baz=64,slow=36						
GAZ	**Gaziantep**	**63.06**	**310**	P	**P**	**13 24 01.6**	**+1.6**
GAZ				IAmb	IAmb	13 24 21.6	
	comp=Z,31nm,0.8s						
CAN	**Canberra**	**63.07**	**133**	P	**P**	**13 24 01.3**	**+1.2**
CAN				IAmb	IAmb	13 24 02.6	
	comp=Z,46nm,1.3s						
CAN	**Canberra**	**63.07**	**133**	P	**P**	**13 24 01.3**	**+1.2**
CAN				pmax	pmax		
	comp=Z,46nm,1.3s						
CAN	**Canberra**	**63.07**	**133**	P	**P**	**13 24 01.1**	**+1.1**
CAN				pP	**pP**	**13 24 13.8**	**+1.0**
ARMA	**Armidale**	**63.08**	**127**	P	**P**	**13 24 01.7**	**+1.3**
	baz=63,SNR=5.0						
ARMA	**Armidale**	**63.08**	**127**	P	**P**	**13 24 01.3**	**+1.0**
ARMA				IAmb	IAmb	13 24 18.4	
	comp=Z,66nm,1.6s						
SOC	**Sochi**	**63.40**	**318**	*e*P	**P**	**13 23 59.8**	**-2.3**
SOC				*e**SP	**pP**	**13 24 13.6**	**-1.2**
SOC				*e**PP	**sP**	**13 24 13.8**	**-6.0**
SOC				*e*		13 26 19.1	
SOC				*e*S	**S**	**13 32 28.6**	**-3.1**
SOC				*e*		13 33 50.2	
SOC				pmax	pmax		
	comp=Z,37nm,0.7s						
YAK	**Yakutsk**	**63.51**	**17**	P	**P**	**13 24 02.1**	**-0.3**
	comp=Z,45nm,0.6s,baz=275,slow=0.7,SNR=50						
YAK				S	**S**	**13 32 30.3**	**-2.0**
	comp=Z,2.2nm,0.3s,baz=252,slow=3.2,SNR=1.3						
YAK				LR	LR	13 54 29.0	
	comp=Z,2µm,18.1s,baz=224,slow=39						
	comp=Z,45nm,0.6s						
YAK	**Yakutsk**	**63.51**	**17**	P	**P**	**13 24 01.5**	**-0.9**
YAK	**Yakutsk**	**63.51**	**17**	*e*P	**P**	**13 24 02.3**	**-0.1**
YAK				*e**PP	**pP**	**13 24 11.0**	**-4.2**
YAK				*e*		13 24 38.0	
YAK				*e*S	**S**	**13 32 29.9**	**-2.3**
YAK				*e**SS	**pS**	**13 32 49.1**	**+1.4**
YAK				*e*		13 33 45.6	
YAK				*e*SS	**SS**	**13 36 45.1**	**+5.1**
YAK				pmax	pmax		
	comp=Z,212nm,1.3s						
YAK				pmax	pmax		
	comp=N,62nm,1.2s						
YAK				pmax	pmax		
	comp=E,56nm,1.5s						
YAK				pmax	pmax		
	comp=Z,172nm,6.2s						
YAK				pmax	pmax		
	comp=N,142nm,5.9s						
YAK				pmax	pmax		
	comp=E,31nm,2.7s						
YAK				smax	smax		
	comp=N,114nm,3.4s						
YAK				smax	smax		
	comp=E,55nm,3.7s						
YAK				MLR	MLR		
	comp=Z,3µm,24.0s						
YAK				MLR	MLR		
	comp=N,1µm,18.0s						
YAK				MLR	MLR		
	comp=E,1µm,22.0s						
YAK	**Yakutsk**	**63.51**	**17**	P	**P**	**13 24 01.7**	**-0.7**
YAK				pP	**pP**	**13 24 14.3**	**-0.8**
TOKA	**Tokat**	**64.55**	**313**	P	**P**	**13 24 10.5**	**+0.7**
TOKA				IAmb	IAmb	13 24 11.9	
	comp=Z,33nm,0.6s						
BNN	**Bunyan**	**64.58**	**312**	P	**P**	**13 24 10.4**	**+0.3**
MBAR	**Mbarara**	**65.17**	**268**	LR	LR	13 48 15.2	
	comp=Z,712nm,21.9s,baz=74,slow=32						
MBAR	**Mbarara**	**65.17**	**268**	P	**P**	**13 24 15.9**	**+1.4**
MBAR	**Mbarara**	**65.17**	**268**	*ce*P	**P**	**13 24 16.7**	**+2.3**
MBAR				pmax	pmax		
	comp=Z,24nm,1.3s						
MBAR	**Mbarara**	**65.17**	**268**	P	**P**	**13 24 16.0**	**+1.5**
MBAR				sP	**sP**	**13 24 33.3**	**+1.3**
HNR	**Honiara**	**65.20**	**102**	LR	LR	13 55 39.8	
	comp=Z,886nm,19.2s,baz=230,slow=39						
HNR	**Honiara**	**65.20**	**102**	P	**P**	**13 24 13.7**	**-0.7**
HNR	**Honiara**	**65.20**	**102**	P	**P**	**13 24 13.7**	**-0.7**
HNR				pmax	pmax		
	comp=Z,172nm,1.1s						
HNR	**Honiara**	**65.20**	**102**	P	**P**	**13 24 13.9**	**-0.5**
HNR				sP	**sP**	**13 24 30.7**	**-1.5**
VRH	**Novokhopyorsk**	**65.35**	**326**	*e*P	**P**	**13 24 13.5**	**-1.1**
VRH				pmax	pmax		
	comp=Z,70nm,2.0s						
ANN	**Anapa**	**65.38**	**318**	*e*P	**P**	**13 24 14.3**	**-0.6**
ANN				*e**PP	**pP**	**13 24 27.2**	**-0.5**
ANN				*e*S	**S**	**13 32 56.6**	**+0.6**
ANN				pmax	pmax		
	comp=Z,49nm,1.3s						
ANN				MLR	MLR		
	comp=Z,299nm,9.0s						
KIRV	**Kirov**	**65.54**	**335**	LR	LR	13 56 43.8	
	comp=Z,338nm,18.3s,baz=131,slow=40						
KIRV	**Kirov**	**65.54**	**335**	*ce*P	**P**	**13 24 15.0**	**-0.7**
DIKM	**Dikmen**	**65.84**	**314**	⇑P	**P**	**13 24 19.5**	**+1.5**
NRIK	**Noril'sk**	**65.84**	**357**	P	**P**	**13 24 17.3**	**-0.2**
	comp=Z,34nm,0.8s,baz=160,slow=5.3,SNR=44						
NRIK				S	**S**	**13 32 59.4**	**-1.4**
	comp=Z,1.1nm,0.4s,baz=70,slow=18,SNR=1.6						
NRIK				PKKP	**PKKPdf**	**13 44 35.7**	**-3.8**
	comp=Z,2.4nm,0.6s,baz=136,slow=0.7,SNR=3.6						
NRIK				LR	LR	13 58 23.9	
	comp=Z,299nm,19.0s,baz=178,slow=41						
	comp=Z,34nm,0.8s						
NRIK	**Noril'sk**	**65.84**	**357**	P	**P**	**13 24 17.0**	**-0.5**
NRIK				IAmb	IAmb	13 24 18.5	
	comp=Z,60nm,1.1s						
NRIK	**Noril'sk**	**65.84**	**357**	*ce*P	**P**	**13 24 17.1**	**-0.4**
NRIK				pmax	pmax		
	comp=Z,45nm,0.9s						
NRIK				MLR	MLR		
	comp=Z,290nm,15.0s						
BR131	**Keskin Array S**	**66.47**	**312**	P	**P**	**13 24 22.1**	**-0.2**
BR131				IAmb	IAmb	13 24 39.6	
	comp=Z,20nm,0.7s						
BR131	**Keskin Array S**	**66.47**	**312**	*i* P	**P**	**13 24 23.4**	**+1.1**
BR131	**Keskin Array S**	**66.47**	**312**	P	**P**	**13 24 22.1**	**-0.2**
	SNR=5.7						
BRTR	**Keskin Array B**	**66.47**	**312**	P	**P**	**13 24 22.5**	**+0.2**
	comp=Z,9.3nm,0.7s,baz=132,slow=6.9,SNR=49						
BRTR				PKKP	**PKKPdf**	**13 44 35.0**	**-2.8**
	comp=Z,0.7nm,0.6s,baz=11,slow=14,SNR=4.2						
BRTR				LR	LR	13 54 53.4	
	comp=Z,565nm,21.3s,baz=124,slow=37						
	comp=Z,9.3nm,0.7s						
BRTR	**Keskin Array B**	**66.47**	**312**	P	**P**	**13 24 22.2**	**-0.1**
VORD	**Divnogorie**	**66.62**	**325**	*e*P	**P**	**13 24 21.8**	**-1.0**
VORD				pmax	pmax		
	comp=Z,40nm,0.6s						
ILGA	**Ilgaz**	**66.78**	**313**	P	**P**	**13 24 24.5**	**+0.1**
VSR	**Storozhevoye**	**66.80**	**325**	*e*P	**P**	**13 24 23.0**	**-1.0**
VSR				pmax	pmax		
	comp=Z,30nm,0.7s						
VORR	**Voronezh**	**66.97**	**326**	*e*P	**P**	**13 24 23.5**	**-1.5**
VORR				pmax	pmax		
	comp=Z,42nm,1.8s						
ANTO	**Ankara**	**67.13**	**312**	P	**P**	**13 24 26.7**	**+0.3**
ANTO				IAmb	IAmb	13 24 50.7	
	comp=Z,36nm,0.9s						
ANTO	**Ankara**	**67.13**	**312**	P	**P**	**13 24 26.7**	**+0.3**
ANTO				pmax	pmax		
	comp=Z,37nm,1.0s						
ANTO	**Ankara**	**67.13**	**312**	P	**P**	**13 24 28.8**	**+2.4**
ANTO	**Ankara**	**67.13**	**312**	P	**P**	**13 24 26.9**	**+0.5**
LPSR	**Galich'ya Gora**	**67.52**	**326**	*e*P	**P**	**13 24 27.7**	**-0.8**
LPSR				pmax	pmax		
	comp=Z,40nm,0.7s						
MDUB	**Mudurnu**	**68.47**	**312**	P	**P**	**13 24 34.8**	**-0.1**
LSZ	**Lusaka**	**69.50**	**252**	LR	LR	13 50 19.3	
	comp=Z,829nm,21.6s,baz=112,slow=32						
LSZ	**Lusaka**	**69.50**	**252**	P	**P**	**13 24 44.0**	**+2.3**
LSZ	**Lusaka**	**69.50**	**252**	P	**P**	**13 24 43.0**	**+1.3**
MOS	**Moscow**	**69.55**	**329**	*e*P	**P**	**13 24 39.6**	**-1.5**
MOS				*e*		13 24 49.2	
MOS				*e*S	**S**	**13 33 41.7**	**-4.0**
MOS				pmax	pmax		
	comp=Z,97nm,0.8s						
MOS				MLR	MLR		
	comp=Z,1µm,22.0s						
MA2	**Magadan**	**69.77**	**26**	P	**P**	**13 24 42.3**	**-0.1**
	comp=Z,32nm,0.8s,baz=233,slow=5.5,SNR=48						
MA2				LR	LR	13 59 37.5	
	comp=Z,684nm,18.2s,baz=232,slow=40						
	comp=Z,32nm,0.8s						
MA2	**Magadan**	**69.77**	**26**	P	**P**	**13 24 42.1**	**-0.3**
MA2	**Magadan**	**69.77**	**26**	*ce*P	**P**	**13 24 42.5**	**+0.1**
MA2				pmax	pmax		
	comp=Z,69nm,1.3s						
MA2				MLR	MLR		
	comp=Z,931nm,17.0s						
MA2	**Magadan**	**69.77**	**26**	P	**P**	**13 24 42.5**	**+0.1**
MA2				pP	**pP**	**13 24 54.6**	**-0.8**
OBN	**Obninsk**	**69.84**	**328**	LR	LR	13 59 42.8	
	comp=Z,80nm,19.4s,baz=124,slow=40						
OBN	**Obninsk**	**69.84**	**328**	P	**P**	**13 24 42.7**	**-0.1**
OBN				IAmb	IAmb	13 25 00.1	
	comp=Z,82nm,1.1s						
OBN	**Obninsk**	**69.84**	**328**	*ce*P	**P**	**13 24 42.5**	**-0.4**
OBN				*i*		13 24 58.7	
OBN				*e*		13 27 18.0	
OBN				*e*S	**S**	**13 33 50.8**	**+1.8**
OBN				pmax	pmax		
	comp=Z,46nm,0.7s						
OBN				MLR	MLR		
	comp=Z,250nm,17.0s						
MANT	**Manisa**	**70.02**	**310**	P	**P**	**13 24 44.9**	**+0.2**
PETK	**Petropavlovsk-**	**70.51**	**34**	P	**P**	**13 24 47.1**	**0.0**
	comp=Z,3.2nm,0.8s,baz=238,slow=0.5,SNR=5.9						
PETK				LR	LR	13 59 25.5	
	comp=Z,636nm,18.1s,baz=226,slow=39						
	comp=Z,3.2nm,0.8s						
PETK	**Petropavlovsk-**	**70.51**	**34**	P	**P**	**13 24 47.0**	**0.0**
KARP	**Karpathos**	**70.57**	**306**	P	**P**	**13 24 48.5**	**+0.6**
KLMR	**Klimovskoe**	**70.98**	**334**	*e*P	**P**	**13 24 47.8**	**-1.9**
KLMR				AMP		13 24 50.6	
	comp=Z,60nm,1.1s						
KLMR	**Klimovskoe**	**70.98**	**334**	*e*P	**P**	**13 24 47.8**	**-1.9**
KLMR				pmax	pmax		
	comp=Z,60nm,1.1s						
PET	**Petropavlovsk**	**71.02**	**35**	P	**P**	**13 24 49.4**	**-0.7**
PET				IAmb	IAmb	13 24 57.1	
	comp=Z,95nm,1.5s						
PET	**Petropavlovsk**	**71.02**	**35**	*e*P	**P**	**13 24 47.2**	**-2.9**
PET				*e*S	**S**	**13 34 00.6**	**-2.3**
PET				*e*		13 34 50.9	
PET				pmax	pmax		
	comp=Z,52nm,1.4s						
PET				MLR	MLR		
	comp=Z,900nm,17.0s						
PET				MLR	MLR		
	comp=Z,1µm,16.0s						
TIXI	**Tiksi**	**71.06**	**11**	P	**P**	**13 24 49.1**	**-0.9**
	comp=Z,39nm,0.7s,baz=273,slow=23,SNR=224						
TIXI				S	**S**	**13 33 59.0**	**-3.7**
	comp=Z,0.4nm,0.2s,baz=270,slow=24,SNR=1.3						
TIXI				LR	LR	13 58 49.1	
	comp=Z,733nm,18.7s,baz=270,slow=38						
	comp=Z,39nm,0.7s						
TIXI	**Tiksi**	**71.06**	**11**	P	**P**	**13 24 49.0**	**-1.1**
TIXI				IAmb	IAmb	13 24 50.4	
	comp=Z,51nm,0.8s						

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TIXI  Tiksi            71.06  11 ⇑P   P     13 24 49.3 -0.7
TIXI  Tiksi            71.06  11  P   P     13 24 49.2 -0.9
TIXI                              pP  pP    13 25 02.1 -1.0
KOUNC Koumac, New Ca   71.26 113  P   P     13 24 53.6 +1.4
KOUNC                             IAmb IAmb 13 24 54.9
      comp=Z,66nm,1.1s
TLCR                   71.32 317 ⇑P   P     13 24 52.5 +0.4
TLCR                   71.32 317 ⇑P   P     13 24 52.5 +0.4
TIRR  Tirgusor         71.43 316 ⇑P   P     13 24 53.9 +1.1
TIRR  Tirgusor         71.43 316  P   P     13 24 53.0 +0.2
TIRR  Tirgusor         71.43 316 ⇑P   P     13 24 53.9 +1.1
TLBR  Topalu           71.70 316 ⇑P   P     13 24 55.4 +1.0
MILM  Milestii Mici    71.76 318⇓eP   P     13 24 54.0 -0.7
      comp=Z,130nm,0.6s
MILM  Milestii Mici    71.76 318 eP   P     13 24 54.0 -0.7
MILM                              pmax pmax
      comp=Z,130nm,0.6s
KIS   Kishinev         71.77 318 eP   P     13 24 54.0 -0.8
KIS                               pmax pmax
      comp=Z,90nm,0.8s
ICOR  Ion Corvin       71.78 315 ⇑P   P     13 24 56.1 +1.1
CFR   Carcaliu         71.79 316 ⇓P   P     13 24 56.0 +1.0
CFR   Carcaliu         71.79 316 ⇓P   P     13 24 56.0 +1.0
HARR  Harsova          71.82 316 ⇓P   P     13 24 55.9 +0.8
HARR  Harsova          71.82 316 ⇓P   P     13 24 55.9 +0.8
SEY   Seymchan         72.10  24  P   P     13 24 56.2 -0.3
      comp=Z,11nm,0.5s,baz=232,slow=4.9,SNR=54
SEY                               S   S     13 34 11.6 -3.4
      comp=Z,0.3nm,0.5s,baz=168,slow=23,SNR=1.5
SEY                               LR  LR    14 00 25.5
      comp=Z,1µm,18.4s,baz=290,slow=39
      comp=Z,11nm,0.5s
SEY   Seymchan         72.10  24ceP   P     13 24 56.3 -0.1
SEY                               pmax pmax
      comp=Z,46nm,1.3s
IDI   Anoyia           72.36 306  LR  LR    14 00 21.3
      comp=Z,303nm,21.8s,baz=79,slow=39
IDI   Anoyia           72.36 306  P   P     13 24 59.4 +0.7
IDI                               IAmb IAmb 13 25 13.5
      comp=Z,42nm,0.9s
SORM  Soroca           72.37 320 ⇑P   P     13 24 58.9 +0.5
SORM  Soroca           72.37 320 ⇑P   P     13 24 58.9 +0.5
ALN   Alexandroupoli   72.39 312  P   P     13 24 59.1 +0.5
ALN   Alexandroupoli   72.39 312  P   P     13 24 59.1 +0.5
ALN                               pmax pmax
      comp=Z,25nm,1.1s
GHRR                   72.49 317 ⇑P   P     13 25 01.0 +1.9
AKASG Malin Array Be   72.50 322  P   P     13 24 58.9 -0.3
      comp=Z,18nm,0.7s,baz=81,slow=4.2,SNR=126
AKASG                             LR  LR    14 00 19.2
      comp=Z,196nm,19.1s,baz=100,slow=39
      comp=Z,18nm,0.7s
AKASG Malin Array Be   72.50 322  P   P     13 24 58.6 -0.5
AKASG                             IAmb IAmb 13 24 59.8
      comp=Z,40nm,0.8s
AKBB  Malin Array Si   72.50 322  P   P     13 24 58.5 -0.6
AKBB                              IAmb IAmb 13 24 59.8
      comp=Z,39nm,0.8s
AKBB  Malin Array Si   72.50 322ceP   P     13 24 58.9 -0.2
AKBB                              pmax pmax
      comp=Z,41nm,1.0s
RAZG  Razgrad          72.57 315 ⇓P   P     13 25 00.9 +1.2
PANC  Panciu           72.62 317 ⇑P   P     13 25 00.9 +1.0
RDO   Rodhopi          72.81 312  P   P     13 25 00.9 -0.2
ISR   Istrita          72.87 316 ⇓P   P     13 25 04.0 +2.5
ISR   Istrita          72.87 316 ⇓P   P     13 25 04.0 +2.5
VRI   Vrincioaia       72.91 317 ⇓P   P     13 25 03.4 +1.7
VRI   Vrincioaia       72.91 317 ⇓P   P     13 25 03.4 +1.7
ADZR  Andozero         72.95 337 eP   P     13 25 00.0 -1.5
ADZR                             e*PP pP    13 25 13.6 -0.9
ADZR                              pmax pmax
      comp=Z,41nm,0.9s
PLOR  Plostina         72.96 317 ⇑P   P     13 25 03.8 +1.8
PLOR  Plostina         72.96 317 ⇑P   P     13 25 03.8 +1.8
TESR  Tescani          73.11 318 ⇓P   P     13 25 04.1 +1.3
SECR                   73.19 316 ⇓P   P     13 25 05.3 +2.0
COVR  Voineasa-Covas   73.26 317 ⇑P   P     13 25 04.8 +1.0
MLR   Muntele Rosu     73.36 316 ⇓P   P     13 25 06.2 +1.7
MLR   Muntele Rosu     73.36 316  LR  LR    14 03 09.8
      comp=Z,281nm,18.7s,baz=77,slow=41
MLR   Muntele Rosu     73.36 316  P   P     13 25 05.1 +0.6
MLR                               IAmb IAmb 13 25 06.9
      comp=Z,59nm,0.9s
MLR   Muntele Rosu     73.36 316 ⇓P   P     13 25 06.2 +1.7
DZM   Mont Dzumac      73.53 114 eP   P     13 25 06.4 +0.5
      comp=Z,88nm,1.2s
DZM   Mont Dzumac      73.53 114 eLR  LR    13 47 41.0
      comp=Z,707nm,29.9s
DZM   Mont Dzumac      73.53 114  LR  LR    13 57 57.6
      comp=Z,189nm,21.7s,baz=234,slow=36
DZM   Mont Dzumac      73.53 114  P   P     13 25 06.0 +0.2
DZM                               IAmb IAmb 13 25 08.7
      comp=Z,39nm,1.1s
ONTNC Ouen Toro        73.58 114  P   P     13 25 06.5 +0.4
ONTNC                             IAmb IAmb 13 25 08.1
      comp=Z,29nm,0.8s
LBTB  Lobatse          73.74 243  LR  LR    13 54 32.7
      comp=Z,1µm,18.9s,baz=68,slow=33
LBTB  Lobatse          73.74 243  P   P     13 25 08.2 +1.1
LBTB  Lobatse          73.74 243  P   P     13 25 08.2 +1.1
LBTB                              pmax pmax
      comp=Z,28nm,0.9s
DOPR  Dopca            73.84 317 ⇓P   P     13 25 08.0 +0.8
PLVB  Pleven           73.89 314 ⇑P   P     13 25 08.3 +0.9
MTUR  Matau            73.92 316 ⇑P   P     13 25 08.7 +1.0
MTUR  Matau            73.92 316 ⇑P   P     13 25 08.7 +1.0
VOIR                   73.97 316 ⇓P   P     13 25 08.6 +0.6
VOIR                   73.97 316 ⇓P   P     13 25 08.6 +0.6
LIFNC LIFOU            74.02 113  P   P     13 25 09.6 +1.0
ARR   Arges            74.25 316 ⇓P   P     13 25 10.5 +0.9
BURAR Bucovina Array   74.30 318 ⇓P   P     13 25 11.6 +1.7
BURAR Bucovina Array   74.30 318  P   P     13 25 11.1 +1.2
BURAR                             IAmb IAmb 13 25 12.7
      comp=Z,62nm,1.1s
BURAR Bucovina Array   74.30 318 ⇓P   P     13 25 11.6 +1.7
BUR08 Bucovina Ar. S   74.32 319  P   P     13 25 11.2 +1.1
BUR08                             IAmb IAmb 13 25 12.5
      comp=Z,50nm,1.1s
MNK   Minsk            74.35 326 i P  P     13 25 09.3 -0.6
      comp=E,8.0nm,0.9s
MNK                              i P  P     13 25 09.3 -0.6
      comp=N,32nm,1.0s
MNK                              i P  P     13 25 09.3 -0.6
      comp=Z,99nm,0.8s,baz=286
MNK                              i pP pP    13 25 23.6 +0.8
MNK                              i PP PP    13 27 55.5 -0.9
MNK                              i PPP PPP  13 29 40.9
MNK                              i S  S     13 34 40.1 -0.8
MNK                              i sS sS    13 35 04.7 +2.0
MNK                              i SS SS    13 39 27.5  0.0
MNK                              i SSS SSS  13 42 49.4
MNK                              i LR LR    13 58 37.2
MNK                              i LRM MLR  14 00 06.5
      comp=N,474nm,15.6s
MNK                              i LRM MLR  14 00 17.0
      comp=Z,172nm,12.9s
MNK                              i LRM MLR  14 00 41.1
      comp=E,12nm,10.2s
MNK   Minsk            74.35 326 i P  P     13 25 09.3 -0.6
MNK                              i *PP pP   13 25 23.6 +0.8
MNK                              i          13 27 55.4
MNK                              i PPP PPP  13 29 40.8
MNK                              i S  S     13 34 40.0 -0.8
MNK                              i *SS sS   13 35 04.6 +2.0
MNK                              i SS SS    13 39 27.5  0.0
MNK                               pmax pmax
      comp=Z,99nm,0.8s
MNK                               pmax pmax
      comp=E,8.0nm,0.9s
MNK                               pmax pmax
      comp=N,32nm,1.0s
MNK                               MLR MLR
      comp=N,474nm,16.0s
MNK                               MLR MLR
      comp=Z,172nm,13.0s
MNK                               MLR MLR
      comp=E,12nm,10.0s
PUL   Pulkovo          74.71 331ceP   P     13 25 13.2 +1.3
PUL                               pmax pmax
      comp=Z,104nm,0.8s
VTS   Vitosha          74.75 313  P   P     13 25 13.8 +1.0
VTS   Vitosha          74.75 313  P   P     13 25 13.8 +1.0
VTS                               pmax pmax
      comp=Z,15nm,0.8s
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ARCR  ARCALIA          74.77 318 ⇑P   P     13 25 14.2 +1.7
BOSA  Boshof           74.80 239  P   P     13 25 14.2 +1.0
      comp=Z,8.2nm,1.0s,baz=87,slow=7.5,SNR=7.3
BOSA                              LR  LR    13 54 31.3
      comp=Z,573nm,20.3s,baz=70,slow=33
      comp=Z,8.2nm,1.0s
BOSA  Boshof           74.80 239  P   P     13 25 14.2 +1.0
BOSA                              IAmb IAmb 13 25 30.6
      comp=Z,80nm,1.8s
LOT   Lotru            74.86 316 ⇑P   P     13 25 13.4 +0.2
AGG   Agios Georgios   74.91 309  P   P     13 25 12.2 -1.3
AGG   Agios Georgios   74.91 309  P   P     13 25 12.2 -1.3
AGG                               pmax pmax
      comp=Z,3.0nm,0.8s
LIT   Litokhoron       74.93 310  P   P     13 25 12.8 -0.8
LIT                               IAmb IAmb 13 25 30.9
      comp=Z,34nm,1.0s
LIT   Litokhoron       74.93 310  P   P     13 25 12.8 -0.8
LIT                               pmax pmax
      comp=Z,34nm,1.0s
ITM   Ithomi           74.99 307  P   P     13 25 13.8 -0.2
ITM                               IAmb IAmb 13 25 34.0
      comp=Z,26nm,0.7s
NACGM Naroch           75.07 326⇑iP   P     13 25 14.7 +0.6
      comp=Z,109nm,0.9s,baz=106
LVV   L'vov            75.52 321 eP   P     13 25 17.4 +0.6
DEV   Deva             75.53 316 ⇑P   P     13 25 18.6 +1.7
DEV   Deva             75.53 316 ⇑P   P     13 25 18.6 +1.7
GZR   Gura Zlata       75.54 316 ⇓P   P     13 25 17.9 +0.9
GZR   Gura Zlata       75.54 316 ⇓P   P     13 25 17.9 +0.9
IZAR  Zarasai          75.59 327 eP   P     13 25 19.8 +2.8
ISAL  Salakas          75.61 327 eP   P     13 25 19.1 +1.9
HERR  Herculane        75.70 315 ⇓P   P     13 25 19.1 +1.1
DRGR                   75.82 317 ⇑P   P     13 25 20.4 +1.7
DRGR                   75.82 317 ⇑P   P     13 25 20.4 +1.7
SURR  Surduc           76.05 316 ⇓P   P     13 25 21.3 +1.5
VSU   Vasula           76.07 330 i P  P     13 25 21.3 +1.6
VSU   Vasula           76.07 330 eP   P     13 25 20.2 +0.6
LVZ   Lovozero         76.09 340  P   P     13 25 19.3 -0.4
LVZ   Lovozero         76.09 340  P   P     13 25 19.3 -0.4
LVZ                               pmax pmax
      comp=Z,250nm,1.9s
TRPA  Tarpa            76.17 319 ⇑P   P     13 25 22.1 +1.6
MDVR  Moldovita        76.18 315 ⇑P   P     13 25 21.8 +1.0
BZS   Buzias           76.38 316 ⇓P   P     13 25 22.9 +1.1
BZS   Buzias           76.38 316 ⇓P   P     13 25 22.9 +1.1
APA   Apatity          76.38 340⇓iP   P     13 25 19.9 -1.4
APA                               pmax pmax
      comp=Z,26nm,0.8s
APA                               MLR MLR
      comp=Z,1µm,27.0s
SIRR  Siria            76.45 317 ⇑P   P     13 25 23.8 +1.6
PABE  Paberze          76.79 326  P   P     13 25 24.1 +0.3
PABE  Paberze          76.79 326 eP   P     13 25 24.2 +0.4
VSVD  Vaisvydziai      76.92 327 eP   P     13 25 25.3 +0.7
SJES  Sjenica          77.22 313 eP   P     13 25 28.2 +1.5
FIA1  FINESS Array S   77.22 332  P   P     13 25 26.2  0.0
FIA1                              IAmb IAmb 13 25 42.8
      comp=Z,32nm,0.8s
FINES FINESS Array B   77.22 332  P   P     13 25 26.3 +0.2
      comp=Z,23nm,0.6s,baz=104,slow=6.0,SNR=150
      comp=Z,23nm,0.6s
FINES FINESS Array B   77.22 332  P   P     13 25 26.1  0.0
STHS  Stebnicka Huta   77.23 320 eP   P     13 25 27.8 +1.3
STHS                              pmax pmax
      comp=Z,64nm,0.8s
STHS  Stebnicka Huta   77.23 320 eP   P     13 25 27.8 +1.3
DIVS  Divibare         77.31 314  P   P     13 25 27.5 +0.4
DIVS  Divibare         77.31 314 eP   P     13 25 27.4 +0.2
FRGS  Fruska Gora      77.57 315 ⇓P   P     13 25 29.3 +0.8
FRGS  Fruska Gora      77.57 315 eP   P     13 25 28.7 +0.2
KECS  Kecovo           77.58 319 eP   P     13 25 30.1 +1.6
KECS                              pmax pmax
      comp=Z,57nm,0.7s
KECS  Kecovo           77.58 319 eP   P     13 25 30.1 +1.6
PDG   Podgorica        77.64 313  P   P     13 25 28.9  0.0
PDG                               IAmb IAmb 13 25 48.2
      comp=Z,28nm,0.7s
DRME  Dracevica, Mon   77.67 312 eP   P     13 25 29.0 -0.1
MEF   Metsahovi        77.69 331 eP   P     13 25 29.2 +0.5
TEKS  Tekeris          77.69 315 eP   P     13 25 28.8 -0.4
RUDO  Rudo             77.70 314 eP   P     13 25 29.4 +0.2
NIE   Niedzica         77.84 320 eP   P     13 25 32.0 +2.1
PSZ   Piszkesteto      77.89 318 ⇓P   P     13 25 31.8 +1.5
PSZ   Piszkesteto      77.89 318  P   P     13 25 31.0 +0.7
PSZ   Piszkesteto      77.89 318 ⇓P   P     13 25 31.8 +1.5
BEL   Belsk            77.92 322 eP   P     13 25 31.2 +0.9
UPM   Unac-Piva        77.98 313 eP   P     13 25 31.6 +0.5
SCTE  Santa Cesarea    77.99 310  P   P     13 25 31.4 +0.4
PBUR  Paburge          78.02 327 eP   P     13 25 31.6 +0.9
HAPS  Han Pijesak,Bl   78.05 314 eP   P     13 25 32.3 +1.0
BRY   Bratogost        78.22 313 eP   P     13 25 32.3  0.0
OJC   Ojcow            78.28 320 eP   P     13 25 33.3 +1.0
OJC   Ojcow            78.28 320  P   P     13 25 33.1 +0.8
OJC   Ojcow            78.28 320  P   P     13 25 33.1 +0.8
OJC                               pmax pmax
      comp=Z,90nm,0.9s
LANS  Liptovska Anna   78.34 319 eP   P     13 25 34.7 +2.0
LANS                              pmax pmax
      comp=Z,13nm,0.8s
LANS  Liptovska Anna   78.34 319 eP   P     13 25 34.7 +2.0
MORH  Mrgy, Hungar     78.52 316 ⇓P   P     13 25 34.9 +1.3
VYHS  Vyhne            78.67 319 eP   P     13 25 35.7 +1.2
VYHS                              pmax pmax
      comp=Z,30nm,0.8s
VYHS  Vyhne            78.67 319 eP   P     13 25 35.7 +1.2
VADS  Vadso            78.73 341 eP   P     13 25 35.1 +0.7
VADS                              IAmb IAmb 13 25 35.2
      comp=Z,54nm,0.7s
STON  Ston             78.83 313 eP   P     13 25 33.8 -1.7
SRO   Srobarova        78.93 318 eP   P     13 25 38.0 +2.1
SRO                               pmax pmax
      comp=Z,82nm,0.9s
SRO   Srobarova        78.93 318 eP   P     13 25 38.0 +2.1
RAF   Rauma            79.14 332 eP   P     13 25 37.4 +0.6
OKC   Ostrava-Krasne   79.28 320 eP   P     13 25 39.1 +1.3
OKC   Ostrava-Krasne   79.28 320 eP   P     13 25 39.1 +1.3
SRKY  Kupres RS        79.33 314 eP   P     13 25 38.0 -0.4
SUR   Sutherland       79.34 236  LR  LR    13 57 08.1
      comp=Z,586nm,18.6s,baz=72,slow=33
SUR   Sutherland       79.34 236  P   P     13 25 41.8 +3.1
KEV   Kevo             79.37 341  P   P     13 25 38.1 +0.2
KEV                               IAmb IAmb 13 25 39.2
      comp=Z,45nm,1.0s
KEV   Kevo             79.37 341  P   P     13 25 38.1 +0.2
KEV                               pmax pmax
      comp=Z,45nm,1.0s
BLY   Banja Luka       79.38 315 eP   P     13 25 39.4 +0.9
BILL  Bilibino         79.41  21  P   P     13 25 37.7 -0.5
BILL  Bilibino         79.41  21⇑iP   P     13 25 37.9 -0.2
BILL                             i          13 25 43.3
BILL                             i          13 25 50.5
BILL                             e          13 28 45.4
BILL                             eS   S     13 35 36.9 +1.4
BILL                              pmax pmax
      comp=Z,42nm,2.5s
BILL                              MLR MLR
      comp=Z,844nm,15.0s
JAVC  Velka Javorina   79.48 319 eP   P     13 25 40.9 +1.9
A051A Mrakovica        79.60 315 eP   P     13 25 40.3 +0.5
DCZ   Deep Cove        79.63 137  P   P     13 25 39.3 -0.4
DCZ                               IAmb IAmb 13 25 53.5
      comp=Z,40nm,1.2s
MORC  Moravsky Berou   79.67 320 ⇓P   P     13 25 41.4 +1.4
MORC  Moravsky Berou   79.67 320  P   P     13 25 40.9 +0.9
MORC                              IAmb IAmb 13 25 42.4
      comp=Z,40nm,0.9s
MORC  Moravsky Berou   79.67 320 eP   P     13 25 41.2 +1.2
MORC  Moravsky Berou   79.67 320 ⇓P   P     13 25 41.4 +1.4
MODS  Modra-Piesok     79.68 318 eP   P     13 25 41.3 +1.2
MODS                              pmax pmax
      comp=Z,55nm,0.9s
MODS  Modra-Piesok     79.68 318 eP   P     13 25 41.3 +1.2
ARA0  ARCESS Array S   79.80 340 eP   P     13 25 41.0 +0.7
ARCES ARCESS Array B   79.80 340  P   P     13 25 40.4 +0.1
      comp=Z,14nm,0.5s,baz=93,slow=5.4,SNR=143
ARCES                             LR  LR    14 04 47.8
      comp=Z,291nm,18.2s,baz=108,slow=38
      comp=Z,14nm,0.5s
ARCES ARCESS Array B   79.80 340  P   P     13 25 40.8 +0.5
ARCES                             IAmb IAmb 13 25 56.2
      comp=Z,80nm,1.4s
ARCES ARCESS Array B   79.80 340  P   P     13 25 40.8 +0.5
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ARCES                             pmax pmax
      comp=Z,80nm,1.4s
A050A Klekovaca        79.82 314 eP   P     13 25 40.9 -0.1
CUC   Castrocucco      80.02 310  P   P     13 25 42.8 +0.7
SHEM  Shemya Is, Ala   80.03  37  P   P     13 25 42.2 +0.4
      comp=Z,20nm,0.5s,baz=306,slow=6.6,SNR=6.2
SHEM                              LR  LR    14 01 57.0
      comp=Z,164nm,20.5s,baz=271,slow=36
      comp=Z,20nm,0.5s
SMY   Shemya           80.03  37  P   P     13 25 42.6 +0.8
SMY                               IAmb IAmb 13 27 33.5
      comp=Z,109nm,1.1s
SMY   Shemya           80.03  37  P   P     13 25 42.6 +0.8
SMY                               pmax pmax
      comp=Z,109nm,1.1s
KOGS  Kog              80.19 316 eP   P     13 25 44.0 +1.2
KRLC  Kraliky          80.19 320 eP   P     13 25 44.3 +1.5
KRLC  Kraliky          80.19 320 eP   P     13 25 44.3 +1.5
VRAC  Vranov           80.23 319 ⇑P   P     13 25 44.9 +1.9
VRAC  Vranov           80.23 319 eP   P     13 25 44.1 +1.1
VRAC  Vranov           80.23 319 ⇑P   P     13 25 44.9 +1.9
RONA  Rosalia, Austr   80.27 318 eP   P     13 25 44.4 +1.1
      comp=Z,16nm,0.9s,SNR=6.2
WHZ   Wether Hill Ro   80.28 138  P   P     13 25 44.0 +0.7
WHZ                               IAmb IAmb 13 28 01.1
      comp=Z,127nm,2.0s
KRUC  Moravsky         80.34 319 eP   P     13 25 44.6 +1.0
KTK1  Kautokeino       80.43 340 eP   P     13 25 44.1 +0.5
KTK1                              IAmb IAmb 13 25 44.7
      comp=Z,36nm,0.7s
GCIS  Gornji Cirnik    80.57 316 eP   P     13 25 46.1 +1.3
KSP   Ksiaz            80.58 321 eP   P     13 25 46.2 +1.3
CONA  Conrad Observa   80.58 318 eP   P     13 25 45.8 +0.8
      comp=Z,9.2nm,0.7s,SNR=9.6
OSTC  Ostas            80.60 321 eP   P     13 25 46.6 +1.6
OSTC  Ostas            80.60 321 eP   P     13 25 46.6 +1.6
HAMF  Hammerfest       80.71 341 eP   P     13 25 45.8 +0.7
HAMF                              IAmb IAmb 13 25 45.9
      comp=Z,35nm,0.7s
UPC   Upice            80.72 320 eP   P     13 25 47.0 +1.4
UPC   Upice            80.72 320 eP   P     13 25 47.0 +1.4
WKZ   Wanaka           80.73 136  P   P     13 25 46.7 +0.9
WKZ                               IAmb IAmb 13 26 50.3
      comp=Z,159nm,1.9s
ARSA  Arzberg          80.75 317 i P  P     13 25 47.1 +1.2
      comp=Z,37nm,1.1s,SNR=12
BOJS  Bojanci          80.81 315 eP   P     13 25 47.1 +1.0
UPP   Uppsala          80.95 330 eP   P     13 25 47.1 +0.6
TREC  Trest            80.95 319 eP   P     13 25 47.6 +0.7
TREC  Trest            80.95 319 eP   P     13 25 47.6 +0.7
SOKA  Soboth           81.05 317 eP   P     13 25 48.9 +1.4
      comp=Z,44nm,0.9s,SNR=28
LJU   Ljubljana        81.35 316 eP   P     13 25 50.4 +1.4
OBKA  Obir             81.37 316 i P  P     13 25 50.5 +1.3
      comp=Z,20nm,0.7s,SNR=8.0
OBKA  Obir             81.37 316 eP   P     13 25 50.1 +0.9
CEY   Cerknica         81.40 316 eP   P     13 25 50.0 +0.6
JETT  Jettan, Norway   81.53 340 eP   P     13 25 50.3 +0.7
JETT                              IAmb IAmb 13 25 50.8
      comp=Z,61nm,0.6s
PRU   Pruhonice        81.62 320 eP   P     13 25 51.0 +0.6
PRU   Pruhonice        81.62 320 eP   P     13 25 51.0 +0.6
PVCC  Panska Ves       81.64 320 eP   P     13 25 51.9 +1.4
PVCC  Panska Ves       81.64 320 eP   P     13 25 51.9 +1.4
MOA   Molln            81.65 318 eP   P     13 25 51.4 +0.7
      comp=Z,19nm,0.8s
SKDS  Skadanscina      81.68 315 eP   P     13 25 50.7 -0.1
CKRC  Cesky Krumlov    81.69 319 eP   P     13 25 52.0 +1.2
CKRC  Cesky Krumlov    81.69 319 eP   P     13 25 52.0 +1.2
BSD   Bornholm Skovb   81.83 325 i P  P     13 25 50.0 -1.3
BSD                               IAmb IAmb 13 26 09.8
      comp=Z,52nm,1.1s
TRI   Trieste          81.86 315  P   P     13 25 51.8 +0.1
TRI   Trieste          81.86 315  P   P     13 25 51.8 +0.1
TRI                               pmax pmax
      comp=Z,20nm,0.8s
RPZ   Rata Peaks       81.89 135  LR  LR    14 03 07.5
      comp=Z,363nm,20.1s,baz=257,slow=36
RPZ   Rata Peaks       81.89 135  P   P     13 25 52.2 +0.3
RPZ                               IAmb IAmb 13 25 53.7
      comp=Z,34nm,0.9s
AQU   L'Aquila         81.96 312  P   P     13 25 53.0 +0.7
AQU                               IAmb IAmb 13 26 11.5
      comp=Z,56nm,0.9s
AQU   L'Aquila         81.96 312  P   P     13 25 53.1 +0.7
AQU                               pmax pmax
      comp=Z,55nm,0.9s
SABO  M.te Sabotino    81.99 316  P   P     13 25 52.8 +0.3
SABO                              IAmb IAmb 13 25 54.1
      comp=Z,30nm,0.9s
MYKA  Terra Mystica    82.00 316 eP   P     13 25 53.5 +0.9
      comp=Z,19nm,0.8s,SNR=10.0
GUMA  Gualdo di Mace   82.04 313  P   P     13 25 53.6 +0.8
GUMA                              IAmb IAmb 13 26 11.7
      comp=Z,82nm,0.8s
PRED  Cave del Predi   82.04 316  P   P     13 25 53.4 +0.6
PRED                              IAmb IAmb 13 25 55.2
      comp=Z,59nm,0.8s
TRO   Tromso           82.06 340 eP   P     13 25 52.3 +0.1
TRO                               IAmb IAmb 13 25 52.6
      comp=Z,26nm,0.7s
BIOA  Bad Ischl, Aus   82.06 317 eP   P     13 25 53.3 +0.5
      comp=Z,24nm,0.8s,SNR=8.8
HOPEN Hopen            82.06 347 eP   P     13 25 52.5 +0.3
HOPEN                             IAmb IAmb 13 25 54.7
      comp=Z,24nm,0.7s
BRG   Berggiesshubel   82.07 321 i P  P     13 25 54.0 +1.3
BRG                               Amp       13 25 55.1
      comp=Z,31nm,0.8s
BRG   Berggiesshubel   82.07 321  P   P     13 26 02.4  +10
BRG                               Amp       13 26 03.3
      comp=Z,19nm,1.0s
BRG   Berggiesshubel   82.07 321 i P  P     13 25 54.0 +1.3
BRG                                         13 26 02.4
BRG                                         13 26 12.4
BRG                               pmax pmax
      comp=Z,31nm,0.8s
BRG                               pmax pmax
      comp=Z,19nm,1.0s
BRG                               pmax pmax
      comp=Z,29nm,1.2s
BRG                               pmax pmax
      comp=Z,11nm,1.0s
BRG   Berggiesshubel   82.07 321 eP   P     13 25 53.9 +1.3
      comp=Z,31nm,0.8s,baz=92,slow=5.1
ROBS  Robic            82.07 316 eP   P     13 25 53.5 +0.7
GEC2  GERESS Array S   82.09 319  P   P     13 25 53.9 +0.9
GEC2                              IAmb IAmb 13 25 55.3
      comp=Z,45nm,0.8s
GEC2  GERESS Array S   82.09 319 eP   P     13 25 54.3 +1.3
      comp=Z,53nm,0.9s,baz=92,slow=5.1
GERES GERESS Array B   82.09 319  P   P     13 25 52.0 -1.0
      comp=Z,33nm,0.8s,baz=95,slow=3.3,SNR=111
GERES                             S   S     13 36 04.1 -0.4
      comp=Z,0.2nm,0.3s,baz=46,slow=9.5,SNR=3.5
      comp=Z,33nm,0.8s
GERES GERESS Array B   82.09 319  P   P     13 25 53.7 +0.7
GERES GERESS Array B   82.09 319  P   P     13 25 53.7 +0.7
KHC   Kasperske Hory   82.19 319  P   P     13 25 54.0 +0.5
KHC   Kasperske Hory   82.19 319 eP   P     13 25 54.1 +0.7
KHC                              ex   x     13 26 04.5
KHC   Kasperske Hory   82.19 319 i P  P     13 25 54.8 +1.4
KHC                               pmax pmax
      comp=Z,35nm,0.8s
FDMO  Fiordimonte      82.22 313  P   P     13 25 54.3 +0.6
FDMO                              IAmb IAmb 13 26 11.9
      comp=Z,40nm,1.0s
KBA   Koelnbreinsper   82.23 317 eP   P     13 25 54.3 +0.4
      comp=Z,19nm,0.9s,SNR=10
RUE   Ruedersdorf      82.28 322 eP   P     13 25 54.3 +0.6
RUE   Ruedersdorf      82.28 322 eP   P     13 25 54.9 +1.1
      comp=Z,133nm,0.8s,baz=92,slow=5.1
QRZ   Quartz Range     82.35 132  P   P     13 25 55.7 +1.3
FBE   Freiberg         82.44 321 eP   P     13 25 56.1 +1.4
      comp=Z,45nm,0.8s,baz=92,slow=5.1
CLUD  Cludinico        82.51 316  P   P     13 25 55.8 +0.6
DEL   Delary           82.54 326 i P  P     13 25 55.0  0.0
STAL  STALIGIAL        82.62 316  P   P     13 25 56.2 +0.5
STAL                              IAmb IAmb 13 26 14.2
      comp=Z,41nm,0.9s
RJOB  Jochberg         82.63 318 eP   P     13 25 56.1 +0.3
      comp=Z,32nm,0.8s,baz=92,slow=5.1
MRNZ  Matariki Terra   82.63 132  P   P     13 25 55.0 -0.9
CLL   Collm            82.69 321  P   P     13 25 56.4 +0.5
CLL                               IAmb IAmb 13 25 57.8
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      comp=Z,27nm,1.0s
CLL   Collm             82.69 321 i P   P      13 25 56.6 +0.7
      comp=Z,25nm,0.9s
CLL                               ePcP  PcP    13 26 01.0 +0.2
CLL                               ex    x      13 26 05.0
CLL   Collm             82.69 321 i P   P      13 25 56.6 +0.7
CLL                                pmax pmax
      comp=Z,25nm,0.9s
CLL   Collm             82.69 321 eP    P      13 25 56.7 +0.7
      comp=Z,25nm,0.9s,baz=92,slow=5.1
TKNZ  Takaka Hill       82.71 132  P    P      13 25 56.4 +0.1
ABTA  Abfaltersbach     82.78 316 i P   P      13 25 57.0 +0.4
      comp=Z,20nm,0.9s,SNR=8.3
CIMO  Cimolais          82.81 316  P    P      13 25 57.4 +0.7
CIMO                               IAmb IAmb   13 25 58.8
      comp=Z,75nm,0.9s
THZ   Tophouse          82.81 133  P    P      13 25 57.0 +0.1
NKC   Novy Kostel       82.98 320 eP    P      13 25 58.6 +1.1
NKC   Novy Kostel       82.98 320 eP    P      13 25 58.6 +1.1
FAUS  Fauske            83.02 337 eP    P      13 25 57.9 +0.6
FAUS                               IAmb IAmb   13 25 59.3
      comp=Z,34nm,0.8s
WERN  Wernitzgruen      83.03 320 eP    P      13 25 59.0 +1.2
      comp=Z,16nm,0.8s,baz=92,slow=5.1
GUNZ  Gunzen            83.06 320 eP    P      13 25 59.1 +1.1
      comp=Z,24nm,0.8s,baz=92,slow=5.1
GUNZ                              epP   pP     13 26 07.7 -3.3
WERD  Werda             83.08 320 eP    P      13 25 59.0 +0.9
      comp=Z,22nm,0.8s,baz=92,slow=5.1
STEI  Steigen           83.11 338 eP    P      13 25 58.2 +0.4
STEI                               IAmb IAmb   13 25 59.3
      comp=Z,50nm,0.9s
AMKA  Amchitka          83.11  39  P    P      13 25 58.1  0.0
ROTZ  Rotzenmuhle       83.11 320 eP    P      13 25 59.6 +1.4
      comp=Z,8.8nm,0.8s,baz=92,slow=5.1
LATE  Laterza           83.15 312  P    P      13 25 59.0 +0.4
LATE                               IAmb IAmb   13 26 17.0
      comp=Z,48nm,1.0s
PLN   Plauen            83.18 320 eP    P      13 25 59.5 +1.0
      comp=Z,115nm,2.2s,baz=92,slow=5.1
MANZ  Manzenberg        83.19 320 eP    P      13 26 00.1 +1.5
      comp=Z,11nm,0.9s,baz=92,slow=5.1
MOR8  Moi Rana          83.21 336 eP    P      13 25 58.4  0.0
MOR8                               IAmb IAmb   13 25 58.5
      comp=Z,29nm,0.7s
CTI   Castel Tesino     83.35 316  P    P      13 26 00.7 +1.0
CTI                                IAmb IAmb   13 26 01.9
      comp=Z,51nm,0.9s
CTI   Castel Tesino     83.35 316  P    P      13 26 00.7 +1.0
CTI                                pmax pmax
      comp=Z,51nm,0.9s
WTTA  Wattenberg        83.40 317 eP    P      13 26 00.2 +0.2
      comp=Z,50nm,0.9s,SNR=14
WATA  Walderalm         83.44 317 i P   P      13 26 00.1  0.0
      comp=Z,31nm,1.0s,SNR=7.0
NEUB  Neuenburg         83.45 321 eP    P      13 26 00.7 +0.9
      comp=Z,51nm,0.9s,baz=92,slow=5.1
NEUB                              epP   pP     13 26 09.5 -3.4
MOX   Moxa              83.53 320 eP    P      13 26 01.3 +1.0
      comp=Z,20nm,0.8s,baz=92,slow=5.1
FUR   Furstenfeldbru    83.67 318 eP    P      13 26 01.7 +0.6
      comp=Z,39nm,0.8s,baz=92,slow=5.1
SQTA  Sankt Quirin      83.69 317 i P   P      13 26 01.7 +0.4
      comp=Z,36nm,0.8s,SNR=12
MSVF  Nonsavu           83.72 108  LR   LR     14 03 56.2
      comp=Z,89nm,20.7s,baz=144,slow=36
MSVF  Nonsavu           83.72 108  P    P      13 26 03.0 +1.0
MSVF                               IAmb IAmb   13 26 05.3
      comp=Z,26nm,0.9s
MSVF  Nonsavu           83.72 108  P    P      13 26 03.0 +1.0
MSVF                               pmax pmax
      comp=Z,26nm,1.0s
GRA1  Grafenberg Arr    83.75 319  P    P      13 26 02.7 +1.2
GRA1                               IAmb IAmb   13 26 04.0
      comp=Z,47nm,0.8s
GRF   Grafenberg Arr    83.75 319  P    P      13 26 02.7 +1.2
GRF                                pmax pmax
      comp=Z,47nm,0.8s
GRF   Grafenberg Arr    83.75 319 eP    P      13 26 02.9 +1.4
      comp=Z,54nm,0.9s,baz=92,slow=5.1
GRFO  Grafenberg        83.75 319  P    P      13 26 02.8 +1.3
GRFO                               IAmb IAmb   13 26 04.0
      comp=Z,45nm,0.8s
GRFO  Grafenberg        83.75 319  P    P      13 26 02.8 +1.3
GRFO                               pmax pmax
      comp=Z,45nm,0.8s
MOTA  Moosalm           83.76 317 i P   P      13 26 02.0 +0.2
      comp=Z,36nm,0.9s,SNR=12
LOF   Lofoten           83.77 338 eP    P      13 26 01.8 +0.6
ZCCA  Zocca             83.79 314  P    P      13 26 03.9 +2.1
ZCCA                               IAmb IAmb   13 26 26.2
      comp=Z,42nm,0.9s
FLTG  Flechtingen       83.83 322 eP    P      13 26 02.0 +0.3
      comp=Z,22nm,0.8s,baz=92,slow=5.1
NC405 NORSAR Array S    83.99 331  P    P      13 26 02.5  0.0
RETA  Reutte            84.00 317 i P   P      13 26 03.4 +0.6
      comp=Z,36nm,0.7s,SNR=17
FETA  Feichten          84.01 317 i P   P      13 26 03.8 +0.7
      comp=Z,21nm,0.9s,SNR=11
NC602 NORSAR Array S    84.05 331  P    P      13 26 02.8  0.0
NC602 NORSAR Array S    84.05 331 eP    P      13 26 03.1 +0.4
NSS   Namsos            84.09 334 eP    P      13 26 03.3 +0.5
NSS                                IAmb IAmb   13 26 04.1
      comp=Z,24nm,0.6s
SALO  Salr              84.13 315  P    P      13 26 04.8 +1.3
NC303 NORSAR Array S    84.16 331  P    P      13 26 03.4 +0.1
NC303                              IAmb IAmb   13 26 13.6
      comp=Z,34nm,1.1s
ASSE  Asse, Remlinge    84.17 322 eP    P      13 26 04.3 +0.9
      comp=Z,18nm,0.8s,baz=92,slow=5.1
NB2   NORSAR Subarra    84.23 331  P    P      13 26 03.7  0.0
      comp=Z,18nm,0.9s,baz=96,slow=5.1
NB2   NORSAR Subarra    84.23 331  P    P      13 26 03.7  0.0
      slow=5.1
NOA   NORSAR Array B    84.23 331  P    P      13 26 03.8  0.0
      comp=Z,8.8nm,0.8s,baz=94,slow=5.2,SNR=22
NOA                                PP   PP     13 29 16.9 -1.6
      comp=Z,3.1nm,0.9s,baz=91,slow=8.5,SNR=3.5
NOA                                LR   LR     14 06 33.6
      comp=Z,150nm,19.5s,baz=80,slow=38
      comp=Z,8.8nm,0.8s
SPB2  Spitsbergen Ar    84.30 348  P    P      13 26 03.7 -0.1
SPB2                               IAmb IAmb   13 26 26.4
      comp=Z,46nm,0.9s
SPA0  Spitsbergen Ar    84.31 348 eP    P      13 26 03.8 +0.1
SPA0                               IAmb IAmb   13 26 06.1
      comp=Z,35nm,0.9s
SPITS Spitsbergen Ar    84.31 348  P    P      13 26 02.6 -1.2
      comp=Z,14nm,0.5s,baz=93,slow=10,SNR=40
SPITS                              LR   LR     14 12 21.4
      comp=Z,243nm,18.2s,baz=92,slow=42
      comp=Z,14nm,0.5s
FUORN Ofenpass-Fuorn    84.32 316  P    P      13 26 05.5 +0.7
FUORN                              IAmb IAmb   13 26 23.4
      comp=Z,30nm,0.9s
CLZ   Clausthal         84.35 322 eP    P      13 26 05.6 +1.1
      comp=Z,44nm,0.9s,baz=92,slow=5.1
CLZ                               epP   pP     13 26 14.2 -3.3
BSEG  Bad Segeberg      84.43 324 eP    P      13 26 06.1 +1.3
      comp=Z,71nm,0.8s,baz=92,slow=5.1
NBO00 NORSAR Array S    84.44 331  P    P      13 26 05.6 +0.9
UBR   Ueberruh          84.44 317 eP    P      13 26 05.7 +0.6
      comp=Z,29nm,1.0s,baz=92,slow=5.1
NC204 NORSAR Array S    84.46 331  P    P      13 26 05.1 +0.2
NRDL  Niedersach Rie    84.53 322 eP    P      13 26 06.8 +1.6
      comp=Z,32nm,0.9s,baz=92,slow=5.1
DAVA  Damuels           84.59 317 i P   P      13 26 06.9 +0.9
      comp=Z,36nm,1.0s,SNR=13
GTTG  Gottingen         84.59 321 eP    P      13 26 06.8 +1.1
      comp=Z,30nm,0.8s,baz=92,slow=5.1
MRZ   Mangatainoka R    84.60 131  P    P      13 26 06.1 +0.2
MSSA  Maissana          84.83 314  P    P      13 26 06.9 -0.2
MSSA                               IAmb IAmb   13 26 24.5
      comp=Z,30nm,1.0s
KONO  Kongsberg         84.97 329  P    P      13 26 08.2 +0.8
KONO  Kongsberg         84.97 329  P    P      13 26 08.2 +0.8
KONO                               pmax pmax
      comp=Z,146nm,1.8s
KONO  Kongsberg         84.97 329 eP    P      13 26 08.6 +1.2
RETH  Rethem/Aller,     84.98 322 eP    P      13 26 08.7 +1.1
      comp=Z,35nm,0.9s,baz=92,slow=5.1
RETH                              epP   pP     13 26 17.4 -3.2
KEST  Kesra             85.03 305  P    P      13 26 07.8 -0.6
      comp=Z,19nm,0.9s,baz=225,slow=4.3,SNR=14
KEST                               LR   LR     14 11 28.8
      comp=Z,106nm,18.1s,baz=28,slow=41
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      comp=Z,19nm,0.9s
KEST  Kesra             85.03 305  P    P      13 26 11.2 +2.8
BKZ   Black Stump Fm    85.06 130  P    P      13 26 08.1 -0.2
STU   Stuttgart         85.06 318 eP    P      13 26 08.9 +0.7
      comp=Z,73nm,0.9s,baz=92,slow=5.1
BFZ   Birch Farm        85.10 131  P    P      13 26 08.8 +0.4
MUD   Monsted U'grnd    85.14 326 eP    P      13 26 07.4 -0.9
MUD                                IAmb IAmb   13 26 11.1
      comp=Z,61nm,1.0s
DOMB  Dombas            85.29 332 eP    P      13 26 09.7 +0.7
KIWB  Kanaga Island     85.34  38  P    P      13 26 08.8 -0.6
RTZ   Ruatahuna         85.35 129  P    P      13 26 09.2 -0.6
RTZ                                IAmb IAmb   13 26 10.7
      comp=Z,66nm,1.1s
URZ   Urewera           85.40 129  LR   LR     14 07 00.0
      comp=Z,202nm,18.5s,baz=10.0,slow=38
HOMB  Homborsund        85.52 328 eP    P      13 26 10.9 +0.7
TNS   Taunus Mts        85.55 320 eP    P      13 26 11.7 +1.1
      comp=Z,32nm,0.8s,baz=92,slow=5.1
KASTN Kahler Asten      85.56 321 eP    P      13 26 11.7 +1.1
      comp=Z,17nm,0.8s,baz=92,slow=5.1
ADK   Adak              85.63  38  P    P      13 26 10.0 -0.8
ADK   Adak              85.63  38  P    P      13 26 10.0 -0.8
ADK                                pmax pmax
      comp=Z,164nm,1.9s
BFO   Black Forest      85.64 318  P    P      13 26 10.9 -0.1
BFO                                IAmb IAmb   13 26 12.6
      comp=Z,24nm,0.8s
BFO   Black Forest      85.64 318  P    P      13 26 10.9 -0.1
BFO                                pmax pmax
      comp=Z,24nm,0.8s
BFO   Black Forest      85.64 318 eP    P      13 26 11.5 +0.5
      comp=Z,28nm,0.8s,baz=92,slow=5.1
SKAR  Skarslia          85.64 330 eP    P      13 26 12.4 +1.6
IBBN  Ibbenburen        85.97 322 eP    P      13 26 13.8 +1.3
      comp=Z,64nm,0.7s,baz=92,slow=5.1
MOL   Molde             86.00 332 eP    P      13 26 13.8 +1.4
SNART Snartemo          86.20 328 eP    P      13 26 15.2 +1.6
AKN   Aaknes            86.26 332 eP    P      13 26 15.4 +1.6
BUG   Bochum--Univer    86.28 321 eP    P      13 26 15.2 +1.2
      comp=Z,51nm,0.8s,baz=92,slow=5.1
SENIN Lac Senin/Sane    86.37 316  P    P      13 26 15.4 +0.5
AHRW  Bad Neuenahr-A    86.42 320 eP    P      13 26 16.2 +1.4
      comp=Z,30nm,0.9s,baz=92,slow=5.1
ECH   Echery            86.42 318  P    P      13 26 15.4 +0.5
ECH                                IAmb IAmb   13 26 17.1
      comp=Z,19nm,0.9s
ECH   Echery            86.42 318  P    P      13 26 15.4 +0.5
ECH                                pmax pmax
      comp=Z,19nm,0.9s
ODD1  Odda              86.48 330 eP    P      13 26 15.8 +0.8
BLS5  Blasjo            86.58 329 eP    P      13 26 16.8 +1.4
HYA   Hoyanger          86.67 331 eP    P      13 26 17.3 +1.5
BNI   Bardonecchia      86.85 315  P    P      13 26 17.3 +0.1
BNI                                IAmb IAmb   13 26 52.1
      comp=Z,18nm,1.0s
BNI   Bardonecchia      86.85 315  P    P      13 26 17.3 +0.1
BNI                                pmax pmax
      comp=Z,18nm,1.0s
WLF   Walferdange       87.04 319  P    P      13 26 18.7 +0.8
WLF                                IAmb IAmb   13 26 20.5
      comp=Z,22nm,0.9s
WLF   Walferdange       87.04 319  P    P      13 26 18.7 +0.8
WLF                                pmax pmax
      comp=Z,22nm,0.9s
WLF   Walferdange       87.04 319 dP    P      13 26 19.0 +1.1
      comp=Z,18nm,0.9s
WLF   Walferdange       87.04 319 eP    P      13 26 19.4 +1.5
      comp=Z,23nm,0.9s,baz=92,slow=5.1
MEM   Membach           87.10 320 dP    P      13 26 19.3 +1.2
      comp=Z,21nm,0.8s
BHOU  Houvegnez         87.11 320 dP    P      13 26 19.9 +1.6
RCHB  Rochefort         87.62 320 dP    P      13 26 21.8 +1.2
BGES  Gesves            87.70 320 dP    P      13 26 22.2 +1.2
      comp=Z,14nm,0.8s
BMRD  Maredsous         87.91 320 dP    P      13 26 23.3 +1.3
      comp=Z,7.3nm,0.9s
DOU   Dourbes           88.03 320 dP    P      13 26 23.8 +1.2
      comp=Z,13nm,0.9s
SNF   Seneffe           88.20 320 dP    P      13 26 24.7 +1.4
      comp=Z,31nm,0.8s
SSB   Saint Sauveur     88.35 315  P    P      13 26 24.9 +0.6
SSB   Saint Sauveur     88.35 315  P    P      13 26 24.9 +0.6
SSB                                pmax pmax
      comp=Z,12nm,0.8s
RAO   Raoul Island      88.50 119  LR   LR     14 08 57.9
      comp=Z,158nm,18.3s,baz=230,slow=38
TNA   Tin City          89.32  24  P    P      13 26 28.0 -0.4
TNA   Tin City          89.32  24  P    P      13 26 28.3  0.0
      baz=277
NOR   Nord              89.66 352 i P   P      13 26 29.6 -0.1
NOR                                IAmb IAmb   13 26 30.0
      comp=Z,25nm,0.9s
CLF   Chambon-Foret     89.71 318  P    P      13 26 31.5 +1.0
ANM   Nome              90.54  25  P    P      13 26 34.2 +0.2
ANM   Nome              90.54  25  P    P      13 26 34.2 +0.2
ANM                                pmax pmax
      comp=Z,11nm,1.2s
ANM   Nome              90.54  25  P    P      13 26 34.5 +0.4
      baz=280
RDOG  Red Dog Mine      90.87  22  P    P      13 26 35.8 +0.3
      baz=282
DAG   Danmarks Havn     91.95 348 i P   P      13 26 39.6 -0.8
DAG                                IAmb IAmb   13 27 03.6
      comp=Z,6.7nm,0.6s
A21K  Barrow            92.15  18  P    P      13 26 41.9 +0.5
A21K  Barrow            92.15  18  P    P      13 26 42.2 +0.9
      baz=288,SNR=26
TORD  Torodi Ar. Bea    93.19 283  P    P      13 26 48.9 +1.5
      comp=Z,3.4nm,0.7s,baz=86,slow=5.4,SNR=18
TORD                               PP   PP     13 30 33.0 +1.6
      comp=Z,0.2nm,0.4s,baz=26,slow=37,SNR=2.4
TORD                               LR   LR     14 08 27.6
      comp=Z,254nm,18.5s,baz=76,slow=35
      comp=Z,3.4nm,0.7s
TORD  Torodi Ar. Bea    93.19 283  P    P      13 26 48.1 +0.8
TORD                               IAmb IAmb   13 29 15.0
      comp=Z,12nm,0.8s
AFI   Afiamalu          93.20 104  LR   LR     14 11 11.3
      comp=Z,62nm,20.1s,baz=268,slow=37
QSPA  South Pole Qui    93.56 180  LR   LR     14 03 21.2
      comp=Z,750nm,20.1s,baz=291,slow=32
S12K  Black Hills       93.83  34  P    P      13 26 50.3 +0.8
      baz=282
GCSA  Galena City Sc    94.05  24  P    P      13 26 51.1 +0.9
      baz=287
N16K  Nishlik Lake      94.41  29  P    P      13 26 53.1 +1.1
      baz=285
F21K  Alatna River      94.56  21  P    P      13 26 53.0 +0.4
      baz=290
SDPT  Sand Point        94.79  34  P    P      13 26 54.3 +0.5
      baz=283
G21K  Allakaket         94.80  22  P    P      13 26 54.3 +0.6
      baz=290
E22K  Anaktuvuk Pass    94.82  20  P    P      13 26 54.3 +0.5
      baz=292,SNR=9.6
D23K  Nanushuk River    94.88  19  P    P      13 26 54.8 +0.7
      baz=293
IMAR  Indian Mountai    94.89  23  P    P      13 26 54.6 +0.4
F22K  John River        94.93  21  P    P      13 26 55.2 +0.9
      baz=292
TTA   Tatalina          94.97  26  P    P      13 26 54.8 +0.2
TTA                                IAmb IAmb   13 26 56.3
      comp=Z,15nm,1.1s
TTA   Tatalina          94.97  26  P    P      13 26 54.8 +0.2
TTA                                pmax pmax
      comp=Z,15nm,1.1s
TTA   Tatalina          94.97  26  P    P      13 26 55.1 +0.5
      baz=288
O16K  Kokwok River B    94.97  29  P    P      13 26 55.0 +0.4
      baz=286,SNR=5.0
P16K  Nushagak River    95.17  30  P    P      13 26 55.4 -0.2
      baz=286
C24K  Franklin Bluff    95.21  18  P    P      13 26 55.9 +0.4
      baz=295
ESDC  Sonseca Array     95.21 310  P    P      13 26 57.2 +1.0
      comp=Z,3.2nm,0.8s,baz=57,slow=4.4,SNR=18
      comp=Z,3.2nm,0.8s
ESDC  Sonseca Array     95.21 310  P    P      13 26 57.0 +0.7
H21K  Melozitna Rive    95.37  23  P    P      13 26 56.9 +0.6
H21K                               IAmb IAmb   13 26 58.4
      comp=Z,18nm,1.1s
H21K  Melozitna Rive    95.37  23  P    P      13 26 57.1 +0.7
      baz=291
G22K  Bettles           95.39  21  P    P      13 26 56.7 +0.3
      baz=292
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O17K  Koliganek Bris    95.41  29  P    P      13 26 56.8 +0.3
      baz=287,SNR=6.1
E23K  Chandalar         95.61  20  P    P      13 26 57.9 +0.4
      baz=294
K20K  Telida            95.66  25  P    P      13 26 58.4 +0.7
K20K  Telida            95.66  25  P    P      13 26 58.8 +1.1
      baz=290
L19K  White Mountain    95.71  26  P    P      13 26 58.5 +0.6
L19K                               IAmb IAmb   13 26 59.9
      comp=Z,18nm,0.8s
L19K  White Mountain    95.71  26  P    P      13 26 58.7 +0.7
      baz=289
COLD  Coldfoot          95.74  21  P    P      13 26 58.1 +0.1
COLD  Coldfoot          95.74  21  P    P      13 26 58.4 +0.4
      baz=294,SNR=6.4
H22K  Ishtalitna Cre    95.83  22  P    P      13 26 59.2 +0.8
      baz=292,SNR=11
I21K  Tanana            95.87  23  P    P      13 26 59.1 +0.5
I21K                               IAmb IAmb   13 27 00.6
      comp=Z,16nm,1.1s
I21K  Tanana            95.87  23  P    P      13 26 59.4 +0.8
      baz=292
E24K  Your Creek        95.99  20  P    P      13 26 59.6 +0.4
      baz=295
M19K  Big River Lodg    96.01  27  P    P      13 27 00.1 +0.8
      baz=289
G23K  Bananza Creek     96.01  21  P    P      13 26 59.8 +0.5
      baz=294
L20K  Farewell, AK      96.04  26  P    P      13 27 00.1 +0.6
      baz=290
D25K  Kavik River       96.12  18  P    P      13 27 00.2 +0.5
      baz=297
SNAA  Sanae             96.15 198  LR   LR     14 04 20.3
      comp=Z,169nm,18.6s,baz=102,slow=32
CHUM  Lake Minchumin    96.21  24  P    P      13 27 00.8 +0.7
      baz=291,SNR=12
O18K  Koktuh Hills      96.29  29  P    P      13 27 01.4 +0.7
      baz=288
C26K  Camden Bay        96.29  18  P    P      13 27 01.5 +1.1
      baz=299
N19K  Bonanza Creek     96.32  28  P    P      13 27 01.5 +0.6
N19K  Bonanza Creek     96.32  28  P    P      13 27 01.3 +0.4
      baz=289
MLY   Manley            96.41  23  P    P      13 27 01.3 +0.1
MLY                                IAmb IAmb   13 27 02.9
      comp=Z,33nm,2.0s
MLY   Manley            96.41  23  P    P      13 27 01.8 +0.7
      baz=293,SNR=5.3
P18K  Big Mountain,     96.43  29  P    P      13 27 01.7 +0.4
      baz=288
F24K  Squaw Lake        96.43  20  P    P      13 27 01.7 +0.5
      baz=296
CAST  Castle Rocks      96.48  25  P    P      13 27 01.8 +0.4
CAST                               IAmb IAmb   13 27 03.0
      comp=Z,21nm,1.0s
CAST  Castle Rocks      96.48  25  P    P      13 27 01.9 +0.4
      baz=292,SNR=13
H23K  Yukon River       96.55  22  P    P      13 27 02.2 +0.5
H23K                               IAmb IAmb   13 27 03.5
      comp=Z,7.3nm,0.8s
H23K  Yukon River       96.55  22  P    P      13 27 02.4 +0.7
      baz=294
M20K  Styx River        96.58  26  P    P      13 27 02.6 +0.6
      baz=290
O19K  Port Alsworth     96.60  28  P    P      13 27 02.3 +0.3
O19K                               IAmb IAmb   13 27 04.1
      comp=Z,30nm,1.2s
O19K  Port Alsworth     96.60  28  P    P      13 27 02.1 +0.1
      baz=289
PPLA  Purkeypile        96.62  25  P    P      13 27 02.3 +0.1
      baz=291
BPAW  Bear Paw Mtn.     96.67  24  P    P      13 27 02.4 +0.1
BPAW                               IAmb IAmb   13 27 03.8
      comp=Z,25nm,1.2s
BPAW  Bear Paw Mtn.     96.67  24  P    P      13 27 02.5 +0.1
      baz=292,SNR=12
Q18K  Katmai Hardscr    96.77  30  P    P      13 27 02.8 -0.2
      baz=288
C27K  Jago River        96.80  18  P    P      13 27 03.2 +0.4
      baz=300
I23K  Minto, Yukon-K    96.90  23  P    P      13 27 03.2 -0.1
I23K  Minto, Yukon-K    96.90  23  P    P      13 27 03.6 +0.4
      baz=294,SNR=5.4
G24K  Hadweenzic Riv    96.94  21  P    P      13 27 03.9 +0.5
      baz=296
E25K  Arctic Village    96.94  19  P    P      13 27 03.9 +0.4
      baz=298
NEEM  North Greenlan    96.98 353 i P   P      13 27 04.5 +0.7
NEEM                               IAmb IAmb   13 27 22.0
      comp=Z,25nm,1.2s
F25K  Christian Rive    97.17  20  P    Pdif   13 27 05.0 +0.4
      baz=298
H24K  Noodor Dome       97.17  22  P    Pdif   13 27 04.7 +0.1
H24K  Noodor Dome       97.17  22  P    Pdif   13 27 04.9 +0.3
      baz=296
TRF   Thorofare Moun    97.21  24  P    Pdif   13 27 05.3 +0.2
TRF                                IAmb IAmb   13 30 55.4
      comp=Z,33nm,1.7s
TRF   Thorofare Moun    97.21  24  P    Pdif   13 27 05.3 +0.3
      baz=293
SPCR  Spurr Chakacha    97.23  27  P    Pdif   13 27 05.4 +0.4
      baz=291
NEA2  Nenana            97.24  23  P    P      13 27 04.8  0.0
NEA2  Nenana            97.24  23  P    P      13 27 04.9  0.0
      baz=294
SKT   Skwentna          97.25  26  P    P      13 27 04.4 -0.5
SKT                                IAmb IAmb   13 27 05.5
      comp=Z,13nm,1.1s
SKT   Skwentna          97.25  26  P    P      13 27 04.8 -0.1
      baz=292,SNR=5.3
G25K  Bearman Lake      97.40  21  P    Pdif   13 27 05.9 +0.4
      baz=297
MDM   Murphy Dome       97.42  23  P    P      13 27 05.4 -0.3
O20K  Slope Mountain    97.44  28  P    Pdif   13 27 06.4 +0.4
      baz=291
BMAR  Burnt Mountain    97.61  20  P    Pdif   13 27 06.7 +0.1
F26K  Sheenjek River    97.62  19  P    Pdif   13 27 07.2 +0.6
      baz=299
MCK   McKinley          97.65  24  P    P      13 27 06.2 -0.6
MCK   McKinley          97.65  24  P    P      13 27 06.2 -0.6
MCK   McKinley          97.65  24  P    P      13 27 06.6 -0.2
      baz=294
BORG  Borgarnes         97.96 337  LR   LR     14 13 52.7
      comp=Z,214nm,20.3s,baz=82,slow=37
ILAR  Eielson Array     98.01  23  P    P      13 27 06.7 -1.6
      comp=Z,1.9nm,0.9s,baz=300,slow=4.1,SNR=18
ILAR                               PP   PP     13 31 01.8 -5.4
      comp=Z,3.3nm,1.2s,baz=294,slow=7.7,SNR=7.0
ILAR                               LR   LR     14 14 39.7
      comp=Z,195nm,19.1s,baz=315,slow=37
      comp=Z,1.9nm,0.9s
G26K  Porcupine Rive    98.11  20  P    Pdif   13 27 09.4 +0.7
      baz=300
HDA   Harding Lake      98.15  23  P    P      13 27 08.8 -0.1
      baz=296
PRP   Porcupine Dome    98.19  22  P    P      13 27 08.8 -0.4
PRP   Porcupine Dome    98.19  22  P    P      13 27 09.0 -0.2
      baz=298
E27K  Coleen River      98.20  19  P    Pdif   13 27 09.5 +0.3
      baz=302
KDAK  Kodiak Island     98.27  30  LR   LR     14 17 32.5
      comp=Z,144nm,18.4s,baz=311,slow=39
RC01  Rabbit Creek A    98.38  27  P    P      13 27 10.0  0.0
      baz=293
BRSE  Bradley Lake S    98.45  28  P    Pdif   13 27 10.4  0.0
      baz=292
SUMG  Summit            98.62 347 i P   P      13 27 11.3 -0.1
SUMG                               IAmb IAmb   13 27 34.6
      comp=Z,20nm,1.3s
SML   Sawmill           98.71  26  P    P      13 27 11.5 -0.1
      baz=295
KNK   Knik Glacier      98.82  26  P    P      13 27 11.9 -0.1
      baz=294
K24K  Donnelly Dome     98.88  23  P    Pdif   13 27 12.4 +0.1
      baz=297
SEW   Seward            98.91  27  P    Pdif   13 27 12.5 +0.1
      baz=293
G27K  Doyon Strip       98.91  20  P    Pdif   13 27 12.8 +0.5
      baz=302
M23K  Glacier View      98.97  26  P    Pdif   13 27 12.8 +0.1
      baz=295
SCM   Sheep Creek Mo    99.13  25  P    Pdif   13 27 13.5  0.0
      baz=296
H27K  Steamboat Moun    99.26  20  P    Pdif   13 27 14.0 +0.1
      baz=302
RIDG  Independent Ri    99.28  23       Pdif   13 27 13.6 -0.5
RIDG                               IAmb IAmb   13 30 14.9
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	comp=Z,44nm,2.0s						
RIDG	Independent Ri	99.28	23	P	Pdif	13 27 13.9	-0.2
	baz=298						
PAX	Paxson	99.39	24	P	Pdif	13 27 14.6	0.0
	baz=298						
J26L	Joseph Creek	99.41	22	P	Pdif	13 27 14.6	-0.1
	baz=300						
TULEG	Thule	99.46	356	*i* P	Pdif	13 27 14.6	+0.1
TULEG				IAmb	IAmb	13 27 18.2	
	comp=Z,4.7nm,0.8s						
SCRK	Sand Creek	99.50	23		Pdif	13 27 14.8	-0.3
SCRK	Sand Creek	99.50	23	P	Pdif	13 27 15.0	-0.1
	baz=299						
I27K	Kandik River	99.56	21	P	Pdif	13 27 15.6	+0.3
	baz=302						
HARP	HAARP	99.79	24	P	Pdif	13 27 16.5	+0.2
	baz=298						
KLU	Klutina	99.88	25	P	Pdif	13 27 17.2	+0.4
	baz=297						
A36M	Sachs Harbour	100.04	12	P	Pdif	13 27 17.3	+0.1
	baz=318						
EGAK	Eagle	100.16	21	P	Pdif	13 27 18.2	+0.3
	baz=302						
K27K	Chicken	100.20	22	P	Pdif	13 27 18.3	+0.2
	baz=301						
L26K	Log Cabin Wild	100.22	23	P	Pdif	13 27 18.1	-0.1
	baz=299						
KULLO	Kullorsuaq	100.22	353	*i* P	Pdif	13 27 18.7	+0.7
KULLO				IAmb	IAmb	13 27 37.3	
	comp=Z,16nm,1.1s						
EYAK	Cordova Ski Ar	100.38	26	P	Pdif	13 27 19.0	0.0
	baz=297						
N25K	Chitina, Valde	100.39	25	P	Pdif	13 27 19.0	-0.1
	baz=298						
INK	Inuvik	100.57	17	P	Pdif	13 27 19.3	-0.3
	comp=Z,3.7nm,0.7s,baz=322,slow=4.8,SNR=23						
INK				PP	PP	13 31 24.0	-2.4
	comp=Z,4.9nm,1.2s,baz=298,slow=16,SNR=4.6						
INK				PKiKP	PKiKP	13 31 46.0	+0.2
	comp=Z,1.4nm,0.8s,baz=262,slow=8.1,SNR=3.3						
INK	Inuvik	100.57	17	P	Pdif	13 27 20.1	+0.5
	baz=310						
G30M	tAoh Zraii Nji	100.58	18	P	Pdif	13 27 19.6	-0.2
	baz=307						
Q23K	Middleton Isla	100.61	27	P	Pdif	13 27 19.6	-0.4
	baz=296						
M26K	Nabesna, AK	100.67	24	P	Pdif	13 27 20.4	+0.2
	baz=300						
EPYK	Eagle Plains	100.79	19	P	Pdif	13 27 20.1	-0.7
	baz=306						
L27K	Beaver Creek,	100.80	23	P	Pdif	13 27 20.8	0.0
	baz=301						
F31M	Tsiigehtchic	101.06	17	P	Pdif	13 27 21.9	+0.1
	baz=309						
M27K	Edge Creek, AK	101.14	24	P	Pdif	13 27 22.9	+0.4
	baz=301						
DAWY	Dawson	101.19	22	P	Pdif	13 27 22.3	-0.3
	baz=303						
BVCY	Beaver Creek	101.52	23	P	Pdif	13 27 24.0	0.0
	baz=302						
K29M	Barlow Dome	102.00	21	P	Pdif	13 27 26.5	+0.3
	baz=305						
CTG	Chitna Glacier	102.08	25	P	Pdif	13 27 26.8	+0.1
	baz=301						
L29M	L29M	102.19	22	P	Pdif	13 27 27.2	+0.1
	baz=304						
C36M	Paulatuk	102.30	13	P	Pdif	13 27 28.0	+0.7
	baz=319						
M30M	Minto, Yukon	103.00	22	P	Pdif	13 27 31.2	+0.6
	baz=306						
WRGLY	Wrigley	107.09	17	P	PKiKP	13 31 59.2	+1.3
	baz=319						
WTLY	Watson Lake, Y	107.54	22	P	PKiKP	13 31 59.7	+0.9
	baz=313						
S34M	Telegraph Cree	108.09	24	P	PKiKP	13 32 00.7	+0.8
	baz=310						
T35M	Bob Quinn	109.06	25	P	PKiKP	13 32 02.0	+0.3
	baz=310						
YKA	Yellowknife Ar	110.12	14	Pdiff	Pdif	13 28 03.2	+1.0
	comp=Z,0.4nm,0.8s,baz=327,slow=4.3,SNR=7.3						
YKA				PKiKP	PKiKP	13 32 02.9	-0.7
	comp=Z,0.8nm,0.9s,baz=320,slow=2.1,SNR=7.6						
YKA				PP	PP	13 32 30.3	-6.7
	comp=Z,0.6nm,0.8s,baz=294,slow=1.9,SNR=4.4						
YKA				PKKPbc	PKKPbc	13 43 05.2	-2.6
	comp=Z,0.3nm,0.8s,baz=151,slow=3.1,SNR=8.0						
YKA				PKKP	PKKPab	13 43 20.6	+2.7
	comp=Z,0.5nm,0.9s,baz=144,slow=3.6,SNR=5.8						
TBI	Tubuai	114.11	114	*e*LR	LR	14 06 28.4	
	comp=Z,1µm,23.8s						
TBI				*e*LR	LR	14 06 29.2	
	comp=Z,5µm,23.8s						
PPT2	Papeete2	114.54	108	*e*LR	LR	14 06 41.5	
	comp=Z,308nm,30.5s						
PPT2				*e*LR	LR	14 06 41.7	
	comp=Z,394nm,29.0s						
FCC	Fort Churchill	117.31	6	PKPdf	PKPdf	13 32 17.1	-0.3
FCC	Fort Churchill	117.31	6	PKIKP	PKPdf	13 32 17.1	-0.3
SCHQ	Schefferville	119.99	349	PKP	PKiKP	13 32 22.9	+0.1
	comp=Z,5.7nm,0.8s,baz=51,slow=3.9,SNR=11						
SCHQ				PP	PP	13 33 46.1	-0.4
	comp=Z,4.1nm,0.9s,baz=14,slow=8.5,SNR=4.1						
FFC	Flin Flon	120.00	12	PKPdf	PKPdf	13 32 22.4	-0.3
FFC	Flin Flon	120.00	12	PKIKP	PKPdf	13 32 22.4	-0.3
LTY	Liberty	120.04	28		PKPdf	13 32 23.0	-0.1
NEW	Newport	120.86	25	PKPdf	PKPdf	13 32 24.7	0.0
NEW	Newport	120.86	25	PKIKP	PKPdf	13 32 24.7	0.0
NEW	Newport	120.86	25	P	PKPdf	13 32 24.7	0.0
	baz=321						
HAWA	Hanford	121.20	28	PKPdf	PKiKP	13 32 25.5	+0.1
HUMO	Hull Mountain	122.15	33	PKPdf	PKiKP	13 32 28.0	+0.6
PINE	Pine Mountain	122.39	31	PKPdf	PKiKP	13 32 28.6	+0.5
J05D	Fort Rock, OR	122.60	31	PKPdf	PKiKP	13 32 29.1	+0.6
L04D	Klamath Falls	122.77	33		PKiKP	13 32 29.1	+0.2
KHMM	Horse Mountain	122.86	35	PKPdf	PKiKP	13 32 29.7	+0.7
I07A	Izee	122.91	30		PKiKP	13 32 29.7	+0.7
K05A	Summer Lake	123.17	32		PKiKP	13 32 30.3	+0.6
MSO	Missoula	123.31	24	PKPdf	PKPdf	13 32 29.6	+0.1
MSO	Missoula	123.31	24	P	PKiKP	13 32 29.8	0.0
	baz=324,SNR=9.0						
PLID	Pearl Lake	123.81	27		PKPdf	13 32 30.5	-0.2
EGMT	Eagleton	123.90	20		PKiKP	13 32 30.9	+0.1
EGMT	Eagleton	123.90	20	P	PKiKP	13 32 30.7	-0.1
	baz=329						
J08A	Circle Bar Ran	123.95	30		PKiKP	13 32 31.4	+0.3
MOD	Modoc Plateau	124.06	32	PKPdf	PKiKP	13 32 31.8	+0.4
TAOE	Nuku Hiva Isla	124.17	98	*e*LR	LR	14 11 08.7	
	comp=Z,223nm,27.1s						
WVOR	Wild Horse Val	124.54	31		PKiKP	13 32 32.9	+0.6
WVOR	Wild Horse Val	124.54	31	PKIKP	PKiKP	13 32 32.9	+0.6
LRM	Limekiln Ridge	124.73	24	PKPdf	PKPdf	13 32 32.3	-0.1
DLMT	Dillon	125.05	24		PKiKP	13 32 33.3	0.0
MFID	Camas Ranch	125.18	28	PKPdf	PKiKP	13 32 33.7	+0.2
BOZ	Bozeman (W)	125.25	23		PKiKP	13 32 33.8	+0.1
BOZ	Bozeman (W)	125.25	23	PKIKP	PKiKP	13 32 33.8	+0.1
BOZ	Bozeman (W)	125.25	23	P	PKiKP	13 32 34.0	+0.4
	baz=326,SNR=9.4						
DGMT	Dagmar	125.25	16		PKiKP	13 32 33.5	+0.1
DGMT	Dagmar	125.25	16	P	PKiKP	13 32 33.4	0.0
	baz=335						
DGMT	Dagmar	125.25	16	P	PKiKP	13 32 33.5	+0.1
	baz=335						
MCMT	McKenzie Canyo	125.38	25	PKPdf	PKiKP	13 32 34.0	-0.1
ULM	Lac du Bonnet	125.40	9	PKP	PKPdf	13 32 33.0	-0.2
	comp=Z,24nm,0.8s,baz=346,slow=3.3,SNR=34						
ULM	Lac du Bonnet	125.40	9	PKIKP	PKPdf	13 32 33.0	-0.2
HLID	Hailey	125.71	27	PKPdf	PKiKP	13 32 34.8	+0.1
HLID	Hailey	125.71	27	P	PKiKP	13 32 34.9	+0.1
	baz=322						
QLMT	Earthquake Lak	125.96	24		PKPdf	13 32 35.0	+0.2
PAHR	Pah Rah Range	126.10	33		PKPdf	13 32 35.3	+0.2
LAO	LASA Array	126.25	19		PKiKP	13 32 35.9	+0.4
LAO	LASA Array	126.25	19	P	PKiKP	13 32 35.8	+0.4
	baz=332						
LAO	LASA Array	126.25	19	P	PKiKP	13 32 36.4	+0.9
	baz=332						
YMR	Madison River	126.28	24		PKiKP	13 32 36.7	+0.8
RLMT	Red Lodge	126.55	22	P	PKiKP	13 32 36.8	+0.5
	baz=328						
H17A	Grant Village	126.66	23	P	PKiKP	13 32 37.0	+0.3
	baz=326,SNR=6.3						
YERR	Yerington	126.68	34		PKiKP	13 32 37.0	+0.2
WAKR	Walker	126.91	34		PKiKP	13 32 37.6	+0.4
IMW	Indian Meadow	126.93	24		PKiKP	13 32 37.3	0.0
MDND	Maddock	126.98	13	PKPdf	PKiKP	13 32 36.8	-0.1
MDND	Maddock	126.98	13	P	PKPdf	13 32 36.3	0.0
	baz=341						
MDND	Maddock	126.98	13	P	PKPdf	13 32 36.4	+0.1
	baz=341						
FXWY	Fox Creek	127.11	24		PKiKP	13 32 37.5	-0.1
MOOW	Moose Ponds	127.13	24	PKPdf	PKiKP	13 32 37.6	0.0
KVN	Kaiserville	127.26	33	PKPdf	PKiKP	13 32 37.9	0.0
KVN	Kaiserville	127.26	33	PKIKP	PKiKP	13 32 37.9	0.0
AGMN	Agassiz Nation	127.29	10		PKPdf	13 32 37.1	+0.2
AGMN	Agassiz Nation	127.29	10	P	PKPdf	13 32 37.2	+0.2
	baz=345						
AGMN	Agassiz Nation	127.29	10	P	PKiKP	13 32 37.5	+0.1
	baz=345						
REDW	Red Top Meadow	127.41	24		PKiKP	13 32 38.2	0.0
B35A	Bob, Littlefor	127.56	8		PKPdf	13 32 37.7	+0.3
B35A	Bob, Littlefor	127.56	8	P	PKPdf	13 32 37.8	+0.3
	baz=348						
NVAR	Mina Array Bea	127.59	34	PKP	PKiKP	13 32 39.1	+0.5
	comp=Z,10nm,0.9s,baz=265,slow=2.5,SNR=41						
NVAR				PP	PP	13 34 39.7	+1.2
	comp=Z,2.0nm,0.9s,baz=278,slow=3.8,SNR=3.9						
NVAR	Mina Array Bea	127.59	34	PKPdf	PKiKP	13 32 38.8	+0.2
LMQ	La Malbaie	127.60	348		PKiKP	13 32 38.1	0.0
LHV	Little Huntoon	127.61	34		PKiKP	13 32 39.2	+0.9
NV11	Mina Array Sit	127.67	34		PKiKP	13 32 38.8	+0.1
HVU	Hansel Valley	127.86	27		PKiKP	13 32 38.8	-0.2
HVU	Hansel Valley	127.86	27	PKIKP	PKiKP	13 32 38.8	-0.2
E28A	Huff	127.92	14	P	PKiKP	13 32 39.3	+0.5
	baz=339						
EYMN	Ely	128.24	6	P	PKiKP	13 32 39.3	-0.1
	baz=351,SNR=7.6						
EYMN	Ely	128.24	6	P	PKiKP	13 32 39.9	+0.5
	baz=351						
E63A	Oxbow	128.25	346	P	PKiKP	13 32 39.8	+0.4
	baz=20						
E63A				P	PKiKP	13 32 39.8	+0.4
	baz=20						
BW06	Boulder Array	128.43	24		PKPdf	13 32 39.3	-0.3
BW06	Boulder Array	128.43	24	P	PKPdf	13 32 39.5	0.0
	baz=327,SNR=9.2						
PD31	Pinedale Array	128.43	24	PKPdf	PKPdf	13 32 39.7	+0.1
PDAR	Pinedale Array	128.43	24	PKP	PKPdf	13 32 39.8	+0.2
	comp=Z,1.7nm,0.6s,baz=329,slow=1.7,SNR=20						
PDAR				PP	PP	13 34 42.5	-1.1
	comp=Z,0.8nm,0.8s,baz=64,slow=3.4,SNR=3.2						
PDAR	Pinedale Array	128.43	24		PKPdf	13 32 39.3	-0.2
DSP	Deep Springs	128.53	34	PKPdf	PKiKP	13 32 40.1	-0.1
SMMC	Simmler	128.74	38	P	PKiKP	13 32 41.0	+0.2
	baz=312						
LCH	Last Change Ra	128.81	34		PKPdf	13 32 40.6	+0.2
F63A	Nahmakanta, Br	129.09	346	P	PKiKP	13 32 41.3	+0.2
	baz=19						
F63A				P	PKiKP	13 32 41.3	+0.2
	baz=19						
DUG	Dugway, Tooele	129.10	28	P	PKiKP	13 32 42.0	+0.4
	baz=322						
CWC	Cottonwood Cre	129.11	35	P	PKiKP	13 32 42.1	+0.4
	baz=314						
R11A	Troy Canyon, C	129.12	32		PKiKP	13 32 41.7	0.0
R11A	Troy Canyon, C	129.12	32	P	PKiKP	13 32 42.1	+0.5
	baz=318						
PKM	Mcpherson Peak	129.13	38	P	PKiKP	13 32 41.8	+0.1
	baz=312						
GRAC	Grapevine Rang	129.13	34	P	PKiKP	13 32 42.1	+0.5
	baz=315						
RSSD	Black Hills	129.23	18	PKPdf	PKiKP	13 32 41.7	-0.1
RSSD	Black Hills	129.23	18	PKIKP	PKiKP	13 32 41.7	-0.1
RSSD	Black Hills	129.23	18	P	PKiKP	13 32 42.0	+0.3
	baz=334						
RSSD	Black Hills	129.23	18	P	PKiKP	13 32 42.0	+0.3
	baz=334						
D41A	Chassel	129.38	4		PKiKP	13 32 42.1	+0.4
D41A	Chassel	129.38	4	P	PKiKP	13 32 42.4	+0.7
	baz=354						
ISA	Isabella, Lake	129.42	36	P	PKiKP	13 32 42.1	-0.1
	baz=313						
SBC	Santa Barbara	129.49	38	P	PKiKP	13 32 42.3	+0.1
	baz=311						
PKME	Peaks-Kenny Pk	129.54	346	P	PKiKP	13 32 41.8	-0.2
	baz=19						
E38A	The Farm, Brul	129.56	7		PKiKP	13 32 42.3	+0.2
E38A	The Farm, Brul	129.56	7	P	PKiKP	13 32 42.5	+0.5
	baz=350						
F33A	5 Mile Ranch,	129.59	11	PKPdf	PKiKP	13 32 41.9	-0.3
F33A	5 Mile Ranch,	129.59	11	P	PKPdf	13 32 41.7	+0.4
	baz=344						
NLU	North Lily Min	129.63	28		PKiKP	13 32 42.4	-0.3
K22A	Casper	129.69	21		PKiKP	13 32 42.6	-0.1
K22A	Casper	129.69	21	P	PKiKP	13 32 42.4	-0.2
	baz=330						
K22A	Casper	129.69	21	P	PKiKP	13 32 43.0	+0.3
	baz=330						
WCT	Wildcat Mounta	129.69	34		PKiKP	13 32 43.0	+0.3
MPMC	Manual Prospec	129.72	35	P	PKiKP	13 32 42.7	-0.2
	baz=315,SNR=13						
TPNV	Topopah Spring	129.79	34	P	PKiKP	13 32 42.7	-0.3
	baz=316						
FURC	Furnace Creek,	129.79	34	P	PKiKP	13 32 43.0	+0.2
	baz=316						
SCZ2	Santa Cruz Isl	129.83	39	P	PKiKP	13 32 42.9	0.0
	baz=311						
LRMC	Laurel Mtn Rad	130.01	36	P	PKiKP	13 32 43.6	+0.1
	baz=314,SNR=5.7						
F36A	Milaca	130.03	9	PKPdf	PKiKP	13 32 42.9	-0.1
F36A	Milaca	130.03	9	P	PKiKP	13 32 42.8	-0.2
	baz=348						
E43A	Lone Tree Farm	130.15	3	P	PKiKP	13 32 43.1	-0.1
	baz=356						
E46A	Sault Ste Mari	130.22	0	PKPdf	PKiKP	13 32 43.3	-0.1
E46A	Sault Ste Mari	130.22	0	P	PKiKP	13 32 43.6	+0.2
	baz=360						
EDW2	Edwards Air Fo	130.24	37	P	PKiKP	13 32 44.1	+0.3
	baz=313						
COWI	Conover	130.29	5	P	PKiKP	13 32 44.1	+0.5
	baz=354						
SUSD	Miller	130.35	14	P	PKiKP	13 32 44.3	+0.6
	baz=340						
SUSD	Miller	130.35	14	P	PKiKP	13 32 44.3	+0.6
	baz=340						
SHOC	Shoshone, Teco	130.53	35	P	PKiKP	13 32 44.2	-0.1
	baz=316,SNR=5.3						
TMUT	Trail Mountain	130.56	28		PKiKP	13 32 45.1	+0.4
GSC	Goldstone, Bar	130.65	36	P	PKiKP	13 32 44.8	+0.1
	baz=315,SNR=5.4						
SPMN	Marine on St.	130.76	8	P	PKiKP	13 32 44.8	+0.3
	baz=349						
SPMN	Marine on St.	130.76	8	P	PKiKP	13 32 44.6	+0.1
	baz=349						
Q16A	Castle Valley	130.88	28		PKiKP	13 32 45.4	+0.2
BFSC	Mount Baldy Ra	130.88	37	P	PKiKP	13 32 45.6	+0.4
	baz=313						
BMNY	Brushton-Moira	130.98	351	P	PKiKP	13 32 45.0	+0.1
	baz=13						
CIS	Catalina Islan	130.98	39	P	PKiKP	13 32 45.8	+0.5
	baz=312						
I63A	Otisfield	130.99	347	P	PKiKP	13 32 45.6	+0.7
	baz=18						
I63A				P	PKiKP	13 32 45.6	+0.7
	baz=18						
SRU	San Rafael Swe	131.03	27	PKPdf	PKPdf	13 32 44.8	+0.3
SRU	San Rafael Swe	131.03	27	PKIKP	PKPdf	13 32 44.8	+0.3
G40A	Rib Lake	131.03	6	P	PKiKP	13 32 45.3	+0.3
	baz=352						
TUQ	Turquoise Moun	131.06	35	P	PKiKP	13 32 45.6	+0.1
	baz=316						
O20A	White River Ci	131.17	25	PKPdf	PKiKP	13 32 45.8	+0.1
O20A	White River Ci	131.17	25	P	PKiKP	13 32 46.5	+0.8
	baz=327,SNR=11						
LONY	Lake Ozonia	131.21	351	P	PKiKP	13 32 46.1	+0.7
	baz=13						
N23A	Red Feather La	131.43	22	P	PKiKP	13 32 46.3	-0.1
	baz=330						
ECSD	EROS Data Cent	131.54	12	PKPdf	PKPdf	13 32 45.5	+0.3
ECSD	EROS Data Cent	131.54	12	P	PKiKP	13 32 45.9	-0.2
	baz=343						
ECSD	EROS Data Cent	131.54	12	P	PKiKP	13 32 45.9	-0.2
	baz=343						
GMRC	Granite Mounta	131.68	35	P	PKiKP	13 32 46.6	-0.2
	baz=316,SNR=8.4						
I37B	Waseca	131.86	9	P	PKiKP	13 32 46.7	-0.1
	baz=348						
WCNY	West Carthage	131.99	352	P	PKiKP	13 32 47.3	+0.3
	baz=11						
PFO	Pinyon Flats O	132.03	37	P	PKiKP	13 32 47.6	0.0
	baz=314						
BELC	Belle Mtn. Jos	132.04	36	P	PKiKP	13 32 47.2	-0.4
	baz=315						
TPFO	Pinon Flats	132.04	37	P	PKiKP	13 32 47.8	+0.2
	baz=314						
K31A	O'Neill	132.11	14		PKPdf	13 32 46.5	+0.2
K31A	O'Neill	132.11	14	P	PKiKP	13 32 47.4	+0.1
	baz=340						
J59A	Piesco	132.32	350	P	PKiKP	13 32 48.1	+0.4
	baz=13						
J59A				P	PKiKP	13 32 48.1	+0.4
	baz=13						
IRM	Iron Mountain	132.42	35	P	PKiKP	13 32 48.3	+0.1
	baz=316						
W13A	Hualapai Mount	132.44	33		PKiKP	13 32 48.2	-0.3
ISCO	Idaho Springs	132.51	22	P	PKiKP	13 32 48.3	-0.3
	baz=330						
I42A	Draeger Farm,	132.51	5	P	PKiKP	13 32 48.3	+0.2
	baz=354						
J58A	Remsen	132.54	351	P	PKiKP	13 32 48.2	0.0
	baz=12						
J58A				P	PKiKP	13 32 48.2	0.0
	baz=12						
MONP2	Monument Peak	132.56	38	P	PKiKP	13 32 48.9	+0.1
	baz=314						
PV15	Paradox Valley	132.57	26		PKPdf	13 32 47.7	+0.1
BC3	Big Chuckawall	132.60	36	P	PKiKP	13 32 48.6	-0.1
	baz=315						
J57A	Williamstown	132.60	352	P	PKiKP	13 32 48.5	+0.2
	baz=11						
J57A				P	PKiKP	13 32 48.5	+0.2
	baz=11						
HRV	Adam Dziewonsk	132.68	347	P	PKiKP	13 32 48.3	-0.1
	baz=17						
HRV	Adam Dziewonsk	132.68	347	P	PKiKP	13 32 48.0	-0.5
	baz=17						
OGNE	Ogallala	132.74	18	P	PKiKP	13 32 48.4	-0.4
	baz=335						
OGNE	Ogallala	132.74	18	P	PKiKP	13 32 48.5	-0.2
	baz=335						
PDMCI	Parker Dam,Lak	132.89	34	P	PKiKP	13 32 49.3	+0.2
	baz=317						
SWSC	Sam W. Stewart	132.89	37	P	PKiKP	13 32 48.9	-0.2
	baz=314						
IKP	In-Ko-Pah, Jac	132.91	38	P	PKPdf	13 32 48.7	+0.6
	baz=314						
L61B	Northampton	132.97	348	P	PKiKP	13 32 48.9	-0.1
	baz=16						
L61B	Northampton	132.97	348	P	PKiKP	13 32 49.9	+0.9
	baz=16						
HCNY	Howe Caverns	133.05	350	P	PKiKP	13 32 49.9	+0.7
	baz=13						
L34A	Svendsen Farm,	133.29	12	P	PKiKP	13 32 49.7	0.0
	baz=343						
K38A	Parkersburg	133.29	9	P	PKiKP	13 32 49.7	0.0
	baz=348						
K57A	Scipio Center	133.34	352	P	PKiKP	13 32 50.0	+0.2
	baz=10						
JFWS	Jewell Farm	133.35	6	P	PKiKP	13 32 49.6	-0.2
	baz=352						
JFWS	Jewell Farm	133.35	6	P	PKiKP	13 32 49.9	+0.1
	baz=352						
GLA	Glamis	133.40	36	P	PKiKP	13 32 50.6	+0.3
	baz=316						
BGNE	Belgrade	133.40	14	PKPdf	PKPdf	13 32 48.9	+0.1
BGNE	Belgrade	133.40	14	P	PKiKP	13 32 49.8	-0.2
	baz=341						
WUAZ	Wupatki	133.46	31	P	PKiKP	13 32 50.3	-0.1
	baz=321						
MVCO	Mesa Verde	133.50	27	PKPdf	PKPdf	13 32 49.8	+0.4
MVCO	Mesa Verde	133.50	27	P	PKPdf	13 32 49.9	+0.5
	baz=326						
L59A	Walton	133.65	351	P	PKiKP	13 32 51.1	+0.7
	baz=13						
L59A				P	PKiKP	13 32 51.1	+0.7
	baz=13						
BINY	Binghamton	133.78	352	P	PKiKP	13 32 50.9	+0.2
	baz=11						
BINY	Binghamton	133.78	352	P	PKiKP	13 32 51.1	+0.4
	baz=11						
WVNY	West Valley, N	133.90	354	P	PKiKP	13 32 51.7	+0.7
	baz=7.7						
SCIA	State Center	133.94	9	P	PKiKP	13 32 50.9	-0.1
	baz=347						
SCIA	State Center	133.94	9	P	PKiKP	13 32 51.2	+0.1
	baz=347						
L56A	Greenwood	134.06	353	P	PKiKP	13 32 51.4	+0.1
	baz=9.1						
L56A				P	PKiKP	13 32 51.4	+0.1
	baz=9.1						
L40A	Anamosa	134.08	7		PKPdf	13 32 50.3	+0.3
L40A	Anamosa	134.08	7	P	PKiKP	13 32 50.9	-0.4
	baz=350						
NBCL	Cascavel-CE	134.21	268	*e*P	PKPdf	13 32 50.1	-0.8
BRNY	Black Rk. Fore	134.22	349	P	PKiKP	13 32 51.8	+0.2
	baz=14						
L42A	Oliver, Polo	134.31	6	P	PKPdf	13 32 51.0	+0.6
	baz=352						
ALF01	Guarapari-ES	134.47	245	*e*P	PKPdf	13 32 50.6	-0.7
GUA01	Guaratinga, BA	134.57	250	*e*P	PKPdf	13 32 50.5	-1.1
W18A	Petrified Fore	134.60	30	P	PKiKP	13 32 52.3	-0.5
	baz=323						
L48A	N Adams	134.64	0	P	PKPdf	13 32 51.3	+0.2
	baz=360						
L48A				P	PKPdf	13 32 51.3	+0.2
	baz=360						
ODNJ	Ogdensburg	134.65	350	P	PKiKP	13 32 52.3	-0.1
	baz=13						
N38A	Joes South For	135.03	10	P	PKPdf	13 32 52.2	+0.4
	baz=347						
M53A	WI Miller and	135.03	356	P	PKiKP	13 32 53.1	-0.1
	baz=4.9						
T25A	Trinidad	135.28	23	P	PKiKP	13 32 53.6	-0.6
	baz=331						
214A	Organ Pipe Nat	135.36	35	P	PKiKP	13 32 53.9	-0.4
	baz=317						
SSPA	Standing Stone	135.57	353	P	PKiKP	13 32 54.0	-0.4
	baz=8.9						
SSPA	Standing Stone	135.57	353	P	PKPdf	13 32 53.6	+0.8
	baz=8.9						
N49A	Columbus Grove	135.67	360	P	PKiKP	13 32 54.7	+0.1
	baz=360						
N49A				P	PKiKP	13 32 54.7	+0.1
	baz=360						
N53A	Lisbon	135.68	356	P	PKiKP	13 32 54.6	0.0
	baz=4.7						
N53A				P	PKiKP	13 32 54.6	0.0
	baz=4.7						
N47A	Urbana	135.69	2	P	PKiKP	13 32 54.6	0.0
	baz=358						
N47A				P	PKiKP	13 32 54.6	0.0
	baz=358						
UPAO	U. Pittsburgh	135.94	355	P	PKPdf	13 32 54.3	+0.8
	baz=5.9						
KSU1	Kansas State U	135.97	14	PKPdf	PKPdf	13 32 54.3	+0.7
KSU1	Kansas State U	135.97	14	P	PKiKP	13 32 54.9	-0.3
	baz=342						
KSU1	Kansas State U	135.97	14	P	PKPdf	13 32 54.2	+0.7
	baz=342						
P38A	Dawn	136.11	10	PKPdf	PKPdf	13 32 54.0	+0.2
P38A	Dawn	136.11	10	P	PKiKP	13 32 55.3	-0.2
	baz=346						
SFIN	Lafayette	136.13	3	P	PKPdf	13 32 54.7	+0.8
	baz=356						
TUC	Tucson	136.24	33	P	PKiKP	13 32 56.0	-0.1
	baz=320						
O53A	New Philadelph	136.25	357	P	PKiKP	13 32 55.6	-0.2
	baz=4.2						
O54A	Avella	136.26	356	P	PKiKP	13 32 56.2	+0.4
	baz=5.4						
O54A				P	PKiKP	13 32 56.2	+0.4
	baz=5.4						
ANMO	Albuquerque	136.29	27*c*	*i*PKIKP	PKPdf	13 32 54.4	-0.2
ANMO				pmax	pmax		
	comp=Z,15nm,1.3s						
ANMO	Albuquerque	136.29	27	P	PKiKP	13 32 55.7	-0.6
	baz=327						
ANMO	Albuquerque	136.29	27	P	PKiKP	13 32 55.7	-0.6
	baz=327						
O48B	Farmland	136.32	1	P	PKiKP	13 32 55.5	-0.4
	baz=358						
O48B	Farmland	136.32	1	P	PKPdf	13 32 54.9	+0.7
	baz=358						
ACSO	Alum Creek Sta	136.34	359	P	PKiKP	13 32 55.4	-0.6
	baz=1.7						
ACSO	Alum Creek Sta	136.34	359	P	PKPdf	13 32 54.7	+0.4
	baz=1.7						
O49A	Covington	136.40	0	P	PKPdf	13 32 54.2	-0.2
	baz=360						
O49A				P	PKPdf	13 32 54.2	-0.2
	baz=360						

P40A	Paris	136.45	9		PKPdf	13 32 54.9	+0.5
P40A	Paris	136.45	9	P	PKPdf	13 32 55.2	+0.7
	baz=349						
P43A	Skaggs, Pawnee	136.67	6	P	PKPdf	13 32 55.0	+0.2
	baz=352						
MCWV	Mont Chateau	136.74	355	P	PKiKP	13 32 56.1	-0.6
	baz=6.2						
P46A	Rosedale	136.88	3		PKPdf	13 32 55.7	+0.4
Y22A	Socorro	136.90	28	P	PKPdf	13 32 56.3	+0.6
	baz=326						
P52A	Corning	136.91	358	P	PKiKP	13 32 56.6	-0.6
	baz=2.9						
P53A	Whipple	137.02	357	P	PKPdf	13 32 56.4	+0.9
	baz=4.0						
P53A				P	PKPdf	13 32 56.4	+0.9
	baz=4.0						
P49A	Miami Univ. Ec	137.05	1	P	PKiKP	13 32 57.1	-0.3
	baz=359						
P51A	Williamsport	137.09	359	P	PKPdf	13 32 56.1	+0.5
	baz=1.6						
P51A				P	PKPdf	13 32 56.1	+0.5
	baz=1.6						
P48A	Milroy	137.11	1	P	PKPdf	13 32 55.8	+0.1
	baz=358						
P48A				P	PKPdf	13 32 55.8	+0.1
	baz=358						
Q44A	Meyer Farm, Va	137.45	6	P	PKPdf	13 32 56.9	+0.6
	baz=353						
Q54A	Coxs Mills	137.49	356	P	PKPdf	13 32 56.7	+0.3
	baz=4.9						
Q54A				P	PKPdf	13 32 56.7	+0.3
	baz=4.9						
Q52A	Bidwell	137.59	358	P	PKiKP	13 32 57.7	-0.8
	baz=2.8						
Q52A				P	PKiKP	13 32 57.7	-0.8
	baz=2.8						
R40A	Maddies Statio	137.63	9	PKPdf	PKPdf	13 32 56.8	+0.1
R40A	Maddies Statio	137.63	9	P	PKPdf	13 32 57.1	+0.4
	baz=348						
121A	Cookes Peak, D	137.64	30	P	PKPdf	13 32 57.6	+0.5
	baz=324						
OLIL	Olney	137.70	5	P	PKPdf	13 32 57.4	+0.6
	baz=354						
PARB	Paraibuna	137.90	239	*e*P	PKPdf	13 32 56.7	-1.0
BSCB	Bom Sucesso	137.98	242	*e*P	PKPdf	13 32 56.7	-1.2
CCM	Cathedral Cave	138.01	8	P	PKiKP	13 32 59.4	0.0
	baz=349						
CCM	Cathedral Cave	138.01	8	P	PKPdf	13 32 57.6	+0.2
	baz=349						
S39A	Bolivar	138.03	11	PKPdf	PKPdf	13 32 57.3	-0.1
S39A	Bolivar	138.03	11	P	PKPdf	13 32 57.0	-0.4
	baz=346						
FVM	French Village	138.20	7	P	PKPdf	13 32 57.5	-0.3
	baz=351						
R53A	Hurricane	138.20	357	P	PKPdf	13 32 57.8	+0.1
	baz=3.3						
R53A				P	PKPdf	13 32 57.8	+0.1
	baz=3.3						
R49A	Shelbyville	138.28	1	P	PKPdf	13 32 57.9	0.0
	baz=358						
R49A				P	PKPdf	13 32 57.9	0.0
	baz=358						
R50A	Paris	138.30	0	P	PKPdf	13 32 58.0	+0.1
	baz=360						
R50A				P	PKPdf	13 32 58.0	+0.1
	baz=360						
WCI	Wyandotte Cave	138.31	2	PKPdf	PKPdf	13 32 58.1	+0.1
WCI	Wyandotte Cave	138.31	2	PKIKP	PKPdf	13 32 58.1	+0.1
WCI	Wyandotte Cave	138.31	2	P	PKiKP	13 32 59.7	-0.3
	baz=357						
WCI	Wyandotte Cave	138.31	2	P	PKPdf	13 32 58.3	+0.3
	baz=357						
S57A	Dark Hollow, R	138.54	354	P	PKPdf	13 32 59.4	+1.0
	baz=7.8						
S57A				P	PKPdf	13 32 59.4	+1.0
	baz=7.8						
S44A	Carbondale	138.62	6	P	PKiKP	13 32 59.7	-1.0
	baz=352						
MSTX	Muleshoe	138.70	24	P	PKiKP	13 33 00.9	-0.2
	baz=331						
MSTX	Muleshoe	138.70	24	P	PKiKP	13 33 00.2	-0.9
	baz=331						
S51A	Beattyville	138.94	359	P	PKPdf	13 33 00.1	+1.0
	baz=0.8						
S51A				P	PKPdf	13 33 00.1	+1.0
	baz=0.8						
JANB	Januaria	139.13	251	*e*P	PKPdf	13 32 59.6	-0.5
RLO	Rose Lookout	139.14	13	PKPdf	PKPdf	13 32 59.6	0.0
VAO	Valinhos	139.18	238	*e*P	PKPdf	13 32 59.8	-0.2
TUL1	Leonard	139.19	14	P	PKiKP	13 33 01.9	0.0
	baz=342						
BLA	Blacksburg	139.22	355	P	PKiKP	13 33 02.0	0.0
	baz=5.7						
BLA	Blacksburg	139.22	355	P	PKiKP	13 33 02.3	+0.3
	baz=5.7						
HHAR	Hobbs	139.26	12	PKPdf	PKPdf	13 32 59.6	-0.1
T57A	Hurt	139.32	354	P	PKiKP	13 33 01.1	-1.0
	baz=7.5						
T57A				P	PKiKP	13 33 01.1	-1.0
	baz=7.5						
SPB	Sao Paulo	139.34	237	*e*P	PKPdf	13 32 60.0	-0.2
CNLB	Canela	139.36	227	*e*P	PKPdf	13 32 59.4	-0.8
MNTX	Cornudas Mount	139.49	28	P	PKiKP	13 33 02.0	-0.6
	baz=326						
T47A	Sharon Grove	139.50	4	P	PKPdf	13 33 00.4	+0.3
	baz=356						
T50A	Nancy	139.56	1	P	PKPdf	13 33 00.6	+0.4
	baz=359						
T50A				P	PKPdf	13 33 00.6	+0.4
	baz=359						
LCAR	Lake Charles	139.98	9	P	PKPdf	13 33 00.8	-0.2
	baz=349						
TZTN	Tazewell	140.03	359	P	PKiKP	13 33 03.5	-0.1
	baz=0.9						
U49A	Red Boiling Sp	140.04	2	P	PKPdf	13 33 01.2	+0.1
	baz=358						
WVT	Waverly	140.30	5	P	PKiKP	13 33 04.3	+0.2
	baz=354						
WVT	Waverly	140.30	5	P	PKPdf	13 33 02.6	+0.9
	baz=354						
CLTN	Cedars of Leba	140.44	3		PKPdf	13 33 02.2	+0.3
WTFS	Witchita Falls	140.44	19		PKPpre	13 32 54.7	
V55A	Taylorsville	140.63	356	P	PKPdf	13 33 03.0	+0.7
	baz=4.6						
V55A				P	PKPdf	13 33 03.0	+0.7
	baz=4.6						
V52A	Sevierville	140.73	359	P	PKPdf	13 33 03.2	+0.8
	baz=0.9						
V48A	Smith Brothers	140.76	3	P	PKPdf	13 33 03.0	+0.5
	baz=356						
V51A	Loudon	140.78	0	P	PKPdf	13 33 02.7	+0.2
	baz=360						
V53A	Saluda	140.89	358	P	PKPdf	13 33 03.0	+0.2
	baz=2.1						
V53A				P	PKPdf	13 33 03.0	+0.2
	baz=2.1						
MIAR	Mount Ida	141.01	12	P	PKiKP	13 33 05.5	-0.1
	baz=345						
PLCA	Paso Flores	141.07	197	PKP	PKPdf	13 33 04.3	+1.3
	comp=Z,4.7nm,1.1s,baz=224,slow=3.4,SNR=4.0						
PLCA	Paso Flores	141.07	197	*e*P	PKPdf	13 33 01.6	-1.3
ABTX	Abilene, Hawle	141.08	21		PKPpre	13 32 56.7	
ABTX	Abilene, Hawle	141.08	21	P	PKiKP	13 33 05.4	-0.5
	baz=335						
W57A	Gilead	141.22	355	P	PKPdf	13 33 03.6	+0.3
	baz=6.6						
W57A				P	PKPdf	13 33 03.6	+0.3
	baz=6.6						
ALGR	Alto Alegre (B	141.23	226	*e*P	PKPdf	13 33 03.5	-0.1
KMSC	Kings Mountain	141.34	356	P	PKiKP	13 33 06.5	+0.2
	baz=4.5						
KMSC	Kings Mountain	141.34	356	P	PKPdf	13 33 04.0	+0.5
	baz=4.5						
W50A	Signal Mountai	141.36	1	P	PKPdf	13 33 04.3	+0.6
	baz=358						
W52A	Murphy	141.48	360	P	PKPdf	13 33 04.5	+0.6
	baz=0.3						
CASEE	Lake Jocassee	141.57	358	P	PKPdf	13 33 05.2	+1.3
	baz=1.9						
PAULI	Pauline	141.69	357	P	PKPdf	13 33 05.5	+1.3
	baz=3.7						
OXF	Oxford	141.75	7	P	PKiKP	13 33 06.8	-0.3
	baz=352						
TX31	Lajitas Ar. Si	142.27	28		PKPpre	13 33 00.1	
TX32	Lajitas Array	142.27	28		PKPpre	13 33 00.4	
TXAR	Lajitas Array	142.27	28	PKhKP	PKPpre	13 32 59.7	
	comp=Z,1.7nm,0.6s,baz=273,slow=1.5,SNR=25						
TXAR				PKP	PKPdf	13 33 07.0	+1.5
	comp=Z,5.8nm,0.8s,baz=228,slow=1.7,SNR=20						
TXAR				PP	PP	13 36 09.1	-1.9
	comp=Z,0.7nm,1.0s,baz=67,slow=32,SNR=2.5						
TXAR	Lajitas Array	142.27	28		PKPpre	13 33 00.2	
HODGE	Hodges	142.30	357	P	PKPdf	13 33 06.1	+0.8
	baz=3.1						
Y45A	Yeager Farm, C	142.37	7	P	PKPdf	13 33 05.9	+0.5
	baz=351						
BDFB	Brasilia	142.47	249	PKP	PKiKP	13 33 07.9	-1.3
	comp=Z,2.8nm,0.5s,baz=144,slow=3.4,SNR=3.8						
BDFB	Brasilia	142.47	249	*e*P	PKPdf	13 33 05.3	-0.8
PTGB	Pitanga	142.64	233	*e*P	PKPdf	13 33 05.1	-1.1
CRSM	Crissiumal (Br	142.71	227	*e*P	PKPdf	13 33 04.9	-1.2
FRBT	Francisco Belt	142.79	230	*e*P	PKPdf	13 33 05.8	-0.7
HPIG		143.21	33		PKPbc	13 33 05.3	+1.0
SMTB	Santa Maria do	143.27	260	*e*P	PKPdf	13 33 06.8	-0.7
MECA	Mercedes	144.49	221	*e*P	PKPab	13 33 06.2	-1.4
833A	Chaparral WMA,	145.02	24	P	PKPdf	13 33 10.5	+0.3
	baz=333						
TIGA	Tifton	145.12	359	P	PKPdf	13 33 11.4	+1.1
	baz=1.0						
BRAL	Brewton	145.29	4	P	PKPdf	13 33 11.7	+1.1
	baz=355						
CPUP	Villa Florida	145.77	226	PKPbc	PKPab	13 33 13.1	+0.7
	comp=Z,6.5nm,0.8s,baz=135,slow=2.1,SNR=16						
AMBA	Amambai (Brazi	145.85	233	*e*P	PKPdf	13 33 11.1	-0.7
C2SB	Chapadao do Su	145.86	241	*e*P	PKPdf	13 33 10.9	-0.9
ARAG	Araguaiana, MT	145.97	247	*e*P	PKPdf	13 33 10.9	-1.2
SNDB	Serra Nova Dou	146.41	254	*e*P	PKPdf	13 33 11.7	-1.2
MT01	Popeta	147.59	200	PKPbc	PKPbc	13 33 17.2	+0.2
AQDB	Aquidauana	147.60	237	*e*P	PKPdf	13 33 14.6	-0.1
PP1B	Ponte de Pedra	148.10	242	*e*P	PKPdf	13 33 15.2	-0.4
DWPF	Disney Wildern	148.34	355	P	PKPdf	13 33 17.4	+1.6
	baz=5.1						
VA06	Catapilco	148.78	201		PKPbc	13 33 20.0	-0.2
PANT	Pantanal (Braz	149.03	238	*e*P	PKPdf	13 33 16.7	-0.5
SALV	Santo Antonio	149.44	245	*e*P	PKPdf	13 33 17.1	-0.8
MALB	Monte Alegre	150.06	273	*e*P	PKPdf	13 33 18.3	-0.6
CO03	El Pedregal	150.09	204		PKPbc	13 33 23.4	-0.3
GO04	Tololo Observa	150.72	204		PKPbc	13 33 25.2	-0.2
NPGB	Novo Progresso	151.10	262	*e*P	PKPdf	13 33 20.2	-0.4
AC05	El Transito	151.65	206		PKiKP	13 33 28.1	+0.2
MTP	Monte Pirata	151.66	320		PKiKP	13 33 27.9	-0.1
LCO	Las Campanas	151.69	206		PKiKP	13 33 28.1	0.0
LCO	Las Campanas	151.69	206	PKIKP	PKiKP	13 33 28.1	0.0
CELP	Cerrillos	152.32	322		PKPbc	13 33 28.3	-0.8
PTLB	Pontes e Lacer	152.69	243	*e*P	PKPdf	13 33 22.7	-0.2
GO03	Copiap	152.70	208		PKPbc	13 33 29.8	+0.1
BBSD	Serra de San D	153.23	238	*e*P	PKPdf	13 33 23.7	+0.1
TEIG	Tepich	155.96	9	PKPab	PKPab	13 33 54.1	-0.1
CMIG	Matias Romero	156.86	27	PKP	PKPdf	13 33 29.6	+1.0
	comp=Z,4.5nm,0.5s,baz=330,slow=8.1,SNR=4.2						
CMIG				PKPab	PKPab	13 33 57.2	-1.0
	comp=Z,18nm,0.8s,baz=1.0,slow=4.4,SNR=10						
LPAZ	La Paz	159.82	230	PKP	PKPdf	13 33 34.0	+1.1
	comp=Z,2.0nm,0.7s,baz=56,slow=4.5,SNR=6.8						
LPAZ				PKPab	PKPab	13 34 14.9	+3.0
	comp=Z,3.1nm,0.8s,baz=214,slow=3.6,SNR=3.3						
LPAZ	La Paz	159.82	230	PKIKP	PKPdf	13 33 34.0	+1.1
SDV	Santo Domingo	161.64	313	PKPab	PKPab	13 34 19.6	+0.1
	comp=Z,7.5nm,0.7s,baz=30,slow=4.3,SNR=8.6						
ROSC	El Rosal	167.04	310	PKPab	PKPab	13 34 41.6	-1.8
	comp=Z,8.3nm,0.4s,baz=93,slow=17,SNR=1.6						

BUC 14 13:15:29.1±0.3, 45°.30N×25°.10E, h5km, ml0.9/3, 9C-4D, Error ellipse: s-maj=2.7km s-min=1.4km az=176.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTUR	Matau	0.08	201	⇑P	Pg	13 15 30.6	-0.3
VOIR		0.14	344	⇑P	Pg	13 15 31.5	-0.5
VOIR				⇑S	Sg	13 15 34.1	+0.2
ARR	Arges	0.34	282	⇑P	Pg	13 15 35.8	+0.2
ARR				⇓S	Sg	13 15 40.8	+0.7
MLR	Muntele Rosu	0.62	72	⇑P	Pg	13 15 41.2	+0.1
MLR				⇓S	Sg	13 15 50.0	+0.9
MLR	Muntele Rosu	0.62	72	⇑P	Pg	13 15 41.0	0.0
MLR				⇑S	Sb	13 15 50.5	-1.1
LOT	Lotru	0.95	279	⇑P	Pg	13 15 47.2	-0.2
LOT				⇓S	Sg	13 15 59.5	-0.2
LOT	Lotru	0.95	279	⇑P	Pg	13 15 47.2	-0.2
LOT				⇓S	Sb	13 16 01.2	+0.1

ROM 14 13:29:02.1±0.1, 43°.046N±0°.003×13°.003E±0°.004, h10km, ML2.1/30, 9C-9D, Error ellipse: s-maj=0.3km s-min=0.3km az=84.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CESI	CESI - Serrava	0.08	240	P	Pg	13 29 04.9	+0.4
CESI				S	Sg	13 29 06.7	+0.4
CESI				AML	AML		
	comp=N,2770µm,0.2s						
CESI				AML	AML		
	comp=E,2070µm,1.4s						
T1220	Camerino, Fraz	0.09	44	P	Pg	13 29 04.9	+0.3
T1220				S	Sg	13 29 06.8	+0.4
T1220				AML	AML		
	comp=E,23850µm,1.5s						
T1220				AML	AML		
	comp=E,5135µm,0.3s						
T1220				AML	AML		
	comp=N,5185µm,0.5s						
T1220				AML	AML		
	comp=N,5190µm,0.5s						
T1220				AML	AML		
	comp=E,23800µm,1.5s						
T1220				AML	AML		
	comp=N,5105µm,0.5s						
T1220				AML	AML		
	comp=E,5140µm,0.3s						
T1220				AML	AML		
	comp=N,5190µm,1.5s						
T1220				AML	AML		
	comp=N,5105µm,1.5s						
T1220				AML	AML		
	comp=E,23800µm,0.5s						
T1216	Preci, Frazion	0.16	176	P	Pg	13 29 06.0	+0.5
T1216				S	Sg	13 29 08.8	+0.8
T1216				AML	AML		
	comp=E,1845µm,1.0s						
T1216				AML	AML		
	comp=N,2335µm,1.3s						
T1216				AML	AML		
	comp=E,1850µm,1.0s						
T1216				AML	AML		
	comp=N,2340µm,1.3s						
T1256	Bolognola (MC)	0.17	104	P	Pg	13 29 06.4	+0.5
T1256				S	Sg	13 29 09.3	+0.9
T1256				AML	AML		
	comp=N,673µm,1.4s						
T1256				AML	AML		
	comp=E,886µm,1.6s						
T1256				AML	AML		
	comp=N,672µm,1.4s						
T1256				AML	AML		
	comp=N,672µm,0.6s						
T1256				AML	AML		
	comp=E,886µm,0.4s						
MC2	Monte Cornacci	0.19	134	P	Pg	13 29 06.8	+0.5
MC2				S	Sg	13 29 10.7	+1.6
SNTG	Esanatoglia	0.21	348	P	Pg	13 29 07.4	+0.8
SNTG				S	Sg	13 29 11.3	+1.7
SNTG				AML	AML		
	comp=N,676µm,0.1s						
SNTG				AML	AML		
	comp=E,639µm,0.2s						
SNTG				AML	AML		
	comp=N,730µm,0.1s						
SNTG				AML	AML		
	comp=N,676µm,0.1s						
SNTG				AML	AML		
	comp=E,624µm,0.2s						
ASSB	Assisi San Ben	0.25	269	⇓P	Pg	13 29 07.9	+0.6
ASSB				AML	AML		
	comp=E,442µm,0.4s						
ASSB				AML	AML		
	comp=N,945µm,0.2s						
T1215	Vallo di Nera,	0.26	202	P	Pg	13 29 08.1	+0.7
T1215				S	Sb	13 29 12.7	-0.9
T1215				AML	AML		
	comp=E,321µm,1.3s						
T1215				AML	AML		
	comp=N,438µm,0.2s						
T1215				AML	AML		
	comp=N,438µm,0.2s						
T1215				AML	AML		
	comp=E,321µm,1.3s						
T1215				AML	AML		
	comp=E,321µm,0.7s						
MMO1	Montemonaco	0.28	122	P	Pg	13 29 08.3	+0.5
MMO1				S	Sb	13 29 13.1	-1.0
EL6	Elcito	0.29	14	⇑P	Pg	13 29 08.8	+0.7
EL6				AML	AML		
	comp=E,910µm,0.5s						
EL6				AML	AML		
	comp=N,944µm,0.5s						
EL6				AML	AML		
	comp=N,944µm,0.5s						
EL6				AML	AML		
	comp=N,944µm,1.5s						
T1212	Cascia, Frazio	0.30	174	P	Pg	13 29 08.7	+0.6
T1212				S	Sb	13 29 13.7	-0.8
T1212				AML	AML		
	comp=N,682µm,0.3s						
T1212				AML	AML		
	comp=E,666µm,0.9s						
T1212				AML	AML		
	comp=N,678µm,0.3s						
T1212				AML	AML		
	comp=E,614µm,0.9s						
T1212				AML	AML		
	comp=N,682µm,0.2s						
T1212				AML	AML		
	comp=N,678µm,1.7s						
ATCC	AVT- Casa Cast	0.30	298	⇑P	Pb	13 29 09.1	-0.6
ATCC				AML	AML		
	comp=E,615µm,1.5s						
ATCC				AML	AML		
	comp=N,447µm,1.4s						
ATCC				AML	AML		
	comp=N,447µm,0.6s						
ATCC				AML	AML		
	comp=E,615µm,0.5s						
FOSV	Fossato di Vic	0.30	325	P	Pn	13 29 11.4	-1.3
T1214	Arquata del Tr	0.32	152	P	Pg	13 29 09.0	+0.4
T1214				S	Sb	13 29 14.5	-1.0
T1214				AML	AML		
	comp=E,422µm,0.8s						
T1214				AML	AML		
	comp=N,400µm,0.8s						
T1214				AML	AML		
	comp=E,422µm,0.8s						
T1214				AML	AML		
	comp=N,400µm,1.2s						
T1217	Poggiodomo (PG	0.34	189	P	Pg	13 29 09.5	+0.6
T1217				S	Sb	13 29 15.1	-0.7
T1217				AML	AML		
	comp=E,322µm,0.7s						
T1217				AML	AML		
	comp=N,264µm,1.0s						
T1217				AML	AML		
	comp=E,322µm,0.7s						
T1217				AML	AML		
	comp=N,264µm,1.0s						
CING	Cingoli	0.36	23	⇑P	Pb	13 29 09.9	-0.7
CING				AML	AML		
	comp=E,476µm,0.4s						
CING				AML	AML		
	comp=N,248µm,1.2s						
CING				AML	AML		
	comp=E,476µm,1.6s						
CING				AML	AML		
	comp=N,248µm,0.8s						
T1241	Roccafluvione,	0.37	121	⇑P	Pg	13 29 09.8	+0.4
T1241				AML	AML		
	comp=E,210µm,0.7s						
T1241				AML	AML		
	comp=N,168µm,1.6s						
T1241				AML	AML		
	comp=N,168µm,0.4s						
T1218	Civita (PG)	0.39	168	P	Pg	13 29 10.1	+0.4
T1218				S	Sb	13 29 16.5	-0.7
T1218				AML	AML		
	comp=N,398µm,0.2s						
T1218				AML	AML		
	comp=N,394µm,0.2s						
T1218				AML	AML		
	comp=N,398µm,0.2s						
T1218				AML	AML		
	comp=E,362µm,0.1s						
T1218				AML	AML		
	comp=N,394µm,0.2s						
T1218				AML	AML		
	comp=E,370µm,0.1s						
T1218				AML	AML		
	comp=N,398µm,1.8s						
T1218				AML	AML		
	comp=N,394µm,1.8s						
MOMA	Monte Martano	0.40	233	⇑P	Pg	13 29 10.7	+0.6
MOMA				AML	AML		
	comp=E,228µm,1.6s						
MOMA				AML	AML		
	comp=N,226µm,0.9s						
MOMA				AML	AML		
	comp=E,228µm,0.4s						
MURB	Monte Urbino	0.41	302	⇑P	Pb	13 29 11.1	-0.5
MURB				AML	AML		
	comp=N,413µm,0.2s						
MURB				AML	AML		
	comp=E,459µm,1.3s						
MURB				AML	AML		
	comp=E,459µm,0.7s						
SSFR	Montelago di S	0.42	338	⇓P	Pb	13 29 11.4	-0.4
SSFR				AML	AML		
	comp=E,713µm,0.1s						
SSFR				AML	AML		
	comp=N,567µm,0.1s						
SSFR				AML	AML		
	comp=E,578µm,0.1s						
SSFR				AML	AML		
	comp=N,635µm,0.1s						
ARVD	Arcevia	0.45	354	⇓P	Pb	13 29 11.7	-0.5
ARVD				AML	AML		
	comp=E,390µm,0.3s						
ARVD				AML	AML		
	comp=N,202µm,0.4s						
ARRO	Arrone	0.50	201	S	Sb	13 29 20.4	+0.1
ARRO				AML	AML		
	comp=E,276µm,0.3s						
ARRO				AML	AML		
	comp=N,190µm,0.2s						
FRON	Frontone	0.51	337	⇓P	Pb	13 29 12.9	-0.4
FRON				AML	AML		
	comp=N,200µm,0.3s						
FRON				AML	AML		
	comp=E,193µm,0.2s						
T1211	Morro Reatino	0.52	192	⇑P	Pb	13 29 13.0	-0.5
T1211				S	Sb	13 29 21.4	+0.2
T1211				AML	AML		
	comp=E,208µm,1.0s						
T1211				AML	AML		
	comp=E,191µm,0.5s						
T1211				AML	AML		
	comp=N,238µm,0.2s						
T1211				AML	AML		
	comp=N,280µm,1.3s						
T1211				AML	AML		
	comp=E,191µm,0.5s						
T1211				AML	AML		
	comp=N,280µm,0.7s						
T1211				AML	AML		
	comp=N,238µm,0.2s						
T1211				AML	AML		
	comp=E,208µm,1.0s						
T1211				AML	AML		
	comp=E,191µm,1.5s						
ATVO	AVT- Monte Val	0.55	308	⇑P	Pb	13 29 13.9	0.0
ATVO				AML	AML		
	comp=E,56µm,0.4s						
ATVO				AML	AML		
	comp=N,60µm,1.4s						
ATVO				AML	AML		
	comp=N,60µm,0.6s						
RM33	Pellescritta (	0.56	164	S	Sb	13 29 22.5	+0.4
RM33				AML	AML		
	comp=E,109µm,0.2s						
RM33				AML	AML		

	comp=N,104µm,1.0s						
RM33				AML	AML		
	comp=N,104µm,1.0s						
CAMP	Campotosto	0.59	150	⇓P	Pg	13 29 13.6	0.0
CAMP				AML	AML		
	comp=E,58µm,0.9s						
CAMP				AML	AML		
	comp=N,48µm,0.9s						
PIEI	Pieia	0.60	325	⇓P	Pb	13 29 14.4	-0.3
PIEI				S	Sb	13 29 24.8	+1.5
PIEI				AML	AML		
	comp=E,111µm,0.1s						
PIEI				AML	AML		
	comp=N,80µm,0.2s						
TERO	Teramo	0.61	134	⇑P	Pg	13 29 14.1	+0.1
TERO				AML	AML		
	comp=E,88µm,1.1s						
TERO				AML	AML		
	comp=N,97µm,1.4s						
TERO				AML	AML		
	comp=N,97µm,0.6s						
FSSB	Fossombrone	0.67	346	S	Sb	13 29 26.7	+1.5
FSSB				AML	AML		
	comp=N,422µm,0.4s						
FSSB				AML	AML		
	comp=E,388µm,0.3s						
BADI	Badiali	0.72	310	⇓P	Pb	13 29 16.9	+0.1
T0110	Collepietro	1.00	145	⇓P	Pg	13 29 21.1	-0.3
SAMA	S.Maria delle	1.30	194	P	Pn	13 29 25.2	-1.2
SAMA				AML	AML		
	comp=E,540µm,0.1s						
SAMA				AML	AML		
	comp=N,539µm,0.1s						
OSSC	Osservatorio P	1.37	291	S	Sg	13 29 47.7	+1.5
PTRJ	Pietraroja	2.03	145	S	Sb	13 30 05.0	+0.5
VITU	Vitulano (BN)	2.22	146	P	Pg	13 29 43.6	-1.1
CAVE	Cavezzo	2.32	322	⇓P	Pn	13 29 42.0	+1.6
NDIM	Novi di Modena	2.39	321	S	Sg	13 30 20.5	+1.7

WEL 14 13:57:59.9±0.5**, 42°S**±3°×**17°4E**±°**, h9**^{km}±4^{km}**, M2.3**/4**, ML2.4**/8**, MLv2.3**/4**, Error ellipse: s-maj=0.0km s-min=0.0km az=96.1, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.19	184	P	Pg	13 58 04.4	+0.6
BSWZ	Blackbirch Sta	0.57	25	P	Pg	13 58 11.4	+0.5
BSWZ				S	Sb	13 58 20.1	0.0
THZ	Tophouse	0.67	314	P	Pg	13 58 13.1	+0.2
THZ				S	Sg	13 58 22.4	+0.7
GVZ	Greta Valley S	0.83	207	P	Pb	13 58 16.8	+0.3
GVZ				S	Sn	13 58 29.5	-0.7
TUWZ	Tuamarina	0.85	20	P	Pb	13 58 16.7	-0.1
NNZ	Nelson	1.02	353	P	Pb	13 58 19.6	-0.1
NNZ				S	Sg	13 58 32.0	-0.8
MRNZ	Matariki Terra	1.02	324	P	Pn	13 58 20.1	-0.3
MRNZ				S	Sn	13 58 34.5	-0.3
LTZ	Lake Taylor	1.10	239	P	Pg	13 58 19.8	-1.2
LTZ				S	Sg	13 58 34.3	-0.9
DUWZ	D'Urville Isla	1.45	11	P	Pb	13 58 27.0	-0.1
CAW	Cannon Point	1.59	46	P	Pn	13 58 27.3	-0.9
CAW				S	Sn	13 58 48.4	-0.5

NEIC 14 14:06:14.2±1.3, 13.°6N±0.°1×120.°8E±0.°2, h118^{km}±8^{km}, mb4.2/28, Error ellipse: s-maj=22.0km s-min=16.5km az=88.0

IDC 14 14:06:15.0±8.8, 13.°62N×120.°88E, h132^{km}±84^{km}, mb3.3/8, mbtmp3.8/8, Error ellipse: s-maj=53.3km s-min=14.2km az=65.0

MAN 14 14:06:16.5, 13.°68N×120.°59E, h122^{km}, mb4.5, ML3.3, MS3.1

ISC 14 14:06:16.1±0.6**, 13.°68N**±0.°04×**120.°62E**±0.°05**, h140**^{km}±5^{km}**, n56, σ1^{s}21**/66**, mb4.0**/22**, 7C-8D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.37	279	⇑eP	Pn	14 06 35.6	-0.1
LUBP				eS	Sn	14 06 49.8	-0.8
TGY	Tagaytay City	0.52	36	⇓eP	Pn	14 06 36.8	+0.3
TGY				i S	Sn	14 06 52.2	+0.1
MACP	Maragondon, Ca	0.59	9	⇓eP	Pn	14 06 36.5	-0.4
MACP				eS	Sn	14 06 51.3	-1.4
LQP	Lukban	0.99	64	⇑eP	Pn	14 06 40.6	+0.5
LQP				eS	Sn	14 06 59.0	+0.7
BOAC	Boac	1.21	100	⇑eP	Pn	14 06 42.1	+0.2
BOAC				eS	Sn	14 07 02.4	+0.8
BUSP	Coron	1.71	194	⇓eP	Pn	14 06 47.3	0.0
BUSP				eS	Sn	14 07 09.9	-1.3
GQP	Guinayangan	1.79	82	⇓iP	Pn	14 06 48.9	+0.8
OTRP	Odiongan	1.89	134	⇑eP	Pn	14 06 49.2	-0.2
OTRP				eS	Sn	14 07 13.3	-1.5
PCPH	Palayan	1.93	14	⇓eP	Pn	14 06 49.4	-0.4
PCPH				eS	Sn	14 07 17.5	+1.8
JCNP	Jose Panganiba	2.10	73	⇓eP	Pn	14 06 52.7	+0.8
BALP	Baler	2.25	24	⇓eP	Pn	14 06 54.8	+1.1
IBAJ	Ibajay, Aklan	2.39	141	⇑iP	Pn	14 06 55.8	+0.4
ENPP	El Nido	2.72	206	⇑eP	Pn	14 07 00.5	+1.0
ENPP				eS	Sn	14 07 34.8	+1.8
PVCP	Virac	3.44	91	⇓eP	Pn	14 07 10.0	+1.3
ABRA	Dolores	3.95	1	⇑eP	Pn	14 07 11.3	-4.2
CMAR	Chiang Mai Arr	21.36	286	P	P	14 10 55.2	+2.7
	0.8nm,0.3s,baz=91,slow=8.0,SNR=6.3						
	0.8nm,0.3s						
JSD	Sado	28.89	30	P	P	14 12 00.9	-0.8
USRK	Ussuriysk Ar.	31.94	16	P	P	14 12 28.5	0.0
MBWA	Marble Bar	34.63	181	P	P	14 12 51.3	-0.8
PSA00	Pilbara Seismi	35.04	181	P	P	14 12 55.0	-0.5
PSA00				IAmb	IAmb	14 13 16.8	
	comp=Z,7.9nm,1.1s						
JKA	Kamikawa-asahi	35.69	28	P	P	14 12 59.9	-1.0
WB0	Warramunga Arr	35.89	158	P	P	14 13 00.6	-2.4
WB0				IAmb	IAmb	14 13 03.4	
	comp=Z,4.3nm,1.2s						
WRAB	Tennant Creek	36.03	158	P	P	14 13 02.1	-2.0
WRA	Warramunga Arr	36.03	158	P	P	14 13 02.1	-2.0
	comp=Z,0.3nm,0.5s,baz=330,slow=10,SNR=6.2						
	comp=Z,0.3nm,0.5s						
WB2	Warramunga Arr	36.04	158	P	P	14 13 01.8	-2.4
WB2				IAmb	IAmb	14 13 25.4	
	comp=Z,6.3nm,1.4s						
SONM	Songino Array	36.06	344	P	P	14 13 04.7	+0.5
	comp=Z,0.6nm,0.5s,baz=161,slow=11,SNR=7.2						
	comp=Z,0.6nm,0.5s						
SONM	Songino Array	36.06	344	P	P	14 13 04.4	+0.2
AS31	Alice Springs	39.32	161	P	P	14 13 30.7	-1.1
ASAR	Alice Springs	39.32	161	P	P	14 13 30.5	-1.3
	comp=Z,0.4nm,0.4s,baz=337,slow=7.6,SNR=23						
ASAR				PcP	PcP	14 15 36.2	-1.4
	comp=Z,0.2nm,0.4s,baz=343,slow=3.3,SNR=4.1						
	comp=Z,0.4nm,0.4s						
MK31	Makanchi Array	46.01	324	P	P	14 14 26.7	+1.3
MKAR	Makanchi Array	46.01	324	P	P	14 14 26.8	+1.3
	comp=Z,0.8nm,0.5s,baz=126,slow=9.2,SNR=12						
	comp=Z,0.8nm,0.5s						
MAKZ	Makanchi	46.20	324	P	P	14 14 28.2	+1.3
BBOO	Buckleboo	48.52	163	P	P	14 14 43.4	-1.6
KAAM	Kaadhehdhoo	48.92	259	P	P	14 14 49.3	+0.8
ZAA0	Zalesovo Array	49.04	333	P	P	14 14 48.9	+0.1
ZAA0				IAmb	IAmb	14 14 49.2	
	comp=Z,1.6nm,0.5s						
ZALV	Zalesovo Beam	49.04	333	P	P	14 14 48.9	+0.2
	comp=Z,1.1nm,0.4s,baz=112,slow=7.2,SNR=6.6						
	comp=Z,1.1nm,0.4s						
KURK	Kurchatov	50.17	326	P	P	14 14 58.4	+1.1
GAR	Garm	50.88	309	P	P	14 15 03.9	+0.9
GAR				IAmb	IAmb	14 15 04.9	
	comp=Z,6.3nm,1.3s						
KK31	Karatay Array	51.94	314	P	P	14 15 11.6	+0.9
KK31				IAmb	IAmb	14 15 19.3	
	comp=Z,4.0nm,1.5s						
KKAR	Karatay Array	51.94	314	P	P	14 15 11.6	+0.9
TIXI	Tiksi	58.16	3	P	P	14 15 54.1	-0.7
TIXI				IAmb	IAmb	14 15 54.8	
	comp=Z,2.3nm,0.8s						
ABKAR	Akbulak array	60.70	319	P	P	14 16 12.9	+0.2
ABKAR				IAmb	IAmb	14 16 20.0	
	comp=Z,2.8nm,1.4s						
BILL	Bilibino	61.75	18	P	P	14 16 19.6	+0.2
BILL				IAmb	IAmb	14 16 38.0	
	comp=Z,2.6nm,1.3s						
KIWB	Kanaga Island	62.28	38	P	P	14 16 22.8	-0.4
H21K	Melozitna Rive	76.24	25	P	P	14 17 50.0	+1.0
CAST	Castle Rocks	76.68	28	P	P	14 17 52.2	+0.7
CAST				IAmb	IAmb	14 18 22.8	
	comp=Z,4.9nm,1.4s						
MLY	Manley	77.14	26	P	P	14 17 54.5	+0.5
MLY				IAmb	IAmb	14 17 55.4	
	comp=Z,3.9nm,1.2s						
MCK	McKinley	78.05	27	P	P	14 17 58.9	-0.2
RND	Reindeer	78.12	27	P	P	14 17 59.3	-0.3
RND				IAmb	IAmb	14 18 21.3	
	comp=Z,7.0nm,1.3s						
ILAR	Eielson Array	78.81	26	P	P	14 18 03.4	+0.2
	comp=Z,0.3nm,0.9s,baz=320,slow=4.1,SNR=2.2						
	comp=Z,0.3nm,0.9s						
ARCES	ARCESS Array B	79.08	339	P	P	14 18 05.6	+1.0
	comp=Z,2.8nm,1.0s,baz=90,slow=4.5,SNR=1.5						
	comp=Z,2.8nm,1.0s						
BMAR	Burnt Mountain	79.32	23	P	P	14 18 07.0	+1.0
BARN	Barnard Glacie	81.85	29	P	P	14 18 20.8	+1.1
CTGM	Chitina Glacie	82.03	29	P	P	14 18 21.8	+1.1
CTGM				IAmb	IAmb	14 18 43.6	
	comp=Z,6.2nm,1.0s						
A36M	Sachs Harbour	84.28	17	P	P	14 18 31.8	+0.1
A36M				IAmb	IAmb	14 18 57.5	
	comp=Z,4.6nm,1.4s						
TXAR	Lajitas Array	119.54	44	PKP	PKPdf	14 24 49.9	-0.2
	comp=Z,0.1nm,0.4s,baz=330,slow=1.3,SNR=2.3						

OTT 14 14:13:14.8±0.4, 46.°38N×87.°54W, h0^{km}, MN2.7/6, Blast, Michigan, U.S. 247km west from Sault Ste. Marie, On Mining explosion.

NEIC 14 14:13:14.7±1.7, 46.°42N±0.°04×87.°51W±0.°07, h0^{km}±2^{km}, ML2.3/4, Error ellipse: s-maj=9.3km s-min=5.2km az=300.0

ISC 14 14:13:13.8±1.0**, 46.°40N**±0.°06×**87.°57W**±0.°03**, h0**^{km}**, n21, σ1^{s}67**/37**, Michigan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
E43A	Lone Tree Farm	0.40	93		Pb	14 13 23.8	+0.1
E43A				IAML		14 13 33.9	
	comp=E,220nm,0.1s						
COWI	Conover	1.13	255		Pg	14 13 35.9	+0.5
COWI				IAML		14 13 57.3	
	comp=E,98nm,0.2s						
G40A	Rib Lake	2.16	239		Pb	14 13 53.5	-0.4
E46A	Sault Ste Mari	2.26	90	Pn	Pn	14 13 52.5	+0.1
E46A				Sn	Sn	14 14 20.5	-0.4
E46A	Sault Ste Mari	2.26	90	PN	Pn	14 13 52.5	+0.1
E46A				SN	Sn	14 14 20.5	-0.4
TBO	Thunder Bay	2.57	332	Pn	Pn	14 13 57.8	+1.1
TBO				Sn	Sn	14 14 29.8	+1.1
TBO	Thunder Bay	2.57	332	PN	Pn	14 13 57.8	+1.1
TBO				SN	Sn	14 14 29.8	+1.1
TBO				Trac		14 14 36.0	
	comp=E,12nm,0.2s						
EYMN	Ely	3.09	301	Pn	Pn	14 14 04.8	+0.9
EYMN				Sn	Sn	14 14 42.7	+1.1
EYMN	Ely	3.09	301	PN	Pn	14 14 04.8	+0.9
EYMN				SN	Sn	14 14 42.7	+1.1
GTO	Geraldton	3.37	7	Pn	Pn	14 14 08.6	+0.9
GTO				Sn	Sn	14 14 48.1	-0.3
GTO	Geraldton	3.37	7	PN	Pn	14 14 08.6	+0.9
GTO				SN	Sn	14 14 48.1	-0.3
GTO				Trac		14 15 04.2	
	comp=E,4.5nm,0.1s						
ATKO	Atikokan Iron	3.65	313	Pn	Pn	14 14 13.7	+2.2
ATKO				Sn	Sn	14 14 55.4	+0.1
ATKO	Atikokan Iron	3.65	313	PN	Pn	14 14 13.7	+2.2
ATKO				SN	Sn	14 14 55.4	+0.1
ATKO				Trac		14 15 09.6	
	comp=E,2.3nm,0.1s						
SOLO	Sioux Lookout	4.72	322	Pn	Pn	14 14 27.3	+1.2
SOLO				Sn	Sn	14 15 20.7	-0.8
SOLO	Sioux Lookout	4.72	322	PN	Pn	14 14 27.3	+1.2
SOLO				SN	Sn	14 15 20.7	-0.8
SOLO				Trac		14 15 39.4	
	comp=E,2.5nm,0.2s						
EPLO	Experimental L	5.27	311	Sn	Sn	14 15 33.3	-1.9
EPLO	Experimental L	5.27	311	SN	Sn	14 15 33.3	-1.9
PKLO	Pickle Lake	5.42	341	Pn	Pn	14 14 36.5	+0.6
PKLO				Sn	Sn	14 15 36.3	-2.6
PKLO	Pickle Lake	5.42	341	PN	Pn	14 14 36.5	+0.6
PKLO				SN	Sn	14 15 36.3	-2.6
PKLO				Trac		14 16 07.8	
	comp=E,2.5nm,0.3s						
ULM	Lac du Bonnet	6.75	308	Pn	Pn	14 14 54.5	+0.5
ULM				Sn	Sn	14 16 06.7	-4.8
ULM	Lac du Bonnet	6.75	308	PN	Pn	14 14 54.5	+0.5
ULM				SN	Sn	14 16 06.7	-4.8
ULM				Trac		14 16 15.1	
	comp=E,3.6nm,0.4s						

GUC 14 14:27:03.4±0.5**, 23.°97S**×**67.°43W, h219**^{km}±6^{km}**, ML4.0, 6C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.92	315	eP	Pn	14 27 42.6	-0.5
LVC				i S	S	14 28 12.6	-1.1
PB15	IPOC Station P	2.02	292	⇑iP	Pn	14 27 43.7	-0.1
PB15				i S	S	14 28 14.2	-0.8
GO02	Mina Guanaco	2.30	238	⇓iP	Pn	14 27 45.0	-1.7
GO02				i S	S	14 28 17.7	-2.6
GO02				IAML		14 28 18.4	
	comp=N,458nm,0.3s						
PB06	IPOC Station P	2.34	302	⇑iP	Pn	14 27 47.1	+0.1
PB06				i S	S	14 28 20.1	-0.6
PB06				IAML		14 28 22.7	
	comp=E,511nm,0.1s						
PB09	IPOC Station P	2.73	322	⇑iP	Pn	14 27 51.9	+0.6
PB09				i S	S	14 28 29.4	+0.9
PB09				IAML		14 28 30.6	
	comp=N,138nm,0.5s						
PB14	IPOC Station P	2.79	256	eP	Pn	14 27 51.0	-1.0
PB14				i S	S	14 28 27.2	-2.6
PB03	IPOC Station P	2.87	311	eP	Pn	14 27 53.1	+0.3
PB03				i S	S	14 28 30.6	-0.7
PB03				IAML		14 28 32.6	
	comp=E,224nm,0.3s						
PB10	IPOC Station P	2.90	278	eP	Pn	14 27 53.2	+0.3
PB10				i S	S	14 28 30.9	-0.6
PB10				IAML		14 28 34.3	
	comp=N,120nm,0.4s						
PB04	IPOC Station P	2.99	303	eP	Pn	14 27 54.6	+0.5
PB04				i S	S	14 28 32.6	-1.0
PB04				IAML		14 28 34.8	
	comp=N,259nm,0.4s						
PB07	IPOC Station P	3.18	314	⇑iP	Pn	14 27 56.7	+0.3
PB07				i S	S	14 28 36.9	-0.7
AC02	Maricunga	3.24	208	⇓iP	Pn	14 27 54.7	-2.7
PB01	IPOC Station P	3.48	326	⇑iP	Pn	14 27 59.6	-0.2
PB01				i S	S	14 28 43.8	-0.1
PB02	IPOC Station P	3.49	319	eP	Pn	14 27 59.7	-0.2
PB02				i S	S	14 28 43.0	-1.0
AC01	Pan de Azucar	3.60	232	⇓iP	Pn	14 27 58.5	-2.6
AC01				i S	S	14 28 41.8	-4.4
PB08	IPOC Station P	4.13	337	⇑iP	Pn	14 28 08.4	+0.5
PB08				i S	S	14 28 58.8	+0.3
GO03	Copiap	4.41	214	eP	Pn	14 28 07.3	-3.6
GO03				i S	S	14 28 57.6	-6.4
GO01	Chusmiza	4.58	339	eP	Pn	14 28 14.7	+1.1
GO01				i S	S	14 29 08.7	-0.1
PB11	IPOC Station P	4.67	333	eP	Pn	14 28 13.6	-0.9
PB11				i S	S	14 29 08.5	-1.8
MNMC	Minye Minye	5.22	337	eP	Pn	14 28 21.4	-0.1
MNMC				i S	S	14 29 22.6	-0.3
AC04	Llanos de Chal	5.34	217	eP	Pn	14 28 18.6	-3.9
AC04				i S	S	14 29 18.8	-6.3
AC05	El Transito	5.48	207	eP	Pn	14 28 21.3	-3.1
AC05				i S	S	14 29 21.8	-6.7

KRNET 14 14:40:50.9±0.1, 41.°22N×73.°37E, h17^{km}, mb3.7

SOME 14 14:40:51.3, 41.°18N×73.°43E, h20^{km}

NNC 14 14:40:51.7±0.7, 41.°28N×73.°38E, h0^{km}, mb4.4, mpv4.0, Error ellipse: s-maj=5.1km s-min=3.2km az=1.0

KNET 14 14:40:53.6±0.3, 41.°35N×73.°47E, h7^{km}±1^{km}, ml3.1, Error ellipse: s-maj=3.4km s-min=1.9km az=93.0

ISU 14 14:40:53.4, 41.°17N×73.°41E, h17^{km}

ISC 14 14:40:50.3±1.1**, 41.°17N**±0.°02×**73.°56E**±0.°02**, h9**^{km}±9^{km}**, n94, σ1^{s}33**/133**, 39C-30D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.87	223	⇑iP	Pg	14 41 06.9	-0.1
	baz=13						
OHH				⇑iS	Sg	14 41 18.1	-0.2
	baz=13						
ARLS	Aral	0.90	39	⇓iP	Pn	14 41 08.8	-0.6
	baz=48						
ARLS				⇓iS	Sn	14 41 22.2	-0.4
	baz=48						
AML	Almayashu	0.97	6	P	Pb	14 41 09.3	-0.3
	419nm,0.2s,SNR=328						
AML				⇓S	Sg	14 41 21.8	+0.2
	498nm,0.2s						
AML	Almayashu	0.97	6	⇑P	Pg	14 41 09.1	+0.1
	3.4nm,0.2s						
AML				⇓S	Sg	14 41 21.9	+0.2
	16nm,0.3s						
AML	Almayashu	0.97	6	⇑iP	Pg	14 41 08.8	-0.2
	baz=15						
AML				⇑iS	Sg	14 41 21.5	-0.1
	baz=15						
UCH	Uchtor	1.28	34	⇓P	Pg	14 41 16.1	+1.3
	118nm,0.2s,SNR=190						
UCH				⇑S	Sn	14 41 33.9	+1.6
	261nm,0.3s						
UCH	Uchtor	1.28	34	⇓iP	Pg	14 41 15.5	+0.6
	baz=40						
UCH				⇓iS	Sn	14 41 33.3	+0.9
	baz=40						
ARK	Arkit	1.35	298	⇑iP	Pn	14 41 13.9	-1.6
	baz=99						
ARK				⇑iS	Sb	14 41 30.4	-3.0
	baz=99						
NAM	Namangan	1.45	264	P	Pg	14 41 18.2	+0.2
NAM				S	Sg	14 41 36.8	+0.1
EKS2	Erkin-Say	1.50	6	⇓P	Pb	14 41 18.7	+0.2
	36nm,0.2s,SNR=29						
EKS2				⇑S	Sg	14 41 39.0	+0.4
	148nm,0.3s						
EKS2	Erkin-Say	1.50	6	⇑eP	Pb	14 41 18.1	-0.4
	baz=12						
EKS2				⇑iS	Sb	14 41 37.8	+0.1
	baz=12						
KSNS	Kasansay	1.54	270	P	Pg	14 41 19.4	-0.4
MNAS	Manas	1.54	330	⇑iP	Pn	14 41 17.2	-0.9
	baz=33						
MNAS				⇑iS	Sn	14 41 36.7	-1.6
	baz=33						
FRG	Fergana	1.56	240	P	Pg	14 41 20.0	-0.2
FRG				S	Sg	14 41 40.1	-0.4
MRKS	Merke	1.60	351	P	Pb	14 41 19.6	-0.5
	30nm,0.2s						
MRKS				S	Sb	14 41 40.5	+0.1
	178nm,0.2s						
MRKS	Merke	1.60	351	eP	Pb	14 41 19.6	-0.5
	30nm,0.2s						
MRKS				eS	Sb	14 41 40.5	+0.1
	178nm,0.2s						
AAK	Ala-Archa	1.63	25	⇓P	Pg	14 41 21.8	+0.3
	96nm,0.3s,SNR=164						
AAK				⇑S	Sg	14 41 43.5	+0.9
	154nm,0.2s						
AAK	Ala-Archa	1.63	25	⇑iP	Pg	14 41 21.3	-0.2
	baz=30						
AAK				⇑iS	Sg	14 41 43.0	+0.4
	baz=30						
CHMI	Chimion	1.79	241	P	Pg	14 41 24.0	-0.5
CHMI				S	Sg	14 41 46.9	-0.8
KBK	Karagaybulak	1.82	34	⇓P	Pg	14 41 25.8	+0.7
	65nm,0.1s,SNR=214						
KBK				⇓S	Sg	14 41 50.8	+2.1
	285nm,0.3s						
KBK	Karagaybulak	1.82	34	⇑iP	Pg	14 41 25.2	+0.1
	baz=39						
KBK				⇑iS	Sg	14 41 49.9	+1.3
	baz=39						
FRU1	Bishkek	1.83	26	⇑eP	Pg	14 41 25.1	-0.2
	baz=30						
FRU1				⇑iS	Sg	14 41 49.8	+0.8
	baz=30						
TRKS	Terek-Say	1.86	282	⇓iP	Pn	14 41 22.1	-0.4
	baz=79						
TRKS				⇓iS	Sn	14 41 44.5	-1.7
	baz=79						
NRN	Naryn	1.86	81	⇓iP	Pg	14 41 26.7	+0.8
	baz=83						
NRN				⇓iS	Sg	14 41 53.0	+3.0
	baz=83						
CHMS	Chumysh	2.04	25	⇓P	Pg	14 41 29.2	-0.1
	53nm,0.3s,SNR=56						
CHMS				⇓S	Sg	14 41 55.9	+0.2
	85nm,0.3s						
CHMS	Chumysh	2.04	25	⇑iP	Pb	14 41 27.7	+0.2
	baz=30						
CHMS				⇑iS	Sg	14 41 54.4	-1.3
	baz=30						
DRK	Karamyk	2.15	219	⇑iP	Pb	14 41 28.4	-1.2
	baz=15						
DRK				⇑iS	Sb	14 41 56.1	-0.5
	baz=15						
USP	Ospenovka	2.21	18	⇓P	Pb	14 41 31.4	+0.8
	44nm,0.2s,SNR=115						
USP				⇑S	Sg	14 42 00.9	-0.4
	179nm,0.3s						
USP	Ospenovka	2.21	18	⇑iP	Pb	14 41 30.1	-0.4
	baz=22						
USP				⇑iS	Sb	14 41 58.8	+0.7
	baz=22						
BOOM	Boomskoye usch	2.22	53	⇓iP	Pb	14 41 31.2	+0.5
	baz=56						
BOOM				⇓iS	Sg	14 42 00.8	-0.7
	baz=56						
ULHL	Ulahol	2.28	61	⇓P	Pg	14 41 34.5	+0.5
	35nm,0.2s,SNR=6.4						
ULHL	Ulahol	2.28	61	⇓iP	Pb	14 41 32.5	+0.7
	baz=64						
ULHL				⇓iS	Sg	14 42 02.8	-0.8
	baz=64						
TKM2	Tokmak 2	2.32	40	⇓P	Pg	14 41 33.9	-0.9
	133nm,0.3s,SNR=127						
TKM2				⇑S	Sg	14 42 05.8	+1.0
	62nm,0.2s						
TKM2	Tokmak 2	2.32	40	⇓Pg	Pg	14 41 34.6	-0.1
	48nm,0.3s						
TKM2				⇑Lg	Lg	14 42 06.4	
	55nm,0.3s						
TKM2	Tokmak 2	2.32	40	⇑iP	Pb	14 41 32.5	+0.1
	baz=44						
TKM2				⇑iS	Sb	14 42 02.6	+1.3
	baz=44						
BTK	Batken	2.36	243	⇑iP	Pn	14 41 30.5	+1.2
	baz=40						
BTK				⇑iS	Sn	14 41 59.4	+0.9
	baz=40						
DZA	Taraz	2.39	317	Pg	Pb	14 41 33.5	-0.1
	91nm,0.3s						
DZA				Lg	Lg	14 42 03.7	
	333nm,0.3s						
DZA	Taraz	2.39	317	ePg	Pb	14 41 33.5	-0.1
	91nm,0.3s						
DZA				eLg	Lg	14 42 03.7	
	333nm,0.3s						
SGDS	Sogindy	2.42	19	Pg	Pb	14 41 34.7	+0.6
	41nm,0.4s						
SGDS				Lg	Lg	14 42 05.6	
	147nm,0.6s						
KST	Kastek	2.59	43	Pg	Pg	14 41 39.3	-0.6
	40nm,0.3s						
KST				Lg	Lg	14 42 13.6	
	170nm,0.6s						
KST	Kastek	2.59	43	ePg	Pg	14 41 39.3	-0.6
	40nm,0.3s						
KST				eLg	Lg	14 42 13.6	
	170nm,0.6s						
DGS	Degeres	2.65	38	Pg	Pg	14 41 39.7	-1.3
	290nm,0.4s						
DGS				Lg	Lg	14 42 14.8	
	97nm,0.7s						
DGS	Degeres	2.65	38	ePg	Pg	14 41 39.7	-1.3
	290nm,0.4s						
DGS				eLg	Lg	14 42 14.8	
	97nm,0.7s						
CHMG	Chimgan	2.70	279	P	Sn	14 42 08.5	+1.6

CHRV	Charvak	2.75	281	P	Sn	14 42 10.1	+1.9
IUG	Iuzhnay	2.82	292	*e*Pg	Pb	14 41 40.5	-0.3
	58nm,0.3s						
IUG				*e*Lg	Lg	14 42 15.7	
	348nm,0.7s						
KDJ	Kajisay	2.88	69	⇓*i*P	Pb	14 41 41.4	-0.6
	baz=71						
KDJ				⇓*i*S	Sb	14 42 18.0	+0.6
	baz=71						
MTBS	Maitube	2.90	46	Pg	Pg	14 41 45.3	-0.5
	34nm,0.2s						
MTBS				Lg	Lg	14 42 24.2	
	80nm,0.7s						
MTBS	Maitube	2.90	46	*e*Pg	Pg	14 41 45.3	-0.5
	34nm,0.2s						
MTBS				*e*Lg	Lg	14 42 24.2	
	80nm,0.7s						
IZV	Izvestkoviy	2.94	50	Pg	Pg	14 41 46.7	0.0
	17nm,0.3s						
IZV				Lg	Lg	14 42 26.4	
	112nm,0.7s						
IZV	Izvestkoviy	2.94	50	*e*Pg	Pg	14 41 46.7	0.0
	17nm,0.3s						
IZV				*e*Lg	Lg	14 42 26.4	
	112nm,0.7s						
KRBS	Karabastau	2.98	31	Pg	Pg	14 41 45.4	-1.9
	36nm,0.4s						
KRBS				Lg	Lg	14 42 23.8	
	47nm,0.5s						
KRBS	Karabastau	2.98	31	*e*Pg	Pg	14 41 45.4	-1.9
	36nm,0.4s						
KRBS				*e*Lg	Lg	14 42 23.8	
	47nm,0.5s						
KK31	Karatay Array	2.98	312	Pn	Pn	14 41 38.4	+0.6
	0.7nm,0.3s,baz=126,slow=13,SNR=91						
KK31				⇑Pg	Pb	14 41 44.7	+1.2
	9.4nm,0.5s,baz=131,slow=15,SNR=18						
KK31				Lg	Lg	14 42 20.3	
	20nm,0.3s,baz=131,slow=26,SNR=13						
KKAR	Karatay Array	2.98	312	⇓*i*P	Pn	14 41 38.6	+0.8
	baz=12						
KKAR				⇓*i*S	Sn	14 42 13.9	+0.2
	baz=12						
YBZ	Yangibazar	3.00	274	P	Sb	14 42 22.8	+2.1
TNSS	Tian-Shan	3.14	52	Pg	Pg	14 41 50.8	+0.4
	32nm,0.4s						
TNSS				Lg	Lg	14 42 33.2	
	34nm,0.6s						
TNSS	Tian-Shan	3.14	52	*e*Pg	Pg	14 41 50.8	+0.4
	32nm,0.4s						
TNSS				*e*Lg	Lg	14 42 33.2	
	34nm,0.6s						
CHM	Chimkent	3.18	293	*e*Pg	Pb	14 41 47.5	+0.6
	132nm,0.2s						
CHM				*e*Lg	Lg	14 42 27.5	
	232nm,0.3s						
AAA	Alma-Ata	3.22	50	Pg	Pg	14 41 51.4	-0.6
	82nm,0.3s						
AAA				Lg	Lg	14 42 34.9	
	163nm,0.6s						
AAA	Alma-Ata	3.22	50	*e*Pg	Pg	14 41 51.4	-0.6
	82nm,0.3s						
AAA				*e*Lg	Lg	14 42 34.9	
	163nm,0.6s						
KUMR	Kumaryk	3.24	273	P	Sb	14 42 30.0	+2.4
KUMR				S	Pg	14 41 55.6	+3.2
KNDC	Almaty	3.26	50	⇑Pg	Pg	14 41 52.8	+0.1
	40nm,0.5s						
KNDC				⇑Lg	Lg	14 42 36.1	
	146nm,0.8s						
MDOK	Medeo	3.27	51	⇓Pg	Pg	14 41 51.3	-1.6
	19nm,0.5s						
MDOK				Pg	Pg	14 41 51.9	-1.0
	28nm,0.4s						
MDOK				⇑Lg	Lg	14 42 35.3	
	28nm,0.6s						
MDOK				Lg	Lg	14 42 35.8	
	63nm,1.0s						
MDOK	Medeo	3.27	51	*e*Pg	Pg	14 41 51.9	-1.0
	28nm,0.4s						
MDOK				*e*Lg	Lg	14 42 35.8	
	63nm,1.0s						
KUU	Kurty	3.41	36	Pg	Pg	14 41 53.9	-1.8
	36nm,0.4s						
KUU				Lg	Lg	14 42 38.7	
	43nm,0.5s						
KUU	Kurty	3.41	36	*e*Pg	Pg	14 41 53.9	-1.8
	36nm,0.4s						
KUU				*e*Lg	Lg	14 42 38.7	
	43nm,0.5s						
KTBS	Karatobe	3.44	41	Pg	Pg	14 41 54.7	-1.4
	43nm,0.6s						
KTBS				Lg	Lg	14 42 40.0	
	79nm,0.5s						
KTBS	Karatobe	3.44	41	*e*Pg	Pg	14 41 54.7	-1.4
	43nm,0.6s						
KTBS				*e*Lg	Lg	14 42 40.0	
	79nm,0.5s						
ANVS	Anan'yevo	3.46	61	⇑*e*P	Pb	14 41 48.7	-3.2
	baz=63						
ANVS				⇑*i*S	Sb	14 42 31.0	-3.2
	baz=63						
CHKK	Chushkaly	3.69	42	Pg	Pg	14 42 00.1	-1.0
	13nm,0.4s						
CHKK				Lg	Lg	14 42 49.4	
	51nm,0.6s						
CHKK	Chushkaly	3.69	42	*e*Pg	Pg	14 42 00.1	-1.0
	13nm,0.4s						
CHKK				*e*Lg	Lg	14 42 49.4	
	51nm,0.6s						
BTLS	Baital	3.89	5	Pg	Pb	14 42 00.9	+1.9
	9.5nm,0.5s						
BTLS				Lg	Lg	14 42 51.1	
	42nm,0.6s						
BTLS	Baital	3.89	5	*e*Pg	Pb	14 42 00.9	+1.9
	9.5nm,0.5s						
BTLS				*e*Lg	Lg	14 42 51.1	
	42nm,0.6s						
SATY	Saty	4.07	61	Pg	Pg	14 42 08.3	0.0
	12nm,0.4s						
SATY				Lg	Lg	14 43 03.1	
	32nm,0.5s						
SATY	Saty	4.07	61	*e*Pg	Pg	14 42 08.3	0.0
	12nm,0.4s						
SATY				*e*Lg	Lg	14 43 03.1	
	32nm,0.5s						
KURS	Kuram	4.13	54	Pg	Pg	14 42 09.3	-0.1
	14nm,0.6s						
KURS				Lg	Lg	14 43 05.2	
	16nm,1.1s						
KURS	Kuram	4.13	54	*e*Pg	Pg	14 42 09.3	-0.1
	14nm,0.6s						
KURS				*e*Lg	Lg	14 43 05.2	
	16nm,1.1s						
ZHN	Zhinishke	4.14	59	Pg	Pg	14 42 09.5	0.0
	11nm,0.4s						
ZHN				Lg	Lg	14 43 05.2	
	45nm,0.3s						
ZHN	Zhinishke	4.14	59	*e*Pg	Pg	14 42 09.5	0.0
	11nm,0.4s						
ZHN				*e*Lg	Lg	14 43 05.2	
	45nm,0.3s						
ARXS	Arharly	4.38	45	Pg	Pg	14 42 11.6	-2.5
	31nm,0.5s						
ARXS				Lg	Lg	14 43 09.5	
	49nm,0.9s						
ARXS	Arharly	4.38	45	*e*Pg	Pg	14 42 11.6	-2.5
	31nm,0.5s						
ARXS				*e*Lg	Lg	14 43 09.5	
	49nm,0.9s						
KPKS	Kokpek	4.44	57	Pg	Pg	14 42 14.1	-1.3
	16nm,0.4s						
KPKS				Lg	Lg	14 43 13.3	
	30nm,0.7s						
KPKS	Kokpek	4.44	57	*e*Pg	Pg	14 42 14.1	-1.3
	16nm,0.4s						
KPKS				*e*Lg	Lg	14 43 13.3	
	30nm,0.7s						
UZB	Uzynbulak	4.52	62	Pg	Pg	14 42 15.2	-1.6
	11nm,0.6s						
UZB				Lg	Lg	14 43 15.0	
	14nm,0.5s						
UZB	Uzynbulak	4.52	62	*e*Pg	Pg	14 42 15.2	-1.6
	11nm,0.6s						
UZB				*e*Lg	Lg	14 43 15.0	
	14nm,0.5s						
SHLS	Shalkode	4.82	64	Pg	Pg	14 42 26.6	+4.1
	25nm,0.6s						
SHLS				Lg	Lg	14 43 34.7	
	34nm,0.4s						
SHLS	Shalkode	4.82	64	*e*Pg	Pg	14 42 26.6	+4.1
	25nm,0.6s						
SHLS				*e*Lg	Lg	14 43 34.7	
	34nm,0.4s						
PDGK	Podgornoye	4.91	62	Pg	Pg	14 42 22.9	-1.3
	4.5nm,0.5s						
PDGK				Lg	Lg	14 43 28.3	
	7.2nm,0.6s						
TDK	Taldyqorghan	5.22	41	Pg	Pg	14 42 28.2	-2.1
	16nm,0.4s						
TDK				Lg	Lg	14 43 37.2	
	46nm,0.8s						
TDK	Taldyqorghan	5.22	41	*e*Pg	Pg	14 42 28.2	-2.1
	16nm,0.4s						
TDK				*e*Lg	Lg	14 43 37.2	
	46nm,0.8s						
AGL	Agalyk	5.36	254	P	Sg	14 43 39.4	-3.0
DJR	Jarkent	5.57	53	Pg	Pg	14 42 34.8	-2.1
	4.8nm,0.6s						
DJR				Lg	Lg	14 43 49.5	
	9.3nm,0.7s						
DJR	Jarkent	5.57	53	*e*Pg	Pg	14 42 34.9	-2.1
	4.8nm,0.6s						
DJR				*e*Lg	Lg	14 43 49.5	
	9.3nm,0.7s						

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*IDC **14** 14:52:23.9±2.2, 6°.00S×103°.47E, h0^{km}, mb3.9/8, mbtmp3.9/8, Error ellipse: s-maj=75.6km s-min=21.7km az=54.0*

*NEIC **14** 14:52:26.1±1.4, 6°.2S±0°.1×103°.24E±0°.10, h21^{km}±5^{km}, mb4.3/9, Error ellipse: s-maj=19.5km s-min=10.2km az=215.0*

*DJA **14** 14:52:27.2±0.9, 6°S±3°×10°3E±°, h18^{km}±9^{km}, M4.4/15, mb4.4/5, mB4.8/2, MLv4.4/15, Mw(mB)4.1/2*

ISC 14 14:52:27.7±0.8**, 6°.23S**±0°.10×**103°.31E**±0°.08**, h39**^{km}±4^{km}**, n57, σ1^s.19**/60**, mb4.2**/12**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	Kota Agung	1.37	59	P	Pn	14 52 50.1	-0.3
KASI				S	Sn	14 53 07.1	-0.2
LWLI	Liwa	1.42	32	P	Pn	14 52 51.2	+0.1
LWLI				S	Sn	14 53 09.9	+1.3
MNAI	Manna	1.90	349	Pn	Pn	14 52 58.3	+0.7
MNAI	Manna	1.90	349	P	Pn	14 52 58.7	+1.1
MNAI	Manna	1.90	349	P	Pn	14 52 58.3	+0.7
MNAI				S	Sn	14 53 22.4	+2.1
MDSI	Maura Dua	1.94	26	P	Pn	14 52 58.8	+0.6
MDSI				S	Sn	14 53 21.7	+0.4
KLI	Kotabumi	2.05	49	P	Pn	14 53 01.2	+1.5
KLI				S	Sn	14 53 26.5	+2.4
BLSI	Bandar Lampung	2.11	66	P	Pn	14 53 01.1	+0.6
BLSI				S	Sn	14 53 26.6	+1.1
CGJI	Cibinong	2.40	99	P	Pn	14 53 04.4	0.0
CGJI				S	Sn	14 53 34.5	+2.0
KSI	Kapahiang	2.66	344	P	Pn	14 53 09.4	+1.2
CBJI	Citeko	3.52	93	P	Pn	14 53 22.3	+2.4
CNJI	Cibinong	3.94	106	P	Pn	14 53 25.7	0.0
BBJI	Bungbulang	4.48	106	P	Pn	14 53 33.5	+0.4
PPSI	Pulau Pagai	4.77	316	P	Pn	14 53 38.1	+1.0
XMI	Christmas Isla	4.80	151	P	Pn	14 53 33.1	-4.5
CMJI	Cimerak	5.32	107	P	Pn	14 53 44.0	-0.7
	88nm,1.0s,0.4nm						
KPJI	Karang Pucung	5.69	101	P	Pn	14 53 52.9	+3.2
	19nm,0.8s,0.1nm						
DSRI	Dabo	5.86	12	P	Pn	14 53 51.9	-0.1
	12nm,0.5s,1μm0.1nm						
PDSI	Padang	6.00	332	P	Pn	14 53 54.3	+0.2
	15nm,0.7s,670nm0.2nm						
UGM	Wanagama	7.35	104	Pn	Pn	14 54 13.5	+1.0
UGM	Wanagama	7.35	104	P	Pn	14 54 13.0	+0.4
UGM	Wanagama	7.35	104	P	Pn	14 54 14.0	+1.4
GSI	Gunungsitoli	9.43	322	Pn	Pn	14 54 39.6	-1.5
GSI	Gunungsitoli	9.43	322	P	Pn	14 54 40.0	-1.1
JAGI	Jajag, Banyuwa	10.98	102	Pn	Pn	14 55 03.2	+0.8
JAGI	Jajag, Banyuwa	10.98	102	P	Pn	14 55 02.6	+0.3
PLAI	Plampang	14.57	101	P	Pn	14 55 48.9	-2.5
SOEI	Soe	21.04	101	P	P	14 57 07.5	-1.1
SOEI				IAmb	IAmb	14 57 43.8	
	comp=Z,17nm,0.9s						
CMAR	Chiang Mai Arr	24.91	350	P	P	14 57 46.8	-0.5
	comp=Z,1.6nm,0.8s,baz=181,slow=9.0,SNR=13						
	comp=Z,1.6nm,0.8s						
H08S2	Diego Garcia H	30.62	266	T	T	15 30 54.4	
	baz=89,slow=75,SNR=9.5						
H08S3	Diego Garcia H	30.63	266	T	T	15 30 42.5	
	baz=89,slow=75,SNR=9.7						
H08S1	Diego Carcia H	30.64	266	T	T	15 30 58.2	
	baz=89,slow=75,SNR=9.4						
WB0	Warramunga Arr	33.05	117	P	P	14 59 01.2	+1.3
WRA	Warramunga Arr	33.06	117	P	P	14 59 01.0	+1.0
	comp=Z,0.6nm,1.0s,baz=288,slow=12,SNR=4.1						
	comp=Z,0.6nm,1.0s						
WRAB	Tennant Creek	33.07	117	P	P	14 59 00.4	+0.4
WRAB				IAmb	IAmb	14 59 34.5	
	comp=Z,4.3nm,1.4s						
ASAR	Alice Springs	34.13	124	P	P	14 59 10.7	+1.4
	comp=Z,0.2nm,0.7s,baz=292,slow=7.6,SNR=2.2						
	comp=Z,0.2nm,0.7s						
TAPN	Taplejung	36.64	336	*e*P	P	14 59 32.3	+1.3
JIRN	Jiri	37.54	335	*e*P	P	14 59 40.2	+1.4
	comp=Z,2.5nm,0.4s						
GUN	Gumba	37.89	334	*e*P	P	14 59 42.9	+1.2
	comp=Z,6.2nm,0.5s						
DANN	Dangsing	39.22	332	*e*P	P	14 59 54.1	+1.3
	comp=Z,6.2nm,0.4s						
PYUN	Piuthan	39.37	331	*e*P	P	14 59 56.1	+2.2
	comp=Z,3.1nm,0.4s						
KSRS	Korea Array	49.16	26	P	P	15 01 11.8	0.0
	comp=Z,1.8nm,0.7s,baz=228,slow=6.7,SNR=6.3						
	comp=Z,1.8nm,0.7s						
SONM	Songino Array	53.91	3	P	P	15 01 48.3	+0.9
	comp=Z,2.9nm,0.7s,baz=180,slow=9.5,SNR=29						
	comp=Z,2.9nm,0.7s						
SONM	Songino Array	53.91	3	P	P	15 01 47.8	+0.4
SONM				IAmb	IAmb	15 01 49.2	
	comp=Z,2.8nm,0.8s						
ULN	Ulaanbaatar	53.97	3	P	P	15 01 46.9	-0.9
GAR	Garm	54.40	329	P	P	15 01 51.1	-0.1
MK31	Makanchi Array	56.00	343	P	P	15 02 02.2	-0.2
MKAR	Makanchi Array	56.00	343	P	P	15 02 02.9	+0.5
	comp=Z,0.8nm,0.5s,baz=148,slow=9.0,SNR=27						
	comp=Z,0.8nm,0.5s						
MKAR	Makanchi Array	56.00	343	P	P	15 02 02.2	-0.2
USRK	Ussuriysk Ar.	56.47	24	P	P	15 02 04.3	-1.4
	comp=Z,3.5nm,0.7s,baz=240,slow=3.1,SNR=4.7						
	comp=Z,3.5nm,0.7s						
USRK	Ussuriysk Ar.	56.47	24	P	P	15 02 05.4	-0.3
ZAA0	Zalesovo Array	61.95	348	P	P	15 02 43.1	-0.3
ZAA0				IAmb	IAmb	15 02 46.1	
	comp=Z,2.5nm,0.7s						
ZALV	Zalesovo Beam	61.95	348	P	P	15 02 43.5	0.0
	comp=Z,1.9nm,0.3s,baz=157,slow=5.5,SNR=10						
	comp=Z,1.9nm,0.3s						
ZALV	Zalesovo Beam	61.95	348	P	P	15 02 43.1	-0.4
BRVK	Borovoye	65.35	339	P	P	15 03 06.1	+0.2
BRVK				IAmb	IAmb	15 03 37.8	
	comp=Z,2.2nm,1.1s						
ABKAR	Akbulak array	66.92	331	P	P	15 03 15.6	-0.4
TXAR	Lajitas Array	145.71	45	PKPbc	PKPab	15 12 04.9	+1.3
	comp=Z,1.8nm,0.6s,baz=277,slow=1.1,SNR=22						

MAN 14 15:01:05.9, 10°.09N×125°.48E, h29^{km}, mb4.1, ML2.9, MS2.5, 4C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	Maasin	0.62	274	⇑*e*P	Pb	15 01 18.4	+0.2
MSLP				*e*S	Sn	15 01 28.2	+0.5
GLSP	General Luna,	0.70	116	⇓*e*P	Pn	15 01 20.4	+0.5
GLSP				*e*S	Sn	15 01 30.4	+0.7
BUTP	Butuan	1.12	173	⇑*e*P	Pn	15 01 24.8	-0.8
BUTP				*e*S	Sb	15 01 40.8	-0.1
CGP	Cagayan de Oro	1.80	206	⇑*e*P	Pn	15 01 32.8	-2.2
CGP				*e*S	Sn	15 01 50.5	-6.4
BIPH	Bislig	2.08	155	⇑*e*P	Pn	15 01 38.9	0.0

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*IDC **14** 15:03:38.8±0.5, 15°.56S×177°.37W, h0^{km}, mb4.7/21, mbtmp4.7/23, ML5.1/1, MS5.1/62, Error ellipse: s-maj=17.8km s-min=12.8km az=142.0*

*BJI **14** 15:03:38.0±0.0, 15°.70S×177°.10W, h10^{km}, mb4.9/44, mB5.5/32, Ms5.5/43, Ms7 5.3/43*

*MOS **14** 15:03:39.0±1.1, 15°.52S×177°.29W, h13^{km}, mb5.3/40, MS5.2/4, Error ellipse: s-maj=9.6km s-min=8.2km az=161.4*

*NEIC **14** 15:03:40.0±1.0, 15°.7S±0°.1×177°.12W±0°.08, h10^{km}±1^{km}, mb5.2/138, Ms_20 5.4/311, Mww5.7/15, Error ellipse: s-maj=19.2km s-min=13.2km az=166.0*

*NEIC **14** 15:03:40, 15°.47S×177°.22W, h26^{km}, Moment Tensor Solution. Duration: 3^s.1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.13; $M_{\theta\theta}$-1.98; $M_{\phi\phi}$2.10; $M_{r\theta}$0.43; $M_{\theta\phi}$3.13; $M_{\phi r}$-0.47; Fault plane solution: $M_0$3.79000×10^{17} NP1: ϕ_s343.79000°, δ85.51000°, λ-171.17000°. NP2: ϕ_s253.10000°, δ81.20000°, λ-4.54000°. Principal axes: T 3.8093, Plg3.0000°, Azm118.0000°; N -0.0392, Plg80.0000°, Azm11.0000°; P -3.7700, Plg9.0000°, Azm209.0000°;*

*NEIC **14** 15:03:40, 15°.67S×177°.12W, h26^{km}*

*BGR **14** 15:03:45.5, 15°.51S×175°.01W, h33^{km}*

*GCMT **14** 15:03:45.0±0.1, 15°.46S±0°.01×177°.16W±0°.01, h15^{km}, MW5.7/159, Moment Tensor Solution. s120,c218; s159,c333; Duration: 1^s.6 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.07±.04; $M_{\theta\theta}$-2.14±.04; $M_{\phi\phi}$2.21±.04; $M_{r\theta}$0.13±.11; $M_{\theta\phi}$3.08±.03; $M_{\phi r}$-0.15±.11; Best double couple: $M_0$3.77600×10^{17} NP1:ϕ_s342.00000°, δ89.00000°, λ-177.00000°. NP2:ϕ_s252.00000°, δ87.00000°, λ-1.00000°. Principal axes: T 3.8070, Plg1.0000°, Azm117.0000°; N -0.0630, Plg87.0000°, Azm7.0000°; P -3.7450, Plg3.0000°, Azm207.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 15:03:39.8±0.3**, 15°.75S**±0°.05×**177°.15W**±0°.04**, h10**^{km}**, n771, σ1^s.36**/623**, mb5.1**/122**, MS5.4**/230**, 28C-25D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	5.00	246	Pn	Pn	15 04 55.2	+0.1
	2.5nm,0.3s,baz=81,slow=12,SNR=13						
MSVF				LR	LR	15 06 40.3	
	comp=Z,12μm,20.5s,baz=57,slow=37						
	18nm,0.6s						
MSVF	Nonsavu	5.00	246	Pn	Pn	15 04 55.8	+0.7
MSVF	Nonsavu	5.00	246	*i* P	Pn	15 04 56.9	+1.8
AFI	Afiamalu	5.51	71	Pn	Pn	15 04 59.2	-2.8
	4.8nm,0.3s,baz=211,slow=1.4,SNR=13						
AFI				Sn	Sn	15 06 06.9	+1.4
	baz=78,slow=17						
NIUE	Niue	7.65	117	P	Pn	15 05 31.5	+0.1
	baz=7.7,SNR=10						
NIUE	Niue	7.65	117	Pn	Pn	15 05 31.2	-0.1
FUNA	Funafuti	8.01	333	Pn	Pn	15 05 29.8	-6.6
OUENC	Ouen Island, N	16.51	244		P	15 07 34.7	+0.4
DZM	Mont Dzumac	16.74	245	*e*Pn	Pn	15 07 33.4	-1.3
	271nm,1.8s						
DZM				*e*LR	LR	15 11 26.4	
	comp=Z,14μm,24.0s						
DZM	Mont Dzumac	16.74	245	Pn	P	15 07 36.6	-0.3
	0.3nm,0.3s,baz=68,slow=11,SNR=11						
DZM				Sn	Sn	15 10 45.6	+4.7
	0.2nm,0.3s,baz=12,slow=15,SNR=0.9						
DZM				LR	LR	15 13 04.8	
	comp=Z,8μm,18.6s,baz=74,slow=34						
DZM	Mont Dzumac	16.74	245		P	15 07 38.2	+1.3
ONTNC	Ouen Toro	16.81	245		P	15 07 38.5	+0.9
RAR	Rarotonga	17.35	111	P	P	15 07 44.7	+1.1
	44nm,1.2s,baz=253,slow=5.3,SNR=6.4						
RAR				LR	LR	15 12 54.2	
	comp=Z,7μm,20.9s,baz=270,slow=32						
MXZ	Matakaoa Point	22.10	190	IAMs_20	IAMs_20	15 15 59.4	
	comp=Z,16μm,19.0s						
TOZ	Tahuroa Road	22.84	195	IAMs_20	IAMs_20	15 16 08.1	
	comp=Z,17μm,20.0s						
URZ	Urewera	22.99	192	P	P	15 08 45.0	+0.3
	comp=Z,22nm,0.9s,baz=136,slow=6.5,SNR=7.0						
URZ				LR	LR	15 16 20.5	
	comp=Z,12μm,19.4s,baz=128,slow=33						
	comp=Z,22nm,0.9s						
HNR	Honiara	23.20	283	P	P	15 08 43.1	-4.0
	comp=Z,576nm,0.5s,baz=223,slow=14,SNR=1.9						
HIZ	Hauiti	23.75	196	IAMs_20	IAMs_20	15 16 47.0	
	comp=Z,13μm,18.0s						
BKZ	Black Stump Fm	23.99	192	IAMs_20	IAMs_20	15 17 06.4	
	comp=Z,10μm,21.0s						
BFZ	Birch Farm	25.50	192	P	P	15 09 07.6	-0.7
BFZ				IAMs_20	IAMs_20	15 17 53.4	
	comp=Z,12μm,20.0s						
MRZ	Mangatainoka R	25.62	193	IAMs_20	IAMs_20	15 18 29.5	
	comp=Z,10μm,19.0s						
SNZO	South Karori	26.43	194	IAMs_20	IAMs_20	15 18 44.1	
	comp=Z,11μm,19.0s						
TCW	Tory Channel	26.44	195	P	P	15 09 16.3	-0.5
PAE	Paea	26.47	98	*e*T	T	15 36 53.4	
	comp=Z,4.7nm,0.3s						
PPT	Papeete	26.47	98	LR	LR	15 17 12.5	
	comp=Z,5μm,20.6s,baz=266,slow=30						
PPT2	Papeete2	26.47	98	*e*S	S	15 13 49.9	-1.8
	comp=Z,558nm,22.0s						
PPT2				*e*LQ	LQ	15 14 47.9	
	comp=Z,10μm,27.5s						
PPT2				*e*LR	LR	15 15 54.9	
	comp=Z,11μm,25.5s						
PPT2				*e*LR	LR	15 15 54.9	
	comp=Z,16μm,25.8s						
BHW	Baring Head	26.49	194	IAMs_20	IAMs_20	15 18 45.6	
	comp=Z,11μm,19.0s						
QRZ	Quartz Range	26.55	198	P	P	15 09 17.7	-0.2
QRZ				IAMs_20	IAMs_20	15 18 15.2	
	comp=Z,11μm,22.0s						
NNZ	Nelson	26.67	196	IAMs_20	IAMs_20	15 18 32.5	
	comp=Z,11μm,19.0s						
TVO	Taravao	26.78	98	*e*T	T	15 37 10.0	
	comp=Z,2.2nm,0.3s						
CMWZ	Cape Campbell	26.96	194	P	P	15 09 21.2	-0.3
MRNZ	Matariki Terra	27.01	197	P	P	15 09 22.4	+0.3
TBI	Tubuai	27.14	111	*e*S	S	15 14 00.6	-1.3
	comp=Z,6μm,26.5s						
TBI				*e*LR	LR	15 16 13.0	
	comp=Z,251μm,25.0s						
TBI				*e*LR	LR	15 16 13.3	
	comp=Z,89μm,28.8s						
TBI	Tubuai	27.14	111	*e*T	T	15 37 38.6	
	comp=Z,18nm,0.3s						
THZ	Tophouse	27.31	196	P	P	15 09 25.2	+0.4
THZ				IAmb	IAmb	15 09 38.9	
	comp=Z,42nm,0.9s						
DSZ	Denniston Nort	27.61	198	P	P	15 09 27.7	+0.3
KHZ	Kahutara	27.76	195	IAMs_20	IAMs_20	15 19 26.2	
	comp=Z,11μm,20.0s						
GVZ	Greta Valley S	28.40	195	IAMs_20	IAMs_20	15 19 57.2	
	comp=Z,9μm,19.0s						
LTZ	Lake Taylor	28.43	196	P	P	15 09 35.1	+0.3
LTZ				IAmb	IAmb	15 09 41.3	
	comp=Z,34nm,0.8s						
INZ	Inchbonnie	28.61	198	P	P	15 09 35.8	-0.5
INZ				IAMs_20	IAMs_20	15 20 46.8	
	comp=Z,11μm,19.0s						
KWAJ	Kwajalein Atol	28.68	327	IAMs_20	IAMs_20	15 17 36.8	
	comp=Z,9μm,21.0s						
MQZ	McQueen's Vall	29.19	195	IAMs_20	IAMs_20	15 20 21.1	
	comp=Z,8μm,19.0s						
RPZ	Rata Peaks	29.63	197	P	P	15 09 46.2	+0.8
	comp=Z,15nm,0.9s,baz=316,slow=22,SNR=3.7						
	comp=Z,15nm,0.9s						
RPZ	Rata Peaks	29.63	197	IAMs_20	IAMs_20	15 21 28.8	
	comp=Z,7μm,18.0s						
FOZ	Fox Glacier	29.84	199	IAMs_20	IAMs_20	15 22 11.4	
	comp=Z,7μm,18.0s						
LBZ	Lake Benmore	30.50	198	IAMs_20	IAMs_20	15 22 07.8	
	comp=Z,6μm,18.0s						
ODZ	Otahua Downs	30.97	197	IAMs_20	IAMs_20	15 21 03.2	
	comp=Z,10μm,22.0s						
EIDS	Eidsvold	31.18	247	P	P	15 09 59.0	-0.3
EIDS				IAmb	IAmb	15 11 07.2	
	comp=Z,48nm,1.6s						
WKZ	Wanaka	31.26	199	IAMs_20	IAMs_20	15 22 34.8	
	comp=Z,6μm,19.0s						
MLZ	Mavora Lakes	32.03	200	P	P	15 10 06.8	+0.3
MLZ				IAmb	IAmb	15 10 26.7	
	comp=Z,39nm,1.1s						
ARMA	Armidale	32.09	237	P	P	15 10 08.5	+1.1

	baz=32,SNR=3.6						
ARMA	**Armidale**	**32.09**	**237**	P	**P**	**15 10 06.5**	**-0.9**
ARMA				IAmb	IAmb	15 10 15.4	
	comp=Z,30nm,1.1s						
KRVT	**Keravat (AS076**	**32.35**	**287**	LR	LR	15 21 49.6	
	comp=Z,7µm,20.8s,baz=260,slow=34						
DCZ	**Deep Cove**	**32.44**	**201**	P	**P**	**15 10 10.3**	**+0.2**
DCZ				IAmb	IAmb	15 10 16.6	
	comp=Z,53nm,1.1s						
WHZ	**Wether Hill Ro**	**32.55**	**200**	P	**P**	**15 10 11.4**	**+0.4**
RMQ	**Roma**	**33.45**	**246**	P	**P**	**15 10 20.3**	**+1.0**
	baz=34,SNR=12						
CTA	**Charters Tower**	**35.04**	**257**	P	**P**	**15 10 33.1**	**0.0**
	comp=Z,11nm,0.9s,baz=86,slow=11,SNR=8.4						
CTA				LR	LR	15 22 22.7	
	comp=Z,3µm,20.4s,baz=82,slow=32						
	comp=Z,11nm,0.9s						
CTAO	**Charters Tower**	**35.04**	**257**	P	**P**	**15 10 32.9**	**-0.2**
CTAO				IAmb	IAmb	15 10 58.7	
	comp=Z,57nm,1.5s						
CTAO	**Charters Tower**	**35.04**	**257**	P	**P**	**15 10 32.9**	**-0.2**
CTAO				pmax	pmax		
	comp=Z,57nm,1.5s						
CTAO				MLR	MLR		
	comp=Z,3µm,18.0s						
PMG	**Port Moresby**	**35.36**	**276**	P	**P**	**15 10 34.8**	**-1.1**
	comp=Z,7.6nm,0.8s,baz=55,slow=4.4,SNR=4.9						
PMG				LR	LR	15 22 56.7	
	comp=Z,6µm,20.4s,baz=92,slow=33						
	comp=Z,7.6nm,0.8s						
PMG	**Port Moresby**	**35.36**	**276**	*ce*P	**P**	**15 10 35.1**	**-0.8**
PMG				pmax	pmax		
	comp=Z,32nm,1.7s						
CNB	**Canberra Magne**	**35.71**	**231**	P	**P**	**15 10 39.2**	**+0.5**
	baz=36						
CAN	**Canberra**	**35.98**	**231**	P	**P**	**15 10 41.1**	**+0.1**
CAN				IAmb	IAmb	15 10 46.4	
	comp=Z,36nm,1.1s						
CAN	**Canberra**	**35.98**	**231**	P	**P**	**15 10 41.1**	**+0.1**
CAN				pmax	pmax		
	comp=Z,36nm,1.1s						
TAOE	**Nuku Hiva Isla**	**36.75**	**84**	*e*SS	SS	15 19 12.2	-0.7
	comp=Z,2µm,25.1s						
TAOE				*e*LR	LR	15 20 39.8	
	comp=Z,5µm,24.4s						
TAOE	**Nuku Hiva Isla**	**36.75**	**84**	*e*T	T	15 49 32.8	
	comp=Z,20nm,0.2s						
MTSU	**Mount Surprise**	**36.89**	**261**	P	**P**	**15 10 48.6**	**-0.4**
	baz=37,SNR=9.3						
CMSA	**Cobar Meteorol**	**37.28**	**238**	P	**P**	**15 10 52.5**	**+0.4**
	baz=37,SNR=27						
QLP	**Quilpie**	**37.46**	**247**	P	**P**	**15 10 54.3**	**+0.6**
	baz=38,SNR=8.7						
H11S2	**WAKE ISLAND Hy**	**37.55**	**334**	T	T	15 50 24.8	
	baz=154,slow=76,SNR=33						
H11S3	**WAKE ISLAND Hy**	**37.56**	**334**	T	T	15 50 25.2	
	baz=154,slow=76,SNR=30						
H11S1	**WAKE ISLAND Hy**	**37.57**	**334**	T	T	15 50 22.6	
	baz=154,slow=76,SNR=43						
WAKE	**Wake Island**	**38.28**	**335**	IAMs_20	IAMs_20	15 23 35.1	
	comp=Z,6µm,20.0s						
H11N3	**WAKE ISLAND Hy**	**38.57**	**335**	T	T	15 51 41.1	
	baz=154,slow=76,SNR=9.0						
H11N1	**WAKE ISLAND Hy**	**38.57**	**335**	T	T	15 51 40.9	
	baz=154,slow=76,SNR=28						
H11N2	**WAKE ISLAND Hy**	**38.59**	**335**	T	T	15 51 42.0	
	baz=154,slow=76,SNR=19						
TOO	**Toolangi**	**39.47**	**229**	P	**P**	**15 11 11.0**	**+0.4**
	baz=40,SNR=5.5						
TOO	**Toolangi**	**39.47**	**229**	P	**P**	**15 11 10.8**	**+0.2**
TOO				IAmb	IAmb	15 11 14.8	
	comp=Z,39nm,1.0s						
TOO	**Toolangi**	**39.47**	**229**	P	**P**	**15 11 10.8**	**+0.2**
TOO				pmax	pmax		
	comp=Z,39nm,1.0s						
TAU	**Tasmania Unive**	**40.65**	**221**	IAMs_20	IAMs_20	15 24 17.4	
	comp=Z,5µm,22.0s						
STKA	**Stephens Creek**	**40.74**	**239**	P	**P**	**15 11 21.8**	**+0.7**
	comp=Z,44nm,1.0s,baz=64,slow=7.1,SNR=38						
STKA				LR	LR	15 26 43.4	
	comp=Z,3µm,19.9s,baz=70,slow=34						
	comp=Z,44nm,1.0s						
STKA	**Stephens Creek**	**40.74**	**239**	P	**P**	**15 11 21.8**	**+0.7**
	baz=41,SNR=26						
STKA	**Stephens Creek**	**40.74**	**239**	P	**P**	**15 11 21.2**	**0.0**
STKA	**Stephens Creek**	**40.74**	**239**	*i* P	**P**	**15 11 21.4**	**+0.3**
HMH	**Humu'ula Sheep**	**41.09**	**32**	P	**P**	**15 11 23.8**	**-0.5**
HPAH	**Hawaii Prepara**	**41.34**	**31**	P	**P**	**15 11 25.6**	**-0.5**
KHLH	**Kahului Airpor**	**41.71**	**30**	P	**P**	**15 11 28.7**	**-0.4**
ARPS	**Mount Arapiles**	**41.91**	**232**	P	**P**	**15 11 30.4**	**-0.2**
	baz=42,SNR=12						
HTT	**Hallett**	**43.29**	**238**	P	**P**	**15 11 42.2**	**+0.2**
	baz=43,SNR=18						
BBOO	**Buckleboo**	**45.52**	**239**	P	**P**	**15 11 59.8**	**0.0**
	baz=46,SNR=12						
BBOO	**Buckleboo**	**45.52**	**239**	P	**P**	**15 11 59.3**	**-0.5**
BBOO				IAmb	IAmb	15 12 13.4	
	comp=Z,56nm,1.4s						
WB0	**Warramunga Arr**	**46.20**	**258**	P	**P**	**15 12 03.1**	**-2.3**
WB0				IAmb	IAmb	15 13 43.7	
	comp=Z,13nm,0.8s						
WB2	**Warramunga Arr**	**46.23**	**257**	P	**P**	**15 12 04.1**	**-1.5**
WRAB	**Tennant Creek**	**46.23**	**257**	P	**P**	**15 12 03.1**	**-2.5**
WRAB				IAmb	IAmb	15 13 45.4	
	comp=Z,12nm,0.7s						
WRAB	**Tennant Creek**	**46.23**	**257**	*ce*P	**P**	**15 12 05.5**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,18nm,1.7s						
WRA	**Warramunga Arr**	**46.24**	**257**	P	**P**	**15 12 03.9**	**-1.9**
	comp=Z,3.4nm,1.1s,baz=85,slow=6.0,SNR=15						
WRA				LR	LR	15 30 47.6	
	comp=Z,1µm,19.7s,baz=86,slow=35						
	comp=Z,3.4nm,1.1s						
AS31	**Alice Springs**	**46.56**	**252**	P	**P**	**15 12 06.6**	**-1.6**
ASAR	**Alice Springs**	**46.56**	**252**	P	**P**	**15 12 06.7**	**-1.6**
	comp=Z,26nm,0.7s,baz=84,slow=8.2,SNR=163						
ASAR				LR	LR	15 30 06.5	
	comp=Z,4µm,18.8s,baz=96,slow=34						
	comp=Z,26nm,0.7s						
GUMO	**Guam**	**47.54**	**306**	P	**P**	**15 12 13.6**	**-2.2**
	comp=Z,40nm,0.9s,baz=168,slow=20,SNR=3.6						
GUMO				LR	LR	15 29 17.8	
	comp=Z,2µm,21.5s,baz=120,slow=33						
	comp=Z,40nm,0.9s						
MTN	**Manton Dam**	**50.10**	**266**	P	**P**	**15 12 34.0**	**-1.6**
MTN				IAmb	IAmb	15 12 35.3	
	comp=Z,32nm,0.8s						
WRKA	**Warakurna**	**51.68**	**250**	P	**P**	**15 12 46.4**	**-1.0**
	baz=52,SNR=56						
FORT	**Forrest**	**52.04**	**243**	P	**P**	**15 12 49.1**	**-0.8**
FORT				IAmb	IAmb	15 12 53.5	
	comp=Z,31nm,0.9s						
SIJI	**Sorong**	**52.96**	**281**	LR	LR	15 34 14.4	
	comp=Z,2µm,20.3s,baz=116,slow=35						
FITZ	**Fitzroy Crossi**	**54.60**	**259**	P	**P**	**15 13 09.1**	**+0.1**
	baz=55						
FITZ	**Fitzroy Crossi**	**54.60**	**259**	P	**P**	**15 13 08.8**	**-0.2**
SOEI	**Soe**	**57.30**	**268**	P	**P**	**15 13 27.9**	**-0.6**
JCJ	**Chichijima**	**58.06**	**317**	LR	LR	15 33 04.6	
	comp=Z,3µm,21.2s,baz=133,slow=31						
PSA00	**Pilbara Seismi**	**59.64**	**254**	P	**P**	**15 13 43.7**	**-0.9**
DAV	**Davao City (W)**	**61.07**	**287**	LR	LR	15 38 35.9	
	comp=Z,892nm,18.8s,baz=102,slow=34						
NWAO	**Narrogin (SRO)**	**61.30**	**241**	P	**P**	**15 13 57.0**	**+1.2**
	comp=Z,14nm,0.8s,baz=307,slow=19,SNR=1.9						
NWAO				LR	LR	15 37 57.4	
	comp=Z,3µm,21.8s,baz=81,slow=34						
	comp=Z,14nm,0.8s						
NWAO	**Narrogin (SRO)**	**61.30**	**241**	P	**P**	**15 13 57.0**	**+1.2**
NWAO	**Narrogin (SRO)**	**61.30**	**241**	IAMs_20	IAMs_20	15 38 39.0	
	comp=Z,3µm,21.0s						
NWAO	**Narrogin (SRO)**	**61.30**	**241**	P	**P**	**15 13 57.0**	**+1.2**
VNDA	**Vanda**	**62.69**	**185**	LR	LR	15 37 06.8	
	comp=Z,501nm,19.6s,baz=36,slow=32						
KAPI	**Kappang**	**62.77**	**272**	LR	LR	15 39 51.9	
	comp=Z,583nm,21.3s,baz=96,slow=35						
RPN	**Rapa Nui**	**63.49**	**113**	LR	LR	15 34 27.5	
	comp=Z,2µm,21.4s,baz=262,slow=29						
JHJ	**Hachijo jima 2**	**63.66**	**320**	LR	LR	15 36 26.8	
	comp=Z,984nm,21.7s,baz=113,slow=31						
MJAR	**Matsushiro Arr**	**66.93**	**322**	P	**P**	**15 14 30.5**	**-2.1**
	comp=Z,7.1nm,1.0s,baz=153,slow=6.4,SNR=7.1						
MJAR				LR	LR	15 38 05.0	
	comp=Z,980nm,22.0s,baz=132,slow=31						
	comp=Z,7.1nm,1.0s						
JAGI	**Jajag, Banyuwa**	**67.32**	**267**	P	**P**	**15 14 33.6**	**-2.0**
JAGI	**Jajag, Banyuwa**	**67.32**	**267**	P	**P**	**15 14 33.4**	**-2.2**
ADK	**Adak**	**67.34**	**0**	IAMs_20	IAMs_20	15 36 25.7	
	comp=Z,2µm,22.0s						
JOW	**Kunigami**	**67.81**	**308**	LR	LR	15 38 35.4	
	comp=Z,983nm,20.1s,baz=93,slow=31						
SHEM	**Shemya Is, Ala**	**68.61**	**354**	LR	LR	15 41 19.9	
	comp=Z,839nm,19.1s,baz=176,slow=33						
JNU	**Nakatsue**	**69.44**	**315**	LR	LR	15 39 56.2	
	comp=Z,1µm,21.2s,baz=120,slow=32						
UNV	**Unalaska Valle**	**69.91**	**7**	P	**P**	**15 14 49.5**	**-1.3**
JKA	**Kamikawa-asahi**	**69.98**	**330**	P	**P**	**15 14 50.9**	**-0.6**
ASAJ	**Asahikawa**	**69.98**	**330**	LR	LR	15 39 17.6	
	comp=Z,2µm,21.7s,baz=151,slow=31						
ASAJ	**Asahikawa**	**69.98**	**330**	P	**P**	**15 14 50.9**	**-0.6**
ASAJ				pmax	pmax		
	comp=Z,62nm,1.3s						
TWG	**Pinlang**	**71.57**	**301**	IAMs_20	IAMs_20	15 43 27.0	
	comp=Z,2µm,20.0s						
PET	**Petropavlovsk**	**71.60**	**345**	*e*P	**P**	**15 15 04.0**	**+2.9**
PET				*e*S	**S**	**15 24 22.7**	**+2.4**
PET				*e*SS	**SS**	**15 28 53.6**	**-2.5**
PETK	**Petropavlovsk-**	**71.92**	**344**	P	**P**	**15 15 03.5**	**+0.4**
	comp=Z,20nm,1.2s,baz=121,slow=7.1,SNR=6.8						
PETK				LR	LR	15 43 21.9	
	comp=Z,1µm,19.2s,baz=164,slow=33						
	comp=Z,20nm,1.2s						
YSS	**Yuzh-Sakhalins**	**72.05**	**332**	P	**P**	**15 15 02.7**	**-1.3**
YSS				IAMs_20	IAMs_20	15 41 11.3	
	comp=Z,2µm,20.0s						
YSS	**Yuzh-Sakhalins**	**72.05**	**332**	*e*P	**P**	**15 15 03.5**	**-0.5**
YSS				*e*S	**S**	**15 24 28.8**	**+3.1**
YSS				*e*SS	**SS**	**15 29 06.1**	**+2.8**
YSS				pmax	pmax		
	comp=Z,50nm,1.1s						
YHNB	**Yeheng**	**72.15**	**303**	IAMs_20	IAMs_20	15 39 37.6	
	comp=Z,2µm,20.0s						
KSM	**Kuching**	**73.62**	**276**	P	**P**	**15 15 12.6**	**-1.5**
KSM				IAmb	IAmb	15 15 19.9	
	comp=Z,41nm,1.4s						
MCCM	**Marconi Confer**	**73.89**	**42**	IAMs_20	IAMs_20	15 39 38.7	
	comp=Z,2µm,21.0s						
KSRS	**Korea Array**	**73.92**	**317**	P	**P**	**15 15 14.8**	**-0.5**
	comp=Z,6.6nm,1.0s,baz=149,slow=6.3,SNR=7.3						
KSRS				LR	LR	15 42 11.8	
	comp=Z,1µm,21.7s,baz=135,slow=31						
	comp=Z,6.6nm,1.0s						
KSAR	**Wonju Array Be**	**73.93**	**317**	P	**P**	**15 15 14.2**	**-1.2**
KSAR	**Wonju Array Be**	**73.93**	**317**	P	**P**	**15 15 14.2**	**-1.2**
SAO	**San Andreas Ge**	**74.04**	**44**	P	**P**	**15 15 16.0**	**0.0**
SAO				IAmb	IAmb	15 15 23.5	
	comp=Z,22nm,1.1s						
SAO	**San Andreas Ge**	**74.04**	**44**	P	**P**	**15 15 16.0**	**0.0**
SAO				pmax	pmax		
	comp=Z,22nm,1.2s						
QSPA	**South Pole Qui**	**74.30**	**180**	P	**P**	**15 15 19.4**	**+2.1**
	comp=Z,13nm,0.9s,baz=343,slow=1.8,SNR=14						
QSPA				LR	LR	15 43 10.6	
	comp=Z,1µm,21.8s,baz=44,slow=32						
	comp=Z,13nm,0.9s						
INCN	**Inchon**	**74.78**	**317**	IAMs_20	IAMs_20	15 42 26.4	
	comp=Z,2µm,21.0s						
PASC	**Pasadena Art C**	**74.88**	**47**	IAMs_20	IAMs_20	15 40 57.1	
	comp=Z,2µm,20.0s						
109C	**Camp Elliot, M**	**75.00**	**49**	IAMs_20	IAMs_20	15 40 09.4	
	comp=Z,2µm,20.0s						
TYV	**Tymovskoe**	**75.08**	**335**	*e*P	**P**	**15 15 20.5**	**-1.2**
TYV				*e*S	**S**	**15 25 02.0**	**+2.2**
TYV				pmax	pmax		
	comp=Z,200nm,3.9s						
TYV				pmax	pmax		
	comp=Z,23nm,1.4s						
TYV				smax	smax		
	comp=N,400nm,5.5s						
TYV				smax	smax		
	comp=E,500nm,5.5s						
R17K	**Ugashik Creek**	**75.11**	**11**	P	**P**	**15 15 22.7**	**+0.9**
	baz=201						
BFSC	**Mount Baldy Ra**	**75.29**	**48**	P	**P**	**15 15 22.9**	**-0.6**
	baz=239						
EDW2	**Edwards Air Fo**	**75.38**	**47**	P	**P**	**15 15 23.6**	**-0.4**
	baz=239						
CMB	**Columbia Colle**	**75.45**	**43**	P	**P**	**15 15 23.8**	**-0.4**
CMB	**Columbia Colle**	**75.45**	**43**	P	**P**	**15 15 23.8**	**-0.4**
CMB				pmax	pmax		
	comp=Z,12nm,1.2s						
ISA	**Isabella, Lake**	**75.46**	**46**	P	**P**	**15 15 24.2**	**-0.2**
	baz=238						
MONP2	**Monument Peak**	**75.50**	**49**	P	**P**	**15 15 24.7**	**-0.2**
	baz=240						
USA0B	**Ussuriysk Arra**	**75.53**	**325**	P	**P**	**15 15 23.1**	**-1.4**
USA0B				IAmb	IAmb	15 15 36.8	
	comp=Z,48nm,1.4s						
USA0B	**Ussuriysk Arra**	**75.53**	**325**	P	**P**	**15 15 23.1**	**-1.4**
USA0B				pmax	pmax		
	comp=Z,49nm,1.4s						
USRK	**Ussuriysk Ar.**	**75.53**	**325**	P	**P**	**15 15 23.1**	**-1.4**
	comp=Z,8.5nm,1.2s,baz=152,slow=6.5,SNR=2.0						
USRK				LR	LR	15 43 06.7	
	comp=Z,1µm,21.7s,baz=123,slow=32						
	comp=Z,8.5nm,1.2s						
USRK	**Ussuriysk Ar.**	**75.53**	**325**	P	**P**	**15 15 23.2**	**-1.3**
USRK	**Ussuriysk Ar.**	**75.53**	**325**	P	**P**	**15 15 23.2**	**-1.3**
ORV	**Oroville**	**75.58**	**41**	IAMs_20	IAMs_20	15 40 43.4	
	comp=Z,2µm,21.0s						
IKP	**In-Ko-Pah, Jac**	**75.61**	**50**	P	**P**	**15 15 25.3**	**0.0**
	baz=240						
Q17K	**Contact Creek**	**75.79**	**11**	P	**P**	**15 15 26.2**	**+0.4**
	baz=201						
PFO	**Pinyon Flats O**	**75.83**	**49**	LR	LR	15 40 35.4	
	comp=Z,2µm,21.6s,baz=244,slow=29						
PFO	**Pinyon Flats O**	**75.83**	**49**	IAMs_20	IAMs_20	15 40 12.4	
	comp=Z,3µm,21.0s						
PFO	**Pinyon Flats O**	**75.83**	**49**	P	**P**	**15 15 26.4**	**-0.3**
	baz=240						
TPFO	**Pinon Flats**	**75.83**	**49**	P	**P**	**15 15 26.4**	**-0.3**
	baz=240						
LRMC	**Laurel Mtn Rad**	**75.91**	**46**	P	**P**	**15 15 26.5**	**-0.5**
	baz=239						
SWSC	**Sam W. Stewart**	**75.98**	**50**	P	**P**	**15 15 26.9**	**-0.5**
	baz=240						
KDAK	**Kodiak Island**	**76.03**	**13**	LR	LR	15 41 47.0	
	comp=Z,2µm,21.7s,baz=234,slow=30						
KDAK	**Kodiak Island**	**76.03**	**13**	IAMs_20	IAMs_20	15 43 09.5	
	comp=Z,3µm,21.0s						
Q16K	**King Salmon**	**76.04**	**11**	P	**P**	**15 15 28.1**	**+1.1**
	baz=200						
MDPB	**Devils Postpil**	**76.09**	**44**	P	**P**	**15 15 27.7**	**-0.5**
YBH	**Yreka Blue Hor**	**76.09**	**39**	LR	LR	15 40 59.0	
	comp=Z,3µm,21.6s,baz=231,slow=29						
YBH	**Yreka Blue Hor**	**76.09**	**39**	P	**P**	**15 15 28.3**	**+0.4**
YBH	**Yreka Blue Hor**	**76.09**	**39**	P	**P**	**15 15 28.3**	**+0.4**
YBH				pmax	pmax		
	comp=Z,13nm,1.0s						
CWC	**Cottonwood Cre**	**76.14**	**45**	P	**P**	**15 15 27.9**	**-0.4**
	baz=238						
OMMB	**Old Mammoth Mi**	**76.14**	**44**	P	**P**	**15 15 27.6**	**-0.9**
LPIG	**La Paz**	**76.32**	**60**	LR	LR	15 42 41.5	
	comp=Z,766nm,18.3s,baz=241,slow=31						
Q18K	**Katmai Hardscr**	**76.32**	**12**	P	**P**	**15 15 30.2**	**+1.4**
	baz=202						
MPMC	**Manual Prospec**	**76.34**	**46**	P	**P**	**15 15 29.7**	**+0.1**
	baz=239						
BELC	**Belle Mtn. Jos**	**76.36**	**48**	P	**P**	**15 15 29.9**	**+0.2**
	baz=240						
HUMO	**Hull Mountain**	**76.47**	**38**	IAMs_20	IAMs_20	15 40 57.7	
	comp=Z,2µm,21.0s						
HEC	**Hector,Ludlow**	**76.53**	**48**	P	**P**	**15 15 31.3**	**+0.8**
	baz=240						
BC3	**Big Chuckawall**	**76.58**	**49**	P	**P**	**15 15 32.0**	**+1.1**
	baz=241						
L04D	**Klamath Falls**	**76.63**	**39**	P	**P**	**15 15 30.7**	**-0.3**
PPBI	**Pangkal Pinang**	**76.63**	**272**	P	P	15 15 36.7	+5.2
O16K	**Kokwok River B**	**76.66**	**10**	P	**P**	**15 15 30.7**	**+0.2**
	baz=199						
DSP	**Deep Springs**	**76.70**	**45**	P	**P**	**15 15 30.6**	**-0.7**
YERR	**Yerington**	**76.72**	**43**	P	**P**	**15 15 30.6**	**-1.0**
QSM	**Queen of Sheba**	**76.73**	**46**	P	**P**	**15 15 31.2**	**-0.3**
QSM				IAmb	IAmb	15 15 38.7	
	comp=Z,22nm,1.5s						
GLA	**Glamis**	**76.75**	**50**	P	**P**	**15 15 32.9**	**+1.1**
	baz=241						
LHV	**Little Huntoon**	**76.81**	**44**	P	**P**	**15 15 31.2**	**-0.6**
LHV				IAmb	IAmb	15 15 43.7	
	comp=Z,31nm,1.3s						
LCH	**Last Change Ra**	**76.85**	**45**	P	**P**	**15 15 32.0**	**-0.3**
Q19K	**Cape Douglas,**	**76.86**	**12**	IAMs_20	IAMs_20	15 42 18.3	
	comp=Z,2µm,20.0s						
P18K	**Big Mountain,**	**76.97**	**11**	IAMs_20	IAMs_20	15 42 54.4	
	comp=Z,1µm,20.0s						
P18K	**Big Mountain,**	**76.97**	**11**	P	**P**	**15 15 33.1**	**+0.7**
	baz=202						
GWY	**Greenwater Val**	**76.98**	**46**	P	**P**	**15 15 32.3**	**-0.8**
GMRC	**Granite Mounta**	**76.99**	**48**	P	**P**	**15 15 33.7**	**+0.5**
	baz=240						
O17K	**Koliganek Bris**	**77.00**	**10**	P	**P**	**15 15 33.0**	**+0.6**
	baz=200						
PAHR	**Pah Rah Range**	**77.02**	**42**	P	**P**	**15 15 33.0**	**-0.3**
NVAR	**Mina Array Bea**	**77.04**	**44**	P	**P**	**15 15 33.5**	**0.0**
	comp=Z,5.1nm,0.9s,baz=228,slow=8.5,SNR=28						
NVAR				LR	LR	15 41 22.1	
	comp=Z,1µm,21.9s,baz=236,slow=29						
	comp=Z,5.1nm,0.9s						
NVAR	**Mina Array Bea**	**77.04**	**44**	P	**P**	**15 15 32.5**	**-1.0**
IRM	**Iron Mountain**	**77.05**	**49**	P	**P**	**15 15 33.0**	**-0.4**
	baz=241						
TUQ	**Turquoise Moun**	**77.12**	**47**	P	**P**	**15 15 33.6**	**-0.4**
	baz=240						
MDJ	**Mudanjiang**	**77.14**	**324**	P	**P**	**15 15 34.4**	**+0.8**
MDJ				pP	pwP	15 15 38.6	-0.5
MDJ				PcP	**PcP**	**15 15 45.5**	**+1.1**
MDJ				PP	**PP**	**15 18 29.0**	**+1.4**
MDJ				S	**S**	**15 25 25.1**	**+2.3**
MDJ				pmax	pmax		
	comp=Z,14nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,280nm,4.2s						
MDJ				LR	LR		
	comp=Z,780nm,14.5s						
MDJ				LR	LR		
	comp=Z,610nm,14.5s						
MDJ				LR	LR		
	comp=Z,1µm,24.6s						
NV11	**Mina Array Sit**	**77.14**	**44**	P	**P**	**15 15 33.1**	**-0.9**
NV11				IAmb	IAmb	15 15 40.7	
	comp=Z,18nm,1.1s						
HKPS	**Hong Kong Po S**	**77.16**	**298**	IAMs_20	IAMs_20	15 47 54.5	
	comp=Z,1µm,19.0s						
WCT	**Wildcat Mounta**	**77.32**	**46**	P	**P**	**15 15 34.1**	**-0.8**
N16K	**Nishlik Lake**	**77.39**	**9**	P	**P**	**15 15 35.9**	**+1.2**
	baz=198						
113A	**Mohawk Valley,**	**77.40**	**51**	P	**P**	**15 15 34.4**	**-0.9**
113A				IAmb	IAmb	15 15 42.9	
	comp=Z,22nm,1.5s						
O18K	**Koktuh Hills**	**77.41**	**11**	P	**P**	**15 15 35.5**	**+0.7**
	baz=202						
KVN	**Kaiserville**	**77.50**	**43**	P	**P**	**15 15 34.8**	**-1.2**
KVN	**Kaiserville**	**77.50**	**43**	P	**P**	**15 15 34.8**	**-1.2**
KVN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NJ2	**Nanjing**	**77.52**	**309**	*e*P	**P**	**15 15 35.8**	**-0.2**
NJ2				sP	**pwP**	**15 15 41.3**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,14nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,510nm,3.8s						
NJ2				LR	LR		
	comp=Z,1µm,13.7s						
NJ2				LR	LR		
	comp=Z,670nm,17.0s						
NJ2				LR	LR		
	comp=Z,2µm,18.6s						
TPH	**Tonopah**	**77.57**	**44**	P	**P**	**15 15 35.0**	**-1.4**
TPH	**Tonopah**	**77.57**	**44**	P	**P**	**15 15 35.1**	**-1.4**
TPH				pmax	pmax		
	comp=Z,39nm,0.9s						
TPNV	**Topopah Spring**	**77.66**	**46**	P	**P**	**15 15 35.9**	**-1.0**
TPNV				IAMs_20	IAMs_20	15 44 41.6	
	comp=Z,2µm,19.0s						
TPNV	**Topopah Spring**	**77.66**	**46**	P	**P**	**15 15 35.9**	**-1.0**
TPNV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TPNV	**Topopah Spring**	**77.66**	**46**	P	**P**	**15 15 36.1**	**-0.8**
	baz=239,SNR=5.4						
GRNR	**Gornyy**	**77.69**	**332**	⇑*i*P	**P**	**15 15 35.7**	**-0.9**
GRNR				*e*S	**S**	**15 25 31.0**	**+2.4**
GRNR				pmax	pmax		
	comp=E,5.0nm,1.0s						
GRNR				pmax	pmax		
	comp=N,2.0nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GRNR				smax	smax		
	comp=N,1.0nm,0.9s						
214A	**Organ Pipe Nat**	**77.74**	**52**	P	**P**	**15 15 37.2**	**-0.2**
	baz=243						
K05A	**Summer Lake**	**77.77**	**39**	P	**P**	**15 15 36.4**	**-1.1**
K05A				IAmb	IAmb	15 15 54.0	
	comp=Z,19nm,1.1s						
PDMCI	**Parker Dam,Lak**	**77.85**	**49**	P	**P**	**15 15 38.5**	**+0.6**
	baz=241						
O19K	**Port Alsworth**	**77.89**	**11**	P	**P**	**15 15 36.8**	**-0.7**
O19K	**Port Alsworth**	**77.89**	**11**	P	**P**	**15 15 38.4**	**+1.0**
	baz=202						
CNPM	**China Poot**	**77.91**	**13**	IAMs_20	IAMs_20	15 47 10.2	
	comp=Z,2µm,20.0s						
ILSW	**Iliamna Southw**	**77.93**	**12**	P	**P**	**15 15 37.2**	**-0.7**
O20K	**Slope Mountain**	**78.12**	**12**	P	**P**	**15 15 39.7**	**+0.8**
	baz=204						
SHPR	**Sheep Range**	**78.19**	**47**	P	**P**	**15 15 38.2**	**-1.7**
BRLK	**Bradley Lake**	**78.20**	**13**	IAMs_20	IAMs_20	15 44 27.5	
	comp=Z,2µm,20.0s						
BRSE	**Bradley Lake S**	**78.22**	**13**	P	**P**	**15 15 40.6**	**+1.2**
	baz=206						
N19K	**Bonanza Creek**	**78.44**	**11**	P	**P**	**15 15 41.4**	**+0.8**
	baz=202						
DSRI	**Dabo**	**78.58**	**273**	P	**P**	**15 15 45.3**	**+2.9**
	comp=Z,38nm,1.5s,comp=Z,1µm						
R11A	**Troy Canyon, C**	**78.82**	**45**	P	**P**	**15 15 42.9**	**-0.5**
R11A	**Troy Canyon, C**	**78.82**	**45**	P	**P**	**15 15 42.7**	**-0.7**
	baz=240,SNR=5.6						
SEW	**Seward**	**78.83**	**14**	P	**P**	**15 15 43.7**	**+1.1**
	baz=207						
NLWA	**Neilton Lookou**	**78.86**	**34**	IAMs_20	IAMs_20	15 42 07.7	
	comp=Z,2µm,22.0s						
KLR	**Kul'dur**	**78.89**	**329**	LR	LR	15 44 35.7	
	comp=Z,2µm,21.9s,baz=134,slow=31						
KLR	**Kul'dur**	**78.89**	**329**	*ce*P	**P**	**15 15 43.2**	**0.0**
KLR				pmax	pmax		
	comp=Z,10.0nm,1.7s						
BNX	**BinXian**	**79.05**	**324**	⇑P	**P**	**15 15 43.8**	**-0.4**
BNX				pmax	pmax		
	comp=Z,17nm,1.1s						
BNX				pmax	pmax		
	comp=Z,320nm,5.5s						
CN2	**Changchun**	**79.07**	**322**	*e*P	**P**	**15 15 42.5**	**-1.9**
CN2				pP	PcP	15 15 52.5	-0.3
CN2				S	**S**	**15 25 38.6**	**-5.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,600nm,15.0s						
CN2				LR	LR		
	comp=Z,700nm,15.0s						
CN2				LR	LR		
	comp=Z,800nm,17.0s						
O22K	**Cooper Landing**	**79.11**	**13**	IAMs_20	IAMs_20	15 44 33.8	
	comp=Z,2µm,21.0s						
P23K	**Montague Islan**	**79.22**	**15**	P	**P**	**15 15 46.9**	**+2.0**
	baz=209						
SPCR	**Spurr Chakacha**	**79.23**	**12**	P	**P**	**15 15 46.1**	**+1.2**
	baz=204						
SPU	**Mount Spurr**	**79.25**	**12**	P	**P**	**15 15 44.4**	**-0.6**
I07A	**Izee**	**79.37**	**38**	P	**P**	**15 15 45.0**	**-1.2**
TUC	**Tucson**	**79.43**	**52**	P	**P**	**15 15 45.9**	**-0.8**
TUC				IAmb	IAmb	15 15 54.8	
	comp=Z,55nm,1.9s						
TUC	**Tucson**	**79.43**	**52**	IAMs_20	IAMs_20	15 42 12.8	
	comp=Z,2µm,21.0s						
TUC	**Tucson**	**79.43**	**52**	P	**P**	**15 15 45.9**	**-0.8**
TUC				pmax	pmax		
	comp=Z,55nm,1.9s						
TUC	**Tucson**	**79.43**	**52**	P	**P**	**15 15 47.3**	**+0.6**
	baz=244						
MA2	**Magadan**	**79.45**	**344**	LR	LR	15 46 08.7	
	comp=Z,1µm,20.7s,baz=160,slow=32						
MA2	**Magadan**	**79.45**	**344**	P	**P**	**15 15 44.2**	**-1.9**
MA2				IAmb	IAmb	15 15 51.4	
	comp=Z,70nm,1.8s						
MA2				IAMs_20	IAMs_20	15 45 35.3	
	comp=Z,2µm,21.0s						
MA2	**Magadan**	**79.45**	**344**	*ce*P	**P**	**15 15 44.0**	**-2.1**
MA2				pmax	pmax		

	comp=Z,30nm,1.7s						
M19K	Big River Lodg	79.47	11	P	P	15 15 47.0	+0.9
	baz=202						
L19K	White Mountain	79.64	10	P	P	15 15 47.8	+0.7
	baz=202						
RC01	Rabbit Creek A	79.65	13	P	P	15 15 47.6	+0.5
	baz=207						
M20K	Styx River	79.68	11	IAMs_20	IAMs_20	15 48 30.9	
	comp=Z,2µm,19.0s						
M20K	Styx River	79.68	11	P	P	15 15 48.0	+0.6
	baz=203						
Q12A	Willow Creek R	79.68	45	P	P	15 15 46.9	-1.1
QIZ	Qiongzhong	79.70	293	P	P	15 15 47.9	-0.4
QIZ				S	S	15 25 51.4	+0.1
QIZ				LR	LR		
	comp=Z,860nm,16.5s						
QIZ				LR	LR		
	comp=Z,1µm,17.8s						
QIZ				LR	LR		
	comp=Z,2µm,22.2s						
QIZ	Qiongzhong	79.70	293	IAMs_20	IAMs_20	15 45 34.0	
	comp=Z,3µm,22.0s						
D05A	Enumclaw	79.75	35	P	P	15 15 47.3	-0.7
PWL	Port Wells	79.76	14	IAMs_20	IAMs_20	15 45 46.1	
	comp=Z,2µm,20.0s						
PWL	Port Wells	79.76	14	P	P	15 15 48.9	+1.1
	baz=208						
BBB	Bella Bella	79.85	28	LR	LR	15 43 26.0	
	comp=Z,2µm,20.2s,baz=246,slow=30						
CCUT	Cedar City	79.96	46	P	P	15 15 48.8	-0.9
SPR3	Spring Creek 3	80.00	45	P	P	15 15 48.9	-1.1
CRAG	Craig	80.06	24	P	P	15 15 51.0	+1.5
	baz=223						
SKT	Skwentna	80.08	12	IAMs_20	IAMs_20	15 44 12.5	
	comp=Z,2µm,21.0s						
SKT	Skwentna	80.08	12	P	P	15 15 51.7	+2.3
	baz=205						
L20K	Farewell, AK	80.09	11	P	P	15 15 50.4	+0.9
	baz=203						
TTA	Tatalina	80.15	10	P	P	15 15 49.8	-0.1
TTA				IAmb	IAmb	15 16 01.2	
	comp=Z,21nm,1.1s						
TTA	Tatalina	80.15	10	P	P	15 15 49.8	-0.1
TTA				pmax	pmax		
	comp=Z,21nm,1.1s						
TTA	Tatalina	80.15	10	P	P	15 15 51.3	+1.4
	baz=201						
KNK	Knik Glacier	80.22	14	IAMs_20	IAMs_20	15 44 46.3	
	comp=Z,2µm,21.0s						
KNK	Knik Glacier	80.22	14	P	P	15 15 51.2	+1.0
	baz=208						
PMR	Palmer	80.23	13	P	P	15 15 51.9	+1.7
	baz=207						
ELK	Elko	80.26	43	LR	LR	15 43 32.4	
	comp=Z,2µm,21.6s,baz=246,slow=30						
ELK	Elko	80.26	43	P	P	15 15 50.0	-1.2
ELK				IAmb	IAmb	15 16 05.6	
	comp=Z,36nm,1.9s						
ELK				IAMs_20	IAMs_20	15 43 21.4	
	comp=Z,1µm,21.0s						
ELK	Elko	80.26	43	P	P	15 15 50.0	-1.2
ELK				pmax	pmax		
	comp=Z,36nm,2.0s						
WHN	Wuhan	80.32	305	P	P	15 15 54.6	+3.2
WHN				S	S	15 26 01.5	+4.1
WHN				LR	LR		
	comp=Z,3µm,17.3s						
WHN				LR	LR		
	comp=Z,2µm,15.6s						
WHN				LR	LR		
	comp=Z,3µm,21.3s						
G08A	Pilot Rock	80.37	37	P	P	15 15 51.0	-0.6
WUAZ	Wupatki	80.43	49	IAMs_20	IAMs_20	15 43 40.0	
	comp=Z,2µm,20.0s						
WUAZ	Wupatki	80.43	49	P	P	15 15 52.7	+0.6
	baz=243						
SIT	Sitka	80.43	22	P	P	15 15 53.0	+1.6
	baz=221						
U33K	Whale Pass	80.54	23	P	P	15 15 52.9	+1.0
	baz=223						
V35K	Ketchikan	80.55	24	P	P	15 15 53.2	+1.1
	baz=224						
ANM	Nome	80.57	5	P	P	15 15 51.7	-0.3
ANM				IAMs_20	IAMs_20	15 45 49.4	
	comp=Z,1µm,20.0s						
ANM	Nome	80.57	5	P	P	15 15 51.7	-0.3
ANM				pmax	pmax		
	comp=Z,13nm,1.4s						
ANM	Nome	80.57	5	P	P	15 15 53.2	+1.2
	baz=192						
SML	Sawmill	80.60	13	IAMs_20	IAMs_20	15 45 39.3	
	comp=Z,1µm,20.0s						
SML	Sawmill	80.60	13	P	P	15 15 53.9	+1.5
	baz=208						
DIV	Divide	80.61	15	P	P	15 15 52.4	0.0
HAWA	Hanford	80.66	36	IAMs_20	IAMs_20	15 44 20.6	
	comp=Z,2µm,20.0s						
TIA	Tai'an	80.70	312	⇓P	P	15 15 55.3	+1.9
TIA				S	S	15 26 08.8	+7.5
TIA				pmax	pmax		
	comp=Z,11nm,1.0s						
TIA				pmax	pmax		
	comp=Z,220nm,3.5s						
TIA				LR	LR		
	comp=Z,520nm,21.4s						
TIA				LR	LR		
	comp=Z,800nm,22.4s						
TIA				LR	LR		
	comp=Z,1µm,23.5s						
CUT	Chulitna	80.72	12	P	P	15 15 53.7	+0.9
	baz=206						
PPLA	Purkeypile	80.78	11	P	P	15 15 55.3	+1.9
	baz=204						
DUN6	Lazy B Ranch	80.83	53	P	P	15 15 53.6	-0.8
SCM	Sheep Creek Mo	80.85	14	IAMs_20	IAMs_20	15 43 58.9	
	comp=Z,1µm,21.0s						
SCM	Sheep Creek Mo	80.85	14	P	P	15 15 55.4	+1.7
	baz=209						
K20K	Telida	80.87	10	P	P	15 15 53.4	-0.3
K20K				IAmb	IAmb	15 15 59.0	
	comp=Z,34nm,1.4s						
K20K	Telida	80.87	10	P	P	15 15 54.5	+0.8
	baz=202						
KLU	Klutina	80.89	15	IAMs_20	IAMs_20	15 45 21.8	
	comp=Z,2µm,20.0s						
KLU	Klutina	80.89	15	P	P	15 15 53.6	-0.3
	baz=210						
WRAK	Wrangell Islan	81.06	23	P	P	15 15 55.1	+0.4
	baz=223						
BMO	Blue Mountains	81.11	38	P	P	15 15 54.9	-0.6
BMO	Blue Mountains	81.11	38	P	P	15 15 54.9	-0.6
BMO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MSU	Marysvale	81.24	46	P	P	15 15 55.7	-0.8
MSU	Marysvale	81.24	46	P	P	15 15 55.7	-0.8
MFID	Camas Ranch	81.25	40	IAMs_20	IAMs_20	15 43 55.5	
	comp=Z,2µm,21.0s						
VRDI	Verde Repeater	81.28	16	IAMs_20	IAMs_20	15 44 39.3	
	comp=Z,1µm,21.0s						
CAST	Castle Rocks	81.28	11	P	P	15 15 55.9	0.0
	baz=204						
BCPM	Bancas Point	81.30	18	IAMs_20	IAMs_20	15 43 56.8	
	comp=Z,2µm,20.0s						
N25K	Chitina, Valde	81.31	15	P	P	15 15 56.0	-0.2
N25K				IAmb	IAmb	15 16 46.9	
	comp=Z,43nm,1.6s						
N25K				IAMs_20	IAMs_20	15 44 22.1	
	comp=Z,1µm,20.0s						
N25K	Chitina, Valde	81.31	15	P	P	15 15 57.2	+1.1
	baz=212						
M24K	Tolsona, Glenn	81.36	14	P	P	15 15 57.1	+0.7
	baz=210						
TNA	Tin City	81.36	4	P	P	15 15 55.9	-0.3
TNA				IAmb	IAmb	15 16 01.7	
	comp=Z,37nm,1.3s						
TNA	Tin City	81.36	4	P	P	15 15 56.6	+0.5
	baz=189						
MCARA	McCarthy VSAT	81.53	16	IAMs_20	IAMs_20	15 44 44.8	
	comp=Z,1µm,21.0s						
MCARA	McCarthy VSAT	81.53	16	P	P	15 15 56.8	-0.4
	baz=213						
DUG	Dugway, Tooele	81.60	44	P	P	15 15 56.9	-1.3
	baz=241						
LOGN	Logan Glacier	81.61	17	IAMs_20	IAMs_20	15 44 27.0	
	comp=Z,2µm,21.0s						
BARN	Barnard Glacie	81.62	17	P	P	15 15 57.8	-0.2
BARN				IAMs_20	IAMs_20	15 44 57.3	
	comp=Z,2µm,21.0s						
KTH	Kantishna Hill	81.62	12	IAMs_20	IAMs_20	15 44 51.4	
	comp=Z,2µm,22.0s						
CTG	Chitna Glacier	81.63	17	P	P	15 15 58.1	+0.2
	baz=215						
CTGM	Chitina Glacie	81.63	17	IAMs_20	IAMs_20	15 44 15.6	
	comp=Z,1µm,21.0s						
R32K	Eaglecrest	81.64	21	P	P	15 15 58.9	+1.0
	baz=221						
TRF	Thorofare Moun	81.66	12	P	P	15 15 57.1	-0.9
TRF				IAmb	IAmb	15 16 06.8	
	comp=Z,19nm,1.1s						
TRF	Thorofare Moun	81.66	12	P	P	15 15 58.3	+0.2
	baz=206						
CHUM	Lake Minchumin	81.67	11	P	P	15 15 58.9	+1.1
	baz=204						
HEH	HeiHe	81.73	328	eP	P	15 15 57.0	-1.5
HEH				S	S	15 26 14.3	+3.0
HEH				sS	SKSac	15 26 17.8	-0.6
HEH				SS	SS	15 31 31.0	+1.6
HEH				pmax	pmax		
	comp=Z,12nm,1.5s						
HEH				pmax	pmax		
	comp=Z,220nm,5.3s						
HEH				LR	LR		
	comp=Z,1µm,23.7s						
HEH				LR	LR		
	comp=Z,1µm,21.5s						
HEH				LR	LR		
	comp=Z,2µm,23.3s						
O28M	Mount Upton	81.80	17	P	P	15 15 59.0	0.0
	baz=216						
121A	Cookes Peak, D	81.82	53	P	P	15 15 58.6	-1.1
121A				IAmb	IAmb	15 16 03.9	
	comp=Z,21nm,1.4s						
121A	Cookes Peak, D	81.82	53	P	P	15 15 59.6	-0.1
	baz=246						
121A	Cookes Peak, D	81.82	53	P	P	15 15 58.3	-1.3
	baz=246						
HARP	HAARP	81.85	14	P	P	15 16 00.3	+1.3
	baz=211						
B08A	Colville Reser	81.89	35	P	P	15 15 58.8	-0.6
O29M	Mount Kennedy	81.89	18	P	P	15 16 00.9	+1.5
	baz=217						
RND	Reindeer	81.91	12	IAMs_20	IAMs_20	15 45 28.8	
	comp=Z,2µm,21.0s						
PLBC	Pleasant Camp	81.92	20	P	P	15 16 00.4	+1.1
	baz=219						
SEY	Seymchan	81.96	346	LR	LR	15 47 33.6	
	comp=Z,650nm,20.6s,baz=148,slow=32						
SEY	Seymchan	81.96	346	*i* P	P	15 15 59.5	+0.1
SEY				pmax	pmax		
	comp=Z,49nm,1.5s						
PLID	Pearl Lake	82.02	39	P	P	15 15 59.6	-0.9
PLID				IAmb	IAmb	15 16 23.4	
	comp=Z,29nm,1.8s						
PLID				IAMs_20	IAMs_20	15 44 31.7	
	comp=Z,2µm,21.0s						
BPAW	Bear Paw Mtn.	82.11	11	P	P	15 16 00.4	+0.2
	baz=205						
MCK	McKinley	82.18	12	P	P	15 16 00.3	-0.3
MCK				IAmb	IAmb	15 16 04.3	
	comp=Z,17nm,0.9s						
MCK	McKinley	82.18	12	P	P	15 16 00.3	-0.3
MCK				pmax	pmax		
	comp=Z,17nm,0.9s						
MCK	McKinley	82.18	12	P	P	15 15 59.9	-0.8
	baz=207,SNR=12						
HLID	Hailey	82.22	41	IAMs_20	IAMs_20	15 45 29.0	
	comp=Z,2µm,20.0s						
HLID	Hailey	82.22	41	P	P	15 16 00.8	-0.7
	baz=240,SNR=11						
P30M	Million Dollar	82.25	19	P	P	15 16 01.8	+0.7
	baz=219						
T35M	Bob Quinn	82.27	24	P	P	15 16 01.9	+0.7
	baz=225						
PAX	Paxson	82.27	14	P	P	15 16 02.4	+1.2
	baz=211						
TMUT	Trail Mountain	82.27	46	P	P	15 16 01.2	-0.8
TMUT				IAmb	IAmb	15 16 09.2	
	comp=Z,13nm,1.0s						
YUK8	Steele Glacier	82.34	17	P	P	15 16 02.2	+0.4
	baz=216						
M26K	Nabesna, AK	82.39	15	IAMs_20	IAMs_20	15 45 17.6	
	comp=Z,2µm,20.0s						
M26K	Nabesna, AK	82.39	15	P	P	15 16 03.1	+1.3
	baz=213						
BWN	Browne	82.47	12	P	P	15 16 01.2	-0.9
YUK6	Outpost Mounta	82.47	18	P	P	15 16 03.3	+0.8
	baz=217						
EPT	El Paso	82.50	54	IAMs_20	IAMs_20	15 44 43.2	
	comp=Z,2µm,20.0s						
YUK3	Moose Creek	82.54	17	P	P	15 16 03.5	+0.7
	baz=215						
S34M	Telegraph Cree	82.60	23	P	P	15 16 04.3	+1.4
	baz=224						
M27K	Edge Creek, AK	82.64	16	P	P	15 16 03.1	-0.1
M27K				IAMs_20	IAMs_20	15 46 34.3	
	comp=Z,1µm,20.0s						
M27K	Edge Creek, AK	82.64	16	P	P	15 16 04.2	+0.9
	baz=214						
YUK4	Talbot Arm	82.71	18	P	P	15 16 04.8	+1.1
	baz=217						
L26K	Log Cabin Wild	82.83	15	IAMs_20	IAMs_20	15 47 13.2	
	comp=Z,2µm,20.0s						
L26K	Log Cabin Wild	82.83	15	P	P	15 16 05.3	+1.3
	baz=213						
P32M	Atlin	82.90	21	P	P	15 16 05.0	+0.5
	baz=222						
I21K	Tanana	82.91	10	P	P	15 16 03.9	-0.5
I21K				IAmb	IAmb	15 16 22.6	
	comp=Z,39nm,1.6s						
I21K	Tanana	82.91	10	P	P	15 16 05.4	+1.0
	baz=204						
K24K	Donnelly Dome	82.92	13	P	P	15 16 05.2	+0.7
	baz=210						
NEA2	Nenana	82.92	12	P	P	15 16 05.4	+1.0
	baz=207						
BVCY	Beaver Creek	82.95	16	P	P	15 16 04.8	+0.1
	baz=215						
HNS	HongShan	82.97	312	⇓P	P	15 16 05.3	0.0
HNS				pmax	pmax		
	comp=Z,20nm,1.4s						
HNS				LR	LR		
	comp=Z,600nm,15.9s						
HNS				LR	LR		
	comp=Z,1µm,22.3s						
HNS				LR	LR		
	comp=Z,2µm,19.9s						
TCUT	Toone Canyon	82.98	44	P	P	15 16 04.1	-1.6
TCUT				IAmb	IAmb	15 16 12.3	
	comp=Z,16nm,0.8s						
MLY	Manley	83.00	11	P	P	15 16 04.3	-0.6
MLY				IAmb	IAmb	15 16 09.1	
	comp=Z,23nm,1.5s						
MLY	Manley	83.00	11	P	P	15 16 05.2	+0.3
	baz=206,SNR=6.1						
WRH	Wood River Hil	83.01	12	P	P	15 16 03.9	-1.0
WRH				IAmb	IAmb	15 16 10.3	
	comp=Z,42nm,1.5s						
WRH				IAMs_20	IAMs_20	15 46 45.0	
	comp=Z,2µm,20.0s						
Y22A	Socorro	83.02	52	P	P	15 16 06.3	+0.4
	baz=246						
O30N	Mendenhall	83.03	19	P	P	15 16 04.9	-0.2
	baz=220						
NEW	Newport	83.06	36	LR	LR	15 45 03.2	
	comp=Z,1µm,21.3s,baz=228,slow=30						
NEW	Newport	83.06	36	IAMs_20	IAMs_20	15 44 51.1	
	comp=Z,2µm,21.0s						
NEW	Newport	83.06	36	P	P	15 16 05.9	+0.3
	baz=237						
RIDG	Independent Ri	83.08	14	IAMs_20	IAMs_20	15 45 51.8	
	comp=Z,2µm,21.0s						
RIDG	Independent Ri	83.08	14	P	P	15 16 06.7	+1.3
	baz=211						
HWUT	Hardware Ranch	83.10	43	P	P	15 16 04.9	-1.2
HWUT				IAMs_20	IAMs_20	15 44 50.6	
	comp=Z,1µm,21.0s						
BJT	Baijiatuau	83.11	315	P	P	15 16 05.5	-0.5
BJT	Baijiatuau	83.11	315	IAMs_20	IAMs_20	15 46 35.9	
	comp=Z,1µm,22.0s						
BJT	Baijiatuau	83.11	315	P	P	15 16 05.5	-0.5
BJT				pmax	pmax		
	comp=Z,48nm,1.3s						
Y22D	IRIS PASSCAL I	83.11	52	IAMs_20	IAMs_20	15 45 03.2	
	comp=Z,1µm,20.0s						
BJI	Beijing	83.11	315	P	P	15 16 06.3	+0.3
BJI				LR	LR		
	comp=Z,550nm,17.2s						
BJI				LR	LR		
	comp=Z,600nm,21.6s						
BJI				LR	LR		
	comp=Z,880nm,25.1s						
DOT	Dot Lake	83.18	14	P	P	15 16 05.4	-0.5
DOT				IAmb	IAmb	15 16 08.9	
	comp=Z,9.7nm,0.8s						
HDA	Harding Lake	83.19	13	P	P	15 16 05.2	-0.7
HDA	Harding Lake	83.19	13	P	P	15 16 06.9	+1.0
	baz=209,SNR=8.0						
PV05	Paradox Valley	83.20	47	P	P	15 16 06.3	-0.5
H21K	Melozitna Rive	83.21	10	P	P	15 16 05.5	-0.4
H21K				IAmb	IAmb	15 16 11.4	
	comp=Z,26nm,1.4s						
H21K	Melozitna Rive	83.21	10	P	P	15 16 06.9	+1.0
	baz=204						
CCB	Clear Creek Bu	83.22	12	P	P	15 16 04.8	-1.1
CCB				IAmb	IAmb	15 16 10.9	
	comp=Z,39nm,1.7s						
CCB				IAMs_20	IAMs_20	15 46 51.6	
	comp=Z,2µm,20.0s						
L27K	Beaver Creek,	83.24	15	IAMs_20	IAMs_20	15 46 04.1	
	comp=Z,2µm,21.0s						
L27K	Beaver Creek,	83.24	15	P	P	15 16 07.0	+0.9
	baz=214						
BCAR	Beaver Creek A	83.25	15	P	P	15 16 05.7	-0.6
MVCO	Mesa Verde	83.25	48	IAMs_20	IAMs_20	15 45 20.9	
	comp=Z,2µm,20.0s						
N30M	Aishikik Lake	83.26	18	P	P	15 16 07.3	+1.0
	baz=219						
MNTX	Cornudas Mount	83.35	55	P	P	15 16 06.7	-0.8
MNTX				IAmb	IAmb	15 16 11.3	
	comp=Z,31nm,1.6s						
MNTX	Cornudas Mount	83.35	55	P	P	15 16 06.1	-1.3
	baz=247						
MNTX	Cornudas Mount	83.35	55	P	P	15 16 07.5	+0.1
	baz=247						
IMAR	Indian Mountai	83.36	9	P	P	15 16 06.1	-0.6
IPM	Ipoh	83.36	277	P	P	15 16 07.0	-1.0
I23K	Minto, Yukon-K	83.36	11	IAMs_20	IAMs_20	15 46 26.3	
	comp=Z,2µm,21.0s						
I23K	Minto, Yukon-K	83.36	11	P	P	15 16 07.1	+0.4
	baz=207						
PV10	Paradox Valley	83.37	47	P	P	15 16 06.1	-1.6
PV10				IAmb	IAmb	15 16 11.5	
	comp=Z,16nm,1.0s						
DLBC	Dease Lake	83.38	23	LR	LR	15 45 57.7	
	comp=Z,5µm,20.5s,baz=243,slow=30						
DLBC	Dease Lake	83.38	23	P	P	15 16 06.9	-0.1
	baz=225						
PV14	Lion Creek, Pa	83.38	47	P	P	15 16 07.5	-0.3
PV14				IAmb	IAmb	15 16 11.7	
	comp=Z,11nm,1.0s						
PV19	Morning Glory	83.38	47	P	P	15 16 07.3	-0.5
PV19				IAmb	IAmb	15 16 11.7	
	comp=Z,14nm,1.1s						
TCOL	CIGO, UAF Yank	83.41	12	P	P	15 16 06.7	-0.2
TCOL				IAmb	IAmb	15 16 16.0	
	comp=Z,18nm,0.8s						
TCOL	CIGO, UAF Yank	83.41	12	P	P	15 16 07.6	+0.6
	baz=208						
COLA	College	83.42	12	P	P	15 16 06.8	-0.2
COLA				IAmb	IAmb	15 16 16.0	
	comp=Z,17nm,0.8s						
COLA	College	83.42	12	IAMs_20	IAMs_20	15 48 45.6	
	comp=Z,2µm,20.0s						
COLA	College	83.42	12	*i* P	P	15 16 06.7	-0.2
COLA				pmax	pmax		
	comp=Z,16nm,0.9s						
COLA	College	83.42	12	P	P	15 16 07.9	+1.0
	baz=208						
LYN	LuoYang	83.42	308	⇓*i*P	P	15 16 13.3	+5.6
LYN				pmax	pmax		
	comp=Z,15nm,1.1s						
PV16	Nyswonger Mesa	83.43	47	P	P	15 16 07.7	-0.3
PV16				IAmb	IAmb	15 16 24.4	
	comp=Z,44nm,1.9s						
PV13	Radium Mtn., P	83.43	48	P	P	15 16 06.9	-1.1
PV13				IAmb	IAmb	15 16 18.1	
	comp=Z,34nm,1.6s						
SCRK	Sand Creek	83.48	14	P	P	15 16 07.4	-0.1
SCRK				IAmb	IAmb	15 16 36.7	
	comp=Z,21nm,1.5s						
SCRK				IAMs_20	IAMs_20	15 45 43.4	
	comp=Z,1µm,22.0s						
SCRK	Sand Creek	83.48	14	P	P	15 16 08.3	+0.8
	baz=212						
PV12	Saucer Basin,	83.52	47	P	P	15 16 06.7	-1.7
PV12				IAmb	IAmb	15 16 35.5	
	comp=Z,28nm,1.3s						
IL31		83.52	13	P	P	15 16 06.3	-1.2
ILAR	Eielson Array	83.52	13	P	P	15 16 06.5	-1.1
	comp=Z,3.9nm,0.8s,baz=218,slow=6.2,SNR=32						
ILAR				LR	LR	15 46 39.6	
	comp=Z,1µm,21.1s,baz=210,slow=31						
	comp=Z,3.9nm,0.8s						
ILAR	Eielson Array	83.52	13	P	P	15 16 06.2	-1.4
IL03	Eielson Array	83.53	13	P	P	15 16 06.6	-1.0
M29M	Somme Creek	83.64	17	P	P	15 16 08.9	+0.5
	baz=217						
H22K	Ishtalitna Cre	83.67	10	P	P	15 16 08.7	+0.4
	baz=205						
P33M	Teslin, Yukon	83.67	21	P	P	15 16 09.4	+0.9
	baz=223						
N31M	Braeburn, Yuko	83.68	19	IAMs_20	IAMs_20	15 45 34.7	
	comp=Z,2µm,21.0s						
N31M	Braeburn, Yuko	83.68	19	P	P	15 16 09.2	+0.8
	baz=220						
POKR	Poker Plat Res	83.72	12	P	P	15 16 07.4	-1.2
POKR	Poker Plat Res	83.72	12	P	P	15 16 08.7	+0.1
	baz=209,SNR=5.9						
ANMO	Albuquerque	83.81	51	LR	LR	15 45 17.2	
	comp=Z,2µm,21.5s,baz=332,slow=30						
ANMO	Albuquerque	83.81	51	P	P	15 16 09.5	-0.5
ANMO				IAmb	IAmb	15 16 14.3	
	comp=Z,16nm,1.2s						
ANMO	Albuquerque	83.81	51	IAMs_20	IAMs_20	15 45 16.8	
	comp=Z,2µm,21.0s						
ANMO	Albuquerque	83.81	51	*ce*P	P	15 16 09.2	-0.8
ANMO				pmax	pmax		
	comp=Z,16nm,1.3s						
ANMO	Albuquerque	83.81	51	P	P	15 16 09.2	-0.8
	baz=246						
ANMO	Albuquerque	83.81	51	P	P	15 16 10.0	0.0
	baz=246						
MCMT	McKenzie Canyo	83.82	40	P	P	15 16 09.5	-0.4
TX31	Lajitas Ar. Si	83.82	57	P	P	15 16 09.8	-0.3
TX31	Lajitas Ar. Si	83.82	57	P	P	15 16 10.3	+0.3
	baz=248						
TX32	Lajitas Array	83.82	57	P	P	15 16 10.1	+0.1
TX32				IAmb	IAmb	15 16 18.6	
	comp=Z,21nm,1.2s						
TXAR	Lajitas Array	83.82	57	P	P	15 16 10.5	+0.5
	comp=Z,4.9nm,1.1s,baz=232,slow=5.5,SNR=14						
TXAR				S	S	15 26 39.9	+6.1
	comp=Z,0.3nm,0.3s,baz=91,slow=6.6,SNR=4.9						
TXAR				LR	LR	15 46 08.3	
	comp=Z,1µm,19.7s,baz=244,slow=30						
	comp=Z,4.9nm,1.1s						
TXAR	Lajitas Array	83.82	57	P	P	15 16 09.7	-0.4
G21K	Allakaket	83.89	9	P	P	15 16 09.6	+0.2
	baz=203						
ZEA	Zeya	83.90	330	*e*P	P	15 16 09.3	-0.4
ZEA				*e*S	S	15 26 33.9	+0.6
ZEA				pmax	pmax		
	comp=N,10.0nm,1.5s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,200nm,6.4s						
ZEA				smax	smax		
	comp=E,200nm,12.7s						
ZEA				smax	smax		
	comp=N,300nm,12.3s						
H23K	Yukon River	83.94	11	IAMs_20	IAMs_20	15 49 01.4	
	comp=Z,1µm,19.0s						
H23K	Yukon River	83.94	11	P	P	15 16 10.2	+0.5
	baz=207						
K27K	Chicken	83.98	15	IAMs_20	IAMs_20	15 45 25.7	
	comp=Z,2µm,22.0s						
K27K	Chicken	83.98	15	P	P	15 16 10.5	+0.5
	baz=214						
J26L	Joseph Creek	84.02	14	P	P	15 16 10.1	-0.2
J26L				IAMs_20	IAMs_20	15 47 12.8	

	comp=Z,2μm,21.0s						
J26L	**Joseph Creek**	**84.02**	**14**	P	**P**	**15 16 10.4**	**+0.2**
	baz=212						
ENH	**Enshi**	**84.07**	**304**	P	**P**	**15 16 10.7**	**-0.5**
MSO	**Missoula**	**84.15**	**38**	P	**P**	**15 16 10.5**	**-0.8**
	baz=240						
RDOG	**Red Dog Mine**	**84.21**	**5**	P	**P**	**15 16 10.9**	**0.0**
RDOG				IAmb	IAmb	15 16 18.3	
	comp=Z,14nm,1.2s						
RDOG				IAMs_20	IAMs_20	15 47 32.6	
	comp=Z,2μm,21.0s						
RDOG	**Red Dog Mine**	**84.21**	**5**	P	**P**	**15 16 11.8**	**+0.8**
	baz=194						
M30M	**Minto, Yukon**	**84.22**	**18**	IAMs_20	IAMs_20	15 45 30.1	
	comp=Z,2μm,21.0s						
M30M	**Minto, Yukon**	**84.22**	**18**	P	**P**	**15 16 11.6**	**+0.4**
	baz=219						
L29M	**L29M**	**84.26**	**17**	P	**P**	**15 16 11.4**	**0.0**
	baz=218						
H24K	**Noodor Dome**	**84.26**	**12**	P	**P**	**15 16 11.5**	**+0.1**
	baz=208						
REDW	**Red Top Meadow**	**84.39**	**42**	P	**P**	**15 16 11.7**	**-1.1**
REDW				IAmb	IAmb	15 16 20.3	
	comp=Z,26nm,1.2s						
FXWY	**Fox Creek**	**84.40**	**42**	IAMs_20	IAMs_20	15 45 55.9	
	comp=Z,2μm,21.0s						
BILL	**Bilibino**	**84.42**	**354**	*ce*P	**P**	**15 16 09.8**	**-2.2**
BILL				pmax	pmax		
	comp=Z,21nm,2.5s						
PRP	**Porcupine Dome**	**84.46**	**13**	P	**P**	**15 16 11.7**	**-0.8**
PRP				IAmb	IAmb	15 16 36.2	
	comp=Z,34nm,1.4s						
PRP	**Porcupine Dome**	**84.46**	**13**	P	**P**	**15 16 11.9**	**-0.6**
	baz=210,SNR=7.5						
F21K	**Alatna River**	**84.55**	**9**	P	**P**	**15 16 13.3**	**+0.5**
	baz=203						
LRM	**Limekiln Ridge**	**84.55**	**39**	P	**P**	**15 16 13.0**	**-0.6**
IMW	**Indian Meadow**	**84.58**	**42**	P	**P**	**15 16 13.1**	**-0.7**
IMW				IAmb	IAmb	15 16 23.4	
	comp=Z,10nm,1.1s						
IMW				IAMs_20	IAMs_20	15 45 50.5	
	comp=Z,1μm,21.0s						
MOOW	**Moose Ponds**	**84.64**	**42**	IAMs_20	IAMs_20	15 45 51.1	
	comp=Z,2μm,22.0s						
G23K	**Bananza Creek**	**84.64**	**10**	P	**P**	**15 16 13.8**	**+0.5**
	baz=206						
M31M	**Drury Creek, Y**	**84.65**	**19**	P	**P**	**15 16 13.8**	**+0.4**
	baz=221						
S22A	**4UR Ranch, Cre**	**84.68**	**49**	P	**P**	**15 16 13.8**	**-0.7**
	baz=246						
DAWY	**Dawson**	**84.69**	**16**	P	**P**	**15 16 13.1**	**-0.5**
DAWY				IAmb	IAmb	15 16 23.4	
	comp=Z,12nm,0.9s						
DAWY	**Dawson**	**84.69**	**16**	P	**P**	**15 16 13.8**	**+0.2**
	baz=216,SNR=5.6						
O20A	**White River Ci**	**84.69**	**46**	P	**P**	**15 16 13.7**	**-0.7**
	baz=244						
I26K	**Coal Creek Min**	**84.80**	**14**	IAMs_20	IAMs_20	15 47 57.3	
	comp=Z,1μm,20.0s						
I26K	**Coal Creek Min**	**84.80**	**14**	P	**P**	**15 16 14.5**	**+0.4**
	baz=213						
FLWY	**Flagg Ranch**	**84.82**	**42**	IAMs_20	IAMs_20	15 45 58.9	
	comp=Z,1μm,22.0s						
EGAK	**Eagle**	**84.83**	**15**	P	**P**	**15 16 14.0**	**-0.2**
EGAK				IAmb	IAmb	15 16 38.3	
	comp=Z,33nm,1.4s						
EGAK				IAMs_20	IAMs_20	15 46 57.1	
	comp=Z,2μm,20.0s						
EGAK	**Eagle**	**84.83**	**15**	P	**P**	**15 16 14.6**	**+0.4**
	baz=215						
RPSI	**Rantau Prapat**	**84.88**	**274**	P	**P**	**15 16 14.2**	**-1.4**
PSI	**Prapat**	**84.91**	**274**	P	**P**	**15 16 14.2**	**-1.7**
PSI				pmax	pmax		
	comp=Z,34nm,1.3s						
XLT	**XiLinHaoTe**	**84.94**	**318**	*e*P	**P**	**15 16 15.1**	**-0.2**
XLT				S	**S**	**15 26 40.0**	**-4.3**
XLT				pmax	pmax		
	comp=Z,19nm,1.0s						
XLT				pmax	pmax		
	comp=Z,170nm,6.7s						
XLT				LR	LR		
	comp=Z,700nm,17.3s						
XLT				LR	LR		
	comp=Z,800nm,19.6s						
BOZ	**Bozeman (W)**	**84.95**	**40**	P	**P**	**15 16 15.8**	**+0.3**
	baz=242,SNR=6.1						
BW06	**Boulder Array**	**84.96**	**43**	P	**P**	**15 16 15.5**	**-0.2**
	baz=243						
PD31	**Pinedale Array**	**84.96**	**43**	P	**P**	**15 16 14.4**	**-1.2**
PD31				IAmb	IAmb	15 16 24.4	
	comp=Z,17nm,1.4s						
PDAR	**Pinedale Array**	**84.96**	**43**	P	**P**	**15 16 14.7**	**-1.0**
	comp=Z,2.8nm,0.9s,baz=220,slow=3.7,SNR=10						
PDAR				LR	LR	15 46 33.9	
	comp=Z,1μm,21.8s,baz=256,slow=30						
	comp=Z,2.8nm,0.9s						
PDAR	**Pinedale Array**	**84.96**	**43**	P	**P**	**15 16 13.9**	**-1.8**
FARO	**Faro, Yukon**	**85.00**	**19**	P	**P**	**15 16 15.8**	**+0.7**
	baz=222						
K29M	**Barlow Dome**	**85.01**	**16**	P	**P**	**15 16 15.6**	**+0.3**
	baz=218						
F22K	**John River**	**85.01**	**9**	P	**P**	**15 16 15.7**	**+0.6**
	baz=204						
H17A	**Grant Village**	**85.04**	**41**	P	**P**	**15 16 16.3**	**+0.2**
	baz=242						
COLD	**Coldfoot**	**85.08**	**10**	P	**P**	**15 16 15.3**	**-0.1**
COLD				IAmb	IAmb	15 16 20.9	
	comp=Z,27nm,1.3s						
COLD	**Coldfoot**	**85.08**	**10**	P	**P**	**15 16 16.7**	**+1.3**
	baz=206						
G24K	**Hadweenzic Riv**	**85.10**	**11**	P	**P**	**15 16 16.7**	**+1.1**
	baz=209						
SMCO	**Snowmass**	**85.17**	**47**	IAMs_20	IAMs_20	15 47 53.6	
	comp=Z,1μm,20.0s						
LKWY	**Lake**	**85.23**	**41**	IAMs_20	IAMs_20	15 49 47.8	
	comp=Z,2μm,19.0s						
J29M	**Klondike Camp**	**85.31**	**16**	IAMs_20	IAMs_20	15 46 45.8	
	comp=Z,1μm,21.0s						
PMSA	**Palmer Station**	**85.31**	**157**	LR	LR	15 47 27.4	
	comp=Z,490nm,21.4s,baz=246,slow=31						
HIA	**Hailar**	**85.32**	**324**	P	**P**	**15 16 16.2**	**-0.9**
HIA				IAmb	IAmb	15 16 23.3	
	comp=Z,31nm,1.4s						
HIA	**Hailar**	**85.32**	**324**	IAMs_20	IAMs_20	15 50 14.9	
	comp=Z,1μm,20.0s						
HIA	**Hailar**	**85.32**	**324**	*i* P	**P**	**15 16 16.7**	**-0.4**
HIA				pmax	pmax		
	comp=Z,25nm,1.4s						
I27K	**Kandik River**	**85.40**	**14**	P	**P**	**15 16 18.5**	**+1.4**
	baz=214						
G25K	**Bearman Lake**	**85.43**	**12**	P	**P**	**15 16 18.7**	**+1.6**
	baz=210						
FYU	**Fort Yukon**	**85.43**	**12**	IAMs_20	IAMs_20	15 47 26.9	
	comp=Z,2μm,21.0s						
SDCO	**Great Sand Dun**	**85.65**	**49**	IAMs_20	IAMs_20	15 46 49.2	
	comp=Z,2μm,20.0s						
SDCO	**Great Sand Dun**	**85.65**	**49**	P	**P**	**15 16 19.4**	**+0.1**
	baz=246						
SDCO	**Great Sand Dun**	**85.65**	**49**	P	**P**	**15 16 19.5**	**+0.2**
	baz=246						
F24K	**Squaw Lake**	**85.75**	**11**	P	**P**	**15 16 20.3**	**+1.5**
	baz=208						
XAN	**Xi'an**	**85.92**	**307**	P	**P**	**15 16 22.3**	**+1.9**
XAN				pP	pwP	15 16 26.6	+0.6
XAN				S	**S**	**15 27 01.0**	**+6.6**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.7s						
XAN				pmax	pmax		
	comp=Z,290nm,7.3s						
XAN				LR	LR		
	comp=Z,360nm,20.6s						
XAN				LR	LR		
	comp=Z,560nm,22.0s						
XAN				LR	LR		
	comp=Z,840nm,22.0s						
E23K	**Chandalar**	**85.93**	**10**	P	**P**	**15 16 20.9**	**+1.2**
	baz=206						
MMPY	**Sheldon Lake,**	**85.94**	**19**	P	**P**	**15 16 21.4**	**+1.5**
	baz=224						
H27K	**Steamboat Moun**	**85.94**	**14**	P	**P**	**15 16 20.8**	**+1.0**
	baz=214						
I29M	**Ogilvie Camp,**	**86.01**	**15**	IAMs_20	IAMs_20	15 46 28.4	
	comp=Z,2μm,22.0s						
I29M	**Ogilvie Camp,**	**86.01**	**15**	P	**P**	**15 16 21.7**	**+1.6**
	baz=217						
G26K	**Porcupine Rive**	**86.06**	**13**	P	**P**	**15 16 21.4**	**+1.1**
	baz=212						
E24K	**Your Creek**	**86.14**	**10**	P	**P**	**15 16 21.8**	**+1.0**
	baz=208						
RLMT	**Red Lodge**	**86.20**	**41**	P	**P**	**15 16 22.2**	**+0.4**
	baz=243						
T25A	**Trinidad**	**86.20**	**50**	P	**P**	**15 16 21.0**	**-1.0**
T25A				IAmb	IAmb	15 16 53.6	
	comp=Z,25nm,1.8s						
T25A	**Trinidad**	**86.20**	**50**	P	**P**	**15 16 22.2**	**+0.2**
	baz=247						
F25K	**Christian Rive**	**86.23**	**12**	P	**P**	**15 16 22.2**	**+1.0**
	baz=210						
MAW	**Mawson**	**86.29**	**199**	LR	LR	15 52 22.1	
	comp=Z,1μm,18.3s,baz=113,slow=34						
BMAR	**Burnt Mountain**	**86.30**	**12**	P	**P**	**15 16 21.2**	**-0.4**
ISCO	**Idaho Springs**	**86.39**	**47**	IAMs_20	IAMs_20	15 48 55.8	
	comp=Z,1μm,20.0s						
G27K	**Doyon Strip**	**86.40**	**13**	P	**P**	**15 16 22.5**	**+0.4**
	baz=214						
D23K	**Nanushuk River**	**86.58**	**9**	P	**P**	**15 16 23.1**	**+0.3**
	baz=205						
N23A	**Red Feather La**	**86.60**	**46**	P	**P**	**15 16 23.1**	**-0.9**
	baz=246						
F26K	**Sheenjek River**	**86.62**	**12**	P	**P**	**15 16 23.6**	**+0.6**
	baz=212						
HHC	**Hu-ho-hao-te**	**86.64**	**314**	*e*P	**P**	**15 16 23.9**	**0.0**
HHC				SS	SS	15 32 42.4	-0.3
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
HHC				pmax	pmax		
	comp=Z,550nm,6.1s						
HHC				LR	LR		
	comp=Z,1μm,17.0s						
HHC				LR	LR		
	comp=Z,2μm,22.1s						
HHC				LR	LR		
	comp=Z,4μm,21.7s						
E25K	**Arctic Village**	**86.71**	**11**	P	**P**	**15 16 24.7**	**+1.2**
	baz=210						
KOTAN	**Kotaneelee Air**	**86.79**	**24**	P	**P**	**15 16 24.5**	**+0.5**
	baz=230						
833A	**Chaparral WMA,**	**86.98**	**60**	P	**P**	**15 16 25.0**	**-0.7**
833A				IAmb	IAmb	15 16 42.4	
	comp=Z,11nm,1.1s						
833A	**Chaparral WMA,**	**86.98**	**60**	P	**P**	**15 16 25.2**	**-0.5**
	baz=250						
PHWY	**Pilot Hill**	**87.10**	**46**	IAMs_20	IAMs_20	15 48 54.5	
	comp=Z,1μm,20.0s						
EPYK	**Eagle Plains**	**87.21**	**15**	IAMs_20	IAMs_20	15 47 37.1	
	comp=Z,1μm,21.0s						
EGMT	**Eagleton**	**87.22**	**38**	IAMs_20	IAMs_20	15 46 47.1	
	comp=Z,2μm,22.0s						
EGMT	**Eagleton**	**87.22**	**38**	P	**P**	**15 16 27.0**	**+0.5**
	baz=243						
CMIG	**Matias Romero**	**87.41**	**72**	LR	LR	15 46 55.7	
	comp=Z,812nm,20.4s,baz=254,slow=30						
AMTX	**Amarillo**	**87.42**	**53**	IAMs_20	IAMs_20	15 46 26.3	
	comp=Z,2μm,22.0s						
E27K	**Coleen River**	**87.56**	**13**	P	**P**	**15 16 28.6**	**+1.0**
	baz=214						
C24K	**Franklin Bluff**	**87.57**	**10**	P	**P**	**15 16 29.1**	**+1.5**
	baz=207						
D25K	**Kavik River**	**87.61**	**10**	P	**P**	**15 16 28.9**	**+1.0**
	baz=210						
BTO	**Baotou**	**87.61**	**313**	*e*P	**P**	**15 16 29.8**	**+1.2**
BTO				pP	**pwP**	**15 16 40.1**	**+5.9**
BTO				S	**S**	**15 27 09.6**	**-1.0**
BTO				SS	**SS**	**15 32 58.1**	**+1.1**
BTO				pmax	pmax		
	comp=Z,37nm,0.6s						
BTO				pmax	pmax		
	comp=Z,610nm,3.3s						
BTO				LR	LR		
	comp=Z,5μm,17.6s						
BTO				LR	LR		
	comp=Z,5μm,22.7s						
BTO				LR	LR		
	comp=Z,10μm,22.8s						
G30M	**tAoh Zraii Nji**	**87.81**	**15**	P	**P**	**15 16 29.6**	**+0.7**
	baz=219						
KMI	**Kunming**	**87.93**	**297**	⇑P	**P**	**15 16 30.0**	**-0.7**
KMI				PP	**PP**	**15 20 03.5**	**+6.4**
KMI				S	**S**	**15 27 09.5**	**-5.0**
KMI				SS	**SS**	**15 33 02.3**	**-0.2**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.6s						
KMI				pmax	pmax		
	comp=Z,220nm,7.6s						
KMI				LR	LR		
	comp=Z,390nm,19.1s						
KMI				LR	LR		
	comp=Z,1μm,24.1s						
KMI				LR	LR		
	comp=Z,2μm,23.2s						
A21K	**Barrow**	**87.98**	**6**	IAMs_20	IAMs_20	15 54 04.3	
	comp=Z,1μm,19.0s						
H03S2	**Juan Fernandez**	**88.01**	**124**	T	T	16 54 11.7	
	baz=251,slow=75,SNR=13						
H03S1	**Juan Fernandez**	**88.02**	**124**	T	T	16 54 07.6	
	baz=251,slow=75,SNR=14						
H03S3	**Juan Fernandez**	**88.02**	**124**	T	T	16 54 09.6	
	baz=251,slow=75,SNR=14						
YAK	**Yakutsk**	**88.03**	**338**	LR	LR	15 55 55.9	
	comp=Z,442nm,18.3s,baz=133,slow=36						
YAK	**Yakutsk**	**88.03**	**338**	*e*P	**P**	**15 16 33.1**	**+3.2**
YAK				*e*S	**SKSac**	**15 26 58.6**	**+0.4**
YAK				*e*		15 28 20.3	
YAK				pmax	pmax		
	comp=Z,24nm,1.1s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,368nm,7.3s						
YAK				pmax	pmax		
	comp=N,134nm,7.3s						
YAK				pmax	pmax		
	comp=E,101nm,4.6s						
YAK				smax	smax		
	comp=E,186nm,5.1s						
YAK				smax	smax		
	comp=N,87nm,4.9s						
YAK				MLR	MLR		
	comp=Z,974nm,25.0s						
YAK				MLR	MLR		
	comp=N,420nm,22.0s						
YAK				MLR	MLR		
	comp=E,393nm,21.0s						
H03N2	**Juan Fernandez**	**88.12**	**124**	T	T	16 54 19.4	
	baz=257,slow=72,SNR=7.0						
H03N3	**Juan Fernandez**	**88.12**	**124**	T	T	16 54 17.2	
	baz=257,slow=72,SNR=6.3						
H03N1	**Juan Fernandez**	**88.14**	**124**	T	T	16 54 13.0	
	baz=257,slow=72,SNR=11						
C27K	**Jago River**	**88.35**	**11**	P	**P**	**15 16 32.9**	**+1.6**
	baz=212						
C26K	**Camden Bay**	**88.38**	**11**	P	**P**	**15 16 32.7**	**+1.3**
	baz=211						
F31M	**Tsiigehtchic**	**88.79**	**15**	P	**P**	**15 16 35.0**	**+1.6**
	baz=221						
LAO	**LASA Array**	**88.80**	**41**	IAMs_20	IAMs_20	15 48 29.1	
	comp=Z,2μm,21.0s						
LAO	**LASA Array**	**88.80**	**41**	P	**P**	**15 16 34.6**	**+0.5**
	baz=246						
LAO	**LASA Array**	**88.80**	**41**	P	**P**	**15 16 34.5**	**+0.5**
	baz=246						
CD2	**Chengdu**	**88.92**	**302**	P	**P**	**15 16 34.0**	**-1.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WRGLY	**Wrigley**	**88.98**	**21**	P	**P**	**15 16 36.2**	**+1.9**
	baz=231						
RSSD	**Black Hills**	**89.18**	**44**	P	**P**	**15 16 34.7**	**-1.4**
RSSD				IAmb	IAmb	15 16 41.0	
	comp=Z,23nm,1.7s						
RSSD	**Black Hills**	**89.18**	**44**	IAMs_20	IAMs_20	15 50 36.4	
	comp=Z,1μm,20.0s						
RSSD	**Black Hills**	**89.18**	**44**	P	**P**	**15 16 34.7**	**-1.4**
RSSD				pmax	pmax		
	comp=Z,23nm,1.7s						
RSSD	**Black Hills**	**89.18**	**44**	P	**P**	**15 16 36.7**	**+0.6**
	baz=247						
RSSD	**Black Hills**	**89.18**	**44**	P	**P**	**15 16 35.7**	**-0.4**
	baz=247						
PZH	**PanZhiHua**	**89.21**	**298**	P	**P**	**15 16 38.9**	**+2.3**
PZH				S	**S**	**15 27 24.4**	**-2.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=Z,470nm,4.7s						
PZH				LR	LR		
	comp=Z,500nm,20.0s						
PZH				LR	LR		
	comp=Z,600nm,19.8s						
PZH				LR	LR		
	comp=Z,480nm,19.7s						
CMAR	**Chiang Mai Arr**	**89.30**	**289**	P	**P**	**15 16 37.5**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=94,slow=2.6,SNR=8.6						
CMAR				LR	LR	15 52 37.6	
	comp=Z,1μm,21.1s,baz=115,slow=33						
	comp=Z,1.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**89.30**	**289**	P	**P**	**15 16 36.7**	**-0.3**
CMAR	**Chiang Mai Arr**	**89.30**	**289**	P	**P**	**15 16 36.7**	**-0.3**
OGNE	**Ogallala**	**89.35**	**47**	IAMs_20	IAMs_20	15 48 35.2	
	comp=Z,1μm,22.0s						
INK	**Inuvik**	**89.50**	**15**	LR	LR	15 49 18.6	
	comp=Z,1μm,22.0s,baz=197,slow=31						
INK	**Inuvik**	**89.50**	**15**	P	**P**	**15 16 38.1**	**+1.4**
	baz=222						
WMOK	**Wichita Mounta**	**89.61**	**54**	IAMs_20	IAMs_20	15 48 17.3	
	comp=Z,2μm,22.0s						
WMOK	**Wichita Mounta**	**89.61**	**54**	P	**P**	**15 16 38.5**	**+0.4**
	baz=251						
CBKS	**Cedar Bluff**	**90.25**	**50**	IAMs_20	IAMs_20	15 49 35.2	
	comp=Z,1μm,20.0s						
HKT	**Hockley**	**90.45**	**59**	IAMs_20	IAMs_20	15 52 56.9	
	comp=Z,1μm,20.0s						
LZH	**Lanzhou**	**90.54**	**307**	⇓P	**P**	**15 16 44.3**	**+1.7**
LZH				pP	pwP	15 16 49.0	+0.9
LZH				sP	sP	15 16 52.0	+5.9
LZH				S	**S**	**15 27 38.5**	**+0.1**
LZH				sS	sS	15 27 51.3	+8.6
LZH				SS	**SS**	**15 33 35.8**	**-4.0**
LZH				pmax	pmax		
	comp=Z,13nm,1.4s						
LZH				pmax	pmax		
	comp=Z,260nm,8.3s						
LZH				LR	LR		
	comp=Z,760nm,15.8s						
LZH				LR	LR		
	comp=Z,780nm,16.5s						
LZH				LR	LR		
	comp=Z,1μm,15.8s						
OK032	**Salt Plains WL**	**90.72**	**52**	IAMs_20	IAMs_20	15 49 47.8	
	comp=Z,2μm,20.0s						
OK029	**Liberty Lake**	**90.97**	**53**	IAMs_20	IAMs_20	15 48 50.5	
	comp=Z,2μm,21.0s						
OK025	**Westminster Rd**	**91.00**	**53**	IAMs_20	IAMs_20	15 48 28.1	
	comp=Z,2μm,22.0s						
OK033	**Mehan**	**91.45**	**53**	IAMs_20	IAMs_20	15 49 29.1	
	comp=Z,2μm,22.0s						
OK031	**S. Brethren Rd**	**91.50**	**53**	IAMs_20	IAMs_20	15 51 32.4	
	comp=Z,2μm,20.0s						
OK052	**Battle Ridge R**	**91.54**	**53**	IAMs_20	IAMs_20	15 51 41.5	
	comp=Z,2μm,20.0s						
TNCH	**TengChong**	**91.56**	**295**	*e*P	**P**	**15 16 47.6**	**0.0**
TNCH				pP	sP	15 16 50.8	-0.3
TNCH				SKS	**SKSac**	**15 27 18.4**	**-2.5**
TNCH				S	**S**	**15 27 45.1**	**-3.1**
TNCH				SS	**SS**	**15 33 55.8**	**+0.8**
TNCH				pmax	pmax		
	comp=Z,13nm,1.3s						
TNCH				pmax	pmax		
	comp=Z,180nm,4.2s						
TNCH				LR	LR		
	comp=Z,340nm,24.0s						
TNCH				LR	LR		
	comp=Z,320nm,20.9s						
TNCH				LR	LR		
	comp=Z,1μm,22.1s						
OK053	**SW of W Deep R**	**91.56**	**53**	IAMs_20	IAMs_20	15 49 18.0	
	comp=Z,2μm,22.0s						
YKA	**Yellowknife Ar**	**91.88**	**24**	P	**P**	**15 16 48.3**	**+0.4**
	comp=Z,1.3nm,0.9s,baz=238,slow=4.7,SNR=12						
YKA				LR	LR	15 50 44.3	
	comp=Z,4μm,21.3s,baz=243,slow=31						
	comp=Z,1.3nm,0.9s						
PLCA	**Paso Flores**	**91.94**	**133**	LR	LR	15 49 58.7	
	comp=Z,648nm,21.7s,baz=232,slow=30						
NATX	**Nacogdoches**	**91.95**	**58**	IAMs_20	IAMs_20	15 51 32.7	
	comp=Z,1μm,18.0s						
TUL1	**Leonard**	**92.29**	**53**	IAMs_20	IAMs_20	15 51 25.5	
	comp=Z,2μm,20.0s						
ULN	**Ulaanbaatar**	**92.31**	**319**	P	**P**	**15 16 49.8**	**-0.8**
ULN				IAmb	IAmb	15 16 57.4	
	comp=Z,10nm,1.1s						
ULN	**Ulaanbaatar**	**92.31**	**319**	*ce*P	**P**	**15 16 48.5**	**-2.0**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.7s						
KSU1	**Kansas State U**	**92.65**	**50**	IAMs_20	IAMs_20	15 54 32.7	
	comp=Z,2μm,18.0s						
C36M	**Paulatuk**	**92.69**	**16**	IAMs_20	IAMs_20	15 55 24.9	
	comp=Z,1μm,19.0s						
SONM	**Songino Array**	**92.71**	**319**	P	**P**	**15 16 51.8**	**-0.6**
	comp=Z,1.2nm,0.9s,baz=129,slow=3.9,SNR=8.0						
SONM				LR	LR	15 53 58.4	
	comp=Z,674nm,21.7s,baz=113,slow=33						
	comp=Z,1.2nm,0.9s						
SNAA	**Sanae**	**92.71**	**178**	LR	LR	15 56 26.1	
	comp=Z,664nm,19.1s,baz=188,slow=34						
MIAR	**Mount Ida**	**93.63**	**55**	IAMs_20	IAMs_20	15 50 24.9	
	comp=Z,2μm,22.0s						
ECSD	**EROS Data Cent**	**94.07**	**46**	IAMs_20	IAMs_20	15 51 14.0	
	comp=Z,2μm,22.0s						
ECSD	**EROS Data Cent**	**94.07**	**46**	P	**P**	**15 16 59.0**	**+0.4**
	baz=252						
ECSD	**EROS Data Cent**	**94.07**	**46**	P	**P**	**15 16 59.1**	**+0.6**
	baz=252						
A36M	**Sachs Harbour**	**94.10**	**14**	P	**P**	**15 16 58.0**	**0.0**
A36M				IAmb	IAmb	15 17 01.8	
	comp=Z,10nm,0.8s						
A36M	**Sachs Harbour**	**94.10**	**14**	P	**P**	**15 16 58.6**	**+0.6**
	baz=229						
TIXI	**Tiksi**	**94.38**	**345**	LR	LR	15 56 46.9	
	comp=Z,852nm,19.6s,baz=92,slow=34						
TIXI	**Tiksi**	**94.38**	**345**	P	**P**	**15 16 58.4**	**-0.9**
TIXI				IAmb	IAmb	15 17 09.3	
	comp=Z,13nm,1.4s						
TIXI				IAMs_20	IAMs_20	15 56 44.8	
	comp=Z,950nm,19.0s						
TIXI	**Tiksi**	**94.38**	**345**	*ce*P	**P**	**15 16 58.7**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,12nm,1.7s						
FFC	**Flin Flon**	**94.40**	**34**	IAMs_20	IAMs_20	15 51 54.9	
	comp=Z,2μm,21.0s						
GTA	**Gaotai**	**94.59**	**310**	*e*P	**P**	**15 17 02.9**	**+1.7**
GTA				pP	pwP	15 17 06.3	-0.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,140nm,5.8s						
GTA				LR	LR		
	comp=Z,430nm,19.3s						
GTA				LR	LR		
	comp=Z,980nm,22.5s						
GTA				LR	LR		
	comp=Z,2μm,24.0s						
S39A	**Bolivar**	**94.71**	**52**	P	**P**	**15 17 01.4**	**-0.2**
	baz=254						
JTS	**Las Juntas de**	**94.83**	**81**	LR	LR	15 50 16.6	
	comp=Z,400nm,20.1s,baz=254,slow=29						
R40A	**Maddies Statio**	**95.67**	**52**	P	**P**	**15 17 05.4**	**-0.6**
	baz=254						
AGMN	**Agassiz Nation**	**95.93**	**42**	IAMs_20	IAMs_20	15 55 27.0	
	comp=Z,1μm,20.0s						
P40A	**Paris**	**96.17**	**51**	P	**P**	**15 17 08.6**	**+0.4**
	baz=255						
T42A	**Van Buren**	**96.24**	**53**	P	**P**	**15 17 08.4**	**-0.2**
	baz=255						
ATAH	**Atahualpa**	**96.44**	**99**	LR	LR	15 50 51.4	
	comp=Z,2μm,20.8s,baz=252,slow=29						
NNA	**Nana**	**96.49**	**104**	LR	LR	15 53 01.8	
	comp=Z,340nm,18.5s,baz=250,slow=31						
ULM	**Lac du Bonnet**	**96.49**	**40**	LR	LR	15 53 47.0	
	comp=Z,2μm,21.5s,baz=266,slow=31						
F36A	**Milaca**	**96.79**	**44**	P	**P**	**15 17 11.3**	**+0.4**
	baz=254						
OXF	**Oxford**	**96.94**	**56**	IAMs_20	IAMs_20	15 59 12.6	
	comp=Z,1μm,18.0s						
BRDH	**Bariadhala**	**97.01**	**292**	LR	LR	15 59 00.4	
	comp=Z,657nm,20.1s,baz=100,slow=34						
CFA	**Coronel Fontan**	**97.22**	**126**	LR	LR	15 51 43.5	
	comp=Z,1μm,20.5s,baz=246,slow=30						
WVT	**Waverly**	**98.57**	**55**	IAMs_20	IAMs_20	15 52 51.8	
	comp=Z,2μm,22.0s						
EYMN	**Ely**	**98.66**	**43**	IAMs_20	IAMs_20	15 54 56.2	
	comp=Z,2μm,21.0s						

COWI	Conover	99.82	45	IAMs_20	IAMs_20	15 59 10.9	
	comp=Z,1µm,19.0s						
L44A	Lake County Fo	99.84	49	IAMs_20	IAMs_20	15 54 53.9	
	comp=Z,2µm,22.0s						
LVC	Limon Verde	100.11	117	IAMs_20	IAMs_20	15 51 28.5	
	comp=Z,1µm,20.0s						
ERPA	Erie	105.64	50	IAMs_20	IAMs_20	16 00 11.4	
	comp=Z,1µm,21.0s						
LONY	Lake Ozonia	109.78	48	P	PKiKP	15 22 10.6	-0.7
	baz=267						
PAL	Palisades	110.07	52	P	PKiKP	15 22 11.3	-0.6
	baz=266						
SAML	Samuel	110.17	106	IAMs_20	IAMs_20	15 59 47.7	
	comp=Z,971nm,19.0s						
L61B	Northampton	111.07	50	P	PKiKP	15 22 13.6	-0.2
	baz=268						
KSH	Kashi	112.78	307	PKP	PKiKP	15 22 17.3	0.0
KSH				LR	LR		
	comp=Z,510nm,15.5s						
KSH				LR	LR		
	comp=Z,620nm,18.9s						
KSH				LR	LR		
	comp=Z,840nm,18.6s						
AAK	Ala-Archa	113.94	310	IAMs_20	IAMs_20	16 10 28.3	
	comp=Z,730nm,19.0s						
SABA	Saba	116.96	78	IAMs_20	IAMs_20	16 06 25.3	
	comp=Z,759nm,20.0s						
ARU	Arti	121.71	327	i PKIKP	PKiKP	15 22 35.4	+1.5
ARU						15 24 08.2	
ARU						15 29 47.1	
ARU				SS	SS	15 40 41.2	-1.5
ARU				MLR	MLR		
	comp=Z,1µm,23.0s						
MSEY	Mahe Island	124.11	253	IAMs_20	IAMs_20	16 11 13.6	
	comp=Z,1µm,22.0s						
GEYT	Alibeck	126.79	306	PKP	PKPdf	15 22 43.8	-0.4
	comp=Z,3.1nm,0.9s,baz=259,slow=2.9,SNR=4.6						
KLMR	Klimovskoe	127.83	338	ePKPdf	PKiKP	15 22 47.4	+1.5
KLMR				AMP		15 22 51.8	
	comp=Z,14nm,1.3s						
KLMR				LQ	LQ	16 09 35.5	
KLMR				LQ	LQ	16 09 35.5	
KLMR				LR	LR	16 11 17.1	
KLMR	Klimovskoe	127.83	338	ePKIKP	PKiKP	15 22 47.3	+1.4
KLMR				pmax	pmax		
	comp=Z,14nm,1.3s						
OBN	Obninsk	132.91	334	ePKIKP	PKPdf	15 22 54.9	-0.2
OBN				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KIV	Kislovodsk	136.10	318	IAMs_20	IAMs_20	16 20 27.6	
	comp=Z,952nm,22.0s						
KIV	Kislovodsk	136.10	318	i PKIKP	PKiKP	15 23 02.7	-0.6
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MNK	Minsk	136.71	339	i PKP	PKPdf	15 22 59.5	-2.8
	comp=E,4.0nm,0.9s						
MNK				i PKP	PKPdf	15 22 59.5	-2.8
	comp=N,36nm,0.9s						
MNK				i PKP	PKPdf	15 22 59.5	-2.8
	comp=Z,20nm,0.8s,baz=216						
MNK				i PP	PP	15 25 41.9	-2.2
MNK				i PPP	PPP	15 28 40.0	
MNK				i SKS	SKSdf	15 30 10.3	-2.9
MNK				i PS	PS	15 36 06.7	-3.5
MNK				i SS	SS	15 43 46.6	-0.5
MNK				i SSS	SSS	15 48 50.9	
MNK				i LR	LR	16 20 17.9	
MNK				i LRM	MLR	16 22 54.5	
	comp=E,90nm,20.0s						
MNK				i LRM	MLR	16 23 53.1	
	comp=N,613nm,16.8s						
MNK				i LRM	MLR	16 24 32.5	
	comp=Z,798nm,19.3s						
MNK	Minsk	136.71	339	i PKIKP	PKPdf	15 22 59.4	-2.8
MNK				i		15 25 41.9	
MNK				i PPP	PPP	15 28 40.0	
MNK				i		15 30 10.3	
MNK				i PS	PS	15 36 06.7	-3.5
MNK				i SS	SS	15 43 46.5	-0.6
MNK				i SSS	SSS	15 48 50.9	
MNK				pmax	pmax		
	comp=N,36nm,0.9s						
MNK				pmax	pmax		
	comp=Z,20nm,0.9s						
MNK				pmax	pmax		
	comp=E,4.0nm,0.9s						
MNK				MLR	MLR		
	comp=E,90nm,20.0s						
MNK				MLR	MLR		
	comp=N,613nm,17.0s						
MNK				MLR	MLR		
	comp=Z,798nm,19.0s						
NACGM	Naroch	136.76	340	ePKP	PKiKP	15 23 04.7	+0.6
	comp=Z,9.0nm,0.9s,baz=34						
AKASG	Malin Array Be	139.18	334	PKP	PKiKP	15 23 07.9	-1.3
	comp=Z,0.3nm,0.3s,baz=33,slow=3.5,SNR=1.3						
ATD	Arta Tunnel	140.94	269	IAMs_20	IAMs_20	16 22 35.1	
	comp=Z,677nm,21.0s						
STHS	Stebnicka Huta	143.22	340	ePKIKP	PKiKP	15 23 16.4	-1.2
STHS	Stebnicka Huta	143.22	340	ePKP	PKiKP	15 23 16.4	-1.2
BURAR	Bucovina Array	143.23	335	⇓P	PKiKP	15 23 20.1	+2.3
BURAR	Bucovina Array	143.23	335	⇓PKIKP	PKiKP	15 23 20.1	+2.3
CLL	Collm	143.60	349	ePKiKP	PKiKP	15 23 19.6	+1.3
CLL				eSKPbc	SKPbc	15 26 49.0	-4.7
CLL				eSS	SS	15 45 12.0	+4.6
CLL				eSSS	SSS	15 50 36.0	
CLL				AMS	AMS	16 25 00.0	
	comp=N,600nm,20.9s						
CLL				AMS	AMS	16 25 00.0	
	comp=E,400nm,18.9s						
CLL	Collm	143.60	349	ePKIKP	PKiKP	15 23 17.0	-1.3
CLL				i		15 23 24.0	
CLL				pmax	pmax		
	comp=Z,21nm,1.9s						
DPC	Dobruska-Polom	143.80	345	ePKP	PKPdf	15 23 14.2	-1.2
DPC	Dobruska-Polom	143.80	345	ePKIKP	PKPdf	15 23 14.2	-1.2
TPGR	Topolog	143.84	329	⇓P	PKiKP	15 23 18.4	-0.6
TRPA	Tarpa	143.86	337	⇑P	PKiKP	15 23 20.6	+1.7
MORC	Moravsky Berou	144.02	344	⇓P	PKiKP	15 23 18.7	-0.6
MORC	Moravsky Berou	144.02	344	ePKP	PKPdf	15 23 14.9	-0.8
MORC	Moravsky Berou	144.02	344	⇓PKIKP	PKiKP	15 23 18.7	-0.6
BR131	Keskin Array S	144.06	318		PKPab	15 23 13.1	-0.6
BR131	Keskin Array S	144.06	318	PKIKP	PKPab	15 23 13.1	-0.6
BRTR	Keskin Array B	144.06	318	PKP	PKPdf	15 23 16.0	-0.3
	comp=Z,7.7nm,1.1s,baz=72,slow=1.3,SNR=10						
BRTR	Keskin Array B	144.06	318	PKPdf	PKPab	15 23 12.8	-0.9
FURI	Furi	144.38	263	IAMs_20	IAMs_20	16 26 39.1	
	comp=Z,541nm,18.0s						
PRU	Pruhonice	144.55	347	ePKP	PKiKP	15 23 19.7	-0.6
PRU	Pruhonice	144.55	347	ePKIKP	PKiKP	15 23 19.7	-0.6
MLR	Muntele Rosu	144.56	332	⇓P	PKiKP	15 23 19.0	-1.6
MLR	Muntele Rosu	144.56	332	⇓PKIKP	PKiKP	15 23 19.0	-1.6
VRAC	Vranov	144.70	344	⇑P	PKiKP	15 23 18.7	-1.9
VRAC	Vranov	144.70	344	ePKP	PKPdf	15 23 16.4	-0.5
VRAC	Vranov	144.70	344	⇑PKIKP	PKiKP	15 23 18.7	-1.9
VYHS	Vyhne	144.80	341	ePKIKP	PKPdf	15 23 18.0	+0.9
VYHS	Vyhne	144.80	341	ePKP	PKPdf	15 23 18.0	+0.9
JAVC	Velka Javorina	144.81	343	ePKP	PKPdf	15 23 18.1	+0.9
MARR	Marisel-Cluj	144.84	336	⇑P	PKPab	15 23 14.0	-2.3
PSZ	Piszkesteto	144.97	340	⇑P	PKPdf	15 23 18.8	+1.3
PSZ	Piszkesteto	144.97	340	⇑PKIKP	PKPdf	15 23 18.8	+1.3
KRUC	Moravsky	144.97	344	ePKP	PKPdf	15 23 17.2	-0.2
VOIR		145.01	332	⇑P	PKPdf	15 23 19.2	+1.5
VOIR		145.01	332	⇑PKIKP	PKPdf	15 23 19.2	+1.5
MANZ	Manzenberg	145.03	350	ePKPbc	PKPdf	15 23 17.7	+0.2
	baz=8.2,slow=3.4						
ASF	Jabal al Asfar	145.04	304	PKP	PKPbc	15 23 17.1	-0.4
	comp=Z,8.7nm,1.0s,baz=90,slow=5.1,SNR=4.8						
AHRW	Bad Neuenahr-A	145.12	355	ePKPbc	PKPdf	15 23 18.0	+0.4
	baz=8.2,slow=3.4						
MEM	Membach	145.13	356	dPKP	PKPdf	15 23 18.2	+0.6
BTNL	Ternell	145.15	356	dPcP	PKiKP	15 23 21.7	+0.2
ROTZ	Rotzenmuhle	145.22	349	ePKPbc	PKPdf	15 23 19.3	+1.6
	baz=8.2,slow=3.4						
ARR	Arges	145.25	333	⇑P	PKPdf	15 23 18.0	-0.1
TNS	Taunus Mts	145.31	354	ePKPbc	PKPab	15 23 18.2	+0.3
	baz=8.2,slow=3.4						
MODS	Modra-Piesok	145.37	343	ePKIKP	PKiKP	15 23 20.9	-1.1
MODS	Modra-Piesok	145.37	343	ePKP	PKiKP	15 23 20.9	-1.1
BHOU	Houvegnez	145.39	356	dPKP	PKiKP	15 23 21.4	-0.5
BGES	Gesves	145.40	357	dPKP	PKPab	15 23 19.1	+1.1
GRF	Grafenberg Arr	145.46	350	ePKPbc	PKPab	15 23 20.1	+1.7
	baz=8.2,slow=3.4						
GRFO	Grafenberg	145.47	350	ePKPbc	PKPab	15 23 20.1	+1.8
	baz=8.2,slow=3.4						
BMRD	Maredsous	145.50	358	dPKP	PKPab	15 23 20.0	+1.6
KHC	Kasperske Hory	145.57	348		PKPdf	15 23 17.0	-1.5
KHC	Kasperske Hory	145.57	348	ePKP	PKPdf	15 23 18.0	-0.4
KHC				ex	x	15 23 20.8	
KHC	Kasperske Hory	145.57	348	PKIKP	PKPdf	15 23 17.0	-1.5
DEV	Deva	145.57	335	⇑P	PKiKP	15 23 23.5	+1.0
DEV	Deva	145.57	335	⇑PKIKP	PKiKP	15 23 23.5	+1.0
MILB	Miltenberg	145.60	353	ePKPbc	PKPab	15 23 19.6	+0.7
	baz=8.2,slow=3.4						
RCHB	Rochefort	145.62	357	dPKP	PKiKP	15 23 22.9	+0.5
CKRC	Cesky Krumlov	145.70	347	ePKP	PKPab	15 23 20.7	+1.4
CKRC				ex	x	15 23 26.3	
CKRC	Cesky Krumlov	145.70	347	ePKIKP	PKPab	15 23 20.7	+1.4
CKRC				e		15 23 26.3	
DOU	Dourbes	145.71	358	dPKP	PKPab	15 23 20.6	+1.4
SIRR	Siria	145.75	337	⇓P	PKiKP	15 23 21.3	-1.6
LODK	Lodwar	145.75	252	IAMs_20	IAMs_20	16 22 17.2	
	comp=Z,631nm,21.0s						
GEC2	GERESS Array S	145.81	347		PKPdf	15 23 17.4	-1.6
GEC2	GERESS Array S	145.81	347	ePKPbc	PKPab	15 23 21.0	+1.2
	baz=8.2,slow=3.4						
GERES	GERESS Array B	145.81	347	PKPbc	PKPdf	15 23 17.6	-1.3
	comp=Z,3.2nm,0.8s,baz=20,slow=4.3,SNR=14						
MMAI	Mount Meron Ar	145.91	306	PKPbc	PKPbc	15 23 19.7	-0.5
	comp=Z,23nm,1.0s,baz=46,slow=6.0,SNR=10						
SURR	Surduc	145.99	336	⇓P	PKPbc	15 23 19.5	-0.4
GZR	Gura Zlata	146.02	335	⇓P	PKPab	15 23 21.3	+0.6
GZR	Gura Zlata	146.02	335	⇓PKP2	PKPab	15 23 21.3	+0.6
WLF	Walferdange	146.06	356	dPKP	PKPdf	15 23 19.4	+0.2
WLF	Walferdange	146.06	356	ePKPbc	PKPab	15 23 20.6	+0.1
	baz=8.2,slow=3.4						
CONA	Conrad Observa	146.16	344	ePKP	PKPbc	15 23 20.2	-0.2
	comp=Z,54nm,2.1s						
RONA	Rosalia, Austr	146.25	344	ePKP	PKPbc	15 23 20.5	-0.2
	comp=Z,39nm,1.7s						
BZS	Buzias	146.31	336	⇓P	PKPdf	15 23 19.7	-0.1
BZS	Buzias	146.31	336	⇓PKP2	PKPdf	15 23 19.7	-0.1
GHAJ	Ghor Haditha	146.40	303	IAMs_20	IAMs_20	16 36 10.4	
	comp=Z,545nm,18.0s						
HERR	Herculane	146.59	334	⇑P	PKPab	15 23 23.5	+0.7
MOA	Molln	146.63	346	ePKP	PKPbc	15 23 21.5	-0.3
	comp=Z,28nm,1.8s						
STU	Stuttgart	146.66	352	ePKPbc	PKPab	15 23 22.9	+0.1
	baz=8.2,slow=3.4						
CSS	Mathiatis	146.66	311	IAMs_20	IAMs_20	16 29 41.3	
	comp=Z,598nm,22.0s						
ARSA	Arzberg	146.87	344	ePKP	PKPbc	15 23 21.8	-0.8
	comp=Z,16nm,1.5s						
MORH	Mrgy, Hungar	146.87	340	⇑P	PKiKP	15 23 24.5	-0.7
BIOA	Bad Ischl, Aus	146.92	347	ePKP	PKPbc	15 23 22.9	+0.3
	comp=Z,19nm,1.1s						
MDVR	Moldovita	146.96	335	⇑P	PKiKP	15 23 28.2	+2.7
RJOB	Jochberg	147.06	348	ePKPbc	PKPab	15 23 24.8	+0.3
	baz=8.2,slow=3.4						
ISP	Isparta	147.14	317	IAMs_20	IAMs_20	16 27 20.9	
	comp=Z,596nm,21.0s						
BFO	Black Forest	147.19	353	ePKPbc	PKPbc	15 23 23.8	+0.4
	baz=8.2,slow=3.4						
FRGS	Fruska Gora	147.38	337	⇑P	PKiKP	15 23 26.1	-0.1
ECH	Echery	147.43	355	ePKPbc	PKPab	15 23 25.6	-0.3
	baz=8.2,slow=3.4						
EIL	Elat	147.43	301	PKPbc	PKPbc	15 23 23.5	-1.1
	comp=Z,27nm,1.2s,baz=56,slow=3.6,SNR=7.7						
SOKA	Soboth	147.53	344	epPKP	PKPbc	15 23 24.6	+0.1
	comp=Z,16nm,1.1s						
KBA	Koelnbreinsper	147.56	347	epPKP	PKPbc	15 23 24.7	+0.1
	comp=Z,30nm,1.3s,SNR=9.5						
UBR	Ueberruh	147.59	351	ePKPbc	PKPab	15 23 26.7	0.0
	baz=8.2,slow=3.4						
BERGE	Lenzkirch (DE)	147.66	353	ePKPbc	PKPbc	15 23 24.9	+0.1
	baz=8.2,slow=3.4						
RETA	Reutte	147.68	350	epPKP	PKPbc	15 23 24.4	-0.4
	comp=Z,19nm,1.0s						
WATA	Walderalm	147.68	349	ePKP	PKPbc	15 23 25.4	+0.5
	comp=Z,9.8nm,0.8s						
SLE	Schleitheim	147.73	353	ePKPbc	PKiKP	15 23 26.6	-0.4
	baz=8.2,slow=3.4						
WTTA	Wattenberg	147.74	349	epPKP	PKiKP	15 23 27.0	-0.2
	comp=Z,20nm,1.2s						
MOTA	Moosalm	147.76	349	ePKiKP	PKiKP	15 23 26.7	-0.5
	comp=Z,15nm,1.1s						
OBKA	Obir	147.81	345	ePKiKP	PKiKP	15 23 26.6	-0.6
	comp=Z,7.4nm,1.1s						
METMA	Mettma DE	147.81	353	ePKPbc	PKiKP	15 23 26.0	-1.1
	baz=8.2,slow=3.4						
SQTA	Sankt Quirin	147.86	349	ePKiKP	PKiKP	15 23 26.7	-0.6
	comp=Z,17nm,1.2s						
MYKA	Terra Mystica	147.92	346	ePKP	PKiKP	15 23 26.4	-1.0
	comp=Z,24nm,1.5s						
SULZ	Cheisacher	148.01	353	ePKPbc	PKiKP	15 23 27.3	-0.2
	baz=8.2,slow=3.4						
DAVA	Damuels	148.01	351	epPKP	PKPbc	15 23 25.4	-0.4
	comp=Z,15nm,0.9s						
VTS	Vitosha	148.02	331	⇑P	PKPab	15 23 33.2	+4.5
VTS	Vitosha	148.02	331	⇑PKP2	PKPab	15 23 33.2	+4.5
MBAR	Mbarara	148.02	242	IAMs_20	IAMs_20	16 24 06.7	
	comp=Z,736nm,21.0s						
WILA	Wila	148.03	352	ePKPbc	PKiKP	15 23 27.5	-0.1
	baz=8.2,slow=3.4						
ABTA	Abfaltersbach	148.06	347	ePKiKP	PKPbc	15 23 26.2	+0.3
	comp=Z,16nm,1.0s						
PRED	Cave del Predi	148.11	346	PKPab	PKiKP	15 23 27.5	-0.3
FETA	Feichten	148.13	350	ePKiKP	PKPbc	15 23 26.8	+0.7
	comp=Z,20nm,1.1s,SNR=5.5						
DIVS	Divibare	148.21	336	PKPbc	PKPbc	15 23 25.4	-1.0
BALST	Balsthal	148.25	354	ePKPbc	PKPab	15 23 29.9	+0.6
	baz=8.2,slow=3.4						
PLONS	Plons/SG	148.32	351	ePKPbc	PKPab	15 23 30.2	+0.6
	baz=8.2,slow=3.4						
BNI	Bardonecchia	150.61	354	PKPab	PKPab	15 23 37.5	-1.5
BNI	Bardonecchia	150.61	354	PKIKP	PKPab	15 23 37.5	-1.5
KARP	Karpathos	150.66	317	IAMs_20	IAMs_20	16 40 17.1	
	comp=Z,587nm,20.0s						
ZCCA	Zocca	150.66	348		PKPab	15 23 37.9	-1.3
SANT	Santorini	151.24	320	IAMs_20	IAMs_20	16 32 37.2	
	comp=Z,616nm,21.0s						
IDI	Anoyia	152.29	319	IAMs_20	IAMs_20	16 38 55.0	
	comp=Z,507nm,20.0s						

DJA ***14*** *15:09:36.9±0.2, 3°S±2°×12°9E±°, h10^{km}, M4.5/16, mb4.8/12, mB5.0/7, MLv4.4/16, Mw(mB)4.3/7*

NEIC ***14*** *15:09:41.3±1.8, 2°.99S±0°.06×128°.81E±0°.05, h45^{km}±9^{km}, mb4.4/20, Error ellipse: s-maj=9.9km s-min=5.0km az=148.0*

IDC ***14*** *15:09:42.1±2.3, 3°.02S×128°.87E, h55^{km}±22^{km}, mb3.9/7, mbtmp4.3/10, ML4.5/3, MS3.0/1, Error ellipse: s-maj=18.4km s-min=11.9km az=87.0*

ISC 14 15:09:41.3±0.5**, 3°.11S**±0°.05×**128°.72E**±0°.06**, h51^{km}, n65,** σ**1^{s}93**/69**, mb4.4**/17**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.31	138	P	Pn	15 09 44.0	-6.6
MSAI				S	Sn	15 09 48.9	-8.4
AAI	Ambon	0.78	223	P	Pn	15 09 52.9	-3.2
AAI				S	Sn	15 10 02.4	-4.5
NLAI	Namlea	1.62	265	P	Pn	15 10 05.9	-1.6
BNDI	Bandanaira	1.83	140	P	Pn	15 10 09.2	-1.2
BNDI				S	Sn	15 10 32.9	+0.5
LBMI	Labuha	2.74	334	P	Pn	15 10 20.5	-2.4
SANI	Sanana	2.93	291	P	Pn	15 10 22.3	-3.1
SIJI	Sorong	3.38	49	P	Pn	15 10 29.6	-2.0
	69nm,0.3s,baz=241,slow=21,SNR=149						
SIJI				S	Sn	15 11 07.7	-2.9
	83nm,0.3s,baz=61,slow=21,SNR=16						
	139nm,0.2s						
FAKI	Fak Fak	3.53	87	Pn	Pn	15 10 32.5	-1.1
FAKI	Fak Fak	3.53	87	P	Pn	15 10 32.5	-1.1
TNTI	Ternate	4.09	341	Pn	Pn	15 10 39.4	-1.9
SAUI	Saumlaki	5.48	152	P	Pn	15 10 58.0	-2.4
	79nm,0.8s,5µm0.4nm						
RKPI	Ransiki, Papua	5.68	74	P	Pn	15 11 01.6	-1.6
	134nm,0.7s,1µm1.5nm						
LUWI	Luwuk	6.29	289	Pn	Pn	15 11 10.6	-1.0
LUWI	Luwuk	6.29	289	P	Pn	15 11 09.7	-1.9
	62nm,0.6s,1µm0.3nm						
BBSI	Bau Bau	6.57	249	P	Pn	15 11 13.5	-1.9
MRSI	Marisa	7.66	298	P	Pn	15 11 27.7	-2.6
	49nm,0.6s,934nm0.2nm						
SOEI	Soe	7.95	214	Pn	Pn	15 11 37.0	+2.6
SOEI	Soe	7.95	214	P	Pn	15 11 33.8	-0.6
	33nm,1.0s,0.7nm						
BKSI	Bulukumba	8.85	255	P	Pn	15 11 45.9	-0.8
	37nm,0.7s,467nm						
SPSI	Sidrap Palu	8.97	264	P	Pn	15 11 46.2	-2.2
	39nm,0.7s						
TOLI2	Tolitoli	8.98	298	Pn	Pn	15 11 46.6	-1.7
KAPI	Kappang	9.14	258	P	Pn	15 11 54.9	+4.2
	4.4nm,0.3s,baz=117,slow=5.3,SNR=34						
KAPI				LR	LR	15 15 17.0	
	comp=Z,80nm,19.0s,baz=16,slow=36						
	58nm,0.7s						
KAPI	Kappang	9.14	258	Pn	Pn	15 11 52.4	+1.8
MPSI	Mapaga	9.46	291	P	Pn	15 11 53.7	-1.3
	12nm,0.7s						
MTN	Manton Dam	9.96	166	Pn	Pn	15 12 04.2	+2.4
KNRA	Kununurra	12.49	180	Pn	Pn	15 12 37.0	+0.7
MYLDM	Lahad Datu	13.12	309	Pn	Pn	15 12 45.0	0.0
KKM	Kota Kinabalu	15.45	306	P	P	15 13 19.5	-0.4
WB0	Warramunga Arr	17.46	162	Pn	Pn	15 13 40.5	-0.8
WRAB	Tennant Creek	17.60	162	P	Pn	15 13 42.1	-1.0
WRA	Warramunga Arr	17.60	162	P	Pn	15 13 42.6	-0.5
	1.7nm,0.3s,baz=337,slow=12,SNR=47						
	6.6nm,0.5s						
WRA	Warramunga Arr	17.60	162	P	Pn	15 13 42.2	-0.9
WB2	Warramunga Arr	17.61	162	P	Pn	15 13 42.9	-0.3
PSA00	Pilbara Seismi	20.28	204	P	P	15 14 12.6	-0.2
PSA00				IAmb	IAmb	15 14 13.4	
	comp=Z,19nm,0.5s						
AS31	Alice Springs	21.04	167	P	P	15 14 21.4	+0.3
AS31				IAmb	IAmb	15 14 27.1	
	comp=Z,8.8nm,0.5s						
ASAR	Alice Springs	21.04	167	P	P	15 14 21.4	+0.4
	comp=Z,12nm,0.4s,baz=345,slow=11,SNR=96						
ASAR				S	S	15 18 15.6	+2.9
	comp=Z,1.7nm,0.9s,baz=356,slow=23,SNR=3.0						
	comp=Z,12nm,0.4s						
ASAR	Alice Springs	21.04	167	P	P	15 14 21.3	+0.2
CTA	Charters Tower	24.03	136	P	P	15 14 52.6	+0.9
	comp=Z,4.5nm,0.8s,baz=328,slow=9.1,SNR=5.1						
	comp=Z,4.5nm,0.8s						
CTAO	Charters Tower	24.03	136	P	P	15 14 52.4	+0.7
CTAO				IAmb	IAmb	15 14 55.0	
	comp=Z,14nm,1.1s						
KULM	Kulim	29.26	287	P	P	15 15 39.9	+1.1
KULM				IAmb	IAmb	15 16 16.8	
	comp=Z,17nm,1.0s						
BBOO	Buckleboo	30.34	168	P	P	15 15 47.2	-1.0
BBOO				IAmb	IAmb	15 16 08.0	
	comp=Z,11nm,1.2s						
RPSI	Rantau Prapat	30.34	281	P	P	15 15 49.0	+0.5
PHRA	Phrae	35.33	308	P	P	15 16 30.9	-1.1
PZH	PanZhiHua	39.33	320	P	P	15 17 08.6	+2.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,4.6s						
KSRS	Korea Array	40.37	359	P	P	15 17 14.5	+0.3
	comp=Z,1.0nm,0.8s,baz=178,slow=10,SNR=2.5						
	comp=Z,1.0nm,0.8s						
HHC	Hu-ho-hao-te	46.48	342	eP	P	15 18 05.9	+2.4
HHC				pmax	pmax		
	comp=Z,30nm,0.8s						
HHC				pmax	pmax		
	comp=Z,380nm,5.3s						
GTA	Gaotai	49.98	331	eP	P	15 18 31.3	+0.7
GTA				sP	pP	15 18 43.4	-1.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONM	Songino Array	54.37	342	P	P	15 19 03.7	+0.6
	comp=Z,1.8nm,1.0s,baz=164,slow=6.4,SNR=5.6						
	comp=Z,1.8nm,1.0s						
WMQ	Urumqi	59.47	327	eP	P	15 19 41.3	+2.1
PETK	Petropavlovsk-	61.08	19	P	P	15 19 49.2	-0.7
	comp=Z,2.0nm,0.8s,baz=178,slow=4.5,SNR=3.5						
	comp=Z,2.0nm,0.8s						
MK31	Makanchi Array	64.30	326	P	P	15 20 11.5	0.0
MK31				IAmb	IAmb	15 20 12.7	
	comp=Z,2.6nm,0.8s						
MKAR	Makanchi Array	64.30	326	P	P	15 20 11.7	+0.2
	comp=Z,3.2nm,0.7s,baz=124,slow=8.1,SNR=40						
	comp=Z,3.2nm,0.7s						
MKAR	Makanchi Array	64.30	326	P	P	15 20 11.5	0.0
MAKZ	Makanchi	64.48	326	P	P	15 20 12.5	-0.2
MAKZ				IAmb	IAmb	15 20 13.7	
	comp=Z,2.2nm,0.7s						
YAK	Yakutsk	64.97	0	P	P	15 20 15.8	+0.3
ZAA0	Zalesovo Array	67.56	334	P	P	15 20 30.9	-1.4
ZAA0				IAmb	IAmb	15 20 32.8	
	comp=Z,3.5nm,0.9s						
ZALV	Zalesovo Beam	67.56	334	P	P	15 20 32.0	-0.3
	comp=Z,1.8nm,0.7s,baz=131,slow=6.7,SNR=8.1						
	comp=Z,1.8nm,0.7s						
ZALV	Zalesovo Beam	67.56	334	P	P	15 20 30.8	-1.5
KURK	Kurchatov	68.56	328	P	P	15 20 38.6	0.0
KKAR	Karatay Array	69.60	318	P	P	15 20 45.1	-0.2
BRVK	Borovoye	74.19	328	P	P	15 21 12.8	+0.2
TIXI	Tiksi	74.62	0	P	P	15 21 14.8	+0.1
TIXI				IAmb	IAmb	15 21 18.6	
	comp=Z,1.6nm,0.5s						
ABKAR	Akbulak array	78.69	321	P	P	15 21 37.7	-0.4
GEVA	Gevas	88.50	308	P	P	15 22 29.7	+0.9
TORD	Torodi Ar. Bea	126.72	284	PKP	PKPdf	15 28 40.0	-0.2
	comp=Z,0.3nm,0.5s,baz=83,slow=1.4,SNR=2.6						

SJA ***14*** *15:11:17.2±1.0, 33°.58S×71°.33W, h48^{km}±5^{km}, ML4.0, MW4.0, Hypocentre not reviewed by the ISC*

GUC ***14*** *15:11:17.8±0.8, 33°.58S×71°.32W, h52^{km}±2^{km}, ML4.1*

NEIC ***14*** *15:11:18.1±1.2, 33°.55S±0°.03×71°.35W±0°.06, h44^{km}±5^{km}, mb4.4/7, ML4.1(GUC), Error ellipse: s-maj=6.9km s-min=3.5km az=102.0*

IDC ***14*** *15:11:18.2±0.8, 33°.55S×71°.30W, h52^{km}±6^{km}, mb3.6/5, mbtmp3.8/11, MS2.9/1, Error ellipse: s-maj=19.9km s-min=12.3km az=131.0*

ISC 14 15:11:17.7±0.6**, 33°.57S**±0°.02×**71°.33W**±0°.03**, h47^{km}**±4^{km}**, n92,** σ**0^{s}94**/121**, mb4.2**/7**, 6C-13D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA05	Santo Domingo	0.25	251		Pn	15 11 26.0	-0.1
VA05				Sn	Sn	15 11 32.5	+0.5
VA05	Santo Domingo	0.25	251	⇑iP	Pn	15 11 26.3	+0.2
VA05				i S	Sn	15 11 32.8	+0.8
VA05				IAML		15 11 36.1	
	comp=N,13µm,0.4s						
MT01	Popeta	0.30	168		Pn	15 11 26.6	0.0
MT01				Sn	Sn	15 11 32.9	+0.1
MT01	Popeta	0.30	168	⇑iP	Pn	15 11 26.7	+0.2
MT01				eS	Sn	15 11 33.0	+0.2
MT01				IAML		15 11 33.4	
	comp=N,31µm,0.2s						
MT01	Popeta	0.30	168	eP		15 11 26.8	
MT01				eS		15 11 33.0	
MT01				IAML		15 11 33.8	
	comp=Z,11µm,0.2s						
MT09	Talagante	0.35	126		Pn	15 11 27.4	+0.2
MT09				Sn	Sn	15 11 34.0	+0.1
MT09	Talagante	0.35	126	⇓iP	Pn	15 11 27.6	+0.4
MT09				i S	Sn	15 11 34.6	+0.7
MT09				IAML		15 11 35.1	
	comp=N,38µm,0.2s						
MT02	Curacav	0.35	27		Pn	15 11 27.6	+0.5
MT02				Sn	Sn	15 11 34.0	+0.3
MT02	Curacav	0.35	27	⇓iP	Pn	15 11 27.7	+0.6
MT02				eS	Sn	15 11 34.3	+0.6
MT02				IAML		15 11 34.9	
	comp=N,19µm,0.3s						
MT02	Curacav	0.35	27	eP		15 11 27.9	
MT02				eS		15 11 34.6	
MT02				IAML		15 11 35.0	
	comp=Z,9µm,0.3s						
MT05	Renca	0.53	70		Pn	15 11 29.8	+0.6
MT05	Renca	0.53	70	⇓iP	Pn	15 11 29.8	+0.6
MT05				eS	Sn	15 11 38.1	+0.8
MT05				IAML		15 11 39.2	
	comp=E,18µm,0.4s						
MT05	Renca	0.53	70	eP		15 11 29.8	
MT05				eS		15 11 39.3	
MT05				IAML		15 11 41.4	
	comp=Z,5µm,0.2s						
VA01	Torpederas	0.61	334		Pn	15 11 30.4	+0.3
VA01	Torpederas	0.61	334	⇑iP	Pn	15 11 30.5	+0.4
VA01				eS	Sn	15 11 40.5	+1.4
VA01	Torpederas	0.61	334	eP		15 11 30.6	
VA01				eS		15 11 40.8	

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VA01                           eS           15 11 41.5
ROC1  El Roble        0.65  24          Pn  15 11 31.3 +0.3
ROC1  El Roble        0.65  24 eP           15 11 31.3
ROC1                           eS           15 11 41.5
ROCH  El Roble        0.66  24⇓iP       Pn  15 11 31.4 +0.4
ROCH                           eS       Sn  15 11 41.4 +0.9
ROCH                            IAML        15 11 42.0
      comp=N,15µm,0.1s
MT12  Pirque          0.67 104⇓iP       Pn  15 11 31.6 +0.6
MT12                           eS       Sn  15 11 41.4 +0.9
MT12                            IAML        15 11 47.3
      comp=E,19µm,0.5s
MT03  Universidad Ad  0.69  84          Pn  15 11 31.8 +0.6
MT03  Universidad Ad  0.69  84⇓iP       Pn  15 11 31.9 +0.6
MT03                           eS       Sn  15 11 41.8 +0.8
MT03  Universidad Ad  0.69  84 eP           15 11 32.1
MT03                           eS           15 11 42.9
MT03                            IAML        15 11 43.5
      comp=Z,7µm,0.1s
PEL   Peldehue        0.69  52          Pn  15 11 31.6 +0.4
PEL                             Sn      Sn  15 11 41.0  0.0
PEL   Peldehue        0.69  52 eP       Pn  15 11 31.2  0.0
PEL                            eS       Sn  15 11 41.8 +0.8
PEL                             IAML        15 11 43.0
      comp=N,17µm,0.2s
PEL   Peldehue        0.69  52 eP           15 11 31.5
PEL                            eS           15 11 42.9
MT10  Hacienda Santa  0.73  66⇓iP       Pn  15 11 32.6 +0.8
MT10                           eS       Sn  15 11 43.2 +1.2
MT10                            IAML        15 11 44.6
      comp=E,15µm,0.3s
BO01  Tunca           0.84 166          Pn  15 11 33.6 +0.4
BO01  Tunca           0.84 166 eP       Pn  15 11 33.7 +0.5
BO01                           eS       Sn  15 11 45.1 +0.6
BO01  Tunca           0.84 166 eP           15 11 34.0
BO01                           eS           15 11 45.2
MT13  San Alfonso     0.89 101          Pn  15 11 34.5 +0.5
MT13  San Alfonso     0.89 101⇓iP       Pn  15 11 34.6 +0.7
MT13                           eS       Sn  15 11 47.0 +1.2
MT13                            IAML        15 11 48.4
      comp=E,15µm,0.2s
FCH   Farellones      0.90  74 eP       Pn  15 11 34.8 +0.5
FCH                            eS       Sn  15 11 46.5  0.0
LMEL  Las Melosas     0.98 107          Pn  15 11 35.9 +0.7
LMEL  Las Melosas     0.98 107⇓iP       Pn  15 11 35.9 +0.7
LMEL                           eS       Sn  15 11 49.1 +1.1
MT04  Ro Olivares     1.01  81⇓iP       Pn  15 11 36.5 +0.8
MT04                           eS       Sn  15 11 49.8 +0.9
MT04                            IAML        15 11 50.4
      comp=N,8µm,0.2s
VA06  Catapilco       1.01   1          Pn  15 11 36.3 +0.8
VA06  Catapilco       1.01   1 eP       Pn  15 11 36.4 +0.9
VA06                           eS       Sn  15 11 48.7 +0.1
VA06                            IAML        15 11 53.9
      comp=N,6µm,0.5s
VA03  San Esteban     1.04  39          Pn  15 11 36.6 +0.6
VA03  San Esteban     1.04  39⇓iP       Pn  15 11 36.8 +0.8
VA03                           eS       Sn  15 11 50.8 +1.4
VA03                            IAML        15 11 52.2
      comp=E,10µm,0.1s
VA03  San Esteban     1.04  39 eP           15 11 34.6
VA03                           eP           15 11 37.0
VA03                           eS           15 11 51.1
VA03                            IAML        15 11 54.4
      comp=Z,4µm,0.1s
BO03  Pichilemu       1.06 210⇑iP       Pn  15 11 36.1 -0.1
BO03                           eS       Sn  15 11 51.1 +1.3
MT08  Bocatoma Ro     1.10  84          Pn  15 11 37.6 +0.6
MT08  Bocatoma Ro     1.10  84⇓iP       Pn  15 11 38.0 +1.0
MT08                           eS       Sn  15 11 52.5 +1.4
BO02  Sierra Bellavi  1.30 160          Pn  15 11 40.1 +0.6
BO02  Sierra Bellavi  1.30 160⇓eP       Pn  15 11 40.1 +0.6
BO02                           eS       Sn  15 11 56.9 +1.2
BO02                            IAML        15 12 00.9
      comp=N,8µm,0.3s
BO02  Sierra Bellavi  1.30 160 eP           15 11 40.3
BO02                           eS           15 11 57.9
BO02                            IAML        15 12 01.4
      comp=Z,3µm,0.2s
GO05  Huala           1.52 199          Pn  15 11 43.2 +0.8
GO05  Huala           1.52 199 eP       Pn  15 11 43.2 +0.8
GO05                           eS       Sn  15 12 01.9 +0.9
GO05  Huala           1.52 199 eP           15 11 43.6
GO05                           eS           15 12 06.3
ARCO  CERRO ARCO      2.14  71 eP           15 11 50.3
ARCO                           eS           15 12 11.5
AAGR  Agrelo          2.15  78 eP           15 11 54.9
ASAL  Salagasta       2.31  66 eP           15 11 57.1
ASAL                           eS           15 12 24.3
CO02  Combarbal       2.38   7          Pn  15 11 55.0 +0.6
CO02  Combarbal       2.38   7⇑eP       Pn  15 11 55.0 +0.6
CO02                           eS       Sn  15 12 24.1 +1.7
CO02  Combarbal       2.38   7 eP           15 11 54.9
CO02                           eS           15 12 24.8
CO02                            IAML        15 12 32.2
      comp=Z,621nm,0.2s
RTLS  Leoncito        2.46  45 eP           15 11 58.0
RTLS                           eS           15 12 35.8
RTLS                            IAML        15 12 37.5
      comp=Z,559nm,0.2s
CO03  El Pedregal     2.78  11          Pn  15 12 00.8 +1.0
CO03  El Pedregal     2.78  11⇑eP       Pn  15 12 01.1 +1.3
CO03                           eS       Sn  15 12 33.5 +1.3
CO03                            IAML        15 12 40.1
      comp=E,1µm,0.3s
CO03  El Pedregal     2.78  11 eP           15 12 01.2
CO03                           eS           15 12 36.9
CO03                            IAML        15 12 47.5
      comp=Z,482nm,0.5s
CO06  Fray Jorge      2.90 355  Pn      Pn  15 12 01.5  0.0
CO06  Fray Jorge      2.90 355 eP       Pn  15 12 01.4  0.0
CO06                           eS       Sn  15 12 38.1 +3.0
CO06                            IAML        15 12 49.6
      comp=N,483nm,0.3s
ZON   Zonda           3.02  49          Pn  15 12 02.7 -0.4
ZON   Zonda           3.02  49 eP           15 12 06.0
ZON                            eS           15 12 51.4
ZON                             IAML        15 12 56.0
      comp=Z,220nm,0.4s
CFA   Coronel Fontan  3.27  54  P       Pn  15 12 08.1 +1.6
      comp=Z,66nm,0.3s,baz=227,slow=13,SNR=172
CFA                             S       Sn  15 12 44.1  0.0
      comp=Z,38nm,0.3s,baz=242,slow=15,SNR=4.4
CFA                             LR      LR  15 13 39.9
      comp=Z,177nm,20.0s,baz=121,slow=44
CFA   Coronel Fontan  3.27  54 eP           15 12 09.1
CFA                            eS           15 12 49.3
GO04  Tololo Observa  3.42   8          Pn  15 12 08.7 -0.1
GO04  Tololo Observa  3.42   8 eP       Pn  15 12 09.3 +0.5
GO04                           eS       Sn  15 12 48.5 +0.3
GO04  Tololo Observa  3.42   8 eP           15 12 10.2
GO04                           eS           15 12 49.8
CO05  La Serena       3.65   1 eP       Pn  15 12 16.0 +4.4
CO05                           eS       Sn  15 12 53.5 +0.2
LCO   Las Campanas    4.58   7 eP           15 12 24.3
LCO                            eP           15 12 26.2
LCO                            eS           15 13 25.3
LCO                             IAML        15 13 40.6
      comp=Z,336nm,0.5s
LCO   Las Campanas    4.58   7  Pn      Pn  15 12 24.1 -0.6
AC05  El Transito     4.81  11 eP           15 12 28.5
AC05                           eS           15 13 29.8
AC05                            IAML        15 13 45.0
      comp=Z,146nm,0.9s
AC04  Llanos de Chal  5.36   2  Pn      Pn  15 12 34.4 -0.7
AC04  Llanos de Chal  5.36   2 eP           15 12 36.0
AC04                           eS           15 13 48.3
AC04                            IAML        15 13 55.8
      comp=Z,156nm,1.2s
H03S1 Juan Fernandez  6.32 265  T       T   15 19 05.9
      baz=87,slow=75,SNR=88
H03S3 Juan Fernandez  6.32 266  T       T   15 19 08.3
      baz=87,slow=75,SNR=72
H03N1 Juan Fernandez  6.34 269  T       T   15 20 16.3
      baz=87,slow=73,SNR=80
H03S2 Juan Fernandez  6.34 266  T       T   15 19 01.2
      baz=87,slow=75,SNR=75
H03N3 Juan Fernandez  6.35 269  T       T   15 19 48.7
      baz=87,slow=73,SNR=86
H03N2 Juan Fernandez  6.35 269  T       T   15 19 49.6
      baz=87,slow=73,SNR=64
AC02  Maricunga       6.98  16  Pn      Pn  15 12 57.3 -0.5
PLCA  Paso Flores     7.17 175  P       Pn  15 13 01.6 +1.5
      comp=Z,0.8nm,0.3s,baz=342,slow=11,SNR=12
AC01  Pan de Azucar   7.43   5  Pn      Pn  15 13 02.4 -1.2
TRQA  Tornquist       8.81 123  Pn      Pn  15 13 23.4 +1.0
LVC   Limon Verde    11.13  12  P       Pn  15 13 55.3 +0.7
      comp=Z,1.3nm,0.4s,baz=281,slow=12,SNR=2.3
ITQB  Itaqui         13.12  77  Pn      Pn  15 14 19.9 -1.4
CPUP  Villa Florida  14.11  63  P       Pn  15 14 35.5 +0.6
      comp=Z,0.6nm,0.4s,baz=186,slow=11,SNR=2.9
CPUP                            S       Sn  15 17 09.5 -0.6
      comp=Z,3.5nm,1.0s,baz=201,slow=15,SNR=2.6
CPUP  Villa Florida  14.11  63  Pn      Pn  15 14 33.0 -1.9
PLTB  Pedras Altas   15.04  88  Pn      Pn  15 14 46.3 -0.9
PLTB                            IAmb    IAmb 15 15 07.1
      comp=Z,19nm,1.5s
LPAZ  La Paz         17.45  10  P       Pn  15 15 18.5 +0.1
      comp=Z,1.9nm,0.8s,baz=176,slow=9.9,SNR=6.0
SIV   San Ignacio    19.80  30  P       P   15 15 43.2 -1.2
      comp=Z,2.4nm,0.5s,baz=206,slow=9.3,SNR=11
EFI   East Falkland  20.50 156          P   15 15 52.5 +0.9
EFI                             IAmb    IAmb 15 16 29.8
      comp=Z,36nm,1.1s
ETMB  Extrema        24.11  12  P       P   15 16 28.6 -0.5
ETMB                            IAmb    IAmb 15 16 31.2
      comp=Z,5.6nm,0.7s
SAML  Samuel         25.63  19  P       P   15 16 43.6 +0.6
BOAV  Boa Vista      37.20  18  P       P   15 18 23.5 -1.1
BOAV                            IAmb    IAmb 15 18 24.5
      comp=Z,3.8nm,0.9s
SNAA  Sanae          51.76 158  P       P   15 20 20.5 +0.3
      comp=Z,2.0nm,0.6s,baz=231,slow=5.2,SNR=5.9
      comp=Z,2.0nm,0.6s
SNAA  Sanae          51.76 158  P       P   15 20 20.9 +0.8
QSPA  South Pole Qui 56.66 180  P       P   15 20 56.2 +0.2
      comp=Z,1.4nm,0.9s,baz=41,slow=0.6,SNR=5.7
      comp=Z,1.4nm,0.9s
TXAR  Lajitas Array  69.66 330  P       P   15 22 23.1 +0.7
      comp=Z,0.4nm,0.5s,baz=158,slow=8.9,SNR=4.7
TXAR                            pP      pP  15 22 36.3 +0.4
      comp=Z,0.6nm,0.5s,baz=154,slow=8.5,SNR=5.3
      comp=Z,0.4nm,0.5s
TORD  Torodi Ar. Bea 83.51  70  P       P   15 23 40.1 -0.8
      comp=Z,1.5nm,0.7s,baz=260,slow=4.3,SNR=6.9
TORD                            pP      pP  15 23 55.4 +0.7
      comp=Z,3.0nm,1.0s,baz=235,slow=5.1,SNR=5.7
      comp=Z,1.5nm,0.7s
TORD  Torodi Ar. Bea 83.51  70  P       P   15 23 40.7 -0.2
TORD                            IAmb    IAmb 15 24 00.8
      comp=Z,6.3nm,1.2s
NVAR  Mina Array Bea 83.88 325  P       P   15 23 43.5 +0.9
      comp=Z,0.2nm,0.5s,baz=170,slow=5.5,SNR=2.2
      comp=Z,0.2nm,0.5s
YKA   Yellowknife Ar 101.85 341 P       Pdif 15 25 03.7 -1.6
      comp=Z,0.2nm,0.6s,baz=141,slow=3.2,SNR=2.4
ASAR  Alice Springs  118.21 206 PKP     PKPdf 15 29 58.7 -1.6
      comp=Z,0.2nm,0.5s,baz=128,slow=2.0,SNR=1.4
WRA   Warramunga Arr 121.42 209 PKP     PKPdf 15 30 05.3 -1.1
      comp=Z,0.3nm,0.5s,baz=169,slow=1.6,SNR=6.8
H11S2 WAKE ISLAND Hy126.37 269  T       T   17 49 21.1
      baz=118,slow=75,SNR=9.4
H11S1 WAKE ISLAND Hy126.38 269  T       T   17 49 21.4
      baz=118,slow=75,SNR=9.6
H11S3 WAKE ISLAND Hy126.39 269  T       T   17 49 22.2
      baz=118,slow=75,SNR=9.2
BVAR  Borovoye Array 146.57  43 PKPbc   PKPbc 15 30 52.8 -0.7
      comp=Z,0.9nm,0.4s,baz=284,slow=3.2,SNR=8.4
BVAR                            pPKPbc  pPKPbc 15 31 08.4 +0.6
      comp=Z,0.4nm,0.5s,baz=298,slow=3.1,SNR=2.7
AAK   Ala-Archa      151.78  61 PKPbc   PKPbc 15 31 07.0 -0.3
      comp=Z,2.3nm,0.6s,baz=195,slow=3.4,SNR=12
KURBB Kurchatov Arra 152.16  43 PKPbc   PKPbc 15 31 06.8 -0.7
      comp=Z,1.0nm,0.8s,baz=304,slow=3.0,SNR=10
ZALV  Zalesovo Beam  153.55  32 PKPbc   PKPbc 15 31 09.1 -1.4
      comp=Z,1.8nm,0.6s,baz=295,slow=3.7,SNR=9.0
ZALV                            PKPab   PKPab 15 31 23.0 -0.2
      comp=Z,1.3nm,0.7s,baz=285,slow=3.1,SNR=5.3
MKAR  Makanchi Array 156.04  49 PKP     PKPdf 15 31 06.0 -0.5
      comp=Z,0.2nm,0.5s,baz=294,slow=1.4,SNR=2.5
MKAR                            PKPab   PKPab 15 31 33.7 -0.4
      comp=Z,0.6nm,0.7s,baz=316,slow=3.3,SNR=6.7
PZH   PanZhiHua      170.74 138 PKP     PKPdf 15 31 21.8 +0.7
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*DNK **14** 15:14:33.6±1.1, 55°.94N×15°.58E, h0^{km}, ML2.0, Explosion*

UPP 14 15:14:33.7±0.3**, 55°.98N×15°.55E, h0**^{km}**, ML2.4,**
Suspected explosion, Baltic Sea

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Code  Station Name      Δ°  AZ°   Phase ID       Time     Res
                                  Op    ISC     h  m  s   ISC
BLEU  Blekinge        0.36  24    P     Pg     15 14 40.6 +0.1
BLEU                              S     Sg     15 14 45.6 +0.3
BLEU  Blekinge        0.36  24  i P     Pg     15 14 40.2 -0.4
BLEU                              P     Pb     15 14 40.6 -2.3
BLEU                              S     Sg     15 14 45.6 +0.3
BSD   Bornholm Skovb  0.94 203  i P     Pg     15 14 50.0 -1.6
BSD                               IAML         15 15 10.1
      comp=Z,15nm,0.1s
VXJU  Vaexsjoe        1.01 341    P     Pg     15 14 52.6 -0.4
VXJU  Vaexsjoe        1.01 341    P     Pg     15 14 52.6 -0.4
DEL   Delary          1.06 298  i P     Pg     15 14 53.0 -1.0
LUNU  Lund            1.24 255    P     Pg     15 14 56.8 -0.5
LUNU  Lund            1.24 255  i P     Pg     15 14 56.0 -1.4
LUNU                              P     Pb     15 14 56.8 -1.1
OSKU  Oskarshamn      1.26  14    P     Pg     15 14 57.1 -0.7
OSKU  Oskarshamn      1.26  14    P     Pg     15 14 57.1 -0.7
BJUU  Bjuv            1.42 275    P     Pn     15 14 59.7 -1.0
BJUU  Bjuv            1.42 275  i P     Pn     15 14 59.1 -1.7
BJUU                              P     Pg     15 14 59.7 -1.2
BYXU  Byxelkrok       1.54  31    P     Pn     15 15 02.0 -0.4
BYXU  Byxelkrok       1.54  31    P     Pn     15 15 02.0 -0.4
EKSU  Eksjoe          1.61 355    P     Pn     15 15 03.1 -0.2
EKSU  Eksjoe          1.61 355    P     Pn     15 15 03.1 -0.2
GNOU  Gnosjoe         1.65 324    P     Pn     15 15 03.7 -0.2
GNOU  Gnosjoe         1.65 324    P     Pn     15 15 03.7 -0.2
VSTU  Vaestervik      1.77  17    P     Pn     15 15 05.9 +0.4
VSTU  Vaestervik      1.77  17    P     Pn     15 15 05.9 +0.4
FABU  Falkenberg      1.88 304  i P     Pn     15 15 07.6 +0.6
BORU  Boraas          2.26 319  i P     Pb     15 15 13.9 -1.4
ONAU  Onsala          2.46 307  i P     Pb     15 15 16.9 -1.8
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*NEIC **14** 15:19:06.0±1.4, 24°.0S±0°.2×175°.6W±0°.1, h20^{km}±5^{km}, mb4.2/7, Error ellipse: s-maj=29.4km s-min=15.1km az=170.0*

*IDC **14** 15:19:28.8±15.0, 22°.93S×176°.90W, h171^{km}±103^{km}, mb3.5/5, mbtmp4.0/6, Error ellipse: s-maj=165.2km s-min=27.0km az=134.0*

ISC 14 15:19:07.6±1.1**, 23°.9S**±0°.2×**175°.6W**±0°.1**, h35**^{km}**, n17,**
σ**1^{s}.03**/18**, mb4.1**/10**, Tonga Islands region**

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Code  Station Name      Δ°  AZ°   Phase ID       Time     Res
                                  Op    ISC     h  m  s   ISC
NIUE  Niue            7.18  49    Pn    Pn     15 20 50.1  0.0
MSVF  Nonsavu         8.52 315    P     Pn     15 21 09.1 +0.5
      14nm,0.8s,baz=200,slow=11,SNR=11
MSVF  Nonsavu         8.52 315    Pn    Pn     15 21 09.4 +0.8
CTAO  Charters Tower 35.46 269    P     P      15 26 00.8 -0.1
CTAO                              IAmb  IAmb   15 26 02.2
      comp=Z,8.1nm,0.6s
STKA  Stephens Creek 38.42 248    P     P      15 26 27.3 +1.4
STKA                              IAmb  IAmb   15 26 40.9
      comp=Z,1.2nm,1.3s
AS31  Alice Springs  45.96 260    P     P      15 27 27.3 -0.2
AS31                              IAmb  IAmb   15 27 31.3
      comp=Z,0.6nm,0.9s
ASAR  Alice Springs  45.96 260    P     P      15 27 27.5  0.0
      comp=Z,1.2nm,0.9s,baz=94,slow=6.9,SNR=17
ASAR                              PcP   PcP    15 29 05.5 +1.4
      comp=Z,0.2nm,0.7s,baz=115,slow=4.1,SNR=2.1
      comp=Z,1.2nm,0.9s
WB2   Warramunga Arr 46.37 265    P     P      15 27 29.7 -1.1
WB2                               IAmb  IAmb   15 27 52.7
      comp=Z,6.6nm,1.4s
WRAB  Tennant Creek  46.37 265    P     P      15 27 29.9 -0.9
WRAB                              IAmb  IAmb   15 27 57.4
      comp=Z,8.5nm,1.5s
WRA   Warramunga Arr 46.38 265    P     P      15 27 29.9 -1.0
      comp=Z,1.4nm,0.5s,baz=96,slow=8.3,SNR=47
      comp=Z,1.4nm,0.5s
KNRA  Kununurra      52.67 268    P     P      15 28 18.2 -0.7
FITZ  Fitzroy Crossi 54.80 264    P     P      15 28 34.1 -0.2
PETK  Petropavlovsk- 80.13 344    P     P      15 31 12.7 -1.0
      comp=Z,5.7nm,1.1s,baz=152,slow=6.4,SNR=2.5
      comp=Z,5.7nm,1.1s
PETK  Petropavlovsk- 80.13 344    P     P      15 31 12.8 -0.9
ILAR  Eielson Array  91.17  12    P     P      15 32 10.0 +1.7
      comp=Z,0.4nm,1.0s,baz=218,slow=5.2,SNR=4.6
      comp=Z,0.4nm,1.0s
CMAR  Chiang Mai Arr 93.29 289    P     P      15 32 17.8 -1.5
      comp=Z,0.3nm,0.5s,baz=133,slow=5.0,SNR=1.6
      comp=Z,0.3nm,0.5s
AKASG Malin Array Be 147.05 331   PKPbc PKPab  15 38 47.0 -1.0
      comp=Z,0.3nm,0.3s,baz=42,slow=4.0,SNR=4.7
```

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*MEX **14** 15:33:16.6±0.4, 14°.45N×92°.77W, h67^{km}±47^{km}, MD4.2*

*GCG **14** 15:33:18.1±0.4, 15°.67N×91°.90W, h9^{km}±38^{km}, MD3.7*

ISC 14 15:33:14.7±2.2**, 14°.41N**±0°.08×**92°.81W**±0°.05**, h24**^{km}±16^{km}**,**
n13, σ**1^{s}.17**/25**, Near coast of Chiapas**

```
Code  Station Name      Δ°  AZ°   Phase ID       Time     Res
                                  Op    ISC     h  m  s   ISC
PATR  El Naranjo      0.90  38   eP     Pb     15 33 31.6 -0.2
PATR                             i S    Sb     15 33 43.8 +0.4
CHUJ  Union Juarez    0.96  45   eP     Pn     15 33 32.5 -0.4
CHUJ                             eS     Sb     15 33 45.2 +0.1
PAVE  Pavencul        0.99  38   eP     Pn     15 33 33.0 -0.3
PAVE                             eS     Sb     15 33 45.5 -0.6
STG3  Santiaguito 3,  1.23  76   eP     Pn     15 33 37.0 +0.4
STG3                             eS     Sn     15 33 51.8 -0.8
PCIG                  1.35 343   eP     Pn     15 33 37.8 -0.1
PCIG                             eS     Sn     15 33 54.1 -1.1
FUG   Fuego 3         1.90  89   eP     Pn     15 33 46.4 +0.6
FUG                              eS     Sn     15 34 08.8 -0.4
CCIG  Comitan         1.97  19   eP     Pb     15 33 49.8 -0.2
CCIG                             eS     Sn     15 34 12.7 +1.9
PCG   Pacaya          2.13  90   eP     Pn     15 33 49.6 +0.6
PCG                              eS     Sn     15 34 13.9 -1.0
TGIG                  2.38 353   eP     Pn     15 33 54.0 +1.8
TGIG                             eS     Sn     15 34 22.3 +1.7
NILT  Santiago Nilte  2.76 321   eP     Pn     15 33 57.2 -0.3
NILT                             i S    Sn     15 34 28.2 -1.9
CMIG  Matias Romero   3.33 323   eP     Pn     15 34 06.4 +1.1
CMIG                             eS     Sn     15 34 41.9 -2.2
NEUV  Arroyo Zacate   4.37 319   eP     Pn     15 34 18.5 -1.0
NEUV                             i S    Sn     15 34 55.6  -14
YOIG  Yosondua        5.17 299   eP     Pn     15 34 32.7 +1.8
YOIG                             eS     Sn     15 35 30.4 +0.4
```

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*NNC **14** 15:34:23.9±0.4, 44°.72N×77°.54E, h0^{km}, mb3.6, mpv3.5, Error ellipse: s-maj=3.3km s-min=1.9km az=146.0*

*SOME **14** 15:34:25.0, 44°.72N×77°.48E, h15^{km}*

ISC 14 15:34:23.2±1.2**, 44°.75N**±0°.03×**77°.54E**±0°.02**, h4**^{km}±11^{km}**,**
n49, σ**0^{s}.71**/90**, 10C-2D, Eastern Kazakhstan**

```
Code  Station Name      Δ°  AZ°   Phase ID       Time     Res
                                  Op    ISC     h  m  s   ISC
ARXS  Arharly         0.57 159    P     Pb     15 34 35.3 -0.6
      54nm,0.1s
ARXS                              S     Sb     15 34 42.7 -1.7
      287nm,0.2s
ARXS  Arharly         0.57 159   eP     Pb     15 34 35.3 -0.6
      54nm,0.1s
ARXS                             eS     Sb     15 34 42.7 -1.7
      287nm,0.2s
TDK   Taldyqorghan    0.67  67    P     Pb     15 34 37.6 +0.2
      84nm,0.1s
TDK                               S     Sb     15 34 46.5 -0.6
      92nm,0.2s
TDK   Taldyqorghan    0.67  67   eP     Pb     15 34 37.6 +0.2
      84nm,0.1s
TDK                              eS     Sb     15 34 46.5 -0.6
      92nm,0.2s
CHKK  Chushkaly       0.98 204    P     Pb     15 34 42.3 -0.4
      24nm,0.2s
CHKK                              S     Sb     15 34 55.3 -0.7
      148nm,0.2s
CHKK  Chushkaly       0.98 204   eP     Pb     15 34 42.3 -0.4
      24nm,0.2s
CHKK                             eS     Sb     15 34 55.2 -0.7
      148nm,0.2s
KTBS  Karatobe        1.21 211    P     Pb     15 34 46.5 -0.1
      12nm,0.2s
KTBS                              S     Sb     15 35 02.1 -0.5
      127nm,0.4s
KTBS  Karatobe        1.21 211   eP     Pb     15 34 46.5 -0.1
      12nm,0.2s
KTBS                             eS     Sb     15 35 02.1 -0.5
      98nm,0.1s
KUU   Kurty           1.21 226    P     Pg     15 34 46.4 -0.1
      45nm,0.2s
KUU                               S     Sg     15 35 02.2  0.0
      89nm,0.2s
KUU   Kurty           1.21 226   eP     Pg     15 34 46.4 -0.1
      45nm,0.2s
KUU                              eS     Sg     15 35 02.2  0.0
      89nm,0.2s
KURS  Kuram           1.34 160    P     Pb     15 34 48.7 -0.2
      4.5nm,0.1s
KURS                              S     Sg     15 35 05.7 -0.4
      25nm,0.4s
KURS  Kuram           1.34 160   eP     Pb     15 34 48.7 -0.2
      4.5nm,0.1s
KURS                             eS     Sg     15 35 05.8 -0.4
      25nm,0.4s
KPKS  Kokpek          1.52 147    P     Pb     15 34 51.5 -0.6
      5.0nm,0.1s
KPKS  Kokpek          1.52 147   eP     Pb     15 34 51.5 -0.6
      5.0nm,0.1s
KPKS                             eS     Sn     15 35 10.9 -0.7
      50nm,0.1s
KNDC  Almaty          1.58 195   ⇑Pn    Pb     15 34 52.5 -0.6
      12nm,0.2s
KNDC                             ⇑Sn    Sg     15 35 14.1  0.0
      23nm,0.3s
AAA   Alma-Ata        1.60 197    P     Pg     15 34 53.9  0.0
      36nm,0.2s
AAA                               S     Sg     15 35 14.7  0.0
      100nm,0.2s
AAA   Alma-Ata        1.60 197   eP     Pg     15 34 53.9  0.0
      36nm,0.2s
AAA                              eS     Sg     15 35 14.7  0.0
      100nm,0.2s
MDOK  Medeo           1.62 193   ⇓Pn    Pb     15 34 53.2 -0.7
      6.1nm,0.3s
MDOK                              Pg    Pb     15 34 53.4 -0.4
      18nm,0.2s
MDOK                              Lg    Lg     15 35 14.1
      34nm,0.4s
MDOK                             ⇑Sn    Sb     15 35 14.4 -0.3
      5.2nm,0.2s
MDOK  Medeo           1.62 193   eP     Pb     15 34 53.4 -0.4
      18nm,0.2s
MDOK                             eS     Sn     15 35 14.1 -0.1
      34nm,0.4s
DJR   Jarkent         1.66 104    P     Pb     15 34 54.6 +0.1
      5.1nm,0.1s
DJR                               S     Sb     15 35 15.8  0.0
      49nm,0.4s
DJR   Jarkent         1.66 104   eP     Pb     15 34 54.6 +0.1
      5.1nm,0.1s
DJR                              eS     Sb     15 35 15.8  0.0
      49nm,0.4s
KRBS  Karabastau      1.70 233    P     Pb     15 34 54.7 -0.5
      27nm,0.2s
KRBS                              S     Sb     15 35 16.5 -0.5
      43nm,0.2s
KRBS  Karabastau      1.70 233   eP     Pb     15 34 54.7 -0.5
      27nm,0.2s
KRBS                             eS     Sb     15 35 16.5 -0.5
      43nm,0.2s
ZHN   Zhinishke       1.70 157    P     Pb     15 34 54.9 -0.3
      3.9nm,0.2s
ZHN                               S     Sb     15 35 16.5 -0.5
      63nm,0.2s
ZHN   Zhinishke       1.70 157   eP     Pb     15 34 54.9 -0.3
      3.9nm,0.2s
ZHN                              eS     Sb     15 35 16.5 -0.5
      63nm,0.2s
TNSS  Tian-Shan       1.76 194    P     Pb     15 34 56.3 -0.1
      12nm,0.2s
TNSS                              S     Sb     15 35 18.9 -0.1
      25nm,0.3s
TNSS  Tian-Shan       1.76 194   eP     Pb     15 34 56.2 -0.1
      12nm,0.2s
TNSS                             eS     Sb     15 35 18.9 -0.1
      25nm,0.3s
SATY  Saty            1.80 159    P     Pb     15 34 56.8  0.0
      8.8nm,0.1s
SATY                              S     Sb     15 35 19.8  0.0
      96nm,0.1s
```

SATY	**Saty**	**1.80**	**159**	*e*P	**Pb**	**15 34 56.8**	**0.0**
	8.8nm,0.1s						
SATY				*e*S	**Sb**	**15 35 19.8**	**0.0**
	96nm,0.1s						
MTBS	**Maitube**	**1.81**	**207**	P	**Pb**	**15 34 56.3**	**-0.6**
	14nm,0.3s						
MTBS				S	**Sn**	**15 35 18.8**	**+0.3**
	41nm,0.4s						
MTBS	**Maitube**	**1.81**	**207**	*e*P	**Pb**	**15 34 56.4**	**-0.5**
	14nm,0.3s						
MTBS				*e*S	**Sn**	**15 35 18.9**	**+0.3**
	41nm,0.4s						
IZV	**Izvestkoviy**	**1.84**	**202**	P	**Pb**	**15 34 57.4**	**0.0**
	3.7nm,0.3s						
IZV				S	**Sb**	**15 35 21.1**	**+0.2**
IZV	**Izvestkoviy**	**1.84**	**202**	*e*P	**Pb**	**15 34 57.5**	**0.0**
	2.4nm,0.0s						
IZV				*e*S	**Sb**	**15 35 21.1**	**+0.2**
	20nm,0.1s						
UZB	**Uzynbulak**	**1.92**	**146**	P	**Pb**	**15 34 58.7**	**-0.2**
	12nm,0.4s						
UZB				S	**Sb**	**15 35 23.0**	**-0.4**
	33nm,0.2s						
UZB	**Uzynbulak**	**1.92**	**146**	*e*P	**Pb**	**15 34 58.7**	**-0.2**
	12nm,0.4s						
UZB				*e*S	**Sb**	**15 35 23.0**	**-0.4**
	33nm,0.2s						
DGS	**Degeres**	**1.97**	**221**	P	**Pb**	**15 34 59.2**	**-0.6**
	43nm,0.3s						
DGS				S	**Sb**	**15 35 23.7**	**-1.1**
	23nm,0.6s						
DGS	**Degeres**	**1.97**	**221**	*e*P	**Pb**	**15 34 59.2**	**-0.6**
	43nm,0.3s						
DGS				*e*S	**Sb**	**15 35 23.7**	**-1.1**
	18nm,0.0s						
PDGK	**Podgornoye**	**1.99**	**135**	Pg	**Pb**	**15 34 59.3**	**-0.9**
	5.4nm,0.3s						
PDGK				Lg	Lg	15 35 25.1	
	11nm,0.2s						
PDGK	**Podgornoye**	**1.99**	**135**	⇓Pn	**Pb**	**15 34 59.0**	**-1.1**
	3.9nm,0.4s						
PDGK				⇑Sn	**Sb**	**15 35 25.0**	**-0.4**
	7.8nm,0.5s						
KST	**Kastek**	**2.05**	**214**	Pg	**Pb**	**15 35 01.0**	**-0.1**
	9.6nm,0.4s						
KST				Lg	Lg	15 35 27.3	
	21nm,0.3s						
KST	**Kastek**	**2.05**	**214**	*e*Pg	**Pb**	**15 35 01.0**	**-0.1**
	9.6nm,0.4s						
KST				*e*Lg	Lg	15 35 27.3	
	21nm,0.3s						
SHLS	**Shalkode**	**2.11**	**138**	Pg	**Pg**	**15 35 05.6**	**+2.0**
	11nm,0.3s						
SHLS				Lg	Lg	15 35 34.9	
	28nm,0.3s						
SHLS	**Shalkode**	**2.11**	**138**	*e*Pg	**Pg**	**15 35 05.9**	**+2.3**
	9.3nm,0.0s						
SHLS				*e*Lg	Lg	15 35 35.3	
	28nm,0.3s						
TKM2	**Tokmak 2**	**2.31**	**218**	⇑Pg	**Pg**	**15 35 07.4**	**0.0**
	1.2nm,0.2s						
TKM2				⇑Lg	Lg	15 35 35.3	
	1.9nm,0.2s						
SGDS	**Sogindy**	**2.46**	**239**	Lg	Lg	15 35 39.5	
	7.1nm,0.2s						
BTLS	**Baital**	**2.50**	**278**	Pg	**Pb**	**15 35 09.6**	**+0.9**
	1.1nm,0.1s						
BTLS				Lg	Lg	15 35 41.6	
	5.2nm,0.2s						
BTLS	**Baital**	**2.50**	**278**	*e*Pg	**Pb**	**15 35 09.6**	**+0.9**
	1.2nm,0.0s						
BTLS				*e*Lg	Lg	15 35 41.6	
	5.2nm,0.2s						
MAKZ	**Makanchi**	**3.73**	**55**	Pn	**Pn**	**15 35 22.5**	**+0.9**
MAKZ				Pg	**Pg**	**15 35 33.6**	**-1.0**
MAKZ				Sn	**Sn**	**15 36 07.0**	**+1.1**
MAKZ				Lg	Lg	15 36 20.2	
MK31	**Makanchi Array**	**3.90**	**57**	⇑Pn	**Pn**	**15 35 25.4**	**+1.4**
	0.4nm,0.2s,baz=233,slow=11,SNR=57						
MK31				⇑Pg	**Pg**	**15 35 35.8**	**-2.2**
	0.4nm,0.2s,baz=232,slow=13,SNR=8.6						
MK31				⇑Sn	**Sn**	**15 36 08.7**	**-1.6**
	0.2nm,0.2s,baz=229,slow=23,SNR=4.3						
MK31				⇑Lg	Lg	15 36 26.2	
	0.9nm,0.3s,baz=235,slow=28,SNR=6.1						

LDG ***14*** *15:57:13.6±0.1, 42°.91N×13°.16E, h9^{km}, Ml3.3/21, Error ellipse: s-maj=3.0km s-min=2.9km az=149.0*

ROM ***14*** *15:57:13.1±0.0, 42°.915N±0°.001×13°.148E±0°.003, h8^{km}, ML3.5/188, Error ellipse: s-maj=0.2km s-min=0.0km az=253.0*

IDC ***14*** *15:57:13.8±1.4, 43°.09N×13°.04E, h0^{km}, mb3.3/3, mbtmp3.4/5, ML3.5/2, Error ellipse: s-maj=48.9km s-min=14.8km az=99.0*

PRU ***14*** *15:57:16.3±0.0, 43°.01N×13°.15E, h10^{km}*

BEO ***14*** *15:57:17.0±1.0, 42°.95N×13°.27E, h0^{km}, ML3.6/6*

ISC 14 15:57:13.4±0.7**, 42°.93N**±0°.01×**13°.15E**±0°.01**, h9**^{km}±4^{km}**, n219,** σ2^{s}.07/287**, mb3.5**/3**, 21C-14D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MC2	**Monte Cornacci**	**0.03**	**116**	⇑P	**Pg**	**15 57 14.8**	**-0.6**
MC2				S	**Sg**	**15 57 15.7**	**-1.0**
T1245	**Castelsantange**	**0.08**	**159**	⇓P	**Pg**	**15 57 15.4**	**-0.3**
T1245				S	**Sg**	**15 57 17.0**	**-0.3**
T1245				AML	AML		
	comp=E,90150µm,0.3s						
T1245				AML	AML		
	comp=E,83550µm,0.3s						
T1245				AML	AML		
T1245				AML	AML		
FEMA	**Monte Fema**	**0.08**	**295**	P	**Pg**	**15 57 15.8**	**0.0**
FEMA				S	**Sg**	**15 57 17.6**	**+0.1**
T1256	**Bolognola (MC)**	**0.10**	**35**	⇑P	**Pg**	**15 57 16.0**	**0.0**
T1256				S	**Sg**	**15 57 17.9**	**+0.1**
T1256				AML	AML		
	comp=E,56700µm,0.5s						
T1256				AML	AML		
T1256				AML	AML		
T1256				AML	AML		
	comp=E,59700µm,0.5s						
T1256				AML	AML		
T1256				AML	AML		
T1256				AML	AML		
	comp=E,56700µm,0.5s						
T1216	**Preci, Frazion**	**0.10**	**249**	⇑P	**Pg**	**15 57 16.0**	**+0.1**
T1216				S	**Sg**	**15 57 18.1**	**+0.3**
T1216				AML	AML		
	comp=N,56450µm,0.8s						
T1216				AML	AML		
	comp=E,59100µm,1.4s						
T1216				AML	AML		
	comp=E,59100µm,0.6s						
T1216				AML	AML		
	comp=N,56450µm,0.8s						
FDMO	**Fiordimonte**	**0.12**	**337**	⇑P	**Pg**	**15 57 16.4**	**+0.2**
FDMO				S	**Sg**	**15 57 18.8**	**+0.7**
MMO1	**Montemonaco**	**0.13**	**102**	⇑P	**Pg**	**15 57 16.5**	**+0.1**
MMO1				S	**Sg**	**15 57 18.9**	**+0.4**
T1219	**Muccia, Frazio**	**0.17**	**321**	P	**Pg**	**15 57 17.4**	**+0.4**
T1219				S	**Sg**	**15 57 20.4**	**+1.0**
T1219				AML	AML		
	comp=E,56050µm,0.3s						
T1219				AML	AML		
	comp=N,83200µm,0.3s						
T1219				AML	AML		
	comp=E,59600µm,0.3s						
T1219				AML	AML		
	comp=N,79150µm,0.3s						
T1219				AML	AML		
	comp=N,79150µm,0.3s						
T1219				AML	AML		
	comp=E,59600µm,1.7s						
T1219				AML	AML		
	comp=N,83200µm,0.3s						
T1219				AML	AML		
	comp=E,56050µm,1.7s						
CSP1	**Cessapalombo**	**0.17**	**14**	⇑P	**Pg**	**15 57 17.4**	**+0.3**
CSP1				S	**Sg**	**15 57 20.6**	**+1.0**
T1214	**Arquata del Tr**	**0.17**	**166**	⇓P	**Pg**	**15 57 17.2**	**+0.1**
T1214				S	**Sg**	**15 57 20.3**	**+0.6**
T1214				AML	AML		
	comp=E,18150µm,0.6s						
T1214				AML	AML		
	comp=E,17800µm,0.5s						
T1214				AML	AML		
	comp=N,20750µm,0.6s						
T1214				AML	AML		
	comp=N,21500µm,0.6s						
T1214				AML	AML		
	comp=E,17800µm,1.5s						
T1220	**Camerino, Fraz**	**0.19**	**346**	⇑P	**Pg**	**15 57 17.7**	**+0.3**
T1220				S	**Sg**	**15 57 21.5**	**+1.5**
T1220				AML	AML		
T1220				AML	AML		
T1220				AML	AML		
T1220				AML	AML		
T1220				AML	AML		
GUMA	**Gualdo di Mace**	**0.19**	**45**	⇑P	**Pg**	**15 57 18.1**	**+0.7**
GUMA				S	**Sg**	**15 57 22.0**	**+1.9**
GUMA				AML	AML		
	comp=E,66200µm,0.5s						
GUMA				AML	AML		
	comp=N,82750µm,0.6s						
GUMA				AML	AML		
	comp=E,74250µm,0.6s						
GUMA				AML	AML		
	comp=N,66250µm,0.5s						
T1212	**Cascia, Frazio**	**0.19**	**204**	P	**Pg**	**15 57 17.7**	**+0.3**
T1212				S	**Sg**	**15 57 20.9**	**+0.7**
T1212				AML	AML		
	comp=N,18650µm,0.6s						
T1212				AML	AML		
	comp=E,25850µm,0.6s						
T1212				AML	AML		
	comp=E,24750µm,0.6s						
T1212				AML	AML		
	comp=E,24750µm,0.6s						
T1212				AML	AML		
	comp=N,18050µm,0.6s						
T1212				AML	AML		
	comp=E,25850µm,0.6s						
CESI	**CESI - Serrava**	**0.20**	**293**	⇑P	**Pg**	**15 57 17.9**	**+0.4**
CESI				S	**Sg**	**15 57 21.4**	**+1.1**
CESI				AML	AML		
	comp=E,43350µm,0.7s						
CESI				AML	AML		
	comp=N,60700µm,1.4s						
CESI				AML	AML		
	comp=E,43350µm,1.3s						
CESI				AML	AML		
	comp=N,60700µm,0.6s						
T1244	**Arquata del Tr**	**0.20**	**147**	⇓P	**Pg**	**15 57 17.9**	**+0.3**
T1213	**Norcia, Frazio**	**0.20**	**185**	P	**Pg**	**15 57 17.7**	**+0.1**
T1213				S	**Sg**	**15 57 21.1**	**+0.6**
T1241	**Roccafluvione,**	**0.22**	**109**	⇑P	**Pg**	**15 57 18.1**	**+0.3**
T1241				S	**Sg**	**15 57 21.8**	**+0.9**
T1241				AML	AML		
	comp=E,16950µm,0.4s						
T1241				AML	AML		
	comp=N,16200µm,0.4s						
T1241				AML	AML		
	comp=N,14750µm,1.5s						
T1241				AML	AML		
	comp=E,16450µm,0.4s						
T1241				AML	AML		
	comp=N,14750µm,0.5s						
T1241				AML	AML		
	comp=N,16200µm,1.6s						
T1221	**Campello sul C**	**0.23**	**253**	⇑P	**Pg**	**15 57 18.5**	**+0.3**
T1221				S	**Sg**	**15 57 22.6**	**+1.2**
T1215	**Vallo di Nera,**	**0.24**	**239**	⇑P	**Pg**	**15 57 18.6**	**+0.2**
T1215				S	**Sg**	**15 57 22.7**	**+1.0**
T1218	**Civita (PG)**	**0.26**	**186**	⇓P	**Pg**	**15 57 18.7**	**+0.1**
T1218				S	**Sg**	**15 57 23.1**	**+0.9**
T1218				AML	AML		
	comp=E,10350µm,1.4s						
T1218				AML	AML		
	comp=N,10510µm,0.6s						
T1218				AML	AML		
	comp=N,10525µm,0.6s						
T1218				AML	AML		
	comp=E,10535µm,0.7s						
T1218				AML	AML		
	comp=N,10425µm,0.6s						
T1218				AML	AML		
	comp=E,10350µm,0.6s						
MDAR	**Monte D'Aria**	**0.27**	**359**	P	**Pg**	**15 57 19.2**	**+0.4**
MDAR				S	**Sg**	**15 57 23.7**	**+1.3**
SEF1	**Sefro**	**0.27**	**326**	P	**Pg**	**15 57 19.3**	**+0.6**
SEF1				S	**Sg**	**15 57 24.1**	**+1.7**
SEF1				AML	AML		
	comp=N,50400µm,0.9s						
SEF1				AML	AML		
	comp=N,50400µm,0.9s						
SEF1				AML	AML		
	comp=N,50400µm,1.1s						
SEF1				AML	AML		
	comp=E,70750µm,0.7s						
T1217	**Poggiodomo (PG**	**0.27**	**217**	⇑P	**Pg**	**15 57 19.0**	**+0.2**
T1217				S	**Sg**	**15 57 23.5**	**+1.0**
T1217				AML	AML		
	comp=N,13900µm,0.6s						
T1217				AML	AML		
	comp=E,13605µm,0.6s						
T1217				AML	AML		
	comp=N,13400µm,0.4s						
T1217				AML	AML		
	comp=E,15100µm,0.7s						
T1217				AML	AML		
	comp=E,13600µm,0.6s						
T1217				AML	AML		
	comp=N,13400µm,1.6s						
T1217				AML	AML		
	comp=N,13900µm,1.4s						
PIO1	**Pioraco**	**0.28**	**334**	P	**Pb**	**15 57 19.9**	**-0.7**
PIO1				S	**Sb**	**15 57 24.5**	**-1.1**
T1204	**Amatrice, Fraz**	**0.28**	**154**	⇓P	**Pg**	**15 57 19.2**	**+0.1**
T1204				S	**Sg**	**15 57 24.0**	**+1.2**
T1201	**Domo (RI)**	**0.28**	**165**	⇓P	**Pg**	**15 57 19.4**	**+0.3**
T1201				S	**Sg**	**15 57 24.6**	**+1.8**
SSM1	**San Severino M**	**0.30**	**4**	P	**Pg**	**15 57 19.9**	**+0.4**
SSM1				S	**Sb**	**15 57 24.7**	**-1.5**
FIU1	**Fiuminata**	**0.31**	**328**	P	**Pg**	**15 57 20.3**	**+0.8**
FIU1				S	**Sb**	**15 57 25.3**	**-1.0**
MNTP	**Montappone**	**0.31**	**48**	P	**Pb**	**15 57 20.7**	**-0.6**
MNTP				S	**Sb**	**15 57 27.1**	**+0.6**
MNTP				AML	AML		
	comp=E,35200µm,0.7s						
MNTP				AML	AML		
	comp=N,24500µm,0.8s						
MNTP				AML	AML		
	comp=N,24500µm,1.2s						
GAG1	**Gagliole**	**0.32**	**349**	P	**Pg**	**15 57 20.3**	**+0.5**
GAG1				S	**Sb**	**15 57 25.8**	**-0.8**
GAG1				AML	AML		
	comp=E,90850µm,0.3s						
GAG1				AML	AML		
	comp=E,90850µm,0.3s						
GAG1				AML	AML		
	comp=N,70500µm,0.4s						
SMA1	**SAN MARTINO**	**0.33**	**155**	⇓P	**Pg**	**15 57 19.9**	**0.0**
SMA1				S	**Sg**	**15 57 25.2**	**+1.0**
SMA1				AML	AML		
	comp=E,10675µm,0.5s						
SMA1				AML	AML		
	comp=E,10680µm,0.5s						
SMA1				AML	AML		
	comp=N,8360µm,1.0s						
SMA1				AML	AML		
	comp=E,10680µm,1.5s						
MTL1	**Matelica**	**0.34**	**343**	P	**Pg**	**15 57 20.9**	**+0.7**
MTL1				S	**Sb**	**15 57 26.9**	**-0.5**
SNTG	**Esanatoglia**	**0.36**	**335**	P	**Pg**	**15 57 21.1**	**+0.5**
SNTG				S	**Sb**	**15 57 27.0**	**-0.9**
SNTG				AML	AML		
	comp=E,12300µm,0.5s						
SNTG				AML	AML		
	comp=N,12905µm,1.3s						
SNTG				AML	AML		
	comp=E,11950µm,0.5s						
SNTG				AML	AML		
	comp=N,13465µm,1.3s						
ASSB	**Assisi San Ben**	**0.38**	**288**	AML	AML		
	comp=E,16550µm,0.4s						
ASSB				AML	AML		
	comp=N,20150µm,0.6s						
OFFI	**Offida**	**0.39**	**89**	⇑P	**Pb**	**15 57 22.3**	**-0.3**
OFFI				AML	AML		
	comp=N,14300µm,0.4s						
OFFI				AML	AML		
	comp=E,11000µm,0.5s						
OFFI				AML	AML		
	comp=N,14300µm,1.6s						
EL6	**Elcito**	**0.40**	**355**	⇑P	**Pg**	**15 57 21.6**	**+0.2**
EL6				S	**Sb**	**15 57 28.4**	**-0.8**
EL6				AML	AML		
	comp=E,34050µm,0.2s						
EL6				AML	AML		
	comp=N,28550µm,0.3s						
RM33	**Pellescritta (**	**0.42**	**174**	⇓P	**Pg**	**15 57 21.6**	**-0.1**
RM33				S	**Sg**	**15 57 28.6**	**+1.4**
RM33				AML	AML		
	comp=E,4070µm,0.8s						
RM33				AML	AML		
	comp=E,4015µm,0.8s						
RM33				AML	AML		
	comp=N,4655µm,0.3s						
RM33				AML	AML		
	comp=E,4070µm,0.8s						
RM33				AML	AML		
	comp=N,4685µm,0.3s						
T1246	**Crognaleto (TE**	**0.43**	**144**	⇓P	**Pg**	**15 57 21.6**	**-0.2**
T1246				S	**Sg**	**15 57 28.5**	**+1.1**
CAMP	**Campotosto**	**0.43**	**154**	⇓P	**Pg**	**15 57 21.7**	**-0.2**
CAMP				S	**Sg**	**15 57 28.6**	**+0.9**
CAMP				AML	AML		
	comp=E,2805µm,0.7s						
CAMP				AML	AML		
	comp=N,2670µm,0.7s						
MOMA	**Monte Martano**	**0.44**	**254**	⇑P	**Pg**	**15 57 22.2**	**+0.1**
MOMA				S	**Sb**	**15 57 30.0**	**-0.3**
MOMA				AML	AML		
	comp=N,5705µm,1.4s						
MOMA				AML	AML		
	comp=E,4880µm,0.8s						
MOMA				AML	AML		
	comp=E,4995µm,0.8s						
MOMA				AML	AML		
	comp=N,5905µm,1.4s						
ARRO	**Arrone**	**0.45**	**219**	P	**Pg**	**15 57 22.2**	**+0.1**
CING	**Cingoli**	**0.45**	**4**	⇑P	**Pg**	**15 57 22.4**	**+0.2**
CING				S	**Sb**	**15 57 30.0**	**-0.5**
CING				AML	AML		
	comp=E,15700µm,1.0s						
CING				AML	AML		
	comp=E,15700µm,1.0s						
CING				AML	AML		
	comp=N,7900µm,0.3s						
T1211	**Morro Reatino**	**0.45**	**209**	⇑P	**Pg**	**15 57 22.3**	**+0.1**
T1211				AML	AML		
	comp=E,5735µm,1.5s						
T1211				AML	AML		
	comp=N,7425µm,1.3s						
T1211				AML	AML		
	comp=E,6260µm,1.5s						
T1211				AML	AML		
	comp=N,7755µm,1.3s						
T1211				AML	AML		
	comp=E,5735µm,0.5s						
T1211				AML	AML		
	comp=N,7755µm,0.7s						
T1211				AML	AML		
	comp=N,7425µm,0.7s						
T1211				AML	AML		
	comp=E,6260µm,0.5s						
TERO	**Teramo**	**0.45**	**132**	⇓P	**Pg**	**15 57 22.1**	**-0.2**
TERO				S	**Sg**	**15 57 29.2**	**+1.0**
TERO				AML	AML		
	comp=N,7350µm,1.5s						
TERO				AML	AML		
	comp=E,5105µm,0.5s						
TERO				AML	AML		
	comp=N,7165µm,1.4s						
TERO				AML	AML		
	comp=E,5320µm,0.5s						
TERO				AML	AML		
	comp=N,7165µm,0.6s						
TERO				AML	AML		
	comp=N,7350µm,0.5s						
TERO				AML	AML		
	comp=E,5320µm,1.5s						
TERO				AML	AML		
	comp=E,5105µm,1.5s						
ATCC	**AVT- Casa Cast**	**0.45**	**305**	P	**Pg**	**15 57 22.7**	**+0.4**
ATCC				S	**Sb**	**15 57 30.1**	**-0.5**
ATCC				AML	AML		
	comp=E,13150µm,1.0s						
ATCC				AML	AML		
	comp=N,17400µm,0.7s						
ATCC				AML	AML		
	comp=E,13150µm,1.0s						
ATCC				AML	AML		
	comp=N,17400µm,1.3s						
FOSV	**Fossato di Vic**	**0.47**	**322**	⇑P	**Pg**	**15 57 22.8**	**+0.3**
FOSV				AML	AML		
	comp=E,10215µm,0.6s						
FOSV				AML	AML		
	comp=N,18700µm,0.4s						
T1247	**Pizzolo (AQ)**	**0.50**	**167**	P	**Pg**	**15 57 22.9**	**-0.2**
T1247				AML	AML		
	comp=E,5990µm,0.6s						
T1247				AML	AML		
	comp=E,5990µm,1.4s						
T1247				AML	AML		
	comp=N,5425µm,0.9s						
CADA	**Capodarco di F**	**0.52**	**59**	P	**Pb**	**15 57 25.3**	**+0.5**
CESX	**Cesi**	**0.53**	**233**	⇑P	**Pg**	**15 57 23.4**	**-0.2**
CESX				AML	AML		
	comp=E,5425µm,1.5s						
CESX				AML	AML		
	comp=N,4450µm,1.6s						
CESX				AML	AML		
	comp=N,4450µm,0.4s						
CESX				AML	AML		
	comp=E,5425µm,0.5s						
MMUR	**Monte Murano**	**0.53**	**348**	P	**Pg**	**15 57 24.1**	**+0.4**
T1222	**Castel Sant'An**	**0.53**	**189**	P	**Pg**	**15 57 23.5**	**-0.3**
T1222				AML	AML		
	comp=E,2460µm,1.6s						
T1222				AML	AML		
	comp=N,2105µm,1.1s						
T1222				AML	AML		
	comp=N,2060µm,1.1s						
T1222				AML	AML		
	comp=E,2455µm,1.6s						
T1222				AML	AML		
	comp=N,2105µm,0.9s						
T1222				AML	AML		
	comp=N,2060µm,0.9s						
T1222				AML	AML		
	comp=E,2430µm,0.4s						
T1222				AML	AML		
	comp=E,2455µm,0.4s						
CIMA	**Civitanova Mar**	**0.54**	**45**	P	**Pb**	**15 57 25.2**	**+0.1**
PP3	**Marolino**	**0.56**	**37**	P	**Pb**	**15 57 25.4**	**0.0**
PP3				AML	AML		
	comp=E,17500µm,0.9s						
PP3				AML	AML		
	comp=E,17500µm,1.0s						
PP3				AML	AML		
	comp=N,23750µm,0.6s						
PP3				AML	AML		
	comp=E,17500µm,1.0s						
PP3				AML	AML		
	comp=N,23900µm,0.4s						
PP3				AML	AML		
	comp=N,23750µm,1.4s						
PP3				AML	AML		
	comp=E,18400µm,0.5s						
GIGS	**Gran Sasso**	**0.57**	**147**	P	**Pg**	**15 57 24.0**	**-0.5**
GIGS				AML	AML		
	comp=N,843µm,1.6s						
GIGS				AML	AML		
	comp=E,1013µm,0.7s						
GIGS				AML	AML		
	comp=N,843µm,0.4s						
GIGS				AML	AML		
	comp=E,1013µm,1.3s						
MURB	**Monte Urbino**	**0.57**	**306**	P	**Pg**	**15 57 24.7**	**+0.2**
MURB				AML	AML		
	comp=E,24900µm,1.0s						
MURB				AML	AML		
	comp=E,22400µm,1.0s						
MURB				AML	AML		
	comp=N,14750µm,0.4s						
MURB				AML	AML		

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          comp=N,15200µm,0.3s
SSFR  Montelago di S    0.58 332  P     Pg    15 57 24.8 +0.2
SSFR                              AML   AML
          comp=N,15800µm,1.0s
SSFR                              AML   AML
          comp=E,15150µm,0.2s
SSFR                              AML   AML
          comp=N,15800µm,1.0s
SSFR                              AML   AML
          comp=N,16800µm,0.2s
SSFR                              AML   AML
          comp=E,13950µm,0.2s
ARVD  Arcevia           0.59 345  AML   AML
          comp=N,4315µm,0.8s
ARVD                              AML   AML
          comp=E,7980µm,0.9s
ATSC  Scheggia e Pas    0.60 326  P     Pg    15 57 25.2 +0.1
AQU   L'Aquila          0.60 162  P     Pg    15 57 24.8 -0.3
ATFO  Monte Foce - G    0.61 316 ⇑P     Pg    15 57 25.4 +0.1
ATFO                              AML   AML
          comp=E,7255µm,0.6s
ATFO                              AML   AML
          comp=N,7025µm,0.8s
ATFO                              AML   AML
          comp=E,7255µm,1.4s
ATTE  AVT- Monte Tez    0.64 295  P     Pg    15 57 25.8 -0.1
ATTE                              AML   AML
          comp=N,2735µm,0.8s
ATTE                              AML   AML
          comp=E,3235µm,0.7s
FIAM  Fiamignano        0.66 182 ⇓P     Pg    15 57 25.6 -0.6
FIAM                              AML   AML
          comp=E,2435µm,0.8s
FIAM                              AML   AML
          comp=N,2185µm,0.9s
FIAM                              AML   AML
          comp=N,2185µm,1.1s
FIAM                              AML   AML
          comp=E,2435µm,1.2s
FRON  Frontone          0.67 332  AML   AML
          comp=N,7000µm,1.4s
FRON                              AML   AML
          comp=E,4540µm,1.2s
ATLO  AVT- Montelove    0.67 306  P     Pg    15 57 26.3 -0.1
TB02  Pietralunga       0.70 309  P     Pg    15 57 27.2 +0.3
ATBU  Serra di Buran    0.70 321  P     Pg    15 57 27.2 +0.2
AOI   Ancona            0.70  28  P     Pg    15 57 27.2 +0.2
ATVO  AVT- Monte Val    0.71 310  P     Pg    15 57 27.0 -0.1
ATVO                              AML   AML
          comp=N,3180µm,0.4s
ATVO                              AML   AML
          comp=E,3005µm,0.8s
COR1  Corinaldo         0.71 351  P     Pb    15 57 28.4 +0.3
COR1                              AML   AML
          comp=N,10370µm,0.4s
COR1                              AML   AML
          comp=E,12250µm,0.6s
COR1                              AML   AML
          comp=E,12250µm,1.4s
COR1                              AML   AML
          comp=E,6320µm,0.6s
COR1                              AML   AML
          comp=N,9105µm,0.4s
ATVA  AVT- Monte Val    0.72 299  P     Pg    15 57 27.5 +0.1
FAGN  Fagnano           0.73 154  P     Pg    15 57 26.9 -0.7
FAGN                              AML   AML
          comp=E,4905µm,0.5s
FAGN                              AML   AML
          comp=N,3610µm,0.4s
VCEL  Villa Celiera     0.74 136 ⇓P     Pg    15 57 27.4 -0.3
VCEL                              AML   AML
          comp=N,4210µm,1.6s
VCEL                              AML   AML
          comp=N,4210µm,0.4s
VCEL                              AML   AML
          comp=E,3035µm,1.5s
ATPI  Pietralunga -     0.76 314  P     Pg    15 57 27.8 -0.3
ATPI                              AML   AML
          comp=E,3880µm,0.9s
ATPI                              AML   AML
          comp=N,3010µm,0.4s
PIEI  Pieia             0.76 324  AML   AML
          comp=N,2760µm,1.3s
PIEI                              AML   AML
          comp=N,2760µm,0.7s
PIEI                              AML   AML
          comp=E,3400µm,0.3s
MPAG  Monte Paganucc    0.76 338  P     Pg    15 57 28.3 +0.3
MPAG                              S     Sb    15 57 40.1 +0.8
MPAG                              AML   AML
          comp=N,4890µm,0.6s
MPAG                              AML   AML
          comp=E,5195µm,0.4s
MPAG                              AML   AML
          comp=E,5135µm,0.4s
MPAG                              AML   AML
          comp=N,5005µm,0.6s
ATMI  Monte Miggiano    0.76 302  P     Pb    15 57 29.1 +0.1
ATMI                              AML   AML
          comp=E,8405µm,0.5s
ATMI                              AML   AML
          comp=N,9390µm,0.6s
ATMI                              AML   AML
          comp=E,8405µm,1.5s
MGAB  Montegabbione     0.76 269  P     Pg    15 57 27.8 -0.3
MGAB                              AML   AML
          comp=E,4365µm,0.5s
MGAB                              AML   AML
          comp=N,5910µm,1.0s
MGAB                              AML   AML
          comp=E,4795µm,0.4s
MGAB                              AML   AML
          comp=N,5900µm,1.0s
MGAB                              AML   AML
          comp=E,4795µm,1.6s
MGAB                              AML   AML
          comp=N,5900µm,1.0s
MGAB                              AML   AML
          comp=N,5910µm,1.0s
MGAB                              AML   AML
          comp=E,4365µm,1.5s
FSSB  Fossombrone       0.81 341  P     Pg    15 57 29.3 +0.3
FSSB                              AML   AML
          comp=E,11350µm,0.4s
FSSB                              AML   AML
          comp=N,16250µm,0.3s
FSSB                              AML   AML
          comp=N,16250µm,1.7s
APEC  Apecchio          0.83 320  AML   AML
          comp=E,3900µm,0.8s
APEC                              AML   AML
          comp=N,5405µm,0.6s
SRES  S.Oreste - Sor    0.84 215  P     Pg    15 57 29.4 -0.2
T0110 Collepietro       0.84 146 ⇓P     Pg    15 57 28.7 -0.9
T0110                             AML   AML
          comp=N,3330µm,0.5s
T0110                             AML   AML
          comp=E,3575µm,0.5s
ATMC  Monte Cedrone     0.87 307  P     Pb    15 57 31.0 +0.2
PE3   Peglio            0.91 328  P     Pb    15 57 31.3  0.0
PE3                               AML   AML
          comp=N,22µm,0.4s
PE3                               AML   AML
          comp=E,14500µm,0.5s
PE3                               AML   AML
          comp=N,22µm,1.6s
SACS  San Casciano d    0.92 266  P     Pg    15 57 31.2 +0.2
SACS                              AML   AML
          comp=E,2640µm,0.6s
SACS                              AML   AML
          comp=N,3160µm,0.8s
SACS                              AML   AML
          comp=E,2395µm,0.6s
SACS                              AML   AML
          comp=N,3350µm,0.8s
SACS                              AML   AML
          comp=E,2395µm,1.4s
SACS                              AML   AML
          comp=E,2640µm,1.4s
PTQR  Pietraquaria      0.92 168  P     Pg    15 57 29.9 -1.2
MTCE  Montecelio        0.95 199  P     Pg    15 57 31.2 -0.5
MTCE                              AML   AML
          comp=E,1145µm,0.6s
MTCE                              AML   AML
          comp=N,722µm,1.3s
MTCE                              AML   AML
          comp=E,1145µm,1.4s
MTCE                              AML   AML
          comp=N,722µm,0.7s
CAFI  Castiglion Fio    0.96 295  P     Pg    15 57 31.7 -0.1
CAFI                              AML   AML
          comp=E,2155µm,1.6s
CAFI                              AML   AML
          comp=N,1665µm,1.3s
CAFI                              AML   AML
          comp=E,2200µm,1.6s
CAFI                              AML   AML
          comp=N,1705µm,1.3s
CAFI                              AML   AML
          comp=N,1665µm,0.7s
CAFI                              AML   AML
          comp=N,1705µm,0.7s
CAFI                              AML   AML
          comp=E,2200µm,0.4s
CAFI                              AML   AML
          comp=E,2155µm,0.4s
PARC  Parchiule         0.98 318  P     Pg    15 57 32.1 -0.2
PARC                              AML   AML
          comp=N,2175µm,0.8s
PARC                              AML   AML
          comp=E,2045µm,0.7s
PARC                              AML   AML
          comp=N,2175µm,1.2s
CERT  Cerreto           0.99 187  P     Pg    15 57 31.6 -0.7
CERT                              AML   AML
          comp=E,1455µm,0.6s
CERT                              AML   AML
          comp=N,979µm,1.5s
CERT                              AML   AML
          comp=N,979µm,0.5s
SSP9  Sansepolcro       0.99 311  P     Pb    15 57 32.8 +0.1
SSP9                              AML   AML
          comp=E,2270µm,1.6s
SSP9                              AML   AML
          comp=N,2560µm,1.2s
SSP9                              AML   AML
          comp=E,2265µm,1.6s
SSP9                              AML   AML
          comp=N,2560µm,0.8s
LATE  Laterza           1.04 253  P     Pg    15 57 33.7 +0.3
CPGN  Carpegna, Ital    1.06 326  P     Pn    15 57 34.6 -0.1
CPGN                              AML   AML
          comp=E,67000µm,1.6s
CPGN                              AML   AML
          comp=N,3330µm,0.5s
CPGN                              AML   AML
          comp=N,77000µm,1.6s
CPGN                              AML   AML
          comp=E,67000µm,0.4s
CPGN                              AML   AML
          comp=E,4430µm,0.5s
INTR  Introdacqua       1.07 148  P     Pg    15 57 32.5 -1.5
INTR                              AML   AML
          comp=E,1µm,0.9s
INTR                              AML   AML
          comp=N,2µm,0.7s
INTR                              AML   AML
          comp=E,1223µm,0.9s
INTR                              AML   AML
          comp=N,3035µm,0.7s
INTR                              AML   AML
          comp=E,1µm,1.0s
INTR                              AML   AML
          comp=E,1223µm,1.1s
INTR                              AML   AML
          comp=E,1µm,1.0s
INTR                              AML   AML
          comp=N,2µm,0.6s
SF11  Podere del Sol    1.08 267  P     Pg    15 57 34.5 +0.2
MCIV  Monte Civitell    1.09 263  P     Pg    15 57 34.7 +0.2
MCIV                              AML   AML
          comp=N,792µm,0.8s
MCIV                              AML   AML
          comp=E,843µm,0.9s
SF04  Casetta           1.10 266  P     Pb    15 57 35.0 +0.3
SF04                              AML   AML
          comp=N,987µm,0.7s
SF04                              AML   AML
          comp=N,987µm,1.3s
SF04                              AML   AML
          comp=E,842µm,0.8s
VVLD  Villa Vallelon    1.11 162  P     Pg    15 57 34.0 -0.8
CRE   Caprese Michel    1.12 309  P     Pb    15 57 35.1 +0.1
CRE                               AML   AML
          comp=E,1022µm,1.6s
CRE                               AML   AML
          comp=N,1470µm,1.1s
CRE                               AML   AML
          comp=E,1022µm,0.4s
GUAR  Guarcino          1.14 174  P     Pg    15 57 35.0 -0.3
LPEL  Lama dei Pelig    1.17 139  P     Pb    15 57 34.3 -1.5
LPEL                              AML   AML
          comp=E,1135µm,1.1s
LPEL                              AML   AML
          comp=N,992µm,0.5s
LPEL                              AML   AML
          comp=N,992µm,1.5s
SF01  Poggio Pratacc    1.17 265  P     Pb    15 57 36.1 +0.2
SF01                              AML   AML
          comp=N,1445µm,0.6s
SF01                              AML   AML
          comp=E,1162µm,0.8s
SF01                              AML   AML
          comp=N,1445µm,1.4s
TOLF  Tolfa             1.21 225  P     Pb    15 57 36.0 -0.5
TOLF                              AML   AML
          comp=E,889µm,1.2s
TOLF                              AML   AML
          comp=N,650µm,1.5s
TOLF                              AML   AML
          comp=E,889µm,0.8s
TOLF                              AML   AML
          comp=N,650µm,0.5s
ARCI  Arcidosso         1.23 267  P     Pb    15 57 36.1 -0.9
POFI  Posta Fibreno     1.28 161  P     Pb    15 57 38.5 +0.8
ASQU  Asqua             1.32 312  P     Pg    15 57 38.8  0.0
LRP   Arpino            1.32 166  P     Pn    15 57 38.9 +0.8
GIUL  Giuliano Di Ro    1.37 177  P     Pb    15 57 39.9 +0.6
RNI2  Rionero Sannit    1.43 148  P     Pb    15 57 41.2 +0.9
CSNT  Castellina Chi    1.47 292  P     Pn    15 57 40.5 +0.4
CSNT                              AML   AML
          comp=N,479µm,0.9s
CSNT                              AML   AML
          comp=E,456µm,0.6s
CSNT                              AML   AML
          comp=N,479µm,1.1s
FRES  Fresagrandinar    1.47 130  P     Pb    15 57 41.5 +0.5
CERA  Filignano         1.48 154  P     Pn    15 57 40.1 -0.2
FROS  Frosini           1.49 282  P     Pb    15 57 41.6 +0.4
RUFI  Rufina            1.50 308  P     Pb    15 57 41.6 +0.1
OSSC  Osservatorio P    1.51 294  P     Pb    15 57 41.8 +0.1
MIDA  Miranda           1.52 147  P     Pn    15 57 40.9 -0.1
TRIV  Trivento          1.56 138  P     Pg    15 57 43.5 +0.3
LMD   Lutirano          1.56 318  P     Pb    15 57 42.6 +0.2
MAON  Monte Argentar    1.57 252  P     Pn    15 57 41.2 -0.3
MAON                              AML   AML
          comp=E,264µm,1.0s
MAON                              AML   AML
          comp=N,198µm,1.0s
MAON                              AML   AML
          comp=N,198µm,1.0s
MAON                              AML   AML
          comp=E,264µm,1.0s
TRIF  Trifonti          1.66 277  P     Pn    15 57 43.2 +0.4
VAGA  Valle Agricola    1.71 152  P     Pb    15 57 45.2 +0.1
BSSO  Busso             1.75 142  P     Pb    15 57 46.9 +1.1
DUGI  Dugi Otok         1.75  52  ePn   Pn    15 57 44.9 +0.9
CRMI  Carmignano        1.81 299  P     Pn    15 57 46.0 +1.1
CIGN  Sant'Elia a Pi    1.82 134  P     Pb    15 57 47.3 +0.4
MELA  Melanico ??? S    1.91 129  P     Pn    15 57 47.0 +0.8
MTCR  Monte La Croce    1.91 306  P     Pn    15 57 47.5 +1.1
SACR  S. Croce Del S    1.92 142  P     Pb    15 57 48.4 -0.2
VIRC  Vir               1.94  45  ePn   Pn    15 57 47.0 +0.4
VIRC                              Sn    Sb    15 58 12.4 -0.9
ZIRJ  Zirje             1.96  67  ePn   Pb    15 57 48.4 -0.9
BRJN  Brijuni           2.02  12  ePn   Pn    15 57 48.9 +1.1
NVLJ  Novalja           2.06  37  ePn   Pn    15 57 48.3 +0.1
MORI  Morici            2.09  62  ePn   Pn    15 57 50.2 +1.6
APRC  Apricena          2.12 123  P     Pn    15 57 49.5 +0.3
RABC  Rab               2.17  32  ePn   Pn    15 57 51.4 +1.6
MAIM  Mastiano          2.17 298  P     Pn    15 57 50.0 +0.1
MAIM                              AML   AML
          comp=E,254µm,0.6s
MAIM                              AML   AML
          comp=N,326µm,0.6s
MAIM                              AML   AML
          comp=E,254µm,1.4s
MAIM                              AML   AML
          comp=N,326µm,1.4s
SMRN  Sveta Marina      2.23  19  ePn   Pn    15 57 51.0 +0.5
HVAR  Hvar              2.43  83  ePn   Pn    15 57 54.2 +0.9
UDBI  Udbina            2.48  49  ePn   Pn    15 57 55.9 +1.8
UDBI                              Sn    Sn    15 58 25.2 +0.7
KIJV  Kijevo            2.60  64  ePn   Pn    15 57 57.3 +1.6
KIJV                              Sn    Sb    15 58 30.8 -1.5
PLIT  Plitvice          2.65  42  ePn   Pb    15 57 58.9 -2.1
SKDS  Skadanscina       2.69  13  ePn   Pn    15 57 55.9 -1.1
LSTV  Lastovo           2.76  92  ePn   Pn    15 57 58.6 +0.8
MAKA  Makarska          2.86  81  ePn   Pn    15 58 01.3 +2.1
MAKA                              Sn    Sb    15 58 37.5 -2.2
A050A Klekovaca         2.90  56  ePn   Pb    15 58 03.3 -2.1
CEY   Cerknica          2.96  18  ePn   Pn    15 58 01.2 +0.6
RICI  Ricice            2.97  78  ePn   Pn    15 58 02.9 +2.1
BOJS  Bojanci           2.99  30  ePn   Pn    15 58 01.6 +0.6
SABO  M.te Sabotino     3.07   6  P     Pn    15 58 02.4 +0.2
SABO                              AML   AML
          comp=E,2775µm,0.6s
SABO                              AML   AML
          comp=N,750µm,0.7s
SABO                              AML   AML
          comp=E,663µm,0.6s
SABO                              AML   AML
          comp=N,2845µm,0.7s
PGF   Pioggiola         3.08 264  eP    Pn    15 58 04.1 +1.7
PGF                               eSn   Sn    15 58 35.9 -3.5
          comp=N,14nm,0.7s
SRKY  Kupres RS         3.14  67  ePn   Pb    15 58 06.8 -2.6
MGRS  Mrkonjic Grad     3.22  61  ePn   Pn    15 58 04.8 +0.6
MPRI  Monte Prat        3.32 358  P     Pn    15 58 06.8 +1.2
VINO  Villanova         3.33   2  P     Pn    15 58 06.3 +0.5
VINO                              AML   AML
          comp=E,290µm,0.6s
VINO                              AML   AML
          comp=N,163µm,1.2s
VINO                              AML   AML
          comp=N,163µm,0.8s
STON  Ston              3.34  89  ePn   Pn    15 58 06.5 +0.6
STON                              Sn    Sn    15 58 45.5 -0.2
STON  Ston              3.34  89  ePn   Pn    15 58 05.9  0.0
A051A Mrakovica         3.42  51  ePn   Pn    15 58 07.3 +0.3
CIMO  Cimolais          3.42 352  P     Pn    15 58 08.0 +1.0
BLY   Banja Luka        3.44  57  ePn   Pn    15 58 10.3 +3.1
BLY                               eSn   Sn    15 58 52.1 +4.0
BLY   Banja Luka        3.44  57  ePn   Pn    15 58 08.5 +1.3
PTCC  Patocco-Chiusa    3.48   2  P     Pn    15 58 08.3 +0.5
PTCC                              AML   AML
          comp=E,206µm,0.4s
PTCC                              AML   AML
          comp=N,123µm,0.7s
ACOM  Acomizza, Ital    3.63   4  P     Pn    15 58 11.5 +1.5
ZOU   Zoufplan          3.63 358  P     Pn    15 58 11.1 +1.1
MABI  Malga Bissina     3.65 330  P     Pn    15 58 12.2 +1.8
OBKA  Obir              3.72  15  ePn   Pn    15 58 11.0 -0.1
          comp=N,1.4nm,0.2s
OBKA  Obir              3.72  15  ePn   Pn    15 58 12.4 +1.3
MYKA  Terra Mystica     3.72   5  ePn   Pn    15 58 12.3 +1.2
          comp=N,7.4nm,0.4s,SNR=8.4
ABTA  Abfaltersbach     3.85 353  ePn   Pn    15 58 14.3 +1.4
          comp=N,37nm,0.5s,SNR=41
SOKA  Soboth            3.98  19  ePn   Pn    15 58 17.4 +2.6
          comp=N,1.2nm,0.2s
KBA   Koelnbreinsper    4.15   2  ePn   Pn    15 58 19.3 +2.1
          comp=N,11nm,0.3s,SNR=13
SBF   Sospel            4.27 285  eP    Pn    15 58 20.9 +2.2
SBF                               eSn   Sn    15 59 04.3 -4.4
          comp=N,22nm,0.5s
HAPS  Han Pijesak,Bl    4.38  73  ePn   Pn    15 58 22.4 +2.2
FETA  Feichten          4.44 338  ePn   Pn    15 58 23.6 +2.5
          comp=N,8.2nm,0.7s
WTTA  Wattenberg        4.47 347  ePn   Pn    15 58 23.0 +1.4
          comp=N,12nm,0.4s
SQTA  Sankt Quirin      4.51 343  ePn   Pn    15 58 24.6 +2.6
          comp=N,11nm,0.3s,SNR=10.0
DRME  Dracevica, Mon    4.52  97  ePn   Pn    15 58 24.0 +2.0
WATA  Walderalm         4.55 346  ePn   Pn    15 58 24.4 +1.8
          comp=N,14nm,0.5s,SNR=7.7
ARSA  Arzberg           4.64  20  ePn   Pn    15 58 24.4 +0.6
          comp=N,1.5nm,0.3s
MOTA  Moosalm           4.65 343  ePn   Pn    15 58 26.6 +2.7
          comp=N,14nm,0.8s
BBLS  Lazi&#263;i       4.65  76  ePn   Pn    15 58 26.5 +2.5
BBLS                              eSn   Sn    15 59 19.1 +1.0
BIOA  Bad Ischl, Aus    4.78   4  ePn   Pn    15 58 27.8 +2.1
          comp=N,21nm,0.6s,SNR=22
LMR   La Mourre         4.88 277  eP    Pn    15 58 29.4 +2.4
LMR                               eSn   Sn    15 59 18.6 -5.0
          comp=N,5.0nm,0.6s
DAVA  Damuels           4.94 333  ePn   Pn    15 58 29.8 +1.8
          comp=N,12nm,0.6s,SNR=5.4
MBDF  Montbardon        4.95 293  eP    Pn    15 58 30.7 +2.5
MBDF                              eSn   Sn    15 59 20.7 -5.0
          comp=N,3.3nm,0.4s
MOA   Molln             4.99   9  ePn   Pn    15 58 29.8 +1.3
          comp=N,3.1nm,0.3s
SJES  Sjenica           5.01  84  ePn   Pn    15 58 31.5 +2.6
SJES                              eSn   Sn    15 59 27.4 +0.5
SJES  Sjenica           5.01  84  ePn   Pn    15 58 31.2 +2.3
DIVS  Divibare          5.11  74  ePn   Pn    15 58 31.3 +1.0
IVAS  Ivanjica          5.16  80  ePn   Pn    15 58 32.9 +2.0
IVAS                              eSn   Sn    15 59 30.2 -0.3
LPL   La Plagne         5.29 301  eP    Pn    15 58 35.7 +2.9
LPL                               eSn   Sn    15 59 28.9 -5.1
          comp=N,10nm,0.4s
CONA  Conrad Observa    5.35  20  i Pn  Pn    15 58 34.9 +1.4
          comp=N,1.5nm,0.2s
SMRF  Simiane la Rot    5.61 283  eP    Pn    15 58 40.0 +2.9
SMRF                              eSn   Sn    15 59 36.3 -5.5
          comp=N,1.5nm,0.4s
ORIF  Oris-en-Rattie    5.62 293  eP    Pn    15 58 40.0 +2.8
ORIF                              eSn   Sn    15 59 36.4 -5.5
          comp=N,10nm,0.6s
SELS  Selova            5.84  84  ePn   Pn    15 58 42.2 +1.9
GERES GERESS Array B    5.93   4   Pn   Pn    15 58 41.5  0.0
          comp=N,1.3nm,0.3s,baz=174,slow=13,SNR=25
GERES                              Sn   Sn    15 59 47.2 -2.4
          comp=N,2.9nm,0.3s,baz=175,slow=25,SNR=10.0
          comp=N,1.7nm,0.3s
CKRC  Cesky Krumlov     5.95   7  ePN   Pn    15 58 43.2 +1.5
CKRC                              eSN   Sn    15 59 47.0 -3.0
KHC   Kasperske Hory    6.21   3  ePN   Pn    15 58 46.0 +0.7
KHC                               eSN   Sn    15 59 54.4 -2.1
CABF  La Chapelle       6.23 309  eP    Pn    15 58 48.6 +2.9
CABF                              eSn   Sn    15 59 51.4 -5.6
          comp=N,22nm,0.8s
VIVF  Saint-Julien-l    6.42 290  eP    Pn    15 58 51.0 +2.8
VIVF                              eSn   Sn    15 59 55.7 -6.0
          comp=N,2.2nm,0.4s
KRUC  Moravsky          6.54  19  ePN   Pn    15 58 49.5 -0.3
KRUC                              eSN   Sn    16 00 02.4 -2.0
HINF  Hinteralfeld      6.60 320  eP    Pn    15 58 53.6 +2.9
HINF                              eSn   Sn    16 00 00.0 -6.0
          comp=N,24nm,0.4s
CDF   Champ du Feu      6.86 325  eP    Pn    15 58 56.5 +2.3
CDF                               eSn   Sn    16 00 06.1 -6.3
          comp=N,7.4nm,0.4s
LASF  Ste Croix         6.86 283  eP    Pn    15 58 57.5 +3.3
LASF                              eSn   Sn    16 00 06.0 -6.3
          comp=N,1.3nm,0.3s
ZAPS  Zavoj             6.95  84  ePn   Pn    15 58 59.1 +3.6
HAU   Haudompre         6.97 319  eP    Pn    15 58 59.0 +3.2
HAU                               eSn   Sn    16 00 08.9 -6.3
          comp=N,43nm,0.5s
PRU   Pruhonice         7.13   7  eSN   Sn    16 00 16.4 -2.5
NKC   Novy Kostel       7.32 356  eSN   Sn    16 00 20.5 -3.3
SMF   Signal de Mont    7.59 302  eP    Pn    15 59 07.8 +3.5
SMF                               eSn   Sn    16 00 23.7 -6.7
          comp=N,5.5nm,0.4s
PAGF  Fort de Pagny     7.66 320  eP    Pn    15 59 08.4 +3.3
PAGF                              eSn   Sn    16 00 25.4 -6.6
          comp=N,29nm,0.7s
KEST  Kesra             7.77 204   Pn   Pn    15 59 11.4 +4.7
          comp=N,0.2nm,0.3s,baz=95,slow=18,SNR=2.4
          comp=N,6.3nm,1.1s
LOR   Lormes            7.88 307  eP    Pn    15 59 11.7 +3.6
LOR                               eSn   Sn    16 00 30.5 -6.9
          comp=N,5.5nm,0.4s
AVF   Avril sur Loir    7.96 302  eP    Pn    15 59 13.0 +3.7
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AVF				*e*Sn	**Sn**	**16 00 32.6**	**-6.8**
	comp=N,2.4nm,0.5s						
BRG	**Berggiesshubel**	**7.97**	**4**	*e*P	Pn	15 59 16.7	+7.3
BRG				Amp		15 59 23.2	
	comp=Z,1.9nm,0.6s						
BRG				S	**Sn**	**16 00 35.0**	**-4.5**
BRG				Amp		16 00 43.7	
	comp=Z,5.4nm,0.8s						
BRG				r		16 01 35.8	
BRG				Amp		16 01 59.9	
	comp=Z,10.0nm,1.2s						
SSF	**Saint Saulge**	**7.99**	**304**	*e*P	**Pn**	**15 59 13.3**	**+3.6**
SSF				*e*Sn	**Sn**	**16 00 33.0**	**-7.1**
	comp=Z,3.8nm,0.5s						
MTLF	**Montolieu**	**8.01**	**277**	*e*P	**Pn**	**15 59 13.7**	**+3.7**
BGF	**Bois d'Agland**	**8.18**	**300**	*e*P	**Pn**	**15 59 15.9**	**+3.6**
BGF				*e*Sn	**Sn**	**16 00 38.3**	**-6.6**
	comp=Z,6.0nm,0.4s						
TCF	**Toulx Ste Croi**	**8.50**	**297**	*e*P	**Pn**	**15 59 20.1**	**+3.4**
TORD	**Torodi Ar. Bea**	**31.28**	**202**	P	**P**	**16 03 36.2**	**+2.4**
	comp=Z,0.3nm,0.4s,baz=17,slow=9.9,SNR=2.9						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**47.72**	**60**	P	**P**	**16 05 51.7**	**+1.3**
	comp=Z,0.2nm,0.7s,baz=281,slow=8.4,SNR=2.2						
	comp=Z,0.2nm,0.7s						
YKA	**Yellowknife Ar**	**66.91**	**336**	P	**P**	**16 08 05.5**	**-0.1**
	comp=Z,0.3nm,0.9s,baz=44,slow=6.3,SNR=2.2						
	comp=Z,0.3nm,0.9s						

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*IDC **14** 16:00:35.0±7.7, 31°.12S×179°.66E, h428^{km}±88^{km}, mb2.8/2, mbtmp3.6/2, Error ellipse: s-maj=108.5km s-min=37.0km az=8.0*

*WEL **14** 16:00:40.9±1.1, 31°S±20°×18°0E±5°5, h347^{km}±28^{km}, M4.5/6, mB4.7/5, MLv4.8/6, Mw(mB)4.0/5, Error ellipse: s-maj=0.1km s-min=0.0km az=109.6, confirmed*

*NOU **14** 16:00:57.5, 33°.22S×179°.32E, h443^{km}, mb4.1/9, South of Kermadec Islands*

ISC 14 16:00:34.2±1.0**, 31°.22S**±0°.09×**179°.9E**±0°.2**, h426^{km}, n24, σ2^{s}.38**/34**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.70**	**44**	P	**P**	**16 01 37.3**	**+0.2**
GLKZ				S	**S**	**16 02 27.3**	**-0.8**
MXZ	**Matakaoa Point**	**6.46**	**191**	P	**P**	**16 02 16.5**	**+4.2**
KUZ	**Kuaotunu**	**6.52**	**211**	P	**P**	**16 02 17.6**	**+4.3**
WMGZ	**Waiomatatini S**	**6.70**	**190**	P	**P**	**16 02 16.7**	**+1.6**
WMGZ				S	**S**	**16 03 35.7**	**-1.7**
HAZ	**Te Kaha**	**6.75**	**195**	P	**P**	**16 02 16.0**	**+0.3**
HAZ				S	**S**	**16 03 37.2**	**-1.3**
PKGZ	**Pakihiroa**	**6.82**	**192**	P	**P**	**16 02 20.4**	**+3.8**
PKGZ				S	**S**	**16 03 37.4**	**-2.6**
RUGZ	**Raukumara Rang**	**6.98**	**195**	P	**P**	**16 02 21.9**	**+3.6**
RUGZ				S	**S**	**16 03 42.8**	**-0.4**
TWGZ	**Tauwhareparae**	**7.12**	**192**	P	**P**	**16 02 22.3**	**+2.5**
TWGZ				S	**S**	**16 03 46.5**	**+0.6**
OPRZ	**Ohinepanea**	**7.17**	**202**	P	**P**	**16 02 24.4**	**+4.1**
CNGZ	**Carnagh Statio**	**7.38**	**191**	P	**P**	**16 02 25.3**	**+2.8**
URZ	**Urewera**	**7.39**	**197**	P	**P**	**16 02 23.2**	**+0.5**
	56nm,0.3s,baz=44,slow=2.3,SNR=82						
URZ				S	**S**	**16 03 49.0**	**-2.2**
	30nm,0.6s,baz=154,slow=23,SNR=15						
URZ	**Urewera**	**7.39**	**197**	P	**P**	**16 02 23.2**	**+0.5**
URZ	**Urewera**	**7.39**	**197**	P	**P**	**16 02 23.8**	**+1.2**
URZ				S	**S**	**16 03 49.1**	**-2.2**
TKGZ	**Te Karaka**	**7.40**	**193**	P	**P**	**16 02 26.1**	**+3.3**
TKGZ				S	**S**	**16 03 48.7**	**-2.7**
MUGZ	**Murupara**	**7.69**	**199**	P	**P**	**16 02 28.1**	**+2.2**
HIZ	**Hauiti**	**8.38**	**208**	P	**P**	**16 02 37.0**	**+3.6**
BKZ	**Black Stump Fm**	**8.41**	**199**	P	**P**	**16 02 34.5**	**+0.8**
BFZ	**Birch Farm**	**9.90**	**196**	P	**P**	**16 02 52.3**	**+2.2**
QRZ	**Quartz Range**	**11.29**	**210**	P	**P**	**16 03 06.9**	**+1.5**
KHZ	**Kahutara**	**12.28**	**203**	P	**P**	**16 03 17.4**	**+1.2**
JCZ	**Jackson Bay**	**15.55**	**211**	P	**P**	**16 03 53.5**	**+1.8**
ASAR	**Alice Springs**	**41.29**	**269**	P	**P**	**16 07 39.9**	**-1.0**
	0.6nm,0.8s,baz=103,slow=7.6,SNR=13						
ASAR				PcP	**PcP**	**16 09 28.9**	**-1.0**
	0.2nm,0.9s,baz=104,slow=3.9,SNR=1.9						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**42.36**	**274**	P	**P**	**16 07 47.8**	**-1.5**
	0.4nm,0.3s,baz=112,slow=7.8,SNR=13						
	0.4nm,0.3s						
FINES	**FINESS Array B**	**145.27**	**338**	PKPbc	**PKPbc**	**16 19 21.5**	**-0.7**
	0.8nm,0.4s,baz=44,slow=4.4,SNR=12						

ROM 14 16:14:41.1±0.0**, 42°.767N**±0°.002×**13°.062E**±0°.003**, h10^{km}, ML1.7**/17**, 5C-4D, Error ellipse: s-maj=0.2km s-min=0.2km az=303.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.02**	**220**	P	Pg	16 14 43.4	+0.3
T1212				S	Sg	16 14 44.6	+0.2
T1212				AML	AML		
	comp=E,2220µm,0.4s						
T1212				AML	AML		
	comp=N,2560µm,0.2s						
T1212				AML	AML		
	comp=E,2145µm,0.4s						
T1212				AML	AML		
	comp=E,2225µm,0.3s						
T1212				AML	AML		
	comp=E,2140µm,0.3s						
T1212				AML	AML		
	comp=N,2555µm,0.2s						
T1212				AML	AML		
	comp=N,2600µm,0.2s						
T1218	**Civita (PG)**	**0.10**	**158**	P	Pg	16 14 44.3	+0.4
T1218				S	Sg	16 14 46.4	+0.5
T1218				AML	AML		
	comp=N,1185µm,0.4s						
T1218				AML	AML		
	comp=E,716µm,0.3s						
T1218				AML	AML		
	comp=E,675µm,0.2s						
T1218				AML	AML		
	comp=N,1230µm,0.2s						
T1218				AML	AML		
	comp=N,1185µm,1.6s						
T1214	**Arquata del Tr**	**0.11**	**94**	P	Pg	16 14 44.4	+0.4
T1214				S	Sg	16 14 46.5	+0.4
T1214				AML	AML		
	comp=N,980µm,0.1s						
T1214				AML	AML		
	comp=E,971µm,0.2s						
T1214				AML	AML		
	comp=E,996µm,0.1s						
T1214				AML	AML		
	comp=N,940µm,0.1s						
T1217	**Poggiodomo (PG**	**0.11**	**240**	P	Pg	16 14 44.5	+0.5
T1217				S	Sg	16 14 46.8	+0.7
T1217				AML	AML		
	comp=E,252µm,0.4s						
T1217				AML	AML		
	comp=N,261µm,0.6s						
T1217				AML	AML		
	comp=E,252µm,0.3s						
T1217				AML	AML		
	comp=N,261µm,0.6s						
T1217				AML	AML		
	comp=N,261µm,1.4s						
T1245	**Castelsantange**	**0.13**	**46**	P	Pg	16 14 44.8	+0.4
T1245				S	Sg	16 14 47.2	+0.5
T1245				AML	AML		
	comp=E,1695µm,0.6s						
T1245				AML	AML		
	comp=E,1475µm,0.7s						
T1245				AML	AML		
	comp=N,1250µm,0.2s						
T1245				AML	AML		
	comp=N,1260µm,0.2s						
T1245				AML	AML		
	comp=E,1475µm,1.3s						
T1245				AML	AML		
	comp=E,1695µm,1.4s						
T1215	**Vallo di Nera,**	**0.15**	**284**	P	Pg	16 14 45.1	+0.6
T1215				S	Sg	16 14 47.7	+0.8
T1215				AML	AML		
	comp=E,132µm,0.4s						
T1215				AML	AML		
	comp=N,214µm,0.7s						
MC2	**Monte Cornacci**	**0.17**	**33**	P	Pg	16 14 45.6	+0.5
MC2				S	Sg	16 14 48.8	+1.0
MMO1	**Montemonaco**	**0.23**	**56**	P	Pg	16 14 46.4	+0.4
MMO1				S	Sg	16 14 50.4	+1.1
SMA1	**SAN MARTINO**	**0.24**	**124**	P	Pb	16 14 47.2	-0.4
SMA1				S	Sg	16 14 50.9	+1.3
SMA1				AML	AML		
	comp=N,121µm,0.8s						
SMA1				AML	AML		
	comp=E,133µm,1.1s						
CESI	**CESI - Serrava**	**0.26**	**334**	P	Pg	16 14 47.1	+0.6
CESI				S	Sb	16 14 51.7	-1.0
CESI				AML	AML		
	comp=E,58µm,0.3s						
CESI				AML	AML		
	comp=N,101µm,0.3s						
T1256	**Bolognola (MC)**	**0.27**	**27**	P	Pg	16 14 47.0	+0.3
T1256				S	Sg	16 14 51.6	+1.2
T1256				AML	AML		
	comp=E,100µm,0.3s						
T1256				AML	AML		
	comp=N,76µm,1.1s						
T1256				AML	AML		
	comp=E,100µm,0.3s						
FDMO	**Fiordimonte**	**0.27**	**4**	⇑P	Pg	16 14 47.1	+0.5
FDMO				AML	AML		
	comp=E,85µm,0.2s						
FDMO				AML	AML		
	comp=N,135µm,0.2s						
T1211	**Morro Reatino**	**0.28**	**213**	P	Pg	16 14 47.3	+0.4
T1211				S	Sb	16 14 51.9	-1.1
T1211				AML	AML		
	comp=E,278µm,1.1s						
T1211				AML	AML		
	comp=N,256µm,1.2s						
T1211				AML	AML		
	comp=E,246µm,0.3s						
T1211				AML	AML		
	comp=E,278µm,1.1s						
T1211				AML	AML		
	comp=N,256µm,1.2s						
T1211				AML	AML		
	comp=N,225µm,0.2s						
T1211				AML	AML		
	comp=E,278µm,0.9s						
T1211				AML	AML		
	comp=N,256µm,0.8s						
RM33	**Pellescritta (**	**0.28**	**156**	P	Pg	16 14 47.2	+0.3
RM33				S	Sb	16 14 51.9	-1.2
RM33				AML	AML		
	comp=E,80µm,1.5s						
RM33				AML	AML		
	comp=E,80µm,0.5s						
RM33				AML	AML		
	comp=N,72µm,0.8s						
T1241	**Roccafluvione,**	**0.29**	**72**	⇑P	Pg	16 14 47.3	+0.4
T1241				AML	AML		
	comp=E,240µm,0.3s						
T1241				AML	AML		
	comp=N,292µm,0.7s						
T1241				AML	AML		
	comp=E,252µm,0.2s						
T1241				AML	AML		
	comp=N,174µm,0.3s						
T1241				AML	AML		
	comp=N,292µm,0.7s						
ARRO	**Arrone**	**0.29**	**229**	⇓P	Pg	16 14 47.6	+0.6
ARRO				AML	AML		
	comp=N,65µm,0.6s						
ARRO				AML	AML		
	comp=E,85µm,0.2s						
T1219	**Muccia, Frazio**	**0.29**	**352**	⇑P	Pg	16 14 47.4	+0.4
CSP1	**Cessapalombo**	**0.34**	**18**	⇓P	Pg	16 14 48.4	+0.4
T1220	**Camerino, Fraz**	**0.34**	**3**	⇓P	Pg	16 14 48.5	+0.5
T1220				AML	AML		
	comp=E,230µm,0.5s						
T1220				AML	AML		
	comp=N,232µm,1.2s						
T1220				AML	AML		
	comp=N,232µm,0.8s						
MOMA	**Monte Martano**	**0.36**	**276**	⇓P	Pg	16 14 49.0	+0.6
MOMA				AML	AML		
	comp=N,114µm,0.1s						
MOMA				AML	AML		
	comp=E,130µm,0.3s						
T1222	**Castel Sant'An**	**0.37**	**183**	S	Sg	16 14 54.1	+0.9
TERO	**Teramo**	**0.42**	**110**	⇑P	Pg	16 14 49.5	0.0
TERO				AML	AML		
	comp=E,71µm,1.3s						
TERO				AML	AML		
	comp=N,93µm,1.6s						
TERO				AML	AML		
	comp=N,93µm,0.4s						
TERO				AML	AML		
	comp=E,71µm,0.7s						
GIGS	**Gran Sasso**	**0.49**	**130**	⇑P	Pb	16 14 51.5	-0.3
EL6	**Elcito**	**0.56**	**3**	P	Pg	16 14 52.3	+0.2
EL6				S	Sb	16 15 01.6	+0.4

ROM 14 16:15:17.8±0.1**, 42°.922N**±0°.002×**13°.158E**±0°.004**, h7^{km}, ML1.4**/4**, Error ellipse: s-maj=0.2km s-min=0.1km az=270.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.03**	**111**	P	Pg	16 15 19.1	-0.3
MC2				S	Sg	16 15 20.0	-0.4
T1245	**Castelsantange**	**0.07**	**161**	P	Pg	16 15 19.8	+0.2
T1245				S	Sg	16 15 21.3	+0.3
T1245				AML	AML		
	comp=E,686µm,1.1s						
T1245				AML	AML		
	comp=N,640µm,1.4s						
T1245				AML	AML		
	comp=N,640µm,1.4s						
T1245				AML	AML		
	comp=N,640µm,0.6s						
T1245				AML	AML		
	comp=E,614µm,0.2s						
T1245				AML	AML		
	comp=E,686µm,0.9s						
T1245				AML	AML		
	comp=N,576µm,0.4s						
T1256	**Bolognola (MC)**	**0.10**	**31**	P	Pg	16 15 20.2	+0.1
T1256				S	Sg	16 15 22.3	+0.5
T1256				AML	AML		
	comp=E,170µm,0.2s						
T1256				AML	AML		
	comp=N,212µm,0.2s						
T1216	**Preci, Frazion**	**0.11**	**253**	P	Pg	16 15 20.5	+0.3
T1216				S	Sg	16 15 22.6	+0.8
T1216				AML	AML		
	comp=E,316µm,0.3s						
T1216				AML	AML		
	comp=N,316µm,0.3s						
T1216				AML	AML		
	comp=E,316µm,1.7s						
FDMO	**Fiordimonte**	**0.13**	**336**	P	Pg	16 15 20.9	+0.4
FDMO				S	Sg	16 15 23.6	+1.2
FDMO				AML	AML		
	comp=E,120µm,0.8s						
FDMO				AML	AML		
	comp=N,124µm,0.3s						
MMO1	**Montemonaco**	**0.13**	**100**	P	Pg	16 15 20.8	+0.3
MMO1				S	Sg	16 15 23.1	+0.8
T1214	**Arquata del Tr**	**0.17**	**167**	P	Pg	16 15 21.7	+0.5
T1214				S	Sg	16 15 25.0	+1.4
CSP1	**Cessapalombo**	**0.17**	**11**	P	Pg	16 15 21.7	+0.4
CSP1				S	Sg	16 15 24.9	+1.2
T1219	**Muccia, Frazio**	**0.17**	**321**	P	Pg	16 15 21.7	+0.4
T1219				S	Sg	16 15 24.7	+0.9
T1212	**Cascia, Frazio**	**0.19**	**206**	P	Pg	16 15 22.1	+0.6
T1212				S	Sg	16 15 25.6	+1.5
T1212				AML	AML		
	comp=E,110µm,0.5s						
T1212				AML	AML		
	comp=N,105µm,1.5s						
T1212				AML	AML		
	comp=E,110µm,0.5s						
T1212				AML	AML		
	comp=N,105µm,1.5s						
T1220	**Camerino, Fraz**	**0.20**	**345**	P	Pg	16 15 22.3	+0.6
T1220				S	Sg	16 15 25.7	+1.4
T1215	**Vallo di Nera,**	**0.24**	**241**	P	Pg	16 15 23.1	+0.5
T1215				S	Sg	16 15 27.3	+1.4

ROM 14 16:16:38.5±0.1**, 42°.764N**±0°.004×**13°.064E**±0°.005**, h10^{km}, ML1.2**/5**, 1C-5D, Error ellipse: s-maj=0.4km s-min=0.3km az=7.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.02**	**230**	⇓P	Pg	16 16 40.7	+0.4
T1212				S	Sg	16 16 41.9	+0.3
T1212				AML	AML		
	comp=E,298µm,0.4s						
T1212				AML	AML		
	comp=N,343µm,0.2s						
T1212				AML	AML		
	comp=E,271µm,0.3s						
T1212				AML	AML		
	comp=N,338µm,0.2s						
T1218	**Civita (PG)**	**0.10**	**158**	P	Pg	16 16 41.0	-0.1
T1218				S	Sg	16 16 43.8	+0.7
T1218				AML	AML		
	comp=N,222µm,0.2s						
T1218				AML	AML		
	comp=E,136µm,0.2s						
T1214	**Arquata del Tr**	**0.11**	**92**	⇓P	Pg	16 16 41.7	+0.4
T1214				S	Sg	16 16 43.8	+0.6
T1214				AML	AML		
	comp=E,120µm,0.5s						
T1214				AML	AML		
	comp=N,118µm,0.1s						
T1214				AML	AML		
	comp=E,121µm,0.5s						
T1214				AML	AML		
	comp=N,118µm,0.1s						
T1214				AML	AML		
	comp=N,118µm,1.9s						
T1214				AML	AML		
	comp=E,121µm,1.5s						
T1217	**Poggiodomo (PG**	**0.11**	**242**	P	Pg	16 16 41.8	+0.5
T1245	**Castelsantange**	**0.13**	**44**	P	Pg	16 16 42.0	+0.4
T1245				S	Sg	16 16 44.4	+0.6
T1245				AML	AML		
	comp=E,142µm,0.7s						
T1245				AML	AML		
	comp=N,266µm,0.7s						
T1245				AML	AML		
	comp=N,266µm,1.3s						
T1216	**Preci, Frazion**	**0.13**	**345**	S	Sg	16 16 42.1	-1.6
T1215	**Vallo di Nera,**	**0.15**	**285**	P	Pg	16 16 42.3	+0.5
T1215				S	Sg	16 16 45.0	+0.9
MC2	**Monte Cornacci**	**0.17**	**32**	P	Pg	16 16 41.8	-0.6
MMO1	**Montemonaco**	**0.24**	**55**	P	Pg	16 16 43.1	-0.2
FDMO	**Fiordimonte**	**0.27**	**4**	AML	AML		
	comp=E,61µm,0.2s						
FDMO				AML	AML		
	comp=E,61µm,0.2s						
FDMO				AML	AML		
	comp=N,49µm,0.2s						
RM33	**Pellescritta (**	**0.28**	**156**	⇓P	Pg	16 16 44.6	+0.5
T1211	**Morro Reatino**	**0.28**	**214**	P	Pg	16 16 44.7	+0.6
T1211				S	Sb	16 16 49.5	-0.9
T1219	**Muccia, Frazio**	**0.29**	**352**	⇓P	Pg	16 16 41.0	-3.4
T1220	**Camerino, Fraz**	**0.35**	**3**	⇓P	Pg	16 16 41.7	-3.7
TERO	**Teramo**	**0.42**	**109**	⇑P	Pg	16 16 47.0	+0.2

ROM 14 16:17:18.4±0.1**, 42°.651N**±0°.003×**13°.259E**±0°.004**, h12^{km}, ML1.2**/5**, Error ellipse: s-maj=0.3km s-min=0.0km az=46.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	**0.06**	**110**	P	Pg	16 17 21.4	+0.4
SMA1				S	Sg	16 17 23.0	+0.2
SMA1				AML	AML		
	comp=E,184µm,0.5s						
SMA1				AML	AML		
	comp=N,267µm,0.4s						
T1218	**Civita (PG)**	**0.11**	**280**	P	Pg	16 17 21.9	+0.4
T1218				S	Sg	16 17 23.9	+0.2
T1218				AML	AML		
	comp=N,200µm,0.4s						
T1218				AML	AML		
	comp=E,140µm,0.2s						
T1218				AML	AML		
	comp=E,140µm,1.8s						
T1214	**Arquata del Tr**	**0.12**	**341**	P	Pg	16 17 22.0	+0.4
T1214				S	Sg	16 17 24.3	+0.3
RM33	**Pellescritta (**	**0.14**	**193**	P	Pb	16 17 22.6	-0.6
RM33				S	Sg	16 17 25.4	+0.9
RM33				AML	AML		
	comp=E,92µm,0.6s						
RM33				AML	AML		
	comp=N,85µm,0.2s						
RM33				AML	AML		
	comp=E,92µm,1.4s						
T1245	**Castelsantange**	**0.21**	**346**	P	Pg	16 17 23.6	+0.4
T1245				S	Sg	16 17 27.2	+0.9
T1245				AML	AML		
	comp=E,88µm,0.3s						
T1245				AML	AML		
	comp=N,112µm,0.7s						
T1245				AML	AML		
	comp=E,88µm,1.7s						
T1245				AML	AML		
	comp=N,112µm,1.3s						
T1241	**Roccafluvione,**	**0.24**	**32**	P	Pg	16 17 24.0	+0.4
T1241				S	Sg	16 17 27.8	+0.8
T1217	**Poggiodomo (PG**	**0.25**	**284**	P	Pg	16 17 24.2	+0.5
T1217				S	Sg	16 17 28.1	+0.9
TERO	**Teramo**	**0.26**	**96**	P	Pg	16 17 24.2	+0.4
TERO				S	Sg	16 17 28.2	+0.8
TERO				AML	AML		
	comp=E,97µm,0.1s						
TERO				AML	AML		
	comp=N,135µm,0.1s						
MC2	**Monte Cornacci**	**0.27**	**349**	P	Pg	16 17 24.5	+0.4
MC2				S	Sb	16 17 29.1	-0.8
GIGS	**Gran Sasso**	**0.30**	**131**	P	Pg	16 17 25.2	+0.5
GIGS				S	Sb	16 17 29.9	-1.0
T1211	**Morro Reatino**	**0.32**	**249**	P	Pg	16 17 25.3	+0.4
T1211				S	Sg	16 17 30.3	+1.0
T1215	**Vallo di Nera,**	**0.33**	**298**	P	Pg	16 17 25.3	+0.3
T1215				S	Sg	16 17 30.4	+0.9
T1219	**Muccia, Frazio**	**0.45**	**336**	S	Sb	16 17 34.4	-0.6
CERT	**Cerreto**	**0.73**	**196**	S	Sb	16 17 44.2	+1.1
VIVA	**Pratoni del Vi**	**0.97**	**202**	P	Pg	16 17 35.3	-1.8
MCIV	**Monte Civitell**	**1.17**	**277**	S	Sn	16 17 58.5	+1.8

IDC 14 16:17:41.0±3.3**, 22°.32N**×**12°.34W, h0^{km}, mbtmp3.8**/2**, ML3.7**/2**, Error ellipse: s-maj=153.5km s-min=57.8km az=61.0, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**16.17**	**122**	Pn	Pn	16 21 29.7	0.0
	0.1nm,0.3s,baz=301,slow=12,SNR=5.9						
TORD				Sn	Sn	16 24 20.4	-10
	0.1nm,0.3s,baz=303,slow=24,SNR=2.2						
	0.9nm,0.5s						
DBIC	**Dimbokro**	**17.15**	**154**	P	Pn	16 21 42.3	0.0
	0.5nm,0.3s,baz=344,slow=13,SNR=4.2						
	2.0nm,0.6s						
WRA	**Warramunga Arr**	**148.86**	**92**	PKPbc	PKPbc	16 37 30.6	-0.8
	0.4nm,1.1s,baz=294,slow=2.6,SNR=1.6						
ASAR	**Alice Springs**	**148.93**	**99**	PKPbc	PKPbc	16 37 31.2	-0.4
	0.1nm,0.6s,baz=278,slow=2.4,SNR=1.6						

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*IDC **14** 16:39:47.5±0.9, 27°.12N×97°.07E, h0^{km}, mb3.8/11, mbtmp3.8/11, Error ellipse: s-maj=39.2km s-min=16.5km az=52.0*

*BJI **14** 16:39:50.7±0.0, 27°.01N×96°.95E, h9^{km}, mb4.0/14, mB4.8/2, ML3.8/7, Ms3.5/2, Ms7 3.4/2*

*NEIC **14** 16:39:56.8±1.6, 27°.30N±0°.08×96°.79E±0°.07, h54^{km}±8^{km}, mb4.4/18, Error ellipse: s-maj=11.0km s-min=9.4km az=166.0*

ISC 14 16:39:53.0±0.4**, 27°.10N**±0°.05×**96°.91E**±0°.03**, h28^{km}, n64, σ2^{s}.39**/71**, mb4.1**/18**, 1C, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKP	**Lekhapani**	**0.97**	**284**	*e*P	**Pb**	**16 40 11.4**	**+0.1**
LKP				*e*S	**Sb**	**16 40 30.5**	**+6.7**
LKP				IAML		16 40 34.5	

	comp=N,3μm,0.8s						
DIBR	DIBRUGARH	1.81	282	*e*P	Pb	16 40 26.1	+0.5
DIBR				*e*S	Sb	16 40 54.5	+6.7
DIBR				IAML		16 40 58.8	
	comp=E,1μm,0.5s						
MOKO	MOKOCHONG	2.28	251	*e*P	Pb	16 40 31.9	-1.6
MOKO				*e*S	Sb	16 41 06.2	+4.9
MOKO				IAML		16 41 10.3	
	comp=N,745nm,0.6s						
MOKO				IAML		16 41 10.8	
	comp=E,498nm,0.8s						
TNCH	TengChong	2.52	145	Pn	Pn	16 40 29.8	-2.6
TNCH				Pg	Pb	16 40 34.3	-3.5
TNCH				Sg	Sb	16 41 08.8	+0.3
TNCH				smax	smax		
	comp=E,610nm,1.1s						
TNCH				smax	smax		
	comp=E,550nm,1.8s						
ZIRO	ZIRO	2.75	279	*e*P	Pn	16 40 36.9	+1.4
ITAN	ITANAGAR	2.84	272	*e*P	Pn	16 40 39.0	+2.5
ITAN				IAML		16 41 40.0	
	comp=N,799nm,0.7s						
ITAN				IAML		16 41 40.0	
	comp=E,633nm,0.5s						
KOHI	KOHIMA	2.86	242	*e*P	Pb	16 40 40.5	-3.0
KOHI				IAML		16 41 34.7	
	comp=N,223nm,0.9s						
KOHI				IAML		16 41 36.1	
	comp=E,347nm,0.7s						
IMP	Imphal	3.50	230	*e*P	Pn	16 40 49.5	+3.9
IMP				*e*S	Sb	16 41 32.1	-4.2
IMP				IAML		16 41 36.2	
	comp=N,46nm,0.7s						
TEZP	TEZPUR	3.70	263	*e*P	Pn	16 40 50.1	+1.8
PZH	PanZhiHua	4.36	97	Pn	Pn	16 40 58.3	+0.7
PZH				Pg	Pb	16 41 10.6	+1.5
PZH				Sn	Sn	16 41 47.5	-0.1
PZH				Sg	Sb	16 42 07.8	+6.5
PZH				smax	smax		
	comp=N,70nm,1.4s						
PZH				smax	smax		
	comp=N,50nm,1.2s						
PZH				LR	LR		
	comp=N,230nm,5.2s						
PZH				LR	LR		
	comp=N,340nm,7.2s						
PZH				LR	LR		
	comp=N,320nm,6.7s						
SHL	Shillong	4.76	252		Pn	16 41 04.6	+1.5
SHL	Shillong	4.76	252	*e*P	Pn	16 41 04.2	+1.1
SHL				IAML		16 42 04.7	
	comp=E,126nm,0.8s						
MND	Mandalay	5.12	188	Pn	Pn	16 41 13.1	+5.3
KMI	Kunming	5.60	109	⇑Pn	Pn	16 41 18.3	+3.6
KMI				Sn	Sn	16 42 25.8	+7.5
KMI				smax	smax		
	comp=E,38nm,1.0s						
KMI				smax	smax		
	comp=E,41nm,1.0s						
KMI				LR	LR		
	comp=E,330nm,6.1s						
KMI				LR	LR		
	comp=E,380nm,10.3s						
KMI				LR	LR		
	comp=E,430nm,10.3s						
LSA	Lhasa	5.69	298	Pn	Pn	16 41 17.5	+1.4
LSA	Lhasa	5.69	298	Pn	Pn	16 41 17.2	+1.1
SAIH	SAIHA	5.81	219	*e*P	Pn	16 41 21.6	+4.0
TAPN	Taplejung	8.19	274	*e*P	Pn	16 41 51.1	+0.8
	comp=E,25nm,0.4s						
ODAN	Odare	8.49	271	*e*P	Pn	16 41 55.6	+1.2
CMAR	Chiang Mai Arr	8.81	167	Pn	Pn	16 42 01.4	+2.9
	comp=E,0.1nm,0.3s,baz=342,slow=13,SNR=16						
CMAR				Lg	Lg	16 44 31.8	
	baz=343,slow=29						
RAMN	Ramite	9.19	271	*e*P	Pn	16 42 04.5	+0.5
GOMU	GeErMu	9.24	349	P	Pn	16 42 05.6	+0.8
GOMU				pP		16 42 08.8	
GOMU				sP		16 42 13.1	
GOMU				pmax	pmax		
	comp=E,3.0nm,0.9s						
JIRN	Jiri	9.54	276	*e*P	Pn	16 42 08.9	0.0
	comp=E,15nm,0.3s						
GUN	Gumba	9.82	277	*e*P	Pn	16 42 12.4	-0.4
	comp=E,42nm,0.4s						
PKI	Pulchoki	10.23	275	*e*P	Pn	16 42 17.3	-1.1
	comp=E,9.8nm,0.4s						
PKIN	Phulchoki	10.25	275	*e*P	Pn	16 42 17.8	-0.7
	comp=E,19nm,0.5s						
KKN	Kakani	10.35	276	*e*P	Pn	16 42 19.6	-0.3
	comp=E,7.2nm,0.6s						
GKN	Gorkha	10.93	278	*e*P	Pn	16 42 26.4	-1.3
DANN	Dangsing	11.71	279	*e*P	Pn	16 42 36.1	-2.5
	comp=E,13nm,0.4s						
KOLN	Koldanda	11.84	276	*e*P	Pn	16 42 38.3	-1.9
	comp=E,3.8nm,0.9s						
WMQ	Urumqi	18.27	338	*e*P	Pn	16 44 04.8	+0.3
HHC	Hu-ho-hao-te	18.29	38	*e*P	Pn	16 44 03.6	-1.2
HHC				pmax	pmax		
	comp=E,19nm,0.9s						
HHC				pmax	pmax		
	comp=E,300nm,5.6s						
KSH	Kashi	21.37	311	P	P	16 44 36.8	-1.6
KSH				pP	pP	16 44 45.3	-1.1
KSH				sP	sP	16 44 55.9	+5.9
KSH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NIL	Nilore	21.40	293	P	P	16 44 37.4	-1.2
NIL				IAmb	IAmb	16 44 41.9	
	comp=Z,9.7nm,0.8s						
SONM	Songino Array	21.99	17	P	P	16 44 42.8	-2.1
	comp=Z,1.2nm,0.8s,baz=195,slow=11,SNR=7.6						
	comp=Z,1.2nm,0.8s						
SONM	Songino Array	21.99	17	P	P	16 44 44.1	-0.8
MK31	Makanchi Array	22.79	333	P	P	16 44 51.4	-2.0
MKAR	Makanchi Array	22.79	333	P	P	16 44 51.4	-2.0
	comp=Z,2.1nm,0.7s,baz=135,slow=10.0,SNR=18						
	comp=Z,2.1nm,0.7s						
MAKZ	Makanchi	22.93	333	P	P	16 44 53.2	-1.6
AAK	Ala-Archa	23.94	316	P	P	16 45 05.1	+0.1
	comp=Z,0.8nm,0.6s,baz=159,slow=8.6,SNR=7.3						
	comp=Z,0.8nm,0.6s						
AAK	Ala-Archa	23.94	316	P	P	16 45 04.9	-0.1
KBL	Kabul	25.00	294	P	P	16 45 13.5	-1.3
KBL				IAmb	IAmb	16 45 17.0	
	comp=Z,11nm,0.8s						
GAR	Garm	25.15	305	P	P	16 45 15.5	-0.5
GAR				IAmb	IAmb	16 45 17.1	
	comp=Z,11nm,1.0s						
CHGR	Chuyangaron	25.90	303	P	P	16 45 21.6	-1.2
CHGR				IAmb	IAmb	16 45 45.4	
	comp=Z,11nm,1.1s						
KURBB	Kurchatov Arra	27.35	334	P	P	16 45 34.9	-0.6
	comp=Z,1.6nm,0.5s,baz=148,slow=11,SNR=15						
	comp=Z,1.6nm,0.5s						
GEYT	Alibeck	34.22	298	P	P	16 46 37.1	+0.7
	comp=Z,1.9nm,0.6s,baz=99,slow=6.4,SNR=3.8						
	comp=Z,1.9nm,0.6s						
ABKAR	Akbulak array	36.00	318	P	P	16 46 51.5	0.0
AKTO	Aktyubinsk	37.62	319	P	P	16 47 05.0	-0.3
	comp=Z,2.2nm,0.8s,baz=102,slow=5.4,SNR=4.6						
	comp=Z,2.2nm,0.8s						
KNRA	Kununurra	52.58	140	P	P	16 49 07.1	+2.7
PSA00	Pilbara Seismi	53.24	153	P	P	16 49 11.4	+2.2
PSA00				IAmb	IAmb	16 49 19.6	
	comp=Z,6.9nm,1.3s						
BR131	Keskin Array S	53.29	301	P	P	16 49 08.4	-1.3
BR131				IAmb	IAmb	16 49 19.0	
	comp=Z,8.6nm,1.4s						
BRTR	Keskin Array B	53.29	301	P	P	16 49 08.3	-1.3
	comp=Z,0.6nm,0.6s,baz=106,slow=6.6,SNR=3.1						
	comp=Z,0.6nm,0.6s						
BRTR	Keskin Array B	53.29	301	P	P	16 49 08.6	-1.1
AKASG	Malin Array Be	55.60	315	P	P	16 49 24.5	-1.6
	comp=Z,0.9nm,0.7s,baz=70,slow=5.8,SNR=2.6						
	comp=Z,0.9nm,0.7s						
ARCES	ARCESS Array B	58.38	337	P	P	16 49 46.4	+0.9
WRA	Warramunga Arr	59.19	138	P	P	16 49 49.8	-1.9
	comp=Z,1.3nm,0.8s,baz=328,slow=7.5,SNR=9.2						
	comp=Z,1.3nm,0.8s						
ASAR	Alice Springs	61.84	141	P	P	16 50 08.3	-1.5
	comp=Z,0.8nm,0.7s,baz=327,slow=7.0,SNR=8.7						
	comp=Z,0.8nm,0.7s						
KBN	Korca	62.83	304	P	P	16 50 15.2	-1.1
CLL	Collm	65.66	317	*e*P	P	16 50 35.0	+0.4
GRA1	Grafenberg Arr	67.16	315	P	P	16 50 42.4	-1.9
GRA1				IAmb	IAmb	16 51 22.0	
	comp=Z,12nm,1.1s						
GRFO	Grafenberg	67.16	315	P	P	16 50 42.2	-2.1
IMAR	Indian Mountai	72.98	24	P	P	16 51 17.5	-2.3
BMAR	Burnt Mountain	75.30	21	P	P	16 51 31.8	-1.4
TORD	Torodi Ar. Bea	88.65	284	P	P	16 52 43.5	-0.7
	comp=Z,0.4nm,0.7s,baz=67,slow=3.5,SNR=3.1						
	comp=Z,0.4nm,0.7s						

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*NEIC **14** 16:42:10.9±1.0, 20.3°S±0.2°×177.7°W±0.1°, h512km±10km, mb4.0/19, Error ellipse: s-maj=24.5km s-min=17.0km az=154.0*

*IDC **14** 16:42:13.9±1.7, 19.80°S×178.15°W, h527km±17km, mb3.1/7, mbtmp4.1/10, Error ellipse: s-maj=32.5km s-min=13.8km az=151.0*

ISC 14 16:42:10.7±0.6, **20.3°S**±0.1°×**177.79°W**±0.09°, **h500**km, **n49**, σ**1.48**/50, **mb3.7**/18, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.67	302	P	P	16 43 36.1	+1.1
	12nm,0.4s,baz=121,slow=8.5,SNR=43						
MSVF	Nonsavu	4.67	302	P	P	16 43 36.5	+1.6
NIUE	Niue	7.50	82	P	P	16 43 59.8	-2.3
AFI	Afiamalu	8.53	43	P	P	16 44 12.9	0.0
	7.5nm,0.6s,baz=225,slow=14,SNR=1.2						
AFI				S	S	16 45 43.6	-9.4
	25nm,0.6s,baz=36,slow=19,SNR=4.7						
PINNC	Pines Island,	13.95	258	P	P	16 45 10.9	+1.0
DZM	Mont Dzumac	14.82	260	P	P	16 45 20.2	+1.0
	7.4nm,0.8s,baz=67,slow=18,SNR=2.8						
DZM	Mont Dzumac	14.82	260	P	P	16 45 20.0	+0.8
URZ	Urewera	18.48	193	P	P	16 46 01.6	+6.3
	4.5nm,0.4s,baz=4.6,slow=5.4,SNR=6.1						
MRNZ	Matariki Terra	22.56	199	P	P	16 46 32.6	+0.3
CTAO	Charters Tower	33.71	264	P	P	16 48 09.8	-0.2
CTAO				IAmb	IAmb	16 48 10.5	
	comp=Z,5.2nm,0.8s						
STKA	Stephens Creek	38.07	244	P	P	16 48 45.0	-1.1
	comp=Z,1.2nm,0.6s,baz=84,slow=10,SNR=3.6						
	comp=Z,1.2nm,0.6s						
STKA	Stephens Creek	38.07	244	P	P	16 48 45.3	-0.8
BBOO	Buckleboo	42.83	243	P	P	16 49 23.4	-0.8
BBOO				IAmb	IAmb	16 49 36.9	
	comp=Z,9.5nm,1.2s						
AS31	Alice Springs	44.77	256	P	P	16 49 38.2	-1.2
ASAR	Alice Springs	44.77	256	P	P	16 49 38.7	-0.7
	comp=Z,4.2nm,0.8s,baz=92,slow=7.9,SNR=39						
ASAR				PcP	PcP	16 51 10.6	-0.5
	comp=Z,0.5nm,0.6s,baz=98,slow=3.9,SNR=4.5						
ASAR				S	S	16 55 37.6	-2.2
	comp=Z,1.1nm,1.1s,baz=95,slow=15,SNR=4.1						
	comp=Z,4.2nm,0.8s						
ASAR	Alice Springs	44.77	256	P	P	16 49 37.8	-1.6
WB0	Warramunga Arr	44.81	262	P	P	16 49 38.5	-1.2
WB0				IAmb	IAmb	16 49 52.4	
	comp=Z,2.8nm,1.0s						
WRAB	Tennant Creek	44.82	262	P	P	16 49 38.5	-1.3
WRAB				IAmb	IAmb	16 49 39.4	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	44.83	262	P	P	16 49 38.7	-1.2
	comp=Z,1.1nm,0.6s,baz=97,slow=8.7,SNR=22						
	comp=Z,1.1nm,0.6s						
WRA	Warramunga Arr	44.83	262	P	P	16 49 38.7	-1.2
KNRA	Kununurra	50.87	266	P	P	16 50 23.8	-1.4
QSPA	South Pole Qui	69.82	180	P	P	16 52 30.1	-0.2
QSPA				IAmb	IAmb	16 53 01.2	
	comp=Z,3.0nm,1.4s						
NVAR	Mina Array Bea	80.71	43	P	P	16 53 32.4	+0.7
	comp=Z,0.8nm,0.8s,baz=222,slow=9.3,SNR=4.8						
	comp=Z,0.8nm,0.8s						
P18K	Big Mountain,	81.49	11	P	P	16 53 33.9	-1.0
K05A	Summer Lake	81.65	39	P	P	16 53 37.4	+1.0
K05A				IAmb	IAmb	16 53 48.4	
	comp=Z,15nm,1.5s						
J05D	Fort Rock, OR	81.79	38	P	P	16 53 37.8	+0.8
TNA	Tin City	85.87	4	P	P	16 53 55.9	-0.7
TNA				IAmb	IAmb	16 54 11.5	
	comp=Z,2.5nm,1.4s						
BARN	Barnard Glacie	86.09	17		P	16 53 58.5	+0.6
TXAR	Lajitas Array	86.76	57	P	P	16 54 02.1	+0.4
	comp=Z,0.7nm,0.8s,baz=212,slow=7.1,SNR=9.1						
	comp=Z,0.7nm,0.8s						
TXAR	Lajitas Array	86.76	57		P	16 54 02.4	+0.7
MLY	Manley	87.51	11	P	P	16 54 03.3	-1.1
MLY				IAmb	IAmb	16 54 04.5	
	comp=Z,6.0nm,1.5s						
WRH	Wood River Hil	87.52	12	P	P	16 54 03.7	-0.6
HDA	Harding Lake	87.70	13		P	16 54 04.5	-0.7
HDA				IAmb	IAmb	16 54 05.3	
	comp=Z,3.1nm,0.7s						
H21K	Melozitna Rive	87.73	10		P	16 54 05.1	-0.3
H21K				IAmb	IAmb	16 54 12.9	
	comp=Z,1.6nm,1.2s						
CCB	Clear Creek Bu	87.73	12		P	16 54 04.5	-0.8
CCB				IAmb	IAmb	16 54 05.0	
	comp=Z,2.6nm,0.7s						
IMAR	Indian Mountai	87.88	10		P	16 54 05.4	-0.6
ILAR	Eielson Array	88.03	13	P	P	16 54 05.3	-1.4
	comp=Z,0.4nm,0.6s,baz=211,slow=4.9,SNR=5.1						
	comp=Z,0.4nm,0.6s						
ILAR	Eielson Array	88.03	13		P	16 54 06.3	-0.4
PDAR	Pinedale Array	88.65	43	P	P	16 54 10.1	-0.4
	comp=Z,0.7nm,0.7s,baz=193,slow=3.7,SNR=6.4						
	comp=Z,0.7nm,0.7s						
M30M	Minto, Yukon	88.67	18		P	16 54 09.9	0.0
MKAR	Makanchi Array	111.17	313	PKiKP	PKiKP	16 59 45.6	-1.5
	comp=Z,0.3nm,0.6s,baz=143,slow=0.4,SNR=4.4						
AKASG	Malin Array Be	142.89	331	PKhKP	PKPpre	17 00 42.9	
	comp=Z,1.7nm,0.4s,baz=38,slow=4.3,SNR=13						
BRTR	Keskin Array B	146.82	313	PKPbc	PKPbc	17 00 56.4	-0.5
	comp=Z,0.9nm,0.6s,baz=120,slow=4.9,SNR=4.9						
KRLC	Kraliky	148.07	342	*e*PKP	PKPbc	17 00 58.7	-0.9
PRU	Pruhonice	148.75	345	*e*PKP	PKPbc	17 01 00.9	-0.3
NKC	Novy Kostel	149.00	347	*e*PKP	PKPab	17 01 11.9	+3.9
KHC	Kasperske Hory	149.78	345	*e*PKP	PKPbc	17 01 03.5	-0.3
CKRC	Cesky Krumlov	149.88	344	*e*PKP	PKPbc	17 01 02.7	-1.3
GERES	GERESS Array B	150.01	345	PKPbc	PKPbc	17 01 03.8	-0.6
	comp=Z,0.6nm,0.5s,baz=66,slow=3.2,SNR=6.1						

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*TAP **14** 17:06:18.6, 25.22°N×122.97E, h264km, ML3.3, D*

*JMA **14** 17:06:23.1±0.3, 26°N±3°×122.4°E±0.9°, h221km, MV2.9/9, TAIWAN REGION*

ISC 14 17:06:22.5±3.5, **25.4°N**±0.2°×**122.44°E**±0.05°, **h240**km±19km, **n37**, σ**0.87**/68, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.56	227	*e*P	Pn	17 06 54.1	-0.4
	baz=255						
TIPB	Shuangxi	0.69	233	P	Pn	17 06 55.1	+0.1
	baz=247						
TIPB				*e*S	S	17 07 23.5	+3.1
	baz=247						
TWE	Neicheng	0.97	226	P	Pn	17 06 56.9	+0.7
	baz=250						
TWE				*i* S	S	17 07 23.6	+0.9
	baz=250						
FUSB	Fushanzhiwuyua	1.00	231	*i* P	Pn	17 06 56.5	0.0
	baz=251						
FUSB				*e*S	S	17 07 23.0	-0.1
	baz=251						
NDS	Dongshan	1.00	221	*e*P	Pn	17 06 57.6	+1.1
	baz=243						
NDS				*e*S	S	17 07 25.0	+1.9
	baz=243						
NWLT	Wulai	1.05	234	*i* P	Pn	17 06 56.7	-0.1
	baz=251						
NWLT				*e*S	S	17 07 22.8	-0.8
	baz=251						
YOJ	Yonaguni jima	1.06	151	*e*P	Pn	17 06 53.5	-3.4
	baz=173						
ENTT	Nioudou	1.09	227	P	Pn	17 06 57.1	+0.1
	baz=248						
ENTT				*e*S	S	17 07 24.3	+0.2
	baz=248						
EWUT	Wuta	1.12	213	*e*P	Pn	17 06 57.5	+0.3
	baz=233						
EWUT				*i* S	S	17 07 24.6	+0.2
	baz=233						
ENA	Nanau	1.15	214	*e*P	Pn	17 06 57.8	+0.4
	baz=233						
ENA				*i* S	S	17 07 25.1	+0.4
	baz=233						
LATG	Datong	1.19	224	P	Pn	17 06 58.0	+0.2
	baz=246						
LATG				*e*S	S	17 07 25.7	+0.3
	baz=246						
YHNB	Yeheng	1.20	233	P	Pn	17 06 57.4	-0.4
	baz=248						
YHNB				*e*S	S	17 07 24.4	-1.1
	baz=248						
NSK	Sanguang	1.21	234	*e*P	Pn	17 06 57.4	-0.4
	baz=249						
NSK				*e*S	S	17 07 24.4	-1.1
	baz=249						
NNS	Nan Shan	1.35	226	P	Pn	17 06 59.0	+0.1
	baz=246						
NNS				*e*S	S	17 07 27.3	-0.2
	baz=246						
NNSB	Datong	1.36	225	*i* P	Pn	17 06 59.1	+0.1
	baz=240						
NNSB				*e*S	S	17 07 27.1	-0.4
	baz=240						
NFF	Wufeng Townshi	1.42	238	*e*P	Pn	17 06 58.9	-0.5
	baz=250						
NFF				*e*S	S	17 07 26.7	-1.5
	baz=250						
NACB	Ninganchiao	1.44	212	*e*P	Pn	17 06 59.1	-0.3
	baz=238						
NACB				*e*S	S	17 07 27.3	-1.0
	baz=238						
ETLH	Xiulin Townshi	1.47	217	*i* P	Pn	17 06 59.4	-0.3
	baz=239						
ETLH				*e*S	S	17 07 28.5	-0.4
	baz=239						
LIOB	Emei	1.49	240	*e*P	Pn	17 06 59.7	-0.1
	baz=248						
LIOB				*e*S	S	17 07 28.4	-0.6
	baz=248						
NSTT	Nanjuang	1.51	240	*e*P	Pn	17 06 59.6	-0.3
	baz=252						
IRIF	Iriomote-Funau	1.58	132	P	Pn	17 07 00.7	+0.2
IRIF				S	S	17 07 30.0	-0.2
TWT	Tachien	1.61	226	*i* P	Pn	17 07 01.7	+0.7
	baz=239						
TWT				*e*S	S	17 07 31.9	+0.7
	baz=239						
WHF	Hehuan Shan	1.64	221	P	Pn	17 07 02.0	+0.5
	baz=240						
CHGB	Renai	1.76	221	P	Pn	17 07 02.9	+0.7
	baz=239						
CHGB				S	S	17 07 34.4	+1.0
	baz=239						
ESL	Shilin	1.82	210	P	Pn	17 07 01.9	-0.6
	baz=231						
ESL				*e*S	S	17 07 34.1	+0.2
	baz=231						
HATJ	Hateruma jima	1.82	137	*e*S	S	17 07 34.8	+0.8
JKRS	Kuro-shima	1.83	129	P	Pn	17 07 03.5	+0.8
JKRS				S	S	17 07 34.2	+0.2
OWD	Renai	1.84	219	*e*P	Pn	17 07 04.1	+1.3
	baz=228						
OWD				*i* S	S	17 07 34.7	+0.2
	baz=228						
WUSB	Renai	1.84	221	P	Pn	17 07 03.1	+0.2
	baz=238						
WUSB				*i* S	S	17 07 35.3	+0.8
	baz=238						
JIJ	Ishigaki jima	1.86	123	P	Pn	17 07 03.1	+0.3
JIJ				S	S	17 07 33.4	-1.1
JISG	Ishigakijimahi	1.88	115	P	Pn	17 07 03.6	+0.5
JISG				S	S	17 07 34.7	-0.1
WCS	Beigang Elemen	1.92	227	P	Pn	17 07 03.2	-0.3
	baz=241						
WCS				*e*S	S	17 07 34.1	-1.4
	baz=241						
DPDB	Guoxing	1.93	226	*i* P	Pn	17 07 03.7	+0.1
	baz=240						
DPDB				*e*S	S	17 07 36.2	+0.4
	baz=240						
VWDT	VWDT	2.01	216	*e*P	Pn	17 07 05.2	+0.9
	baz=228						
VWDT				*e*S	S	17 07 37.9	+0.8
	baz=228						
SSLB	Suanglung	2.09	221	P	Pn	17 07 05.0	-0.1
	baz=238						
SSLB				*e*S	S	17 07 38.0	-0.5
	baz=238						
JTJ	Tarama	2.19	110	S	S	17 07 39.7	-0.2
WHYT	Xinyi Township	2.22	221	*i* P	Pn	17 07 06.1	-0.3
	baz=235						
WHYT				*e*S	S	17 07 40.1	-0.7
	baz=235						

ROM 14 17:08:31.6±0.0, **42.767°N**±0.002°×**13.068°E**±0.004°, **h11**km, **ML1.1**/4, **Error ellipse: s-maj=0.3km s-min=0.2km az=290.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	Cascia, Frazio	0.02	228	P	Pg	17 08 34.0	+0.3
T1212				S	Sg	17 08 35.2	+0.1
T1212				AML	AML		
	comp=E,284μm,0.4s						
T1212				AML	AML		
	comp=N,251μm,0.1s						
T1218	Civita (PG)	0.10	160	P	Pg	17 08 35.0	+0.5
T1218				S	Sg	17 08 37.1	+0.6
T1218				AML	AML		
	comp=E,148μm,0.1s						
T1218				AML	AML		
	comp=N,235μm,0.2s						
T1218				AML	AML		
	comp=N,234μm,0.2s						
T1218				AML	AML		
	comp=E,148μm,0.1s						
T1217	Poggiodomo (PG	0.12	241	P	Pg	17 08 35.1	+0.4
T1217				S	Sg	17 08 37.4	+0.6
T1245	Castelsantange	0.13	45	P	Pg	17 08 35.3	+0.5
T1245				S	Sg	17 08 37.7	+0.6
T1245				AML	AML		
	comp=E,252μm,0.7s						
T1245				AML	AML		
	comp=N,148μm,0.8s						
T1245				AML	AML		
	comp=N,148μm,0.8s						
T1216	Preci, Frazion	0.13	344	P	Pg	17 08 35.2	+0.4
T1216				S	Sg	17 08 37.8	+0.8
MC2	Monte Cornacci	0.17	32	P	Pg	17 08 36.2	+0.6
MMO1	Montemonaco	0.23	55	P	Pg	17 08 37.0	+0.5
FDMO	Fiordimonte	0.27	3	P	Pg	17 08 37.8	+0.6
FDMO				S	Sg	17 08 42.0	+1.1
FDMO				AML	AML		
	comp=E,17μm,1.3s						
FDMO				AML	AML		
	comp=N,33μm,0.2s						
FDMO				AML	AML		
	comp=E,17μm,1.3s						
FDMO				AML	AML		
	comp=E,17μm,0.7s						
RM33	Pellescritta (	0.28	157	P	Pg	17 08 37.8	+0.4
RM33				S	Sg	17 08 42.2	+1.0
T1211	Morro Reatino	0.28	214	P	Pg	17 08 37.8	+0.4
T1211				S	Sb	17 08 42.7	-0.8
T1241	Roccafluvione,	0.28	71	P	Pg	17 08 38.0	+0.6
T1241				S	Sb	17 08 42.6	-1.0
TERO	Teramo	0.42	110	P	Pg	17 08 40.2	+0.3
GAG1	Gagliole	0.47	360	P	Pn	17 08 43.2	-1.2
APEC	Apecchio	0.92	329	P	Pg	17 08 47.8	-1.7

ROM 14 17:09:12.9±0.0, **42.970°N**±0.002°×**13.101°E**±0.003°, **h10**km, **ML1.4**/15, **3C-2D, Error ellipse: s-maj=0.2km s-min=0.1km az=38.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FDMO	Fiordimonte	0.07	352	P	Pg	17 09 15.6	+0.3
FDMO				S	Sg	17 09 17.1	+0.2
FDMO				AML	AML		
	comp=E,329μm,0.4s						
FDMO				AML	AML		
	comp=N,305μm,0.2s						
MC2	Monte Cornacci	0.09	131	P	Pg	17 09 16.0	+0.4
MC2				S	Sg	17 09 17.9	+0.4
T1216	Preci, Frazion	0.10	217	P	Pg	17 09 16.1	+0.5
T1216				S	Sg	17 09 18.1	+0.6
T1216				AML	AML		

	comp=E,820µm,0.4s						
T1216				AML	AML		
	comp=N,490µm,0.1s						
T1256	**Bolognola (MC)**	**0.10**	**68**	⇑P	Pg	17 09 16.1	+0.4
T1256				S	Sg	17 09 18.2	+0.4
T1256				AML	AML		
	comp=N,136µm,0.6s						
T1256				AML	AML		
	comp=E,118µm,0.4s						
T1219	**Muccia, Frazio**	**0.11**	**321**	P	Pg	17 09 16.3	+0.5
T1219				S	Sg	17 09 18.4	+0.6
T1219				AML	AML		
	comp=N,386µm,0.1s						
T1219				AML	AML		
	comp=E,356µm,0.2s						
T1219				AML	AML		
	comp=N,407µm,0.3s						
T1219				AML	AML		
	comp=E,364µm,0.2s						
T1245	**Castelsantange**	**0.13**	**150**	P	Pg	17 09 16.6	+0.4
T1245				AML	AML		
	comp=N,223µm,1.0s						
T1245				AML	AML		
	comp=E,186µm,0.3s						
T1220	**Camerino, Fraz**	**0.14**	**356**	P	Pg	17 09 16.8	+0.6
T1220				S	Sg	17 09 19.4	+0.9
CESI	**CESI - Serrava**	**0.15**	**284**	P	Pg	17 09 17.0	+0.7
CESI				S	Sg	17 09 19.7	+1.0
CESI				AML	AML		
	comp=E,134µm,0.4s						
CESI				AML	AML		
	comp=E,134µm,1.6s						
CESI				AML	AML		
	comp=N,211µm,0.3s						
MMO1	**Montemonaco**	**0.18**	**113**	P	Pg	17 09 17.4	+0.6
MMO1				S	Sg	17 09 20.5	+0.9
T1212	**Cascia, Frazio**	**0.22**	**191**	AML	AML		
	comp=E,184µm,0.9s						
T1212				AML	AML		
	comp=N,182µm,0.1s						
T1212				AML	AML		
	comp=N,183µm,0.1s						
T1212				AML	AML		
	comp=E,184µm,0.9s						
T1215	**Vallo di Nera,**	**0.24**	**226**	P	Pg	17 09 18.5	+0.6
T1215				S	Sg	17 09 22.3	+1.1
T1215				AML	AML		
	comp=N,132µm,0.3s						
T1215				AML	AML		
	comp=N,132µm,0.3s						
T1215				AML	AML		
	comp=E,100µm,0.1s						
T1241	**Roccafluvione,**	**0.27**	**115**	P	Pg	17 09 19.1	+0.7
T1241				S	Sb	17 09 23.4	-1.1
T1241				AML	AML		
	comp=N,105µm,0.1s						
T1241				AML	AML		
	comp=E,114µm,0.4s						
T1217	**Poggiodomo (PG**	**0.29**	**206**	AML	AML		
	comp=E,95µm,0.2s						
T1217				AML	AML		
	comp=E,95µm,0.2s						
T1217				AML	AML		
	comp=N,105µm,0.2s						
T1217				AML	AML		
	comp=N,105µm,0.2s						
SNTG	**Esanatoglia**	**0.31**	**338**	P	Pg	17 09 19.6	+0.4
SNTG				S	Sb	17 09 24.7	-1.0
SNTG				AML	AML		
	comp=E,30µm,1.4s						
SNTG				AML	AML		
	comp=N,34µm,1.0s						
SNTG				AML	AML		
	comp=E,30µm,0.6s						
ASSB	**Assisi San Ben**	**0.33**	**283**	⇓P	Pg	17 09 20.1	+0.5
ASSB				S	Sb	17 09 25.4	-1.0
ASSB				AML	AML		
	comp=E,111µm,0.7s						
ASSB				AML	AML		
	comp=N,82µm,0.4s						
ASSB				AML	AML		
	comp=E,111µm,1.3s						
EL6	**Elcito**	**0.36**	**0**	⇑P	Pg	17 09 20.7	+0.5
EL6				S	Sb	17 09 26.4	-0.8
ATCC	**AVT- Casa Cast**	**0.40**	**303**	P	Pb	17 09 21.5	-0.6
ATCC				AML	AML		
	comp=E,98µm,0.3s						
ATCC				AML	AML		
	comp=N,45µm,0.6s						
ATCC				AML	AML		
	comp=N,45µm,1.4s						
MURB	**Monte Urbino**	**0.51**	**305**	⇓P	Pg	17 09 23.5	+0.5
MURB				AML	AML		
	comp=E,70µm,0.3s						
MURB				AML	AML		
	comp=N,58µm,0.4s						
PP3	**Marolino**	**0.55**	**42**	⇑P	Pg	17 09 23.0	-0.7
AQU	**L'Aquila**	**0.65**	**160**	AML	AML		
	comp=N,142µm,1.1s						
AQU				AML	AML		
	comp=E,174µm,0.1s						
AQU				AML	AML		
	comp=N,142µm,0.9s						
FIU	**Minerbio Fiu**	**2.04**	**326**	P	Pg	17 09 51.8	-0.2
MAIM	**Mastiano**	**2.12**	**297**	P	Pg	17 09 53.6	0.0

NNC 14 17:12:59.2±5.4, 36°.86N×69°.51E, h0^{km}, mb3.8, mpv3.5, 4C, Error ellipse: s-maj=51.0km s-min=37.3km az=136.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**5.30**	**4**	Pg	Pn	17 14 22.0	+2.3
	17nm,0.3s						
IUG				Lg	Lg	17 15 24.9	
	16nm,0.4s						
AML	**Almayashu**	**6.18**	**30**	⇑P	Pn	17 14 32.3	+0.2
	0.5nm,0.6s						
AML				⇑S	Sn	17 15 43.8	+0.2
	1.5nm,0.6s						
KK31	**Karatay Array**	**6.28**	**7**	⇑P	Pn	17 14 34.4	+1.3
	0.7nm,0.3s,baz=194,slow=14,SNR=14						
KK31				⇑S	Sn	17 15 47.6	+1.9
	0.5nm,0.3s,baz=195,slow=24,SNR=4.4						
MRKS	**Merke**	**6.54**	**25**	Pg	Pn	17 14 38.8	+2.1
	2.0nm,0.4s						
MRKS				Lg	Lg	17 15 53.2	
	6.2nm,0.6s						
AB31	**Akbulak array**	**14.21**	**334**	P	Pn	17 16 18.8	-2.8
	0.3nm,0.4s,baz=154,slow=12,SNR=22						

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*IDC **14** 17:13:20.3±1.6, 59°.40N×139°.13W, h0^{km}, mb3.5/5, mbtmp3.4/7, ML2.9/2, Error ellipse: s-maj=37.1km s-min=17.7km az=26.0*

*AEIC **14** 17:13:20.5±1.6, 59°.52N±0°.05×138°.85W±0°.07, h6^{km}±3^{km}, Error ellipse: s-maj=7.6km s-min=3.6km az=212.0*

*ANF **14** 17:13:20.1±0.3, 59°.51N×138°.86W, h4^{km}±2^{km}, ML3.7/38, Error ellipse: s-maj=2.4km s-min=1.5km az=23.0*

*PGC **14** 17:13:20.7±0.2, 59°.45N×138°.87W, h5^{km}, ML3.3, ML3.6/15, 39km Ene of Yakutat, Ak Southeastern Alaska*

*NEIC **14** 17:13:21.4±1.6, 59°.54N±0°.05×138°.89W±0°.07, h11^{km}±7^{km}, ML3.5/18, ML3.6(OTT), ML3.3(AEIC), Error ellipse: s-maj=7.8km s-min=3.8km az=210.0*

ISC 14 17:13:20.7±0.6, 59°.53N±0°.02×138°.85W±0°.02, h10^{km}, n204, σ1^{s}53/277, mb3.5/5, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PNL	**Peninsula**	**0.31**	**298**		Pn	17 13 31.1	-0.3
PNL	**Peninsula**	**0.31**	**298**	P	Pb	17 13 27.0	-1.4
PNL				S	Pn	17 13 31.1	-0.3
PNL	**Peninsula**	**0.31**	**298**	P	Pg	17 13 26.9	-0.1
	baz=117,SNR=1000						
PNL				S	Sg	17 13 30.3	-0.9
	baz=117						
YKU2	**Yakutat**	**0.42**	**269**	Pg	Pb	17 13 29.6	-0.6
YKU2				Sg	Sb	17 13 37.1	+0.6
BCPM	**Bancas Point**	**0.59**	**318**		Pg	17 13 31.7	-0.4
BCPM				Sg	Sg	17 13 39.4	-0.3
BCPM				IAML		17 13 42.1	
	comp=E,3µm,0.3s						
O29M	**Mount Kennedy**	**0.79**	**10**	P	Pg	17 13 35.7	-0.3
O29M				S	Sb	17 13 46.5	-0.9
O29M	**Mount Kennedy**	**0.79**	**10**	P	Pg	17 13 35.5	-0.5
	baz=190						
O29M				S	Sg	17 13 46.3	0.0
	baz=190						
PINM	**Pinnacle**	**0.91**	**310**	P	Pg	17 13 36.9	-1.3
	baz=128,SNR=370						
PINM				S	Sb	17 13 50.4	-0.5
	baz=128						
PCA	**Pinnacle**	**0.91**	**309**		Pg	17 13 36.9	-1.4
PCA	**Pinnacle**	**0.91**	**309**		Sb	17 13 50.5	-0.4
PCA	**Pinnacle**	**0.91**	**309**	P	Pg	17 13 36.9	-1.4
PCA				S	Sb	17 13 50.5	-0.4
YUK7	**Dusty Glacier**	**1.07**	**19**	P	Pg	17 13 40.7	-0.6
YUK7				S	Sb	17 13 55.7	+0.2
P30M	**Million Dollar**	**1.13**	**57**	P	Pg	17 13 41.9	-0.4
P30M				S	Sn	17 13 57.2	-0.9
P30M	**Million Dollar**	**1.13**	**57**	P	Pb	17 13 41.8	-0.5
	baz=238,SNR=1000						
P30M				S	Sb	17 13 57.1	+0.1
	baz=238						
SAMH	**Samovar Hills**	**1.15**	**303**		Pb	17 13 41.5	-1.2
SAMH	**Samovar Hills**	**1.15**	**303**	P	Pb	17 13 41.4	-1.3
SAMH				S	Sn	17 13 59.4	+0.6
PLBC	**Pleasant Camp**	**1.27**	**92**	P	Pn	17 13 43.4	-1.1
PLBC				S	Sb	17 14 00.1	-0.9
PLBC	**Pleasant Camp**	**1.27**	**92**	P	Pn	17 13 43.4	-1.1
	baz=274,SNR=1000						
PLBC				S	Sb	17 14 00.3	-0.7
	baz=274						
O28M	**Mount Upton**	**1.42**	**332**	Pn	Pn	17 13 46.2	-0.6
O28M				Sg	Sn	17 14 05.3	-0.4
O28M	**Mount Upton**	**1.42**	**332**	P	Pn	17 13 46.2	-0.6
	baz=151						
O28M				S	Sb	17 14 05.0	-0.7
	baz=151						
YUK6	**Outpost Mounta**	**1.44**	**9**	Pn	Pb	17 13 47.2	-0.6
YUK6				Sg	Sg	17 14 06.8	-0.3
YUK6	**Outpost Mounta**	**1.44**	**9**	P	Pb	17 13 47.0	-0.8
	baz=190,SNR=1000						
YUK6				S	Sg	17 14 06.6	-0.5
	baz=190						
HYT	**Haines Junctio**	**1.47**	**27**	Pn	Pb	17 13 47.6	-0.5
HYT					Sg	17 14 07.2	-0.6
HYT	**Haines Junctio**	**1.47**	**27**	Pn	Pb	17 13 47.6	-0.5
HYT				Sg	Sg	17 14 07.4	-0.4
HYT	**Haines Junctio**	**1.47**	**27**	P	Pb	17 13 47.6	-0.5
	baz=208,SNR=1000						
HYT				S	Sg	17 14 07.3	-0.6
	baz=208						
YUK5	**Granite Creek**	**1.69**	**17**	Pn	Pb	17 13 51.7	-0.2
YUK5				Sg	Sg	17 14 14.1	-0.8
LOGN	**Logan Glacier**	**1.69**	**321**		Pn	17 13 50.2	-0.2
LOGN				Sn	Sn	17 14 11.8	-0.4
LOGN				IAML		17 14 16.7	
	comp=E,499nm,0.7s						
LOGN	**Logan Glacier**	**1.69**	**321**	Pn	Pb	17 13 50.5	-1.4
LOGN				Sg	Sb	17 14 12.6	-0.7
SKAG	**Skagway**	**1.80**	**91**		Pb	17 13 52.3	-1.3
SKAG				Sn	Sb	17 14 16.0	-0.2
SKAG				IAML		17 14 18.3	
	comp=N,369nm,0.6s						
SKAG				IAML		17 14 18.5	
	comp=E,452nm,0.7s						
SKAG	**Skagway**	**1.80**	**91**	P	Pb	17 13 52.3	-1.3
	baz=274,SNR=125						
SKAG				S	Sb	17 14 15.7	-0.5
	baz=274						
YUK8	**Steele Glacier**	**1.82**	**346**	Pn	Pb	17 13 52.8	-1.4
YUK8				Pg	Pg	17 13 54.6	-1.0
YUK8				Sg	Sg	17 14 18.6	-0.7
YUK8	**Steele Glacier**	**1.82**	**346**	P	Pb	17 13 52.6	-1.6
	baz=165,SNR=1000						
YUK8				Sb	Sg	17 14 18.5	-0.7
	baz=165						
YUK4	**Talbot Arm**	**1.83**	**3**	Pn	Pg	17 13 54.8	-1.0
YUK4				Pg	Pb	17 13 56.4	+2.1
YUK4	**Talbot Arm**	**1.83**	**3**	P	Pg	17 13 54.5	-1.2
	baz=185,SNR=780						
O30N	**Mendenhall**	**1.86**	**47**	P	Pb	17 13 53.6	-1.2
	baz=229,SNR=592						
O30N				S	Sb	17 14 17.9	-0.2
	baz=229						
CTGM	**Chitina Glacie**	**1.90**	**320**		Pn	17 13 53.5	+0.2
CTGM				Sn	Sb	17 14 18.4	-1.1
CTGM				IAML		17 14 20.7	
	comp=N,484nm,0.6s						
CTGM				IAML		17 14 20.8	
	comp=E,384nm,0.8s						
CTGM	**Chitina Glacie**	**1.90**	**320**	Pn	Pn	17 13 53.5	+0.2
CTGM				Sn	Sb	17 14 18.6	-0.8
CTG	**Chitna Glacier**	**1.91**	**320**	P	Pn	17 13 53.3	0.0
	baz=138,SNR=573						
CTG				S	Sb	17 14 18.2	-1.2
	baz=138						
R31K	**City Hall, Gus**	**1.96**	**123**	S	Sb	17 14 19.7	-1.1
	baz=306						
S31K	**Pelican**	**2.08**	**138**	P	Pn	17 13 55.4	-0.1
	baz=320,SNR=155						
BARN	**Barnard Glacie**	**2.08**	**319**		Pn	17 13 56.0	+0.2
BARN				Sn	Sn	17 14 21.9	+0.1
BARN				IAML		17 14 31.7	
	comp=N,308nm,0.5s						
BARN				IAML		17 14 31.8	
	comp=E,448nm,0.5s						
N30M	**Aishikik Lake**	**2.13**	**23**	Pn	Pn	17 13 57.2	+0.9
N30M				Sn	Sn	17 14 23.8	+1.0
N30M	**Aishikik Lake**	**2.13**	**23**	P	Pn	17 13 56.9	+0.6
	baz=205						
N30M				S	Sn	17 14 23.8	+1.0
	baz=205						
KIAG	**Kiagna River**	**2.24**	**310**		Pn	17 13 57.7	-0.3
KIAG	**Kiagna River**	**2.24**	**310**	Pn	Pn	17 13 58.0	-0.1
KIAG				Sn	Sb	17 14 27.5	-1.8
BESE	**Bessie Mountai**	**2.27**	**113**		Pb	17 13 59.7	-2.1
BESE	**Bessie Mountai**	**2.27**	**113**	Pn	Pn	17 13 57.8	-0.5
BESE				Sg	Sb	17 14 30.3	+0.3
BALM	**Baldy**	**2.31**	**313**		Pn	17 13 58.8	-0.1
BALM	**Baldy**	**2.31**	**313**	Pn	Pn	17 13 58.9	-0.1
BALM				Sn	Sb	17 14 28.9	-2.2
YUK3	**Moose Creek**	**2.39**	**341**	Pn	Pn	17 14 00.5	+0.4
YUK3				Sn	Sb	17 14 32.8	-0.8
YUK3	**Moose Creek**	**2.39**	**341**	P	Pn	17 14 00.3	+0.2
	baz=160,SNR=44						
YUK3				Sb	Sg	17 14 35.2	-2.3
	baz=160						
YUK2	**White River**	**2.47**	**337**	Pn	Pn	17 14 01.5	+0.4
YUK2				Sg	Sg	17 14 38.2	-1.9
N31M	**Braeburn, Yuko**	**2.48**	**36**		Pn	17 14 02.1	+0.9
N31M				IAML		17 14 40.9	
	comp=N,319nm,0.6s						
N31M	**Braeburn, Yuko**	**2.48**	**36**	Pn	Pn	17 14 02.4	+1.2
N31M				Pg	Pg	17 14 06.7	-1.6
N31M				Sn	Sb	17 14 33.6	-2.4
N31M	**Braeburn, Yuko**	**2.48**	**36**	P	Pn	17 14 02.3	+1.1
	baz=219,SNR=112						
N31M				S	Sn	17 14 33.3	+1.7
	baz=219						
R32K	**Eaglecrest**	**2.57**	**117**	P	Pn	17 14 01.3	-1.1
	baz=301,SNR=100						
P32M	**Atlin**	**2.62**	**86**	Pn	Pn	17 14 03.3	+0.3
P32M				Sn	Sn	17 14 36.0	+1.2
P32M	**Atlin**	**2.62**	**86**	P	Pn	17 14 03.0	0.0
	baz=271,SNR=195						
P32M				S	Sn	17 14 35.8	+1.0
	baz=271						
JIS	**Juneau Island**	**2.63**	**116**		Pn	17 14 02.6	-0.5
MCARA	**McCarthy VSAT**	**2.79**	**314**	Pn	Pn	17 14 05.5	+0.2
MCARA	**McCarthy VSAT**	**2.79**	**314**	P	Pn	17 14 05.5	+0.2
	baz=130,SNR=144						
VRDI	**Verde Repeater**	**2.85**	**309**		Pn	17 14 06.0	-0.4
M29M	**Somme Creek**	**2.94**	**4**	Pn	Pn	17 14 08.2	+0.8
M29M				Sg	Sg	17 14 52.6	-2.2
M29M	**Somme Creek**	**2.94**	**4**	P	Pn	17 14 08.3	+0.8
	baz=184						
M29M				Sb	Sg	17 14 52.4	-2.5
	baz=184						
S32K	**Killisnoo**	**3.05**	**131**	Pb	Pb	17 14 14.6	-0.4
	baz=314						
S32K				Sb	Sb	17 14 53.2	+1.1
	baz=314						
BVCY	**Beaver Creek**	**3.06**	**342**	Pg	Pb	17 14 16.3	+1.1
BVCY				Sg	Sg	17 14 58.1	-0.8
SIT	**Sitka**	**3.10**	**142**	Pn	Pn	17 14 10.4	+0.9
SIT	**Sitka**	**3.10**	**142**	Sb	Sb	17 14 55.3	+1.8
	baz=325						
GLB	**Gilahina Butte**	**3.12**	**310**		Pn	17 14 09.8	-0.2
P33M	**Teslin, Yukon**	**3.12**	**75**	Pn	Pn	17 14 09.7	-0.2
P33M				IAML		17 14 58.4	
	comp=E,181nm,0.6s						
P33M	**Teslin, Yukon**	**3.12**	**75**	Pn	Pn	17 14 09.9	-0.1
P33M	**Teslin, Yukon**	**3.12**	**75**	P	Pn	17 14 09.8	-0.2
	baz=260,SNR=13						
P33M				Sb	Sb	17 14 57.1	+2.8
	baz=260						
M27K	**Edge Creek, AK**	**3.20**	**334**	Pn	Pn	17 14 11.3	+0.1
M27K	**Edge Creek, AK**	**3.20**	**334**	Pn	Pn	17 14 11.5	+0.4
M27K				Pg	Pb	17 14 18.1	+0.4
M27K				Sg	Sg	17 15 01.0	-2.4
M27K	**Edge Creek, AK**	**3.20**	**334**	P	Pn	17 14 11.6	+0.4
	baz=151						
M30M	**Minto, Yukon**	**3.22**	**17**		Pn	17 14 11.9	+0.6
M30M	**Minto, Yukon**	**3.22**	**17**	Pn	Pn	17 14 12.4	+1.1
M30M				Pg	Pb	17 14 19.4	+1.5
M30M				Sg	Sg	17 15 01.4	-2.6
M30M	**Minto, Yukon**	**3.22**	**17**	P	Pn	17 14 12.2	+0.9
	baz=199,SNR=58						
Q32M	**Nakina River**	**3.43**	**97**	P	Pn	17 14 14.3	0.0
	baz=282,SNR=36						
M31M	**Drury Creek, Y**	**3.46**	**37**		Pn	17 14 15.8	+1.3
M31M	**Drury Creek, Y**	**3.46**	**37**	Pn	Pn	17 14 16.1	+1.5
M31M				Sn	Sn	17 14 55.9	+0.3
M31M				Sg	Sg	17 15 09.7	-2.0
M31M	**Drury Creek, Y**	**3.46**	**37**	P	Pn	17 14 16.1	+1.5
	baz=221,SNR=18						
M31M				S	Sn	17 14 57.3	+1.7
	baz=221						
M26K	**Nabesna, AK**	**3.52**	**327**		Pn	17 14 15.2	-0.2
M26K	**Nabesna, AK**	**3.52**	**327**	P	Pn	17 14 15.6	+0.1
	baz=143,SNR=22						
M26K				S	Sn	17 14 58.0	+0.8
	baz=143						
N25K	**Chitina, Valde**	**3.52**	**309**	Pn	Pn	17 14 15.5	0.0
N25K	**Chitina, Valde**	**3.52**	**309**	P	Pn	17 14 15.6	+0.1
	baz=124						
N25K				S	Sn	17 14 58.0	+0.7
	baz=124						
EYAK	**Cordova Ski Ar**	**3.61**	**289**	Pn	Pn	17 14 17.3	+0.7
L29M	**L29M**	**3.61**	**5**	Pn	Pn	17 14 17.9	+1.2
L29M				Pg	Pg	17 14 27.2	-2.7
L29M				Sg	Sg	17 15 13.7	-2.9
L29M	**L29M**	**3.61**	**5**	P	Pn	17 14 17.8	+1.0
	baz=186						
DIV	**Divide**	**3.80**	**298**		Pn	17 14 18.1	-1.2
FARO	**Faro, Yukon**	**3.82**	**42**		Pn	17 14 20.6	+1.0
FARO	**Faro, Yukon**	**3.82**	**42**	Pn	Pn	17 14 21.2	+1.6
FARO				Sn	Sn	17 15 04.5	0.0
FARO				Sg	Sg	17 15 20.4	-2.8
FARO	**Faro, Yukon**	**3.82**	**42**	P	Pn	17 14 20.9	+1.4
	baz=227,SNR=14						
FARO				S	Sn	17 15 06.4	+1.9
	baz=227						
BCAR	**Beaver Creek A**	**3.83**	**340**		Pn	17 14 18.8	-0.8
L27K	**Beaver Creek,**	**3.83**	**339**	Pn	Pn	17 14 20.6	+0.9
L27K	**Beaver Creek,**	**3.83**	**339**	Pn	Pn	17 14 21.4	+1.7
L27K				Pg	Pg	17 14 31.0	-3.0
L27K				Sg	Sg	17 15 22.7	-0.8
KLU	**Klutina**	**4.01**	**302**		Pn	17 14 22.8	+0.5
KLU	**Klutina**	**4.01**	**302**	P	Pn	17 14 22.6	+0.4
	baz=116						
L26K	**Log Cabin Wild**	**4.13**	**330**		Pn	17 14 24.0	+0.2
MAYO	**Mayo, Yukon**	**4.32**	**18**	Pn	Pn	17 14 26.6	+0.2
MAYO	**Mayo, Yukon**	**4.32**	**18**	Sn	Sn	17 15 17.0	+0.2
MAYO				Sg	Sg	17 15 35.3	-4.0
S34M	**Telegraph Cree**	**4.34**	**109**	Pn	Pn	17 14 26.9	+0.3
S34M				Sg	Sg	17 15 33.9	-5.9
S34M	**Telegraph Cree**	**4.34**	**109**	P	Pn	17 14 26.9	+0.3
	baz=295,SNR=28						
K29M	**Barlow Dome**	**4.38**	**8**	Pn	Pn	17 14 28.9	+1.6
K29M				Sg	Sg	17 15 38.5	-2.7
K29M	**Barlow Dome**	**4.38**	**8**	P	Pn	17 14 28.7	+1.4
	baz=189,SNR=91						
M24K	**Tolsona, Glenn**	**4.42**	**309**		Pn	17 14 28.2	+0.3
M24K	**Tolsona, Glenn**	**4.42**	**309**	P	Pn	17 14 28.5	+0.6
	baz=123						
DAWY	**Dawson**	**4.56**	**357**	Pn	Pn	17 14 30.0	+0.2
DAWY	**Dawson**	**4.56**	**357**	Pn	Pn	17 14 30.6	+0.8
DAWY				Sn	Sn	17 15 23.2	+0.4
DAWY				Sg	Sg	17 15 45.1	-2.0
DAWY	**Dawson**	**4.56**	**357**	P	Pn	17 14 30.8	+1.0
	baz=176,SNR=22						
WRAK	**Wrangell Islan**	**4.66**	**129**	Pn	Pn	17 14 31.3	+0.3
WRAK	**Wrangell Islan**	**4.66**	**129**	P	Pn	17 14 31.2	+0.3
	baz=315						
DLBC	**Dease Lake**	**4.69**	**100**	Pn	Pn	17 14 31.5	-0.1
DLBC	**Dease Lake**	**4.69**	**100**	Pn	Pn	17 14 32.1	+0.5
DLBC				Sn	Sn	17 15 25.1	-1.0
DLBC				Sg	Sg	17 15 45.8	-5.4
DLBC	**Dease Lake**	**4.69**	**100**	P	Pn	17 14 31.5	-0.1
	baz=287						
PAX	**Paxson**	**4.71**	**320**	Pn	Pn	17 14 32.8	+1.0
SCM	**Sheep Creek Mo**	**4.77**	**303**		Pn	17 14 32.9	+0.3
SCM	**Sheep Creek Mo**	**4.77**	**303**	P	Pn	17 14 32.9	+0.3
	baz=115						
K27K	**Chicken**	**4.77**	**343**	Pn	Pn	17 14 32.8	+0.2
MMPY	**Sheldon Lake,**	**4.82**	**47**	Pn	Pn	17 14 34.8	+1.6
MMPY				Sn	Sn	17 15 29.8	+0.8
MMPY				Sg	Sg	17 15 52.5	-2.6
MMPY	**Sheldon Lake,**	**4.82**	**47**	P	Pn	17 14 34.8	+1.6
	baz=233,SNR=188						
DOT	**Dot Lake**	**4.83**	**331**		Pn	17 14 33.2	-0.1
DOT	**Dot Lake**	**4.83**	**331**	Pn	Pn	17 14 34.8	+1.4
PWL	**Port Wells**	**4.92**	**290**	Pn	Pn	17 14 33.7	-0.9
PWL	**Port Wells**	**4.92**	**290**	P	Pn	17 14 34.1	-0.6
	baz=102						
J29M	**Klondike Camp**	**4.96**	**3**	Pn	Pn	17 14 36.1	+1.0
J29M	**Klondike Camp**	**4.96**	**3**	Sg	Sg	17 15 57.3	-2.3
SCRK	**Sand Creek**	**5.09**	**334**		Pn	17 14 35.9	-1.1
SCRK	**Sand Creek**	**5.09**	**334**	P	Pn	17 14 38.2	+1.2
	baz=149						
RIDG	**Independent Ri**	**5.10**	**329**		Pn	17 14 36.9	-0.3
CRAG	**Craig**	**5.11**	**140**	Pn	Pn	17 14 38.7	+1.6
WTLY	**Watson Lake, Y**	**5.11**	**79**	Pn	Pn	17 14 37.1	-0.1
WTLY	**Watson Lake, Y**	**5.11**	**79**	Sg	Sg	17 15 58.9	-5.6
WTLY	**Watson Lake, Y**	**5.11**	**79**	P	Pn	17 14 37.3	0.0
	baz=268						
KNK	**Knik Glacier**	**5.12**	**296**	Pn	Pn	17 14 37.4	+0.1
KNK	**Knik Glacier**	**5.12**	**296**	P	Pn	17 14 37.9	+0.6
	baz=108						
SML	**Sawmill**	**5.19**	**300**	Pn	Pn	17 14 38.4	0.0
SML	**Sawmill**	**5.19**	**300**	P	Pn	17 14 39.3	+0.8
	baz=112						
T35M	**Bob Quinn**	**5.21**	**116**	Sg	Sg	17 16 02.0	-5.7
T35M	**Bob Quinn**	**5.21**	**116**	P	Pn	17 14 38.9	+0.3
	baz=303						
EGAK	**Eagle**	**5.38**	**349**		Pn	17 14 40.8	-0.1
EGAK	**Eagle**	**5.38**	**349**	P	Pn	17 14 42.8	+1.9
	baz=167,SNR=12						
SEW	**Seward**	**5.38**	**281**	Pn	Pn	17 14 39.3	-1.6
GHO	**Glory Hole Cre**	**5.44**	**299**	Pn	Pn	17 14 42.3	+0.4
J26L	**Joseph Creek**	**5.46**	**338**		Pn	17 14 42.0	-0.1
PMR	**Palmer**	**5.48**	**297**	Pn	Pn	17 14 42.2	0.0
O22K	**Cooper Landing**	**5.54**	**285**	Pn	Pn	17 14 42.8	-0.3
RC01	**Rabbit Creek A**	**5.64**	**291**	Pn	Pn	17 14 44.0	-0.5
I29M	**Ogilvie Camp,**	**5.86**	**2**	Sn	Sn	17 15 55.2	+0.4
BRSE	**Bradley Lake S**	**6.04**	**277**	P	Pn	17 14 49.6	-0.4
	baz=87						
BRLK	**Bradley Lake**	**6.11**	**277**	Pn	Pn	17 14 50.8	-0.2
I26K	**Coal Creek Min**	**6.14**	**343**	Pn	Pn	17 14 53.5	+2.2
RND	**Reindeer**	**6.17**	**313**	Pn	Pn	17 14 51.5	-0.3
HDA	**Harding Lake**	**6.21**	**326**	Pn	Pn	17 14 50.5	-1.8
I27K	**Kandik River**	**6.23**	**349**	Pn	Pn	17 14 54.7	+2.1
I27K				Sg	Sg	17 16 34.7	-5.9
CUT	**Chulitna**	**6.26**	**302**	Pn	Pn	17 14 51.8	-1.2
CNPM	**China Poot**	**6.30**	**275**	Pn	Pn	17 14 53.0	-0.6
MCK	**McKinley**	**6.39**	**316**	Pn	Pn	17 14 57.0	+2.2
IL31		**6.47**	**328**	Pn	Pn	17 14 55.4	-0.4
ILAR	**Eielson Array**	**6.47**	**328**	Pn	Pn	17 14 56.2	+0.4
	comp=E,0.2nm,0.3s,baz=154,slow=13,SNR=13						
ILAR				Lg	Lg	17 16 43.1	
	comp=E,0.2nm,0.3s,baz=134,slow=26,SNR=3.7						
	comp=E,0.6nm,0.5s						
HOM	**Homer**	**6.50**	**277**	Pn	Pn	17 14 58.5	+2.3
LIRD	**Liard River Hi**	**6.50**	**86**	Sg	Sg	17 16 41.5	-7.6
WRH	**Wood River Hil**	**6.59**	**323**	Pn	Pn	17 14 58.7	+1.1
SKT	**Skwentna**	**6.68**	**297**	Pn	Pn	17 14 58.7	-0.1
TRF	**Thorofare Moun**	**6.74**	**311**		Pn	17 15 01.1	+1.4
H27K	**Steamboat Moun**	**6.84**	**351**	Pn	Pn	17 15 02.9	+2.0

H27K				Sg	Sg	17 16 54.8	-5.2
BWN	Browne	6.85	317	Pn	Pn	17 15 00.6	-0.4
NEA2	Nenana	6.99	321	Pn	Pn	17 15 04.7	+1.7
MDM	Murphy Dome	6.99	325	Pn	Pn	17 15 03.8	+0.8
KTH	Kantishna Hill	7.04	310		Pn	17 15 05.0	+1.3
ILSW	Iliamna Southw	7.24	280	Pn	Pn	17 15 06.0	-0.4
DIB	Dawson Inlet,	7.26	148	Pn	Pn	17 15 08.0	+1.4
PPLA	Purkeypile	7.27	303	Pn	Pn	17 15 07.0	0.0
BPAW	Bear Paw Mtn.	7.35	314	Pn	Pn	17 15 07.7	-0.2
KDAK	Kodiak Island	7.38	262	Pn	Pn	17 15 06.7	-1.6
G27K	Doyon Strip	7.42	351	Pn	Pn	17 15 10.3	+1.4
G27K				Sg	Sg	17 17 11.8	-6.7
CAST	Castle Rocks	7.44	307	Pn	Pn	17 15 09.2	+0.1
I23K	Minto, Yukon-K	7.46	324	Pn	Pn	17 15 10.4	+1.0
Q19K	Cape Douglas,	7.62	272	Pn	Pn	17 15 10.7	-0.9
FYU	Fort Yukon	7.63	340	Pn	Pn	17 15 12.5	+0.7
MLY	Manley	7.82	320	Pn	Pn	17 15 14.2	-0.2
N19K	Bonanza Creek	7.90	286	Pn	Pn	17 15 14.9	-0.7
FNBB	Fort Nelson	8.15	88	Sg	Sg	17 17 31.6	-10
K20K	Telida	8.24	304	Pn	Pn	17 15 19.3	-0.8
O18K	Koktuh Hills	8.28	279	Pn	Pn	17 15 20.2	-0.6
NBC2	NorthernBC 2	8.29	81	Sg	Sg	17 17 36.9	-10
I21K	Tanana	8.32	319	Pn	Pn	17 15 21.0	-0.2
BMAR	Burnt Mountain	8.33	345	Pn	Pn	17 15 22.9	+1.4
P18K	Big Mountain,	8.35	276	Pn	Pn	17 15 21.2	-0.4
H21K	Melozitna Rive	8.89	320	Pn	Pn	17 15 30.4	+1.4
TTA	Tatalina	8.95	300	Pn	Pn	17 15 31.0	+1.1
IMAR	Indian Mountai	9.39	320	Pn	Pn	17 15 37.1	+1.2
YKA	Yellowknife Ar	12.10	65	Pn	Pn	17 16 13.0	+0.1
	comp=E,0.1nm,0.3s,baz=264,slow=13,SNR=5.3						
YKA				Lg	Lg	17 19 40.4	
	baz=258,slow=28,SNR=4.4						
	comp=E,0.4nm,0.7s						
PDAR	Pinedale Array	24.57	120	P	P	17 18 42.4	+1.6
	comp=E,0.1nm,0.3s,baz=332,slow=5.1,SNR=2.6						
	comp=E,0.1nm,0.3s						
H11N2	WAKE ISLAND Hy	55.30	248	T	T	18 22 06.5	
	baz=30,slow=76,SNR=18						
H11N3	WAKE ISLAND Hy	55.31	248	T	T	18 22 08.8	
	baz=30,slow=76,SNR=19						
H11N1	WAKE ISLAND Hy	55.32	248	T	T	18 22 02.0	
	baz=30,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	56.45	248	T	T	18 23 21.0	
	baz=30,slow=75,SNR=29						
H11S2	WAKE ISLAND Hy	56.46	248	T	T	18 23 11.2	
	baz=30,slow=75,SNR=16						
H11S3	WAKE ISLAND Hy	56.47	248	T	T	18 23 22.1	
	baz=30,slow=75,SNR=12						
SONM	Songino Array	60.53	315	P	P	17 23 32.2	+1.5
	comp=E,0.2nm,0.7s,baz=36,slow=7.6,SNR=2.2						
	comp=E,0.2nm,0.7s						
MKAR	Makanchi Array	68.81	331	P	P	17 24 27.5	+2.8
	comp=E,0.2nm,0.6s,baz=30,slow=5.5,SNR=2.1						
	comp=E,0.2nm,0.6s						
BRTR	Keskin Array B	80.91	6	P	P	17 25 36.6	+1.7
	comp=E,0.5nm,0.5s,baz=2.9,slow=8.7,SNR=3.8						
	comp=E,0.5nm,0.5s						
CMAR	Chiang Mai Arr	89.26	307	P	P	17 26 17.0	+0.1
	comp=E,0.5nm,0.7s,baz=23,slow=4.9,SNR=4.2						
	comp=E,0.5nm,0.7s						

ANF ***14*** *17:14:04.5±0.1, 33°.24N×116°.05W, h15^{km}, ML3.7/23, Error ellipse: s-maj=1.3km s-min=1.1km az=112.0*
NEIC ***14*** *17:14:05.3±1.1, 33°.24N±0°.01×116°.07W±0°.01, h18^{km}±1^{km}, Error ellipse: s-maj=2.1km s-min=0.7km az=221.0*
PAS ***14*** *17:14:05.6±1.6, 33°.239N±0°.009×116°.05W±0°.01, h5^{km}±5^{km}, Mwr3.6/6, ML3.6/52(NEIC), Error ellipse: s-maj=1.4km s-min=1.3km az=52.0*
IDC ***14*** *17:14:08.7±3.4, 33°.42N×115°.89W, h0^{km}, mbtmp2.7/3, ML3.4/3, Error ellipse: s-maj=56.1km s-min=15.1km az=48.0*
ISC 14 17:14:05.4±0.9**, 33°.22N**±0°.01×**116°.05W**±0°.01**, h21**^{km}±1^{km}**, n165, σ0^{s}.88**/228**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALN	Salton City	0.08	41		Pb	17 14 09.3	0.0
SLH	Sleepy Hollow	0.18	260		Pb	17 14 09.4	-1.8
SLH					Sb	17 14 12.6	-2.7
ERRC	Elmore Ranch	0.21	119		Pb	17 14 15.1	+3.9
BOMB	Bombay Beach	0.30	62		Pb	17 14 11.8	-0.3
BOMB					Sb	17 14 16.7	0.0
BORC	Borrego Spring	0.31	279		Pb	17 14 11.5	-0.8
BORC					Sb	17 14 16.1	-0.9
SUP	Superstition M	0.33	145		Pb	17 14 12.3	-0.2
SUP					Sb	17 14 17.1	-0.2
CRR	Carrizo Plain	0.34	169		Pb	17 14 12.6	0.0
CRR					Sb	17 14 18.2	+0.6
SWSC	Sam W. Stewart	0.34	143		Pb	17 14 12.6	-0.1
SWSC					Sb	17 14 17.8	0.0
SWSC	Sam W. Stewart	0.34	143	P	Pb	17 14 12.6	-0.1
	baz=325,SNR=741						
SWSC				S	Sb	17 14 17.6	-0.1
	baz=325						
CLI2	Calipatria 2	0.40	104		Pb	17 14 13.8	+0.1
CLI2					Sn	17 14 21.1	-1.7
CTCC	Cactus City	0.43	6		Pb	17 14 13.7	-0.6
CTCC					Sb	17 14 19.8	-0.5
MONP2	Monument Peak	0.46	224		Pb	17 14 14.5	-0.3
MONP2					Sb	17 14 20.8	-0.3
MONP2	Monument Peak	0.46	224	P	Pb	17 14 14.5	-0.3
	baz=42,SNR=450						
MONP2				S	Sb	17 14 20.7	-0.4
	baz=42						
COK2	Cook Ranch 2	0.46	144		Pb	17 14 15.2	+0.5
COK2					Sn	17 14 22.5	-1.6
CTW	Cottonwood Mou	0.48	18		Pb	17 14 14.3	-0.8
CTW					Sb	17 14 20.8	-0.8
JUEM	Julian Eagle M	0.48	253		Pb	17 14 15.0	-0.3
JUEM					Sb	17 14 21.4	-0.5
MATG	Mataguay Scout	0.50	268		Pb	17 14 15.2	-0.4
MATG					Sb	17 14 22.1	-0.4
PMD	Palm Desert	0.51	327		Pb	17 14 14.5	-1.1
PMD				Sg	Sb	17 14 20.6	-2.0
PMD				IAML		17 14 21.2	
	comp=N,3µm,0.3s						
PMD				IAML		17 14 21.4	
	comp=E,6µm,0.4s						
XPFO	Pion Flat	0.52	319		Pb	17 14 14.9	-0.9
XPFO					Sb	17 14 21.6	-1.4
IMPE	Imperial	0.52	128		Pn	17 14 16.6	-0.8
IMPE					Sn	17 14 25.3	-0.4
PFO	Pinyon Flats O	0.52	318		Pb	17 14 14.9	-0.9
PFO				Sg	Sb	17 14 21.4	-1.6
PFO				IAML		17 14 22.4	
	comp=E,5µm,0.5s						
PFO				IAML		17 14 22.5	
	comp=E,7µm,0.3s						
PFO	Pinyon Flats O	0.52	318		Pb	17 14 15.0	-0.9
PFO					Sb	17 14 21.5	-1.6
PFO	Pinyon Flats O	0.52	318	P	Pb	17 14 15.0	-0.9
	baz=137,SNR=855						
PFO				S	Sb	17 14 21.8	-1.3
	baz=137						
WESC	Westside Schoo	0.53	150		Pb	17 14 16.4	+0.4
WESC					Sn	17 14 24.9	-1.1
FRD	Ford Ranch, An	0.54	300		Pb	17 14 15.7	-0.6
FRD					Sb	17 14 22.8	-0.8
FRD	Ford Ranch, An	0.54	300		Pb	17 14 15.6	-0.6
FRD					Sb	17 14 22.9	-0.7
HAY	Hayfield	0.57	32		Pb	17 14 16.5	-0.3
HAY					Sb	17 14 24.5	-0.1
IKP	In-Ko-Pah, Jac	0.57	185		Pb	17 14 16.6	-0.3
IKP					Sb	17 14 24.7	+0.1
IKP	In-Ko-Pah, Jac	0.57	185	P	Pb	17 14 16.6	-0.3
	baz=5.2,SNR=1000						
IKP				S	Sb	17 14 24.7	+0.1
	baz=5.2						
SNDA	J Saunders Pla	0.58	305		Pb	17 14 16.4	-0.6
SNDA					Sb	17 14 24.5	-0.3
YUH	Yuha Desert	0.58	170	Pg	Pb	17 14 16.5	-0.5
YUH				Sg	Sb	17 14 24.6	-0.2
YUH				IAML		17 14 26.3	
	comp=N,2µm,0.2s						
BZNA	Buzz No.'s Pla	0.58	298		Pb	17 14 16.6	-0.4
BZNA					Sb	17 14 24.2	-0.9
DNR	Dunn Ranch,Anz	0.60	305		Pb	17 14 16.8	-0.5
DNR					Sb	17 14 25.1	-0.4
RMX	La Rumorosa	0.62	182		Pn	17 14 18.3	-0.7
RMX	La Rumorosa	0.62	182	Sg	Sn	17 14 27.4	-0.9
RMX				IAML		17 14 29.0	
	comp=E,2µm,0.5s						
RMX				IAML		17 14 29.1	
	comp=N,1µm,0.4s						
DREC	Desert Rsrch C	0.65	129		Pn	17 14 19.2	-0.1
DREC					Sn	17 14 29.9	+1.0
BC3	Big Chuckawall	0.66	49		Pb	17 14 17.9	-0.5
BC3					Sb	17 14 26.7	-0.4
BC3	Big Chuckawall	0.66	49	P	Pb	17 14 17.8	-0.5
	baz=230,SNR=482						
BC3				S	Sb	17 14 26.9	-0.1
	baz=230						
CRY	Cary Ranch	0.67	301		Pb	17 14 18.2	-0.3
CRY					Sb	17 14 26.8	-0.7
GVDA	Garner Valley	0.69	311		Pb	17 14 18.2	-0.6
GVDA					Sb	17 14 27.2	-0.8
PLM	Palomar	0.69	281		Pb	17 14 18.6	-0.3
PLM					Sb	17 14 28.2	+0.1
EML	El Monte Cty P	0.75	244		Pb	17 14 19.5	-0.2
EML					Sb	17 14 29.1	-0.4
BAR	Barrett	0.75	224		Pb	17 14 19.4	-0.4
BAR				Sg	Sb	17 14 29.2	-0.4
BELC	Belle Mtn. Jos	0.78	3		Pb	17 14 19.7	-0.6
BELC					Sb	17 14 30.2	-0.3
BELC	Belle Mtn. Jos	0.78	3	P	Pb	17 14 19.7	-0.6
	baz=183,SNR=451						
BELC				S	Sb	17 14 30.2	-0.3
	baz=183						
EW2	E Wide Canyon	0.78	337		Pb	17 14 19.8	-0.5
EW2					Sb	17 14 30.1	-0.3
UABX	UABC, Campus M	0.78	139		Pb	17 14 20.0	-0.2
UABX				Sg	Sn	17 14 32.0	-0.1
DPP	Dos Picos Cty	0.78	254		Pb	17 14 20.1	-0.2
DPP					Pn	17 14 30.2	+9.0
TKX	Tecate	0.80	216		Pb	17 14 20.5	-0.2
TKX	Tecate	0.80	216	Sg	Sb	17 14 30.8	-0.3
DEVC	Devers	0.84	328		Pb	17 14 20.9	-0.3
DEVC					Sb	17 14 31.4	-0.7
COA	Coachella	0.85	114		Pb	17 14 21.0	-0.5
COA					Sn	17 14 33.7	-0.2
DUZA	Dulzura	0.87	225		Pb	17 14 21.5	-0.2
DUZA					Sb	17 14 33.0	+0.1
POB	Polly Butte	0.87	303		Pb	17 14 21.5	-0.3
POB					Sb	17 14 32.5	-0.5
TPC	Twentynine Pal	0.88	360		Pb	17 14 21.5	-0.5
BLAC	Blackrock camp	0.89	341		Pb	17 14 21.8	-0.5
BLAC					Sb	17 14 33.3	-0.5
SDRC	San Diego Road	0.90	237		Pb	17 14 21.9	-0.2
SDRC					Sb	17 14 33.6	-0.1
DGR	Domenigoni Val	0.91	298		Pb	17 14 22.2	-0.3
DGR					Sn	17 14 34.4	-1.1
BACC	Bachelor Mtn.	0.92	295		Pb	17 14 22.3	-0.3
BACC					Sb	17 14 34.1	-0.2
RUN	Ruthven	0.93	105		Pb	17 14 22.1	-0.7
MTRP	Mission Trails	0.94	245		Pn	17 14 23.0	-0.3
109C	Camp Elliot, M	0.95	250	P	Pn	17 14 23.0	-0.4
	baz=68						
109C				S	Sb	17 14 35.0	-0.2
	baz=68						
OLP	Otay Lakes Par	0.96	231		Pn	17 14 23.3	-0.3
GORC	Green Oak Ranc	0.99	266		Pb	17 14 23.5	-0.3
EMSC	East Mesa	1.01	118		Pn	17 14 24.1	-0.2
CPBX	Cerro Prieto	1.02	142		Pb	17 14 23.1	-1.1
CPBX				Sg	Sn	17 14 38.3	+0.3
MURC	Murrieta	1.03	292		Pb	17 14 24.1	-0.5
MURC	Murrieta	1.03	292	P	Pb	17 14 24.0	-0.5
	baz=110,SNR=301						
MURC				S	Sn	17 14 38.1	-0.3
	baz=110						
GLA	Glamis	1.04	99		Pb	17 14 23.7	-0.9
GLA				Sg	Sb	17 14 37.1	-0.7
GLA				IAML		17 14 39.4	
	comp=N,1µm,0.6s						
GLA				IAML		17 14 41.5	
	comp=E,1µm,0.7s						
GLA	Glamis	1.04	99	P	Pb	17 14 23.7	-0.9
	baz=281,SNR=120						
GLA				S	Sb	17 14 37.2	-0.6
	baz=281						
CBX	Cerro Bola	1.04	210		Pn	17 14 24.9	0.0
CBX				Sg	Sn	17 14 38.6	-0.2
CBX				IAML		17 14 41.2	
	comp=E,2µm,0.6s						
CBX				IAML		17 14 42.6	
	comp=N,1µm,0.6s						
BBSC	Beaumont Base	1.05	312		Pn	17 14 24.9	+0.1
GTM	Goat Mountain	1.10	347		Pb	17 14 25.3	-0.4
TJX	Tijuana	1.11	230		Pb	17 14 26.1	+0.3
TJX				Sg	Sn	17 14 40.8	+0.6
PEC	Perris	1.15	306		Pb	17 14 26.0	-0.5
IRM	Iron Mountain	1.20	39		Pb	17 14 27.1	-0.3
IRM	Iron Mountain	1.20	39	P	Pn	17 14 26.2	-0.7
	baz=220,SNR=449						
IRM				S	Sn	17 14 42.4	-0.1
	baz=220						
CFT	Crafton Hills	1.20	313		Pb	17 14 28.3	+0.8
ESJX	Sierra Juarez	1.22	176		Pn	17 14 27.0	-0.3
ELS	Elsinore Mount	1.23	291		Pn	17 14 27.0	-0.4
ELS				Sg	Sb	17 14 43.2	-0.2
SVD	Seven Oaks Dam	1.24	315		Pb	17 14 28.7	+0.6
BBRC	Big Bear Solar	1.27	325		Pb	17 14 28.7	0.0
BBRC	Big Bear Solar	1.27	325	Pg	Pb	17 14 28.7	0.0
	baz=144						
BBRC				S	Sb	17 14 45.0	+0.3
	baz=144						
SIL	Silver Peak	1.30	330		Pb	17 14 29.4	+0.3
RVR	Riverside	1.35	305		Pb	17 14 30.7	+0.8
BLYC	Blythe	1.38	67		Pn	17 14 28.4	-0.9
BLYC				IAML		17 14 50.4	
	comp=E,780nm,0.6s						
BLYC				IAML		17 14 53.6	
	comp=N,677nm,0.7s						
GMRC	Granite Mounta	1.59	12	P	Pn	17 14 31.8	-0.6
	baz=192,SNR=264						
GMRC				Sb	Sb	17 14 54.9	+1.0
	baz=192						
HEC	Hector,Ludlow	1.62	352	P	Pn	17 14 32.4	-0.3
	baz=171,SNR=242						
BFSC	Mount Baldy Ra	1.68	307	P	Pn	17 14 33.3	-0.3
	baz=126,SNR=154						
BFSC				Sb	Sb	17 14 57.5	+1.0
	baz=126						
RRX	Edison Barstow	1.83	335	Pg	Pb	17 14 39.1	+1.0
	baz=154						
VTX	Valle De La Tr	1.84	173		Pn	17 14 36.5	+0.8
PDMCI	Parker Dam,Lak	1.92	55	Sb	Sb	17 15 04.1	+0.9
	baz=237						
FMP	Fort Macarthur	1.94	285	Pb	Pb	17 14 39.7	-0.3
	baz=104						
NEE2	Needles Airpor	1.94	37	Sb	Sb	17 15 05.3	+1.4
	baz=218						
113A	Mohawk Valley,	1.97	103		Pn	17 14 37.0	-0.4
CIS	Catalina Islan	1.99	276	Pb	Pb	17 14 40.6	-0.3
	baz=94,SNR=124						
PASC	Pasadena Art C	2.02	299		Pb	17 14 39.6	-1.7
PASC				IAML		17 15 08.4	
	comp=N,434nm,0.6s						
DECC	Green Verdugo	2.17	299	Pb	Pb	17 14 43.7	-0.1
	baz=117						
DECC				Sb	Sb	17 15 11.8	+1.5
	baz=117						
GSC	Goldstone, Bar	2.17	343		Pn	17 14 40.4	+0.1
GSC				IAML		17 15 20.6	
	comp=E,432nm,1.3s						
GSC				IAML		17 15 25.1	
	comp=N,329nm,0.8s						
GSC	Goldstone, Bar	2.17	343	Sb	Sb	17 15 13.1	+2.7
	baz=163						
TUQ	Turquoise Moun	2.21	3	P	Pn	17 14 40.4	-0.6
	baz=183,SNR=93						
EDW2	Edwards Air Fo	2.31	316	Sb	Sb	17 15 16.4	+1.9
	baz=135						
SFX	San Felipe	2.40	155	Pg	Pb	17 14 49.5	+1.7
CCAC	Calif City Air	2.52	320		Pn	17 14 45.8	+0.7
W13A	Hualapai Mount	2.59	43		Pn	17 14 46.3	+0.1
Y14A	Wickenburg	2.64	73		Pb	17 14 49.4	-2.5
V12A	Nelson	2.69	21		Pn	17 14 48.7	+1.3
PIX	Pinacate	2.75	126	Pn	Pn	17 14 47.3	-0.8
QSM	Queen of Sheba	2.82	346		Pn	17 14 49.1	-0.1
SNCC	San Nicolas Is	2.92	271	Pn	Pn	17 14 50.4	-0.1
GWY	Greenwater Val	3.00	350		Pn	17 14 51.3	-0.5
214A	Organ Pipe Nat	3.01	114		Pn	17 14 51.6	-0.2
ISA	Isabella, Lake	3.15	321		Pn	17 14 53.8	0.0
ISA				IAML		17 15 47.5	
	comp=N,141nm,0.7s						
ISA				IAML		17 15 48.1	
	comp=E,224nm,0.8s						
BCW	Bitter Crk WRg	3.28	302		Pn	17 14 55.4	-0.2
BCW				IAML		17 15 55.0	
	comp=N,218nm,0.6s						
SHPR	Sheep Range	3.36	12		Pn	17 14 57.0	+0.4
TPNV	Topopah Spring	3.72	357		Pn	17 15 02.4	+0.7
TPNV				IAML		17 16 07.0	
	comp=N,84nm,0.5s						
TPNV				IAML		17 16 07.6	
	comp=N,68nm,0.7s						
GRAC	Grapevine Rang	3.92	344		Pn	17 15 05.3	+1.1
GRAC				IAML		17 16 13.2	
	comp=E,126nm,1.3s						
GRAC				IAML		17 16 15.0	
	comp=N,110nm,0.8s						
LCH	Last Change Ra	4.21	342		Pn	17 15 09.4	+1.0
PRN	Pahroc Range	4.25	11		Pn	17 15 10.3	+1.3
S11A	Rachel	4.42	3		Pn	17 15 13.0	+1.7
LCMT	Little Creek M	4.42	30		Pn	17 15 12.9	+1.5
DSP	Deep Springs	4.43	340		Pn	17 15 12.8	+1.6
U15A	North Rim	4.45	43		Pn	17 15 13.1	+1.3
WUAZ	Wupatki	4.49	58		Pn	17 15 14.6	+2.3
TUC	Tucson	4.53	100		Pn	17 15 14.0	+1.3
MZP	Montezuma Peak	4.60	347		Pn	17 15 13.5	-0.4
CCUT	Cedar City	4.84	26		Pn	17 15 18.4	+1.2
SZCU	Shurtz Canyon	4.99	28		Pn	17 15 20.1	+0.9
OMMB	Old Mammoth Mi	5.00	332		Pn	17 15 19.1	-0.4
MDPB	Devils Postpil	5.05	331		Pn	17 15 20.3	+0.3
R11A	Troy Canyon, C	5.13	4		Pn	17 15 22.4	+1.4
PKCU	Pink Cliffs	5.20	35		Pn	17 15 21.3	-0.9
X18A	Snowflake	5.24	74		Pn	17 15 22.7	+0.2
BBGB	Big Mountain B	5.29	311	Pn	Pn	17 15 23.0	-0.3
LHV	Little Huntoon	5.40	339		Pn	17 15 25.5	+0.9
NV11	Mina Array Sit	5.47	342		Pn	17 15 27.2	+1.4
NVAR	Mina Array Bea	5.51	341	Pn	Pn	17 15 29.6	+3.3
	comp=N,0.4nm,0.3s,baz=166,slow=15,SNR=3.2						
NVAR				Pg	Pb	17 15 42.3	+1.3
	comp=N,0.3nm,0.3s,baz=162,slow=16,SNR=3.6						
NVAR				Lg	Lg	17 16 59.0	
	comp=N,0.5nm,0.3s,baz=168,slow=30,SNR=1.7						
	comp=N,0.3nm,0.4s						
NVAR	Mina Array Bea	5.51	341		Pn	17 15 28.2	+1.9
W18A	Petrified Fore	5.56	68		Pn	17 15 27.0	0.0
Q09A	Carvers	5.67	351	Pn	Pn	17 15 30.6	+2.1
MTPU	Mount Pierson	5.75	32	Pn	Pn	17 15 30.2	+0.5
Q12A	Willow Creek R	5.89	9		Pn	17 15 31.1	-0.3
SPR3	Spring Creek 3	5.93	13	Pn	Pn	17 15 32.3	+0.1
WAKR	Walker	5.95	333		Pn	17 15 31.9	-0.4
CMB	Columbia Colle	5.96	325		Pn	17 15 32.7	+0.3
KVN	Kaiserville	6.05	345		Pn	17 15 33.9	+0.2
TCRU	Three Creeks R	6.12	27		Pn	17 15 34.3	-0.4
MVU	Marysvale	6.12	29		Pn	17 15 35.8	+1.0
MSU	Marysvale	6.14	30		Pn	17 15 35.6	+0.6
YERR	Yerington	6.30	337		Pn	17 15 37.3	+0.1
EMB	Emerald Bay	6.61	331		Pn	17 15 41.6	+0.1
SRIG	Santa Rosalia	6.74	150		Pn	17 15 44.5	+1.5
121A	Cookes Peak, D	6.98	93		Pn	17 15 46.6	+0.1
MVCO	Mesa Verde	7.35	55	Pn	Pn	17 15 52.0	+0.5
SRU	San Rafael Swe	7.38	36	Pn	Pn	17 15 52.5	+0.5
DUG	Dugway, Tooele	7.43	20	Pn	Pn	17 15 52.2	-0.4
ELK	Elko	7.54	5		Pn	17 15 53.1	-1.1
PV13	Radium Mtn., P	7.67	48	Pn	Pn	17 15 57.1	+1.1
PV11	David Mesa, Pa	7.72	47	Pn	Pn	17 15 56.5	-0.2
PV23	Carpenter Ridg	7.74	46		Pn	17 15 57.2	+0.2
P18A	Preston Nutter	7.92	35	Pn	Pn	17 15 58.7	-0.8
PV07	Paradox Valley	7.95	47	Pn	Pn	17 15 59.7	-0.1
ANMO	Albuquerque	8.14	75	Pn	Pn	17 16 02.8	+0.3
PDAR	Pinedale Array	10.81	26	Pn	Pn	17 16 44.7	+5.7
	comp=N,0.1nm,0.3s,baz=191,slow=14,SNR=1.5						
	comp=N,0.1nm,0.4s						
TXAR	Lajitas Array	11.28	107	Pn	Pn	17 16 52.3	+7.0
	comp=N,0.1nm,0.3s,baz=288,slow=15,SNR=2.6						
	comp=N,0.3nm,0.7s						

LDG ***14*** *17:15:17.4±0.1, 42°.35N×13°.34E, h10^{km}, Ml2.9/15, Error ellipse: s-maj=3.9km s-min=2.4km az=43.0*
ROM ***14*** *17:15:17.5±0.1, 42°.363N±0°.004×13°.344E±0°.004, h10^{km}, ML3.2/98, Error ellipse: s-maj=0.4km s-min=0.3km az=153.0*
IDC ***14*** *17:15:19.2±2.0, 42°.62N×13°.43E, h0^{km}, mb3.3/1, mbtmp3.3/3, ML3.2/2, Error ellipse: s-maj=49.6km s-min=20.2km az=92.0*
PRU ***14*** *17:15:20.7±0.0, 42°.42N×13°.68E, h10^{km}*
BEO ***14*** *17:15:24.8±2.0, 42°.49N×13°.34E, h104^{km}±6^{km}, ML3.1/5*
ISC 14 17:15:18.2±0.8**, 42°.37N**±0°.02×**13°.34E**±0°.02**, h12**^{km}±4^{km}**, n189, σ1^{s}.96**/219**, 29C-37D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.05	112	P	Pg	17 15 20.2	-0.4
AQU				S	Sg	17 15 21.7	-0.6
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
T1247	Pizzolo (AQ)	0.07	338	P	Pg	17 15 20.6	-0.3
T1247				S	Sg	17 15 22.4	-0.4
T1247				AML	AML		
T1247				AML	AML		
T1247				AML	AML		
RM33	Pellescritta (	0.16	327	P	Pg	17 15 21.9	-0.1
RM33				S	Sg	17 15 24.8	+0.1
RM33				AML	AML		
	comp=N,21250µm,0.2s						
RM33				AML	AML		
	comp=E,25650µm,0.4s						
RM33				AML	AML		
	comp=N,20350µm,0.3s						
RM33				AML	AML		
	comp=E,25300µm,0.3s						
CAMP	Campotosto	0.17	19	P	Pg	17 15 22.0	-0.2
CAMP				S	Sg	17 15 25.0	0.0
CAMP				AML	AML		
	comp=N,36300µm,0.4s						
CAMP				AML	AML		
	comp=E,20450µm,0.3s						
GIGS	Gran Sasso	0.19	66	P	Pg	17 15 22.1	-0.3
GIGS				S	Sg	17 15 25.3	-0.1
GIGS				AML	AML		
	comp=N,7900µm,0.3s						
GIGS				AML	AML		
	comp=E,12035µm,0.3s						
FIAM	Fiamignano	0.19	237	P	Pg	17 15 22.3	-0.2
FIAM				S	Sg	17 15 25.5	0.0
FIAM				AML	AML		
	comp=N,27300µm,0.5s						
FIAM				AML	AML		
	comp=E,27400µm,0.7s						
FIAM				AML	AML		
	comp=N,27300µm,1.5s						
FAGN	Fagnano	0.21	120	P	Pg	17 15 22.6	-0.2
FAGN				AML	AML		
	comp=N,68800µm,0.3s						
FAGN				AML	AML		
	comp=E,74850µm,0.4s						
T1222	Castel Sant'An	0.22	277	P	Pg	17 15 22.9	-0.1
T1222				S	Sg	17 15 26.8	+0.6
T1222				AML	AML		
	comp=E,22550µm,1.6s						
T1222				AML	AML		
	comp=N,16700µm,0.3s						
T1222				AML	AML		
	comp=N,17050µm,0.3s						
T1222				AML	AML		
	comp=E,22850µm,1.6s						
T1222				AML	AML		
	comp=E,22550µm,1.5s						
T1222				AML	AML		
	comp=E,22850µm,1.5s						
T1222				AML	AML		
	comp=N,16700µm,0.3s						
T1222				AML	AML		
	comp=E,22550µm,0.5s						
T1222				AML	AML		
	comp=N,17050µm,0.3s						
T1222				AML	AML		
	comp=E,22850µm,0.5s						

SMA1	**SAN MARTINO**	**0.26**	**0**	P	**Pg**	**17 15 23.4**	**-0.2**	
SMA1				S	**Sg**	**17 15 28.4**	**+1.1**	
SMA1				AML	AML			comp=N,21000µm,0.4s
SMA1				AML	AML			comp=E,34150µm,0.5s
TERO	**Teramo**	**0.32**	**38**	P	**Pg**	**17 15 24.1**	**-0.5**	
TERO				S	**Sg**	**17 15 29.9**	**+0.9**	
TERO				AML	AML			comp=N,20800µm,0.9s
TERO				AML	AML			comp=E,20500µm,0.7s
TERO				AML	AML			comp=N,20300µm,0.9s
TERO				AML	AML			comp=E,21100µm,0.7s
TERO				AML	AML			comp=N,20300µm,1.1s
TERO				AML	AML			comp=N,20800µm,1.1s
T1218	**Civita (PG)**	**0.34**	**331**	P	**Pg**	**17 15 24.7**	**-0.3**	
T1218				S	**Sg**	**17 15 31.0**	**+1.3**	
T1218				AML	AML			comp=E,5805µm,0.6s
T1218				AML	AML			comp=N,6505µm,0.3s
T1218				AML	AML			comp=E,6165µm,0.7s
T1218				AML	AML			comp=N,6485µm,0.3s
PTQR	**Pietraquaria**	**0.35**	**172**	P	**Pg**	**17 15 24.7**	**-0.6**	
PTQR				AML	AML			comp=E,6490µm,0.6s
PTQR				AML	AML			comp=N,7330µm,0.2s
T0110	**Collepietro**	**0.36**	**114**	P	**Pg**	**17 15 25.0**	**-0.4**	
T0110				AML	AML			comp=N,12100µm,0.4s
T0110				AML	AML			comp=E,16950µm,1.0s
T0110				AML	AML			comp=N,12100µm,1.6s
VCEL	**Villa Celiera**	**0.38**	**87**	P	**Pg**	**17 15 25.6**	**-0.1**	
VCEL				AML	AML			comp=N,26650µm,0.6s
VCEL				AML	AML			comp=E,25600µm,1.3s
T1211	**Morro Reatino**	**0.39**	**294**	P	**Pg**	**17 15 25.5**	**-0.5**	
T1211				S	**Sg**	**17 15 32.1**	**+0.9**	
T1211				AML	AML			comp=E,5215µm,0.4s
T1211				AML	AML			comp=N,7730µm,0.5s
T1211				AML	AML			comp=E,5225µm,0.4s
T1211				AML	AML			comp=E,5215µm,0.5s
T1211				AML	AML			comp=E,5225µm,0.5s
T1211				AML	AML			comp=N,7580µm,0.6s
T1214	**Arquata del Tr**	**0.40**	**346**	P	**Pg**	**17 15 26.0**	**-0.1**	
T1214				S	**Sg**	**17 15 32.4**	**+0.9**	
T1214				AML	AML			comp=E,4230µm,1.2s
T1214				AML	AML			comp=N,3630µm,1.3s
T1214				AML	AML			comp=N,3625µm,1.4s
T1214				AML	AML			comp=E,4145µm,0.4s
T1214				AML	AML			comp=N,3565µm,1.4s
T1214				AML	AML			comp=E,4230µm,0.8s
T1214				AML	AML			comp=N,3565µm,0.6s
T1214				AML	AML			comp=N,3625µm,0.6s
T1212	**Cascia, Frazio**	**0.43**	**330**	P	**Pg**	**17 15 26.4**	**-0.4**	
T1212				S	**Sg**	**17 15 33.9**	**+1.3**	
T1212				AML	AML			comp=N,2790µm,0.8s
T1212				AML	AML			comp=E,3140µm,0.6s
T1212				AML	AML			comp=E,3145µm,0.6s
T1212				AML	AML			comp=N,2825µm,0.8s
T1212				AML	AML			comp=N,2825µm,1.2s
T1212				AML	AML			comp=E,3325µm,0.6s
T1212				AML	AML			comp=N,2790µm,1.2s
T1217	**Poggiodomo (PG**	**0.45**	**319**	P	**Pg**	**17 15 26.7**	**-0.4**	
T1217				S	**Sg**	**17 15 33.9**	**+0.8**	
T1217				AML	AML			comp=E,3370µm,0.7s
T1217				AML	AML			comp=N,3435µm,0.4s
T1217				AML	AML			comp=E,3180µm,0.8s
T1217				AML	AML			comp=N,3600µm,0.4s
T1217				AML	AML			comp=E,3370µm,0.8s
T1217				AML	AML			comp=N,3600µm,0.4s
T1217				AML	AML			comp=E,3370µm,1.2s
T1217				AML	AML			comp=E,3175µm,0.8s
ARRO	**Arrone**	**0.47**	**296**	P	**Pg**	**17 15 27.0**	**-0.4**	
ARRO				S	**Sg**	**17 15 34.6**	**+1.0**	
ARRO				AML	AML			comp=E,2525µm,0.5s
ARRO				AML	AML			comp=N,2795µm,0.8s
ARRO				AML	AML			comp=N,2795µm,1.2s
T1241	**Roccafluvione,**	**0.49**	**8**	AML	AML			comp=N,4025µm,1.5s
T1241				AML	AML			comp=N,4025µm,0.5s
T1241				AML	AML			comp=N,4080µm,0.5s
T1241				AML	AML			comp=E,4585µm,0.6s
T1241				AML	AML			comp=E,4775µm,0.6s
T1241				AML	AML			comp=N,4080µm,1.5s
T1245	**Castelsantange**	**0.49**	**347**	P	**Pg**	**17 15 27.5**	**-0.4**	
T1245				S	**Sg**	**17 15 35.3**	**+0.7**	
T1245				AML	AML			comp=N,7345µm,0.5s
T1245				AML	AML			comp=E,7490µm,0.3s
T1245				AML	AML			comp=N,6785µm,0.5s
T1245				AML	AML			comp=E,7520µm,0.3s
T1245				AML	AML			comp=N,7345µm,0.4s
CERT	**Cerreto**	**0.50**	**212**	⇑P	**Pg**	**17 15 27.3**	**-0.6**	
CERT				AML	AML			comp=N,4160µm,0.3s
CERT				AML	AML			comp=E,6325µm,0.3s
MMO1	**Montemonaco**	**0.53**	**359**	P	**Pg**	**17 15 27.9**	**-0.6**	
MMO1				S	**Sg**	**17 15 36.0**	**+0.5**	
VVLD	**Villa Vallelon**	**0.55**	**157**	⇑P	**Pg**	**17 15 27.9**	**-0.9**	
VVLD				AML	AML			comp=N,2350µm,0.6s
VVLD				AML	AML			comp=E,1875µm,1.5s
VVLD				AML	AML			comp=N,2350µm,1.4s
VVLD				AML	AML			comp=E,1875µm,0.5s
MC2	**Monte Cornacci**	**0.55**	**349**	P	**Pg**	**17 15 28.4**	**-0.6**	
T1215	**Vallo di Nera,**	**0.55**	**321**	P	**Pg**	**17 15 28.3**	**-0.6**	
T1215				S	**Sg**	**17 15 37.2**	**+0.9**	
T1215				AML	AML			comp=E,1895µm,0.8s
T1215				AML	AML			comp=N,1230µm,0.6s
T1215				AML	AML			comp=N,1320µm,0.6s
T1215				AML	AML			comp=E,1955µm,0.8s
INTR	**Introdacqua**	**0.56**	**130**	⇓P	**Pg**	**17 15 28.4**	**-0.7**	
INTR				AML	AML			comp=E,2µm,1.0s
INTR				AML	AML			comp=N,3µm,0.4s
INTR				AML	AML			comp=N,4390µm,0.5s
INTR				AML	AML			comp=E,2430µm,1.0s
INTR				AML	AML			comp=N,3µm,0.5s
INTR				AML	AML			comp=E,2µm,1.0s
MTCE	**Montecelio**	**0.56**	**232**	⇑P	**Pg**	**17 15 28.5**	**-0.7**	
MTCE				AML	AML			comp=N,2020µm,0.6s
MTCE				AML	AML			comp=E,2510µm,0.5s
T1216	**Preci, Frazion**	**0.57**	**336**	P	**Pg**	**17 15 28.7**	**-0.6**	
T1216				AML	AML			comp=E,4085µm,0.6s
T1216				AML	AML			comp=N,4400µm,1.6s
T1216				AML	AML			comp=E,4090µm,0.6s
T1216				AML	AML			comp=N,4395µm,1.6s
T1216				AML	AML			comp=N,4395µm,0.4s
GUAR	**Guarcino**	**0.58**	**182**	⇓P	**Pg**	**17 15 29.8**	**+0.3**	
GUAR				AML	AML			comp=N,4780µm,0.4s
GUAR				AML	AML			comp=E,4095µm,0.5s
CESX	**Cesi**	**0.61**	**293**	⇑P	**Pg**	**17 15 29.4**	**-0.6**	
CESX				AML	AML			comp=N,3105µm,0.4s
CESX				AML	AML			comp=E,2285µm,0.4s
OFFI	**Offida**	**0.62**	**25**	P	**Pg**	**17 15 29.8**	**-0.4**	
OFFI				AML	AML			comp=E,15800µm,0.7s
OFFI				AML	AML			comp=N,16700µm,0.8s
OFFI				AML	AML			comp=N,16700µm,1.2s
SRES	**S.Oreste - Sor**	**0.63**	**258**	⇑P	**Pg**	**17 15 30.6**	**+0.3**	
SRES				AML	AML			comp=E,1565µm,1.1s
SRES				AML	AML			comp=N,1430µm,1.3s
SRES				AML	AML			comp=N,1430µm,0.7s
T1256	**Bolognola (MC)**	**0.64**	**353**	P	**Pg**	**17 15 29.8**	**-0.8**	
T1256				AML	AML			comp=E,1930µm,0.6s
T1256				AML	AML			comp=N,2340µm,0.4s
FDMO	**Fiordimonte**	**0.69**	**345**	P	**Pg**	**17 15 30.7**	**-0.9**	
FDMO				AML	AML			comp=E,1380µm,0.2s
FDMO				AML	AML			comp=N,1260µm,1.2s
FDMO				AML	AML			comp=N,1260µm,0.8s
GUMA	**Gualdo di Mace**	**0.69**	**0**	P	**Pg**	**17 15 31.1**	**-0.5**	
GUMA				AML	AML			comp=E,7520µm,0.5s
GUMA				AML	AML			comp=N,6675µm,0.7s
GUMA				AML	AML			comp=E,7515µm,0.4s
GUMA				AML	AML			comp=N,7915µm,0.4s
GUMA				AML	AML			comp=N,6675µm,1.3s
CESI	**CESI - Serrava**	**0.71**	**333**	P	**Pg**	**17 15 31.4**	**-0.5**	
CESI				AML	AML			comp=E,2220µm,0.4s
CESI				AML	AML			comp=N,2085µm,0.3s
CESI				AML	AML			comp=E,2220µm,1.6s
LPEL	**Lama dei Pelig**	**0.71**	**117**	⇓P	**Pg**	**17 15 31.0**	**-0.9**	
LPEL				AML	AML			comp=N,3395µm,1.1s
LPEL				AML	AML			comp=E,3255µm,0.4s
LPEL				AML	AML			comp=N,3395µm,0.9s
MOMA	**Monte Martano**	**0.71**	**308**	P	**Pg**	**17 15 31.5**	**-0.5**	
MOMA				AML	AML			comp=E,2590µm,0.4s
MOMA				AML	AML			comp=E,2585µm,0.4s
MOMA				AML	AML			comp=N,2385µm,0.6s
MOMA				AML	AML			comp=N,2430µm,0.6s
POFI	**Posta Fibreno**	**0.71**	**157**	⇓P	**Pg**	**17 15 31.5**	**-0.5**	
POFI				AML	AML			comp=E,1455µm,0.4s
POFI				AML	AML			comp=N,1050µm,1.4s
POFI				AML	AML			comp=E,1550µm,0.4s
POFI				AML	AML			comp=E,1460µm,0.4s
POFI				AML	AML			comp=N,1061µm,1.4s
T1219	**Muccia, Frazio**	**0.72**	**341**	P	**Pg**	**17 15 31.4**	**-0.8**	
T1219				AML	AML			comp=N,1730µm,0.3s
T1219				AML	AML			comp=N,1880µm,0.3s
T1219				AML	AML			comp=E,1670µm,0.4s
T1219				AML	AML			comp=E,1530µm,0.4s
CSP1	**Cessapalombo**	**0.72**	**352**	⇑P	**Pg**	**17 15 31.4**	**-0.9**	
CSP1				AML	AML			comp=E,2160µm,0.3s
CSP1				AML	AML			comp=N,2815µm,0.8s
RMP	**Rome, Mte Porz**	**0.73**	**220**	⇓P	**Pg**	**17 15 32.8**	**+0.5**	
RMP				AML	AML			comp=E,3670µm,0.4s
RMP				AML	AML			comp=N,4125µm,0.4s
RMP				AML	AML			comp=E,3670µm,1.6s
LRP	**Arpino**	**0.75**	**165**	⇓P	**Pg**	**17 15 31.7**	**-1.0**	
LRP				AML	AML			comp=E,906µm,0.4s
LRP				AML	AML			comp=N,1408µm,0.5s
VIVA	**Pratoni del Vi**	**0.75**	**214**	⇓P	**Pn**	**17 15 35.3**	**+0.7**	
VIVA				AML	AML			comp=E,7395µm,0.4s
VIVA				AML	AML			comp=N,8355µm,0.4s
T1220	**Camerino, Fraz**	**0.76**	**346**	⇓P	**Pg**	**17 15 32.1**	**-0.7**	
T1220				S	**Sb**	**17 15 44.5**	**+0.9**	
T1220				AML	AML			comp=E,15570µm,1.5s
T1220				AML	AML			comp=N,8055µm,1.3s
T1220				AML	AML			comp=E,7755µm,0.3s
T1220				AML	AML			comp=N,7975µm,1.3s
T1220				AML	AML			comp=E,15545µm,1.5s
T1220				AML	AML			comp=E,7750µm,0.3s
T1220				AML	AML			comp=N,7975µm,1.3s
T1220				AML	AML			comp=E,15545µm,0.5s
T1220				AML	AML			comp=N,8055µm,1.3s
GIUL	**Giuliano Di Ro**	**0.82**	**184**	P	**Pb**	**17 15 33.2**	**-1.1**	
GIUL				AML	AML			comp=N,1850µm,0.4s
GIUL				AML	AML			comp=E,2330µm,0.5s
ASSB	**Assisi San Ben**	**0.83**	**324**	⇓P	**Pb**	**17 15 33.3**	**-1.3**	
ASSB				AML	AML			comp=E,2030µm,1.4s
ASSB				AML	AML			comp=N,1590µm,0.7s
ASSB				AML	AML			comp=N,1590µm,1.3s
ASSB				AML	AML			comp=E,2030µm,0.6s
LIK	**San Giovanni I**	**0.88**	**169**	⇑P	**Pb**	**17 15 35.6**	**+0.2**	
LIK				AML	AML			comp=N,2080µm,0.6s
LIK				AML	AML			comp=N,2075µm,0.6s
LIK				AML	AML			comp=E,2835µm,0.5s
GAG1	**Gagliole**	**0.89**	**347**	P	**Pb**	**17 15 31.8**	**-3.7**	
GAG1				AML	AML			comp=E,4260µm,0.7s
GAG1				AML	AML			comp=N,6365µm,0.4s
LATB	**Latina**	**0.92**	**198**	⇓P	**Pb**	**17 15 35.3**	**-0.8**	
LATB				AML	AML			comp=N,736µm,0.8s
LATB				AML	AML			comp=E,630µm,0.9s
LATB				AML	AML			comp=N,736µm,1.2s
CERA	**Filignano**	**0.93**	**146**	⇑P	**Pb**	**17 15 35.3**	**-0.9**	
CERA				AML	AML			comp=E,1470µm,0.8s
CERA				AML	AML			comp=N,1320µm,0.5s
CERA				AML	AML			comp=E,1505µm,0.8s
CERA				AML	AML			comp=N,1360µm,0.5s
SNTG	**Esanatoglia**	**0.93**	**342**	⇓P	**Pb**	**17 15 35.1**	**-1.1**	
SNTG				AML	AML			comp=E,814µm,0.5s
SNTG				AML	AML			comp=E,872µm,0.5s
SNTG				AML	AML			comp=N,986µm,0.6s
SNTG				AML	AML			comp=N,1084µm,0.6s
ATCC	**AVT- Casa Cast**	**0.96**	**328**	⇓P	**Pb**	**17 15 36.0**	**-0.8**	
ATCC				AML	AML			comp=E,2400µm,0.6s
ATCC				AML	AML			comp=N,2470µm,1.4s
ATCC				AML	AML			comp=N,2470µm,0.6s
ATCC				AML	AML			comp=E,2400µm,1.4s
EL6	**Elcito**	**0.97**	**350**	⇑P	**Pb**	**17 15 35.7**	**-1.3**	
EL6				AML	AML			comp=E,2650µm,1.6s
EL6				AML	AML			comp=N,3455µm,0.5s
EL6				AML	AML			comp=E,2650µm,0.4s
EL6				AML	AML			comp=N,3455µm,1.5s
MIDA	**Miranda**	**1.00**	**137**	⇓P	**Pb**	**17 15 36.2**	**-1.3**	
MIDA				AML	AML			comp=N,946µm,1.2s
MIDA				AML	AML			comp=E,990µm,1.1s
MIDA				AML	AML			comp=N,920µm,1.2s
MIDA				AML	AML			comp=E,1012µm,1.1s
MIDA				AML	AML			comp=N,946µm,0.8s
MIDA				AML	AML			comp=N,920µm,0.8s
CING	**Cingoli**	**1.01**	**354**	⇓P	**Pb**	**17 15 36.5**	**-1.1**	
FOSV	**Fossato di Vic**	**1.01**	**336**	⇑P	**Pb**	**17 15 37.0**	**-0.7**	
FOSV				AML	AML			comp=E,1320µm,0.8s
FOSV				AML	AML			comp=N,1260µm,0.4s
FOSV				AML	AML			comp=E,1320µm,1.2s
PP3	**Marolino**	**1.02**	**11**	⇓P	**Pb**	**17 15 37.7**	**-0.1**	
PP3				AML	AML			comp=N,3020µm,0.8s
PP3				AML	AML			comp=E,3505µm,0.8s
PP3				AML	AML			comp=N,3095µm,0.8s
PP3				AML	AML			comp=E,3800µm,0.8s
TOLF	**Tolfa**	**1.04**	**253**	⇓P	**Pb**	**17 15 38.4**	**+0.3**	
TOLF				AML	AML			comp=N,894µm,1.1s
TOLF				AML	AML			comp=E,1001µm,0.8s
MGAB	**Montegabbione**	**1.05**	**301**	P	**Pb**	**17 15 38.0**	**-0.2**	
MGAB				AML	AML			comp=E,1655µm,0.6s
MGAB				AML	AML			comp=N,1710µm,0.4s
MGAB				AML	AML			comp=N,1605µm,0.4s
MGAB				AML	AML			comp=E,1970µm,0.6s
MGAB				AML	AML			comp=N,1710µm,1.6s
MGAB				AML	AML			comp=N,1605µm,1.6s
FRES	**Fresagrandinar**	**1.07**	**112**	⇑P	**Pg**	**17 15 40.1**	**+1.4**	
FRES				AML	AML			comp=E,878µm,0.7s
FRES				AML	AML			comp=N,567µm,1.0s
FRES				AML	AML			comp=E,878µm,1.3s
MURB	**Monte Urbino**	**1.07**	**326**	P	**Pb**	**17 15 38.0**	**-0.7**	
MURB				AML	AML			comp=E,3355µm,1.0s
MURB				AML	AML			comp=N,2530µm,0.9s
MURB				AML	AML			comp=E,3485µm,1.1s
MURB				AML	AML			comp=N,2655µm,0.9s
MURB				AML	AML			comp=E,3485µm,0.9s
MURB				AML	AML			comp=E,3355µm,1.0s
TRIV	**Trivento**	**1.09**	**123**	⇓P	**Pb**	**17 15 38.9**	**0.0**	
TRIV				AML	AML			comp=E,825µm,0.6s
TRIV				AML	AML			comp=N,1026µm,0.9s
TRIV				AML	AML			comp=E,864µm,0.6s
TRIV				AML	AML			comp=N,985µm,0.9s
TRIV				AML	AML			comp=N,985µm,1.1s
TRIV				AML	AML			comp=E,864µm,1.4s
TRIV				AML	AML			comp=E,825µm,1.4s
TRIV				AML	AML			comp=N,1026µm,1.1s
ATTE	**AVT- Monte Tez**	**1.10**	**319**	⇑P	**Pg**	**17 15 40.5**	**+1.3**	
ATTE				AML	AML			comp=E,744µm,0.7s
ATTE				AML	AML			comp=N,982µm,0.8s
SSFR	**Montelago di S**	**1.14**	**339**	⇓P	**Pn**	**17 15 39.4**	**-0.5**	
SSFR				AML	AML			comp=E,1615µm,1.3s
SSFR				AML	AML			comp=N,1465µm,1.0s
SSFR				AML	AML			comp=N,1460µm,0.8s
SSFR				AML	AML			comp=E,1665µm,0.3s

SSFR				AML	AML		
	comp=N,1465µm,1.0s						
SSFR				AML	AML		
	comp=E,1615µm,0.7s						
ATFO	Monte Foce - G	1.14	331	⇓P	Pn	17 15 39.2	-0.8
ATFO				AML	AML		
	comp=E,1015µm,1.4s						
ATFO				AML	AML		
	comp=N,851µm,0.6s						
ATFO				AML	AML		
	comp=E,1015µm,0.6s						
SACS	San Casciano d	1.16	295	⇓P	Pb	17 15 40.9	+0.8
SACS				AML	AML		
	comp=E,614µm,1.1s						
SACS				AML	AML		
	comp=N,966µm,1.0s						
SACS				AML	AML		
	comp=E,605µm,0.9s						
SACS				AML	AML		
	comp=N,1010µm,1.1s						
SACS				AML	AML		
	comp=E,614µm,0.9s						
SACS				AML	AML		
	comp=E,605µm,1.1s						
LATE	Laterza	1.16	282	⇓P	Pb	17 15 40.8	+0.7
ARVD	Arcevia	1.16	346	⇑P	Pn	17 15 40.5	+0.2
ARVD				AML	AML		
	comp=E,812µm,0.7s						
ARVD				AML	AML		
	comp=N,730µm,0.7s						
ARVD				AML	AML		
	comp=N,730µm,1.3s						
ATVO	AVT- Monte Val	1.22	326	⇓P	Pn	17 15 40.3	-0.7
ATVO				AML	AML		
	comp=E,706µm,0.6s						
ATVO				AML	AML		
	comp=N,621µm,0.7s						
ATVO				AML	AML		
	comp=N,621µm,1.3s						
BSSO	Busso	1.25	131	⇓P	Pn	17 15 41.5	0.0
BSSO				AML	AML		
	comp=E,582µm,0.7s						
BSSO				AML	AML		
	comp=N,483µm,1.0s						
BSSO				AML	AML		
	comp=N,200µm,1.0s						
BSSO				AML	AML		
	comp=N,200µm,1.0s						
BSSO				AML	AML		
	comp=N,483µm,1.0s						
BSSO				AML	AML		
	comp=E,246µm,0.7s						
ATPI	Pietralunga -	1.28	328	⇑P	Pn	17 15 41.8	-0.1
ATPI				AML	AML		
	comp=E,985µm,0.8s						
ATPI				AML	AML		
	comp=N,682µm,0.6s						
ATPI				AML	AML		
	comp=E,985µm,1.2s						
MODR	Mondragone	1.29	162	P	Pn	17 15 40.6	-1.4
MODR				AML	AML		
	comp=E,270µm,1.3s						
MODR				AML	AML		
	comp=N,309µm,0.8s						
MODR				AML	AML		
	comp=E,270µm,0.7s						
PIEI	Pieia	1.30	333	⇑P	Pn	17 15 42.1	-0.1
PIEI				AML	AML		
	comp=E,562µm,0.8s						
PIEI				AML	AML		
	comp=N,563µm,0.7s						
SF04	Casetta	1.32	291	⇓P	Pg	17 15 44.5	+1.0
SF04				AML	AML		
	comp=E,455µm,1.0s						
SF04				AML	AML		
	comp=N,405µm,0.9s						
SF04				AML	AML		
	comp=N,405µm,1.1s						
MPAG	Monte Paganucc	1.32	342	P	Pn	17 15 39.5	-3.0
MPAG				AML	AML		
	comp=E,692µm,0.5s						
MPAG				AML	AML		
	comp=N,704µm,1.6s						
MPAG				AML	AML		
	comp=E,692µm,1.5s						
MPAG				AML	AML		
	comp=N,704µm,0.4s						
PIGN	Pignataro Magg	1.33	151	⇑P	Pg	17 15 44.8	+1.1
PIGN				AML	AML		
	comp=E,268µm,0.7s						
PIGN				AML	AML		
	comp=N,364µm,0.9s						
PIGN				AML	AML		
	comp=E,248µm,0.7s						
PIGN				AML	AML		
	comp=N,276µm,0.7s						
PIGN				AML	AML		
	comp=N,276µm,1.3s						
PIGN				AML	AML		
	comp=E,268µm,1.3s						
PIGN				AML	AML		
	comp=N,364µm,1.1s						
PIGN				AML	AML		
	comp=E,248µm,1.3s						
FSSB	Fossombrone	1.38	343	P	Pn	17 15 43.2	-0.1
FSSB				AML	AML		
	comp=N,1625µm,0.5s						
FSSB				AML	AML		
	comp=E,1395µm,0.3s						
FSSB				AML	AML		
	comp=N,1625µm,1.5s						
SF01	Poggio Pratacc	1.38	289	⇑P	Pb	17 15 44.7	+0.8
SF01				AML	AML		
	comp=N,803µm,1.3s						
SF01				AML	AML		
	comp=E,682µm,0.6s						
SF01				AML	AML		
	comp=N,803µm,0.7s						
BADI	Badiali	1.39	325	⇓P	Pb	17 15 44.5	+0.5
ARCI	Arcidosso	1.45	290	⇓P	Pb	17 15 45.6	+0.4
ARCI				AML	AML		
	comp=E,230µm,0.7s						
ARCI				AML	AML		
	comp=N,199µm,1.3s						
PE3	Peglio	1.46	335	⇓P	Pn	17 15 45.3	+1.0
PARC	Parchiule	1.51	328	⇑P	Pn	17 15 46.0	+1.0
PARC				AML	AML		
	comp=E,681µm,0.8s						
PARC				AML	AML		
	comp=N,574µm,0.6s						
PARC				AML	AML		
	comp=E,681µm,1.2s						
PARC				AML	AML		
	comp=N,574µm,1.4s						
CRE	Caprese Michel	1.61	321	⇑P	Pn	17 15 47.0	+0.6
CRE				AML	AML		
	comp=E,265µm,1.4s						
CRE				AML	AML		
	comp=E,265µm,0.6s						
CRE				AML	AML		
	comp=N,294µm,1.1s						
MAON	Monte Argentar	1.63	273	⇑P	Pn	17 15 47.0	+0.3
MAON				AML	AML		
	comp=N,178µm,0.8s						
MAON				AML	AML		
	comp=E,240µm,0.9s						
APRC	Apricena	1.75	110	⇓P	Pb	17 15 50.1	-0.2
APRC				AML	AML		
	comp=E,434µm,0.5s						
APRC				AML	AML		
	comp=N,709µm,0.4s						
ASQU	Asqua	1.82	322	⇑P	Pn	17 15 50.5	+1.2
ASQU				AML	AML		
	comp=N,199µm,1.3s						
ASQU				AML	AML		
	comp=E,206µm,1.2s						
CASP	Castiglione de	1.87	284	⇑P	Pn	17 15 50.3	+0.3
CASP				AML	AML		
	comp=N,163µm,0.6s						
CASP				AML	AML		
	comp=E,97µm,0.7s						
SGRT	San Giovanni R	1.90	108	⇑P	Pb	17 15 52.3	-0.5
SGRT				AML	AML		
	comp=N,432µm,0.6s						
SGRT				AML	AML		
	comp=E,452µm,0.6s						
TRIF	Trifonti	1.94	293	⇑P	Pn	17 15 51.8	+0.8
TRIF				AML	AML		
	comp=E,128µm,0.4s						
TRIF				AML	AML		
	comp=N,109µm,0.9s						
SGTA	Sant Agata di	1.96	128	P	Pb	17 15 54.6	+0.8
SGTA				AML	AML		
	comp=E,226µm,0.6s						
SGTA				AML	AML		
	comp=N,148µm,0.7s						
SGTA				AML	AML		
	comp=N,148µm,1.3s						
SGTA				AML	AML		
	comp=E,226µm,1.4s						
RUFI	Rufina	1.98	318	⇓P	Pn	17 15 52.8	+1.3
RUFI				AML	AML		
	comp=N,182µm,1.6s						
RUFI				AML	AML		
	comp=E,182µm,0.7s						
RUFI				AML	AML		
	comp=N,182µm,0.4s						
MSAG	Monte S. Angel	2.03	108	⇑P	Pb	17 15 55.8	+0.9
BRSN	Barisano	2.12	335	S	Sb	17 16 24.7	+2.0
MPPT	Montemurlo	2.28	315	P	Pn	17 15 55.2	-0.4
MPPT				AML	AML		
	comp=E,118µm,0.6s						
MPPT				AML	AML		
	comp=N,108µm,1.0s						
IMOL	Imola, Italy	2.30	330	S	Sn	17 16 21.6	-2.5
MTCR	Monte La Croce	2.38	315	⇑P	Pn	17 15 58.4	+1.4
MTCR				AML	AML		
	comp=E,104µm,1.5s						
MTCR				AML	AML		
	comp=N,131µm,1.6s						
MTCR				AML	AML		
	comp=N,131µm,0.4s						
MTCR				AML	AML		
	comp=E,104µm,0.5s						
PALZ	Palazzo San Ge	2.43	125	⇓P	Pn	17 15 59.7	+2.0
FIU	Minerbio Fiu	2.63	330	P	Pn	17 16 02.7	+2.3
FIU				S	Sb	17 16 39.2	+1.7
FIU				AML	AML		
	comp=E,554µm,1.5s						
FIU				AML	AML		
	comp=N,700µm,0.2s						
FIU				AML	AML		
	comp=E,554µm,0.5s						
FIU				AML	AML		
	comp=N,700µm,1.8s						
GROG	Isola di Gorgo	2.74	294	P	Pg	17 16 11.8	+1.1
PTRP	Pietrapertosa	2.76	131	P	Pn	17 16 05.2	+2.9
PTRP				AML	AML		
	comp=N,103µm,0.6s						
PTRP				AML	AML		
	comp=E,103µm,1.0s						
PTRP				AML	AML		
	comp=N,103µm,1.4s						
AMUR	Altamura	2.85	120	⇓P	Pn	17 16 05.3	+1.8
AMUR				AML	AML		
	comp=E,111µm,0.7s						
AMUR				AML	AML		
	comp=N,112µm,0.7s						
NDIM	Novi di Modena	3.07	326	⇓P	Pb	17 16 13.0	+0.3
NDIM				S	Sn	17 16 42.2	-0.9
A050A	Klekovaca	3.14	47	*e*Pn	Pn	17 16 09.2	+1.7
SKDS	Skadanscina	3.21	9	*e*Pn	Pn	17 16 08.8	+0.4
SKDS	Skadanscina	3.21	9	*e*Pn	Pn	17 16 08.5	+0.1
PGF	Pioggiola	3.21	275	*e*P	Pn	17 16 09.4	+0.9
PGF				*e*Sn	Sn	17 16 42.5	-4.3
	comp=N,19nm,0.6s						
PGF	Pioggiola	3.21	275	⇓P	Pn	17 16 10.1	+1.6
PGF				AML	AML		
	comp=E,52µm,0.4s						
PGF				AML	AML		
	comp=N,51µm,1.6s						
STON	Ston	3.26	80	*e*Pn	Pn	17 16 10.2	+1.2
STON				*e*Sn	Sn	17 16 39.8	-7.9
STON	Ston	3.26	80	*e*Pn	Pn	17 16 10.2	+1.2
SRKY	Kupres RS	3.27	58	*e*Pn	Pn	17 16 10.9	+1.6
TRI	Trieste	3.35	5	⇑P	Pb	17 16 16.8	-0.6
MSSA	Maissana	3.40	306	P	Pn	17 16 12.9	+1.9
MGRS	Mrkonjic Grad	3.41	52	*e*Pn	Pn	17 16 13.4	+2.2
BOJS	Bojanci	3.42	23	*e*Pn	Pn	17 16 13.9	+2.6
BOJS	Bojanci	3.42	23	*e*Pn	Pn	17 16 09.6	-1.7
CEY	Cerknica	3.46	13	*e*Pn	Pn	17 16 11.7	-0.1
TDS	Terranova Siba	3.54	139	P	Pb	17 16 18.9	-1.8
BLY	Banja Luka	3.67	48	*e*Pn	Pn	17 16 16.4	+1.7
CGRP	Cima Grappa	3.68	343	⇓P	Pn	17 16 16.8	+1.9
CGRP				AML	AML		
	comp=N,140µm,0.7s						
CGRP				AML	AML		
	comp=E,141µm,0.5s						
A051A	Mrakovica	3.70	43	*e*Pn	Pn	17 16 15.6	+0.5
TREB	Trebinje	3.72	83	*e*Pn	Pn	17 16 17.0	+1.6
TREB	Trebinje	3.72	83	*e*Pn	Pn	17 16 15.8	+0.4
RNCA	Ronca, Sant'Ol	3.82	305	S	Sb	17 17 15.0	+3.4
LEOD	Capriano del C	3.86	324	S	Sn	17 17 02.8	+0.3
BRY	Bratogost	3.88	80	*e*Pn	Pn	17 16 16.5	-1.2
MAGA	Magasa	3.92	331	⇓P	Pn	17 16 19.4	+1.1
MAGA				AML	AML		
	comp=N,160µm,0.5s						
MAGA				AML	AML		
	comp=E,282µm,0.5s						
PTCC	Patocco-Chiusa	4.03	0	⇑P	Pn	17 16 21.5	+1.8
PTCC				AML	AML		
	comp=E,37µm,1.1s						
PTCC				AML	AML		
	comp=N,36µm,1.0s						
PTCC				AML	AML		
	comp=E,37µm,0.9s						
PTCC				AML	AML		
	comp=N,36µm,1.0s						
SARZ	Sarezzano	4.07	309	⇓P	Pn	17 16 25.0	+4.9
EUCT	Pavia	4.15	314	S	Sn	17 17 12.6	+2.9
VSL	Villasalto	4.15	228	⇑P	Pn	17 16 23.1	+1.7
UPM	Unac-Piva	4.18	77	*e*Pn	Pn	17 16 22.1	+0.2
MABI	Malga Bissina	4.20	332	P	Pn	17 16 23.5	+1.3
OBKA	Obir	4.22	11	*e*Pn	Pn	17 16 22.6	+0.1
	comp=N,1.0nm,0.2s						
OBKA	Obir	4.22	11	*e*Pn	Pn	17 16 22.5	+0.1
MYKA	Terra Mystica	4.26	3	*e*Pn	Pn	17 16 23.5	+0.6
	comp=N,3.4nm,0.4s						
DRME	Dracevica, Mon	4.34	90	*e*Pn	Pn	17 16 25.6	+1.6
MILZ	Milazzo	4.35	160	S	Sn	17 17 14.5	-0.1
ERC	Erice	4.37	188	S	Sn	17 17 13.4	-1.9
APPI	Appiano	4.37	341	⇓P	Pn	17 16 26.6	+2.1
APPI				AML	AML		
	comp=N,85µm,0.4s						
APPI				AML	AML		
	comp=E,68µm,0.5s						
PDG	Podgorica	4.38	87	*e*Pn	Pn	17 16 27.0	+2.5
ABTA	Abfaltersbach	4.41	353	*e*Pn	Pn	17 16 26.4	+1.4
	comp=E,8.7nm,0.4s,SNR=4.6						
HAPS	Han Pijesak,Bl	4.45	65	*e*Pn	Pn	17 16 17.1	-8.4
SBF	Sospel	4.57	291	*e*P	Pn	17 16 28.7	+1.6
SBF				*e*Sn	Sn	17 17 14.7	-5.4
	comp=E,7.7nm,0.5s						
RUDO	Rudo	4.60	72	*e*Pn	Pn	17 16 29.4	+1.9
RUDO	Rudo	4.60	72	*e*Pn	Pn	17 16 27.7	+0.2
BBLS	Lazići	4.69	69	*e*Pn	Pn	17 16 31.3	+2.6
SJES	Sjenica	4.96	77	*e*Pn	Pn	17 16 35.0	+2.4
SJES	Sjenica	4.96	77	*e*Pn	Pn	17 16 34.5	+1.9
FETA	Feichten	5.00	339	*e*Pn	Pn	17 16 33.4	+0.2
	comp=E,1.5nm,0.5s						
WTTA	Wattenberg	5.04	347	*e*Pn	Pn	17 16 36.1	+2.5
	comp=E,8.4nm,0.6s						
SQTA	Sankt Quirin	5.08	343	*e*Pn	Pn	17 16 36.2	+2.1
	comp=E,8.0nm,0.5s						
LMR	La Mourre	5.11	283	*e*P	Pn	17 16 35.0	+0.5
LMR				*e*Sn	Sn	17 17 27.5	-5.8
	comp=E,2.1nm,0.4s						
ARSA	Arzberg	5.12	17	*e*Pn	Pn	17 16 35.3	+0.7
	comp=E,4.3nm,0.7s						
IVAS	Ivanjica	5.14	74	*e*Pn	Pn	17 16 36.7	+1.7
DIVS	Divibare	5.16	68	*e*Pn	Pn	17 16 37.0	+1.8
DIVS	Divibare	5.16	68	*e*Pn	Pn	17 16 36.1	+0.9
MOTA	Moosalm	5.22	343	*e*Pn	Pn	17 16 38.8	+2.7
	comp=E,5.0nm,0.6s						
MBDF	Montbardon	5.32	298	*e*P	Pn	17 16 39.3	+1.8
MBDF				*e*Sn	Sn	17 17 32.8	-5.9
	comp=E,3.5nm,0.7s						
BIOA	Bad Ischl, Aus	5.32	2	*e*Pn	Pn	17 16 37.6	+0.2
	comp=E,2.7nm,0.4s						
FRGS	Fruska Gora	5.45	57	*e*Pn	Pn	17 16 40.6	+1.4
FRGS	Fruska Gora	5.45	57	*e*Pn	Pn	17 16 40.4	+1.2
TRUS	Trudelj	5.48	68	*e*Pn	Pn	17 16 41.4	+1.8
DAVA	Damuels	5.49	335	*e*Pn	Pn	17 16 42.5	+2.7
	comp=E,6.3nm,0.6s						
MOA	Molln	5.51	7	*e*Pn	Pn	17 16 41.2	+1.1
	comp=E,4.0nm,0.4s						
GRUS	Gruza	5.61	72	*e*Pn	Pn	17 16 42.8	+1.5
LPL	La Plagne	5.71	306	*e*P	Pn	17 16 45.0	+2.1
LPL				*e*Sn	Sn	17 17 42.4	-6.0
	comp=E,1.7nm,0.3s						
OHR	Ohrid	5.72	100	*i* Pn	Pn	17 16 46.0	+3.0
SELS	Selova	5.79	79	*e*Pn	Pn	17 16 45.4	+1.6
CONA	Conrad Observa	5.83	17	*e*Pn	Pn	17 16 43.7	-0.8
	comp=E,1.3nm,0.2s						
SMRF	Simiane la Rot	5.90	288	*e*P	Pn	17 16 47.3	+2.0
SMRF				*e*Sn	Sn	17 17 46.6	-6.2
	comp=E,0.3nm,0.1s						
ORIF	Oris-en-Rattie	5.98	298	*e*P	Pn	17 16 48.6	+2.1
ORIF				*e*Sn	Sn	17 17 48.4	-6.5
	comp=E,1.2nm,0.5s						
FNA	Florina	6.24	102	*e*Pn	Pn	17 16 53.2	+3.2
BARS	Barje	6.28	83	*e*Pn	Pn	17 16 52.0	+1.5
PRVS	Prvonek	6.47	86	*e*Pn	Pn	17 16 54.9	+1.7
GERES	GERESS Array B	6.48	2	Pn	Pn	17 16 53.9	+0.5
	comp=E,0.3nm,0.3s,baz=172,slow=13,SNR=5.9						
GERES				Sn	Sn	17 18 02.5	-4.7
	comp=E,0.4nm,0.3s,baz=182,slow=24,SNR=3.1						
	comp=E,0.5nm,0.4s						
CKRC	Cesky Krumlov	6.48	6	*e*SN	Sn	17 18 05.4	-1.8
STIP	Stip	6.63	93	*i* Pn	Pn	17 16 59.2	+3.9
CABF	La Chapelle	6.69	312	*e*P	Pn	17 16 58.7	+2.4
CABF				*e*Sn	Sn	17 18 05.7	-6.8
	comp=E,0.7nm,0.2s						
VIVF	Saint-Julien-l	6.76	294	*e*P	Pn	17 16 59.5	+2.3
VIVF				*e*Sn	Sn	17 18 07.4	-6.6
	comp=E,0.9nm,0.2s						
KHC	Kasperske Hory	6.76	1	*e*PN	Pn	17 16 57.5	+0.3
KHC				*e*SN	Sn	17 18 11.9	-2.2
HINF	Hinteralfeld	7.12	322	*e*P	Pn	17 17 03.2	+1.1
HINF				*e*Sn	Sn	17 18 15.8	-7.0
	comp=E,3.2nm,0.5s						
LASF	Ste Croix	7.13	287	*e*P	Pn	17 17 04.5	+2.3
KEST	Kesra	7.32	206	Pn	Pn	17 17 10.2	+5.2
	comp=E,0.6nm,0.3s,baz=72,slow=13,SNR=7.0						
	comp=E,3.6nm,0.5s						
CDF	Champ du Feu	7.39	327	*e*P	Pn	17 17 07.4	+1.5
CDF				*e*Sn	Sn	17 18 22.4	-7.2
	comp=E,1.7nm,0.4s						
HAU	Haudompre	7.49	321	*e*P	Pn	17 17 09.4	+2.3
HAU				*e*Sn	Sn	17 18 25.0	-6.9
	comp=E,6.6nm,0.5s						
SFTF	Sexfontaines	8.26	318	*e*P	Pn	17 17 20.6	+2.9
SFTF				*e*Sn	Sn	17 18 43.2	-7.6
	comp=E,3.9nm,0.5s						
MKAR	Makanchi Array	47.88	60	P	P	17 23 57.0	+1.1
	comp=E,0.2nm,0.6s,baz=282,slow=8.0,SNR=4.5						
	comp=E,0.2nm,0.6s						

NEIC ***14*** *17:33:53.8±2.0, 47°.56N±0°.03×92°.68W±0°.06, h0km±2km,*
ML2.8/6, Error ellipse: s-maj=6.8km s-min=5.7km
az=101.0
IDC ***14*** *17:33:54.2±3.6, 47°.62N×92°.52W, h0km, mbtmp2.8/2,*
ML1.9/2, Error ellipse: s-maj=65.0km s-min=26.4km
az=50.0
OTT ***14*** *17:33:54.7±0.3, 47°.55N×92°.67W, h0km, MN3.1/6, Blast,*
Minnesota, U.S. 129km southeast from Fort Frances, On
Mining explosion.
ISC 14 17:33:53.3±0.8, **47°.55N**±0°.04×**92°.67W**±0°.04, **h0km, n49,**
σ**0s.89**/61, **Minnesota**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EYMN	Ely	0.89	63		Pg	17 34 10.1	-0.2
EYMN				IAML		17 34 26.8	
	300nm,1.2s						
EYMN	Ely	0.89	63	PG	Pg	17 34 10.2	0.0
EYMN				SG	Sg	17 34 22.4	+0.6
B35A	Bob, Littlefor	1.08	319		Pg	17 34 14.2	+0.3
B35A				IAML		17 34 30.6	
	comp=N,225nm,1.4s						
B35A				IAML		17 34 33.5	
	comp=E,258nm,0.3s						
E38A	The Farm, Brul	1.21	141		Pg	17 34 16.5	0.0
E38A				IAML		17 34 38.6	
	comp=E,264nm,0.9s						
ATKO	Atikokan Iron	1.46	29		Pn	17 34 21.3	+0.3
ATKO				Sg	Sg	17 34 40.2	-0.1
ATKO	Atikokan Iron	1.46	29	PG	Pn	17 34 21.3	+0.3
ATKO				SG	Sg	17 34 40.2	-0.1
ATKO				Trac		17 34 44.8	
	comp=E,22nm,0.1s						
F36A	Milaca	1.79	199		Pn	17 34 25.8	+0.4
EPLO	Experimental L	2.24	342	Sn	Sn	17 35 01.4	+1.4
EPLO	Experimental L	2.24	342	SN	Sn	17 35 01.4	+1.4
AGMN	Agassiz Nation	2.27	290		Pn	17 34 32.0	0.0
SPMN	Marine on St.	2.33	182		Pn	17 34 33.9	+1.1
TBO	Thunder Bay	2.45	62	Pn	Pn	17 34 35.1	+0.6
TBO				Sn	Sn	17 35 05.8	+0.7
TBO	Thunder Bay	2.45	62	PN	Pn	17 34 35.1	+0.6
TBO				SN	Sn	17 35 05.8	+0.7
TBO				Trac		17 35 13.6	
	comp=E,20nm,0.1s						
SOLO	Sioux Lookout	2.50	9	Pn	Pn	17 34 36.3	+1.0
SOLO				Sn	Sn	17 35 07.0	+0.5
SOLO	Sioux Lookout	2.50	9	PN	Pn	17 34 36.3	+1.0
SOLO				SN	Sn	17 35 07.0	+0.5
SOLO				Trac		17 35 15.2	
	comp=E,13nm,0.1s						
COWI	Conover	2.83	120		Pn	17 34 40.6	+0.9
D41A	Chassel	2.84	98		Pn	17 34 40.9	+1.1
G40A	Rib Lake	2.85	142		Pn	17 34 41.2	+1.2
D32A	Dogwood Acres,	2.98	264	Pn	Pn	17 34 42.9	+1.1
F33A	5 Mile Ranch,	3.02	237		Pn	17 34 43.4	+1.1
ULM	Lac du Bonnet	3.43	323	Pn	Pn	17 34 48.5	+0.5
	comp=E,0.2nm,0.3s,baz=146,slow=16,SNR=1.8						
ULM				Pg	Pb	17 34 55.5	+0.6
	comp=E,1.1nm,0.3s,baz=145,slow=15,SNR=14						
ULM				Lg	Lg	17 35 40.1	
	comp=E,8.0nm,0.3s,baz=41,slow=20,SNR=30						
	comp=E,0.9nm,0.3s						
ULM	Lac du Bonnet	3.43	323	Pn	Pn	17 34 47.9	0.0
ULM	Lac du Bonnet	3.43	323	PN	Pn	17 34 48.9	+0.9
ULM				SN	Sn	17 35 28.8	-0.6
ULM				LG	Lg	17 35 42.6	
ULM				Trac		17 35 43.4	
	comp=E,54nm,0.5s						
I10CA	LAC DU BONNET	3.46	321	I	I	17 55 55.8	
	comp=E,0.1nm,1.1s,baz=135,slow=330,SNR=4.7						
I37A	Lemond, Waseca	3.57	188	Pn	Pn	17 34 51.7	+1.8
F42A	Maple Grove Fa	3.60	118	Pn	Pn	17 34 51.7	+1.4
I40A	Norwalk	3.93	158	Pn	Pn	17 34 56.0	+1.1
E43A	Lone Tree Farm	4.06	105	Pn	Pn	17 34 57.2	+0.6
PKLO	Pickle Lake	4.23	20	Pn	Pn	17 34 59.1	+0.1
PKLO				Sn	Sn	17 35 47.4	-1.7
PKLO	Pickle Lake	4.23	20	PN	Pn	17 34 59.1	+0.1
PKLO				SN	Sn	17 35 47.4	-1.7
PKLO				Trac		17 36 08.5	
	comp=E,4.9nm,0.1s						
GTO	Geraldton	4.38	58	Pn	Pn	17 35 01.7	+0.8
GTO				Sn	Sn	17 35 51.7	-1.0
GTO	Geraldton	4.38	58	PN	Pn	17 35 01.7	+0.8
GTO				SN	Sn	17 35 51.7	-1.0
GTO				Trac		17 36 15.2	
	comp=E,16nm,0.2s						
I42A	Draeger Farm,	4.51	143	Pn	Pn	17 35 03.2	+0.5
H43A	Windswept, Lux	4.60	130	Pn	Pn	17 35 04.0	0.0
MDND	Maddock	4.69	276	Pn	Pn	17 35 04.1	-1.2
ECSD	EROS Data Cent	4.71	217	Pn	Pn	17 35 06.1	+0.5
K38A	Parkersburg	4.90	181		Pn	17 35 09.1	+0.9
JFWS	Jewell Farm	4.94	159		Pn	17 35 08.2	-0.5
SUSD	Miller	5.37	237	Pn	Pn	17 35 14.0	-0.6
G45A	Suttons Bay	5.47	115	Pn	Pn	17 35 15.3	-0.7
L40A	Anamosa	5.58	169	Pn	Pn	17 35 18.7	+1.2
K43A	Burlington	5.73	146	Pn	Pn	17 35 19.9	+0.3
E46A	Sault Ste Mari	5.85	99	Pn	Pn	17 35 21.2	+0.1
GLMI	Grayling	6.22	113	Pn	Pn	17 35 25.9	-0.4
RSSD	Black Hills	8.64	251	Pn	Pn	17 35 58.2	-1.5
P46A	Rosedale	8.86	151	Pn	Pn	17 36 02.6	+0.1
LAO	LASA Array	9.28	270	Pn	Pn	17 36 06.6	-1.7
OGNE	Ogallala	9.41	229	Pn	Pn	17 36 09.6	-0.6
YKA	Yellowknife Ar	19.39	329	P	P	17 38 19.4	-1.0
	baz=132,slow=13,SNR=3.9						
	comp=E,0.3nm,0.9s						

*IDC **14** 17:47:47.4±0.8, 55°.22N×164°.68E, h0^{km}, mb3.7/12, mbtmp3.8/16, ML4.2/4, MS2.8/3, Error ellipse: s-maj=22.2km s-min=12.9km az=170.0*

*KRSC **14** 17:47:48.6±1.7, 55°.08N×164°.64E, h49^{km}±23^{km}, Mc4.0, Ml4.3*

*MOS **14** 17:47:50.6±0.8, 55°.14N×164°.70E, h40^{km}, mb4.5/6, Error ellipse: s-maj=8.1km s-min=5.8km az=60.9*

*NEIC **14** 17:47:51.7±1.6, 55°.2N±0°.1×164°.6E±0°.2, h29^{km}±7^{km}, mb4.3/34, Error ellipse: s-maj=21.9km s-min=12.4km az=147.0*

ISC 14 17:47:50.1±3.1**, 55°.13N**±0°.04×**164°.70E**±0°.05**, h20**^{km}±20^{km}**, n139, σ1^{s}27**/157**, mb4.2**/30**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.73**	**83**	PN	**Pb**	**17 48 03.8**	**-0.4**
BKI				S	**Sb**	**17 48 13.1**	**-0.6**
BKI	**Bering**	**0.73**	**83**	*e*P	**Pb**	**17 48 03.8**	**-0.4**
BKI				*e*S	**Sb**	**17 48 13.1**	**-0.6**
KBTR	**Krutoberegovo**	**1.52**	**316**	PN	**Pn**	**17 48 14.9**	**-1.3**
KBTR				S	**Sn**	**17 48 31.9**	**-3.5**
KBTR	**Krutoberegovo**	**1.52**	**316**	*e*P	**Pn**	**17 48 14.9**	**-1.3**
KBTR				*e*S	**Sn**	**17 48 31.9**	**-3.5**
KBG	**Krutoberegovo**	**1.60**	**316**	PN	**Pn**	**17 48 16.0**	**-1.2**
KBG				S	**Sn**	**17 48 34.1**	**-3.2**
KBG	**Krutoberegovo**	**1.60**	**316**	*e*P	**Pn**	**17 48 16.0**	**-1.2**
KBG				*e*S	**Sn**	**17 48 34.1**	**-3.2**
SMKR	**Semkarok**	**2.34**	**310**	PN	**Pn**	**17 48 28.0**	**+0.5**
SMKR				S	**Sn**	**17 48 56.1**	**+0.5**
SMKR	**Semkarok**	**2.34**	**310**	*e*P	**Pn**	**17 48 28.0**	**+0.5**
SMKR				*e*S	**Sn**	**17 48 56.1**	**+0.5**
BZGR	**Bezymyannyi-Gr**	**2.42**	**291**	PN	**Pn**	**17 48 29.6**	**+1.0**
BZGR				S	**Sn**	**17 48 58.2**	**+0.5**
BZGR	**Bezymyannyi-Gr**	**2.42**	**291**	*e*P	**Pn**	**17 48 29.6**	**+1.0**
BZGR				*e*S	**Sn**	**17 48 58.2**	**+0.5**
TUMD	**Tumrok D**	**2.47**	**274**	*e*P	**Pn**	**17 48 29.7**	**+0.4**
BZP	**Bezymyannyi-Pe**	**2.50**	**290**	*e*P	**Pn**	**17 48 30.6**	**+0.8**
SRKR	**Sorokina**	**2.51**	**309**	PN	**Pn**	**17 48 30.8**	**+0.9**
SRKR	**Sorokina**	**2.51**	**309**	*e*P	**Pn**	**17 48 30.8**	**+0.9**
BZMR	**Bezymyannaya**	**2.53**	**290**	PN	**Pn**	**17 48 31.4**	**+1.2**
BZMR	**Bezymyannaya**	**2.53**	**290**	*e*P	**Pn**	**17 48 31.4**	**+1.2**
BZWR	**Bezymyannyi-We**	**2.53**	**291**	PN	**Pn**	**17 48 31.4**	**+1.1**
BZWR	**Bezymyannyi-We**	**2.53**	**291**	*e*P	**Pn**	**17 48 31.4**	**+1.1**
TUMR	**Tumrok**	**2.62**	**275**	PN	**Pn**	**17 48 29.7**	**-1.7**
TUMR	**Tumrok**	**2.62**	**275**	*e*P	**Pn**	**17 48 32.6**	**+1.3**
TUMR				*e*S	**Sn**	**17 49 02.9**	**+0.4**
SMAR	**Somma**	**3.94**	**244**	PN	**Pn**	**17 48 50.7**	**+1.1**
SMAR	**Somma**	**3.94**	**244**	*e*P	**Pn**	**17 48 50.7**	**+1.1**
SMAR				*e*S	**Sn**	**17 49 33.3**	**-2.0**
KRER	**Koryakskii**	**3.94**	**245**	PN	**Pn**	**17 48 51.2**	**+1.5**
KRER				S	**Sn**	**17 49 34.4**	**-1.0**
KRER	**Koryakskii**	**3.94**	**245**	*e*P	**Pn**	**17 48 51.2**	**+1.5**
KRER				*e*S	**Sn**	**17 49 34.4**	**-1.0**
UGLR	**Uglovaya**	**3.95**	**243**	PN	**Pn**	**17 48 51.0**	**+1.3**
UGLR	**Uglovaya**	**3.95**	**243**	*e*P	**Pn**	**17 48 51.0**	**+1.3**
UGLR				*e*S	**Sn**	**17 49 33.7**	**-1.9**
AVH	**Avacha**	**3.97**	**244**	PN	**Pn**	**17 48 51.4**	**+1.5**
AVH				S	**Sn**	**17 49 34.9**	**-1.0**
AVH	**Avacha**	**3.97**	**244**	*e*P	**Pn**	**17 48 51.4**	**+1.5**
AVH				*e*S	**Sn**	**17 49 34.9**	**-1.0**
KRX	**Arik**	**3.97**	**246**	PN	**Pn**	**17 48 51.6**	**+1.6**
KRX				S	**Sn**	**17 49 34.8**	**-1.2**
KRX	**Arik**	**3.97**	**246**	*e*P	**Pn**	**17 48 51.6**	**+1.6**
KRX				*e*S	**Sn**	**17 49 34.8**	**-1.2**
KOK	**Koryaka**	**4.01**	**245**	PN	**Pn**	**17 48 51.9**	**+1.4**
KOK	**Koryaka**	**4.01**	**245**	*e*P	**Pn**	**17 48 51.9**	**+1.4**
KOK				*e*S	**Sn**	**17 49 35.4**	**-1.4**
DALK	**Dalny**	**4.08**	**242**	PN	**Pn**	**17 48 51.9**	**+0.5**
DALK	**Dalny**	**4.08**	**242**	*e*P	**Pn**	**17 48 51.9**	**+0.5**
DALK				*e*S	**Sn**	**17 49 35.9**	**-2.7**
PET	**Petropavlovsk**	**4.14**	**242**		**Pn**	**17 48 52.3**	**+0.2**
PET	**Petropavlovsk**	**4.14**	**242**	*e*PN	**Pn**	**17 48 52.6**	**+0.5**
PET				pmax	pmax		
	comp=Z,45nm,0.3s						
PET	**Petropavlovsk**	**4.14**	**242**	*e*P	**Pn**	**17 48 52.7**	**+0.6**
PET				*e*S	**Sn**	**17 49 37.9**	**-2.0**
INSR	**Institute**	**4.14**	**243**	*e*P	**Pn**	**17 48 52.4**	**+0.2**
INSR				*e*S	**Sn**	**17 49 37.8**	**-2.2**
GNL	**Ganaly**	**4.20**	**253**	PN	**Pn**	**17 48 54.8**	**+1.7**
GNL	**Ganaly**	**4.20**	**253**	*e*P	**Pn**	**17 48 54.8**	**+1.7**
OSSR	**Ossora**	**4.23**	**348**	PN	**Pn**	**17 48 54.1**	**+0.7**
OSSR	**Ossora**	**4.23**	**348**	*e*P	**Pn**	**17 48 54.1**	**+0.7**
OSSR				*e*S	**Sn**	**17 49 40.5**	**-1.6**
TIGL	**Tigil**	**4.27**	**311**	*e*P	**Pn**	**17 48 56.5**	**+2.6**
PEA0B	**Petropavlovsk-**	**4.59**	**247**		**Pn**	**17 48 59.4**	**+1.0**
PEA0B	**Petropavlovsk-**	**4.59**	**247**	PN	**Pn**	**17 48 59.4**	**+1.0**
PETK	**Petropavlovsk-**	**4.59**	**247**	Pn	**Pn**	**17 48 59.1**	**+0.7**
	comp=Z,8.3nm,0.3s,baz=81,slow=16,SNR=42						
PETK				Sn	**Sn**	**17 49 53.0**	**+2.0**
	comp=Z,2.5nm,0.3s,baz=65,slow=23,SNR=3.7						
PETK				LR	LR	17 51 06.9	
	comp=Z,71nm,19.8s,baz=348,slow=43						
	comp=Z,13nm,0.5s						
PETK	**Petropavlovsk-**	**4.59**	**247**		**Pn**	**17 48 58.8**	**+0.4**
PETK	**Petropavlovsk-**	**4.59**	**247**	PN	**Pn**	**17 48 58.8**	**+0.4**
MTVR	**Mutnovka**	**4.69**	**238**	PN	**Pn**	**17 49 01.0**	**+1.2**
MTVR	**Mutnovka**	**4.69**	**238**	*e*P	**Pn**	**17 49 01.0**	**+1.2**
GRL	**Gorelyy**	**4.70**	**239**	PN	**Pn**	**17 49 01.3**	**+1.3**
GRL	**Gorelyy**	**4.70**	**239**	*e*P	**Pn**	**17 49 01.3**	**+1.3**
GRL				*e*S	**Sn**	**17 49 52.3**	**-1.6**
PALN	**Palana**	**4.74**	**329**	PN	Pb	17 49 08.3	-4.1
PALN	**Palana**	**4.74**	**329**	*e*P	Pb	17 49 08.3	-4.1
APC	**Apacha**	**4.96**	**247**	PN	**Pn**	**17 49 04.9**	**+1.4**
APC	**Apacha**	**4.96**	**247**	*e*P	**Pn**	**17 49 04.9**	**+1.4**
KDTR	**Khodutka, Kamc**	**5.17**	**233**	PN	**Pn**	**17 49 06.1**	**-0.2**
KDTR	**Khodutka, Kamc**	**5.17**	**233**	*e*P	**Pn**	**17 49 06.1**	**-0.2**
KDTR				*e*S	**Sn**	**17 50 00.2**	**-5.1**
TILK	**Tilichiki**	**5.39**	**8**	PN	**Pn**	**17 49 10.6**	**+1.3**
TILK	**Tilichiki**	**5.39**	**8**	*e*P	**Pn**	**17 49 10.6**	**+1.3**
PAU	**Pauzhetka**	**5.99**	**235**	PN	**Pn**	**17 49 19.6**	**+2.1**
PAU	**Pauzhetka**	**5.99**	**235**	*e*P	**Pn**	**17 49 19.6**	**+2.1**
SHEM	**Shemya Is, Ala**	**6.05**	**110**	LR	LR	17 51 36.1	
	comp=Z,103nm,20.5s,baz=204,slow=38						
SKR	**Severo-Kuril's**	**6.84**	**233**	PN	**Pn**	**17 49 29.3**	**+0.1**
SKR	**Severo-Kuril's**	**6.84**	**233**	*e*P	**Pn**	**17 49 29.3**	**+0.1**
KMSK	**Kamenskaya**	**7.40**	**5**	PN	**Pn**	**17 49 38.5**	**+1.6**
KMSK	**Kamenskaya**	**7.40**	**5**	*e*P	**Pn**	**17 49 38.5**	**+1.6**
MA2	**Magadan**	**8.75**	**306**	Pn	**Pn**	**17 49 56.1**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=118,slow=15,SNR=4.3						
MA2				LR	LR	17 53 54.2	
	comp=Z,93nm,18.5s,baz=326,slow=42						
	comp=Z,1.4nm,0.5s						
BILL	**Bilibino**	**12.98**	**3**	Pn	**Pn**	**17 50 53.2**	**0.0**
JKA	**Kamikawa-asahi**	**17.98**	**241**		**Pn**	**17 51 57.5**	**-1.3**
JKA				IAmb	IAmb	17 52 25.4	
	comp=Z,16nm,1.1s						
ASAJ	**Asahikawa**	**17.98**	**241**	P	**Pn**	**17 51 58.9**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=86,slow=11,SNR=11						
	comp=Z,7.1nm,0.7s						
ASAJ	**Asahikawa**	**17.98**	**241**	P	**Pn**	**17 51 57.5**	**-1.2**
ASAJ				pmax	pmax		
	comp=Z,17nm,1.1s						
ERM	**Erimo**	**19.27**	**236**	P	**P**	**17 52 12.0**	**-1.3**
ERM				IAmb	IAmb	17 52 55.8	
	comp=Z,51nm,1.2s						
ERM	**Erimo**	**19.27**	**236**	P	**P**	**17 52 12.0**	**-1.3**
ERM				pmax	pmax		
	comp=Z,51nm,1.3s						
YAK	**Yakutsk**	**19.32**	**305**	P	**P**	**17 52 12.6**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=103,slow=1.9,SNR=9.5						
	comp=Z,4.2nm,0.5s						
YAK	**Yakutsk**	**19.32**	**305**	P	**P**	**17 52 12.2**	**-1.5**
YAK				IAmb	IAmb	17 52 13.8	
	comp=Z,8.6nm,0.6s						
YAK	**Yakutsk**	**19.32**	**305**	*e*P	**P**	**17 52 12.9**	**-0.8**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,2.0s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.6s						
JTM	**Tenmabayashi**	**21.22**	**237**	P	**P**	**17 52 34.2**	**-0.2**
K20K	**Telida**	**22.26**	**52**	P	**P**	**17 52 45.4**	**-0.1**
IMAR	**Indian Mountai**	**22.66**	**45**	P	**P**	**17 52 49.4**	**-0.3**
M20K	**Styx River**	**22.69**	**56**	P	**P**	**17 52 50.9**	**+0.7**
H21K	**Melozitna Rive**	**23.00**	**46**	P	**P**	**17 52 53.9**	**+0.6**
PPLA	**Purkeypile**	**23.11**	**53**	P	**P**	**17 52 55.0**	**+0.4**
PPLA				IAmb	IAmb	17 53 27.1	
	comp=Z,12nm,1.4s						
OHAK	**Old Harbor**	**23.21**	**67**	P	**P**	**17 52 56.9**	**+1.4**
KDAK	**Kodiak Island**	**23.46**	**66**	P	**P**	**17 52 57.4**	**-0.5**
	comp=Z,14nm,1.0s,baz=270,slow=3.0,SNR=2.3						
	comp=Z,14nm,1.0s						
CNPM	**China Poot**	**23.84**	**61**	P	**P**	**17 53 01.3**	**-0.3**
SUA	**Susitna One**	**23.85**	**56**	P	**P**	**17 53 00.9**	**-1.0**
TRF	**Thorofare Moun**	**23.97**	**51**	P	**P**	**17 53 02.5**	**-0.5**
TRF				IAmb	IAmb	17 53 42.1	
	comp=Z,24nm,1.5s						
BWN	**Browne**	**24.33**	**50**	P	**P**	**17 53 08.7**	**+2.6**
BWN				IAmb	IAmb	17 53 21.0	
	comp=Z,21nm,1.2s						
I23K	**Minto, Yukon-K**	**24.39**	**47**	P	**P**	**17 53 06.5**	**-0.2**
MDM	**Murphy Dome**	**24.87**	**48**	P	**P**	**17 53 10.7**	**-0.3**
WRH	**Wood River Hil**	**24.93**	**49**	P	**P**	**17 53 12.0**	**+0.5**
WRH				IAmb	IAmb	17 53 24.9	
	comp=Z,7.3nm,1.4s						
CCB	**Clear Creek Bu**	**25.05**	**49**	P	**P**	**17 53 13.8**	**+1.2**
CCB				IAmb	IAmb	17 53 15.1	
	comp=Z,6.6nm,1.4s						
SCM	**Sheep Creek Mo**	**25.44**	**55**	P	**P**	**17 53 16.6**	**+0.3**
SCM	**Sheep Creek Mo**	**25.44**	**55**	P	**P**	**17 53 16.6**	**+0.3**
SCM				pmax	pmax		
	comp=Z,42nm,1.4s						
ILAR	**Eielson Array**	**25.44**	**48**	P	**P**	**17 53 15.8**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=261,slow=8.1,SNR=12						
	comp=Z,1.1nm,0.8s						
ILAR	**Eielson Array**	**25.44**	**48**	P	**P**	**17 53 18.1**	**+1.9**
MJB9	**Matsu-Tunnel**	**25.94**	**235**	P	**P**	**17 53 21.3**	**+0.4**
MJB9				IAmb	IAmb	17 53 27.7	
	comp=Z,15nm,1.3s						
MAJO	**Matsushiro**	**25.94**	**235**	P	**P**	**17 53 20.4**	**-0.5**
MAJO				IAmb	IAmb	17 53 26.8	
	comp=Z,15nm,1.3s						
MAJO	**Matsushiro**	**25.94**	**235**	P	**P**	**17 53 20.4**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,15nm,1.3s						
BMAR	**Burnt Mountain**	**26.42**	**42**	P	**P**	**17 53 26.2**	**+1.1**
N25K	**Chitina, Valde**	**26.76**	**55**	P	**P**	**17 53 28.5**	**+0.3**
N25K				IAmb	IAmb	17 53 57.9	
	comp=Z,8.9nm,1.3s						
MCARA	**McCarthy VSAT**	**27.54**	**55**	P	**P**	**17 53 36.1**	**+1.0**
MCARA				IAmb	IAmb	17 53 58.8	
	comp=Z,18nm,1.4s						
K27K	**Chicken**	**27.58**	**50**	P	**P**	**17 53 35.4**	**0.0**
K27K				IAmb	IAmb	17 53 36.1	
	comp=Z,11nm,1.4s						
L27K	**Beaver Creek,**	**27.81**	**52**	P	**P**	**17 53 37.8**	**+0.1**
L27K				IAmb	IAmb	17 53 58.5	
	comp=Z,8.1nm,1.4s						
BCAR	**Beaver Creek A**	**27.83**	**52**	P	**P**	**17 53 37.7**	**-0.1**
INK	**Inuvik**	**30.58**	**40**	P	**P**	**17 54 01.8**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=303,slow=6.1,SNR=1.7						
	comp=Z,0.3nm,0.6s						
INK	**Inuvik**	**30.58**	**40**	P	**P**	**17 54 01.7**	**-0.3**
INK	**Inuvik**	**30.58**	**40**	P	**P**	**17 54 01.7**	**-0.3**
INK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**35.38**	**176**	T	T	18 32 45.2	
	baz=359,slow=76,SNR=426						
H11N3	**WAKE ISLAND Hy**	**35.39**	**176**	T	T	18 32 46.1	
	baz=359,slow=76,SNR=214						
H11N1	**WAKE ISLAND Hy**	**35.39**	**176**	T	T	18 32 48.3	
	baz=359,slow=76,SNR=182						
SONM	**Songino Array**	**36.08**	**283**	P	**P**	**17 54 50.2**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=62,slow=7.3,SNR=8.1						
	comp=Z,0.5nm,0.4s						
SONM	**Songino Array**	**36.08**	**283**	P	**P**	**17 54 51.0**	**+0.7**
H11S1	**WAKE ISLAND Hy**	**36.59**	**177**	T	T	18 34 15.0	
	baz=359,slow=76,SNR=7.9						
H11S3	**WAKE ISLAND Hy**	**36.60**	**177**	T	T	18 34 16.4	
	baz=359,slow=76,SNR=9.0						
H11S2	**WAKE ISLAND Hy**	**36.60**	**177**	T	T	18 34 22.0	
	baz=359,slow=76,SNR=7.1						
YKA	**Yellowknife Ar**	**39.81**	**46**	P	**P**	**17 55 21.4**	**0.0**
	comp=Z,0.2nm,0.6s,baz=298,slow=8.1,SNR=2.5						
	comp=Z,0.2nm,0.6s						
KURK	**Kurchatov**	**48.94**	**303**	P	**P**	**17 56 33.8**	**-0.7**
KURK	**Kurchatov**	**48.94**	**303**	P	**P**	**17 56 33.8**	**-0.7**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KURBB	**Kurchatov Arra**	**49.04**	**303**	P	**P**	**17 56 35.2**	**-0.1**
	comp=Z,2.9nm,0.5s,baz=56,slow=7.7,SNR=40						
	comp=Z,2.9nm,0.5s						
PLID	**Pearl Lake**	**49.20**	**67**	P	**P**	**17 56 37.8**	**+0.8**
PLID				IAmb	IAmb	17 57 08.8	
	comp=Z,2.4nm,1.1s						
MK31	**Makanchi Array**	**49.69**	**297**	P	**P**	**17 56 39.7**	**-0.7**
MK31	**Makanchi Array**	**49.69**	**297**	P	**P**	**17 56 39.7**	**-0.7**
MK31				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MKAR	**Makanchi Array**	**49.69**	**297**	P	**P**	**17 56 40.3**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=56,slow=6.9,SNR=11						
	comp=Z,0.8nm,0.7s						
MAKZ	**Makanchi**	**49.84**	**297**	P	**P**	**17 56 40.7**	**-0.8**
MAKZ				IAmb	IAmb	17 56 42.0	
	comp=Z,3.6nm,1.2s						
MAKZ	**Makanchi**	**49.84**	**297**	P	**P**	**17 56 40.7**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.3s						
FCC	**Fort Churchill**	**50.17**	**42**	P	**P**	**17 56 43.4**	**-0.4**
FCC				IAmb	IAmb	17 56 57.2	
	comp=Z,3.3nm,1.2s						
FCC	**Fort Churchill**	**50.17**	**42**	P	**P**	**17 56 43.4**	**-0.4**
FCC				pmax	pmax		
	comp=Z,3.0nm,1.3s						
ARCES	**ARCESS Array B**	**52.16**	**343**	P	**P**	**17 56 59.0**	**+0.4**
ARCES	**ARCESS Array B**	**52.16**	**343**	P	**P**	**17 56 59.0**	**+0.4**
ARCES				pmax	pmax		
	comp=Z,25nm,1.4s						
NVAR	**Mina Array Bea**	**52.54**	**75**	P	**P**	**17 57 02.7**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=302,slow=8.4,SNR=2.4						
	comp=Z,0.3nm,0.6s						
PV23	**Carpenter Ridg**	**57.58**	**68**	P	**P**	**17 57 39.0**	**+0.4**
ABKAR	**Akbulak array**	**58.50**	**312**	P	**P**	**17 57 44.3**	**-0.2**
ABKAR	**Akbulak array**	**58.50**	**312**	P	**P**	**17 57 43.5**	**-1.0**
ABKAR				IAmb	IAmb	17 57 59.1	
	comp=Z,1.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**61.22**	**261**	P	**P**	**17 58 05.3**	**+1.7**
	comp=Z,0.4nm,0.8s,baz=18,slow=6.1,SNR=2.2						
	comp=Z,0.4nm,0.8s						
TXAR	**Lajitas Array**	**67.37**	**71**	P	**P**	**17 58 44.4**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=305,slow=5.9,SNR=5.5						
	comp=Z,0.4nm,0.6s						
WRA	**Warramunga Arr**	**79.13**	**209**	P	**P**	**17 59 53.1**	**0.0**
	comp=Z,0.7nm,0.7s,baz=18,slow=6.0,SNR=4.5						
	comp=Z,0.7nm,0.7s						
ASAR	**Alice Springs**	**82.78**	**208**	P	**P**	**18 00 13.2**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=15,slow=6.1,SNR=5.8						
	comp=Z,1.0nm,0.8s						

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*NEIC **14** 17:49:14.6±2.2, 8°.08S±0°.10×122°.66E±0°.08, h207^{km}±5^{km}, mb4.0/23, Error ellipse: s-maj=15.2km s-min=9.9km az=210.0*

*IDC **14** 17:49:16.4±3.0, 8°.16S×122°.56E, h231^{km}±27^{km}, mb3.5/6, mbtmp4.0/8, Error ellipse: s-maj=52.1km s-min=10.7km az=60.0*

ISC 14 17:49:15.4±0.5**, 8°.17S**±0°.06×**122°.67E**±0°.06**, h226**^{km}**, n61, σ1^{s}58**/66**, mb3.9**/12**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**0.63**	**223**		**Pn**	**17 49 42.9**	**-3.2**
MMRI				Sn	**S**	**17 50 04.7**	**-5.3**
MMRI	**Maumere**	**0.63**	**223**	P	**Pn**	**17 49 43.1**	**-3.0**
SOEI	**Soe**	**2.23**	**135**		**Pn**	**17 49 56.8**	**-1.5**
SOEI				Sn	**S**	**17 50 27.5**	**-4.4**
SOEI	**Soe**	**2.23**	**135**	P	**Pn**	**17 49 57.1**	**-1.3**
PLAI	**Plampang**	**4.89**	**262**	P	**Pn**	**17 50 26.9**	**-2.2**
JAGI	**Jajag, Banyuwa**	**8.44**	**267**	Pn	**Pn**	**17 51 11.5**	**-2.9**
MTN	**Manton Dam**	**9.53**	**120**		**Pn**	**17 51 27.4**	**-1.0**
MTN	**Manton Dam**	**9.53**	**120**	P	**Pn**	**17 51 27.5**	**-0.8**
KNRA	**Kununurra**	**9.55**	**142**		**Pn**	**17 51 27.8**	**-0.8**
KNRA	**Kununurra**	**9.55**	**142**	P	**Pn**	**17 51 27.7**	**-0.9**
FITZ	**Fitzroy Crossi**	**10.29**	**164**		**Pn**	**17 51 38.0**	**0.0**
KDU	**Kakadu**	**10.63**	**116**	P	**Pn**	**17 51 42.1**	**-0.3**
FAKI	**Fak Fak**	**10.86**	**62**	Pn	**Pn**	**17 51 44.1**	**-1.3**
FAKI	**Fak Fak**	**10.86**	**62**	P	**Pn**	**17 51 45.3**	**-0.1**
UGM	**Wanagama**	**12.03**	**270**	Pn	**Pn**	**17 51 58.5**	**-1.7**
MBWA	**Marble Bar**	**13.22**	**192**	P	**P**	**17 52 19.3**	**+2.2**
PSA00	**Pilbara Seismi**	**13.60**	**191**	P	**P**	**17 52 22.8**	**+1.5**
PSA00	**Pilbara Seismi**	**13.60**	**191**	P	**P**	**17 52 23.2**	**+1.9**
SBUM	**Sibu**	**14.83**	**315**	P	**P**	**17 52 35.9**	**+0.9**
WB0	**Warramunga Arr**	**16.18**	**137**	P	**P**	**17 52 50.4**	**+0.6**
WB0				IAmb	IAmb	17 52 54.2	
	comp=Z,10nm,1.5s						
WRA	**Warramunga Arr**	**16.27**	**137**	P	**P**	**17 52 51.7**	**+0.9**
	comp=Z,0.8nm,0.4s,baz=326,slow=14,SNR=27						
WRA				S	**S**	**17 55 46.3**	**-3.7**
	comp=Z,0.6nm,0.6s,baz=320,slow=21,SNR=3.8						
WRA	**Warramunga Arr**	**16.27**	**137**	P	**P**	**17 52 50.8**	**0.0**
WRAB	**Tennant Creek**	**16.27**	**137**	P	**P**	**17 52 51.2**	**+0.4**
WRAB				IAmb	IAmb	17 53 14.0	
	comp=Z,3.0nm,0.7s						
WB2	**Warramunga Arr**	**16.28**	**137**	P	**P**	**17 52 51.6**	**+0.7**
WB2				IAmb	IAmb	17 52 55.0	
	comp=Z,11nm,1.4s						
GIRL	**Giralia**	**16.52**	**208**	P	**Pn**	**17 52 55.5**	**+0.7**
AS31	**Alice Springs**	**18.80**	**146**	P	**P**	**17 53 20.2**	**+1.8**
ASAR	**Alice Springs**	**18.80**	**146**	P	**P**	**17 53 20.2**	**+1.9**
	comp=Z,5.4nm,0.7s,baz=323,slow=10,SNR=120						
ASAR				S	**S**	**17 56 42.1**	**+2.0**
	comp=Z,0.4nm,0.7s,baz=329,slow=23,SNR=4.9						
ASAR				ScP	**ScP**	**18 00 49.6**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=318,slow=1.2,SNR=2.4						
COEN	**Coen**	**20.92**	**108**	P	**P**	**17 53 39.5**	**-1.5**
MORW	**Morawa**	**21.71**	**196**	P	**P**	**17 53 49.2**	**+0.4**
FORT	**Forrest**	**23.05**	**168**	P	**P**	**17 54 03.4**	**+2.4**
BBOO	**Buckleboo**	**27.48**	**155**	P	**P**	**17 54 42.3**	**+1.4**
BBOO				IAmb	IAmb	17 55 26.2	
	comp=Z,13nm,1.4s						
STKA	**Stephens Creek**	**29.44**	**146**	P	**P**	**17 54 59.8**	**+1.5**
	comp=Z,1.0nm,0.4s,baz=326,slow=9.8,SNR=3.5						
	comp=Z,1.0nm,0.4s						
STKA	**Stephens Creek**	**29.44**	**146**	P	**P**	**17 55 00.1**	**+1.9**
TAPN	**Taplejung**	**48.92**	**317**	*e*P	**P**	**17 57 39.7**	**+0.4**
	comp=Z,4.2nm,0.6s						
RAMN	**Ramite**	**49.41**	**316**	*e*P	**P**	**17 57 43.3**	**+0.3**
	comp=Z,11nm,0.6s						
JIRN	**Jiri**	**50.14**	**317**	*e*P	**P**	**17 57 48.4**	**-0.2**
GUN	**Gumba**	**50.51**	**317**	*e*P	**P**	**17 57 51.4**	**0.0**
	comp=Z,9.1nm,0.5s						
PKI	**Pulchoki**	**50.62**	**316**	*e*P	**P**	**17 57 51.4**	**-0.8**
PKIN	**Phulchoki**	**50.63**	**316**	*e*P	**P**	**17 57 51.7**	**-0.5**
WAKE	**Wake Island**	**51.20**	**57**	P	**P**	**17 57 57.0**	**+0.8**
GKN	**Gorkha**	**51.42**	**316**	*e*P	**P**	**17 57 57.0**	**-0.9**
	comp=Z,4.2nm,0.3s						
DANN	**Dangsing**	**52.24**	**316**	*e*P	**P**	**17 58 03.3**	**-0.8**
	comp=Z,15nm,0.5s						
PYUN	**Piuthan**	**52.63**	**315**	*e*P	**P**	**17 58 06.0**	**-0.9**
SONM	**Songino Array**	**57.59**	**347**	P	**P**	**17 58 41.9**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=161,slow=7.9,SNR=4.9						
	comp=Z,0.3nm,0.5s						
MK31	**Makanchi Array**	**65.44**	**331**	P	**P**	**17 59 35.0**	**+0.8**
MKAR	**Makanchi Array**	**65.44**	**331**	P	**P**	**17 59 34.4**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=140,slow=7.9,SNR=23						
	comp=Z,1.5nm,0.5s						
MKAR	**Makanchi Array**	**65.44**	**331**	P	**P**	**17 59 34.1**	**0.0**
MAKZ	**Makanchi**	**65.61**	**331**	P	**P**	**17 59 34.9**	**-0.4**
MAKZ				IAmb	IAmb	17 59 57.6	
	comp=Z,2.7nm,1.4s						
GAR	**Garm**	**67.50**	**318**	P	**P**	**17 59 47.7**	**+0.2**
GAR				IAmb	IAmb	17 59 49.6	
	comp=Z,3.3nm,1.0s						
PEA0B	**Petropavlovsk-**	**67.91**	**22**	P	**P**	**17 59 50.9**	**+1.4**
PETK	**Petropavlovsk-**	**67.91**	**22**	P	**P**	**17 59 51.2**	**+1.6**
ZAA0	**Zalesovo Array**	**69.62**	**337**	P	**P**	**17 59 59.8**	**-0.2**
ZAA0				IAmb	IAmb	18 00 01.0	
	comp=Z,2.1nm,0.8s						
ZALV	**Zalesovo Beam**	**69.62**	**337**	P	**P**	**17 59 60.0**	**-0.1**
	comp=Z,1.4nm,0.5s,baz=138,slow=6.3,SNR=7.3						
	comp=Z,1.4nm,0.5s						
ZALV	**Zalesovo Beam**	**69.62**	**337**	P	**P**	**18 00 00.1**	**0.0**
KURBB	**Kurchatov Arra**	**69.89**	**332**	P	**P**	**18 00 02.0**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=143,slow=5.5,SNR=16						
	comp=Z,0.8nm,0.5s						
KURK	**Kurchatov**	**69.92**	**332**	P	**P**	**18 00 02.1**	**+0.1**
KURK				IAmb	IAmb	18 00 03.4	
	comp=Z,2.0nm,0.8s						
SEY	**Seymchan**	**74.46**	**14**	P	**P**	**18 00 29.3**	**+0.7**
	comp=Z,1.5nm,0.5s,baz=230,slow=5.6,SNR=20						
	comp=Z,1.5nm,0.5s						
ABKAR	**Akbulak array**	**79.01**	**324**	P	**P**	**18 00 54.0**	**-0.3**
ABKAR	**Akbulak array**	**79.01**	**324**	P	**P**	**18 00 54.2**	**-0.1**
ABKAR				IAmb	IAmb	18 01 07.7	
	comp=Z,1.6nm,0.8s						
QSPA	**South Pole Qui**	**81.82**	**180**	P	**P**	**18 01 10.5**	**+1.3**
TORD	**Torodi Ar. Bea**	**121.89**	**280**	PKP	**PKPdf**	**18 07 43.3**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=59,slow=1.5,SNR=2.2						

ROM 14 17:51:45.0±0.1**, 42°.368N**±0°.004×**13°.344E**±0°.005**, h10**^{km}**, ML1.7**/18**, 2C-7D, Error ellipse: s-maj=0.4km s-min=0.4km az=11.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.04**	**108**	P	Pg	17 51 47.7	+0.5
AQU				S	Sg	17 51 49.1	+0.4
AQU				AML	AML		
	comp=E,2240µm,0.3s						
AQU				AML	AML		
	comp=N,2380µm,0.4s						
AQU				AML	AML		
	comp=E,2470µm,0.3s						
AQU				AML	AML		
	comp=N,2655µm,0.4s						
T1247	**Pizzolo (AQ)**	**0.08**	**335**	P	Pg	17 51 48.1	+0.5
T1247				S	Sg	17 51 50.0	+0.6
T1247				AML	AML		
	comp=E,2390µm,1.4s						
T1247				AML	AML		
	comp=N,2105µm,0.7s						
T1247				AML	AML		
	comp=E,2390µm,0.6s						
RM33	**Pellescritta (**	**0.17**	**326**	P	Pg	17 51 49.4	+0.6
RM33				S	Sg	17 51 52.8	+1.3
RM33				AML	AML		
	comp=E,396µm,0.3s						
RM33				AML	AML		
	comp=N,354µm,0.2s						
CAMP	**Campotosto**	**0.17**	**16**	P	Pg	17 51 49.4	+0.5
CAMP				S	Sg	17 51 52.6	+0.9
CAMP				AML	AML		
	comp=E,226µm,0.4s						
CAMP				AML	AML		
	comp=N,450µm,0.3s						
GIGS	**Gran Sasso**	**0.19**	**64**	P	Pg	17 51 49.6	+0.5
GIGS				S	Sg	17 51 52.7	+0.8
GIGS				AML	AML		
	comp=E,121µm,0.2s						
GIGS				AML	AML		
	comp=N,118µm,0.3s						
GIGS				AML	AML		
	comp=N,118µm,0.3s						
GIGS				AML	AML		
	comp=N,118µm,1.7s						
FIAM	**Fiamignano**	**0.20**	**239**	P	Pg	17 51 49.8	+0.6
FIAM				S	Sg	17 51 53.0	+0.9
FIAM				AML	AML		
	comp=E,406µm,0.4s						
FIAM				AML	AML		
	comp=N,438µm,0.5s						
FAGN	**Fagnano**	**0.20**	**120**	P	Pg	17 51 50.0	+0.6
FAGN				S	Sg	17 51 54.2	+1.9
FAGN				AML	AML		
	comp=E,750µm,0.8s						
FAGN				AML	AML		
	comp=N,852µm,0.3s						
FAGN				AML	AML		
	comp=E,750µm,1.2s						
T1222	**Castel Sant'An**	**0.23**	**278**	P	Pg	17 51 50.4	+0.5
T1222				S	Sg	17 51 54.2	+1.1
T1222				AML	AML		
	comp=E,332µm,1.5s						
T1222				AML	AML		
	comp=N,201µm,1.3s						
T1222				AML	AML		
	comp=N,201µm,0.7s						
T1222				AML	AML		
	comp=E,332µm,0.5s						
SMA1	**SAN MARTINO**	**0.26**	**359**	P	Pg	17 51 51.1	+0.6
SMA1				S	Sb	17 51 55.7	-0.9
SMA1				AML	AML		
	comp=E,500µm,0.5s						
SMA1				AML	AML		
	comp=N,414µm,0.3s						
SMA1				AML	AML		
	comp=E,500µm,1.5s						
TERO	**Teramo**	**0.32**	**37**	P	Pg	17 51 51.6	+0.1
TERO				AML	AML		

	comp=N,346µm,0.8s						
TERO				AML	AML		
	comp=N,356µm,0.8s						
TERO				AML	AML		
	comp=E,324µm,1.0s						
TERO				AML	AML		
	comp=E,312µm,1.0s						
PTQR	**Pietraquaria**	**0.35**	**173**	⇑P	Pg	17 51 52.4	+0.4
PTQR				AML	AML		
	comp=E,86µm,0.5s						
PTQR				AML	AML		
	comp=E,86µm,1.5s						
PTQR				AML	AML		
	comp=N,116µm,0.2s						
T0110	**Collepietro**	**0.35**	**114**	P	Pb	17 51 52.8	-0.6
T0110				AML	AML		
	comp=E,166µm,0.4s						
T0110				AML	AML		
	comp=N,167µm,0.3s						
T0110				AML	AML		
	comp=N,167µm,1.7s						
T0110				AML	AML		
	comp=E,166µm,1.6s						
VCEL	**Villa Celiera**	**0.37**	**86**	P	Pg	17 51 52.7	+0.3
VCEL				AML	AML		
	comp=N,356µm,1.2s						
VCEL				AML	AML		
	comp=E,404µm,0.6s						
T1214	**Arquata del Tr**	**0.40**	**346**	⇓P	Pg	17 51 53.6	+0.5
T1212	**Cascia, Frazio**	**0.44**	**330**	⇓P	Pb	17 51 54.4	-0.6
T1212				AML	AML		
	comp=E,52µm,0.5s						
T1212				AML	AML		
	comp=N,60µm,0.7s						
T1212				AML	AML		
	comp=N,60µm,1.3s						
T1212				AML	AML		
	comp=E,52µm,1.5s						
CERT	**Cerreto**	**0.50**	**213**	⇓P	Pg	17 51 54.9	+0.1
CERT				AML	AML		
	comp=E,93µm,0.3s						
CERT				AML	AML		
	comp=N,67µm,0.3s						
INTR	**Introdacqua**	**0.55**	**130**	⇓P	Pg	17 51 56.2	+0.4
INTR				AML	AML		
	comp=E,30µm,0.7s						
INTR				AML	AML		
	comp=N,65µm,0.8s						
INTR				AML	AML		
	comp=E,30µm,1.3s						
INTR				AML	AML		
	comp=N,65µm,1.2s						
T1215	**Vallo di Nera,**	**0.56**	**321**	⇓P	Pg	17 51 56.3	+0.3
FDMO	**Fiordimonte**	**0.69**	**344**	⇓P	Pg	17 51 58.7	+0.2
FDMO				AML	AML		
	comp=N,36µm,0.1s						
FDMO				AML	AML		
	comp=E,42µm,0.2s						
T1220	**Camerino, Fraz**	**0.77**	**346**	⇓P	Pb	17 52 00.5	0.0
APEC	**Apecchio**	**1.37**	**331**	⇑P	Pn	17 52 09.9	-0.3

ROM 14 17:51:52.3±0.1, 43°.463N±0°.003×12°.614E±0°.003, h12km, ML1.1/18, 2C, Error ellipse: s-maj=0.3km s-min=0.1km az=145.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIEI	**Pieia**	**0.09**	**322**	⇑P	Pg	17 51 55.5	+0.3
PIEI				S	Sg	17 51 57.7	+0.5
PIEI				AML	AML		
	comp=E,182µm,0.1s						
PIEI				AML	AML		
	comp=N,87µm,0.6s						
FRON	**Frontone**	**0.10**	**56**	P	Pg	17 51 55.5	+0.3
FRON				S	Sg	17 51 57.7	+0.4
FRON				AML	AML		
	comp=N,226µm,0.1s						
FRON				AML	AML		
	comp=E,130µm,0.1s						
FRON				AML	AML		
	comp=N,226µm,1.9s						
ATFO	**Monte Foce - G**	**0.10**	**198**	⇑P	Pg	17 51 55.6	+0.4
ATFO				S	Sg	17 51 58.0	+0.6
ATFO				AML	AML		
	comp=E,110µm,0.7s						
ATFO				AML	AML		
	comp=N,96µm,0.8s						
SSFR	**Montelago di S**	**0.12**	**102**	P	Pg	17 51 55.9	+0.3
SSFR				S	Sg	17 51 58.4	+0.6
SSFR				AML	AML		
	comp=N,235µm,0.6s						
SSFR				AML	AML		
	comp=N,235µm,1.4s						
SSFR				AML	AML		
	comp=E,247µm,0.3s						
NARO	**Abbazia di Nar**	**0.15**	**351**	P	Pg	17 51 56.3	+0.4
NARO				S	Sg	17 51 59.2	+0.8
NARO				AML	AML		
	comp=N,56µm,1.4s						
NARO				AML	AML		
	comp=E,86µm,0.1s						
ATVO	**AVT- Monte Val**	**0.17**	**242**	P	Pg	17 51 56.7	+0.5
ATVO				S	Sg	17 51 59.4	+0.4
ATVO				AML	AML		
	comp=E,32µm,0.8s						
ATVO				AML	AML		
	comp=N,33µm,0.2s						
ATVO				AML	AML		
	comp=N,33µm,1.8s						
MPAG	**Monte Paganucc**	**0.20**	**32**	P	Pg	17 51 57.1	+0.4
MPAG				S	Sg	17 52 00.7	+0.9
MPAG				AML	AML		
	comp=E,147µm,0.1s						
MPAG				AML	AML		
	comp=N,42µm,0.1s						
MURB	**Monte Urbino**	**0.21**	**198**	AML	AML		
	comp=E,67µm,0.3s						
MURB				AML	AML		
	comp=N,48µm,0.3s						
ARVD	**Arcevia**	**0.24**	**81**	P	Pg	17 51 57.7	+0.3
ARVD				S	Sg	17 52 02.1	+1.2
FSSB	**Fossombrone**	**0.26**	**27**	P	Pg	17 51 58.1	+0.4
FSSB				S	Sb	17 52 02.6	-0.7
FSSB				AML	AML		
	comp=E,132µm,0.5s						
FSSB				AML	AML		
	comp=E,132µm,1.5s						
FSSB				AML	AML		
	comp=N,81µm,1.0s						
CESX	**Cesi**	**0.85**	**182**	AML	AML		
	comp=N,250µm,1.5s						
CESX				AML	AML		
	comp=E,388µm,0.4s						

BJI ***14*** *18:16:45.4±0.0, 30°.30S×177°.00W, h5km, mb5.1/23, mB5.7/15, Ms5.0/5, Ms7 4.8/6*

MOS ***14*** *18:16:48.4±1.1, 30°.27S×177°.47W, h15km, mb5.4/35, MS4.9/4, Error ellipse: s-maj=10.2km s-min=8.5km az=113.4*

NOU ***14*** *18:16:50.2, 30°.83S×176°.67W, h47km, mb5.3/56, Kermadec Islands Region*

IDC ***14*** *18:16:51.0±2.1, 30°.20S×177°.47W, h20km±12km, mb4.7/19, mbtmp4.8/19, MS4.6/51, Error ellipse: s-maj=15.3km s-min=13.4km az=52.0*

NEIC ***14*** *18:16:52.2±1.8, 30°.30S±0°.07×177°.5W±0°.1, h33km±3km, mb5.3/146, Error ellipse: s-maj=14.5km s-min=9.6km az=71.0*

GCMT ***14*** *18:16:54.2±0.2, 30°.25S±0°.01×177°.24W±0°.01, h28km, MW5.3/103, Moment Tensor Solution. s72,c96; s103,c160; Duration: $1^{s}0$ Moment tensor: Scale 10^{17} Nm; M_{rr}0.38±.03; $M_{\theta\theta}$0.40±.02; $M_{\phi\phi}$-0.78±.02; $M_{r\theta}$-0.22±.04; $M_{\theta\phi}$-0.31±.02; $M_{\phi r}$0.62±.04; Best double couple: $M_0$0.97700×10^{17} NP1:ϕ_s341.00000°, δ76.00000°, λ53.00000°. NP2:ϕ_s233.00000°, δ39.00000°, λ157.00000°. Principal axes: T 0.8790, Plg46.0000°, Azm213.0000°; N 0.1960, Plg36.0000°, Azm352.0000°; P -1.0750, Plg22.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 18:16:51.9±0.2, 30°.37S±0°.04×177°.41W±0°.04, h33km: pP-P, n735, $\sigma 2^{s}28$/652, mb5.2/115, MS4.8/58, 27C-33D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.19**	**338**	P	**Pn**	**18 17 09.9**	**-2.4**
GLKZ				S	**Sn**	**18 17 24.4**	**-2.9**
RAO	**Raoul Island**	**1.20**	**338**	Pn	**Pn**	**18 17 10.2**	**-2.2**
	4µm,0.3s,baz=142,slow=1.3,SNR=115						
RAO				Sn	**Sn**	**18 17 24.1**	**-3.5**
	7µm,0.3s,baz=108,slow=20,SNR=11						
RAO	**Raoul Island**	**1.20**	**338**		**Pn**	**18 17 09.7**	**-2.7**
RAO	**Raoul Island**	**1.20**	**338**	Sn	**Sn**	**18 17 24.8**	**-2.7**
RAO	**Raoul Island**	**1.20**	**338**	P	**Pn**	**18 17 09.7**	**-2.7**
RAO						18 17 24.8	
RIZ	**Raoul Island**	**1.21**	**338**	P	**Pn**	**18 17 10.3**	**-2.3**
RIZ				S	**Sn**	**18 17 25.8**	**-2.0**
MXZ	**Matakaoa Point**	**8.00**	**205**	Pn	**Pn**	**18 18 42.4**	**-3.5**
MXZ	**Matakaoa Point**	**8.00**	**205**	P	**Pn**	**18 18 42.6**	**-3.3**
MXZ				S	**Sn**	**18 20 13.4**	**-1.8**
WMGZ	**Waiomatatini S**	**8.19**	**204**	P	**Pn**	**18 18 44.8**	**-3.7**
WMGZ				S	**Sn**	**18 20 17.2**	**-2.7**
HAZ	**Te Kaha**	**8.37**	**207**	P	**Pn**	**18 18 46.8**	**-4.1**
HAZ				S	**Sn**	**18 20 24.5**	**+0.2**
PKGZ	**Pakihiroa**	**8.38**	**205**	P	**Pn**	**18 18 46.5**	**-4.6**
PKGZ				S	**Sn**	**18 20 20.8**	**-3.7**
PUZ	**Puketiti**	**8.47**	**204**	P	Pn	18 18 46.9	-5.5
PUZ				S	**Sn**	**18 20 21.5**	**-5.4**
RUGZ	**Raukumara Rang**	**8.60**	**207**	P	**Pn**	**18 18 49.9**	**-4.3**
RUGZ				S	**Sn**	**18 20 27.6**	**-2.4**
WCZ	**Waipu Caves**	**8.86**	**229**	P	Pn	18 19 03.4	+5.8
CNGZ	**Carnagh Statio**	**8.86**	**203**	P	**Pn**	**18 18 53.1**	**-4.6**
MWZ	**Matawai**	**8.97**	**206**	P	Pn	18 18 54.3	-4.9
MWZ				S	**Sn**	**18 20 35.9**	**-3.3**
URZ	**Urewera**	**9.08**	**208**	Pn	Pn	18 18 55.8	-4.8
	1.6nm,0.3s,baz=352,slow=7.1,SNR=2.6						
URZ				Sn	**Sn**	**18 20 34.8**	**-6.8**
	32nm,0.3s,baz=303,slow=20,SNR=11						
RIGZ	**Rimuhau**	**9.22**	**204**	P	Pn	18 18 57.4	-5.1
RIGZ				S	**Sn**	**18 20 40.9**	**-4.2**
MUGZ	**Murupara**	**9.40**	**209**	P	Pn	18 18 59.7	-5.4
MUGZ				S	**Sn**	**18 20 44.8**	**-4.9**
RTZ	**Ruatahuna**	**9.43**	**208**	Pn	Pn	18 18 59.2	-6.3
RAHZ	**Arahi**	**9.65**	**207**	P	**Pn**	**18 19 05.1**	**-3.4**
RAHZ				S	**Sn**	**18 20 52.4**	**-3.4**
NMHZ	**Naumai**	**9.92**	**207**	P	**Pn**	**18 19 09.0**	**-3.2**
NMHZ				S	**Sn**	**18 20 59.7**	**-2.7**
BKZ	**Black Stump Fm**	**10.10**	**208**	Pn	Pn	18 19 08.3	-6.4
BKZ	**Black Stump Fm**	**10.10**	**208**	P	**Pn**	**18 19 10.4**	**-4.3**
BKZ				S	**Sn**	**18 21 00.5**	**-6.4**
MCHZ	**McNeill Hill**	**10.26**	**207**	P	**Pn**	**18 19 12.8**	**-4.0**
MCHZ				S	**Sn**	**18 21 06.1**	**-4.6**
HIZ	**Hauiti**	**10.33**	**216**	Pn	**Pn**	**18 19 14.4**	**-3.3**
HIZ	**Hauiti**	**10.33**	**216**	P	Pn	18 19 24.0	+6.3
SNVZ	**South Ngauruho**	**10.48**	**211**	P	**Pn**	**18 19 18.8**	**-1.3**
BHHZ	**Black Hill Sta**	**10.55**	**209**	P	**Pn**	**18 19 16.8**	**-4.0**
BHHZ				S	**Sn**	**18 21 10.2**	**-7.7**
FWVZ	**Far West T-bar**	**10.58**	**211**	P	**Pn**	**18 19 20.5**	**-0.9**
WNVZ	**Wahianoa**	**10.62**	**211**	P	**Pn**	**18 19 19.2**	**-2.7**
VRZ	**Vera Road**	**10.85**	**214**	P	**Pn**	**18 19 28.7**	**+3.9**
PNHZ	**Pukenui**	**10.86**	**207**	P	Pn	18 19 18.9	-6.1
TSZ	**Takapari Road**	**11.08**	**207**	P	Pn	18 19 17.2	-11
BFZ	**Birch Farm**	**11.51**	**205**	Pn	Pn	18 19 28.0	-5.9
BFZ	**Birch Farm**	**11.51**	**205**	P	Pn	18 19 27.3	-6.6
MRZ	**Mangatainoka R**	**11.74**	**207**	Pn	Pn	18 19 29.5	-7.6
MRZ	**Mangatainoka R**	**11.74**	**207**	P	Pn	18 19 29.7	-7.4
LKBA	**Tubou, Lakemba**	**12.15**	**354**	P	Pn	18 19 48.6	+5.8
SNZO	**South Karori**	**12.64**	**208**	Pn	Pn	18 19 44.3	-5.1
TCW	**Tory Channel**	**12.74**	**210**		Pn	18 19 38.3	-12
TUWZ	**Tuamarina**	**13.06**	**210**		Pn	18 19 38.2	-17
NIUE	**Niue**	**13.14**	**33**	Pn	Pn	18 19 46.4	-10
NNZ	**Nelson**	**13.14**	**212**		Pn	18 19 42.0	-14
NNZ	**Nelson**	**13.14**	**212**	P	**Pn**	**18 19 55.3**	**-0.9**
TKNZ	**Takaka Hill**	**13.20**	**214**	Pn	Pn	18 19 49.8	-7.2
MSVF	**Nonsavu**	**13.24**	**341**	Pn	**Pn**	**18 19 60.0**	**+2.2**
	1.0nm,0.3s,baz=169,slow=8.5,SNR=6.4						
MSVF	**Nonsavu**	**13.24**	**341**	Pn	**Pn**	**18 19 56.3**	**-1.6**
MSVF	**Nonsavu**	**13.24**	**341**	P	**P**	**18 20 02.6**	**-4.6**
MSVF	**Nonsavu**	**13.24**	**341**	*i* P	**Pn**	**18 19 54.9**	**-2.9**
QRZ	**Quartz Range**	**13.25**	**215**	P	**Pn**	**18 19 56.6**	**-1.1**
	47nm,0.8s						
BSWZ	**Blackbirch Sta**	**13.32**	**209**	P	**Pn**	**18 19 57.0**	**-1.7**
CTZ	**Chatham Island**	**13.35**	**178**	Pn	Pn	18 19 53.4	-5.7
CTZ	**Chatham Island**	**13.35**	**178**	P	Pn	18 19 50.0	-9.1
MRNZ	**Matariki Terra**	**13.57**	**213**	P	**Pn**	**18 19 58.3**	**-3.8**
THZ	**Tophouse**	**13.79**	**212**	P	**Pn**	**18 20 02.6**	**-2.6**
TAVE	**Taveuni**	**13.79**	**350**	P	**P**	**18 20 10.8**	**-2.4**
KHZ	**Kahutara**	**14.04**	**209**	P	**Pn**	**18 20 04.0**	**-4.5**
DSZ	**Denniston Nort**	**14.30**	**215**	P	**Pn**	**18 20 08.4**	**-3.6**
GVZ	**Greta Valley S**	**14.71**	**209**	P	**Pn**	**18 20 13.4**	**-4.2**
LTZ	**Lake Taylor**	**14.89**	**211**	Pn	Pn	18 20 13.6	-6.4
LTZ	**Lake Taylor**	**14.89**	**211**	P	Pn	18 20 14.2	-5.8
PINNC	**Pines Island,**	**15.59**	**296**	P	**Pn**	**18 20 30.1**	**+0.7**
PINNC	**Pines Island,**	**15.59**	**296**	P	**P**	**18 20 37.6**	**+4.4**
RACZ	**Rakaia**	**15.71**	**209**	P	**Pn**	**18 20 26.4**	**-4.3**
MHCZ	**Mount Hutt**	**15.79**	**211**	P	**Pn**	**18 20 29.2**	**-2.7**
WACZ	**Wakanui South**	**16.01**	**209**	P	**Pn**	**18 20 32.1**	**-2.4**
RPZ	**Rata Peaks**	**16.17**	**211**	Pn	**Pn**	**18 20 31.0**	**-5.6**
	2.1nm,0.3s,baz=80,slow=6.6,SNR=8.7						
RPZ				Sn	Sn	18 23 17.6	-17
	3.8nm,0.3s,baz=126,slow=23,SNR=8.5						
RPZ	**Rata Peaks**	**16.17**	**211**	P	**Pn**	**18 20 31.9**	**-4.7**
RPZ	**Rata Peaks**	**16.17**	**211**	P	**Pn**	**18 20 32.6**	**-4.0**
OUENC	**Ouen Island, N**	**16.17**	**296**	P	**P**	**18 20 38.3**	**-1.3**
OUENC	**Ouen Island, N**	**16.17**	**296**	P	**P**	**18 20 44.1**	**+4.5**
ARCZ	**Arundel**	**16.30**	**211**	P	**Pn**	**18 20 34.6**	**-3.7**
YATNC	**Mamie plateau,**	**16.33**	**297**	P	**P**	**18 20 46.7**	**+5.3**
ONTNC	**Ouen Toro**	**16.53**	**295**	P	**P**	**18 20 42.5**	**-1.1**
ONTNC	**Ouen Toro**	**16.53**	**295**	P	**P**	**18 20 46.7**	**+3.1**
DZM	**Mont Dzumac**	**16.67**	**296**	*e*Pn	**P**	**18 20 48.0**	**+2.7**
	296nm,1.4s						
DZM				*e*LR	LR	18 24 32.5	
	comp=Z,7µm,23.9s						
DZM	**Mont Dzumac**	**16.67**	**296**	Pn	**P**	**18 20 49.3**	**+4.0**
	0.6nm,0.3s,baz=92,slow=16,SNR=8.9						
DZM				LR	LR	18 25 58.7	
	comp=Z,5µm,18.6s,baz=126,slow=33						
DZM	**Mont Dzumac**	**16.67**	**296**	P	**P**	**18 20 45.7**	**+0.4**
DZM	**Mont Dzumac**	**16.67**	**296**	P	**P**	**18 20 50.3**	**+5.0**
NOUC	**Port Laguerre**	**16.76**	**296**	P	**P**	**18 20 50.7**	**+4.5**
LIFNC	**LIFOU**	**16.81**	**301**	P	**Pn**	**18 20 45.4**	**+0.6**
LIFNC	**LIFOU**	**16.81**	**301**	P	**P**	**18 20 53.2**	**+6.5**
LBZ	**Lake Benmore**	**17.08**	**212**	P	**Pn**	**18 20 44.7**	**-3.5**
LBZ	**Lake Benmore**	**17.08**	**212**	P	**Pn**	**18 20 45.6**	**-2.5**
AFI	**Afiamalu**	**17.19**	**19**	Pn	**Pn**	**18 20 44.6**	**-5.1**
	2.4nm,0.3s,baz=158,slow=5.4,SNR=8.3						
AFI				Sn	Sn	18 23 44.0	-16
	1.8nm,0.3s,baz=180,slow=20,SNR=1.5						
AFI				LR	LR	18 28 18.7	
	comp=Z,1µm,18.9s,baz=191,slow=40						
ODZ	**Otahua Downs**	**17.40**	**209**	P	**Pn**	**18 20 48.2**	**-3.9**
ODZ	**Otahua Downs**	**17.40**	**209**	P	**Pn**	**18 20 47.9**	**-4.2**
ODZ	**Otahua Downs**	**17.40**	**209**	P	**Pn**	**18 20 48.4**	**-3.7**
JCZ	**Jackson Bay**	**17.51**	**215**	P	**Pn**	**18 20 50.9**	**-2.7**
WKZ	**Wanaka**	**17.96**	**213**	P	**Pn**	**18 20 56.6**	**-2.4**
EAZ	**Earnscleugh**	**18.13**	**211**	P	**Pn**	**18 21 00.1**	**-1.0**
RAR	**Rarotonga**	**18.30**	**64**	P	**P**	**18 20 57.7**	**-5.5**
	53nm,0.9s,baz=234,slow=5.9,SNR=18						
RAR				S	Sn	18 24 02.3	-24
	8.3nm,0.7s,baz=210,slow=16,SNR=1.7						
RAR	**Rarotonga**	**18.30**	**64**		**P**	**18 20 57.3**	**-5.9**
RAR				IAmb	IAmb	18 21 03.8	
	comp=Z,330nm,1.4s						
RAR	**Rarotonga**	**18.30**	**64**	P	**P**	**18 20 58.3**	**-4.8**
RAR	**Rarotonga**	**18.30**	**64**	P	**P**	**18 20 57.3**	**-5.9**
RAR				pmax	pmax		
	comp=Z,330nm,1.4s						
MLZ	**Mavora Lakes**	**18.79**	**213**	P	**P**	**18 21 05.2**	**-3.2**
KOUNC	**Koumac, New Ca**	**19.18**	**296**	P	**P**	**18 21 10.7**	**-2.2**
KOUNC	**Koumac, New Ca**	**19.18**	**296**	P	**Pn**	**18 21 18.3**	**+4.4**
SYZ	**Scrubby Hill**	**19.23**	**209**	P	**P**	**18 21 10.0**	**-3.2**
SYZ	**Scrubby Hill**	**19.23**	**209**	P	**Pn**	**18 21 14.0**	**-0.3**
WHZ	**Wether Hill Ro**	**19.26**	**212**	P	**P**	**18 21 10.0**	**-3.5**
LHI	**Lord Howe Isla**	**20.21**	**261**	P	**P**	**18 21 24.9**	**+0.9**
	baz=20,SNR=4.4						
LHI	**Lord Howe Isla**	**20.21**	**261**	P	**P**	**18 21 23.3**	**-0.7**
LHI				IAmb	IAmb	18 21 29.8	
	comp=Z,158nm,1.1s						
FUNA	**Funafuti**	**21.96**	**351**	P	**P**	**18 21 43.2**	**+0.2**
FUNA				IAmb	IAmb	18 21 50.6	
	comp=Z,249nm,1.6s						
TBI	**Tubuai**	**25.85**	**81**	*e*P	**P**	**18 22 21.9**	**+1.3**
	comp=Z,906nm,26.8s						
TBI				*e*S	**S**	**18 26 47.4**	**-0.9**
	comp=Z,2µm,42.5s						
TBI				*e*LR	LR	18 28 50.7	
	comp=Z,16µm,24.5s						
TBI				*e*LR	LR	18 28 51.0	
	comp=Z,68µm,24.8s						
TBI	**Tubuai**	**25.85**	**81**	*e*T	T	18 49 50.0	
	comp=Z,24nm,0.4s						
ARMA	**Armidale**	**26.67**	**262**	P	**P**	**18 22 28.8**	**+0.8**
	baz=27,SNR=9.7						
ARMA	**Armidale**	**26.67**	**262**	P	**P**	**18 22 27.5**	**-0.5**
ARMA	**Armidale**	**26.67**	**262**	P	**P**	**18 22 31.1**	**+3.1**
MGCD	**Mangrove Creek**	**26.86**	**256**	P	**P**	**18 22 30.1**	**+0.5**
	baz=27,SNR=13						
MGCD	**Mangrove Creek**	**26.86**	**256**	P	**P**	**18 22 33.1**	**+3.5**
SYDH	**Sydney Hard Ro**	**27.14**	**254**	P	**P**	**18 22 35.5**	**+3.4**
EIDS	**Eidsvold**	**28.24**	**272**	P	**P**	**18 22 43.9**	**+1.8**
	baz=28,SNR=7.9						
EIDS	**Eidsvold**	**28.24**	**272**	P	**P**	**18 22 42.0**	**0.0**
EIDS	**Eidsvold**	**28.24**	**272**	P	**P**	**18 22 45.2**	**+3.1**
CNB	**Canberra Magne**	**28.27**	**251**	P	**P**	**18 22 44.3**	**+2.0**
PAE	**Paea**	**28.31**	**70**	*e*P	**P**	**18 22 41.4**	**-1.3**
	comp=Z,20nm,1.3s						
PPT2	**Papeete2**	**28.35**	**70**	*e*P	**P**	**18 22 44.8**	**+1.7**
	comp=Z,121nm,23.5s						
PPT2				*e*LR	LR	18 29 53.5	
	comp=Z,3µm,25.5s						
PPT2				*e*LR	LR	18 30 00.0	
	comp=Z,3µm,24.2s						
PPTF	**Pamatai, Papee**	**28.36**	**70**	P	**P**	**18 22 42.1**	**-1.1**
PPT	**Papeete**	**28.36**	**70**	P	**P**	**18 22 42.4**	**-0.8**
	comp=Z,18nm,0.7s,baz=277,slow=17,SNR=2.9						
PPT				LR	LR	18 30 56.2	
	comp=Z,1µm,21.1s,baz=249,slow=30						
	comp=Z,18nm,0.7s						
MILA	**Mila**	**28.50**	**247**	P	**P**	**18 22 44.3**	**0.0**
	baz=29,SNR=8.4						
TIAR	**Tiarei**	**28.55**	**70**	*e*P	**P**	**18 22 43.5**	**-1.4**
	comp=Z,7.7nm,0.9s						
CAN	**Canberra**	**28.56**	**251**	P	**P**	**18 22 45.8**	**+0.9**
CAN				IAmb	IAmb	18 22 60.0	
	comp=Z,49nm,0.9s						
CAN	**Canberra**	**28.56**	**251**	P	**P**	**18 22 47.7**	**+2.8**
CAN	**Canberra**	**28.56**	**251**	P	**P**	**18 22 45.8**	**+0.9**
CAN				pmax	pmax		
	comp=Z,49nm,0.9s						
YNG	**Young**	**29.07**	**253**	P	**P**	**18 22 51.9**	**+2.5**
HNR	**Honiara**	**29.67**	**310**	LR	LR	18 33 55.4	
	comp=Z,13µm,18.2s,baz=158,slow=35						
HNR	**Honiara**	**29.67**	**310**	P	**P**	**18 22 55.1**	**+0.3**
HNR				IAmb	IAmb	18 23 16.0	
	comp=Z,46nm,0.9s						
HNR	**Honiara**	**29.67**	**310**	P	**P**	**18 22 55.1**	**+0.3**
HNR				pmax	pmax		
	comp=Z,46nm,1.0s						
RMQ	**Roma**	**29.94**	**269**	P	**P**	**18 22 58.5**	**+1.4**
	baz=30,SNR=33						
RMQ	**Roma**	**29.94**	**269**	P	**P**	**18 23 00.2**	**+3.1**
TAU	**Tasmania Unive**	**30.72**	**236**	P	**P**	**18 23 04.7**	**+0.9**
TAU				IAmb	IAmb	18 23 10.0	
	comp=Z,110nm,1.6s						
TAU	**Tasmania Unive**	**30.72**	**236**	P	**P**	**18 23 04.7**	**+0.9**
TAU				pmax	pmax		
	comp=Z,110nm,1.6s						
VAH	**Vaihoa**	**31.19**	**68**	*e*P	**P**	**18 23 06.7**	**-1.5**
	comp=Z,48nm,1.0s						
VAH	**Vaihoa**	**31.19**	**68**	*e*T	T	18 57 08.0	
	comp=Z,25nm,0.3s						
TOO	**Toolangi**	**31.44**	**247**	P	**P**	**18 23 12.4**	**+2.1**
	baz=32,SNR=10.0						
TOO	**Toolangi**	**31.44**	**247**	P	**P**	**18 23 10.5**	**+0.2**
TOO				IAmb	IAmb	18 23 25.1	
	comp=Z,62nm,1.2s						
TOO	**Toolangi**	**31.44**	**247**	P	**P**	**18 23 11.5**	**+1.2**
TOO	**Toolangi**	**31.44**	**247**	P	**P**	**18 23 10.5**	**+0.2**
TOO				pmax	pmax		
	comp=Z,63nm,1.2s						
CMSA	**Cobar Meteorol**	**31.57**	**258**	P	**P**	**18 23 13.7**	**+2.2**
	baz=32,SNR=21						
CMSA	**Cobar Meteorol**	**31.57**	**258**	P	**P**	**18 23 14.0**	**+2.5**
QLP	**Quilpie**	**33.82**	**267**	P	**P**	**18 23 32.6**	**+1.5**
	baz=34,SNR=25						
QLP	**Quilpie**	**33.82**	**267**	P	**P**	**18 23 32.9**	**+1.7**
CTA	**Charters Tower**	**34.30**	**279**	P	**P**	**18 23 36.5**	**+1.1**
	comp=Z,22nm,0.6s,baz=106,slow=10,SNR=40						
CTA				ScP	**ScP**	**18 29 55.5**	**+1.6**
	comp=Z,4.2nm,1.0s,baz=99,slow=2.6,SNR=3.5						
CTA				LR	LR	18 36 15.4	
	comp=Z,3µm,18.3s,baz=122,slow=34						
	comp=Z,22nm,0.6s						
CTA	**Charters Tower**	**34.30**	**279**	P	**P**	**18 23 37.1**	**+1.7**
CTAO	**Charters Tower**	**34.30**	**279**	P	**P**	**18 23 35.2**	**-0.2**
CTAO	**Charters Tower**	**34.30**	**279**	P	**P**	**18 23 37.3**	**+1.9**
CTAO	**Charters Tower**	**34.30**	**279**	P	**P**	**18 23 35.2**	**-0.2**
CTAO				pmax	pmax		
	comp=Z,96nm,0.7s						
CTAO	**Charters Tower**	**34.30**	**279**	P	**P**	**18 23 36.5**	**+1.1**
CTAO				pP	**pwP**	**18 23 48.7**	**-0.5**
CTAO				sP	**sP**	**18 23 54.4**	**+7.2**
ARPS	**Mount Arapiles**	**34.35**	**248**	P	**P**	**18 23 36.9**	**+1.2**
	baz=34,SNR=13						
ARPS	**Mount Arapiles**	**34.35**	**248**	P	**P**	**18 23 36.7**	**+1.0**
STKA	**Stephens Creek**	**34.98**	**257**	P	**P**	**18 23 42.2**	**+1.0**
	comp=Z,47nm,0.6s,baz=94,slow=9.7,SNR=67						
STKA				LR	LR	18 37 07.2	
	comp=Z,2µm,18.1s,baz=96,slow=35						
	comp=Z,47nm,0.6s						
STKA	**Stephens Creek**	**34.98**	**257**	P	**P**	**18 23 43.4**	**+2.2**
	baz=35,SNR=17						
STKA	**Stephens Creek**	**34.98**	**257**	P	**P**	**18 23 40.9**	**-0.4**
STKA	**Stephens Creek**	**34.98**	**257**	P	**P**	**18 23 43.7**	**+2.5**
INKA	**Innaminka**	**36.52**	**263**	P	**P**	**18 23 56.4**	**+1.9**
MTSU	**Mount Surprise**	**36.79**	**280**	P	**P**	**18 23 57.8**	**+0.9**
	baz=37,SNR=12						
MTSU	**Mount Surprise**	**36.79**	**280**	P	**P**	**18 23 59.4**	**+2.5**
HTT	**Hallett**	**37.00**	**254**	P	**P**	**18 23 59.5**	**+1.0**
	baz=37,SNR=68						
HTT	**Hallett**	**37.00**	**254**	P	**P**	**18 23 59.6**	**+1.1**
XMAS	**Kiritimati**	**37.44**	**34**	P	**P**	**18 24 01.9**	**-0.5**
LCRK	**Leigh Creek**	**38.08**	**258**	P	**P**	**18 24 08.2**	**+0.5**
WHYH	**Whyalla**	**38.17**	**254**	P	**P**	**18 24 09.3**	**+0.9**
RABL	**Rabaul**	**38.76**	**306**	P	**P**	**18 24 12.4**	**-1.1**
RABL				IAmb	IAmb	18 25 28.8	
	comp=Z,80nm,1.4s						
PMG	**Port Moresby**	**39.05**	**295**	P	**P**	**18 24 16.1**	**+0.1**
	comp=Z,6.4nm,0.9s,baz=50,slow=6.7,SNR=3.9						
PMG				ScP	**S**	**18 30 13.6**	**+0.4**
	comp=Z,6.7nm,0.9s,baz=44,slow=3.8,SNR=4.2						
PMG				LR	LR	18 37 40.0	
	comp=Z,1µm,20.9s,baz=138,slow=32						
	comp=Z,6.4nm,0.9s						
PMG	**Port Moresby**	**39.05**	**295**	P	**P**	**18 24 14.3**	**-1.7**
PMG	**Port Moresby**	**39.05**	**295**	P	**P**	**18 24 16.1**	**+0.1**
PMG				pP	**sP**	**18 24 27.9**	**+0.2**
BBOO	**Buckleboo**	**39.47**	**254**	P	**P**	**18 24 19.9**	**+0.7**
	baz=40,SNR=43						
BBOO	**Buckleboo**	**39.47**	**254**	P	**P**	**18 24 18.8**	**-0.4**
BBOO				IAmb	IAmb	18 24 32.4	
	comp=Z,62nm,0.8s						
BBOO	**Buckleboo**	**39.47**	**254**	P	**P**	**18 24 20.1**	**+0.8**
QIS	**Mount Isa**	**39.82**	**274**	P	**P**	**18 24 23.3**	**+0.9**
	baz=40,SNR=12						
QIS	**Mount Isa**	**39.82**	**274**	P	**P**	**18 24 23.7**	**+1.4**
TAOE	**Nuku Hiva Isla**	**40.83**	**66**	*e*P	**P**	**18 24 31.8**	**+1.0**
	comp=Z,101nm,22.3s						
TAOE				*e*S	**S**	**18 30 40.7**	**+0.7**
	comp=Z,280nm,23.5s						
TAOE				*e*LR	LR	18 35 46.4	
	comp=Z,2µm,24.5s						
OOD	**Oodnadatta**	**40.84**	**262**	P	**P**	**18 24 31.2**	**+0.5**
MULG	**Mulgathing**	**41.63**	**257**	P	**P**	**18 24 37.5**	**+0.4**
AS01	**Alice Springs**	**43.58**	**267**	P	**P**	**18 24 52.9**	**-0.2**
AS31	**Alice Springs**	**43.62**	**267**	P	**P**	**18 24 52.4**	**-1.1**
ASAR	**Alice Springs**	**43.62**	**267**	P	**P**	**18 24 53.0**	**-0.5**
	comp=Z,9.6nm,0.6s,baz=102,slow=6.3,SNR=128						
ASAR				PcP	**PcP**	**18 26 41.4**	**+0.9**
	comp=Z,3.6nm,0.8s,baz=110,slow=4.1,SNR=2.1						
ASAR				ScP	**ScP**	**18 30 31.4**	**+1.7**
	comp=Z,3.0nm,0.8s,baz=112,slow=3.8,SNR=8.7						
ASAR				S	**S**	**18 31 19.4**	**-1.6**
	comp=Z,0.9nm,0.9s,baz=108,slow=15,SNR=3.1						
ASAR				PKiKP	**PKiKP**	**18 33 42.1**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=104,slow=1.4,SNR=1.8						
ASAR				LR	LR	18 42 50.1	
	comp=Z,4µm,18.2s,baz=116,slow=36						

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      comp=Z,9.6nm,0.6s
ASAR  Alice Springs    43.62 267   P      P      18 24 51.9 -1.6
DRV   Dumont d'Urvil   44.36 203   P      P      18 24 59.6 +0.9
WB2   Warramunga Arr   44.59 272   P      P      18 24 58.9 -2.4
WRAB  Tennant Creek    44.60 272   P      P      18 24 58.7 -2.6
WRAB  Tennant Creek    44.60 272   P      P      18 25 01.5 +0.2
WRAB  Tennant Creek    44.60 272 i P      P      18 25 00.2 -1.1
WRAB                               pmax   pmax
      comp=Z,43nm,0.8s
WRAB  Tennant Creek    44.60 272   P      P      18 25 00.5 -0.8
WRAB                               pP     sP     18 25 13.2  0.0
WRAB                               sP     pwP    18 25 18.4 +3.2
WRA   Warramunga Arr   44.60 272   P      P      18 25 00.2 -1.1
      comp=Z,19nm,0.5s,baz=114,slow=7.3,SNR=105
WRA                                ScP    ScP    18 30 34.7 +1.0
      comp=Z,5.6nm,1.1s,baz=112,slow=3.9,SNR=5.4
WRA                                S      S      18 31 29.9 -5.5
      comp=Z,0.7nm,0.7s,baz=114,slow=14,SNR=2.4
WRA                                PKiKP  PKiKP  18 33 42.6 -1.1
      comp=Z,0.3nm,0.8s,baz=104,slow=0.3,SNR=1.8
WRA                                LR     LR     18 42 41.7
      comp=Z,2µm,18.2s,baz=104,slow=35
      comp=Z,19nm,0.5s
WRA   Warramunga Arr   44.60 272   P      P      18 24 59.0 -2.3
FORT  Forrest          46.55 255   P      P      18 25 16.6 +0.1
      baz=47,SNR=9.2
FORT  Forrest          46.55 255   P      P      18 25 14.4 -2.1
FORT                               IAmb   IAmb   18 25 28.6
      comp=Z,51nm,1.1s
FORT  Forrest          46.55 255   P      P      18 25 15.6 -1.0
WRKA  Warakurna        47.99 262   P      P      18 25 26.6 -1.3
      baz=48,SNR=43
WRKA  Warakurna        47.99 262   P      P      18 25 26.9 -1.0
VNDA  Vanda            48.17 186   P      P      18 25 32.1 +3.5
      comp=Z,2.7nm,0.7s,baz=42,slow=6.4,SNR=5.8
VNDA                               LR     LR     18 43 16.9
      comp=Z,274nm,20.2s,baz=28,slow=33
      comp=Z,2.7nm,0.7s
VNDA  Vanda            48.17 186   P      P      18 25 29.6 +1.0
VNDA                               pP     pwP    18 25 41.8 -0.9
KDU   Kakadu           49.41 280   P      P      18 25 38.3 -0.5
      baz=50,SNR=4.3
SMPI  Sarmi            50.21 296   P      P      18 25 56.1  +11
MTN   Manton Dam       50.48 279   P      P      18 25 48.5 +1.5
      baz=51,SNR=8.4
MTN   Manton Dam       50.48 279   P      P      18 25 45.4 -1.6
MTN                                IAmb   IAmb   18 25 51.2
      comp=Z,39nm,1.4s
KNRA  Kununurra        51.21 274   P      P      18 25 52.8 +0.4
      baz=51,SNR=19
KNRA  Kununurra        51.21 274   P      P      18 25 52.0 -0.5
KNRA                               IAmb   IAmb   18 26 06.0
      comp=Z,49nm,1.1s
KNRA  Kununurra        51.21 274   P      P      18 25 52.7 +0.2
FITZ  Fitzroy Crossi   52.87 270   P      P      18 26 03.7 -1.2
FITZ  Fitzroy Crossi   52.87 270   P      P      18 26 04.7 -0.1
CCD   Concordia, Ant   53.12 196   P      P      18 26 08.8 +2.5
HMH   Humu'ula Sheep   53.98  26   P      P      18 26 11.5 -1.6
HPAH  Hawaii Prepara   54.29  25   P      P      18 26 13.4 -1.7
FAKI  Fak Fak          54.81 290   P      P      18 26 17.8 -1.3
KLBR  Kellerberrin     54.84 251   P      P      18 26 18.2 -0.9
      baz=55,SNR=11
NWAO  Narrogin (SRO)   54.88 249   LR     LR     18 48 45.1
      comp=Z,659nm,18.4s,baz=68,slow=35
NWAO  Narrogin (SRO)   54.88 249   P      P      18 26 19.4  0.0
NWAO  Narrogin (SRO)   54.88 249   P      P      18 26 19.4  0.0
NWAO                               pmax   pmax
      comp=Z,415nm,1.5s
CASY  Casey            55.40 208   P      P      18 26 22.7 +0.1
CASY  Casey            55.40 208   P      P      18 26 23.1 +0.5
CASY                               pP     sP     18 26 35.5 +0.9
MEEK  Meekatharra      55.69 257   P      P      18 26 24.7 -0.6
      baz=56,SNR=5.4
PSA00 Pilbara Seismi   56.47 263   P      P      18 26 29.7 -1.2
PSA00                              IAmb   IAmb   18 26 39.6
      comp=Z,42nm,2.0s
PSA00                              PcP    PcP    18 27 26.2 -1.4
PSA00 Pilbara Seismi   56.47 263   P      P      18 26 28.7 -2.3
PSA00                              IAmb   IAmb   18 26 35.6
      comp=Z,63nm,1.8s
PSA00                              PcP    PcP    18 27 25.8 -1.9
MBWA  Marble Bar       56.73 263   P      P      18 26 30.8 -2.0
MBWA                               IAmb   IAmb   18 26 48.8
      comp=Z,25nm,1.2s
MBWA  Marble Bar       56.73 263   P      P      18 26 31.4 -1.4
SIJI  Sorong           56.80 291   LR     LR     18 49 27.0
      comp=Z,509nm,21.2s,baz=84,slow=34
GUMO  Guam             56.82 315   LR     LR     18 47 59.5
      comp=Z,359nm,20.9s,baz=132,slow=33
GUMO  Guam             56.82 315   P      P      18 26 30.9 -2.4
GUMO  Guam             56.82 315   P      P      18 26 31.0 -2.4
GUMO                               pmax   pmax
      comp=Z,271nm,1.7s
MORW  Morawa           57.03 253   P      P      18 26 33.8 -1.0
      baz=57,SNR=5.5
MORW  Morawa           57.03 253   P      P      18 26 32.3 -2.5
MORW                               IAmb   IAmb   18 28 01.7
      comp=Z,84nm,1.6s
SOEI  Soe              57.85 278   P      P      18 26 47.5 +6.6
RPN   Rapa Nui         58.95 105   LR     LR     18 45 21.1
      comp=Z,476nm,21.4s,baz=240,slow=29
QSPA  South Pole Qui   59.74 180   P      P      18 26 55.8 +2.5
      comp=Z,40nm,0.9s,baz=36,slow=4.1,SNR=53
QSPA                               LR     LR     18 50 26.9
      comp=Z,858nm,19.5s,baz=39,slow=34
      comp=Z,40nm,0.9s
QSPA  South Pole Qui   59.74 180   P      P      18 26 55.0 +1.7
QSPA  South Pole Qui   59.74 180   P      P      18 26 55.9 +2.6
QSPA                               pP     pwP    18 27 09.3 +1.4
MMRI  Maumere          60.15 278   P      P      18 27 01.6 +4.9
LUWI  Luwuk            63.67 285   P      P      18 27 25.5 +5.1
      comp=Z,39nm,1.1s
KAPI  Kappang          64.11 280   LR     LR     18 55 55.8
      comp=Z,658nm,18.0s,baz=136,slow=37
TWSI  Taliwang, Sumb   64.70 275   P      P      18 27 39.2  +12
SRBI  Singaraja        66.45 274   P      P      18 27 49.3  +11
MPSI  Mapaga           66.82 285   P      P      18 27 44.6 +3.8
      comp=Z,12nm,0.9s
BELA  Belgrano 2       69.74 172   P      P      18 27 58.2  0.0
BELA                               IAmb   IAmb   18 28 00.4
      comp=Z,23nm,1.0s
UGM   Wanagama         70.58 272   P      P      18 28 03.8 -0.5
MYLDM Lahad Datu       70.67 288   P      P      18 28 05.5 +0.7
PMSA  Palmer Station   72.08 156   LR     LR     18 55 40.5
      comp=Z,583nm,18.3s,baz=196,slow=32
MAW   Mawson           72.51 200   LR     LR     18 59 35.5
      comp=Z,472nm,18.8s,baz=90,slow=35
KKM   Kota Kinabalu    73.03 288   P      P      18 28 17.6 -1.5
KKM                                IAmb   IAmb   18 28 34.2
      comp=Z,30nm,1.1s
SBUM  Sibu             74.41 282   P      P      18 28 25.5 -1.6
MG03  Isla Dawson      75.17 144   P      P      18 28 30.2 -0.6
KSM   Kuching          75.52 280   P      P      18 28 30.6 -2.8
KSM                                IAmb   IAmb   18 28 48.5
      comp=Z,53nm,1.7s
JOW   Kunigami         77.02 312   LR     LR     18 57 50.2
      comp=Z,184nm,21.4s,baz=284,slow=32
TROLL Troll, Antarti   77.90 180   P      P      18 28 47.3 +1.1
SNAA  Sanae            78.17 178   P      P      18 28 48.8 +1.3
SNAA  Sanae            78.17 178   LR     LR     19 01 03.4
      comp=Z,369nm,20.6s,baz=160,slow=34
SNAA  Sanae            78.17 178   P      P      18 28 48.2 +0.6
SNAA                               IAmb   IAmb   18 28 50.7
      comp=Z,48nm,1.3s
SNAA  Sanae            78.17 178  eP      P      18 28 47.2 -0.4
SNAA                               pmax   pmax
      comp=Z,26nm,1.1s
JGF   Kuroka           78.20 324   P      P      18 28 47.6 -0.5
VNA3  Neumayer Olymp   78.30 176   P      P      18 28 49.2 +1.0
MJAR  Matsushiro Arr   78.51 325   P      P      18 28 50.9 +1.1
      comp=Z,2.9nm,0.7s,baz=153,slow=5.3,SNR=3.6
      comp=Z,2.9nm,0.7s
VNA2  Neumayer--Watz   78.74 177   P      P      18 28 52.1 +1.4
      baz=189,slow=5.0
NVL   N'lazarevskaya   78.93 183  eP      P      18 28 53.5 +1.8
NVL                                pmax   pmax
      comp=Z,38nm,1.4s
VNA1  Neumayer--Stat   78.97 176   P      P      18 28 53.5 +1.7
JNU   Nakatsue         79.88 318   LR     LR     18 59 47.6
      comp=Z,94nm,21.8s,baz=126,slow=32
TPUB  Ta-pu            79.88 304   P      P      18 28 55.9 -1.7
SSLB  Suanglung        79.96 305   P      P      18 28 56.9 -1.1
JHS   Saijyo           79.99 321   P      P      18 28 58.9 +1.0
LL02  Futaleuf         80.01 134   P      P      18 28 58.7 +0.6
LL02                               IAmb   IAmb   18 29 11.8
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      comp=Z,28nm,1.2s
H03S2 Juan Fernandez   80.06 123   T      T      19 58 29.4
      baz=238,slow=74,SNR=10.0
H03S1 Juan Fernandez   80.07 123   T      T      19 58 21.9
      baz=238,slow=74,SNR=12
H03S3 Juan Fernandez   80.07 123   T      T      19 58 21.5
      baz=238,slow=74,SNR=12
H03N3 Juan Fernandez   80.25 123   T      T      19 58 40.0
      baz=241,slow=73,SNR=8.1
H03N2 Juan Fernandez   80.25 123   T      T      19 58 40.1
      baz=241,slow=73,SNR=7.5
H03N1 Juan Fernandez   80.26 123   T      T      19 58 41.6
      baz=241,slow=73,SNR=12
KIWB  Kanaga Island    81.87   0   P      P      18 29 06.5 -0.9
ADK   Adak             81.90   0   P      P      18 29 07.3 -0.3
ADK                                IAmb   IAmb   18 29 20.9
      comp=Z,47nm,0.9s
ADK   Adak             81.90   0   P      P      18 29 07.3 -0.3
ADK                                pmax   pmax
      comp=Z,47nm,0.9s
PLCA  Paso Flores      82.15 133   P      P      18 29 11.2 +1.6
      comp=Z,14nm,1.2s,baz=249,slow=5.7,SNR=8.0
PLCA                               LR     LR     18 56 47.2
      comp=Z,277nm,21.6s,baz=222,slow=29
      comp=Z,14nm,1.2s
PLCA  Paso Flores      82.15 133   P      P      18 29 10.7 +1.0
PLCA                               IAmb   IAmb   18 29 14.2
      comp=Z,30nm,1.4s
PLCA  Paso Flores      82.15 133   P      P      18 29 10.7 +1.0
PLCA                               pmax   pmax
      comp=Z,30nm,1.4s
GO06  Curarrehue       82.19 131   P      P      18 29 09.9  0.0
GO06                               IAmb   IAmb   18 29 23.0
      comp=Z,28nm,1.4s
EFI   East Falkland    82.54 147   P      P      18 29 11.3  0.0
EFI   East Falkland    82.54 147   P      P      18 29 11.3  0.0
EFI                                pmax   pmax
      comp=Z,317nm,1.8s
JKA   Kamikawa-asahi   82.65 332   P      P      18 29 13.2 +1.4
JKA                                IAmb   IAmb   18 29 15.9
      comp=Z,40nm,1.2s
ASAJ  Asahikawa        82.65 332   LR     LR     19 02 46.7
      comp=Z,564nm,19.2s,baz=163,slow=33
ASAJ  Asahikawa        82.65 332   P      P      18 29 13.2 +1.5
ASAJ                               pmax   pmax
      comp=Z,40nm,1.2s
SHEM  Shemya Is, Ala   83.08 355   LR     LR     19 02 13.0
      comp=Z,720nm,19.9s,baz=140,slow=33
SNCC  San Nicolas Is   83.66  46   P      P      18 29 18.9 +1.6
      baz=227
LPIG  La Paz           84.09  58   LR     LR     19 02 01.2
      comp=Z,507nm,18.2s,baz=216,slow=32
SCZ2  Santa Cruz Isl   84.09  45   P      P      18 29 21.3 +1.8
      baz=227
CIS   Catalina Islan   84.45  46   P      P      18 29 22.2 +0.9
      baz=228
PKM   Mcpherson Peak   84.59  44   P      P      18 29 23.9 +1.7
      baz=227
KSRS  Korea Array      84.66 319   P      P      18 29 23.4 +1.3
      comp=Z,3.1nm,0.9s,baz=134,slow=7.0,SNR=5.0
KSRS                               LR     LR     19 04 40.9
      comp=Z,130nm,19.1s,baz=145,slow=34
      comp=Z,3.1nm,0.9s
AKUT  Akutan           84.76   7   P      P      18 29 21.8 -0.4
SMMC  Simmler          84.77  44   P      P      18 29 24.7 +1.8
      baz=227
CBX   Cerro Bola       84.84  48   P      P      18 29 23.2 -0.2
BCW   Bitter Crk WRg   84.87  44   P      P      18 29 22.4 -1.1
BCW                                IAmb   IAmb   18 29 38.3
      comp=Z,51nm,1.4s
SAO   San Andreas Ge   84.92  42   P      P      18 29 23.8 +0.3
SAO                                IAmb   IAmb   18 29 39.8
      comp=Z,17nm,1.1s
SAO   San Andreas Ge   84.92  42   P      P      18 29 23.8 +0.3
SAO                                pmax   pmax
      comp=Z,17nm,1.1s
109C  Camp Elliot, M   84.93  47   P      P      18 29 24.8 +1.1
      baz=229
YSS   Yuzh-Sakhalins   84.94 334   P      P      18 29 24.3 +0.9
YSS   Yuzh-Sakhalins   84.94 334  eP      P      18 29 25.1 +1.7
YSS                               eS      S      18 39 54.7 +5.1
YSS                               ePPS    PPS    18 41 03.6
YSS                               eSS     SS     18 45 26.5 +2.8
YSS                                pmax   pmax
      comp=Z,40nm,1.0s
YSS                                MLR    MLR
      comp=Z,400nm,18.0s
BBGB  Big Mountain B   85.02  42   P      P      18 29 25.1 +0.8
OSI   Osito Audit: C   85.07  45   P      P      18 29 25.3 +0.9
      baz=228
BAR   Barrett          85.07  48   P      P      18 29 24.9 +0.4
ESJX  Sierra Juarez    85.10  49   P      P      18 29 24.1 -0.8
ELS   Elsinore Mount   85.23  46   P      P      18 29 25.3  0.0
ELS                                IAmb   IAmb   18 29 27.9
      comp=Z,15nm,1.1s
MURC  Murrieta         85.34  47   P      P      18 29 27.6 +1.7
      baz=229
ARVC  Arvin            85.35  45   P      P      18 29 26.5 +0.7
      baz=228
MONP2 Monument Peak    85.37  48   P      P      18 29 26.8 +0.6
      baz=229,SNR=8.1
IKP   In-Ko-Pah, Jac   85.41  48   P      P      18 29 27.4 +1.2
      baz=230
BFSC  Mount Baldy Ra   85.47  46   P      P      18 29 27.7 +1.1
      baz=228
MT01  Popeta           85.47 127   P      P      18 29 25.9 -0.8
YUH   Yuha Desert      85.53  48   P      P      18 29 26.4 -0.3
PET   Petropavlovsk    85.63 346  eP      P      18 29 21.0 -5.6
PET                               e              18 32 48.9
PET                               eS      S      18 39 53.5 -2.6
PET                               ePS     PnS    18 40 55.3 -0.9
PET                                pmax   pmax
      comp=Z,39nm,1.0s
PET                                MLR    MLR
      comp=Z,400nm,19.0s
PET                                MLR    MLR
      comp=Z,600nm,19.0s
VES   Vestal, Richgr   85.67  44   P      P      18 29 28.7 +1.4
      baz=228
EDW2  Edwards Air Fo   85.69  45   P      P      18 29 28.9 +1.3
      baz=228
SWSC  Sam W. Stewart   85.80  48   P      P      18 29 29.7 +1.6
      baz=230
TPFO  Pinon Flats      85.81  47   P      P      18 29 29.2 +0.9
      baz=229,SNR=6.6
PFO   Pinyon Flats O   85.81  47   LR     LR     19 00 39.6
      comp=Z,349nm,20.3s,baz=230,slow=31
PFO   Pinyon Flats O   85.81  47   P      P      18 29 27.9 -0.4
PFO                                IAmb   IAmb   18 29 31.1
      comp=Z,16nm,1.1s
PFO   Pinyon Flats O   85.81  47 i P      P      18 29 27.6 -0.7
PFO                                pmax   pmax
      comp=Z,13nm,1.0s
PFO   Pinyon Flats O   85.81  47   P      P      18 29 29.5 +1.3
      baz=229,SNR=6.1
VOG   Valley Oaks Go   85.82  43   P      P      18 29 29.2 +1.2
      baz=227
PMD   Palm Desert      85.89  47   P      P      18 29 28.0 -0.5
PMD                                IAmb   IAmb   18 29 31.2
      comp=Z,15nm,1.2s
PEA0B Petropavlovsk-   85.91 345 i P      P      18 29 28.1  0.0
PETK  Petropavlovsk-   85.91 345   P      P      18 29 28.2 +0.1
      comp=Z,12nm,0.8s,baz=108,slow=6.3,SNR=18
PETK                               LR     LR     19 05 11.1
      comp=Z,253nm,18.7s,baz=147,slow=34
      comp=Z,12nm,0.8s
PETK  Petropavlovsk-   85.91 345   P      P      18 29 27.8 -0.3
PETK  Petropavlovsk-   85.91 345   P      P      18 29 27.8 -0.3
ISA   Isabella, Lake   85.92  44   P      P      18 29 28.6 -0.1
ISA                                IAmb   IAmb   18 29 45.7
      comp=Z,29nm,1.2s
ISA   Isabella, Lake   85.92  44   P      P      18 29 28.6 -0.1
ISA                                pmax   pmax
      comp=Z,29nm,1.3s
ISA   Isabella, Lake   85.92  44   P      P      18 29 30.2 +1.6
      baz=228
BBRC  Big Bear Solar   85.95  46   P      P      18 29 30.3 +1.3
      baz=229
KMPM  Mount Pierce     86.01  38   P      P      18 29 29.4 +0.4
KMRM  Mail Ridge       86.09  38   P      P      18 29 28.9 -0.5
LRMC  Laurel Mtn Rad   86.28  45   P      P      18 29 31.5 +1.0
      baz=228
RRX   Edison Barstow   86.30  46   P      P      18 29 31.6 +1.1
      baz=229
GSI   Gunungsitoli     86.35 274   P      P      18 29 30.0 -1.3
GSI   Gunungsitoli     86.35 274   P      P      18 29 37.1 +5.9
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BELC  Belle Mtn. Jos   86.36  47   P      P      18 29 32.1 +1.1
      baz=230,SNR=13
CMB   Columbia Colle   86.40  42   P      P      18 29 31.0  0.0
CMB   Columbia Colle   86.40  42   P      P      18 29 31.0  0.0
CMB                                pmax   pmax
      comp=Z,11nm,1.0s
PIX   Pinacate         86.45  50   P      P      18 29 30.8 -0.5
BC3   Big Chuckawall   86.48  48   P      P      18 29 32.8 +1.3
      baz=230,SNR=13
GLA   Glamis           86.50  48   P      P      18 29 31.3 -0.3
GLA                                IAmb   IAmb   18 29 34.8
      comp=Z,28nm,1.2s
GLA   Glamis           86.50  48   P      P      18 29 31.3 -0.3
GLA                                pmax   pmax
      comp=Z,28nm,1.3s
GLA   Glamis           86.50  48   P      P      18 29 33.2 +1.7
      baz=230
KHMM  Horse Mountain   86.55  38   P      P      18 29 32.3 +0.5
KHMM                               IAmb   IAmb   18 29 46.4
      comp=Z,36nm,1.4s
SDPT  Sand Point       86.60  10   P      P      18 29 33.7 +2.4
      baz=195
NJ2   Nanjing          86.61 310  eP      P      18 29 33.5 +1.4
NJ2                                pmax   pmax
      comp=Z,16nm,1.4s
CWC   Cottonwood Cre   86.68  44   P      P      18 29 33.3 +0.8
      baz=228
HEC   Hector,Ludlow    86.69  46   P      P      18 29 33.7 +1.2
      baz=229,SNR=12
GSC   Goldstone, Bar   86.70  46   P      P      18 29 32.8 +0.2
GSC   Goldstone, Bar   86.70  46   P      P      18 29 32.8 +0.2
GSC                                pmax   pmax
      comp=Z,22nm,0.4s
GSC   Goldstone, Bar   86.70  46   P      P      18 29 33.9 +1.4
      baz=229
S12K  Black Hills      86.73   9   P      P      18 29 35.0 +3.0
      baz=193
MPMC  Manual Prospec   86.78  45   P      P      18 29 34.2 +1.2
      baz=228
MDPB  Devils Postpil   86.89  43   IAmb   IAmb   18 29 49.6
      comp=Z,25nm,1.5s
UGL   Uglegorsk        86.97 335  eP      P      18 29 36.6 +3.3
UGL                                pmax   pmax
      comp=Z,30nm,1.1s
TIN   Tinemaha, Big    87.00  43   P      P      18 29 35.3 +1.3
      baz=228
IRM   Iron Mountain    87.00  47   P      P      18 29 35.3 +1.4
      baz=230,SNR=19
113A  Mohawk Valley,   87.00  49   P      P      18 29 34.1 +0.2
GMRC  Granite Mounta   87.08  47   P      P      18 29 36.1 +1.6
      baz=230
QSM   Queen of Sheba   87.10  45   P      P      18 29 33.8 -0.6
QSM                                IAmb   IAmb   18 29 36.9
      comp=Z,17nm,1.2s
214A  Organ Pipe Nat   87.13  50   P      P      18 29 34.7  0.0
214A                               IAmb   IAmb   18 29 49.3
      comp=Z,24nm,1.6s
214A  Organ Pipe Nat   87.13  50   P      P      18 29 36.3 +1.7
      baz=231
EMB   Emerald Bay      87.21  41   P      P      18 29 34.7 -0.4
EMB                                IAmb   IAmb   18 29 50.9
      comp=Z,18nm,1.2s
WAKR  Walker           87.27  42   P      P      18 29 34.7 -0.6
WAKR                               IAmb   IAmb   18 29 51.6
      comp=Z,42nm,1.4s
TUQ   Turquoise Moun   87.33  46   P      P      18 29 37.1 +1.4
      baz=229
DSP   Deep Springs     87.36  43   IAmb   IAmb   18 29 51.8
      comp=Z,25nm,1.4s
SHOC  Shoshone, Teco   87.42  45   P      P      18 29 36.7 +0.8
      baz=229
USA0B Ussuriysk Arra   87.42 326 i P      P      18 29 35.5 -0.2
USRK  Ussuriysk Ar.    87.42 326   P      P      18 29 36.7 +1.0
      comp=Z,6.9nm,0.8s,baz=154,slow=4.1,SNR=7.2
USRK                               LR     LR     19 05 23.7
      comp=Z,171nm,19.5s,baz=133,slow=33
      comp=Z,6.9nm,0.8s
FURC  Furnace Creek,   87.43  45   P      P      18 29 37.0 +1.1
      baz=229
MPK   Martis Peak      87.47  41   P      P      18 29 35.8 -0.6
GRAC  Grapevine Rang   87.47  44   P      P      18 29 36.0 -0.2
GRAC  Grapevine Rang   87.47  44   P      P      18 29 37.8 +1.6
      baz=228
CO03  El Pedregal      87.55 124   P      P      18 29 37.0  0.0
CO03                               IAmb   IAmb   18 29 41.1
      comp=Z,30nm,1.3s
LHV   Little Huntoon   87.64  42   P      P      18 29 37.6 +0.7
LHV                                IAmb   IAmb   18 29 57.2
      comp=Z,21nm,1.2s
YBH   Yreka Blue Hor   87.70  38   LR     LR     19 05 22.6
      comp=Z,325nm,18.1s,baz=234,slow=33
YERR  Yerington        87.71  42   IAmb   IAmb   18 29 53.2
      comp=Z,20nm,1.3s
NEE2  Needles Airpor   87.72  47   P      P      18 29 38.6 +1.2
      baz=230
PDMCI Parker Dam,Lak   87.73  48   P      P      18 29 39.2 +1.7
      baz=230
CHGN  Chignik          87.83  10   P      P      18 29 40.6 +3.3
      baz=196
NVAR  Mina Array Bea   87.87  42   P      P      18 29 39.5 +1.2
      comp=Z,8.0nm,0.9s,baz=220,slow=8.0,SNR=40
NVAR                               LR     LR     19 02 48.6
      comp=Z,599nm,19.4s,baz=227,slow=31
      comp=Z,8.0nm,0.9s
NV11  Mina Array Sit   87.96  42   P      P      18 29 39.4 +0.7
NV11                               IAmb   IAmb   18 29 54.5
      comp=Z,23nm,1.4s
TPNV  Topopah Spring   88.12  45   P      P      18 29 40.9 +1.5
      baz=229
TYV   Tymovskoe        88.23 336  eP      P      18 29 41.2 +1.8
TYV                               eS      S      18 40 24.5 +3.1
TYV                                pmax   pmax
      comp=Z,200nm,5.1s
TYV                                pmax   pmax
      comp=Z,33nm,0.9s
TYV                                smax   smax
      comp=N,400nm,7.4s
TYV                                smax   smax
      comp=E,400nm,7.4s
TPH   Tonopah          88.27  43   P      P      18 29 40.3 +0.1
TPH   Tonopah          88.27  43   P      P      18 29 40.3 +0.1
TPH                                pmax   pmax
      comp=Z,132nm,1.3s
TUC   Tucson           88.70  51   P      P      18 29 42.5 +0.3
TUC                                IAmb   IAmb   18 29 45.6
      comp=Z,21nm,1.2s
TUC   Tucson           88.70  51   P      P      18 29 42.5 +0.3
TUC                                pmax   pmax
      comp=Z,21nm,1.3s
TUC   Tucson           88.70  51   P      P      18 29 44.0 +1.8
      baz=232
CFA   Coronel Fontan   88.84 126   LR     LR     19 00 31.8
      comp=Z,227nm,21.4s,baz=254,slow=30
MOD   Modoc Plateau    89.11  39   P      P      18 29 43.7 -0.3
MOD                                IAmb   IAmb   18 30 00.3
      comp=Z,19nm,1.4s
319A  Douglas          89.16  53   P      P      18 29 44.2 -0.2
319A                               IAmb   IAmb   18 30 09.9
      comp=Z,19nm,1.1s
R16K  Pilot Point      89.18  11   P      P      18 29 46.8 +3.2
      baz=197
K05A  Summer Lake      89.36  38   P      P      18 29 44.4 -0.8
R11A  Troy Canyon, C   89.43  44   P      P      18 29 48.0 +2.4
      baz=230
R17K  Ugashik Creek    89.44  11   P      P      18 29 47.9 +3.0
      baz=198
PINE  Pine Mountain    90.07  37   P      P      18 29 49.2 +0.7
PINE                               IAmb   IAmb   18 30 03.6
      comp=Z,29nm,1.3s
Q17K  Contact Creek    90.12  11   P      P      18 29 51.0 +2.8
      baz=198
KDAK  Kodiak Island    90.27  13   LR     LR     19 06 15.2
      comp=Z,377nm,18.2s,baz=224,slow=33
WUAZ  Wupatki          90.27  48   P      P      18 29 49.5 -0.1
WUAZ                               IAmb   IAmb   18 29 52.6
      comp=Z,24nm,1.0s
WUAZ  Wupatki          90.27  48   P      P      18 29 51.3 +1.7
      baz=232
Q12A  Willow Creek R   90.32  44   P      P      18 29 48.9 -0.8
Q12A                               IAmb   IAmb   18 30 06.4
      comp=Z,26nm,1.3s
WVOR  Wild Horse Val   90.37  39   IAmb   IAmb   18 30 04.7
      comp=Z,34nm,1.6s
Q16K  King Salmon      90.39  11   P      P      18 29 52.0 +2.7
      baz=198
CN2   Changchun        90.43 323  eP      P      18 29 50.6 +0.7
CN2                                sP     pP     18 29 57.0 -2.0
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CN2                                S      S        18 40 44.6 +2.3
CN2                                pmax   pmax
      comp=Z,20nm,1.0s
CN2                                pmax   pmax
      comp=Z,200nm,5.0s
GRNR  Gornyy            90.49 333⇑iP      P        18 29 51.6 +1.6
GRNR                               pmax   pmax
      comp=E,1.0nm,1.0s
GRNR                               pmax   pmax
      comp=N,3.0nm,1.1s
GRNR                               pmax   pmax
      comp=Z,5.0nm,1.1s
GRNR                               MLR    MLR
      comp=E,270nm,19.0s
P16K  Nushagak River    90.52  10  P      P        18 29 53.9 +4.0
      baz=197
X18A  Snowflake         90.59  50  P      P        18 29 51.5 +0.4
X18A                               IAmb   IAmb     18 29 54.3
      comp=Z,16nm,1.0s
BNX   BinXian           90.78 325 ⇓P      P        18 29 51.8 +0.4
BNX                                pmax   pmax
      comp=Z,13nm,1.0s
BNX                                pmax   pmax
      comp=Z,200nm,3.8s
121A  Cookes Peak, D    90.86  52  P      P        18 29 54.1 +1.6
      baz=234
I07A  Izee              91.02  38  P      P        18 29 52.5 -0.3
I07A                               IAmb   IAmb     18 30 17.6
      comp=Z,13nm,1.2s
O16K  Kokwok River B    91.05  10  P      P        18 29 56.2 +3.8
      baz=197
J08A  Circle Bar Ran    91.08  39  P      P        18 29 54.0 +0.9
J08A                               IAmb   IAmb     18 30 20.4
      comp=Z,18nm,1.2s
W18A  Petrified Fore    91.09  49  P      P        18 29 55.3 +1.8
      baz=233
ELK   Elko              91.18  42  LR     LR       19 05 39.7
      comp=Z,620nm,18.8s,baz=234,slow=32
ELK   Elko              91.18  42  P      P        18 29 54.6 +0.8
ELK   Elko              91.18  42  P      P        18 29 54.6 +0.8
ELK                                pmax   pmax
      comp=Z,7.0nm,1.2s
G06A  Carlson Farm,     91.23  36  P      P        18 29 54.5 +0.9
KLR   Kul'dur           91.27 329  LR     LR       19 08 18.3
      comp=Z,265nm,19.1s,baz=138,slow=34
KLR   Kul'dur           91.27 329ceP      P        18 29 54.0 +0.4
KLR                                pmax   pmax
      comp=Z,16nm,1.7s
N16K  Nishlik Lake      91.80   9  P      P        18 29 57.7 +1.8
      baz=196
TX31  Lajitas Ar. Si    91.95  57  P      P        18 29 57.0 -0.5
TX32  Lajitas Array     91.95  57  IAmb   IAmb     18 30 22.2
      comp=Z,15nm,1.4s
TXAR  Lajitas Array     91.95  57  P      P        18 29 58.8 +1.3
      comp=Z,4.0nm,1.1s,baz=210,slow=6.6,SNR=21
TXAR                               LR     LR       19 06 47.1
      comp=Z,311nm,18.3s,baz=234,slow=33
      comp=Z,4.0nm,1.1s
MNTX  Cornudas Mount    92.05  54  P      P        18 29 58.9 +1.2
      baz=235
G08A  Pilot Rock        92.13  37  P      P        18 29 58.1 +0.2
G08A                               IAmb   IAmb     18 30 00.2
      comp=Z,14nm,1.1s
O19K  Port Alsworth     92.22  11  P      P        18 29 59.5 +1.8
      baz=200
DUG   Dugway, Tooele    92.26  44  P      P        18 30 00.2 +1.5
      baz=231
CMIG  Matias Romero     92.26  72  LR     LR       19 03 20.1
      comp=Z,189nm,20.2s,baz=206,slow=30
MFID  Camas Ranch       92.57  40  IAmb   IAmb     18 30 13.9
      comp=Z,12nm,1.1s
HNS   HongShan          92.59 312 ⇑P      P        18 30 02.0 +2.0
TMUT  Trail Mountain    92.68  45  P      P        18 30 01.4 +0.5
TMUT                               IAmb   IAmb     18 30 26.8
      comp=Z,8.8nm,0.9s
N19K  Bonanza Creek     92.77  11  P      P        18 30 03.5 +3.1
      baz=200
BBB   Bella Bella       92.83  28  LR     LR       19 07 46.3
      comp=Z,542nm,18.2s,baz=250,slow=33
NNA   Nana              92.94 106  LR     LR       19 01 51.6
      comp=Z,224nm,21.9s,baz=236,slow=29
Q23K  Middleton Isla    93.10  15  P      P        18 30 02.9 +1.1
      baz=207
ANMO  Albuquerque       93.16  51  LR     LR       19 09 22.7
      comp=Z,261nm,18.2s,baz=334,slow=34
ANMO  Albuquerque       93.16  51  P      P        18 30 03.5 +0.5
ANMO                               IAmb   IAmb     18 30 20.5
      comp=Z,22nm,1.8s
ANMO  Albuquerque       93.16  51 iP      P        18 30 02.2 -0.9
ANMO                               pmax   pmax
      comp=Z,5.0nm,1.0s
ANMO  Albuquerque       93.16  51  P      P        18 30 03.3 +0.2
      baz=235
SPUT  South Promonto    93.17  43  IAmb   IAmb     18 30 18.6
      comp=Z,28nm,1.5s
HVU   Hansel Valley     93.27  43  IAmb   IAmb     18 30 19.7
      comp=Z,14nm,1.1s
O22K  Cooper Landing    93.33  13  P      P        18 30 04.4 +1.5
      baz=204
P23K  Montague Islan    93.37  15  P      P        18 30 05.0 +1.9
      baz=206
MA2   Magadan           93.40 344  LR     LR       19 06 49.1
      comp=Z,277nm,21.8s,baz=158,slow=32
MA2   Magadan           93.40 344  P      P        18 30 04.0 +0.7
MA2                                IAmb   IAmb     18 30 16.0
      comp=Z,8.9nm,1.0s
MA2   Magadan           93.40 344 iP      P        18 30 03.3 +0.1
MA2                                pmax   pmax
      comp=Z,4.0nm,1.0s
HLID  Hailey            93.45  40  P      P        18 30 05.2 +1.0
      baz=230,SNR=9.1
PV13  Radium Mtn., P    93.49  47  P      P        18 30 04.5  0.0
PV13                               IAmb   IAmb     18 30 08.2
      comp=Z,13nm,1.5s
LVC   Limon Verde       93.50 119  LR     LR       19 03 28.3
      comp=Z,210nm,21.1s,baz=226,slow=30
SPCR  Spurr Chakacha    93.53  12  P      P        18 30 07.4 +3.5
      baz=202
PLID  Pearl Lake        93.56  39  IAmb   IAmb     18 30 30.3
      comp=Z,14nm,1.1s
BSUT  Blindstream Ca    93.71  45  IAmb   IAmb     18 30 20.5
      comp=Z,29nm,1.9s
CMAR  Chiang Mai Arr    93.87 289  P      P        18 30 07.7 +1.3
      comp=Z,0.8nm,0.9s,baz=143,slow=3.2,SNR=2.4
CMAR                               LR     LR       19 14 51.1
      comp=Z,81nm,19.3s,baz=170,slow=37
      comp=Z,0.8nm,0.9s
V35K  Ketchikan         93.93  24  P      P        18 30 08.6 +2.9
      baz=218
HEH   HeiHe             93.95 328 eP      P        18 30 15.4 +9.4
HEH                                pmax   pmax
      comp=Z,4.0nm,0.9s
L19K  White Mountain    94.01  10  P      P        18 30 08.1 +2.1
      baz=200
U33K  Whale Pass        94.03  23  P      P        18 30 08.3 +2.1
      baz=217
ATAH  Atahualpa         94.15 101  LR     LR       19 02 11.0
      comp=Z,198nm,21.9s,baz=228,slow=29
PMR   Palmer            94.47  13  P      P        18 30 10.8 +2.7
      baz=204
S22A  4UR Ranch, Cre    94.53  49  P      P        18 30 10.4 +1.0
      baz=235
TTA   Tatalina          94.54  10  P      P        18 30 11.2 +2.6
      baz=198
833A  Chaparral WMA,    94.55  60  P      P        18 30 09.9 +0.6
      baz=238
NEW   Newport           95.05  36  LR     LR       19 10 16.4
      comp=Z,499nm,18.2s,baz=224,slow=34
MSTX  Muleshoe          95.14  54  P      P        18 30 12.0  0.0
      baz=237
REDW  Red Top Meadow    95.36  42  IAmb   IAmb     18 30 40.9
      comp=Z,22nm,1.6s
SDCO  Great Sand Dun    95.39  49  P      P        18 30 14.4 +1.1
      baz=236
FXWY  Fox Creek         95.43  42  P      P        18 30 12.2 -1.0
FXWY                               IAmb   IAmb     18 30 29.7
      comp=Z,21nm,1.8s
DLMT  Dillon            95.60  40  IAmb   IAmb     18 30 21.0
      comp=Z,10.0nm,0.9s
IMW   Indian Meadow     95.64  42  P      P        18 30 13.5 -0.8
IMW                                IAmb   IAmb     18 30 16.4
      comp=Z,11nm,1.4s
PZH   PanZhiHua         95.75 297  P      P        18 30 15.4 +0.4
PZH                                pmax   pmax
      comp=Z,5.0nm,0.6s
PZH                                pmax   pmax
      comp=Z,100nm,4.8s
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PDAR  Pinedale Array    95.77  43  P      P        18 30 15.2 +0.4
      comp=Z,0.8nm,0.9s,baz=204,slow=3.3,SNR=6.7
PDAR                               PKKP   PKKPdf   18 47 07.7 +1.0
      comp=Z,0.5nm,0.7s,baz=54,slow=4.6,SNR=4.4
PDAR                               LR     LR       19 08 02.3
      comp=Z,379nm,18.8s,baz=244,slow=32
      comp=Z,0.8nm,0.9s
T25A  Trinidad          95.77  50  P      P        18 30 16.2 +1.2
      baz=236
O29M  Mount Kennedy     95.80  18  P      P        18 30 17.4 +3.0
      baz=213
FLWY  Flagg Ranch       95.89  42  IAmb   IAmb     18 30 31.9
      comp=Z,18nm,1.2s
SEY   Seymchan          96.07 347  LR     LR       19 09 43.0
      comp=Z,412nm,20.7s,baz=152,slow=33
SEY   Seymchan          96.07 347 iP      P        18 30 15.5 +0.1
SEY                                pmax   pmax
      comp=Z,5.0nm,1.3s
YHL   Hebgen Lake       96.07  41  IAmb   IAmb     18 30 41.5
      comp=Z,25nm,1.6s
YMR   Madison River     96.09  41  P      P        18 30 17.5 +1.3
YMR                                IAmb   IAmb     18 30 33.1
      comp=Z,15nm,1.4s
BOZ   Bozeman (W)       96.28  40  P      P        18 30 18.7 +1.7
      baz=232
Q24A  Divide            96.30  48  IAmb   IAmb     18 30 24.4
      comp=Z,7.4nm,0.8s
AMTX  Amarillo          96.39  53  P      P        18 30 19.0 +1.3
      baz=237
ZEA   Zeya              96.47 331 eP      P        18 30 18.7 +1.3
ZEA                               e                18 41 37.2
ZEA                                pmax   pmax
      comp=Z,10.0nm,1.2s
CD2   Chengdu           96.50 302 eP      P        18 30 17.8 -0.5
CD2                                pmax   pmax
      comp=Z,10.0nm,0.5s
Q32M  Nakina River      96.57  22  P      P        18 30 20.4 +2.4
      baz=218
HHC   Hu-ho-hao-te      96.58 314 eP      P        18 30 18.6 +0.2
HHC                                pmax   pmax
      comp=Z,16nm,0.9s
M27K  Edge Creek, AK    96.72  16  P      P        18 30 20.9 +2.3
      baz=210
DLBC  Dease Lake        96.90  23  LR     LR       19 10 16.7
      comp=Z,265nm,19.3s,baz=268,slow=33
JTS   Las Juntas de     97.22  82  LR     LR       19 04 45.6
      comp=Z,326nm,20.3s,baz=290,slow=30
RLMT  Red Lodge         97.33  41  P      Pdif     18 30 23.6 +1.7
      baz=234
K22A  Casper            97.52  45  P      Pdif     18 30 23.6 +0.8
      baz=235
N31M  Braeburn, Yuko    97.55  19  P      Pdif     18 30 24.8 +2.6
      baz=215
H21K  Melozitna Rive    97.59  10  P      Pdif     18 30 25.5 +3.2
      baz=201
M29M  Somme Creek       97.63  17  P      Pdif     18 30 24.6 +1.9
      baz=213
LPAZ  La Paz            97.69 114  P      Pdif     18 30 26.4 +1.6
      comp=Z,1.0nm,0.7s,baz=214,slow=7.3,SNR=2.8
LPAZ                               LR     LR       19 05 22.6
      comp=Z,96nm,21.2s,baz=239,slow=30
      comp=Z,1.0nm,0.7s
ILAR  Eielson Array     97.79  13  P      P        18 30 22.9 -0.2
      comp=Z,0.9nm,0.9s,baz=219,slow=6.8,SNR=8.4
ILAR                               LR     LR       19 07 49.8
      comp=Z,156nm,21.3s,baz=183,slow=31
      comp=Z,0.9nm,0.9s
ILAR  Eielson Array     97.79  13  P      P        18 30 23.0 -0.2
J26L  Joseph Creek      98.21  14  IAmb   IAmb     18 30 41.9
      comp=Z,6.7nm,1.0s
J26L  Joseph Creek      98.21  14  P      Pdif     18 30 27.1 +1.9
      baz=209
H23K  Yukon River       98.27  11  P      Pdif     18 30 28.7 +3.3
      baz=204
L29M  L29M              98.27  17  P      Pdif     18 30 28.2 +2.8
      baz=214
DAWY  Dawson            98.77  16  P      Pdif     18 30 29.2 +1.5
      baz=213
BILL  Bilibino          98.87 354 eP      P        18 30 26.1 -1.8
BILL                              eS      S        18 41 48.8 -6.3
BILL                               pmax   pmax
      comp=Z,2.0nm,1.0s
BILL                               MLR    MLR
      comp=Z,494nm,19.0s
I26K  Coal Creek Min    99.00  14  P      Pdif     18 30 29.8 +1.2
      baz=210
CPUP  Villa Florida     99.60 128  LR     LR       19 11 21.2
      comp=Z,284nm,18.1s,baz=234,slow=33
RSSD  Black Hills       99.84  44  P      Pdif     18 30 33.4 +0.3
      baz=237
YAK   Yakutsk          101.42 337 iP      Pdif     18 30 38.0 -1.4
YAK                                pmax   pmax
      comp=Z,2.0nm,0.9s
SONM  Songino Array    103.46 318  Pdiff  Pdif     18 30 48.8 -0.2
      comp=Z,0.3nm,0.5s,baz=121,slow=5.6,SNR=2.2
SONM                               PKKPbc PKKPbc   18 46 43.7 +0.2
      comp=Z,0.4nm,0.9s,baz=266,slow=1.7,SNR=3.6
YKA   Yellowknife Ar   105.20  25  Pdiff  Pdif     18 31 01.9 +5.7
      comp=Z,0.2nm,0.5s,baz=222,slow=5.2,SNR=2.5
YKA                                PKiKP  PKiKP    18 35 10.8 +0.5
      comp=Z,0.2nm,0.6s,baz=259,slow=1.7,SNR=5.1
YKA                                PP     PP       18 35 21.7 +3.8
      comp=Z,0.6nm,0.9s,baz=229,slow=5.6,SNR=5.7
YKA                                PKKPbc PKKPbc   18 46 38.0 -0.5
      comp=Z,0.2nm,0.7s,baz=44,slow=2.9,SNR=4.3
ULM   Lac du Bonnet    107.70  42  PKKP            18 46 42.0
      comp=Z,1.5nm,0.7s,baz=40,slow=3.9,SNR=3.2
RAMN  Ramite           107.89 291 eP      PKiKP    18 35 24.3 +7.6
JIRN  Jiri             108.53 292 eP      PKiKP    18 35 25.5 +7.5
GUN   Gumba            108.88 292 eP      PKiKP    18 35 26.4 +7.8
PKIN  Phulchoki        109.13 291 eP      PKiKP    18 35 26.8 +7.8
DANN  Dangsing         110.77 291 eP      PKiKP    18 35 28.5 +6.4
PYUN  Piuthan          111.29 291 eP      PKiKP    18 35 27.7 +4.7
WMQ   Urumqi           113.61 308 ePKP    PKiKP    18 35 27.8 +1.1
BOSA  Boshof           117.48 202  PKP    PKiKP    18 35 36.3 +1.4
      comp=Z,2.5nm,1.0s,baz=90,slow=3.0,SNR=2.0
MK31  Makanchi Array   118.14 310         PKPdf    18 35 34.2 -1.1
MK31  Makanchi Array   118.14 310  PKIKP  PKPdf    18 35 34.2 -1.1
MKAR  Makanchi Array   118.14 310  PKP    PKPdf    18 35 34.6 -0.7
      comp=Z,2.0nm,0.9s,baz=96,slow=1.2,SNR=13
MKAR                               PKKPbc PKKPab   18 45 55.6 -0.1
      comp=Z,0.6nm,0.8s,baz=280,slow=2.8,SNR=5.3
ZALV  Zalesovo Beam    118.35 318  PKP    PKPdf    18 35 34.6 -0.8
      comp=Z,1.4nm,0.8s,baz=103,slow=3.2,SNR=6.5
MAKZ  Makanchi         118.36 310  PKPdf  PKPdf    18 35 34.5 -1.2
MAKZ  Makanchi         118.36 310  PKIKP  PKPdf    18 35 34.5 -1.2
MSEY  Mahe Island      118.62 245         PKPdf    18 35 34.3 -3.0
MSEY  Mahe Island      118.62 245  PKIKP  PKPdf    18 35 34.3 -3.0
NRIK  Noril'sk         119.82 336  PKP    PKiKP    18 35 38.5 +0.6
      comp=Z,1.0nm,0.3s,baz=112,slow=2.3,SNR=2.0
NRIK  Noril'sk         119.82 336c iPKIKP PKPdf    18 35 36.8 -1.0
NRIK                               pmax   pmax
      comp=Z,1.0nm,0.8s
KSH   Kashi            120.66 300  PKP    PKiKP    18 35 41.6 +1.0
KURK  Kurchatov        121.40 314  PKPdf  PKPdf    18 35 39.6 -1.7
KURK  Kurchatov        121.40 314c iPKIKP PKiKP    18 35 41.6 +0.1
KURK                               pmax   pmax
      comp=Z,11nm,1.7s
AAK   Ala-Archa        122.52 304  PKPdf  PKPdf    18 35 43.0 -1.1
AAK   Ala-Archa        122.52 304  PKIKP  PKPdf    18 35 43.0 -1.1
TULEG Thule            123.62  15         PKPdf    18 35 44.0 -0.9
KBL   Kabul            124.68 293  PKPdf  PKPdf    18 35 48.3 -0.2
KBL   Kabul            124.68 293  PKIKP  PKPdf    18 35 48.3 -0.2
KK31  Karatay Array    125.48 304  PKPdf  PKPdf    18 35 49.0 -0.5
KK31  Karatay Array    125.48 304  PKIKP  PKPdf    18 35 49.0 -0.5
CHGR  Chuyangaron      125.59 298  PKPdf  PKPdf    18 35 49.0 -1.0
CHGR  Chuyangaron      125.59 298  PKIKP  PKPdf    18 35 49.0 -1.0
SCHQ  Schefferville    125.88  42  PKP    PKiKP    18 35 50.2 -0.1
      comp=Z,3.5nm,1.0s,baz=0.0,slow=3.0,SNR=4.1
BRVK  Borovoye         126.81 316  PKPdf  PKPdf    18 35 51.4 -0.3
BRVK  Borovoye         126.81 316c iPKIKP PKiKP    18 35 52.4 +0.2
BRVK                               pmax   pmax
      comp=Z,14nm,1.7s
ARU   Arti             133.39 321  PKPdf  PKPdf    18 36 03.5 -0.5
ARU   Arti             133.39 321 iPKIKP  PKPdf    18 36 04.1  0.0
ARU                                                18 38 31.7
GEYT  Alibeck          134.01 295  PKP    PKiKP    18 36 06.7 -0.5
      comp=Z,3.8nm,0.7s,baz=185,slow=4.3,SNR=8.8
GEYT                               SKPbc  SKPab    18 39 34.1 -1.3
      comp=Z,12nm,1.0s,baz=113,slow=2.2,SNR=10.0
H10N3 ASCENSION HYDR138.61 154     T      T        21 11 53.9
      baz=203,slow=74
H10N1 ASCENSION HYDR138.62 154     T      T        21 12 10.0
      baz=203,slow=74
H10N2 ASCENSION HYDR138.63 154     T      T        21 12 19.0
      baz=203
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ARCES ARCESS Array B 138.67 348  PKhKP  PKPpre   18 36 04.8
      comp=Z,2.2nm,0.9s,baz=46,slow=2.6,SNR=3.9
ARCES                            PKP    PKiKP    18 36 14.9 -0.7
      comp=Z,2.6nm,0.6s,baz=50,slow=2.8,SNR=8.5
ARCES ARCESS Array B 138.67 348  PKIKP  PKiKP    18 36 15.0 -0.7
BELG  Belogornoye    140.52 317 iPKIKP  PKPdf    18 36 16.3 -1.0
BELG                             pmax   pmax
      comp=Z,2.0nm,0.9s
KLMR  Klimovskoe     140.98 332 ePKPdf  PKPdf    18 36 15.4 -2.5
KLMR                             AMP             18 36 31.4
      comp=Z,22nm,1.3s
KLMR  Klimovskoe     140.98 332 ePKIKP  PKPdf    18 36 15.4 -2.5
KLMR                             pmax   pmax
      comp=Z,22nm,1.3s
RAYN  Ar Rayn        141.32 270  PKPdf  PKPdf    18 36 17.3 -2.5
RAYN  Ar Rayn        141.32 270  PKIKP  PKPdf    18 36 17.3 -2.5
AKT   Akhty          142.19 300 ePKIKP  PKPdf    18 36 18.5 -2.4
AKT                             e                18 39 25.4
AKT                              pmax   pmax
      comp=Z,14nm,1.0s
VRH   Novokhopyorsk  144.37 317 ePKIKP  PKPbc    18 36 23.3 +0.6
VRH                              pmax   pmax
      comp=Z,25nm,1.6s
GNI   Garni          144.51 298  PKPdf  PKPbc    18 36 24.0 +0.3
GNI   Garni          144.51 298c iPKIKP PKPdf    18 36 24.5 -0.6
GNI                              pmax   pmax
      comp=Z,29nm,1.7s
MOS   Moscow         144.60 326 ePKIKP  PKPab    18 36 22.7 -0.4
MOS                              pmax   pmax
      comp=Z,40nm,1.1s
ZEI   Tsey           144.92 302 iPKIKP  PKPbc    18 36 25.1  0.0
ZEI                              pmax   pmax
      comp=Z,34nm,1.0s
NCK   Nalchik        145.05 304 iPKIKP  PKPbc    18 36 24.9 -0.3
NCK                              pmax   pmax
      comp=Z,43nm,1.0s
PUL   Pulkovo        145.18 336c iPKIKP PKPdf    18 36 27.1 +1.7
PUL                              pmax   pmax
      comp=Z,170nm,0.8s
FINES FINESS Array B 145.29 340  PKPbc  PKPbc    18 36 25.2 -0.2
      comp=Z,33nm,0.7s,baz=53,slow=2.9,SNR=80
LPSR  Galich'ya Gora 145.41 320 ePKIKP  PKPbc    18 36 25.9 -0.1
LPSR                             pmax   pmax
      comp=Z,40nm,0.8s
OBN   Obninsk        145.44 326         PKPdf    18 36 24.7 -1.3
OBN   Obninsk        145.44 326⇓iPKIKP  PKPdf    18 36 25.6 -0.3
OBN                              pmax   pmax
      comp=Z,64nm,1.2s
KBZ   Khabaz         145.52 304  PKPbc  PKPab    18 36 27.1 +0.2
      comp=Z,12nm,0.8s,baz=149,slow=2.8,SNR=23
KBZ   Khabaz         145.52 304c iPKIKP PKPdf    18 36 26.4 -0.1
KIV   Kislovodsk     145.63 305 ⇓P      PKPab    18 36 27.9 +0.4
KIV   Kislovodsk     145.63 305 iPKIKP  PKPdf    18 36 26.5 -0.3
KIV                              pmax   pmax
      comp=Z,24nm,1.0s
VORR  Voronezh       145.65 319 ePKIKP  PKPab    18 36 27.3 +0.2
VORR                             pmax   pmax
      comp=Z,64nm,1.5s
SHA1  Shidzhatmaz    145.69 304 iPKP2   PKPdf    18 36 26.0 -1.1
NEY   Neytrino       145.72 303 iPKP2   PKPdf    18 36 26.0 -1.1
VSR   Storozhevoye   145.86 318 ePKP2   PKPdf    18 36 26.3 -0.5
VSR                              pmax   pmax
      comp=Z,50nm,0.7s
VORD  Divnogorie     145.88 318 ePKP2   PKPdf    18 36 26.5 -0.4
VORD                             pmax   pmax
      comp=Z,30nm,0.8s
GURO  Guroymak-BITLI 146.67 295  PKPdf  PKPdf    18 36 25.9 -3.0
GURO                                    PKPbc    18 36 29.9 -0.7
MEF   Metsahovi      146.77 340 eP      PKPbc    18 36 29.7 -0.2
RAF   Rauma          146.81 343 eP      PKPbc    18 36 29.9 -0.1
VSU   Vasula         147.41 336 eP      PKPab    18 36 32.9 -0.8
KOPT  Kop Dagi       147.77 298         PKPbc    18 36 34.0 +0.3
SOC   Sochi          147.81 305 iPKP2   PKPbc    18 36 32.5 -0.8
SOC                             e                18 39 56.3
SOC                             eSS     SS       18 58 58.3 -5.7
SOC                             eSSS    SSS      19 04 36.8
SOC                              pmax   pmax
      comp=Z,45nm,0.9s
MTSE  Matsula        148.16 339 eP      PKPbc    18 36 33.5 -0.3
KTUT  Trabzon        148.21 300 ⇓P      PKPbc    18 36 34.1 -0.4
NB2   NORSAR Subarra148.80 352   PKP    PKPbc    18 36 35.4  0.0
      comp=Z,3.8nm,0.7s,baz=12,slow=2.8
NOA   NORSAR Array B148.80 352   PKPbc  PKPbc    18 36 35.0 -0.4
      comp=Z,11nm,0.9s,baz=15,slow=4.3,SNR=18
UPP   Uppsala        148.82 345 eP      PKiKP    18 36 37.2 +0.5
ANN   Anapa          149.12 308 iPKP2   PKPbc    18 36 36.0 -0.6
ANN                              pmax   pmax
      comp=Z,65nm,0.8s
ISAL  Salakas        149.78 333 eP      PKPab    18 36 46.2 +2.9
MNK   Minsk          149.81 330 iPKiKP  PKiKP    18 36 38.7 -0.3
      comp=E,2.0nm,0.8s
MNK                             iPKiKP  PKiKP    18 36 38.7 -0.3
      comp=N,29nm,0.9s
MNK                             iPKiKP  PKiKP    18 36 38.7 -0.3
      comp=Z,39nm,1.1s,baz=227
MNK                             iPP     PP       18 40 11.2 -0.6
MNK                             iPPP    PPP      18 43 32.0
MNK                             iSKS    SKSdf    18 43 40.4 +1.9
MNK                             iSS     SS       18 59 28.1 +3.3
MNK                             iSSS    SSS      19 05 07.4
MNK                             iLQ     LQ       19 35 05.0
MNK                             iLR     LR       19 39 14.8
MNK                             iLRM    MLR      19 43 39.9
      comp=E,22nm,17.2s
MNK                             iLRM    MLR      19 43 39.9
      comp=N,317nm,20.4s
MNK                             iLRM    MLR      19 43 39.9
      comp=Z,267nm,18.5s
MNK   Minsk          149.81 330 iPKP2   PKiKP    18 36 38.7 -0.3
MNK                             i                18 40 11.2
MNK                             iPPP    PPP      18 43 32.0
MNK                             i                18 43 40.4
MNK                             iSS     SS       18 59 28.1 +3.2
MNK                             iSSS    SSS      19 05 07.4
MNK                              pmax   pmax
      comp=E,2.0nm,0.8s
MNK                              pmax   pmax
      comp=N,29nm,0.9s
MNK                              pmax   pmax
      comp=Z,39nm,1.1s
MNK                              MLR    MLR
      comp=E,22nm,17.0s
MNK                              MLR    MLR
      comp=N,317nm,20.0s
MNK                              MLR    MLR
      comp=Z,267nm,19.0s
NACGM Naroch         150.00 332 ePKiKP  PKiKP    18 36 39.6 +0.2
      comp=Z,46nm,1.2s,baz=43
VIKU  Vikbolandet    150.25 345 eP      PKPbc    18 36 38.0 -0.9
KONO  Kongsberg      150.34 353 ⇑PKIKP  PKPbc    18 36 38.6 -0.5
PABE  Paberze        150.64 335  PKPdf  PKPdf    18 36 34.0 -0.5
PABE                                    PKPbc    18 36 38.9 -1.1
PABE  Paberze        150.64 335 eP      PKiKP    18 36 40.8 +0.2
DIKM  Dikmen         151.44 302 ⇓P      PKPab    18 36 47.8 -2.9
AKASG Malin Array Be 151.58 323  PKPbc  PKPbc    18 36 42.3 -0.1
      comp=Z,3.8nm,0.5s,baz=34,slow=2.7,SNR=42
AKASG                            PKPab  PKPab    18 36 50.5 -0.4
      comp=Z,35nm,0.8s,baz=33,slow=2.6,SNR=16
AKASG Malin Array Be 151.58 323         PKPbc    18 36 40.8 -1.5
AKBB  Malin Array Si 151.58 323         PKPbc    18 36 41.0 -1.3
AKBB  Malin Array Si 151.58 323  PKIKP  PKPbc    18 36 41.0 -1.3
ILGA  Ilgaz          152.70 302         PKPbc    18 36 44.9 -0.6
BR131 Keskin Array S 153.03 299         PKPbc    18 36 43.6 -2.5
BR131 Keskin Array S 153.03 299  PKIKP  PKPbc    18 36 43.7 -2.5
BRTR  Keskin Array B 153.03 299  PKPbc  PKPbc    18 36 45.5 -0.7
      comp=Z,4.1nm,0.7s,baz=111,slow=2.8,SNR=18
BRTR                             PKPab  sPKPbc   18 36 58.6 -0.1
      comp=Z,9.7nm,0.7s,baz=131,slow=4.0,SNR=14
BRTR  Keskin Array B 153.03 299         PKPbc    18 36 44.6 -1.6
BRTR  Keskin Array B 153.03 299  PKIKP  PKPbc    18 36 44.6 -1.6
PURM  Purcari        153.41 315 ⇓P      PKPbc    18 36 46.5  0.0
SORM  Soroca         153.50 319 ⇑P      PKPbc    18 36 46.3 -0.4
SORM  Soroca         153.50 319 ⇑PKIKP  PKPbc    18 36 46.3 -0.4
ANTO  Ankara         153.64 299 ⇑P      PKPdf    18 36 42.1 +2.5
ANTO  Ankara         153.64 299         PKPbc    18 36 45.2 -2.2
ANTO  Ankara         153.64 299 ⇑PKIKP  PKPdf    18 36 42.1 +2.5
TLCR                 154.68 313 ⇓P      PKPbc    18 36 48.7 -0.6
TLCR                 154.68 313 ⇓PKIKP  PKPbc    18 36 48.7 -0.6
VLDR  Vladesti       154.83 315 ⇑P      PKPbc    18 36 47.0 -2.6
TATR  Tatarca        154.97 314 ⇓P      PKiKP    18 36 57.0 +7.1
TPGR  Topolog        155.08 313 ⇑P      PKPab    18 37 03.3 -2.8
CFR   Carcaliu       155.11 314 ⇓P      PKPdf    18 36 51.8 +10
CFR   Carcaliu       155.11 314 ⇓PKIKP  PKPdf    18 36 51.8 +10
GHRR                 155.13 316 ⇓P      PKPdf    18 36 53.0 +12
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TESR	Tescani	155.35	318	⇓P	PKPab	18 36 59.0	-8.1
MFTR	Murfatlar	155.38	311	⇑P	PKPab	18 37 03.5	-3.8
HARR	Harsova	155.47	313	⇓P	PKPdf	18 36 47.2	+5.3
HARR	Harsova	155.47	313	⇓PKIKP	PKPdf	18 36 47.2	+5.3
BURAR	Bucovina Array	155.53	321	⇓P	PKPdf	18 36 49.4	+7.4
BURAR	Bucovina Array	155.53	321	⇓PKIKP	PKPdf	18 36 49.4	+7.4
VRI	Vrincioaia	155.64	316	⇑P	PKPab	18 37 01.0	-7.4
VRI	Vrincioaia	155.64	316	⇑PKP2	PKPab	18 37 01.0	-7.4
PLOR	Plostina	155.69	316	⇓P	PKPab	18 37 02.6	-6.1
PLOR	Plostina	155.69	316	⇓PKP2	PKPab	18 37 02.6	-6.1
MLR	Muntele Rosu	156.30	316	⇓P	PKPab	18 36 57.3	-14
MLR	Muntele Rosu	156.30	316	⇓PKIKP	PKPab	18 36 57.3	-14
ARCR	ARCALIA	156.32	321	⇑P	PKPab	18 36 59.6	-12
DOPR	Dopca	156.38	318	⇓P	PKPdf	18 36 55.3	+12
BMR	Baia Mare	156.41	323	⇓P	PKPab	18 37 12.0	+0.4
BMR	Baia Mare	156.41	323	⇓PKP2	PKPab	18 37 12.0	+0.4
TRPA	Tarpa	156.60	325	⇓P	PKPab	18 37 10.3	-2.0
VOIR		156.87	317	⇓P	PKPab	18 37 00.3	-13
MESR	Meseseni	157.03	323	⇓P	PKPab	18 37 09.2	-5.0
ARR	Arges	157.15	317	⇓P	PKPdf	18 36 56.7	+12
FLTG	Flechtingen	157.15	346	ePKPab	PKPab	18 37 26.4	+12
	baz=22,slow=4.4						
NRDL	Niedersach Rie	157.21	348	ePKPab	PKPab	18 37 27.2	+13
	baz=22,slow=4.4						
DRGR		157.38	322	⇓P	PKPdf	18 36 55.3	+11
DRGR		157.38	322	⇓PKIKP	PKPdf	18 36 55.3	+11
OSTC	Ostas	157.40	337	ePKPAB	PKPab	18 37 17.0	+1.3
OSTC	Ostas	157.40	337	ePKP2	PKPab	18 37 17.0	+1.3
UPC	Upice	157.51	337	ePKPAB	PKPab	18 37 16.9	+0.7
UPC	Upice	157.51	337	ePKP2	PKPab	18 37 16.9	+0.7
DPC	Dobruska-Polom	157.54	337	ePKPDF	PKPdf	18 36 53.4	+8.9
DPC				ePKPAB	PKPab	18 37 17.6	+1.2
DPC	Dobruska-Polom	157.54	337	ePKIKP	PKPdf	18 36 53.4	+8.9
MORC	Moravsky Berou	157.57	334	ePKP	PKPab	18 37 16.6	0.0
KRLC	Kraliky	157.61	336	ePKPDF	PKPdf	18 36 53.0	+8.4
KRLC				ePKPAB	PKPab	18 37 15.0	-1.7
KRLC	Kraliky	157.61	336	ePKIKP	PKPdf	18 36 53.0	+8.4
KRLC				e		18 37 15.0	
CLL	Collm	157.69	343	e(PKPdif)		18 36 54.0	
CLL				ex	x	18 37 07.0	
CLL				i PKPab	PKPab	18 37 17.2	+0.3
	comp=Z,18nm,1.4s						
CLL				i pPKPab	sPKPab	18 37 28.9	-0.4
	comp=Z,25nm,0.9s						
CLL	Collm	157.69	343	ePKP2	PKPab	18 37 07.0	-10
CLL				pmax	pmax		
	comp=Z,18nm,1.4s						
CLL	Collm	157.69	343	ePKPab	PKPab	18 37 29.0	+12
	baz=22,slow=4.4						
IBBN	Ibbenburen	157.75	352	ePKPab	PKPab	18 37 29.7	+13
	baz=22,slow=4.4						
CLZ	Clausthal	157.79	347	ePKPab	PKPab	18 37 29.7	+12
	baz=22,slow=4.4						
BRG	Berggiesshubel	157.83	341	ePKP	PKPdf	18 36 47.3	+2.5
BRG				Amp		18 36 57.1	
	comp=Z,8.9nm,1.3s						
BRG	Berggiesshubel	157.83	341	P	PKPab	18 37 18.2	+0.7
BRG				Amp		18 37 20.2	
	comp=Z,24nm,1.5s						
BRG	Berggiesshubel	157.83	341	P	PKPab	18 37 30.4	+13
BRG				Amp		18 37 31.1	
	comp=Z,19nm,0.8s						
BRG	Berggiesshubel	157.83	341	ePKIKP	PKPdf	18 36 47.2	+2.5
BRG				pmax	pmax		
	comp=Z,9.0nm,1.3s						
BRG				pmax	pmax		
	comp=Z,24nm,1.5s						
BRG				pmax	pmax		
	comp=Z,19nm,0.8s						
BRG	Berggiesshubel	157.83	341	ePKPab	PKPab	18 37 30.3	+13
	baz=22,slow=4.4						
FBE	Freiberg	157.95	342	ePKPab	PKPab	18 37 30.5	+12
	baz=22,slow=4.4						
PVCC	Panska Ves	157.95	339	ePKPAB	PKPab	18 37 20.2	+2.1
PVCC	Panska Ves	157.95	339	ePKP2	PKPab	18 37 20.2	+2.1
VYHS	Vyhne	158.06	330	ePKP2	PKPab	18 37 18.9	+0.2
VYHS	Vyhne	158.06	330	ePKP	PKPab	18 37 18.9	+0.2
NEUB	Neuenburg	158.09	344	ePKPab	PKPab	18 37 30.8	+12
	baz=22,slow=4.4						
GTTG	Gottingen	158.15	348	ePKPab	PKPab	18 37 31.6	+13
	baz=22,slow=4.4						
GZR	Gura Zlata	158.21	319	⇑P	PKPdf	18 36 41.4	-4.1
GZR	Gura Zlata	158.21	319	⇑PKIKP	PKPdf	18 36 41.4	-4.1
JAVC	Velka Javorina	158.26	332	ePKP	PKPab	18 37 18.8	-0.8
SIRR	Siria	158.28	322	⇑P	PKPdf	18 36 59.0	+14
VRAC	Vranov	158.31	335	ePKP	PKPab	18 37 19.2	-0.5
SURR	Surduc	158.35	321	⇓P	PKPab	18 37 18.6	-1.4
PRU	Pruhonice	158.43	339	ePKPAB	PKPab	18 37 20.7	+0.5
PRU	Pruhonice	158.43	339	ePKP2	PKPab	18 37 20.7	+0.5
KRUC	Moravsky	158.59	335	ePKP	PKPab	18 37 20.4	-0.5
MOX	Moxa	158.65	344	ePKPab	PKPab	18 37 33.4	+12
	baz=22,slow=4.4						
WERD	Werda	158.66	343	ePKPab	PKPab	18 37 33.7	+12
	baz=22,slow=4.4						
PLN	Plauen	158.66	343	ePKPab	PKPab	18 37 33.6	+12
	baz=22,slow=4.4						
BUG	Bochum--Univer	158.67	352	ePKPab	PKPab	18 37 33.3	+12
	baz=22,slow=4.4						
BZS	Buzias	158.71	321	⇓P	PKPdf	18 36 46.6	+0.6
BZS	Buzias	158.71	321	⇓PKIKP	PKPdf	18 36 46.6	+0.6
GUNZ	Gunzen	158.73	343	ePKPab	PKPab	18 37 34.2	+13
	baz=22,slow=4.4						
KASTN	Kahler Asten	158.74	350	ePKPab	PKPab	18 37 33.6	+12
	baz=22,slow=4.4						
WERN	Wernitzgruen	158.79	342	ePKPab	PKPab	18 37 34.6	+13
	baz=22,slow=4.4						
MODS	Modra-Piesok	158.80	332	ePKP2	PKPab	18 37 22.9	+1.0
MODS	Modra-Piesok	158.80	332	ePKP	PKPab	18 37 22.9	+1.0
NKC	Novy Kostel	158.82	342	ePKPAB	PKPab	18 37 22.8	+0.9
NKC	Novy Kostel	158.82	342	ePKP2	PKPab	18 37 22.8	+0.9
MANZ	Manzenberg	159.13	343	ePKPab	PKPab	18 37 35.4	+12
	baz=22,slow=4.4						
MDVR	Moldovita	159.18	319	⇑P	PKPdf	18 36 44.2	-2.5
ROTZ	Rotzenmuhle	159.31	342	ePKPab	PKPab	18 37 36.6	+13
	baz=22,slow=4.4						
VTS	Vitosha	159.45	312	⇑P	PKPab	18 37 29.9	+4.8
VTS	Vitosha	159.45	312	⇑PKP2	PKPab	18 37 29.9	+4.8
KHC	Kasperske Hory	159.49	339	PKPdf	PKPdf	18 36 43.0	-3.8
KHC				PKPab	PKPab	18 37 24.6	-0.2
KHC	Kasperske Hory	159.49	339	⇑ePKP	PKPdf	18 36 59.9	+13
KHC				ePKPAB	PKPab	18 37 25.4	+0.5
KHC				ex	x	18 37 37.7	
KHC	Kasperske Hory	159.49	339	PKP2	PKPab	18 37 24.6	-0.2
CKRC	Cesky Krumlov	159.53	337	ePKPDF	PKPdf	18 36 59.7	+13
CKRC				ePKPAB	PKPab	18 37 25.9	+0.9
CKRC	Cesky Krumlov	159.53	337	ePKIKP	PKPdf	18 36 59.7	+13
AHRW	Bad Neuenahr-A	159.57	352	ePKPab	PKPab	18 37 37.8	+13
	baz=22,slow=4.4						
GRF	Grafenberg Arr	159.63	344	ePKPab	PKPab	18 37 38.0	+13
	baz=22,slow=4.4						
TNS	Taunus Mts	159.69	349	ePKPab	PKPab	18 37 37.8	+12
	baz=22,slow=4.4						
GEC2	GERESS Array S	159.70	338	PKPdf	PKPdf	18 36 43.3	-3.9
GEC2				PKPab	PKPab	18 37 25.2	-0.7
GEC2	GERESS Array S	159.70	338	ePKPab	PKPab	18 37 38.5	+13
	baz=22,slow=4.4						
GERES	GERESS Array B	159.70	338	PKP	PKPdf	18 36 48.2	+1.0
	comp=Z,0.7nm,0.9s,baz=349,slow=1.0,SNR=4.0						
GERES				PKPab	PKPab	18 37 25.9	+0.1
	comp=Z,3.4nm,1.0s,baz=53,slow=5.2,SNR=9.5						
CONA	Conrad Observa	159.72	334	epPKP	PKPab	18 37 28.0	+2.0
	comp=Z,5.4nm,0.9s						
RONA	Rosalia, Austr	159.74	332	ePKP	PKPab	18 37 26.2	+0.2
	comp=Z,8.7nm,0.9s						
ARSA	Arzberg	160.41	333	ePKP	PKPab	18 37 28.6	-0.3
WLF	Walferdange	160.54	353	ePKPab	PKPab	18 37 42.2	+13
	baz=22,slow=4.4						
BIOA	Bad Ischl, Aus	160.73	337	epPKP	PKPab	18 37 31.6	+1.3
	comp=Z,15nm,1.2s						
STU	Stuttgart	160.94	347	ePKPab	PKPab	18 37 43.8	+13
	baz=22,slow=4.4						
RJOB	Jochberg	160.96	338	ePKPab	PKPab	18 37 44.3	+13
	baz=22,slow=4.4						
FUR	Furstenfeldbru	161.02	342	ePKPab	PKPab	18 37 44.4	+13
	baz=22,slow=4.4						
SOKA	Soboth	161.07	333	epPKP	PKPab	18 37 33.4	+1.5
	comp=Z,6.4nm,1.3s						
BFO	Black Forest	161.53	348	ePKPab	PKPab	18 37 45.9	+12
	baz=22,slow=4.4						
MYKA	Terra Mystica	161.64	335	ePKP	PKPab	18 37 34.0	-0.4
	comp=Z,4.2nm,0.6s						
WATA	Walderalm	161.69	340	epPKP	PKPab	18 37 35.7	+1.0
	comp=Z,15nm,1.2s						
WTTA	Wattenberg	161.74	340	epPKP	PKPab	18 37 35.6	+0.7
	comp=Z,7.5nm,0.9s						
UBR	Ueberruh	161.77	344	ePKPab	PKPab	18 37 47.0	+12
	baz=22,slow=4.4						
RETA	Reutte	161.78	342	epPKP	PKPab	18 37 35.6	+0.7
	comp=Z,6.3nm,0.9s						
MOTA	Moosalm	161.82	341	ePKP	PKPab	18 37 35.4	+0.2
	comp=Z,18nm,1.2s						
PRED	Cave del Predi	161.82	335	PKPdf	PKPdf	18 36 47.6	-1.9
PRED				PKPab	PKPab	18 37 33.1	-2.0
SQTA	Sankt Quirin	161.91	341	epPKP	PKPab	18 37 36.1	+0.6
	comp=Z,13nm,1.2s						
ABTA	Abfaltersbach	161.93	338	ePKP	PKPab	18 37 35.5	-0.1
	comp=Z,8.8nm,1.5s						
CLUD	Cludinico	162.06	336	PKPdf	PKPdf	18 36 47.6	-2.1
CLUD				PKPab	PKPab	18 37 35.3	-0.9
DAVA	Damuels	162.19	344	ePKP	PKPab	18 37 36.3	-0.6
	comp=Z,9.6nm,1.4s						
CIMO	Cimolais	162.33	337	PKPdf	PKPdf	18 36 45.8	-4.2
CIMO					PKPab	18 37 36.0	-1.3
FUORN	Ofenpass-Fuorn	162.72	342	PKPab	PKPab	18 37 38.7	-0.5
TORD	Torodi Ar. Bea	162.84	177	PKP	PKPdf	18 36 51.8	+0.4
	comp=Z,5.2nm,1.2s,baz=228,slow=4.1,SNR=9.1						
TORD				PKPab	PKPab	18 37 40.9	+0.7
	comp=Z,4.2nm,0.9s,baz=176,slow=4.0,SNR=7.6						
TORD				PP	PP	18 41 28.9	+5.5
	comp=Z,2.9nm,1.1s,baz=190,slow=4.4,SNR=4.4						
FDMO	Fiordimonte	164.83	329	PKPdf	PKPdf	18 36 49.1	-3.3
FDMO					PKPab	18 37 47.6	-0.8
MSSA	Maissana	165.04	340	PKPdf	PKPdf	18 36 48.5	-4.1
MSSA				PKPab	PKPab	18 37 47.2	-2.1
ESDC	Sonseca Array	169.28	28	PKP	PKPdf	18 36 57.2	+1.4
	comp=Z,2.6nm,1.2s,baz=343,slow=1.5,SNR=5.0						
ESDC				PKPab	PKPab	18 38 08.7	+0.5
	comp=Z,1.9nm,1.0s,baz=306,slow=4.5,SNR=3.7						

*IDC **14** 18:48:12.4±1.9,36°.26N×142°.36E,h0^{km},mb3.7/5,*
mbtmp3.7/8,ML3.3/3,Error ellipse: s-maj=38.3km
s-min=24.7km az=84.0
*JMA **14** 18:48:15.5±0.2,36°.3N±0°.4×14°2E±°,h53^{km},MV3.2/29,*
FAR E OFF IBARAKI PREF
ISC 14 18:48:11.5±2.5,**36°.30N**±0°.04×**142°.31E**±0°.09,**h0**^{km}±14^{km},
n28,σ**1^{s}76**/30,**mb3.8**/5,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	1.32	244	eP	Pg	18 48 37.3	+0.5
CHOJ				eS	Sg	18 48 53.0	-0.9
JHYU	Hitachinakayam	1.39	272	P	Pn	18 48 38.1	-0.1
JHO	Hitachi	1.44	283	P	Pn	18 48 38.4	-0.4
JHO				eS	Sg	18 48 55.4	-2.3
ONAJ	Iwakimizuishiy	1.46	304	P	Pn	18 48 38.9	-0.3
JFK	Kawauchi	1.57	313	P	Pn	18 48 40.4	-0.3
JFK				eS	Sn	18 48 59.5	-2.3
BSO1	Boso 1	1.97	214	eP	Pn	18 48 46.6	+1.0
BSO1				eS	Sn	18 49 10.2	-0.5
JMM	Marumori	1.98	323	P	Pn	18 48 46.2	-0.1
JMM				eS	Sn	18 49 09.1	-2.8
JOTO	OTAMA OYAMA	2.02	309	P	Pn	18 48 47.8	+0.9
JAG	Ashikaga	2.31	274	i P	Pn	18 48 50.7	-0.1
JRY	Ryogami san	2.77	265	P	Pn	18 48 57.3	+0.1
JMK	Ichinoseki	2.79	342	eS	Sn	18 49 30.5	-1.2
JOD2	Odawara 2	2.81	249	eP	Pn	18 48 58.5	+0.7
JYK	Kaneyama	3.04	330	P	Pn	18 49 02.2	+1.3
JYN	Shimob	3.16	256	P	Pn	18 49 04.0	+1.4
MJAR	Matsushiro Arr	3.32	275	Pn	Pn	18 49 04.6	-0.1
	0.9nm,0.3s,baz=104,slow=11,SNR=49						
MJAR				Sn	Sn	18 49 47.4	+2.5
	0.1nm,0.3s,baz=97,slow=21,SNR=1.4 4.1nm,0.3s						
JHJ	Hachijo jima 2	3.79	214	Pn	Pn	18 49 12.4	+1.2
	29nm,0.3s,baz=52,slow=11,SNR=2.4						
JHJ				Sn	Sn	18 49 51.4	-5.1
	54nm,0.3s,baz=0.0,slow=20,SNR=2.2 227nm,0.7s						
ASAJ	Asahikawa	7.81	2	Pn	Pn	18 50 06.7	+0.2
	0.4nm,0.3s,baz=209,slow=13,SNR=8.1						
ASAJ				Sn	Sn	18 51 32.7	-2.9
	0.2nm,0.3s,baz=323,slow=20,SNR=1.6 1.3nm,0.3s						
H11N2	WAKE ISLAND Hy	27.15	121	T	T	19 22 34.2	
	baz=312,slow=75,SNR=5.9						
H11N1	WAKE ISLAND Hy	27.16	121	T	T	19 22 37.3	
	baz=312,slow=75,SNR=6.2						
H11N3	WAKE ISLAND Hy	27.17	121	T	T	19 22 38.6	
	baz=312,slow=75,SNR=4.6						
H11S1	WAKE ISLAND Hy	27.86	123	T	T	19 23 29.4	
	baz=315,slow=76,SNR=3.8						
H11S3	WAKE ISLAND Hy	27.86	123	T	T	19 23 26.3	
	baz=315,slow=76,SNR=4.2						
H11S2	WAKE ISLAND Hy	27.87	123	T	T	19 23 27.8	
	baz=315,slow=76,SNR=3.8						
SONM	Songino Array	28.80	305	P	P	18 54 12.2	+1.0
	1.3nm,0.8s,baz=101,slow=8.4,SNR=9.3 1.3nm,0.8s						
ZALV	Zalesovo Beam	42.94	313	P	P	18 56 12.7	+0.8
	0.4nm,0.5s,baz=91,slow=8.6,SNR=2.4 0.4nm,0.5s						
MKAR	Makanchi Array	45.12	303	P	P	18 56 32.6	+3.0
	0.8nm,0.6s,baz=85,slow=9.7,SNR=8.6 0.8nm,0.6s						
KURBB	Kurchatov Arra	47.02	309	P	P	18 56 45.0	+0.6
	0.6nm,0.4s,baz=82,slow=8.4,SNR=5.9 0.6nm,0.4s						
WRA	Warramunga Arr	56.44	189	P	P	18 57 55.2	+0.2
	0.5nm,1.0s,baz=3.7,slow=7.4,SNR=1.8 0.5nm,1.0s						

*KRNET **14** 18:55:19.9±0.1,39°.34N×73°.49E,mb3.4*
*SOME **14** 18:55:19.9,39°.47N×73°.03E,h5^{km}*
*NNC **14** 18:55:22.3±1.8,39°.27N×73°.71E,h0^{km},mb3.6,mpv3.2,*
Error ellipse: s-maj=13.3km s-min=9.8km az=167.0
ISC 14 18:55:20.3±1.2,**39°.42N**±0°.06×**73°.48E**±0°.03,**h10**^{km},**n49**,
σ**1^{s}89**/66,**23C-12D**,**Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	Osh	1.22	334	⇑eP	Pg	18 55 44.5	+0.7
	baz=36						
OHH				⇑eS	Sn	18 56 02.4	+2.2
	baz=36						
DRK	Karamyk	1.30	273	⇑iP	Pg	18 55 44.9	-0.5
	baz=77						
DRK				⇑iS	Sn	18 56 03.4	+0.9
	baz=77						
BTK	Batken	2.15	288	⇓eP	Pb	18 55 59.2	-0.2
	baz=90						
BTK				⇓iS	Sg	18 56 27.9	-1.5
	baz=90						
GAR	Garm	2.49	261	⇓eP	Pb	18 56 03.6	-1.7
	baz=63						
GAR				⇓eS	Sb	18 56 35.5	-0.6
	baz=63						
ARLS	Aral	2.52	14	⇑iP	Pb	18 56 05.1	-0.6
	baz=14						
ARLS				⇑eS	Sb	18 56 38.0	+1.2
	baz=14						
ARK	Arkit	2.64	335	⇑eP	Pb	18 56 06.9	-0.9
	baz=35						
ARK				⇑eS	Sb	18 56 40.9	+0.6
	baz=35						
AML	Almayashu	2.71	3	P	Pb	18 56 09.9	+0.7
	SNR=23						
AML	Almayashu	2.71	3	⇓Pn	Pb	18 56 09.7	+0.5
	0.9nm,0.5s						
AML				⇑Sn	Sg	18 56 47.7	+0.3
	9.8nm,0.7s						
AML	Almayashu	2.71	3	⇓eP	Pb	18 56 07.8	-1.3
	baz=3.0						
AML				⇓eS	Sb	18 56 43.0	+0.4
	baz=3.0						
TRKS	Terek-Say	2.76	320	⇑eP	Pb	18 56 07.4	-2.4
	baz=21						
TRKS				⇑eS	Sb	18 56 42.0	-1.8
	baz=21						
NRN	Naryn	2.78	43	⇑eP	Pb	18 56 08.0	-2.3
	baz=42						
NRN				⇑eS	Sb	18 56 43.5	-1.0
	baz=42						
UCH	Uchtor	2.91	15	P	Pb	18 56 14.0	+1.4
	SNR=18						
UCH	Uchtor	2.91	15	⇑eP	Pb	18 56 10.8	-1.8
	baz=15						
UCH				⇑eS	Sb	18 56 47.8	-0.6
	baz=15						
MNAS	Manas	3.15	347	⇑iP	Pb	18 56 14.2	-2.3
	baz=47						
MNAS				⇑iS	Sb	18 56 53.6	-1.4
	baz=47						
EKS2	Erkin-Say	3.24	4	P	Pb	18 56 17.8	-0.3
	SNR=6.8						
EKS2	Erkin-Say	3.24	4	⇑iP	Pb	18 56 15.1	-3.0
	baz=4.0						
EKS2				⇑eS	Sb	18 56 55.6	-2.1
	baz=4.0						
AAK	Ala-Archa	3.30	13	P	Pb	18 56 19.1	0.0
	SNR=6.7						
AAK	Ala-Archa	3.30	13	⇑eP	Pn	18 56 15.8	+3.6
	baz=13						
AAK				⇑eS	Sb	18 56 56.9	-2.5
	baz=13						
MRKS	Merke	3.32	357	ePg	Pb	18 56 19.6	+0.1
	4.2nm,0.1s						
MRKS				eLg	Lg	18 57 02.4	
	9.2nm,0.2s						
KBK	Karagaybulak	3.42	18	P	Pb	18 56 20.9	-0.1
	SNR=5.3						
KBK	Karagaybulak	3.42	18	⇓iP	Pn	18 56 17.5	+3.7
	baz=18						
KBK				⇓iS	Sb	18 56 59.7	-3.0
	baz=18						
ULHL	Ulahol	3.51	36	⇓iP	Pn	18 56 18.8	+3.6
	baz=35						
ULHL				⇓eS	Sn	18 57 01.7	+4.8
	baz=35						
CHMS	Chumysh	3.70	15	P	Pb	18 56 24.1	-1.7
	SNR=7.9						
IUG	Iuzhnay	3.78	317	Pg	Pb	18 56 24.9	-2.2
	29nm,0.8s						
IUG				Lg	Lg	18 57 11.3	
	52nm,0.8s						
IUG	Iuzhnay	3.78	317	ePg	Pb	18 56 24.9	-2.2
	20nm,0.0s						
IUG				eLg	Lg	18 57 11.3	
	50nm,0.2s						
TKM2	Tokmak 2	3.84	24	⇑Pn	Pb	18 56 25.7	-2.6
	2.3nm,0.8s						
TKM2				⇓Sn	Sg	18 57 20.6	-3.1
	7.8nm,0.5s						
KST	Kastek	4.07	27	Pg	Pg	18 56 37.2	-1.1
	3.0nm,0.6s						
KST				Lg	Lg	18 57 32.5	
	23nm,0.6s						
KST	Kastek	4.07	27	ePg	Pg	18 56 37.2	-1.1
	2.8nm,0.2s						
KST				eLg	Lg	18 57 32.5	
	23nm,0.6s						
SGDS	Sogindy	4.12	12	Pg	Pg	18 56 38.3	-0.9
	2.8nm,0.7s						
SGDS				Lg	Lg	18 57 33.9	
	12nm,1.0s						
DGS	Degeres	4.19	24	Pg	Pg	18 56 39.8	-0.7
	4.2nm,0.5s						
DGS				Lg	Lg	18 57 37.1	
	14nm,0.8s						
DGS	Degeres	4.19	24	ePg	Pg	18 56 39.8	-0.7
	4.2nm,0.5s						
DGS				eLg	Lg	18 57 37.1	
	13nm,0.1s						
KK31	Karatay Array	4.30	330	Pn	Pn	18 56 30.9	+5.0
	1.6nm,0.3s,baz=136,slow=12,SNR=41						
KK31				⇑Sn	Sb	18 57 25.8	-2.2
	2.3nm,0.3s						
IZV	Izvestkoviy	4.31	32	Pg	Pg	18 56 41.5	-1.4
	4.2nm,0.7s						
IZV				Lg	Lg	18 57 40.0	
	16nm,0.8s						
IZV	Izvestkoviy	4.31	32	ePg	Pg	18 56 41.5	-1.4
	4.2nm,0.7s						
IZV				eLg	Lg	18 57 40.0	
	16nm,0.8s						
MTBS	Maitube	4.32	30	Pg	Pg	18 56 41.3	-1.7
	5.4nm,0.5s						
MTBS				Lg	Lg	18 57 39.5	
	6.4nm,0.3s						
MTBS	Maitube	4.32	30	ePg	Pg	18 56 41.3	-1.7
	5.3nm,0.1s						
MTBS				eLg	Lg	18 57 39.5	
	9.5nm,0.3s						
TNSS	Tian-Shan	4.46	35	Pg	Pg	18 56 44.9	-0.8
	7.0nm,0.8s						
TNSS				Lg	Lg	18 57 45.6	
	5.9nm,0.6s						
TNSS	Tian-Shan	4.46	35	ePg	Pg	18 56 44.9	-0.8
	7.0nm,0.8s						
TNSS				eLg	Lg	18 57 45.6	
	6.1nm,0.2s						
KRBS	Karabastau	4.58	20	Pg	Pg	18 56 46.6	-1.3
	2.8nm,0.6s						
KRBS				Lg	Lg	18 57 48.7	
	15nm,1.0s						
KRBS	Karabastau	4.58	20	ePg	Pg	18 56 46.6	-1.3
	3.1nm,0.2s						
KRBS				eLg	Lg	18 57 48.7	
	15nm,1.0s						
MDOK	Medeo	4.60	35	Pg	Pg	18 56 47.3	-1.2
	5.4nm,1.3s						
MDOK				Lg	Lg	18 57 49.8	
	16nm,0.7s						
MDOK	Medeo	4.60	35	ePg	Pg	18 56 47.3	-1.2
	5.1nm,0.6s						
MDOK				eLg	Lg	18 57 49.8	
	16nm,0.4s						
KTBS	Karatobe	4.91	28	Pg	Pg	18 56 52.3	-2.1
	2.3nm,0.5s						
KTBS				Lg	Lg	18 57 58.6	
	23nm,0.7s						
KTBS	Karatobe	4.91	28	ePg	Pg	18 56 52.2	-2.1
	2.6nm,0.1s						
KTBS				eLg	Lg	18 57 58.6	
	23nm,0.7s						
KUU	Kurty	4.95	25	Pg	Pg	18 56 53.5	-1.6
	2.5nm,0.8s						
KUU				Lg	Lg	18 58 00.5	
	10nm,0.8s						
KUU	Kurty	4.95	25	ePg	Pg	18 56 53.5	-1.6
	2.4nm,0.2s						
KUU				eLg	Lg	18 58 00.6	
	10.0nm,0.2s						
BTLS	Baital	5.63	4	Pg	Pg	18 57 05.8	-2.3
	1.6nm,0.7s						
BTLS				Lg	Lg	18 58 21.0	
	3.4nm,1.1s						
BTLS	Baital	5.63	4	ePg	Pg	18 57 05.8	-2.3
	1.6nm,0.7s						
BTLS				eLg	Lg	18 58 21.0	
	3.4nm,1.1s						
PDGK	Podgornoye	5.97	47	Pg	Pg	18 57 11.9	-2.7
	1.6nm,1.5s						
PDGK				Lg	Lg	18 58 31.7	
	2.3nm,1.2s						

*IDC **14** 18:55:30.0±59.0,22°.71S×176°.37W,h0^{km},mb4.0/3,*
mbtmp4.0/3,Error ellipse: s-maj=1094.0km
s-min=170.1km az=87.0
*NEIC **14** 18:56:40.9±1.1,24°.4S±0°.2×179°.8W±0°.1,h454^{km}±17^{km},*
mb4.1/12,Error ellipse: s-maj=28.1km s-min=9.2km
az=140.0
ISC 14 18:56:43.3±1.0,**24°.2S**±0°.2×**179°.7W**±0°.1,**h512**^{km},**n18**,
σ**1^{s}00**/18,**mb4.0**/10,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	10.39	62	P	P	18 59 04.5	-0.5
QRZ	Quartz Range	17.81	200	P	P	19 00 20.7	-0.4
THZ	Tophouse	18.56	198	P	P	19 00 26.4	-1.7
CTAO	Charters Tower	31.79	271	P	P	19 02 26.5	+1.0
CTAO				IAmb	IAmb	19 03 10.4	
	comp=Z,21nm,1.5s						
STKA	Stephens Creek	34.90	249	P	P	19 02 51.2	-0.4
	comp=Z,2.3nm,1.0s,baz=98,slow=11,SNR=4.4 comp=Z,2.3nm,1.0s						
STKA	Stephens Creek	34.90	249	P	P	19 02 49.9	-1.7
BBOO	Buckleboo	39.61	247	P	P	19 03 29.4	-0.9
BBOO				IAmb	IAmb	19 03 58.8	
	comp=Z,14nm,1.4s						
AS31	Alice Springs	42.29	261	P	P	19 03 51.6	-0.2
AS31				IAmb	IAmb	19 04 03.1	
	comp=Z,2.4nm,1.5s						
ASAR	Alice Springs	42.29	261	P	P	19 03 51.7	-0.1
	comp=Z,0.4nm,0.4s,baz=93,slow=7.8,SNR=22						

	comp=Z,0.4nm,0.4s						
ASAR	**Alice Springs**	**42.29**	**261**	P	**P**	**19 03 51.3**	**-0.6**
WRAB	**Tennant Creek**	**42.69**	**266**	P	**P**	**19 03 54.7**	**-0.3**
WRAB				IAmb	IAmb	19 03 55.8	
	comp=Z,4.0nm,1.1s						
WB0	**Warramunga Arr**	**42.69**	**267**	P	**P**	**19 03 54.6**	**-0.4**
WB0				IAmb	IAmb	19 03 55.9	
	comp=Z,9.8nm,1.4s						
WRA	**Warramunga Arr**	**42.70**	**266**	P	**P**	**19 03 54.5**	**-0.6**
	comp=Z,2.0nm,0.5s,baz=100,slow=8.1,SNR=35						
	comp=Z,2.0nm,0.5s						
FORT	**Forrest**	**46.49**	**250**	P	**P**	**19 04 23.3**	**-0.8**
MTN	**Manton Dam**	**47.79**	**275**	P	**P**	**19 04 34.2**	**+0.1**
MTN				IAmb	IAmb	19 04 54.9	
	comp=Z,15nm,1.2s						
KNRA	**Kununurra**	**49.00**	**270**	P	**P**	**19 04 44.0**	**+0.8**
KNRA				IAmb	IAmb	19 05 14.4	
	comp=Z,7.1nm,0.7s						
FITZ	**Fitzroy Crossi**	**51.12**	**266**	P	**P**	**19 04 59.8**	**+1.2**
QSPA	**South Pole Qui**	**65.87**	**180**	P	**P**	**19 06 39.5**	**+1.8**

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*NOU **14** 18:59:00.8, 30°.26S×175°.10W, h0^{km}, mb4.9/22, Kermadec Islands Region*

*IDC **14** 18:59:15.9±0.8, 30°.31S×177°.55W, h0^{km}, mb4.4/8, mbtmp4.4/8, MS4.1/29, Error ellipse: s-maj=27.2km s-min=22.0km az=137.0*

*NEIC **14** 18:59:18.8±2.6, 30°.20S±0°.08×177°.4W±0°.1, h18^{km}±4^{km}, mb4.9/34, Error ellipse: s-maj=16.1km s-min=9.5km az=56.0*

ISC 14 18:59:16.9±0.4, **30°.42S**±0°.04×**177°.45W**±0°.06, **h10**^{km}, **n157**, σ**2**^{s}**.14**/147, **mb4.8**/22, **MS4.2**/28, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**1.22**	**340**	P	**Pn**	**18 59 37.8**	**-2.2**
GLKZ				S	**Sb**	**18 59 52.6**	**-3.3**
RAO	**Raoul Island**	**1.23**	**340**	Pn	**Pn**	**18 59 38.5**	**-1.7**
	3μm,0.3s,baz=128,slow=4.6,SNR=66						
RAO				Sn	**Sb**	**18 59 53.3**	**-2.9**
	8μm,0.3s,baz=87,slow=19,SNR=13						
RAO				LR	LR	19 00 05.4	
	comp=Z,2μm,20.1s,baz=138,slow=45						
RAO	**Raoul Island**	**1.23**	**340**		**Pn**	**18 59 38.4**	**-1.8**
RAO				Sn	**Sb**	**18 59 52.7**	**-3.5**
RIZ	**Raoul Island**	**1.24**	**340**	P	**Pn**	**18 59 38.5**	**-1.8**
RIZ				S	**Sb**	**18 59 54.6**	**-1.9**
MXZ	**Matakaoa Point**	**7.95**	**205**	Pn	**Pn**	**19 01 10.6**	**-2.0**
MXZ	**Matakaoa Point**	**7.95**	**205**	P	**Pn**	**19 01 10.5**	**-2.0**
MXZ				S	**Sn**	**19 02 40.6**	**-2.0**
WMGZ	**Waiomatatini S**	**8.14**	**204**	P	**Pn**	**19 01 16.1**	**+0.9**
WMGZ				S	**Sn**	**19 02 45.7**	**-1.5**
HAZ	**Te Kaha**	**8.32**	**207**	P	**Pn**	**19 01 15.8**	**-1.8**
HAZ				S	**Sn**	**19 02 52.0**	**+0.3**
PKGZ	**Pakihiroa**	**8.32**	**205**	P	**Pn**	**19 01 15.0**	**-2.8**
PKGZ				S	**Sn**	**19 02 48.8**	**-3.1**
PUZ	**Puketiti**	**8.42**	**204**	P	**Pn**	**19 01 16.4**	**-2.7**
PUZ				S	**Sn**	**19 02 52.6**	**-1.6**
RUGZ	**Raukumara Rang**	**8.54**	**207**	P	**Pn**	**19 01 17.7**	**-3.1**
RUGZ				S	**Sn**	**19 02 56.6**	**-0.8**
CNGZ	**Carnagh Statio**	**8.81**	**203**	P	**Pn**	**19 01 21.6**	**-2.8**
CNGZ				S	**Sn**	**19 03 04.1**	**+0.4**
MWZ	**Matawai**	**8.92**	**206**	P	**Pn**	**19 01 23.6**	**-2.3**
MWZ				S	**Sn**	**19 03 04.3**	**-2.3**
URZ	**Urewera**	**9.02**	**208**	Pn	**Pn**	**19 01 24.2**	**-3.0**
	1.8nm,0.3s,baz=348,slow=5.4,SNR=9.7						
URZ				Sn	**Sn**	**19 03 04.0**	**-4.9**
	29nm,0.3s,baz=315,slow=20,SNR=13						
URZ	**Urewera**	**9.02**	**208**	P	**Pn**	**19 01 24.8**	**-2.4**
URZ				S	**Sn**	**19 03 05.9**	**-3.0**
RIGZ	**Rimuhau**	**9.16**	**204**	P	**Pn**	**19 01 26.3**	**-2.9**
RIGZ				S	**Sn**	**19 03 10.1**	**-2.3**
MUGZ	**Murupara**	**9.35**	**209**	P	**Pn**	**19 01 29.5**	**-2.2**
RTZ	**Ruatahuna**	**9.38**	**208**	Pn	**Pn**	**19 01 29.7**	**-2.6**
RAHZ	**Arahi**	**9.60**	**206**	P	**Pn**	**19 01 34.4**	**-0.7**
RAHZ				S	**Sn**	**19 03 19.9**	**-3.3**
BKZ	**Black Stump Fm**	**10.05**	**208**	Pn	**Pn**	**19 01 38.8**	**-2.6**
BKZ	**Black Stump Fm**	**10.05**	**208**	P	**Pn**	**19 01 38.5**	**-2.9**
BKZ				S	**Sn**	**19 03 29.6**	**-4.6**
SNVZ	**South Ngauruho**	**10.43**	**211**	P	**Pn**	**19 01 47.6**	**+0.9**
BHHZ	**Black Hill Sta**	**10.50**	**209**	P	**Pn**	**19 01 44.9**	**-2.6**
BHHZ				S	**Sn**	**19 03 39.6**	**-5.6**
WNVZ	**Wahianoa**	**10.56**	**211**	P	**Pn**	**19 01 44.6**	**-3.9**
BFZ	**Birch Farm**	**11.45**	**205**	P	**Pn**	**19 01 56.4**	**-4.2**
HOWZ	**Holdsworth Sta**	**11.92**	**207**	P	**Pn**	**19 02 07.9**	**+1.0**
TUWZ	**Tuamarina**	**13.01**	**210**	Pn	Pn	19 02 15.8	-5.9
TUWZ	**Tuamarina**	**13.01**	**210**	P	**Pn**	**19 02 21.3**	**-0.5**
NNZ	**Nelson**	**13.09**	**212**	P	**Pn**	**19 02 26.1**	**+3.2**
QRZ	**Quartz Range**	**13.19**	**215**	P	**Pn**	**19 02 27.4**	**+3.1**
QRZ	**Quartz Range**	**13.19**	**215**	P	**Pn**	**19 02 26.9**	**+2.5**
MSVF	**Nonsavu**	**13.28**	**341**	LR	LR	19 06 49.7	
	comp=Z,711nm,18.6s,baz=180,slow=34						
MSVF	**Nonsavu**	**13.28**	**341**		**P**	**19 02 36.2**	**+0.7**
MRNZ	**Matariki Terra**	**13.52**	**213**	P	**Pn**	**19 02 28.3**	**-0.5**
THZ	**Tophouse**	**13.74**	**212**		Pn	19 02 25.3	-6.5
THZ	**Tophouse**	**13.74**	**212**	P	**Pn**	**19 02 31.0**	**-0.8**
KHZ	**Kahutara**	**13.99**	**209**	P	**Pn**	**19 02 33.4**	**-1.8**
DSZ	**Denniston Nort**	**14.24**	**215**	P	**Pn**	**19 02 38.7**	**0.0**
GVZ	**Greta Valley S**	**14.66**	**209**	P	**Pn**	**19 02 41.4**	**-3.0**
LTZ	**Lake Taylor**	**14.83**	**211**	Pn	**Pn**	**19 02 43.0**	**-3.7**
LTZ				IAmb	IAmb	19 02 55.5	
	comp=Z,169nm,1.9s						
LTZ	**Lake Taylor**	**14.83**	**211**	P	**Pn**	**19 02 43.8**	**-3.0**
INZ	**Inchbonnie**	**15.17**	**213**		**Pn**	**19 02 47.8**	**-3.4**
INZ				IAmb	IAmb	19 02 56.7	
	comp=Z,28nm,1.1s						
INZ	**Inchbonnie**	**15.17**	**213**	P	**Pn**	**19 02 50.1**	**-1.0**
RACZ	**Rakaia**	**15.65**	**209**	P	**Pn**	**19 02 57.5**	**0.0**
MHCZ	**Mount Hutt**	**15.74**	**211**	P	**Pn**	**19 02 59.4**	**+0.6**
WVZ	**Waitaha Valley**	**15.77**	**214**	P	**Pn**	**19 02 59.9**	**+0.9**
RPZ	**Rata Peaks**	**16.11**	**211**	Pn	**Pn**	**19 03 00.8**	**-2.8**
	comp=Z,2.2nm,0.3s,baz=68,slow=4.4,SNR=5.9						
RPZ				Sn	Sn	19 05 45.7	-17
	comp=Z,1.6nm,0.3s,baz=126,slow=21,SNR=2.6						
RPZ				LR	LR	19 09 16.0	
	comp=Z,869nm,20.0s,baz=42,slow=37						
RPZ	**Rata Peaks**	**16.11**	**211**	P	**Pn**	**19 02 59.4**	**-4.2**
RPZ	**Rata Peaks**	**16.11**	**211**	P	**P**	**19 03 05.0**	**-1.9**
RPZ	**Rata Peaks**	**16.11**	**211**	P	**Pn**	**19 03 02.2**	**-1.3**
ARCZ	**Arundel**	**16.24**	**211**	P	**Pn**	**19 03 05.4**	**+0.2**
DZM	**Mont Dzumac**	**16.66**	**296**	*e*Pn	**P**	**19 03 13.0**	**-0.1**
	comp=Z,73nm,1.2s						
DZM				*e*LR	LR	19 07 04.3	
	comp=Z,2μm,23.9s						
DZM	**Mont Dzumac**	**16.66**	**296**	Pn	**P**	**19 03 14.7**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=79,slow=18,SNR=2.9						
DZM				LR	LR	19 08 26.8	
	comp=Z,2μm,18.8s,baz=149,slow=33						
AFI	**Afiamalu**	**17.24**	**19**	LR	LR	19 10 27.3	
	comp=Z,229nm,19.7s,baz=182,slow=39						
ODZ	**Otahua Downs**	**17.35**	**209**	P	**Pn**	**19 03 16.6**	**-2.6**
JCZ	**Jackson Bay**	**17.46**	**215**	P	**P**	**19 03 21.0**	**-0.8**
RAR	**Rarotonga**	**18.34**	**64**	P	**Pn**	**19 03 26.2**	**-5.4**
	comp=Z,11nm,0.6s,baz=246,slow=12,SNR=5.8						
RAR				LR	LR	19 09 38.8	
	comp=Z,295nm,18.5s,baz=250,slow=34						
KOUNC	**Koumac, New Ca**	**19.17**	**297**	P	**P**	**19 03 39.0**	**-1.7**
KOUNC				IAmb	IAmb	19 03 46.2	
	comp=Z,42nm,1.2s						
KOUNC	**Koumac, New Ca**	**19.17**	**297**	P	**Pn**	**19 03 44.9**	**+3.3**
WHZ	**Wether Hill Ro**	**19.20**	**212**	P	**P**	**19 03 38.7**	**-2.2**
TBI	**Tubuai**	**25.89**	**81**	*e*LR	LR	19 11 22.6	
	comp=Z,16μm,23.0s						
TBI				*e*LR	LR	19 11 22.6	
	comp=Z,4μm,24.5s						
ARMA	**Armidale**	**26.63**	**262**	P	**P**	**19 04 59.5**	**+3.5**
ARMA				IAmb	IAmb	19 05 18.1	
	comp=Z,25nm,1.2s						
EIDS	**Eidsvold**	**28.21**	**272**	P	**P**	**19 05 13.1**	**+3.0**
EIDS				IAmb	IAmb	19 06 07.9	
	comp=Z,40nm,1.6s						
PPT2	**Papeete2**	**28.39**	**70**	*e*S	**S**	**19 09 59.3**	**+0.4**
	comp=Z,76nm,23.5s						
PPT2				*e*LR	LR	19 12 21.6	
	comp=Z,615nm,25.2s						
PPT2				*e*LR	LR	19 12 32.2	
	comp=Z,743nm,24.2s						
PPT	**Papeete**	**28.41**	**70**	LR	LR	19 13 24.3	
	comp=Z,272nm,20.6s,baz=240,slow=30						
CAN	**Canberra**	**28.52**	**251**	P	**P**	**19 05 14.5**	**+1.7**
CAN				IAmb	IAmb	19 05 28.1	
	comp=Z,18nm,1.0s						
YNG	**Young**	**29.03**	**253**	P	**P**	**19 05 21.1**	**+3.8**
HNR	**Honiara**	**29.68**	**310**	LR	LR	19 16 22.9	
	comp=Z,4μm,18.2s,baz=152,slow=35						
RMQ	**Roma**	**29.91**	**269**	P	**P**	**19 05 28.4**	**+3.3**
TOO	**Toolangi**	**31.40**	**247**	P	**P**	**19 05 40.5**	**+2.3**
TOO				IAmb	IAmb	19 05 52.4	
	comp=Z,21nm,1.2s						
TOO	**Toolangi**	**31.40**	**247**	P	**P**	**19 05 40.5**	**+2.3**
CMSA	**Cobar Meteorol**	**31.53**	**258**	P	**P**	**19 05 41.8**	**+2.4**
QLP	**Quilpie**	**33.79**	**267**	P	**P**	**19 06 02.4**	**+3.2**
CTA	**Charters Tower**	**34.27**	**279**	P	**P**	**19 06 06.2**	**+2.7**
CTAO	**Charters Tower**	**34.27**	**279**	P	**P**	**19 06 03.8**	**+0.3**
CTAO				IAmb	IAmb	19 06 18.0	
	comp=Z,28nm,0.9s						
CTAO	**Charters Tower**	**34.27**	**279**	P	**P**	**19 06 05.9**	**+2.4**
STKA	**Stephens Creek**	**34.94**	**257**	P	**P**	**19 06 10.7**	**+1.6**
	comp=Z,5.1nm,0.4s,baz=98,slow=13,SNR=36						
STKA				LR	LR	19 19 26.3	
	comp=Z,592nm,18.1s,baz=61,slow=35						
	comp=Z,5.1nm,0.4s						
STKA	**Stephens Creek**	**34.94**	**257**	P	**P**	**19 06 10.7**	**+1.6**
STKA	**Stephens Creek**	**34.94**	**257**	P	**P**	**19 06 11.5**	**+2.4**
INKA	**Innaminka**	**36.49**	**264**	P	**P**	**19 06 25.5**	**+3.0**
MTSU	**Mount Surprise**	**36.77**	**280**	P	**P**	**19 06 27.3**	**+2.3**
HTT	**Hallett**	**36.96**	**254**	P	**P**	**19 06 28.3**	**+1.8**
LCRK	**Leigh Creek**	**38.04**	**258**	P	**P**	**19 06 37.0**	**+1.4**
WHYH	**Whyalla**	**38.13**	**254**	P	**P**	**19 06 39.3**	**+3.0**
PMG	**Port Moresby**	**39.05**	**295**	LR	LR	19 19 57.1	
	comp=Z,363nm,21.1s,baz=128,slow=32						
BBOO	**Buckleboo**	**39.42**	**254**	P	**P**	**19 06 47.5**	**+0.3**
BBOO				IAmb	IAmb	19 07 00.4	
	comp=Z,22nm,0.9s						
BBOO	**Buckleboo**	**39.42**	**254**	P	**P**	**19 06 47.7**	**+0.5**
QIS	**Mount Isa**	**39.79**	**274**	P	**P**	**19 06 51.2**	**+0.8**
OOD	**Oodnadatta**	**40.81**	**262**	P	**P**	**19 07 00.2**	**+1.5**
TAOE	**Nuku Hiva Isla**	**40.87**	**66**	*e*S	**S**	**19 13 11.8**	**+0.7**
	comp=Z,78nm,21.3s						
TAOE				*e*LR	LR	19 18 19.3	
	comp=Z,396nm,22.9s						
AS01	**Alice Springs**	**43.55**	**267**	P	**P**	**19 07 22.2**	**+1.0**
AS31	**Alice Springs**	**43.59**	**267**	P	**P**	**19 07 21.6**	**+0.1**
ASAR	**Alice Springs**	**43.59**	**267**	P	**P**	**19 07 20.7**	**-0.8**
	comp=Z,3.0nm,0.5s,baz=106,slow=7.5,SNR=83						
ASAR				PcP	**PcP**	**19 09 09.8**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=125,slow=4.0,SNR=2.3						
ASAR				ScP	**ScP**	**19 13 00.6**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=103,slow=4.5,SNR=4.9						
ASAR				LR	LR	19 25 18.1	
	comp=Z,874nm,18.2s,baz=121,slow=36						
	comp=Z,3.0nm,0.5s						
WB2	**Warramunga Arr**	**44.57**	**272**	P	**P**	**19 07 28.4**	**-1.0**
WB2				IAmb	IAmb	19 07 42.8	
	comp=Z,16nm,0.5s						
WRAB	**Tennant Creek**	**44.57**	**272**	P	**P**	**19 07 30.0**	**+0.6**
WRA	**Warramunga Arr**	**44.58**	**272**	P	**P**	**19 07 28.5**	**-1.0**
	comp=Z,5.7nm,0.4s,baz=110,slow=8.0,SNR=77						
WRA				LR	LR	19 24 40.7	
	comp=Z,468nm,20.0s,baz=116,slow=34						
	comp=Z,5.7nm,0.4s						
WRA	**Warramunga Arr**	**44.58**	**272**	P	**P**	**19 07 28.8**	**-0.7**
WB0	**Warramunga Arr**	**44.60**	**272**	P	**P**	**19 07 28.9**	**-0.8**
WB0				IAmb	IAmb	19 07 36.1	
	comp=Z,13nm,0.6s						
FORT	**Forrest**	**46.51**	**255**		**P**	**19 07 43.6**	**-1.0**
VNDA	**Vanda**	**48.13**	**186**	P	**P**	**19 07 58.8**	**+2.2**
MTN	**Manton Dam**	**50.46**	**279**	P	**P**	**19 08 14.7**	**-0.5**
MTN				IAmb	IAmb	19 10 04.7	
	comp=Z,21nm,1.2s						
KNRA	**Kununurra**	**51.18**	**274**	P	**P**	**19 08 20.9**	**+0.2**
KNRA				IAmb	IAmb	19 08 36.3	
	comp=Z,71nm,2.0s						
FITZ	**Fitzroy Crossi**	**52.84**	**270**	P	**P**	**19 08 32.8**	**-0.2**
CASY	**Casey**	**55.35**	**208**	P	**P**	**19 08 51.2**	**+0.6**
MBWA	**Marble Bar**	**56.70**	**263**	P	**P**	**19 08 59.6**	**-1.4**
GUMO	**Guam**	**56.83**	**315**	LR	LR	19 30 37.5	
	comp=Z,114nm,20.1s,baz=135,slow=33						
MORW	**Morawa**	**56.98**	**253**	P	**P**	**19 09 01.5**	**-1.4**
QSPA	**South Pole Qui**	**59.69**	**180**	P	**P**	**19 09 23.7**	**+2.3**
KAPI	**Kappang**	**64.08**	**280**	LR	LR	19 36 01.5	
	comp=Z,128nm,21.6s,baz=136,slow=34						
BELA	**Belgrano 2**	**69.70**	**172**	P	**P**	**19 10 27.6**	**+1.1**
BELA				IAmb	IAmb	19 10 41.3	
	comp=Z,10nm,1.3s						
KKM	**Kota Kinabalu**	**73.02**	**288**	P	**P**	**19 10 46.9**	**-0.6**
KKM				IAmb	IAmb	19 10 53.0	
	comp=Z,5.6nm,0.7s						
MG03	**Isla Dawson**	**75.15**	**144**	P	**P**	**19 10 59.5**	**+0.3**
SNAA	**Sanae**	**78.12**	**178**	P	**P**	**19 11 16.0**	**+0.1**
MJAR	**Matsushiro Arr**	**78.53**	**325**	LR	LR	19 41 08.1	
	comp=Z,58nm,19.5s,baz=156,slow=32						
COYC	**Coyhaique**	**78.59**	**136**	P	**P**	**19 11 20.1**	**+1.2**
JNU	**Nakatsue**	**79.89**	**318**	LR	LR	19 40 49.4	
	comp=Z,90nm,21.8s,baz=296,slow=31						
H03S2	**Juan Fernandez**	**80.06**	**123**	T	T	20 40 53.7	
	baz=238,slow=74,SNR=12						
H03S1	**Juan Fernandez**	**80.07**	**123**	T	T	20 40 59.8	
	baz=238,slow=74,SNR=13						
H03S3	**Juan Fernandez**	**80.07**	**123**	T	T	20 40 58.8	
	baz=238,slow=74,SNR=14						
H03N3	**Juan Fernandez**	**80.25**	**123**	T	T	20 41 05.3	
	baz=240,slow=72,SNR=7.6						
H03N2	**Juan Fernandez**	**80.25**	**123**	T	T	20 41 03.0	
	baz=240,slow=72,SNR=8.3						
H03N1	**Juan Fernandez**	**80.26**	**123**	T	T	20 41 05.3	
	baz=240,slow=72,SNR=13						
KIWB	**Kanaga Island**	**81.92**	**0**		**P**	**19 11 36.5**	**+0.3**
ADK	**Adak**	**81.95**	**0**	P	**P**	**19 11 36.0**	**-0.4**
ASAJ	**Asahikawa**	**82.68**	**332**	LR	LR	19 45 25.2	
	comp=Z,146nm,18.3s,baz=164,slow=34						
SHEM	**Shemya Is, Ala**	**83.12**	**355**	LR	LR	19 45 00.9	
	comp=Z,166nm,18.9s,baz=129,slow=33						
LPIG	**La Paz**	**84.14**	**58**	LR	LR	19 44 29.3	
	comp=Z,110nm,18.4s,baz=214,slow=32						
PFO	**Pinyon Flats O**	**85.87**	**47**	LR	LR	19 43 07.3	
	comp=Z,98nm,19.6s,baz=246,slow=31						
PETK	**Petropavlovsk-**	**85.95**	**345**	P	**P**	**19 11 57.7**	**+0.8**
	comp=Z,2.9nm,0.9s,baz=108,slow=7.9,SNR=5.3						
	comp=Z,2.9nm,0.9s						
USRK	**Ussuriysk Ar.**	**87.44**	**326**	P	**P**	**19 12 05.0**	**+0.7**
	comp=Z,2.5nm,0.8s,baz=105,slow=8.2,SNR=2.2						
	comp=Z,2.5nm,0.8s						
YBH	**Yreka Blue Hor**	**87.75**	**38**	LR	LR	19 43 55.9	
	comp=Z,90nm,20.6s,baz=220,slow=31						
NVAR	**Mina Array Bea**	**87.93**	**42**	P	**P**	**19 12 08.2**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=219,slow=7.0,SNR=7.7						
NVAR				LR	LR	19 46 12.8	
	comp=Z,166nm,18.5s,baz=228,slow=32						
	comp=Z,1.2nm,0.8s						
PRN	**Pahroc Range**	**89.19**	**45**	P	**P**	**19 12 13.5**	**+0.4**
PRN				IAmb	IAmb	19 12 28.4	
	comp=Z,10nm,1.5s						
U15A	**North Rim**	**90.29**	**47**	P	**P**	**19 12 19.1**	**+0.7**
U15A				IAmb	IAmb	19 12 35.2	
	comp=Z,6.3nm,1.2s						
KDAK	**Kodiak Island**	**90.31**	**13**	LR	LR	19 47 53.8	
	comp=Z,91nm,19.2s,baz=224,slow=32						
ELK	**Elko**	**91.23**	**42**	LR	LR	19 47 48.6	
	comp=Z,131nm,18.8s,baz=254,slow=32						
KLR	**Kul'dur**	**91.29**	**329**	P	**P**	**19 12 23.1**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=159,slow=1.6,SNR=3.8						
	comp=Z,0.8nm,0.6s						
TXAR	**Lajitas Array**	**92.00**	**57**	P	**P**	**19 12 27.0**	**+0.7**
	comp=Z,0.9nm,1.1s,baz=209,slow=4.1,SNR=4.4						
TXAR				LR	LR	19 49 34.4	
	comp=Z,105nm,18.0s,baz=346,slow=33						
	comp=Z,0.9nm,1.1s						
CMIG	**Matias Romero**	**92.30**	**72**	LR	LR	19 45 20.1	
	comp=Z,37nm,19.6s,baz=204,slow=30						
ANMO	**Albuquerque**	**93.21**	**51**	LR	LR	19 52 45.1	
	comp=Z,70nm,18.1s,baz=16,slow=34						
MA2	**Magadan**	**93.44**	**344**	LR	LR	19 57 49.7	
	comp=Z,62nm,18.7s,baz=175,slow=38						
CMAR	**Chiang Mai Arr**	**93.86**	**289**	LR	LR	19 58 37.5	
	comp=Z,29nm,18.0s,baz=190,slow=38						
NEW	**Newport**	**95.11**	**36**	LR	LR	19 53 19.5	
	comp=Z,142nm,18.3s,baz=223,slow=34						
PDAR	**Pinedale Array**	**95.82**	**43**	LR	LR	19 50 01.6	
	comp=Z,109nm,19.2s,baz=298,slow=32						
MKAR	**Makanchi Array**	**118.15**	**310**	PKP	**PKPdf**	**19 18 02.8**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=226,slow=2.3,SNR=6.2						
ARCES	**ARCESS Array B**	**138.71**	**348**	PKhKP	PKPpre	19 18 35.5	
	comp=Z,3.1nm,0.8s,baz=22,slow=2.9,SNR=1.8						
ARCES				PKP	pPKPdf	19 18 43.4	-1.0
	comp=Z,4.4nm,0.9s,baz=97,slow=3.0,SNR=8.0						
FINES	**FINESS Array B**	**145.32**	**340**	PKPbc	**PKPbc**	**19 18 53.7**	**-0.4**
	comp=Z,5.4nm,0.4s,baz=46,slow=4.0,SNR=34						
KBZ	**Khabaz**	**145.52**	**304**	PKPbc	**PKPab**	**19 18 55.8**	**+0.2**
	comp=Z,3.4nm,0.9s,baz=347,slow=0.6,SNR=5.6						
NB2	**NORSAR Subarra**	**148.84**	**352**	PKP	**PKPbc**	**19 19 04.1**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=28,slow=3.4						
NOA	**NORSAR Array B**	**148.84**	**352**	PKPbc	**PKPbc**	**19 19 03.8**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=14,slow=4.2,SNR=3.3						
AKASG	**Malin Array Be**	**151.60**	**323**	PKPbc	**PKPbc**	**19 19 10.1**	**-1.0**
	comp=Z,0.8nm,0.3s,baz=36,slow=2.9,SNR=10.0						
AKASG				PKPab	**PKPab**	**19 19 19.2**	**-0.4**
	comp=Z,4.6nm,0.5s,baz=36,slow=2.9,SNR=12						
BRTR	**Keskin Array B**	**153.03**	**299**	PKPbc	**PKPbc**	**19 19 14.4**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=137,slow=4.0,SNR=8.0						
DPC	**Dobruska-Polom**	**157.56**	**336**	*e*PKPAB	**PKPab**	**19 19 44.2**	**-0.9**
KRLC	**Kraliky**	**157.63**	**335**	*e*PKPAB	**PKPab**	**19 19 43.8**	**-1.6**
CLL	**Collm**	**157.73**	**343**	*e*PKPab	**PKPab**	**19 19 48.0**	**+2.3**
KHC	**Kasperske Hory**	**159.52**	**339**	*e*PKPAB	**PKPab**	**19 19 54.3**	**+0.7**
KHC				*e*x	x	19 20 08.6	
TORD	**Torodi Ar. Bea**	**162.80**	**177**	PKP	**PKPdf**	**19 19 21.1**	**+1.1**
	comp=Z,0.7nm,1.0s,baz=219,slow=2.1,SNR=2.6						
TORD				PKPab	**pPKPab**	**19 20 09.3**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=178,slow=3.1,SNR=5.6						

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*MOS **14** 19:01:46.3±0.0, 42°.53N×45°.43E, h14^{km}, MPVA3.9*

*NORS **14** 19:01:47.4±0.0, 42°.44N×45°.41E, h9^{km}, MPVA4.0*

*TIF **14** 19:01:47.1, 42°.59N×45°.42E, h9^{km}±2^{km}*

*DRS **14** 19:01:50.3±0.0, 42°.53N×45°.53E, h14^{km}*

ISC 14 19:01:47.7±0.9, **42°.56N**±0°.02×**45°.42E**±0°.02, **h14**^{km}±8^{km}, **n43**, σ**1**^{s}**.40**/85, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHTL	**Shatili**	**0.22**	**296**	P	**Pb**	**19 01 52.2**	**-1.4**
SHTL				S	**Sg**	**19 01 55.1**	**-1.0**
BTLR	**Botlikh**	**0.60**	**80**	*e*Pg	**Pn**	**19 02 00.1**	**-1.8**
	54nm,0.2s						
BTLR				*e*Sg	**Sb**	**19 02 08.1**	**-0.3**
	103nm,0.2s						
PNSH	**Pansheti**	**0.60**	**277**	P	**Pb**	**19 01 59.4**	**-0.7**
PNSH				S	**Sg**	**19 02 06.7**	**-0.8**
KMGR	**Komgaron**	**0.64**	**321**	*i* Pg	**Pn**	**19 02 01.4**	**-1.1**
KMGR				*e*Sg	**Sn**	**19 02 11.8**	**-0.7**
DVE	**Vedeno**	**0.65**	**52**	*e*Pg	**Pn**	**19 02 00.6**	**-2.0**
DVE				*e*Sg	**Sn**	**19 02 11.9**	**-0.9**
GROC	**Groznyy**	**0.70**	**23**	*e*Pg	**Pn**	**19 02 02.4**	**-0.7**
GROC				*e*Sg	**Sn**	**19 02 13.6**	**-0.2**
VLKR	**Vladikavkaz**	**0.73**	**312**	*e*Pg	**Pn**	**19 02 03.0**	**-0.7**
VLKR				*e*Sg	**Sn**	**19 02 15.5**	**+0.8**
LACR	**Lac**	**0.87**	**288**	*e*Pg	**Pn**	**19 02 04.1**	**-1.6**
LACR				*i* Sg	**Sb**	**19 02 15.5**	**-0.7**
LGD	**Lagodekhi**	**0.95**	**140**	P	**Pn**	**19 02 06.2**	**-0.4**
LGD				S	**Sn**	**19 02 19.9**	**0.0**
XNZR	**Khunzakh**	**0.95**	**91**	*e*Pg	**Pn**	**19 02 06.6**	**-0.2**
	28nm,0.3s						
XNZR				*e*Sg	**Sn**	**19 02 19.4**	**-0.7**
	389nm,0.4s						
DLMR	**Dylym**	**1.02**	**60**	*e*Pg	**Pn**	**19 02 08.2**	**+0.5**
	103nm,0.2s						
DLMR				*e*Sg	**Sn**	**19 02 21.9**	**0.0**
	259nm,0.4s						
UNCR	**Uncukul**	**1.02**	**81**	*e*Pg	**Pn**	**19 02 07.7**	**0.0**
	54nm,0.5s						
UNCR				*e*Sg	**Sn**	**19 02 22.0**	**+0.1**
	129nm,0.3s						
BTKR	**Batakoyurt**	**1.04**	**322**	*e*Pg	**Pg**	**19 02 09.3**	**+1.6**
BTKR				*e*Sg	**Sn**	**19 02 24.8**	**+2.5**
ARNR	**Ardon**	**1.04**	**307**	*e*Pg	**Pg**	**19 02 09.0**	**+1.2**
ARNR				*e*Sg	**Sn**	**19 02 25.1**	**+2.8**
DGRG	**David-gareji**	**1.11**	**182**	P	**Pg**	**19 02 11.5**	**+2.4**
DGRG				S	**Sn**	**19 02 27.9**	**+3.9**
KORR	**Kora**	**1.13**	**298**	*e*Pg	**Pg**	**19 02 10.3**	**+0.8**
KORR				*e*Sg	**Sn**	**19 02 27.4**	**+3.0**
KRNR	**Karanay**	**1.13**	**76**	*e*Pg	**Pg**	**19 02 09.6**	**+0.2**
	13nm,0.2s						
KRNR				*e*Sg	**Sn**	**19 02 24.6**	**+0.1**
	187nm,0.2s						
DBC	**Dubki**	**1.13**	**66**	*e*Pg	**Pg**	**19 02 10.6**	**+1.0**
	14nm,0.1s						
DBC				*e*Sg	**Sn**	**19 02 26.5**	**+1.9**
	232nm,0.4s						
ZEI	**Tsey**	**1.14**	**282**	*e*Pg	**Pg**	**19 02 08.7**	**-1.1**
ZEI				*e*Sg	**Sn**	**19 02 25.6**	**+0.5**
GNBR	**Gunib**	**1.15**	**98**	*e*Pg	**Pg**	**19 02 10.2**	**+0.3**
	35nm,0.3s						
GNBR				*e*Sg	**Sn**	**19 02 25.6**	**+0.5**
	75nm,0.2s						
ARKR	**Arakani**	**1.16**	**87**	*e*Pg	**Pg**	**19 02 09.9**	**-0.2**
ARKR				*e*Pg	**Pn**	**19 02 10.9**	**+1.3**
	1.0nm,0.3s						
ARKR				*e*Sg	**Sn**	**19 02 26.9**	**+1.6**
ARKR				*e*Sg	**Sn**	**19 02 26.9**	**+1.6**
	228nm,0.2s						
DDFL	**Dedoflistskaro**	**1.23**	**155**	P	Pg	19 02 14.5	+3.2
TRKR	**Terskaya**	**1.27**	**337**	*e*Pg	**Pg**	**19 02 12.8**	**+0.7**
TRKR				*e*Sg	**Sg**	**19 02 31.7**	**+3.1**
BUJR	**Buynaksk**	**1.27**	**77**	*e*Pg	**Pg**	**19 02 13.0**	**+0.8**
	39nm,0.2s						
BUJR				*e*Sg	**Sg**	**19 02 31.1**	**+2.4**
	111nm,0.4s						
STDR	**Stavd-Durt**	**1.28**	**309**	*e*Pg	**Pg**	**19 02 13.2**	**+0.8**
STDR				*e*Sg	**Sg**	**19 02 31.4**	**+2.2**
KMKR	**Kumukh**	**1.31**	**108**	*i* Pg	**Pg**	**19 02 12.8**	**-0.2**
	54nm,0.5s						
KMKR				*e*Sg	**Sg**	**19 02 30.8**	**+0.6**
	206nm,0.3s						
LSNR	**Lesken**	**1.37**	**302**	*e*Pg	**Pg**	**19 02 14.7**	**+0.5**
LSNR				*e*Sg	**Sg**	**19 02 34.2**	**+2.2**
DIGR	**Digorskoe uzhe**	**1.40**	**285**	*e*Pg	**Pg**	**19 02 13.8**	**-0.8**
DIGR				*e*Sg	**Sg**	**19 02 35.1**	**+2.3**
TRLG	**Trialeti**	**1.42**	**224**	P	**Pg**	**19 02 15.2**	**+0.3**
TRLG				S	**Sg**	**19 02 35.7**	**+2.3**
PRTR	**Priterechnaya**	**1.45**	**325**	*e*Pg	**Pg**	**19 02 15.6**	**0.0**
PRTR				*e*Sg	**Sg**	**19 02 36.7**	**+2.2**
ONI	**Oni**	**1.46**	**272**	P	**Pg**	**19 02 15.3**	**-0.3**
DMNI	**Dmanisi**	**1.54**	**217**	P	**Pg**	**19 02 16.7**	**-0.5**
DMNI				S	**Sg**	**19 02 37.9**	**+0.7**
MAK	**Makhachkala**	**1.58**	**75**	*e*Pg	**Pg**	**19 02 17.3**	**-0.8**
MAK				*e*Sg	**Sg**	**19 02 38.0**	**-0.7**
NCK	**Nalchik**	**1.63**	**306**	*e*Pg	**Pg**	**19 02 18.3**	**-0.8**
NCK				*e*Sg	**Sg**	**19 02 42.3**	**+2.0**
SGKR	**Sergokala**	**1.66**	**93**	*e*Pg	**Pg**	**19 02 18.4**	**-1.1**
	1.0nm,0.4s						
SGKR				*e*Sg	**Sg**	**19 02 40.8**	**-0.2**
	111nm,0.4s						
TKB	**Tkibuli**	**1.81**	**264**	P	**Pg**	**19 02 21.3**	**-1.1**
TKB				S	**Sg**	**19 02 46.2**	**+0.3**
ABS	**Abastumani**	**2.10**	**248**	P	**Pg**	**19 02 26.4**	**-1.6**
ABS				S	**Sg**	**19 02 54.0**	**-1.2**
NEY	**Neytrino**	**2.10**	**290**	*e*Pg	**Pb**	**19 02 25.4**	**-0.3**
NEY				*e*Sg	**Sg**	**19 02 53.5**	**-1.8**
KBZ	**Khabaz**	**2.19**	**303**	*e*Pg	**Pb**	**19 02 26.0**	**-1.0**
KBZ				*e*Sg	**Sg**	**19 02 55.9**	**-2.1**
PYA1	**Pyatigorsk**	**2.27**	**312**	*e*Pn	**Pb**	**19 02 27.1**	**-1.3**
PYA1				*e*Sn	**Sb**	**19 02 56.0**	**-0.3**
SHA1	**Shidzhatmaz**	**2.34**	**301**	*e*Pn	**Pb**	**19 02 29.4**	**-0.4**
SHA1				*e*Sn	**Sb**	**19 02 59.7**	**+1.1**
BEYR	**Belyy Ugol+**	**2.39**	**308**	*e*Pn	**Pb**	**19 02 28.9**	**-1.7**
BEYR				*e*Sn	**Sb**	**19 03 00.2**	**+0.3**
KIV	**Kislovodsk**	**2.44**	**306**	*e*Pn	**Pn**	**19 02 28.2**	**+1.0**
KIV				*e*Sn	**Sb**	**19 02 59.4**	**-1.8**

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*UPP **14** 19:02:28.5±0.1, 67°.08N×20°.94E, h0^{km}, ML2.3, Suspected explosion*

*IDC **14** 19:02:29.9±0.9, 67°.06N×21°.29E, h0^{km}, mbtmp3.2/4, ML2.0/4, Error ellipse: s-maj=17.8km s-min=8.6km az=105.0*

ISC 14 19:02:28.5±0.8, **67°.08N**±0°.03×**20°.95E**±0°.03, **h0**^{km}, **n19**, σ**0**^{s}**.73**/23, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.15**	**286**	P	**Pg**	**19 02 31.7**	**+0.3**
DUNU				S	**Sg**	**19 02 34.1**	**+0.7**
MASU	**Masugnsbyn**	**0.56**	**47**	P	**Pg**	**19 02 39.2**	**+0.1**
ERTU	**Ertsjaerv**	**0.72**	**137**	P	**Pg**	**19 02 42.1**	**-0.1**
PAJU	**Pajala**	**0.85**	**93**	P	**Pg**	**19 02 44.4**	**-0.3**
KUA	**Kurravaara**	**0.91**	**345**	P	**Pg**	**19 02 45.4**	**-0.5**
RATU	**Laukkuluspa**	**0.91**	**326**	P	**Pg**	**19 02 45.4**	**-0.6**
HARU	**Harads**	**0.92**	**179**	P	**Pg**	**19 02 45.6**	**-0.4**
SALU	**Saltoluokta**	**1.00**	**289**	P	**Pg**	**19 02 47.1**	**-0.5**
LANU	**Lannavaara**	**1.05**	**22**	P	**Pg**	**19 02 47.8**	**-0.8**
NIKU	**Nikkaluokta**	**1.08**	**318**	P	**Pg**	**19 02 48.4**	**-0.8**
KOVU	**Salmi**	**1.19**	**346**	P	**Pg**	**19 02 50.5**	**-0.7**

KALU	**Kalix**	**1.56**	**141**	P	**Pn**	**19 02 57.0**	**-0.4**
SJUU	**Sjulsmark**	**1.60**	**170**	P	**Pn**	**19 02 58.0**	**+0.1**
HEF	**Hetta**	**1.69**	**36**	*e*P	**Pn**	**19 02 59.1**	**-0.1**
KIF	**Kilpisjarvi**	**1.93**	**358**	*e*P	**Pb**	**19 03 04.1**	**-0.4**
ARCES	**ARCESS Array B**	**2.99**	**32**	Pn	**Pn**	**19 03 17.4**	**+0.3**
	0.3nm,0.3s,baz=210,slow=14,SNR=73						
ARCES				Sn	**Sn**	**19 03 55.5**	**+1.9**
	0.5nm,0.3s,baz=218,slow=22,SNR=6.8						
	1.2nm,0.2s						
FINES	**FINESS Array B**	**6.08**	**156**	Pn	**Pn**	**19 04 00.7**	**+1.2**
	0.1nm,0.3s,baz=348,slow=13,SNR=12						
FINES				Sn	**Sn**	**19 05 08.5**	**-1.2**
	0.2nm,0.3s,baz=347,slow=22,SNR=1.6						
FINES				Lg	Lg	19 05 35.2	
	0.1nm,0.3s,baz=347,slow=30,SNR=2.7						
	1.0nm,0.8s						
NOA	**NORSAR Array B**	**7.41**	**220**	Pn	**Pn**	**19 04 18.0**	**+0.3**
	baz=51,slow=9.1,SNR=0.9						
NOA				Sn	**Sn**	**19 05 42.1**	**-0.2**
	baz=76,slow=17,SNR=1.5						
	0.5nm,0.6s						
SPITS	**Spitsbergen Ar**	**11.23**	**355**	Pn	**Pn**	**19 05 09.7**	**-0.3**
	baz=165,slow=18						
	3.9nm,0.9s						

SNET ***14*** *19:13:22.7±0.9, 13°.96N×90°.95W, h93^{km}±19^{km}, ML3.7*
GCG ***14*** *19:13:24.3±0.6, 13°.97N×90°.87W, h85^{km}±8^{km}, MD3.7*

ISC 14 19:13:23.8±2.8**, 14°.0N**±0°.2×**90°.87W**±0°.07**, h100**^{km}±25^{km}**,**
n9, σ**0^{s}.90**/18**, 3C-2D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUG	**Fuego 3**	**0.45**	**4**	⇑*e*P	**Pn**	**19 13 39.1**	**-0.4**
FUG				*e*S	**Sn**	**19 13 50.4**	**-0.8**
PCG	**Pacaya**	**0.47**	**33**	⇑*i*P	**Pn**	**19 13 39.6**	**-0.2**
PCG				*e*S	**Sn**	**19 13 52.4**	**+0.9**
SULM	**Suchitepequez,**	**0.74**	**295**	⇓*e*P	**Pn**	**19 13 42.4**	**+0.9**
SULM				*e*S	**Sn**	**19 13 53.7**	**-1.2**
NBG	**Las Nubes**	**0.78**	**41**	⇑*e*P	**Pn**	**19 13 42.4**	**+0.1**
NBG				*e*S	**Sn**	**19 13 56.2**	**+0.1**
STG3	**Santiaguito 3,**	**0.98**	**317**	⇓*e*P	**Pn**	**19 13 43.9**	**-0.4**
STG3				*e*S	**Sn**	**19 14 00.3**	**+0.7**
SLOZ	**Alcaldia de Sa**	**1.06**	**88**	*e*P	**Pn**	**19 13 44.3**	**-0.6**
SLOZ				*e*S	**Sn**	**19 14 01.1**	**+0.3**
NUBE	**Las Nubes**	**1.07**	**95**	*e*P	**Pn**	**19 13 44.4**	**-0.7**
NUBE				*e*S	**Sn**	**19 14 00.9**	**-0.2**
NUBE				IAML		19 14 02.0	
	comp=Z,334nm,0.4s						
CEVE	**Cerro Verde**	**1.23**	**98**	*e*P	**Pn**	**19 13 46.9**	**-0.1**
CEVE				*e*S	**Sn**	**19 14 06.9**	**+2.4**
CEVE				IAML		19 14 10.9	
	comp=Z,2µm,0.3s						
JAYA	**Jayaque - finc**	**1.43**	**103**	*e*P	**Pn**	**19 13 48.8**	**-0.5**
JAYA				*e*S	**Sn**	**19 14 08.2**	**-0.4**
JAYA				IAML		19 14 13.5	
	comp=Z,1µm,0.2s						

KRSC 14 19:14:44.5±1.6**, 48°.66N**×**155°.84E, h6**^{km}±22^{km}**, Ml4.0,**
Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.04**	**5**	*e*P	Pn	19 15 19.8	+0.5
SKR				*e*S	Sn	19 15 45.8	+0.8
PAU	**Pauzhetka**	**2.88**	**12**	*e*S	Sb	19 16 10.8	-0.9
KDTR	**Khodutka, Kamc**	**3.47**	**24**	*e*P	Pn	19 15 41.5	+2.6
KDTR				*e*S	Sn	19 16 22.9	+2.7
GRL	**Gorelyy**	**4.15**	**19**	*e*S	Sn	19 16 42.4	+5.1
UGLR	**Uglovaya**	**4.93**	**21**	*e*P	Pn	19 16 03.8	+4.6
AVH	**Avacha**	**4.96**	**21**	*e*P	Pn	19 16 04.9	+5.3
KOK	**Koryaka**	**4.96**	**20**	*e*P	Pn	19 16 03.8	+4.2
KRX	**Arik**	**5.03**	**20**	*e*P	Pn	19 16 04.7	+4.1
GNL	**Ganaly**	**5.21**	**14**	*e*P	Pn	19 16 07.0	+3.9

GUC 14 19:19:00.4±0.3**, 37°.27S**×**74°.97W, h25**^{km}±5^{km}**, ML3.7, Off**
coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BI04	**Isla Mocha**	**1.43**	**143**	*e*P	Pn	19 19 24.3	-0.4
BI04				*i* S	Sn	19 19 40.5	-2.2
BI04				IAML		19 19 41.9	
	comp=E,1µm,0.2s						
BI04				IAML		19 19 42.3	
	comp=N,2µm,0.2s						
BI05	**Punta Hualpn**	**1.52**	**70**	*e*P	Pn	19 19 25.8	-0.2
BI05				*e*S	Sn	19 19 44.8	-0.1
BI05				IAML		19 19 45.4	
	comp=E,2µm,0.3s						
LC02	**Puerto Saavedr**	**1.97**	**141**	*e*P	Pn	19 19 32.7	+0.5
LC02				*e*S	Sn	19 19 55.2	-0.9
LR04	**Corral**	**2.87**	**156**	*e*P	Pn	19 19 44.5	-0.1
LR04				*i* S	Sn	19 20 13.1	-5.2
LR04				IAML		19 20 16.9	
	comp=N,544nm,0.2s						
LR03	**Panguipulli**	**3.13**	**140**	*e*P	Pn	19 19 48.8	+0.6
LR03				*i* S	Sn	19 20 24.9	+0.1
LR03				IAML		19 20 34.0	
	comp=E,321nm,0.2s						
GO05	**Huala**	**3.34**	**48**	*e*P	Pn	19 19 51.6	+0.5
GO05				*e*S	Sn	19 20 29.5	-0.5
GO05				IAML		19 20 33.1	
	comp=E,84nm,0.2s						
GO06	**Curarrehue**	**3.59**	**131**	*e*P	Pn	19 19 56.1	+1.5
GO06				*i* S	Sn	19 20 36.6	+0.4
BO02	**Sierra Bellavi**	**4.20**	**55**	*e*P	Pn	19 20 03.9	+1.0
BO02				*i* S	Sn	19 20 52.5	+1.2
BO01	**Tunca**	**4.27**	**49**	*e*P	Pn	19 20 05.0	+1.2
BO01				*e*S	Sn	19 20 53.9	+1.0
MT01	**Popeta**	**4.56**	**43**	*e*P	Pn	19 20 07.7	-0.1
MT01				*e*S	Sn	19 21 00.2	+0.3
MT09	**Talagante**	**4.77**	**44**	*e*P	Pn	19 20 11.5	+0.7
MT02	**Curacav**	**5.09**	**39**	*e*P	Pn	19 20 14.6	-0.5
MT02				*e*S	Sn	19 21 11.0	-2.0
ROCH	**El Roble**	**5.38**	**38**	*e*P	Pn	19 20 20.1	+0.8

IDC ***14*** *19:25:52.2±3.9, 15°.79S×176°.41W, h0^{km}, mb4.3/3, mbtmp4.3/3, Error ellipse: s-maj=156.1km s-min=79.0km az=152.0*
NEIC ***14*** *19:26:21.3±1.8, 16°.9S±0°.3×176°.0W±0°.5, h273^{km}±32^{km}, mb4.1/12, Error ellipse: s-maj=71.6km s-min=22.1km az=119.0*

ISC 14 19:26:21.8±1.5**, 16°.8S**±0°.7×**175°.9W**±0°.4**, h300**^{km}**, n17,**
σ**1^{s}.53**/19**, mb3.9**/10**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.90**	**55**	Pn	**Pn**	**19 27 38.2**	**-0.1**
STKA	**Stephens Creek**	**41.27**	**241**	P	**P**	**19 33 39.9**	**+1.4**
	2.0nm,0.5s,baz=87,slow=9.4,SNR=12						
	2.0nm,0.5s						
STKA	**Stephens Creek**	**41.27**	**241**	P	**P**	**19 33 39.7**	**+1.1**
BBOO	**Buckleboo**	**46.04**	**240**	P	**P**	**19 34 17.4**	**+1.0**
BBOO				IAmb	IAmb	19 34 18.3	
	comp=Z,7.1nm,0.9s						
WB2	**Warramunga Arr**	**47.18**	**258**	P	**P**	**19 34 24.5**	**-0.9**
WB2				IAmb	IAmb	19 34 27.2	
	comp=Z,8.7nm,1.4s						
WRAB	**Tennant Creek**	**47.18**	**258**	P	**P**	**19 34 24.8**	**-0.6**
WRAB				IAmb	IAmb	19 34 37.2	
	comp=Z,4.0nm,1.2s						
WRA	**Warramunga Arr**	**47.19**	**258**	P	**P**	**19 34 24.9**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=91,slow=7.3,SNR=21						
WRA				PcP	**sP**	**19 35 58.0**	**-2.3**
	comp=Z,0.1nm,0.5s,baz=95,slow=4.0,SNR=1.6						
	comp=Z,0.9nm,0.6s						
AS31	**Alice Springs**	**47.40**	**253**	P	**P**	**19 34 27.2**	**+0.2**
AS31				IAmb	IAmb	19 34 27.7	
	comp=Z,2.9nm,0.6s						
ASAR	**Alice Springs**	**47.40**	**253**	P	**P**	**19 34 27.2**	**+0.2**
	comp=Z,10nm,0.6s,baz=88,slow=8.1,SNR=133						
ASAR				PcP	**sP**	**19 35 58.4**	**-3.6**
	comp=Z,0.3nm,0.4s,baz=100,slow=4.1,SNR=2.7						
	comp=Z,10nm,0.6s						
ASAR	**Alice Springs**	**47.40**	**253**	P	**P**	**19 34 26.7**	**-0.3**
MTN	**Manton Dam**	**51.23**	**267**	P	**P**	**19 34 55.9**	**+0.1**
MTN				IAmb	IAmb	19 35 25.9	
	comp=Z,19nm,1.4s						
FORT	**Forrest**	**52.65**	**244**	P	**P**	**19 35 06.1**	**0.0**
KNRA	**Kununurra**	**52.98**	**263**	P	**P**	**19 35 09.5**	**+0.8**
KNRA				IAmb	IAmb	19 35 13.4	
	comp=Z,14nm,1.1s						
FITZ	**Fitzroy Crossi**	**55.57**	**259**	P	**P**	**19 35 28.7**	**+1.5**
SOEI	**Soe**	**58.47**	**269**	P	**P**	**19 35 50.7**	**+3.2**
PSA00	**Pilbara Seismi**	**60.51**	**254**	P	**P**	**19 36 01.5**	**+0.3**
PSA00				IAmb	IAmb	19 36 19.0	
	comp=Z,12nm,1.1s						
MBWA	**Marble Bar**	**60.67**	**255**	P	**P**	**19 36 01.5**	**-0.8**

GCMT 14 19:38:37.0±0.3**, 54°.01S**±0°.04×**2°.26W**±0°.05**, h20**^{km}±1^{km}**, MW5.0**/86**, Moment Tensor Solution. s20,c21; s86,c106; Duration: 0 Moment tensor: Scale** 10^{16} **Nm;** M_{rr}-2.76±.23; $M_{\theta\theta}$1.11±.17; $M_{\phi\phi}$1.65±.15; $M_{r\theta}$2.47±.36; $M_{\theta\phi}$-1.08±.10; $M_{\phi r}$-0.37±.27; **Best double couple:** $M_0$3.56500×10^{16} **NP1:**ϕ_s296.00000°, δ67.00000°, λ-108.00000°. **NP2:**ϕ_s156.00000°, δ29.00000°, λ-54.00000°. **Principal axes:** T 3.1640**,** Plg20.0000°**,** Azm40.0000°**;** N 0.8020**,** Plg16.0000°**,** Azm304.0000°**;** P -3.9660**,** Plg64.0000°**,** Azm177.0000°**; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southern Mid-Atlantic Ridge**

AUST ***14*** *19:57:12.2±1.9, 30°.43S×136°.98E, h10^{km}±12^{km} Error ellipse: s-maj=8.7km s-min=7.8km az=31.0*
IDC ***14*** *19:57:12.2±3.9, 29°.92S×137°.45E, h0^{km}, mbtmp2.7/3, ML2.8/3, Error ellipse: s-maj=80.3km s-min=17.4km az=44.0*

ISC 14 19:57:09.9±0.8**, 30°.36S**±0°.04×**136°.87E**±0°.04**, h10**^{km}**, n10,**
σ**1^{s}.64**/20**, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCRK	**Leigh Creek**	**1.17**	**94**	P	**Pb**	**19 57 31.7**	**-0.5**
	baz=1.1,SNR=17						
LCRK				S	**Sn**	**19 57 49.0**	**+0.6**
	baz=1.1						
MULG	**Mulgathing**	**2.43**	**271**	P	**Pb**	**19 57 53.3**	**-0.4**
	baz=2.5,SNR=6.8						
MULG				S	**Sb**	**19 58 25.4**	**+1.8**
	baz=2.5,SNR=7.7						
BBOO	**Buckleboo**	**2.53**	**196**	P	**Pn**	**19 57 52.6**	**+1.5**
	baz=2.5,SNR=12						
BBOO				S	**Sb**	**19 58 25.1**	**-1.6**
	baz=2.5,SNR=5.4						
OOD	**Oodnadatta**	**2.76**	**338**	P	**Pb**	**19 57 58.2**	**-1.1**
	baz=2.9,SNR=4.0						
OOD				S	**Sb**	**19 58 33.7**	**+0.5**
	baz=2.9,SNR=4.6						
HTT	**Hallett**	**3.52**	**151**	P	**Pn**	**19 58 05.0**	**+0.3**
	baz=3.4						
HTT				S	**Sn**	**19 58 47.8**	**+1.3**
	baz=3.4						
INKA	**Innaminka**	**4.29**	**53**	P	**Pn**	**19 58 17.6**	**+2.4**
	baz=4.2						
INKA				S	**Sn**	**19 59 06.9**	**+1.7**
	baz=4.2						
STKA	**Stephens Creek**	**4.33**	**112**	Pn	**Pn**	**19 58 15.8**	**0.0**
	0.3nm,0.3s,baz=293,slow=13,SNR=5.0						
STKA				Sn	**Sn**	**19 59 05.5**	**-0.7**
	0.8nm,0.3s,baz=314,slow=22,SNR=6.2						
STKA				Lg	Lg	19 59 20.7	
	1.7nm,0.3s,baz=345,slow=21,SNR=8.2						
	0.7nm,0.3s						
STKA	**Stephens Creek**	**4.33**	**112**	P	**Pn**	**19 58 17.1**	**+1.4**
	baz=4.2						
STKA				S	**Sn**	**19 59 06.3**	**0.0**
	baz=4.2						
ASAR	**Alice Springs**	**7.17**	**338**	Pn	**Pn**	**19 58 57.3**	**+2.4**
	0.1nm,0.3s,baz=154,slow=11,SNR=7.2						
ASAR				Sn	**Sn**	**20 00 15.7**	**-0.9**
	0.1nm,0.3s,baz=157,slow=23,SNR=4.8						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**10.62**	**347**	Pn	**Pn**	**19 59 41.6**	**-0.6**
	0.1nm,0.3s,baz=162,slow=12,SNR=5.4						
WRA				Sn	**Sn**	**20 01 37.4**	**-4.0**
	0.1nm,0.3s,baz=165,slow=24,SNR=1.4						
	0.2nm,0.4s						

SJA ***14*** *20:03:47.6±0.6, 24°.03S×67°.02W, h175^{km}±4^{km}, ML4.5, MW4.2, Hypocentre not reviewed by the ISC*
IDC ***14*** *20:03:48.4±1.0, 24°.06S×66°.87W, h182^{km}±10^{km}, mb3.6/6, mbtmp4.3/13, MS3.9/2, Error ellipse: s-maj=17.1km s-min=14.0km az=36.0*
NEIC ***14*** *20:03:49.0±2.8, 24°.00S±0°.06×67°.08W±0°.10, h201^{km}±9^{km}, mb4.5/19, ML4.9(GUC), Error ellipse: s-maj=13.0km s-min=8.1km az=94.0*
VAO ***14*** *20:03:50.2±0.5, 24°.05S×67°.08W, h209^{km}, mb4.4*
GUC ***14*** *20:03:51.0±0.5, 23°.89S×67°.31W, h230^{km}±7^{km}, ML4.9*

ISC 14 20:03:48.5±0.6**, 24°.04S**±0°.03×**67°.05W**±0°.06**, h194**^{km}±7^{km}**,**
n165, σ**1^{s}.42**/202**, mb4.3**/8**, 14C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HJA	**Humahuaca**	**1.72**	**62**	*e*P		20 04 25.7	
HJA				*e*S		20 04 57.1	
LVC	**Limon Verde**	**2.22**	**309**	P	**Pn**	**20 04 31.5**	**+2.1**
	204nm,0.3s,baz=136,slow=7.3,SNR=318						
LVC				S	**Sn**	**20 05 02.3**	**+1.2**
	498nm,0.3s,baz=17,slow=22,SNR=53						
LVC	**Limon Verde**	**2.22**	**309**		**Pn**	**20 04 31.4**	**+2.1**
LVC				Sn	**Sn**	**20 05 02.1**	**+1.1**
LVC	**Limon Verde**	**2.22**	**309**	*i* P	**Pn**	**20 04 31.4**	**+2.1**
LVC				*i* S	**Sn**	**20 05 02.2**	**+1.1**
LVC	**Limon Verde**	**2.22**	**309**	*e*P		20 04 31.4	
LVC				*e*S		20 05 01.9	
YJA	**Yavi**	**2.33**	**38**	*e*P		20 04 32.3	
YJA				*e*S		20 05 05.7	
PB15	**IPOC Station P**	**2.37**	**290**		**Pn**	**20 04 32.7**	**+1.9**
PB15				Sn	**Sn**	**20 05 04.3**	**+0.7**
PB15	**IPOC Station P**	**2.37**	**290**	⇑*i*P	**Pn**	**20 04 32.9**	**+2.1**
PB15				*i* S	**Sn**	**20 05 04.6**	**+1.0**
PB15	**IPOC Station P**	**2.37**	**290**	*e*P		20 04 32.8	
PB15				*e*S		20 05 05.8	
GO02	**Mina Guanaco**	**2.57**	**244**		**Pn**	**20 04 34.6**	**+1.5**
GO02				Sn	**Sn**	**20 05 08.4**	**+0.5**
GO02	**Mina Guanaco**	**2.57**	**244**	⇑*i*P	**Pn**	**20 04 34.8**	**+1.7**
GO02				*i* S	**Sn**	**20 05 09.0**	**+1.1**
GO02	**Mina Guanaco**	**2.57**	**244**	*e*P		20 04 34.8	
GO02				*e*S		20 05 09.8	
PB06	**IPOC Station P**	**2.67**	**299**		**Pn**	**20 04 35.8**	**+1.7**
PB06				Sn	**Sn**	**20 05 09.7**	**+0.1**
PB06	**IPOC Station P**	**2.67**	**299**	⇑*i*P	**Pn**	**20 04 36.1**	**+2.0**
PB06				*i* S	**Sn**	**20 05 10.1**	**+0.4**
PB06				IAML		20 05 10.8	
	comp=N,4µm,0.4s						
PB06	**IPOC Station P**	**2.67**	**299**	*e*P		20 04 36.0	
PB06				*e*S		20 05 10.7	
PB06				IAML		20 05 12.2	
	comp=Z,1µm,0.3s						
PB09	**IPOC Station P**	**3.01**	**317**		**Pn**	**20 04 40.2**	**+2.1**
PB09				Sn	**Sn**	**20 05 17.2**	**+0.3**
PB09	**IPOC Station P**	**3.01**	**317**	⇑*i*P	**Pn**	**20 04 40.4**	**+2.2**
PB09				*i* S	**Sn**	**20 05 17.6**	**+0.7**
PB09				IAML		20 05 19.5	
	comp=E,1µm,0.5s						
PB09	**IPOC Station P**	**3.01**	**317**	*e*P		20 04 40.4	
PB09				*e*S		20 05 07.7	
PB09				IAML		20 05 18.7	
	comp=Z,843nm,0.8s						
PB14	**IPOC Station P**	**3.11**	**258**		**Pn**	**20 04 40.4**	**+0.9**
PB14				Sn	**Sn**	**20 05 18.2**	**-1.1**
PB14	**IPOC Station P**	**3.11**	**258**	⇑*i*P	**Pn**	**20 04 40.7**	**+1.2**
PB14				*i* S	**Sn**	**20 05 18.9**	**-0.4**
PB14	**IPOC Station P**	**3.11**	**258**	*e*P		20 04 40.8	
PB14				*e*S		20 05 20.4	
PB14				IAML		20 05 22.0	
	comp=Z,523nm,0.5s						
PB03	**IPOC Station P**	**3.18**	**308**		**Pn**	**20 04 41.2**	**+1.1**
PB03				Sn	**Sn**	**20 05 19.3**	**-1.3**
PB03	**IPOC Station P**	**3.18**	**308**	⇑*i*P	**Pn**	**20 04 41.6**	**+1.4**
PB03				*i* S	**Sn**	**20 05 19.9**	**-0.6**
PB03				IAML		20 05 22.2	
	comp=E,2µm,0.4s						
PB03	**IPOC Station P**	**3.18**	**308**	*e*P		20 04 41.6	
PB03				*e*S		20 05 21.1	
PB03				IAML		20 05 24.4	
	comp=Z,2µm,0.1s						
PB10	**IPOC Station P**	**3.25**	**279**		**Pn**	**20 04 42.2**	**+1.3**
PB10				Sn	**Sn**	**20 05 20.6**	**-1.2**
PB10	**IPOC Station P**	**3.25**	**279**	⇑*i*P	**Pn**	**20 04 42.5**	**+1.6**
PB10				*i* S	**Sn**	**20 05 21.8**	**+0.1**
PB10				IAML		20 05 25.8	
	comp=E,689nm,0.3s						
PB10	**IPOC Station P**	**3.25**	**279**	*e*P		20 04 42.5	
PB10				*e*S		20 05 22.4	
PB10				IAML		20 05 23.6	
	comp=Z,388nm,0.7s						
PB04	**IPOC Station P**	**3.31**	**300**		**Pn**	**20 04 42.9**	**+1.1**
PB04				Sn	**Sn**	**20 05 22.3**	**-1.2**
PB04	**IPOC Station P**	**3.31**	**300**	⇑*i*P	**Pn**	**20 04 43.2**	**+1.4**
PB04				*i* S	**Sn**	**20 05 22.8**	**-0.7**
PB04	**IPOC Station P**	**3.31**	**300**	*e*P		20 04 43.1	
PB04				*e*S		20 05 24.1	
PB04				IAML		20 05 26.4	
	comp=Z,1µm,0.3s						
AC02	**Maricunga**	**3.36**	**214**	Pn	**Pn**	**20 04 44.0**	**+1.4**
AC02	**Maricunga**	**3.36**	**214**	⇑*i*P	**Pn**	**20 04 44.2**	**+1.5**
AC02	**Maricunga**	**3.36**	**214**	*e*P		20 04 44.2	
AC02				*e*S		20 05 25.0	
PB07	**IPOC Station P**	**3.48**	**311**		**Pn**	**20 04 44.9**	**+1.0**
PB07				Sn	**Sn**	**20 05 25.7**	**-1.4**
PB07	**IPOC Station P**	**3.48**	**311**	⇑*i*P	**Pn**	**20 04 45.1**	**+1.3**
PB07				*i* S	**Sn**	**20 05 26.3**	**-0.9**
PB07				IAML		20 05 27.6	
	comp=E,2µm,0.5s						
PB07	**IPOC Station P**	**3.48**	**311**	*e*P		20 04 45.0	
PB07				*e*S		20 05 27.3	
PB07				IAML		20 05 28.7	
	comp=Z,850nm,0.2s						
PB01	**IPOC Station P**	**3.73**	**322**		**Pn**	**20 04 47.7**	**+0.8**
PB01				Sn	**Sn**	**20 05 31.1**	**-1.5**
PB01	**IPOC Station P**	**3.73**	**322**	⇑*i*P	**Pn**	**20 04 48.0**	**+1.1**
PB01				*i* S	**Sn**	**20 05 31.5**	**-1.1**
PB01	**IPOC Station P**	**3.73**	**322**	*e*P		20 04 48.0	
PB01				*e*S		20 05 33.0	
PB01				IAML		20 05 36.3	
	comp=Z,499nm,0.3s						
PB02	**IPOC Station P**	**3.77**	**315**		**Pn**	**20 04 47.8**	**+0.4**
PB02				Sn	**Sn**	**20 05 31.2**	**-2.2**
PB02	**IPOC Station P**	**3.77**	**315**	⇑*i*P	**Pn**	**20 04 48.2**	**+0.8**
PB02				*i* S	**Sn**	**20 05 31.7**	**-1.7**
PB02				IAML		20 05 34.7	
	comp=E,1µm,0.5s						
PB02	**IPOC Station P**	**3.77**	**315**	*e*P		20 04 48.2	
PB02				*e*S		20 05 33.3	
PB02				IAML		20 05 38.5	
	comp=Z,1µm,0.4s						
AC01	**Pan de Azucar**	**3.84**	**236**	Pn	**Pn**	**20 04 48.1**	**0.0**
AC01				Sn	**Sn**	**20 05 32.3**	**-2.6**
AC01	**Pan de Azucar**	**3.84**	**236**	⇑*i*P	**Pn**	**20 04 48.1**	**0.0**
AC01				*i* S	**Sn**	**20 05 33.0**	**-1.9**
AC01	**Pan de Azucar**	**3.84**	**236**	*e*P		20 04 48.2	
AC01				*e*S		20 05 33.5	
AC01				IAML		20 05 34.6	
	comp=Z,372nm,0.2s						
PB08	**IPOC Station P**	**4.34**	**333**		**Pn**	**20 04 56.0**	**+1.3**
PB08				Sn	**Sn**	**20 05 46.2**	**-0.5**
PB08	**IPOC Station P**	**4.34**	**333**	⇓*i*P	**Pn**	**20 04 56.3**	**+1.6**
PB08				*i* S	**Sn**	**20 05 46.8**	**+0.1**
PB08				IAML		20 05 49.4	
	comp=E,359nm,0.3s						
PB08	**IPOC Station P**	**4.34**	**333**	*e*P		20 04 56.4	
PB08				*e*S		20 05 47.9	
PB08				IAML		20 05 53.3	
	comp=Z,193nm,0.5s						
TA01	**Diego Aracena**	**4.51**	**319**	Pn	**Pn**	**20 04 56.7**	**+0.2**
TA01	**Diego Aracena**	**4.51**	**319**	*e*P	**Pn**	**20 04 56.5**	**0.0**
TA01				*i* S	**Sn**	**20 05 47.7**	**-2.3**
TA01	**Diego Aracena**	**4.51**	**319**	*e*P		20 04 57.1	
TA01				*e*S		20 05 50.0	
TA01				IAML		20 05 52.5	
	comp=Z,201nm,0.5s						
CYA	**Choya**	**4.53**	**166**	*e*P		20 04 57.6	
CYA				*e*S		20 05 33.7	
GO03	**Copiap**	**4.56**	**218**		**Pn**	**20 04 56.7**	**-0.5**
GO03	**Copiap**	**4.56**	**218**	⇑*i*P	**Pn**	**20 04 56.6**	**-0.5**
GO03				*i* S	**Sn**	**20 05 48.9**	**-2.3**
GO03	**Copiap**	**4.56**	**218**	*e*P		20 04 56.8	
GO03				*e*S		20 05 49.8	
GO01	**Chusmiza**	**4.78**	**335**		**Pn**	**20 05 00.1**	**-0.4**
GO01	**Chusmiza**	**4.78**	**335**	*e*P	**Pn**	**20 05 01.5**	**+1.1**
GO01				*i* S	**Sn**	**20 05 56.5**	**-0.5**
GO01	**Chusmiza**	**4.78**	**335**	*e*P		20 05 00.5	
GO01				*e*S		20 05 58.3	
PB11	**IPOC Station P**	**4.89**	**330**	Pn	**Pn**	**20 05 01.2**	**-0.4**
PB11	**IPOC Station P**	**4.89**	**330**	⇓*i*P	**Pn**	**20 05 01.6**	**0.0**
PB11				*i* S	**Sn**	**20 05 56.6**	**-2.5**
PB11	**IPOC Station P**	**4.89**	**330**	*e*P		20 05 01.6	
PB11				*e*S		20 05 57.2	
PB11				IAML		20 05 59.3	
	comp=Z,325nm,0.6s						
PSGC	**Pisagua**	**5.26**	**327**	*e*P	**Pn**	**20 05 05.0**	**-1.2**
PSGC				*i* S	**Sn**	**20 06 00.3**	**-7.1**
PSGCX	**Pisagua**	**5.26**	**327**		**Pn**	**20 05 05.2**	**-1.1**
PSGCX	**Pisagua**	**5.26**	**327**	*e*P		20 05 05.1	
PSGCX				*e*S		20 06 05.0	
PSGCX				IAML		20 06 09.7	
	comp=Z,104nm,0.3s						
MNMC	**Minye Minye**	**5.42**	**334**		**Pn**	**20 05 08.7**	**+0.1**
MNMC	**Minye Minye**	**5.42**	**334**	*e*P	**Pn**	**20 05 08.9**	**+0.4**
MNMC				*i* S	**Sn**	**20 06 09.9**	**-1.8**
AC04	**Llanos de Chal**	**5.50**	**220**		**Pn**	**20 05 06.2**	**-3.0**
AC04	**Llanos de Chal**	**5.50**	**220**	*e*P	**Pn**	**20 05 08.2**	**-1.0**
AC04				*i* S	**Sn**	**20 06 09.9**	**-3.0**
AC05	**El Transito**	**5.58**	**210**	Pn	**Pn**	**20 05 09.7**	**-0.6**
AC05	**El Transito**	**5.58**	**210**	*e*P	**Pn**	**20 05 10.1**	**-0.3**
AC05				*i* S	**Sn**	**20 06 12.8**	**-2.2**
LCO	**Las Campanas**	**5.93**	**213**	Pn	**Pn**	**20 05 13.8**	**-1.2**
PB16	**IPOC Station P**	**6.12**	**338**		**Pn**	**20 05 18.1**	**+0.3**
PB12	**IPOC Station P**	**6.20**	**330**	Pn	**Pn**	**20 05 16.8**	**-1.6**
AP01	**Chacalluta**	**6.42**	**331**	Pn	**Pn**	**20 05 20.3**	**-0.9**
CO01	**Juntas del Tor**	**6.51**	**204**		**Pn**	**20 05 22.3**	**-0.2**
PB18	**Visviri**	**6.80**	**340**	Pn	**Pn**	**20 05 28.0**	**+1.3**
CO05	**La Serena**	**6.95**	**212**	Pn	**Pn**	**20 05 26.5**	**-1.4**
GO04	**Tololo Observa**	**6.96**	**208**		**Pn**	**20 05 25.9**	**-2.4**
CO03	**El Pedregal**	**7.50**	**205**		**Pn**	**20 05 33.1**	**-2.2**
CFA	**Coronel Fontan**	**7.61**	**188**	P	**Pn**	**20 05 36.3**	**-0.3**
	comp=Z,12nm,0.2s,baz=14,slow=11,SNR=60						
CFA				S	**Sn**	**20 06 56.9**	**-5.7**
	comp=Z,22nm,0.3s,baz=270,slow=23,SNR=12						
ZON	**Zonda**	**7.62**	**191**	Pn	**Pn**	**20 05 36.2**	**-0.6**
CO06	**Fray Jorge**	**7.76**	**211**	Pn	**Pn**	**20 05 37.2**	**-1.4**
LPAZ	**La Paz**	**7.78**	**352**	P	**Pn**	**20 05 40.6**	**+1.2**
	comp=Z,24nm,0.4s,baz=160,slow=6.2,SNR=66						
LPAZ				S	**Sn**	**20 07 04.7**	**-2.8**
	comp=Z,3.1nm,0.7s,baz=194,slow=12,SNR=1.2						
LPAZ	**La Paz**	**7.78**	**352**	Pn	**Pn**	**20 05 40.2**	**+0.7**
CO02	**Combarbal**	**7.95**	**205**	Pn	**Pn**	**20 05 40.0**	**-1.1**
CPUP	**Villa Florida**	**9.10**	**107**	P	**Pn**	**20 05 53.5**	**-2.6**
	comp=Z,3.0nm,0.7s,baz=299,slow=13,SNR=6.2						
CPUP	**Villa Florida**	**9.10**	**107**	Pn	**Pn**	**20 05 53.9**	**-2.2**
BBSD	**Serra de San D**	**9.10**	**43**	*e*P	**Pn**	**20 05 56.0**	**-0.2**
VA03	**San Esteban**	**9.22**	**199**		**Pn**	**20 05 57.6**	**-0.2**
VA06	**Catapilco**	**9.28**	**203**	Pn	Pn	20 05 53.4	-5.0
MECA	**Mercedes**	**9.51**	**125**	*e*P	**Pn**	**20 06 02.1**	**+0.7**
ROC1	**El Roble**	**9.56**	**200**	Pn	**Pn**	**20 05 59.6**	**-2.7**
SIV	**San Ignacio**	**9.78**	**36**	P	**Pn**	**20 06 03.8**	**-1.2**
	comp=Z,11nm,0.3s,baz=211,slow=13,SNR=39						
SIV				S	Sn	20 07 39.7	-15
	comp=Z,3.1nm,0.6s,baz=217,slow=14,SNR=4.4						
MT02	**Curacav**	**9.86**	**200**	Pn	**Pn**	**20 06 03.2**	**-2.7**
MT13	**San Alfonso**	**10.08**	**196**	Pn	**Pn**	**20 06 08.3**	**-0.6**
LMEL	**Las Melosas**	**10.16**	**195**		**Pn**	**20 06 08.3**	**-1.6**
MT09	**Talagante**	**10.30**	**199**		**Pn**	**20 06 10.0**	**-1.7**
MT01	**Popeta**	**10.46**	**200**	Pn	**Pn**	**20 06 13.0**	**-0.6**
AZCA	**Azaras, Argent**	**10.73**	**114**	*e*P	**Pn**	**20 06 17.6**	**+0.3**
ITQB	**Itaqui**	**10.87**	**123**	Pn	**Pn**	**20 06 20.2**	**+1.2**
BO01	**Tunca**	**10.90**	**198**	Pn	**Pn**	**20 06 19.0**	**-0.4**
AQDB	**Aquidauana**	**11.09**	**74**	Pn	**Pn**	**20 06 23.1**	**+1.1**
AQDB	**Aquidauana**	**11.09**	**74**	*e*P	**Pn**	**20 06 23.9**	**+1.9**
BO02	**Sierra Bellavi**	**11.20**	**196**		**Pn**	**20 06 22.2**	**-1.0**
PTLB	**Pontes e Lacer**	**11.33**	**43**		**Pn**	**20 06 24.7**	**-0.4**
CRSM	**Crissiumal (Br**	**12.22**	**109**	*e*P	**Pn**	**20 06 37.5**	**+1.2**
RODS	**Rosario do Sul**	**12.28**	**123**	*e*P	**Pn**	**20 06 37.5**	**+0.4**
VILB	**Vilhena**	**12.79**	**32**	Pn	**Pn**	**20 06 44.5**	**+0.8**
VILB	**Vilhena**	**12.79**	**32**	*e*P	**P**	**20 06 45.2**	**-2.1**
FRBT	**Francisco Belt**	**12.83**	**102**	*e*P	**P**	**20 06 46.0**	**-1.7**
SALV	**Santo Antonio**	**13.39**	**55**	*e*P	**P**	**20 06 53.5**	**-0.5**

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ALGR  Alto Alegre (B    13.43 114  eP      P       20 06 55.0 +0.6
CPSB  Cacapava Do Su    13.67 121  eP      P       20 06 56.8 -0.2
PTGB  Pitanga           13.68  96  eP      P       20 06 55.4 -1.8
ITAB  Concordia         13.83 106          Pn      20 06 55.8 -0.7
ITAB  Concordia         13.83 106  eP      Pn      20 06 56.1 -0.5
PLTB  Pedras Altas      14.16 126   Pn     P       20 07 01.0 -1.4
PLTB  Pedras Altas      14.16 126  eP      Pn      20 06 59.5 -1.1
ETMB  Extrema           14.16   3   Pn     Pn      20 06 58.9 -1.9
ETMB  Extrema           14.16   3  eP      Pn      20 07 00.8  0.0
C2SB  Chapadao do Su    14.24  71  eP      P       20 07 02.8 -0.5
TRQA  Tornquist         14.63 164          Pn      20 07 04.8 -1.5
TRQA  Tornquist         14.63 164  eP      Pn      20 07 05.9 -0.4
PCMB  Pacaembu          14.76  84  eP      Pn      20 07 07.5 -0.6
CNLB  Canela            15.40 113  eP      Pn      20 07 14.9 -1.0
SAML  Samuel            15.45  14          P       20 07 16.8 -0.1
SAML  Samuel            15.45  14  eP      P       20 07 17.5 +0.7
PDRB  Porto dos Gac     15.78  40  eP      Pn      20 07 20.1 -0.4
GO06  Curarrehue        15.95 193          Pn      20 07 22.2 -0.2
GO06                                IAmb   IAmb    20 07 26.4
      comp=Z,18nm,1.1s
ARAG  Araguaiana, MT    16.55  63  eP      Pn      20 07 30.1 +0.3
LR04  Corral            16.69 197          Pn      20 07 30.7 -0.5
PLCA  Paso Flores       16.91 189   P      Pn      20 07 34.0 +0.1
      comp=Z,2.6nm,0.4s,baz=4.6,slow=11,SNR=18
PLCA  Paso Flores       16.91 189   P      Pn      20 07 33.4 -0.5
PLCA  Paso Flores       16.91 189  eP      P       20 07 32.7  0.0
CLDB  Colider           16.92  41  eP      P       20 07 32.9  0.0
CZSB  Cruzeiro do Su    17.10 341   P      P       20 07 34.6 -0.3
CZSB                                IAmb   IAmb    20 07 40.2
      comp=Z,8.2nm,0.7s
BB19B Bebedouro         17.37  84  eP      Pn      20 07 38.9 -0.6
LL04  Puerto Octay      17.41 194   P      P       20 07 38.5 +0.4
LL04                                IAmb   IAmb    20 07 39.9
      comp=Z,18nm,0.8s
RCLB  Rio Claro- Sao    18.02  89  eP      P       20 07 44.9 -0.1
PET01 Itanhaem-SP       18.05  95  eP      P       20 07 45.3  0.0
VAO   Valinhos          18.45  91  eP      P       20 07 49.6 -0.2
IPMB  Ipameri, GO       18.59  75  eP      P       20 07 51.4 +0.2
LL06  Loncomilla        18.93 195   P      P       20 07 54.7  0.0
LL06                                IAmb   IAmb    20 07 56.8
      comp=Z,77nm,0.9s
SNDB  Serra Nova Dou    19.17  54  eP      P       20 07 57.4 -0.1
LL02  Futaleuf          19.51 191   P      P       20 08 01.7 +0.8
LL02                                IAmb   IAmb    20 08 05.7
      comp=Z,26nm,0.9s
PARB  Paraibuna         19.64  92  eP      P       20 08 02.1 -0.5
BDFB  Brasilia          19.75  68   P      P       20 08 03.9 +0.1
      comp=Z,54nm,0.6s,baz=246,slow=11,SNR=68
BDFB  Brasilia          19.75  68   P      P       20 08 03.1 -0.6
BDFB  Brasilia          19.75  68  eP      P       20 08 03.8  0.0
PMNB  Patos De Minas    19.97  78  eP      P       20 08 05.8 -0.3
TEFE  Tefe              20.54   7  eP      P       20 08 14.2 +2.1
BSCB  Bom Sucesso       20.80  86  eP      P       20 08 14.2 -0.7
VAS01 Vassouras-RJ      21.78  90  eP      P       20 08 24.8 -0.3
ITTB  Itaituba          22.39  31  eP      P       20 08 30.0 -0.9
DUB01 Friburgo-RJ       22.79  90  eP      P       20 08 34.0 -0.6
JANB  Januaria          23.19  72  eP      P       20 08 37.2 -1.1
SMTB  Santa Maria do    23.95  54  eP      P       20 08 45.1  0.0
SDBA  SAO DESIDERIO     23.97  65  eP      P       20 08 44.3 -1.0
PRPB  Parauapebas       24.29  46  eP      P       20 08 47.7 -0.5
ALF01 Guarapari-ES      24.58  87  eP      P       20 08 50.5 -0.2
SJMB  Sao Joao De Ma    24.65  83  eP      P       20 08 50.8 -0.6
MALB  Monte Alegre      25.29  31  eP      P       20 08 56.7 -0.5
GUA01 Guaratinga, BA    26.57  79  eP      P       20 09 08.4 -0.4
MG03  Isla Dawson       29.88 184   P      P       20 09 39.0 +1.4
SDV   Santo Domingo     32.91 353   LR     LR      20 25 33.4
      comp=Z,160nm,19.0s,baz=139,slow=40
RCBR  Riachuelo         34.98  64  eP      P       20 10 22.1 -0.4
PMSA  Palmer Station    40.78 178   P      P       20 11 14.3 +4.1
CELP  Cerrillos         41.86   1   P      P       20 11 19.2 -0.3
CELP                                IAmb   IAmb    20 11 39.2
      comp=Z,22nm,1.4s
MTDJ  Mount Denham      43.23 345   P      P       20 11 28.1 -2.7
BELA  Belgrano 2        56.01 172   P      P       20 13 06.6 +0.3
SNAA  Sanae             59.33 161   P      P       20 13 30.6 +0.9
SNAA                                IAmb   IAmb    20 13 39.8
      comp=Z,23nm,1.4s
TXAR  Lajitas Array     63.68 324   P      P       20 14 01.1 +1.7
      comp=Z,0.2nm,0.6s,baz=146,slow=8.3,SNR=3.0
TXAR                                LR     LR      20 44 30.1
      comp=Z,96nm,18.1s,baz=62,slow=38
      comp=Z,0.2nm,0.6s
DBIC  Dimbokro          67.86  72   P      P       20 14 25.8 -0.5
      comp=Z,1.6nm,0.3s,baz=246,slow=6.2,SNR=7.8
      comp=Z,1.6nm,0.3s
DBIC  Dimbokro          67.86  72   P      P       20 14 24.9 -1.3
DBIC                                IAmb   IAmb    20 14 38.2
      comp=Z,11nm,1.3s
SUR   Sutherland        75.84 119   P      P       20 15 13.6 -0.2
TORD  Torodi Ar. Bea    76.63  69   P      P       20 15 18.3 +0.2
      comp=Z,4.2nm,0.5s,baz=265,slow=5.9,SNR=46
      comp=Z,4.2nm,0.5s
PDAR  Pinedale Array    77.16 329   P      P       20 15 22.6 +1.8
      comp=Z,0.1nm,0.4s,baz=143,slow=7.8,SNR=2.1
      comp=Z,0.1nm,0.4s
BOSA  Boshof            80.76 117   P      P       20 15 41.2 +0.4
      comp=Z,2.0nm,0.5s,baz=242,slow=3.4,SNR=10
      comp=Z,2.0nm,0.5s
BOSA  Boshof            80.76 117   P      P       20 15 40.2 -0.5
BOSA                                IAmb   IAmb    20 15 59.2
      comp=Z,13nm,1.5s
LBTB  Lobatse           82.42 114   P      P       20 15 49.5 +0.1
ESDC  Sonseca Array     86.46  44   P      P       20 16 10.3 +1.1
      comp=Z,0.7nm,0.8s,baz=266,slow=5.8,SNR=2.2
      comp=Z,0.7nm,0.8s
ASAR  Alice Springs    128.40 205   PKP    PKiKP   20 22 33.4 +0.1
      comp=Z,0.2nm,0.9s,baz=124,slow=1.6,SNR=4.6
WRA   Warramunga Arr   131.57 207   PKP    PKiKP   20 22 40.2 +0.4
      comp=Z,0.1nm,0.3s,baz=96,slow=0.9,SNR=6.2
GEYT  Alibeck          131.63  60   PKP    PKiKP   20 22 39.9 +0.5
      comp=Z,0.5nm,0.4s,baz=263,slow=5.8,SNR=1.5
ZALV  Zalesovo Beam    143.45  28   PKP    PKPdf   20 22 58.5 -1.0
      comp=Z,1.1nm,0.6s,baz=304,slow=3.4,SNR=6.1
KSH   Kashi            145.26  55   PKPbc  PKPab   20 23 04.5 +0.8
MKAR  Makanchi Array   146.58  40   PKPbc  PKPab   20 23 08.2 -0.2
      comp=Z,1.5nm,0.5s,baz=312,slow=3.0,SNR=20
PZH   PanZhiHua        169.57  74   PKP    PKPdf   20 23 31.5 -1.7
```

RSNC 14 20:04:04.7±1.0**, 6°.80N**×**73°.15W, h142**^{km}±4^{km}**, ML3.0, Mw3.7, 1C-4D, Northern Colombia**

```
Code  Station Name      Δ°   AZ°     Phase ID         Time      Res
                                   Op      ISC      h  m  s    ISC
BARC  Barichara          0.20 188⇓iP      Pn       20 04 23.9 -0.4
BARC                             eS       Sn       20 04 38.5 -0.7
BARC                             i                 20 04 39.7
      comp=Z,270nm,0.2s
BRRC  Barranca, Sant     0.64 299⇑iP      Pn       20 04 25.8 -0.1
BRRC                             eS       Sn       20 04 42.5 +0.5
BRRC                             i                 20 04 45.6
      comp=Z,229nm,0.3s
PAMC  Pamplona, Colo     0.70  40⇓eP      Pn       20 04 26.7 -0.2
PAMC                             eS       Sn       20 04 43.5 -0.2
PAMC                             i                 20 04 46.1
      comp=Z,386nm,0.6s
RUSC  La Rusia           0.90 176 eP      Pn       20 04 27.9 -0.5
RUSC                             eS       Sn       20 04 45.8 -0.6
RUSC                             i                 20 04 47.6
      comp=Z,46nm,0.3s
PTBC  PUERTO BERRIO,     1.32 259 eP      Pn       20 04 30.8 -1.0
PTBC                             eS       Sn       20 04 51.1 -1.3
PTBC                             i                 20 04 54.8
      comp=Z,227nm,0.3s
TAMC  Tame, Arauca       1.40 105⇓iP      Pn       20 04 32.3 -0.3
TAMC                             i                 20 04 52.4
      comp=Z,59nm,0.4s
TAMC                             eS       Sn       20 04 53.6 -0.3
SPBC  San Pablo de B     1.46 219 eP      Pn       20 04 32.8 -0.5
SPBC                             eS       Sn       20 04 55.7 +0.5
SPBC                             i                 20 04 58.6
      comp=Z,109nm,0.2s
ZARC  Zaragoza, Cauc     1.83 292 eP      Pn       20 04 37.0 -0.3
ZARC                             eS       Sn       20 05 02.4 +0.1
ZARC                             i                 20 05 08.0
      comp=Z,136nm,0.2s
NORC  Norcasia           2.10 234 eP      Pn       20 04 39.9 -0.7
NORC                             eS       Sn       20 05 07.8 -0.3
NORC                             i                 20 05 11.0
      comp=Z,84nm,0.3s
CHIC  Chingaza           2.23 195 eP      Pn       20 04 42.1 -0.4
CHIC                             eS       Sn       20 05 11.1 -0.4
CHIC                             i                 20 05 20.9
      comp=Z,25nm,0.3s
ROSC  El Rosal           2.26 211 eP      Pn       20 04 43.7 +0.8
ROSC                             eS       Sn       20 05 14.0 +1.7
ROSC                             i                 20 05 23.3
      comp=Z,57nm,0.4s
HELC  Santa Helena       2.44 256 eP      Pn       20 04 46.0 +1.0
HELC                             eS       Sn       20 05 15.2 -0.7
HELC                             i                 20 05 24.4
      comp=Z,53nm,0.4s
UREC  San Jos de Ur      2.54 292 eP      Pn       20 04 44.1 -1.8
UREC                             eS       Sn       20 05 16.2 -1.6
UREC                             i                 20 05 25.6
      comp=Z,82nm,0.2s
GUY2C Guyana, Caldas     2.70 235 eP      Pn       20 04 48.8 +0.4
GUY2C                            eS       Sn       20 05 21.6 -0.4
GUY2C                             IAML             20 05 29.3
      comp=Z,70nm,0.3s
PTGC  Puerto Gaitan,     2.77 158 eP      Pn       20 04 47.3 -1.6
PTGC                             eS       Sn       20 05 19.8 -3.1
PTGC                             i                 20 05 22.3
      comp=Z,55nm,0.4s
CBOC  Ciudad Bolivar     2.99 252 eP      Pn       20 04 52.6 +0.9
CBOC                             eS       Sn       20 05 27.6 -0.5
CBOC                             i                 20 05 33.0
      comp=Z,26nm,0.5s
DBBC  Dabeiba            3.04 274 eP      Pn       20 04 52.0 -0.4
DBBC                             eS       Sn       20 05 28.1 -1.1
DBBC                             i                 20 05 31.4
      comp=Z,58nm,0.2s
ANIL  Santa Ana          3.20 224 eP      Pn       20 04 56.0 +1.4
ANIL                             eS       Sn       20 05 36.1 +2.9
ANIL                             i                 20 05 41.0
      comp=Z,80nm,0.4s
ARGC  Ariguani, Magd     3.23 341 eP      Pn       20 04 54.9 +0.2
ARGC                             eS       Sn       20 05 34.3 +0.9
ARGC                             i                 20 05 40.6
      comp=Z,30nm,0.3s
PRAC  Prado              3.52 209 eP      Pn       20 04 58.1 -0.4
PRAC                             eS       Sn       20 05 39.8 -0.3
PRAC                             i                 20 05 42.8
      comp=Z,28nm,0.3s
ORTC  Ortega, Tolima     3.54 216 eP      Pn       20 04 58.8 -0.1
ORTC                             eS       Sn       20 05 41.7 +0.9
ORTC                             i                 20 05 47.1
      comp=Z,30nm,0.5s
SJCC  San Jacinto, C     3.68 327⇓iP      Pn       20 04 58.9 -1.7
SJCC                             eS       Sn       20 05 39.7 -4.2
SJCC                             i                 20 05 43.4
      comp=Z,42nm,0.4s
CRJC  Cerrejon, Guaj     4.21   4 eP      Pn       20 05 04.7 -2.8
CRJC                             eS       Sn       20 05 51.1 -5.4
CRJC                             i                 20 05 56.6
      comp=Z,36nm,0.4s
YOTC  Yotoco, Valle      4.23 229 eP      Pn       20 05 07.1 -0.8
YOTC                             eS       Sn       20 05 57.6 +0.5
YOTC                             i                 20 06 06.2
      comp=Z,3.8nm,0.6s
SMRC  Santa Marta, M     4.47 346 eP      Pn       20 05 10.1 -0.8
SMRC                             eS       Sn       20 05 57.9 -4.6
MACC  Macarena, Meta     4.67 189 eP      Pn       20 05 11.3 -2.4
MACC                             eS       Sn       20 06 02.7 -4.7
MACC                             i                 20 06 07.7
      comp=Z,9.4nm,0.4s
URIC  Uribia, Colomb     5.01  13 eP      Pn       20 05 14.8 -3.3
URIC                             eS       Sn       20 06 09.4 -5.9
URIC                             i                 20 06 12.9
      comp=Z,7.4nm,0.4s
POPC  Popayan, Colom     5.50 220 eP      Pn       20 05 24.3 -0.6
POPC                             eS       Sn       20 06 27.4 +0.1
POPC                             i                 20 06 39.0
      comp=Z,2.3nm,0.4s
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*IDC **14** 20:11:03.7±1.1, 1°.33S×126°.78E, h0^{km}, mb3.8/4, mbtmp3.8/6, ML3.9/2, MS2.8/1, Error ellipse: s-maj=35.5km s-min=19.0km az=60.0*

*DJA **14** 20:11:05.5±0.2, 1°S±2°×12°7E±°, h10^{km}, M4.1/14, mb4.4/5, mB4.8/1, MLv3.9/14, Mw(mB)4.1/1*

ISC 14 20:11:03.8±1.5**, 1°.17S**±0°.03×**126°.93E**±0°.04**, h0**^{km}±11^{km}**, n22, σ1**^{s}**80**/27**, mb4.1**/5**, Southern Molucca Sea**

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Code  Station Name      Δ°   AZ°     Phase ID         Time      Res
                                   Op      ISC      h  m  s    ISC
LBMI  Labuha             0.78  47  P       Pg       20 11 19.3 +0.6
LBMI                               S       Sg       20 11 28.9 +0.1
SANI  Sanana             1.28 227  P       Pg       20 11 29.0 +0.6
SANI                               S       Sn       20 11 45.6 -1.3
TNTI  Ternate            1.98  13  P       Pb       20 11 38.9 -1.7
TNTI                               S       Sn       20 12 00.8 -3.1
NLAI  Namlea             2.06 175  P       Pb       20 11 40.9 -1.2
NLAI                               S       Sn       20 12 06.0 -0.1
AAI   Ambon              2.80 153  P       Pn       20 11 52.0 +2.2
AAI                                S       Sn       20 12 25.6 +1.3
MSAI  Masohi             2.94 137  P       Pb       20 11 54.6 -2.5
MSAI                               S       Sb       20 12 30.8 -2.8
LUWI  Luwuk              4.16 272  P       Pn       20 12 09.9 +1.4
GTOI  Gorontalo          4.31 295  P       Pb       20 12 14.5 -5.9
SIJI  Sorong             4.34  86  Pn      Pn       20 12 13.6 +2.5
      5.3nm,0.3s,baz=242,slow=23,SNR=18
SIJI                               Sn      Sn       20 13 04.3 +1.9
      baz=138,slow=23
      18nm,0.3s
MRSI  Marisa             5.25 288  P       Pn       20 12 25.5 +2.0
      9.6nm,0.4s,0.1nm
FAKI  Fak Fak            5.59 108  P       Pn       20 12 29.2 +1.0
      31nm,1.0s,0.3nm
BBSI  Bau Bau            6.11 225  P       Pn       20 12 35.2 -0.2
SPSI  Sidrap Palu        7.67 249  P       Pn       20 12 58.6 +1.8
      31nm,0.6s,562nm0.1nm
BKSI  Bulukumba          7.95 239  P       Pn       20 13 03.1 +2.5
KAPI  Kappang            8.12 242  LR      LR       20 17 09.7
      comp=Z,65nm,18.6s,baz=105,slow=46
WRA   Warramunga Arr    20.02 159  P       P        20 15 36.1 -2.1
      0.3nm,0.3s,baz=340,slow=11,SNR=18
      1.4nm,0.6s
ASAR  Alice Springs     23.36 164  P       P        20 16 12.6 -1.5
      2.5nm,0.8s,baz=345,slow=12,SNR=27
      2.5nm,0.8s
TPUB  Ta-pu             25.08 346  P       P        20 16 30.6 +0.4
KRVT  Keravat (AS076    25.26  98  P       P        20 16 33.9 +2.1
      122nm,0.7s,baz=277,slow=9.2,SNR=4.1
STKA  Stephens Creek    33.54 157  P       P        20 17 45.4 +0.1
      1.4nm,0.5s,baz=310,slow=11,SNR=4.3
      1.4nm,0.5s
SONM  Songino Array     51.99 343  P       P        20 20 14.5 -0.4
      0.3nm,0.6s,baz=168,slow=7.4,SNR=3.7
      0.3nm,0.6s
MKAR  Makanchi Array    61.70 327  P       P        20 21 24.5 +0.7
      0.6nm,0.3s,baz=120,slow=7.7,SNR=16
      0.6nm,0.3s
```

HEL 14 20:26:33.6±0.2**, 68°.16N**×**33°.70E, h0**^{km}**, ML1.2, Suspected explosion, Baltic States-Belarus-Northwestern Russia**

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Code  Station Name      Δ°   AZ°     Phase ID         Time      Res
                                   Op      ISC      h  m  s    ISC
LVZ   Lovozero           0.44 125  PG      Pg       20 26 41.5 -0.5
LVZ                                SG      Sg       20 26 47.4 -0.4
VRF   Varrio             1.60 257  PG      Pn       20 27 02.3 -0.8
VRF                                MSG              20 27 21.6
      comp=Z,1.3nm,0.2s
VRF                                SN      Sn       20 27 23.2 -1.2
OLKF  Oulanka, Finla     2.49 224  SN      Sn       20 27 42.5 -3.8
OLKF                               MSG              20 27 47.2
      comp=Z,0.5nm,0.2s
KEV   Kevo               2.90 307  PG      Pb       20 27 25.8 -0.3
KEV                                MSG              20 27 59.1
      comp=Z,0.7nm,0.2s
MSF   Maaselka           2.90 221  SN      Sn       20 27 53.0 -3.6
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*IDC **14** 20:31:26.5±0.4, 24°.58S×176°.01W, h0^{km}, mb4.6/25, mbtmp4.6/27, ML4.3/2, MS4.3/25, Error ellipse: s-maj=17.7km s-min=12.7km az=130.0*

*BJI **14** 20:31:26.0±0.0, 24°.50S×175°.70W, h5^{km}, mb5.1/38, mB5.7/21, Ms5.3/7, Ms7 4.9/9*

*NEIC **14** 20:31:27.4±2.0, 24°.39S±0°.08×175°.57W±0°.09, h10^{km}±1^{km}, mb5.1/82, Error ellipse: s-maj=13.9km s-min=12.2km az=128.0*

*MOS **14** 20:31:28.3±1.6, 24°.63S×175°.83W, h23^{km}, mb5.2/25, Error ellipse: s-maj=10.7km s-min=9.0km az=79.3*

*NOU **14** 20:31:28.8, 24°.46S×175°.23W, h18^{km}, mb5.1/11, South of Tonga Islands*

*GCMT **14** 20:31:31.4±0.2, 24°.49S±0°.02×175°.65W±0°.01, h17^{km}±1^{km}, MW5.0/96, Moment Tensor Solution. s29,c37; s96,c135; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.76±.13; $M_{\theta\theta}$-2.93±.11; $M_{\phi\phi}$3.68±.12; $M_{r\theta}$-1.07±.32; $M_{\theta\phi}$-0.17±.09; $M_{\phi r}$-0.97±.27; Best double couple: $M_0$3.64500×10^{16} NP1:ϕ_s41.00000°, δ82.00000°, λ-25.00000°. NP2: ϕ_s135.00000°, δ65.00000°, λ-171.00000°. Principal axes: T 3.8820, Plg12.0000°, Azm90.0000°; N -0.4800, Plg63.0000°, Azm205.0000°; P -3.4080, Plg23.0000°, Azm355.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 20:31:30.2±0.4**, 24°.61S**±0°.05×**175°.69W**±0°.06**, h27**^{km}±2^{km}**, h27**^{km}**:pP-P, n388, σ1**^{s}**81**/371**, mb5.0**/87**, MS4.4**/31**, 48C-18D, South of Tonga Islands**

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Code  Station Name      Δ°   AZ°     Phase ID         Time      Res
                                   Op      ISC      h  m  s    ISC
RAO   Raoul Island       5.03 203  Pn      Pn       20 32 41.7 -2.1
      27nm,0.3s,baz=299,slow=23,SNR=2.0
RAO                                Sn      Sn       20 33 40.0 -1.1
      45nm,0.3s,baz=272,slow=22,SNR=1.1
      196nm,0.4s
RAO   Raoul Island       5.03 203  Pn      Pn       20 32 46.1 +2.3
RAO   Raoul Island       5.03 203  P       Pn       20 32 47.6 +3.8
NIUE  Niue               7.68  45  Pn      Pn       20 33 13.8 -6.5
NIUE                               Sn      Sn       20 34 30.0  -16
NIUE  Niue               7.68  45  P       Pn       20 33 14.3 -6.0
TAVE  Taveuni            8.80 333  P       Pn       20 33 37.5 +1.9
MSVF  Nonsavu            9.00 318  Pn      Pn       20 33 39.4 +1.0
      28nm,0.3s,baz=138,slow=13,SNR=56
MSVF  Nonsavu            9.00 318  Pn      Pn       20 33 36.9 -1.5
MSVF  Nonsavu            9.00 318  P       Pn       20 33 39.2 +0.8
MSVF  Nonsavu            9.00 318 iP       Pn       20 33 37.1 -1.3
AFI   Afiamalu          11.27  20  Pn      Pn       20 34 03.6 -6.0
      16nm,0.3s,baz=294,slow=7.2,SNR=10
AFI                                Sn      Sn       20 36 01.2  -13
      4.9nm,0.3s,baz=41,slow=24,SNR=2.4
AFI                                LR      LR       20 38 08.0
      comp=Z,756nm,21.5s,baz=202,slow=35
URZ   Urewera           14.92 203  Pn      Pn       20 34 56.6 -2.7
      0.5nm,0.3s,baz=293,slow=22,SNR=1.0
URZ                                Sn      Sn       20 37 33.8  -10
      0.4nm,0.3s,baz=214,slow=22,SNR=1.5
      1.8nm,0.3s
URZ   Urewera           14.92 203  P       P        20 35 04.2 -0.4
RAR   Rarotonga         15.05  80  Pn      Pn       20 34 56.9 -4.1
      10.0nm,0.3s,baz=233,slow=7.4,SNR=30
RAR                                Sn      Sn       20 37 32.9  -14
      1.7nm,0.3s,baz=123,slow=23,SNR=1.7
RAR                                LR      LR       20 39 41.9
      comp=Z,300nm,21.5s,baz=266,slow=32
RAR   Rarotonga         15.05  80  Pn      Pn       20 34 56.1 -5.0
RAR   Rarotonga         15.05  80  P       Pn       20 34 55.9 -5.2
RAR   Rarotonga         15.05  80  P       Pn       20 34 56.1 -5.0
PINNC Pines Island,     15.59 274  Pn      Pn       20 35 07.7 -0.3
NMHZ  Naumai            15.78 202  P       P        20 35 18.7 +4.5
NMHZ                               S       sP       20 35 23.0 -0.1
BKZ   Black Stump Fm    15.95 203  P       Pn       20 35 13.9 +1.2
BKZ   Black Stump Fm    15.95 203  P       Pn       20 35 13.9 +1.2
HIZ   Hauiti            16.02 208  P       P        20 35 17.4 +0.7
MCHZ  McNeill Hill      16.12 202  P       Pn       20 35 15.5 +0.5
OUENC Ouen Island, N    16.17 274          Pn       20 35 15.1 -0.6
YATNC Mamie plateau,    16.20 275  P       P        20 35 21.2 +2.3
LIFNC LIFOU             16.21 280  Pn      Pn       20 35 15.8 -0.2
LIFNC                              IAmb    IAmb     20 35 25.5
      comp=Z,169nm,1.2s
BHHZ  Black Hill Sta    16.38 203  P       Pn       20 35 18.4 +0.1
TRVZ  Turoa             16.41 205  P       P        20 35 22.5 +1.1
MTVZ  Mangateitei       16.51 205  P       P        20 35 22.3  0.0
ONTNC Ouen Toro         16.55 274          Pn       20 35 22.0 +1.6
ONTNC                              IAmb    IAmb     20 35 26.3
      comp=Z,399nm,2.0s
DZM   Mont Dzumac       16.60 275 ePn      Pn       20 35 21.3 +0.1
      comp=Z,304nm,1.4s
DZM                               eLR      LR       20 39 13.5
      comp=Z,3μm,25.3s
DZM   Mont Dzumac       16.60 275  Pn      P        20 35 25.3 +1.8
      comp=Z,0.6nm,0.3s,baz=84,slow=14,SNR=11
DZM                                LR      LR       20 40 29.1
      comp=Z,1μm,20.7s,baz=52,slow=33
DZM   Mont Dzumac       16.60 275          P        20 35 23.3 -0.2
DZM                                IAmb    IAmb     20 35 29.4
      comp=Z,327nm,1.8s
PNHZ  Pukenui           16.71 202  P       Pn       20 35 22.3 -0.1
NOUC  Port Laguerre     16.72 275  P       P        20 35 28.1 +3.4
DVHZ  Dannevirke        17.07 202  P       Pn       20 35 27.1 +0.2
DVHZ                               S       sP       20 35 41.4 +4.0
BFZ   Birch Farm        17.39 201  P       Pn       20 35 28.7 -2.1
BFZ   Birch Farm        17.39 201  P       Pn       20 35 30.1 -0.7
MRZ   Mangatainoka R    17.59 202  P       Pn       20 35 31.9 -1.5
HOWZ  Holdsworth Sta    17.83 202  P       Pn       20 35 34.1 -2.2
TUWZ  Tuamarina         18.86 205  P       P        20 35 40.6 -7.5
KOUNC Koumac, New Ca    18.92 278  P       Pn       20 35 52.2 +2.5
KOUNC                              IAmb    IAmb     20 35 55.2
      comp=Z,172nm,1.7s
CTZ   Chatham Island    19.09 182  P       Pn       20 35 51.9 +0.3
CTZ                                IAmb    IAmb     20 36 05.2
      comp=Z,224nm,1.5s
RPZ   Rata Peaks        21.93 206  P       P        20 36 20.1 -1.4
      comp=Z,7.2nm,0.8s,baz=37,slow=5.1,SNR=5.3
RPZ                                LR      LR       20 44 47.8
      comp=Z,2μm,19.1s,baz=20,slow=37
      comp=Z,7.2nm,0.8s
TBI   Tubuai            23.99  92 eLQ      LQ       20 41 28.4
      comp=Z,5μm,14.2s
TBI                               eLR      LR       20 42 29.0
      comp=Z,6μm,24.8s
TBI                               eLR      LR       20 42 29.3
      comp=Z,27μm,24.8s
TBI   Tubuai            23.99  92 eT       T        21 01 34.6
      comp=Z,12nm,0.3s
MLZ   Mavora Lakes      24.50 208  P       P        20 36 46.2 -0.9
WHZ   Wether Hill Ro    24.99 208  P       P        20 36 51.1 -0.4
PAE   Paea              25.29  79 eT       T        21 03 26.5
      comp=Z,7.3nm,0.3s
PPT2  Papeete2          25.32  79 eLQ      LQ       20 42 01.5
      comp=Z,3μm,15.2s
PPT2                              eLR      LR       20 43 05.0
      comp=Z,2μm,25.0s
PPT2                              eLR      LR       20 43 05.1
      comp=Z,1μm,26.5s
PPT   Papeete           25.32  79  P       P        20 36 56.8 +1.9
      comp=Z,23nm,0.6s,baz=270,slow=10,SNR=5.0
PPT                                LR      LR       20 44 07.2
      comp=Z,563nm,21.3s,baz=252,slow=30
      comp=Z,23nm,0.6s
HNR   Honiara           27.68 299  LR      LR       20 46 10.6
      comp=Z,5μm,19.4s,baz=152,slow=32
ARMA  Armidale          29.49 251  P       P        20 37 31.6 -0.6
ARMA                               IAmb    IAmb     20 37 39.6
      comp=Z,26nm,1.2s
EIDS  Eidsvold          30.09 261  P       P        20 37 35.7 -1.8
CTA   Charters Tower    35.41 270  LR      LR       20 50 57.0
      comp=Z,365nm,18.9s,baz=110,slow=33
CTAO  Charters Tower    35.41 270  P       P        20 38 21.4 -2.6
CTAO                               IAmb    IAmb     20 38 34.7
      comp=Z,58nm,1.6s
CTAO  Charters Tower    35.41 270  P       P        20 38 21.4 -2.6
CTAO                               pmax    pmax
      comp=Z,58nm,1.7s
KRVT  Keravat (AS076    37.04 298  LR      LR       20 53 04.9
      comp=Z,206nm,18.4s,baz=286,slow=35
RKT   Rikitea           37.17  96 eS       S        20 44 23.7 -0.5
      comp=Z,53μm,35.5s
RKT                               eLR      LR       20 48 36.3
      comp=Z,129μm,23.2s
TAOE  Nuku Hiva Isla    37.32  71 eS       S        20 44 25.0 -1.8
      comp=Z,124nm,25.8s
TAOE                              eLR      LR       20 48 38.0
      comp=Z,697nm,24.4s
STKA  Stephens Creek    38.13 249  P       P        20 38 45.1 -2.0
      comp=Z,1.3nm,0.6s,baz=96,slow=13,SNR=6.1
STKA                               PcP     PcP      20 41 02.6 +0.9
      comp=Z,1.3nm,0.7s,baz=34,slow=3.6,SNR=3.5
STKA                               LR      LR       20 51 46.6
      comp=Z,617nm,21.4s,baz=81,slow=32
      comp=Z,1.3nm,0.6s
STKA  Stephens Creek    38.13 249  P       P        20 38 44.8 -2.3
STKA  Stephens Creek    38.13 249  P       P        20 38 44.8 -2.3
STKA                               pmax    pmax
      comp=Z,3.0nm,1.4s
```

PMG	**Port Moresby**	**38.45**	**287**	P	**P**	**20 38 47.5**	**-2.4**
	comp=Z,6.8nm,0.3s,baz=148,slow=7.7,SNR=5.2						
PMG				LR	LR	20 52 28.8	
	comp=Z,536nm,18.4s,baz=160,slow=33						
	comp=Z,6.8nm,0.3s						
PMG	**Port Moresby**	**38.45**	**287**	P	**P**	**20 38 47.2**	**-2.8**
PMG				IAmb	IAmb	20 39 01.7	
	comp=Z,48nm,0.8s						
PMG	**Port Moresby**	**38.45**	**287**	*ce*P	**P**	**20 38 50.7**	**+0.7**
PMG				pmax	pmax		
	comp=Z,27nm,1.7s						
AS31	**Alice Springs**	**45.80**	**260**	P	**P**	**20 39 47.7**	**-2.2**
ASAR	**Alice Springs**	**45.80**	**260**	P	**P**	**20 39 47.3**	**-2.6**
	comp=Z,8.8nm,1.1s,baz=93,slow=6.4,SNR=54						
ASAR				PcP	**PcP**	**20 41 28.5**	**+1.3**
	comp=Z,1.2nm,0.6s,baz=115,slow=4.1,SNR=1.9						
ASAR				LR	LR	20 58 15.1	
	comp=Z,691nm,18.3s,baz=115,slow=35						
	comp=Z,8.8nm,1.1s						
WB2	**Warramunga Arr**	**46.27**	**265**	P	P	20 39 49.4	-4.2
WB2				IAmb	IAmb	20 40 00.4	
	comp=Z,21nm,1.1s						
WRAB	**Tennant Creek**	**46.27**	**265**	P	P	20 39 49.7	-3.9
WRAB				IAmb	IAmb	20 40 00.4	
	comp=Z,19nm,1.1s						
WRAB	**Tennant Creek**	**46.27**	**265**	*ce*P	**P**	**20 39 54.5**	**+0.9**
WRAB				pmax	pmax		
	comp=Z,27nm,1.7s						
WB0	**Warramunga Arr**	**46.27**	**266**	P	**P**	**20 39 49.9**	**-3.8**
WB0				IAmb	IAmb	20 40 00.4	
	comp=Z,15nm,0.8s						
WRA	**Warramunga Arr**	**46.28**	**265**	P	**P**	**20 39 49.9**	**-3.8**
	comp=Z,5.4nm,0.6s,baz=104,slow=8.0,SNR=49						
WRA				PcP	**PcP**	**20 41 29.9**	**+0.9**
	comp=Z,1.3nm,0.8s,baz=93,slow=3.6,SNR=2.0						
WRA				LR	LR	20 58 35.3	
	comp=Z,440nm,19.0s,baz=128,slow=35						
	comp=Z,5.4nm,0.6s						
WRA	**Warramunga Arr**	**46.28**	**265**	P	P	20 39 49.7	-4.0
WRA	**Warramunga Arr**	**46.28**	**265**	P	P	20 39 49.7	-4.0
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FORT	**Forrest**	**49.75**	**250**	P	**P**	**20 40 17.1**	**-3.3**
MTN	**Manton Dam**	**51.43**	**273**	P	**P**	**20 40 30.1**	**-3.1**
MTN				IAmb	IAmb	20 42 15.8	
	comp=Z,26nm,1.2s						
KNRA	**Kununurra**	**52.61**	**269**	P	**P**	**20 40 38.8**	**-3.2**
KNRA				IAmb	IAmb	20 40 53.6	
	comp=Z,16nm,0.7s						
SBA	**Scott Base**	**53.94**	**185**	P	**P**	**20 40 50.9**	**0.0**
SBA	**Scott Base**	**53.94**	**185**	P	**P**	**20 40 50.9**	**0.0**
SBA				pmax	pmax		
	comp=Z,310nm,1.9s						
VNDA	**Vanda**	**54.04**	**186**	P	**P**	**20 40 51.0**	**-0.7**
	comp=Z,3.7nm,1.0s,baz=32,slow=7.2,SNR=2.5						
	comp=Z,3.7nm,1.0s						
VNDA	**Vanda**	**54.04**	**186**	P	**P**	**20 40 51.6**	**0.0**
VNDA				IAmb	IAmb	20 40 59.1	
	comp=Z,40nm,1.4s						
VNDA	**Vanda**	**54.04**	**186**	P	**P**	**20 40 51.0**	**-0.7**
GUMO	**Guam**	**54.07**	**310**	LR	LR	21 01 29.3	
	comp=Z,87nm,21.9s,baz=139,slow=34						
FITZ	**Fitzroy Crossi**	**54.69**	**265**	P	**P**	**20 40 54.4**	**-2.9**
SIJI	**Sorong**	**56.40**	**286**	LR	LR	21 04 25.8	
	comp=Z,364nm,20.7s,baz=106,slow=35						
NWAO	**Narrogin (SRO)**	**58.52**	**245**	LR	LR	21 03 51.0	
	comp=Z,306nm,20.1s,baz=191,slow=33						
NWAO	**Narrogin (SRO)**	**58.52**	**245**	P	**P**	**20 41 23.7**	**-0.6**
NWAO	**Narrogin (SRO)**	**58.52**	**245**	P	**P**	**20 41 23.7**	**-0.6**
NWAO				pmax	pmax		
	comp=Z,142nm,1.6s						
SOEI	**Soe**	**58.82**	**273**	P	**P**	**20 41 26.2**	**-0.6**
PSA00	**Pilbara Seismi**	**58.90**	**259**	P	**P**	**20 41 24.4**	**-2.7**
MBWA	**Marble Bar**	**59.12**	**259**	P	**P**	**20 41 25.8**	**-2.8**
MBWA				IAmb	IAmb	20 41 42.6	
	comp=Z,16nm,1.1s						
RPN	**Rapa Nui**	**59.12**	**108**	LR	LR	20 59 55.8	
	comp=Z,87nm,21.3s,baz=26,slow=29						
CASY	**Casey**	**61.21**	**206**	P	**P**	**20 41 42.9**	**+0.7**
KAPI	**Kappang**	**64.82**	**276**	LR	LR	21 08 50.6	
	comp=Z,184nm,21.6s,baz=106,slow=35						
DAV	**Davao City (W)**	**65.28**	**291**	LR	LR	21 05 52.5	
	comp=Z,54nm,21.3s,baz=152,slow=32						
QSPA	**South Pole Qui**	**65.48**	**180**	P	**P**	**20 42 12.8**	**+2.1**
	comp=Z,33nm,1.0s,baz=45,slow=1.9,SNR=28						
QSPA				LR	LR	21 09 13.8	
	comp=Z,194nm,18.3s,baz=302,slow=35						
	comp=Z,33nm,1.0s						
TOLI2	**Tolitoli**	**66.57**	**283**	P	**P**	**20 42 17.3**	**-1.1**
TOLI2				IAmb	IAmb	20 42 36.1	
	comp=Z,15nm,1.0s						
MJAR	**Matsushiro Arr**	**74.77**	**323**	P	**P**	**20 43 07.2**	**-0.6**
	comp=Z,3.1nm,0.9s,baz=178,slow=6.4,SNR=4.6						
	comp=Z,3.1nm,0.9s						
BELA	**Belgrano 2**	**75.22**	**172**	P	**P**	**20 43 10.7**	**+0.8**
ADK	**Adak**	**76.17**	**359**	P	**P**	**20 43 15.2**	**-0.2**
ADK	**Adak**	**76.17**	**359**	P	**P**	**20 43 15.2**	**-0.2**
ADK				pmax	pmax		
	comp=Z,72nm,1.5s						
MAW	**Mawson**	**78.43**	**199**	P	**P**	**20 43 28.4**	**+0.3**
	comp=Z,34nm,0.8s,baz=102,slow=9.3,SNR=1.7						
	comp=Z,34nm,0.8s						
SCZ2	**Santa Cruz Isl**	**78.94**	**45**	P	**P**	**20 43 34.2**	**+2.8**
	baz=230						
SKR	**Severo-Kuril's**	**79.00**	**342**	*e*P	P	20 43 38.7	+7.5
SKR				*e*S	S	20 53 53.3	+25
SKR				*e*SS	**SS**	**20 58 40.5**	**+5.8**
SKR				pmax	pmax		
	comp=Z,26nm,1.1s						
SKR				pmax	pmax		
	comp=Z,100nm,4.7s						
ESJX	**Sierra Juarez**	**80.14**	**48**	P	**P**	**20 43 35.7**	**-2.5**
ELS	**Elsinore Mount**	**80.16**	**46**	P	**P**	**20 43 36.9**	**-1.2**
MONP2	**Monument Peak**	**80.36**	**47**	P	**P**	**20 43 41.3**	**+2.0**
	baz=232						
YSS	**Yuzh-Sakhalins**	**80.51**	**333**	P	**P**	**20 43 38.7**	**-0.9**
YSS	**Yuzh-Sakhalins**	**80.51**	**333**	*e*P	**P**	**20 43 40.5**	**+1.0**
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
KMPM	**Mount Pierce**	**80.53**	**37**	P	**P**	**20 43 37.7**	**-2.3**
KMPM				IAmb	IAmb	20 43 47.9	
	comp=Z,35nm,1.2s						
YUH	**Yuha Desert**	**80.55**	**48**	P	**P**	**20 43 38.5**	**-1.6**
EDW2	**Edwards Air Fo**	**80.55**	**45**	P	**P**	**20 43 42.3**	**+2.1**
	baz=231						
KMRM	**Mail Ridge**	**80.63**	**38**	P	**P**	**20 43 40.6**	**+0.1**
KMRM				IAmb	IAmb	20 43 54.1	
	comp=Z,20nm,0.9s						
ISA	**Isabella, Lake**	**80.74**	**44**	P	**P**	**20 43 40.0**	**-1.2**
ISA				IAmb	IAmb	20 43 46.2	
	comp=Z,15nm,1.0s						
ISA	**Isabella, Lake**	**80.74**	**44**	P	**P**	**20 43 40.0**	**-1.2**
ISA				pmax	pmax		
	comp=Z,15nm,1.0s						
ISA	**Isabella, Lake**	**80.74**	**44**	P	**P**	**20 43 42.9**	**+1.7**
	baz=231						
PFO	**Pinyon Flats O**	**80.77**	**47**	*e*P	**P**	**20 43 43.2**	**+1.7**
	comp=Z,4.7nm,1.1s,baz=273,slow=1.9,SNR=6.7						
	comp=Z,4.7nm,1.1s						
PFO	**Pinyon Flats O**	**80.77**	**47**	P	**P**	**20 43 40.3**	**-1.1**
PFO	**Pinyon Flats O**	**80.77**	**47**	*i* P	**P**	**20 43 40.1**	**-1.4**
PFO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
PFO	**Pinyon Flats O**	**80.77**	**47**	P	**P**	**20 43 43.1**	**+1.6**
	baz=232						
TPFO	**Pinon Flats**	**80.77**	**47**	P	**P**	**20 43 43.1**	**+1.6**
	baz=232						
PEA0B	**Petropavlovsk-**	**80.78**	**344**	*i* P	**P**	**20 43 40.8**	**-0.1**
PETK	**Petropavlovsk-**	**80.78**	**344**	P	**P**	**20 43 41.1**	**+0.3**
	comp=Z,6.9nm,0.8s,baz=167,slow=10.0,SNR=10						
	comp=Z,6.9nm,0.8s						
PETK	**Petropavlovsk-**	**80.78**	**344**	P	**P**	**20 43 40.3**	**-0.6**
PETK	**Petropavlovsk-**	**80.78**	**344**	P	**P**	**20 43 40.3**	**-0.6**
SWSC	**Sam W. Stewart**	**80.81**	**47**	P	**P**	**20 43 43.2**	**+1.7**
	baz=233						
CMB	**Columbia Colle**	**81.08**	**41**	P	**P**	**20 43 42.2**	**-0.7**
CMB	**Columbia Colle**	**81.08**	**41**	P	**P**	**20 43 42.2**	**-0.7**
CMB				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LRMC	**Laurel Mtn Rad**	**81.13**	**44**	P	**P**	**20 43 45.4**	**+2.1**
	baz=231						
BELC	**Belle Mtn. Jos**	**81.31**	**47**	P	**P**	**20 43 46.2**	**+1.9**
	baz=233						
KSRS	**Korea Array**	**81.36**	**318**	P	**P**	**20 43 44.9**	**+0.6**
	comp=Z,2.7nm,0.9s,baz=160,slow=5.0,SNR=4.6						
	comp=Z,2.7nm,0.9s						
BC3	**Big Chuckawall**	**81.47**	**47**	P	**P**	**20 43 47.1**	**+1.9**
	baz=233						
GLA	**Glamis**	**81.53**	**48**	P	**P**	**20 43 45.3**	**-0.1**
GLA				IAmb	IAmb	20 43 48.9	
	comp=Z,28nm,1.4s						
GLA	**Glamis**	**81.53**	**48**	P	**P**	**20 43 45.3**	**-0.1**
GLA				pmax	pmax		
	comp=Z,28nm,1.4s						
GLA	**Glamis**	**81.53**	**48**	P	**P**	**20 43 47.5**	**+2.2**
	baz=234						
GSC	**Goldstone, Bar**	**81.58**	**45**	P	**P**	**20 43 44.4**	**-1.3**
GSC				IAmb	IAmb	20 43 53.2	
	comp=Z,13nm,1.1s						
GSC	**Goldstone, Bar**	**81.58**	**45**	P	**P**	**20 43 44.4**	**-1.3**
GSC				pmax	pmax		
	comp=Z,13nm,1.1s						
PIX	**Pinacate**	**81.59**	**50**	P	**P**	**20 43 44.4**	**-1.2**
MPMC	**Manual Prospec**	**81.61**	**44**	P	**P**	**20 43 47.8**	**+1.9**
	baz=231						
MDPB	**Devils Postpil**	**81.61**	**42**	P	**P**	**20 43 44.9**	**-1.1**
MDPB				IAmb	IAmb	20 45 33.7	
	comp=Z,9.5nm,0.5s						
OMMB	**Old Mammoth Mi**	**81.65**	**42**	IAmb	IAmb	20 43 53.8	
	comp=Z,25nm,1.6s						
H03S2	**Juan Fernandez**	**81.93**	**123**	T	T	22 14 50.4	
	baz=244,slow=74,SNR=5.1						
H03S1	**Juan Fernandez**	**81.95**	**123**	T	T	22 14 53.0	
	baz=244,slow=74,SNR=21						
H03S3	**Juan Fernandez**	**81.95**	**123**	T	T	22 14 52.3	
	baz=244,slow=74,SNR=18						
WAKR	**Walker**	**81.96**	**41**	P	**P**	**20 43 46.3**	**-1.4**
WAKR				IAmb	IAmb	20 44 01.4	
	comp=Z,25nm,1.3s						
IRM	**Iron Mountain**	**81.97**	**47**	P	**P**	**20 43 49.8**	**+2.1**
	baz=233						
GMRC	**Granite Mounta**	**82.01**	**46**	P	**P**	**20 43 50.1**	**+2.1**
	baz=233						
113A	**Mohawk Valley,**	**82.08**	**49**	P	**P**	**20 43 47.4**	**-0.8**
113A				IAmb	IAmb	20 43 51.5	
	comp=Z,16nm,1.5s						
DSP	**Deep Springs**	**82.13**	**43**	IAmb	IAmb	20 44 02.0	
	comp=Z,10nm,1.0s						
YBH	**Yreka Blue Hor**	**82.21**	**37**	P	**P**	**20 43 50.9**	**+2.1**
	comp=Z,2.8nm,0.7s,baz=185,slow=5.9,SNR=5.3						
	comp=Z,2.8nm,0.7s						
TUQ	**Turquoise Moun**	**82.23**	**45**	P	**P**	**20 43 50.9**	**+1.8**
	baz=232						
LCH	**Last Change Ra**	**82.24**	**43**	IAmb	IAmb	20 44 02.4	
	comp=Z,13nm,1.1s						
214A	**Organ Pipe Nat**	**82.27**	**50**	P	**P**	**20 43 51.7**	**+2.4**
	baz=235						
UGL	**Uglegorsk**	**82.47**	**334**	*e*P	**P**	**20 43 51.7**	**+1.8**
UGL				pmax	pmax		
	comp=Z,50nm,0.9s						
NVAR	**Mina Array Bea**	**82.59**	**42**	P	**P**	**20 43 52.9**	**+1.8**
	comp=Z,3.5nm,0.6s,baz=224,slow=7.6,SNR=1.4						
	comp=Z,3.5nm,0.6s						
PDMCI	**Parker Dam,Lak**	**82.72**	**47**	P	**P**	**20 43 54.2**	**+2.6**
	baz=234						
TPNV	**Topopah Spring**	**82.94**	**44**	P	**P**	**20 43 51.5**	**-1.4**
TPNV				IAmb	IAmb	20 44 00.7	
	comp=Z,28nm,1.6s						
TPNV	**Topopah Spring**	**82.94**	**44**	P	**P**	**20 43 51.5**	**-1.4**
TPNV				pmax	pmax		
	comp=Z,28nm,1.6s						
TPNV	**Topopah Spring**	**82.94**	**44**	P	**P**	**20 43 55.2**	**+2.3**
	baz=232						
V12A	**Nelson**	**83.10**	**46**	IAmb	IAmb	20 44 07.4	
	comp=Z,12nm,1.1s						
KVN	**Kaiserville**	**83.11**	**41**	P	**P**	**20 43 53.0**	**-0.8**
KVN				IAmb	IAmb	20 44 00.9	
	comp=Z,19nm,1.4s						
KVN	**Kaiserville**	**83.11**	**41**	P	**P**	**20 43 53.0**	**-0.8**
KVN				pmax	pmax		
	comp=Z,19nm,1.4s						
USA0B	**Ussuriysk Arra**	**83.55**	**325**	*i* P	**P**	**20 43 55.7**	**+0.1**
USRK	**Ussuriysk Ar.**	**83.55**	**325**	P	**P**	**20 43 56.7**	**+1.2**
	comp=Z,9.3nm,0.9s,baz=129,slow=3.4,SNR=8.1						
	comp=Z,9.3nm,0.9s						
MOD	**Modoc Plateau**	**83.66**	**38**	P	**P**	**20 43 56.2**	**-0.3**
MOD				IAmb	IAmb	20 44 09.5	
	comp=Z,16nm,1.1s						
SNAA	**Sanae**	**83.85**	**178**	P	**P**	**20 43 57.9**	**+0.9**
SNAA	**Sanae**	**83.85**	**178**	*i* P	**P**	**20 43 58.9**	**+1.9**
SNAA				pmax	pmax		
	comp=Z,12nm,1.0s						
K05A	**Summer Lake**	**83.88**	**37**	P	**P**	**20 43 55.9**	**-1.7**
TUC	**Tucson**	**83.88**	**50**	P	**P**	**20 43 56.3**	**-1.4**
TUC				IAmb	IAmb	20 44 01.4	
	comp=Z,16nm,1.3s						
TUC	**Tucson**	**83.88**	**50**	P	**P**	**20 43 56.3**	**-1.4**
TUC				pmax	pmax		
	comp=Z,16nm,1.3s						
TUC	**Tucson**	**83.88**	**50**	P	**P**	**20 43 59.7**	**+2.0**
	baz=236						
J05D	**Fort Rock, OR**	**84.06**	**37**	P	**P**	**20 43 57.0**	**-1.4**
NJ2	**Nanjing**	**84.13**	**309**	*e*P	**P**	**20 43 59.3**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PINE	**Pine Mountain**	**84.56**	**36**	IAmb	IAmb	20 44 14.4	
	comp=Z,20nm,1.1s						
PLCA	**Paso Flores**	**84.92**	**133**	LR	LR	21 12 37.1	
	comp=Z,114nm,21.5s,baz=206,slow=29						
MDJ	**Mudanjiang**	**85.09**	**324**	P	**P**	**20 44 04.3**	**+0.9**
MDJ				sP	PcP	20 44 08.4	+1.8
MDJ				PP	**PP**	**20 47 23.1**	**+1.9**
MDJ				SS	SS	21 00 12.5	+6.9
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,170nm,3.6s						
MDJ				LR	LR		
	comp=Z,260nm,18.8s						
Q12A	**Willow Creek R**	**85.10**	**43**	P	**P**	**20 44 02.8**	**-1.0**
Q12A				IAmb	IAmb	20 44 17.0	
	comp=Z,20nm,1.2s						
U15A	**North Rim**	**85.19**	**46**	IAmb	IAmb	20 44 18.5	
	comp=Z,17nm,1.0s						
I07A	**Izee**	**85.53**	**37**	P	**P**	**20 44 03.6**	**-2.2**
I07A				IAmb	IAmb	20 44 18.8	
	comp=Z,11nm,1.1s						
ELK	**Elko**	**85.88**	**42**	P	**P**	**20 44 09.3**	**+1.5**
	comp=Z,1.2nm,0.6s,baz=204,slow=4.2,SNR=5.5						
	comp=Z,1.2nm,0.6s						
GRNR	**Gornyy**	**86.12**	**332**	⇓*i*P	**P**	**20 44 09.2**	**+0.8**
GRNR				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MSU	**Marysvale**	**86.47**	**45**	P	**P**	**20 44 10.0**	**-0.7**
MSU	**Marysvale**	**86.47**	**45**	P	**P**	**20 44 10.0**	**-0.7**
CN2	**Changchun**	**86.84**	**322**	*e*P	**P**	**20 44 12.5**	**+0.4**
CN2				sP	pP	20 44 19.0	-0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BNX	**BinXian**	**87.00**	**324**	⇑P	**P**	**20 44 13.1**	**+0.3**
BNX				pmax	pmax		
	comp=Z,12nm,1.0s						
BNX				pmax	pmax		
	comp=Z,140nm,5.4s						
KLR	**Kul'dur**	**87.14**	**329**	*ce*P	**P**	**20 44 14.6**	**+1.2**
KLR				pmax	pmax		
	comp=Z,22nm,2.5s						
MNTX	**Cornudas Mount**	**87.43**	**53**	P	**P**	**20 44 17.2**	**+1.9**
	baz=239						
MNTX	**Cornudas Mount**	**87.43**	**53**	P	**P**	**20 44 16.6**	**+1.3**
	baz=239						
Y22A	**Socorro**	**87.45**	**51**	P	**P**	**20 44 17.0**	**+1.4**
	baz=238						
TX31	**Lajitas Ar. Si**	**87.51**	**56**	P	**P**	**20 44 16.3**	**+0.4**
	baz=240						
TXAR	**Lajitas Array**	**87.51**	**56**	P	**P**	**20 44 18.1**	**+2.2**
	comp=Z,1.8nm,1.0s,baz=210,slow=7.0,SNR=14						
	comp=Z,1.8nm,1.0s						
TIA	**Tai'an**	**87.60**	**312**	⇑P	**P**	**20 44 17.4**	**+1.4**
TIA				pmax	pmax		
	comp=Z,13nm,1.0s						
MA2	**Magadan**	**88.31**	**344**	P	**P**	**20 44 17.5**	**-1.2**
MA2	**Magadan**	**88.31**	**344**	*ce*P	**P**	**20 44 17.9**	**-0.8**
MA2				pmax	pmax		
	comp=Z,11nm,1.0s						
ANMO	**Albuquerque**	**88.34**	**50**	P	**P**	**20 44 21.1**	**+1.4**
	comp=Z,1.6nm,0.7s,baz=198,slow=9.6,SNR=6.3						
	comp=Z,1.6nm,0.7s						
ANMO	**Albuquerque**	**88.34**	**50**	P	**P**	**20 44 18.9**	**-0.9**
ANMO				IAmb	IAmb	20 44 24.9	
	comp=Z,21nm,1.6s						
ANMO	**Albuquerque**	**88.34**	**50**	*ce*P	**P**	**20 44 18.6**	**-1.2**
ANMO				pmax	pmax		
	comp=Z,24nm,2.5s						
ANMO	**Albuquerque**	**88.34**	**50**	P	**P**	**20 44 20.3**	**+0.5**
	baz=238						
BSUT	**Blindstream Ca**	**88.52**	**44**	IAmb	IAmb	20 44 33.8	
	comp=Z,10.0nm,1.0s						
S22A	**4UR Ranch, Cre**	**89.56**	**48**	IAmb	IAmb	20 44 39.0	
	comp=Z,23nm,1.5s						
CTG	**Chitna Glacier**	**89.71**	**16**	P	**P**	**20 44 27.2**	**+1.7**
	baz=211						
HNS	**HongShan**	**89.88**	**312**	⇑P	P	20 44 36.3	+10
HNS				pmax	pmax		
	comp=Z,17nm,1.7s						
HEH	**HeiHe**	**89.91**	**327**	*e*P	**P**	**20 44 26.0**	**-0.5**
HEH				S	S	20 55 27.3	+10
HEH				pmax	pmax		
	comp=Z,12nm,1.2s						
HEH				pmax	pmax		
	comp=Z,370nm,5.8s						
HEH				LR	LR		
	comp=Z,480nm,20.8s						
HEH				LR	LR		
	comp=Z,420nm,20.6s						
HEH				LR	LR		
	comp=Z,670nm,20.8s						
LYN	**LuoYang**	**89.98**	**308**	⇓P	**P**	**20 44 29.8**	**+2.6**
LYN				pP	pP	20 44 34.9	+0.3
LYN				pmax	pmax		
	comp=Z,13nm,0.7s						
TRF	**Thorofare Moun**	**90.03**	**11**	P	**P**	**20 44 27.8**	**+0.9**
	baz=203						
TNA	**Tin City**	**90.08**	**3**	P	**P**	**20 44 28.3**	**+1.4**
	baz=187						
MOOW	**Moose Ponds**	**90.35**	**41**	P	**P**	**20 44 29.3**	**+0.3**
SDCO	**Great Sand Dun**	**90.45**	**48**	P	**P**	**20 44 29.9**	**+0.1**
	baz=239						
GYA	**Guiyang**	**90.51**	**299**	⇑P	**P**	**20 44 34.1**	**+4.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.6s						
PD31	**Pinedale Array**	**90.52**	**42**	P	**P**	**20 44 29.3**	**-0.6**
PD31				IAmb	IAmb	20 47 25.5	
	comp=Z,15nm,1.6s						
PDAR	**Pinedale Array**	**90.52**	**42**	P	**P**	**20 44 30.8**	**+0.9**
	comp=Z,1.1nm,0.9s,baz=294,slow=4.7,SNR=7.8						
	comp=Z,1.1nm,0.9s						
SEY	**Seymchan**	**90.85**	**346**	*ce*P	**P**	**20 44 30.6**	**0.0**
SEY				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BOZ	**Bozeman (W)**	**90.88**	**39**	P	**P**	**20 44 33.4**	**+2.0**
	baz=235						
DLBC	**Dease Lake**	**91.01**	**22**	P	**P**	**20 44 30.8**	**-0.8**
	comp=Z,5.8nm,1.0s,baz=225,slow=7.1,SNR=2.1						
DLBC				LR	LR	21 16 18.6	
	comp=Z,171nm,21.6s,baz=286,slow=30						
	comp=Z,5.8nm,1.0s						
M29M	**Somme Creek**	**91.70**	**16**	P	**P**	**20 44 37.1**	**+2.4**
	baz=213						
ILAR	**Eielson Array**	**91.86**	**12**	P	**P**	**20 44 36.6**	**+1.4**
	comp=Z,2.8nm,0.8s,baz=222,slow=5.2,SNR=4.5						
	comp=Z,2.8nm,0.8s						
ZEA	**Zeya**	**92.24**	**330**	*e*P	P	20 44 42.3	+5.0
ZEA				*e*		20 44 55.7	
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
XAN	**Xi'an**	**92.30**	**306**	P	**P**	**20 44 39.0**	**+0.9**
XAN				pP	pP	20 44 45.4	-0.1
XAN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PHRA	**Phrae**	**92.38**	**289**	P	**P**	**20 44 37.5**	**-1.2**
RDOG	**Red Dog Mine**	**92.87**	**5**	P	**P**	**20 44 41.2**	**+1.3**
	baz=192						
NNA	**Nana**	**92.95**	**105**	LR	LR	21 18 13.6	
	comp=Z,112nm,19.5s,baz=232,slow=30						
KMI	**Kunming**	**93.09**	**296**	⇑P	**P**	**20 44 43.9**	**+1.7**
KMI				pmax	pmax		
	comp=Z,15nm,1.5s						
BILL	**Bilibino**	**93.34**	**353**	P	**P**	**20 44 41.2**	**-0.8**
BILL	**Bilibino**	**93.34**	**353**	*ce*P	**P**	**20 44 41.8**	**-0.2**
BILL				*i*		20 44 45.5	
BILL				*i*		20 44 51.5	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CMAR	**Chiang Mai Arr**	**93.47**	**289**	P	**P**	**20 44 44.2**	**+0.4**
	comp=Z,4.0nm,0.8s,baz=121,slow=3.3,SNR=16						
	comp=Z,4.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**93.47**	**289**	P	**P**	**20 44 42.7**	**-1.1**
CMAR	**Chiang Mai Arr**	**93.47**	**289**	*i* P	**P**	**20 44 47.0**	**+3.2**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHTO	**Chiang Mai**	**93.62**	**289**	P	**P**	**20 44 42.9**	**-1.6**
CHTO	**Chiang Mai**	**93.62**	**289**	P	**P**	**20 44 42.9**	**-1.6**
CHTO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ATAH	**Atahualpa**	**93.65**	**99**	LR	LR	21 16 51.2	
	comp=Z,190nm,21.6s,baz=252,slow=29						
HHC	**Hu-ho-hao-te**	**93.73**	**313**	*e*P	**P**	**20 44 44.1**	**-0.5**
HHC				pmax	pmax		
	comp=Z,23nm,0.8s						
HHC				pmax	pmax		
	comp=Z,260nm,6.9s						
PZH	**PanZhiHua**	**94.49**	**297**	P	**P**	**20 44 49.6**	**+1.1**
PZH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,4.4s						
LAO	**LASA Array**	**94.62**	**40**	P	**P**	**20 44 49.3**	**+0.7**
	baz=239						
BTO	**Baotou**	**94.64**	**313**	SS	SS	21 02 31.4	+7.0
BTO				pmax	pmax		
	comp=Z,29nm,0.8s						
BTO				pmax	pmax		
	comp=Z,540nm,4.4s						
BTO				LR	LR		
	comp=N,1µm,16.2s						
BTO				LR	LR		
	comp=E,2µm,18.8s						
BTO				LR	LR		
	comp=Z,2µm,25.5s						
BTO	**Baotou**	**94.64**	**313**	*e*P	**P**	**20 44 51.6**	**+2.8**
BTO				pP	**pP**	**20 44 56.5**	**+0.3**
BTO				sP	**sP**	**20 44 58.6**	**-0.2**
BTO				sS	**sS**	**20 56 12.3**	**-0.1**
BTO				pmax	pmax		
	comp=Z,28nm,1.1s						
BTO				LR	LR		
	comp=Z,1µm,16.2s						
BTO				LR	LR		
	comp=Z,2µm,18.2s						
BTO				LR	LR		
	comp=Z,2µm,21.2s						
RSSD	**Black Hills**	**94.65**	**43**	P	**P**	**20 44 47.5**	**-1.4**
RSSD				IAmb	IAmb	20 45 01.7	
	comp=Z,11nm,1.0s						
RSSD	**Black Hills**	**94.65**	**43**	P	**P**	**20 44 47.5**	**-1.4**
RSSD				pmax	pmax		
	comp=Z,11nm,1.0s						
RSSD	**Black Hills**	**94.65**	**43**	P	**P**	**20 44 48.9**	**0.0**
	baz=240						
CD2	**Chengdu**	**94.78**	**302**	*e*P	**P**	**20 44 49.6**	**0.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LVC	**Limon Verde**	**94.85**	**117**	LR	LR	21 18 12.6	
	comp=Z,137nm,20.1s,baz=228,slow=30						
JTS	**Las Juntas de**	**94.88**	**81**	LR	LR	21 17 05.1	
	comp=Z,96nm,21.9s,baz=282,slow=29						
TNCH	**TengChong**	**96.53**	**294**	*e*P	**P**	**20 44 57.9**	**0.0**
TNCH				pP	PcP	20 45 01.0	+3.0
TNCH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
YAK	**Yakutsk**	**96.71**	**337**	*i* P	**P**	**20 44 57.7**	**+0.2**
YAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LZH	**Lanzhou**	**96.94**	**306**	*e*P	**P**	**20 45 04.0**	**+4.6**
LZH				pP	sP	20 45 09.1	-0.3
LZH				sP	pwP	20 45 12.3	-0.4
LZH				pmax	pmax		
	comp=Z,14nm,1.6s						
INK	**Inuvik**	**97.68**	**15**	P	**P**	**20 45 02.5**	**+0.7**
	comp=Z,1.8nm,0.9s,baz=212,slow=6.2,SNR=3.3						
	comp=Z,1.8nm,0.9s						
YKA	**Yellowknife Ar**	**99.35**	**24**	P	**Pdif**	**20 45 10.4**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=235,slow=5.0,SNR=5.1						
	comp=Z,0.3nm,0.7s						
SONM	**Songino Array**	**100.23**	**318**	P	**Pdif**	**20 45 14.7**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=145,slow=4.6,SNR=4.8						
WMQ	**Urumqi**	**111.20**	**310**	*e*PKP	**PKiKP**	**20 50 01.0**	**-0.4**

WMQ				LR	LR		
	comp=Z,210nm,25.5s						
ZALV	Zalesovo Beam	115.01	320	PKP	PKiKP	20 50 07.5	-0.7
	comp=Z,0.4nm,0.4s,baz=5.2,slow=3.3,SNR=4.4						
NRIK	Noril'sk	115.16	337	i PKIKP	PKiKP	20 50 08.4	+0.3
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MKAR	Makanchi Array	115.54	312	PKP	PKPdf	20 50 08.6	-1.0
	comp=Z,0.8nm,0.7s,baz=81,slow=1.4,SNR=9.3						
KURK	Kurchatov	118.44	316c	i PKIKP	PKPdf	20 50 15.3	+0.4
KURK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BOSA	Boshof	123.37	202	PKP	PKiKP	20 50 27.9	+2.2
	comp=Z,4.2nm,1.0s,baz=139,slow=6.5,SNR=3.2						
KK31	Karatay Array	123.44	307	PKPdf	PKPdf	20 50 23.4	-1.4
KK31	Karatay Array	123.44	307	PKIKP	PKPdf	20 50 23.4	-1.4
KKAR	Karatay Array	123.44	307	PKPdf	PKPdf	20 50 23.6	-1.3
KKAR	Karatay Array	123.44	307	PKIKP	PKPdf	20 50 23.6	-1.3
BRVK	Borovoye	123.64	319	i PKIKP	PKPdf	20 50 25.1	+0.2
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ARU	Arti	129.78	324	i PKIKP	PKPdf	20 50 37.1	+0.6
ARU						20 52 47.6	
GEYT	Alibeck	132.73	300	PKP	PKiKP	20 50 45.2	+1.3
	comp=Z,1.9nm,0.5s,baz=346,slow=41,SNR=4.0						
ARCES	ARCESS Array B	133.33	350	PKP	PKPdf	20 50 44.0	+1.1
	comp=Z,6.2nm,0.9s,baz=343,slow=2.5,SNR=6.9						
ARCES	ARCESS Array B	133.33	350	PKIKP	PKPdf	20 50 44.0	+1.1
FINES	FINESS Array B	140.30	344	PKP	PKPdf	20 50 54.4	-1.6
	comp=Z,5.4nm,1.0s,baz=27,slow=0.6,SNR=4.4						
RAYN	Ar Rayn	142.47	277	⇑PKIKP	PKiKP	20 51 05.0	+0.8
KBZ	Khabaz	143.23	311	PKP	PKPdf	20 51 04.1	+2.4
	comp=Z,1.3nm,0.8s,baz=58,slow=2.8,SNR=4.2						
NOA	NORSAR Array B	143.28	354	PKP	PKPbc	20 50 59.4	+0.9
	comp=Z,0.8nm,0.8s,baz=2.7,slow=2.3,SNR=3.4						
KIV	Kislovodsk	143.30	311	i PKIKP	PKPdf	20 51 01.8	-0.3
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SHA1	Shidzhatmaz	143.39	311	i PKIKP	PKPdf	20 51 02.0	-0.4
LODK	Lodwar	143.41	240	PKPdf	PKPbc	20 51 00.6	+0.3
AKH	Akhalkalaki	143.48	307	PKPdf	PKPab	20 50 59.9	+1.1
AKH	Akhalkalaki	143.48	307	PKIKP	PKPab	20 50 59.9	+1.1
VIKU	Vikbolandet	145.01	349	eP	PKPbc	20 51 03.3	-0.5
ISAL	Salakas	145.17	338	eP	PKiKP	20 51 08.5	-0.2
MNK	Minsk	145.39	336	i PKiKP	PKPbc	20 51 05.9	+0.7
	comp=E,4.0nm,0.9s						
MNK				i PKiKP	PKPbc	20 51 05.9	+0.7
	comp=N,28nm,0.8s						
MNK				i PKiKP	PKPbc	20 51 05.9	+0.7
	comp=Z,50nm,1.0s,baz=220						
MNK				i PP	PP	20 54 21.1	-3.7
MNK				i PPP	PPP	20 57 33.8	
MNK				i SKS	SKSdf	20 58 10.6	-1.7
MNK				i SS	SS	21 13 13.4	-0.9
MNK				i SSS	SSS	21 18 40.2	
MNK				i LQ	LQ	21 48 18.2	
MNK				i LR	LR	21 52 01.0	
MNK				i LRM	MLR	21 55 26.6	
	comp=N,272nm,10.9s						
MNK				i LRM	MLR	21 55 37.5	
	comp=E,31nm,8.4s						
MNK				i LRM	MLR	21 55 45.3	
	comp=Z,237nm,9.0s						
MNK	Minsk	145.39	336	i PKIKP	PKPbc	20 51 05.8	+0.7
MNK				i		20 54 21.0	
MNK				i		20 58 10.6	
MNK				i SS	SS	21 13 13.4	-0.9
MNK				i SSS	SSS	21 18 40.1	
MNK				pmax	pmax		
	comp=N,28nm,0.8s						
MNK				pmax	pmax		
	comp=Z,50nm,1.0s						
MNK				pmax	pmax		
	comp=E,4.0nm,0.9s						
MNK				MLR	MLR		
	comp=N,272nm,11.0s						
MNK				MLR	MLR		
	comp=E,31nm,8.0s						
MNK				MLR	MLR		
	comp=Z,237nm,9.0s						
NACGM	Naroch	145.47	337	⇑i PKiKP	PKPdf	20 51 05.4	0.0
	comp=Z,99nm,0.9s,baz=37						
VSVD	Vaisvydziai	145.53	341	eP	PKPab	20 51 06.6	+0.9
PABE	Paberze	145.92	340	PKPdf	PKPdf	20 51 04.8	-1.2
PABE	Paberze	145.92	340	eP	PKPbc	20 51 07.3	+0.6
KOPT	Kop Dagi	146.04	306		PKPdf	20 51 06.2	-0.9
AKASG	Malin Array Be	147.63	330	PKPbc	PKPdf	20 51 11.1	+2.0
	comp=Z,4.4nm,0.6s,baz=32,slow=3.5,SNR=27						
AKASG	Malin Array Be	147.63	330		PKPdf	20 51 10.4	+1.3
AKASG	Malin Array Be	147.63	330	PKP2	PKPdf	20 51 10.4	+1.3
AKBB	Malin Array Si	147.63	330		PKPdf	20 51 10.0	+0.9
AKBB	Malin Array Si	147.63	330	PKP2	PKPdf	20 51 10.0	+0.9
SORM	Soroca	149.81	327	⇓P	PKPbc	20 51 17.8	+0.3
SORM	Soroca	149.81	327	⇓PKP2	PKPbc	20 51 17.8	+0.3
LVV	L'vov	150.52	334	ePKIKP	PKPdf	20 51 17.0	+3.2
BRTR	Keskin Array B	151.12	309	PKPbc	PKPbc	20 51 21.1	-0.1
	comp=Z,4.1nm,0.9s,baz=127,slow=2.3,SNR=14						
BRTR	Keskin Array B	151.12	309		PKPdf	20 51 17.9	+2.6
BRTR	Keskin Array B	151.12	309	PKIKP	PKPdf	20 51 17.9	+2.6
VLDR	Vladesti	151.46	324	⇓P	PKiKP	20 51 22.9	+1.0
TLCR		151.47	322	⇑P	PKPbc	20 51 21.0	-0.5
TLCR		151.47	322	⇑PKIKP	PKPbc	20 51 21.0	-0.5
BUR08	Bucovina Ar. S	151.66	329		PKPbc	20 51 21.3	-0.8
ANTO	Ankara	151.66	309		PKPdf	20 51 19.3	+3.3
ANTO	Ankara	151.66	309	PKIKP	PKPdf	20 51 19.3	+3.3
BURAR	Bucovina Array	151.67	329	⇓P	PKiKP	20 51 23.1	+0.6
BURAR	Bucovina Array	151.67	329		PKPbc	20 51 20.1	-2.0
BURAR	Bucovina Array	151.67	329	⇓PKIKP	PKiKP	20 51 23.1	+0.6
TESR	Tescani	151.76	326	⇑P	PKPbc	20 51 22.3	+0.1
CFR	Carcaliu	151.85	323	⇑P	PKPbc	20 51 22.2	-0.2
CFR	Carcaliu	151.85	323	⇑PKIKP	PKPbc	20 51 22.2	-0.2
TPGR	Topolog	151.89	322	⇓P	PKPbc	20 51 23.2	+0.7
STHS	Stebnicka Huta	151.92	336	ePKIKP	PKPbc	20 51 21.5	-1.0
STHS				e		20 51 31.9	
STHS	Stebnicka Huta	151.92	336	ePKP	PKPbc	20 51 21.5	-1.0
STHS				e		20 51 31.9	
VRI	Vrincioaia	152.16	325	⇓P	PKiKP	20 51 24.9	+1.5
VRI	Vrincioaia	152.16	325	⇓PKIKP	PKiKP	20 51 24.9	+1.5
PLOR	Plostina	152.21	325	⇑P	PKPbc	20 51 23.0	-0.3
PLOR	Plostina	152.21	325	⇑PKIKP	PKPbc	20 51 23.0	-0.3
BMR	Baia Mare	152.40	331	⇓P	PKiKP	20 51 26.6	+2.7
MANR	Mangalia	152.42	320	⇑P	PKPab	20 51 31.5	-2.4
OZUR		152.48	327	⇑P	PKPab	20 51 31.2	-3.0
OSTC	Ostas	152.51	343	⇑ePKP	PKPbc	20 51 23.9	+0.1
OSTC				ex	x	20 51 37.6	
OSTC	Ostas	152.51	343	ePKIKP	PKPbc	20 51 23.9	+0.1
CLL	Collm	152.52	348	ePKPbc	PKPbc	20 51 24.0	+0.3
	comp=Z,8.0nm,0.9s						
CLL				epPKPbc	sPKPdf	20 51 26.0	-0.9
CLL				ePKPab	sPKPbc	20 51 33.0	-0.9
CLL				i sPKPab	pPKPab	20 51 38.2	-3.3
CLL	Collm	152.52	348	ePKIKP	PKPbc	20 51 24.0	+0.3
CLL				e		20 51 33.0	
CLL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
UPC	Upice	152.60	344	⇑ePKP	PKPbc	20 51 24.5	+0.5
UPC				ePKPAB	sPKPbc	20 51 33.4	-0.7
UPC	Upice	152.60	344	ePKIKP	PKPbc	20 51 24.5	+0.5
UPC				e		20 51 33.4	
DPC	Dobruska-Polom	152.67	343	⇑ePKP	PKPbc	20 51 25.0	+0.8
DPC				epPKP	PKPab	20 51 37.8	+3.0
DPC	Dobruska-Polom	152.67	343	ePKIKP	PKPbc	20 51 25.0	+0.8
DPC				e		20 51 37.8	
NEHR	Nehoiu	152.68	325	⇑P	PKiKP	20 51 25.4	+0.9
BRG	Berggiesshubel	152.75	347	ePKP	PKiKP	20 51 25.2	+0.8
BRG				Amp		20 51 25.9	
	comp=Z,8.6nm,1.0s						
BRG	Berggiesshubel	152.75	347	P	PKPab	20 51 34.1	-0.9
BRG				Amp		20 51 35.7	
	comp=Z,15nm,1.3s						
BRG	Berggiesshubel	152.75	347	P	PKPab	20 51 37.8	+2.8
BRG				Amp		20 51 38.5	
	comp=Z,15nm,0.9s						
BRG	Berggiesshubel	152.75	347	ePKIKP	PKiKP	20 51 25.2	+0.8
BRG						20 51 34.0	
BRG						20 51 37.7	
BRG				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,15nm,1.3s						
BRG				pmax	pmax		
	comp=Z,15nm,0.9s						
LANS	Liptovska Anna	152.78	338	ePKIKP	PKPab	20 51 33.3	-2.0
KRLC	Kraliky	152.79	342	⇑ePKP	PKiKP	20 51 25.4	+0.8
KRLC				ePKPAB	sPKPbc	20 51 32.6	-2.0
KRLC	Kraliky	152.79	342	ePKIKP	PKiKP	20 51 25.4	+0.8
KRLC				e		20 51 32.6	
MLR	Muntele Rosu	152.81	325	⇑P	PKiKP	20 51 25.9	+1.0
MLR	Muntele Rosu	152.81	325	⇑PKIKP	PKiKP	20 51 25.9	+1.0
MORC	Moravsky Berou	152.84	341	⇑P	PKiKP	20 51 27.0	+2.3
MORC	Moravsky Berou	152.84	341	ePKP	PKPbc	20 51 25.0	+0.4
MORC	Moravsky Berou	152.84	341	⇑PKIKP	PKiKP	20 51 27.0	+2.3
PVCC	Panska Ves	152.93	346	⇑ePKP	PKiKP	20 51 26.8	+2.0
PVCC				ex	x	20 51 38.4	
PVCC	Panska Ves	152.93	346	ePKIKP	PKiKP	20 51 26.8	+2.0
PVCC				e		20 51 38.4	
SECR		153.06	325	⇓P	PKPbc	20 51 24.8	-0.4
VOIR		153.31	326	⇑P	PKiKP	20 51 27.3	+1.4
VOIR		153.31	326	⇑PKIKP	PKiKP	20 51 27.3	+1.4
MARR	Marisel-Cluj	153.33	330	⇑P	PKiKP	20 51 26.8	+0.9
DRGR		153.42	331	⇓P	PKPbc	20 51 26.8	+0.8
DRGR		153.42	331	⇓PKIKP	PKPbc	20 51 26.8	+0.8
VRAC	Vranov	153.54	342	⇑P	PKiKP	20 51 29.0	+2.8
VRAC	Vranov	153.54	342	ePKP	PKiKP	20 51 27.8	+1.6
VRAC	Vranov	153.54	342	⇓PKIKP	PKiKP	20 51 31.0	+4.8
VYHS	Vyhne	153.55	338	ePKP2	PKPab	20 51 39.4	+0.8
VYHS	Vyhne	153.55	338	ePKP	PKPab	20 51 39.4	+0.8
ARR	Arges	153.57	327	⇑P	PKiKP	20 51 27.6	+1.2
JAVC	Velka Javorina	153.62	340	ePKP	PKPbc	20 51 26.8	+0.5
NKC	Novy Kostel	153.65	348	ePKPAB	PKPab	20 51 39.1	+0.2
NKC	Novy Kostel	153.65	348	ePKP2	PKPab	20 51 39.1	+0.2
KRUC	Moravsky	153.82	342	ePKP	PKiKP	20 51 27.7	+1.0
BSZH	Besenyszg	154.04	335	⇑P	PKPdf	20 51 21.5	+2.4
GZR	Gura Zlata	154.45	329	⇓P	PKPbc	20 51 26.3	-1.9
GZR	Gura Zlata	154.45	329	⇓PKIKP	PKPbc	20 51 26.3	-1.9
KHC	Kasperske Hory	154.47	346	ePKPDF	PKPdf	20 51 22.1	+2.4
KHC				ePKPAB	sPKPbc	20 51 37.4	-0.9
KHC				ex	x	20 51 50.5	
KHC	Kasperske Hory	154.47	346	ePKIKP	PKPdf	20 51 22.1	+2.4
KHC				e		20 51 37.4	
SURR	Surduc	154.48	330	⇑P	PKPbc	20 51 28.3	+0.2
CKRC	Cesky Krumlov	154.59	344	⇑ePKP	PKPdf	20 51 24.4	+4.5
CKRC				ex	x	20 51 37.3	
CKRC	Cesky Krumlov	154.59	344	ePKIKP	PKPdf	20 51 24.4	+4.5
CKRC				e		20 51 37.3	
GERES	GERESS Array B	154.71	345	PKPbc	PKPbc	20 51 26.9	-1.8
	comp=Z,0.2nm,0.3s,baz=55,slow=3.9,SNR=2.8						
BZS	Buzias	154.81	331	⇑P	PKPbc	20 51 28.6	-0.3
BZS	Buzias	154.81	331	⇑PKIKP	PKPbc	20 51 28.6	-0.3
PLVB	Pleven	154.93	323	⇓P	PKiKP	20 51 37.5	+8.3
CONA	Conrad Observa	154.99	341	epPKP	pPKPdf	20 51 31.0	+2.8
	comp=Z,3.5nm,1.0s						
CONA				ePKP	PKPab	20 51 42.8	-2.0
	comp=Z,17nm,1.7s						
HERR	Herculane	155.00	328	⇑P	PKPdf	20 51 30.4	+10
RONA	Rosalia, Austr	155.07	341	epPKP	pPKPdf	20 51 31.3	+3.1
	comp=Z,7.1nm,1.7s						
RONA				ePKP	PKPab	20 51 42.7	-2.4
	comp=Z,13nm,1.2s						
MDVR	Moldovita	155.41	329	⇑P	PKPdf	20 51 32.3	+11
MOA	Molln	155.50	344	epPKiKP	PKPdf	20 51 34.3	+13
	comp=Z,3.9nm,1.3s						
MOA				ePKP	PKPab	20 51 45.3	-1.5
	comp=Z,15nm,1.4s						
BIOA	Bad Ischl, Aus	155.80	345	ePKP	PKPab	20 51 47.4	-0.8
	comp=Z,30nm,1.5s						
VTS	Vitosha	156.20	324	⇑P	PKPab	20 51 56.7	+6.5
VTS	Vitosha	156.20	324	⇑PKP2	PKPab	20 51 56.7	+6.5
WATA	Walderalm	156.60	347	epPKP	PKPab	20 51 52.6	+0.9
	comp=Z,16nm,1.4s						
WTTA	Wattenberg	156.65	347	epPKP	PKPab	20 51 52.6	+0.6
	comp=Z,6.4nm,1.0s						
MYKA	Terra Mystica	156.79	344	ePKP	PKPab	20 51 52.2	-0.3
	comp=Z,12nm,1.2s						
DAVA	Damuels	156.94	350	ePKP	PKPab	20 51 52.9	-0.4
	comp=Z,6.6nm,0.9s						
ABTA	Abfaltersbach	156.96	345	ePKP	PKPab	20 51 53.0	-0.2
	comp=Z,10nm,1.3s						
PRED	Cave del Predi	156.99	343	PKPdf	PKPdf	20 51 21.6	-1.6
PRED				PKPab	PKPab	20 51 50.9	-2.4
CLUD	Cludinico	157.14	345	PKPdf	PKPdf	20 51 21.9	-1.4
CLUD				PKPab	PKPab	20 51 52.5	-1.4
TRI	Trieste	157.61	342	PKPdf	PKPdf	20 51 21.9	-2.0
TRI				PKPab	PKPab	20 51 54.6	-1.3
TRI	Trieste	157.61	342	PKIKP	PKPdf	20 51 21.9	-2.0
TRI						20 51 54.7	
SENIN	Lac Senin/Sane	158.16	354	PKPdf	PKPdf	20 51 23.5	-1.4
SENIN				PKPab	PKPab	20 51 56.5	-2.1
LIT	Litokhoron	158.29	320	PKPdf	PKPdf	20 51 21.3	-3.6
LIT				PKPab	PKPab	20 51 56.1	-3.1
LIT	Litokhoron	158.29	320	PKP2	PKPab	20 51 56.1	-3.1
LIT						21 51 21.3	
DBIC	Dimbokro	160.11	152	PKP	PKPdf	20 51 26.4	-1.4
	comp=Z,2.6nm,0.9s,baz=159,slow=3.8,SNR=3.3						
ESDC	Sonseca Array	163.44	23	PKPab	PKPab	20 52 21.5	-0.1
	comp=Z,0.5nm,0.8s,baz=316,slow=5.4,SNR=2.8						
TORD	Torodi Ar. Bea	168.33	167	PKP	PKPdf	20 51 35.4	+0.3
	comp=Z,2.9nm,1.1s,baz=279,slow=0.7,SNR=6.2						
TORD				PKPab	PKPab	20 52 44.9	+1.4
	comp=Z,1.8nm,0.8s,baz=190,slow=2.1,SNR=4.8						

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*TEH **14** 20:42:56.7, 29.°25N×57.°14E, h100km, ML2.5*
*DSN **14** 20:42:59.7±0.8, 28.°83N×57.°30E, h15km, ML2.8/7, Error ellipse: s-maj=32.3km s-min=6.7km az=109.0*
*OMAN **14** 20:43:01.3±0.3, 28.°68N×57.°42E, h10km, mb5.1/3, ml3.0/8, Error ellipse: s-maj=7.5km s-min=4.1km az=306.0*
ISC 14 20:42:57.1±0.9**, 29.°02N**±0.°03×**57.°13E**±0.°06**, h10km, n41, σ1.s89**/60**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NGRK	Negar Kerman	0.71	330	Pg	Pn	20 43 14.1	+0.5
NGRK				Sg	Sn	20 43 26.4	+1.6
CHMN	Cheshme madani	0.91	23	Pg	Pg	20 43 15.1	+0.5
CHMN				Sg	Sb	20 43 28.7	+1.3
TVBK	TV Kerman	1.01	341	Pg	Pg	20 43 16.4	-0.3
KBAM	BAM	1.16	84	Pg	Pb	20 43 19.5	+0.2
KHNJ	Kahnooj	1.18	155	Pg	Pg	20 43 23.4	+3.6
KHGB	Koh Gabri	1.47	337	Pg	Pn	20 43 20.9	-2.9
IBND	Bandar-abas	1.65	199	Pn	Pb	20 43 28.2	+0.6
GENO	Geno	1.82	208	Pn	Pb	20 43 30.3	-0.4
IBAF	Bafgh	2.90	332	Pn	Pn	20 43 40.3	-3.1
SHME	Shamm	3.09	197	eP	Pn	20 43 46.4	+0.5
	SNR=19						
SHME				S	Sn	20 44 22.2	-0.7
SHME	Shamm	3.09	197	P	Pn	20 43 46.7	+0.8
	SNR=19						
SHME				S	Sn	20 44 22.3	-0.6
BANOM	Banah	3.17	194	i P	Pn	20 43 48.0	+0.9
	SNR=48						
BANOM	Banah	3.17	194	P	Pn	20 43 48.1	+1.0
	SNR=48						
BANOM				S	Sn	20 44 25.6	+0.5
MASF	Masafi	3.74	194	P	Pn	20 43 56.5	+1.7
	SNR=7.0						
MASF				S	Sn	20 44 39.1	+0.1
MSFE	Esma-Masafi	3.75	194	i P	Pn	20 43 56.2	+1.2
	SNR=7.0						
IKOO	Kooshah	3.75	25	Pn	Pn	20 43 51.1	-4.2
MDH	Madha	3.78	192	P	Pn	20 43 55.7	+0.2
MDH	Madha	3.78	192	P	Pn	20 43 55.8	+0.4
MDH				S	Sn	20 44 37.1	-3.0
UOSS	Minazif	4.14	192	P	Pn	20 44 00.0	-0.4
UOSS	Minazif	4.14	192	P	Pn	20 44 00.5	0.0
UOSS				S	Sn	20 44 46.7	-2.3
NAZ	Nazwa, Dubai	4.23	198	i P	Pn	20 44 01.7	+0.1
	SNR=7.7						
NAZ	Nazwa, Dubai	4.23	198	P	Pn	20 44 03.0	+1.5
	SNR=7.7						
NAZ				S	Sn	20 44 51.7	+0.7
HATD	Hatta, Dubai	4.27	192	P	Pn	20 44 05.4	+3.1
HATD				S	Sn	20 44 52.3	+0.1
ASHO	Ashiyiah	4.43	193	i P	Pn	20 44 04.8	+0.4
	SNR=16						
ASHO				S	Sn	20 44 55.7	-0.3
ASHO	Ashiyiah	4.43	193	P	Pn	20 44 05.2	+0.8
	SNR=16						
ASHO				S	Sn	20 44 56.5	+0.5
FAQ	Al Faqa, Dubai	4.48	198	i P	Pn	20 44 05.1	+0.1
	SNR=8.8						
FAQ	Al Faqa, Dubai	4.48	198	P	Pn	20 44 05.8	+0.8
	SNR=8.8						
FAQ				S	Sn	20 44 56.6	-0.6
ASUD	Al Ashush, Dub	4.67	201	i P	Pn	20 44 08.4	+0.8
	SNR=20						
ASUD	Al Ashush, Dub	4.67	201	P	Pn	20 44 08.9	+1.3
	SNR=20						
ASUD				S	Sn	20 45 01.2	-0.6
SOHO	SOHO	4.90	186	i P	Pn	20 44 10.0	-0.8
	SNR=6.4						
SOHO	SOHO	4.90	186	P	Pn	20 44 10.9	+0.1
SOHO				S	Sn	20 45 02.8	-4.7
ALNE	Al Ain	5.10	194	P	Pn	20 44 13.7	+0.1
ALNE				S	Sn	20 45 09.7	-2.9
HOQ	Hoqain	5.42	178	P	Pn	20 44 15.6	-2.4
ARQ	Araqi	5.69	186	P	Pn	20 44 23.3	+1.6
ARQ				S	Sn	20 45 27.3	+0.2
WSAR	Wadi Sarin	5.91	167	P	Pn	20 44 24.4	-0.4
	SNR=16						
WSAR				S	Sn	20 45 28.1	-4.6
SMDO	Samad	6.00	172	P	Pn	20 44 26.4	+0.4
SMDO				S	Sn	20 45 31.5	-3.3
MZWR	Madinat Zayed	6.00	210	P	Pn	20 44 24.8	-1.1
BSY	Bisya	6.25	179	P	Pn	20 44 31.5	+2.0
	SNR=10						
MHTO	MHTO	8.04	174	P	Pn	20 44 54.7	+0.8
MHTO				S	Sn	20 46 20.3	-4.6
WHFO	Wadi Hawf	11.47	196	P	Pn	20 45 37.7	-3.4
	SNR=14						
ABTO	Aybut	12.14	198	P	Pn	20 45 46.0	-4.2

ROM 14 20:50:06.6±0.1**, 42.°796N**±0.°002×**13.°238E**±0.°004**, h15km, ML0.9**/3**, 1D, Error ellipse: s-maj=0.2km s-min=0.2km az=264.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	Arquata del Tr	0.04	211	P	Pg	20 50 09.5	0.0
T1214				S	Sg	20 50 11.6	+0.1
T1245	Castelsantange	0.07	329	P	Pg	20 50 09.8	0.0
T1245				S	Sg	20 50 12.1	+0.2
T1245				AML	AML		
	comp=E,46µm,0.9s						
T1245				AML	AML		
	comp=N,81µm,0.4s						
MC2	Monte Cornacci	0.12	343	P	Pg	20 50 10.5	+0.1
MC2				S	Sb	20 50 13.4	-0.2
MMO1	Montemonaco	0.12	32	P	Pg	20 50 10.3	0.0
MMO1				S	Sg	20 50 13.0	+0.3
T1212	Cascia, Frazio	0.15	253	P	Pg	20 50 10.7	+0.2
T1212				S	Sb	20 50 13.8	-0.4
T1241	Roccafluvione,	0.15	67	P	Pg	20 50 10.7	+0.1
T1241				AML	AML		
	comp=E,177µm,0.2s						
T1241				AML	AML		
	comp=N,172µm,0.1s						
T1241				AML	AML		
	comp=E,177µm,0.2s						
T1218	Civita (PG)	0.15	216	P	Pg	20 50 10.8	+0.1
T1218				S	Sb	20 50 14.1	-0.3
T1216	Preci, Frazion	0.19	301	P	Pg	20 50 11.2	+0.1
T1216				S	Sb	20 50 14.7	-0.6
T1256	Bolognola (MC)	0.21	358	P	Pg	20 50 11.8	+0.2
T1256				S	Sg	20 50 15.5	+0.6
T1217	Poggiodomo (PG	0.24	250	P	Pg	20 50 12.1	+0.2
T1217				S	Sb	20 50 16.3	-0.6
T1217				AML	AML		
	comp=E,33µm,1.6s						
T1217				AML	AML		
	comp=N,28µm,1.6s						
T1217				AML	AML		
	comp=E,33µm,0.4s						
FDMO	Fiordimonte	0.27	335	P	Pg	20 50 12.5	+0.2
FDMO				S	Sb	20 50 17.0	-0.6
T1215	Vallo di Nera,	0.27	271	P	Pg	20 50 12.8	+0.4
T1215				S	Sb	20 50 17.4	-0.4
T1219	Muccia, Frazio	0.31	327	P	Pg	20 50 13.3	+0.2
T1219				S	Sb	20 50 18.4	-0.4
TERO	Teramo	0.32	123	⇓P	Pg	20 50 13.2	-0.1
T1220	Camerino, Fraz	0.33	341	P	Pg	20 50 09.9	-3.6

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*AEIC **14** 21:01:09.4±2.3, 52.°10N±0.°08×170.°41W±0.°09, h24km±4km, Error ellipse: s-maj=12.2km s-min=6.5km az=150.0*
*MOS **14** 21:01:09.4±0.8, 52.°24N×170.°60W, h41km, mb5.3/84, MS4.1/6, Error ellipse: s-maj=7.2km s-min=4.2km az=98.3*
*BJI **14** 21:01:10.1±0.0, 52.°34N×170.°69W, h57km, mb5.2/71, mB5.2/43, Ms4.8/26, Ms7 4.6/28*
*GCMT **14** 21:01:11.6±0.3, 52.°08N±0.°02×170.°35W±0.°02, h38km, MW5.0/101, Moment Tensor Solution. s65,c100; s101,c149; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.24±.16; $M_{\theta\theta}$-2.97±.12; $M_{\phi\phi}$-1.27±.11; $M_{r\theta}$1.61±.12; $M_{\theta\phi}$-1.81±.06; $M_{\phi r}$1.50±.09; Best double couple: $M_0$4.72300×10^{16} NP1:ϕ_s53.00000°, δ59.00000°, λ85.00000°. NP2:ϕ_s242.00000°, δ31.00000°, λ98.00000°. Principal axes: T 4.7980, Plg76.0000°, Azm309.0000°; N -0.1500, Plg4.0000°, Azm55.0000°; P -4.6480, Plg14.0000°, Azm146.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **14** 21:01:11.6±1.7, 52.°24N×170.°64W, h42km±14km, mb4.7/35, mbtmp4.9/39, ML4.5/4, MS4.2/70 Error ellipse: s-maj=13.1km s-min=8.3km az=163.0*
*NEIC **14** 21:01:12.7±1.5, 52.°28N±0.°07×170.°50W±0.°09, h54km±5km, mb5.1/246, ML4.9(AEIC), Error ellipse: s-maj=10.8km s-min=6.6km az=150.0*
*BGR **14** 21:01:16.3, 53.°50N×171.°50W, h33km, mb5.2*
ISC 14 21:01:11.9±0.3**, 52.°25N**±0.°04×**170.°64W**±0.°03**, h48km**±2km**, h48km:pP-P, n1217, σ1.s02**/1242**, mb5.2**/294**, MS4.3**/86**, 46C-39D, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLES	Cleveland East	0.73	38	Pn	Pn	21 01 24.5	-1.4
CLES				Sn	Sn	21 01 35.6	-0.5
NIKH	Nikolski High	1.30	56	Pn	Pn	21 01 31.1	-2.6
NIKH				Sn	Sn	21 01 45.8	-4.0
NIKH	Nikolski High	1.30	56	P	Pn	21 01 31.3	-2.3
	baz=236,SNR=87						
UNV	Unalaska Valle	2.96	56	Pn	Pn	21 01 55.0	-1.2
UNV	Unalaska Valle	2.96	56		Sn	21 02 28.8	-1.7
UNV	Unalaska Valle	2.96	56	P	Pn	21 01 55.6	-0.7
UNV	Unalaska Valle	2.96	56	P	Pn	21 01 55.3	-1.0
	baz=239,SNR=30						
GSTR	Great Sitkin T	3.34	269		Pn	21 02 03.0	+1.5
AKUT	Akutan	3.48	55	Pn	Pn	21 02 04.1	+0.7
AKUT	Akutan	3.48	55	P	Pn	21 02 05.2	+1.8
ADK	Adak	3.75	267	Pn	Pn	21 02 08.1	+1.0
ADK	Adak	3.75	267	P	Pn	21 02 08.8	+1.7
ADK	Adak	3.75	267	P	Pn	21 02 08.1	+1.0
KIWB	Kanaga Island	4.04	267	Pn	Pn	21 02 11.8	+0.7
SPIA	Saint Paul Isl	4.94	2	Pn	Pn	21 02 25.5	+2.1
SPIA	Saint Paul Isl	4.94	2	P	Pn	21 02 25.9	+2.5
SPIA	Saint Paul Isl	4.94	2	P	Pn	21 02 25.6	+2.2
	baz=182,SNR=46						
FALS	False Pass	5.03	56	Pn	Pn	21 02 25.8	+1.2
FALS	False Pass	5.03	56	P	Pn	21 02 27.3	+2.6
FALS	False Pass	5.03	56	P	Pn	21 02 26.8	+2.2
	baz=241						
S12K	Black Hills	6.13	52	P	Pn	21 02 40.3	+0.5
	baz=239						
AMKA	Amchitka	6.30	266	Pn	Pn	21 02 42.9	+0.8
SDPT	Sand Point	6.77	59	Pn	Pn	21 02 48.4	-0.1
SDPT	Sand Point	6.77	59	P	Pn	21 02 49.5	+1.0
SDPT	Sand Point	6.77	59	P	Pn	21 02 49.3	+0.8
	baz=247						
CHGN	Chignik	8.22	56	Pn	Pn	21 03 08.1	-0.2
CHGN	Chignik	8.22	56	P	Pn	21 03 08.9	+0.6
	baz=245						
R16K	Pilot Point	9.21	50	P	Pn	21 03 23.5	+1.7
	baz=240						
SHEM	Shemya Is, Ala	9.33	279	P	Pn	21 03 23.7	+0.2
	14nm,0.3s,baz=27,slow=3.7,SNR=12						
SHEM				LR	LR	21 06 51.7	
	comp=Z,1µm,20.6s,baz=88,slow=36						
	43nm,0.5s						
SMY	Shemya	9.33	279	Pn	Pn	21 03 24.1	+0.7
SMY	Shemya	9.33	279	P	Pn	21 03 24.2	+0.7
R17K	Ugashik Creek	9.81	51	P	Pn	21 03 30.3	+0.2
	baz=242						
P16K	Nushagak River	9.85	41	P	Pn	21 03 32.6	+2.0
	baz=232						
O16K	Kokwok River B	10.17	39	P	Pn	21 03 36.7	+1.8

	baz=229,SNR=31						
Q16K	King Salmon	10.21	45	P	Pn	21 03 37.0	+1.5
	baz=237						
Q17K	Contact Creek	10.34	49	P	Pn	21 03 38.2	+0.7
	baz=240						
N16K	Nishlik Lake	10.53	34	P	Pn	21 03 41.6	+1.6
	baz=223						
O17K	Koliganek Bris	10.67	40	P	Pn	21 03 43.4	+1.6
	baz=231,SNR=13						
Q18K	Katmai Hardscr	10.93	48	P	Pn	21 03 45.5	0.0
	baz=241						
P18K	Big Mountain,	11.21	44	Pn	Pn	21 03 50.0	+0.6
P18K	Big Mountain,	11.21	44	P	Pn	21 03 50.4	+1.0
	baz=237,SNR=9.6						
O18K	Koktuh Hills	11.48	42		Pn	21 03 55.0	+2.1
O18K	Koktuh Hills	11.48	42	P	Pn	21 03 53.7	+0.7
	baz=235,SNR=6.9						
Q19K	Cape Douglas,	11.69	48	Pn	Pn	21 03 55.2	-0.6
Q19K	Cape Douglas,	11.69	48	P	Pn	21 03 55.5	-0.3
	baz=242						
KDAK	Kodiak Island	11.73	55	P	Pn	21 03 54.5	-1.9
	1.7nm,0.3s,baz=253,slow=8.7,SNR=16						
	11nm,0.5s						
KDAK	Kodiak Island	11.73	55	Pn	Pn	21 03 53.8	-2.5
KDAK	Kodiak Island	11.73	55	*i* P	Pn	21 03 53.9	-2.4
SVW2	Sparrevohn	12.10	37	P	P	21 04 07.2	-5.7
Q20K	Shuyak Island	12.14	51	P	Pn	21 04 00.6	-1.3
	baz=246						
P19K	Oil Pt	12.22	46	P	Pn	21 04 04.7	+1.6
	baz=240						
N19K	Bonanza Creek	12.34	40	Pn	Pn	21 04 05.8	+1.1
N19K	Bonanza Creek	12.34	40	P	Pn	21 04 05.5	+0.8
	baz=233						
ANM	Nome	12.64	10	Pn	Pn	21 04 10.2	+1.4
ANM	Nome	12.64	10	P	Pn	21 04 10.2	+1.4
ANM	Nome	12.64	10	P	Pn	21 04 11.4	+2.6
	baz=195,SNR=43						
O20K	Slope Mountain	12.70	45	P	Pn	21 04 11.9	+2.3
	baz=240						
M19K	Big River Lodg	13.06	36		Pn	21 04 16.4	+1.9
M19K	Big River Lodg	13.06	36	P	Pn	21 04 15.7	+1.3
	baz=229,SNR=15						
L19K	White Mountain	13.08	34	P	Pn	21 04 14.8	+0.1
	baz=227						
TTA	Tatalina	13.23	30	Pn	Pn	21 04 17.4	+0.7
TTA	Tatalina	13.23	30	P	Pn	21 04 20.4	+3.6
TTA	Tatalina	13.23	30	P	Pn	21 04 17.5	+0.7
TTA	Tatalina	13.23	30	P	Pn	21 04 18.4	+1.6
	baz=222,SNR=22						
BRSE	Bradley Lake S	13.38	48	P	Pn	21 04 16.8	-2.1
	baz=244						
TNA	Tin City	13.42	5		Pn	21 04 21.2	+1.9
TNA	Tin City	13.42	5	P	Pn	21 04 21.9	+2.6
	baz=187,SNR=64						
SPCR	Spurr Chakacha	13.47	41	P	Pn	21 04 21.0	+0.9
	baz=236						
M20K	Styx River	13.51	38	P	Pn	21 04 20.6	0.0
	baz=232						
L20K	Farewell, AK	13.62	35	P	Pn	21 04 21.9	-0.2
	baz=229						
SEW	Seward	14.12	48		Pn	21 04 26.3	-2.6
SEW	Seward	14.12	48	P	Pn	21 04 26.5	-2.4
	baz=245						
K20K	Telida	14.15	32	P	Pn	21 04 31.2	+1.9
	baz=226,SNR=15						
O22K	Cooper Landing	14.16	46		Pn	21 04 28.5	-1.0
O22K	Cooper Landing	14.16	46	P	Pn	21 04 29.4	0.0
	baz=244						
SKT	Skwentna	14.17	39		Pn	21 04 30.4	+0.7
SKT	Skwentna	14.17	39	P	Pn	21 04 31.2	+1.6
	baz=235						
GCSA	Galena City Sc	14.39	24	P	Pn	21 04 31.6	-0.9
	baz=216						
RC01	Rabbit Creek A	14.44	44		Pn	21 04 31.1	-2.0
RC01	Rabbit Creek A	14.44	44	P	Pn	21 04 32.7	-0.4
	baz=241						
PPLA	Purkeypile	14.48	35		Pn	21 04 34.4	+0.6
PPLA	Purkeypile	14.48	35	P	Pn	21 04 34.9	+1.1
	baz=231,SNR=6.6						
CAST	Castle Rocks	14.85	34	P	Pn	21 04 40.1	+1.6
	baz=230,SNR=21						
CUT	Chulitna	14.90	39	P	Pn	21 04 40.7	+1.6
	baz=236						
PMR	Palmer	14.94	43	P	Pn	21 04 41.8	+2.2
PMR	Palmer	14.94	43	P	Pn	21 04 37.9	-1.7
	baz=241						
PWL	Port Wells	14.95	46		Pn	21 04 37.1	-2.7
PWL	Port Wells	14.95	46	P	Pn	21 04 38.3	-1.5
	baz=245						
CHUM	Lake Minchumin	15.08	32	P	Pn	21 04 43.4	+1.9
	baz=228,SNR=17						
KNK	Knik Glacier	15.14	44	P	Pn	21 04 42.8	+0.5
	baz=242,SNR=7.2						
KTH	Kantishna Hill	15.34	35		Pn	21 04 45.1	+0.1
SML	Sawmill	15.38	43		Pn	21 04 44.6	-0.8
SML	Sawmill	15.38	43	P	Pn	21 04 46.2	+0.7
	baz=241						
TRF	Thorofare Moun	15.50	36		Pn	21 04 47.7	+0.5
TRF	Thorofare Moun	15.50	36	P	Pn	21 04 48.2	+1.0
	baz=233						
M23K	Glacier View	15.62	43	P	Pn	21 04 49.1	+0.6
	baz=242,SNR=19						
BPAW	Bear Paw Mtn.	15.67	33		Pn	21 04 48.8	-0.3
BPAW	Bear Paw Mtn.	15.67	33	P	Pn	21 04 49.3	+0.2
	baz=230,SNR=34						
SCM	Sheep Creek Mo	15.81	44		Pn	21 04 49.1	-1.9
SCM				IAmb	IAmb	21 04 56.9	
	comp=Z,48nm,0.6s						
SCM	Sheep Creek Mo	15.81	44	P	Pn	21 04 49.1	-1.9
SCM				pmax	pmax		
	comp=Z,49nm,0.6s						
SCM	Sheep Creek Mo	15.81	44	P	Pn	21 04 50.9	-0.2
	baz=243						
I21K	Tanana	16.08	29	P	Pn	21 04 55.0	+0.7
I21K	Tanana	16.08	29	P	Pn	21 04 54.3	-0.1
	baz=225						
MCK	McKinley	16.16	36		Pn	21 04 55.0	-0.3
MCK	McKinley	16.16	36	P	Pn	21 04 55.1	-0.3
MCK				pmax	pmax		
	comp=Z,25nm,1.4s						
MCK	McKinley	16.16	36	P	Pn	21 04 54.2	-1.2
	baz=235						
IMAR	Indian Mountai	16.18	25	P	P	21 04 56.9	-1.2
H21K	Melozitna Rive	16.19	27	P	Pn	21 04 55.2	-0.6
	baz=222						
DIV	Divide	16.20	47		Pn	21 04 53.4	-2.6
KLU	Klutina	16.27	46		Pn	21 04 52.8	-4.1
KLU	Klutina	16.27	46	P	Pn	21 04 55.3	-1.6
	baz=246						
RDOG	Red Dog Mine	16.29	10	Pn	Pn	21 04 57.1	+0.2
RDOG	Red Dog Mine	16.29	10	P	P	21 04 59.0	-0.3
	baz=197,SNR=14						
MLY	Manley	16.36	31	P	Pn	21 04 58.3	+0.4
	baz=228,SNR=28						
M24K	Tolsona, Glenn	16.42	44		Pn	21 04 57.5	-1.2
M24K	Tolsona, Glenn	16.42	44	P	Pn	21 04 57.8	-0.9
	baz=244						
NEA2	Nenana	16.63	34	P	Pn	21 05 01.0	-0.3
	baz=232						
G21K	Allakaket	16.66	24	P	Pn	21 05 02.1	+0.5
	baz=219						
H22K	Ishtalitna Cre	16.77	28	P	Pn	21 05 03.7	+0.7
	baz=224						
I23K	Minto, Yukon-K	16.88	32	P	Pn	21 05 04.2	-0.1
	baz=230,SNR=17						
N25K	Chitina, Valde	16.90	46		Pn	21 05 02.1	-2.7
N25K	Chitina, Valde	16.90	46	P	Pn	21 05 03.7	-1.1
	baz=248,SNR=5.8						
HARP	HAARP	16.98	43	P	Pn	21 05 04.4	-1.2
	baz=245,SNR=6.2						
CCB	Clear Creek Bu	17.09	35		Pn	21 05 04.1	-2.9
PAX	Paxson	17.10	41	P	Pn	21 05 06.1	-1.1
	baz=243						
MDM	Murphy Dome	17.14	33		Pn	21 05 05.7	-1.9
GLB	Gilahina Butte	17.20	47		Pn	21 05 05.8	-2.6
COLA	College	17.21	34	P	P	21 05 11.2	+1.7
COLA	College	17.21	34	*i* P	Pn	21 05 07.8	-0.7
COLA				pmax	pmax		
	comp=Z,22nm,1.0s						
COLA	College	17.21	34	P	Pn	21 05 08.4	-0.1
	baz=233						
F21K	Alatna River	17.22	23	P	Pn	21 05 08.8	+0.2
	baz=218						
HDA	Harding Lake	17.26	36	P	Pn	21 05 08.0	-1.2
	baz=236						
H23K	Yukon River	17.27	30	P	Pn	21 05 08.8	-0.4
H23K	Yukon River	17.27	30	P	Pn	21 05 09.3	0.0
	baz=228						
VRDI	Verde Repeater	17.29	48		Pn	21 05 07.2	-2.5
K24K	Donnelly Dome	17.38	39	P	Pn	21 05 10.2	-0.4
	baz=240,SNR=7.0						
IL31		17.49	35		Pn	21 05 09.9	-2.0
ILAR	Eielson Array	17.49	35	P	Pn	21 05 10.3	-1.6
	comp=Z,0.6nm,0.3s,baz=223,slow=11,SNR=40						
ILAR				S	Sn	21 08 27.1	+1.6
	comp=Z,0.2nm,0.6s,baz=203,slow=21,SNR=0.8						
ILAR				PcP	PcP	21 09 50.2	+0.3
	comp=Z,2.6nm,0.5s,baz=294,slow=3.6,SNR=13						
ILAR				ScP	ScP	21 13 21.3	+0.6
	comp=Z,0.6nm,0.8s,baz=265,slow=3.1,SNR=3.7						
	comp=Z,3.1nm,0.6s						
ILAR	Eielson Array	17.49	35	P	Pn	21 05 10.7	-1.2
POKR	Poker Plat Res	17.50	34	P	Pn	21 05 11.6	-0.5
	baz=233						
MCARA	McCarthy VSAT	17.53	48		Pn	21 05 10.5	-1.9
MCARA	McCarthy VSAT	17.53	48	P	Pn	21 05 11.5	-1.0
	baz=251,SNR=8.3						
RIDG	Independent Ri	17.71	40	P	Pn	21 05 14.8	+0.1
	baz=241,SNR=8.4						
G23K	Bananza Creek	17.73	27	P	P	21 05 15.2	-0.1
	baz=225						
F22K	John River	17.76	24	P	P	21 05 15.5	0.0
	baz=219						
H24K	Noodor Dome	17.80	31	P	P	21 05 16.1	+0.1
	baz=231						
M26K	Nabesna, AK	17.90	45	P	Pn	21 05 15.5	-1.5
	baz=248,SNR=12						
DOT	Dot Lake	17.98	40	P	Pn	21 05 16.7	-1.3
L26K	Log Cabin Wild	18.00	43	P	Pn	21 05 17.2	-1.0
	baz=246,SNR=9.9						
COLD	Coldfoot	18.05	26	P	P	21 05 17.9	-0.9
COLD	Coldfoot	18.05	26	P	P	21 05 18.8	0.0
	baz=224						
SCRK	Sand Creek	18.16	39	P	P	21 05 18.8	-1.3
	baz=242,SNR=15						
CTG	Chitna Glacier	18.19	50	P	P	21 05 20.4	-0.1
	baz=254,SNR=9.7						
LOGN	Logan Glacier	18.31	50	P	P	21 05 21.6	-0.2
M27K	Edge Creek, AK	18.37	45	P	P	21 05 21.5	-1.0
	baz=250						
PRP	Porcupine Dome	18.39	34	P	P	21 05 22.1	-0.5
	baz=236,SNR=10						
G24K	Hadweenzic Riv	18.48	30	P	Pn	21 05 24.2	+0.3
	baz=230						
PCA	Pinnacle	18.50	53	P	P	21 05 24.1	+0.2
PINM	Pinnacle	18.51	53	P	Pn	21 05 24.5	0.0
	baz=258						
J26L	Joseph Creek	18.57	38	P	P	21 05 23.7	-0.8
	baz=241						
PET	Petropavlovsk	18.59	285	P	Pn	21 05 25.4	0.0
PET	Petropavlovsk	18.59	285	P	Pn	21 05 27.7	+2.3
	comp=Z,153nm,0.8s						
PET	Petropavlovsk	18.59	285	*e*P	Pn	21 05 27.7	+2.3
PET				*e*S	Sn	21 08 42.8	-9.3
PET				pmax	pmax		
	comp=Z,48nm,0.7s						
PET				pmax	pmax		
	comp=Z,300nm,5.2s						
PET				MLR	MLR		
	comp=Z,700nm,18.0s						
PET				MLR	MLR		
	comp=Z,800nm,16.0s						
L27K	Beaver Creek,	18.65	43	P	P	21 05 24.9	-0.5
	baz=248						
BCAR	Beaver Creek A	18.67	43	P	P	21 05 24.4	-1.2
O28M	Mount Upton	18.68	51	P	P	21 05 25.8	-0.2
	baz=256						
E23K	Chandalar	18.82	25	P	P	21 05 27.6	+0.4
	baz=223						
YUK3	Moose Creek	18.82	48	P	P	21 05 27.7	+0.2
	baz=253,SNR=18						
BVCY	Beaver Creek	18.84	46	P	P	21 05 27.5	+0.1
	baz=251						
PNL	Peninsula	18.85	55	P	Pn	21 05 30.5	+1.9
PNL	Peninsula	18.85	55	P	P	21 05 27.5	-0.1
	baz=261						
F24K	Squaw Lake	18.90	27	P	P	21 05 28.4	+0.3
	baz=227						
K27K	Chicken	18.93	40	P	P	21 05 28.0	-0.4
	baz=245						
G25K	Bearman Lake	18.94	31	P	P	21 05 28.3	-0.2
	baz=232						
YUK8	Steele Glacier	19.01	50	P	P	21 05 29.4	-0.2
	baz=256,SNR=11						
FYU	Fort Yukon	19.09	32	P	P	21 05 29.6	-0.6
I26K	Coal Creek Min	19.12	36	P	P	21 05 28.4	-2.0
	baz=240						
E24K	Your Creek	19.12	26	P	Pn	21 05 32.1	+0.3
	baz=225						
PEA0B	Petropavlovsk-	19.14	285	P	Pn	21 05 32.1	+0.1
PEA0B				IAmb	IAmb	21 05 35.0	
	comp=Z,76nm,0.8s						
PEA0B	Petropavlovsk-	19.14	285	*ce*P	Pn	21 05 32.4	+0.4
PETK	Petropavlovsk-	19.14	285	P	Pn	21 05 31.8	-0.3
	comp=Z,8.3nm,0.3s,baz=82,slow=14,SNR=84						
PETK				PcP	PcP	21 09 53.9	+1.0
	comp=Z,3.4nm,0.8s,baz=226,slow=7.7,SNR=4.3						
	comp=Z,47nm,0.6s						
PETK	Petropavlovsk-	19.14	285	P	P	21 05 31.4	+0.6
D23K	Nanushuk River	19.24	22	P	Pn	21 05 32.6	-0.5
	baz=219						
BILL	Bilibino	19.35	334	P	Pn	21 05 34.2	-0.2
BILL	Bilibino	19.35	334⇑	*e*P	Pn	21 05 34.7	+0.3
BILL				*i* S	Sn	21 09 14.0	+3.7
BILL				pmax	pmax		
	comp=Z,35nm,0.8s						
BILL				MLR	MLR		
	comp=Z,437nm,16.0s						
O29M	Mount Kennedy	19.37	53	P	P	21 05 33.3	-0.1
	baz=260						
YUK4	Talbot Arm	19.55	50	P	Pn	21 05 37.1	0.0
	baz=256,SNR=11						
YUK6	Outpost Mounta	19.59	51	P	P	21 05 36.2	+0.3
	baz=258,SNR=15						
F25K	Christian Rive	19.60	29	P	P	21 05 36.3	+0.6
	baz=231						
EGAK	Eagle	19.62	39	P	P	21 05 35.1	-0.8
EGAK	Eagle	19.62	39	P	P	21 05 35.4	-0.5
	baz=244,SNR=12						
G26K	Porcupine Rive	19.79	32	P	P	21 05 37.1	-0.6
	baz=235						
BMAR	Burnt Mountain	19.82	30	P	P	21 05 36.9	-1.3
I27K	Kandik River	19.82	36	P	P	21 05 38.1	-0.2
	baz=241						
M29M	Somme Creek	19.91	47	P	P	21 05 39.2	0.0
	baz=254						
E25K	Arctic Village	19.96	28	P	P	21 05 39.8	+0.2
	baz=230,SNR=17						
HYT	Haines Junctio	19.98	52	P	P	21 05 40.4	+0.4
HYT				IAmb	IAmb	21 05 44.1	
	comp=Z,157nm,0.8s						
HYT	Haines Junctio	19.98	52	P	Pn	21 05 42.0	-0.1
	baz=259,SNR=66						
DAWY	Dawson	20.03	42	P	P	21 05 39.6	-0.9
DAWY	Dawson	20.03	42	P	P	21 05 39.1	-1.4
	baz=248,SNR=6.4						
F26K	Sheenjek River	20.11	30	P	P	21 05 40.8	-0.5
	baz=233						
P30M	Million Dollar	20.14	54	P	P	21 05 40.6	-1.0
	baz=262						
A21K	Barrow	20.14	13	P	P	21 05 40.9	-0.7
A21K				IAmb	IAmb	21 05 56.2	
	comp=Z,69nm,1.1s						
A21K	Barrow	20.14	13	P	P	21 05 41.3	-0.2
	baz=205,SNR=9.0						
H27K	Steamboat Moun	20.16	35	P	P	21 05 40.9	-0.9
	baz=240						
L29M	L29M	20.25	45	P	P	21 05 42.6	-0.2
	baz=252						
C24K	Franklin Bluff	20.27	22	P	Pn	21 05 44.3	-1.0
	baz=221						
N30M	Aishikik Lake	20.30	50	P	P	21 05 44.6	+1.1
	baz=258						
S31K	Pelican	20.33	60	P	P	21 05 44.5	+0.8
	baz=268						
PLBC	Pleasant Camp	20.36	56	P	P	21 05 44.7	+0.7
	baz=264,SNR=18						
G27K	Doyon Strip	20.41	33	P	P	21 05 44.7	+0.1
	baz=238						
D25K	Kavik River	20.55	25	P	Pn	21 05 47.9	-0.7
	baz=226						
O30N	Mendenhall	20.66	52	P	P	21 05 48.2	+1.0
	baz=261,SNR=11						
M30M	Minto, Yukon	20.69	47	P	P	21 05 48.3	+0.7
	baz=256						
K29M	Barlow Dome	20.73	43	P	P	21 05 48.4	+0.3
	baz=251						
SKAG	Skagway	20.88	56	P	P	21 05 50.0	+0.4
SKAG				IAmb	IAmb	21 05 52.1	
	comp=Z,98nm,0.9s						
SKAG	Skagway	20.88	56	P	P	21 05 50.9	+1.3
SKAG	Skagway	20.88	56	P	P	21 05 51.1	+1.5
	baz=265,SNR=14						
N31M	Braeburn, Yuko	20.93	50	P	P	21 05 50.0	-0.1
N31M	Braeburn, Yuko	20.93	50	P	P	21 05 50.5	+0.3
	baz=260,SNR=8.9						
I29M	Ogilvie Camp,	20.96	39	P	P	21 05 50.3	-0.2
	baz=247						
E27K	Coleen River	21.18	30	P	P	21 05 53.1	+0.2
	baz=236						
R32K	Eaglecrest	21.25	59	P	P	21 05 53.6	0.0
	baz=269						
C26K	Camden Bay	21.33	24	P	P	21 05 55.0	+0.6
	baz=227						
C27K	Jago River	21.45	26	P	P	21 05 56.2	+0.5
	baz=229						
M31M	Drury Creek, Y	21.70	49	P	P	21 05 57.0	-1.5
M31M	Drury Creek, Y	21.70	49	P	P	21 05 58.6	+0.1
	baz=259						
P32M	Atlin	21.71	56	P	P	21 05 59.2	+0.6
	baz=267,SNR=8.1						
EPYK	Eagle Plains	21.96	37	P	P	21 05 59.3	-1.9
EPYK				IAmb	IAmb	21 06 05.4	
	comp=Z,32nm,0.6s						
EPYK	Eagle Plains	21.96	37	P	P	21 05 59.9	-1.3
	baz=246,SNR=23						
T33K	Petersburg	22.14	63	P	P	21 06 04.2	+1.2
	baz=274						
SEY	Seymchan	22.18	313	P	P	21 06 04.4	+0.9
	comp=Z,44nm,0.9s,baz=104,slow=9.9,SNR=56						
SEY				PcP	PcP	21 09 58.8	+0.4
	comp=Z,5.2nm,0.5s,baz=131,slow=3.6,SNR=6.1						
SEY				LR	LR	21 14 41.9	
	comp=Z,779nm,19.7s,baz=124,slow=36						
	comp=Z,44nm,0.9s						
SEY	Seymchan	22.18	313	*ce*P	P	21 06 03.9	+0.4
SEY				pmax	pmax		
	comp=Z,34nm,0.8s						
FARO	Faro, Yukon	22.19	49	P	P	21 06 04.4	+0.7
	baz=260,SNR=6.7						
P33M	Teslin, Yukon	22.20	54	P	P	21 06 04.8	+0.8
	baz=266,SNR=15						
G30M	tAoh Zraii Nji	22.39	36	P	P	21 06 05.8	0.0
	baz=246						
Q32M	Nakina River	22.43	57	P	P	21 06 07.1	+0.6
	baz=269						
WRAK	Wrangell Islan	22.50	64	P	P	21 06 07.4	+0.4
	baz=276						
MA2	Magadan	22.56	304	P	P	21 06 09.5	+1.9
	comp=Z,52nm,0.8s,baz=84,slow=9.4,SNR=57						
	comp=Z,52nm,0.8s						
MA2	Magadan	22.56	304	P	P	21 06 08.4	+0.7
MA2				IAmb	IAmb	21 06 11.5	
	comp=Z,60nm,0.9s						
MA2	Magadan	22.56	304	P	P	21 06 10.5	+2.8
MA2	Magadan	22.56	304	*ce*P	P	21 06 07.8	+0.1
MA2				pmax	pmax		
	comp=Z,83nm,1.0s						
V35K	Ketchikan	23.05	67	P	P	21 06 13.1	+0.4
	baz=279						
S34M	Telegraph Cree	23.05	60	P	P	21 06 12.7	0.0
	baz=273,SNR=12						
MMPY	Sheldon Lake,	23.21	48	P	P	21 06 14.7	+0.4
	baz=262,SNR=24						
F31M	Tsiigehtchic	23.46	36	P	P	21 06 16.0	-0.5
	baz=248,SNR=12						
T35M	Bob Quinn	23.60	62	P	P	21 06 19.0	+0.9
	baz=276,SNR=5.1						
DLBC	Dease Lake	23.61	59	P	P	21 06 20.1	+1.9
	comp=Z,44nm,0.8s,baz=273,slow=10,SNR=46						
DLBC				PcP	PcP	21 10 03.1	+1.5
	comp=Z,3.6nm,0.7s,baz=141,slow=9.9,SNR=2.7						
	comp=Z,44nm,0.8s						
DLBC	Dease Lake	23.61	59	P	P	21 06 19.0	+0.8
DLBC				IAmb	IAmb	21 06 22.8	
	comp=Z,52nm,0.9s						
DLBC	Dease Lake	23.61	59	P	P	21 06 20.6	+2.4
	baz=272,SNR=21						
INK	Inuvik	23.87	34	P	P	21 06 19.1	-1.4
	comp=Z,12nm,0.4s,baz=242,slow=8.3,SNR=94						
INK				PcP	PcP	21 10 02.9	+1.1
	comp=Z,8.3nm,0.5s,baz=126,slow=0.5,SNR=11						
	comp=Z,12nm,0.4s						
INK	Inuvik	23.87	34	P	P	21 06 18.9	-1.5
INK	Inuvik	23.87	34	P	P	21 06 20.4	+0.1
	baz=246,SNR=27						
LIRD	Liard River Hi	25.59	56	P	P	21 06 38.4	+2.2
	baz=274,SNR=6.4						
BBB	Bella Bella	25.78	73	PcP	PcP	21 10 04.2	-2.1
	comp=Z,76nm,1.1s,baz=140,slow=2.4,SNR=3.6						
KOTAN	Kotaneelee Air	26.58	54	P	P	21 06 47.1	+2.0
	baz=274,SNR=12						
WRGLY	Wrigley	26.82	47	P	P	21 06 47.2	+0.1
	baz=268						
C36M	Paulatuk	27.46	34	P	P	21 06 52.8	0.0
	baz=255						
A36M	Sachs Harbour	27.88	28	P	P	21 06 55.3	-1.3
A36M	Sachs Harbour	27.88	28	P	P	21 06 56.1	-0.5
	baz=249,SNR=7.3						
LLLB	Lillooet	29.99	73	P	P	21 07 16.7	+1.1
YSS	Yuzh-Sakhalins	30.24	279	*e*P	P	21 07 18.2	+0.4
YSS				*e*S	S	21 12 09.4	-4.4
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS				MLR	MLR		
	comp=Z,300nm,19.0s						
HILA	High Level	30.36	57	P	P	21 07 19.2	+0.4
YKA	Yellowknife Ar	30.90	49	P	P	21 07 23.8	+0.4
	comp=Z,4.1nm,0.6s,baz=270,slow=7.9,SNR=90						
YKA				PcP	PcP	21 10 19.9	+1.1
	comp=Z,3.5nm,0.7s,baz=278,slow=2.4,SNR=14						
YKA				ScP	ScP	21 13 57.8	+0.5
	comp=Z,0.8nm,0.8s,baz=281,slow=2.7,SNR=5.9						
YKA				LR	LR	21 21 07.5	
	comp=Z,404nm,18.8s,baz=308,slow=39						
	comp=Z,4.1nm,0.6s						
JKA	Kamikawa-asahi	31.74	274	P	P	21 07 31.5	+0.5
JKA				IAmb	IAmb	21 07 36.1	
	comp=Z,36nm,1.0s						
ASAJ	Asahikawa	31.74	274	LR	LR	21 18 52.2	
	comp=Z,475nm,21.9s,baz=73,slow=33						
ASAJ	Asahikawa	31.74	274	P	P	21 07 31.5	+0.5
ASAJ				pmax	pmax		
	comp=Z,36nm,1.0s						
GRNR	Gornyy	32.38	289⇑	*i*P	P	21 07 36.4	-0.2
GRNR				pmax	pmax		
	comp=Z,20nm,1.0s						
GRNR				MLR	MLR		
	comp=N,350nm,15.0s						
GRNR				MLR	MLR		
	comp=E,250nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,320nm,16.0s						
TIXI	Tiksi	32.44	329	P	P	21 07 36.9	+0.1
	comp=Z,1.2nm,0.3s,baz=270,slow=23,SNR=9.9						
TIXI				LR	LR	21 20 56.9	
	comp=Z,333nm,21.8s,baz=101,slow=36						
	comp=Z,1.2nm,0.3s						
TIXI	Tiksi	32.44	329	P	P	21 07 36.9	+0.1
TIXI	Tiksi	32.44	329	*ce*P	P	21 07 36.6	-0.2
TIXI				pmax	pmax		
	comp=Z,10.0nm,2.5s						
ERM	Erimo	32.54	270	P	P	21 07 39.0	+1.0
ERM	Erimo	32.54	270	P	P	21 07 39.7	+1.7
ERM	Erimo	32.54	270	*ce*P	P	21 07 38.7	+0.7
ERM				pmax	pmax		
	comp=Z,82nm,1.3s						
ERM	Erimo	32.54	270	P	P	21 07 38.8	+0.7
JEM	Erimo	32.54	270	P	P	21 07 39.2	+1.2
YAK	Yakutsk	32.66	311	P	P	21 07 38.2	-0.7
YAK				IAmb	IAmb	21 07 39.9	
	comp=Z,54nm,0.7s						
YAK	Yakutsk	32.66	311	*e*P	P	21 07 38.5	-0.4
YAK				*e**PP	pP	21 07 49.8	-1.5
YAK				*e*		21 10 23.0	
YAK				*e*S	S	21 12 50.2	-1.1
YAK				*e*SS	SnSn	21 14 55.9	+6.6
YAK				*e*		21 18 02.0	
YAK				pmax	pmax		
	comp=Z,71nm,1.0s						

YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,22nm,1.2s						
YAK				pmax	pmax		
	comp=Z,130nm,6.2s						
YAK				pmax	pmax		
	comp=N,153nm,6.7s						
YAK				pmax	pmax		
	comp=E,109nm,6.4s						
YAK				smax	smax		
	comp=E,108nm,5.8s						
YAK				smax	smax		
	comp=N,41nm,4.4s						
YAK				MLR	MLR		
	comp=Z,496nm,24.0s						
YAK				MLR	MLR		
	comp=N,155nm,24.0s						
YAK				MLR	MLR		
	comp=E,166nm,18.0s						
YAK	**Yakutsk**	**32.66**	**311**	P	**P**	**21 07 38.8**	**0.0**
HAWA	**Hanford**	**33.23**	**79**	P	**P**	**21 07 43.3**	**-0.8**
HAWA				IAmb	IAmb	21 08 01.5	
	comp=Z,18nm,1.1s						
C09A	**Chrisman Ranch**	**33.32**	**76**	P	**P**	**21 07 44.4**	**-0.5**
C09A				IAmb	IAmb	21 08 02.6	
	comp=Z,65nm,1.9s						
YBH	**Yreka Blue Hor**	**33.76**	**89**	LR	LR	21 18 42.6	
	comp=Z,438nm,18.8s,baz=306,slow=31						
NEW	**Newport**	**33.79**	**75**	LR	LR	21 20 57.7	
	comp=Z,222nm,18.5s,baz=285,slow=35						
NEW	**Newport**	**33.79**	**75**	P	**P**	**21 07 49.4**	**+0.4**
NEW				IAmb	IAmb	21 07 51.0	
	comp=Z,19nm,0.9s						
NEW	**Newport**	**33.79**	**75**	P	**P**	**21 07 49.4**	**+0.4**
NEW				pmax	pmax		
	comp=Z,19nm,0.9s						
NEW	**Newport**	**33.79**	**75**	P	**P**	**21 07 49.6**	**+0.6**
	baz=297,SNR=16						
K05A	**Summer Lake**	**34.32**	**86**	P	**P**	**21 07 54.6**	**+0.9**
K05A				IAmb	IAmb	21 08 18.9	
	comp=Z,15nm,0.9s						
JTM	**Tenmabayashi**	**34.53**	**270**	P	**P**	**21 07 55.1**	**-0.3**
KLR	**Kul'dur**	**35.76**	**289**	LR	LR	21 23 10.1	
	comp=Z,484nm,19.5s,baz=74,slow=37						
KLR	**Kul'dur**	**35.76**	**289**	*ce*P	**P**	**21 08 05.3**	**-0.6**
KLR				pmax	pmax		
	comp=Z,20nm,1.0s						
PLID	**Pearl Lake**	**36.03**	**79**	P	**P**	**21 08 06.6**	**-1.9**
ZEA	**Zeya**	**36.36**	**298**	*e*P	**P**	**21 08 10.6**	**-0.4**
ZEA				*e*		21 08 19.3	
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MSO	**Missoula**	**36.37**	**75**	P	**P**	**21 08 10.9**	**-0.4**
MSO	**Missoula**	**36.37**	**75**	P	**P**	**21 08 12.0**	**+0.7**
	baz=300,SNR=5.7						
JMM	**Marumori**	**36.48**	**266**	P	**P**	**21 08 12.2**	**0.0**
RES	**Resolute Bay**	**36.81**	**25**	LR	LR	21 25 45.1	
	comp=Z,246nm,20.6s,baz=216,slow=40						
RES	**Resolute Bay**	**36.81**	**25**	P	**P**	**21 08 14.0**	**-0.5**
RES	**Resolute Bay**	**36.81**	**25**	P	**P**	**21 08 14.0**	**-0.5**
RES				pmax	pmax		
	comp=Z,12nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**36.88**	**217**	T	T	21 47 33.7	
	baz=22,slow=76,SNR=41						
H11N3	**WAKE ISLAND Hy**	**36.89**	**217**	T	T	21 47 38.0	
	baz=22,slow=76,SNR=218						
H11N1	**WAKE ISLAND Hy**	**36.90**	**217**	T	T	21 47 32.5	
	baz=22,slow=76,SNR=44						
HEH	**HeiHe**	**37.78**	**292**	*e*P	**P**	**21 08 21.8**	**-1.2**
HEH				PcP	**PcP**	**21 10 38.8**	**0.0**
HEH				pmax	pmax		
	comp=Z,77nm,0.8s						
HEH				LR	LR		
	comp=Z,440nm,15.9s						
HEH				LR	LR		
	comp=Z,430nm,15.5s						
HEH				LR	LR		
	comp=Z,650nm,16.2s						
HLID	**Hailey**	**37.81**	**80**	P	**P**	**21 08 23.5**	**0.0**
HLID	**Hailey**	**37.81**	**80**	P	**P**	**21 08 23.8**	**+0.2**
	baz=304						
JSD	**Sado**	**37.93**	**269**	P	**P**	**21 08 24.4**	**0.0**
MCMT	**McKenzie Canyo**	**38.06**	**78**	P	**P**	**21 08 26.3**	**+0.5**
H11S1	**WAKE ISLAND Hy**	**38.08**	**216**	T	T	21 49 05.1	
	baz=22,slow=76,SNR=599						
H11S2	**WAKE ISLAND Hy**	**38.09**	**216**	T	T	21 49 01.1	
	baz=22,slow=76,SNR=605						
H11S3	**WAKE ISLAND Hy**	**38.09**	**216**	T	T	21 49 04.4	
	baz=22,slow=76,SNR=323						
USA0B	**Ussuriysk Arra**	**38.15**	**281**	*i* P	**P**	**21 08 25.2**	**-1.0**
USRK	**Ussuriysk Ar.**	**38.15**	**281**	P	**P**	**21 08 25.1**	**-1.1**
	comp=Z,6.2nm,0.7s,baz=56,slow=6.1,SNR=8.7						
USRK				PcP	**PcP**	**21 10 41.3**	**+1.3**
	comp=Z,9.4nm,0.8s,baz=59,slow=6.0,SNR=8.1						
USRK				LR	LR	21 23 06.8	
	comp=Z,228nm,21.4s,baz=68,slow=34						
	comp=Z,6.2nm,0.7s						
USRK	**Ussuriysk Ar.**	**38.15**	**281**	P	**P**	**21 08 25.4**	**-0.8**
USRK	**Ussuriysk Ar.**	**38.15**	**281**	P	**P**	**21 08 25.4**	**-0.8**
KVN	**Kaiserville**	**38.18**	**89**	P	**P**	**21 08 27.3**	**+0.5**
KVN	**Kaiserville**	**38.18**	**89**	P	**P**	**21 08 27.3**	**+0.5**
KVN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
EGMT	**Eagleton**	**38.24**	**71**	P	**P**	**21 08 26.9**	**-0.1**
EGMT				IAmb	IAmb	21 08 28.9	
	comp=Z,33nm,0.8s						
EGMT	**Eagleton**	**38.24**	**71**	P	**P**	**21 08 27.7**	**+0.7**
	baz=300,SNR=21						
BOZ	**Bozeman (W)**	**38.38**	**76**	P	**P**	**21 08 28.5**	**+0.2**
BOZ				IAmb	IAmb	21 08 29.5	
	comp=Z,8.2nm,0.6s						
BOZ	**Bozeman (W)**	**38.38**	**76**	P	**P**	**21 08 28.5**	**+0.2**
BOZ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BOZ	**Bozeman (W)**	**38.38**	**76**	P	**P**	**21 08 29.1**	**+0.7**
	baz=302,SNR=10.0						
NVAR	**Mina Array Bea**	**38.44**	**90**	P	**P**	**21 08 29.7**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=318,slow=8.6,SNR=8.3						
NVAR				PcP	**PcP**	**21 10 42.1**	**+0.7**
	comp=Z,2.0nm,0.8s,baz=290,slow=4.1,SNR=3.9						
NVAR				ScP	**ScP**	**21 14 24.4**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=283,slow=5.7,SNR=6.6						
NVAR				LR	LR	21 21 58.5	
	comp=Z,340nm,18.5s,baz=300,slow=32						
MJAR	**Matsushiro Arr**	**38.91**	**267**	P	**P**	**21 08 31.7**	**-1.1**
	comp=Z,4.9nm,0.5s,baz=48,slow=7.2,SNR=10.0						
MJAR				PcP	**PcP**	**21 10 43.4**	**+0.8**
	comp=Z,11nm,0.9s,baz=74,slow=2.0,SNR=10						
MJAR				LR	LR	21 22 43.5	
	comp=Z,349nm,20.5s,baz=54,slow=33						
	comp=Z,4.9nm,0.5s						
MAJO	**Matsushiro**	**38.91**	**267**	P	**P**	**21 08 32.4**	**-0.3**
MAJO				IAmb	IAmb	21 08 34.6	
	comp=Z,29nm,0.8s						
MAJO	**Matsushiro**	**38.91**	**267**	P	**P**	**21 08 33.9**	**+1.2**
MAJO	**Matsushiro**	**38.91**	**267**	*i* P	**P**	**21 08 33.1**	**+0.4**
MAJO				pmax	pmax		
	comp=Z,27nm,1.0s						
MJB9	**Matsu-Tunnel**	**38.91**	**267**	P	**P**	**21 08 33.0**	**+0.2**
MJB9				IAmb	IAmb	21 08 35.6	
	comp=Z,29nm,0.8s						
ELK	**Elko**	**38.92**	**85**	LR	LR	21 23 05.0	
	comp=Z,510nm,18.9s,baz=307,slow=34						
ELK	**Elko**	**38.92**	**85**	P	**P**	**21 08 32.7**	**-0.3**
ELK	**Elko**	**38.92**	**85**	P	**P**	**21 08 32.7**	**-0.3**
ELK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
YHL	**Hebgen Lake**	**39.05**	**77**	P	**P**	**21 08 34.1**	**0.0**
YHL				IAmb	IAmb	21 08 59.4	
	comp=Z,19nm,1.1s						
FFC	**Flin Flon**	**39.45**	**58**	P	**P**	**21 08 36.9**	**0.0**
FFC				IAmb	IAmb	21 08 38.4	
	comp=Z,19nm,1.2s						
FFC	**Flin Flon**	**39.45**	**58**	P	**P**	**21 08 36.9**	**0.0**
FFC				pmax	pmax		
	comp=Z,19nm,1.2s						
FFC	**Flin Flon**	**39.45**	**58**	P	**P**	**21 08 37.3**	**+0.4**
FFC				pP	**pP**	**21 08 51.3**	**+1.8**
FFC				sP	**sP**	**21 08 57.4**	**+2.3**
FFC				PcP	**PcP**	**21 10 44.8**	**+0.9**
H17A	**Grant Village**	**39.66**	**77**	P	**P**	**21 08 41.5**	**+2.3**
	baz=304,SNR=5.8						
CWC	**Cottonwood Cre**	**39.84**	**92**	P	**P**	**21 08 41.2**	**+0.6**
	baz=311						
RLMT	**Red Lodge**	**40.04**	**75**	P	**P**	**21 08 42.1**	**-0.2**
RLMT				IAmb	IAmb	21 08 44.5	
	comp=Z,19nm,0.9s						
RLMT	**Red Lodge**	**40.04**	**75**	P	**P**	**21 08 43.1**	**+0.8**
	baz=303,SNR=17						
JGF	**Kuroka**	**40.05**	**266**	P	**P**	**21 08 42.2**	**0.0**
BNX	**BinXian**	**40.06**	**286**	⇓P	**P**	**21 08 41.1**	**-1.0**
BNX				pmax	pmax		
	comp=Z,42nm,0.9s						
BNX				pmax	pmax		
	comp=Z,150nm,4.5s						
R11A	**Troy Canyon, C**	**40.16**	**88**	P	**P**	**21 08 42.6**	**-0.7**
	baz=309						
MPMC	**Manual Prospec**	**40.45**	**92**	P	**P**	**21 08 46.5**	**+0.8**
	baz=311						
TPNV	**Topopah Spring**	**40.64**	**90**	P	**P**	**21 08 49.0**	**+1.8**
	baz=310						
DUG	**Dugway, Tooele**	**40.73**	**84**	P	**P**	**21 08 48.3**	**+0.4**
	baz=307						
ALE	**Alert**	**40.84**	**11**	P	**P**	**21 08 48.5**	**+0.3**
ALE				pP	**pP**	**21 09 02.0**	**+1.2**
ALE				PcP	**PcP**	**21 10 48.6**	**+0.6**
LAO	**LASA Array**	**40.99**	**71**	P	**P**	**21 08 50.3**	**+0.5**
LAO				IAmb	IAmb	21 08 52.0	
	comp=Z,15nm,0.6s						
LAO	**LASA Array**	**40.99**	**71**	P	**P**	**21 08 50.8**	**+0.9**
	baz=302,SNR=9.3						
LAO	**LASA Array**	**40.99**	**71**	P	**P**	**21 08 51.1**	**+1.2**
	baz=302,SNR=9.3						
PD31	**Pinedale Array**	**41.19**	**78**	P	**P**	**21 08 51.9**	**+0.1**
PDAR	**Pinedale Array**	**41.19**	**78**	P	**P**	**21 08 52.2**	**+0.4**
	comp=Z,6.2nm,0.5s,baz=306,slow=2.4,SNR=142						
PDAR				LR	LR	21 25 05.4	
	comp=Z,269nm,18.8s,baz=317,slow=35						
	comp=Z,6.2nm,0.5s						
PDAR	**Pinedale Array**	**41.19**	**78**	P	**P**	**21 08 52.0**	**+0.3**
DGMT	**Dagmar**	**41.22**	**68**	P	**P**	**21 08 52.3**	**+0.6**
	baz=301						
GSC	**Goldstone, Bar**	**41.37**	**92**	P	**P**	**21 08 55.5**	**+2.3**
	baz=312,SNR=6.4						
BOD	**Bodaibo**	**41.46**	**309**	*e*P	**P**	**21 08 52.3**	**-1.2**
BOD				pmax	pmax		
	comp=Z,56nm,0.9s						
BFSC	**Mount Baldy Ra**	**41.55**	**94**	P	**P**	**21 08 54.8**	**+0.1**
	baz=312						
FCC	**Fort Churchill**	**41.61**	**50**	P	**P**	**21 08 54.8**	**+0.1**
FCC				IAmb	IAmb	21 08 56.4	
	comp=Z,52nm,0.9s						
FCC	**Fort Churchill**	**41.61**	**50**	P	**P**	**21 08 54.8**	**+0.1**
FCC				pmax	pmax		
	comp=Z,52nm,1.0s						
HEC	**Hector,Ludlow**	**41.97**	**92**	P	**P**	**21 08 57.0**	**-1.0**
	baz=312						
CN2	**Changchun**	**42.29**	**285**	⇓P	**P**	**21 08 59.8**	**-0.7**
CN2				pP	pP	21 09 15.1	+2.1
CN2				S	**S**	**21 15 14.5**	**-3.1**
CN2				pmax	pmax		
	comp=Z,30nm,0.9s						
CN2				pmax	pmax		
	comp=Z,300nm,6.0s						
CN2				LR	LR		
	comp=Z,200nm,13.0s						
CN2				LR	LR		
	comp=Z,200nm,13.0s						
CN2				LR	LR		
	comp=Z,300nm,13.0s						
GMRC	**Granite Mounta**	**42.41**	**92**	P	**P**	**21 09 02.7**	**+1.0**
	baz=312						
RDMU	**Red Mountain**	**42.48**	**81**	P	**P**	**21 09 02.5**	**+0.2**
RDMU				IAmb	IAmb	21 09 21.1	
	comp=Z,21nm,1.0s						
TULEG	**Thule**	**42.50**	**20**	P	**P**	**21 09 01.8**	**0.0**
TULEG	**Thule**	**42.50**	**20**	*i* P	**P**	**21 09 01.7**	**-0.1**
TULEG				IAmb	IAmb	21 09 02.9	
	comp=Z,12nm,0.8s						
HIA	**Hailar**	**42.59**	**295**	P	**P**	**21 09 02.6**	**-0.2**
HIA				IAmb	IAmb	21 09 03.6	
	comp=Z,27nm,0.8s						
HIA	**Hailar**	**42.59**	**295**	P	**P**	**21 09 02.5**	**-0.4**
HIA	**Hailar**	**42.59**	**295**	P	**P**	**21 09 02.7**	**-0.2**
HIA				pmax	pmax		
	comp=Z,27nm,0.8s						
HIA	**Hailar**	**42.59**	**295**	P	**P**	**21 09 02.7**	**-0.2**
HIA				PcP	**PcP**	**21 10 54.7**	**+0.4**
PFO	**Pinyon Flats O**	**42.71**	**94**	LR	LR	21 22 53.3	
	comp=Z,353nm,20.6s,baz=308,slow=30						
PFO	**Pinyon Flats O**	**42.71**	**94**	P	**P**	**21 09 03.7**	**-0.5**
PFO	**Pinyon Flats O**	**42.71**	**94**	*i* P	**P**	**21 09 04.4**	**+0.3**
PFO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PFO	**Pinyon Flats O**	**42.71**	**94**	P	**P**	**21 09 03.1**	**-1.0**
	baz=313						
TPFO	**Pinon Flats**	**42.71**	**94**	P	**P**	**21 09 01.9**	**-2.3**
	baz=313						
BELC	**Belle Mtn. Jos**	**42.73**	**93**	P	**P**	**21 09 04.3**	**0.0**
	baz=313						
K22A	**Casper**	**43.08**	**76**	P	**P**	**21 09 06.8**	**-0.3**
	baz=306						
JCJ	**Chichijima**	**43.13**	**253**	LR	LR	21 26 41.9	
	comp=Z,106nm,19.9s,baz=1.0,slow=36						
IRM	**Iron Mountain**	**43.15**	**92**	P	**P**	**21 09 06.3**	**-1.2**
	baz=312						
MONP2	**Monument Peak**	**43.22**	**95**	P	**P**	**21 09 06.0**	**-2.4**
	baz=313						
W13A	**Hualapai Mount**	**43.29**	**90**	P	**P**	**21 09 08.4**	**-0.6**
BC3	**Big Chuckawall**	**43.30**	**93**	P	**P**	**21 09 08.2**	**-0.7**
	baz=313						
JMN	**Monobe**	**43.43**	**267**	P	**P**	**21 09 10.2**	**+0.4**
O20A	**White River Ci**	**43.55**	**80**	P	**P**	**21 09 10.6**	**-0.4**
O20A				IAmb	IAmb	21 09 28.1	
	comp=Z,68nm,1.4s						
O20A	**White River Ci**	**43.55**	**80**	P	**P**	**21 09 11.4**	**+0.5**
	baz=308,SNR=7.2						
IKP	**In-Ko-Pah, Jac**	**43.58**	**95**	P	**P**	**21 09 08.5**	**-2.6**
	baz=314						
YUH	**Yuha Desert**	**43.69**	**95**	P	**P**	**21 09 11.8**	**-0.1**
RSSD	**Black Hills**	**43.70**	**73**	P	**P**	**21 09 12.1**	**-0.1**
RSSD				IAmb	IAmb	21 10 51.6	
	comp=Z,29nm,0.3s						
RSSD	**Black Hills**	**43.70**	**73**	P	**P**	**21 09 12.1**	**-0.1**
RSSD				pmax	pmax		
	comp=Z,29nm,0.4s						
RSSD	**Black Hills**	**43.70**	**73**	P	**P**	**21 09 11.9**	**-0.1**
	baz=305						
RSSD	**Black Hills**	**43.70**	**73**	P	**P**	**21 09 12.3**	**+0.2**
	baz=305,SNR=12						
RSSD	**Black Hills**	**43.70**	**73**	P	**P**	**21 09 12.1**	**-0.1**
BLYC	**Blythe**	**43.80**	**92**	P	**P**	**21 09 12.9**	**+0.1**
GLA	**Glamis**	**44.09**	**93**	P	**P**	**21 09 14.2**	**-0.9**
	baz=313						
MDND	**Maddock**	**44.15**	**66**	P	**P**	**21 09 15.3**	**-0.1**
	baz=304						
PV11	**David Mesa, Pa**	**44.30**	**83**	P	**P**	**21 09 16.4**	**-0.6**
PV11				IAmb	IAmb	21 09 34.1	
	comp=Z,34nm,0.7s						
N23A	**Red Feather La**	**44.47**	**78**	P	**P**	**21 09 18.1**	**-0.4**
N23A	**Red Feather La**	**44.47**	**78**	P	**P**	**21 09 17.8**	**-0.6**
	baz=308						
WUAZ	**Wupatki**	**44.56**	**88**	P	**P**	**21 09 19.5**	**+0.4**
	baz=311						
KSRS	**Korea Array**	**44.64**	**276**	P	**P**	**21 09 20.8**	**+1.3**
	comp=Z,24nm,1.0s,baz=60,slow=7.8,SNR=25						
	comp=Z,24nm,1.0s						
ULM	**Lac du Bonnet**	**44.89**	**61**	P	**P**	**21 09 20.9**	**-0.4**
	comp=Z,17nm,1.0s,baz=303,slow=8.5,SNR=18						
ULM				PcP	**PcP**	**21 11 02.0**	**-0.1**
	comp=Z,7.4nm,0.5s,baz=270,slow=4.7,SNR=7.6						
	comp=Z,17nm,1.0s						
MVCO	**Mesa Verde**	**45.23**	**84**	P	**P**	**21 09 24.5**	**0.0**
	baz=310						
NEEM	**North Greenlan**	**45.31**	**16**	*i* P	**P**	**21 09 24.5**	**-0.2**
NEEM				IAmb	IAmb	21 09 25.3	
	comp=Z,44nm,1.0s						
ISCO	**Idaho Springs**	**45.34**	**79**	P	**P**	**21 09 25.1**	**-0.3**
	baz=309						
NOR	**Nord**	**45.66**	**5**	*i* P	**P**	**21 09 27.0**	**0.0**
NOR				IAmb	IAmb	21 09 28.1	
	comp=Z,11nm,0.7s						
TJN	**Taejon**	**45.68**	**275**	P	**P**	**21 09 27.6**	**-0.1**
TJN	**Taejon**	**45.68**	**275**	P	**P**	**21 09 29.0**	**+1.3**
TJN	**Taejon**	**45.68**	**275**	*ce*P	**P**	**21 09 28.3**	**+0.6**
JNU	**Nakatsue**	**45.69**	**269**	P	**P**	**21 09 28.8**	**+0.9**
	comp=Z,59nm,0.9s,baz=47,slow=6.1,SNR=16						
	comp=Z,59nm,0.9s						
JNU	**Nakatsue**	**45.69**	**269**	P	**P**	**21 09 28.3**	**+0.5**
JNU	**Nakatsue**	**45.69**	**269**	P	**P**	**21 09 28.6**	**+0.8**
S22A	**4UR Ranch, Cre**	**45.90**	**82**	P	**P**	**21 09 29.3**	**-0.5**
S22A				IAmb	IAmb	21 09 44.8	
	comp=Z,32nm,1.7s						
S22A	**4UR Ranch, Cre**	**45.90**	**82**	P	**P**	**21 09 29.1**	**-0.7**
	baz=310						
PIX	**Pinacate**	**45.95**	**94**	P	**P**	**21 09 29.6**	**-0.3**
AGMN	**Agassiz Nation**	**45.98**	**64**	P	**P**	**21 09 29.1**	**-0.8**
AGMN				IAmb	IAmb	21 09 30.9	
	comp=Z,20nm,0.9s						
AGMN	**Agassiz Nation**	**45.98**	**64**	P	**P**	**21 09 29.7**	**-0.2**
	baz=304,SNR=8.2						
KULLO	**Kullorsuaq**	**46.00**	**20**	*i* P	**P**	**21 09 29.5**	**-0.3**
KULLO				IAmb	IAmb	21 09 31.0	
	comp=Z,21nm,0.9s						
214A	**Organ Pipe Nat**	**46.08**	**93**	P	**P**	**21 09 30.6**	**-0.3**
	baz=314						
NRIK	**Noril'sk**	**46.15**	**331**	P	**P**	**21 09 32.2**	**+1.2**
	comp=Z,6.8nm,0.5s,baz=80,slow=8.3,SNR=14						
NRIK				LR	LR	21 32 31.3	
	comp=Z,232nm,18.4s,baz=76,slow=41						
	comp=Z,6.8nm,0.5s						
NRIK	**Noril'sk**	**46.15**	**331**	P	**P**	**21 09 30.9**	**-0.1**
NRIK				IAmb	IAmb	21 09 32.9	
	comp=Z,14nm,1.0s						
SUSD	**Miller**	**46.47**	**70**	P	**P**	**21 09 34.1**	**+0.3**
	baz=306						
SDCO	**Great Sand Dun**	**46.71**	**81**	P	**P**	**21 09 34.9**	**-1.3**
SDCO	**Great Sand Dun**	**46.71**	**81**	P	**P**	**21 09 36.3**	**+0.1**
	baz=310						
OGNE	**Ogallala**	**46.78**	**75**	P	**P**	**21 09 34.4**	**-2.1**
	baz=308						
TUC	**Tucson**	**47.08**	**91**	P	**P**	**21 09 38.4**	**-0.4**
TUC	**Tucson**	**47.08**	**91**	P	**P**	**21 09 38.4**	**-0.4**
TUC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TUC	**Tucson**	**47.08**	**91**	P	**P**	**21 09 38.8**	**0.0**
	baz=314						
B35A	**Bob, Littlefor**	**47.11**	**62**	P	**P**	**21 09 38.6**	**-0.2**
	baz=305,SNR=12						
F33A	**5 Mile Ranch,**	**47.16**	**67**	P	**P**	**21 09 38.5**	**-0.7**
	baz=306						
UPNV	**Upernavik**	**47.39**	**22**	*i* P	**P**	**21 09 40.9**	**+0.3**
UPNV				IAmb	IAmb	21 09 41.7	
	comp=Z,33nm,1.0s						
DL2	**Dalian**	**47.54**	**282**	P	**P**	**21 09 42.3**	**+0.1**
DL2				pmax	pmax		
	comp=Z,45nm,0.9s						
KSCO	**Kaye Shedlock'**	**47.64**	**78**	P	**P**	**21 09 43.9**	**+0.7**
	baz=310						
XLT	**XiLinHaoTe**	**47.72**	**291**	*e*P	**P**	**21 09 43.9**	**+0.2**
XLT				sP	sP	21 10 05.8	+3.9
XLT				PcP	**PcP**	**21 11 12.3**	**+0.1**
XLT				pmax	pmax		
	comp=Z,20nm,0.9s						
XLT				pmax	pmax		
	comp=Z,130nm,4.9s						
XLT				LR	LR		
	comp=Z,30nm,14.1s						
XLT				LR	LR		
	comp=Z,300nm,14.9s						
XLT				LR	LR		
	comp=Z,400nm,18.3s						
T25A	**Trinidad**	**47.76**	**81**	P	**P**	**21 09 43.2**	**-1.0**
T25A				IAmb	IAmb	21 10 02.1	
	comp=Z,45nm,1.2s						
T25A	**Trinidad**	**47.76**	**81**	P	**P**	**21 09 45.4**	**+1.1**
	baz=311,SNR=5.6						
ANMO	**Albuquerque**	**47.96**	**85**	LR	LR	21 27 29.0	
	comp=Z,316nm,19.8s,baz=37,slow=33						
ANMO	**Albuquerque**	**47.96**	**85**	*ce*P	**P**	**21 09 45.0**	**-0.7**
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ANMO	**Albuquerque**	**47.96**	**85**	P	**P**	**21 09 45.1**	**-0.7**
	baz=312						
ECSD	**EROS Data Cent**	**48.24**	**69**	P	**P**	**21 09 46.5**	**-1.1**
ECSD				IAmb	IAmb	21 09 47.6	
	comp=Z,24nm,1.1s						
ECSD	**EROS Data Cent**	**48.24**	**69**	P	**P**	**21 09 46.9**	**-0.8**
	baz=308,SNR=12						
EYMN	**Ely**	**48.57**	**62**	P	**P**	**21 09 49.3**	**-0.8**
EYMN				IAmb	IAmb	21 09 51.1	
	comp=Z,20nm,0.9s						
EYMN	**Ely**	**48.57**	**62**	P	**P**	**21 09 49.9**	**-0.2**
	baz=306,SNR=9.1						
F36A	**Milaca**	**48.70**	**65**	P	**P**	**21 09 50.5**	**-0.6**
	baz=307,SNR=5.9						
121A	**Cookes Peak, D**	**48.77**	**88**	P	**P**	**21 09 51.7**	**-0.4**
121A				IAmb	IAmb	21 10 09.8	
	comp=Z,18nm,1.1s						
121A	**Cookes Peak, D**	**48.77**	**88**	P	**P**	**21 09 51.2**	**-0.8**
	baz=314						
BGNE	**Belgrade**	**48.79**	**72**	P	**P**	**21 09 51.1**	**-0.8**
BGNE	**Belgrade**	**48.79**	**72**	P	**P**	**21 09 51.5**	**-0.4**
	baz=309						
BGNE	**Belgrade**	**48.79**	**72**	P	**P**	**21 09 52.0**	**+0.1**
	baz=309						
NUUG	**Nuugaatsiaq**	**48.90**	**22**	*e*P	**P**	**21 09 52.3**	**+0.1**
NUUG				IAmb	IAmb	21 09 53.3	
	comp=Z,7.5nm,0.7s						
KBS	**Kingsbay**	**49.07**	**359**	P	**P**	**21 09 54.2**	**+0.7**
KBS	**Kingsbay**	**49.07**	**359**	*ce*P	**P**	**21 09 54.4**	**+0.9**
KBS				pmax	pmax		
	comp=Z,139nm,2.5s						
KBS	**Kingsbay**	**49.07**	**359**	*i* P	**P**	**21 09 54.1**	**+0.6**
KBS	**Kingsbay**	**49.07**	**359**	*e*P	**P**	**21 09 54.6**	**+1.0**
KBS				IAmb	IAmb	21 09 56.3	
	comp=Z,38nm,0.8s						
KBS	**Kingsbay**	**49.07**	**359**	P	**P**	**21 09 54.5**	**+0.9**
KBS				PcP	**PcP**	**21 11 15.0**	**-1.4**
IRK	**Irkutsk**	**49.13**	**306**	*e*P	**P**	**21 09 53.8**	**-0.5**
IRK				pmax	pmax		
	comp=Z,32nm,1.2s						
E38A	**The Farm, Brul**	**49.34**	**63**	P	**P**	**21 09 55.4**	**-0.6**
	baz=307,SNR=9.5						
L34A	**Svendsen Farm,**	**49.47**	**71**	P	**P**	**21 09 56.6**	**-0.5**
	baz=309						
SPMN	**Marine on St.**	**49.49**	**65**	P	**P**	**21 09 56.8**	**-0.4**
	baz=308,SNR=11						
SPMN	**Marine on St.**	**49.49**	**65**	P	**P**	**21 09 56.9**	**-0.3**
	baz=308,SNR=11						
CBKS	**Cedar Bluff**	**49.50**	**76**	P	**P**	**21 09 56.6**	**-0.7**
	baz=310						
FRB	**Frobisher Bay**	**49.52**	**35**	LR	LR	21 33 06.6	
	comp=Z,576nm,20.4s,baz=320,slow=39						
SPA0	**Spitsbergen Ar**	**49.76**	**358**	*e*P	**P**	**21 09 59.0**	**+0.1**
SPA0				IAmb	IAmb	21 09 59.9	
	comp=Z,52nm,1.1s						
SPITS	**Spitsbergen Ar**	**49.76**	**358**	LR	LR	21 32 21.6	
	comp=Z,223nm,18.8s,baz=320,slow=38						
SPITS	**Spitsbergen Ar**	**49.76**	**358**	P	**P**	**21 09 58.8**	**0.0**
SPITS				pmax	pmax		
	comp=Z,35nm,0.8s						
SPB2	**Spitsbergen Ar**	**49.77**	**358**	P	**P**	**21 09 58.7**	**-0.1**
SPB2				IAmb	IAmb	21 10 00.0	
	comp=Z,31nm,0.7s						
I37B	**Waseca**	**49.90**	**67**	P	**P**	**21 10 00.3**	**0.0**
	baz=308,SNR=9.6						
DAG	**Danmarks Havn**	**50.02**	**8**	*i* P	**P**	**21 09 60.0**	**-0.8**
DAG				IAmb	IAmb	21 10 00.9	
	comp=Z,28nm,0.7s						
BJI	**Beijing**	**50.07**	**287**	P	**P**	**21 10 02.0**	**+0.4**
BJI				pP	**pP**	**21 10 14.6**	**+0.2**
BJI				pmax	pmax		
	comp=Z,12nm,0.8s						
BJT	**Baijiatuau**	**50.08**	**287**	P	**P**	**21 10 01.8**	**+0.1**
BJT				IAmb	IAmb	21 10 03.0	
	comp=Z,16nm,1.0s						
BJT	**Baijiatuau**	**50.08**	**287**	P	**P**	**21 10 02.4**	**+0.7**
	comp=Z,17nm,0.8s						
BJT	**Baijiatuau**	**50.08**	**287**	P	**P**	**21 10 01.8**	**+0.1**
BJT				pmax	pmax		
	comp=Z,16nm,1.0s						
BJT	**Baijiatuau**	**50.08**	**287**	P	**P**	**21 10 02.0**	**+0.3**
ULN	**Ulaanbaatar**	**50.32**	**300**	P	**P**	**21 10 03.5**	**-0.1**
ULN				IAmb	IAmb	21 10 04.6	
	comp=Z,22nm,0.8s						
ULN	**Ulaanbaatar**	**50.32**	**300**	*ce*P	**P**	**21 10 03.2**	**-0.4**
ULN				pmax	pmax		
	comp=Z,28nm,1.0s						
ULN	**Ulaanbaatar**	**50.32**	**300**	P	**P**	**21 10 04.0**	**+0.3**
ULN				pP	**pP**	**21 10 18.0**	**+1.4**
ULN				PcP	**PcP**	**21 11 22.2**	**+0.5**
N35A	**Tabor**	**50.60**	**71**	P	**P**	**21 10 05.7**	**+0.1**
	baz=310,SNR=5.1						
SONM	**Songino Array**	**50.69**	**300**	P	**P**	**21 10 06.9**	**+0.5**
	comp=Z,16nm,0.9s,baz=60,slow=5.8,SNR=119						
SONM				PcP	**PcP**	**21 11 23.7**	**+0.7**

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      comp=Z,8.0nm,0.7s,baz=54,slow=1.4,SNR=12
SONM                                ScP     ScP      21 15 16.6 +1.7
      comp=Z,1.6nm,0.9s,baz=50,slow=3.9,SNR=6.9
SONM                                LR      LR       21 33 30.7
      comp=Z,444nm,19.4s,baz=52,slow=38
      comp=Z,16nm,0.9s
SONM  Songino Array     50.69 300   P       P        21 10 06.4 +0.1
SONM                                IAmb    IAmb     21 10 07.7
      comp=Z,37nm,1.4s
SONM                                PcP     PcP      21 11 23.1 +0.1
ZAK   Zakamensk         50.74 304  eP       P        21 10 06.6 -0.1
ZAK                                 pmax    pmax
      comp=Z,12nm,1.3s
MNTX  Cornudas Mount    50.82  87   P       P        21 10 07.5 +0.1
      baz=314
MSTX  Muleshoe          50.86  83   P       P        21 10 07.5 -0.3
MSTX                                IAmb    IAmb     21 10 25.1
      comp=Z,35nm,1.2s
MSTX  Muleshoe          50.86  83   P       P        21 10 07.9 +0.1
      baz=313
G40A  Rib Lake          50.91  64   P       P        21 10 07.4 -0.5
      baz=309,SNR=5.5
AMTX  Amarillo          50.91  81   P       P        21 10 08.0 -0.1
      baz=312
MOY   Mondy             51.10 307  eP       P        21 10 09.9 +0.5
MOY                                 pmax    pmax
      comp=Z,22nm,1.4s
HOPEN Hopen             51.12 355  eP       P        21 10 09.6 +0.5
HOPEN                               IAmb    IAmb     21 10 10.8
      comp=Z,49nm,0.9s
SUMG  Summit            51.12  17 i P       P        21 10 09.9 +0.4
SUMG                                IAmb    IAmb     21 10 11.7
      comp=Z,41nm,1.0s
KSU1  Kansas State U    51.17  74   P       P        21 10 08.3 -1.6
      baz=311
SCIA  State Center      51.33  69   P       P        21 10 10.3 -0.8
SCIA                                IAmb    IAmb     21 10 11.6
      comp=Z,40nm,1.0s
SCIA  State Center      51.33  69   P       P        21 10 10.7 -0.4
      baz=310
E43A  Lone Tree Farm    51.96  61   P       P        21 10 15.7  0.0
      baz=309
TIA   Tai'an            52.01 282 ⇑P       P        21 10 16.4 +0.2
TIA                                 pmax    pmax
      comp=Z,29nm,0.8s
N38A  Joes South For    52.04  70   P       P        21 10 16.0 -0.4
      baz=311,SNR=7.6
DBG   Daneborg          52.16  10 i P       P        21 10 16.2 -0.6
DBG                                 IAmb    IAmb     21 10 16.7
      comp=Z,28nm,0.6s
HHC   Hu-ho-hao-te      52.23 290  eP       P        21 10 19.3 +1.3
HHC                                 pmax    pmax
      comp=Z,58nm,0.8s
HHC                                 pmax    pmax
      comp=Z,230nm,5.0s
GUMO  Guam              52.37 239   P       P        21 10 17.5 -1.5
      comp=Z,103nm,0.4s,baz=92,slow=2.3,SNR=20
GUMO                                LR      LR       21 33 22.1
      comp=Z,36nm,18.4s,baz=81,slow=37
GUMO  Guam              52.37 239   P       P        21 10 17.6 -1.5
GUMO  Guam              52.37 239   P       P        21 10 17.6 -1.5
GUMO                                pmax    pmax
      comp=Z,147nm,0.5s
GUMO  Guam              52.37 239   P       P        21 10 17.3 -1.8
JFWS  Jewell Farm       52.37  66   P       P        21 10 17.3 -1.5
JFWS                                IAmb    IAmb     21 10 18.3
      comp=Z,28nm,1.1s
JFWS  Jewell Farm       52.37  66   P       P        21 10 17.3 -1.5
JFWS                                pmax    pmax
      comp=Z,28nm,1.1s
JFWS  Jewell Farm       52.37  66   P       P        21 10 17.7 -1.1
      baz=310
I42A  Draeger Farm,     52.49  64   P       P        21 10 19.1 -0.6
      baz=310,SNR=5.4
P38A  Dawn              52.63  71   P       P        21 10 19.5 -1.3
P38A                                IAmb    IAmb     21 10 20.5
      comp=Z,33nm,0.7s
P38A  Dawn              52.63  71   P       P        21 10 20.0 -0.8
      baz=311,SNR=14
HNS   HongShan          52.66 285 ⇑P       P        21 10 22.1 +1.1
HNS                                 pP      pP       21 10 30.8 -3.2
HNS                                 PcP     PcP      21 11 31.4 +1.1
HNS                                 pmax    pmax
      comp=Z,82nm,0.9s
HNS                                 LR      LR
      comp=Z,410nm,21.5s
HNS                                 LR      LR
      comp=Z,340nm,19.1s
T35B  Sooner Cattle     52.66  76   P       P        21 10 20.4 -0.7
      baz=312
WMOK  Wichita Mounta    52.77  79   P       P        21 10 21.6 -0.3
WMOK                                IAmb    IAmb     21 10 38.1
      comp=Z,45nm,1.8s
WMOK  Wichita Mounta    52.77  79   P       P        21 10 21.6 -0.3
WMOK                                pmax    pmax
      comp=Z,45nm,1.8s
WMOK  Wichita Mounta    52.77  79   P       P        21 10 21.3 -0.6
      baz=313
SFJD  Kangerlussuaq     52.81  25   LR      LR       21 36 22.4
      comp=Z,215nm,18.6s,baz=317,slow=40
SFJD  Kangerlussuaq     52.81  25 i P       P        21 10 21.7  0.0
SFJD                                IAmb    IAmb     21 10 22.3
      comp=Z,20nm,0.9s
SFJD  Kangerlussuaq     52.81  25   P       P        21 10 21.6 -0.1
LPIG  La Paz            53.25  98   LR      LR       21 30 15.0
      comp=Z,116nm,18.4s,baz=234,slow=33
BTO   Baotou            53.28 291  eP       P        21 10 26.3 +0.6
BTO                                 pP      sP       21 10 42.1 -2.0
BTO                                 pmax    pmax
      comp=Z,270nm,0.9s
BTO                                 pmax    pmax
      comp=Z,450nm,2.7s
BTO                                 LR      LR
      comp=N,1µm,16.1s
BTO                                 LR      LR
      comp=E,2µm,19.2s
BTO                                 LR      LR
      comp=Z,2µm,25.9s
BTO   Baotou            53.28 291  eP       P        21 10 26.1 +0.4
BTO                                 pP      sP       21 10 41.8 -2.3
BTO                                 pmax    pmax
      comp=Z,140nm,0.7s
BTO                                 pmax    pmax
      comp=Z,450nm,2.7s
BTO                                 LR      LR
      comp=Z,960nm,15.7s
BTO                                 LR      LR
      comp=Z,2µm,15.7s
BTO                                 LR      LR
      comp=Z,2µm,17.1s
BJO1  Bjornoya          53.37 357  eP       P        21 10 26.4 +0.7
E46A  Sault Ste Mari    53.40  59   P       P        21 10 26.4 +0.1
      baz=310
TX31  Lajitas Ar. Si    53.53  88   P       P        21 10 27.5 -0.2
TX31  Lajitas Ar. Si    53.53  88   P       P        21 10 28.0 +0.3
      baz=316
TXAR  Lajitas Array     53.53  88   P       P        21 10 27.7  0.0
      comp=Z,2.9nm,0.6s,baz=301,slow=5.1,SNR=30
TXAR                                LR      LR       21 30 50.3
      comp=Z,221nm,20.8s,baz=328,slow=33
      comp=Z,2.9nm,0.6s
P40A  Paris             53.55  70   P       P        21 10 26.9 -0.7
      baz=312,SNR=18
ICESG Greenland Ices    53.74  20 i P       P        21 10 28.3 -0.7
ICESG                               IAmb    IAmb     21 10 29.6
      comp=Z,54nm,1.1s
NJ2   Nanjing           53.79 277⇑iP       P        21 10 29.3 -0.1
NJ2                                 pP      pP       21 10 43.9 +1.5
NJ2                                 sP      sP       21 10 50.9 +3.0
NJ2                                 pmax    pmax
      comp=Z,33nm,0.8s
NJ2                                 pmax    pmax
      comp=Z,510nm,4.3s
HPIG                    54.02  91   P       P        21 10 30.8 -0.6
S39A  Bolivar           54.03  73   P       P        21 10 29.2 -1.9
      baz=312,SNR=5.7
L44A  Lake County Fo    54.16  65   P       P        21 10 30.4 -1.6
      baz=311
GLMI  Grayling          54.23  61   P       P        21 10 31.3 -1.2
      baz=311
U38A  Gravette          54.25  75   P       P        21 10 31.6 -1.1
      baz=313,SNR=5.9
R40A  Maddies Statio    54.25  72   P       P        21 10 30.9 -1.7
      baz=312,SNR=7.0
DY2G  Dye2              54.33  24 i P       P        21 10 32.2 -0.9
DY2G                                IAmb    IAmb     21 10 33.5
      comp=Z,4.5nm,0.8s
HDIL  Hopedale          54.46  68   P       P        21 10 32.9 -1.2
HDIL  Hopedale          54.46  68   P       P        21 10 33.3 -0.9
      baz=312,SNR=6.5
HHAR  Hobbs             54.62  75   P       P        21 10 34.1 -1.3
HHAR                                IAmb    IAmb     21 10 34.8
      comp=Z,12nm,0.9s
X37A  Clayton           54.92  77   P       P        21 10 37.8 +0.2
      baz=314,SNR=6.4
P43A  Skaggs, Pawnee    54.94  69   P       P        21 10 37.0 -0.6
      baz=312
CCM   Cathedral Cave    55.01  71   P       P        21 10 37.0 -1.1
CCM   Cathedral Cave    55.01  71   P       P        21 10 37.0 -1.1
CCM                                 pmax    pmax
      comp=Z,9.0nm,0.9s
CCM   Cathedral Cave    55.01  71   P       P        21 10 36.5 -1.6
      baz=313
CCM   Cathedral Cave    55.01  71   P       P        21 10 36.6 -1.5
JCT   Junction City     55.09  84           P        21 10 38.2 -0.7
JCT                                 IAmb    IAmb     21 10 52.2
      comp=Z,12nm,0.8s
JCT   Junction City     55.09  84   P       P        21 10 38.2 -0.7
JCT                                 pmax    pmax
      comp=Z,12nm,0.8s
JCT   Junction City     55.09  84   P       P        21 10 37.8 -1.1
      baz=315
O44A  Mansfield         55.20  68   P       P        21 10 38.6 -0.8
      baz=312
U40A  Yellville         55.21  74   P       P        21 10 38.5 -1.2
      baz=313,SNR=11
U40A                                P       P        21 10 38.5 -1.2
      baz=313,SNR=11
SCO   Scoresbysund      55.51  12   P       P        21 10 41.1 -0.1
SCO                                 IAmb    IAmb     21 10 42.2
      comp=Z,14nm,0.7s
SCO   Scoresbysund      55.51  12   P       P        21 10 41.1 -0.1
SCO                                 pmax    pmax
      comp=Z,14nm,0.7s
SCO   Scoresbysund      55.51  12 i P       P        21 10 41.3 +0.1
SCO                                 IAmb    IAmb     21 10 42.3
      comp=Z,13nm,0.8s
FVM   French Village    55.53  71   P       P        21 10 40.9 -1.0
      baz=313,SNR=7.6
T42A  Van Buren         55.79  72   P       P        21 10 41.7 -2.1
      baz=313
SFIN  Lafayette         55.82  67   P       P        21 10 43.7 -0.2
      baz=312,SNR=7.2
SFIN  Lafayette         55.82  67   P       P        21 10 43.6 -0.3
      baz=312,SNR=7.2
LYN   LuoYang           55.92 284⇓iP       P        21 10 45.9 +1.1
LYN                                 pmax    pmax
      comp=Z,37nm,0.9s
FCAR  Ozark Folk Cen    55.96  74   P       P        21 10 43.4 -1.7
FCAR                                IAmb    IAmb     21 10 44.1
      comp=Z,20nm,0.9s
MIAR  Mount Ida         56.02  76   P       P        21 10 45.2 -0.3
MIAR                                IAmb    IAmb     21 10 46.6
      comp=Z,23nm,1.0s
MIAR  Mount Ida         56.02  76   P       P        21 10 45.2 -0.3
MIAR                                pmax    pmax
      comp=Z,23nm,1.0s
MIAR  Mount Ida         56.02  76   P       P        21 10 45.6 +0.1
      baz=314,SNR=7.7
SCHQ  Schefferville     56.05  43   P       P        21 10 45.7 +0.3
      comp=Z,55nm,0.8s,baz=321,slow=8.0,SNR=79
SCHQ                                LR      LR       21 37 27.2
      comp=Z,280nm,19.9s,baz=346,slow=39
      comp=Z,55nm,0.8s
SCHQ  Schefferville     56.05  43   P       P        21 10 45.5 +0.1
N47A  Urbana            56.27  65   P       P        21 10 46.1 -1.1
      baz=313
N47A                                P       P        21 10 46.1 -1.1
      baz=313
OLIL  Olney             56.36  69   P       P        21 10 47.0 -0.8
OLIL  Olney             56.36  69   P       P        21 10 47.1 -0.8
      baz=313,SNR=5.6
JMIC  Jan Mayen         56.40   7   LR      LR       21 35 52.2
      comp=Z,173nm,19.0s,baz=268,slow=37
S44A  Carbondale        56.41  70   P       P        21 10 47.3 -0.9
      baz=313,SNR=6.0
AAM   Ann Arbor         56.43  63   P       P        21 10 48.5 +0.2
      baz=313
ISOG  Isortoq, Green    56.84  22 i P       P        21 10 49.4 -1.4
833A  Chaparral WMA,    56.87  85   P       P        21 10 51.6  0.0
      baz=316
WLAR  White Oak Lake    56.90  76   P       P        21 10 50.8 -0.9
HAMF  Hammerfest        56.98 354  eP       P        21 10 51.2 -0.6
HAMF                                IAmb    IAmb     21 10 55.5
      comp=Z,97nm,1.6s
ZAA0  Zalesovo Array    56.98 317   P       P        21 10 51.6 -0.4
ZAA0                                IAmb    IAmb     21 11 48.2
      comp=Z,11nm,0.8s
ZALV  Zalesovo Beam     56.98 317   P       P        21 10 52.0  0.0
      comp=Z,1.8nm,0.4s,baz=39,slow=6.3,SNR=11
ZALV                                PcP     PcP      21 11 47.5 +0.8
      comp=Z,12nm,0.8s,baz=41,slow=3.8,SNR=17
ZALV                                LR      LR       21 36 48.5
      comp=Z,313nm,19.0s,baz=48,slow=38
      comp=Z,1.8nm,0.4s
ZALV  Zalesovo Beam     56.98 317   P       P        21 10 51.2 -0.9
O48B  Farmland          56.99  65   P       P        21 10 51.2 -1.1
      baz=313,SNR=8.4
O48B  Farmland          56.99  65   P       P        21 10 50.9 -1.5
      baz=313,SNR=8.4
VADS  Vadso             57.08 352  eP       P        21 10 52.5 +0.1
VADS                                IAmb    IAmb     21 10 53.8
      comp=Z,38nm,0.7s
ANGG  Ammassalik, Gr    57.08  21   P       P        21 10 51.1 -1.4
ANGG                                IAmb    IAmb     21 10 53.1
      comp=Z,19nm,0.8s
ANGG  Ammassalik, Gr    57.08  21 i P       P        21 10 50.8 -1.7
ANGG                                IAmb    IAmb     21 10 53.2
      comp=Z,18nm,0.8s
USIN  University of     57.14  69   P       P        21 10 52.2 -1.1
SADO  Sadowa            57.17  58   LR      LR       21 36 23.9
      comp=Z,229nm,19.5s,baz=320,slow=37
SADO  Sadowa            57.17  58   P       P        21 10 52.9 -0.6
P48A  Milroy            57.38  66   P       P        21 10 54.0 -1.1
      baz=313
P48A                                P       P        21 10 54.0 -1.1
      baz=313
YHNB  Yeheng            57.52 269   P       P        21 10 55.9 -0.4
WHN   Wuhan             57.59 279   P       P        21 10 56.8 +0.2
WHN                                 pP      sP       21 11 13.0 -2.2
WHN                                 pmax    pmax
      comp=Z,140nm,1.0s
KEV   Kevo              57.62 353   P       P        21 10 55.5 -0.8
KEV   Kevo              57.62 353   P       P        21 10 55.5 -0.8
KEV                                 pmax    pmax
      comp=Z,109nm,1.6s
KEV   Kevo              57.62 353   P       P        21 10 55.9 -0.4
P49A  Miami Univ. Ec    57.73  66   P       P        21 10 56.2 -1.3
      baz=314,SNR=6.8
P49A  Miami Univ. Ec    57.73  66   P       P        21 10 56.3 -1.3
      baz=314,SNR=6.8
WCI   Wyandotte Cave    57.74  68   P       P        21 10 56.7 -0.9
WCI                                 IAmb    IAmb     21 10 58.1
      comp=Z,26nm,0.9s
WCI   Wyandotte Cave    57.74  68   P       P        21 10 56.7 -0.9
WCI                                 pmax    pmax
      comp=Z,26nm,0.9s
WCI   Wyandotte Cave    57.74  68   P       P        21 10 57.0 -0.6
      baz=314
WCI   Wyandotte Cave    57.74  68   P       P        21 10 57.1 -0.5
      baz=314,SNR=7.1
WCI   Wyandotte Cave    57.74  68   P       P        21 10 56.8 -0.9
ARA0  ARCESS Array S    57.95 353  eP       P        21 10 58.3 -0.4
ARCES ARCESS Array B    57.95 353   P       P        21 10 58.2 -0.5
      comp=Z,7.1nm,0.5s,baz=16,slow=6.2,SNR=62
ARCES                               PcP     PcP      21 11 51.0 +0.7
      comp=Z,12nm,0.9s,baz=20,slow=4.0,SNR=6.5
ARCES                               LR      LR       21 35 22.9
      comp=Z,262nm,21.8s,baz=336,slow=35
      comp=Z,7.1nm,0.5s
ARCES ARCESS Array B    57.95 353   P       P        21 10 58.1 -0.5
IVI   Ivigtut           57.97  29  eP       P        21 10 59.0 +0.1
IVI                                 IAmb    IAmb     21 10 60.0
      comp=Z,23nm,0.9s
IVI   Ivigtut           57.97  29   P       P        21 10 58.8  0.0
IVI                                 pP      pP       21 11 12.9 +0.8
T47A  Sharon Grove      58.13  70   P       P        21 10 59.9 -0.5
T47A  Sharon Grove      58.13  70   P       P        21 11 00.1 -0.3
      baz=314,SNR=13
W45A  Hickory Valley    58.20  72   P       P        21 10 58.7 -2.1
      baz=314,SNR=9.5
TRO   Tromso            58.23 356  eP       P        21 11 00.7 +0.2
TRO                                 IAmb    IAmb     21 11 01.4
      comp=Z,43nm,0.5s
JETT  Jettan, Norway    58.23 355  eP       P        21 11 01.0 +0.3
JETT                                IAmb    IAmb     21 11 01.4
      comp=Z,51nm,0.7s
WVT   Waverly           58.31  71   P       P        21 11 00.8 -0.8
      baz=314
WVT   Waverly           58.31  71   P       P        21 11 01.0 -0.6
      baz=314,SNR=7.7
WVT   Waverly           58.31  71   P       P        21 11 00.8 -0.8
WVT                                 pP      pP       21 11 14.4 -0.1
XAN   Xi'an             58.38 286   P       P        21 11 02.3 +0.1
XAN                                 S       S        21 19 05.3 +3.8
XAN                                 pmax    pmax
      comp=Z,25nm,0.9s
XAN                                 pmax    pmax
      comp=Z,130nm,5.9s
XAN   Xi'an             58.38 286   P       P        21 11 02.4 +0.1
XAN                                 pP      pP       21 11 15.8 +0.4
SSLB  Suanglung         58.43 269   P       P        21 11 02.4 -0.3
SSLB  Suanglung         58.43 269   P       P        21 11 03.5 +0.9
YULB  Yu-li             58.51 268   P       P        21 11 03.1 -0.1
OXF   Oxford            58.52  73   P       P        21 10 57.6 -5.5
      baz=315
ERPA  Erie              58.55  61   P       P        21 11 02.9 -0.3
      baz=314
KTK1  Kautokeino        58.62 354  eP       P        21 11 03.2 -0.1
M53A  WI Miller and     58.65  62   P       P        21 11 03.6 -0.3
      baz=314
LVZ   Lovozero          58.69 349   P       P        21 11 03.5 -0.3
LVZ   Lovozero          58.69 349ceP       P        21 11 02.5 -1.3
LVZ                                 pmax    pmax
      comp=Z,63nm,0.8s
LVZ   Lovozero          58.69 349   P       P        21 11 03.4 -0.4
R50A  Paris             58.82  67   P       P        21 11 04.4 -0.7
      baz=314,SNR=5.2
R50A                                P       P        21 11 04.4 -0.7
      baz=314,SNR=5.2
DGZ   Jazzator, Alta    58.85 312  eP       P        21 11 05.0 -0.4
DGZ                                 pmax    pmax
      comp=Z,8.0nm,0.5s
O52A  Adamsville        58.93  64   P       P        21 11 05.1 -0.8
      baz=314
O52A                                P       P        21 11 05.1 -0.8
      baz=314
O53A  New Philadelph    59.18  63   P       P        21 11 05.5 -2.1
      baz=314
MMNY  Mt. Morris Dam    59.22  59   P       P        21 11 07.5 -0.4
U49A  Red Boiling Sp    59.23  69   P       P        21 11 07.3 -0.7
      baz=315
T50A  Nancy             59.41  68   P       P        21 11 09.1 -0.1
      baz=315
T50A                                P       P        21 11 09.1 -0.1
      baz=315
BMNY  Brushton-Moira    59.50  55   P       P        21 11 09.2 -0.5
      baz=315
WCNY  West Carthage     59.52  57   P       P        21 11 10.0 +0.1
      baz=315
LONY  Lake Ozonia       59.62  55   P       P        21 11 08.0 -2.5
      baz=315
P53A  Whipple           59.62  64   P       P        21 11 10.3 -0.4
      baz=315
P53A                                P       P        21 11 10.3 -0.4
      baz=315
O54A  Avella            59.68  63   P       P        21 11 10.8 -0.3
      baz=315
O54A                                P       P        21 11 10.8 -0.3
      baz=315
L56A  Greenwood         59.83  59   P       P        21 11 11.9 -0.2
L56A  Greenwood         59.83  59   P       P        21 11 12.1  0.0
      baz=315,SNR=5.8
L56A                                P       P        21 11 12.1  0.0
      baz=315,SNR=5.8
GTA   Gaotai            59.84 296 ⇑P       P        21 11 12.0 -0.3
GTA                                 pP      pP       21 11 21.9 -3.6
GTA                                 PcP     PcP      21 11 59.3 +0.8
GTA                                 pmax    pmax
      comp=Z,28nm,0.9s
GTA                                 pmax    pmax
      comp=Z,100nm,4.4s
GTA                                 LR      LR
      comp=Z,340nm,15.3s
GTA                                 LR      LR
      comp=Z,330nm,17.4s
GTA                                 LR      LR
      comp=Z,460nm,16.4s
LOF   Lofoten           59.90 358  eP       P        21 11 11.6 -0.4
LOF                                 IAmb    IAmb     21 11 18.7
      comp=Z,233nm,1.5s
LZH   Lanzhou           59.91 291 ⇓P       P        21 11 14.0 +1.1
LZH                                 pP      sP       21 11 29.6 -1.8
LZH                                 PcP     PcP      21 12 00.3 +1.5
LZH                                 pmax    pmax
      comp=Z,59nm,1.5s
LZH                                 pmax    pmax
      comp=Z,260nm,7.6s
LZH                                 LR      LR
      comp=Z,280nm,13.4s
LZH                                 LR      LR
      comp=Z,420nm,14.4s
LZH                                 LR      LR
      comp=Z,520nm,16.5s
STEI  Steigen           60.06 357  eP       P        21 11 13.0 -0.2
STEI                                IAmb    IAmb     21 11 13.1
      comp=Z,33nm,0.5s
J58A  Remsen            60.15  57   P       P        21 11 14.4 +0.2
J58A                                IAmb    IAmb     21 11 15.4
      comp=Z,42nm,1.1s
J58A  Remsen            60.15  57   P       P        21 11 14.7 +0.4
      baz=315
J58A                                P       P        21 11 14.7 +0.4
      baz=315
Q54A  Coxs Mills        60.28  64   P       P        21 11 15.0 -0.2
      baz=315
Q54A                                P       P        21 11 15.0 -0.2
      baz=315
MCWV  Mont Chateau      60.34  63   P       P        21 11 14.5 -1.1
      baz=315
TZTN  Tazewell          60.48  68   P       P        21 11 16.0 -0.6
      baz=315
FAUS  Fauske            60.60 357  eP       P        21 11 16.9  0.0
FAUS                                IAmb    IAmb     21 11 21.7
      comp=Z,73nm,1.2s
BINY  Binghamton        60.61  58   P       P        21 11 16.2 -1.2
      baz=315
SSPA  Standing Stone    60.71  61   P       P        21 11 17.7 -0.4
SSPA  Standing Stone    60.71  61   P       P        21 11 17.0 -1.1
      baz=315
SSPA  Standing Stone    60.71  61   P       P        21 11 17.9 -0.2
ENH   Enshi             60.72 282   P       P        21 11 18.5 +0.1
ENH                                 IAmb    IAmb     21 11 20.1
      comp=Z,24nm,0.9s
ENH   Enshi             60.72 282   P       P        21 11 19.1 +0.7
ENH   Enshi             60.72 282   P       P        21 11 18.3 -0.1
S54A  Dingess, Beckl    60.85  65   P       P        21 11 19.1  0.0
      baz=315
S54A                                P       P        21 11 19.1  0.0
      baz=315
V52A  Sevierville       60.95  68   P       P        21 11 19.2 -0.6
      baz=316
TKL   Tuckaleechee C    60.98  68   LR      LR       21 36 40.7
      comp=Z,226nm,20.4s,baz=313,slow=35
TKL   Tuckaleechee C    60.98  68   P       P        21 11 19.6 -0.4
      baz=316
H62A  Milan             61.36  53   P       P        21 11 22.2 -0.3
KONS  Konsvik           61.54 358  eP       P        21 11 23.4 +0.1
KONS                                IAmb    IAmb     21 11 27.5
      comp=Z,73nm,1.2s
ZSN   Zaisan            61.65 312  eP       P        21 11 24.5 +0.1
      comp=Z,14nm,0.6s,baz=312
ZSN   Zaisan            61.65 312  eP       P        21 11 24.5 +0.1
ZSN                                 pmax    pmax
      comp=Z,14nm,0.6s
STOK  Stokkvaagen       61.71 358  eP       P        21 11 24.9 +0.5
BLA   Blacksburg        61.76  65   P       P        21 11 25.2 -0.1
BLA   Blacksburg        61.76  65   P       P        21 11 25.3 -0.1
BLA                                 pmax    pmax
      comp=Z,79nm,1.1s
BLA   Blacksburg        61.76  65   P       P        21 11 24.2 -1.1
      baz=316,SNR=5.0
BLA   Blacksburg        61.76  65   P       P        21 11 25.6 +0.3
      baz=316,SNR=5.0
BATG  Bathurst New B    61.82  48   P       P        21 11 25.4 -0.1
MOR8  Moi Rana          61.84 358  eP       P        21 11 24.2 -1.2
MOR8                                IAmb    IAmb     21 11 24.8
      comp=Z,27nm,0.5s
KURK  Kurchatov         61.94 318   P       P        21 11 25.8 -0.4
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KURK				IAmb	IAmb	21 11 27.2	
	comp=Z,16nm,0.7s						
KURK	**Kurchatov**	**61.94**	**318**	*ce*P	**P**	**21 11 26.2**	**0.0**
KURK				pmax	pmax		
	comp=Z,16nm,0.7s						
ADZR	**Andozero**	**61.98**	**346**	*e*P	**P**	**21 11 24.1**	**-2.2**
ADZR				*e**PP	**pP**	**21 11 38.5**	**-1.1**
ADZR				pmax	pmax		
	comp=Z,36nm,0.8s						
KURBB	**Kurchatov Arra**	**62.05**	**318**	LR	LR	21 39 22.8	
	comp=Z,439nm,21.6s,baz=343,slow=37						
LUPA	**Lehigh Univers**	**62.07**	**59**	P	**P**	**21 11 27.1**	**-0.3**
V55A	**Taylorsville**	**62.29**	**67**	P	**P**	**21 11 28.6**	**-0.2**
	baz=316						
V55A				P	**P**	**21 11 28.6**	**-0.2**
	baz=316						
T57A	**Hurt**	**62.56**	**64**	P	**P**	**21 11 30.2**	**-0.4**
	baz=316						
T57A				P	**P**	**21 11 30.2**	**-0.4**
	baz=316						
KMSC	**Kings Mountain**	**62.74**	**67**	P	**P**	**21 11 30.8**	**-1.0**
	baz=316,SNR=6.6						
KMSC	**Kings Mountain**	**62.74**	**67**	P	**P**	**21 11 31.6**	**-0.2**
	baz=316,SNR=6.6						
WMQ	**Urumqi**	**62.99**	**307**	*e*P	**P**	**21 11 33.6**	**+0.2**
WMQ				pP	sP	21 11 50.3	-1.9
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
WMQ				LR	LR		
	comp=Z,260nm,17.1s						
GGN	**Saint George**	**63.05**	**50**	P	**P**	**21 11 33.1**	**-0.6**
MK31	**Makanchi Array**	**63.32**	**313**	P	**P**	**21 11 35.0**	**-0.6**
MK31	**Makanchi Array**	**63.32**	**313**	*i* P	**P**	**21 11 34.8**	**-0.7**
MKAR	**Makanchi Array**	**63.32**	**313**	P	**P**	**21 11 34.9**	**-0.6**
	comp=Z,4.7nm,0.7s,baz=49,slow=5.9,SNR=53						
MKAR				LR	LR	21 39 22.3	
	comp=Z,177nm,21.2s,baz=32,slow=36						
	comp=Z,4.7nm,0.7s						
MKAR	**Makanchi Array**	**63.32**	**313**	P	**P**	**21 11 34.6**	**-1.0**
BVAR	**Borovoye Array**	**63.34**	**324**	LR	LR	21 42 25.8	
	comp=Z,464nm,18.1s,baz=20,slow=39						
BRVK	**Borovoye**	**63.35**	**324**	P	**P**	**21 11 35.4**	**-0.2**
BRVK				IAmb	IAmb	21 11 37.0	
	comp=Z,25nm,1.1s						
BRVK	**Borovoye**	**63.35**	**324**	*ce*P	**P**	**21 11 34.4**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,20nm,1.0s						
BRVK	**Borovoye**	**63.35**	**324**	P	**P**	**21 11 35.4**	**-0.2**
SVE	**Sverdlovsk**	**63.42**	**331**	*e*P	**P**	**21 11 36.1**	**+0.1**
SVE				pmax	pmax		
	comp=Z,20nm,0.9s						
MAKZ	**Makanchi**	**63.45**	**313**	P	**P**	**21 11 35.5**	**-0.9**
MAKZ	**Makanchi**	**63.45**	**313**	P	**P**	**21 11 35.5**	**-0.9**
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MAKZ	**Makanchi**	**63.45**	**313**	P	**P**	**21 11 35.5**	**-0.9**
T59A	**Double "B" Far**	**63.52**	**63**	P	**P**	**21 11 37.5**	**+0.5**
	baz=317						
T59A				P	**P**	**21 11 37.5**	**+0.5**
	baz=317						
NSS	**Namsos**	**63.54**	**359**	*e*P	**P**	**21 11 36.5**	**-0.1**
NSS				IAmb	IAmb	21 11 37.4	
	comp=Z,57nm,1.1s						
154A	**Montrose**	**63.55**	**70**	P	**P**	**21 11 36.1**	**-1.1**
	baz=317						
CD2	**Chengdu**	**63.66**	**287**	*e*P	**P**	**21 11 36.8**	**-1.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
DRLN	**Deer Lake**	**64.05**	**42**	P	**P**	**21 11 39.9**	**-0.4**
ARU	**Arti**	**64.36**	**332**	LR	LR	21 45 09.4	
	comp=Z,317nm,18.1s,baz=7.5,slow=41						
ARU	**Arti**	**64.36**	**332**	P	**P**	**21 11 41.6**	**-0.6**
ARU				IAmb	IAmb	21 11 43.3	
	comp=Z,18nm,0.6s						
ARU	**Arti**	**64.36**	**332**	*c i*P	**P**	**21 11 41.6**	**-0.6**
ARU						21 12 13.8	
ARU				S	**S**	**21 20 16.6**	**+0.1**
ARU				SS	**SS**	**21 24 26.7**	**+0.8**
ARU				pmax	pmax		
	comp=Z,15nm,0.6s						
ARU	**Arti**	**64.36**	**332**	P	**P**	**21 11 41.9**	**-0.3**
KLMR	**Klimovskoe**	**64.69**	**344**	*e*P	**P**	**21 11 41.5**	**-2.8**
KLMR				AMP		21 11 42.8	
	comp=Z,13nm,1.4s						
KLMR	**Klimovskoe**	**64.69**	**344**	*e*P	**P**	**21 11 41.4**	**-2.8**
KLMR				pmax	pmax		
	comp=Z,13nm,1.4s						
KIRV	**Kirov**	**64.82**	**338**	LR	LR	21 44 46.2	
	comp=Z,222nm,18.0s,baz=355,slow=40						
KIRV	**Kirov**	**64.82**	**338**	*ce*P	**P**	**21 11 45.6**	**+0.5**
TBLU	**Trondheim**	**64.83**	**360**	*e*P	**P**	**21 11 44.6**	**-0.5**
NHSC	**New Hope**	**64.87**	**68**	P	**P**	**21 11 45.3**	**-0.6**
	baz=317						
GOMU	**GeErMu**	**64.89**	**297**	P	**P**	**21 11 46.5**	**+0.1**
GOMU				S	**S**	**21 20 16.1**	**-8.3**
GOMU				pmax	pmax		
	comp=Z,28nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,120nm,5.5s						
GOMU				LR	LR		
	comp=Z,320nm,14.2s						
GOMU				LR	LR		
	comp=Z,180nm,14.2s						
GOMU				LR	LR		
	comp=Z,350nm,14.3s						
BRZS	**Berezniki**	**64.91**	**320**	*e*P	**P**	**21 11 45.6**	**-0.2**
	baz=320						
BRZS	**Berezniki**	**64.91**	**320**	*e*P	**P**	**21 11 45.6**	**-0.2**
GYA	**Guiyang**	**65.19**	**282**	⇓P	**P**	**21 11 49.1**	**+0.9**
GYA				pP	pP	21 12 01.6	+0.1
GYA				pmax	pmax		
	comp=Z,70nm,1.0s						
GBN	**Guysborough**	**65.30**	**47**	P	**P**	**21 11 48.5**	**+0.1**
GBN				IAmb	IAmb	21 11 50.4	
	comp=Z,43nm,1.1s						
MOL	**Molde**	**65.51**	**1**	*e*P	**P**	**21 11 49.9**	**+0.4**
FIA1	**FINESS Array S**	**65.87**	**351**	P	**P**	**21 11 51.1**	**-0.7**
FINES	**FINESS Array B**	**65.87**	**351**	P	**P**	**21 11 51.4**	**-0.5**
	comp=Z,7.9nm,0.4s,baz=16,slow=7.7,SNR=77						
	comp=Z,7.9nm,0.4s						
AFI	**Afiamalu**	**65.89**	**181**	LR	LR	21 35 42.2	
	comp=Z,60nm,19.9s,baz=38,slow=31						
AKN	**Aaknes**	**65.90**	**1**	*e*P	**P**	**21 11 52.5**	**+0.4**
DOMB	**Dombas**	**66.05**	**0**	*e*P	**P**	**21 11 53.0**	**-0.1**
DOMB				IAmb	IAmb	21 11 53.9	
	comp=Z,59nm,1.1s						
TAOE	**Nuku Hiva Isla**	**66.24**	**147**	*e*S	**S**	**21 20 40.8**	**+0.3**
	comp=Z,99nm,26.5s						
TAOE				*e*SS	**SS**	**21 24 58.8**	**+1.2**
	comp=Z,99nm,30.1s						
TAOE				*e*LR	LR	21 31 53.9	
	comp=Z,381nm,21.4s						
TAOE	**Nuku Hiva Isla**	**66.24**	**147**	*e*T	T	22 24 19.0	
	comp=Z,28nm,0.2s						
HNR	**Honiara**	**66.42**	**212**	LR	LR	21 34 32.3	
	comp=Z,1μm,20.8s,baz=48,slow=30						
TDK	**Taldyqorghan**	**66.43**	**314**	*e*P	**P**	**21 11 55.6**	**-0.3**
	comp=Z,7.2nm,0.8s,baz=314						
TDK	**Taldyqorghan**	**66.43**	**314**	*e*P	**P**	**21 11 55.5**	**-0.3**
TDK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RAF	**Rauma**	**66.64**	**353**	*e*P	**P**	**21 11 56.5**	**-0.3**
NB201	**NORSAR Array S**	**67.04**	**359**	P	**P**	**21 11 59.7**	**+0.3**
NB2	**NORSAR Subarra**	**67.05**	**359**	P	**P**	**21 11 59.3**	**-0.2**
	comp=Z,4.7nm,0.5s,baz=1.9,slow=6.9						
NB2	**NORSAR Subarra**	**67.05**	**359**	P	**P**	**21 11 59.3**	**-0.2**
	slow=6.9						
NOA	**NORSAR Array B**	**67.05**	**359**	P	**P**	**21 11 59.5**	**0.0**
	comp=Z,14nm,0.8s,baz=1.3,slow=6.4,SNR=31						
NOA				LR	LR	21 43 27.2	
	comp=Z,97nm,18.1s,baz=280,slow=38						
	comp=Z,14nm,0.8s						
MEF	**Metsahovi**	**67.23**	**352**	*e*P	**P**	**21 12 00.3**	**-0.3**
NC602	**NORSAR Array S**	**67.35**	**359**	*e*P	**P**	**21 12 01.6**	**+0.2**
SHLS	**Shalkode**	**67.39**	**312**	*e*P	**P**	**21 12 00.9**	**-1.2**
	comp=Z,4.5nm,0.4s,baz=312						
SHLS	**Shalkode**	**67.39**	**312**	*e*P	**P**	**21 12 00.9**	**-1.2**
SHLS				pmax	pmax		
	comp=Z,5.0nm,0.4s						
SKAR	**Skarslia**	**67.41**	**1**	*e*P	**P**	**21 12 01.9**	**+0.1**
KPKS	**Kokpek**	**67.50**	**313**	*e*P	**P**	**21 12 03.1**	**+0.4**
	comp=Z,3.9nm,0.5s,baz=312						
KPKS	**Kokpek**	**67.50**	**313**	*e*P	**P**	**21 12 03.1**	**+0.4**
KPKS				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AAL	**Aland**	**67.60**	**354**	*e*P	**P**	**21 12 02.5**	**-0.3**
SATY	**Saty**	**67.95**	**312**	*e*P	**P**	**21 12 06.3**	**+0.7**
	baz=312						
SATY	**Saty**	**67.95**	**312**	*e*P	**P**	**21 12 06.3**	**+0.7**
CMIG	**Matias Romero**	**67.97**	**90**	LR	LR	21 39 18.9	
	comp=Z,185nm,19.6s,baz=314,slow=34						
UPP	**Uppsala**	**68.05**	**356**	*e*P	**P**	**21 12 05.4**	**-0.3**
PZH	**PanZhiHua**	**68.10**	**285**	P	**P**	**21 12 07.5**	**+0.7**
PZH				pmax	pmax		
	comp=Z,60nm,1.0s						
PZH				pmax	pmax		
	comp=Z,130nm,5.8s						
BTLS	**Baital**	**68.29**	**316**	*e*P	**P**	**21 12 07.3**	**-0.2**
	baz=316						
BTLS	**Baital**	**68.29**	**316**	*e*P	**P**	**21 12 07.3**	**-0.2**
KONO	**Kongsberg**	**68.45**	**360**	P	**P**	**21 12 08.1**	**-0.2**
KONO				IAmb	IAmb	21 13 21.7	
	comp=Z,67nm,1.4s						
KONO	**Kongsberg**	**68.45**	**360**	*ce*P	**P**	**21 12 07.8**	**-0.5**
KONO				pmax	pmax		
	comp=Z,50nm,2.5s						
KONO	**Kongsberg**	**68.45**	**360**	*e*P	**P**	**21 12 08.8**	**+0.5**
KONO	**Kongsberg**	**68.45**	**360**	P	**P**	**21 12 08.7**	**+0.5**
MDOK	**Medeo**	**68.48**	**313**	*e*P	**P**	**21 12 09.1**	**+0.1**
	baz=313						
MDOK	**Medeo**	**68.48**	**313**	*e*P	**P**	**21 12 09.0**	**+0.1**
DAV	**Davao City (W)**	**68.53**	**253**	LR	LR	21 39 04.4	
	comp=Z,188nm,19.8s,baz=48,slow=33						
GENI	**Genyem**	**68.54**	**234**	P	**P**	**21 12 10.0**	**+0.6**
KMI	**Kunming**	**68.54**	**284**	⇑P	**P**	**21 12 10.4**	**+0.8**
KMI				pP	pP	21 12 25.3	+2.1
KMI				sP	PcP	21 12 32.1	-2.4
KMI				pmax	pmax		
	comp=Z,24nm,1.0s						
KMI				pmax	pmax		
	comp=Z,130nm,5.1s						
KMI				LR	LR		
	comp=Z,260nm,19.3s						
KMI				LR	LR		
	comp=Z,160nm,25.3s						
KMI				LR	LR		
	comp=Z,290nm,27.4s						
VSU	**Vasula**	**68.74**	**350**	*i* P	**P**	**21 12 10.3**	**+0.3**
VSU	**Vasula**	**68.74**	**350**	*e*P	**P**	**21 12 10.0**	**0.0**
MTSE	**Matsula**	**68.77**	**352**	*e*P	**P**	**21 12 10.3**	**+0.1**
TARG	**Taragay, Kyrgy**	**69.27**	**312**	P	**P**	**21 12 14.6**	**+0.4**
TARG				IAmb	IAmb	21 12 59.1	
	comp=Z,52nm,1.6s						
TARG	**Taragay, Kyrgy**	**69.27**	**312**	P	**P**	**21 12 14.6**	**+0.4**
TARG				pmax	pmax		
	comp=Z,52nm,1.6s						
SGDS	**Sogindy**	**69.32**	**315**	*e*P	**P**	**21 12 14.3**	**+0.3**
	baz=315						
SGDS	**Sogindy**	**69.32**	**315**	*e*P	**P**	**21 12 14.3**	**+0.3**
TKM2	**Tokmak 2**	**69.32**	**314**	P	**P**	**21 12 15.0**	**+0.8**
	SNR=6.0						
VIKU	**Vikbolandet**	**69.44**	**356**	*e*P	**P**	**21 12 14.3**	**-0.1**
USP	**Ospenovka**	**69.52**	**315**	P	**P**	**21 12 15.7**	**+0.4**
	SNR=12						
CHMS	**Chumysh**	**69.63**	**315**	P	**P**	**21 12 16.3**	**+0.4**
	SNR=5.6						
AKTO	**Aktyubinsk**	**69.72**	**329**	LR	LR	21 47 23.4	
	comp=Z,204nm,18.4s,baz=258,slow=40						
KBK	**Karagaybulak**	**69.82**	**314**	P	**P**	**21 12 18.2**	**+0.9**
	SNR=6.2						
PMOR	**Pomariorio Ree**	**69.82**	**157**	*e*T	T	22 28 46.0	
	comp=Z,5.9nm,0.3s						
SLIT	**Slitere, Latvi**	**69.97**	**353**	*e*P	**P**	**21 12 17.6**	**-0.1**
AAK	**Ala-Archa**	**70.03**	**315**	P	**P**	**21 12 19.0**	**+0.4**
	SNR=12						
AAK	**Ala-Archa**	**70.03**	**315**	P	**P**	**21 12 19.0**	**+0.4**
	comp=Z,8.8nm,0.5s,baz=10.0,slow=0.8,SNR=28						
AAK				LR	LR	21 45 18.9	
	comp=Z,256nm,18.8s,baz=9.0,slow=38						
	comp=Z,8.8nm,0.5s						
AAK	**Ala-Archa**	**70.03**	**315**	P	**P**	**21 12 18.7**	**+0.2**
AAK				IAmb	IAmb	21 12 19.9	
	comp=Z,14nm,1.1s						
AAK	**Ala-Archa**	**70.03**	**315**	*ce*P	**P**	**21 12 18.9**	**+0.4**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AAK	**Ala-Archa**	**70.03**	**315**	P	**P**	**21 12 18.8**	**+0.3**
ABKAR	**Akbulak array**	**70.12**	**327**	P	**P**	**21 12 18.4**	**-0.3**
ABKAR				IAmb	IAmb	21 12 20.5	
	comp=Z,13nm,0.8s						
ABKAR	**Akbulak array**	**70.12**	**327**	P	**P**	**21 12 18.4**	**-0.3**
EKS2	**Erkin-Say**	**70.32**	**315**	P	**P**	**21 12 20.9**	**+0.6**
	SNR=15						
MSVF	**Nonsavu**	**70.38**	**191**	LR	LR	21 36 33.4	
	comp=Z,146nm,19.9s,baz=117,slow=30						
OBN	**Obninsk**	**70.64**	**344**	LR	LR	21 45 23.8	
	comp=Z,90nm,21.8s,baz=354,slow=38						
OBN	**Obninsk**	**70.64**	**344**	⇑*e*P	**P**	**21 12 21.7**	**-0.1**
OBN				*e*		21 12 43.5	
OBN				*e*		21 14 58.7	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.4s						
BELG	**Belogornoye**	**70.89**	**336**	LR	LR	21 46 05.4	
	comp=Z,224nm,19.7s,baz=318,slow=38						
BELG	**Belogornoye**	**70.89**	**336**	*i* P	**P**	**21 12 23.5**	**+0.2**
BELG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SOR	**Soroa**	**70.90**	**77**	P	**P**	**21 12 23.2**	**-0.7**
SOR				IAmb	IAmb	21 14 35.6	
	comp=Z,33nm,1.2s						
SOR	**Soroa**	**70.90**	**77**	P	**P**	**21 12 23.2**	**-0.7**
SOR				pmax	pmax		
	comp=Z,33nm,1.2s						
TNCH	**TengChong**	**71.12**	**287**	⇑P	**P**	**21 12 26.3**	**+0.9**
TNCH				pP	pP	21 12 40.6	+1.6
TNCH				sP	PcP	21 12 46.8	+1.4
TNCH				pmax	pmax		
	comp=Z,49nm,1.1s						
TNCH				pmax	pmax		
	comp=Z,200nm,6.2s						
PMG	**Port Moresby**	**71.26**	**224**	P	**P**	**21 12 26.2**	**+0.1**
	comp=Z,19nm,0.9s,baz=356,slow=6.9,SNR=8.0						
PMG				LR	LR	21 37 10.6	
	comp=Z,90nm,21.9s,baz=5.0,slow=30						
	comp=Z,19nm,0.9s						
PMG	**Port Moresby**	**71.26**	**224**	P	**P**	**21 12 26.2**	**+0.1**
PMG				IAmb	IAmb	21 12 27.1	
	comp=Z,21nm,0.9s						
PMG	**Port Moresby**	**71.26**	**224**	P	**P**	**21 12 26.1**	**+0.1**
PMG	**Port Moresby**	**71.26**	**224**	P	**P**	**21 12 26.0**	**-0.1**
PMG	**Port Moresby**	**71.26**	**224**	*ce*P	**P**	**21 12 26.8**	**+0.8**
PMG				pmax	pmax		
	comp=Z,14nm,0.8s						
PMG	**Port Moresby**	**71.26**	**224**	P	**P**	**21 12 25.9**	**-0.1**
PMG				pP	**pP**	**21 12 39.7**	**+0.7**
KKAR	**Karatay Array**	**71.35**	**317**	P	**P**	**21 12 25.7**	**-0.7**
KKAR	**Karatay Array**	**71.35**	**317**	P	**P**	**21 12 25.7**	**-0.7**
DEL	**Delary**	**71.58**	**357**	*e*P	**P**	**21 12 27.9**	**+0.4**
PBUR	**Paburge**	**71.59**	**353**	*e*P	**P**	**21 12 27.7**	**+0.1**
ISAL	**Salakas**	**71.65**	**350**	*e*P	**P**	**21 12 28.6**	**+0.7**
SIJI	**Sorong**	**71.76**	**243**	LR	LR	21 39 49.8	
	comp=Z,98nm,20.2s,baz=192,slow=32						
LSA	**Lhasa**	**71.80**	**295**	P	**P**	**21 12 30.6**	**+0.8**
LSA				IAmb	IAmb	21 12 32.2	
	comp=Z,38nm,0.7s						
LSA	**Lhasa**	**71.80**	**295**	P	**P**	**21 12 30.6**	**+0.8**
LSA				pmax	pmax		
	comp=Z,38nm,0.7s						
LSA	**Lhasa**	**71.80**	**295**	P	**P**	**21 12 31.1**	**+1.3**
KSH	**Kashi**	**71.88**	**312**	P	**P**	**21 12 33.4**	**+3.7**
KSH				pP	pP	21 12 42.8	-0.5
KSH				pmax	pmax		
	comp=Z,24nm,0.5s						
PPT	**Papeete**	**71.90**	**159**	LR	LR	21 36 10.4	
	comp=Z,136nm,21.0s,baz=338,slow=29						
PPT2	**Papeete2**	**71.92**	**159**	*e*S	**S**	**21 21 47.7**	**+0.3**
	comp=Z,139nm,31.0s						
PPT2				*e*SS	**SS**	**21 26 26.2**	**+1.0**
	comp=Z,115nm,27.0s						
PPT2				*e*LR	LR	21 34 22.0	
	comp=Z,186nm,29.8s						
PPT2				*e*LR	LR	21 34 32.0	
	comp=Z,184nm,22.8s						
PABE	**Paberze**	**71.93**	**351**	P	**P**	**21 12 29.7**	**+0.2**
PABE	**Paberze**	**71.93**	**351**	*e*P	**P**	**21 12 29.8**	**+0.2**
TIAR	**Tiarei**	**71.94**	**159**	*e*T	T	22 31 28.0	
	comp=Z,2.5nm,0.3s						
NACGM	**Naroch**	**72.23**	**350**	*e*P	**P**	**21 12 29.8**	**-1.6**
ESK	**Eskdalemuir**	**72.29**	**8**	P	**P**	**21 12 31.8**	**+0.1**
ESK				IAmb	IAmb	21 12 32.8	
	comp=Z,24nm,1.0s						
ESK	**Eskdalemuir**	**72.29**	**8**	P	**P**	**21 12 31.8**	**+0.1**
ESK				pmax	pmax		
	comp=Z,24nm,1.0s						
IUG	**Iuzhnay**	**72.34**	**317**	*e*P	**P**	**21 12 32.2**	**-0.3**
	comp=Z,3.2nm,0.4s,baz=317						
IUG	**Iuzhnay**	**72.34**	**317**	*e*P	**P**	**21 12 32.2**	**-0.3**
IUG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
MNK	**Minsk**	**72.50**	**349**	*i* P	**P**	**21 12 31.9**	**-1.1**
	comp=E,2.0nm,0.8s						
MNK				*i* P	**P**	**21 12 31.9**	**-1.1**
	comp=N,32nm,0.8s						
MNK				*i* P	**P**	**21 12 31.9**	**-1.1**
	comp=Z,64nm,0.9s,baz=192						
MNK				*i* pP	**pP**	**21 12 46.2**	**-0.5**
MNK				*i* PP	**PP**	**21 15 13.3**	**-0.6**
MNK				*i* PPP	PPP	21 16 57.6	
MNK				*i* S	**S**	**21 21 52.7**	**-0.5**
MNK				*i* SS	**SS**	**21 26 32.9**	**+1.7**
MNK				*i* SSS	SSS	21 29 53.4	
MNK				*i* LR	LR	21 44 30.7	
MNK				*i* LRM	MLR	21 46 56.9	
	comp=N,2μm,19.5s						
MNK				*i* LRM	MLR	21 47 22.9	
	comp=E,27nm,17.0s						
MNK				*i* LRM	MLR	21 48 06.1	
	comp=Z,272nm,17.0s						
MNK	**Minsk**	**72.50**	**349**	*i* P	**P**	**21 12 31.9**	**-1.1**
MNK				*i* *PP	**pP**	**21 12 46.2**	**-0.5**
MNK				*i*		21 15 13.2	
MNK				*i* PPP	PPP	21 16 57.5	
MNK				*i* S	**S**	**21 21 52.7**	**-0.5**
MNK				*i* SS	**SS**	**21 26 32.9**	**+1.7**
MNK				pmax	pmax		
	comp=N,32nm,0.8s						
MNK				pmax	pmax		
	comp=Z,64nm,0.9s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				MLR	MLR		
	comp=N,2μm,20.0s						
MNK				MLR	MLR		
	comp=E,27nm,17.0s						
MNK				MLR	MLR		
	comp=Z,272nm,17.0s						
BSD	**Bornholm Skovb**	**72.90**	**357**	*e*P	**P**	**21 12 35.9**	**+0.5**
FAKI	**Fak Fak**	**72.94**	**241**	P	**P**	**21 12 36.0**	**-0.2**
NONG	**Nongkai**	**73.64**	**278**	P	**P**	**21 12 41.7**	**+1.4**
CRAI	**Chiangrai**	**73.66**	**282**	P	**P**	**21 12 41.3**	**+0.9**
RAR	**Rarotonga**	**73.76**	**169**	LR	LR	21 39 28.3	
	comp=Z,217nm,19.9s,baz=314,slow=31						
DSB	**Dublin**	**74.05**	**10**	P	**P**	**21 12 42.1**	**-0.1**
BSEG	**Bad Segeberg**	**74.18**	**359**	*e*P	**P**	**21 12 43.4**	**+0.5**
	comp=Z,26nm,0.9s,baz=1.6,slow=5.7						
MYLDM	**Lahad Datu**	**74.25**	**258**	P	**P**	**21 12 45.0**	**+1.1**
MYLDM				IAmb	IAmb	21 12 46.5	
	comp=Z,27nm,0.8s						
SHL	**Shillong**	**74.56**	**292**	P	**P**	**21 12 45.3**	**-0.5**
SHL				IAmb	IAmb	21 12 46.3	
	comp=Z,17nm,0.8s						
SHL	**Shillong**	**74.56**	**292**	P	**P**	**21 12 45.3**	**-0.5**
SHL				pmax	pmax		
	comp=Z,17nm,0.8s						
GKP	**Gorka Klasztor**	**74.64**	**355**	*e*P	**P**	**21 12 46.3**	**+0.7**
GAR	**Garm**	**74.83**	**315**	P	**P**	**21 12 47.2**	**+0.1**
MND	**Mandalay**	**74.83**	**286**	P	**P**	**21 12 47.4**	**+0.2**
KKM	**Kota Kinabalu**	**74.95**	**260**	P	**P**	**21 12 48.5**	**+0.5**
KKM				IAmb	IAmb	21 12 49.8	
	comp=Z,39nm,1.3s						
KKM	**Kota Kinabalu**	**74.95**	**260**	P	**P**	**21 12 49.8**	**+1.8**
DLV	**T Lat**	**75.07**	**270**	P	**P**	**21 12 49.9**	**+1.0**
PHRA	**Phrae**	**75.08**	**281**	P	**P**	**21 12 49.4**	**+0.8**
RETH	**Rethem/Aller,**	**75.38**	**0**	*e*P	**P**	**21 12 50.2**	**+0.4**
	comp=Z,26nm,0.9s,baz=1.6,slow=5.7						
TAPN	**Taplejung**	**75.52**	**296**	*e*P	**P**	**21 12 51.7**	**+0.2**
RUE	**Ruedersdorf**	**75.57**	**357**	*e*P	**P**	**21 12 51.9**	**+0.9**
RUE	**Ruedersdorf**	**75.57**	**357**	*e*P	**P**	**21 12 51.1**	**+0.2**
	comp=Z,41nm,0.9s,baz=1.6,slow=5.7						
CHTO	**Chiang Mai**	**75.61**	**282**	P	**P**	**21 12 52.0**	**+0.4**
CHTO	**Chiang Mai**	**75.61**	**282**	P	**P**	**21 12 52.1**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CHGR	**Chuyangaron**	**75.61**	**316**	P	**P**	**21 12 51.5**	**-0.1**
CHGR	**Chuyangaron**	**75.61**	**316**	P	**P**	**21 12 51.5**	**-0.1**
CHGR				pmax	pmax		
	comp=Z,47nm,0.6s						
NRDL	**Niedersach Rie**	**75.62**	**360**	*e*P	**P**	**21 12 51.3**	**+0.1**
	comp=Z,27nm,1.2s,baz=1.6,slow=5.7						
SANI	**Sanana**	**75.68**	**247**	P	**P**	**21 12 51.9**	**-0.2**
FLTG	**Flechtingen**	**75.78**	**359**	*e*P	**P**	**21 12 51.9**	**-0.2**
	comp=Z,18nm,0.7s,baz=1.6,slow=5.7						
IBBN	**Ibbenburen**	**75.80**	**1**	*e*P	**P**	**21 12 52.8**	**+0.5**
	comp=Z,47nm,0.9s,baz=1.6,slow=5.7						
BEL	**Belsk**	**75.84**	**353**	*e*P	**P**	**21 12 53.2**	**+0.7**
CM31	**Chiang Mai Arr**	**75.88**	**282**	P	**P**	**21 12 53.8**	**+0.5**
CMAR	**Chiang Mai Arr**	**75.88**	**282**	P	**P**	**21 12 54.1**	**+0.9**
	comp=Z,50nm,0.8s,baz=27,slow=6.8,SNR=264						
CMAR				LR	LR	21 50 25.1	
	comp=Z,66nm,18.1s,baz=40,slow=39						
	comp=Z,50nm,0.8s						
CMAR	**Chiang Mai Arr**	**75.88**	**282**	P	**P**	**21 12 53.8**	**+0.6**
AKASG	**Malin Array Be**	**76.05**	**347**	P	**P**	**21 12 52.9**	**-0.9**
	comp=Z,2.1nm,0.3s,baz=16,slow=5.6,SNR=44						
AKASG				LR	LR	21 50 43.0	
	comp=Z,202nm,18.8s,baz=347,slow=39						
	comp=Z,2.1nm,0.3s						
AKASG	**Malin Array Be**	**76.05**	**347**	P	**P**	**21 12 52.9**	**-0.9**
AKBB	**Malin Array Si**	**76.05**	**347**	P	**P**	**21 12 52.6**	**-1.1**
AKBB				IAmb	IAmb	21 12 54.2	
	comp=Z,20nm,0.9s						
AKBB	**Malin Array Si**	**76.05**	**347**	*ce*P	**P**	**21 12 52.5**	**-1.2**
AKBB				pmax	pmax		
	comp=Z,18nm,0.9s						
GUN	**Gumba**	**76.09**	**298**	*e*P	**P**	**21 12 54.9**	**+0.1**
	comp=Z,69nm,0.5s						
JIRN	**Jiri**	**76.12**	**297**	*e*P	**P**	**21 12 55.3**	**+0.3**
	comp=Z,94nm,0.4s						
TOLI2	**Tolitoli**	**76.14**	**253**	P	**P**	**21 12 54.0**	**-0.7**
TOLI2				IAmb	IAmb	21 12 55.1	
	comp=Z,18nm,1.0s						
CLZ	**Clausthal**	**76.28**	**359**	*e*P	**P**	**21 12 55.5**	**+0.5**
	comp=Z,30nm,0.8s,baz=1.6,slow=5.7						
RAMN	**Ramite**	**76.45**	**296**	*e*P	**P**	**21 12 56.6**	**-0.1**
GTTG	**Gottingen**	**76.58**	**360**	*e*P	**P**	**21 12 57.2**	**+0.5**
	comp=Z,32nm,0.9s,baz=1.6,slow=5.7						
PKI	**Pulchoki**	**76.61**	**298**	*e*P	**P**	**21 12 57.4**	**-0.3**
PKIN	**Phulchoki**	**76.61**	**298**	*e*P	**P**	**21 12 57.5**	**-0.2**
BUG	**Bochum--Univer**	**76.67**	**1**	*e*P	**P**	**21 12 57.0**	**-0.1**
	comp=Z,19nm,0.8s,baz=1.6,slow=5.7						
DZM	**Mont Dzumac**	**76.67**	**202**	*e*SS	SS	21 27 38.7	+1.2
	comp=Z,81nm,27.2s						
DZM				*e*LR	LR	21 36 44.7	
	comp=Z,213nm,21.3s						
DZM	**Mont Dzumac**	**76.67**	**202**	LR	LR	21 41 31.3	
	comp=Z,178nm,19.9s,baz=20,slow=32						
GKN	**Gorkha**	**76.69**	**299**	*e*P	**P**	**21 12 57.9**	**-0.1**
	comp=Z,39nm,0.4s						
LUWI	**Luwuk**	**76.71**	**251**	P	**P**	**21 12 56.9**	**-1.1**
LUWI	**Luwuk**	**76.71**	**251**	P	**P**	**21 12 58.2**	**+0.3**
DMN	**Daman**	**76.75**	**298**	*e*P	**P**	**21 12 58.6**	**+0.2**
	comp=Z,25nm,0.5s						
CLL	**Collm**	**76.77**	**358**	P	**P**	**21 12 57.2**	**-0.6**
CLL				IAmb	IAmb	21 12 59.6	
	comp=Z,17nm,0.7s						
CLL	**Collm**	**76.77**	**358**	*i* P	**P**	**21 12 57.8**	**0.0**
	comp=Z,22nm,1.0s						
CLL				*i* PcP	**PcP**	**21 13 08.6**	**-0.3**
	comp=Z,12nm,1.1s						
CLL				*e*pP	**sP**	**21 13 15.0**	**-1.9**
CLL				*e*sP	pP	21 13 20.0	+8.5
CLL	**Collm**	**76.77**	**358**	*i* P	**P**	**21 12 57.8**	**0.0**
CLL				*i*		21 13 08.6	
CLL				*e**PP	**sP**	**21 13 15.0**	**-1.9**
CLL				pmax	pmax		
	comp=Z,22nm,1.0s						
CLL				pmax	pmax		
	comp=Z,12nm,1.1s						
CLL	**Collm**	**76.77**	**358**	*e*P	**P**	**21 12 57.5**	**-0.2**
	comp=Z,22nm,1.1s,baz=1.6,slow=5.7						
DANN	**Dangsing**	**76.89**	**299**	*e*P	**P**	**21 12 59.4**	**+0.2**
NEUB	**Neuenburg**	**76.89**	**358**	*e*P	**P**	**21 12 58.9**	**+0.4**
	comp=Z,38nm,0.8s,baz=1.6,slow=5.7						
KASTN	**Kahler Asten**	**76.92**	**1**	*e*P	**P**	**21 12 59.0**	**+0.3**
	comp=Z,17nm,1.0s,baz=1.6,slow=5.7						
BRDH	**Bariadhala**	**76.94**	**290**	LR	LR	21 51 07.9	

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          comp=Z,225nm,18.1s,baz=5.0,slow=39
FBE   Freiberg          77.15 357 eP    P     21 13 00.5 +0.5
          comp=Z,30nm,1.0s,baz=1.6,slow=5.7
BRG   Berggiesshubel    77.18 357 i P   P     21 13 00.7 +0.6
BRG                               Amp         21 13 01.4
          comp=Z,29nm,1.1s
BRG   Berggiesshubel    77.18 357  P    P     21 13 10.6  +11
BRG                               Amp         21 13 11.9
          comp=Z,8.2nm,1.0s
BRG   Berggiesshubel    77.18 357 i P   P     21 13 00.7 +0.6
BRG                                           21 13 10.6
BRG                                pmax pmax
          comp=Z,29nm,1.1s
BRG                                pmax pmax
          comp=Z,8.0nm,1.0s
BRG   Berggiesshubel    77.18 357 eP    P     21 13 00.2 +0.1
          comp=Z,29nm,1.1s,baz=1.6,slow=5.7
OSTC  Ostas             77.40 356 eP    P     21 13 01.6 +0.2
OSTC  Ostas             77.40 356 eP    P     21 13 01.6 +0.2
MOX   Moxa              77.46 359 eP    P     21 13 02.0 +0.3
          comp=Z,24nm,0.8s,baz=1.6,slow=5.7
UPC   Upice             77.46 356 eP    P     21 13 02.0 +0.3
UPC   Upice             77.46 356 eP    P     21 13 02.0 +0.3
MEM   Membach           77.47   2 dP    P     21 13 02.3 +0.5
          comp=Z,17nm,1.0s
BSTI  Sart Tilman       77.49   2 dP    P     21 13 02.6 +0.8
PYUN  Piuthan           77.50 300 eP    P     21 13 02.2  -0.4
BTNL  Ternell           77.50   2 dP    P     21 13 02.7 +0.7
          comp=Z,19nm,1.0s
PVCC  Panska Ves        77.50 357 eP    P     21 13 02.4 +0.5
PVCC  Panska Ves        77.50 357 eP    P     21 13 02.4 +0.5
OJC   Ojcow             77.52 353  P    P     21 13 01.9  -0.2
OJC                                IAmb IAmb  21 13 03.1
          comp=Z,22nm,1.0s
OJC   Ojcow             77.52 353  P    P     21 13 01.9  -0.2
OJC                                pmax pmax
          comp=Z,22nm,1.0s
SNF   Seneffe           77.52   3 dP    P     21 13 02.5 +0.5
          comp=Z,17nm,0.8s
TBI   Tubuai            77.52 160 eLR   LR    21 37 07.8
          comp=Z,484nm,21.8s
TBI                               eLR   LR    21 37 07.9
          comp=Z,3µm,20.8s
TBI   Tubuai            77.52 160 eT    T     22 38 25.7
          comp=Z,8.8nm,0.3s
LVV   L'vov             77.54 350 eP    P     21 13 02.0  -0.2
AHRW  Bad Neuenahr-A    77.56   1 eP    P     21 13 02.7 +0.4
          comp=Z,21nm,0.9s,baz=1.6,slow=5.7
DPC   Dobruska-Polom    77.60 355 eP    P     21 13 02.9 +0.3
DPC   Dobruska-Polom    77.60 355 eP    P     21 13 02.9 +0.3
PLN   Plauen            77.61 358 eP    P     21 13 02.7 +0.1
          comp=Z,10nm,0.8s,baz=1.6,slow=5.7
NAYO  Nakonayok         77.64 277  P    P     21 13 04.4 +1.2
          comp=Z,571nm,0.9s
BCLA  Clavier           77.64   3 dP    P     21 13 03.0 +0.3
          comp=Z,12nm,0.9s
WERD  Werda             77.64 358 eP    P     21 13 03.0 +0.2
          comp=Z,12nm,1.2s,baz=1.6,slow=5.7
BGES  Gesves            77.67   3 dP    P     21 13 03.0 +0.1
          comp=Z,13nm,0.9s
GUNZ  Gunzen            77.73 358 eP    P     21 13 03.6 +0.3
          comp=Z,10nm,0.8s,baz=1.6,slow=5.7
BMRD  Maredsous         77.75   3 dP    P     21 13 03.8 +0.5
          comp=Z,26nm,0.9s
WERN  Wernitzgruen      77.80 358 eP    P     21 13 04.2 +0.5
          comp=Z,23nm,1.0s,baz=1.6,slow=5.7
KRLC  Kraliky           77.85 355 eP    P     21 13 04.4 +0.4
KRLC  Kraliky           77.85 355 eP    P     21 13 04.4 +0.4
NKC   Novy Kostel       77.86 358 eP    P     21 13 04.4 +0.4
NKC   Novy Kostel       77.86 358 eP    P     21 13 04.4 +0.4
TNS   Taunus Mts        77.90   1 eP    P     21 13 04.5 +0.3
          comp=Z,19nm,0.9s,baz=1.6,slow=5.7
RCHB  Rochefort         77.91   3 dP    P     21 13 04.5 +0.3
          comp=Z,20nm,0.9s
NIL   Nilore            77.92 310  P    P     21 13 04.8 +0.2
NIL                                IAmb IAmb  21 13 05.9
          comp=Z,30nm,0.6s
NIL   Nilore            77.92 310  P    P     21 13 04.8 +0.2
NIL                                pmax pmax
          comp=Z,30nm,0.6s
DOU   Dourbes           77.95   3 dP    P     21 13 04.6 +0.2
          comp=Z,17nm,0.9s
OKC   Ostrava-Krasne    78.01 354 eP    P     21 13 05.2 +0.4
OKC   Ostrava-Krasne    78.01 354 eP    P     21 13 05.2 +0.4
PRU   Pruhonice         78.04 357 eP    P     21 13 04.6  -0.3
PRU   Pruhonice         78.04 357 eP    P     21 13 04.6  -0.3
MORC  Moravsky Berou    78.11 355 ⇓P    P     21 13 06.2 +0.7
MORC  Moravsky Berou    78.11 355  P    P     21 13 05.6 +0.2
MORC                               IAmb IAmb  21 13 06.7
          comp=Z,19nm,0.9s
MORC  Moravsky Berou    78.11 355 eP    P     21 13 05.7 +0.3
MORC  Moravsky Berou    78.11 355  P    P     21 13 06.1 +0.7
MANZ  Manzenberg        78.11 358 eP    P     21 13 05.6 +0.2
          comp=Z,2.2nm,0.8s,baz=1.6,slow=5.7
STHS  Stebnicka Huta    78.20 352 eP    P     21 13 06.2 +0.3
STHS                               pmax pmax
          comp=Z,20nm,0.8s
STHS  Stebnicka Huta    78.20 352 eP    P     21 13 06.2 +0.3
ROTZ  Rotzenmuhle       78.33 358 eP    P     21 13 07.0 +0.5
          comp=Z,2.9nm,0.9s,baz=1.6,slow=5.7
GRA1  Grafenberg Arr    78.42 359  P    P     21 13 07.5 +0.4
GRA1                               IAmb IAmb  21 13 09.0
          comp=Z,30nm,0.8s
GRF   Grafenberg Arr    78.42 359  P    P     21 13 07.5 +0.4
GRF                                pmax pmax
          comp=Z,30nm,0.8s
GRF   Grafenberg Arr    78.42 359 eP    P     21 13 07.8 +0.7
          comp=Z,38nm,0.9s,baz=1.6,slow=5.7
GRFO  Grafenberg        78.42 359  P    P     21 13 07.5 +0.5
GRFO                               IAmb IAmb  21 13 08.9
          comp=Z,29nm,0.8s
GRFO  Grafenberg        78.42 359  P    P     21 13 07.5 +0.5
GRFO                               pmax pmax
          comp=Z,29nm,0.8s
WLF   Walferdange       78.42   2  P    P     21 13 07.2 +0.1
WLF                                IAmb IAmb  21 13 08.9
          comp=Z,13nm,0.9s
WLF   Walferdange       78.42   2  P    P     21 13 07.2 +0.1
WLF                                pmax pmax
          comp=Z,13nm,0.9s
WLF   Walferdange       78.42   2 dP    P     21 13 07.9 +0.8
          comp=Z,9.4nm,0.9s
WLF   Walferdange       78.42   2 eP    P     21 13 07.6 +0.6
          comp=Z,17nm,1.1s,baz=1.6,slow=5.7
LANS  Liptovska Anna    78.61 353 eP    P     21 13 09.8 +1.6
LANS                               pmax pmax
          comp=Z,22nm,0.9s
LANS  Liptovska Anna    78.61 353 eP    P     21 13 09.8 +1.6
VRAC  Vranov            78.63 355 ⇑P    P     21 13 09.2 +0.9
VRAC  Vranov            78.63 355 eP    P     21 13 08.9 +0.7
VRAC  Vranov            78.63 355  P    P     21 13 09.1 +0.9
TREC  Trest             78.69 356 eP    P     21 13 08.7 +0.1
TREC  Trest             78.69 356 eP    P     21 13 08.7 +0.1
KRUC  Moravsky          78.89 355 eP    P     21 13 09.9 +0.3
KHC   Kasperske Hory    78.93 357  P    P     21 13 10.6 +0.7
KHC                                IAmb IAmb  21 13 11.8
          comp=Z,21nm,0.8s
KHC   Kasperske Hory    78.93 357 eP    P     21 13 10.4 +0.5
KHC   Kasperske Hory    78.93 357 eP    P     21 13 10.4 +0.5
JAVC  Velka Javorina    79.02 354 eP    P     21 13 11.9 +1.5
KBL   Kabul             79.11 313  P    P     21 13 10.5  -0.9
KBL                                IAmb IAmb  21 13 11.8
          comp=Z,15nm,1.1s
KBL   Kabul             79.11 313  P    P     21 13 10.5  -0.9
KBL                                pmax pmax
          comp=Z,15nm,1.1s
KECS  Kecovo            79.19 352 eP    P     21 13 12.3 +1.0
KECS  Kecovo            79.19 352 eP    P     21 13 12.3 +1.0
GEC2  GERESS Array S    79.21 357  P    P     21 13 11.9 +0.3
GEC2                               IAmb IAmb  21 13 12.9
          comp=Z,17nm,0.8s
GEC2  GERESS Array S    79.21 357 eP    P     21 13 11.5  0.0
          comp=Z,19nm,0.9s,baz=1.6,slow=5.7
GERES GERESS Array B    79.21 357  P    P     21 13 11.9 +0.3
          comp=Z,12nm,0.8s,baz=22,slow=5.0,SNR=14
          comp=Z,12nm,0.8s
GERES GERESS Array B    79.21 357  P    P     21 13 11.7 +0.2
CKRC  Cesky Krumlov     79.22 357 eP    P     21 13 11.1  -0.4
CKRC  Cesky Krumlov     79.22 357 eP    P     21 13 11.1  -0.4
VYHS  Vyhne             79.31 354 eP    P     21 13 12.7 +0.8
VYHS                               pmax pmax
          comp=Z,23nm,1.0s
VYHS  Vyhne             79.31 354 eP    P     21 13 12.7 +0.8
JTS   Las Juntas de     79.31  87  LR   LR    21 50 41.9
          comp=Z,66nm,18.4s,baz=354,slow=38
STU   Stuttgart         79.35   0 eP    P     21 13 12.8 +0.6
          comp=Z,48nm,0.9s,baz=1.6,slow=5.7
TRPA  Tarpa             79.36 351 ⇓P    P     21 13 12.7 +0.5
SMOL  Smolenice         79.38 355 eP    P     21 13 13.9 +1.6
SMOL                               pmax pmax
          comp=Z,16nm,0.8s
MODS  Modra-Piesok      79.52 355 eP    P     21 13 14.3 +1.2
MODS                               pmax pmax
          comp=Z,63nm,0.9s
MODS  Modra-Piesok      79.52 355 eP    P     21 13 14.3 +1.2
BUR08 Bucovina Ar. S    79.56 349  P    P     21 13 13.3  -0.2
BUR08                              IAmb IAmb  21 13 14.3
          comp=Z,10nm,0.8s
BURAR Bucovina Array    79.59 349 ⇓P    P     21 13 13.7  0.0
BURAR Bucovina Array    79.59 349  P    P     21 13 13.4  -0.2
BURAR Bucovina Array    79.59 349  P    P     21 13 13.6  0.0
BMR   Baia Mare         79.72 350 ⇑P    P     21 13 14.5 +0.3
BMR   Baia Mare         79.72 350  P    P     21 13 14.5 +0.3
BFO   Black Forest      79.79   1  P    P     21 13 14.6  0.0
BFO   Black Forest      79.79   1  P    P     21 13 14.6  0.0
BFO                                pmax pmax
          comp=Z,12nm,1.0s
BFO   Black Forest      79.79   1 eP    P     21 13 15.0 +0.4
          comp=Z,13nm,1.0s,baz=1.6,slow=5.7
PSZ   Piszkesteto       79.80 353 ⇑P    P     21 13 15.8 +1.0
PSZ   Piszkesteto       79.80 353  P    P     21 13 14.8 +0.1
PSZ                                IAmb IAmb  21 13 16.5
          comp=Z,16nm,1.0s
PSZ   Piszkesteto       79.80 353  P    P     21 13 15.7 +1.0
ECH   Echery            79.89   1  P    P     21 13 15.4 +0.3
ECH                                IAmb IAmb  21 13 17.0
          comp=Z,22nm,0.9s
ECH   Echery            79.89   1  P    P     21 13 15.4 +0.3
ECH                                pmax pmax
          comp=Z,22nm,0.9s
CLF   Chambon-Foret     79.92   5  P    P     21 13 15.9 +0.7
CLF                                IAmb IAmb  21 13 17.0
          comp=Z,62nm,1.0s
FUR   Furstenfeldbru    79.95 359 eP    P     21 13 16.0 +0.5
          comp=Z,36nm,1.1s,baz=1.6,slow=5.7
KIV   Kislovodsk        79.95 336 ⇓P    P     21 13 16.2 +0.6
KIV   Kislovodsk        79.95 336  P    P     21 13 15.4  -0.2
KIV   Kislovodsk        79.95 336 eP    P     21 13 16.2 +0.6
KIV                                pmax pmax
          comp=Z,11nm,1.0s
SRO   Srobarova         80.02 354 eP    P     21 13 16.9 +1.1
SRO                                pmax pmax
          comp=Z,16nm,0.9s
SRO   Srobarova         80.02 354 eP    P     21 13 16.9 +1.1
CONA  Conrad Observa    80.04 356 eP    P     21 13 16.8 +0.7
          comp=Z,21nm,0.7s,SNR=15
KBZ   Khabaz            80.11 336  P    P     21 13 16.9 +0.5
          comp=Z,3.4nm,0.5s,baz=9.6,slow=1.8,SNR=24
KBZ                                LR   LR    21 53 15.2
          comp=Z,230nm,18.0s,baz=354,slow=39
          comp=Z,3.4nm,0.5s
KBZ   Khabaz            80.11 336ceP    P     21 13 16.5 +0.2
KBZ                                pmax pmax
          comp=Z,5.0nm,0.9s
NCK   Nalchik           80.15 335 i P   P     21 13 16.6  0.0
NCK                                pmax pmax
          comp=Z,18nm,0.9s
SHA1  Shidzhatmaz       80.16 336 i P   P     21 13 16.6  -0.3
MOA   Molln             80.19 357 eP    P     21 13 17.2 +0.5
          comp=Z,7.9nm,0.8s
ARCR  ARCALIA           80.21 350 ⇓P    P     21 13 17.8 +0.9
RONA  Rosalia, Austr    80.25 355 eP    P     21 13 17.6 +0.5
          comp=Z,13nm,1.2s,SNR=6.5
MTSU  Mount Surprise    80.27 223  P    P     21 13 18.3 +0.9
BKB   Balikpapan        80.33 255  P    P     21 13 17.7  -0.2
RJOB  Jochberg          80.34 358 eP    P     21 13 18.1 +0.4
          comp=Z,21nm,0.8s,baz=1.6,slow=5.7
BIOA  Bad Ischl, Aus    80.37 357 eP    P     21 13 18.3 +0.6
          comp=Z,15nm,0.6s,SNR=10
UBR   Ueberruh          80.44 359 eP    P     21 13 18.8 +0.6
          comp=Z,23nm,1.2s,baz=1.6,slow=5.7
TESR  Tescani           80.50 348 ⇓P    P     21 13 18.3  -0.2
RETA  Reutte            80.63 359 i P   P     21 13 19.8 +0.6
          comp=Z,12nm,0.7s,SNR=6.1
CJR   Cluj-Napoca       80.66 350 ⇓P    P     21 13 19.6 +0.3
CJR   Cluj-Napoca       80.66 350  P    P     21 13 19.6 +0.3
GEYT  Alibeck           80.66 323  P    P     21 13 19.5  0.0
          comp=Z,6.3nm,0.9s,baz=354,slow=4.5,SNR=12
GEYT                               LR   LR    21 52 33.5
          comp=Z,120nm,19.9s,baz=14,slow=38
          comp=Z,6.3nm,0.9s
DRGR                    80.67 351 ⇑P    P     21 13 19.5  0.0
DRGR                    80.67 351  P    P     21 13 19.4  0.0
ZEI   Tsey              80.73 335 eP    P     21 13 19.2  -0.8
ZEI                                pmax pmax
          comp=Z,4.0nm,0.4s
ARSA  Arzberg           80.73 356 eP    P     21 13 20.6 +0.9
          comp=Z,16nm,0.7s,SNR=7.9
MARR  Marisel-Cluj      80.75 350 ⇓P    P     21 13 19.7  -0.1
MOTA  Moosalm           80.77 359 i P   P     21 13 20.6 +0.5
          comp=Z,19nm,0.8s,SNR=12
WATA  Walderalm         80.77 358 eP    P     21 13 20.7 +0.6
          comp=Z,25nm,0.9s,SNR=12
DAVA  Damuels           80.84 360 i P   P     21 13 22.1 +1.7
          comp=Z,16nm,0.9s,SNR=8.1
WTTA  Wattenberg        80.84 358 i P   P     21 13 21.2 +0.7
          comp=Z,24nm,0.7s,SNR=12
AKT   Akhty             80.89 332 eP    P     21 13 20.5  -0.3
AKT                                pmax pmax
          comp=Z,14nm,0.5s
SQTA  Sankt Quirin      80.89 359 eP    P     21 13 21.4 +0.7
          comp=Z,30nm,0.8s,SNR=19
VLDR  Vladesti          80.97 347 ⇓P    P     21 13 21.4 +0.5
KBA   Koelnbreinsper    80.99 357 eP    P     21 13 22.3 +1.1
          comp=Z,104nm,1.1s,SNR=51
OZUR                    81.02 349 ⇓P    P     21 13 21.9 +0.6
KDU   Kakadu            81.05 236  P    P     21 13 22.0 +0.4
FETA  Feichten          81.10 359 eP    P     21 13 22.6 +0.8
          comp=Z,40nm,0.9s,SNR=21
VRI   Vrincioaia        81.13 348 ⇑P    P     21 13 22.5 +0.6
VRI   Vrincioaia        81.13 348  P    P     21 13 22.4 +0.6
PLOR  Plostina          81.15 348 ⇓P    P     21 13 23.0 +1.1
PLOR  Plostina          81.15 348  P    P     21 13 23.0 +1.1
ODBI  Odobesti          81.19 348 ⇑P    P     21 13 22.9 +0.8
DOPR  Dopca             81.19 349 ⇓P    P     21 13 23.1 +1.0
COVR  Voineasa-Covas    81.21 348 ⇓P    P     21 13 23.1 +0.8
CTA   Charters Tower    81.23 221  P    P     21 13 22.7 +0.2
          comp=Z,11nm,0.9s,baz=57,slow=5.3,SNR=11
CTA                                LR   LR    21 44 13.6
          comp=Z,108nm,20.8s,baz=68,slow=32
          comp=Z,11nm,0.9s
CTAO  Charters Tower    81.23 221  P    P     21 13 23.1 +0.6
RKT   Rikitea           81.26 147 eT    T     22 43 05.0
          comp=Z,2.4nm,0.3s
SIRR  Siria             81.29 351 ⇓P    P     21 13 23.0 +0.4
SEKA  Sheki             81.30 332  P    P     21 13 22.7  -0.2
SOKA  Soboth            81.33 356 i P   P     21 13 23.4 +0.5
          comp=Z,26nm,0.8s,SNR=21
ABTA  Abfaltersbach     81.34 358 eP    P     21 13 23.3 +0.3
          comp=Z,21nm,0.8s,SNR=11
PERS  Pernice           81.37 356 i P   P     21 13 23.8 +0.7
MYKA  Terra Mystica     81.43 357 eP    P     21 13 24.1 +0.6
          comp=Z,10nm,0.8s
FUORN Ofenpass-Fuorn    81.50 359  P    P     21 13 24.6 +0.5
FUORN                              IAmb IAmb  21 13 26.2
          comp=Z,22nm,1.1s
TLCR                    81.50 346 ⇓P    P     21 13 24.2 +0.5
TLCR                    81.50 346  P    P     21 13 24.2 +0.5
OBKA  Obir              81.52 356 eP    P     21 13 24.4 +0.4
          comp=Z,19nm,0.6s,SNR=20
GROS  Grobnik           81.52 356 i P   P     21 13 24.3 +0.3
MORH  Mrgy, Hungar      81.59 354 ⇓P    P     21 13 24.1  0.0
MLR   Muntele Rosu      81.59 348 ⇑P    P     21 13 24.3  -0.1
MLR   Muntele Rosu      81.59 348  LR   LR    21 52 36.6
          comp=Z,274nm,20.8s,baz=344,slow=38
MLR   Muntele Rosu      81.59 348  P    P     21 13 24.7 +0.3
MLR                                IAmb IAmb  21 13 27.0
          comp=Z,11nm,0.9s
MLR   Muntele Rosu      81.59 348  P    P     21 13 24.7 +0.3
MLR                                pmax pmax
          comp=Z,11nm,0.9s
CFR   Carcaliu          81.61 347 ⇑P    P     21 13 24.3  -0.1
CFR   Carcaliu          81.61 347  P    P     21 13 24.2  -0.1
PRED  Cave del Predi    81.62 357  P    P     21 13 24.4  -0.1
PRED                               IAmb IAmb  21 13 25.8
          comp=Z,21nm,0.8s
CLUD  Cludinico         81.62 358  P    P     21 13 24.2  -0.2
CLUD                               IAmb IAmb  21 13 26.9
          comp=Z,14nm,0.8s
KAPI  Kappang           81.67 251  LR   LR    21 47 10.4
          comp=Z,43nm,19.4s,baz=46,slow=34
SENIN Lac Senin/Sane    81.75   1  P    P     21 13 25.4  0.0
SENIN                              IAmb IAmb  21 13 57.1
          comp=Z,67nm,1.6s
SURR  Surduc            81.76 351 ⇓P    P     21 13 25.1 +0.1
VOIR                    81.76 349 ⇑P    P     21 13 26.2 +0.9
VOIR                    81.76 349  P    P     21 13 26.1 +0.9
CIMO  Cimolais          81.78 358  P    P     21 13 25.4 +0.2
CIMO                               IAmb IAmb  21 13 35.8
          comp=Z,7.7nm,0.9s
STAL  STALIGIAL         81.82 358  P    P     21 13 25.6 +0.1
STAL                               IAmb IAmb  21 13 26.2
          comp=Z,24nm,1.6s
MTN   Manton Dam        81.87 237  P    P     21 13 25.9  0.0
MTN   Manton Dam        81.87 237  P    P     21 13 26.1 +0.1
ARR   Arges             81.87 349 ⇓P    P     21 13 26.4 +0.5
TPGR  Topolog           81.89 346 ⇑P    P     21 13 26.1 +0.3
LOT   Lotru             81.89 350 ⇑P    P     21 13 25.9  -0.1
BZS   Buzias            81.94 351 ⇑P    P     21 13 26.0  -0.1
BZS   Buzias            81.94 351  P    P     21 13 25.9  -0.1
GZR   Gura Zlata        82.05 351 ⇓P    P     21 13 26.9 +0.1
GZR   Gura Zlata        82.05 351  P    P     21 13 26.8 +0.1
CTI   Castel Tesino     82.06 358  P    P     21 13 26.9  0.0
CTI                                IAmb IAmb  21 13 27.7
          comp=Z,19nm,1.0s
CTI   Castel Tesino     82.06 358  P    P     21 13 26.9  0.0
CTI                                pmax pmax
          comp=Z,19nm,1.0s
SABO  M.te Sabotino     82.08 357  P    P     21 13 26.4  -0.4
SABO                               IAmb IAmb  21 13 30.2
          comp=Z,14nm,0.9s
AKH   Akhalkalaki       82.13 335  P    P     21 13 27.4  0.0
AKH                                IAmb IAmb  21 13 30.8
          comp=Z,25nm,1.0s
AKH   Akhalkalaki       82.13 335  P    P     21 13 27.4  0.0
AKH                                pmax pmax
          comp=Z,25nm,1.0s
KSM   Kuching           82.14 262  P    P     21 13 28.1 +0.6
KSM                                IAmb IAmb  21 13 29.1
          comp=Z,33nm,0.9s
KSM   Kuching           82.14 262  P    P     21 13 28.8 +1.3
TIRR  Tirgusor          82.28 346 ⇓P    P     21 13 28.3 +0.5
TIRR  Tirgusor          82.28 346  P    P     21 13 27.7  -0.2
TIRR  Tirgusor          82.28 346  P    P     21 13 28.3 +0.5
BOJS  Bojanci           82.49 356 i P   P     21 13 29.1 +0.2
HERR  Herculane         82.59 351 ⇓P    P     21 13 29.5  0.0
SURA  Surathani         82.67 275  P    P     21 13 31.8 +1.5
SSB   Saint Sauveur     82.76   3  P    P     21 13 30.1  -0.3
SSB                                IAmb IAmb  21 13 32.6
          comp=Z,16nm,0.8s
SSB   Saint Sauveur     82.76   3  P    P     21 13 30.1  -0.3
SSB                                pmax pmax
          comp=Z,16nm,0.8s
MDVR  Moldovita         82.76 351 ⇑P    P     21 13 30.0  -0.4
SGRR  Singureni         82.84 348 ⇓P    P     21 13 30.3  -0.4
SOEI  Soe               82.97 244  P    P     21 13 31.4  -0.5
SOEI                               IAmb IAmb  21 13 36.7
          comp=Z,23nm,0.8s
SOEI  Soe               82.97 244  P    P     21 13 32.5 +0.6
GNI   Garni             82.97 333  LR   LR    21 57 49.6
          comp=Z,144nm,18.5s,baz=358,slow=41
GNI   Garni             82.97 333ceP    P     21 13 31.7  -0.1
GNI                                pmax pmax
          comp=Z,4.0nm,0.7s
BNI   Bardonecchia      83.05   2  P    P     21 13 33.1 +1.1
BNI                                IAmb IAmb  21 13 34.9
          comp=Z,23nm,0.8s
BNI   Bardonecchia      83.05   2  P    P     21 13 33.1 +1.1
BNI                                pmax pmax
          comp=Z,23nm,0.9s
SRIT  Nakonsritamara    83.13 275  P    P     21 13 33.5 +0.8
SRIT                               IAmb IAmb  21 13 35.0
          comp=Z,43nm,1.1s
SRIT  Nakonsritamara    83.13 275  P    P     21 13 34.3 +1.6
SKLT  Songkhla          83.62 273  P    P     21 13 36.9 +1.7
ZCCA  Zocca             83.77 359  P    P     21 13 36.4 +0.8
ZCCA                               IAmb IAmb  21 13 42.5
          comp=Z,30nm,0.9s
MSSA  Maissana          83.81 360  P    P     21 13 35.8  -0.1
MSSA                               IAmb IAmb  21 13 36.7
          comp=Z,19nm,1.0s
DIKM  Dikmen            83.81 341 ⇓P    P     21 13 37.3 +1.4
PLVB  Pleven            83.83 349 ⇑P    P     21 13 36.2 +0.4
SJG   San Juan          84.41  68  LR   LR    21 52 02.4
          comp=Z,73nm,20.4s,baz=198,slow=36
QIS   Mount Isa         84.44 226  P    P     21 13 39.5 +0.3
OSSC  Osservatorio P    84.59 359  P    P     21 13 39.3  -0.5
VTS   Vitosha           84.75 350 ⇑P    P     21 13 41.9 +1.1
VTS   Vitosha           84.75 350  P    P     21 13 41.9 +1.1
MTP   Monte Pirata      84.76  67  P    P     21 13 40.9  0.0
MTP                                IAmb IAmb  21 13 42.2
          comp=Z,28nm,0.8s
MURB  Monte Urbino      84.82 358  P    P     21 13 41.2 +0.2
TOKA  Tokat             84.83 340  P    P     21 13 41.6 +0.5
TOKA                               IAmb IAmb  21 13 43.7
          comp=Z,18nm,0.8s
KULM  Kulim             85.07 272  P    P     21 13 42.9 +0.3
KULM                               IAmb IAmb  21 13 44.4
          comp=Z,19nm,0.9s
GURO  Guroymak-BITLI    85.20 335  P    P     21 13 43.5 +0.4
PBRG  Braganca          85.28  12 eP    P     21 13 43.8 +0.5
PDG   Podgorica         85.31 353 ⇓P    P     21 13 43.2  -0.1
IPM   Ipoh              85.47 271  P    P     21 13 44.4  -0.2
IPM                                IAmb IAmb  21 13 45.9
          comp=Z,22nm,0.9s
IPM   Ipoh              85.47 271  P    P     21 13 45.2 +0.6
CESX  Cesi              85.47 358  P    P     21 13 43.9  -0.3
CESX                               IAmb IAmb  21 13 46.2
          comp=Z,18nm,0.8s
KNRA  Kununurra         85.47 237  P    P     21 13 44.0  -0.3
KNRA                               IAmb IAmb  21 13 45.2
          comp=Z,23nm,0.9s
CAMP  Campotosto        85.53 357  P    P     21 13 44.6  0.0
CAMP                               IAmb IAmb  21 13 46.2
          comp=Z,27nm,0.9s
POLO  Lamas de Olo      85.57  13 eP    P     21 13 45.3 +0.5
SKO   Skopje            85.57 351 i P   P     21 13 45.5 +0.8
STIP  Stip              85.77 350 i P   P     21 13 45.0  -0.6
MVO   Moncorvo          85.88  12 eP    P     21 13 46.9 +0.6
RDO   Rodhopi           85.92 348  P    P     21 13 47.1 +0.7
RDO   Rodhopi           85.92 348  P    P     21 13 46.8 +0.4
NVR   Nevrokopi         85.93 349  P    P     21 13 48.1 +1.6
PHP   Peshkopia         85.95 352  P    P     21 13 46.5  -0.1
BR131 Keskin Array S    85.99 341 i P   P     21 13 46.7  -0.3
BRTR  Keskin Array B    85.99 341  P    P     21 13 47.6 +0.5
          comp=Z,4.5nm,0.9s,baz=51,slow=2.2,SNR=19
          comp=Z,4.5nm,0.9s
BRTR  Keskin Array B    85.99 341  P    P     21 13 47.2 +0.2
BRTR  Keskin Array B    85.99 341 i P   P     21 13 47.5 +0.5
BRTR                               pmax pmax
          comp=Z,4.0nm,0.8s
RMQ   Roma              86.08 216  P    P     21 13 48.5 +1.3
          comp=Z,19nm,1.0s
ALN   Alexandroupoli    86.10 347  P    P     21 13 47.3  0.0
ALN                                IAmb IAmb  21 13 48.6
          comp=Z,26nm,0.9s
ALN   Alexandroupoli    86.10 347  P    P     21 13 47.3  0.0
ALN                                pmax pmax
          comp=Z,26nm,0.9s
WB0   Warramunga Arr    86.15 231  P    P     21 13 46.9  -0.7
WB0                                IAmb IAmb  21 13 48.0
          comp=Z,15nm,1.1s
SRS   Serrai            86.19 349  P    P     21 13 47.5  -0.3
PVIS  Viseu             86.20  13 eP    P     21 13 48.3 +0.4
KNT   Kendrikon         86.22 350  P    P     21 13 47.9  0.0
WRAB  Tennant Creek     86.31 231  P    P     21 13 47.9  -0.5
WRAB                               IAmb IAmb  21 13 48.9
          comp=Z,17nm,1.1s
WRAB  Tennant Creek     86.31 231  P    P     21 13 49.1 +0.6
WRAB  Tennant Creek     86.31 231ceP    P     21 13 47.5  -1.0
WRAB                               pmax pmax
          comp=Z,13nm,0.8s
WRA   Warramunga Arr    86.33 231  P    P     21 13 47.8  -0.7
          comp=Z,7.9nm,0.8s,baz=38,slow=5.9,SNR=63
WRA                                LR   LR    21 48 21.8
          comp=Z,86nm,20.1s,baz=335,slow=33
          comp=Z,7.9nm,0.8s
BNN   Bunyan            86.38 340  P    P     21 13 48.9  0.0
KOKK  Kokkinochori,     86.44 349  P    P     21 13 49.1 +0.1
GRG   Griva             86.48 350  P    P     21 13 49.5 +0.3
OHR   Ohrid             86.48 351 i P   P     21 13 49.3  0.0
THAS  Thassos island    86.56 348  P    P     21 13 49.4  -0.2
MTE   Manteigas         86.56  13 eP    P     21 13 50.5 +0.8
FNA   Florina           86.75 351  P    P     21 13 50.4  -0.2
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Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCAS	Casmilo, Conde	86.77	14	eP	P	21 13 51.3	+0.7
OUR	Ouranopolis	86.92	349	P	P	21 13 51.1	-0.2
EZN	Ezine	87.12	347	P	P	21 13 52.3	0.0
PCBR	Castelo Branco	87.12	13	eP	P	21 13 52.0	-0.3
LIA	Limnos Island	87.20	348	P	P	21 13 52.5	-0.2
LIT	Litokhoron	87.32	350	P	P	21 13 53.0	-0.3
PMRV	Marv??o	87.53	13	eP	P	21 13 54.9	+0.5
SCTE	Santa Cesarea	87.71	353	P	P	21 13 54.9	-0.3
ESBB	Sonseca Array	87.72	10	P	P	21 13 54.6	-0.6
ESBB				IAmb	IAmb	21 13 56.7	
	comp=Z,17nm,0.8s						
ESDC	Sonseca Array	87.72	10	P	P	21 13 55.6	+0.3
	comp=Z,17nm,0.8s,baz=349,slow=4.6,SNR=71						
	comp=Z,17nm,0.8s						
ESDC	Sonseca Array	87.72	10	P	P	21 13 55.0	-0.3
ESDC				IAmb	IAmb	21 13 56.7	
	comp=Z,16nm,0.8s						
PAB	San Pablo	87.80	11	P	P	21 13 55.2	-0.4
PAB				IAmb	IAmb	21 13 56.6	
	comp=Z,14nm,1.0s						
PAB	San Pablo	87.80	11	P	P	21 13 55.3	-0.4
PAB				pmax	pmax		
	comp=Z,14nm,1.0s						
THL	Klokotos Trika	87.90	350	P	P	21 13 55.2	-0.8
XOR	Xorichti	87.97	349	P	P	21 13 57.6	+1.2
KULA	Kula-Manisa	88.05	345	P	P	21 13 52.3	-4.6
PESTR	Estremoz	88.06	13	eP	P	21 13 56.9	0.0
PSI	Prapat	88.08	272	P	P	21 13 57.9	+0.5
PSI	Prapat	88.08	272	P	P	21 13 57.8	+0.4
PSI				pmax	pmax		
	comp=Z,78nm,1.0s						
RPSI	Rantau Prapat	88.16	272	P	P	21 13 57.8	+0.2
EVO	Evora	88.33	14	eP	P	21 13 57.9	-0.2
EVO				A	A	21 14 02.6	
	comp=Z,23nm,1.6s						
AGG	Agios Georgios	88.40	350	P	P	21 13 57.6	-0.9
AGG	Agios Georgios	88.40	350	P	P	21 13 57.6	-0.9
AGG				IAmb	IAmb	21 13 58.6	
	comp=Z,4.4nm,0.6s						
AGG	Agios Georgios	88.40	350	P	P	21 13 57.6	-0.9
AGG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MAKR	Makrakomi, Fth	88.43	350	P	P	21 13 58.8	+0.1
HYB	Hyderabad	88.50	297	eP	P	21 13 59.1	-0.2
EVR	Evrytania	88.56	350	P	P	21 14 00.3	+0.9
BKNI	Bangkinang	88.71	269	P	P	21 14 00.8	+0.6
BKNI	Bangkinang	88.71	269	P	P	21 14 02.6	+2.4
PBAR	Barrancos	88.82	13	eP	P	21 14 00.3	-0.1
ANX	Ano Chora	88.87	350	P	P	21 14 00.5	-0.3
PVO	Paravola	88.89	350	P	P	21 13 59.3	-1.4
SERG	Sergoula	89.03	350	P	P	21 14 00.4	-1.1
EFP	Efpalio	89.03	350	P	P	21 14 02.0	+0.6
SDV	Santo Domingo	89.11	77	LR	LR	21 54 02.2	
	comp=Z,58nm,21.3s,baz=72,slow=36						
SDV	Santo Domingo	89.11	77	P	P	21 14 01.8	-0.6
SDV				IAmb	IAmb	21 14 03.4	
	comp=Z,8.7nm,0.9s						
SDV	Santo Domingo	89.11	77	eP	P	21 14 02.5	+0.1
FITZ	Fitzroy Crossi	89.12	239	P	P	21 14 02.0	0.0
FITZ	Fitzroy Crossi	89.12	239	P	P	21 14 02.9	+1.0
PTEO	Sao Teotonio	89.19	14	eP	P	21 14 02.1	-0.1
KLV	Kalavryta, Ach	89.39	350	P	P	21 14 02.9	-0.3
GUR	Goura	89.47	350	P	P	21 14 03.1	-0.6
DRO	Drossia	89.52	350	P	P	21 14 03.8	0.0
AS01	Alice Springs	89.70	229	P	P	21 14 04.9	+0.3
	comp=Z,33nm,0.9s						
AS31	Alice Springs	89.72	229	P	P	21 14 04.5	-0.2
AS31				IAmb	IAmb	21 14 06.2	
	comp=Z,10nm,1.1s						
ASAR	Alice Springs	89.73	229	P	P	21 14 05.1	+0.4
	comp=Z,22nm,0.8s,baz=34,slow=4.6,SNR=133						
ASAR				PKKPbc	PKKPbc	21 31 37.8	+1.4
	comp=Z,0.3nm,0.4s,baz=206,slow=2.1,SNR=9.1						
	comp=Z,22nm,0.8s						
ASAR	Alice Springs	89.73	229	P	P	21 14 04.7	0.0
ASAR	Alice Springs	89.73	229	P	P	21 14 04.7	0.0
RUSC	La Rusia	90.00	80	P	P	21 14 06.1	-0.8
RUSC				IAmb	IAmb	21 14 18.2	
	comp=Z,16nm,1.1s						
ROSC	El Rosal	90.07	82	LR	LR	21 59 13.2	
	comp=Z,70nm,18.2s,baz=246,slow=39						
INKA	Innaminka	90.29	222	P	P	21 14 08.3	+1.1
	comp=Z,63nm,1.0s						
BAUV	El Baul	90.61	75	P	P	21 14 08.5	-0.7
CMSA	Cobar Meteorol	91.77	216	P	P	21 14 14.4	+0.4
KEST	Kesra	92.38	0	P	P	21 14 17.3	+0.1
	comp=Z,5.1nm,0.9s,baz=138,slow=2.9,SNR=5.6						
	comp=Z,5.1nm,0.9s						
STKA	Stephens Creek	93.61	219	P	P	21 14 22.5	0.0
	comp=Z,8.8nm,1.0s,baz=1.0,slow=3.9,SNR=13						
STKA				LR	LR	21 50 37.9	
	comp=Z,144nm,21.7s,baz=25,slow=32						
	comp=Z,8.8nm,1.0s						
STKA	Stephens Creek	93.61	219	P	P	21 14 23.3	+0.8
	comp=Z,2.0nm,1.0s						
EIL	Elat	95.40	338	LR	LR	22 03 04.2	
	comp=Z,87nm,18.1s,baz=75,slow=39						
RPN	Rapa Nui	95.43	128	LR	LR	21 47 31.5	
	comp=Z,90nm,20.1s,baz=31,slow=29						
PALK	Pallekele	95.51	289	LR	LR	22 00 34.4	
	comp=Z,87nm,21.9s,baz=135,slow=37						
PALK	Pallekele	95.51	289	P	P	21 14 31.6	-0.1
PALK	Pallekele	95.51	289	P	P	21 14 31.7	-0.1
PALK				pmax	pmax		
	comp=Z,17nm,0.9s						
RPZ	Rata Peaks	96.89	193	LR	LR	21 51 29.9	
	comp=Z,106nm,21.8s,baz=319,slow=31						
RAYN	Ar Rayn	98.20	327	P	P	21 14 43.4	-0.5
RAYN				IAmb	IAmb	21 14 44.8	
	comp=Z,9.2nm,0.9s						
RAYN	Ar Rayn	98.20	327	P	P	21 14 43.4	-0.5
RAYN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TORD	Torodi Ar. Bea	114.53	8	PKP	PKiKP	21 19 46.3	-0.4
	comp=Z,1.0nm,0.5s,baz=340,slow=2.5,SNR=22						
TORD				PKKPbc	PKKPbc	21 30 23.4	+0.3
	comp=Z,0.8nm,0.5s,baz=178,slow=2.6,SNR=13						
H03N2	Juan Fernandez	116.61	111	T	T	23 27 23.3	
	baz=318,slow=77,SNR=28						
H03N1	Juan Fernandez	116.62	111	T	T	23 27 24.6	
	baz=318,slow=77,SNR=40						
H03N3	Juan Fernandez	116.62	111	T	T	23 27 25.9	
	baz=318,slow=77,SNR=15						
DBIC	Dimbokro	120.06	16	PKP	PKPdf	21 19 57.0	-0.3
	comp=Z,0.8nm,0.3s,baz=355,slow=2.9,SNR=5.2						
JANB	Januaria	123.74	69	eP	PKPdf	21 20 03.5	-0.8
IPMB	Ipameri, GO	123.76	75	eP	PKPdf	21 20 03.5	-0.9
ITRB	Iturama	123.81	78	eP	PKPdf	21 20 03.5	-0.9
CPUP	Villa Florida	124.49	89	PKP	PKPdf	21 20 05.0	-0.4
	comp=Z,1.7nm,0.5s,baz=316,slow=2.5,SNR=5.4						
CPUP	Villa Florida	124.49	89	PKIKP	PKPdf	21 20 05.0	-0.4
CPUP	Villa Florida	124.49	89	eP	PKPdf	21 20 04.7	-0.7
PCMB	Pacaembu	124.71	81	eP	PKPdf	21 20 05.4	-0.6
MCR1	Marechal Candi	125.14	85	eP	PKPdf	21 20 05.9	-0.8
PLCA	Paso Flores	126.48	111	PKP	PKPdf	21 20 09.0	+0.1
	comp=Z,4.2nm,0.9s,baz=250,slow=0.6,SNR=6.0						
PLCA	Paso Flores	126.48	111	PKIKP	PKPdf	21 20 09.0	+0.1
PLCA	Paso Flores	126.48	111	eP	PKPdf	21 20 08.0	-0.9
CRSM	Crissiumal (Br	127.35	88	eP	PKPdf	21 20 10.0	-0.9
PET01	Itanhaem-SP	129.13	79	eP	PKPdf	21 20 13.8	-0.5
ABR01	Abrolhos, BA	129.26	66	eP	PKPdf	21 20 14.2	-0.5
BOSA	Boshof	153.59	327	PKP	PKPdf	21 20 57.9	+0.6
	comp=Z,7.2nm,1.3s,baz=140,slow=0.5,SNR=4.2						
BOSA				PKPbc	PKiKP	21 21 05.7	+0.6
	comp=Z,9.7nm,0.4s,baz=5.7,slow=2.1,SNR=90						

ROM 14 21:08:28.2±0.1**, 42°.622N**±0°.004×**13°.233E**±0°.005**, h11^{km}, ML1.6**/19**, 1C-1D, Error ellipse: s-maj=0.4km s-min=0.3km az=236.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1218	Civita (PG)	0.10	299	P	Pg	21 08 31.5	+0.4
T1218				S	Sg	21 08 33.6	+0.5
T1218				AML	AML		
	comp=E,698µm,0.2s						
T1218				AML	AML		
	comp=N,2060µm,0.2s						
T1218				AML	AML		
	comp=E,642µm,0.3s						
T1218				AML	AML		
	comp=N,2095µm,0.2s						
T1218				AML	AML		
	comp=E,698µm,0.2s						
T1218				AML	AML		
	comp=N,2100µm,0.2s						
T1218				AML	AML		
	comp=E,642µm,0.3s						
T1218				AML	AML		
	comp=N,2060µm,0.2s						
RM33	Pellescritta (	0.11	187	P	Pg	21 08 31.8	+0.5
RM33				S	Sg	21 08 34.1	+0.7
RM33				AML	AML		
	comp=E,934µm,0.3s						
RM33				AML	AML		
	comp=N,784µm,0.2s						
RM33				AML	AML		
	comp=E,906µm,1.4s						
RM33				AML	AML		
	comp=E,932µm,0.3s						
RM33				AML	AML		
	comp=N,809µm,0.2s						
T1214	Arquata del Tr	0.14	353	P	Pg	21 08 31.8	+0.2
T1214				S	Sg	21 08 34.6	+0.5
T1214				AML	AML		
	comp=E,194µm,0.4s						
T1214				AML	AML		
	comp=N,220µm,0.6s						
T1214				AML	AML		
	comp=E,194µm,0.4s						
T1214				AML	AML		
	comp=E,194µm,1.6s						
T1214				AML	AML		
	comp=N,220µm,1.4s						
CAMP	Campotosto	0.16	123	P	Pg	21 08 32.3	+0.5
CAMP				S	Sg	21 08 35.0	+0.5
CAMP				AML	AML		
	comp=E,151µm,1.1s						
CAMP				AML	AML		
	comp=N,176µm,0.7s						
T1247	Pizzolo (AQ)	0.19	165	AML	AML		
	comp=N,296µm,1.2s						
T1247				AML	AML		
	comp=N,296µm,0.8s						
T1247				AML	AML		
	comp=E,276µm,0.1s						
T1222	Castel Sant'An	0.26	214	P	Pg	21 08 34.0	+0.4
T1222				S	Sg	21 08 38.2	+0.9
T1222				AML	AML		
	comp=N,152µm,0.2s						
T1222				AML	AML		
	comp=E,203µm,0.3s						
T1222				AML	AML		
	comp=N,152µm,1.8s						
TERO	Teramo	0.27	90	P	Pg	21 08 34.1	+0.2
TERO				S	Sg	21 08 38.3	+0.6
TERO				AML	AML		
	comp=E,204µm,1.1s						
TERO				AML	AML		
	comp=E,204µm,1.1s						
TERO				AML	AML		
	comp=N,152µm,1.3s						
TERO				AML	AML		
	comp=E,231µm,1.1s						
TERO				AML	AML		
	comp=E,231µm,0.9s						
TERO				AML	AML		
	comp=N,162µm,1.0s						
TERO				AML	AML		
	comp=N,152µm,0.7s						
TERO				AML	AML		
	comp=E,204µm,0.9s						
T1241	Roccafluvione,	0.28	32	P	Pg	21 08 34.2	+0.3
T1241				S	Sg	21 08 38.7	+0.9
T1241				AML	AML		
	comp=E,160µm,1.0s						
T1241				AML	AML		
	comp=N,77µm,1.3s						
T1241				AML	AML		
	comp=E,160µm,1.0s						
T1241				AML	AML		
	comp=N,77µm,0.7s						
MMO1	Montemonaco	0.29	14	P	Pg	21 08 34.6	+0.5
MMO1				S	Sg	21 08 39.0	+0.9
T1211	Morro Reatino	0.29	253	P	Pg	21 08 34.5	+0.3
T1211				S	Sg	21 08 39.3	+1.1
T1211				AML	AML		
	comp=E,225µm,1.4s						
T1211				AML	AML		
	comp=E,182µm,0.4s						
T1211				AML	AML		
	comp=E,225µm,0.6s						
T1211				AML	AML		
	comp=N,300µm,0.2s						
T1211				AML	AML		
	comp=N,296µm,0.2s						
GIGS	Gran Sasso	0.30	125	P	Pg	21 08 34.6	+0.2
GIGS				S	Sg	21 08 39.3	+0.8
GIGS				AML	AML		
	comp=E,57µm,0.2s						
GIGS				AML	AML		
	comp=N,72µm,0.1s						
GIGS				AML	AML		
	comp=E,57µm,0.2s						
T1216	Preci, Frazion	0.31	330	P	Pg	21 08 35.0	+0.5
T1216				S	Sb	21 08 40.0	-1.0
T1216				AML	AML		
	comp=N,122µm,0.3s						
T1216				AML	AML		
	comp=E,109µm,0.4s						
T1215	Vallo di Nera,	0.32	304	P	Pg	21 08 35.0	+0.2
T1215				S	Sg	21 08 40.0	+0.8
ARRO	Arrone	0.35	263	P	Pg	21 08 35.5	+0.3
ARRO				AML	AML		
	comp=E,77µm,1.3s						
ARRO				AML	AML		
	comp=E,77µm,1.3s						
ARRO				AML	AML		
	comp=N,82µm,1.2s						
ARRO				AML	AML		
	comp=E,77µm,0.7s						
FDMO	Fiordimonte	0.43	346	⇑P	Pg	21 08 36.9	+0.2
FDMO				AML	AML		
	comp=E,30µm,0.5s						
FDMO				AML	AML		
	comp=N,26µm,0.3s						
GUMA	Gualdo di Mace	0.45	10	P	Pb	21 08 37.7	-0.5
GUMA				S	Sb	21 08 44.6	-0.2
GUMA				AML	AML		
	comp=E,186µm,0.3s						
GUMA				AML	AML		
	comp=N,116µm,0.6s						
OFFI	Offida	0.46	47	AML	AML		
	comp=N,178µm,0.5s						
OFFI				AML	AML		
	comp=E,199µm,0.6s						
T1219	Muccia, Frazio	0.47	339	S	Sb	21 08 45.4	0.0
T1220	Camerino, Fraz	0.50	348	⇓P	Pg	21 08 38.2	+0.2
VCEL	Villa Celiera	0.50	117	P	Pg	21 08 38.6	+0.5
VCEL				S	Sb	21 08 46.1	-0.4
VCEL				AML	AML		
	comp=E,190µm,1.3s						
VCEL				AML	AML		
	comp=N,162µm,0.6s						
VCEL				AML	AML		
	comp=E,190µm,0.7s						
MOMA	Monte Martano	0.52	291	P	Pg	21 08 38.5	0.0
MOMA				S	Sb	21 08 46.7	-0.3
MOMA				AML	AML		
	comp=E,86µm,0.2s						
MOMA				AML	AML		
	comp=N,92µm,0.2s						
T0110	Collepietro	0.56	134	P	Pg	21 08 39.3	0.0
T0110				S	Sb	21 08 48.1	-0.2
T0110				AML	AML		
	comp=N,66µm,1.5s						
T0110				AML	AML		
	comp=N,66µm,0.5s						
T0110				AML	AML		
	comp=E,100µm,0.3s						
PP3	Marolino	0.81	20	S	Sg	21 08 52.9	-1.4
PTRJ	Pietraroja	1.58	142	P	Pg	21 08 59.1	+0.5

ROM 14 21:09:02.1±0.1**, 42°.622N**±0°.004×**13°.231E**±0°.004**, h13^{km}, ML1.6**/5**, 5C-2D, Error ellipse: s-maj=0.4km s-min=0.2km az=203.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	SAN MARTINO	0.08	84	⇑P	Pg	21 09 05.4	+0.5
SMA1				S	Sg	21 09 07.4	+0.4
SMA1				AML	AML		
	comp=N,352µm,0.8s						
SMA1				AML	AML		
	comp=E,936µm,0.3s						
SMA1				AML	AML		
	comp=N,352µm,1.2s						
T1218	Civita (PG)	0.10	299	P	Pg	21 09 05.6	+0.3
T1218				S	Sg	21 09 07.3	-0.1
T1218				AML	AML		
	comp=N,1028µm,0.2s						
T1218				AML	AML		
	comp=E,772µm,0.1s						
T1218				AML	AML		
	comp=E,798µm,0.1s						
T1218				AML	AML		
	comp=N,1020µm,0.2s						
RM33	Pellescritta (	0.11	186	P	Pb	21 09 05.9	-0.4
RM33				S	Sg	21 09 08.1	+0.4
RM33				AML	AML		
	comp=E,238µm,0.2s						
RM33				AML	AML		
	comp=N,144µm,0.7s						
T1214	Arquata del Tr	0.14	353	⇓P	Pg	21 09 06.2	+0.4
T1214				S	Sg	21 09 08.7	+0.4
T1212	Cascia, Frazio	0.19	313	P	Pg	21 09 07.0	+0.5
T1212				S	Sg	21 09 10.0	+0.6
T1217	Poggiodomo (PG	0.24	292	P	Pg	21 09 07.8	+0.5
T1217				S	Sg	21 09 11.6	+0.8
T1222	Castel Sant'An	0.26	213	⇓P	Pb	21 09 08.2	-0.5
T1222				S	Sb	21 09 12.4	-0.8
TERO	Teramo	0.28	90	⇑P	Pg	21 09 08.2	+0.3
TERO				S	Sg	21 09 12.5	+0.7
T1241	Roccafluvione,	0.28	32	⇑P	Pg	21 09 08.2	+0.3
T1241				S	Sg	21 09 12.7	+0.8
MMO1	Montemonaco	0.29	14	P	Pg	21 09 07.9	-0.2
T1211	Morro Reatino	0.29	252	⇑P	Pg	21 09 08.7	+0.5
T1211				S	Sb	21 09 13.3	-0.8
GIGS	Gran Sasso	0.30	124	P	Pg	21 09 08.7	+0.3
GIGS				S	Sg	21 09 13.1	+0.5
GIGS				AML	AML		
	comp=E,37µm,0.1s						
GIGS				AML	AML		
	comp=N,41µm,0.1s						
T1216	Preci, Frazion	0.31	330	⇑P	Pb	21 09 09.2	-0.3
T1215	Vallo di Nera,	0.32	304	P	Pg	21 09 09.1	+0.4

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*IDC **14** 21:11:35.7±1.1, 28°.06N×104°.74E, h0^{km}, mb3.5/6, mbtmp3.5/7, ML3.4/1, Error ellipse: s-maj=70.9km s-min=19.8km az=61.0*

ISC 14 21:11:37.5±1.3**, 28°.0N**±0°.2×**104°.8E**±0°.4**, h10^{km}, n8, σ1**^{s}**.94**/11**, mb3.5**/6**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	Chengdu	3.02	343	Pn	Pn	21 12 25.6	+0.2
CD2				Pg	Pb	21 12 34.6	+3.3
CD2				Sn	Sn	21 12 57.6	-4.0
CD2				Sg	Sb	21 13 08.8	+0.5
CD2				smax	smax		
	comp=N,150nm,0.7s						
CD2				smax	smax		
	comp=E,230nm,0.8s						
SONM	Songino Array	19.82	3	P	P	21 16 08.5	+0.1
	comp=E,0.1nm,0.3s,baz=186,slow=11,SNR=2.5						
	comp=E,0.6nm,0.6s						
MKAR	Makanchi Array	25.74	323	P	P	21 17 07.5	-0.7
	comp=E,0.5nm,0.5s,baz=123,slow=9.8,SNR=11						
	comp=E,0.5nm,0.5s						
ZALV	Zalesovo Beam	29.76	336	P	P	21 17 43.0	-1.0
	comp=E,0.5nm,0.5s,baz=125,slow=9.0,SNR=2.6						
	comp=E,0.5nm,0.5s						
KURBB	Kurchatov Arra	30.08	326	P	P	21 17 46.3	-0.7
	comp=E,0.8nm,0.6s,baz=131,slow=9.7,SNR=9.1						
	comp=E,0.8nm,0.6s						
WRA	Warramunga Arr	55.59	146	P	P	21 21 13.2	-0.4
	comp=E,0.5nm,1.0s,baz=334,slow=8.6,SNR=4.6						
	comp=E,0.5nm,1.0s						
ASAR	Alice Springs	58.56	148	P	P	21 21 35.2	+0.7
	comp=E,0.6nm,0.9s,baz=321,slow=7.5,SNR=4.4						
	comp=E,0.6nm,0.9s						
YKA	Yellowknife Ar	84.45	17	P	P	21 24 09.3	-0.8
	comp=E,0.1nm,0.5s,baz=327,slow=4.5,SNR=2.0						
	comp=E,0.1nm,0.5s						

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*IDC **14** 21:30:35.9±0.9, 39°.98N×145°.15E, h0^{km}, mb3.7/11, mbtmp3.8/15, ML3.5/4, MS3.1/2, Error ellipse: s-maj=22.4km s-min=18.1km az=128.0*

*NEIC **14** 21:30:38.5±1.5, 40°.05N±0°.05×145°.0E±0°.1, h10^{km}±1^{km}, mb4.0/8, Error ellipse: s-maj=16.6km s-min=8.6km az=80.0*

*NIED **14** 21:30:40.1, 40°.11N×144°.84E, h44^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.81; $M_{\theta\theta}$-0.25; $M_{\phi\phi}$4.06; $M_{r\theta}$0.90; $M_{\theta\phi}$0.27; $M_{\phi r}$-0.66; Fault plane solution: $M_0$4.11000×10^{14} NP1: ϕ_s350.00000°, δ51.00000°, λ-108.00000°. NP2: ϕ_s197.00000°, δ42.00000°, λ-69.00000°.*

*JMA **14** 21:30:40.1±0.3, 40°.1N±0°.9×14°5E±°, h44^{km}, MV4.1/32, FAR E OFF NORTH HONSHU*

ISC 14 21:30:41.1±0.7**, 40°.09N**±0°.05×**144°.94E**±0°.07**, h32^{km}, n60, σ1**^{s}**.53**/78**, mb4.0**/15**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERM	Erimo	2.35	326		Pn	21 31 17.0	-0.4
ERM				Sn	Sn	21 31 44.3	-0.8
JEM	Erimo	2.35	326	P	Pn	21 31 17.1	-0.3
JTH	Tanohata	2.37	267	P	Pn	21 31 16.3	-1.4
JTH				eS	Sn	21 31 42.9	-2.7
MIYJ	Miyakonagasawa	2.45	259	i P	Pn	21 31 18.0	-0.9
MIYJ				S	Sn	21 31 45.6	-2.2
JKEN	Kujiedanarisaw	2.48	274	P	Pn	21 31 17.9	-1.3
JKEN				eS	Sn	21 31 45.4	-2.9
JTHR	Tokachihiroo	2.52	331	P	Pn	21 31 19.2	-0.7
JANG	Nango	2.63	277	i P	Pn	21 31 20.5	-0.9
JANG				S	Sn	21 31 50.2	-2.0
JNBK	Urakawa-nobuka	2.74	324	eP	Pn	21 31 22.8	0.0
JNBK				eS	Sn	21 31 55.6	+0.8
JCH	Churui	2.79	335	P	Pn	21 31 22.8	-0.7
JCH				eS	Sn	21 31 54.1	-1.9
JOM	Ohasama	2.88	259	i P	Pn	21 31 24.4	-0.3
JOM				S	Sn	21 31 56.8	-1.4
JAK	Akkeshi	2.91	357	P	Pn	21 31 23.8	-1.4
JAK				eS	Sn	21 31 57.7	-1.3
JTM	Tenmabayashi	3.03	285		Pn	21 31 26.9	+0.1
JMK	Ichinoseki	3.09	250	i P	Pn	21 31 26.9	-0.8
JMK				S	Sn	21 32 01.1	-2.4
JOT	Ohata	3.22	295	P	Pn	21 31 29.4	-0.1
JOT				eS	Sn	21 32 05.3	-1.4
JAR	Ashorobuto	3.32	345	i P	Pn	21 31 29.7	-1.1
JAR				S	Sn	21 32 06.7	-2.5
NEM2	Nemuro 2	3.33	10	P	Pn	21 31 28.9	-2.0
NEM2				S	Sn	21 32 06.1	-3.3
JYK	Kaneyama	3.73	253	P	Pn	21 31 36.1	-0.3
JYK				eS	Sn	21 32 18.4	-0.8
JEW	Eniwo	3.80	318	eP	Pn	21 31 38.0	+0.6
JRA	Rausu	3.85	2	S	Sn	21 32 19.9	-2.2
JMM	Marumori	3.92	237		Pn	21 31 37.4	-1.6
JTKR	Abashiri--Toko	3.95	349	P	Pn	21 31 39.2	-0.3
JTKR				eS	Sn	21 32 23.8	-0.9
JHR	Hokuryu	4.37	328	P	Pn	21 31 46.5	+1.4
JKA	Kamikawa-asahi	4.38	337		Pn	21 31 45.1	-0.3
ASAJ	Asahikawa	4.38	337	Pn	Pn	21 31 45.2	-0.2
	4.1nm,0.3s,baz=193,slow=11,SNR=17						
ASAJ				Sn	Sn	21 32 30.8	-4.6
	1.5nm,0.3s,baz=120,slow=13,SNR=4.4						
	11nm,0.4s						
JOSM	Okushiri--Mats	4.58	298	P	Pn	21 31 48.0	-0.2
JSD	Sado	5.58	251	Pn	Pn	21 32 01.9	-0.1
JRY	Ryogami san	6.26	231	eP	Pn	21 32 09.7	-1.6
JRY				eS	Sn	21 33 16.5	-5.2
MJAR	Matsushiro Arr	6.37	238	Pn	Pn	21 32 11.9	-0.8
	0.5nm,0.3s,baz=77,slow=13,SNR=22						
MJAR				Sn	Sn	21 33 25.1	+0.8
	0.2nm,0.3s,baz=73,slow=20,SNR=1.5						
	11nm,0.8s						
MAJO	Matsushiro	6.37	238		Pn	21 32 12.6	-0.1
MJB9	Matsu-Tunnel	6.37	238		Pn	21 32 13.4	+0.7
JGF	Kuroka	7.48	236	Pn	Pn	21 32 28.1	0.0

INU	Inuyama	7.86	235	Pn	Pn	21 32 32.4	-0.8
USRK	Ussuriysk Ar.	10.45	297	Pn	Pn	21 33 08.3	-0.4
	0.4nm,0.3s,baz=99,slow=13,SNR=7.0						
	12nm,0.9s						
JHS	Saijyo	10.67	245	Pn	Pn	21 33 10.9	-0.8
KLR	Kul'dur	13.08	319	Pn	Pn	21 33 44.2	-0.4
	0.1nm,0.3s,baz=130,slow=12,SNR=4.7						
KLR				LR	LR	21 38 51.8	
	comp=Z,124nm,18.2s,baz=326,slow=37						
	1.0nm,0.7s						
JNU	Nakatsue	13.26	243	LR	LR	21 39 10.6	
	comp=Z,42nm,20.5s,baz=354,slow=38						
SEY	Seymchan	23.31	9	P	P	21 35 46.1	+0.2
	1.8nm,0.3s,baz=192,slow=8.2,SNR=16						
	1.8nm,0.3s						
YAK	Yakutsk	23.85	342	P	P	21 35 51.5	+0.4
	5.0nm,0.3s,baz=358,slow=1.6,SNR=4.2						
	5.0nm,0.3s						
SONM	Songino Array	28.56	299	P	P	21 36 34.3	+0.2
	0.3nm,0.4s,baz=95,slow=10,SNR=2.9						
	0.3nm,0.4s						
SONM	Songino Array	28.56	299	P	P	21 36 36.0	+1.9
GSTR	Great Sitkin T	29.23	53	P	P	21 36 40.4	+0.6
ZAA0	Zalesovo Array	41.98	310	P	P	21 38 29.6	+0.7
ZAA0				IAmb	IAmb	21 38 42.8	
	comp=Z,7.6nm,1.5s						
ZALV	Zalesovo Beam	41.98	310	P	P	21 38 30.9	+2.0
	comp=Z,0.5nm,0.5s,baz=93,slow=8.1,SNR=2.6						
ZALV				PcP	PcP	21 40 25.0	+1.4
	comp=Z,2.5nm,0.5s,baz=70,slow=3.2,SNR=10						
	comp=Z,0.5nm,0.5s						
ZALV	Zalesovo Beam	41.98	310	P	P	21 38 30.0	+1.1
MK31	Makanchi Array	44.91	300	P	P	21 38 52.0	-0.6
MK31				IAmb	IAmb	21 39 17.8	
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	44.91	300	P	P	21 38 51.1	-1.5
CMAR	Chiang Mai Arr	44.95	255	P	P	21 38 54.7	+1.4
	comp=Z,0.3nm,0.6s,baz=51,slow=8.6,SNR=1.4						
	comp=Z,0.3nm,0.6s						
ILAR	Eielson Array	45.43	34	P	P	21 38 55.5	-1.0
	comp=Z,0.2nm,0.8s,baz=276,slow=8.8,SNR=2.5						
	comp=Z,0.2nm,0.8s						
KURK	Kurchatov	46.29	306	P	P	21 39 03.6	+0.2
BRVK	Borovoye	50.66	311	P	P	21 39 38.2	+1.2
BRVK				IAmb	IAmb	21 39 50.5	
	comp=Z,1.5nm,0.9s						
ABKAR	Akbulak array	58.10	310	P	P	21 40 32.4	+1.2
ABKAR	Akbulak array	58.10	310	P	P	21 40 32.2	+1.0
ABKAR				IAmb	IAmb	21 40 33.4	
	comp=Z,2.0nm,0.7s						
WB0	Warramunga Arr	60.35	191	P	P	21 40 45.6	-1.4
WRA	Warramunga Arr	60.53	191	P	P	21 40 46.8	-1.4
	comp=Z,0.8nm,0.6s,baz=12,slow=7.2,SNR=7.7						
	comp=Z,0.8nm,0.6s						
WRA	Warramunga Arr	60.53	191	P	P	21 40 46.5	-1.7
FINES	FINESS Array B	67.38	333	P	P	21 41 33.5	+0.7
	comp=Z,1.4nm,0.5s,baz=46,slow=7.6,SNR=12						
	comp=Z,1.4nm,0.5s						
FINES	FINESS Array B	67.38	333	P	P	21 41 33.2	+0.5
NVAR	Mina Array Bea	70.97	56	P	P	21 41 53.9	-1.8
	comp=Z,0.2nm,0.4s,baz=293,slow=7.5,SNR=2.5						
	comp=Z,0.2nm,0.4s						
KBZ	Khabaz	70.98	311	P	P	21 41 57.4	+2.0
	comp=Z,1.9nm,0.9s,baz=68,slow=3.4,SNR=5.5						
	comp=Z,1.9nm,0.9s						
PDAR	Pinedale Array	73.56	48	P	P	21 42 11.8	+0.5
	comp=Z,0.2nm,0.6s,baz=232,slow=2.9,SNR=3.6						
	comp=Z,0.2nm,0.6s						

ROM 14 21:56:25.8±0.1, 43°.048N±0°.004×13°.011E±0°.006, h5^{km}, ML1.0/4, 2C, Error ellipse: s-maj=0.5km s-min=0.2km az=103.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1219	Muccia, Frazio	0.01	341	P	Pg	21 56 26.8	-0.1
T1219				S	Sg	21 56 27.2	-0.4
FDMO	Fiordimonte	0.06	101	P	Pg	21 56 27.7	+0.4
FDMO				S	Sg	21 56 28.9	+0.5
T1220	Camerino, Fraz	0.09	42	P	Pg	21 56 28.4	+0.6
CESI	CESI - Serrava	0.09	241	⇑P	Pg	21 56 28.4	+0.6
CESI				S	Sg	21 56 30.1	+0.9
CESI				AML	AML		
	comp=N,153μm,1.2s						
CESI				AML	AML		
	comp=E,115μm,0.4s						
FEMA	Monte Fema	0.09	162	P	Pg	21 56 28.3	+0.4
T1216	Preci, Frazion	0.16	178	P	Pg	21 56 29.4	+0.4
T1216				AML	AML		
	comp=E,101μm,1.0s						
T1216				AML	AML		
	comp=N,140μm,1.4s						
T1216				AML	AML		
	comp=E,101μm,1.0s						
T1216				AML	AML		
	comp=N,141μm,1.4s						
T1216				AML	AML		
	comp=E,101μm,1.0s						
T1256	Bolognola (MC)	0.16	105	P	Pg	21 56 29.9	+0.7
MC2	Monte Cornacci	0.19	136	P	Pg	21 56 30.2	+0.6
SNTG	Esanatoglia	0.21	346	⇑P	Pg	21 56 30.6	+0.5
SNTG				AML	AML		
	comp=E,42μm,0.3s						
SNTG				AML	AML		
	comp=E,42μm,1.7s						
SNTG				AML	AML		
	comp=N,50μm,0.2s						
T1245	Castelsantange	0.23	146	P	Pg	21 56 30.9	+0.6
T1245				AML	AML		
	comp=E,59μm,0.2s						
T1245				AML	AML		
	comp=N,74μm,1.0s						
T1245				AML	AML		
	comp=N,74μm,1.0s						
T1245				AML	AML		
	comp=E,59μm,0.2s						
T1215	Vallo di Nera,	0.27	203	P	Pg	21 56 31.6	+0.6
MMO1	Montemonaco	0.28	123	P	Pg	21 56 31.8	+0.6
MMO1				S	Sb	21 56 36.6	-1.6
EL6	Elcito	0.29	13	P	Pg	21 56 32.2	+0.7
EL6				S	Sb	21 56 37.4	-1.4
T1212	Cascia, Frazio	0.30	175	P	Pg	21 56 32.1	+0.5
T1214	Arquata del Tr	0.32	153	P	Pg	21 56 32.8	+0.7
CING	Cingoli	0.35	22	P	Pg	21 56 33.4	+0.7

ROM 14 21:56:49.7±0.0, 42°.811N±0°.002×13°.116E±0°.004, h11^{km}, ML1.2/2, 3C-1D, Error ellipse: s-maj=0.3km s-min=0.2km az=277.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1245	Castelsantange	0.07	49	P	Pg	21 56 52.4	+0.2
T1245				S	Sg	21 56 54.1	+0.1
T1245				AML	AML		
	comp=N,374μm,0.2s						
T1245				AML	AML		
	comp=E,195μm,0.4s						
T1245				AML	AML		
	comp=E,195μm,1.6s						
T1212	Cascia, Frazio	0.08	222	⇑P	Pg	21 56 52.6	+0.4
T1212				S	Sg	21 56 54.4	+0.4
T1212				AML	AML		
	comp=N,203μm,0.7s						
T1212				AML	AML		
	comp=E,222μm,0.2s						
T1212				AML	AML		
	comp=E,246μm,0.2s						
T1212				AML	AML		
	comp=E,222μm,0.2s						
T1212				AML	AML		
	comp=N,184μm,0.3s						
T1212				AML	AML		
	comp=N,202μm,0.7s						
T1214	Arquata del Tr	0.09	127	⇓P	Pg	21 56 52.6	+0.3
T1214				S	Sg	21 56 54.5	+0.2
T1216	Preci, Frazion	0.11	318	P	Pg	21 56 53.0	+0.5
MC2	Monte Cornacci	0.12	28	⇑P	Pg	21 56 53.1	+0.4
MC2				S	Sg	21 56 55.8	+0.8
T1218	Civita (PG)	0.14	180	P	Pg	21 56 53.5	+0.5
T1218				S	Sg	21 56 56.1	+0.7
T1217	Poggiodomo (PG	0.17	234	P	Pg	21 56 53.9	+0.5
MMO1	Montemonaco	0.18	60	P	Pg	21 56 54.0	+0.4
T1215	Vallo di Nera,	0.18	267	P	Pg	21 56 54.2	+0.5
T1256	Bolognola (MC)	0.21	22	P	Pg	21 56 54.7	+0.5
FDMO	Fiordimonte	0.23	355	⇑P	Pg	21 56 54.9	+0.5
T1241	Roccafluvione,	0.24	79	P	Pg	21 56 55.1	+0.5
T1241				S	Sg	21 56 59.0	+1.1
CESI	CESI - Serrava	0.25	321	P	Pg	21 56 55.4	+0.6
T1219	Muccia, Frazio	0.26	342	P	Pg	21 56 55.4	+0.4
T1220	Camerino, Fraz	0.30	356	P	Pg	21 56 56.2	+0.5
TERO	Teramo	0.41	117	P	Pg	21 56 57.9	+0.3

ROM 14 21:57:08.0±0.1, 42°.885N±0°.003×13°.036E±0°.004, h11^{km}, ML0.9/9, 1C-2D, Error ellipse: s-maj=0.3km s-min=0.3km az=314.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1216	Preci, Frazion	0.01	296	P	Pg	21 57 10.2	+0.2
T1216				S	Sg	21 57 11.5	+0.1
T1216				AML	AML		
	comp=E,870μm,0.3s						
T1216				AML	AML		
	comp=N,786μm,0.3s						
T1216				AML	AML		
	comp=E,870μm,0.3s						
T1216				AML	AML		
	comp=N,786μm,0.3s						
T1216				AML	AML		
	comp=E,595μm,0.1s						
T1216				AML	AML		
	comp=N,481μm,0.1s						
FEMA	Monte Fema	0.08	8	P	Pg	21 57 10.8	+0.2
T1245	Castelsantange	0.12	104	P	Pg	21 57 11.4	+0.4
T1245				S	Sg	21 57 13.8	+0.6
T1245				AML	AML		
	comp=E,141μm,0.1s						
T1245				AML	AML		
	comp=E,127μm,0.1s						
T1245				AML	AML		
	comp=N,180μm,0.1s						
MC2	Monte Cornacci	0.12	76	P	Pg	21 57 11.5	+0.4
MC2				S	Sg	21 57 13.9	+0.5
T1212	Cascia, Frazio	0.13	177	P	Pg	21 57 11.8	+0.6
T1212				S	Sg	21 57 14.3	+0.8
T1212				AML	AML		
	comp=N,64μm,0.2s						
T1212				AML	AML		
	comp=E,64μm,0.6s						
T1212				AML	AML		
	comp=E,77μm,0.1s						
T1215	Vallo di Nera,	0.15	236	P	Pg	21 57 12.0	+0.6
T1215				S	Sg	21 57 14.6	+0.8
CESI	CESI - Serrava	0.15	321	⇓P	Pb	21 57 12.7	-0.2
CESI				AML	AML		
	comp=N,51μm,0.2s						
CESI				AML	AML		
	comp=E,31μm,0.1s						
FDMO	Fiordimonte	0.16	14	⇓P	Pg	21 57 12.0	+0.5
FDMO				S	Sg	21 57 14.8	+0.7
FDMO				AML	AML		
	comp=E,160μm,0.3s						
FDMO				AML	AML		
	comp=N,74μm,0.1s						
FDMO				AML	AML		
	comp=N,74μm,0.1s						
FDMO				AML	AML		
	comp=E,161μm,0.3s						
T1219	Muccia, Frazio	0.17	353	P	Pg	21 57 12.2	+0.4
T1219				AML	AML		
	comp=N,54μm,0.1s						
T1219				AML	AML		
	comp=N,56μm,0.1s						
T1219				AML	AML		
	comp=E,56μm,0.1s						
T1219				AML	AML		
	comp=E,47μm,0.1s						
T1214	Arquata del Tr	0.18	134	P	Pg	21 57 12.5	+0.5
T1256	Bolognola (MC)	0.18	49	P	Pg	21 57 12.6	+0.5
T1217	Poggiodomo (PG	0.19	204	P	Pg	21 57 12.7	+0.6
T1217				S	Sg	21 57 16.1	+1.1
T1217				AML	AML		
	comp=N,100μm,0.3s						
T1217				AML	AML		
	comp=E,27μm,0.1s						
T1217				AML	AML		
	comp=N,55μm,0.1s						
MMO1	Montemonaco	0.21	86	P	Pg	21 57 13.0	+0.5
MMO1				S	Sg	21 57 16.7	+1.0
T1220	Camerino, Fraz	0.23	10	P	Pg	21 57 13.3	+0.5
T1220				AML	AML		
	comp=N,101μm,0.2s						
T1220				AML	AML		
	comp=E,122μm,0.3s						
T1220				AML	AML		
	comp=N,98μm,0.2s						
T1220				AML	AML		
	comp=E,12045μm,2.2s						
T1241	Roccafluvione,	0.29	95	P	Pg	21 57 14.4	+0.5
T1241				AML	AML		
	comp=E,44μm,0.2s						
ASSB	Assisi San Ben	0.32	300	⇑P	Pb	21 57 15.2	-0.6
ASSB				AML	AML		
	comp=E,15μm,0.1s						
ASSB				AML	AML		
	comp=N,17μm,0.1s						
T1211	Morro Reatino	0.38	201	S	Sb	21 57 22.5	-0.1
SRES	S.Oreste - Sor	0.76	211	S	Sn	21 57 34.9	-1.2

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*IDC **14** 21:57:55.2±1.3, 54°.75S×133°.43W, h0^{km}, mb4.0/4, mbtmp4.0/4, MS3.3/2, Error ellipse: s-maj=103.4km s-min=28.7km az=159.0*

ISC 14 21:57:56.7±1.3, 54°.8S±0°.6×133°.4W±0°.3, h10^{km}, n14, σ0^{s}63/6, mb4.1/4, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	Rarotonga	38.94	319	LR	LR	22 19 33.4	
	comp=Z,45nm,18.0s,baz=146,slow=33						
H03S2	Juan Fernandez	42.97	84	T	T	22 52 03.0	
	baz=223,slow=74,SNR=13						
H03S1	Juan Fernandez	42.97	84	T	T	22 52 04.4	
	baz=223,slow=74,SNR=12						
H03S3	Juan Fernandez	42.98	84	T	T	22 52 07.2	
	baz=223,slow=74,SNR=12						
H03N3	Juan Fernandez	43.24	84	T	T	22 52 26.6	
	baz=230,slow=74						
H03N2	Juan Fernandez	43.25	83	T	T	22 52 19.4	
	baz=230,slow=74						
H03N1	Juan Fernandez	43.26	84	T	T	22 52 22.0	
	baz=230						
AFI	Afiamalu	50.50	309	LR	LR	22 25 13.7	
	comp=Z,28nm,18.8s,baz=52,slow=32						
LPAZ	La Paz	62.63	79	P	P	22 08 21.9	-0.1
	0.7nm,0.5s,baz=194,slow=4.2,SNR=2.0						
	0.7nm,0.5s						
ASAR	Alice Springs	72.51	254	P	P	22 09 24.0	+0.3
	1.4nm,0.7s,baz=136,slow=6.9,SNR=16						
	1.4nm,0.7s						
WRA	Warramunga Arr	75.22	256	P	P	22 09 39.9	+0.3
	1.2nm,0.7s,baz=144,slow=5.1,SNR=14						
	1.2nm,0.7s						
TXAR	Lajitas Array	87.59	26	P	P	22 10 45.1	+0.3
	0.9nm,1.1s,baz=181,slow=5.3,SNR=3.6						
	0.9nm,1.1s						
ILAR	Eielson Array	119.65	353	PKP	PKiKP	22 16 45.3	-0.1
	0.4nm,0.8s,baz=217,slow=0.5,SNR=5.0						
ZALV	Zalesovo Beam	157.87	284	PKPab	PKPab	22 18 24.5	-0.9
	0.6nm,0.6s,baz=123,slow=5.5,SNR=4.0						

ROM 14 21:58:31.0±0.1, 42°.812N±0°.003×13°.116E±0°.004, h10^{km}, ML1.2/9, 3C-1D, Error ellipse: s-maj=0.3km s-min=0.0km az=324.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1245	Castelsantange	0.07	50	P	Pg	21 58 33.7	+0.2
T1245				S	Sg	21 58 35.4	+0.1
T1212	Cascia, Frazio	0.08	221	P	Pg	21 58 33.9	+0.4
T1212				S	Sg	21 58 35.7	+0.4
T1212				AML	AML		
	comp=E,692μm,0.2s						
T1212				AML	AML		
	comp=N,565μm,0.3s						
T1212				AML	AML		
	comp=E,708μm,0.2s						
T1212				AML	AML		
	comp=N,566μm,0.3s						
T1214	Arquata del Tr	0.09	128	P	Pg	21 58 33.9	+0.3
T1214				S	Sg	21 58 35.7	+0.2
T1216	Preci, Frazion	0.11	318	⇑P	Pg	21 58 34.2	+0.5
T1216				AML	AML		
	comp=E,113μm,1.6s						
T1216				AML	AML		
	comp=N,160μm,1.4s						
T1216				AML	AML		
	comp=E,112μm,1.6s						
T1216				AML	AML		
	comp=N,160μm,1.4s						
MC2	Monte Cornacci	0.11	29	⇑P	Pg	21 58 34.4	+0.4
MC2				S	Sg	21 58 36.9	+0.7
T1218	Civita (PG)	0.14	180	⇓P	Pg	21 58 34.9	+0.5
T1218				S	Sg	21 58 37.5	+0.8
T1218				AML	AML		
	comp=E,228μm,0.8s						
T1218				AML	AML		
	comp=N,277μm,0.7s						
T1218				AML	AML		
	comp=N,293μm,0.7s						
T1218				AML	AML		
	comp=E,218μm,0.9s						
T1218				AML	AML		
	comp=N,293μm,1.3s						
T1218				AML	AML		
	comp=N,277μm,1.3s						
T1217	Poggiodomo (PG	0.17	234	P	Pg	21 58 35.2	+0.5
T1217				S	Sg	21 58 38.6	+1.2
MMO1	Montemonaco	0.18	61	P	Pg	21 58 35.3	+0.4
MMO1				S	Sg	21 58 38.4	+0.7
T1215	Vallo di Nera,	0.18	267	P	Pg	21 58 35.4	+0.5
T1215				S	Sg	21 58 38.6	+0.9
T1215				AML	AML		
	comp=E,91μm,0.1s						
T1215				AML	AML		
	comp=N,78μm,0.2s						
FDMO	Fiordimonte	0.23	355	AML	AML		
	comp=N,64μm,0.6s						
FDMO				AML	AML		
	comp=N,64μm,1.4s						
FDMO				AML	AML		
	comp=E,63μm,1.4s						
FDMO				AML	AML		
	comp=N,64μm,1.4s						
FDMO				AML	AML		
	comp=E,63μm,0.6s						
T1241	Roccafluvione,	0.24	79	AML	AML		
	comp=E,76μm,1.1s						
T1241				AML	AML		
	comp=N,114μm,0.1s						
T1241				AML	AML		
	comp=E,76μm,0.9s						
RM33	Pellescritta (	0.31	166	AML	AML		
	comp=E,53μm,0.4s						
RM33				AML	AML		
	comp=N,40μm,0.2s						
ARRO	Arrone	0.35	228	AML	AML		
	comp=N,25μm,1.3s						
ARRO				AML	AML		
	comp=E,29μm,1.2s						
ARRO				AML	AML		
	comp=N,25μm,0.7s						
ARRO				AML	AML		
	comp=E,29μm,0.8s						
VIVA	Pratoni del Vi	1.09	194	⇑P	Pb	21 58 50.1	-1.8
VIVA				AML	AML		
	comp=N,224μm,0.7s						
VIVA				AML	AML		
	comp=E,290μm,1.0s						

ROM 14 21:59:30.3±0.1, 43°.007N±0°.004×13°.082E±0°.005, h6^{km}±1^{km}, ML1.0/4, 3C-3D, Error ellipse: s-maj=0.4km s-min=0.3km az=233.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDMO	Fiordimonte	0.03	8	P	Pg	21 59 31.6	0.0
FDMO				S	Sg	21 59 32.4	-0.1
FEMA	Monte Fema	0.05	208	P	Pg	21 59 32.2	+0.3
T1219	Muccia, Frazio	0.07	312	P	Pg	21 59 32.4	+0.2
T1219				S	Sg	21 59 33.9	+0.4
T1220	Camerino, Fraz	0.10	3	P	Pg	21 59 32.9	+0.2
T1256	Bolognola (MC)	0.11	90	P	Pg	21 59 33.0	+0.3
T1256				S	Sg	21 59 35.0	+0.7
T1256				AML	AML		
	comp=N,81μm,1.6s						
T1256				AML	AML		
	comp=N,81μm,1.6s						
T1256				AML	AML		
	comp=E,132μm,0.3s						
T1256				AML	AML		
	comp=N,81μm,0.4s						
MC2	Monte Cornacci	0.12	140	P	Pg	21 59 33.4	+0.4
T1216	Preci, Frazion	0.12	202	P	Pg	21 59 33.4	+0.5
T1216				S	Sg	21 59 36.0	+1.2
CESI	CESI - Serrava	0.13	269	P	Pg	21 59 33.6	+0.5
T1245	Castelsantange	0.17	153	P	Pg	21 59 34.2	+0.4
T1245				AML	AML		
	comp=E,57μm,0.7s						
T1245				AML	AML		
	comp=N,63μm,1.1s						
T1245				AML	AML		
	comp=E,57μm,1.3s						
GUMA	Gualdo di Mace	0.19	73	⇑P	Pg	21 59 34.9	+0.6
GUMA				S	Sg	21 59 38.6	+1.8
GUMA				AML	AML		
	comp=E,175μm,1.4s						
GUMA				AML	AML		
	comp=N,178μm,0.2s						
GUMA				AML	AML		
	comp=E,175μm,0.6s						
MMO1	Montemonaco	0.21	121	P	Pg	21 59 34.8	+0.3
MMO1				S	Sg	21 59 38.4	+1.1
T1212	Cascia, Frazio	0.26	186	P	Pg	21 59 35.8	+0.4
T1212				S	Sg	21 59 40.3	+1.6
T1215	Vallo di Nera,	0.26	218	P	Pg	21 59 35.9	+0.5
SNTG	Esanatoglia	0.27	337	⇑P	Pg	21 59 36.3	+0.7
SNTG				AML	AML		
	comp=N,35μm,1.1s						
SNTG				AML	AML		
	comp=E,49μm,0.1s						
SNTG				AML	AML		
	comp=N,35μm,0.9s						
T1241	Roccafluvione,	0.30	120	⇑P	Pg	21 59 36.5	+0.4
EL6	Elcito	0.32	3	⇓P	Pg	21 59 36.9	+0.2
CING	Cingoli	0.38	13	⇓P	Pg	21 59 37.9	+0.2
MURB	Monte Urbino	0.48	302	⇓P	Pg	21 59 39.9	+0.3
ARVD	Arcevia	0.50	348	S	Sb	21 59 48.6	-0.6

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*SOME **14** 22:16:48.8, 43°.62N×82°.05E, h10^{km}*

NNC 14 22:16:49.3±2.6, 43°.76N×82°.13E, h0^{km}, mb2.6, mpv2.3, 5C-2D, Error ellipse: s-maj=31.2km s-min=7.0km az=134.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	Jarkent	1.78	290	P	Pn	22 17 21.9	+0.5
	5.5nm,0.3s						
DJR				S	Sg	22 17 46.2	-0.2
	55nm,0.3s						
DJR	Jarkent	1.78	290	*e*P	Pn	22 17 21.9	+0.5
	2.4nm,0.0s						
DJR				*e*S	Sg	22 17 46.2	-0.2
	38nm,0.1s						
PDGK	Podgornoye	1.96	258	S	Sn	22 17 49.8	+0.5
	12nm,0.5s						
PDGK	Podgornoye	1.96	258	⇑Pn	Pn	22 17 24.0	+0.1
	3.8nm,0.4s						
PDGK				⇓Sn	Sb	22 17 50.4	-0.6
	30nm,0.6s						
UZB	Uzynbulak	2.34	256	Pg	Pn	22 17 30.7	+1.5
	2.8nm,0.4s						
UZB				Lg	Lg	22 18 01.4	
	6.2nm,0.2s						
UZB	Uzynbulak	2.34	256	*e*Pg	Pn	22 17 30.6	+1.5
	3.4nm,0.1s						
UZB				*e*Lg	Lg	22 18 01.4	
	9.3nm,0.1s						
KPKS	Kokpek	2.52	265	Pg	Pn	22 17 33.4	+1.9
	3.7nm,0.2s						
KPKS				Lg	Lg	22 18 06.4	
	7.4nm,0.2s						

KPKS	**Kokpek**	**2.52**	**265**	*e*Pg	Pb	22 17 34.0	-1.4
	3.7nm,0.1s						
KPKS				*e*Lg	Lg	22 18 06.7	
	13nm,0.1s						
SATY	**Saty**	**2.80**	**257**	Pg	Pb	22 17 38.8	-1.5
	2.2nm,0.4s						
SATY				Lg	Lg	22 18 15.0	
	7.7nm,0.1s						
SATY	**Saty**	**2.80**	**257**	*e*Pg	Pb	22 17 38.8	-1.5
	1.1nm,0.1s						
SATY				*e*Lg	Lg	22 18 15.0	
	9.2nm,0.1s						
MK31	**Makanchi Array**	**3.04**	**2**	⇑Pn	Pn	22 17 38.3	-0.4
	0.1nm,0.3s						
MK31				Pg	Pb	22 17 45.2	+1.0
	0.2nm,0.3s,baz=184,slow=16,SNR=21						
MK31				⇑Lg	Lg	22 18 23.6	
	5.1nm,0.5s						
MAKZ	**Makanchi**	**3.05**	**358**	⇑Pn	Pn	22 17 38.1	-0.7
	4.7nm,2.5s						
MAKZ				⇓Pg	Pg	22 17 47.3	-0.5
	0.7nm,0.7s						
MAKZ				⇑Lg	Lg	22 18 26.5	
	1.8nm,0.6s						
CHKK	**Chushkaly**	**3.72**	**273**	*e*Pg	Pb	22 17 55.5	-0.4
	0.6nm,0.1s						
CHKK				*e*Lg	Lg	22 18 43.6	
	4.4nm,0.2s						

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*IDC **14** 22:38:17.4±0.8, 36°.04S×97°.97W, h0^{km}, mb4.1/10, mbtmp4.1/10, MS4.3/40, Error ellipse: s-maj=24.8km s-min=21.6km az=30.0*

*GCMT **14** 22:38:19.2±0.2, 36°.33S±0°.01×98°.11W±0°.02, h20^{km}±1^{km}, MW5.0/115, Moment Tensor Solution. s43,c53; s115,c162; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.28±.14; M$_{\theta\theta}$-0.26±.13; M$_{\phi\phi}$0.54±.12; M$_{r\theta}$0.16±.24; M$_{\theta\phi}$-4.25±.11; M$_{\phi r}$-0.69±.21; Best double couple: M$_0$4.32400×10^{16} NP1:ϕ_s183.00000°, δ88.00000°, λ9.00000°. NP2:ϕ_s93.00000°, δ81.00000°, λ178.00000°. Principal axes: T 4.4870, Plg7.0000°, Azm48.0000°; N -0.3250, Plg81.0000°, Azm193.0000°; P -4.1620, Plg5.0000°, Azm317.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **14** 22:38:20.2±1.9, 36°.1S±0°.1×97°.9W±0°.2, h10^{km}±1^{km}, mb4.7/49 Error ellipse: s-maj=24.0km s-min=19.7km az=256.0*

ISC 14 22:38:19.0±0.6**, 36°.1S**±0°.1×**97°.95W**±0°.10**, h10**^{km}**, n126, σ0^{s}90**/84**, mb4.6**/31**, MS4.3**/42**, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**13.20**	**310**	LR	LR	22 44 58.7	
	comp=Z,2µm,20.7s,baz=130,slow=31						
RPN	**Rapa Nui**	**13.20**	**310**	Pn	**Pn**	**22 41 26.7**	**+0.2**
VA02	**Isla de Pascua**	**13.24**	**309**	Pn	**Pn**	**22 41 26.4**	**-0.7**
H03S2	**Juan Fernandez**	**15.76**	**87**	T	T	22 58 29.9	
	baz=254,slow=75,SNR=24						
H03S1	**Juan Fernandez**	**15.78**	**87**	T	T	22 58 33.6	
	baz=254,slow=75,SNR=11						
H03S3	**Juan Fernandez**	**15.78**	**87**	T	T	22 58 30.8	
	baz=254,slow=75,SNR=7.2						
H03N2	**Juan Fernandez**	**15.86**	**86**	T	T	22 58 31.9	
	baz=247,slow=72,SNR=42						
H03N3	**Juan Fernandez**	**15.86**	**86**	T	T	22 58 33.1	
	baz=247,slow=72,SNR=45						
H03N1	**Juan Fernandez**	**15.87**	**86**	T	T	22 58 33.0	
	baz=247,slow=72,SNR=48						
LL04	**Puerto Octay**	**20.52**	**111**		**P**	**22 42 57.6**	**+0.3**
LL04				IAmb	IAmb	22 43 24.1	
	comp=Z,29nm,1.2s						
AY01	**Puyuhuapi**	**20.95**	**121**	P	**P**	**22 43 03.0**	**+1.1**
AY01				IAmb	IAmb	22 43 08.3	
	comp=Z,35nm,1.2s						
LL02	**Futaleuf**	**21.25**	**117**	P	**P**	**22 43 04.8**	**-0.3**
LL02				IAmb	IAmb	22 43 28.7	
	comp=Z,39nm,1.4s						
COYC	**Coyhaique**	**21.64**	**124**	P	**P**	**22 43 09.1**	**-0.3**
PLCA	**Paso Flores**	**21.91**	**110**	P	**P**	**22 43 14.0**	**+1.6**
	comp=Z,2.9nm,0.9s,baz=288,slow=13,SNR=2.3						
PLCA				LR	LR	22 49 35.1	
	comp=Z,615nm,20.8s,baz=278,slow=31						
	comp=Z,2.9nm,0.9s						
BO02	**Sierra Bellavi**	**22.15**	**95**	P	**P**	**22 43 14.3**	**-0.7**
LCO	**Las Campanas**	**23.99**	**81**	P	**P**	**22 43 33.7**	**-0.4**
LCO				IAmb	IAmb	22 43 44.8	
	comp=Z,23nm,1.4s						
AC05	**El Transito**	**24.40**	**81**	P	**P**	**22 43 37.5**	**-0.2**
AC05				IAmb	IAmb	22 43 53.2	
	comp=Z,33nm,1.4s						
CFA	**Coronel Fontan**	**25.03**	**88**	P	**P**	**22 43 43.0**	**-0.3**
	comp=Z,1.3nm,0.4s,baz=246,slow=10.0,SNR=2.1						
CFA				LR	LR	22 51 13.4	
	comp=Z,375nm,19.6s,baz=254,slow=31						
	comp=Z,1.3nm,0.4s						
AC02	**Maricunga**	**26.19**	**77**	P	**P**	**22 43 52.7**	**-1.6**
LVC	**Limon Verde**	**28.55**	**70**	LR	LR	22 52 37.8	
	comp=Z,1µm,22.0s,baz=236,slow=30						
PB08	**IPOC Station P**	**29.83**	**66**	P	**P**	**22 44 26.6**	**-0.1**
PB08				IAmb	IAmb	22 44 28.4	
	comp=Z,20nm,1.4s						
GO01	**Chusmiza**	**30.09**	**65**	P	**P**	**22 44 29.9**	**+0.6**
MNMC	**Minye Minye**	**30.14**	**63**	P	**P**	**22 44 29.5**	**+0.1**
MNMC				IAmb	IAmb	22 44 51.0	
	comp=Z,14nm,1.2s						
NNA	**Nana**	**30.67**	**44**	LR	LR	22 53 54.9	
	comp=Z,1µm,19.4s,baz=230,slow=31						
PB16	**IPOC Station P**	**30.72**	**62**	P	**P**	**22 44 35.5**	**+0.6**
LPAZ	**La Paz**	**33.05**	**61**	P	**P**	**22 44 55.1**	**-0.4**
	comp=Z,9.0nm,0.9s,baz=218,slow=6.7,SNR=16						
LPAZ				LR	LR	22 55 12.7	
	comp=Z,374nm,21.8s,baz=206,slow=31						
	comp=Z,9.0nm,0.9s						
LPAZ	**La Paz**	**33.05**	**61**	P	**P**	**22 44 55.8**	**+0.4**
ATAH	**Atahualpa**	**33.95**	**36**	LR	LR	22 55 33.1	
	comp=Z,770nm,21.4s,baz=207,slow=31						
PMSA	**Palmer Station**	**35.08**	**155**	LR	LR	22 55 10.5	
	comp=Z,516nm,21.5s,baz=292,slow=29						
CPUP	**Villa Florida**	**35.86**	**86**	LR	LR	22 58 06.0	
	comp=Z,215nm,18.2s,baz=246,slow=33						
CZSB	**Cruzeiro do Su**	**36.47**	**45**	P	**P**	**22 45 24.4**	**0.0**
SIV	**San Ignacio**	**38.41**	**68**	P	**P**	**22 45 39.8**	**-1.0**
	comp=Z,0.6nm,0.4s,baz=255,slow=9.2,SNR=4.8						
SIV				LR	LR	22 59 52.0	
	comp=Z,416nm,20.3s,baz=254,slow=34						
	comp=Z,0.6nm,0.4s						
CHSH	**Refugio Sur-Vo**	**38.73**	**31**	P	**P**	**22 45 45.3**	**+1.2**
CHSH				IAmb	IAmb	22 46 08.0	
	comp=Z,17nm,0.9s						
PORT	**Chimborazo Vol**	**38.80**	**32**	P	**P**	**22 45 46.1**	**+1.4**
PORT				IAmb	IAmb	22 45 58.6	
	comp=Z,17nm,1.1s						
ETMB	**Extrema**	**38.92**	**56**	P	**P**	**22 45 44.2**	**-0.9**
SLOR	**San Lorenzo -**	**39.58**	**32**	P	**P**	**22 45 51.6**	**+0.6**
PULU	**Pululahua**	**40.26**	**31**	P	**P**	**22 45 56.1**	**-0.5**
OTAV	**Otavalo**	**40.47**	**31**	P	**P**	**22 45 57.6**	**-0.9**
OTAV				IAmb	IAmb	22 46 00.3	
	comp=Z,19nm,1.4s						
SAML	**Samuel**	**41.60**	**58**	P	**P**	**22 46 06.5**	**-0.8**
SAML				IAmb	IAmb	22 46 15.8	
	comp=Z,26nm,1.5s						
TBI	**Tubuai**	**46.02**	**271**	*e*LR	LR	22 59 26.7	
	comp=Z,4µm,22.2s						
TBI				*e*LR	LR	22 59 26.9	
	comp=Z,933nm,24.8s						
ROSC	**El Rosal**	**46.38**	**33**	P	**P**	**22 46 46.3**	**+0.3**
	comp=Z,5.1nm,0.4s,baz=254,slow=12,SNR=3.6						
ROSC				LR	LR	23 04 21.3	
	comp=Z,464nm,18.0s,baz=228,slow=34						
	comp=Z,5.1nm,0.4s						
ROSC	**El Rosal**	**46.38**	**33**	P	**P**	**22 46 46.8**	**+0.7**
TAOE	**Nuku Hiva Isla**	**46.96**	**295**	*e*S	S	22 53 25.6	-16
	comp=Z,127nm,24.1s						
TAOE				*e*LR	LR	23 00 01.1	
	comp=Z,226nm,25.8s						
SRBA	**San Rafael, Bu**	**47.16**	**20**	P	**P**	**22 46 51.4**	**-0.5**
MACA	**Manacapuru-AM**	**47.51**	**55**	P	**P**	**22 46 53.5**	**-1.0**
JTS	**Las Juntas de**	**47.77**	**17**	LR	LR	23 02 03.6	
	comp=Z,573nm,21.4s,baz=162,slow=30						
RUSC	**La Rusia**	**47.87**	**34**	P	**P**	**22 46 57.2**	**-0.6**
BDFB	**Brasilia**	**48.75**	**79**	LR	LR	23 06 14.4	
	comp=Z,266nm,20.1s,baz=307,slow=34						
PPT2	**Papeete2**	**49.03**	**278**	*e*LR	LR	23 00 53.1	
	comp=Z,172nm,23.8s						
PPT2				*e*LR	LR	23 00 53.1	
	comp=Z,146nm,23.2s						
PPT	**Papeete**	**49.04**	**278**	LR	LR	23 01 58.4	
	comp=Z,138nm,21.2s,baz=136,slow=29						
MATN	**Matagalpa**	**50.10**	**15**	P	**P**	**22 47 15.1**	**+0.8**
SDV	**Santo Domingo**	**51.63**	**35**	LR	LR	23 08 26.9	
	comp=Z,359nm,18.2s,baz=200,slow=35						
BAUV	**El Baul**	**52.94**	**38**	P	**P**	**22 47 35.6**	**0.0**
BAUV				IAmb	IAmb	22 47 38.1	
	comp=Z,13nm,0.9s						
CMIG	**Matias Romero**	**53.01**	**4**	LR	LR	23 04 31.3	
	comp=Z,141nm,19.7s,baz=168,slow=30						
QSPA	**South Pole Qui**	**54.09**	**180**	P	**P**	**22 47 45.2**	**+1.5**
	comp=Z,1.3nm,0.8s,baz=119,slow=8.3,SNR=2.3						
	comp=Z,1.3nm,0.8s						
QSPA	**South Pole Qui**	**54.09**	**180**	P	**P**	**22 47 44.2**	**+0.5**
QSPA				IAmb	IAmb	22 47 54.4	
	comp=Z,6.9nm,1.1s						
RAR	**Rarotonga**	**55.40**	**268**	LR	LR	23 05 18.2	
	comp=Z,108nm,18.1s,baz=152,slow=29						
VNDA	**Vanda**	**57.20**	**195**	LR	LR	23 06 37.3	
	comp=Z,180nm,20.5s,baz=244,slow=30						
MDP	**Montagnes des**	**58.98**	**56**	LR	LR	23 11 42.6	
	comp=Z,556nm,18.2s,baz=250,slow=34						
LPIG	**La Paz**	**61.03**	**347**	LR	LR	23 08 15.5	
	comp=Z,88nm,21.7s,baz=59,slow=30						
SJG	**San Juan**	**61.77**	**35**	LR	LR	23 12 36.9	
	comp=Z,162nm,21.7s,baz=208,slow=33						
HPIG		**63.15**	**352**	P	**P**	**22 48 47.7**	**+0.5**
HPIG				IAmb	IAmb	22 49 20.4	
	comp=Z,7.2nm,1.2s						
URZ	**Urewera**	**65.28**	**240**	LR	LR	23 09 46.4	
	comp=Z,256nm,21.0s,baz=258,slow=29						
TX32	**Lajitas Array**	**65.34**	**355**	P	**P**	**22 49 02.8**	**+1.4**
TX32				IAmb	IAmb	22 49 19.7	
	comp=Z,6.3nm,1.4s						
TXAR	**Lajitas Array**	**65.34**	**355**	P	**P**	**22 49 02.1**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=171,slow=8.6,SNR=7.5						
TXAR				LR	LR	23 11 28.0	
	comp=Z,152nm,19.9s,baz=40,slow=30						
	comp=Z,0.7nm,0.8s						
TXAR	**Lajitas Array**	**65.34**	**355**	P	**P**	**22 49 02.5**	**+1.2**
JCT	**Junction City**	**66.28**	**358**	P	**P**	**22 49 08.1**	**+0.7**
JCT				IAmb	IAmb	22 49 18.4	
	comp=Z,7.5nm,1.1s						
RPZ	**Rata Peaks**	**66.80**	**232**	LR	LR	23 12 15.0	
	comp=Z,232nm,19.2s,baz=142,slow=30						
AFI	**Afiamalu**	**68.95**	**268**	LR	LR	23 13 08.0	
	comp=Z,163nm,18.4s,baz=101,slow=30						
TUC	**Tucson**	**69.13**	**348**	P	**P**	**22 49 27.4**	**+2.0**
TUC				IAmb	IAmb	22 49 34.2	
	comp=Z,4.4nm,1.2s						
ANMO	**Albuquerque**	**71.15**	**353**	LR	LR	23 16 17.1	
	comp=Z,120nm,18.0s,baz=228,slow=32						
PFO	**Pinyon Flats O**	**71.50**	**344**	LR	LR	23 14 12.0	
	comp=Z,144nm,18.1s,baz=125,slow=30						
TKL	**Tuckaleechee C**	**72.63**	**12**	LR	LR	23 17 52.3	
	comp=Z,123nm,20.0s,baz=152,slow=33						
CCM	**Cathedral Cave**	**74.07**	**6**	P	**P**	**22 49 55.1**	**+0.2**
CCUT	**Cedar City**	**74.69**	**347**	P	**P**	**22 49 59.5**	**+0.7**
MSVF	**Nonsavu**	**75.03**	**259**	LR	LR	23 13 51.2	
	comp=Z,164nm,20.2s,baz=168,slow=28						
DSP	**Deep Springs**	**75.45**	**344**	P	**P**	**22 50 03.3**	**+0.4**
DSP				IAmb	IAmb	22 50 19.5	
	comp=Z,9.7nm,1.4s						
R11A	**Troy Canyon, C**	**75.88**	**346**	P	**P**	**22 50 06.1**	**+0.5**
TMUT	**Trail Mountain**	**76.04**	**349**	P	**P**	**22 50 07.2**	**+0.6**
TMUT				IAmb	IAmb	22 50 38.2	
	comp=Z,4.0nm,0.9s						
LHV	**Little Huntoon**	**76.41**	**343**	P	**P**	**22 50 09.7**	**+1.3**
LHV				IAmb	IAmb	22 50 35.6	
	comp=Z,11nm,1.1s						
NVAR	**Mina Array Bea**	**76.54**	**344**	P	**P**	**22 50 09.6**	**+0.2**
	comp=Z,2.3nm,0.8s,baz=179,slow=7.3,SNR=15						
NVAR				LR	LR	23 16 38.5	
	comp=Z,174nm,19.3s,baz=207,slow=30						
	comp=Z,2.3nm,0.8s						
NVAR	**Mina Array Bea**	**76.54**	**344**	P	**P**	**22 50 10.1**	**+0.7**
KVN	**Kaiserville**	**77.09**	**344**	P	**P**	**22 50 13.2**	**+0.8**
ELK	**Elko**	**78.13**	**347**	LR	LR	23 18 17.6	
	comp=Z,118nm,19.0s,baz=106,slow=31						
BW06	**Boulder Array**	**79.23**	**351**	P	**P**	**22 50 24.1**	**-0.2**
BW06				IAmb	IAmb	22 50 47.4	
	comp=Z,8.2nm,1.2s						
PDAR	**Pinedale Array**	**79.23**	**351**	P	**P**	**22 50 23.4**	**-0.9**
	comp=Z,2.9nm,0.6s,baz=159,slow=5.9,SNR=30						
	comp=Z,2.9nm,0.6s						
PDAR	**Pinedale Array**	**79.23**	**351**	P	**P**	**22 50 24.1**	**-0.2**
ECSD	**EROS Data Cent**	**79.50**	**1**	P	**P**	**22 50 25.5**	**0.0**
ECSD				IAmb	IAmb	22 50 27.4	
	comp=Z,4.7nm,0.8s						
KMRM	**Mail Ridge**	**79.59**	**340**	P	**P**	**22 50 27.7**	**+1.6**
FXWY	**Fox Creek**	**80.28**	**350**	P	**P**	**22 50 30.6**	**+0.6**
FLWY	**Flagg Ranch**	**80.67**	**351**	P	**P**	**22 50 33.1**	**+1.1**
HLID	**Hailey**	**80.72**	**348**	P	**P**	**22 50 33.4**	**+1.2**
HLID				IAmb	IAmb	22 50 41.4	
	comp=Z,6.5nm,1.1s						
YBH	**Yreka Blue Hor**	**80.74**	**341**	LR	LR	23 18 33.0	
	comp=Z,66nm,20.1s,baz=158,slow=30						
J08A	**Circle Bar Ran**	**81.29**	**345**	P	**P**	**22 50 36.6**	**+1.3**
J08A				IAmb	IAmb	22 50 52.5	
	comp=Z,9.7nm,1.3s						
DZM	**Mont Dzumac**	**81.61**	**249**	*e*LR	LR	23 15 45.7	
	comp=Z,308nm,28.6s						
DZM	**Mont Dzumac**	**81.61**	**249**	LR	LR	23 18 31.1	
	comp=Z,97nm,19.0s,baz=200,slow=30						
HUMO	**Hull Mountain**	**81.62**	**342**	P	**P**	**22 50 38.5**	**+1.6**
HUMO				IAmb	IAmb	22 50 44.1	
	comp=Z,5.5nm,0.9s						
J05D	**Fort Rock, OR**	**81.83**	**343**	P	**P**	**22 50 39.7**	**+1.5**
PINE	**Pine Mountain**	**82.25**	**343**	P	**P**	**22 50 40.7**	**+0.3**
PLID	**Pearl Lake**	**82.47**	**347**	P	**P**	**22 50 42.9**	**+1.3**
NEW	**Newport**	**85.74**	**347**	LR	LR	23 22 57.1	
	comp=Z,117nm,18.2s,baz=100,slow=31						
BBTS	**Babate**	**91.76**	**73**	LR	LR	23 30 38.7	
	comp=Z,195nm,18.4s,baz=246,slow=34						
BBB	**Bella Bella**	**91.81**	**342**	LR	LR	23 25 41.7	
	comp=Z,71nm,19.8s,baz=355,slow=31						
STKA	**Stephens Creek**	**92.33**	**227**	LR	LR	23 25 28.4	
	comp=Z,130nm,18.2s,baz=198,slow=31						
HNR	**Honiara**	**94.12**	**255**	LR	LR	23 24 55.7	
	comp=Z,1µm,20.6s,baz=154,slow=30						
SCHQ	**Schefferville**	**94.46**	**17**	LR	LR	23 31 16.3	
	comp=Z,169nm,18.4s,baz=181,slow=34						
CTA	**Charters Tower**	**97.51**	**239**	LR	LR	23 28 02.2	
	comp=Z,151nm,21.1s,baz=100,slow=31						
YKA	**Yellowknife Ar**	**99.19**	**352**	P	**Pdif**	**22 51 59.6**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=160,slow=5.1,SNR=5.6						
	comp=Z,0.3nm,0.8s						
GERES	**GERESS Array B**	**129.64**	**53**	PKP	**PKPdf**	**22 57 27.5**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=240,slow=5.1,SNR=4.2						
TOKA	**Tokat**	**144.26**	**69**	PKPdf	PKPbc	22 57 54.1	+0.8
RAYN	**Ar Rayn**	**146.09**	**102**	PKPbc	**PKPbc**	**22 57 59.7**	**+0.1**
NRIK	**Noril'sk**	**146.59**	**356**	PKPbc	**PKPdf**	**22 57 58.3**	**+0.2**
	comp=Z,3.0nm,0.7s,baz=44,slow=1.9,SNR=5.7						
NRIK	**Noril'sk**	**146.59**	**356**	PKPdf	**PKPdf**	**22 57 59.2**	**+1.1**
KOPT	**Kop Dagi**	**147.27**	**70**	PKPbc	**PKPbc**	**22 58 02.4**	**-0.4**
GURO	**Guroymak-BITLI**	**148.26**	**73**	PKPdf	**PKPdf**	**22 58 01.9**	**-0.1**
GEVA	**Gevas**	**149.03**	**74**	PKPdf	**PKPdf**	**22 58 02.5**	**-0.8**
KBZ	**Khabaz**	**149.26**	**64**	PKPbc	**PKPbc**	**22 58 07.0**	**-0.5**
	comp=Z,4.3nm,1.0s,baz=255,slow=1.1,SNR=8.4						
KARS	**Kars**	**149.29**	**70**	PKPdf	**PKPdf**	**22 58 04.1**	**+0.5**
AKH	**Akhalkalaki**	**149.66**	**68**	PKPdf	**PKPdf**	**22 58 05.2**	**+0.9**
GNI	**Garni**	**150.53**	**71**	PKPbc	**PKPbc**	**22 58 11.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**156.93**	**225**	PKPab	**PKPab**	**22 58 45.0**	**0.0**
	comp=Z,0.6nm,0.3s,baz=152,slow=2.6,SNR=8.9						
CMAR	**Chiang Mai Arr**	**156.93**	**225**	PKPdf	**PKPdf**	**22 58 14.2**	**-1.0**
CMAR				PKPab	**PKPab**	**22 58 44.3**	**-0.8**
SONM	**Songino Array**	**158.55**	**311**	PKP	**PKPdf**	**22 58 14.9**	**-1.6**
	comp=Z,0.5nm,0.9s,baz=90,slow=0.6,SNR=3.1						
SONM				PKPab	**PKPab**	**22 58 49.3**	**-2.2**
	comp=Z,1.1nm,1.1s,baz=93,slow=1.8,SNR=4.1						
ZALV	**Zalesovo Beam**	**162.07**	**355**	PKPab	**PKPab**	**22 59 07.0**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=38,slow=7.5,SNR=6.1						
KURBB	**Kurchatov Arra**	**165.29**	**9**	PKPab	**PKPab**	**22 59 19.0**	**-1.6**
	comp=Z,0.6nm,0.4s,baz=347,slow=4.6,SNR=6.6						
MKAR	**Makanchi Array**	**169.34**	**359**	PKPab	**PKPab**	**22 59 38.0**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=28,slow=5.5,SNR=12						

IDC 14 22:45:17.0±2.3**, 6°.55S×127°.51E, h0**^{km}**, mb3.3**/1**, mbtmp3.3**/3**, ML3.2**/2**, Error ellipse: s-maj=184.0km s-min=32.5km az=65.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.88**	**154**	Pn	Pn	22 48 49.0	+0.2
	0.1nm,0.3s,baz=335,slow=20,SNR=1.7						
WRA				Sn	Sn	22 51 26.2	-8.3
	0.1nm,0.3s,baz=332,slow=22,SNR=1.5						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**18.10**	**161**	P	Pn	22 49 29.8	-0.2
	0.2nm,0.3s,baz=335,slow=12,SNR=13						
	1.4nm,0.7s						
MKAR	**Makanchi Array**	**66.51**	**328**	P	P	22 56 08.8	0.0
	0.2nm,0.7s,baz=150,slow=6.5,SNR=2.5						
	0.2nm,0.7s						

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*DJA **14** 23:01:51.4±0.3, 0°S±3°×12°4E±°, h10^{km}, M4.1/12, mb4.1/3, MLv4.1/12*

*IDC **14** 23:01:55.7±8.4, 0°.12S×123°.47E, h170^{km}±88^{km}, mb3.1/4, mbtmp3.6/5, Error ellipse: s-maj=80.5km s-min=19.3km az=57.0*

ISC 14 23:01:52.7±0.9**, 0°.11S**±0°.07×**123°.74E**±0°.06**, h157**^{km}**, n14, σ2^{s}89**/17**, mb3.5**/4**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	**Gorontalo**	**1.04**	**315**	P	**Pn**	**23 02 17.0**	**-1.5**
GTOI				S	**Sn**	**23 02 34.9**	**-3.4**
LUWI	**Luwuk**	**1.34**	**226**	P	**Pn**	**23 02 17.5**	**-3.8**
LUWI				S	**Sn**	**23 02 36.2**	**-7.0**
MRSI	**Marisa**	**1.89**	**288**	P	**Pn**	**23 02 25.5**	**-1.6**
SANI	**Sanana**	**2.96**	**131**	P	**Pn**	**23 02 36.4**	**-3.5**
TNTI	**Ternate**	**3.73**	**76**	P	**Pn**	**23 02 47.8**	**-1.9**
LBMI	**Labuha**	**3.79**	**98**	P	**Pn**	**23 02 48.8**	**-1.8**
MPSI	**Mapaga**	**3.87**	**277**	P	**Pn**	**23 02 50.8**	**-0.7**
NLAI	**Namlea**	**4.58**	**133**	P	**Pn**	**23 02 59.9**	**-0.8**
SPSI	**Sidrap Palu**	**5.52**	**226**	P	**Pn**	**23 03 13.4**	**+0.2**
	12nm,0.4s,0.1nm						
KAPI	**Kappang**	**6.30**	**219**	P	**Pn**	**23 03 24.3**	**+0.8**
	5.2nm,0.4s,baz=20,slow=15,SNR=6.8						
KAPI				S	**Sn**	**23 04 33.9**	**-0.7**
	8.6nm,0.4s,baz=123,slow=21,SNR=6.2						
WRA	**Warramunga Arr**	**22.28**	**153**	P	**P**	**23 06 39.5**	**+2.1**
	0.6nm,0.5s,baz=335,slow=9.7,SNR=9.7						
	0.6nm,0.5s						
STKA	**Stephens Creek**	**35.83**	**154**	P	**P**	**23 08 40.6**	**+3.3**
	0.7nm,0.3s,baz=346,slow=7.0,SNR=3.9						
	0.7nm,0.3s						
SONM	**Songino Array**	**50.08**	**345**	P	**P**	**23 10 32.5**	**+0.8**
	0.2nm,0.7s,baz=142,slow=5.4,SNR=1.5						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**59.09**	**328**	P	**P**	**23 11 37.4**	**+0.8**
	0.4nm,0.5s,baz=129,slow=8.5,SNR=6.8						
	0.4nm,0.5s						

GCMT 14 23:16:59.0±0.2**, 54°.21S**±0°.02×**2°.16W**±0°.03**, h13**^{km}**, MW5.0**/123**, Moment Tensor Solution. s47,c59; s123,c170; Duration: 0 Moment tensor: Scale** 10^{16} **Nm;** M$_{rr}$-4.52±.19; M$_{\theta\theta}$2.25±.14; M$_{\phi\phi}$2.26±.13; M$_{r\theta}$-0.34±.35; M$_{\theta\phi}$-2.17±.09; M$_{\phi r}$-1.59±.32; **Best double couple:** M$_0$4.74300×10^{16} **NP1:**ϕ_s330.00000°, δ53.00000°, λ-71.00000°. **NP2:**ϕ_s121.00000°, δ41.00000°, λ-113.00000°. **Principal axes:** T 4.5170, Plg6.0000°, Azm47.0000°**;** N 0.4430**,** Plg15.0000°**,** Azm138.0000°**;** P -4.9700**,** Plg74.0000°**,** Azm296.0000°**; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southern Mid-Atlantic Ridge**

NNC 14 23:32:41.1±5.2**, 37°.18N×70°.89E, h0**^{km}**, mb3.6, mpv3.2, 4C Error ellipse: s-maj=48.0km s-min=36.6km az=131.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**5.01**	**353**	Pg	Pn	23 33 58.5	+0.8
	2.2nm,0.2s						
IUG				Lg	Lg	23 34 59.3	
	38nm,0.5s						
AML	**Almayashu**	**5.40**	**23**	⇑P	Pn	23 34 02.0	-1.3
	0.4nm,0.5s						
AML				⇑S	Sn	23 35 08.0	+1.7
	2.5nm,0.7s						
MRKS	**Merke**	**5.84**	**17**	Pg	Pn	23 34 08.1	-1.0
	3.3nm,0.4s						
MRKS				Lg	Lg	23 35 17.9	
	7.4nm,0.7s						
KK31	**Karatay Array**	**5.92**	**357**	⇑P	Pn	23 34 11.6	+1.5
	0.4nm,0.3s,baz=177,slow=13,SNR=4.2						
KK31				⇑S	Sn	23 35 19.2	+0.5
	3.2nm,0.3s						
AB31	**Akbulak array**	**14.45**	**330**	P	Pn	23 36 06.6	-0.2
	0.3nm,0.5s,baz=134,slow=12,SNR=4.0						

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*IDC **14** 23:39:22.6±0.8, 40°.94S×91°.58W, h0^{km}, mb4.1/13, mbtmp4.1/14, MS4.5/46, Error ellipse: s-maj=23.4km s-min=21.5km az=149.0*

*GCMT **14** 23:39:23.4±0.1, 40°.89S±0°.01×91°.76W±0°.01, h12^{km}, MW5.2/148, Moment Tensor Solution. s100,c139; s148,c232; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.77±.01; M$_{\theta\theta}$-0.06±.01; M$_{\phi\phi}$0.82±.01; M$_{r\theta}$0.41±.04; M$_{\theta\phi}$-0.10±.01; M$_{\phi r}$0.06±.03; Best double couple: M$_0$0.90100×10^{17} NP1:ϕ_s197.00000°, δ51.00000°, λ-57.00000°. NP2:ϕ_s331.00000°, δ50.00000°, λ-124.00000°. Principal axes: T 0.8370, Plg1.0000°, Azm264.0000°; N 0.1270, Plg25.0000°, Azm354.0000°; P -0.9640, Plg65.0000°, Azm173.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **14** 23:39:25.4±1.3, 40°.52S±0°.08×91°.9W±0°.1, h10^{km}±1^{km}, mb4.9/64 Error ellipse: s-maj=20.0km s-min=8.1km az=236.0*

ISC 14 23:39:24.6±0.5**, 40°.59S**±0°.10×**91°.80W**±0°.07**, h10**^{km}**, n146, σ1^{s}25**/107**, mb4.8**/40**, MS4.5**/47**, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**12.27**	**61**	T	T	23 55 22.3	
	baz=230,slow=73,SNR=1472						
H03S1	**Juan Fernandez**	**12.28**	**61**	T	T	23 55 23.9	
	baz=230,slow=73,SNR=1117						
H03S3	**Juan Fernandez**	**12.29**	**61**	T	T	23 55 20.6	
	baz=230,slow=73,SNR=974						
H03N3	**Juan Fernandez**	**12.51**	**59**	T	T	23 55 30.1	
	baz=231,slow=71,SNR=3172						
H03N2	**Juan Fernandez**	**12.51**	**59**	T	T	23 55 28.2	
	baz=231,slow=71,SNR=2752						
H03N1	**Juan Fernandez**	**12.53**	**59**	T	T	23 55 34.6	
	baz=231,slow=71,SNR=2317						
GO07	**Milladeo Hill,**	**13.76**	**107**	Pn	**Pn**	**23 42 40.7**	**+1.1**
LC02	**Puerto Saavedr**	**14.30**	**89**	Pn	**Pn**	**23 42 47.7**	**+0.6**
AY01	**Puyuhuapi**	**14.63**	**111**	Pn	**Pn**	**23 42 51.9**	**+0.3**
LL03	**Petrohue**	**14.69**	**98**	Pn	**Pn**	**23 42 53.4**	**+1.0**
LL04	**Puerto Octay**	**14.71**	**98**		**Pn**	**23 42 54.4**	**+1.7**
BI05	**Punta Hualpn**	**15.04**	**81**		**Pn**	**23 42 58.3**	**+1.3**
BI05				IAmb	IAmb	23 43 04.7	
	comp=Z,30nm,1.0s						
LL02	**Futaleuf**	**15.09**	**106**	Pn	**Pn**	**23 43 00.0**	**+2.3**
COYC	**Coyhaique**	**15.23**	**116**	Pn	**Pn**	**23 43 02.2**	**+2.5**
GO06	**Curarrehue**	**15.60**	**93**	Pn	**Pn**	**23 43 04.7**	**+0.2**
GO08	**Villa O'Higgin**	**15.79**	**126**	Pn	**Pn**	**23 43 08.2**	**+1.3**
PLCA	**Paso Flores**	**16.13**	**97**	Pn	**Pn**	**23 43 07.9**	**-3.5**
	comp=Z,2.2nm,1.0s,baz=271,slow=9.1,SNR=2.1						
PLCA				LR	LR	23 47 53.6	
	comp=Z,6µm,19.8s,baz=279,slow=32						
PLCA	**Paso Flores**	**16.13**	**97**	Pn	**Pn**	**23 43 12.9**	**+1.5**
LMEL	**Las Melosas**	**18.45**	**75**	P	**P**	**23 43 41.5**	**+1.0**
MT08	**Bocatoma Ro**	**18.78**	**75**		**P**	**23 43 43.7**	**-0.5**
MT08				IAmb	IAmb	23 43 49.2	
	comp=Z,20nm,1.5s						
CO03	**El Pedregal**	**19.67**	**67**	P	**P**	**23 43 54.2**	**+0.4**
RPN	**Rapa Nui**	**19.76**	**307**	LR	LR	23 49 30.8	
	comp=Z,3µm,19.4s,baz=138,slow=30						
GO04	**Tololo Observa**	**19.99**	**65**	Pn	**Pn**	**23 43 59.1**	**-0.1**
CO01	**Juntas del Tor**	**20.59**	**66**	P	**P**	**23 44 04.9**	**+0.9**
CO01				IAmb	IAmb	23 44 18.0	
	comp=Z,68nm,1.9s						
LCO	**Las Campanas**	**20.77**	**63**	P	**P**	**23 44 06.3**	**+0.3**
CFA	**Coronel Fontan**	**21.00**	**72**	P	**P**	**23 44 07.0**	**-1.2**
	comp=Z,1.2nm,0.4s,baz=234,slow=13,SNR=5.1						
CFA				LR	LR	23 51 10.3	

	comp=Z,4µm,18.9s,baz=243,slow=34						
	comp=Z,1.2nm,0.4s						
AC05	**El Transito**	21.17	63	P	P	23 44 10.2	0.0
AC05				IAmb	IAmb	23 44 25.8	
	comp=Z,40nm,1.1s						
GO03	**Copiap**	22.00	61	P	P	23 44 18.4	-0.6
GO03				IAmb	IAmb	23 44 38.2	
	comp=Z,44nm,1.2s						
TRQA	**Tornquist**	23.16	93	P	P	23 44 31.3	+0.1
AC02	**Maricunga**	23.24	61	P	P	23 44 31.7	-0.9
AC02				IAmb	IAmb	23 44 52.1	
	comp=Z,71nm,1.6s						
PB14	**IPOC Station P**	23.96	55	P	P	23 44 39.1	-0.3
PB14				IAmb	IAmb	23 45 03.8	
	comp=Z,70nm,1.8s						
GO02	**Mina Guanaco**	24.09	57		P	23 44 40.3	-0.3
GO02				IAmb	IAmb	23 44 59.0	
	comp=Z,49nm,1.4s						
LVC	**Limon Verde**	26.36	54	P	P	23 45 00.5	-0.8
	comp=Z,0.8nm,0.3s,baz=217,slow=6.5,SNR=1.2						
LVC				LR	LR	23 52 55.6	
	comp=Z,2µm,20.7s,baz=220,slow=31						
	comp=Z,0.8nm,0.3s						
PB01	**IPOC Station P**	27.20	51	P	P	23 45 08.6	0.0
PB01				IAmb	IAmb	23 45 27.7	
	comp=Z,29nm,1.4s						
PMSA	**Palmer Station**	29.02	156	LR	LR	23 53 33.6	
	comp=Z,965nm,21.4s,baz=310,slow=30						
NNA	**Nana**	31.39	29	LR	LR	23 55 08.3	
	comp=Z,950nm,20.6s,baz=182,slow=30						
LPAZ	**La Paz**	31.74	47	P	P	23 45 50.4	+0.9
	comp=Z,1.2nm,0.7s,baz=270,slow=19,SNR=4.5						
LPAZ				LR	LR	23 55 58.8	
	comp=Z,951nm,20.4s,baz=205,slow=31						
	comp=Z,1.2nm,0.7s						
LPAZ	**La Paz**	31.74	47	P	P	23 45 49.3	-0.2
LPAZ				IAmb	IAmb	23 46 09.4	
	comp=Z,20nm,1.4s						
CPUP	**Villa Florida**	31.86	74	P	P	23 45 50.8	+0.9
	comp=Z,1.6nm,0.8s,baz=109,slow=20,SNR=2.9						
CPUP				LR	LR	23 57 16.3	
	comp=Z,2µm,21.9s,baz=237,slow=34						
	comp=Z,1.6nm,0.8s						
PLTB	**Pedras Altas**	31.86	86	P	P	23 45 51.5	+1.7
ATAH	**Atahualpa**	35.41	23	P	P	23 46 23.1	+1.9
	comp=Z,4.4nm,0.7s,baz=140,slow=7.6,SNR=3.0						
ATAH				LR	LR	23 58 20.2	
	comp=Z,972nm,18.4s,baz=217,slow=32						
	comp=Z,4.4nm,0.7s						
SIV	**San Ignacio**	36.19	56	P	P	23 46 27.1	-0.5
	comp=Z,1.3nm,0.8s,baz=236,slow=9.4,SNR=4.3						
SIV				LR	LR	00 00 00.2	
	comp=Z,1µm,21.5s,baz=237,slow=34						
	comp=Z,1.3nm,0.8s						
AQDB	**Aquidauana**	36.65	68	P	P	23 46 29.9	-1.5
AQDB				IAmb	IAmb	23 46 43.0	
	comp=Z,20nm,1.0s						
CZSB	**Cruzeiro do Su**	36.89	33	P	P	23 46 32.2	-1.3
CZSB				IAmb	IAmb	23 47 30.2	
	comp=Z,48nm,1.6s						
PTLB	**Pontes e Lacer**	37.84	58	P	P	23 46 40.8	-0.7
PTLB				IAmb	IAmb	23 46 57.9	
	comp=Z,32nm,1.7s						
ETMB	**Extrema**	38.12	44	P	P	23 46 43.0	-0.9
ETMB				IAmb	IAmb	23 47 02.0	
	comp=Z,20nm,1.4s						
SAML	**Samuel**	40.48	47		P	23 47 05.1	+1.5
OTAV	**Otavalo**	42.42	20	P	P	23 47 20.6	+0.6
BELA	**Belgrano 2**	43.88	165	P	P	23 47 31.9	+1.2
BELA				IAmb	IAmb	23 48 35.0	
	comp=Z,33nm,1.6s						
BDFB	**Brasilia**	45.31	70	P	P	23 47 40.9	-2.0
	comp=Z,1.1nm,0.6s,baz=210,slow=8.1,SNR=1.4						
BDFB				LR	LR	00 05 48.8	
	comp=Z,1µm,18.5s,baz=222,slow=35						
	comp=Z,1.1nm,0.6s						
ROSC	**El Rosal**	47.98	24	P	P	23 48 04.3	+0.3
	comp=Z,6.0nm,0.3s,baz=172,slow=23,SNR=1.9						
ROSC				LR	LR	00 06 43.1	
	comp=Z,451nm,18.8s,baz=188,slow=34						
	comp=Z,6.0nm,0.3s						
ROSC	**El Rosal**	47.98	24	P	P	23 48 02.8	-1.3
RUSC	**La Rusia**	49.36	25	P	P	23 48 14.1	-0.7
RUSC				IAmb	IAmb	23 49 16.5	
	comp=Z,15nm,1.0s						
QSPA	**South Pole Qui**	49.64	180	P	P	23 48 13.3	-2.8
	comp=Z,1.6nm,0.5s,baz=205,slow=0.5,SNR=18						
QSPA				LR	LR	00 05 25.3	
	comp=Z,518nm,21.7s,baz=125,slow=32						
	comp=Z,1.6nm,0.5s						
TBI	**Tubuai**	50.96	271	*e*S	S	23 55 44.3	+1.0
	comp=Z,1µm,26.5s						
TBI				*e*SS	SS	23 59 20.5	+2.4
	comp=Z,757nm,25.2s						
TBI				*e*LR	LR	00 02 58.0	
	comp=Z,15µm,27.8s						
TBI				*e*LR	LR	00 03 00.6	
	comp=Z,46µm,24.5s						
JTS	**Las Juntas de**	51.02	9	LR	LR	00 05 39.5	
	comp=Z,549nm,19.2s,baz=170,slow=31						
SNAA	**Sanae**	51.74	156	LR	LR	00 07 38.9	
	comp=Z,426nm,18.8s,baz=272,slow=33						
SDV	**Santo Domingo**	52.97	27	LR	LR	00 09 15.8	
	comp=Z,683nm,21.1s,baz=184,slow=34						
SDV	**Santo Domingo**	52.97	27	P	P	23 48 41.0	-0.6
SDV				IAmb	IAmb	23 49 42.1	
	comp=Z,12nm,0.9s						
TAOE	**Nuku Hiva Isla**	53.18	293	*e*S	S	23 56 14.6	+0.5
	comp=Z,390nm,25.7s						
TAOE				*e*LR	LR	00 04 01.7	
	comp=Z,2µm,24.7s						
VNDA	**Vanda**	54.12	195	LR	LR	00 08 48.0	
	comp=Z,260nm,18.1s,baz=94,slow=33						
PPT2	**Papeete2**	54.41	277	*e*S	S	23 56 31.3	+0.6
	comp=Z,704nm,25.2s						
PPT2				*e*LR	LR	00 04 36.2	
	comp=Z,2µm,29.0s						
PPT2				*e*LR	LR	00 04 36.4	
	comp=Z,2µm,26.5s						
PPT	**Papeete**	54.42	277	LR	LR	00 06 21.7	
	comp=Z,416nm,21.7s,baz=156,slow=30						
CMIG	**Matias Romero**	57.46	357	LR	LR	00 08 52.0	
	comp=Z,206nm,20.9s,baz=148,slow=31						
MDP	**Montagnes des**	57.94	48	LR	LR	00 12 44.6	
	comp=Z,468nm,18.8s,baz=222,slow=34						
RAR	**Rarotonga**	60.02	267	LR	LR	00 09 17.3	
	comp=Z,573nm,19.6s,baz=156,slow=30						
SJG	**San Juan**	63.09	27	LR	LR	00 16 21.2	
	comp=Z,196nm,18.5s,baz=210,slow=35						
LPIG	**La Paz**	66.63	342	LR	LR	00 12 29.1	
	comp=Z,125nm,18.2s,baz=116,slow=30						
URZ	**Urewera**	67.15	239	LR	LR	00 13 45.8	
	comp=Z,792nm,18.6s,baz=246,slow=31						
RPZ	**Rata Peaks**	67.81	231	LR	LR	00 13 34.1	
	comp=Z,513nm,18.2s,baz=147,slow=30						
HPIG		68.41	347	P	P	23 50 26.6	-0.1
RAO	**Raoul Island**	68.89	249	LR	LR	00 17 30.8	
	comp=Z,218nm,18.4s,baz=147,slow=33						
TX31	**Lajitas Ar. Si**	70.44	349		P	23 50 39.1	0.0
TX32	**Lajitas Array**	70.44	349	P	P	23 50 38.2	-0.9
TX32				IAmb	IAmb	23 51 55.0	
	comp=Z,24nm,1.8s						
TXAR	**Lajitas Array**	70.44	349	P	P	23 50 41.5	+2.4
	comp=Z,2.0nm,0.9s,baz=162,slow=8.5,SNR=12						
TXAR				LR	LR	00 16 08.4	
	comp=Z,286nm,20.6s,baz=123,slow=31						
	comp=Z,2.0nm,0.9s						
TXAR	**Lajitas Array**	70.44	349	P	P	23 50 38.2	-0.9
JCT	**Junction City**	71.10	353	P	P	23 50 42.2	-0.8
435B	**Jarrell**	71.22	355	P	P	23 50 44.0	+0.4
AFI	**Afiamalu**	73.53	266	LR	LR	00 16 41.3	
	comp=Z,821nm,18.2s,baz=134,slow=30						
TUC	**Tucson**	74.63	343	P	P	23 51 03.4	-0.5
TUC				IAmb	IAmb	23 52 06.7	
	comp=Z,12nm,1.1s						
MSTX	**Muleshoe**	74.88	351	P	P	23 51 05.8	+0.5
MSTX				IAmb	IAmb	23 52 06.9	
	comp=Z,16nm,1.0s						
JSC	**Jenkinsville**	75.14	9		P	23 51 06.6	-0.1
TKL	**Tuckaleechee C**	76.24	7	LR	LR	00 19 12.8	
	comp=Z,157nm,18.6s,baz=169,slow=31						
ANMO	**Albuquerque**	76.37	348	P	P	23 51 16.4	+2.4
	comp=Z,2.5nm,0.9s,baz=260,slow=5.1,SNR=6.1						
ANMO				LR	LR	00 20 19.1	
	comp=Z,123nm,19.6s,baz=234,slow=32						
	comp=Z,2.5nm,0.9s						
ANMO	**Albuquerque**	76.37	348	P	P	23 51 14.5	+0.5
PFO	**Pinyon Flats O**	77.27	339	LR	LR	00 17 29.1	
	comp=Z,173nm,20.3s,baz=102,slow=29						
CCM	**Cathedral Cave**	78.27	0	P	P	23 51 25.2	+0.9
CCM				IAmb	IAmb	23 52 25.3	
	comp=Z,13nm,0.9s						
MSVF	**Nonsavu**	78.79	256	LR	LR	00 17 45.7	
	comp=Z,416nm,21.2s,baz=154,slow=29						
S22A	**4UR Ranch, Cre**	79.17	348	P	P	23 51 30.8	+1.2
S22A				IAmb	IAmb	23 52 32.6	
	comp=Z,26nm,1.4s						
PV13	**Radium Mtn., P**	79.91	346		P	23 51 34.6	+1.0
PV13				IAmb	IAmb	23 52 35.9	
	comp=Z,23nm,1.3s						
CCUT	**Cedar City**	80.24	343	P	P	23 51 36.3	+0.9
CCUT				IAmb	IAmb	23 52 43.3	
	comp=Z,16nm,1.5s						
WCT	**Wildcat Mounta**	80.31	340	P	P	23 51 34.9	-0.7
TPNV	**Topopah Spring**	80.36	340	P	P	23 51 35.6	-0.4
Q16A	**Castle Valley**	81.09	345	P	P	23 51 40.8	+0.9
DSP	**Deep Springs**	81.21	339	P	P	23 51 41.0	+0.7
DSP				IAmb	IAmb	23 52 48.0	
	comp=Z,16nm,1.4s						
TMUT	**Trail Mountain**	81.46	345	P	P	23 51 42.3	+0.4
TMUT				IAmb	IAmb	23 52 38.9	
	comp=Z,28nm,1.6s						
NLU	**North Lily Min**	82.27	344	P	P	23 51 46.0	-0.1
NVAR	**Mina Array Bea**	82.30	339	P	P	23 51 48.8	+2.5
	comp=Z,1.2nm,0.8s,baz=155,slow=6.3,SNR=7.0						
	comp=Z,1.2nm,0.8s						
NVAR	**Mina Array Bea**	82.30	339	P	P	23 51 46.5	+0.2
BSUT	**Blindstream Ca**	82.57	346	P	P	23 51 48.6	+0.7
BSUT				IAmb	IAmb	23 52 50.2	
	comp=Z,13nm,1.1s						
DUG	**Dugway, Tooele**	82.66	344	P	P	23 51 48.4	+0.4
KVN	**Kaiserville**	82.83	340	P	P	23 51 49.2	+0.2
KVN				IAmb	IAmb	23 52 56.1	
	comp=Z,22nm,1.7s						
ELK	**Elko**	83.72	342	P	P	23 51 53.5	-0.1
ELK				IAmb	IAmb	23 52 54.8	
	comp=Z,6.7nm,1.1s						
HVU	**Hansel Valley**	84.17	344	P	P	23 51 55.7	-0.1
HVU				IAmb	IAmb	23 52 57.1	
	comp=Z,9.8nm,1.1s						
DZM	**Mont Dzumac**	84.36	246	*e*LR	LR	00 18 30.2	
	comp=Z,1µm,25.0s						
DZM	**Mont Dzumac**	84.36	246	LR	LR	00 24 55.2	
	comp=Z,444nm,18.1s,baz=209,slow=32						
SUR	**Sutherland**	84.39	128	LR	LR	00 23 40.1	
	comp=Z,138nm,18.4s,baz=202,slow=32						
BW06	**Boulder Array**	84.52	347	P	P	23 51 58.1	+0.5
PD31	**Pinedale Array**	84.52	347	P	P	23 51 58.3	+0.6
PDAR	**Pinedale Array**	84.52	347	P	P	23 51 59.3	+1.7
	comp=Z,4.2nm,0.8s,baz=160,slow=5.4,SNR=30						
PDAR				LR	LR	00 26 14.6	
	comp=Z,108nm,18.8s,baz=95,slow=33						
	comp=Z,4.2nm,0.8s						
PDAR	**Pinedale Array**	84.52	347	P	P	23 51 57.9	+0.2
RSSD	**Black Hills**	85.05	351	P	P	23 51 59.9	-0.4
REDW	**Red Top Meadow**	85.32	346	P	P	23 52 00.9	-0.8
FXWY	**Fox Creek**	85.62	346	P	P	23 52 03.8	+0.7
FXWY				IAmb	IAmb	23 53 04.4	
	comp=Z,8.5nm,1.0s						
SADO	**Sadowa**	85.74	9	LR	LR	00 26 52.1	
	comp=Z,260nm,18.1s,baz=268,slow=33						
FLWY	**Flagg Ranch**	85.99	346	P	P	23 52 06.1	+1.1
WVOR	**Wild Horse Val**	86.14	340	P	P	23 52 06.4	+0.8
WVOR				IAmb	IAmb	23 53 07.6	
	comp=Z,9.9nm,1.1s						
HLID	**Hailey**	86.22	344	P	P	23 52 06.9	+0.9
YBH	**Yreka Blue Hor**	86.61	337	LR	LR	00 22 26.3	
	comp=Z,127nm,21.5s,baz=142,slow=30						
BBTS	**Babate**	88.60	69	LR	LR	00 30 05.9	
	comp=Z,405nm,18.5s,baz=238,slow=34						
BOSA	**Boshof**	89.76	128	LR	LR	00 27 02.3	
	comp=Z,165nm,20.9s,baz=196,slow=32						
TSUM	**Tsumeb**	91.55	117	LR	LR	00 26 26.3	
	comp=Z,211nm,21.8s,baz=216,slow=31						
DBIC	**Dimbokro**	91.98	83	LR	LR	00 29 54.3	
	comp=Z,207nm,19.4s,baz=196,slow=33						
LBTB	**Lobatse**	92.60	126	LR	LR	00 29 38.3	
	comp=Z,174nm,19.0s,baz=190,slow=33						
STKA	**Stephens Creek**	92.62	223	LR	LR	00 25 28.3	
	comp=Z,195nm,21.7s,baz=179,slow=30						
SCHQ	**Schefferville**	97.43	14	LR	LR	00 35 15.9	
	comp=Z,152nm,19.0s,baz=194,slow=34						
HNR	**Honiara**	97.46	251	LR	LR	00 27 56.7	
	comp=Z,1µm,21.1s,baz=156,slow=30						
CTA	**Charters Tower**	99.06	234	LR	LR	00 31 46.5	
	comp=Z,181nm,18.1s,baz=108,slow=32						
GERES	**GERESS Array B**	128.39	54	PKP	PKPdf	23 58 29.7	-1.3
	comp=Z,0.5nm,0.7s,baz=202,slow=2.1,SNR=2.7						
BRTR	**Keskin Array B**	138.86	73	PKP	PKPdf	23 58 51.4	+0.4
	comp=Z,0.6nm,0.7s,baz=193,slow=5.9,SNR=3.7						
KLMR	**Klimovskoe**	144.23	39	*e*	PKPab	23 58 55.6	-2.0
KLMR				AMP		23 59 06.9	
	comp=Z,55nm,1.5s						
KLMR				*e*		23 59 46.6	
KIV	**Kislovodsk**	146.48	69	PKPdf	PKPdf	23 59 05.2	+1.0
KBZ	**Khabaz**	146.59	69	PKPbc	PKPbc	23 59 06.0	+0.1
	comp=Z,1.9nm,0.9s,baz=326,slow=7.4,SNR=4.2						
USRK	**Ussuriysk Ar.**	147.75	291	PKPbc	PKPdf	23 59 06.9	+0.7
	comp=Z,3.1nm,0.8s,baz=98,slow=4.4,SNR=3.7						
KSAR	**Wonju Array Be**	149.18	277	PKPbc	PKPbc	23 59 12.0	-1.1
HEH	**HeiHe**	151.13	303	*e*P	PKPbc	23 59 15.4	-1.9
HEH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NRIK	**Noril'sk**	151.19	0	PKPbc	PKPbc	23 59 16.0	-0.9
	comp=Z,2.8nm,0.9s,baz=81,slow=3.1,SNR=5.1						
NRIK	**Noril'sk**	151.19	0	PKPbc	PKPbc	23 59 16.4	-0.5
NJ2	**Nanjing**	153.97	261	*e*P	PKPdf	23 59 18.4	+2.2
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
CMAR	**Chiang Mai Arr**	156.08	206	PKPdf	PKPdf	23 59 18.2	-1.4
ABKAR	**Akbulak array**	158.30	57	PKPdf	PKPdf	23 59 20.6	-0.8
PZH	**PanZhiHua**	162.01	223	PKP	PKPdf	23 59 27.3	+0.9
HHC	**Hu-ho-hao-te**	162.29	278	*e*P	PKPdf	23 59 21.8	-4.5
CD2	**Chengdu**	164.12	237	PKP	PKPdf	23 59 29.0	+0.8
LZH	**Lanzhou**	166.92	255	*e*PKP	PKPdf	23 59 30.6	0.0
WMQ	**Urumqi**	176.75	6	*e*P	PKPdf	23 59 37.3	+2.5

SEA ***14*** *23:43:19.6±1.7, 46°.448N±0°.009×122°.332W±0°.004, h12^{km}±4^{km}, ML3.2/18, ML3.0/80(NEIC), Error ellipse: s-maj=1.4km s-min=0.4km az=191.0*

PNSN ***14*** *23:43:19.6, 46°.45N×122°.33W, h12^{km}, MD3.2, Fault plane solution: NP1:ϕ_s150.00000°, δ15.00000°, λ160.00000°.*

NEIC 14 23:43:19.2±1.8, **46°.453N**±0°.010×**122°.36W**±0°.02, **h11**^{km}±5^{km}**, Error ellipse: s-maj=2.0km s-min=1.4km az=103.0, Washington**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
B201	**Coldwater, Mou**	0.16	156		Pg	23 43 23.2	+0.3
B201					Sg	23 43 25.9	+0.4
JRO	**Jston Ridge Ob**	0.20	151		Pg	23 43 23.9	+0.3
JRO					Sg	23 43 27.1	+0.4
STD	**Studebaker Rid**	0.24	156		Pg	23 43 24.3	+0.2
STD					Sg	23 43 27.9	+0.4
FL2	**Flat Top 2**	0.26	178		Pg	23 43 24.7	+0.2
VALT	**Mount Saint He**	0.27	154		Pg	23 43 25.1	+0.3
VALT					Sg	23 43 29.4	+1.0
BOLM	**Sugar Bowl**	0.27	151		Pg	23 43 25.2	+0.4
SHW	**Mount Saint He**	0.28	162		Pg	23 43 25.1	+0.3
RVW	**Rose Valley**	0.40	221		Pg	23 43 27.2	+0.1
LON	**Longmire**	0.48	52		Pg	23 43 28.4	-0.3
LON	**Longmire**	0.48	52	Pg	Pg	23 43 28.1	-0.6
LON					Sg	23 43 34.6	-0.4
LON				IAML		23 43 35.0	
	comp=N,765nm,0.6s						
LON				IAML		23 43 35.4	
	comp=E,541nm,0.2s						
REMR	**Mount Rainier-**	0.51	44		Pg	23 43 29.0	-0.2
F04A	**Amboy**	0.52	184	Pg	Pg	23 43 29.1	-0.3
F04A				Sg	Sg	23 43 36.3	+0.1
PCFR	**Pierce County**	0.54	354		Pg	23 43 29.7	0.0
PCFR					Sg	23 43 37.5	+0.7
B941	**Kapowsin**	0.54	10		Pg	23 43 29.5	-0.3
B941					Sg	23 43 37.0	0.0
RVC	**Mount Rainier-**	0.56	29		Pg	23 43 29.9	-0.1
ALST	**Alston**	0.58	234		Pg	23 43 30.5	+0.1
RRHS	**Rochester High**	0.58	307		Pb	23 43 31.1	-0.2
F04D	**Rainier, OR**	0.58	231	Pg	Pg	23 43 30.3	-0.2
F04D				Sg	Sg	23 43 38.7	+0.5
OBSR	**Observation Ro**	0.58	40		Pg	23 43 30.2	-0.4
GHW	**Garrison Hill**	0.59	6		Pg	23 43 30.3	-0.4
GHW					Sg	23 43 38.9	+0.3
BMW	**Boistfort Moun**	0.60	272		Pg	23 43 30.9	+0.1
RCS	**Mount Rainier-**	0.60	46		Pg	23 43 30.5	-0.5
WPW	**White Pass**	0.61	66		Pg	23 43 30.5	-0.6
PCEP	**Pierce County**	0.66	4		Pg	23 43 32.1	+0.1
FMW	**Mount Fremont**	0.67	44		Pg	23 43 31.8	-0.5
CPW	**Capitol Peak**	0.74	315		Pg	23 43 33.4	-0.2
CPW					Sb	23 43 44.3	-0.1
GULW	**Guler Mountain**	0.75	135		Pg	23 43 32.9	-0.8
D05A	**Enumclaw**	0.78	19	Pg	Pg	23 43 33.8	-0.5
D05A				IAML		23 43 50.1	
	comp=E,538nm,0.7s						
E03A	**Lebam**	0.84	277	Pg	Pg	23 43 34.6	-0.7
E03A				IAML		23 43 53.9	
	comp=E,625nm,0.5s						
E03A				IAML		23 43 54.5	
	comp=N,633nm,0.5s						
GSM	**Grass Mountain**	0.84	27		Pg	23 43 34.6	-0.9
APM	**Augspurger Mou**	0.86	146		Pg	23 43 34.9	-0.9
B019	**Raymond**	0.91	283		Pg	23 43 36.0	-0.7
F03A	**Seaside**	0.98	238	Pg	Pg	23 43 36.8	-1.3
B017	**Montesano**	0.99	304		Pg	23 43 37.8	-0.3
RADR	**Rader Ridge**	0.99	269	Pg	Pg	23 43 37.5	-0.8
RADR				IAML		23 43 57.1	
	comp=N,665nm,0.8s						
RATT	**Rattlesnake La**	1.04	21		Pb	23 43 37.9	-1.3
VLL	**Laurance Lake**	1.10	154		Pb	23 43 39.4	-0.8
SP2	**Seward Park 2**	1.11	4		Pb	23 43 39.6	-0.7
GMW	**Gold Mountain**	1.13	345		Pb	23 43 39.2	-1.5
KMOR	**Kings Mountain**	1.14	224		Pb	23 43 39.2	-1.6
GNW	**Green Mountain**	1.16	344		Pb	23 43 39.4	-1.7
WISH	**Wishkah**	1.17	305		Pb	23 43 41.0	-0.4
WISH				IAML		23 44 02.6	
	comp=N,404nm,0.6s						
WISH				IAML		23 44 03.3	
	comp=E,418nm,0.6s						
B022	**Seaside**	1.20	246		Pn	23 43 40.1	-1.7
TIMB	**Timberline**	1.21	158		Pb	23 43 41.0	-1.1
TDH	**Tom, Dick, Har**	1.23	161		Pn	23 43 41.0	-1.4
HOOD	**Mount Hood Mea**	1.23	156	Pn	Pn	23 43 40.7	-1.7
HOOD				IAML		23 43 59.8	
	comp=E,473nm,0.6s						
G04A	**Mulino**	1.25	184		Pn	23 43 41.0	-1.5
YA2	**Yakima**	1.27	86		Pn	23 43 42.7	-0.1
HDW	**Hoodsport**	1.29	339		Pn	23 43 41.7	-1.4
EBG	**Ellensburg**	1.32	69		Pn	23 43 43.0	-0.5
C04A	**Brinnon**	1.33	342		Pn	23 43 42.7	-0.9
G03D	**McMinnville, O**	1.39	207	Pn	Pn	23 43 43.1	-1.3
TBM	**Table Mountain**	1.41	59		Pn	23 43 44.9	+0.2
HTW	**Haystack Looko**	1.41	16		Pn	23 43 44.0	-0.8
B013	**Quilcene**	1.41	345		Pn	23 43 43.8	-0.9
B013	**Quilcene**	1.41	345		Pn	23 43 43.8	-0.9
LTY	**Liberty**	1.41	55	Pn	Pn	23 43 43.9	-0.9
LTY				IAML		23 44 04.9	
	comp=E,164nm,0.4s						
G05A	**Wamic**	1.41	149	Pn	Pn	23 43 44.8	0.0
G05A				IAML		23 44 10.3	
	comp=E,208nm,0.8s						
G05A				IAML		23 44 12.1	
	comp=N,218nm,0.7s						
OLQ	**Olympics--Lake**	1.45	318		Pn	23 43 44.8	-0.5
VBEM	**Beaver Butte**	1.50	158		Pn	23 43 46.4	+0.4
BLTW	**Bickleton**	1.61	109		Pn	23 43 47.6	+0.1
SQM	**Sequim**	1.69	344		Pn	23 43 48.7	+0.2
G06A	**Carlson Farm,**	1.71	135	Pn	Pn	23 43 48.4	-0.5
G06A				IAML		23 44 12.4	
	comp=N,130nm,0.6s						
G06A				IAML		23 44 16.3	
	comp=E,124nm,0.4s						
WRW	**Wenatchee Ridg**	1.73	35		Pn	23 43 49.7	+0.5
JCW	**Jim Creek**	1.77	9		Pn	23 43 49.9	+0.3
H04A	**Detroit Lake**	1.77	176	Pn	Pn	23 43 49.4	-0.4
F07A	**Phinny Hill Vi**	1.78	107	Pn	Pn	23 43 49.5	-0.3
F07A				IAML		23 44 15.5	
	comp=E,238nm,0.6s						
B04A	**Port Angeles**	1.78	335		Pn	23 43 50.6	+0.8
B04A	**Port Angeles**	1.78	335	Pn	Pn	23 43 50.4	+0.6
B04A				IAML		23 44 17.6	
	comp=E,86nm,0.4s						
B04A				IAML		23 44 18.8	
	comp=N,72nm,0.5s						
VTHM	**Trough**	1.79	135		Pn	23 43 49.8	-0.2
MDW	**Midway**	1.80	84		Pn	23 43 50.0	-0.1
ETW	**Entiat**	1.80	50		Pn	23 43 49.8	-0.5
GPW	**Glacier Peak**	1.86	26		Pn	23 43 51.8	+0.6
RSW	**Rattlesnake Hi**	1.92	91		Pn	23 43 51.4	-0.4
H04D	**Lebanon**	1.95	188	Pn	Pn	23 43 52.3	+0.2
HAWA	**Hanford**	1.96	91	Pn	Pn	23 43 51.4	-0.9
COR	**Corvallis**	1.98	200	Pn	Pn	23 43 53.0	+0.4
GBL	**Gable Mountain**	2.01	85		Pn	23 43 52.9	-0.1
H2OWA	**Water**	2.03	91		Pn	23 43 53.0	-0.3
LOCW	**Locke Island**	2.04	82		Pn	23 43 53.6	+0.2
WTV	**Waterville**	2.06	52		Pb	23 43 55.6	-1.0
RPW	**Rockport**	2.08	16		Pn	23 43 55.2	+1.2
CBSW	**Chelan Butte S**	2.08	49		Pb	23 43 56.6	-0.3
EPH	**Ephrata**	2.10	64		Pn	23 43 54.5	+0.2
WIW	**Wooded Island**	2.12	90		Pn	23 43 54.5	0.0
NLW	**Nelson Butte**	2.13	40		Pb	23 43 56.6	-1.3
I05D	**Terrebonne, OR**	2.23	161	Pn	Pn	23 43 56.6	+0.5
I05D				IAML		23 44 31.1	
	comp=E,104nm,0.7s						
I05D				IAML		23 44 31.9	
	comp=N,173nm,0.6s						
MCW	**Mount Constitu**	2.25	352		Pn	23 43 57.5	+1.1
PRLK	**Prince Lake**	2.26	173		Pb	23 43 58.8	-1.2
TCBUT	**Trout Creek Bu**	2.27	167		Pb	23 44 01.4	+1.2
BUCK	**Buck Mountain**	2.30	191	Pn	Pn	23 43 58.3	+1.3
BUCK				IAML		23 44 30.8	
	comp=E,120nm,0.9s						
BUCK				IAML		23 44 32.7	
	comp=N,94nm,0.6s						
B011	**North Saanich**	2.32	342		Pn	23 43 58.1	+0.9
PGC	**Sidney**	2.32	342	Pn	Pn	23 43 57.8	+0.6
DHW2	**Dyer Hill 2**	2.34	48		Pb	23 44 01.0	-0.3
HUOR	**Husband**	2.36	171		Pb	23 44 00.5	-1.3
YPT	**Yellepit**	2.39	99		Pn	23 43 58.0	-0.2
I02E	**Swisshome, OR**	2.57	205	Pn	Pn	23 44 02.2	+1.6
I02E				IAML		23 44 47.8	
	comp=N,105nm,0.1s						
I02E				IAML		23 44 51.9	
	comp=E,118nm,1.1s						
VDB	**Vedder Mountai**	2.58	4		Pn	23 44 02.7	+1.9
HBO	**Huckleberry Mo**	2.61	179		Pb	23 44 03.9	-2.1
G08A	**Pilot Rock**	2.65	115	Pn	Pn	23 44 00.3	-1.5
G08A				IAML		23 44 46.2	
	comp=N,53nm,0.6s						
G08A				IAML		23 44 46.3	
	comp=E,48nm,0.4s						
CLRS	**Cowichan Lake**	2.65	334	Pn	Pn	23 44 01.6	-0.2
I04A	**Tendick Farm,**	2.66	181	Pn	Pn	23 44 04.0	+2.1
B08A	**Colville Reser**	2.80	46	Pn	Pn	23 44 04.2	+0.3
B08A				IAML		23 44 49.0	
	comp=E,38nm,0.5s						
I03D	**Drain, OR**	2.84	195	Pn	Pn	23 44 05.5	+1.1
I03D				IAML		23 44 45.6	
	comp=E,45nm,0.5s						
I03D				IAML		23 44 53.6	
	comp=N,50nm,1.2s						
PINE	**Pine Mountain**	2.84	159	Pn	Pn	23 44 04.8	+0.2
PINE				IAML		23 44 59.0	
	comp=N,60nm,1.0s						
PINE				IAML		23 45 00.1	
	comp=E,47nm,0.9s						
E09A	**Wood Farm, Sta**	2.91	87	Pn	Pn	23 44 03.8	-1.5
E09A				IAML		23 44 54.7	
	comp=N,77nm,0.9s						
E09A				IAML		23 44 55.4	
	comp=E,37nm,0.6s						
C09A	**Chrisman Ranch**	3.10	63	Pn	Pn	23 44 07.0	-0.9
I07A	**Izee**	3.11	139	Pn	Pn	23 44 08.0	-0.2
J05D	**Fort Rock, OR**	3.27	165	Pn	Pn	23 44 11.1	+0.6
DBO	**Dodson Butte**	3.39	191	Pn	Pn	23 44 12.9	+0.8
DBO				IAML		23 45 11.7	
	comp=N,28nm,2.6s						
DBO				IAML		23 45 24.9	
	comp=E,36nm,2.7s						
J01E	**Myrtle Point**	3.48	199	Pn	Pn	23 44 13.7	+0.6
HUMO	**Hull Mountain**	3.87	187	Pn	Pn	23 44 19.4	+0.9
K02D	**Willamette Mer**	3.87	194	Pn	Pn	23 44 19.1	+0.4
K05A	**Summer Lake**	3.87	164	Pn	Pn	23 44 19.2	+0.5
K05A				IAML		23 45 45.2	
	comp=E,20nm,4.7s						

K05A				IAML		23 46 24.7	
	comp=N,22nm,4.4s						
BMO	Blue Mountains	3.89	112	Pn	Pn	23 44 16.8	-2.1
NEW	Newport	3.99	61	Pn	Pn	23 44 19.1	-1.2
NEW				IAML		23 45 29.8	
	comp=N,18nm,3.5s						
LLLB	Lillooet	4.17	4	Pn	Pn	23 44 23.8	+1.1
LLLB				IAML		23 45 32.1	
	comp=E,17nm,2.9s						
LLLB				IAML		23 45 40.6	
	comp=N,14nm,1.9s						
L04D	Klamath Falls	4.24	179	Pn	Pn	23 44 25.1	+1.4
LKVW	Lakeview	4.46	161		Pb	23 44 33.0	-4.6
PLID	Pearl Lake	4.66	105	Pn	Pn	23 44 27.5	-2.0
PLID				IAML		23 45 42.8	
	comp=N,10nm,4.8s						
YBH	Yreka Blue Hor	4.73	183	Pn	Pn	23 44 31.6	+1.2
YBH				IAML		23 46 51.4	
	comp=E,8.3nm,3.6s						
YBH				IAML		23 46 52.9	
	comp=N,10nm,4.4s						
KRPM	Rodgers	5.43	193	Pn	Pn	23 44 41.7	+1.7
HLID	Hailey	6.33	114	Pn	Pn	23 44 51.5	-1.0

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*IDC **14** 23:43:32.7±3.2, 4°.41S×126°.70E, h39^{km}±37^{km}, mb3.5/2, mbtmp4.0/5, ML4.0/3, Error ellipse: s-maj=26.3km s-min=25.1km az=27.0*

*DJA **14** 23:43:33.1±0.8, 4°S±5°×12°6E±°, h10^{km}, M3.2/6, mB4.6/1, MLv3.2/6, Mw(mB)3.8/1*

ISC 14 23:43:32.6±1.0**, 4°.47S**±0°.08×**126°.68E**±0°.07**, h35^{km}, n9, σ1^{s}.65**/12**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLAI	Namlea	1.29	19	P	Pn	23 43 53.1	-1.0
NLAI				S	Sn	23 44 11.3	+1.1
AAI	Ambon	1.70	63	P	Pn	23 44 05.4	+5.6
SANI	Sanana	2.50	344	P	Pn	23 44 11.0	+0.3
SANI				S	Sn	23 44 39.8	-0.2
MSAI	Masohi	2.51	64	P	Pn	23 44 14.5	+3.6
SIJI	Sorong	5.81	52	Pn	Pn	23 44 56.1	-0.3
	3.7nm,0.3s,baz=246,slow=12,SNR=4.2						
SIJI				Sn	Sn	23 45 59.2	-2.7
	0.6nm,0.3s,baz=209,slow=22,SNR=1.1						
	14nm,0.4s						
KAPI	Kappang	6.92	265	Pn	Pn	23 45 12.3	+0.8
	4.9nm,0.3s,baz=105,slow=4.9,SNR=12						
KAPI				Sn	Sn	23 46 29.1	0.0
	1.4nm,0.3s,baz=156,slow=17,SNR=1.7						
	10nm,0.3s						
WRA	Warramunga Arr	17.10	155	P	Pn	23 47 30.0	+1.0
	0.4nm,0.3s,baz=329,slow=12,SNR=21						
	2.2nm,0.5s						
ASAR	Alice Springs	20.32	161	P	P	23 48 05.8	-0.1
	6.2nm,0.8s,baz=340,slow=11,SNR=39						
	6.2nm,0.8s						
MKAR	Makanchi Array	64.32	328	P	P	23 54 04.2	-0.5
	0.3nm,0.5s,baz=119,slow=8.3,SNR=5.8						
	0.3nm,0.5s						

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*NEIC **15** 00:00:26.5±2.0, 35°.23S±0°.04×70°.95W±0°.07, h99^{km}±4^{km}, mb4.6/49, Error ellipse: s-maj=8.4km s-min=5.0km az=100.0*

*IDC **15** 00:00:27.4±2.1, 35°.20S×70°.77W, h99^{km}±18^{km}, mb4.0/8, mbtmp4.3/13, MS3.2/2, Error ellipse: s-maj=25.5km s-min=13.6km az=99.0*

*VAO **15** 00:00:27.9±0.3, 35°.17S×70°.88W, h98^{km}, mb4.2*

*GUC **15** 00:00:27.9±0.8, 35°.24S×70°.96W, h98^{km}±4^{km}, ML4.5*

*SJA **15** 00:00:28.2±3.0, 35°.13S×70°.92W, h75^{km}, ML4.0, MW4.1, Hypocentre not reviewed by the ISC*

ISC 15 00:00:26.5±0.7**, 35°.23S**±0°.04×**70°.96W**±0°.04**, h101^{km}**±5^{km}**, n163, σ1^{s}.01**/196**, mb4.5**/27**, 10C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BO02	Sierra Bellavi	0.46	18		Pn	00 00 42.6	+0.5
BO02				Sn	Sn	00 00 54.3	+0.4
BO02	Sierra Bellavi	0.46	18⇑	iP	Pn	00 00 42.9	+0.7
BO02				i S	Sn	00 00 54.5	+0.7
BO02				IAML		00 00 58.8	
	comp=N,21μm,0.5s						
BO02	Sierra Bellavi	0.46	18	eP		00 00 42.0	
BO02				eS		00 00 55.7	
BO02				IAML		00 00 58.1	
	comp=Z,9μm,0.2s						
GO05	Huala	0.83	285	Pn	Pn	00 00 46.1	+0.9
GO05				Sn	Sn	00 00 59.7	+0.4
GO05	Huala	0.83	285⇓	iP	Pn	00 00 46.2	+1.0
GO05				i S	Sn	00 01 00.1	+0.9
GO05				IAML		00 01 00.9	
	comp=N,5μm,0.3s						
GO05	Huala	0.83	285	eP		00 00 46.3	
GO05				eS		00 00 59.9	
BO01	Tunca	0.85	353	Pn	Pn	00 00 45.8	+0.5
BO01				Sn	Sn	00 00 59.0	-0.6
BO01	Tunca	0.85	353⇑	iP	Pn	00 00 45.9	+0.5
BO01				i S	Sn	00 00 60.0	+0.4
BO01				IAML		00 01 01.2	
	comp=N,4μm,0.2s						
BO01	Tunca	0.85	353	eP		00 00 45.0	
BO01				eS		00 00 59.7	
BO01				IAML		00 01 01.7	
	comp=Z,1μm,0.2s						
BO03	Pichilemu	1.11	311	eP	Pn	00 00 49.5	+1.4
BO03				i S	Sn	00 01 05.6	+1.2
BO03				IAML		00 01 06.7	
	comp=N,7μm,0.4s						
EDS3	Malargue	1.38	113	eP		00 00 53.0	
EDS3				eS		00 01 12.9	
MT01	Popeta	1.39	350	Pn	Pn	00 00 51.7	+0.3
MT01				Sn	Sn	00 01 09.7	-0.6
MT01	Popeta	1.39	350	eP	Pn	00 00 51.9	+0.4
MT01				i S	Sn	00 01 10.3	0.0
MT01				IAML		00 01 12.9	
	comp=N,6μm,0.4s						
MT01	Popeta	1.39	350	eP		00 00 51.9	
MT01				eS		00 01 10.0	
MT01				IAML		00 01 12.3	
	comp=Z,2μm,0.2s						
MT09	Talagante	1.46	359	Pn	Pn	00 00 52.7	+0.3
MT09				Sn	Sn	00 01 12.0	+0.1
MT09	Talagante	1.46	359	eP	Pn	00 00 53.2	+0.8
MT09				i S	Sn	00 01 12.4	+0.5
MT09				IAML		00 01 15.1	
	comp=N,15μm,0.2s						
LMEL	Las Melosas	1.52	24	Pn	Pn	00 00 54.5	+1.3
LMEL				Sn	Sn	00 01 14.8	+1.5
LMEL	Las Melosas	1.52	24⇑	iP	Pn	00 00 54.4	+1.3
LMEL				i S	Sn	00 01 15.3	+2.0
MT12	Pirque	1.53	13⇑	iP	Pn	00 00 54.1	+0.8
MT12				i S	Sn	00 01 14.5	+0.9
MT12				IAML		00 01 20.5	
	comp=N,9μm,0.6s						
MT13	San Alfonso	1.59	21	Pn	Pn	00 00 55.3	+1.3
MT13				Sn	Sn	00 01 16.3	+1.5
MT13	San Alfonso	1.59	21⇑	iP	Pn	00 00 55.4	+1.5
MT13				i S	Sn	00 01 17.0	+2.2
MT13				IAML		00 01 17.8	
	comp=N,12μm,0.3s						
VA05	Santo Domingo	1.67	341	Pn	Pn	00 00 55.5	+0.6
VA05				Sn	Sn	00 01 16.4	+0.1
VA05	Santo Domingo	1.67	341⇑	iP	Pn	00 00 55.4	+0.6
VA05				i S	Sn	00 01 17.0	+0.7
VA05				IAML		00 01 21.9	
	comp=E,18μm,0.5s						
MT03	Universidad Ad	1.77	12	Pn	Pn	00 00 57.1	+0.8
MT03				Sn	Sn	00 01 19.3	+0.3
MT03	Universidad Ad	1.77	12⇑	iP	Pn	00 00 57.2	+0.9
MT03				i S	Sn	00 01 20.2	+1.2
MT03				IAML		00 01 21.6	
	comp=E,4μm,0.3s						
MT03	Universidad Ad	1.77	12	eP		00 00 57.2	
MT03				eS		00 01 20.0	
MT03				IAML		00 01 24.8	
	comp=Z,2μm,0.3s						
MT05	Renca	1.85	6	Pn	Pn	00 00 57.8	+0.6
MT05				Sn	Sn	00 01 20.9	+0.3
MT05	Renca	1.85	6	eP	Pn	00 00 58.3	+1.2
MT05				i S	Sn	00 01 21.5	+0.9
MT05				IAML		00 01 24.0	
	comp=N,13μm,0.3s						
MT05	Renca	1.85	6	eP		00 00 58.0	
MT05				eS		00 01 20.7	
MT05				IAML		00 01 22.8	
	comp=Z,3μm,1.1s						
MT04	Ro Olivares	1.95	21	eP	Pn	00 00 59.9	+1.3
MT04				i S	Sn	00 01 24.6	+1.5
MT04				IAML		00 01 28.2	
	comp=N,4μm,0.4s						
MT08	Bocatoma Ro	1.95	24	Pn	Pn	00 00 59.6	+1.0
MT08				Sn	Sn	00 01 24.5	+1.5
MT08	Bocatoma Ro	1.95	24	eP	Pn	00 00 60.0	+1.4
MT08				i S	Sn	00 01 24.9	+1.8
MT08				IAML		00 01 30.6	
	comp=N,2μm,0.8s						
MT02	Curacav	1.98	356	Pn	Pn	00 00 59.2	+0.4
MT02	Curacav	1.98	356	eP	Pn	00 00 59.5	+0.7
MT02				IAML		00 01 28.3	
	comp=E,4μm,0.4s						
MT02	Curacav	1.98	356	eP		00 00 59.4	
MT02				eS		00 01 23.1	
MT02				IAML		00 01 29.0	
	comp=Z,1μm,0.9s						
FCH	Farellones	1.98	16⇑	iP	Pn	00 00 59.9	+0.7
FCH				i S	Sn	00 01 24.7	+0.7
FCH				IAML		00 01 27.4	
	comp=N,3μm,0.5s						
MT10	Hacienda Santa	1.99	10⇑	iP	Pn	00 00 59.8	+0.8
MT10				i S	Sn	00 01 25.2	+1.3
MT10				IAML		00 01 29.2	
	comp=N,5μm,0.7s						
PEL	Peldehue	2.10	6	Pn	Pn	00 01 00.9	+0.5
PEL	Peldehue	2.10	6	eP	Pn	00 01 01.4	+1.0
PEL				i S	Sn	00 01 27.5	+1.2
PEL	Peldehue	2.10	6	i P		00 01 01.1	
PEL				eS		00 01 27.0	
ROC1	El Roble	2.25	359	Pn	Pn	00 01 02.8	+0.2
ROC1	El Roble	2.25	359	i P		00 01 03.4	
ROC1				eS		00 01 30.1	
ROCH	El Roble	2.26	359	eP	Pn	00 01 03.2	+0.6
ROCH				i S	Sn	00 01 31.5	+1.3
VA01	Torpederas	2.28	345	Pn	Pn	00 01 03.2	+0.6
VA01	Torpederas	2.28	345	eP	Pn	00 01 03.5	+0.8
VA01				i S	Sn	00 01 29.9	-0.5
VA01				IAML		00 01 31.5	
	comp=N,6μm,0.2s						
VA01	Torpederas	2.28	345	eP		00 01 03.4	
VA01				eS		00 01 30.6	
VA01				IAML		00 01 31.8	
	comp=Z,2μm,0.6s						
BI05	Punta Hualpn	2.36	230	Pn	Pn	00 01 04.1	+0.4
BI05	Punta Hualpn	2.36	230	eP	Pn	00 01 04.7	+1.0
BI05				i S	Sn	00 01 32.8	+0.6
BI05				IAML		00 01 35.0	
	comp=N,3μm,0.6s						
VA03	San Esteban	2.49	8	Pn	Pn	00 01 05.8	+0.2
VA03	San Esteban	2.49	8	eP		00 01 06.2	
VA03				eS		00 01 35.9	
VA03				IAML		00 01 41.8	
	comp=Z,1μm,0.5s						
CANA	Caviahue	2.65	182	i P		00 01 09.6	
CANA				IAML		00 02 23.3	
	comp=Z,56nm,1.1s						
VA06	Catapilco	2.68	354	Pn	Pn	00 01 08.1	+0.1
VA06	Catapilco	2.68	354⇓	iP	Pn	00 01 08.5	+0.5
AAGR	Agrelo	2.77	40	i P		00 01 10.8	
AAGR				IAML		00 01 51.1	
	comp=Z,118nm,1.1s						
ASAL	Salagasta	3.17	34	eP		00 01 16.0	
ASAL				IAML		00 01 59.2	
	comp=Z,68nm,1.5s						
RTLS	Leoncito	3.69	22	eP		00 01 23.5	
RTLS				IAML		00 02 11.1	
	comp=Z,728nm,0.8s						
CO02	Combarbal	4.02	359	Pn	Pn	00 01 25.8	-0.2
CO02	Combarbal	4.02	359⇑	iP	Pn	00 01 25.9	-0.2
CO02				i S	Sn	00 02 12.4	+0.2
CO02	Combarbal	4.02	359	eP		00 01 25.8	
CO02				eS		00 02 12.4	
CO02				IAML		00 02 31.0	
	comp=Z,643nm,0.6s						
ZON	Zonda	4.14	28	Pn	Pn	00 01 28.1	+0.4
ZON	Zonda	4.14	28	eP		00 01 28.3	
ZON				eS		00 02 16.8	
ZON				IAML		00 02 20.2	
	comp=Z,69nm,0.5s						
CFA	Coronel Fontan	4.27	33	P	Pn	00 01 29.2	-0.2
	comp=Z,51nm,0.2s,baz=204,slow=3.6,SNR=226						
CFA				S	Sn	00 02 17.0	-1.2
	comp=Z,100nm,0.3s,baz=213,slow=14,SNR=9.5						
GO06	Curarrehue	4.36	185	Pn	Pn	00 01 30.4	-0.3
CO03	El Pedregal	4.39	3	Pn	Pn	00 01 30.9	-0.1
CO03	El Pedregal	4.39	3	eP		00 01 31.1	
CO03				eS		00 02 19.9	
CO03				IAML		00 02 20.4	
	comp=Z,522nm,0.3s						
LR03	Panguipulli	4.53	194	Pn	Pn	00 01 31.5	-1.2
CO06	Fray Jorge	4.58	353	Pn	Pn	00 01 32.9	-0.7
LR04	Corral	5.04	202	Pn	Pn	00 01 38.5	-1.1
GO04	Tololo Observa	5.05	2	Pn	Pn	00 01 39.1	-1.0
GO04	Tololo Observa	5.05	2	eP		00 01 39.3	
GO04				eS		00 02 35.0	
CO01	Juntas del Tor	5.29	8	Pn	Pn	00 01 42.1	-1.3
CO01	Juntas del Tor	5.29	8	eP		00 01 43.7	
CO01				eS		00 02 42.5	
CO01				IAML		00 03 05.2	
	comp=Z,93nm,0.6s						
CO05	La Serena	5.31	357	Pn	Pn	00 01 42.3	-1.0
PLCA	Paso Flores	5.50	177	P	Pn	00 01 46.6	+0.6
	comp=Z,6.6nm,0.5s,baz=344,slow=11,SNR=43						
PLCA				LR	LR	00 03 33.3	
	comp=Z,111nm,19.7s,baz=114,slow=34						
PLCA	Paso Flores	5.50	177	Pn	Pn	00 01 45.9	0.0
PLCA	Paso Flores	5.50	177	eP	Pn	00 01 47.9	+1.9
LL04	Puerto Octay	5.78	191	Pn	Pn	00 01 47.7	-2.0
LCO	Las Campanas	6.21	2	Pn	Pn	00 01 54.0	-1.9
AC05	El Transito	6.41	5	Pn	Pn	00 01 56.6	-1.9
LL05	Los Muermos	6.47	197	Pn	Pn	00 01 57.4	-1.7
H03S1	Juan Fernandez	6.71	280	P	Pn	00 02 03.9	+1.9
H03N1	Juan Fernandez	6.82	283	P	Pn	00 02 06.3	+2.7
AC04	Llanos de Chal	7.01	359	Pn	Pn	00 02 05.0	-1.5
LL06	Loncomilla	7.28	196	Pn	Pn	00 02 09.6	-0.4
GO03	Copiap	7.64	5	Pn	Pn	00 02 13.4	-1.8
TRQA	Tornquist	7.74	114	Pn	Pn	00 02 16.1	-0.3
GO07	Milladeo Hill,	8.14	194	Pn	Pn	00 02 20.2	-1.6
AC02	Maricunga	8.52	11	Pn	Pn	00 02 25.1	-2.4
GO02	Mina Guanaco	10.11	7	Pn	Pn	00 02 48.2	-0.7
LVC	Limon Verde	12.71	9	P	Pn	00 03 23.5	-0.3
	comp=Z,4.8nm,0.3s,baz=181,slow=9.6,SNR=15						
LVC	Limon Verde	12.71	9	Pn	Pn	00 03 22.3	-1.6
LVC	Limon Verde	12.71	9	eP	Pn	00 03 23.2	-0.6
PB03	IPOC Station P	13.18	5	Pn	Pn	00 03 27.4	-2.5
PB07	IPOC Station P	13.49	4	Pn	Pn	00 03 32.3	-1.7
PB02	IPOC Station P	13.89	4	Pn	Pn	00 03 37.1	-2.0
RODS	Rosario do Sul	14.12	74	eP	Pn	00 03 42.1	+0.2
PB01	IPOC Station P	14.20	6	Pn	Pn	00 03 40.9	-2.1
CPUP	Villa Florida	14.68	57	P	Pn	00 03 48.1	-1.0
	comp=Z,1.0nm,0.2s,baz=239,slow=18,SNR=2.2						
PLTB	Pedras Altas	14.88	81	Pn	Pn	00 03 50.7	-1.0
PB11	IPOC Station P	15.46	5	Pn	Pn	00 03 57.7	-1.4
PB11				IAmb	IAmb	00 04 04.0	
	comp=Z,18nm,0.7s						
GO01	Chusmiza	15.58	6	Pn	Pn	00 03 59.9	-1.1
PSGCX	Pisagua	15.59	3	Pn	Pn	00 03 59.8	-1.0
PSGCX				IAmb	IAmb	00 04 05.9	
	comp=Z,21nm,1.1s						
MNMC	Minye Minye	16.09	5	Pn	Pn	00 04 05.7	-1.3
MNMC				IAmb	IAmb	00 04 12.1	
	comp=Z,26nm,0.7s						
PB12	IPOC Station P	16.56	2		Pn	00 04 12.0	-0.8
PB12				IAmb	IAmb	00 04 16.6	
	comp=Z,22nm,1.1s						
PB16	IPOC Station P	16.88	5	Pn	Pn	00 04 15.1	-2.1
ITAB	Concordia	17.95	69	P	P	00 04 26.9	-1.8
ITAB	Concordia	17.95	69	eP	P	00 04 27.9	-0.8
CNLB	Canela	17.98	76	eP	P	00 04 29.7	+0.5
EFI	East Falkland	18.86	155	P	P	00 04 38.2	-0.3
LPAZ	La Paz	19.04	8	P	Pn	00 04 42.5	-0.6
	comp=Z,2.9nm,0.5s,baz=178,slow=10,SNR=13						
LPAZ	La Paz	19.04	8	P	P	00 04 40.2	-1.1
LPAZ	La Paz	19.04	8	eP	Pn	00 04 43.2	+0.1
PTGB	Pitanga	19.40	62	eP	P	00 04 44.7	0.0
AQDB	Aquidauana	19.91	46	P	P	00 04 48.8	-1.4
AQDB	Aquidauana	19.91	46	eP	P	00 04 50.4	+0.2
BBSD	Serra de San D	20.20	30	eP	P	00 04 53.0	-0.4
PANT	Pantanal (Braz	20.57	42	eP	P	00 04 57.4	+0.1
SIV	San Ignacio	21.11	27	P	P	00 05 02.3	-0.8
	comp=Z,6.7nm,0.8s,baz=204,slow=9.3,SNR=29						
SIV				LR	LR	00 14 33.7	
	comp=Z,141nm,18.9s,baz=126,slow=40						
	comp=Z,6.7nm,0.8s						
PTLB	Pontes e Lacer	22.37	31	P	P	00 05 14.6	-1.9
PTLB	Pontes e Lacer	22.37	31	eP	P	00 05 16.0	-0.4
SALV	Santo Antonio	23.61	39	eP	P	00 05 28.4	0.0
NNA	Nana	23.75	346	P	P	00 05 31.5	+1.8
	comp=Z,4.8nm,0.6s,baz=219,slow=6.4,SNR=2.1						
	comp=Z,4.8nm,0.6s						
VILB	Vilhena	24.22	26	eP	P	00 05 34.6	+0.6
ETMB	Extrema	25.67	11	P	P	00 05 46.2	-0.8
ETMB				IAmb	IAmb	00 05 51.6	
	comp=Z,11nm,0.8s						
ETMB	Extrema	25.67	11	eP	P	00 05 47.5	+0.5
ARAG	Araguaiana, MT	25.93	46	eP	P	00 05 50.7	+1.3
PDRB	Porto dos Gac	26.83	32	eP	P	00 05 57.2	-0.3
SAML	Samuel	27.11	17	P	P	00 05 59.0	-1.1
SAML	Samuel	27.11	17	eP	P	00 06 00.5	+0.5
TBTG	Tabatinga, AM	30.91	2	P	P	00 06 32.4	-1.3
JANB	Januaria	31.22	57	eP	P	00 06 36.0	-0.5
NPGB	Novo Progresso	31.51	31	eP	P	00 06 38.1	-0.9
TEFE	Tefe	32.11	12	eP	P	00 06 44.7	+0.5
ITTB	Itaituba	33.79	28	eP	P	00 06 59.2	+0.3
SGCB	S£o Gabriel d	35.12	7	eP	P	00 07 10.2	-0.2
MALB	Monte Alegre	36.66	29	eP	P	00 07 22.9	-0.6
BOAV	Boa Vista	38.69	17	P	P	00 07 39.2	-1.4
BOAV				IAmb	IAmb	00 08 00.9	
	comp=Z,6.6nm,1.3s						
BOAV	Boa Vista	38.69	17	eP	P	00 07 40.5	-0.1
RUSC	La Rusia	40.95	357	P	P	00 07 59.9	+0.1
RUSC				IAmb	IAmb	00 08 02.6	
	comp=Z,14nm,1.1s						
SDV	Santo Domingo	43.88	0	eP	P	00 08 23.3	+0.1
BAUV	El Baul	44.02	4	P	P	00 08 23.6	-0.6
SNAA	Sanae	50.11	158	P	P	00 09 11.1	+0.2
SNAA				IAmb	IAmb	00 09 36.4	
	comp=Z,11nm,1.3s						
MLPR	Magueyes Islan	53.04	5	P	P	00 09 32.6	-0.6
CRPR	Cabo Rojo, PR	53.07	5	P	P	00 09 33.4	-0.1
CELP	Cerrillos	53.18	5	P	P	00 09 33.6	-0.6
QSPA	South Pole Qui	55.01	180	P	P	00 09 49.0	+1.8
	comp=Z,1.8nm,0.5s,baz=140,slow=2.3,SNR=25						
	comp=Z,1.8nm,0.5s						
TEIG	Tepich	57.55	341	P	P	00 10 05.6	0.0
SOR	Soroa	58.83	347	P	P	00 10 14.2	-0.2
833A	Chaparral WMA,	68.68	333	P	P	00 11 18.5	-0.6
833A				IAmb	IAmb	00 11 22.1	
	comp=Z,9.9nm,0.8s						
TXAR	Lajitas Array	71.25	330	P	P	00 11 36.2	+1.3
	comp=Z,2.0nm,0.8s,baz=154,slow=9.1,SNR=16						
	comp=Z,2.0nm,0.8s						
TXAR	Lajitas Array	71.25	330	P	P	00 11 35.7	+0.8
TX31	Lajitas Ar. Si	71.25	330	P	P	00 11 34.6	-0.3
TX31				IAmb	IAmb	00 11 37.9	
	comp=Z,19nm,1.3s						
TX32	Lajitas Array	71.25	330	P	P	00 11 35.4	+0.5
TX32				IAmb	IAmb	00 11 37.9	
	comp=Z,5.8nm,1.2s						
W50A	Signal Mountai	71.34	348	P	P	00 11 34.9	-0.4
W50A				IAmb	IAmb	00 11 54.5	
	comp=Z,29nm,1.5s						
CPCT	Cooper Cave	71.45	348	P	P	00 11 36.3	+0.5
CPCT				IAmb	IAmb	00 11 56.0	
	comp=Z,12nm,1.3s						
SWET	Sewanee	71.47	347	P	P	00 11 36.2	+0.2
SWET				IAmb	IAmb	00 11 37.6	
	comp=Z,12nm,1.0s						
PLAL	Pickwick Lake	71.66	345	P	P	00 11 37.4	+0.3
PLAL				IAmb	IAmb	00 12 09.6	
	comp=Z,9.3nm,1.4s						
V48A	Smith Brothers	72.14	346	P	P	00 11 41.4	+1.4
V48A				IAmb	IAmb	00 11 54.6	
	comp=Z,18nm,1.5s						
Z35A	Perchaven, San	72.52	337	P	P	00 11 42.5	+0.2
WVT	Waverly	72.72	346	P	P	00 11 42.7	-0.7
WVT				IAmb	IAmb	00 11 45.1	
	comp=Z,10.0nm,0.8s						
R55A	Marlinton	73.64	352	P	P	00 11 48.6	-0.2
GDL2	Guadalupe Moun	74.05	331	P	P	00 11 50.6	-0.8
DBIC	Dimbokro	74.74	70	P	P	00 11 56.0	+0.4
	comp=Z,4.5nm,0.8s,baz=208,slow=5.9,SNR=5.5						
	comp=Z,4.5nm,0.8s						
DBIC	Dimbokro	74.74	70	P	P	00 11 55.8	+0.1
DBIC				IAmb	IAmb	00 11 57.4	
	comp=Z,11nm,1.1s						
CCM	Cathedral Cave	75.31	344	P	P	00 11 59.4	+1.0
CCM				IAmb	IAmb	00 12 00.2	
	comp=Z,4.3nm,0.8s						
AMTX	Amarillo	75.43	334	P	P	00 12 00.1	+0.8
AMTX				IAmb	IAmb	00 12 01.9	
	comp=Z,7.3nm,0.7s						
M63A	Gales Ferry	76.27	359	P	P	00 12 04.6	+0.9
P40A	Paris	76.90	343	P	P	00 12 08.5	+1.1
P40A				IAmb	IAmb	00 12 08.8	
	comp=Z,8.9nm,0.8s						
CASY	Casey	78.80	181	P	P	00 12 18.5	+0.8
SDCO	Great Sand Dun	79.37	333	P	P	00 12 21.3	-0.2
I37A	Lemond, Waseca	81.48	344	P	P	00 12 32.4	+0.2
I37A				IAmb	IAmb	00 12 33.7	
	comp=Z,7.7nm,0.7s						
ECSD	EROS Data Cent	82.00	342	P	P	00 12 34.0	-0.9
MSU	Marysvale	82.71	329	P	P	00 12 38.8	-0.3
F36A	Milaca	83.26	344	P	P	00 12 40.6	-0.9
TORD	Torodi Ar. Bea	83.80	69	P	P	00 12 45.0	+0.1
	comp=Z,2.3nm,0.7s,baz=254,slow=3.9,SNR=16						
	comp=Z,2.3nm,0.7s						
TORD	Torodi Ar. Bea	83.80	69	P	P	00 12 44.7	-0.3
R11A	Troy Canyon, C	84.08	326	P	P	00 12 46.4	+0.4
DUG	Dugway, Tooele	84.39	329	P	P	00 12 48.2	+0.7
DUG				IAmb	IAmb	00 12 51.2	
	comp=Z,5.0nm,1.1s						
DRLN	Deer Lake	84.97	9	P	P	00 12 49.4	-0.6
DRLN				IAmb	IAmb	00 12 58.4	
	comp=Z,20nm,1.2s						
PDAR	Pinedale Array	85.27	333	P	P	00 12 53.0	+1.0
	comp=Z,0.8nm,0.6s,baz=146,slow=8.4,SNR=8.4						
	comp=Z,0.8nm,0.6s						
ULM	Lac du Bonnet	87.92	344	P	P	00 13 04.9	+0.5
	comp=Z,2.4nm,0.6s,baz=179,slow=3.4,SNR=5.1						
	comp=Z,2.4nm,0.6s						
MKAR	Makanchi Array	156.86	52	PKPab	PKPab	00 20 40.2	+0.2
	comp=Z,0.7nm,0.7s,baz=295,slow=4.2,SNR=9.1						
SONM	Songino Array	167.26	8	PKPab	PKPab	00 21 26.6	+1.2
	comp=Z,0.4nm,0.6s,baz=339,slow=0.7,SNR=2.8						
PZH	PanZhiHua	169.28	142	PKP	PKPdf	00 20 22.4	+0.1

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*HEL **15** 00:19:55.9±0.3, 67°.81N×20°.08E, h0^{km}, ML1.5, Explosion*

*UPP **15** 00:19:56.0±0.0, 67°.83N×20°.22E, h0^{km}, ML2.8, Suspected explosion*

*DNK **15** 00:19:56.4±0.4, 67°.82N×20°.23E, h0^{km}, ML2.8(UPP), Explosion*

ISC 15 00:19:55.5±0.8**, 67°.77N**±0°.02×**20°.32E**±0°.02**, h0^{km}, n39, σ0^{s}.83**/59**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATU	Laukkuluspa	0.28	281	P	Pg	00 20 00.7	-0.2
RATU				S	Sg	00 20 04.2	-0.3
RATU	Laukkuluspa	0.28	281	P	Pg	00 20 00.7	-0.2
RATU				S	Sg	00 20 04.2	-0.3
KOVU	Salmi	0.46	352	P	Pg	00 20 03.7	-0.5
KOVU				S	Sg	00 20 09.2	-1.0
KOVU	Salmi	0.46	352	P	Pg	00 20 03.7	-0.5
KOVU				S	Sg	00 20 09.2	-1.0
NIKU	Nikkaluokta	0.50	281	P	Pg	00 20 04.6	-0.4
NIKU				S	Sg	00 20 11.0	-0.5
NIKU	Nikkaluokta	0.50	281	P	Pg	00 20 04.6	-0.4
NIKU				S	Sg	00 20 11.0	-0.5
DUNU	Dundret	0.66	172	P	Pb	00 20 09.6	-0.4
DUNU	Dundret	0.66	172	P	Pb	00 20 09.6	-0.4
LANU	Lannavaara	0.69	66	P	Pg	00 20 09.3	+0.6
LANU	Lannavaara	0.69	66	P	Pg	00 20 09.3	+0.6
LANU	Lannavaara	0.69	66	PG	Pg	00 20 09.3	+0.6
LANU				SG	Sb	00 20 19.5	-0.9
MASU	Masugnsbyn	0.72	116	P	Pb	00 20 10.7	-0.1
MASU	Masugnsbyn	0.72	116	P	Pb	00 20 10.7	-0.1

SALU	Saltoluokta	0.80	241	P	Pg	00 20 10.9	+0.1
SALU	Saltoluokta	0.80	241	P	Pg	00 20 10.9	+0.1
KIF	Kilpisjarvi	1.25	8	*e*P	Pg	00 20 19.2	-0.3
KIF	Kilpisjarvi	1.25	8	PN	Pb	00 20 19.6	-0.3
KIF				MSG		00 20 34.3	
	comp=Z,6.2nm,0.2s						
PAJU	Pajala	1.32	124	P	Pn	00 20 21.2	+0.1
PAJU				S	Sn	00 20 39.9	+0.6
PAJU	Pajala	1.32	124	P	Pn	00 20 21.2	+0.1
PAJU				S	Sn	00 20 39.9	+0.6
PAJU	Pajala	1.32	124	PG	Pb	00 20 20.8	-0.2
PAJU				SG	Sn	00 20 40.1	+0.8
HEF	Hetta	1.41	61	*e*P	Pg	00 20 22.2	-0.2
HEF	Hetta	1.41	61	PG	Pn	00 20 22.0	-0.3
	baz=252						
HEF				MSG		00 20 40.0	
	comp=Z,2.3nm,0.2s						
HEF				SG	Sn	00 20 41.4	-0.2
ERTU	Ertsjaerv	1.43	148	P	Pb	00 20 23.1	+0.2
ERTU	Ertsjaerv	1.43	148	P	Pb	00 20 23.1	+0.2
ERTU	Ertsjaerv	1.43	148	PG	Pb	00 20 23.0	+0.1
ERTU				SG	Sn	00 20 43.5	+1.5
KLF	Kolari	1.50	109	PG	Pg	00 20 24.2	0.0
	baz=297						
KLF				MSG		00 20 43.9	
	comp=Z,2.4nm,0.2s						
KLF				SG	Sn	00 20 45.8	+1.9
HARU	Harads	1.64	171	P	Pg	00 20 26.6	-0.3
HARU	Harads	1.64	171	P	Pg	00 20 26.6	-0.3
KTK1	Kautokeino	1.65	40	PG	Pn	00 20 25.9	+0.2
KTK1				SN	Sg	00 20 49.1	+0.8
TRO	Tromso	1.94	345	PG	Pn	00 20 30.2	+0.6
KALU	Kalix	2.27	147	PG	Pb	00 20 36.6	-0.7
KALU				SG	Sg	00 21 07.1	-1.1
TOF	Tornio	2.32	135	PB	Pb	00 20 37.8	-0.4
TOF				MSG		00 21 07.2	
	comp=Z,1.7nm,0.2s						
TOF				SB	Sg	00 21 08.8	-1.2
SGF	Sodankyl	2.40	95	PB	Pb	00 20 38.6	-0.9
SGF				SG	Sg	00 21 12.2	-0.2
RNF	Rovaniemi	2.51	115	PB	Pb	00 20 40.5	-0.8
RNF				SB	Sb	00 21 13.8	+1.1
ARA0	ARCESS Array S	2.59	45	PB	Pn	00 20 40.2	+1.5
	baz=227						
VRF	Varrio	3.53	86	PG	Pg	00 21 01.0	-2.1
OLKF	Oulanka, Finla	3.84	108	PG	Pg	00 21 07.2	-1.9
OLKF				SG	Sg	00 21 59.0	+0.2
MSF	Maaselka	3.92	114	SG	Sg	00 22 01.0	-0.3
KU6	Riekki	4.16	110	PG	Pb	00 21 11.8	+2.3
KU6				SG	Sg	00 22 07.6	-1.4

*NOU **15** 00:23:23.1, 45°.01S×167°.59E, h154^{km}, MLv5.0/12, South Island, New Zealand*

*IDC **15** 00:23:24.4±0.8, 44°.81S×167°.68E, h128^{km}±7^{km}, mb4.2/7, mbtmp4.5/9, MS2.9/1, Error ellipse: s-maj=18.9km s-min=9.9km az=179.0*

*NEIC **15** 00:23:24.2±1.5, 44°.92S±0°.07×167°.64E±0°.09, h128^{km}±6^{km}, mb4.6/20, Error ellipse: s-maj=12.2km s-min=4.5km az=137.0*

*WEL **15** 00:23:25.9±0.9, 45°S±4°×16°8E±°, h115^{km}±6^{km}, M4.8/9, MLv4.8/9, Error ellipse: s-maj=0.0km s-min=0.0km az=125.9, confirmed*

ISC 15 00:23:24.5±0.5**, 44°.91S**±0°.05×**167°.67E**±0°.05**, h132**^{km}±4^{km}**, n145, σ1^{s}.15**/163**, mb4.5**/15**, 1C, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.30	39	P	Pn	00 23 43.9	+1.0
MSZ				S	Sn	00 23 58.6	+1.8
MLZ	Mavora Lakes	0.56	145		Pn	00 23 44.4	+0.2
MLZ				Sn	Sn	00 23 58.7	-0.5
MLZ	Mavora Lakes	0.56	145	P	Pn	00 23 44.4	+0.2
MLZ				S	Sn	00 23 59.1	-0.1
DCZ	Deep Cove	0.67	213		Pn	00 23 43.7	-1.1
DCZ				Sn	Sn	00 23 57.9	-2.4
DCZ	Deep Cove	0.67	213	P	Pn	00 23 44.0	-0.9
DCZ				S	Sn	00 23 58.9	-1.4
WKZ	Wanaka	0.96	86	Pn	Pn	00 23 48.6	+1.3
WKZ				Sn	Sn	00 24 05.1	+0.5
WKZ	Wanaka	0.96	86	P	Pn	00 23 48.8	+1.5
WKZ				S	Sn	00 24 05.6	+1.0
WHZ	Wether Hill Ro	1.01	169	Pn	Pn	00 23 47.3	-0.3
WHZ				Sn	Sn	00 24 04.1	-1.2
WHZ	Wether Hill Ro	1.01	169	P	Pn	00 23 47.4	-0.3
WHZ				S	Sn	00 24 04.6	-0.7
JCZ	Jackson Bay	1.16	44	P	Pn	00 23 50.6	+1.4
JCZ	Jackson Bay	1.16	44	P	Pn	00 23 50.4	+1.2
JCZ				S	Sn	00 24 09.9	+2.0
EAZ	Earnscleugh	1.21	106	P	Pn	00 23 50.6	+1.0
EAZ				S	Sn	00 24 08.5	-0.3
PYZ	Puysegur Point	1.44	208	Pn	Pn	00 23 51.0	-1.0
PYZ	Puysegur Point	1.44	208	P	Pn	00 23 51.2	-0.8
PYZ	Puysegur Point	1.44	208	P	Pn	00 23 51.1	-0.9
PYZ				S	Sn	00 24 09.8	-3.3
TUZ	Tuapeka	1.74	128	P	Pn	00 23 56.0	+0.7
TUZ				S	Sn	00 24 17.7	-1.4
LBZ	Lake Benmore	1.87	75	Pn	Pn	00 23 56.9	-0.1
LBZ	Lake Benmore	1.87	75	P	Pn	00 23 57.3	+0.3
LBZ				S	Sn	00 24 21.2	-0.7
SYZ	Scrubby Hill	1.93	148	P	Pn	00 23 58.0	+0.3
SYZ				S	Sn	00 24 21.7	-1.4
FOZ	Fox Glacier	2.07	49		Pn	00 23 59.6	+0.2
ODZ	Otahua Downs	2.12	95	Pn	Pn	00 24 00.4	+0.4
ODZ	Otahua Downs	2.12	95	P	Pn	00 24 00.4	+0.4
ODZ	Otahua Downs	2.12	95	P	Pn	00 24 00.5	+0.5
HHSZ	Highcliff Hill	2.29	116	P	Pn	00 24 02.8	+0.8
TMZ	Timaru	2.44	79	P	Pn	00 24 04.1	+0.1
GCSZ	Gaunt Creek Bo	2.49	51	P	Pn	00 24 04.5	-0.2
ARCZ	Arundel	2.69	70	P	Pn	00 24 07.1	-0.1
RPZ	Rata Peaks	2.71	65	P	Pn	00 24 07.4	0.0
	501nm,0.4s,baz=228,slow=5.8,SNR=606						
RPZ				S	Sn	00 24 39.7	-0.8
	898nm,0.3s,baz=233,slow=5.8,SNR=7.9						
RPZ				LR	LR	00 25 23.1	
	comp=Z,222nm,18.4s,baz=218,slow=44						
RPZ	Rata Peaks	2.71	65	P	Pn	00 24 07.5	+0.1
RPZ	Rata Peaks	2.71	65	P	Pn	00 24 07.4	0.0
WVZ	Waitaha Valley	2.88	52	P	Pn	00 24 09.4	-0.1
MHCZ	Mount Hutt	3.12	65	P	Pn	00 24 12.5	-0.3
WACZ	Wakanui South	3.14	74	P	Pn	00 24 13.1	+0.1
RACZ	Rakaia	3.42	71	P	Pn	00 24 16.8	+0.2
INZ	Inchbonnie	3.50	53	Pn	Pn	00 24 17.3	-0.3
INZ	Inchbonnie	3.50	53	P	Pn	00 24 18.0	+0.4
OXZ	Oxford	3.52	65	Pn	Pn	00 24 18.6	+0.6
OXZ	Oxford	3.52	65	P	Pn	00 24 19.4	+1.4
MQZ	McQueen’s Vall	3.78	73	Pn	Pn	00 24 20.8	-0.4
MQZ	McQueen’s Vall	3.78	73	P	Pn	00 24 21.2	-0.1
AKCZ	Akaroa Harbour	3.90	76	P	Pn	00 24 23.2	+0.3
LTZ	Lake Taylor	3.95	59	P	Pn	00 24 23.0	-0.7
AMCZ	Amberley	3.99	66	Pn	Pn	00 24 23.9	-0.2
AMCZ	Amberley	3.99	66	P	Pn	00 24 24.2	+0.1
GVZ	Greta Valley S	4.33	65	Pn	Pn	00 24 29.0	+0.3
GVZ	Greta Valley S	4.33	65	P	Pn	00 24 28.8	+0.1
DSZ	Denniston Nort	4.37	45	Pn	Pn	00 24 28.8	-0.4
DSZ	Denniston Nort	4.37	45	P	Pn	00 24 29.1	-0.1
KHZ	Kahutara	4.94	62	Pn	Pn	00 24 36.5	-0.1
KHZ	Kahutara	4.94	62	P	Pn	00 24 37.8	+1.1
KHZ	Kahutara	4.94	62	P	Pn	00 24 37.5	+0.8
THZ	Tophouse	4.95	52	Pn	Pn	00 24 36.2	-0.7
THZ	Tophouse	4.95	52	P	Pn	00 24 36.7	-0.3
MRNZ	Matariki Terra	5.11	49	Pn	Pn	00 24 38.2	-0.9
MRNZ	Matariki Terra	5.11	49	P	Pn	00 24 39.1	0.0
QRZ	Quartz Range	5.42	43	Pn	Pn	00 24 42.7	-0.5
QRZ	Quartz Range	5.42	43	P	Pn	00 24 43.3	+0.1
QRZ	Quartz Range	5.42	43	P	Pn	00 24 43.1	-0.1
TKNZ	Takaka Hill	5.48	47	Pn	Pn	00 24 42.3	-1.8
TKNZ	Takaka Hill	5.48	47	P	Pn	00 24 43.8	-0.2
BSWZ	Blackbirch Sta	5.54	57	Pn	Pn	00 24 44.2	-0.6
BSWZ	Blackbirch Sta	5.54	57	P	Pn	00 24 45.3	+0.5
NNZ	Nelson	5.58	51	Pn	Pn	00 24 45.1	-0.2
NNZ	Nelson	5.58	51	P	Pn	00 24 46.2	+0.9
TUWZ	Tuamarina	5.76	55	Pn	Pn	00 24 47.0	-0.7
TUWZ	Tuamarina	5.76	55	P	Pn	00 24 48.3	+0.6
TCW	Tory Channel	6.09	55	Pn	Pn	00 24 52.2	0.0
TCW	Tory Channel	6.09	55	P	Pn	00 24 52.3	+0.1
DUWZ	D’Urville Isla	6.16	50	P	Pn	00 24 53.7	+0.6
SNZO	South Karori	6.28	58	Pn	Pn	00 24 54.5	-0.2
SNZO	South Karori	6.28	58	P	Pn	00 24 55.1	+0.4
BHW	Baring Head	6.32	59	Pn	Pn	00 24 54.7	-0.6
PLWZ	Palliser	6.47	62	Pn	Pn	00 24 56.5	-0.8
PLWZ	Palliser	6.47	62	P	Pn	00 24 57.2	-0.1
CAW	Cannon Point	6.62	58	P	Pn	00 24 58.1	-1.2
PAWZ	Paruwai Farm	6.68	61	P	Pn	00 24 59.9	-0.3
KIW	Kapiti Island	6.68	55	P	Pn	00 24 59.3	-0.9
TRWZ	Traveller	6.83	62	P	Pn	00 25 01.7	-0.5
MTW	Mount Morrison	6.86	60	P	Pn	00 25 01.8	-0.6
HOWZ	Holdsworth Sta	7.02	58	P	Pn	00 25 03.9	-0.7
TMWZ	Te Maipa	7.12	61	P	Pn	00 25 05.5	-0.6
MRZ	Mangatainoka R	7.20	57	Pn	Pn	00 25 05.0	-2.1
MRZ	Mangatainoka R	7.20	57	P	Pn	00 25 05.8	-1.4
KHEZ	Kahui Hut	7.33	42	P	Pn	00 25 09.9	+1.0
KHEZ	Kahui Hut	7.33	42	P	Pn	00 25 10.2	+1.3
NEZ	North Egmont	7.39	43	P	Pn	00 25 11.3	+1.6
PKE	Pukeiti	7.39	42	P	Pn	00 25 11.1	+1.4
PRWZ	Pori Road	7.50	57	P	Pn	00 25 10.4	-0.8
BFZ	Birch Farm	7.59	59	Pn	Pn	00 25 10.6	-1.8
BFZ	Birch Farm	7.59	59	P	Pn	00 25 11.1	-1.2
BFZ	Birch Farm	7.59	59	P	Pn	00 25 11.2	-1.2
DVHZ	Dannevirke	7.78	57	P	Pn	00 25 14.2	-0.8
HIZ	Hauiti	8.35	43	Pn	Pn	00 25 21.2	-1.4
HIZ	Hauiti	8.35	43	P	Pn	00 25 22.1	-0.5
BKZ	Black Stump Fm	8.72	52	Pn	Pn	00 25 26.9	-0.6
BKZ	Black Stump Fm	8.72	52	P	Pn	00 25 28.5	+0.9
URZ	Urewera	9.70	50	P	Pn	00 25 38.8	-1.9
	11nm,0.6s,baz=288,slow=18,SNR=5.4						
URZ				S	Sn	00 27 20.1	-7.7
	13nm,0.7s,baz=173,slow=9.2,SNR=2.7						
URZ	Urewera	9.70	50	P	Pn	00 25 39.2	-1.5
TOO	Toolangi	18.18	286	Pn	Pn	00 27 27.8	-0.6
TOO				IAmb	IAmb	00 27 33.0	
	comp=Z,28nm,1.1s						
ARMA	Armidale	19.19	313	Pn	Pn	00 27 40.6	+0.2
ARMA				IAmb	IAmb	00 27 43.2	
	comp=Z,46nm,1.5s						
EIDS	Eidsvold	23.66	320	P	P	00 28 24.6	+0.8
STKA	Stephens Creek	24.10	294	P	P	00 28 29.3	+1.5
	comp=Z,5.0nm,0.7s,baz=120,slow=11,SNR=7.7						
STKA				pP	pP	00 28 53.8	+0.1
	comp=Z,3.4nm,0.8s,baz=120,slow=12,SNR=2.8						
	comp=Z,5.0nm,0.7s						
STKA	Stephens Creek	24.10	294	P	P	00 28 28.5	+0.7
CTA	Charters Tower	30.45	317	P	P	00 29 25.6	+1.0
	comp=Z,6.9nm,0.8s,baz=154,slow=9.3,SNR=7.4						
	comp=Z,6.9nm,0.8s						
CTAO	Charters Tower	30.45	317	P	P	00 29 24.4	-0.2
CTAO				IAmb	IAmb	00 29 27.0	
	comp=Z,9.8nm,0.9s						
AS31	Alice Springs	34.66	296	P	P	00 30 00.4	-1.0
ASAR	Alice Springs	34.66	296	P	P	00 30 01.1	-0.2
	comp=Z,9.0nm,1.0s,baz=133,slow=6.6,SNR=54						
ASAR				pP	pP	00 30 28.0	-1.0
	comp=Z,1.2nm,0.7s,baz=130,slow=6.8,SNR=2.5						
	comp=Z,9.0nm,1.0s						
ASAR	Alice Springs	34.66	296	P	P	00 30 00.4	-1.0
WB2	Warramunga Arr	37.13	301	P	P	00 30 22.1	-0.2
WRA	Warramunga Arr	37.14	301	P	P	00 30 21.9	-0.6
	comp=Z,8.7nm,0.9s,baz=140,slow=8.1,SNR=52						
WRA				pP	pP	00 30 50.4	0.0
	comp=Z,2.1nm,0.8s,baz=135,slow=7.9,SNR=2.9						
WRA				PcP	PcP	00 32 39.3	-0.6
	comp=Z,0.3nm,0.8s,baz=146,slow=3.2,SNR=1.8						
	comp=Z,8.7nm,0.9s						
WRA	Warramunga Arr	37.14	301	P	P	00 30 21.2	-1.2
COEN	Coen	37.20	318	P	P	00 30 22.9	-0.1
COEN				IAmb	IAmb	00 30 49.8	
	comp=Z,17nm,1.4s						
WB0	Warramunga Arr	37.24	301	P	P	00 30 22.9	-0.4
WB0				IAmb	IAmb	00 30 24.2	
	comp=Z,9.4nm,1.0s						
H01W1	Cape Leeuwin H	41.58	265	T	T	01 15 04.4	
	baz=120,slow=75,SNR=52						
H01W2	Cape Leeuwin H	41.59	265	T	T	01 15 05.2	
	baz=120,slow=75,SNR=53						
H01W3	Cape Leeuwin H	41.60	265	T	T	01 15 05.7	
	baz=120,slow=75,SNR=57						
MORW	Morawa	43.42	273	P	P	00 31 11.9	-2.2
KNRA	Kununurra	43.81	299	P	P	00 31 17.0	-0.3
MTN	Manton Dam	44.58	304	P	P	00 31 22.9	-0.5
MTN				IAmb	IAmb	00 31 24.4	
	comp=Z,9.6nm,0.7s						
QSPA	South Pole Qui	45.22	180	P	P	00 31 29.6	+1.5
	comp=Z,10.0nm,0.8s,baz=23,slow=4.7,SNR=41						
	comp=Z,10.0nm,0.8s						
QSPA	South Pole Qui	45.22	180	P	P	00 31 28.9	+0.8
QSPA				IAmb	IAmb	00 31 30.6	
	comp=Z,11nm,0.8s						
PSA00	Pilbara Seismi	45.47	285	P	P	00 31 30.7	+0.3
MBWA	Marble Bar	45.82	285	P	P	00 31 32.0	-1.1
MBWA				IAmb	IAmb	00 31 33.8	
	comp=Z,9.4nm,0.9s						
BELA	Belgrano 2	56.73	174	P	P	00 32 53.9	+0.2
BELA				IAmb	IAmb	00 32 55.2	
	comp=Z,3.9nm,0.8s						
KAPI	Kappang	57.62	299	P	P	00 32 58.9	-1.8
SNAA	Sanae	63.53	183	P	P	00 33 39.5	-0.7
KKM	Kota Kinabalu	68.48	303	P	P	00 34 11.4	-1.2
KKM				IAmb	IAmb	00 34 13.4	
	comp=Z,9.0nm,0.7s						
PLCA	Paso Flores	80.05	139	P	P	00 35 20.3	+1.0
	comp=Z,3.4nm,1.0s,baz=203,slow=7.8,SNR=3.5						
	comp=Z,3.4nm,1.0s						
H08S2	Diego Garcia H	88.31	261	T	T	02 13 21.0	
	baz=135,slow=76,SNR=117						
H08S1	Diego Carcia H	88.32	261	T	T	02 13 21.6	
	baz=135,slow=76,SNR=105						
H08S3	Diego Garcia H	88.33	261	T	T	02 13 17.7	
	baz=135,slow=76,SNR=110						
NJ2	Nanjing	88.52	320	*e*P	P	00 36 03.8	+2.0
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
CMAR	Chiang Mai Arr	88.66	298	P	P	00 36 03.5	+0.8
	comp=Z,1.0nm,0.3s,baz=158,slow=2.8,SNR=4.4						
CMAR				pP	pP	00 36 36.1	+0.4
	comp=Z,0.9nm,0.3s,baz=149,slow=3.5,SNR=1.7						
	comp=Z,1.0nm,0.3s						
WHN	Wuhan	89.40	316	⇑P	P	00 36 09.8	+3.9
PZH	PanZhiHua	93.01	305	P	P	00 36 24.8	+1.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,4.3s						
MKAR	Makanchi Array	118.15	309	PKP	PKPdf	00 41 54.7	-0.5
	comp=Z,0.1nm,0.3s,baz=209,slow=1.4,SNR=6.6						
YKA	Yellowknife Ar	123.57	33	PKP	PKPdf	00 42 04.2	-0.8
	comp=Z,0.1nm,0.3s,baz=265,slow=1.9,SNR=2.1						
YKA				pPKP	pPKPdf	00 42 40.3	-0.4
	comp=Z,0.2nm,0.6s,baz=253,slow=1.3,SNR=2.1						
SPITS	Spitsbergen Ar	144.78	350	PKP	PKPab	00 42 43.6	+0.2
	comp=Z,14nm,0.9s,baz=132,slow=6.0,SNR=5.5						
BRTR	Keskin Array B	145.97	278	PKPbc	PKPdf	00 42 48.0	+0.6
	comp=Z,1.3nm,0.8s,baz=132,slow=5.4,SNR=8.3						
BRTR				pPKPbc	pPKPdf	00 43 22.3	-0.7
	comp=Z,2.6nm,0.9s,baz=137,slow=5.1,SNR=6.7						
BRTR	Keskin Array B	145.97	278	PKPbc	PKPbc	00 42 48.6	+0.2
TORD	Torodi Ar. Bea	146.16	205	PKPbc	PKPdf	00 42 48.9	+0.6
	comp=Z,4.6nm,0.7s,baz=152,slow=2.1,SNR=29						
TORD				pPKPbc	pPKPbc	00 43 23.9	-0.7
	comp=Z,1.9nm,0.7s,baz=149,slow=1.7,SNR=4.0						
TORD	Torodi Ar. Bea	146.16	205	PKPbc	PKPdf	00 42 48.6	+0.4
AKASG	Malin Array Be	151.78	297	PKPbc	PKPbc	00 43 02.4	-0.2
	comp=Z,0.5nm,0.5s,baz=60,slow=2.1,SNR=6.7						
AKASG				pPKPbc	pPKPbc	00 43 36.7	-1.2
	comp=Z,0.2nm,0.3s,baz=67,slow=1.7,SNR=2.0						
FINES	FINESS Array B	152.20	320	pPKPbc	pPKPbc	00 43 38.5	-0.2
	comp=Z,1.3nm,0.6s,baz=90,slow=2.8,SNR=1.4						
FINES	FINESS Array B	152.20	320	PKPdf	PKPdf	00 42 56.9	+0.4

*SJA **15** 00:37:00.5±0.6, 27°.35S×71°.32W, h32^{km}±2^{km}, ML3.4, MW3.5, Hypocentre not reviewed by the ISC*

GUC 15 00:37:04.4±0.8**, 27°.48S×71°.09W, h51**^{km}±9^{km}**, ML3.5, 1C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC04	Llanos de Chal	0.72	179	⇓*i*P	Pn	00 37 19.5	+1.0
AC04				*e*S	Sn	00 37 30.2	+1.5
AC04				IAML		00 37 31.4	
	comp=E,1µm,0.3s						
AC04	Llanos de Chal	0.72	179	*e*P		00 37 14.0	
AC04				*e*P		00 37 18.0	
AC04				*e*S		00 37 30.5	
GO03	Copiap	0.77	99	⇓*i*P	Pn	00 37 20.6	+1.4
GO03				*e*S	Sn	00 37 32.1	+2.1
GO03				IAML		00 37 33.8	
	comp=N,2µm,0.2s						
GO03	Copiap	0.77	99	*e*P		00 37 20.6	
GO03				*e*S		00 37 34.3	
AC01	Pan de Azucar	1.40	19	*e*P	Pn	00 37 26.5	-1.1
AC01	Pan de Azucar	1.40	19	*e*P		00 37 25.0	
AC01				*e*S		00 37 40.5	
AC05	El Transito	1.53	152	*e*P	Pn	00 37 32.5	+3.0
AC05				*e*S	Sn	00 37 52.4	+4.0
AC05				IAML		00 37 58.9	
	comp=N,535nm,0.3s						
AC05	El Transito	1.53	152	*e*P		00 37 31.0	
AC05				*e*S		00 37 53.0	
AC05				IAML		00 37 53.0	
	comp=Z,332nm,0.6s						
LCO	Las Campanas	1.56	167	*e*P	Pn	00 37 32.1	+2.1
LCO				*e*S	Sn	00 37 52.4	+3.1
LCO	Las Campanas	1.56	167	*e*P		00 37 31.0	
LCO				*e*S		00 37 53.1	
LCO				IAML		00 37 57.4	
	comp=Z,675nm,0.3s						
AC02	Maricunga	1.86	70	*i* P	Pn	00 37 36.7	+2.3
AC02				*e*S	Sn	00 38 00.0	+3.0
AC02				IAML		00 38 01.4	
	comp=N,1µm,0.3s						
AC02	Maricunga	1.86	70	*e*P		00 37 35.0	
AC02				*e*S		00 38 01.1	
AC02				IAML		00 38 01.1	
	comp=Z,819nm,0.2s						
CO01	Juntas del Tor	2.64	161	*e*P		00 37 47.0	
CO01				*e*S		00 38 21.3	
CO01				IAML		00 38 22.8	
	comp=Z,76nm,0.2s						
GO02	Mina Guanaco	2.67	31	⇑*i*P	Pn	00 37 45.1	-0.1
GO02				*e*S	Sn	00 38 15.8	-0.8
GO02	Mina Guanaco	2.67	31	*e*P		00 37 44.0	
GO02				*e*S		00 38 16.7	
GO04	Tololo Observa	2.69	175	*e*P	Pn	00 37 48.0	+2.5
GO04				*e*S	Sn	00 38 20.8	+3.8
GO04				IAML		00 38 40.0	
	comp=N,500nm,0.7s						
GO04	Tololo Observa	2.69	175	*e*P		00 37 47.0	
GO04				*e*S		00 38 04.0	
PB14	IPOC Station P	2.91	12	*e*P		00 37 46.5	
PB14				*e*S		00 38 23.8	
PB14				IAML		00 38 42.7	
	comp=Z,50nm,0.4s						
CO03	El Pedregal	3.37	174	*e*P		00 37 56.0	
CO03				*e*S		00 38 45.8	
CO03				IAML		00 38 51.2	
	comp=Z,50nm,0.7s						
PB15	IPOC Station P	4.50	19	*e*P	Pn	00 38 09.9	-0.4
PB15	IPOC Station P	4.50	19	*e*P		00 38 09.8	
PB15				*e*S		00 39 00.8	
PB15				IAML		00 39 20.2	
	comp=Z,135nm,0.2s						
CYA	Choya	4.78	103	*e*P		00 38 17.0	
CYA				*e*S		00 39 12.7	
CYA				IAML		00 39 14.6	
	comp=Z,11nm,0.4s						
PB04	IPOC Station P	5.20	10	*e*P		00 38 17.1	
PB04				*e*S		00 39 14.0	
PB04				IAML		00 39 44.7	
	comp=Z,21nm,0.7s						
LVC	Limon Verde	5.24	23	*e*P		00 38 18.0	
LVC				*e*P		00 38 19.8	
LVC				*e*S		00 39 18.6	
LVC				IAML		00 39 52.2	
	comp=Z,16nm,1.1s						
VA03	San Esteban	5.29	175	*e*P	Pn	00 38 23.7	+2.8

IDC 15 00:40:55.7±8.6**, 2°.51S**×**141°.86E, h0**^{km}**, mb3.0**/2**, mbtmp3.1**/3**, ML3.3**/1**, Error ellipse: s-maj=320.8km s-min=34.6km az=90.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.82	202	P	P	00 45 16.9	-0.3
	0.1nm,0.3s,baz=26,slow=12,SNR=3.5						
	0.3nm,0.3s						
ASAR	Alice Springs	22.40	199	P	P	00 45 56.2	+0.2
	0.2nm,0.5s,baz=28,slow=11,SNR=2.5						
	0.2nm,0.5s						
MKAR	Makanchi Array	71.58	321	P	P	00 52 18.9	0.0
	0.1nm,0.4s,baz=100,slow=7.9,SNR=1.6						
	0.1nm,0.4s						

ROM 15 01:11:10.4±0.0**, 42°.890N**±0°.002×**13°.045E**±0°.001**, h11**^{km}**, ML1.2**/6**, 3C-3D, Error ellipse: s-maj=0.8km s-min=0.2km az=266.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	Preci, Frazion	0.02	271	P	Pg	01 11 12.7	+0.3
T1216				S	Sg	01 11 14.2	+0.3
T1216				AML	AML		
	comp=E,268µm,0.2s						
T1216				AML	AML		
	comp=N,354µm,0.3s						
T1216				AML	AML		
	comp=N,354µm,0.3s						
MC2	Monte Cornacci	0.11	78	P	Pg	01 11 13.8	+0.3
MC2				S	Sg	01 11 16.1	+0.5
T1245	Castelsantange	0.11	108	P	Pg	01 11 13.8	+0.3
T1245				S	Sg	01 11 16.1	+0.5
T1245				AML	AML		
	comp=E,120µm,0.9s						
T1245				AML	AML		
	comp=N,118µm,0.7s						
T1245				AML	AML		
	comp=N,118µm,0.7s						
T1212	Cascia, Frazio	0.14	180	⇑P	Pg	01 11 14.2	+0.5
T1212				S	Sg	01 11 16.9	+0.8
FDMO	Fiordimonte	0.15	12	P	Pg	01 11 14.4	+0.5
FDMO				AML	AML		
	comp=N,396µm,0.2s						
FDMO				AML	AML		
	comp=E,378µm,0.2s						
CESI	CESI - Serrava	0.15	318	⇑P	Pg	01 11 14.6	+0.6
CESI				S	Sg	01 11 17.4	+0.9
CESI				AML	AML		
	comp=N,86µm,0.4s						
CESI				AML	AML		
	comp=E,66µm,0.6s						
T1215	Vallo di Nera,	0.16	236	⇑P	Pg	01 11 14.5	+0.5
T1215				S	Sg	01 11 17.4	+0.8
T1219	Muccia, Frazio	0.17	350	⇓P	Pg	01 11 14.6	+0.4
T1219				AML	AML		
	comp=E,1143µm,0.1s						
T1219				AML	AML		
	comp=N,1510µm,0.3s						
T1219				AML	AML		
	comp=E,1232µm,0.1s						
T1219				AML	AML		
	comp=N,1410µm,0.3s						
T1219				AML	AML		
	comp=N,1510µm,0.3s						
T1219				AML	AML		
	comp=N,1410µm,0.3s						
T1256	Bolognola (MC)	0.18	49	P	Pg	01 11 14.7	+0.3
T1256				S	Sg	01 11 18.0	+0.8
T1217	Poggiodomo (PG	0.20	205	⇓P	Pg	01 11 15.2	+0.6
T1217				AML	AML		
	comp=E,26µm,1.4s						
T1217				AML	AML		
	comp=N,29µm,1.0s						
T1217				AML	AML		
	comp=E,26µm,1.4s						
T1217				AML	AML		
	comp=E,26µm,0.6s						
MMO1	Montemonaco	0.21	87	P	Pg	01 11 15.2	+0.3
T1220	Camerino, Fraz	0.22	8	P	Pg	01 11 15.6	+0.5
T1220				AML	AML		
	comp=E,245µm,0.2s						
T1220				AML	AML		
	comp=N,258µm,0.2s						
T1220				AML	AML		
	comp=N,258µm,1.8s						
T1218	Civita (PG)	0.23	167	P	Pg	01 11 15.6	+0.4
GUMA	Gualdo di Mace	0.27	51	⇓P	Pb	01 11 16.7	-0.7
T1241	Roccafluvione,	0.29	97	P	Pg	01 11 16.6	+0.4
T1241				S	Sb	01 11 21.3	-1.1
ASSB	Assisi San Ben	0.32	298	P	Pg	01 11 17.4	+0.5

SNTG	Esanatoglia	0.37	348	P	Pb	01 11 18.5	-0.6
EL6	Elcito	0.44	5	S	Sb	01 11 26.7	-0.2

INET 15 01:11:21.5±0.3, 13°.28N×87°.87W, h4^{km}±6^{km}, ML3.3
SNET 15 01:11:23.1±1.6, 13°.30N×87°.78W, h5^{km}, ML3.2
ISC 15 01:11:22.8±0.9**, 13°.32N**±0°.05×**87°.77W**±0°.04**, h15**^{km}±7^{km}**, n13, σ0ˢ.32**/18**, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.07	238	eP	Pg	01 11 25.9	0.0
CNCH				eS	Sg	01 11 27.9	-0.1
LCND	La Caada	0.12	267	eP	Pg	01 11 26.5	+0.2
LCND				eP	Pg	01 11 26.6	+0.4
LCND				eS	Sb	01 11 29.0	-0.5
FAGO	Alcalda de S	0.50	319	eP	Pb	01 11 33.3	-0.1
FAGO				eS	Sb	01 11 40.3	-0.3
VSM	San Miguel	0.50	283	eP	Pb	01 11 33.7	+0.1
RANC	El Ranchito	0.52	283	eP	Pb	01 11 33.7	-0.1
LCY	Lacayo	0.52	282	eP	Pb	01 11 33.9	+0.1
PACA	Pacayal	0.56	286	eP	Pb	01 11 34.5	+0.1
TGUH	Tegucigalpa,Un	0.88	33	eP	Pg	01 11 40.2	+0.2
TGUH	Tegucigalpa,Un	0.88	33	eP	Pg	01 11 40.2	+0.2
CRIN	San Cristobal	0.93	131	eP	Pb	01 11 40.6	-0.1
CRIN				eS	Sn	01 11 55.5	+0.8
CRIN				IAML		01 12 02.6	
	comp=N,870nm,0.3s						
SCLA	Alcaldia de Sa	1.01	293	eP	Pb	01 11 42.1	0.0
P5NO	Presa 5 de nov	1.17	305	eP	Pn	01 11 44.6	-0.2
MATN	Matagalpa	1.84	102	eP	Pn	01 11 53.7	-0.3

ROM 15 01:11:44.1±0.1**, 42°.847N**±0°.003×**13°.239E**±0°.004**, h14**^{km}**, ML0.9**/2**, 1C-3D, Error ellipse: s-maj=0.3km s-min=0.3km az=126.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1245	Castelsantange	0.04	285	P	Pg	01 11 47.0	0.0
T1245				S	Sg	01 11 49.0	+0.1
T1245				AML	AML		
	comp=N,105µm,0.6s						
T1245				AML	AML		
	comp=N,105µm,1.4s						
T1245				AML	AML		
	comp=E,74µm,0.3s						
MC2	Monte Cornacci	0.07	332	P	Pg	01 11 47.4	+0.1
MMO1	Montemonaco	0.08	51	P	Pg	01 11 47.4	+0.1
MMO1				S	Sg	01 11 49.7	+0.3
T1214	Arquata del Tr	0.09	194	P	Pg	01 11 47.6	+0.2
T1214				S	Sg	01 11 49.9	+0.3
T1241	Roccafluvione,	0.14	86	P	Pg	01 11 48.2	+0.2
T1241				S	Sg	01 11 51.0	+0.6
T1256	Bolognola (MC)	0.16	357	P	Pg	01 11 48.4	+0.1
T1216	Preci, Frazion	0.17	285	⇑P	Pg	01 11 48.4	+0.2
T1216				AML	AML		
	comp=E,398µm,0.3s						
T1216				AML	AML		
	comp=N,348µm,0.3s						
T1216				AML	AML		
	comp=N,347µm,0.3s						
T1212	Cascia, Frazio	0.17	236	P	Pg	01 11 48.5	+0.1
T1218	Civita (PG)	0.20	207	⇓P	Pg	01 11 49.1	+0.3
FDMO	Fiordimonte	0.22	330	S	Sg	01 11 53.0	+0.6
FDMO				AML	AML		
	comp=E,70µm,0.2s						
FDMO				AML	AML		
	comp=N,33µm,0.8s						
FDMO				AML	AML		
	comp=E,70µm,1.8s						
T1219	Muccia, Frazio	0.27	321	⇓P	Pg	01 11 50.1	+0.2
TERO	Teramo	0.35	130	⇓P	Pb	01 11 51.8	-0.4

IDC 15 01:14:32.2±3.6**, 5°.54S**×**129°.26E, h316**^{km}±52^{km}**, mb3.2**/1**, mbtmp4.1**/4**, Error ellipse: s-maj=93.5km s-min=15.8km az=79.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.06	23	P	Pn	01 15 52.6	+1.5
	4.7nm,0.3s,baz=198,slow=20,SNR=11						
SIJI				S	S	01 16 54.2	-0.5
	27nm,0.2s,baz=257,slow=23,SNR=15						
WRA	Warramunga Arr	15.14	161	P	P	01 17 49.9	-0.2
	2.8nm,0.3s,baz=342,slow=12,SNR=69						
WRA				S	S	01 20 34.2	-0.1
	0.2nm,0.3s,baz=332,slow=21,SNR=1.5						
ASAR	Alice Springs	18.57	167	P	P	01 18 27.1	0.0
	3.2nm,0.5s,baz=346,slow=12,SNR=41						
MKAR	Makanchi Array	66.61	327	P	P	01 24 49.2	0.0
	0.5nm,0.4s,baz=118,slow=8.3,SNR=14						
	0.5nm,0.4s						

IDC 15 01:17:13.9±2.1, 24°.41S×179°.89E, h482^{km}±25^{km}, mb3.4/8, mbtmp4.3/10, Error ellipse: s-maj=26.8km s-min=16.2km az=156.0
NEIC 15 01:17:18.3±1.8, 24°.6S±0°.1×179°.8E±0°.2, h539^{km}±10^{km}, mb4.3/22, Error ellipse: s-maj=20.0km s-min=19.5km az=104.0
ISC 15 01:17:16.5±0.6**, 24°.63S**±0°.08×**179°.84E**±0°.09**, h517**^{km}**, n46, σ1ˢ.35**/49**, mb4.2**/18**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.06	346	P	P	01 19 04.4	+0.3
NIUE	Niue	10.99	62	P	P	01 19 45.4	+0.8
PINNC	Pines Island,	11.54	278	P	P	01 19 51.9	+1.7
DZM	Mont Dzumac	12.56	279	P	P	01 20 01.9	+0.8
	15nm,0.9s,baz=94,slow=19,SNR=8.5						
DZM	Mont Dzumac	12.56	279	P	P	01 20 03.0	+1.9
AFI	Afiamalu	13.28	38	P	P	01 20 02.5	-6.2
	18nm,0.6s,baz=108,slow=0.7,SNR=4.7						
AFI				S	S	01 22 16.5	-14
	27nm,0.2s,baz=36,slow=3.6,SNR=2.0						
URZ	Urewera	13.78	189	P	P	01 20 12.9	-0.6
	8.1nm,0.6s,baz=219,slow=3.4,SNR=5.7						
URZ				S	S	01 22 38.5	-1.0
	6.1nm,0.7s,baz=35,slow=21,SNR=1.5						
HIZ	Hauiti	14.47	196	P	P	01 20 23.3	+2.5
BKZ	Black Stump Fm	14.76	190	P	P	01 20 26.1	+2.2
MRZ	Mangatainoka R	16.38	192	P	P	01 20 38.8	-1.7
QRZ	Quartz Range	17.27	199	P	P	01 20 49.1	0.0
NNZ	Nelson	17.39	196	P	P	01 20 50.7	+0.4
DSZ	Denniston Nort	18.33	199	P	P	01 20 58.8	-0.1
LTZ	Lake Taylor	19.15	197	P	P	01 21 06.1	-0.3
LTZ				IAmb	IAmb	01 21 11.8	
	comp=Z,8.6nm,0.9s						
RPZ	Rata Peaks	20.35	199	P	P	01 21 19.5	+2.2
	comp=Z,2.8nm,0.5s,baz=32,slow=19,SNR=1.6						
	comp=Z,2.8nm,0.5s						
ARMA	Armidale	25.63	251	P	P	01 22 04.8	0.0
ARMA				IAmb	IAmb	01 22 06.8	
	comp=Z,8.7nm,1.1s						
EIDS	Eidsvold	26.05	262	P	P	01 22 08.9	+0.4
EIDS				IAmb	IAmb	01 22 10.2	
	comp=Z,4.7nm,0.7s						
CTA	Charters Tower	31.34	272	P	P	01 22 55.3	+0.7
	comp=Z,14nm,0.5s,baz=96,slow=9.4,SNR=26						
	comp=Z,14nm,0.5s						
CTAO	Charters Tower	31.34	272	P	P	01 22 55.1	+0.5
STKA	Stephens Creek	34.32	249	P	P	01 23 20.3	+0.6
	comp=Z,2.2nm,0.5s,baz=93,slow=13,SNR=9.4						
	comp=Z,2.2nm,0.5s						
STKA	Stephens Creek	34.32	249	P	P	01 23 19.5	-0.2
BBOO	Buckleboo	39.02	248	P	P	01 23 58.1	-0.4
BBOO				IAmb	IAmb	01 23 59.3	
	comp=Z,6.9nm,0.9s						
AS31	Alice Springs	41.77	261	P	P	01 24 18.5	-2.1
ASAR	Alice Springs	41.77	261	P	P	01 24 20.6	0.0
	comp=Z,4.8nm,1.0s,baz=95,slow=8.0,SNR=21						
	comp=Z,4.8nm,1.0s						
ASAR	Alice Springs	41.77	261	P	P	01 24 19.9	-0.8
WB2	Warramunga Arr	42.20	267	P	P	01 24 23.3	-0.7
WB2				IAmb	IAmb	01 24 24.3	
	comp=Z,7.3nm,0.6s						
WRAB	Tennant Creek	42.20	267	P	P	01 24 23.6	-0.5
WRAB				IAmb	IAmb	01 24 24.0	
	comp=Z,7.1nm,0.5s						
WB0	Warramunga Arr	42.21	267	P	P	01 24 23.6	-0.5
WB0				IAmb	IAmb	01 24 24.3	
	comp=Z,9.9nm,0.6s						
WRA	Warramunga Arr	42.21	267	P	P	01 24 23.6	-0.5
	comp=Z,6.8nm,0.5s,baz=104,slow=8.0,SNR=61						
WRA				ScP	ScP	01 29 10.5	+2.8
	comp=Z,1.6nm,0.8s,baz=102,slow=3.8,SNR=11						
	comp=Z,6.8nm,0.5s						
WRA	Warramunga Arr	42.21	267	P	P	01 24 22.7	-1.4
FORT	Forrest	45.92	250	P	P	01 24 51.7	-0.9
MTN	Manton Dam	47.37	275	P	P	01 25 02.0	-1.8
MTN				IAmb	IAmb	01 25 07.1	
	comp=Z,7.5nm,1.0s						
KNRA	Kununurra	48.54	270	P	P	01 25 12.2	-0.3
KNRA				IAmb	IAmb	01 25 13.9	
	comp=Z,13nm,1.0s						
VNDA	Vanda	53.64	185	P	P	01 25 48.8	+0.1
PSA00	Pilbara Seismi	54.89	260	P	P	01 25 57.7	-0.7
PSA00				IAmb	IAmb	01 26 00.3	
	comp=Z,6.7nm,1.1s						
MBWA	Marble Bar	55.10	261	P	P	01 25 58.6	-1.3
MBWA				IAmb	IAmb	01 26 06.0	
	comp=Z,7.9nm,1.1s						
MORW	Morawa	56.49	250	P	P	01 26 08.8	-0.6
MORW				IAmb	IAmb	01 26 24.7	
	comp=Z,11nm,1.0s						
QSPA	South Pole Qui	65.45	180	P	P	01 27 08.3	+0.4
NVAR	Mina Array Bea	85.38	44	P	P	01 28 59.1	-0.2
	comp=Z,0.3nm,0.5s,baz=229,slow=9.1,SNR=4.1						
	comp=Z,0.3nm,0.5s						
TXAR	Lajitas Array	90.94	58	P	P	01 29 25.7	+0.3
	comp=Z,0.7nm,0.8s,baz=215,slow=6.7,SNR=9.3						
	comp=Z,0.7nm,0.8s						
PDAR	Pinedale Array	93.32	44	P	P	01 29 35.9	-0.3
	comp=Z,0.3nm,0.8s,baz=254,slow=8.4,SNR=2.6						
	comp=Z,0.3nm,0.8s						
KURK	Kurchatov	115.62	316	PKPdf	PKPdf	01 34 54.8	-4.7
BR131	Keskin Array S	147.89	306	PKPbc	PKPbc	01 36 03.3	-0.3
BR131				PKPab	PKPab	01 36 07.8	-0.3
BRTR	Keskin Array B	147.89	306	PKPab	PKPab	01 36 07.7	-0.3
	comp=Z,1.0nm,0.6s,baz=99,slow=3.0,SNR=5.8						
BRTR	Keskin Array B	147.89	306		PKPdf	01 36 00.2	+0.4
BRTR				PKPab	PKiKP	01 36 07.5	+2.5
BURAR	Bucovina Array	149.49	325		PKPbc	01 36 05.8	-1.4

ROM 15 01:29:17.4±0.1**, 42°.812N**±0°.003×**13°.143E**±0°.004**, h9**^{km}**, ML1.4**/5**, 1C-4D, Error ellipse: s-maj=0.4km s-min=0.1km az=310.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1245	Castelsantange	0.06	36	P	Pg	01 29 19.3	-0.1
T1245				S	Sg	01 29 20.6	-0.3
T1245				AML	AML		
	comp=N,1335µm,1.0s						
T1245				AML	AML		
	comp=N,1335µm,1.0s						
T1245				AML	AML		
	comp=N,1500µm,0.9s						
T1245				AML	AML		
	comp=E,1185µm,0.5s						
T1245				AML	AML		
	comp=E,1135µm,0.3s						
T1214	Arquata del Tr	0.07	137	⇑P	Pg	01 29 19.6	0.0
T1214				S	Sg	01 29 21.3	+0.1
T1214				AML	AML		
	comp=N,246µm,1.3s						
T1214				AML	AML		
	comp=N,246µm,0.7s						
T1214				AML	AML		
	comp=N,250µm,1.3s						
T1214				AML	AML		
	comp=E,429µm,0.2s						
T1214				AML	AML		
	comp=E,409µm,0.2s						
T1212	Cascia, Frazio	0.09	230	P	Pg	01 29 20.2	+0.4
T1212				S	Sg	01 29 22.3	+0.7
T1212				AML	AML		
	comp=E,242µm,0.3s						
T1212				AML	AML		
	comp=N,290µm,0.9s						
T1212				AML	AML		
	comp=E,236µm,0.2s						
T1212				AML	AML		
	comp=N,317µm,0.9s						
T1212				AML	AML		
	comp=N,316µm,0.9s						
T1212				AML	AML		
	comp=N,290µm,0.9s						
T1212				AML	AML		
	comp=E,242µm,0.3s						
T1212				AML	AML		
	comp=E,236µm,0.1s						
MC2	Monte Cornacci	0.11	19	⇓P	Pg	01 29 20.5	+0.3
MC2				S	Sg	01 29 22.8	+0.8
T1216	Preci, Frazion	0.12	311	P	Pg	01 29 20.4	+0.3
T1216				AML	AML		
	comp=E,145µm,1.0s						
T1216				AML	AML		
	comp=N,252µm,1.0s						
T1216				AML	AML		
	comp=E,145µm,1.0s						
T1218	Civita (PG)	0.14	188	P	Pg	01 29 21.0	+0.4
MMO1	Montemonaco	0.16	57	P	Pg	01 29 21.4	+0.5
MMO1				S	Sg	01 29 24.3	+1.1
T1215	Vallo di Nera,	0.20	267	P	Pg	01 29 22.1	+0.5
T1215				S	Sg	01 29 25.8	+1.4
T1256	Bolognola (MC)	0.20	17	P	Pg	01 29 22.1	+0.5
T1256				S	Sg	01 29 26.1	+1.5
T1241	Roccafluvione,	0.22	78	⇓P	Pg	01 29 22.5	+0.7
FDMO	Fiordimonte	0.23	350	P	Pg	01 29 22.7	+0.6
FDMO				AML	AML		
	comp=E,42µm,0.3s						
FDMO				AML	AML		
	comp=N,41µm,0.6s						
FDMO				AML	AML		
	comp=E,42µm,0.3s						
SMA1	SAN MARTINO	0.23	142	P	Pg	01 29 22.8	+0.7
T1219	Muccia, Frazio	0.26	338	P	Pg	01 29 23.4	+0.7
T1220	Camerino, Fraz	0.30	352	P	Pg	01 29 24.1	+0.7
TERO	Teramo	0.39	119	⇓P	Pg	01 29 25.4	+0.4
ASSB	Assisi San Ben	0.42	303	⇓P	Pg	01 29 26.0	+0.3
ARVD	Arcevia	0.70	348	S	Sb	01 29 42.8	+1.1
VIVA	Pratoni del Vi	1.10	195	P	Pg	01 29 35.5	-2.9

ROM 15 01:29:55.1±0.1**, 42°.808N**±0°.002×**13°.115E**±0°.004**, h10**^{km}**, ML0.5**/1**, 2C-1D, Error ellipse: s-maj=0.3km s-min=0.1km az=301.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1245	Castelsantange	0.07	48	P	Pg	01 29 57.6	+0.1
T1245				S	Sg	01 29 59.2	+0.1
T1245				AML	AML		
	comp=E,43µm,0.7s						
T1245				AML	AML		
	comp=N,60µm,0.3s						
T1245				AML	AML		
	comp=N,60µm,1.7s						
T1212	Cascia, Frazio	0.08	223	P	Pg	01 29 57.7	+0.3
T1212				S	Sg	01 29 59.5	+0.5
T1214	Arquata del Tr	0.08	125	P	Pg	01 29 57.8	+0.2
T1214				S	Sg	01 29 59.6	+0.3
T1216	Preci, Frazion	0.11	319	P	Pg	01 29 58.1	+0.3
T1216				S	Sg	01 30 00.3	+0.6
MC2	Monte Cornacci	0.12	28	P	Pg	01 29 58.4	+0.3
MC2				S	Sg	01 30 00.8	+0.6
T1218	Civita (PG)	0.14	180	P	Pg	01 29 58.7	+0.4
T1217	Poggiodomo (PG	0.17	235	⇑P	Pg	01 29 59.2	+0.5
MMO1	Montemonaco	0.18	60	P	Pg	01 29 59.2	+0.2
T1215	Vallo di Nera,	0.18	268	⇓P	Pg	01 29 59.3	+0.4
AQU	L'Aquila	0.50	155	⇑P	Pg	01 30 01.8	-3.0

ROM 15 01:30:41.7±0.1**, 42°.555N**±0°.007×**13°.295E**±0°.006**, h14**^{km}±1^{km}**, ML0.9**/2**, 1C, Error ellipse: s-maj=0.6km s-min=0.5km az=346.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RM33	Pellescritta (	0.07	233	P	Pg	01 30 45.0	+0.2
RM33				S	Sg	01 30 47.0	+0.1
RM33				AML	AML		
	comp=N,46µm,0.2s						
RM33				AML	AML		
	comp=N,46µm,0.2s						
RM33				AML	AML		
	comp=E,83µm,0.2s						
SMA1	SAN MARTINO	0.08	21	⇑P	Pg	01 30 45.2	+0.3
SMA1				S	Sg	01 30 47.4	+0.5
SMA1				AML	AML		
	comp=N,103µm,0.6s						
SMA1				AML	AML		
	comp=E,166µm,0.2s						
CAMP	Campotosto	0.09	103	P	Pg	01 30 45.1	+0.2
CAMP				S	Sg	01 30 47.3	+0.2
T1246	Crognaleto (TE	0.15	79	P	Pg	01 30 46.0	+0.3
T1246				S	Sg	01 30 48.7	+0.4
T1218	Civita (PG)	0.18	311	P	Pg	01 30 46.3	+0.2
T1218				S	Sg	01 30 49.3	+0.4
T1214	Arquata del Tr	0.21	343	S	Sg	01 30 47.2	-2.8
TERO	Teramo	0.24	73	P	Pg	01 30 47.3	+0.3
TERO				S	Sg	01 30 51.0	+0.5
MMO1	Montemonaco	0.34	4	S	Sg	01 30 49.2	-4.5

KRNET 15 01:31:52.3±0.1, 40°.74N×73°.24E, h27^{km}, mb3.3
NNC 15 01:31:53.2±0.8, 40°.82N×73°.26E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=5.1km s-min=3.7km az=172.0
ISU 15 01:31:53.4, 40°.65N×73°.24E, h20^{km}
SOME 15 01:31:53.5, 40°.88N×73°.30E, h10^{km}
KNET 15 01:31:54.5±0.4, 40°.89N×73°.31E, h9^{km}±2^{km}, ml3.0, Error ellipse: s-maj=5.5km s-min=2.2km az=90.0
ISC 15 01:31:49.6±1.1**, 40°.62N**±0°.03×**73°.50E**±0°.02**, h13**^{km}±9^{km}**, n83, σ1ˢ.28**/118**, 30C-37D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.55	260	⇑iP	Pg	01 32 00.7	+0.3
	baz=38						
OHH				⇑iS	Sg	01 32 06.9	-0.9
	baz=38						
OHH	Osh	0.55	260	P	Pg	01 32 00.7	+0.3
OHH				S	Sg	01 32 06.5	-1.3
ANR	Andizhan	0.88	279	P	Pg	01 32 06.3	-0.2
ANR				S	Sg	01 32 16.2	-1.8
FRG	Fergana	1.33	260	P	Pn	01 32 14.5	+0.5
FRG				S	Sb	01 32 30.4	-1.0
ARLS	Aral	1.39	26	⇓iP	Pg	01 32 17.5	+1.2
	baz=36						
ARLS				⇓iS	Sg	01 32 35.7	+1.4
	baz=36						
AML	Almayashu	1.52	6	⇑P	Pg	01 32 19.0	+0.2
	44nm,0.1s,SNR=180						
AML				⇓S	Sb	01 32 37.9	+0.7
	259nm,0.2s						
AML	Almayashu	1.52	6	⇑P	Pg	01 32 18.9	+0.2
	1.5nm,0.5s						
AML				⇓S	Sb	01 32 37.6	+0.4
	22nm,0.6s						
AML	Almayashu	1.52	6	⇓iP	Pb	01 32 18.4	+0.5
	baz=14						
AML				⇓iS	Sb	01 32 37.5	+0.3
	baz=14						
CHMI	Chimion	1.55	258	P	Pb	01 32 18.3	+0.1
CHMI				S	Sb	01 32 37.9	+0.2
KSNS	Kasansay	1.59	290	P	Pb	01 32 19.5	+0.5
ARK	Arkit	1.65	316	⇓iP	Pn	01 32 18.4	-0.1
	baz=18						
ARK				⇓iS	Sn	01 32 37.5	-2.1
	baz=18						
DRK	Karamyk	1.73	229	⇑iP	Pg	01 32 22.6	-0.2
	baz=22						
DRK				⇑iS	Sb	01 32 44.4	+1.2
	baz=22						
UCH	Uchtor	1.78	25	⇓P	Pg	01 32 25.1	+1.3
	25nm,0.2s,SNR=20						
UCH				⇓S	Sg	01 32 48.4	+1.5
	44nm,0.2s						
UCH	Uchtor	1.78	25	⇑iP	Pg	01 32 23.9	+0.1
	baz=32						
UCH				⇑iS	Sg	01 32 46.9	0.0
	baz=32						
TRKS	Terek-Say	2.00	298	⇑iP	Pn	01 32 23.1	-0.2
	baz=95						
TRKS				⇑iS	Sn	01 32 45.5	-2.8
	baz=95						
MNAS	Manas	2.01	339	⇓iP	Pn	01 32 25.0	+1.6
	baz=43						
MNAS				⇓iS	Sn	01 32 48.6	+0.1
	baz=43						
EKS2	Erkin-Say	2.05	6	⇓P	Pg	01 32 28.5	-0.4
	11nm,0.1s,SNR=84						
EKS2				⇑S	Sg	01 32 54.3	-1.3
	47nm,0.3s						
EKS2	Erkin-Say	2.05	6	⇓iP	Pb	01 32 26.5	-0.3
	baz=12						
EKS2				⇓iS	Sb	01 32 51.5	-0.8
	baz=12						
BTK	Batken	2.12	256	⇓eP	Pn	01 32 26.6	+1.7
	baz=51						
BTK				⇓iS	Sn	01 32 51.9	+0.6
	baz=51						
MRKS	Merke	2.13	355	Pg	Pb	01 32 29.4	+1.2
	28nm,0.3s						
MRKS				Lg	Lg	01 32 55.1	
	119nm,0.3s						
MRKS	Merke	2.13	355	eP	Pb	01 32 29.4	+1.2
	28nm,0.3s						
MRKS				eS	Sb	01 32 55.1	+0.5
	119nm,0.3s						
AAK	Ala-Archa	2.15	20	⇓P	Pg	01 32 30.7	-0.1
	17nm,0.2s,SNR=26						
AAK				⇑S	Sg	01 32 59.0	+0.3
	85nm,0.2s						
AAK	Ala-Archa	2.15	20	⇑iP	Pb	01 32 28.5	0.0
	baz=26						
AAK				⇑iS	Sb	01 32 55.2	0.0
	baz=26						
KBK	Karagaybulak	2.31	28	⇓P	Pg	01 32 34.0	+0.1
	15nm,0.1s,SNR=27						
KBK				⇓S	Sg	01 33 04.0	+0.3
	114nm,0.3s						
KBK	Karagaybulak	2.31	28	⇑iP	Pb	01 32 31.0	-0.2
	baz=33						
KBK				⇑iS	Sb	01 32 59.5	-0.2
	baz=33						
FRU1	Bishkek	2.35	21	⇑iP	Pb	01 32 31.4	-0.4
	baz=26						
FRU1				⇑iS	Sb	01 32 59.8	-0.9
	baz=26						
CHMS	Chumysh	2.55	21	⇑P	Pb	01 32 36.4	+1.1
	6.0nm,0.2s,SNR=7.0						
CHMS	Chumysh	2.55	21	⇓iP	Pb	01 32 34.3	-1.0
	baz=26						
CHMS				⇓iS	Sb	01 33 04.7	-2.0
	baz=26						
ULHL	Ulahol	2.62	51	⇑iP	Pb	01 32 37.0	+0.3
	baz=55						
ULHL				⇑iS	Sb	01 33 09.5	+0.6
	baz=55						
USP	Ospenovka	2.75	15	⇓P	Pb	01 32 38.3	-0.3
	5.0nm,0.2s,SNR=10.0						
USP	Ospenovka	2.75	15	⇓iP	Pb	01 32 36.7	-1.9
	baz=20						
USP				⇓iS	Sn	01 33 08.7	+2.1
	baz=20						
TKM2	Tokmak 2	2.78	34	⇓P	Pb	01 32 40.4	+1.0
	6.6nm,0.2s,SNR=14						
TKM2	Tokmak 2	2.78	34	⇑Pg	Pg	01 32 41.6	-1.4
	4.7nm,0.3s						
TKM2				⇑Lg	Lg	01 33 19.8	
	12nm,0.4s						
TKM2	Tokmak 2	2.78	34	⇓iP	Pb	01 32 38.1	-1.3
	baz=38						
TKM2				⇓iS	Sb	01 33 11.8	-1.7
	baz=38						
DZA	Taraz	2.79	325	Pg	Pb	01 32 40.6	+1.2
	39nm,0.1s						
DZA				Lg	Lg	01 33 13.8	
	218nm,0.6s						
DZA	Taraz	2.79	325	ePg	Pb	01 32 40.6	+1.2
	39nm,0.1s						
DZA				eLg	Lg	01 33 13.8	
	218nm,0.6s						
CHMG	Chimgan	2.79	291	P	Pb	01 32 37.7	-1.8
CHMG				S	Sb	01 33 12.4	-1.3
CHRV	Charvak	2.87	292	P	Sb	01 33 14.8	-0.9
GAR	Garm	2.94	238	⇑iP	Pn	01 32 39.0	+2.9
	baz=33						
GAR				⇑iS	Sn	01 33 12.7	+1.3
	baz=33						

SGDS	**Sogindy**	**2.95**	**16**	Pg	**Pg**	**01 32 45.2**	**-1.0**
	3.8nm,0.2s						
SGDS				Lg	Lg	01 33 22.3	
	32nm,0.4s						
IUG	**Iuzhnay**	**3.02**	**301**	Pg	**Pb**	**01 32 43.6**	**+0.3**
	44nm,0.3s						
IUG				Lg	Lg	01 33 19.4	
	153nm,0.6s						
IUG	**Iuzhnay**	**3.02**	**301**	*e*Pg	**Pb**	**01 32 43.6**	**+0.3**
	44nm,0.3s						
IUG				*e*Lg	Lg	01 33 19.4	
	153nm,0.6s						
YBZ	**Yangibazar**	**3.04**	**284**	P	**Sb**	**01 33 20.0**	**-0.7**
KST	**Kastek**	**3.04**	**36**	Pg	**Pg**	**01 32 49.3**	**+1.4**
	0.8nm,0.2s						
KST				Lg	Lg	01 33 28.6	
	29nm,0.4s						
KST	**Kastek**	**3.04**	**36**	*e*Pg	**Pg**	**01 32 49.3**	**+1.4**
	0.8nm,0.2s						
KST				*e*Lg	Lg	01 33 28.6	
	29nm,0.4s						
DGS	**Degeres**	**3.12**	**32**	Pg	**Pg**	**01 32 49.8**	**+0.4**
	14nm,0.4s						
DGS				Lg	Lg	01 33 30.0	
	32nm,0.6s						
DGS	**Degeres**	**3.12**	**32**	*e*Pg	**Pg**	**01 32 49.8**	**+0.4**
	14nm,0.4s						
DGS				*e*Lg	Lg	01 33 30.0	
	32nm,0.6s						
KDJ	**Kajisay**	**3.15**	**60**	⇑*i*P	**Pb**	**01 32 44.9**	**-0.8**
	baz=64						
KDJ				⇑*i*S	**Sb**	**01 33 22.8**	**-1.3**
	baz=64						
TAS	**Tashkent**	**3.26**	**284**	⇓*i*P	**Pn**	**01 32 41.4**	**+0.9**
	baz=82						
TAS				⇓*i*S	**Sn**	**01 33 17.4**	**-1.8**
	baz=82						
KUMR	**Kumaryk**	**3.27**	**282**	P	**Sb**	**01 33 29.5**	**+2.3**
MTBS	**Maitube**	**3.33**	**40**	Pg	**Pg**	**01 32 53.5**	**+0.1**
	12nm,0.5s						
MTBS				Lg	Lg	01 33 35.7	
	20nm,0.6s						
MTBS	**Maitube**	**3.33**	**40**	*e*Pg	**Pg**	**01 32 53.5**	**+0.1**
	12nm,0.5s						
MTBS				*e*Lg	Lg	01 33 35.7	
	20nm,0.6s						
KK31	**Karatay Array**	**3.34**	**319**	⇓Pg	**Pb**	**01 32 47.9**	**-0.8**
	1.3nm,0.2s,baz=138,slow=16,SNR=26						
KK31				⇓Lg	Lg	01 33 29.7	
	16nm,0.6s,baz=142,slow=30,SNR=7.3						
KKAR	**Karatay Array**	**3.34**	**319**	⇑*i*P	**Pn**	**01 32 42.6**	**+1.1**
	baz=20						
KKAR				⇑*i*S	**Sn**	**01 33 19.3**	**-1.8**
	baz=20						
IZV	**Izvestkoviy**	**3.35**	**43**	Pg	**Pg**	**01 32 53.8**	**0.0**
	5.1nm,0.4s						
IZV				Lg	Lg	01 33 37.0	
	20nm,0.6s						
IZV	**Izvestkoviy**	**3.35**	**43**	*e*Pg	**Pg**	**01 32 53.8**	**0.0**
	5.1nm,0.4s						
IZV				*e*Lg	Lg	01 33 37.0	
	20nm,0.6s						
KRBS	**Karabastau**	**3.47**	**27**	Pg	**Pg**	**01 32 55.0**	**-1.1**
	4.2nm,0.4s						
KRBS				Lg	Lg	01 33 38.5	
	22nm,0.8s						
KRBS	**Karabastau**	**3.47**	**27**	*e*Pg	**Pg**	**01 32 55.0**	**-1.1**
	4.2nm,0.4s						
KRBS				*e*Lg	Lg	01 33 38.5	
	22nm,0.8s						
TNSS	**Tian-Shan**	**3.53**	**46**	Pg	**Pg**	**01 32 58.0**	**+0.7**
	5.3nm,0.3s						
TNSS				Lg	Lg	01 33 43.7	
	10nm,0.4s						
TNSS	**Tian-Shan**	**3.53**	**46**	*e*Pg	**Pg**	**01 32 58.0**	**+0.7**
	5.3nm,0.3s						
TNSS				*e*Lg	Lg	01 33 43.7	
	10nm,0.4s						
MDOK	**Medeo**	**3.67**	**45**	⇓Pg	**Pg**	**01 33 00.2**	**+0.2**
	11nm,0.9s						
MDOK				Pg	**Pg**	**01 33 00.9**	**+1.0**
	8.1nm,0.5s						
MDOK				Lg	Lg	01 33 49.3	
	12nm,0.8s						
MDOK				⇑Lg	Lg	01 33 50.2	
	26nm,1.3s						
MDOK	**Medeo**	**3.67**	**45**	*e*Pg	**Pg**	**01 33 00.9**	**+1.0**
	8.1nm,0.5s						
MDOK				*e*Lg	Lg	01 33 49.3	
	12nm,0.8s						
ANVS	**Anan'yevo**	**3.80**	**54**	⇓*i*P	**Pb**	**01 32 53.2**	**-3.4**
	baz=57						
ANVS				⇓*i*S	**Sb**	**01 33 38.1**	**-4.5**
	baz=57						
KTBS	**Karatobe**	**3.89**	**36**	Pg	**Pg**	**01 33 04.2**	**+0.1**
	5.2nm,0.4s						
KTBS				Lg	Lg	01 33 54.2	
	59nm,0.4s						
KTBS	**Karatobe**	**3.89**	**36**	*e*Pg	**Pg**	**01 33 04.2**	**+0.1**
	5.2nm,0.4s						
KTBS				*e*Lg	Lg	01 33 54.2	
	59nm,0.4s						
CHKK	**Chushkaly**	**4.14**	**38**	Pg	**Pg**	**01 33 08.9**	**0.0**
	5.5nm,0.3s						
CHKK				Lg	Lg	01 34 02.5	
	19nm,0.4s						
CHKK	**Chushkaly**	**4.14**	**38**	*e*Pg	**Pg**	**01 33 08.9**	**0.0**
	5.5nm,0.3s						
CHKK				*e*Lg	Lg	01 34 02.5	
	19nm,0.4s						
SATY	**Saty**	**4.40**	**55**	Pg	**Pg**	**01 33 14.4**	**+0.5**
	5.6nm,0.4s						
SATY				Lg	Lg	01 34 11.6	
	15nm,0.6s						
SATY	**Saty**	**4.40**	**55**	*e*Pg	**Pg**	**01 33 14.4**	**+0.5**
	5.6nm,0.4s						
SATY				*e*Lg	Lg	01 34 11.6	
	15nm,0.6s						
BTLS	**Baital**	**4.44**	**5**	Pg	**Pb**	**01 33 10.8**	**+3.4**
	2.2nm,0.3s						
BTLS				Lg	Lg	01 34 05.8	
	13nm,0.6s						
BTLS	**Baital**	**4.44**	**5**	*e*Pg	**Pb**	**01 33 10.8**	**+3.4**
	2.2nm,0.3s						
BTLS				*e*Lg	Lg	01 34 05.8	
	13nm,0.6s						
ZHN	**Zhinishke**	**4.48**	**54**	Pg	**Pg**	**01 33 17.7**	**+2.3**
	5.3nm,0.3s						
ZHN				Lg	Lg	01 34 17.2	
	14nm,0.1s						
ZHN	**Zhinishke**	**4.48**	**54**	*e*Pg	**Pg**	**01 33 17.7**	**+2.3**
	5.3nm,0.3s						
ZHN				*e*Lg	Lg	01 34 17.2	
	14nm,0.1s						
KPKS	**Kokpek**	**4.79**	**52**	Pg	**Pg**	**01 33 22.0**	**+0.6**
	5.8nm,0.6s						
KPKS				Lg	Lg	01 34 24.8	
	9.4nm,0.5s						
KPKS	**Kokpek**	**4.79**	**52**	*e*Pg	**Pg**	**01 33 22.0**	**+0.6**
	5.8nm,0.6s						
KPKS				*e*Lg	Lg	01 34 24.8	
	9.4nm,0.5s						
ARXS	**Arharly**	**4.81**	**40**	Pg	**Pg**	**01 33 20.4**	**-1.3**
	4.2nm,0.5s						
ARXS				Lg	Lg	01 34 22.6	
	13nm,0.6s						
ARXS	**Arharly**	**4.81**	**40**	*e*Pg	**Pg**	**01 33 20.4**	**-1.3**
	4.2nm,0.5s						
ARXS				*e*Lg	Lg	01 34 22.6	
	13nm,0.6s						
UZB	**Uzynbulak**	**4.83**	**57**	Pg	**Pg**	**01 33 21.4**	**-0.7**
	4.7nm,0.4s						
UZB				Lg	Lg	01 34 23.6	
	6.4nm,0.3s						
UZB	**Uzynbulak**	**4.83**	**57**	*e*Pg	**Pg**	**01 33 21.4**	**-0.7**
	4.7nm,0.4s						
UZB				*e*Lg	Lg	01 34 23.6	
	6.4nm,0.3s						
PDGK	**Podgornoye**	**5.22**	**57**	Pg	**Pg**	**01 33 28.9**	**-0.7**
	3.1nm,1.2s						
PDGK				Lg	Lg	01 34 36.8	
	2.0nm,0.6s						
PDGK	**Podgornoye**	**5.22**	**57**	⇓Pg	**Pg**	**01 33 28.6**	**-1.0**
	6.5nm,1.1s						
PDGK				⇓Lg	Lg	01 34 39.9	
	7.2nm,0.7s						
DJR	**Jarkent**	**5.95**	**49**	Pg	**Pg**	**01 33 42.2**	**-1.3**
	2.3nm,0.7s						
DJR				Lg	Lg	01 34 59.4	
	7.0nm,1.1s						
DJR	**Jarkent**	**5.95**	**49**	*e*Pg	**Pg**	**01 33 42.2**	**-1.3**
	2.3nm,0.7s						
DJR				*e*Lg	Lg	01 34 59.4	
	7.0nm,1.1s						

MAN 15 01:37:46.4, 19°.62N×121°.29E, h26km, mb4.9, ML3.8, MS3.7, 6C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CICP	**Calayan Island**	**0.40**	**153**	⇑*e*P	Pn	01 37 56.4	0.0
CICP				*e*S	Sn	01 38 04.5	+1.4
BBP	**Basco**	**1.03**	**38**	⇑*e*P	Pn	01 38 04.3	-0.8
BBP				*e*S	Sn	01 38 19.3	+0.5
PACPP	**Pamplona Cagay**	**1.16**	**177**	⇑*e*P	Pn	01 38 06.1	-0.8
PACPP				*e*S	Sn	01 38 21.5	-0.3
APYP	**Conner**	**1.75**	**182**	⇑*e*P	Pn	01 38 15.2	+0.1
APYP				*e*S	Sb	01 38 38.0	-1.4
ABRA	**Dolores**	**2.04**	**196**	⇑*e*P	Pn	01 38 17.6	-1.4
ABRA				*e*S	Sn	01 38 44.8	+1.2
SAMP	**Sagada Mountai**	**2.55**	**188**	⇑*e*P	Pn	01 38 27.9	+1.8
SAMP				*e*S	Sn	01 38 58.9	+2.5

MOS ***15*** *01:38:52.9±0.8, 1°.80N×127°.05E, h43km, mb4.9/29, Error ellipse: s-maj=11.7km s-min=6.4km az=101.6*

BJI ***15*** *01:38:56.2±0.0, 1°.80N×127°.10E, h65km, mb4.7/43, mB5.2/24, Ms4.7/6, Ms7 4.5/5*

IDC ***15*** *01:38:57.4±1.5, 1°.79N×127°.14E, h71km±12km, mb4.3/23, mbtmp4.6/26, MS3.7/11, Error ellipse: s-maj=18.2km s-min=7.7km az=77.0*

NEIC ***15*** *01:38:57.1±1.4, 1°.76N±0°.05×127°.03E±0°.03, h63km±5km, mb5.1/102, Error ellipse: s-maj=9.0km s-min=1.6km az=150.0*

DJA ***15*** *01:38:57.7±0.2, 2°N±2°×12°7E±°, h59km±3km, M4.8/24, mB5.3/11, mb5.0/24, MLv4.9/15, Mw(mB)4.7/11*

ISC 15 01:38:56.8±0.2, 1°.82N±0°.03×127°.06E±0°.04, h63km, n402, σ1ˢ.39/425, mb4.9/104, 16C-6D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.08**	**164**	Pn	**Pn**	**01 39 17.2**	**+1.2**
TNTI	**Ternate**	**1.08**	**164**	P	**Pn**	**01 39 17.2**	**+1.2**
TNTI				S	**Sn**	**01 39 31.8**	**+1.5**
SGSI	**Sangihe**	**2.41**	**321**	P	**Pn**	**01 39 34.0**	**+0.1**
SGSI				S	**Sn**	**01 40 02.3**	**0.0**
LBMI	**Labuha**	**2.48**	**170**	P	**Pn**	**01 39 36.7**	**+1.9**
LBMI				S	**Sn**	**01 40 08.2**	**+4.2**
SANI	**Sanana**	**3.99**	**196**	P	**Pn**	**01 39 56.2**	**+0.7**
SANI				S	**Sn**	**01 40 40.1**	**-0.9**
GTOI	**Gorontalo**	**4.22**	**254**	P	**Pn**	**01 40 01.3**	**+2.7**
GTOI				S	**Sn**	**01 40 49.8**	**+3.2**
GSPH	**General Santos**	**4.74**	**334**	⇑*e*P	**Pn**	**01 40 04.1**	**-1.8**
GSPH				*i* S	**Sn**	**01 40 56.9**	**-2.7**
SIJI	**Sorong**	**4.98**	**122**	P	**Pn**	**01 40 10.7**	**+1.6**
	61nm,0.8s,baz=321,slow=11,SNR=16						
NLAI	**Namlea**	**5.02**	**180**	P	**Pn**	**01 40 11.2**	**+1.6**
	83nm,0.6s,6µm0.9nm						
LUWI	**Luwuk**	**5.14**	**237**	Pn	**Pn**	**01 40 07.4**	**-3.9**
LUWI	**Luwuk**	**5.14**	**237**	P	**Pn**	**01 40 15.5**	**+4.2**
	235nm,0.7s,3µm2.4nm						
MRSI	**Marisa**	**5.29**	**256**	P	**Pn**	**01 40 15.3**	**+2.0**
	213nm,0.5s,2µm0.9nm						
SKMP	**Bagumbayan, Su**	**5.31**	**332**	⇑*e*P	**Pn**	**01 40 13.5**	**0.0**
SKMP				*e*S	**Sn**	**01 41 09.3**	**-4.0**
DAV	**Davao City (W)**	**5.42**	**344**	P	**Pn**	**01 40 15.7**	**+0.5**
	430nm,0.4s,baz=162,slow=6.4,SNR=1.8						
DAV				S	**Sn**	**01 41 18.3**	**+1.9**
	262nm,0.4s,baz=105,slow=21,SNR=3.5						
DAV				LR	LR	01 42 22.8	
	comp=Z,283nm,19.5s,baz=156,slow=38						
MSAI	**Masohi**	**5.46**	**160**	P	**Pn**	**01 40 17.5**	**+1.9**
	21nm,0.6s,2µm0.1nm						
KCP	**Kidapawan**	**5.52**	**339**	⇑*i*P	**Pn**	**01 40 17.4**	**+0.8**
KCP				*i* S	**Sn**	**01 41 19.7**	**+1.0**
AAI	**Ambon**	**5.58**	**168**	P	**Pn**	**01 40 21.7**	**+4.4**
	102nm,1.3s,2µm0.5nm						
CDOP	**Cateel, Davao**	**5.96**	**354**	⇑*e*P	**Pn**	**01 40 23.1**	**+0.6**
CDOP				*e*S	**Sn**	**01 41 27.1**	**-2.3**
CTBH	**Cotabato--PC H**	**6.06**	**332**	⇓*e*P	**Pn**	**01 40 24.0**	**+0.1**
TOLI2	**Tolitoli**	**6.32**	**264**	Pn	**Pn**	**01 40 27.6**	**+0.1**
BUKP	**Musuan**	**6.34**	**342**	⇑*e*P	**Pn**	**01 40 28.7**	**+0.9**
BUKP				*e*S	**Sn**	**01 41 37.8**	**-1.1**
BIPH	**Bislig**	**6.37**	**354**	⇓*e*P	**Pn**	**01 40 27.8**	**-0.3**
BIPH				*e*S	**Sn**	**01 41 35.7**	**-3.7**
TASP	**Talacogon, Agu**	**6.71**	**349**	*e*S	**Sn**	**01 41 52.1**	**+4.2**
TASP	**Talacogon, Agu**	**6.71**	**349**	⇑*e*P	**Pn**	**01 40 34.9**	**+2.1**
FAKI	**Fak Fak**	**7.00**	**132**	Pn	**Pn**	**01 40 36.5**	**-0.2**
FAKI	**Fak Fak**	**7.00**	**132**	P	**Pn**	**01 40 36.8**	**0.0**
	59nm,1.0s,0.4nm						
CGP	**Cagayan de Oro**	**7.00**	**340**	⇓*e*P	**Pn**	**01 40 39.6**	**+2.7**
BUTP	**Butuan**	**7.25**	**349**	⇓*e*P	**Pn**	**01 40 42.7**	**+2.5**
BUTP				*e*S	**Sn**	**01 42 04.7**	**+3.5**
MPSI	**Mapaga**	**7.31**	**259**	P	**Pn**	**01 40 42.8**	**+1.8**
	56nm,0.8s,3µm0.4nm						
RKPI	**Ransiki, Papua**	**7.84**	**115**	P	**Pn**	**01 40 50.8**	**+2.5**
	112nm,0.8s,14µm2.8nm						
GLSP	**General Luna,**	**7.97**	**353**	⇓*e*P	**Pn**	**01 40 51.6**	**+1.6**
GLSP				*e*S	**Sn**	**01 42 12.2**	**-6.6**
MYLDM	**Lahad Datu**	**9.18**	**292**	Pn	**Pn**	**01 41 07.9**	**+1.4**
SPSI	**Sidrap Palu**	**9.28**	**232**	P	**Pn**	**01 41 11.2**	**+3.3**
	40nm,0.5s						
BKSI	**Bulukumba**	**9.92**	**224**	P	**Pn**	**01 41 20.4**	**+3.8**
	49nm,0.7s,836nm						
KAPI	**Kappang**	**9.97**	**227**	P	**Pn**	**01 41 19.0**	**+1.6**
	14nm,0.3s,baz=45,slow=1.0,SNR=6.5						
KAPI				S	**Sn**	**01 43 04.6**	**-3.2**
	7.4nm,0.4s,baz=122,slow=16,SNR=1.1						
KAPI	**Kappang**	**9.97**	**227**	Pn	**Pn**	**01 41 17.6**	**+0.3**
KAPI	**Kappang**	**9.97**	**227**	P	**Pn**	**01 41 17.7**	**+0.3**
BSSI	**Bau Bau, Buton**	**10.27**	**220**	P	**Pn**	**01 41 24.3**	**+2.7**
	35nm,1.0s						
KKM	**Kota Kinabalu**	**11.61**	**292**	Pn	**Pn**	**01 41 39.9**	**+0.1**
SOEI	**Soe**	**11.83**	**194**	Pn	**Pn**	**01 41 41.7**	**-1.2**
SOEI	**Soe**	**11.83**	**194**	P	**Pn**	**01 41 46.0**	**+3.1**
	97nm,1.0s						
SMPI	**Sarmi**	**12.24**	**108**	P	**P**	**01 41 56.6**	**-2.1**
BASI	**Baing, Sumba**	**13.59**	**208**	P	**Pn**	**01 42 08.9**	**+2.2**
	77nm,1.0s						
PLAI	**Plampang**	**14.05**	**221**	P	**P**	**01 42 17.0**	**-1.8**
	59nm,1.1s						
TWSI	**Taliwang, Sumb**	**14.59**	**224**	P	**P**	**01 42 23.5**	**-1.3**
SBUM	**Sibu**	**14.85**	**273**	Pn	**Pn**	**01 42 22.8**	**-0.5**
MTN	**Manton Dam**	**15.11**	**165**	P	**Pn**	**01 42 27.1**	**+0.4**
	baz=15,SNR=19						
MTN	**Manton Dam**	**15.11**	**165**	Pn	**Pn**	**01 42 25.2**	**-1.5**
KDU	**Kakadu**	**15.38**	**160**	P	**Pn**	**01 42 30.0**	**0.0**
	baz=15,SNR=11						
JAGI	**Jajag, Banyuwa**	**16.43**	**231**	Pn	**Pn**	**01 42 41.7**	**-1.8**
JAGI	**Jajag, Banyuwa**	**16.43**	**231**	P	P	01 43 03.2	+18
BLJI	**Banyuglugur**	**16.45**	**235**	P	**P**	**01 42 50.5**	**+5.0**
KSM	**Kuching**	**16.75**	**269**	Pn	**Pn**	**01 42 46.0**	**-1.4**
KNRA	**Kununurra**	**17.46**	**175**	P	**Pn**	**01 42 56.2**	**+0.1**
	baz=17,SNR=29						
KNRA	**Kununurra**	**17.46**	**175**		**Pn**	**01 42 55.2**	**-0.9**
KNRA				IAmb	IAmb	01 42 57.9	
	comp=Z,40nm,0.6s						
KNRA	**Kununurra**	**17.46**	**175**	P	**P**	**01 42 56.5**	**-0.1**
SMRI	**Semarang**	**18.78**	**242**	P	**P**	**01 43 09.1**	**-2.1**
SMRI				IAmb	IAmb	01 43 13.7	
	comp=Z,71nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.84**	**184**	P	**P**	**01 43 22.1**	**-0.6**
	baz=20						
FITZ	**Fitzroy Crossi**	**19.84**	**184**	P	**P**	**01 43 22.0**	**-0.6**
GUMO	**Guam**	**21.14**	**56**	P	**P**	**01 43 35.5**	**-1.3**
	comp=Z,23nm,0.4s,baz=180,slow=19,SNR=2.6						
GUMO				LR	LR	01 50 24.1	
	comp=Z,74nm,21.5s,baz=270,slow=32						
	comp=Z,23nm,0.4s						
GUMO	**Guam**	**21.14**	**56**	P	**P**	**01 43 35.9**	**-0.9**
GUMO				IAmb	IAmb	01 43 37.2	
	comp=Z,169nm,1.4s						
GUMO	**Guam**	**21.14**	**56**	P	**P**	**01 43 35.9**	**-0.9**
GUMO				pmax	pmax		
	comp=Z,169nm,1.4s						
TPUB	**Ta-pu**	**22.25**	**344**	P	**P**	**01 43 47.2**	**-1.4**
TPUB				IAmb	IAmb	01 44 12.5	
	comp=Z,42nm,0.8s						
COEN	**Coen**	**22.38**	**135**	P	**P**	**01 43 50.9**	**+0.9**
	baz=22						
COEN	**Coen**	**22.38**	**135**	P	**P**	**01 43 49.1**	**-0.9**
WB0	**Warramunga Arr**	**22.62**	**162**	P	**P**	**01 43 51.2**	**-1.4**
WB0				IAmb	IAmb	01 43 53.2	
	comp=Z,46nm,0.7s						
SSLB	**Suanglung**	**22.63**	**345**	P	**P**	**01 43 51.3**	**-1.4**
SSLB				IAmb	IAmb	01 43 59.3	
	comp=Z,198nm,1.9s						
WRAB	**Tennant Creek**	**22.77**	**162**	P	**P**	**01 43 52.8**	**-1.4**
WRAB				IAmb	IAmb	01 43 54.7	
	comp=Z,37nm,0.6s						
WRAB	**Tennant Creek**	**22.77**	**162**	P	**P**	**01 43 52.9**	**-1.2**
WRAB	**Tennant Creek**	**22.77**	**162**	*ce*P	**P**	**01 43 53.1**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,46nm,1.0s						
WRA	**Warramunga Arr**	**22.77**	**162**	P	**P**	**01 43 53.0**	**-1.2**
	comp=Z,35nm,0.5s,baz=340,slow=11,SNR=236						
WRA				PcP	**PcP**	**01 47 44.0**	**-0.1**
	comp=Z,1.5nm,0.4s,baz=342,slow=2.2,SNR=4.9						
WRA				S	**S**	**01 47 57.1**	**-1.5**
	comp=Z,0.9nm,0.7s,baz=332,slow=16,SNR=3.0						
WRA				ScP	**ScP**	**01 51 14.9**	**-1.7**
	comp=Z,0.7nm,0.7s,baz=330,slow=3.2,SNR=5.1						
	comp=Z,35nm,0.5s						
WRA	**Warramunga Arr**	**22.77**	**162**	P	**P**	**01 43 52.0**	**-2.2**
WRA	**Warramunga Arr**	**22.77**	**162**	P	**P**	**01 43 52.0**	**-2.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WB2	**Warramunga Arr**	**22.77**	**162**	P	**P**	**01 43 53.2**	**-1.1**
	baz=23						
WB2	**Warramunga Arr**	**22.77**	**162**	P	**P**	**01 43 53.0**	**-1.3**
WB2				IAmb	IAmb	01 43 54.8	
	comp=Z,39nm,0.7s						
YOJ	**Yonaguni jima**	**22.85**	**350**	P	**P**	**01 43 55.3**	**+0.4**
YOJ	**Yonaguni jima**	**22.85**	**350**	P	**P**	**01 43 55.3**	**+0.4**
YOJ				pmax	pmax		
	comp=Z,215nm,1.2s						
PMG	**Port Moresby**	**22.91**	**119**	LR	LR	01 54 04.8	
	comp=Z,166nm,20.5s,baz=280,slow=40						
MBWA	**Marble Bar**	**23.93**	**197**	P	**P**	**01 44 03.9**	**-1.4**
MBWA	**Marble Bar**	**23.93**	**197**	P	**P**	**01 44 04.7**	**-0.5**
PSA00	**Pilbara Seismi**	**24.29**	**197**	P	**P**	**01 44 07.3**	**-1.2**
PSA00				IAmb	IAmb	01 44 10.3	
	comp=Z,88nm,2.0s						
PSA00	**Pilbara Seismi**	**24.29**	**197**	P	**P**	**01 44 08.6**	**+0.1**
QIS	**Mount Isa**	**25.41**	**152**	P	**P**	**01 44 18.6**	**-0.1**
	baz=25,SNR=24						
MTSU	**Mount Surprise**	**26.11**	**140**	P	**P**	**01 44 26.9**	**+1.8**
	baz=26,SNR=4.5						
AS31	**Alice Springs**	**26.19**	**166**	P	**P**	**01 44 24.1**	**-1.6**
ASAR	**Alice Springs**	**26.19**	**166**	P	**P**	**01 44 24.4**	**-1.3**
	comp=Z,3.7nm,0.4s,baz=355,slow=7.2,SNR=64						
ASAR				PcP	**PcP**	**01 47 50.4**	**-1.1**
	comp=Z,2.1nm,0.7s,baz=338,slow=2.2,SNR=5.5						
ASAR				S	**S**	**01 48 52.9**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=342,slow=18,SNR=3.8						
ASAR				ScP	**ScP**	**01 51 24.8**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=351,slow=2.4,SNR=6.3						
	comp=Z,3.7nm,0.4s						
ASAR	**Alice Springs**	**26.19**	**166**	P	**P**	**01 44 24.7**	**-1.0**
ASAR	**Alice Springs**	**26.19**	**166**	P	**P**	**01 44 24.7**	**-1.0**
AS01	**Alice Springs**	**26.20**	**166**	P	**P**	**01 44 25.0**	**-0.8**
WRKA	**Warakurna**	**26.72**	**178**	P	**P**	**01 44 29.7**	**-0.8**
	baz=27,SNR=17						
WRKA	**Warakurna**	**26.72**	**178**	P	**P**	**01 44 29.6**	**-0.9**
GIRL	**Giralia**	**27.34**	**207**	P	**P**	**01 44 36.5**	**+0.5**
CTA	**Charters Tower**	**28.78**	**140**	P	**P**	**01 44 48.8**	**-0.1**
	comp=Z,6.3nm,1.2s,baz=334,slow=14,SNR=1.7						
CTA				LR	LR	01 56 59.5	
	comp=Z,118nm,18.6s,baz=276,slow=38						
	comp=Z,6.3nm,1.2s						
MEEK	**Meekatharra**	**29.44**	**196**	P	**P**	**01 44 53.9**	**-0.8**
	baz=29,SNR=8.2						
MEEK	**Meekatharra**	**29.44**	**196**	P	**P**	**01 44 54.8**	**+0.1**
NJ2	**Nanjing**	**31.06**	**346**	*e*P	**P**	**01 45 10.8**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PHRA	**Phrae**	**31.10**	**304**	P	**P**	**01 45 09.3**	**-0.1**
PATS	**Pohnpei**	**31.55**	**80**	P	**P**	**01 45 14.9**	**+1.5**
	baz=32						
CMAR	**Chiang Mai Arr**	**32.15**	**303**	P	**P**	**01 45 18.7**	**0.0**
	comp=Z,0.9nm,0.3s,baz=129,slow=7.7,SNR=4.2						
	comp=Z,0.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**32.15**	**303**	*ce*P	**P**	**01 45 16.3**	**-2.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
INKA	**Innaminka**	**32.20**	**157**	P	**P**	**01 45 19.0**	**0.0**
CHTO	**Chiang Mai**	**32.32**	**303**	P	**P**	**01 45 19.3**	**-0.9**
CHTO	**Chiang Mai**	**32.32**	**303**	P	**P**	**01 45 19.3**	**-0.9**
FORT	**Forrest**	**32.43**	**178**	P	**P**	**01 45 20.4**	**-0.6**
	baz=32,SNR=11						
FORT	**Forrest**	**32.43**	**178**	P	**P**	**01 45 18.9**	**-2.0**
FORT				IAmb	IAmb	01 45 45.1	
	comp=Z,29nm,0.8s						
FORT	**Forrest**	**32.43**	**178**	P	**P**	**01 45 20.1**	**-0.8**
MORW	**Morawa**	**32.47**	**198**	P	**P**	**01 45 20.2**	**-1.2**
	baz=32,SNR=3.7						
MORW	**Morawa**	**32.47**	**198**	P	**P**	**01 45 20.9**	**-0.5**
MORW	**Morawa**	**32.47**	**198**	P	**P**	**01 45 21.8**	**+0.4**
MULG	**Mulgathing**	**32.61**	**169**	P	**P**	**01 45 22.1**	**-0.5**
ENH	**Enshi**	**32.85**	**331**	P	**P**	**01 45 24.6**	**-0.1**
KMBL	**Kambalda**	**33.37**	**188**	P	**P**	**01 45 28.5**	**-0.6**
	baz=33,SNR=5.9						
KMBL	**Kambalda**	**33.37**	**188**	P	**P**	**01 45 28.8**	**-0.4**
BLDU	**Ballidu**	**33.73**	**196**	P	**P**	**01 45 31.6**	**-0.8**
	baz=34,SNR=5.7						
BLDU	**Ballidu**	**33.73**	**196**	P	**P**	**01 45 32.5**	**+0.2**
LCRK	**Leigh Creek**	**33.80**	**163**	P	**P**	**01 45 32.6**	**-0.3**
KLBR	**Kellerberrin**	**34.38**	**194**	P	**P**	**01 45 37.6**	**-0.4**
	baz=34,SNR=10						
KLBR	**Kellerberrin**	**34.38**	**194**	P	**P**	**01 45 37.9**	**-0.1**
PZH	**PanZhiHua**	**34.55**	**317**	P	**P**	**01 45 42.6**	**+2.9**
PZH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,110nm,5.2s						
HNR	**Honiara**	**34.61**	**109**	P	**P**	**01 45 41.7**	**+1.5**
HNR	**Honiara**	**34.61**	**109**	P	**P**	**01 45 41.7**	**+1.5**
HNR				pmax	pmax		
	comp=Z,56nm,0.6s						
INU	**Inuyama**	**34.62**	**14**	P	**P**	**01 45 40.0**	**0.0**
INU				pP	**pwP**	**01 45 58.0**	**+0.2**
INU				sP	**sP**	**01 46 07.7**	**+5.7**
JGF	**Kuroka**	**34.95**	**15**	P	**P**	**01 45 42.9**	**0.0**
MUN	**Mundaring**	**35.15**	**196**	P	**P**	**01 45 44.8**	**+0.2**
	baz=35,SNR=4.2						
MUN	**Mundaring**	**35.15**	**196**	P	**P**	**01 45 45.0**	**+0.4**
LYN	**LuoYang**	**35.30**	**339**	*e*P	P	01 45 52.3	+6.4
LYN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BBOO	**Buckleboo**	**35.47**	**167**	P	**P**	**01 45 46.8**	**-0.6**
	baz=36,SNR=24						
BBOO	**Buckleboo**	**35.47**	**167**	P	**P**	**01 45 46.4**	**-0.9**
BBOO				IAmb	IAmb	01 46 58.5	
	comp=Z,96nm,1.9s						
BBOO	**Buckleboo**	**35.47**	**167**	P	**P**	**01 45 46.8**	**-0.6**
KSRS	**Korea Array**	**35.47**	**1**	P	**P**	**01 45 48.1**	**+0.8**
	comp=Z,3.5nm,0.6s,baz=179,slow=10,SNR=8.8						
KSRS				PcP	**PcP**	**01 48 16.8**	**+1.1**
	comp=Z,1.3nm,0.5s,baz=209,slow=3.1,SNR=3.1						
	comp=Z,3.5nm,0.6s						
EIDS	**Eidsvold**	**35.66**	**141**	P	**P**	**01 45 48.8**	**-0.3**
EIDS				IAmb	IAmb	01 45 54.8	
	comp=Z,57nm,1.9s						
NWAO	**Narrogin (SRO)**	**35.78**	**194**	P	**P**	**01 45 49.5**	**-0.4**
	comp=Z,8.8nm,0.6s,baz=33,slow=9.8,SNR=6.0						
	comp=Z,8.8nm,0.6s						
NWAO	**Narrogin (SRO)**	**35.78**	**194**	P	**P**	**01 45 49.6**	**-0.4**
NWAO	**Narrogin (SRO)**	**35.78**	**194**	P	**P**	**01 45 49.8**	**-0.2**
NWAO				IAmb	IAmb	01 46 17.9	
	comp=Z,94nm,1.4s						
NWAO	**Narrogin (SRO)**	**35.78**	**194**	P	**P**	**01 45 50.2**	**+0.2**
NWAO	**Narrogin (SRO)**	**35.78**	**194**	P	**P**	**01 45 49.8**	**-0.2**
NWAO				pmax	pmax		
	comp=Z,94nm,1.4s						
TNCH	**TengChong**	**35.93**	**312**	*e*P	**P**	**01 45 53.5**	**+1.9**
TNCH				pP	pwP	01 46 09.9	+0.2
MAJO	**Matsushiro**	**36.06**	**15**	P	**P**	**01 45 51.7**	**-0.7**
MAJO				IAmb	IAmb	01 45 53.4	
	comp=Z,17nm,0.8s						
MAJO	**Matsushiro**	**36.06**	**15**	P	**P**	**01 45 51.7**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,17nm,0.8s						
MAJO	**Matsushiro**	**36.06**	**15**	P	**P**	**01 45 51.5**	**-0.8**
MAJO				pP	**sP**	**01 46 12.4**	**-2.0**
MJAR	**Matsushiro Arr**	**36.06**	**15**	P	**P**	**01 45 51.3**	**-1.0**

	comp=Z,12nm,0.8s,baz=182,slow=9.7,SNR=21						
MJAR				PcP	**PcP**	**01 48 18.3**	**+0.8**
	comp=Z,1.8nm,0.5s,baz=174,slow=2.8,SNR=2.7						
	comp=Z,12nm,0.8s						
MJB9	**Matsu-Tunnel**	**36.06**	**15**	P	**P**	**01 45 52.7**	**+0.3**
MJB9				IAmb	IAmb	01 45 54.4	
	comp=Z,17nm,0.8s						
STKA	**Stephens Creek**	**36.23**	**159**	P	**P**	**01 45 53.2**	**-0.7**
	comp=Z,16nm,0.6s,baz=329,slow=9.4,SNR=32						
	comp=Z,16nm,0.6s						
STKA	**Stephens Creek**	**36.23**	**159**	P	**P**	**01 45 53.7**	**-0.3**
	baz=36,SNR=13						
STKA	**Stephens Creek**	**36.23**	**159**	P	**P**	**01 45 53.4**	**-0.5**
STKA	**Stephens Creek**	**36.23**	**159**	P	**P**	**01 45 53.8**	**-0.1**
STKA	**Stephens Creek**	**36.23**	**159**	*i* P	**P**	**01 45 53.6**	**-0.3**
XAN	**Xi'an**	**36.27**	**334**	P	**P**	**01 45 57.9**	**+3.7**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CD2	**Chengdu**	**36.38**	**325**	*e*P	**P**	**01 45 56.0**	**+0.7**
HTT	**Hallett**	**36.80**	**163**	P	**P**	**01 45 58.5**	**-0.3**
	baz=37,SNR=7.6						
HTT	**Hallett**	**36.80**	**163**	P	**P**	**01 45 58.6**	**-0.1**
HNS	**HongShan**	**37.20**	**344**	⇑P	P	01 46 07.1	+5.1
HNS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CMSA	**Cobar Meteorol**	**37.59**	**153**	P	**P**	**01 46 05.6**	**+0.1**
	baz=38,SNR=6.7						
CMSA	**Cobar Meteorol**	**37.59**	**153**	P	**P**	**01 46 05.6**	**+0.1**
JMM	**Marumori**	**38.03**	**18**	P	**P**	**01 46 08.6**	**-0.4**
BJT	**Baijiatuau**	**39.30**	**347**	P	**P**	**01 46 20.0**	**+0.4**
BJT				IAmb	IAmb	01 46 24.1	
	comp=Z,17nm,0.8s						
BJT	**Baijiatuau**	**39.30**	**347**	P	**P**	**01 46 20.0**	**+0.4**
BJT				pmax	pmax		
	comp=Z,17nm,0.8s						
BJT	**Baijiatuau**	**39.30**	**347**	P	**P**	**01 46 19.8**	**+0.2**
BJI	**Beijing**	**39.31**	**347**	P	**P**	**01 46 19.8**	**+0.1**
BJI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ARMA	**Armidale**	**39.70**	**146**	P	**P**	**01 46 23.5**	**+0.2**
	baz=40,SNR=16						
ARMA	**Armidale**	**39.70**	**146**	P	**P**	**01 46 24.1**	**+0.8**
ARMA				IAmb	IAmb	01 46 25.1	
	comp=Z,21nm,0.8s						
LZH	**Lanzhou**	**40.32**	**330**	*e*P	**P**	**01 46 31.3**	**+2.9**
LZH				pP	pP	01 46 41.8	-1.7
LZH				sP	sP	01 46 51.9	+1.4
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
ARPS	**Mount Arapiles**	**40.77**	**162**	P	**P**	**01 46 32.0**	**+0.1**
	baz=41,SNR=9.8						
JTM	**Tenmabayashi**	**40.81**	**16**	P	**P**	**01 46 31.3**	**-0.9**
HHC	**Hu-ho-hao-te**	**41.31**	**342**	*e*P	**P**	**01 46 40.5**	**+4.1**
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,5.3s						
CAN	**Canberra**	**42.26**	**153**	P	**P**	**01 46 44.4**	**+0.2**
CAN				IAmb	IAmb	01 47 57.0	
	comp=Z,54nm,1.3s						
CAN	**Canberra**	**42.26**	**153**	P	**P**	**01 46 44.4**	**+0.2**
CAN				pmax	pmax		
	comp=Z,54nm,1.3s						
CAN	**Canberra**	**42.26**	**153**	P	**P**	**01 46 44.9**	**+0.7**
CAN				pP	**sP**	**01 47 05.0**	**-1.3**
USRK	**Ussuriysk Ar.**	**42.43**	**5**	P	**P**	**01 46 45.6**	**+0.3**
	comp=Z,11nm,0.7s,baz=192,slow=7.1,SNR=15						
	comp=Z,11nm,0.7s						
USRK	**Ussuriysk Ar.**	**42.43**	**5**	P	**P**	**01 46 45.8**	**+0.5**
USRK	**Ussuriysk Ar.**	**42.43**	**5**	P	**P**	**01 46 45.8**	**+0.5**
USA0B	**Ussuriysk Arra**	**42.43**	**5**	P	**P**	**01 46 45.9**	**+0.6**
USA0B				IAmb	IAmb	01 46 47.0	
	comp=Z,18nm,0.9s						
USA0B	**Ussuriysk Arra**	**42.43**	**5**	P	**P**	**01 46 45.9**	**+0.6**
USA0B				pmax	pmax		
	comp=Z,18nm,0.9s						
MDJ	**Mudanjiang**	**42.68**	**3**	P	**P**	**01 46 48.9**	**+1.5**
MDJ				pmax	pmax		
	comp=Z,21nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,370nm,4.0s						
XLT	**XiLinHaoTe**	**43.03**	**348**	*e*P	**P**	**01 46 48.3**	**-2.0**
XLT				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,200nm,6.4s						
ASAJ	**Asahikawa**	**44.32**	**16**	LR	LR	02 05 01.5	
	comp=Z,61nm,19.4s,baz=149,slow=35						
DZM	**Mont Dzumac**	**45.18**	**124**	LR	LR	02 07 03.7	
	comp=Z,91nm,20.0s,baz=208,slow=37						
DZM	**Mont Dzumac**	**45.18**	**124**	P	**P**	**01 47 08.4**	**+0.5**
DZM				IAmb	IAmb	01 48 31.0	
	comp=Z,26nm,1.2s						
LIFNC	**LIFOU**	**45.29**	**122**	P	**P**	**01 47 06.7**	**-2.0**
RAMN	**Ramite**	**46.13**	**307**	*e*P	**P**	**01 47 15.4**	**-0.1**
	comp=Z,11nm,0.6s						
PALK	**Pallekele**	**46.51**	**278**	LR	LR	02 09 13.0	
	comp=Z,84nm,19.3s,baz=236,slow=39						
JIRN	**Jiri**	**46.77**	**307**	*e*P	**P**	**01 47 19.2**	**-1.5**
	comp=Z,15nm,0.5s						
GUN	**Gumba**	**47.13**	**307**	*e*P	**P**	**01 47 22.4**	**-1.0**
	comp=Z,18nm,0.5s						
KLR	**Kul'dur**	**47.41**	**4**	P	**P**	**01 47 24.6**	**-0.2**
	comp=Z,4.4nm,0.8s,baz=232,slow=6.6,SNR=16						
KLR				LR	LR	02 10 47.7	
	comp=Z,46nm,18.6s,baz=310,slow=40						
	comp=Z,4.4nm,0.8s						
KLR	**Kul'dur**	**47.41**	**4**	*ce*P	**P**	**01 47 25.4**	**+0.6**
KLR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HEH	**HeiHe**	**48.26**	**0**	*e*P	**P**	**01 47 31.6**	**+0.2**
HEH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DANN	**Dangsing**	**49.01**	**307**	*e*P	**P**	**01 47 37.2**	**-0.7**
	comp=Z,18nm,0.5s						
ULN	**Ulaanbaatar**	**49.03**	**342**	P	**P**	**01 47 37.7**	**+0.1**
ULN				IAmb	IAmb	01 47 42.9	
	comp=Z,9.6nm,0.9s						
ULN	**Ulaanbaatar**	**49.03**	**342**	*ce*P	**P**	**01 47 38.2**	**+0.6**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ULN	**Ulaanbaatar**	**49.03**	**342**	P	**P**	**01 47 38.0**	**+0.5**
ULN				pP	**sP**	**01 47 58.5**	**-1.6**
SONM	**Songino Array**	**49.21**	**342**	P	**P**	**01 47 40.0**	**+1.1**
	comp=Z,5.1nm,0.7s,baz=156,slow=8.7,SNR=23						
	comp=Z,5.1nm,0.7s						
SONM	**Songino Array**	**49.21**	**342**	P	**P**	**01 47 39.9**	**+1.0**
PYUN	**Piuthan**	**49.52**	**306**	*e*P	**P**	**01 47 41.1**	**-0.6**
	comp=Z,14nm,0.6s						
ZAK	**Zakamensk**	**52.43**	**341**	*e*P	**P**	**01 48 03.4**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MSVF	**Nonsavu**	**53.83**	**113**	LR	LR	02 10 13.4	
	comp=Z,72nm,18.9s,baz=124,slow=35						
MSVF	**Nonsavu**	**53.83**	**113**	P	**P**	**01 48 13.4**	**-0.5**
MSVF				IAmb	IAmb	01 49 37.5	
	comp=Z,43nm,1.4s						
MSVF	**Nonsavu**	**53.83**	**113**	P	**P**	**01 48 13.4**	**-0.5**
MSVF				pmax	pmax		
	comp=Z,43nm,1.5s						
MOY	**Mondy**	**54.28**	**340**	*e*P	**P**	**01 48 18.1**	**+1.5**
MOY				pmax	pmax		
	comp=Z,13nm,1.6s						
WMQ	**Urumqi**	**54.48**	**326**	*e*P	**P**	**01 48 19.4**	**+1.3**
WMQ				sP	sP	01 48 43.1	+2.4
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
BOD	**Bodaibo**	**56.80**	**352**	⇓*i*P	**P**	**01 48 34.9**	**+0.6**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.2s						
PEA0B	**Petropavlovsk-**	**57.07**	**21**	P	**P**	**01 48 36.0**	**-0.4**
PEA0B	**Petropavlovsk-**	**57.07**	**21**	P	**P**	**01 48 36.1**	**-0.4**
PEA0B				pmax	pmax		
	comp=Z,70nm,1.7s						
PETK	**Petropavlovsk-**	**57.07**	**21**	P	**P**	**01 48 36.6**	**+0.2**
	comp=Z,4.4nm,0.6s,baz=172,slow=3.2,SNR=8.9						
	comp=Z,4.4nm,0.6s						
PETK	**Petropavlovsk-**	**57.07**	**21**	P	**P**	**01 48 36.1**	**-0.3**
PETK	**Petropavlovsk-**	**57.07**	**21**	P	**P**	**01 48 36.1**	**-0.3**
DGZ	**Jazzator, Alta**	**58.41**	**331**	*i* P	**P**	**01 48 46.4**	**+0.3**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
DCZ	**Deep Cove**	**58.95**	**148**	P	**P**	**01 48 50.0**	**+0.3**
DCZ				IAmb	IAmb	01 50 28.3	
	comp=Z,24nm,1.3s						
FOZ	**Fox Glacier**	**59.19**	**145**	P	**P**	**01 48 51.1**	**-0.3**
QRZ	**Quartz Range**	**59.24**	**141**	P	**P**	**01 48 51.6**	**-0.2**
DSZ	**Denniston Nort**	**59.31**	**142**	P	**P**	**01 48 52.1**	**-0.2**
MK31	**Makanchi Array**	**59.31**	**326**	P	**P**	**01 48 52.4**	**+0.1**
MK31				IAmb	IAmb	01 48 54.2	
	comp=Z,6.1nm,0.8s						
MK31	**Makanchi Array**	**59.31**	**326**	*i* P	**P**	**01 48 52.5**	**+0.3**
MKAR	**Makanchi Array**	**59.31**	**326**	P	**P**	**01 48 52.9**	**+0.6**
	comp=Z,5.3nm,0.4s,baz=119,slow=7.2,SNR=126						
	comp=Z,5.3nm,0.4s						
MKAR	**Makanchi Array**	**59.31**	**326**	P	**P**	**01 48 52.7**	**+0.4**
MLZ	**Mavora Lakes**	**59.40**	**147**	P	**P**	**01 48 52.3**	**-0.6**
MLZ				IAmb	IAmb	01 50 22.8	
	comp=Z,57nm,1.7s						
MAKZ	**Makanchi**	**59.50**	**326**	P	**P**	**01 48 53.3**	**-0.2**
MAKZ				IAmb	IAmb	01 48 55.4	
	comp=Z,7.7nm,0.8s						
MAKZ	**Makanchi**	**59.50**	**326**	P	**P**	**01 48 53.3**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MAKZ	**Makanchi**	**59.50**	**326**	P	**P**	**01 48 54.0**	**+0.5**
MAKZ				pP	**sP**	**01 49 15.6**	**-0.6**
WKZ	**Wanaka**	**59.55**	**147**	P	**P**	**01 48 53.5**	**-0.4**
TKNZ	**Takaka Hill**	**59.63**	**141**	P	**P**	**01 48 53.7**	**-0.7**
LBZ	**Lake Benmore**	**59.92**	**146**	P	**P**	**01 48 56.0**	**-0.4**
NNZ	**Nelson**	**59.99**	**141**	P	**P**	**01 48 55.4**	**-1.5**
THZ	**Tophouse**	**60.00**	**142**	P	**P**	**01 48 55.7**	**-1.3**
THZ	**Tophouse**	**60.00**	**142**	P	**P**	**01 48 56.6**	**-0.4**
RPZ	**Rata Peaks**	**60.02**	**144**	LR	LR	02 16 57.0	
	comp=Z,112nm,18.3s,baz=236,slow=38						
RPZ	**Rata Peaks**	**60.02**	**144**	P	**P**	**01 48 56.7**	**-0.4**
RPZ				IAmb	IAmb	01 48 57.8	
	comp=Z,15nm,0.7s						
YAK	**Yakutsk**	**60.10**	**1**	*e*P	**P**	**01 48 57.6**	**+0.3**
YAK				pmax	pmax		
	comp=Z,30nm,0.8s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
WTVZ	**West Tongariro**	**60.32**	**138**	P	**P**	**01 49 00.3**	**+0.9**
WNVZ	**Wahianoa**	**60.43**	**138**	P	**P**	**01 49 00.5**	**+0.3**
MA2	**Magadan**	**60.47**	**14**	P	**P**	**01 49 00.7**	**+0.8**
MA2				IAmb	IAmb	01 49 01.8	
	comp=Z,10nm,0.9s						
MA2	**Magadan**	**60.47**	**14**	*ce*P	**P**	**01 49 00.6**	**+0.7**
MA2				pmax	pmax		
	comp=Z,12nm,1.0s						
MA2	**Magadan**	**60.47**	**14**	P	**P**	**01 49 01.0**	**+1.1**
TCW	**Tory Channel**	**60.55**	**141**	P	**P**	**01 48 59.4**	**-1.4**
ODZ	**Otahua Downs**	**60.59**	**146**	P	**P**	**01 49 00.7**	**-0.2**
ODZ				IAmb	IAmb	01 50 54.0	
	comp=Z,43nm,1.5s						
KHZ	**Kahutara**	**60.75**	**142**	P	**P**	**01 49 00.8**	**-1.3**
KHZ	**Kahutara**	**60.75**	**142**	P	**P**	**01 49 01.1**	**-1.0**
GVZ	**Greta Valley S**	**60.76**	**143**	P	**P**	**01 49 01.6**	**-0.5**
GVZ	**Greta Valley S**	**60.76**	**143**	P	**P**	**01 49 01.9**	**-0.3**
BHHZ	**Black Hill Sta**	**60.82**	**138**	P	**P**	**01 49 02.0**	**-0.8**
OGWZ	**Otaki Gorge**	**60.92**	**140**	P	**P**	**01 49 02.3**	**-0.9**
BKZ	**Black Stump Fm**	**60.95**	**138**	P	**P**	**01 49 03.0**	**-0.6**
KWHZ	**Kaweka Forest**	**61.03**	**138**	P	**P**	**01 49 03.9**	**-0.2**
BHW	**Baring Head**	**61.04**	**140**	P	**P**	**01 49 01.9**	**-2.2**
MCHZ	**McNeill Hill**	**61.23**	**138**	P	**P**	**01 49 05.6**	**+0.1**
RAHZ	**Arahi**	**61.23**	**137**	P	**P**	**01 49 05.6**	**+0.1**
AAK	**Ala-Archa**	**62.00**	**318**	P	**P**	**01 49 10.7**	**-0.1**
AAK	**Ala-Archa**	**62.00**	**318**	P	**P**	**01 49 10.7**	**-0.1**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AAK	**Ala-Archa**	**62.00**	**318**	P	**P**	**01 49 11.8**	**+1.0**
AAK				pP	**sP**	**01 49 33.4**	**-0.2**
ZAA0	**Zalesovo Array**	**62.44**	**333**	P	**P**	**01 49 11.3**	**-1.9**
ZALV	**Zalesovo Beam**	**62.44**	**333**	P	**P**	**01 49 12.7**	**-0.5**
	comp=Z,3.2nm,0.7s,baz=117,slow=5.2,SNR=14						
	comp=Z,3.2nm,0.7s						
ZALV	**Zalesovo Beam**	**62.44**	**333**	P	**P**	**01 49 11.8**	**-1.4**
ZALV	**Zalesovo Beam**	**62.44**	**333**	*i* P	**P**	**01 49 13.1**	**-0.1**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBL	**Kabul**	**62.95**	**308**	P	**P**	**01 49 17.1**	**-0.2**
KBL	**Kabul**	**62.95**	**308**	P	**P**	**01 49 17.1**	**-0.2**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GAR	**Garm**	**63.46**	**313**	P	**P**	**01 49 20.1**	**-0.4**
GAR				IAmb	IAmb	01 49 52.3	
	comp=Z,11nm,0.7s						
KURK	**Kurchatov**	**63.53**	**328**	P	**P**	**01 49 20.5**	**0.0**
KURK				IAmb	IAmb	01 49 22.2	
	comp=Z,24nm,0.6s						
KURK	**Kurchatov**	**63.53**	**328**	*ce*P	**P**	**01 49 21.2**	**+0.7**
KURK				pmax	pmax		
	comp=Z,27nm,0.8s						
KURK	**Kurchatov**	**63.53**	**328**	P	**P**	**01 49 21.2**	**+0.7**
KURK				pP	**sP**	**01 49 42.9**	**-0.6**
SEY	**Seymchan**	**63.81**	**13**	*ce*P	**P**	**01 49 21.8**	**-0.4**
SEY				pmax	pmax		
	comp=Z,13nm,1.7s						
KK31	**Karatay Array**	**64.85**	**318**	P	**P**	**01 49 29.1**	**-0.3**
KK31	**Karatay Array**	**64.85**	**318**	P	**P**	**01 49 29.2**	**-0.3**
KK31				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KKAR	**Karatay Array**	**64.85**	**318**	P	**P**	**01 49 29.4**	**0.0**
KKAR	**Karatay Array**	**64.85**	**318**	P	**P**	**01 49 29.4**	**0.0**
AMKA	**Amchitka**	**65.91**	**33**	P	**P**	**01 49 37.1**	**+1.0**
KIWB	**Kanaga Island**	**68.08**	**34**	P	**P**	**01 49 49.5**	**-0.4**
BRVK	**Borovoye**	**69.17**	**327**	P	**P**	**01 49 57.0**	**+0.5**
BRVK				IAmb	IAmb	01 50 22.1	
	comp=Z,19nm,1.1s						
BRVK	**Borovoye**	**69.17**	**327**	P	**P**	**01 49 57.1**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,19nm,1.1s						
BRVK	**Borovoye**	**69.17**	**327**	P	**P**	**01 49 56.8**	**+0.2**
BRVK				pP	**sP**	**01 50 19.4**	**-0.4**
TIXI	**Tiksi**	**69.74**	**1**	*ce*P	**P**	**01 49 59.8**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BILL	**Bilibino**	**71.31**	**15**	*i* P	**P**	**01 50 10.4**	**+1.0**
BILL				pmax	pmax		
	comp=Z,7.0nm,2.1s						
GEYT	**Alibeck**	**72.35**	**309**	P	**P**	**01 50 16.8**	**+0.5**
	comp=Z,3.1nm,0.7s,baz=124,slow=3.8,SNR=6.8						
	comp=Z,3.1nm,0.7s						
NRIK	**Noril'sk**	**72.36**	**346**	P	**P**	**01 50 15.6**	**0.0**
	comp=Z,6.6nm,0.6s,baz=130,slow=6.4,SNR=11						
	comp=Z,6.6nm,0.6s						
NRIK	**Noril'sk**	**72.36**	**346**	P	**P**	**01 50 15.7**	**+0.1**
NRIK	**Noril'sk**	**72.36**	**346**	P	**P**	**01 50 15.7**	**+0.1**
NRIK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ABKAR	**Akbulak array**	**73.84**	**321**	P	**P**	**01 50 24.2**	**-0.6**
ARU	**Arti**	**76.72**	**328**	P	**P**	**01 50 40.7**	**-0.5**
ARU	**Arti**	**76.72**	**328**	*c i*P	**P**	**01 50 40.3**	**-0.9**
ARU						01 53 28.4	
ARU				S	**S**	**02 00 21.6**	**-1.6**
ARU				SS	**SS**	**02 05 15.9**	**-4.2**
ARU				pmax	pmax		
	comp=Z,69nm,5.4s						
TNA	**Tin City**	**78.21**	**23**	P	**P**	**01 50 50.3**	**+1.0**
ANM	**Nome**	**78.87**	**24**	P	**P**	**01 50 54.0**	**+1.1**
ANM	**Nome**	**78.87**	**24**	P	**P**	**01 50 54.0**	**+1.1**
ANM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ANM	**Nome**	**78.87**	**24**	P	**P**	**01 50 54.0**	**+1.1**
	baz=250						
N16K	**Nishlik Lake**	**80.65**	**29**	P	**P**	**01 51 04.7**	**+1.9**
	baz=257						
P16K	**Nushagak River**	**80.72**	**30**	P	**P**	**01 51 05.0**	**+1.9**
	baz=258						
O16K	**Kokwok River B**	**80.79**	**30**	P	**P**	**01 51 05.0**	**+1.6**
	baz=258						
AKT	**Akhty**	**80.81**	**312**	*e*P	**P**	**01 51 06.1**	**+2.0**
AKT				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SEKA	**Sheki**	**81.18**	**311**	P	**P**	**01 51 06.0**	**0.0**
O17K	**Koliganek Bris**	**81.33**	**30**	P	**P**	**01 51 08.2**	**+2.0**
	baz=259						
VNDA	**Vanda**	**81.50**	**173**	P	**P**	**01 51 06.3**	**-0.6**
	comp=Z,3.7nm,0.9s,baz=311,slow=7.3,SNR=7.4						
	comp=Z,3.7nm,0.9s						
VNDA	**Vanda**	**81.50**	**173**	P	**P**	**01 51 06.4**	**-0.5**
VNDA				IAmb	IAmb	01 52 32.4	
	comp=Z,68nm,2.0s						
VNDA	**Vanda**	**81.50**	**173**	P	**P**	**01 51 06.4**	**-0.5**
VNDA				pmax	pmax		
	comp=Z,68nm,2.0s						
RAYN	**Ar Rayn**	**81.54**	**293**	P	**P**	**01 51 09.0**	**+0.7**
RAYN	**Ar Rayn**	**81.54**	**293**	P	**P**	**01 51 09.0**	**+0.7**
RAYN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
P18K	**Big Mountain,**	**82.19**	**30**	P	**P**	**01 51 10.7**	**-0.2**
GCSA	**Galena City Sc**	**82.43**	**25**	P	**P**	**01 51 13.4**	**+1.4**
	baz=258						
TTA	**Tatalina**	**82.45**	**27**	P	**P**	**01 51 13.3**	**+1.1**
TTA				IAmb	IAmb	01 51 14.6	
	comp=Z,11nm,1.0s						
TTA	**Tatalina**	**82.45**	**27**	P	**P**	**01 51 13.3**	**+1.1**
TTA				pmax	pmax		
	comp=Z,11nm,1.0s						
TTA	**Tatalina**	**82.45**	**27**	P	**P**	**01 51 13.8**	**+1.6**
	baz=259						
N19K	**Bonanza Creek**	**82.79**	**29**	P	**P**	**01 51 15.0**	**+0.9**
N19K				IAmb	IAmb	01 51 16.8	
	comp=Z,17nm,1.0s						
N19K	**Bonanza Creek**	**82.79**	**29**	P	**P**	**01 51 15.5**	**+1.4**
	baz=261						
L19K	**White Mountain**	**82.84**	**28**	P	**P**	**01 51 16.1**	**+1.8**
	baz=260						
M19K	**Big River Lodg**	**83.01**	**28**	P	**P**	**01 51 16.9**	**+1.8**
M19K				IAmb	IAmb	01 51 17.3	
	comp=Z,9.2nm,0.9s						
M19K	**Big River Lodg**	**83.01**	**28**	P	**P**	**01 51 17.0**	**+1.9**
	baz=261						
KDAK	**Kodiak Island**	**83.32**	**32**	P	**P**	**01 51 17.6**	**+0.8**
KDAK	**Kodiak Island**	**83.32**	**32**	P	**P**	**01 51 17.6**	**+0.8**
KDAK				pmax	pmax		
	comp=Z,244nm,1.8s						
L20K	**Farewell, AK**	**83.34**	**27**	P	**P**	**01 51 18.4**	**+1.6**
	baz=261						
K20K	**Telida**	**83.39**	**26**	P	**P**	**01 51 18.0**	**+1.0**
K20K				IAmb	IAmb	01 51 19.7	
	comp=Z,11nm,0.9s						
K20K	**Telida**	**83.39**	**26**	P	**P**	**01 51 18.4**	**+1.4**
	baz=261						
RSO	**Redoubt South**	**83.58**	**29**	P	**P**	**01 51 17.2**	**-1.1**
M20K	**Styx River**	**83.60**	**28**	P	**P**	**01 51 18.4**	**+0.2**
M20K				IAmb	IAmb	01 51 20.7	
	comp=Z,19nm,0.8s						
M20K	**Styx River**	**83.60**	**28**	P	**P**	**01 51 19.5**	**+1.3**
	baz=262						
ZEI	**Tsey**	**83.75**	**313**	*e*P	**P**	**01 51 23.6**	**+4.0**
ZEI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
A21K	**Barrow**	**83.92**	**18**	P	**P**	**01 51 20.6**	**+1.1**
A21K				IAmb	IAmb	01 51 22.0	
	comp=Z,24nm,0.8s						
A21K	**Barrow**	**83.92**	**18**	P	**P**	**01 51 21.0**	**+1.5**
	baz=258						
IMAR	**Indian Mountai**	**83.95**	**24**	P	**P**	**01 51 20.8**	**+0.9**
G21K	**Allakaket**	**84.13**	**23**	P	**P**	**01 51 22.5**	**+1.7**
	baz=261						
PPLA	**Purkeypile**	**84.17**	**27**	P	**P**	**01 51 21.9**	**+0.7**
PPLA				IAmb	IAmb	01 51 27.4	
	comp=Z,36nm,1.6s						
F21K	**Alatna River**	**84.25**	**23**	P	**P**	**01 51 23.0**	**+1.6**
	baz=261						
H21K	**Melozitna Rive**	**84.28**	**24**	P	**P**	**01 51 22.7**	**+1.2**
H21K				IAmb	IAmb	01 51 23.4	
	comp=Z,30nm,1.9s						
H21K	**Melozitna Rive**	**84.28**	**24**	P	**P**	**01 51 23.3**	**+1.7**
	baz=262						
CAST	**Castle Rocks**	**84.28**	**27**	P	**P**	**01 51 22.5**	**+0.8**
SKT	**Skwentna**	**84.36**	**28**	P	**P**	**01 51 21.3**	**-0.7**
SKT				IAmb	IAmb	01 51 23.2	
	comp=Z,12nm,0.8s						
SKT	**Skwentna**	**84.36**	**28**	P	**P**	**01 51 22.7**	**+0.7**
	baz=263						
KBZ	**Khabaz**	**84.53**	**314**	P	**P**	**01 51 23.1**	**-0.1**
	comp=Z,2.0nm,1.0s,baz=91,slow=9.8,SNR=2.1						
	comp=Z,2.0nm,1.0s						
KBZ	**Khabaz**	**84.53**	**314**	*i* P	**P**	**01 51 22.6**	**-0.6**
KBZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
I21K	**Tanana**	**84.56**	**25**	P	**P**	**01 51 23.8**	**+0.9**
I21K				IAmb	IAmb	01 51 33.7	
	comp=Z,27nm,1.7s						
I21K	**Tanana**	**84.56**	**25**	P	**P**	**01 51 24.3**	**+1.4**
	baz=262						
KIV	**Kislovodsk**	**84.69**	**314**	*e*P	**P**	**01 51 22.7**	**-1.5**
KIV				pmax	pmax		
	comp=Z,2.0nm,1.1s						
F22K	**John River**	**84.79**	**22**	P	**P**	**01 51 25.9**	**+1.8**
	baz=262						
KTH	**Kantishna Hill**	**84.82**	**26**	P	**P**	**01 51 24.3**	**0.0**
KTH				IAmb	IAmb	01 53 21.1	
	comp=Z,37nm,1.8s						
BPAW	**Bear Paw Mtn.**	**84.85**	**26**	P	**P**	**01 51 24.9**	**+0.4**
BPAW				IAmb	IAmb	01 54 27.1	
	comp=Z,38nm,2.0s						
BPAW	**Bear Paw Mtn.**	**84.85**	**26**	P	**P**	**01 51 25.5**	**+1.0**
	baz=264						
H22K	**Ishtalitna Cre**	**84.90**	**24**	P	**P**	**01 51 26.2**	**+1.6**
	baz=263						
G22K	**Bettles**	**84.97**	**23**	P	**P**	**01 51 26.1**	**+1.1**
	baz=263						
GURO	**Guroymak-BITLI**	**84.98**	**308**	P	**P**	**01 51 25.5**	**-0.3**
MLY	**Manley**	**85.06**	**25**	P	**P**	**01 51 26.4**	**+0.9**
	baz=264						
COLD	**Coldfoot**	**85.52**	**23**	P	**P**	**01 51 28.5**	**+0.8**
COLD				IAmb	IAmb	01 51 30.8	
	comp=Z,8.3nm,0.7s						
COLD	**Coldfoot**	**85.52**	**23**	P	**P**	**01 51 28.8**	**+1.1**
	baz=264						
D23K	**Nanushuk River**	**85.53**	**21**	P	**P**	**01 51 29.4**	**+1.7**
	baz=263						
G23K	**Bananza Creek**	**85.53**	**23**	P	**P**	**01 51 28.9**	**+1.1**
	baz=264						
H23K	**Yukon River**	**85.64**	**24**	P	**P**	**01 51 29.0**	**+0.6**
H23K	**Yukon River**	**85.64**	**24**	P	**P**	**01 51 29.6**	**+1.3**
	baz=265						
I23K	**Minto, Yukon-K**	**85.66**	**25**	P	**P**	**01 51 28.8**	**+0.4**
I23K				IAmb	IAmb	01 54 18.5	
	comp=Z,24nm,1.8s						
I23K	**Minto, Yukon-K**	**85.66**	**25**	P	**P**	**01 51 29.3**	**+1.0**
	baz=265						
MCK	**McKinley**	**85.72**	**26**	P	**P**	**01 51 28.5**	**-0.3**
MCK				IAmb	IAmb	01 51 53.6	
	comp=Z,28nm,1.8s						
MCK	**McKinley**	**85.72**	**26**	P	**P**	**01 51 28.5**	**-0.3**
MCK				pmax	pmax		
	comp=Z,28nm,1.8s						
MCK	**McKinley**	**85.72**	**26**	P	**P**	**01 51 29.0**	**+0.2**
	baz=265						
NEA2	**Nenana**	**85.73**	**25**	P	**P**	**01 51 28.7**	**-0.1**
NEA2				IAmb	IAmb	01 52 21.8	
	comp=Z,6.4nm,0.5s						
KNK	**Knik Glacier**	**85.77**	**29**	P	**P**	**01 51 29.6**	**+0.5**
KNK	**Knik Glacier**	**85.77**	**29**	P	**P**	**01 51 30.1**	**+1.1**
	baz=266						
E23K	**Chandalar**	**85.82**	**22**	P	**P**	**01 51 30.4**	**+1.1**
	baz=264						
M23K	**Glacier View**	**86.14**	**28**	P	**P**	**01 51 31.9**	**+1.0**
	baz=267						
H24K	**Noodor Dome**	**86.32**	**24**	P	**P**	**01 51 32.3**	**+0.6**
H24K	**Noodor Dome**	**86.32**	**24**	P	**P**	**01 51 32.6**	**+0.8**
	baz=266						
F24K	**Squaw Lake**	**86.43**	**23**	P	**P**	**01 51 33.6**	**+1.3**
	baz=266						
G24K	**Hadweenzic Riv**	**86.54**	**23**	P	**P**	**01 51 34.0**	**+1.3**
	baz=267						
ILAR	**Eielson Array**	**86.68**	**25**	P	**P**	**01 51 31.4**	**-2.0**
	comp=Z,1.1nm,0.7s,baz=248,slow=5.0,SNR=14						
	comp=Z,1.1nm,0.7s						
D25K	**Kavik River**	**87.09**	**21**	P	**P**	**01 51 35.8**	**+0.4**
	baz=267						
F25K	**Christian Rive**	**87.30**	**23**	P	**P**	**01 51 37.7**	**+1.2**
	baz=268						
E25K	**Arctic Village**	**87.34**	**22**	P	**P**	**01 51 37.8**	**+1.2**
	baz=268						
RIDG	**Independent Ri**	**87.54**	**26**	P	**P**	**01 51 37.3**	**-0.4**
RIDG				IAmb	IAmb	01 51 38.3	
	comp=Z,13nm,1.0s						
RIDG	**Independent Ri**	**87.54**	**26**	P	**P**	**01 51 37.8**	**+0.1**
	baz=269						
C27K	**Jago River**	**88.04**	**21**	P	**P**	**01 51 41.2**	**+1.2**
	baz=270						
K27K	**Chicken**	**88.76**	**26**	P	**P**	**01 51 43.9**	**+0.5**
K27K				IAmb	IAmb	01 51 45.5	
	comp=Z,14nm,1.1s						
K27K	**Chicken**	**88.76**	**26**	P	**P**	**01 51 44.6**	**+1.2**
	baz=272						
OBN	**Obninsk**	**88.81**	**325**	*i* P	**P**	**01 51 46.8**	**+3.0**
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
E27K	**Coleen River**	**88.83**	**22**	P	**P**	**01 51 44.6**	**+0.9**
	baz=272						

L27K	Beaver Creek,	88.90	27	P	P	01 51 44.5	+0.4
L27K	Beaver Creek,	88.90	27	P	P	01 51 45.1	+0.9
	baz=272						
I27K	Kandik River	88.91	25	P	P	01 51 45.2	+1.0
	baz=272						
DAWY	Dawson	89.94	26	P	P	01 51 49.6	+0.6
	baz=274						
L29M	L29M	90.58	27	P	P	01 51 53.6	+1.6
	baz=275						
K29M	Barlow Dome	90.78	26	P	P	01 51 53.9	+0.9
	baz=276						
EPYK	Eagle Plains	90.85	24	P	P	01 51 53.1	-0.1
	baz=276						
M30M	Minto, Yukon	91.24	27	P	P	01 51 56.4	+1.3
	baz=276						
BRTR	Keskin Array B	91.49	310	LR	LR	02 40 13.1	
	comp=Z,203nm,18.3s,baz=335,slow=40						
INK	Inuvik	91.81	22	P	P	01 51 56.6	-0.8
	comp=Z,1.2nm,0.6s,baz=268,slow=4.5,SNR=7.9						
	comp=Z,1.2nm,0.6s						
F31M	Tsiigehtchic	91.87	22	P	P	01 51 57.4	-0.4
	baz=279						
ARCES	ARCESS Array B	92.35	340	P	P	01 51 58.7	-1.4
	comp=Z,2.6nm,0.8s,baz=83,slow=7.4,SNR=3.9						
	comp=Z,2.6nm,0.8s						
FARO	Faro, Yukon	92.88	28	P	P	01 52 03.6	+0.9
FARO				IAmb	IAmb	01 52 04.3	
	comp=Z,15nm,0.9s						
FARO	Faro, Yukon	92.88	28	P	P	01 52 03.7	+1.0
	baz=279						
N32M	Quiet Lake	93.18	29	P	P	01 52 05.3	+1.2
	baz=280						
FINES	FINESS Array B	93.67	332	P	P	01 52 04.7	-1.5
	comp=Z,6.3nm,1.1s,baz=63,slow=6.7,SNR=3.8						
	comp=Z,6.3nm,1.1s						
C36M	Paulatuk	94.89	20	P	P	01 52 10.7	-0.9
C36M				IAmb	IAmb	01 52 12.1	
	comp=Z,6.5nm,1.0s						
C36M	Paulatuk	94.89	20	P	P	01 52 11.5	-0.2
	baz=288						
WTLY	Watson Lake, Y	95.45	29	P	P	01 52 15.8	+1.3
	baz=283						
YKA	Yellowknife Ar	101.09	25	P	Pdif	01 52 38.8	-0.9
	comp=Z,0.7nm,0.8s,baz=293,slow=4.5,SNR=7.8						
ECSD	EROS Data Cent	120.15	35	P	PKPdf	01 57 40.7	-0.2
	baz=307						
MNTX	Cornudas Mount	120.19	51	P	PKiKP	01 57 42.0	+0.6
	baz=294						
SCHQ	Schefferville	122.39	9	PKP	PKPdf	01 57 44.6	-0.3
	comp=Z,2.6nm,0.5s,baz=320,slow=2.4,SNR=12						
TXAR	Lajitas Array	122.49	53	PKP	PKPdf	01 57 45.7	-0.2
	comp=Z,1.1nm,0.7s,baz=270,slow=0.8,SNR=16						
TORD	Torodi Ar. Bea	123.81	287	PKP	PKPdf	01 57 48.1	-0.5
	comp=Z,2.0nm,0.6s,baz=64,slow=2.0,SNR=15						
JCT	Junction City	125.03	50	P	PKiKP	01 57 51.4	+0.4
	baz=297						
S39A	Bolivar	125.79	39		PKPdf	01 57 51.3	-0.6
PLCA	Paso Flores	138.11	160	PKP	PKPdf	01 58 15.9	+0.7
	comp=Z,1.6nm,0.6s,baz=219,slow=1.0,SNR=6.3						
MT13	San Alfonso	144.32	155	PKPdf	PKPbc	01 58 25.0	0.0
BOAB	BOACO BROADBAN	144.54	66	PKPdf	PKPab	01 58 24.9	-0.8
CFA	Coronel Fontan	147.03	156	PKPbc	PKPdf	01 58 31.7	+0.6
	comp=Z,5.4nm,0.6s,baz=237,slow=4.6,SNR=15						
CO01	Juntas del Tor	147.60	151		PKPdf	01 58 30.0	-2.4
AC05	El Transito	148.45	150	PKPbc	PKPdf	01 58 35.0	+1.3
CPUP	Villa Florida	155.26	171	PKPbc	PKPdf	01 58 52.5	+8.7
	comp=Z,2.7nm,1.0s,baz=198,slow=6.4,SNR=4.1						
SIV	San Ignacio	163.79	151	PKP	PKPdf	01 58 53.7	-0.1
	comp=Z,1.2nm,0.8s,baz=259,slow=1.9,SNR=6.8						
SIV				PKPab	PKPab	01 59 46.0	-0.2
	comp=Z,1.2nm,0.7s,baz=192,slow=3.5,SNR=6.2						
BDFB	Brasilia	165.43	199	PKPab	PKPab	01 59 53.6	+0.2
	comp=Z,1.9nm,0.8s,baz=199,slow=7.0,SNR=3.5						

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*NOU **15** 01:57:57.9, 40°.78S×174°.80E, h43^{km}, MLv3.4/7, Cook Strait, New Zealand*

*WEL **15** 01:57:57.5±0.4, 41°S±4°×17°5E±°, h29^{km}±4^{km}, M3.3/21, ML3.6/21, MLv3.3/21, Error ellipse: s-maj=0.0km s-min=0.0km az=161.4, confirmed*

ISC 15 01:57:58.1±1.3, **40°.75S**±0°.03×**174°.75E**±0°.03, **h51**^{km}±9^{km}, **n92, σ0^{s}.95**/102, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIW	Kapiti Island	0.16	132	P	Pn	01 58 05.8	-0.6
KIW				S	Sn	01 58 11.7	-0.6
OGWZ	Otaki Gorge	0.33	102	P	Pn	01 58 07.4	-0.1
OGWZ				S	Sn	01 58 14.3	0.0
CAW	Cannon Point	0.43	146	P	Pn	01 58 08.8	+0.2
CAW				S	Sn	01 58 17.6	+1.4
WEL	Wellington	0.53	179	P	Pn	01 58 10.2	+0.3
SNZO	South Karori	0.56	184	P	Pn	01 58 10.4	+0.3
TCW	Tory Channel	0.58	218	P	Pn	01 58 10.2	-0.2
TCW				S	Sn	01 58 19.2	-0.1
HOWZ	Holdsworth Sta	0.60	104	P	Pn	01 58 10.5	-0.1
DUWZ	D'Urville Isla	0.63	265	P	Pn	01 58 10.2	-0.9
DUWZ				S	Sn	01 58 19.7	-0.7
MRZ	Mangatainoka R	0.64	82	P	Pn	01 58 10.8	-0.3
MRZ				S	Sn	01 58 21.4	+0.9
MTW	Mount Morrison	0.70	126	P	Pn	01 58 11.7	-0.2
MTW				S	Sn	01 58 24.3	+2.4
PAWZ	Paruwai Farm	0.81	141	P	Pn	01 58 13.2	-0.2
POWZ	Post Office Ro	0.85	65	P	Pn	01 58 13.4	-0.5
TIWZ	Tintock	0.86	92	P	Pn	01 58 13.6	-0.5
TIWZ				S	Sn	01 58 25.7	0.0
PLWZ	Palliser	0.90	155	P	Pn	01 58 14.3	-0.3
TUWZ	Tuamarina	0.91	222	P	Pn	01 58 15.0	+0.3
TUWZ				S	Sn	01 58 28.0	+1.2
TMWZ	Te Maipa	0.93	113	P	Pn	01 58 15.9	+0.9
PRWZ	Pori Road	0.95	78	P	Pn	01 58 15.0	-0.2
PRWZ				S	Sn	01 58 28.5	+0.8
TRWZ	Traveller	0.96	133	P	Pn	01 58 16.5	+1.2
WAZ	Wanganui	1.01	10	P	Pn	01 58 16.0	-0.1
CMWZ	Cape Campbell	1.07	202	P	Pn	01 58 18.8	+2.0
NNZ	Nelson	1.14	245	P	Pn	01 58 17.8	+0.1
BFZ	Birch Farm	1.14	87	P	Pn	01 58 17.1	-0.6
BFZ	Birch Farm	1.14	87	P	Pn	01 58 16.9	-0.8
TSZ	Takapari Road	1.16	54	P	Pn	01 58 17.3	-0.6
BSWZ	Blackbirch Sta	1.17	214	P	Pn	01 58 18.5	+0.4
DVHZ	Dannevirke	1.17	68	P	Pn	01 58 17.1	-1.1
LREZ	Lake Rotokare	1.32	348	P	Pn	01 58 20.1	0.0
TKNZ	Takaka Hill	1.39	258	P	Pn	01 58 21.1	0.0
PNHZ	Pukenui	1.39	53	P	Pn	01 58 20.0	-1.1
WPHZ	Waipukurau	1.46	63	P	Pn	01 58 21.0	-1.1
NMEZ	Namu Road	1.50	333	P	Pn	01 58 23.0	+0.5
PRHZ	Porangahau	1.52	72	P	Pn	01 58 21.8	-1.0
PKVZ	Pokaka	1.53	18	P	Pn	01 58 23.2	+0.1
MOVZ	Moawhango	1.55	30	P	Pn	01 58 22.7	-0.6
KHEZ	Kahui Hut	1.56	339	P	Pn	01 58 23.9	+0.4
KHEZ	Kahui Hut	1.56	339	P	Pn	01 58 23.8	+0.2
NEZ	North Egmont	1.56	341	P	Pn	01 58 23.7	+0.2
WNVZ	Wahianoa	1.56	25	P	Pn	01 58 23.8	+0.1
TRVZ	Turoa	1.57	23	P	Pn	01 58 22.8	-1.1
DRZ	Dome Shelter	1.60	23	P	Pn	01 58 24.9	+0.6
WHVZ	Whangaehu Hut	1.60	24	P	Pn	01 58 24.4	+0.2
BHHZ	Black Hill Sta	1.61	39	P	Pn	01 58 23.9	-0.4
FWVZ	Far West T-bar	1.62	23	P	Pn	01 58 24.5	+0.1
DREZ	Durham Road	1.62	345	P	Pn	01 58 24.9	+0.7
VRZ	Vera Road	1.63	0	P	Pn	01 58 24.2	-0.2
NBEZ	Newall Road No	1.63	335	P	Pn	01 58 24.7	+0.3
TUVZ	Tukino	1.64	25	P	Pn	01 58 24.8	+0.2
MRNZ	Matariki Terra	1.64	246	P	Pn	01 58 24.9	+0.4
PKE	Pukeiti	1.66	339	P	Pn	01 58 24.7	-0.2
QRZ	Quartz Range	1.69	267	P	Pn	01 58 24.8	-0.4
QRZ	Quartz Range	1.69	267	P	Pn	01 58 24.6	-0.6
NGZ	Ngauruhoe	1.71	23	P	Pn	01 58 26.1	+0.5
SNVZ	South Ngauruho	1.71	24	P	Pn	01 58 25.7	+0.1
THZ	Tophouse	1.72	233	P	Pn	01 58 26.0	+0.4
OTVZ	Oturere	1.74	24	P	Pn	01 58 26.7	+0.7
NNVZ	North Ngauruho	1.75	23	P	Pn	01 58 26.5	+0.3
NNVZ				P	Pn	01 58 26.5	+0.3
WTVZ	West Tongariro	1.76	22	P	Pn	01 58 26.4	+0.1
TWVZ	Taurewa	1.76	18	P	Pn	01 58 25.6	-0.7
TMVZ	Te Maari	1.79	24	P	Pn	01 58 27.1	+0.4
KRVZ	Karewarewa	1.79	23	P	Pn	01 58 27.1	+0.4
NTVZ	North Tongarir	1.80	24	P	Pn	01 58 27.6	+0.8
KWHZ	Kaweka Forest	1.84	45	P	Pn	01 58 26.2	-1.2
KAHZ	Kahuranaki	1.89	60	P	Pn	01 58 26.6	-1.4
KHZ	Kahutara	1.90	208	P	Pn	01 58 28.0	0.0
KHZ	Kahutara	1.90	208	P	Pn	01 58 27.7	-0.2
KATZ	Kakaramea	1.92	23	P	Pn	01 58 29.0	+0.6
RITZ	Rihia Road	1.97	26	P	Pn	01 58 30.8	+1.7
MCHZ	McNeill Hill	1.98	49	P	Pn	01 58 34.4	+5.2
RATZ	Rangitukua	2.04	23	P	Pn	01 58 31.4	+1.4
BKZ	Black Stump Fm	2.07	41	P	Pn	01 58 29.3	-1.2
BKZ	Black Stump Fm	2.07	41	P	Pn	01 58 29.1	-1.4
HIZ	Hauiti	2.24	2	P	Pn	01 58 33.5	+0.8
HIZ	Hauiti	2.24	2	P	Pn	01 58 33.2	+0.5
NMHZ	Naumai	2.29	44	P	Pn	01 58 32.2	-1.2
DSZ	Denniston Nort	2.43	245	P	Pn	01 58 35.2	-0.2
MTHZ	Maungataniwha	2.49	41	P	Pn	01 58 34.3	-1.8
MTHZ				P	Pn	01 58 34.4	-1.8
TLZ	Tolley Road	2.50	14	P	Pn	01 58 36.3	0.0
GVZ	Greta Valley S	2.56	210	P	Pn	01 58 36.2	-0.9
LTZ	Lake Taylor	2.75	222	P	Pn	01 58 39.1	-0.6
TOZ	Tahuroa Road	3.07	11	P	Pn	01 58 43.7	-0.4
URZ	Urewera	3.09	37	P	Pn	01 58 47.2	+2.9
INZ	Inchbonnie	3.16	230	P	Pn	01 58 44.7	-0.7
MWZ	Matawai	3.23	43	P	Pn	01 58 52.4	+6.0
MQZ	McQueen's Vall	3.34	207	P	Pn	01 58 45.1	-2.6
AKCZ	Akaroa Harbour	3.40	203	P	Pn	01 58 47.2	-1.5
MHCZ	Mount Hutt	3.65	219	P	Pn	01 58 50.4	-1.6
WVZ	Waitaha Valley	3.79	231	P	Pn	01 58 53.5	-0.4
WIAZ	Waiheke Island	3.96	4	P	Pn	01 58 56.0	-0.3
GCSZ	Gaunt Creek Bo	4.17	231	P	Pn	01 59 01.6	+2.4
TMZ	Timaru	4.56	216	P	Pn	01 59 03.0	-1.6
LBZ	Lake Benmore	4.96	221	P	Pn	01 59 08.9	-1.1
JCZ	Jackson Bay	5.52	231	P	Pn	01 59 16.0	-1.8

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*IDC **15** 01:59:07.4±0.9, 6°.85N×73°.06W, h153^{km}±18^{km}, mb2.9/2, mbtmp3.6/4, Error ellipse: s-maj=50.6km s-min=8.8km az=132.0*

*RSNC **15** 01:59:09.2±1.2, 6°.81N×73°.15W, h145^{km}±5^{km}, ML3.4, Mw3.7*

ISC 15 01:59:07.2±0.9, **6°.81N**±0°.04×**73°.10W**±0°.04, **h157**^{km}±6^{km}, **n28, σ1^{s}.62**/53, **2C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.23	201	⇓*e*P	Pn	01 59 28.7	-0.1
BARC				*e*S	Sn	01 59 44.1	-1.1
BARC				*i*		01 59 46.6	
	comp=Z,818nm,0.3s						
PAMC	Pamplona, Colo	0.66	37	*e*P	Pn	01 59 31.6	+0.7
PAMC				*e*S	Sn	01 59 48.4	-0.5
PAMC				*i*		01 59 52.0	
	comp=Z,325nm,0.5s						
BRRC	Barranca, Sant	0.68	296	⇑*i*P	Pn	01 59 30.5	+0.2
BRRC				*e*S	Sn	01 59 47.4	-0.7
BRRC				*i*		01 59 51.6	
	comp=Z,369nm,0.3s						
RUSC	La Rusia	0.91	179	⇓*i*P	Pn	01 59 32.6	0.0
RUSC				*e*S	Sn	01 59 51.4	-0.6
RUSC				*i*		01 59 52.8	
	comp=Z,226nm,0.3s						
TAMC	Tame, Arauca	1.35	106	⇑*i*P	Pn	01 59 37.2	+1.2
TAMC				*e*S	Sn	01 59 58.6	+0.7
TAMC				*i*		02 00 01.3	
	comp=Z,121nm,0.2s						
PTBC	PUERTO BERRIO,	1.37	259	*e*P	Pn	01 59 35.3	-0.8
PTBC				*e*S	Sn	01 59 56.4	-1.8
PTBC				*i*		02 00 02.9	
	comp=Z,235nm,0.5s						
SPBC	San Pablo de B	1.50	220	*e*P	Pn	01 59 37.6	+0.1
SPBC				*e*S	Sn	02 00 00.3	-0.4
SPBC				*i*		02 00 07.6	
	comp=Z,401nm,0.2s						
ZARC	Zaragoza, Cauc	1.87	291	*e*P	Pn	01 59 41.4	0.0
ZARC				*e*S	Sn	02 00 05.9	-1.7
ZARC				*i*		02 00 11.9	
	comp=Z,318nm,0.4s						
NORC	Norcasia	2.15	235	*e*P	Pn	01 59 44.8	+0.2
NORC				*e*S	Sn	02 00 12.8	-0.7
NORC				*i*		02 00 22.3	
	comp=Z,170nm,0.4s						
CHIC	Chingaza	2.25	196	*e*P	Pn	01 59 46.9	+0.7
CHIC				*e*S	Sn	02 00 15.5	-0.8
CHIC				*i*		02 00 21.5	
	comp=Z,146nm,0.3s						
ROSC	El Rosal	2.30	212	P	Pn	01 59 48.5	+1.7
	comp=Z,96nm,0.4s,baz=80,slow=17,SNR=158						
ROSC				S	Sn	02 00 18.1	+0.9
	comp=Z,86nm,0.3s,baz=41,slow=19,SNR=5.4						
ROSC	El Rosal	2.30	212	*e*P	Pn	01 59 48.4	+1.7
ROSC				*e*S	Sn	02 00 16.6	-0.6
HELC	Santa Helena	2.49	256	*e*P	Pn	01 59 49.4	+0.4
HELC				*e*S	Sn	02 00 19.2	-1.9
HELC				*i*		02 00 26.8	
	comp=Z,122nm,0.3s						
VILC	Villavicencio,	2.74	192	*e*P	Pn	01 59 52.1	+0.2
VILC				*e*S	Sn	02 00 26.4	-0.1
VILC				*i*		02 00 36.4	
	comp=Z,251nm,0.4s						
GUY2C	Guyana, Caldas	2.75	235	*e*P	Pn	01 59 52.6	+0.4
GUY2C				*e*S	Sn	02 00 31.0	+4.0
GUY2C				IAML		02 00 35.1	
	comp=Z,181nm,0.6s						
PTGC	Puerto Gaitan,	2.77	160	⇓*i*P	Pn	01 59 51.9	-0.2
PTGC				*e*S	Sn	02 00 23.7	-3.0
PTGC				*i*		02 00 26.8	
	comp=Z,66nm,0.6s						
CBOC	Ciudad Bolivar	3.04	252	*e*P	Pn	01 59 56.4	+0.8
CBOC				*e*S	Sn	02 00 33.4	+0.4
CBOC				*i*		02 00 41.9	
	comp=Z,38nm,0.4s						
DBBC	Dabeiba	3.10	274	*e*P	Pn	01 59 56.1	-0.1
DBBC				*e*S	Sn	02 00 32.4	-1.7
DBBC				*i*		02 00 34.2	
	comp=Z,66nm,0.4s						
SDV	Santo Domingo	3.20	50	P	Pn	01 59 57.6	0.0
	comp=Z,69nm,0.3s,baz=232,slow=11,SNR=127						
SDV				S	Sn	02 00 35.4	-1.3
	comp=Z,24nm,0.5s,baz=273,slow=19,SNR=7.0						
ANIL	Santa Ana	3.25	225	*e*P	Pn	01 59 59.6	+1.2
ANIL				*e*S	Sn	02 00 40.2	+2.3
ORTC	Ortega, Tolima	3.59	217	*e*P	Pn	02 00 03.0	+0.5
ORTC				*e*S	Sn	02 00 46.2	+0.9
ORTC				*i*		02 00 50.1	
	comp=Z,102nm,0.2s						
APAC	Apartado, Choc	3.62	288	*e*P	Pn	02 00 02.6	-0.1
APAC				*e*S	Sn	02 00 43.7	-2.3
YOTC	Yotoco, Valle	4.28	229	*e*P	Pn	02 00 11.3	-0.2
YOTC				*e*S	Sn	02 01 03.0	+1.4
MACC	Macarena, Meta	4.69	189	*e*P	Pn	02 00 16.1	-0.7
MACC				*e*S	Sn	02 01 08.0	-3.1
BETC	Betania	4.72	210	*e*P	Pn	02 00 16.0	-1.2
BETC				*e*S	Sn	02 01 05.0	-6.8
BETC				*i*		02 01 20.9	
	comp=Z,26nm,0.5s						
TXAR	Lajitas Array	36.49	312	P	P	02 05 58.2	+0.6
	comp=Z,0.1nm,0.4s,baz=133,slow=9.2,SNR=3.8						
	comp=Z,0.1nm,0.4s						
YKA	Yellowknife Ar	63.28	340	P	P	02 09 19.3	+0.4
	comp=Z,0.4nm,0.5s,baz=134,slow=6.9,SNR=8.0						
	comp=Z,0.4nm,0.5s						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPbc	02 18 41.5	+0.6
	comp=Z,0.2nm,0.7s,baz=104,slow=3.2,SNR=1.1						

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*GCG **15** 02:04:35.1±0.7, 13°.70N×92°.02W, h66^{km}±139^{km}, MD3.7*

*IDC **15** 02:04:39.8±7.1, 15°.56N×91°.34W, h0^{km}, mb3.2/2, mbtmp3.1/4, ML3.2/2, MS3.0/1, Error ellipse: s-maj=155.9km s-min=29.9km az=11.0*

*SNET **15** 02:04:40.9±0.7, 13°.88N×91°.59W, h13^{km}±999^{km}, ML3.6*

ISC 15 02:04:35.6±2.1, **13°.8N**±0°.2×**92°.06W**±0°.09, **h46**^{km}±22^{km}, **n19, σ1^{s}.74**/22, **Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SULM	Suchitepequez,	0.71	42	*e*P	Pn	02 04 50.2	+0.8
FUG	Fuego 3	1.36	60	*e*P	Pn	02 04 58.2	-0.1
PCG	Pacaya	1.54	66	*e*P	Pn	02 05 01.6	+0.8
NBG	Las Nubes	1.85	64	*e*P	Pn	02 05 06.8	+1.7
NBG				*e*S	Sn	02 05 29.6	+2.2
NUBE	Las Nubes	2.22	86	*e*P	Pn	02 05 10.3	+0.2
NUBE				*e*S	Sn	02 05 33.8	-2.6
SBLS	San Blas	2.37	88	*e*P	Pn	02 05 13.9	+1.7
JAYA	Jayaque - finc	2.54	92	*e*P	Pn	02 05 14.8	+0.3
JAYA				*e*S	Sn	02 05 42.1	-2.3
JAYA				IAML		02 05 50.6	
	comp=Z,602nm,0.2s						
PMON	Piamonte	2.67	91	*e*P	Pn	02 05 17.3	+1.0
LFRS	El Faro	2.92	93	*e*P	Pn	02 05 21.1	+1.4
LFRS				*e*S	Sn	02 05 52.2	-1.4
SJTE	Alcalda de S	2.97	93	*e*P	Pn	02 05 21.2	+0.8
SJTE				*e*S	Sn	02 05 52.9	-1.9
COEG	Centro de Oper	3.10	92	IAML		02 06 13.8	
	comp=Z,177nm,0.3s						
SCLA	Alcaldia de Sa	3.24	91	*e*P	Pn	02 05 25.6	+1.6
PACA	Pacayal	3.65	94	IAML		02 06 37.5	
	comp=Z,747nm,0.3s						
CNCH	Conchagua	4.14	96	*e*P	Pn	02 05 38.5	+2.1
CMIG	Matias Romero	4.28	321	Pn	Pn	02 05 39.0	+0.9
	comp=Z,1.0nm,0.3s,baz=141,slow=11,SNR=2.7						
CMIG				Sn	Sn	02 06 25.2	-1.7
	comp=Z,3.7nm,0.3s,baz=126,slow=19,SNR=5.9						
CMIG				Lg	Lg	02 06 37.3	
	comp=Z,7.6nm,0.3s,baz=278,slow=20,SNR=6.6						
	comp=Z,2.6nm,0.3s						
JTS	Las Juntas de	7.77	116	LR	LR	02 09 53.3	
	comp=Z,84nm,18.1s,baz=94,slow=38						
TXAR	Lajitas Array	18.85	327	P	P	02 08 50.6	-1.3
	baz=156,slow=14,SNR=3.2						
	comp=Z,0.1nm,0.6s						
NVAR	Mina Array Bea	33.81	321	P	P	02 11 16.0	+2.4
	comp=Z,0.1nm,0.3s,baz=121,slow=8.5,SNR=2.5						
	comp=Z,0.1nm,0.3s						
YKA	Yellowknife Ar	51.23	347	P	P	02 13 32.6	-1.7
	comp=Z,0.2nm,0.6s,baz=139,slow=7.9,SNR=2.5						
	comp=Z,0.2nm,0.6s						

ROM 15 02:12:58.5±0.0, **42°.684N**±0°.003×**13°.185E**±0°.002, **h12**^{km}, **ML1.1**/5, **2C-2D, Error ellipse: s-maj=0.2km s-min=0.1km az=12.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1218	Civita (PG)	0.05	255	P	Pg	02 13 01.1	+0.3
T1218				S	Sg	02 13 02.8	+0.2
T1218				AML	AML		
	comp=E,388µm,0.4s						
T1218				AML	AML		
	comp=E,336µm,0.4s						
T1218				AML	AML		
	comp=N,561µm,0.2s						
T1218				AML	AML		
	comp=E,387µm,0.4s						
T1218				AML	AML		
	comp=E,336µm,0.4s						
T1218				AML	AML		
	comp=N,557µm,0.2s						
T1218				AML	AML		
	comp=N,561µm,0.2s						
T1218				AML	AML		
	comp=E,387µm,1.6s						
T1218				AML	AML		
	comp=E,336µm,1.6s						
T1214	Arquata del Tr	0.08	13	P	Pg	02 13 01.4	+0.2
T1214				S	Sg	02 13 03.3	+0.2
SMA1	SAN MARTINO	0.12	116	P	Pg	02 13 02.2	+0.5
SMA1				AML	AML		
	comp=N,119µm,0.2s						
SMA1				AML	AML		
	comp=E,150µm,0.2s						
T1212	Cascia, Frazio	0.12	303	⇑P	Pg	02 13 02.1	+0.4
T1212				S	Sg	02 13 04.4	+0.4
T1245	Castelsantange	0.17	1	P	Pg	02 13 02.9	+0.4
T1245				AML	AML		
	comp=E,83µm,1.3s						
T1245				AML	AML		
	comp=N,95µm,1.2s						
T1245				AML	AML		
	comp=E,83µm,1.3s						
T1245				AML	AML		
	comp=E,83µm,0.7s						
T1245				AML	AML		
	comp=N,95µm,0.8s						
RM33	Pellescritta (	0.18	173	P	Pg	02 13 02.9	+0.5
RM33				S	Sg	02 13 06.0	+0.8
RM33				AML	AML		
	comp=N,52µm,0.2s						
RM33				AML	AML		
	comp=E,35µm,1.5s						
RM33				AML	AML		
	comp=E,35µm,0.5s						
T1217	Poggiodomo (PG	0.19	279	⇑P	Pg	02 13 03.1	+0.5
MC2	Monte Cornacci	0.23	1	P	Pg	02 13 03.9	+0.5
MMO1	Montemonaco	0.24	26	P	Pg	02 13 03.9	+0.4
T1216	Preci, Frazion	0.24	330	⇓P	Pb	02 13 04.4	-0.5
T1241	Roccafluvione,	0.25	46	P	Pg	02 13 04.0	+0.3
T1241				S	Sg	02 13 08.2	+1.0
T1215	Vallo di Nera,	0.26	297	P	Pg	02 13 04.3	+0.4
T1211	Morro Reatino	0.29	238	P	Pg	02 13 04.8	+0.5
TERO	Teramo	0.32	101	P	Pg	02 13 05.0	+0.1
ARRO	Arrone	0.33	251	⇓P	Pg	02 13 05.5	+0.4
FDMO	Fiordimonte	0.36	349	P	Pg	02 13 06.1	+0.4
T1219	Muccia, Frazio	0.39	341	S	Sb	02 13 12.7	-0.8

ROM 15 02:13:47.0±0.1, **42°.521N**±0°.004×**13°.304E**±0°.005, **h13**^{km}, **ML1.0**/3, **Error ellipse: s-maj=0.5km s-min=0.1km az=346.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RM33	Pellescritta (	0.07	260	P	Pg	02 13 50.1	+0.2
RM33				S	Sg	02 13 51.9	+0.1
RM33				AML	AML		
	comp=E,116µm,0.3s						
RM33				AML	AML		
	comp=N,66µm,1.3s						
RM33				AML	AML		
	comp=E,116µm,1.7s						
CAMP	Campotosto	0.08	79	P	Pg	02 13 50.2	+0.3
CAMP				S	Sg	02 13 52.2	+0.2
T1247	Pizzolo (AQ)	0.08	183	P	Pg	02 13 51.7	+1.8
T1247				AML	AML		
	comp=N,116µm,0.3s						
T1247				AML	AML		
	comp=E,73µm,0.1s						
SMA1	SAN MARTINO	0.11	12	P	Pg	02 13 50.6	+0.3
SMA1				S	Sg	02 13 53.2	+0.5
SMA1				AML	AML		
	comp=E,252µm,0.2s						
SMA1				AML	AML		
	comp=N,156µm,0.3s						
T1246	Crognaleto (TE	0.15	66	P	Pg	02 13 51.2	+0.3
T1246				S	Sg	02 13 53.9	+0.4
T1218	Civita (PG)	0.20	317	P	Pg	02 13 51.7	+0.1
T1222	Castel Sant'An	0.23	239	P	Pg	02 13 52.5	+0.4
TERO	Teramo	0.24	65	P	Pg	02 13 52.5	+0.2
T1211	Morro Reatino	0.33	272	S	Sg	02 13 59.2	+0.8
MC2	Monte Cornacci	0.40	348	S	Sb	02 14 01.6	-0.6

ROM 15 02:23:18.0±0.1, **42°.922N**±0°.002×**13°.218E**±0°.004, **h9**^{km}, **ML1.1**/2, **2C-1D, Error ellipse: s-maj=0.2km s-min=0.2km az=233.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1245	Castelsantange	0.07	199	P	Pg	02 23 20.3	+0.1
T1245				S	Sg	02 23 22.0	+0.3
T1245				AML	AML		
	comp=N,332µm,0.3s						
T1245				AML	AML		
	comp=E,288µm,0.2s						
T1245				AML	AML		
	comp=N,332µm,0.3s						
T1245				AML	AML		
	comp=E,327µm,1.1s						
T1245				AML	AML		
	comp=N,332µm,1.7s						
T1245				AML	AML		
	comp=N,427µm,1.1s						
MMO1	Montemonaco	0.08	106	P	Pg	02 23 20.6	+0.3
MMO1				S	Sg	02 23 22.3	+0.4
T1256	Bolognola (MC)	0.09	4	⇓P	Pg	02 23 20.8	+0.4
T1256				S	Sg	02 23 22.4	+0.3
T1256				AML	AML		
	comp=E,44µm,1.3s						
T1256				AML	AML		
	comp=N,53µm,0.6s						
T1256				AML	AML		
	comp=E,44µm,1.3s						
T1256				AML	AML		
	comp=N,53µm,0.6s						
T1256				AML	AML		

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,44µm,0.7s						
T1256				AML	AML		
	comp=E,69µm,0.9s						
FDMO	**Fiordimonte**	**0.15**	**320**	P	Pg	02 23 21.7	+0.4
T1216	**Preci, Frazion**	**0.15**	**258**	P	Pg	02 23 21.7	+0.4
T1219	**Muccia, Frazio**	**0.20**	**311**	⇑P	Pg	02 23 22.9	+0.6
T1220	**Camerino, Fraz**	**0.21**	**333**	P	Pg	02 23 23.0	+0.6
T1212	**Cascia, Frazio**	**0.21**	**217**	P	Pg	02 23 23.3	+0.9
T1218	**Civita (PG)**	**0.26**	**197**	⇑P	Pg	02 23 24.1	+0.8
T1247	**Pizzolo (AQ)**	**0.48**	**173**	AML	AML		
	comp=N,93µm,1.6s						
T1247				AML	AML		
	comp=E,72µm,1.0s						

ROM 15 02:23:53.4±0.0**, 42°.813N**±0°.002×**13°.050E**±0°.003**, h11^{km}, ML1.3**/7**, 3C-2D, Error ellipse: s-maj=0.2km s-min=0.2km az=167.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.06**	**184**	P	Pg	02 23 56.0	+0.3
T1212				S	Sg	02 23 57.6	+0.2
T1212				AML	AML		
	comp=E,560µm,0.7s						
T1212				AML	AML		
	comp=N,630µm,0.2s						
T1212				AML	AML		
	comp=E,560µm,1.3s						
T1212				AML	AML		
	comp=N,614µm,0.2s						
T1212				AML	AML		
	comp=E,540µm,0.1s						
T1216	**Preci, Frazion**	**0.08**	**344**	P	Pg	02 23 56.3	+0.4
T1216				AML	AML		
	comp=E,262µm,1.4s						
T1216				AML	AML		
	comp=N,300µm,0.3s						
T1216				AML	AML		
	comp=E,262µm,0.6s						
T1245	**Castelsantange**	**0.11**	**66**	P	Pg	02 23 56.8	+0.4
T1245				S	Sg	02 23 59.0	+0.5
T1245				AML	AML		
	comp=E,244µm,0.4s						
T1245				AML	AML		
	comp=N,462µm,0.5s						
T1214	**Arquata del Tr**	**0.13**	**114**	P	Pg	02 23 57.0	+0.4
T1214				S	Sg	02 23 59.4	+0.5
T1217	**Poggiodomo (PG**	**0.13**	**221**	P	Pg	02 23 57.1	+0.5
T1217				S	Sg	02 23 59.7	+0.8
T1215	**Vallo di Nera,**	**0.13**	**266**	P	Pg	02 23 57.1	+0.5
T1215				S	Sg	02 23 59.6	+0.7
T1215				AML	AML		
	comp=E,111µm,0.2s						
T1215				AML	AML		
	comp=N,112µm,0.2s						
MC2	**Monte Cornacci**	**0.14**	**46**	P	Pg	02 23 57.4	+0.5
MC2				S	Sg	02 24 00.2	+0.9
FEMA	**Monte Fema**	**0.15**	**360**	P	Pg	02 23 57.2	+0.3
T1218	**Civita (PG)**	**0.15**	**161**	⇓P	Pg	02 23 57.3	+0.5
T1218				AML	AML		
	comp=E,190µm,0.3s						
T1218				AML	AML		
	comp=N,238µm,0.2s						
T1218				AML	AML		
	comp=E,150µm,0.6s						
T1218				AML	AML		
	comp=E,190µm,0.3s						
T1218				AML	AML		
	comp=N,238µm,0.2s						
T1218				AML	AML		
	comp=N,204µm,0.2s						
T1218				AML	AML		
	comp=E,150µm,0.6s						
T1218				AML	AML		
	comp=E,190µm,1.7s						
CESI	**CESI - Serrava**	**0.22**	**331**	P	Pg	02 23 58.6	+0.5
CESI				S	Sg	02 24 02.3	+1.1
CESI				AML	AML		
	comp=N,124µm,0.5s						
CESI				AML	AML		
	comp=E,55µm,0.1s						
CESI				AML	AML		
	comp=N,124µm,0.5s						
MMO1	**Montemonaco**	**0.22**	**67**	P	Pg	02 23 58.5	+0.5
MMO1				S	Sg	02 24 02.2	+1.0
FDMO	**Fiordimonte**	**0.23**	**7**	P	Pg	02 23 58.8	+0.7
FDMO				S	Sg	02 24 02.5	+1.1
FDMO				AML	AML		
	comp=E,75µm,0.2s						
FDMO				AML	AML		
	comp=N,73µm,0.2s						
T1256	**Bolognola (MC)**	**0.23**	**34**	⇑P	Pb	02 23 59.0	-0.7
T1219	**Muccia, Frazio**	**0.24**	**353**	P	Pg	02 23 58.9	+0.4
SMA1	**SAN MARTINO**	**0.28**	**131**	P	Pg	02 23 59.7	+0.7
T1241	**Roccafluvione,**	**0.28**	**81**	P	Pg	02 23 59.7	+0.5
T1220	**Camerino, Fraz**	**0.30**	**5**	P	Pg	02 24 00.0	+0.5
ARRO	**Arrone**	**0.31**	**222**	⇓P	Pg	02 24 00.2	+0.5
T1211	**Morro Reatino**	**0.31**	**207**	P	Pb	02 24 00.5	-0.6
RM33	**Pellescritta (**	**0.33**	**158**	P	Pg	02 24 00.4	+0.4
MOMA	**Monte Martano**	**0.35**	**269**	P	Pb	02 24 01.1	-0.6
ASSB	**Assisi San Ben**	**0.37**	**309**	P	Pg	02 24 01.2	+0.5
SNTG	**Esanatoglia**	**0.45**	**350**	⇑P	Pg	02 24 02.5	+0.2
TERO	**Teramo**	**0.45**	**115**	⇑P	Pg	02 24 02.3	+0.1
ATCC	**AVT- Casa Cast**	**0.48**	**321**	P	Pg	02 24 03.1	+0.3

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*BJI **15** 02:26:53.5±0.0, 8°.17S×107°.52E, h80^{km}, mb4.7/25, mB5.4/11, Ms5.2/2, Ms7 4.9/2*

*IDC **15** 02:26:53.7±2.6, 7°.62S×108°.01E, h56^{km}±22^{km}, mb4.2/29, mbtmp4.5/29, MS3.6/8, Error ellipse: s-maj=20.6km s-min=10.8km az=50.0*

*NEIC **15** 02:26:54.6±1.2, 7°.81S±0°.08×108°.00E±0°.06, h79^{km}±6^{km}, mb4.6/48, Error ellipse: s-maj=14.1km s-min=1.9km az=217.0*

*DJA **15** 02:26:54.5±0.2, 8°S±2°×10°8E±°, h64^{km}±2^{km}, M4.9/54, mb4.8/54, mB5.5/18, MLv5.0/28, Mw4.5/80, Mw(mB)4.9/18*

ISC 15 02:26:54.7±0.6**, 7°.97S**±0°.06×**107°.96E**±0°.05**, h78**^{km}±5^{km}**, n178, σ1§76**/179**, mb4.5**/53**, 3C-3D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNJI	**Cibinong**	**1.05**	**308**	P	**Pn**	**02 27 13.0**	**-1.3**
KPJI	**Karang Pucung**	**1.15**	**57**	P	**Pn**	**02 27 16.2**	**+0.7**
SKJI	**Sukabumi**	**1.69**	**304**	P	**Pn**	**02 27 21.7**	**-0.8**
YOGI	**Yogyakarta**	**2.32**	**86**	P	**Pn**	**02 27 30.7**	**-0.1**
UGM	**Wanagama**	**2.54**	**89**	Pn	**Pn**	**02 27 33.4**	**-0.5**
UGM	**Wanagama**	**2.54**	**89**	P	**Pn**	**02 27 34.2**	**+0.4**
SBJI	**Serang**	**2.58**	**315**	P	**Pn**	**02 27 35.1**	**+0.6**
SMRI	**Semarang**	**2.62**	**70**	Pn	**Pn**	**02 27 36.4**	**+1.4**
SMRI	**Semarang**	**2.62**	**70**	P	**Pn**	**02 27 37.1**	**+2.1**
CGJI	**Cibinong**	**2.62**	**301**	P	**Pn**	**02 27 33.9**	**-1.1**
UWJI	**Ujung Watu**	**3.34**	**63**	P	**Pn**	**02 27 46.4**	**+1.7**
NGJI	**Ngawi**	**3.52**	**80**	P	**Pn**	**02 27 50.1**	**+3.0**
BLSI	**Bandar Lampung**	**3.74**	**314**	P	**Pn**	**02 27 49.9**	**-0.2**
PWJI	**Pagerwojo**	**3.81**	**91**	P	**Pn**	**02 27 52.6**	**+1.6**
TBJI	**Tambak Boyo**	**4.02**	**74**	P	**Pn**	**02 27 55.5**	**+1.6**
KASI	**Kota Agung**	**4.21**	**305**	P	**Pn**	**02 27 57.2**	**+0.6**
KLI	**Kotabumi**	**4.36**	**315**	P	**Pn**	**02 28 00.4**	**+1.8**
GRJI	**Gresik**	**4.60**	**77**	P	**Pn**	**02 28 03.1**	**+1.2**
LWLI	**Liwa**	**4.86**	**307**	P	**Pn**	**02 28 07.0**	**+1.4**
MDSI	**Maura Dua**	**5.11**	**312**	P	**Pn**	**02 28 10.1**	**+1.3**
	84nm,0.7s,1µm0.4nm						
BWJI	**Bawean**	**5.12**	**66**	P	**Pn**	**02 28 10.5**	**+1.6**
	486nm,0.7s,2.5nm						
GMJI	**Gumukmas**	**5.44**	**94**	P	**Pn**	**02 28 14.6**	**+1.3**
	126nm,0.8s,2µm0.8nm						
BLJI	**Banyuglugur**	**5.58**	**88**	P	**Pn**	**02 28 16.9**	**+1.6**
	109nm,0.5s,4µm0.8nm						
PMBI	**Palembang**	**5.93**	**327**	Pn	**Pn**	**02 28 18.7**	**-1.3**
PPBI	**Pangkal Pinang**	**6.05**	**342**	P	**Pn**	**02 28 23.6**	**+1.9**
	152nm,0.9s,2.6nm						
MNAI	**Manna**	**6.13**	**305**	Pn	**Pn**	**02 28 20.4**	**-2.5**
MNAI	**Manna**	**6.13**	**305**	P	**Pn**	**02 28 23.4**	**+0.6**
	181nm,0.5s,1.8nm						
JAGI	**Jajag, Banyuwa**	**6.15**	**95**	Pn	**Pn**	**02 28 22.1**	**-0.9**
JAGI	**Jajag, Banyuwa**	**6.15**	**95**	P	**Pn**	**02 28 24.1**	**+1.1**
	90nm,0.8s,4µm1.2nm						
ABJI	**Asem Bagus**	**6.22**	**89**	P	**Pn**	**02 28 26.5**	**+2.6**
	142nm,0.6s,0.7nm						
PBKI	**Pangkalan Bun**	**6.40**	**35**	P	**Pn**	**02 28 28.1**	**+1.6**
	179nm,0.7s,14µm1.4nm						
KSI	**Kapahiang**	**6.85**	**308**	P	**Pn**	**02 28 33.1**	**+0.4**
	128nm,0.6s						
IGBI	**Denpasar**	**7.16**	**97**	P	**Pn**	**02 28 36.9**	**+0.1**
	106nm,0.6s,3µm0.6nm						
SRBI	**Singaraja**	**7.18**	**91**	P	**Pn**	**02 28 38.9**	**+1.8**
	81nm,0.5s,2µm0.5nm						
DSRI	**Dabo**	**8.17**	**335**	P	**Pn**	**02 28 52.6**	**+2.0**
	50nm,0.7s						
BBKI	**Banjar Baru**	**8.18**	**57**	P	**Pn**	**02 28 53.7**	**+2.9**
TWSI	**Taliwang, Sumb**	**8.86**	**96**	P	**Pn**	**02 29 00.1**	**0.0**
	57nm,0.7s,1µm						
PPSI	**Pulau Pagai**	**9.46**	**303**	P	**Pn**	**02 29 06.0**	**-2.2**
	133nm,0.9s						
SDSI	**Sungai Dareh**	**9.55**	**317**	P	**Pn**	**02 29 09.0**	**-0.5**
	16nm,0.7s						
KSM	**Kuching**	**9.67**	**14**	Pn	Pn	02 29 05.9	-5.2
PLAI	**Plampang**	**9.75**	**96**	P	**Pn**	**02 29 12.6**	**+0.4**
	73nm,1.0s,828nm						
SBUM	**Sibu**	**11.19**	**22**	Pn	**Pn**	**02 29 29.2**	**-2.6**
KAPI	**Kappang**	**12.08**	**77**	P	**Pn**	**02 29 47.1**	**+3.2**
	7.8nm,0.2s,baz=245,slow=19,SNR=4.4						
KAPI				LR	LR	02 35 08.2	
	comp=Z,198nm,19.0s,baz=256,slow=41						
KAPI	**Kappang**	**12.08**	**77**	Pn	**Pn**	**02 29 42.4**	**-1.6**
BKSI	**Bulukumba**	**12.36**	**78**	P	**Pn**	**02 29 49.7**	**+1.9**
	20nm,0.6s						
BSSI	**Bau Bau, Buton**	**12.57**	**82**	P	**Pn**	**02 29 53.6**	**+3.0**
	50nm,0.9s						
GSI	**Gunungsitoli**	**13.86**	**311**	Pn	Pn	02 30 01.4	-6.4
MMRI	**Maumere**	**14.14**	**94**	Pn	**Pn**	**02 30 08.7**	**-2.8**
MMRI	**Maumere**	**14.14**	**94**	P	**Pn**	**02 30 12.7**	**+1.2**
	81nm,0.7s						
IPM	**Ipoh**	**14.17**	**331**	Pn	**Pn**	**02 30 07.8**	**-4.0**
MPSI	**Mapaga**	**14.48**	**56**	P	**P**	**02 30 20.2**	**-0.2**
	23nm,1.1s						
TSI	**Tuntungan**	**14.76**	**320**	P	**Pn**	**02 30 20.3**	**+0.9**
TOLI2	**Tolitoli**	**15.64**	**55**	Pn	**Pn**	**02 30 28.3**	**-2.5**
KKM	**Kota Kinabalu**	**16.17**	**31**	Pn	**Pn**	**02 30 33.1**	**-4.4**
SOEI	**Soe**	**16.21**	**98**	Pn	**Pn**	**02 30 35.7**	**-2.3**
SOEI				IAmb	IAmb	02 31 02.1	
	comp=Z,56nm,0.8s						
SOEI	**Soe**	**16.21**	**98**	P	**Pn**	**02 30 38.8**	**+0.8**
	comp=Z,69nm,0.8s						
MYLDM	**Lahad Datu**	**16.77**	**39**	Pn	**Pn**	**02 30 41.9**	**-3.0**
MYLDM				IAmb	IAmb	02 31 13.2	
	comp=Z,67nm,1.1s						
GTOI	**Gorontalo**	**17.27**	**61**	P	**P**	**02 30 51.7**	**+0.3**
	comp=Z,18nm,0.6s						
MBWA	**Marble Bar**	**17.35**	**140**	Pn	**Pn**	**02 30 50.5**	**-1.5**
PSA00	**Pilbara Seismi**	**17.73**	**141**	P	**P**	**02 30 55.4**	**-1.1**
PSA00	**Pilbara Seismi**	**17.73**	**141**		**P**	**02 30 54.2**	**-2.2**
PSA00				IAmb	IAmb	02 31 00.5	
	comp=Z,31nm,1.4s						
SANI	**Sanana**	**18.89**	**73**	P	**Pn**	**02 31 10.6**	**0.0**
	comp=Z,42nm,0.8s						
NLAI	**Namlea**	**19.61**	**77**	P	**Pn**	**02 31 20.5**	**+1.4**
	comp=Z,36nm,0.7s,comp=Z,1µm						
FITZ	**Fitzroy Crossi**	**19.93**	**122**		**P**	**02 31 20.8**	**+0.3**
AAI	**Ambon**	**20.57**	**79**	P	Pn	02 31 30.3	-0.1
	comp=Z,82nm,0.9s,comp=Z,4µm						
LBMI	**Labuha**	**20.79**	**70**	P	Pn	02 31 31.9	-1.1
	comp=Z,130nm,0.7s,comp=Z,2µm						
KNRA	**Kununurra**	**21.74**	**113**	P	**P**	**02 31 39.7**	**-0.2**
KNRA				IAmb	IAmb	02 32 11.3	
	comp=Z,23nm,0.8s						
DAV	**Davao City (W)**	**23.06**	**50**	LR	LR	02 43 09.9	
	comp=Z,77nm,19.1s,baz=302,slow=43						
DAV	**Davao City (W)**	**23.06**	**50**	P	**P**	**02 31 50.2**	**-3.7**
MTN	**Manton Dam**	**23.29**	**104**	P	**P**	**02 31 55.9**	**-0.2**
MTN				IAmb	IAmb	02 32 10.6	
	comp=Z,34nm,1.2s						
SIJI	**Sorong**	**24.27**	**74**	P	**P**	**02 32 05.8**	**+0.9**
	comp=Z,18nm,0.7s,baz=257,slow=9.8,SNR=6.9						
	comp=Z,18nm,0.7s						
FAKI	**Fak Fak**	**24.68**	**80**	P	**P**	**02 32 06.9**	**-1.9**
FAKI				IAmb	IAmb	02 32 16.3	
	comp=Z,46nm,1.0s						
FAKI	**Fak Fak**	**24.68**	**80**	P	**P**	**02 32 09.8**	**+1.1**
	comp=Z,56nm,1.2s						
FAKI				pP	**pP**	**02 32 24.6**	**-2.0**
	comp=Z,56nm,1.2s						
RKPI	**Ransiki, Papua**	**26.89**	**78**	P	**P**	**02 32 31.7**	**+3.0**
	comp=Z,62nm,1.2s,comp=Z,8µm						
CMAR	**Chiang Mai Arr**	**27.73**	**341**	P	**P**	**02 32 34.0**	**-2.0**
	comp=Z,0.8nm,0.3s,baz=174,slow=9.6,SNR=1.6						
CMAR				PcP	**PcP**	**02 35 53.8**	**+2.5**
	comp=Z,0.8nm,0.3s,baz=197,slow=2.8,SNR=5.3						
CMAR				LR	LR	02 45 06.8	
	comp=Z,89nm,18.0s,baz=165,slow=40						
	comp=Z,0.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**27.73**	**341**	P	**P**	**02 32 33.7**	**-2.4**
WB0	**Warramunga Arr**	**28.16**	**117**	P	**P**	**02 32 37.9**	**-2.2**
WRA	**Warramunga Arr**	**28.18**	**118**	P	**P**	**02 32 41.9**	**+1.7**
	comp=Z,2.3nm,0.9s,baz=293,slow=12,SNR=14						
WRA				PcP	**PcP**	**02 35 52.9**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=312,slow=1.9,SNR=3.3						
	comp=Z,2.3nm,0.9s						
WRA	**Warramunga Arr**	**28.18**	**118**	P	**P**	**02 32 39.6**	**-0.5**
WB2	**Warramunga Arr**	**28.19**	**118**	P	**P**	**02 32 39.8**	**-0.4**
WB2				IAmb	IAmb	02 33 15.0	
	comp=Z,7.0nm,0.8s						
ASAR	**Alice Springs**	**29.35**	**125**	P	**P**	**02 32 52.5**	**+1.9**
	comp=Z,2.2nm,0.9s,baz=300,slow=7.9,SNR=13						
ASAR				PcP	**PcP**	**02 35 57.0**	**+1.7**
	comp=Z,1.7nm,0.7s,baz=304,slow=2.2,SNR=7.3						
ASAR				ScP	**ScP**	**02 39 33.1**	**+2.6**
	comp=Z,0.8nm,0.7s,baz=298,slow=2.0,SNR=5.4						
ASAR				LR	LR	02 44 33.9	
	comp=Z,80nm,19.3s,baz=271,slow=36						
	comp=Z,2.2nm,0.9s						
AS31	**Alice Springs**	**29.35**	**125**	P	**P**	**02 32 50.0**	**-0.6**
PALK	**Pallekele**	**31.11**	**298**	LR	LR	02 45 11.4	
	comp=Z,122nm,18.5s,baz=245,slow=35						
TNCH	**TengChong**	**34.06**	**345**	*e*P	**P**	**02 33 33.9**	**+1.9**
TNCH				pP	pP	02 33 50.5	-0.2
PZH	**PanZhiHua**	**34.79**	**350**	P	**P**	**02 33 40.8**	**+2.6**
PZH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
H08S2	**Diego Garcia H**	**35.13**	**268**	T	T	03 10 58.2	
	baz=93,slow=76,SNR=935						
H08S3	**Diego Garcia H**	**35.15**	**268**	T	T	03 10 59.6	
	baz=93,slow=76,SNR=226						
H08S1	**Diego Carcia H**	**35.15**	**268**	T	T	03 10 59.6	
	baz=93,slow=76,SNR=290						
BBOO	**Buckleboo**	**35.90**	**137**	P	**P**	**02 33 46.9**	**-0.7**
WHN	**Wuhan**	**38.78**	**9**	P	**P**	**02 34 11.4**	**-0.5**
STKA	**Stephens Creek**	**39.29**	**132**	P	**P**	**02 34 18.6**	**+2.4**
	comp=Z,6.0nm,0.4s,baz=308,slow=6.7,SNR=25						
STKA				PcP	**PcP**	**02 36 25.6**	**+1.9**
	comp=Z,2.6nm,0.5s,baz=328,slow=4.1,SNR=2.3						
STKA				LR	LR	02 52 56.8	
	comp=Z,62nm,18.6s,baz=214,slow=40						
	comp=Z,6.0nm,0.4s						
STKA	**Stephens Creek**	**39.29**	**132**	P	**P**	**02 34 18.4**	**+2.2**
TAPN	**Taplejung**	**40.22**	**332**	*e*P	**P**	**02 34 25.4**	**+1.1**
	comp=Z,5.7nm,0.5s						
RAMN	**Ramite**	**40.42**	**330**	*e*P	**P**	**02 34 25.3**	**-0.6**
	comp=Z,4.5nm,0.3s						
NJ2	**Nanjing**	**41.13**	**14**	*e*P	**P**	**02 34 33.9**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
JIRN	**Jiri**	**41.21**	**330**	*e*P	**P**	**02 34 33.3**	**+0.8**
	comp=Z,8.8nm,0.4s						
GUN	**Gumba**	**41.57**	**330**	*e*P	**P**	**02 34 36.3**	**+0.8**
	comp=Z,5.2nm,0.3s						
DANN	**Dangsing**	**43.01**	**328**	*e*P	**P**	**02 34 47.2**	**+0.1**
	comp=Z,24nm,0.5s						
PYUN	**Piuthan**	**43.22**	**327**	*e*P	**P**	**02 34 49.0**	**+0.3**
	comp=Z,16nm,0.4s						
LZH	**Lanzhou**	**43.99**	**355**	*e*P	**P**	**02 34 58.3**	**+3.6**
LZH				sP	sP	02 35 21.4	-1.4
LZH				pmax	pmax		
	comp=Z,14nm,0.9s						
ARMA	**Armidale**	**46.51**	**125**	P	**P**	**02 35 13.9**	**-0.8**
ARMA				IAmb	IAmb	02 35 50.4	
	comp=Z,21nm,1.4s						
BTO	**Baotou**	**48.37**	**2**	*e*P	**P**	**02 35 30.0**	**+1.1**
BTO				pP	**pP**	**02 35 49.5**	**+1.2**
BTO				sP	**sP**	**02 35 57.8**	**+0.6**
BTO				PcP	**PcP**	**02 36 55.6**	**+1.2**
BTO				S	**S**	**02 42 26.4**	**+2.8**
BTO				sS	**sS**	**02 42 59.8**	**+3.9**
BTO				pmax	pmax		
	comp=Z,29nm,0.5s						
BTO				pmax	pmax		
	comp=Z,830nm,5.4s						
BTO				LR	LR		
	comp=Z,920nm,6.0s						
BTO				LR	LR		
	comp=Z,950nm,5.2s						
BTO				LR	LR		
	comp=Z,1µm,6.5s						
HHC	**Hu-ho-hao-te**	**48.69**	**4**	*e*P	**P**	**02 35 34.3**	**+3.0**
HHC				pmax	pmax		
	comp=Z,19nm,0.8s						
HHC				pmax	pmax		
	comp=Z,330nm,6.0s						
XLT	**XiLinHaoTe**	**52.15**	**7**	*e*P	P	02 36 03.0	+5.7
XLT				pP	pP	02 36 17.8	+0.8
XLT				sP	sP	02 36 25.5	-0.3
XLT				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,150nm,5.4s						
PATS	**Pohnpei**	**52.32**	**75**	P	**P**	**02 35 56.1**	**-3.0**
MJAR	**Matsushiro Arr**	**52.60**	**31**	P	**P**	**02 35 58.7**	**-2.0**
	comp=Z,1.4nm,0.5s,baz=224,slow=6.5,SNR=1.8						
	comp=Z,1.4nm,0.5s						
NIL	**Nilore**	**52.90**	**323**	P	**P**	**02 36 00.6**	**-2.5**
WMQ	**Urumqi**	**54.72**	**342**	*e*P	**P**	**02 36 19.6**	**+3.4**
WMQ				pP	pP	02 36 35.3	-0.6
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SONM	**Songino Array**	**55.58**	**359**	P	**P**	**02 36 22.2**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=179,slow=8.5,SNR=12						
SONM				PcP	**PcP**	**02 37 22.1**	**+0.8**
	comp=Z,3.2nm,0.5s,baz=180,slow=3.0,SNR=14						
SONM				ScP	**ScP**	**02 41 14.5**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=183,slow=2.5,SNR=3.9						
	comp=Z,1.6nm,0.5s						
SONM	**Songino Array**	**55.58**	**359**	P	**P**	**02 36 20.7**	**-1.6**
ULN	**Ulaanbaatar**	**55.60**	**359**	P	**P**	**02 36 20.7**	**-1.8**
ULN				IAmb	IAmb	02 36 23.6	
	comp=Z,2.6nm,0.6s						
KSH	**Kashi**	**55.77**	**330**	P	**P**	**02 36 22.8**	**-1.1**
KSH				pP	pP	02 36 40.3	-3.3
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KBL	**Kabul**	**56.05**	**321**	P	**P**	**02 36 23.8**	**-2.3**
KBL				IAmb	IAmb	02 36 26.3	
	comp=Z,5.3nm,0.8s						
USRK	**Ussuriysk Ar.**	**56.29**	**21**	P	**P**	**02 36 24.9**	**-2.4**
GAR	**Garm**	**58.35**	**326**	P	**P**	**02 36 40.0**	**-2.1**
CHGR	**Chuyangaron**	**58.76**	**325**	P	**P**	**02 36 42.9**	**-2.1**
MK31	**Makanchi Array**	**59.12**	**340**	P	**P**	**02 36 45.6**	**-1.6**
MK31				IAmb	IAmb	02 36 47.9	
	comp=Z,2.5nm,0.6s						
MKAR	**Makanchi Array**	**59.12**	**340**	P	**P**	**02 36 45.7**	**-1.5**
	comp=Z,4.3nm,0.6s,baz=148,slow=7.5,SNR=56						
	comp=Z,4.3nm,0.6s						
MKAR	**Makanchi Array**	**59.12**	**340**	P	**P**	**02 36 45.0**	**-2.2**
UOSS	**Minazif**	**60.08**	**305**	P	**P**	**02 36 52.8**	**-1.4**
KKAR	**Karatay Array**	**61.17**	**329**	P	**P**	**02 36 59.7**	**-1.6**
KURBB	**Kurchatov Arra**	**63.69**	**340**	P	**P**	**02 37 16.8**	**-1.1**
	comp=Z,2.3nm,0.6s,baz=154,slow=5.7,SNR=9.7						
	comp=Z,2.3nm,0.6s						
KURK	**Kurchatov**	**63.73**	**340**	P	**P**	**02 37 16.8**	**-1.3**
KURK				IAmb	IAmb	02 37 29.8	
	comp=Z,4.8nm,0.9s						
ZALV	**Zalesovo Beam**	**64.71**	**345**	P	**P**	**02 37 23.5**	**-1.0**
	comp=Z,0.8nm,0.3s,baz=148,slow=5.6,SNR=4.3						
ZALV				PcP	**PcP**	**02 37 57.2**	**-0.3**
	comp=Z,1.8nm,0.5s,baz=149,slow=1.4,SNR=4.1						
	comp=Z,0.8nm,0.3s						
ZALV	**Zalesovo Beam**	**64.71**	**345**	P	**P**	**02 37 22.7**	**-1.8**
GEYT	**Alibeck**	**65.12**	**318**	P	**P**	**02 37 27.4**	**-0.1**
	comp=Z,8.0nm,0.7s,baz=151,slow=6.6,SNR=19						
	comp=Z,8.0nm,0.7s						
GEYT	**Alibeck**	**65.12**	**318**	P	**P**	**02 37 26.1**	**-1.4**
GEYT				IAmb	IAmb	02 37 29.0	
	comp=Z,12nm,0.7s						
GYA0B	**ALIBECK ARRAY**	**65.12**	**318**	P	**P**	**02 37 26.1**	**-1.4**
GYA0B				IAmb	IAmb	02 37 29.0	
	comp=Z,12nm,0.7s						
RAYN	**Ar Rayn**	**68.55**	**299**	P	**P**	**02 37 48.4**	**-1.3**
RAYN				IAmb	IAmb	02 37 51.5	
	comp=Z,14nm,1.4s						
BVAR	**Borovoye Array**	**68.63**	**337**	P	**P**	**02 37 48.2**	**-1.3**
	comp=Z,4.9nm,0.7s,baz=142,slow=8.9,SNR=20						
	comp=Z,4.9nm,0.7s						
BRVK	**Borovoye**	**68.69**	**337**	P	**P**	**02 37 47.8**	**-2.0**
BRVK				IAmb	IAmb	02 38 06.7	
	comp=Z,3.1nm,0.6s						
ABKAR	**Akbulak array**	**70.73**	**329**	P	**P**	**02 38 02.1**	**-0.4**
AKTO	**Aktyubinsk**	**72.44**	**329**	P	**P**	**02 38 11.9**	**-0.9**
	comp=Z,2.9nm,0.6s,baz=100,slow=2.8,SNR=12						
	comp=Z,2.9nm,0.6s						
VNDA	**Vanda**	**74.85**	**170**	P	**P**	**02 38 29.2**	**+2.8**
	comp=Z,1.5nm,0.4s,baz=328,slow=6.5,SNR=11						
	comp=Z,1.5nm,0.4s						
VNDA	**Vanda**	**74.85**	**170**	P	**P**	**02 38 27.1**	**+0.7**
VNDA				IAmb	IAmb	02 38 55.5	
	comp=Z,13nm,1.1s						
GNI	**Garni**	**75.31**	**315**	P	**P**	**02 38 30.0**	**+0.1**
	comp=Z,1.2nm,0.5s,baz=80,slow=12,SNR=1.8						
	comp=Z,1.2nm,0.5s						
ARU	**Arti**	**75.90**	**334**	P	**P**	**02 38 32.4**	**-0.3**
	comp=Z,1.5nm,0.3s,baz=135,slow=7.1,SNR=5.7						
	comp=Z,1.5nm,0.3s						
ARU	**Arti**	**75.90**	**334**	P	**P**	**02 38 32.0**	**-0.7**
ARU				IAmb	IAmb	02 38 35.1	
	comp=Z,11nm,1.2s						
GURO	**Guroymak-BITLI**	**76.63**	**313**	P	**P**	**02 38 36.0**	**-1.5**
KARS	**Kars**	**76.66**	**315**	P	**P**	**02 38 36.3**	**-1.3**
AKH	**Akhalkalaki**	**76.68**	**316**	P	**P**	**02 38 35.9**	**-1.8**
KBZ	**Khabaz**	**78.00**	**318**	P	**P**	**02 38 44.5**	**-0.3**
	comp=Z,2.0nm,0.8s,baz=96,slow=1.9,SNR=5.4						
	comp=Z,2.0nm,0.8s						
LSZ	**Lusaka**	**78.12**	**256**	LR	LR	03 07 08.0	
	comp=Z,87nm,21.1s,baz=150,slow=31						
KIV	**Kislovodsk**	**78.23**	**318**	P	**P**	**02 38 44.6**	**-1.7**
KIV				IAmb	IAmb	02 38 49.4	
	comp=Z,5.2nm,0.7s						
ASF	**Jabal al Asfar**	**78.49**	**305**	P	**P**	**02 38 49.6**	**+1.7**
	comp=Z,6.7nm,0.7s,baz=54,slow=2.3,SNR=6.7						
	comp=Z,6.7nm,0.7s						
BELG	**Belogornoye**	**78.96**	**327**	P	**P**	**02 38 49.8**	**-0.1**
	comp=Z,9.9nm,0.7s,baz=305,slow=1.2,SNR=9.9						
	comp=Z,9.9nm,0.7s						
EIL	**Elat**	**79.39**	**302**	P	**P**	**02 38 53.8**	**+1.0**
	comp=Z,5.6nm,0.8s,baz=120,slow=9.8,SNR=4.5						
	comp=Z,5.6nm,0.8s						
BOSA	**Boshof**	**79.85**	**242**	P	**P**	**02 38 58.4**	**+2.8**
	comp=Z,1.6nm,0.4s,baz=123,slow=4.3,SNR=15						
	comp=Z,1.6nm,0.4s						
BOSA	**Boshof**	**79.85**	**242**	P	**P**	**02 38 55.6**	**0.0**
BOSA				IAmb	IAmb	02 39 21.0	
	comp=Z,17nm,1.4s						
MMAI	**Mount Meron Ar**	**79.94**	**306**	P	**P**	**02 38 57.6**	**+1.8**
	comp=Z,2.7nm,0.5s,baz=92,slow=7.1,SNR=3.6						
	comp=Z,2.7nm,0.5s						
TIXI	**Tiksi**	**80.65**	**7**	P	**P**	**02 38 57.2**	**-1.4**
TIXI				IAmb	IAmb	02 38 59.1	
	comp=Z,3.5nm,0.6s						
KIRV	**Kirov**	**81.18**	**333**	P	**P**	**02 39 02.4**	**+0.8**
	comp=Z,6.9nm,0.6s,baz=127,slow=10,SNR=3.8						
	comp=Z,6.9nm,0.6s						
BNN	**Bunyan**	**81.29**	**311**	P	**P**	**02 39 03.7**	**+0.7**
BNN				IAmb	IAmb	02 39 38.5	
	comp=Z,16nm,1.0s						
QSPA	**South Pole Qui**	**82.03**	**180**	P	**P**	**02 39 07.0**	**+0.7**
QSPA				IAmb	IAmb	02 39 30.1	
	comp=Z,6.9nm,1.1s						
BR131	**Keskin Array S**	**83.18**	**312**	P	**P**	**02 39 11.5**	**-1.3**
BR131				IAmb	IAmb	02 39 14.3	
	comp=Z,5.4nm,0.8s						
BRTR	**Keskin Array B**	**83.18**	**312**	P	**P**	**02 39 12.7**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=130,slow=7.8,SNR=14						
	comp=Z,1.9nm,0.7s						
BRTR	**Keskin Array B**	**83.18**	**312**	P	**P**	**02 39 12.2**	**-0.7**
SUR	**Sutherland**	**83.39**	**238**	LR	LR	03 11 33.0	
	comp=Z,126nm,18.1s,baz=138,slow=32						
BZK	**Bozkurt**	**83.55**	**314**	P	**P**	**02 39 13.3**	**-1.1**
KLMR	**Klimovskoe**	**86.67**	**333**	*e*P	**P**	**02 39 27.2**	**-2.4**
KLMR				AMP		02 39 31.8	
	comp=Z,31nm,1.8s						
AKASG	**Malin Array Be**	**89.04**	**321**	P	**P**	**02 39 40.9**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=78,slow=3.1,SNR=5.6						
	comp=Z,0.5nm,0.5s						
VRI	**Vrincioaia**	**89.60**	**316**	⇓P	**P**	**02 39 47.8**	**+3.9**
TESR	**Tescani**	**89.79**	**317**	⇑P	**P**	**02 39 47.3**	**+2.5**
MLR	**Muntele Rosu**	**90.06**	**316**	⇓P	**P**	**02 39 47.2**	**+0.9**

MLR	Muntele Rosu	90.06	316	P	P	02 39 45.5	-0.8
	comp=Z,2.2nm,0.7s,baz=119,slow=19,SNR=5.6						
	comp=Z,2.2nm,0.7s						
BURAR	Bucovina Array	90.96	318	⇑P	P	02 39 52.5	+2.2
VTS	Vitosha	91.47	313	⇑P	P	02 39 56.6	+3.7
MDVR	Moldovita	92.90	315	⇓P	P	02 40 00.6	+1.3
FINES	FINESS Array B	93.07	332	P	P	02 39 58.3	-1.3
	comp=Z,3.5nm,0.7s,baz=122,slow=2.1,SNR=7.2						
	comp=Z,3.5nm,0.7s						
ARCES	ARCESS Array B	94.77	340	P	P	02 40 06.9	-0.4
	comp=Z,2.0nm,1.0s,baz=106,slow=6.1,SNR=1.1						
	comp=Z,2.0nm,1.0s						
GERES	GERESS Array B	98.74	318	P	Pdif	02 40 26.9	+1.0
	comp=Z,0.3nm,0.5s,baz=116,slow=2.3,SNR=2.6						
	comp=Z,0.3nm,0.5s						
TORD	Torodi Ar. Bea	107.54	281	PKiKP	PKiKP	02 45 14.8	+1.1
	comp=Z,0.4nm,0.5s,baz=73,slow=1.3,SNR=14						
YKA	Yellowknife Ar	117.43	21	PKP	PKiKP	02 45 32.1	+0.9
	comp=Z,1.0nm,0.6s,baz=350,slow=1.7,SNR=29						
NVAR	Mina Array Bea	128.54	47	PKP	PKiKP	02 45 56.1	+2.0
	comp=Z,0.5nm,0.6s,baz=320,slow=2.4,SNR=4.3						
PDAR	Pinedale Array	132.20	37	PKP	PKiKP	02 46 01.5	+0.1
	comp=Z,0.5nm,0.6s,baz=11,slow=0.9,SNR=6.2						
SCHQ	Schefferville	133.08	356	PKP	PKiKP	02 46 03.0	+0.5
	comp=Z,1.5nm,0.8s,baz=257,slow=8.9,SNR=7.9						
TXAR	Lajitas Array	143.47	50	PKP	PKPdf	02 46 20.5	-0.8
	comp=Z,1.3nm,0.7s,baz=310,slow=0.8,SNR=20						
BDFB	Brasilia	146.58	225	PKPbc	PKiKP	02 46 31.3	0.0
	comp=Z,6.4nm,0.5s,baz=155,slow=3.2,SNR=14						

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*IDC **15** 02:32:54.7±1.5, 38.°30N×22.°04E, h0^{km}, mb3.5/3, mbtmp3.4/6, ML3.2/3, Error ellipse: s-maj=29.3km s-min=18.0km az=100.0*

*ISK **15** 02:32:54.5, 38.°40N×22.°14E, h12^{km}, ML3.1/10*

*THE **15** 02:32:55.2, 38.°44N×21.°96E, h11^{km}, ML3.3/11, Error ellipse: s-maj=0.8km s-min=0.5km az=92.0*

*ATH **15** 02:32:55.2, 38.°43N×21.°94E, h10^{km}±1^{km}, ML3.1/17, Error ellipse: s-maj=1.0km s-min=0.7km az=107.0*

ISC 15 02:32:55.2±0.7, **38.°42N**±0.°01×**21.°96E**±0.°02, **h10**^{km}±4^{km}, **n96**, σ**1^{s}11**/125, **mb3.5**/3, **3C-2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EFP	Efpalio	0.04	275	P	Pg	02 32 56.9	-0.3
EFP				S	Sg	02 32 58.3	-0.3
	154µm,0.2s						
EFP	Efpalio	0.04	275	P	Pg	02 32 56.8	-0.4
EFP				S	Sg	02 32 58.2	-0.3
EFP				AML	AML	02 32 58.4	
EFP				AML	AML	02 32 58.5	
SERG	Sergoula	0.08	97	P	Pg	02 32 57.7	+0.1
SERG				S	Sg	02 32 59.6	+0.3
	65µm,0.2s						
SERG	Sergoula	0.08	97	P	Pg	02 32 57.6	+0.1
SERG				S	Sg	02 32 59.6	+0.3
SERG				AML	AML	02 32 59.9	
SERG				AML	AML	02 33 00.0	
TRIZ	Trizonia	0.11	123	P	Pg	02 32 58.2	+0.3
TRIZ				S	Sg	02 33 00.6	+0.8
	14µm,0.3s						
TRIZ	Trizonia	0.11	123	P	Pg	02 32 58.2	+0.3
TRIZ				S	Sg	02 33 00.6	+0.8
ANX	Ano Chora	0.17	350	P	Pg	02 32 58.8	-0.2
ANX				S	Sg	02 33 01.7	0.0
	17µm,0.2s						
ANX	Ano Chora	0.17	350	P	Pg	02 32 58.4	-0.7
ANX				S	Sg	02 33 01.2	-0.5
ANX				AML	AML	02 33 02.6	
	comp=E,26462µm,0.2s						
ANX				AML	AML	02 33 02.9	
	comp=N,39412µm,0.3s						
LAKA	Lakka	0.18	175	P	Pg	02 32 59.1	-0.1
LAKA				S	Sg	02 33 02.8	+0.9
	comp=N,9µm,0.3s						
LAKA	Lakka	0.18	175	P	Pg	02 32 59.0	-0.2
LAKA				S	Sg	02 33 02.7	+0.9
LAKA				AML	AML	02 33 05.1	
	comp=E,4895µm,0.3s						
LAKA				AML	AML	02 33 05.7	
	comp=N,4836µm,0.3s						
UPR	University Cam	0.19	224	P	Pg	02 32 59.5	+0.2
ALIK	Aliki, Aigiali	0.20	144	P	Pg	02 33 00.0	+0.5
PVO	Paravola	0.39	300	P	Pg	02 33 01.5	-1.5
PVO				S	Sg	02 33 08.4	+0.3
	comp=N,3µm,0.2s						
KLV	Kalavryta, Ach	0.41	158	P	Pg	02 33 03.1	-0.2
KLV				S	Sb	02 33 10.2	-0.7
	comp=N,1µm,0.2s						
KLV	Kalavryta, Ach	0.41	158	P	Pg	02 33 03.1	-0.2
KLV				S	Sg	02 33 09.5	+0.8
KLV				AML	AML	02 33 11.4	
	comp=E,2519µm,0.2s						
KLV				AML	AML	02 33 12.9	
	comp=N,2570µm,0.2s						
DLFA	Delphi	0.42	82	P	Pg	02 33 03.1	-0.5
DLFA				S	Sb	02 33 10.0	-1.3
DLFA				AML	AML	02 33 13.2	
	comp=N,2798µm,0.2s						
DLFA				AML	AML	02 33 13.3	
	comp=E,3729µm,0.4s						
EVR	Evrytania	0.51	347	P	Pg	02 33 05.5	+0.3
EVR				S	Sg	02 33 12.1	+0.2
	comp=E,6µm,0.1s						
EVR	Evrytania	0.51	347	P	Pg	02 33 05.4	+0.2
EVR				S	Sg	02 33 12.8	+1.0
EVR				AML	AML	02 33 15.1	
	comp=N,10232µm,0.1s						
EVR				AML	AML	02 33 15.5	
	comp=E,12495µm,0.3s						
DRO	Drossia	0.51	203	P	Pg	02 33 05.1	-0.1
DRO				S	Sb	02 33 13.8	0.0
	comp=E,4µm,0.2s						
DRO	Drossia	0.51	203	P	Pg	02 33 05.0	-0.2
DRO				S	Sg	02 33 12.4	+0.6
DRO				AML	AML	02 33 14.0	
	comp=E,9125µm,0.2s						
DRO				AML	AML	02 33 15.5	
	comp=N,8030µm,0.3s						
RLS	Riolos of Patr	0.53	227	P	Pg	02 33 05.6	0.0
RLS				S	Sb	02 33 14.1	-0.3
	comp=N,3µm,0.3s						
RLS	Riolos of Patr	0.53	227	P	Pg	02 33 05.5	0.0
RLS				S	Sg	02 33 13.3	+0.7
RLS				AML	AML	02 33 15.7	
	comp=E,6208µm,0.3s						
RLS				AML	AML	02 33 15.8	
	comp=N,4926µm,0.3s						
GUR	Goura	0.57	148	P	Pg	02 33 05.9	-0.5
GUR				S	Sb	02 33 14.8	-0.9
	comp=N,3µm,0.3s						
GUR	Goura	0.57	148	P	Pg	02 33 05.8	-0.6
GUR				S	Sb	02 33 14.7	-1.0
GUR				AML	AML	02 33 19.9	
	comp=N,6120µm,0.3s						
GUR				AML	AML	02 33 21.8	
	comp=E,5021µm,0.4s						
MAKR	Makrakomi, Fth	0.60	13	P	Pg	02 33 06.5	-0.5
MAKR	Makrakomi, Fth	0.60	13	P	Pg	02 33 06.3	-0.7
MAKR				S	Sg	02 33 15.5	+0.5
MAKR				AML	AML	02 33 17.9	
	comp=E,15798µm,0.2s						
MAKR				AML	AML	02 33 18.1	
	comp=N,16687µm,0.2s						
AXAR	Agios Charalam	0.65	58	P	Pg	02 33 07.0	-0.8
AXAR	Agios Charalam	0.65	58	P	Pg	02 33 07.0	-0.8
AXAR				S	Sb	02 33 17.2	-0.5
AXAR				AML	AML	02 33 18.5	
	comp=N,10574µm,0.4s						
AXAR				AML	AML	02 33 22.0	
	comp=E,10651µm,0.3s						
AGG	Agios Georgios	0.67	26	P	Pg	02 33 06.9	-1.2
AGG	Agios Georgios	0.67	26	Pg	Pg	02 33 07.2	-0.9
AGG				Sg	Sg	02 33 17.2	+0.3
AGG	Agios Georgios	0.67	26	P	Pg	02 33 06.9	-1.2
AGG				S	Sb	02 33 17.4	-0.9
THAL	Thalero	0.68	125	P	Pg	02 33 08.3	0.0
THAL	Thalero	0.68	125	P	Pg	02 33 08.1	-0.2
THAL				AML	AML	02 33 23.0	
	comp=N,4336µm,0.3s						
THAL				AML	AML	02 33 24.4	
	comp=E,5221µm,0.2s						
ATAL	Atalanti	0.88	72	P	Pg	02 33 10.9	-1.2
ATAL	Atalanti	0.88	72	P	Pg	02 33 10.8	-1.2
ATAL				AML	AML	02 33 27.8	
	comp=E,622µm,0.3s						
ATAL				AML	AML	02 33 28.1	
	comp=N,1032µm,0.5s						
LOUT	Loutraki	0.91	118	P	Pg	02 33 12.5	-0.3
LOUT	Loutraki	0.91	118	P	Pg	02 33 12.3	-0.4
LOUT				AML	AML	02 33 29.4	
	comp=N,259µm,0.4s						
LOUT				AML	AML	02 33 31.1	
	comp=E,275µm,0.6s						
NYDR	Nydri-Lefkada	1.03	287	P	Pg	02 33 14.2	-0.8
EVGI	Lefkada island	1.04	281	P	Pg	02 33 14.3	-1.0
EVGI	Lefkada island	1.04	281	P	Pg	02 33 14.2	-1.1
VIL2	Platees	1.05	101	P	Pb	02 33 15.2	-0.3
LKD2	Lefkada island	1.08	290	P	Pb	02 33 15.3	-0.8
LKD2	Lefkada island	1.08	290	P	Pb	02 33 15.2	-0.8
VILL	Villia	1.10	103	P	Pg	02 33 15.4	-0.9
FSK	Fiskardo	1.10	272	P	Pb	02 33 15.3	-1.0
FSK	Fiskardo	1.10	272	P	Pb	02 33 15.1	-1.2
FSK				AML	AML	02 33 37.5	
	comp=N,1305µm,0.4s						
FSK				AML	AML	02 33 39.8	
	comp=E,1536µm,0.3s						
TSLK	Tsoukalades, L	1.10	292	P	Pb	02 33 15.7	-0.6
TSLK	Tsoukalades, L	1.10	292	P	Pb	02 33 15.9	-0.4
VLS	Valsamata	1.10	258	P	Pb	02 33 15.2	-1.3
VLS	Valsamata	1.10	258	P	Pb	02 33 15.0	-1.4
LTHK	Lithakia	1.14	232	P	Pb	02 33 16.0	-1.0
LTHK	Lithakia	1.14	232	P	Pb	02 33 15.6	-1.4
THL	Klokotos Trika	1.14	2	P	Pb	02 33 16.0	-1.1
THL	Klokotos Trika	1.14	2	P	Pb	02 33 15.8	-1.3
KEF4	Livadi, Kephal	1.22	263	P	Pn	02 33 16.9	-1.4
EPID	Epidavros	1.22	131	P	Pg	02 33 18.8	+0.1
EPID	Epidavros	1.22	131	P	Pg	02 33 18.5	-0.2
ITM	Ithomi	1.24	181	P	Pn	02 33 17.8	-0.9
ITM	Ithomi	1.24	181	Pn	Pn	02 33 18.1	-0.6
ITM	Ithomi	1.24	181	P	Pn	02 33 17.6	-1.1
LRSO	Larissa Observ	1.29	15	P	Pn	02 33 19.0	-0.4
NEO	Neokhori	1.32	48	P	Pn	02 33 19.7	-0.2
XOR	Xorichti	1.35	45	P	Pb	02 33 20.6	0.0
KRND	KRANIDI	1.40	137	P	Pb	02 33 21.3	-0.2
ATHU	Athens Univers	1.51	107	P	Pb	02 33 22.7	-0.7
ATHU				AML	AML	02 33 48.1	
	comp=N,385µm,0.5s						
ATHU				AML	AML	02 33 48.4	
	comp=E,187µm,0.4s						
PYL	PYLOS	1.54	187	P	Pn	02 33 22.9	+0.2
EREA	Eretria	1.55	90	P	Pb	02 33 23.4	-0.6
DION	Dionisos Attik	1.59	102	P	Pb	02 33 24.4	-0.3
KYMI	Kymi, Euboea I	1.69	82	P	Pn	02 33 24.7	-0.2
PENT	Pentalofos	1.88	340	P	Pb	02 33 29.1	-0.7
KZN	Kozani	1.89	356	P	Pb	02 33 28.9	-1.0
KTHA	Kythira Island	2.33	158	Pn	Pb	02 33 35.8	-1.6
HORT	Hortiatis	2.34	22	Pn	Pn	02 33 33.6	-0.3
OUR	Ouranopolis	2.47	39	Pn	Pn	02 33 35.0	-0.5
GRG	Griva	2.55	8	Pn	Pn	02 33 37.3	+0.6
KNT	Kendrikon	2.83	15	Pn	Pn	02 33 40.5	0.0
OHR	Ohrid	2.83	342	*i* Pn	Pb	02 33 44.4	-1.5
OHR				*i* Sn	Sb	02 34 21.1	+0.4
APE	Apeiranthos	3.14	114	Pn	Pn	02 33 43.1	-1.7
RODP	Rodopos	3.20	153	Pn	Pn	02 33 44.9	-0.7
STIP	Stip	3.27	3	*i* Pn	Pn	02 33 48.2	+1.6
TIR	Tirane	3.33	332	⇑P	Pg	02 34 00.1	+1.0
IMMV	Iera Moni Meta	3.37	151	Pn	Pn	02 33 47.7	-0.3
KNDR	Palaiochora Ch	3.47	156	Pn	Pn	02 33 48.9	-0.4
RDO	Rodhopi	3.87	44	Pn	Pn	02 33 54.4	-0.4
IDI	Anoyia	3.91	142	⇓P	Pn	02 33 56.8	+1.3
IDI	Anoyia	3.91	142	Pn	Pn	02 33 56.1	+0.6
	comp=E,1.0nm,0.3s,baz=315,slow=16,SNR=17						
IDI				Sn	Sn	02 34 38.5	-3.0
	comp=E,1.5nm,0.3s,baz=292,slow=19,SNR=1.3						
	comp=E,4.2nm,0.4s						
IDI	Anoyia	3.91	142	Pn	Pn	02 33 54.8	-0.7
TIP	Timpagrande	4.13	282	⇑P	Pn	02 34 00.5	+2.0
KDZ	Kurdzhali	4.17	38	Pn	Pn	02 33 58.1	-0.9
VTS	Vitosha	4.30	13	⇓P	Pb	02 34 06.2	-4.8
PDG	Podgorica	4.50	334	⇑P	Pn	02 34 04.6	+1.1
MLR	Muntele Rosu	7.66	22	Pn	Pn	02 34 50.7	+3.7
	comp=E,0.2nm,0.3s,baz=180,slow=20,SNR=4.6						
MLR				Sn	Sn	02 36 18.8	+4.9
	comp=E,0.1nm,0.3s,baz=137,slow=19,SNR=1.6						
	comp=E,1.2nm,0.5s						
BRTR	Keskin Array B	9.18	78	Pn	Pn	02 35 10.1	+2.3
	comp=E,0.1nm,0.3s,baz=268,slow=13,SNR=4.9						
	comp=E,0.4nm,0.5s						
HFS	Hagfors	22.35	349	P	P	02 37 54.2	+1.0
	comp=E,1.9nm,0.7s,baz=177,slow=12,SNR=1.5						
	comp=E,1.9nm,0.7s						
TORD	Torodi Ar. Bea	30.94	221	P	P	02 39 13.5	+1.0
	comp=E,0.5nm,0.7s,baz=29,slow=10,SNR=3.5						
	comp=E,0.5nm,0.7s						
MKAR	Makanchi Array	44.21	59	P	P	02 41 04.2	-0.2
	comp=E,0.3nm,0.5s,baz=273,slow=7.9,SNR=7.4						
	comp=E,0.3nm,0.5s						

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*IDC **15** 02:34:02.4±8.7, 8.°96S×110.°11E, h54^{km}±76^{km}, mb3.9/15, mbtmp4.2/15, MS3.6/1, Error ellipse: s-maj=35.1km s-min=14.3km az=65.0*

*NEIC **15** 02:34:02.2±1.9, 9.°23S±0.°07×110.°00E±0.°04, h56^{km}±6^{km}, mb4.2/20, Error ellipse: s-maj=9.8km s-min=6.0km az=163.0*

*DJA **15** 02:34:02.9±0.3, 9°S±3°×11°0E±°, h46^{km}±9^{km}, M4.9/24, mB5.5/10, mb4.9/12, MLv4.7/24, Mw4.1/41, Mw(mB)5.0/10*

ISC 15 02:34:02.3±1.0, **9.°25S**±0.°06×**110.°06E**±0.°05, **h62**^{km}±9^{km}, **n92**, σ**1^{s}40**/97, **mb4.2**/20, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UGM	Wanagama	1.40	19		Pn	02 34 26.3	+0.5
UGM				Sn	Sn	02 34 42.4	-1.0
UGM	Wanagama	1.40	19	P	Pn	02 34 26.4	+0.6
UGM	Wanagama	1.40	19	P	Pn	02 34 26.1	+0.3
UGM				S	Sn	02 34 42.5	-0.9
YOGI	Yogyakarta	1.44	9	P	Pn	02 34 26.5	+0.3
PWJI	Pagerwojo	2.11	55	P	Pn	02 34 36.4	+1.1
PWJI				S	Sn	02 34 59.8	-0.7
CMJI	Cimerak	2.15	312	P	Pn	02 34 36.2	+0.3
CMJI				S	Sn	02 35 01.6	+0.1
KPJI	Karang Pucung	2.20	330	P	Pn	02 34 38.1	+1.5
SMRI	Semarang	2.22	10	Pn	Pn	02 34 37.0	+0.3
SMRI				Sn	Sn	02 35 04.1	+1.0
SMRI	Semarang	2.22	10	P	Pn	02 34 39.3	+2.5
SMRI	Semarang	2.22	10	P	Pn	02 34 39.0	+2.2
SMRI				S	Sn	02 35 04.7	+1.6
NGJI	Ngawi	2.33	37	P	Pn	02 34 42.3	+4.0
UWJI	Ujung Watu	2.94	18	P	Pn	02 34 48.2	+1.5
BBJI	Bungbulang	2.97	306	P	Pn	02 34 47.8	+0.7
TBJI	Tambak Boyo	3.00	36	P	Pn	02 34 48.9	+1.5
GRJI	Gresik	3.34	46	P	Pn	02 34 54.2	+2.2
CNJI	Cibinong	3.48	303	P	Pn	02 34 54.5	+0.5
GMJI	Gumukmas	3.49	74	P	Pn	02 34 55.1	+1.0
BLJI	Banyuglugur	3.81	67	P	Pn	02 35 00.5	+2.0
JAGI	Jajag, Banyuwa	4.12	80		Pn	02 35 03.8	+1.1
JAGI	Jajag, Banyuwa	4.12	80	P	Pn	02 35 04.5	+1.7
JAGI	Jajag, Banyuwa	4.12	80	P	Pn	02 35 03.9	+1.1
ABJI	Asem Bagus	4.38	71	P	Pn	02 35 08.8	+2.5
XMI	Christmas Isla	4.46	254	P	Pn	02 35 08.2	+0.7
IGBI	Denpasar	5.05	86	P	Pn	02 35 16.8	+1.4
CGJI	Cibinong	5.05	301	P	Pn	02 35 16.4	+0.9
	383nm,0.4s,11µm1.8nm						
DNP	Denpasar	5.12	84	P	Pn	02 35 19.2	+2.7
SRBI	Singaraja	5.23	78	P	Pn	02 35 19.6	+1.7
	59nm,0.5s,2µm0.8nm						
KASI	Kota Agung	6.64	303	P	Pn	02 35 39.3	+2.0
TWSI	Taliwang, Sumb	6.76	86	P	Pn	02 35 40.3	+1.3
MDSI	Maura Dua	7.51	309	P	Pn	02 35 50.8	+1.6
	26nm,1.0s,2µm0.1nm						
PLAI	Plampang	7.64	87	P	Pn	02 35 52.5	+1.5
PLAI	Plampang	7.64	87	P	Pn	02 35 52.5	+1.5
	90nm,0.7s,1µm0.5nm						
MNAI	Manna	8.56	304	Pn	Pn	02 36 03.5	-0.1
MNAI	Manna	8.56	304	P	Pn	02 36 04.4	+0.8
MNAI	Manna	8.56	304	P	Pn	02 36 04.1	+0.5
	133nm,0.7s						
KSI	Kapahiang	9.27	306	P	Pn	02 36 14.1	+0.8
	202nm,0.7s,11µm						
BASI	Baing, Sumba	10.42	96	P	Pn	02 36 29.0	0.0
	104nm,0.5s,2µm						
GIRL	Giralia	13.91	164	Pn	Pn	02 37 14.7	-1.8
GIRL	Giralia	13.91	164	P	Pn	02 37 15.0	-1.5
SOEI	Soe	14.03	93	Pn	Pn	02 37 16.4	-1.8
SOEI	Soe	14.03	93	P	Pn	02 37 18.5	+0.3
SOEI	Soe	14.03	93	P	Pn	02 37 16.6	-1.6
	25nm,0.6s						
MBWA	Marble Bar	15.07	143	Pn	Pn	02 37 29.7	-2.0
MBWA				IAmb	IAmb	02 37 31.6	
	comp=Z,12nm,0.6s						
MBWA	Marble Bar	15.07	143	P	Pn	02 37 30.2	-1.5
PSA00	Pilbara Seismi	15.46	144	Pn	Pn	02 37 35.2	-1.5
PSA00				IAmb	IAmb	02 37 46.6	
	comp=Z,9.0nm,0.7s						
PSA00	Pilbara Seismi	15.46	144	P	Pn	02 37 35.6	-1.1
KULM	Kulim	17.22	327		P	02 37 59.8	+0.3
FITZ	Fitzroy Crossi	17.50	122		P	02 38 02.8	+0.1
KNRA	Kununurra	19.34	111		P	02 38 22.9	0.0
KNRA				IAmb	IAmb	02 38 38.4	
	comp=Z,8.0nm,0.8s						
KNRA	Kununurra	19.34	111	P	Pn	02 38 24.6	+0.1
WB0	Warramunga Arr	25.74	117	P	P	02 39 27.9	+0.6
WB0				IAmb	IAmb	02 39 55.0	
	comp=Z,6.0nm,0.8s						
WRA	Warramunga Arr	25.76	117	P	P	02 39 27.7	+0.2
	comp=Z,1.0nm,0.8s,baz=290,slow=12,SNR=7.9						
WRA				PcP	PcP	02 42 57.7	+1.5
	comp=Z,0.9nm,0.5s,baz=301,slow=1.8,SNR=6.9						
	comp=Z,1.0nm,0.8s						
WRA	Warramunga Arr	25.76	117	P	P	02 39 29.0	+1.5
WRAB	Tennant Creek	25.76	117	P	P	02 39 28.7	+1.2
WRAB				IAmb	IAmb	02 39 55.2	
	comp=Z,7.0nm,0.7s						
WB2	Warramunga Arr	25.77	117	P	P	02 39 28.3	+0.7
WB2				IAmb	IAmb	02 39 55.1	
	comp=Z,4.2nm,0.7s						
ASAR	Alice Springs	26.93	125	P	P	02 39 40.6	+2.5
	comp=Z,0.9nm,0.7s,baz=300,slow=8.9,SNR=6.4						
ASAR				PcP	PcP	02 43 00.8	+1.8
	comp=Z,1.5nm,0.5s,baz=302,slow=1.9,SNR=11						
	comp=Z,0.9nm,0.7s						
FORT	Forrest	27.21	144	P	P	02 39 40.6	+0.2
PALK	Pallekele	33.54	298	LR	LR	02 54 15.8	
	comp=Z,86nm,18.4s,baz=295,slow=36						
TNCH	TengChong	35.88	342	*e*P	P	02 40 59.0	+2.3
TNCH				pP	sP	02 41 16.8	-1.1
TNCH				pmax	pmax		
	comp=Z,230nm,0.5s						
CTAO	Charters Tower	36.56	111	P	P	02 41 02.5	0.0
STKA	Stephens Creek	36.90	132	P	P	02 41 07.7	+2.4
	comp=Z,1.5nm,0.4s,baz=315,slow=9.2,SNR=5.4						
	comp=Z,1.5nm,0.4s						
STKA	Stephens Creek	36.90	132	P	P	02 41 07.2	+1.9
H08S2	Diego Garcia H	37.18	270	T	T	03 20 29.7	
	baz=94,slow=75,SNR=2.3						
H08S3	Diego Garcia H	37.19	270	T	T	03 20 27.1	
	baz=94,slow=75,SNR=3.4						
H08S1	Diego Carcia H	37.20	270	T	T	03 20 28.1	
	baz=94,slow=75,SNR=3.6						
KSRS	Korea Array	49.38	19	P	P	02 42 45.4	-0.4
	comp=Z,2.4nm,0.7s,baz=207,slow=8.7,SNR=5.7						
	comp=Z,2.4nm,0.7s						
MJAR	Matsushiro Arr	52.68	29	P	P	02 43 08.1	-2.5
	comp=Z,1.6nm,0.5s,baz=207,slow=8.0,SNR=2.2						
	comp=Z,1.6nm,0.5s						
NIL	Nilore	55.16	322	P	P	02 43 28.0	-0.8
USRK	Ussuriysk Ar.	56.79	19	P	P	02 43 38.8	-1.3
	comp=Z,4.5nm,0.7s,baz=233,slow=6.6,SNR=8.5						
	comp=Z,4.5nm,0.7s						
USRK	Ussuriysk Ar.	56.79	19	P	P	02 43 39.7	-0.4
SONM	Songino Array	56.92	357	P	P	02 43 40.6	-0.5
	comp=Z,1.7nm,0.6s,baz=178,slow=8.4,SNR=16						
SONM				PcP	PcP	02 44 36.3	+0.3
	comp=Z,0.5nm,0.5s,baz=174,slow=6.2,SNR=2.8						
	comp=Z,1.7nm,0.6s						
SONM	Songino Array	56.92	357	P	P	02 43 40.6	-0.5
SONM				IAmb	IAmb	02 43 49.6	
	comp=Z,3.2nm,1.4s						
CHGR	Chuyangaron	60.99	324	P	P	02 44 09.7	+0.2
MK31	Makanchi Array	61.04	339	P	P	02 44 09.5	-0.1
MK31				IAmb	IAmb	02 44 10.0	
	comp=Z,2.1nm,0.5s						
MKAR	Makanchi Array	61.04	339	P	P	02 44 09.3	-0.3
	comp=Z,2.9nm,0.4s,baz=152,slow=7.6,SNR=45						
	comp=Z,2.9nm,0.4s						
MKAR	Makanchi Array	61.04	339	P	P	02 44 09.2	-0.4
KKAR	Karatay Array	63.33	329	P	P	02 44 24.2	-0.8
KURBB	Kurchatov Arra	65.61	339	P	P	02 44 39.1	-0.5
	comp=Z,0.7nm,0.4s,baz=153,slow=6.2,SNR=9.1						
	comp=Z,0.7nm,0.4s						
KURK	Kurchatov	65.65	339	P	P	02 44 39.0	-0.9
KURK				IAmb	IAmb	02 45 13.6	
	comp=Z,3.7nm,1.2s						
ZAA0	Zalesovo Array	66.48	344	P	P	02 44 44.1	-1.0
ZALV	Zalesovo Beam	66.48	344	P	P	02 44 44.2	-1.0
	comp=Z,1.2nm,0.3s,baz=149,slow=6.5,SNR=7.4						
	comp=Z,1.2nm,0.3s						
ZALV	Zalesovo Beam	66.48	344	P	P	02 44 43.8	-1.4
BVAR	Borovoye Array	70.62	336	P	P	02 45 09.7	-1.3
	comp=Z,0.9nm,0.4s,baz=142,slow=9.2,SNR=5.3						
	comp=Z,0.9nm,0.4s						
ABKAR	Akbulak array	72.89	328	P	P	02 45 24.6	-0.1
PETK	Petropavlovsk-	74.12	28	P	P	02 45 30.2	-1.7
	comp=Z,1.2nm,0.5s,baz=252,slow=2.9,SNR=2.3						
	comp=Z,1.2nm,0.5s						
QSPA	South Pole Qui	80.75	180	P	P	02 46 11.4	+2.4
	comp=Z,1.3nm,0.7s,baz=280,slow=0.6,SNR=8.7						
	comp=Z,1.3nm,0.7s						
QSPA	South Pole Qui	80.75	180	P	P	02 46 10.8	+1.8
QSPA				IAmb	IAmb	02 46 35.3	
	comp=Z,5.7nm,1.4s						
MMAI	Mount Meron Ar	82.36	305	P	P	02 46 17.4	-0.6
	comp=Z,3.9nm,0.9s,baz=119,slow=8.4,SNR=2.7						
	comp=Z,3.9nm,0.9s						
BRTR	Keskin Array B	85.57	311	P	P	02 46 34.5	+0.1
	comp=Z,1.1nm,0.7s,baz=129,slow=7.0,SNR=7.5						
	comp=Z,1.1nm,0.7s						
TORD	Torodi Ar. Bea	109.81	281	PKiKP	PKiKP	02 52 28.2	+0.7
	comp=Z,0.3nm,0.7s,baz=86,slow=2.5,SNR=1.8						
YKA	Yellowknife Ar	117.86	22	PKP	PKPdf	02 52 40.2	-1.3
	comp=Z,0.1nm,0.8s,baz=298,slow=1.3,SNR=4.7						
TXAR	Lajitas Array	142.63	53	PKP	PKPdf	02 53 26.9	-2.4
	comp=Z,0.1nm,0.5s,baz=276,slow=1.6,SNR=5.1						

ROM 15 02:35:56.3±0.1, **42.°968N**±0.°003×**13.°057E**±0.°004, **h13**^{km}, **ML0.9**/3, **1D, Error ellipse: s-maj=0.3km s-min=0.2km az=280.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FDMO	Fiordimonte	0.07	18	P	Pg	02 35 59.2	+0.2
FDMO				S	Sg	02 36 01.1	+0.2
FDMO				AML	AML		
	comp=E,134µm,0.2s						
FDMO				AML	AML		
	comp=N,82µm,0.2s						
T1216	Preci, Frazion	0.08	200	P	Pg	02 35 59.3	+0.3
T1219	Muccia, Frazio	0.10	337	P	Pg	02 35 59.5	+0.2
T1219				S	Sg	02 36 01.6	+0.2
MC2	Monte Cornacci	0.11	119	P	Pg	02 35 59.9	+0.4
MC2				S	Sg	02 36 02.4	+0.5
CESI	CESI - Serrava	0.12	289	⇓P	Pg	02 35 59.9	+0.4
CESI				S	Sg	02 36 02.5	+0.7
CESI				AML	AML		
	comp=N,184µm,0.1s						
CESI				AML	AML		
	comp=E,109µm,0.1s						
T1256	Bolognola (MC)	0.13	73	AML	AML		
	comp=N,34µm,0.5s						
T1256				AML	AML		
	comp=N,34µm,1.5s						
T1256				AML	AML		
	comp=E,32µm,0.5s						
T1256				AML	AML		
	comp=N,34µm,1.5s						
T1220	Camerino, Fraz	0.14	9	P	Pg	02 36 00.2	+0.4
T1220				S	Sg	02 36 03.1	+0.7
MMO1	Montemonaco	0.21	109	P	Pg	02 36 01.3	+0.4
MMO1				S	Sg	02 36 04.8	+0.7
T1212	Cascia, Frazio	0.22	182	P	Pg	02 36 01.3	+0.3
T1212				S	Sg	02 36 05.1	+0.9
T1215	Vallo di Nera,	0.22	220	P	Pg	02 36 01.4	+0.4

ROM 15 02:36:54.8±0.1, **42.°769N**±0.°002×**13.°162E**±0.°003, **h13**^{km}, **ML1.4**/5, **4C-1D, Error ellipse: s-maj=0.3km s-min=0.1km az=321.0, Central Italy**

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

T1214	**Arquata del Tr**	**0.04**	**105**	P	Pg	02 36 57.5	+0.1
T1214				S	Sg	02 36 59.2	+0.1
T1214				AML	AML		
	comp=E,446µm,0.1s						
T1214				AML	AML		
	comp=N,244µm,0.9s						
T1214				AML	AML		
	comp=E,454µm,0.8s						
T1214				AML	AML		
	comp=N,199µm,0.2s						
T1214				AML	AML		
	comp=N,244µm,1.1s						
T1212	**Cascia, Frazio**	**0.09**	**259**	P	Pg	02 36 57.9	+0.2
T1212				S	Sg	02 37 00.0	+0.2
T1212				AML	AML		
	comp=E,159µm,0.9s						
T1212				AML	AML		
	comp=N,237µm,0.3s						
T1245	**Castelsantange**	**0.09**	**12**	P	Pg	02 36 58.0	+0.2
T1245				S	Sg	02 37 00.2	+0.2
T1245				AML	AML		
	comp=E,414µm,0.1s						
T1245				AML	AML		
	comp=N,384µm,0.2s						
T1218	**Civita (PG)**	**0.10**	**199**	P	Pg	02 36 58.2	+0.3
T1218				S	Sg	02 37 00.6	+0.4
T1218				AML	AML		
	comp=E,254µm,0.2s						
T1218				AML	AML		
	comp=E,232µm,0.2s						
T1218				AML	AML		
	comp=N,406µm,0.2s						
T1218				AML	AML		
	comp=N,402µm,0.2s						
MC2	**Monte Cornacci**	**0.15**	**8**	P	Pg	02 36 58.9	+0.3
MC2				S	Sg	02 37 01.9	+0.6
T1216	**Preci, Frazion**	**0.16**	**319**	P	Pg	02 36 59.0	+0.3
MMO1	**Montemonaco**	**0.18**	**43**	⇑P	Pg	02 36 59.2	+0.3
MMO1				S	Sg	02 37 02.5	+0.6
T1217	**Poggiodomo (PG**	**0.18**	**252**	⇑P	Pg	02 36 59.3	+0.4
T1217				S	Sg	02 37 02.6	+0.7
SMA1	**SAN MARTINO**	**0.19**	**137**	⇓P	Pg	02 36 59.4	+0.3
T1241	**Roccafluvione,**	**0.22**	**66**	P	Pg	02 36 59.8	+0.3
T1215	**Vallo di Nera,**	**0.22**	**279**	P	Pg	02 36 59.9	+0.3
T1256	**Bolognola (MC)**	**0.24**	**11**	P	Pg	02 37 00.3	+0.3
RM33	**Pellescritta (**	**0.26**	**171**	P	Pb	02 37 01.0	-0.5
FDMO	**Fiordimonte**	**0.27**	**348**	P	Pg	02 37 00.7	+0.1
T1219	**Muccia, Frazio**	**0.31**	**338**	⇑P	Pg	02 37 01.5	+0.3
T1220	**Camerino, Fraz**	**0.35**	**351**	⇑P	Pg	02 37 02.1	+0.3
TERO	**Teramo**	**0.36**	**114**	P	Pg	02 37 02.1	+0.1
TERO				AML	AML		
	comp=E,124µm,1.2s						
TERO				AML	AML		
	comp=N,53µm,1.6s						
TERO				AML	AML		
	comp=N,53µm,0.4s						
TERO				AML	AML		
	comp=E,124µm,0.8s						

ROM 15 02:37:31.4±0.1, 42°.631N±0°.003×13°.354E±0°.002, h4^{km}, ML1.4/9, 2D, Error ellipse: s-maj=0.3km s-min=0.1km az=196.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	**0.01**	**269**	P	Pg	02 37 32.3	-0.1
SMA1				S	Sg	02 37 32.9	-0.2
CAMP	**Campotosto**	**0.10**	**157**	⇓P	Pg	02 37 33.9	+0.3
CAMP				S	Sg	02 37 35.7	+0.7
CAMP				AML	AML		
	comp=E,122µm,0.1s						
CAMP				AML	AML		
	comp=N,256µm,0.5s						
CAMP				AML	AML		
	comp=N,256µm,1.5s						
RM33	**Pellescritta (**	**0.16**	**220**	P	Pg	02 37 35.0	+0.4
RM33				S	Sg	02 37 37.8	+1.1
RM33				AML	AML		
	comp=E,357µm,0.3s						
RM33				AML	AML		
	comp=N,378µm,1.1s						
RM33				AML	AML		
	comp=E,357µm,1.7s						
RM33				AML	AML		
	comp=N,466µm,1.1s						
RM33				AML	AML		
	comp=E,342µm,0.3s						
T1214	**Arquata del Tr**	**0.17**	**320**	⇓P	Pg	02 37 35.3	+0.5
T1218	**Civita (PG)**	**0.18**	**283**	P	Pg	02 37 35.3	+0.3
T1218				S	Sg	02 37 38.7	+1.3
TERO	**Teramo**	**0.18**	**92**	P	Pg	02 37 35.5	+0.5
TERO				S	Sg	02 37 38.8	+1.4
TERO				AML	AML		
	comp=E,1785µm,0.2s						
TERO				AML	AML		
	comp=E,1920µm,0.2s						
TERO				AML	AML		
	comp=N,1405µm,0.1s						
TERO				AML	AML		
	comp=N,1530µm,0.1s						
TERO				AML	AML		
	comp=E,1920µm,1.8s						
TERO				AML	AML		
	comp=E,1785µm,1.8s						
T1241	**Roccafluvione,**	**0.23**	**14**	AML	AML		
	comp=N,100µm,0.3s						
T1241				AML	AML		
	comp=E,64µm,1.2s						
GIGS	**Gran Sasso**	**0.24**	**139**	AML	AML		
	comp=N,40µm,0.4s						
GIGS				AML	AML		
	comp=E,51µm,1.3s						
GIGS				AML	AML		
	comp=E,51µm,0.7s						
T1245	**Castelsantange**	**0.26**	**332**	AML	AML		
	comp=E,82µm,1.7s						
T1245				AML	AML		
	comp=E,82µm,0.3s						
T1245				AML	AML		
	comp=N,122µm,0.5s						
T1215	**Vallo di Nera,**	**0.40**	**296**	AML	AML		
	comp=N,38µm,0.6s						
T1215				AML	AML		
	comp=E,24µm,1.6s						
T1215				AML	AML		
	comp=N,38µm,1.4s						
T1215				AML	AML		
	comp=E,24µm,0.4s						
GUMA	**Gualdo di Mace**	**0.43**	**358**	AML	AML		
	comp=N,80µm,1.1s						
GUMA				AML	AML		
	comp=E,88µm,0.5s						
GUMA				AML	AML		
	comp=N,80µm,0.9s						
T1220	**Camerino, Fraz**	**0.52**	**338**	AML	AML		
	comp=E,78µm,0.7s						
T1220				AML	AML		
	comp=E,78µm,1.3s						
T1220				AML	AML		
	comp=N,116µm,0.3s						

IDC 15 02:48:49.5±10.0, 17°.94S×178°.47W, h515^{km}±35^{km}, mb2.7/3, mbtmp3.5/4, Error ellipse: s-maj=355.5km s-min=31.6km az=141.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.33**	**273**	P	P	02 50 04.0	0.0
	4.1nm,0.5s,baz=125,slow=13,SNR=4.7						
WRA	**Warramunga Arr**	**44.57**	**260**	P	P	02 56 15.4	-0.2
	0.3nm,0.7s,baz=93,slow=6.6,SNR=2.2						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**44.73**	**254**	P	P	02 56 16.7	-0.1
	0.8nm,0.4s,baz=90,slow=8.7,SNR=21						
	0.8nm,0.4s						
ILAR	**Eielson Array**	**85.93**	**13**	P	P	03 00 34.2	0.0
	0.1nm,0.4s,baz=218,slow=5.2,SNR=6.2						
	0.1nm,0.4s						

ROM 15 02:59:18.4±0.1, 43°.044N±0°.004×13°.042E±0°.004, h9^{km}, ML1.0/7, 3C-1D, Error ellipse: s-maj=0.4km s-min=0.3km az=155.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.03**	**295**	P	Pg	02 59 20.5	+0.3
T1219				S	Sg	02 59 21.5	0.0
T1219				AML	AML		
	comp=N,928µm,0.2s						
T1219				AML	AML		
	comp=E,676µm,0.4s						
T1219				AML	AML		
	comp=E,726µm,0.4s						
T1219				AML	AML		
	comp=N,984µm,0.3s						
FDMO	**Fiordimonte**	**0.03**	**102**	P	Pg	02 59 20.3	+0.1
FDMO				S	Sg	02 59 21.2	-0.3
FDMO				AML	AML		
	comp=E,464µm,0.6s						
FDMO				AML	AML		
	comp=N,435µm,0.3s						
T1220	**Camerino, Fraz**	**0.07**	**28**	P	Pg	02 59 21.0	+0.4
T1220				S	Sg	02 59 22.6	+0.3
T1220				AML	AML		
	comp=E,1060µm,0.3s						
T1220				AML	AML		
	comp=N,880µm,0.5s						
T1220				AML	AML		
	comp=E,1060µm,0.3s						
T1220				AML	AML		
	comp=N,882µm,0.5s						
CSP1	**Cessapalombo**	**0.13**	**68**	P	Pg	02 59 21.9	+0.5
CSP1				S	Sg	02 59 24.3	+0.7
T1256	**Bolognola (MC)**	**0.14**	**105**	AML	AML		
	comp=N,53µm,0.3s						
T1256				AML	AML		
	comp=E,62µm,0.5s						
T1256				AML	AML		
	comp=E,62µm,0.5s						
T1245	**Castelsantange**	**0.22**	**150**	AML	AML		
	comp=N,75µm,0.3s						
T1245				AML	AML		
	comp=E,51µm,0.6s						
SNTG	**Esanatoglia**	**0.22**	**341**	P	Pg	02 59 23.9	+0.9
SNTG				S	Sg	02 59 27.6	+1.5
SNTG				AML	AML		
	comp=E,28µm,1.1s						
SNTG				AML	AML		
	comp=N,30µm,0.2s						
SNTG				AML	AML		
	comp=E,28µm,0.9s						
T1215	**Vallo di Nera,**	**0.27**	**208**	P	Pb	02 59 25.0	-0.6
ASSB	**Assisi San Ben**	**0.28**	**270**	P	Pb	02 59 24.9	-0.8
ASSB				S	Sb	02 59 29.6	-0.9
EL6	**Elcito**	**0.29**	**9**	P	Pg	02 59 24.9	+0.7
EL6				S	Sb	02 59 29.8	-1.0
T1212	**Cascia, Frazio**	**0.29**	**180**	⇑P	Pb	02 59 25.1	-0.8
T1214	**Arquata del Tr**	**0.31**	**157**	⇑P	Pg	02 59 25.4	+0.7
ATCC	**AVT- Casa Cast**	**0.33**	**296**	AML	AML		
	comp=E,43µm,1.3s						
ATCC				AML	AML		
	comp=N,24µm,1.2s						
ATCC				AML	AML		
	comp=E,43µm,0.7s						
ATCC				AML	AML		
	comp=N,24µm,0.8s						
T1241	**Roccafluvione,**	**0.34**	**123**	AML	AML		
	comp=E,28µm,1.5s						
T1241				AML	AML		
	comp=N,35µm,0.1s						
T1241				AML	AML		
	comp=E,28µm,0.5s						
CING	**Cingoli**	**0.35**	**19**	⇓P	Pg	02 59 26.0	+0.6
T1218	**Civita (PG)**	**0.38**	**172**	⇑P	Pg	02 59 26.5	+0.6
ARVD	**Arcevia**	**0.46**	**351**	S	Sb	02 59 35.7	0.0
T1211	**Morro Reatino**	**0.53**	**195**	S	Sb	02 59 37.9	+0.2
T1211				AML	AML		
	comp=E,284µm,1.1s						
T1211				AML	AML		
	comp=N,426µm,1.3s						
T1211				AML	AML		
	comp=E,284µm,0.9s						
T1211				AML	AML		
	comp=N,426µm,0.7s						

ROM 15 03:00:05.8±0.0, 42°.854N±0°.001×13°.080E±0°.003, h12^{km}, ML1.5/17, 4C-10D, Error ellipse: s-maj=0.2km s-min=0.0km az=259.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.06**	**310**	P	Pg	03 00 08.4	+0.2
T1216				S	Sg	03 00 10.3	+0.2
T1216				AML	AML		
	comp=N,790µm,0.3s						
T1216				AML	AML		
	comp=E,840µm,0.2s						
T1245	**Castelsantange**	**0.08**	**88**	P	Pg	03 00 08.8	+0.2
T1245				S	Sg	03 00 10.8	+0.2
T1245				AML	AML		
	comp=E,534µm,0.5s						
T1245				AML	AML		
	comp=N,684µm,0.3s						
T1245				AML	AML		
	comp=E,534µm,1.5s						
T1245				AML	AML		
	comp=N,684µm,1.7s						
MC2	**Monte Cornacci**	**0.10**	**54**	P	Pg	03 00 09.2	+0.3
MC2				S	Sg	03 00 11.5	+0.4
T1212	**Cascia, Frazio**	**0.10**	**194**	P	Pg	03 00 09.1	+0.4
T1212				S	Sg	03 00 11.4	+0.5
T1212				AML	AML		
	comp=N,1175µm,0.2s						
T1212				AML	AML		
	comp=E,774µm,0.1s						
T1212				AML	AML		
	comp=N,1135µm,0.2s						
T1212				AML	AML		
	comp=E,782µm,0.1s						
FEMA	**Monte Fema**	**0.11**	**348**	P	Pg	03 00 09.2	+0.3
T1214	**Arquata del Tr**	**0.13**	**135**	⇓P	Pg	03 00 09.6	+0.3
T1214				S	Sg	03 00 12.2	+0.5
T1214				AML	AML		
	comp=E,388µm,0.3s						
T1214				AML	AML		
	comp=N,374µm,0.3s						
T1214				AML	AML		
	comp=E,378µm,0.3s						
T1214				AML	AML		
	comp=E,388µm,0.3s						
T1214				AML	AML		
	comp=N,366µm,0.6s						
T1215	**Vallo di Nera,**	**0.16**	**252**	P	Pg	03 00 10.0	+0.4
T1217	**Poggiodomo (PG**	**0.18**	**218**	P	Pg	03 00 10.3	+0.4
T1217				AML	AML		
	comp=N,103µm,1.4s						
T1217				AML	AML		
	comp=E,88µm,0.9s						
T1217				AML	AML		
	comp=N,103µm,0.6s						
FDMO	**Fiordimonte**	**0.18**	**2**	P	Pg	03 00 10.3	+0.4
FDMO				S	Sg	03 00 13.4	+0.7
FDMO				AML	AML		
	comp=E,127µm,0.2s						
FDMO				AML	AML		
	comp=N,112µm,0.8s						
FDMO				AML	AML		
	comp=N,112µm,1.2s						
T1218	**Civita (PG)**	**0.19**	**172**	P	Pg	03 00 10.3	+0.4
T1218				S	Sg	03 00 13.6	+0.7
T1218				AML	AML		
	comp=E,254µm,1.5s						
T1218				AML	AML		
	comp=N,430µm,0.2s						
T1218				AML	AML		
	comp=N,418µm,0.2s						
T1218				AML	AML		
	comp=E,234µm,0.6s						
T1256	**Bolognola (MC)**	**0.19**	**35**	P	Pg	03 00 10.4	+0.4
MMO1	**Montemonaco**	**0.19**	**76**	P	Pg	03 00 10.3	+0.3
MMO1				S	Sg	03 00 13.5	+0.6
CESI	**CESI - Serrava**	**0.20**	**320**	⇓P	Pg	03 00 10.6	+0.4
CESI				S	Sg	03 00 14.1	+0.9
CESI				AML	AML		
	comp=E,188µm,0.4s						
CESI				AML	AML		
	comp=N,217µm,0.2s						
T1219	**Muccia, Frazio**	**0.21**	**345**	⇓P	Pg	03 00 10.7	+0.3
T1219				S	Sg	03 00 14.3	+0.8
T1219				AML	AML		
	comp=E,198µm,0.2s						
T1219				AML	AML		
	comp=N,133µm,0.3s						
CSP1	**Cessapalombo**	**0.26**	**21**	P	Pg	03 00 11.5	+0.3
CSP1				S	Sb	03 00 15.9	-0.9
T1220	**Camerino, Fraz**	**0.26**	**1**	P	Pg	03 00 11.6	+0.4
T1220				AML	AML		
	comp=E,364µm,1.5s						
T1220				AML	AML		
	comp=N,327µm,0.6s						
T1220				AML	AML		
	comp=E,364µm,0.5s						
T1241	**Roccafluvione,**	**0.26**	**89**	P	Pg	03 00 11.6	+0.4
T1241				S	Sg	03 00 15.8	+1.0
T1241				AML	AML		
	comp=E,99µm,0.5s						
T1241				AML	AML		
	comp=E,98µm,0.5s						
T1241				AML	AML		
	comp=N,174µm,0.2s						
T1241				AML	AML		
	comp=E,98µm,1.5s						
GUMA	**Gualdo di Mace**	**0.28**	**42**	⇑P	Pb	03 00 12.2	-0.5
GUMA				AML	AML		
	comp=E,128µm,0.2s						
GUMA				AML	AML		
	comp=N,138µm,0.6s						
GUMA				AML	AML		
	comp=E,128µm,1.8s						
SMA1	**SAN MARTINO**	**0.29**	**140**	⇓P	Pg	03 00 12.1	+0.3
SMA1				AML	AML		
	comp=N,208µm,0.4s						
SMA1				AML	AML		
	comp=E,270µm,0.5s						
ARRO	**Arrone**	**0.36**	**220**	⇓P	Pg	03 00 13.4	+0.4
RM33	**Pellescritta (**	**0.36**	**164**	P	Pg	03 00 13.2	+0.2
T1211	**Morro Reatino**	**0.36**	**207**	⇑P	Pg	03 00 13.6	+0.5
ASSB	**Assisi San Ben**	**0.36**	**302**	⇓P	Pg	03 00 13.3	+0.2
ASSB				AML	AML		
	comp=E,72µm,0.5s						
ASSB				AML	AML		
	comp=N,57µm,0.9s						
ASSB				AML	AML		
	comp=N,57µm,1.1s						
MOMA	**Monte Martano**	**0.38**	**263**	⇓P	Pb	03 00 14.0	-0.5
MOMA				AML	AML		
	comp=N,69µm,1.0s						
MOMA				AML	AML		
	comp=N,69µm,1.0s						
MOMA				AML	AML		
	comp=E,59µm,0.2s						
CAMP	**Campotosto**	**0.40**	**143**	⇓P	Pg	03 00 13.8	+0.1
SNTG	**Esanatoglia**	**0.41**	**346**	⇑P	Pg	03 00 14.2	+0.2
SNTG				AML	AML		
	comp=N,33µm,0.2s						
SNTG				AML	AML		
	comp=E,29µm,0.2s						
TERO	**Teramo**	**0.45**	**121**	⇓P	Pg	03 00 14.6	0.0
ATCC	**AVT- Casa Cast**	**0.46**	**316**	P	Pg	03 00 15.2	+0.3
EL6	**Elcito**	**0.48**	**2**	P	Pg	03 00 15.4	+0.2
EL6				S	Sb	03 00 23.5	+0.4
CING	**Cingoli**	**0.53**	**9**	⇓P	Pg	03 00 16.3	+0.2
MURB	**Monte Urbino**	**0.58**	**315**	⇑P	Pb	03 00 17.6	-0.3

ROM 15 03:13:45.8±0.0, 42°.764N±0°.003×13°.133E±0°.004, h11^{km}, ML1.4/9, 2C-4D, Error ellipse: s-maj=0.4km s-min=0.3km az=135.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.06**	**95**	P	Pg	03 13 48.4	+0.1
T1214				S	Sg	03 13 50.1	+0.1
T1214				AML	AML		
	comp=N,322µm,0.9s						
T1214				AML	AML		
	comp=E,548µm,0.3s						
T1214				AML	AML		
	comp=N,354µm,0.9s						
T1214				AML	AML		
	comp=E,590µm,0.3s						
T1214				AML	AML		
	comp=N,322µm,1.1s						
T1212	**Cascia, Frazio**	**0.07**	**259**	P	Pg	03 13 48.6	+0.4
T1212				S	Sg	03 13 50.4	+0.5
T1212				AML	AML		
	comp=E,384µm,0.2s						
T1212				AML	AML		
	comp=N,501µm,0.2s						
T1212				AML	AML		
	comp=E,361µm,0.2s						
T1212				AML	AML		
	comp=N,487µm,0.2s						
T1212				AML	AML		
	comp=N,502µm,0.2s						
T1212				AML	AML		
	comp=E,361µm,0.2s						
T1212				AML	AML		
	comp=E,383µm,0.2s						
T1212				AML	AML		
	comp=N,488µm,0.2s						
T1218	**Civita (PG)**	**0.10**	**188**	P	Pg	03 13 48.9	+0.3
T1218				S	Sg	03 13 51.1	+0.5
T1218				AML	AML		
	comp=E,320µm,0.3s						
T1218				AML	AML		
	comp=N,619µm,0.2s						
T1218				AML	AML		
	comp=E,330µm,0.3s						
T1218				AML	AML		
	comp=N,623µm,0.2s						
T1245	**Castelsantange**	**0.10**	**24**	P	Pg	03 13 49.0	+0.3
T1245				S	Sg	03 13 51.2	+0.4
T1245				AML	AML		
	comp=E,473µm,0.2s						
T1245				AML	AML		
	comp=N,368µm,0.3s						
T1245				AML	AML		
	comp=N,369µm,0.3s						
T1245				AML	AML		
	comp=E,472µm,0.2s						
T1216	**Preci, Frazion**	**0.15**	**327**	P	Pg	03 13 49.8	+0.4
T1216				S	Sg	03 13 52.7	+0.9
T1216				AML	AML		
	comp=E,90µm,0.3s						
T1216				AML	AML		
	comp=N,108µm,0.1s						
T1216				AML	AML		
	comp=E,90µm,1.7s						
MC2	**Monte Cornacci**	**0.15**	**16**	P	Pg	03 13 49.9	+0.3
MC2				S	Sg	03 13 53.1	+0.9
T1215	**Vallo di Nera,**	**0.20**	**281**	⇓P	Pb	03 13 51.4	-0.1
SMA1	**SAN MARTINO**	**0.20**	**132**	⇓P	Pg	03 13 50.6	+0.5
SMA1				AML	AML		
	comp=E,50µm,0.8s						
SMA1				AML	AML		
	comp=N,47µm,0.1s						
SMA1				AML	AML		
	comp=E,50µm,1.2s						
T1241	**Roccafluvione,**	**0.24**	**67**	⇑P	Pg	03 13 51.0	+0.1
T1241				AML	AML		
	comp=E,67µm,0.3s						
T1241				AML	AML		
	comp=N,55µm,1.0s						
T1256	**Bolognola (MC)**	**0.25**	**16**	⇓P	Pg	03 13 51.4	+0.3
RM33	**Pellescritta (**	**0.26**	**167**	P	Pg	03 13 51.5	+0.3
T1211	**Morro Reatino**	**0.31**	**222**	⇓P	Pg	03 13 52.5	+0.4
GUMA	**Gualdo di Mace**	**0.33**	**26**	AML	AML		
	comp=E,116µm,0.3s						
GUMA				AML	AML		
	comp=N,83µm,0.2s						
GUMA				AML	AML		
	comp=N,272µm,0.5s						
GUMA				AML	AML		
	comp=E,266µm,0.8s						
T1247	**Pizzolo (AQ)**	**0.34**	**159**	S	Sb	03 13 59.6	+0.1
T1220	**Camerino, Fraz**	**0.35**	**355**	⇑P	Pg	03 13 53.1	+0.3
TERO	**Teramo**	**0.38**	**112**	P	Pg	03 13 53.0	-0.3
ASSB	**Assisi San Ben**	**0.45**	**309**	P	Pb	03 13 55.3	-0.4
ASSB				AML	AML		
	comp=N,32µm,1.3s						
ASSB				AML	AML		
	comp=E,49µm,0.6s						
ASSB				AML	AML		

comp=N,32µm,0.7s

ROM 15 03:14:06.6±0.0,**42°.939N**±0°.002×**13°.002E**±0°.003, **h12^{km},ML1.0**/2,**4C-2D,Error ellipse: s-maj=0.2km s-min=0.0km az=60.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1216	Preci, Frazion	0.05	166	P	Pg	03 14 09.3	+0.3
T1216				S	Sg	03 14 11.1	+0.4
CESI	CESI - Serrava	0.10	313	⇓P	Pg	03 14 09.9	+0.4
CESI				S	Sg	03 14 12.2	+0.6
CESI				AML	AML		
	comp=N,188µm,0.3s						
CESI				AML	AML		
	comp=E,118µm,0.2s						
FDMO	Fiordimonte	0.12	33	⇑P	Pg	03 14 10.1	+0.4
FDMO				S	Sg	03 14 12.6	+0.6
FDMO				AML	AML		
	comp=E,79µm,0.2s						
FDMO				AML	AML		
	comp=N,79µm,0.1s						
T1219	Muccia, Frazio	0.12	2	P	Pg	03 14 10.0	+0.3
T1219				S	Sg	03 14 12.5	+0.4
MC2	Monte Cornacci	0.14	101	P	Pg	03 14 10.6	+0.4
T1245	Castelsantange	0.16	121	P	Pg	03 14 10.7	+0.3
T1215	Vallo di Nera,	0.17	216	P	Pg	03 14 10.9	+0.4
T1215				S	Sg	03 14 14.0	+0.8
T1256	Bolognola (MC)	0.18	68	⇓P	Pg	03 14 11.1	+0.4
T1220	Camerino, Fraz	0.18	20	P	Pg	03 14 11.1	+0.4
T1212	Cascia, Frazio	0.19	171	P	Pg	03 14 11.3	+0.4
CSP1	Cessapalombo	0.21	44	⇑P	Pg	03 14 11.7	+0.4
MMO1	Montemonaco	0.24	99	⇑P	Pg	03 14 12.2	+0.5
MMO1				S	Sg	03 14 16.2	+1.0
ASSB	Assisi San Ben	0.27	292	⇑P	Pg	03 14 12.6	+0.3
ASSB				S	Sb	03 14 17.2	-0.9

IDC 15 03:17:17.0±2.8,**55°.41N**×**86°.18E,h0^{km},mbtmp3.2**/3, **ML2.5**/3,**Error ellipse: s-maj=25.0km s-min=16.2km az=66.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.67	209	I	I	03 27 00.0	
	baz=25,slow=342,SNR=18						
ZALV	Zalesovo Beam	1.67	209	Pg	Pn	03 17 45.7	-1.7
	3.6nm,0.3s,baz=26,slow=16,SNR=46						
ZALV				Lg	Lg	03 18 11.6	
	3.4nm,0.3s,baz=29,slow=32,SNR=13						
KURBB	Kurchatov Arra	6.65	227	Pn	Pn	03 18 56.5	+0.6
	0.1nm,0.3s,baz=40,slow=14,SNR=2.4						
KURBB				Lg	Lg	03 20 45.9	
	0.1nm,0.3s,baz=54,slow=30,SNR=1.4 1.3nm,0.2s						
MKAR	Makanchi Array	8.97	197	Pn	Pn	03 19 27.8	+0.1
	0.1nm,0.3s,baz=18,slow=13,SNR=4.6						
MKAR				Sn	Sn	03 21 07.4	-2.0
	baz=18,slow=24,SNR=2.4						
MKAR				Lg	Lg	03 21 59.9	
	baz=20,slow=30,SNR=7.2 0.1nm,0.4s						
BVAR	Borovoye Array	9.55	262	Pn	Pn	03 19 34.7	-1.0
	0.1nm,0.3s,baz=68,slow=14,SNR=5.4						
BVAR				Sn	Sn	03 21 13.9	-10
	baz=64,slow=25,SNR=4.1 0.6nm,0.4s						

ROM 15 03:36:36.3±0.1,**42°.708N**±0°.004×**13°.155E**±0°.004, **h11^{km},ML1.4**/8,**2C-3D,Error ellipse: s-maj=0.5km s-min=0.1km az=161.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1218	Civita (PG)	0.05	218	P	Pg	03 36 38.8	+0.2
T1218				S	Sg	03 36 40.5	+0.2
T1218				AML	AML		
	comp=E,506µm,0.9s						
T1218				AML	AML		
	comp=E,499µm,0.9s						
T1218				AML	AML		
	comp=N,739µm,0.2s						
T1218				AML	AML		
	comp=N,744µm,0.2s						
T1214	Arquata del Tr	0.07	38	P	Pg	03 36 39.0	+0.2
T1214				S	Sg	03 36 40.8	+0.1
T1214				AML	AML		
	comp=N,182µm,0.6s						
T1214				AML	AML		
	comp=N,192µm,0.6s						
T1214				AML	AML		
	comp=E,216µm,0.3s						
T1214				AML	AML		
	comp=N,192µm,1.4s						
T1214				AML	AML		
	comp=N,182µm,1.4s						
T1214				AML	AML		
	comp=E,175µm,1.0s						
T1212	Cascia, Frazio	0.09	298	⇓P	Pg	03 36 39.4	+0.4
T1212				S	Sg	03 36 41.5	+0.5
T1212				AML	AML		
	comp=E,120µm,0.6s						
T1212				AML	AML		
	comp=N,128µm,0.4s						
T1245	Castelsantange	0.15	9	P	Pg	03 36 40.4	+0.5
T1245				S	Sg	03 36 43.5	+1.0
T1245				AML	AML		
	comp=N,143µm,0.8s						
T1245				AML	AML		
	comp=E,123µm,0.2s						
SMA1	SAN MARTINO	0.15	120	AML	AML		
	comp=E,106µm,0.2s						
SMA1				AML	AML		
	comp=N,59µm,0.1s						
T1217	Poggiodomo (PG	0.17	272	P	Pg	03 36 40.5	+0.4
T1217				S	Sg	03 36 43.6	+0.9
RM33	Pellescritta (	0.20	167	⇑P	Pg	03 36 40.8	+0.1
RM33				AML	AML		
	comp=E,496µm,0.3s						
RM33				AML	AML		
	comp=E,489µm,0.3s						
RM33				AML	AML		
	comp=E,496µm,0.3s						
RM33				AML	AML		
	comp=N,392µm,0.2s						
RM33				AML	AML		
	comp=N,385µm,0.3s						
RM33				AML	AML		
	comp=E,490µm,0.3s						
RM33				AML	AML		
	comp=N,392µm,1.8s						
T1216	Preci, Frazion	0.21	331	P	Pg	03 36 41.3	+0.5
T1216				S	Sg	03 36 45.0	+1.2
MMO1	Montemonaco	0.23	33	P	Pg	03 36 41.5	+0.3
MMO1				S	Sg	03 36 45.5	+1.0
CAMP	Campotosto	0.26	132	AML	AML		
	comp=N,192µm,1.6s						
CAMP				AML	AML		
	comp=N,192µm,0.4s						
CAMP				AML	AML		
	comp=E,289µm,0.2s						
T1256	Bolognola (MC)	0.30	10	⇓P	Pg	03 36 43.0	+0.4
TERO	Teramo	0.34	104	AML	AML		
	comp=N,71µm,0.9s						
TERO				AML	AML		
	comp=N,71µm,1.1s						
TERO				AML	AML		
	comp=E,74µm,0.3s						
T1220	Camerino, Fraz	0.41	353	⇑P	Pg	03 36 44.7	+0.4
FAGN	Fagnano	0.54	144	AML	AML		
	comp=E,55µm,1.5s						
FAGN				AML	AML		
	comp=E,55µm,0.5s						
FAGN				AML	AML		
	comp=N,57µm,1.6s						
FAGN				AML	AML		
	comp=N,57µm,0.4s						
T0110	Collepietro	0.67	136	S	Sg	03 36 58.4	+0.3
LRP	Arpino	1.11	163	S	Sb	03 37 11.7	-0.2
MAKZ	Makanchi	47.62	60	⇓Lg	Lg	03 45 17.0	
	comp=N,3.3nm,1.2s						

ROM 15 03:36:48.7±0.1,**42°.548N**±0°.003×**13°.308E**±0°.004, **h14^{km},ML1.5**/5,**7C-1D,Error ellipse: s-maj=0.3km s-min=0.1km az=204.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	Campotosto	0.07	99	P	Pg	03 36 51.9	+0.2
CAMP				S	Sg	03 36 53.9	+0.1
RM33	Pellescritta (	0.08	241	⇑P	Pg	03 36 52.0	+0.3
RM33				S	Sg	03 36 54.0	+0.2
RM33				AML	AML		
	comp=E,496µm,0.3s						
RM33				AML	AML		
	comp=N,392µm,0.2s						
RM33				AML	AML		
	comp=E,489µm,0.3s						
RM33				AML	AML		
	comp=N,392µm,0.2s						
RM33				AML	AML		
	comp=E,490µm,0.3s						
RM33				AML	AML		
	comp=E,496µm,0.3s						
RM33				AML	AML		
	comp=N,385µm,0.3s						
SMA1	SAN MARTINO	0.09	14	⇑P	Pg	03 36 52.0	+0.2
SMA1				S	Sg	03 36 54.4	+0.5
SMA1				AML	AML		
	comp=E,1018µm,0.2s						
SMA1				AML	AML		
	comp=N,238µm,0.5s						
T1247	Pizzolo (AQ)	0.11	184	P	Pb	03 36 52.3	-0.3
T1247				AML	AML		
	comp=E,368µm,1.5s						
T1247				AML	AML		
	comp=N,478µm,0.1s						
T1246	Crognaleto (TE	0.14	75	P	Pg	03 36 52.7	+0.3
T1246				S	Sg	03 36 55.3	+0.3
T1218	Civita (PG)	0.19	311	⇓P	Pg	03 36 53.4	+0.2
T1218				S	Sg	03 36 56.6	+0.4
T1214	Arquata del Tr	0.22	341	P	Pg	03 36 54.1	+0.3
TERO	Teramo	0.23	71	⇑P	Pg	03 36 54.0	+0.2
TERO				AML	AML		
	comp=E,74µm,0.3s						
TERO				AML	AML		
	comp=N,71µm,1.1s						
TERO				AML	AML		
	comp=N,71µm,0.9s						
T1222	Castel Sant'An	0.25	234	⇑P	Pg	03 36 54.5	+0.4
T1222				S	Sb	03 36 58.6	-0.6
T1212	Cascia, Frazio	0.28	316	P	Pg	03 36 54.9	+0.2
FIAM	Fiamignano	0.31	207	S	Sg	03 36 59.4	-0.2
FIAM				AML	AML		
	comp=E,84µm,0.6s						
FIAM				AML	AML		
	comp=N,58µm,1.1s						
FIAM				AML	AML		
	comp=E,84µm,1.4s						
FIAM				AML	AML		
	comp=N,58µm,0.9s						
T1241	Roccafluvione,	0.32	16	P	Pg	03 36 55.6	+0.3
T1217	Poggiodomo (PG	0.32	301	P	Pg	03 36 55.6	+0.3
FAGN	Fagnano	0.35	144	AML	AML		
	comp=N,57µm,1.6s						
FAGN				AML	AML		
	comp=E,55µm,0.5s						
MMO1	Montemonaco	0.35	2	⇑P	Pg	03 36 56.2	+0.3
ARRO	Arrone	0.40	275	P	Pg	03 36 57.0	+0.2
T1216	Preci, Frazion	0.40	328	⇑P	Pg	03 36 57.1	+0.2
T1215	Vallo di Nera,	0.41	308	⇑P	Pg	03 36 57.0	0.0

IDC 15 03:39:10.7±10.0,**3°.66S**×**138°.51E,h272^{km}**±105^{km}, **mb2.8**/2,**mbtmp3.4**/3,**Error ellipse: s-maj=165.4km s-min=40.3km az=106.0,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.69	194	P	P	03 42 46.2	-1.6
	0.6nm,0.7s,baz=16,slow=12,SNR=3.1						
WRA				S	S	03 45 45.8	-2.4
	1.3nm,0.6s,baz=14,slow=22,SNR=6.9						
ASAR	Alice Springs	20.38	192	P	P	03 43 28.3	+0.9
	0.3nm,0.3s,baz=22,slow=9.6,SNR=6.5 0.3nm,0.3s						
ILAR	Eielson Array	86.77	24	P	P	03 51 23.7	-0.3
	0.3nm,0.5s,baz=270,slow=4.5,SNR=6.3 0.3nm,0.5s						

*MAN **15** 03:43:07.3, 6°.51N×127°.49E, h15^{km}, mb4.7, ML3.6, MS3.5*
*IDC **15** 03:43:10.9±2.6, 6°.36N×127°.20E, h53^{km}±24^{km}, mb3.6/11, mbtmp3.9/12, ML4.1/1, MS3.4/5, Error ellipse: s-maj=33.6km s-min=13.6km az=65.0*
ISC 15 03:43:10.5±1.3,**6°.36N**±0°.06×**127°.34E**±0°.09,**h49^{km}**±13^{km}, **n32,**σ**2^{s}.01**/33,**mb4.0**/11,**MS3.5**/5,**9C-3D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDOP	Cateel, Davao	1.67	328	⇑*e*P	Pn	03 43 35.6	-1.7
DAV	Davao City (W)	1.88	292	P	Pn	03 43 40.3	+0.1
	470nm,0.7s,baz=74,slow=4.4,SNR=14						
DAV				S	Sn	03 44 06.6	+3.8
	374nm,0.4s,baz=279,slow=23,SNR=2.3						
BIPH	Bislig	2.05	332	⇑*i*P	Pn	03 43 40.5	-2.1
BIPH				*i* S	Sn	03 44 02.5	-4.5
KCP	Kidapawan	2.32	286	⇓*e*P	Pn	03 43 41.8	-4.5
GSPH	General Santos	2.39	264	⇑*e*P	Pn	03 43 46.0	-1.3
GSPH				*i* S	Sn	03 44 14.1	-1.3
TASP	Talacogon, Agu	2.57	324	⇓*e*P	Pn	03 43 50.5	+0.8
TASP				*e*S	Sn	03 44 21.9	+2.2
BUKP	Musuan	2.71	304	⇑*i*P	Pn	03 43 52.3	+0.6
BUKP				*e*S	Sn	03 44 22.8	-0.5
SKMP	Bagumbayan, Su	2.78	273	⇑*e*P	Pn	03 43 52.1	-0.4
SKMP				*e*S	Sn	03 44 34.1	+9.3
CTBH	Cotabato--PC H	3.18	286	⇑*e*P	Pn	03 43 59.9	+1.8
CGP	Cagayan de Oro	3.34	309	⇓*e*P	Pn	03 44 01.4	+1.1
CGP				*e*S	Sn	03 44 43.8	+5.0
GLSP	General Luna,	3.60	341	⇑*i*P	Pn	03 44 13.6	+10
GLSP				*e*S	Sn	03 44 55.2	+10
SCPH	Surigao	3.86	332	⇑*e*P	Pn	03 44 07.6	+0.2
RCP	Roxas	6.87	319	⇑*e*P	Pn	03 44 51.4	+2.6
SIJI	Sorong	8.19	151	P	Pn	03 45 08.0	+1.3
	2.2nm,0.3s,baz=244,slow=23,SNR=7.1 5.6nm,0.3s						
PMG	Port Moresby	25.21	128	LR	LR	04 00 39.2	
	comp=Z,141nm,18.4s,baz=356,slow=41						
WRA	Warramunga Arr	27.03	165	P	P	03 48 48.6	+0.3
	0.6nm,0.4s,baz=345,slow=11,SNR=7.9 0.6nm,0.4s						
CMAR	Chiang Mai Arr	30.16	296	LR	LR	04 02 59.0	
	comp=Z,62nm,18.4s,baz=315,slow=40						
ASAR	Alice Springs	30.53	168	P	P	03 49 17.9	-1.5
	0.5nm,0.6s,baz=349,slow=7.5,SNR=6.1						
ASAR				PcP	PcP	03 52 18.9	+1.3
	0.4nm,0.6s,baz=347,slow=3.2,SNR=3.3 0.5nm,0.6s						
KSRS	Korea Array	30.95	1	LR	LR	04 01 23.0	
	comp=Z,26nm,21.1s,baz=200,slow=35						
MJAR	Matsushiro Arr	31.64	17	P	P	03 49 28.4	-0.7
	2.1nm,0.7s,baz=180,slow=9.0,SNR=4.6 2.1nm,0.7s						
STKA	Stephens Creek	40.39	161	P	P	03 50 44.4	+0.6
	1.1nm,0.4s,baz=330,slow=12,SNR=3.9 1.1nm,0.4s						
SONM	Songino Array	45.03	340	P	P	03 51 21.2	-0.3
	0.4nm,0.8s,baz=145,slow=7.9,SNR=3.0						
SONM				PcP	PcP	03 53 02.5	+0.7
	0.2nm,0.3s,baz=151,slow=3.3,SNR=1.8 0.4nm,0.8s						
DZM	Mont Dzumac	47.60	128	LR	LR	04 11 51.2	
	comp=Z,71nm,19.6s,baz=211,slow=36						
MKAR	Makanchi Array	55.77	324	P	P	03 52 41.6	-0.9
	0.9nm,0.7s,baz=123,slow=8.3,SNR=12						
MKAR				PcP	PcP	03 53 40.7	-0.5
	0.5nm,0.7s,baz=115,slow=4.6,SNR=2.2 0.9nm,0.7s						
ZALV	Zalesovo Beam	58.55	332	P	P	03 52 59.8	-2.2
	0.5nm,0.4s,baz=134,slow=6.2,SNR=4.2 0.5nm,0.4s						
KURBB	Kurchatov Arra	59.88	326	P	P	03 53 10.5	-0.8
	2.2nm,0.7s,baz=126,slow=6.0,SNR=26 2.2nm,0.7s						
KDAK	Kodiak Island	79.36	32	LR	LR	04 38 19.5	
	comp=Z,33nm,18.4s,baz=43,slow=42						
ILAR	Eielson Array	82.48	26	P	P	03 55 28.4	+0.8
	0.7nm,0.7s,baz=244,slow=4.9,SNR=17 0.7nm,0.7s						
AKASG	Malin Array Be	90.24	321	P	P	03 56 05.0	-0.9
	0.4nm,0.5s,baz=54,slow=5.2,SNR=5.0 0.4nm,0.5s						
YKA	Yellowknife Ar	96.87	24	P	P	03 56 37.3	+1.1
	0.5nm,0.8s,baz=301,slow=4.5,SNR=5.8 0.5nm,0.8s						
TXAR	Lajitas Array	119.50	51	PKP	PKiKP	04 01 57.1	+1.4
	0.2nm,0.6s,baz=262,slow=0.9,SNR=4.5						
TORD	Torodi Ar. Bea	122.64	290	PKP	PKPdf	04 02 01.4	-0.5
	1.2nm,1.3s,baz=48,slow=2.6,SNR=4.3						

*IDC **15** 03:50:24.5±0.9, 0°.96S×149°.59E, h0^{km}, mb3.8/7, mbtmp3.8/8, ML4.0/1, Error ellipse: s-maj=34.6km s-min=20.3km az=99.0*
ISC 15 03:50:28.1±0.9,**1°.0S**±0°.1×**149°.6E**±0°.2,**h23^{km},n15,** σ**1^{s}.13**/9,**mb3.6**/7,**New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	19.24	189	P	Pn	03 54 51.6	-0.4
	0.3nm,0.3s,baz=13,slow=11,SNR=2.1 2.8nm,0.8s						
WRA	Warramunga Arr	24.00	217	P	P	03 55 40.7	-0.7
	2.9nm,0.6s,baz=42,slow=10,SNR=32 2.9nm,0.6s						
H11S3	WAKE ISLAND Hy	25.67	40	T	T	04 22 36.1	
	baz=222,slow=75,SNR=910						
H11S2	WAKE ISLAND Hy	25.68	40	T	T	04 22 35.6	
	baz=222,slow=75,SNR=1145						
H11S1	WAKE ISLAND Hy	25.69	40	T	T	04 22 36.0	
	baz=222,slow=75,SNR=961						
DZM	Mont Dzumac	26.61	143	P	P	03 56 05.8	+0.7
	4.7nm,0.5s,baz=342,slow=6.4,SNR=5.8 4.7nm,0.5s						
H11N1	WAKE ISLAND Hy	26.70	39	T	T	04 23 52.5	
	baz=220,slow=75,SNR=104						
H11N3	WAKE ISLAND Hy	26.71	39	T	T	04 23 53.7	
	baz=220,slow=75,SNR=190						
H11N2	WAKE ISLAND Hy	26.72	39	T	T	04 23 53.7	
	baz=220,slow=75,SNR=188						
ASAR	Alice Springs	27.17	213	P	P	03 56 10.1	0.0
	2.3nm,0.7s,baz=49,slow=7.9,SNR=13 2.3nm,0.7s						
SONM	Songino Array	61.42	328	P	P	04 00 42.1	-0.7
	0.1nm,0.3s,baz=132,slow=6.2,SNR=2.1 0.1nm,0.3s						
MKAR	Makanchi Array	75.37	319	P	P	04 02 11.5	+1.5
	0.4nm,0.9s,baz=123,slow=5.3,SNR=1.9 0.4nm,0.9s						
ILAR	Eielson Array	79.92	23	P	P	04 02 33.2	-1.7
	0.5nm,0.8s,baz=257,slow=5.8,SNR=7.6 0.5nm,0.8s						
YKA	Yellowknife Ar	93.59	28	P	P	04 03 43.2	+1.0
	0.2nm,0.7s,baz=272,slow=5.2,SNR=2.2 0.2nm,0.7s						
TORD	Torodi Ar. Bea	145.98	292	PKPbc	PKPab	04 10 07.6	+0.1
	0.6nm,0.8s,baz=57,slow=4.1,SNR=2.3						

IDC 15 04:05:08.2±1.0,**4°.18N**×**121°.62E,h0^{km},mb3.9**/5, **mbtmp3.9**/5,**Error ellipse: s-maj=158.2km s-min=18.7km az=64.0,Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.04	153	P	P	04 10 51.9	-0.4
	1.3nm,0.3s,baz=336,slow=9.5,SNR=48 1.3nm,0.3s						
ASAR	Alice Springs	30.16	157	P	P	04 11 20.8	+0.5
	0.8nm,0.5s,baz=337,slow=7.1,SNR=11 0.8nm,0.5s						
SONM	Songino Array	45.42	346	P	P	04 13 30.2	+1.4
	0.4nm,0.5s,baz=160,slow=8.8,SNR=4.1 0.4nm,0.5s						
MKAR	Makanchi Array	54.36	328	P	P	04 14 37.2	+0.4
	0.6nm,0.3s,baz=125,slow=7.8,SNR=17 0.6nm,0.3s						
KURBB	Kurchatov Arra	58.68	329	P	P	04 15 05.8	-1.6
	0.6nm,0.6s,baz=127,slow=5.8,SNR=9.0 0.6nm,0.6s						

*MDD **15** 04:10:39.2±0.4, 35°.19N×4°.02W, h0^{km}, mb_Lg2.8/16, Error ellipse: s-maj=3.4km s-min=2.4km az=154.0*
*SFS **15** 04:10:39.8, 35°.17N×3°.92W, h12^{km}, ML3.2/16, ML3.1/12, MLv3.2/16*
*INMG **15** 04:10:39.7±1.4, 35°.19N×3°.99W, h4^{km}±5^{km}, ML2.4, Error ellipse: s-maj=3.0km s-min=2.4km az=109.0*
*IGIL **15** 04:10:40.4, 35°.19N×4°.02W, h2^{km}, ML2.5*
*CNRM **15** 04:10:40.4, 35°.19N×4°.06W, h23^{km}, ml2.8*
ISC 15 04:10:39.0±1.1,**35°.20N**±0°.02×**3°.97W**±0°.02,**h16^{km}**±9^{km}, **n72,**σ**1^{s}.08**/131,**Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVLZ	Peæn de	0.28	266	P	Pg	04 10 45.4	+0.5
PVLZ				S	Sb	04 10 50.4	+0.4
AKLM	AKL	0.69	173	P	Pg	04 10 51.6	-0.9
AKLM				S	Sg	04 11 00.8	-0.9
EMEL	Melilla	0.83	82	Pg	Pb	04 10 55.5	+0.3
EMEL				Sg	Sb	04 11 06.7	+0.6
EMEL				*i* Vmb_Lg		04 11 09.7	
WMELI	Melilla	0.84	81	P	Pb	04 10 54.5	-0.8
WMELI				S	Sb	04 11 06.4	+0.1
CHEFC	Chefchaouen	1.13	266	P	Pg	04 11 01.3	+0.5
CHEFC				S	Sb	04 11 13.2	-1.5
CEU	Ceuta	1.34	302	P	Pg	04 11 04.9	0.0
ECEU	Ceuta	1.35	302	P	Pb	04 11 04.4	+0.5
ECEU	Ceuta	1.35	302	Pg	Pn	04 11 01.9	-1.3
ECEU				Sg	Sb	04 11 19.0	-2.0
ECEU				*i* Vmb_Lg		04 11 22.6	
JBK	JBK	1.44	126	P	Pn	04 11 04.7	+0.1
JBK				S	Sn	04 11 23.5	+0.2
EMIJ	Mijas	1.52	335	S	Sn	04 11 26.2	+1.1
EMIJ				P	Pn	04 11 05.0	-0.5
EMIJ	Mijas	1.52	335	Pn	Pn	04 11 05.5	-0.1
EMIJ				Sn	Sn	04 11 25.1	0.0
EMIJ				*i* Vmb_Lg		04 11 30.1	
EMAL	Malaga-Limoner	1.61	347	P	Pn	04 11 06.1	-0.7
EMAL				S	Sn	04 11 28.7	+1.4
ELGU	Los Guajares,	1.69	9	P	Pn	04 11 07.2	-0.9
ELGU				S	Sn	04 11 28.3	-1.1
ELGU	Los Guajares,	1.69	9	Pn	Pn	04 11 06.8	-1.2
ELGU				Sn	Sn	04 11 26.8	-2.7
ELGU				*i* Vmb_Lg		04 11 32.4	
EBER	Berja	1.91	27	S	Sn	04 11 34.3	-0.7
EBER				P	Pn	04 11 10.5	-0.6
EBER	Berja	1.91	27	Pn	Pn	04 11 10.5	-0.6
EBER				Sn	Sn	04 11 34.7	-0.3
EBER				*i* Vmb_Lg		04 11 46.7	
EGOR	Sierra Gorda,	1.92	357	P	Pn	04 11 11.7	+0.6
EGOR	Sierra Gorda,	1.92	357	Pn	Pn	04 11 11.6	+0.4
EGOR				Sn	Sn	04 11 36.5	+1.4
EGOR				*i* Vmb_Lg		04 11 45.2	
IFR	Ifrane	1.93	210	P	Pn	04 11 11.5	+0.1
IFR				S	Sn	04 11 34.2	-1.2
EQUE	Quentar	2.05	12	Pn	Pn	04 11 13.3	+0.3
EQUE				Sn	Sn	04 11 38.8	+0.4
EQUE				*i* Vmb_Lg		04 11 53.2	
ENIJ	Nijar	2.27	38	Sn	Sn	04 11 41.0	-2.8
ENIJ				*i* Vmb_Lg		04 11 59.9	
MD31	MD31	2.41	196	P	Pn	04 11 19.0	+1.0
MD31				S	Sn	04 11 46.3	-1.0
MDT	Midelt	2.43	193	P	Pn	04 11 19.1	+0.8
MDT				S	Sn	04 11 48.0	+0.2
EQES	Quesada	2.70	15	Pn	Pn	04 11 24.2	+2.3
EQES				Sn	Sn	04 11 55.7	+1.4
EQES				*i* Vmb_Lg		04 11 59.1	
ZHG	ZHG	2.82	233	P	Pn	04 11 23.8	+0.3
ZHG				S	Sn	04 11 58.5	+1.2
EADA	Adamuz	3.01	351	S	Sn	04 12 00.4	-1.5
EADA				P	Pn	04 11 27.2	+1.1
EADA	Adamuz	3.01	351	Pn	Pn	04 11 27.6	+1.6
EADA				Sn	Sn	04 12 02.2	+0.3
EADA				*i* Vmb_Lg		04 12 08.7	
ECAB	El Cabril	3.10	338	S	Sn	04 12 04.8	+0.6
ECAB				P	Pn	04 11 28.3	+0.9
ECAB	El Cabril	3.10	338	Pn	Pn	04 11 28.0	+0.6
ECAB				Sn	Sn	04 12 04.8	+0.6
ECAB				*i* Vmb_Lg		04 12 11.7	
EMIN	Mina Concepcio	3.37	320	S	Sn	04 12 09.3	-1.4
EMIN				P	Pn	04 11 31.5	+0.4
EMIN	Mina Concepcio	3.37	320	Pn	Pn	04 11 31.1	+0.1

EMIN				Sn	**Sn**	**04 12 09.1**	**-1.6**
EMIN				*i* Vmb_Lg		04 12 12.2	
AVE	**Averroes**	**3.42**	**237**	P	**Pn**	**04 11 32.0**	**+0.2**
PSIM	**Granatula de C**	**3.62**	**3**	Pn	**Pn**	**04 11 36.3**	**+1.8**
PSIM				Sn	**Sn**	**04 12 17.5**	**+0.4**
EGRO	**El Granado**	**3.67**	**310**	P	**Pn**	**04 11 35.7**	**+0.5**
EGRO				S	**Sn**	**04 12 17.2**	**-1.0**
EGRO	**El Granado**	**3.67**	**310**	Pn	**Pn**	**04 11 35.9**	**+0.7**
EGRO				Sn	**Sn**	**04 12 17.3**	**-1.0**
EGRO				*i* Vmb_Lg		04 12 19.2	
PVAQ	**Vaqueiros**	**3.75**	**307**	P	**Pn**	**04 11 36.8**	**+0.6**
PVAQ				S	**Sn**	**04 12 19.5**	**-0.6**
PVAQ	**Vaqueiros**	**3.75**	**307**	P	**Pn**	**04 11 36.5**	**+0.3**
PVAQ				S	**Sn**	**04 12 19.3**	**-0.7**
PVAQ	**Vaqueiros**	**3.75**	**307**	*e*P	**Pn**	**04 11 36.8**	**+0.6**
PVAQ				*e*S	**Sn**	**04 12 19.3**	**-0.7**
PVAQ				A	A	04 12 19.9	
	8.9nm,0.3s						
PBDV	**Barranco-do-Ve**	**3.80**	**304**	*e*P	**Pn**	**04 11 38.0**	**+1.0**
PBDV				*e*S	**Sn**	**04 12 21.0**	**-0.4**
PBDV				A	A	04 12 23.4	
	6.7nm,0.6s						
PBAR	**Barrancos**	**3.87**	**321**	P	**Pn**	**04 11 38.2**	**+0.4**
PBAR				S	**Sn**	**04 12 21.8**	**-1.2**
PBAR	**Barrancos**	**3.87**	**321**	*e*P	**Pn**	**04 11 38.5**	**+0.7**
PBAR				*e*S	**Sn**	**04 12 22.7**	**-0.2**
PBAR				A	A	04 12 24.4	
	3.8nm,0.5s						
ETOB	**Tobarra**	**3.95**	**29**	Pn	**Pn**	**04 11 41.0**	**+1.9**
ETOB				Sn	**Sn**	**04 12 26.4**	**+1.2**
ETOB				*i* Vmb_Lg		04 12 48.5	
PCVE	**Castro Verde**	**4.09**	**308**	P	**Pn**	**04 11 42.4**	**+1.5**
PCVE				S	**Sn**	**04 12 28.1**	**-0.3**
PCVE	**Castro Verde**	**4.09**	**308**	*e*P	**Pn**	**04 11 42.4**	**+1.5**
PCVE				*e*S	**Sn**	**04 12 28.4**	**0.0**
PCVE				A	A	04 12 32.4	
	4.6nm,0.2s						
PBEJ	**Beja**	**4.22**	**313**	*e*P	**Pn**	**04 11 44.2**	**+1.4**
PBEJ				*e*S	**Sn**	**04 12 31.3**	**-0.5**
PBEJ				A	A	04 12 34.1	
	3.1nm,0.4s						
EBAD	**Badajoz**	**4.31**	**326**	Pn	**Pn**	**04 11 44.3**	**+0.4**
EBAD				Sn	**Sn**	**04 12 32.8**	**-1.1**
EBAD				*i* Vmb_Lg		04 12 38.8	
MESJ	**Messejana**	**4.33**	**309**	*e*P	**Pn**	**04 11 45.2**	**+1.0**
MESJ				*e*S	**Sn**	**04 12 34.1**	**-0.2**
MESJ				A	A	04 12 36.3	
	4.3nm,0.3s						
MESJ	**Messejana**	**4.33**	**309**	*e*P	**Pn**	**04 11 45.0**	**+0.8**
MESJ				*e*S	**Sn**	**04 12 31.9**	**-2.4**
MESJ				IAML		04 12 35.5	
	comp=N,10.0nm,0.3s						
PAB	**San Pablo**	**4.35**	**356**	Pn	**Pn**	**04 11 45.9**	**+1.3**
PAB				Sn	**Sn**	**04 12 35.5**	**+0.4**
PFVI	**Vila Bisbo**	**4.38**	**298**	*e*S	**Sn**	**04 12 34.9**	**-0.8**
ESDC	**Sonseca Array**	**4.47**	**0**	Pn	**Pn**	**04 11 46.7**	**+0.4**
ESDC				Sn	**Sn**	**04 12 37.7**	**-0.3**
PTEO	**Sao Teotonio**	**4.50**	**303**	*e*P	**Pn**	**04 11 48.2**	**+1.7**
PTEO				*e*S	**Sn**	**04 12 38.5**	**-0.1**
TZRR	**Tazzarine**	**4.60**	**197**	P	**Pn**	**04 11 49.1**	**+1.0**
TZRR				S	**Sn**	**04 12 42.7**	**+1.5**
EVO	**Evora**	**4.65**	**317**	*e*P	**Pn**	**04 11 49.7**	**+1.1**
EVO				*e*S	**Sn**	**04 12 42.4**	**+0.1**
EVO				A	A	04 12 44.1	
	comp=N,3.4nm,0.6s						
PESTR	**Estremoz**	**4.67**	**323**	P	**Pn**	**04 11 50.0**	**+1.1**
PESTR				S	**Sn**	**04 12 41.8**	**-1.1**
PESTR	**Estremoz**	**4.67**	**323**	*e*P	**Pn**	**04 11 50.3**	**+1.3**
PESTR				*e*S	**Sn**	**04 12 42.7**	**-0.2**
PESTR				A	A	04 12 44.1	
	comp=N,2.3nm,0.9s						
PNCL	**Nicolau / Gran**	**4.68**	**310**	P	**Pn**	**04 11 49.8**	**+0.7**
PNCL				S	**Sn**	**04 12 42.1**	**-1.0**
PNCL	**Nicolau / Gran**	**4.68**	**310**	*e*P	**Pn**	**04 11 49.9**	**+0.8**
PNCL				*e*S	**Sn**	**04 12 42.8**	**-0.3**
PNCL				A	A	04 12 44.5	
	comp=N,4.0nm,0.5s						
PMRV	**Marv??o**	**5.03**	**328**	*e*P	**Pn**	**04 11 54.8**	**+0.9**
PMRV				*e*S	**Sn**	**04 12 50.7**	**-1.0**
PMRV				A	A	04 13 08.9	
	comp=N,2.2nm,0.1s						
OUK	**Oukaimeden**	**5.15**	**221**	P	**Pn**	**04 11 55.6**	**-0.2**
OUK				S	**Sn**	**04 12 56.2**	**+1.1**
PMTG	**Montargil**	**5.15**	**320**	*e*P	**Pn**	**04 11 56.6**	**+1.1**
PMTG				*e*S	**Sn**	**04 12 54.7**	**+0.1**
PMTG				A	A	04 13 00.0	
	comp=N,2.8nm,0.7s						
ZGR	**Zagora**	**5.25**	**196**	P	**Pn**	**04 11 57.6**	**+0.6**
ZGR				S	**Sn**	**04 12 59.7**	**+2.4**
PCBR	**Castelo Branco**	**5.41**	**330**	*e*P	**Pn**	**04 12 00.3**	**+1.2**
PCBR				*e*S	**Sn**	**04 12 59.6**	**-1.4**
PCBR				A	A	04 13 11.2	
	comp=N,2.0nm,0.5s						
GUD	**Guadarrama**	**5.44**	**358**	Pn	**Pn**	**04 12 00.6**	**+1.0**
GUD				Sn	**Sn**	**04 13 00.8**	**-1.2**
PSBE	**So Bento**	**5.78**	**320**	*e*P	**Pn**	**04 12 05.5**	**+1.4**
MTE	**Manteigas**	**5.92**	**332**	*e*P	**Pn**	**04 12 07.6**	**+1.5**
MTE				*e*S	**Sn**	**04 13 14.4**	**+0.8**
PVIS	**Viseu**	**6.33**	**332**	*e*P	**Pn**	**04 12 13.2**	**+1.5**
MVO	**Moncorvo**	**6.43**	**339**	*e*P	**Pn**	**04 12 14.2**	**+1.1**
PVRL	**Vila Real**	**6.75**	**335**	*e*S	**Sn**	**04 13 32.3**	**-1.8**
PVRL				A	A	04 13 35.6	
	comp=N,3.1nm,0.2s						
POLO	**Lamas de Olo**	**6.86**	**335**	*e*P	**Pn**	**04 12 20.6**	**+1.5**
PBRG	**Braganca**	**6.95**	**343**	*e*P	**Pn**	**04 12 21.9**	**+1.7**
PGAV	**Gavieira, Arco**	**7.55**	**335**	*e*P	**Pn**	**04 12 30.4**	**+1.8**

ROM 15 04:16:17.9±0.0, 43°.009N±0°.003×13°.049E±0°.004, h11^{km}, ML1.5/11, 3C-3D, Error ellipse: s-maj=0.3km s-min=0.3km az=336.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDMO	**Fiordimonte**	**0.04**	**46**	P	Pg	04 16 20.3	+0.3
FDMO				S	Sg	04 16 21.7	+0.1
FDMO				AML	AML		
	comp=N,560µm,0.2s						
FDMO				AML	AML		
	comp=E,716µm,0.1s						
T1219	**Muccia, Frazio**	**0.06**	**327**	P	Pg	04 16 20.5	+0.3
T1219				S	Sg	04 16 22.0	+0.1
T1219				AML	AML		
	comp=E,1285µm,0.1s						
T1219				AML	AML		
	comp=N,1515µm,0.3s						
T1219				AML	AML		
	comp=E,1150µm,0.1s						
T1219				AML	AML		
	comp=E,1285µm,0.1s						
T1219				AML	AML		
	comp=E,1145µm,0.1s						
T1219				AML	AML		
	comp=N,1640µm,0.3s						
T1219				AML	AML		
	comp=N,1520µm,0.3s						
T1220	**Camerino, Fraz**	**0.10**	**16**	P	Pg	04 16 21.2	+0.5
T1220				S	Sg	04 16 23.4	+0.6
T1220				AML	AML		
	comp=E,10268µm,1.6s						
T1220				AML	AML		
	comp=N,647µm,0.8s						
T1220				AML	AML		
	comp=E,696µm,0.2s						
T1220				AML	AML		
	comp=N,668µm,0.8s						
T1220				AML	AML		
	comp=E,696µm,0.2s						
T1220				AML	AML		
	comp=N,665µm,0.8s						
T1220				AML	AML		
	comp=N,665µm,1.2s						
CESI	**CESI - Serrava**	**0.11**	**268**	P	Pg	04 16 21.3	+0.5
CESI				S	Sg	04 16 23.5	+0.7
CESI				AML	AML		
	comp=N,181µm,0.4s						
CESI				AML	AML		
	comp=E,186µm,0.5s						
T1216	**Preci, Frazion**	**0.12**	**190**	P	Pg	04 16 21.4	+0.4
T1216				S	Sg	04 16 23.7	+0.6
T1216				AML	AML		
	comp=E,215µm,0.3s						
T1216				AML	AML		
	comp=N,340µm,0.7s						
T1256	**Bolognola (MC)**	**0.13**	**91**	AML	AML		
	comp=E,138µm,0.2s						
T1256				AML	AML		
	comp=N,306µm,0.3s						
MC2	**Monte Cornacci**	**0.14**	**133**	P	Pg	04 16 21.8	+0.4
MC2				S	Sg	04 16 24.8	+1.0
T1245	**Castelsantange**	**0.18**	**146**	P	Pg	04 16 22.5	+0.5
T1245				S	Sg	04 16 25.9	+1.1
T1245				AML	AML		
	comp=E,238µm,0.6s						
T1245				AML	AML		
	comp=E,237µm,0.6s						
T1245				AML	AML		
	comp=N,251µm,0.6s						
GUMA	**Gualdo di Mace**	**0.22**	**76**	AML	AML		
	comp=E,110µm,0.6s						
GUMA				AML	AML		
	comp=E,110µm,1.4s						
GUMA				AML	AML		
	comp=N,164µm,0.2s						
MMO1	**Montemonaco**	**0.23**	**118**	P	Pg	04 16 23.3	+0.5
MMO1				S	Sg	04 16 27.1	+1.1
T1215	**Vallo di Nera,**	**0.25**	**213**	P	Pg	04 16 23.5	+0.5
T1215				S	Sg	04 16 27.6	+1.1
SNTG	**Esanatoglia**	**0.26**	**342**	P	Pg	04 16 23.7	+0.4
ASSB	**Assisi San Ben**	**0.29**	**277**	⇑P	Pg	04 16 24.2	+0.4
ASSB				AML	AML		
	comp=E,53µm,0.7s						
ASSB				AML	AML		
	comp=N,54µm,1.0s						
ASSB				AML	AML		
	comp=E,53µm,1.3s						
EL6	**Elcito**	**0.32**	**7**	⇑P	Pg	04 16 24.9	+0.5
ATCC	**AVT- Casa Cast**	**0.35**	**301**	⇓P	Pg	04 16 25.4	+0.6
ATCC				AML	AML		
	comp=E,65µm,1.5s						
ATCC				AML	AML		
	comp=N,51µm,1.6s						
ATCC				AML	AML		
	comp=E,65µm,0.5s						
ATCC				AML	AML		
	comp=N,51µm,0.4s						
FOSV	**Fossato di Vic**	**0.35**	**324**	⇓P	Pg	04 16 25.5	+0.5
CING	**Cingoli**	**0.38**	**16**	⇑P	Pg	04 16 26.0	+0.5
SSFR	**Montelago di S**	**0.47**	**336**	⇓P	Pb	04 16 27.7	-0.5
SSFR				AML	AML		
	comp=N,75µm,0.1s						
SSFR				AML	AML		
	comp=E,60µm,0.2s						
SSFR				AML	AML		
	comp=N,75µm,1.9s						
ARVD	**Arcevia**	**0.49**	**351**	S	Sb	04 16 36.1	+0.2

ROM 15 04:16:45.5±0.1, 42°.990N±0°.002×13°.125E±0°.003, h8^{km}, ML1.0/1, 1C-1D, Error ellipse: s-maj=0.2km s-min=0.1km az=215.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDMO	**Fiordimonte**	**0.05**	**329**	P	Pg	04 16 47.4	+0.1
FDMO				AML	AML		
	comp=E,190µm,0.2s						
FDMO				AML	AML		
	comp=N,184µm,0.6s						
T1256	**Bolognola (MC)**	**0.08**	**78**	P	Pg	04 16 48.0	+0.2
T1256				S	Sg	04 16 49.6	+0.2
MC2	**Monte Cornacci**	**0.09**	**148**	P	Pg	04 16 48.1	+0.2
T1219	**Muccia, Frazio**	**0.11**	**307**	P	Pg	04 16 48.5	+0.4
T1219				S	Sg	04 16 50.5	+0.6
T1220	**Camerino, Fraz**	**0.12**	**348**	P	Pg	04 16 48.9	+0.6
T1216	**Preci, Frazion**	**0.13**	**218**	P	Pg	04 16 48.8	+0.4
T1216				S	Sg	04 16 51.3	+1.0
T1245	**Castelsantange**	**0.14**	**161**	P	Pg	04 16 49.0	+0.3
MMO1	**Montemonaco**	**0.17**	**121**	⇓P	Pg	04 16 49.6	+0.5
MMO1				S	Sg	04 16 52.8	+1.2
T1214	**Arquata del Tr**	**0.24**	**165**	P	Pg	04 16 50.9	+0.6
T1212	**Cascia, Frazio**	**0.25**	**194**	⇑P	Pg	04 16 51.0	+0.6
T1215	**Vallo di Nera,**	**0.27**	**225**	S	Sb	04 16 56.3	-0.9
T1217	**Poggiodomo (PG**	**0.31**	**207**	S	Sg	04 16 55.8	-0.1
T1218	**Civita (PG)**	**0.32**	**181**	S	Sg	04 16 55.7	-0.4

ROM 15 04:51:19.3±0.1, 42°.570N±0°.004×13°.329E±0°.007, h11^{km}, ML1.7/19, 4C-9D, Error ellipse: s-maj=0.6km s-min=0.4km az=315.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMA1	**SAN MARTINO**	**0.06**	**5**	⇓P	Pg	04 51 22.0	+0.2
SMA1				S	Sg	04 51 23.6	+0.2
SMA1				AML	AML		
	comp=E,3385µm,1.5s						
SMA1				AML	AML		
	comp=E,3385µm,0.5s						
SMA1				AML	AML		
	comp=N,1920µm,1.3s						
RM33	**Pellescritta (**	**0.10**	**234**	⇓P	Pg	04 51 22.6	+0.4
RM33				S	Sg	04 51 24.5	+0.3
RM33				AML	AML		
	comp=N,1795µm,0.3s						
RM33				AML	AML		
	comp=E,1620µm,0.2s						
RM33				AML	AML		
	comp=N,1735µm,0.3s						
RM33				AML	AML		
	comp=E,1560µm,0.2s						
RM33				AML	AML		
	comp=N,1800µm,0.3s						
T1247	**Pizzolo (AQ)**	**0.13**	**190**	⇓P	Pg	04 51 23.1	+0.6
T1247				AML	AML		
	comp=E,768µm,0.8s						
T1247				AML	AML		
	comp=N,630µm,0.4s						
T1247				AML	AML		
	comp=E,768µm,1.2s						
T1218	**Civita (PG)**	**0.19**	**303**	AML	AML		
	comp=N,504µm,0.4s						
T1218				AML	AML		
	comp=E,214µm,0.9s						
T1218				AML	AML		
	comp=E,213µm,0.5s						
T1218				AML	AML		
	comp=N,490µm,0.4s						
T1218				AML	AML		
	comp=E,214µm,0.9s						
T1218				AML	AML		
	comp=N,491µm,0.4s						
T1218				AML	AML		
	comp=E,214µm,1.1s						
T1214	**Arquata del Tr**	**0.21**	**335**	AML	AML		
	comp=N,214µm,0.3s						
T1214				AML	AML		
	comp=E,379µm,0.8s						
T1214				AML	AML		
	comp=E,384µm,0.9s						
T1214				AML	AML		
	comp=N,228µm,0.4s						
GIGS	**Gran Sasso**	**0.21**	**124**	P	Pg	04 51 24.2	+0.4
GIGS				S	Sg	04 51 27.6	+0.6
GIGS				AML	AML		
	comp=N,63µm,1.6s						
GIGS				AML	AML		
	comp=E,89µm,0.9s						
GIGS				AML	AML		
	comp=E,89µm,1.1s						
GIGS				AML	AML		
	comp=N,63µm,0.4s						
AQU	**L'Aquila**	**0.22**	**166**	P	Pg	04 51 24.7	+0.7
AQU				AML	AML		
	comp=E,166µm,1.2s						
AQU				AML	AML		
	comp=N,221µm,0.2s						
AQU				AML	AML		
	comp=E,166µm,0.8s						
T1222	**Castel Sant'An**	**0.27**	**232**	P	Pg	04 51 25.5	+0.5
T1222				S	Sb	04 51 30.0	-1.0
T1222				AML	AML		
	comp=E,192µm,0.3s						
T1222				AML	AML		
	comp=N,188µm,0.2s						
T1212	**Cascia, Frazio**	**0.28**	**311**	AML	AML		
	comp=N,114µm,0.7s						
T1212				AML	AML		
	comp=E,143µm,0.5s						
T1245	**Castelsantange**	**0.30**	**340**	AML	AML		
	comp=N,314µm,0.5s						
T1245				AML	AML		
	comp=E,199µm,0.6s						
T1245				AML	AML		
	comp=N,314µm,1.5s						
T1217	**Poggiodomo (PG**	**0.33**	**296**	P	Pb	04 51 26.8	-0.4
T1217				AML	AML		
	comp=E,60µm,0.5s						
T1217				AML	AML		
	comp=N,87µm,0.5s						
T1217				AML	AML		
	comp=N,87µm,1.5s						
T1217				AML	AML		
	comp=E,60µm,1.5s						
T1211	**Morro Reatino**	**0.35**	**264**	⇓P	Pb	04 51 27.1	-0.6
T1211				AML	AML		
	comp=E,80µm,0.5s						
T1211				AML	AML		
	comp=N,145µm,0.6s						
FAGN	**Fagnano**	**0.36**	**148**	⇑P	Pg	04 51 27.0	+0.5
FAGN				AML	AML		
	comp=E,371µm,0.8s						
FAGN				AML	AML		
	comp=N,338µm,0.3s						
FAGN				AML	AML		
	comp=E,371µm,1.2s						
T1215	**Vallo di Nera,**	**0.41**	**305**	⇑P	Pg	04 51 28.0	+0.5
ARRO	**Arrone**	**0.42**	**271**	⇓P	Pb	04 51 28.3	-0.4
ARRO				AML	AML		
	comp=E,48µm,0.6s						
ARRO				AML	AML		
	comp=N,44µm,0.6s						
T1256	**Bolognola (MC)**	**0.44**	**350**	P	Pg	04 51 28.5	+0.4
OFFI	**Offida**	**0.45**	**36**	⇑P	Pb	04 51 29.8	+0.4
OFFI				AML	AML		
	comp=E,235µm,0.4s						
OFFI				AML	AML		
	comp=N,182µm,0.6s						
OFFI				AML	AML		
	comp=N,182µm,1.4s						
T0110	**Collepietro**	**0.48**	**136**	⇓P	Pb	04 51 29.4	-0.4
T0110				AML	AML		
	comp=N,139µm,1.5s						
T0110				AML	AML		
	comp=E,139µm,0.4s						
T0110				AML	AML		
	comp=N,139µm,0.5s						
FDMO	**Fiordimonte**	**0.50**	**339**	⇓P	Pg	04 51 28.0	-1.1
T1220	**Camerino, Fraz**	**0.57**	**342**	⇓P	Pb	04 51 30.9	-0.4
T1220				AML	AML		
	comp=E,300µm,0.3s						
T1220				AML	AML		
	comp=N,361µm,1.5s						
ASSB	**Assisi San Ben**	**0.68**	**314**	⇑P	Pb	04 51 33.2	-0.1
ASSB				AML	AML		
	comp=N,39µm,0.6s						
ASSB				AML	AML		
	comp=E,39µm,1.3s						
EL6	**Elcito**	**0.78**	**348**	⇓P	Pg	04 51 34.5	+0.1

ROM 15 04:51:44.5±0.0, 42°.810N±0°.001×13°.124E±0°.003, h11^{km}, ML1.7/4, 8C-3D, Error ellipse: s-maj=0.2km s-min=0.1km az=253.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1245	**Castelsantange**	**0.07**	**46**	⇑P	Pg	04 51 47.2	+0.3
T1245				S	Sg	04 51 49.0	+0.2
T1245				AML	AML		
	comp=E,712µm,0.3s						
T1245				AML	AML		
	comp=E,768µm,1.0s						
T1245				AML	AML		
	comp=N,1055µm,1.0s						
T1245				AML	AML		
	comp=N,1225µm,1.0s						
T1245				AML	AML		
	comp=E,712µm,1.7s						
T1245				AML	AML		
	comp=E,768µm,1.0s						
T1214	**Arquata del Tr**	**0.08**	**129**	P	Pg	04 51 47.4	+0.3
T1214				S	Sg	04 51 49.3	+0.3
T1212	**Cascia, Frazio**	**0.08**	**225**	⇓P	Pg	04 51 47.5	+0.4
T1212				S	Sg	04 51 49.4	+0.4
T1212				AML	AML		
	comp=E,428µm,0.2s						
T1212				AML	AML		
	comp=E,434µm,0.2s						
T1212				AML	AML		
	comp=N,718µm,0.3s						
T1212				AML	AML		
	comp=N,712µm,0.3s						
T1216	**Preci, Frazion**	**0.11**	**316**	⇑P	Pg	04 51 47.8	+0.4
T1216				S	Sg	04 51 50.2	+0.7
MC2	**Monte Cornacci**	**0.11**	**26**	⇑P	Pg	04 51 47.9	+0.4
T1218	**Civita (PG)**	**0.14**	**183**	P	Pg	04 51 48.3	+0.4
T1218				S	Sg	04 51 51.0	+0.8
FEMA	**Monte Fema**	**0.16**	**340**	P	Pg	04 51 48.7	+0.5
T1217	**Poggiodomo (PG**	**0.17**	**235**	P	Pg	04 51 48.9	+0.6
T1215	**Vallo di Nera,**	**0.19**	**268**	P	Pg	04 51 49.1	+0.5
T1256	**Bolognola (MC)**	**0.21**	**21**	⇑P	Pg	04 51 49.5	+0.4
T1256				S	Sg	04 51 53.2	+1.0
T1256				AML	AML		
	comp=E,235µm,0.8s						
T1256				AML	AML		
	comp=E,234µm,0.8s						
T1256				AML	AML		
	comp=N,261µm,0.9s						
FDMO	**Fiordimonte**	**0.23**	**353**	⇑P	Pg	04 51 49.7	+0.4
T1241	**Roccafluvione,**	**0.23**	**78**	P	Pg	04 51 49.7	+0.4
SMA1	**SAN MARTINO**	**0.24**	**139**	⇓P	Pg	04 51 49.9	+0.4
CESI	**CESI - Serrava**	**0.25**	**321**	P	Pg	04 51 50.2	+0.5
CESI				S	Sb	04 51 54.5	-1.1
CESI				AML	AML		
	comp=N,148µm,0.4s						
CESI				AML	AML		
	comp=E,96µm,1.5s						
CESI				AML	AML		
	comp=E,96µm,0.5s						
T1219	**Muccia, Frazio**	**0.26**	**341**	P	Pg	04 51 50.2	+0.4
GUMA	**Gualdo di Mace**	**0.30**	**32**	P	Pb	04 51 51.2	-0.6
T1220	**Camerino, Fraz**	**0.30**	**355**	⇓P	Pg	04 51 51.0	+0.4
RM33	**Pellescritta (**	**0.31**	**167**	P	Pg	04 51 51.1	+0.3
T1211	**Morro Reatino**	**0.34**	**216**	⇑P	Pg	04 51 51.8	+0.5
ARRO	**Arrone**	**0.35**	**229**	⇑P	Pg	04 51 52.0	+0.5
T1222	**Castel Sant'An**	**0.41**	**189**	S	Sb	04 51 59.6	-0.5
GIGS	**Gran Sasso**	**0.49**	**137**	P	Pg	04 51 54.1	+0.1
SRES	**S.Oreste - Sor**	**0.73**	**219**	⇑P	Pb	04 51 59.8	+0.6

ROM 15 04:59:28.0±0.0, 42°.767N±0°.001×13°.064E±0°.003, h11^{km}, ML2.3/43, 16C-12D, Error ellipse: s-maj=0.1km s-min=0.1km az=234.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1212	**Cascia, Frazio**	**0.02**	**222**	P	Pg	04 59 30.3	+0.3
T1212				S	Sg	04 59 31.6	+0.2
T1218	**Civita (PG)**	**0.10**	**159**	⇑P	Pg	04 59 31.2	+0.4
T1218				S	Sg	04 59 33.5	+0.6
T1218				AML	AML		
	comp=E,5100µm,0.6s						
T1218				AML	AML		
	comp=E,4865µm,0.6s						
T1218				AML	AML		
	comp=N,11290µm,0.2s						
T1218				AML	AML		
	comp=N,11485µm,0.2s						
T1218				AML	AML		
	comp=N,11290µm,0.2s						
T1218				AML	AML		
	comp=E,5100µm,0.6s						
T1218				AML	AML		
	comp=E,4865µm,0.6s						
T1214	**Arquata del Tr**	**0.11**	**94**	⇓P	Pg	04 59 31.3	+0.4
T1214				S	Sg	04 59 33.5	+0.5
T1214				AML	AML		
	comp=N,3325µm,0.7s						
T1214				AML	AML		
	comp=N,3150µm,0.3s						
T1214				AML	AML		
	comp=E,3805µm,0.2s						
T1214				AML	AML		
	comp=N,3145µm,0.3s						

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T1214                                AML     AML
        comp=E,4005µm,0.2s
T1214                                AML     AML
        comp=N,3145µm,1.7s
T1217   Poggiodomo (PG   0.11 240  ⇑P      Pg          04 59 31.4 +0.5
T1217                                S       Sg          04 59 33.7 +0.7
T1217                                AML     AML
        comp=E,1995µm,0.1s
T1217                                AML     AML
        comp=E,1910µm,0.1s
T1217                                AML     AML
        comp=E,1990µm,0.1s
T1217                                AML     AML
        comp=N,2755µm,1.1s
T1217                                AML     AML
        comp=E,1910µm,0.1s
T1217                                AML     AML
        comp=N,2625µm,0.4s
T1217                                AML     AML
        comp=N,2755µm,0.9s
T1216   Preci, Frazion   0.13 345  ⇓P      Pg          04 59 31.6 +0.5
T1216                                S       Sg          04 59 34.0 +0.6
T1216                                AML     AML
        comp=N,5215µm,1.6s
T1216                                AML     AML
        comp=E,3845µm,0.6s
T1216                                AML     AML
        comp=N,5215µm,1.5s
T1216                                AML     AML
        comp=E,3840µm,0.6s
T1245   Castelsantange   0.13  46   P      Pg          04 59 31.6 +0.4
T1245                                S       Sg          04 59 34.1 +0.6
T1245                                AML     AML
        comp=E,8885µm,0.2s
T1245                                AML     AML
        comp=N,8180µm,0.3s
T1245                                AML     AML
        comp=N,8730µm,0.3s
T1245                                AML     AML
        comp=E,8015µm,0.1s
T1245                                AML     AML
        comp=E,8880µm,0.2s
T1215   Vallo di Nera,   0.15 284  ⇑P      Pg          04 59 32.0 +0.6
T1215                                S       Sg          04 59 34.6 +0.8
T1215                                AML     AML
        comp=E,1195µm,0.2s
T1215                                AML     AML
        comp=N,1275µm,0.9s
T1215                                AML     AML
        comp=N,1200µm,0.9s
T1215                                AML     AML
        comp=N,1270µm,0.9s
T1215                                AML     AML
        comp=N,1270µm,1.1s
T1215                                AML     AML
        comp=N,1200µm,1.1s
T1215                                AML     AML
        comp=E,1155µm,0.2s
MC2     Monte Cornacci   0.17  33  ⇓P      Pg          04 59 32.5 +0.5
MC2                                  S       Sg          04 59 35.6 +0.9
FEMA    Monte Fema       0.20 357   P      Pg          04 59 32.8 +0.5
MMO1    Montemonaco      0.23  56  ⇑P      Pg          04 59 33.3 +0.4
MMO1                                 S       Sg          04 59 37.4 +1.1
SMA1    SAN MARTINO      0.24 124   P      Pg          04 59 33.7 +0.6
SMA1                                 AML     AML
        comp=E,1260µm,0.7s
SMA1                                 AML     AML
        comp=N,1103µm,0.3s
SMA1                                 AML     AML
        comp=E,1260µm,1.3s
CESI    CESI - Serrava   0.27 334  ⇓P      Pg          04 59 34.0 +0.6
CESI                                 S       Sb          04 59 38.3 -1.1
CESI                                 AML     AML
        comp=E,624µm,0.3s
CESI                                 AML     AML
        comp=N,1970µm,0.5s
T1256   Bolognola (MC)   0.27  26   P      Pg          04 59 34.0 +0.4
T1256                                S       Sb          04 59 38.5 -1.2
T1256                                AML     AML
        comp=E,1134µm,0.9s
T1256                                AML     AML
        comp=E,1155µm,0.9s
T1256                                AML     AML
        comp=N,812µm,1.5s
T1256                                AML     AML
        comp=E,1134µm,1.1s
T1256                                AML     AML
        comp=N,844µm,1.5s
T1256                                AML     AML
        comp=E,1155µm,1.1s
FDMO    Fiordimonte      0.27   4   P      Pg          04 59 34.0 +0.5
T1211   Morro Reatino    0.28 213   P      Pg          04 59 34.2 +0.5
T1211                                AML     AML
        comp=N,2760µm,0.2s
T1211                                AML     AML
        comp=E,1740µm,0.1s
T1211                                AML     AML
        comp=N,2745µm,0.2s
T1211                                AML     AML
        comp=E,1740µm,0.1s
RM33    Pellescritta (   0.28 157   P      Pg          04 59 34.1 +0.4
RM33                                 AML     AML
        comp=N,841µm,0.9s
RM33                                 AML     AML
        comp=E,646µm,1.5s
RM33                                 AML     AML
        comp=E,666µm,1.5s
RM33                                 AML     AML
        comp=N,841µm,0.9s
RM33                                 AML     AML
        comp=N,828µm,0.1s
RM33                                 AML     AML
        comp=E,666µm,0.5s
RM33                                 AML     AML
        comp=E,646µm,0.5s
T1241   Roccafluvione,   0.28  72  ⇑P      Pg          04 59 34.2 +0.4
T1241                                AML     AML
        comp=E,2240µm,0.2s
T1241                                AML     AML
        comp=N,942µm,0.3s
T1241                                AML     AML
        comp=N,888µm,1.3s
T1241                                AML     AML
        comp=N,889µm,1.3s
T1241                                AML     AML
        comp=E,2315µm,0.2s
T1241                                AML     AML
        comp=N,942µm,0.3s
T1241                                AML     AML
        comp=N,889µm,0.7s
T1241                                AML     AML
        comp=E,2240µm,0.2s
ARRO    Arrone           0.29 230  ⇑P      Pg          04 59 34.4 +0.5
ARRO                                 AML     AML
        comp=E,778µm,1.1s
ARRO                                 AML     AML
        comp=N,852µm,0.3s
T1219   Muccia, Frazio   0.29 352   P      Pg          04 59 34.3 +0.3
T1220   Camerino, Fraz   0.34   3   P      Pg          04 59 35.2 +0.4
T1220                                AML     AML
        comp=E,2720µm,0.3s
T1220                                AML     AML
        comp=N,2395µm,0.6s
T1220                                AML     AML
        comp=N,2395µm,1.4s
T1220                                AML     AML
        comp=E,2720µm,1.7s
CAMP    Campotosto       0.34 132   P      Pg          04 59 35.3 +0.4
CAMP                                 AML     AML
        comp=E,160µm,0.4s
CAMP                                 AML     AML
        comp=N,110µm,1.2s
CAMP                                 AML     AML
        comp=N,110µm,0.8s
GUMA    Gualdo di Mace   0.36  34  ⇑P      Pb          04 59 35.8 -0.6
GUMA                                 AML     AML
        comp=E,2055µm,0.4s
GUMA                                 AML     AML
        comp=N,1700µm,0.5s
GUMA                                 AML     AML
        comp=E,1865µm,0.3s
GUMA                                 AML     AML
        comp=E,2055µm,0.3s
GUMA                                 AML     AML
        comp=N,1700µm,0.6s
GUMA                                 AML     AML
        comp=N,2180µm,0.4s
```

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GUMA                                 AML     AML
        comp=E,2055µm,1.7s
GUMA                                 AML     AML
        comp=N,1865µm,1.7s
MOMA    Monte Martano    0.36 276  ⇑P      Pg          04 59 35.8 +0.5
MOMA                                 AML     AML
        comp=E,918µm,0.2s
MOMA                                 AML     AML
        comp=N,905µm,0.2s
MOMA                                 AML     AML
        comp=N,854µm,1.5s
MOMA                                 AML     AML
        comp=E,951µm,0.2s
MOMA                                 AML     AML
        comp=N,905µm,1.8s
T1222   Castel Sant'An   0.37 183  ⇓P      Pg          04 59 35.6 +0.3
T1222                                AML     AML
        comp=E,484µm,0.5s
T1222                                AML     AML
        comp=N,456µm,0.3s
T1222                                AML     AML
        comp=E,488µm,0.5s
T1222                                AML     AML
        comp=N,465µm,0.3s
T1222                                AML     AML
        comp=N,466µm,0.2s
T1222                                AML     AML
        comp=E,488µm,1.5s
T1222                                AML     AML
        comp=E,484µm,1.5s
T1222                                AML     AML
        comp=N,456µm,0.3s
T1246   Crognaleto (TE   0.37 120   P      Pg          04 59 35.6 +0.3
T1247   Pizzolo (AQ)     0.37 152   P      Pb          04 59 36.0 -0.6
T1247                                AML     AML
        comp=E,540µm,0.4s
T1247                                AML     AML
        comp=N,616µm,1.2s
CESX    Cesi             0.39 246   P      Pg          04 59 36.0 +0.3
CESX                                 AML     AML
        comp=N,427µm,1.1s
CESX                                 AML     AML
        comp=E,428µm,0.7s
CESX                                 AML     AML
        comp=N,427µm,0.9s
ASSB    Assisi San Ben   0.41 313   P      Pg          04 59 36.5 +0.4
ASSB                                 AML     AML
        comp=N,308µm,1.4s
ASSB                                 AML     AML
        comp=E,296µm,0.6s
ASSB                                 AML     AML
        comp=N,308µm,0.6s
MDAR    Monte D'Aria     0.43   8   P      Pg          04 59 36.8 +0.3
AQU     L'Aquila         0.48 149   P      Pb          04 59 38.1 -0.5
AQU                                  AML     AML
        comp=N,148µm,0.4s
AQU                                  AML     AML
        comp=E,148µm,0.4s
OFFI    Offida           0.49  70  ⇑P      Pb          04 59 38.6  0.0
OFFI                                 AML     AML
        comp=E,766µm,0.5s
OFFI                                 AML     AML
        comp=N,907µm,0.7s
OFFI                                 AML     AML
        comp=E,766µm,1.5s
GIGS    Gran Sasso       0.49 130   P      Pg          04 59 37.7 +0.1
GIGS                                 AML     AML
        comp=E,55µm,0.7s
GIGS                                 AML     AML
        comp=N,43µm,0.9s
GIGS                                 AML     AML
        comp=E,55µm,0.7s
GIGS                                 AML     AML
        comp=N,43µm,1.1s
GIGS                                 AML     AML
        comp=E,55µm,1.3s
SNTG    Esanatoglia      0.50 350  ⇓P      Pg          04 59 37.9 +0.2
SNTG                                 AML     AML
        comp=E,232µm,0.6s
SNTG                                 AML     AML
        comp=N,232µm,1.3s
SNTG                                 AML     AML
        comp=E,232µm,1.4s
FIAM    Fiamignano       0.50 175  ⇑P      Pg          04 59 38.1 +0.3
FIAM                                 AML     AML
        comp=N,256µm,1.0s
FIAM                                 AML     AML
        comp=E,280µm,0.7s
FIAM                                 AML     AML
        comp=E,280µm,1.3s
ATCC    AVT- Casa Cast   0.52 323  ⇑P      Pg          04 59 38.6 +0.4
ATCC                                 AML     AML
        comp=E,290µm,0.6s
ATCC                                 AML     AML
        comp=N,348µm,0.6s
ATCC                                 AML     AML
        comp=N,348µm,1.4s
EL6     Elcito           0.56   3  ⇑P      Pg          04 59 39.1 +0.1
EL6                                  S       Sb          04 59 48.5 +0.5
EL6                                  AML     AML
        comp=N,356µm,0.3s
EL6                                  AML     AML
        comp=E,514µm,0.3s
EL6                                  AML     AML
        comp=N,356µm,0.3s
FOSV    Fossato di Vic   0.57 337   P      Pg          04 59 39.6 +0.4
CING    Cingoli          0.62   9  ⇑P      Pg          04 59 40.2 +0.2
CING                                 AML     AML
        comp=E,142µm,0.6s
CING                                 AML     AML
        comp=N,156µm,0.1s
FAGN    Fagnano          0.63 142  ⇑P      Pb          04 59 40.7 -0.4
FAGN                                 AML     AML
        comp=E,262µm,0.4s
FAGN                                 AML     AML
        comp=N,290µm,0.3s
MURB    Monte Urbino     0.63 322  ⇓P      Pg          04 59 40.6 +0.3
MURB                                 AML     AML
        comp=E,410µm,1.4s
MURB                                 AML     AML
        comp=N,547µm,1.5s
MURB                                 AML     AML
        comp=N,547µm,0.5s
VCEL    Villa Celiera    0.68 123   P      Pb          04 59 41.8 -0.3
VCEL                                 AML     AML
        comp=E,242µm,1.0s
VCEL                                 AML     AML
        comp=N,200µm,1.5s
VCEL                                 AML     AML
        comp=E,242µm,1.0s
MGAB    Montegabbione    0.71 282  ⇓P      Pb          04 59 42.6 +0.1
MGAB                                 AML     AML
        comp=E,152µm,0.9s
MGAB                                 AML     AML
        comp=N,330µm,0.5s
MGAB                                 AML     AML
        comp=E,168µm,0.6s
MGAB                                 AML     AML
        comp=N,308µm,0.5s
MGAB                                 AML     AML
        comp=E,152µm,1.1s
PP3     Marolino         0.73  33   P      Pb          04 59 43.4 +0.6
PP3                                  AML     AML
        comp=E,324µm,0.8s
PP3                                  AML     AML
        comp=N,439µm,1.3s
PP3                                  AML     AML
        comp=N,439µm,0.7s
ARVD    Arcevia          0.74 353   S      Sb          04 59 54.1 +1.1
ARVD                                 AML     AML
        comp=E,122µm,0.9s
ARVD                                 AML     AML
        comp=N,77µm,1.6s
ARVD                                 AML     AML
        comp=E,122µm,1.1s
ARVD                                 AML     AML
        comp=N,77µm,0.4s
T0110   Collepietro      0.76 135  ⇓P      Pg          04 59 42.6  0.0
T0110                                AML     AML
        comp=E,163µm,0.6s
T0110                                AML     AML
        comp=N,120µm,0.6s
ATVO    AVT- Monte Val   0.78 322  ⇑P      Pg          04 59 43.3 +0.2
ATVO                                 AML     AML
        comp=E,68µm,0.4s
ATVO                                 AML     AML
        comp=N,72µm,0.4s
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FRON    Frontone         0.79 342   P      Pg          04 59 43.4 +0.2
FRON                                 AML     AML
        comp=E,70µm,1.4s
FRON                                 AML     AML
        comp=N,100µm,1.4s
FRON                                 AML     AML
        comp=N,100µm,0.6s
FRON                                 AML     AML
        comp=E,70µm,0.6s
CERT    Cerreto          0.82 184  ⇓P      Pg          04 59 43.6 -0.2
CERT                                 S       Sn          04 59 57.3 -0.4
CERT                                 AML     AML
        comp=E,228µm,0.5s
CERT                                 AML     AML
        comp=E,228µm,1.5s
CERT                                 AML     AML
        comp=N,124µm,0.4s
SACS    San Casciano d   0.85 276  ⇑P      Pb          04 59 44.8 -0.1
MPAG    Monte Paganucc   0.89 346  ⇓P      Pb          04 59 45.9 +0.4
MPAG                                 AML     AML
        comp=N,66µm,0.2s
MPAG                                 AML     AML
        comp=E,71µm,0.8s
APEC    Apecchio         0.92 329   P      Pn          04 59 48.0 +1.1
FSSB    Fossombrone      0.95 347  ⇓P      Pb          04 59 46.4 -0.1
FSSB                                 AML     AML
        comp=N,284µm,0.3s
FSSB                                 AML     AML
        comp=E,342µm,0.4s
TOLF    Tolfa            1.05 229   S      Sn          05 00 04.3 +0.9
TOLF                                 AML     AML
        comp=N,72µm,1.6s
TOLF                                 AML     AML
        comp=E,52µm,0.8s
TOLF                                 AML     AML
        comp=N,72µm,0.4s
PTRJ    Pietraroja       1.78 142   P      Pg          05 00 03.3 +1.2
PTRJ                                 S       Sn          05 00 20.0 -1.4
CRTO    Cratere Ovest,   2.19 152   S      Sb          05 00 34.3 -0.7
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      ROM 15 05:00:06.2±0.0,42.°770N±0.°001×13.°062E±0.°001,
          h9km,ML1.8/1,1D,Error ellipse: s-maj=0.1km
          s-min=0.0km az=324.0,Central Italy
Code    Station Name       Δ°   AZ°    Phase ID              Time      Res
                                    Op        ISC          h  m  s     ISC
T1212   Cascia, Frazio   0.02 214   P         Pg          05 00 08.2 +0.2
T1212                               S         Sg          05 00 09.5 +0.3
T1212                               AML       AML
        comp=E,993µm,0.2s
T1212                               AML       AML
        comp=N,941µm,0.2s
T1212                               AML       AML
        comp=E,931µm,0.2s
T1212                               AML       AML
        comp=N,969µm,0.2s
T1212                               AML       AML
        comp=E,932µm,0.2s
T1212                               AML       AML
        comp=N,970µm,0.2s
T1218   Civita (PG)      0.11 158   P         Pg          05 00 09.2 +0.3
T1218                               S         Sg          05 00 11.4 +0.6
T1218                               AML       AML
        comp=E,598µm,0.2s
T1218                               AML       AML
        comp=N,880µm,0.2s
T1218                               AML       AML
        comp=E,601µm,0.1s
T1218                               AML       AML
        comp=N,848µm,0.2s
T1218                               AML       AML
        comp=N,876µm,0.2s
T1218                               AML       AML
        comp=N,847µm,0.2s
T1218                               AML       AML
        comp=E,601µm,0.1s
T1218                               AML       AML
        comp=E,598µm,0.1s
T1214   Arquata del Tr   0.11  95   P         Pg          05 00 09.3 +0.3
T1214                               S         Sg          05 00 11.3 +0.4
T1217   Poggiodomo (PG   0.11 239   P         Pg          05 00 09.4 +0.4
T1217                               S         Sg          05 00 11.6 +0.7
T1216   Preci, Frazion   0.12 346   P         Pg          05 00 09.6 +0.4
T1216                               S         Sg          05 00 12.0 +0.8
T1245   Castelsantange   0.13  47  ⇓P         Pg          05 00 09.6 +0.3
T1245                               S         Sg          05 00 12.0 +0.6
T1215   Vallo di Nera,   0.15 283   P         Pg          05 00 09.9 +0.4
T1215                               S         Sg          05 00 12.6 +0.8
MC2     Monte Cornacci   0.17  34   P         Pg          05 00 10.4 +0.4
MC2                                 S         Sg          05 00 13.6 +0.9
```

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      IDC 15 05:15:07.2±0.7,39.°89N×145.°14E,h0km,mb3.7/15,
          mbtmp3.8/19,ML3.4/4,MS3.7/2,Error ellipse:
          s-maj=18.4km s-min=16.2km az=136.0
      JMA 15 05:15:11.2±0.3,40.°1N±1.°0×14°5E±°,h44km,MV3.9/30,
          FAR E OFF NORTH HONSHU
     NIED 15 05:15:11.2,40.°08N×144.°85E,h44km,MW4.0,Moment
          Tensor Solution.   s3   Moment tensor: Scale 10^15Nm;
          Mrr-0.69; Mθθ0.26; Mφφ0.43; Mrθ0.56; Mθφ0.15; Mφr0.64;
           Fault plane solution: M0 1.04000×10^15   NP1:
          φs219.00000°,δ72.00000°,λ-87.00000°.   NP2:φs29.00000°,
          δ18.00000°,λ-100.00000°.
      ISC 15 05:15:12.4±0.7,40.°03N±0.°05×144.°99E±0.°06,h32km,n54,
          σ1ˢ65/59,mb3.8/15,Off east coast of Honshu
Code    Station Name       Δ°   AZ°    Phase ID              Time      Res
                                    Op        ISC          h  m  s     ISC
JTH     Tanohata         2.41 269   P         Pn          05 15 47.4 -2.1
JTH                                eS         Sn          05 16 14.8 -3.1
ERM     Erimo            2.42 326   P         Pn          05 15 48.5 -1.2
JEM     Erimo            2.42 326   P         Pn          05 15 48.5 -1.2
JEM     Erimo            2.42 326   P         Pn          05 15 48.4 -1.2
MIYJ    Miyakonagasawa   2.48 260   P         Pn          05 15 49.2 -1.5
MIYJ                               eS         Sn          05 16 16.8 -3.1
JKEN    Kujiedanarisaw   2.52 275   P         Pn          05 15 49.3 -1.8
JTHR    Tokachihiroo     2.59 331   P         Pn          05 15 50.5 -1.5
JANG    Nango            2.68 278  i P        Pn          05 15 51.7 -1.7
JANG                                S         Sn          05 16 21.8 -3.0
JNBK    Urakawa-nobuka   2.81 324   P         Pn          05 15 54.4 -0.6
JNBK                               eS         Sn          05 16 27.7 -0.1
JCH     Churui           2.85 335   P         Pn          05 15 54.2 -1.5
JCH                                eS         Sn          05 16 26.6 -2.4
JOM     Ohasama          2.91 260  i P        Pn          05 15 55.6 -0.9
JAK     Akkeshi          2.97 356   P         Pn          05 15 55.0 -2.2
JTM     Tenmabayashi     3.09 285   P         Pn          05 15 58.0 -0.9
JMK     Ichinoseki       3.11 251   P         Pn          05 15 58.1 -1.1
JOT     Ohata            3.29 295   P         Pn          05 16 00.7 -1.0
JOT                                eS         Sn          05 16 37.0 -2.5
NEM2    Nemuro 2         3.38   9   P         Pn          05 16 00.2 -2.6
NEM2                               eS         Sn          05 16 37.6 -4.2
JAR     Ashorobuto       3.39 345   P         Pn          05 16 01.1 -1.9
JAR                                eS         Sn          05 16 39.0 -3.1
JYK     Kaneyama         3.75 254   P         Pn          05 16 07.2 -0.9
JYK                                 S         Sn          05 16 49.2 -2.0
JEW     Eniwo            3.87 318   P         Pn          05 16 09.6  0.0
JEW                                eS         Sn          05 16 53.5 -0.5
JMM     Marumori         3.92 238   P         Pn          05 16 08.5 -1.9
JTKR    Abashiri--Toko   4.02 349   P         Pn          05 16 10.8 -0.8
JTKR                               eS         Sn          05 16 54.7 -2.9
JHR     Hokuryu          4.44 328   P         Pn          05 16 18.4 +0.9
ASAJ    Asahikawa        4.45 337   Pn        Pn          05 16 16.9 -0.7
        2.7nm,0.3s,baz=199,slow=7.5,SNR=6.6
ASAJ                                Sn        Sn          05 17 09.6 +1.2
        1.7nm,0.3s,baz=120,slow=20,SNR=4.2
        11nm,0.4s
JSD     Sado             5.61 251   P         Pn          05 16 32.7 -0.8
JRY     Ryogami san      6.26 232   P         Pn          05 16 41.1 -1.5
MJAR    Matsushiro Arr   6.37 239   Pn        Pn          05 16 43.4 -0.7
        0.4nm,0.3s,baz=80,slow=14,SNR=22
MJAR                                Sn        Sn          05 17 55.3 -0.5
        0.1nm,0.3s,baz=55,slow=22,SNR=1.4
        13nm,0.9s
MAJO    Matsushiro       6.37 239   P         Pn          05 16 43.8 -0.3
JGF     Kuroka           7.49 236   P         Pn          05 16 59.7 +0.3
USRK    Ussuriysk Ar.   10.52 298   Pn        Pn          05 17 41.6 +0.8
        0.5nm,0.3s,baz=107,slow=14,SNR=12
        12nm,0.8s
KLR     Kul'dur         13.15 319   Pn        Pn          05 18 16.1 -0.8
        0.1nm,0.3s,baz=128,slow=14,SNR=5.1
        1.1nm,0.7s
KSRS    Korea Array     13.57 265   LR        LR          05 23 29.8
```

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,28nm,21.5s,baz=320,slow=37						
PETK	**Petropavlovsk-**	**15.69**	**29**	LR	LR	05 26 18.1	
	comp=Z,85nm,18.1s,baz=324,slow=43						
SEY	**Seymchan**	**23.36**	**9**	P	**P**	**05 20 18.5**	**+0.7**
	2.7nm,0.5s,baz=199,slow=7.6,SNR=15						
	2.7nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**27.62**	**131**	T	T	05 49 43.9	
	baz=322,slow=76,SNR=3.9						
H11N1	**WAKE ISLAND Hy**	**27.63**	**131**	T	T	05 49 45.5	
	baz=322,slow=76,SNR=4.0						
H11N3	**WAKE ISLAND Hy**	**27.64**	**131**	T	T	05 49 47.5	
	baz=322,slow=76,SNR=3.8						
H11S1	**WAKE ISLAND Hy**	**28.47**	**133**	T	T	05 50 49.1	
	baz=323,slow=74						
H11S3	**WAKE ISLAND Hy**	**28.48**	**133**	T	T	05 50 49.3	
	baz=323,slow=74						
H11S2	**WAKE ISLAND Hy**	**28.49**	**133**	T	T	05 50 50.6	
	baz=323						
SONM	**Songino Array**	**28.63**	**299**	P	**P**	**05 21 08.2**	**+2.2**
	0.5nm,0.6s,baz=70,slow=9.1,SNR=4.4						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**42.05**	**310**	P	**P**	**05 23 02.1**	**+1.3**
	0.3nm,0.4s,baz=80,slow=8.1,SNR=2.0						
ZALV				PcP	**PcP**	**05 24 55.7**	**+0.5**
	1.6nm,0.5s,baz=82,slow=2.9,SNR=5.9						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**44.97**	**300**	P	**P**	**05 23 25.4**	**+1.0**
	0.3nm,0.7s,baz=86,slow=12,SNR=3.1						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**45.45**	**34**	P	**P**	**05 23 27.0**	**-1.0**
	0.4nm,0.7s,baz=271,slow=6.8,SNR=5.7						
	0.4nm,0.7s						
YKA	**Yellowknife Ar**	**59.80**	**32**	P	**P**	**05 25 14.6**	**+0.5**
	0.2nm,0.6s,baz=301,slow=6.6,SNR=4.5						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**60.49**	**192**	P	**P**	**05 25 17.3**	**-1.9**
	1.1nm,0.5s,baz=12,slow=7.2,SNR=11						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**64.21**	**191**	P	**P**	**05 25 43.4**	**-0.7**
	0.6nm,0.8s,baz=19,slow=8.0,SNR=4.4						
	0.6nm,0.8s						
DZM	**Mont Dzumac**	**64.94**	**158**	LR	LR	05 48 47.6	
	comp=Z,181nm,21.4s,baz=266,slow=31						
FINES	**FINESS Array B**	**67.45**	**333**	P	**P**	**05 26 05.0**	**+0.5**
	1.1nm,0.5s,baz=71,slow=6.9,SNR=9.5						
	1.1nm,0.5s						
NVAR	**Mina Array Bea**	**70.96**	**56**	P	**P**	**05 26 27.0**	**-0.1**
	0.6nm,0.6s,baz=294,slow=6.2,SNR=6.6						
	0.6nm,0.6s						
KBZ	**Khabaz**	**71.05**	**311**	P	**P**	**05 26 28.2**	**+1.1**
	2.0nm,0.8s,baz=111,slow=8.6,SNR=2.0						
	2.0nm,0.8s						
NOA	**NORSAR Array B**	**72.47**	**338**	P	**P**	**05 26 37.1**	**+1.6**
	0.5nm,0.8s,baz=29,slow=6.4,SNR=1.0						
	0.5nm,0.8s						
PDAR	**Pinedale Array**	**73.57**	**48**	P	**P**	**05 26 42.6**	**+0.1**
	0.8nm,0.5s,baz=274,slow=1.1,SNR=16						
	0.8nm,0.5s						
AKASG	**Malin Array Be**	**73.61**	**323**	P	**P**	**05 26 42.5**	**+0.2**
	0.1nm,0.3s,baz=63,slow=14,SNR=1.4						
	0.1nm,0.3s						
TXAR	**Lajitas Array**	**86.08**	**55**	P	**P**	**05 27 50.4**	**+0.1**
	0.4nm,0.5s,baz=296,slow=3.8,SNR=11						
	0.4nm,0.5s						

IDC 15 05:15:19.5±2.3**, 6°.63S**×**129°.57E, h0^{km}, mb3.4**/1**, mbtmp3.3**/3**, ML3.7**/2**, Error ellipse: s-maj=143.8km s-min=32.6km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.02**	**161**	Pn	Pn	05 18 39.1	-0.4
	0.4nm,0.3s,baz=343,slow=14,SNR=20						
WRA				Sn	Sn	05 21 02.6	-13
	0.2nm,0.3s,baz=341,slow=22,SNR=2.0						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**17.44**	**167**	P	Pn	05 19 24.7	+0.3
	0.2nm,0.3s,baz=358,slow=11,SNR=6.6						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**67.69**	**327**	P	P	05 26 18.7	0.0
	0.1nm,0.4s,baz=122,slow=7.8,SNR=4.0						
	0.1nm,0.4s						

ISK ***15*** *05:33:38.3, 39°.86N×38°.96E, h5^{km}, ML3.4/19*

DDA ***15*** *05:33:39.0±0.0, 39°.79N×38°.97E, h5^{km}±2^{km}, MW3.5*

ISC 15 05:33:39.1±1.1**, 39°.85N**±0°.02×**38°.99E**±0°.02**, h7**^{km}±10^{km}**, n34, σ0^{s}63**/54**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KELT	**Kelkit**	**0.36**	**34**	P	**Pb**	**05 33 47.5**	**-0.4**
KELT				S	**Sb**	**05 33 52.9**	**-1.0**
KELT				*i* AML	AML	05 33 53.0	
	comp=E,3µm,0.5s						
KELT				*i* AML	AML	05 33 53.0	
	comp=N,2µm,0.6s						
EUZM	**Uzumlu**	**0.56**	**105**	SPECP		05 33 50.0	
EUZM				P	**Pg**	**05 33 50.4**	**+0.4**
EUZM				S	**Sb**	**05 33 59.7**	**+0.1**
EUZM				*i* AML	AML	05 34 01.0	
	comp=E,689nm,0.4s						
EUZM				*i* AML	AML	05 34 04.0	
	comp=N,536nm,0.6s						
ERZN	**Erzincan**	**0.62**	**115**	Pg	**Pg**	**05 33 51.2**	**+0.1**
ERZN				Sg	**Sb**	**05 34 00.8**	**-0.5**
KEMA	**Kemaliye**	**0.70**	**214**	P	**Pg**	**05 33 51.9**	**-0.6**
KEMA				*i* AML	AML	05 34 01.0	
	comp=E,2µm,0.7s						
KEMA				*i* AML	AML	05 34 01.0	
	comp=N,2µm,0.7s						
KEMA				S	**Sg**	**05 34 01.1**	**-0.5**
SUSE	**Susehri**	**0.70**	**301**	P	**Pg**	**05 33 53.2**	**+0.6**
SUSE				S	**Sb**	**05 34 03.5**	**-0.3**
SUSE				*i* AML	AML	05 34 04.0	
	comp=N,3µm,0.4s						
SUSE				*i* AML	AML	05 34 05.0	
	comp=E,2µm,0.3s						
TNCL	**Tunceli-Merkez**	**0.85**	**150**	P	**Pg**	**05 33 55.2**	**-0.2**
TNCL				S	**Sg**	**05 34 06.5**	**+0.1**
TNCL				*i* AML	AML	05 34 07.0	
	comp=E,880nm,0.3s						
TNCL				*i* AML	AML	05 34 09.0	
	comp=N,642nm,0.5s						
ARPR	**Arapgir-MALATY**	**0.91**	**214**	Pg	**Pg**	**05 33 55.8**	**-0.8**
ARPR				Sg	**Sg**	**05 34 08.6**	**+0.1**
BAYT	**Aydıntepe-Bayb**	**1.03**	**58**	Pg	**Pg**	**05 33 58.9**	**0.0**
BAYT				Sg	**Sn**	**05 34 13.7**	**-1.3**
MACK	**Trabzon**	**1.24**	**28**	P	**Pg**	**05 34 03.3**	**+0.4**
MACK				S	**Sg**	**05 34 19.1**	**+0.1**
MACK				*i* AML	AML	05 34 22.0	
	comp=E,4µm,0.2s						
MACK				*i* AML	AML	05 34 23.0	
	comp=N,4µm,0.2s						
KTUT	**Trabzon**	**1.28**	**27**	Pn	**Pg**	**05 34 03.6**	**0.0**
KTUT				Sn	**Sn**	**05 34 21.2**	**+0.4**
KOVA	**Elazig, Kovanc**	**1.31**	**151**	SPECP		05 34 03.0	
KOVA				P	**Pn**	**05 34 03.4**	**-0.5**
KOVA				S	**Sb**	**05 34 20.6**	**-0.5**
KOVA				*i* AML	AML	05 34 21.0	
	comp=E,397nm,0.4s						
KOVA				*i* AML	AML	05 34 21.0	
	comp=N,282nm,0.3s						
RSDY	**Resadiye-TOKAT**	**1.39**	**294**	Pn	**Pn**	**05 34 04.5**	**-0.4**
IZDR	**Rize**	**1.52**	**52**	SPECP		05 34 07.0	
IZDR				P	**Pb**	**05 34 07.2**	**-0.4**
IZDR				S	**Sb**	**05 34 26.9**	**-0.2**
IZDR				*i* AML	AML	05 34 29.0	
	comp=E,331nm,0.3s						
IZDR				*i* AML	AML	05 34 31.0	
	comp=N,188nm,0.4s						
SVSK	**Karacayir**	**1.54**	**273**	Pn	**Pn**	**05 34 07.0**	**+0.1**
KRIK	**Erzurum-spir**	**1.56**	**71**	SPECP		05 34 09.0	
KRIK				P	**Pg**	**05 34 09.1**	**+0.1**
KRIK				S	**Sg**	**05 34 30.3**	**+1.0**
KRIK				*i* AML	AML	05 34 34.0	
	comp=N,103nm,0.5s						
BNGB	**Bingl**	**1.56**	**123**	Pn	**Pb**	**05 34 08.1**	**-0.3**
BNGB				Sn	**Sg**	**05 34 29.5**	**+0.2**
MAYA	**Malatya/Merkez**	**1.59**	**196**	SPECP		05 34 07.0	
MAYA				P	**Pn**	**05 34 07.8**	**+0.1**
MAYA				S	**Sn**	**05 34 27.8**	**-0.7**
MAYA				*i* AML	AML	05 34 30.0	
	comp=E,312nm,0.4s						
MAYA				*i* AML	AML	05 34 33.0	
	comp=N,209nm,0.3s						
DARE	**Darende-Malaty**	**1.73**	**223**	Pn	**Pn**	**05 34 09.9**	**+0.1**
DARE				Sn	**Sn**	**05 34 32.9**	**+0.7**
AKCD	**Akcadag**	**1.76**	**209**	P	**Pn**	**05 34 10.1**	**0.0**
AKCD				S	**Sb**	**05 34 34.7**	**+0.5**
AKCD				*i* AML	AML	05 34 41.0	
	comp=E,221nm,0.7s						
AKCD				*i* AML	AML	05 34 42.0	
	comp=N,407nm,1.0s						
HANI	**Diyarbakir_Han**	**1.80**	**142**	SPECP		05 34 12.0	
HANI				P	**Pb**	**05 34 12.7**	**+0.2**
HANI				S	**Sg**	**05 34 36.4**	**-0.6**
HANI				*i* AML	AML	05 34 44.0	
	comp=N,75nm,1.0s						
SLHN	**Bingol, Solhan**	**1.81**	**119**	SPECP		05 34 13.0	
SLHN				P	**Pg**	**05 34 13.6**	**-0.2**
SLHN				S	**Sg**	**05 34 37.3**	**+0.1**
SLHN				*i* AML	AML	05 34 40.0	
	comp=E,171nm,0.5s						
CHOM	**Cayeli-Rize**	**1.83**	**47**	Pn	**Pb**	**05 34 11.8**	**-1.2**
TOKT	**Tokat**	**1.94**	**285**	Pn	**Pn**	**05 34 12.7**	**+0.2**
DYBB	**Diyarbakir**	**2.10**	**154**	Pn	**Pn**	**05 34 15.5**	**+0.8**
ELBS	**KAHRAMANMARAS**	**2.10**	**224**	P	Pn	05 34 08.0	-6.8
ELBS				S	**Sb**	**05 34 45.6**	**+1.6**
ELBS				*i* AML	AML	05 34 47.0	
	comp=E,205nm,1.0s						
ELBS				*i* AML	AML	05 34 47.0	
	comp=N,252nm,0.6s						
KOPR	**Koprukoy-ERZUR**	**2.20**	**85**	Pn	**Pn**	**05 34 17.2**	**+0.9**
AKCA	**Adyaman/G¶l**	**2.29**	**207**	P	**Pb**	**05 34 20.5**	**-0.3**
AKCA				S	**Sg**	**05 34 52.7**	**-0.1**
AKCA				*i* AML	AML	05 35 02.0	
	comp=N,82nm,0.9s						
AKCA				*i* AML	AML	05 35 04.0	
	comp=E,67nm,0.7s						
URFA	**Urfa**	**2.41**	**183**	Pn	**Pn**	**05 34 19.9**	**+0.9**
SVAN	**Silvan-Diyarba**	**2.42**	**134**	Pn	**Pn**	**05 34 20.1**	**+1.0**
KVT	**Kavak**	**2.56**	**300**	Pn	**Pn**	**05 34 21.5**	**+0.4**
BNN	**Bunyan**	**2.64**	**249**	Pn	**Pn**	**05 34 22.6**	**+0.4**
YOZ	**Yozgat**	**2.84**	**267**	Pn	**Pn**	**05 34 25.6**	**+0.6**
DIKM	**Dikmen**	**3.36**	**304**	Pn	**Pn**	**05 34 32.8**	**+0.8**
KOZT	**Kozan**	**3.43**	**227**	Pn	**Pn**	**05 34 34.0**	**+1.1**

NEIC ***15*** *05:35:15.2±1.4, 5°.51S±0°.08×154°.04E±0°.07, h33^{km}±6^{km}, mb4.8/37, Error ellipse: s-maj=11.5km s-min=9.1km az=212.0*

BJI ***15*** *05:35:16.9±0.0, 5°.09S×153°.91E, h45^{km}, mb4.9/40, mB5.3/16, Ms5.0/3, Ms7 4.7/3*

IDC ***15*** *05:35:16.3±1.7, 5°.56S×153°.85E, h42^{km}±13^{km}, mb4.2/15, mbtmp4.5/18, ML3.3/3, MS4.0/32, Error ellipse: s-maj=15.9km s-min=10.3km az=63.0*

GCMT ***15*** *05:35:17.2±0.3, 5°.83S±0°.03×153°.61E±0°.03, h36^{km}±1^{km}, MW4.9/46, Moment Tensor Solution. s46,c54; s46,c56; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.01±.18; $M_{\theta\theta}$-1.81±.13; $M_{\phi\phi}$-1.20±.12; $M_{r\theta}$0.61±.14; $M_{\theta\phi}$1.03±.09; $M_{\phi r}$-1.43±.12; Best double couple: $M_0$3.18300×10^{16} NP1:ϕ_s139.00000°, δ59.00000°, λ101.00000°. NP2: ϕ_s298.00000°, δ33.00000°, λ72.00000°. Principal axes: T 3.4660, Plg73.0000°, Azm79.0000°; N -0.5660, Plg10.0000°, Azm313.0000°; P -2.9000, Plg13.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***15*** *05:35:18.0±0.5, 6°S±3°×15°4E±°, h49^{km}±5^{km}, M4.8/18, mB5.1/5, mb4.8/18, MLv5.0/3, Mw(mB)4.5/5*

ISC 15 05:35:15.2±0.4**, 5°.54S**±0°.05×**153°.97E**±0°.06**, h35**^{km}**, h35**^{km}**:pP-P, n139, σ1^{s}13**/124**, mb4.8**/41**, MS3.9**/34**, 2C, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.24**	**307**		**Pn**	**05 35 52.0**	**+2.0**
KRVT	**Keravat (AS076**	**2.29**	**302**	P	**Pn**	**05 35 51.2**	**+0.6**
	37nm,0.3s,baz=140,slow=3.4,SNR=17						
KRVT				S	**Sn**	**05 36 16.4**	**-1.2**
	975nm,0.4s,baz=68,slow=23,SNR=11						
KRVT				LR	LR	05 36 57.3	
	comp=Z,3µm,21.1s,baz=282,slow=46						
	1µm,1.1s						
HNR	**Honiara**	**7.08**	**123**	P	**Pn**	**05 36 57.1**	**+0.8**
	532nm,0.3s,baz=292,slow=7.5,SNR=2.0						
HNR				S	**Sn**	**05 38 14.3**	**-1.3**
	950nm,0.6s,baz=282,slow=14,SNR=1.3						
HNR				LR	LR	05 40 04.4	
	comp=Z,19µm,18.3s,baz=285,slow=40						
HNR	**Honiara**	**7.08**	**123**	Pn	**Pn**	**05 36 55.0**	**-1.4**
PMG	**Port Moresby**	**7.76**	**240**	P	**Pn**	**05 37 05.3**	**-0.5**
	3.3nm,0.3s,baz=70,slow=5.9,SNR=5.7						
PMG				S	**Sn**	**05 38 30.9**	**-1.6**
	121nm,1.0s,baz=326,slow=22,SNR=7.0						
	18nm,0.5s						
PMG	**Port Moresby**	**7.76**	**240**	Pn	**Pn**	**05 37 04.7**	**-1.1**
PATS	**Pohnpei**	**13.04**	**19**	Pn	**Pn**	**05 38 17.3**	**-0.7**
COEN	**Coen**	**13.52**	**231**		**Pn**	**05 38 25.3**	**+0.6**
SMPI	**Sarmi**	**15.63**	**282**	P	**Pn**	**05 38 51.7**	**-1.3**
	42nm,1.5s						
CTA	**Charters Tower**	**16.29**	**207**	P	**Pn**	**05 39 01.6**	**+0.2**
	0.2nm,0.3s,baz=28,slow=14,SNR=11						
CTA				LR	LR	05 44 59.3	
	comp=Z,508nm,19.9s,baz=62,slow=36						
	17nm,0.9s						
CTAO	**Charters Tower**	**16.29**	**207**	Pn	**Pn**	**05 39 01.8**	**+0.4**
LIFNC	**LIFOU**	**19.88**	**141**	P	**P**	**05 39 43.3**	**-0.3**
EIDS	**Eidsvold**	**19.91**	**188**	P	**P**	**05 39 43.6**	**-0.2**
DZM	**Mont Dzumac**	**20.39**	**145**	*e*Pn	Pn	05 39 51.2	-0.3
	80nm,1.1s						
DZM				*e*S	**S**	**05 43 33.0**	**-2.9**
	243nm,23.6s						
DZM				*e*LR	LR	05 44 43.1	
	comp=Z,740nm,23.2s						
DZM	**Mont Dzumac**	**20.39**	**145**	P	Pn	05 39 51.0	-0.5
	16nm,0.5s,baz=266,slow=9.3,SNR=19						
	16nm,0.5s						
DZM	**Mont Dzumac**	**20.39**	**145**	P	**P**	**05 39 48.0**	**-1.2**
DZM				IAmb	IAmb	05 39 58.2	
	comp=Z,64nm,1.3s						
OUENC	**Ouen Island, N**	**20.89**	**145**	P	**P**	**05 39 54.3**	**-0.2**
OUENC				IAmb	IAmb	05 40 00.4	
	comp=Z,28nm,0.9s						
GUMO	**Guam**	**21.05**	**335**	P	**P**	**05 39 57.8**	**+1.5**
	comp=Z,34nm,0.9s,baz=133,slow=5.9,SNR=2.8						
GUMO				LR	LR	05 49 10.5	
	comp=Z,142nm,18.3s,baz=138,slow=40						
	comp=Z,34nm,0.9s						
GUMO	**Guam**	**21.05**	**335**	P	**P**	**05 39 55.3**	**-1.0**
SIJI	**Sorong**	**23.13**	**281**	P	**P**	**05 40 19.7**	**+1.2**
	comp=Z,3.4nm,0.4s,baz=132,slow=14,SNR=1.4						
	comp=Z,3.4nm,0.4s						
MTN	**Manton Dam**	**23.66**	**251**	P	**P**	**05 40 24.4**	**+0.6**
MTN				IAmb	IAmb	05 40 43.4	
	comp=Z,13nm,0.8s						
WB0	**Warramunga Arr**	**23.72**	**232**	P	**P**	**05 40 23.9**	**-0.3**
WB2	**Warramunga Arr**	**23.85**	**231**	P	**P**	**05 40 24.7**	**-0.8**
WRA	**Warramunga Arr**	**23.86**	**231**	P	**P**	**05 40 24.2**	**-1.3**
	comp=Z,4.7nm,0.9s,baz=54,slow=11,SNR=18						
WRA				PcP	**PcP**	**05 44 09.2**	**+0.9**
	comp=Z,4.2nm,0.9s,baz=56,slow=2.3,SNR=8.1						
WRA				ScP	**ScP**	**05 47 41.4**	**-2.7**
	comp=Z,0.4nm,1.1s,baz=56,slow=3.1,SNR=1.4						
WRA				LR	LR	05 49 17.6	
	comp=Z,410nm,21.7s,baz=66,slow=35						
	comp=Z,4.7nm,0.9s						
WRA	**Warramunga Arr**	**23.86**	**231**	P	**P**	**05 40 24.6**	**-0.9**
AS31	**Alice Springs**	**26.42**	**225**	P	**P**	**05 40 49.3**	**+0.5**
ASAR	**Alice Springs**	**26.42**	**225**	P	**P**	**05 40 48.6**	**-0.3**
	comp=Z,8.0nm,1.0s,baz=57,slow=8.8,SNR=28						
ASAR				PcP	**PcP**	**05 44 15.2**	**+1.3**
	comp=Z,3.5nm,0.9s,baz=55,slow=2.1,SNR=11						
ASAR				ScP	**ScP**	**05 47 48.9**	**-2.4**
	comp=Z,0.3nm,0.5s,baz=57,slow=3.0,SNR=1.7						
	comp=Z,8.0nm,1.0s						
ASAR	**Alice Springs**	**26.42**	**225**	P	**P**	**05 40 49.0**	**+0.1**
MSVF	**Nonsavu**	**26.47**	**119**	LR	LR	05 50 46.8	
	comp=Z,262nm,19.0s,baz=273,slow=35						
KNRA	**Kununurra**	**26.71**	**246**	P	**P**	**05 40 52.5**	**+1.0**
KNRA				IAmb	IAmb	05 41 11.6	
	comp=Z,35nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**26.98**	**27**	T	T	06 09 13.9	
	baz=208,slow=76,SNR=35						
H11S2	**WAKE ISLAND Hy**	**26.98**	**27**	T	T	06 09 06.4	
	baz=208,slow=76,SNR=47						
H11S1	**WAKE ISLAND Hy**	**27.00**	**27**	T	T	06 09 07.4	
	baz=208,slow=76,SNR=32						
STKA	**Stephens Creek**	**28.64**	**202**	P	**P**	**05 41 07.2**	**-1.4**
	comp=Z,1.4nm,0.5s,baz=6.7,slow=10,SNR=3.4						
STKA				LR	LR	05 52 38.4	
	comp=Z,305nm,19.9s,baz=20,slow=36						
	comp=Z,1.4nm,0.5s						
FITZ	**Fitzroy Crossi**	**30.34**	**243**	P	**P**	**05 41 22.9**	**-1.0**
DAV	**Davao City (W)**	**30.98**	**294**	LR	LR	05 53 22.5	
	comp=Z,231nm,18.2s,baz=145,slow=35						
MMRI	**Maumere**	**31.63**	**263**	P	**P**	**05 41 35.2**	**-0.1**
TOLI2	**Tolitoli**	**33.80**	**280**	P	**P**	**05 41 55.0**	**+0.7**
KAPI	**Kappang**	**34.07**	**269**	LR	LR	05 57 08.4	
	comp=Z,112nm,21.9s,baz=70,slow=39						
AFI	**Afiamalu**	**34.73**	**106**	LR	LR	05 55 53.1	
	comp=Z,154nm,18.3s,baz=286,slow=36						
TUWZ	**Tuamarina**	**39.94**	**156**	P	**P**	**05 42 48.5**	**+2.4**
MRZ	**Mangatainoka R**	**39.98**	**154**	P	**P**	**05 42 48.2**	**+1.7**
MRZ				IAmb	IAmb	05 42 53.1	
	comp=Z,33nm,1.2s						
LTZ	**Lake Taylor**	**40.48**	**159**	P	**P**	**05 42 53.4**	**+2.8**
LTZ				IAmb	IAmb	05 43 03.3	
	comp=Z,33nm,1.4s						
RPZ	**Rata Peaks**	**40.89**	**161**	P	**P**	**05 42 55.0**	**+1.1**
	comp=Z,7.3nm,0.8s,baz=39,slow=8.5,SNR=3.2						
	comp=Z,7.3nm,0.8s						
NWAO	**Narrogin (SRO)**	**43.71**	**227**	LR	LR	06 02 21.5	
	comp=Z,451nm,18.2s,baz=64,slow=37						
JNU	**Nakatsue**	**44.26**	**332**	LR	LR	05 57 56.0	
	comp=Z,108nm,20.9s,baz=3.0,slow=31						
MJAR	**Matsushiro Arr**	**44.39**	**342**	LR	LR	06 01 31.2	
	comp=Z,192nm,18.7s,baz=148,slow=36						
RAR	**Rarotonga**	**47.42**	**114**	LR	LR	06 00 34.6	
	comp=Z,113nm,21.0s,baz=268,slow=32						
KSRS	**Korea Array**	**49.19**	**333**	P	**P**	**05 43 59.5**	**-0.4**
	comp=Z,3.2nm,0.9s,baz=149,slow=10,SNR=7.6						
KSRS				LR	LR	06 03 59.9	
	comp=Z,41nm,18.6s,baz=130,slow=35						
	comp=Z,3.2nm,0.9s						
NJ2	**Nanjing**	**50.15**	**320**	*e*P	**P**	**05 44 09.5**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
ASAJ	**Asahikawa**	**50.48**	**349**	LR	LR	06 06 27.9	
	comp=Z,80nm,18.2s,baz=172,slow=37						
SDSI	**Sungai Dareh**	**52.64**	**273**	P	**P**	**05 44 24.9**	**-1.5**
	comp=Z,11nm,0.7s						
ENH	**Enshi**	**55.51**	**313**	P	**P**	**05 44 47.7**	**+0.6**
ENH				pP	**pwP**	**05 44 59.7**	**+0.5**
HNS	**HongShan**	**56.24**	**323**	⇑P	**P**	**05 44 52.1**	**0.0**
HNS				pmax	pmax		
	comp=Z,16nm,1.1s						
PPT	**Papeete**	**56.39**	**107**	LR	LR	06 07 10.1	
	comp=Z,55nm,18.2s,baz=224,slow=34						
PPT2	**Papeete2**	**56.40**	**107**	*e*LR	LR	06 01 23.5	
	comp=Z,96nm,24.0s						
TBI	**Tubuai**	**57.19**	**114**	*e*LR	LR	06 01 45.3	
	comp=Z,3µm,25.2s						
TBI				*e*LR	LR	06 01 45.4	
	comp=Z,762nm,26.5s						
XAN	**Xi'an**	**57.96**	**316**	P	**P**	**05 45 04.3**	**-0.1**
XAN				pP	pP	05 45 14.3	-0.3
XAN				S	**S**	**05 52 59.8**	**-2.7**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,220nm,5.7s						
XAN	**Xi'an**	**57.96**	**316**	P	**P**	**05 45 04.8**	**+0.4**
XAN				pP	**pwP**	**05 45 16.9**	**+0.2**
PHRA	**Phrae**	**58.10**	**296**	P	**P**	**05 45 06.4**	**+0.8**
PETK	**Petropavlovsk-**	**58.52**	**3**	P	**P**	**05 45 08.3**	**+0.4**
	comp=Z,5.8nm,1.1s,baz=197,slow=4.5,SNR=5.1						
PETK				LR	LR	06 06 37.2	
	comp=Z,54nm,21.8s,baz=180,slow=32						
	comp=Z,5.8nm,1.1s						
PETK	**Petropavlovsk-**	**58.52**	**3**	P	**P**	**05 45 06.9**	**-1.0**
CRAI	**Chiangrai**	**58.55**	**298**	P	**P**	**05 45 08.2**	**-0.5**
CRAI				IAmb	IAmb	05 45 10.6	
	comp=Z,14nm,1.0s						
CMAR	**Chiang Mai Arr**	**59.24**	**295**	P	**P**	**05 45 14.4**	**+0.8**
	comp=Z,4.3nm,0.3s,baz=109,slow=5.2,SNR=11						
CMAR				LR	LR	06 09 02.1	
	comp=Z,53nm,21.0s,baz=165,slow=34						
	comp=Z,4.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**59.24**	**295**	P	**P**	**05 45 12.9**	**-0.7**
CHTO	**Chiang Mai**	**59.35**	**296**	P	**P**	**05 45 12.1**	**-2.3**
PZH	**PanZhiHua**	**59.75**	**305**	P	**P**	**05 45 19.8**	**+2.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PZH				pmax	pmax		
	comp=Z,90nm,4.5s						
XLT	**XiLinHaoTe**	**59.90**	**329**	*e*P	**P**	**05 45 17.4**	**-0.3**
XLT				pP	pwP	05 45 30.8	+0.7
XLT				sP	sP	05 45 34.9	+3.1
XLT				PcP	**PcP**	**05 46 03.1**	**-0.8**
XLT				pmax	pmax		
	comp=Z,17nm,1.0s						
XLT				pmax	pmax		
	comp=Z,220nm,5.3s						
HHC	**Hu-ho-hao-te**	**60.33**	**324**	*e*P	**P**	**05 45 22.9**	**+2.1**
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,360nm,6.7s						
SHEM	**Shemya Is, Ala**	**60.52**	**14**	LR	LR	06 07 35.6	
	comp=Z,170nm,21.5s,baz=158,slow=32						
DRV	**Dumont d'Urvil**	**61.78**	**186**	P	**P**	**05 45 31.9**	**+1.8**
DRV				pP	**sP**	**05 45 44.0**	**-0.2**
LZH	**Lanzhou**	**62.57**	**316**	*e*P	**P**	**05 45 37.8**	**+1.7**
LZH				pP	sP	05 45 48.8	-1.4
LZH				sP	pP	05 45 56.8	+10
LZH				pmax	pmax		
	comp=Z,22nm,1.5s						
MA2	**Magadan**	**64.96**	**358**	LR	LR	06 11 10.7	
	comp=Z,45nm,21.3s,baz=138,slow=33						
TAOE	**Nuku Hiva Isla**	**65.38**	**97**	*e*LR	LR	06 05 32.6	
	comp=Z,78nm,20.8s						
GTA	**Gaotai**	**66.99**	**317**	⇑P	**P**	**05 46 05.8**	**+1.0**
GTA				pP	pP	05 46 14.0	-1.1
GTA				sP	sP	05 46 19.1	+0.1
GTA				pmax	pmax		
	comp=Z,17nm,1.2s						
ULN	**Ulaanbaatar**	**67.24**	**328**	P	**P**	**05 46 06.4**	**+0.2**
ULN				IAmb	IAmb	05 46 08.1	
	comp=Z,6.7nm,1.1s						
ULN	**Ulaanbaatar**	**67.24**	**328**	P	**P**	**05 46 07.2**	**+1.0**
ULN				pP	**pwP**	**05 46 18.9**	**+0.1**
SONM	**Songino Array**	**67.57**	**327**	P	**P**	**05 46 08.8**	**+0.4**
	comp=Z,3.9nm,0.9s,baz=141,slow=5.8,SNR=16						
	comp=Z,3.9nm,0.9s						
SONM	**Songino Array**	**67.57**	**327**	P	**P**	**05 46 08.5**	**+0.2**
SONM				IAmb	IAmb	05 46 11.2	
	comp=Z,7.6nm,1.2s						
SHL	**Shillong**	**67.68**	**300**	IAmb	IAmb	05 46 10.5	
	comp=Z,14nm,0.9s						
CCD	**Concordia, Ant**	**71.69**	**188**	P	**P**	**05 46 35.3**	**+1.7**
CCD				sP	**PcP**	**05 46 51.5**	**-1.1**
TAPN	**Taplejung**	**71.78**	**301**	*e*P	**P**	**05 46 35.3**	**+0.4**
	comp=Z,29nm,1.0s						
TAPN	**Taplejung**	**71.78**	**301**	*e*P	**P**	**05 46 35.4**	**+0.5**
ODAN	**Odare**	**71.92**	**300**	*e*P	**P**	**05 46 35.5**	**-0.2**
RAMN	**Ramite**	**72.62**	**300**	*e*P	**P**	**05 46 39.1**	**-0.8**
RAMN	**Ramite**	**72.62**	**300**	*e*P	**P**	**05 46 39.7**	**-0.2**
JIRN	**Jiri**	**73.17**	**301**	*e*P	**P**	**05 46 43.0**	**-0.3**
JIRN	**Jiri**	**73.17**	**301**	*e*P	**P**	**05 46 43.4**	**+0.1**
GUN	**Gumba**	**73.50**	**301**	*e*P	**P**	**05 46 44.9**	**-0.2**
	comp=Z,18nm,0.8s						
GUN	**Gumba**	**73.50**	**301**	*e*P	**P**	**05 46 45.0**	**-0.2**
PKI	**Pulchoki**	**73.81**	**301**	*e*P	**P**	**05 46 46.6**	**-0.4**
PKIN	**Phulchoki**	**73.82**	**301**	*e*P	**P**	**05 46 46.7**	**-0.3**
	comp=Z,5.4nm,0.3s						
BILL	**Bilibino**	**73.92**	**5**	P	**P**	**05 46 45.8**	**-0.6**
BILL				IAmb	IAmb	05 47 09.6	
	comp=Z,5.5nm,1.1s						
DMN	**Daman**	**74.08**	**301**	*e*P	**P**	**05 46 48.7**	**+0.3**
DMN	**Daman**	**74.08**	**301**	*e*P	**P**	**05 46 48.8**	**+0.3**
PALK	**Pallekele**	**74.20**	**279**	LR	LR	06 22 36.8	
	comp=Z,87nm,19.7s,baz=224,slow=38						
GKN	**Gorkha**	**74.58**	**301**	*e*P	**P**	**05 46 50.4**	**-0.9**
GKN	**Gorkha**	**74.58**	**301**	*e*P	**P**	**05 46 51.3**	**0.0**
KOLN	**Koldanda**	**75.41**	**300**	*e*P	**P**	**05 46 55.9**	**-0.2**
DANN	**Dangsing**	**75.42**	**301**	*e*P	**P**	**05 46 55.6**	**-0.7**
DANN	**Dangsing**	**75.42**	**301**	*e*P	**P**	**05 46 55.9**	**-0.4**
PYUN	**Piuthan**	**76.02**	**301**	*e*P	**P**	**05 46 59.2**	**-0.4**
PYUN	**Piuthan**	**76.02**	**301**	*e*P	**P**	**05 46 59.4**	**-0.2**
KDAK	**Kodiak Island**	**76.32**	**26**	LR	LR	06 14 38.4	
	comp=Z,155nm,21.8s,baz=264,slow=31						
WMQ	**Urumqi**	**77.07**	**317**	*e*P	**P**	**05 47 05.6**	**+0.5**

WMQ				PcP	**pP**	**05 47 13.9**	**-1.6**
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
TIXI	**Tiksi**	**78.78**	**352**	LR	LR	06 20 22.4	
	comp=Z,57nm,20.1s,baz=217,slow=34						
MK31	**Makanchi Array**	**81.65**	**319**	P	**P**	**05 47 30.0**	**+0.1**
MK31				IAmb	IAmb	05 47 31.5	
	comp=Z,13nm,1.2s						
MKAR	**Makanchi Array**	**81.65**	**319**	P	**P**	**05 47 29.9**	**0.0**
	comp=Z,3.9nm,0.5s,baz=94,slow=7.9,SNR=58						
MKAR				LR	LR	06 25 11.5	
	comp=Z,109nm,18.5s,baz=278,slow=37						
	comp=Z,3.9nm,0.5s						
MKAR	**Makanchi Array**	**81.65**	**319**	P	**P**	**05 47 30.2**	**+0.4**
MAKZ	**Makanchi**	**81.86**	**319**	P	**P**	**05 47 30.7**	**-0.3**
MAKZ				IAmb	IAmb	05 47 32.5	
	comp=Z,14nm,1.0s						
ILAR	**Eielson Array**	**82.41**	**22**	P	**P**	**05 47 32.9**	**-0.6**
	comp=Z,1.4nm,1.0s,baz=253,slow=5.0,SNR=8.7						
ILAR				LR	LR	06 23 51.0	
	comp=Z,122nm,18.5s,baz=248,slow=35						
	comp=Z,1.4nm,1.0s						
ZAA0	**Zalesovo Array**	**82.41**	**326**	P	**P**	**05 47 32.5**	**-1.2**
ZAA0				IAmb	IAmb	05 47 34.2	
	comp=Z,5.4nm,1.1s						
ZALV	**Zalesovo Beam**	**82.41**	**326**	P	**P**	**05 47 33.4**	**-0.3**
	comp=Z,2.5nm,0.4s,baz=104,slow=6.3,SNR=15						
	comp=Z,2.5nm,0.4s						
ZALV	**Zalesovo Beam**	**82.41**	**326**	P	**P**	**05 47 33.2**	**-0.5**
KSH	**Kashi**	**84.30**	**311**	P	**P**	**05 47 46.8**	**+2.9**
KSH				pP	sP	05 47 58.3	+0.1
KSH				pmax	pmax		
	comp=Z,16nm,1.1s						
QSPA	**South Pole Qui**	**84.42**	**180**	P	**P**	**05 47 45.7**	**+1.7**
QSPA				IAmb	IAmb	05 48 00.3	
	comp=Z,13nm,0.9s						
KURK	**Kurchatov**	**85.07**	**322**	P	**P**	**05 47 47.2**	**-0.1**
TKM2	**Tokmak 2**	**85.28**	**314**	P	**P**	**05 47 49.7**	**+0.8**
	SNR=12						
NIL	**Nilore**	**85.35**	**304**	P	**P**	**05 47 49.4**	**+0.2**
KBK	**Karagaybulak**	**85.69**	**313**	P	**P**	**05 47 52.0**	**+1.1**
	SNR=6.4						
CHMS	**Chumysh**	**85.90**	**314**	P	**P**	**05 47 52.5**	**+0.7**
	SNR=7.3						
UCH	**Uchtor**	**85.93**	**313**	P	**P**	**05 47 53.7**	**+1.2**
	SNR=8.1						
AAK	**Ala-Archa**	**86.02**	**313**	P	**P**	**05 47 52.5**	**0.0**
AAK				IAmb	IAmb	05 47 54.5	
	comp=Z,13nm,1.0s						
USP	**Ospenovka**	**86.14**	**314**	P	**P**	**05 47 53.5**	**+0.5**
	SNR=8.6						
AML	**Almayashu**	**86.51**	**313**	P	**P**	**05 47 56.7**	**+1.5**
	SNR=9.5						
EPYK	**Eagle Plains**	**86.91**	**22**	P	**P**	**05 47 55.8**	**-0.4**
EPYK				IAmb	IAmb	05 48 20.3	
	comp=Z,9.1nm,1.2s						
YBH	**Yreka Blue Hor**	**88.68**	**48**	LR	LR	06 20 34.1	
	comp=Z,249nm,21.1s,baz=296,slow=31						
INK	**Inuvik**	**88.73**	**21**	LR	LR	06 26 51.6	
	comp=Z,143nm,18.4s,baz=244,slow=35						
KK31	**Karatay Array**	**88.98**	**313**	IAmb	IAmb	05 48 07.6	
	comp=Z,3.8nm,1.0s						
KKAR	**Karatay Array**	**88.98**	**313**	P	**P**	**05 48 06.1**	**-0.5**
KKAR	**Karatay Array**	**88.98**	**313**	P	**P**	**05 48 06.2**	**-0.4**
KKAR				IAmb	IAmb	05 48 07.6	
	comp=Z,3.8nm,1.0s						
CHGR	**Chuyangaron**	**89.38**	**309**	P	**P**	**05 48 07.5**	**-1.1**
NVAR	**Mina Array Bea**	**91.63**	**52**	LR	LR	06 25 43.7	
	comp=Z,76nm,18.1s,baz=299,slow=33						
PFO	**Pinyon Flats O**	**92.67**	**57**	LR	LR	06 26 09.2	
	comp=Z,65nm,18.5s,baz=290,slow=33						
ELK	**Elko**	**94.18**	**50**	LR	LR	06 24 02.8	
	comp=Z,84nm,20.7s,baz=292,slow=31						
YKA	**Yellowknife Ar**	**95.54**	**28**	P	**P**	**05 48 36.9**	**+0.5**
	comp=Z,0.5nm,1.0s,baz=274,slow=5.5,SNR=4.9						
	comp=Z,0.5nm,1.0s						
LPIG	**La Paz**	**97.45**	**66**	LR	LR	06 28 04.0	
	comp=Z,100nm,18.6s,baz=342,slow=32						
PDAR	**Pinedale Array**	**98.49**	**48**	LR	LR	06 29 13.4	
	comp=Z,235nm,18.4s,baz=328,slow=33						
TORD	**Torodi Ar. Bea**	**151.64**	**287**	PKPbc	**PKPbc**	**05 55 06.6**	**-0.4**
	comp=Z,7.9nm,0.9s,baz=58,slow=1.8,SNR=32						
TORD				PKPab	**pPKPdf**	**05 55 13.7**	**+1.7**
	comp=Z,4.7nm,0.8s,baz=62,slow=2.2,SNR=12						

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*KRNET **15** 05:38:17.8±0.1, 39°.31N×72°.17E, h14^{km}, mb3.6*
*SOME **15** 05:38:22.3, 39°.63N×72°.00E, h10^{km}*
*NNC **15** 05:38:23.3±1.1, 39°.50N×72°.39E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=8.6km s-min=5.3km az=4.0*
ISC 15 05:38:15.6±1.1, **39°.25N**±0°.05×**72°.30E**±0°.03, **h10^{km}, n62, σ2^{s}41**/80, **28C-15D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	**Osh**	**1.32**	**16**	⇑*i*P	**Pg**	**05 38 42.1**	**+1.1**
	baz=21						
OHH				⇑*i*S	**Sg**	**05 38 59.7**	**+1.5**
	baz=21						
BTK	**Batken**	**1.40**	**305**	⇑*i*P	**Pg**	**05 38 41.8**	**-0.7**
	baz=6.0						
BTK				⇑*i*S	**Sg**	**05 38 59.1**	**-1.6**
	baz=6.0						
GAR	**Garm**	**1.57**	**261**	⇑*i*P	**Pg**	**05 38 45.0**	**-0.6**
	baz=59						
GAR				⇑*i*S	**Sg**	**05 39 04.9**	**-1.1**
	baz=59						
TRKS	**Terek-Say**	**2.44**	**339**	⇑*e*P	**Pb**	**05 38 57.8**	**-1.9**
	baz=41						
TRKS				⇑*i*S	**Sb**	**05 39 27.0**	**-2.9**
	baz=41						
CHGR	**Chuyangaron**	**2.52**	**257**	⇑*i*P	**Pb**	**05 39 00.0**	**-1.0**
	baz=56						
CHGR				⇑*i*S	**Sb**	**05 39 30.5**	**-1.7**
	baz=56						
ARK	**Arkit**	**2.56**	**354**	⇑*i*P	**Pb**	**05 39 00.8**	**-0.8**
	baz=57						
ARK				⇑*i*S	**Sb**	**05 39 32.2**	**-0.9**
	baz=57						
ARLS	**Aral**	**3.02**	**30**	⇑*i*P	**Pb**	**05 39 08.2**	**-1.4**
	baz=32						
ARLS				⇑*i*S	**Sb**	**05 39 44.9**	**-1.8**
	baz=32						
AML	**Almayashu**	**3.06**	**20**	P	**Pb**	**05 39 10.3**	**-0.1**
	SNR=44						
AML	**Almayashu**	**3.06**	**20**	⇓Pn	**Pb**	**05 39 10.2**	**-0.2**
	1.1nm,0.3s						
AML				⇓Lg	Lg	05 39 51.7	
	12nm,0.6s						
AML	**Almayashu**	**3.06**	**20**	⇑*i*P	**Pb**	**05 39 08.8**	**-1.6**
	baz=22						
AML				⇑*i*S	**Sb**	**05 39 45.8**	**-2.2**
	baz=22						
MNAS	**Manas**	**3.23**	**3**	⇓*i*P	**Pb**	**05 39 10.4**	**-2.8**
	baz=4.0						
MNAS				⇓*i*S	**Sb**	**05 39 48.8**	**-3.9**
	baz=4.0						
IUG	**Iuzhnay**	**3.37**	**330**	Pg	**Pb**	**05 39 14.5**	**-1.0**
	26nm,0.4s						
IUG				Lg	Lg	05 39 52.6	
	48nm,0.3s						
IUG	**Iuzhnay**	**3.37**	**330**	*e*Pg	**Pb**	**05 39 14.4**	**-1.0**
	26nm,0.4s						
IUG				*e*Lg	Lg	05 39 51.9	
	48nm,0.3s						
UCH	**Uchtor**	**3.41**	**29**	P	**Pb**	**05 39 15.9**	**-0.5**
	SNR=15						
UCH	**Uchtor**	**3.41**	**29**	⇑*i*P	**Pb**	**05 39 13.9**	**-2.5**
	baz=31						
UCH				⇑*i*S	**Sb**	**05 39 54.2**	**-3.9**
	baz=31						
MRKS	**Merke**	**3.56**	**11**	Pg	**Pg**	**05 39 23.9**	**+0.2**
	16nm,0.3s						
MRKS				Lg	Lg	05 40 08.7	
	55nm,0.5s						
MRKS	**Merke**	**3.56**	**11**	*e*Pg	**Pg**	**05 39 23.9**	**+0.2**
	16nm,0.3s						
MRKS				*e*Lg	Lg	05 40 08.7	
	55nm,0.5s						
NRN	**Naryn**	**3.57**	**51**	⇓*i*P	**Pb**	**05 39 15.7**	**-3.2**
	baz=53						
NRN				⇓*i*S	**Sn**	**05 39 58.2**	**+4.6**
	baz=53						
EKS2	**Erkin-Say**	**3.58**	**18**	P	**Pb**	**05 39 18.3**	**-0.8**
	SNR=6.1						
EKS2	**Erkin-Say**	**3.58**	**18**	⇑*e*P	**Pb**	**05 39 15.5**	**-3.6**
	baz=19						
EKS2				⇑*e*S	**Sn**	**05 39 57.7**	**+3.9**
	baz=19						
AAK	**Ala-Archa**	**3.77**	**25**	P	**Pb**	**05 39 20.5**	**-1.8**
	SNR=11						
AAK	**Ala-Archa**	**3.77**	**25**	⇓*i*P	**Pb**	**05 39 18.5**	**-3.7**
	baz=27						
AAK				⇓*i*S	**Sn**	**05 40 02.7**	**+4.4**
	baz=27						
KBK	**Karagaybulak**	**3.94**	**30**	⇓*i*P	**Pb**	**05 39 21.0**	**-4.3**
	baz=31						
KBK				⇓*i*S	**Sn**	**05 40 07.2**	**+4.4**
	baz=31						
FRU1	**Bishkek**	**3.96**	**26**	⇑*i*P	**Pb**	**05 39 21.2**	**-4.4**
	baz=27						
FRU1				⇑*i*S	**Sn**	**05 40 07.5**	**+4.4**
	baz=27						
KK31	**Karatay Array**	**4.08**	**341**	⇓Pn	Pb	05 39 22.2	-5.3
	1.3nm,0.2s,baz=149,slow=12,SNR=158						
KK31				Pg	**Pg**	**05 39 31.9**	**-1.8**
	2.4nm,0.3s,baz=161,slow=14,SNR=8.9						
KK31				⇑Sn	**Sb**	**05 40 12.8**	**-4.0**
	3.6nm,0.3s,baz=134,slow=24,SNR=4.4						
KK31				⇓Lg	Lg	05 40 26.0	
	4.5nm,0.4s,baz=152,slow=28,SNR=4.2						
CHMS	**Chumysh**	**4.17**	**26**	P	**Pb**	**05 39 26.3**	**-2.8**
	SNR=15						
CHMS	**Chumysh**	**4.17**	**26**	⇑*i*P	**Pn**	**05 39 24.0**	**+4.7**
	baz=27						
CHMS				⇑*i*S	**Sn**	**05 40 12.3**	**+4.1**
	baz=27						
USP	**Ospenovka**	**4.34**	**22**	P	**Pb**	**05 39 28.0**	**-3.9**
	SNR=5.6						
TKM2	**Tokmak 2**	**4.43**	**33**	⇑Pn	**Pb**	**05 39 29.3**	**-4.3**
	3.6nm,0.4s						
TKM2				⇑Lg	Lg	05 40 35.6	
	10nm,0.5s						
TKM2	**Tokmak 2**	**4.43**	**33**	⇓*e*P	Pn	05 39 27.9	+4.9
	baz=35						
TKM2				⇓*i*S	**Sn**	**05 40 19.1**	**+4.4**
	baz=35						
SGDS	**Sogindy**	**4.54**	**22**	Pg	**Pg**	**05 39 42.8**	**+0.2**
	11nm,0.4s						
SGDS				Lg	Lg	05 40 40.4	
	69nm,1.0s						
KST	**Kastek**	**4.69**	**35**	Pg	**Pg**	**05 39 45.3**	**0.0**
	6.2nm,0.3s						
KST				Lg	Lg	05 40 45.6	
	18nm,0.6s						
KST	**Kastek**	**4.69**	**35**	*e*Pg	**Pg**	**05 39 45.3**	**0.0**
	6.2nm,0.3s						
KST				*e*Lg	Lg	05 40 45.6	
	18nm,0.6s						
DGS	**Degeres**	**4.77**	**32**	Pg	**Pg**	**05 39 46.1**	**-0.8**
	6.0nm,0.5s						
DGS				Lg	Lg	05 40 47.0	
	16nm,0.5s						
DGS	**Degeres**	**4.77**	**32**	*e*Pg	**Pg**	**05 39 46.1**	**-0.8**
	6.0nm,0.5s						
DGS				*e*Lg	Lg	05 40 47.0	
	16nm,0.5s						
MTBS	**Maitube**	**4.97**	**37**	Pg	**Pg**	**05 39 50.4**	**-0.3**
	4.6nm,0.5s						
MTBS				Lg	Lg	05 40 54.1	
	16nm,0.8s						
MTBS	**Maitube**	**4.97**	**37**	*e*Pg	**Pg**	**05 39 50.4**	**-0.3**
	4.6nm,0.5s						
MTBS				*e*Lg	Lg	05 40 54.1	
	16nm,0.8s						
KRBS	**Karabastau**	**5.11**	**29**	Pg	**Pg**	**05 39 51.5**	**-1.9**
	5.6nm,0.8s						
KRBS				Lg	Lg	05 40 57.2	
	6.6nm,0.4s						
KRBS	**Karabastau**	**5.11**	**29**	*e*Pg	**Pg**	**05 39 51.5**	**-1.9**
	5.6nm,0.8s						
KRBS				*e*Lg	Lg	05 40 56.1	
	6.6nm,0.4s						
TNSS	**Tian-Shan**	**5.15**	**41**	Pg	**Pg**	**05 39 52.9**	**-1.4**
	6.2nm,0.4s						
TNSS				Lg	Lg	05 40 58.8	
	14nm,0.8s						
TNSS	**Tian-Shan**	**5.15**	**41**	*e*Pg	**Pg**	**05 39 52.9**	**-1.4**
	6.2nm,0.4s						
TNSS				*e*Lg	Lg	05 40 58.0	
	14nm,0.8s						
MDOK	**Medeo**	**5.30**	**41**	⇑Pg	**Pg**	**05 39 55.3**	**-1.7**
	15nm,1.2s						
MDOK				Pg	**Pg**	**05 39 56.8**	**-0.2**
MDOK				Lg	Lg	05 41 04.7	
	5.8nm,0.4s						
MDOK				Lg	Lg	05 41 04.7	
	24nm,0.7s						
MDOK	**Medeo**	**5.30**	**41**	*e*P	**Pg**	**05 39 56.9**	**-0.2**
MDOK				*e*S	**Sg**	**05 41 04.7**	**-0.9**
	5.8nm,0.4s						
KOTS	**Kotyrbulak**	**5.38**	**41**	Pg	**Pg**	**05 39 58.3**	**-0.3**
	7.7nm,0.5s						
KOTS				Lg	Lg	05 41 08.1	
	40nm,0.7s						
KOTS	**Kotyrbulak**	**5.38**	**41**	*e*Pg	**Pg**	**05 39 58.3**	**-0.3**
	7.7nm,0.5s						
KOTS				*e*Lg	Lg	05 41 07.8	
	40nm,0.7s						
KTBS	**Karatobe**	**5.54**	**35**	Pg	**Pg**	**05 40 00.4**	**-1.2**
	3.7nm,0.5s						
KTBS				Lg	Lg	05 41 10.8	
	22nm,0.5s						
KTBS	**Karatobe**	**5.54**	**35**	*e*Pg	**Pg**	**05 40 00.4**	**-1.2**
	3.7nm,0.5s						
KTBS				*e*Lg	Lg	05 41 10.8	
	22nm,0.5s						
CHKK	**Chushkaly**	**5.79**	**36**	Pg	**Pg**	**05 40 04.5**	**-1.8**
	4.7nm,0.3s						
CHKK				Lg	Lg	05 41 17.8	
	8.4nm,0.4s						
CHKK	**Chushkaly**	**5.79**	**36**	*e*Pg	**Pg**	**05 40 04.5**	**-1.8**
	4.7nm,0.3s						
CHKK				*e*Lg	Lg	05 41 17.8	
	8.4nm,0.4s						
BTLS	**Baital**	**5.93**	**12**	Pg	**Pg**	**05 40 06.6**	**-2.4**
	2.4nm,0.8s						
BTLS				Lg	Lg	05 41 21.6	
	6.2nm,0.4s						
BTLS	**Baital**	**5.93**	**12**	*e*Pg	**Pg**	**05 40 06.6**	**-2.4**
	2.4nm,0.8s						
BTLS				*e*Lg	Lg	05 41 21.6	
	6.2nm,0.4s						
SATY	**Saty**	**5.97**	**49**	Pg	**Pg**	**05 40 09.8**	**-0.1**
	4.3nm,1.0s						
SATY				Lg	Lg	05 41 26.8	
	11nm,0.8s						
SATY	**Saty**	**5.97**	**49**	*e*Pg	**Pg**	**05 40 09.8**	**-0.1**
	4.3nm,1.0s						
SATY				*e*Lg	Lg	05 41 26.8	
	11nm,0.8s						
KURS	**Kuram**	**6.11**	**44**	Pg	**Pg**	**05 40 11.3**	**-1.3**
	4.6nm,0.7s						
KURS				Lg	Lg	05 41 29.5	
	8.5nm,1.6s						
KURS	**Kuram**	**6.11**	**44**	*e*Pg	**Pg**	**05 40 11.3**	**-1.3**
	4.6nm,0.7s						
KURS				*e*Lg	Lg	05 41 29.5	
	8.5nm,1.6s						
KPKS	**Kokpek**	**6.38**	**47**	Pg	**Pg**	**05 40 15.5**	**-2.3**
	3.3nm,0.6s						
KPKS				Lg	Lg	05 41 36.6	
	9.6nm,0.6s						
KPKS	**Kokpek**	**6.38**	**47**	*e*Pg	**Pg**	**05 40 15.5**	**-2.3**
	3.3nm,0.6s						
KPKS				*e*Lg	Lg	05 41 36.6	
	9.6nm,0.6s						
UZB	**Uzynbulak**	**6.39**	**50**	Pg	**Pg**	**05 40 16.4**	**-1.5**
	5.8nm,0.6s						
UZB				Lg	Lg	05 41 38.1	
	6.8nm,0.6s						
UZB	**Uzynbulak**	**6.39**	**50**	*e*Pg	**Pg**	**05 40 16.4**	**-1.5**
	5.8nm,0.6s						
UZB				*e*Lg	Lg	05 41 38.1	
	6.8nm,0.6s						
PDGK	**Podgornoye**	**6.77**	**51**	Pg	**Pg**	**05 40 22.7**	**-2.5**
	1.0nm,0.5s						
PDGK				Lg	Lg	05 41 49.8	
	3.7nm,0.6s						
PDGK	**Podgornoye**	**6.77**	**51**	⇓Lg	Lg	05 41 52.9	
	7.1nm,0.7s						
DJR	**Jarkent**	**7.55**	**45**	Pg	**Pg**	**05 40 37.0**	**-3.1**
	1.5nm,0.6s						
DJR				Lg	Lg	05 42 13.4	
	11nm,1.4s						

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*ISK **15** 05:42:30.5, 41°.52N×42°.74E, h11^{km}, ML2.7/7*
*MOS **15** 05:42:30.2±0.0, 41°.58N×42°.81E, h6^{km}, MPVA3.4*
*TIF **15** 05:42:30.3, 41°.47N×42°.82E, h18^{km}*
*NORS **15** 05:42:31.4±0.0, 41°.59N×42°.83E, h8^{km}, MPVA3.4*
*DDA **15** 05:42:32.1±0.0, 41°.46N×42°.70E, h7^{km}±1^{km}, ML2.4*
ISC 15 05:42:31.0±0.8, **41°.50N**±0°.02×**42°.81E**±0°.02, **h14^{km}**±5^{km}, **n33, σ0^{s}89**/61, **Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EPOS	**Posof**	**0.06**	**275**	P	**Pg**	**05 42 33.6**	**-0.4**
EPOS				*i* AML	AML	05 42 35.0	
	comp=N,7µm,0.7s						
EPOS				*i* AML	AML	05 42 35.0	
	comp=E,3µm,0.3s						
EPOS				S	**Sg**	**05 42 35.3**	**-0.7**
ABS	**Abastumani**	**0.26**	**1**	P	**Pg**	**05 42 37.1**	**+0.5**
ABS				S	**Sg**	**05 42 41.6**	**+1.1**
AHAN	**Ardahan-Merkez**	**0.36**	**202**	P	**Pg**	**05 42 38.6**	**+0.1**
AHAN				S	**Sg**	**05 42 43.8**	**+0.3**
AHAN				*i* AML	AML	05 42 44.0	
	comp=E,969nm,0.4s						
AHAN				*i* AML	AML	05 42 45.0	
	comp=N,400nm,0.6s						
BGD	**Bogdanovka**	**0.64**	**111**	P	**Pg**	**05 42 43.3**	**-0.3**
BGD				S	**Sg**	**05 42 52.0**	**-0.1**
BRNG	**Burnasheti**	**0.78**	**80**	P	**Pb**	**05 42 46.1**	**-0.3**
BRNG				S	**Sb**	**05 42 56.6**	**-0.2**
DAGI	**Agillar**	**0.79**	**238**	P	**Pg**	**05 42 46.1**	**-0.3**
DAGI				S	**Sg**	**05 42 55.4**	**-1.5**
BATM	**Batumi**	**0.84**	**278**	P	**Pb**	**05 42 47.2**	**-0.1**
BATM				S	**Sb**	**05 42 59.1**	**+0.6**
TKB	**Tkibuli**	**0.86**	**9**	P	**Pb**	**05 42 48.0**	**+0.2**
TKB				S	**Sn**	**05 43 00.3**	**-0.8**
DBOC	**Borcka**	**0.87**	**260**	P	**Pg**	**05 42 47.6**	**-0.3**
DBOC				S	**Sb**	**05 42 59.3**	**-0.1**
DBOC				*i* AML	AML	05 43 00.0	
	comp=E,180nm,0.2s						
KARS	**Kars**	**0.89**	**167**	Pg	**Pn**	**05 42 49.5**	**+0.3**
DBAD	**Bademkaya**	**0.97**	**241**	P	**Pg**	**05 42 49.0**	**-0.6**
DBAD				S	**Sg**	**05 43 01.4**	**-1.0**
DBAD				*i* AML	AML	05 43 04.0	
	comp=E,81nm,0.4s						
DBAD				*i* AML	AML	05 43 04.0	
	comp=N,82nm,0.3s						
TRLG	**Trialeti**	**0.97**	**87**	P	**Pg**	**05 42 49.0**	**-0.8**
TRLG				S	**Sg**	**05 43 01.9**	**-0.7**
SENK	**Senkaya-Erzuru**	**1.00**	**200**	Pg	**Pg**	**05 42 50.1**	**-0.2**
SENK				Sg	**Sb**	**05 43 03.9**	**+0.7**
DDEM	**Demirkent**	**1.00**	**233**	P	**Pg**	**05 42 49.8**	**-0.6**
DDEM				S	**Sb**	**05 43 04.1**	**+0.9**
DDEM				*i* AML	AML	05 43 06.0	
	comp=N,204nm,0.3s						
DDEM				*i* AML	AML	05 43 07.0	
	comp=E,106nm,0.2s						
HOPA	**Hopa-Artvin**	**1.03**	**264**	Pg	**Pg**	**05 42 49.7**	**-1.2**
HOPA				Sg	**Sb**	**05 43 04.0**	**+0.1**
DMNI	**Dmanisi**	**1.05**	**99**	P	**Pg**	**05 42 50.5**	**-0.9**
DMNI				S	**Sg**	**05 43 03.1**	**-2.1**
ONI	**Oni**	**1.19**	**24**	Pn	**Pn**	**05 42 53.5**	**+0.2**
ONI				Sn	**Sn**	**05 43 10.4**	**+1.1**
ONI	**Oni**	**1.19**	**24**	P	**Pn**	**05 42 53.8**	**+0.5**
ONI				S	**Sn**	**05 43 10.4**	**+1.1**
DIGR	**Digorskoe uzhe**	**1.51**	**22**	*e*Pg	**Pg**	**05 42 59.9**	**-0.3**
DIGR				*e*Sg	**Sg**	**05 43 20.7**	**+0.9**
ZEI	**Tsey**	**1.52**	**32**	*e*Pg	**Pg**	**05 42 59.9**	**-0.5**
ZEI				*e*Sg	**Sg**	**05 43 21.4**	**+1.3**
CHOM	**Cayeli-Rize**	**1.59**	**256**	Pn	**Pn**	**05 42 59.1**	**+0.4**
KOPR	**Koprukoy-ERZUR**	**1.67**	**206**	Pn	**Pn**	**05 43 00.5**	**+0.6**
LACR	**Lac**	**1.73**	**39**	*e*Pg	**Pg**	**05 43 03.0**	**-1.2**
LACR				*e*Sg	**Sg**	**05 43 27.8**	**+1.1**
NEY	**Neytrino**	**1.75**	**358**	*e*Pg	**Pg**	**05 43 04.4**	**-0.3**
NEY				*e*Sg	**Sg**	**05 43 27.1**	**-0.3**
KORR	**Kora**	**1.84**	**30**	*e*Pg	**Pg**	**05 43 05.5**	**-0.8**
KORR				*e*Sg	**Sg**	**05 43 31.6**	**+1.3**
LSNR	**Lesken**	**1.93**	**23**	*e*Pg	**Pb**	**05 43 05.4**	**-0.6**
LSNR				*e*Sg	**Sg**	**05 43 31.7**	**-1.5**
GNI	**Garni**	**1.99**	**132**	Pn	**Pn**	**05 43 05.9**	**+1.5**
DOMR	**Dombai**	**2.00**	**334**	*e*Pg	**Pb**	**05 43 07.3**	**+0.1**
DOMR				*e*Sg	**Sg**	**05 43 34.5**	**-0.7**
STDR	**Stavd-Durt**	**2.09**	**26**	*e*Pg	**Pg**	**05 43 09.5**	**-1.6**
STDR				*e*Sg	**Sg**	**05 43 36.9**	**-1.3**
SHTL	**Shatili**	**2.10**	**56**	P	**Pb**	**05 43 08.6**	**-0.2**
KBZ	**Khabaz**	**2.23**	**2**	*e*Pg	**Pg**	**05 43 12.0**	**-1.7**
KBZ				*e*Sg	**Sg**	**05 43 40.5**	**-2.1**
SHA1	**Shidzhatmaz**	**2.24**	**357**	*e*Pg	**Pb**	**05 43 11.8**	**+0.4**
SHA1				*i* Sg	**Sb**	**05 43 39.9**	**+0.8**
KIV	**Kislovodsk**	**2.46**	**358**	*i* Pn	**Pb**	**05 43 15.1**	**+0.1**
KIV				*e*Sn	**Sb**	**05 43 44.9**	**-0.2**

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*CNRM **15** 05:44:37.3, 35°.50N×5°.16W, h134^{km}, ml3.1*
*MDD **15** 05:44:37.2±0.4, 35°.72N×4°.62W, h28^{km}, mb_Lg2.9/11, Error ellipse: s-maj=3.9km s-min=2.6km az=158.0*
*INMG **15** 05:44:37.4±1.6, 35°.72N×4°.66W, h31^{km}±7^{km}, ML2.5, Error ellipse: s-maj=2.9km s-min=2.3km az=96.0*
*IGIL **15** 05:44:37.1, 35°.72N×4°.62W, h22^{km}, ML2.7*
*SFS **15** 05:44:37.5, 35°.72N×4°.66W, h79^{km}, ML3.0/13, ML3.0/12, MLv3.0/13*
ISC 15 05:44:35.9±0.9, **35°.76N**±0°.03×**4°.60W**±0°.03, **h10^{km}, n68, σ3^{s}23**/123, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECEU	**Ceuta**	**0.65**	**282**	P	**Pn**	**05 44 52.7**	**+1.6**
ECEU	**Ceuta**	**0.65**	**282**	Pg	**Pn**	**05 44 54.7**	**+3.6**
ECEU				S	**Sn**	**05 45 05.4**	**+4.0**
EMIJ	**Mijas**	**0.81**	**350**	P	**Pb**	**05 44 54.3**	**+2.2**
EMIJ				S	**Sb**	**05 45 06.5**	**+3.4**
EMIJ	**Mijas**	**0.81**	**350**	Pg	**Pb**	**05 44 54.1**	**+2.0**
EMIJ				S	**Sb**	**05 45 06.6**	**+3.5**
EMIJ				*i* Vmb_Lg		05 45 08.0	
CHEFC	**Chefchaouen**	**0.89**	**223**	P	**Pn**	**05 44 57.0**	**+2.5**
CHEFC				S	**Sn**	**05 45 11.3**	**+3.8**
EMAL	**Malaga-Limoner**	**1.00**	**8**	S	**Sg**	**05 45 11.0**	**+2.7**
EMAL				P	**Pg**	**05 44 56.7**	**+1.5**
ELGU	**Los Guajares,**	**1.35**	**35**	P	**Pn**	**05 45 00.2**	**-0.7**
ELGU				S	**Sn**	**05 45 17.4**	**-1.6**
ELGU	**Los Guajares,**	**1.35**	**35**	Pn	**Pn**	**05 45 00.2**	**-0.7**
ELGU				Sn	**Sn**	**05 45 17.2**	**-1.7**
ELGU				*i* Vmb_Lg		05 45 21.2	
EGOR	**Sierra Gorda,**	**1.40**	**16**	P	**Pn**	**05 45 02.3**	**+0.7**
EGOR	**Sierra Gorda,**	**1.40**	**16**	Pn	**Pn**	**05 45 01.5**	**-0.1**
EGOR				Sn	**Sn**	**05 45 17.5**	**-2.8**
EGOR				Sg	**Sb**	**05 45 22.4**	**+2.2**
EGOR				*i* Vmb_Lg		05 45 30.2	
EQUE	**Quentar**	**1.71**	**33**	Pn	**Pn**	**05 45 06.4**	**+0.5**
EQUE				Sn	**Sn**	**05 45 26.3**	**-1.6**
EBER	**Berja**	**1.78**	**50**	Pn	**Pn**	**05 45 05.4**	**-1.5**
EBER				Sn	**Sn**	**05 45 27.2**	**-2.6**
EBER				*i* Vmb_Lg		05 46 14.1	
IFR	**Ifrane**	**2.28**	**191**	P	**Pn**	**05 45 11.9**	**-1.9**
IFR				S	**Sn**	**05 45 36.5**	**-5.6**
EQES	**Quesada**	**2.38**	**31**	Pn	**Pn**	**05 45 14.1**	**-0.9**
EQES				Sn	**Sn**	**05 45 42.3**	**-1.9**
EADA	**Adamuz**	**2.40**	**0**	P	**Pn**	**05 45 14.9**	**-0.4**
EADA				S	**Sn**	**05 45 42.5**	**-2.2**
EADA	**Adamuz**	**2.40**	**0**	Pn	**Pn**	**05 45 14.8**	**-0.5**
EADA				Sn	**Sn**	**05 45 42.8**	**-1.9**
EADA				*i* Vmb_Lg		05 45 45.8	
ECAB	**El Cabril**	**2.40**	**344**	P	**Pn**	**05 45 14.4**	**-0.8**
ECAB				S	**Sn**	**05 45 41.5**	**-3.2**
ECAB	**El Cabril**	**2.40**	**344**	Pn	**Pn**	**05 45 14.3**	**-1.0**
ECAB				Sn	**Sn**	**05 45 41.7**	**-3.0**
ECAB				*i* Vmb_Lg		05 45 45.4	
EMIN	**Mina Concepcio**	**2.60**	**321**	P	**Pn**	**05 45 17.1**	**-0.9**
EMIN				S	**Sn**	**05 45 45.9**	**-3.8**
EMIN	**Mina Concepcio**	**2.60**	**321**	Pn	**Pn**	**05 45 16.7**	**-1.3**
EMIN				Sn	**Sn**	**05 45 45.9**	**-3.8**
EMIN				*i* Vmb_Lg		05 45 47.5	
ZHG	**ZHG**	**2.86**	**217**	P	**Pn**	**05 45 19.3**	**-2.3**
ZHG				S	**Sn**	**05 45 50.7**	**-5.4**
MD31	**MD31**	**2.89**	**183**	P	**Pn**	**05 45 20.1**	**-2.0**
MD31				S	**Sn**	**05 45 52.3**	**-4.6**
EGRO	**El Granado**	**2.92**	**308**	P	**Pn**	**05 45 21.1**	**-1.2**
EGRO				S	**Sn**	**05 45 52.9**	**-4.5**
EGRO	**El Granado**	**2.92**	**308**	Pn	**Pn**	**05 45 21.1**	**-1.2**
EGRO				Sn	**Sn**	**05 45 53.3**	**-4.1**
EGRO				*i* Vmb_Lg		05 45 55.5	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MDT	Midelt	2.94	180	P	Pn	05 45 20.8	-2.0
MDT				S	Sn	05 45 53.7	-4.5
PVAQ	Vaqueiros	3.00	304	P	Pn	05 45 22.6	-0.8
PVAQ				S	Sn	05 45 55.1	-4.3
PVAQ	Vaqueiros	3.00	304	P	Pn	05 45 21.6	-1.8
PVAQ				S	Sn	05 45 53.5	-5.9
PVAQ	Vaqueiros	3.00	304	ePn	Pn	05 45 22.2	-1.2
PVAQ				eSn	Sn	05 45 55.0	-4.4
PVAQ				A	A	05 45 57.3	
	28nm,0.3s						
PBDV	Barranco-do-Ve	3.06	300	ePn	Pb	05 45 33.2	+2.7
PBDV				eSn	Sn	05 45 57.1	-4.0
PBDV				A	A	05 46 08.9	
	14nm,0.2s						
PBAR	Barrancos	3.10	322	P	Pn	05 45 23.9	-1.0
PBAR				S	Sn	05 45 56.2	-5.8
PBAR	Barrancos	3.10	322	ePn	Pn	05 45 23.9	-1.0
PBAR				eSn	Sn	05 45 57.7	-4.2
PBAR				A	A	05 46 00.0	
	14nm,0.2s						
PSIM	Granatula de C	3.12	12	Pn	Pn	05 45 24.5	-0.7
PSIM				Sn	Sn	05 45 58.3	-4.3
PCVE	Castro Verde	3.33	305	ePn	Pn	05 45 26.7	-1.4
PCVE				eSn	Sn	05 46 03.1	-4.6
PCVE				A	A	05 46 05.6	
	12nm,0.2s						
PBEJ	Beja	3.46	312	ePn	Pn	05 45 28.7	-1.1
PBEJ				eSn	Sn	05 46 06.3	-4.5
PBEJ				A	A	05 46 08.2	
	9.1nm,0.1s						
EBAD	Badajoz	3.55	328	P	Pn	05 45 29.9	-1.1
EBAD				S	Sn	05 46 08.9	-4.3
EBAD	Badajoz	3.55	328	Pn	Pn	05 45 30.0	-1.1
EBAD				Sn	Sn	05 46 08.8	-4.4
EBAD				i Vmb_Lg		05 46 10.6	
MESJ	Messejana	3.57	307	ePn	Pn	05 45 30.2	-1.1
MESJ				eSn	Sn	05 46 08.4	-5.1
MESJ				A	A	05 46 10.9	
	11nm,0.1s						
MESJ	Messejana	3.57	307	eP	Pn	05 45 29.9	-1.4
MESJ				eS	Sn	05 46 08.4	-5.1
MESJ				IAML		05 46 11.0	
	comp=N,20nm,0.1s						
MORF	Marmelete	3.61	296	ePn	Pn	05 45 30.4	-1.5
MORF				eSn	Sn	05 46 09.8	-4.8
MORF				A	A	05 46 12.7	
	comp=N,14nm,0.2s						
MORF	Marmelete	3.61	296	eP	Pn	05 45 30.4	-1.5
MORF				eS	Sn	05 46 09.4	-5.2
MORF				IAML		05 46 10.9	
	comp=N,18nm,0.1s						
PFVI	Vila Bisbo	3.67	293	eSn	Sn	05 46 11.5	-4.6
PTEO	Sao Teotonio	3.76	299	ePn	Pn	05 45 32.8	-1.2
PTEO				eSn	Sn	05 46 13.9	-4.4
PTEO				A	A	05 46 17.2	
	comp=N,11nm,0.4s						
ETOB	Tobarra	3.77	39	P	Pn	05 45 33.0	-1.1
ETOB	Tobarra	3.77	39	Pn	Pn	05 45 32.8	-1.3
ETOB				Sn	Sn	05 46 15.2	-3.4
PAB	San Pablo	3.78	3	Pn	Pn	05 45 33.0	-1.3
PAB				Sn	Sn	05 46 13.6	-5.3
PAB				i Vmb_Lg		05 46 23.7	
EVO	Evora	3.88	316	ePn	Pn	05 45 34.5	-1.1
EVO				eSn	Sn	05 46 16.5	-4.7
EVO				A	A	05 46 18.7	
	comp=N,18nm,0.1s						
PESTR	Estremoz	3.91	323	P	Pn	05 45 35.5	-0.4
PESTR	Estremoz	3.91	323	P	Pn	05 45 34.7	-1.3
PESTR				S	Sn	05 46 17.0	-4.9
PESTR	Estremoz	3.91	323	ePn	Pn	05 45 35.1	-0.9
PESTR				eSn	Sn	05 46 17.2	-4.7
PESTR				A	A	05 46 19.2	
	comp=N,7.0nm,0.8s						
PNCL	Nicolau / Gran	3.92	308	P	Pn	05 45 34.6	-1.6
PNCL	Nicolau / Gran	3.92	308	ePn	Pn	05 45 34.8	-1.4
PNCL				eSn	Sn	05 46 17.0	-5.3
PNCL				A	A	05 46 21.2	
	comp=N,6.2nm,0.4s						
PMRV	Marv??o	4.28	330	ePn	Pn	05 45 39.9	-1.1
PMRV				eSn	Sn	05 46 26.0	-5.0
PMRV				A	A	05 46 28.1	
	comp=N,2.2nm,0.1s						
PMTG	Montargil	4.38	320	ePn	Pn	05 45 41.3	-1.2
PMTG				eSn	Sn	05 46 28.0	-5.6
PMTG				A	A	05 46 42.5	
	comp=N,3.5nm,0.2s						
EPLA	Plasencia	4.45	345	Pn	Pn	05 45 42.2	-1.3
EPLA				Sn	Sn	05 46 30.2	-5.1
EPLA				i Vmb_Lg		05 46 59.4	
PCBR	Castelo Branco	4.66	332	ePn	Pn	05 45 45.1	-1.2
PCBR				eSn	Sn	05 46 35.6	-4.9
PCBR				A	A	05 46 35.8	
	comp=N,3.3nm,0.5s						
PMAFR	Mafra	4.91	312	eSn	Sn	05 46 42.0	-4.5
PSBE	So Bento	5.01	320	ePn	Pn	05 45 50.5	-0.6
PSBE				eSn	Sn	05 46 43.9	-5.2
PSBE				A	A	05 46 48.7	
	comp=N,6.3nm,1.1s						
MTE	Manteigas	5.18	334	ePn	Pn	05 45 52.6	-0.9
MTE				eSn	Sn	05 46 49.3	-4.0
MTE				A	A	05 46 52.2	
	comp=N,2.7nm,0.5s						
PCAS	Casmilo, Conde	5.28	325	eSn	Sn	05 46 50.3	-5.3
OUK	Oukaimeden	5.30	212	P	Pn	05 45 47.8	-7.7
ETOR	Torete	5.43	21	Pn	Pn	05 45 55.6	-1.3
ETOR				Sn	Sn	05 46 51.6	-7.9
PVIS	Viseu	5.58	333	eSn	Sn	05 46 58.6	-4.6
MVO	Moncorvo	5.72	341	ePn	Pn	05 46 00.1	-0.8
MVO				eSn	Sn	05 47 02.4	-4.2
PVRL	Vila Real	6.02	337	ePn	Pn	05 46 04.2	-0.8
PVRL				eSn	Sn	05 47 08.1	-5.9
PVRL				A	A	05 47 11.2	
	comp=N,7.0nm,0.1s						
POLO	Lamas de Olo	6.13	337	ePn	Pn	05 46 05.8	-0.8
POLO				eSn	Sn	05 47 11.0	-5.9
PBRG	Braganca	6.26	345	ePn	Pn	05 46 07.5	-0.8
PCAB	Cabril	6.51	337	ePn	Pn	05 46 11.0	-0.8
PGAV	Gavieira, Arco	6.82	336	ePn	Pn	05 46 15.5	-0.6
PGAV				eSn	Sn	05 47 28.6	-5.2

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*IDC **15** 05:48:36.7±0.8, 39°.87N×145°.07E, h0km, mb3.6/11, mbtmp3.7/15, ML3.4/4, Error ellipse: s-maj=20.9km s-min=18.1km az=126.0*

*JMA **15** 05:48:40.9±0.3, 40°.1N±0°.8×14°5E±°, h46km, MV3.8/32, FAR E OFF NORTH HONSHU*

*NIED **15** 05:48:40.9, 40°.07N×144°.86E, h46km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-6.02; $M_{\theta\theta}$2.50; $M_{\phi\phi}$3.52; $M_{r\theta}$4.07; $M_{\theta\phi}$0.98; $M_{\phi r}$3.94; Fault plane solution: $M_0$7.58000×10^{14} NP1: ϕ_s222.00000°, δ69.00000°, λ-86.00000°. NP2: ϕ_s31.00000°, δ21.00000°, λ-100.00000°.*

ISC 15 05:48:41.6±0.7, **40°.01N**±0°.05×**145°.01E**±0°.06, **h32**km, **n42**, σ**1ˢ.71**/52, **mb3.8**/11, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JTH	Tanohata	2.41	269	P	Pn	05 49 17.3	-1.5
JTH				eS	Sn	05 49 44.3	-3.0
JEM	Erimo	2.44	326	P	Pn	05 49 18.2	-1.0
JEM				S	Sn	05 49 46.5	-1.5
MIYJ	Miyakonagasawa	2.49	261	eP	Pn	05 49 18.9	-1.0
MIYJ				eS	Sn	05 49 46.6	-2.5
JKEN	Kujiedanarisaw	2.54	276	P	Pn	05 49 18.9	-1.5
JTHR	Tokachihiroo	2.62	331	P	Pn	05 49 20.3	-1.3
JTHR				eS	Sn	05 49 50.5	-1.8
JANG	Nango	2.70	279	P	Pn	05 49 21.5	-1.2
JANG				eS	Sn	05 49 51.3	-3.0
JNBK	Urakawa-nobuka	2.84	324	eP	Pn	05 49 24.2	-0.4
JNBK				S	Sn	05 49 57.1	-0.5
JCH	Churui	2.88	335	P	Pn	05 49 23.9	-1.3
JCH				eS	Sn	05 49 55.9	-3.0
JOM	Ohasama	2.91	261	P	Pn	05 49 25.3	-0.3
JOM				eS	Sn	05 49 57.6	-1.9
JAK	Akkeshi	3.00	356	eS	Sn	05 49 59.3	-2.3
JMK	Ichinoseki	3.11	251	P	Pn	05 49 27.8	-0.6
JOT	Ohata	3.31	296	P	Pn	05 49 30.5	-0.6
JOT				eS	Sn	05 50 06.8	-2.5
NEM2	Nemuro 2	3.40	9	eP	Pn	05 49 29.9	-2.4
NEM2				S	Sn	05 50 07.6	-3.9
JAR	Ashorobuto	3.41	345	i P	Pn	05 49 30.9	-1.6
JAR				eS	Sn	05 50 08.6	-3.3
JYK	Kaneyama	3.76	255	P	Pn	05 49 37.0	-0.3
JEW	Eniwo	3.89	318	P	Pn	05 49 40.0	+0.9
JEW				eS	Sn	05 50 23.4	-0.3
JRA	Rausu	3.93	1	eP	Pn	05 49 38.3	-1.3
JRA				eS	Sn	05 50 22.0	-2.6
JTKR	Abashiri--Toko	4.04	349	eP	Pn	05 49 39.7	-1.5
JTKR				S	Sn	05 50 25.8	-1.6
JHR	Hokuryu	4.46	328	P	Pn	05 49 48.2	+1.2
JHR				eS	Sn	05 50 37.6	-0.1
ASAJ	Asahikawa	4.48	337	Pn	Pn	05 49 46.3	-0.9
	2.7nm,0.3s,baz=148,slow=14,SNR=2.8						
ASAJ				Sn	Sn	05 50 39.8	+1.6
	1.6nm,0.3s,baz=120,slow=34,SNR=1.6						
	6.0nm,0.3s						
JRY	Ryogami san	6.25	232	eP	Pn	05 50 11.1	-0.5
MJAR	Matsushiro Arr	6.37	239	Pn	Pn	05 50 10.3	-2.8
	0.3nm,0.3s,baz=57,slow=11,SNR=14						
	8.3nm,0.8s						
USRK	Ussuriysk Ar.	10.54	298	Pn	Pn	05 51 11.2	+0.9
	0.2nm,0.3s,baz=101,slow=15,SNR=8.1						
	8.6nm,0.8s						
KLR	Kul'dur	13.18	319	Pn	Pn	05 51 44.9	-1.5
	0.1nm,0.3s,baz=115,slow=13,SNR=4.1						
	1.2nm,0.8s						
SEY	Seymchan	23.38	9	P	P	05 53 47.3	+0.1
	2.9nm,0.6s,baz=193,slow=6.8,SNR=13						
	2.9nm,0.6s						
H11N2	WAKE ISLAND Hy	27.59	131	T	T	06 23 09.5	
	baz=322						
H11N1	WAKE ISLAND Hy	27.60	131	T	T	06 23 16.2	
	baz=322						
H11N3	WAKE ISLAND Hy	27.61	131	T	T	06 23 16.2	
	baz=322						
H11S1	WAKE ISLAND Hy	28.45	133	T	T	06 24 16.4	
	baz=324						
H11S3	WAKE ISLAND Hy	28.45	133	T	T	06 24 16.4	
	baz=324						
H11S2	WAKE ISLAND Hy	28.46	133	T	T	06 24 21.7	
	baz=324						
SONM	Songino Array	28.65	299	P	P	05 54 37.1	+1.8
	0.3nm,0.5s,baz=98,slow=10,SNR=2.3						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	42.08	310	PcP	PcP	05 58 25.2	+0.9
	0.9nm,0.5s,baz=98,slow=2.7,SNR=3.5						
MKAR	Makanchi Array	44.99	300	P	P	05 56 55.6	+1.8
	0.2nm,0.5s,baz=79,slow=10,SNR=1.6						
	0.2nm,0.5s						
ILAR	Eielson Array	45.47	34	P	P	05 56 57.6	+0.3
	0.3nm,0.7s,baz=258,slow=6.1,SNR=4.5						
	0.3nm,0.7s						
YKA	Yellowknife Ar	59.81	32	P	P	05 58 43.2	-0.1
	0.2nm,0.7s,baz=293,slow=5.6,SNR=3.3						
	0.2nm,0.7s						
WRA	Warramunga Arr	60.46	192	P	P	05 58 46.9	-1.3
	0.7nm,0.6s,baz=12,slow=7.2,SNR=7.5						
	0.7nm,0.6s						
ASAR	Alice Springs	64.19	191	P	P	05 59 12.1	-0.9
	0.2nm,0.3s,baz=8.9,slow=6.6,SNR=1.9						
	0.2nm,0.3s						
FINES	FINESS Array B	67.48	333	P	P	05 59 34.5	+0.6
	0.8nm,0.5s,baz=57,slow=7.0,SNR=6.5						
	0.8nm,0.5s						
NVAR	Mina Array Bea	70.97	56	P	P	05 59 56.8	+0.6
	0.6nm,0.7s,baz=290,slow=5.8,SNR=5.6						
	0.6nm,0.7s						
PDAR	Pinedale Array	73.58	48	P	P	06 00 12.7	+0.9
	0.7nm,0.5s,baz=267,slow=0.7,SNR=15						
	0.7nm,0.5s						
TXAR	Lajitas Array	86.09	55	P	P	06 01 20.2	+0.7
	0.3nm,0.5s,baz=297,slow=3.5,SNR=11						
	0.3nm,0.5s						

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*MOS **15** 05:57:47.1±0.0, 40°.75N×47°.71E, h15km, MPVA3.6*

*DRS **15** 05:57:49.5±0.0, 40°.40N×47°.87E, h28km*

*TEH **15** 05:57:56.5, 39°.85N×48°.14E, h26km±199km, ML2.9*

ISC 15 05:57:46.1±1.7, **40°.59N**±0°.03×**47°.93E**±0°.06, **h11**km±13km, **n26**, σ**0ˢ.90**/42, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKT	Akhty	0.90	350	ePg	Pg	05 58 03.2	-0.2
AKT				eSg	Sb	05 58 16.3	+0.5
KSMR	Kasumkent	1.02	8	ePg	Pn	05 58 06.7	+0.3
	2.0nm,0.1s						
KSMR				eSg	Sn	05 58 20.2	-0.6
	10.0nm,0.2s						
DRN	Derbent	1.47	12	ePg	Pb	05 58 13.2	-0.1
	52nm,0.4s						
DRN				eSg	Sb	05 58 32.0	0.0
	78nm,0.2s						
URKR	Urkarakh	1.59	352	ePg	Pn	05 58 14.2	-0.1
	28nm,0.4s						
URKR				eSg	Sn	05 58 33.3	-1.5
	112nm,0.2s						
DDFL	Dedoflistskaro	1.62	302	P	Pb	05 58 16.3	+0.4
KMKR	Kumukh	1.66	338	ePg	Pn	05 58 15.8	+0.5
	46nm,0.4s						
KMKR				eSg	Sn	05 58 36.3	-0.4
	104nm,0.4s						
LGD	Lagodekhi	1.78	315	P	Pn	05 58 16.8	+0.1
LGD				S	Sn	05 58 38.6	-0.8
SGKR	Sergokala	1.88	354	ePg	Pn	05 58 18.2	+0.1
	1.0nm,0.5s						
SGKR				eSg	Sn	05 58 40.8	-1.0
	46nm,0.7s						
GNBR	Gunib	1.94	338	ePg	Pn	05 58 20.0	+1.1
	13nm,0.3s						
GNBR				eSg	Sn	05 58 43.8	+0.4
	13nm,0.0s						
ARKR	Arakani	2.13	341	ePn	Pn	05 58 22.5	+0.9
	1.0nm,0.4s						
ARKR				eSn	Sn	05 58 48.4	+0.4
	23nm,0.5s						
XNZR	Khunzakh	2.15	335	ePn	Pn	05 58 22.2	+0.2
	10.0nm,0.2s						
XNZR				eSn	Sn	05 58 48.3	-0.6
	24nm,0.4s						
UNCR	Uncukul	2.29	338	ePn	Pn	05 58 24.5	+0.7
	14nm,0.8s						
UNCR				eSn	Sn	05 58 52.1	+0.2
	14nm,0.4s						
GAS1	Astara - Iran	2.31	162	Pg	Pn	05 58 25.4	+1.4
KRNR	Karanay	2.36	341	ePn	Pn	05 58 25.4	+0.6
	4.0nm,0.3s						
KRNR				eSn	Sn	05 58 53.4	-0.5
	13nm,0.6s						
IHRS	Heris	2.37	197	Pg	Pb	05 58 28.1	-0.8
BTLR	Botlikh	2.44	329	ePg	Pn	05 58 26.8	+0.9
BTLR				eSg	Sn	05 58 57.3	+1.7
DBC	Dubki	2.56	342	ePn	Pn	05 58 27.4	-0.1
	4.0nm,0.4s						
DBC				eSn	Sn	05 58 57.7	-1.1
	23nm,0.3s						
ISHB	Shabestar	2.92	219	Pn	Pb	05 58 37.7	-0.6
SHTL	Shatili	2.93	316	P	Pn	05 58 33.4	+0.7
SHTL				S	Sn	05 59 07.2	-0.8
ZEI	Tsey	3.73	307	ePn	Pn	05 58 45.0	+1.2
ZEI				eSn	Sn	05 59 26.1	-1.7
DIGR	Digorskoe uzhe	3.99	307	ePn	Pn	05 58 48.8	+1.5
JIR1	Jirandeh	4.15	159	Pn	Pn	05 58 50.0	+0.6
QALM	Alamut, Qazvin	4.67	152	Pn	Pn	05 58 57.2	+0.5
KLST	Kelardasht - M	4.75	148	Pn	Pn	05 58 57.9	0.0
MZPU	Pul - Mazandar	5.03	144	Pn	Pn	05 59 01.7	0.0
IFIR	Firoozkooh	6.23	141	Pn	Pn	05 59 20.5	+2.3

IDC 15 06:05:32.4±4.0, **9°.75S**×**112°.42E**, **h0**km, **mb3.4**/3, **mbtmp3.4**/3, **Error ellipse: s-maj=210.3km s-min=30.5km az=53.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	24.75	127	P	P	06 10 56.0	0.0
	0.6nm,0.6s,baz=303,slow=9.2,SNR=6.6						
	0.6nm,0.6s						
SONM	Songino Array	57.58	355	P	P	06 15 24.0	0.0
	0.3nm,0.6s,baz=191,slow=5.9,SNR=2.3						
	0.3nm,0.6s						
MKAR	Makanchi Array	62.39	337	P	P	06 15 57.0	-0.1
	0.2nm,0.5s,baz=152,slow=8.6,SNR=4.0						
	0.2nm,0.5s						

IDC 15 06:18:13.4±13.0, **2°.81S**×**80°.83W**, **h0**km, **mb3.3**/3, **mbtmp3.5**/4, **ML2.9**/1, **Error ellipse: s-maj=277.4km s-min=64.0km az=167.0, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SDV	Santo Domingo	15.44	41	Pn	Pn	06 21 54.1	+1.2
	0.5nm,0.3s,baz=259,slow=15,SNR=5.3						
	1.6nm,0.3s						
TXAR	Lajitas Array	38.73	327	P	P	06 25 38.6	-1.1
	0.2nm,0.7s,baz=138,slow=9.6,SNR=2.2						
	0.2nm,0.7s						
NVAR	Mina Array Bea	53.67	324	P	P	06 27 38.9	+1.5
	0.5nm,0.7s,baz=133,slow=7.5,SNR=4.7						
	0.5nm,0.7s						
YKA	Yellowknife Ar	69.98	344	P	P	06 29 25.7	-0.8
	0.3nm,0.6s,baz=144,slow=5.8,SNR=5.3						
	0.3nm,0.6s						

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*IDC **15** 06:32:40.1±0.8, 39°.92N×145°.10E, h0km, mb3.6/12, mbtmp3.7/16, ML3.2/4, MS3.0/2, Error ellipse: s-maj=20.3km s-min=17.9km az=122.0*

*NIED **15** 06:32:44.8, 40°.10N×144°.79E, h44km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-4.64; $M_{\theta\theta}$1.21; $M_{\phi\phi}$3.43; $M_{r\theta}$3.75; $M_{\theta\phi}$0.81; $M_{\phi r}$5.41; Fault plane solution: $M_0$7.78000×10^{14} NP1: ϕ_s212.00000°, δ74.00000°, λ-85.00000°. NP2: ϕ_s14.00000°, δ17.00000°, λ-107.00000°.*

*JMA **15** 06:32:44.8±0.4, 40°N±1°×14°5E±°, h44km, MV3.8/24, FAR E OFF NORTH HONSHU*

ISC 15 06:32:45.1±0.7, **40°.04N**±0°.06×**144°.96E**±0°.07, **h32**km, **n39**, σ**1ˢ.48**/43, **mb3.6**/12, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JTH	Tanohata	2.38	269	P	Pn	06 33 20.8	-1.1
JTH				eS	Sn	06 33 46.8	-3.1
MIYJ	Miyakonagasawa	2.46	260	P	Pn	06 33 22.4	-0.6
MIYJ				S	Sn	06 33 49.7	-2.2
JKEN	Kujiedanarisaw	2.49	275	P	Pn	06 33 22.3	-1.2
JTHR	Tokachihiroo	2.58	331	P	Pn	06 33 23.7	-0.9
JANG	Nango	2.66	278	P	Pn	06 33 24.8	-0.9
JANG				eS	Sn	06 33 54.4	-2.4
JNBK	Urakawa-nobuka	2.79	324	P	Pn	06 33 27.7	+0.2
JCH	Churui	2.84	336	P	Pn	06 33 27.3	-0.9
JCH				eS	Sn	06 33 59.7	-1.7
JOM	Ohasama	2.88	260	P	Pn	06 33 28.6	-0.2
JOM				S	Sn	06 34 00.8	-1.5
JAK	Akkeshi	2.96	356	eS	Sn	06 34 03.0	-1.3
JOT	Ohata	3.26	296	P	Pn	06 33 33.8	-0.1
JOT				S	Sn	06 34 09.3	-2.3
JAR	Ashorobuto	3.38	345	P	Pn	06 33 34.5	-1.1
JAR				S	Sn	06 34 12.0	-2.5
NEM2	Nemuro 2	3.38	10	P	Pn	06 33 33.4	-2.2
NEM2				S	Sn	06 34 10.9	-3.6
JYK	Kaneyama	3.73	254	P	Pn	06 33 39.9	-0.5
JTKR	Abashiri--Toko	4.01	349	eP	Pn	06 33 43.6	-0.7
JTKR				eS	Sn	06 34 28.4	-1.7
JHR	Hokuryu	4.42	328	eP	Pn	06 33 51.4	+1.5
ASAJ	Asahikawa	4.44	337	Pn	Pn	06 33 49.9	-0.3
	0.8nm,0.3s,baz=165,slow=31,SNR=2.0						
ASAJ				Sn	Sn	06 34 43.0	+2.3
	0.7nm,0.3s,baz=105,slow=27,SNR=1.3						
	4.7nm,0.3s						
MJAR	Matsushiro Arr	6.35	239	Pn	Pn	06 34 16.4	-0.1
	0.2nm,0.3s,baz=51,slow=11,SNR=9.8						
	6.5nm,0.7s						
USRK	Ussuriysk Ar.	10.49	298	Pn	Pn	06 35 13.9	+0.8
	1.0nm,0.3s,baz=108,slow=14,SNR=5.6						
	11nm,1.0s						
KLR	Kul'dur	13.13	319	Pn	Pn	06 35 49.0	-0.3
	0.1nm,0.3s,baz=119,slow=15,SNR=2.8						
	0.3nm,0.3s						
KSRS	Korea Array	13.54	264	LR	LR	06 40 53.4	
	comp=Z,25nm,20.6s,baz=335,slow=36						
JOW	Kunigami	19.12	232	LR	LR	06 44 17.5	
	comp=Z,123nm,18.4s,baz=129,slow=36						
SEY	Seymchan	23.36	9	P	P	06 37 51.6	+1.2
	3.5nm,0.8s,baz=187,slow=16,SNR=14						
	3.5nm,0.8s						
H11N2	WAKE ISLAND Hy	27.64	131	T	T	07 07 24.0	
	baz=322						
H11N1	WAKE ISLAND Hy	27.65	131	T	T	07 07 20.7	
	baz=322						
H11N3	WAKE ISLAND Hy	27.66	131	T	T	07 07 29.4	
	baz=322						
H11S1	WAKE ISLAND Hy	28.49	133	T	T	07 08 21.3	
	baz=323						
H11S3	WAKE ISLAND Hy	28.50	133	T	T	07 08 20.8	
	baz=323						
H11S2	WAKE ISLAND Hy	28.51	133	T	T	07 08 09.8	
	baz=323						
SONM	Songino Array	28.60	299	P	P	06 38 40.5	+2.1
	0.3nm,0.5s,baz=107,slow=9.7,SNR=2.0						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	42.03	310	P	P	06 40 33.9	+0.6
	0.3nm,0.3s,baz=87,slow=8.4,SNR=1.6						
ZALV				PcP	PcP	06 42 29.2	+1.4
	1.2nm,0.5s,baz=109,slow=3.6,SNR=4.6						
	0.3nm,0.3s						
MKAR	Makanchi Array	44.95	300	P	P	06 40 57.0	0.0
	0.2nm,0.6s,baz=86,slow=6.4,SNR=2.4						
MKAR				PcP	PcP	06 42 37.8	-0.1
	0.2nm,0.7s,baz=72,slow=5.0,SNR=1.8						
	0.2nm,0.6s						
ILAR	Eielson Array	45.47	34	P	P	06 40 59.6	-1.1
	0.5nm,1.0s,baz=266,slow=5.4,SNR=4.1						
	0.5nm,1.0s						
YKA	Yellowknife Ar	59.81	32	P	P	06 42 46.7	-0.1
	0.2nm,0.7s,baz=298,slow=6.0,SNR=3.7						
	0.2nm,0.7s						
WRA	Warramunga Arr	60.48	191	P	P	06 42 50.6	-1.3
	0.9nm,0.6s,baz=11,slow=7.0,SNR=6.7						
	0.9nm,0.6s						
ASAR	Alice Springs	64.21	191	P	P	06 43 16.2	-0.6
	0.6nm,0.8s,baz=9.7,slow=6.6,SNR=4.7						
	0.6nm,0.8s						
FINES	FINESS Array B	67.43	333	P	P	06 43 38.1	+1.0
	2.5nm,0.9s,baz=39,slow=5.3,SNR=3.7						
	2.5nm,0.9s						
NVAR	Mina Array Bea	70.98	56	P	P	06 44 00.0	+0.2
	0.3nm,0.6s,baz=300,slow=7.1,SNR=2.9						
	0.3nm,0.6s						
PDAR	Pinedale Array	73.59	48	P	P	06 44 15.8	+0.5
	0.5nm,0.7s,baz=253,slow=2.4,SNR=5.6						
	0.5nm,0.7s						
TXAR	Lajitas Array	86.10	55	P	P	06 45 23.4	+0.3
	0.6nm,0.8s,baz=320,slow=5.1,SNR=8.1						
	0.6nm,0.8s						

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*HVO **15** 06:54:44.4±0.7, 19°.97N±0°.02×155°.56W±0°.03, h43km±1km, ML1.9/4, ML2.5/38(NEIC), Error ellipse: s-maj=4.4km s-min=2.8km az=49.0*

NEIC 15 06:54:43.0±0.8, **19°.97N**±0°.02×**155°.58W**±0°.03, **h45**km±4km, **Error ellipse: s-maj=4.3km s-min=2.1km az=72.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HPAH	Hawaii Prepara	0.12	298		Pn	06 54 50.8	+0.3
HPAH					Sn	06 54 55.5	-0.1
HPAH	Hawaii Prepara	0.12	298	IAML		06 54 55.6	
	comp=N,279nm,0.1s						
HPAH				IAML		06 54 55.7	
	comp=E,159nm,0.1s						
POHA	Pohakuloa	0.22	168		Pn	06 54 51.2	-0.1
POHA					Sn	06 54 56.5	-0.6
POHA	Pohakuloa	0.22	168	IAML		06 54 56.7	
	comp=E,184nm,0.2s						
POHA				IAML		06 54 57.0	
	comp=E,155nm,0.1s						
MHA	Mahukona	0.37	305		Pn	06 54 52.9	+0.5
HUH	Hualalai	0.37	220		Pn	06 54 53.3	+0.5
HUH	Hualalai	0.37	220	IAML		06 55 12.7	
	comp=E,230nm,3.7s						
HMH	Humuʻula Sheep	0.38	166		Pn	06 54 53.1	+0.2
HMH	Humuʻula Sheep	0.38	166		Sn	06 54 59.6	-0.2
HMH	Humuʻula Sheep	0.38	166	IAML		06 54 57.6	
	comp=N,259nm,4.1s						
HMH				IAML		06 54 58.6	
	comp=E,238nm,3.6s						
ALEP	Alea Permanent	0.43	188		Pn	06 54 53.8	+0.2
ALEP					Sn	06 55 00.8	-0.2
MLOA	Mauna Loa Obse	0.43	179	Pn	Pn	06 54 53.9	+0.2
KHLU	Kahalu`u	0.48	218		Pn	06 54 53.9	+0.1
KHLU	Kahalu`u	0.48	218		Sn	06 55 01.0	-0.5

KHLU	Kahalu`u	0.48	218	IAML		06 55 00.4	
	comp=N,83nm,3.1s						
MWH	Moku‘aweowe	0.49	182		Pn	06 54 54.1	-0.3
MWH	Moku‘aweowe	0.49	182	IAML		06 55 10.6	
	comp=N,152nm,2.0s						
MWH				IAML		06 55 16.9	
	comp=E,217nm,3.1s						
MLH	Mauna Loa	0.51	159		Pn	06 54 54.3	-0.1
MLH					Sn	06 55 01.5	-0.9
MLH	Mauna Loa	0.51	159	IAML		06 55 08.5	
	comp=E,211nm,3.6s						
MLH				IAML		06 55 11.1	
	comp=N,213nm,4.2s						
CPH	Captain Cook	0.58	213		Pn	06 54 55.0	-0.1
RSD	Rainshed	0.58	151		Pn	06 54 55.1	-0.1
RSD					Sn	06 55 03.1	-0.8
RSD	Rainshed	0.58	151	IAML		06 55 15.2	
	comp=N,265nm,3.7s						
RSD				IAML		06 55 19.2	
	comp=E,205nm,1.9s						
AIN	Ainahou	0.61	169		Pn	06 54 55.5	-0.1
AIN					Sn	06 55 03.8	-0.8
AIN	Ainahou	0.61	169	IAML		06 55 05.5	
	comp=N,235nm,3.2s						
UWE	Uwekahuna	0.61	154		Pn	06 54 55.3	-0.3
UWE					Sn	06 55 03.4	-1.2
UWB	Uwekahuna B	0.62	152		Pn	06 54 55.1	-0.5
UWB	Uwekahuna B	0.62	152	IAML		06 55 13.6	
	comp=N,313nm,1.7s						
UWB				IAML		06 55 19.3	
	comp=E,211nm,1.6s						
WRMHI	West Rim	0.62	155		Pn	06 54 55.3	-0.5
HATHI	Halema‘uma‘u T	0.63	151		Pn	06 54 55.2	-0.5
HATHI	Halema‘uma‘u T	0.63	151	IAML		06 55 01.6	
	comp=N,378nm,1.2s						
HATHI				IAML		06 55 21.2	
	comp=E,475nm,1.0s						
PUH	Pauahi	0.69	150		Pn	06 54 55.9	-0.7
PUH					Sn	06 55 04.7	-1.5
PUH	Pauahi	0.69	150	IAML		06 55 14.2	
	comp=E,146nm,1.6s						
PUH				IAML		06 55 20.7	
	comp=N,266nm,0.9s						
KNHH	Kane Nui o Ham	0.71	147		Pn	06 54 56.3	-0.5
HLP	Hilina Pali	0.72	159		Pn	06 54 56.6	-0.4
HLP	Hilina Pali	0.72	159		Sn	06 55 05.6	-1.4
HLP	Hilina Pali	0.72	159	IAML		06 55 04.6	
	comp=E,445nm,3.3s						
KHU	Kahuku	0.72	182		Pn	06 54 56.8	-0.4
KHU					Sn	06 55 05.9	-1.4
KHU	Kahuku	0.72	182	IAML		06 55 11.2	
	comp=N,192nm,3.7s						
KHU				IAML		06 55 12.3	
	comp=E,293nm,3.8s						
STCH	Steam Cracks	0.73	144		Pn	06 54 56.5	-0.6
STCH					Sn	06 55 05.3	-1.8
STCH	Steam Cracks	0.73	144	IAML		06 55 05.7	
	comp=E,326nm,0.1s						
STCH				IAML		06 55 23.4	
	comp=N,337nm,0.6s						
NPOC	North of Pu‘u	0.73	142		Sn	06 55 05.4	-1.8
JCUZ	Jacuzzi	0.74	142	Pn	Pn	06 54 58.3	+1.1
HTC	Hot Caves	0.75	167		Pn	06 54 57.0	-0.3
JOKA	Jonika Flow	0.77	135		Pn	06 54 56.9	-0.6
JOKA					Sn	06 55 06.3	-1.7
KHLH	Kahului Airpor	1.21	319	Pn	Pn	06 55 03.3	-0.2
KHLH				IAML		06 55 32.9	
	comp=N,84nm,3.9s						
KHLH				IAML		06 55 39.2	
	comp=E,91nm,4.0s						

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*IDC **15** 06:56:44.2±0.7, 39°.90N×145°.15E, h0^{km}, mb3.9/12, mbtmp4.0/16, ML3.4/3, MS3.3/7, Error ellipse: s-maj=19.9km s-min=16.2km az=134.0*

*MOS **15** 06:56:46.3±0.9, 39°.76N×145°.21E, h27^{km}, mb4.1/11, Error ellipse: s-maj=12.5km s-min=9.1km az=88.3*

*NIED **15** 06:56:48.1, 40°.08N×144°.83E, h42^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.42; $M_{\theta\theta}$0.37; $M_{\phi\phi}$1.05; $M_{r\theta}$0.46; $M_{\theta\phi}$0.26; $M_{\phi r}$0.95; Fault plane solution: $M_0$1.66000×10^{15} NP1: ϕ_s203.00000°, δ65.00000°, λ-87.00000°. NP2: ϕ_s16.00000°, δ25.00000°, λ-96.00000°.*

*JMA **15** 06:56:48.1±0.3, 40°.1N±0°.7×14°5E±°, h42^{km}, MV4.1/28, FAR E OFF NORTH HONSHU*

ISC 15 06:56:49.3±0.6**, 40°.00N**±0°.05×**145°.01E**±0°.06**, h32^{km}, n67, σ2^{s}21**/74**, mb4.0**/21**, 10C-6D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	2.42	269	eP	Pn	06 57 24.4	-2.3
JTH				eS	Sn	06 57 51.5	-3.7
JEM	Erimo	2.45	326	eP	Pn	06 57 25.2	-1.8
JEM				eS	Sn	06 57 53.1	-2.8
MIYJ	Miyakonagasawa	2.50	261	eP	Pn	06 57 25.9	-1.8
JKEN	Kujiedanarisaw	2.54	276	eP	Pn	06 57 26.0	-2.3
JKEN				eS	Sn	06 57 53.9	-4.2
JTHR	Tokachihiroo	2.63	331	P	Pn	06 57 27.3	-2.2
JTHR				eS	Sn	06 57 57.3	-2.9
JANG	Nango	2.70	279	eP	Pn	06 57 28.5	-2.0
JANG				eS	Sn	06 57 58.4	-3.7
JNBK	Urakawa-nobuka	2.84	324	eP	Pn	06 57 31.1	-1.3
JCH	Churui	2.89	335	eP	Pn	06 57 30.7	-2.4
JCH				S	Sn	06 58 03.1	-3.6
JOM	Ohasama	2.92	261	P	Pn	06 57 32.4	-1.0
JOM				S	Sn	06 58 04.8	-2.6
JMK	Ichinoseki	3.12	252	eP	Pn	06 57 34.6	-1.6
JOT	Ohata	3.31	296	eP	Pn	06 57 37.5	-1.4
NEM2	Nemuro 2	3.40	9	eP	Pn	06 57 36.8	-3.3
NEM2				eS	Sn	06 58 14.1	-5.3
NMR	Nemuro--Hokkai	3.41	9	⇑iP	Pn	06 57 36.8	-3.4
JAR	Ashorobuto	3.42	345	P	Pn	06 57 38.0	-2.4
JAR				eS	Sn	06 58 15.7	-4.1
JYK	Kaneyama	3.76	255	P	Pn	06 57 44.4	-0.7
JYK				eS	Sn	06 58 26.1	-2.2
JRA	Rausu	3.93	1	eP	Pn	06 57 44.8	-2.7
JTKR	Abashiri--Toko	4.05	349	P	Pn	06 57 47.4	-1.6
JTKR				eS	Sn	06 58 33.1	-2.2
YUK	Yuzh-Kuril'sk	4.08	9	eP	Pn	06 57 46.6	-2.8
SHO	Shikotan	4.09	19	d iP	Pn	06 57 46.6	-3.0
SHO				pmax	pmax		
	comp=Z,29nm,0.3s						
SHO				pmax	pmax		
	comp=N,31nm,0.2s						
SHO				pmax	pmax		
	comp=E,12nm,0.2s						
RUSJ	Misakicho	4.10	2	eP	Pn	06 57 47.1	-2.6
JHR	Hokuryu	4.47	328	P	Pn	06 57 55.5	+0.7
ASAJ	Asahikawa	4.49	337	Pn	Pn	06 57 54.2	-0.9
	comp=E,1.7nm,0.3s,baz=59,slow=5.9,SNR=4.6						
ASAJ				Sn	Sn	06 58 46.2	+0.2
	comp=E,1.3nm,0.3s,baz=288,slow=30,SNR=9.9						
	comp=E,5.8nm,0.4s						
KUR	Kuril'sk	5.63	21	eP	Pn	06 58 07.8	-3.0
KUR				pmax	pmax		
	comp=Z,48nm,0.3s						
MJA0	Matsu Arr-Jizo	6.34	239	eP	Pn	06 58 20.8	+0.2
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MAJO	Matsushiro	6.37	239	⇑eP	Pn	06 58 20.4	-0.6
MJAR	Matsushiro Arr	6.37	239	Pn	Pn	06 58 20.1	-0.8
	comp=Z,0.5nm,0.3s,baz=55,slow=12,SNR=44						
MJAR				Sn	Sn	06 59 29.5	-3.1
	baz=264,slow=32						
MJAR				LR	LR	07 00 53.5	
	comp=Z,170nm,19.2s,baz=118,slow=39						
	comp=Z,31nm,0.9s						
YSS	Yuzh-Sakhalins	7.14	347	eP	Pn	06 58 34.0	+2.6
YSS				eS	Sn	06 59 52.6	+1.2
USA0B	Ussuriysk Arra	10.54	298	deP	Pn	06 59 18.5	+0.4
USRK	Ussuriysk Ar.	10.54	298	Pn	Pn	06 59 18.5	+0.4
	comp=Z,0.3nm,0.3s,baz=105,slow=14,SNR=19						
USRK				LR	LR	07 03 35.3	
	comp=Z,140nm,18.5s,baz=126,slow=38						
	comp=Z,23nm,0.9s						
KLR	Kul'dur	13.19	319	Pn	Pn	06 59 52.0	-2.2
	comp=Z,0.1nm,0.3s,baz=121,slow=14,SNR=6.8						
KLR				LR	LR	07 05 36.1	
	comp=Z,133nm,18.0s,baz=265,slow=40						
KLR	Kul'dur	13.19	319	⇑eP	Pn	06 59 53.3	-0.9
KLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
JNU	Nakatsue	13.27	243	Pn	Pn	06 59 53.6	-1.8
	comp=Z,7.4nm,0.8s,baz=65,slow=19,SNR=1.9						
JNU				LR	LR	07 06 07.2	
	comp=Z,142nm,18.4s,baz=355,slow=42						
KSRS	Korea Array	13.58	265	LR	LR	07 04 56.5	
	comp=Z,70nm,18.4s,baz=65,slow=36						
PEA0B	Petropavlovsk-	15.71	29	⇓eP	P	07 00 29.1	-2.7
HIA	Hailar	20.15	306	⇑eP	Pn	07 01 23.0	+0.3
HIA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SEY	Seymchan	23.39	9	P	P	07 01 54.5	-0.4
	comp=Z,6.3nm,0.8s,baz=184,slow=11,SNR=23						
	comp=Z,6.3nm,0.8s						
SEY	Seymchan	23.39	9	⇓eP	P	07 01 55.8	+0.9
SEY				pmax	pmax		
	comp=Z,8.0nm,0.8s						
YAK	Yakutsk	23.95	342	⇑eP	P	07 02 02.8	+2.5
YAK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
H11N2	WAKE ISLAND Hy	27.59	131	T	T	07 31 21.2	
	baz=322,slow=75,SNR=4.3						
H11N1	WAKE ISLAND Hy	27.60	131	T	T	07 31 23.0	
	baz=322,slow=75,SNR=5.0						
H11N3	WAKE ISLAND Hy	27.60	131	T	T	07 31 21.8	
	baz=322,slow=75,SNR=5.4						
ULN	Ulaanbaatar	28.21	299	⇑eP	P	07 02 42.4	+3.2
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
H11S1	WAKE ISLAND Hy	28.44	133	T	T	07 32 22.3	
	baz=324,slow=76,SNR=5.9						
H11S3	WAKE ISLAND Hy	28.44	133	T	T	07 32 24.2	
	baz=324,slow=76,SNR=5.1						
H11S2	WAKE ISLAND Hy	28.46	133	T	T	07 32 23.4	
	baz=324,slow=76,SNR=6.6						
SONM	Songino Array	28.66	299	P	P	07 02 43.8	+0.7
	comp=Z,0.9nm,0.7s,baz=86,slow=9.6,SNR=3.0						
SONM				LR	LR	07 14 49.5	
	comp=Z,105nm,18.1s,baz=5.5,slow=38						
	comp=Z,0.9nm,0.7s						
BILL	Bilibino	30.40	16	i P	P	07 02 59.5	+1.4
BILL				i		07 04 00.0	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TIXI	Tiksi	32.75	351	⇓eP	P	07 03 21.4	+2.7
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.2s						
DGZ	Jazzator, Alta	41.03	303	⇑eP	P	07 04 31.7	+2.1
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ZALV	Zalesovo Beam	42.09	310	P	P	07 04 39.9	+1.9
	comp=Z,1.4nm,0.9s,baz=90,slow=6.4,SNR=3.6						
ZALV				PcP	PcP	07 06 32.9	+0.7
	comp=Z,1.0nm,0.5s,baz=101,slow=4.6,SNR=3.6						
	comp=Z,1.4nm,0.9s						
CMAR	Chiang Mai Arr	44.98	255	LR	LR	07 25 33.7	
	comp=Z,21nm,18.3s,baz=180,slow=38						
MK31	Makanchi Array	45.00	300	⇓eP	P	07 05 03.2	+1.6
MKAR	Makanchi Array	45.00	300	P	P	07 05 02.0	+0.4
	comp=Z,0.5nm,0.8s,baz=80,slow=8.9,SNR=4.0						
MKAR				PcP	PcP	07 06 42.3	0.0
	comp=Z,0.6nm,0.9s,baz=78,slow=2.0,SNR=1.7						
	comp=Z,0.5nm,0.8s						
ILAR	Eielson Array	45.47	34	P	P	07 05 04.3	-0.7
	comp=Z,0.8nm,1.0s,baz=280,slow=7.1,SNR=7.1						
	comp=Z,0.8nm,1.0s						
KURK	Kurchatov	46.38	306	⇑eP	P	07 05 14.7	+2.3
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BRVK	Borovoye	50.76	311	⇑eP	P	07 05 48.8	+2.8
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AAK	Ala-Archa	51.60	297	⇑eP	P	07 05 55.3	+2.6
AAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
YKA	Yellowknife Ar	59.81	32	P	P	07 06 49.9	-1.1
	comp=Z,0.4nm,0.8s,baz=289,slow=5.9,SNR=5.4						
	comp=Z,0.4nm,0.8s						
YKA	Yellowknife Ar	59.81	32	eP	P	07 06 51.2	+0.1
WRA	Warramunga Arr	60.46	192	P	P	07 06 54.8	-1.2
	comp=Z,1.1nm,0.7s,baz=10,slow=6.9,SNR=8.6						
	comp=Z,1.1nm,0.7s						
ASAR	Alice Springs	64.18	191	P	P	07 07 19.9	-1.0
	comp=Z,1.0nm,0.8s,baz=2.4,slow=6.7,SNR=6.3						
	comp=Z,1.0nm,0.8s						
FINES	FINESS Array B	67.48	333	P	P	07 07 42.3	+0.7
	comp=Z,2.1nm,0.9s,baz=54,slow=7.1,SNR=4.2						
	comp=Z,2.1nm,0.9s						
FINES	FINESS Array B	67.48	333	eP	P	07 07 43.1	+1.5
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NVAR	Mina Array Bea	70.97	56	P	P	07 08 04.2	+0.3
	comp=Z,1.4nm,0.8s,baz=289,slow=6.5,SNR=10						
	comp=Z,1.4nm,0.8s						
KIV	Kislovodsk	71.07	312	eP	P	07 08 03.4	-0.9
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PDAR	Pinedale Array	73.58	48	P	P	07 08 19.9	+0.4
	comp=Z,0.9nm,0.6s,baz=255,slow=1.0,SNR=13						
	comp=Z,0.9nm,0.6s						
TXAR	Lajitas Array	86.09	55	P	P	07 09 27.1	-0.1
	comp=Z,1.3nm,0.8s,baz=298,slow=3.5,SNR=16						
	comp=Z,1.3nm,0.8s						

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*NIED **15** 07:30:30.8, 35°.74N×140°.68E, h50^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.14; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$-1.05; $M_{r\theta}$-0.05; $M_{\theta\phi}$-0.03; $M_{\phi r}$0.96; Fault plane solution: $M_0$1.46000×10^{15} NP1: ϕ_s359.00000°, δ66.00000°, λ87.00000°. NP2: ϕ_s185.00000°, δ24.00000°, λ96.00000°.*

*JMA **15** 07:30:30.8±0.2, 35°.7N±0°.6×140°.7E±0°.8, h50^{km}±1^{km}, MV3.7/38, NEAR CHOSHI CITY*

JMA Felt II J1 at NEAR CHOSHI CITY .

*NEIC **15** 07:30:33.0±1.2, 35°.84N±0°.07×140°.7E±0°.1, h61^{km}±8^{km}, mb4.3/12, Error ellipse: s-maj=12.8km s-min=8.9km az=116.0*

*IDC **15** 07:30:34.2±2.2, 35°.67N×140°.56E, h75^{km}±18^{km}, mb3.5/18, mbtmp3.8/22, MS3.0/4, Error ellipse: s-maj=17.0km s-min=14.8km az=98.0*

ISC 15 07:30:31.8±0.8**, 35°.75N**±0°.05×**140°.74E**±0°.06**, h52^{km}**±6^{km}**, n88, σ1^{s}10**/82**, mb4.0**/25**, 7D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.11	114	i P	Pn	07 30 38.8	-1.1
JSMT	Sammumatsuo	0.26	246	i P	Pn	07 30 39.6	-1.1
JSMT				S	Sn	07 30 46.8	-0.4
JIHU	Itakohorinouch	0.28	322	i P	Pn	07 30 40.2	-0.7
JIHU				S	Sn	07 30 47.4	-0.1
JCN	Nagara	0.55	233	⇓P	Pn	07 30 42.9	-0.8
JCN				⇓eS	Sn	07 30 51.9	-0.4
JYT	Yasato	0.65	318	⇓iP	Pn	07 30 43.6	-1.4
JYT				⇓S	Sn	07 30 52.8	-1.8
BSO4	Boso 4	0.82	204	⇓P	Pn	07 30 46.1	-1.1
BSO3	Boso 3	0.96	191	P	Pn	07 30 47.5	-1.3
BSO1	Boso 1	1.11	170	eP	Pn	07 30 49.6	-0.9
JAG	Ashikaga	1.24	303	⇓P	Pn	07 30 51.2	-1.6
JOD2	Odawara 2	1.43	251	⇓iP	Pn	07 30 54.0	-1.5
JMM	Marumori	2.12	1	Pn	Pn	07 31 05.2	+0.4
JMM	Marumori	2.12	1	P	Pn	07 31 05.8	+1.0
MJAR	Matsushiro Arr	2.20	292	P	Pn	07 31 05.5	-0.4
	20nm,0.3s,baz=97,slow=14,SNR=87						
MJAR				S	Sn	07 31 32.7	+0.8
	49nm,0.6s,baz=126,slow=15,SNR=4.3						
MJAR				LR	LR	07 31 53.3	
	comp=Z,238nm,20.9s,baz=120,slow=38						
MAJO	Matsushiro	2.20	292	Pn	Pn	07 31 05.6	-0.3
MAJO	Matsushiro	2.20	292	P	Pn	07 31 06.3	+0.4
MJB9	Matsu-Tunnel	2.20	292	Pn	Pn	07 31 06.6	+0.7
JSG	Sagara	2.35	244	Pn	Pn	07 31 09.7	+1.8
JSG	Sagara	2.35	244	P	Pn	07 31 12.9	+5.0
JGF	Kuroka	2.76	268	Pn	Pn	07 31 13.9	+0.3
JGF	Kuroka	2.76	268	P	Pn	07 31 14.5	+0.9
JSD	Sado	3.03	320	Pn	Pn	07 31 17.4	+0.2
JSD	Sado	3.03	320	P	Pn	07 31 18.2	+0.9
INU	Inuyama	3.06	264	Pn	Pn	07 31 17.2	-0.5
INU	Inuyama	3.06	264	P	Pn	07 31 17.6	-0.1
JTM	Tenmabayashi	5.04	3	Pn	Pn	07 31 45.0	+0.2
JTM	Tenmabayashi	5.04	3	P	Pn	07 31 45.5	+0.7
JMN	Monobe	6.00	252	Pn	Pn	07 31 59.6	+1.6
JMN	Monobe	6.00	252	P	Pn	07 32 00.6	+2.6
JHS	Saijyo	6.27	265	Pn	Pn	07 32 02.1	+0.3
JHS	Saijyo	6.27	265	P	Pn	07 32 04.1	+2.3
ERM	Erimo	6.54	16	Pn	Pn	07 32 03.8	-1.5
ERM	Erimo	6.54	16	P	Pn	07 32 05.6	+0.3
JEM	Erimo	6.54	16	P	Pn	07 32 05.7	+0.4
ASAJ	Asahikawa	8.48	9	P	Pn	07 32 34.4	+2.4
	6.9nm,0.5s,baz=180,slow=21,SNR=2.3						
ASAJ				S	Sn	07 34 04.3	-1.9
	3.5nm,0.5s,baz=15,slow=25,SNR=1.7						
JKA	Kamikawa-asahi	8.48	9	Pn	Pn	07 32 31.0	-0.9
JNU	Nakatsue	8.56	255	P	Pn	07 32 33.8	+0.7
	18nm,1.0s,baz=232,slow=2.3,SNR=3.5						
JNU				LR	LR	07 35 58.8	
	comp=Z,144nm,19.4s,baz=32,slow=39						
JCJ	Chichijima	8.71	171	Pn	Pn	07 32 37.5	+2.2
KSRS	Korea Array	10.44	283	P	Pn	07 33 01.4	+2.6
	1.4nm,0.6s,baz=97,slow=14,SNR=2.4						
KSRS				LR	LR	07 36 52.7	
	comp=Z,107nm,21.6s,baz=100,slow=37						
USRK	Ussuriysk Ar.	10.78	324	LR	LR	07 36 55.0	
	comp=Z,110nm,20.0s,baz=79,slow=35						
USRK	Ussuriysk Ar.	10.78	324	Pn	Pn	07 33 02.5	-0.9
XLT	XiLinHaoTe	20.56	301	eP	Pn	07 35 15.9	+7.1
XLT				pP	sP	07 35 31.1	+6.5
XLT				pmax	pmax		
	comp=Z,5.0nm,0.7s						
XLT				pmax	pmax		
	comp=Z,140nm,5.7s						
HHC	Hu-ho-hao-te	23.40	291	eP	P	07 35 35.6	-0.6
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
HHC				pmax	pmax		
	comp=Z,360nm,5.7s						
H11N2	WAKE ISLAND Hy	27.99	118	T	T	08 05 25.2	
	baz=311,slow=75,SNR=21						
H11N1	WAKE ISLAND Hy	28.00	118	T	T	08 05 23.4	
	baz=311,slow=75,SNR=26						
H11N3	WAKE ISLAND Hy	28.01	118	T	T	08 05 20.2	
	baz=311,slow=75,SNR=20						
SONM	Songino Array	28.08	306	P	P	07 36 17.1	-1.4
	comp=Z,0.5nm,0.5s,baz=112,slow=10.0,SNR=1.3						
	comp=Z,0.5nm,0.5s						
SEY	Seymchan	28.16	11	P	P	07 36 19.6	+0.8
	comp=Z,0.7nm,0.6s,baz=198,slow=20,SNR=1.7						
	comp=Z,0.7nm,0.6s						
H11S1	WAKE ISLAND Hy	28.65	120	T	T	08 06 29.1	
	baz=312,slow=75,SNR=27						
H11S3	WAKE ISLAND Hy	28.65	120	T	T	08 06 27.9	
	baz=312,slow=75,SNR=14						
H11S2	WAKE ISLAND Hy	28.67	120	T	T	08 06 19.3	
	baz=312,slow=75,SNR=20						
WMQ	Urumqi	40.95	298	eP	P	07 38 10.5	+1.2
ZALV	Zalesovo Beam	42.39	313	P	P	07 38 21.3	+0.4
	comp=Z,2.3nm,0.8s,baz=80,slow=10,SNR=3.9						
	comp=Z,2.3nm,0.8s						
MK31	Makanchi Array	44.35	303	P	P	07 38 36.5	-0.3
MKAR	Makanchi Array	44.35	303	P	P	07 38 36.7	-0.2
	comp=Z,1.7nm,0.7s,baz=88,slow=9.7,SNR=18						
	comp=Z,1.7nm,0.7s						
MKAR	Makanchi Array	44.35	303	P	P	07 38 36.8	0.0
KURK	Kurchatov	46.31	309	P	P	07 38 51.3	-0.9
KURK				IAmb	IAmb	07 38 53.1	
	comp=Z,3.8nm,0.8s						
KURBB	Kurchatov Arra	46.37	309	P	P	07 38 52.1	-0.6
	comp=Z,1.4nm,0.4s,baz=85,slow=8.1,SNR=18						
	comp=Z,1.4nm,0.4s						
TARG	Taragay, Kyrgy	48.49	297	P	P	07 39 09.1	-0.8
TARG				IAmb	IAmb	07 39 11.6	
	comp=Z,3.7nm,0.9s						
KTH	Kantishna Hill	49.12	33	P	P	07 39 13.6	-0.3
KTH				IAmb	IAmb	07 39 40.6	
	comp=Z,2.7nm,1.1s						
ILAR	Eielson Array	50.87	32	P	P	07 39 28.1	+1.1
	comp=Z,0.6nm,0.7s,baz=270,slow=5.6,SNR=9.4						
	comp=Z,0.6nm,0.7s						
ILAR	Eielson Array	50.87	32	P	P	07 39 27.4	+0.3
BVAR	Borovoye Array	51.04	313	P	P	07 39 27.5	-1.0
	comp=Z,1.2nm,0.6s,baz=92,slow=10,SNR=6.4						
	comp=Z,1.2nm,0.6s						
BRVK	Borovoye	51.10	313	P	P	07 39 28.3	-0.7
BRVK				IAmb	IAmb	07 39 30.5	
	comp=Z,2.5nm,0.8s						
BMAR	Burnt Mountain	51.72	28	P	P	07 39 33.9	+0.4
CTGM	Chitina Glacie	53.79	36	P	P	07 39 48.5	-0.5
FITZ	Fitzroy Crossi	55.43	198	P	P	07 40 00.9	-0.2
WB0	Warramunga Arr	55.54	187	P	P	07 40 00.6	-1.2
WB0				IAmb	IAmb	07 40 18.1	
	comp=Z,5.2nm,1.1s						
WB2	Warramunga Arr	55.71	187	P	P	07 40 02.0	-1.1
WRA	Warramunga Arr	55.72	187	P	P	07 40 01.9	-1.2
	comp=Z,1.3nm,0.6s,baz=0.7,slow=7.6,SNR=22						
	comp=Z,1.3nm,0.6s						
WRA	Warramunga Arr	55.72	187	P	P	07 40 01.8	-1.3
INK	Inuvik	55.78	27	P	P	07 40 04.1	+1.1
	comp=Z,0.6nm,0.6s,baz=280,slow=5.5,SNR=3.7						
	comp=Z,0.6nm,0.6s						
ABKAR	Akbulak array	58.36	311	P	P	07 40 21.2	-0.3
ASAR	Alice Springs	59.44	187	P	P	07 40 28.4	-0.8
	comp=Z,0.7nm,0.5s,baz=16,slow=10,SNR=16						
	comp=Z,0.7nm,0.5s						
ASAR	Alice Springs	59.44	187	P	P	07 40 29.5	+0.2
MBWA	Marble Bar	59.99	203	P	P	07 40 32.1	-0.9
RES	Resolute Bay	63.98	14	P	P	07 40 59.0	-0.1
RES				IAmb	IAmb	07 40 59.2	
	comp=Z,4.9nm,1.4s						
YKA	Yellowknife Ar	65.19	30	P	P	07 41 07.8	+0.5
	comp=Z,0.2nm,0.7s,baz=301,slow=6.4,SNR=3.8						
	comp=Z,0.2nm,0.7s						
FINES	FINESS Array B	69.70	332	P	P	07 41 35.4	-0.4
	comp=Z,1.7nm,0.8s,baz=57,slow=5.1,SNR=4.0						
	comp=Z,1.7nm,0.8s						
FINES	FINESS Array B	69.70	332	P	P	07 41 35.5	-0.2
AKASG	Malin Array Be	74.98	322	P	P	07 42 07.0	-0.4
	comp=Z,0.3nm,0.2s,baz=36,slow=5.7,SNR=4.6						
	comp=Z,0.3nm,0.2s						
NOA	NORSAR Array B	75.16	337	P	P	07 42 07.0	-1.3
	comp=Z,0.6nm,0.5s,baz=44,slow=5.5,SNR=2.0						
	comp=Z,0.6nm,0.5s						
NVAR	Mina Array Bea	76.20	53	P	P	07 42 16.4	+1.5
	comp=Z,0.3nm,0.7s,baz=289,slow=5.6,SNR=2.6						
	comp=Z,0.3nm,0.7s						
PDAR	Pinedale Array	78.96	45	P	P	07 42 31.5	+1.3
	comp=Z,0.3nm,0.6s,baz=319,slow=1.7,SNR=4.4						
	comp=Z,0.3nm,0.6s						
BRTR	Keskin Array B	79.29	311	P	P	07 42 31.1	-0.9
	comp=Z,0.7nm,0.8s,baz=35,slow=3.5,SNR=2.4						
	comp=Z,0.7nm,0.8s						
TXAR	Lajitas Array	91.34	52	P	P	07 43 33.5	+1.2
	comp=Z,0.2nm,0.8s,baz=310,slow=3.2,SNR=3.6						
	comp=Z,0.2nm,0.8s						
H03N2	Juan Fernandez	147.41	98	T	T	10 34 50.3	
	baz=290						
H03N3	Juan Fernandez	147.42	98	T	T	10 34 51.6	
	baz=290						
H03N1	Juan Fernandez	147.43	98	T	T	10 34 58.2	
	baz=290						

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*AEIC **15** 07:32:28.7±2.9, 56°.0N±0°.1×153°.2W±0°.2, h8^{km}±10^{km}, ML2.9, ML3.5/21(NEIC), Error ellipse: s-maj=21.9km s-min=16.5km az=211.0*

NEIC 15 07:32:22.9±2.5**, 55°.7N**±0°.2×**153°.2W**±0°.2**, h22^{km}**±26^{km}**, Error ellipse: s-maj=32.8km s-min=17.0km az=200.0, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	Old Harbor	1.52	358		Pn	07 32 47.3	-1.5
KDAK	Kodiak Island	2.11	9	Pn	Pn	07 32 55.8	-1.0
Q19K	Cape Douglas,	3.25	356	Pn	Pn	07 33 12.8	+0.3
Q19K				IAML		07 34 00.8	
	comp=N,141nm,2.0s						
P18K	Big Mountain,	3.86	344	Pn	Pn	07 33 20.8	-0.1
P18K				IAML		07 34 40.8	
	comp=N,28nm,2.9s						
P18K				IAML		07 34 51.0	
	comp=E,46nm,3.0s						
P19K	Oil Pt	3.96	360	Pn	Pn	07 33 22.2	-0.1
P19K				IAML		07 34 19.2	
	comp=N,141nm,2.7s						
P19K				IAML		07 34 19.9	
	comp=E,131nm,2.4s						
CNPM	China Poot	3.98	15		Pn	07 33 21.8	-0.7
CNPM	China Poot	3.98	15	IAML		07 35 13.1	
	comp=N,74nm,3.8s						
CNPM				IAML		07 35 37.0	
	comp=E,76nm,3.5s						
HOM	Homer	4.05	11	Pn	Pn	07 33 24.7	+1.2
BRLK	Bradley Lake	4.26	16		Pn	07 33 24.9	-1.4
BRLK	Bradley Lake	4.26	16	IAML		07 35 49.6	

	comp=N,70nm,3.1s						
BRSE	Bradley Lake S	4.26	17		Pn	07 33 24.9	-1.4
ILSW	Iliamna Southw	4.29	0	Pn	Pn	07 33 26.5	-0.4
O19K	Port Alsworth	4.55	353	Pn	Pn	07 33 29.6	-0.6
SLKM	Skilak Lake	5.07	17		Pn	07 33 36.3	-1.1
N19K	Bonanza Creek	5.17	353	Pn	Pn	07 33 38.6	-0.3
SPU	Mount Spurr	5.53	6	Pn	Pn	07 33 43.6	-0.2
PWL	Port Wells	5.77	24		Pn	07 33 46.1	-0.9
M20K	Styx River	6.20	0	Pn	Pn	07 33 53.0	-0.1
L19K	White Mountain	6.56	353	Pn	Pn	07 33 57.8	-0.1
SML	Sawmill	6.62	20	Pn	Pn	07 34 00.6	+1.8
SCM	Sheep Creek Mo	6.86	24		Pn	07 34 01.5	-0.6
KLU	Klutina	6.93	30	Pn	Pn	07 34 03.5	+0.4
M24K	Tolsona, Glenn	7.38	27	Pn	Pn	07 34 11.6	+2.5
CAST	Castle Rocks	7.76	4	Pn	Pn	07 34 16.6	+2.2
BALM	Baldy	7.81	42		Pn	07 34 14.5	-0.7
TRF	Thorofare Moun	7.91	10	Pn	Pn	07 34 17.5	+1.0
KTH	Kantishna Hill	7.96	7	Pn	Pn	07 34 18.5	+1.3
LOGN	Logan Glacier	8.22	46	Pn	Pn	07 34 22.5	+1.7
MCK	McKinley	8.34	13	Pn	Pn	07 34 24.6	+2.4
WRH	Wood River Hil	9.15	14		Pn	07 34 32.2	-1.2
ILAR	Eielson Array	9.62	16	Pn	Pn	07 34 41.0	+1.3
IMAR	Indian Mountai	10.32	359	Pn	Pn	07 34 49.6	+0.2
BMAR	Burnt Mountain	12.44	16	Pn	Pn	07 35 18.5	+0.1

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*HVO **15** 08:01:19.7±2.4, 20°.14N±0°.07×155°.81W±0°.06, h24km±7km, ML3.1/24, ML3.1/54(NEIC), Error ellipse: s-maj=11.7km s-min=4.9km az=218.0*

NEIC 15 08:01:17.6±1.4, 20°.12N±0°.04×155°.82W±0°.04, h33km±8km, Error ellipse: s-maj=6.9km s-min=4.2km az=51.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MHA	Mahukona	0.11	312	Pg	Pb	08 01 24.0	+0.5
MHA	Mahukona	0.11	312		Sb	08 01 27.4	0.0
HPAH	Hawaii Prepara	0.14	127		Pb	08 01 24.0	+0.2
HPAH					Sb	08 01 27.3	-0.8
HPAH	Hawaii Prepara	0.14	127	IAML		08 01 27.4	
	comp=N,7μm,0.3s						
HPAH				IAML		08 01 27.5	
	comp=E,6μm,0.2s						
HUH	Hualalai	0.43	182		Pn	08 01 28.2	+0.4
HUH					Sb	08 01 33.9	-0.2
HUH	Hualalai	0.43	182	IAML		08 01 36.8	
	comp=E,3μm,0.4s						
HUH				IAML		08 01 41.0	
	comp=N,4μm,0.2s						
POHA	Pohakuloa	0.45	143	Pg	Pn	08 01 28.0	+0.1
POHA	Pohakuloa	0.45	143		Sb	08 01 34.3	-0.2
KKH	Kailua Kona	0.49	203		Pn	08 01 28.8	+0.4
KHLU	Kahalu`u	0.53	188		Pn	08 01 28.9	0.0
KHLU					Sb	08 01 35.8	-0.6
KHLU	Kahalu`u	0.53	188	IAML		08 01 36.1	
	comp=E,1μm,0.3s						
KHLU				IAML		08 01 36.2	
	comp=N,956nm,0.2s						
ALEP	Alea Permanent	0.59	164		Pn	08 01 30.5	+0.5
ALEP					Sb	08 01 38.5	0.0
HMH	Humu‘ula Sheep	0.60	148		Pb	08 01 30.3	+0.2
HMH					Sb	08 01 38.1	-0.4
MLOA	Mauna Loa Obse	0.62	159		Pb	08 01 30.9	+0.4
MLOA					Sb	08 01 39.0	-0.2
MLOA	Mauna Loa Obse	0.62	159	IAML		08 01 46.9	
	comp=N,884nm,0.3s						
MLOA				IAML		08 01 51.4	
	comp=E,550nm,0.4s						
CPH	Captain Cook	0.63	189		Pb	08 01 30.5	+0.1
CPH					Sb	08 01 38.6	-0.5
MWH	Moku‘aweowe	0.66	162		Pn	08 01 31.0	-0.1
MWH					Sb	08 01 39.4	-1.0
MWH	Moku‘aweowe	0.66	162	IAML		08 01 49.7	
	comp=N,1μm,0.3s						
MWH				IAML		08 01 50.6	
	comp=E,1μm,0.3s						
MLH	Mauna Loa	0.74	147		Pn	08 01 32.0	+0.1
MLH					Sb	08 01 41.0	-1.3
MLH	Mauna Loa	0.74	147	IAML		08 01 41.2	
	comp=E,803nm,0.3s						
MLH				IAML		08 01 41.9	
	comp=N,904nm,0.2s						
HLK	Haleakala	0.76	328		Pn	08 01 31.5	-0.7
HLK					Sn	08 01 40.2	-2.5
HLK	Haleakala	0.76	328	IAML		08 01 40.4	
	comp=E,380nm,0.5s						
HLK				IAML		08 01 45.7	
	comp=N,272nm,2.1s						
AIN	Ainahou	0.81	155		Pn	08 01 33.2	+0.3
AIN					Sn	08 01 43.0	-0.9
RSD	Rainshed	0.82	142		Pn	08 01 33.1	+0.1
RSD					Sn	08 01 43.1	-1.0
RSD	Rainshed	0.82	142	IAML		08 01 43.4	
	comp=E,867nm,0.3s						
RSD				IAML		08 01 44.1	
	comp=N,638nm,0.3s						
UWE	Uwekahuna	0.85	144		Pn	08 01 33.3	-0.1
UWE					Sn	08 01 43.3	-1.4
UWB	Uwekahuna B	0.85	143		Pn	08 01 33.2	-0.2
UWB					Sn	08 01 43.0	-1.9
OBL	Observatory Le	0.86	144		Pn	08 01 33.4	-0.1
WRMHI	West Rim	0.86	145		Pn	08 01 33.3	-0.2
SBLHI	Steaming Bluff	0.86	143		Pn	08 01 33.2	-0.2
SBLHI					Sn	08 01 43.0	-1.9
SBLHI	Steaming Bluff	0.86	143	IAML		08 01 52.6	
	comp=N,539nm,0.5s						
NPH	North Pit	0.86	144		Pn	08 01 33.4	-0.2
NPH					Sn	08 01 43.4	-1.6
NPH	North Pit	0.86	144	IAML		08 02 00.0	
	comp=N,470nm,1.3s						
HATHI	Halema‘uma‘u T	0.86	143		Pn	08 01 33.3	-0.2
HATHI					Sn	08 01 43.1	-1.9
HATHI	Halema‘uma‘u T	0.86	143	IAML		08 02 02.2	
	comp=E,834nm,0.9s						
HATHI				IAML		08 02 02.3	
	comp=N,599nm,0.8s						
BYL	Byron's Ledge	0.87	143	IAML		08 02 04.7	
	comp=N,549nm,1.1s						
SDHHI	Sand Hill	0.87	146	IAML		08 01 54.1	
	comp=E,646nm,0.8s						
SDHHI				IAML		08 01 54.2	
	comp=N,680nm,0.7s						
KKO	Keanakako`i	0.88	144		Pb	08 01 34.9	+0.3
KKO				IAML		08 01 53.2	
	comp=E,428nm,1.1s						
KHU	Kahuku	0.89	168		Pn	08 01 33.9	-0.1
KHU					Sn	08 01 44.2	-1.6
HLP	Hilina Pali	0.94	149		Pn	08 01 34.7	0.0
HLP					Sn	08 01 45.6	-1.4
HLP	Hilina Pali	0.94	149	IAML		08 01 52.7	
	comp=E,602nm,1.6s						
HLP				IAML		08 01 53.8	
	comp=N,454nm,0.5s						
KNHH	Kane Nui o Ham	0.95	140		Pn	08 01 34.6	-0.2
HTC	Hot Caves	0.96	156		Pn	08 01 34.9	+0.1
KHLH	Kahului Airpor	0.97	324		Pn	08 01 35.0	+0.2
KHLH					Sn	08 01 46.9	-0.5
KHLH	Kahului Airpor	0.97	324	IAML		08 01 47.1	
	comp=N,371nm,0.5s						
KHLH				IAML		08 01 47.1	
	comp=E,528nm,0.3s						
STCH	Steam Cracks	0.97	138		Pn	08 01 34.8	-0.2
STCH	Steam Cracks	0.97	138	IAML		08 01 46.8	
	comp=N,350nm,0.2s						
STCH				IAML		08 01 47.1	
	comp=E,529nm,0.1s						
JOKA	Jonika Flow	1.02	131		Pn	08 01 35.4	-0.2
HON	Honolulu	2.37	301		Pn	08 01 54.1	-0.1
HON					Sn	08 02 21.4	-0.7
KIP	Kipapa	2.43	303	Pn	Pn	08 01 54.9	-0.1
KIP				IAML		08 02 23.7	
	comp=E,95nm,0.7s						
KIP				IAML		08 02 37.3	
	comp=E,122nm,4.6s						
KEKH	Kekaha	4.08	298	Pn	Pn	08 02 18.8	+1.0

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*UPA **15** 08:05:38.0±1.0, 9°.45N×83°.81W, h8km±5km, MW2.9*
*INET **15** 08:05:39.1±0.2, 9°.52N×83°.79W, h17km, ML2.4*

ISC 15 08:05:38.8±1.0, 9°.49N±0°.07×83°.79W±0°.06, h28km±6km, n14, σ0s.40/24, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDM	Cerro de Muert	0.07	21	eP	Pb	08 05 44.1	-0.2
CDM				eS	Sb	08 05 48.3	+0.2
CDM				IAML		08 05 49.7	
	comp=N,901nm,0.4s						
PEZE	Perez Zeledon,	0.15	135	eP	Pb	08 05 44.2	-0.3
PEZE				eS	Sb	08 05 48.4	+0.1
PEZE				IAML		08 05 48.8	
	comp=E,1μm,0.2s						
RIMA	Rio Macho	0.28	345	eP	Pb	08 05 45.8	-0.3
RIMA				eS	Sb	08 05 51.1	+0.1
RIMA				IAML		08 05 51.5	
	comp=E,870nm,0.1s						
LCR2	La Lucha 2	0.33	319	eP	Pb	08 05 46.5	-0.2
HDC3	Heredia 3	0.60	328	eP	Pb	08 05 50.8	-0.1
HDC3				eS	Sn	08 06 00.1	-0.4
HDC3				IAML		08 06 00.4	
	comp=N,141nm,0.2s						
HDC	Heredia	0.60	328	i P	Pb	08 05 50.6	-0.3
HDC				i S	Sn	08 06 00.0	-0.4
JACO	JACO, Garabito	0.88	281	eP	Pb	08 05 54.8	-0.7
MLIR3	Monte Lirio, C	1.18	126	eP	Pn	08 05 59.8	+0.3
BRU2	Volcan	1.28	123	i P	Pn	08 06 01.2	+0.1
BRU2				i S	Sb	08 06 19.4	+0.7
CNI2	El Empalme, Bo	1.30	93	i P	Pn	08 06 01.3	+0.3
CNI2				i S	Sb	08 06 18.6	-0.3
BC3P	Paso Ancho	1.34	120	i P	Pn	08 06 02.5	+0.6
BC3P				i S	Sb	08 06 20.3	0.0
JTS	Las Juntas de	1.40	305	eP	Pn	08 06 03.1	+0.7
JTS				eS	Sb	08 06 22.0	+0.3
LESP3	La Esperanza,	1.46	137	eP	Pn	08 06 03.7	+0.4
BCO2	Palmira	1.46	122	i P	Pn	08 06 03.7	+0.2
BCO2				i S	Sb	08 06 23.6	-0.1

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*DJA **15** 08:16:12.9±0.5, 2°N±4°×12°7E±°, h118km±5km, M4.2/9, mb4.5/6, mB4.9/1, MLv4.0/9, Mw(mB)4.2/1*
*IDC **15** 08:16:15.1±11.0, 1°.73N×127°.34E, h127km±107km, mb3.9/5, mbtmp4.3/6, ML4.5/1, Error ellipse: s-maj=81.6km s-min=15.6km az=56.0*

ISC 15 08:16:13.8±1.2, 1°.78N±0°.09×127°.34E±0°.10, h112km, n15, σ1s.41/16, mb4.2/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.00	178	P	Pn	08 16 36.0	+0.8
LBMI	Labuha	2.41	176	P	Pn	08 16 54.6	+2.5
SGSI	Sangihe	2.62	316	P	Pn	08 16 54.4	-0.5
SANI	Sanana	4.04	200	P	Pn	08 17 13.6	-0.1
GTOI	Gorontalo	4.47	255	P	Pn	08 17 21.6	+2.0
NLAI	Namlea	4.99	183	P	Pn	08 17 27.6	+1.0
MRSI	Marisa	5.55	257	P	Pn	08 17 34.8	+0.7
	63nm,0.7s,1μm0.3nm						
SPSI	Sidrap Palu	9.47	233	P	Pn	08 18 28.1	+0.8
	51nm,0.6s						
BKSI	Bulukumba	10.08	226	P	Pn	08 18 36.9	+1.3
	9.0nm,0.6s						
KAPI	Kappang	10.15	228	P	Pn	08 18 39.1	+2.7
	4.5nm,0.3s,baz=13,slow=14,SNR=7.9						
KAPI				S	Sn	08 20 26.9	-1.5
	6.1nm,0.4s,baz=37,slow=20,SNR=2.1						
	16nm,0.5s						
WRA	Warramunga Arr	22.65	163	P	P	08 21 04.9	-0.9
	11nm,0.6s,baz=343,slow=11,SNR=89						
	11nm,0.6s						
ASAR	Alice Springs	26.09	166	P	P	08 21 36.6	-0.6
	0.7nm,0.3s,baz=343,slow=7.7,SNR=19						
	0.7nm,0.3s						
STKA	Stephens Creek	36.10	159	P	P	08 23 04.6	-0.4
	5.3nm,0.4s,baz=347,slow=7.2,SNR=26						
	5.3nm,0.4s						
MKAR	Makanchi Array	59.49	326	P	P	08 26 05.3	+0.1
	1.4nm,0.6s,baz=122,slow=8.1,SNR=18						
	1.4nm,0.6s						
KURBB	Kurchatov Arra	63.70	328	P	P	08 26 32.9	-0.4
	1.4nm,0.6s,baz=127,slow=6.0,SNR=15						
	1.4nm,0.6s						

NOU 15 08:17:17.7, 14°.84S×167°.44E, h118km, MLv4.6/11, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	2.96	166	P	Pn	08 18 03.6	+0.2
KOUNC	Koumac, New Ca	6.42	207	P	Pn	08 18 49.8	-0.1
YATNC	Mamie plateau,	7.20	184	P	Pn	08 18 59.9	-0.5
DZM	Mont Dzumac	7.25	187	P	Pn	08 19 00.8	-0.4
NOUC	Port Laguerre	7.30	188	P	Pn	08 19 02.3	+0.6
ONTNC	Ouen Toro	7.49	187	P	Pn	08 19 04.5	+0.3
OUENC	Ouen Island, N	7.56	184	P	Pn	08 19 05.0	-0.2

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*WEL **15** 08:21:51.4±0.4, 40°S±2°×17°5E±°, h19km±5km, M3.5/22, ML3.7/22, MLv3.5/22, Error ellipse: s-maj=0.0km s-min=0.0km az=85.1, confirmed*
*NOU **15** 08:21:52.9, 40°.11S×174°.94E, h63km, MLv3.3/7, Cook Strait, New Zealand*

ISC 15 08:21:51.8±1.0, 40°.11S±0°.02×174°.95E±0°.02, h18km±9km, n109, σ0s.95/121, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WAZ	Wanganui	0.35	4	P	Pg	08 22 00.4	+1.1
WAZ				S	Sb	08 22 06.8	+2.0
POWZ	Post Office Ro	0.69	115	P	Pg	08 22 05.6	+0.3
POWZ				S	Sg	08 22 15.3	+0.8
OGWZ	Otaki Gorge	0.73	167	P	Pg	08 22 06.0	-0.2
OGWZ				S	Sg	08 22 15.6	-0.2
MRZ	Mangatainoka R	0.73	139	P	Pg	08 22 06.4	+0.2
MRZ				S	Sg	08 22 16.4	+0.5
KIW	Kapiti Island	0.76	183	P	Pg	08 22 06.0	-0.6
KIW				S	Sg	08 22 15.6	-1.1
LREZ	Lake Rotokare	0.77	326	P	Pg	08 22 07.4	+0.5
TSZ	Takapari Road	0.77	87	P	Pg	08 22 06.8	-0.2
TSZ				S	Sg	08 22 17.3	0.0
MTVZ	Mangateitei	0.82	29	P	Pg	08 22 07.2	-0.7
MTVZ				S	Sg	08 22 19.0	+0.2
PKVZ	Pokaka	0.87	20	P	Pg	08 22 07.7	-1.1
PRWZ	Pori Road	0.90	120	P	Pg	08 22 09.4	+0.1
PRWZ				S	Sg	08 22 22.1	+1.0
HOWZ	Holdsworth Sta	0.90	152	P	Pg	08 22 09.1	-0.3
HOWZ				S	Sg	08 22 21.1	-0.1
WNVZ	Wahianoa	0.92	33	P	Pg	08 22 08.7	-1.1
WNVZ				S	Sg	08 22 21.3	-0.7
TRVZ	Turoa	0.93	30	P	Pg	08 22 08.9	-1.1
TRVZ				S	Sg	08 22 21.4	-0.8
MOVZ	Moawhango	0.93	42	P	Pb	08 22 08.4	-1.0
MOVZ				S	Sg	08 22 21.0	-1.3
DVHZ	Dannevirke	0.95	102	P	Pb	08 22 10.1	+0.4
DVHZ				S	Sb	08 22 23.3	+1.3
DRZ	Dome Shelter	0.95	30	P	Pg	08 22 09.3	-1.1
WHVZ	Whangaehu Hut	0.96	31	P	Pg	08 22 09.2	-1.2
FWVZ	Far West T-bar	0.97	29	P	Pb	08 22 09.2	-0.9
PNHZ	Pukenui	0.98	79	P	Pb	08 22 09.7	-0.5
TIWZ	Tintock	0.98	134	P	Pb	08 22 10.6	+0.4
PREZ	Palmer Road	0.98	321	P	Pb	08 22 10.7	+0.4
VRZ	Vera Road	0.99	351	P	Pb	08 22 10.3	-0.1
TUVZ	Tukino	1.00	33	P	Pb	08 22 10.1	-0.6
CAW	Cannon Point	1.00	175	P	Pb	08 22 10.2	-0.5
DUWZ	D’Urville Isla	1.05	228	P	Pb	08 22 10.5	-1.0
BHHZ	Black Hill Sta	1.05	55	P	Pb	08 22 10.1	-1.4
NGZ	Ngauruhoe	1.05	28	P	Pb	08 22 10.7	-0.9
SNVZ	South Ngauruho	1.06	30	P	Pb	08 22 10.9	-0.9
NEZ	North Egmont	1.07	321	P	Pb	08 22 12.0	+0.3
NMEZ	Namu Road	1.08	309	P	Pb	08 22 12.3	+0.3
DREZ	Durham Road	1.08	327	P	Pb	08 22 12.6	+0.6
KHEZ	Kahui Hut	1.09	318	P	Pb	08 22 12.4	+0.3
KHEZ	Kahui Hut	1.09	318	P	Pb	08 22 12.5	+0.4
OTVZ	Oturere	1.09	30	P	Pb	08 22 11.3	-0.9
NNVZ	North Ngauruho	1.10	28	P	Pb	08 22 11.3	-1.0
TWVZ	Taurewa	1.10	20	P	Pb	08 22 10.8	-1.5
WTVZ	West Tongariro	1.10	27	P	Pb	08 22 11.1	-1.3
ETVZ	East Tongariro	1.13	31	P	Pb	08 22 12.2	-0.7
MTW	Mount Morrison	1.13	159	P	Pb	08 22 12.3	-0.5
KRVZ	Karewarewa	1.14	28	P	Pb	08 22 12.5	-0.5
WPHZ	Waipukurau	1.14	88	P	Pb	08 22 13.3	+0.3
BFZ	Birch Farm	1.14	121	P	Pb	08 22 12.8	-0.2
BFZ	Birch Farm	1.14	121	P	Pb	08 22 12.5	-0.6
TMVZ	Te Maari	1.15	31	P	Pb	08 22 12.2	-1.0
NTVZ	North Tongarir	1.15	29	P	Pb	08 22 12.2	-1.0
PKE	Pukeiti	1.18	320	P	Pn	08 22 14.2	+0.8
NBEZ	Newall Road No	1.19	315	P	Pn	08 22 13.9	+0.4
WEL	Wellington	1.19	187	P	Pn	08 22 13.2	-0.3
SNZO	South Karori	1.22	189	P	Pn	08 22 13.8	-0.1
TCW	Tory Channel	1.22	205	P	Pn	08 22 12.8	-1.1
TMWZ	Te Maipa	1.23	145	P	Pn	08 22 13.7	-0.4
CPWZ	Castlepoint	1.25	131	P	Pn	08 22 15.6	+1.3
KATZ	Kakaramea	1.27	27	P	Pn	08 22 13.9	-0.8
PRHZ	Porangahau	1.30	98	P	Pn	08 22 15.3	+0.3
KWHZ	Kaweka Forest	1.32	59	P	Pn	08 22 14.9	-0.5
PAWZ	Paruwai Farm	1.32	164	P	Pn	08 22 15.7	+0.3
RITZ	Rihia Road	1.33	32	P	Pn	08 22 15.4	0.0
RATZ	Rangitukua	1.39	27	P	Pn	08 22 16.5	+0.2
TRWZ	Traveller	1.41	157	P	Pn	08 22 17.3	+0.7
PXZ	Pawanui	1.47	88	P	Pn	08 22 17.2	-0.1
PLWZ	Palliser	1.48	171	P	Pn	08 22 17.1	-0.5
MCHZ	McNeill Hill	1.50	64	P	Pn	08 22 18.9	+1.2
KAHZ	Kahuranaki	1.51	79	P	Pn	08 22 18.2	+0.2
BKZ	Black Stump Fm	1.51	52	P	Pn	08 22 18.4	+0.3
BKZ	Black Stump Fm	1.51	52	P	Pn	08 22 18.2	+0.1
WATZ	Wairara	1.52	24	P	Pn	08 22 18.4	+0.3
TUWZ	Tuamarina	1.53	210	P	Pn	08 22 17.5	-0.7
HIZ	Hauiti	1.59	357	P	Pn	08 22 18.7	-0.4
HIZ	Hauiti	1.59	357	P	Pn	08 22 18.7	-0.4
NNZ	Nelson	1.63	227	P	Pn	08 22 19.8	+0.1
CMWZ	Cape Campbell	1.73	199	P	Pn	08 22 23.6	+2.6
KUTZ	Kaahu Road	1.75	23	P	Pn	08 22 20.7	-0.6
NMHZ	Naumai	1.75	55	P	Pn	08 22 22.5	+1.1
TKNZ	Takaka Hill	1.78	238	P	Pn	08 22 21.6	-0.1
ARHZ	Aropaoanui	1.79	63	P	Pn	08 22 22.4	+0.7
BSWZ	Blackbirch Sta	1.80	207	P	Pn	08 22 22.4	+0.4
TLZ	Tolley Road	1.83	15	P	Pn	08 22 21.4	-1.0
ALRZ	Allen Road	1.88	35	P	Pn	08 22 22.8	-0.2
MTHZ	Maungataniwha	1.92	50	P	Pn	08 22 23.8	+0.1
PRRZ	Plateau Road	1.96	35	P	Pn	08 22 23.8	-0.2
QRZ	Quartz Range	1.98	248	P	Pn	08 22 24.0	-0.4
QRZ	Quartz Range	1.98	248	P	Pn	08 22 24.1	-0.4
RAHZ	Arahi	2.03	55	P	Pn	08 22 25.6	+0.4
MRNZ	Matariki Terra	2.11	232	P	Pn	08 22 26.6	+0.4
RRRZ	Republican Roa	2.14	35	P	Pn	08 22 26.4	-0.2
MUGZ	Murupara	2.15	41	P	Pn	08 22 27.5	+0.7
RTZ	Ruatahuna	2.16	47	P	Pn	08 22 30.2	+3.1
THZ	Tophouse	2.27	223	P	Pn	08 22 28.8	+0.3
TOZ	Tahuroa Road	2.41	10	P	Pn	08 22 29.3	-1.0
URZ	Urewera	2.49	43	P	Pn	08 22 30.9	-0.5
KHZ	Kahutara	2.54	204	P	Pn	08 22 31.7	-0.4
KHZ	Kahutara	2.54	204	P	Pn	08 22 31.7	-0.4
OPRZ	Ohinepanea	2.58	29	P	Pn	08 22 34.7	+2.0
TGRZ	Tauranga	2.58	24	P	Pn	08 22 35.1	+2.4
RIGZ	Rimuhau	2.59	58	P	Pn	08 22 32.5	-0.3
MWZ	Matawai	2.67	49	P	Pn	08 22 33.8	-0.2
DSZ	Denniston Nort	2.89	235	P	Pn	08 22 37.2	+0.2
AWAZ	Awhitu Peninsu	3.05	355	P	Pn	08 22 39.8	+0.7
GVZ	Greta Valley S	3.20	206	P	Pn	08 22 40.0	-1.2
HAZ	Te Kaha	3.22	44	P	Pn	08 22 42.2	+0.8
PKGZ	Pakihiroa	3.29	49	P	Pn	08 22 42.0	-0.5
LTZ	Lake Taylor	3.35	216	P	Pn	08 22 42.4	-0.9
INZ	Inchbonnie	3.72	224	P	Pn	08 22 47.6	-0.7
OXZ	Oxford	3.89	213	P	Pn	08 22 48.3	-2.3
AKCZ	Akaroa Harbour	4.06	201	P	Pn	08 22 51.1	-1.9
WCZ	Waipu Caves	4.19	353	P	Pn	08 22 54.6	-0.2
WVZ	Waitaha Valley	4.34	225	P	Pn	08 22 59.7	+3.0
TMZ	Timaru	5.18	213	P	Pn	08 23 06.5	-1.9
DCZ	Deep Cove	7.85	224	P	Pn	08 23 49.1	+4.1

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*NNC **15** 08:24:54.9±4.4, 37°.04N×70°.67E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=34.8km s-min=25.2km az=167.0*
*IDC **15** 08:24:56.7±3.1, 36°.53N×71°.44E, h177km±28km, mb3.2/4, mbtmp3.8/11, MS2.9/1, Error ellipse: s-maj=26.4km s-min=24.0km az=34.0*
*SOME **15** 08:24:57.0, 38°.10N×71°.63E, h0km*

ISC 15 08:24:54.6±0.8, 36°.59N±0°.07×71°.00E±0°.07, h188km, n34, σ2s.11/40, mb3.2/4, 6C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	5.60	353	ePg	Pn	08 26 16.6	+0.1
	7.7nm,0.2s						
IUG				eLg	Lg	08 27 18.1	
	111nm,0.7s						
AML	Almayashu	5.91	20	P	Pn	08 26 20.2	-0.7
	SNR=18						
AML	Almayashu	5.91	20	⇑P	Pn	08 26 20.0	-0.9
	1.2nm,0.6s						
AML				⇑S	Sn	08 27 25.7	-3.3
	20nm,0.7s						
UCH	Uchtor	6.25	25	P	Pn	08 26 24.3	-1.1
	SNR=7.9						
MRKS	Merke	6.38	15	ePg	Pn	08 26 26.3	-0.5
	5.5nm,0.3s						
MRKS				eLg	Lg	08 27 36.1	
	32nm,0.5s						
KK31	Karatay Array	6.51	357	⇓P	Pn	08 26 28.2	-0.2
	1.7nm,0.3s,baz=179,slow=13,SNR=72						
KK31				⇑S	Sn	08 27 38.7	-3.9
	9.4nm,0.5s,baz=187,slow=25,SNR=3.7						
AAK	Ala-Archa	6.61	23	P	Pn	08 26 31.8	+2.0
	SNR=6.0						
AAK	Ala-Archa	6.61	23	P	Pn	08 26 31.4	+1.6
	6.9nm,0.4s,baz=193,slow=5.3,SNR=21						
AAK				S	Sn	08 27 41.8	-3.3
	3.8nm,0.3s,baz=131,slow=19,SNR=5.6						
AAK				LR	LR	08 29 29.0	
	comp=Z,103nm,21.8s,baz=340,slow=42						
KBK	Karagaybulak	6.78	25	P	Pn	08 26 34.4	+2.4
	SNR=5.3						
TKM2	Tokmak 2	7.24	28	P	Pn	08 26 39.8	+1.7
	SNR=19						
TKM2	Tokmak 2	7.24	28	⇑P	Pn	08 26 38.7	+0.6
	11nm,0.5s						
TKM2				⇓S	Sn	08 27 58.6	-1.5
	4.4nm,0.6s						
KTBS	Karatobe	8.34	30	ePg	Pn	08 27 04.3	+12
	1.3nm,0.5s						
KTBS				eLg	Lg	08 28 43.4	
	6.6nm,0.7s						
GEYT	Alibeck	10.36	281	P	P	08 27 26.0	-0.7
	5.2nm,0.5s,baz=90,slow=11,SNR=7.8						
GEYT				S	Sn	08 29 11.3	-2.8
	2.1nm,0.5s,baz=126,slow=10.0,SNR=2.2						
PYUN	Piuthan	13.20	127	eP	Pn	08 27 51.6	-3.6
	14nm,0.4s						
MKAR	Makanchi Array	13.22	36	P	Pn	08 27 56.4	+1.3
	0.5nm,0.6s,baz=200,slow=10.0,SNR=2.5						
DANN	Dangsing	13.54	124	eP	Pn	08 27 57.0	-2.6
	14nm,0.4s						
GKN	Gorkha	14.35	123	eP	Pn	08 28 07.4	-2.2
	6.7nm,0.3s						
DMN	Daman	14.92	123	eP	Pn	08 28 14.8	-1.9
AB31	Akbulak array	15.01	331	⇓P	P	08 28 19.5	+1.3
	0.9nm,0.4s						
AB31				⇓S	S	08 31 01.1	-3.8
	6.0nm,0.8s,baz=161,slow=20,SNR=9.3						
KURBB	Kurchatov Arra	15.04	19	P	Pn	08 28 17.8	+0.2
	1.2nm,0.7s,baz=211,slow=8.3,SNR=3.9						
PKIN	Phulchoki	15.14	122	eP	Pn	08 28 17.9	-1.5
	20nm,0.6s						
PKI	Pulchoki	15.15	122	eP	Pn	08 28 18.0	-1.6
GUN	Gumba	15.26	120	eP	Pn	08 28 19.4	-1.5
	5.2nm,0.3s						
JIRN	Jiri	15.63	120	eP	Pn	08 28 23.7	-1.8
	27nm,0.5s						
RAMN	Ramite	16.36	122	eP	P	08 28 32.1	-1.5
BVAR	Borovoye Array	16.44	359	P	P	08 28 35.7	+1.7
	0.6nm,0.5s,baz=272,slow=4.2,SNR=3.2						
AKTO	Aktyubinsk	16.70	330	P	Pn	08 28 40.3	+2.5
	1.5nm,0.5s,baz=137,slow=4.6,SNR=6.3						
AKTO				S	S	08 31 42.0	+0.6
	0.8nm,0.5s,baz=75,slow=19,SNR=2.4						
AKTO	Aktyubinsk	16.70	330	⇑P	Pn	08 28 40.6	+2.8
	1.7nm,0.8s						
AKTO				⇑S	S	08 31 41.4	0.0
	3.7nm,1.1s						
TAPN	Taplejung	16.89	118	eP	P	08 28 38.5	-1.0
	14nm,0.5s						
ZALV	Zalesovo Beam	19.83	25	P	P	08 29 12.8	+2.1
	3.4nm,0.5s,baz=226,slow=11,SNR=14						
ARCES	ARCESS Array B	41.06	338	P	P	08 32 24.8	+5.5
	1.1nm,0.7s,baz=109,slow=8.1,SNR=4.1						
	1.1nm,0.7s						
YKA	Yellowknife Ar	81.15	3	P	P	08 36 52.3	+3.6
	0.3nm,0.7s,baz=350,slow=5.6,SNR=7.9						

	0.3nm,0.7s						
WRA	Warramunga Arr	82.04	122	P	P	08 36 55.5	+1.5
	0.6nm,1.1s,baz=326,slow=4.8,SNR=6.4						
	0.6nm,1.1s						
ASAR	Alice Springs	84.31	125	P	P	08 37 07.1	+1.5
	0.4nm,0.8s,baz=304,slow=5.2,SNR=5.8						
	0.4nm,0.8s						

IDC 15 08:27:02.7±1.5**, 3°.73S**×**125°.69E, h0^{km}, mb3.3**/3**, mbtmp3.2**/4**, ML3.3**/1**, Error ellipse: s-maj=176.2km s-min=25.1km az=64.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.19	153	P	P	08 31 18.6	+1.4
	0.1nm,0.3s,baz=332,slow=10,SNR=5.2						
	0.1nm,0.3s						
ASAR	Alice Springs	21.35	159	P	P	08 31 50.5	-1.2
	0.2nm,0.5s,baz=345,slow=12,SNR=4.7						
	0.2nm,0.5s						
MKAR	Makanchi Array	63.18	328	P	P	08 37 30.7	-1.9
	0.3nm,0.6s,baz=134,slow=8.0,SNR=3.9						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	67.52	330	P	P	08 38 02.2	+1.5
	0.4nm,0.5s,baz=132,slow=7.9,SNR=6.7						
	0.4nm,0.5s						

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*LDG **15** 08:27:51.5±0.2, 42°.91N×1°.63W, h10^{km}, Md2.5/2, Ml2.7/7, Error ellipse: s-maj=3.8km s-min=2.8km az=131.0*

*STR **15** 08:27:52.4±0.9, 43°N±3°×°±°, h5^{km}, MLv2.2/8, Error ellipse: s-maj=0.0km s-min=0.0km az=99.4, preliminary*

*MDD **15** 08:27:52.9±0.3, 42°.91N×1°.59W, h11^{km}, mb_Lg2.5/12, Error ellipse: s-maj=2.4km s-min=1.3km az=159.0*

ISC 15 08:27:51.7±0.8**, 42°.90N**±0°.02×**1°.59W**±0°.02**, h11**^{km}±5^{km}**, n31, σ1^s.26**/60**, 2C-1D, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EARA	Aranguren	0.13	176	⇑Pg	Pg	08 27 54.3	-0.6
EARA				Sg	Sg	08 27 56.4	-0.7
EARA	Aranguren	0.13	176	Pg	Pg	08 27 54.2	-0.6
EARA				Sg	Sg	08 27 56.6	-0.5
EORO	Oroz-Betelu	0.21	92	⇓Pg	Pg	08 27 55.8	-0.3
EORO				Sg	Sg	08 27 59.0	-0.3
EORO				*i* Vmb_Lg		08 28 00.4	
EALK	Alkurruntz	0.33	11	⇑Pg	Pg	08 27 58.5	+0.2
EALK				Sg	Sg	08 28 02.9	+0.2
EALK				*i* Vmb_Lg		08 28 05.4	
EALK	Alkurruntz	0.33	11	Pg	Pg	08 27 58.6	+0.2
EALK				Sg	Sg	08 28 04.0	+1.3
SJPF	Ste Jean	0.34	51	*e*Pg	Pg	08 27 58.5	-0.1
SJPF				*e*Sg	Sg	08 28 03.5	+0.3
	199nm,0.3s						
OSSF	Osses	0.43	34	Pg	Pg	08 28 00.2	0.0
OSSF				Sg	Sg	08 28 06.5	+0.6
ATE	Arette	0.68	74	Pg	Pg	08 28 04.7	-0.1
ATE				Sg	Sg	08 28 13.9	+0.1
ETSF	Etsaut	0.76	90	*e*Pg	Pg	08 28 06.1	-0.2
ETSF				*e*Sg	Sg	08 28 16.3	0.0
	18nm,0.2s						
CANF	Canfranc	0.80	99	Pg	Pg	08 28 07.6	+0.5
TERF	Tercis-les-Bai	0.85	24	Pg	Pg	08 28 06.8	-1.4
VIEF	Viey	1.19	90	Pg	Pb	08 28 14.9	+0.7
ECHI	Chisagues Biel	1.33	99	Pg	Pg	08 28 16.9	-0.4
ECHI				Sg	Sg	08 28 34.7	0.0
ECHI				*i* Vmb_Lg		08 28 39.3	
ECHI	Chisagues Biel	1.33	99	Pg	Pb	08 28 17.6	+0.8
EPF	Esparros	1.42	84	*e*Pg	Pn	08 28 18.2	+0.8
EPF				*e*Sg	Sb	08 28 36.9	+0.6
	14nm,0.2s						
ESAC	San Caprasio	1.44	144	Pg	Pg	08 28 19.6	+0.3
ESAC				Sg	Sb	08 28 36.8	0.0
MLS	Moulis	1.97	87	Pg	Pg	08 28 29.2	-0.3
SALF	Salau	2.05	93	Pn	Pb	08 28 28.9	0.0
SALF				Pg	Pg	08 28 31.7	+0.7
SALF				Sg	Sg	08 28 58.2	+0.6
ETOR	Torete	2.11	190	Pn	Pn	08 28 28.7	+1.9
ETOR				Sg	Sb	08 28 57.7	+1.7
ETOR				*i* Vmb_Lg		08 29 03.3	
ERTA	Horta de San J	2.41	143	Pn	Pn	08 28 32.5	+1.4
ERTA				Sg	Sb	08 29 07.2	+2.4
ERTA				*i* Vmb_Lg		08 29 15.1	
EPOB	Poblet	2.52	127	Pn	Pn	08 28 31.6	-0.8
EPOB				Pg	Pb	08 28 37.5	+0.7
EPOB				Sn	Sn	08 29 03.4	+0.3
EPOB				Sg	Sg	08 29 11.4	-1.1
EPOB				*i* Vmb_Lg		08 29 20.1	
EMOS	Mosqueruela	2.67	161	Pg	Pb	08 28 39.4	-0.1
EMOS				Sg	Sg	08 29 16.2	-1.2
EMOS				*i* Vmb_Lg		08 29 22.8	
EARI	Arriondas	2.68	280	Pn	Pn	08 28 34.7	0.0
EARI				Sg	Sb	08 29 14.0	+1.5
MTLF	Montolieu	2.82	80	*e*P	Pn	08 28 37.7	+1.1
MTLF				*e*Sn	Sn	08 29 06.4	-4.2
	3.8nm,0.3s						
GUD	Guadarrama	2.96	221	Sn	Sn	08 29 14.5	+0.4
GUD				Sg	Sg	08 29 25.0	-1.7
GUD				*i* Vmb_Lg		08 29 29.4	
RJF	Les Rejaudoux	3.29	42	*e*P	Pn	08 28 44.7	+1.7
RJF				*e*Sn	Sn	08 29 18.0	-4.0
	2.0nm,0.1s						
CAF	Calviac	3.33	51	*e*P	Pn	08 28 43.8	+0.2
CAF				*e*Sn	Sn	08 29 21.7	-1.4
	3.9nm,0.2s						
ECAL	Calabor	3.93	258	Pn	Pn	08 28 53.0	+1.0
ECAL				*i* Vmb_Lg		08 30 02.0	
PAB	San Pablo	3.94	213	Pn	Pn	08 28 52.6	+0.5
PAB				Sn	Sn	08 29 37.0	-1.4
PAB				Sg	Sg	08 29 57.1	-1.2
PAB				*i* Vmb_Lg		08 30 00.9	
TCF	Toulx Ste Croi	4.34	37	*e*P	Pn	08 28 58.4	+0.9
TCF				*e*Sn	Sn	08 29 46.8	-1.3
	1.3nm,0.2s						
BGF	Bois d'Agland	4.83	39	*e*P	Pn	08 29 04.2	-0.1
BGF				*e*Sn	Sn	08 29 57.1	-3.1
	4.7nm,0.3s						

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*IDC **15** 08:43:46.9±2.6, 30°.35S×178°.19W, h0^{km}, mb3.9/3, mbtmp3.9/4, ML3.3/1, Error ellipse: s-maj=68.1km s-min=21.2km az=124.0*

ISC 15 08:43:48.2±2.4**, 30°.5S**±0°.1×**177°.7W**±0°.4**, h35**^{km}**, n12, σ1^s.50**/8**, mb4.0**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.23	353	Pn	Pn	08 44 09.1	+0.2
	176nm,0.3s,baz=111,slow=23,SNR=18						
RAO				Sn	Sn	08 44 22.4	-1.9
	466nm,0.3s,baz=109,slow=22,SNR=8.5						
URZ	Urewera	8.85	207	Pn	Pn	08 45 53.7	+0.1
	0.3nm,0.3s,baz=68,slow=22,SNR=1.0						
URZ				Sn	Sn	08 47 29.8	-2.2
	1.3nm,0.3s,baz=296,slow=20,SNR=7.1						
	5.2nm,0.9s						
STKA	Stephens Creek	34.68	257	P	P	08 50 36.2	+1.6
	1.2nm,0.4s,baz=102,slow=12,SNR=9.4						
	1.2nm,0.4s						
ASAR	Alice Springs	43.33	267	P	P	08 51 47.4	+0.3
	0.4nm,0.4s,baz=105,slow=7.1,SNR=12						
	0.4nm,0.4s						
WRA	Warramunga Arr	44.33	272	P	P	08 51 55.1	0.0
	0.9nm,0.4s,baz=111,slow=7.7,SNR=13						
	0.9nm,0.4s						
H03S2	Juan Fernandez	80.23	123	T	T	10 25 10.6	
	baz=238,slow=74,SNR=6.4						
H03S1	Juan Fernandez	80.25	123	T	T	10 25 09.2	
	baz=238,slow=74,SNR=6.3						
H03S3	Juan Fernandez	80.25	123	T	T	10 25 11.1	
	baz=238,slow=74,SNR=8.5						
H03N3	Juan Fernandez	80.43	123	T	T	10 25 21.7	
	baz=241,slow=72,SNR=4.8						
H03N2	Juan Fernandez	80.43	123	T	T	10 25 21.3	
	baz=241,slow=72,SNR=4.5						
H03N1	Juan Fernandez	80.44	123	T	T	10 25 19.4	
	baz=241,slow=72,SNR=7.5						
FINES	FINESS Array B	145.29	340	PKPbc	PKiKP	09 03 25.4	0.0
	0.8nm,0.5s,baz=57,slow=5.1,SNR=8.6						

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*IDC **15** 09:04:42.0±0.9, 18°.49N×62°.05W, h0^{km}, mb3.8/9, mbtmp3.9/11, ML3.4/2, MS3.4/5, Error ellipse: s-maj=28.8km s-min=18.5km az=54.0*

*TRN **15** 09:04:45.6, 18°.30N×62°.39W, h8^{km}, MD4.1*

ISC 15 09:04:44.4±2.1**, 18°.51N**±0°.06×**62°.24W**±0°.06**, h11**^{km}±12^{km}**, n38, σ1^s.21**/40**, mb4.0**/9**, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMRT	St. Maarten	0.92	240	*e*P	Pg	09 05 02.2	+0.1
SMRT				*e*S	Sg	09 05 13.7	-0.4
ANWB	Willy Bob	0.94	153	*e*P	Pn	09 05 04.3	+0.7
SEUS	St. Eustatius	1.24	215	*e*P	Pn	09 05 08.0	+0.4
SEUS				*e*S	Sg	09 05 23.2	-1.1
SABA	Saba	1.30	227	*e*P	Pn	09 05 08.9	+0.3
SABA				*e*S	Sb	09 05 25.6	-0.1
ANBD	Bethesda, Anti	1.53	163	*e*P	Pn	09 05 12.3	+0.7
MBFL	Flemmings, Mon	1.75	179	*e*P	Pn	09 05 15.9	+1.1
MLYT	Lee's Yard	1.78	179	*e*P	Pn	09 05 16.5	+1.3
MLYT				*e*S	Sn	09 05 38.3	+0.5
ABD	La Joyeuse, An	2.15	160	*e*P	Pn	09 05 21.4	+1.2
ABD				*e*S	Sn	09 05 49.1	+2.2
H05N1	Guadeloupe/Mar	2.46	153	Pn	Pn	09 05 25.3	+0.8
H05N1				Sn	Sn	09 05 56.0	+1.5
CBE	Ff, Capester	2.50	166	*e*P	Pn	09 05 26.6	+1.5
CBE				*e*S	Sn	09 05 55.7	0.0
MAGL	Barre de l’ile	2.71	160	*e*P	Pn	09 05 29.7	+1.8
MAGL				*e*S	Sn	09 06 01.3	+0.6
SJG	San Juan	3.74	264	Pn	Pn	09 05 43.8	+1.8
	5.1nm,0.3s,baz=93,slow=10,SNR=8.6						
SJG				Sn	Sn	09 06 26.3	+0.3
	6.9nm,0.3s,baz=9.0,slow=19,SNR=2.3						
SJG				LR	LR	09 07 21.1	
	comp=Z,256nm,18.3s,baz=102,slow=41						
	21nm,0.5s						
BIM	Bigot	4.13	164	*e*P	Pn	09 05 49.9	+2.4
BIM	Bigot	4.13	164	*e*S	Sn	09 06 35.9	+0.1
MPOM	Morne Pois Mar	4.26	162	*e*P	Pn	09 05 51.8	+2.6
MPOM	Morne Pois Mar	4.26	162	*e*S	Sn	09 06 39.1	+0.2
AOPR	Arecibo Observ	4.29	268	*e*P	Pn	09 05 51.1	+1.5
SLBI	Saint Lucia, B	4.63	165	*e*P	Pn	09 05 55.2	+1.0
SLBI	Saint Lucia, B	4.63	165	*e*S	Sn	09 06 47.6	-0.4
SLB	Belfond	4.80	166	*e*P	Pn	09 05 57.8	+1.1
SDV	Santo Domingo	12.57	222	LR	LR	09 11 57.1	
	comp=Z,61nm,19.0s,baz=80,slow=34						
ROSC	El Rosal	18.00	222	P	Pn	09 08 56.5	+1.4
	1.5nm,0.3s,baz=26,slow=5.7,SNR=4.1						
ROSC				LR	LR	09 15 59.0	
	comp=Z,130nm,19.6s,baz=42,slow=37						
	9.1nm,0.5s						
BDFB	Brasilia	36.72	157	P	P	09 11 50.0	-1.9
	2.1nm,0.7s,baz=331,slow=11,SNR=3.7						
	2.1nm,0.7s						
TXAR	Lajitas Array	39.19	294	P	P	09 12 12.9	+0.2
	0.2nm,0.5s,baz=109,slow=9.0,SNR=6.5						
	0.2nm,0.5s						
LVC	Limon Verde	41.39	189	LR	LR	09 31 06.8	
	comp=Z,73nm,18.5s,baz=204,slow=38						
CPUP	Villa Florida	44.83	174	P	P	09 12 57.1	-1.5
	1.7nm,0.7s,baz=348,slow=6.1,SNR=5.2						
	1.7nm,0.7s						
PDAR	Pinedale Array	46.59	312	P	P	09 13 13.2	+0.4
	2.0nm,0.7s,baz=112,slow=9.7,SNR=22						
	2.0nm,0.7s						
NVAR	Mina Array Bea	52.31	305	P	P	09 13 57.8	+1.2
	0.3nm,0.6s,baz=69,slow=8.1,SNR=3.9						
	0.3nm,0.6s						
NEW	Newport	53.16	317	P	P	09 14 02.7	+0.3
	2.5nm,0.8s,baz=148,slow=5.8,SNR=6.0						
	2.5nm,0.8s						
H10N3	ASCENSION HYDR	53.88	115	T	T	10 12 25.1	
	baz=299						
H10N2	ASCENSION HYDR	53.88	115	T	T	10 12 23.9	
	baz=299						
H10N1	ASCENSION HYDR	53.90	115	T	T	10 12 23.6	
	baz=299						
H10S3	ASCENSION HYDR	54.29	116	T	T	10 12 54.1	
	baz=295,slow=74,SNR=10						
H10S2	ASCENSION HYDR	54.31	116	T	T	10 12 55.8	
	baz=285,slow=74,SNR=4.7						
YKA	Yellowknife Ar	56.73	334	P	P	09 14 28.1	+0.2
	1.1nm,0.8s,baz=107,slow=7.4,SNR=12						
YKA				PcP	PcP	09 15 23.7	-0.2
	0.1nm,0.6s,baz=96,slow=4.5,SNR=3.8						
	1.1nm,0.8s						
TORD	Torodi Ar. Bea	61.48	85	P	P	09 15 00.6	-1.1
	0.5nm,0.8s,baz=310,slow=5.6,SNR=2.3						
	0.5nm,0.8s						
DLBC	Dease Lake	62.80	327	LR	LR	09 43 15.0	
	comp=Z,48nm,18.4s,baz=114,slow=37						
ILAR	Eielson Array	71.15	333	P	P	09 16 02.0	-0.8
	0.7nm,0.8s,baz=91,slow=4.4,SNR=7.9						
	0.7nm,0.8s						

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*IDC **15** 09:07:52.7±1.9, 41°.55S×174°.19E, h0^{km}, mb3.3/2, mbtmp3.3/4, ML3.3/2, Error ellipse: s-maj=50.2km s-min=25.8km az=136.0*

*NOU **15** 09:07:55.3, 41°.88S×174°.53E, h14^{km}, MLv4.2/12, Cook Strait, New Zealand*

*WEL **15** 09:07:56.2±0.3, 42°S±3°×17°4E±°, h13^{km}±2^{km}, M3.8/26, ML4.1/26, MLv3.8/26, Error ellipse: s-maj=0.0km s-min=0.0km az=143.4, confirmed*

ISC 15 09:07:55.6±0.9**, 41°.79S**±0°.03×**174°.33E**±0°.03**, h23**^{km}±6^{km}**, n131, σ1^s.31**/138**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.10	293	P	Pb	09 07 59.9	-0.2
CMWZ				S	Sb	09 08 02.9	-0.1
BSWZ	Blackbirch Sta	0.35	282	P	Pb	09 08 03.1	-0.1
BSWZ				S	Sb	09 08 08.8	+0.3
TUWZ	Tuamarina	0.46	320	P	Pb	09 08 04.5	-0.6
TUWZ				S	Sb	09 08 10.5	-1.1
SNZO	South Karori	0.55	30	P	Pb	09 08 07.0	+0.4
TCW	Tory Channel	0.58	356	P	Pb	09 08 06.4	-0.7
WEL	Wellington	0.60	33	P	Pb	09 08 07.9	+0.5
PLWZ	Palliser	0.72	73	P	Pn	09 08 11.3	+0.9
MSWZ	Moikau Station	0.78	62	P	Pn	09 08 12.4	+1.2
MSWZ				S	Sn	09 08 24.3	+2.1
KHZ	Kahutara	0.86	223	P	Pn	09 08 13.9	+1.6
KHZ	Kahutara	0.86	223	P	Pn	09 08 13.9	+1.6
CAW	Cannon Point	0.87	39	P	Pn	09 08 12.7	+0.2
PAWZ	Paruwai Farm	0.91	64	P	Pn	09 08 13.9	+0.8
NNZ	Nelson	0.92	308	P	Pb	09 08 12.6	-0.2
KIW	Kapiti Island	1.02	25	P	Pb	09 08 14.8	+0.2
DUWZ	D’Urville Isla	1.03	342	P	Pn	09 08 14.3	-0.3
THZ	Tophouse	1.07	271	P	Pb	09 08 16.1	+0.6
MTW	Mount Morrison	1.08	55	P	Pb	09 08 16.0	+0.4
TRWZ	Traveller	1.09	70	P	Pb	09 08 16.0	+0.3
OGWZ	Otaki Gorge	1.16	33	P	Pb	09 08 17.3	+0.4
MRNZ	Matariki Terra	1.25	288	P	Pb	09 08 18.9	+0.4
HOWZ	Holdsworth Sta	1.26	45	P	Pb	09 08 18.4	-0.2
TKNZ	Takaka Hill	1.28	306	P	Pb	09 08 19.0	0.0
TMWZ	Te Maipa	1.35	60	P	Pn	09 08 19.5	+0.4
MRZ	Mangatainoka R	1.47	40	P	Pb	09 08 21.3	-0.8
GVZ	Greta Valley S	1.52	219	P	Pb	09 08 22.7	-0.5
TIWZ	Tintock	1.54	50	P	Pn	09 08 22.0	+0.2
CPWZ	Castlepoint	1.66	59	P	Pn	09 08 23.9	+0.7
QRZ	Quartz Range	1.67	305	P	Pb	09 08 25.3	-0.3
QRZ	Quartz Range	1.67	305	P	Pb	09 08 25.3	-0.3
PRWZ	Pori Road	1.74	46	P	Pn	09 08 24.9	+0.4
POWZ	Post Office Ro	1.77	38	P	Pn	09 08 25.3	+0.6
BFZ	Birch Farm	1.82	53	P	Pn	09 08 25.3	-0.1
BFZ	Birch Farm	1.82	53	P	Pn	09 08 25.2	-0.2
LTZ	Lake Taylor	1.83	236	P	Pn	09 08 26.9	+1.3
AMCZ	Amberley	1.86	221	P	Pn	09 08 27.0	+0.9
DSZ	Denniston Nort	1.89	270	P	Pb	09 08 28.4	-1.1
DVHZ	Dannevirke	2.03	44	P	Pn	09 08 28.2	-0.2
WAZ	Wanganui	2.09	14	P	Pb	09 08 32.0	-0.8
TSZ	Takapari Road	2.12	36	P	Pn	09 08 30.1	+0.4
MQZ	McQueen’s Vall	2.28	212	P	Pn	09 08 31.6	-0.2
OXZ	Oxford	2.29	227	P	Pn	09 08 32.0	+0.1
PRHZ	Porangahau	2.31	50	P	Pn	09 08 31.7	-0.5
LREZ	Lake Rotokare	2.33	1	P	Pb	09 08 35.6	-1.2
AKCZ	Akaroa Harbour	2.33	206	P	Pn	09 08 32.9	+0.4
INZ	Inchbonnie	2.34	245	P	Pn	09 08 34.0	+1.3
PNHZ	Pukenui	2.35	38	P	Pn	09 08 32.8	+0.1
WPHZ	Waipukurau	2.35	44	P	Pn	09 08 32.7	-0.1
NMEZ	Namu Road	2.40	352	P	Pb	09 08 36.3	-1.7
PREZ	Palmer Road	2.45	357	P	Pb	09 08 37.5	-1.4
KHEZ	Kahui Hut	2.50	354	P	Pb	09 08 38.3	-1.6
KHEZ	Kahui Hut	2.50	354	P	Pb	09 08 38.1	-1.7
NEZ	North Egmont	2.52	356	P	Pb	09 08 38.8	-1.4
RACZ	Rakaia	2.52	219	P	Pn	09 08 35.1	-0.1
NBEZ	Newall Road No	2.54	352	P	Pb	09 08 38.2	-2.3
DREZ	Durham Road	2.60	358	P	Pb	09 08 39.8	-1.7
PXZ	Pawanui	2.60	48	P	Pn	09 08 35.2	-1.0
PKE	Pukeiti	2.60	354	P	Pb	09 08 38.9	-2.7
MOVZ	Moawhango	2.61	25	P	Pn	09 08 37.4	+1.0
PKVZ	Pokaka	2.61	18	P	Pn	09 08 39.0	+2.5
WNVZ	Wahianoa	2.64	22	P	Pn	09 08 38.4	+1.5
BHHZ	Black Hill Sta	2.65	30	P	Pn	09 08 37.7	+0.8
TRVZ	Turoa	2.65	21	P	Pb	09 08 42.0	-0.6
DRZ	Dome Shelter	2.68	21	P	Pb	09 08 43.5	+0.4
WHVZ	Whangaehu Hut	2.68	21	P	Pn	09 08 39.3	+1.8
VRZ	Vera Road	2.68	7	P	Pn	09 08 39.9	+2.6
MHCZ	Mount Hutt	2.68	229	P	Pn	09 08 37.4	-0.1
FWVZ	Far West T-bar	2.69	21	P	Pn	09 08 39.7	+1.9
TUVZ	Tukino	2.71	22	P	Pn	09 08 39.5	+1.7
KAHZ	Kahuranaki	2.77	45	P	Pn	09 08 37.9	-0.8
NGZ	Ngauruhoe	2.78	21	P	Pb	09 08 44.9	+0.2
SNVZ	South Ngauruho	2.78	21	P	Pn	09 08 40.5	+1.7
OTVZ	Oturere	2.81	22	P	Pn	09 08 40.9	+1.6
NNVZ	North Ngauruho	2.83	21	P	Pb	09 08 44.0	-1.4
WACZ	Wakanui South	2.83	220	P	Pn	09 08 39.6	+0.3
WTVZ	West Tongariro	2.83	20	P	Pn	09 08 41.5	+1.9
TWVZ	Taurewa	2.84	18	P	Pn	09 08 41.6	+1.9
KWHZ	Kaweka Forest	2.85	35	P	Pn	09 08 39.5	-0.2
ETVZ	East Tongariro	2.85	22	P	Pn	09 08 41.5	+1.8
TMVZ	Te Maari	2.87	22	P	Pn	09 08 41.5	+1.5
KRVZ	Karewarewa	2.87	21	P	Pn	09 08 42.0	+2.0
NTVZ	North Tongarir	2.87	21	P	Pn	09 08 41.7	+1.6
MCHZ	McNeill Hill	2.95	38	P	Pn	09 08 40.8	-0.2
WVZ	Waitaha Valley	2.96	243	P	Pn	09 08 42.5	+1.4
KATZ	Kakaramea	3.00	21	P	Pb	09 08 48.0	-0.4
RITZ	Rihia Road	3.04	23	P	Pb	09 08 49.1	+0.1
RPZ	Rata Peaks	3.09	230	Pn	Pn	09 08 43.3	+0.3
	4.3nm,0.3s,baz=55,slow=3.6,SNR=29						
RPZ				Sn	Sn	09 09 18.7	-0.5
	9.4nm,0.3s,baz=320,slow=22,SNR=11						
	11nm,0.3s						
RPZ	Rata Peaks	3.09	230	P	Pn	09 08 43.7	+0.7
RPZ	Rata Peaks	3.09	230	P	Pn	09 08 43.3	+0.3
BKZ	Black Stump Fm	3.09	33	P	Pn	09 08 43.4	+0.4
BKZ	Black Stump Fm	3.09	33	P	Pn	09 08 42.6	-0.5
RATZ	Rangitukua	3.12	21	P	Pb	09 08 50.4	0.0
ARCZ	Arundel	3.17	226	P	Pn	09 08 44.6	+0.5
WATZ	Wairara	3.26	20	P	Pb	09 08 51.7	-1.0
NMHZ	Naumai	3.28	36	P	Pn	09 08 45.8	+0.1
HIZ	Hauiti	3.29	7	P	Pn	09 08 48.2	+2.4
HIZ	Hauiti	3.29	7	P	Pn	09 08 48.1	+2.4
RAHZ	Arahi	3.56	37	P	Pn	09 08 49.2	-0.1
TMZ	Timaru	3.56	222	P	Pn	09 08 49.6	+0.2
ALRZ	Allen Road	3.57	26	P	Pn	09 08 49.2	-0.3
ALRZ				P	Pn	09 08 49.3	-0.3
TLZ	Tolley Road	3.58	15	P	Pn	09 08 51.0	+1.3
PRRZ	Plateau Road	3.64	26	P	Pn	09 08 52.4	+1.8
LBZ	Lake Benmore	4.00	228	P	Pn	09 08 57.0	+1.5
URZ	Urewera	4.12	32	Pn	Pn	09 08 54.8	-2.3
	1.5nm,0.3s,baz=226,slow=18,SNR=9.3						
URZ				Sn	Sn	09 09 43.8	-0.7
	1.3nm,0.3s,baz=153,slow=11,SNR=1.5						
	3.6nm,0.3s						
URZ	Urewera	4.12	32	P	Pn	09 08 57.6	+0.5
URZ	Urewera	4.12	32	P	Pn	09 08 56.9	-0.2
TOZ	Tahuroa Road	4.15	13	P	Pn	09 08 59.5	+2.0
ODZ	Otahua Downs	4.22	218	P	Pn	09 08 58.9	+0.4
ODZ	Otahua Downs	4.22	218	P	Pn	09 08 58.2	-0.3
TGRZ	Tauranga	4.32	21	P	Pn	09 09 03.6	+3.8
TWGZ	Tauwhareparae	4.56	39	P	Pn	09 09 05.2	+2.0
RUGZ	Raukumara Rang	4.60	35	P	Pn	09 09 04.5	+0.7
AWAZ	Awhitu Peninsu	4.72	3	P	Pn	09 09 07.6	+2.2
HAZ	Te Kaha	4.82	35	P	Pn	09 09 05.8	-0.9
ETAZ	East Tamaki Re	4.85	6	P	Pn	09 09 09.4	+2.3
WTAZ	Waiatarua	4.85	2	P	Pn	09 09 10.3	+3.2
WKZ	Wanaka	4.93	230	P	Pn	09 09 08.6	+0.4
RVAZ	Riverhead Bore	5.01	2	P	Pn	09 09 11.9	+2.5
EAZ	Earnscleugh	5.02	225	P	Pn	09 09 09.7	+0.2
WIAZ	Waiheke Island	5.03	7	P	Pn	09 09 11.9	+2.3
MBAZ	Motutapu North	5.03	5	P	Pn	09 09 12.1	+2.5
KUZ	Kuaotunu	5.15	13	P	Pn	09 09 13.0	+1.8
KUZ	Kuaotunu	5.15	13	P	Pn	09 09 13.4	+2.1
ABAZ	Army Bay	5.19	4	P	Pn	09 09 14.4	+2.5
MLZ	Mavora Lakes	5.76	230	P	Pn	09 09 19.9	+0.2
WCZ	Waipu Caves	5.84	0	P	Pn	09 09 23.6	+2.9
SYZ	Scrubby Hill	6.04	216	P	Pn	09 09 24.7	+1.2
SYZ	Scrubby Hill	6.04	216	P	Pn	09 09 24.4	+0.9
CTZ	Chatham Island	6.94	109	P	Pn	09 09 36.3	+0.6
ASAR	Alice Springs	38.10	285	P	P	09 15 12.3	-0.4
	0.3nm,0.5s,baz=120,slow=6.4,SNR=5.3						
	0.3nm,0.5s						
WRA	Warramunga Arr	40.17	290	P	P	09 15 28.5	-1.6
	0.3nm,0.6s,baz=127,slow=8.3,SNR=1.7						
	0.3nm,0.6s						
TORD	Torodi Ar. Bea	150.75	195	PKPbc	PKiKP	09 27 47.7	+0.7
	0.3nm,0.7s,baz=165,slow=2.7,SNR=1.7						

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*NEIC **15** 09:27:28.2±1.4, 30°.26S±0°.05×177°.6W±0°.2, h10^{km}±1^{km}, mb4.4/16, Error ellipse: s-maj=24.0km s-min=5.4km az=75.0*

*IDC **15** 09:27:31.7±2.3, 30°.15S×177°.54W, h45^{km}±18^{km}, mb4.0/9, mbtmp4.2/9, MS3.5/2, Error ellipse: s-maj=24.6km s-min=18.5km az=110.0*

ISC 15 09:27:30.6±0.6**, 30°.28S**±0°.06×**177°.6W**±0°.1**, h35**^{km}**, n48, σ1^s.17**/44**, mb4.3**/17**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.07	344	P	Pn	09 27 48.3	-0.7
	2μm,0.3s,baz=123,slow=6.1,SNR=44						
RAO				S	Sn	09 28 01.7	-1.0
	7μm,0.3s,baz=135,slow=20,SNR=11						
RAO	Raoul Island	1.07	344		Pn	09 27 48.5	-0.6
RAO				Sn	Sn	09 28 03.4	+0.8
URZ	Urewera	9.09	207	P	Pn	09 29 34.3	-4.9
	4.5nm,0.3s,baz=3.2,slow=6.2,SNR=1.5						
URZ				S	Sn	09 31 17.3	-2.9
	5.9nm,0.3s,baz=320,slow=21,SNR=2.1						
RTZ	Ruatahuna	9.44	207	Pn	Pn	09 29 42.6	-1.6
MSVF	Nonsavu	13.11	341	LR	LR	09 34 58.6	
	comp=Z,167nm,18.6s,baz=184,slow=34						
RPZ	Rata Peaks	16.17	211	P	Pn	09 31 12.1	-2.9
	3.4nm,0.6s,baz=52,slow=5.5,SNR=1.9						
RPZ				S	Sn	09 33 58.4	-15
	2.3nm,0.8s,baz=84,slow=18,SNR=1.0						
DZM	Mont Dzumac	16.49	296	LR	LR	09 36 37.3	
	comp=Z,201nm,19.4s,baz=209,slow=33						
ARMA	Armidale	26.53	262	P	P	09 33 05.7	+0.6
ARMA				IAmb	IAmb	09 33 23.0	
	comp=Z,9.0nm,1.1s						
EIDS	Eidsvold	28.09	272	P	P	09 33 20.1	+1.1
EIDS				IAmb	IAmb	09 33 32.5	
	comp=Z,8.0nm,1.1s						
CTAO	Charters Tower	34.14	279	P	P	09 34 13.2	+0.8
STKA	Stephens Creek	34.85	257	P	P	09 34 20.2	+1.7
	comp=Z,5.4nm,0.7s,baz=96,slow=11,SNR=9.5						
	comp=Z,5.4nm,0.7s						
STKA	Stephens Creek	34.85	257	P	P	09 34 19.3	+0.8
BBOO	Buckleboo	39.35	254	P	P	09 34 57.1	+0.5
BBOO				IAmb	IAmb	09 35 05.2	
	comp=Z,15nm,1.1s						
AS31	Alice Springs	43.47	267	P	P	09 35 31.7	+1.0
ASAR	Alice Springs	43.48	267	P	P	09 35 30.8	+0.1
	comp=Z,0.9nm,0.4s,baz=105,slow=7.2,SNR=14						
	comp=Z,0.9nm,0.4s						
ASAR	Alice Springs	43.48	267	P	P	09 35 31.6	+0.9
WB2	Warramunga Arr	44.44	272	P	P	09 35 38.7	+0.3
WB2				IAmb	IAmb	09 35 51.3	
	comp=Z,6.0nm,0.8s						
WRAB	Tennant Creek	44.45	272	P	P	09 35 38.8	+0.3
WRAB				IAmb	IAmb	09 35 51.3	
	comp=Z,4.5nm,0.7s						
WRA	Warramunga Arr	44.45	272	P	P	09 35 38.6	+0.1
	comp=Z,1.7nm,0.3s,baz=110,slow=8.1,SNR=42						
	comp=Z,1.7nm,0.3s						
WRA	Warramunga Arr	44.45	272	P	P	09 35 39.6	+1.1
WB0	Warramunga Arr	44.48	272	P	P	09 35 38.5	-0.2
WB0				IAmb	IAmb	09 35 51.4	
	comp=Z,6.0nm,1.0s						
VNDA	Vanda	48.25	186	P	P	09 36 08.7	+1.2
VNDA				IAmb	IAmb	09 36 11.5	
	comp=Z,1.0nm,0.7s						
KNRA	Kununurra	51.05	274	P	P	09 36 30.8	+1.1
FITZ	Fitzroy Crossi	52.72	270	P	P	09 36 43.4	+1.3
CASY	Casey	55.41	208	P	P	09 37 02.8	+1.8
QSPA	South Pole Qui	59.83	180	P	P	09 37 33.4	+1.1

	comp=Z,5.2nm,0.7s,baz=12,slow=0.9,SNR=31						
	comp=Z,5.2nm,0.7s						
QSPA	South Pole Qui	59.83	180	P	P	09 37 34.0	+1.7
SNAA	Sanae	78.26	178	P	P	09 39 27.6	+1.2
SNAA				IAmb	IAmb	09 39 30.9	
	comp=Z,5.7nm,1.0s						
H03S2	Juan Fernandez	80.23	123	T	T	11 09 00.1	
	baz=246						
H03S1	Juan Fernandez	80.24	123	T	T	11 09 19.7	
	baz=246,slow=74						
H03S3	Juan Fernandez	80.25	123	T	T	11 09 12.5	
	baz=246,slow=74						
H03N3	Juan Fernandez	80.42	123	T	T	11 09 28.4	
	baz=240,slow=71,SNR=6.0						
H03N2	Juan Fernandez	80.42	123	T	T	11 09 38.9	
	baz=240,slow=71,SNR=7.3						
H03N1	Juan Fernandez	80.44	123	T	T	11 09 44.7	
	baz=240,slow=71,SNR=5.5						
PETK	Petropavlovsk-	85.79	345	P	P	09 40 06.1	+0.3
	comp=Z,3.7nm,0.9s,baz=83,slow=4.6,SNR=3.4						
	comp=Z,3.7nm,0.9s						
USRK	Ussuriysk Ar.	87.26	326	P	P	09 40 13.5	+0.3
	comp=Z,1.6nm,0.8s,baz=159,slow=10,SNR=2.2						
	comp=Z,1.6nm,0.8s						
NVAR	Mina Array Bea	87.91	43	P	P	09 40 16.6	-0.2
	comp=Z,0.6nm,0.8s,baz=227,slow=7.4,SNR=5.5						
	comp=Z,0.6nm,0.8s						
TXAR	Lajitas Array	92.02	57	P	P	09 40 35.5	-0.6
	comp=Z,0.4nm,0.9s,baz=212,slow=4.4,SNR=4.0						
	comp=Z,0.4nm,0.9s						
ILAR	Eielson Array	97.73	13	P	P	09 41 00.2	-1.1
	comp=Z,0.2nm,0.9s,baz=188,slow=9.1,SNR=1.5						
	comp=Z,0.2nm,0.9s						
MKAR	Makanchi Array	117.97	310	PKP	PKPdf	09 46 12.5	-0.9
	comp=Z,0.2nm,0.5s,baz=201,slow=2.4,SNR=2.6						
ARCES	ARCESS Array B	138.55	348	PKP	PKPdf	09 46 51.7	0.0
	comp=Z,13nm,1.3s,baz=126,slow=1.6,SNR=3.9						
FINES	FINESS Array B	145.16	340	PKPbc	PKPbc	09 47 02.7	-0.6
	comp=Z,4.0nm,0.5s,baz=50,slow=3.1,SNR=22						
KBZ	Khabaz	145.34	304	PKPbc	PKPbc	09 47 03.9	-0.5
	comp=Z,1.9nm,0.7s,baz=359,slow=7.0,SNR=3.3						
NB2	NORSAR Subarra	148.69	352	PKP	PKPbc	09 47 13.0	-0.5
	comp=Z,1.8nm,1.0s,baz=17,slow=2.6						
NOA	NORSAR Array B	148.69	352	PKPbc	PKPbc	09 47 12.5	-1.0
	comp=Z,1.6nm,0.9s,baz=18,slow=4.2,SNR=2.4						
AKASG	Malin Array Be	151.42	323	PKPbc	PKPbc	09 47 18.6	-1.7
	comp=Z,0.9nm,0.5s,baz=35,slow=2.7,SNR=6.4						
AKASG				PKPab	PKPab	09 47 28.2	-0.4
	comp=Z,1.8nm,0.5s,baz=37,slow=2.9,SNR=9.4						
BRTR	Keskin Array B	152.86	299	PKPbc	PKPbc	09 47 22.9	-1.2
	comp=Z,0.7nm,0.6s,baz=125,slow=3.6,SNR=2.7						
BRTR				PKPab	sPKPdf	09 47 32.4	+1.8
	comp=Z,0.9nm,0.4s,baz=133,slow=4.6,SNR=8.0						
TORD	Torodi Ar. Bea	162.93	178	PKPab	PKPab	09 48 18.6	-0.3
	comp=Z,0.5nm,0.5s,baz=180,slow=3.8,SNR=4.1						

BJI ***15*** *09:59:04.8±0.0, 7°.10S×129°.87E, h103^{km}, mb4.6/27, mB5.3/11*

IDC ***15*** *09:59:09.3±2.0, 6°.81S×129°.86E, h111^{km}±18^{km}, mb4.1/17, mbtmp4.4/20, MS3.1/5, Error ellipse: s-maj=20.7km s-min=11.6km az=74.0*

NEIC ***15*** *09:59:09.7±1.3, 6°.82S±0°.04×130°.00E±0°.07, h121^{km}±8^{km}, mb4.6/24, Error ellipse: s-maj=11.4km s-min=3.4km az=120.0*

DJA ***15*** *09:59:10.0±0.2, 7°S±2°×13°0E±°, h108^{km}±4^{km}, M4.7/31, mb4.6/31, mB5.3/6, MLv4.7/13, Mw4.2/46, Mw(mB)4.7/6*

ISC 15 09:59:08.4±0.3, **6°.90S**±0°.04×**129°.98E**±0°.06, **h104**^{km}, **n141**, σ**2^{s}.22**/144, **mb4.6**/36, **1C**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.69	129	Pn	Pn	09 59 41.9	+4.6
SAUI	Saumlaki	1.69	129	P	Pn	09 59 41.8	+4.6
SAUI	Saumlaki	1.69	129	P	Pn	09 59 41.8	+4.6
BNDI	Bandanaira	2.37	358	P	Pn	09 59 48.8	+2.9
BNDI	Bandanaira	2.37	358	P	Pn	09 59 48.3	+2.4
AAI	Ambon	3.66	331	P	Pn	10 00 05.0	+1.9
MSAI	Masohi	3.69	343	P	Pn	10 00 06.0	+2.5
FAKI	Fak Fak	4.56	30		Pn	10 00 16.3	+1.1
FAKI				Sn	Sn	10 01 06.9	-0.2
FAKI	Fak Fak	4.56	30	P	Pn	10 00 16.0	+0.8
FAKI	Fak Fak	4.56	30	P	Pn	10 00 15.4	+0.2
NLAI	Namlea	4.63	322	P	Pn	10 00 18.6	+2.4
MTN	Manton Dam	6.01	169	Pn	Pn	10 00 37.2	+2.3
MTN	Manton Dam	6.01	169	P	Pn	10 00 35.9	+1.0
SIJI	Sorong	6.13	12	P	Pn	10 00 35.9	-0.6
	38nm,0.2s,baz=203,slow=12,SNR=47						
SIJI				S	Sn	10 01 41.5	-3.8
	42nm,0.2s,baz=143,slow=20,SNR=16						
KDU	Kakadu	6.25	157	P	Pn	10 00 39.4	+1.2
SANI	Sanana	6.25	320	P	Pn	10 00 41.2	+3.0
	25nm,1.0s,0.1nm						
SOEI	Soe	6.32	243	Pn	Pn	10 00 41.3	+2.0
SOEI	Soe	6.32	243	P	Pn	10 00 40.9	+1.6
SOEI	Soe	6.32	243	P	Pn	10 00 40.8	+1.5
	104nm,0.8s,1µm1.0nm						
LBMI	Labuha	6.70	338	P	Pn	10 00 47.5	+3.3
	259nm,0.7s,3µm0.8nm						
RKPI	Ransiki, Papua	6.80	38	P	Pn	10 00 47.6	+2.0
	120nm,0.6s,6µm3.4nm						
MMRI	Maumere	7.86	257	P	Pn	10 01 02.2	+2.1
	50nm,1.2s,0.2nm						
KNRA	Kununurra	8.80	188	Pn	Pn	10 01 11.8	-1.1
KNRA	Kununurra	8.80	188	P	Pn	10 01 11.7	-1.1
BASI	Baing, Sumba	9.86	250	P	Pn	10 01 28.3	+1.0
	77nm,0.6s,1µm						
BKSI	Bulukumba	9.93	279	P	Pn	10 01 29.5	+1.4
	23nm,0.9s						
KAPI	Kappang	10.34	280	P	Pn	10 01 32.8	-1.1
	6.8nm,0.4s,baz=95,slow=8.3,SNR=4.9						
KAPI				LR	LR	10 05 07.8	
	comp=Z,74nm,18.9s,baz=134,slow=35						
KAPI	Kappang	10.34	280		Pn	10 01 33.1	-0.7
MRSI	Marisa	10.87	312	P	Pn	10 01 44.9	+4.0
	55nm,0.8s,1µm						
FITZ	Fitzroy Crossi	11.90	200	Pn	Pn	10 01 51.5	-3.3
TOLI2	Tolitoli	12.15	311	Pn	Pn	10 01 58.0	-0.1
PLAI	Plampang	12.24	260	P	Pn	10 01 57.3	-2.0
PLAI	Plampang	12.24	260	P	Pn	10 01 57.3	-2.0
	24nm,0.8s						
MPSI	Mapaga	12.37	305	P	Pn	10 02 02.8	+1.9
	8.6nm,0.8s						
TWSI	Taliwang, Sumb	13.10	261	P	Pn	10 02 10.1	-0.5
	8.0nm,0.8s						
WB0	Warramunga Arr	13.49	162	Pn	Pn	10 02 13.3	-2.3
WRAB	Tennant Creek	13.63	162		Pn	10 02 15.1	-2.4
WRA	Warramunga Arr	13.64	162	P	Pn	10 02 15.1	-2.4
	19nm,0.3s,baz=338,slow=13,SNR=195						
WRA				S	Sn	10 04 39.2	-8.6
	15nm,0.6s,baz=334,slow=24,SNR=8.9						
WRA				LR	LR	10 08 21.2	
	comp=Z,105nm,19.6s,baz=256,slow=40						
WRA	Warramunga Arr	13.64	162		Pn	10 02 13.6	-3.9
WB2	Warramunga Arr	13.64	162	Pn	Pn	10 02 15.7	-1.9
DAV	Davao City (W)	14.56	342	LR	LR	10 07 39.2	
	comp=Z,42nm,19.6s,baz=56,slow=35						
COEN	Coen	14.74	119	Pn	Pn	10 02 31.9	+0.1
COEN	Coen	14.74	119	P	Pn	10 02 34.4	+2.6
BBKI	Banjar Baru	15.46	282	P	Pn	10 02 42.1	+1.3
	142nm,0.9s						
QIS	Mount Isa	16.47	146	P	Pn	10 02 53.6	+0.2
AS31	Alice Springs	17.09	168	P	Pn	10 03 01.2	+0.2
AS31				IAmb	IAmb	10 03 03.9	
	comp=Z,15nm,0.5s						
ASAR	Alice Springs	17.09	168	P	Pn	10 03 00.9	-0.1
	comp=Z,18nm,0.5s,baz=343,slow=9.6,SNR=316						
ASAR				S	Sn	10 06 03.8	-7.4
	comp=Z,7.3nm,0.6s,baz=353,slow=27,SNR=6.7						
ASAR				ScP	ScP	10 11 03.5	-2.3
	comp=Z,1.0nm,0.7s,baz=8.2,slow=2.0,SNR=1.6						
ASAR	Alice Springs	17.09	168		Pn	10 03 01.2	+0.2
AS01	Alice Springs	17.10	168	P	Pn	10 03 00.4	-0.7
MBWA	Marble Bar	17.30	214	P	P	10 03 03.0	-0.4
MBWA	Marble Bar	17.30	214	P	Pn	10 03 04.2	+0.7
PSA00	Pilbara Seismi	17.57	213		P	10 03 06.1	-0.3
PSA00				IAmb	IAmb	10 03 08.8	
	comp=Z,22nm,0.6s						
PSA00	Pilbara Seismi	17.57	213	P	Pn	10 03 07.3	+0.5
MTSU	Mount Surprise	17.89	130	P	Pn	10 03 13.0	+2.3
WRKA	Warakurna	18.10	185	P	P	10 03 12.5	+0.2
KKM	Kota Kinabalu	18.82	313	P	P	10 03 18.6	-1.6
UGM	Wanagama	19.32	266	P	P	10 03 26.0	+0.3
SBUM	Sibu	20.01	297	P	P	10 03 32.5	-0.6
SBUM				IAmb	IAmb	10 03 35.6	
	comp=Z,20nm,0.7s						
CTA	Charters Tower	20.52	131	P	Pn	10 03 42.3	+0.6
	comp=Z,2.7nm,0.6s,baz=315,slow=12,SNR=4.7						
	comp=Z,2.7nm,0.6s						
OOD	Oodnadatta	21.47	166	P	P	10 03 50.0	+1.4
GIRL	Giralia	21.80	222	P	P	10 03 51.0	-1.1
GIRL	Giralia	21.80	222	P	P	10 03 54.6	+2.5
BBJI	Bungbulang	22.16	267	P	P	10 03 55.7	-0.5
	comp=Z,46nm,1.0s						
MEEK	Meekatharra	22.41	208	P	P	10 03 59.3	+0.7
INKA	Innaminka	23.10	155	P	P	10 04 07.9	+2.5
MULG	Mulgathing	23.57	171	P	P	10 04 11.8	+2.1
QLP	Quilpie	23.82	147	P	P	10 04 16.1	+4.2
FORT	Forrest	23.82	184	P	P	10 04 11.4	-0.5
FORT	Forrest	23.82	184	P	P	10 04 13.6	+1.7
LCRK	Leigh Creek	24.67	163	P	P	10 04 21.9	+2.3
KMBL	Kambalda	25.49	196	P	P	10 04 27.7	+0.6
MORW	Morawa	25.67	209	P	P	10 04 28.6	-0.1
MORW				IAmb	IAmb	10 04 46.9	
	comp=Z,28nm,1.4s						
MORW	Morawa	25.67	209	P	P	10 04 32.0	+3.3
BBOO	Buckleboo	26.39	168	P	P	10 04 35.3	+0.1
BBOO				IAmb	IAmb	10 04 49.9	
	comp=Z,30nm,1.4s						
BBOO	Buckleboo	26.39	168	P	P	10 04 39.4	+4.2
BLDU	Ballidu	26.67	206	P	P	10 04 40.2	+2.5
STKA	Stephens Creek	27.11	158	P	P	10 04 42.8	+1.1
	comp=Z,1.8nm,0.3s,baz=330,slow=9.2,SNR=19						
	comp=Z,1.8nm,0.3s						
STKA	Stephens Creek	27.11	158	P	P	10 04 43.3	+1.7
HTT	Hallett	27.67	164	P	P	10 04 49.4	+2.7
NWAO	Narrogin (SRO)	28.48	203	P	P	10 04 53.9	+0.1
	comp=Z,3.7nm,0.5s,baz=94,slow=21,SNR=1.2						
	comp=Z,3.7nm,0.5s						
NWAO	Narrogin (SRO)	28.48	203	P	P	10 04 54.3	+0.5
BKNI	Bangkinang	29.75	283	P	P	10 05 10.0	+4.7
HNR	Honiara	29.77	97	P	P	10 05 02.1	-3.4
	comp=Z,450nm,0.3s,baz=209,slow=13,SNR=2.0						
RPSI	Rantau Prapat	32.43	286	P	P	10 05 27.1	-1.8
RPSI				IAmb	IAmb	10 05 32.0	
	comp=Z,9.8nm,0.8s						
PHRA	Phrae	38.71	311	P	P	10 06 21.8	-0.8
CM31	Chiang Mai Arr	39.65	310	P	P	10 06 28.7	-1.7
CM31				IAmb	IAmb	10 06 30.6	
	comp=Z,6.5nm,0.8s						
CMAR	Chiang Mai Arr	39.65	310	P	P	10 06 29.4	-1.0
	comp=Z,2.5nm,0.4s,baz=140,slow=7.5,SNR=27						
CMAR				LR	LR	10 24 26.9	
	comp=Z,18nm,18.9s,baz=295,slow=38						
	comp=Z,2.5nm,0.4s						
JNU	Nakatsue	39.81	1	LR	LR	10 25 11.0	
	comp=Z,34nm,18.4s,baz=338,slow=39						
WHN	Wuhan	40.14	339	⇑P	P	10 06 43.1	+8.9
WHN				sP	sP	10 07 21.9	+13
WHN				pmax	pmax		
	comp=Z,34nm,0.8s						
NJ2	Nanjing	40.16	345	*e*P	P	10 06 35.0	+0.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH	PanZhiHua	43.05	322	P	P	10 06 58.8	+0.6
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,4.3s						
MJAR	Matsushiro Arr	43.90	10	P	P	10 07 03.1	-1.6
	comp=Z,2.1nm,0.6s,baz=178,slow=8.9,SNR=6.7						
	comp=Z,2.1nm,0.6s						
KSRS	Korea Array	44.17	358	P	P	10 07 06.7	-0.2
	comp=Z,1.1nm,0.7s,baz=176,slow=9.8,SNR=4.2						
	comp=Z,1.1nm,0.7s						
XAN	Xi'an	45.34	335	P	P	10 07 14.4	-1.9
XAN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BJI	Beijing	48.42	346	P	P	10 07 39.6	-0.5
BJI				pmax	pmax		
	comp=Z,160nm,4.3s						
LZH	Lanzhou	49.31	332	*e*P	P	10 07 49.3	+2.1
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC	Hu-ho-hao-te	50.45	342	*e*P	P	10 07 56.3	+0.7
HHC				pmax	pmax		
	comp=Z,23nm,0.8s						
HHC				pmax	pmax		
	comp=Z,350nm,6.6s						
BTO	Baotou	50.72	340	*e*P	P	10 08 02.3	+4.6
BTO				pP	pP	10 08 26.8	+5.0
BTO				PP	PP	10 09 56.8	+1.9
BTO				S	S	10 15 13.3	+8.0
BTO				pmax	pmax		
	comp=Z,35nm,0.5s						
BTO				pmax	pmax		
	comp=Z,910nm,5.5s						
BTO				LR	LR		
	comp=Z,1µm,8.7s						
BTO				LR	LR		
	comp=Z,910nm,9.5s						
BTO				LR	LR		
	comp=Z,620nm,10.8s						
USRK	Ussuriysk Ar.	50.90	2	P	P	10 07 58.5	-0.3
	comp=Z,3.1nm,0.6s,baz=178,slow=6.8,SNR=6.3						
	comp=Z,3.1nm,0.6s						
TAPN	Taplejung	53.21	312	*e*P	P	10 08 15.3	-1.4
	comp=Z,12nm,0.4s						
RAMN	Ramite	53.82	311	*e*P	P	10 08 19.9	-1.2
	comp=Z,26nm,0.5s						
JIRN	Jiri	54.51	311	*e*P	P	10 08 24.7	-1.5
	comp=Z,9.4nm,0.4s						
GUN	Gumba	54.87	311	*e*P	P	10 08 27.4	-1.4
	comp=Z,21nm,0.4s						
PKI	Pulchoki	55.05	311	*e*P	P	10 08 28.6	-1.5
PKIN	Phulchoki	55.06	311	*e*P	P	10 08 28.5	-1.6
DMN	Daman	55.30	310	*e*P	P	10 08 30.5	-1.3
GKN	Gorkha	55.85	311	*e*P	P	10 08 34.2	-1.4
	comp=Z,10.0nm,0.3s						
DANN	Dangsing	56.70	310	*e*P	P	10 08 39.5	-2.3
	comp=Z,6.9nm,0.5s						
PYUN	Piuthan	57.16	310	*e*P	P	10 08 42.8	-2.1
	comp=Z,4.6nm,0.3s						
ULN	Ulaanbaatar	58.17	342	P	P	10 08 50.0	-1.5
ULN				IAmb	IAmb	10 08 52.6	
	comp=Z,6.3nm,0.8s						
SONM	Songino Array	58.34	342	P	P	10 08 52.5	-0.3
	comp=Z,1.1nm,0.4s,baz=161,slow=5.7,SNR=8.0						
	comp=Z,1.1nm,0.4s						
SONM	Songino Array	58.34	342	P	P	10 08 51.3	-1.5
WMQ	Urumqi	63.30	327	*e*P	P	10 09 24.8	-1.6
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
PETK	Petropavlovsk-	64.24	18	P	P	10 09 31.5	-0.7
	comp=Z,1.5nm,0.4s,baz=163,slow=10,SNR=1.7						
	comp=Z,1.5nm,0.4s						
KSH	Kashi	67.93	318	P	P	10 09 57.1	+0.8
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MK31	Makanchi Array	68.13	327	P	P	10 09 56.5	-0.8
MK31				IAmb	IAmb	10 09 58.0	
	comp=Z,6.3nm,0.8s						
MKAR	Makanchi Array	68.13	327	P	P	10 09 57.0	-0.4
	comp=Z,3.9nm,0.4s,baz=119,slow=8.0,SNR=60						
	comp=Z,3.9nm,0.4s						
MKAR	Makanchi Array	68.13	327	P	P	10 09 56.0	-1.3
MA2	Magadan	68.31	11	P	P	10 09 56.6	-1.4
MAKZ	Makanchi	68.31	327	P	P	10 09 57.2	-1.3
MAKZ				IAmb	IAmb	10 09 59.0	
	comp=Z,7.0nm,0.8s						
ZALV	Zalesovo Beam	71.49	334	P	P	10 10 16.2	-1.4
	comp=Z,5.1nm,0.5s,baz=118,slow=5.0,SNR=10						
	comp=Z,5.1nm,0.5s						
SEY	Seymchan	71.72	11	P	P	10 10 19.2	+0.4
	comp=Z,4.1nm,0.7s,baz=209,slow=4.7,SNR=21						
	comp=Z,4.1nm,0.7s						
KURK	Kurchatov	72.42	329	P	P	10 10 22.2	-1.1
KURK				IAmb	IAmb	10 10 23.7	
	comp=Z,12nm,1.0s						
VNDA	Vanda	72.55	173	P	P	10 10 24.6	+1.0
	comp=Z,16nm,1.4s,baz=355,slow=3.5,SNR=2.0						
	comp=Z,16nm,1.4s						
VNDA	Vanda	72.55	173	P	P	10 10 23.9	+0.3
KKAR	Karatay Array	73.25	319	P	P	10 10 28.4	-0.1
BRVK	Borovoye	78.04	328	P	P	10 10 54.3	-1.2
TIXI	Tiksi	78.39	360	P	P	10 10 55.9	-1.2
GEYT	Alibeck	80.14	310	P	P	10 11 06.4	-0.9
	comp=Z,1.8nm,0.4s,baz=144,slow=5.2,SNR=2.2						
	comp=Z,1.8nm,0.4s						
ABKAR	Akbulak array	82.42	322	P	P	10 11 17.6	-1.4
AKTO	Aktyubinsk	83.98	322	P	P	10 11 26.4	-0.7
	comp=Z,2.1nm,0.5s,baz=113,slow=4.6,SNR=8.0						
	comp=Z,2.1nm,0.5s						
RAYN	Ar Rayn	87.69	294	P	P	10 11 44.1	-1.9
RAYN				IAmb	IAmb	10 11 46.1	
	comp=Z,4.4nm,0.7s						
KBZ	Khabaz	92.61	314	P	P	10 12 09.4	+0.9
	comp=Z,0.8nm,0.3s,baz=262,slow=8.5,SNR=2.0						
	comp=Z,0.8nm,0.3s						
ILAR	Eielson Array	93.27	25	P	P	10 12 09.3	-1.7
	comp=Z,0.5nm,0.7s,baz=247,slow=5.5,SNR=8.3						
	comp=Z,0.5nm,0.7s						
YKA	Yellowknife Ar	107.67	26	PKiKP	PKiKP	10 17 22.3	-0.7
	comp=Z,0.2nm,0.6s,baz=301,slow=1.2,SNR=5.0						
PDAR	Pinedale Array	116.84	45	PKP	PKPdf	10 17 41.5	+0.1
	comp=Z,0.4nm,0.7s,baz=0.0,slow=1.5,SNR=4.4						
ULM	Lac du Bonnet	122.38	33	PKP	PKPdf	10 17 50.8	-0.7
	comp=Z,1.6nm,0.5s,baz=260,slow=6.1,SNR=2.4						
TXAR	Lajitas Array	124.90	59	PKP	PKPdf	10 17 57.7	+0.7
	comp=Z,0.8nm,1.1s,baz=233,slow=1.1,SNR=4.0						
TORD	Torodi Ar. Bea	128.77	281	PKP	PKPdf	10 18 04.2	-0.5
	comp=Z,0.8nm,0.5s,baz=88,slow=1.8,SNR=5.4						
CPUP	Villa Florida	146.21	168	PKPbc	PKPdf	10 18 37.7	+1.3
	comp=Z,4.2nm,0.9s,baz=210,slow=4.0,SNR=6.3						
LPAZ	La Paz	150.81	142	PKPbc	PKPbc	10 18 51.0	+0.4
	comp=Z,0.7nm,0.4s,baz=256,slow=4.2,SNR=2.9						

KRNET ***15*** *10:09:49.3±0.1, 39°.10N×71°.20E, h12^{km}, mb2.5*

ISC 15 10:09:50.2±1.4, **39°.17N**±0°.07×**71°.13E**±0°.05, **h6**^{km}±14^{km}, **n9**, σ**1^{s}.90**/16, **17C**, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	0.60	59	⇑*i*P	Pg	10 10 01.5	-0.4
	baz=51						
DRK				⇑*i*S	Sb	10 10 10.0	-2.4
	baz=51						
GAR	Garm	0.66	256	⇑*i*P	Pg	10 10 02.7	-0.1
	baz=62						
GAR				⇑*i*S	Sb	10 10 12.7	-0.9
	baz=62						
BTK	Batken	0.92	345	⇑*i*P	Pg	10 10 08.5	+0.5
	baz=43						
BTK				⇑*i*S	Sn	10 10 22.8	-0.7
	baz=43						
CHGR	Chuyangaron	1.62	252	⇑*i*P	Pg	10 10 20.4	-0.9
	baz=55						
CHGR				⇑*i*S	Sg	10 10 43.0	+0.7
	baz=55						
CHGR	Chuyangaron	1.62	252	P	Pg	10 10 20.5	-0.9
OHH	Osh	1.86	43	⇑*i*P	Pb	10 10 24.4	-0.3
	baz=40						
OHH				⇑*i*S	Sg	10 10 50.4	+0.4
	baz=40						
TRKS	Terek-Say	2.36	0	⇑*e*P	Pb	10 10 31.6	-1.7
	baz=60						
TRKS				⇑*i*S	Sb	10 11 02.5	-0.3
	baz=60						
AML	Almayashu	3.54	33	⇑Pg	Pb	10 10 53.4	-0.2
AML				⇑Lg	Lg	10 11 39.3	
	0.1nm,0.3s						
KK31	Karatay Array	3.96	353	⇑Pn	Pn	10 10 55.3	+3.7
	0.3nm,0.2s,baz=175,slow=13,SNR=13						
KK31				⇑Sn	Sb	10 11 44.6	-4.1
	0.8nm,0.4s,baz=174,slow=21,SNR=5.3						
KK31				⇑Lg	Lg	10 11 58.6	
	1.2nm,0.5s,baz=204,slow=35,SNR=4.1						

JMA 15 10:13:35.2±0.3, **40°.1N**±0°.8×**14°5E**±°, **h43**^{km}, **MV3.5**/32, **FAR E OFF NORTH HONSHU**, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	2.32	268	P	Pn	10 14 11.9	+1.0
JTH				*e*S	Sn	10 14 38.8	+0.6
JEM	Erimo	2.35	327	*e*P	Pn	10 14 13.3	+2.0
JEM				S	Sn	10 14 41.1	+2.1
MIYJ	Miyakonagasawa	2.41	260	P	Pn	10 14 13.5	+1.4
MIYJ				*e*S	Sn	10 14 42.2	+1.8
JKEN	Kujiedanarisaw	2.44	275	P	Pn	10 14 13.5	+1.0
JKEN				*e*S	Sn	10 14 42.2	+1.2
JTHR	Tokachihiroo	2.54	332	*e*S	Sn	10 14 45.1	+1.6
JANG	Nango	2.60	278	P	Pn	10 14 16.1	+1.4
JANG				*e*S	Sn	10 14 46.1	+1.0
JNBK	Urakawa-nobuka	2.74	325	P	Pn	10 14 18.9	+2.2
JNBK				*e*S	Sn	10 14 51.9	+3.2
JCH	Churui	2.80	336	P	Pn	10 14 18.5	+1.0
JCH				*e*S	Sn	10 14 50.9	+0.8
JOM	Ohasama	2.83	259	P	Pn	10 14 19.9	+2.1
JOM				S	Sn	10 14 52.3	+1.6
JAK	Akkeshi	2.94	357	*e*P	Pn	10 14 19.9	+0.5
JAK				*e*S	Sn	10 14 54.6	+1.1
JMK	Ichinoseki	3.04	250	P	Pn	10 14 22.4	+1.6
JMK				*e*S	Sn	10 14 57.5	+1.6
JOT	Ohata	3.20	296	*e*S	Sn	10 15 01.6	+1.7
JAR	Ashorobuto	3.35	346	P	Pn	10 14 25.8	+0.8
JAR				*e*S	Sn	10 15 04.0	+0.5
NEM2	Nemuro 2	3.37	11	*e*P	Pn	10 14 24.4	-0.9
NEM2				*e*S	Sn	10 15 02.1	-1.9
JYK	Kaneyama	3.68	253	P	Pn	10 14 32.0	+2.5
JEW	Eniwo	3.79	318	*e*P	Pn	10 14 34.0	+2.8
JEW				*e*S	Sn	10 15 18.0	+3.5
JTKR	Abashiri--Toko	3.98	350	P	Pn	10 14 35.2	+1.5
JTKR				*e*S	Sn	10 15 20.6	+1.5
JHR	Hokuryu	4.38	328	P	Pn	10 14 42.8	+3.7
JOSM	Okushiri--Mats	4.56	298	*e*P	Pn	10 14 44.1	+2.4
JRY	Ryogami san	6.21	231	*e*P	Pn	10 15 05.2	+0.9

IDC ***15*** *10:45:04.9±0.8, 50°.07N×78°.78E, h0^{km}, mbtmp2.8/3, ML2.3/3, Error ellipse: s-maj=11.5km s-min=6.1km az=58.0*

NNC ***15*** *10:45:04.2±0.4, 50°.03N×78°.77E, h0^{km}, mb3.0, mpv2.7, Error ellipse: s-maj=8.3km s-min=2.2km az=76.0, Suspected Mining explosion.*

ISC 15 10:45:04.8±0.8, **50°.04N**±0°.04×**78°.70E**±0°.05, **h0**^{km}, **n18**, σ**1^{s}.16**/34, **21C-8D**, **Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	Kurchatov Arra	0.56	348	⇓P	Pg	10 45 15.5	0.0
KUR07				⇑S	Sb	10 45 24.6	-1.4
KUR06	Kurchatov Arra	0.58	349	⇑P	Pg	10 45 15.8	-0.1
KUR06				⇓S	Sb	10 45 25.0	-1.5
KUR14	Kurchatov Arra	0.58	353	⇑P	Pg	10 45 15.8	-0.1
KUR14				⇑S	Sb	10 45 24.9	-1.8
KUR15	Kurchatov Arra	0.59	351	⇑P	Pg	10 45 16.0	-0.1
KUR15				⇑S	Sb	10 45 25.4	-1.5
KURBB	Kurchatov Arra	0.60	349	Pg	Pg	10 45 15.1	-1.2
	1.9nm,0.3s,baz=165,slow=18,SNR=29						
KURBB				Lg	Lg	10 45 25.2	
	1.6nm,0.3s,baz=160,slow=33,SNR=6.3						
KURBB	Kurchatov Arra	0.60	349	⇑P	Pg	10 45 16.1	-0.1
	18nm,0.3s						
KURBB				⇑S	Sg	10 45 24.7	+0.8
	15nm,0.4s						
KUR16	Kurchatov Arra	0.60	348	⇓P	Pg	10 45 16.5	+0.1
KUR16				⇑S	Sb	10 45 26.0	-1.4
KUR17	Kurchatov Arra	0.61	346	⇑P	Pg	10 45 16.5	0.0
KUR17				⇑S	Sb	10 45 26.0	-1.7
KUR05	Kurchatov Arra	0.62	350	⇓P	Pg	10 45 16.4	-0.2
KUR05				⇑S	Sg	10 45 25.9	+1.3
KUR04	Kurchatov Arra	0.64	351	⇑P	Pg	10 45 16.9	-0.1
KUR04				⇑S	Sb	10 45 26.7	-1.5
KURK	Kurchatov	0.68	356	⇑P	Pg	10 45 17.4	-0.5
	5.0nm,0.3s						
KURK				⇓S	Sg	10 45 27.5	+0.8
	25nm,0.9s						
MAKZ	Makanchi	3.90	145	⇓Pn	Pn	10 46 06.4	+0.5
	1.7nm,1.0s						
MAKZ				⇑Pg	Pb	10 46 14.4	0.0
	1.7nm,0.8s						
MAKZ				⇑Lg	Lg	10 47 05.9	
	4.1nm,0.7s						
MK31	Makanchi Array	4.03	142	⇑Pn	Pn	10 46 08.3	+0.6
	0.1nm,0.2s,baz=319,slow=9.9,SNR=32						
MK31				⇑Pg	Pb	10 46 17.3	+0.7
	0.4nm,0.3s,baz=322,slow=14,SNR=14						
MK31				⇓Lg	Lg	10 47 10.6	
	2.2nm,0.4s,baz=316,slow=28,SNR=18						
MKAR	Makanchi Array	4.03	142	Pn	Pn	10 46 08.2	+0.5
	0.4nm,0.3s,baz=321,slow=10,SNR=30						
MKAR				Pg	Pb	10 46 15.2	-1.5
	0.8nm,0.3s,baz=329,slow=15,SNR=17						

MKAR				Sn	Sn	10 46 55.1	-0.5
	0.3nm,0.3s,baz=323,slow=14,SNR=2.3						
MKAR				Lg	Lg	10 47 10.4	
	1.4nm,0.3s,baz=331,slow=26,SNR=6.8						
	0.3nm,0.3s						
OTUK	**Ortayu**	4.55	249	⇓Pn	Pn	10 46 15.9	+1.0
	0.6nm,0.3s						
OTUK				⇑Pg	Pb	10 46 27.0	+1.5
	2.6nm,1.0s						
OTUK				⇑Lg	Lg	10 47 29.3	
	1.1nm,0.3s						
ZALV	**Zalesovo Beam**	5.44	42	Pn	Pn	10 46 28.2	+1.1
	0.9nm,0.3s,baz=230,slow=14,SNR=8.2						
ZALV				Sn	Sn	10 47 32.3	+1.9
	0.1nm,0.3s,baz=222,slow=21,SNR=1.5						
ZALV				Lg	Lg	10 47 58.0	
	0.2nm,0.3s,baz=243,slow=25,SNR=2.2						
	1.6nm,0.3s						
I46RU	**ZALESOVO INFRA**	5.44	42	I	I	11 17 10.0	
	baz=222,slow=334,SNR=2.3						
BVAR	**Borovoye Array**	5.99	303	Pn	Pn	10 46 35.3	+0.7
	baz=107,slow=14,SNR=2.1						
BVAR				Sn	Sn	10 47 41.1	-2.8
	baz=105,slow=21,SNR=2.5						
BVAR				Lg	Lg	10 48 17.2	
	baz=120,slow=26,SNR=2.2						
	0.2nm,0.3s						

IDC 15 10:48:25.3±1.9, 6°.84S×128°.30E, h0^{km}, mb3.2/1, mbtmp3.3/4, ML3.1/3, Error ellipse: s-maj=66.4km s-min=30.3km az=79.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	6.63	27	Pn	Pn	10 50 04.2	+0.1
	0.6nm,0.3s,baz=198,slow=20,SNR=9.1						
SIJI				Sn	Sn	10 51 05.1	-15
	1.0nm,0.3s,baz=213,slow=22,SNR=5.4						
	1.8nm,0.4s						
WRA	**Warramunga Arr**	14.28	156	Pn	Pn	10 51 47.6	-1.4
	0.1nm,0.3s,baz=333,slow=13,SNR=2.1						
WRA				Sn	Sn	10 54 12.1	-16
	0.1nm,0.3s,baz=335,slow=22,SNR=1.8						
	0.5nm,0.8s						
ASAR	**Alice Springs**	17.57	163	P	P	10 52 32.8	-0.3
	0.1nm,0.3s,baz=344,slow=11,SNR=8.9						
ASAR				S	Sn	10 55 37.9	-10
	0.8nm,1.1s,baz=356,slow=25,SNR=1.3						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	67.18	328	P	P	10 59 21.2	0.0
	0.1nm,0.5s,baz=140,slow=8.1,SNR=2.1						
	0.1nm,0.5s						

IDC 15 11:04:51.3±8.4, 12°.71N×124°.88E, h0^{km}, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=506.7km s-min=32.0km az=91.0, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	33.75	164	P	P	11 11 34.4	-0.5
	1.0nm,1.0s,baz=335,slow=8.8,SNR=2.3						
	1.0nm,1.0s						
ASAR	**Alice Springs**	37.21	166	P	P	11 12 05.0	+0.4
	0.3nm,0.8s,baz=357,slow=9.2,SNR=2.0						
	0.3nm,0.8s						
ILAR	**Eielson Array**	77.86	26	P	P	11 16 50.6	0.0
	0.5nm,0.9s,baz=257,slow=6.1,SNR=5.9						
	0.5nm,0.9s						

SOME 15 11:13:56.7, 44°.15N×81°.85E, h15^{km}

NNC 15 11:13:57.9±1.5, 44°.28N×81°.81E, h0^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=19.4km s-min=6.0km az=130.0

ISC 15 11:13:56.1±1.5, 44°.06N±0°.09×81°.96E±0°.08, h10^{km}, n28, σ1^{s}.31/29, 7C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	**Jarkent**	1.58	281	*e*P	Pg	11 14 26.0	-0.4
	2μm,0.2s						
DJR				*e*S	Sg	11 14 46.9	0.0
	34nm,0.2s						
PDGK	**Podgornoye**	1.93	249	Pg	Pg	11 14 32.8	-0.4
	2.5nm,0.3s						
PDGK				Lg	Lg	11 14 58.0	
	23nm,0.3s						
PDGK	**Podgornoye**	1.93	249	⇑Pn	Pg	11 14 32.6	-0.6
	4.8nm,0.5s						
PDGK				⇑Sn	Sg	11 14 59.1	+0.8
	41nm,0.7s						
SHLS	**Shalkode**	2.03	244	*e*P	Pn	11 14 30.8	+0.4
	13nm,0.1s						
SHLS				*e*S	Sn	11 14 55.3	-0.6
	122nm,0.2s						
UZB	**Uzynbulak**	2.32	248	Pg	Pg	11 14 39.8	-0.7
	3.8nm,0.1s						
UZB				Lg	Lg	11 15 10.1	
	39nm,0.3s						
UZB	**Uzynbulak**	2.32	248	*e*Pg	Pb	11 14 38.6	+0.5
	3.8nm,0.1s						
UZB				*e*Lg	Lg	11 15 08.9	
	39nm,0.3s						
KPKS	**Kokpek**	2.44	257	Pg	Pb	11 14 39.4	-0.7
	18nm,0.2s						
KPKS				Lg	Lg	11 15 09.8	
	118nm,0.5s						
KPKS	**Kokpek**	2.44	257	*e*Pg	Pb	11 14 39.5	-0.7
	18nm,0.2s						
KPKS				*e*Lg	Lg	11 15 10.4	
	118nm,0.5s						
ZHN	**Zhinishke**	2.71	252	Pg	Pb	11 14 46.1	+1.4
	3.3nm,0.2s						
ZHN				Lg	Lg	11 15 20.9	
	56nm,0.2s						
ZHN	**Zhinishke**	2.71	252	*e*Pg	Pb	11 14 45.9	+1.2
	3.3nm,0.2s						
ZHN				*e*Lg	Lg	11 15 20.8	
	56nm,0.2s						
MK31	**Makanchi Array**	2.74	5	Pn	Pn	11 14 40.6	+0.5
	3.2nm,0.4s,baz=180,slow=12,SNR=82						
MK31				⇑Lg	Lg	11 15 16.7	
	2.5nm,0.2s,baz=184,slow=29,SNR=8.0						
MAKZ	**Makanchi**	2.75	0	⇓Pn	Pn	11 14 40.8	+0.6
	2.0nm,0.3s						
MAKZ				⇑Lg	Lg	11 15 17.4	
	6.6nm,0.4s						
SATY	**Saty**	2.77	250	Pg	Pb	11 14 47.1	+1.3
	3.9nm,0.1s						
SATY				Lg	Lg	11 15 22.7	
	47nm,0.3s						
SATY	**Saty**	2.77	250	*e*Pg	Pb	11 14 46.7	+1.0
	3.9nm,0.1s						
SATY				*e*Lg	Lg	11 15 22.5	
	47nm,0.3s						
KURS	**Kuram**	2.80	259	*e*Pg	Pb	11 14 47.5	+1.2
	1.7nm,0.2s						
KURS				*e*Lg	Lg	11 15 24.0	
	12nm,0.5s						
CHKK	**Chushkaly**	3.59	268	Pg	Pb	11 15 00.5	+0.8
	3.3nm,0.2s						
CHKK				Lg	Lg	11 15 46.1	
	28nm,0.2s						
CHKK	**Chushkaly**	3.59	268	*e*Pg	Pb	11 15 00.5	+0.8
	2.5nm,0.1s						
CHKK				*e*Lg	Lg	11 15 46.0	
	28nm,0.2s						
MDOK	**Medeo**	3.68	258	⇑Pg	Pg	11 15 04.8	-1.7
	6.3nm,0.8s						
MDOK				⇑Lg	Lg	11 15 56.6	
	12nm,0.9s						
MDOK	**Medeo**	3.68	258	*e*Pg	Pb	11 15 02.5	+1.2
	5.4nm,1.9s						
MDOK				*e*Lg	Lg	11 15 49.2	
	5.8nm,0.9s						
TNSS	**Tian-Shan**	3.78	256	Pg	Pg	11 15 05.7	-2.9
	1.1nm,0.2s						
TNSS				Lg	Lg	11 15 54.5	
	3.4nm,0.6s						
TNSS	**Tian-Shan**	3.78	256	*e*Pg	Pg	11 15 05.9	-2.7
	1.1nm,0.2s						
TNSS				*e*Lg	Lg	11 15 55.1	
	3.4nm,0.6s						
KTBS	**Karatobe**	3.83	267	*e*Pg	Pb	11 15 05.1	+1.4
	2.0nm,0.5s						
KTBS				*e*Lg	Lg	11 15 53.9	
	12nm,0.5s						
ZSN	**Zaisan**	3.95	30	*e*Pg	Pb	11 15 06.1	+0.3
	2.5nm,0.4s						
ZSN				*e*Lg	Lg	11 15 55.9	
	6.7nm,0.5s						
KUU	**Kurty**	4.06	270	*e*Pg	Pb	11 15 08.7	+1.1
	4.0nm,0.4s						
KUU				*e*Lg	Lg	11 16 00.1	
	10nm,0.4s						
MTBS	**Maitube**	4.12	259	*e*Pg	Pb	11 15 11.1	+2.3
	1.3nm,0.3s						
MTBS				*e*Lg	Lg	11 16 04.0	
	7.1nm,0.5s						
TKM2	**Tokmak 2**	4.77	258	⇓Pg	Pg	11 15 25.5	-1.9
	1.9nm,0.7s						
TKM2				⇓Lg	Lg	11 16 28.9	
	5.3nm,0.7s						
KURBB	**Kurchatov Arra**	6.96	342	⇓Lg	Lg	11 17 32.0	
	5.7nm,0.7s						
KURK	**Kurchatov**	7.03	342	⇑Lg	Lg	11 17 34.9	
	5.9nm,0.8s						

ISK 15 11:20:42.7, 41°.88N×23°.24E, h5^{km}, ML3.3/19

SOF 15 11:20:42.8, 41°.95N×23°.26E, h13^{km}, MD3.2

SKO 15 11:20:42.5, 41°.94N×23°.22E, h12^{km}, ML2.8

DDA 15 11:20:43.8±0.0, 42°.01N×23°.07E, h3^{km}±4^{km}, ML3.1

THE 15 11:20:44.6, 41°.85N×23°.21E, h4^{km}±1^{km}, ML2.8/10, Error ellipse: s-maj=2.3km s-min=1.1km az=183.0

ATH 15 11:20:44.6, 41°.86N×23°.19E, h11^{km}±4^{km}, ML2.8/6, Error ellipse: s-maj=5.6km s-min=2.0km az=171.0

ISC 15 11:20:42.6±1.0, 41°.95N±0°.02×23°.21E±0°.02, h8^{km}±9^{km}, n76, σ1^{s}.27/111, 13C-6D, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	**Krupnik**	0.13	227	P	Pg	11 20 46.7	+1.2
MMB	**Musomiste**	0.53	133	P	Pb	11 20 53.9	-0.4
PLNA	**Plana**	0.55	17	P	Pb	11 20 54.0	-0.5
VTS	**Vitosha**	0.66	2	⇑P	Pn	11 20 59.6	+1.1
VTS				⇑S	Sn	11 21 08.3	-0.8
VTS	**Vitosha**	0.66	2	*i* Sg	Sn	11 21 08.4	-0.8
VTS	**Vitosha**	0.66	2	P	Pg	11 20 55.8	+0.3
NVR	**Nevrokopi**	0.78	141	P	Pb	11 20 58.6	+0.2
NVR				S	Sb	11 21 08.6	-0.5
	808nm,0.1s						
NVR	**Nevrokopi**	0.78	141	P	Pb	11 20 58.6	+0.2
NVR				S	Sb	11 21 08.4	-0.7
NVR				AML	AML	11 21 09.0	
	comp=N,1788μm,0.2s						
NVR				AML	AML	11 21 09.1	
	comp=E,1392μm,0.2s						
STIP	**Stip**	0.81	252	*i* Pg	Pg	11 20 54.7	-3.5
STIP				*i* Sg	Sg	11 21 03.1	-5.5
STIP				*e*Lg	Lg	11 21 03.6	
	comp=N,944nm,0.2s						
KNT	**Kendrikon**	0.82	197	P	Pg	11 20 58.1	-0.4
KNT				S	Sg	11 21 08.5	-0.7
	comp=N,465nm,0.2s						
KNT	**Kendrikon**	0.82	197	Pg	Pg	11 20 57.9	-0.6
KNT				Sg	Sg	11 21 08.8	-0.4
KNT	**Kendrikon**	0.82	197	*i* Pg	Pg	11 20 58.1	-0.4
KNT				*i* Sg	Sg	11 21 08.8	-0.4
KNT	**Kendrikon**	0.82	197	P	Pg	11 20 58.1	-0.4
KNT				S	Sg	11 21 08.5	-0.7
KNT				AML	AML	11 21 12.6	
	comp=E,896μm,0.2s						
KNT				AML	AML	11 21 13.2	
	comp=N,966μm,0.3s						
SRS	**Serrai**	0.88	161	P	Pg	11 20 59.8	+0.2
SRS				S	Sg	11 21 11.4	+0.3
	comp=N,565nm,0.2s						
SRS	**Serrai**	0.88	161	*i* Pg	Pg	11 20 59.8	+0.2
SRS				*i* Sg	Sg	11 21 11.4	+0.3
SRS	**Serrai**	0.88	161	P	Pg	11 20 59.8	+0.2
SRS				S	Sg	11 21 11.1	-0.1
SRS				AML	AML	11 21 14.2	
	comp=E,1012μm,0.1s						
SRS				AML	AML	11 21 15.9	
	comp=N,994μm,0.2s						
PGB	**Panagyurishte**	0.93	50	P	Pb	11 21 00.8	-0.2
PLD	**Plovdiv**	1.12	82	Pn	Pb	11 21 04.1	-0.2
PLD				Sn	Sn	11 21 20.1	-0.1
PLD	**Plovdiv**	1.12	82	*i* Pg	Pb	11 21 04.0	-0.3
PLD				*i* Sg	Sn	11 21 19.2	-1.1
SOH	**Sokhos**	1.14	174	P	Pg	11 21 04.4	0.0
SOH				S	Sg	11 21 19.3	+0.1
	comp=N,862nm,0.3s						
SOH	**Sokhos**	1.14	174	*i* Pg	Pg	11 21 04.5	0.0
SOH				*i* Sg	Sb	11 21 19.7	+0.2
SOH	**Sokhos**	1.14	174	P	Pg	11 21 04.4	0.0
SOH				AML	AML	11 21 20.4	
	comp=N,2758μm,0.3s						
SOH				AML	AML	11 21 20.6	
	comp=E,1570μm,0.2s						
RZN	**Rozhen**	1.16	103	P	Pg	11 21 04.1	-0.8
GRG	**Griva**	1.17	212	P	Pg	11 21 05.1	+0.1
GRG				S	Sg	11 21 20.4	+0.2
	comp=E,455nm,0.3s						
GRG	**Griva**	1.17	212	Pn	Pg	11 21 04.5	-0.5
GRG				Sn	Sg	11 21 20.6	+0.4
GRG	**Griva**	1.17	212	*i* Pg	Pg	11 21 05.1	+0.1
GRG				*i* Sg	Sb	11 21 21.2	+0.9
GRG	**Griva**	1.17	212	P	Pg	11 21 05.1	+0.1
GRG				AML	AML	11 21 21.5	
	comp=N,747μm,0.3s						
GRG				AML	AML	11 21 21.8	
	comp=E,1071μm,0.4s						
KOKK	**Kokkinochori,**	1.28	152	P	Pn	11 21 06.5	-0.3
KOKK				S	Sb	11 21 23.2	-0.4
	comp=E,295nm,0.3s						
KOKK	**Kokkinochori,**	1.28	152	P	Pn	11 21 06.6	-0.3
KOKK				AML	AML	11 21 25.4	
	comp=E,1643μm,0.3s						
KOKK				AML	AML	11 21 26.7	
	comp=N,1717μm,0.3s						
THE	**Thessaloniki**	1.33	188	P	Pg	11 21 08.2	0.0
THE				S	Sn	11 21 26.1	+0.7
	comp=N,432nm,0.6s						
THE	**Thessaloniki**	1.33	188	*i* Pg	Pg	11 21 08.4	+0.2
THE				*i* Sg	Sn	11 21 26.4	+1.0
BARS	**Barje**	1.34	310	*i* Pg	Pg	11 21 09.0	+0.5
BARS				*i* Sg	Sg	11 21 26.6	+0.7
KAVA	**Kavala**	1.37	134	P	Pn	11 21 07.7	-0.3
KAVA				S	Sg	11 21 26.5	-0.2
KAVA	**Kavala**	1.37	134	P	Pn	11 21 07.8	-0.2
KDZ	**Kurdzhali**	1.68	100	Pn	Pn	11 21 12.0	-0.3
KDZ	**Kurdzhali**	1.68	100	P	Pn	11 21 11.8	-0.5
OUR	**Ouranopolis**	1.72	160	P	Pn	11 21 12.8	0.0
OUR				S	Sb	11 21 36.4	+0.2
OUR	**Ouranopolis**	1.72	160	Pn	Pn	11 21 12.9	+0.1
THAS	**Thassos island**	1.76	139	P	Pn	11 21 13.1	-0.3
THAS				S	Sb	11 21 37.4	0.0
	comp=N,462nm,0.4s						
PLVB	**Pleven**	1.77	36	⇑P	Pg	11 21 17.4	+0.8
PLVB				⇑S	Sg	11 21 41.0	+1.5
FNA	**Florina**	1.81	230	P	Pn	11 21 15.1	+1.0
FNA				S	Sb	11 21 39.1	+0.3
	comp=N,78nm,0.6s						
FNA	**Florina**	1.81	230	*i* Pn	Pn	11 21 15.2	+1.0
RDO	**Rodhopi**	1.93	114	P	Pn	11 21 16.5	+0.8
RDO				S	Sg	11 21 43.3	-1.2
	comp=N,305nm,0.3s						
RDO	**Rodhopi**	1.93	114	Pn	Pn	11 21 16.4	+0.8
OHR	**Ohrid**	2.00	246	*i* Pn	Pb	11 21 19.5	+0.3
OHR				*i* Sn	Sg	11 21 48.1	+1.3
OHR				*e*Lg	Lg	11 21 52.1	
	comp=E,91nm,1.1s						
OHR				*e*Lg	Lg	11 21 52.8	
	comp=N,44nm,0.7s						
VLAD	**Vladila**	2.22	23	⇓P	Pb	11 21 23.4	+0.4
PUNG	**Punghina**	2.33	355	⇑P	Pb	11 21 23.7	-1.1
PUNG				⇑S	Sb	11 21 53.7	-0.1
ALN	**Alexandroupoli**	2.38	115	Pn	Pn	11 21 22.7	+0.8
ALN	**Alexandroupoli**	2.38	115	P	Pg	11 21 26.9	-1.4
ALN				S	Sg	11 21 59.3	+0.2
ENEZ	**Enez**	2.53	118	Pn	Pn	11 21 24.9	+1.0
CAVK	**Edirne/Enez-Ca**	2.56	119	P	Pg	11 21 31.4	-0.3
CAVK				S	Sg	11 22 05.6	+0.7
CAVK				*i* AML	AML	11 22 09.0	
	comp=N,106nm,0.5s						
CAVK				*i* AML	AML	11 22 14.0	
	comp=N,100nm,1.0s						
COPA	**Copaceanca**	2.63	33	⇓P	Pb	11 21 28.7	-1.3
EDRB	**Edirne**	2.64	91	Pn	Pn	11 21 26.9	+1.4
UKOP	**Uzunkopru-Edir**	2.70	107	Pn	Pn	11 21 27.7	+1.4
SRE	**Strehaia**	2.71	360	⇑P	Pb	11 21 29.4	-1.9
DJES	**Djerdap**	2.76	350	⇑P	Pn	11 21 29.4	+2.3
ERIK	**Erikli-Kesan**	2.80	116	Pn	Pn	11 21 28.5	+0.8
ERIK	**Erikli-Kesan**	2.80	116	P	Pb	11 21 33.7	+0.9
ERIK				S	Sg	11 22 11.9	-0.7
ERIK				*i* AML	AML	11 22 17.0	
	comp=N,74nm,0.8s						
ERIK				*i* AML	AML	11 22 18.0	
	comp=N,70nm,0.5s						
KESN	**Edirne-Kesan**	2.84	112	P	Pg	11 21 35.9	-1.3
KESN				S	Sg	11 22 14.2	+0.1
KESN				*i* AML	AML	11 22 17.0	
	comp=N,146nm,0.5s						
KESN				*i* AML	AML	11 22 20.0	
	comp=N,96nm,0.4s						
KIRK	**Kırklareli**	2.91	92	P	Pb	11 21 35.5	+0.8
KIRK				S	Sg	11 22 13.2	-2.9
KIRK				*i* AML	AML	11 22 21.0	
	comp=N,21nm,0.8s						
GELI	**Tayfur-Gelibol**	2.91	121	Pn	Pn	11 21 30.3	+1.1
HERR	**Herculane**	2.98	349	⇑P	Pn	11 21 31.2	+1.0
AGG	**Agios Georgios**	3.00	193	Pn	Pn	11 21 31.6	+1.1
MDVR	**Moldovita**	3.03	339	⇓P	Pn	11 21 32.9	+2.0
LPK	**Lapseki**	3.11	119	Pn	Pn	11 21 33.1	+1.1
RKY	**Sarkoy-Tekirda**	3.25	112	Pn	Pn	11 21 35.1	+1.2
GZR	**Gura Zlata**	3.45	355	⇓P	Pn	11 21 38.1	+1.4
KRBG	**Karabiga-Canak**	3.46	115	Pn	Pn	11 21 38.2	+1.5
LOT	**Lotru**	3.52	6	Pn	Pn	11 21 37.4	-0.3
VOIR		3.73	20	⇑P	Pn	11 21 42.1	+1.6
BZS	**Buzias**	3.84	343	⇓P	Pn	11 21 43.1	+1.2
EDC	**Edincik**	3.86	113	Pn	Pn	11 21 43.9	+1.6
ISR	**Istrita**	3.98	36	⇑P	Pb	11 21 48.5	-4.6
MLR	**Muntele Rosu**	4.05	28	⇓P	Pn	11 21 49.1	+4.1
PLOR	**Plostina**	4.62	31	⇑P	Pn	11 21 55.6	+2.8
VRI	**Vrincioaia**	4.66	32	⇑P	Pn	11 21 56.1	+2.8

HVO 15 11:21:14.2±0.9, 19°.19N±0°.01×155°.46W±0°.02, h36^{km}±3^{km}, ML2.6/38, ML2.9/28(NEIC), Error ellipse: s-maj=2.6km s-min=2.0km az=101.0

NEIC 15 11:21:12.6±0.7, 19°.21N±0°.01×155°.49W±0°.02, h41^{km}±2^{km}, Error ellipse: s-maj=2.7km s-min=1.9km az=110.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTC	**Hot Caves**	0.09	73		Pn	11 21 19.8	+0.3
KHU	**Kahuku**	0.13	286		Pn	11 21 20.1	+0.2
KHU				Sn	Sn	11 21 24.3	-0.6
KHU				IAML		11 21 24.4	
	comp=N,2μm,0.2s						
HPO	**Honuapo**	0.14	208		Pn	11 21 19.9	+0.3
HPO					Sn	11 21 24.2	-0.3
AIN	**Ainahou**	0.16	9		Pn	11 21 20.5	+0.4
AIN				Sn	Sn	11 21 24.9	-0.3
HLP	**Hilina Pali**	0.19	63		Pn	11 21 20.4	+0.3
HLP				IAML		11 21 29.5	
	comp=E,958nm,0.5s						
HLP				IAML		11 21 34.3	
	comp=N,872nm,0.5s						
SDHHI	**Sand Hill**	0.25	46		Pn	11 21 20.7	0.0
SDHHI				Sn	Sn	11 21 25.6	-0.7
WRMHI	**West Rim**	0.26	42		Pn	11 21 20.8	0.0
WRMHI					Sn	11 21 26.0	-0.5
UWE	**Uwekahuna**	0.28	41		Pn	11 21 20.9	-0.1
UWE				IAML		11 21 26.4	
	comp=N,1μm,1.1s						
KKO	**Keanakako\`i**	0.28	48		Pn	11 21 21.0	0.0
KKO				IAML		11 21 28.7	
	comp=N,1μm,0.6s						
KKO				IAML		11 21 30.9	
	comp=E,679nm,0.7s						
UWB	**Uwekahuna B**	0.29	43	Pn	Pn	11 21 20.9	-0.2
MLH	**Mauna Loa**	0.30	19		Pn	11 21 21.5	+0.2
MLH				IAML		11 21 27.1	
	comp=N,843nm,0.5s						
HATHI	**Halema‘uma‘u T**	0.30	45		Sn	11 21 26.4	-0.6
RSD	**Rainshed**	0.32	38		Pn	11 21 21.4	0.0
KNHH	**Kane Nui o Ham**	0.34	61		Pn	11 21 21.5	-0.1
ALEP	**Alea Permanent**	0.36	336		Pn	11 21 22.0	-0.1
ALEP					Sn	11 21 27.9	-0.8
HMH	**Humu‘ula Sheep**	0.39	0		Sn	11 21 29.2	0.0
JCUZ	**Jacuzzi**	0.40	65	Pn	Pn	11 21 22.2	0.0
JCUZ				IAML		11 21 28.3	
	comp=E,548nm,0.4s						
JCUZ				IAML		11 21 28.4	
	comp=N,842nm,0.6s						
CPH	**Captain Cook**	0.49	304		Pn	11 21 23.3	0.0
CPH					Sn	11 21 29.6	-1.4
JOKA	**Jonika Flow**	0.51	64		Pn	11 21 23.3	-0.3
JOKA					Sn	11 21 29.9	-1.3
KHLU	**Kahalu\`u**	0.54	315		Pn	11 21 24.1	+0.1
KHLU				IAML		11 21 31.4	
	comp=E,714nm,0.4s						
KHLU				IAML		11 21 31.4	
	comp=N,824nm,0.2s						
POHA	**Pohakuloa**	0.55	355		Pn	11 21 24.3	0.0
HUH	**Hualalai**	0.57	325		Pn	11 21 25.1	+0.4
HUH				IAML		11 21 41.2	
	comp=E,640nm,0.5s						
HPAH	**Hawaii Prepara**	0.84	346	Pn	Pn	11 21 27.9	-0.2
HPAH				IAML		11 21 38.3	
	comp=E,438nm,0.3s						
HPAH				IAML		11 21 38.6	
	comp=N,456nm,0.2s						
MHA	**Mahukona**	1.05	338	Pn	Pn	11 21 31.0	+0.1
HLK	**Haleakala**	1.70	335		Pn	11 21 39.6	-0.4
HON	**Honolulu**	3.16	312	Pn	Pn	11 21 59.2	-0.7

IDC 15 11:25:13.4±3.1, 41°.74S×174°.39E, h40^{km}±30^{km}, mb3.4/3, mbtmp3.5/5, ML3.0/2, MS3.1/1, Error ellipse: s-maj=34.9km s-min=23.2km az=127.0

NOU 15 11:25:13.7, 41°.86S×174°.51E, h27^{km}, MLv4.1/10, Cook Strait, New Zealand

WEL 15 11:25:14.5±0.3, 42°S±3°×17°4E±°, h23^{km}±3^{km}, M3.9/26, ML4.1/26, MLv3.9/26, Error ellipse: s-maj=0.0km s-min=0.0km az=150.4, confirmed

ISC 15 11:25:13.9±0.6, 41°.71S±0°.03×174°.31E±0°.03, h28^{km}±4^{km}, n121, σ1^{s}.37/121, mb3.4/3, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	0.08	243	P	Pn	11 25 20.2	+1.4
CMWZ				S	Sb	11 25 25.4	+3.3
BSWZ	**Blackbirch Sta**	0.33	269	P	Pb	11 25 21.6	+0.1
BSWZ				S	Sb	11 25 26.7	0.0
TUWZ	**Tuamarina**	0.40	316	P	Pb	11 25 21.9	-0.7
SNZO	**South Karori**	0.50	37	P	Pn	11 25 25.4	+0.3
TCW	**Tory Channel**	0.50	357	P	Pb	11 25 24.0	-0.3
TCW				S	Sb	11 25 32.0	+0.7
WEL	**Wellington**	0.55	39	P	Pn	11 25 26.4	+0.6
PLWZ	**Palliser**	0.72	79	P	Pn	11 25 29.8	+1.5
MSWZ	**Moikau Station**	0.76	68	P	Pn	11 25 30.6	+1.8
MSWZ				S	Sn	11 25 42.7	+3.2
CAW	**Cannon Point**	0.83	43	P	Pn	11 25 31.1	+1.4
NNZ	**Nelson**	0.86	305	P	Pn	11 25 29.1	-1.0
PAWZ	**Paruwai Farm**	0.90	69	P	Pn	11 25 32.0	+1.3
KHZ	**Kahutara**	0.91	219	P	Pb	11 25 32.0	+0.9
KHZ	**Kahutara**	0.91	219	P	Pb	11 25 32.0	+0.9
DUWZ	**D’Urville Isla**	0.96	342	P	Pn	11 25 31.3	-0.2
KIW	**Kapiti Island**	0.96	28	P	Pb	11 25 32.3	+0.4
MTW	**Mount Morrison**	1.05	59	P	Pb	11 25 33.9	+0.5
THZ	**Tophouse**	1.05	267	P	Pn	11 25 32.7	-0.1
TRWZ	**Traveller**	1.08	74	P	Pb	11 25 34.4	+0.4
OGWZ	**Otaki Gorge**	1.10	36	P	Pb	11 25 34.9	+0.5
MRNZ	**Matariki Terra**	1.21	285	P	Pn	11 25 35.3	+0.3
HOWZ	**Holdsworth Sta**	1.22	48	P	Pb	11 25 36.1	-0.2
TKNZ	**Takaka Hill**	1.22	303	P	Pn	11 25 35.2	+0.1
TMWZ	**Te Maipa**	1.33	64	P	Pb	11 25 37.5	-0.8
MRZ	**Mangatainoka R**	1.42	43	P	Pb	11 25 38.9	-0.8
TIWZ	**Tintock**	1.51	52	P	Pb	11 25 39.8	-1.5
GVZ	**Greta Valley S**	1.57	217	P	Pn	11 25 40.7	+0.7
QRZ	**Quartz Range**	1.61	303	P	Pn	11 25 41.7	+1.3
QRZ	**Quartz Range**	1.61	303	P	Pn	11 25 41.5	+1.0
CPWZ	**Castlepoint**	1.63	61	P	Pb	11 25 41.7	-1.6
PRWZ	**Pori Road**	1.71	48	P	Pn	11 25 42.6	+0.8
POWZ	**Post Office Ro**	1.72	40	P	Pn	11 25 42.8	+0.9
BFZ	**Birch Farm**	1.79	55	P	Pn	11 25 43.1	+0.2
BFZ	**Birch Farm**	1.79	55	P	Pn	11 25 43.0	+0.2

LTZ	Lake Taylor	1.85	234	P	Pn	11 25 44.5	+0.6
DSZ	Denniston Nort	1.88	268	P	Pn	11 25 45.2	+1.0
AMCZ	Amberley	1.91	219	P	Pn	11 25 45.1	+0.5
DVHZ	Dannevirke	1.99	45	P	Pn	11 25 45.8	+0.1
WAZ	Wanganui	2.02	15	P	Pb	11 25 48.9	-1.0
TSZ	Takapari Road	2.07	38	P	Pn	11 25 47.5	+0.6
LREZ	Lake Rotokare	2.25	2	P	Pb	11 25 53.9	+0.1
PRHZ	Porangahau	2.28	51	P	Pn	11 25 49.6	0.0
PNHZ	Pukenui	2.30	39	P	Pn	11 25 50.3	+0.3
WPHZ	Waipukurau	2.31	45	P	Pn	11 25 50.3	+0.3
NMEZ	Namu Road	2.32	352	P	Pb	11 25 54.9	-0.2
OXZ	Oxford	2.33	225	P	Pn	11 25 49.8	-0.6
MQZ	McQueen's Vall	2.34	211	P	Pn	11 25 49.6	-0.8
INZ	Inchbonnie	2.36	244	P	Pn	11 25 51.4	+0.6
AKCZ	Akaroa Harbour	2.39	205	P	Pn	11 25 51.1	-0.1
KHEZ	Kahui Hut	2.43	355	P	Pb	11 25 55.6	-1.3
KHEZ	Kahui Hut	2.43	355	P	Pb	11 25 55.1	-1.8
NEZ	North Egmont	2.44	356	P	Pb	11 25 56.4	-0.8
NBEZ	Newall Road No	2.46	352	P	Pn	11 25 55.0	+2.8
MTVZ	Mangateitei	2.49	21	P	Pb	11 25 55.4	-2.5
DREZ	Durham Road	2.52	358	P	Pb	11 25 56.5	-1.9
PKE	Pukeiti	2.53	354	P	Pn	11 25 55.9	+2.8
PKVZ	Pokaka	2.55	18	P	Pn	11 25 55.7	+2.3
MOVZ	Moawhango	2.55	26	P	Pn	11 25 54.5	+1.1
PXZ	Pawanui	2.56	50	P	Pn	11 25 53.1	-0.5
RACZ	Rakaia	2.57	218	P	Pn	11 25 53.0	-0.7
WNVZ	Wahianoa	2.58	23	P	Pn	11 25 55.6	+1.7
TRVZ	Turoa	2.59	22	P	Pb	11 25 57.0	-2.7
BHHZ	Black Hill Sta	2.59	32	P	Pn	11 25 54.8	+0.8
VRZ	Vera Road	2.61	8	P	Pn	11 25 56.7	+2.5
WHVZ	Whangaehu Hut	2.62	22	P	Pn	11 25 56.8	+2.3
FWVZ	Far West T-bar	2.63	22	P	Pn	11 25 56.9	+2.1
TUVZ	Tukino	2.65	23	P	Pn	11 25 56.8	+1.9
NGZ	Ngauruhoe	2.72	22	P	Pb	11 26 02.9	+0.9
SNVZ	South Ngauruho	2.72	22	P	Pn	11 25 57.8	+1.9
MHCZ	Mount Hutt	2.72	227	P	Pn	11 25 55.2	-0.6
KAHZ	Kahuranaki	2.73	46	P	Pn	11 25 55.5	-0.4
OTVZ	Oturere	2.75	23	P	Pn	11 25 58.2	+1.9
WTVZ	West Tongariro	2.77	21	P	Pn	11 25 58.5	+1.9
TWVZ	Taurewa	2.77	18	P	Pb	11 25 59.6	-3.2
KWHZ	Kaweka Forest	2.79	36	P	Pn	11 25 56.9	0.0
TMVZ	Te Maari	2.80	23	P	Pn	11 25 59.1	+2.1
WACZ	Wakanui South	2.88	218	P	Pn	11 25 57.3	-0.5
MCHZ	McNeill Hill	2.90	40	P	Pn	11 25 58.2	-0.1
RITZ	Rihia Road	2.98	24	P	Pb	11 26 07.2	+0.9
WVZ	Waitaha Valley	2.98	242	P	Pn	11 25 59.6	+0.4
BKZ	Black Stump Fm	3.04	34	P	Pn	11 26 00.1	-0.1
BKZ	Black Stump Fm	3.04	34	P	Pn	11 25 59.9	-0.3
RATZ	Rangitukua	3.05	22	P	Pb	11 26 07.1	-0.5
RPZ	Rata Peaks	3.12	229	Pn	Pn	11 26 01.0	-0.2
	1.8nm,0.3s,baz=128,slow=23,SNR=3.5						
RPZ				Sn	Sn	11 26 35.6	-2.1
	8.4nm,0.3s,baz=142,slow=23,SNR=18						
RPZ				LR	LR	11 27 44.3	
	comp=Z,283nm,20.1s,baz=26,slow=48						
	6.9nm,0.3s						
RPZ	Rata Peaks	3.12	229	P	Pn	11 26 01.2	-0.1
RPZ	Rata Peaks	3.12	229	P	Pn	11 26 01.1	-0.2
ARHZ	Aropaoanui	3.19	41	P	Pn	11 26 02.2	0.0
ARCZ	Arundel	3.21	225	P	Pn	11 26 02.1	-0.3
HIZ	Hauiti	3.22	8	P	Pn	11 26 05.2	+2.6
HIZ	Hauiti	3.22	8	P	Pn	11 26 05.2	+2.6
NMHZ	Naumai	3.23	37	P	Pn	11 26 02.6	-0.3
MRHZ	Matea Rd	3.30	30	P	Pn	11 26 03.2	-0.5
WPRZ	Whakapapatarin	3.49	25	P	Pn	11 26 07.8	+1.5
RAHZ	Arahi	3.51	38	P	Pn	11 26 05.7	-0.8
TLZ	Tolley Road	3.51	16	P	Pn	11 26 07.9	+1.3
ALRZ	Allen Road	3.51	27	P	Pn	11 26 06.4	-0.3
TMZ	Timaru	3.60	221	P	Pn	11 26 07.4	-0.5
MUGZ	Murupara	3.74	31	P	Pn	11 26 10.6	+0.8
LBZ	Lake Benmore	4.04	227	P	Pn	11 26 13.9	+0.1
URZ	Urewera	4.06	33	Pn	Pn	11 26 12.8	-1.4
	1.1nm,0.3s,baz=328,slow=5.1,SNR=14						
URZ				Sn	Sn	11 26 59.4	-1.5
	2.2nm,0.3s,baz=55,slow=22,SNR=1.5						
	2.5nm,0.3s						
URZ	Urewera	4.06	33	P	Pn	11 26 12.9	-1.3
URZ	Urewera	4.06	33	P	Pn	11 26 12.9	-1.3
TOZ	Tahuroa Road	4.08	13	P	Pn	11 26 15.7	+1.3
ODZ	Otahua Downs	4.27	218	P	Pn	11 26 16.1	-1.0
ODZ	Otahua Downs	4.27	218	P	Pn	11 26 16.0	-1.0
TWGZ	Tauwhareparae	4.52	40	P	Pn	11 26 19.5	-1.0
RUGZ	Raukumara Rang	4.55	36	P	Pn	11 26 20.0	-1.1
AWAZ	Awhitu Peninsu	4.65	3	P	Pn	11 26 25.0	+2.7
HAZ	Te Kaha	4.77	35	P	Pn	11 26 23.1	-0.8
PKGZ	Pakihiroa	4.79	38	P	Pn	11 26 22.9	-1.4
WIAZ	Waiheke Island	4.95	8	P	Pn	11 26 28.7	+2.3
HHSZ	Highcliff Hill	4.96	212	P	Pn	11 26 26.4	-0.1
WKZ	Wanaka	4.96	229	P	Pn	11 26 25.7	-0.8
EAZ	Earnscleugh	5.06	224	P	Pn	11 26 27.3	-0.6
MLZ	Mavora Lakes	5.80	229	P	Pn	11 26 37.7	-0.3
SYZ	Scrubby Hill	6.09	216	P	Pn	11 26 42.2	+0.2
DCZ	Deep Cove	6.41	232	P	Pn	11 26 46.6	+0.2
CTZ	Chatham Island	6.98	110	P	Pn	11 26 54.6	+0.3
ASAR	Alice Springs	38.06	285	P	P	11 32 28.4	-1.8
	0.7nm,1.0s,baz=126,slow=7.1,SNR=2.6						
	0.7nm,1.0s						
WRA	Warramunga Arr	40.13	290	P	P	11 32 46.1	-1.4
	0.5nm,0.8s,baz=128,slow=7.5,SNR=2.6						
	0.5nm,0.8s						
QSPA	South Pole Qui	48.42	180	P	P	11 33 50.9	-2.5
	1.9nm,1.1s,baz=54,slow=6.4,SNR=2.6						
	1.9nm,1.1s						
TORD	Torodi Ar. Bea	150.82	195	PKPbc	PKPbc	11 45 01.7	-2.4
	0.3nm,0.6s,baz=166,slow=1.8,SNR=1.9						

IDC ***15*** *11:27:50.7±1.0, 42°.68N×141°.45E, h138^{km}±8^{km}, mb3.5/16, mbtmp3.9/20, Error ellipse: s-maj=14.2km s-min=11.1km az=141.0*

MOS ***15*** *11:27:50.4±0.9, 42°.68N×141°.47E, h151^{km}, mb4.1/14, Error ellipse: s-maj=9.0km s-min=6.9km az=92.2*

JMA ***15*** *11:27:51.2±0.1, 42°.7N±0°.5×141°.4E±0°.5, h137^{km}, MV3.8/38, IBURI REGION*

NEIC ***15*** *11:27:51.4±0.7, 42°.71N±0°.06×141°.4E±0°.1, h138^{km}±8^{km}, mb4.1/23, Error ellipse: s-maj=12.3km s-min=8.2km az=101.0*

SKHL ***15*** *11:27:52.1±0.3, 42°.70N×141°.60E, h143^{km}±9^{km}, mb4.9/9, msha5.7/5*

ISC 15 11:27:51.0±0.6**, 42°.66N**±0°.04×**141°.49E**±0°.04**, h140**^{km}±5^{km}**, n146, σ1^{s}36**/171**, mb4.1**/37**, 8C-28D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEW	Eniwo	0.18	351	⇓*i*P	Pn	11 28 10.2	+0.3
JEW				⇓*e*S	Sn	11 28 24.3	-0.1
JIAM	Iburiatsuma	0.32	97	⇓*i*P	Pn	11 28 10.8	+0.5
JIAM				⇓*e*S	Sn	11 28 26.0	+1.1
JNB	Noboribetsu	0.38	240	⇓*i*P	Pn	11 28 10.4	-0.2
JNB				⇓*e*S	Sn	11 28 24.8	-0.6
JISS	Ishikarishitsu	0.61	355	⇓P	Pn	11 28 12.1	+0.4
JBT2	Biratori 2	0.66	80	⇓*i*P	Pn	11 28 12.4	+0.4
JBT2				⇓*e*S	Sn	11 28 28.4	+0.4
JKB	Kayabe	0.84	204	P	Pn	11 28 13.4	0.0
JKB				*e*S	Sn	11 28 29.7	-0.7
JFR	Furan	0.95	58	*e*P	Pn	11 28 14.4	+0.1
JYM2	Yakumo 2	0.99	237	⇓*i*P	Pn	11 28 14.7	+0.1
JYM2				⇓*e*S	Sn	11 28 31.6	-1.0
JAB	Ashibetsu	1.00	32	⇓*i*P	Pn	11 28 15.6	+0.9
JAB				⇓*e*S	Sn	11 28 33.8	+0.9
JNBK	Urakawa-nobuka	1.01	112	P	Pn	11 28 15.5	+0.7
JSH	Shimam	1.06	269	⇓P	Pn	11 28 15.1	-0.2
JHR	Hokuryu	1.09	9	⇓*i*P	Pn	11 28 16.3	+0.7
JHR				⇓*e*S	Sn	11 28 35.4	+1.0
JOT	Ohata	1.32	194	*i* P	Pn	11 28 17.9	+0.1
JCH	Churui	1.39	91	P	Pn	11 28 18.5	0.0
JCH				*e*S	Sn	11 28 38.7	-0.7
ERM	Erimo	1.40	117	Pn	Pn	11 28 19.5	+0.9
ERM				Sn	Sn	11 28 40.9	+1.2
ERM	Erimo	1.40	117	P	Pn	11 28 19.8	+1.2
ERM	Erimo	1.40	117	*c i*PN	Pn	11 28 19.3	+0.7
JEM	Erimo	1.40	117	P	Pn	11 28 19.5	+0.9
JKK2	Kamakawa 2	1.52	37	⇓P	Pn	11 28 20.2	+0.3
JKK2				⇓*e*S	Sn	11 28 42.1	0.0
JOMM	Oshimamatsumae	1.58	225	*e*P	Pn	11 28 20.9	+0.3
JOMM				*e*S	Sn	11 28 42.8	-0.5
JOSM	Okushiri--Mats	1.60	249	⇓*i*P	Pn	11 28 20.5	-0.3
ASAJ	Asahikawa	1.66	29	P	Pn	11 28 21.9	+0.4
	91nm,0.4s,baz=238,slow=14,SNR=98						
ASAJ				S	Sn	11 28 44.2	-0.7
	119nm,0.7s,baz=74,slow=28,SNR=6.0						
ASAJ	Asahikawa	1.66	29	PN	Pn	11 28 21.8	+0.3
JKA	Kamikawa-asahi	1.66	29		Pn	11 28 21.8	+0.3
JKA	Kamikawa-asahi	1.66	29	*e*P	Pn	11 28 21.8	+0.3
JSS	Shosan	1.76	9	*e*P	Pn	11 28 23.5	+1.0
JAR	Ashorobuto	1.79	69	P	Pn	11 28 23.2	+0.2
JAR				*e*S	Sn	11 28 47.1	-0.4
JTM	Tenmabayashi	1.90	190		Pn	11 28 24.3	0.0
JTM	Tenmabayashi	1.90	190	P	Pn	11 28 24.2	0.0
AKK	Akkeshi	2.49	81	*e*P	Pn	11 28 31.1	-0.3
RUSJ	Misakicho	3.10	61	*e*PN	Pn	11 28 43.3	+4.2
RUSJ				*e*S	Sn	11 29 22.3	+6.0
NMR	Nemuro--Hokkai	3.19	76	⇑*i*PN	Pn	11 28 39.6	-0.7
NMR				*e*S	Sn	11 29 15.2	-3.2
NMR	Nemuro--Hokkai	3.19	76	*i* P	Pn	11 28 39.8	-0.5
NMR				*i* S	Sn	11 29 15.8	-2.6
YUK	Yuzh-Kuril'sk	3.47	65	*e*PN	Pn	11 28 45.9	+1.9
YUK				*e*S	Sn	11 29 26.6	+1.6
YUK				pmax	pmax		
	comp=Z,123nm,0.3s						
YUK				pmax	pmax		
	comp=E,18nm,0.2s						
YUK				smax	smax		
	comp=N,176nm,0.3s						
YUK				smax	smax		
	comp=E,308nm,0.4s						
YUK	Yuzh-Kuril'sk	3.47	65	*e*P	Pn	11 28 45.0	+1.0
YUK				AMB	AMB	11 28 47.7	
	comp=E,120nm,0.3s						
YUK				*e*S	Sn	11 29 25.0	0.0
YUK				A	A	11 29 29.5	
	comp=E,180nm,0.4s						
YUK				A	A	11 29 29.5	
	comp=E,310nm,0.4s						
SHO	Shikotan	4.08	71	*d i*PN	Pn	11 28 51.5	-0.5
SHO				*e*S	Sn	11 29 35.6	-3.8
SHO				pmax	pmax		
	comp=Z,47nm,0.3s						
SHO				pmax	pmax		
	comp=N,21nm,0.2s						
SHO				pmax	pmax		
	comp=E,30nm,0.2s						
SHO				smax	smax		
	comp=E,270nm,0.3s						
SHO				smax	smax		
	comp=N,265nm,0.2s						
SHO	Shikotan	4.08	71	*i* P	Pn	11 28 51.5	-0.5
SHO				AMB	AMB	11 28 51.8	
	comp=N,50nm,0.3s						
SHO				*e*S	Sn	11 29 36.7	-2.7
SHO				A	A	11 29 39.6	
	comp=N,270nm,0.3s						
SHO				A	A	11 29 39.6	
	comp=N,270nm,0.3s						
YSS	Yuzh-Sakhalins	4.38	11	Pn	Pn	11 28 56.4	+0.4
YSS	Yuzh-Sakhalins	4.38	11	α*e*PN	Pn	11 28 56.3	+0.4
YSS				*e*S	Sn	11 29 45.3	-1.2
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				smax	smax		
	comp=N,20nm,0.8s						
YSS				smax	smax		
	comp=E,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,400nm,19.0s						
YSS	Yuzh-Sakhalins	4.38	11	*e*P	Pn	11 28 56.3	+0.4
YSS				AMB	AMB	11 28 57.4	
	comp=Z,60nm,0.8s						
YSS				*e*S	Sn	11 29 45.3	-1.2
YSS				A	A	11 29 48.0	
	comp=Z,20nm,0.8s						
YSS				A	A	11 29 48.0	
	comp=Z,20nm,0.8s						
YSS				AMS	AMS	11 32 10.0	
	comp=Z,400nm,19.0s						
JMM	Marumori	4.82	187	Pn	Pn	11 29 00.7	-1.1
JMM	Marumori	4.82	187	P	Pn	11 29 00.7	-1.1
JSD	Sado	5.24	209	Pn	Pn	11 29 07.8	+0.5
JSD	Sado	5.24	209	P	Pn	11 29 07.9	+0.6
KUR	Kuril'sk	5.27	59	*e*PN	Pn	11 29 08.9	+1.2
KUR				*e*S	Sn	11 30 11.2	+3.6
KUR				pmax	pmax		
	comp=Z,30nm,0.6s						
KUR				smax	smax		
	comp=E,45nm,0.3s						
KUR				smax	smax		
	comp=N,26nm,0.2s						
KUR	Kuril'sk	5.27	59	*e*P	Pn	11 29 08.7	+1.0
KUR				AMB	AMB	11 29 13.2	
	comp=N,30nm,0.6s						
KUR				*e*S	Sn	11 30 05.8	-1.8
KUR				A	A	11 30 14.7	
	comp=N,30nm,0.2s						
KUR				A	A	11 30 14.7	
	comp=N,50nm,0.2s						
MJB9	Matsu-Tunnel	6.61	204	Pn	Pn	11 29 27.2	+1.4
MAJO	Matsushiro	6.62	204	Pn	Pn	11 29 26.2	+0.4
MAJO	Matsushiro	6.62	204	P	Pn	11 29 27.6	+1.8
MAJO	Matsushiro	6.62	204	⇓*e*PN	Pn	11 29 28.0	+2.2
MJAR	Matsushiro Arr	6.62	204	P	Pn	11 29 26.2	+0.4
	comp=N,2.4nm,0.4s,baz=30,slow=11,SNR=16						
USA0B	Ussuriysk Arra	7.08	286	Pn	Pn	11 29 31.8	-0.2
USA0B	Ussuriysk Arra	7.08	286	PN	Pn	11 29 31.8	-0.2
USRK	Ussuriysk Ar.	7.08	286	P	Pn	11 29 32.4	+0.4
	comp=N,4.1nm,0.8s,baz=92,slow=14,SNR=6.2						
JGF	Kuroka	7.75	206	Pn	Pn	11 29 41.7	+0.7
JGF	Kuroka	7.75	206	P	Pn	11 29 42.2	+1.2
INU	Inuyama	8.09	207	Pn	Pn	11 29 45.6	0.0
INU	Inuyama	8.09	207	P	Pn	11 29 45.9	+0.3
TYV	Tymovskoe	8.24	5	*e*PN	Pn	11 29 51.4	+3.9
TYV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TYV				pmax	pmax		
	comp=Z,200nm,3.6s						
TYV	Tymovskoe	8.24	5	*e*P	Pn	11 29 48.4	+0.9
TYV				AMB	AMB	11 29 52.5	
	comp=Z,30nm,0.5s						
TYV				AMB	AMB	11 29 53.4	
	comp=Z,200nm,3.6s						
TYV				*e*S	Sn	11 31 14.7	-4.3
TYV				A	A	11 31 29.2	
	comp=Z,200nm,4.0s						
TYV				A	A	11 31 29.2	
	comp=Z,200nm,4.0s						
TYV				A	A	11 31 32.6	
	comp=Z,30nm,0.9s						
TYV				A	A	11 31 32.6	
	comp=Z,20nm,0.9s						
KLR	Kul'dur	9.44	317	P	Pn	11 30 02.7	-0.7
	comp=Z,3.9nm,0.9s,baz=115,slow=14,SNR=10						
KLR	Kul'dur	9.44	317	*i* PN	Pn	11 30 03.2	-0.2
KLR	Kul'dur	9.44	317	*i* P	Pn	11 30 03.3	-0.2
ZEA	Zeya	14.56	324	*e*P	Pn	11 31 08.7	-1.4
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA	Zeya	14.56	324	*e*P	Pn	11 31 09.3	-0.8
ZEA				AMB	AMB	11 31 11.6	
	comp=Z,10.0nm,0.7s						
MA2	Magadan	17.88	16	P	P	11 31 48.4	-0.9
	comp=Z,7.1nm,0.7s,baz=205,slow=10,SNR=8.1						
MA2	Magadan	17.88	16	P	P	11 31 48.8	-0.5
MA2				IAmb	IAmb	11 31 51.5	
	comp=Z,9.4nm,0.9s						
MA2	Magadan	17.88	16	*d i*P	Pn	11 31 50.2	-0.4
MA2				pmax	pmax		
	comp=Z,15nm,1.3s						
MA2	Magadan	17.88	16	*i* P	Pn	11 31 50.2	-0.4
XLT	XiLinHaoTe	18.52	283	*e*P	Pn	11 31 58.8	+0.3
XLT				sP	sP	11 32 42.8	+5.2
XLT				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YAK	Yakutsk	20.63	344	⇓*e*P	P	11 32 16.0	-3.0
YAK				pmax	pmax		
	comp=Z,12nm,0.7s						
SEY	Seymchan	21.29	14	P	P	11 32 24.5	-1.5
	comp=Z,4.5nm,0.5s,baz=195,slow=7.6,SNR=16						
	comp=Z,4.5nm,0.5s						
SEY	Seymchan	21.29	14	⇑*e*P	P	11 32 24.6	-1.5
SEY				pmax	pmax		
	comp=Z,11nm,2.5s						
HHC	Hu-ho-hao-te	22.34	276	*e*P	P	11 32 35.3	-2.1
HHC				pmax	pmax		
	comp=Z,25nm,0.8s						
HHC				pmax	pmax		
	comp=Z,350nm,6.2s						
ULN	Ulaanbaatar	24.65	294	⇓*e*P	P	11 32 59.3	+0.6
ULN				pmax	pmax		
	comp=Z,5.0nm,1.6s						
ULN	Ulaanbaatar	24.65	294	*e*P	P	11 32 59.3	+0.6
SONM	Songino Array	25.10	294	P	P	11 33 02.4	-0.3
	comp=Z,1.7nm,0.4s,baz=89,slow=9.0,SNR=8.5						
	comp=Z,1.7nm,0.4s						
SONM	Songino Array	25.10	294	P	P	11 33 02.2	-0.4
TIXI	Tiksi	29.72	352	⇑*e*P	P	11 33 45.4	+2.0
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TIXI	Tiksi	29.72	352	*e*P	P	11 33 45.4	+2.0
H11N2	WAKE ISLAND Hy	31.33	129	T	T	12 06 03.5	
	baz=324,slow=75						
H11N1	WAKE ISLAND Hy	31.34	129	T	T	12 06 00.1	
	baz=324						
H11N3	WAKE ISLAND Hy	31.34	129	T	T	12 06 03.0	
	baz=324,slow=75						
DGZ	Jazzator, Alta	37.38	300	⇓*e*P	P	11 34 50.9	+0.8
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NRIK	Noril'sk	38.24	332	⇓*e*P	P	11 34 56.1	-0.8
ZAA0	Zalesovo Array	38.35	307	P	P	11 34 57.6	-0.4
ZALV	Zalesovo Beam	38.35	307	P	P	11 34 57.7	-0.3
	comp=Z,4.9nm,0.5s,baz=92,slow=9.2,SNR=19						
ZALV				PcP	PcP	11 37 06.6	-2.1
	comp=Z,0.6nm,0.5s,baz=108,slow=4.7,SNR=2.7						
	comp=Z,4.9nm,0.5s						
ZALV	Zalesovo Beam	38.35	307	P	P	11 34 57.2	-0.8
ZALV	Zalesovo Beam	38.35	307	*i* P	P	11 34 58.7	+0.7
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.5s						
WMQ	Urumqi	38.62	291	*e*P	P	11 35 02.1	+1.6
WMQ				LR	LR		
	comp=Z,110nm,15.5s						
A21K	Barrow	41.31	26	P	P	11 35 21.6	-0.6
MK31	Makanchi Array	41.40	297	P	P	11 35 23.1	-0.2
MK31	Makanchi Array	41.40	297	*d i*P	P	11 35 23.0	-0.3
MKAR	Makanchi Array	41.40	297	P	P	11 35 22.6	-0.7
	comp=Z,0.8nm,0.5s,baz=82,slow=11,SNR=16						
	comp=Z,0.8nm,0.5s						
MKAR	Makanchi Array	41.40	297	P	P	11 35 23.2	-0.2
MKAR	Makanchi Array	41.40	297	*i* P	P	11 35 25.2	+1.9
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	41.40	297	*i* P	P	11 35 25.2	+1.9
MAKZ	Makanchi	41.60	297	P	P	11 35 24.8	-0.2
MAKZ				IAmb	IAmb	11 35 27.5	
	comp=Z,2.3nm,0.7s						
MAKZ	Makanchi	41.60	297	P	P	11 35 24.8	-0.2
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
IMAR	Indian Mountai	41.86	34	P	P	11 35 26.9	+0.1
CAST	Castle Rocks	42.63	38	P	P	11 35 33.7	+0.6
CAST				IAmb	IAmb	11 35 37.0	
	comp=Z,6.1nm,1.5s						
KURK	Kurchatov	42.69	303	P	P	11 35 33.2	-0.4
KURK	Kurchatov	42.69	303	*c i*P	P	11 35 33.1	-0.5
KURK				pmax	pmax		
	comp=Z,19nm,0.8s						
KURBB	Kurchatov Arra	42.77	303	P	P	11 35 34.0	-0.3
	comp=Z,20nm,0.7s,baz=76,slow=8.8,SNR=34						
KTH	Kantishna Hill	43.14	37	P	P	11 35 38.1	+0.8
KTH				IAmb	IAmb	11 35 39.3	
	comp=Z,4.6nm,1.1s						
TRF	Thorofare Moun	43.43	37	P	P	11 35 40.2	+0.4
TRF				IAmb	IAmb	11 35 47.5	
	comp=Z,4.8nm,1.2s						
ILAR	Eielson Array	44.79	35	P	P	11 35 50.7	+0.4
	comp=Z,0.6nm,0.7s,baz=266,slow=6.0,SNR=9.4						
	comp=Z,0.6nm,0.7s						
SCRK	Sand Creek	46.15	36	P	P	11 36 00.8	-0.3
DOT	Dot Lake	46.17	37	P	P	11 36 01.8	+0.6
DOT				IAmb	IAmb	11 36 24.8	
	comp=Z,4.0nm,1.3s						
BRVK	Borovoye	47.02	309	P	P	11 36 07.9	0.0
BRVK				IAmb	IAmb	11 36 11.5	
	comp=Z,15nm,1.4s						
BRVK	Borovoye	47.02	309	⇑*e*P	P	11 36 07.8	0.0
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
BRVK	Borovoye	47.02	309	*e*P	P	11 36 07.8	0.0
EGAK	Eagle	47.21	35	P	P	11 36 09.6	+0.4
EGAK				IAmb	IAmb	11 36 25.0	
	comp=Z,8.2nm,1.5s						
BCAR	Beaver Creek A	47.29	37	P	P	11 36 11.4	+1.5
INK	Inuvik	49.40	29	P	P	11 36 26.2	+0.4
	comp=Z,1.0nm,0.5s,baz=308,slow=7.3,SNR=8.7						
	comp=Z,1.0nm,0.5s						
INK	Inuvik	49.40	29	P	P	11 36 26.3	+0.4
KKAR	Karatay Array	50.52	296	P	P	11 36 34.2	-0.6
KKAR	Karatay Array	50.52	296	P	P	11 36 34.2	-0.6
FARO	Faro, Yukon	51.27	37	P	P	11 36 41.2	+1.1
FARO				IAmb	IAmb	11 36 50.9	
	comp=Z,6.1nm,1.4s						
ARU	Arti	52.27	316	*d i*P	P	11 36 49.0	+1.4
ARU						11 37 55.3	
ARU				S	S	11 44 07.5	+5.9
ARU				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ARU	Arti	52.27	316	*e*P	P	11 36 49.0	+1.4
C36M	Paulatuk	52.34	27	P	P	11 36 48.0	+0.2
C36M				IAmb	IAmb	11 36 51.2	
	comp=Z,1.3nm,0.6s						
ABKAR	Akbulak array	54.47	307	P	P	11 37 03.6	-0.1
ABKAR				IAmb	IAmb	11 37 08.0	
	comp=Z,2.1nm,0.6s						
RES	Resolute Bay	57.15	15	P	P	11 37 22.3	-0.1
RES				IAmb	IAmb	11 37 23.1	
	comp=Z,3.7nm,1.1s						
RES	Resolute Bay	57.15	15	P	P	11 37 22.3	-0.1
RES				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ARCES	ARCESS Array B	58.77	338	P	P	11 37 33.7	-0.1
	comp=Z,7.4nm,1.2s,baz=50,slow=8.2,SNR=5.5						
	comp=Z,7.4nm,1.2s						
YKA	Yellowknife Ar	58.95	32	P	P	11 37 35.2	0.0
	comp=Z,0.1nm,0.4s,baz=306,slow=6.1,SNR=6.0						
	comp=Z,0.1nm,0.4s						
YKA	Yellowknife Ar	58.95	32	*i* P	P	11 37 35.5	+0.4
WB0	Warramunga Arr	62.46	188	P	P	11 37 59.5	+0.1
WB0				IAmb	IAmb	11 38 25.8	
	comp=Z,7.7nm,1.4s						
CTAO	Charters Tower	62.59	175	P	P	11 38 00.8	+0.6
CTAO	Charters Tower	62.59	175	P	P	11 38 00.8	+0.6
CTAO				pmax	pmax		
	comp=Z,9.0nm,1.4s						
WB2	Warramunga Arr	62.64	188	P	P	11 38 01.8	+1.3
WRA	Warramunga Arr	62.64	188	P	P	11 37 59.9	-0.6
	comp=Z,0.7nm,0.6s,baz=6.0,slow=6.9,SNR=8.2						
	comp=Z,0.7nm,0.6s						
FIA1	FINESS Array S	63.89	331	P	P	11 38 08.3	0.0
FINES	FINESS Array B	63.89	331	P	P	11 38 07.9	-0.4
	comp=Z,2.8nm,0.5s,baz=54,slow=8.2,SNR=19						
	comp=Z,2.8nm,0.5s						
FINES	FINESS Array B	63.89	331	P	P	11 38 08.2	-0.1
FINES	FINESS Array B	63.89	331	P	P	11 38 08.2	-0.1
ASAR	Alice Springs	66.37	188	P	P	11 38 24.5	-0.2
	comp=Z,0.3nm,0.6s,baz=4.7,slow=5.5,SNR=5.6						
	comp=Z,0.3nm,0.6s						
KIV	Kislovodsk	67.32	309	*e*P	P	11 38 29.7	-1.1
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NB2	NORSAR Subarra	69.03	337	P	P	11 38 39.9	-1.2
	comp=Z,0.6nm,0.5s,baz=44,slow=6.2						
NOA	NORSAR Array B	69.03	337	P	P	11 38 40.2	-0.9
	comp=Z,1.2nm,0.7s,baz=34,slow=4.8,SNR=1.2						
	comp=Z,1.2nm,0.7s						
AKASG	Malin Array Be	69.92	321	P	P	11 38 45.8	-0.7
	comp=Z,1.5nm,0.4s,baz=40,slow=6.7,SNR=2.0						
	comp=Z,1.5nm,0.4s						
AKASG	Malin Array Be	69.92	321	*i* P	P	11 38 50.7	+4.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NVAR	Mina Array Bea	71.62	55	P	P	11 38 58.5	+1.0
	comp=Z,0.5nm,0.7s,baz=305,slow=5.2,SNR=4.7						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	73.72	47	P	P	11 39 10.2	+0.5
	comp=Z,0.3nm,0.5s,baz=90,slow=0.4,SNR=5.1						
	comp=Z,0.3nm,0.5s						
TXAR	Lajitas Array	86.65	53	P	P	11 40 17.5	-1.5
	comp=Z,0.2nm,0.7s,baz=260,slow=3.5,SNR=2.1						
	comp=Z,0.2nm,0.7s						

SKHL ***15*** *11:41:49.3±0.3, 46°.10N×153°.20E, h35^{km}±5^{km}, mb4.5/3*

*IDC **15** 11:41:54.1±2.9,46°.91N×152°.87E,h94km±26km,mb3.3/8,mbtmp3.7/11,MS3.7/1,Error ellipse: s-maj=33.1km s-min=16.4km az=145.0*

ISC 15 11:41:49.8±1.2,46°.5N±0°.2×153°.1E±0°.1,h50km,n26,σ2s.29/14,mb3.5/7,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.87**	**253**	*e*P	**Pn**	**11 42 47.3**	**+0.6**
KUR				AMB	AMB	11 42 49.1	
	50nm,0.2s						
KUR				*e*S	**Sn**	**11 43 30.6**	**-0.3**
KUR				A	A	11 43 48.7	
	40nm,0.4s						
KUR				A	A	11 43 48.7	
	100nm,0.4s						
SHO	**Shikotan**	**5.15**	**242**	*e*P	Pn	11 43 03.3	-1.0
SHO				AMB	AMB	11 43 06.0	
	30nm,0.5s						
SHO				*e*S	Sn	11 43 58.8	-3.6
SHO				A	A	11 44 26.3	
	40nm,0.5s						
SHO				A	A	11 44 26.3	
	40nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.67**	**247**	*e*P	**Pn**	**11 43 12.0**	**+0.6**
YUK				*e*S	**Sn**	**11 44 13.2**	**-2.0**
YUK				A	A	11 44 19.8	
	60nm,0.5s						
YUK				A	A	11 44 19.8	
	100nm,0.5s						
NMR	**Nemuro--Hokkai**	**6.10**	**242**	*e*P	Pn	11 43 17.2	0.0
NMR				*e*S	**Sn**	**11 44 23.0**	**-2.6**
AKK	**Akkeshi**	**6.83**	**242**	*e*P	Pn	11 43 27.7	+0.4
AKK				*e*S	**Sn**	**11 44 41.4**	**-2.3**
PETK	**Petropavlovsk-**	**7.25**	**22**	P	**Pn**	**11 43 34.1**	**+1.0**
	1.3nm,0.6s,baz=186,slow=13,SNR=1.4						
ASAJ	**Asahikawa**	**7.78**	**256**	P	**Pn**	**11 43 42.4**	**+2.0**
	8.6nm,0.9s,baz=78,slow=18,SNR=7.1						
ASAJ				S	**Sn**	**11 45 10.8**	**+3.9**
	5.3nm,1.1s,baz=241,slow=8.8,SNR=1.7						
USRK	**Ussuriysk Ar.**	**15.02**	**269**	P	**Pn**	**11 45 18.9**	**+0.2**
	2.2nm,0.6s,baz=72,slow=14,SNR=2.5						
KSRS	**Korea Array**	**20.72**	**253**	P	**P**	**11 46 28.5**	**+2.7**
	0.6nm,0.5s,baz=56,slow=9.2,SNR=2.2						
	0.6nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**29.00**	**152**	T	T	12 19 11.5	
	baz=340,slow=76,SNR=52						
H11N1	**WAKE ISLAND Hy**	**29.01**	**152**	T	T	12 19 12.6	
	baz=340,slow=76,SNR=44						
H11N3	**WAKE ISLAND Hy**	**29.01**	**152**	T	T	12 19 12.7	
	baz=340,slow=76,SNR=29						
H11S1	**WAKE ISLAND Hy**	**30.08**	**154**	T	T	12 20 35.6	
	baz=341,slow=76,SNR=57						
H11S3	**WAKE ISLAND Hy**	**30.09**	**154**	T	T	12 20 35.6	
	baz=341,slow=76,SNR=60						
H11S2	**WAKE ISLAND Hy**	**30.10**	**154**	T	T	12 20 34.8	
	baz=341,slow=76,SNR=57						
SONM	**Songino Array**	**31.41**	**290**	LR	LR	12 02 08.4	
	comp=Z,122nm,18.4s,baz=348,slow=39						
INK	**Inuvik**	**41.87**	**32**	P	P	11 49 31.7	-2.7
	1.0nm,0.8s,baz=273,slow=5.6,SNR=4.8						
	1.0nm,0.8s						
MKAR	**Makanchi Array**	**47.05**	**298**	P	**P**	**11 50 13.2**	**-3.0**
	0.2nm,0.5s,baz=64,slow=9.8,SNR=2.1						
	0.2nm,0.5s						
YKA	**Yellowknife Ar**	**51.13**	**37**	P	**P**	**11 50 45.8**	**-1.3**
	0.4nm,0.8s,baz=291,slow=6.8,SNR=4.3						
	0.4nm,0.8s						
HFS	**Hagfors**	**68.69**	**340**	P	P	11 52 44.3	-3.3
	3.0nm,0.8s,baz=46,slow=8.3,SNR=7.4						
	3.0nm,0.8s						
AKASG	**Malin Array Be**	**71.75**	**326**	P	P	11 53 03.3	-3.1
	0.8nm,0.3s,baz=29,slow=6.1,SNR=5.8						
	0.8nm,0.3s						
ASAR	**Alice Springs**	**71.97**	**198**	P	**P**	**11 53 09.5**	**+1.6**
	0.4nm,0.9s,baz=5.7,slow=4.7,SNR=1.9						
	0.4nm,0.9s						
TXAR	**Lajitas Array**	**77.62**	**60**	P	P	11 53 39.7	-1.1
	0.2nm,0.5s,baz=301,slow=5.2,SNR=6.3						
	0.2nm,0.5s						
H03N2	**Juan Fernandez**	**138.75**	**91**	T	T	14 36 34.0	
	baz=308,slow=77,SNR=4.2						
H03N1	**Juan Fernandez**	**138.77**	**91**	T	T	14 36 30.3	
	baz=308,slow=77,SNR=4.2						
H03N3	**Juan Fernandez**	**138.77**	**91**	T	T	14 36 34.8	
	baz=308,slow=77,SNR=4.2						

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*IDC **15** 11:42:09.3±1.2,36°.56N×6°.90E,h0km,mb3.5/6,mbtmp3.6/8,ML3.5/2,Error ellipse: s-maj=26.7km s-min=17.2km az=23.0*

*CRAAG **15** 11:42:10.3,36°.58N×6°.80E,Ml3.6,Algerie 05km SE Ain-Bouziane*

*LDG **15** 11:42:14.1±0.1,36°.60N×6°.92E,h10km,Ml3.4/16,Error ellipse: s-maj=3.6km s-min=1.6km az=43.0*

ISC 15 11:42:10.8±0.7,36°.62N±0°.05×6°.78E±0°.04,h12km,n34,σ1s.98/46,mb3.6/6,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAEH	**'Ain El Ouahch**	**0.17**	**19**	P	**Pg**	**11 42 15.7**	**+1.0**
CASM	**Ain Smara**	**0.43**	**213**	P	**Pg**	**11 42 18.4**	**-0.9**
CMAH	**Djebel Manchou**	**0.51**	**89**	P	**Pg**	**11 42 21.3**	**+0.5**
ABSA	**Djebel Ababsia**	**0.66**	**121**	P	**Pg**	**11 42 23.8**	**+0.2**
DFRA	**Djebel Bou Aff**	**0.73**	**264**	P	**Pg**	**11 42 25.9**	**+0.9**
CKHR	**Kef el Ahmar**	**1.19**	**240**	P	**Pn**	**11 42 34.6**	**+1.2**
SET	**Setif**	**1.19**	**250**	P	**Pn**	**11 42 34.0**	**+0.6**
KEST	**Kesra**	**2.25**	**112**	Pn	**Pn**	**11 42 48.5**	**+0.5**
	14nm,0.3s,baz=251,slow=4.8,SNR=69						
KEST				Lg	Lg	11 43 16.4	
	5.6nm,0.3s,baz=66,slow=20,SNR=2.0						
	69nm,0.6s						
PGF	**Pioggiola**	**6.16**	**15**	*e*Pn	**Pn**	**11 43 44.1**	**+2.4**
PGF				*e*Sn	**Sn**	**11 44 49.9**	**-2.3**
	12nm,0.4s						
LMR	**La Mourre**	**6.71**	**358**	*e*Pn	**Pn**	**11 43 50.7**	**+1.6**
LMR				*e*Sn	**Sn**	**11 45 01.9**	**-3.5**
	10nm,0.2s						
SBF	**Sospel**	**7.25**	**4**	*e*Pn	**Pn**	**11 43 58.2**	**+1.6**
SBF				*e*Sn	**Sn**	**11 45 16.2**	**-2.7**
	20nm,0.4s						
SMRF	**Simiane la Rot**	**7.41**	**353**	*e*Pn	**Pn**	**11 43 59.8**	**+1.1**
SMRF				*e*Sn	**Sn**	**11 45 20.2**	**-2.4**
	2.1nm,0.3s						
MTLF	**Montolieu**	**7.57**	**334**	*e*Pn	**Pn**	**11 44 02.6**	**+1.6**
MTLF				*e*Sn	**Sn**	**11 45 24.9**	**-1.8**
	2.8nm,0.3s						
LASF	**Ste Croix**	**7.78**	**344**	*e*Pn	**Pn**	**11 44 05.7**	**+1.9**
LASF				*e*Sn	**Sn**	**11 45 29.0**	**-2.7**
	2.0nm,0.2s						
EPF	**Esparros**	**8.10**	**324**	*e*Pn	**Pn**	**11 44 10.6**	**+2.4**
EPF				*e*Sn	**Sn**	**11 45 37.5**	**-2.1**
	4.4nm,0.3s						
MBDF	**Montbardon**	**8.10**	**360**	*e*Pn	**Pn**	**11 44 09.9**	**+1.6**
MBDF				*e*Sn	**Sn**	**11 45 36.7**	**-3.2**
	1.8nm,0.3s						
ORIF	**Oris-en-Rattie**	**8.32**	**356**	*e*Pn	**Pn**	**11 44 13.0**	**+1.7**
ORIF				*e*Sn	**Sn**	**11 45 42.2**	**-3.0**
	1.2nm,0.3s						
VIVF	**Saint-Julien-l**	**8.38**	**350**	*e*Pn	**Pn**	**11 44 12.4**	**+0.3**
VIVF				*e*Sn	**Sn**	**11 45 43.8**	**-2.8**
	2.0nm,0.2s						
ETSF	**Etsaut**	**8.44**	**320**	*e*Pn	**Pn**	**11 44 15.1**	**+2.2**
ETSF				*e*Sn	**Sn**	**11 45 45.9**	**-2.3**
	1.2nm,0.2s						
LPL	**La Plagne**	**8.89**	**360**	*e*Pn	**Pn**	**11 44 20.7**	**+1.5**
SJPF	**Ste Jean**	**8.94**	**319**	*e*Pn	**Pn**	**11 44 22.5**	**+2.8**
SJPF				*e*Sn	**Sn**	**11 45 57.6**	**-2.7**
	1.6nm,0.4s						
ESDC	**Sonseca Array**	**9.00**	**293**	Pn	**Pn**	**11 44 24.1**	**+3.5**
	0.2nm,0.3s,baz=97,slow=14,SNR=2.4						
	0.4nm,0.4s						
CAF	**Calviac**	**9.03**	**338**	*e*Pn	**Pn**	**11 44 22.9**	**+1.9**
CAF	**Calviac**	**9.03**	**338**	*e*Pg	Pn	11 45 01.9	+41
CAF				*e*Sn	**Sn**	**11 45 59.7**	**-3.0**
	2.1nm,0.4s						
RJF	**Les Rejaudoux**	**9.54**	**337**	*e*Pn	**Pn**	**11 44 28.8**	**+0.8**
SMF	**Signal de Mont**	**10.26**	**349**	*e*Pn	**Pn**	**11 44 39.5**	**+1.8**
AVF	**Avril sur Loir**	**10.48**	**347**	*e*Pn	**Pn**	**11 44 42.4**	**+1.6**
BRTR	**Keskin Array B**	**21.31**	**73**	P	**P**	**11 46 57.5**	**-0.1**
	0.5nm,0.8s,baz=272,slow=7.0,SNR=2.1						
	0.5nm,0.8s						
AKASG	**Malin Array Be**	**21.37**	**42**	P	**P**	**11 46 57.6**	**-0.4**
	2.0nm,0.7s,baz=239,slow=11,SNR=4.2						
	2.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**23.82**	**192**	P	**P**	**11 47 23.1**	**-0.6**
	1.0nm,0.7s,baz=0.5,slow=11,SNR=5.4						
	1.0nm,0.7s						
MKAR	**Makanchi Array**	**55.26**	**54**	P	**P**	**11 51 44.6**	**+0.9**
	0.7nm,0.7s,baz=284,slow=5.8,SNR=6.2						
	0.7nm,0.7s						
ILAR	**Eielson Array**	**76.84**	**349**	P	**P**	**11 54 01.9**	**-0.2**
	0.4nm,1.0s,baz=47,slow=4.3,SNR=3.4						
	0.4nm,1.0s						
CMAR	**Chiang Mai Arr**	**80.90**	**74**	P	**P**	**11 54 24.7**	**-0.5**
	0.6nm,0.4s,baz=308,slow=4.4,SNR=1.9						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**131.51**	**85**	PKP	**PKPdf**	**12 01 24.6**	**+0.9**
	0.9nm,1.2s,baz=318,slow=2.5,SNR=1.5						

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*SOME **15** 11:57:57.0,44°.23N×82°.85E,h0km*

*NNC **15** 11:57:59.5±3.0,44°.38N×82°.75E,h0km,mb2.6,mpv2.2,Error ellipse: s-maj=32.6km s-min=7.8km az=117.0*

ISC 15 11:57:55.6±6.0,44°.2N±0°.2×83°.2E±0°.4,h10km,n6,σ0s.24/6,3C-3D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	**Jarkent**	**2.45**	**275**	*e*Pg	**Pb**	**11 58 39.7**	**0.0**
	4.5nm,0.3s						
DJR				*e*Lg	Lg	11 59 11.1	
	3.3nm,0.4s						
MK31	**Makanchi Array**	**2.70**	**347**	⇑Pg	**Pb**	**11 58 44.0**	**-0.1**
	0.2nm,0.2s,baz=172,slow=16,SNR=21						
MK31				⇓Lg	Lg	11 59 16.4	
	1.0nm,0.3s,baz=165,slow=28,SNR=15						
MAKZ	**Makanchi**	**2.78**	**343**	⇑Pg	**Pb**	**11 58 45.4**	**+0.1**
	2.2nm,1.1s						
MAKZ				⇓Lg	Lg	11 59 17.2	
	0.4nm,0.2s						
PDGK	**Podgornoye**	**2.81**	**254**	⇓Pg	**Pb**	**11 58 46.2**	**+0.3**
	2.7nm,1.2s						
PDGK				⇑Lg	Lg	11 59 22.7	
	2.8nm,0.4s						
UZB	**Uzynbulak**	**3.19**	**253**	*e*Pg	**Pb**	**11 58 52.2**	**-0.2**
	4.9nm,0.9s						
UZB				*e*Lg	Lg	11 59 32.9	
	1.9nm,0.3s						
SATY	**Saty**	**3.64**	**254**	*e*Pg	**Pb**	**11 59 00.0**	**-0.1**
	1.5nm,0.3s						
SATY				*e*Lg	Lg	11 59 45.9	
	2.8nm,0.3s						

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*TAP **15** 12:27:43.0,24°.29N×122°.85E,h60km±1km,ML2.7,C*

*JMA **15** 12:27:43.1±0.2,24°N±2°×122°.9E±0°.6,h61km±1km,MV2.3/10,NW OFF ISHIGAKIJIMA IS*

ISC 15 12:27:43.8±1.2,24°.32N±0°.04×122°.85E±0°.02,h55km±7km,n63,σ0s.95/126,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.16**	**34**	*i* P	**Pn**	**12 27 52.3**	**-0.1**
JYNG				S	**Sn**	**12 27 58.7**	**+0.1**
YOJ	**Yonaguni jima**	**0.20**	**46**	P	**Pn**	**12 27 52.5**	**-0.2**
YOJ				S	**Sn**	**12 27 59.0**	**-0.1**
YOJ	**Yonaguni jima**	**0.20**	**46**	*e*P	**Pn**	**12 27 51.0**	**-1.7**
	baz=37						
YOJ				S	**Sn**	**12 27 59.4**	**+0.3**
	baz=37						
EOS4	**EOS4**	**0.53**	**248**	P	**Pn**	**12 27 55.9**	**+0.7**
	baz=251						
EOS4				*e*S	**Sn**	**12 28 05.4**	**+1.8**
	baz=251						
EOS2	**EOS2**	**0.57**	**280**	P	**Pn**	**12 27 56.2**	**+0.2**
	baz=282						
EOS2				*e*S	**Sn**	**12 28 06.5**	**+1.6**
	baz=282						
IRIF	**Iriomote-Funau**	**0.80**	**89**	P	**Pn**	**12 27 58.7**	**-0.3**
IRIF				S	**Sn**	**12 28 10.3**	**+0.1**
HATJ	**Hateruma jima**	**0.91**	**107**	P	**Pn**	**12 28 00.9**	**+0.5**
HATJ				*e*S	**Sn**	**12 28 14.2**	**+1.5**
TWC	**Suao**	**0.96**	**288**	P	**Pn**	**12 28 00.2**	**-0.8**
	baz=289						
TWC				*e*S	**Sn**	**12 28 13.1**	**-0.7**
	baz=289						
EWUT	**Wuta**	**0.98**	**277**	P	**Pn**	**12 28 01.5**	**+0.1**
	baz=279						
EWUT				*e*S	**Sn**	**12 28 13.9**	**-0.6**
	baz=279						
JKRS	**Kuro-shima**	**1.06**	**94**	P	**Pn**	**12 28 02.7**	**+0.3**
JKRS				S	**Sn**	**12 28 16.9**	**+0.6**
NDS	**Dongshan**	**1.08**	**287**	P	**Pn**	**12 28 02.8**	**+0.1**
	baz=288						
NDS				S	**Sn**	**12 28 16.2**	**-0.6**
	baz=288						
ETL	**Fush Village**	**1.13**	**262**	*i* P	**Pn**	**12 28 03.1**	**-0.4**
	baz=263						
ETL				S	**Sn**	**12 28 17.8**	**-0.3**
	baz=263						
TIPB	**Shuangxi**	**1.14**	**305**	P	**Pn**	**12 28 02.9**	**-0.6**
	baz=306						
TIPB				*e*S	**Sn**	**12 28 16.8**	**-1.4**
	baz=306						
TWE	**Neicheng**	**1.15**	**291**	P	**Pn**	**12 28 03.5**	**-0.1**
	baz=291						
TWE				S	**Sn**	**12 28 18.4**	**0.0**
	baz=291						
NACB	**Ninganchiao**	**1.16**	**263**	P	**Pn**	**12 28 03.4**	**-0.3**
	baz=264						
NACB				S	**Sn**	**12 28 18.0**	**-0.5**
	baz=264						
TWD	**Chiawan**	**1.17**	**258**	P	**Pn**	**12 28 03.4**	**-0.5**
	baz=259						
TWD				S	**Sn**	**12 28 18.1**	**-0.8**
	baz=259						
SXI1	**Grass Mountain**	**1.17**	**311**	P	**Pn**	**12 28 03.3**	**-0.7**
	baz=312						
SXI1				*e*S	**Sn**	**12 28 20.1**	**+1.0**
	baz=312						
JIJ	**Ishigaki jima**	**1.18**	**88**	P	**Pn**	**12 28 03.7**	**-0.3**
JIJ				S	**Sn**	**12 28 18.1**	**-1.0**
ENTT	**Nioudou**	**1.21**	**285**	P	**Pn**	**12 28 04.9**	**+0.4**
	baz=286						
ENTT				S	**Sn**	**12 28 19.3**	**-0.6**
	baz=286						
LATG	**Datong**	**1.23**	**280**	P	**Pn**	**12 28 04.7**	**-0.1**
	baz=281						
LATG				*e*S	**Sn**	**12 28 21.6**	**+1.2**
	baz=281						
WFSB	**Wu-fen Shan**	**1.23**	**308**	P	**Pn**	**12 28 04.0**	**-0.7**
	baz=308						
WFSB				*e*S	**Sn**	**12 28 18.3**	**-2.0**
	baz=308						
FUSB	**Fushanzhiwuyua**	**1.23**	**291**	*i* P	**Pn**	**12 28 04.6**	**-0.2**
	baz=292						
FUSB				S	**Sn**	**12 28 19.8**	**-0.6**
	baz=292						
ETLH	**Xiulin Townshi**	**1.25**	**265**	P	**Pn**	**12 28 04.3**	**-0.8**
	baz=266						
ETLH				*e*S	**Sn**	**12 28 20.2**	**-0.8**
	baz=266						
ETM	**Tongmen**	**1.29**	**254**	P	**Pn**	**12 28 04.6**	**-0.9**
	baz=255						
ETM				*e*S	**Sn**	**12 28 20.7**	**-1.1**
	baz=255						
NWLT	**Wulai**	**1.31**	**291**	P	**Pn**	**12 28 05.9**	**+0.1**
	baz=291						
NWLT				S	**Sn**	**12 28 22.6**	**+0.3**
	baz=291						
NNSB	**Datong**	**1.34**	**275**	P	**Pn**	**12 28 06.3**	**-0.1**
	baz=275						
NNSB				S	**Sn**	**12 28 22.9**	**-0.3**
	baz=275						
NNSH	**Datong**	**1.34**	**275**	P	**Pn**	**12 28 06.4**	**0.0**
	baz=275						
NNSH				S	**Sn**	**12 28 22.4**	**-0.8**
	baz=275						
NNS	**Nan Shan**	**1.35**	**275**	P	**Pn**	**12 28 05.9**	**-0.6**
	baz=276						
NNS				*i* S	**Sn**	**12 28 23.2**	**-0.2**
	baz=276						
JISG	**Ishigakijimahi**	**1.36**	**78**	P	**Pn**	**12 28 05.4**	**-1.0**
JISG				S	**Sn**	**12 28 22.7**	**-0.7**
YHNB	**Yeheng**	**1.39**	**285**	P	**Pn**	**12 28 07.2**	**+0.3**
	baz=285						
YHNB				S	**Sn**	**12 28 24.6**	**+0.3**
	baz=285						
ESL	**Shilin**	**1.39**	**249**	P	**Pn**	**12 28 06.2**	**-0.7**
	baz=249						
ESL				S	**Sn**	**12 28 23.6**	**-0.6**
	baz=249						
NSK	**Sanguang**	**1.41**	**285**	*i* P	**Pn**	**12 28 07.0**	**-0.2**
	baz=285						
NSK				S	**Sn**	**12 28 24.6**	**-0.1**
	baz=285						
EGFH	**Guangfu**	**1.45**	**244**	P	**Pn**	**12 28 06.9**	**-0.8**
	baz=244						
EGFH				*e*S	**Sn**	**12 28 24.9**	**-0.9**
	baz=244						
HGSD	**Ruisui**	**1.54**	**238**	P	**Pn**	**12 28 08.4**	**-0.5**
	baz=238						
HGSD				*e*S	**Sn**	**12 28 26.2**	**-1.7**
	baz=238						
CHGB	**Renai**	**1.55**	**261**	P	**Pn**	**12 28 09.4**	**+0.1**
	baz=261						
CHGB				S	**Sn**	**12 28 27.7**	**-0.7**
	baz=261						
OWD	**Renai**	**1.57**	**257**	*i* P	**Pn**	**12 28 09.3**	**-0.1**
	baz=257						
OWD				*e*S	**Sn**	**12 28 27.6**	**-1.2**
	baz=257						
NFF	**Wufeng Townshi**	**1.61**	**281**	P	**Pn**	**12 28 10.2**	**+0.3**
	baz=282						
NFF				*e*S	**Sn**	**12 28 30.3**	**+0.7**
	baz=282						
WUSB	**Renai**	**1.62**	**259**	P	**Pn**	**12 28 10.3**	**+0.2**
	baz=259						
WUSB				S	**Sn**	**12 28 30.0**	**+0.1**
	baz=259						
EHY	**Hungye**	**1.62**	**240**	P	**Pn**	**12 28 09.4**	**-0.5**
	baz=240						
EHY				S	**Sn**	**12 28 29.3**	**-0.5**
	baz=240						
VWDT	**VWDT**	**1.66**	**250**	*i* P	**Pn**	**12 28 10.6**	**0.0**
	baz=251						
VWDT				*i* S	**Sn**	**12 28 30.6**	**-0.1**
	baz=251						
YULB	**Yu-li**	**1.70**	**237**	P	**Pn**	**12 28 10.4**	**-0.7**
	baz=237						
YULB				*e*S	**Sn**	**12 28 30.5**	**-1.2**
	baz=237						
JTJ	**Tarama**	**1.72**	**79**	P	**Pn**	**12 28 11.3**	**0.0**
JTJ				*e*S	**Sn**	**12 28 32.2**	**0.0**
TWF1	**Yuli**	**1.72**	**236**	P	**Pn**	**12 28 11.0**	**-0.4**
	baz=236						
TWF1				S	**Sn**	**12 28 31.6**	**-0.6**
	baz=236						
DPDB	**Guoxing**	**1.78**	**261**	*e*P	**Pn**	**12 28 12.9**	**+0.7**
	baz=261						
DPDB				S	**Sn**	**12 28 34.0**	**+0.2**
	baz=261						
WCS	**Beigang Elemen**	**1.79**	**262**	*e*P	**Pn**	**12 28 13.1**	**+0.8**
	baz=262						
WCS				*e*S	**Sn**	**12 28 34.4**	**+0.5**
	baz=262						
SSLB	**Suanglung**	**1.81**	**253**	*i* P	**Pn**	**12 28 12.6**	**-0.1**
	baz=253						
SSLB				*e*S	**Sn**	**12 28 34.9**	**+0.3**
	baz=253						
TYC	**Yuchr**	**1.87**	**258**	*e*P	**Pn**	**12 28 13.9**	**+0.5**
	baz=258						
TYC				S	**Sn**	**12 28 35.6**	**-0.2**
	baz=258						
EHD	**Haiduan**	**1.91**	**233**	P	**Pn**	**12 28 13.4**	**-0.5**
	baz=233						
EHD				*e*S	**Sn**	**12 28 34.5**	**-2.2**
	baz=233						
WHYT	**Xinyi Township**	**1.93**	**252**	P	**Pn**	**12 28 14.6**	**+0.4**
	baz=252						
WHYT				S	**Sn**	**12 28 37.4**	**0.0**
	baz=252						
EDH	**Donghe**	**1.95**	**227**	P	**Pn**	**12 28 13.9**	**-0.6**
	baz=227						
EDH				*e*S	**Sn**	**12 28 35.2**	**-2.7**
	baz=227						
WJS	**Zhushan**	**2.00**	**256**	*e*P	**Pn**	**12 28 17.1**	**+1.9**
	baz=256						
WJS				*e*S	**Sn**	**12 28 41.2**	**+2.1**
	baz=256						
ELDTW	**Lidau**	**2.02**	**237**	P	**Pn**	**12 28 15.1**	**-0.5**
	baz=236						
ELDTW				*e*S	**Sn**	**12 28 37.4**	**-2.4**
	baz=236						
ALS	**Alishan**	**2.04**	**247**	*e*P	**Pn**	**12 28 16.9**	**+1.0**
	baz=247						
ALS				*e*S	**Sn**	**12 28 40.8**	**+0.3**
	baz=247						
TWGBT	**Beinan**	**2.21**	**228**	*e*P	**Pn**	**12 28 17.3**	**-0.8**
	baz=227						
TWGBT				S	**Sn**	**12 28 43.2**	**-1.0**
	baz=227						
TWG	**Pinlang**	**2.21**	**228**	P	**Pn**	**12 28 17.5**	**-0.5**
	baz=227						
TWG				*e*S	**Sn**	**12 28 42.7**	**-1.6**
	baz=227						
STYH	**Taoyuan**	**2.22**	**239**	*e*P	**Pn**	**12 28 18.7**	**+0.6**
	baz=239						
STYH				*e*S	**Sn**	**12 28 45.0**	**+0.6**
	baz=239						
WCKO	**Fanlu**	**2.23**	**247**	*e*P	**Pn**	**12 28 20.4**	**+2.0**
	baz=247						
WCKO				S	**Sn**	**12 28 44.9**	**+0.1**
	baz=247						
TPUB	**Ta-pu**	**2.27**	**244**	*e*P	**Pn**	**12 28 20.9**	**+2.0**
	baz=244						
TPUB				*e*S	**Sn**	**12 28 47.3**	**+1.5**
	baz=244						
JMJ	**Miyako jima 2**	**2.28**	**77**	P	**Pn**	**12 28 19.4**	**+0.4**
	baz=76						
JMJ				S	**Sn**	**12 28 46.3**	**+0.4**
	baz=76						
CHN4	**Tsaushan**	**2.28**	**245**	*e*P	**Pn**	**12 28 21.0**	**+2.0**
	baz=245						
CHN4				*e*S	**Sn**	**12 28 47.8**	**+1.8**
	baz=245						
WTP	**Ta-pu**	**2.31**	**243**	*e*P	**Pn**	**12 28 21.1**	**+1.6**
	baz=243						
WTP				*e*S	**Sn**	**12 28 48.7**	**+1.9**
	baz=243						
TWK	**Hsinying**	**2.41**	**245**	*e*P	**Pn**	**12 28 22.9**	**+2.1**
	baz=244						
TWK				*e*S	**Sn**	**12 28 50.5**	**+1.4**
	baz=244						
MASBT	**Mashibuluo**	**2.65**	**231**	P	**Pn**	**12 28 24.6**	**+0.5**
	baz=230						
MASBT				S	**Sn**	**12 28 54.6**	**-0.5**
	baz=230						

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*IDC **15** 12:45:10.6±10.0,15°.17N×92°.82W,h0km,mb3.4/2,mbtmp3.4/4,ML3.4/2,Error ellipse: s-maj=218.1km s-min=71.4km az=15.0*

*MEX **15** 12:45:20.6±0.3,15°.03N×93°.61W,h16km±70km,MD3.9*

ISC 15 12:45:21.1±2.3,16°.2N±0°.1×92°.82W±0°.09,h25km±19km,n8,σ1s.26/13,Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**0.60**	**220**	*e*P	**Pb**	**12 45 32.6**	**-0.3**
PCIG				*e*S	**Sb**	**12 45 42.3**	**+1.3**
PAVE	**Pavencul**	**1.15**	**147**	*e*P	**Pb**	**12 45 42.0**	**-0.4**
PAVE				*e*S	**Sn**	**12 45 58.4**	**+1.5**
PATR	**El Naranjo**	**1.19**	**151**	*e*P	**Pn**	**12 45 40.9**	**-1.4**
PATR				*e*S	**Sn**	**12 45 56.7**	**-1.1**
CHUJ	**Union Juarez**	**1.27**	**147**	*e*P	**Pn**	**12 45 42.6**	**-0.9**
CHUJ				*e*S	**Sn**	**12 45 59.9**	**0.0**
CMIG	**Matias Romero**	**2.18**	**295**	Pn	**Pn**	**12 45 55.0**	**-0.9**
	9.9nm,0.3s,baz=168,slow=14,SNR=121						
CMIG				Sn	**Sn**	**12 46 20.8**	**-1.3**
	50nm,0.3s,baz=136,slow=13,SNR=10.0						
	26nm,0.3s						
TXAR	**Lajitas Array**	**16.47**	**325**	P	**P**	**12 49 15.0**	**+1.8**
	baz=140,slow=13,SNR=4.1						
	0.4nm,0.8s						
NVAR	**Mina Array Bea**	**31.51**	**320**	P	**P**	**12 51 41.5**	**+0.1**
	0.4nm,0.7s,baz=134,slow=7.7,SNR=4.6						
	0.4nm,0.7s						
YKA	**Yellowknife Ar**	**48.75**	**347**	P	**P**	**12 54 03.9**	**+0.3**
	0.4nm,0.7s,baz=150,slow=7.6,SNR=7.9						
	0.4nm,0.7s						

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*IDC **15** 12:52:15.0±0.6,37°.60N×143°.84E,h0km,mb3.7/15,mbtmp3.8/20,ML3.8/4,MS3.1/2,Error ellipse: s-maj=17.3km s-min=14.0km az=117.0*

*NEIC **15** 12:52:17.2±1.3,37°.66N±0°.07×143°.75E±0°.09,h10km±1km,mb4.4/14,Error ellipse: s-maj=12.3km s-min=11.7km*

az=120.0

*JMA **15** 12:52:18.3±0.2,37°.7N±0°.8×14°4E±°,h62^{km},MV4.0/29, FAR E OFF FUKUSHIMA PREF*

*NIED **15** 12:52:18.3,37°.75N×143°.70E,h62^{km},MW3.9,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.87; $M_{\theta\theta}$-3.54; $M_{\phi\phi}$7.41; $M_{r\theta}$3.74; $M_{\theta\phi}$-0.74; $M_{\phi r}$5.55; Fault plane solution: $M_0$9.27000×10^{14} NP1: ϕ_s208.00000°,δ75.00000°,λ-58.00000°. NP2: ϕ_s320.00000°,δ35.00000°,λ-153.00000°.*

ISC 15 12:52:17.1±0.6,**37°.79N**±0°.06×**143°.72E**±0°.06,**h10**^{km},**n73**, σ**1^{s}39**/71,**mb4.0**/24,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**1.85**	**287**	*i* P	**Pn**	**12 52 48.5**	**-0.4**
JIKH				S	**Sn**	**12 53 11.0**	**-1.3**
JIO	**Ouri**	**1.98**	**290**	*i* P	**Pn**	**12 52 50.4**	**-0.3**
JIO				S	**Sn**	**12 53 14.2**	**-1.4**
JKMT	**Kesennumamotoy**	**2.04**	**301**	*i* P	**Pn**	**12 52 51.2**	**-0.3**
OFUJ	**Ofunato**	**2.06**	**309**	P	**Pn**	**12 52 51.5**	**-0.3**
JMK	**Ichinoseki**	**2.28**	**301**	P	**Pn**	**12 52 54.8**	**0.0**
JMM	**Marumori**	**2.32**	**273**		**Pn**	**12 52 54.9**	**-0.4**
JOM	**Ohasama**	**2.54**	**312**	*e*P	**Pn**	**12 52 58.6**	**+0.2**
JOM				*e*S	**Sn**	**12 53 28.4**	**-0.9**
JOTO	**OTAMA OYAMA**	**2.69**	**266**	P	**Pn**	**12 53 00.4**	**-0.1**
JOTO				*e*S	**Sn**	**12 53 32.6**	**-0.6**
JYK	**Kaneyama**	**2.87**	**294**	P	**Pn**	**12 53 03.4**	**+0.4**
JANG	**Nango**	**3.10**	**327**	S	**Sn**	**12 53 40.8**	**-2.4**
JTM	**Tenmabayashi**	**3.63**	**326**	Pn	**Pn**	**12 53 14.5**	**+1.1**
BSO1	**Boso 1**	**3.83**	**216**	P	Pn	12 53 13.4	-2.2
JRY	**Ryogami san**	**4.24**	**247**	*i* P	**Pn**	**12 53 21.1**	**-0.8**
JRY				S	**Sn**	**12 54 07.3**	**-4.2**
ERM	**Erimo**	**4.25**	**354**	Pn	**Pn**	**12 53 22.2**	**+0.4**
JSD	**Sado**	**4.32**	**275**	Pn	**Pn**	**12 53 23.7**	**+0.9**
JOD2	**Odawara 2**	**4.50**	**237**	P	**Pn**	**12 53 23.9**	**-1.5**
MJAR	**Matsushiro Arr**	**4.57**	**256**	Pn	**Pn**	**12 53 26.0**	**-0.3**
	1.0nm,0.3s,baz=74,slow=10,SNR=52						
MJAR				Sn	**Sn**	**12 54 18.8**	**-0.7**
	baz=193,slow=22						
MJAR				LR	LR	12 55 29.7	
	comp=Z,192nm,18.5s,baz=90,slow=42						
	23nm,0.7s						
MAJO	**Matsushiro**	**4.57**	**256**	Pn	**Pn**	**12 53 27.1**	**+0.8**
MJB9	**Matsu-Tunnel**	**4.57**	**256**	Pn	**Pn**	**12 53 28.4**	**+2.0**
JCH	**Churui**	**4.83**	**357**	P	**Pn**	**12 53 29.3**	**-0.6**
JCH				*e*S	**Sn**	**12 54 21.0**	**-4.8**
JSG	**Sagara**	**5.44**	**237**	Pn	**Pn**	**12 53 36.7**	**-1.6**
JGF	**Kuroka**	**5.55**	**249**	Pn	**Pn**	**12 53 39.8**	**-0.1**
INU	**Inuyama**	**5.91**	**248**	Pn	**Pn**	**12 53 44.9**	**+0.2**
JKA	**Kamikawa-asahi**	**6.38**	**353**	Pn	**Pn**	**12 53 51.6**	**+0.4**
ASAJ	**Asahikawa**	**6.38**	**353**	Pn	**Pn**	**12 53 51.1**	**0.0**
	9.1nm,0.3s,baz=199,slow=11,SNR=71						
ASAJ				Sn	**Sn**	**12 54 59.6**	**-4.5**
	2.1nm,0.3s,baz=63,slow=29,SNR=6.1						
	20nm,0.4s						
JHS	**Saijyo**	**8.99**	**255**	Pn	**Pn**	**12 54 27.9**	**+1.0**
YSS	**Yuzh-Sakhalins**	**9.19**	**356**	Pn	**Pn**	**12 54 30.8**	**+1.1**
USRK	**Ussuriysk Ar.**	**10.93**	**310**	Pn	**Pn**	**12 54 54.5**	**+0.9**
	0.3nm,0.3s,baz=106,slow=12,SNR=6.2						
	3.1nm,0.6s						
USRK	**Ussuriysk Ar.**	**10.93**	**310**	Pn	**Pn**	**12 54 53.0**	**-0.5**
KSRS	**Korea Array**	**12.53**	**273**	Pn	**Pn**	**12 55 17.7**	**+2.3**
	0.1nm,0.3s,baz=85,slow=14,SNR=7.9						
KSRS				LR	LR	12 59 36.7	
	comp=Z,78nm,18.9s,baz=95,slow=35						
	2.5nm,0.7s						
KLR	**Kul'dur**	**14.34**	**327**	Pn	**Pn**	**12 55 39.6**	**-0.5**
	0.2nm,0.3s,baz=129,slow=13,SNR=8.8						
PETK	**Petropavlovsk-**	**18.14**	**28**	P	**Pn**	**12 56 30.7**	**+1.7**
	2.4nm,0.9s,baz=226,slow=14,SNR=2.0						
MA2	**Magadan**	**22.27**	**9**	P	**P**	**12 57 16.2**	**+2.1**
	2.5nm,0.7s,baz=160,slow=4.5,SNR=4.2						
	2.5nm,0.7s						
SEY	**Seymchan**	**25.73**	**9**	P	**P**	**12 57 48.8**	**+1.4**
	0.9nm,0.7s,baz=160,slow=23,SNR=3.2						
	0.9nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**27.02**	**125**	T	T	13 26 11.7	
	baz=317,slow=76,SNR=9.5						
H11N1	**WAKE ISLAND Hy**	**27.03**	**125**	T	T	13 26 11.6	
	baz=317,slow=76,SNR=9.7						
H11N3	**WAKE ISLAND Hy**	**27.04**	**125**	T	T	13 26 13.6	
	baz=317,slow=76,SNR=9.9						
H11S1	**WAKE ISLAND Hy**	**27.79**	**127**	T	T	13 27 07.6	
	baz=318,slow=76,SNR=6.3						
H11S3	**WAKE ISLAND Hy**	**27.79**	**127**	T	T	13 27 06.1	
	baz=318,slow=76,SNR=8.2						
H11S2	**WAKE ISLAND Hy**	**27.81**	**127**	T	T	13 27 07.5	
	baz=318,slow=76,SNR=6.4						
AMKA	**Amchitka**	**28.45**	**50**	P	**P**	**12 58 11.6**	**-0.3**
ULN	**Ulaanbaatar**	**28.47**	**303**	P	**P**	**12 58 13.1**	**+0.7**
SONM	**Songino Array**	**28.91**	**302**	P	**P**	**12 58 17.3**	**+1.0**
	0.9nm,0.6s,baz=104,slow=8.1,SNR=9.5						
	0.9nm,0.6s						
SONM	**Songino Array**	**28.91**	**302**	P	**P**	**12 58 16.6**	**+0.3**
ENH	**Enshi**	**29.22**	**265**	P	**P**	**12 58 17.7**	**-1.4**
ENH				IAmb	IAmb	12 58 22.1	
	comp=Z,11nm,1.0s						
ZAA0	**Zalesovo Array**	**42.77**	**312**	P	**P**	**13 00 14.7**	**+0.1**
ZAA0				IAmb	IAmb	13 00 22.2	
	comp=Z,4.3nm,0.6s						
ZALV	**Zalesovo Beam**	**42.77**	**312**	P	**P**	**13 00 15.5**	**+1.0**
	comp=Z,0.5nm,0.4s,baz=78,slow=7.4,SNR=2.3						
	comp=Z,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**42.77**	**312**	P	**P**	**13 00 14.9**	**+0.4**
CMAR	**Chiang Mai Arr**	**43.46**	**256**	P	**P**	**13 00 21.5**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=55,slow=6.7,SNR=1.8						
	comp=Z,0.2nm,0.3s						
A21K	**Barrow**	**45.05**	**23**	IAmb	IAmb	13 00 46.7	
	comp=Z,9.6nm,0.9s						
IMAR	**Indian Mountai**	**45.07**	**31**	P	**P**	**13 00 33.6**	**+0.8**
MK31	**Makanchi Array**	**45.28**	**302**	P	**P**	**13 00 35.4**	**+0.6**
MK31				IAmb	IAmb	13 00 36.3	
	comp=Z,3.7nm,1.2s						
MKAR	**Makanchi Array**	**45.28**	**302**	P	**P**	**13 00 35.5**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=84,slow=9.0,SNR=9.9						
	comp=Z,1.0nm,0.6s						
MAKZ	**Makanchi**	**45.48**	**302**	P	**P**	**13 00 37.0**	**+0.6**
MAKZ				IAmb	IAmb	13 00 44.2	
	comp=Z,2.1nm,0.7s						
KURK	**Kurchatov**	**46.91**	**308**	P	**P**	**13 00 48.2**	**+0.7**
KURBB	**Kurchatov Arra**	**46.99**	**308**	P	**P**	**13 00 48.4**	**+0.2**
	comp=Z,2.0nm,0.7s,baz=83,slow=8.2,SNR=17						
	comp=Z,2.0nm,0.7s						
SCM	**Sheep Creek Mo**	**47.77**	**37**	P	**P**	**13 00 54.4**	**+0.2**
HDA	**Harding Lake**	**47.85**	**33**	P	**P**	**13 00 55.8**	**+1.0**
HDA				IAmb	IAmb	13 01 31.8	
	comp=Z,4.9nm,1.3s						
ILAR	**Eielson Array**	**47.88**	**33**	P	**P**	**13 00 55.4**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=253,slow=5.9,SNR=11						
	comp=Z,0.6nm,0.8s						
SCRK	**Sand Creek**	**49.17**	**34**	P	**P**	**13 01 05.4**	**+0.4**
INK	**Inuvik**	**52.88**	**28**	P	**P**	**13 01 32.2**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=277,slow=8.1,SNR=6.6						
	comp=Z,0.4nm,0.4s						
INK	**Inuvik**	**52.88**	**28**	P	**P**	**13 01 33.6**	**+1.0**
INK				IAmb	IAmb	13 01 48.7	
	comp=Z,4.2nm,1.4s						
WRA	**Warramunga Arr**	**58.09**	**190**	P	P	13 02 08.7	-2.0
	comp=Z,8.3nm,0.7s,baz=11,slow=7.3,SNR=56						
ABKAR	**Akbulak array**	**58.85**	**310**	P	**P**	**13 02 16.3**	**+0.5**
ABKAR				IAmb	IAmb	13 02 31.3	
	comp=Z,1.8nm,0.7s						
ASAR	**Alice Springs**	**61.82**	**190**	P	P	13 02 34.3	-1.9
	comp=Z,2.1nm,0.8s,baz=11,slow=6.6,SNR=17						
	comp=Z,2.1nm,0.8s						
ASAR	**Alice Springs**	**61.82**	**190**	P	**P**	**13 02 35.0**	**-1.2**
YKA	**Yellowknife Ar**	**62.23**	**31**	P	**P**	**13 02 38.4**	**-0.2**
	comp=Z,0.2nm,0.7s,baz=301,slow=7.0,SNR=2.4						
	comp=Z,0.2nm,0.7s						
STKA	**Stephens Creek**	**69.33**	**182**	P	**P**	**13 03 22.9**	**-1.7**
	comp=Z,1.9nm,0.8s,baz=344,slow=14,SNR=3.7						
	comp=Z,1.9nm,0.8s						
KBZ	**Khabaz**	**71.79**	**311**	P	**P**	**13 03 38.4**	**-1.3**
	comp=Z,1.4nm,0.9s,baz=9.9,slow=7.2,SNR=2.1						
NVAR	**Mina Array Bea**	**73.07**	**54**	P	**P**	**13 03 48.1**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=307,slow=5.1,SNR=2.0						
	comp=Z,0.2nm,0.7s						
PDAR	**Pinedale Array**	**75.83**	**47**	P	**P**	**13 04 03.8**	**0.0**
	comp=Z,0.4nm,0.6s,baz=312,slow=1.9,SNR=4.4						
	comp=Z,0.4nm,0.6s						
TXAR	**Lajitas Array**	**88.20**	**54**	P	**P**	**13 05 08.5**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=294,slow=2.9,SNR=3.8						
	comp=Z,0.3nm,0.8s						
SIV	**San Ignacio**	**149.19**	**52**	PKPbc	**PKPdf**	**13 12 05.5**	**+3.4**
	comp=Z,0.8nm,0.8s,baz=282,slow=1.2,SNR=3.6						

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*IDC **15** 13:50:01.8±2.1,15°.61N×122°.13E,h0^{km},mb3.3/4, mbtmp3.4/4,MS3.2/1,Error ellipse: s-maj=84.6km s-min=25.3km az=53.0*

*MAN **15** 13:50:05.6,15°.65N×122°.00E,h7^{km},mb4.7,ML3.6,MS3.5*

ISC 15 13:50:04.4±1.1,**15°.69N**±0°.03×**122°.07E**±0°.04,**h16**^{km}±9^{km}, **n26**,σ**1^{s}50**/30,**mb3.3**/4,**7C-9D**,**Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALP	**Baler**	**0.48**	**276**	⇑*e*P	**Pb**	**13 50 14.5**	**0.0**
BALP				*e*S	**Sb**	**13 50 21.5**	**+0.2**
PCPH	**Palayan**	**0.95**	**262**	⇓*e*P	**Pb**	**13 50 22.6**	**+0.1**
PCPH				*e*S	**Sg**	**13 50 35.2**	**-0.2**
CAUP	**Cauayan**	**1.27**	**349**	⇑*e*P	**Pg**	**13 50 28.3**	**-0.7**
CAUP				*e*S	**Sg**	**13 50 47.4**	**+1.9**
PALP	**Palanan**	**1.40**	**14**	⇓*e*P	**Pg**	**13 50 30.4**	**-1.2**
PALP				*e*S	Sg	13 50 59.8	+10
SMPP	**San Manuel, Pa**	**1.42**	**289**	⇓*e*P	**Pn**	**13 50 29.4**	**-0.2**
SMPP				*e*S	**Sn**	**13 50 48.4**	**+0.5**
QVP	**Quezon City--P**	**1.48**	**224**	⇓*e*P	**Pg**	**13 50 32.4**	**-0.6**
JCNP	**Jose Panganiba**	**1.52**	**157**	⇑*e*P	**Pg**	**13 50 32.6**	**-1.1**
JCNP				*e*S	**Sg**	**13 50 53.3**	**-0.2**
LQP	**Lukban**	**1.65**	**198**	⇑*e*P	**Pb**	**13 50 35.2**	**+0.6**
LQP				*e*S	Sg	13 51 10.0	+12
GQP	**Guinayangan**	**1.81**	**168**	⇓*e*P	**Pg**	**13 50 38.1**	**-1.2**
GQP				*e*S	**Sn**	**13 50 54.1**	**-3.6**
TGY	**Tagaytay City**	**1.93**	**215**	⇑*e*P	Pg	13 50 46.2	+4.7
TGY				*i* S	**Sg**	**13 51 08.9**	**+2.5**
MACP	**Maragondon, Ca**	**1.93**	**223**	⇑*e*P	**Pg**	**13 50 42.8**	**+1.3**
MACP				*e*S	**Sg**	**13 51 06.8**	**+0.1**
BOLP	**Bolinao**	**2.19**	**289**	⇓*e*P	**Pb**	**13 50 42.4**	**-1.2**
BOLP				*e*S	**Sg**	**13 51 14.0**	**-0.9**
ABRA	**Dolores**	**2.34**	**326**	⇓*e*P	**Pb**	**13 50 45.1**	**-1.2**
ABRA				*e*S	**Sg**	**13 51 18.4**	**-1.5**
SIPP	**Brgy, Tapao**	**2.71**	**325**	⇓*i*P	**Pb**	**13 50 52.5**	**0.0**
SIPP				*i* S	Sg	13 51 44.5	+13
PACPP	**Pamplona Cagay**	**2.84**	**346**	⇓*e*P	**Pn**	**13 50 51.0**	**+2.0**
PACPP				*e*S	**Sn**	**13 51 25.2**	**+2.2**
PVCP	**Virac**	**2.90**	**136**	⇑*e*P	Pg	13 51 04.1	+4.1
PVCP				*e*S	**Sg**	**13 51 40.9**	**+3.3**
CMAR	**Chiang Mai Arr**	**22.28**	**280**	P	**P**	**13 55 01.8**	**+0.6**
	0.3nm,0.3s,baz=84,slow=9.3,SNR=2.3						
CMAR				LR	LR	14 04 09.9	
	comp=Z,53nm,18.1s,baz=95,slow=38						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**37.41**	**161**	P	**P**	**13 57 15.4**	**-1.5**
	0.3nm,0.6s,baz=337,slow=9.3,SNR=2.0						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**40.79**	**163**	P	**P**	**13 57 44.5**	**-0.7**
	0.4nm,0.8s,baz=340,slow=6.9,SNR=4.6						
	0.4nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**42.66**	**80**	T	T	14 44 03.8	
	baz=274,slow=74,SNR=44						
H11S1	**WAKE ISLAND Hy**	**42.67**	**80**	T	T	14 43 58.5	
	baz=274,slow=74,SNR=26						
H11S2	**WAKE ISLAND Hy**	**42.67**	**80**	T	T	14 43 59.0	
	baz=274,slow=74,SNR=38						
H11N1	**WAKE ISLAND Hy**	**42.79**	**78**	T	T	14 44 11.2	
	baz=275						
H11N2	**WAKE ISLAND Hy**	**42.80**	**78**	T	T	14 44 07.3	
	baz=275						
H11N3	**WAKE ISLAND Hy**	**42.81**	**78**	T	T	14 44 11.9	
	baz=275						
MKAR	**Makanchi Array**	**45.26**	**322**	P	**P**	**13 58 21.7**	**+0.5**
	0.5nm,0.8s,baz=110,slow=9.2,SNR=4.5						
	0.5nm,0.8s						

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*IDC **15** 13:53:39.1±2.0,2°.00S×98°.75E,h0^{km},mb3.8/8, mbtmp3.8/8,Error ellipse: s-maj=83.9km s-min=20.4km az=56.0*

*DJA **15** 13:53:41.4±0.9,2°S±6°×9°9E±°,h10^{km},M3.7/6,MLv3.7/6*

ISC 15 13:53:41.2±1.0,**1°.9S**±0°.1×**99°.0E**±0°.1,**h10**^{km},**n20**, σ**0^{s}73**/14,**mb4.0**/7,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**1.37**	**131**	P	**Pn**	**13 54 06.7**	**+0.2**
PPSI				S	**Sn**	**13 54 24.0**	**-0.7**
PDSI	**Padang**	**1.77**	**58**	P	**Pn**	**13 54 11.2**	**-0.7**
PBSI	**Pulau Batu**	**1.92**	**339**	P	**Pn**	**13 54 13.9**	**-0.1**
SDSI	**Sungai Dareh**	**2.63**	**69**	P	**Pn**	**13 54 24.3**	**+0.6**
SBSI	**Sibolga**	**3.39**	**359**	P	Pn	13 54 32.2	-2.0
CMAR	**Chiang Mai Arr**	**20.19**	**360**	P	**P**	**13 58 17.2**	**+1.0**
	0.5nm,0.4s,baz=185,slow=10,SNR=5.5						
	0.5nm,0.4s						
H08S2	**Diego Garcia H**	**26.99**	**257**	T	T	14 27 22.2	
	baz=79,slow=76,SNR=349						
H08S3	**Diego Garcia H**	**27.00**	**257**	T	T	14 27 22.6	
	baz=79,slow=76,SNR=296						
H08S1	**Diego Carcia H**	**27.01**	**257**	T	T	14 27 22.1	
	baz=79,slow=76,SNR=302						
H01W3	**Cape Leeuwin H**	**35.77**	**158**	T	T	14 38 25.9	
	baz=335,slow=76,SNR=86						
H01W2	**Cape Leeuwin H**	**35.78**	**158**	T	T	14 38 26.7	
	baz=335,slow=76,SNR=118						
H01W1	**Cape Leeuwin H**	**35.78**	**158**	T	T	14 38 27.2	
	baz=335,slow=76,SNR=85						
WRA	**Warramunga Arr**	**38.95**	**120**	P	**P**	**14 01 07.1**	**-0.7**
	0.4nm,0.6s,baz=301,slow=9.8,SNR=4.0						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**40.17**	**126**	P	**P**	**14 01 18.4**	**+0.4**
	0.4nm,0.8s,baz=297,slow=7.8,SNR=6.4						
	0.4nm,0.8s						
SONM	**Songino Array**	**49.92**	**7**	P	**P**	**14 02 35.6**	**+0.4**
	1.6nm,0.7s,baz=188,slow=9.3,SNR=10.0						
	1.6nm,0.7s						
MKAR	**Makanchi Array**	**50.62**	**345**	P	**P**	**14 02 40.7**	**+0.2**
	0.4nm,0.4s,baz=159,slow=8.6,SNR=9.8						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**56.85**	**350**	P	**P**	**14 03 26.1**	**+0.2**
	1.6nm,0.4s,baz=176,slow=6.1,SNR=8.4						
	1.6nm,0.4s						
BVAR	**Borovoye Array**	**59.70**	**340**	P	**P**	**14 03 44.6**	**-1.3**
	0.6nm,0.5s,baz=136,slow=9.2,SNR=3.6						
	0.6nm,0.5s						
FINES	**FINESS Array B**	**83.51**	**332**	P	**P**	**14 06 08.9**	**-0.2**
	4.2nm,1.1s,baz=144,slow=10,SNR=4.5						
	4.2nm,1.1s						
TXAR	**Lajitas Array**	**145.21**	**36**	PKPbc	**PKPbc**	**14 13 20.6**	**+0.9**
	1.1nm,0.6s,baz=255,slow=1.2,SNR=18						

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*NNC **15** 14:02:02.9±3.6,40°.70N×77°.98E,h0^{km},mb3.1,mpv2.8, Error ellipse: s-maj=24.5km s-min=18.6km az=0.0*

*KRNET **15** 14:02:04.8±0.1,40°.78N×78°.17E,h20^{km},mb2.1*

*SOME **15** 14:02:06.1,40°.83N×78°.02E,h10^{km}*

ISC 15 14:02:08.2±2.6,**40°.9N**±0°.1×**77°.96E**±0°.06,**h2**^{km}±14^{km},**n30**, σ**0^{s}97**/37,**5C-15D**,**Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.83**	**352**	⇓*i*P	**Pg**	**14 02 23.3**	**-0.9**
	baz=44						
TARG				⇓*i*S	**Sb**	**14 02 36.8**	**-0.6**
	baz=44						
KDJ	**Kajisay**	**1.35**	**335**	⇑*i*P	**Pn**	**14 02 32.8**	**-1.5**
	baz=32						
KDJ				⇑*i*S	**Sg**	**14 02 53.2**	**+1.4**
	baz=32						
NRN	**Naryn**	**1.57**	**290**	⇓*i*P	**Pb**	**14 02 37.3**	**-0.9**
	baz=92						
NRN				⇓*i*S	**Sg**	**14 03 00.8**	**+2.1**
	baz=92						
ANVS	**Anan'yevo**	**1.89**	**353**	⇓*i*P	**Pn**	**14 02 40.8**	**-0.8**
	baz=50						
ANVS				⇓*i*S	**Sb**	**14 03 07.2**	**-0.4**
	baz=50						
SATY	**Saty**	**2.18**	**9**	Pg	**Pb**	**14 02 48.4**	**0.0**
	1.9nm,0.2s						
SATY				Lg	Lg	14 03 19.4	
	5.6nm,0.5s						
SATY	**Saty**	**2.18**	**9**	*e*Pg	**Pb**	**14 02 48.4**	**0.0**
	1.9nm,0.2s						
SATY				*e*Lg	Lg	14 03 18.9	
	5.6nm,0.5s						
TNSS	**Tian-Shan**	**2.26**	**341**	Pg	**Pb**	**14 02 49.7**	**-0.2**
	2.4nm,0.2s						
TNSS				Lg	Lg	14 03 22.0	
	2.5nm,0.7s						
TNSS	**Tian-Shan**	**2.26**	**341**	*e*Pg	**Pb**	**14 02 49.7**	**-0.2**
	2.4nm,0.2s						
TNSS				*e*Lg	Lg	14 03 21.2	
	2.5nm,0.7s						
IZV	**Izvestkoviy**	**2.35**	**335**	*e*Pg	**Pb**	**14 02 51.5**	**+0.1**
	1.2nm,0.4s						
IZV				*e*Lg	Lg	14 03 24.3	
	2.8nm,0.2s						
MDOK	**Medeo**	**2.35**	**344**	⇓Pg	**Pn**	**14 02 48.5**	**+0.5**
	2.2nm,0.6s						
MDOK				⇓Lg	Lg	14 03 24.6	
	3.6nm,0.6s						
MDOK	**Medeo**	**2.35**	**344**	*e*Pg	**Pb**	**14 02 50.9**	**-0.6**
	2.6nm,0.4s						
MDOK				*e*Lg	Lg	14 03 23.2	
	2.3nm,0.2s						
UZB	**Uzynbulak**	**2.37**	**19**	*e*Pg	**Pb**	**14 02 50.9**	**-0.9**
	3.7nm,0.7s						
UZB				*e*Lg	Lg	14 03 23.3	
	3.2nm,0.6s						
KOTS	**Kotyrbulak**	**2.41**	**345**	Pg	**Pb**	**14 02 52.5**	**+0.1**
	2.5nm,0.3s						
KOTS				Lg	Lg	14 03 26.1	
	6.2nm,0.6s						
KOTS	**Kotyrbulak**	**2.41**	**345**	*e*Pg	**Pb**	**14 02 52.5**	**+0.1**
	2.5nm,0.3s						
KOTS				*e*Lg	Lg	14 03 26.1	
	6.2nm,0.6s						
MTBS	**Maitube**	**2.50**	**333**	*e*Pg	**Pb**	**14 02 53.7**	**-0.2**
	1.7nm,0.3s						
MTBS				*e*Lg	Lg	14 03 28.0	
	3.4nm,0.2s						
KURS	**Kuram**	**2.58**	**3**	*e*Pg	**Pb**	**14 02 56.1**	**+0.8**
	2.8nm,0.9s						
KURS				*e*Lg	Lg	14 03 32.0	
	5.1nm,0.7s						
KST	**Kastek**	**2.60**	**326**	*e*Pg	**Pb**	**14 02 56.2**	**+0.6**
	0.9nm,0.5s						
KST				*e*Lg	Lg	14 03 32.0	
	3.1nm,0.2s						
KPKS	**Kokpek**	**2.61**	**12**	*e*Pg	**Pb**	**14 02 55.3**	**-0.5**
	4.7nm,0.5s						
KPKS				*e*Lg	Lg	14 03 30.5	
	5.8nm,1.1s						
PDGK	**Podgornoye**	**2.67**	**25**	Pg	**Pb**	**14 02 56.0**	**-0.8**
	0.9nm,0.3s						
PDGK				Lg	Lg	14 03 31.9	
	2.5nm,0.8s						
PDGK	**Podgornoye**	**2.67**	**25**	⇓Pg	**Pn**	**14 02 53.4**	**+1.0**
	2.0nm,0.7s						
PDGK				⇑Lg	Lg	14 03 31.9	
	3.8nm,0.6s						
TKM2	**Tokmak 2**	**2.67**	**320**	⇓Pg	**Pn**	**14 02 52.8**	**+0.3**
	3.2nm,1.4s						
TKM2				⇓Lg	Lg	14 03 33.0	
	1.1nm,0.5s						
TKM2	**Tokmak 2**	**2.67**	**320**	⇓*e*P	**Pn**	**14 02 52.4**	**-0.1**
	baz=19						
TKM2				⇓*i*S	**Sb**	**14 03 27.3**	**-3.0**
	baz=19						
DGS	**Degeres**	**2.84**	**326**	Pg	**Pb**	**14 03 00.2**	**+0.4**
	2.5nm,0.6s						
DGS				Lg	Lg	14 03 39.1	
	3.6nm,0.4s						
DGS	**Degeres**	**2.84**	**326**	*e*Pg	**Pb**	**14 03 00.2**	**+0.4**
	2.5nm,0.6s						
DGS				*e*Lg	Lg	14 03 39.1	
	3.6nm,0.4s						
ARLS	**Aral**	**2.90**	**290**	⇓*i*P	**Pn**	**14 02 55.3**	**-0.2**
	baz=92						
ARLS				⇓*i*S	**Sn**	**14 03 32.2**	**+1.2**
	baz=92						
UCH	**Uchtor**	**2.90**	**298**	⇑*e*P	**Pn**	**14 02 55.8**	**0.0**
	baz=99						
UCH				⇑*e*S	**Sn**	**14 03 33.0**	**+1.5**
	baz=99						
KTBS	**Karatobe**	**2.96**	**342**	*e*Pg	**Pb**	**14 03 01.8**	**+0.1**
	0.9nm,0.2s						
KTBS				*e*Lg	Lg	14 03 42.0	
	2.8nm,0.3s						
KRBS	**Karabastau**	**3.26**	**329**	Pg	**Pb**	**14 03 06.1**	**-0.8**
KRBS				Lg	Lg	14 03 50.1	
KRBS	**Karabastau**	**3.26**	**329**	*e*Pg	**Pb**	**14 03 06.1**	**-0.8**
	0.4nm,0.5s						
KRBS				*e*Lg	Lg	14 03 49.3	
	1.2nm,0.8s						
DJR	**Jarkent**	**3.68**	**21**	*e*Pg	**Pb**	**14 03 14.8**	**+0.8**
	1.2nm,0.5s						
DJR				*e*Lg	Lg	14 04 03.8	
	1.9nm,0.8s						

WEL 15 14:20:00.4±1.3,**33°S**±20°×**18°0E**±3°9,**h407**^{km}±26^{km}, **M5.1**/1,**ML4.9**/5,**MLv5.1**/1,**Error ellipse: s-maj=0.1km s-min=0.0km az=114.3**,**confirmed**,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.85**	**193**	P	P	14 21 21.8	+0.9
MXZ				S	S	14 22 26.5	-0.3
WMGZ	**Waiomatatini S**	**5.08**	**191**	P	P	14 21 23.9	+0.7
WMGZ				S	S	14 22 31.8	+0.8
HAZ	**Te Kaha**	**5.15**	**197**	P	P	14 21 22.0	-1.9
HAZ				S	S	14 22 31.3	-1.0
MTHZ	**Maungataniwha**	**6.43**	**200**	S	S	14 22 58.2	+0.8
NMHZ	**Naumai**	**6.67**	**199**	P	P	14 21 41.1	+0.1
NMHZ				S	S	14 23 03.5	+1.3
BKZ	**Black Stump Fm**	**6.82**	**201**	P	P	14 21 41.6	-1.1
BKZ				S	S	14 23 05.5	+0.1
BHHZ	**Black Hill Sta**	**7.25**	**202**	P	P	14 21 46.2	-1.1
BHHZ				S	S	14 23 13.8	-0.3
KAHZ	**Kahuranaki**	**7.30**	**197**	P	P	14 21 48.0	0.0
KAHZ				S	S	14 23 18.7	+3.6
PKE	**Pukeiti**	**7.83**	**214**	P	P	14 21 54.2	+0.5
NBEZ	**Newall Road No**	**7.94**	**214**	P	P	14 21 55.9	+0.9
MRZ	**Mangatainoka R**	**8.47**	**201**	P	P	14 21 59.5	-1.2
MRZ				S	S	14 23 36.8	-2.5

IDC 15 14:35:32.4±7.4,**1°.83S**×**137°.03E**,**h0**^{km},**mb3.0**/2, **mbtmp3.2**/3,**ML3.4**/1,**Error ellipse: s-maj=339.1km s-min=31.0km az=82.0**,**Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.19**	**188**	P	Pn	14 39 46.0	-0.7
	0.1nm,0.3s,baz=13,slow=12,SNR=6.7						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**21.92**	**188**	P	P	14 40 27.9	+0.4
	0.5nm,0.7s,baz=10.0,slow=9.3,SNR=14						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**68.07**	**323**	P	P	14 46 34.0	-0.1
	0.1nm,0.4s,baz=123,slow=5.3,SNR=1.5						
	0.1nm,0.4s						

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*TUL **15** 15:16:47.5±0.5,36°.401N±0°.010×96°.88W±0°.02,h5^{km}±3^{km}, ML3.5,mb_Lg3.2/50(NEIC),ML3.4/62(NEIC),Error ellipse: s-maj=2.0km s-min=1.3km az=71.0*

*ANF **15** 15:16:47.5±0.4,36°.39N×96°.88W,h5^{km},ML3.5/7,Error ellipse: s-maj=3.7km s-min=3.3km az=104.0*

*NEIC **15** 15:16:48.2±0.5,36°.394N±0°.006×96°.88W±0°.02,h3^{km}±3^{km}, Error ellipse: s-maj=2.1km s-min=0.7km az=70.0*

ISC 15 15:16:47.6±0.8,**36°.40N**±0°.02×**96°.89W**±0°.02,**h7**^{km}±4^{km}, **n99**,σ**0^{s}54**/112,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK046	**Pawnee Station**	**0.01**	**261**	Pg	**Pg**	**15 16 48.8**	**-0.1**
OK046				Sg	**Sg**	**15 16 49.5**	**-0.2**
OK046				IAML		15 16 49.6	
	69µm,0.1s						
OK045	**Pawnee Station**	**0.06**	**331**	Pg	**Pg**	**15 16 49.4**	**+0.1**
OK045				Sg	**Sg**	**15 16 50.4**	**0.0**
OK050	**Pawnee Station**	**0.07**	**266**		**Pg**	**15 16 49.6**	**+0.1**
OK050				IAML		15 16 51.2	
	28µm,0.2s						
OK050				IAML		15 16 51.7	
	17µm,0.2s						
OK044	**Pawnee Station**	**0.08**	**109**		**Pg**	**15 16 49.7**	**+0.1**
OK044				Sg	**Sg**	**15 16 51.0**	**+0.1**
QUOK	**Quay**	**0.27**	**147**	Pg	**Pg**	**15 16 53.2**	**+0.3**
QUOK				Sg	**Sg**	**15 16 56.9**	**+0.3**
QUOK				IAML		15 16 57.2	
	comp=E,7µm,0.3s						
QUOK				IAML		15 16 57.4	
	comp=N,4µm,0.3s						
OK033	**Mehan**	**0.36**	**186**	Pg	**Pg**	**15 16 54.9**	**+0.3**
OK033				Sg	**Sg**	**15 16 59.8**	**+0.5**
OK033				IAML		15 17 00.1	

	comp=N,3µm,0.2s						
OK052	**Battle Ridge R**	**0.41**	**170**		**Pg**	**15 16 55.8**	**+0.2**
OK052				Sg	**Sg**	**15 17 00.6**	**-0.4**
BLOK	**Blackwell**	**0.45**	**324**	Pg	**Pg**	**15 16 56.5**	**+0.2**
BLOK				Sg	**Sg**	**15 17 02.3**	**+0.2**
BLOK				IAML		15 17 02.7	
	comp=E,3µm,0.3s						
BLOK				IAML		15 17 04.6	
	comp=N,3µm,0.2s						
OK031	**S. Brethren Rd**	**0.45**	**174**	Pg	**Pg**	**15 16 56.5**	**+0.2**
OK031				Sg	**Sg**	**15 17 02.4**	**+0.3**
OK030	**Cody Creek RV**	**0.48**	**169**		**Pg**	**15 16 57.1**	**+0.2**
OK030				Sg	**Sg**	**15 17 03.4**	**+0.3**
T35A	**Sooner Cattle**	**0.60**	**31**		**Pg**	**15 16 59.1**	**-0.1**
T35A				Sg	**Sg**	**15 17 06.8**	**-0.2**
T35B	**Sooner Cattle**	**0.60**	**31**	P	**Pg**	**15 16 59.2**	**0.0**
	baz=210						
T35B				S	**Sg**	**15 17 07.1**	**0.0**
	baz=210						
DEOK	**Depew**	**0.64**	**150**	Pg	**Pg**	**15 17 00.1**	**+0.1**
DEOK				Sg	**Sg**	**15 17 08.5**	**+0.2**
DEOK				IAML		15 17 10.7	
	comp=E,1µm,0.3s						
OK029	**Liberty Lake**	**0.76**	**217**	Pg	**Pg**	**15 17 02.0**	**-0.1**
OK029				Sg	**Sg**	**15 17 12.2**	**+0.3**
OK029				IAML		15 17 16.5	
	comp=E,1µm,0.7s						
KAN13	**South Haven SW**	**0.77**	**323**		**Pg**	**15 17 02.5**	**0.0**
KAN13				Sg	**Sg**	**15 17 12.8**	**+0.2**
KAN13				IAML		15 17 14.8	
	comp=N,2µm,0.3s						
OK005	**Luther M Schoo**	**0.78**	**198**	Pg	**Pg**	**15 17 02.5**	**-0.1**
CROK	**Carrier**	**0.89**	**277**		**Pg**	**15 17 04.5**	**-0.1**
CROK				Sg	**Sg**	**15 17 16.4**	**+0.2**
CROK				IAML		15 17 17.2	
	comp=N,2µm,0.3s						
CROK				IAML		15 17 20.6	
	comp=E,976nm,0.3s						
OK025	**Westminster Rd**	**0.89**	**204**		**Pg**	**15 17 04.5**	**-0.3**
OK025				Sg	**Sg**	**15 17 16.7**	**+0.4**
OK025				IAML		15 17 19.2	
	comp=E,1µm,0.1s						
OK025				IAML		15 17 19.3	
	comp=E,2µm,0.4s						
GC02	**Grant County #**	**0.90**	**300**		**Pg**	**15 17 04.7**	**-0.2**
GC02				Sg	**Sg**	**15 17 16.6**	**0.0**
OK011	**Prague**	**0.93**	**170**	Pg	**Pg**	**15 17 05.4**	**-0.1**
KAN09	**Caldwell North**	**0.94**	**322**	Pg	**Pg**	**15 17 05.5**	**-0.2**
KAN09				Sg	**Sg**	**15 17 17.5**	**-0.4**
KAN17	**Caldwell West**	**0.95**	**313**	Pg	**Pg**	**15 17 06.0**	**+0.1**
KAN17				Sg	**Sg**	**15 17 18.2**	**0.0**
KAN17				IAML		15 17 28.5	
	comp=E,2µm,0.3s						
KS20	**Mayfield South**	**0.98**	**328**	Pg	**Pg**	**15 17 06.3**	**-0.2**
KS20				Sg	**Sg**	**15 17 19.2**	**-0.2**
KS20				IAML		15 17 19.5	
	comp=E,1µm,0.2s						
KS20				IAML		15 17 19.6	
	comp=E,849nm,0.2s						
TUL1	**Leonard**	**1.01**	**118**		**Pg**	**15 17 06.6**	**-0.5**
TUL1				Sg	**Sg**	**15 17 19.8**	**-0.5**
TUL1	**Leonard**	**1.01**	**118**	P	**Pg**	**15 17 06.7**	**-0.4**
	baz=299						
TUL1				S	**Sg**	**15 17 19.8**	**-0.5**
	baz=299						
KAN01	**Argonia South**	**1.02**	**318**	Pg	**Pg**	**15 17 07.1**	**-0.3**
KAN01				Sg	**Sg**	**15 17 20.2**	**-0.4**
KAN01				IAML		15 17 21.8	
	comp=N,823nm,0.2s						
KAN01				IAML		15 17 22.4	
	comp=E,880nm,0.1s						
KAN14	**Manchester OK**	**1.02**	**303**	Pg	**Pg**	**15 17 07.0**	**-0.3**
KAN14				Sg	**Sg**	**15 17 20.2**	**-0.4**
KAN14				IAML		15 17 22.5	
	comp=E,1µm,0.1s						
KAN05	**Bluff City Nor**	**1.06**	**312**	Pg	**Pg**	**15 17 07.7**	**-0.3**
KAN05				Sg	**Sg**	**15 17 21.4**	**-0.4**
KS21	**Milan North St**	**1.08**	**325**	Pg	**Pg**	**15 17 08.1**	**-0.3**
KS21				Sg	**Sg**	**15 17 22.0**	**-0.4**
KS21	**Milan North St**	**1.08**	**325**	IAML		15 17 25.1	
	comp=E,802nm,0.1s						
OKCSW	**OKLAHOMA CITY**	**1.09**	**204**		**Pg**	**15 17 07.7**	**-0.8**
OKCSW				Sg	**Sg**	**15 17 22.9**	**+0.3**
OKCSW				IAML		15 17 25.7	
	comp=N,1µm,0.3s						
OK032	**Salt Plains WL**	**1.14**	**291**	Pg	**Pg**	**15 17 08.9**	**-0.5**
OK032				Sg	**Sg**	**15 17 23.9**	**-0.3**
KAN08	**Anthony NE Sta**	**1.20**	**314**		**Pg**	**15 17 10.1**	**-0.5**
KAN08				Sg	**Sg**	**15 17 25.8**	**-0.3**
KAN08				IAML		15 17 27.3	
	comp=N,762nm,0.2s						
KAN08				IAML		15 17 27.9	
	comp=E,862nm,0.3s						
FNO	**Franklin**	**1.21**	**200**	Pg	**Pg**	**15 17 09.6**	**-1.3**
FNO				Sg	**Sg**	**15 17 26.6**	**0.0**
FNO				IAML		15 17 28.8	
	comp=E,1µm,0.3s						
FNO				IAML		15 17 29.7	
	comp=N,815nm,0.2s						
W35A	**Tecumseh**	**1.24**	**179**	Pg	**Pg**	**15 17 10.3**	**-1.2**
W35A				Sg	**Sg**	**15 17 27.4**	**-0.3**
W35A				IAML		15 17 29.6	
	comp=E,477nm,0.2s						
W35A				IAML		15 17 29.6	
	comp=N,802nm,0.3s						
OK038	**West end E0370**	**1.49**	**274**		**Pn**	**15 17 15.2**	**+0.2**
OK035	**E0210 Rd and N**	**1.50**	**282**		**Pn**	**15 17 15.1**	**+0.1**
RLO	**Rose Lookout**	**1.53**	**98**		**Pn**	**15 17 15.3**	**-0.2**
CSTR	**Hydro, Custer**	**1.64**	**243**	Pn	**Pn**	**15 17 17.4**	**+0.4**
NOKA	**Waynoka**	**1.66**	**279**	Pn	**Pn**	**15 17 17.9**	**+0.6**
U32A	**Winter Ranch,**	**1.70**	**270**	Pn	**Pn**	**15 17 18.6**	**+0.8**
U32A	**Winter Ranch,**	**1.70**	**270**	P	**Pn**	**15 17 17.8**	**-0.1**
	baz=89						
U32A				S	**Sb**	**15 17 41.1**	**+0.1**
	baz=89						
X34A	**Smith Ranch, M**	**1.95**	**203**	Pn	**Pb**	**15 17 22.5**	**-1.1**
U38A	**Gravette**	**2.02**	**88**	Pn	**Pn**	**15 17 23.1**	**+0.8**
U38A	**Gravette**	**2.02**	**88**	P	**Pn**	**15 17 22.7**	**+0.5**
	baz=270						
U38A				S	**Sn**	**15 17 48.3**	**+0.5**
	baz=270						
X37A	**Clayton**	**2.19**	**145**	Pn	**Pn**	**15 17 25.3**	**+0.7**
X37A	**Clayton**	**2.19**	**145**	P	**Pn**	**15 17 25.0**	**+0.4**
	baz=326						
WMOK	**Wichita Mounta**	**2.26**	**223**	Pn	**Pn**	**15 17 26.1**	**+0.6**
WMOK	**Wichita Mounta**	**2.26**	**223**	P	**Pn**	**15 17 25.7**	**+0.1**
	baz=42						
WMOK				S	**Sn**	**15 17 54.9**	**+1.1**
	baz=42						
HHAR	**Hobbs**	**2.39**	**92**	Pn	**Pn**	**15 17 28.0**	**+0.8**
HHAR	**Hobbs**	**2.39**	**92**	P	**Pn**	**15 17 27.6**	**+0.4**
	baz=274						
HHAR				S	**Sn**	**15 17 58.1**	**+1.3**
	baz=274						
LOOK	**Love County**	**2.41**	**186**	Pn	**Pn**	**15 17 28.4**	**+0.8**
R32A	**Long Quarter,**	**2.48**	**325**	Pn	**Pn**	**15 17 29.8**	**+1.1**
R32A	**Long Quarter,**	**2.48**	**325**	P	**Pn**	**15 17 29.5**	**+0.8**
	baz=144						
R32A				S	**Sn**	**15 18 00.6**	**+1.4**
	baz=144						
KSU1	**Kansas State U**	**2.71**	**5**	Pn	**Pn**	**15 17 32.9**	**+1.3**
WTFS	**Witchita Falls**	**2.93**	**207**	Pn	**Pn**	**15 17 35.5**	**+0.8**
Z35A	**Perchaven, San**	**3.08**	**186**	Pn	**Pn**	**15 17 37.4**	**+0.7**
S39A	**Bolivar**	**3.13**	**65**	Pn	**Pn**	**15 17 38.1**	**+0.6**
S39A				IAmb_Lg		15 18 34.7	
	comp=Z,69nm,0.9s						
MIAR	**Mount Ida**	**3.28**	**123**	Pn	**Pn**	**15 17 40.0**	**+0.6**
CBKS	**Cedar Bluff**	**3.30**	**318**	Pn	**Pn**	**15 17 40.4**	**+0.5**
FW06	**Azle**	**3.46**	**189**	Pn	**Pn**	**15 17 42.8**	**+0.8**
FW06				IAmb_Lg		15 18 44.2	
	comp=Z,33nm,0.8s						
FW03	**Perrin-Whitt E**	**3.49**	**196**	IAmb_Lg		15 18 38.0	
	comp=Z,7.9nm,0.7s						
Z38A	**Mt. Pleasant**	**3.50**	**153**	IAmb_Lg		15 18 40.6	
	comp=Z,42nm,0.8s						
FW07	**Weatherford**	**3.76**	**192**	Pn	**Pn**	**15 17 46.3**	**+0.2**
FW07				IAmb_Lg		15 18 52.1	
	comp=Z,26nm,0.8s						
X40A	**Basin Creek Fa**	**3.82**	**119**	Pn	**Pn**	**15 17 46.5**	**-0.5**
FCAR	**Ozark Folk Cen**	**3.89**	**96**	Pn	**Pn**	**15 17 47.4**	**-0.5**
WHAR	**Wooly Hollow**	**3.90**	**105**	Pn	**Pn**	**15 17 48.6**	**+0.6**
WHAR				IAmb_Lg		15 18 57.5	
	comp=Z,33nm,0.8s						
UALR	**University of**	**4.05**	**112**	IAmb_Lg		15 19 00.3	
	comp=Z,53nm,0.9s						
WLAR	**White Oak Lake**	**4.12**	**130**	IAmb_Lg		15 19 00.6	
	comp=Z,39nm,0.7s						
R40A	**Maddies Statio**	**4.14**	**61**	Pn	**Pn**	**15 17 51.9**	**+0.6**
R40A				IAmb_Lg		15 18 57.2	
	comp=Z,46nm,0.9s						
P38A	**Dawn**	**4.17**	**38**	Pn	**Pn**	**15 17 52.1**	**+0.3**
AMTX	**Amarillo**	**4.18**	**250**	IAmb_Lg		15 19 01.4	
	comp=Z,35nm,1.0s						
N33A	**J Bar K, Exete**	**4.36**	**354**	IAmb_Lg		15 19 13.5	
	comp=Z,48nm,1.0s						
ABTX	**Abilene, Hawle**	**4.40**	**212**	IAmb_Lg		15 19 10.9	
	comp=Z,30nm,0.9s						
WHTX	**Lake Whitney,**	**4.42**	**186**	Pn	**Pn**	**15 17 55.6**	**+0.3**
237A	**Washetta, Mont**	**4.48**	**168**	Pn	**Pn**	**15 17 56.1**	**+0.1**
LCAR	**Lake Charles**	**4.65**	**92**	Pn	**Pn**	**15 17 58.5**	**+0.2**
CCM	**Cathedral Cave**	**4.80**	**68**	Pn	**Pn**	**15 17 59.7**	**-0.7**
P40A	**Paris**	**4.94**	**49**	Pn	**Pn**	**15 18 01.3**	**-1.0**
P40A				IAmb_Lg		15 19 21.3	
	comp=Z,59nm,0.8s						
HBAR	**Harrisburg**	**5.13**	**98**	IAmb_Lg		15 19 43.7	
	comp=Z,58nm,0.8s						
KSCO	**Kaye Shedlock'**	**5.24**	**302**	IAmb_Lg		15 19 37.1	
	comp=Z,23nm,0.7s						
FVM	**French Village**	**5.40**	**71**	Pn	**Pn**	**15 18 08.6**	**-0.1**
FVM				IAmb_Lg		15 19 43.1	
	comp=Z,25nm,0.9s						
435B	**Jarrell**	**5.63**	**186**	IAmb_Lg		15 20 00.9	
	comp=Z,22nm,1.0s						
PEBM	**Pemiscott Bayo**	**5.69**	**91**	IAmb_Lg		15 19 56.2	
	comp=Z,53nm,0.7s						
143A	**Socs Landing,**	**5.84**	**128**	IAmb_Lg		15 20 09.0	
	comp=Z,29nm,0.7s						
T25A	**Trinidad**	**6.08**	**279**	Pn	**Pn**	**15 18 17.8**	**-0.4**
SCIA	**State Center**	**6.20**	**26**	IAmb_Lg		15 20 04.8	
	comp=Z,48nm,0.9s						
S44A	**Carbondale**	**6.24**	**76**	Pn	**Pn**	**15 18 20.4**	**+0.1**
JCT	**Junction City**	**6.38**	**203**	IAmb_Lg		15 20 16.9	
	comp=Z,41nm,1.0s						
W45A	**Hickory Valley**	**6.39**	**99**	IAmb_Lg		15 20 19.5	
	comp=Z,29nm,0.8s						
OXF	**Oxford**	**6.39**	**105**	IAmb_Lg		15 20 10.4	
	comp=Z,30nm,0.7s						
L40A	**Anamosa**	**7.17**	**36**	IAmb_Lg		15 20 39.0	
	comp=Z,31nm,0.8s						
BRIGG	**Briggsdale**	**7.17**	**308**	IAmb_Lg		15 20 38.5	
	comp=Z,30nm,1.0s						
HDIL	**Hopedale**	**7.26**	**53**	IAmb_Lg		15 20 49.4	
	comp=Z,31nm,0.7s						
ECSD	**EROS Data Cent**	**7.33**	**2**	Pn	**Pn**	**15 18 34.3**	**-0.9**
OLIL	**Olney**	**7.36**	**69**	IAmb_Lg		15 20 52.6	
	comp=Z,29nm,0.9s						
L42A	**Oliver, Polo**	**7.92**	**43**	Pn	**Pn**	**15 18 42.1**	**-1.2**
N23A	**Red Feather La**	**8.38**	**305**	IAmb_Lg		15 21 24.2	
	comp=Z,22nm,0.8s						
SFIN	**Lafayette**	**8.66**	**60**	IAmb_Lg		15 21 27.2	
	comp=Z,28nm,0.8s						

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*IDC **15** 15:17:17.1±0.4, 60°.86N×165°.75E, h0^{km}, mb4.5/31, mbtmp4.6/36, ML5.4/3, MS3.8/33, Error ellipse: s-maj=13.4km s-min=7.9km az=165.0*

*KRSC **15** 15:17:17.1±0.9, 60°.82N×165°.76E, h24^{km}±14^{km}, Mc4.9, Ml5.1*

*BJI **15** 15:17:17.5±0.0, 60°.84N×166°.06E, h30^{km}, mb4.9/62, mB5.2/33, Ms4.8/22, Ms7 4.3/18*

*MOS **15** 15:17:17.2±1.1, 60°.88N×165°.75E, h12^{km}, mb5.0/68, Error ellipse: s-maj=7.7km s-min=3.6km az=80.5*

*NEIC **15** 15:17:19.6±1.4, 60°.90N±0°.08×165°.6E±0°.2, h18^{km}±3^{km}, mb4.9/321, Error ellipse: s-maj=12.9km s-min=9.4km az=139.0*

*GCMT **15** 15:17:20.6±0.4, 60°.92N±0°.04×165°.59E±0°.09, h21^{km}±1^{km}, MW4.8/68, Moment Tensor Solution. s8,c8; s68,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.18±.25; $M_{\theta\theta}$-1.64±.17; $M_{\phi\phi}$-0.53±.13; $M_{r\theta}$0.90±.25; $M_{\theta\phi}$0.73±.07; $M_{\phi r}$-0.47±.24; Best double couple: $M_0$2.32300×10^{16} NP1:ϕ_s117.00000°,δ58.00000°,λ90.00000°. NP2: ϕ_s296.00000°,δ32.00000°,λ89.00000°. Principal axes: T 2.4110, Plg77.0000°, Azm28.0000°; N -0.1750, Plg0.0000°, Azm297.0000°; P -2.2340, Plg13.0000°, Azm207.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 15:17:20.8±0.5, **60°.80N**±0°.03×**165°.78E**±0°.03, **h26**^{km}±3^{km}, **n810,** σ1^{s}.14/770, **mb4.9**/244, **MS3.9**/44, **52C-23D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TILK	**Tilichiki**	**0.40**	**153**	PN	**Pb**	**15 17 26.2**	**-3.1**
TILK				S	**Sb**	**15 17 33.0**	**-2.1**
TILK	**Tilichiki**	**0.40**	**153**	*e*P	**Pb**	**15 17 26.2**	**-3.1**
TILK				*e*S	**Sb**	**15 17 33.0**	**-2.1**
KMSK	**Kamenskaya**	**1.68**	**7**	PN	**Pn**	**15 17 47.0**	**-1.5**
KMSK				S	**Sn**	**15 18 08.3**	**-0.9**
KMSK	**Kamenskaya**	**1.68**	**7**	*e*P	**Pn**	**15 17 47.0**	**-1.5**
KMSK				*e*S	**Sn**	**15 18 08.3**	**-0.9**
OSSR	**Ossora**	**2.07**	**222**	PN	**Pn**	**15 17 52.4**	**-1.4**
OSSR				S	**Sn**	**15 18 18.3**	**-0.4**
OSSR	**Ossora**	**2.07**	**222**	*e*P	**Pn**	**15 17 52.4**	**-1.4**
OSSR				*e*S	**Sn**	**15 18 18.3**	**-0.4**
PALN	**Palana**	**3.39**	**242**	PN	**Pn**	**15 18 10.6**	**-1.3**
PALN	**Palana**	**3.39**	**242**	*e*P	**Pn**	**15 18 10.6**	**-1.3**
PALN				*e*S	**Sn**	**15 18 50.9**	**-0.5**
TIGL	**Tigil**	**4.75**	**233**	*e*P	**Pn**	**15 18 30.5**	**-0.1**
SMKR	**Semkarok**	**4.79**	**210**	PN	**Pn**	**15 18 33.1**	**+1.8**
SMKR	**Semkarok**	**4.79**	**210**	*e*P	**Pn**	**15 18 33.1**	**+1.8**
SRKR	**Sorokina**	**4.80**	**212**	PN	**Pn**	**15 18 33.1**	**+1.7**
SRKR	**Sorokina**	**4.80**	**212**	*e*P	**Pn**	**15 18 33.1**	**+1.7**
KBG	**Krutoberegovo**	**4.84**	**201**	PN	**Pn**	**15 18 33.0**	**+1.2**
KBG	**Krutoberegovo**	**4.84**	**201**	*e*P	**Pn**	**15 18 33.0**	**+1.2**
KBG				*e*S	**Sn**	**15 19 28.5**	**+1.6**
KBTR	**Krutoberegovo**	**4.86**	**200**	PN	**Pn**	**15 18 32.6**	**+0.4**
KBTR	**Krutoberegovo**	**4.86**	**200**	*e*P	**Pn**	**15 18 32.6**	**+0.4**
KBTR				*e*S	**Sn**	**15 19 29.4**	**+1.8**
KLY	**Klyuchi**	**5.24**	**213**	PN	**Pn**	**15 18 38.2**	**+0.8**
KLY	**Klyuchi**	**5.24**	**213**	*e*P	**Pn**	**15 18 38.2**	**+0.8**
SRDR	**Sredinnyy**	**5.50**	**218**	PN	**Pn**	**15 18 42.6**	**+1.6**
SRDR	**Sredinnyy**	**5.50**	**218**	*e*P	**Pn**	**15 18 42.6**	**+1.6**
BZGR	**Bezymyannyi-Gr**	**5.56**	**211**	PN	**Pn**	**15 18 42.6**	**+0.7**
BZGR	**Bezymyannyi-Gr**	**5.56**	**211**	*e*P	**Pn**	**15 18 42.6**	**+0.7**
BZWR	**Bezymyannyi-We**	**5.59**	**212**	PN	**Pn**	**15 18 42.7**	**+0.4**
BZWR	**Bezymyannyi-We**	**5.59**	**212**	*e*P	**Pn**	**15 18 42.7**	**+0.4**
BKI	**Bering**	**5.62**	**179**	PN	**Pn**	**15 18 42.5**	**0.0**
BKI	**Bering**	**5.62**	**179**	*e*P	**Pn**	**15 18 42.5**	**0.0**
BZMR	**Bezymyannaya**	**5.62**	**212**	PN	**Pn**	**15 18 43.1**	**+0.4**
BZMR	**Bezymyannaya**	**5.62**	**212**	*e*P	**Pn**	**15 18 43.1**	**+0.4**
BZP	**Bezymyannyi-Pe**	**5.62**	**212**	*e*P	**Pn**	**15 18 43.2**	**+0.4**
KIRR	**Kirishev**	**5.64**	**213**	PN	**Pn**	**15 18 44.4**	**+1.4**
KIRR	**Kirishev**	**5.64**	**213**	*e*P	**Pn**	**15 18 44.4**	**+1.4**
KOZ	**Kozyrevsk**	**5.68**	**216**	PN	**Pn**	**15 18 46.2**	**+2.8**
KOZ	**Kozyrevsk**	**5.68**	**216**	*e*P	**Pn**	**15 18 46.2**	**+2.8**
KMNR	**Kamenistaya**	**5.84**	**212**	PN	**Pn**	**15 18 48.4**	**+2.7**
KMNR	**Kamenistaya**	**5.84**	**212**	*e*P	**Pn**	**15 18 48.4**	**+2.7**
ESO	**Esso**	**6.14**	**220**	PN	**Pn**	**15 18 52.4**	**+2.6**
ESO	**Esso**	**6.14**	**220**	*e*P	**Pn**	**15 18 52.4**	**+2.6**
TUMR	**Tumrok**	**6.29**	**211**	PN	**Pn**	**15 18 55.0**	**+3.1**
TUMR	**Tumrok**	**6.29**	**211**	*e*P	**Pn**	**15 18 55.5**	**+3.6**
TUMD	**Tumrok D**	**6.30**	**209**	*e*P	**Pn**	**15 18 55.0**	**+3.1**
SEY	**Seymchan**	**6.69**	**294**	Pn	**Pn**	**15 18 56.5**	**-0.6**
	11nm,0.5s,baz=102,slow=12,SNR=210						
SEY				Lg	Lg	15 20 38.2	
	3.3nm,0.3s,baz=198,slow=20,SNR=4.2						
SEY	**Seymchan**	**6.69**	**294**	*d i*PN	**Pn**	**15 18 56.8**	**-0.4**
BILL	**Bilibino**	**7.27**	**1**	Pn	**Pn**	**15 19 05.3**	**+0.1**
BILL	**Bilibino**	**7.27**	**1**	*i* PN	**Pn**	**15 19 05.6**	**+0.4**
BILL				*i* S	**Sn**	**15 20 32.3**	**+5.5**
BILL				pmax	pmax		
	comp=Z,29nm,0.4s						
BILL				MLR	MLR		
	comp=Z,354nm,16.0s						
MA2	**Magadan**	**7.58**	**267**	Pn	**Pn**	**15 19 08.9**	**-0.6**
	comp=Z,14nm,0.3s,baz=72,slow=13,SNR=138						
MA2				Sn	**Sn**	**15 20 31.6**	**-2.9**
	baz=32,slow=13						
MA2				Lg	Lg	15 21 11.7	
	baz=336,slow=20						
MA2				LR	LR	15 21 14.3	
	comp=Z,45nm,21.4s,baz=82,slow=31						
	comp=Z,61nm,0.5s						
MA2	**Magadan**	**7.58**	**267**	Pn	**Pn**	**15 19 08.6**	**-0.9**
MA2	**Magadan**	**7.58**	**267**	*d i*PN	**Pn**	**15 19 09.0**	**-0.5**
MA2				pmax	pmax		
	comp=Z,63nm,0.6s						
GNL	**Ganaly**	**8.29**	**214**	PN	**Pn**	**15 19 22.3**	**+3.0**
GNL	**Ganaly**	**8.29**	**214**	*e*P	**Pn**	**15 19 22.3**	**+3.0**
PET	**Petropavlovsk**	**8.71**	**210**	*e*PN	Pn	15 19 29.5	+4.5
PET				pmax	pmax		
	comp=Z,62nm,1.0s						
PET				MLR	MLR		
	comp=Z,700nm,12.0s						
PET				MLR	MLR		
	comp=Z,500nm,11.0s						
PEA0B	**Petropavlovsk-**	**8.88**	**213**	Pn	**Pn**	**15 19 28.9**	**+1.6**
PEA0B	**Petropavlovsk-**	**8.88**	**213**	⇑*e*PN	**Pn**	**15 19 27.6**	**+0.3**
PETK	**Petropavlovsk-**	**8.88**	**213**	Pn	**Pn**	**15 19 28.8**	**+1.5**
	comp=Z,5.3nm,1.0s,baz=17,slow=15,SNR=3.4						
PETK				LR	LR	15 23 19.2	
	comp=Z,854nm,20.3s,baz=39,slow=41						
PETK	**Petropavlovsk-**	**8.88**	**213**	Pn	**Pn**	**15 19 27.5**	**+0.2**
SHEM	**Shemya Is, Ala**	**9.28**	**147**	Pn	**Pn**	**15 19 29.7**	**-3.1**
	comp=Z,1.5nm,0.3s,baz=261,slow=12,SNR=1.1						
SHEM				LR	LR	15 22 43.6	
	comp=Z,298nm,18.0s,baz=338,slow=35						
TNA	**Tin City**	**12.73**	**57**	Pn	**Pn**	**15 20 20.0**	**+0.1**
TNA	**Tin City**	**12.73**	**57**	P	**Pn**	**15 20 20.1**	**+0.3**
	baz=261						
ANM	**Nome**	**13.70**	**62**	Pn	**Pn**	**15 20 32.9**	**-0.2**
ANM	**Nome**	**13.70**	**62**	P	**Pn**	**15 20 32.9**	**-0.2**
ANM	**Nome**	**13.70**	**62**	P	**Pn**	**15 20 33.5**	**+0.4**
	baz=268,SNR=13						
OKH	**Okha**	**14.30**	**250**	*de*P	**Pn**	**15 20 39.6**	**-1.7**
OKH				MLR	MLR		
	comp=Z,800nm,14.0s						
OKH				MLR	MLR		
	comp=N,1µm,14.0s						
OKH				MLR	MLR		
	comp=E,900nm,11.0s						
RDOG	**Red Dog Mine**	**15.18**	**48**	Pn	**Pn**	**15 20 53.3**	**+0.1**
RDOG	**Red Dog Mine**	**15.18**	**48**	P	**Pn**	**15 20 54.2**	**+1.0**
	baz=257,SNR=23						
TYV	**Tymovskoe**	**16.27**	**243**	*e*P	**P**	**15 21 09.6**	**-0.5**
TYV				*e*S	**Sn**	**15 24 11.2**	**+4.4**
TYV				pmax	pmax		
	comp=Z,14nm,1.1s						
TYV				pmax	pmax		
	comp=Z,300nm,4.4s						
TYV				smax	smax		
	comp=N,9.0nm,1.7s						
TYV				smax	smax		
	comp=N,200nm,5.5s						
YAK	**Yakutsk**	**17.18**	**290**	P	**Pn**	**15 21 19.0**	**+0.4**
	comp=N,0.1nm,0.3s,baz=173,slow=0.4,SNR=25						
	comp=N,53nm,0.8s						
YAK	**Yakutsk**	**17.18**	**290**		**Pn**	**15 21 18.1**	**-0.6**
YAK				IAmb	IAmb	15 21 21.4	
	comp=Z,104nm,0.8s						
YAK	**Yakutsk**	**17.18**	**290**	*e*P	**P**	**15 21 19.9**	**-0.2**
YAK				*e*S	**Sn**	**15 24 28.4**	**-0.3**
YAK				pmax	pmax		
	comp=Z,80nm,0.7s						
YAK				pmax	pmax		
	comp=N,8.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,28nm,0.9s						
YAK				smax	smax		
	comp=N,142nm,3.5s						
YAK				smax	smax		
	comp=E,90nm,3.7s						
YAK				MLR	MLR		
	comp=Z,123nm,16.0s						
N16K	**Nishlik Lake**	**17.26**	**76**	P	**P**	**15 21 22.1**	**+1.1**
	baz=287						
GCSA	**Galena City Sc**	**17.35**	**61**	P	**P**	**15 21 22.9**	**+1.0**
	baz=275						
O16K	**Kokwok River B**	**17.86**	**78**	P	**P**	**15 21 28.8**	**+1.3**
	baz=290						
TTA	**Tatalina**	**17.96**	**67**		**Pn**	**15 21 28.6**	**+0.2**
TTA	**Tatalina**	**17.96**	**67**	P	**Pn**	**15 21 28.6**	**+0.2**
TTA				pmax	pmax		
	comp=Z,14nm,1.0s						
TTA	**Tatalina**	**17.96**	**67**	P	**P**	**15 21 29.3**	**+0.5**
	baz=281						
TIXI	**Tiksi**	**18.04**	**322**	P	**P**	**15 21 29.7**	**+0.2**
	comp=Z,139nm,0.3s,baz=90,slow=23,SNR=28						
TIXI				LR	LR	15 29 05.6	
	comp=Z,125nm,20.0s,baz=133,slow=39						
	comp=Z,6.3nm,0.5s						
TIXI	**Tiksi**	**18.04**	**322**		**Pn**	**15 21 27.6**	**-1.6**
TIXI	**Tiksi**	**18.04**	**322**	⇓*e*P	**P**	**15 21 29.4**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,30nm,1.7s						
TIXI				MLR	MLR		
	comp=Z,173nm,16.0s						
A21K	**Barrow**	**18.15**	**39**		**Pn**	**15 21 29.7**	**-0.9**
A21K	**Barrow**	**18.15**	**39**	P	**P**	**15 21 30.8**	**0.0**
	baz=254,SNR=18						
IMAR	**Indian Mountai**	**18.58**	**56**	P	**Pn**	**15 21 35.8**	**-0.1**
L19K	**White Mountain**	**18.64**	**69**	P	**P**	**15 21 36.5**	**+0.2**
L19K	**White Mountain**	**18.64**	**69**	P	**Pn**	**15 21 38.0**	**+1.3**
	baz=284						
G21K	**Allakaket**	**18.66**	**55**	P	**Pn**	**15 21 38.1**	**+1.3**
	baz=272						
F21K	**Alatna River**	**18.66**	**53**	P	**Pn**	**15 21 38.0**	**+1.1**
	baz=270						
K20K	**Telida**	**18.75**	**65**	P	**P**	**15 21 37.2**	**-0.2**
K20K	**Telida**	**18.75**	**65**	P	**Pn**	**15 21 39.1**	**+1.1**
	baz=281						
P17K	**Kvichak River**	**18.79**	**78**	P	**Pn**	**15 21 39.9**	**+1.5**
	baz=292						
M19K	**Big River Lodg**	**18.92**	**69**	P	**P**	**15 21 39.1**	**-0.2**
M19K	**Big River Lodg**	**18.92**	**69**	P	**Pn**	**15 21 40.5**	**+0.4**
	baz=285						
H21K	**Melozitna Rive**	**18.99**	**57**	P	**P**	**15 21 40.5**	**+0.4**
H21K	**Melozitna Rive**	**18.99**	**57**	P	**Pn**	**15 21 41.0**	**+0.2**
	baz=275						
L20K	**Farewell, AK**	**19.02**	**67**	P	**Pn**	**15 21 41.0**	**-0.2**
	baz=284						
GRNR	**Gornyy**	**19.15**	**252**	⇑*i*P	**Pn**	**15 21 43.2**	**+0.3**
GRNR				*e*S	**S**	**15 25 19.9**	**+2.7**
GRNR				pmax	pmax		
	comp=E,5.0nm,0.7s						
GRNR				pmax	pmax		
	comp=N,3.0nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GRNR				smax	smax		
	comp=N,1.0nm,0.6s						
GRNR				MLR	MLR		
	comp=E,450nm,16.0s						
GRNR				MLR	MLR		
	comp=N,380nm,19.0s						
GRNR				MLR	MLR		
	comp=Z,410nm,16.0s						
F22K	**John River**	**19.17**	**52**	P	**P**	**15 21 42.3**	**+0.3**
	baz=270						
N19K	**Bonanza Creek**	**19.18**	**72**	P	**P**	**15 21 42.5**	**+0.3**
	baz=288						
YSS	**Yuzh-Sakhalins**	**19.26**	**234**	P	**P**	**15 21 42.4**	**-0.6**
YSS	**Yuzh-Sakhalins**	**19.26**	**234**	*e*P	**P**	**15 21 43.0**	**0.0**
YSS				pmax	pmax		
	comp=Z,300nm,4.1s						
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
P18K	**Big Mountain,**	**19.30**	**77**	P	**Pn**	**15 21 44.8**	**+0.2**
	baz=291						
E22K	**Anaktuvuk Pass**	**19.32**	**50**	P	**Pn**	**15 21 44.6**	**-0.2**
	baz=269,SNR=88						
I21K	**Tanana**	**19.38**	**59**	P	**P**	**15 21 44.9**	**+0.6**
I21K	**Tanana**	**19.38**	**59**	P	**Pn**	**15 21 46.2**	**+0.7**
	baz=277						
Q17K	**Contact Creek**	**19.41**	**80**	P	**Pn**	**15 21 46.2**	**+0.2**
	baz=294						
CHUM	**Lake Minchumin**	**19.43**	**63**	P	**Pn**	**15 21 47.0**	**+0.9**
	baz=280,SNR=11						
R17K	**Ugashik Creek**	**19.43**	**83**	P	**P**	**15 21 45.5**	**+0.7**
	baz=296						
O19K	**Port Alsworth**	**19.45**	**74**	P	**Pn**	**15 21 46.3**	**-0.1**
	baz=290						
M20K	**Styx River**	**19.51**	**69**	P	**P**	**15 21 46.4**	**+0.6**
M20K	**Styx River**	**19.51**	**69**	P	**Pn**	**15 21 47.3**	**+0.2**
	baz=286						
H22K	**Ishtalitna Cre**	**19.56**	**57**	P	**P**	**15 21 46.7**	**+0.4**
	baz=276						
CAST	**Castle Rocks**	**19.62**	**64**	P	**Pn**	**15 21 47.8**	**-0.6**

CAST	Castle Rocks	19.62	64	P	Pn	15 21 48.3	-0.1
	baz=282,SNR=14						
PPLA	Purkeypile	19.68	66	P	P	15 21 48.1	+0.4
PPLA	Purkeypile	19.68	66	P	Pn	15 21 49.5	+0.2
	baz=283						
Q18K	Katmai Hardscr	19.68	79	P	Pn	15 21 49.6	+0.3
	baz=293						
D23K	Nanushuk River	19.77	47	P	P	15 21 49.2	+0.8
	baz=268,SNR=18						
MLY	Manley	19.92	59	P	P	15 21 50.8	+0.5
MLY	Manley	19.92	59	P	Pn	15 21 52.3	+0.3
	baz=278,SNR=40						
COLD	Coldfoot	19.94	52	P	P	15 21 50.8	+0.4
COLD				IAmb	IAmb	15 21 59.9	
	comp=Z,77nm,0.9s						
COLD	Coldfoot	19.94	52	P	Pn	15 21 51.5	-0.6
	baz=273,SNR=46						
BPAW	Bear Paw Mtn.	19.97	62	P	P	15 21 51.6	+0.9
BPAW	Bear Paw Mtn.	19.97	62	P	Pn	15 21 52.4	-0.1
	baz=281,SNR=10						
G23K	Bananza Creek	20.04	54	P	Pn	15 21 52.7	-0.7
	baz=274						
RSO	Redoubt South	20.10	73	P	P	15 21 53.3	+0.9
KTH	Kantishna Hill	20.10	63	P	P	15 21 53.0	+0.8
SPCR	Spurr Chakacha	20.12	70	P	Pn	15 21 53.8	-0.6
	baz=288						
E23K	Chandalar	20.14	50	P	P	15 21 53.7	+1.1
	baz=271						
SKT	Skwentna	20.21	68	IAmb	IAmb	15 21 56.8	
	comp=Z,49nm,1.0s						
SKT	Skwentna	20.21	68	P	Pn	15 21 55.4	+0.1
	baz=286,SNR=14						
H23K	Yukon River	20.32	57	P	P	15 21 55.0	+0.5
H23K				IAmb	IAmb	15 22 03.5	
	comp=Z,54nm,0.8s						
H23K	Yukon River	20.32	57	P	Pn	15 21 56.3	-0.3
	baz=277						
TRF	Thorofare Moun	20.40	63	P	P	15 21 56.0	+0.4
TRF				IAmb	IAmb	15 22 02.6	
	comp=Z,34nm,0.9s						
TRF	Thorofare Moun	20.40	63	P	Pn	15 21 57.1	-0.6
	baz=283,SNR=16						
I23K	Minto, Yukon-K	20.48	58	P	Pn	15 21 57.8	-0.7
	baz=279,SNR=17						
C24K	Franklin Bluff	20.51	45	P	P	15 21 57.1	+0.6
	baz=267						
E24K	Your Creek	20.57	50	P	P	15 21 58.4	+1.2
	baz=272						
YUK	Yuzh-Kuril'sk	20.58	224	⇑eP	P	15 21 57.2	-0.2
BWN	Browne	20.61	61	P	P	15 21 57.9	+0.2
BWN				IAmb	IAmb	15 22 06.6	
	comp=Z,106nm,0.9s						
NEA2	Nenana	20.70	60	P	P	15 21 58.6	0.0
NEA2				IAmb	IAmb	15 22 07.3	
	comp=Z,25nm,0.7s						
NEA2	Nenana	20.70	60	P	Pn	15 22 00.2	-0.9
	baz=281,SNR=16						
SUA	Susitna One	20.71	69	IAmb	IAmb	15 22 05.8	
	comp=Z,36nm,0.9s						
SUA	Susitna One	20.71	69	P	Pn	15 22 00.4	-1.0
	baz=288						
F24K	Squaw Lake	20.82	52	P	Pn	15 22 01.5	-0.9
	baz=274						
MCK	McKinley	20.93	62	P	P	15 22 01.8	+0.7
MCK				IAmb	IAmb	15 22 06.0	
	comp=Z,50nm,0.8s						
MCK	McKinley	20.93	62	P	P	15 22 01.8	+0.7
MCK				pmax	pmax		
	comp=Z,50nm,0.8s						
MCK	McKinley	20.93	62	P	Pn	15 22 02.9	-0.9
	baz=283,SNR=31						
Q20K	Shuyak Island	20.95	77	P	Pn	15 22 03.7	-0.3
	baz=294						
MDM	Murphy Dome	20.99	59	IAmb	IAmb	15 22 09.6	
	comp=Z,43nm,0.9s						
H24K	Noodor Dome	20.99	56	P	P	15 22 03.8	+2.0
	baz=278						
RND	Reindeer	21.04	63	P	P	15 22 02.5	+0.1
RND	Reindeer	21.04	63	P	P	15 22 02.5	+0.1
RND				pmax	pmax		
	comp=Z,18nm,0.8s						
G24K	Hadweenzic Riv	21.05	54	P	P	15 22 04.3	+1.9
	baz=276,SNR=59						
WRH	Wood River Hil	21.14	60	IAmb	IAmb	15 22 11.2	
	comp=Z,83nm,0.9s						
TCOL	CIGO, UAF Yank	21.16	59	P	P	15 22 03.9	+0.4
TCOL				IAmb	IAmb	15 22 11.9	
	comp=Z,42nm,0.8s						
TCOL	CIGO, UAF Yank	21.16	59	P	P	15 22 05.3	+1.8
	baz=281						
COLA	College	21.16	59	P	P	15 22 03.8	+0.2
COLA				IAmb	IAmb	15 22 12.0	
	comp=Z,42nm,0.8s						
COLA	College	21.16	59	ceP	P	15 22 06.4	+2.9
COLA				pmax	pmax		
	comp=Z,33nm,0.9s						
COLA	College	21.16	59	P	P	15 22 05.2	+1.7
	baz=281						
KDAK	Kodiak Island	21.21	80	P	P	15 22 05.3	+1.2
	comp=Z,27nm,1.1s,baz=306,slow=5.4,SNR=8.5						
KDAK				LR	LR	15 30 45.2	
	comp=Z,201nm,20.3s,baz=306,slow=38						
	comp=Z,27nm,1.1s						
KDAK	Kodiak Island	21.21	80	⇓eP	P	15 22 08.5	+4.4
KDAK				pmax	pmax		
	comp=Z,49nm,1.2s						
CCB	Clear Creek Bu	21.23	59	P	P	15 22 05.2	+1.0
CCB				IAmb	IAmb	15 22 10.2	
	comp=Z,23nm,0.7s						
POKR	Poker Plat Res	21.29	58	P	P	15 22 04.4	-0.6
POKR	Poker Plat Res	21.29	58	P	P	15 22 06.3	+1.3
	baz=281,SNR=19						
BRSE	Bradley Lake S	21.30	74	P	P	15 22 06.1	+1.0
	baz=292						
D25K	Kavik River	21.32	46	P	P	15 22 05.6	+0.3
	baz=271						
PMR	Palmer	21.41	68	P	P	15 22 08.0	+1.7
	baz=288						
O22K	Cooper Landing	21.51	71	P	P	15 22 08.3	+1.0
	baz=291						
G25K	Bearman Lake	21.58	53	P	P	15 22 10.1	+2.0
	baz=277						
IL31		21.59	59	P	P	15 22 08.3	+0.2
IL31				IAmb	IAmb	15 22 15.0	
	comp=Z,60nm,0.7s						
ILAR	Eielson Array	21.59	59	P	P	15 22 08.7	+0.6
	comp=Z,21nm,0.6s,baz=273,slow=8.9,SNR=249						
ILAR				LR	LR	15 31 29.6	
	comp=Z,305nm,18.8s,baz=257,slow=40						
	comp=Z,21nm,0.6s						
ILAR	Eielson Array	21.59	59	P	P	15 22 08.4	+0.3
ILAR	Eielson Array	21.59	59	P	P	15 22 08.4	+0.3
HDA	Harding Lake	21.64	60	P	P	15 22 08.8	+0.2
HDA				IAmb	IAmb	15 22 14.3	
	comp=Z,54nm,0.8s						
HDA	Harding Lake	21.64	60	P	P	15 22 09.8	+1.1
	baz=283,SNR=54						
E25K	Arctic Village	21.66	50	P	P	15 22 10.1	+1.2
	baz=274,SNR=60						
F25K	Christian Rive	21.67	51	P	P	15 22 10.8	+1.8
	baz=276						
ASAJ	Asahikawa	21.68	230	LR	LR	15 30 32.3	
	comp=Z,96nm,20.5s,baz=34,slow=37						
SML	Sawmill	21.71	67	IAmb	IAmb	15 22 25.1	
	comp=Z,29nm,0.9s						
SML	Sawmill	21.71	67	P	P	15 22 10.2	+0.7
	baz=288						
ZEA	Zeya	21.73	268	eP	P	15 22 09.6	-0.1
ZEA				pmax	pmax		
	comp=E,10.0nm,1.4s						
ZEA				pmax	pmax		
	comp=N,10.0nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
SEW	Seward	21.77	72	P	P	15 22 10.9	+0.8
	baz=292						
KNK	Knik Glacier	21.78	68	P	P	15 22 10.8	+0.6
KNK				IAmb	IAmb	15 22 16.3	
	comp=Z,30nm,0.8s						
KNK	Knik Glacier	21.78	68	P	P	15 22 11.3	+1.1
	baz=289						
C26K	Camden Bay	21.82	45	P	P	15 22 11.7	+1.0
	baz=270						
FYU	Fort Yukon	21.95	54	P	P	15 22 13.1	+1.1
FYU				IAmb	IAmb	15 22 18.6	
	comp=Z,74nm,0.7s						
M23K	Glacier View	21.99	67	P	P	15 22 12.9	+0.5
	baz=289,SNR=16						
PRP	Porcupine Dome	22.01	57	P	P	15 22 13.6	+0.8
PRP				IAmb	IAmb	15 22 19.5	
	comp=Z,60nm,0.8s						
PRP	Porcupine Dome	22.01	57	P	P	15 22 13.9	+1.1
	baz=281,SNR=55						
PWL	Port Wells	22.02	70	P	P	15 22 13.7	+0.9
PWL				IAmb	IAmb	15 22 18.1	
	comp=Z,70nm,1.0s						
PWL	Port Wells	22.02	70	P	P	15 22 13.4	+0.5
	baz=290						
BMAR	Burnt Mountain	22.09	51	P	P	15 22 15.1	+1.5
SCM	Sheep Creek Mo	22.15	67	P	P	15 22 13.0	-1.3
SCM	Sheep Creek Mo	22.15	67	P	P	15 22 13.0	-1.3
SCM				pmax	pmax		
	comp=Z,107nm,1.0s						
SCM	Sheep Creek Mo	22.15	67	P	P	15 22 14.3	0.0
	baz=289,SNR=22						
F26K	Sheenjek River	22.23	51	P	P	15 22 15.8	+0.7
	baz=277						
C27K	Jago River	22.25	46	P	P	15 22 15.7	+0.5
	baz=272						
K24K	Donnelly Dome	22.28	61	P	P	15 22 15.7	+0.1
	baz=285,SNR=14						
KLR	Kul'dur	22.40	254	P	P	15 22 17.3	+0.2
	comp=Z,9.4nm,0.6s,baz=50,slow=9.5,SNR=28						
KLR				LR	LR	15 31 16.3	
	comp=Z,191nm,18.8s,baz=44,slow=38						
	comp=Z,9.4nm,0.6s						
KLR	Kul'dur	22.40	254	⇑eP	P	15 22 17.2	+0.2
KLR				pmax	pmax		
	comp=Z,17nm,1.0s						
G26K	Porcupine Rive	22.47	53	P	P	15 22 18.6	+1.1
	baz=279						
M24K	Tolsona, Glenn	22.59	66	P	P	15 22 18.4	-0.5
M24K	Tolsona, Glenn	22.59	66	P	P	15 22 19.9	+0.9
	baz=289,SNR=17						
PAX	Paxson	22.64	63	P	P	15 22 20.0	+0.5
PAX	Paxson	22.64	63	P	P	15 22 20.0	+0.5
PAX				pmax	pmax		
	comp=Z,18nm,0.8s						
PAX	Paxson	22.64	63	P	P	15 22 19.8	+0.3
	baz=287,SNR=12						
RIDG	Independent Ri	22.69	61	P	P	15 22 20.0	0.0
	baz=286,SNR=46						
KLU	Klutina	22.90	67	P	P	15 22 21.2	-1.0
KLU				IAmb	IAmb	15 22 27.5	
	comp=Z,28nm,0.8s						
KLU	Klutina	22.90	67	P	P	15 22 22.5	+0.3
	baz=290,SNR=12						
HARP	HAARP	22.95	64	P	P	15 22 22.6	0.0
	baz=288						
SCRK	Sand Creek	23.00	60	IAmb	IAmb	15 22 26.7	
	comp=Z,37nm,0.9s						
SCRK	Sand Creek	23.00	60	P	P	15 22 22.9	-0.4
	baz=286,SNR=35						
I26K	Coal Creek Min	23.02	57	P	P	15 22 23.2	-0.2
I26K	Coal Creek Min	23.02	57	P	P	15 22 23.2	-0.2
	baz=283						
DOT	Dot Lake	23.05	61	P	P	15 22 23.0	-0.8
DOT				IAmb	IAmb	15 22 26.7	
	comp=Z,41nm,0.7s						
E27K	Coleen River	23.13	49	P	P	15 22 25.5	+1.1
	baz=278						
EYAK	Cordova Ski Ar	23.32	69	P	P	15 22 27.2	+0.9
	baz=292						
G27K	Doyon Strip	23.32	53	P	P	15 22 27.4	+1.0
	baz=281						
TEY	Ternei	23.35	241	⇑eP	P	15 22 27.3	+0.5
TEY				pmax	pmax		
	comp=N,10.0nm,0.7s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.7s						
TEY				pmax	pmax		
	comp=Z,20nm,0.7s						
MENT	Mentasta	23.41	63	P	P	15 22 26.5	-0.8
MENT				IAmb	IAmb	15 22 33.3	
	comp=Z,52nm,1.1s						
N25K	Chitina, Valde	23.46	66	P	P	15 22 27.6	-0.3
	baz=291						
H27K	Steamboat Moun	23.48	54	P	P	15 22 29.1	+1.1
	baz=282						
L26K	Log Cabin Wild	23.55	62	IAmb	IAmb	15 22 33.6	
	comp=Z,31nm,1.1s						
L26K	Log Cabin Wild	23.55	62	P	P	15 22 28.7	0.0
	baz=288,SNR=17						
I27K	Kandik River	23.58	56	P	P	15 22 29.7	+0.7
	baz=284						
HEH	HeiHe	23.79	261	eP	P	15 22 30.3	-0.7
HEH				pP	sP	15 22 39.4	-2.4
HEH				S	S	15 26 43.3	-1.5
HEH				pmax	pmax		
	comp=Z,52nm,0.8s						
HEH				pmax	pmax		
	comp=Z,420nm,6.5s						
HEH				LR	LR		
	comp=Z,700nm,16.2s						
HEH				LR	LR		
	comp=Z,900nm,15.4s						
HEH				LR	LR		
	comp=Z,360nm,14.4s						
K27K	Chicken	23.79	60	P	P	15 22 30.3	-0.7
K27K	Chicken	23.79	60	P	P	15 22 31.1	+0.1
	baz=287						
M26K	Nabesna, AK	23.90	64	P	P	15 22 32.6	+0.6
M26K				IAmb	IAmb	15 22 34.3	
	comp=Z,58nm,1.4s						
M26K	Nabesna, AK	23.90	64	P	P	15 22 32.8	+0.7
	baz=290,SNR=12						
EGAK	Eagle	23.97	57	P	P	15 22 31.2	-1.4
EGAK				IAmb	IAmb	15 22 35.8	
	comp=Z,52nm,0.7s						
EGAK	Eagle	23.97	57	P	P	15 22 32.0	-0.6
	baz=286,SNR=52						
VRDI	Verde Repeater	24.11	67	P	P	15 22 33.8	-0.4
VRDI				IAmb	IAmb	15 22 38.8	
	comp=Z,23nm,0.8s						
L27K	Beaver Creek,	24.19	62	P	P	15 22 34.7	-0.1
L27K				IAmb	IAmb	15 22 38.4	
	comp=Z,29nm,0.9s						
L27K	Beaver Creek,	24.19	62	P	P	15 22 35.2	+0.4
	baz=289						
MCARA	McCarthy VSAT	24.24	66	P	P	15 22 35.1	-0.1
MCARA	McCarthy VSAT	24.24	66	P	P	15 22 36.1	+0.9
	baz=292,SNR=8.9						
M27K	Edge Creek, AK	24.40	63	P	P	15 22 37.5	+0.7
	baz=290,SNR=35						
BVCY	Beaver Creek	24.83	63	P	P	15 22 41.2	+0.7
	baz=291						
DAWY	Dawson	24.91	59	P	P	15 22 41.1	-0.2
DAWY				IAmb	IAmb	15 22 46.6	
	comp=Z,18nm,0.8s						
DAWY	Dawson	24.91	59	P	P	15 22 41.1	-0.2
	baz=288,SNR=20						
BARN	Barnard Glacie	24.98	66	P	P	15 22 42.6	+0.6
I29M	Ogilvie Camp,	24.98	55	IAmb	IAmb	15 22 46.4	
	comp=Z,43nm,0.9s						
I29M	Ogilvie Camp,	24.98	55	P	P	15 22 42.1	+0.3
	baz=286,SNR=35						
CTG	Chitna Glacier	25.16	66	P	P	15 22 44.8	+1.2
	baz=293,SNR=35						
CTGM	Chitina Glacie	25.16	66	P	P	15 22 42.9	-0.8
YUK3	Moose Creek	25.24	64	P	P	15 22 45.3	+0.9
	baz=292,SNR=13						
EPYK	Eagle Plains	25.34	53	IAmb	IAmb	15 22 49.7	
	comp=Z,45nm,0.8s						
EPYK	Eagle Plains	25.34	53	P	P	15 22 45.5	+0.4
	baz=285,SNR=28						
LOGN	Logan Glacier	25.36	66	P	P	15 22 46.1	+0.6
G30M	tAoh Zraii Nji	25.38	51	P	P	15 22 46.4	+1.0
	baz=284						
YUK8	Steele Glacier	25.73	65	P	P	15 22 49.7	+0.7
	baz=294						
O28M	Mount Upton	25.75	66	P	P	15 22 49.5	+0.4
	baz=294						
L29M	L29M	25.76	60	P	P	15 22 49.6	+0.6
	baz=291						
K29M	Barlow Dome	25.77	58	P	P	15 22 49.2	+0.1
	baz=290						
M29M	Somme Creek	25.86	62	P	P	15 22 51.0	+1.0
	baz=292						
PINM	Pinnacle	26.00	68	P	P	15 22 52.2	+0.9
	baz=296						
USA0B	Ussuriysk Arra	26.03	246	⇑eP	P	15 22 54.1	+2.6
USRK	Ussuriysk Ar.	26.03	246	P	P	15 22 52.7	+1.2
	comp=Z,3.3nm,0.8s,baz=37,slow=11,SNR=5.1						
USRK				LR	LR	15 34 28.6	
	comp=Z,340nm,18.2s,baz=24,slow=40						
	comp=Z,3.3nm,0.8s						
BOD	Bodaibo	26.03	287	eP	P	15 22 50.9	-0.5
BOD				pmax	pmax		
	comp=Z,37nm,1.0s						
INK	Inuvik	26.07	48	P	P	15 22 51.8	+0.2
	comp=Z,5.3nm,0.6s,baz=328,slow=11,SNR=15						
INK				PcP	PcP	15 26 18.5	0.0
	comp=Z,2.6nm,0.6s,baz=342,slow=2.8,SNR=4.5						
INK				LR	LR	15 34 47.6	
	comp=Z,230nm,20.0s,baz=288,slow=40						
	comp=Z,5.3nm,0.6s						
INK	Inuvik	26.07	48	IAmb	IAmb	15 22 55.1	
	comp=Z,44nm,1.8s						
INK	Inuvik	26.07	48	P	P	15 22 52.3	+0.7
	baz=284,SNR=6.7						
F31M	Tsiigehtchic	26.20	50	P	P	15 22 52.9	+0.1
	baz=285,SNR=20						
YUK4	Talbot Arm	26.20	64	P	P	15 22 53.8	+0.6
	baz=294						
YUK6	Outpost Mounta	26.49	65	P	P	15 22 55.7	-0.1
	baz=295						
M30M	Minto, Yukon	26.53	61	P	P	15 22 56.2	+0.3
M30M	Minto, Yukon	26.53	61	P	P	15 22 56.8	+0.9
	baz=293,SNR=5.9						
PNL	Peninsula	26.58	68	P	P	15 22 57.4	+1.1
	baz=297						
O29M	Mount Kennedy	26.67	66	P	P	15 22 59.0	+1.6
	baz=296						
MDJ	Mudanjiang	26.79	249	P	P	15 22 58.6	+0.2
MDJ				pP	pP	15 23 03.6	-2.4
MDJ				PP	PnPn	15 23 39.8	-0.3
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,320nm,6.1s						
MDJ				LR	LR		
	comp=Z,520nm,17.9s						
MDJ				LR	LR		
	comp=Z,610nm,16.8s						
MDJ				LR	LR		
	comp=Z,610nm,13.0s						
N30M	Aishikik Lake	26.84	63	P	P	15 23 00.6	+1.8
	baz=294						
HYT	Haines Junctio	26.93	65	P	P	15 22 60.0	+0.4
HYT				IAmb	IAmb	15 23 07.6	
	comp=Z,28nm,1.3s						
HYT	Haines Junctio	26.93	65	P	P	15 23 00.3	+0.7
	baz=296						
BNX	BinXian	26.96	254	⇑P	P	15 22 59.8	-0.1
BNX				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BNX				pmax	pmax		
	comp=Z,130nm,4.0s						
N31M	Braeburn, Yuko	27.40	63	P	P	15 23 04.2	+0.4
N31M				IAmb	IAmb	15 23 08.3	
	comp=Z,19nm,1.1s						
N31M	Braeburn, Yuko	27.40	63	P	P	15 23 04.5	+0.7
	baz=295						
P30M	Million Dollar	27.48	66	P	P	15 23 05.8	+1.4
	baz=297						
M31M	Drury Creek, Y	27.70	61	P	P	15 23 07.1	+0.6
	baz=294						
A36M	Sachs Harbour	27.99	38	P	P	15 23 08.6	-0.3
A36M	Sachs Harbour	27.99	38	P	P	15 23 09.2	+0.4
	baz=283,SNR=7.3						
FARO	Faro, Yukon	28.14	60	P	P	15 23 11.3	+0.9
	baz=295						
HIA	Hailar	28.18	267	P	P	15 23 09.9	-0.9
HIA	Hailar	28.18	267	P	P	15 23 09.9	-0.9
HIA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SKAG	Skagway	28.51	66	P	P	15 23 13.8	+0.2
	baz=299						
MMPY	Sheldon Lake,	28.85	59	P	P	15 23 17.1	+0.4
	baz=296						
P33M	Teslin, Yukon	29.27	64	P	P	15 23 21.6	+1.1
	baz=299						
CN2	Changchun	29.34	253	eP	P	15 23 20.4	-0.7
CN2				eS	S	15 28 09.5	-3.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,400nm,6.0s						
CN2				LR	LR		
	comp=Z,400nm,11.0s						
CN2				LR	LR		
	comp=Z,300nm,11.0s						
CN2				LR	LR		
	comp=Z,200nm,10.0s						
MJAR	Matsushiro Arr	29.92	228	P	P	15 23 26.3	0.0
	comp=Z,2.6nm,0.8s,baz=22,slow=11,SNR=5.0						
MJAR				LR	LR	15 35 46.4	
	comp=Z,189nm,18.9s,baz=25,slow=37						
	comp=Z,2.6nm,0.8s						
Q32M	Nakina River	30.13	66	P	P	15 23 28.3	+0.1
	baz=301						
S34M	Telegraph Cree	31.19	67	P	P	15 23 38.4	+1.1
	baz=303						
DLBC	Dease Lake	31.40	65	LR	LR	15 38 19.7	
	comp=Z,433nm,19.7s,baz=310,slow=40						
DLBC	Dease Lake	31.40	65	P	P	15 23 41.0	+1.6
	baz=302						
NRIK	Noril'sk	31.75	319	P	P	15 23 41.8	-0.4
	comp=Z,4.3nm,0.5s,baz=82,slow=11,SNR=8.6						
	comp=Z,4.3nm,0.5s						
NRIK	Noril'sk	31.75	319	P	P	15 23 41.2	-1.0
NRIK	Noril'sk	31.75	319	ceP	P	15 23 42.1	-0.1
NRIK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
T35M	Bob Quinn	32.10	68	P	P	15 23 46.6	+1.3
	baz=304,SNR=8.0						
LIRD	Liard River Hi	32.61	62	P	P	15 23 50.6	+0.8
	baz=303						
KOTAN	Kotaneelee Air	33.09	60	P	P	15 23 55.1	+1.1
	baz=303						
KSRS	Korea Array	33.30	243	P	P	15 23 56.1	+0.2
	comp=Z,2.6nm,0.9s,baz=27,slow=9.1,SNR=7.4						
KSRS				PcP	PcP	15 26 38.4	+0.9
	comp=Z,2.2nm,1.0s,baz=294,slow=1.2,SNR=5.4						
KSRS				LR	LR	15 38 57.7	
	comp=Z,148nm,18.1s,baz=50,slow=39						
	comp=Z,2.6nm,0.9s						
KSAR	Wonju Array Be	33.32	243	P	P	15 23 55.4	-0.8
KSAR	Wonju Array Be	33.32	243	P	P	15 23 55.4	-0.8
XLT	XiLinHaoTe	33.75	263	eP	P	15 24 00.5	+0.5
XLT				pP	pP	15 24 05.3	-2.4
XLT				PcP	PcP	15 26 40.9	+2.1
XLT				pmax	pmax		
	comp=Z,63nm,0.8s						
XLT				pmax	pmax		
	comp=Z,300nm,6.0s						
DL2	Dalian	34.95	252	P	P	15 24 10.6	+0.3
DL2				eS	S	15 29 37.3	-2.9
DL2				pmax	pmax		
	comp=Z,21nm,0.9s						
DL2				pmax	pmax		
	comp=Z,350nm,5.7s						
DL2				LR	LR		
	comp=Z,360nm,16.3s						
DL2				LR	LR		
	comp=Z,300nm,15.1s						
DL2				LR	LR		
	comp=Z,310nm,16.3s						
RES	Resolute Bay	35.01	27	LR	LR	15 40 53.4	
	comp=Z,140nm,18.5s,baz=2.5,slow=40						
ULN	Ulaanbaatar	35.34	276	P	P	15 24 12.9	-0.9
ULN	Ulaanbaatar	35.34	276	c iP	P	15 24 14.0	+0.2
ULN				pmax	pmax		
	comp=Z,14nm,1.3s						
ZAK	Zakamensk	35.47	282	eP	P	15 24 14.6	-0.2
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
YKA	Yellowknife Ar	35.62	52	P	P	15 24 16.0	+0.2
	comp=Z,8.1nm,0.8s,baz=302,slow=8.1,SNR=61						
YKA				PcP	PcP	15 26 44.2	+0.4
	comp=Z,2.0nm,0.8s,baz=313,slow=3.6,SNR=12						
YKA				LR	LR	15 41 06.4	
	comp=Z,166nm,21.8s,baz=265,slow=40						
	comp=Z,8.1nm,0.8s						
SONM	Songino Array	35.68	276	P	P	15 24 17.5	+0.8
	comp=Z,9.2nm,1.0s,baz=57,slow=7.8,SNR=25						
SONM				PcP	PcP	15 26 44.9	+0.4
	comp=Z,2.9nm,0.8s,baz=53,slow=0.8,SNR=10						
	comp=Z,9.2nm,1.0s						
SONM	Songino Array	35.68	276	P	P	15 24 15.7	-1.0
SONM	Songino Array	35.68	276	P	P	15 24 15.7	-1.0

SONM				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MOY	**Mondy**	**35.71**	**285**	*e*P	**P**	**15 24 17.9**	**+1.0**
MOY				pmax	pmax		
	comp=Z,31nm,2.9s						
JNU	**Nakatsue**	**35.76**	**235**	LR	LR	15 38 39.1	
	comp=Z,134nm,20.1s,baz=28,slow=36						
BBB	**Bella Bella**	**36.00**	**73**	LR	LR	15 39 12.5	
	comp=Z,133nm,19.0s,baz=306,slow=36						
BJI	**Beijing**	**36.64**	**258**	P	**P**	**15 24 25.3**	**+0.6**
BJI				pmax	pmax		
	comp=Z,21nm,1.0s						
BJT	**Baijiatuau**	**36.66**	**258**	P	**P**	**15 24 23.2**	**-1.7**
BJT				IAmb	IAmb	15 24 26.2	
	comp=Z,32nm,1.0s						
BJT	**Baijiatuau**	**36.66**	**258**	P	**P**	**15 24 23.2**	**-1.7**
BJT				pmax	pmax		
	comp=Z,32nm,1.0s						
HILA	**High Level**	**36.95**	**58**	P	**P**	**15 24 26.0**	**-1.2**
HHC	**Hu-ho-hao-te**	**38.25**	**264**	*e*P	**P**	**15 24 38.0**	**-0.5**
HHC				pmax	pmax		
	comp=Z,28nm,1.0s						
HHC				pmax	pmax		
	comp=Z,330nm,6.6s						
HHC				LR	LR		
	comp=Z,580nm,13.3s						
HHC				LR	LR		
	comp=Z,620nm,14.0s						
HHC				LR	LR		
	comp=Z,460nm,13.3s						
BTO	**Baotou**	**39.19**	**265**	*e*P	**P**	**15 24 46.8**	**+0.4**
BTO				sP	**sP**	**15 25 00.0**	**+2.6**
BTO				S	**S**	**15 30 46.3**	**+1.5**
BTO				sS	**sS**	**15 31 02.5**	**+4.8**
BTO				SS	**SS**	**15 33 30.3**	**-7.5**
BTO				pmax	pmax		
	comp=Z,45nm,0.6s						
BTO				pmax	pmax		
	comp=Z,540nm,5.6s						
BTO				LR	LR		
	comp=Z,1µm,11.9s						
BTO				LR	LR		
	comp=Z,2µm,12.2s						
BTO				LR	LR		
	comp=Z,1µm,7.7s						
HNS	**HongShan**	**39.43**	**257**	⇑P	**P**	**15 24 48.3**	**0.0**
BRLDA	**Berland Lookou**	**39.63**	**64**	P	**P**	**15 24 49.8**	**-0.1**
BRLDA				IAmb	IAmb	15 24 55.0	
	comp=Z,26nm,0.9s						
LLLB	**Lillooet**	**39.96**	**71**	P	**P**	**15 24 52.1**	**-0.5**
SPA0	**Spitsbergen Ar**	**40.02**	**351**	*e*P	**P**	**15 24 52.9**	**+0.1**
NEEM	**North Greenlan**	**40.13**	**12**	*i* P	**P**	**15 24 53.5**	**-0.5**
NEEM				IAmb	IAmb	15 24 56.5	
	comp=Z,28nm,0.9s						
ZAA0	**Zalesovo Array**	**41.54**	**298**	P	**P**	**15 25 03.5**	**-2.0**
ZALV	**Zalesovo Beam**	**41.54**	**298**	P	**P**	**15 25 05.6**	**0.0**
	comp=Z,2.2nm,0.5s,baz=45,slow=7.2,SNR=12						
ZALV				PcP	**PcP**	**15 27 02.5**	**+0.1**
	comp=Z,2.1nm,0.6s,baz=89,slow=1.0,SNR=3.9						
	comp=Z,2.2nm,0.5s						
ZALV	**Zalesovo Beam**	**41.54**	**298**	P	**P**	**15 25 04.5**	**-1.1**
NJ2	**Nanjing**	**41.87**	**248**	*e*P	**P**	**15 25 08.0**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,320nm,9.5s						
NJ2				LR	LR		
	comp=Z,340nm,8.5s						
NJ2				LR	LR		
	comp=Z,490nm,9.8s						
KULLO	**Kullorsuaq**	**41.94**	**16**	*i* P	**P**	**15 25 08.3**	**-0.3**
KULLO				IAmb	IAmb	15 25 10.9	
	comp=Z,19nm,0.8s						
E03A	**Lebam**	**42.03**	**77**	P	**P**	**15 25 09.6**	**0.0**
E03A				IAmb	IAmb	15 25 15.7	
	comp=Z,33nm,1.1s						
JOW	**Kunigami**	**42.37**	**234**	LR	LR	15 43 50.0	
	comp=Z,104nm,20.0s,baz=322,slow=38						
DAG	**Danmarks Havn**	**42.65**	**2**	*i* P	**P**	**15 25 13.0**	**-1.3**
DAG				IAmb	IAmb	15 25 16.3	
	comp=Z,6.5nm,0.9s						
B08A	**Colville Reser**	**42.72**	**72**	P	**P**	**15 25 16.1**	**+0.8**
LYN	**LuoYang**	**42.79**	**257**	*e*P	**P**	**15 25 17.1**	**+1.1**
LYN				S	**S**	**15 31 37.5**	**-0.8**
LYN				sS	sS	15 31 57.0	+5.7
LYN				pmax	pmax		
	comp=Z,19nm,1.0s						
LYN				LR	LR		
	comp=Z,270nm,15.8s						
LYN				LR	LR		
	comp=Z,200nm,9.0s						
LYN				LR	LR		
	comp=Z,230nm,14.8s						
LTY	**Liberty**	**42.89**	**74**	P	**P**	**15 25 16.8**	**0.0**
DGZ	**Jazzator, Alta**	**43.35**	**292***c*	*i*P	**P**	**15 25 21.2**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,16nm,0.8s						
DGZ				MLR	MLR		
	comp=Z,155nm,15.0s						
C09A	**Chrisman Ranch**	**43.62**	**71**	P	**P**	**15 25 22.4**	**-0.2**
UPNV	**Upernavik**	**43.67**	**17**	*i* P	**P**	**15 25 21.9**	**-0.7**
UPNV				IAmb	IAmb	15 25 24.9	
	comp=Z,15nm,0.8s						
NEW	**Newport**	**43.81**	**70**	LR	LR	15 43 53.6	
	comp=Z,118nm,19.7s,baz=308,slow=36						
NEW	**Newport**	**43.81**	**70**	P	**P**	**15 25 24.7**	**+0.6**
	baz=317						
HOOD	**Mount Hood Mea**	**43.84**	**76**	P	**P**	**15 25 24.6**	**+0.1**
HOOD				IAmb	IAmb	15 27 05.7	
	comp=Z,19nm,0.6s						
F07A	**Phinny Hill Vi**	**44.23**	**75**	P	**P**	**15 25 28.3**	**+0.9**
WALA	**Waterton Lakes**	**44.70**	**67**	P	**P**	**15 25 31.7**	**+0.3**
WALA				IAmb	IAmb	15 25 35.4	
	comp=Z,17nm,1.0s						
DBG	**Daneborg**	**45.10**	**2**	*i* P	**P**	**15 25 32.9**	**-1.1**
DBG				IAmb	IAmb	15 25 35.6	
	comp=Z,8.5nm,1.2s						
GTA	**Gaotai**	**45.11**	**273**	⇑P	**P**	**15 25 34.8**	**+0.1**
GTA				pP	pP	15 25 41.6	-1.0
GTA				pmax	pmax		
	comp=Z,14nm,1.0s						
GTA				LR	LR		
	comp=Z,230nm,18.5s						
GTA				LR	LR		
	comp=Z,360nm,17.5s						
GTA				LR	LR		
	comp=Z,320nm,17.8s						
PINE	**Pine Mountain**	**45.32**	**77**	IAmb	IAmb	15 25 38.4	
	comp=Z,28nm,1.4s						
J05D	**Fort Rock, OR**	**45.56**	**78**	P	**P**	**15 25 37.8**	**-0.5**
FCC	**Fort Churchill**	**45.66**	**46**	IAmb	IAmb	15 25 41.2	
	comp=Z,19nm,0.9s						
FFC	**Flin Flon**	**45.67**	**54**	P	**P**	**15 25 38.4**	**-0.4**
FFC				IAmb	IAmb	15 25 42.5	
	comp=Z,11nm,1.1s						
FFC	**Flin Flon**	**45.67**	**54**	P	**P**	**15 25 38.4**	**-0.4**
FFC				pmax	pmax		
	comp=Z,11nm,1.1s						
LZH	**Lanzhou**	**45.74**	**266**	*e*P	**P**	**15 25 40.4**	**+0.6**
LZH				pP	pP	15 25 44.4	-3.3
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
VADS	**Vadso**	**45.78**	**341**	*e*P	**P**	**15 25 39.1**	**-0.3**
L04D	**Klamath Falls**	**45.85**	**80**	P	**P**	**15 25 39.7**	**-0.8**
SUMG	**Summit**	**45.87**	**10**	*i* P	**P**	**15 25 40.0**	**-0.6**
SUMG				IAmb	IAmb	15 25 44.9	
	comp=Z,19nm,1.0s						
YBH	**Yreka Blue Hor**	**46.02**	**81**	LR	LR	15 42 16.0	
	comp=Z,60nm,19.1s,baz=317,slow=33						
YBH	**Yreka Blue Hor**	**46.02**	**81**	P	**P**	**15 25 41.5**	**-0.4**
YBH				IAmb	IAmb	15 25 47.2	
	comp=Z,8.1nm,0.8s						
YBH	**Yreka Blue Hor**	**46.02**	**81**	P	**P**	**15 25 41.5**	**-0.4**
YBH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BMO	**Blue Mountains**	**46.24**	**74**	P	**P**	**15 25 43.7**	**+0.1**
BMO				IAmb	IAmb	15 25 45.8	
	comp=Z,8.6nm,0.9s						
BMO	**Blue Mountains**	**46.24**	**74**	P	**P**	**15 25 43.7**	**+0.1**
BMO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MSO	**Missoula**	**46.33**	**69**	IAmb	IAmb	15 25 48.5	
	comp=Z,11nm,1.1s						
MSO	**Missoula**	**46.33**	**69**	P	**P**	**15 25 45.0**	**+0.7**
	baz=318						
KURK	**Kurchatov**	**46.51**	**299**	P	**P**	**15 25 44.9**	**-0.6**
KURK	**Kurchatov**	**46.51**	**299***c*	*i*P	**P**	**15 25 45.4**	**0.0**
KURK				pmax	pmax		
	comp=Z,47nm,0.9s						
PLID	**Pearl Lake**	**46.68**	**72**	P	**P**	**15 25 46.6**	**-0.5**
PLID				IAmb	IAmb	15 25 51.3	
	comp=Z,5.6nm,0.7s						
KMRM	**Mail Ridge**	**46.70**	**83**	P	**P**	**15 25 48.5**	**+1.3**
KMRM				IAmb	IAmb	15 25 53.7	
	comp=Z,12nm,0.8s						
KIP	**Kipapa**	**46.75**	**131**⇑	*e*P	**P**	**15 25 49.0**	**+1.4**
KIP				pmax	pmax		
	comp=Z,28nm,1.0s						
J08A	**Circle Bar Ran**	**46.82**	**76**	IAmb	IAmb	15 27 23.1	
	comp=Z,8.2nm,0.8s						
ARA0	**ARCESS Array S**	**46.91**	**342**	*e*P	**P**	**15 25 48.0**	**-0.3**
ARCES	**ARCESS Array B**	**46.91**	**342**	P	**P**	**15 25 47.1**	**-1.2**
	comp=Z,4.0nm,0.6s,baz=30,slow=7.3,SNR=3.7						
ARCES				PcP	**PcP**	**15 27 20.1**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=40,slow=3.8,SNR=7.0						
	comp=Z,4.0nm,0.6s						
MOD	**Modoc Plateau**	**47.05**	**78**	IAmb	IAmb	15 25 51.8	
	comp=Z,8.0nm,0.9s						
EGMT	**Eagleton**	**47.33**	**65**	IAmb	IAmb	15 25 55.4	
	comp=Z,19nm,0.9s						
EGMT	**Eagleton**	**47.33**	**65**	P	**P**	**15 25 52.4**	**+0.4**
	baz=319,SNR=10						
HRY	**Holter Researc**	**47.38**	**68**	P	**P**	**15 25 53.3**	**+0.8**
WMQ	**Urumqi**	**47.58**	**286**	*e*P	**P**	**15 25 54.8**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,23nm,0.9s						
WMQ				LR	LR		
	comp=Z,81nm,15.1s						
JETT	**Jettan, Norway**	**47.61**	**344**	*e*P	**P**	**15 25 53.7**	**-0.1**
ILULI	**Ilulissat**	**47.62**	**17**	P	**P**	**15 25 52.8**	**-1.0**
ILULI	**Ilulissat**	**47.62**	**17**	P	**P**	**15 25 52.8**	**-1.0**
ILULI				pmax	pmax		
	comp=Z,24nm,0.6s						
ILULI	**Ilulissat**	**47.62**	**17**	*i* P	**P**	**15 25 52.7**	**-1.1**
ILULI				IAmb	IAmb	15 25 55.8	
	comp=Z,24nm,0.6s						
KTK1	**Kautokeino**	**47.72**	**343**	*e*P	**P**	**15 25 54.2**	**-0.4**
KTK1				IAmb	IAmb	15 25 56.7	
	comp=Z,23nm,0.8s						
TRO	**Tromso**	**47.73**	**345**	*e*P	**P**	**15 25 54.7**	**0.0**
LRM	**Limekiln Ridge**	**47.77**	**69**	P	**P**	**15 25 56.5**	**+0.8**
MK31	**Makanchi Array**	**47.82**	**293**	IAmb	IAmb	15 25 55.7	
	comp=Z,8.2nm,0.7s						
MK31	**Makanchi Array**	**47.82**	**293***c*	*i*P	**P**	**15 25 54.8**	**-1.0**
MKAR	**Makanchi Array**	**47.82**	**293**	P	**P**	**15 25 55.0**	**-0.8**
	comp=Z,11nm,0.6s,baz=48,slow=7.4,SNR=165						
	comp=Z,11nm,0.6s						
MKAR	**Makanchi Array**	**47.82**	**293**	P	**P**	**15 25 54.7**	**-1.0**
MKAR	**Makanchi Array**	**47.82**	**293**	P	**P**	**15 25 55.0**	**-0.8**
MAKZ	**Makanchi**	**47.95**	**293**	P	**P**	**15 25 55.5**	**-1.3**
MAKZ				IAmb	IAmb	15 25 58.0	
	comp=Z,8.0nm,0.7s						
MAKZ	**Makanchi**	**47.95**	**293**	P	**P**	**15 25 55.5**	**-1.3**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MFID	**Camas Ranch**	**48.03**	**74**	IAmb	IAmb	15 25 59.5	
	comp=Z,8.4nm,1.0s						
DLMT	**Dillon**	**48.05**	**70**	P	**P**	**15 25 57.7**	**0.0**
DLMT				IAmb	IAmb	15 26 03.4	
	comp=Z,9.9nm,0.8s						
BRVK	**Borovoye**	**48.20**	**306**	P	**P**	**15 25 57.5**	**-1.0**
BRVK	**Borovoye**	**48.20**	**306***c*	*i*P	**P**	**15 25 58.7**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,36nm,1.3s						
BOZ	**Bozeman (W)**	**48.32**	**69**	IAmb	IAmb	15 26 02.0	
	comp=Z,10.0nm,1.1s						
BOZ	**Bozeman (W)**	**48.32**	**69**	P	**P**	**15 26 00.3**	**+0.5**
	baz=320						
MCMT	**McKenzie Canyo**	**48.34**	**70**	P	**P**	**15 26 00.2**	**+0.2**
HLID	**Hailey**	**48.58**	**73**	P	**P**	**15 26 01.6**	**-0.3**
HLID	**Hailey**	**48.58**	**73**	P	**P**	**15 26 02.3**	**+0.5**
	baz=320						
SVE	**Sverdlovsk**	**48.88**	**315**	*e*P	**P**	**15 26 04.7**	**+0.9**
SVE				pmax	pmax		
	comp=Z,23nm,0.9s						
QLMT	**Earthquake Lak**	**48.99**	**69**	P	**P**	**15 26 05.1**	**+0.1**
GCMT	**Greycliff**	**49.06**	**67**	P	**P**	**15 26 05.3**	**-0.2**
ICESG	**Greenland Ices**	**49.12**	**12**	*i* P	**P**	**15 26 04.9**	**-1.0**
ICESG				IAmb	IAmb	15 26 09.0	
	comp=Z,32nm,1.2s						
PAHR	**Pah Rah Range**	**49.19**	**80**	P	**P**	**15 26 06.8**	**+0.3**
FRB	**Frobisher Bay**	**49.20**	**29**	LR	LR	15 49 15.7	
	comp=Z,172nm,18.4s,baz=359,slow=39						
YMR	**Madison River**	**49.33**	**69**	P	**P**	**15 26 08.8**	**+1.1**
YMR				IAmb	IAmb	15 26 11.7	
	comp=Z,11nm,0.7s						
YNR	**Norris Junctio**	**49.42**	**69**	P	**P**	**15 26 06.8**	**-1.6**
YNR				IAmb	IAmb	15 26 15.5	
	comp=Z,14nm,1.3s						
DGMT	**Dagmar**	**49.43**	**61**	P	**P**	**15 26 08.6**	**+0.5**
	baz=320						
ADZR	**Andozero**	**49.46**	**333**	*e*P	**P**	**15 26 06.9**	**-1.1**
ADZR				pmax	pmax		
	comp=Z,12nm,0.6s						
YMP	**Mirror Lake Pl**	**49.64**	**68**	P	**P**	**15 26 10.5**	**+0.3**
YMP				IAmb	IAmb	15 26 16.0	
	comp=Z,20nm,1.2s						
LKWY	**Lake**	**49.67**	**69**	P	**P**	**15 26 12.0**	**+1.8**
LKWY				IAmb	IAmb	15 26 17.3	
	comp=Z,20nm,0.9s						
LKWY	**Lake**	**49.67**	**69**	P	**P**	**15 26 12.0**	**+1.8**
LKWY				pmax	pmax		
	comp=Z,20nm,0.9s						
H17A	**Grant Village**	**49.72**	**69**	P	**P**	**15 26 12.0**	**+1.4**
H17A				IAmb	IAmb	15 26 17.1	
	comp=Z,12nm,0.9s						
H17A	**Grant Village**	**49.72**	**69**	P	**P**	**15 26 12.8**	**+2.2**
	baz=321,SNR=14						
SFJD	**Kangerlussuaq**	**49.74**	**18**	LR	LR	15 48 54.4	
	comp=Z,69nm,19.8s,baz=19,slow=38						
SFJD	**Kangerlussuaq**	**49.74**	**18**	P	**P**	**15 26 09.3**	**-0.8**
SFJD				IAmb	IAmb	15 26 14.0	
	comp=Z,19nm,1.1s						
SFJD	**Kangerlussuaq**	**49.74**	**18**	P	**P**	**15 26 09.3**	**-0.8**
SFJD				pmax	pmax		
	comp=Z,19nm,1.1s						
SFJD	**Kangerlussuaq**	**49.74**	**18**	*i* P	**P**	**15 26 08.9**	**-1.2**
SFJD				IAmb	IAmb	15 26 13.3	
	comp=Z,10.0nm,0.9s						
RLMT	**Red Lodge**	**49.76**	**68**	P	**P**	**15 26 11.2**	**+0.3**
RLMT				IAmb	IAmb	15 26 16.7	
	comp=Z,26nm,0.9s						
RLMT	**Red Lodge**	**49.76**	**68**	P	**P**	**15 26 12.4**	**+1.5**
	baz=320,SNR=14						
FLWY	**Flagg Ranch**	**49.90**	**69**	IAmb	IAmb	15 26 18.1	
	comp=Z,26nm,0.9s						
ARU	**Arti**	**49.91**	**316**	LR	LR	15 48 07.1	
	comp=Z,102nm,20.9s,baz=329,slow=37						
ARU	**Arti**	**49.91**	**316**	P	**P**	**15 26 10.6**	**-1.0**
ARU				IAmb	IAmb	15 26 14.9	
	comp=Z,13nm,0.8s						
ARU	**Arti**	**49.91**	**316***c*	*i*P	**P**	**15 26 11.6**	**0.0**
ARU						15 27 30.2	
ARU						15 28 06.9	
ARU				S	**S**	**15 33 20.2**	**+0.5**
ARU				SS	**SS**	**15 36 54.1**	**+2.3**
ARU				pmax	pmax		
	comp=Z,17nm,0.8s						
LAO	**LASA Array**	**49.91**	**64**	P	**P**	**15 26 12.2**	**+0.3**
LAO				IAmb	IAmb	15 26 16.9	
	comp=Z,13nm,1.1s						
LAO	**LASA Array**	**49.91**	**64**	P	**P**	**15 26 13.1**	**+1.2**
	baz=320						
IMW	**Indian Meadow**	**49.94**	**70**	IAmb	IAmb	15 26 19.4	
	comp=Z,7.3nm,0.8s						
CD2	**Chengdu**	**49.97**	**262**	*e*P	**P**	**15 26 10.5**	**-1.9**
GOMU	**GeErMu**	**50.07**	**274**	P	**P**	**15 26 13.3**	**-0.3**
GOMU				S	**S**	**15 33 23.1**	**-0.2**
GOMU				pmax	pmax		
	comp=Z,19nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,88nm,5.6s						
GOMU				LR	LR		
	comp=Z,250nm,10.8s						
GOMU				LR	LR		
	comp=Z,380nm,10.8s						
GOMU				LR	LR		
	comp=Z,130nm,11.1s						
FXWY	**Fox Creek**	**50.09**	**70**	P	**P**	**15 26 13.2**	**-0.3**
FXWY				IAmb	IAmb	15 26 17.7	
	comp=Z,8.4nm,0.9s						
TPAW	**Teton Pass**	**50.24**	**70**	P	**P**	**15 26 14.6**	**0.0**
TPAW				IAmb	IAmb	15 26 18.0	
	comp=Z,9.9nm,0.8s						
REDW	**Red Top Meadow**	**50.39**	**70**	P	**P**	**15 26 14.7**	**-1.0**
NVAR	**Mina Array Bea**	**50.71**	**80**	P	**P**	**15 26 19.2**	**+1.0**
	comp=Z,3.0nm,0.7s,baz=307,slow=7.2,SNR=17						
NVAR				PcP	**PcP**	**15 27 36.2**	**+1.1**
	comp=Z,2.0nm,0.8s,baz=310,slow=2.9,SNR=5.7						
	comp=Z,3.0nm,0.7s						
NVAR	**Mina Array Bea**	**50.71**	**80**	P	**P**	**15 26 18.7**	**+0.5**
NV11	**Mina Array Sit**	**50.78**	**80**	P	**P**	**15 26 19.6**	**+1.0**
DY2G	**Dye2**	**50.85**	**16**	*i* P	**P**	**15 26 18.3**	**-0.5**
DY2G				IAmb	IAmb	15 26 20.6	
	comp=Z,23nm,0.8s						
OMMB	**Old Mammoth Mi**	**51.02**	**81**	P	**P**	**15 26 21.5**	**+0.8**
KIRV	**Kirov**	**51.07**	**323**	LR	LR	15 51 25.9	
	comp=Z,128nm,20.4s,baz=339,slow=40						
KIRV	**Kirov**	**51.07**	**323**⇓	*e*P	**P**	**15 26 20.7**	**+0.4**
SPUT	**South Promonto**	**51.24**	**73**	IAmb	IAmb	15 26 25.9	
	comp=Z,17nm,1.5s						
PMPB	**Monarch Peak**	**51.26**	**84**	P	**P**	**15 26 22.7**	**+0.6**
HWUT	**Hardware Ranch**	**51.42**	**72**	IAmb	IAmb	15 26 27.6	
	comp=Z,18nm,1.4s						
BW06	**Boulder Array**	**51.45**	**70**	IAmb	IAmb	15 26 28.8	
	comp=Z,13nm,0.8s						
BW06	**Boulder Array**	**51.45**	**70**	P	**P**	**15 26 24.6**	**+0.9**
	baz=322						
PD31	**Pinedale Array**	**51.45**	**70**	P	**P**	**15 26 23.4**	**-0.3**
PD31				IAmb	IAmb	15 26 28.8	
	comp=Z,11nm,0.8s						
PDAR	**Pinedale Array**	**51.45**	**70**	P	**P**	**15 26 24.7**	**+1.0**
	comp=Z,10nm,0.8s,baz=322,slow=3.5,SNR=51						
PDAR				PcP	**PcP**	**15 27 37.1**	**-0.7**
	comp=Z,2.1nm,0.9s,baz=238,slow=0.9,SNR=1.7						
PDAR				LR	LR	15 47 34.9	
	comp=Z,141nm,21.7s,baz=1.0,slow=35						
	comp=Z,10nm,0.8s						
ULM	**Lac du Bonnet**	**51.50**	**54**	P	**P**	**15 26 23.6**	**0.0**
	comp=Z,7.3nm,0.8s,baz=332,slow=5.6,SNR=7.8						
ULM				PcP	**PcP**	**15 27 36.2**	**-1.3**
	comp=Z,7.4nm,1.0s,baz=337,slow=6.2,SNR=4.2						
ULM				LR	LR	15 50 20.7	
	comp=Z,211nm,18.7s,baz=312,slow=38						
	comp=Z,7.3nm,0.8s						
ULM	**Lac du Bonnet**	**51.50**	**54**	P	**P**	**15 26 23.3**	**-0.3**
ULM				IAmb	IAmb	15 26 27.5	
	comp=Z,32nm,1.5s						
DSP	**Deep Springs**	**51.71**	**80**	P	**P**	**15 26 27.0**	**+1.6**
KLMR	**Klimovskoe**	**51.83**	**330**	*e*P	**P**	**15 26 24.8**	**-1.2**
KLMR				AMP		15 26 26.7	
	comp=Z,15nm,0.8s						
KLMR	**Klimovskoe**	**51.83**	**330**	*e*P	**P**	**15 26 24.8**	**-1.2**
KLMR				pmax	pmax		
	comp=Z,15nm,0.8s						
TIN	**Tinemaha, Big**	**51.84**	**81**	P	**P**	**15 26 27.9**	**+1.4**
	baz=323						
TCUT	**Toone Canyon**	**51.88**	**72**	P	**P**	**15 26 26.1**	**-0.8**
TCUT				IAmb	IAmb	15 27 44.0	
	comp=Z,8.1nm,0.7s						
DUG	**Dugway, Tooele**	**51.95**	**74**	P	**P**	**15 26 27.6**	**+0.4**
DUG	**Dugway, Tooele**	**51.95**	**74**	P	**P**	**15 26 27.7**	**+0.4**
DUG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
DUG	**Dugway, Tooele**	**51.95**	**74**	P	**P**	**15 26 28.2**	**+0.8**
	baz=322						
CTU	**Camp Tracy**	**52.05**	**73**	IAmb	IAmb	15 26 33.1	
	comp=Z,11nm,1.1s						
R11A	**Troy Canyon, C**	**52.09**	**78**	P	**P**	**15 26 28.7**	**+0.3**
	baz=323						
SPR3	**Spring Creek 3**	**52.17**	**76**	P	**P**	**15 26 30.5**	**+1.2**
SPR3				IAmb	IAmb	15 26 32.5	
	comp=Z,11nm,1.2s						
GYA	**Guiyang**	**52.28**	**257**	⇑P	**P**	**15 26 29.8**	**-0.1**
GYA				pmax	pmax		
	comp=Z,14nm,1.1s						
VES	**Vestal, Richgr**	**52.39**	**82**	P	**P**	**15 26 31.5**	**+1.1**
	baz=324						
CWC	**Cottonwood Cre**	**52.40**	**81**	P	**P**	**15 26 31.9**	**+1.1**
	baz=323						
NLU	**North Lily Min**	**52.48**	**74**	P	**P**	**15 26 31.3**	**-0.1**
NLU				IAmb	IAmb	15 26 33.7	
	comp=Z,13nm,1.2s						
BSUT	**Blindstream Ca**	**52.64**	**72**	P	**P**	**15 26 33.0**	**+0.3**
BSUT				IAmb	IAmb	15 26 38.4	
	comp=Z,17nm,1.0s						
PKM	**Mcpherson Peak**	**52.80**	**84**	P	**P**	**15 26 35.3**	**+1.6**
	baz=324,SNR=5.9						
WCT	**Wildcat Mounta**	**52.82**	**80**	P	**P**	**15 26 34.0**	**+0.3**
RSSD	**Black Hills**	**52.88**	**65**	P	**P**	**15 26 33.1**	**-1.2**
RSSD				IAmb	IAmb	15 26 38.4	
	comp=Z,12nm,0.9s						
RSSD	**Black Hills**	**52.88**	**65**	P	**P**	**15 26 33.1**	**-1.2**
RSSD				pmax	pmax		
	comp=Z,12nm,0.9s						
RSSD	**Black Hills**	**52.88**	**65**	P	**P**	**15 26 34.9**	**+0.6**
	baz=322						
TPNV	**Topopah Spring**	**52.88**	**79**	P	**P**	**15 26 33.8**	**-0.5**
TPNV	**Topopah Spring**	**52.88**	**79**	P	**P**	**15 26 33.8**	**-0.5**
TPNV				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TPNV	**Topopah Spring**	**52.88**	**79**	P	**P**	**15 26 35.0**	**+0.8**
	baz=323						
K22A	**Casper**	**52.92**	**68**	IAmb	IAmb	15 26 38.0	
	comp=Z,15nm,0.9s						
K22A	**Casper**	**52.92**	**68**	P	**P**	**15 26 35.1**	**+0.5**
	baz=322						
FURC	**Furnace Creek,**	**52.97**	**80**	P	**P**	**15 26 36.1**	**+1.4**
	baz=323						
MPMC	**Manual Prospec**	**52.99**	**81**	P	**P**	**15 26 36.3**	**+1.1**
	baz=324,SNR=9.7						
AGMN	**Agassiz Nation**	**53.05**	**56**	P	**P**	**15 26 34.9**	**-0.3**
AGMN				IAmb	IAmb	15 26 38.5	
	comp=Z,9.6nm,0.8s						
AGMN	**Agassiz Nation**	**53.05**	**56**	P	**P**	**15 26 35.8**	**+0.6**
	baz=323						
GWY	**Greenwater Val**	**53.28**	**80**	IAmb	IAmb	15 26 39.9	
	comp=Z,22nm,1.7s						
LRMC	**Laurel Mtn Rad**	**53.36**	**82**	P	**P**	**15 26 38.9**	**+1.1**
	baz=324						
QSM	**Queen of Sheba**	**53.37**	**81**	IAmb	IAmb	15 26 43.0	
	comp=Z,10nm,1.1s						
RWWY	**Rawlins**	**53.37**	**69**	P	**P**	**15 26 37.2**	**-0.8**
RWWY				IAmb	IAmb	15 26 41.6	
	comp=Z,21nm,1.2s						
TMUT	**Trail Mountain**	**53.41**	**74**	P	**P**	**15 26 38.9**	**+0.5**
TMUT				IAmb	IAmb	15 26 42.3	
	comp=Z,13nm,1.4s						
EDW2	**Edwards Air Fo**	**53.69**	**82**	P	**P**	**15 26 41.3**	**+1.1**
	baz=324,SNR=5.5						
Q16A	**Castle Valley**	**53.73**	**74**	P	**P**	**15 26 39.8**	**-0.8**
CCUT	**Cedar City**	**53.78**	**77**	IAmb	IAmb	15 27 24.2	
	comp=Z,15nm,1.9s						
TKM2	**Tokmak 2**	**53.83**	**295**	P	**P**	**15 26 41.6**	**+0.3**
	SNR=15						
B35A	**Bob, Littlefor**	**53.85**	**54**	IAmb	IAmb	15 26 44.1	
	comp=Z,13nm,0.8s						
SRU	**San Rafael Swe**	**53.88**	**73**	P	**P**	**15 26 41.9**	**+0.2**
SRU				IAmb	IAmb	15 26 46.4	
	comp=Z,13nm,0.9s						
SRU	**San Rafael Swe**	**53.88**	**73**	P	**P**	**15 26 41.9**	**+0.2**
SRU				pmax	pmax		
	comp=Z,13nm,0.9s						
GSC	**Goldstone, Bar**	**53.93**	**81**	IAmb	IAmb	15 26 44.6	
	comp=Z,12nm,1.1s						
GSC	**Goldstone, Bar**	**53.93**	**81**	P	**P**	**15 26 43.4**	**+1.4**
	baz=324,SNR=8.5						
MTPU	**Mount Pierson**	**53.95**	**75**	P	**P**	**15 26 43.1**	**+0.7**
USP	**Ospenovka**	**54.04**	**296**	P	**P**	**15 26 43.2**	**+0.6**
	SNR=19						
ULHL	**Ulahol**	**54.08**	**294**	P	**P**	**15 26 43.5**	**+0.5**
	SNR=5.2						
O20A	**White River Ci**	**54.13**	**71**	P	**P**	**15 26 44.5**	**+1.0**
	baz=323						
CHMS	**Chumysh**	**54.14**	**295**	P	**P**	**15 26 44.0**	**+0.7**
	SNR=7.6						
FINES	**FINESS Array B**	**54.22**	**337**	P	**P**	**15 26 42.7**	**-0.9**
	comp=Z,5.7nm,0.7s,baz=23,slow=8.4,SNR=21						
FINES				PcP	**PcP**	**15 27 47.2**	**-0.4**
	comp=Z,3.6nm,0.9s,baz=9.5,slow=4.2,SNR=2.0						
	comp=Z,5.7nm,0.7s						
FINES	**FINESS Array B**	**54.22**	**337**	*i* P	**P**	**15 26 42.9**	**-0.7**
FINES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TUQ	**Turquoise Moun**	**54.25**	**80**	P	**P**	**15 26 45.5**	**+1.2**
	baz=324						
SNCC	**San Nicolas Is**	**54.26**	**85**	P	**P**	**15 26 45.9**	**+1.6**
	baz=325						
LCMT	**Little Creek M**	**54.27**	**77**	P	**P**	**15 26 45.1**	**+0.6**

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LCMT                             IAmb    IAmb      15 26 47.3
      comp=Z,14nm,1.7s
KBK   Karagaybulak    54.33 295  P       P         15 26 45.5 +0.6
      SNR=15
BFSC  Mount Baldy Ra  54.37  82  P       P         15 26 46.4 +1.2
      baz=324
KNB   Kanab           54.47  77  P       P         15 26 46.5 +0.5
KNB   Kanab           54.47  77  P       P         15 26 46.5 +0.5
KNB                              pmax    pmax
      comp=Z,8.0nm,1.1s
V12A  Nelson          54.53  79  P       P         15 26 47.0 +0.7
AAK   Ala-Archa       54.55 295  P       P         15 26 47.1 +0.7
      SNR=21
AAK   Ala-Archa       54.55 295  P       P         15 26 45.4 -1.0
AAK                              IAmb    IAmb      15 26 47.9
      comp=Z,17nm,0.7s
AAK   Ala-Archa       54.55 295ceP       P         15 26 46.8 +0.4
AAK                              pmax    pmax
      comp=Z,17nm,0.9s
N23A  Red Feather La  54.58  68  IAmb    IAmb      15 26 51.0
      comp=Z,15nm,1.0s
N23A  Red Feather La  54.58  68  P       P         15 26 47.6 +0.8
      baz=323
PZH   PanZhiHua       54.61 261  P       P         15 26 47.8 +0.8
PZH                              pmax    pmax
      comp=Z,10.0nm,0.7s
PZH                              pmax    pmax
      comp=Z,100nm,4.6s
F33A  5 Mile Ranch,   54.84  58  IAmb    IAmb      15 26 52.3
      comp=Z,23nm,0.9s
EKS2  Erkin-Say       54.84 296  P       P         15 26 49.2 +0.7
      SNR=22
UCH   Uchtor          54.86 295  P       P         15 26 50.0 +0.9
      SNR=10
GMRC  Granite Mounta  54.90  80  P       P         15 26 50.3 +1.2
      baz=324
EYMN  Ely             55.07  53  P       P         15 26 50.0 +0.1
      baz=325
PV23  Carpenter Ridg  55.12  73  IAmb    IAmb      15 26 55.2
      comp=Z,28nm,1.4s
U15A  North Rim       55.19  77  IAmb    IAmb      15 27 57.2
      comp=Z,8.8nm,1.1s
ABKAR Akbulak array   55.20 310  P       P         15 26 50.4 -0.4
ABKAR                            IAmb    IAmb      15 26 52.9
      comp=Z,10.0nm,0.8s
PV07  Paradox Valley  55.30  72  P       P         15 26 52.1 +0.1
PV07                             IAmb    IAmb      15 26 55.8
      comp=Z,15nm,1.1s
AML   Almayashu       55.30 295  P       P         15 26 53.1 +0.9
      SNR=16
BELC  Belle Mtn. Jos  55.37  81  P       P         15 26 53.6 +1.1
      baz=325
PV13  Radium Mtn., P  55.44  73  P       P         15 26 53.9 +0.9
PV13                             IAmb    IAmb      15 26 58.1
      comp=Z,12nm,0.8s
PV15  Paradox Valley  55.45  72  P       P         15 26 53.0 -0.1
PV15                             IAmb    IAmb      15 26 56.9
      comp=Z,14nm,0.8s
PFO   Pinyon Flats O  55.46  82  P       P         15 26 53.6 +0.5
PFO                              IAmb    IAmb      15 26 56.7
      comp=Z,27nm,1.5s
PFO   Pinyon Flats O  55.46  82⇑iP       P         15 26 54.0 +0.9
PFO                              pmax    pmax
      comp=Z,9.0nm,0.6s
PFO   Pinyon Flats O  55.46  82  P       P         15 26 54.4 +1.3
      baz=325
TPFO  Pinon Flats     55.47  82  P       P         15 26 54.2 +1.1
      baz=325
PMD   Palm Desert     55.47  82  IAmb    IAmb      15 26 55.1
      comp=Z,10nm,1.1s
ISCO  Idaho Springs   55.61  69  P       P         15 26 54.9 +0.5
      baz=324
IRM   Iron Mountain   55.66  80  P       P         15 26 55.8 +1.4
      baz=325
BC3   Big Chuckawall  55.91  81  P       P         15 26 57.2 +0.8
      baz=325
KK31  Karatay Array   55.92 298  P       P         15 26 55.9 -0.2
KK31                             IAmb    IAmb      15 26 59.4
      comp=Z,20nm,1.1s
KK31  Karatay Array   55.92 298  P       P         15 26 55.9 -0.2
KK31                             pmax    pmax
      comp=Z,20nm,1.1s
KKAR  Karatay Array   55.92 298  P       P         15 26 55.9 -0.2
KKAR                             IAmb    IAmb      15 26 59.4
      comp=Z,20nm,1.1s
KKAR  Karatay Array   55.92 298  P       P         15 26 55.9 -0.2
KKAR                             pmax    pmax
      comp=Z,20nm,1.1s
F36A  Milaca          55.95  56  IAmb    IAmb      15 27 59.7
      comp=Z,44nm,2.0s
PDMCI Parker Dam,Lak  56.02  80  P       P         15 26 58.2 +1.3
      baz=325
MONP2 Monument Peak   56.06  82  P       P         15 26 58.9 +1.3
      baz=325
BAR   Barrett         56.12  83  P       P         15 26 58.8 +1.1
BAR                              IAmb    IAmb      15 27 00.0
      comp=Z,10nm,1.1s
E38A  The Farm, Brul  56.14  54  P       P         15 26 57.1 -0.5
OGNE  Ogallala        56.30  65  P       P         15 27 00.3 +1.3
      baz=324
SWSC  Sam W. Stewart  56.32  82  P       P         15 27 00.5 +1.4
      baz=325
MVCO  Mesa Verde      56.36  73  P       P         15 27 01.2 +1.6
      baz=324
WUAZ  Wupatki         56.37  76  P       P         15 27 00.5 +0.9
WUAZ  Wupatki         56.37  76  P       P         15 27 00.9 +1.3
      baz=324
KSH   Kashi           56.38 292  P       P         15 27 03.9 +4.3
KSH                              pmax    pmax
      comp=Z,16nm,0.8s
ECSD  EROS Data Cent  56.40  60  P       P         15 26 59.6  0.0
ECSD                             IAmb    IAmb      15 27 03.4
      comp=Z,29nm,1.2s
ECSD  EROS Data Cent  56.40  60  P       P         15 27 00.5 +0.9
      baz=325
IKP   In-Ko-Pah, Jac  56.41  82  P       P         15 27 00.5 +0.7
      baz=325
CBX   Cerro Bola      56.42  83  P       P         15 27 00.2 +0.2
CBX                              IAmb    IAmb      15 27 02.6
      comp=Z,8.3nm,1.0s
Q24A  Divide          56.49  69  P       P         15 27 01.4 +0.8
      baz=324
YUH   Yuha Desert     56.51  82  P       P         15 27 01.4 +1.0
S22A  4UR Ranch, Cre  56.70  71  P       P         15 27 02.5 +0.4
S22A                             IAmb    IAmb      15 27 07.4
      comp=Z,13nm,1.2s
S22A  4UR Ranch, Cre  56.70  71  P       P         15 27 04.3 +2.2
      baz=324,SNR=10
GLA   Glamis          56.71  81  P       P         15 27 01.5 -0.4
GLA                              IAmb    IAmb      15 27 04.8
      comp=Z,10nm,0.8s
GLA   Glamis          56.71  81  P       P         15 27 01.5 -0.4
GLA                              pmax    pmax
      comp=Z,10.0nm,0.9s
GLA   Glamis          56.71  81  P       P         15 27 02.8 +0.9
      baz=325
SPMN  Marine on St.   56.77  56  P       P         15 27 02.5 +0.4
      baz=325
BELG  Belogornoye     56.84 320d iP      P         15 27 02.8 +0.3
BELG                             pmax    pmax
      comp=Z,4.0nm,0.9s
VSU   Vasula          56.85 336 i P      P         15 27 06.2 +3.7
Y14A  Wickenburg      56.87  79  P       P         15 27 03.5 +0.5
NB2   NORSAR Subarra  56.92 346  P       P         15 27 02.7 -0.3
      comp=Z,3.6nm,0.5s,baz=18,slow=7.4
NB2   NORSAR Subarra  56.92 346  P       P         15 27 02.7 -0.3
      slow=7.4
NOA   NORSAR Array B  56.92 346  P       P         15 27 02.6 -0.4
      comp=Z,5.5nm,0.6s,baz=13,slow=6.7,SNR=15
      comp=Z,5.5nm,0.6s
ESJX  Sierra Juarez   57.02  83  P       P         15 27 05.1 +0.8
ESJX                             IAmb    IAmb      15 27 07.0
      comp=Z,10.0nm,1.0s
LSA   Lhasa           57.13 273  P       P         15 27 03.6 -1.9
LSA                              IAmb    IAmb      15 27 06.8
      comp=Z,7.9nm,0.8s
LSA   Lhasa           57.13 273  P       P         15 27 03.6 -1.9
LSA                              pmax    pmax
      comp=Z,8.0nm,0.8s
NC602 NORSAR Array S  57.17 345 eP       P         15 27 04.4 -0.3
X16A  Lo Mia Camp, P  57.23  77  P       P         15 27 05.6 -0.1
SDCO  Great Sand Dun  57.32  70  P       P         15 27 06.8 +0.3
SDCO                             IAmb    IAmb      15 27 12.6
      comp=Z,14nm,1.4s
SDCO  Great Sand Dun  57.32  70  P       P         15 27 07.8 +1.3
      baz=325,SNR=9.2
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TNCH  TengChong       57.41 263 eP       P         15 27 07.6 +0.5
TNCH                             pP      pP        15 27 12.8 -2.4
TNCH                             pmax    pmax
      comp=Z,22nm,1.0s
SCHQ  Schefferville   57.41  33  P       P         15 27 06.0 -0.6
      comp=Z,4.5nm,0.5s,baz=318,slow=7.2,SNR=10.0
SCHQ                             LR      LR        15 53 22.8
      comp=Z,51nm,19.2s,baz=79,slow=38
      comp=Z,4.5nm,0.5s
113A  Mohawk Valley,  57.45  80  P       P         15 27 08.1 +1.0
113A                             IAmb    IAmb      15 27 11.2
      comp=Z,13nm,1.4s
W18A  Petrified Fore  57.47  75  P       P         15 27 07.9 +0.4
      baz=325
VTX   Valle De La Tr  57.60  83  P       P         15 27 09.5 +1.2
KSCO  Kaye Shedlock'  57.60  67  P       P         15 27 08.5 +0.2
KSCO  Kaye Shedlock'  57.60  67  P       P         15 27 09.1 +0.8
      baz=325
SKAR  Skarslia        57.61 347 eP       P         15 27 08.2 +0.3
BGNE  Belgrade        57.64  62  P       P         15 27 09.6 +1.2
      baz=325
OBN   Obninsk         57.64 328 i P      P         15 27 07.9 -0.2
OBN                             i                  15 28 01.8
OBN                              pmax    pmax
      comp=Z,9.0nm,1.1s
OBN                              MLR     MLR
      comp=Z,161nm,12.0s
G40A  Rib Lake        57.78  54  IAmb    IAmb      15 27 13.6
      comp=Z,12nm,0.8s
X18A  Snowflake       57.85  76  P       P         15 27 10.7 +0.5
X18A                             IAmb    IAmb      15 27 15.5
      comp=Z,8.7nm,0.9s
T25A  Trinidad        58.31  70  P       P         15 27 14.8 +1.4
      baz=325
SFX   San Felipe      58.34  82  P       P         15 27 14.1 +0.7
SFX                              IAmb    IAmb      15 27 15.9
      comp=Z,10nm,1.2s
KONO  Kongsberg       58.47 346⇑eP       P         15 27 15.7 +1.9
KONO                             pmax    pmax
      comp=Z,21nm,1.0s
214A  Organ Pipe Nat  58.58  80  P       P         15 27 15.3 +0.2
214A                             IAmb    IAmb      15 27 18.0
      comp=Z,6.8nm,0.9s
214A  Organ Pipe Nat  58.58  80  P       P         15 27 17.2 +2.1
      baz=326,SNR=6.5
CBKS  Cedar Bluff     59.06  65  P       P         15 27 19.2 +0.8
      baz=326
ANMO  Albuquerque     59.16  73  LR      LR        15 54 02.1
      comp=Z,111nm,18.1s,baz=89,slow=37
ANMO  Albuquerque     59.16  73  P       P         15 27 19.9 +0.6
ANMO  Albuquerque     59.16  73⇑eP       P         15 27 20.5 +1.3
ANMO                             pmax    pmax
      comp=Z,3.0nm,1.0s
ANMO  Albuquerque     59.16  73  P       P         15 27 20.3 +1.1
      baz=326
N35A  Tabor           59.17  61  P       P         15 27 18.7 -0.3
TUC   Tucson          59.26  78  P       P         15 27 20.6 +0.7
      baz=326
SCIA  State Center    59.33  58  P       P         15 27 20.2 +0.1
SCIA  State Center    59.33  58  P       P         15 27 19.9 -0.2
      baz=326
CHGR  Chuyangaron     60.14 296  P       P         15 27 24.2 -1.6
CHGR  Chuyangaron     60.14 296  P       P         15 27 24.2 -1.6
CHGR                             pmax    pmax
      comp=Z,59nm,0.7s
NACGM Naroch          60.15 334 eP       P         15 27 25.7 +0.2
      comp=Z,207nm,16.5s,baz=22
KSU1  Kansas State U  60.20  63  P       P         15 27 26.4 +0.3
      baz=326
319A  Douglas         60.76  78  P       P         15 27 29.3 -0.8
319A                             IAmb    IAmb      15 27 34.7
      comp=Z,11nm,1.0s
TAPN  Taplejung       60.76 274 eP       P         15 27 29.3 -1.2
      comp=Z,13nm,0.8s
P38A  Dawn            61.09  60  IAmb    IAmb      15 27 34.8
      comp=Z,14nm,0.7s
GUN   Gumba           61.19 276 eP       P         15 27 32.4 -1.0
NOKA  Waynoka         61.22  66  P       P         15 27 32.8 -0.4
JIRN  Jiri            61.25 276 eP       P         15 27 32.4 -1.5
AMTX  Amarillo        61.42  69  P       P         15 27 34.8 +0.1
AMTX  Amarillo        61.42  69  P       P         15 27 35.3 +0.7
      baz=326
DAV   Davao City (W)  61.43 227  LR      LR        15 57 13.5
      comp=Z,56nm,18.2s,baz=341,slow=39
GC02  Grant County #  61.52  65  P       P         15 27 33.7 -1.5
RAMN  Ramite          61.64 275 eP       P         15 27 35.2 -1.2
      comp=Z,32nm,0.8s
MSTX  Muleshoe        61.68  71  IAmb    IAmb      15 27 41.0
      comp=Z,13nm,0.9s
MSTX  Muleshoe        61.68  71  P       P         15 27 36.8 +0.4
      baz=326
PKI   Pulchoki        61.70 276 eP       P         15 27 35.8 -1.1
PKIN  Phulchoki       61.70 276 eP       P         15 27 36.3 -0.5
GKN   Gorkha          61.72 277 eP       P         15 27 36.0 -0.8
CROK  Carrier         61.75  65  P       P         15 27 35.9 -0.8
DANN  Dangsing        61.86 278 eP       P         15 27 37.2 -0.7
      comp=Z,28nm,0.9s
HDIL  Hopedale        62.08  56  P       P         15 27 38.7 -0.1
      baz=328
PHRA  Phrae           62.13 258  P       P         15 27 39.3 -0.1
MNTX  Cornudas Mount  62.34  74  P       P         15 27 41.6 +0.9
      baz=327,SNR=6.4
PYUN  Piuthan         62.44 279 eP       P         15 27 40.9 -0.8
      comp=Z,36nm,1.1s
NIL   Nilore          62.44 290  P       P         15 27 41.0 -0.4
NIL   Nilore          62.44 290  P       P         15 27 41.0 -0.4
NIL                              pmax    pmax
      comp=Z,25nm,1.0s
CHTO  Chiang Mai      62.48 259  P       P         15 27 40.9 -0.9
CHTO  Chiang Mai      62.48 259  P       P         15 27 40.9 -0.9
OK029 Liberty Lake    62.58  65  P       P         15 27 42.1 -0.1
SRIG  Santa Rosalia   62.69  83  P       P         15 27 43.1 +0.1
SRIG                             IAmb    IAmb      15 27 48.1
      comp=Z,16nm,0.8s
R40A  Maddies Statio  62.75  60  P       P         15 27 43.0 -0.3
R40A                             IAmb    IAmb      15 27 47.4
      comp=Z,16nm,0.8s
CM31  Chiang Mai Arr  62.78 259  P       P         15 27 43.4 -0.5
CM31                             IAmb    IAmb      15 27 45.8
      comp=Z,6.7nm,0.7s
CMAR  Chiang Mai Arr  62.78 259  P       P         15 27 44.0 +0.1
      comp=Z,2.9nm,0.7s,baz=6.5,slow=6.3,SNR=28
      comp=Z,2.9nm,0.7s
CMAR  Chiang Mai Arr  62.78 259  P       P         15 27 42.9 -0.9
CMAR  Chiang Mai Arr  62.78 259  P       P         15 27 42.9 -0.9
S39A  Bolivar         62.80  61  P       P         15 27 43.0 -0.7
S39A                             IAmb    IAmb      15 27 47.1
      comp=Z,12nm,0.8s
WMOK  Wichita Mounta  62.86  67  P       P         15 27 44.1 -0.1
WMOK                             IAmb    IAmb      15 27 49.0
      comp=Z,17nm,0.8s
WMOK  Wichita Mounta  62.86  67  P       P         15 27 44.1 -0.1
WMOK                             pmax    pmax
      comp=Z,17nm,0.9s
WMOK  Wichita Mounta  62.86  67  P       P         15 27 45.0 +0.8
      baz=327
POST  Post            63.02  70  P       P         15 27 45.7 +0.4
POST                             IAmb    IAmb      15 29 48.4
      comp=Z,137nm,0.2s
SFIN  Lafayette       63.12  55  P       P         15 27 45.2 -0.5
      baz=329
TUL1  Leonard         63.22  64  P       P         15 27 46.5  0.0
      baz=327
RLO   Rose Lookout    63.34  63  IAmb    IAmb      15 27 49.7
      comp=Z,8.6nm,0.7s
CCM   Cathedral Cave  63.38  59  P       P         15 27 47.7 +0.2
CCM   Cathedral Cave  63.38  59  P       P         15 27 47.7 +0.2
CCM                              pmax    pmax
      comp=Z,80nm,2.0s
CCM   Cathedral Cave  63.38  59  P       P         15 27 46.8 -0.7
      baz=328
AKASG Malin Array Be  63.50 331  P       P         15 27 47.4 -0.7
      comp=Z,2.7nm,0.5s,baz=28,slow=6.2,SNR=18
AKASG                            LR      LR        15 59 12.6
      comp=Z,192nm,18.2s,baz=342,slow=40
      comp=Z,2.7nm,0.5s
AKBB  Malin Array Si  63.50 331  P       P         15 27 46.7 -1.4
AKBB                             IAmb    IAmb      15 27 50.2
      comp=Z,21nm,1.2s
AKBB  Malin Array Si  63.50 331⇑eP       P         15 27 47.3 -0.8
KBL   Kabul           63.62 294  P       P         15 27 48.0 -1.4
KBL                              IAmb    IAmb      15 27 49.0
      comp=Z,14nm,0.7s
KBL   Kabul           63.62 294  P       P         15 27 48.0 -1.4
KBL                              pmax    pmax
      comp=Z,14nm,0.7s
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FVM   French Village  63.78  59  P       P         15 27 50.2  0.0
FVM   French Village  63.78  59  P       P         15 27 50.2  0.0
FVM                              pmax    pmax
      comp=Z,35nm,1.3s
EKA   Eskdalemuir Ar  63.88 353  P       P         15 27 49.8 -0.7
      comp=Z,8.6nm,0.9s,baz=10,slow=5.8,SNR=8.9
      comp=Z,8.6nm,0.9s
E62A  Clayton Lake    63.96  39  P       P         15 27 50.5 -0.7
O48B  Farmland        64.00  54  P       P         15 27 51.0 -0.6
      baz=329,SNR=7.9
LOOK  Love County     64.21  66  P       P         15 27 53.4 +0.3
ABTX  Abilene, Hawle  64.24  69  P       P         15 27 53.2 -0.1
ABTX                             IAmb    IAmb      15 27 56.4
      comp=Z,14nm,0.7s
ABTX  Abilene, Hawle  64.24  69  P       P         15 27 54.0 +0.6
      baz=327
M53A  WI Miller and   64.70  50  P       P         15 27 55.5 -0.7
      baz=330
P49A  Miami Univ. Ec  64.79  54  P       P         15 27 56.0 -0.8
P49A  Miami Univ. Ec  64.79  54  P       P         15 27 56.2 -0.6
      baz=330
FCAR  Ozark Folk Cen  64.83  61  IAmb    IAmb      15 28 00.2
      comp=Z,14nm,0.9s
ACSO  Alum Creek Sta  64.87  52  P       P         15 27 57.0 -0.2
      baz=330
LCAR  Lake Charles    65.10  60  P       P         15 27 59.1 +0.3
LCAR                             IAmb    IAmb      15 28 01.6
      comp=Z,6.5nm,0.7s
TX31  Lajitas Ar. Si  65.12  74  P       P         15 27 59.3 +0.1
TX31                             IAmb    IAmb      15 28 00.9
      comp=Z,22nm,1.2s
TX32  Lajitas Array   65.12  74  IAmb    IAmb      15 28 00.9
      comp=Z,7.6nm,1.2s
TXAR  Lajitas Array   65.12  74  P       P         15 28 00.1 +0.9
      comp=Z,2.4nm,0.8s,baz=304,slow=3.1,SNR=17
      comp=Z,2.4nm,0.8s
TXAR  Lajitas Array   65.12  74  P       P         15 27 59.9 +0.7
TXAR  Lajitas Array   65.12  74  P       P         15 27 59.9 +0.7
WHAR  Wooly Hollow    65.27  62  P       P         15 28 00.1 +0.1
WHAR                             IAmb    IAmb      15 28 01.5
      comp=Z,13nm,0.7s
MIAR  Mount Ida       65.34  63  IAmb    IAmb      15 28 04.1
      comp=Z,15nm,1.1s
MIAR  Mount Ida       65.34  63  P       P         15 28 00.5 +0.1
      baz=328
GEYT  Alibeck         65.43 304  P       P         15 28 01.6 +0.6
      comp=Z,19nm,1.0s,baz=358,slow=4.5,SNR=27
      comp=Z,19nm,1.0s
GEYT  Alibeck         65.43 304  P       P         15 28 00.6 -0.4
GEYT                             IAmb    IAmb      15 28 04.3
      comp=Z,17nm,0.9s
GEYT  Alibeck         65.43 304  P       P         15 28 00.6 -0.4
GEYT                             pmax    pmax
      comp=Z,17nm,1.0s
GYA0B ALIBECK ARRAY   65.43 304  P       P         15 28 00.5 -0.5
GYA0B                            IAmb    IAmb      15 28 08.4
      comp=Z,17nm,0.9s
P51A  Williamsport    65.48  52  IAmb    IAmb      15 28 01.1
      comp=Z,15nm,0.7s
O53A  New Philadelph  65.53  51  P       P         15 28 00.4 -1.1
      baz=330
RABL  Rabaul          65.67 195  P       P         15 28 03.4 +0.7
GNAR  Gosnell         65.67  60  P       P         15 28 02.2 -0.3
R49A  Shelbyville     65.68  55  IAmb    IAmb      15 28 02.8
      comp=Z,14nm,0.9s
P52A  Corning         65.71  52  P       P         15 28 01.8 -1.0
      baz=330
BINY  Binghamton      65.74  46  P       P         15 28 02.2 -0.7
      baz=332
WHTX  Lake Whitney,   65.77  68  P       P         15 28 03.6 +0.4
      baz=328
Z38A  Mt. Pleasant    65.81  65  P       P         15 28 03.2 -0.2
KIV   Kislovodsk      65.83 318 eP       P         15 28 05.7 +2.1
KIV                              pmax    pmax
      comp=Z,13nm,1.1s
KBZ   Khabaz          65.96 318  P       P         15 28 05.1 +0.8
      comp=Z,15nm,1.1s,baz=83,slow=3.7,SNR=16
      comp=Z,15nm,1.1s
KBZ   Khabaz          65.96 318ceP       P         15 28 04.9 +0.7
KBZ                              pmax    pmax
      comp=Z,13nm,0.9s
JCT   Junction City   65.97  70  P       P         15 28 04.5 -0.1
JCT                              IAmb    IAmb      15 28 05.5
      comp=Z,12nm,1.1s
JCT   Junction City   65.97  70  P       P         15 28 04.5 -0.1
JCT                              pmax    pmax
      comp=Z,13nm,1.1s
JCT   Junction City   65.97  70  P       P         15 28 05.1 +0.5
      baz=328
OJC   Ojcow           65.99 337  P       P         15 28 02.9 -1.5
OJC                              IAmb    IAmb      15 28 07.7
      comp=Z,14nm,0.8s
OJC   Ojcow           65.99 337  P       P         15 28 02.9 -1.5
OJC                              pmax    pmax
      comp=Z,14nm,0.8s
T47A  Sharon Grove    66.01  57  P       P         15 28 03.8 -0.9
SORM  Soroca          66.10 330 ⇑P       P         15 28 04.8 -0.3
SORM  Soroca          66.10 330 ⇑P       P         15 28 04.8 -0.3
CLL   Collm           66.12 342 eP       P         15 28 04.0 -1.2
      comp=Z,6.0nm,0.9s
CLL   Collm           66.12 342 eP       P         15 28 04.0 -1.2
CLL                              pmax    pmax
      comp=Z,6.0nm,0.9s
WLAR  White Oak Lake  66.27  63  P       P         15 28 06.3 -0.1
AKT   Akhty           66.31 314 eP       P         15 28 07.2 +0.5
AKT                             e                  15 28 36.6
AKT                              pmax    pmax
      comp=Z,33nm,1.2s
SSPA  Standing Stone  66.43  48  P       P         15 28 06.1 -1.3
SSPA  Standing Stone  66.43  48  P       P         15 28 06.5 -0.8
      baz=332
WVT   Waverly         66.45  58  P       P         15 28 06.8 -0.7
WVT   Waverly         66.45  58  P       P         15 28 06.8 -0.7
WVT                              pmax    pmax
      comp=Z,38nm,1.3s
WVT   Waverly         66.45  58  P       P         15 28 07.3 -0.2
      baz=329
ZEI   Tsey            66.47 317 eP       P         15 28 07.3 -0.5
ZEI                              pmax    pmax
      comp=Z,10.0nm,1.1s
STHS  Stebnicka Huta  66.47 336 eP       P         15 28 07.2 -0.3
STHS                             pmax    pmax
      comp=Z,7.0nm,0.9s
STHS  Stebnicka Huta  66.47 336 eP       P         15 28 07.2 -0.3
MCWV  Mont Chateau    66.56  50  P       P         15 28 07.8 -0.4
      baz=331
W45A  Hickory Valley  66.71  59  P       P         15 28 08.6 -0.6
MORC  Moravsky Berou  66.84 338 ⇑P       P         15 28 10.5 +0.6
MORC  Moravsky Berou  66.84 338  P       P         15 28 08.5 -1.4
MORC                             IAmb    IAmb      15 28 12.6
      comp=Z,8.1nm,1.1s
MORC  Moravsky Berou  66.84 338 ⇑P       P         15 28 10.5 +0.6
SLBS  Sierra La Lagu  66.86  83  P       P         15 28 11.2 +0.8
SLBS                             IAmb    IAmb      15 28 15.6
      comp=Z,19nm,1.2s
LANS  Liptovska Anna  67.08 337 eP       P         15 28 12.7 +1.3
LANS                             pmax    pmax
      comp=Z,9.0nm,0.8s
LANS  Liptovska Anna  67.08 337 eP       P         15 28 12.7 +1.3
SOC   Sochi           67.11 320 eP       P         15 28 12.8 +1.2
SOC                             e                  15 30 38.2
SOC                             ePPP     PPP       15 32 26.2
SOC                             eS       S         15 37 07.0 +3.2
SOC                             eSS      SS        15 41 28.0 +6.1
SOC                              MLR     MLR
      comp=Z,169nm,15.0s
OXF   Oxford          67.17  60  P       P         15 28 12.3 +0.3
OXF   Oxford          67.17  60  P       P         15 28 12.4 +0.3
OXF                              pmax    pmax
      comp=Z,53nm,1.1s
OXF   Oxford          67.17  60  P       P         15 28 12.6 +0.5
      baz=329
V48A  Smith Brothers  67.20  57  IAmb    IAmb      15 28 14.4
      comp=Z,14nm,0.8s
BUR08 Bucovina Ar. S  67.30 332  P       P         15 28 11.9 -1.0
BUR08                            IAmb    IAmb      15 28 15.8
      comp=Z,6.5nm,0.8s
BURAR Bucovina Array  67.32 332 ⇓P       P         15 28 13.2 +0.2
BURAR Bucovina Array  67.32 332  P       P         15 28 12.6 -0.4
BURAR                            IAmb    IAmb      15 28 15.7
      comp=Z,8.5nm,0.7s
BURAR Bucovina Array  67.32 332 ⇓P       P         15 28 13.2 +0.2
PLAL  Pickwick Lake   67.33  59  IAmb    IAmb      15 28 16.3
      comp=Z,13nm,0.9s
TRPA  Tarpa           67.43 334 ⇑P       P         15 28 14.0 +0.5
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VRAC	Vranov	67.46	339	⇑P	P	15 28 13.8	0.0
VRAC	Vranov	67.46	339	⇑P	P	15 28 13.8	0.0
KECS	Kecovo	67.52	336	*e*P	P	15 28 16.7	+2.6
KECS	Kecovo	67.52	336	*e*P	P	15 28 16.7	+2.6
PAL	Palisades	67.52	45	P	P	15 28 13.4	-0.8
	baz=333						
MEM	Membach	67.75	346	*d*P	P	15 28 15.6	0.0
BTNL	Ternell	67.76	346	*d*P	P	15 28 15.7	0.0
VYHS	Vyhne	67.83	337	*e*P	P	15 28 15.9	-0.2
VYHS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
VYHS	Vyhne	67.83	337	*e*P	P	15 28 15.9	-0.2
TZTN	Tazewell	67.83	54	P	P	15 28 16.0	-0.3
	baz=331						
143A	Socs Landing,	67.86	63	P	P	15 28 16.6	+0.1
TESR	Tescani	68.03	331	⇑P	P	15 28 17.4	0.0
KHC	Kasperske Hory	68.15	341	⇓*e*P	P	15 28 19.9	+1.8
KHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BMRD	Maredsous	68.20	347	*d*P	P	15 28 17.9	-0.4
HKT	Hockley	68.23	68	⇑*e*P	P	15 28 20.8	+2.0
HKT				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MODS	Modra-Piesok	68.24	338	*e*P	P	15 28 19.5	+0.8
MODS	Modra-Piesok	68.24	338	*e*P	P	15 28 19.5	+0.8
W50A	Signal Mountai	68.28	57	P	P	15 28 18.5	-0.7
GEC2	GERESS Array S	68.40	341	P	P	15 28 19.1	-0.7
GERES	GERESS Array B	68.40	341	P	P	15 28 19.4	-0.4
	comp=Z,2.1nm,0.7s,baz=5.5,slow=4.2,SNR=12						
	comp=Z,2.1nm,0.7s						
BLA	Blacksburg	68.48	52	P	P	15 28 20.2	-0.2
	baz=331						
TKL	Tuckaleechee C	68.51	55	LR	LR	16 00 19.2	
	comp=Z,119nm,18.1s,baz=14,slow=38						
GNI	Garni	68.53	315	⇓*e*P	P	15 28 22.7	+1.8
GNI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
VRI	Vrincioaia	68.61	331	⇑P	P	15 28 22.4	+1.3
VRI	Vrincioaia	68.61	331	⇑P	P	15 28 22.4	+1.3
DRGR		68.66	334	⇑P	P	15 28 21.6	+0.2
DRGR		68.66	334	⇑P	P	15 28 21.6	+0.2
COVR	Voineasa-Covas	68.76	331	⇓P	P	15 28 23.5	+1.5
DOPR	Dopca	68.83	332	⇓P	P	15 28 22.9	+0.5
MRSI	Marisa	68.85	228	P	P	15 28 22.0	-0.8
	comp=Z,18nm,1.0s						
CFR	Carcaliu	68.91	329	⇓P	P	15 28 24.6	+1.7
CFR	Carcaliu	68.91	329	⇓P	P	15 28 24.6	+1.7
TPGR	Topolog	69.14	329	⇑P	P	15 28 24.6	+0.2
MLR	Muntele Rosu	69.15	331	⇑P	P	15 28 26.5	+1.9
MLR	Muntele Rosu	69.15	331	P	P	15 28 22.4	-2.2
MLR				IAmb	IAmb	15 28 26.7	
	comp=Z,5.9nm,0.7s						
MLR	Muntele Rosu	69.15	331	⇑P	P	15 28 26.5	+1.9
SIRR	Siria	69.38	334	⇓P	P	15 28 26.5	+0.7
VOIR		69.41	332	⇑P	P	15 28 27.7	+1.6
VOIR		69.41	332	⇑P	P	15 28 27.7	+1.6
LRAL	Lakeview Retre	69.46	59	IAmb	IAmb	15 28 27.5	
	comp=Z,12nm,0.8s						
LRAL	Lakeview Retre	69.46	59	P	P	15 28 25.5	-0.9
	baz=330						
ARR	Arges	69.58	332	⇓P	P	15 28 28.8	+1.7
SURR	Surduc	69.77	334	⇑P	P	15 28 29.5	+1.3
346A	Big Creek Wild	69.82	62	P	P	15 28 27.9	-0.8
KMSC	Kings Mountain	69.93	53	P	P	15 28 28.4	-0.9
	baz=332						
GZR	Gura Zlata	69.97	333	⇑P	P	15 28 29.8	+0.3
GZR	Gura Zlata	69.97	333	⇑P	P	15 28 29.8	+0.3
BZS	Buzias	70.01	334	⇑P	P	15 28 30.4	+0.7
BZS	Buzias	70.01	334	⇑P	P	15 28 30.4	+0.7
HNR	Honiara	70.16	186	LR	LR	15 56 24.3	
	comp=Z,1μm,18.5s,baz=178,slow=33						
PRED	Cave del Predi	70.76	340	P	P	15 28 34.0	-0.3
FRGS	Fruska Gora	70.83	335	⇑P	P	15 28 36.4	+1.7
SBUM	Sibu	70.85	238	P	P	15 28 35.5	+0.4
SBUM				IAmb	IAmb	15 28 36.5	
	comp=Z,5.9nm,0.9s						
GURO	Guroymak-BITLI	70.89	316	P	P	15 28 35.3	-0.1
ZAIG	Zacatecas	71.20	77	P	P	15 28 38.2	+0.6
ZAIG				IAmb	IAmb	15 28 42.7	
	comp=Z,7.9nm,1.1s						
DIVS	Divibare	71.81	335	P	P	15 28 40.1	-0.6
BR131	Keskin Array S	72.48	323	P	P	15 28 43.7	-1.2
BR131				IAmb	IAmb	15 28 48.8	
	comp=Z,6.7nm,0.8s						
BR131	Keskin Array S	72.48	323	*de*P	P	15 28 45.4	+0.5
BRTR	Keskin Array B	72.48	323	P	P	15 28 45.5	+0.6
	comp=Z,3.4nm,0.7s,baz=62,slow=3.4,SNR=14						
	comp=Z,3.4nm,0.7s						
BRTR	Keskin Array B	72.48	323	*i* P	P	15 28 48.0	+3.1
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VTS	Vitosha	72.50	332	⇓P	P	15 28 45.4	+0.4
VTS	Vitosha	72.50	332	⇓P	P	15 28 45.4	+0.4
RDO	Rodhopi	73.35	330	P	P	15 28 49.3	-0.5
RDO				IAmb	IAmb	15 28 53.3	
	comp=Z,13nm,1.2s						
FNA	Florina	74.67	333	P	P	15 28 56.4	-1.2
FNA	Florina	74.67	333	P	P	15 28 56.4	-1.2
FNA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PSI	Prapat	76.42	251	P	P	15 29 07.4	-0.6
PSI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
RPSI	Rantau Prapat	76.51	251	P	P	15 29 07.4	-1.0
MSVF	Nonsavu	78.88	168	⇑*e*P	P	15 29 22.7	+1.2
MSVF				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ESDC	Sonseca Array	79.53	352	P	P	15 29 24.8	-0.2
	comp=Z,3.9nm,0.8s,baz=1.9,slow=5.6,SNR=14						
	comp=Z,3.9nm,0.8s						
CTA	Charters Tower	82.14	198	P	P	15 29 39.1	+0.3
	comp=Z,3.7nm,0.8s,baz=4.8,slow=8.2,SNR=4.3						
	comp=Z,3.7nm,0.8s						
RAYN	Ar Rayn	83.17	307	P	P	15 29 43.0	-1.5
RAYN				IAmb	IAmb	15 29 47.5	
	comp=Z,11nm,0.9s						
RAYN	Ar Rayn	83.17	307	⇑P	P	15 29 44.2	-0.3
WRAB	Tennant Creek	84.36	210	P	P	15 29 50.3	0.0
WRAB				IAmb	IAmb	15 29 51.3	
	comp=Z,9.4nm,0.9s						
WRAB	Tennant Creek	84.36	210	*ce*P	P	15 29 50.1	-0.2
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WB2	Warramunga Arr	84.37	210	P	P	15 29 50.0	-0.3
WB2				IAmb	IAmb	15 29 51.3	
	comp=Z,9.3nm,0.8s						
WRA	Warramunga Arr	84.37	210	P	P	15 29 50.3	-0.1
	comp=Z,5.4nm,0.8s,baz=16,slow=5.4,SNR=37						
	comp=Z,5.4nm,0.8s						
WRA	Warramunga Arr	84.37	210	P	P	15 29 49.8	-0.6
WRA	Warramunga Arr	84.37	210	*i* P	P	15 29 50.2	-0.2
WRA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ASAR	Alice Springs	88.06	209	P	P	15 30 08.6	+0.1
	comp=Z,1.3nm,0.7s,baz=12,slow=4.7,SNR=25						
	comp=Z,1.3nm,0.7s						
SJG	San Juan	91.05	48	LR	LR	16 15 08.7	
	comp=Z,19nm,18.9s,baz=192,slow=38						
STKA	Stephens Creek	94.44	200	LR	LR	16 09 20.7	
	comp=Z,46nm,21.0s,baz=207,slow=33						
SDV	Santo Domingo	97.72	56	LR	LR	16 18 41.4	
	comp=Z,87nm,18.4s,baz=52,slow=38						
QSPA	South Pole Qui	150.57	180	PKPbc	PKPbc	15 37 08.2	-0.3
	comp=Z,16nm,0.7s,baz=296,slow=0.7,SNR=91						

IDC 15 15:17:26.8±8.4, 18°.44S×178°.00W, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=369.7km s-min=39.6km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.92	260	P	P	15 25 43.7	-0.1
	0.3nm,0.7s,baz=96,slow=7.7,SNR=1.7						
	0.3nm,0.7s						
ASAR	Alice Springs	45.03	255	P	P	15 25 44.5	-0.1
	0.8nm,0.6s,baz=91,slow=7.9,SNR=16						
	0.8nm,0.6s						
ILAR	Eielson Array	86.31	13	P	P	15 30 10.2	0.0
	0.3nm,0.9s,baz=223,slow=5.6,SNR=4.3						
	0.3nm,0.9s						

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*KNET **15** 15:19:46.5±0.3, 42°.57N×75°.36E, h11km±4km, ml1.3, Error ellipse: s-maj=3.2km s-min=1.9km az=6.0*

*SOME **15** 15:19:47.3, 42°.57N×75°.33E, h10km*

*NNC **15** 15:19:47.2±0.6, 42°.61N×75°.31E, h0km, mb2.3, mpv2.6, Error ellipse: s-maj=7.0km s-min=2.5km az=142.0*

ISC 15 15:19:47.3±1.0, 42°.57N±0°.03×75°.35E±0°.02, h10km±9km, n38, σ0s.67/67, 10C-11D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBK	Karagaybulak	0.31	287	⇓P	Pg	15 19 53.9	+0.4
	20nm,0.1s,SNR=124						
KBK				⇑S	Sb	15 19 58.8	-1.4
	98nm,0.2s						
TKM2	Tokmak 2	0.40	28	⇑P	Pg	15 19 54.8	-0.3
	4.0nm,0.1s,SNR=96						
TKM2				⇓S	Sg	15 20 00.5	0.0
	44nm,0.1s						
TKM2	Tokmak 2	0.40	28	⇓P	Pg	15 19 54.9	-0.3
	0.7nm,0.2s						
TKM2				⇓S	Sg	15 20 00.1	-0.4
	9.8nm,0.3s						
CHMS	Chumysh	0.61	315	⇓P	Pg	15 19 59.1	-0.1
	3.1nm,0.1s,SNR=16						
CHMS				⇓S	Sg	15 20 07.6	+0.3
	20nm,0.2s						
AAK	Ala-Archa	0.63	277	⇓P	Pg	15 19 59.4	-0.2
	7.0nm,0.1s,SNR=5.9						
AAK				⇑S	Sg	15 20 08.2	+0.3
	23nm,0.3s						
KST	Kastek	0.66	44	P	Pg	15 20 00.1	+0.1
	1.6nm,0.1s						
KST				S	Sg	15 20 08.8	+0.1
	5.3nm,0.2s						
KST	Kastek	0.66	44	*e*P	Pg	15 20 00.1	+0.1
	1.6nm,0.1s						
KST				*e*S	Sg	15 20 08.8	+0.1
	5.3nm,0.2s						
ULHL	Ulahol	0.74	116	⇓P	Pg	15 20 00.7	-0.8
	3.2nm,0.1s,SNR=14						
ULHL				⇑S	Sg	15 20 10.3	-0.9
	8.3nm,0.1s						
DGS	Degeres	0.74	25	P	Pg	15 20 01.5	-0.1
	2.9nm,0.1s						
DGS				S	Sg	15 20 11.5	+0.1
	12nm,0.2s						
DGS	Degeres	0.74	25	*e*P	Pg	15 20 01.5	-0.1
	2.9nm,0.1s						
DGS				*e*S	Sg	15 20 11.5	+0.1
	12nm,0.2s						
USP	Ospenovka	0.94	319	⇑P	Pg	15 20 05.0	-0.3
	6.4nm,0.1s,SNR=15						
MTBS	Maitube	0.97	54	*e*P	Pg	15 20 05.9	-0.1
	1.0nm,0.1s						
MTBS				*e*S	Sg	15 20 18.9	+0.2
	5.7nm,0.3s						
IZV	Izvestkoviy	1.04	63	*e*P	Pg	15 20 07.1	-0.3
	0.8nm,0.1s						
IZV				*e*S	Sg	15 20 20.8	-0.1
	4.4nm,0.2s						
KRBS	Karabastau	1.15	12	P	Pb	15 20 08.7	-0.7
	3.5nm,0.1s						
KRBS				S	Sb	15 20 24.0	-0.5
	9.1nm,0.1s						
KRBS	Karabastau	1.15	12	*e*P	Pb	15 20 08.7	-0.7
	3.5nm,0.1s						
KRBS				*e*S	Sb	15 20 24.0	-0.5
	9.1nm,0.1s						
EKS2	Erkin-Say	1.16	275	⇑P	Pg	15 20 09.4	-0.2
	2.6nm,0.2s,SNR=16						
EKS2				⇑S	Sn	15 20 26.1	+0.3
	2.5nm,0.1s						
TNSS	Tian-Shan	1.27	68	P	Pn	15 20 11.2	-0.3
	0.4nm,0.1s						
TNSS				S	Sb	15 20 27.9	-0.2
	2.8nm,0.2s						
TNSS	Tian-Shan	1.27	68	*e*P	Pn	15 20 11.2	-0.3
	0.4nm,0.1s						
TNSS				*e*S	Sb	15 20 27.9	-0.2
	2.8nm,0.2s						
AML	Almayashu	1.30	251	⇓P	Pg	15 20 11.9	-0.4
	0.2nm,0.7s						
AML				⇑S	Sb	15 20 28.5	-0.5
	0.3nm,0.6s						
MDOK	Medeo	1.39	64	⇓P	Pg	15 20 15.2	+1.3
	1.1nm,0.5s						
MDOK				⇑S	Sn	15 20 31.5	+0.1
	2.0nm,0.6s						
MDOK	Medeo	1.39	64	*e*P	Pn	15 20 13.1	+0.2
	0.9nm,0.4s						
MDOK				*e*S	Sb	15 20 30.9	-0.3
	6.0nm,0.2s						
KOTS	Kotyrbulak	1.46	62	*e*P	Pb	15 20 14.8	+0.2
	1.1nm,0.2s						
KOTS				*e*S	Sg	15 20 34.0	-0.2
	4.3nm,0.3s						
KTBS	Karatobe	1.50	40	P	Pb	15 20 15.1	-0.3
	0.8nm,0.1s						
KTBS				S	Sb	15 20 34.9	+0.4
	13nm,0.3s						
KTBS	Karatobe	1.50	40	*e*P	Pb	15 20 15.1	-0.3
	0.8nm,0.1s						
KTBS				*e*S	Sb	15 20 34.9	+0.4
	13nm,0.3s						
KUU	Kurty	1.51	28	P	Pb	15 20 15.2	-0.2
	1.1nm,0.1s						
KUU				S	Sb	15 20 34.9	+0.2
	7.2nm,0.3s						
KUU	Kurty	1.51	28	*e*P	Pb	15 20 15.2	-0.2
	1.1nm,0.1s						
KUU				*e*S	Sb	15 20 34.9	+0.2
	7.2nm,0.3s						
MRKS	Merke	1.57	277	P	Pb	15 20 16.6	+0.1
MRKS				S	Sg	15 20 37.3	-0.6
MRKS	Merke	1.57	277	*e*P	Pb	15 20 16.6	+0.1
MRKS				*e*S	Sg	15 20 37.3	-0.6
CHKK	Chushkaly	1.76	42	*e*P	Pb	15 20 19.9	+0.3
	0.4nm,0.2s						
CHKK				*e*S	Sg	15 20 42.9	-0.9
	8.0nm,0.2s						
SATY	Saty	2.30	77	Pg	Pb	15 20 30.2	+1.2
	4.4nm,0.3s						
SATY				Lg	Lg	15 21 00.6	
	8.0nm,0.2s						
SATY	Saty	2.30	77	*e*Pg	Pb	15 20 30.2	+1.2
	4.4nm,0.3s						
SATY				*e*Lg	Lg	15 21 00.6	
	8.0nm,0.2s						
ARXS	Arharly	2.44	47	*e*Pg	Pb	15 20 31.8	+0.4
	2.4nm,0.2s						
ARXS				*e*Lg	Lg	15 21 03.2	
	5.7nm,0.5s						
KPKS	Kokpek	2.61	69	Pg	Pb	15 20 35.2	+1.0
	2.2nm,0.1s						
KPKS				Lg	Lg	15 21 09.3	
	11nm,0.5s						
KPKS	Kokpek	2.61	69	*e*Pg	Pb	15 20 35.2	+1.0
	2.2nm,0.1s						
KPKS				*e*Lg	Lg	15 21 09.3	
	11nm,0.5s						
BTLS	Baital	2.65	340	*e*Pg	Pb	15 20 35.5	+0.7
	0.9nm,0.2s						
BTLS				*e*Lg	Lg	15 21 09.9	
	2.2nm,0.5s						
UZB	Uzynbulak	2.76	77	Pg	Pb	15 20 38.1	+1.2
UZB				Lg	Lg	15 21 13.9	
UZB	Uzynbulak	2.76	77	*e*P	Pb	15 20 38.0	+1.2
UZB				*e*S	Sg	15 21 13.9	-2.1
KK31	Karatay Array	3.60	280	⇓Pg	Pb	15 20 53.2	+2.2
	0.3nm,0.3s,baz=93,slow=15						
KK31				⇑Lg	Lg	15 21 40.3	
	0.6nm,0.4s,baz=87,slow=29						

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*NEIC **15** 15:23:05.3±2.0, 18°.9N±0°.1×68°.96W±0°.04, h111km±5km, ML3.3/34, Md3.6/32(RSPR), Error ellipse: s-maj=15.5km s-min=5.0km az=181.0*

*OSPL **15** 15:23:07.7±1.4, 18°.48N×68°.94W, h132km±9km, ML2.7*

*RSPR **15** 15:23:08.6, 18°.45N×68°.93W, h111km±4km, MD3.5/9*

ISC 15 15:23:06.1±1.2, 18°.70N±0°.09×68°.91W±0°.04, h127km±9km, n60, σ1s.36/67, 3C-8D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DR12	Loma Pena Alta	0.46	281	Pn	Pn	15 23 20.0	-4.5
DR12				Sn	Sn	15 23 33.7	-4.9
PCDR	Punta Cana, DR	0.53	110	⇑*e*P	Pn	15 23 25.5	+0.6
PCDR	Punta Cana, DR	0.53	110	*e*S	Sn	15 23 40.0	+0.9
PCDR	Punta Cana, DR	0.53	110	Pn	Pn	15 23 24.4	-0.6
PCDR					Sn	15 23 38.7	-0.5
PCDR				IAML		15 23 44.0	
	comp=N,805nm,0.5s						
PCDR	Punta Cana, DR	0.53	110	*i* P	Pn	15 23 25.3	+0.4
PCDR				*e*S	Sn	15 23 39.8	+0.7
PCDR				IAML		15 23 43.2	
	comp=Z,267nm,0.6s						
SDD	Santo Domingo	0.98	256	Pn	Pn	15 23 28.0	-0.5
SDD				Sn	Sn	15 23 44.4	-1.0
LONA1	Toro Cenizo, N	1.13	307	*e*S	Sn	15 23 50.3	+2.3
IDE	Isla Desecheo	1.40	103	⇑*i*P	Pn	15 23 33.4	+0.6
IDE	Isla Desecheo	1.40	103	*e*S	Sn	15 23 53.4	+0.4
IDE	Isla Desecheo	1.40	103		Pn	15 23 33.4	+0.6
IDE					Sn	15 23 53.4	+0.4
AGPR	Aguadilla, PR	1.72	97	⇑*i*P	Pn	15 23 39.4	+2.9
AGPR	Aguadilla, PR	1.72	97	*e*S	Sn	15 24 00.4	+0.7
AGPR	Aguadilla, PR	1.72	97	Pn	Pn	15 23 35.8	-0.7
AGPR				Sn	Sn	15 23 59.0	-0.7
AGPR				IAML		15 24 07.0	
	comp=N,440nm,0.5s						
AGPR	Aguadilla, PR	1.72	97	*i* P	Pn	15 23 37.6	+1.1
AGPR				IAML		15 24 05.7	
	comp=Z,170nm,0.6s						
LSP	Las Mesas	1.81	107	⇓*e*P	Pn	15 23 39.1	+1.6
LSP	Las Mesas	1.81	107	*e*S	Sn	15 24 02.1	+0.5
LSP	Las Mesas	1.81	107		Pn	15 23 39.1	+1.6
LSP					Sn	15 24 02.1	+0.5
CRPR	Cabo Rojo, PR	1.84	112	⇑*i*P	Pn	15 23 38.2	+0.3
CRPR	Cabo Rojo, PR	1.84	112	*e*S	Sn	15 24 01.3	-1.0
CRPR	Cabo Rojo, PR	1.84	112	Pn	Pn	15 23 37.6	-0.3
CRPR				IAML		15 24 13.2	
	comp=N,105nm,0.5s						
CRPR	Cabo Rojo, PR	1.84	112	*i* P	Pn	15 23 38.3	+0.4
CRPR				IAML		15 24 08.3	
	comp=Z,45nm,0.2s						
MLPR	Magueyes Islan	1.91	112	⇓*i*P	Pn	15 23 38.8	0.0
MLPR	Magueyes Islan	1.91	112	*e*S	Sn	15 24 03.2	-0.6
MLPR	Magueyes Islan	1.91	112		Pn	15 23 38.5	-0.3
AOPR	Arecibo Observ	2.07	99	⇑*i*P	Pn	15 23 42.8	+2.0
AOPR	Arecibo Observ	2.07	99	*e*S	Sn	15 24 07.2	-0.2
AOPR	Arecibo Observ	2.07	99	Pn	Pn	15 23 40.8	0.0
AOPR				Sn	Sn	15 24 06.7	-0.6
UUPR	Utuado, UPR, P	2.12	102	Pn	Pn	15 23 40.7	-0.7
EMPR	Esperanza - Ma	2.27	95	⇑*e*P	Pn	15 23 42.2	-0.9
EMPR	Esperanza - Ma	2.27	95	*e*S	Sn	15 24 10.9	-0.7
EMPR	Esperanza - Ma	2.27	95	Pn	Pn	15 23 41.5	-1.7
EMPR				Sn	Sn	15 24 10.4	-1.2
EMPR				IAML		15 24 23.9	
	comp=N,242nm,0.5s						
SDDR	Presa de Saban	2.27	277	Pn	Pn	15 23 42.2	-1.1
SDDR				IAML		15 24 16.6	
	comp=N,102nm,0.7s						
SDDR	Presa de Saban	2.27	277	*i* P	Pn	15 23 44.9	+1.6
SDDR				IAML		15 24 19.2	
	comp=Z,32nm,0.7s						
OBIP	Obispado Ponce	2.28	106	⇓*e*P	Pn	15 23 45.1	+1.8
OBIP	Obispado Ponce	2.28	106	*e*S	Sn	15 24 11.7	-0.3
OBIP	Obispado Ponce	2.28	106	Pn	Pn	15 23 42.2	-1.1
OBIP				IAML		15 24 18.1	
	comp=N,80nm,0.7s						
OBIP				IAML		15 24 19.2	
	comp=E,85nm,0.5s						
CELP	Cerrillos	2.30	105	Pn	Pn	15 23 43.3	-0.3
CELP				IAML		15 24 17.8	
	comp=E,123nm,0.8s						
CELP				IAML		15 24 19.6	
	comp=N,166nm,0.4s						
GCPR	Guaynabo City	2.71	98	*e*S	Sn	15 24 19.9	-1.8
GCPR	Guaynabo City	2.71	98	Pn	Pn	15 23 48.5	-0.2
GCPR				IAML		15 24 26.9	
	comp=N,67nm,0.3s						
GCPR				IAML		15 24 26.9	
	comp=E,55nm,0.3s						
IGPR	InterUniversit	2.76	105	⇓*e*P	Pn	15 23 52.0	+2.5
IGPR	InterUniversit	2.76	105	*e*S	Sn	15 24 22.1	-0.8
IGPR	InterUniversit	2.76	105		Pn	15 23 52.0	+2.5
CBYP	Canovanas	2.93	98	⇓*e*P	Pn	15 23 52.8	+1.1
CBYP	Canovanas	2.93	98	*e*S	Sn	15 24 25.4	-1.5
CBYP	Canovanas	2.93	98	Pn	Pn	15 23 51.5	-0.1
HUMP	Col San Antoni	2.96	100	⇓*e*P	Pn	15 23 53.1	+1.1
HUMP	Col San Antoni	2.96	100	*e*S	Sn	15 24 25.7	-1.7
HUMP	Col San Antoni	2.96	100	Pn	Pn	15 23 51.7	-0.3
HUMP				IAML		15 24 30.9	
	comp=N,105nm,0.2s						
HUMP				IAML		15 24 32.4	
	comp=E,153nm,0.2s						
MTP	Monte Pirata	3.24	100	⇑*e*P	Pn	15 23 57.1	+1.4
MTP	Monte Pirata	3.24	100	*e*S	Sn	15 24 31.1	-3.0
MTP	Monte Pirata	3.24	100	Pn	Pn	15 23 54.9	-0.8
MTP				IAML		15 24 38.9	
	comp=E,52nm,0.2s						
MTP				IAML		15 24 39.8	
	comp=N,53nm,0.2s						
CUPR	Culebra, Puert	3.46	96	⇓*e*P	Pn	15 23 58.1	-0.6
CUPR	Culebra, Puert	3.46	96	*e*S	Sn	15 24 36.9	-2.4
CUPR	Culebra, Puert	3.46	96	Pn	Pn	15 23 57.0	-1.6
CUPR				IAML		15 24 42.7	
	comp=E,29nm,0.7s						
GRTK	Grand Turk	3.49	324	Pn	Pn	15 23 55.4	-3.6
GRTK	Grand Turk	3.49	324	*e*S	Sn	15 24 39.9	0.0
STVI	Saint Thomas	3.77	95	⇓*e*P	Pn	15 24 03.9	+1.2
STVI	Saint Thomas	3.77	95	Pn	Pn	15 24 03.0	+0.3
STVI				IAML		15 24 51.3	
	comp=E,40nm,0.3s						
STVI				IAML		15 24 55.4	
	comp=N,48nm,0.4s						
SMRT	St. Maarten	5.58	96	Pn	Pn	15 24 26.9	0.0
BAUV	El Baul	9.74	175	Pn	Pn	15 25 23.7	+0.8

IDC 15 15:27:03.7±1.5, 37°.23N×32°.55W, h0km, mb3.4/5, mbtmp3.4/5, MS3.6/2, Error ellipse: s-maj=55.5km s-min=26.2km az=19.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC	Sonseca Array	22.48	75	P	P	15 32 05.0	+0.3
	1.0nm,1.0s,baz=269,slow=9.0,SNR=1.6						
	1.0nm,1.0s						
MDT	Midelt	23.26	93	LR	LR	15 39 34.7	
	comp=Z,167nm,18.3s,baz=104,slow=32						
BBTS	Babate	26.62	143	LR	LR	15 41 48.0	
	comp=Z,113nm,19.6s,baz=24,slow=33						
TORD	Torodi Ar. Bea	38.84	119	P	P	15 34 30.1	-0.6
	0.5nm,0.5s,baz=320,slow=7.4,SNR=4.9						
	0.5nm,0.5s						
YKA	Yellowknife Ar	54.21	325	P	P	15 36 29.4	-1.4
	0.7nm,0.9s,baz=69,slow=7.3,SNR=3.9						
	0.7nm,0.9s						
TXAR	Lajitas Array	58.72	285	P	P	15 37 04.4	+0.9
	0.3nm,0.7s,baz=96,slow=8.3,SNR=2.7						
	0.3nm,0.7s						
MKAR	Makanchi Array	78.03	40	P	P	15 39 04.8	+0.7
	0.4nm,0.7s,baz=331,slow=5.6,SNR=4.3						
	0.4nm,0.7s						

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*WEL **15** 15:27:36.3±1.0, 33°S±6°×18°0W±1°3, h20km±8km, M4.7/31, mB5.3/23, ML4.8/34, MLv4.7/31, Mw(mB)4.7/23, Error ellipse: s-maj=0.0km s-min=0.0km az=110.6, confirmed*

*NOU **15** 15:28:07.4, 35°.77S×178°.30E, h237km, MLv4.1/10, Off E. Coast of N. Island, N.Z.*

ISC 15 15:27:32.5±1.7, 33°.43S±0°.09×179°.5W±0°.1, h250km, n103, σ1s.95/121, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.36	18	S	S	15 29 33.7	-1.2
MXZ	Matakaoa Point	4.50	203	P	Pn	15 28 46.9	+4.7
MXZ	Matakaoa Point	4.50	203	P	Pn	15 28 45.2	+3.1
MXZ				S	S	15 29 39.3	+1.6
WMGZ	Waiomatatini S	4.71	201	P	Pn	15 28 47.5	+2.9
WMGZ				S	S	15 29 45.0	+2.9
HAZ	Te Kaha	4.86	207	P	Pn	15 28 48.0	+1.5
HAZ				S	S	15 29 46.0	+0.5
PKGZ	Pakihiroa	4.87	203	P	Pn	15 28 48.5	+1.8
PKGZ				S	S	15 29 45.5	-0.5
WIZ	White Island	4.91	213	P	Pn	15 28 51.1	+4.0
PUZ	Puketiti	4.99	201	P	Pn	15 28 50.0	+1.9
PUZ				S	S	15 29 49.9	+1.6
RUGZ	Raukumara Rang	5.08	206	P	Pn	15 28 50.6	+1.3
RUGZ				S	S	15 29 49.1	-1.6
KUZ	Kuaotunu	5.14	229	P	Pn	15 28 51.8	+1.8

TWGZ	**Tauwhareparae**	**5.17**	**203**	P	**Pn**	**15 28 52.2**	**+1.9**
TWGZ				S	**S**	**15 29 54.7**	**+2.3**
MYRZ	**Mayor Island**	**5.20**	**221**	P	Pn	15 28 57.9	+7.3
WHRZ	**Whale Island**	**5.28**	**212**	P	**Pn**	**15 28 56.0**	**+4.3**
CNGZ	**Carnagh Statio**	**5.38**	**200**	P	**Pn**	**15 28 55.0**	**+2.1**
CNGZ				S	**S**	**15 29 54.4**	**-2.7**
TKGZ	**Te Karaka**	**5.45**	**203**	P	**Pn**	**15 28 54.8**	**+1.1**
TKGZ				S	**S**	**15 29 58.6**	**0.0**
OPRZ	**Ohinepanea**	**5.46**	**215**	P	**Pn**	**15 28 54.9**	**+1.1**
MWZ	**Matawai**	**5.46**	**206**	P	**Pn**	**15 28 54.8**	**+0.9**
MWZ				S	**S**	**15 29 59.4**	**+0.4**
MARZ	**Manawahe**	**5.52**	**213**	P	**Pn**	**15 28 57.4**	**+2.8**
TGRZ	**Tauranga**	**5.52**	**218**	P	**Pn**	**15 28 57.7**	**+3.1**
URZ	**Urewera**	**5.56**	**209**	P	**Pn**	**15 28 55.2**	**+0.1**
URZ	**Urewera**	**5.56**	**209**	P	**Pn**	**15 28 55.1**	**0.0**
URZ				S	**S**	**15 29 59.6**	**-1.4**
EDRZ	**Edgecumbe**	**5.59**	**212**	P	**Pn**	**15 28 55.8**	**+0.3**
WCZ	**Waipu Caves**	**5.67**	**242**	P	**Pn**	**15 28 54.7**	**-1.8**
RIGZ	**Rimuhau**	**5.72**	**202**	P	**Pn**	**15 28 57.9**	**+0.8**
RIGZ				S	**S**	**15 30 04.7**	**0.0**
KARZ	**Kaharoa**	**5.75**	**216**	P	**Pn**	**15 29 01.6**	**+4.1**
OMRZ	**Omania**	**5.76**	**215**	P	**Pn**	**15 29 01.3**	**+3.7**
TARZ	**Mount Tarawera**	**5.80**	**213**	P	**Pn**	**15 29 01.5**	**+3.3**
RRRZ	**Republican Roa**	**5.88**	**212**	P	**Pn**	**15 29 02.0**	**+2.9**
HLRZ	**Highlands Stat**	**5.88**	**214**	P	**Pn**	**15 29 02.9**	**+3.8**
MUGZ	**Murupara**	**5.88**	**210**	P	**Pn**	**15 28 59.7**	**+0.6**
MUGZ				S	**S**	**15 30 07.8**	**-0.7**
RTZ	**Ruatahuna**	**5.92**	**208**	P	**Pn**	**15 28 59.6**	**-0.1**
RTZ				S	**S**	**15 30 06.1**	**-3.2**
SNGZ	**Shannon Statio**	**5.93**	**205**	P	**Pn**	**15 29 00.3**	**+0.6**
SNGZ				S	**S**	**15 30 09.0**	**-0.5**
HSRZ	**Hossack Road**	**5.98**	**214**	P	**Pn**	**15 29 03.4**	**+3.0**
HRRZ	**Handcock Road**	**6.03**	**214**	P	**Pn**	**15 29 04.1**	**+3.1**
KNZ	**Kokohu**	**6.04**	**202**	P	**Pn**	**15 29 04.0**	**+3.0**
KNZ				S	**S**	**15 30 09.4**	**-2.4**
PRRZ	**Plateau Road**	**6.07**	**212**	P	**Pn**	**15 29 03.9**	**+2.5**
MHGZ	**Mahia Peninsul**	**6.09**	**200**	P	**Pn**	**15 29 03.0**	**+1.3**
MHGZ				S	**S**	**15 30 10.1**	**-2.9**
ALRZ	**Allen Road**	**6.14**	**212**	P	**Pn**	**15 29 04.8**	**+2.5**
RAHZ	**Arahi**	**6.14**	**206**	P	**Pn**	**15 29 02.4**	**+0.1**
RAHZ				S	**S**	**15 30 13.1**	**-1.1**
MTHZ	**Maungataniwha**	**6.18**	**208**	P	**Pn**	**15 29 03.0**	**+0.2**
MTHZ				S	**S**	**15 30 13.7**	**-1.4**
WPRZ	**Whakapapatarin**	**6.19**	**214**	P	**Pn**	**15 29 05.9**	**+3.0**
WHHZ	**Waihua**	**6.23**	**204**	P	**Pn**	**15 29 06.0**	**+2.6**
WHHZ				S	**S**	**15 30 16.2**	**-0.1**
KUTZ	**Kaahu Road**	**6.33**	**216**	P	**Pn**	**15 29 07.7**	**+3.0**
MRHZ	**Matea Rd**	**6.33**	**210**	P	**Pn**	**15 29 06.6**	**+1.9**
TLZ	**Tolley Road**	**6.35**	**218**	P	**Pn**	**15 29 07.4**	**+2.5**
WHTZ	**Whakaora**	**6.40**	**214**	P	**Pn**	**15 29 08.1**	**+2.5**
NMHZ	**Naumai**	**6.40**	**207**	P	**Pn**	**15 29 05.7**	**0.0**
ARHZ	**Aropaoanui**	**6.48**	**205**	P	**Pn**	**15 29 08.3**	**+1.7**
WATZ	**Wairara**	**6.54**	**215**	P	**Pn**	**15 29 10.1**	**+2.7**
BKZ	**Black Stump Fm**	**6.58**	**208**	P	**Pn**	**15 29 07.1**	**-0.8**
BKZ	**Black Stump Fm**	**6.58**	**208**	P	**Pn**	**15 29 07.4**	**-0.5**
RATZ	**Rangitukua**	**6.65**	**214**	P	**Pn**	**15 29 10.9**	**+2.2**
RITZ	**Rihia Road**	**6.70**	**213**	P	**Pn**	**15 29 11.2**	**+1.9**
MCHZ	**McNeill Hill**	**6.75**	**206**	P	**Pn**	**15 29 09.5**	**-0.4**
KATZ	**Kakaramea**	**6.77**	**214**	P	**Pn**	**15 29 12.1**	**+1.8**
CKHZ	**Cape Kidnapper**	**6.81**	**203**	P	**Pn**	**15 29 12.3**	**+1.7**
KWHZ	**Kaweka Forest**	**6.83**	**208**	P	**Pn**	**15 29 10.0**	**-1.1**
HIZ	**Hauiti**	**6.84**	**221**	P	**Pn**	**15 29 14.2**	**+3.1**
NTVZ	**North Tongarir**	**6.88**	**213**	P	**Pn**	**15 29 13.6**	**+1.9**
TMVZ	**Te Maari**	**6.88**	**213**	P	**Pn**	**15 29 13.2**	**+1.5**
KRVZ	**Karewarewa**	**6.89**	**213**	P	**Pn**	**15 29 13.6**	**+1.7**
ETVZ	**East Tongariro**	**6.89**	**213**	P	**Pn**	**15 29 13.5**	**+1.7**
WTVZ	**West Tongariro**	**6.93**	**214**	P	**Pn**	**15 29 14.0**	**+1.6**
OTVZ	**Oturere**	**6.94**	**213**	P	**Pn**	**15 29 13.1**	**+0.6**
SNVZ	**South Ngauruho**	**6.97**	**213**	P	**Pn**	**15 29 13.3**	**+0.5**
TWVZ	**Taurewa**	**6.97**	**215**	P	**Pn**	**15 29 14.2**	**+1.4**
NGZ	**Ngauruhoe**	**6.97**	**213**	P	**Pn**	**15 29 14.8**	**+1.9**
KAHZ	**Kahuranaki**	**7.00**	**204**	P	**Pn**	**15 29 12.5**	**-0.6**
TUVZ	**Tukino**	**7.03**	**213**	P	**Pn**	**15 29 14.8**	**+1.3**
BHHZ	**Black Hill Sta**	**7.03**	**209**	P	**Pn**	**15 29 12.8**	**-0.7**
FWVZ	**Far West T-bar**	**7.06**	**213**	P	**Pn**	**15 29 15.0**	**+0.9**
WHVZ	**Whangaehu Hut**	**7.07**	**213**	P	**Pn**	**15 29 15.3**	**+1.1**
MOVZ	**Moawhango**	**7.10**	**211**	P	**Pn**	**15 29 14.6**	**+0.2**
WNVZ	**Wahianoa**	**7.10**	**213**	P	**Pn**	**15 29 13.7**	**-0.9**
PKVZ	**Pokaka**	**7.18**	**214**	P	**Pn**	**15 29 16.4**	**+0.9**
MTVZ	**Mangateitei**	**7.20**	**213**	P	**Pn**	**15 29 16.6**	**+0.9**
PXZ	**Pawanui**	**7.21**	**203**	P	**Pn**	**15 29 16.0**	**+0.2**
PNHZ	**Pukenui**	**7.34**	**207**	P	**Pn**	**15 29 15.5**	**-1.9**
VRZ	**Vera Road**	**7.34**	**218**	P	**Pn**	**15 29 18.7**	**+1.2**
WPHZ	**Waipukurau**	**7.39**	**205**	P	**Pn**	**15 29 17.8**	**-0.2**
PRHZ	**Porangahau**	**7.50**	**203**	P	**Pn**	**15 29 18.2**	**-1.2**
TSZ	**Takapari Road**	**7.56**	**208**	P	**Pn**	**15 29 19.5**	**-0.7**
DVHZ	**Dannevirke**	**7.69**	**206**	P	**Pn**	**15 29 21.3**	**-0.5**
WAZ	**Wanganui**	**7.72**	**214**	P	**Pn**	**15 29 23.0**	**+0.7**
LREZ	**Lake Rotokare**	**7.78**	**218**	P	**Pn**	**15 29 24.0**	**+1.1**
NEZ	**North Egmont**	**7.80**	**220**	P	**Pn**	**15 29 25.6**	**+2.4**
KHEZ	**Kahui Hut**	**7.86**	**220**	P	**Pn**	**15 29 26.0**	**+2.0**
NBEZ	**Newall Road No**	**7.92**	**221**	P	**Pn**	**15 29 27.3**	**+2.5**
POWZ	**Post Office Ro**	**7.92**	**207**	P	**Pn**	**15 29 24.3**	**-0.4**
PRWZ	**Pori Road**	**7.99**	**206**	P	**Pn**	**15 29 26.0**	**+0.4**
BFZ	**Birch Farm**	**8.00**	**204**	P	**Pn**	**15 29 24.5**	**-1.2**
BFZ	**Birch Farm**	**8.00**	**204**	P	**Pn**	**15 29 24.6**	**-1.2**
TIWZ	**Tintock**	**8.21**	**205**	P	**Pn**	**15 29 28.0**	**-0.5**
CPWZ	**Castlepoint**	**8.22**	**204**	P	**Pn**	**15 29 29.9**	**+1.4**
HOWZ	**Holdsworth Sta**	**8.46**	**207**	P	**Pn**	**15 29 30.2**	**-1.3**
MTW	**Mount Morrison**	**8.69**	**206**	P	**Pn**	**15 29 33.1**	**-1.3**
TRWZ	**Traveller**	**8.83**	**204**	P	**Pn**	**15 29 35.5**	**-0.8**
PAWZ	**Paruwai Farm**	**8.91**	**206**	P	**Pn**	**15 29 35.8**	**-1.5**
SNZO	**South Karori**	**9.12**	**209**	P	**Pn**	**15 29 38.3**	**-1.6**
QRZ	**Quartz Range**	**9.75**	**219**	P	**Pn**	**15 29 44.9**	**-3.0**
KHZ	**Kahutara**	**10.53**	**210**	P	**Pn**	**15 29 55.1**	**-2.4**
CTZ	**Chatham Island**	**10.53**	**169**	P	P	15 30 11.6	+9.0
ODZ	**Otahua Downs**	**13.88**	**210**	P	**Pn**	**15 30 38.0**	**-1.1**

IDC 15 15:40:07.3±2.6, 2°.49S×133°.70E, h0^{km}, mb3.0/2, mbtmp3.1/3, ML2.9/1, Error ellipse: s-maj=158.6km s-min=30.1km az=81.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** baz=356,slow=12,SNR=1.6 0.3nm,0.7s	**17.36**	**178**	P	Pn	15 44 11.1	-0.1
ASAR	**Alice Springs** 0.3nm,0.8s,baz=9.0,slow=12,SNR=2.0 0.3nm,0.8s	**21.05**	**179**	P	P	15 44 53.2	+0.1
SONM	**Songino Array** 0.2nm,0.3s,baz=128,slow=7.0,SNR=4.1 0.2nm,0.3s	**55.51**	**338**	P	P	15 49 44.2	-0.1

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*JMA **15** 15:42:43.0±0.1, 37°.0N±0°.2×141°.2E±0°.4, h21^{km}, MV3.0/39, E OFF FUKUSHIMA PREF*

*IDC **15** 15:42:44.3±5.6, 36°.55N×141°.18E, h0^{km}, mb3.4/2, mbtmp3.4/2, ML1.4/1, Error ellipse: s-maj=114.9km s-min=32.7km az=24.0*

ISC 15 15:42:42.9±1.9, 37°.03N±0°.05×141°.23E±0°.08, h15^{km}±9^{km}, n17, σ0^{s}.58/20, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.35**	**281**	*i* P	**Pg**	**15 42 50.3**	**+0.1**
ONAJ				S	**Sg**	**15 42 55.7**	**+0.5**
JFK	**Kawauchi**	**0.44**	**319**	*i* P	**Pg**	**15 42 51.8**	**0.0**
JFK				S	**Sg**	**15 42 57.9**	**+0.2**
JFFD	**Fukushimafurud**	**0.54**	**276**	*i* P	**Pg**	**15 42 53.4**	**-0.2**
JFFD				S	**Sg**	**15 43 00.8**	**0.0**
JHO	**Hitachi**	**0.68**	**232**	P	**Pb**	**15 42 55.6**	**-0.9**
JHO				S	**Sg**	**15 43 04.9**	**-0.3**
JOTO	**OTAMA OYAMA**	**0.89**	**306**	*i* P	**Pb**	**15 42 59.9**	**-0.2**
JOTO				S	**Sb**	**15 43 11.9**	**+0.1**
JMM	**Marumori**	**0.90**	**337**	P	**Pb**	**15 42 59.4**	**-0.9**
JMM				S	**Sb**	**15 43 11.5**	**-0.6**
JSB	**Shiboa**	**1.05**	**267**	*e*P	**Pb**	**15 43 03.1**	**+0.2**
JSB				S	**Sn**	**15 43 17.4**	**-0.2**
JFY	**Yanaizu**	**1.28**	**287**	P	**Pn**	**15 43 06.3**	**0.0**
JFY				S	**Sn**	**15 43 23.0**	**-0.1**
MJAR	**Matsushiro Arr** 0.1nm,0.3s,baz=90,slow=12,SNR=1.6	**2.48**	**259**	Pn	**Pn**	**15 43 23.9**	**+1.1**
MJAR	0.5nm,0.3s,baz=101,slow=17,SNR=9.5			Sn	**Sb**	**15 43 56.4**	**-1.1**
H11N2	**WAKE ISLAND Hy** baz=313,slow=75,SNR=14	**28.27**	**121**	T	T	16 18 10.2	
H11N1	**WAKE ISLAND Hy** baz=313,slow=75,SNR=23	**28.28**	**121**	T	T	16 18 10.8	
H11N3	**WAKE ISLAND Hy** baz=313,slow=75,SNR=17	**28.29**	**121**	T	T	16 18 09.8	
H11S1	**WAKE ISLAND Hy** baz=315,slow=75,SNR=5.9	**28.98**	**123**	T	T	16 19 01.4	
H11S3	**WAKE ISLAND Hy** baz=315,slow=75,SNR=6.8	**28.98**	**123**	T	T	16 19 03.0	
H11S2	**WAKE ISLAND Hy** baz=315,slow=75,SNR=4.2	**29.00**	**123**	T	T	16 19 03.3	
WRA	**Warramunga Arr** 0.4nm,0.8s,baz=3.2,slow=7.3,SNR=2.1 0.4nm,0.8s	**57.04**	**188**	P	**P**	**15 52 28.4**	**+0.1**
ASAR	**Alice Springs** 0.4nm,0.9s,baz=11,slow=10,SNR=1.8 0.4nm,0.9s	**60.77**	**188**	P	**P**	**15 52 54.9**	**+0.7**

DJA 15 15:49:24.3±1.0, 0°N±5°×12°2E±°, h146^{km}±8^{km}, M1.9/5, MLv1.9/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.55**	**304**	P	Pn	15 49 46.9	+1.4
MRSI				S	Sn	15 50 03.5	+2.0
GTOI	**Gorontalo**	**0.77**	**53**	P	Pn	15 49 47.2	+0.4
GTOI				S	Sn	15 50 05.6	+1.6
LUWI	**Luwuk**	**1.26**	**163**	P	Pn	15 49 51.0	-0.1
LUWI				S	Sn	15 50 12.4	+0.8

IDC 15 15:49:35.2±5.8, 0°.69S×130°.97E, h0^{km}, mb3.3/2, mbtmp3.2/3, ML3.1/1, MS3.7/1, Error ellipse: s-maj=420.0km s-min=27.5km az=72.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=352,slow=13,SNR=1.7 0.2nm,0.5s	**19.41**	**170**	P	P	15 54 03.3	+0.1
ASAR	**Alice Springs** 0.6nm,0.6s,baz=350,slow=11,SNR=12 0.6nm,0.6s	**23.02**	**173**	P	P	15 54 42.1	+0.1
JCJ	**Chichijima** comp=Z,133nm,18.4s,baz=132,slow=34	**29.66**	**21**	LR	LR	16 06 13.9	
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=117,slow=8.0,SNR=4.9 0.2nm,0.5s	**63.58**	**325**	P	P	16 00 07.8	-0.1

TEH 15 16:05:06.7, 34°.71N×50°.80E, h8^{km}±42^{km}, ML3.6, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IQOM	**Qom**	**0.26**	**59**	Pg	Pg	16 05 12.9	+0.8
IQOM				Sg	Sb	16 05 17.5	-1.1
GHVR	**GHOM**	**0.47**	**119**	Pg	Pg	16 05 16.3	+0.4
ASAO	**Ashtian**	**0.66**	**256**	Pg	Pg	16 05 19.9	+0.5
IVRN	**Varamin**	**0.82**	**69**	Pg	Pb	16 05 23.2	0.0
IVRN				Sg	Sb	16 05 35.4	+1.0
IHSB	**Hasanabad**	**0.83**	**28**	Pg	Pb	16 05 23.6	+0.2
IMHD	**Mahdasht**	**0.98**	**354**	Pg	Pg	16 05 25.6	+0.1
IMHD				Sg	Sb	16 05 39.7	+0.6
IRAZ	**Razeghan**	**0.99**	**315**	Pg	Pg	16 05 25.7	-0.2
QAMS	**Qamsar**	**1.09**	**153**	Pg	Pg	16 05 26.9	-0.7
TEH	**Tehran**	**1.13**	**25**	Pg	Pn	16 05 28.9	-0.1
TEHA	**Amirabad Tehra**	**1.14**	**25**	Pg	Pb	16 05 28.8	0.0
KHMZ	**Khomeyn**	**1.19**	**216**	Pg	Pg	16 05 28.2	-1.3
THKV	**Tehran--Karaj**	**1.21**	**3**	Pg	Pn	16 05 30.0	0.0
CHTH	**Charan**	**1.23**	**13**	Pg	Pg	16 05 30.0	-0.3
ISFB	**Sefidab**	**1.24**	**106**	Pg	Pn	16 05 29.7	-0.8
DAMV	**Damavand**	**1.33**	**46**	Pg	Pn	16 05 31.8	0.0
KRSH	**Karshahi**	**1.33**	**123**	Pg	Pn	16 05 31.2	-0.5
IDMV	**Damavand**	**1.33**	**49**	Pg	Pn	16 05 32.0	+0.1
IDMV				Sg	Sn	16 05 50.7	+0.7
HAGD	**Aghdareh**	**1.37**	**275**	Pg	Pn	16 05 32.0	-0.3
IKLH	**Kolahrood**	**1.53**	**155**	Pg	Pn	16 05 34.7	+0.2
QALM	**Alamut, Qazvin**	**1.73**	**356**	Pg	Pb	16 05 39.1	+0.4
IGZV	**Ghazvin**	**1.74**	**344**	Pg	Pb	16 05 39.1	0.0
KLST	**Kelardasht - M**	**1.82**	**7**	Pn	Pb	16 05 40.2	-0.2
MZPU	**Pul - Mazandar**	**1.84**	**20**	Pn	Pb	16 05 40.9	+0.2
IFIR	**Firoozkooh**	**1.85**	**59**	Pn	Pb	16 05 40.7	-0.3
HSAM	**Samen**	**1.88**	**255**	Pn	Pb	16 05 40.8	-0.6
IPRN	**Peran**	**1.98**	**39**	Pn	Pb	16 05 43.4	+0.4
JIR1	**Jirandeh**	**2.15**	**338**	Pn	Pb	16 05 45.2	-0.9
ISHM	**Shahmirzad**	**2.32**	**61**	Pn	Pb	16 05 47.8	-1.2
GIDE	**GILAN DEYLAMAN**	**2.33**	**342**	Pn	Pb	16 05 48.1	-0.9
IDOB	**Doab**	**2.35**	**248**	Pn	Pb	16 05 48.4	-1.1
SHK1	**Shahrekord**	**2.38**	**178**	Pn	Pb	16 05 48.7	-1.2
IBZA	**Bozab**	**2.43**	**265**	Pn	Pb	16 05 49.1	-1.7
NASN	**Na'in**	**2.54**	**138**	Pn	Pb	16 05 50.6	-2.0
ZNJK	**Zanjan**	**2.60**	**319**	Pn	Pn	16 05 51.4	+2.1
IANJ	**Anjilo**	**2.67**	**73**	Pn	Pn	16 05 51.5	+1.4
IKFM	**Kafar-mosalman**	**2.72**	**245**	Pn	Pn	16 05 52.7	+2.1
IKOM	**Komasi**	**2.77**	**260**	Pn	Pb	16 05 54.3	-2.1
SNGE	**Sanandaj**	**2.86**	**279**	Pn	Pb	16 05 55.8	-2.3
ANAR	**Anarak**	**2.87**	**121**	Pn	Pn	16 05 54.7	+1.9
IGLO	**Ghaloghah**	**3.05**	**53**	Pn	Pb	16 05 58.5	-2.9
ILIN	**Lien**	**3.16**	**275**	Pn	Pn	16 05 59.0	+2.0
AMIS	**Naft Sefid**	**3.29**	**203**	Pn	Pn	16 06 01.7	+3.2
IGHG	**Ghaleghazi**	**3.51**	**265**	Pn	Pn	16 06 04.2	+2.5
IDHR	**Dehrash**	**3.63**	**271**	Pn	Pn	16 06 06.0	+2.6
KLNJ	**Kolanjah**	**3.75**	**169**	Pn	Pn	16 06 07.5	+2.4
YZKH	**Yazd**	**3.92**	**125**	Pn	Pn	16 06 09.3	+2.0
ILBA	**Ilam Banvizeh**	**3.96**	**255**	Pn	Pn	16 06 09.3	+1.6
SHRO	**Shahrood**	**4.45**	**72**	Pn	Pn	16 06 17.7	+3.2
TNSJ	**Nastanj**	**4.87**	**97**	Pn	Pn	16 06 22.3	+2.0
TPRV	**Parvadeh(Tabas**	**5.18**	**107**	Pn	Pn	16 06 26.1	+1.5
MRVT	**Maraveh tapeh**	**5.20**	**54**	Pn	Pn	16 06 26.8	+2.1
TABS	**Tabas**	**5.35**	**100**	Pn	Pn	16 06 28.9	+2.0
TKDS	**Koohdasht(Taba**	**5.36**	**100**	Pn	Pn	16 06 29.0	+2.0

NNC 15 16:08:27.7±4.1, 37°.11N×70°.50E, h0^{km}, mb3.9, mpv3.5, 4C-3D, Error ellipse: s-maj=30.9km s-min=29.9km az=146.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu** SNR=36	**5.58**	**25**	P	Pn	16 09 53.4	+1.0
AML	**Almayashu** 1.8nm,0.5s	**5.58**	**25**	⇑Pn	Pn	16 09 53.0	+0.7
AML	11nm,0.7s			⇓Sn	Sn	16 10 60.0	+2.5
UCH	**Uchtor** SNR=27	**5.97**	**30**	P	Pn	16 09 58.2	+0.4
KK31	**Karatay Array** 0.6nm,0.3s,baz=184,slow=13,SNR=18	**5.98**	**0**	Pn	Pn	16 09 58.0	+0.5
KK31	3.1nm,0.5s,baz=171,slow=12,SNR=5.5			⇓Pg	Pb	16 10 14.2	+1.4
KK31	4.0nm,0.6s,baz=177,slow=22,SNR=4.7			⇓Sn	Sn	16 11 07.6	+0.9
KK31	3.4nm,0.6s			⇑Lg	Lg	16 11 36.7	
EKS2	**Erkin-Say** SNR=12	**6.09**	**23**	P	Pn	16 10 00.5	+1.5
AAK	**Ala-Archa** SNR=7.8	**6.31**	**28**	P	Pn	16 10 02.8	+0.6
KBK	**Karagaybulak** SNR=5.5	**6.51**	**30**	P	Pn	16 10 05.4	+0.6
TKM2	**Tokmak 2** SNR=6.5	**7.00**	**32**	P	Pn	16 10 11.2	-0.3
TKM2	**Tokmak 2** 8.8nm,0.6s	**7.00**	**32**	⇑Pn	Pn	16 10 10.8	-0.8
TKM2	6.2nm,0.8s			⇑Sn	Sn	16 11 32.5	+0.5

NOU 15 16:09:50.8, 20°.71S×169°.96E, h122^{km}, MLv4.2/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**2.55**	**268**	P	Pn	16 10 29.9	-1.3
PINNC	**Pines Island,**	**3.01**	**231**	P	Pn	16 10 37.0	-0.2
YATNC	**Mamie plateau,**	**3.16**	**244**	P	Pn	16 10 38.9	-0.3
YATNC	**Mamie plateau,**	**3.16**	**244**	P	Pn	16 10 39.1	-0.1
OUENC	**Ouen Island, N**	**3.36**	**239**	P	Pn	16 10 41.9	0.0
OUENC	**Ouen Island, N**	**3.36**	**239**	P	Pn	16 10 42.2	+0.3
DVP	**Devils Point**	**3.41**	**330**	P	Pn	16 10 42.7	+0.1
DZM	**Mont Dzumac**	**3.54**	**247**	P	Pn	16 10 44.6	+0.2
DZM	**Mont Dzumac**	**3.54**	**247**	P	Pn	16 10 44.7	+0.3
ONTNC	**Ouen Toro**	**3.63**	**243**	P	Pn	16 10 45.6	+0.1
ONTNC	**Ouen Toro**	**3.63**	**243**	P	Pn	16 10 45.4	-0.1
NOUC	**Port Laguerre**	**3.68**	**247**	P	Pn	16 10 47.0	+0.9
NOUC	**Port Laguerre**	**3.68**	**247**	P	Pn	16 10 46.7	+0.6
KOUNC	**Koumac, New Ca**	**5.32**	**271**	P	Pn	16 11 09.1	+1.1

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*IDC **15** 16:10:49.7±1.6, 1°.01S×134°.28E, h0^{km}, mb3.7/4, mbtmp3.8/6, ML3.6/2, MS2.7/1, Error ellipse: s-maj=39.2km s-min=19.9km az=53.0*

*DJA **15** 16:10:55.1±0.7, 1°S±5°×13°4E±°, h28^{km}±5^{km}, M4.0/7, mb4.4/4, MLv3.8/7*

ISC 15 16:10:53.5±1.1, 1°.02S±0°.09×134°.34E±0°.06, h27^{km}, n10, σ0^{s}.82/13, mb3.9/4, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**0.52**	**198**	P	**Pb**	**16 11 04.1**	**0.0**
RKPI				S	**Sn**	**16 11 12.7**	**-0.4**
SRPI	**Serui, Papua**	**2.08**	**114**	P	**Pn**	**16 11 27.5**	**+0.8**
SRPI				S	**Sb**	**16 11 54.4**	**-1.8**
FAKI	**Fak Fak**	**2.81**	**228**	P	**Pn**	**16 11 37.2**	**+0.4**
SIJI	**Sorong** 2.0nm,0.3s,baz=90,slow=17,SNR=24	**3.07**	**273**	Pn	**Pn**	**16 11 39.8**	**-0.5**
SIJI	6.0nm,0.3s,baz=90,slow=20,SNR=2.1			Sn	**Sn**	**16 12 16.7**	**+0.4**
SIJI	comp=Z,104nm,18.1s,baz=152,slow=41 16nm,0.2s			LR	LR	16 12 53.4	
BNDI	**Bandanaira** 105nm,1.4s,0.7nm	**5.63**	**232**	P	**Pn**	**16 12 15.9**	**+0.4**
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=359,slow=11,SNR=20 1.3nm,0.4s	**18.81**	**180**	P	**P**	**16 15 10.6**	**-0.6**
CTA	**Charters Tower** 3.2nm,0.7s,baz=315,slow=8.8,SNR=6.8 3.2nm,0.7s	**22.25**	**149**	P	**P**	**16 15 49.8**	**+1.2**
ASAR	**Alice Springs** 0.8nm,0.4s,baz=7.2,slow=9.9,SNR=28 0.8nm,0.4s	**22.52**	**181**	P	**P**	**16 15 51.0**	**-0.4**
STKA	**Stephens Creek** 1.0nm,0.5s,baz=347,slow=14,SNR=4.2 1.0nm,0.5s	**31.45**	**168**	P	**P**	**16 17 13.2**	**+0.3**
MKAR	**Makanchi Array** 0.5nm,0.6s,baz=113,slow=7.8,SNR=8.1 0.5nm,0.6s	**65.81**	**324**	P	**P**	**16 21 36.5**	**0.0**

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*UPA **15** 16:12:58.5±0.5, 8°.55N×82°.74W, h52^{km}±4^{km}, MW3.0*

*UCR **15** 16:12:59.0±1.1, 8°.41N×82°.79W, h24^{km}±4^{km}, MW3.5*

ISC 15 16:12:58.8±1.8, 8°.51N±0°.04×82°.73W±0°.04, h16^{km}±13^{km}, n13, σ0^{s}.64/23, 4C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.29**	**8**	⇑*i*P	**Pn**	**16 13 07.8**	**-0.7**
BRU2				*e*S	**Sn**	**16 13 15.2**	**+0.7**
DVD	**David**	**0.29**	**104**	⇓*e*P	**Pn**	**16 13 08.5**	**+0.2**
DVD				*e*S	**Sn**	**16 13 14.8**	**+0.4**
BCO2	**Palmira**	**0.29**	**44**	⇑*i*P	**Pn**	**16 13 08.1**	**-0.5**
BCO2				*e*S	**Sn**	**16 13 15.0**	**+0.3**
PTAR3	**Potrerillos Ar**	**0.30**	**52**	*e*P	**Pn**	**16 13 08.1**	**-0.5**
BC3P	**Paso Ancho**	**0.33**	**22**	⇑*i*P	**Pn**	**16 13 08.2**	**-0.9**
BC3P				*e*P	**Pn**	**16 13 08.2**	**-0.9**
BC3P				*e*S	**Sn**	**16 13 15.6**	**-0.1**
PTPM	**Petroterminale**	**0.34**	**206**	*e*P	**Pn**	**16 13 08.1**	**-0.9**
PTPM				*e*S	**Sn**	**16 13 15.9**	**+0.4**
EDAD	**Golfito**	**0.45**	**288**	⇓*e*P	**Pb**	**16 13 08.4**	**0.0**
EDAD				*e*S	**Sb**	**16 13 15.9**	**+0.9**
EDP2	**Potrero Grande**	**0.67**	**319**	⇓*e*P	**Pg**	**16 13 12.2**	**+0.3**
EDP2				*e*S	**Sn**	**16 13 23.0**	**-0.8**
EDPN	**Palmar Norte**	**0.85**	**302**	⇑*i*P	**Pb**	**16 13 14.3**	**-0.8**
EDPN				*e*S	**Sb**	**16 13 26.5**	**+0.2**
RVSTA	**Santa Teresita**	**1.72**	**328**	*e*P	**Pn**	**16 13 28.6**	**+0.4**
ABE2	**San Pablo**	**1.77**	**312**	*e*P	**Pn**	**16 13 28.4**	**-0.5**
ABE2				*e*S	**Sn**	**16 13 51.6**	**+0.4**
LCOCO	**El Coco**	**1.77**	**333**	*e*P	**Pn**	**16 13 29.4**	**+0.7**
RVLA	**Villa Bonita**	**1.80**	**332**	*e*P	**Pn**	**16 13 29.3**	**+0.1**

IDC 15 16:30:31.0±9.9, 1°.57N×98°.55W, h0^{km}, mb3.3/4, mbtmp3.3/4, MS3.6/7, Error ellipse: s-maj=401.7km s-min=149.3km az=97.0, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero** comp=Z,102nm,18.2s,baz=177,slow=31	**15.84**	**13**	LR	LR	16 38 42.2	
LPIG	**La Paz** comp=Z,143nm,20.5s,baz=214,slow=31	**25.13**	**334**	LR	LR	16 43 20.8	
TXAR	**Lajitas Array** 0.2nm,0.8s,baz=168,slow=14,SNR=2.0	**28.04**	**350**	P	P	16 36 24.6	+0.4
TXAR	comp=Z,82nm,18.0s,baz=154,slow=34 0.2nm,0.8s			LR	LR	16 46 10.5	
ANMO	**Albuquerque** comp=Z,101nm,18.3s,baz=216,slow=35	**34.02**	**348**	LR	LR	16 50 22.8	
PFO	**Pinyon Flats O** comp=Z,118nm,18.4s,baz=140,slow=30	**36.02**	**334**	LR	LR	16 48 44.0	
LVC	**Limon Verde** comp=Z,117nm,18.9s,baz=198,slow=31	**37.58**	**131**	LR	LR	16 49 43.2	
H03N2	**Juan Fernandez** baz=330,slow=78,SNR=24	**39.43**	**154**	T	T	17 20 57.4	
H03N1	**Juan Fernandez** baz=330,slow=78,SNR=40	**39.44**	**154**	T	T	17 20 57.9	
H03N3	**Juan Fernandez** baz=330,slow=78,SNR=19	**39.45**	**154**	T	T	17 20 56.5	
NVAR	**Mina Array Bea** comp=Z,89nm,18.0s,baz=244,slow=32	**40.91**	**336**	LR	LR	16 51 56.2	
PDAR	**Pinedale Array** 0.4nm,0.8s,baz=148,slow=8.7,SNR=4.3 0.4nm,0.8s	**42.19**	**348**	P	P	16 38 25.3	-0.5
YKA	**Yellowknife Ar** 0.2nm,0.9s,baz=160,slow=6.9,SNR=2.6 0.2nm,0.9s	**61.96**	**352**	P	P	16 40 52.9	+0.5
ILAR	**Eielson Array** 0.4nm,0.8s,baz=165,slow=5.6,SNR=5.4 0.4nm,0.8s	**71.98**	**340**	P	P	16 41 56.0	-0.3
H11N3	**WAKE ISLAND Hy** baz=86,slow=74,SNR=4.6	**93.75**	**290**	T	T	18 27 29.3	
H11N2	**WAKE ISLAND Hy** baz=86	**93.76**	**290**	T	T	18 27 25.7	
H11N1	**WAKE ISLAND Hy** baz=86,slow=74,SNR=4.3	**93.77**	**290**	T	T	18 27 27.4	
H11S2	**WAKE ISLAND Hy** baz=86,slow=75,SNR=11	**94.01**	**289**	T	T	18 27 46.1	
H11S1	**WAKE ISLAND Hy** baz=86,slow=75,SNR=8.8	**94.01**	**289**	T	T	18 27 50.2	
H11S3	**WAKE ISLAND Hy** baz=86,slow=75,SNR=6.5	**94.03**	**289**	T	T	18 27 50.8	

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*IDC **15** 16:38:18.8±0.7, 5°.41S×146°.97E, h210^{km}±7^{km}, mb3.9/16, mbtmp4.5/22, Error ellipse: s-maj=13.3km s-min=9.5km az=78.0*

*BJI **15** 16:38:18.4±0.0, 5°.27S×147°.10E, h214^{km}, mb4.4/26, mB4.9/15*

*NEIC **15** 16:38:19.2±1.6, 5°.48S±0°.08×146°.90E±0°.05, h207^{km}±7^{km}, mb4.5/55, Error ellipse: s-maj=12.0km s-min=6.2km az=160.0*

*DJA **15** 16:38:19.1±0.4, 5°S±4°×14°7E±°, h196^{km}±6^{km}, M4.8/13, mB5.0/5, mb4.6/13, MLv5.1/3, Mw(mB)4.3/5*

ISC 15 16:38:18.1±0.3, 5°.47S±0°.05×146°.89E±0°.06, h200^{km}, n124, σ1^{s}.22/130, mb4.4/47, 1C, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby** 111nm,0.3s,baz=20,slow=4.8,SNR=88	**3.92**	**176**	P	**Pn**	**16 39 20.6**	**+1.7**
PMG	345nm,0.6s,baz=5.0,slow=5.3,SNR=7.7			S	**Sn**	**16 40 05.1**	**-1.6**
PMG	**Port Moresby**	**3.92**	**176**	Pn	**Pn**	**16 39 19.7**	**+0.8**
PMG	**Port Moresby**	**3.92**	**176**	P	**Pn**	**16 39 21.0**	**+2.1**
KRVT	**Keravat (AS076** 69nm,0.8s,baz=244,slow=5.1,SNR=14	**5.24**	**77**	P	**Pn**	**16 39 35.0**	**-0.6**
RABL	**Rabaul**	**5.40**	**77**		**Pn**	**16 39 40.0**	**+2.2**
RABL	**Rabaul**	**5.40**	**77**	P	**Pn**	**16 39 41.0**	**+3.3**
GENI	**Genyem** 65nm,0.8s,0.7nm	**7.29**	**293**	P	**Pn**	**16 40 00.6**	**-1.6**
SMPI	**Sarmi** 24nm,0.7s	**8.87**	**293**	P	**Pn**	**16 40 22.5**	**-0.2**
COEN	**Coen**	**9.19**	**203**	Pn	**Pn**	**16 40 28.4**	**+1.5**
COEN	**Coen**	**9.19**	**203**	P	**Pn**	**16 40 30.5**	**+3.6**
MTSU	**Mount Surprise**	**12.84**	**191**	P	**P**	**16 41 16.9**	**-0.2**
HNR	**Honiara** 765nm,0.7s,baz=221,slow=5.9,SNR=8.9	**13.53**	**108**	P	**Pn**	**16 41 23.0**	**+0.7**
HNR	**Honiara**	**13.53**	**108**	Pn	**Pn**	**16 41 22.6**	**+0.3**

HNR	**Honiara**	13.53	108	P	Pn	16 41 23.8	+1.5
	106nm,1.0s						
TV1H	**Townsville Har**	13.71	180	P	P	16 41 27.4	+0.7
CTA	**Charters Tower**	14.54	182	P	P	16 41 37.2	+1.2
	28nm,0.8s,baz=0.3,slow=12,SNR=20						
CTAO	**Charters Tower**	14.54	182		Pn	16 41 36.0	+1.2
CTAO	**Charters Tower**	14.54	182	P	P	16 41 37.8	+1.8
KDU	**Kakadu**	15.94	242	P	P	16 41 52.5	+1.1
SIJI	**Sorong**	16.26	286	P	P	16 41 56.3	+1.3
	3.2nm,0.5s,baz=167,slow=23,SNR=3.2						
QIS	**Mount Isa**	16.58	205	P	Pn	16 42 00.7	+1.2
PATS	**Pohnpei**	16.71	43	P	P	16 41 58.9	-1.1
MTN	**Manton Dam**	17.19	244		P	16 42 04.9	-0.3
RK1H	**Rockhampton Ha**	18.15	169	P	Pn	16 42 17.9	0.0
WB0	**Warramunga Arr**	18.71	219	P	P	16 42 22.2	+0.5
WB0				IAmb	IAmb	16 42 23.9	
	comp=Z,43nm,1.1s						
WRAB	**Tennant Creek**	18.86	219	P	P	16 42 23.8	+0.4
WRAB	**Tennant Creek**	18.86	219	P	P	16 42 24.6	+1.3
WB2	**Warramunga Arr**	18.86	219	P	P	16 42 24.0	+0.6
WRA	**Warramunga Arr**	18.87	219	P	P	16 42 24.7	+1.2
	comp=Z,42nm,0.7s,baz=41,slow=11,SNR=292						
WRA				S	S	16 45 44.0	-3.5
	comp=Z,6.6nm,0.8s,baz=40,slow=21,SNR=7.8						
WRA				PcP	PcP	16 46 40.7	-0.5
	comp=Z,2.1nm,0.8s,baz=26,slow=1.7,SNR=2.6						
WRA	**Warramunga Arr**	18.87	219	P	P	16 42 23.1	-0.4
WB1	**Warramunga Ar.**	18.88	219	P	P	16 42 24.8	+1.2
GUMO	**Guam**	19.04	354	P	P	16 42 25.8	+0.5
EIDS	**Eidsvold**	20.19	169	P	P	16 42 38.8	+1.2
EIDS				IAmb	IAmb	16 42 41.4	
	comp=Z,13nm,0.8s						
EIDS	**Eidsvold**	20.19	169	P	P	16 42 39.6	+2.0
KNRA	**Kununurra**	20.49	239	P	P	16 42 40.4	-0.4
KNRA	**Kununurra**	20.49	239	P	P	16 42 42.1	+1.3
RMQ	**Roma**	20.97	175	P	P	16 42 47.7	+1.8
QLP	**Quilpie**	21.15	187	P	P	16 42 49.1	+1.4
AS01	**Alice Springs**	21.97	213	P	P	16 42 57.5	+1.3
AS31	**Alice Springs**	21.99	213	P	P	16 42 57.0	+0.6
AS31				IAmb	IAmb	16 42 58.9	
	comp=Z,16nm,0.8s						
ASAR	**Alice Springs**	22.00	213	P	P	16 42 57.6	+1.2
	comp=Z,41nm,0.8s,baz=44,slow=8.3,SNR=382						
ASAR				S	S	16 46 40.9	-3.9
	comp=Z,5.6nm,0.9s,baz=34,slow=16,SNR=7.2						
	comp=Z,41nm,0.8s						
ASAR	**Alice Springs**	22.00	213	P	P	16 42 57.2	+0.8
INKA	**Innaminka**	22.91	194	P	P	16 43 06.1	+1.5
FITZ	**Fitzroy Crossi**	24.26	237	P	P	16 43 17.3	+0.3
FITZ	**Fitzroy Crossi**	24.26	237	P	P	16 43 17.7	+0.7
OOD	**Oodnadatta**	24.63	204	P	P	16 43 21.4	+1.1
DZM	**Mont Dzumac**	25.10	133	P	P	16 43 23.2	-1.5
	comp=Z,3.3nm,0.6s,baz=297,slow=18,SNR=1.6						
	comp=Z,3.3nm,0.6s						
ARMA	**Armidale**	25.21	170	P	P	16 43 26.6	+0.9
ARMA				IAmb	IAmb	16 43 28.3	
	comp=Z,23nm,0.9s						
LCRK	**Leigh Creek**	26.15	197	P	P	16 43 34.9	+0.9
WRKA	**Warakurna**	26.39	221	P	P	16 43 36.8	+0.5
STKA	**Stephens Creek**	26.73	190	P	P	16 43 39.1	-0.1
	comp=Z,2.3nm,0.5s,baz=353,slow=10,SNR=7.6						
	comp=Z,2.3nm,0.5s						
STKA	**Stephens Creek**	26.73	190	P	P	16 43 38.9	-0.2
STKA	**Stephens Creek**	26.73	190	P	P	16 43 39.6	+0.4
TARA	**Tarawa**	26.87	76	P	P	16 43 41.1	+0.5
BBOO	**Buckleboo**	29.02	199	P	P	16 43 59.4	0.0
BBOO				IAmb	IAmb	16 44 12.0	
	comp=Z,19nm,1.1s						
CAN	**Canberra**	29.77	177	P	P	16 44 06.2	+0.1
CAN				IAmb	IAmb	16 44 06.7	
	comp=Z,25nm,1.3s						
MBWA	**Marble Bar**	30.60	237	P	P	16 44 13.0	-0.5
MBWA				IAmb	IAmb	16 44 14.4	
	comp=Z,9.3nm,0.8s						
PSA00	**Pilbara Seismi**	30.70	236	P	P	16 44 14.1	-0.3
PSA00				IAmb	IAmb	16 44 15.7	
	comp=Z,4.3nm,0.8s						
FORT	**Forrest**	30.78	213	P	P	16 44 15.6	+0.6
MSVF	**Nonsavu**	32.80	114	P	P	16 44 33.4	+0.6
	comp=Z,9.0nm,0.5s,baz=274,slow=9.6,SNR=13						
	comp=Z,9.0nm,0.5s						
MSVF	**Nonsavu**	32.80	114	P	P	16 44 31.8	-1.1
MSVF				IAmb	IAmb	16 44 35.3	
	comp=Z,13nm,0.7s						
MORW	**Morawa**	37.45	228	P	P	16 45 12.7	+0.3
MORW				IAmb	IAmb	16 45 25.1	
	comp=Z,51nm,1.5s						
TPUB	**Ta-pu**	38.41	319	P	P	16 45 20.4	-0.1
TPUB				IAmb	IAmb	16 45 48.1	
	comp=Z,29nm,1.2s						
TATO	**Taipei**	39.07	322	P	P	16 45 26.8	+0.9
MJAR	**Matsushiro Arr**	42.58	350	P	P	16 45 53.3	-1.1
	comp=Z,4.1nm,1.0s,baz=157,slow=6.6,SNR=4.4						
	comp=Z,4.1nm,1.0s						
MRZ	**Mangatainoka R**	43.46	148	P	P	16 46 01.5	+0.1
MRZ				IAmb	IAmb	16 46 22.2	
	comp=Z,34nm,1.4s						
BFZ	**Birch Farm**	43.83	147	P	P	16 46 04.3	-0.1
NJ2	**Nanjing**	45.88	326	*e*P	P	16 46 22.1	+1.4
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
KSRS	**Korea Array**	46.22	339	P	P	16 46 23.2	0.0
	comp=Z,4.1nm,0.7s,baz=156,slow=8.9,SNR=17						
	comp=Z,4.1nm,0.7s						
KS19	**Wonju Array Si**	46.29	339	P	P	16 46 23.6	-0.1
KS19				IAmb	IAmb	16 46 43.0	
	comp=Z,30nm,1.4s						
JTM	**Tenmabayashi**	46.34	354	P	P	16 46 24.2	+0.2
JKA	**Kamikawa-asahi**	49.51	356	P	P	16 46 48.8	+0.4
JKA				IAmb	IAmb	16 47 16.6	
	comp=Z,23nm,1.2s						
USA0B	**Ussuriysk Arra**	51.23	346	P	P	16 47 01.4	+0.2
USA0B				IAmb	IAmb	16 47 27.9	
	comp=Z,9.8nm,1.4s						
USRK	**Ussuriysk Ar.**	51.23	346	P	P	16 47 01.4	+0.1
	comp=Z,2.2nm,0.5s,baz=176,slow=6.7,SNR=8.4						
	comp=Z,2.2nm,0.5s						
USRK	**Ussuriysk Ar.**	51.23	346	P	P	16 47 00.9	-0.4
HNS	**HongShan**	52.14	328	⇑P	P	16 47 08.0	-0.1
HNS				pmax	pmax		
	comp=Z,15nm,0.8s						
CMAR	**Chiang Mai Arr**	52.91	298	P	P	16 47 14.2	+0.1
	comp=Z,0.3nm,0.4s,baz=128,slow=5.8,SNR=4.4						
CMAR				pP	pP	16 48 00.3	+1.8
	comp=Z,0.6nm,0.6s,baz=115,slow=6.2,SNR=3.3						
	comp=Z,0.3nm,0.4s						
XAN	**Xi'an**	53.21	320	P	P	16 47 14.8	-1.3
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PZH	**PanZhiHua**	54.05	308	P	P	16 47 24.4	+2.0
PZH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.3s						
HHC	**Hu-ho-hao-te**	56.33	328	*e*P	P	16 47 40.3	+1.9
HHC				pmax	pmax		
	comp=Z,36nm,1.0s						
HHC				pmax	pmax		
	comp=Z,220nm,5.4s						
PEA0B	**Petropavlovsk-**	59.07	8	P	P	16 47 57.5	+0.4
PETK	**Petropavlovsk-**	59.07	8	P	P	16 47 56.5	-0.6
	comp=Z,5.1nm,0.5s,baz=163,slow=6.5,SNR=36						
	comp=Z,5.1nm,0.5s						
PETK	**Petropavlovsk-**	59.07	8	P	P	16 47 56.7	-0.4
ULN	**Ulaanbaatar**	63.60	331	P	P	16 48 28.1	+0.3
ULN				IAmb	IAmb	16 48 29.0	
	comp=Z,4.9nm,0.8s						
SONM	**Songino Array**	63.89	331	P	P	16 48 30.0	+0.3
	comp=Z,2.5nm,0.7s,baz=152,slow=7.2,SNR=14						
	comp=Z,2.5nm,0.7s						
SONM	**Songino Array**	63.89	331	P	P	16 48 30.1	+0.5
KIWB	**Kanaga Island**	64.82	24	P	P	16 48 36.2	+0.8
MA2	**Magadan**	64.92	2	P	P	16 48 36.2	+0.3
MA2				IAmb	IAmb	16 48 36.8	
	comp=Z,9.8nm,1.1s						
ADK	**Adak**	65.03	24	P	P	16 48 36.7	0.0
ADK				IAmb	IAmb	16 48 42.3	
	comp=Z,9.0nm,0.8s						
YAK	**Yakutsk**	68.61	351	P	P	16 48 59.0	0.0
YAK				IAmb	IAmb	16 49 01.0	
	comp=Z,9.1nm,0.7s						
WMQ	**Urumqi**	72.32	319	*e*P	P	16 49 24.1	+2.0
VNDA	**Vanda**	72.44	177	P	P	16 49 22.8	+0.7
VNDA				IAmb	IAmb	16 49 49.8	
	comp=Z,5.0nm,1.1s						
MK31	**Makanchi Array**	77.03	320	P	P	16 49 48.0	-1.0
MKAR	**Makanchi Array**	77.03	320	P	P	16 49 48.1	-0.9
	comp=Z,0.6nm,0.5s,baz=98,slow=8.2,SNR=11						
MKAR				pP	pwP	16 50 39.1	+0.3
	comp=Z,0.5nm,0.7s,baz=94,slow=7.3,SNR=2.6						
	comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	77.03	320	P	P	16 49 48.0	-1.0
MAKZ	**Makanchi**	77.23	320	P	P	16 49 48.9	-1.2
ANM	**Nome**	78.25	19	P	P	16 49 55.8	+0.5
ZALV	**Zalesovo Beam**	78.51	328	P	P	16 49 55.1	-1.8
	comp=Z,1.8nm,0.5s,baz=110,slow=6.5,SNR=11						
ZALV				pP	pP	16 50 46.5	+1.9
	comp=Z,0.9nm,0.5s,baz=117,slow=8.3,SNR=2.8						
	comp=Z,1.8nm,0.5s						
ZALV	**Zalesovo Beam**	78.51	328	P	P	16 49 55.0	-1.9
AAK	**Ala-Archa**	80.90	315	P	P	16 50 10.1	-0.2
CNPM	**China Poot**	80.92	27	P	P	16 50 08.9	-1.0
M20K	**Styx River**	81.22	25	P	P	16 50 11.4	-0.1
M20K				IAmb	IAmb	16 50 21.0	
	comp=Z,16nm,1.5s						
K20K	**Telida**	81.58	23	P	P	16 50 13.4	+0.1
RC01	**Rabbit Creek A**	82.30	26	P	P	16 50 15.4	-1.6
RC01				IAmb	IAmb	16 50 34.9	
	comp=Z,24nm,1.4s						
CAST	**Castle Rocks**	82.39	23	P	P	16 50 16.7	-0.8
CAST				IAmb	IAmb	16 50 17.7	
	comp=Z,5.3nm,1.2s						
IMAR	**Indian Mountai**	83.04	21	P	P	16 50 20.1	-0.6
TRF	**Thorofare Moun**	83.12	24	P	P	16 50 20.8	-0.6
H21K	**Melozitna Rive**	83.21	21	P	P	16 50 20.8	-0.9
I21K	**Tanana**	83.28	22	P	P	16 50 21.6	-0.3
I21K				IAmb	IAmb	16 50 24.4	
	comp=Z,5.6nm,1.3s						
MLY	**Manley**	83.67	22	P	P	16 50 23.4	-0.6
MLY				IAmb	IAmb	16 50 25.8	
	comp=Z,4.5nm,0.6s						
I23K	**Minto, Yukon-K**	84.25	22	P	P	16 50 25.7	-1.1
M24K	**Tolsona, Glenn**	84.27	26	P	P	16 50 26.1	-1.1
M24K				IAmb	IAmb	16 50 27.5	
	comp=Z,29nm,1.1s						
WRH	**Wood River Hil**	84.44	23	P	P	16 50 26.4	-1.5
WRH				IAmb	IAmb	16 50 26.8	
	comp=Z,4.5nm,1.0s						
QSPA	**South Pole Qui**	84.49	180	P	P	16 50 27.5	-0.8
QSPA				IAmb	IAmb	16 50 31.3	
	comp=Z,5.4nm,1.2s						
CCB	**Clear Creek Bu**	84.63	23	P	P	16 50 27.1	-1.7
CCB				IAmb	IAmb	16 50 27.9	
	comp=Z,4.5nm,0.9s						
NRIK	**Noril'sk**	84.74	342	P	P	16 50 28.3	-1.0
	comp=Z,2.6nm,0.6s,baz=100,slow=5.5,SNR=8.7						
	comp=Z,2.6nm,0.6s						
HDA	**Harding Lake**	84.87	24	P	P	16 50 29.5	-0.5
ILAR	**Eielson Array**	85.04	23	P	P	16 50 28.7	-2.2
	comp=Z,3.4nm,0.7s,baz=254,slow=4.8,SNR=48						
	comp=Z,3.4nm,0.7s						
NVAR	**Mina Array Bea**	97.13	52	P	P	16 51 26.9	-1.3
	comp=Z,1.2nm,0.8s,baz=259,slow=4.8,SNR=8.0						
	comp=Z,1.2nm,0.8s						
YKA	**Yellowknife Ar**	98.75	28	P	P	16 51 33.1	-1.5
	comp=Z,0.3nm,0.9s,baz=276,slow=5.0,SNR=4.1						
	comp=Z,0.3nm,0.9s						
PLCA	**Paso Flores**	122.62	147	PKP	PKPdf	16 56 49.8	-0.6
	comp=Z,1.5nm,0.8s,baz=234,slow=5.9,SNR=3.9						
CPUP	**Villa Florida**	140.62	145	PKP	PKPdf	16 57 22.7	-1.9
	comp=Z,1.4nm,0.7s,baz=184,slow=2.7,SNR=3.4						
TORD	**Torodi Ar. Bea**	144.85	285	PKP	PKPbc	16 57 30.1	-1.7
	comp=Z,1.2nm,0.5s,baz=64,slow=3.4,SNR=8.5						
SJG	**San Juan**	145.38	66	PKPbc	PKPdf	16 57 32.0	-1.1
	comp=Z,4.3nm,0.2s,baz=193,slow=8.7,SNR=1.7						

ROM 15 16:39:58.3±0.0, 42°.765N±0°.002×13°.070E±0°.002, h10^{km}, ML2.2/38, 19C-4D, Error ellipse: s-maj=0.2km s-min=0.2km az=270.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	0.02	235	P	Pg	16 40 00.5	+0.3
T1212				S	Sg	16 40 01.8	+0.1
T1212				AML	AML		
	comp=N,14700µm,0.2s						
T1212				AML	AML		
	comp=E,10700µm,0.3s						
T1212				AML	AML		
	comp=N,14650µm,0.2s						
T1212				AML	AML		
	comp=E,11050µm,0.3s						
T1212				AML	AML		
	comp=N,14700µm,0.2s						
T1212				AML	AML		
	comp=N,14650µm,0.2s						
T1212				AML	AML		
	comp=N,14650µm,1.8s						
T1212				AML	AML		
	comp=N,14700µm,1.8s						
T1212				AML	AML		
	comp=E,11050µm,1.7s						
T1212				AML	AML		
	comp=E,10700µm,1.7s						
T1218	**Civita (PG)**	0.10	160	P	Pg	16 40 01.5	+0.5
T1218				S	Sg	16 40 03.6	+0.5
T1218				AML	AML		
	comp=E,8565µm,0.2s						
T1218				AML	AML		
	comp=N,12750µm,0.3s						
T1218				AML	AML		
	comp=E,8575µm,0.2s						
T1218				AML	AML		
	comp=N,12450µm,0.3s						
T1218				AML	AML		
	comp=N,12750µm,0.4s						
T1218				AML	AML		
	comp=E,8580µm,0.2s						
T1218				AML	AML		
	comp=N,12450µm,0.3s						
T1218				AML	AML		
	comp=E,8575µm,0.2s						
T1218				AML	AML		
	comp=N,12750µm,1.7s						
T1218				AML	AML		
	comp=N,12450µm,1.7s						
T1218				AML	AML		
	comp=E,8565µm,0.2s						
T1214	**Arquata del Tr**	0.10	93	P	Pg	16 40 01.6	+0.4
T1214				S	Sg	16 40 03.6	+0.4
T1214				AML	AML		
	comp=E,8750µm,0.5s						
T1214				AML	AML		
	comp=N,8360µm,0.4s						
T1214				AML	AML		
	comp=E,8950µm,0.5s						
T1214				AML	AML		
	comp=N,8195µm,0.4s						
T1214				AML	AML		
	comp=N,8190µm,0.4s						
T1214				AML	AML		
	comp=N,8360µm,1.6s						
T1214				AML	AML		
	comp=N,8190µm,1.6s						
T1214				AML	AML		
	comp=E,8750µm,1.5s						
T1214				AML	AML		
	comp=E,8950µm,1.5s						
T1217	**Poggiodomo (PG**	0.12	243	P	Pg	16 40 01.7	+0.4
T1217				S	Sg	16 40 03.9	+0.6
T1217				AML	AML		
	comp=E,1680µm,0.2s						
T1217				AML	AML		
	comp=N,1835µm,1.6s						
T1217				AML	AML		
	comp=E,1445µm,0.2s						
T1217				AML	AML		
	comp=N,1825µm,1.6s						
T1217				AML	AML		
	comp=E,1680µm,0.2s						
T1217				AML	AML		
	comp=N,1790µm,1.6s						
T1217				AML	AML		
	comp=E,1450µm,0.2s						
T1217				AML	AML		
	comp=N,1830µm,1.6s						
T1245	**Castelsantange**	0.13	43	P	Pg	16 40 01.9	+0.4
T1245				S	Sg	16 40 04.3	+0.6
T1245				AML	AML		
	comp=E,7580µm,0.7s						
T1245				AML	AML		
	comp=N,8215µm,0.6s						
T1245				AML	AML		
	comp=E,7580µm,0.7s						
T1245				AML	AML		
	comp=E,6370µm,0.7s						
T1245				AML	AML		
	comp=N,7325µm,0.3s						
T1245				AML	AML		
	comp=E,6370µm,1.3s						
T1245				AML	AML		
	comp=N,8215µm,1.4s						
T1245				AML	AML		
	comp=E,7580µm,1.3s						
T1216	**Preci, Frazion**	0.13	344	⇑P	Pg	16 40 01.9	+0.5
T1216				S	Sg	16 40 04.3	+0.6
T1216				AML	AML		
	comp=E,2315µm,0.4s						
T1216				AML	AML		
	comp=N,2925µm,0.4s						
T1216				AML	AML		
	comp=E,2315µm,0.4s						
T1215	**Vallo di Nera,**	0.15	284	⇑P	Pg	16 40 02.2	+0.5
T1215				S	Sg	16 40 04.9	+0.7
T1215				AML	AML		
	comp=N,642µm,1.3s						
T1215				AML	AML		
	comp=E,880µm,0.5s						
T1215				AML	AML		
	comp=N,670µm,0.6s						
T1215				AML	AML		
	comp=E,872µm,0.5s						
T1215				AML	AML		
	comp=N,642µm,1.3s						
T1215				AML	AML		
	comp=E,880µm,0.5s						
T1215				AML	AML		
	comp=N,669µm,0.6s						
T1215				AML	AML		
	comp=N,642µm,0.7s						
T1215				AML	AML		
	comp=N,669µm,1.4s						
MC2	**Monte Cornacci**	0.17	31	⇑P	Pg	16 40 02.7	+0.5
MC2				S	Sg	16 40 05.7	+0.7
MMO1	**Montemonaco**	0.23	54	⇑P	Pg	16 40 03.6	+0.4
MMO1				S	Sg	16 40 07.5	+1.1
SMA1	**SAN MARTINO**	0.24	124	⇓P	Pb	16 40 04.1	-0.6
SMA1				S	Sg	16 40 07.2	+0.6
SMA1				AML	AML		
	comp=N,1225µm,0.7s						
SMA1				AML	AML		
	comp=N,1225µm,1.3s						
SMA1				AML	AML		
	comp=E,1805µm,0.2s						
T1256	**Bolognola (MC)**	0.27	25	⇑P	Pg	16 40 04.2	+0.4
T1256				S	Sb	16 40 09.0	-1.0
T1256				AML	AML		
	comp=E,774µm,0.4s						
T1256				AML	AML		
	comp=N,425µm,0.7s						
CESI	**CESI - Serrava**	0.27	333	⇓P	Pg	16 40 04.4	+0.6
CESI				S	Sg	16 40 08.7	+1.2
CESI				AML	AML		
	comp=N,704µm,0.3s						
CESI				AML	AML		
	comp=N,704µm,1.7s						
CESI				AML	AML		
	comp=E,303µm,1.2s						
FDMO	**Fiordimonte**	0.27	3	⇑P	Pg	16 40 04.2	+0.4
FDMO				S	Sg	16 40 08.6	+1.0
FDMO				AML	AML		
	comp=E,494µm,0.2s						
FDMO				AML	AML		
	comp=N,568µm,1.0s						
FDMO				AML	AML		
	comp=N,568µm,1.0s						
RM33	**Pellescritta (**	0.28	157	P	Pg	16 40 04.3	+0.4
RM33				S	Sb	16 40 09.0	-1.2
RM33				AML	AML		
	comp=E,650µm,0.2s						
RM33				AML	AML		
	comp=E,646µm,0.8s						
RM33				AML	AML		
	comp=N,871µm,1.3s						
RM33				AML	AML		
	comp=E,646µm,0.8s						
RM33				AML	AML		
	comp=N,842µm,1.3s						
RM33				AML	AML		
	comp=E,650µm,0.2s						
RM33				AML	AML		
	comp=N,842µm,0.7s						
RM33				AML	AML		
	comp=N,871µm,0.7s						
RM33				AML	AML		
	comp=E,646µm,1.2s						
T1211	**Morro Reatino**	0.28	214	⇑P	Pg	16 40 04.4	+0.4
T1211				S	Sb	16 40 09.2	-1.0
T1211				AML	AML		
	comp=N,1960µm,0.4s						
T1211				AML	AML		
	comp=N,1955µm,0.4s						
T1211				AML	AML		
	comp=E,1590µm,0.3s						
T1211				AML	AML		
	comp=E,1565µm,0.3s						
T1241	**Roccafluvione,**	0.28	71	⇑P	Pg	16 40 04.5	+0.4
T1241				S	Sb	16 40 09.3	-1.0
T1241				AML	AML		
	comp=E,1570µm,1.3s						
T1241				AML	AML		
	comp=N,1550µm,0.3s						
T1241				AML	AML		
	comp=N,1555µm,0.3s						
T1241				AML	AML		
	comp=N,1480µm,0.3s						
T1241				AML	AML		
	comp=E,1600µm,1.3s						
ARRO	**Arrone**	0.29	231	⇑P	Pg	16 40 04.7	+0.5
ARRO				S	Sb	16 40 09.4	-1.0
ARRO				AML	AML		
	comp=E,668µm,0.2s						
ARRO				AML	AML		
	comp=N,592µm,0.2s						
T1219	**Muccia, Frazio**	0.29	351	P	Pg	16 40 04.5	+0.3
T1219				S	Sg	16 40 09.3	+1.1
T1219				AML	AML		
	comp=E,342µm,0.5s						
T1219				AML	AML		
	comp=E,281µm,0.5s						
T1219				AML	AML		
	comp=N,294µm,1.5s						
T1219				AML	AML		
	comp=N,320µm,0.7s						
T1219				AML	AML		
	comp=N,294µm,0.5s						
T1219				AML	AML		
	comp=E,342µm,1.5s						
CSP1	**Cessapalombo**	0.34	17	⇑P	Pg	16 40 05.5	+0.3
CSP1				S	Sb	16 40 10.9	-1.1
CSP1				AML	AML		
	comp=E,360µm,1.4s						
CSP1				AML	AML		
	comp=N,613µm,0.4s						
T1220	**Camerino, Fraz**	0.35	2	P	Pg	16 40 05.7	+0.5
T1220				S	Sb	16 40 11.3	-0.8
T1220				AML	AML		
	comp=E,1540µm,0.3s						
T1220				AML	AML		
	comp=N,1705µm,1.1s						
T1220				AML	AML		
	comp=N,1710µm,1.1s						
T1220				AML	AML		
	comp=E,1540µm,0.4s						
T1220				AML	AML		
	comp=N,1710µm,0.9s						
GUMA	**Gualdo di Mace**	0.36	33	P	Pb	16 40 06.1	-0.6
GUMA				S	Sb	16 40 12.0	-0.3
GUMA				AML	AML		
	comp=E,1520µm,0.3s						
GUMA				AML	AML		
	comp=N,1040µm,0.6s						
GUMA				AML	AML		
	comp=E,1360µm,0.4s						
GUMA				AML	AML		
	comp=N,1340µm,0.5s						
GUMA				AML	AML		
	comp=E,1515µm,0.3s						

GUMA				AML	AML		
	comp=N,1340µm,1.5s						
T1222	**Castel Sant'An**	**0.36**	**184**	⇑P	Pg	16 40 05.8	+0.3
T1222				S	Sb	16 40 11.5	-1.1
T1222				AML	AML		
	comp=E,570µm,0.9s						
T1222				AML	AML		
	comp=N,477µm,1.4s						
T1222				AML	AML		
	comp=E,480µm,1.3s						
T1222				AML	AML		
	comp=N,406µm,1.6s						
T1222				AML	AML		
	comp=N,477µm,1.4s						
T1222				AML	AML		
	comp=E,480µm,1.3s						
T1222				AML	AML		
	comp=N,406µm,1.6s						
T1222				AML	AML		
	comp=E,570µm,1.1s						
T1222				AML	AML		
	comp=N,406µm,0.4s						
T1222				AML	AML		
	comp=N,477µm,0.6s						
MOMA	**Monte Martano**	**0.37**	**276**	⇑P	Pg	16 40 06.1	+0.4
MOMA				S	Sb	16 40 12.0	-0.8
MOMA				AML	AML		
	comp=E,770µm,0.2s						
MOMA				AML	AML		
	comp=N,652µm,1.6s						
MOMA				AML	AML		
	comp=N,566µm,1.4s						
MOMA				AML	AML		
	comp=E,862µm,0.3s						
MOMA				AML	AML		
	comp=N,652µm,0.4s						
MOMA				AML	AML		
	comp=N,566µm,0.6s						
CESX	**Cesi**	**0.39**	**247**	⇑P	Pg	16 40 06.2	+0.2
CESX				S	Sb	16 40 12.9	-0.5
CESX				AML	AML		
	comp=N,312µm,0.6s						
CESX				AML	AML		
	comp=E,306µm,0.3s						
CESX				AML	AML		
	comp=N,312µm,1.4s						
ASSB	**Assisi San Ben**	**0.41**	**313**	P	Pg	16 40 06.9	+0.5
ASSB				S	Sb	16 40 13.3	-0.6
ASSB				AML	AML		
	comp=E,226µm,0.6s						
ASSB				AML	AML		
	comp=N,200µm,0.4s						
TERO	**Teramo**	**0.42**	**110**	⇑P	Pg	16 40 06.6	+0.1
TERO				S	Sg	16 40 13.1	+1.0
TERO				AML	AML		
	comp=E,460µm,1.5s						
TERO				AML	AML		
	comp=N,603µm,0.1s						
TERO				AML	AML		
	comp=E,506µm,1.3s						
TERO				AML	AML		
	comp=N,672µm,0.1s						
TERO				AML	AML		
	comp=E,506µm,0.7s						
TERO				AML	AML		
	comp=E,460µm,0.5s						
GIGS	**Gran Sasso**	**0.48**	**130**	⇑P	Pg	16 40 07.8	+0.1
GIGS				S	Sg	16 40 15.1	+0.9
GIGS				AML	AML		
	comp=E,67µm,0.9s						
GIGS				AML	AML		
	comp=N,59µm,0.1s						
OFFI	**Offida**	**0.48**	**69**	P	Pb	16 40 08.9	0.0
OFFI				AML	AML		
	comp=E,562µm,0.7s						
OFFI				AML	AML		
	comp=N,700µm,1.1s						
OFFI				AML	AML		
	comp=N,700µm,0.9s						
OFFI				AML	AML		
	comp=E,563µm,0.7s						
FIAM	**Fiamignano**	**0.50**	**176**	P	Pg	16 40 08.2	+0.2
FIAM				S	Sb	16 40 15.6	-0.8
FIAM				AML	AML		
	comp=E,178µm,1.3s						
FIAM				AML	AML		
	comp=N,247µm,0.4s						
FIAM				AML	AML		
	comp=N,247µm,1.6s						
FIAM				AML	AML		
	comp=E,178µm,0.7s						
SNTG	**Esanatoglia**	**0.50**	**349**	⇑P	Pg	16 40 08.1	+0.1
SNTG				S	Sb	16 40 16.4	-0.1
SNTG				AML	AML		
	comp=E,108µm,1.5s						
SNTG				AML	AML		
	comp=N,124µm,0.3s						
SNTG				AML	AML		
	comp=E,108µm,0.5s						
ATCC	**AVT- Casa Cast**	**0.53**	**323**	⇑P	Pg	16 40 09.0	+0.4
ATCC				AML	AML		
	comp=E,174µm,0.8s						
ATCC				AML	AML		
	comp=N,202µm,0.5s						
ATCC				AML	AML		
	comp=N,202µm,1.5s						
ATCC				AML	AML		
	comp=E,174µm,1.2s						
EL6	**Elcito**	**0.56**	**2**	⇑P	Pg	16 40 09.4	+0.1
EL6				AML	AML		
	comp=N,232µm,0.4s						
EL6				AML	AML		
	comp=E,223µm,1.5s						
FAGN	**Fagnano**	**0.63**	**142**	P	Pb	16 40 11.2	-0.1
FAGN				AML	AML		
	comp=E,320µm,0.4s						
FAGN				AML	AML		
	comp=N,192µm,0.3s						
SRES	**S.Oreste - Sor**	**0.67**	**218**	P	Pb	16 40 11.7	-0.4
SRES				AML	AML		
	comp=E,97µm,1.1s						
SRES				AML	AML		
	comp=N,99µm,1.0s						
VCEL	**Villa Celiera**	**0.68**	**123**	P	Pb	16 40 12.2	-0.1
VCEL				AML	AML		
	comp=N,268µm,1.5s						
VCEL				AML	AML		
	comp=E,184µm,0.6s						
VCEL				AML	AML		
	comp=E,184µm,1.4s						
SSFR	**Montelago di S**	**0.70**	**343**	⇑P	Pb	16 40 12.4	-0.2
SSFR				AML	AML		
	comp=N,189µm,0.3s						
SSFR				AML	AML		
	comp=E,183µm,0.2s						
MGAB	**Montegabbione**	**0.72**	**282**	⇓P	Pb	16 40 13.2	+0.3
MGAB				AML	AML		
	comp=E,211µm,1.4s						
MGAB				AML	AML		
	comp=E,202µm,1.5s						
MGAB				AML	AML		
	comp=E,211µm,0.6s						
MGAB				AML	AML		
	comp=E,202µm,0.5s						
MGAB				AML	AML		
	comp=N,193µm,0.4s						
MGAB				AML	AML		
	comp=N,172µm,0.4s						
T0110	**Collepietro**	**0.75**	**135**	⇓P	Pg	16 40 12.6	-0.2
T0110				AML	AML		
	comp=N,144µm,0.3s						
T0110				AML	AML		
	comp=E,144µm,0.5s						
CERT	**Cerreto**	**0.82**	**185**	P	Pb	16 40 14.4	-0.1
CERT				AML	AML		
	comp=N,118µm,0.5s						
CERT				AML	AML		
	comp=E,242µm,0.6s						
CERT				AML	AML		
	comp=N,118µm,1.5s						

ROM 15 16:40:57.3±0.0**, 42°.860N**±0°.002×**13°.165E**±0°.003**,**
h12^{km}**, ML2.1**/25**, 13C-4D, Error ellipse: s-maj=0.2km**
s-min=0.0km az=258.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.02**	**102**	P	Pg	16 40 59.8	+0.1
T1245				S	Sg	16 41 01.4	0.0
T1245				AML	AML		
	comp=E,10040µm,0.2s						
T1245				AML	AML		
	comp=N,17450µm,0.3s						
T1245				AML	AML		
	comp=E,9430µm,0.4s						
T1245				AML	AML		
	comp=N,16350µm,0.3s						
T1245				AML	AML		
	comp=E,10040µm,0.1s						
T1245				AML	AML		
	comp=E,9430µm,1.6s						
MC2	**Monte Cornacci**	**0.06**	**19**	P	Pg	16 41 00.1	+0.1
MC2				S	Sg	16 41 02.0	+0.1
T1214	**Arquata del Tr**	**0.11**	**162**	⇓P	Pg	16 41 00.7	+0.3
T1214				S	Sg	16 41 03.1	+0.4
T1214				AML	AML		
	comp=E,2400µm,0.8s						
T1214				AML	AML		
	comp=E,2585µm,0.8s						
T1214				AML	AML		
	comp=N,2480µm,0.4s						
T1214				AML	AML		
	comp=N,2295µm,0.3s						
T1216	**Preci, Frazion**	**0.11**	**286**	⇑P	Pg	16 41 00.8	+0.3
T1216				S	Sg	16 41 03.1	+0.5
T1216				AML	AML		
	comp=E,1510µm,1.2s						
T1216				AML	AML		
	comp=N,1720µm,1.3s						
T1216				AML	AML		
	comp=E,1510µm,0.8s						
MMO1	**Montemonaco**	**0.12**	**72**	P	Pg	16 41 00.9	+0.3
MMO1				S	Sg	16 41 03.1	+0.1
FEMA	**Monte Fema**	**0.13**	**320**	P	Pg	16 41 01.2	+0.4
FEMA				S	Sg	16 41 03.8	+0.5
T1212	**Cascia, Frazio**	**0.14**	**219**	P	Pg	16 41 01.3	+0.5
T1212				S	Sg	16 41 03.9	+0.6
T1212				AML	AML		
	comp=E,2170µm,0.3s						
T1212				AML	AML		
	comp=E,2220µm,0.3s						
T1212				AML	AML		
	comp=N,3090µm,0.2s						
T1212				AML	AML		
	comp=N,3095µm,0.2s						
T1212				AML	AML		
	comp=E,2170µm,0.3s						
T1212				AML	AML		
	comp=E,2220µm,0.2s						
T1256	**Bolognola (MC)**	**0.15**	**17**	P	Pg	16 41 01.4	+0.3
T1256				S	Sg	16 41 04.2	+0.4
T1256				AML	AML		
	comp=E,295µm,0.6s						
T1256				AML	AML		
	comp=N,441µm,1.2s						
T1256				AML	AML		
	comp=E,295µm,1.4s						
FDMO	**Fiordimonte**	**0.18**	**342**	P	Pg	16 41 01.8	+0.3
FDMO				S	Sg	16 41 05.0	+0.6
FDMO				AML	AML		
	comp=E,344µm,0.8s						
FDMO				AML	AML		
	comp=N,309µm,1.1s						
FDMO				AML	AML		
	comp=E,344µm,1.2s						
T1218	**Civita (PG)**	**0.19**	**191**	P	Pg	16 41 02.1	+0.4
T1218				S	Sg	16 41 05.5	+0.9
T1218				AML	AML		
	comp=N,1635µm,0.2s						
T1218				AML	AML		
	comp=E,1290µm,0.2s						
T1218				AML	AML		
	comp=E,1325µm,0.2s						
T1218				AML	AML		
	comp=E,1295µm,0.2s						
T1218				AML	AML		
	comp=N,1620µm,0.2s						
T1241	**Roccafluvione,**	**0.20**	**91**	⇑P	Pg	16 41 02.0	+0.4
T1241				S	Sg	16 41 05.3	+0.7
T1241				AML	AML		
	comp=N,2355µm,0.7s						
T1241				AML	AML		
	comp=N,2490µm,0.7s						
T1241				AML	AML		
	comp=E,2005µm,0.2s						
T1241				AML	AML		
	comp=E,1810µm,0.2s						
T1215	**Vallo di Nera,**	**0.23**	**255**	⇑P	Pg	16 41 02.6	+0.4
T1215				S	Sg	16 41 06.4	+0.9
T1215				AML	AML		
	comp=E,282µm,1.1s						
T1215				AML	AML		
	comp=N,380µm,0.9s						
T1215				AML	AML		
	comp=N,380µm,1.1s						
T1215				AML	AML		
	comp=E,282µm,0.9s						
T1217	**Poggiodomo (PG**	**0.23**	**229**	P	Pg	16 41 02.6	+0.4
T1217				S	Sg	16 41 06.6	+1.1
T1217				AML	AML		
	comp=E,256µm,1.2s						
T1217				AML	AML		
	comp=E,257µm,1.2s						
T1217				AML	AML		
	comp=N,402µm,0.5s						
T1219	**Muccia, Frazio**	**0.23**	**329**	P	Pg	16 41 02.6	+0.3
T1219				S	Sg	16 41 06.4	+0.8
T1219				AML	AML		
	comp=E,593µm,0.2s						
T1219				AML	AML		
	comp=N,826µm,0.3s						
T1219				AML	AML		
	comp=E,573µm,0.2s						
T1219				AML	AML		
	comp=N,830µm,0.3s						
T1219				AML	AML		
	comp=E,593µm,0.2s						
T1219				AML	AML		
	comp=N,830µm,0.2s						
T1219				AML	AML		
	comp=E,573µm,0.2s						
T1219				AML	AML		
	comp=N,826µm,0.2s						
GUMA	**Gualdo di Mace**	**0.24**	**32**	P	Pb	16 41 03.0	-0.6
GUMA				S	Sg	16 41 07.5	+1.6
GUMA				AML	AML		
	comp=E,992µm,0.3s						
GUMA				AML	AML		
	comp=N,900µm,0.7s						
GUMA				AML	AML		
	comp=N,900µm,1.3s						
CESI	**CESI - Serrava**	**0.24**	**307**	P	Pg	16 41 02.9	+0.4
CESI				S	Sg	16 41 06.9	+1.0
CESI				AML	AML		
	comp=E,1084µm,0.2s						
CESI				AML	AML		
	comp=N,1440µm,0.2s						
T1220	**Camerino, Fraz**	**0.26**	**347**	P	Pg	16 41 03.1	+0.4
T1220				S	Sb	16 41 07.6	-0.7
T1220				AML	AML		
	comp=E,1102µm,1.2s						
T1220				AML	AML		
	comp=N,1310µm,0.6s						
T1220				AML	AML		
	comp=E,1102µm,1.2s						
T1220				AML	AML		
	comp=N,1310µm,0.6s						
T1220				AML	AML		
	comp=E,1099µm,1.2s						
T1220				AML	AML		
	comp=E,1099µm,0.8s						
SMA1	**SAN MARTINO**	**0.26**	**151**	P	Pg	16 41 03.0	+0.2
SMA1				S	Sg	16 41 07.4	+0.8
SMA1				AML	AML		
	comp=N,448µm,1.0s						
SMA1				AML	AML		
	comp=E,412µm,1.2s						
SMA1				AML	AML		
	comp=E,412µm,0.8s						
SMA1				AML	AML		
	comp=N,448µm,1.0s						
RM33	**Pellescritta (**	**0.35**	**174**	⇓P	Pg	16 41 04.8	+0.3
RM33				AML	AML		
	comp=E,280µm,0.3s						
RM33				AML	AML		
	comp=N,244µm,0.2s						
TERO	**Teramo**	**0.40**	**126**	⇑P	Pg	16 41 05.3	0.0
TERO				AML	AML		
	comp=E,336µm,1.1s						
TERO				AML	AML		
	comp=E,314µm,1.1s						
TERO				AML	AML		
	comp=N,318µm,1.2s						
TERO				AML	AML		
	comp=N,318µm,0.8s						
TERO				AML	AML		
	comp=N,290µm,0.6s						
TERO				AML	AML		
	comp=E,336µm,0.9s						
TERO				AML	AML		
	comp=E,314µm,0.9s						
ASSB	**Assisi San Ben**	**0.41**	**296**	⇑P	Pg	16 41 05.8	+0.2
ASSB				AML	AML		
	comp=E,198µm,0.7s						
ASSB				AML	AML		
	comp=N,192µm,1.2s						
SNTG	**Esanatoglia**	**0.43**	**337**	⇑P	Pg	16 41 06.0	+0.2
SNTG				AML	AML		
	comp=E,66µm,1.3s						
SNTG				AML	AML		
	comp=N,69µm,1.1s						
T1247	**Pizzolo (AQ)**	**0.43**	**167**	S	Sb	16 41 13.1	-0.2
MOMA	**Monte Martano**	**0.44**	**263**	P	Pb	16 41 06.6	-0.5
MOMA				AML	AML		
	comp=N,341µm,1.1s						
MOMA				AML	AML		
	comp=E,429µm,0.2s						
MOMA				AML	AML		
	comp=E,463µm,0.2s						
MOMA				AML	AML		
	comp=N,341µm,1.1s						
MOMA				AML	AML		
	comp=N,262µm,0.5s						
EL6	**Elcito**	**0.47**	**354**	⇑P	Pg	16 41 06.9	+0.2
EL6				AML	AML		
	comp=N,152µm,1.3s						
EL6				AML	AML		
	comp=E,142µm,0.3s						
EL6				AML	AML		
	comp=N,152µm,1.3s						
EL6				AML	AML		
	comp=E,142µm,1.7s						
EL6				AML	AML		
	comp=N,152µm,0.7s						
ATCC	**AVT- Casa Cast**	**0.50**	**310**	⇑P	Pb	16 41 07.8	-0.3
ATCC				AML	AML		
	comp=E,126µm,0.3s						
ATCC				AML	AML		
	comp=N,101µm,0.7s						
GIGS	**Gran Sasso**	**0.51**	**144**	⇑P	Pg	16 41 07.1	-0.2
GIGS				AML	AML		
	comp=E,54µm,1.5s						
GIGS				AML	AML		
	comp=N,60µm,0.7s						
SSFR	**Montelago di S**	**0.64**	**334**	⇑P	Pg	16 41 08.3	-1.5
ARVD	**Arcevia**	**0.66**	**346**	S	Sn	16 41 21.4	-1.4
ATFO	**Monte Foce - G**	**0.67**	**320**	⇓P	Pg	16 41 10.5	+0.1
FAGN	**Fagnano**	**0.67**	**152**	⇓P	Pg	16 41 10.6	+0.3
VCEL	**Villa Celiera**	**0.68**	**133**	⇑P	Pg	16 41 10.6	0.0
ATTE	**AVT- Monte Tez**	**0.68**	**300**	P	Pg	16 41 10.6	-0.1
ATTE				AML	AML		
	comp=E,40µm,0.7s						
ATTE				AML	AML		
	comp=N,48µm,1.5s						
ATTE				AML	AML		
	comp=N,48µm,0.5s						
FRON	**Frontone**	**0.73**	**334**	P	Pg	16 41 10.7	-0.8
T0110	**Collepietro**	**0.78**	**144**	⇑P	Pg	16 41 12.1	-0.3
PIEI	**Pieia**	**0.82**	**326**	⇑P	Pg	16 41 13.3	+0.1
PIEI				S	Sn	16 41 26.1	-0.6

IDC ***15*** *16:45:04.9±1.1, 20°.31S×172°.52E, h0^{km}, mb3.9/5, mbtmp3.9/8, ML4.2/3, MS3.6/10, Error ellipse: s-maj=43.4km s-min=21.2km az=152.0*

ISC 15 16:45:09.9±0.8**, 20°.3S**±0°.2×**172°.5E**±0°.1**, h35**^{km}**, n23,**
σ**0^{s}.77**/16**, mb3.8**/5**, MS3.6**/7**, 1D, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
YATNC	**Mamie plateau,**	**5.53**	**251**	P	**Pn**	**16 46 29.5**	**-0.3**
OUENC	**Ouen Island, N**	**5.69**	**248**	P	**Pn**	**16 46 32.6**	**+0.7**
MSVF	**Nonsavu**	**5.83**	**65**	Pn	**Pn**	**16 46 34.6**	**+0.6**
	1.0nm,0.3s,baz=241,slow=14,SNR=5.4						
MSVF				LR	LR	16 48 30.9	
	comp=Z,268nm,19.3s,baz=201,slow=35						
	4.5nm,0.8s						
DZM	**Mont Dzumac**	**5.93**	**252**	Pn	**Pn**	**16 46 35.4**	**0.0**
	1.2nm,0.3s,baz=150,slow=11,SNR=13						
	8.4nm,0.6s						
DZM	**Mont Dzumac**	**5.93**	**252**	P	**Pn**	**16 46 36.3**	**+0.9**
ONTNC	**Ouen Toro**	**5.99**	**250**	P	**Pn**	**16 46 36.3**	**+0.2**
NOUC	**Port Laguerre**	**6.06**	**252**	P	**Pn**	**16 46 37.6**	**+0.5**
HNR	**Honiara**	**16.28**	**310**	LR	LR	16 54 25.5	
	comp=Z,1µm,18.8s,baz=117,slow=34						
URZ	**Urewera**	**18.29**	**168**	P	**P**	**16 49 20.6**	**-0.2**
	0.2nm,0.3s,baz=75,slow=8.7,SNR=4.2						
URZ				LR	LR	16 54 36.0	
	comp=Z,148nm,20.9s,baz=90,slow=31						
	14nm,0.9s						
RPZ	**Rata Peaks**	**23.34**	**183**	LR	LR	16 57 43.1	
	comp=Z,134nm,18.7s,baz=203,slow=32						
STKA	**Stephens Creek**	**29.95**	**241**	P	**P**	**16 51 14.9**	**-0.1**
	4.2nm,1.0s,baz=64,slow=9.0,SNR=3.7						
	4.2nm,1.0s						
WRA	**Warramunga Arr**	**35.80**	**264**	P	**P**	**16 52 05.7**	**-0.5**
	1.4nm,1.1s,baz=102,slow=8.5,SNR=2.2						
	1.4nm,1.1s						
ASAR	**Alice Springs**	**35.89**	**257**	P	**P**	**16 52 06.6**	**-0.4**
	1.1nm,0.8s,baz=86,slow=8.4,SNR=5.2						
	1.1nm,0.8s						
GUMO	**Guam**	**43.32**	**319**	LR	LR	17 09 07.3	
	comp=Z,83nm,19.7s,baz=143,slow=33						
SIJI	**Sorong**	**44.72**	**290**	LR	LR	17 11 17.5	
	comp=Z,48nm,18.8s,baz=99,slow=35						
ASAJ	**Asahikawa**	**69.76**	**337**	LR	LR	17 19 51.0	
	comp=Z,40nm,20.8s,baz=158,slow=30						
PETK	**Petropavlovsk-**	**74.27**	**351**	LR	LR	17 27 31.3	
	comp=Z,21nm,19.8s,baz=187,slow=34						
MA2	**Magadan**	**81.60**	**349**	LR	LR	17 26 54.5	
	comp=Z,29nm,19.9s,baz=172,slow=31						
KDAK	**Kodiak Island**	**83.08**	**18**	LR	LR	17 24 49.0	
	comp=Z,76nm,21.3s,baz=212,slow=29						
NVAR	**Mina Array Bea**	**87.24**	**47**	P	**P**	**16 57 51.8**	**-1.4**
	0.6nm,0.8s,baz=230,slow=7.0,SNR=2.8						
	0.6nm,0.8s						
ILAR	**Eielson Array**	**90.39**	**16**	P	**P**	**16 58 06.9**	**-0.2**
	0.3nm,0.7s,baz=220,slow=5.4,SNR=4.7						
	0.3nm,0.7s						
CLL	**Collm**	**145.17**	**337**	⇓*i*PKPbc	**PKPdf**	**17 04 45.1**	**+1.5**
	comp=Z,11nm,0.7s						
CLL				*i* PKPab	**PKiKP**	**17 04 48.4**	**+0.9**
	comp=Z,6.0nm,0.8s						
GERES	**GERESS Array B**	**146.88**	**334**	PKPbc	**PKPab**	**17 04 49.8**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=38,slow=2.4,SNR=15						

DJA 15 16:49:56.8±0.3**, 2°N**±3°×**12°6E**±°**, h10**^{km}**, M3.5**/8**, mB5.3**/1**,**
MLv3.5/8**, Mw(mB)4.7**/1**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.25**	**359**	P	Pn	16 50 18.7	-1.6
SGSI				S	Sn	16 50 37.2	0.0
TNTI	**Ternate**	**2.44**	**132**	P	Pn	16 50 38.8	+2.0
GTOI	**Gorontalo**	**3.11**	**235**	P	Pn	16 50 47.0	+1.1
LBMI	**Labuha**	**3.61**	**147**	P	Pn	16 50 53.8	+0.9
MRSI	**Marisa**	**4.11**	**242**	P	Pn	16 51 00.2	+0.5
SANI	**Sanana**	**4.47**	**175**	P	Pn	16 51 03.3	-1.4
NLAI	**Namlea**	**5.84**	**165**	P	Pn	16 51 23.2	-0.3

ANF ***15*** *16:51:09.4±0.4, 36°.83N×89°.11W, h0^{km}, ML4.7/7, Error ellipse: s-maj=5.2km s-min=3.6km az=4.0*

IDC ***15*** *16:51:09.1±0.8, 36°.96N×89°.10W, h0^{km}, mb3.9/5, mbtmp4.0/9, ML3.5/4, Error ellipse: s-maj=12.5km s-min=8.2km az=13.0*

*SLM **15** 16:51:10.1±1.4,36.°882N±0.°007×89.°12W±0.°01,h8^{km}±4^{km}, Mwr3.6,mb_Lg3.9/183(NEIC),ML4.0/30(NEIC),Error ellipse: s-maj=1.9km s-min=0.4km az=123.0*

*NEIC **15** 16:51:10.2±1.1,36.°88N±0.°01×89.°13W±0.°01,h4^{km}±3^{km}, Error ellipse: s-maj=1.8km s-min=1.7km az=87.0*

ISC 15 16:51:09.5±0.7**,36.°84N**±0.°02×**89.°16W**±0.°02**,h19**^{km}±2^{km}**, n307,σ1.°71**/315**,mb4.0**/5**,New Madrid region, Missouri**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHRM	Charleston	0.16	273		Pg	16 51 13.7	-0.3
CHRM					Sg	16 51 17.0	-0.1
EPRM	East Prairie	0.20	232		Pg	16 51 14.6	0.0
EPRM					Sg	16 51 18.5	+0.5
FMKY	Fulgham	0.27	131		Pb	16 51 15.0	-0.7
DWDM	Dogwood	0.27	260		Pb	16 51 15.8	+0.1
HENM	Henderson Moun	0.28	243		Pb	16 51 16.1	+0.2
HENM					Sb	16 51 20.9	+0.7
HICK	Hickman	0.31	190		Pb	16 51 16.2	-0.3
HICK				IAML		16 51 29.1	
	comp=E,13µm,0.3s						
SJMO	Saint John's B	0.33	230		Pb	16 51 17.0	+0.1
MATM	Matthews	0.36	259		Pb	16 51 17.5	+0.1
KEWM	Kewanee	0.38	248		Pb	16 51 17.9	+0.2
KEWM					Sb	16 51 23.7	+0.5
NMMO	New Madrid	0.40	231		Pb	16 51 18.4	+0.2
NMMO					Sb	16 51 24.8	+0.8
WALK	Watson Lake	0.43	226		Pb	16 51 18.8	+0.2
WALK					Sb	16 51 25.6	+0.8
NMEM	New Madrid Sch	0.43	232		Pb	16 51 19.1	+0.4
T45B	Paducah	0.45	67	P	Pg	16 51 17.6	-1.1
	baz=251,SNR=194						
T45B				S	Sg	16 51 23.7	-1.1
	baz=251						
T45A	Paducah	0.45	67		Pg	16 51 17.4	-1.3
T45A				IAML		16 51 29.7	
	comp=N,11µm,0.7s						
FLPT	Flippin	0.45	197		Pb	16 51 19.3	+0.3
CATM	Catron	0.45	240		Pb	16 51 19.2	+0.3
CATM					Sb	16 51 26.4	+1.0
COKM	Charter Oak	0.47	254		Pb	16 51 19.5	+0.2
PARMO	Parma	0.51	250		Pb	16 51 19.9	+0.1
PARMO					Sb	16 51 27.4	+0.6
PARMO				IAML		16 51 28.2	
	comp=E,8µm,0.2s						
PARMO				IAML		16 51 38.7	
	comp=N,8µm,0.2s						
MARMO	Marston	0.51	233		Pb	16 51 20.4	+0.5
MARMO					Sb	16 51 28.2	+1.2
MCIL	McClure	0.53	329		Pb	16 51 19.9	-0.3
PENMO	Penman	0.54	224		Pb	16 51 20.9	+0.4
GUAMO	Guam	0.55	275		Pb	16 51 20.7	+0.2
GUAMO					Sb	16 51 28.8	+0.9
UTMT	University of	0.55	154		Pb	16 51 20.3	-0.2
UTMT				Sg	Sb	16 51 28.2	+0.1
UTMT				IAML		16 51 32.8	
	comp=N,9µm,0.8s						
PPLM	Point Pleasant	0.56	218		Pb	16 51 21.1	+0.5
WYBT	Wynnburg	0.56	209		Pb	16 51 21.3	+0.6
GLAT	Glass	0.58	190		Pb	16 51 21.3	+0.3
GLAT				Sg	Sb	16 51 30.0	+1.1
GLAT				IAML		16 51 32.5	
	comp=E,6µm,0.4s						
GLAT				IAML		16 51 39.4	
	comp=N,7µm,0.5s						
POBM	Portage Bay	0.59	223		Pb	16 51 21.8	+0.6
PGVM	Portageville	0.59	230		Pb	16 51 21.9	+0.6
CGM3	Cape Girardeau	0.60	319		Pb	16 51 21.1	-0.3
CGM3				Sg	Sg	16 51 28.7	-1.0
PVMO	Portageville	0.61	226		Pb	16 51 21.9	+0.4
PVMO				Sg	Sb	16 51 30.2	+0.5
PVMO				IAML		16 51 40.0	
	comp=E,6µm,0.3s						
PVMO				IAML		16 51 41.4	
	comp=N,8µm,0.5s						
MLDM	Malden	0.65	251		Pb	16 51 22.8	+0.6
TOPM	Tallapoosa	0.67	242		Pb	16 51 23.1	+0.6
BRNM	Bernie	0.68	260		Pb	16 51 23.1	+0.3
WADM	Wardell	0.70	227		Pb	16 51 23.8	+0.7
MIST	Miston	0.72	202		Pb	16 51 24.2	+0.7
BETM	Bethany	0.76	253		Pb	16 51 24.7	+0.5
LNXT	Lenox	0.79	200		Pb	16 51 25.0	+0.4
LNXT				Sg	Sb	16 51 37.0	+2.1
LNXT	Lenox	0.79	200	P	Pb	16 51 25.4	+0.8
	baz=21,SNR=105						
RELT	Roellen	0.82	188		Pb	16 51 26.0	+0.9
BRGM	Braggadocio	0.85	222		Pb	16 51 26.5	+0.8
S44A	Carbondale	0.85	355		Pg	16 51 25.1	-1.1
S44A				Sg	Sg	16 51 35.5	-2.1
S44A	Carbondale	0.85	355	P	Pb	16 51 25.3	-0.5
	baz=173,SNR=199						
LLKY	Land-Between-t	0.86	84		Pg	16 51 25.2	-1.0
FPST	Four Points	0.90	195		Pn	16 51 27.5	+0.4
CWPT	Cottonwood Poi	0.91	204		Pn	16 51 27.9	+0.6
PEBM	Pemiscott Bayo	0.92	218		Pb	16 51 27.6	+0.6
PEBM				Sg	Sb	16 51 39.7	+0.9
PEBM				IAML		16 51 52.7	
	comp=E,4µm,0.4s						
HALT	Halls	0.94	189		Pb	16 51 27.6	+0.4
HALT				Sg	Sn	16 51 41.7	+1.0
HALT				IAML		16 51 45.9	
	comp=N,3µm,0.2s						
HALT				IAML		16 51 46.0	
	comp=E,3µm,0.4s						
CHNM	Channel	1.01	218		Pn	16 51 29.6	+0.9
PBMO	Poplar Bluff	1.02	267		Pb	16 51 28.8	+0.1
PBMO				Sg	Sb	16 51 42.4	+0.7
PBMO				IAML		16 51 48.0	
	comp=N,5µm,0.3s						
PBMO	Poplar Bluff	1.02	267	P	Pb	16 51 28.9	+0.3
	baz=84,SNR=98						
PBMO				S	Sb	16 51 42.7	+1.0
	baz=84						
EDIT	Edith	1.03	198		Pn	16 51 30.0	+1.0
GNAR	Gosnell	1.12	219		Pn	16 51 31.2	+1.1
GNAR				Sg	Sn	16 51 47.0	+2.0
GNAR				IAML		16 51 56.4	
	comp=N,4µm,0.4s						
ARPT	Arp	1.16	201		Pn	16 51 32.3	+1.5
WVT	Waverly	1.29	123		Pg	16 51 32.4	-1.9
WVT				Sg	Sb	16 51 50.5	+1.2
WVT				IAML		16 51 53.3	
	comp=N,3µm,0.1s						
WVT				IAML		16 51 53.4	
	comp=N,3µm,0.1s						
WVT	Waverly	1.29	123	P	Pg	16 51 32.5	-1.9
	baz=306						
WVT	Waverly	1.29	123	P	Pg	16 51 32.5	-1.9
	baz=306						
FVM	French Village	1.52	319		Pn	16 51 36.9	+1.1
FVM	French Village	1.52	319	P	Pn	16 51 36.7	+0.9
	baz=136,SNR=246						
FVM				S	Sb	16 51 56.8	+0.7
	baz=136						
LPAR	Lepanto	1.54	217		Pg	16 51 38.1	-1.2
T42A	Van Buren	1.56	277		Pb	16 51 37.7	-0.1
NHIN	New Harmony	1.61	37		Pb	16 51 38.9	+0.1
USIN	University of	1.64	46		Pb	16 51 38.5	-0.6
SFTN	Shelby Forest	1.64	205		Pb	16 51 39.4	+0.3
T47A	Sharon Grove	1.65	84		Pn	16 51 38.6	+1.0
T47A	Sharon Grove	1.65	84	P	Pn	16 51 38.4	+0.8
	baz=267						
T47A				S	Sb	16 52 00.2	+0.3
	baz=267						
W45A	Hickory Valley	1.68	181	Pn	Pn	16 51 39.1	+1.1
W45A	Hickory Valley	1.68	181	P	Pb	16 51 39.6	-0.3
	baz=1.7,SNR=27						
EBZ	Ebenezer Churc	1.71	185		Pb	16 51 40.5	+0.2
HBAR	Harrisburg	1.77	224		Pb	16 51 41.1	-0.2
HBAR	Harrisburg	1.77	224	P	Pg	16 51 42.2	-1.3
	baz=43,SNR=14						
LCAR	Lake Charles	1.78	245	Pn	Pb	16 51 41.4	-0.2
LCAR	Lake Charles	1.78	245	P	Pb	16 51 42.0	+0.4
	baz=63,SNR=75						
MET	Memphis--Engin	1.83	200	Pn	Pn	16 51 41.6	+1.6
SLM	Saint Louis	1.98	335		Pb	16 51 44.2	-0.8
SLM				IAmb_Lg		16 52 12.9	
	comp=Z,653nm,0.7s						
SLM	Saint Louis	1.98	335	P	Pb	16 51 45.1	0.0
	baz=153,SNR=11						
SLM				S	Sb	16 52 10.4	+1.0
	baz=153						
CCM	Cathedral Cave	2.05	307	Pn	Pn	16 51 45.0	+1.9
CCM	Cathedral Cave	2.05	307	P	Pb	16 51 45.9	-0.3
	baz=124						
CCM				S	Sb	16 52 12.8	+1.4
	baz=124						
CCM	Cathedral Cave	2.05	307	P	Pb	16 51 45.4	-0.8
	baz=124,SNR=414						
CCM				S	Sb	16 52 12.9	+1.4
	baz=124						
PLAL	Pickwick Lake	2.05	154		Pn	16 51 44.3	+1.2
PLAL				IAmb_Lg		16 52 16.4	
	comp=Z,415nm,0.7s						
PWLA	Pickwick Lake	2.06	154		Pn	16 51 44.5	+1.3
Q44A	Meyer Farm, Va	2.06	3	Pn	Pn	16 51 44.5	+1.3
Q44A	Meyer Farm, Va	2.06	3	P	Pb	16 51 46.0	-0.4
	baz=182,SNR=12						
Q44A				S	Sn	16 52 10.6	+2.2
	baz=182						
OLIL	Olney	2.07	24		Pn	16 51 45.1	+1.8
OLIL	Olney	2.07	24	P	Pb	16 51 45.9	-0.5
	baz=204,SNR=14						
OLIL				S	Sb	16 52 13.0	+1.2
	baz=204						
V48A	Smith Brothers	2.19	120		Pn	16 51 46.6	+1.7
V48A				IAmb_Lg		16 52 20.0	
	comp=Z,640nm,0.7s						
V48A	Smith Brothers	2.19	120	P	Pn	16 51 47.1	+2.1
	baz=302,SNR=93						
OXF	Oxford	2.33	185		Pn	16 51 48.6	+1.7
FCAR	Ozark Folk Cen	2.57	249		Pn	16 51 53.1	+2.9
WCI	Wyandotte Cave	2.67	58		Pn	16 51 53.2	+1.7
WCI				IAmb_Lg		16 52 32.7	
	comp=Z,273nm,0.7s						
WCI	Wyandotte Cave	2.67	58	P	Pn	16 51 53.8	+2.3
	baz=240						
WCI				Sb	Sb	16 52 31.1	+2.0
	baz=240						
WCI	Wyandotte Cave	2.67	58	P	Pn	16 51 53.7	+2.3
	baz=240,SNR=27						
U49A	Red Boiling Sp	2.74	96		Pn	16 51 54.4	+1.9
U49A	Red Boiling Sp	2.74	96	P	Pn	16 51 55.5	+3.0
	baz=279,SNR=96						
P43A	Skaggs, Pawnee	2.81	354	Pn	Pn	16 51 55.7	+2.2
P43A	Skaggs, Pawnee	2.81	354	P	Pb	16 51 56.9	-2.2
	baz=173,SNR=26						
R40A	Maddies Statio	2.86	301		Pn	16 51 56.7	+2.5
R40A	Maddies Statio	2.86	301	P	Pn	16 51 57.0	+2.8
	baz=118,SNR=40						
X48A	Hartselle	2.94	144		Pn	16 51 56.8	+1.5
X48A	Hartselle	2.94	144	P	Pn	16 51 57.4	+2.0
	baz=326,SNR=148						
WHAR	Wooly Hollow	2.97	239		Pn	16 51 58.1	+2.4
WHAR				IAmb_Lg		16 52 47.2	
	comp=Z,310nm,0.9s						
Y45A	Yeager Farm, C	2.99	186	Pn	Pn	16 51 58.0	+2.1
SWET	Sewanee	3.08	121		Pn	16 51 59.0	+1.8
BLO	Bloomington	3.12	41	Pn	Pn	16 51 58.5	+0.7
BLO				IAmb_Lg		16 52 50.1	
	comp=Z,235nm,0.7s						
P46A	Rosedale	3.17	28		Pn	16 52 00.3	+1.9
UALR	University of	3.31	232		Pn	16 52 02.5	+2.2
O44A	Mansfield	3.35	9		Pn	16 52 02.5	+1.6
O44A				IAmb_Lg		16 52 56.9	
	comp=Z,352nm,0.7s						
S39A	Bolivar	3.43	286	Pn	Pn	16 52 02.9	+0.9
S39A				IAmb_Lg		16 53 02.0	
	comp=Z,304nm,0.9s						
T50A	Nancy	3.47	86		Pn	16 52 04.4	+1.9
T50A				IAmb_Lg		16 52 58.3	
	comp=Z,275nm,0.9s						
T50A	Nancy	3.47	86	P	Pn	16 52 05.3	+2.8
	baz=269						
T50A				P	Pn	16 52 05.3	+2.8
	baz=269						
R49A	Shelbyville	3.48	64	Pn	Pn	16 52 02.5	-0.2
R49A				IAmb_Lg		16 53 05.9	
	comp=Z,235nm,0.9s						
R49A	Shelbyville	3.48	64	P	Pn	16 52 04.9	+2.1
	baz=247,SNR=11						
R49A				P	Pn	16 52 04.9	+2.1
	baz=247,SNR=11						
R49A				S	Sn	16 52 46.9	+3.4
	baz=247						
R49A				S	Sn	16 52 46.9	+3.4
	baz=247						
P40A	Paris	3.52	321	Pn	Pn	16 52 04.9	+1.7
P40A				IAmb_Lg		16 53 05.7	
	comp=Z,247nm,0.8s						
P40A	Paris	3.52	321	P	Pn	16 52 06.6	+3.4
	baz=138						
W50A	Signal Mountai	3.52	117	Pn	Pn	16 52 04.9	+1.5
W50A				IAmb_Lg		16 53 04.7	
	comp=Z,296nm,0.7s						
W50A	Signal Mountai	3.52	117	P	Pn	16 52 05.7	+2.4
	baz=300,SNR=34						
DYTN	Dayton	3.56	111		Pn	16 52 05.7	+1.9
RCG	Rock City	3.61	120		Pn	16 52 09.0	+4.5
CCAR	Cane Creek	3.62	217	IAmb_Lg		16 53 14.6	
	comp=Z,219nm,0.7s						
FPAL	Fort Paine	3.69	127	Pn	Pn	16 52 07.7	+2.1
FPAL				IAmb_Lg		16 53 13.2	
	comp=Z,204nm,0.7s						
HDIL	Hopedale	3.71	358	Pn	Pn	16 52 07.6	+1.7
Y49A	Blount Mountai	3.73	142	Pn	Pn	16 52 06.7	+0.5
Y49A				IAmb_Lg		16 53 11.7	
	comp=Z,311nm,0.7s						
Y49A	Blount Mountai	3.73	142	P	Pn	16 52 07.7	+1.5
	baz=325,SNR=23						
Y49A				Sb	Sb	16 53 04.3	+4.6
	baz=325						
Z47A	Carrollton	3.74	166	Pn	Pn	16 52 07.1	+0.8
Z47A				IAmb_Lg		16 53 10.4	
	comp=Z,240nm,0.9s						
Z47A	Carrollton	3.74	166	P	Pn	16 52 08.6	+2.2
	baz=347,SNR=10						
Z47A				S	Sn	16 52 51.9	+2.0
	baz=347						
X40A	Basin Creek Fa	3.80	233	Pn	Pn	16 52 08.6	+1.4
X40A	Basin Creek Fa	3.80	233	P	Pn	16 52 08.9	+1.8
	baz=50,SNR=16						
X40A				P	Pn	16 52 08.9	+1.8
	baz=50,SNR=16						
BCRT	Bacon Ridge	3.85	105		Pn	16 52 11.9	+4.0
SFIN	Lafayette	3.88	24	Pn	Pn	16 52 09.0	+0.7
SFIN				IAmb_Lg		16 53 15.0	
	comp=Z,352nm,0.9s						
SFIN	Lafayette	3.88	24	P	Pn	16 52 10.5	+2.2
	baz=205						
SFIN	Lafayette	3.88	24	P	Pn	16 52 10.1	+1.8
	baz=205,SNR=13						
SFIN				Sb	Sb	16 53 06.5	+2.5
	baz=205						
HHAR	Hobbs	3.89	263	Pn	Pn	16 52 10.8	+2.5
P48A	Milroy	3.94	47	Pn	Pn	16 52 09.1	+0.1
P48A				IAmb_Lg		16 53 16.3	
	comp=Z,259nm,0.8s						
CPCT	Cooper Cave	4.00	109	Pn	Pn	16 52 11.8	+1.9
CMGA	Chestnut Mount	4.02	122		Pn	16 52 12.7	+2.6
V51A	Loudon	4.02	104	Pn	Pn	16 52 12.2	+2.1
V51A				IAmb_Lg		16 53 17.4	
	comp=Z,225nm,0.9s						
V51A	Loudon	4.02	104	P	Pn	16 52 13.0	+2.8
	baz=287,SNR=28						
N41A	Harden Midland	4.08	342	Pn	Pn	16 52 12.4	+1.5
N41A	Harden Midland	4.08	342	P	Pn	16 52 13.4	+2.4
	baz=160,SNR=12						
ETT	Etowah	4.10	110		Pn	16 52 14.6	+3.3
R50A	Paris	4.10	68	Pn	Pn	16 52 12.9	+1.7
R50A				IAmb_Lg		16 53 20.9	
	comp=Z,328nm,0.9s						
R50A	Paris	4.10	68	Sn	Sn	16 53 01.1	+2.4
	baz=251						
R50A				Sn	Sn	16 53 01.1	+2.4
	baz=251						
X51A	Calhoun	4.17	122	Pn	Pn	16 52 13.9	+1.7
GRBT	Greenback	4.18	105		Pn	16 52 16.4	+4.1
LRAL	Lakeview Retre	4.19	154	Pn	Pn	16 52 12.6	+0.1
LRAL				IAmb_Lg		16 53 27.3	
	comp=Z,168nm,0.8s						
LRAL	Lakeview Retre	4.19	154	P	Pn	16 52 13.7	+1.1
	baz=336						
LRAL	Lakeview Retre	4.19	154	P	Pn	16 52 13.6	+1.1
	baz=336						
U38A	Gravette	4.22	266	Pn	Pn	16 52 15.3	+2.4
U38A				IAmb_Lg		16 53 26.0	
	comp=Z,197nm,0.8s						
U38A	Gravette	4.22	266	P	Pn	16 52 15.7	+2.8
	baz=82,SNR=26						
MIAR	Mount Ida	4.26	239	Pn	Pn	16 52 15.1	+1.6
MIAR				IAmb_Lg		16 53 25.7	
	comp=Z,270nm,0.9s						
MIAR	Mount Ida	4.26	239	P	Pn	16 52 16.3	+2.8
	baz=56						
MIAR				Sb	Sg	16 53 22.7	-3.7
	baz=56						
MIAR	Mount Ida	4.26	239	P	Pn	16 52 16.1	+2.7
	baz=56,SNR=48						
CPRT	Copper Ridge	4.31	98		Pn	16 52 17.3	+2.9
CCRT	Cow Camps Rge	4.35	107		Pn	16 52 18.5	+3.7
P49A	Miami Univ. Ec	4.41	51	Pn	Pn	16 52 16.2	+0.7
P49A	Miami Univ. Ec	4.41	51	P	Pn	16 52 17.1	+1.5
	baz=234,SNR=6.1						
P38A	Dawn	4.42	310	Pn	Pn	16 52 17.1	+1.4
P38A	Dawn	4.42	310	P	Pn	16 52 17.6	+2.0
	baz=127,SNR=35						
P38A				S	Sn	16 53 08.7	+2.0
	baz=127						
TKL	Tuckaleechee C	4.51	104	Pn	Pn	16 52 20.3	+3.4
	comp=Z,8.0nm,0.3s,baz=245,slow=5.8,SNR=45						
TKL				Pg	Pb	16 52 28.8	+0.7
	comp=Z,18nm,0.3s,baz=270,slow=11,SNR=30						
TKL				Sn	Sn	16 53 11.0	+2.2
	comp=Z,11nm,0.3s,baz=233,slow=22,SNR=6.2						
TKL				Lg	Lg	16 53 28.5	
	comp=Z,56nm,0.3s,baz=132,slow=9.5,SNR=25						
	comp=Z,23nm,0.3s						
TKL	Tuckaleechee C	4.51	104	Pn	Pn	16 52 18.2	+1.3
TKL	Tuckaleechee C	4.51	104	P	Pn	16 52 20.2	+3.4
	baz=287,SNR=16						
S51A	Beattyville	4.51	78	Pn	Pn	16 52 19.5	+2.6
S51A	Beattyville	4.51	78	P	Pn	16 52 19.6	+2.7
	baz=262,SNR=25						
S51A				P	Pn	16 52 19.6	+2.7
	baz=262,SNR=25						
TZTN	Tazewell	4.52	92	Pn	Pn	16 52 19.3	+2.3
TZTN	Tazewell	4.52	92	Sb	Sg	16 53 29.5	-5.1
	baz=276						
TZTN	Tazewell	4.52	92	P	Pn	16 52 19.9	+2.9
	baz=276,SNR=19						
143A	Socs Landing,	4.52	205	Pn	Pn	16 52 18.4	+1.4
143A				IAmb_Lg		16 53 46.1	
	comp=Z,185nm,0.8s						
V52A	Sevierville	4.60	101	Pn	Pn	16 52 19.0	+0.9
V52A	Sevierville	4.60	101	P	Pn	16 52 20.7	+2.6
	baz=285,SNR=10						
ASTN	Avondale Sprin	4.60	95		Pn	16 52 17.4	-0.8
M44A	Midewin, Midew	4.62	10	Pn	Pn	16 52 19.3	+1.0
M44A				IAmb_Lg		16 53 36.6	
	comp=Z,216nm,1.0s						
O48B	Farmland	4.63	41	P	Pn	16 52 19.4	+0.8
	baz=224						
Z41A	Richland Creek	4.66	221	Pn	Pn	16 52 18.7	-0.2
RLO	Rose Lookout	4.77	264	Pn	Pn	16 52 22.6	+2.1
RLO				IAmb_Lg		16 53 49.0	
	comp=Z,144nm,0.8s						
N47A	Urbana	4.86	33	Pn	Pn	16 52 21.3	-0.3
N47A				IAmb_Lg		16 53 43.4	
	comp=Z,176nm,0.8s						
O49A	Covington	5.05	47	Pn	Pn	16 52 25.8	+1.5
O49A				IAmb_Lg		16 53 54.9	
	comp=Z,136nm,0.7s						
N38A	Joes South For	5.07	322	Pn	Pn	16 52 25.8	+1.3
N38A	Joes South For	5.07	322	P	Pn	16 52 26.9	+2.3
	baz=139						
Y52A	Lilburn	5.12	124	Pn	Pn	16 52 26.6	+1.4
Y52A				IAmb_Lg		16 53 54.3	
	comp=Z,130nm,0.7s						
L42A	Oliver, Polo	5.17	356	Pn	Pn	16 52 27.0	+1.1
L42A				IAmb_Lg		16 53 54.3	
	comp=Z,158nm,0.9s						
L42A	Oliver, Polo	5.17	356	P	Pn	16 52 28.0	+2.1
	baz=175,SNR=8.8						
V53A	Saluda	5.26	101	Pn	Pn	16 52 28.8	+1.5
V53A	Saluda	5.26	101	P	Pn	16 52 29.6	+2.3
	baz=285						
V53A				P	Pn	16 52 29.6	+2.3
	baz=285						
BG3	Lake Jocassee	5.38	108	Pn	Pn	16 52 30.1	+1.2
BG3				IAmb_Lg		16 54 01.6	
	comp=Z,146nm,0.7s						
L44A	Lake County Fo	5.42	10	Pn	Pn	16 52 30.9	+1.6
TUL1	Leonard	5.43	262	Pn	Pn	16 52 31.3	+1.8
TUL1	Leonard	5.43	262	P	Pn	16 52 32.0	+2.5
	baz=78						
TUL1	Leonard	5.43	262	P	Pn	16 52 32.1	+2.5
	baz=78,SNR=7.9						
L40A	Anamosa	5.45	344	Pn	Pn	16 52 29.9	+0.1
L40A	Anamosa	5.45	344	P	Pn	16 52 31.8	+2.0
	baz=162						
P51A	Williamsport	5.48	59	IAmb_Lg		16 54 00.1	
	comp=Z,189nm,0.8s						
X37A	Clayton	5.53	248	Pn	Pn	16 52 33.5	+2.6
X37A				IAmb_Lg		16 54 15.6	
	comp=Z,157nm,0.9s						
X37A	Clayton	5.53	248	P	Pn	16 52 34.0	+3.1
	baz=64						
152A	Waverly Hall	5.54	137	IAmb_Lg		16 54 04.9	
	comp=Z,175nm,0.7s						
L46A	Eue Claire	5.62	22	IAmb_Lg		16 54 15.7	
	comp=Z,187nm,0.8s						
N49A	Columbus Grove	5.63	42	IAmb_Lg		16 54 14.6	
	comp=Z,150nm,0.8s						
Q52A	Bidwell	5.85	67	Pn	Pn	16 52 36.0	+0.7
Q52A				IAmb_Lg		16 54 24.7	
	comp=Z,172nm,0.9s						
K43A	Burlington	5.89	6	Pn	Pn	16 52 36.4	+0.6
K43A				IAmb_Lg		16 54 20.9	
	comp=Z,156nm,1.1s						
T35A	Sooner Cattle	5.89	273	Pn	Pn	16 52 38.0	+2.1
ACSO	Alum Creek Sta	5.91	53	IAmb_Lg		16 54 16.1	
	comp=Z,196nm,0.9s						
U54A	Nelsons Funny	5.91	91	Pn	Pn	16 52 38.1	+1.9
R53A	Hurricane	5.92	73	Pn	Pn	16 52 37.5	+1.3
R53A				IAmb_Lg		16 54 17.5	
	comp=Z,177nm,0.7s						
BRAL	Brewton	5.92	162	IAmb_Lg		16 54 26.6	
	comp=Z,154nm,0.7s						
SCIA	State Center	5.95	329	Pn	Pn	16 52 37.6	+0.9
DEOK	Depew	6.01	263	Pn	Pn	16 52 39.6	+2.2
DEOK				IAmb_Lg		16 54 29.9	
	comp=Z,206nm,0.8s						
QUOK	Quay	6.12	266	IAmb_Lg		16 54 29.1	
	comp=Z,214nm,0.8s						
JFWS	Jewell Farm	6.12	352	Pn	Pn	16 52 39.5	+0.5
JFWS				IAmb_Lg		16 54 23.6	
	comp=Z,143nm,0.7s						
JFWS	Jewell Farm	6.12	352	P	Pn	16 52 40.9	+1.9
	baz=172						
JFWS	Jewell Farm	6.12	352	P	Pn	16 52 40.6	+1.6
	baz=172,SNR=9.4						
OK044	Pawnee Station	6.16	268	Pn	Pn	16 52 41.6	+2.0
OK044				IAmb_Lg		16 54 32.7	
	comp=Z,156nm,0.8s						
P52A	Corning	6.19	61	Pn	Pn	16 52 40.9	+0.9
P52A				IAmb_Lg		16 54 31.0	
	comp=Z,197nm,0.9s						
HODGE	Hodges	6.20	113	IAmb_Lg		16 54 31.7	
	comp=Z,132nm,0.9s						
OK030	Cody Creek RV	6.22	264	Pn	Pn	16 52 40.8	+0.5
OK052	Battle Ridge R	6.22	264	Pn	Pn	16 52 42.0	+1.6
OK052				IAmb_Lg		16 54 33.5	
	comp=Z,204nm,0.8s						
OK046	Pawnee Station	6.25	268	Pn	Pn	16 52 43.0	+2.3
OK045	Pawnee Station	6.25	269	Pn	Pn	16 52 42.0	+1.2
L48A	N Adams	6.27	34	Pn	Pn	16 52 41.8	+0.7
L48A				IAmb_Lg		16 54 43.3	
	comp=Z,194nm,0.9s						
PAULI	Pauline	6.30	107	IAmb_Lg		16 54 33.9	
	comp=Z,128nm,0.8s						
KSU1	Kansas State U	6.30	293	Pn	Pn	16 52 42.8	+1.4
KSU1				IAmb_Lg		16 54 47.2	
	comp=Z,163nm,0.8s						
KSU1	Kansas State U	6.30	293	P	Pn	16 52 43.4	+1.9
	baz=108						
KSU1				S	Sn	16 53 52.6	-0.4
	baz=108						
KSU1	Kansas State U	6.30	293	P	Pn	16 52 43.2	+1.7
	baz=108,SNR=17						
OK050	Pawnee Station	6.31	268	Pn	Pn	16 52 41.4	-0.2
OK050				IAmb_Lg		16 54 37.6	
	comp=Z,191nm,0.9s						
S54A	Dingess, Beckl	6.33	79	IAmb_Lg		16 54 33.9	
	comp=Z,141nm,0.7s						

K38A	Parkersburg	6.43	335	Pn	Pn	16 52 42.4	-0.8
K38A				IAmb_Lg		16 54 48.5	
	comp=Z,126nm,0.8s						
BLOK	Blackwell	6.46	272	Pn	Pn	16 52 45.7	+2.0
BLOK				IAmb_Lg		16 54 36.6	
	comp=Z,137nm,0.8s						
W35A	Tecumseh	6.48	257	Pn	Pn	16 52 45.9	+1.9
W35A				IAmb_Lg		16 54 47.7	
	comp=Z,200nm,1.0s						
V55A	Taylorsville	6.49	96	Pn	Pn	16 52 45.7	+1.6
V55A				IAmb_Lg		16 54 40.8	
	comp=Z,120nm,0.7s						
KMSC	Kings Mountain	6.57	103	Pn	Pn	16 52 44.1	-1.0
KMSC				IAmb_Lg		16 54 39.8	
	comp=Z,114nm,0.7s						
M50A	Fremont	6.58	44	IAmb_Lg		16 54 42.4	
	comp=Z,113nm,0.8s						
O52A	Adamsville	6.61	58	IAmb_Lg		16 54 39.1	
	comp=Z,182nm,0.9s						
P53A	Whipple	6.67	64	Pn	Pn	16 52 47.1	+0.6
P53A				IAmb_Lg		16 54 41.0	
	comp=Z,136nm,1.0s						
N51A	Ashland	6.68	50	Pn	Pn	16 52 47.8	+1.2
OK025	Westminster Rd	6.73	262	IAmb_Lg		16 54 59.6	
	comp=Z,111nm,0.9s						
OK029	Liberty Lake	6.78	264	IAmb_Lg		16 55 02.0	
	comp=Z,128nm,1.2s						
KAN01	Argonia South	6.89	275	Pn	Pn	16 52 51.1	+1.5
Q54A	Coxs Mills	6.92	69	Pn	Pn	16 52 50.4	+0.5
Q54A				IAmb_Lg		16 55 02.5	
	comp=Z,133nm,0.9s						
JSC	Jenkinsville	6.93	109	IAmb_Lg		16 54 44.0	
	comp=Z,135nm,0.9s						
BLA	Blacksburg	7.00	84	IAmb_Lg		16 54 59.0	
	comp=Z,168nm,0.7s						
I42A	Draeger Farm,	7.04	1	Pn	Pn	16 52 52.8	+1.2
I42A	Draeger Farm,	7.04	1	P	Pn	16 52 52.6	+0.9
	baz=181						
U56A	King	7.08	91	IAmb_Lg		16 54 59.0	
	comp=Z,119nm,0.8s						
O53A	New Philadelph	7.10	59	Pn	Pn	16 52 53.4	+1.0
O53A				IAmb_Lg		16 54 49.6	
	comp=Z,144nm,0.8s						
I40A	Norwalk	7.13	351	Pn	Pn	16 52 52.6	-0.3
LOOK	Love County	7.14	249	Pn	Pn	16 52 54.0	+1.0
LOOK				IAmb_Lg		16 55 13.4	
	comp=Z,85nm,0.9s						
255A	Hazlehurst	7.39	130	IAmb_Lg		16 55 00.3	
	comp=Z,140nm,0.8s						
X34A	Smith Ranch, M	7.40	255	Pn	Pn	16 52 57.4	+0.9
X34A				IAmb_Lg		16 55 10.3	
	comp=Z,96nm,0.9s						
BIRD	Birdtown, Kers	7.41	105	Pn	Pn	16 52 56.9	+0.2
Z35A	Perchaven, San	7.50	245	Pn	Pn	16 52 57.2	-0.7
I45A	Fountain	7.52	16	IAmb_Lg		16 55 10.2	
	comp=Z,116nm,0.7s						
N33A	J Bar K, Exete	7.55	304	IAmb_Lg		16 55 14.4	
	comp=Z,129nm,0.8s						
N53A	Lisbon	7.61	56	IAmb_Lg		16 55 05.3	
	comp=Z,95nm,0.7s						
W57A	Gilead	7.62	100	Pn	Pn	16 53 00.3	+0.7
O54A	Avella	7.65	61	IAmb_Lg		16 55 24.5	
	comp=Z,127nm,0.7s						
M52A	Chesterland	7.66	50	Pn	Pn	16 53 00.0	-0.1
M52A				IAmb_Lg		16 55 13.0	
	comp=Z,148nm,0.8s						
Y57A	Sumter	7.69	109	IAmb_Lg		16 55 14.5	
	comp=Z,152nm,0.8s						
K50A	Casco	7.77	38	IAmb_Lg		16 55 18.3	
	comp=Z,96nm,1.0s						
MCWV	Mont Chateau	7.85	66	IAmb_Lg		16 55 21.4	
	comp=Z,79nm,0.8s						
NOKA	Waynoka	7.85	271	IAmb_Lg		16 55 21.7	
	comp=Z,91nm,0.8s						
I37A	Lemond, Waseca	7.86	337	IAmb_Lg		16 55 20.8	
	comp=Z,90nm,1.1s						
FW06	Azle	7.90	243	Pn	Pn	16 53 03.3	-0.2
FW06				IAmb_Lg		16 55 35.2	
	comp=Z,64nm,1.2s						
U32A	Winter Ranch,	7.93	270	Pn	Pn	16 53 03.9	0.0
U32A				IAmb_Lg		16 55 31.9	
	comp=Z,111nm,0.8s						
WMOK	Wichita Mounta	8.10	258	Pn	Pn	16 53 06.7	+0.5
WMOK				IAmb_Lg		16 55 29.4	
	comp=Z,86nm,1.0s						
Q56A	Snyder Ridge,	8.18	71	IAmb_Lg		16 55 34.3	
	comp=Z,128nm,1.1s						
FW07	Weatherford	8.21	242	IAmb_Lg		16 55 40.2	
	comp=Z,39nm,1.1s						
FW03	Perrin-Whitt E	8.24	245	IAmb_Lg		16 55 38.3	
	comp=Z,26nm,0.9s						
Y58A	Scranton	8.29	108	IAmb_Lg		16 55 37.7	
	comp=Z,112nm,0.8s						
X58A	Rowland	8.31	103	IAmb_Lg		16 55 30.9	
	comp=Z,121nm,0.7s						
WHTX	Lake Whitney,	8.39	237	Pn	Pn	16 53 09.8	-0.3
WHTX	Lake Whitney,	8.39	237	P	Pn	16 53 12.1	+2.0
	baz=52						
G40A	Rib Lake	8.46	355	Pn	Pn	16 53 11.5	+0.5
G40A	Rib Lake	8.46	355	P	Pn	16 53 12.3	+1.2
	baz=174						
ALLY	Alegheny Colle	8.48	53	IAmb_Lg		16 55 36.1	
	comp=Z,114nm,0.8s						
G45A	Suttons Bay	8.61	17	IAmb_Lg		16 55 47.7	
	comp=Z,116nm,0.7s						
SPMN	Marine on St.	8.81	343	IAmb_Lg		16 55 50.7	
	comp=Z,74nm,0.8s						
ERPA	Erie	8.83	51	IAmb_Lg		16 55 46.7	
	comp=Z,95nm,0.7s						
ECSD	EROS Data Cent	8.93	323	Pn	Pn	16 53 18.1	+0.6
ECSD	EROS Data Cent	8.93	323	P	Pn	16 53 18.7	+1.2
	baz=138						
ECSD	EROS Data Cent	8.93	323	P	Pn	16 53 18.7	+1.2
	baz=138,SNR=8.3						
COWI	Conover	9.25	0	Pn	Pn	16 53 22.3	+0.3
K31A	O'Neill	9.37	311	IAmb_Lg		16 56 16.8	
	comp=Z,106nm,0.7s						
F36A	Milaca	9.59	341	Pn	Pn	16 53 26.6	+0.1
E43A	Lone Tree Farm	9.66	9	Pn	Pn	16 53 28.0	+0.4
E43A	Lone Tree Farm	9.66	9	P	Pn	16 53 28.4	+0.8
	baz=190						
D41A	Chassel	10.22	2	P	Pn	16 53 36.1	+0.9
	baz=182						
AMTX	Amarillo	10.35	263	Pn	Pn	16 53 38.1	+1.0
POST	Post	10.80	253	Pn	Pn	16 53 43.5	+0.2
SADO	Sadowa	10.96	41	Pn	Pn	16 53 42.7	-2.6
	comp=Z,0.4nm,0.3s,baz=193,slow=22,SNR=1.9						
SADO				Sn	Sn	16 55 41.6	-5.9
	comp=Z,1.2nm,0.3s,baz=229,slow=4.6,SNR=3.6						
SADO				Lg	Lg	16 56 42.9	
	comp=Z,0.8nm,0.3s,baz=335,slow=14,SNR=2.1						
	comp=Z,3.5nm,0.4s						
EYMN	Ely	11.23	352	Pn	Pn	16 53 47.2	-1.8
MSTX	Muleshoe	11.47	260	Pn	Pn	16 53 52.0	-0.5
L59A	Walton	12.14	60	Pn	Pn	16 54 00.2	-1.3
T25A	Trinidad	12.20	276	Pn	Pn	16 54 01.7	-0.9
SDCO	Great Sand Dun	13.05	279	Pn	Pn	16 54 15.2	+1.0
RSSD	Black Hills	13.45	307	Pn	Pn	16 54 20.1	+0.6
N23A	Red Feather La	13.69	292	Pn	Pn	16 54 23.1	+0.2
ANMO	Albuquerque	14.15	267	Lg	Lg	16 58 33.3	
	comp=Z,0.4nm,0.3s,baz=110,slow=2.6,SNR=6.2						
ULM	Lac du Bonnet	14.25	342	Pn	Pn	16 54 27.2	-3.0
	comp=Z,0.7nm,0.3s,baz=173,slow=11,SNR=4.1						
ULM				Lg	Lg	16 58 23.9	
	comp=Z,0.5nm,0.3s,baz=272,slow=21,SNR=1.7						
	comp=Z,2.1nm,0.4s						
TXAR	Lajitas Array	14.27	243	Pn	Pn	16 54 30.2	-0.5
	comp=Z,0.3nm,0.3s,baz=67,slow=12,SNR=14						
TXAR				Sn	Sn	16 57 02.2	-6.4
	comp=Z,0.1nm,0.3s,baz=57,slow=15,SNR=1.9						
TXAR				Lg	Lg	16 58 33.9	
	comp=Z,0.2nm,0.3s,baz=40,slow=32,SNR=2.0						
	comp=Z,0.5nm,0.5s						
TXAR	Lajitas Array	14.27	243	Pn	Pn	16 54 29.9	-0.9
TX31	Lajitas Ar. Si	14.27	243	Pn	Pn	16 54 29.6	-1.1
TX32	Lajitas Array	14.27	243	Pn	Pn	16 54 30.6	-0.2
RWWY	Rawlins	14.79	295	Pn	Pn	16 54 38.3	+0.4
PDAR	Pinedale Array	16.74	297	Lg	Lg	16 59 49.1	
	baz=115,slow=34,SNR=2.4						
SCHQ	Schefferville	23.61	33	P	P	16 56 20.0	+0.8
	comp=Z,6.0nm,1.1s,baz=235,slow=13,SNR=2.3						
	comp=Z,6.0nm,1.1s						
YKA	Yellowknife Ar	30.10	337	P	P	16 57 18.3	+0.7
	comp=Z,0.2nm,0.5s,baz=129,slow=8.9,SNR=5.3						
	comp=Z,0.2nm,0.5s						
ILAR	Eielson Array	43.70	328	P	P	16 59 15.6	+2.6
	comp=Z,2.2nm,0.9s,baz=100,slow=6.7,SNR=23						
	comp=Z,2.2nm,0.9s						
FINES	FINESS Array B	68.95	28	P	P	17 02 14.2	+1.2
	comp=Z,1.5nm,0.7s,baz=318,slow=2.6,SNR=3.6						
	comp=Z,1.5nm,0.7s						
ZALV	Zalesovo Beam	89.43	4	P	P	17 04 07.0	+2.1
	comp=Z,0.5nm,0.5s,baz=357,slow=5.8,SNR=2.1						
	comp=Z,0.5nm,0.5s						
ASAR	Alice Springs	140.87	277	PKhKP	PKPpre	17 10 32.8	
	comp=Z,0.5nm,0.9s,baz=56,slow=3.2,SNR=4.4						

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*SLM **15** 16:57:52.7±0.6, 36°.881N±0°.009×89°.11W±0°.01, h8^{km}±2^{km}, Md2.6/9, ML2.3/26(NEIC), Error ellipse: s-maj=1.7km s-min=0.7km az=136.0*

NEIC 15 16:57:52.6±0.5**, 36°.882N**±0°.008×**89°.11W**±0°.01**, h7**^{km}±2^{km}**, Error ellipse: s-maj=1.7km s-min=1.1km az=67.0, New Madrid region, Missouri**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHRM	Charleston	0.20	261		Pg	16 57 56.3	-0.4
CHRM					Sg	16 58 00.1	+0.8
EPRM	East Prairie	0.26	230		Pg	16 57 57.3	-0.3
EPRM					Sg	16 58 01.3	+0.3
FMKY	Fulgham	0.27	143		Pg	16 57 57.6	-0.3
DWDM	Dogwood	0.32	254		Pg	16 57 58.5	-0.3
HENM	Henderson Moun	0.33	240		Pg	16 57 58.8	-0.3
HENM					Sg	16 58 03.5	+0.1
HICK	Hickman	0.35	195		Pg	16 57 58.6	-0.9
HICK				Sg	Sg	16 58 03.5	-0.6
SJMO	Saint John's B	0.39	229		Pg	16 57 59.8	-0.3
SJMO					Sg	16 58 05.1	0.0
T45A	Paducah	0.40	70	Pg	Pg	16 58 00.3	-0.1
T45A				Sg	Sg	16 58 05.6	0.0
T45A				IAML		16 58 14.3	
	comp=N,179nm,0.7s						
MATM	Matthews	0.41	255		Pg	16 58 00.3	-0.2
KEWM	Kewanee	0.43	245		Pg	16 58 00.6	-0.3
KEWM					Sg	16 58 06.3	-0.1
CATM	Catron	0.51	238		Pg	16 58 02.0	-0.4
MCIL	McClure	0.52	323		Pg	16 58 02.2	-0.4
COKM	Charter Oak	0.52	251		Pg	16 58 02.3	-0.4
PARMO	Parma	0.56	247	Pg	Pg	16 58 02.5	-0.8
PARMO				Sg	Sg	16 58 10.1	-0.6
PARMO				IAML		16 58 10.2	
	comp=E,121nm,0.8s						
PARMO				IAML		16 58 10.7	
	comp=N,118nm,0.2s						
MARMO	Marston	0.57	232		Pg	16 58 03.1	-0.4
GUAMO	Guam	0.58	271		Pg	16 58 03.5	-0.3
PENMO	Penman	0.60	224		Pg	16 58 03.6	-0.5
CGM3	Cape Girardeau	0.60	314	Pg	Pg	16 58 03.9	-0.3
CGM3				Sg	Sg	16 58 11.7	-0.4
CGM3				IAML		16 58 12.9	
	comp=N,216nm,0.2s						
CGM3				IAML		16 58 13.4	
	comp=E,238nm,0.2s						
WYBT	Wynnburg	0.62	210		Pg	16 58 04.1	-0.3
GLAT	Glass	0.63	193	Pg	Pg	16 58 04.2	-0.5
GLAT				Sg	Sg	16 58 12.5	-0.3
GLAT				IAML		16 58 16.0	
	comp=E,131nm,1.8s						
GLAT				IAML		16 58 19.7	
	comp=N,155nm,0.6s						
PGVM	Portageville	0.65	230		Pg	16 58 04.6	-0.5
MLDM	Malden	0.70	249		Pg	16 58 05.5	-0.5
TOPM	Tallapoosa	0.72	241		Pg	16 58 05.8	-0.6
BRNM	Bernie	0.73	258		Pg	16 58 05.9	-0.6
WADM	Wardell	0.75	227		Pg	16 58 06.5	-0.6
BETM	Bethany	0.81	251		Pg	16 58 07.6	-0.5
S44A	Carbondale	0.82	352	Pg	Pg	16 58 07.6	-0.7
LNXT	Lenox	0.84	201	Pg	Pg	16 58 08.1	-0.6
PEBM	Pemiscott Bayo	0.98	218	Pg	Pg	16 58 10.5	-0.9
PEBM				Sg	Sg	16 58 23.4	-0.6
PEBM				IAML		16 58 41.1	
	comp=E,129nm,1.9s						
HALT	Halls	0.99	191	Pg	Pg	16 58 09.4	-2.2
HALT				IAML		16 58 40.0	
	comp=N,104nm,1.9s						
HALT				IAML		16 58 40.4	
	comp=E,117nm,3.5s						
PBMO	Poplar Bluff	1.06	265	Pg	Pg	16 58 11.6	-1.4
PBMO				Sg	Sg	16 58 25.4	-1.4
PBMO				IAML		16 58 30.4	
	comp=N,69nm,0.3s						
PBMO				IAML		16 58 32.6	
	comp=E,65nm,0.2s						
GNAR	Gosnell	1.17	219	Pg	Pg	16 58 13.3	-1.7
GNAR				IAML		16 58 26.6	
	comp=E,118nm,3.5s						
WVT	Waverly	1.28	126	Pg	Pn	16 58 15.5	-1.4
WVT				IAML		16 58 36.9	
	comp=E,39nm,0.1s						
FVM	French Village	1.52	317		Pn	16 58 18.9	-1.3
T42A	Van Buren	1.59	276	Pn	Pn	16 58 19.6	-1.5
T47A	Sharon Grove	1.61	86	Pn	Pn	16 58 20.8	-0.7
W45A	Hickory Valley	1.72	182	Pn	Pn	16 58 21.4	-1.5
LCAR	Lake Charles	1.83	244	Pn	Pn	16 58 23.8	-0.7
CCM	Cathedral Cave	2.06	305	Pn	Pn	16 58 26.4	-1.3
PLAL	Pickwick Lake	2.07	156	Pn	Pn	16 58 27.2	-0.6
V48A	Smith Brothers	2.17	121	Pn	Pn	16 58 29.6	+0.4

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*JMA **15** 17:05:19.4±0.2, 35°.9N±0°.4×140°.9E±0°.7, h43^{km}±1^{km}, MV3.6/38, NEAR CHOSHI CITY*

JMA Felt I J1 at NEAR CHOSHI CITY .

*NIED **15** 17:05:19.4, 35°.90N×140°.87E, h43^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.85; M$_{\theta\theta}$-0.13; M$_{\phi\phi}$-0.72; M$_{r\theta}$0.07; M$_{\theta\phi}$-0.48; M$_{\phi r}$1.35; Fault plane solution: M$_0$1.64000×10^{15} NP1:φ$_s$8.00000°, δ74.00000°, λ76.00000°. NP2:φ$_s$230.00000°, δ21.00000°, λ130.00000°.*

*NEIC **15** 17:05:20.5±1.3, 35°.93N±0°.08×141°.0E±0°.1, h50^{km}±8^{km}, mb4.4/16 Error ellipse: s-maj=16.2km s-min=7.4km az=125.0*

*IDC **15** 17:05:20.8±2.8, 35°.85N×140°.76E, h53^{km}±24^{km}, mb3.6/16, mbtmp3.8/19, ML3.0/3, MS3.3/6, Error ellipse: s-maj=19.1km s-min=15.3km az=113.0*

ISC 15 17:05:19.8±0.8**, 35°.90N**±0°.04×**140°.88E**±0°.06**, h44**^{km}±6^{km}**, n85, σ1^{s}.21**/77**, mb4.0**/23**, 9D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.20	186	P	Pn	17 05 26.8	-0.8
CHOJ				*e*S	Sn	17 05 32.1	-0.8
JIHU	Itakohorinouch	0.30	283	*i* P	Pn	17 05 28.2	-0.2
JIHU				*e*S	Sn	17 05 34.6	+0.2
JSMT	Sammumatsuo	0.44	234	⇓P	Pn	17 05 29.9	0.0
JSMT				⇓*e*S	Sn	17 05 36.6	-0.5
JHYU	Hitachinakayam	0.50	332	⇓*i*P	Pn	17 05 30.5	-0.3
JHYU				⇓*e*S	Sn	17 05 38.5	-0.1
JYT	Yasato	0.65	301	⇓*i*P	Pn	17 05 31.9	-0.8
JYT				⇓*e*S	Sn	17 05 40.5	-1.4
JHO	Hitachi	0.76	340	⇓P	Pn	17 05 33.7	-0.4
JHO				⇓*e*S	Sn	17 05 44.1	-0.4
BSO4	Boso 4	1.01	206	P	Pn	17 05 38.2	+0.7
BSO3	Boso 3	1.14	196	*e*P	Pn	17 05 39.3	+0.3
JAG	Ashikaga	1.27	295	⇓P	Pn	17 05 40.6	-0.5
JMM	Marumori	1.96	358		Pn	17 05 51.4	+0.7
JMM	Marumori	1.96	358	P	Pn	17 05 52.4	+1.7
MJAR	Matsushiro Arr	2.26	287	P	Pn	17 05 54.8	+0.2
	3.7nm,0.3s,baz=8.1,slow=7.8,SNR=88						
MJAR				S	Sn	17 06 19.6	-1.7
	30nm,0.5s,baz=155,slow=12,SNR=3.3						
MJAR				LR	LR	17 06 57.3	
	comp=Z,507nm,18.3s,baz=142,slow=44						
	18nm,0.3s						
MAJO	Matsushiro	2.26	287		Pn	17 05 55.5	+0.8
MAJO	Matsushiro	2.26	287	P	Pn	17 05 55.7	+1.0
MJB9	Matsu-Tunnel	2.26	287		Pn	17 05 56.5	+1.7
JSG	Sagara	2.52	242		Pn	17 06 01.2	+2.9
JSG	Sagara	2.52	242	P	Pn	17 06 02.3	+3.1
JGF	Kuroka	2.88	265		Pn	17 06 05.8	+2.5
JGF	Kuroka	2.88	265	P	Pn	17 06 06.1	+0.9
JSD	Sado	2.99	316		Pn	17 06 06.6	+1.8
JSD	Sado	2.99	316	P	Pn	17 06 07.2	+2.4
INU	Inuyama	3.20	261		Pn	17 06 09.7	+2.1
INU	Inuyama	3.20	261	P	Pb	17 06 09.7	+0.9
JTM	Tenmabayashi	4.88	2		Pn	17 06 32.1	+1.4
JTM	Tenmabayashi	4.88	2	P	Pn	17 06 32.4	+1.7
JMN	Monobe	6.16	251	Pn	Pn	17 06 50.6	+2.4
JMN	Monobe	6.16	251	P	Pb	17 06 52.6	+2.4
ERM	Erimo	6.36	15	Pn	Pn	17 06 50.0	-1.0
JEM	Erimo	6.36	15	P	Pn	17 06 50.3	-0.7
JHS	Saijyo	6.40	264	Pn	Pn	17 06 54.6	+3.0
JHS	Saijyo	6.40	264	P	Pn	17 06 54.5	+2.9
ASAJ	Asahikawa	8.31	9	P	Pn	17 07 15.9	-1.9
	5.5nm,0.4s,baz=218,slow=14,SNR=18						
ASAJ				S	Sn	17 08 47.4	-2.8
	5.2nm,0.6s,baz=96,slow=32,SNR=1.5						
JKA	Kamikawa-asahi	8.31	9	Pn	Pn	17 07 16.6	-1.1
JNU	Nakatsue	8.71	254	LR	LR	17 10 53.2	
	comp=Z,207nm,18.4s,baz=54,slow=39						
KSRS	Korea Array	10.53	282	P	Pn	17 07 48.7	+0.6
	0.1nm,0.3s,baz=99,slow=14,SNR=1.5						
KSRS				LR	LR	17 11 43.5	
	comp=Z,102nm,21.2s,baz=90,slow=37						
	0.4nm,0.3s						
USRK	Ussuriysk Ar.	10.73	323	P	Pn	17 07 52.4	+1.6
	0.2nm,0.3s,baz=110,slow=11,SNR=4.2						
	1.7nm,0.6s						
KLR	Kul'dur	14.91	336	LR	LR	17 14 14.3	
	comp=Z,116nm,18.3s,baz=164,slow=36						
PETK	Petropavlovsk-	20.88	29	P	P	17 09 58.5	+0.5
	2.8nm,1.0s,baz=221,slow=8.2,SNR=1.8						
	2.8nm,1.0s						
MA2	Magadan	24.55	12	P	P	17 10 34.7	-0.4
	4.1nm,0.8s,baz=147,slow=21,SNR=3.7						
	4.1nm,0.8s						
H11N2	WAKE ISLAND Hy	27.96	118	T	T	17 40 12.9	
	baz=311,slow=75,SNR=36						
H11N1	WAKE ISLAND Hy	27.97	118	T	T	17 40 18.3	
	baz=311,slow=75,SNR=33						
H11N3	WAKE ISLAND Hy	27.98	118	T	T	17 40 14.2	
	baz=311,slow=75,SNR=32						
SEY	Seymchan	27.98	11	P	P	17 11 07.5	+1.4
	0.5nm,0.5s,baz=180,slow=23,SNR=16						
	0.5nm,0.5s						
SONM	Songino Array	28.08	306	P	P	17 11 07.0	-0.3
	0.8nm,0.6s,baz=106,slow=9.0,SNR=5.5						
SONM				LR	LR	17 21 21.3	
	comp=Z,87nm,18.2s,baz=184,slow=34						
	0.8nm,0.6s						
SONM	Songino Array	28.08	306	P	P	17 11 05.8	-1.5
H11S1	WAKE ISLAND Hy	28.63	120	T	T	17 41 09.3	
	baz=313,slow=75,SNR=44						
H11S3	WAKE ISLAND Hy	28.63	120	T	T	17 41 05.0	
	baz=313,slow=75,SNR=47						
H11S2	WAKE ISLAND Hy	28.64	120	T	T	17 41 11.7	
	baz=313,slow=75,SNR=38						
FAKI	Fak Fak	39.45	194	P	P	17 12 46.3	+0.4
CMAR	Chiang Mai Arr	40.80	256	LR	LR	17 31 16.2	
	comp=Z,23nm,18.2s,baz=180,slow=38						
ZALV	Zalesovo Beam	42.37	313	P	P	17 13 09.7	+0.1
	1.1nm,0.5s,baz=103,slow=8.4,SNR=7.8						
	1.1nm,0.5s						
ZALV	Zalesovo Beam	42.37	313	P	P	17 13 09.4	-0.1
MK31	Makanchi Array	44.37	303	P	P	17 13 26.1	+0.3
MK31				IAmb	IAmb	17 13 26.9	
	comp=Z,2.4nm,0.8s						
MKAR	Makanchi Array	44.37	303	P	P	17 13 26.1	+0.3
	comp=Z,2.4nm,0.6s,baz=89,slow=9.9,SNR=36						
	comp=Z,2.4nm,0.6s						
MKAR	Makanchi Array	44.37	303	P	P	17 13 26.2	+0.4
MAKZ	Makanchi	44.58	303		P	17 13 27.3	-0.2
MAKZ				IAmb	IAmb	17 13 28.7	
	comp=Z,2.9nm,0.8s						
KURK	Kurchatov	46.30	309	P	P	17 13 40.9	-0.1
KURK				IAmb	IAmb	17 13 41.8	
	comp=Z,5.0nm,0.8s						
ILAR	Eielson Array	50.68	32	P	P	17 14 15.2	+0.7
	comp=Z,0.5nm,0.6s,baz=268,slow=5.7,SNR=9.0						
	comp=Z,0.5nm,0.6s						
BRVK	Borovoye	51.08	313	P	P	17 14 18.5	+0.9
BRVK				IAmb	IAmb	17 14 36.4	
	comp=Z,3.6nm,1.5s						
KNRA	Kununurra	52.56	195	P	P	17 14 29.2	+0.3
INK	Inuvik	55.59	27	P	P	17 14 51.5	+1.0
	comp=Z,0.7nm,0.6s,baz=260,slow=11,SNR=2.5						
	comp=Z,0.7nm,0.6s						
FITZ	Fitzroy Crossi	55.61	198	P	P	17 14 51.2	+0.1
WB0	Warramunga Arr	55.70	187	P	P	17 14 51.2	-0.6
WB0				IAmb	IAmb	17 15 21.3	
	comp=Z,10nm,1.4s						
CHGR	Chuyangaron	55.77	296	P	P	17 14 50.9	-1.5
CHGR				IAmb	IAmb	17 15 04.5	
	comp=Z,7.0nm,1.0s						
WRAB	Tennant Creek	55.87	187	P	P	17 14 52.4	-0.7
WRAB				IAmb	IAmb	17 15 33.1	
	comp=Z,7.4nm,1.3s						
WB2	Warramunga Arr	55.88	187	P	P	17 14 51.8	-1.3
WRA	Warramunga Arr	55.88	187	P	P	17 14 52.3	-0.8
	comp=Z,0.8nm,0.5s,baz=0.8,slow=7.7,SNR=20						
	comp=Z,0.8nm,0.5s						
WRA	Warramunga Arr	55.88	187	P	P	17 14 51.7	-1.4
ARU	Arti	56.93	319	P	P	17 15 00.0	-0.2
ABKAR	Akbulak array	58.35	311	P	P	17 15 10.6	+0.3
ABKAR	Akbulak array	58.35	311	P	P	17 15 10.6	+0.3
ABKAR				IAmb	IAmb	17 15 10.8	
	comp=Z,1.6nm,0.5s						
AS31	Alice Springs	59.61	187	P	P	17 15 19.2	-0.1
ASAR	Alice Springs	59.61	187	P	P	17 15 18.9	-0.4
	comp=Z,0.9nm,0.8s,baz=13,slow=8.1,SNR=10						
	comp=Z,0.9nm,0.8s						
ASAR	Alice Springs	59.61	187	P	P	17 15 19.1	-0.1
RES	Resolute Bay	63.80	14	P	P	17 15 47.2	+0.3
ARCES	ARCESS Array B	64.91	339	P	P	17 15 53.5	-0.7
	comp=Z,3.5nm,0.9s,baz=40,slow=6.3,SNR=3.5						
	comp=Z,3.5nm,0.9s						
YKA	Yellowknife Ar	65.00	30	P	P	17 15 54.7	-0.2
	comp=Z,0.2nm,0.7s,baz=298,slow=6.7,SNR=2.3						
	comp=Z,0.2nm,0.7s						
FINES	FINESS Array B	69.62	332	P	P	17 16 23.7	-0.4
	comp=Z,2.9nm,0.9s,baz=71,slow=10,SNR=2.1						
	comp=Z,2.9nm,0.9s						
AKASG	Malin Array Be	74.93	322	P	P	17 16 55.0	-1.0
	comp=Z,0.7nm,0.6s,baz=42,slow=5.9,SNR=6.8						
	comp=Z,0.7nm,0.6s						
BRTR	Keskin Array B	79.28	311	P	P	17 17 21.0	+0.2
	comp=Z,0.4nm,0.7s,baz=34,slow=7.3,SNR=2.2						
	comp=Z,0.4nm,0.7s						
TXAR	Lajitas Array	91.15	52	P	P	17 18 20.9	+0.5
	comp=Z,0.1nm,0.6s,baz=297,slow=4.0,SNR=1.9						
	comp=Z,0.1nm,0.6s						
H03N2	Juan Fernandez	147.31	97	T	T	20 09 32.2	
	baz=289,slow=76,SNR=15						
H03N3	Juan Fernandez	147.33	98	T	T	20 09 30.0	
	baz=289,slow=76,SNR=13						
H03N1	Juan Fernandez	147.33	97	T	T	20 09 33.4	
	baz=289,slow=76,SNR=13						
LPAZ	La Paz	147.63	60	PKPbc	PKPbc	17 25 01.1	+0.4
	comp=Z,0.7nm,0.3s,baz=358,slow=5.9,SNR=4.0						

JMA 15 17:05:51.2±0.1**, 35°.0N**±0°.2×**138°.0E**±0°.2**, h33**^{km}**, MV0.5**/19**, SW SHIZUOKA PREF, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKKG	Kakegawa	0.17	198	S	Sb	17 06 01.6	0.0
SHZ3	Shizuoka 3	0.19	50	P	Pn	17 05 57.5	-0.1
JKKS	Kakegawashinom	0.20	192	P	Pb	17 05 57.8	+0.1

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*IDC **15** 17:20:16.8±0.8, 53°.14N×161°.30W, h0^{km}, mb3.8/15, mbtmp3.8/17, ML3.9/2, Error ellipse: s-maj=23.0km s-min=15.0km az=174.0*

*NEIC **15** 17:20:18.3±2.1, 53°.16N±0°.09×161°.1W±0°.1, h10^{km}±2^{km}, mb4.2/19, ML3.7/8, ML3.7(AEIC), Error ellipse: s-maj=14.7km s-min=10.5km az=163.0*

*AEIC **15** 17:20:21.5±2.8, 53°.19N±0°.09×161°.3W±0°.1, h9^{km}±6^{km}, Error ellipse: s-maj=13.2km s-min=8.7km az=164.0*

ISC 15 17:20:18.6±0.7**, 53°.17N**±0°.09×**161°.16W**±0°.06**, h10**^{km}**, n241, σ0^{s}.96**/222**, mb3.9**/18**, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	False Pass	2.15	323		Pn	17 20 55.0	+0.6
FALS					Sn	17 21 20.6	-0.4
FALS	False Pass	2.15	323	P	Pn	17 20 54.5	+0.1
	baz=142						
SDPT	Sand Point	2.22	10	Pn	Pn	17 20 54.6	-0.8
SDPT				IAML		17 21 25.4	
	comp=E,343nm,0.4s						

S12K	Black Hills	2.59	349	P	Pn	17 21 01.4	+0.9
	baz=170						
AKUT	Akutan	2.91	291		Pn	17 21 05.0	+0.2
AKUT				IAML		17 21 40.3	
	comp=E,159nm,0.6s						
UNV	Unalaska Valle	3.26	284		Pn	17 21 09.8	+0.1
UNV	Unalaska Valle	3.26	284		Sn	17 21 47.3	-1.2
UNV	Unalaska Valle	3.26	284	P	Pn	17 21 09.8	+0.1
	baz=100						
CHGN	Chignik	3.52	26	Pn	Pn	17 21 13.4	+0.2
CHGN				IAML		17 21 55.6	
	comp=E,288nm,0.2s						
CHGN				IAML		17 21 56.2	
	comp=N,187nm,0.2s						
CHGN	Chignik	3.52	26	P	Pn	17 21 13.3	+0.1
	baz=209						
NIKH	Nikolski High	4.65	271	Pn	Pn	17 21 28.6	-0.1
R16K	Pilot Point	4.85	23	P	Pn	17 21 31.8	+0.3
	baz=207						
R17K	Ugashik Creek	5.24	29	P	Pn	17 21 37.9	+1.1
	baz=214						
CLES	Cleveland East	5.29	270	Pn	Pn	17 21 38.0	+0.5
CLES				IAML		17 22 49.5	
	comp=N,332nm,1.3s						
CLES				IAML		17 22 56.3	
	comp=E,272nm,1.8s						
Q17K	Contact Creek	5.91	28	P	Pn	17 21 46.2	+0.1
	baz=213,SNR=10						
OHAK	Old Harbor	6.06	45	Pn	Pn	17 21 47.0	-1.2
OHAK	Old Harbor	6.06	45	P	Pn	17 21 47.5	-0.7
	baz=232						
Q16K	King Salmon	6.07	23	P	Pn	17 21 48.4	+0.2
	baz=207						
P16K	Nushagak River	6.13	16	P	Pn	17 21 49.7	+0.6
	baz=199						
Q18K	Katmai Hardscr	6.48	30	P	Pn	17 21 53.8	-0.3
	baz=216,SNR=5.4						
P17K	Kvichak River	6.58	22	P	Pn	17 21 55.2	-0.1
	baz=206						
O16K	Kokwok River B	6.66	14	P	Pn	17 21 56.2	-0.1
	baz=197,SNR=5.5						
KDAK	Kodiak Island	6.71	43	Pn	Pn	17 21 55.6	-1.4
	comp=E,4.5nm,0.3s,baz=232,slow=5.2,SNR=52						
KDAK				Sn	Sn	17 23 05.4	-8.1
	comp=E,2.3nm,0.3s,baz=234,slow=19,SNR=7.7						
	comp=E,14nm,0.4s						
KDAK	Kodiak Island	6.71	43	Pn	Pn	17 21 55.8	-1.2
O17K	Koliganek Bris	6.99	17	P	Pn	17 22 01.4	+0.6
	baz=201						
P18K	Big Mountain,	7.05	26		Pn	17 22 02.1	+0.3
P18K	Big Mountain,	7.05	26	P	Pn	17 22 02.2	+0.5
	baz=211,SNR=5.5						
Q19K	Cape Douglas,	7.14	33	Pn	Pn	17 22 03.2	+0.3
Q19K	Cape Douglas,	7.14	33	P	Pn	17 22 03.0	+0.1
	baz=220						
N16K	Nishlik Lake	7.44	9	P	Pn	17 22 08.2	+1.2
	baz=192						
P19K	Oil Pt	7.84	31	Pn	Pn	17 22 12.6	0.0
O19K	Port Alsworth	7.98	25	Pn	Pn	17 22 14.7	+0.3
O19K	Port Alsworth	7.98	25	P	Pn	17 22 15.1	+0.7
	baz=212						
ILSW	Iliamna Southw	8.13	30	Pn	Pn	17 22 16.7	+0.1
CNPM	China Poot	8.41	37		Pn	17 22 19.3	-1.1
N19K	Bonanza Creek	8.48	23	Pn	Pn	17 22 21.7	+0.3
N19K	Bonanza Creek	8.48	23	P	Pn	17 22 22.8	+1.5
	baz=209						
RSO	Redoubt South	8.63	29	Pn	Pn	17 22 20.0	-3.5
BRLK	Bradley Lake	8.71	37	Pn	Pn	17 22 22.9	-1.5
BRSE	Bradley Lake S	8.74	37	P	Pn	17 22 23.9	-1.1
	baz=226						
SPU	Mount Spurr	9.42	28		Pn	17 22 34.4	+0.2
SEW	Seward	9.47	38	Pn	Pn	17 22 34.1	-0.7
M19K	Big River Lodg	9.47	20		Pn	17 22 36.2	+1.3
M19K	Big River Lodg	9.47	20	P	Pn	17 22 35.1	+0.2
	baz=206						
SLKM	Skilak Lake	9.47	35		Pn	17 22 34.9	-0.1
ADK	Adak	9.55	268	Pn	Pn	17 22 36.7	+0.7
L19K	White Mountain	9.64	18		Pn	17 22 38.1	+0.9
L19K	White Mountain	9.64	18	P	Pn	17 22 37.8	+0.6
	baz=204						
M20K	Styx River	9.73	23		Pn	17 22 40.2	+1.7
M20K	Styx River	9.73	23	P	Pn	17 22 39.4	+0.8
	baz=210						
KIWB	Kanaga Island	9.84	269	Pn	Pn	17 22 40.8	+0.8
SUA	Susitna One	10.02	30	Pn	Pn	17 22 42.1	-0.4
SUA	Susitna One	10.02	30	P	Pn	17 22 41.7	-0.9
	baz=219						
RC01	Rabbit Creek A	10.06	33		Pn	17 22 42.0	-0.9
RC01	Rabbit Creek A	10.06	33	P	Pn	17 22 43.0	+0.1
	baz=223						
L20K	Farewell, AK	10.10	20	P	Pn	17 22 44.7	+1.2
	baz=206						
TTA	Tatalina	10.15	13	Pn	Pn	17 22 44.1	-0.2
TTA	Tatalina	10.15	13	P	Pn	17 22 43.7	-0.6
	baz=198						
SKT	Skwentna	10.22	26		Pn	17 22 44.5	-0.7
SKT	Skwentna	10.22	26	P	Pn	17 22 45.6	+0.5
	baz=215						
PWL	Port Wells	10.38	37		Pn	17 22 45.3	-2.1
PWL	Port Wells	10.38	37	P	Pn	17 22 46.7	-0.7
	baz=228						
PMR	Palmer	10.63	33	P	Pn	17 22 50.0	-0.7
	baz=223						
KNK	Knik Glacier	10.72	35		Pn	17 22 51.3	-0.8
KNK	Knik Glacier	10.72	35	P	Pn	17 22 51.8	-0.2
	baz=226						
PPLA	Purkeypile	10.83	22	Pn	Pn	17 22 54.4	+0.8
PPLA	Purkeypile	10.83	22	P	Pn	17 22 55.4	+1.8
	baz=210						
K20K	Telida	10.86	17	Pn	Pn	17 22 54.0	+0.1
K20K	Telida	10.86	17	P	Pn	17 22 53.6	-0.4
	baz=204						
CUT	Chulitna	10.91	28	Pn	Pn	17 22 54.6	+0.1
SML	Sawmill	11.05	33	Pn	Pn	17 22 55.2	-1.2
SML	Sawmill	11.05	33	P	Pn	17 22 55.7	-0.8
	baz=225						
EYAK	Cordova Ski Ar	11.19	43	Pn	Pn	17 22 56.9	-1.5
EYAK	Cordova Ski Ar	11.19	43	P	Pn	17 22 57.5	-0.9
	baz=236						
M23K	Glacier View	11.24	34	P	Pn	17 22 58.7	-0.4
	baz=226,SNR=7.1						
CAST	Castle Rocks	11.31	21		Pn	17 23 00.1	0.0
CAST	Castle Rocks	11.31	21	P	Pn	17 23 01.0	+0.9
	baz=209						
SCM	Sheep Creek Mo	11.40	35		Pn	17 23 00.0	-1.4
SCM	Sheep Creek Mo	11.40	35	P	Pn	17 23 00.9	-0.5
	baz=227						
DIV	Divide	11.52	40	Pn	Pn	17 23 01.8	-1.2
ANM	Nome	11.63	351	P	Pn	17 23 04.8	+0.5
	baz=168						
CHUM	Lake Minchumin	11.68	20	P	Pn	17 23 05.3	+0.3
	baz=208						
KLU	Klutina	11.69	38		Pn	17 23 03.7	-1.5
KLU	Klutina	11.69	38	P	Pn	17 23 04.5	-0.8
	baz=232						
KTH	Kantishna Hill	11.69	23	Pn	Pn	17 23 04.6	-0.7
TRF	Thorofare Moun	11.76	25		Pn	17 23 05.6	-0.7
TRF	Thorofare Moun	11.76	25	P	Pn	17 23 05.6	-0.7
	baz=214						
M24K	Tolsona, Glenn	11.99	36		Pn	17 23 08.1	-1.3
M24K	Tolsona, Glenn	11.99	36	P	Pn	17 23 09.2	-0.2
	baz=229						
AMKA	Amchitka	12.10	269	Pn	Pn	17 23 08.8	-2.1
BPAW	Bear Paw Mtn.	12.15	22	Pn	Pn	17 23 11.0	-0.5
BPAW	Bear Paw Mtn.	12.15	22	P	Pn	17 23 11.3	-0.2
	baz=211						
N25K	Chitina, Valde	12.26	40	Pn	Pn	17 23 13.1	0.0
MCK	McKinley	12.34	26	Pn	Pn	17 23 14.3	+0.1
MCK	McKinley	12.34	26	P	Pn	17 23 13.7	-0.4
	baz=217						
GLB	Gilahina Butte	12.47	42	Pn	Pn	17 23 14.3	-1.7
VRDI	Verde Repeater	12.50	43	Pn	Pn	17 23 14.7	-1.8
HARP	HAARP	12.54	36	P	Pn	17 23 16.5	-0.5
	baz=230						
BWN	Browne	12.56	24	Pn	Pn	17 23 14.9	-2.2
MCARA	McCarthy VSAT	12.76	43	Pn	Pn	17 23 17.5	-2.3
MCARA	McCarthy VSAT	12.76	43	P	Pn	17 23 19.4	-0.4
	baz=238						
PAX	Paxson	12.82	34		Pn	17 23 19.2	-1.5
PAX	Paxson	12.82	34	P	Pn	17 23 19.4	-1.2
	baz=228,SNR=9.1						
TNA	Tin City	12.88	347	P	Pn	17 23 21.7	+0.3
	baz=162						
I21K	Tanana	12.91	18		Pn	17 23 21.4	-0.4
I21K	Tanana	12.91	18	P	Pn	17 23 22.3	+0.5
	baz=206,SNR=6.1						
NEA2	Nenana	13.01	24	P	Pn	17 23 21.9	-1.3
	baz=214						
MLY	Manley	13.01	20	P	Pn	17 23 22.7	-0.7
	baz=209						
WRH	Wood River Hil	13.16	25		Pn	17 23 22.5	-2.7
BARN	Barnard Glacie	13.17	45	Pn	Pn	17 23 24.5	-1.1
H21K	Melozitna Rive	13.21	15		Pn	17 23 26.4	+0.5
H21K	Melozitna Rive	13.21	15	P	Pn	17 23 25.8	-0.1
	baz=203						
CTG	Chitna Glacier	13.26	46	P	Pn	17 23 26.4	-0.4
	baz=243						
CTGM	Chitina Glacie	13.27	46	Pn	Pn	17 23 26.7	-0.1
K24K	Donnelly Dome	13.30	31	P	Pn	17 23 27.1	-0.1
	baz=224,SNR=12						
M26K	Nabesna, AK	13.34	39		Pn	17 23 27.3	-0.5
M26K	Nabesna, AK	13.34	39	P	Pn	17 23 27.6	-0.2
	baz=235						
LOGN	Logan Glacier	13.35	47	Pn	Pn	17 23 28.7	+0.7
IMAR	Indian Mountai	13.37	13	Pn	Pn	17 23 29.1	+1.0
CCB	Clear Creek Bu	13.37	25		Pn	17 23 22.4	-5.7
PCA	Pinnacle	13.39	51	Pn	Pn	17 23 28.6	+0.1
PINM	Pinnacle	13.39	51	P	Pn	17 23 28.0	-0.5
	baz=248						
I23K	Minto, Yukon-K	13.41	22	Pn	Pn	17 23 25.2	-3.5
I23K	Minto, Yukon-K	13.41	22	P	Pn	17 23 28.3	-0.4
	baz=212						
HDA	Harding Lake	13.41	27		Pn	17 23 25.5	-3.2
HDA	Harding Lake	13.41	27	P	Pn	17 23 26.9	-1.8
	baz=220						
MDM	Murphy Dome	13.52	24	Pn	Pn	17 23 28.1	-2.1
TCOL	CIGO, UAF Yank	13.54	25	P	Pn	17 23 29.9	-0.6
	baz=217						
COLA	College	13.54	25	P	Pn	17 23 29.6	-0.8
	baz=217						
RIDG	Independent Ri	13.55	32		Pn	17 23 29.1	-1.6
RIDG	Independent Ri	13.55	32	P	Pn	17 23 29.9	-0.7
	baz=226,SNR=6.2						
L26K	Log Cabin Wild	13.59	36		Pn	17 23 31.0	-0.1
L26K	Log Cabin Wild	13.59	36	P	Pn	17 23 30.8	-0.4
	baz=232						
H22K	Ishtalitna Cre	13.66	17	P	Pn	17 23 31.8	-0.3
	baz=206						
O28M	Mount Upton	13.69	48	P	Pn	17 23 32.6	-0.1
	baz=246						
IL31		13.71	26		Pn	17 23 29.4	-3.3
ILAR	Eielson Array	13.71	26	Pn	Pn	17 23 29.4	-3.4
	comp=E,0.4nm,0.3s,baz=217,slow=13,SNR=21						
ILAR				Sn	Sn	17 25 53.6	-11
	comp=E,0.2nm,0.3s,baz=211,slow=28,SNR=4.3						
	comp=E,1.5nm,0.6s						
ILAR	Eielson Array	13.71	26	Pn	Pn	17 23 28.8	-4.0
DOT	Dot Lake	13.74	34	Pn	Pn	17 23 30.3	-3.0
M27K	Edge Creek, AK	13.75	40	Pn	Pn	17 23 31.1	-2.3
POKR	Poker Plat Res	13.85	25	P	Pn	17 23 33.5	-1.1
	baz=217						
G21K	Allakaket	13.91	13	P	Pn	17 23 35.4	-0.1
	baz=200						
H23K	Yukon River	13.95	20	Pn	Pn	17 23 32.3	-3.8
H23K	Yukon River	13.95	20	P	Pn	17 23 36.3	+0.2
	baz=210						
SCRK	Sand Creek	13.99	33		Pn	17 23 35.0	-1.8
SCRK	Sand Creek	13.99	33	P	Pn	17 23 35.3	-1.4
	baz=228						
YUK3	Moose Creek	14.02	44	P	Pn	17 23 36.6	-0.6
	baz=242						
YUK8	Steele Glacier	14.09	46	P	Pn	17 23 38.3	+0.1
	baz=245						
L27K	Beaver Creek,	14.16	38	Pn	Pn	17 23 37.5	-1.5
L27K	Beaver Creek,	14.16	38	P	Pn	17 23 38.6	-0.4
	baz=235						
BVCY	Beaver Creek	14.18	41	P	Pn	17 23 39.5	+0.3
	baz=239						
BCAR	Beaver Creek A	14.18	38	Pn	Pn	17 23 38.1	-1.2
O29M	Mount Kennedy	14.25	51	P	Pn	17 23 41.7	+1.4
	baz=250						
H24K	Noodor Dome	14.33	22	Pn	Pn	17 23 38.2	-3.0
H24K	Noodor Dome	14.33	22	P	Pn	17 23 40.2	-1.0
	baz=214						
F21K	Alatna River	14.58	12	P	Pn	17 23 45.0	+0.3
	baz=199						
G23K	Bananza Creek	14.64	18	P	Pn	17 23 45.1	-0.5
	baz=208						
PRP	Porcupine Dome	14.66	26	Pn	Pn	17 23 41.6	-4.2
PRP	Porcupine Dome	14.66	26	P	Pn	17 23 45.7	-0.2
	baz=220						
K27K	Chicken	14.66	35	Pn	Pn	17 23 44.0	-1.8
F22K	John River	15.02	13	P	Pn	17 23 50.5	-0.1
	baz=202						
PLBC	Pleasant Camp	15.07	55	P	Pn	17 23 52.2	+1.0
	baz=256						
COLD	Coldfoot	15.07	17	P	Pn	17 23 51.4	+0.1
	baz=206						
M29M	Somme Creek	15.16	43	P	Pn	17 23 51.9	-0.7
	baz=243						
I26K	Coal Creek Min	15.17	30		Pn	17 23 50.9	-1.7
I26K				IAmb	IAmb	17 24 12.0	
	comp=Z,7.5nm,0.8s						
I26K	Coal Creek Min	15.17	30	P	Pn	17 23 51.3	-1.4
	baz=226						
EGAK	Eagle	15.45	33		Pn	17 23 53.5	-2.7
EGAK				IAmb	IAmb	17 24 07.2	
	comp=Z,14nm,0.8s						
EGAK	Eagle	15.45	33	P	Pn	17 23 55.3	-1.0
	baz=231						
O30N	Mendenhall	15.56	51	P	Pn	17 23 57.8	0.0
	baz=252						
L29M	L29M	15.61	41	P	Pn	17 23 58.7	+0.2
	baz=241						
DAWY	Dawson	15.63	37	P	Pn	17 23 57.6	-1.1
DAWY				IAmb	IAmb	17 24 12.2	
	comp=Z,8.6nm,0.8s						
DAWY	Dawson	15.63	37	P	Pn	17 23 58.6	-0.1
	baz=236						
E22K	Anaktuvuk Pass	15.66	13	P	Pn	17 23 59.7	+0.6
	baz=202,SNR=5.4						
F24K	Squaw Lake	15.76	19	P	Pn	17 23 58.8	-1.5
	baz=211						
I27K	Kandik River	15.84	31	P	Pn	17 24 00.2	-1.3
	baz=228						
M30M	Minto, Yukon	15.92	44	Pn	Pn	17 24 02.3	-0.1
M30M				IAmb	IAmb	17 24 19.2	
	comp=Z,19nm,1.4s						
E23K	Chandalar	15.92	16	P	Pn	17 24 02.1	-0.4
	baz=206						
N31M	Braeburn, Yuko	15.94	49	Pn	Pn	17 24 03.2	+0.5
N31M				IAmb	IAmb	17 24 14.3	
	comp=Z,23nm,1.2s						
E24K	Your Creek	16.13	17	P	Pn	17 24 05.0	-0.1
	baz=209						
H27K	Steamboat Moun	16.30	29	P	Pn	17 24 06.4	-0.9
	baz=226						
BMAR	Burnt Mountain	16.39	23	Pn	Pn	17 24 04.1	-4.4
D23K	Nanushuk River	16.59	13	P	Pn	17 24 11.0	0.0
	baz=203						
G27K	Doyon Strip	16.67	27	P	Pn	17 24 10.5	-1.6
	baz=225						
I29M	Ogilvie Camp,	16.76	34	P	Pn	17 24 12.7	-0.4
I29M	Ogilvie Camp,	16.76	34	P	Pn	17 24 12.7	-0.4
	baz=234						
M31M	Drury Creek, Y	16.80	47	Pn	Pn	17 24 12.3	-1.4
M31M	Drury Creek, Y	16.80	47	P	Pn	17 24 13.1	-0.6
	baz=250						
P33M	Teslin, Yukon	16.98	54	Pn	Pn	17 24 14.1	-1.9
P33M	Teslin, Yukon	16.98	54	P	Pn	17 24 16.0	0.0
	baz=258						
FARO	Faro, Yukon	17.27	47		Pn	17 24 18.8	-0.8
FARO	Faro, Yukon	17.27	47	P	Pn	17 24 19.9	+0.3
	baz=251						
C24K	Franklin Bluff	17.57	14	P	Pn	17 24 22.6	-0.5
	baz=206,SNR=17						
D25K	Kavik River	17.60	17	P	Pn	17 24 23.6	-0.1
	baz=211						
EPYK	Eagle Plains	17.88	33	P	Pn	17 24 26.1	-1.0
EPYK	Eagle Plains	17.88	33	P	Pn	17 24 27.7	+0.6
	baz=234,SNR=18						
MMPY	Sheldon Lake,	18.32	47	P	Pn	17 24 33.5	+1.0
	baz=253						
A21K	Barrow	18.33	5		Pn	17 24 29.8	-2.6
A21K				IAmb	IAmb	17 24 33.0	
	comp=Z,12nm,0.6s						
A21K	Barrow	18.33	5	P	Pn	17 24 32.3	-0.2
	baz=189						
C27K	Jago River	18.36	19	P	Pn	17 24 33.2	+0.2
	baz=215						
C26K	Camden Bay	18.38	18	P	Pn	17 24 33.5	+0.4
	baz=212						
G30M	tAoh Zraii Nji	18.41	32	P	Pn	17 24 34.4	+0.9
	baz=234						
F31M	Tsiigehtchic	19.46	32	P	P	17 24 45.7	+0.7
	baz=236,SNR=14						
INK	Inuvik	20.02	30	P	P	17 24 51.6	+0.5
	comp=Z,6.1nm,0.5s,baz=230,slow=11,SNR=20						
	comp=Z,6.1nm,0.5s						
INK	Inuvik	20.02	30	P	P	17 24 51.7	+0.5
INK				IAmb	IAmb	17 25 11.5	
	comp=Z,10.0nm,0.8s						
INK	Inuvik	20.02	30	P	P	17 24 52.5	+1.4
	baz=235,SNR=11						
BILL	Bilibino	21.46	326	P	P	17 25 07.2	+0.6
C36M	Paulatuk	23.52	32	P	P	17 25 28.6	+0.3
C36M				IAmb	IAmb	17 25 37.1	
	comp=Z,7.0nm,0.8s						
C36M	Paulatuk	23.52	32	P	P	17 25 29.0	+0.7
	baz=246						
A36M	Sachs Harbour	24.41	26	P	P	17 25 37.4	+0.7
A36M				IAmb	IAmb	17 25 42.9	
	comp=Z,6.3nm,0.8s						
A36M	Sachs Harbour	24.41	26	P	P	17 25 37.7	+0.9
	baz=239						
PETK	Petropavlovsk-	24.44	287	P	P	17 25 37.1	-0.1
	comp=Z,1.2nm,0.4s,baz=83,slow=12,SNR=16						
	comp=Z,1.2nm,0.4s						
YKA	Yellowknife Ar	25.92	50	P	P	17 25 51.5	+1.1
	comp=Z,0.5nm,0.8s,baz=264,slow=7.9,SNR=8.9						
YKA				PcP	PcP	17 29 17.1	-1.5
	comp=Z,0.4nm,0.6s,baz=273,slow=2.1,SNR=6.4						
	comp=Z,0.5nm,0.8s						
YKA	Yellowknife Ar	25.92	50		P	17 25 51.7	+1.3
NVAR	Mina Array Bea	32.77	99	P	P	17 26 52.6	+0.8
	comp=Z,0.6nm,0.8s,baz=301,slow=9.2,SNR=4.1						
	comp=Z,0.6nm,0.8s						
PDAR	Pinedale Array	35.35	86	P	P	17 27 15.4	+1.2
	comp=Z,0.5nm,0.5s,baz=301,slow=4.7,SNR=5.6						
	comp=Z,0.5nm,0.5s						
O20A	White River Ci	37.72	88	P	P	17 27 33.6	-0.9
	baz=308						
PV13	Radium Mtn., P	38.62	91	P	P	17 27 42.4	+0.4
PV13				IAmb	IAmb	17 27 43.8	
	comp=Z,4.4nm,0.8s						
H11N2	WAKE ISLAND Hy	41.48	229	T	T	18 12 11.6	
	baz=50						
H11N3	WAKE ISLAND Hy	41.49	229	T	T	18 12 09.9	
	baz=50						
H11N1	WAKE ISLAND Hy	41.50	229	T	T	18 12 13.5	
	baz=50						
H11S1	WAKE ISLAND Hy	42.64	228	T	T	18 13 39.4	
	baz=28,slow=76,SNR=5.5						
H11S2	WAKE ISLAND Hy	42.65	228	T	T	18 13 37.7	
	baz=28,slow=76,SNR=6.3						
H11S3	WAKE ISLAND Hy	42.66	228	T	T	18 13 39.1	
	baz=28,slow=76,SNR=6.0						
WMOK	Wichita Mounta	46.94	87	P	P	17 28 49.2	-0.1
	baz=313						
TX31	Lajitas Ar. Si	47.80	96	P	P	17 28 55.2	-0.9
TX32	Lajitas Array	47.80	96	P	P	17 28 55.8	-0.4
TX32				IAmb	IAmb	17 28 58.1	
	comp=Z,5.3nm,1.4s						
TXAR	Lajitas Array	47.80	96	P	P	17 28 56.8	+0.6
	comp=Z,0.5nm,0.6s,baz=302,slow=6.4,SNR=9.9						
	comp=Z,0.5nm,0.6s						
TXAR	Lajitas Array	47.80	96	P	P	17 28 56.5	+0.3
NRIK	Noril'sk	48.01	334	P	P	17 28 57.3	+0.2
	comp=Z,1.4nm,0.7s,baz=188,slow=14,SNR=2.0						
	comp=Z,1.4nm,0.7s						
HDIL	Hopedale	48.70	75	P	P	17 29 01.8	-1.0
	baz=311						
JCT	Junction City	49.30	92	P	P	17 29 07.2	-0.4
JCT	Junction City	49.30	92	P	P	17 29 07.8	+0.2
	baz=316						
KSRS	Korea Array	50.20	282	P	P	17 29 15.1	+0.8
	comp=Z,1.5nm,0.9s,baz=48,slow=8.3,SNR=3.8						
	comp=Z,1.5nm,0.9s						
833A	Chaparral WMA,	51.10	94	P	P	17 29 22.5	+1.3
	baz=317						
ZALV	Zalesovo Beam	60.05	321	P	P	17 30 25.1	-0.1
	comp=Z,0.7nm,0.5s,baz=40,slow=10,SNR=3.6						
	comp=Z,0.7nm,0.5s						
FINES	FINESS Array B	65.58	356	P	P	17 31 01.3	-0.6
	comp=Z,1.6nm,0.8s,baz=353,slow=5.7,SNR=5.6						
	comp=Z,1.6nm,0.8s						
MKAR	Makanchi Array	66.71	318	P	P	17 31 08.9	-0.6
	comp=Z,0.4nm,0.7s,baz=50,slow=6.6,SNR=6.7						
	comp=Z,0.4nm,0.7s						
AKASG	Malin Array Be	76.13	353	P	P	17 32 06.8	+0.7
	comp=Z,0.5nm,0.5s,baz=9.4,slow=5.5,SNR=4.9						
	comp=Z,0.5nm,0.5s						
CMAR	Chiang Mai Arr	81.20	289	P	P	17 32 33.6	-1.0
	comp=Z,0.5nm,0.6s,baz=28,slow=5.8,SNR=7.4						
	comp=Z,0.5nm,0.6s						
WRA	Warramunga Arr	91.55	238	P	P	17 33 24.2	-1.1
	comp=Z,0.3nm,0.7s,baz=33,slow=5.9,SNR=2.8						
	comp=Z,0.3nm,0.7s						
ASAR	Alice Springs	94.87	236	P	P	17 33 38.9	-1.8
	comp=Z,0.5nm,0.7s,baz=24,slow=4.6,SNR=5.9						
	comp=Z,0.5nm,0.7s						

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*JMA **15** 17:26:30.7±0.5, 41°N±1°×13°4E±°, h537^{km}, MV3.5/21, SEA OF JAPAN*

*IDC **15** 17:26:30.6±1.1, 41°.68N×133°.53E, h477^{km}±13^{km}, mb3.0/6, mbtmp3.7/10, Error ellipse: s-maj=26.8km s-min=14.9km az=73.0*

ISC 15 17:26:30.6±0.8, **41°.54N**±0°.09×**133°.79E**±0°.09, **h500^{km}**, **n21**, σ**1^{s}.77**/23, **mb3.4**/6, **Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USRK	Ussuriysk Ar.	2.97	334	P	P	17 27 38.8	-2.3
	17nm,0.6s,baz=205,slow=9.3,SNR=29						
JIW	Iwasaki	4.79	99	*e*P	P	17 27 57.0	+1.4
JSK	Shakotan	5.27	68	*e*P	P	17 28 01.1	+1.3
JOT	Ohata	5.46	89	P	P	17 28 03.0	+1.4
JRG	Rokugo	5.64	110	*e*P	P	17 28 04.7	+1.2
KSRS	Korea Array	6.10	230	P	P	17 28 06.3	-1.5
	1.3nm,0.6s,baz=40,slow=9.8,SNR=7.6						
JMK	Ichinoseki	6.24	112	*e*P	P	17 28 09.8	+0.7
JMM	Marumori	6.53	122	*e*P	P	17 28 12.7	+0.7
JAG	Ashikaga	6.75	137	*e*P	P	17 28 14.8	+0.5
JFK	Kawauchi	6.88	125	*e*P	P	17 28 15.8	+0.1
ASAJ	Asahikawa	6.97	65	P	P	17 28 16.2	0.0
	2.4nm,0.3s,baz=262,slow=5.8,SNR=12						
JCH	Churui	7.20	78	*e*P	P	17 28 19.6	+0.9
JCH				*e*S	S	17 29 45.3	-2.0
JHO	Hitachi	7.21	131	*e*P	P	17 28 18.4	-0.5
JHO				*e*S	S	17 29 43.9	-3.8
KLR	Kul'dur	7.83	350	P	P	17 28 22.6	-2.2
	2.2nm,0.6s,baz=173,slow=4.8,SNR=11						
JTKR	Abashiri--Toko	7.83	69	*e*P	P	17 28 26.9	+1.8
MKAR	Makanchi Array	36.77	296	P	P	17 32 54.1	-0.8
	0.6nm,0.7s,baz=84,slow=11,SNR=6.4						
	0.6nm,0.7s						
ARCES	ARCESS Array B	57.62	337	P	P	17 35 32.4	+0.7
	3.8nm,1.0s,baz=46,slow=5.2,SNR=4.0						
	3.8nm,1.0s						
WRA	Warramunga Arr	61.17	179	P	P	17 35 58.7	+2.6
	0.3nm,0.5s,baz=352,slow=7.1,SNR=5.1						
	0.3nm,0.5s						
FINES	FINESS Array B	61.99	329	P	P	17 36 01.6	+0.7
	2.4nm,0.9s,baz=64,slow=7.2,SNR=5.1						
	2.4nm,0.9s						
ASAR	Alice Springs	64.87	180	P	P	17 36 23.1	+3.2
	0.2nm,0.4s,baz=356,slow=6.7,SNR=12						
	0.2nm,0.4s						
AKASG	Malin Array Be	67.06	318	P	P	17 36 33.8	+0.5
	0.4nm,0.3s,baz=46,slow=6.5,SNR=6.0						
	0.4nm,0.3s						

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*DRS **15** 17:38:06.5±0.0, 39°.92N×49°.90E, h24^{km}*

*TEH **15** 17:38:09.6, 39°.11N×49°.71E, h10^{km}±999^{km}, ML2.9*

ISC 15 17:38:03.8±1.6, **40°.03N**±0°.09×**50°.1E**±0°.1, **h35^{km}**, **n8**, σ**1^{s}.04**/11, **Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSMR	Kasumkent	2.15	318	*e*Pg	Pn	17 38 37.6	+0.4
	1.0nm,0.5s						
KSMR				*e*Sg	Sn	17 39 02.3	-0.3
	12nm,0.3s						
AKT	Akhty	2.29	310	*e*Pg	Pn	17 38 39.0	-0.1
	8.0nm,0.2s						
AKT				*e*Sg	Sn	17 39 04.8	-1.3
	26nm,0.2s						

IHRS	Heris	2.91	235	Pn	Pn	17 38 48.8	+1.1
KMKR	Kumukh	3.07	314	*e*Pn	Pn	17 38 50.5	+0.6
	10.0nm,0.6s						
KMKR				*e*Sn	Sn	17 39 25.6	+0.1
	23nm,0.3s						
KLST	Kelardasht - M	3.60	167	Pn	Pn	17 38 56.8	-0.5
QALM	Alamut, Qazvin	3.62	173	Pn	Pn	17 38 56.7	-0.9
MZPU	Pul - Mazandar	3.78	161	Pn	Pn	17 38 59.1	-0.6
IPRN	Peran	4.19	154	Pn	Pn	17 39 07.2	+1.9

IDC 15 17:45:12.7±2.2**, 1°.09N×125°.05E, h0^{km}, mb3.2**/3**,**
mbtmp3.2/3**, Error ellipse: s-maj=228.2km**
s-min=28.7km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.80	157	P	P	17 50 17.4	+0.1
	0.5nm,0.7s,baz=334,slow=10,SNR=6.1 0.5nm,0.7s						
ASAR	Alice Springs	26.07	161	P	P	17 50 47.8	-0.4
	0.4nm,1.0s,baz=348,slow=14,SNR=1.4 0.4nm,1.0s						
MKAR	Makanchi Array	58.79	327	P	P	17 55 13.1	+0.2
	0.1nm,0.3s,baz=111,slow=7.9,SNR=2.6 0.1nm,0.3s						

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*NEIC **15** 17:58:01.7±1.0, 6°.0S±0°.1×151°.3E±0°.2, h53^{km}±9^{km},*
mb4.3/14, Error ellipse: s-maj=27.5km s-min=10.0km
az=123.0
*IDC **15** 17:58:02.6±1.5, 5°.95S×151°.25E, h76^{km}±14^{km}, mb3.7/5,*
mbtmp4.0/6, Error ellipse: s-maj=36.8km s-min=12.2km
az=120.0
ISC 15 17:58:01.1±0.6**, 5°.98S**±0°.08×**151°.18E**±0°.10**, h50^{km}, n28,**
σ1^{s}.44/31**, mb4.0**/13**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.87	27	P	Pn	17 58 30.5	-0.2
	1µm,0.3s,baz=274,slow=1.2,SNR=421						
KRVT				S	Sn	17 58 54.7	+1.7
	1µm,0.5s,baz=302,slow=20,SNR=10						
RABL	Rabaul	2.03	29		Pn	17 58 33.0	+0.1
RABL				Sn	Sn	17 59 01.8	+4.6
PMG	Port Moresby	5.24	229	P	Pn	17 59 18.9	+2.0
	6.1nm,0.3s,baz=51,slow=14,SNR=3.7						
PMG				S	Sn	18 00 15.3	-0.8
	20nm,0.5s,baz=133,slow=18,SNR=3.7						
PMG	Port Moresby	5.24	229		Pn	17 59 18.7	+1.8
HNR	Honiara	9.34	112	P	Pn	18 00 13.7	+0.5
	148nm,0.2s,baz=312,slow=15,SNR=1.8						
WB0	Warramunga Arr	21.31	228	P	P	18 02 43.7	-0.2
WB0				IAmb	IAmb	18 03 15.4	
	comp=Z,4.2nm,0.8s						
WRAB	Tennant Creek	21.44	228	P	P	18 02 44.8	-0.5
WRAB				IAmb	IAmb	18 03 11.0	
	comp=Z,4.9nm,0.8s						
WB2	Warramunga Arr	21.45	228	P	P	18 02 44.7	-0.7
WB2				IAmb	IAmb	18 03 03.2	
	comp=Z,9.9nm,1.2s						
WRA	Warramunga Arr	21.46	228	P	P	18 02 45.1	-0.3
	comp=Z,2.7nm,0.4s,baz=54,slow=10,SNR=46 comp=Z,2.7nm,0.4s						
WRA	Warramunga Arr	21.46	228	P	P	18 02 44.5	-1.0
KNRA	Kununurra	24.01	245	P	P	18 03 11.9	+0.5
KNRA				IAmb	IAmb	18 03 13.6	
	comp=Z,19nm,1.3s						
AS31	Alice Springs	24.20	222	P	P	18 03 13.9	+0.7
ASAR	Alice Springs	24.20	222	P	P	18 03 13.6	+0.4
	comp=Z,2.5nm,0.6s,baz=56,slow=9.9,SNR=72 comp=Z,2.5nm,0.6s						
ASAR	Alice Springs	24.20	222	P	P	18 03 13.3	+0.2
FITZ	Fitzroy Crossi	27.68	242	P	P	18 03 44.3	-0.4
NACB	Ninganchiao	41.60	317	P	P	18 05 44.9	+0.5
NACB				IAmb	IAmb	18 06 12.6	
	comp=Z,16nm,0.9s						
SSLB	Suanglung	41.78	316	P	P	18 05 46.2	+0.2
YHNB	Yeheng	42.08	318	P	P	18 05 49.4	+1.0
YHNB				IAmb	IAmb	18 06 27.8	
	comp=Z,44nm,1.4s						
PETK	Petropavlovsk-	59.12	5	P	P	18 07 53.7	-2.7
	comp=Z,4.2nm,1.0s,baz=136,slow=6.6,SNR=4.1 comp=Z,4.2nm,1.0s						
SONM	Songino Array	66.47	329	P	P	18 08 45.4	-0.2
SONM				IAmb	IAmb	18 08 47.9	
	comp=Z,1.3nm,1.2s						
CNPM	China Poot	79.47	26	P	P	18 10 01.5	-0.6
MKAR	Makanchi Array	80.16	319	P	P	18 10 06.7	+0.6
PWL	Port Wells	81.40	26	P	P	18 10 12.7	+0.3
IMAR	Indian Mountai	82.03	20	P	P	18 10 14.7	-1.0
ILAR	Eielson Array	83.86	22	P	P	18 10 21.7	-3.4
	comp=Z,0.4nm,0.6s,baz=250,slow=5.0,SNR=7.5 comp=Z,0.4nm,0.6s						
QSPA	South Pole Qui	83.99	180	P	P	18 10 26.4	+0.4
QSPA				IAmb	IAmb	18 10 30.4	
	comp=Z,3.5nm,1.1s						
NVAR	Mina Array Bea	94.08	52	P	P	18 11 13.7	-1.0
	comp=Z,0.4nm,0.6s,baz=320,slow=4.4,SNR=3.5 comp=Z,0.4nm,0.6s						
TORD	Torodi Ar. Bea	149.10	286	PKPbc	PKPbc	18 17 44.5	-0.5
	comp=Z,3.4nm,0.7s,baz=59,slow=2.8,SNR=17						

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*BJI **15** 18:00:56.1±0.0, 6°.16S×151°.69E, h52^{km}, mb4.7/43,*
mB5.2/17, Ms5.1/3, Ms7 4.6/2
*IDC **15** 18:01:00.5±1.5, 5°.86S×151°.15E, h55^{km}±13^{km}, mb4.1/19,*
mbtmp4.4/21, MS3.8/21, Error ellipse: s-maj=16.8km
s-min=10.0km az=120.0
*NEIC **15** 18:01:01.7±2.2, 5°.88S±0°.07×151°.13E±0°.09, h57^{km}±7^{km},*
mb4.9/75, Error ellipse: s-maj=14.0km s-min=9.4km
az=121.0
*DJA **15** 18:01:02.9±0.4, 6°S±4°×15°1E±°, h71^{km}±7^{km}, M4.9/11,*
mB4.9/4, mb4.6/11, MLv5.3/2, Mw(mB)4.2/4
ISC 15 18:01:00.4±0.3**, 5°.89S**±0°.05×**151°.11E**±0°.06**, h50^{km}, n173,**
σ1^{s}.35/177**, mb4.8**/63**, MS3.8**/18**, 1C-1D, New Britain**
region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.81	30	P	Pn	18 01 30.0	+0.7
	6µm,0.3s,baz=291,slow=0.6,SNR=87						
KRVT				S	Sn	18 01 55.1	+4.0
	8µm,0.6s,baz=315,slow=21,SNR=18						
KRVT				LR	LR	18 01 59.5	
	comp=Z,1µm,21.1s,baz=34,slow=33						
RABL	Rabaul	1.98	32	Pn	Pn	18 01 32.0	+0.4
RABL				Sn	Sn	18 02 01.5	+6.2
RABL	Rabaul	1.98	32	P	Pn	18 01 33.6	+2.0
PMG	Port Moresby	5.25	228	P	Pn	18 02 18.7	+2.3
	46nm,0.5s,baz=42,slow=9.7,SNR=10						
PMG				S	Sn	18 03 15.8	+0.1
	86nm,0.6s,baz=29,slow=12,SNR=3.7						
PMG				LR	LR	18 04 09.3	
	comp=Z,509nm,21.7s,baz=26,slow=36						
PMG	Port Moresby	5.25	228	Pn	Pn	18 02 17.2	+0.8
PMG	Port Moresby	5.25	228	P	Pn	18 02 20.3	+3.9
PMG	Port Moresby	5.25	228	P	Pn	18 02 20.1	+3.7
HNR	Honiara	9.44	112	P	Pn	18 03 13.4	-0.4
	1µm,0.8s,baz=199,slow=7.2,SNR=4.2						
HNR				LR	LR	18 06 15.5	
	comp=Z,6µm,21.3s,baz=268,slow=34						
HNR	Honiara	9.44	112		Pn	18 03 13.3	-0.5
PATS	Pohnpei	14.54	30	Pn	Pn	18 04 24.4	+1.1
CTA	Charters Tower	14.89	198	P	Pn	18 04 29.9	+1.9
	5.7nm,0.8s,baz=24,slow=13,SNR=7.3						
CTA				LR	LR	18 10 14.4	
	comp=Z,299nm,18.3s,baz=28,slow=37						
CTA	Charters Tower	14.89	198	P	P	18 04 32.2	-0.5
CTAO	Charters Tower	14.89	198		Pn	18 04 27.8	-0.1
QIS	Mount Isa	18.37	216	P	P	18 05 12.7	+1.5
EIDS	Eidsvold	19.37	180	P	P	18 05 22.0	-0.2
KDU	Kakadu	19.59	248	P	P	18 05 24.7	+0.1
GUMO	Guam	20.32	342	LR	LR	18 11 38.4	
	comp=Z,195nm,21.8s,baz=170,slow=31						
SIJI	Sorong	20.42	283	P	P	18 05 34.5	+0.8
	5.8nm,0.6s,baz=92,slow=9.2,SNR=7.5 5.8nm,0.6s						
RMQ	Roma	20.61	186	P	P	18 05 37.1	+1.5
	47nm,1.0s						
MTN	Manton Dam	20.88	249	P	P	18 05 37.8	-0.8
MTN				IAmb	IAmb	18 05 49.6	
	comp=Z,38nm,1.0s						
MTN	Manton Dam	20.88	249	P	P	18 05 39.5	+0.9
WB0	Warramunga Arr	21.32	228		P	18 05 43.0	-0.3
WB0				IAmb	IAmb	18 06 02.6	
	comp=Z,67nm,1.6s						
WRAB	Tennant Creek	21.46	228	P	P	18 05 44.4	-0.4
WB2	Warramunga Arr	21.46	228		P	18 05 44.5	-0.4
WRA	Warramunga Arr	21.47	228	P	P	18 05 44.8	-0.2
	comp=Z,12nm,0.5s,baz=54,slow=10,SNR=50						
WRA				S	S	18 09 40.6	0.0
	comp=Z,4.0nm,1.1s,baz=57,slow=17,SNR=7.3						
WRA				PcP	PcP	18 09 46.7	0.0
	comp=Z,2.0nm,1.0s,baz=33,slow=1.7,SNR=6.7						
WRA				ScP	ScP	18 13 19.2	-0.6
	comp=Z,0.8nm,0.8s,baz=48,slow=2.6,SNR=4.1						
WRA				LR	LR	18 14 03.2	
	comp=Z,204nm,19.2s,baz=100,slow=36 comp=Z,12nm,0.5s						
WRA	Warramunga Arr	21.47	228	P	P	18 05 44.3	-0.6
DZM	Mont Dzumac	21.88	139	P	P	18 05 47.4	-1.9
	comp=Z,9.9nm,1.0s,baz=172,slow=2.4,SNR=3.7						
DZM				LR	LR	18 13 33.5	
	comp=Z,383nm,19.1s,baz=307,slow=34 comp=Z,9.9nm,1.0s						
KNRA	Kununurra	23.99	244	P	P	18 06 11.2	+0.6
KNRA				IAmb	IAmb	18 06 12.4	
	comp=Z,27nm,0.7s						
AS31	Alice Springs	24.22	221	P	P	18 06 12.9	+0.2
ASAR	Alice Springs	24.23	221	P	P	18 06 13.1	+0.3
	comp=Z,18nm,0.8s,baz=58,slow=9.3,SNR=98						
ASAR				PcP	PcP	18 09 52.4	+0.1
	comp=Z,1.6nm,1.1s,baz=38,slow=2.0,SNR=2.7						
ASAR				S	S	18 10 35.1	+7.1
	comp=Z,1.5nm,0.9s,baz=40,slow=17,SNR=4.6						
ASAR				ScP	ScP	18 13 28.0	+1.0
	comp=Z,1.0nm,0.8s,baz=42,slow=3.0,SNR=6.5						
ASAR				LR	LR	18 15 44.6	
	comp=Z,290nm,18.6s,baz=79,slow=36 comp=Z,18nm,0.8s						
ASAR	Alice Springs	24.23	221	P	P	18 06 12.2	-0.5
SOEI	Soe	26.87	260	P	P	18 06 37.6	+0.7
SOEI				IAmb	IAmb	18 07 12.2	
	comp=Z,17nm,0.9s						
STKA	Stephens Creek	27.35	198	P	P	18 06 40.2	-0.7
	comp=Z,8.4nm,0.9s,baz=20,slow=6.7,SNR=4.4						
STKA				LR	LR	18 16 52.0	
	comp=Z,185nm,21.2s,baz=20,slow=35 comp=Z,8.4nm,0.9s						
STKA	Stephens Creek	27.35	198	P	P	18 06 42.4	+1.5
FITZ	Fitzroy Crossi	27.67	242	P	P	18 06 43.3	-0.6
DAV	Davao City (W)	28.55	296	LR	LR	18 19 15.2	
	comp=Z,93nm,18.1s,baz=154,slow=38						
MMRI	Maumere	28.77	263	P	P	18 06 52.5	-1.3
MMRI				IAmb	IAmb	18 06 54.0	
	comp=Z,30nm,0.9s						
MBWA	Marble Bar	33.98	240	P	P	18 07 39.3	-0.3
MBWA				pP	pP	18 07 51.9	-0.6
PSA00	Pilbara Seismi	34.03	240	P	P	18 07 39.2	-0.8
PSA00				IAmb	IAmb	18 08 43.8	
	comp=Z,40nm,1.6s						
JAGI	Jajag, Banyuwa	36.75	264	P	P	18 08 01.7	-1.8
URZ	Urewera	39.94	147	LR	LR	18 22 33.7	
	comp=Z,154nm,20.2s,baz=339,slow=32						
TCW	Tory Channel	40.81	153	P	P	18 08 36.9	-0.2
BSWZ	Blackbirch Sta	41.03	154	P	P	18 08 38.5	-0.5
YULB	Yu-li	41.17	316	P	P	18 08 40.7	+0.4
YULB				IAmb	IAmb	18 08 43.1	
	comp=Z,24nm,0.7s						
NACB	Ninganchiao	41.48	317	P	P	18 08 43.0	+0.2
RPZ	Rata Peaks	41.56	158	LR	LR	18 24 58.4	
	comp=Z,322nm,19.0s,baz=275,slow=35						
TPUB	Ta-pu	41.57	315	P	P	18 08 43.9	+0.3
SSLB	Suanglung	41.66	316	P	P	18 08 45.0	+0.7
SSLB				IAmb	IAmb	18 08 50.4	
	comp=Z,20nm,0.6s						
YHNB	Yeheng	41.96	318	P	P	18 08 47.9	+1.0
JNU	Nakatsue	43.29	335	P	P	18 08 57.7	+0.2
	comp=Z,13nm,0.8s,baz=202,slow=3.9,SNR=7.5 comp=Z,13nm,0.8s						
MJAR	Matsushiro Arr	43.90	345	LR	LR	18 26 53.8	
	comp=Z,144nm,18.1s,baz=184,slow=35						
KSRS	Korea Array	48.24	335	P	P	18 09 36.5	+0.2
	comp=Z,2.6nm,0.8s,baz=153,slow=9.2,SNR=9.2 comp=Z,2.6nm,0.8s						
NJ2	Nanjing	48.66	323	*e*P	P	18 09 42.1	+2.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ASAJ	Asahikawa	50.36	352	LR	LR	18 29 46.8	
	comp=Z,47nm,20.4s,baz=195,slow=34						
WHN	Wuhan	50.50	318	⇑P	P	18 09 57.4	+3.6
USRK	Ussuriysk Ar.	52.75	343	LR	LR	18 28 30.8	
	comp=Z,57nm,21.4s,baz=114,slow=31						
ENH	Enshi	53.69	315	P	P	18 10 17.4	-0.1
ENH				IAmb	IAmb	18 10 19.6	
	comp=Z,25nm,1.3s						
ENH	Enshi	53.69	315	P	P	18 10 17.7	+0.2
ENH				pP	pP	18 10 29.7	-1.9
HNS	HongShan	54.83	325	⇓P	P	18 10 27.0	+1.4
HNS				pmax	pmax		
	comp=Z,11nm,1.0s						
XAN	Xi'an	56.27	318	P	P	18 10 36.3	+0.2
XAN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CMAR	Chiang Mai Arr	56.83	296	P	P	18 10 40.0	-0.4
	comp=Z,0.6nm,0.6s,baz=126,slow=6.2,SNR=8.9 comp=Z,0.6nm,0.6s						
KLR	Kul'dur	57.43	345	P	P	18 10 42.9	-1.1
	comp=Z,2.7nm,0.9s,baz=162,slow=3.9,SNR=6.1						
KLR				LR	LR	18 34 39.6	
	comp=Z,47nm,18.8s,baz=172,slow=35 comp=Z,2.7nm,0.9s						
PZH	PanZhiHua	57.64	306	P	P	18 10 48.8	+2.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
CD2	Chengdu	58.19	312	*e*P	P	18 10 50.0	+0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XLT	XiLinHaoTe	58.77	331	*e*P	P	18 11 01.6	+8.0
XLT				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XLT				pmax	pmax		
	comp=Z,200nm,5.5s						
HHC	Hu-ho-hao-te	58.97	326	*e*P	P	18 10 57.1	+2.1
HHC				pmax	pmax		
	comp=Z,22nm,0.8s						
HHC				pmax	pmax		
	comp=Z,280nm,5.9s						
PETK	Petropavlovsk-	59.03	5	P	P	18 10 53.3	-1.8
	comp=Z,2.4nm,0.5s,baz=164,slow=6.5,SNR=18						
PETK				LR	LR	18 32 51.7	
	comp=Z,57nm,19.6s,baz=196,slow=32 comp=Z,2.4nm,0.5s						
HEH	HeiHe	59.56	343	*e*P	P	18 10 57.4	-1.4
HEH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HEH				pmax	pmax		
	comp=Z,370nm,6.0s						
TNCH	TengChong	59.65	303	*e*P	P	18 11 02.5	+2.4
TNCH				pP	pP	18 11 15.8	+1.5
TNCH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
DRV	Dumont d'Urvil	61.16	185	P	P	18 11 09.8	+0.3
DRV				pP	pP	18 11 22.7	+0.7
MA2	Magadan	65.25	360	P	P	18 11 35.4	-1.2
	comp=Z,2.1nm,0.6s,baz=179,slow=4.2,SNR=4.3						
MA2				LR	LR	18 36 26.2	
	comp=Z,52nm,21.9s,baz=174,slow=33 comp=Z,2.1nm,0.6s						
MA2	Magadan	65.25	360	P	P	18 11 35.8	-0.9
ULN	Ulaanbaatar	66.04	329	P	P	18 11 42.1	-0.1
ULN	Ulaanbaatar	66.04	329	P	P	18 11 42.4	+0.2
ULN				pP	pP	18 11 55.8	-0.8
SONM	Songino Array	66.36	329	P	P	18 11 43.9	-0.3
	comp=Z,1.5nm,0.6s,baz=147,slow=4.7,SNR=11						
SONM				LR	LR	18 39 59.6	
	comp=Z,76nm,21.1s,baz=170,slow=35 comp=Z,1.5nm,0.6s						
SONM	Songino Array	66.36	329	P	P	18 11 44.2	-0.1
CCD	Concordia, Ant	70.97	187	P	P	18 12 13.0	+0.2
CCD				pP	pP	18 12 25.4	-1.2
CHGN	Chignik	74.44	27	P	P	18 12 31.4	-1.7
BILL	Bilibino	74.53	6	P	P	18 12 33.2	-0.2
WMQ	Urumqi	75.41	318	*e*P	P	18 12 40.0	+0.8
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TIXI	Tiksi	78.75	353	P	P	18 12 56.7	-0.5
MK31	Makanchi Array	80.04	319	P	P	18 13 04.1	-0.7
MKAR	Makanchi Array	80.04	319	P	P	18 13 04.1	-0.8
	comp=Z,1.7nm,0.8s,baz=101,slow=6.9,SNR=15						
MKAR				PP	PP	18 16 06.1	-1.4
	comp=Z,1.5nm,1.0s,baz=106,slow=8.9,SNR=5.8 comp=Z,1.7nm,0.8s						
MAKZ	Makanchi	80.25	319	P	P	18 13 05.5	-0.4
ZAA0	Zalesovo Array	81.13	327	P	P	18 13 09.1	-1.3
ZALV	Zalesovo Beam	81.13	327	P	P	18 13 09.0	-1.4
	comp=Z,1.8nm,0.6s,baz=116,slow=6.5,SNR=7.4 comp=Z,1.8nm,0.6s						
ZALV	Zalesovo Beam	81.13	327	P	P	18 13 08.5	-1.9
CAST	Castle Rocks	81.14	22	P	P	18 13 10.2	-0.1
CAST				IAmb	IAmb	18 16 08.8	
	comp=Z,20nm,1.8s						
TARG	Taragay, Kyrgy	81.59	314	P	P	18 13 14.2	+0.5
TARG				IAmb	IAmb	18 13 26.1	
	comp=Z,14nm,1.8s						
TRF	Thorofare Moun	81.84	23	P	P	18 13 12.8	-1.4
TRF				IAmb	IAmb	18 13 14.2	
	comp=Z,28nm,1.7s						
IMAR	Indian Mountai	81.97	20	P	P	18 13 14.2	-0.4
I21K	Tanana	82.13	21	P	P	18 13 16.3	+0.8
KSH	Kashi	82.37	311	P	P	18 13 18.9	+1.4
KSH				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MLY	Manley	82.50	21	P	P	18 13 17.4	-0.1
MLY				IAmb	IAmb	18 13 19.0	
	comp=Z,6.1nm,0.5s						
MCK	McKinley	82.51	23	P	P	18 13 18.0	+0.4
MCK				IAmb	IAmb	18 13 18.7	
	comp=Z,10nm,1.0s						
NEA2	Nenana	82.89	22	P	P	18 13 19.8	+0.4
CCB	Clear Creek Bu	83.39	22	P	P	18 13 21.1	-0.9
KURK	Kurchatov	83.59	322	P	P	18 13 23.5	+0.1
HDA	Harding Lake	83.60	23	P	P	18 13 23.4	+0.2
HDA				IAmb	IAmb	18 13 32.7	
	comp=Z,30nm,1.9s						
IL31		83.79	22	P	P	18 13 22.1	-1.9
IL31				IAmb	IAmb	18 13 30.7	
	comp=Z,36nm,2.0s						
ILAR	Eielson Array	83.79	22	P	P	18 13 21.8	-2.4
	comp=Z,2.7nm,0.6s,baz=250,slow=4.7,SNR=34 comp=Z,2.7nm,0.6s						
ILAR	Eielson Array	83.79	22	P	P	18 13 22.2	-1.9
QSPA	South Pole Qui	84.08	180	P	P	18 13 25.7	-0.1
QSPA				IAmb	IAmb	18 13 26.7	
	comp=Z,6.5nm,0.9s						
AAK	Ala-Archa	84.20	314	P	P	18 13 26.7	-0.2
AAK				IAmb	IAmb	18 13 29.4	
	comp=Z,11nm,1.6s						
DOT	Dot Lake	84.39	24	P	P	18 13 27.4	+0.1
DOT				IAmb	IAmb	18 13 29.0	
	comp=Z,6.1nm,0.8s						
M27K	Edge Creek, AK	84.77	26	P	P	18 13 29.9	+0.5
BCAR	Beaver Creek A	85.09	25	P	P	18 13 30.9	+0.1
EGAK	Eagle	86.02	23	P	P	18 13 36.9	+1.6
EGAK				IAmb	IAmb	18 14 57.1	
	comp=Z,20nm,1.7s						
NRIK	Noril'sk	86.45	341	P	P	18 13 35.7	-1.6
	comp=Z,1.9nm,0.5s,baz=160,slow=3.0,SNR=5.1 comp=Z,1.9nm,0.5s						
NRIK	Noril'sk	86.45	341	P	P	18 13 36.5	-0.8
NRIK				IAmb	IAmb	18 13 36.9	
	comp=Z,14nm,1.7s						
KK31	Karatay Array	87.16	314	P	P	18 13 40.7	-0.7
KK31				IAmb	IAmb	18 13 42.5	
	comp=Z,12nm,1.4s						
KKAR	Karatay Array	87.16	314	P	P	18 13 40.1	-1.3
KKAR	Karatay Array	87.16	314	P	P	18 13 40.7	-0.7
KKAR				IAmb	IAmb	18 13 42.5	
	comp=Z,12nm,1.4s						
I29M	Ogilvie Camp,	87.35	23	P	P	18 13 42.5	+0.6
I29M				IAmb	IAmb	18 13 43.5	
	comp=Z,7.1nm,0.8s						
CHGR	Chuyangaron	87.39	309	P	P	18 13 41.4	-1.3
INK	Inuvik	90.06	21	P	P	18 13 54.0	-0.5
	comp=Z,2.0nm,0.7s,baz=280,slow=2.1,SNR=8.7						
INK				LR	LR	18 48 23.0	
	comp=Z,50nm,21.6s,baz=278,slow=32 comp=Z,2.0nm,0.7s						
INK	Inuvik	90.06	21	P	P	18 13 54.5	+0.1
INK				IAmb	IAmb	18 17 04.1	
	comp=Z,17nm,1.8s						
HUMO	Hull Mountain	90.95	47	P	P	18 14 01.2	+1.9
YBH	Yreka Blue Hor	91.03	48	LR	LR	18 46 58.5	
	comp=Z,73nm,21.4s,baz=335,slow=30						
YBH	Yreka Blue Hor	91.03	48	P	P	18 13 59.3	-0.4
YBH				IAmb	IAmb	18 14 01.9	
	comp=Z,7.2nm,0.9s						
J04A	Umpqua Nationa	91.64	47	P	P	18 14 01.8	-0.9
J05D	Fort Rock, OR	92.28	47	P	P	18 14 06.7	+1.1
CMB	Columbia Colle	92.40	52	P	P	18 14 06.7	+0.5
CMB				IAmb	IAmb	18 14 08.5	
	comp=Z,8.3nm,1.4s						
MOD	Modoc Plateau	92.83	48	P	P	18 14 09.5	+1.3
MOD				IAmb	IAmb	18 14 10.5	
	comp=Z,11nm,1.2s						
PAHR	Pah Rah Range	93.33	51	P	P	18 14 10.6	0.0
PAHR				IAmb	IAmb	18 14 12.8	
	comp=Z,8.0nm,1.4s						
A36M	Sachs Harbour	93.58	18	P	P	18 14 08.6	-2.1
I07A	Izee	93.61	46	P	P	18 14 10.1	-1.5
LHV	Little Huntoon	93.90	52	P	P	18 14 14.4	+1.5
NVAR	Mina Array Bea	94.07	52	P	P	18 14 14.4	+0.3
	comp=Z,3.4nm,0.7s,baz=259,slow=5.8,SNR=22 comp=Z,3.4nm,0.7s						
NVAR	Mina Array Bea	94.07	52	P	P	18 14 14.8	+0.7
NV11	Mina Array Sit	94.19	52	P	P	18 14 15.3	+0.8
NV11				IAmb	IAmb	18 14 16.5	
	comp=Z,6.2nm,0.9s						
DSP	Deep Springs	94.26	53	P	P	18 14 15.5	+0.9
DSP				IAmb	IAmb	18 14 17.0	
	comp=Z,6.5nm,1.0s						
KVN	Kaiserville	94.28	51	P	P	18 14 15.7	+0.8
KVN				IAmb	IAmb	18 14 16.7	
	comp=Z,3.2nm,0.8s						
J08A	Circle Bar Ran	94.30	47	P	P	18 14 14.7	-0.1
WAPA	Wapiti River	94.58	35	P	P	18 14 17.0	+1.3
TPH	Tonopah	94.90	52	P	P	18 14 17.7	-0.1
QSM	Queen of Sheba	95.05	54	P	P	18 14 18.7	+0.4
WCT	Wildcat Mounta	95.29	54	P	P	18 14 20.1	+0.6
NEW	Newport	95.52	42	LR	LR	18 52 59.4	
	comp=Z,84nm,18.3s,baz=258,slow=33						
BRLDA	Berland Lookou	95.59	36	P	P	18 14 20.8	+0.3
TPNV	Topopah Spring	95.60	54	P	P	18 14 22.2	+1.2
TPNV				IAmb	IAmb	18 14 23.1	
	comp=Z,4.6nm,0.9s						
R11A	Troy Canyon, C	96.20	52	P	P	18 14 25.2	+1.5
R11A				IAmb	IAmb	18 14 46.0	
	comp=Z,6.1nm,1.8s						
ELK	Elko	96.56	50	P	P	18 14 26.7	+1.3
ELK				IAmb	IAmb	18 14 27.1	
	comp=Z,5.0nm,1.4s						
PRN	Pahroc Range	96.58	53	P	P	18 14 26.9	+1.5
PRN				IAmb	IAmb	18 14 29.5	
	comp=Z,5.8nm,1.3s						
YKA	Yellowknife Ar	97.16	28	P	P	18 14 26.9	-0.4
	comp=Z,0.5nm,0.6s,baz=272,slow=4.2,SNR=7.6 comp=Z,0.5nm,0.6s						
SPR3	Spring Creek 3	97.20	52	P	P	18 14 29.2	+0.7
SPR3				IAmb	IAmb	18 14 30.5	
	comp=Z,8.7nm,1.4s						
PDAR	Pinedale Array	100.82	48	P	Pdif	18 14 43.9	-0.5
	comp=Z,0.8nm,0.6s,baz=219,slow=1.2,SNR=7.3						
PDAR	Pinedale Array	100.82	48	Pdif	Pdif	18 14 44.4	0.0
AKASG	Malin Array Be	114.38	324	PKiKP	PKPdf	18 19 34.1	-0.6
	comp=Z,0.5nm,0.5s,baz=46,slow=2.0,SNR=5.6						
BRTR	Keskin Array B	114.76	311	PKP	PKiKP	18 19 35.0	-1.0
	comp=Z,0.8nm,0.7s,baz=64,slow=2.9,SNR=4.5						
VYHS	Vyhne	121.41	325	*e*PKP	PKPdf	18 19 48.7	+0.3
KRLC	Kraliky	121.72	327	*e*PKPDF	PKPdf	18 19 49.6	+0.6
CHVC	Chvalec	121.83	328	*e*PKPDF	PKPdf	18 19 50.2	+1.1
CLL	Collm	122.97	330	*i* PKPdf	PKPdf	18 19 51.7	+0.5
RONA	Rosalia, Austr	123.28	325	*e*PKP	PKPdf	18 19 52.3	+0.2
	comp=Z,4.1nm,0.7s						
CONA	Conrad Observa	123.40	325	PKP	PKPdf	18 19 52.2	-0.1
	comp=Z,2.4nm,0.9s						
CKRC	Cesky Krumlov	123.76	327	*e*PKPDF	PKPdf	18 19 53.5	+0.6
NKC	Novy Kostel	123.90	329	*e*PKPDF	PKPdf	18 19 54.2	+1.1
ARSA	Arzberg	123.97	325	*e*PKP	PKPdf	18 19 53.1	-0.3
	comp=Z,2.5nm,0.7s						
KHC	Kasperske Hory	123.98	328	*e*PKPDF	PKPdf	18 19 52.9	-0.4
GERES	GERESS Array B	124.08	327	PKP	PKPdf	18 19 53.5	-0.2
	comp=Z,1.8nm,0.7s,baz=64,slow=3.1,SNR=14						

SOKA	Soboth	124.56	325	ePKP	PKPdf	18 19 54.2	-0.4
	comp=Z,5.8nm,1.2s						
ABTA	Abfaltersbach	125.95	326	ePKP	PKPdf	18 19 56.6	-0.7
	comp=Z,6.0nm,1.3s						
WATA	Walderalm	126.12	327	ePKP	PKPdf	18 19 56.0	-1.7
	comp=Z,1.7nm,0.4s						
WTTA	Wattenberg	126.13	327	ePKP	PKPdf	18 19 55.8	-1.9
	comp=Z,8.1nm,0.9s						
MOTA	Moosalm	126.37	327	ePKiKP	PKPdf	18 19 58.6	+0.5
	comp=Z,5.5nm,0.9s						
SQTA	Sankt Quirin	126.39	327	ePKP	PKPdf	18 19 58.0	-0.2
	comp=Z,8.1nm,1.1s						
RETA	Reutte	126.47	327	ePKiKP	PKPdf	18 19 59.3	+1.1
	comp=Z,2.7nm,0.8s						
FETA	Feichten	126.77	327	ePKP	PKPdf	18 19 58.9	0.0
	comp=Z,7.5nm,0.9s						
DAVA	Damuels	127.06	328	ePKiKP	PKPdf	18 20 00.2	+0.8
	comp=Z,5.2nm,0.8s						
SDV	Santo Domingo	138.51	83	PKP	PKPdf	18 20 21.5	-0.4
	comp=Z,4.3nm,0.6s,baz=262,slow=2.6,SNR=6.4						
TORD	Torodi Ar. Bea	149.01	286	PKPbc	PKPbc	18 20 43.6	-0.5
	comp=Z,23nm,0.7s,baz=54,slow=2.9,SNR=110						
DBIC	Dimbokro	156.10	273	PKPab	PKPab	18 21 17.9	-0.3
	comp=Z,4.9nm,0.8s,baz=107,slow=2.6,SNR=5.3						

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*IDC **15** 18:04:46.8±2.0, 37.°12N×143.°71E, h0^{km}, mb3.8/4, mbtmp3.7/6, ML2.8/2, MS3.1/3, Error ellipse: s-maj=47.6km s-min=24.8km az=53.0*

*JMA **15** 18:04:47.4±0.2, 37.°7N±0.°8×14°4E±°, h46^{km}, MV3.5/29, FAR E OFF FUKUSHIMA PREF*

ISC 15 18:04:47.4±2.3**, 37.°72N**±0.°07×**143.°8E**±0.°1**, h40^{km}**±27^{km}**, n32, σ1.^{s}54**/32**, mb3.8**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.93	288	i P	Pn	18 05 17.7	0.0
JIKH				S	Sn	18 05 39.9	-0.9
JIO	Ouri	2.06	292	P	Pn	18 05 19.6	+0.1
JIO				S	Sn	18 05 43.5	-0.5
JKMT	Kesennumamotoy	2.13	302	P	Pn	18 05 20.5	+0.1
JKMT				eS	Sn	18 05 44.5	-1.1
OFUJ	Ofunato	2.15	310	P	Pn	18 05 20.8	0.0
OFUJ				eS	Sn	18 05 45.5	-0.7
JMK	Ichinoseki	2.37	302	P	Pn	18 05 24.0	+0.3
JOM	Ohasama	2.63	313	P	Pn	18 05 28.0	+0.7
JOM				eS	Sn	18 05 57.8	-0.2
JOTO	OTAMA OYAMA	2.75	268	P	Pn	18 05 29.8	+0.8
JOTO				eS	Sn	18 06 01.4	+0.4
JYK	Kaneyama	2.96	295	P	Pn	18 05 33.0	+1.2
JANG	Nango	3.19	327	eP	Pn	18 05 35.8	+0.8
JAG	Ashikaga	3.70	251	i P	Pn	18 05 42.8	+0.7
JAG				S	Sn	18 06 24.2	-0.3
BSO1	Boso 1	3.81	218	eP	Pn	18 05 42.7	-0.4
JOT	Ohata	4.23	331	eP	Pn	18 05 50.5	+1.3
JRY	Ryogami san	4.28	248	P	Pn	18 05 50.3	+0.4
JRY				eS	Sn	18 06 36.0	-2.6
JOD2	Odawara 2	4.51	239	eS	Sn	18 06 41.2	-3.3
MJAR	Matsushiro Arr	4.62	257	Pn	Pn	18 05 55.9	+1.3
	0.3nm,0.3s,baz=91,slow=26,SNR=20						
MJAR				Sn	Sn	18 06 47.7	+0.7
	baz=71,slow=22,SNR=2.7						
	5.8nm,0.6s						
JCH	Churui	4.90	356	eP	Pn	18 05 58.6	+0.1
JCH				eS	Sn	18 06 51.0	-2.9
ASAJ	Asahikawa	6.45	352	Pn	Pn	18 06 20.6	+0.8
	1.8nm,0.3s,baz=203,slow=14,SNR=19						
ASAJ				Sn	Sn	18 07 35.1	+2.9
	0.3nm,0.3s,baz=41,slow=19,SNR=1.3						
JCJ	Chichijima	10.68	188	LR	LR	18 13 21.8	
	comp=Z,40nm,19.0s,baz=312,slow=51						
KSRS	Korea Array	12.60	274	Pn	Pn	18 07 46.8	+2.9
	0.1nm,0.3s,baz=90,slow=13,SNR=3.0						
	1.3nm,0.8s						
KLR	Kul'dur	14.43	327	Pn	P	18 08 12.1	-2.8
	0.1nm,0.3s,baz=166,slow=17,SNR=2.1						
H11N2	WAKE ISLAND Hy	26.93	125	T	T	18 38 43.3	
	baz=317,slow=75						
H11N1	WAKE ISLAND Hy	26.94	125	T	T	18 38 32.8	
	baz=317,slow=75						
H11N3	WAKE ISLAND Hy	26.95	125	T	T	18 38 43.0	
	baz=317,slow=75						
H11S1	WAKE ISLAND Hy	27.70	127	T	T	18 39 41.9	
	baz=318						
H11S3	WAKE ISLAND Hy	27.70	127	T	T	18 39 47.9	
	baz=318						
H11S2	WAKE ISLAND Hy	27.72	127	T	T	18 39 40.3	
	baz=318						
SONM	Songino Array	29.00	302	P	P	18 10 51.0	+7.7
	0.3nm,0.5s,baz=98,slow=10,SNR=2.3						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	42.86	312	P	P	18 12 49.0	+7.6
	1.3nm,0.7s,baz=80,slow=9.1,SNR=5.4						
	1.3nm,0.7s						
CMAR	Chiang Mai Arr	43.50	257	LR	LR	18 32 11.8	
	comp=Z,26nm,18.2s,baz=90,slow=38						
WRA	Warramunga Arr	58.04	190	P	P	18 14 36.7	+0.4
	2.1nm,0.8s,baz=10.0,slow=7.3,SNR=10						
	2.1nm,0.8s						
ASAR	Alice Springs	61.76	190	P	P	18 15 03.9	+2.0
	0.6nm,0.8s,baz=13,slow=9.0,SNR=5.0						
	0.6nm,0.8s						
IDI	Anoyia	87.89	314	LR	LR	19 04 10.6	
	comp=Z,25nm,18.2s,baz=310,slow=40						

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*IDC **15** 18:29:34.5±0.9, 8.°07N×59.°05E, h0^{km}, mb3.9/8, mbtmp4.0/9, ML3.1/1, MS3.7/22, Error ellipse: s-maj=25.0km s-min=21.8km az=30.0*

*NEIC **15** 18:29:39.7±1.9, 8.°35N±0.°09×58.°8E±0.°1, h10^{km}±2^{km}, mb4.3/11, Error ellipse: s-maj=23.1km s-min=13.0km az=69.0*

ISC 15 18:29:37.0±0.9**, 8.°1N**±0.°1×**58.°9E**±0.°1**, h10^{km}, n42, σ1.^{s}11**/25**, mb4.1**/14**, MS3.7**/21**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	15.03	359	Pn	Pn	18 33 09.7	+0.2
	0.1nm,0.3s,baz=175,slow=11,SNR=2.4						
WSAR				LR	LR	18 38 02.2	
	comp=Z,244nm,19.2s,baz=194,slow=34						
	9.5nm,1.2s						
PALK	Pallekele	21.60	91	LR	LR	18 41 33.5	
	comp=Z,112nm,18.1s,baz=285,slow=34						
KMBO	Kilima Mbogo	23.49	248	P	P	18 34 46.6	-0.8
	0.1nm,0.5s,baz=49,slow=24,SNR=7.3						
KMBO	Kilima Mbogo	23.49	248	P	P	18 34 48.7	+1.2
KMBO				IAmb	IAmb	18 34 58.0	
	comp=Z,14nm,1.2s						
LODK	Lodwar	23.90	260	P	P	18 34 52.8	+1.4
LODK				IAmb	IAmb	18 35 06.2	
	comp=Z,9.0nm,1.2s						
MBAR	Mbarara	29.41	254	LR	LR	18 46 23.9	
	comp=Z,53nm,20.8s,baz=88,slow=34						
EIL	Elat	31.07	317	LR	LR	18 46 56.3	
	comp=Z,71nm,18.5s,baz=84,slow=33						
MMAI	Mount Meron Ar	32.97	322	LR	LR	18 49 04.6	
	comp=Z,103nm,21.7s,baz=159,slow=35						
GNI	Garni	34.31	341	LR	LR	18 51 43.5	
	comp=Z,146nm,19.2s,baz=143,slow=39						
GNI	Garni	34.31	341	P	P	18 36 22.9	-1.0
GNI				IAmb	IAmb	18 36 47.1	
	comp=Z,8.4nm,1.2s						
BRDH	Bariadhala	34.59	62	LR	LR	18 50 46.0	
	comp=Z,185nm,18.2s,baz=274,slow=37						
KK31	Karatay Array	36.29	14	P	P	18 36 41.4	+0.7
KK31				IAmb	IAmb	18 36 45.0	
	comp=Z,5.3nm,1.1s						
KKAR	Karatay Array	36.29	14	P	P	18 36 41.2	+0.4
KKAR				IAmb	IAmb	18 36 45.0	
	comp=Z,5.3nm,1.1s						
AAK	Ala-Archa	37.00	19	LR	LR	18 51 47.6	
	comp=Z,166nm,19.8s,baz=194,slow=36						
KBZ	Khabaz	38.13	341	LR	LR	18 55 22.6	
	comp=Z,88nm,19.3s,baz=145,slow=40						
BRTR	Keskin Array B	38.75	328	P	P	18 37 01.6	-0.3
	comp=Z,1.9nm,1.0s,baz=153,slow=9.8,SNR=8.0						
BRTR				LR	LR	18 52 13.5	
	comp=Z,111nm,18.3s,baz=30,slow=35						
	comp=Z,1.9nm,1.0s						
CMAR	Chiang Mai Arr	40.19	71	LR	LR	18 52 06.4	
	comp=Z,30nm,20.6s,baz=250,slow=34						
CMAR	Chiang Mai Arr	40.19	71	P	P	18 37 16.5	+2.6
ABKAR	Akbulak array	41.00	1	P	P	18 37 20.5	+0.3
IDI	Anoyia	41.24	316	LR	LR	18 54 37.2	
	comp=Z,74nm,18.4s,baz=320,slow=36						
MK31	Makanchi Array	43.40	23	P	P	18 37 40.3	+0.5
MKAR	Makanchi Array	43.40	23	P	P	18 37 38.8	-1.0
	comp=Z,0.4nm,0.7s,baz=223,slow=11,SNR=3.6						
MKAR				PcP	PcP	18 39 26.8	-1.5
	comp=Z,0.5nm,0.9s,baz=211,slow=1.7,SNR=3.4						
MKAR				LR	LR	18 55 52.9	
	comp=Z,84nm,19.9s,baz=222,slow=36						
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	43.40	23	P	P	18 37 40.2	+0.3
BVAR	Borovoye Array	45.73	10	LR	LR	18 58 31.0	
	comp=Z,86nm,18.0s,baz=235,slow=38						
LBTB	Lobatse	46.26	224	LR	LR	18 55 41.9	
	comp=Z,92nm,19.0s,baz=178,slow=34						
MLR	Muntele Rosu	46.84	328	LR	LR	18 58 08.5	
	comp=Z,154nm,19.1s,baz=28,slow=36						
BOSA	Boshof	48.89	220	LR	LR	18 56 06.8	
	comp=Z,108nm,19.9s,baz=84,slow=32						
TSUM	Tsumeb	48.96	236	LR	LR	18 58 29.6	
	comp=Z,80nm,18.4s,baz=136,slow=35						
AKASG	Malin Array Be	49.06	335	P	P	18 38 23.7	-0.5
	comp=Z,1.4nm,0.8s,baz=141,slow=7.0,SNR=8.3						
	comp=Z,1.4nm,0.8s						
ZAA0	Zalesovo Array	50.22	20	P	P	18 38 32.2	-0.8
ZALV	Zalesovo Beam	50.22	20	P	P	18 38 32.3	-0.7
	comp=Z,1.7nm,0.8s,baz=224,slow=8.3,SNR=7.1						
ZALV				LR	LR	18 59 41.6	
	comp=Z,89nm,20.2s,baz=244,slow=36						
	comp=Z,1.7nm,0.8s						
ZALV	Zalesovo Beam	50.22	20	P	P	18 38 32.1	-1.0
MORC	Moravsky Berou	53.95	328	P	P	18 39 02.1	+1.1
MORC				IAmb	IAmb	18 39 02.7	
	comp=Z,5.0nm,1.3s						
SUR	Sutherland	54.25	220	LR	LR	19 00 03.8	
	comp=Z,124nm,19.8s,baz=100,slow=34						
TORD	Torodi Ar. Bea	56.38	280	P	P	18 39 19.8	+0.8
	comp=Z,1.8nm,1.0s,baz=90,slow=5.7,SNR=8.0						
	comp=Z,1.8nm,1.0s						
TORD	Torodi Ar. Bea	56.38	280	P	P	18 39 20.2	+1.2
TORD				IAmb	IAmb	18 39 30.6	
	comp=Z,3.2nm,1.4s						
SENIN	Lac Senin/Sane	58.20	320	P	P	18 39 31.1	-0.5
FINES	FINESS Array B	58.47	342	P	P	18 39 32.6	-0.4
	comp=Z,2.3nm,0.9s,baz=138,slow=11,SNR=3.7						
	comp=Z,2.3nm,0.9s						
DBIC	Dimbokro	63.21	273	LR	LR	19 07 39.7	
	comp=Z,66nm,18.0s,baz=90,slow=36						
KSRS	Korea Array	68.44	53	LR	LR	19 12 21.5	
	comp=Z,31nm,19.1s,baz=325,slow=38						
WRA	Warramunga Arr	79.22	112	P	P	18 41 41.5	-1.5
	comp=Z,1.1nm,0.9s,baz=295,slow=4.6,SNR=5.9						
	comp=Z,1.1nm,0.9s						
ASAR	Alice Springs	79.68	116	P	P	18 41 44.0	-1.4
	comp=Z,1.2nm,0.9s,baz=294,slow=5.0,SNR=8.8						
	comp=Z,1.2nm,0.9s						

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*MOS **15** 18:50:21.8±0.8, 45.°24N×150.°14E, h61^{km}, mb4.2/11, Error ellipse: s-maj=8.6km s-min=7.6km az=56.5*

*SKHL **15** 18:50:22.6±0.2, 45.°10N×150.°20E, h71^{km}±5^{km}, mb5.3/6*

*JMA **15** 18:50:25.8±0.9, 45°N±4°×15°0E±°, h30^{km}, MV5.1/14, KURILE ISLANDS REGION*

*NEIC **15** 18:50:25.4±1.1, 45.°3N±0.°1×150.°1E±0.°1, h70^{km}±7^{km}, mb4.4/25, Error ellipse: s-maj=18.3km s-min=12.4km az=152.0*

*IDC **15** 18:50:25.2±2.2, 45.°32N×150.°01E, h74^{km}±19^{km}, mb3.6/26, mbtmp3.9/31, MS3.1/6, Error ellipse: s-maj=16.1km s-min=10.8km az=152.0*

ISC 15 18:50:21.6±0.5**, 45.°01N**±0.°06×**150.°20E**±0.°06**, h51^{km}, n171, σ1.^{s}57**/177**, mb4.1**/47**, 10C-7D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.67	278	d iPN	Pn	18 50 48.7	+0.4
KUR				eS	Sn	18 51 08.4	-0.2
KUR				pmax	pmax		
	comp=Z,2µm,0.4s						
KUR				pmax	pmax		
	comp=N,790nm,0.1s						
KUR				pmax	pmax		
	comp=E,560nm,0.1s						
KUR				smax	smax		
	comp=N,605nm,0.2s						
KUR				smax	smax		
	comp=E,3µm,0.2s						
KUR	Kuril'sk	1.67	278	i P	Pn	18 50 48.8	+0.4
KUR				AMB	AMB	18 50 49.9	
	comp=E,2µm,0.5s						
KUR				i S	Sn	18 51 08.7	+0.1
KUR				A	A	18 51 09.5	
	comp=E,610nm,0.3s						
KUR				A	A	18 51 09.5	
	comp=E,3µm,0.3s						
SHO	Shikotan	2.67	246	c iPN	Pn	18 51 02.7	+0.6
SHO				i S	Sn	18 51 35.2	+2.0
SHO				pmax	pmax		
	comp=N,84nm,0.3s						
SHO				pmax	pmax		
	comp=E,67nm,0.3s						
SHO				pmax	pmax		
	comp=Z,186nm,0.3s						
SHO				smax	smax		
	comp=N,622nm,0.5s						
SHO				smax	smax		
	comp=E,1µm,0.2s						
SHO	Shikotan	2.67	246	i P	Pn	18 51 03.5	+1.4
SHO				AMB	AMB	18 51 07.9	
	comp=E,190nm,0.2s						
SHO				eS	Sn	18 51 34.1	+0.9
SHO				A	A	18 51 47.5	
	comp=E,750nm,0.2s						
SHO				A	A	18 51 47.5	
	comp=E,940nm,0.2s						
YUK	Yuzh-Kuril'sk	3.26	254	c iPN	Pn	18 51 12.3	+2.2
YUK				eS	Sn	18 51 51.2	+3.6
YUK				pmax	pmax		
	comp=Z,1µm,0.2s						
YUK				pmax	pmax		
	comp=N,165nm,0.1s						
YUK				pmax	pmax		
	comp=E,125nm,0.1s						
YUK				smax	smax		
	comp=N,800nm,0.2s						
YUK				smax	smax		
	comp=E,1µm,0.2s						
YUK	Yuzh-Kuril'sk	3.26	254	i P	Pn	18 51 12.0	+1.9
YUK				AMB	AMB	18 51 15.3	
	comp=E,1µm,0.3s						
YUK				eS	Sn	18 51 48.9	+1.4
YUK				A	A	18 51 59.7	
	comp=E,800nm,0.3s						
YUK				A	A	18 51 59.7	
	comp=E,2µm,0.3s						
NEM2	Nemuro 2	3.61	244	eP	Pn	18 51 15.8	+1.0
NEM2				eS	Sn	18 51 52.7	-3.5
NMR	Nemuro--Hokkai	3.61	245	⇑ iPN	Pn	18 51 15.6	+0.6
NMR				i S	Sn	18 51 56.6	+0.3
NMR	Nemuro--Hokkai	3.61	245	i P	Pn	18 51 16.7	+1.7
NMR				i S	Sn	18 51 56.8	+0.5
RUSJ	Misakicho	3.66	257	ePN	Pn	18 51 18.9	+3.3
RUSJ				eS	Sn	18 52 06.2	+8.8
JRA	Rausu	3.79	255	eP	Pn	18 51 20.5	+3.0
JNK	Nakash	4.19	252	eP	Pn	18 51 26.1	+3.2
AKK	Akkeshi	4.35	245	eP	Pn	18 51 27.0	+1.9
JAK	Akkeshi	4.45	245	eP	Pn	18 51 27.9	+1.4
JAK				eS	Sn	18 52 14.1	-3.0
JTKR	Abashiri--Toko	4.62	259	eP	Pn	18 51 31.8	+3.0
JAR	Ashorobuto	4.94	252	eP	Pn	18 51 36.4	+3.2
JAR				eS	Sn	18 52 28.2	-0.8
JOB	Onbets	5.06	248	eP	Pn	18 51 36.8	+2.0
JKK2	Kamakawa 2	5.46	261	eP	Pn	18 51 43.3	+3.0
JCH	Churui	5.50	247	eP	Pn	18 51 43.1	+2.2
JKA	Kamikawa-asahi	5.51	263		Pn	18 51 44.2	+3.2
JKA	Kamikawa-asahi	5.51	263	eP	Pn	18 51 44.3	+3.3
ASAJ	Asahikawa	5.51	263	P	Pn	18 51 44.2	+3.3
	comp=E,12nm,0.3s,baz=97,slow=8.3,SNR=45						
ASAJ				S	Sn	18 52 44.0	+1.0
	comp=E,12nm,0.4s,baz=100,slow=11,SNR=1.3						
ASAJ				LR	LR	18 53 59.8	
	comp=E,130nm,21.3s,baz=134,slow=40						
YSS	Yuzh-Sakhalins	5.54	293		Pn	18 51 42.6	+1.2
YSS	Yuzh-Sakhalins	5.54	293	ePN	Pn	18 51 42.6	+1.2
YSS				eS	Sn	18 52 44.0	+0.2
YSS				pmax	pmax		
	comp=Z,30nm,0.5s						
YSS				smax	smax		
	comp=E,20nm,0.6s						
YSS				MLR	MLR		
	comp=Z,300nm,17.0s						
YSS	Yuzh-Sakhalins	5.54	293	i P	Pn	18 51 42.7	+1.3
YSS				AMB	AMB	18 51 43.3	
	comp=Z,70nm,0.3s						
YSS				eS	Sn	18 52 42.7	-1.1
YSS				A	A	18 52 53.6	
	comp=Z,30nm,0.3s						
YSS				A	A	18 52 53.6	
	comp=Z,10.0nm,0.3s						
YSS				AMS	AMS	18 53 40.0	
	comp=Z,300nm,17.0s						
ERM	Erimo	5.93	242	c ePN	Pn	18 51 50.8	+4.0
ERM				pmax	pmax		
	comp=Z,300nm,2.5s						
JNBK	Urakawa-nobuka	6.06	246	eP	Pn	18 51 50.1	+1.7
UGL	Uglegorsk	6.89	309	eP	Pn	18 52 01.9	+2.1
UGL				AMB	AMB	18 52 04.8	
	comp=Z,30nm,0.5s						
SKR	Severo-Kuril's	6.93	33	⇑ ePN	Pn	18 51 54.7	-5.7
SKR	Severo-Kuril's	6.93	33	eP	Pn	18 52 01.7	+1.3
SKR				AMB	AMB	18 52 04.5	
	comp=Z,40nm,0.3s						
TYV	Tymovskoe	7.74	322	eP	Pn	18 52 12.4	+0.9
TYV				AMB	AMB	18 52 15.3	
	comp=Z,20nm,0.4s						
JANG	Nango	7.90	237	eP	Pn	18 52 13.5	-0.2
JANG				eS	Sn	18 53 35.5	-6.2
JTM	Tenmabayashi	7.92	241	Pn	Pn	18 52 15.3	+1.2
JTH	Tanohata	7.98	233	eS	Sn	18 53 37.9	-5.8
PEA0B	Petropavlovsk-	9.47	29	Pn	Pn	18 52 35.1	-0.2
PEA0B	Petropavlovsk-	9.47	29	PN	Pn	18 52 35.1	-0.2
PETK	Petropavlovsk-	9.47	29	P	Pn	18 52 35.9	+0.7
	comp=Z,4.6nm,0.6s,baz=207,slow=13,SNR=12						
PETK				LR	LR	18 56 25.7	
	comp=Z,72nm,18.5s,baz=238,slow=39						
PETK	Petropavlovsk-	9.47	29	Pn	Pn	18 52 34.8	-0.5
MJAR	Matsushiro Arr	12.41	231	P	Pn	18 53 16.4	+1.0
	comp=Z,1.9nm,0.7s,baz=30,slow=13,SNR=3.2						
MJAR				LR	LR	18 57 39.6	
	comp=Z,85nm,19.6s,baz=18,slow=35						
USRK	Ussuriysk Ar.	13.01	273	P	Pn	18 53 25.5	+2.0
	comp=Z,2.9nm,0.7s,baz=81,slow=13,SNR=2.0						
KLR	Kul'dur	13.25	295	P	Pn	18 53 29.1	+2.3
	comp=Z,3.4nm,1.0s,baz=98,slow=15,SNR=10						
KLR				LR	LR	18 57 51.9	
	comp=Z,103nm,20.0s,baz=103,slow=34						
KLR	Kul'dur	13.25	295	⇓ ePN	Pn	18 53 29.9	+3.1
KLR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KLR	Kul'dur	13.25	295	eP	Pn	18 53 27.5	+0.7
KLR				AMB	AMB	18 53 32.8	
	comp=Z,10.0nm,0.8s						
ZEA	Zeya	17.25	309	eP	Pn	18 54 14.3	-4.3
SEY	Seymchan	18.00	3	P	Pn	18 54 27.1	-0.7
	comp=Z,0.7nm,0.6s,baz=194,slow=14,SNR=5.7						
SEY	Seymchan	18.00	3	⇓ eP	Pn	18 54 26.9	-0.9
SEY				pmax	pmax		
	comp=Z,2.0nm,1.4s						
SEY	Seymchan	18.00	3	eP	Pn	18 54 26.9	-0.9
KSRS	Korea Array	18.34	253	P	Pn	18 54 34.0	+1.9
	comp=Z,1.7nm,0.6s,baz=59,slow=11,SNR=13						
JNU	Nakatsue	19.08	238	LR	LR	19 01 42.4	
	comp=Z,58nm,19.3s,baz=342,slow=35						
YAK	Yakutsk	20.80	332	P	P	18 54 57.7	-0.6
	comp=Z,18nm,0.7s,baz=143,slow=1.8,SNR=4.1						
YAK				LR	LR	19 04 41.5	
	comp=Z,76nm,18.0s,baz=84,slow=42						
	comp=Z,18nm,0.7s						
YAK	Yakutsk	20.80	332	P	P	18 54 57.4	-0.8
YAK				IAmb	IAmb	18 55 03.0	
	comp=Z,37nm,0.8s						
YAK	Yakutsk	20.80	332	eP	Pn	18 55 01.7	+0.5
YAK				pmax	pmax		
	comp=Z,33nm,0.8s						
YAK				pmax	pmax		
	comp=N,7.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.0s						
TIXI	Tiksi	28.62	346	⇓ eP	P	18 56 10.6	-2.0
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
H11N2	WAKE ISLAND Hy	28.77	146	T	T	19 26 58.8	
	baz=336,slow=76						
H11N1	WAKE ISLAND Hy	28.78	146	T	T	19 27 07.4	
	baz=336,slow=76						
H11N3	WAKE ISLAND Hy	28.78	146	T	T	19 27 07.4	
	baz=336,slow=76						
H11S1	WAKE ISLAND Hy	29.80	147	T	T	19 28 25.0	
	baz=336,slow=76						
H11S3	WAKE ISLAND Hy	29.80	147	T	T	19 28 25.2	
	baz=336,slow=76						
H11S2	WAKE ISLAND Hy	29.81	147	T	T	19 28 19.1	
	baz=336,slow=76						
SONM	Songino Array	30.03	291	P	P	18 56 25.3	-0.3
	comp=Z,0.3nm,0.5s,baz=90,slow=8.6,SNR=2.7						
SONM				PcP	PcP	18 59 27.1	+0.7
	comp=Z,0.4nm,0.6s,baz=105,slow=3.3,SNR=2.6						
	comp=Z,0.3nm,0.5s						
IMAR	Indian Mountai	36.36	35	P	P	18 57 20.2	-0.1
CUT	Chulitna	37.69	41	P	P	18 57 31.2	-0.4
ILAR	Eielson Array	39.17	37	P	P	18 57 43.7	-0.3
	comp=Z,0.7nm,0.6s,baz=269,slow=7.2,SNR=8.3						
	comp=Z,0.7nm,0.6s						
ILAR	Eielson Array	39.17	37	P	P	18 57 43.3	-0.7
BMAR	Burnt Mountain	40.09	33	P	P	18 57 52.8	+1.1
BCAR	Beaver Creek A	41.54	40	P	P	18 58 04.4	+0.7
ZALV	Zalesovo Beam	42.00	307	P	P	18 58 06.1	-1.3
	comp=Z,0.3nm,0.3s,baz=75,slow=11,SNR=1.8						
ZALV				PcP	PcP	19 00 01.7	+0.1
	comp=Z,1.3nm,0.6s,baz=59,slow=4.9,SNR=6.7						
	comp=Z,0.3nm,0.3s						
INK	Inuvik	44.20	31	P	P	18 58 25.1	+0.1
	comp=Z,1.6nm,0.6s,baz=285,slow=9.9,SNR=5.3						
	comp=Z,1.6nm,0.6s						
INK	Inuvik	44.20	31	P	P	18 58 25.0	+0.1
INK				IAmb	IAmb	18 58 26.9	
	comp=Z,8.7nm,1.5s						
MK31	Makanchi Array	45.94	298	P	P	18 58 38.9	-0.3
MK31	Makanchi Array	45.94	298	⇑ eP	P	18 58 40.1	+0.9
MKAR	Makanchi Array	45.94	298	P	P	18 58 38.4	-0.8
	comp=Z,0.2nm,0.4s,baz=72,slow=6.7,SNR=10						
MKAR				PcP	PcP	19 00 15.9	+0.6
	comp=Z,0.5nm,0.5s,baz=57,slow=2.2,SNR=6.9						
	comp=Z,0.2nm,0.4s						
MKAR	Makanchi Array	45.94	298	P	P	18 58 39.5	+0.3
MKAR	Makanchi Array	45.94	298	c eP	P	18 58 44.2	+5.0
A36M	Sachs Harbour	46.30	25	P	P	18 58 41.9	+0.2
A36M				IAmb	IAmb	18 58 42.7	
	comp=Z,2.8nm,0.8s						
KURK	Kurchatov	46.64	304	⇓ eP	P	18 58 45.9	+1.3
KURK				pmax	pmax		
	comp=Z,6.0nm,2.2s						
KURBB	Kurchatov Arra	46.73	304	P	P	18 58 43.6	-1.7
	comp=Z,0.5nm,0.3s,baz=66,slow=8.4,SNR=5.1						
KURBB				PcP	PcP	19 00 17.8	-0.1
	comp=Z,0.6nm,0.4s,baz=73,slow=3.3,SNR=6.2						
	comp=Z,0.5nm,0.3s						
C36M	Paulatuk	47.33	29	P	P	18 58 49.6	-0.1
C36M				IAmb	IAmb	18 58 50.5	
	comp=Z,5.0nm,0.5s						
LSA	Lhasa	48.33	273	P	P	18 58 59.4	+0.9
LSA				IAmb	IAmb	18 59 01.3	
	comp=Z,3.1nm,0.8s						
LSA	Lhasa	48.33	273	P	P	18 58 59.4	+0.9
LSA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LSA	Lhasa	48.33	273	eP	P	18 58 59.4	+0.9
CMAR	Chiang Mai Arr	49.97	255	P	P	18 59 10.8	+0.2
	comp=Z,0.3nm,0.5s,baz=42,slow=8.6,SNR=4.2						
	comp=Z,0.3nm,0.5s						
CMAR	Chiang Mai Arr	49.97	255	c eP	P	18 59 12.6	+2.0
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SHL	Shillong	50.28	268	P	P	18 59 13.4	+0.3
SHL				IAmb	IAmb	18 59 14.3	
	comp=Z,3.2nm,0.7s						
SHL	Shillong	50.28	268	P	P	18 59 13.4	+0.3
SHL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BVAR	Borovoye Array	50.40	309	P	P	18 59 12.4	-1.0
	comp=Z,0.3nm,0.3s,baz=96,slow=10,SNR=4.1						
BVAR				PcP	PcP	19 00 30.9	-0.3
	comp=Z,0.8nm,0.4s,baz=91,slow=3.9,SNR=6.6						
	comp=Z,0.3nm,0.3s						
BRVK	Borovoye	50.44	310	⇓ eP	P	18 59 12.9	-0.8

BRVK				pmax	pmax		
	comp=Z,2.0nm,1.4s						
BRVK	Borovoye	50.44	310	*e*P	P	18 59 12.9	-0.8
TAPN	Taplejung	52.16	273	*e*P	P	18 59 28.4	+1.1
	comp=Z,2.1nm,0.4s						
AAK	Ala-Archa	52.78	296	P	P	18 59 30.5	-1.0
	comp=Z,0.6nm,0.5s,baz=108,slow=3.2,SNR=2.8						
	comp=Z,0.6nm,0.5s						
AAK	Ala-Archa	52.78	296	⇑*e*P	P	18 59 32.0	+0.5
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AAK	Ala-Archa	52.78	296	*e*P	P	18 59 32.0	+0.5
JIRN	Jiri	53.05	274	*e*P	P	18 59 34.5	+0.5
GUN	Gumba	53.12	274	*e*P	P	18 59 35.7	+1.3
RES	Resolute Bay	53.12	18	P	P	18 59 32.3	-1.0
	comp=Z,1.2nm,0.5s,baz=298,slow=3.7,SNR=6.2						
	comp=Z,1.2nm,0.5s						
RAMN	Ramite	53.18	273	*e*P	P	18 59 35.5	+0.7
	comp=Z,14nm,0.4s						
YKA	Yellowknife Ar	53.52	35	P	P	18 59 36.0	-0.5
	comp=Z,1.4nm,0.7s,baz=296,slow=6.9,SNR=17						
	comp=Z,1.4nm,0.7s						
YKA	Yellowknife Ar	53.52	35	*i* P	P	18 59 36.7	+0.2
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
DANN	Dangsing	54.35	276	*e*P	P	18 59 44.1	+0.7
	comp=Z,4.2nm,0.3s						
ARU	Arti	54.92	317	P	P	18 59 45.2	-1.5
	comp=Z,1.4nm,0.4s,baz=346,slow=11,SNR=4.3						
	comp=Z,1.4nm,0.4s						
PYUN	Piuthan	55.04	276	*e*P	P	18 59 49.3	+1.0
	comp=Z,4.0nm,0.3s						
KK31	Karatay Array	55.05	298	P	P	18 59 47.4	-0.6
KK31	Karatay Array	55.05	298	P	P	18 59 47.4	-0.6
KK31				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KKAR	Karatay Array	55.05	298	P	P	18 59 47.5	-0.4
KKAR	Karatay Array	55.05	298	P	P	18 59 47.4	-0.6
KKAR				IAmb	IAmb	18 59 54.1	
	comp=Z,1.3nm,1.0s						
KKAR	Karatay Array	55.05	298	P	P	18 59 47.5	-0.4
ABKAR	Akbulak array	57.97	309	P	P	19 00 07.9	-0.6
ABKAR	Akbulak array	57.97	309	P	P	19 00 08.3	-0.2
ABKAR				IAmb	IAmb	19 00 09.2	
	comp=Z,4.9nm,0.5s						
CHGR	Chuyangaron	58.34	295	P	P	19 00 11.4	0.0
CHGR	Chuyangaron	58.34	295	P	P	19 00 11.4	0.0
CHGR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
AKTO	Aktyubinsk	58.36	311	P	P	19 00 10.8	-0.5
	comp=Z,1.0nm,0.4s,baz=87,slow=6.5,SNR=3.5						
	comp=Z,1.0nm,0.4s						
ARCES	ARCESS Array B	58.81	340	PcP	PcP	19 01 03.0	-0.2
	comp=Z,5.2nm,1.0s,baz=61,slow=4.2,SNR=4.1						
FCC	Fort Churchill	63.82	32	P	P	19 00 47.9	-0.1
FCC				IAmb	IAmb	19 00 48.2	
	comp=Z,2.9nm,0.7s						
FCC	Fort Churchill	63.82	32	P	P	19 00 47.9	-0.1
FCC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FINES	FINESS Array B	64.73	334	P	P	19 00 52.0	-1.9
	comp=Z,2.0nm,0.7s,baz=52,slow=9.0,SNR=7.3						
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	64.73	334	P	P	19 00 52.2	-1.7
FINES	FINESS Array B	64.73	334	*i* P	P	19 00 52.4	-1.6
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NVAR	Mina Array Bea	65.05	60	P	P	19 00 57.5	+0.7
	comp=Z,0.8nm,0.6s,baz=304,slow=7.3,SNR=5.3						
	comp=Z,0.8nm,0.6s						
GEYT	Alibeck	65.73	300	P	P	19 00 60.0	-1.0
	comp=Z,1.6nm,0.5s,baz=8.5,slow=3.0,SNR=5.0						
	comp=Z,1.6nm,0.5s						
GEYT	Alibeck	65.73	300	P	P	19 01 00.0	-1.0
WB0	Warramunga Arr	66.06	196	P	P	19 01 05.6	+2.6
WB0				IAmb	IAmb	19 01 23.8	
	comp=Z,5.2nm,1.1s						
WRA	Warramunga Arr	66.24	196	P	P	19 01 06.0	+1.8
	comp=Z,0.9nm,0.8s,baz=15,slow=6.7,SNR=5.4						
	comp=Z,0.9nm,0.8s						
WRA	Warramunga Arr	66.24	196	P	P	19 01 06.2	+2.0
WRA	Warramunga Arr	66.24	196	P	P	19 01 06.2	+2.0
PDAR	Pinedale Array	67.42	52	P	P	19 01 12.6	+0.7
	comp=Z,0.5nm,0.7s,baz=333,slow=2.3,SNR=5.7						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	67.42	52	P	P	19 01 12.9	+1.0
NOA	NORSAR Array B	69.19	340	P	P	19 01 20.7	-1.7
	comp=Z,1.2nm,0.7s,baz=29,slow=6.7,SNR=4.5						
	comp=Z,1.2nm,0.7s						
AS31	Alice Springs	69.94	196	P	P	19 01 30.5	+3.1
ASAR	Alice Springs	69.95	196	P	P	19 01 30.5	+3.1
	comp=Z,0.6nm,0.8s,baz=11,slow=6.5,SNR=12						
	comp=Z,0.6nm,0.8s						
ASAR	Alice Springs	69.95	196	P	P	19 01 27.6	+0.2
KBZ	Khabaz	70.58	313	P	P	19 01 31.9	+0.8
	comp=Z,5.3nm,1.0s,baz=62,slow=3.4,SNR=11						
	comp=Z,5.3nm,1.0s						
KBZ	Khabaz	70.58	313	⇓*e*P	P	19 01 32.0	+0.9
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KBZ	Khabaz	70.58	313	*e*P	P	19 01 32.0	+0.9
PV13	Radium Mtn., P	70.90	55	P	P	19 01 35.0	+1.5
AKASG	Malin Array Be	71.83	325	P	P	19 01 37.3	-1.3
	comp=Z,0.5nm,0.3s,baz=37,slow=5.7,SNR=8.6						
	comp=Z,0.5nm,0.3s						
AKASG	Malin Array Be	71.83	325	*ce*P	P	19 01 37.7	-0.9
BUR08	Bucovina Ar. S	75.87	325	P	P	19 02 02.3	-0.1
BUR08				IAmb	IAmb	19 02 02.7	
	comp=Z,2.3nm,0.8s						
BURAR	Bucovina Array	75.89	325	P	P	19 02 02.1	-0.4
BURAR				IAmb	IAmb	19 02 03.2	
	comp=Z,2.9nm,0.7s						
DPC	Dobruska-Polom	76.92	332	*e*P	P	19 02 07.8	-0.5
DPC	Dobruska-Polom	76.92	332	*e*P	P	19 02 07.8	-0.5
KRLC	Kraliky	77.00	331	*e*P	P	19 02 08.1	-0.6
KRLC	Kraliky	77.00	331	*e*P	P	19 02 08.1	-0.6
BRTR	Keskin Array B	78.23	315	P	P	19 02 14.5	-1.3
	comp=Z,0.7nm,0.7s,baz=46,slow=6.2,SNR=3.3						
	comp=Z,0.7nm,0.7s						
KHC	Kasperske Hory	78.88	333	P	P	19 02 19.1	-0.1
KHC				IAmb	IAmb	19 02 19.7	
	comp=Z,2.9nm,0.7s						
KHC	Kasperske Hory	78.88	333	*e*P	P	19 02 19.3	+0.1
KHC	Kasperske Hory	78.88	333	*e*P	P	19 02 19.3	+0.1
CKRC	Cesky Krumlov	78.91	332	*e*P	P	19 02 19.1	-0.2
CKRC	Cesky Krumlov	78.91	332	*e*P	P	19 02 19.1	-0.2
GERES	GERESS Array B	79.09	332	P	P	19 02 19.3	-1.1
	comp=Z,0.6nm,0.4s,baz=36,slow=6.3,SNR=8.3						
	comp=Z,0.6nm,0.4s						
GERES	GERESS Array B	79.09	332	P	P	19 02 20.0	-0.4
GERES	GERESS Array B	79.09	332	P	P	19 02 20.0	-0.4
TX31	Lajitas Ar. Si	80.12	58	P	P	19 02 27.6	+1.2
TX32	Lajitas Array	80.13	58	P	P	19 02 27.6	+1.3
TX32				IAmb	IAmb	19 02 28.3	
	comp=Z,5.1nm,1.2s						
TXAR	Lajitas Array	80.13	58	P	P	19 02 27.2	+0.9
	comp=Z,1.0nm,0.4s,baz=298,slow=4.5,SNR=22						
	comp=Z,1.0nm,0.4s						
TXAR	Lajitas Array	80.13	58	P	P	19 02 27.4	+1.1
TXAR	Lajitas Array	80.13	58	P	P	19 02 27.4	+1.1
SOKA	Soboth	80.52	331	*e*P	P	19 02 28.1	0.0
	comp=Z,1.7nm,0.6s						
KBA	Koelnbreinsper	80.75	332	*i* PcP	P	19 02 29.9	+0.4
	comp=Z,5.8nm,1.0s						
OBKA	Obir	80.83	331	*e*P	P	19 02 29.5	-0.3
	comp=Z,2.5nm,0.8s						
WATA	Walderalm	81.10	333	*e*P	P	19 02 31.2	-0.1
	comp=Z,3.5nm,0.5s						
WTTA	Wattenberg	81.15	333	*e*PcP	P	19 02 31.7	+0.2
	comp=Z,1.8nm,0.4s						
MOTA	Moosalm	81.25	333	*e*P	P	19 02 31.9	-0.2
	comp=Z,1.5nm,0.5s						
DAVA	Damuels	81.69	334	*i* P	P	19 02 32.7	-1.8
	comp=Z,3.9nm,1.2s						
BATG	Bathurst New B	82.72	24	P	P	19 02 39.9	+0.3
PPT2	Papeete2	82.86	123	*e*LR	LR	19 02 43.0	
	comp=Z,80nm,23.8s						
TORD	Torodi Ar. Bea	115.46	326	PKP	PKiKP	19 08 57.7	-0.3
	comp=Z,0.2nm,0.3s,baz=42,slow=1.2,SNR=1.8						
H03N2	Juan Fernandez	140.78	90	T	T	21 46 56.0	
	baz=304,slow=77						
H03N3	Juan Fernandez	140.79	90	T	T	21 46 56.9	
	baz=304,slow=77						
H03N1	Juan Fernandez	140.79	90	T	T	21 47 01.5	
	baz=304,slow=77						
GO04	Tololo Observa	144.69	79	PKPdf	PKPab	19 09 53.3	+1.7
PLCA	Paso Flores	150.06	96	PKPbc	PKPbc	19 10 07.5	+1.4
	comp=Z,1.4nm,0.8s,baz=309,slow=3.1,SNR=6.5						

IDC ***15*** *18:50:27.6±6.3, 28°.96S×175°.87W, h67^{km}±39^{km}, mb3.6/3, mbtmp4.0/5, ML3.5/2, MS3.6/6, Error ellipse: s-maj=51.4km s-min=34.3km az=52.0*

ISC 15 18:50:25.1±2.4**, 28°.9S**±0°.1×**175°.7W**±0°.2**, h50^{km}, n9, σ0^{s}.92**/8**, mb3.9**/3**, MS3.7**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.95	259	P	Pn	18 50 56.9	+1.1
	518nm,0.3s,baz=105,slow=20,SNR=4.2						
RAO				S	Sn	18 51 19.0	-0.1
	1μm,0.5s,baz=94,slow=23,SNR=5.0						
URZ	Urewera	11.08	211	P	Pn	18 53 01.7	+0.9
	0.2nm,0.3s,baz=106,slow=7.4,SNR=1.4						
URZ				S	Sn	18 55 02.0	-1.2
	7.2nm,0.7s,baz=241,slow=19,SNR=1.6						
	5.0nm,0.8s						
MSVF	Nonsavu	12.49	331	LR	LR	18 57 05.3	
	comp=Z,150nm,19.6s,baz=159,slow=32						
DZM	Mont Dzumac	17.47	289	P	Pn	18 54 24.8	-0.5
	0.3nm,0.3s,baz=119,slow=19,SNR=2.5						
DZM				LR	LR	18 59 45.4	
	comp=Z,257nm,18.8s,baz=200,slow=32						
	9.3nm,1.1s						
PPT	Papeete	26.48	71	LR	LR	19 06 07.9	
	comp=Z,35nm,18.2s,baz=190,slow=35						
CTA	Charters Tower	35.57	276	LR	LR	19 10 07.7	
	comp=Z,162nm,18.9s,baz=126,slow=33						
STKA	Stephens Creek	36.77	254	P	P	18 57 27.5	-0.5
	1.2nm,0.7s,baz=134,slow=18,SNR=1.3						
STKA				LR	LR	19 11 03.2	
	comp=Z,117nm,18.3s,baz=194,slow=34						
	1.2nm,0.7s						
ASAR	Alice Springs	45.20	264	P	P	18 58 37.1	-0.3
	0.9nm,0.7s,baz=97,slow=7.1,SNR=15						
ASAR				LR	LR	19 16 27.9	
	comp=Z,91nm,18.3s,baz=158,slow=35						
	0.9nm,0.7s						
WRA	Warramunga Arr	46.06	270	P	P	18 58 43.8	-0.5
	1.8nm,0.9s,baz=110,slow=6.4,SNR=9.3						
	1.8nm,0.9s						

NOU ***15*** *19:00:45.0, 42°.54S×173°.63E, h4^{km}, MLv4.0/11, South Island, New Zealand*

WEL ***15*** *19:00:46.2±0.5, 42°S±3°×17°4E±°, h13^{km}±3^{km}, M3.6/19, ML3.8/19, MLv3.6/19, Error ellipse: s-maj=0.0km s-min=0.0km az=126.2, confirmed*

ISC 15 19:00:45.8±0.9**, 42°.44S**±0°.03×**173°.55E**±0°.03**, h16**^{km}±5^{km}**, n93, σ1^{s}.21**/99**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.02	338	P	Pg	19 00 48.4	-0.1
KHZ	Kahutara	0.02	338	P	Pg	19 00 48.4	-0.1
KHZ				S	Sg	19 00 50.4	0.0
GVZ	Greta Valley S	0.65	215	P	Pn	19 01 00.7	+0.3
GVZ				S	Sn	19 01 11.5	+1.1
BSWZ	Blackbirch Sta	0.76	19	P	Pg	19 01 00.2	-0.4
THZ	Tophouse	0.83	324	P	Pb	19 01 00.3	-1.4
CMWZ	Cape Campbell	0.85	36	P	Pn	19 01 03.1	0.0
AMCZ	Amberley	0.99	221	P	Pn	19 01 05.9	+0.8
LTZ	Lake Taylor	1.00	249	P	Pb	19 01 04.6	-0.2
LTZ				S	Sn	19 01 20.2	+1.0
TUWZ	Tuamarina	1.05	16	P	Pb	19 01 05.4	-0.1
MRNZ	Matariki Terra	1.19	330	P	Pn	19 01 07.0	-0.8
NNZ	Nelson	1.22	354	P	Pn	19 01 07.4	-0.8
TCW	Tory Channel	1.34	24	P	Pn	19 01 10.0	+0.2
TCW				S	Sg	19 01 29.1	+0.1
SNZO	South Karori	1.42	38	P	Pn	19 01 11.3	+0.4
OXZ	Oxford	1.42	231	P	Pn	19 01 11.0	0.0
OXZ				S	Sb	19 01 30.0	+0.1
MQZ	McQueen’s Vall	1.43	207	P	Pn	19 01 11.0	0.0
WEL	Wellington	1.47	39	P	Pn	19 01 12.0	+0.5
TKNZ	Takaka Hill	1.47	342	P	Pn	19 01 11.8	+0.2
TKNZ				S	Sg	19 01 32.9	-0.2
DSZ	Denniston Nort	1.47	297	P	Pn	19 01 12.3	+0.6
DSZ				S	Sn	19 01 31.6	+0.9
AKCZ	Akaroa Harbour	1.51	198	P	Pb	19 01 12.7	-0.7
PLWZ	Palliser	1.54	56	P	Pn	19 01 12.6	0.0
INZ	Inchbonnie	1.58	259	P	Pb	19 01 14.2	-0.5
RACZ	Rakaia	1.65	218	P	Pn	19 01 14.2	+0.1
DUWZ	D’Urville Isla	1.66	10	P	Pn	19 01 14.6	+0.3
CAW	Cannon Point	1.75	41	P	Pn	19 01 15.5	+0.1
PAWZ	Paruwai Farm	1.75	54	P	Pn	19 01 15.3	-0.3
QRZ	Quartz Range	1.78	334	P	Pn	19 01 17.0	+1.1
QRZ	Quartz Range	1.78	334	P	Pn	19 01 17.0	+1.1
MHCZ	Mount Hutt	1.82	232	P	Pn	19 01 16.4	0.0
KIW	Kapiti Island	1.88	33	P	Pn	19 01 17.6	+0.4
TRWZ	Traveller	1.90	58	P	Pn	19 01 17.6	+0.1
MTW	Mount Morrison	1.94	49	P	Pn	19 01 17.7	-0.4
WACZ	Wakanui South	1.96	219	P	Pn	19 01 18.6	+0.3
OGWZ	Otaki Gorge	2.02	37	P	Pn	19 01 19.3	+0.1
HOWZ	Holdsworth Sta	2.13	44	P	Pn	19 01 20.3	-0.4
WVZ	Waitaha Valley	2.17	252	P	Pn	19 01 22.3	+1.1
TMWZ	Te Maipa	2.20	54	P	Pn	19 01 21.0	-0.7
RPZ	Rata Peaks	2.23	234	P	Pn	19 01 22.4	+0.3
RPZ	Rata Peaks	2.23	234	P	Pn	19 01 22.2	+0.1
ARCZ	Arundel	2.30	228	P	Pn	19 01 23.1	+0.1
MRZ	Mangatainoka R	2.34	41	P	Pn	19 01 23.1	-0.4
TIWZ	Tintock	2.41	47	P	Pg	19 01 31.4	-0.7
POWZ	Post Office Ro	2.64	40	P	Pb	19 01 34.4	+1.7
BFZ	Birch Farm	2.68	50	P	Pn	19 01 28.2	0.0
BFZ	Birch Farm	2.68	50	P	Pn	19 01 27.6	-0.6
TMZ	Timaru	2.69	223	P	Pn	19 01 28.6	+0.2
WAZ	Wanganui	2.89	23	P	Pb	19 01 38.3	+1.4
DVHZ	Dannevirke	2.91	44	P	Pn	19 01 30.3	-1.0
LREZ	Lake Rotokare	3.04	13	P	Pg	19 01 42.5	-1.6
LBZ	Lake Benmore	3.13	230	P	Pn	19 01 34.7	+0.3
KHEZ	Kahui Hut	3.16	7	P	Pb	19 01 38.6	-3.0
KHEZ	Kahui Hut	3.16	7	P	Pb	19 01 38.7	-2.8
NBEZ	Newall Road No	3.17	4	P	Pn	19 01 38.1	+3.1
NEZ	North Egmont	3.19	8	P	Pb	19 01 40.5	-1.6
WPHZ	Waipukurau	3.22	44	P	Pg	19 01 52.4	+4.9
PKE	Pukeiti	3.26	6	P	Pn	19 01 38.6	+2.4
ODZ	Otahua Downs	3.35	218	P	Pn	19 01 37.2	-0.2
ODZ	Otahua Downs	3.35	218	P	Pn	19 01 37.3	-0.2
PKVZ	Pokaka	3.43	24	P	Pb	19 01 44.8	-1.3
VRZ	Vera Road	3.43	16	P	Pn	19 01 42.3	+3.7
MOVZ	Moawhango	3.46	30	P	Pb	19 01 43.8	-2.8
WNVZ	Wahianoa	3.47	27	P	Pn	19 01 40.7	+1.4
BHHZ	Black Hill Sta	3.50	34	P	Pb	19 01 47.4	-0.1
WHVZ	Whangaehu Hut	3.51	27	P	Pb	19 01 47.7	0.0
FWVZ	Far West T-bar	3.52	26	P	Pb	19 01 47.2	-0.7
TUVZ	Tukino	3.54	27	P	Pb	19 01 47.8	-0.4
NGZ	Ngauruhoe	3.61	26	P	Pb	19 01 49.2	-0.1
SNVZ	South Ngauruho	3.61	27	P	Pb	19 01 49.9	+0.5
OTVZ	Oturere	3.64	27	P	Pn	19 01 44.2	+2.5
KAHZ	Kahuranaki	3.64	45	P	Pg	19 01 57.3	+1.7
NNVZ	North Ngauruho	3.65	26	P	Pb	19 01 51.6	+1.5
WTVZ	West Tongariro	3.66	26	P	Pb	19 01 48.4	-1.8
ETVZ	East Tongariro	3.68	27	P	Pb	19 01 51.9	+1.4
TMVZ	Te Maari	3.70	27	P	Pb	19 01 51.2	+0.4
KATZ	Kakaramea	3.82	26	P	Pb	19 01 53.7	+0.8
MCHZ	McNeill Hill	3.82	40	P	Pg	19 01 58.3	-0.7
RATZ	Rangitukua	3.95	26	P	Pb	19 01 56.3	+1.3
BKZ	Black Stump Fm	3.96	35	P	Pn	19 01 47.4	+1.5
BKZ	Black Stump Fm	3.96	35	P	Pb	19 01 56.0	+0.9
HIZ	Hauiti	4.04	15	P	Pn	19 01 48.8	+1.8
HIZ	Hauiti	4.04	15	P	Pn	19 01 49.2	+2.2
EAZ	Earnscleugh	4.15	226	P	Pn	19 01 48.9	+0.4
NMHZ	Naumai	4.15	38	P	Pg	19 02 02.2	-3.1
MTHZ	Maungataniwha	4.37	36	P	Pg	19 02 07.6	-1.8
RTZ	Ruatahuna	4.62	36	P	Pb	19 02 07.6	+1.0
MLZ	Mavora Lakes	4.90	231	P	Pn	19 01 58.3	-0.5
URZ	Urewera	4.98	34	P	Pb	19 02 10.8	-1.7
SYZ	Scrubby Hill	5.17	216	P	Pn	19 02 03.1	+0.6
SYZ	Scrubby Hill	5.17	216	P	Pn	19 02 03.1	+0.6
AWAZ	Awhitu Peninsu	5.43	9	P	Pn	19 02 07.7	+1.6
WIAZ	Waiheke Island	5.77	13	P	Pn	19 02 12.2	+1.6
APZ	The Paps	5.92	220	P	Pn	19 02 13.5	+0.8
CTZ	Chatham Island	7.32	104	P	Pn	19 02 31.5	-0.4
CTZ	Chatham Island	7.32	104	P	Pn	19 02 31.5	-0.4

IDC 15 19:02:30.4±6.0**, 7°.63S**×**154°.34E, h0**^{km}**, mb3.4**/3**, mbtmp3.5**/4**, ML3.1**/1**, Error ellipse: s-maj=115.4km s-min=30.8km az=87.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	4.02	325	Pn	Pn	19 03 32.2	-1.0
	1.3nm,0.3s,baz=190,slow=11,SNR=1.4						
KRVT				Sn	Sn	19 04 20.9	-0.1
	3.4nm,0.3s,baz=209,slow=19,SNR=4.1						
	16nm,0.6s						
WRA	Warramunga Arr	22.92	236	P	P	19 07 36.8	+0.6
	0.3nm,0.5s,baz=59,slow=9.7,SNR=8.4						
	0.3nm,0.5s						
ASAR	Alice Springs	25.27	229	P	P	19 07 56.8	-1.8
	0.5nm,1.0s,baz=57,slow=10,SNR=2.6						
	0.5nm,1.0s						
CMAR	Chiang Mai Arr	60.47	296	P	P	19 12 43.6	+1.1
	0.4nm,0.3s,baz=131,slow=5.9,SNR=5.0						
	0.4nm,0.3s						

IDC ***15*** *19:34:25.9±5.0, 2°.83N×128°.50E, h64^{km}±53^{km}, mb3.1/4, mbtmp3.5/5, ML4.2/1, Error ellipse: s-maj=99.9km s-min=22.9km az=73.0*

DJA ***15*** *19:34:30.0±1.1, 2°N±12°×12°8E±°, h74^{km}±8^{km}, M3.9/7, mb4.1/3, MLv3.8/7*

ISC 15 19:34:24.3±1.1**, 2°.7N**±0°.1×**128°.6E**±0°.1**, h50^{km}, n14, σ1^{s}.77**/13**, mb3.5**/4**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.27	211	P	Pn	19 34 58.1	-1.3
LBMI	Labuha	3.50	197	P	Pn	19 35 15.8	-0.5
SIJI	Sorong	4.49	143	P	Pn	19 35 33.0	+3.2
	10nm,0.3s,baz=331,slow=22,SNR=57						
SIJI				S	Sn	19 36 20.3	-0.5
	4.9nm,0.5s,baz=197,slow=19,SNR=1.3						
	19nm,0.3s						
SANI	Sanana	5.39	208	P	Pn	19 35 40.2	-2.0
GTOI	Gorontalo	5.91	250	P	Pn	19 35 50.6	+1.2
	9.9nm,0.6s,0.0nm						
LUWI	Luwuk	6.88	237	P	Pn	19 36 01.4	-1.3
	17nm,1.1s,0.2nm						
MRSI	Marisa	6.97	251	P	Pn	19 36 06.2	+2.2
WRA	Warramunga Arr	23.23	166	P	P	19 39 28.2	+0.9
	1.0nm,0.5s,baz=345,slow=10.0,SNR=13						
	1.0nm,0.5s						
ASAR	Alice Springs	26.75	169	P	P	19 40 00.7	+1.2
	0.2nm,0.5s,baz=342,slow=10,SNR=5.8						
ASAR				PcP	PcP	19 43 23.0	+1.1
	0.2nm,0.7s,baz=352,slow=2.0,SNR=1.5						
	0.2nm,0.5s						
H11S3	WAKE ISLAND Hy	40.49	64	T	T	20 25 19.0	
	baz=252,slow=74						
H11S2	WAKE ISLAND Hy	40.51	64	T	T	20 25 25.5	
	baz=252,slow=74						
H11S1	WAKE ISLAND Hy	40.51	64	T	T	20 25 20.8	
	baz=252						
SONM	Songino Array	48.84	340	P	P	19 43 03.2	-1.7
	0.3nm,0.8s,baz=146,slow=5.4,SNR=2.3						
	0.3nm,0.8s						
MKAR	Makanchi Array	59.41	325	P	P	19 44 21.8	-0.1
	0.2nm,0.4s,baz=113,slow=8.1,SNR=4.8						
	0.2nm,0.4s						

PGC 15 20:06:01.6±4.2**, 50°.22N**×**130°.26W, h10**^{km}**, MLSn3.0**/10**, Mw3.6**/10**, 208km west of Pt. Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.42	72	Pn	Pn	20 06 27.6	0.0
HOLB				Sn	Sn	20 06 42.1	-4.2
PACB	Port Alice, BC	1.79	82	Pn	Pn	20 06 29.8	-2.6
PACB				Sn	Sn	20 06 50.2	-4.9
MAYB	Maynard	1.99	83	Pn	Pn	20 06 33.7	-1.6
EDB	Eliza Dome	2.05	98	Sn	Sn	20 06 59.7	-2.0
WOSB	Woss	2.37	90	Pn	Pn	20 06 38.8	-1.8
WOSB				Sn	Sn	20 07 06.1	-3.7
BBB	Bella Bella	2.39	34	Pn	Pn	20 06 39.6	-1.2
BBB				Sn	Sn	20 07 06.2	-3.9
BNB	Barry Inlet	2.54	339	Pn	Pn	20 06 41.0	-2.0
BNB				Sn	Sn	20 07 10.4	-3.5
NCRB	Newcastle Ridg	2.70	84	Pn	Pn	20 06 44.0	-1.1
DIB	Dawson Inlet,	3.29	336	Pn	Pn	20 06 51.5	-1.7
OZB	Mount Ozzard	3.34	110	Sn	Sn	20 07 30.7	-3.0
GRNB	Grenville Isla	3.64	3	Pn	Pn	20 06 56.9	-1.1
GRNB				Sg	Sb	20 07 54.3	+4.1
KITB	Kitimat	3.99	14	Pn	Pn	20 07 02.9	+0.1
SHB	Sechelt	4.17	96	Sn	Sn	20 07 51.0	-3.1
FSB	Fort Saint Jam	5.60	38	Pn	Pn	20 07 25.2	+0.3
FSJB	Fort St James	5.60	38	Pn	Pn	20 07 25.2	+0.3

NEIC ***15*** *20:10:15.6±2.6, 0°.09N±0°.09×123°.65E±0°.07, h130^{km}±10^{km}, mb4.2/19, Error ellipse: s-maj=12.8km s-min=9.7km az=159.0*

IDC ***15*** *20:10:16.4±2.0, 0°.11N×123°.61E, h151^{km}±19^{km}, mb3.6/7, mbtmp3.9/9, Error ellipse: s-maj=28.4km s-min=12.6km az=61.0*

DJA ***15*** *20:10:17.5±0.3, 0°S±3°×12°4E±°, h123^{km}±6^{km}, M4.3/13, mb4.2/6, mB4.8/1, MLv4.3/13, Mw(mB)4.1/1*

ISC 15 20:10:16.3±0.5**, 0°.05S**±0°.06×**123°.52E**±0°.05**, h150^{km}, n56, σ1^{s}.57**/66**, mb4.0**/16**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	1.24	217	Pn	Pn	20 10 42.3	-0.9
LUWI				Sn	Sn	20 10 59.2	-4.7
LUWI	Luwuk	1.24	217	P	Pn	20 10 42.0	-1.3
LUWI				S	Sn	20 11 00.8	-3.1
MRSI	Marisa	1.66	288	P	Pn	20 10 46.1	-1.5
TOLI2	Tolitoli	2.97	293		Pn	20 11 01.9	-1.4
SANI	Sanana	3.17	129	P	Pn	20 11 05.2	-0.7
MPSI	Mapaga	3.64	276	P	Pn	20 11 11.9	0.0
TNTI	Ternate	3.94	78	Pn	Pn	20 11 12.3	-3.5
TNTI	Ternate	3.94	78	P	Pn	20 11 15.7	-0.1
LBMI	Labuha	4.03	98	P	Pn	20 11 17.3	+0.3
NLAI	Namlea	4.78	132	P	Pn	20 11 28.1	+1.2
SPSI	Sidrap Palu	5.40	224	P	Pn	20 11 34.6	-0.5
	22nm,0.6s,0.2nm						
KAPI	Kappang	6.20	217	P	Pn	20 11 47.1	+1.3
	6.3nm,0.5s,baz=318,slow=3.1,SNR=14						
KAPI				S	Sn	20 12 55.7	-0.1
	16nm,0.5s,baz=226,slow=18,SNR=10.0						
KAPI	Kappang	6.20	217		Pn	20 11 46.6	+0.8
MSAI	Masohi	6.32	121	P	Pn	20 11 49.2	+1.8
	7.1nm,0.6s,0.1nm						
MYLDM	Lahad Datu	7.22	316		Pn	20 12 01.6	+2.3
SIJI	Sorong	7.79	96	P	Pn	20 12 05.7	-1.3
	1.7nm,0.6s,baz=228,slow=23,SNR=1.9						
SIJI				S	Sn	20 13 35.5	+1.5
	1.8nm,0.3s,baz=253,slow=19,SNR=1.5						
FAKI	Fak Fak	9.18	108	Pn	Pn	20 12 26.6	+1.1
FAKI				Sn	Sn	20 14 02.5	-5.1
KKM	Kota Kinabalu	9.47	310		Pn	20 12 33.2	+3.6
KSM	Kuching	13.29	277	Pn	P	20 13 22.2	-1.5
MTN	Manton Dam	14.79	150	Pn	Pn	20 13 38.5	+0.3
KNRA	Kununurra	16.37	162	P	P	20 14 00.5	+2.7
FITZ	Fitzroy Crossi	18.06	173	P	P	20 14 17.6	+1.3
WB0	Warramunga Arr	22.31	152	P	P	20 15 02.3	+0.6
WB0				IAmb	IAmb	20 15 04.0	
	comp=Z,15nm,1.2s						
WRAB	Tennant Creek	22.43	152	P	P	20 15 03.8	+0.9
WRAB				IAmb	IAmb	20 15 04.7	
	comp=Z,5.4nm,0.6s						
WRA	Warramunga Arr	22.43	152	P	P	20 15 03.9	+1.0
	comp=Z,4.0nm,0.5s,baz=332,slow=10,SNR=88						
WRA				S	S	20 18 56.9	-1.5
	comp=Z,0.5nm,0.7s,baz=334,slow=16,SNR=3.5						
	comp=Z,4.0nm,0.5s						
WB2	Warramunga Arr	22.44	152	P	P	20 15 03.8	+0.8
WB2				IAmb	IAmb	20 15 05.2	
	comp=Z,7.4nm,0.6s						
IPM	Ipoh	22.91	282	P	P	20 15 08.6	+1.0
IPM				IAmb	IAmb	20 15 09.3	
	comp=Z,9.0nm,0.6s						
ASAR	Alice Springs	25.55	157	P	P	20 15 32.7	+1.2
	comp=Z,0.5nm,0.4s,baz=346,slow=15,SNR=16						
ASAR				PcP	PcP	20 18 59.3	+0.4
	comp=Z,0.3nm,0.6s,baz=343,slow=1.5,SNR=4.9						
ASAR				ScP	ScP	20 22 23.2	-1.3
	comp=Z,0.1nm,0.5s,baz=327,slow=2.6,SNR=1.4						
	comp=Z,0.5nm,0.4s						
PHRA	Phrae	29.38	310	P	P	20 16 08.0	+2.4

CM31	**Chiang Mai Arr**	**30.35**	**309**	P	**P**	**20 16 15.4**	**+1.2**
CM31				IAmb	IAmb	20 16 16.9	
	comp=Z,2.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**30.35**	**309**	P	**P**	**20 16 15.1**	**+0.9**
	comp=Z,1.7nm,0.7s,baz=133,slow=6.8,SNR=17						
	comp=Z,1.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**30.35**	**309**	P	**P**	**20 16 15.9**	**+1.7**
CHTO	**Chiang Mai**	**30.55**	**309**	P	**P**	**20 16 16.9**	**+1.0**
STKA	**Stephens Creek**	**35.98**	**153**	P	**P**	**20 17 04.3**	**+1.5**
	comp=Z,2.4nm,0.8s,baz=342,slow=8.9,SNR=3.0						
	comp=Z,2.4nm,0.8s						
MAJO	**Matsushiro**	**38.88**	**19**	P	**P**	**20 17 27.6**	**+0.4**
MJB9	**Matsu-Tunnel**	**38.88**	**19**	P	**P**	**20 17 27.0**	**-0.2**
LSA	**Lhasa**	**42.74**	**317**	P	**P**	**20 18 00.4**	**+0.9**
LSA				IAmb	IAmb	20 18 02.5	
	comp=Z,2.2nm,0.7s						
TAPN	**Taplejung**	**43.87**	**311**	*e*P	**P**	**20 18 08.7**	**+0.3**
	comp=Z,4.3nm,0.4s						
RAMN	**Ramite**	**44.50**	**310**	*e*P	**P**	**20 18 13.8**	**+0.4**
	comp=Z,14nm,0.5s						
JIRN	**Jiri**	**45.18**	**311**	*e*P	**P**	**20 18 19.1**	**+0.2**
	comp=Z,10nm,0.4s						
GUN	**Gumba**	**45.54**	**311**	*e*P	**P**	**20 18 21.7**	**0.0**
	comp=Z,17nm,0.4s						
PKI	**Pulchoki**	**45.73**	**310**	*e*P	**P**	**20 18 22.9**	**-0.3**
	comp=Z,7.2nm,0.5s						
PKIN	**Phulchoki**	**45.74**	**310**	*e*P	**P**	**20 18 22.7**	**-0.5**
	comp=Z,5.2nm,0.3s						
GKN	**Gorkha**	**46.53**	**310**	*e*P	**P**	**20 18 28.9**	**-0.4**
	comp=Z,11nm,0.3s						
DANN	**Dangsing**	**47.38**	**310**	*e*P	**P**	**20 18 35.3**	**-0.7**
PYUN	**Piuthan**	**47.85**	**309**	*e*P	**P**	**20 18 39.5**	**0.0**
	comp=Z,31nm,0.6s						
ULN	**Ulaanbaatar**	**49.83**	**346**	P	**P**	**20 18 53.0**	**-1.1**
SONM	**Songino Array**	**49.97**	**345**	P	**P**	**20 18 54.2**	**-1.0**
	comp=Z,1.6nm,0.7s,baz=160,slow=8.8,SNR=15						
SONM				PcP	**PcP**	**20 20 12.4**	**-0.7**
	comp=Z,0.2nm,0.7s,baz=175,slow=3.4,SNR=4.1						
	comp=Z,1.6nm,0.7s						
SONM	**Songino Array**	**49.97**	**345**	P	**P**	**20 18 54.1**	**-1.0**
MK31	**Makanchi Array**	**58.93**	**328**	P	**P**	**20 19 59.1**	**-0.7**
MK31				IAmb	IAmb	20 20 00.3	
	comp=Z,0.8nm,0.5s						
MKAR	**Makanchi Array**	**58.93**	**328**	P	**P**	**20 19 59.0**	**-0.8**
	comp=Z,0.9nm,0.4s,baz=121,slow=8.6,SNR=26						
MKAR				PcP	**PcP**	**20 20 46.3**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=157,slow=2.5,SNR=7.8						
	comp=Z,0.9nm,0.4s						
MKAR	**Makanchi Array**	**58.93**	**328**	P	**P**	**20 19 59.1**	**-0.7**
ZALV	**Zalesovo Beam**	**62.57**	**335**	P	**P**	**20 20 22.7**	**-1.6**
	comp=Z,0.6nm,0.5s,baz=123,slow=5.5,SNR=3.7						
	comp=Z,0.6nm,0.5s						
KURK	**Kurchatov**	**63.28**	**330**	P	**P**	**20 20 28.1**	**-0.8**
KURK				IAmb	IAmb	20 20 29.4	
	comp=Z,2.0nm,0.5s						
TIXI	**Tiksi**	**71.67**	**2**	P	**P**	**20 21 20.8**	**-0.5**
TIXI				IAmb	IAmb	20 21 21.5	
	comp=Z,3.9nm,1.0s						
TORD	**Torodi Ar. Bea**	**120.92**	**285**	PKP	**PKPdf**	**20 28 51.0**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=63,slow=1.8,SNR=4.3						

IDC 15 21:00:28.0±3.0**, 48°.74S×124°.86E, h0^{km}, mb3.7**/4**, mbtmp3.8**/4**, MS3.6**/9**, Error ellipse: s-maj=73.4km s-min=47.5km az=155.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W1	**Cape Leeuwin H**	**15.95**	**326**	T	T	21 20 59.8	
	baz=153,slow=74,SNR=7.5						
H01W2	**Cape Leeuwin H**	**15.95**	**326**	T	T	21 20 55.7	
	baz=153,slow=74,SNR=8.5						
H01W3	**Cape Leeuwin H**	**15.97**	**326**	T	T	21 20 55.5	
	baz=153,slow=74,SNR=8.0						
STKA	**Stephens Creek**	**21.06**	**43**	P	P	21 05 14.7	+1.1
	2.8nm,0.9s,baz=217,slow=10,SNR=4.6						
STKA				LR	LR	21 11 49.5	
	comp=Z,114nm,21.3s,baz=205,slow=32						
	2.8nm,0.9s						
ASAR	**Alice Springs**	**26.03**	**19**	P	P	21 06 02.6	-0.2
	1.3nm,0.6s,baz=198,slow=9.0,SNR=23						
ASAR				LR	LR	21 15 24.9	
	comp=Z,159nm,20.7s,baz=214,slow=34						
	1.3nm,0.6s						
WRA	**Warramunga Arr**	**29.73**	**18**	P	P	21 06 35.2	-0.8
	0.5nm,0.9s,baz=190,slow=12,SNR=2.4						
WRA				LR	LR	21 17 29.0	
	comp=Z,154nm,21.7s,baz=194,slow=34						
	0.5nm,0.9s						
VNDA	**Vanda**	**32.15**	**166**	LR	LR	21 18 02.3	
	comp=Z,157nm,19.4s,baz=257,slow=33						
CTA	**Charters Tower**	**33.36**	**39**	LR	LR	21 20 49.1	
	comp=Z,94nm,18.1s,baz=234,slow=37						
QSPA	**South Pole Qui**	**41.38**	**180**	LR	LR	21 26 28.3	
	comp=Z,262nm,18.5s,baz=300,slow=38						
SIJI	**Sorong**	**48.01**	**9**	LR	LR	21 29 33.5	
	comp=Z,27nm,19.5s,baz=73,slow=36						
KRVT	**Keravat (AS076**	**49.97**	**36**	LR	LR	21 30 47.1	
	comp=Z,38nm,18.6s,baz=328,slow=36						
SNAA	**Sanae**	**54.34**	**198**	LR	LR	21 31 30.6	
	comp=Z,92nm,20.3s,baz=112,slow=34						
CMAR	**Chiang Mai Arr**	**70.78**	**334**	P	P	21 11 46.5	+0.4
	1.0nm,0.7s,baz=186,slow=5.4,SNR=9.3						
	1.0nm,0.7s						
YKA	**Yellowknife Ar**	**145.09**	**44**	PKPbc	PKPbc	21 20 04.4	-1.1
	1.5nm,0.7s,baz=265,slow=3.5,SNR=21						

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*INET **15** 21:09:56.0±1.0, 12°.28N×87°.59W, h28^{km}±7^{km}, MW3.1*
*SNET **15** 21:09:56.2±0.8, 12°.44N×87°.48W, h52^{km}±20^{km}, ML3.6*
ISC 15 21:09:56.3±1.6**, 12°.48N**±0°.09×**87°.47W**±0°.06**, h72**^{km}±13^{km}**, n28, σ0^{s}.56**/39**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.47**	**61**	*e*P	**Pn**	**21 10 09.2**	**+0.1**
CRIN				*e*S	**Sn**	**21 10 19.3**	**+0.9**
TEL3	**Telica 3**	**0.62**	**81**	*e*P	**Pn**	**21 10 10.2**	**-0.3**
TELN	**Telica**	**0.63**	**78**	*e*P	**Pn**	**21 10 11.0**	**+0.2**
CNGN	**Cerro Negro**	**0.75**	**88**	*e*P	**Pn**	**21 10 11.7**	**-0.3**
CNGN				*e*S	**Sn**	**21 10 23.8**	**+0.2**
CNCH	**Conchagua**	**0.87**	**336**	*i* P	**Pn**	**21 10 12.8**	**-0.8**
CNCH				*e*S	**Sn**	**21 10 26.0**	**-0.3**
COPN	**Copaltepe**	**0.91**	**109**	*e*P	**Pn**	**21 10 12.6**	**-1.1**
MOMN	**Momotombo**	**0.91**	**94**	*e*P	**Pn**	**21 10 13.6**	**-0.3**
MOMN				*e*S	**Sn**	**21 10 26.9**	**0.0**
LCND	**La Caada**	**0.93**	**334**	*e*P	**Pn**	**21 10 13.2**	**-0.8**
LCND				*e*S	**Sn**	**21 10 26.7**	**-0.4**
LCND				*e*S	**Sn**	**21 10 26.8**	**-0.4**
LCND				IAML		21 10 29.3	
	comp=Z,2μm,0.3s						
VSM	**San Miguel**	**1.23**	**320**	*e*P	**Pn**	**21 10 18.2**	**+0.1**
VSM				*e*S	**Sn**	**21 10 35.9**	**+1.5**
LCY	**Lacayo**	**1.24**	**320**	*e*P	**Pn**	**21 10 17.6**	**-0.4**
LCY				*e*S	**Sn**	**21 10 34.0**	**-0.4**
RANC	**El Ranchito**	**1.24**	**320**	*e*P	**Pn**	**21 10 17.6**	**-0.6**
RANC				IAML		21 10 36.3	
	comp=Z,668nm,0.2s						
HUEN		**1.27**	**96**	*e*P	**Pn**	**21 10 18.2**	**-0.2**
HUEN				*e*S	**Sn**	**21 10 36.3**	**+1.3**
PACA	**Pacayal**	**1.29**	**320**	*e*P	**Pn**	**21 10 18.8**	**0.0**
PACA	**Pacayal**	**1.29**	**320**	*e*P	**Pn**	**21 10 18.9**	**+0.1**
FAGO	**Alcalda de S**	**1.36**	**333**	*e*P	**Pn**	**21 10 19.0**	**-0.6**
TECA	**Tecapa**	**1.43**	**315**	*e*P	**Pn**	**21 10 20.8**	**+0.1**
COEB	**Comit de Eme**	**1.45**	**315**	*e*S	**Sn**	**21 10 39.9**	**+0.6**
MATN	**Matagalpa**	**1.57**	**73**	*e*P	**Pn**	**21 10 22.2**	**-0.2**
TGUH	**Tegucigalpa,Un**	**1.58**	**7**	*e*P	**Pn**	**21 10 22.6**	**0.0**
TGUH				*e*S	**Sn**	**21 10 42.5**	**+0.1**
SCLA	**Alcaldia de Sa**	**1.73**	**315**	*e*P	**Pn**	**21 10 25.2**	**+0.7**
BOAB	**BOACO BROADBAN**	**1.76**	**91**	*e*P	**Pn**	**21 10 24.5**	**-0.4**
BOAB				*e*S	**Sn**	**21 10 46.6**	**+0.1**
SJTE	**Alcalda de S**	**1.88**	**307**	*e*P	**Pn**	**21 10 26.4**	**-0.1**
LFRS	**El Faro**	**1.93**	**306**	*e*P	**Pn**	**21 10 26.9**	**-0.3**
P5NO	**Presa 5 de nov**	**1.96**	**320**	*e*P	**Pn**	**21 10 26.9**	**-0.5**
PMON	**Piamonte**	**2.18**	**305**	*e*P	**Pn**	**21 10 30.5**	**0.0**
JAYA	**Jayaque - finc**	**2.26**	**301**	*e*P	**Pn**	**21 10 31.4**	**-0.3**
JAYA				IAML		21 11 01.5	
	comp=Z,351nm,0.2s						
ACON	**Acoyapa**	**2.30**	**102**	*e*P	**Pn**	**21 10 31.5**	**-0.5**
NUBE	**Las Nubes**	**2.66**	**302**	*e*P	**Pn**	**21 10 37.3**	**+0.2**

ROM 15 21:10:18.6±0.0**, 42°.738N**±0°.002×**13°.188E**±0°.004**, h11**^{km}**, ML1.5**/10**, 1C-3D, Error ellipse: s-maj=0.3km s-min=0.2km az=260.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1214	**Arquata del Tr**	**0.03**	**35**	P	Pg	21 10 20.9	+0.1
T1214				S	Sg	21 10 22.2	-0.1
T1214				AML	AML		
	comp=E,1174μm,0.3s						
T1214				AML	AML		
	comp=N,768μm,1.6s						
T1214				AML	AML		
	comp=E,1076μm,0.3s						
T1214				AML	AML		
	comp=N,726μm,1.6s						
T1214				AML	AML		
	comp=N,726μm,0.4s						
T1214				AML	AML		
	comp=N,768μm,0.4s						
T1218	**Civita (PG)**	**0.09**	**218**	P	Pg	21 10 21.6	+0.4
T1218				S	Sg	21 10 23.6	+0.4
T1218				AML	AML		
	comp=E,1265μm,0.4s						
T1218				AML	AML		
	comp=N,2855μm,0.3s						
T1218				AML	AML		
	comp=E,1165μm,0.4s						
T1218				AML	AML		
	comp=N,2800μm,0.3s						
T1218				AML	AML		
	comp=E,1265μm,0.3s						
T1218				AML	AML		
	comp=E,1160μm,0.3s						
T1218				AML	AML		
	comp=N,2855μm,0.2s						
T1245	**Castelsantange**	**0.12**	**0**	P	Pg	21 10 22.0	+0.3
T1245				S	Sg	21 10 24.5	+0.6
T1245				AML	AML		
	comp=E,410μm,0.4s						
T1245				AML	AML		
	comp=E,524μm,1.5s						
T1245				AML	AML		
	comp=N,402μm,1.1s						
T1245				AML	AML		
	comp=N,490μm,0.5s						
T1245				AML	AML		
	comp=E,524μm,0.5s						
T1245				AML	AML		
	comp=N,402μm,0.9s						
SMA1	**SAN MARTINO**	**0.15**	**134**	P	Pg	21 10 22.7	+0.6
SMA1				AML	AML		
	comp=E,120μm,1.6s						
SMA1				AML	AML		
	comp=N,105μm,0.5s						
SMA1				AML	AML		
	comp=E,120μm,0.4s						
MC2	**Monte Cornacci**	**0.17**	**1**	P	Pg	21 10 23.0	+0.5
MC2				S	Sg	21 10 26.4	+1.1
MMO1	**Montemonaco**	**0.19**	**32**	⇑P	Pg	21 10 23.2	+0.5
MMO1				S	Sg	21 10 26.6	+0.9
T1217	**Poggiodomo (PG**	**0.19**	**262**	⇓P	Pg	21 10 23.2	+0.5
T1217				AML	AML		
	comp=E,196μm,0.5s						
T1217				AML	AML		
	comp=N,196μm,0.2s						
T1216	**Preci, Frazion**	**0.20**	**321**	P	Pg	21 10 23.3	+0.5
T1241	**Roccafluvione,**	**0.21**	**56**	P	Pg	21 10 23.7	+0.6
T1241				S	Sg	21 10 27.3	+1.0
T1241				AML	AML		
	comp=E,93μm,0.6s						
T1241				AML	AML		
	comp=N,66μm,0.8s						
T1241				AML	AML		
	comp=E,93μm,0.6s						
T1241				AML	AML		
	comp=N,66μm,0.8s						
T1241				AML	AML		
	comp=E,93μm,1.4s						
RM33	**Pellescritta (**	**0.23**	**175**	P	Pg	21 10 23.8	+0.4
RM33				S	Sg	21 10 27.6	+1.0
RM33				AML	AML		
	comp=E,91μm,0.4s						
RM33				AML	AML		
	comp=N,76μm,0.6s						
T1256	**Bolognola (MC)**	**0.27**	**6**	P	Pg	21 10 24.6	+0.4
T1256				S	Sg	21 10 29.1	+1.1
FDMO	**Fiordimonte**	**0.31**	**346**	P	Pg	21 10 25.2	+0.4
FDMO				S	Sg	21 10 30.1	+1.1
FDMO				AML	AML		
	comp=E,28μm,0.3s						
FDMO				AML	AML		
	comp=N,32μm,1.6s						
T1211	**Morro Reatino**	**0.32**	**230**	P	Pg	21 10 25.4	+0.4
TERO	**Teramo**	**0.33**	**110**	⇓P	Pg	21 10 25.4	+0.3
TERO				AML	AML		
	comp=E,92μm,0.1s						
TERO				AML	AML		
	comp=N,145μm,0.1s						
TERO				AML	AML		
	comp=E,92μm,1.9s						
T1219	**Muccia, Frazio**	**0.34**	**337**	P	Pg	21 10 25.8	+0.3
T1219				S	Sb	21 10 31.3	-1.0
ARRO	**Arrone**	**0.35**	**243**	⇓P	Pg	21 10 26.1	+0.6
T1220	**Camerino, Fraz**	**0.38**	**349**	P	Pg	21 10 26.4	+0.3
T1220				S	Sb	21 10 32.5	-0.8
OFFI	**Offida**	**0.42**	**62**	P	Pb	21 10 28.2	+0.2
EL6	**Elcito**	**0.59**	**354**	P	Pb	21 10 30.6	-0.4

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*IDC **15** 21:10:29.9±1.5, 7°.15S×156°.07E, h93^{km}±16^{km}, mb3.6/5, mbtmp4.0/7, MS3.6/1, Error ellipse: s-maj=24.0km s-min=12.2km az=32.0*
ISC 15 21:10:30.6±1.1**, 7°.0S**±0°.9×**156°.2E**±0°.6**, h100**^{km}**, n14, σ0^{s}.98**/6**, mb3.8**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.45**	**124**	P	**Pn**	**21 11 36.0**	**+0.2**
	817nm,0.3s,baz=231,slow=11,SNR=2.1						
HNR				S	**Sn**	**21 12 25.8**	**-0.7**
	1μm,0.7s,baz=206,slow=22,SNR=1.5						
HNR				LR	LR	21 13 35.7	
	comp=Z,784nm,20.3s,baz=150,slow=42						
KRVT	**Keravat (AS076**	**4.92**	**302**	P	**Pn**	**21 11 42.8**	**+0.4**
	25nm,0.6s,baz=250,slow=2.9,SNR=2.1						
KRVT				S	**Sn**	**21 12 37.0**	**-1.1**
	28nm,0.4s,baz=252,slow=18,SNR=1.8						
PMG	**Port Moresby**	**9.29**	**254**	P	Pn	21 12 39.3	-2.4
	6.4nm,0.5s,baz=245,slow=17,SNR=2.5						
WRA	**Warramunga Arr**	**24.84**	**237**	P	P	21 15 42.0	-2.0
	1.9nm,0.5s,baz=61,slow=9.8,SNR=28						
	1.9nm,0.5s						
ASAR	**Alice Springs**	**27.12**	**230**	P	P	21 16 01.6	-2.9
	0.3nm,0.5s,baz=58,slow=10,SNR=6.5						
	0.3nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**27.31**	**22**	T	T	21 44 23.5	
	baz=202,slow=76,SNR=136						
H11S2	**WAKE ISLAND Hy**	**27.31**	**22**	T	T	21 44 24.6	
	baz=202,slow=76,SNR=105						
H11S1	**WAKE ISLAND Hy**	**27.33**	**22**	T	T	21 44 25.6	
	baz=202,slow=76,SNR=73						
H11N1	**WAKE ISLAND Hy**	**28.50**	**21**	T	T	21 45 55.5	
	baz=210,slow=74						
H11N3	**WAKE ISLAND Hy**	**28.51**	**21**	T	T	21 46 00.3	
	baz=210,slow=74						
H11N2	**WAKE ISLAND Hy**	**28.52**	**21**	T	T	21 45 56.9	
	baz=210						
SONM	**Songino Array**	**69.95**	**327**	P	P	21 21 32.3	+1.0
	0.5nm,0.5s,baz=145,slow=6.4,SNR=6.8						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**84.17**	**318**	P	**P**	**21 22 51.7**	**+0.9**
	0.8nm,0.4s,baz=96,slow=6.9,SNR=23						
	0.8nm,0.4s						
ZALV	**Zalesovo Beam**	**84.82**	**326**	P	**P**	**21 22 53.4**	**-0.5**
	0.6nm,0.5s,baz=127,slow=6.3,SNR=4.2						
	0.6nm,0.5s						

ROM 15 21:11:09.4±0.0**, 42°.890N**±0°.002×**13°.034E**±0°.003**, h11**^{km}**, ML1.2**/7**, Error ellipse: s-maj=0.2km s-min=0.2km az=277.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1216	**Preci, Frazion**	**0.01**	**276**	P	Pg	21 11 11.8	+0.4
T1216				S	Sg	21 11 13.2	+0.4
T1216				AML	AML		
	comp=E,506μm,0.4s						
T1216				AML	AML		
	comp=N,622μm,0.3s						
T1216				AML	AML		
	comp=E,506μm,0.5s						
MC2	**Monte Cornacci**	**0.12**	**79**	P	Pg	21 11 13.1	+0.5
MC2				S	Sg	21 11 15.4	+0.6
T1245	**Castelsantange**	**0.12**	**106**	P	Pg	21 11 11.9	-0.6
T1245				S	Sg	21 11 15.4	+0.6
T1245				AML	AML		
	comp=E,133μm,1.6s						
T1245				AML	AML		
	comp=N,148μm,0.3s						
T1245				AML	AML		
	comp=E,133μm,0.4s						
T1245				AML	AML		
	comp=N,148μm,1.7s						
T1212	**Cascia, Frazio**	**0.14**	**177**	P	Pg	21 11 13.1	+0.4
T1212				S	Sg	21 11 15.8	+0.8
T1212				AML	AML		
	comp=N,127μm,1.6s						
T1212				AML	AML		
	comp=E,106μm,0.9s						
CESI	**CESI - Serrava**	**0.15**	**321**	P	Pg	21 11 13.5	+0.6
CESI				S	Sg	21 11 16.2	+0.8
CESI				AML	AML		
	comp=E,83μm,1.4s						
CESI				AML	AML		
	comp=N,152μm,0.4s						
CESI				AML	AML		
	comp=E,83μm,0.6s						
T1215	**Vallo di Nera,**	**0.15**	**234**	P	Pg	21 11 13.5	+0.6
T1215				S	Sg	21 11 16.2	+0.9
FDMO	**Fiordimonte**	**0.15**	**15**	P	Pg	21 11 13.6	+0.6
FDMO				S	Sg	21 11 16.2	+0.9
FDMO				AML	AML		
	comp=E,194μm,0.3s						
FDMO				AML	AML		
	comp=N,131μm,0.8s						
T1219	**Muccia, Frazio**	**0.17**	**353**	P	Pg	21 11 13.8	+0.6
T1219				S	Sg	21 11 16.7	+0.9
T1214	**Arquata del Tr**	**0.18**	**135**	P	Pg	21 11 14.1	+0.6
T1214				S	Sg	21 11 17.4	+1.1
T1256	**Bolognola (MC)**	**0.18**	**50**	P	Pg	21 11 14.2	+0.7
T1256				S	Sg	21 11 17.4	+1.1
T1256				AML	AML		
	comp=E,83μm,0.2s						
T1256				AML	AML		
	comp=N,87μm,0.2s						
T1256				AML	AML		
	comp=N,87μm,0.2s						
T1256				AML	AML		
	comp=E,83μm,0.2s						
T1217	**Poggiodomo (PG**	**0.19**	**203**	P	Pg	21 11 14.3	+0.7
T1217				S	Sg	21 11 17.7	+1.2
MMO1	**Montemonaco**	**0.22**	**87**	P	Pg	21 11 14.5	+0.5
MMO1				S	Sg	21 11 18.2	+1.0
T1220	**Camerino, Fraz**	**0.22**	**10**	P	Pg	21 11 14.6	+0.4
T1220				S	Sg	21 11 18.6	+1.3
T1218	**Civita (PG)**	**0.23**	**165**	P	Pg	21 11 14.8	+0.5
T1241	**Roccafluvione,**	**0.29**	**96**	P	Pg	21 11 16.0	+0.6
T1241				S	Sb	21 11 20.7	-1.0
ASSB	**Assisi San Ben**	**0.32**	**299**	P	Pg	21 11 16.4	+0.6
ASSB				S	Sb	21 11 21.3	-1.1
SMA1	**SAN MARTINO**	**0.34**	**139**	AML	AML		
	comp=N,107μm,0.3s						
SMA1				AML	AML		
	comp=E,189μm,0.2s						
TERO	**Teramo**	**0.50**	**122**	P	Pg	21 11 19.7	+0.5
TERO				S	Sg	21 11 26.6	+0.9

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*IDC **15** 21:32:10.9±1.4, 43°.79N×105°.54W, h0^{km}, mb4.0/2, mbtmp3.5/5, ML3.1/3, Error ellipse: s-maj=33.8km s-min=9.2km az=149.0*
*NEIC **15** 21:32:12.1±0.8, 43°.74N±0°.05×105°.30W±0°.06, h0^{km}±2^{km}, ML3.1/46, Error ellipse: s-maj=9.3km s-min=7.0km az=330.0*
ISC 15 21:32:11.0±0.9**, 43°.73N**±0°.05×**105°.34W**±0°.05**, h0**^{km}**, n37, σ1^{s}.33**/35**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.02**	**67**	Pg	**Pg**	**21 32 30.9**	**+0.3**
K22A	**Casper**	**1.38**	**219**		**Pg**	**21 32 36.5**	**-0.9**
K22A				IAML		21 32 59.2	
	comp=E,321nm,0.9s						
K22A				IAML		21 33 01.5	
	comp=N,175nm,0.3s						
PHWY	**Pilot Hill**	**2.42**	**182**		**Pn**	**21 32 53.0**	**+0.8**
RWWY	**Rawlins**	**2.46**	**215**		**Pn**	**21 32 54.3**	**+1.7**
RWWY				IAML		21 33 28.4	
	comp=N,145nm,0.9s						
RWWY				IAML		21 33 31.9	
	comp=N,150nm,0.8s						
N23A	**Red Feather La**	**2.87**	**189**		**Pn**	**21 32 59.5**	**+1.3**
N23A				IAML		21 33 45.3	
	comp=N,69nm,0.8s						
N23A				IAML		21 33 48.6	
	comp=E,74nm,0.8s						
LAO	**LASA Array**	**3.03**	**348**	Pn	**Pn**	**21 33 01.1**	**+0.8**
RLMT	**Red Lodge**	**3.14**	**298**		**Pn**	**21 33 03.2**	**+1.2**
RLMT				IAML		21 33 59.8	
	comp=E,36nm,1.1s						
RLMT				IAML		21 34 00.8	
	comp=E,38nm,0.7s						
BW06	**Boulder Array**	**3.23**	**254**		**Pn**	**21 33 04.4**	**+1.2**
BW06				IAML		21 33 52.3	
	comp=E,46nm,0.7s						
BW06				IAML		21 33 55.7	
	comp=E,31nm,0.9s						
PD31	**Pinedale Array**	**3.23**	**254**		**Pn**	**21 33 04.3**	**+1.1**
PDAR	**Pinedale Array**	**3.23**	**254**	Pn	**Pn**	**21 33 04.5**	**+1.4**
	comp=E,2.6nm,0.3s,baz=77,slow=18,SNR=28						
PDAR				Lg	Lg	21 33 47.8	
	comp=E,4.1nm,0.3s,baz=70,slow=31,SNR=15						
	comp=E,3.6nm,0.5s						
PDAR	**Pinedale Array**	**3.23**	**254**		**Pn**	**21 33 04.0**	**+0.8**
OGNE	**Ogallala**	**3.71**	**137**		**Pn**	**21 33 10.5**	**+0.9**
GCMT	**Greycliff**	**3.71**	**305**		**Pn**	**21 33 11.0**	**+1.3**
LKWY	**Lake**	**3.74**	**285**		**Pn**	**21 33 11.7**	**+1.5**
LKWY				IAML		21 33 42.2	
	comp=E,39nm,1.1s						
LKWY				IAML		21 35 06.2	
	comp=E,30nm,1.5s						
H17A	**Grant Village**	**3.83**	**282**		**Pn**	**21 33 13.9**	**+2.4**
H17A				IAML		21 34 18.2	
	comp=N,34nm,1.2s						
H17A				IAML		21 34 23.1	
	comp=E,22nm,1.1s						
FLWY	**Flagg Ranch**	**3.89**	**277**		**Pn**	**21 33 12.1**	**-0.2**
FLWY				IAML		21 34 24.4	
	comp=E,27nm,1.2s						
FLWY				IAML		21 34 27.0	
	comp=E,32nm,1.2s						
MOOW	**Moose Ponds**	**3.92**	**272**	Pn	**Pn**	**21 33 13.0**	**+0.4**
ISCO	**Idaho Springs**	**3.93**	**183**		**Pn**	**21 33 13.8**	**+0.9**
SNOW	**Snow King Moun**	**3.94**	**268**		**Pn**	**21 33 12.1**	**-1.0**
IMW	**Indian Meadow**	**4.05**	**274**		**Pn**	**21 33 17.2**	**+2.6**
IMW				IAML		21 34 23.9	
	comp=E,30nm,1.0s						
IMW				IAML		21 34 27.9	
	comp=E,32nm,1.0s						
FXWY	**Fox Creek**	**4.12**	**271**		**Pn**	**21 33 17.6**	**+2.1**
O20A	**White River Ci**	**4.19**	**212**		**Pn**	**21 33 17.5**	**+1.1**
E28A	**Huff**	**4.35**	**47**	Pn	**Pn**	**21 33 19.4**	**+0.9**
HWUT	**Hardware Ranch**	**5.05**	**247**		**Pn**	**21 33 29.1**	**+0.9**
BSUT	**Blindstream Ca**	**5.14**	**234**		**Pn**	**21 33 30.6**	**+1.0**
BSUT				IAML		21 35 00.5	
	comp=E,16nm,1.0s						
BSUT				IAML		21 35 28.5	
	comp=N,16nm,4.9s						
EGMT	**Eagleton**	**5.29**	**326**		**Pn**	**21 33 32.2**	**+0.8**
P18A	**Preston Nutter**	**5.50**	**224**		**Pn**	**21 33 36.0**	**+1.5**
SPUT	**South Promonto**	**5.78**	**248**		**Pn**	**21 33 40.4**	**+2.1**
SDCO	**Great Sand Dun**	**5.98**	**181**	Pn	**Pn**	**21 33 41.9**	**+0.9**
ECSD	**EROS Data Cent**	**6.32**	**87**	Pn	**Pn**	**21 33 46.2**	**+0.6**
DUG	**Dugway, Tooele**	**6.59**	**240**	Pn	**Pn**	**21 33 51.0**	**+1.6**
I10CA	**LAC DU BONNET**	**9.08**	**41**	I	I	22 23 50.0	
	baz=222,slow=329,SNR=3.2						
ULM	**Lac du Bonnet**	**9.18**	**41**	Pn	**Pn**	**21 34 22.6**	**-2.1**
	comp=N,0.5nm,0.3s,baz=231,slow=12,SNR=2.5						
ULM				Lg	Lg	21 36 55.8	
	baz=333,slow=17,SNR=1.7						
	comp=N,2.0nm,0.5s						

TXAR	Lajitas Array	14.43	174	Pg	P	21 36 37.2	+53
	baz=4.5,slow=13,SNR=1.8						
TXAR				Lg	Lg	21 39 43.9	
	baz=9.2,slow=34						
YKA	Yellowknife Ar	19.57	347	P	**P**	**21 36 39.9**	**-0.3**
	baz=166,slow=12,SNR=2.8 comp=N,0.3nm,0.7s						
ARCES	ARCESS Array B	61.44	18	P	**P**	**21 42 28.1**	**-0.6**
	comp=N,2.1nm,0.8s,baz=328,slow=8.5,SNR=4.0 comp=N,2.1nm,0.8s						
MKAR	Makanchi Array	89.61	355	P	**P**	**21 45 10.4**	**-0.1**
	comp=N,0.4nm,0.8s,baz=2.4,slow=3.5,SNR=4.9 comp=N,0.4nm,0.8s						

AEIC **15** *21:47:13.9±1.5, 51°.07N±0°.06×179°.04E±0°.08, h19km±3km, Error ellipse: s-maj=9.6km s-min=6.2km az=143.0*

BJI **15** *21:47:14.2±0.0, 51°.29N×178°.99E, h36km, mb4.7/69, mB5.2/34, Ms4.8/32, Ms7 4.6/33*

MOS **15** *21:47:14.7±0.9, 51°.21N×179°.15E, h39km, mb5.0/58, MS4.0/4, Error ellipse: s-maj=7.1km s-min=6.0km az=105.6*

NEIC **15** *21:47:15.2±1.5, 51°.14N±0°.09×179°.09E±0°.08, h30km±4km, mb4.9/158, ML4.8(AEIC), Error ellipse: s-maj=13.4km s-min=7.5km az=171.0*

IDC **15** *21:47:16.8±2.0, 51°.30N×179°.12E, h43km±17km, mb4.2/30, mbtmp4.4/32, ML5.2/2, MS4.2/30, Error ellipse: s-maj=17.0km s-min=9.7km az=165.0*

GCMT **15** *21:47:17.2±0.2, 51°.29N±0°.02×179°.24E±0°.02, h27km, MW5.1/109, Moment Tensor Solution. s70,c93; s109,c163; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.17±.14; $M_{\theta\theta}$-3.62±.13; $M_{\phi\phi}$0.45±.11; $M_{r\theta}$0.27±.21; $M_{\theta\phi}$-2.56±.09; $M_{\phi r}$2.30±.21; Best double couple: $M_0$4.84300×10^{16} NP1:ϕ_s36.00000°, δ62.00000°, λ52.00000°. NP2:ϕ_s274.00000°, δ46.00000°, λ139.00000°. Principal axes: T 4.6300, Plg56.0000°, Azm255.0000°; N 0.4290, Plg32.0000°, Azm56.0000°; P -5.0570, Plg9.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 21:47:15.6±0.4**, 51°.09N**±0°.07×**179°.19E**±0°.03**, h35km**±2km**, h36km:pP-P, n630,** σ0ˢ.96/626**, mb4.8**/161**, MS4.3**/45**, 47C-14D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	Amchitka	0.30	14		**Pn**	**21 47 22.0**	**-1.6**
AMKA					**Sn**	**21 47 26.8**	**-2.8**
KIWB	Kanaga Island	2.42	70	Pn	**Pn**	**21 47 53.7**	**+1.1**
ADK	Adak	2.70	71		**Pn**	**21 47 57.0**	**+0.5**
ADK				Sn	**Sn**	**21 48 31.7**	**+3.8**
ADK	Adak	2.70	71	P	**Pn**	**21 47 57.0**	**+0.5**
ADK						21 48 31.7	
GSTR	Great Sitkin T	3.13	69		**Pn**	**21 48 04.0**	**+1.5**
SHEM	Shemya Is, Ala	3.55	300	P	**Pn**	**21 48 08.7**	**+0.5**
	327nm,0.3s,baz=34,slow=2.0,SNR=49						
SHEM				S	**Sn**	**21 48 52.6**	**+3.7**
	471nm,0.4s,baz=307,slow=22,SNR=9.3						
SHEM				LR	LR	21 49 27.5	
	comp=Z,6μm,20.1s,baz=179,slow=38						
SMY	Shemya	3.55	300	Pn	**Pn**	**21 48 07.9**	**-0.2**
SMY	Shemya	3.55	300	P	**Pn**	**21 48 07.9**	**-0.2**
CLES	Cleveland East	6.97	71	Pn	**Pn**	**21 48 57.5**	**+2.5**
NIKH	Nikolski High	7.62	71	Pn	**Pn**	**21 49 05.2**	**+1.2**
NIKH	Nikolski High	7.62	71	P	**Pn**	**21 49 05.8**	**+1.9**
	baz=261						
SPIA	Saint Paul Isl	8.70	41	Pn	**Pn**	**21 49 21.1**	**+2.4**
SPIA	Saint Paul Isl	8.70	41	P	**Pn**	**21 49 20.0**	**+1.3**
	baz=230						
UNV	Unalaska Valle	9.16	67	Pn	**Pn**	**21 49 26.6**	**+1.5**
UNV	Unalaska Valle	9.16	67	P	**Pn**	**21 49 26.3**	**+1.3**
	baz=259						
AKUT	Akutan	9.65	66	Pn	**Pn**	**21 49 33.7**	**+2.0**
PEA0B	Petropavlovsk-	13.36	287	Pn	**Pn**	**21 50 24.2**	**+1.8**
PEA0B	Petropavlovsk-	13.36	287	*ce*P	**Pn**	**21 50 21.8**	**-0.7**
PETK	Petropavlovsk-	13.36	287	P	**Pn**	**21 50 24.0**	**+1.5**
	13nm,1.0s,baz=104,slow=20,SNR=14						
PETK				S	**Sn**	**21 52 45.9**	**-3.6**
	6.0nm,0.9s,baz=91,slow=32,SNR=2.7						
PETK				LR	LR	21 55 23.3	
	comp=Z,1μm,21.6s,baz=96,slow=37						
PETK	Petropavlovsk-	13.36	287	Pn	**Pn**	**21 50 23.3**	**+0.8**
PETK	Petropavlovsk-	13.36	287	P	**Pn**	**21 50 24.0**	**+1.5**
R16K	Pilot Point	14.98	55	P	**Pn**	**21 50 44.7**	**+0.3**
	baz=255						
P16K	Nushagak River	15.24	50	P	**Pn**	**21 50 48.1**	**+0.3**
	baz=249						
O16K	Kokwok River B	15.41	48	P	**Pn**	**21 50 50.4**	**+0.3**
	baz=247						
N16K	Nishlik Lake	15.48	44	P	**Pn**	**21 50 52.1**	**+1.0**
	baz=243						
ANM	Nome	15.75	25		**Pn**	**21 50 56.3**	**+1.9**
ANM	Nome	15.75	25	P	**Pn**	**21 50 56.3**	**+1.9**
ANM				pmax	pmax		
	comp=Z,24nm,1.4s						
ANM	Nome	15.75	25	P	**Pn**	**21 50 55.5**	**+1.1**
	baz=218,SNR=15						
O17K	Koliganek Bris	15.95	48	P	**Pn**	**21 50 58.0**	**+1.0**
	baz=248,SNR=8.4						
TNA	Tin City	15.96	20		**P**	**21 50 59.6**	**-0.6**
TNA	Tin City	15.96	20	P	**Pn**	**21 50 57.7**	**+0.7**
	baz=211,SNR=45						
Q17K	Contact Creek	16.04	54	P	**Pn**	**21 50 58.8**	**+0.5**
	baz=254						
Q18K	Katmai Hardscr	16.59	53	P	**Pn**	**21 51 06.2**	**+1.0**
	baz=254,SNR=7.6						
P18K	Big Mountain,	16.70	50		**Pn**	**21 51 07.1**	**+0.5**
P18K	Big Mountain,	16.70	50	P	**P**	**21 51 07.7**	**-0.9**
	baz=252						
OHAK	Old Harbor	17.18	58	Pn	**Pn**	**21 51 09.0**	**-3.4**
OHAK				IAmb	IAmb	21 51 17.0	
	comp=Z,92nm,1.4s						
OHAK	Old Harbor	17.18	58	P	**Pn**	**21 51 13.1**	**+0.6**
	baz=261						
Q19K	Cape Douglas,	17.35	53	Pn	**Pn**	**21 51 14.2**	**-0.4**
Q19K				IAmb	IAmb	21 51 25.1	
	comp=Z,56nm,0.6s						
Q19K	Cape Douglas,	17.35	53	P	**Pn**	**21 51 15.0**	**+0.4**
	baz=255						
O19K	Port Alsworth	17.40	48	P	**Pn**	**21 51 15.8**	**+0.5**
O19K	Port Alsworth	17.40	48	P	**P**	**21 51 15.9**	**-0.3**
	baz=250						
N19K	Bonanza Creek	17.55	46	P	**P**	**21 51 17.7**	**-0.3**
	baz=248						
KDAK	Kodiak Island	17.64	57	P	**Pn**	**21 51 15.9**	**-2.4**
	comp=Z,22nm,0.4s,baz=307,slow=3.9,SNR=53						
KDAK	Kodiak Island	17.64	57	Pn	**Pn**	**21 51 15.6**	**-2.6**
KDAK				IAmb	IAmb	21 51 20.0	
	comp=Z,169nm,1.8s						
KDAK	Kodiak Island	17.64	57	⇑*e*P	**Pn**	**21 51 17.7**	**-0.6**
P19K	Oil Pt	17.75	50	P	**Pn**	**21 51 19.8**	**+0.2**
	baz=254						
TTA	Tatalina	17.83	39		**P**	**21 51 21.4**	**+0.3**
TTA	Tatalina	17.83	39	P	**P**	**21 51 21.4**	**+0.3**
TTA				pmax	pmax		
	comp=Z,21nm,1.1s						
TTA	Tatalina	17.83	39	P	**P**	**21 51 21.4**	**+0.3**
	baz=240,SNR=6.9						
Q20K	Shuyak Island	17.91	54	P	**Pn**	**21 51 21.6**	**+0.1**
	baz=258						
L19K	White Mountain	17.94	42	P	**P**	**21 51 22.4**	**+0.1**
	baz=244						
M19K	Big River Lodg	18.02	43	P	**P**	**21 51 24.4**	**+1.2**
	baz=245						
MA2	Magadan	18.14	309	P	**Pn**	**21 51 24.1**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=101,slow=6.0,SNR=4.3						
MA2				LR	LR	21 57 53.8	
	comp=Z,1μm,19.4s,baz=114,slow=35 comp=Z,5.0nm,0.6s						
MA2	Magadan	18.14	309	P	**Pn**	**21 51 22.7**	**-1.6**
MA2	Magadan	18.14	309	⇓*e*P	**Pn**	**21 51 23.4**	**-0.9**
MA2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BILL	Bilibino	18.15	344	P	**P**	**21 51 25.4**	**+1.0**
BILL				IAmb	IAmb	21 51 30.2	
	comp=Z,66nm,1.1s						
BILL	Bilibino	18.15	344	*d i*P	**P**	**21 51 26.0**	**+1.6**
BILL				pmax	pmax		
	comp=Z,58nm,1.1s						
BILL				MLR	MLR		
	comp=Z,484nm,16.0s						
O20K	Slope Mountain	18.17	49	P	**P**	**21 51 26.1**	**+1.2**
	baz=253,SNR=5.2						
RSO	Redoubt South	18.22	48	P	**Pn**	**21 51 26.9**	**+1.4**
L20K	Farewell, AK	18.48	42	P	**Pn**	**21 51 29.6**	**+1.0**
	baz=244						
GCSA	Galena City Sc	18.51	33	P	**Pn**	**21 51 29.2**	**+0.4**
	baz=234						
M20K	Styx River	18.56	44	P	**Pn**	**21 51 29.9**	**+0.3**
	baz=247,SNR=5.7						
SEY	Seymchan	18.63	320	P	**Pn**	**21 51 31.3**	**+1.0**
	comp=Z,1.7nm,0.4s,baz=122,slow=13,SNR=7.6						
SEY				LR	LR	21 58 02.3	
	comp=Z,811nm,20.0s,baz=100,slow=35						
SEY	Seymchan	18.63	320	⇑*e*P	**Pn**	**21 51 31.4**	**+1.1**
SEY				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CNPM	China Poot	18.70	52	P	**P**	**21 51 30.7**	**+0.1**
SPCR	Spurr Chakacha	18.72	46	P	**Pn**	**21 51 31.7**	**+0.2**
	baz=250						
K20K	Telida	18.81	39	P	**P**	**21 51 32.2**	**+0.4**
	baz=242,SNR=11						
BRSE	Bradley Lake S	18.99	51	P	**Pn**	**21 51 35.2**	**+0.5**
	baz=256						
RDOG	Red Dog Mine	19.14	21	P	**P**	**21 51 35.9**	**+0.5**
RDOG	Red Dog Mine	19.14	21	P	**Pn**	**21 51 36.2**	**-0.3**
	baz=216,SNR=12						
SKT	Skwentna	19.30	44	P	**Pn**	**21 51 37.9**	**-0.4**
SKT				IAmb	IAmb	21 51 51.7	
	comp=Z,120nm,1.3s						
SKT	Skwentna	19.30	44	P	**Pn**	**21 51 38.2**	**-0.2**
	baz=249,SNR=22						
PPLA	Purkeypile	19.37	41	P	**P**	**21 51 38.6**	**+0.5**
PPLA	Purkeypile	19.37	41	P	**P**	**21 51 38.5**	**+0.4**
	baz=246						
SUA	Susitna One	19.47	46	P	**P**	**21 51 39.6**	**+0.4**
SUA				IAmb	IAmb	21 51 50.7	
	comp=Z,72nm,1.3s						
SUA	Susitna One	19.47	46	P	**P**	**21 51 39.3**	**+0.2**
	baz=252						
CAST	Castle Rocks	19.63	40	P	**P**	**21 51 41.6**	**+0.8**
CAST	Castle Rocks	19.63	40	P	**Pn**	**21 51 41.9**	**-0.5**
	baz=245,SNR=19						
O22K	Cooper Landing	19.67	49	P	**Pn**	**21 51 42.6**	**-0.1**
O22K				IAmb	IAmb	21 51 55.0	
	comp=Z,79nm,0.8s						
O22K	Cooper Landing	19.67	49	P	**Pn**	**21 51 42.4**	**-0.3**
	baz=256						
CHUM	Lake Minchumin	19.75	39	P	**Pn**	**21 51 43.4**	**-0.2**
	baz=243,SNR=12						
RC01	Rabbit Creek A	19.82	48	P	**P**	**21 51 42.9**	**0.0**
RC01	Rabbit Creek A	19.82	48	P	**Pn**	**21 51 44.2**	**-0.4**
	baz=254						
CUT	Chulitna	20.00	44	P	**P**	**21 51 45.7**	**+1.0**
	baz=250						
KTH	Kantishna Hill	20.16	40	P	**P**	**21 51 47.4**	**+0.8**
KTH				IAmb	IAmb	21 51 55.9	
	comp=Z,83nm,1.0s						
PMR	Palmer	20.25	47	P	**P**	**21 51 48.3**	**+0.9**
	baz=253						
IMAR	Indian Mountai	20.30	32	P	**P**	**21 51 48.5**	**+0.6**
BPAW	Bear Paw Mtn.	20.37	39	P	**P**	**21 51 49.2**	**+0.5**
BPAW				IAmb	IAmb	21 52 01.1	
	comp=Z,101nm,1.4s						
BPAW	Bear Paw Mtn.	20.37	39	P	**P**	**21 51 49.5**	**+0.7**
	baz=244,SNR=20						
TRF	Thorofare Moun	20.38	41	P	**P**	**21 51 49.2**	**+0.1**
TRF				IAmb	IAmb	21 52 01.8	
	comp=Z,52nm,0.9s						
TRF	Thorofare Moun	20.38	41	P	**P**	**21 51 49.8**	**+0.7**
	baz=247,SNR=8.8						
PWL	Port Wells	20.43	49	P	**P**	**21 51 48.4**	**-1.1**
PWL				IAmb	IAmb	21 52 00.4	
	comp=Z,51nm,1.1s						
PWL	Port Wells	20.43	49	P	**P**	**21 51 49.6**	**+0.2**
	baz=256						
H21K	Melozitna Rive	20.44	34	P	**P**	**21 51 50.8**	**+1.2**
	baz=238						
I21K	Tanana	20.49	36	P	**P**	**21 51 50.7**	**+0.6**
	baz=240,SNR=24						
KNK	Knik Glacier	20.51	47	P	**P**	**21 51 49.0**	**-1.3**
KNK				IAmb	IAmb	21 52 02.5	
	comp=Z,89nm,1.6s						
KNK	Knik Glacier	20.51	47	P	**P**	**21 51 51.1**	**+0.8**
	baz=255						
SML	Sawmill	20.68	46	P	**P**	**21 51 51.3**	**-0.8**
SML				IAmb	IAmb	21 52 04.6	
	comp=Z,26nm,0.8s						
SML	Sawmill	20.68	46	P	**P**	**21 51 52.4**	**+0.2**
	baz=254						
G21K	Allakaket	20.68	31	P	**P**	**21 51 53.1**	**+1.0**
	baz=235						
MLY	Manley	20.88	37	P	**P**	**21 51 55.2**	**+0.8**
MLY				IAmb	IAmb	21 52 09.3	
	comp=Z,90nm,1.5s						
MLY	Manley	20.88	37	P	**P**	**21 51 54.9**	**+0.5**
	baz=243,SNR=18						
M23K	Glacier View	20.95	47	P	**P**	**21 51 55.5**	**+0.5**
	baz=255						
RND	Reindeer	20.96	42	P	**P**	**21 51 54.5**	**-0.8**
RND	Reindeer	20.96	42	P	**P**	**21 51 54.5**	**-0.8**
RND				pmax	pmax		
	comp=Z,13nm,0.9s						
MCK	McKinley	21.05	41	P	**P**	**21 51 55.7**	**-0.4**
MCK				IAmb	IAmb	21 52 12.4	
	comp=Z,58nm,1.1s						
MCK	McKinley	21.05	41	P	**P**	**21 51 55.7**	**-0.4**
MCK				pmax	pmax		
	comp=Z,58nm,1.1s						
MCK	McKinley	21.05	41	P	**P**	**21 51 56.5**	**+0.4**
	baz=248,SNR=6.3						
H22K	Ishtalitna Cre	21.07	34	P	**P**	**21 51 57.1**	**+0.8**
	baz=240						
F21K	Alatna River	21.10	30	P	**P**	**21 51 56.6**	**-0.1**
	baz=234						
SCM	Sheep Creek Mo	21.14	47	P	**P**	**21 51 56.2**	**-1.0**
SCM				IAmb	IAmb	21 52 11.9	
	comp=Z,85nm,1.2s						
SCM	Sheep Creek Mo	21.14	47	P	**P**	**21 51 56.2**	**-1.0**
SCM				pmax	pmax		
	comp=Z,85nm,1.2s						
SCM	Sheep Creek Mo	21.14	47	P	**P**	**21 51 57.4**	**+0.2**
	baz=255						
NEA2	Nenana	21.33	39	P	**P**	**21 51 59.3**	**+0.2**
NEA2				IAmb	IAmb	21 52 12.4	
	comp=Z,78nm,1.0s						
NEA2	Nenana	21.33	39	P	**P**	**21 52 00.0**	**+0.9**
	baz=246,SNR=30						
I23K	Minto, Yukon-K	21.46	37	P	**P**	**21 52 00.6**	**+0.2**
	baz=244,SNR=12						
WRH	Wood River Hil	21.67	39	P	**P**	**21 52 01.5**	**-1.3**
F22K	John River	21.68	30	P	**P**	**21 52 03.2**	**+0.4**
	baz=235						
H23K	Yukon River	21.70	35	P	**P**	**21 52 03.6**	**+0.5**
	baz=242						
DIV	Divide	21.70	49	P	**P**	**21 52 02.0**	**-1.2**
DIV				IAmb	IAmb	21 52 19.1	
	comp=Z,27nm,0.7s						
KLU	Klutina	21.71	48	P	**P**	**21 52 04.1**	**+0.8**
	baz=257						
M24K	Tolsona, Glenn	21.74	46	P	**P**	**21 52 04.2**	**+0.6**
	baz=256,SNR=5.5						
MDM	Murphy Dome	21.81	38	P	**P**	**21 52 03.8**	**-0.5**
MDM				IAmb	IAmb	21 52 15.4	
	comp=Z,84nm,1.2s						
CCB	Clear Creek Bu	21.86	39	P	**P**	**21 52 03.1**	**-1.6**
TCOL	CIGO, UAF Yank	21.92	38	P	**P**	**21 52 05.2**	**-0.2**
	baz=247						
COLA	College	21.93	38	P	**P**	**21 52 05.6**	**+0.2**
COLA				IAmb	IAmb	21 52 20.3	
	comp=Z,37nm,1.0s						
COLA	College	21.93	38	P	**P**	**21 52 05.6**	**+0.2**
COLA				pmax	pmax		
	comp=Z,37nm,1.0s						
COLA	College	21.93	38	P	**P**	**21 52 05.8**	**+0.4**
	baz=247						
G23K	Bananza Creek	21.96	33	P	**P**	**21 52 06.0**	**+0.1**
	baz=240						
HDA	Harding Lake	22.11	40	P	**P**	**21 52 07.8**	**+0.4**
	baz=249,SNR=5.5						
E22K	Anaktuvuk Pass	22.16	29	P	**P**	**21 52 07.6**	**-0.4**
	baz=234						
COLD	Coldfoot	22.16	32	P	**P**	**21 52 07.8**	**-0.2**
	baz=238						
POKR	Poker Plat Res	22.18	38	P	**P**	**21 52 07.4**	**-0.9**
POKR				IAmb	IAmb	21 52 21.8	
	comp=Z,32nm,0.9s						
POKR	Poker Plat Res	22.18	38	P	**P**	**21 52 08.3**	**0.0**
	baz=247,SNR=6.3						
IL31		22.27	39	P	**P**	**21 52 07.8**	**-1.4**
ILAR	Eielson Array	22.27	39	P	**P**	**21 52 06.8**	**-2.4**
	comp=Z,2.3nm,0.6s,baz=244,slow=9.2,SNR=37						
ILAR				PcP	**PcP**	**21 56 03.0**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=243,slow=1.9,SNR=6.0						
ILAR				ScP	**ScP**	**21 59 39.5**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=261,slow=3.3,SNR=2.6						
ILAR				LR	LR	22 01 20.8	
	comp=Z,527nm,19.1s,baz=239,slow=38 comp=Z,2.3nm,0.6s						
ILAR	Eielson Array	22.27	39	P	**P**	**21 52 08.3**	**-0.9**
HARP	HAARP	22.27	46	P	**P**	**21 52 09.3**	**0.0**
	baz=256						
PAX	Paxson	22.28	44	P	**P**	**21 52 09.3**	**-0.2**
	baz=254,SNR=12						
H24K	Noodor Dome	22.31	36	P	**P**	**21 52 09.7**	**0.0**
	baz=245						
N25K	Chitina, Valde	22.35	48	P	**P**	**21 52 10.5**	**+0.3**
	baz=259						
K24K	Donnelly Dome	22.39	42	P	**P**	**21 52 10.6**	**+0.1**
	baz=252						
GLB	Gilahina Butte	22.69	49	P	**P**	**21 52 12.8**	**-1.0**
GLB				IAmb	IAmb	21 52 27.0	
	comp=Z,28nm,0.8s						
RIDG	Independent Ri	22.77	42	P	**P**	**21 52 13.2**	**-1.4**
RIDG				IAmb	IAmb	21 52 38.5	
	comp=Z,49nm,1.4s						
RIDG	Independent Ri	22.77	42	P	**P**	**21 52 14.3**	**-0.3**
	baz=253						
E23K	Chandalar	22.80	30	P	**P**	**21 52 14.4**	**-0.5**
	baz=238						
VRDI	Verde Repeater	22.83	49	P	**P**	**21 52 14.3**	**-1.0**
VRDI				IAmb	IAmb	21 52 28.2	
	comp=Z,42nm,1.0s						
G24K	Hadweenzic Riv	22.84	34	P	**P**	**21 52 15.4**	**+0.1**
	baz=243						
TYV	Tymovskoe	22.86	284	*e*P	**P**	**21 52 17.3**	**+1.8**
TYV				pmax	pmax		
	comp=Z,300nm,2.9s						
TYV				pmax	pmax		
	comp=Z,32nm,1.6s						
D23K	Nanushuk River	22.98	28	P	**P**	**21 52 16.7**	**0.0**
	baz=234						
MCARA	McCarthy VSAT	23.05	49	P	**P**	**21 52 16.4**	**-1.0**
	baz=261						
A21K	Barrow	23.07	20	P	**P**	**21 52 16.8**	**-0.7**
A21K				IAmb	IAmb	21 52 20.1	
	comp=Z,29nm,0.8s						
A21K	Barrow	23.07	20	P	**P**	**21 52 16.8**	**-0.7**
	baz=221,SNR=6.8						
PRP	Porcupine Dome	23.08	38	P	**P**	**21 52 16.4**	**-1.5**
PRP	Porcupine Dome	23.08	38	P	**P**	**21 52 16.7**	**-1.1**
	baz=248,SNR=8.0						
F24K	Squaw Lake	23.08	32	P	**P**	**21 52 17.9**	**+0.1**
	baz=241						
E24K	Your Creek	23.17	31	P	**P**	**21 52 17.9**	**-0.7**
	baz=239						
SCRK	Sand Creek	23.20	42	P	**P**	**21 52 17.3**	**-1.7**
SCRK	Sand Creek	23.20	42	P	**P**	**21 52 18.1**	**-0.9**
	baz=254,SNR=12						
L26K	Log Cabin Wild	23.23	45	P	**P**	**21 52 18.5**	**-0.8**
	baz=257						
M26K	Nabesna, AK	23.25	46	P	**P**	**21 52 18.9**	**-0.6**
	baz=259						
G25K	Bearman Lake	23.36	35	P	**P**	**21 52 19.6**	**-0.8**
	baz=245						
FYU	Fort Yukon	23.59	36	P	**P**	**21 52 22.6**	**-0.1**
M27K	Edge Creek, AK	23.76	47	P	**P**	**21 52 24.1**	**-0.4**
	baz=260						
CTG	Chitna Glacier	23.81	50	P	**P**	**21 52 24.4**	**-0.5**
	baz=264						
F25K	Christian Rive	23.88	33	P	**P**	**21 52 25.3**	**-0.2**
	baz=244						
L27K	Beaver Creek,	23.92	45	P	**P**	**21 52 25.4**	**-0.5**
	baz=258						
BCAR	Beaver Creek A	23.93	45	P	**P**	**21 52 25.5**	**-0.5**
I26K	Coal Creek Min	23.94	39	P	**P**	**21 52 24.4**	**-1.6**
	baz=252						
C24K	Franklin Bluff	24.00	27	P	**P**	**21 52 26.0**	**-0.4**
	baz=236						
K27K	Chicken	24.03	43	P	**P**	**21 52 26.2**	**-0.6**
	baz=256						
YSS	Yuzh-Sakhalins	24.08	274	P	**P**	**21 52 26.3**	**-1.1**
YSS				IAmb	IAmb	21 52 30.3	
	comp=Z,62nm,1.2s						
YSS	Yuzh-Sakhalins	24.08	274	α*e*P	**P**	**21 52 28.7**	**+1.3**
YSS				*e*S	**S**	**21 56 40.4**	**-2.0**
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
YSS				MLR	MLR		
	comp=Z,600nm,14.0s						
E25K	Arctic Village	24.14	32	P	**P**	**21 52 27.6**	**-0.3**
	baz=243,SNR=55						
BMAR	Burnt Mountain	24.18	34	P	**P**	**21 52 27.8**	**-0.5**
BVCY	Beaver Creek	24.23	47	P	**P**	**21 52 28.4**	**-0.4**
	baz=261,SNR=7.9						
PINM	Pinnacle	24.26	52	P	**P**	**21 52 28.8**	**-0.3**
	baz=267						
G26K	Porcupine Rive	24.27	35	P	**P**	**21 52 29.3**	**+0.3**
	baz=248						
YUK3	Moose Creek	24.33	48	P	**P**	**21 52 29.3**	**-0.5**
	baz=263,SNR=16						
O28M	Mount Upton	24.34	51	P	**P**	**21 52 29.4**	**-0.7**
	baz=265						
F26K	Sheenjek River	24.44	33	P	**P**	**21 52 30.6**	**0.0**
	baz=246						
D25K	Kavik River	24.47	29	P	**P**	**21 52 31.0**	**+0.1**
	baz=240						
EGAK	Eagle	24.60	41	P	**P**	**21 52 31.4**	**-0.7**
EGAK				IAmb	IAmb	21 52 41.7	
	comp=Z,58nm,1.0s						
EGAK	Eagle	24.60	41	P	**P**	**21 52 32.0**	**0.0**
	baz=255,SNR=29						
YUK8	Steele Glacier	24.60	50	P	**P**	**21 52 32.6**	**+0.2**
	baz=264						
I27K	Kandik River	24.64	39	P	**P**	**21 52 32.1**	**-0.4**
	baz=253						
H27K	Steamboat Moun	24.87	38	P	**P**	**21 52 33.4**	**-1.1**
	baz=252						
G27K	Doyon Strip	25.01	36	P	**P**	**21 52 35.3**	**-0.5**
	baz=251						
O29M	Mount Kennedy	25.11	52	P	**P**	**21 52 37.0**	**+0.2**
	baz=268						
YUK4	Talbot Arm	25.14	50	P	**P**	**21 52 37.7**	**+0.5**
	baz=265						
DAWY	Dawson	25.19	43	P	**P**	**21 52 36.6**	**-0.8**
DAWY				IAmb	IAmb	21 52 47.8	
	comp=Z,24nm,0.8s						
DAWY	Dawson	25.19	43	P	**P**	**21 52 38.0**	**+0.6**
	baz=259,SNR=24						
C26K	Camden Bay	25.21	28	P	**P**	**21 52 38.4**	**+0.9**
	baz=240,SNR=46						
M29M	Somme Creek	25.34	47	P	**P**	**21 52 38.6**	**-0.3**
	baz=263						
JKA	Kamikawa-asahi	25.43	268	P	**P**	**21 52 39.2**	**-0.6**
ASAJ	Asahikawa	25.43	268	P	**P**	**21 52 41.1**	**+1.3**
	comp=Z,31nm,0.9s,baz=61,slow=7.5,SNR=10						
ASAJ				LR	LR	22 00 51.6	
	comp=Z,346nm,21.9s,baz=2.0,slow=32 comp=Z,31nm,0.9s						
C27K	Jago River	25.44	29	P	**P**	**21 52 39.6**	**0.0**
	baz=242						
E27K	Coleen River	25.52	33	P	**P**	**21 52 40.8**	**+0.4**
	baz=248						
L29M	L29M	25.58	46	P	**P**	**21 52 40.3**	**-0.7**
	baz=262						
HYT	Haines Junctio	25.66	51	P	**P**	**21 52 41.2**	**-0.6**
HYT				IAmb	IAmb	21 53 13.1	
	comp=Z,24nm,1.1s						
HYT	Haines Junctio	25.66	51	P	**P**	**21 52 41.9**	**0.0**
	baz=268						
N30M	Aishikik Lake	25.90	49	P	**P**	**21 52 43.5**	**-0.4**
	baz=267						
I29M	Ogilvie Camp,	25.91	40	P	**P**	**21 52 43.3**	**-0.7**
	baz=257						
K29M	Barlow Dome	25.96	44	P	**P**	**21 52 44.2**	**-0.3**
	baz=261						
M30M	Minto, Yukon	26.13	47	P	**P**	**21 52 45.6**	**-0.4**
	baz=265						
GRNR	Gornyy	26.68	286	⇓*i*P	**P**	**21 52 51.4**	**+0.4**
GRNR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,1μm,15.0s						
GRNR				MLR	MLR		
	comp=N,640nm,17.0s						
GRNR				MLR	MLR		

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      comp=Z,250nm,16.0s
EPYK  Eagle Plains      26.78  39   P       P       21 52 50.5 -1.3
EPYK  Eagle Plains      26.78  39   P       P       21 52 51.5 -0.2
      baz=257
P33M  Teslin, Yukon     27.98  52   P       P       21 53 02.7  0.0
      baz=273
INK   Inuvik            28.42  35   P       P       21 53 06.1 -0.2
      comp=Z,5.9nm,0.8s,baz=250,slow=4.3,SNR=13
      comp=Z,5.9nm,0.8s
INK   Inuvik            28.42  35   P       P       21 53 05.7 -0.7
INK                                 IAmb    IAmb    21 53 14.3
      comp=Z,20nm,1.1s
INK   Inuvik            28.42  35   P       P       21 53 06.3  0.0
      baz=257,SNR=5.9
YAK   Yakutsk           28.66 312   P       P       21 53 07.3 -1.2
      comp=Z,2.9nm,0.3s,baz=126,slow=2.9,SNR=5.9
YAK                                 LR      LR      22 04 27.8
      comp=Z,562nm,19.2s,baz=102,slow=36
      comp=Z,2.9nm,0.3s
YAK   Yakutsk           28.66 312   P       P       21 53 07.0 -1.6
YAK                                 IAmb    IAmb    21 53 08.4
      comp=Z,27nm,1.3s
YAK   Yakutsk           28.66 312  eP       P       21 53 07.6 -0.9
YAK                                e*PP     pP      21 53 19.4 +1.1
YAK                                e                21 53 57.0
YAK                                eS       S       21 57 52.3 -2.3
YAK                                 pmax    pmax
      comp=Z,18nm,1.1s
YAK                                 pmax    pmax
      comp=N,3.0nm,1.0s
YAK                                 pmax    pmax
      comp=E,8.0nm,0.9s
YAK                                 pmax    pmax
      comp=Z,44nm,1.6s
YAK                                 pmax    pmax
      comp=N,15nm,1.5s
YAK                                 smax    smax
      comp=N,62nm,2.8s
YAK                                 smax    smax
      comp=E,26nm,2.5s
YAK                                 MLR     MLR
      comp=Z,551nm,18.0s
MMPY  Sheldon Lake,     28.68  47   P       P       21 53 08.4 -0.5
      baz=270,SNR=6.3
DLBC  Dease Lake        29.57  56   LR      LR      22 06 23.3
      comp=Z,791nm,18.6s,baz=288,slow=39
KLR   Kul'dur           30.04 285   P       P       21 53 20.9  0.0
      comp=Z,9.0nm,0.4s,baz=68,slow=7.5,SNR=67
KLR                                 LR      LR      22 06 51.3
      comp=Z,168nm,18.7s,baz=84,slow=39
      comp=Z,9.0nm,0.4s
KLR   Kul'dur           30.04 285ceP        P       21 53 20.8 -0.1
KLR                                 pmax    pmax
      comp=Z,40nm,1.7s
TIXI  Tiksi             30.27 331   LR      LR      22 06 09.7
      comp=Z,509nm,18.3s,baz=92,slow=38
TIXI  Tiksi             30.27 331   P       P       21 53 22.4 -0.4
TIXI  Tiksi             30.27 331⇓eP        P       21 53 24.0 +1.3
TIXI                                pmax    pmax
      comp=Z,6.0nm,1.7s
A36M  Sachs Harbour     31.95  29   P       P       21 53 37.7 +0.1
A36M  Sachs Harbour     31.95  29   P       P       21 53 36.8 -0.7
      baz=260,SNR=31
C36M  Paulatuk          31.98  34   P       P       21 53 37.4 -0.3
      baz=265,SNR=9.3
USRK  Ussuriysk Ar.     32.07 276   P       P       21 53 39.1 +0.2
      comp=Z,2.6nm,0.7s,baz=65,slow=8.6,SNR=4.7
      comp=Z,2.6nm,0.7s
BBB   Bella Bella       32.13  67   LR      LR      22 06 32.8
      comp=Z,311nm,18.5s,baz=309,slow=36
HEH   HeiHe             32.27 289  eP       P       21 53 39.1 -1.4
HEH                                 pmax    pmax
      comp=Z,9.0nm,1.0s
HEH                                 pmax    pmax
      comp=Z,380nm,5.3s
KOTAN Kotaneelee Air    32.34  51   P       P       21 53 41.0  0.0
      baz=280
MAJO  Matsushiro        32.49 259⇓eP        P       21 53 43.3 +0.7
MAJO                                pmax    pmax
      comp=Z,21nm,1.2s
MJAR  Matsushiro Arr    32.49 259   P       P       21 53 42.9 +0.2
      comp=Z,4.0nm,0.8s,baz=44,slow=7.2,SNR=7.8
MJAR                                PcP     PcP     21 56 29.4 +0.6
      comp=Z,2.1nm,0.8s,baz=74,slow=5.3,SNR=4.6
MJAR                                LR      LR      22 04 55.7
      comp=Z,542nm,20.2s,baz=52,slow=33
      comp=Z,4.0nm,0.8s
H11N2 WAKE ISLAND Hy    32.76 202   T       T       22 28 47.4
      baz=20,slow=76,SNR=100
H11N3 WAKE ISLAND Hy    32.77 202   T       T       22 28 52.9
      baz=20,slow=76,SNR=127
H11N1 WAKE ISLAND Hy    32.78 202   T       T       22 28 53.6
      baz=20,slow=76,SNR=103
MDJ   Mudanjiang        33.37 279   P       P       21 53 50.0 -0.2
MDJ                                 pP      pP      21 53 58.0 -1.6
MDJ                                 pmax    pmax
      comp=Z,9.0nm,1.1s
MDJ                                 pmax    pmax
      comp=Z,240nm,5.8s
MDJ                                 LR      LR
      comp=Z,340nm,19.0s
MDJ                                 LR      LR
      comp=Z,580nm,19.5s
MDJ                                 LR      LR
      comp=Z,710nm,23.3s
JGF   Kuroka            33.62 259   P       P       21 53 52.4 -0.1
JGF                                 IAmb    IAmb    21 53 55.3
      comp=Z,32nm,1.2s
H11S1 WAKE ISLAND Hy    33.98 202   T       T       22 30 15.9
      baz=19,slow=76
H11S2 WAKE ISLAND Hy    34.00 202   T       T       22 30 18.5
      baz=19,slow=76
H11S3 WAKE ISLAND Hy    34.00 202   T       T       22 30 30.4
      baz=19,slow=76
YKA   Yellowknife Ar    36.35  46   P       P       21 54 15.2 -0.5
      comp=Z,4.5nm,0.7s,baz=281,slow=8.3,SNR=9.7
YKA                                 PcP     PcP     21 56 39.8 +0.3
      comp=Z,3.2nm,1.0s,baz=291,slow=2.9,SNR=5.2
YKA                                 ScP     ScP     22 00 22.5 -0.4
      comp=Z,0.9nm,0.8s,baz=283,slow=2.9,SNR=6.4
YKA                                 LR      LR      22 10 55.3
      comp=Z,907nm,18.6s,baz=280,slow=39
      comp=Z,4.5nm,0.7s
YKA   Yellowknife Ar    36.35  46   P       P       21 54 15.0 -0.7
YKA   Yellowknife Ar    36.35  46ceP        P       21 54 15.1 -0.6
YKA                                 pmax    pmax
      comp=Z,5.0nm,0.6s
JHS   Saijyo            36.65 262   P       P       21 54 17.6 -0.9
JCJ   Chichijima        36.81 244   LR      LR      22 05 57.3
      comp=Z,526nm,21.7s,baz=248,slow=30
BOD   Bodaibo           37.13 306  eP       P       21 54 21.5 -0.9
BOD                                 pmax    pmax
      comp=Z,31nm,1.7s
HIA   Hailar            37.21 291   P       P       21 54 22.6 -0.7
HIA                                 IAmb    IAmb    21 54 25.6
      comp=Z,41nm,1.7s
HIA   Hailar            37.21 291⇓eP        P       21 54 23.1 -0.2
HIA                                 pmax    pmax
      comp=Z,28nm,1.7s
KSRS  Korea Array       38.37 270   P       P       21 54 33.0 -0.1
      comp=Z,3.3nm,0.8s,baz=60,slow=7.9,SNR=12
KSRS                                LR      LR      22 09 13.1
      comp=Z,131nm,21.9s,baz=60,slow=34
      comp=Z,3.3nm,0.8s
KSRS  Korea Array       38.37 270   P       P       21 54 33.0 -0.1
KSAR  Wonju Array Be    38.40 270   P       P       21 54 32.8 -0.6
KSAR  Wonju Array Be    38.40 270   P       P       21 54 32.8 -0.6
INCN  Inchon            39.17 271   P       P       21 54 39.8  0.0
INCN                                IAmb    IAmb    21 54 42.3
      comp=Z,35nm,1.1s
INCN  Inchon            39.17 271   P       P       21 54 39.8  0.0
INCN                                pmax    pmax
      comp=Z,35nm,1.1s
JNU   Nakatsue          39.28 262   LR      LR      22 09 33.6
      comp=Z,357nm,21.5s,baz=46,slow=34
JNU   Nakatsue          39.28 262   P       P       21 54 40.9 +0.1
TJN   Taejon            39.39 269⇑iP        P       21 54 41.5 -0.1
HAWA  Hanford           39.66  72   P       P       21 54 44.5 +0.7
HAWA                                IAmb    IAmb    21 54 55.2
      comp=Z,20nm,0.9s
L04D  Klamath Falls     40.16  79   P       P       21 54 49.0 +0.9
NEW   Newport           40.17  68   LR      LR      22 09 00.9
      comp=Z,232nm,21.1s,baz=300,slow=32
NEW   Newport           40.17  68   P       P       21 54 48.3 +0.2
      baz=299,SNR=6.1
YBH   Yreka Blue Hor    40.18  80   LR      LR      22 10 39.3
      comp=Z,183nm,18.7s,baz=300,slow=35
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RES   Resolute Bay      40.53  24   LR      LR      22 15 15.3
      comp=Z,336nm,18.5s,baz=307,slow=42
RES   Resolute Bay      40.53  24   P       P       21 54 50.2 -0.4
RES                                 IAmb    IAmb    21 55 10.3
      comp=Z,42nm,1.9s
RES   Resolute Bay      40.53  24   P       P       21 54 50.2 -0.4
RES                                 pmax    pmax
      comp=Z,42nm,2.0s
DL2   Dalian            41.46 276   P       P       21 54 59.4 +0.7
DL2                                eS       S       22 01 16.3 +4.8
DL2                                 pmax    pmax
      comp=Z,14nm,1.1s
DL2                                 pmax    pmax
      comp=Z,290nm,6.0s
DL2                                 LR      LR
      comp=Z,310nm,8.8s
DL2                                 LR      LR
      comp=Z,310nm,15.5s
DL2                                 LR      LR
      comp=Z,300nm,17.3s
WALA  Waterton Lakes    41.65  66   P       P       21 55 00.4 +0.1
WALA                                IAmb    IAmb    21 55 03.5
      comp=Z,16nm,1.0s
BMO   Blue Mountains    41.79  73   P       P       21 55 01.9 +0.4
BMO   Blue Mountains    41.79  73   P       P       21 55 01.9 +0.4
BMO                                 pmax    pmax
      comp=Z,9.0nm,0.8s
XLT   XiLinHaoTe        42.06 286  eP       P       21 55 04.6 +0.9
XLT                                 pP      pP      21 55 12.8 -0.4
XLT                                 sP      pwP     21 55 16.5 -0.3
XLT                                 PcP     PcP     21 57 00.3 +2.3
XLT                                 pmax    pmax
      comp=Z,26nm,1.2s
XLT                                 pmax    pmax
      comp=Z,190nm,5.9s
XLT                                 LR      LR
      comp=Z,33nm,17.0s
XLT                                 LR      LR
      comp=Z,320nm,14.0s
XLT                                 LR      LR
      comp=Z,320nm,14.9s
WVOR  Wild Horse Val    42.30  77   P       P       21 55 05.9 +0.2
WVOR  Wild Horse Val    42.30  77   P       P       21 55 05.9 +0.2
WVOR                                pmax    pmax
      comp=Z,13nm,0.9s
MSO   Missoula          42.75  68   P       P       21 55 09.3  0.0
      baz=302
ALE   Alert             43.13  10   P       P       21 55 11.6 -0.2
MFID  Camas Ranch       43.47  74   P       P       21 55 15.8 +0.7
CMB   Columbia Colle    43.79  83   P       P       21 55 19.2 +1.5
CMB   Columbia Colle    43.79  83   P       P       21 55 19.2 +1.5
CMB                                 pmax    pmax
      comp=Z,6.0nm,1.0s
NRIK  Noril'sk          44.02 329   P       P       21 55 18.8 -0.2
      comp=Z,16nm,1.0s,baz=76,slow=5.8,SNR=16
      comp=Z,16nm,1.0s
NRIK  Noril'sk          44.02 329   P       P       21 55 18.5 -0.5
NRIK                                IAmb    IAmb    21 55 23.4
      comp=Z,20nm,1.1s
NRIK  Noril'sk          44.02 329⇓eP        P       21 55 19.2 +0.1
NRIK                                pmax    pmax
      comp=Z,24nm,1.0s
BJI   Beijing           44.19 281   P       P       21 55 21.6 +0.8
BJI                                 pmax    pmax
      comp=Z,6.0nm,1.2s
BJT   Baijiatuau        44.21 281   P       P       21 55 21.1 +0.1
BJT   Baijiatuau        44.21 281   P       P       21 55 21.1 +0.1
BJT                                 pmax    pmax
      comp=Z,12nm,1.2s
HLID  Hailey            44.24  73   P       P       21 55 22.4 +1.0
HLID                                IAmb    IAmb    21 55 31.1
      comp=Z,17nm,0.9s
HLID  Hailey            44.24  73   P       P       21 55 21.6 +0.2
      baz=304,SNR=17
MCMT  McKenzie Canyo    44.47  70   P       P       21 55 24.2 +0.8
EGMT  Eagleton          44.55  65   P       P       21 55 24.2 +0.4
EGMT                                IAmb    IAmb    21 55 33.0
      comp=Z,13nm,0.8s
EGMT  Eagleton          44.55  65   P       P       21 55 23.7 -0.1
      baz=302
KVN   Kaiserville       44.60  80   P       P       21 55 24.9 +0.6
KVN   Kaiserville       44.60  80   P       P       21 55 24.9 +0.6
KVN                                 pmax    pmax
      comp=Z,7.0nm,1.0s
BOZ   Bozeman (W)       44.77  69   P       P       21 55 26.2 +0.7
BOZ                                 IAmb    IAmb    21 55 47.4
      comp=Z,13nm,0.8s
BOZ   Bozeman (W)       44.77  69   P       P       21 55 26.3 +0.7
BOZ                                 pmax    pmax
      comp=Z,13nm,0.8s
BOZ   Bozeman (W)       44.77  69   P       P       21 55 25.6  0.0
      baz=303,SNR=11
LHV   Little Huntoon    44.83  81   P       P       21 55 26.5 +0.6
LHV                                 IAmb    IAmb    21 55 37.8
      comp=Z,39nm,1.4s
NVAR  Mina Array Bea    44.85  81   P       P       21 55 27.0 +0.6
      comp=Z,7.4nm,0.9s,baz=296,slow=7.5,SNR=25
NVAR                                LR      LR      22 11 11.3
      comp=Z,194nm,20.7s,baz=298,slow=32
      comp=Z,7.4nm,0.9s
NVAR  Mina Array Bea    44.85  81   P       P       21 55 27.2 +0.8
NV11  Mina Array Sit    44.94  81   P       P       21 55 27.9 +0.9
ULN   Ulaanbaatar       45.25 296   P       P       21 55 28.8 -0.6
ULN                                 IAmb    IAmb    21 55 31.3
      comp=Z,24nm,1.6s
ULN   Ulaanbaatar       45.25 296ceP        P       21 55 29.4  0.0
ULN                                 pmax    pmax
      comp=Z,15nm,1.7s
ULN   Ulaanbaatar       45.25 296   P       P       21 55 29.9 +0.5
ULN                                 pP      pP      21 55 39.0  0.0
JOW   Kunigami          45.27 257   LR      LR      22 10 56.3
      comp=Z,137nm,21.5s,baz=138,slow=31
ELK   Elko              45.36  76   LR      LR      22 14 11.3
      comp=Z,210nm,18.7s,baz=322,slow=36
ELK   Elko              45.36  76   P       P       21 55 31.7 +1.3
ELK   Elko              45.36  76   P       P       21 55 31.7 +1.3
ELK                                 pmax    pmax
      comp=Z,8.0nm,0.9s
SONM  Songino Array     45.64 296   P       P       21 55 32.9 +0.5
      comp=Z,2.7nm,0.6s,baz=66,slow=7.1,SNR=26
SONM                                PcP     PcP     21 57 09.3 -0.8
      comp=Z,0.8nm,0.5s,baz=60,slow=2.9,SNR=1.7
SONM                                LR      LR      22 16 14.8
      comp=Z,675nm,18.6s,baz=62,slow=38
      comp=Z,2.7nm,0.6s
SONM  Songino Array     45.64 296   P       P       21 55 32.2 -0.3
SONM                                IAmb    IAmb    21 55 35.4
      comp=Z,26nm,1.4s
TULEG Thule             45.65  18   P       P       21 55 31.6 -0.3
YNR   Norris Junctio    45.82  69   P       P       21 55 34.0  0.0
YNR                                 IAmb    IAmb    21 55 43.1
      comp=Z,23nm,1.2s
TIA   Tai'an            45.94 276 ⇑P        P       21 55 35.4 +0.6
TIA                                 pmax    pmax
      comp=Z,17nm,1.1s
ZAK   Zakamensk         46.02 300  eP       P       21 55 35.5 +0.2
ZAK                                 pmax    pmax
      comp=Z,14nm,1.6s
H17A  Grant Village     46.06  70   P       P       21 55 36.0  0.0
      baz=305,SNR=7.5
PKM   Mcpherson Peak    46.11  86   P       P       21 55 37.0 +0.6
      baz=310
CWC   Cottonwood Cre    46.22  83   P       P       21 55 38.3 +1.2
      baz=309
HVU   Hansel Valley     46.25  74   P       P       21 55 38.5 +1.1
HVU                                 IAmb    IAmb    21 55 52.0
      comp=Z,14nm,0.8s
HVU   Hansel Valley     46.25  74   P       P       21 55 38.5 +1.1
HVU                                 pmax    pmax
      comp=Z,14nm,0.8s
RLMT  Red Lodge         46.42  68   P       P       21 55 39.2 +0.5
RLMT                                IAmb    IAmb    21 56 10.4
      comp=Z,16nm,0.9s
RLMT  Red Lodge         46.42  68   P       P       21 55 39.4 +0.7
      baz=304
HHC   Hu-ho-hao-te      46.55 285  eP       P       21 55 40.8 +1.2
HHC                                 pmax    pmax
      comp=Z,45nm,1.0s
HHC                                 pmax    pmax
      comp=Z,270nm,5.0s
HHC                                 LR      LR
      comp=Z,530nm,17.1s
HHC                                 LR      LR
      comp=Z,920nm,16.5s
HHC                                 LR      LR
      comp=Z,490nm,16.5s
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GUMO  Guam              46.55 229   LR      LR      22 13 15.6
      comp=Z,223nm,19.9s,baz=80,slow=33
MOY   Mondy             46.57 303  eP       P       21 55 39.5 -0.2
MOY                                 pmax    pmax
      comp=Z,25nm,1.9s
R11A  Troy Canyon, C    46.59  79   P       P       21 55 40.7 +0.6
      baz=308,SNR=16
AHID  Auburn Hatcher    46.68  72   P       P       21 55 41.8 +1.0
AHID                                IAmb    IAmb    21 56 13.0
      comp=Z,15nm,1.0s
HNS   HongShan          46.71 279 ⇑P        P       21 55 41.9 +1.1
HNS                                 S       S       22 02 28.6 +0.8
HNS                                 pmax    pmax
      comp=Z,21nm,1.3s
HNS                                 LR      LR
      comp=Z,370nm,22.3s
HNS                                 LR      LR
      comp=Z,470nm,22.6s
MPMC  Manual Prospec    46.83  83   P       P       21 55 43.1 +1.1
      baz=310
FURC  Furnace Creek,    46.96  82   P       P       21 55 43.9 +1.2
      baz=309
TPNV  Topopah Spring    47.04  81   P       P       21 55 44.6 +1.0
TPNV  Topopah Spring    47.04  81   P       P       21 55 44.6 +1.0
TPNV                                pmax    pmax
      comp=Z,22nm,0.9s
TPNV  Topopah Spring    47.04  81   P       P       21 55 44.4 +0.8
      baz=309,SNR=9.3
FCC   Fort Churchill    47.07  45   P       P       21 55 42.5 -0.8
FCC                                 IAmb    IAmb    21 55 50.6
      comp=Z,9.3nm,1.0s
FCC   Fort Churchill    47.07  45   P       P       21 55 42.5 -0.8
FCC                                 pmax    pmax
      comp=Z,9.0nm,1.0s
HWUT  Hardware Ranch    47.08  73   P       P       21 55 44.6 +0.7
HWUT                                IAmb    IAmb    21 55 58.0
      comp=Z,17nm,1.2s
DUG   Dugway, Tooele    47.17  76   P       P       21 55 46.0 +1.4
DUG                                 IAmb    IAmb    21 56 18.1
      comp=Z,21nm,1.0s
DUG   Dugway, Tooele    47.17  76   P       P       21 55 46.0 +1.4
DUG                                 pmax    pmax
      comp=Z,21nm,1.0s
DUG   Dugway, Tooele    47.17  76   P       P       21 55 45.3 +0.8
      baz=307,SNR=18
EDW2  Edwards Air Fo    47.26  85   P       P       21 55 45.8 +0.6
      baz=310
NOR   Nord              47.28   3 i P       P       21 55 45.1 +0.4
NOR                                 IAmb    IAmb    21 55 49.8
      comp=Z,1.8nm,1.1s
LAO   LASA Array        47.29  65   P       P       21 55 45.6 +0.3
LAO                                 IAmb    IAmb    21 56 10.0
      comp=Z,19nm,1.2s
LAO   LASA Array        47.29  65   P       P       21 55 45.3 -0.1
      baz=304
SNCC  San Nicolas Is    47.36  88   P       P       21 55 46.9 +1.0
      baz=311
NJ2   Nanjing           47.55 271 ⇓P        P       21 55 48.0 +0.6
NJ2                                 pP      pP      21 55 55.8 -1.6
NJ2                                 pmax    pmax
      comp=Z,22nm,0.7s
BW06  Boulder Array     47.60  71   P       P       21 55 48.1 +0.1
      baz=306,SNR=22
PD31  Pinedale Array    47.60  71   P       P       21 55 48.6 +0.6
PD31                                IAmb    IAmb    21 55 57.1
      comp=Z,12nm,0.8s
PDAR  Pinedale Array    47.60  71   P       P       21 55 48.7 +0.7
      comp=Z,20nm,1.0s,baz=301,slow=3.6,SNR=82
PDAR                                LR      LR      22 13 46.9
      comp=Z,261nm,19.9s,baz=318,slow=33
      comp=Z,20nm,1.0s
BTO   Baotou            47.63 286⇑iP        P       21 55 49.8 +1.7
BTO                                 pP      sP      21 56 01.8 -0.1
BTO                                 S       S       22 02 41.3 +0.1
BTO                                 sS      sS      22 02 59.9 +3.5
BTO                                 pmax    pmax
      comp=Z,110nm,1.3s
BTO                                 pmax    pmax
      comp=Z,900nm,5.4s
BTO                                 LR      LR
      comp=Z,1µm,10.4s
BTO                                 LR      LR
      comp=Z,1µm,10.3s
BTO                                 LR      LR
      comp=Z,2µm,17.1s
SHOC  Shoshone, Teco    47.69  82   P       P       21 55 49.8 +1.3
      baz=310
GSC   Goldstone, Bar    47.74  83   P       P       21 55 50.4 +1.4
GSC                                 IAmb    IAmb    21 56 14.5
      comp=Z,12nm,0.8s
GSC   Goldstone, Bar    47.74  83   P       P       21 55 50.4 +1.4
GSC                                 pmax    pmax
      comp=Z,12nm,0.9s
GSC   Goldstone, Bar    47.74  83   P       P       21 55 49.7 +0.7
      baz=310,SNR=6.2
BFSC  Mount Baldy Ra    47.89  85   P       P       21 55 51.0 +0.8
      baz=311
NEEM  North Greenlan    48.01  13 i P       P       21 55 49.8 -1.0
NEEM                                IAmb    IAmb    21 55 51.1
      comp=Z,76nm,1.4s
HEC   Hector,Ludlow     48.34  84   P       P       21 55 54.4 +0.9
      baz=311
MVU   Marysvale         48.57  77   P       P       21 55 56.3 +0.7
GMRC  Granite Mounta    48.79  83   P       P       21 55 57.8 +0.7
      baz=311
LCMT  Little Creek M    48.87  79   P       P       21 55 58.6 +0.8
LCMT                                IAmb    IAmb    21 56 08.0
      comp=Z,13nm,1.0s
PFO   Pinyon Flats O    49.05  85   LR      LR      22 12 19.3
      comp=Z,194nm,21.5s,baz=255,slow=31
PFO   Pinyon Flats O    49.05  85⇑eP        P       21 55 59.4 +0.3
PFO                                 pmax    pmax
      comp=Z,18nm,1.4s
PFO   Pinyon Flats O    49.05  85   P       P       21 55 59.8 +0.6
      baz=311
PFO   Pinyon Flats O    49.05  85   P       P       21 55 59.7 +0.6
TPFO  Pinon Flats       49.06  85   P       P       21 55 59.8 +0.6
      baz=311
BELC  Belle Mtn. Jos    49.09  84   P       P       21 55 59.6 +0.2
      baz=311
KULLO Kullorsuaq        49.13  17 i P       P       21 55 58.1 -0.9
KULLO                               IAmb    IAmb    21 56 08.6
      comp=Z,10nm,0.8s
IRM   Iron Mountain     49.52  83   P       P       21 56 03.3 +0.7
      baz=311,SNR=6.7
MONP2 Monument Peak     49.55  86   P       P       21 56 03.4 +0.3
      baz=312
BC3   Big Chuckawall    49.66  84   P       P       21 56 04.8 +1.1
      baz=311
U15A  North Rim         49.83  79   P       P       21 56 06.3 +1.0
U15A                                IAmb    IAmb    21 56 26.4
      comp=Z,18nm,0.9s
SWSC  Sam W. Stewart    49.91  85   P       P       21 56 06.7 +1.3
      baz=312
IKP   In-Ko-Pah, Jac    49.91  86   P       P       21 56 06.1 +0.5
      baz=312
LYN   LuoYang           49.92 278 ⇑P        P       21 56 06.8 +1.2
LYN                                 pmax    pmax
      comp=Z,18nm,0.9s
LYN                                 LR      LR
      comp=Z,310nm,18.4s
LYN                                 LR      LR
      comp=Z,180nm,19.2s
LYN                                 LR      LR
      comp=Z,190nm,14.7s
O20A  White River Ci    49.98  73   P       P       21 56 06.8 +0.5
O20A  White River Ci    49.98  73   P       P       21 56 06.5 +0.3
      baz=308,SNR=8.1
RSSD  Black Hills       50.04  66   P       P       21 56 06.4 -0.2
      baz=307
PDMCI Parker Dam,Lak    50.05  83   P       P       21 56 07.8 +1.2
      baz=311
GLA   Glamis            50.45  84   P       P       21 56 10.4 +0.7
      baz=312
SPITS Spitsbergen Ar    50.57 355   P       P       21 56 08.7 -1.3
SPITS                               pmax    pmax
      comp=Z,243nm,1.8s
SPB2  Spitsbergen Ar    50.58 355   P       P       21 56 08.6 -1.4
UPNV  Upernavik         50.66  18 i P       P       21 56 08.6 -2.0
UPNV                                IAmb    IAmb    21 56 11.4
      comp=Z,9.9nm,0.9s
PV07  Paradox Valley    50.79  75   P       P       21 56 12.7 +0.2
PV07                                IAmb    IAmb    21 56 14.4
      comp=Z,16nm,1.2s
N23A  Red Feather La    50.88  71   P       P       21 56 13.3 +0.2
      baz=308
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ULM   Lac du Bonnet     50.90  55    P      P       21 56 12.2 -0.6
      comp=Z,1.1nm,0.4s,baz=239,slow=7.3,SNR=3.1
ULM                                  PcP    PcP     21 57 29.2 +0.4
      comp=Z,3.0nm,0.6s,baz=241,slow=8.3,SNR=3.6
ULM                                  LR     LR      22 18 53.6
      comp=Z,351nm,18.2s,baz=306,slow=37
      comp=Z,1.1nm,0.4s
WUAZ  Wupatki           50.99  79    P      P       21 56 14.7 +0.9
WUAZ                                 IAmb   IAmb    21 56 40.3
      comp=Z,13nm,0.8s
WUAZ  Wupatki           50.99  79    P      P       21 56 14.5 +0.7
      baz=311,SNR=8.6
WHN   Wuhan             51.41 273    P      P       21 56 17.5 +0.7
X16A  Lo Mia Camp, P    51.66  81    P      P       21 56 20.3 +1.3
MVCO  Mesa Verde        51.66  76    P      P       21 56 19.9 +0.9
MVCO                                 IAmb   IAmb    21 56 21.2
      comp=Z,20nm,1.3s
MVCO  Mesa Verde        51.66  76    P      P       21 56 19.1 +0.1
      baz=310
ISCO  Idaho Springs     51.77  71    P      P       21 56 20.3 +0.5
ISCO  Idaho Springs     51.77  71    P      P       21 56 20.3 +0.5
ISCO                                 pmax   pmax
      comp=Z,7.0nm,1.0s
ISCO  Idaho Springs     51.77  71    P      P       21 56 20.2 +0.4
      baz=309
DAG   Danmarks Havn     51.91   5  i P      P       21 56 18.6 -1.4
DAG                                  IAmb   IAmb    21 56 20.4
      comp=Z,3.7nm,0.6s
YULB  Yu-li             52.09 261    P      P       21 56 21.4 -0.7
W18A  Petrified Fore    52.26  79    P      P       21 56 23.8 +0.4
      baz=311
S22A  4UR Ranch, Cre    52.34  74    P      P       21 56 24.3 +0.2
      baz=310,SNR=12
214A  Organ Pipe Nat    52.44  84    P      P       21 56 26.2 +1.6
      baz=313
XAN   Xi'an             52.47 280    P      P       21 56 23.9 -0.9
XAN                                  pP     pP      21 56 30.8 -3.9
XAN                                  S      S       22 03 48.3 -0.3
XAN                                  pmax   pmax
      comp=Z,14nm,1.2s
XAN                                  pmax   pmax
      comp=Z,210nm,4.9s
XAN   Xi'an             52.47 280    P      P       21 56 24.8  0.0
Q24A  Divide            52.57  72    P      P       21 56 26.5 +0.7
      baz=310
SDCO  Great Sand Dun    53.14  73    P      P       21 56 30.2 +0.1
SDCO                                 IAmb   IAmb    21 56 32.6
      comp=Z,11nm,1.1s
SDCO  Great Sand Dun    53.14  73    P      P       21 56 30.5 +0.4
      baz=310,SNR=12
ZAA0  Zalesovo Array    53.31 313    P      P       21 56 29.3 -1.3
ZALV  Zalesovo Beam     53.31 313    P      P       21 56 28.8 -1.7
      comp=Z,1.3nm,0.4s,baz=51,slow=6.3,SNR=9.6
      comp=Z,1.3nm,0.4s
ZALV  Zalesovo Beam     53.31 313    P      P       21 56 29.5 -1.1
ZALV  Zalesovo Beam     53.31 313    P      P       21 56 29.5 -1.1
TUC   Tucson            53.47  82    P      P       21 56 32.4 +0.2
TUC   Tucson            53.47  82    P      P       21 56 32.4 +0.2
TUC                                  pmax   pmax
      comp=Z,9.0nm,1.3s
TUC   Tucson            53.47  82    P      P       21 56 33.2 +1.0
      baz=313
TUC   Tucson            53.47  82    P      P       21 56 32.7 +0.4
SUMG  Summit            53.88  13  i P      P       21 56 34.0 -1.0
SUMG                                 IAmb   IAmb    21 56 36.1
      comp=Z,22nm,1.2s
T25A  Trinidad          54.20  73    P      P       21 56 37.7  0.0
T25A  Trinidad          54.20  73    P      P       21 56 37.5 -0.1
      baz=311,SNR=13
DBG   Daneborg          54.21   6  i P      P       21 56 34.6 -2.3
DBG                                  IAmb   IAmb    21 56 48.8
      comp=Z,6.0nm,0.9s
LZH   Lanzhou           54.24 285  eP       P       21 56 39.3 +1.4
LZH                                  pP     pP      21 56 44.9 -3.0
LZH                                  sP     pwP     21 56 51.3 +0.5
LZH                                  pmax   pmax
      comp=Z,30nm,1.0s
LZH                                  LR     LR
      comp=Z,450nm,14.6s
LZH                                  LR     LR
      comp=Z,490nm,15.6s
LZH                                  LR     LR
      comp=Z,490nm,17.1s
ANMO  Albuquerque       54.39  77    LR     LR      22 19 45.6
      comp=Z,181nm,19.2s,baz=50,slow=36
ANMO  Albuquerque       54.39  77    P      P       21 56 39.5 +0.4
ANMO  Albuquerque       54.39  77⇑eP        P       21 56 40.1 +1.0
ANMO                                 pmax   pmax
      comp=Z,3.0nm,1.1s
ANMO  Albuquerque       54.39  77    P      P       21 56 39.7 +0.7
      baz=312
GTA   Gaotai            54.49 291  ⇑P       P       21 56 39.8 +0.1
GTA                                  pP     pP      21 56 47.4 -2.1
GTA                                  sP     pwP     21 56 52.3 -0.4
GTA                                  pmax   pmax
      comp=Z,12nm,1.2s
GTA                                  LR     LR
      comp=Z,280nm,16.0s
GTA                                  LR     LR
      comp=Z,340nm,17.1s
GTA                                  LR     LR
      comp=Z,370nm,19.6s
ECSD  EROS Data Cent    54.49  62    P      P       21 56 39.4 -0.1
      baz=310
ENH   Enshi             54.65 276    P      P       21 56 39.7 -1.1
ENH   Enshi             54.65 276    P      P       21 56 40.8  0.0
ENH                                  sP     pwP     21 56 53.2 -0.1
DGZ   Jazzator, Alta    54.72 307ceP        P       21 56 41.1 -0.1
DGZ                                  pmax   pmax
      comp=Z,8.0nm,1.3s
121A  Cookes Peak, D    55.19  80    P      P       21 56 45.5 +0.7
      baz=313
ICESG Greenland Ices    56.78  16  i P      P       21 56 54.2 -1.6
ICESG                                IAmb   IAmb    21 56 55.3
      comp=Z,5.6nm,0.5s
MNTX  Cornudas Mount    57.25  79    P      P       21 56 60.0 +0.7
      baz=314,SNR=9.2
MSTX  Muleshoe          57.30  75    P      P       21 57 00.5 +0.7
MSTX                                 IAmb   IAmb    21 57 10.0
      comp=Z,13nm,0.9s
MSTX  Muleshoe          57.30  75    P      P       21 57 00.0 +0.2
      baz=313
AMTX  Amarillo          57.35  74    P      P       21 56 59.8 -0.3
      baz=313
CD2   Chengdu           57.79 281  eP       P       21 57 02.0 -1.2
CD2                                  pmax   pmax
      comp=Z,10.0nm,0.5s
ARCES ARCESS Array B    58.16 349    P      P       21 57 03.0 -2.2
      comp=Z,1.2nm,0.6s,baz=18,slow=7.9,SNR=8.1
      comp=Z,1.2nm,0.6s
ARCES ARCESS Array B    58.16 349    P      P       21 57 03.0 -2.2
KURK  Kurchatov         58.30 313    P      P       21 57 06.1 -0.2
KURK  Kurchatov         58.30 313c iP       P       21 57 06.2 -0.2
KURK                                 pmax   pmax
      comp=Z,32nm,1.7s
KURK  Kurchatov         58.30 313    P      P       21 57 06.3 -0.1
WMQ   Urumqi            58.43 302  eP       P       21 57 07.8 +0.3
WMQ                                  sP     pwP     21 57 20.4 -0.5
WMQ                                  PcP    PcP     21 57 56.9 -1.0
WMQ                                  pmax   pmax
      comp=Z,15nm,1.3s
WMQ                                  pmax   pmax
      comp=Z,360nm,4.7s
WMQ                                  LR     LR
      comp=Z,580nm,16.5s
WMQ                                  LR     LR
      comp=Z,440nm,16.5s
WMQ                                  LR     LR
      comp=Z,600nm,20.9s
JFWS  Jewell Farm       58.54  59    P      P       21 57 08.6 +0.3
      baz=312
GYA   Guiyang           59.09 275  eP       P       21 57 11.9 -0.5
GYA                                  pmax   pmax
      comp=Z,12nm,1.1s
WMOK  Wichita Mounta    59.19  72    P      P       21 57 13.2 +0.3
WMOK                                 IAmb   IAmb    21 57 15.1
      comp=Z,12nm,1.1s
WMOK  Wichita Mounta    59.19  72    P      P       21 57 13.2 +0.3
WMOK                                 pmax   pmax
      comp=Z,13nm,1.2s
WMOK  Wichita Mounta    59.19  72    P      P       21 57 13.3 +0.4
      baz=314,SNR=7.7
MK31  Makanchi Array    59.22 307    P      P       21 57 11.9 -0.9
MK31                                 IAmb   IAmb    21 57 12.7
      comp=Z,3.5nm,0.6s
MK31  Makanchi Array    59.22 307c iP       P       21 57 12.1 -0.8
MKAR  Makanchi Array    59.22 307    P      P       21 57 11.9 -1.0
      comp=Z,3.0nm,0.5s,baz=49,slow=6.0,SNR=64
      comp=Z,3.0nm,0.5s
MKAR  Makanchi Array    59.22 307    P      P       21 57 12.1 -0.8
MKAR  Makanchi Array    59.22 307    P      P       21 57 12.1 -0.8
MAKZ  Makanchi          59.36 308    P      P       21 57 13.2 -0.7
MAKZ                                 IAmb   IAmb    21 57 13.7
      comp=Z,4.7nm,0.6s
MAKZ  Makanchi          59.36 308    P      P       21 57 13.2 -0.7
MAKZ                                 pmax   pmax
      comp=Z,5.0nm,0.6s
MAKZ  Makanchi          59.36 308    P      P       21 57 13.3 -0.6
GOMU  GeErMu            59.58 291    P      P       21 57 14.9 -1.1
GOMU                                 pmax   pmax
      comp=Z,4.0nm,0.7s
GOMU                                 pmax   pmax
      comp=Z,140nm,5.8s
GOMU                                 LR     LR
      comp=Z,200nm,16.5s
GOMU                                 LR     LR
      comp=Z,230nm,17.4s
GOMU                                 LR     LR
      comp=Z,160nm,16.4s
TX31  Lajitas Ar. Si    59.95  80    P      P       21 57 19.1 +0.9
TXAR  Lajitas Array     59.95  80    P      P       21 57 18.9 +0.6
      comp=Z,2.6nm,0.8s,baz=302,slow=4.6,SNR=23
      comp=Z,2.6nm,0.8s
TXAR  Lajitas Array     59.95  80    P      P       21 57 19.2 +0.9
TXAR  Lajitas Array     59.95  80    P      P       21 57 19.2 +0.9
ABTX  Abilene, Hawle    60.13  74    P      P       21 57 20.2 +0.9
ABTX  Abilene, Hawle    60.13  74    P      P       21 57 19.9 +0.5
      baz=314
TUL1  Leonard           60.16  69    P      P       21 57 19.5  0.0
      baz=314
BRVK  Borovoye          60.30 319    P      P       21 57 20.2  0.0
BRVK  Borovoye          60.30 319c iP       P       21 57 20.4 +0.2
BRVK                                 pmax   pmax
      comp=Z,21nm,1.3s
BRVK  Borovoye          60.30 319    P      P       21 57 20.6 +0.3
BRVK                                 pP     pP      21 57 30.7  0.0
HDIL  Hopedale          60.67  61    P      P       21 57 22.5 -0.4
      baz=314
SCHQ  Schefferville     61.01  37    P      P       21 57 24.2 -0.9
      comp=Z,2.7nm,0.5s,baz=300,slow=6.8,SNR=11
      comp=Z,2.7nm,0.5s
SVE   Sverdlovsk        61.15 327  eP       P       21 57 27.7 +1.8
SVE                                  pmax   pmax
      comp=Z,17nm,1.3s
JCT   Junction City     61.53  76    P      P       21 57 29.1 +0.1
      baz=315
WHTX  Lake Whitney,     61.89  73    P      P       21 57 31.8 +0.5
      baz=315
SFIN  Lafayette         62.00  60    P      P       21 57 32.5 +0.6
      baz=315
PZH   PanZhiHua         62.14 278    P      P       21 57 34.6 +1.4
PZH                                  pmax   pmax
      comp=Z,8.0nm,0.9s
PZH                                  pmax   pmax
      comp=Z,100nm,4.8s
ARU   Arti              62.18 327    P      P       21 57 32.9 +0.1
ARU   Arti              62.18 327c iP       P       21 57 33.2 +0.4
ARU                                  S      S       22 05 56.9 +1.5
ARU                                  SS     SS      22 09 58.5 +0.7
ARU                                  pmax   pmax
      comp=Z,34nm,1.6s
ARU   Arti              62.18 327    P      P       21 57 33.3 +0.5
MIAR  Mount Ida         62.41  68    P      P       21 57 35.0 +0.3
MIAR  Mount Ida         62.41  68    P      P       21 57 35.0 +0.3
MIAR                                 pmax   pmax
      comp=Z,37nm,1.5s
MIAR  Mount Ida         62.41  68    P      P       21 57 35.2 +0.4
      baz=315,SNR=5.6
WHAR  Wooly Hollow      62.64  67    P      P       21 57 36.2  0.0
WHAR                                 IAmb   IAmb    21 58 01.9
      comp=Z,13nm,1.0s
H06N1 SOCORRO T-PHAS62.91  93        T      T       23 06 26.3
      SNR=5.8
H06E1 SOCORRO T-PHAS63.01  93        T      T       23 06 28.5
      SNR=4.5
SADO  Sadowa            63.01  52    LR     LR      22 25 01.2
      comp=Z,218nm,20.7s,baz=286,slow=36
O48B  Farmland          63.13  59    P      P       21 57 39.0 -0.5
      baz=316
WCI   Wyandotte Cave    63.95  61    P      P       21 57 45.2 +0.2
      baz=316
HKT   Hockley           64.32  74⇑eP        P       21 57 48.1 +0.8
HKT                                  pmax   pmax
      comp=Z,24nm,1.4s
WVT   Waverly           64.60  64    P      P       21 57 49.1 -0.1
WVT                                  IAmb   IAmb    21 58 03.2
      comp=Z,14nm,1.1s
WVT   Waverly           64.60  64    P      P       21 57 49.1 -0.1
WVT                                  pmax   pmax
      comp=Z,14nm,1.1s
WVT   Waverly           64.60  64    P      P       21 57 49.4 +0.2
      baz=316
WVT   Waverly           64.60  64    P      P       21 57 48.5 -0.6
WVT                                  sP     pwP     21 58 02.3 -0.3
OXF   Oxford            64.86  66    P      P       21 57 50.8  0.0
OXF   Oxford            64.86  66    P      P       21 57 50.8  0.0
OXF                                  pmax   pmax
      comp=Z,58nm,1.2s
OXF   Oxford            64.86  66    P      P       21 57 50.8  0.0
      baz=316
TNCH  TengChong         65.21 280  eP       P       21 57 54.4 +0.9
TNCH                                 pmax   pmax
      comp=Z,9.0nm,1.0s
PLAL  Pickwick Lake     65.28  65    P      P       21 57 53.2 -0.4
TKM2  Tokmak 2          65.31 308    P      P       21 57 54.6 +0.6
      SNR=6.4
USP   Ospenovka         65.59 309    P      P       21 57 56.5 +0.9
      SNR=10
FIA1  FINESS Array S    65.78 346    P      P       21 57 55.2 -1.2
FINES FINESS Array B    65.78 346    P      P       21 57 54.0 -2.3
      comp=Z,3.2nm,0.9s,baz=16,slow=6.3,SNR=9.1
      comp=Z,3.2nm,0.9s
FINES FINESS Array B    65.78 346    P      P       21 57 54.6 -1.8
FINES FINESS Array B    65.78 346ceP        P       21 57 55.2 -1.2
FINES                                pmax   pmax
      comp=Z,3.0nm,0.9s
KBK   Karagaybulak      65.83 308    P      P       21 57 58.1 +0.8
      SNR=7.2
AAK   Ala-Archa         66.07 309    P      P       21 57 59.6 +0.8
      SNR=8.4
AAK   Ala-Archa         66.07 309    P      P       21 57 58.5 -0.3
AAK                                  IAmb   IAmb    21 58 01.5
      comp=Z,23nm,1.6s
AAK   Ala-Archa         66.07 309⇑eP        P       21 57 58.9 +0.1
AAK                                  pmax   pmax
      comp=Z,15nm,1.7s
AAK   Ala-Archa         66.07 309    P      P       21 57 59.1 +0.4
LSA   Lhasa             66.34 288    P      P       21 58 01.1  0.0
LSA   Lhasa             66.34 288    P      P       21 58 01.1  0.0
LSA                                  pmax   pmax
      comp=Z,28nm,1.5s
LSA   Lhasa             66.34 288    P      P       21 58 02.6 +1.5
LSA                                  pP     pP      21 58 11.8 +0.5
UCH   Uchtor            66.36 308    P      P       21 58 04.7 +3.6
      SNR=30
EKS2  Erkin-Say         66.40 309    P      P       21 58 01.4 +0.5
      SNR=16
BINY  Binghamton        66.46  52    P      P       21 58 00.0 -1.1
      baz=318
AML   Almayashu         66.84 309    P      P       21 58 05.0 +1.0
      SNR=7.2
TKL   Tuckaleechee C    67.21  61    LR     LR      22 29 42.5
      comp=Z,252nm,19.1s,baz=316,slow=38
ABKAR Akbulak array     67.39 322    P      P       21 58 06.5 -0.4
ABKAR Akbulak array     67.39 322    P      P       21 58 06.7 -0.3
ABKAR                                IAmb   IAmb    21 58 08.8
      comp=Z,37nm,1.4s
CRAI  Chiangrai         67.56 275    P      P       21 58 08.6 +0.1
NC204 NORSAR Array S    67.61 354    P      P       21 58 07.0 -1.2
KK31  Karatay Array     67.64 311    P      P       21 58 08.0 -0.6
KK31                                 IAmb   IAmb    21 58 10.1
      comp=Z,22nm,1.5s
KK31  Karatay Array     67.64 311    P      P       21 58 08.0 -0.6
KK31                                 pmax   pmax
      comp=Z,22nm,1.5s
KKAR  Karatay Array     67.64 311    P      P       21 58 07.8 -0.8
KKAR  Karatay Array     67.64 311    P      P       21 58 07.8 -0.8
KSH   Kashi             67.65 305    P      P       21 58 13.1 +4.2
KSH                                  sP     sP      21 58 23.8 +1.1
KSH                                  pmax   pmax
      comp=Z,12nm,0.6s
KSH                                  LR     LR
      comp=Z,430nm,8.6s
KSH                                  LR     LR
      comp=Z,390nm,17.2s
KSH                                  LR     LR
      comp=Z,840nm,13.1s
NB2   NORSAR Subarra    67.81 354    P      P       21 58 08.4 -1.0
      comp=Z,3.6nm,0.9s,baz=8.2,slow=6.2
NOA   NORSAR Array B    67.81 354    P      P       21 58 08.0 -1.4
      comp=Z,1.8nm,0.7s,baz=3.1,slow=5.6,SNR=6.5
      comp=Z,1.8nm,0.7s
NOA   NORSAR Array B    67.81 354    P      P       21 58 08.0 -1.4
SHL   Shillong          68.91 285    P      P       21 58 16.4 -0.6
SHL   Shillong          68.91 285    P      P       21 58 16.4 -0.6
SHL                                  pmax   pmax
      comp=Z,47nm,1.3s
PHRA  Phrae             68.94 274    P      P       21 58 17.2 +0.1
BELG  Belogornoye       69.09 331⇑eP        P       21 58 17.0 -0.5
BELG                                 pmax   pmax
      comp=Z,3.0nm,1.0s
TAOE  Nuku Hiva Isla    69.26 136  eLR      LR      22 19 22.9
      comp=Z,363nm,21.9s
TAOE  Nuku Hiva Isla    69.26 136  eT       T       23 14 06.9
      comp=Z,43nm,0.2s
KONO  Kongsberg         69.30 354    P      P       21 58 18.3 -0.4
KONO  Kongsberg         69.30 354    P      P       21 58 18.3 -0.4
KONO                                 pmax   pmax
      comp=Z,94nm,1.6s
CHTO  Chiang Mai        69.51 275    P      P       21 58 20.0 -0.6
CHTO  Chiang Mai        69.51 275    P      P       21 58 20.0 -0.6
CHTO                                 pmax   pmax
      comp=Z,1.0nm,1.7s
OBN   Obninsk           69.68 338  i P      P       21 58 19.6 -1.5
OBN                                i                21 58 44.0
OBN                                i                22 00 53.9
OBN                                  pmax   pmax
      comp=Z,7.0nm,0.8s
OBN                                  MLR    MLR
      comp=Z,416nm,18.0s
CMAR  Chiang Mai Arr    69.78 275    P      P       21 58 21.7 -0.5
      comp=Z,2.8nm,0.5s,baz=23,slow=6.4,SNR=16
      comp=Z,2.8nm,0.5s
CMAR  Chiang Mai Arr    69.78 275    P      P       21 58 22.0 -0.2
CMAR  Chiang Mai Arr    69.78 275ceP        P       21 58 23.0 +0.8
CMAR                                 pmax   pmax
      comp=Z,3.0nm,0.5s
TOLI2 Tolitoli          69.80 245    P      P       21 58 21.9 -0.4
TOLI2                                IAmb   IAmb    21 58 23.5
      comp=Z,14nm,1.1s
TAPN  Taplejung         70.11 289  eP       P       21 58 25.1 +0.5
LUWI  Luwuk             70.44 242    P      P       21 58 26.0 -0.2
GUN   Gumba             70.78 291  eP       P       21 58 29.4 +0.7
      comp=Z,51nm,0.7s
JIRN  Jiri              70.78 290  eP       P       21 58 29.4 +0.6
RAMN  Ramite            71.07 289  eP       P       21 58 30.7 +0.4
PKI   Pulchoki          71.31 291  eP       P       21 58 32.2 +0.3
PKIN  Phulchoki         71.32 291  eP       P       21 58 32.2 +0.3
      comp=Z,23nm,0.6s
GKN   Gorkha            71.44 292  eP       P       21 58 32.8 +0.3
DANN  Dangsing          71.70 292  eP       P       21 58 34.2  0.0
      comp=Z,31nm,0.7s
CHGR  Chuyangaron       71.72 309    P      P       21 58 33.8 -0.1
CHGR  Chuyangaron       71.72 309    P      P       21 58 33.8 -0.1
CHGR                                 pmax   pmax
      comp=Z,99nm,1.5s
PMOR  Pomariorio Ree    71.82 146  eT       T       23 17 16.9
      comp=Z,23nm,0.3s
PYUN  Piuthan           72.33 293  eP       P       21 58 38.1 +0.2
NIL   Nilore            73.53 303    P      P       21 58 44.8 +0.1
NIL   Nilore            73.53 303    P      P       21 58 44.8 +0.1
NIL                                  pmax   pmax
      comp=Z,49nm,1.5s
PPT2  Papeete2          73.66 149  eSS      SS      22 13 02.0 +4.2
      comp=Z,92nm,26.0s
PPT2                               eLR      LR      22 21 25.9
      comp=Z,228nm,26.2s
PPT2                               eLR      LR      22 21 26.0
      comp=Z,198nm,21.5s
PPT2  Papeete2          73.66 149  eT       T       23 19 38.5
      comp=Z,12nm,0.3s
DZM   Mont Dzumac       73.70 192  eLR      LR      22 21 25.6
      comp=Z,347nm,22.9s
TIAR  Tiarei            73.71 149  eT       T       23 19 38.8
      comp=Z,1.9nm,0.3s
PAE   Paea              73.73 149  eT       T       23 19 41.9
      comp=Z,6.4nm,0.3s
SBUM  Sibu              73.77 253    P      P       21 58 45.6 -0.6
SBUM                                 IAmb   IAmb    21 58 54.0
      comp=Z,16nm,1.5s
MEH   Mehetia           74.43 148  eT       T       23 20 36.3
      comp=Z,17nm,0.3s
KBL   Kabul             75.01 307    P      P       21 58 52.7 -0.8
KBL                                  IAmb   IAmb    21 59 03.4
      comp=Z,15nm,1.0s
KBL   Kabul             75.01 307    P      P       21 58 52.7 -0.8
KBL                                  pmax   pmax
      comp=Z,15nm,1.0s
AKASG Malin Array Be    75.42 341    P      P       21 58 54.2 -1.1
      comp=Z,1.9nm,0.5s,baz=21,slow=6.4,SNR=11
      comp=Z,1.9nm,0.5s
CTAO  Charters Tower    76.55 212    P      P       21 59 02.5 +0.6
CTAO                                 IAmb   IAmb    21 59 04.2
      comp=Z,16nm,1.1s
CTAO  Charters Tower    76.55 212    P      P       21 59 02.6 +0.6
CTAO                                 pmax   pmax
      comp=Z,16nm,1.1s
CLL   Collm             77.31 351  eP       P       21 59 05.0 -1.0
CLL   Collm             77.31 351  eP       P       21 59 05.0 -1.0
GEYT  Alibeck           77.43 316    P      P       21 59 06.1 -0.9
      comp=Z,6.0nm,1.1s,baz=347,slow=4.6,SNR=12
GEYT                                 PP     PP      22 02 03.5 +2.5
      comp=Z,1.5nm,0.6s,baz=319,slow=5.9,SNR=3.7
      comp=Z,6.0nm,1.1s
GEYT  Alibeck           77.43 316    P      P       21 59 06.8 -0.2
GEYT                                 IAmb   IAmb    21 59 09.1
      comp=Z,28nm,1.5s
GEYT  Alibeck           77.43 316    P      P       21 59 06.8 -0.2
GEYT                                 pmax   pmax
      comp=Z,28nm,1.5s
GYA0B ALIBECK ARRAY     77.43 316    P      P       21 59 06.9 -0.1
GYA0B                                IAmb   IAmb    21 59 09.0
      comp=Z,19nm,1.4s
SORM  Soroca            78.04 341  ⇓P       P       21 59 09.5 -0.6
SORM  Soroca            78.04 341  ⇓P       P       21 59 09.5 -0.6
KIV   Kislovodsk        78.09 329  eP       P       21 59 10.7 +0.1
KIV                                  pmax   pmax
      comp=Z,5.0nm,1.0s
KBZ   Khabaz            78.23 329    P      P       21 59 09.9 -1.3
      comp=Z,2.2nm,0.9s,baz=16,slow=4.8,SNR=3.8
      comp=Z,2.2nm,0.9s
KBZ   Khabaz            78.23 329⇑eP        P       21 59 11.7 +0.5
KBZ                                  pmax   pmax
      comp=Z,3.0nm,1.0s
AKT   Akhty             78.56 325  eP       P       21 59 14.5 +1.2
AKT                                e                21 59 23.3
AKT                                  pmax   pmax
      comp=Z,13nm,1.0s
ZEI   Tsey              78.74 328  eP       P       21 59 13.9 -0.5
ZEI                                  pmax   pmax
      comp=Z,7.0nm,0.9s
TBI   Tubuai            79.09 151  eLR      LR      22 23 56.2
      comp=Z,1µm,23.8s
BUR08 Bucovina Ar. S    79.14 342    P      P       21 59 16.0 -0.3
BUR08                                IAmb   IAmb    21 59 17.3
      comp=Z,21nm,1.6s
TRPA  Tarpa             79.15 344  ⇑P       P       21 59 16.6 +0.3
BURAR Bucovina Array    79.16 342  ⇑P       P       21 59 16.8 +0.3
BURAR Bucovina Array    79.16 342    P      P       21 59 16.1 -0.4
BURAR Bucovina Array    79.16 342  ⇑P       P       21 59 16.8 +0.3
KHC   Kasperske Hory    79.41 350⇓eP        P       21 59 17.7  0.0
KHC                                  pmax   pmax
      comp=Z,6.0nm,1.2s
GERES GERESS Array B    79.67 350    P      P       21 59 18.0 -1.2
      comp=Z,0.2nm,0.5s,baz=27,slow=6.7,SNR=1.6
      comp=Z,0.2nm,0.5s
GERES GERESS Array B    79.67 350    P      P       21 59 18.0 -1.2
ARCR  ARCALIA           79.83 343  ⇑P       P       21 59 21.4 +1.4
DRGR                    80.42 344  ⇑P       P       21 59 23.5 +0.3
DRGR                    80.42 344  ⇑P       P       21 59 23.5 +0.3
MARR  Marisel-Cluj      80.46 344  ⇓P       P       21 59 24.8 +1.3
COVR  Voineasa-Covas    80.67 341  ⇓P       P       21 59 25.6 +1.0
WB0   Warramunga Arr    80.76 222    P      P       21 59 24.9 -0.2
WB0                                  IAmb   IAmb    21 59 26.4
      comp=Z,30nm,1.4s
GNI   Garni             80.80 326    P      P       21 59 26.3 +0.8
GNI   Garni             80.80 326⇑eP        P       21 59 26.8 +1.3
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GNI				pmax	pmax		
	comp=Z,8.0nm,1.4s						
WRAB	Tennant Creek	80.92	222	d iP	P	21 59 26.6	+0.6
WRAB				pmax	pmax		
	comp=Z,14nm,1.7s						
WB2	Warramunga Arr	80.93	222	P	P	21 59 26.0	0.0
WB2				IAmb	IAmb	21 59 27.5	
	comp=Z,18nm,1.1s						
WRA	Warramunga Arr	80.94	222	P	P	21 59 26.1	-0.1
	comp=Z,4.0nm,0.5s,baz=30,slow=5.8,SNR=49						
	comp=Z,4.0nm,0.5s						
MLR	Muntele Rosu	81.06	341	⇑P	P	21 59 28.0	+1.3
MLR	Muntele Rosu	81.06	341	⇑P	P	21 59 28.0	+1.3
VOIR		81.29	342	⇑P	P	21 59 27.9	0.0
VOIR		81.29	342	⇑P	P	21 59 27.9	0.0
ARR	Arges	81.44	342	⇑P	P	21 59 30.9	+2.3
WTTA	Wattenberg	81.45	351	eP	P	21 59 29.4	+0.6
	comp=Z,3.5nm,0.8s						
KBA	Koelnbreinsper	81.46	350	i P	P	21 59 29.4	+0.5
	comp=Z,11nm,1.4s						
SURR	Surduc	81.52	344	⇑P	P	21 59 29.6	+0.5
SOKA	Soboth	81.66	349	P	P	21 59 30.2	+0.4
	comp=Z,9.1nm,1.2s						
PSI	Prapat	81.71	264	P	P	21 59 30.5	-0.1
PSI				pmax	pmax		
	comp=Z,14nm,1.1s						
BZS	Buzias	81.74	344	⇑P	P	21 59 30.1	-0.1
BZS	Buzias	81.74	344	⇑P	P	21 59 30.1	-0.1
GZR	Gura Zlata	81.76	343	⇑P	P	21 59 29.1	-1.3
GZR	Gura Zlata	81.76	343	⇑P	P	21 59 29.1	-1.3
FETA	Feichten	81.77	352	eP	P	21 59 29.7	-0.8
	comp=Z,1.5nm,0.7s						
RPSI	Rantau Prapat	81.79	264	P	P	21 59 30.4	-0.4
RPSI				IAmb	IAmb	21 59 31.6	
	comp=Z,14nm,1.1s						
OBKA	Obir	81.89	349	eP	P	21 59 30.6	-0.5
	comp=Z,4.3nm,1.1s						
PRED	Cave del Predi	82.06	350	P	P	21 59 31.9	-0.1
FUORN	Ofenpass-Fuorn	82.21	352	P	P	21 59 32.5	-0.5
HERR	Herculane	82.32	344	⇑P	P	21 59 33.4	+0.2
MDVR	Moldovita	82.54	344	⇑P	P	21 59 33.4	-1.1
GURO	Guroymak-BITLI	83.16	328	P	P	21 59 38.7	+0.7
GURO				IAmb	IAmb	21 59 40.5	
	comp=Z,21nm,2.0s						
FITZ	Fitzroy Crossi	83.29	230	P	P	21 59 39.0	+0.5
DIVS	Divibare	83.49	345	P	P	21 59 38.6	-0.8
GSI	Gunungsitoli	83.71	264	P	P	21 59 40.1	-0.7
ZCCA	Zocca	84.39	352	P	P	21 59 44.7	+0.7
AS31	Alice Springs	84.42	221	P	P	21 59 44.2	0.0
ASAR	Alice Springs	84.42	221	P	P	21 59 45.0	+0.8
	comp=Z,6.0nm,1.0s,baz=22,slow=5.3,SNR=26						
	comp=Z,6.0nm,1.0s						
ASAR	Alice Springs	84.42	221	P	P	21 59 44.2	0.0
BRTR	Keskin Array B	84.67	334	P	P	21 59 44.0	-1.6
	comp=Z,1.0nm,0.6s,baz=52,slow=2.2,SNR=6.9						
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	84.67	334	P	P	21 59 45.2	-0.5
BRTR	Keskin Array B	84.67	334	ceP	P	21 59 46.2	+0.6
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
STKA	Stephens Creek	89.01	211	P	P	22 00 06.6	+0.3
	comp=Z,4.7nm,0.8s,baz=323,slow=7.7,SNR=4.6						
	comp=Z,4.7nm,0.8s						
ESDC	Sonseca Array	89.58	2	P	P	22 00 05.6	-3.6
	comp=Z,0.5nm,0.9s,baz=336,slow=2.8,SNR=2.6						
TORD	Torodi Ar. Bea	116.00	357	PKP	PKPdf	22 05 53.9	-0.9
	comp=Z,0.6nm,0.5s,baz=343,slow=2.3,SNR=14						
TORD				PKKPbc	PKKPbc	22 16 23.1	-0.4
	comp=Z,0.2nm,0.6s,baz=177,slow=3.5,SNR=2.1						
H03N2	Juan Fernandez	122.29	105	T	T	00 20 39.1	
	baz=316,slow=77,SNR=24						
H03N1	Juan Fernandez	122.30	105	T	T	00 20 40.4	
	baz=316,slow=77,SNR=54						
H03N3	Juan Fernandez	122.31	105	T	T	00 20 29.7	
	baz=316,slow=77,SNR=90						
BOSA	Boshof	150.21	309	PKPbc	PKPbc	22 07 02.8	+0.1
	comp=Z,7.1nm,0.7s,baz=14,slow=3.0,SNR=19						

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*IDC **15** 21:56:38.7±7.5, 27°.75N×54°.90E, h0^{km}, mb3.6/3, mbtmp3.6/3, MS4.2/1, Error ellipse: s-maj=149.3km s-min=55.9km az=107.0*

*TEH **15** 21:56:43.3, 28°.11N×54°.30E, h7^{km}±31^{km}, ML3.3*

ISC 15 21:56:44.8±0.9**, 28°.09N**±0°.05×**54°.29E**±0°.05**, h10**^{km}**, n33, σ1^{s}93**/31**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAR1	LAR	0.43	170	Pg	Pg	21 56 53.6	+0.4
JHRM	Jahrom	0.75	303	Pg	Pg	21 57 00.1	+0.7
QIR1	Qir	1.17	290	Pg	Pn	21 57 08.6	+1.4
LMD1	Lamerd	1.25	233	Pg	Pg	21 57 11.7	+2.9
GENO	Geno	1.80	112	Pn	Pn	21 57 16.8	+0.7
NGRK	Negar Kerman	2.64	54	Pn	Pn	21 57 30.6	+2.8
DSBU	Dashti - Bushe	2.69	276	Pn	Pn	21 57 30.3	+2.1
BANOM	Banah	2.80	140	Pn	Pn	21 57 29.8	+0.1
KHGB	Koh Gabri	2.97	39	Pn	Pn	21 57 33.6	+1.4
MSFE	Esma-Masafi	3.19	148	Pn	Pn	21 57 36.4	+1.3
MDH	Madha	3.31	147	Pn	Pn	21 57 37.1	+0.5
CHMN	Cheshme madani	3.35	57	Pn	Pn	21 57 40.0	+2.5
FAQ	Al Faqa, Dubai	3.53	160	Pn	Pn	21 57 41.6	+1.9
UOSS	Minazif	3.57	151	Pn	Pn	21 57 41.9	+1.6
ASUD	Al Ashush, Dub	3.57	165	Pn	Pn	21 57 43.7	+3.4
KLNJ	Kolanjah	3.74	322	Pn	Pn	21 57 43.7	+0.7
ASHO	Ashiyiah	3.74	155	Pn	Pn	21 57 45.4	+2.7
SAKB	Bahrain	3.96	239	Pn	Pb	21 57 50.4	-4.2
IRAM	Ramesheh	4.06	336	Pn	Pn	21 57 48.8	+1.6
ALNE	Al Ain	4.23	162	Pn	Pn	21 57 51.3	+2.0
SOHO	SOHO	4.42	152	Pn	Pn	21 57 52.7	+0.7
ANAR	Anarak	5.11	355	Pn	Pn	21 58 02.7	+1.2
UMZA	Um Al Zommool	5.41	171	Pn	Pn	21 58 08.1	+2.5
TKDS	Koohdasht(Taba	6.02	23	Pn	Pn	21 58 15.4	+1.3
KRSH	Karshahi	6.14	343	Pn	Pn	21 58 16.2	+0.4
TNSJ	Nastanj	6.18	18	Pn	Pn	21 58 17.2	+0.9
IDOB	Doab	7.73	319	Pn	Pn	21 58 40.3	+2.7
HSAM	Samen	7.81	323	Pn	Pn	21 58 39.5	+0.7
IKOM	Komasi	8.40	318	Pn	Pn	21 58 47.8	+1.0
BRTR	Keskin Array B	20.65	310	P	Pn	22 01 27.2	+0.1
	0.9nm,0.8s,baz=132,slow=11,SNR=2.6						
	0.9nm,0.8s						
ZALV	Zalesovo Beam	34.14	32	LR	LR	22 20 41.5	
	comp=Z,396nm,18.4s,baz=52,slow=42						
NOA	NORSAR Array B	43.67	331	P	P	22 04 49.1	-0.5
	0.9nm,0.8s,baz=122,slow=8.3,SNR=3.3						
	0.9nm,0.8s						
TORD	Torodi Ar. Bea	51.05	264	P	P	22 05 46.8	-0.8
	1.2nm,0.7s,baz=59,slow=8.4,SNR=10						
	1.2nm,0.7s						

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*TIF **15** 22:10:32.7, 42°.94N×46°.33E, h18^{km}±4^{km}*

*MOS **15** 22:10:32.2±0.0, 42°.90N×46°.34E, h12^{km}, MPVA3.6*

*NORS **15** 22:10:32.6±0.0, 42°.89N×46°.35E, h6^{km}, MPVA3.7*

*DRS **15** 22:10:32.9±0.0, 42°.97N×46°.19E, h16^{km}*

ISC 15 22:10:34.0±1.0**, 42°.93N**±0°.02×**46°.32E**±0°.01**, h5**^{km}±9^{km}**, n45, σ1^{s}21**/90**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLMR	Dylym	0.27	59	ePg	Pg	22 10 39.3	+0.2
DLMR				eSg	Sg	22 10 44.4	+1.7
BTLR	Botlikh	0.28	195	ePg	Pg	22 10 38.8	-0.6
BTLR				i Sg	Sg	22 10 43.0	-0.1
DBC	Dubki	0.39	77	i Pg	Pg	22 10 41.2	-0.2
	41nm,0.7s						
DBC				eSg	Sb	22 10 47.4	-2.3
	83nm,0.4s						
UNCR	Uncukul	0.41	122	i Pg	Pg	22 10 41.6	-0.3
	152nm,0.3s						
UNCR				eSg	Sg	22 10 48.3	+0.9
	230nm,0.2s						
KRNR	Karanay	0.45	104	ePg	Pg	22 10 42.3	-0.3
	24nm,0.6s						
KRNR				eSg	Sg	22 10 49.2	+0.8
	250nm,0.2s						
XNZR	Khunzakh	0.48	144	i Pg	Pg	22 10 43.1	-0.2
	50nm,0.2s						
XNZR				eSg	Sg	22 10 50.8	+1.1
	82nm,0.3s						
BUJR	Buynaksk	0.59	100	ePg	Pb	22 10 46.7	-0.1
	34nm,0.3s						
BUJR				eSg	Sb	22 10 55.9	+0.4
	23nm,0.3s						
ARKR	Arakani	0.60	123	ePg	Pg	22 10 45.3	-0.1
	1.0nm,0.9s						
ARKR				eSg	Sb	22 10 54.3	-1.4
	727nm,0.4s						
GNBR	Gunib	0.72	139	ePg	Pg	22 10 48.0	+0.2
	83nm,0.4s						
GNBR				eSg	Sb	22 10 59.0	-0.4
	35nm,0.3s						
MAK	Makhachkala	0.87	88	ePg	Pb	22 10 51.5	-0.1
MAK				eSg	Sn	22 11 04.2	-1.8
KANR	Karaman	0.90	73	ePg	Pb	22 10 51.2	-0.8
KANR				eSg	Sn	22 11 04.9	-1.7
SHTL	Shatili	0.90	252	P	Pg	22 10 50.2	-1.0
SHTL				S	Sg	22 11 02.7	-0.2
KMKR	Kumukh	0.99	144	i Pg	Pg	22 10 52.8	-0.1
	82nm,0.3s						
KMKR				eSg	Sb	22 11 06.8	-0.3
	1.0nm,0.5s						
SGKR	Sergokala	1.10	115	i Pg	Pg	22 10 53.9	-1.1
	1.0nm,0.8s						
SGKR				ePg	Pn	22 10 56.5	+0.5
SGKR				eSg	Sn	22 11 11.1	-0.5
LGD	Lagodekhi	1.10	183	P	Pg	22 10 54.1	-0.9
LGD				S	Sg	22 11 08.8	-0.5
VLKR	Vladikavkaz	1.21	276	ePg	Pn	22 10 58.0	+0.3
VLKR				eSg	Sn	22 11 14.6	+0.2
URKR	Urkarakh	1.24	128	ePg	Pn	22 10 57.8	-0.3
	23nm,0.3s						
URKR				eSg	Sn	22 11 15.2	0.0
	79nm,0.4s						
PNSH	Pansheti	1.29	257	P	Pg	22 10 57.2	-1.4
PNSH				S	Sg	22 11 15.4	+0.1
BTKR	Batakoyurt	1.37	289	i Pg	Pb	22 11 01.0	+0.9
BTKR				eSg	Sn	22 11 22.0	+3.6
TRKR	Terskaya	1.40	305	ePg	Pb	22 11 01.2	+0.6
TRKR				eSg	Sn	22 11 22.0	+3.0
GUDG	Gudauri	1.44	252	P	Pn	22 11 00.1	-0.7
GUDG				S	Sg	22 11 19.2	-0.9
LACR	Lac	1.49	267	ePg	Pn	22 11 01.5	-0.1
LACR				eSg	Sg	22 11 22.5	+0.7
DDFL	Dedoflistskaro	1.49	186	P	Pg	22 11 04.5	+1.9
ARNR	Ardon	1.51	280	ePg	Pg	22 11 04.1	+1.2
ARNR				eSg	Sg	22 11 25.3	+2.8
KORR	Kora	1.66	276	ePg	Pg	22 11 06.4	+0.7
KORR				eSg	Sg	22 11 29.1	+1.9
STDR	Stavd-Durt	1.71	286	ePg	Pb	22 11 05.6	-0.2
STDR				eSg	Sg	22 11 31.2	+2.5
DRN	Derbent	1.74	121	ePg	Pg	22 11 07.7	+0.3
DRN				eSg	Sg	22 11 31.2	+1.3
ZEI	Tsey	1.78	266	ePg	Pb	22 11 06.7	-0.6
ZEI				eSg	Sb	22 11 30.4	+0.4
AKT	Akhty	1.79	144	ePg	Pn	22 11 06.0	+0.3
	35nm,0.3s						
AKT				eSg	Sb	22 11 30.1	0.0
	112nm,0.4s						
LSNR	Lesken	1.86	282	ePg	Pg	22 11 09.1	-0.5
LSNR				eSg	Sg	22 11 33.7	+0.1
KSMR	Kasumkent	1.89	134	ePg	Pn	22 11 07.6	+0.6
	1.0nm,0.5s						
KSMR				ePg	Pg	22 11 12.1	+2.0
KSMR				eSg	Sb	22 11 33.5	+0.5
DIGR	Digorskoe uzhe	2.01	270	ePg	Pb	22 11 10.4	-0.8
DIGR				eSg	Sb	22 11 36.3	-0.3
NCK	Nalchik	2.07	287	ePg	Pg	22 11 13.6	0.0
NCK				eSg	Sg	22 11 40.4	0.0
ONI	Oni	2.14	262	P	Pb	22 11 13.2	0.0
ONI				S	Sg	22 11 41.6	-1.0
TRLG	Trialeti	2.16	230	P	Pb	22 11 13.3	-0.3
TRLG				S	Sb	22 11 41.4	+0.7
DMNI	Dmanisi	2.25	225	P	Pb	22 11 13.8	-1.5
DMNI				S	Sb	22 11 43.0	-0.5
BRNG	Burnasheti	2.27	236	P	Pb	22 11 15.1	-0.4
BRNG				S	Sg	22 11 47.1	+0.4
KBTC	Kuba-Taba	2.30	294	ePn	Pg	22 11 16.4	-1.5
KBTC				eSn	Sg	22 11 46.0	-1.8
TKB	Tkibuli	2.52	258	P	Pb	22 11 18.4	-1.4
KBZ	Khabaz	2.62	289	ePn	Pb	22 11 18.9	-2.5
KBZ				eSn	Sb	22 11 53.7	-0.1
NEY	Neytrino	2.65	278	ePn	Pn	22 11 19.2	+1.6
NEY				eSn	Sb	22 11 54.8	-0.2
BEYR	Belyy Ugol+	2.77	294	ePn	Pn	22 11 18.5	-0.5
BEYR				eSn	Sb	22 11 55.8	-2.4
SHA1	Shidzhatmaz	2.79	288	ePn	Pn	22 11 19.9	+0.4
SHA1				eSn	Sn	22 11 55.4	+1.7
KIV	Kislovodsk	2.83	292	ePn	Pb	22 11 24.2	-1.0
KIV				eSn	Sb	22 11 57.1	-3.0
ALER	Alexandrovskoy	3.07	308	ePn	Pn	22 11 22.7	-0.4
ALER				eSn	Sn	22 12 01.6	+1.3

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*IDC **15** 22:12:33.4±1.6, 30°.29S×177°.73W, h0^{km}, mb4.1/5, mbtmp4.0/6, ML3.3/1, MS4.9/1, Error ellipse: s-maj=37.2km s-min=21.1km az=93.0*

*NEIC **15** 22:12:38.1±0.8, 30°.23S±0°.07×177°.6W±0°.2, h35^{km}±2^{km}, mb4.3/5, Error ellipse: s-maj=28.5km s-min=10.6km az=80.0*

ISC 15 22:12:38.0±1.4**, 30°.31S**±0°.07×**177°.8W**±0°.2**, h35**^{km}**, n22, σ1^{s}27**/17**, mb4.2**/6**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.07	353	Pn	Pn	22 12 55.5	-1.0
	1µm,0.3s,baz=350,slow=21,SNR=47						
RAO				Sn	Sn	22 13 09.0	-1.1
	2µm,0.3s,baz=360,slow=23,SNR=20						
URZ	Urewera	8.98	207	Pn	Pn	22 14 43.3	-1.9
	0.3nm,0.3s,baz=145,slow=17,SNR=0.9						
URZ				Sn	Sn	22 16 22.9	-2.2
	0.9nm,0.3s,baz=38,slow=20,SNR=1.6						
	1.7nm,0.3s						
BKZ	Black Stump Fm	10.01	207	Pn	Pn	22 14 58.9	-0.5
MRZ	Mangatainoka R	11.66	206	Pn	Pn	22 15 21.8	0.0
CTA	Charters Tower	33.98	279	P	P	22 19 17.8	-0.8
	1.8nm,0.8s,baz=113,slow=11,SNR=1.2						
	1.8nm,0.8s						
CTAO	Charters Tower	33.98	279	P	P	22 19 19.3	+0.8
STKA	Stephens Creek	34.69	257	P	P	22 19 26.8	+2.3
	4.6nm,0.9s,baz=112,slow=13,SNR=4.2						
	4.6nm,0.9s						
STKA	Stephens Creek	34.69	257	P	P	22 19 26.0	+1.4
STKA				IAmb	IAmb	22 19 31.3	
	comp=Z,2.2nm,1.1s						
ASAR	Alice Springs	43.31	267	P	P	22 20 37.1	+0.2
	comp=Z,0.4nm,0.4s,baz=106,slow=6.7,SNR=11						
	comp=Z,0.4nm,0.4s						
WRA	Warramunga Arr	44.29	272	P	P	22 20 45.5	+0.7
	comp=Z,1.9nm,0.5s,baz=110,slow=8.1,SNR=31						
	comp=Z,1.9nm,0.5s						
WRA	Warramunga Arr	44.29	272	P	P	22 20 45.2	+0.5
WB0	Warramunga Arr	44.32	272	P	P	22 20 45.3	+0.4
WB0				IAmb	IAmb	22 21 10.0	
	comp=Z,8.4nm,1.2s						
GUMO	Guam	56.56	315	LR	LR	22 45 30.8	
	comp=Z,986nm,19.8s,baz=42,slow=35						
QSPA	South Pole Qui	59.80	180	P	P	22 22 40.6	+1.0
	comp=Z,1.8nm,0.9s,baz=58,slow=4.5,SNR=6.3						
	comp=Z,1.8nm,0.9s						
QSPA	South Pole Qui	59.80	180	P	P	22 22 40.5	+1.0
QSPA				IAmb	IAmb	22 23 03.4	
	comp=Z,3.2nm,1.0s						
H03S2	Juan Fernandez	80.34	123	T	T	23 54 22.4	
	baz=239						
H03S1	Juan Fernandez	80.36	123	T	T	23 54 24.8	
	baz=239						
H03S3	Juan Fernandez	80.36	123	T	T	23 54 17.9	
	baz=239						
H03N3	Juan Fernandez	80.54	123	T	T	23 54 26.0	
	baz=232						
H03N2	Juan Fernandez	80.54	123	T	T	23 54 22.9	
	baz=232						
H03N1	Juan Fernandez	80.55	123	T	T	23 54 21.5	
	baz=232						
FINES	FINESS Array B	145.13	340	PKPbc	PKPbc	22 32 10.3	-0.4
	comp=Z,2.4nm,0.6s,baz=34,slow=4.0,SNR=0.9						

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*IDC **15** 22:19:36.2±0.6, 55°.63S×27°.06W, h0^{km}, mb4.4/9, mbtmp4.4/10, ML4.1/1, MS3.5/2, Error ellipse: s-maj=20.0km s-min=17.8km az=84.0*

*NEIC **15** 22:19:41.9±1.3, 55°.7S±0°.1×27°.35W±0°.07, h37^{km}±7^{km}, mb5.0/40, Error ellipse: s-maj=18.8km s-min=4.2km az=192.0*

ISC 15 22:19:37.9±0.4**, 55°.66S**±0°.07×**27°.37W**±0°.08**, h10**^{km}**, n147, σ0^{s}83**/143**, mb5.0**/20**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.43	281	Pn	Pn	22 21 00.2	+1.5
HOPE				Sn	Sn	22 21 56.9	-4.3
VNA1	Neumayer--Stat	17.20	158	P	P	22 23 42.6	+3.2
VNA3	Neumayer Olymp	17.40	161	P	P	22 23 43.1	+1.5
VNA2	Neumayer--Watz	17.59	158	P	P	22 23 44.2	+0.4
	baz=319,slow=14						
EFI	East Falkland	18.53	270	P	Pn	22 23 54.8	+0.4
EFI				IAmb	IAmb	22 24 02.4	
	comp=Z,96nm,1.2s						
SNAA	Sanae	19.14	156	P	P	22 24 00.9	0.0
SNAA	Sanae	19.14	156	P	P	22 24 00.4	-0.5
	comp=Z,0.5nm,0.3s,baz=324,slow=11,SNR=18						
	comp=Z,5.4nm,0.6s						
SNAA	Sanae	19.14	156	P	P	22 24 00.3	-0.6
PMSA	Palmer Station	20.08	228	P	Pn	22 24 12.9	0.0
	comp=Z,8.3nm,0.8s,baz=338,slow=4.1,SNR=1.3						
PMSA				LR	LR	22 30 20.0	
	comp=Z,100nm,21.9s,baz=70,slow=32						
	comp=Z,8.3nm,0.8s						
PMSA	Palmer Station	20.08	228	P	Pn	22 24 12.8	-0.1
PMSA				IAmb	IAmb	22 24 43.7	
	comp=Z,117nm,1.6s						
TROLL	Troll, Antarti	20.64	154	P	P	22 24 17.1	-0.3
H09W1	TRISTAN DA CUN	21.18	35	T	T	22 47 19.8	
	SNR=2.5						
BELA	Belgrano 2	22.46	184	P	P	22 24 35.8	-0.9
MG02	Cerro Sombrero	24.37	259	P	P	22 24 54.2	-1.6
MG03	Isla Dawson	24.64	256	P	P	22 24 58.3	+0.1
MG03				IAmb	IAmb	22 25 21.8	
	comp=Z,95nm,1.7s						
GO09	Cerro Castillo	26.76	260	P	P	22 25 16.1	-1.3
GO09				IAmb	IAmb	22 25 38.7	
	comp=Z,54nm,1.4s						
GO08	Villa O'Higgin	28.27	266	P	P	22 25 30.8	-0.2
TRQA	Tornquist	29.08	293	P	P	22 25 38.7	+0.4
PLTB	Pedras Altas	30.16	311	P	P	22 25 48.5	+0.6
ITQB	Itaqui	33.27	309	P	P	22 26 15.3	+0.1
ITQB	Itaqui	33.27	309	eP	P	22 26 15.6	+0.4
ITAB	Concordia	33.56	318	P	P	22 26 18.8	+1.0
ITAB				IAmb	IAmb	22 27 01.3	
	comp=Z,23nm,1.3s						
CRSM	Crissiumal (Br	34.09	315	eP	P	22 26 23.4	+1.1
QSPA	South Pole Qui	34.59	180	P	P	22 26 26.9	+0.3
	comp=Z,4.6nm,0.6s,baz=199,slow=1.2,SNR=33						
	comp=Z,4.6nm,0.6s						
QSPA	South Pole Qui	34.59	180	P	P	22 26 26.7	+0.1
QSPA				IAmb	IAmb	22 26 28.6	
	comp=Z,26nm,1.4s						
QSPA	South Pole Qui	34.59	180	P	P	22 26 26.7	+0.1
QSPA				pP	pwP	22 26 32.4	+0.7
PTGB	Pitanga	35.82	320	eP	P	22 26 38.2	+0.7
CPUP	Villa Florida	36.48	311	P	P	22 26 43.5	+0.5
	comp=Z,10.0nm,0.9s,baz=145,slow=8.7,SNR=12						
CPUP				LR	LR	22 39 47.9	
	comp=Z,99nm,19.7s,baz=186,slow=33						
	comp=Z,10.0nm,0.9s						
CPUP	Villa Florida	36.48	311	P	P	22 26 43.0	+0.1
CPUP				IAmb	IAmb	22 26 44.5	
	comp=Z,20nm,1.1s						
CPUP	Villa Florida	36.48	311	eP	P	22 26 43.9	+1.0
CPUP	Villa Florida	36.48	311	P	P	22 26 43.2	+0.3
BSCB	Bom Sucesso	36.98	332	eP	P	22 26 47.0	-0.4
AMBA	Amambai (Brazi	38.55	317	eP	P	22 27 01.1	+0.5
AC05	El Transito	40.58	293	P	P	22 27 18.4	+0.9
AC05				IAmb	IAmb	22 27 19.6	
	comp=Z,26nm,1.1s						
LCO	Las Campanas	40.66	293	P	P	22 27 18.4	0.0
LCO				pP	pwP	22 27 24.5	+0.4
MURT	Porto Murtinho	40.73	314	eP	P	22 27 18.4	-0.3
AQDB	Aquidauana	41.04	317		P	22 27 20.9	-0.4
AQDB	Aquidauana	41.04	317	eP	P	22 27 21.6	+0.3
AC02	Maricunga	41.61	296	P	P	22 27 27.6	+1.1
JANB	Januaria	42.57	335	eP	P	22 27 33.4	-0.5
GO02	Mina Guanaco	43.22	297	P	P	22 27 40.0	+0.5
ARAG	Araguaiana, MT	44.06	325	eP	P	22 27 46.4	+0.5
LVC	Limon Verde	45.02	300	P	P	22 27 54.9	+1.0
	comp=Z,15nm,0.6s,baz=136,slow=4.0,SNR=21						
	comp=Z,15nm,0.6s						
LVC	Limon Verde	45.02	300	P	P	22 27 55.1	+1.2
LVC				IAmb	IAmb	22 27 57.4	
	comp=Z,16nm,0.7s						
LVC	Limon Verde	45.02	300	eP	P	22 27 55.9	+2.0
LVC	Limon Verde	45.02	300	P	P	22 27 55.3	+1.4
SALV	Santo Antonio	45.22	320	eP	P	22 27 55.9	+0.8
SDBA	SAO DESIDERIO	45.26	336	eP	P	22 27 55.8	+0.2
PB09	IPOC Station P	45.87	300	P	P	22 28 01.9	+1.5
PB09				IAmb	IAmb	22 28 03.3	
	comp=Z,26nm,1.1s						
BBSD	Serra de San D	45.97	313	eP	P	22 28 01.3	+0.3
BOSA	Boshof	45.97	76	P	P	22 27 59.2	-2.0
	comp=Z,2.3nm,0.6s,baz=226,slow=7.5,SNR=13						
	comp=Z,2.3nm,0.6s						
BOSA	Boshof	45.97	76	P	P	22 27 59.9	-1.2
BOSA				IAmb	IAmb	22 28 13.0	
	comp=Z,28nm,1.6s						
PB07	IPOC Station P	46.24	300	P	P	22 28 04.2	+0.8
PB07				IAmb	IAmb	22 28 05.4	
	comp=Z,13nm,0.8s						
PB01	IPOC Station P	46.62	300	P	P	22 28 07.3	+1.0
PTLB	Pontes e Lacer	46.94	316	P	P	22 28 09.0	+0.3
PTLB	Pontes e Lacer	46.94	316	eP	P	22 28 09.3	+0.6
VNDA	Vanda	46.96	183	P	P	22 28 08.4	+0.3
	comp=Z,3.5nm,0.7s,baz=197,slow=5.1,SNR=11						
	comp=Z,3.5nm,0.7s						
VNDA	Vanda	46.96	183	P	P	22 28 08.1	-0.1
VNDA				IAmb	IAmb	22 28 22.0	
	comp=Z,39nm,1.7s						
VNDA	Vanda	46.96	183	P	P	22 28 08.3	+0.2
VNDA				pP	pwP	22 28 14.9	+1.6
PB08	IPOC Station P	47.23	301	P	P	22 28 11.9	+0.6
PB08				IAmb	IAmb	22 28 16.0	
	comp=Z,21nm,1.2s						
SNDB	Serra Nova Dou	47.41	327	eP	P	22 28 12.9	+0.6
GO01	Chusmiza	47.65	302	P	P	22 28 14.9	+0.1
H10S2	ASCENSION HYDR	47.65	17	T	T	23 19 41.5	
	baz=31,slow=74,SNR=17						
H10S3	ASCENSION HYDR	47.66	17	T	T	23 19 32.5	
	baz=189,slow=74,SNR=58						
PB11	IPOC Station P	47.80	301	P	P	22 28 16.6	+1.1
PB11				IAmb	IAmb	22 28 18.2	
	comp=Z,17nm,0.8s						
CCD	Concordia, Ant	48.08	170	P	P	22 28 16.6	-0.7
CCD				pP	pwP	22 28 22.6	+0.1
PSGCX	Pisagua	48.16	301	P	P	22 28 19.1	+0.9
MNMC	Minye Minye	48.30	302	P	P	22 28 20.8	+1.2
LBTB	Lobatse	48.99	74	P	P	22 28 23.0	-1.7
	comp=Z,3.3nm,0.7s,baz=203,slow=9.6,SNR=4.6						
	comp=Z,3.3nm,0.7s						
LBTB	Lobatse	48.99	74	P	P	22 28 23.7	-0.9
LBTB				IAmb	IAmb	22 28 40.8	
	comp=Z,16nm,1.4s						
LBTB	Lobatse	48.99	74	P	P	22 28 23.9	-0.8
SMTB	Santa Maria do	49.34	333	eP	P	22 28 27.5	+0.3
PDRB	Porto dos Gac	49.55	321	eP	P	22 28 29.2	+0.4
VILB	Vilhena	49.63	316	P	P	22 28 29.3	-0.2
VILB	Vilhena	49.63	316	eP	P	22 28 29.9	+0.5
PRPB	Parauapebas	52.50	331	eP	P	22 28 50.6	-0.4
NPGB	Novo Progresso	53.34	325	eP	P	22 28 57.7	+0.5
SAML	Samuel	54.45	315	P	P	22 29 05.3	0.0
SAML				IAmb	IAmb	22 29 06.1	
	comp=Z,9.5nm,0.7s						
SAML	Samuel	54.45	315	eP	P	22 29 05.7	+0.3
SAML	Samuel	54.45	315	P	P	22 29 05.3	0.0
ETMB	Extrema	54.93	311	P	P	22 29 08.7	-0.1
ETMB				IAmb	IAmb	22 29 10.2	
	comp=Z,16nm,1.1s						
ETMB	Extrema	54.93	311	eP	P	22 29 09.3	+0.5
ITTB	Itaituba	55.97	325	eP	P	22 29 16.4	+0.1
DRV	Dumont d'Urvil	57.63	174	P	P	22 29 26.7	-0.7
MALB	Monte Alegre	57.88	328	eP	P	22 29 31.4	+1.5
MCPB	Macapa, AP	58.66	331	eP	P	22 29 35.0	-0.3
TEFE	Tefe	59.98	316	eP	P	22 29 44.7	+0.3
BOAV	Boa Vista	63.91	323	P	P	22 30 10.5	-0.2
BOAV				IAmb	IAmb	22 30 10.9	
	comp=Z,7.6nm,0.7s						
BOAV	Boa Vista	63.91	323	eP	P	22 30 10.6	-0.2
DBIC	Dimbokro	64.85	25	P	P	22 30 16.9	0.0
	comp=Z,0.5nm,0.4s,baz=101,slow=21,SNR=1.2						
	comp=Z,0.5nm,0.4s						
BAUV	El Baul	72.70	318	P	P	22 31 05.4	-0.4
BAUV				IAmb	IAmb	22 31 07.1	

	comp=Z,25nm,1.1s						
TORD	Torodi Ar. Bea	72.76	30	P	P	22 31 06.1	-0.1
	comp=Z,2.4nm,0.8s,baz=200,slow=6.4,SNR=18						
	comp=Z,2.4nm,0.8s						
TORD	Torodi Ar. Bea	72.76	30	P	P	22 31 06.5	+0.4
BIRV	Birongo	73.44	320	P	P	22 31 10.1	-0.1
SDV	Santo Domingo	73.66	315	P	P	22 31 11.4	-0.4
SDV	Santo Domingo	73.66	315	*e*P	P	22 31 12.3	+0.6
FINES	FINESS Array B	124.08	28	PKP	PKPdf	22 38 34.3	-0.7
	comp=Z,1.5nm,0.6s,baz=131,slow=2.3,SNR=13						
ARCES	ARCESS Array B	130.62	22	PKP	PKPdf	22 38 46.5	-0.7
	comp=Z,2.1nm,0.6s,baz=224,slow=1.8,SNR=14						
YKA	Yellowknife Ar	135.81	318	PKP	PKPdf	22 38 56.4	-0.8
	comp=Z,0.7nm,0.6s,baz=128,slow=2.5,SNR=8.5						
MKAR	Makanchi Array	136.86	71	PKhKP	PKPpre	22 38 56.1	
	comp=Z,0.2nm,0.6s,baz=225,slow=3.3,SNR=1.0						
ZALV	Zalesovo Beam	142.28	63	PKhKP	PKPpre	22 39 05.1	
	comp=Z,0.4nm,0.6s,baz=258,slow=2.7,SNR=1.8						
A36M	Sachs Harbour	143.82	329		PKPab	22 39 09.1	+0.5
A36M	Sachs Harbour	143.82	329	P	PKPbc	22 39 10.0	+0.8
	baz=108						
N30M	Aishikik Lake	144.54	309	P	PKPdf	22 39 13.1	0.0
	baz=113						
M30M	Minto, Yukon	144.84	311		PKPab	22 39 12.2	-0.4
M30M	Minto, Yukon	144.84	311	P	PKPab	22 39 12.9	+0.2
	baz=112						
YUK4	Talbot Arm	145.19	308	P	PKPdf	22 39 14.8	+0.4
	baz=112						
INK	Inuvik	145.44	321	PKPbc	PKPdf	22 39 14.3	0.0
	comp=Z,9.0nm,0.8s,baz=75,slow=3.4,SNR=21						
INK	Inuvik	145.44	321		PKPdf	22 39 14.2	-0.1
INK	Inuvik	145.44	321	P	PKPab	22 39 14.8	+0.1
	baz=106						
M29M	Somme Creek	145.51	310	P	PKPab	22 39 15.5	+0.2
	baz=111						
K29M	Barlow Dome	145.60	313	P	PKPbc	22 39 15.5	+0.2
	baz=110						
L29M	L29M	145.60	311	P	PKPbc	22 39 15.6	+0.4
	baz=110						
G30M	tAoh Zraii Nji	146.05	318	P	PKPab	22 39 17.1	0.0
	baz=106						
EPYK	Eagle Plains	146.07	317	P	PKPbc	22 39 16.7	+0.1
	baz=107						
DAWY	Dawson	146.45	312	P	PKPbc	22 39 18.0	+0.2
	baz=108						
BVCY	Beaver Creek	146.55	309	P	PKPbc	22 39 18.5	+0.5
	baz=110						
L27K	Beaver Creek,	147.18	310	P	PKPbc	22 39 20.1	+0.2
	baz=108						
K27K	Chicken	147.57	312		PKPbc	22 39 20.3	-0.6
K27K	Chicken	147.57	312	P	PKPbc	22 39 21.3	+0.5
	baz=106						
I27K	Kandik River	147.79	315	P	PKPbc	22 39 21.7	+0.3
	baz=104						
L26K	Log Cabin Wild	147.83	310	P	PKPbc	22 39 21.8	+0.2
	baz=107						
H27K	Steamboat Moun	147.91	316	P	PKPbc	22 39 22.0	+0.3
	baz=103						
DOT	Dot Lake	148.31	311		PKPbc	22 39 21.8	-1.0
I26K	Coal Creek Min	148.35	314		PKPbc	22 39 22.3	-0.5
I26K	Coal Creek Min	148.35	314	P	PKPbc	22 39 22.9	+0.1
	baz=104						
SCRK	Sand Creek	148.37	311		PKPbc	22 39 22.9	-0.2
SCRK	Sand Creek	148.37	311	P	PKPbc	22 39 23.3	+0.2
	baz=105						
RIDG	Independent Ri	148.67	311	P	PKPbc	22 39 24.6	+0.8
	baz=105						
PAX	Paxson	148.74	309	P	PKPbc	22 39 24.6	+0.5
	baz=106						
G26K	Porcupine Rive	148.94	317	P	PKPbc	22 39 24.5	+0.2
	baz=100						
F26K	Sheenjek River	149.20	318	P	PKPbc	22 39 25.7	+0.7
	baz=99						
C27K	Jago River	149.29	322	P	PKPbc	22 39 25.7	+0.5
	baz=96						
F25K	Christian Rive	149.75	318	P	PKPbc	22 39 26.9	+0.5
	baz=98						
IL31		149.78	312		PKPbc	22 39 25.5	-0.9
ILAR	Eielson Array	149.78	312	PKPbc	PKPbc	22 39 25.2	-1.3
	comp=Z,3.8nm,0.9s,baz=126,slow=1.5,SNR=27						
ILAR	Eielson Array	149.78	312		PKPbc	22 39 25.6	-0.8
E25K	Arctic Village	149.79	319	P	PKPbc	22 39 27.0	+0.5
	baz=97						
MCK	McKinley	150.44	310	P	PKPbc	22 39 28.5	+0.4
	baz=102						
F24K	Squaw Lake	150.60	318	P	PKPbc	22 39 28.6	+0.2
	baz=96						
SONM	Songino Array	150.80	86	PKPbc	PKPbc	22 39 28.9	-0.7
	comp=Z,4.6nm,0.6s,baz=221,slow=3.4,SNR=28						
E24K	Your Creek	150.88	319	P	PKPbc	22 39 29.4	+0.3
	baz=94						
G23K	Bananza Creek	151.35	316	P	PKiKP	22 39 30.8	+0.2
	baz=96						
BPAW	Bear Paw Mtn.	151.40	310	P	PKPbc	22 39 30.1	-0.2
	baz=100						
CAST	Castle Rocks	151.77	309		PKPbc	22 39 30.6	-0.6
G22K	Bettles	151.95	316	P	PKiKP	22 39 32.0	+0.2
	baz=94						
F22K	John River	152.25	317	P	PKiKP	22 39 33.0	+0.5
	baz=92						

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*MOS **15** 22:19:37.5±1.0, 51°.21N×179°.22E, h10^{km}, mb5.4/97, MS5.2/44, Error ellipse: s-maj=5.7km s-min=3.8km az=119.5*

*NEIC **15** 22:19:40.5±1.8, 51°.08N±0°.05×179°.08E±0°.06, h19^{km}±1^{km}, mb5.4/314, Ms_20 5.1/257, Mwb5.4/54, Mww5.6/29, ML5.3(AEIC), Error ellipse: s-maj=8.0km s-min=6.4km az=358.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.27; M$_{\theta\theta}$-1.30; M$_{\phi\phi}$0.03; M$_{r\theta}$0.72; M$_{\theta\phi}$-0.73; M$_{\phi r}$0.81; Fault plane solution: M$_0$1.83000×10^{17} NP1:ϕ_s265.99000°, δ30.83000°, λ122.31000°. NP2: ϕ_s49.62000°, δ64.33000°, λ72.31000°. Principal axes: T 1.7131, Plg66.0000°, Azm288.0000°; N 0.2223, Plg16.0000°, Azm57.0000°; P -1.9354, Plg18.0000°, Azm153.0000°;*

*AEIC **15** 22:19:40.7±1.8, 51°.07N±0°.05×179°.07E±0°.08, h18^{km}±3^{km} Error ellipse: s-maj=8.6km s-min=6.1km az=139.0*

*IDC **15** 22:19:41.9±1.3, 51°.27N×179°.17E, h26^{km}±7^{km}, mb4.9/51, mbtmp5.0/55, ML4.8/5, MS5.1/87, Error ellipse: s-maj=10.5km s-min=7.6km az=160.0*

*BJI **15** 22:19:41.1±0.0, 51°.35N×178°.88E, h31^{km}, mb5.3/86, mB5.6/71, Ms5.5/90, Ms7 5.3/87*

*NEIC **15** 22:19:42.1, 51°.20N×179°.05E, h23^{km}*

*NEIC **15** 22:19:42.1, 51°.20N×179°.05E, h30^{km}*

*NEIC **15** 22:19:42.1, 51°.00N×179°.21E, h30^{km}, Moment Tensor Solution. Duration: 3^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.20; M$_{\theta\theta}$-2.29; M$_{\phi\phi}$0.09; M$_{r\theta}$1.12; M$_{\theta\phi}$-1.12; M$_{\phi r}$1.28; Fault plane solution: M$_0$3.02000×10^{17} NP1:ϕ_s51.63000°, δ63.08000°, λ71.80000°. NP2:ϕ_s267.62000°, δ32.11000°, λ121.60000°. Principal axes: T 2.8683, Plg67.0000°, Azm288.0000°; N 0.3023, Plg16.0000°, Azm60.0000°; P -3.1707, Plg16.0000°, Azm155.0000°;*

*GCMT **15** 22:19:43.5±0.1, 51°.20N±0°.01×179°.18E±0°.01, h22^{km}, MW5.7/163, Moment Tensor Solution. s132,c257; s163,c343; Duration: 1^{s}7 Moment tensor: Scale 10^{17} Nm; M$_{rr}$2.59±.04; M$_{\theta\theta}$-2.62±.04; M$_{\phi\phi}$0.03±.03; M$_{r\theta}$1.96±.07; M$_{\theta\phi}$-1.27±.02; M$_{\phi r}$2.03±.07; Best double couple: M$_0$4.04000×10^{17} NP1:ϕ_s51.00000°, δ68.00000°, λ74.00000°. NP2:ϕ_s268.00000°, δ27.00000°, λ124.00000°. Principal axes: T 3.9230, Plg63.0000°, Azm295.0000°; N 0.2330, Plg15.0000°, Azm57.0000°; P -4.1570, Plg22.0000°, Azm153.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 22:19:43.1±0.3, **51°.27N**±0°.04×**179°.13E**±0°.02, **h34**^{km}±1^{km}, **n1507**, σ**1^{s}21**/1528, **mb5.3**/354, **MS5.1**/264, **87C-30D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMKA	Amchitka	0.16	45	Pg	Pb	22 19 48.6	-0.8
AMKA				Sg	Sb	22 19 53.6	-0.1
KIWB	Kanaga Island	2.40	74	Pn	Pn	22 20 20.3	+0.4
ADK	Adak	2.69	75		Pn	22 20 24.0	+0.1
ADK	Adak	2.69	75	P	Pn	22 20 25.4	+1.6
ADK	Adak	2.69	75	P	Pn	22 20 24.0	+0.1
GSTR	Great Sitkin T	3.11	73		Pn	22 20 30.7	+1.0
SHEM	Shemya Is, Ala	3.44	297	Pn	Pn	22 20 34.6	+0.4
	158nm,0.3s,baz=80,slow=2.3,SNR=75						
SHEM				Sn	Sn	22 21 15.8	+2.2
	87nm,0.3s,baz=111,slow=15,SNR=8.6						
SHEM				LR	LR	22 21 56.7	
	comp=Z,69µm,19.6s,baz=186,slow=39						
SMY	Shemya	3.44	297		Pn	22 20 34.3	+0.2
SMY	Shemya	3.44	297	P	Pn	22 20 37.1	+3.0
SMY	Shemya	3.44	297	P	Pn	22 20 34.1	0.0
SMY				S	Sb	22 21 21.9	-2.5
CLES	Cleveland East	6.95	73		Pn	22 21 24.3	+2.0
NIKH	Nikolski High	7.59	72	Pn	Pn	22 21 33.4	+2.2
NIKH	Nikolski High	7.59	72		Sn	22 22 59.3	+3.3
NIKH	Nikolski High	7.59	72	P	Pn	22 21 33.9	+2.7
NIKH	Nikolski High	7.59	72	P	Pn	22 21 32.4	+1.2
	baz=260,SNR=12						
SPIA	Saint Paul Isl	8.58	42		Pn	22 21 47.3	+2.5
SPIA	Saint Paul Isl	8.58	42	P	Pn	22 21 47.7	+3.0
	baz=230,SNR=21						
BKI	Bering	8.82	302	P	Pn	22 21 52.6	+4.6
BKI				S	Sn	22 23 29.3	+3.3
UNV	Unalaska Valle	9.13	68	Pn	Pn	22 21 53.9	+1.7
UNV	Unalaska Valle	9.13	68	P	Pn	22 21 54.1	+1.9
	baz=258,SNR=17						
AKUT	Akutan	9.61	67		Pn	22 22 00.3	+1.6
AKUT	Akutan	9.61	67	P	Pn	22 22 02.2	+3.4
KBG	Krutoberegovo	10.92	304	P	Pn	22 22 20.2	+3.5
FALS	False Pass	11.10	64		Pn	22 22 20.8	+1.7
FALS	False Pass	11.10	64	P	Pn	22 22 22.4	+3.3
FALS	False Pass	11.10	64	P	Pn	22 22 21.0	+1.9
	baz=257						
SMKR	Semkarok	11.68	304	P	Pn	22 22 29.3	+2.1
TILK	Tilichiki	11.71	327	P	Pn	22 22 30.9	+3.3
SRKR	Sorokina	11.86	304	P	Pn	22 22 32.9	+3.3
BZGR	Bezymyannyi-Gr	11.89	300	P	Pn	22 22 32.6	+2.4
BZMR	Bezymyannaya	12.00	300	P	Pn	22 22 34.6	+2.9
BZWR	Bezymyannyi-We	12.01	300	P	Pn	22 22 34.4	+2.6
S12K	Black Hills	12.04	61	P	Pn	22 22 33.4	+1.3
	baz=255						
TUMR	Tumrok	12.04	297	P	Pn	22 22 34.6	+2.4
KIRR	Kirishev	12.09	300	P	Pn	22 22 35.0	+2.1
KMNR	Kamenistaya	12.10	299	P	Pn	22 22 33.9	+1.0
KPT	Kopyto	12.16	300	P	Pn	22 22 36.0	+2.2
KOZ	Kozyrevsk	12.37	300	P	Pn	22 22 40.4	+3.8
SRDR	Sredinnyy	12.52	301	P	Pn	22 22 40.6	+1.9
UGLR	Uglovaya	12.59	287	P	Pn	22 22 42.4	+2.7
SMAR	Somma	12.61	287	P	Pn	22 22 42.4	+2.4
PET	Petropavlovsk	12.70	286	Pn	Pn	22 22 41.0	0.0
PET	Petropavlovsk	12.70	286	P	Pn	22 22 43.4	+2.4
PET	Petropavlovsk	12.70	286	*e*P	Pn	22 22 43.4	+2.4
PET				*e*S	Sn	22 24 55.4	-5.6
PET				pmax	pmax		
	comp=Z,2µm,5.8s						
PET				pmax	pmax		
	comp=Z,2µm,12.8s						
PET				pmax	pmax		
	comp=Z,116nm,1.2s						
KOK	Koryaka	12.71	287	P	Pn	22 22 43.7	+2.4
SDPT	Sand Point	12.85	64	Pn	Pn	22 22 43.1	0.0
SDPT	Sand Point	12.85	64	P	Pn	22 22 43.8	+0.7
	baz=259						
PEA0B	Petropavlovsk-	13.27	286	Pn	Pn	22 22 50.1	+1.2
PEA0B	Petropavlovsk-	13.27	286	*c i*P	Pn	22 22 50.3	+1.4
PETK	Petropavlovsk-	13.27	286	Pn	Pn	22 22 48.6	-0.3
	comp=Z,3.2nm,0.3s,baz=95,slow=16,SNR=21						
PETK				Sn	Sn	22 25 09.8	-5.2
	comp=Z,1.8nm,0.3s,baz=99,slow=32,SNR=2.8						
PETK				LR	LR	22 27 41.4	
	comp=Z,12µm,22.0s,baz=90,slow=36						
	comp=Z,21nm,0.7s						
PETK	Petropavlovsk-	13.27	286	Pn	Pn	22 22 48.4	-0.5
CHGN	Chignik	14.17	60		Pn	22 23 00.6	-0.5
CHGN	Chignik	14.17	60	P	Pn	22 23 02.1	+1.0
	baz=258						
SKR	Severo-Kuril's	14.50	277	*e*P	Pn	22 23 02.8	-2.8
SKR				pmax	pmax		
	comp=Z,1µm,5.3s						
SKR				MLR	MLR		
	comp=Z,3µm,15.0s						
R16K	Pilot Point	14.91	56	P	Pn	22 23 10.9	-0.2
	baz=254						
P16K	Nushagak River	15.15	50	P	P	22 23 17.0	-2.0
	baz=249,SNR=11						
O16K	Kokwok River B	15.32	48	P	P	22 23 18.6	-2.3
	baz=247						
N16K	Nishlik Lake	15.38	45	P	Pn	22 23 19.0	+1.6
	baz=243						
R17K	Ugashik Creek	15.55	56	P	Pn	22 23 21.0	+1.5
	baz=256						
ANM	Nome	15.60	25	P	P	22 23 23.6	-0.4
ANM	Nome	15.60	25	P	P	22 23 23.6	-0.4
ANM				pmax	pmax		
	comp=Z,134nm,1.6s						
ANM	Nome	15.60	25	P	P	22 23 23.5	-0.4
	baz=218,SNR=64						
Q16K	King Salmon	15.69	52	P	P	22 23 24.1	-0.9
	baz=252,SNR=11						
TNA	Tin City	15.80	20	P	P	22 23 26.2	0.0
TNA	Tin City	15.80	20	P	P	22 23 25.6	-0.5
	baz=211,SNR=82						
O17K	Koliganek Bris	15.85	48	P	P	22 23 26.3	-0.5
	baz=248,SNR=21						
P17K	Kvichak River	15.96	51	P	P	22 23 26.5	-1.5
	baz=250						
Q17K	Contact Creek	15.96	54	P	P	22 23 27.2	-0.9
	baz=254						
Q18K	Katmai Hardscr	16.51	53	P	P	22 23 34.0	-0.2
	baz=254,SNR=16						
P18K	Big Mountain,	16.61	51	P	P	22 23 35.0	-0.3
P18K	Big Mountain,	16.61	51	P	P	22 23 35.5	+0.2
	baz=252						
OHAK	Old Harbor	17.11	59	P	P	22 23 40.0	-0.7
OHAK	Old Harbor	17.11	59	P	Pn	22 23 39.7	+0.4
	baz=261						
Q19K	Cape Douglas,	17.27	53	P	P	22 23 42.6	+0.1
Q19K				IAmb	IAmb	22 23 51.0	
	comp=Z,204nm,0.5s						
Q19K	Cape Douglas,	17.27	53	P	P	22 23 43.2	+0.7
	baz=255,SNR=7.0						
O19K	Port Alsworth	17.31	49	P	P	22 23 44.4	+1.5
	baz=250,SNR=13						
N19K	Bonanza Creek	17.45	47	P	P	22 23 45.6	+1.1
	baz=248,SNR=18						
KDAK	Kodiak Island	17.57	57	P	Pn	22 23 42.9	-2.1
	comp=Z,13nm,0.3s,baz=310,slow=6.8,SNR=93						
KDAK				Sn	Sn	22 26 53.5	-6.0
	comp=Z,0.7nm,0.3s,baz=121,slow=23,SNR=1.3						
	comp=Z,34nm,0.3s						
KDAK	Kodiak Island	17.57	57		Pn	22 23 42.7	-2.4
KDAK	Kodiak Island	17.57	57	*ce*P	Pn	22 23 43.4	-1.7
P19K	Oil Pt	17.66	51	P	P	22 23 48.4	+1.5
	baz=253						
TTA	Tatalina	17.71	39	P	P	22 23 47.2	-0.2
TTA	Tatalina	17.71	39	P	P	22 23 49.3	+1.9
TTA	Tatalina	17.71	39	P	P	22 23 47.2	-0.2
TTA				pmax	pmax		
	comp=Z,90nm,1.3s						
TTA	Tatalina	17.71	39	P	P	22 23 49.0	+1.6
	baz=240,SNR=20						
ILSW	Iliamna Southw	17.80	50	P	P	22 23 49.1	+0.6
Q20K	Shuyak Island	17.83	55	P	P	22 23 49.9	+1.2
	baz=258						
L19K	White Mountain	17.83	42	P	P	22 23 50.5	+1.7
	baz=244						
M19K	Big River Lodg	17.91	43	P	P	22 23 51.0	+1.4
	baz=245						
BILL	Bilibino	17.96	344	P	P	22 23 51.0	+1.0
BILL	Bilibino	17.96	344	P	P	22 23 52.0	+1.9
MA2	Magadan	18.00	309	P	Pn	22 23 49.6	-0.7
	comp=Z,0.8nm,0.3s,baz=117,slow=12,SNR=7.3						
MA2				LR	LR	22 30 23.4	
	comp=Z,12µm,19.5s,baz=114,slow=36						
	comp=Z,12nm,0.7s						
MA2	Magadan	18.00	309	P	Pn	22 23 49.3	-0.9
MA2	Magadan	18.00	309	P	P	22 23 53.1	+2.6
	comp=Z,39nm,1.2s						
MA2	Magadan	18.00	309	*c i*P	P	22 23 51.6	+1.1
MA2				pmax	pmax		
	comp=Z,106nm,2.5s						
O20K	Slope Mountain	18.08	50	P	P	22 23 53.8	+2.3
	baz=253						
RSO	Redoubt South	18.13	49	P	P	22 23 53.7	+1.5
L20K	Farewell, AK	18.37	42	P	Pn	22 23 56.6	+1.8
	baz=244,SNR=30						
GCSA	Galena City Sc	18.38	34	P	Pn	22 23 56.5	+1.7
	baz=234						
HOM	Homer	18.44	52	P	Pn	22 23 57.6	+1.9
	baz=255						
M20K	Styx River	18.45	44	P	Pn	22 23 58.1	+2.2
	baz=247						
SEY	Seymchan	18.47	319	P	P	22 23 54.9	-0.8
	comp=Z,0.4nm,0.3s,baz=125,slow=11,SNR=21						
SEY				LR	LR	22 30 32.2	
	comp=Z,10µm,20.3s,baz=118,slow=35						
SEY				ScP	ScP	22 31 55.2	-1.9
	comp=Z,3.9nm,1.0s,baz=145,slow=23,SNR=4.0						
	comp=Z,5.8nm,0.7s						
SEY	Seymchan	18.47	319	⇑*e*P	Pn	22 23 59.0	+3.0
SEY				pmax	pmax		
	comp=Z,15nm,1.3s						
CNPM	China Poot	18.61	52	P	P	22 23 56.8	-0.5
SPCR	Spurr Chakacha	18.62	47	P	Pn	22 24 00.4	+2.5
	baz=250,SNR=29						
K20K	Telida	18.69	39	P	Pn	22 23 59.3	+0.6
K20K	Telida	18.69	39	P	Pn	22 24 00.2	+1.6
	baz=242,SNR=33						
BRLK	Bradley Lake	18.84	52	P	P	22 23 59.5	-0.3
BRSE	Bradley Lake S	18.91	52	P	Pn	22 24 03.4	+2.1
	baz=256						
CAPN	Captain Cook N	18.98	48	P	Pn	22 24 04.2	+2.1
	baz=253						
RDOG	Red Dog Mine	18.98	21	P	Pn	22 24 02.9	+0.7
RDOG	Red Dog Mine	18.98	21	P	Pn	22 24 04.1	+1.9
	baz=216,SNR=42						
SKT	Skwentna	19.19	45	P	Pn	22 24 04.9	+0.1
SKT				IAmb	IAmb	22 24 11.1	
	comp=Z,394nm,1.2s						
SKT	Skwentna	19.19	45	P	Pn	22 24 06.6	+1.8
	baz=249,SNR=96						
PPLA	Purkeypile	19.26	42	P	Pn	22 24 06.2	+0.6
PPLA	Purkeypile	19.26	42	P	Pn	22 24 07.4	+1.8
	baz=246,SNR=21						
SUA	Susitna One	19.37	47	P	P	22 24 06.1	+0.3
SUA	Susitna One	19.37	47	P	Pn	22 24 07.5	+0.5
	baz=252						
CAST	Castle Rocks	19.52	40	P	Pn	22 24 07.9	-0.7
CAST	Castle Rocks	19.52	40	P	Pn	22 24 09.0	+0.4
	baz=245,SNR=66						
O22K	Cooper Landing	19.58	50	P	Pn	22 24 10.1	+0.8
	baz=256,SNR=14						
SEW	Seward	19.62	51	P	P	22 24 08.7	+0.5
SEW	Seward	19.62	51	P	Pn	22 24 10.1	+0.3
	baz=257						
CHUM	Lake Minchumin	19.63	39	P	Pn	22 24 10.8	+1.0
	baz=243,SNR=56						
RC01	Rabbit Creek A	19.73	48	P	P	22 24 09.6	+0.1
RC01	Rabbit Creek A	19.73	48	P	Pn	22 24 11.1	0.0
	baz=254,SNR=8.5						
CUT	Chulitna	19.89	44	P	P	22 24 11.9	+0.7
CUT				IAmb	IAmb	22 24 20.5	
	comp=Z,135nm,0.6s						
CUT				IAMs_20	IAMs_20	22 32 57.3	
	comp=Z,8µm,20.0s						
CUT	Chulitna	19.89	44	P	Pn	22 24 13.0	0.0
	baz=250,SNR=7.6						
KTH	Kantishna Hill	20.05	41	P	Pn	22 24 14.5	-0.4
PMR	Palmer	20.15	47	P	P	22 24 14.4	+0.4
PMR	Palmer	20.15	47	P	Pn	22 24 16.2	+0.1
PMR	Palmer	20.15	47	P	P	22 24 14.4	+0.4
PMR				pmax	pmax		
	comp=Z,32nm,0.6s						
PMR	Palmer	20.15	47	P	Pn	22 24 15.6	-0.4
	baz=253						
IMAR	Indian Mountai	20.16	33	P	Pn	22 24 15.5	-0.7
BPAW	Bear Paw Mtn.	20.25	39	P	Pn	22 24 16.2	-1.0
BPAW				IAmb	IAmb	22 24 20.3	
	comp=Z,237nm,1.5s						
BPAW	Bear Paw Mtn.	20.25	39	P	Pn	22 24 16.9	-0.4
	baz=244,SNR=53						
TRF	Thorofare Moun	20.27	41	P	Pn	22 24 16.6	-1.0
TRF				IAmb	IAmb	22 24 25.5	
	comp=Z,132nm,0.9s						
TRF	Thorofare Moun	20.27	41	P	Pn	22 24 17.2	-0.4
	baz=247,SNR=40						
H21K	Melozitna Rive	20.31	34	P	Pn	22 24 17.9	-0.1
	baz=238,SNR=56						
PWL	Port Wells	20.33	49	P	P	22 24 15.9	-0.2
PWL				IAmb	IAmb	22 24 22.9	
	comp=Z,133nm,1.2s						
PWL				IAMs_20	IAMs_20	22 33 26.1	
	comp=Z,7µm,22.0s						
PWL	Port Wells	20.33	49	P	P	22 24 16.4	+0.3
	baz=256,SNR=6.8						
I21K	Tanana	20.37	36	P	Pn	22 24 18.0	-0.5
	baz=240						
KNK	Knik Glacier	20.41	48	P	P	22 24 17.1	+0.1
	baz=255						
G21K	Allakaket	20.54	32	P	Pn	22 24 19.7	-0.9
	baz=235						
SML	Sawmill	20.58	47	P	P	22 24 18.0	-0.8
SML				IAmb	IAmb	22 24 33.9	
	comp=Z,87nm,0.9s						
SML	Sawmill	20.58	47	P	P	22 24 18.8	+0.1
	baz=254,SNR=15						
P23K	Montague Islan	20.61	52	P	P	22 24 18.8	-0.2
	baz=260						
MLY	Manley	20.76	37	P	Pn	22 24 21.9	-1.3
MLY				IAmb	IAmb	22 24 31.5	
	comp=Z,216nm,1.6s						
MLY	Manley	20.76	37	P	Pn	22 24 21.9	-1.3
	baz=243,SNR=57						
M23K	Glacier View	20.85	47	P	P	22 24 21.3	-0.4
	baz=254,SNR=19						
BWN	Browne	20.89	40	P	Pn	22 24 23.3	-1.4
MCK	McKinley	20.94	41	P	P	22 24 22.6	0.0
MCK				IAmb	IAmb	22 24 29.9	
	comp=Z,126nm,1.3s						
MCK	McKinley	20.94	41	P	P	22 24 22.6	0.0
MCK				pmax	pmax		
	comp=Z,126nm,1.3s						
MCK	McKinley	20.94	41	P	P	22 24 23.1	+0.6
	baz=248,SNR=18						
H22K	Ishtalitna Cre	20.94	34	P	P	22 24 23.5	+0.9
	baz=240						
F21K	Alatna River	20.96	30	P	Pn	22 24 24.5	-1.1
	baz=234						
SCM	Sheep Creek Mo	21.04	47	P	P	22 24 23.6	-0.2
	baz=255,SNR=18						
Q23K	Middleton Isla	21.05	54	P	P	22 24 23.7	-0.1
	baz=262						
NEA2	Nenana	21.21	39	P	P	22 24 25.9	+0.3
NEA2				IAmb	IAmb	22 24 30.4	
	comp=Z,321nm,1.4s						
NEA2	Nenana	21.21	39	P	P	22 24 26.3	+0.8
	baz=246,SNR=101						
I23K	Minto, Yukon-K	21.33	37	P	P	22 24 28.5	+1.7
	baz=244,SNR=21						
G22K	Bettles	21.43	32	P	P	22 24 29.2	+1.4
	baz=237						
EYAK	Cordova Ski Ar	21.52	51	P	P	22 24 30.7	+1.9
F22K	John River	21.54	30	P	P	22 24 29.7	+0.7
	baz=235						
H23K	Yukon River	21.57	36	P	P	22 24 30.9	+1.5
	baz=242						
DIV	Divide	21.61	49	P	P	22 24 29.4	-0.5
KLU	Klutina	21.61	48	P	P	22 24 29.3	-0.6
KLU				IAMs_20	IAMs_20	22 34 08.0	
	comp=Z,7µm,20.0s						
KLU	Klutina	21.61	48	P	P	22 24 30.1	+0.2
	baz=257,SNR=9.0						
M24K	Tolsona, Glenn	21.64	47	P	P	22 24 30.9	+0.7
	baz=256,SNR=26						
MDM	Murphy Dome	21.69	38	P	P	22 24 30.6	-0.1
MDM				IAmb	IAmb	22 24 36.9	
	comp=Z,99nm,0.8s						
TCOL	CIGO, UAF Yank	21.80	39	IAMs_20	IAMs_20	22 34 01.0	
	comp=Z,5µm,18.0s						
TCOL	CIGO, UAF Yank	21.80	39	P	P	22 24 32.5	+0.7
	baz=247,SNR=13						
COLA	College	21.81	39	P	P	22 24 32.2	+0.4
COLA	College	21.81	39	P	P	22 24 34.4	+2.6
COLA	College	21.81	39	*de*P	P	22 24 33.0	+1.2
COLA				pmax	pmax		
	comp=Z,60nm,1.1s						
COLA	College	21.81	39	P	P	22 24 32.6	+0.8
	baz=247						
G23K	Bananza Creek	21.82	33	P	P	22 24 33.5	+1.4
	baz=240,SNR=136						
HDA	Harding Lake	22.00	40	P	P	22 24 34.4	+0.5
	baz=249,SNR=20						
E22K	Anaktuvuk Pass	22.02	29	P	P	22 24 35.3	+1.1
	baz=234,SNR=77						
COLD	Coldfoot	22.03	32	P	P	22 24 35.1	+0.9
COLD				IAmb	IAmb	22 24 53.7	

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             comp=Z,150nm,1.8s
COLD  Coldfoot          22.03  32   P         P         22 24 34.6 +0.4
             baz=238
POKR  Poker Plat Res    22.07  38   IAMs_20   IAMs_20   22 34 08.9
             comp=Z,5µm,18.0s
POKR  Poker Plat Res    22.07  38   P         P         22 24 35.5 +0.8
             baz=247,SNR=22
IL31                    22.15  39   P         P         22 24 34.1 -1.4
ILAR  Eielson Array     22.15  39   P         P         22 24 33.8 -1.8
             comp=Z,5.6nm,0.5s,baz=236,slow=8.0,SNR=57
ILAR                                PcP       PcP       22 28 30.6 -0.7
             comp=Z,1.5nm,0.5s,baz=206,slow=2.9,SNR=8.6
ILAR                                ScP       ScP       22 32 05.0 -0.8
             comp=Z,3.7nm,0.6s,baz=288,slow=3.7,SNR=23
             comp=Z,5.6nm,0.5s
ILAR  Eielson Array     22.15  39   P         P         22 24 35.3 -0.3
ILAR  Eielson Array     22.15  39   P         P         22 24 35.3 -0.3
HARP  HAARP             22.17  46   P         P         22 24 36.3 +0.4
             baz=256
PAX   Paxson            22.18  45   P         P         22 24 35.6 -0.3
PAX                                 IAmb      IAmb      22 24 51.5
             comp=Z,193nm,1.5s
PAX   Paxson            22.18  45   P         P         22 24 35.7 -0.3
PAX                                 pmax      pmax
             comp=Z,193nm,1.5s
PAX   Paxson            22.18  45   P         P         22 24 36.1 +0.2
             baz=254,SNR=41
H24K  Noodor Dome       22.19  36   P         P         22 24 36.6 +0.5
             baz=245
N25K  Chitina, Valde    22.26  48   IAMs_20   IAMs_20   22 34 36.0
             comp=Z,7µm,20.0s
N25K  Chitina, Valde    22.26  48   P         P         22 24 36.9  0.0
             baz=259,SNR=12
K24K  Donnelly Dome     22.28  42   P         P         22 24 37.1 +0.1
             baz=252,SNR=30
GLB   Gilahina Butte    22.60  49   P         P         22 24 39.5 -0.9
GLB                                 IAmb      IAmb      22 24 44.2
             comp=Z,179nm,1.4s
GLB                                 IAMs_20   IAMs_20   22 34 55.0
             comp=Z,6µm,21.0s
E23K  Chandalar         22.66  30   P         P         22 24 41.5 +0.4
             baz=238,SNR=28
RIDG  Independent Ri    22.66  43   P         P         22 24 40.0 -1.0
RIDG                                IAMs_20   IAMs_20   22 34 42.8
             comp=Z,9µm,19.0s
RIDG  Independent Ri    22.66  43   P         P         22 24 40.5 -0.5
             baz=253,SNR=21
G24K  Hadweenzic Riv    22.71  35   P         P         22 24 41.3 -0.2
             baz=243
VRDI  Verde Repeater    22.73  50   P         P         22 24 40.9 -1.2
VRDI                                IAmb      IAmb      22 24 54.8
             comp=Z,351nm,1.8s
VRDI                                IAMs_20   IAMs_20   22 34 31.5
             comp=Z,6µm,22.0s
TYV   Tymovskoe         22.78 283  eP         P         22 24 44.1 +1.7
TYV                                eS         S         22 28 53.9 +5.1
TYV                                 pmax      pmax
             comp=Z,3µm,4.0s
TYV                                 pmax      pmax
             comp=Z,83nm,1.2s
TYV                                 smax      smax
             comp=N,3µm,10.5s
TYV                                 smax      smax
             comp=E,3µm,10.5s
TYV                                 MLR       MLR
             comp=E,5µm,15.0s
TYV                                 MLR       MLR
             comp=Z,3µm,15.0s
D23K  Nanushuk River    22.84  28   P         P         22 24 43.9 +1.1
             baz=234
A21K  Barrow            22.92  20   IAMs_20   IAMs_20   22 34 01.3
             comp=Z,5µm,20.0s
A21K  Barrow            22.92  20   P         P         22 24 43.9 +0.3
             baz=221,SNR=32
F24K  Squaw Lake        22.95  32   P         P         22 24 44.5 +0.5
             baz=241,SNR=169
PRP   Porcupine Dome    22.96  38   P         P         22 24 43.1 -1.2
PRP   Porcupine Dome    22.96  38   P         P         22 24 43.9 -0.4
             baz=248,SNR=35
MCARA McCarthy VSAT     22.96  49   P         P         22 24 42.9 -1.4
MCARA                               IAmb      IAmb      22 24 55.3
             comp=Z,56nm,0.8s
MCARA McCarthy VSAT     22.96  49   P         P         22 24 44.1 -0.1
             baz=261
DOT   Dot Lake          22.97  43   P         P         22 24 43.6 -0.7
DOT                                 IAmb      IAmb      22 25 01.8
             comp=Z,54nm,0.8s
E24K  Your Creek        23.03  31   P         P         22 24 45.2 +0.3
             baz=239
SCRK  Sand Creek        23.09  42   P         P         22 24 44.1 -1.5
SCRK                                IAMs_20   IAMs_20   22 34 57.2
             comp=Z,7µm,18.0s
SCRK  Sand Creek        23.09  42   P         P         22 24 44.7 -0.9
             baz=254,SNR=42
L26K  Log Cabin Wild    23.13  45   P         P         22 24 46.0 +0.2
             baz=257,SNR=28
M26K  Nabesna, AK       23.16  47   IAMs_20   IAMs_20   22 34 49.7
             comp=Z,5µm,20.0s
M26K  Nabesna, AK       23.16  47   P         P         22 24 46.4 +0.2
             baz=258,SNR=12
G25K  Bearman Lake      23.23  35   P         P         22 24 47.3 +0.5
             baz=245
YUK   Yuzh-Kuril'sk     23.40 265c iP         P         22 24 48.6  0.0
YUK                                e                    22 25 15.9
YUK                                 PPP       PPP       22 25 26.4
YUK                                eS         S         22 29 00.0 +0.8
YUK                                eSS        SnSn      22 29 38.1 +2.4
YUK                                eSSS       SSS       22 30 05.2
YUK                                 pmax      pmax
             comp=Z,804nm,1.1s
YUK                                 MLR       MLR
             comp=Z,3µm,21.0s
NKL   Nikolayevsk       23.45 290  eP         P         22 24 47.8 -1.2
NKL                                 pmax      pmax
             comp=N,28nm,1.2s
NKL                                 pmax      pmax
             comp=Z,270nm,1.8s
NKL                                 MLR       MLR
             comp=N,11µm,23.0s
NKL                                 MLR       MLR
             comp=E,21µm,23.0s
NKL                                 MLR       MLR
             comp=Z,26µm,21.0s
FYU   Fort Yukon        23.47  36   P         P         22 24 49.2 +0.1
BARN  Barnard Glacie    23.57  50   P         P         22 24 49.7 -0.7
BARN                                IAmb      IAmb      22 25 07.2
             comp=Z,118nm,1.4s
M27K  Edge Creek, AK    23.66  47   IAMs_20   IAMs_20   22 35 24.1
             comp=Z,9µm,21.0s
M27K  Edge Creek, AK    23.66  47   P         P         22 24 51.6 +0.4
             baz=260,SNR=27
UGL   Uglegorsk         23.68 279c iP         P         22 24 52.5 +1.2
UGL                                e                    22 25 22.3
UGL                                eS         S         22 29 07.4 +3.8
UGL                                 pmax      pmax
             comp=Z,160nm,0.9s
UGL                                 pmax      pmax
             comp=Z,3µm,5.0s
UGL                                 smax      smax
             comp=E,4µm,12.5s
UGL                                 smax      smax
             comp=N,6µm,16.0s
CTG   Chitna Glacier    23.72  51   P         P         22 24 50.9 -0.9
             baz=264
CTGM  Chitina Glacie    23.72  51   P         P         22 24 50.7 -1.1
CTGM                                IAmb      IAmb      22 25 18.9
             comp=Z,52nm,0.7s
F25K  Christian Rive    23.75  33   P         P         22 24 52.4 +0.4
             baz=244
L27K  Beaver Creek,     23.81  45   P         P         22 24 53.7 +1.1
             baz=258
I26K  Coal Creek Min    23.82  40   P         P         22 24 52.0 -0.5
             baz=252
BCAR  Beaver Creek A    23.83  45   P         P         22 24 52.0 -0.7
C24K  Franklin Bluff    23.85  27   P         P         22 24 52.8 +0.1
             baz=236,SNR=11
K27K  Chicken           23.92  43   IAMs_20   IAMs_20   22 35 14.9
             comp=Z,7µm,18.0s
K27K  Chicken           23.92  43   P         P         22 24 54.1 +0.7
             baz=256
E25K  Arctic Village    24.01  32   P         P         22 24 55.0 +0.7
             baz=243,SNR=168
YSS   Yuzh-Sakhalins    24.03 274   P         P         22 24 54.0 -0.6
YSS                                 IAmb      IAmb      22 24 58.8
             comp=Z,181nm,1.0s
YSS                                 IAMs_20   IAMs_20   22 33 18.6
             comp=Z,6µm,20.0s
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YSS   Yuzh-Sakhalins    24.03 274   P         P         22 24 55.3 +0.7
YSS   Yuzh-Sakhalins    24.03 274α iP         P         22 24 55.4 +0.8
YSS                                eS         S         22 29 07.9 -1.5
YSS                                 pmax      pmax
             comp=Z,3µm,4.5s
YSS                                 pmax      pmax
             comp=N,800nm,5.2s
YSS                                 pmax      pmax
             comp=E,1µm,3.4s
YSS                                 pmax      pmax
             comp=Z,160nm,1.0s
YSS                                 MLR       MLR
             comp=Z,4µm,18.0s
YSS                                 MLR       MLR
             comp=N,3µm,17.0s
YSS                                 MLR       MLR
             comp=E,3µm,17.0s
BMAR  Burnt Mountain    24.05  34   P         P         22 24 54.7  0.0
BVCY  Beaver Creek      24.14  47   P         P         22 24 55.5 -0.1
             baz=261,SNR=27
G26K  Porcupine Rive    24.15  35   P         P         22 24 55.7 +0.2
             baz=248
PINM  Pinnacle          24.18  53   P         P         22 24 55.6 -0.5
             baz=266
YUK3  Moose Creek       24.23  49   P         P         22 24 55.9 -0.7
             baz=263,SNR=56
O28M  Mount Upton       24.26  51   P         P         22 24 57.0  0.0
             baz=265
F26K  Sheenjek River    24.31  34   P         P         22 24 57.0 -0.1
             baz=246,SNR=70
D25K  Kavik River       24.33  29   P         P         22 24 57.6 +0.4
             baz=240
BCPM  Bancas Point      24.48  53   IAMs_20   IAMs_20   22 35 30.8
             comp=Z,6µm,21.0s
EGAK  Eagle             24.49  41   IAMs_20   IAMs_20   22 36 16.2
             comp=Z,5µm,18.0s
EGAK  Eagle             24.49  41   P         P         22 24 59.1 +0.4
             baz=255,SNR=85
YUK8  Steele Glacier    24.51  50   P         P         22 24 58.6 -0.6
             baz=264,SNR=15
I27K  Kandik River      24.52  39   P         P         22 24 58.8 -0.2
             baz=253,SNR=10
PNL   Peninsula         24.60  54   P         P         22 24 59.8 +0.1
             baz=268
H27K  Steamboat Moun    24.75  38   P         P         22 25 00.4 -0.7
             baz=252,SNR=17
G27K  Doyon Strip       24.88  37   P         P         22 25 02.6 +0.3
             baz=250,SNR=30
O29M  Mount Kennedy     25.03  52   P         P         22 25 03.5 -0.3
             baz=268
YUK4  Talbot Arm        25.05  50   P         P         22 25 04.5 +0.4
             baz=265,SNR=15
C26K  Camden Bay        25.07  29   P         P         22 25 04.6 +0.7
             baz=240
DAWY  Dawson            25.08  43   P         P         22 25 04.6 +0.5
DAWY                                IAmb      IAmb      22 25 12.7
             comp=Z,77nm,0.7s
DAWY  Dawson            25.08  43   P         P         22 25 05.0 +0.9
             baz=259,SNR=58
YUK6  Outpost Mounta    25.16  51   P         P         22 25 05.9 +0.8
             baz=266
M29M  Somme Creek       25.25  47   P         P         22 25 06.4 +0.7
             baz=263
C27K  Jago River        25.30  30   P         P         22 25 06.4 +0.4
             baz=242
E27K  Coleen River      25.39  33   P         P         22 25 06.7 -0.1
             baz=248
JKA   Kamikawa-asahi    25.40 268   P         P         22 25 07.2  0.0
ASAJ  Asahikawa         25.40 268   P         P         22 25 07.7 +0.5
             comp=Z,122nm,0.8s,baz=63,slow=5.7,SNR=38
ASAJ                                LR        LR        22 35 05.5
             comp=Z,3µm,20.6s,baz=66,slow=36
             comp=Z,122nm,0.8s
L29M  L29M              25.48  46   P         P         22 25 07.1 -0.7
             baz=262
HYT   Haines Junctio    25.58  51   P         P         22 25 08.1 -0.7
HYT   Haines Junctio    25.58  51   P         P         22 25 09.1 +0.4
             baz=268
J29M  Klondike Camp     25.66  43   IAMs_20   IAMs_20   22 36 27.0
             comp=Z,8µm,18.0s
I29M  Ogilvie Camp,     25.80  41   P         P         22 25 10.9 +0.3
             baz=257,SNR=20
N30M  Aishikik Lake     25.81  50   P         P         22 25 10.3 -0.5
             baz=266
K29M  Barlow Dome       25.86  44   P         P         22 25 11.2  0.0
             baz=261,SNR=12
M30M  Minto, Yukon      26.03  47   IAMs_20   IAMs_20   22 36 54.7
             comp=Z,4µm,21.0s
M30M  Minto, Yukon      26.03  47   P         P         22 25 13.1 +0.4
             baz=264
ERM   Erimo             26.14 263   P         P         22 25 14.3 +0.5
ERM   Erimo             26.14 263   P         P         22 25 15.9 +2.1
ERM   Erimo             26.14 263⇑ eP         P         22 25 15.6 +1.8
ERM                                 pmax      pmax
             comp=Z,138nm,1.2s
JEM   Erimo             26.14 263   P         P         22 25 15.6 +1.8
O30N  Mendenhall        26.27  51   P         P         22 25 15.5 +0.6
             baz=269
S31K  Pelican           26.29  58   P         P         22 25 15.6 +0.6
             baz=274
N31M  Braeburn, Yuko    26.44  50   IAMs_20   IAMs_20   22 37 33.4
             comp=Z,4µm,19.0s
N31M  Braeburn, Yuko    26.44  50   P         P         22 25 17.1 +0.6
             baz=268
GRNR  Gornyy            26.60 286⇑ iP         P         22 25 18.2 +0.3
GRNR                               e                    22 26 22.0
GRNR                               eS         S         22 29 53.1 +2.9
GRNR                                pmax      pmax
             comp=N,8.0nm,0.7s
GRNR                                pmax      pmax
             comp=E,20nm,0.7s
GRNR                                pmax      pmax
             comp=Z,30nm,0.9s
GRNR                                smax      smax
             comp=N,2.0nm,0.6s
GRNR                                MLR       MLR
             comp=E,1µm,20.0s
GRNR                                MLR       MLR
             comp=N,2µm,14.0s
GRNR                                MLR       MLR
             comp=Z,1µm,18.0s
EPYK  Eagle Plains      26.66  39   IAMs_20   IAMs_20   22 37 29.3
             comp=Z,4µm,18.0s
EPYK  Eagle Plains      26.66  39   P         P         22 25 19.0 +0.6
             baz=257
G30M  tAoh Zraii Nji    26.99  38   P         P         22 25 22.0 +0.6
             baz=256
M31M  Drury Creek, Y    27.12  48   IAMs_20   IAMs_20   22 37 07.6
             comp=Z,5µm,20.0s
M31M  Drury Creek, Y    27.12  48   P         P         22 25 22.6  0.0
             baz=268
S32K  Killisnoo         27.23  59   P         P         22 25 22.9 -0.5
             baz=277
JIS   Juneau Island     27.24  57   IAMs_20   IAMs_20   22 36 07.6
             comp=Z,5µm,21.0s
P32M  Atlin             27.48  54   P         P         22 25 25.6 -0.2
             baz=273
FARO  Faro, Yukon       27.61  48   P         P         22 25 26.8 -0.1
FARO  Faro, Yukon       27.61  48   P         P         22 25 27.0 +0.1
             baz=268
P33M  Teslin, Yukon     27.90  53   IAMs_20   IAMs_20   22 38 09.1
             comp=Z,5µm,20.0s
P33M  Teslin, Yukon     27.90  53   P         P         22 25 29.7 +0.1
             baz=273
F31M  Tsiigehtchic      28.03  37   P         P         22 25 30.7 +0.2
             baz=258,SNR=12
JTM   Tenmabayashi      28.13 263   P         P         22 25 31.2 -0.5
JTM   Tenmabayashi      28.13 263   P         P         22 25 33.6 +1.9
Q32M  Nakina River      28.27  55   P         P         22 25 32.6 -0.5
             baz=276
INK   Inuvik            28.30  35   P         P         22 25 32.4 -0.5
             comp=Z,9.1nm,0.5s,baz=262,slow=4.5,SNR=24
INK                                 PcP       PcP       22 28 44.4 -0.6
             comp=Z,10nm,1.0s,baz=239,slow=7.3,SNR=3.8
INK                                 ScP       ScP       22 32 22.9 -0.3
             comp=Z,8.9nm,1.1s,baz=244,slow=3.9,SNR=5.8
             comp=Z,9.1nm,0.5s
INK   Inuvik            28.30  35   P         P         22 25 33.1 +0.2
INK                                 IAmb      IAmb      22 25 48.0
             comp=Z,61nm,1.4s
INK   Inuvik            28.30  35   P         P         22 25 33.2 +0.3
             baz=257,SNR=19
YAK   Yakutsk           28.52 311   P         P         22 25 34.3 -0.6
             comp=Z,12nm,0.5s,baz=74,slow=3.1,SNR=10
YAK                                 ScP       ScP       22 32 23.1 -0.8
             comp=Z,12nm,0.6s,baz=220,slow=2.4,SNR=5.9
YAK                                 LR        LR        22 36 57.7
             comp=Z,6µm,19.6s,baz=104,slow=36
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             comp=Z,12nm,0.5s
YAK   Yakutsk           28.52 311   P         P         22 25 33.6 -1.3
YAK                                 IAmb      IAmb      22 26 26.0
             comp=Z,64nm,0.9s
YAK                                 IAMs_20   IAMs_20   22 36 36.2
             comp=Z,6µm,20.0s
YAK   Yakutsk           28.52 311c iP         P         22 25 33.9 -1.0
YAK                                e                    22 28 46.3
YAK                                eS         S         22 30 19.3 -0.8
YAK                                eSSS       SSS       22 31 51.9
YAK                                e                    22 36 15.5
YAK                                 pmax      pmax
             comp=Z,66nm,1.1s
YAK                                 pmax      pmax
             comp=N,2.0nm,0.8s
YAK                                 pmax      pmax
             comp=E,22nm,1.0s
YAK                                 pmax      pmax
             comp=Z,99nm,1.5s
YAK                                 pmax      pmax
             comp=N,66nm,1.6s
YAK                                 pmax      pmax
             comp=E,65nm,1.3s
YAK                                 smax      smax
             comp=N,291nm,3.7s
YAK                                 smax      smax
             comp=E,148nm,3.8s
YAK                                 MLR       MLR
             comp=Z,7µm,20.0s
YAK                                 MLR       MLR
             comp=E,4µm,19.0s
MMPY  Sheldon Lake,     28.59  47   P         P         22 25 36.2 +0.5
             baz=270,SNR=13
WRAK  Wrangell Islan    28.59  60   IAMs_20   IAMs_20   22 36 02.2
             comp=Z,5µm,21.0s
TEY   Ternei            28.73 274  eP         P         22 25 36.1 -0.9
DLBC  Dease Lake        29.50  56   P         P         22 25 43.6 -0.2
             comp=Z,2.1nm,0.6s,baz=58,slow=10.0,SNR=2.2
DLBC                                LR        LR        22 37 19.3
             comp=Z,4µm,21.9s,baz=282,slow=36
             comp=Z,2.1nm,0.6s
DLBC  Dease Lake        29.50  56   P         P         22 25 44.2 +0.4
             baz=278
KLR   Kul'dur           29.96 285   P         P         22 25 47.8  0.0
             comp=Z,64nm,0.7s,baz=67,slow=7.5,SNR=211
KLR                                 LR        LR        22 39 38.5
             comp=Z,2µm,18.4s,baz=84,slow=40
             comp=Z,64nm,0.7s
KLR   Kul'dur           29.96 285c iP         P         22 25 47.7 -0.1
KLR                                 pmax      pmax
             comp=Z,82nm,1.0s
JMM   Marumori          30.05 259   P         P         22 25 48.6 -0.1
JMM   Marumori          30.05 259   P         P         22 25 50.8 +2.0
             comp=Z,102nm,1.2s
TIXI  Tiksi             30.10 331   P         P         22 25 48.0 -0.8
             comp=Z,4.0nm,0.5s,baz=90,slow=23,SNR=15
TIXI                                PcP       PcP       22 28 49.2 -0.3
             comp=Z,7.5nm,0.5s,baz=270,slow=23,SNR=12
TIXI                                ScP       ScP       22 32 28.4 -0.5
             comp=Z,7.1nm,0.9s,baz=270,slow=23,SNR=7.1
TIXI                                LR        LR        22 38 30.5
             comp=Z,7µm,19.0s,baz=89,slow=38
             comp=Z,4.0nm,0.5s
TIXI  Tiksi             30.10 331   P         P         22 25 48.1 -0.8
ZEA   Zeya              31.10 295  eP         P         22 25 56.9 -1.0
ZEA                                 pmax      pmax
             comp=E,400nm,5.9s
ZEA                                 pmax      pmax
             comp=Z,500nm,4.2s
ZEA                                 pmax      pmax
             comp=E,30nm,0.8s
ZEA                                 pmax      pmax
             comp=Z,70nm,0.8s
ZEA                                 MLR       MLR
             comp=E,2µm,22.0s
ZEA                                 MLR       MLR
             comp=N,3µm,18.0s
ZEA                                 MLR       MLR
             comp=Z,3µm,20.0s
JSD   Sado              31.51 261   P         P         22 26 00.8 -0.9
JSD                                 IAmb      IAmb      22 26 04.2
             comp=Z,71nm,0.9s
JSD   Sado              31.51 261   P         P         22 26 03.2 +1.5
A36M  Sachs Harbour     31.81  29   P         P         22 26 05.2 +1.3
             baz=260,SNR=26
C36M  Paulatuk          31.85  34   P         P         22 26 04.2  0.0
C36M                                IAmb      IAmb      22 26 08.8
             comp=Z,39nm,0.9s
C36M  Paulatuk          31.85  34   P         P         22 26 04.5 +0.2
             baz=265,SNR=44
USA0B Ussuriysk Arra    32.02 276   P         P         22 26 05.8 -0.3
USA0B Ussuriysk Arra    32.02 276⇑ eP         P         22 26 05.5 -0.5
USRK  Ussuriysk Ar.     32.02 276   P         P         22 26 05.8 -0.2
             comp=Z,16nm,0.7s,baz=68,slow=8.6,SNR=27
USRK                                PcP       PcP       22 28 55.2 +0.1
             comp=Z,12nm,1.0s,baz=50,slow=3.4,SNR=6.9
USRK                                LR        LR        22 38 00.0
             comp=Z,3µm,21.6s,baz=56,slow=34
             comp=Z,16nm,0.7s
BBB   Bella Bella       32.10  67   LR        LR        22 38 50.6
             comp=Z,2µm,19.5s,baz=294,slow=36
WRGLY Wrigley           32.12  46   P         P         22 26 07.4 +0.6
             baz=275
HEH   HeiHe             32.17 289  eP         P         22 26 05.8 -1.6
HEH                                 pP        pP        22 26 15.3 -1.7
HEH                                 PP        PP        22 27 17.6 -2.6
HEH                                 PcP       PcP       22 28 54.6 -0.8
HEH                                 S         S         22 31 16.6 -1.1
HEH                                 sS        sS        22 31 34.1 +1.2
HEH                                 ScP       ScP       22 32 36.3 +0.1
HEH                                 pmax      pmax
             comp=Z,21nm,0.7s
HEH                                 pmax      pmax
             comp=Z,600nm,5.7s
HEH                                 LR        LR
             comp=Z,4µm,15.5s
HEH                                 LR        LR
             comp=Z,2µm,22.7s
HEH                                 LR        LR
             comp=Z,5µm,20.3s
KOTAN Kotaneelee Air    32.26  52   P         P         22 26 09.1 +1.0
             baz=280,SNR=12
MJAR  Matsushiro Arr    32.48 259   P         P         22 26 10.0 -0.2
             comp=Z,19nm,0.9s,baz=51,slow=7.2,SNR=31
MJAR                                PcP       PcP       22 28 56.4 -0.2
             comp=Z,13nm,1.1s,baz=308,slow=0.6,SNR=9.2
MJAR                                ScP       ScP       22 32 38.4 +0.9
             comp=Z,5.0nm,1.0s,baz=81,slow=1.4,SNR=7.4
MJAR                                LR        LR        22 37 23.7
             comp=Z,4µm,21.1s,baz=50,slow=33
             comp=Z,19nm,0.9s
MAJO  Matsushiro        32.48 259   P         P         22 26 08.8 -1.4
MAJO  Matsushiro        32.48 259   P         P         22 26 12.3 +2.0
MAJO  Matsushiro        32.48 259⇑ eP         P         22 26 10.7 +0.4
MAJO                                pmax      pmax
             comp=Z,93nm,1.1s
MJB9  Matsu-Tunnel      32.48 259   P         P         22 26 09.7 -0.6
VLA   Vladivostok       32.63 274⇓ eP         P         22 26 13.6 +2.2
VLA                                 pmax      pmax
             comp=Z,46nm,1.1s
H11N2 WAKE ISLAND Hy    32.91 202   T         T         23 01 16.1
             baz=20,slow=75,SNR=190
H11N3 WAKE ISLAND Hy    32.92 202   T         T         23 01 17.8
             baz=20,slow=75,SNR=171
H11N1 WAKE ISLAND Hy    32.93 202   T         T         23 01 18.3
             baz=20,slow=75,SNR=175
MDJ   Mudanjiang        33.30 278   P         P         22 26 15.5 -1.8
MDJ                                 pP        pP        22 26 24.8 -2.2
MDJ                                 sP        sP        22 26 28.8 -1.6
MDJ                                 S         S         22 31 35.1 -0.2
MDJ                                 sS        sS        22 31 51.8 +1.7
MDJ                                 pmax      pmax
             comp=Z,22nm,1.0s
MDJ                                 pmax      pmax
             comp=Z,640nm,5.8s
MDJ                                 LR        LR
             comp=Z,2µm,18.4s
MDJ                                 LR        LR
             comp=Z,5µm,19.2s
MDJ                                 LR        LR
             comp=Z,7µm,20.6s
MDJ   Mudanjiang        33.30 278   P         P         22 26 15.5 -1.8
MDJ                                 IAMs_20   IAMs_20   22 39 16.3
             comp=Z,5µm,21.0s
MDJ   Mudanjiang        33.30 278   P         P         22 26 18.8 +1.5
JGF   Kuroka            33.62 259   P         P         22 26 20.0 -0.2
JGF   Kuroka            33.62 259   P         P         22 26 20.7 +0.5
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INU    Inuyama            33.99 259   P        P        22 26 22.9 -0.5
INU                                   IAmb     IAmb     22 26 26.3
       comp=Z,79nm,1.3s
INU    Inuyama            33.99 259   P        P        22 26 25.4 +2.0
       comp=Z,60nm,2.4s
BNX    BinXian            34.12 281  ⇑P        P        22 26 23.0 -1.3
BNX                                   pP       pP       22 26 34.9 +0.9
BNX                                   sP       sP       22 26 39.6 +2.1
BNX                                   PP       PnPn     22 27 36.5 -1.8
BNX                                   S        S        22 31 46.3 -1.6
BNX                                   sS       sS       22 32 01.0 -2.0
BNX                                   pmax     pmax
       comp=Z,15nm,0.8s
BNX                                   pmax     pmax
       comp=Z,640nm,6.4s
BNX                                   LR       LR
       comp=Z,3µm,15.3s
BNX                                   LR       LR
       comp=Z,2µm,19.7s
BNX                                   LR       LR
       comp=Z,3µm,20.5s
H11S1  WAKE ISLAND Hy     34.14 201   T        T        23 02 50.3
       baz=19,slow=76,SNR=145
H11S2  WAKE ISLAND Hy     34.16 201   T        T        23 02 51.6
       baz=19,slow=76,SNR=122
H11S3  WAKE ISLAND Hy     34.16 201   T        T        23 02 46.6
       baz=19,slow=76,SNR=89
KIP    Kipapa             34.72 141   P        P        22 26 28.8 -1.0
KIP    Kipapa             34.72 141   P        P        22 26 30.8 +1.0
       comp=Z,144nm,1.6s
KIP    Kipapa             34.72 141ceP        P        22 26 30.6 +0.8
KIP                                   pmax     pmax
       comp=Z,170nm,1.1s
HON    Honolulu           34.82 141   P        P        22 26 31.0 +0.4
HON    Honolulu           34.82 141   P        P        22 26 31.0 +0.4
HON                                   pmax     pmax
       comp=Z,195nm,1.2s
OZB    Mount Ozzard       34.88  72   P        P        22 26 32.5 +1.5
CLRS   Cowichan Lake      35.75  71   P        P        22 26 37.7 -0.7
CLRS                                  IAmb     IAmb     22 27 13.3
       comp=Z,52nm,1.3s
HILA   High Level         36.13  53   P        P        22 26 41.5 -0.1
YKA    Yellowknife Ar     36.25  46   P        P        22 26 42.4 -0.1
       comp=Z,24nm,0.8s,baz=280,slow=8.1,SNR=54
YKA                                   PcP      PcP      22 29 06.3 -0.5
       comp=Z,7.6nm,1.1s,baz=281,slow=2.4,SNR=5.9
YKA                                   ScP      ScP      22 32 51.2 +0.8
       comp=Z,11nm,0.6s,baz=290,slow=3.3,SNR=48
       comp=Z,24nm,0.8s
YKA    Yellowknife Ar     36.25  46   P        P        22 26 42.1 -0.4
CN2    Changchun          36.29 280  eP        P        22 26 42.5 -0.6
CN2                                   PP       PP       22 28 05.6 -0.1
CN2                                  eS        S        22 32 22.5 +1.2
CN2                                   SS       SnSn     22 34 46.1 -3.4
CN2                                   pmax     pmax
       comp=Z,10.0nm,0.5s
CN2                                   pmax     pmax
       comp=Z,700nm,7.0s
CN2                                   LR       LR
       comp=Z,2µm,16.0s
CN2                                   LR       LR
       comp=Z,2µm,16.0s
CN2                                   LR       LR
       comp=Z,1µm,18.0s
NLWA   Neilton Lookou     36.55  73   P        P        22 26 46.7 +1.4
NLWA                                  IAmb     IAmb     22 26 49.7
       comp=Z,31nm,0.9s
NLWA                                  IAMs_20  IAMs_20  22 38 54.3
       comp=Z,3µm,22.0s
JHS    Saijyo             36.64 262   P        P        22 26 45.5 -0.6
JHS                                   IAmb     IAmb     22 26 49.2
       comp=Z,77nm,1.1s
JHS    Saijyo             36.64 262   P        P        22 26 47.7 +1.5
JCJ    Chichijima         36.86 243   LR       LR       22 39 00.0
       comp=Z,2µm,22.0s,baz=33,slow=31
BOD    Bodaibo            37.00 306⇓iP        P        22 26 47.0 -1.9
BOD                                   pmax     pmax
       comp=Z,78nm,0.9s
JMN    Monobe             37.00 260   P        P        22 26 48.9 -0.4
JMN                                   IAmb     IAmb     22 26 53.4
       comp=Z,118nm,1.3s
JMN    Monobe             37.00 260   P        P        22 26 50.6 +1.3
HHU    Hamhung            37.11 273   P        P        22 26 50.1 +0.1
HIA    Hailar             37.11 291   P        P        22 26 49.0 -1.1
HIA    Hailar             37.11 291   IAMs_20  IAMs_20  22 42 13.0
       comp=Z,4µm,21.0s
HIA    Hailar             37.11 291   P        P        22 26 51.8 +1.7
HIA    Hailar             37.11 291c iP        P        22 26 49.4 -0.7
HIA                                   pmax     pmax
       comp=Z,33nm,1.1s
POHA   Pohakuloa          37.23 138   IAMs_20  IAMs_20  22 38 24.2
       comp=Z,4µm,21.0s
D05A   Enumclaw           37.78  72   P        P        22 26 56.8 +1.1
D05A                                  IAmb     IAmb     22 27 24.3
       comp=Z,132nm,1.3s
COR    Corvallis          38.28  77   IAMs_20  IAMs_20  22 39 15.4
       comp=Z,3µm,22.0s
KSRS   Korea Array        38.34 269   P        P        22 27 01.3 +0.8
       comp=Z,30nm,1.0s,baz=59,slow=8.1,SNR=51
KSRS                                  PcP      PcP      22 29 13.2 -0.5
       comp=Z,9.5nm,1.0s,baz=67,slow=4.0,SNR=8.3
KSRS                                  LR       LR       22 41 41.6
       comp=Z,1µm,21.9s,baz=60,slow=34
       comp=Z,30nm,1.0s
KS19   Wonju Array Si     38.34 269   P        P        22 27 01.5 +1.0
KS19                                  IAmb     IAmb     22 27 03.9
       comp=Z,60nm,1.1s
KSAR   Wonju Array Be     38.37 269   P        P        22 27 00.2 -0.5
KSAR                                  PcP      PcP      22 29 13.2 -0.6
KSAR   Wonju Array Be     38.37 269   P        P        22 27 00.2 -0.5
KSAR                                                    22 29 13.2
SNY    Shenyang           38.51 278  ⇑P        P        22 27 02.1 +0.3
SNY                                   S        S        22 32 57.9 +2.9
SNY                                   pmax     pmax
       comp=Z,49nm,0.9s
SNY                                   pmax     pmax
       comp=Z,840nm,10.0s
SNY                                   LR       LR
       comp=Z,3µm,20.0s
SNY                                   LR       LR
       comp=Z,2µm,21.6s
SNY                                   LR       LR
       comp=Z,5µm,22.6s
PYAG   Pyongyang          38.74 273   P        P        22 27 04.4 +0.6
PYAG                                  AmB
       comp=Z,480nm,2.0s
B08A   Colville Reser     38.80  69   P        P        22 27 04.1 -0.2
SUJ    Sinuiju            38.91 275   P        P        22 27 05.2 -0.1
SUJ                                   S        S        22 33 01.9 +0.8
SUJ                                   AmB
       comp=Z,68nm,0.8s
SUJ                                   AMS      AMS
       comp=Z,3µm,16.8s
INCN   Inchon             39.13 270   P        P        22 27 06.3 -0.9
INCN                                  IAmb     IAmb     22 27 10.8
       comp=Z,153nm,1.2s
INCN   Inchon             39.13 270   P        P        22 27 08.9 +1.7
       comp=Z,108nm,1.2s
INCN   Inchon             39.13 270   P        P        22 27 06.3 -0.9
INCN                                  pmax     pmax
       comp=Z,153nm,1.3s
INCN                                  MLR      MLR
       comp=Z,1µm,19.0s
JNU    Nakatsue           39.27 262   P        P        22 27 08.2 -0.2
       comp=Z,89nm,1.0s,baz=42,slow=7.5,SNR=16
JNU                                   LR       LR       22 41 50.8
       comp=Z,3µm,21.9s,baz=53,slow=34
       comp=Z,89nm,1.0s
JNU    Nakatsue           39.27 262   P        P        22 27 07.3 -1.1
JNU                                   IAmb     IAmb     22 27 11.6
       comp=Z,156nm,1.2s
JNU                                   PcP      PcP      22 29 14.7 -2.0
JNU    Nakatsue           39.27 262   P        P        22 27 09.6 +1.2
TJN    Taejon             39.36 268   P        P        22 27 08.9 -0.1
TJN    Taejon             39.36 268   P        P        22 27 11.0 +2.0
TJN    Taejon             39.36 268ceP        P        22 27 09.6 +0.6
HJU    Haeju              39.36 272   P        P        22 27 09.3 +0.3
HJU                                   S        S        22 33 09.3 +1.4
HJU                                   AmB
       comp=Z,189nm,1.1s
CIT    Chita              39.45 298  eP        P        22 27 09.8 +0.1
CIT                                  e                  22 28 45.2
CIT                                   pmax     pmax
       comp=Z,215nm,2.3s
HUMO   Hull Mountain      39.54  79   IAMs_20  IAMs_20  22 40 00.9
       comp=Z,3µm,21.0s
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HAWA   Hanford            39.64  72   P        P        22 27 11.7 +0.4
HAWA                                  IAMs_20  IAMs_20  22 40 44.5
       comp=Z,3µm,21.0s
C09A   Chrisman Ranch     39.69  70   P        P        22 27 11.7  0.0
J04A   Umpqua Nationa     39.72  78   P        P        22 27 13.5 +1.2
J04A                                  IAmb     IAmb     22 27 30.4
       comp=Z,59nm,0.8s
NEW    Newport            40.14  68   P        P        22 27 14.8 -0.6
       comp=Z,12nm,0.6s,baz=291,slow=7.5,SNR=20
NEW                                   ScP      ScP      22 33 05.9 +0.4
       comp=Z,2.4nm,0.7s,baz=333,slow=1.4,SNR=3.3
NEW                                   LR       LR       22 42 47.9
       comp=Z,2µm,20.6s,baz=296,slow=35
       comp=Z,12nm,0.6s
NEW    Newport            40.14  68   P        P        22 27 15.0 -0.5
NEW    Newport            40.14  68   P        P        22 27 15.0 -0.5
NEW                                   pmax     pmax
       comp=Z,25nm,1.0s
NEW                                   MLR      MLR
       comp=Z,2µm,20.0s
NEW    Newport            40.14  68   P        P        22 27 15.5  0.0
       baz=299,SNR=14
YBH    Yreka Blue Hor     40.18  80   LR       LR       22 40 52.3
       comp=Z,2µm,21.8s,baz=303,slow=32
YBH    Yreka Blue Hor     40.18  80   P        P        22 27 17.2 +1.2
YBH                                   IAMs_20  IAMs_20  22 40 18.7
       comp=Z,3µm,22.0s
YBH    Yreka Blue Hor     40.18  80   P        P        22 27 17.2 +1.2
YBH                                   pmax     pmax
       comp=Z,25nm,1.0s
YBH                                   MLR      MLR
       comp=Z,3µm,22.0s
RES    Resolute Bay       40.38  24   P        P        22 27 17.6 +0.5
       comp=Z,9.9nm,0.5s,baz=263,slow=8.9,SNR=45
RES                                   ScP      ScP      22 33 06.8 +0.9
       comp=Z,6.4nm,0.9s,baz=332,slow=5.9,SNR=7.5
RES                                   LR       LR       22 47 36.8
       comp=Z,2µm,18.1s,baz=270,slow=42
       comp=Z,9.9nm,0.5s
RES    Resolute Bay       40.38  24   P        P        22 27 17.3 +0.3
RES    Resolute Bay       40.38  24   P        P        22 27 17.3 +0.3
RES                                   pmax     pmax
       comp=Z,50nm,1.4s
JSU    Suzuyama           40.63 260   P        P        22 27 19.5 -0.1
JSU                                   IAmb     IAmb     22 27 22.7
       comp=Z,122nm,1.1s
JSU    Suzuyama           40.63 260   P        P        22 27 21.6 +1.9
DL2    Dalian             41.41 276   P        P        22 27 25.8 -0.1
DL2                                   S        S        22 33 42.6 +4.2
DL2                                   SS       SS       22 36 32.4 -10
DL2                                   pmax     pmax
       comp=Z,68nm,1.1s
DL2                                   pmax     pmax
       comp=Z,520nm,4.7s
DL2                                   LR       LR
       comp=Z,2µm,15.1s
DL2                                   LR       LR
       comp=Z,1µm,16.7s
DL2                                   LR       LR
       comp=Z,2µm,16.7s
HOPS   Hopland Field      41.54  84   P        P        22 27 27.3 +0.2
HOPS                                  IAmb     IAmb     22 27 53.5
       comp=Z,58nm,1.3s
HOPS                                  IAMs_20  IAMs_20  22 41 44.6
       comp=Z,4µm,20.0s
MOD    Modoc Plateau      41.57  78   P        P        22 27 27.2 -0.3
MOD                                   IAMs_20  IAMs_20  22 41 06.6
       comp=Z,3µm,21.0s
WALA   Waterton Lakes     41.60  66   P        P        22 27 27.4 -0.3
BMO    Blue Mountains     41.77  73   P        P        22 27 28.9 -0.1
BMO                                   IAMs_20  IAMs_20  22 41 36.0
       comp=Z,3µm,22.0s
BMO    Blue Mountains     41.77  73   P        P        22 27 28.9 -0.1
BMO                                   pmax     pmax
       comp=Z,18nm,0.9s
BMO                                   MLR      MLR
       comp=Z,3µm,22.0s
XLT    XiLinHaoTe         41.98 286⇑iP        P        22 27 31.1 +0.4
XLT                                   pP       sP       22 27 43.6 -0.6
XLT                                   sP       pP       22 27 48.1 +7.6
XLT                                   PcP      PcP      22 29 27.3 +1.9
XLT                                   S        S        22 33 55.1 +8.2
XLT                                   sS       sS       22 34 12.5 +10
XLT                                   SS       ScS      22 37 20.9 -9.4
XLT                                   pmax     pmax
       comp=Z,100nm,1.2s
XLT                                   pmax     pmax
       comp=Z,990nm,4.4s
XLT                                   LR       LR
       comp=N,160nm,15.3s
XLT                                   LR       LR
       comp=E,2µm,18.3s
XLT                                   LR       LR
       comp=Z,3µm,17.9s
XLT    XiLinHaoTe         41.98 286⇑iP        P        22 27 31.0 +0.4
XLT                                   pP       pP       22 27 35.8 -4.7
XLT                                   sS       sS       22 34 00.8 -1.5
XLT                                   pmax     pmax
       comp=Z,100nm,1.2s
XLT                                   pmax     pmax
       comp=Z,980nm,4.3s
XLT                                   LR       LR
       comp=Z,2µm,18.7s
XLT                                   LR       LR
       comp=Z,3µm,16.6s
MCCM   Marconi Confer     42.17  85   IAMs_20  IAMs_20  22 43 50.3
       comp=Z,3µm,18.0s
WVOR   Wild Horse Val     42.29  77   P        P        22 27 34.0 +0.7
WVOR                                  IAMs_20  IAMs_20  22 41 45.8
       comp=Z,3µm,22.0s
WVOR   Wild Horse Val     42.29  77   P        P        22 27 34.0 +0.7
WVOR                                  pmax     pmax
       comp=Z,28nm,0.9s
WVOR                                  MLR      MLR
       comp=Z,3µm,22.0s
PLID   Pearl Lake         42.43  72   IAMs_20  IAMs_20  22 42 32.3
       comp=Z,3µm,22.0s
MSO    Missoula           42.72  69   P        P        22 27 36.7 -0.1
MSO    Missoula           42.72  69   P        P        22 27 37.0 +0.2
       baz=301,SNR=18
ALE    Alert              42.96  10   IAMs_20  IAMs_20  22 46 45.2
       comp=Z,3µm,20.0s
PAHR   Pah Rah Range      43.41  81   P        P        22 27 41.9 -0.6
MFID   Camas Ranch        43.45  74   P        P        22 27 43.0 +0.3
MFID                                  IAMs_20  IAMs_20  22 42 26.4
       comp=Z,2µm,22.0s
CMB    Columbia Colle     43.80  83   IAMs_20  IAMs_20  22 41 56.4
       comp=Z,3µm,21.0s
NRIK   Noril'sk           43.84 329   P        P        22 27 45.3  0.0
       comp=Z,57nm,1.1s,baz=79,slow=6.3,SNR=45
NRIK                                  PcP      PcP      22 29 31.5 +0.4
       comp=Z,37nm,1.2s,baz=50,slow=2.8,SNR=3.7
NRIK                                  LR       LR       22 47 19.6
       comp=Z,4µm,18.9s,baz=66,slow=38
       comp=Z,57nm,1.1s
NRIK   Noril'sk           43.84 329   P        P        22 27 45.3  0.0
NRIK                                  IAmb     IAmb     22 27 48.9
       comp=Z,77nm,1.1s
NRIK   Noril'sk           43.84 329c iP        P        22 27 45.6 +0.3
NRIK                                  pmax     pmax
       comp=Z,69nm,1.1s
SAO    San Andreas Ge     43.92  85   IAMs_20  IAMs_20  22 44 47.6
       comp=Z,2µm,18.0s
BJI    Beijing            44.12 281   P        P        22 27 48.4 +0.5
BJI                                   S        S        22 34 21.0 +2.8
BJI                                   pmax     pmax
       comp=Z,680nm,6.1s
BJI                                   LR       LR
       comp=Z,2µm,18.4s
BJI                                   LR       LR
       comp=Z,1µm,20.3s
BJI                                   LR       LR
       comp=Z,2µm,20.2s
BJT    Baijiatuau         44.14 281   P        P        22 27 48.1  0.0
BJT                                   IAmb     IAmb     22 27 50.9
       comp=Z,45nm,1.0s
BJT    Baijiatuau         44.14 281   IAMs_20  IAMs_20  22 45 47.8
       comp=Z,3µm,20.0s
BJT    Baijiatuau         44.14 281   P        P        22 27 49.8 +1.7
BJT    Baijiatuau         44.14 281   P        P        22 27 48.1  0.0
BJT                                   pmax     pmax
       comp=Z,45nm,1.0s
BJT                                   MLR      MLR
       comp=Z,3µm,20.0s
HLID   Hailey             44.22  73   P        P        22 27 49.2 +0.3
HLID                                  IAmb     IAmb     22 27 54.8
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       comp=Z,36nm,1.1s
HLID                                  IAMs_20  IAMs_20  22 43 15.7
       comp=Z,3µm,22.0s
HLID   Hailey             44.22  73   P        P        22 27 49.3 +0.3
       baz=304,SNR=52
BBGB   Big Mountain B     44.29  85   P        P        22 27 49.8 +0.3
BBGB                                  IAmb     IAmb     22 28 01.5
       comp=Z,42nm,0.9s
IRK    Irkutsk            44.40 302  eP        P        22 27 49.2 -0.9
IRK                                   pmax     pmax
       comp=Z,76nm,2.3s
EGMT   Eagleton           44.51  65   P        P        22 27 51.2 +0.1
EGMT                                  IAmb     IAmb     22 28 01.9
       comp=Z,44nm,1.1s
EGMT                                  IAMs_20  IAMs_20  22 43 53.2
       comp=Z,2µm,21.0s
EGMT   Eagleton           44.51  65   P        P        22 27 51.6 +0.6
       baz=302,SNR=22
BOZ    Bozeman (W)        44.74  69   P        P        22 27 52.5 -0.4
BOZ                                   IAmb     IAmb     22 28 14.2
       comp=Z,76nm,1.4s
BOZ    Bozeman (W)        44.74  69   P        P        22 27 52.6 -0.4
BOZ                                   pmax     pmax
       comp=Z,76nm,1.4s
BOZ                                   MLR      MLR
       comp=Z,1µm,20.0s
BOZ    Bozeman (W)        44.74  69   P        P        22 27 52.9 -0.1
       baz=303,SNR=28
NVAR   Mina Array Bea     44.85  81   P        P        22 27 54.8 +0.7
       comp=Z,13nm,0.7s,baz=295,slow=7.8,SNR=39
NVAR                                  LR       LR       22 43 07.1
       comp=Z,2µm,21.6s,baz=294,slow=31
       comp=Z,13nm,0.7s
NVAR   Mina Array Bea     44.85  81   P        P        22 27 54.5 +0.4
NV11   Mina Array Sit     44.95  81   P        P        22 27 54.8 +0.1
NV11                                  IAmb     IAmb     22 28 05.2
       comp=Z,43nm,1.4s
ULN    Ulaanbaatar        45.14 295   P        P        22 27 56.3 +0.1
ULN                                   IAmb     IAmb     22 27 59.1
       comp=Z,30nm,0.9s
ULN    Ulaanbaatar        45.14 295c iP        P        22 27 56.4 +0.2
ULN                                   pmax     pmax
       comp=Z,43nm,1.3s
FFC    Flin Flon          45.26  53   P        P        22 27 56.7 -0.1
FFC    Flin Flon          45.26  53   P        P        22 27 56.7 -0.1
FFC                                   pmax     pmax
       comp=Z,31nm,1.2s
FFC                                   MLR      MLR
       comp=Z,4µm,20.0s
JOW    Kunigami           45.27 257   LR       LR       22 45 21.1
       comp=Z,779nm,21.6s,baz=51,slow=34
JOW    Kunigami           45.27 257   P        P        22 27 56.9 -0.4
JOW    Kunigami           45.27 257   P        P        22 27 58.8 +1.5
ELK    Elko               45.35  77   LR       LR       22 43 56.1
       comp=Z,2µm,21.8s,baz=316,slow=32
ELK    Elko               45.35  77   P        P        22 27 57.9 -0.1
ELK                                   IAmb     IAmb     22 28 10.4
       comp=Z,24nm,0.8s
ELK                                   IAMs_20  IAMs_20  22 43 44.6
       comp=Z,2µm,21.0s
ELK    Elko               45.35  77   P        P        22 27 57.9 -0.1
ELK                                   pmax     pmax
       comp=Z,24nm,0.9s
ELK                                   MLR      MLR
       comp=Z,2µm,21.0s
TULEG  Thule              45.48  18   P        P        22 27 57.7 -0.6
TULEG                                 IAmb     IAmb     22 28 00.8
       comp=Z,64nm,1.5s
TULEG  Thule              45.48  18 i P        P        22 27 57.4 -0.9
TULEG                                 IAmb     IAmb     22 28 26.4
       comp=Z,33nm,1.1s
SONM   Songino Array      45.53 296   P        P        22 27 59.8 +0.6
       comp=Z,15nm,0.7s,baz=64,slow=7.9,SNR=81
SONM                                  PcP      PcP      22 29 37.4  0.0
       comp=Z,6.1nm,0.7s,baz=71,slow=2.7,SNR=4.1
SONM                                  ScP      ScP      22 33 28.5 +1.1
       comp=Z,2.5nm,0.7s,baz=41,slow=3.5,SNR=6.0
SONM                                  LR       LR       22 48 53.0
       comp=Z,7µm,18.2s,baz=58,slow=38
       comp=Z,15nm,0.7s
SONM   Songino Array      45.53 296   P        P        22 27 58.9 -0.3
SONM                                  IAmb     IAmb     22 28 03.2
       comp=Z,145nm,1.9s
YMR    Madison River      45.65  70   P        P        22 28 00.2 -0.1
YMR                                   IAmb     IAmb     22 28 31.5
       comp=Z,42nm,1.0s
TPH    Tonopah            45.74  81   P        P        22 28 01.1  0.0
TPH    Tonopah            45.74  81   P        P        22 28 01.1  0.0
TPH                                   pmax     pmax
       comp=Z,132nm,0.8s
TIN    Tinemaha, Big      45.75  83   P        P        22 28 02.2 +1.1
       baz=309
TIA    Tai'an             45.88 276  ⇑P        P        22 28 02.0  0.0
TIA                                   SS       ScS      22 37 55.3 +0.3
TIA                                   pmax     pmax
       comp=Z,24nm,0.7s
TIA                                   pmax     pmax
       comp=Z,720nm,4.7s
TIA                                   LR       LR
       comp=Z,1µm,18.6s
TIA                                   LR       LR
       comp=Z,1µm,18.8s
TIA                                   LR       LR
       comp=Z,2µm,19.4s
ZAK    Zakamensk          45.89 300  eP        P        22 28 01.9 -0.1
ZAK                                   pmax     pmax
       comp=Z,30nm,1.4s
VES    Vestal, Richgr     45.98  85   P        P        22 28 03.1 +0.3
       baz=310
H17A   Grant Village      46.03  70   P        P        22 28 04.5 +1.1
H17A   Grant Village      46.03  70   P        P        22 28 03.1 -0.3
       baz=305,SNR=18
LKWY   Lake               46.04  69   P        P        22 28 04.2 +0.8
LKWY                                  IAmb     IAmb     22 28 25.3
       comp=Z,34nm,1.0s
LKWY   Lake               46.04  69   P        P        22 28 04.2 +0.8
LKWY                                  pmax     pmax
       comp=Z,34nm,1.0s
PKM    Mcpherson Peak     46.14  86   P        P        22 28 03.6 -0.7
       baz=310,SNR=6.4
FXWY   Fox Creek          46.20  71   IAMs_20  IAMs_20  22 44 46.0
       comp=Z,2µm,22.0s
CWC    Cottonwood Cre     46.23  83   P        P        22 28 05.8 +0.8
       baz=309
HVU    Hansel Valley      46.23  74   P        P        22 28 05.3 +0.4
HVU                                   IAmb     IAmb     22 28 10.8
       comp=Z,30nm,0.7s
HVU    Hansel Valley      46.23  74   P        P        22 28 05.3 +0.4
GRAC   Grapevine Rang     46.33  82   P        P        22 28 06.1 +0.5
       baz=309
RLMT   Red Lodge          46.38  68   P        P        22 28 06.1 -0.1
RLMT                                  IAmb     IAmb     22 28 27.8
       comp=Z,64nm,1.1s
RLMT   Red Lodge          46.38  68   P        P        22 28 06.3 +0.2
       baz=304
MOY    Mondy              46.44 303  eP        P        22 28 06.1 -0.2
MOY                                   pmax     pmax
       comp=Z,89nm,2.3s
REDW   Red Top Meadow     46.46  71   IAMs_20  IAMs_20  22 45 05.0
       comp=Z,2µm,22.0s
SNOW   Snow King Moun     46.46  71   IAMs_20  IAMs_20  22 44 55.1
       comp=Z,2µm,22.0s
HHC    Hu-ho-hao-te       46.46 285  eP        P        22 28 07.5 +0.8
HHC                                   pP       pP       22 28 16.6  0.0
HHC                                   PP       PP       22 29 55.0 -0.9
HHC                                   S        S        22 34 50.8 -1.5
HHC                                   sS       sS       22 35 07.8 -0.3
HHC                                   ScS      ScS      22 37 57.3 -1.6
HHC                                   pmax     pmax
       comp=Z,69nm,1.1s
HHC                                   pmax     pmax
       comp=Z,2µm,6.0s
HHC                                   LR       LR
       comp=Z,4µm,16.5s
HHC                                   LR       LR
       comp=Z,5µm,15.9s
HHC                                   LR       LR
       comp=Z,4µm,16.5s
ISA    Isabella, Lake     46.48  84   P        P        22 28 06.1 -0.7
ISA    Isabella, Lake     46.48  84   P        P        22 28 06.1 -0.7
ISA                                   pmax     pmax
       comp=Z,23nm,1.2s
ISA    Isabella, Lake     46.48  84   P        P        22 28 06.7 -0.1
       baz=310
R11A   Troy Canyon, C     46.59  79   P        P        22 28 07.4 -0.4
       baz=308,SNR=42
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ARVC	**Arvin**	**46.60**	**85**	P	**P**	**22 28 06.9**	**-0.7**
	baz=310						
HNS	**HongShan**	**46.64**	**279**	⇑P	**P**	**22 28 08.8**	**+0.9**
HNS				PP	**PP**	**22 30 01.3**	**+3.6**
HNS				S	**S**	**22 34 55.6**	**+0.9**
HNS				SS	**SS**	**22 38 14.8**	**-5.9**
HNS				pmax	pmax		
	comp=Z,70nm,1.3s						
HNS				pmax	pmax		
	comp=Z,820nm,8.0s						
HNS				LR	LR		
	comp=Z,2µm,20.6s						
HNS				LR	LR		
	comp=Z,2µm,19.2s						
HNS				LR	LR		
	comp=Z,3µm,22.3s						
AHID	**Auburn Hatcher**	**46.66**	**72**	P	**P**	**22 28 08.1**	**-0.2**
AHID				IAmb	IAmb	22 28 14.0	
	comp=Z,25nm,0.9s						
AHID				IAMs_20	IAMs_20	22 44 46.3	
	comp=Z,3µm,22.0s						
SSE	**Sheshan**	**46.69**	**268**	P	**P**	**22 28 08.4**	**0.0**
SSE				PP	**PP**	**22 29 57.8**	**-0.6**
SSE				S	**S**	**22 34 53.4**	**-2.1**
SSE				pmax	pmax		
	comp=Z,80nm,1.0s						
SSE				pmax	pmax		
	comp=Z,360nm,5.3s						
MPMC	**Manual Prospec**	**46.84**	**83**	P	**P**	**22 28 10.8**	**+1.0**
	baz=310,SNR=12						
FCC	**Fort Churchill**	**46.97**	**45**	P	**P**	**22 28 09.6**	**-0.6**
FCC				IAmb	IAmb	22 28 13.3	
	comp=Z,16nm,0.8s						
FCC	**Fort Churchill**	**46.97**	**45**	P	**P**	**22 28 09.6**	**-0.6**
FCC				pmax	pmax		
	comp=Z,16nm,0.8s						
FURC	**Furnace Creek,**	**46.97**	**82**	P	**P**	**22 28 10.8**	**+0.3**
	baz=309						
OSI	**Osito Audit: C**	**47.00**	**86**	P	**P**	**22 28 10.4**	**-0.5**
	baz=310						
TPNV	**Topopah Spring**	**47.05**	**81**	P	**P**	**22 28 11.8**	**+0.4**
TPNV				IAmb	IAmb	22 28 28.4	
	comp=Z,40nm,0.8s						
TPNV				IAMs_20	IAMs_20	22 45 01.5	
	comp=Z,3µm,21.0s						
TPNV	**Topopah Spring**	**47.05**	**81**	P	**P**	**22 28 11.8**	**+0.4**
TPNV				pmax	pmax		
	comp=Z,40nm,0.8s						
TPNV				MLR	MLR		
	comp=Z,3µm,21.0s						
TPNV	**Topopah Spring**	**47.05**	**81**	P	**P**	**22 28 11.3**	**-0.1**
	baz=309,SNR=29						
LRMC	**Laurel Mtn Rad**	**47.09**	**84**	P	**P**	**22 28 12.8**	**+1.2**
	baz=310						
NOR	**Nord**	**47.10**	**3**	*i* P	**P**	**22 28 10.7**	**-0.3**
NOR				IAmb	IAmb	22 28 39.9	
	comp=Z,32nm,1.5s						
DUG	**Dugway, Tooele**	**47.16**	**76**	P	**P**	**22 28 12.3**	**+0.1**
DUG				IAmb	IAmb	22 28 34.4	
	comp=Z,50nm,0.9s						
DUG				IAMs_20	IAMs_20	22 44 42.6	
	comp=Z,2µm,22.0s						
DUG	**Dugway, Tooele**	**47.16**	**76**	P	**P**	**22 28 12.3**	**+0.1**
DUG				pmax	pmax		
	comp=Z,50nm,0.9s						
DUG				MLR	MLR		
	comp=Z,2µm,22.0s						
DUG	**Dugway, Tooele**	**47.16**	**76**	P	**P**	**22 28 12.5**	**+0.4**
	baz=307,SNR=40						
LAO	**LASA Array**	**47.25**	**65**	P	**P**	**22 28 12.4**	**-0.3**
LAO				IAmb	IAmb	22 28 42.5	
	comp=Z,52nm,1.3s						
LAO				IAMs_20	IAMs_20	22 47 50.7	
	comp=Z,2µm,20.0s						
LAO	**LASA Array**	**47.25**	**65**	P	**P**	**22 28 13.0**	**+0.3**
	baz=304,SNR=7.8						
LAO	**LASA Array**	**47.25**	**65**	P	**P**	**22 28 11.9**	**-0.8**
	baz=304						
EDW2	**Edwards Air Fo**	**47.28**	**85**	P	**P**	**22 28 13.5**	**+0.4**
	baz=310,SNR=5.5						
DGMT	**Dagmar**	**47.39**	**62**	IAMs_20	IAMs_20	22 48 45.2	
	comp=Z,2µm,20.0s						
NJ2	**Nanjing**	**47.51**	**270**	⇑P	**P**	**22 28 14.6**	**-0.2**
NJ2				pP	**pP**	**22 28 23.8**	**-1.0**
NJ2				sP	**sP**	**22 28 27.3**	**-1.5**
NJ2				S	**S**	**22 35 07.9**	**+0.7**
NJ2				sS	**sS**	**22 35 21.0**	**-1.2**
NJ2				ScS	**ScS**	**22 38 04.0**	**-1.7**
NJ2				pmax	pmax		
	comp=Z,58nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,540nm,6.9s						
NJ2				LR	LR		
	comp=Z,1µm,15.7s						
NJ2				LR	LR		
	comp=Z,1µm,16.2s						
NJ2				LR	LR		
	comp=Z,3µm,24.0s						
BTO	**Baotou**	**47.55**	**285**	⇑*i*P	**P**	**22 28 16.4**	**+1.3**
BTO				pP	**pP**	**22 28 29.3**	**+4.2**
BTO				sP	**sP**	**22 28 33.6**	**+5.0**
BTO				PP	**PP**	**22 30 09.0**	**+2.5**
BTO				S	**S**	**22 35 10.1**	**+2.3**
BTO				pmax	pmax		
	comp=Z,270nm,1.0s						
BTO				pmax	pmax		
	comp=Z,5µm,10.1s						
BTO				LR	LR		
	comp=Z,8µm,16.7s						
BTO				LR	LR		
	comp=Z,7µm,17.1s						
BTO				LR	LR		
	comp=Z,10µm,21.0s						
BW06	**Boulder Array**	**47.58**	**71**	IAMs_20	IAMs_20	22 45 29.6	
	comp=Z,3µm,21.0s						
BW06	**Boulder Array**	**47.58**	**71**	P	**P**	**22 28 15.7**	**+0.2**
	baz=306,SNR=52						
PD31	**Pinedale Array**	**47.58**	**71**	P	**P**	**22 28 15.3**	**-0.2**
PD31				IAmb	IAmb	22 28 27.1	
	comp=Z,31nm,0.8s						
PDAR	**Pinedale Array**	**47.58**	**71**	P	**P**	**22 28 15.2**	**-0.3**
	comp=Z,29nm,0.8s,baz=308,slow=3.0,SNR=123						
PDAR				ScP	**ScP**	**22 33 37.6**	**+1.4**
	comp=Z,1.0nm,0.7s,baz=258,slow=1.3,SNR=3.7						
PDAR				LR	LR	22 45 51.9	
	comp=Z,2µm,22.0s,baz=317,slow=33						
	comp=Z,29nm,0.8s						
PDAR	**Pinedale Array**	**47.58**	**71**	P	**P**	**22 28 15.3**	**-0.2**
PASC	**Pasadena Art C**	**47.62**	**86**	IAMs_20	IAMs_20	22 43 36.2	
	comp=Z,2µm,22.0s						
SHOC	**Shoshone, Teco**	**47.70**	**83**	P	**P**	**22 28 17.2**	**+1.0**
	baz=310,SNR=11						
GSC	**Goldstone, Bar**	**47.75**	**84**	P	**P**	**22 28 16.8**	**0.0**
	baz=310,SNR=15						
NEEM	**North Greenlan**	**47.84**	**13**	*i* P	**P**	**22 28 17.0**	**-0.1**
NEEM				IAmb	IAmb	22 28 18.3	
	comp=Z,93nm,0.6s						
TIY	**Taiyuan**	**47.85**	**281**	⇑P	**P**	**22 28 18.4**	**+0.9**
TIY				pP	**pP**	**22 28 25.1**	**-2.4**
TIY				S	**S**	**22 35 13.3**	**+1.2**
TIY				SS	**SS**	**22 38 35.1**	**-5.4**
TIY				pmax	pmax		
	comp=Z,47nm,0.8s						
TIY				pmax	pmax		
	comp=Z,800nm,5.9s						
TIY				LR	LR		
	comp=Z,2µm,15.8s						
TIY				LR	LR		
	comp=Z,930nm,17.2s						
TIY				LR	LR		
	comp=Z,2µm,16.5s						
FMP	**Fort Macarthur**	**47.86**	**86**	P	**P**	**22 28 17.3**	**-0.1**
	baz=311						
BFSC	**Mount Baldy Ra**	**47.91**	**85**	P	**P**	**22 28 18.0**	**0.0**
	baz=311						
RRX	**Edison Barstow**	**47.91**	**84**	P	**P**	**22 28 17.6**	**-0.2**
	baz=310						
CIS	**Catalina Islan**	**47.99**	**87**	P	**P**	**22 28 18.7**	**+0.2**
	baz=311						
TUQ	**Turquoise Moun**	**48.22**	**83**	P	**P**	**22 28 20.4**	**0.0**
	baz=310						
HEC	**Hector,Ludlow**	**48.35**	**84**	P	**P**	**22 28 21.8**	**+0.4**
	baz=310						
BBRC	**Big Bear Solar**	**48.36**	**85**	P	**P**	**22 28 21.7**	**+0.1**
	baz=311						
MVU	**Marysvale**	**48.57**	**77**	P	**P**	**22 28 23.4**	**+0.2**
MURC	**Murrieta**	**48.62**	**86**	P	**P**	**22 28 23.8**	**+0.5**
	baz=311						
GMRC	**Granite Mounta**	**48.80**	**83**	P	**P**	**22 28 24.9**	**-0.1**
	baz=311,SNR=21						
KULLO	**Kullorsuaq**	**48.97**	**17**	*i* P	**P**	**22 28 24.3**	**-1.1**
KULLO				IAmb	IAmb	22 28 27.7	
	comp=Z,32nm,0.8s						
PFO	**Pinyon Flats O**	**49.07**	**85**	LR	LR	22 44 57.2	
	comp=Z,2µm,21.8s,baz=298,slow=31						
PFO	**Pinyon Flats O**	**49.07**	**85**	P	**P**	**22 28 26.5**	**-0.5**
PFO	**Pinyon Flats O**	**49.07**	**85**	IAMs_20	IAMs_20	22 44 33.0	
	comp=Z,2µm,21.0s						
PFO	**Pinyon Flats O**	**49.07**	**85**	*d i*P	**P**	**22 28 26.9**	**-0.1**
PFO				pmax	pmax		
	comp=Z,12nm,0.9s						
PFO	**Pinyon Flats O**	**49.07**	**85**	P	**P**	**22 28 27.2**	**+0.2**
	baz=311						
TPFO	**Pinon Flats**	**49.08**	**85**	P	**P**	**22 28 27.3**	**+0.3**
	baz=311,SNR=5.7						
BELC	**Belle Mtn. Jos**	**49.10**	**84**	P	**P**	**22 28 27.1**	**-0.1**
	baz=311						
109C	**Camp Elliot, M**	**49.15**	**86**	P	**P**	**22 28 26.9**	**-0.5**
109C				IAmb	IAmb	22 28 32.1	
	comp=Z,24nm,0.9s						
109C	**Camp Elliot, M**	**49.15**	**86**	P	**P**	**22 28 27.1**	**-0.3**
	baz=312						
K22A	**Casper**	**49.44**	**69**	P	**P**	**22 28 30.2**	**+0.4**
K22A				IAmb	IAmb	22 28 49.4	
	comp=Z,28nm,0.9s						
K22A	**Casper**	**49.44**	**69**	P	**P**	**22 28 29.9**	**+0.2**
	baz=307						
NEE2	**Needles Airpor**	**49.46**	**83**	P	**P**	**22 28 28.9**	**-0.9**
	baz=311						
IRM	**Iron Mountain**	**49.53**	**84**	P	**P**	**22 28 29.9**	**-0.5**
	baz=311,SNR=11						
MONP2	**Monument Peak**	**49.57**	**86**	P	**P**	**22 28 30.4**	**-0.5**
	baz=312,SNR=8.0						
RWWY	**Rawlins**	**49.62**	**71**	IAMs_20	IAMs_20	22 47 19.6	
	comp=Z,2µm,20.0s						
BC3	**Big Chuckawall**	**49.67**	**84**	P	**P**	**22 28 30.8**	**-0.7**
	baz=311,SNR=6.3						
W13A	**Hualapai Mount**	**49.70**	**82**	P	**P**	**22 28 31.5**	**-0.4**
CBX	**Cerro Bola**	**49.81**	**86**	P	**P**	**22 28 32.7**	**+0.1**
U15A	**North Rim**	**49.83**	**79**	P	**P**	**22 28 33.1**	**+0.2**
U15A				IAmb	IAmb	22 28 45.3	
	comp=Z,46nm,0.8s						
KBS	**Kingsbay**	**49.84**	**357**	P	**P**	**22 28 32.4**	**+0.3**
KBS	**Kingsbay**	**49.84**	**357**	P	**P**	**22 28 32.4**	**+0.3**
KBS				pmax	pmax		
	comp=Z,253nm,1.8s						
LYN	**LuoYang**	**49.86**	**278**	⇑P	**P**	**22 28 33.1**	**+0.3**
LYN				pP	pP	22 28 45.3	+2.5
LYN				sP	sP	22 28 51.3	+5.2
LYN				S	**S**	**22 35 41.8**	**+1.6**
LYN				pmax	pmax		
	comp=Z,68nm,1.1s						
LYN				pmax	pmax		
	comp=Z,870nm,6.2s						
LYN				LR	LR		
	comp=Z,2µm,16.5s						
LYN				LR	LR		
	comp=Z,1µm,16.3s						
LYN				LR	LR		
	comp=Z,2µm,22.5s						
SWSC	**Sam W. Stewart**	**49.93**	**85**	P	**P**	**22 28 32.2**	**-1.2**
	baz=312						
IKP	**In-Ko-Pah, Jac**	**49.93**	**86**	P	**P**	**22 28 33.3**	**-0.2**
	baz=312						
O20A	**White River Ci**	**49.96**	**73**	P	**P**	**22 28 33.1**	**-0.6**
	baz=308,SNR=26						
RSSD	**Black Hills**	**50.00**	**66**	P	**P**	**22 28 33.9**	**-0.1**
RSSD	**Black Hills**	**50.00**	**66**	P	**P**	**22 28 33.9**	**-0.1**
RSSD				pmax	pmax		
	comp=Z,12nm,1.0s						
RSSD				MLR	MLR		
	comp=Z,1µm,22.0s						
RSSD	**Black Hills**	**50.00**	**66**	P	**P**	**22 28 32.6**	**-1.4**
	baz=307						
RSSD	**Black Hills**	**50.00**	**66**	P	**P**	**22 28 33.0**	**-1.0**
	baz=307						
PDMCI	**Parker Dam,Lak**	**50.06**	**83**	P	**P**	**22 28 34.3**	**-0.1**
	baz=311,SNR=10						
YOJ	**Yonaguni jima**	**50.24**	**260**	P	**P**	**22 28 36.4**	**+0.6**
MDND	**Maddock**	**50.26**	**60**	P	**P**	**22 28 34.4**	**-1.3**
	baz=306						
SPA0	**Spitsbergen Ar**	**50.39**	**355**	*e*P	**P**	**22 28 35.8**	**-0.5**
SPA0				IAmb	IAmb	22 29 20.3	
	comp=Z,126nm,1.2s						
SPITS	**Spitsbergen Ar**	**50.39**	**355**	P	**P**	**22 28 35.8**	**-0.5**
	comp=Z,22nm,0.5s,baz=40,slow=6.6,SNR=107						
SPITS				LR	LR	22 49 17.3	
	comp=Z,2µm,21.9s,baz=349,slow=35						
	comp=Z,22nm,0.5s						
SPB2	**Spitsbergen Ar**	**50.39**	**355**	P	**P**	**22 28 35.8**	**-0.5**
ESJX	**Sierra Juarez**	**50.46**	**86**	P	**P**	**22 28 37.3**	**-0.4**
GLA	**Glamis**	**50.47**	**84**	P	**P**	**22 28 37.1**	**-0.4**
	baz=312,SNR=6.5						
UPNV	**Upernavik**	**50.50**	**18**	*i* P	**P**	**22 28 36.5**	**-0.6**
UPNV				IAmb	IAmb	22 28 39.0	
	comp=Z,126nm,1.5s						
PV10	**Paradox Valley**	**50.58**	**75**	P	**P**	**22 28 39.1**	**+0.6**
PV10				IAmb	IAmb	22 28 51.6	
	comp=Z,39nm,0.7s						
TATO	**Taipei**	**50.81**	**262**	IAMs_20	IAMs_20	22 48 21.1	
	comp=Z,3µm,22.0s						
ULM	**Lac du Bonnet**	**50.83**	**56**	P	**P**	**22 28 39.3**	**-0.6**
	comp=Z,4.4nm,0.4s,baz=314,slow=7.6,SNR=7.9						
ULM				PcP	**PcP**	**22 29 56.1**	**-0.2**
	comp=Z,6.0nm,0.7s,baz=313,slow=5.1,SNR=3.9						
ULM				ScP	**ScP**	**22 33 49.1**	**-0.5**
	comp=Z,3.7nm,0.6s,baz=301,slow=7.8,SNR=5.0						
ULM				LR	LR	22 50 01.3	
	comp=Z,3µm,21.7s,baz=310,slow=36						
	comp=Z,4.4nm,0.4s						
ULM	**Lac du Bonnet**	**50.83**	**56**	P	**P**	**22 28 39.2**	**-0.6**
ULM				IAmb	IAmb	22 28 57.5	
	comp=Z,60nm,1.8s						
N23A	**Red Feather La**	**50.86**	**71**	P	**P**	**22 28 40.5**	**-0.1**
	baz=308,SNR=5.3						
PHWY	**Pilot Hill**	**50.89**	**70**	IAMs_20	IAMs_20	22 47 18.3	
	comp=Z,2µm,22.0s						
WUAZ	**Wupatki**	**50.99**	**80**	P	**P**	**22 28 41.2**	**-0.3**
WUAZ				IAmb	IAmb	22 28 53.8	
	comp=Z,27nm,0.8s						
WUAZ				IAMs_20	IAMs_20	22 50 04.8	
	comp=Z,2µm,20.0s						
WUAZ	**Wupatki**	**50.99**	**80**	P	**P**	**22 28 41.9**	**+0.3**
	baz=311,SNR=12						
YHNB	**Yeheng**	**51.10**	**261**	IAMs_20	IAMs_20	22 48 20.0	
	comp=Z,2µm,21.0s						
SMCO	**Snowmass**	**51.32**	**73**	IAMs_20	IAMs_20	22 47 37.7	
	comp=Z,2µm,22.0s						
NACB	**Ninganchiao**	**51.33**	**261**	IAMs_20	IAMs_20	22 47 44.0	
	comp=Z,2µm,22.0s						
NACB	**Ninganchiao**	**51.33**	**261**	P	**P**	**22 28 45.1**	**+1.1**
	comp=Z,51nm,1.1s						
WHN	**Wuhan**	**51.36**	**272**	⇑P	**P**	**22 28 42.9**	**-1.3**
WHN				S	**S**	**22 36 03.3**	**+2.2**
WHN				pmax	pmax		
	comp=Z,91nm,0.3s						
WHN				LR	LR		
	comp=Z,5µm,15.7s						
WHN				LR	LR		
	comp=Z,2µm,13.7s						
WHN				LR	LR		
	comp=Z,5µm,15.1s						
HOPEN	**Hopen**	**51.42**	**352**	*e*P	**P**	**22 28 44.0**	**0.0**
MVCO	**Mesa Verde**	**51.66**	**76**	P	**P**	**22 28 46.4**	**-0.2**
MVCO				IAmb	IAmb	22 29 11.3	
	comp=Z,22nm,0.8s						
MVCO				IAMs_20	IAMs_20	22 47 49.9	
	comp=Z,2µm,21.0s						
MVCO	**Mesa Verde**	**51.66**	**76**	P	**P**	**22 28 46.2**	**-0.4**
	baz=310,SNR=11						
DAG	**Danmarks Havn**	**51.73**	**5**	*i* P	**P**	**22 28 45.0**	**-1.3**
DAG				IAmb	IAmb	22 28 46.5	
	comp=Z,16nm,0.6s						
ISCO	**Idaho Springs**	**51.74**	**72**	P	**P**	**22 28 47.4**	**+0.1**
ISCO				IAmb	IAmb	22 28 50.5	
	comp=Z,50nm,1.6s						
ISCO				IAMs_20	IAMs_20	22 48 05.8	
	comp=Z,3µm,22.0s						
ISCO	**Idaho Springs**	**51.74**	**72**	P	**P**	**22 28 47.4**	**+0.1**
ISCO				pmax	pmax		
	comp=Z,51nm,1.6s						
ISCO				MLR	MLR		
	comp=Z,3µm,22.0s						
ISCO	**Idaho Springs**	**51.74**	**72**	P	**P**	**22 28 47.0**	**-0.3**
	baz=309,SNR=15						
ISCO	**Idaho Springs**	**51.74**	**72**	P	**P**	**22 28 47.2**	**-0.1**
	baz=309						
AGMN	**Agassiz Nation**	**52.00**	**58**	P	**P**	**22 28 49.0**	**+0.3**
AGMN	**Agassiz Nation**	**52.00**	**58**	P	**P**	**22 28 48.7**	**0.0**
	baz=307						
AGMN	**Agassiz Nation**	**52.00**	**58**	P	**P**	**22 28 47.9**	**-0.8**
	baz=307						
SSLB	**Suanglung**	**52.01**	**261**	P	**P**	**22 28 47.8**	**-1.3**
SSLB				IAMs_20	IAMs_20	22 48 40.0	
	comp=Z,2µm,22.0s						
SSLB	**Suanglung**	**52.01**	**261**	P	**P**	**22 28 50.5**	**+1.4**
	comp=Z,144nm,1.1s						
YULB	**Yu-li**	**52.09**	**260**	P	**P**	**22 28 48.6**	**-1.1**
YULB				IAMs_20	IAMs_20	22 49 28.0	
	comp=Z,2µm,22.0s						
YULB	**Yu-li**	**52.09**	**260**	P	**P**	**22 28 50.7**	**+1.0**
W18A	**Petrified Fore**	**52.26**	**79**	P	**P**	**22 28 50.3**	**-0.8**
W18A				IAmb	IAmb	22 29 03.4	
	comp=Z,35nm,0.9s						
W18A	**Petrified Fore**	**52.26**	**79**	P	**P**	**22 28 51.0**	**-0.1**
	baz=311,SNR=7.2						
S22A	**4UR Ranch, Cre**	**52.33**	**74**	P	**P**	**22 28 51.2**	**-0.5**
	baz=310,SNR=16						
XAN	**Xi'an**	**52.40**	**280**	⇑*i*P	**P**	**22 28 51.6**	**-0.3**
XAN				pP	pP	22 29 00.3	-1.7
XAN				sP	sP	22 29 04.1	-1.2
XAN				S	**S**	**22 36 16.0**	**+0.6**
XAN				pmax	pmax		
	comp=Z,67nm,0.9s						
XAN				pmax	pmax		
	comp=Z,560nm,5.2s						
XAN				LR	LR		
	comp=Z,1µm,16.5s						
XAN				LR	LR		
	comp=Z,2µm,19.9s						
XAN				LR	LR		
	comp=Z,3µm,20.6s						
214A	**Organ Pipe Nat**	**52.46**	**84**	P	**P**	**22 28 52.1**	**-0.3**
	baz=313						
X18A	**Snowflake**	**52.52**	**80**	P	**P**	**22 28 52.4**	**-0.6**
Q24A	**Divide**	**52.55**	**72**	P	**P**	**22 28 53.3**	**0.0**
	baz=310						
TPUB	**Ta-pu**	**52.57**	**261**	P	**P**	**22 28 51.9**	**-1.3**
TPUB				IAMs_20	IAMs_20	22 49 54.8	
	comp=Z,2µm,19.0s						
TPUB	**Ta-pu**	**52.57**	**261**	P	**P**	**22 28 55.0**	**+1.7**
	comp=Z,150nm,1.3s						
SUSD	**Miller**	**52.69**	**63**	P	**P**	**22 28 53.4**	**-0.5**
SUSD				IAmb	IAmb	22 29 04.8	
	comp=Z,61nm,0.9s						
SUSD	**Miller**	**52.69**	**63**	P	**P**	**22 28 53.8**	**-0.1**
	baz=308						
B35A	**Bob, Littlefor**	**53.09**	**56**	P	**P**	**22 28 56.3**	**-0.5**
	baz=308						
KNMB	**Chin-men Tao**	**53.11**	**264**	IAMs_20	IAMs_20	22 49 27.1	
	comp=Z,1µm,20.0s						
SDCO	**Great Sand Dun**	**53.13**	**74**	P	**P**	**22 28 57.5**	**0.0**
SDCO				IAmb	IAmb	22 29 01.6	
	comp=Z,41nm,1.3s						
SDCO				IAMs_20	IAMs_20	22 52 39.5	
	comp=Z,1µm,18.0s						
SDCO	**Great Sand Dun**	**53.13**	**74**	P	**P**	**22 28 57.1**	**-0.5**
	baz=310,SNR=19						
SDCO	**Great Sand Dun**	**53.13**	**74**	P	**P**	**22 28 58.2**	**+0.6**
	baz=310,SNR=19						
OGNE	**Ogallala**	**53.13**	**68**	P	**P**	**22 28 56.4**	**-0.9**
	baz=310						
ZAA0	**Zalesovo Array**	**53.16**	**313**	P	**P**	**22 28 56.0**	**-1.2**
ZALV	**Zalesovo Beam**	**53.16**	**313**	P	**P**	**22 28 56.5**	**-0.7**
	comp=Z,7.4nm,0.5s,baz=48,slow=6.7,SNR=34						
ZALV				PcP	**PcP**	**22 30 05.4**	**+0.5**
	comp=Z,8.3nm,0.7s,baz=86,slow=4.5,SNR=4.0						
ZALV				ScP	**ScP**	**22 33 59.9**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=46,slow=4.2,SNR=2.1						
ZALV				LR	LR	22 53 10.5	
	comp=Z,4µm,18.9s,baz=52,slow=38						
	comp=Z,7.4nm,0.5s						
ZALV	**Zalesovo Beam**	**53.16**	**313**	P	**P**	**22 28 55.9**	**-1.3**
F33A	**5 Mile Ranch,**	**53.29**	**60**	P	**P**	**22 28 58.1**	**-0.1**
	baz=309						
TUC	**Tucson**	**53.48**	**82**	P	**P**	**22 28 59.3**	**-0.7**
TUC	**Tucson**	**53.48**	**82**	P	**P**	**22 28 59.3**	**-0.7**
TUC				pmax	pmax		
	comp=Z,16nm,1.0s						
TUC				MLR	MLR		
	comp=Z,1µm,20.0s						
TUC	**Tucson**	**53.48**	**82**	P	**P**	**22 28 59.2**	**-0.8**
	baz=313						
SUMG	**Summit**	**53.71**	**13**	*i* P	**P**	**22 29 01.5**	**0.0**
SUMG				IAmb	IAmb	22 29 03.9	
	comp=Z,37nm,0.8s						
CNSH	**ChangSha**	**53.89**	**271**	⇑P	**P**	**22 29 01.9**	**-1.0**
CNSH				S	**S**	**22 36 34.5**	**-1.2**
CNSH				pmax	pmax		
	comp=Z,32nm,1.3s						
CNSH				LR	LR		
	comp=Z,1µm,16.5s						
CNSH				LR	LR		
	comp=Z,1µm,14.8s						
CNSH				LR	LR		
	comp=Z,2µm,16.7s						
KSCO	**Kaye Shedlock’**	**54.02**	**70**	P	**P**	**22 29 04.0**	**+0.1**
	baz=310						
KSCO	**Kaye Shedlock’**	**54.02**	**70**	P	**P**	**22 29 03.6**	**-0.3**
	baz=310						
DBG	**Daneborg**	**54.03**	**6**	*i* P	**P**	**22 29 02.0**	**-1.3**
DBG				IAmb	IAmb	22 29 04.8	
	comp=Z,25nm,0.8s						
LZH	**Lanzhou**	**54.16**	**285**	⇑P	**P**	**22 29 05.8**	**+0.8**
LZH				pP	pP	22 29 13.8	-1.3
LZH				sP	sP	22 29 18.8	+0.1
LZH				sS	sS	22 36 52.4	-2.1
LZH				pmax	pmax		
	comp=Z,78nm,1.1s						
LZH				pmax	pmax		
	comp=Z,840nm,5.2s						
LZH				LR	LR		
	comp=Z,2µm,16.5s						
LZH				LR	LR		
	comp=Z,3µm,17.8s						
LZH				LR	LR		
	comp=Z,4µm,17.1s						
T25A	**Trinidad**	**54.18**	**73**	P	**P**	**22 29 04.9**	**-0.3**
T25A	**Trinidad**	**54.18**	**73**	P	**P**	**22 29 04.0**	**-1.2**
	baz=311,SNR=25						
ILULI	**Ilulissat**	**54.32**	**20**	P	**P**	**22 29 04.8**	**-0.6**
ILULI				IAmb	IAmb	22 29 07.9	
	comp=Z,75nm,1.6s						
ILULI	**Ilulissat**	**54.32**	**20**	P	**P**	**22 29 04.8**	**-0.6**
ILULI				pmax	pmax		
	comp=Z,75nm,1.6s						
ANMO	**Albuquerque**	**54.39**	**77**	LR	LR	22 49 51.1	
	comp=Z,2µm,21.6s,baz=50,slow=33						
ANMO	**Albuquerque**	**54.39**	**77**	P	**P**	**22 29 06.8**	**+0.1**
ANMO	**Albuquerque**	**54.39**	**77**	IAMs_20	IAMs_20	22 48 54.9	
	comp=Z,2µm,22.0s						
ANMO	**Albuquerque**	**54.39**	**77**	⇑*e*P	**P**	**22 29 07.5**	**+0.8**
ANMO				pmax	pmax		
	comp=Z,14nm,1.7s						
ANMO	**Albuquerque**	**54.39**	**77**	P	**P**	**22 29 06.4**	**-0.3**
	baz=312						
ANMO	**Albuquerque**	**54.39**	**77**	P	**P**	**22 29 06.1**	**-0.6**
	baz=312						
GTA	**Gaotai**	**54.39**	**291**	⇑P	**P**	**22 29 06.8**	**+0.2**
GTA				pP	pP	22 29 16.0	-0.7
GTA				sP	sP	22 29 20.8	+0.4
GTA				S	**S**	**22 36 43.9**	**+1.3**
GTA				sS	sS	22 36 57.3	-0.1
GTA				pmax	pmax		
	comp=Z,61nm,1.2s						
GTA				pmax	pmax		
	comp=Z,740nm,4.7s						
GTA				LR	LR		
	comp=Z,2µm,17.1s						
GTA				LR	LR		
	comp=Z,2µm,18.9s						
GTA				LR	LR		
	comp=Z,4µm,17.5s						
ECSD	**EROS Data Cent**	**54.44**	**62**	P	**P**	**22 29 06.1**	**-0.7**
ECSD	**EROS Data Cent**	**54.44**	**62**	IAMs_20	IAMs_20	22 50 24.0	
	comp=Z,3µm,22.0s						
ECSD	**EROS Data Cent**	**54.44**	**62**	P	**P**	**22 29 06.8**	**0.0**
	baz=310						
ECSD	**EROS Data Cent**	**54.44**	**62**	P	**P**	**22 29 06.1**	**-0.7**

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        baz=310
EYMN  Ely              54.51  56    P        P        22 29 06.4 -0.8
EYMN                                IAmb     IAmb     22 29 25.6
        comp=Z,46nm,1.5s
EYMN  Ely              54.51  56    IAMs_20  IAMs_20  22 52 02.9
        comp=Z,2µm,22.0s
EYMN  Ely              54.51  56    P        P        22 29 07.9 +0.7
        baz=309
EYMN  Ely              54.51  56    P        P        22 29 06.9 -0.3
        baz=309
DGZ   Jazzator, Alta   54.58 307c iP        P        22 29 08.0 +0.2
DGZ                                 pmax     pmax
        comp=Z,38nm,1.0s
ENH   Enshi            54.60 276    P        P        22 29 06.8 -1.3
ENH                                 IAMs_20  IAMs_20  22 55 44.6
        comp=Z,1µm,19.0s
ENH   Enshi            54.60 276    P        P        22 29 07.8 -0.3
Y22A  Socorro          54.75  78    P        P        22 29 10.6 +1.3
        baz=312,SNR=8.2
F36A  Milaca           54.77  59    P        P        22 29 09.0 -0.1
        baz=310
BGNE  Belgrade         55.07  66    P        P        22 29 10.7 -0.6
        baz=310
121A  Cookes Peak, D   55.20  80    P        P        22 29 12.4 -0.2
121A  Cookes Peak, D   55.20  80    P        P        22 29 11.6 -0.9
        baz=313
121A  Cookes Peak, D   55.20  80    P        P        22 29 11.5 -1.1
        baz=313
E38A  The Farm, Brul   55.34  57    P        P        22 29 11.0 -2.2
        baz=310
SPMN  Marine on St.    55.57  59    P        P        22 29 15.0 +0.1
        baz=310
SPMN  Marine on St.    55.57  59    P        P        22 29 12.6 -2.3
        baz=310
HSIG                   55.64  85    P        P        22 29 15.1 -0.5
CBKS  Cedar Bluff      55.85  69    P        P        22 29 16.4 -0.7
CBKS                                IAmb     IAmb     22 29 26.3
        comp=Z,38nm,0.8s
CBKS                                IAMs_20  IAMs_20  22 55 00.6
        comp=Z,1µm,20.0s
CBKS  Cedar Bluff      55.85  69    P        P        22 29 16.4 -0.7
CBKS                                pmax     pmax
        comp=Z,38nm,0.9s
CBKS                                MLR      MLR
        comp=Z,1µm,20.0s
CBKS  Cedar Bluff      55.85  69    P        P        22 29 17.0  0.0
        baz=311
CBKS  Cedar Bluff      55.85  69    P        P        22 29 17.0  0.0
        baz=311
I37B  Waseca           56.03  60    P        P        22 29 17.4 -0.8
        baz=311
SFJD  Kangerlussuaq    56.23  21    P        P        22 29 18.3 -0.9
SFJD                                IAmb     IAmb     22 29 21.2
        comp=Z,62nm,1.6s
SFJD  Kangerlussuaq    56.23  21    P        P        22 29 18.3 -0.9
SFJD                                pmax     pmax
        comp=Z,63nm,1.7s
SFJD  Kangerlussuaq    56.23  21  i P        P        22 29 18.0 -1.2
SFJD                                IAmb     IAmb     22 29 21.5
        comp=Z,52nm,1.6s
D41A  Chassel          56.60  55    P        P        22 29 21.3 -0.9
        baz=311
ICESG Greenland Ices   56.61  16  i P        P        22 29 20.3 -2.0
ICESG                               IAmb     IAmb     22 29 24.2
        comp=Z,59nm,0.8s
R32A  Long Quarter,    56.71  69    P        P        22 29 22.6 -0.6
        baz=312
N35A  Tabor            56.86  65    P        P        22 29 25.4 +1.3
        baz=312
G40A  Rib Lake         56.93  57    P        P        22 29 24.0 -0.6
        baz=311
COWI  Conover          56.94  56    P        P        22 29 23.5 -1.1
COWI                                IAmb     IAmb     22 29 30.8
        comp=Z,39nm,1.4s
COWI                                IAMs_20  IAMs_20  22 53 16.0
        comp=Z,2µm,21.0s
COWI  Conover          56.94  56    P        P        22 29 23.2 -1.5
        baz=311
VADS  Vadso            56.95 348   eP        P        22 29 23.7 -0.6
HAMF  Hammerfest       57.12 351   eP        P        22 29 24.3 -1.2
MNTX  Cornudas Mount   57.25  79    P        P        22 29 27.0  0.0
        baz=314,SNR=23
MNTX  Cornudas Mount   57.25  79    P        P        22 29 27.7 +0.6
        baz=314,SNR=23
MSTX  Muleshoe         57.29  75    P        P        22 29 27.0 -0.5
MSTX  Muleshoe         57.29  75    P        P        22 29 27.3 -0.1
        baz=313,SNR=8.8
MSTX  Muleshoe         57.29  75    P        P        22 29 27.4  0.0
        baz=313
AMTX  Amarillo         57.33  74    P        P        22 29 27.2 -0.4
AMTX                                IAmb     IAmb     22 29 37.5
        comp=Z,20nm,0.7s
AMTX                                IAMs_20  IAMs_20  22 50 59.8
        comp=Z,2µm,22.0s
AMTX  Amarillo         57.33  74    P        P        22 29 26.7 -1.0
        baz=313
AMTX  Amarillo         57.33  74    P        P        22 29 27.3 -0.3
        baz=313
ZSN   Zaisan           57.34 306   eP        P        22 29 27.6 +0.1
        comp=Z,33nm,1.1s,baz=306
ZSN                                eS        S        22 37 22.4 +1.1
        baz=306
ZSN   Zaisan           57.34 306   eP        P        22 29 27.5 +0.1
ZSN                                eS        S        22 37 22.3 +1.0
ZSN                                 pmax     pmax
        comp=Z,33nm,1.1s
HKPS  Hong Kong Po S   57.36 265    IAMs_20  IAMs_20  22 51 37.8
        comp=Z,1µm,22.0s
KSU1  Kansas State U   57.48  67    P        P        22 29 28.3 -0.2
KSU1                                IAmb     IAmb     22 30 26.1
        comp=Z,32nm,0.9s
KSU1  Kansas State U   57.48  67    P        P        22 29 27.7 -0.9
        baz=312
KSU1  Kansas State U   57.48  67    P        P        22 29 28.4 -0.2
        baz=312
SCIA  State Center     57.53  62    P        P        22 29 28.5 -0.3
        baz=312
GDL2  Guadalupe Moun   57.53  78    P        P        22 29 28.8 -0.4
SEM   Semipalatinsk    57.60 312   eP        P        22 29 28.6 -0.8
        baz=312
SEM   Semipalatinsk    57.60 312   eP        P        22 29 28.6 -0.8
SCO   Scoresbysund     57.60   8    P        P        22 29 28.9  0.0
SCO                                 IAmb     IAmb     22 29 31.6
        comp=Z,50nm,1.4s
SCO   Scoresbysund     57.60   8    P        P        22 29 28.9  0.0
SCO                                 pmax     pmax
        comp=Z,51nm,1.4s
SCO   Scoresbysund     57.60   8  i P        P        22 29 29.0  0.0
SCO                                 IAmb     IAmb     22 29 32.1
        comp=Z,60nm,1.5s
I40A  Norwalk          57.62  59    P        P        22 29 28.1 -1.4
        baz=312
DY2G  Dye2             57.62  20  i P        P        22 29 28.0 -1.4
DY2G                                IAmb     IAmb     22 29 30.1
        comp=Z,18nm,0.8s
F42A  Maple Grove Fa   57.69  56    P        P        22 29 29.3 -0.6
        baz=312
CD2   Chengdu          57.72 280    P        P        22 29 30.0 -0.4
CD2                                 S        S        22 37 26.9 +0.1
CD2                                 pmax     pmax
        comp=Z,30nm,0.8s
CD2                                 LR       LR
        comp=Z,700nm,13.9s
CD2                                 LR       LR
        comp=Z,320nm,15.0s
E43A  Lone Tree Farm   57.86  55    P        P        22 29 30.5 -0.6
        baz=312
OK035 E0210 Rd and N   57.87  70    IAMs_20  IAMs_20  22 51 42.9
        comp=Z,1µm,21.0s
U32A  Winter Ranch,    57.92  71    P        P        22 29 32.3 +0.6
        baz=313
JMIC  Jan Mayen        57.93   3    LR       LR       22 56 27.2
        comp=Z,460nm,18.0s,baz=356,slow=38
ARA0  ARCESS Array S   57.97 349   eP        P        22 29 30.6 -0.9
ARCES ARCESS Array B   57.97 349    P        P        22 29 30.1 -1.4
        comp=Z,2.9nm,0.5s,baz=28,slow=9.4,SNR=30
ARCES                               LR       LR       22 58 16.0
        comp=Z,2µm,18.1s,baz=10,slow=40
        comp=Z,2.9nm,0.5s
ARCES ARCESS Array B   57.97 349    P        P        22 29 30.2 -1.4
ARCES                               IAmb     IAmb     22 29 47.4
        comp=Z,114nm,1.9s
ARCES ARCESS Array B   57.97 349    P        P        22 29 30.2 -1.4
ARCES                               pmax     pmax
        comp=Z,114nm,1.9s
OK032 Salt Plains WL   58.10  70    IAMs_20  IAMs_20  22 56 36.0
        comp=Z,2µm,20.0s
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KURK  Kurchatov        58.15 313    P        P        22 29 33.1 +0.1
KURK  Kurchatov        58.15 313c iP        P        22 29 32.9 -0.1
KURK                                pmax     pmax
        comp=Z,93nm,1.0s
LVZ   Lovozero         58.22 345    P        P        22 29 32.5 -0.8
KURBB Kurchatov Arra   58.25 313    P        P        22 29 33.8  0.0
        comp=Z,34nm,0.5s,baz=41,slow=6.6,SNR=505
KURBB                               LR       LR       22 56 30.3
        comp=Z,6µm,18.6s,baz=30,slow=38
        comp=Z,34nm,0.5s
N38A  Joes South For   58.26  63    P        P        22 29 34.1 +0.1
        baz=312
WMQ   Urumqi           58.30 302   eP        P        22 29 34.8 +0.5
WMQ                                 pP       pP       22 29 41.9 -2.5
WMQ                                 S        S        22 37 39.5 +5.4
WMQ                                 pmax     pmax
        comp=Z,33nm,0.7s
WMQ                                 pmax     pmax
        comp=Z,920nm,5.5s
WMQ                                 LR       LR
        comp=Z,6µm,18.7s
WMQ                                 LR       LR
        comp=Z,5µm,20.9s
WMQ                                 LR       LR
        comp=Z,7µm,22.9s
JFWS  Jewell Farm      58.48  60    P        P        22 29 34.9 -0.6
JFWS                                IAmb     IAmb     22 30 07.3
        comp=Z,22nm,0.7s
JFWS  Jewell Farm      58.48  60    P        P        22 29 34.9 -0.6
JFWS                                pmax     pmax
        comp=Z,22nm,0.7s
JFWS                                MLR      MLR
        comp=Z,3µm,20.0s
JFWS  Jewell Farm      58.48  60    P        P        22 29 35.3 -0.2
        baz=312
JFWS  Jewell Farm      58.48  60    P        P        22 29 34.7 -0.8
        baz=312
JETT  Jettan, Norway   58.48 351   eP        P        22 29 34.8 -0.3
JETT                                IAmb     IAmb     22 29 39.9
        comp=Z,20nm,0.6s
L40A  Anamosa          58.52  61    P        P        22 29 35.6 -0.2
        baz=312
I42A  Draeger Farm,    58.53  58    P        P        22 29 35.0 -0.9
        baz=312
TRO   Tromso           58.54 352   eP        P        22 29 34.8 -0.7
APA   Apatity          58.72 345⇓iP        P        22 29 29.4 -7.4
APA                                i                  22 30 20.7
APA                                 pmax     pmax
        comp=Z,9.0nm,1.1s
KTK1  Kautokeino       58.72 350   eP        P        22 29 36.6 -0.1
KTK1                                IAmb     IAmb     22 29 42.9
        comp=Z,12nm,0.8s
P38A  Dawn             58.89  64    P        P        22 29 37.2 -1.1
        baz=313
T35B  Sooner Cattle    59.02  68    P        P        22 29 38.3 -1.0
        baz=313
GYA   Guiyang          59.04 275 ⇑P        P        22 29 38.8 -0.9
GYA                                 pP       pP       22 29 49.3 -0.6
GYA                                 PP       PP       22 31 50.9 +0.7
GYA                                 S        S        22 37 46.8 +2.6
GYA                                 pmax     pmax
        comp=Z,18nm,1.7s
GYA                                 pmax     pmax
        comp=Z,520nm,4.9s
GYA                                 LR       LR
        comp=Z,560nm,21.4s
GYA                                 LR       LR
        comp=Z,2µm,16.9s
GYA                                 LR       LR
        comp=Z,2µm,19.4s
MK31  Makanchi Array   59.08 307    P        P        22 29 38.6 -1.0
MK31                                IAmb     IAmb     22 29 41.4
        comp=Z,16nm,0.6s
MK31  Makanchi Array   59.08 307c iP        P        22 29 38.8 -0.8
MKAR  Makanchi Array   59.08 307    P        P        22 29 39.0 -0.6
        comp=Z,11nm,0.5s,baz=51,slow=6.1,SNR=274
MKAR                                LR       LR       22 55 45.2
        comp=Z,4µm,20.7s,baz=48,slow=37
        comp=Z,11nm,0.5s
MKAR  Makanchi Array   59.08 307    P        P        22 29 38.5 -1.1
MKAR  Makanchi Array   59.08 307    P        P        22 29 39.0 -0.6
OK045 Pawnee Station   59.09  69    IAMs_20  IAMs_20  22 52 41.4
        comp=Z,2µm,21.0s
OK050 Pawnee Station   59.10  69    P        P        22 29 39.4 -0.5
OK050                               IAmb     IAmb     22 29 48.6
        comp=Z,58nm,1.5s
OK050                               IAMs_20  IAMs_20  22 52 42.5
        comp=Z,2µm,20.0s
OK046 Pawnee Station   59.14  69    IAMs_20  IAMs_20  22 52 50.6
        comp=Z,2µm,20.0s
WMOK  Wichita Mounta   59.17  72             P        22 29 40.2 -0.2
WMOK                                IAmb     IAmb     22 29 45.4
        comp=Z,16nm,0.9s
WMOK  Wichita Mounta   59.17  72    IAMs_20  IAMs_20  22 52 44.4
        comp=Z,2µm,21.0s
WMOK  Wichita Mounta   59.17  72    P        P        22 29 40.2 -0.2
WMOK                                pmax     pmax
        comp=Z,16nm,1.0s
WMOK                                MLR      MLR
        comp=Z,2µm,21.0s
WMOK  Wichita Mounta   59.17  72    P        P        22 29 40.5  0.0
        baz=314,SNR=9.7
WMOK  Wichita Mounta   59.17  72    P        P        22 29 40.7 +0.3
        baz=314,SNR=9.7
MAKZ  Makanchi         59.22 308    P        P        22 29 39.9 -0.7
MAKZ                                IAmb     IAmb     22 29 42.5
        comp=Z,59nm,1.4s
MAKZ  Makanchi         59.22 308    P        P        22 29 40.2 -0.4
OK044 Pawnee Station   59.22  69    IAMs_20  IAMs_20  22 52 57.7
        comp=Z,2µm,20.0s
OK029 Liberty Lake     59.23  70    IAMs_20  IAMs_20  22 52 24.0
        comp=Z,1µm,22.0s
E46A  Sault Ste Mari   59.23  53    P        P        22 29 40.2 -0.4
        baz=313
OK033 Mehan            59.36  69    IAMs_20  IAMs_20  22 52 56.5
        comp=Z,1µm,20.0s
L42A  Oliver, Polo     59.41  60    P        P        22 29 41.8 -0.1
        baz=313
OK025 Westminster Rd   59.45  70    IAMs_20  IAMs_20  22 52 30.7
        comp=Z,1µm,19.0s
OK052 Battle Ridge R   59.48  69    P        P        22 29 42.5  0.0
OK052                               IAmb     IAmb     22 29 45.6
        comp=Z,64nm,1.4s
OK052                               IAMs_20  IAMs_20  22 53 00.5
        comp=Z,1µm,20.0s
GOMU  GeErMu           59.48 291    P        P        22 29 44.4 +1.4
GOMU                                pP       pP       22 29 48.0 -5.1
GOMU                                sP       sP       22 29 52.3 -4.5
GOMU                                pmax     pmax
        comp=Z,37nm,1.0s
GOMU                                pmax     pmax
        comp=Z,280nm,5.8s
GOMU                                LR       LR
        comp=Z,2µm,17.1s
GOMU                                LR       LR
        comp=Z,1µm,16.9s
GOMU                                LR       LR
        comp=Z,3µm,17.3s
OK030 Cody Creek RV    59.53  69    IAMs_20  IAMs_20  22 52 58.0
        comp=Z,1µm,22.0s
LPIG  La Paz           59.54  89    LR       LR       22 52 46.7
        comp=Z,568nm,18.1s,baz=302,slow=33
N41A  Harden Midland   59.65  62    P        P        22 29 42.6 -0.9
        baz=313
K43A  Burlington       59.65  59    P        P        22 29 42.4 -1.2
        baz=313
P40A  Paris            59.79  63    P        P        22 29 43.6 -1.0
        baz=313,SNR=28
ISOG  Isortoq, Green   59.89  17  i P        P        22 29 43.6 -1.2
ISOG                                IAmb     IAmb     22 29 46.1
        comp=Z,33nm,0.7s
TX31  Lajitas Ar. Si   59.95  80    P        P        22 29 45.3 -0.7
TX31  Lajitas Ar. Si   59.95  80    P        P        22 29 45.8 -0.2
        baz=315
TXAR  Lajitas Array    59.95  80    P        P        22 29 46.1 +0.1
        comp=Z,3.5nm,0.6s,baz=299,slow=4.8,SNR=25
TXAR                                LR       LR       22 55 44.1
        comp=Z,2µm,18.4s,baz=325,slow=36
        comp=Z,3.5nm,0.6s
TXAR  Lajitas Array    59.95  80    P        P        22 29 45.7 -0.3
KRVT  Keravat (AS076   60.02 212    LR       LR       22 50 49.5
        comp=Z,796nm,21.2s,baz=147,slow=31
WTFS  Witchita Falls   60.03  72             P        22 29 46.2 -0.2
WTFS                                IAmb     IAmb     22 29 49.0
        comp=Z,56nm,1.3s
SLBS  Sierra La Lagu   60.07  89    IAMs_20  IAMs_20  22 53 27.7
        comp=Z,1µm,18.0s
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ANGG  Ammassalik, Gr   60.08  17  i P        P        22 29 43.8 -2.3
ANGG                                IAmb     IAmb     22 29 45.9
        comp=Z,33nm,0.5s
ABTX  Abilene, Hawle   60.11  74    P        P        22 29 46.2 -0.8
        baz=314,SNR=7.6
ABTX  Abilene, Hawle   60.11  74    P        P        22 29 45.9 -1.0
        baz=314
BVAR  Borovoye Array   60.12 319    P        P        22 29 47.1 +0.4
        comp=Z,56nm,0.5s,baz=50,slow=6.3,SNR=214
BVAR                                LR       LR       22 57 23.2
        comp=Z,7µm,21.6s,baz=45,slow=38
        comp=Z,56nm,0.5s
TUL1  Leonard          60.13  69             P        22 29 46.5 -0.5
TUL1                                IAmb     IAmb     22 29 55.8
        comp=Z,29nm,1.1s
TUL1  Leonard          60.13  69    P        P        22 29 46.2 -0.8
        baz=314
TUL1  Leonard          60.13  69    P        P        22 29 46.2 -0.8
        baz=314
GLMI  Grayling         60.14  55    P        P        22 29 47.1 +0.1
        baz=314
BRVK  Borovoye         60.14 319    P        P        22 29 46.6 -0.2
BRVK  Borovoye         60.14 319c iP        P        22 29 47.2 +0.4
BRVK                                pmax     pmax
        comp=Z,71nm,1.0s
L44A  Lake County Fo   60.24  59    P        P        22 29 46.5 -1.1
        baz=314
S39A  Bolivar          60.33  66    P        P        22 29 46.7 -1.6
        baz=314
HPIG                   60.41  83    P        P        22 29 48.6 -0.7
HPIG                                IAmb     IAmb     22 30 36.8
        comp=Z,18nm,0.5s
R40A  Maddies Statio   60.52  65    P        P        22 29 48.4 -1.2
        baz=314,SNR=14
U38A  Gravette         60.58  68    P        P        22 29 49.2 -0.9
        baz=314
HDIL  Hopedale         60.61  61    P        P        22 29 50.2  0.0
HDIL  Hopedale         60.61  61    P        P        22 29 49.6 -0.6
        baz=314,SNR=5.8
HDIL  Hopedale         60.61  61    P        P        22 29 50.0 -0.3
        baz=314,SNR=5.8
M44A  Midewin, Midew   60.72  60    P        P        22 29 51.1 +0.2
        baz=314
SCHQ  Schefferville    60.89  37    P        P        22 29 51.2 -0.7
        comp=Z,9.3nm,0.6s,baz=325,slow=6.4,SNR=27
        comp=Z,9.3nm,0.6s
SCHQ  Schefferville    60.89  37    P        P        22 29 51.0 -0.9
SCHQ                                IAmb     IAmb     22 29 53.6
        comp=Z,40nm,1.4s
HHAR  Hobbs            60.95  67    P        P        22 29 51.7 -0.9
SVE   Sverdlovsk       60.98 326   eP        P        22 29 53.9 +1.5
SVE                                 pmax     pmax
        comp=Z,74nm,1.5s
SVE                                 MLR      MLR
        comp=Z,4µm,19.0s
FAUS  Fauske           61.05 353   eP        P        22 29 53.8 +1.1
Z35A  Perchaven, San   61.06  72    P        P        22 29 53.7 +0.4
        baz=314
P43A  Skaggs, Pawnee   61.12  62    P        P        22 29 53.2 -0.5
        baz=314,SNR=7.4
CCM   Cathedral Cave   61.26  64    P        P        22 29 53.6 -1.0
CCM                                 IAmb     IAmb     22 30 39.7
        comp=Z,45nm,1.5s
CCM   Cathedral Cave   61.26  64    IAMs_20  IAMs_20  22 53 20.5
        comp=Z,1µm,22.0s
CCM   Cathedral Cave   61.26  64    P        P        22 29 53.6 -1.0
CCM                                 pmax     pmax
        comp=Z,45nm,1.5s
CCM                                 MLR      MLR
        comp=Z,1µm,22.0s
CCM   Cathedral Cave   61.26  64    P        P        22 29 54.9 +0.2
        baz=314
CCM   Cathedral Cave   61.26  64    P        P        22 29 54.6 -0.1
        baz=314
X37A  Clayton          61.29  70    P        P        22 29 55.2 +0.3
        baz=314
O44A  Mansfield        61.35  61    P        P        22 29 55.3 +0.1
        baz=314
BRZS  Berezniki        61.36 315   eP        P        22 29 55.0 -0.1
        comp=Z,13nm,1.1s,baz=315
BRZS                               eS        S        22 38 14.4 +1.3
        baz=315
BRZS  Berezniki        61.36 315   eP        P        22 29 55.0 -0.1
BRZS                               eS        S        22 38 14.3 +1.2
BRZS                                pmax     pmax
        comp=Z,13nm,1.1s
JCT   Junction City    61.52  76    P        P        22 29 55.6 -1.0
JCT                                 IAmb     IAmb     22 30 08.3
        comp=Z,36nm,1.4s
JCT   Junction City    61.52  76    P        P        22 29 55.6 -1.0
JCT                                 pmax     pmax
        comp=Z,36nm,1.4s
JCT                                 MLR      MLR
        comp=Z,3µm,21.0s
JCT   Junction City    61.52  76    P        P        22 29 55.6 -1.0
        baz=315
JCT   Junction City    61.52  76    P        P        22 29 56.2 -0.4
        baz=315
U40A  Yellville        61.53  67    P        P        22 29 56.1 -0.4
        baz=314,SNR=8.8
U40A                                P        P        22 29 56.1 -0.4
        baz=314,SNR=8.8
IVI   Ivigtut          61.67  24   eP        P        22 29 55.9 -1.1
FVM   French Village   61.77  64    P        P        22 29 57.5 -0.5
FVM                                 IAmb     IAmb     22 30 03.3
        comp=Z,40nm,1.4s
FVM   French Village   61.77  64    P        P        22 29 57.6 -0.5
FVM                                 pmax     pmax
        comp=Z,40nm,1.4s
FVM   French Village   61.77  64    P        P        22 29 57.0 -1.1
        baz=314
WHTX  Lake Whitney,    61.88  73    P        P        22 29 58.5 -0.3
WHTX  Lake Whitney,    61.88  73    P        P        22 29 58.4 -0.5
        baz=315
WHTX  Lake Whitney,    61.88  73    P        P        22 29 58.6 -0.3
        baz=315
Q44A  Meyer Farm, Va   61.92  62    P        P        22 29 59.1  0.0
        baz=315
SFIN  Lafayette        61.94  60    P        P        22 29 58.5 -0.6
        baz=315
SFIN  Lafayette        61.94  60    P        P        22 29 58.2 -0.9
        baz=315
ARU   Arti             62.00 327    P        P        22 29 60.0 +0.6
        comp=Z,38nm,0.5s,baz=37,slow=3.9,SNR=115
ARU                                 LR       LR       22 59 31.9
        comp=Z,4µm,20.4s,baz=47,slow=38
        comp=Z,38nm,0.5s
ARU   Arti             62.00 327    P        P        22 29 59.4 +0.1
ARU   Arti             62.00 327    P        P        22 30 00.0 +0.6
T42A  Van Buren        62.06  65    P        P        22 29 59.4 -0.7
        baz=315
PZH   PanZhiHua        62.08 278 ⇑P        P        22 30 00.0 -0.5
PZH                                 pP       pP       22 30 11.3 +0.6
PZH                                 sP       sP       22 30 14.9 +0.8
PZH                                 S        S        22 38 22.9 -0.2
PZH                                 sS       pS       22 38 34.9 -0.1
PZH                                 ScS      SKKSac   22 39 49.3 -0.6
PZH                                 SS       SS       22 42 28.3 +2.6
PZH                                 pmax     pmax
        comp=Z,50nm,1.5s
PZH                                 pmax     pmax
        comp=Z,550nm,6.4s
PZH                                 LR       LR
        comp=Z,3µm,18.6s
PZH                                 LR       LR
        comp=Z,3µm,18.1s
PZH                                 LR       LR
        comp=Z,3µm,19.2s
STOK  Stokkvaagen      62.25 354   eP        P        22 30 01.4 +0.5
DAV   Davao City (W)   62.25 244    P        P        22 30 01.8 +0.3
        comp=Z,78nm,0.3s,baz=274,slow=22,SNR=4.0
DAV                                 LR       LR       22 53 00.7
        comp=Z,1µm,21.6s,baz=54,slow=32
L48A  N Adams          62.26  57    P        P        22 30 00.3 -1.0
        baz=315
L48A                                P        P        22 30 00.3 -1.0
        baz=315
TDK   Taldyqorghan     62.26 308⇑iP        P        22 30 01.5 +0.2
        comp=Z,19nm,0.8s,baz=308
TDK   Taldyqorghan     62.26 308c iP        P        22 30 01.5 +0.2
TDK                                 pmax     pmax
        comp=Z,19nm,0.8s
N47A  Urbana           62.34  58    P        P        22 30 01.0 -0.9
        baz=315
N47A                                P        P        22 30 01.0 -0.9
        baz=315
MIAR  Mount Ida        62.38  69    IAMs_20  IAMs_20  23 00 06.3
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	comp=Z,1µm,20.0s						
MIAR	**Mount Ida**	62.38	69	P	**P**	22 30 01.7	-0.5
	baz=315,SNR=17						
MIAR	**Mount Ida**	62.38	69	P	**P**	22 30 02.0	-0.2
	baz=315,SNR=17						
AAM	**Ann Arbor**	62.41	56	IAMs_20	IAMs_20	22 56 01.8	
	comp=Z,2µm,20.0s						
AAM	**Ann Arbor**	62.41	56	P	**P**	22 30 01.4	-0.9
	baz=315						
P46A	**Rosedale**	62.41	60	P	**P**	22 30 02.4	0.0
	baz=315						
KMI	**Kunming**	62.45	276	⇑P	**P**	22 30 02.6	-0.5
KMI				S	**S**	22 38 24.1	-3.9
KMI				ScS	**ScS**	22 39 53.0	0.0
KMI				pmax	pmax		
	comp=Z,25nm,1.2s						
KMI				pmax	pmax		
	comp=Z,390nm,7.2s						
KMI				LR	LR		
	comp=Z,1µm,19.3s						
KMI				LR	LR		
	comp=Z,790nm,21.1s						
KMI				LR	LR		
	comp=Z,1µm,24.3s						
Z38A	**Mt. Pleasant**	62.45	70	P	**P**	22 30 02.7	0.0
	baz=315						
QIZ	**Qiongzhong**	62.46	266	P	**P**	22 30 03.0	+0.1
QIZ				pP	**pP**	22 30 11.3	-1.9
QIZ				PP	**PP**	22 32 20.3	-0.1
QIZ				S	**S**	22 38 30.1	+2.4
QIZ				sS	**sS**	22 38 44.8	+0.9
QIZ				ScS	**SKSac**	22 39 53.1	+0.4
QIZ				pmax	pmax		
	comp=Z,500nm,2.8s						
QIZ				LR	LR		
	comp=Z,720nm,18.2s						
QIZ				LR	LR		
	comp=Z,740nm,16.7s						
QIZ				LR	LR		
	comp=Z,800nm,12.4s						
OLIL	**Olney**	62.55	62	P	**P**	22 30 03.5	+0.3
	baz=315						
PBMO	**Poplar Bluff**	62.62	65	P	**P**	22 30 03.4	-0.3
	baz=315						
S44A	**Carbondale**	62.64	63	P	**P**	22 30 04.0	+0.1
	baz=315						
435B	**Jarrell**	62.65	74	IAMs_20	IAMs_20	22 57 26.7	
	comp=Z,2µm,19.0s						
435B	**Jarrell**	62.65	74	P	**P**	22 30 04.0	-0.1
	baz=315						
HNR	**Honiara**	62.69	201	LR	LR	22 52 02.0	
	comp=Z,12µm,21.7s,baz=16,slow=31						
HNR	**Honiara**	62.69	201	IAMs_20	IAMs_20	22 51 17.8	
	comp=Z,1µm,22.0s						
LCAR	**Lake Charles**	62.70	66	P	**P**	22 30 03.6	-0.7
	baz=315						
237A	**Washetta, Mont**	62.85	72	P	**P**	22 30 06.3	+0.9
	baz=315						
SADO	**Sadowa**	62.93	52	LR	LR	22 57 19.1	
	comp=Z,2µm,21.7s,baz=320,slow=36						
SHLS	**Shalkode**	63.06	306	*e*P	**P**	22 30 05.5	-1.3
	comp=Z,20nm,0.6s,baz=306						
SHLS	**Shalkode**	63.06	306	*e*P	**P**	22 30 05.5	-1.3
SHLS				pmax	pmax		
	comp=Z,20nm,0.6s						
GENI	**Genyem**	63.06	225	P	**P**	22 30 08.4	+1.5
GENI	**Genyem**	63.06	225	P	**P**	22 30 06.2	-0.7
	comp=Z,89nm,1.1s						
O48B	**Farmland**	63.07	59	P	**P**	22 30 06.6	-0.2
	baz=315						
O48B	**Farmland**	63.07	59	P	**P**	22 30 06.0	-0.7
	baz=315						
KIRV	**Kirov**	63.09	333	P	**P**	22 30 07.2	+0.6
	comp=Z,15nm,0.7s,baz=38,slow=1.6,SNR=5.7						
KIRV				LR	LR	23 01 43.3	
	comp=Z,2µm,18.0s,baz=31,slow=40						
	comp=Z,15nm,0.7s						
KIRV	**Kirov**	63.09	333	⇓*e*P	**P**	22 30 08.1	+1.5
N49A	**Columbus Grove**	63.11	58	P	**P**	22 30 07.3	+0.3
	baz=316						
N49A				P	**P**	22 30 07.3	+0.3
	baz=316						
SMPI	**Sarmi**	63.18	227	P	**P**	22 30 07.7	0.0
	comp=Z,74nm,1.7s						
KPKS	**Kokpek**	63.23	307	⇑*i*P	**P**	22 30 08.1	+0.2
	comp=Z,18nm,0.9s,baz=307						
KPKS	**Kokpek**	63.23	307	*c i*P	**P**	22 30 08.1	+0.2
KPKS				pmax	pmax		
	comp=Z,18nm,0.9s						
BORG	**Borgarnes**	63.24	10	LR	LR	22 59 30.5	
	comp=Z,829nm,18.8s,baz=340,slow=38						
BORG	**Borgarnes**	63.24	10	P	**P**	22 30 07.2	-0.2
BORG	**Borgarnes**	63.24	10	P	**P**	22 30 07.2	-0.2
BORG				pmax	pmax		
	comp=Z,203nm,1.4s						
UZB	**Uzynbulak**	63.29	306	*e*P	**P**	22 30 08.5	+0.1
	baz=306						
UZB	**Uzynbulak**	63.29	306	*e*P	**P**	22 30 08.4	+0.1
833A	**Chaparral WMA,**	63.30	77	P	**P**	22 30 07.9	-0.5
	baz=316						
833A	**Chaparral WMA,**	63.30	77	P	**P**	22 30 09.3	+0.8
	baz=316						
USIN	**University of**	63.33	62	P	**P**	22 30 08.6	+0.1
P48A	**Milroy**	63.49	59	P	**P**	22 30 09.5	0.0
	baz=316,SNR=11						
P48A				P	**P**	22 30 09.5	0.0
	baz=316,SNR=11						
O49A	**Covington**	63.56	58	P	**P**	22 30 09.9	-0.1
	baz=316						
O49A				P	**P**	22 30 09.9	-0.1
	baz=316						
ZHN	**Zhinishke**	63.57	307	*e*P	**P**	22 30 10.4	+0.2
	baz=307						
ZHN	**Zhinishke**	63.57	307	*e*P	**P**	22 30 10.3	+0.2
KLMR	**Klimovskoe**	63.63	339	*e*P	**P**	22 30 06.4	-3.7
KLMR				AMP		22 30 08.3	
	comp=Z,34nm,2.0s						
KLMR				LR	LR	22 53 14.7	
KLMR				AMP		23 02 11.1	
	comp=Z,2µm,10.8s						
KLMR	**Klimovskoe**	63.63	339	*e*P	**P**	22 30 06.4	-3.7
KLMR				pmax	pmax		
	comp=Z,34nm,2.0s						
KLMR				MLR	MLR		
	comp=Z,2µm,11.0s						
SATY	**Saty**	63.66	307	⇑*i*P	**P**	22 30 11.0	+0.2
	comp=Z,12nm,1.2s,baz=307						
SATY	**Saty**	63.66	307	*c i*P	**P**	22 30 11.0	+0.2
SATY				pmax	pmax		
	comp=Z,12nm,1.2s						
NATX	**Nacogdoches**	63.71	71	P	**P**	22 30 10.4	-0.7
NATX	**Nacogdoches**	63.71	71	P	**P**	22 30 10.8	-0.3
	baz=316						
Z41A	**Richland Creek**	63.74	69	P	**P**	22 30 10.8	-0.5
CHKK	**Chushkaly**	63.80	308	*e*P	**P**	22 30 10.9	-0.6
	baz=308						
CHKK	**Chushkaly**	63.80	308	*e*P	**P**	22 30 10.9	-0.6
P49A	**Miami Univ. Ec**	63.82	59	P	**P**	22 30 11.2	-0.5
	baz=316						
WCI	**Wyandotte Cave**	63.90	61	P	**P**	22 30 12.0	-0.3
WCI				IAmb	IAmb	22 30 45.8	
	comp=Z,21nm,0.9s						
WCI	**Wyandotte Cave**	63.90	61	P	**P**	22 30 12.0	-0.3
WCI				pmax	pmax		
	comp=Z,21nm,0.9s						
WCI	**Wyandotte Cave**	63.90	61	P	**P**	22 30 11.8	-0.4
	baz=316						
LATQ	**La Tuque**	64.01	46	P	**P**	22 30 11.3	-1.5
LATQ				IAmb	IAmb	22 30 17.5	
	comp=Z,24nm,0.8s						
KUU	**Kurty**	64.09	308	⇑*i*P	**P**	22 30 12.7	-0.7
	baz=308						
KUU	**Kurty**	64.09	308	*c i*P	**P**	22 30 12.7	-0.7
NSS	**Namsos**	64.11	354	*e*P	**P**	22 30 13.5	+0.3
NSS				IAmb	IAmb	22 30 25.8	
	comp=Z,1µm,2.9s						
ACSO	**Alum Creek Sta**	64.25	57	P	**P**	22 30 14.6	+0.1
	baz=316						
MDOK	**Medeo**	64.27	307	*e*P	**P**	22 30 14.9	+0.1
	baz=307						
MDOK	**Medeo**	64.27	307	*e*P	**P**	22 30 14.9	+0.1
AAA	**Alma-Ata**	64.30	308	*e*P	**P**	22 30 15.4	+0.5
	comp=Z,27nm,0.7s,baz=308						
AAA	**Alma-Ata**	64.30	308	*e*P	**P**	22 30 15.4	+0.5
AAA				pmax	pmax		
	comp=Z,27nm,0.7s						
HKT	**Hockley**	64.30	74	P	**P**	22 30 15.1	+0.2
HKT	**Hockley**	64.30	74	IAMs_20	IAMs_20	23 01 01.1	
	comp=Z,1µm,20.0s						
HKT	**Hockley**	64.30	74	*c i*P	**P**	22 30 16.3	+1.4
HKT				pmax	pmax		
	comp=Z,25nm,1.2s						
HKT	**Hockley**	64.30	74	P	**P**	22 30 16.4	+1.5
	baz=316						
T47A	**Sharon Grove**	64.34	62	P	**P**	22 30 14.8	-0.4
	baz=316,SNR=12						
BTLS	**Baital**	64.36	311	⇑*i*P	**P**	22 30 14.9	-0.3
	comp=Z,31nm,1.3s,baz=311						
BTLS	**Baital**	64.36	311	*c i*P	**P**	22 30 14.8	-0.3
BTLS				pmax	pmax		
	comp=Z,31nm,1.3s						
TNSS	**Tian-Shan**	64.41	307	*e*P	**P**	22 30 16.3	+0.2
	baz=307						
TNSS	**Tian-Shan**	64.41	307	*e*P	**P**	22 30 16.2	+0.2
R49A	**Shelbyville**	64.47	60	P	**P**	22 30 15.5	-0.5
	baz=316						
R49A				P	**P**	22 30 15.5	-0.5
	baz=316						
W45A	**Hickory Valley**	64.48	65	P	**P**	22 30 15.4	-0.7
	baz=316						
WVT	**Waverly**	64.55	64	P	**P**	22 30 15.9	-0.6
WVT				IAmb	IAmb	22 30 46.4	
	comp=Z,16nm,0.8s						
WVT	**Waverly**	64.55	64	IAMs_20	IAMs_20	22 58 33.5	
	comp=Z,2µm,21.0s						
WVT	**Waverly**	64.55	64	P	**P**	22 30 16.0	-0.6
WVT				pmax	pmax		
	comp=Z,16nm,0.9s						
WVT				MLR	MLR		
	comp=Z,2µm,21.0s						
WVT	**Waverly**	64.55	64	P	**P**	22 30 17.2	+0.7
	baz=316						
WVT	**Waverly**	64.55	64	P	**P**	22 30 16.4	-0.2
	baz=316,SNR=6.0						
M53A	**WI Miller and**	64.57	55	P	**P**	22 30 16.5	-0.1
	baz=317						
P51A	**Williamsport**	64.75	58	P	**P**	22 30 16.8	-0.9
	baz=316						
P51A				P	**P**	22 30 16.8	-0.9
	baz=316						
OXF	**Oxford**	64.81	66	P	**P**	22 30 17.9	-0.4
OXF				IAMs_20	IAMs_20	23 00 51.7	
	comp=Z,1µm,18.0s						
OXF	**Oxford**	64.81	66	P	**P**	22 30 17.9	-0.4
OXF				pmax	pmax		
	comp=Z,120nm,1.1s						
OXF				MLR	MLR		
	comp=Z,1µm,18.0s						
OXF	**Oxford**	64.81	66	P	**P**	22 30 18.0	-0.3
	baz=316,SNR=13						
OXF	**Oxford**	64.81	66	P	**P**	22 30 18.1	-0.2
	baz=316,SNR=13						
WVNY	**West Valley, N**	64.92	53	P	**P**	22 30 19.0	+0.1
	baz=317						
O52A	**Adamsville**	64.93	57	P	**P**	22 30 17.9	-1.1
	baz=317						
O52A				P	**P**	22 30 17.9	-1.1
	baz=317						
R50A	**Paris**	64.94	60	P	**P**	22 30 18.4	-0.6
	baz=316						
R50A				P	**P**	22 30 18.4	-0.6
	baz=316						
TARG	**Taragay, Kyrgy**	64.94	306	P	**P**	22 30 19.5	0.0
TARG				IAmb	IAmb	22 30 28.8	
	comp=Z,55nm,1.7s						
TARG	**Taragay, Kyrgy**	64.94	306	P	**P**	22 30 19.5	0.0
TARG				pmax	pmax		
	comp=Z,55nm,1.7s						
N53A	**Lisbon**	64.95	56	P	**P**	22 30 18.6	-0.5
	baz=317						
N53A				P	**P**	22 30 18.6	-0.5
	baz=317						
P52A	**Corning**	65.13	57	IAMs_20	IAMs_20	22 58 08.8	
	comp=Z,2µm,21.0s						
P52A	**Corning**	65.13	57	P	**P**	22 30 20.1	-0.1
	baz=317						
TNCH	**TengChong**	65.14	279	⇑P	**P**	22 30 21.3	+0.5
TNCH				PcP	**PcP**	22 30 54.1	+0.9
TNCH				PP	**PP**	22 32 46.0	+2.0
TNCH				S	**S**	22 39 01.8	+0.4
TNCH				ScS	**SKSac**	22 40 12.3	-1.0
TNCH				SS	**SS**	22 43 15.1	+1.5
TNCH				pmax	pmax		
	comp=Z,34nm,0.9s						
TNCH				pmax	pmax		
	comp=Z,480nm,5.0s						
TNCH				LR	LR		
	comp=Z,410nm,20.3s						
TNCH				LR	LR		
	comp=Z,520nm,20.8s						
TNCH				LR	LR		
	comp=Z,1µm,21.0s						
O53A	**New Philadelph**	65.16	56	P	**P**	22 30 20.2	-0.2
	baz=317						
TKM2	**Tokmak 2**	65.17	308	P	**P**	22 30 21.2	+0.5
	SNR=41						
Y45A	**Yeager Farm, C**	65.20	66	P	**P**	22 30 21.0	+0.2
	baz=316						
LONY	**Lake Ozonia**	65.24	49	P	**P**	22 30 21.1	+0.2
	baz=318						
SGDS	**Sogindy**	65.25	309	*e*P	**P**	22 30 21.6	+0.5
	comp=Z,13nm,1.3s,baz=309						
SGDS	**Sogindy**	65.25	309	*e*P	**P**	22 30 21.6	+0.5
SGDS				pmax	pmax		
	comp=Z,13nm,1.3s						
ULHL	**Ulahol**	65.35	307	P	**P**	22 30 22.4	+0.5
	SNR=15						
ZAIG	**Zacatecas**	65.36	84	P	**P**	22 30 21.1	-1.2
V48A	**Smith Brothers**	65.40	63	P	**P**	22 30 21.8	-0.2
	baz=316						
U49A	**Red Boiling Sp**	65.42	62	P	**P**	22 30 21.6	-0.6
	baz=316,SNR=7.6						
USP	**Ospenovka**	65.45	309	P	**P**	22 30 23.1	+0.7
	SNR=68						
TBLU	**Trondheim**	65.49	354	*e*P	**P**	22 30 21.2	-1.0
CHMS	**Chumysh**	65.53	309	P	**P**	22 30 23.6	+0.7
	SNR=21						
M55A	**Ridgway**	65.53	54	P	**P**	22 30 22.3	-0.6
	baz=318						
M55A				P	**P**	22 30 22.3	-0.6
	baz=318						
Q52A	**Bidwell**	65.55	58	P	**P**	22 30 23.1	+0.1
	baz=317						
Q52A				P	**P**	22 30 23.1	+0.1
	baz=317						
T50A	**Nancy**	65.57	61	P	**P**	22 30 22.9	-0.3
	baz=317						
T50A				P	**P**	22 30 22.9	-0.3
	baz=317						
FIA1	**FINESS Array S**	65.59	346	P	**P**	22 30 21.5	-1.4
FIA1				IAmb	IAmb	22 31 17.9	
	comp=Z,52nm,1.4s						
FINES	**FINESS Array B**	65.59	346	P	**P**	22 30 21.5	-1.4
	comp=Z,4.0nm,0.5s,baz=12,slow=6.6,SNR=36						
FINES				LR	LR	23 03 38.0	
	comp=Z,1µm,18.4s,baz=16,slow=40						
	comp=Z,4.0nm,0.5s						
FINES	**FINESS Array B**	65.59	346	P	**P**	22 30 21.6	-1.2
FINES	**FINESS Array B**	65.59	346	*i* P	**P**	22 30 21.6	-1.2
FINES				pmax	pmax		
	comp=Z,4.0nm,0.5s						
L56A	**Greenwood**	65.64	53	P	**P**	22 30 22.8	-0.9
	baz=318						
L56A				P	**P**	22 30 22.8	-0.9
	baz=318						
KBK	**Karagaybulak**	65.69	308	P	**P**	22 30 24.7	+0.7
	SNR=42						
K57A	**Scipio Center**	65.72	52	P	**P**	22 30 23.6	-0.4
	baz=318						
S51A	**Beattyville**	65.80	60	P	**P**	22 30 24.7	0.0
	baz=317						
S51A				P	**P**	22 30 24.7	0.0
	baz=317						
SIJI	**Sorong**	65.81	234	P	**P**	22 30 24.2	-0.7
	comp=Z,105nm,0.9s,baz=22,slow=7.2,SNR=61						
SIJI				LR	LR	22 54 30.4	
	comp=Z,786nm,21.2s,baz=25,slow=32						
	comp=Z,105nm,0.9s						
VBMS	**Vicksburg**	65.83	68	IAMs_20	IAMs_20	23 01 32.5	
	comp=Z,1µm,19.0s						
VBMS	**Vicksburg**	65.83	68	P	**P**	22 30 24.9	0.0
	baz=316						
D62A	**Allapoint, All**	65.90	44	P	**P**	22 30 24.2	-0.8
	baz=320						
D62A				P	**P**	22 30 24.2	-0.8
	baz=320						
NCB	**Newcomb**	65.90	49	P	**P**	22 30 24.7	-0.6
	baz=319						
AAK	**Ala-Archa**	65.92	309	P	**P**	22 30 26.2	+0.6
	SNR=47						
AAK	**Ala-Archa**	65.92	309	P	**P**	22 30 26.2	+0.6
	comp=Z,18nm,0.5s,baz=128,slow=4.4,SNR=82						
AAK				LR	LR	23 00 38.2	
	comp=Z,3µm,20.1s,baz=46,slow=37						
	comp=Z,18nm,0.5s						
AAK	**Ala-Archa**	65.92	309	P	**P**	22 30 25.4	-0.2
AAK	**Ala-Archa**	65.92	309	*c i*P	**P**	22 30 26.0	+0.4
AAK				pmax	pmax		
	comp=Z,65nm,1.3s						
AAK	**Ala-Archa**	65.92	309	*i* P	**P**	22 30 26.2	+0.6
	SNR=78						
E62A	**Clayton Lake**	66.04	45	P	**P**	22 30 25.1	-1.0
	baz=320						
E62A				P	**P**	22 30 25.1	-1.0
	baz=320						
J59A	**Piesco**	66.15	50	P	**P**	22 30 25.2	-1.6
	baz=319						
J59A				P	**P**	22 30 25.2	-1.6
	baz=319						
R53A	**Hurricane**	66.18	58	P	**P**	22 30 26.4	-0.6
	baz=317						
R53A				P	**P**	22 30 26.4	-0.6
	baz=317						
X48A	**Hartselle**	66.20	64	P	**P**	22 30 26.9	-0.4
	baz=317						
UCH	**Uchtor**	66.22	308	P	**P**	22 30 28.2	+0.4
	SNR=22						
LSA	**Lhasa**	66.25	288	P	**P**	22 30 28.2	+0.1
LSA	**Lhasa**	66.25	288	P	**P**	22 30 28.3	+0.1
LSA	**Lhasa**	66.25	288	*i* P	**P**	22 30 29.3	+1.2
	SNR=30						
344A	**Westbrook Farm**	66.25	69	P	**P**	22 30 27.5	-0.1
	baz=317						
EKS2	**Erkin-Say**	66.26	309	P	**P**	22 30 28.6	+1.0
	SNR=17						
Q54A	**Coxs Mills**	66.29	57	P	**P**	22 30 27.6	-0.1
	baz=318						
Q54A				P	**P**	22 30 27.6	-0.1
	baz=318						
MCWV	**Mont Chateau**	66.31	56	P	**P**	22 30 28.5	+0.7
	baz=318						
MCWV	**Mont Chateau**	66.31	56	P	**P**	22 30 27.6	-0.2
	baz=318						
MOL	**Molde**	66.31	356	*e*P	**P**	22 30 27.5	+0.1
146A	**Union**	66.37	67	P	**P**	22 30 26.7	-1.6
	baz=317						
BINY	**Binghamton**	66.38	52	P	**P**	22 30 27.6	-0.6
	baz=318						
BINY	**Binghamton**	66.38	52	P	**P**	22 30 27.7	-0.6
	baz=318						
F62A	**Pittston Farm,**	66.40	45	P	**P**	22 30 27.6	-0.8
	baz=320						
F62A				P	**P**	22 30 27.6	-0.8
	baz=320						
PMG	**Port Moresby**	66.45	215	P	**P**	22 30 29.3	+0.4
	comp=Z,7.6nm,0.5s,baz=57,slow=22,SNR=4.9						
PMG				LR	LR	22 58 21.9	
	comp=Z,588nm,18.8s,baz=30,slow=35						
	comp=Z,7.6nm,0.5s						
M57A	**Sunshine Farm,**	66.45	53	P	**P**	22 30 28.2	-0.6
	baz=318						
M57A				P	**P**	22 30 28.2	-0.6
	baz=318						
TNTI	**Ternate**	66.47	239	P	**P**	22 30 27.8	-1.4
TNTI				IAmb	IAmb	22 30 41.5	
	comp=Z,43nm,1.1s						
TNTI	**Ternate**	66.47	239	P	**P**	22 30 30.2	+1.1
TNTI	**Ternate**	66.47	239	P	**P**	22 30 30.0	+0.9
	comp=Z,38nm,1.2s						
Z47A	**Carrollton**	66.53	66	P	**P**	22 30 29.0	-0.3
	baz=317,SNR=20						
SSPA	**Standing Stone**	66.59	54	P	**P**	22 30 28.9	-0.8
	baz=318						
SSPA	**Standing Stone**	66.59	54	P	**P**	22 30 28.8	-0.8
	baz=318						
RAF	**Rauma**	66.60	348	*e*P	**P**	22 30 28.0	-1.3
TZTN	**Tazewell**	66.62	60	P	**P**	22 30 29.8	-0.2
	baz=317						
TZTN	**Tazewell**	66.62	60	P	**P**	22 30 29.8	-0.2
	baz=317						
W50A	**Signal Mountai**	66.63	63	P	**P**	22 30 30.2	+0.1
	baz=317						
G62A	**West of Eustis**	66.67	46	P	**P**	22 30 29.4	-0.7
	baz=320						
G62A				P	**P**	22 30 29.4	-0.7
	baz=320						
E63A	**Oxbow**	66.68	44	P	**P**	22 30 28.7	-1.4
	baz=321						
E63A				P	**P**	22 30 28.7	-1.4
	baz=321						
AML	**Almayashu**	66.69	309	P	**P**	22 30 31.8	+1.0
	SNR=46						
V51A	**Loudon**	66.73	62	P	**P**	22 30 29.8	-0.8
	baz=317						
AKN	**Aaknes**	66.73	356	*e*P	**P**	22 30 30.2	0.0
AKN				IAmb	IAmb	22 30 31.7	
	comp=Z,54nm,1.1s						
DOMB	**Dombas**	66.76	355	*e*P	**P**	22 30 30.0	-0.5
H62A	**Milan**	66.88	47	P	**P**	22 30 30.2	-1.3
	baz=320						
H62A				P	**P**	22 30 30.2	-1.3
	baz=320						
S54A	**Dingess, Beckl**	66.91	58	P	**P**	22 30 32.1	+0.3
	baz=318						
S54A				P	**P**	22 30 32.1	+0.3
	baz=318						
FPAL	**Fort Paine**	66.95	63	P	**P**	22 30 31.1	-1.0
FPAL				IAmb	IAmb	22 31 02.2	
	comp=Z,31nm,0.9s						
Y49A	**Blount Mountai**	67.00	64	P	**P**	22 30 31.5	-0.9
	baz=317						
AKTO	**Aktyubinsk**	67.01	324	P	**P**	22 30 33.0	+0.8
	comp=Z,84nm,0.8s,baz=58,slow=6.2,SNR=89						
AKTO				LR	LR	23 02 31.2	
	comp=Z,7µm,19.3s,baz=36,slow=38						
	comp=Z,84nm,0.8s						
AKTO	**Aktyubinsk**	67.01	324	P	**P**	22 30 33.0	+0.8
MEF	**Metsahovi**	67.01	347	*e*P	**P**	22 30 30.7	-1.3
N58A	**Sunbury**	67.03	53	P	**P**	22 30 33.3	+0.9
	baz=318						
N58A				P	**P**	22 30 33.3	+0.9
	baz=318						
FAKI	**Fak Fak**	67.08	232	P	**P**	22 30 30.9	-2.1
FAKI	**Fak Fak**	67.08	232	P	**P**	22 30 34.9	+1.9
	comp=Z,74nm,1.4s						
FAKI	**Fak Fak**	67.08	232	P	**P**	22 30 31.9	-1.1
	comp=Z,74nm,1.4s,comp=Z,1µm						
V52A	**Sevierville**	67.11	61	P	**P**	22 30 33.1	+0.1
	baz=317						
F64A	**Sherman**	67.15	44	P	**P**	22 30 31.9	-1.2
	baz=321						
F64A				P	**P**	22 30 31.9	-1.2
	baz=321						
TKL	**Tuckaleechee C**	67.15	61	LR	LR	23 02 19.2	
	comp=Z,1µm,18.8s,baz=324,slow=38						
TKL	**Tuckaleechee C**	67.15	61	P	**P**	22 30 33.8	+0.5
	baz=317						
ABKAR	**Akbulak array**	67.23	322	P	**P**	22 30 34.0	+0.5
ABKAR	**Akbulak array**	67.23	322	P	**P**	22 30 33.8	+0.3
DZA	**Taraz**	67.26	311	*e*P	**P**	22 30 34.0	0.0
	comp=Z,15nm,1.0s,baz=311						
DZA	**Taraz**	67.26	311	*e*P	**P**	22 30 33.9	0.0
DZA				pmax	pmax		
	comp=Z,15nm,1.0s						
LRAL	**Lakeview Retre**	67.27	65	P	**P**	22 30 33.9	-0.1
	baz=317						
LRAL	**Lakeview Retre**	67.27	65	P	**P**	22 30 33.7	-0.3
	baz=317						
NONG	**Nongkai**	67.38	271	P	**P**	22 30 36.3	+1.3
NC204	**NORSAR Array S**	67.42	354	P	**P**	22 30 34.1	-0.5
W52A	**Murphy**	67.48	62	P	**P**	22 30 35.2	-0.3
	baz=318						
KK31	**Karatay Array**	67.49	311	P	**P**	22 30 35.5	+0.2
KK31	**Karatay Array**	67.49	311	P	**P**	22 30 35.5	+0.2
KK31				pmax	pmax		
	comp=Z,42nm,0.9s						
KKAR	**Karatay Array**	67.49	311	P	**P**	22 30 35.5	+0.2
KKAR	**Karatay Array**	67.49	311	P	**P**	22 30 35.6	+0.2
CRAI	**Chiangrai**	67.51	275	P	**P**	22 30 34.9	-0.9
KSH	**Kashi**	67.51	305	P	**P**	22 30 39.8	+4.1
KSH				pP	sP	22 30 49.0	-0.9

KSH				PcP	**PcP**	**22 31 06.9**	**+4.1**
KSH				S	**S**	**22 39 32.3**	**+2.6**
KSH				pmax	pmax		
	comp=Z,32nm,0.7s						
KSH				LR	LR		
	comp=Z,2µm,19.2s						
KSH				LR	LR		
	comp=Z,2µm,15.5s						
KSH				LR	LR		
	comp=Z,4µm,16.5s						
LBMI	**Labuha**	**67.58**	**238**	P	**P**	**22 30 36.8**	**+0.6**
	comp=Z,48nm,1.4s						
U54A	**Nelsons Funny**	**67.58**	**59**	P	**P**	**22 30 34.8**	**-1.3**
	baz=318						
U54A				P	**P**	**22 30 34.8**	**-1.3**
	baz=318						
NB2	**NORSAR Subarra**	**67.62**	**354**	P	**P**	**22 30 35.1**	**-0.8**
	comp=Z,5.8nm,0.6s,baz=6.4,slow=6.2						
NB2	**NORSAR Subarra**	**67.62**	**354**	P	**P**	**22 30 35.1**	**-0.8**
	slow=6.2						
NOA	**NORSAR Array B**	**67.62**	**354**	P	**P**	**22 30 35.1**	**-0.8**
	comp=Z,9.7nm,0.6s,baz=12,slow=6.9,SNR=37						
NOA				LR	LR	23 01 43.6	
	comp=Z,663nm,18.9s,baz=355,slow=37						
	comp=Z,9.7nm,0.6s						
AAL	**Aland**	**67.64**	**349**	*e*P	**P**	**22 30 34.9**	**-1.0**
V53A	**Saluda**	**67.67**	**61**	P	**P**	**22 30 36.2**	**-0.4**
	baz=318						
V53A				P	**P**	**22 30 36.2**	**-0.4**
	baz=318						
HYA	**Hoyanger**	**67.77**	**356**	*e*P	**P**	**22 30 37.5**	**+0.7**
L61B	**Northampton**	**67.79**	**49**	P	**P**	**22 30 37.5**	**+0.3**
	baz=320						
BLA	**Blacksburg**	**67.82**	**58**	P	**P**	**22 30 37.2**	**-0.3**
	baz=318						
BLA	**Blacksburg**	**67.82**	**58**	P	**P**	**22 30 37.5**	**0.0**
	baz=318						
K62A	**Royalston**	**67.84**	**49**	P	**P**	**22 30 37.1**	**-0.4**
	baz=320						
K62A				P	**P**	**22 30 37.1**	**-0.4**
	baz=320						
MYLDM	**Lahad Datu**	**67.87**	**250**	P	**P**	**22 30 37.2**	**-0.8**
NC602	**NORSAR Array S**	**67.90**	**353**	*e*P	**P**	**22 30 37.6**	**0.0**
CASEE	**Lake Jocassee**	**68.11**	**61**	P	**P**	**22 30 39.1**	**-0.3**
	baz=318						
SKAR	**Skarslia**	**68.16**	**355**	*e*P	**P**	**22 30 39.2**	**-0.1**
SKAR				IAmb	IAmb	22 30 40.5	
	comp=Z,66nm,1.4s						
UPP	**Uppsala**	**68.22**	**350**	*e*P	**P**	**22 30 40.0**	**+0.4**
TUPA	**Temple Univers**	**68.30**	**53**	P	**P**	**22 30 39.4**	**-1.1**
	baz=319						
Y52A	**Lilburn**	**68.31**	**63**	P	**P**	**22 30 39.7**	**-1.0**
	baz=318						
Y52A				P	**P**	**22 30 39.7**	**-1.0**
	baz=318						
VSU	**Vasula**	**68.33**	**345**	*e*P	**P**	**22 30 40.4**	**+0.1**
HFS	**Hagfors**	**68.33**	**352**	P	**P**	**22 30 39.3**	**-1.0**
	comp=Z,6.3nm,0.5s,baz=33,slow=4.1,SNR=20						
HFS				LR	LR	23 01 42.4	
	comp=Z,1µm,19.4s,baz=6.5,slow=37						
	comp=Z,6.3nm,0.5s						
V55A	**Taylorsville**	**68.41**	**59**	P	**P**	**22 30 40.7**	**-0.5**
	baz=318						
V55A				P	**P**	**22 30 40.7**	**-0.5**
	baz=318						
FOR	**Fordham**	**68.42**	**51**	P	**P**	**22 30 41.5**	**+0.3**
	baz=320						
IUG	**Iuzhnay**	**68.45**	**311**	⇑*i*P	**P**	**22 30 42.4**	**+0.8**
	comp=Z,55nm,1.2s,baz=311						
IUG	**Iuzhnay**	**68.45**	**311**	*c i*P	**P**	**22 30 42.3**	**+0.8**
IUG				pmax	pmax		
	comp=Z,55nm,1.2s						
250A	**Grady**	**68.46**	**66**	P	**P**	**22 30 40.5**	**-1.1**
	baz=318						
KKM	**Kota Kinabalu**	**68.54**	**252**	P	**P**	**22 30 40.9**	**-1.4**
KKM				IAmb	IAmb	22 30 44.8	
	comp=Z,33nm,1.2s						
KKM	**Kota Kinabalu**	**68.54**	**252**	P	**P**	**22 30 44.1**	**+1.7**
MTSE	**Matsula**	**68.54**	**346**	*e*P	**P**	**22 30 40.8**	**-0.8**
T57A	**Hurt**	**68.60**	**57**	P	**P**	**22 30 42.8**	**+0.5**
	baz=319						
T57A				P	**P**	**22 30 42.8**	**+0.5**
	baz=319						
BRAL	**Brewton**	**68.61**	**67**	P	**P**	**22 30 42.6**	**+0.1**
	baz=318						
CBN	**Corbin Frederi**	**68.67**	**55**	P	**P**	**22 30 42.8**	**0.0**
	baz=319						
MOS	**Moscow**	**68.68**	**338**	*e*P	**P**	**22 30 41.4**	**-1.1**
MOS				pmax	pmax		
	comp=Z,67nm,0.7s						
MOS				MLR	MLR		
	comp=E,1µm,17.0s						
MOS				MLR	MLR		
	comp=Z,4µm,17.0s						
MOS				MLR	MLR		
	comp=N,3µm,18.0s						
MSVF	**Nonsavu**	**68.71**	**181**	P	**P**	**22 30 43.7**	**+0.6**
	comp=N,6.8nm,0.9s,baz=308,slow=5.3,SNR=3.6						
MSVF				LR	LR	22 55 06.2	
	comp=N,1µm,21.0s,baz=2.4,slow=31						
	comp=N,6.8nm,0.9s						
MSVF	**Nonsavu**	**68.71**	**181**	P	**P**	**22 30 42.1**	**-1.1**
MSVF				IAmb	IAmb	22 31 07.8	
	comp=Z,44nm,1.2s						
OSL	**Oslo**	**68.75**	**354**	*e*P	**P**	**22 30 42.8**	**-0.1**
SHL	**Shillong**	**68.83**	**285**	P	**P**	**22 30 43.5**	**-0.7**
SHL	**Shillong**	**68.83**	**285**	P	**P**	**22 30 43.5**	**-0.7**
SHL				pmax	pmax		
	comp=Z,146nm,1.2s						
152A	**Waverly Hall**	**68.83**	**64**	P	**P**	**22 30 43.0**	**-0.9**
	baz=318						
MND	**Mandalay**	**68.84**	**279**	P	**P**	**22 30 44.7**	**+0.6**
PAULI	**Pauline**	**68.85**	**61**	P	**P**	**22 30 43.1**	**-0.9**
	baz=318						
KMSC	**Kings Mountain**	**68.87**	**60**	P	**P**	**22 30 43.7**	**-0.4**
KMSC				IAmb	IAmb	22 31 34.6	
	comp=Z,44nm,1.1s						
KMSC	**Kings Mountain**	**68.87**	**60**	P	**P**	**22 30 43.9**	**-0.2**
	baz=318						
KMSC	**Kings Mountain**	**68.87**	**60**	P	**P**	**22 30 44.1**	**0.0**
	baz=318						
PHRA	**Phrae**	**68.89**	**273**	P	**P**	**22 30 43.9**	**-0.6**
BELG	**Belogornoye**	**68.92**	**331**	P	**P**	**22 30 44.1**	**0.0**
	comp=Z,53nm,0.9s,baz=342,slow=2.3,SNR=16						
BELG				LR	LR	23 04 00.1	
	comp=Z,3µm,19.2s,baz=17,slow=39						
	comp=Z,53nm,0.9s						
BELG	**Belogornoye**	**68.92**	**331**	*de*P	**P**	**22 30 44.7**	**+0.6**
BELG				pmax	pmax		
	comp=Z,12nm,1.0s						
GTOI	**Gorontalo**	**68.97**	**243**	P	**P**	**22 30 43.6**	**-1.3**
	comp=Z,9.8nm,1.1s						
ODD1	**Odda**	**69.01**	**356**	*e*P	**P**	**22 30 44.5**	**-0.1**
HODGE	**Hodges**	**69.04**	**61**	P	**P**	**22 30 44.6**	**-0.5**
	baz=318						
KONO	**Kongsberg**	**69.11**	**354**	P	**P**	**22 30 44.9**	**-0.3**
KONO				IAmb	IAmb	22 30 46.2	
	comp=Z,35nm,1.0s						
KONO	**Kongsberg**	**69.11**	**354**	⇓*e*P	**P**	**22 30 45.6**	**+0.4**
KONO				pmax	pmax		
	comp=Z,48nm,1.7s						
KONO	**Kongsberg**	**69.11**	**354**	*e*P	**P**	**22 30 45.1**	**-0.1**
TAOE	**Nuku Hiva Isla**	**69.42**	**136**	*e*S	**S**	**22 39 54.0**	**+1.4**
	comp=Z,484nm,29.7s						
TAOE	**Nuku Hiva Isla**	**69.42**	**136**	*e*LR	LR	22 51 53.1	
	comp=Z,4µm,22.4s						
TAOE	**Nuku Hiva Isla**	**69.42**	**136**	*e*T	T	23 46 35.1	
	comp=Z,71nm,0.2s						
TAS	**Tashkent**	**69.44**	**311**	P	**P**	**22 30 47.9**	**+0.4**
TAS	**Tashkent**	**69.44**	**311**	P	**P**	**22 30 47.9**	**+0.4**
TAS				pmax	pmax		
	comp=Z,80nm,0.8s						
CHTO	**Chiang Mai**	**69.46**	**275**	P	**P**	**22 30 47.0**	**-1.0**
CHTO	**Chiang Mai**	**69.46**	**275**	P	**P**	**22 30 47.0**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,2.0nm,1.3s						
OBN	**Obninsk**	**69.50**	**338**	P	**P**	**22 30 47.3**	**-0.3**
	comp=Z,5.4nm,0.4s,baz=148,slow=23,SNR=3.7						
OBN				LR	LR	23 05 37.7	
	comp=Z,1µm,18.4s,baz=15,slow=40						
	comp=Z,5.4nm,0.4s						
OBN	**Obninsk**	**69.50**	**338**	P	**P**	**22 30 47.7**	**+0.1**
OBN				IAmb	IAmb	22 30 49.8	
	comp=Z,25nm,0.6s						
OBN	**Obninsk**	**69.50**	**338**	*i* P	**P**	**22 30 46.9**	**-0.7**
OBN				*i*		22 31 07.7	
OBN				*i* S	**S**	**22 39 58.6**	**+6.2**
OBN				pmax	pmax		
	comp=Z,25nm,0.9s						
OBN				MLR	MLR		
	comp=Z,5µm,18.0s						
BLS5	**Blasjo**	**69.51**	**356**	*e*P	**P**	**22 30 47.4**	**-0.3**
SANI	**Sanana**	**69.58**	**239**	P	**P**	**22 30 48.5**	**-0.1**
	comp=Z,39nm,1.2s						
W57A	**Gilead**	**69.59**	**59**	P	**P**	**22 30 48.4**	**-0.1**
	baz=319						
W57A				P	**P**	**22 30 48.4**	**-0.1**
	baz=319						
MRSI	**Marisa**	**69.70**	**244**	P	**P**	**22 30 47.7**	**-1.7**
	comp=Z,66nm,1.2s,comp=Z,2µm						
BIRD	**Birdtown, Kers**	**69.72**	**60**	P	**P**	**22 30 49.1**	**-0.2**
	baz=319						
CM31	**Chiang Mai Arr**	**69.73**	**274**	P	**P**	**22 30 48.7**	**-1.0**
CM31				IAmb	IAmb	22 30 51.8	
	comp=Z,22nm,0.8s						
CMAR	**Chiang Mai Arr**	**69.73**	**274**	P	**P**	**22 30 49.4**	**-0.2**
	comp=Z,9.2nm,0.5s,baz=27,slow=6.3,SNR=51						
CMAR				LR	LR	23 04 41.8	
	comp=Z,536nm,19.2s,baz=45,slow=39						
	comp=Z,9.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**69.73**	**274**	P	**P**	**22 30 49.1**	**-0.5**
154A	**Montrose**	**69.78**	**63**	P	**P**	**22 30 48.9**	**-0.8**
	baz=318						
SLIT	**Slitere, Latvi**	**69.81**	**347**	*e*P	**P**	**22 30 48.3**	**-1.1**
TOLI2	**Tolitoli**	**69.84**	**245**	P	**P**	**22 30 48.2**	**-2.1**
TOLI2				IAmb	IAmb	22 30 51.4	
	comp=Z,53nm,1.1s						
TOLI2	**Tolitoli**	**69.84**	**245**	P	**P**	**22 30 51.2**	**+0.9**
TAPN	**Taplejung**	**70.02**	**289**	*e*P	**P**	**22 30 52.2**	**+0.5**
	comp=Z,475nm,1.2s						
UNM	**Universidad Na**	**70.02**	**84**	IAMs_20	IAMs_20	22 56 53.8	
	comp=Z,1µm,21.0s						
HAW	**Hawthorne Fire**	**70.05**	**61**	P	**P**	**22 30 51.3**	**-0.1**
	baz=319						
LUWI	**Luwuk**	**70.49**	**242**	P	**P**	**22 30 52.4**	**-1.9**
LUWI	**Luwuk**	**70.49**	**242**	P	**P**	**22 30 54.7**	**+0.4**
LUWI	**Luwuk**	**70.49**	**242**	P	**P**	**22 30 54.0**	**-0.3**
	comp=Z,93nm,1.0s						
HOMB	**Homborsund**	**70.55**	**355**	*e*P	**P**	**22 30 54.4**	**+0.4**
SNART	**Snartemo**	**70.55**	**355**	*e*P	**P**	**22 30 54.3**	**+0.2**
255A	**Hazlehurst**	**70.64**	**63**	P	**P**	**22 30 55.2**	**+0.2**
	baz=319						
GUN	**Gumba**	**70.68**	**291**	*e*P	**P**	**22 30 56.3**	**+0.5**
	comp=Z,560nm,1.1s						
JIRN	**Jiri**	**70.69**	**290**	*e*P	**P**	**22 30 56.4**	**+0.5**
	comp=Z,488nm,1.2s						
Y58A	**Scranton**	**70.70**	**60**	P	**P**	**22 30 55.6**	**+0.2**
	baz=319						
Y58A				P	**P**	**22 30 55.6**	**+0.2**
	baz=319						
RAMN	**Ramite**	**70.97**	**289**	*e*P	**P**	**22 30 57.8**	**+0.3**
	comp=Z,713nm,1.2s						
MPSI	**Mapaga**	**70.98**	**245**	P	**P**	**22 30 56.4**	**-0.8**
	comp=Z,55nm,1.1s,comp=Z,715nm						
BRDH	**Bariadhala**	**71.11**	**283**	LR	LR	23 07 09.4	
	comp=Z,1µm,18.1s,baz=17,slow=40						
LPSR	**Galich'ya Gora**	**71.21**	**336**	*e*P	**P**	**22 30 57.5**	**-0.6**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PKI	**Pulchoki**	**71.21**	**291**	*e*P	**P**	**22 30 59.1**	**+0.1**
PKIN	**Phulchoki**	**71.22**	**291**	*e*P	**P**	**22 30 59.2**	**+0.3**
GKN	**Gorkha**	**71.34**	**292**	*e*P	**P**	**22 30 59.9**	**+0.3**
NAYO	**Nakonayok**	**71.35**	**270**	P	**P**	**22 31 01.0**	**+1.5**
	comp=Z,437nm,1.2s						
DMN	**Daman**	**71.36**	**291**	*e*P	**P**	**22 31 00.2**	**+0.4**
CHGR	**Chuyangaron**	**71.58**	**309**	P	**P**	**22 31 00.7**	**0.0**
CHGR	**Chuyangaron**	**71.58**	**309**	P	**P**	**22 31 00.7**	**0.0**
CHGR				pmax	pmax		
	comp=Z,192nm,0.8s						
DANN	**Dangsing**	**71.59**	**292**	*e*P	**P**	**22 31 01.7**	**+0.5**
PABE	**Paberze**	**71.61**	**345**	P	**P**	**22 30 59.7**	**-0.7**
PABE	**Paberze**	**71.61**	**345**	*e*P	**P**	**22 31 00.6**	**+0.2**
VRH	**Novokhopyorsk**	**71.71**	**333**	*e*P	**P**	**22 31 00.3**	**-0.9**
VRH				pmax	pmax		
	comp=Z,28nm,0.6s						
NACGM	**Naroch**	**71.71**	**344**	*e*P	**P**	**22 31 01.4**	**+0.3**
	comp=Z,9.0nm,0.8s,baz=18						
MNK	**Minsk**	**71.90**	**343**	*i* P	**P**	**22 31 02.1**	**-0.1**
	comp=E,1.0nm,0.9s						
MNK				*i* P	**P**	**22 31 02.1**	**-0.1**
	comp=N,37nm,0.9s						
MNK				*i* P	**P**	**22 31 02.1**	**-0.1**
	comp=Z,11nm,0.9s,baz=18						
MNK				*i* PcP	**PcP**	**22 31 20.5**	**-0.3**
MNK				*i* PP	**PP**	**22 33 41.8**	**+0.4**
MNK				*i* PPP	PPP	22 35 25.8	
MNK				*i* S	**S**	**22 40 20.5**	**+0.2**
MNK				*i* SS	SS	22 45 13.5	+18
MNK				*i* SSS	SSS	22 48 18.4	
MNK				*i* LQ	LQ	22 57 46.7	
MNK				*i* LR	LR	23 03 15.0	
MNK				*i* LRM	MLR	23 07 46.4	
	comp=E,204nm,16.8s						
MNK				*i* LRM	MLR	23 08 02.0	
	comp=Z,2µm,17.0s						
MNK				*i* LRM	MLR	23 08 05.6	
	comp=N,1µm,17.0s						
MNK	**Minsk**	**71.90**	**343**	*i* P	**P**	**22 31 02.1**	**-0.1**
MNK				*i*		22 31 20.5	
MNK				*i*		22 33 41.7	
MNK				*i* PPP	PPP	22 35 25.7	
MNK				*i* S	**S**	**22 40 20.5**	**+0.2**
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,11nm,0.9s						
MNK				pmax	pmax		
	comp=N,37nm,0.9s						
MNK				MLR	MLR		
	comp=E,204nm,17.0s						
VORR	**Voronezh**	**71.98**	**335**	*e*P	**P**	**22 31 02.8**	**0.0**
VORR				pmax	pmax		
	comp=Z,18nm,0.4s						
PMOR	**Pomariorio Ree**	**71.99**	**146**	*e*T	T	23 49 42.0	
	comp=Z,27nm,0.2s						
COEN	**Coen**	**72.11**	**217**	P	**P**	**22 31 02.2**	**-1.7**
COEN				IAmb	IAmb	22 31 05.4	
	comp=Z,50nm,1.4s						
COEN	**Coen**	**72.11**	**217**	P	**P**	**22 31 05.1**	**+1.2**
	comp=Z,27nm,1.7s						
PYUN	**Piuthan**	**72.23**	**293**	*e*P	**P**	**22 31 05.2**	**+0.2**
	comp=Z,206nm,1.0s						
VSR	**Storozhevoye**	**72.40**	**335**	*e*P	**P**	**22 31 05.0**	**-0.3**
VSR				pmax	pmax		
	comp=Z,20nm,0.8s						
NIL	**Nilore**	**73.40**	**303**	P	**P**	**22 31 11.5**	**-0.1**
NIL	**Nilore**	**73.40**	**303**	P	**P**	**22 31 11.5**	**-0.1**
NIL				pmax	pmax		
	comp=Z,47nm,0.7s						
NIL				MLR	MLR		
	comp=Z,4µm,21.0s						
EKA	**Eskdalemuir Ar**	**73.75**	**1**	LR	LR	23 04 02.1	
	comp=Z,582nm,19.2s,baz=338,slow=36						
ESK	**Eskdalemuir**	**73.77**	**1**	P	**P**	**22 31 13.0**	**-0.3**
ESK	**Eskdalemuir**	**73.77**	**1**	P	**P**	**22 31 13.0**	**-0.3**
ESK				pmax	pmax		
	comp=Z,123nm,1.8s						
SBUM	**Sibu**	**73.79**	**253**	P	**P**	**22 31 12.9**	**-1.1**
SBUM				IAmb	IAmb	22 31 16.4	
	comp=Z,62nm,1.8s						
PPT	**Papeete**	**73.82**	**149**	LR	LR	22 55 40.7	
	comp=Z,2µm,20.7s,baz=347,slow=29						
PPT2	**Papeete2**	**73.84**	**149**	*e*P	**P**	**22 31 16.7**	**+2.5**
	comp=Z,94nm,22.2s						
PPT2				*e*S	**S**	**22 40 44.8**	**+1.6**
	comp=Z,853nm,30.5s						
PPT2				*e*SS	**SS**	**22 45 30.2**	**+2.0**
	comp=Z,681nm,24.2s						
PPT2				*e*LR	LR	22 53 56.0	
	comp=Z,3µm,27.5s						
PPT2				*e*LR	LR	22 53 56.0	
	comp=Z,4µm,25.0s						
PPT2	**Papeete2**	**73.84**	**149**	*e*T	T	23 52 02.5	
	comp=Z,14nm,0.3s						
DZM	**Mont Dzumac**	**73.87**	**192**	*e*S	**S**	**22 40 44.8**	**+1.3**
	comp=Z,568nm,26.0s						
DZM				*e*SS	**SS**	**22 45 30.3**	**+1.6**
	comp=Z,546nm,26.1s						
DZM				*e*LR	LR	22 53 56.0	
	comp=Z,3µm,24.2s						
DZM	**Mont Dzumac**	**73.87**	**192**	LR	LR	22 57 23.1	
	comp=Z,1µm,21.4s,baz=25,slow=31						
TIAR	**Tiarei**	**73.88**	**149**	*e*T	T	23 52 05.4	
	comp=Z,3.3nm,0.3s						
PAE	**Paea**	**73.90**	**149**	*e*T	T	23 52 02.8	
	comp=Z,4.5nm,0.3s						
TVO	**Taravao**	**74.12**	**149**	*e*T	T	23 52 30.9	
	comp=Z,2.2nm,0.3s						
CMIG	**Matias Romero**	**74.38**	**82**	LR	LR	22 59 23.9	
	comp=Z,907nm,22.0s,baz=308,slow=32						
RAR	**Rarotonga**	**74.51**	**160**	LR	LR	22 58 10.0	
	comp=Z,2µm,19.9s,baz=314,slow=31						
SPSI	**Sidrap Palu**	**74.57**	**243**	P	**P**	**22 31 19.0**	**+0.5**
	comp=Z,26nm,1.2s						
MEH	**Mehetia**	**74.60**	**148**	*e*T	T	23 53 06.7	
	comp=Z,18nm,0.3s						
KBL	**Kabul**	**74.87**	**307**	P	**P**	**22 31 19.1**	**-1.3**
KBL	**Kabul**	**74.87**	**307**	P	**P**	**22 31 19.1**	**-1.3**
KBL				pmax	pmax		
	comp=Z,104nm,1.2s						
AKASG	**Malin Array Be**	**75.24**	**341**	P	**P**	**22 31 21.1**	**-0.8**
	comp=Z,10nm,0.5s,baz=20,slow=6.4,SNR=42						
AKASG				LR	LR	23 08 19.4	
	comp=Z,3µm,20.0s,baz=26,slow=39						
	comp=Z,10nm,0.5s						
AKASG	**Malin Array Be**	**75.24**	**341**	P	**P**	**22 31 20.7**	**-1.2**
AKASG				IAmb	IAmb	22 31 23.4	
	comp=Z,19nm,0.7s						
AKBB	**Malin Array Si**	**75.24**	**341**	P	**P**	**22 31 20.9**	**-1.1**
AKBB				IAmb	IAmb	22 31 23.5	
	comp=Z,22nm,0.7s						
AKBB	**Malin Array Si**	**75.24**	**341**	*ce*P	**P**	**22 31 21.4**	**-0.5**
KAPI	**Kappang**	**75.45**	**242**	LR	LR	23 00 18.0	
	comp=Z,220nm,20.9s,baz=32,slow=32						
KAPI	**Kappang**	**75.45**	**242**	P	**P**	**22 31 22.7**	**-0.8**
KAPI				IAmb	IAmb	22 31 25.6	
	comp=Z,46nm,1.4s						
KAPI	**Kappang**	**75.45**	**242**	P	**P**	**22 31 25.5**	**+1.9**
	comp=Z,30nm,2.0s						
KAPI	**Kappang**	**75.45**	**242**	⇓*e*P	**P**	**22 31 23.1**	**-0.5**
KAPI				pmax	pmax		
	comp=Z,11nm,0.9s						
KDU	**Kakadu**	**75.46**	**227**	P	**P**	**22 31 22.7**	**-0.9**
BKSI	**Bulukumba**	**75.50**	**242**	P	**P**	**22 31 24.5**	**+0.7**
	comp=Z,43nm,1.1s,comp=Z,624nm						
MTSU	**Mount Surprise**	**75.53**	**214**	P	**P**	**22 31 23.2**	**-0.7**
KSM	**Kuching**	**75.71**	**254**	P	**P**	**22 31 24.4**	**-0.7**
KSM				IAmb	IAmb	22 31 27.3	
	comp=Z,74nm,1.6s						
KSM	**Kuching**	**75.71**	**254**	P	**P**	**22 31 27.1**	**+1.9**
	comp=Z,15nm,0.9s						
TV1H	**Townsville Har**	**75.74**	**211**	P	**P**	**22 31 25.4**	**+0.4**
	comp=Z,24nm,0.7s						
DSB	**Dublin**	**75.76**	**3**	P	**P**	**22 31 24.6**	**-0.3**
DSB				IAmb	IAmb	22 31 27.4	
	comp=Z,29nm,0.9s						
TEIG	**Tepich**	**76.07**	**75**	IAMs_20	IAMs_20	23 06 58.3	
	comp=Z,842nm,21.0s						
MTN	**Manton Dam**	**76.22**	**228**	P	**P**	**22 31 26.9**	**-1.0**
MTN	**Manton Dam**	**76.22**	**228**	P	**P**	**22 31 27.2**	**-0.7**
SURA	**Surathani**	**76.34**	**268**	P	**P**	**22 31 30.3**	**+1.6**
	comp=Z,34nm,1.2s						
CTA	**Charters Tower**	**76.69**	**212**	P	**P**	**22 31 29.5**	**-1.0**
	comp=Z,20nm,0.9s,baz=15,slow=6.4,SNR=19						
CTA				LR	LR	23 05 22.3	
	comp=Z,289nm,18.3s,baz=24,slow=36						
	comp=Z,20nm,0.9s						
CTAO	**Charters Tower**	**76.69**	**212**	P	**P**	**22 31 29.4**	**-1.0**
CTAO				IAmb	IAmb	22 31 32.2	
	comp=Z,39nm,1.1s						
CTAO	**Charters Tower**	**76.69**	**212**	P	**P**	**22 31 30.4**	**0.0**
CTAO	**Charters Tower**	**76.69**	**212**	P	**P**	**22 31 29.4**	**-1.0**
CTAO				pmax	pmax		
	comp=Z,39nm,1.1s						
SRIT	**Nakonsritamara**	**76.79**	**267**	P	**P**	**22 31 31.0**	**-0.3**
SRIT				IAmb	IAmb	22 31 33.4	
	comp=Z,40nm,1.2s						
SRIT	**Nakonsritamara**	**76.79**	**267**	P	**P**	**22 31 33.2**	**+1.9**
	comp=Z,28nm,1.2s						
SOEI	**Soe**	**76.97**	**236**	P	**P**	**22 31 30.8**	**-1.5**
SOEI				IAmb	IAmb	22 32 09.8	
	comp=Z,49nm,1.2s						
SOEI	**Soe**	**76.97**	**236**	P	**P**	**22 31 33.4**	**+1.1**
LVV	**L'vov**	**77.08**	**344**	*e*P	**P**	**22 31 33.0**	**+0.6**
LVV				MLR	MLR		
	comp=E,900nm,16.0s						
LVV				MLR	MLR		
	comp=N,1µm,17.0s						
LVV				MLR	MLR		
	comp=Z,2µm,17.0s						
MMRI	**Maumere**	**77.10**	**238**	P	**P**	**22 31 31.4**	**-1.5**
MMRI				IAmb	IAmb	22 32 05.3	
	comp=Z,41nm,1.2s						
MMRI	**Maumere**	**77.10**	**238**	P	**P**	**22 31 34.0**	**+1.1**
CLL	**Collm**	**77.12**	**351**	*e*P	**P**	**22 31 33.0**	**+0.4**
CLL				*e*S	S	22 41 30.0	+11
CLL				*e*PS	**PnS**	**22 42 01.0**	**+0.7**
CLL				*e*SS	**SS**	**22 46 12.0**	**-3.2**
CLL				*e*SSS	SSS	22 50 06.0	
CLL				*e*x	x	22 53 00.0	
CLL				AMS	AMS	23 08 00.0	
	comp=Z,1µm,19.9s						
CLL	**Collm**	**77.12**	**351**	*e*P	**P**	**22 31 33.0**	**+0.4**
CLL				*e*S	**S**	**22 41 13.0**	**-5.9**
CLL				MLR	MLR		
	comp=Z,1µm,19.9s						
MAK	**Makhachkala**	**77.17**	**326**	*c i*P	**P**	**22 31 31.9**	**-1.1**
MAK				*e*		22 34 22.3	
MAK				*e*PPP	PPP	22 36 14.1	
MAK				*e*S	**S**	**22 41 18.3**	**-1.4**
MAK				*e*SS	**SS**	**22 46 22.0**	**+5.6**
MAK				pmax	pmax		
	comp=Z,243nm,1.2s						
SKLT	**Songkhla**	**77.25**	**266**	P	**P**	**22 31 36.3**	**+2.4**
	comp=Z,25nm,1.2s						
GEYT	**Alibeck**	**77.27**	**316**	P	**P**	**22 31 34.5**	**+0.7**
	comp=Z,36nm,1.1s,baz=0.0,slow=4.4,SNR=44						
GEYT				PP	**PP**	**22 34 29.8**	**+2.4**
	comp=Z,14nm,1.1s,baz=4.6,slow=7.4,SNR=5.5						
GEYT				LR	LR	23 10 45.2	
	comp=Z,5µm,18.2s,baz=50,slow=40						
	comp=Z,36nm,1.1s						
GEYT	**Alibeck**	**77.27**	**316**	P	**P**	**22 31 33.6**	**-0.2**
GEYT				IAmb	IAmb	22 31 37.2	
	comp=Z,59nm,1.2s						
GYA0B	**ALIBECK ARRAY**	**77.27**	**316**	P	**P**	**22 31 33.8**	**+0.1**
GYA0B				IAmb	IAmb	22 31 37.8	
	comp=Z,52nm,1.1s						
OJC	**Ojcow**	**77.37**	**347**	P	**P**	**22 31 34.0**	**0.0**
OJC				IAmb	IAmb	22 32 21.8	
	comp=Z,25nm,1.2s						
OJC	**Ojcow**	**77.37**	**347**	P	**P**	**22 31 34.0**	**0.0**
OJC				pmax	pmax		
	comp=Z,25nm,1.2s						
BRG	**Berggiesshubel**	**77.46**	**350**	*e*P	**P**	**22 31 34.8**	**+0.3**
BRG				Amp		22 31 35.8	
	comp=Z,5.1nm,0.8s						
BRG				Amp		23 09 02.0	
	comp=E,1.0nm,17.5s						
BRG				Amp		23 09 07.0	
	comp=Z,2.1nm,21.5s						
BRG				Amp		23 09 11.0	
	comp=N,1.7nm,22.6s						
BRG	**Berggiesshubel**	**77.46**	**350**	*e*P	**P**	**22 31 34.8**	**+0.3**
BRG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRG				MLR	MLR		
	comp=E,956nm,17.5s						
BRG				MLR	MLR		
	comp=Z,2µm,21.5s						
BRG				MLR	MLR		
	comp=N,2µm,22.6s						
OSTC	**Ostas**	**77.52**	**349**	*e*P	**P**	**22 31 35.4**	**+0.5**
OSTC				AMS	AMS	23 13 30.0	
	comp=N,2µm,19.5s						
OSTC	**Ostas**	**77.52**	**349**	*e*P	**P**	**22 31 35.4**	**+0.5**
OSTC				MLR	MLR		
	comp=Z,2µm,19.5s						
GROC	**Groznyy**	**77.56**	**327**	*e*P	**P**	**22 31 38.5**	**+3.3**
DPC	**Dobruska-Polom**	**77.71**	**349**	*e*P	**P**	**22 31 36.3**	**+0.3**
DPC				AMS	AMS	23 13 20.0	
	comp=Z,2µm,21.4s						
DPC	**Dobruska-Polom**	**77.71**	**349**	*e*P	**P**	**22 31 36.3**	**+0.3**
DPC				MLR	MLR		
	comp=Z,2µm,21.4s						
PVCC	**Panska Ves**	**77.73**	**350**	AMS	AMS	23 10 20.0	
	comp=Z,1µm,16.1s						
SORM	**Soroca**	**77.85**	**340**	⇑P	**P**	**22 31 36.0**	**-0.7**
SORM	**Soroca**	**77.85**	**340**	P	**P**	**22 31 36.0**	**-0.7**

KVAR	Kislovodsk Arr	77.91	329	LR	LR	23 10 01.8	
	comp=Z,2µm,21.2s,baz=266,slow=39						
KIV	Kislovodsk	77.92	329	⇑P	P	22 31 38.2	+0.8
KIV	Kislovodsk	77.92	329	P	P	22 31 38.6	+1.2
KIV				IAmb	IAmb	22 32 17.8	
	comp=Z,22nm,1.0s						
KIV				IAMs_20	IAMs_20	23 10 29.3	
	comp=Z,1µm,20.0s						
KIV	Kislovodsk	77.92	329	*e*P	P	22 31 38.2	+0.8
KIV				pmax	pmax		
	comp=Z,22nm,1.0s						
KIV				MLR	MLR		
	comp=Z,1µm,19.0s						
KIV	Kislovodsk	77.92	329	*i* P	P	22 31 38.9	+1.6
	SNR=11						
KRLC	Kraliky	77.92	348	*e*P	P	22 31 36.6	-0.6
KRLC				*e*x	x	22 31 48.9	
KRLC				AMS	AMS	23 12 20.0	
	comp=Z,2µm,21.2s						
KRLC	Kraliky	77.92	348	*e*P	P	22 31 36.6	-0.6
KRLC				*e*		22 31 48.9	
KRLC				MLR	MLR		
	comp=Z,2µm,21.2s						
STHS	Stebnicka Huta	77.93	345	*e*P	P	22 31 38.2	+1.0
STHS				pmax	pmax		
	comp=Z,15nm,1.0s						
STHS	Stebnicka Huta	77.93	345	*e*P	P	22 31 38.2	+1.0
OKC	Ostrava-Krasne	77.97	348	AMS	AMS	23 12 00.0	
	comp=Z,2µm,16.1s						
KBZ	Khabaz	78.05	329	LR	LR	23 10 13.0	
	comp=Z,3µm,21.5s,baz=27,slow=39						
KBZ	Khabaz	78.05	329	*de*P	P	22 31 39.8	+1.9
KBZ				pmax	pmax		
	comp=Z,12nm,1.0s						
MORC	Moravsky Berou	78.11	348	P	P	22 31 38.1	-0.2
MORC	Moravsky Berou	78.11	348	*e*P	P	22 31 38.3	0.0
MORC	Moravsky Berou	78.11	348	P	P	22 31 38.1	-0.2
MORC				pmax	pmax		
	comp=Z,9.0nm,1.2s						
NKC	Novy Kostel	78.24	351	*e*P	P	22 31 38.4	-0.5
NKC	Novy Kostel	78.24	351	*e*P	P	22 31 38.4	-0.5
PRU	Pruhonice	78.27	350	*e*P	P	22 31 39.5	+0.4
PRU				AMS	AMS	23 09 40.0	
	comp=Z,1µm,22.7s						
PRU	Pruhonice	78.27	350	*e*P	P	22 31 39.5	+0.4
PRU				MLR	MLR		
	comp=Z,1µm,22.7s						
MEM	Membach	78.33	356	*d*P	P	22 31 40.1	+0.7
	comp=Z,9.2nm,1.1s						
BTNL	Ternell	78.35	355	*d*P	P	22 31 39.1	-0.4
	comp=Z,12nm,0.0s						
AKT	Akhty	78.39	325	*e*P	P	22 31 40.6	+0.6
AKT				*e*		22 31 48.9	
AKT				*e*S	S	22 41 36.9	+3.7
AKT				pmax	pmax		
	comp=Z,46nm,0.8s						
LANS	Liptovska Anna	78.46	347	*e*P	P	22 31 41.2	+1.0
LANS				pmax	pmax		
	comp=Z,14nm,1.4s						
LANS	Liptovska Anna	78.46	347	*e*P	P	22 31 41.2	+1.0
MAUC	Maruska	78.48	348	AMS	AMS	23 12 30.0	
	comp=Z,4µm,15.5s						
RK1H	Rockhampton Ha	78.49	207	P	P	22 31 42.8	+2.4
	comp=Z,14nm,0.8s						
BCLA	Clavier	78.55	356	*d*P	P	22 31 40.6	0.0
	comp=Z,6.5nm,1.0s						
ZEI	Tsey	78.56	328	*e*P	P	22 31 40.9	-0.2
ZEI				pmax	pmax		
	comp=Z,39nm,1.1s						
BGES	Gesves	78.60	356	*d*P	P	22 31 40.4	-0.5
	comp=Z,6.6nm,1.0s						
KULM	Kulim	78.68	264	P	P	22 31 41.5	-0.3
KULM				IAmb	IAmb	22 31 43.4	
	comp=Z,28nm,1.2s						
BMRD	Maredsous	78.69	356	*d*P	P	22 31 40.6	-0.8
	comp=Z,12nm,0.0s						
VRAC	Vranov	78.70	348	⇓P	P	22 31 40.9	-0.5
VRAC	Vranov	78.70	348	LR	LR	23 10 55.2	
	comp=Z,904nm,18.2s,baz=14,slow=39						
VRAC	Vranov	78.70	348	*e*P	P	22 31 41.4	-0.1
VRAC	Vranov	78.70	348	P	P	22 31 40.9	-0.5
ANN	Anapa	78.73	333	*e*P	P	22 31 48.1	+6.4
ANN				pmax	pmax		
	comp=Z,65nm,1.3s						
ANN				MLR	MLR		
	comp=N,3µm,21.0s						
ANN				MLR	MLR		
	comp=Z,2µm,21.0s						
RCHB	Rochefort	78.82	356	*d*P	P	22 31 41.7	-0.4
	comp=Z,6.4nm,0.0s						
KIS	Kishinev	78.83	340	*e*P	P	22 31 42.0	-0.2
KIS				MLR	MLR		
	comp=Z,850nm,16.5s						
GRA1	Grafenberg Arr	78.89	352	P	P	22 31 42.7	+0.2
GRA1				IAmb	IAmb	22 31 48.2	
	comp=Z,58nm,1.7s						
GRF	Grafenberg Arr	78.89	352	P	P	22 31 42.7	+0.2
GRF				pmax	pmax		
	comp=Z,58nm,1.7s						
GRFO	Grafenberg	78.89	352	P	P	22 31 42.0	-0.5
GRFO				IAmb	IAmb	22 31 48.2	
	comp=Z,63nm,1.8s						
GRFO	Grafenberg	78.89	352	P	P	22 31 42.0	-0.5
GRFO				pmax	pmax		
	comp=Z,63nm,1.8s						
DOU	Dourbes	78.91	356	*d*P	P	22 31 42.6	0.0
	comp=Z,6.8nm,1.3s						
MILM	Milestii Mici	78.91	340	*e*P	P	22 31 41.0	-1.6
MILM				*e*L	L	23 02 33.0	
MILM				LQM		23 10 14.0	
	comp=Z,2µm,19.5s						
MILM				LRM	MLR	23 11 08.0	
	comp=Z,2µm,16.0s						
MILM	Milestii Mici	78.91	340	*e*P	P	22 31 41.0	-1.6
MILM				MLR	MLR		
	comp=Z,2µm,16.0s						
BUR08	Bucovina Ar. S	78.95	342	P	P	22 31 43.0	-0.1
BUR08				IAmb	IAmb	22 31 45.9	
	comp=Z,20nm,0.7s						
KRUC	Moravsky	78.96	349	*e*P	P	22 31 42.9	0.0
TRPA	Tarpa	78.97	344	⇑P	P	22 31 43.1	+0.2
BURAR	Bucovina Array	78.98	342	⇑P	P	22 31 43.4	+0.3
BURAR	Bucovina Array	78.98	342	P	P	22 31 42.8	-0.4
BURAR				IAmb	IAmb	22 31 46.0	
	comp=Z,30nm,0.7s						
BURAR	Bucovina Array	78.98	342	P	P	22 31 43.4	+0.3
JAVC	Velka Javorina	79.00	348	*e*P	P	22 31 44.4	+1.2
IPM	Ipoh	79.08	263	P	P	22 31 43.0	-1.0
IPM				IAmb	IAmb	22 31 45.0	
	comp=Z,26nm,1.0s						
IPM				IAMs_20	IAMs_20	23 09 05.1	
	comp=Z,752nm,19.0s						
IPM	Ipoh	79.08	263	P	P	22 31 44.3	+0.3
	comp=Z,29nm,1.1s						
SOC	Sochi	79.18	331	*e*P	P	22 31 36.0	-8.1
SOC				*e*		22 34 39.5	
SOC				*e*PPP	PPP	22 36 35.1	
SOC				*e*SSS	SSS	22 50 15.7	
SOC				MLR	MLR		
	comp=Z,2µm,17.0s						
VYHS	Vyhne	79.19	347	*e*P	P	22 31 44.0	-0.2
VYHS				pmax	pmax		
	comp=Z,28nm,1.7s						
VYHS	Vyhne	79.19	347	*e*P	P	22 31 44.0	-0.2
KHC	Kasperske Hory	79.22	350	P	P	22 31 44.1	-0.2
KHC	Kasperske Hory	79.22	350	*e*P	P	22 31 43.9	-0.5
KHC				*e*x	x	22 32 09.5	
KHC				AMS	AMS	23 09 30.0	
	comp=Z,2µm,22.3s						
KHC	Kasperske Hory	79.22	350	⇑*e*P	P	22 31 44.9	+0.5
KHC				pmax	pmax		
	comp=Z,13nm,1.1s						
WLF	Walferdange	79.27	355	*d*P	P	22 31 44.6	0.0
TBI	Tubuai	79.27	151	*e*S	S	22 41 44.0	+1.7
	comp=Z,3µm,41.8s						
TBI				*e*SS	SS	22 46 52.0	+1.8
	comp=Z,2µm,26.8s						
TBI				*e*LR	LR	22 56 26.5	
	comp=Z,80µm,22.0s						
TBI				*e*LR	LR	22 56 26.6	
	comp=Z,14µm,22.5s						
TBI	Tubuai	79.27	151	*e*T	T	23 59 00.5	
	comp=Z,4.7nm,0.3s						
SMOL	Smolenice	79.37	348	*e*P	P	22 31 46.6	+1.5
SMOL				pmax	pmax		
	comp=Z,12nm,1.3s						
CKRC	Cesky Krumlov	79.45	350	*e*P	P	22 31 45.7	+0.1
CKRC				AMS	AMS	23 13 10.0	
	comp=Z,2µm,18.2s						
CKRC	Cesky Krumlov	79.45	350	*e*P	P	22 31 45.7	+0.1
CKRC				MLR	MLR		
	comp=Z,2µm,18.2s						
QIS	Mount Isa	79.48	217	P	P	22 31 46.9	+0.9
GEC2	GERESS Array S	79.49	350	P	P	22 31 45.9	0.0
GERES	GERESS Array B	79.49	350	P	P	22 31 45.3	-0.6
	comp=Z,1.2nm,0.6s,baz=31,slow=6.2,SNR=11						
GERES				LR	LR	23 10 39.5	
	comp=Z,945nm,19.0s,baz=19,slow=38						
	comp=Z,1.2nm,0.6s						
GERES	GERESS Array B	79.49	350	P	P	22 31 45.2	-0.7
MODS	Modra-Piesok	79.53	348	*e*P	P	22 31 47.2	+1.2
MODS				pmax	pmax		
	comp=Z,30nm,1.2s						
MODS	Modra-Piesok	79.53	348	*e*P	P	22 31 47.2	+1.2
ARCR	ARCALIA	79.65	343	⇓P	P	22 31 47.5	+0.8
PLAI	Plampang	79.69	242	P	P	22 31 46.3	-0.9
	comp=Z,30nm,1.3s						
PLAI	Plampang	79.69	242	P	P	22 31 45.3	-1.9
	comp=Z,38nm,1.3s						
TESR	Tescani	79.75	341	⇑P	P	22 31 46.6	-0.6
KNRA	Kununurra	79.80	229	P	P	22 31 49.0	+1.3
	comp=Z,47nm,1.4s						
SRO	Srobarova	79.93	347	*e*P	P	22 31 48.9	+0.7
SRO	Srobarova	79.93	347	*e*P	P	22 31 48.9	+0.7
VLDR	Vladesti	80.09	340	⇑P	P	22 31 49.6	+0.6
CONA	Conrad Observa	80.14	349	*e*P	P	22 31 49.1	-0.3
	comp=Z,10nm,1.1s						
CJR	Cluj-Napoca	80.15	343	⇑P	P	22 31 49.8	+0.4
CJR	Cluj-Napoca	80.15	343	P	P	22 31 49.8	+0.4
EIDS	Eidsvold	80.21	206	P	P	22 31 48.7	-1.0
EIDS				IAmb	IAmb	22 31 52.1	
	comp=Z,27nm,1.1s						
EIDS	Eidsvold	80.21	206	P	P	22 31 51.2	+1.5
RAO	Raoul Island	80.21	177	LR	LR	23 00 51.1	
	comp=Z,1µm,22.0s,baz=130,slow=31						
DRGR		80.23	344	⇓P	P	22 31 49.0	-0.9
DRGR		80.23	344	P	P	22 31 50.0	+0.1
MARR	Marisel-Cluj	80.27	343	⇑P	P	22 31 50.5	+0.3
RONA	Rosalia, Austr	80.31	348	*e*pP	P	22 31 50.8	+0.5
	comp=Z,5.9nm,0.7s						
VRI	Vrincioaia	80.36	341	⇑P	P	22 31 49.8	-0.7
VRI	Vrincioaia	80.36	341	P	P	22 31 49.8	-0.7
PLOR	Plostina	80.39	341	⇓P	P	22 31 50.0	-0.8
PLOR	Plostina	80.39	341	P	P	22 31 49.9	-0.8
MOA	Molln	80.41	350	*e*pP	P	22 31 53.1	+2.3
	comp=Z,10nm,1.7s						
BFO	Black Forest	80.47	354	P	P	22 31 50.6	-0.5
BFO	Black Forest	80.47	354	P	P	22 31 50.6	-0.5
BFO				pmax	pmax		
	comp=Z,16nm,1.3s						
SNET	Serv Nac Est T	80.48	80	IAMs_20	IAMs_20	23 02 57.9	
	comp=Z,916nm,22.0s						
COVR	Voineasa-Covas	80.48	341	⇓P	P	22 31 52.0	+0.7
DOPR	Dopca	80.53	342	⇓P	P	22 31 52.2	+0.7
TLCR		80.55	339	⇑P	P	22 31 51.6	0.0
TLCR		80.55	339	P	P	22 31 51.5	0.0
GNI	Garni	80.63	326	P	P	22 31 52.5	+0.2
	comp=Z,6.7nm,0.6s,baz=191,slow=2.6,SNR=11						
GNI				LR	LR	23 13 11.5	
	comp=Z,4µm,18.7s,baz=38,slow=40						
	comp=Z,6.7nm,0.6s						
GNI	Garni	80.63	326	P	P	22 31 52.5	+0.2
GNI				IAmb	IAmb	22 32 19.7	
	comp=Z,32nm,0.9s						
GNI	Garni	80.63	326	⇑*e*P	P	22 31 54.1	+1.8
GNI				pmax	pmax		
	comp=Z,44nm,1.5s						
GNI	Garni	80.63	326	P	P	22 31 53.7	+1.4
BIOA	Bad Ischl, Aus	80.64	350	*e*P	P	22 31 51.6	-0.4
	comp=Z,15nm,1.4s						
CFR	Carcaliu	80.71	340	⇑P	P	22 31 51.5	-1.0
CFR	Carcaliu	80.71	340	P	P	22 31 51.4	-1.0
DSRI	Dabo	80.74	258	P	P	22 31 53.4	+0.4
	comp=Z,48nm,1.2s,comp=Z,2µm						
ARSA	Arzberg	80.85	349	*e*pP	P	22 31 54.5	+1.3
	comp=Z,10nm,1.1s						
WB0	Warramunga Arr	80.87	222	P	P	22 31 52.1	-1.3
WB0				IAmb	IAmb	22 31 54.4	
	comp=Z,84nm,1.4s						
MLR	Muntele Rosu	80.87	341	⇑P	P	22 31 53.6	+0.1
MLR	Muntele Rosu	80.87	341	LR	LR	23 11 57.8	
	comp=Z,2µm,19.8s,baz=31,slow=39						
MLR	Muntele Rosu	80.87	341	P	P	22 31 54.0	+0.5
MLR	Muntele Rosu	80.87	341	P	P	22 31 53.5	+0.1
SIRR	Siria	80.92	344	⇑P	P	22 31 54.3	+0.8
TPGR	Topolog	80.95	339	⇑P	P	22 31 52.9	-0.9
WRAB	Tennant Creek	81.03	222	P	P	22 31 52.5	-1.8
WRAB				IAmb	IAmb	22 31 55.3	
	comp=Z,50nm,1.2s						
WRAB	Tennant Creek	81.03	222	P	P	22 31 53.3	-1.0
WRAB	Tennant Creek	81.03	222	*d i*P	P	22 31 53.0	-1.3
WRAB				pmax	pmax		
	comp=Z,53nm,1.3s						
WB2	Warramunga Arr	81.04	222	P	P	22 31 52.9	-1.5
WB2				IAmb	IAmb	22 31 55.4	
	comp=Z,44nm,1.1s						
WRA	Warramunga Arr	81.05	222	P	P	22 31 53.0	-1.4
	comp=Z,16nm,0.8s,baz=32,slow=6.2,SNR=100						
WRA				LR	LR	23 05 04.8	
	comp=Z,447nm,19.9s,baz=15,slow=34						
	comp=Z,16nm,0.8s						
WRA	Warramunga Arr	81.05	222	*i* P	P	22 31 53.0	-1.4
WRA				pmax	pmax		
	comp=Z,17nm,0.8s						
CLF	Chambon-Foret	81.05	358	P	P	22 31 54.3	+0.1
WB1	Warramunga Ar.	81.06	222	P	P	22 31 53.3	-1.2
VOIR		81.10	342	⇓P	P	22 31 55.3	+0.6
VOIR		81.10	342	P	P	22 31 55.2	+0.6
PPBI	Pangkal Pinang	81.11	255	P	P	22 31 56.4	+1.4
RETA	Reutte	81.12	352	*e*pP	P	22 31 55.4	+0.8
	comp=Z,4.3nm,0.8s						
WATA	Walderalm	81.19	351	*i* pP	P	22 31 55.7	+0.6
	comp=Z,20nm,1.2s,SNR=6.6						
HARR	Harsova	81.22	340	⇑P	P	22 31 55.2	0.0
HARR	Harsova	81.22	340	P	P	22 31 55.1	0.0
MOTA	Moosalm	81.23	352	*i* P	P	22 31 54.9	-0.5
	comp=Z,24nm,1.4s,SNR=11						
ARR	Arges	81.25	342	⇓P	P	22 31 56.2	+0.8
WTTA	Wattenberg	81.26	351	*i* P	P	22 31 55.4	-0.1
	comp=Z,15nm,0.7s,SNR=7.9						
KBA	Koelnbreinsper	81.27	350	*i* P	P	22 31 55.8	+0.2
	comp=Z,25nm,0.8s,SNR=21						
TLBR	Topalu	81.33	340	⇑P	P	22 31 55.8	+0.1
TIRR	Tirgusor	81.33	339	⇑P	P	22 31 56.0	+0.3
TIRR	Tirgusor	81.33	339	P	P	22 31 56.8	+1.1
TIRR				IAmb	IAmb	22 32 35.3	
	comp=Z,37nm,1.1s						
TIRR	Tirgusor	81.33	339	P	P	22 31 56.0	+0.3
SURR	Surduc	81.34	344	⇑P	P	22 31 56.2	+0.5
SQTA	Sankt Quirin	81.34	352	*i* P	P	22 31 55.8	-0.1
	comp=Z,11nm,0.9s,SNR=7.1						
TSI	Tuntungan	81.37	265	P	P	22 31 56.3	-0.1
DAVA	Damuels	81.39	353	*e*pP	P	22 31 57.3	+1.1
	comp=Z,10nm,1.4s						
TGUH	Tegucigalpa,Un	81.40	78	IAMs_20	IAMs_20	23 07 01.4	
	comp=Z,933nm,22.0s						
SOKA	Soboth	81.48	349	*i* P	P	22 31 56.3	-0.2
	comp=Z,41nm,1.4s,SNR=35						
PERS	Pernice	81.51	349	*i* P	P	22 31 56.5	-0.2
BZS	Buzias	81.56	344	⇑P	P	22 31 56.4	-0.5
BZS	Buzias	81.56	344	P	P	22 31 56.4	-0.5
GZR	Gura Zlata	81.57	343	⇓P	P	22 31 56.8	-0.3
GZR	Gura Zlata	81.57	343	P	P	22 31 56.8	-0.3
FETA	Feichten	81.58	352	*e*P	P	22 31 56.9	-0.4
	comp=Z,13nm,1.1s						
MYKA	Terra Mystica	81.68	350	*e*pP	P	22 31 58.8	+1.2
	comp=Z,12nm,1.2s						
ABTA	Abfaltersbach	81.69	351	*i* P	P	22 31 57.4	-0.3
	comp=Z,20nm,1.3s,SNR=11						
PSI	Prapat	81.69	264	P	P	22 31 58.7	+0.5
PSI	Prapat	81.69	264	P	P	22 31 56.7	-1.5
PSI				pmax	pmax		
	comp=Z,58nm,1.1s						
PSI				MLR	MLR		
	comp=Z,400nm,18.0s						
OBKA	Obir	81.70	349	*i* P	P	22 31 57.5	-0.3
	comp=Z,12nm,0.9s,SNR=6.2						
RPSI	Rantau Prapat	81.77	264	P	P	22 31 56.7	-1.7
RPSI				IAmb	IAmb	22 32 00.2	
	comp=Z,58nm,1.1s						
PRED	Cave del Predi	81.88	350	P	P	22 31 58.0	-0.6
PRED				IAmb	IAmb	22 32 02.1	
	comp=Z,24nm,1.1s						
RMQ	Roma	81.91	207	P	P	22 32 00.4	+1.6
FUORN	Ofenpass-Fuorn	82.02	352	P	P	22 31 59.4	-0.2
FUORN				IAMs_20	IAMs_20	23 04 10.0	
	comp=Z,1µm,21.0s						
GOLS	Golise	82.06	348	*e*P	P	22 31 59.0	-0.7
ROBS	Robic	82.08	350	*e*P	P	22 31 58.4	-1.2
CIMO	Cimolais	82.13	351	P	P	22 31 59.5	-0.5
CIMO				IAmb	IAmb	22 32 11.8	
	comp=Z,16nm,1.5s						
HERR	Herculane	82.13	344	⇑P	P	22 31 59.9	-0.1
STAL	STALIGIAL	82.15	351	P	P	22 31 59.6	-0.4
KOPT	Kop Dagi	82.17	329	P	P	22 31 59.7	-0.9
KOPT				IAmb	IAmb	22 32 44.3	
	comp=Z,21nm,1.0s						
JMBI	JAMBI	82.22	258	P	P	22 31 58.1	-2.7
	comp=Z,146nm,0.4s						
BKNI	Bangkinang	82.30	261	P	P	22 32 00.0	-1.2
BKNI	Bangkinang	82.30	261	P	P	22 32 04.2	+3.0
BKNI	Bangkinang	82.30	261	P	P	22 32 03.3	+2.1
	comp=Z,40nm,0.6s,comp=Z,1µm						
FRGS	Fruska Gora	82.30	345	⇑P	P	22 32 01.7	+0.8
COPA	Copaceanca	82.32	341	⇑P	P	22 32 00.2	-0.8
MDVR	Moldovita	82.35	344	⇓P	P	22 32 01.2	0.0
PWJI	Pagerwojo	82.42	247	P	P	22 32 00.9	-0.8
	comp=Z,56nm,1.3s						
CTI	Castel Tesino	82.46	351	P	P	22 32 01.1	-0.7
CTI	Castel Tesino	82.46	351	P	P	22 32 01.1	-0.7
CTI				pmax	pmax		
	comp=Z,17nm,1.2s						
SENIN	Lac Senin/Sane	82.49	354	P	P	22 32 01.9	-0.2
SENIN				IAmb	IAmb	22 32 49.7	
	comp=Z,76nm,1.5s						
VLAD	Vladila	82.61	342	⇑P	P	22 32 01.7	-0.7
GURO	Guroymak-BITLI	82.99	327	P	P	22 32 05.4	+0.6
GURO				IAmb	IAmb	22 32 09.5	
	comp=Z,32nm,1.6s						
SDSI	Sungai Dareh	83.04	260	P	P	22 32 04.4	-0.6
	comp=Z,28nm,1.3s						
PLVB	Pleven	83.16	342	⇑P	P	22 32 05.6	+0.2
DIVS	Divibare	83.31	345	P	P	22 32 05.6	-0.6
DIVS				IAmb	IAmb	22 32 08.3	
	comp=Z,13nm,0.8s						
FITZ	Fitzroy Crossi	83.38	230	P	P	22 32 05.7	-0.9
FITZ	Fitzroy Crossi	83.38	230	P	P	22 32 07.3	+0.7
KPJI	Karang Pucung	83.54	250	P	P	22 32 07.6	0.0
	comp=Z,37nm,1.1s						
PDSI	Padang	83.62	261	P	P	22 32 07.0	-1.1
	comp=Z,17nm,1.1s						
GSI	Gunungsitoli	83.69	264	P	P	22 32 07.3	-1.2
GSI	Gunungsitoli	83.69	264	P	P	22 32 09.4	+0.9
GSI	Gunungsitoli	83.69	264	P	P	22 32 09.2	+0.7
SSB	Saint Sauveur	83.72	356	P	P	22 32 08.7	+0.5
SSB	Saint Sauveur	83.72	356	P	P	22 32 08.7	+0.5
SSB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BNI	Bardonecchia	83.84	355	P	P	22 32 09.5	+0.5
BNI				IAmb	IAmb	22 32 44.9	
	comp=Z,23nm,1.1s						
BNI	Bardonecchia	83.84	355	P	P	22 32 09.5	+0.5
BNI				pmax	pmax		
	comp=Z,23nm,1.2s						
MTDJ	Mount Denham	84.02	68	P	P	22 32 09.2	-1.0
GTBY	Guantanamo Bay	84.09	66	IAMs_20	IAMs_20	23 09 56.1	
	comp=Z,1µm,22.0s						
MDSI	Maura Dua	84.13	255	P	P	22 32 09.1	-1.6
VTS	Vitosha	84.17	342	⇑P	P	22 32 10.6	-0.2
VTS	Vitosha	84.17	342	P	P	22 32 10.5	-0.2
ZCCA	Zocca	84.21	351	P	P	22 32 11.6	+0.9
MASI	Maura Aman, Be	84.26	258	P	P	22 32 12.3	+0.9
	comp=Z,32nm,1.3s						
BR131	Keskin Array S	84.49	334	P	P	22 32 12.2	-0.2
BR131				IAmb	IAmb	22 32 15.7	
	comp=Z,12nm,0.8s						
BR131	Keskin Array S	84.49	334	*c i*P	P	22 32 12.4	0.0
BRTR	Keskin Array B	84.49	334	P	P	22 32 12.6	+0.2
	comp=Z,6.0nm,0.7s,baz=42,slow=2.7,SNR=35						
BRTR				PKKP	PKKPdf	22 50 09.3	-1.9
	comp=Z,0.2nm,0.5s,baz=186,slow=4.3,SNR=1.1						
BRTR				LR	LR	23 13 25.1	
	comp=Z,1µm,20.2s,baz=58,slow=38						
	comp=Z,6.0nm,0.7s						
BRTR	Keskin Array B	84.49	334	P	P	22 32 11.7	-0.7
AS01	Alice Springs	84.52	221	P	P	22 32 12.4	0.0
	comp=Z,24nm,1.1s						
AS31	Alice Springs	84.54	221	P	P	22 32 11.5	-1.0
ASAR	Alice Springs	84.54	221	P	P	22 32 12.0	-0.5
	comp=Z,12nm,0.7s,baz=23,slow=5.3,SNR=97						
	comp=Z,12nm,0.7s						
ASAR	Alice Springs	84.54	221	P	P	22 32 11.5	-1.0
LWLI	Liwa	84.62	255	P	P	22 32 13.3	0.0
	comp=Z,90nm,0.8s,comp=Z,9µm						
BNN	Bunyan	84.67	332	P	P	22 32 12.4	-0.9
ARMA	Armidale	84.87	204	P	P	22 32 13.0	-1.1
PDG	Podgorica	85.05	345	⇓P	P	22 32 14.7	-0.2
PDG	Podgorica	85.05	345	P	P	22 32 14.6	-0.3
PDG				IAmb	IAmb	22 32 17.2	
	comp=Z,14nm,0.8s						
RDO	Rodhopi	85.12	340	P	P	22 32 14.8	-0.5
RDO				IAmb	IAmb	22 32 19.1	
	comp=Z,27nm,1.1s						
BORA	Eskisehir	85.19	336	P	P	22 32 15.7	-0.1
BORA				IAmb	IAmb	22 32 18.6	
	comp=Z,18nm,0.8s						
ALN	Alexandroupoli	85.25	340	P	P	22 32 15.1	-0.9
ALN	Alexandroupoli	85.25	340	P	P	22 32 15.1	-0.9
ALN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
INKA	Innaminka	85.63	214	P	P	22 32 19.8	+2.1
GAZ	Gaziantep	85.81	330	P	P	22 32 19.0	0.0
GAZ				IAmb	IAmb	22 32 46.8	
	comp=Z,33nm,1.2s						
JACO	JACO, Garabito	86.41	79	P	P	22 32 22.4	+0.3
SDDR	Presa de Saban	87.00	63	P	P	22 32 24.3	-0.7
SDDR				IAmb	IAmb	22 32 27.5	
	comp=Z,33nm,1.4s						
SDDR				IAMs_20	IAMs_20	23 09 53.2	
	comp=Z,951nm,21.0s						
ISP	Isparta	87.11	336	IAMs_20	IAMs_20	23 18 08.1	
	comp=Z,1µm,19.0s						
OOD	Oodnadatta	87.52	218	P	P	22 32 28.6	+1.6
	comp=Z,29nm,1.2s						
CMSA	Cobar Meteorol	87.55	208	P	P	22 32 27.8	+0.7
WRKA	Warakurna	88.14	225	P	P	22 32 31.5	+1.4
SHME	Shamm	88.16	311	P	P	22 32 29.5	-0.9
BANOM	Banah	88.19	311	*i* P	P	22 32 30.2	-0.5
	SNR=7.8						
TIP	Timpagrande	88.62	346	IAMs_20	IAMs_20	23 19 39.6	
	comp=Z,1µm,18.0s						
MBWA	Marble Bar	88.89	233	P	P	22 32 32.2	-1.5
MBWA				IAmb	IAmb	22 32 56.4	
	comp=Z,33nm,1.4s						
LCRK	Leigh Creek	88.98	214	P	P	22 32 35.2	+1.3
CSS	Mathiatis	89.02	332	P	P	22 32 33.5	-0.9
CSS				IAmb	IAmb	22 32 46.9	
	comp=Z,19nm,1.1s						
CSS				IAMs_20	IAMs_20	23 20 00.2	
	comp=Z,780nm,20.0s						
UOSS	Minazif	89.06	310	P	P	22 32 33.1	-1.6
UOSS				IAmb	IAmb	22 32 39.8	
	comp=Z,29nm,1.4s						
UOSS	Minazif	89.06	310	P	P	22 32 33.4	-1.3
STKA	Stephens Creek	89.14	211	P	P	22 32 34.5	-0.1
	comp=Z,18nm,1.2s,baz=7.3,slow=7.2,SNR=9.3						
STKA				LR	LR	23 11 38.2	
	comp=Z,632nm,18.1s,baz=19,slow=35						
	comp=Z,18nm,1.2s						
STKA	Stephens Creek	89.14	211	P	P	22 32 34.3	-0.3
STKA	Stephens Creek	89.14	211	P	P	22 32 36.4	+1.8
URZ	Urewera	89.17	182	LR	LR	23 06 22.0	
	comp=Z,1µm,21.4s,baz=121,slow=31						
PSA00	Pilbara Seismi	89.18	233	P	P	22 32 33.5	-1.6
HATD	Hatta, Dubai	89.20	310	P	P	22 32 34.0	-1.4
WSAR	Wadi Sarin	89.31	308	LR	LR	23 15 55.0	
	comp=Z,1µm,21.5s,baz=66,slow=38						
ASHO	Ashiyiah	89.35	310	P	P	22 32 34.4	-1.8
ESDC	Sonseca Array	89.39	2	P	P	22 32 34.8	-1.3
	comp=Z,1.2nm,0.8s,baz=356,slow=4.5,SNR=7.5						
	comp=Z,1.2nm,0.8s						
ESDC	Sonseca Array	89.39	2	P	P	22 32 34.6	-1.5
FAQ	Al Faqa, Dubai	89.53	311	*i* P	P	22 32 35.4	-1.5
	SNR=6.1						
RTZ	Ruatahuna	89.53	182	IAMs_20	IAMs_20	23 06 23.4	

	comp=Z,1µm,22.0s						
PALK	Pallekele	89.63	281	P	P	22 32 37.7	+0.2
	comp=Z,6.7nm,0.7s,baz=15,slow=1.5,SNR=5.4						
PALK				LR	LR	23 15 45.5	
	comp=Z,464nm,20.4s,baz=133,slow=38						
	comp=Z,6.7nm,0.7s						
PALK	Pallekele	89.63	281	P	P	22 32 37.0	-0.5
PALK				IAmb	IAmb	22 32 39.7	
	comp=Z,36nm,1.4s						
PALK				IAMs_20	IAMs_20	23 20 34.7	
	comp=Z,553nm,19.0s						
ASUD	Al Ashush, Dub	89.75	311	P	P	22 32 37.2	-0.7
ALNE	Al Ain	90.03	310	i P	P	22 32 38.2	-1.1
	SNR=7.0						
BKZ	Black Stump Fm	90.09	182	IAMs_20	IAMs_20	23 15 00.2	
	comp=Z,1µm,20.0s						
MMAI	Mount Meron Ar	90.21	330	LR	LR	23 20 26.9	
	comp=Z,934nm,18.1s,baz=95,slow=40						
CELP	Cerrillos	90.34	60	P	P	22 32 39.8	-1.0
MULG	Mulgathing	90.38	218	P	P	22 32 41.7	+1.3
GCPR	Guaynabo City	90.42	60	P	P	22 32 40.2	-0.9
SJG	San Juan	90.54	60	LR	LR	23 16 35.8	
	comp=Z,529nm,18.8s,baz=300,slow=38						
SJG	San Juan	90.54	60	P	P	22 32 41.5	-0.2
SJG	San Juan	90.54	60	IAMs_20	IAMs_20	23 16 50.9	
	comp=Z,896nm,19.0s						
SJG	San Juan	90.54	60	P	P	22 32 41.5	-0.2
SJG				pmax	pmax		
	comp=Z,91nm,1.6s						
SJG				MLR	MLR		
	comp=Z,900nm,19.0s						
MTP	Monte Pirata	90.88	59	P	P	22 32 42.8	-0.5
IDI	Anoyia	90.88	339	LR	LR	23 19 16.0	
	comp=Z,674nm,18.8s,baz=8.5,slow=39						
IDI	Anoyia	90.88	339	IAMs_20	IAMs_20	23 21 07.5	
	comp=Z,895nm,19.0s						
HTT	Hallett	91.45	213	P	P	22 32 46.5	+1.1
SNZO	South Karori	92.28	183	IAMs_20	IAMs_20	23 07 45.2	
	comp=Z,1µm,20.0s						
KEST	Kesra	92.91	352	LR	LR	23 18 25.1	
	comp=Z,343nm,18.1s,baz=336,slow=38						
EIL	Elat	93.45	329	LR	LR	23 21 41.0	
	comp=Z,1µm,18.2s,baz=50,slow=40						
HATO	Hato, Curacao	93.79	65	IAMs_20	IAMs_20	23 15 16.3	
	comp=Z,824nm,20.0s						
RPZ	Rata Peaks	94.86	186	LR	LR	23 09 04.4	
	comp=Z,1µm,21.4s,baz=36,slow=31						
RAYN	Ar Rayn	95.11	318	P	P	22 33 00.6	-2.2
RAYN				IAmb	IAmb	22 33 05.4	
	comp=Z,19nm,1.1s						
RAYN	Ar Rayn	95.11	318	P	P	22 33 00.6	-2.2
RAYN				pmax	pmax		
	comp=Z,19nm,1.1s						
RAYN				MLR	MLR		
	comp=Z,2µm,22.0s						
RAYN	Ar Rayn	95.11	318	i P	P	22 33 02.1	-0.6
	SNR=21						
SDV	Santo Domingo	95.47	69	LR	LR	23 16 56.7	
	comp=Z,491nm,21.8s,baz=344,slow=36						
SDV	Santo Domingo	95.47	69	IAMs_20	IAMs_20	23 22 31.0	
	comp=Z,781nm,19.0s						
MDT	Midelt	96.22	3	LR	LR	23 15 30.4	
	comp=Z,377nm,22.0s,baz=12,slow=35						
RUSC	La Rusia	96.41	72	P	P	22 33 08.7	-0.6
RUSC				IAmb	IAmb	22 33 12.9	
	comp=Z,24nm,1.5s						
ROSC	El Rosal	96.50	74	LR	LR	23 16 18.1	
	comp=Z,278nm,21.6s,baz=334,slow=35						
TAM	Tamanrasset	106.05	354	IAMs_20	IAMs_20	23 27 10.3	
	comp=Z,650nm,20.0s						
TORD	Torodi Ar. Bea	115.82	357	PKP	PKiKP	22 38 21.0	-1.1
	comp=Z,1.8nm,0.5s,baz=345,slow=2.4,SNR=45						
TORD				PKKPbc	PKKPbc	22 48 51.4	-0.4
	comp=Z,1.0nm,0.6s,baz=165,slow=2.4,SNR=11						
TORD	Torodi Ar. Bea	115.82	357		PKiKP	22 38 20.8	-1.4
KMBO	Kilima Mbogo	120.62	314	i P	PKiKP	22 38 32.7	+0.8
	SNR=7.1						
DBIC	Dimbokro	122.19	5	PKP	PKPdf	22 38 33.6	-0.8
	comp=Z,3.6nm,0.4s,baz=17,slow=2.7,SNR=17						
H03N2	Juan Fernandez	122.37	104	T	T	00 52 55.2	
	baz=316,slow=77,SNR=201						
H03N1	Juan Fernandez	122.39	104	T	T	00 52 59.4	
	baz=316,slow=77,SNR=15						
H03N3	Juan Fernandez	122.39	104	T	T	00 53 02.3	
	baz=316,slow=77,SNR=15						
SMTB	Santa Maria do	123.01	59	eP	PKPdf	22 38 35.3	-0.7
AC05	El Transito	124.56	94		PKPdf	22 38 37.5	-1.2
AQDB	Aquidauana	127.58	75	eP	PKPdf	22 38 43.5	-1.0
CFA	Coronel Fontan	127.74	95	PKP	PKPdf	22 38 43.7	-0.9
	comp=Z,2.4nm,0.5s,baz=343,slow=3.1,SNR=5.2						
CFA				SKPbc	SKPbc	22 41 57.7	
	comp=Z,1.9nm,0.4s,baz=200,slow=19,SNR=1.4						
BDFB	Brasilia	128.33	64	PKP	PKPdf	22 38 45.2	-1.0
	comp=Z,2.1nm,0.5s,baz=121,slow=7.2,SNR=3.2						
IPMB	Ipameri, GO	130.09	66	eP	PKPdf	22 38 49.2	-0.2
CPUP	Villa Florida	130.90	82	PKP	PKPdf	22 38 50.2	-0.5
	comp=Z,3.4nm,1.0s,baz=173,slow=5.3,SNR=3.1						
CPUP				SKPbc	SKPab	22 42 13.1	+0.8
	comp=Z,2.4nm,0.5s,baz=305,slow=2.4,SNR=6.3						
PLCA	Paso Flores	132.19	106	PKP	PKPdf	22 38 52.6	-0.1
	comp=Z,3.8nm,0.9s,baz=269,slow=4.7,SNR=8.7						
PLCA				SKPbc	SKPbc	22 42 15.4	-0.9
	comp=Z,1.3nm,0.9s,baz=73,slow=19,SNR=1.3						
PLCA	Paso Flores	132.19	106	eP	PKiKP	22 38 54.8	+1.0
FRTB	Fartura	133.45	72	eP	PKPdf	22 38 56.0	+0.4
TSUM	Tsumeb	144.84	329	PKPdf	PKPab	22 39 15.5	-0.1
WIN	Windhoek	148.13	327		PKPbc	22 39 25.4	+0.1
WIN	Windhoek	148.13	327	PKP2	PKPbc	22 39 25.5	+0.1
BOSA	Boshof	150.06	309	PKPbc	PKPbc	22 39 30.1	+0.1
	comp=Z,42nm,1.0s,baz=31,slow=2.4,SNR=52						
BOSA	Boshof	150.06	309		PKPbc	22 39 29.6	-0.4
BELA	Belgrano 2	150.56	166		PKPbc	22 39 28.5	-1.0

ROM 15 22:20:46.3±0.0, 43°.008N±0°.003×13°.123E±0°.004, h10^{km}, ML1.2/6, 4C-3D, Error ellipse: s-maj=0.4km s-min=0.2km az=46.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDMO	Fiordimonte	0.04	318	P	Pg	22 20 48.5	+0.2
FDMO				S	Sg	22 20 49.8	0.0
FDMO				AML	AML		
	comp=E,184µm,1.5s						
FDMO				AML	AML		
	comp=N,322µm,0.2s						
FDMO				AML	AML		
	comp=E,184µm,0.5s						
T1256	Bolognola (MC)	0.08	91	⇓P	Pg	22 20 49.1	+0.3
T1256				S	Sg	22 20 51.0	+0.4
T1256				AML	AML		
	comp=E,80µm,1.3s						
T1256				AML	AML		
	comp=E,80µm,1.3s						
T1256				AML	AML		
	comp=N,123µm,0.3s						
T1256				AML	AML		
	comp=E,80µm,0.7s						
T1219	Muccia, Frazio	0.10	300	P	Pg	22 20 49.4	+0.5
T1219				S	Sg	22 20 51.4	+0.5
T1219				AML	AML		
	comp=N,269µm,0.3s						
T1219				AML	AML		
	comp=N,312µm,0.3s						
T1219				AML	AML		
	comp=E,280µm,0.3s						
T1219				AML	AML		
	comp=E,316µm,0.3s						
T1220	Camerino, Fraz	0.11	346	P	Pg	22 20 49.5	+0.4
T1220				S	Sg	22 20 51.6	+0.6
T1220				AML	AML		
	comp=E,265µm,0.3s						
T1220				AML	AML		
	comp=N,340µm,1.6s						
T1220				AML	AML		
	comp=E,265µm,0.3s						
T1220				AML	AML		
	comp=N,342µm,1.6s						
T1220				AML	AML		
	comp=E,265µm,1.7s						
T1220				AML	AML		
	comp=N,342µm,0.4s						
MC2	Monte Cornacci	0.11	152	P	Pg	22 20 49.6	+0.4
MC2				S	Sg	22 20 51.9	+0.6
T1216	Preci, Frazion	0.14	213	⇓P	Pg	22 20 50.1	+0.6
T1216				S	Sg	22 20 52.7	+0.9
T1245	Castelsantange	0.16	162	⇑P	Pg	22 20 50.4	+0.5
T1245				S	Sg	22 20 53.4	+1.0
T1245				AML	AML		
	comp=N,88µm,1.4s						
T1245				AML	AML		
	comp=N,88µm,0.6s						
T1245				AML	AML		
	comp=E,75µm,0.2s						
MMO1	Montemonaco	0.18	126	⇓P	Pg	22 20 50.8	+0.5
MMO1				S	Sg	22 20 53.9	+0.9
T1212	Cascia, Frazio	0.26	193	⇑P	Pg	22 20 52.3	+0.6
T1212				S	Sb	22 20 56.5	-1.2
T1241	Roccafluvione,	0.27	124	⇑P	Pg	22 20 52.5	+0.6
T1241				S	Sb	22 20 57.0	-1.0
T1215	Vallo di Nera,	0.28	222	P	Pg	22 20 52.6	+0.6
T1215				S	Sb	22 20 57.1	-1.1
SNTG	Esanatoglia	0.28	332	P	Pg	22 20 52.6	+0.5
SNTG				S	Sb	22 20 57.1	-1.2
ASSB	Assisi San Ben	0.34	276	⇑P	Pb	22 20 53.9	-0.7
ASSB				S	Sb	22 20 59.3	-0.8
ASSB				AML	AML		
	comp=E,37µm,0.3s						
ASSB				AML	AML		
	comp=N,42µm,0.3s						
SMA1	SAN MARTINO	0.41	157	P	Pg	22 20 54.9	+0.5
RM33	Pellescritta (	0.50	172	P	Pg	22 20 55.5	-0.6

ROM 15 22:21:35.9±0.1, 42°.691N±0°.004×13°.251E±0°.006, h12^{km}±1^{km}, ML1.0/5, 5C-2D, Error ellipse: s-maj=0.5km s-min=0.4km az=134.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1214	Arquata del Tr	0.08	336	P	Pg	22 21 38.8	0.0
T1214				S	Sg	22 21 40.7	0.0
SMA1	SAN MARTINO	0.09	134	⇓P	Pg	22 21 39.1	+0.3
SMA1				S	Sg	22 21 41.1	+0.2
SMA1				AML	AML		
	comp=E,70µm,1.1s						
SMA1				AML	AML		
	comp=N,84µm,0.2s						
SMA1				AML	AML		
	comp=E,70µm,1.1s						
SMA1				AML	AML		
	comp=N,84µm,0.2s						
T1218	Civita (PG)	0.10	258	⇑P	Pg	22 21 39.2	+0.3
T1218				S	Sg	22 21 41.3	+0.2
T1218				AML	AML		
	comp=E,141µm,0.8s						
T1218				AML	AML		
	comp=N,124µm,0.1s						
T1218				AML	AML		
	comp=E,140µm,0.8s						
T1218				AML	AML		
	comp=N,124µm,0.1s						
T1212	Cascia, Frazio	0.16	292	⇑P	Pg	22 21 40.1	+0.3
T1212				S	Sg	22 21 42.9	+0.3
T1245	Castelsantange	0.17	344	P	Pb	22 21 40.8	-0.4
T1245				AML	AML		
	comp=N,46µm,0.7s						
T1245				AML	AML		
	comp=E,36µm,1.5s						
T1245				AML	AML		
	comp=N,46µm,1.3s						
T1245				AML	AML		
	comp=E,36µm,0.5s						
RM33	Pellescritta (	0.18	188	⇑P	Pg	22 21 40.6	+0.5
RM33				S	Sg	22 21 43.9	+0.9
T1241	Roccafluvione,	0.21	39	⇑P	Pg	22 21 41.0	+0.4
T1241				S	Sg	22 21 44.4	+0.6
MMO1	Montemonaco	0.22	15	P	Pg	22 21 41.2	+0.5
MMO1				S	Sg	22 21 44.7	+0.8
MC2	Monte Cornacci	0.23	349	P	Pg	22 21 41.3	+0.4
MC2				S	Sg	22 21 45.8	+1.5
T1217	Poggiodomo (PG	0.24	275	P	Pg	22 21 41.4	+0.3
T1217				S	Sg	22 21 45.4	+0.9
T1215	Vallo di Nera,	0.30	292	⇑P	Pg	22 21 42.7	+0.5
T1215				S	Sg	22 21 47.3	+0.9
AQU	L'Aquila	0.35	162	S	Sb	22 21 49.8	+0.1
AQU				AML	AML		
	comp=N,44µm,1.4s						
AQU				AML	AML		
	comp=E,44µm,1.2s						
AQU				AML	AML		
	comp=N,44µm,0.6s						
FDMO	Fiordimonte	0.37	341	⇓P	Pg	22 21 43.8	+0.5
VVLD	Villa Vallelon	0.86	161	S	Sb	22 22 04.7	+0.3

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*AEIC **15** 22:26:17.6±2.5, 51°.16N±0°.07×178°.99E±0°.08, h16^{km}±2^{km}, Error ellipse: s-maj=12.1km s-min=4.0km az=145.0*

NEIC 15 22:26:16.8±0.8, 51°.1N±0°.1×178°.90E±0°.09, h20^{km}±6^{km}, mb4.1/5, ML3.3(AEIC), Error ellipse: s-maj=20.7km s-min=8.2km az=175.0, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMKA	Amchitka	0.36	45	Pg	Pb	22 26 24.6	+0.1
AMKA				Sg	Sb	22 26 28.9	-0.8
KIWB	Kanaga Island	2.58	72	Pn	Pn	22 26 57.9	+0.5
ADK	Adak	2.87	73	Pn	Pn	22 27 01.4	+0.1
ADK				Sn	Sn	22 27 34.0	-1.2
GSTR	Great Sitkin T	3.29	71	Pn	Pn	22 27 06.9	-0.4
SMY	Shemya	3.38	300	Pn	Pn	22 27 08.8	+0.4
H21K	Melozitna Rive	20.51	34	P	P	22 30 53.4	0.0
TIXI	Tiksi	30.15	331	P	P	22 32 26.8	+1.9
PDAR	Pinedale Array	47.76	71	P	P	22 34 51.7	-0.8
KURK	Kurchatov	58.14	313	P	P	22 36 08.2	-0.4
KURK				IAmb	IAmb	22 36 14.4	
	comp=Z,2.3nm,1.0s						
MK31	Makanchi Array	59.05	307	P	P	22 36 14.7	-0.4
MK31				IAmb	IAmb	22 36 27.6	
	comp=Z,2.0nm,1.1s						
MKAR	Makanchi Array	59.05	307	P	P	22 36 14.2	-0.9
ABKAR	Akbulak array	67.25	322	P	P	22 37 10.0	+0.5
ABKAR	Akbulak array	67.25	322	P	P	22 37 09.5	+0.1
ABKAR				IAmb	IAmb	22 37 14.2	
	comp=Z,0.9nm,1.0s						

IDC 15 22:27:50.3±6.3, 28°.66S×177°.81W, h0^{km}, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=326.6km s-min=94.1km az=164.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.40	265	P	P	22 35 54.3	-0.5
	0.4nm,0.5s,baz=103,slow=6.8,SNR=4.3						
	0.4nm,0.5s						
WRA	Warramunga Arr	44.23	270	P	P	22 36 02.0	+0.5
	0.2nm,0.3s,baz=108,slow=8.6,SNR=1.3						
	0.2nm,0.3s						
FINES	FINESS Array B	143.56	341	PKP	PKPdf	22 47 25.4	-0.9
	2.7nm,0.9s,baz=66,slow=3.4,SNR=4.2						

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*ISK **15** 22:37:23.9, 36°.82N×22°.68E, h5^{km}, ML3.5/16*

*IDC **15** 22:37:24.3±1.0, 36°.68N×22°.68E, h0^{km}, mb3.8/11, mbtmp3.7/20, ML3.0/8, MS3.6/1, Error ellipse: s-maj=19.2km s-min=14.2km az=32.0*

*THE **15** 22:37:25.9, 36°.71N×22°.58E, h1^{km}±2^{km}, ML3.4/7, Error ellipse: s-maj=2.7km s-min=0.8km az=231.0*

*ATH **15** 22:37:26.6, 36°.70N×22°.58E, h10^{km}±31^{km}, ML3.5/10, Error ellipse: s-maj=31.6km s-min=1.0km az=0.0*

ISC 15 22:37:25.4±1.0, 36°.67N±0°.02×22°.57E±0°.02, h9^{km}±7^{km}, n102, σ1^{s}48/125, mb3.8/11, 7C-2D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLI	Veliai	0.30	80	P	Pg	22 37 31.4	0.0
VLI				S	Sg	22 37 36.2	+0.8
	18µm,0.9s						
VLI	Veliai	0.30	80	P	Pg	22 37 31.5	+0.1
VLI				S	Sg	22 37 36.0	+0.6
VLI				AML	AML	22 37 37.7	
	comp=E,45237µm,0.9s						
VLI				AML	AML	22 37 38.0	
	comp=N,28290µm,0.9s						
MNVA	Monemvasia	0.38	87	P	Pb	22 37 33.5	-0.8
MNVA				S	Sg	22 37 38.7	+0.9
MNVA				AML	AML	22 37 41.8	
	comp=N,7073µm,0.7s						
MNVA				AML	AML	22 37 43.2	
	comp=E,14387µm,0.8s						
KTHA	Kythira Island	0.57	136	P	Pb	22 37 36.9	-0.7
KTHA				S	Sb	22 37 45.7	-0.1
	comp=E,4µm,1.0s						
KTHA	Kythira Island	0.57	136	Pg	Pb	22 37 36.9	-0.7
KTHA				Sg	Sb	22 37 47.4	+1.6
KTHA	Kythira Island	0.57	136	P	Pb	22 37 37.0	-0.7
PYL	PYLOS	0.70	289	P	Pb	22 37 38.7	-1.2
PYL	PYLOS	0.70	289	P	Pb	22 37 39.1	-0.8
PYL				S	Sb	22 37 48.2	-1.4
PYL				AML	AML	22 37 54.9	
	comp=E,7797µm,1.1s						
PYL				AML	AML	22 37 55.1	
	comp=N,5038µm,0.9s						
ITM	Ithomi	0.73	315	P	Pb	22 37 38.9	-1.4
ITM				S	Sb	22 37 48.9	-1.4
	comp=N,3µm,0.8s						
ITM	Ithomi	0.73	315	Pg	Pb	22 37 38.7	-1.6
ITM				Sg	Sb	22 37 49.5	-0.8
ITM	Ithomi	0.73	315	P	Pb	22 37 39.2	-1.1
KRND	KRANIDI	0.85	33	P	Pg	22 37 41.2	-0.6
KRND				S	Sg	22 37 53.0	+0.1
	comp=N,2µm,0.5s						
KRND	KRANIDI	0.85	33	P	Pg	22 37 41.3	-0.6
KRND				S	Sg	22 37 52.9	+0.1
KRND				AML	AML	22 37 57.0	
	comp=N,4742µm,0.4s						
KRND				AML	AML	22 37 58.7	
	comp=E,4725µm,0.6s						
YDRA	Hydra	0.99	46	P	Pb	22 37 44.1	-0.6
YDRA				S	Sb	22 37 57.6	-0.2
YDRA				AML	AML	22 38 03.7	
	comp=N,5868µm,0.5s						
YDRA				AML	AML	22 38 04.1	
	comp=E,8160µm,0.8s						
ANKY	Antikythira Is	0.99	143	P	Pn	22 37 44.7	-0.8
ANKY	Antikythira Is	0.99	143	P	Pn	22 37 44.7	-0.8
ANKY				S	Sn	22 37 59.7	0.0
ANKY				AML	AML	22 38 04.9	
	comp=N,2714µm,1.4s						
ANKY				AML	AML	22 38 08.0	
	comp=E,2662µm,0.6s						
EPID	Epidavros	1.04	25	P	Pb	22 37 45.1	-0.6
EPID				S	Sb	22 37 58.9	-0.5
GUR	Goura	1.28	352	P	Pg	22 37 48.2	-1.8
LOUT	Loutraki	1.35	14	P	Pb	22 37 50.8	-0.2
THAL	Thalero	1.37	3	P	Pb	22 37 51.0	-0.1
KLV	Kalavryta, Ach	1.41	346	P	Pn	22 37 50.8	-0.6
KLV	Kalavryta, Ach	1.41	346	P	Pg	22 37 51.6	-0.9
KLV				S	Sn	22 38 10.4	+0.3
KLV				AML	AML	22 38 17.7	
	comp=N,1841µm,0.9s						
KLV				AML	AML	22 38 22.4	
	comp=E,2127µm,0.8s						
DRO	Drossia	1.45	332	P	Pg	22 37 51.8	-1.5
DRO	Drossia	1.45	332	P	Pg	22 37 52.5	-0.9
DRO				S	Sn	22 38 11.5	+0.4
DRO				AML	AML	22 38 27.4	
	comp=N,4806µm,0.7s						
DRO				AML	AML	22 38 29.1	
	comp=E,5356µm,0.8s						
RODP	Rodopos	1.47	139	P	Pg	22 37 53.3	-0.3
RODP	Rodopos	1.47	139	Pn	Pg	22 37 53.7	+0.1
MHLO	Agia Marina, M	1.47	89	P	Pn	22 37 52.0	-0.1
MHLO				S	Sg	22 38 12.6	-0.2
	comp=E,3µm,0.8s						
MHLO	Agia Marina, M	1.47	89	P	Pb	22 37 52.6	-0.4
MHLO				S	Sb	22 38 12.3	+0.5
MHLO				AML	AML	22 38 18.2	
	comp=N,7607µm,0.8s						
MHLO				AML	AML	22 38 19.1	
	comp=E,5636µm,0.8s						
VLY	Voula,Athens	1.53	39	P	Pn	22 37 52.5	-0.5
VLY				S	Sn	22 38 13.2	+0.2
	comp=E,1µm,0.8s						
VLY	Voula,Athens	1.53	39	P	Pb	22 37 53.6	-0.4
ATHU	Athens Univers	1.62	36	P	Pn	22 37 54.0	-0.1
ATHU				S	Sb	22 38 16.3	+0.3
	comp=E,455nm,1.1s						
ATHU	Athens Univers	1.62	36	P	Pn	22 37 54.1	-0.1
VIL2	Platees	1.64	20	P	Pn	22 37 54.4	-0.1
LAKA	Lakka	1.64	343	P	Pb	22 37 54.6	-1.2
RLS	Riolos of Patr	1.64	328	P	Pg	22 37 55.4	-1.6
RLS	Riolos of Patr	1.64	328	P	Pb	22 37 54.6	-1.3
CHAN	Chania	1.65	133	P	Pb	22 37 55.5	-0.6
CHAN				S	Sg	22 38 17.9	-0.7
CHAN				AML	AML	22 38 27.0	
	comp=N,2636µm,0.5s						
CHAN				AML	AML	22 38 35.7	
	comp=E,2150µm,0.7s						
IMMV	Iera Moni Meta	1.66	136	P	Pb	22 37 55.7	-0.5
IMMV	Iera Moni Meta	1.66	136	Pn	Pb	22 37 55.9	-0.3
IMMV	Iera Moni Meta	1.66	136	P	Pb	22 37 55.6	-0.5
KNDR	Palaiochora Ch	1.69	147	P	Pg	22 37 56.7	-1.2
KNDR	Palaiochora Ch	1.69	147	Pn	Pg	22 37 56.9	-1.0
KNDR	Palaiochora Ch	1.69	147	P	Pb	22 37 55.8	-0.9
PTL	Penteli	1.72	36	P	Pb	22 37 56.4	-0.8
PTL	Penteli	1.72	36	P	Pb	22 37 56.2	-1.1
LTHK	Lithakia	1.73	307	P	Pg	22 37 57.3	-1.4
LTHK	Lithakia	1.73	307	P	Pg	22 37 56.7	-2.0
DION	Dionisos Attik	1.78	37	P	Pb	22 37 57.0	-1.2
SERG	Sergoula	1.79	347	P	Pb	22 37 57.5	-0.9
EFP	Efpalio	1.83	343	P	Pb	22 37 58.5	-0.6
EFP	Efpalio	1.83	343	P	Pb	22 37 58.3	-0.9
ANX	Ano Chora	1.99	345	P	Pb	22 38 00.6	-1.3
GVDS	Gavdos	2.20	145	Pn	Pb	22 38 04.3	-1.1
GVD	Gavdhos	2.20	146	Pn	Pb	22 38 04.9	-0.5
IDI	Anoyia	2.33	126	⇑P	Pg	22 38 08.8	-1.3
IDI	Anoyia	2.33	126	Pn	Pn	22 38 04.3	+0.3
	comp=E,1.0nm,0.3s,baz=259,slow=12,SNR=22						
IDI				Sn	Sn	22 38 32.8	0.0
	comp=E,7.6nm,0.3s,baz=185,slow=24,SNR=3.1						
	comp=E,11nm,0.6s						
IDI	Anoyia	2.33	126	P	Pn	22 38 04.1	+0.1
IDI	Anoyia	2.33	126	Pn	Pn	22 38 05.4	+1.4
IDI	Anoyia	2.33	126	P	Pn	22 38 04.9	+0.9
SANT	Santorini	2.34	96	Pn	Pn	22 38 04.2	0.0
AGG	Agios Georgios	2.36	355	Pn	Pn	22 38 03.0	-1.3
APE	Apeiranthos	2.41	80	⇑P	Pg	22 38 10.3	-1.2
APE	Apeiranthos	2.41	80	Pn	Pn	22 38 04.5	-0.5
APE	Apeiranthos	2.41	80	P	Pn	22 38 05.4	+0.4
HRKL	Herakleio	2.46	123	Pn	Pn	22 38 07.3	+1.6
ZKR	Zakros	3.34	117	Pn	Pn	22 38 19.2	+1.4
SIGR	SIGRI	3.63	45	Pn	Pn	22 38 21.2	-0.6
KNT	Kendrikon	4.49	3	Pn	Pn	22 38 33.5	-0.2
VAY	Valandovo	4.64	360	i Pn	Pn	22 38 37.4	+1.6
OHR	Ohrid	4.65	343	i Pn	Pb	22 38 43.9	-3.2
ALN	Alexandroupoli	5.02	32	Pn	Pn	22 38 40.9	0.0
STIP	Stip	5.03	357	i Pn	Pn	22 38 43.2	+2.2
RDO	Rodhopi	5.03	26	Pn	Pn	22 38 40.4	-0.7
TIP	Timpagrande	5.23	300	⇑P	Pn	22 38 46.7	+2.8
VTS	Vitosha	5.96	5	⇓P	Pn	22 38 57.7	+3.7
PDG	Podgorica	6.30	337	⇓P	Pn	22 39 00.0	+1.6
VAE	Valguarnera	6.57	279	Pn	Pn	22 39 05.2	+2.8
	comp=E,0.4nm,0.3s,baz=280,slow=11,SNR=1.9						
VAE				Sn	Sn	22 40 21.4	+4.0
	baz=54,slow=23						
	comp=E,9.6nm,0.8s						
VOIR		8.96	11	⇑P	Pn	22 39 36.3	+1.3
MLR	Muntele Rosu	9.17	15	⇑P	Pn	22 39 41.3	+3.3
MLR	Muntele Rosu	9.17	15	Pn	Pn	22 39 38.9	+0.9
	comp=E,1.6nm,0.8s,baz=135,slow=19,SNR=1.7						
MLR				Lg	Lg	22 42 07.4	
	comp=E,0.1nm,0.3s,baz=169,slow=16,SNR=1.8						
MLR				LR	LR	22 43 24.9	
	comp=E,354nm,19.4s,baz=60,slow=40						
BRTR	Keskin Array B	9.23	67	Pn	Pn	22 39 39.6	+0.8
	baz=246,slow=13,SNR=1.7						
	comp=E,1.0nm,0.9s						
PLOR	Plostina	9.67	17	⇑P	Pn	22 39 46.7	+1.9
VRI	Vrincioaia	9.70	17	⇑P	Pn	22 39 48.8	+3.6
MMAI	Mount Meron Ar	11.15	105	Pn	Pn	22 40 03.5	-1.6
	comp=E,0.2nm,0.3s,baz=287,slow=9.9,SNR=1.4						
	comp=E,0.2nm,0.2s						
EIL	Elat	12.49	120	Pn	Pn	22 40 22.2	-1.2
	comp=E,0.1nm,0.3s,baz=335,slow=20,SNR=1.5						
EIL				Sn	Sn	22 42 35.8	-7.0
	comp=E,0.2nm,0.3s,baz=3.9,slow=12,SNR=3.8						
	comp=E,3.0nm,0.9s						
GERES	GERESS Array B	13.79	335	Pn	Pn	22 40 43.8	+2.7
	comp=E,0.1nm,0.3s,baz=142,slow=10.0,SNR=1.9						
	comp=E,0.1nm,0.3s						
KHC	Kasperske Hory	14.08	335	eP	P	22 40 53.5	+0.7

DPC	Dobruska-Polom	14.40	344	eP	P	22 40 59.4	+3.0
AKASG	Malin Array Be	14.82	17	Pn	Pn	22 40 53.8	-1.2
	comp=E,0.3nm,0.3s,baz=206,slow=9.1,SNR=1.2						
	comp=E,0.2nm,0.2s						
CLL	Collm	16.15	338	i PKP	P	22 41 20.4	+4.7
	comp=Z,12nm,1.1s						
CLL				ex	x	22 41 25.0	
KBZ	Khabaz	17.03	59	Pn	P	22 41 25.4	-0.1
	comp=Z,0.1nm,0.3s,baz=261,slow=8.4,SNR=11						
	comp=Z,4.9nm,0.9s						
ESDC	Sonseca Array	21.05	286	P	P	22 42 11.2	+1.5
	comp=Z,0.5nm,0.7s,baz=82,slow=9.5,SNR=2.7						
	comp=Z,0.5nm,0.7s						
HFS	Hagfors	24.17	349	P	P	22 42 41.3	-0.4
	comp=Z,2.1nm,0.7s,baz=163,slow=10,SNR=1.7						
	comp=Z,2.1nm,0.7s						
FINES	FINESS Array B	24.89	4	P	P	22 42 47.6	-0.7
	comp=Z,1.8nm,0.8s,baz=171,slow=9.8,SNR=1.2						
	comp=Z,1.8nm,0.8s						
NOA	NORSAR Array B	25.43	347	P	P	22 42 53.1	-0.2
	comp=Z,0.6nm,0.6s,baz=150,slow=7.7,SNR=2.1						
	comp=Z,0.6nm,0.6s						
EKA	Eskdalemuir Ar	25.60	325	P	P	22 42 54.9	+0.2
	comp=Z,3.4nm,0.8s,baz=123,slow=7.9,SNR=4.9						
	comp=Z,3.4nm,0.8s						
TORD	Torodi Ar. Bea	29.98	224	P	P	22 43 34.2	-0.1
	comp=Z,0.9nm,0.9s,baz=48,slow=6.3,SNR=3.0						
	comp=Z,0.9nm,0.9s						
ARCES	ARCESS Array B	32.96	2	P	P	22 44 00.5	+0.4
	comp=Z,1.6nm,0.8s,baz=193,slow=7.9,SNR=1.1						
	comp=Z,1.6nm,0.8s						
MKAR	Makanchi Array	44.72	57	P	P	22 45 38.2	-0.6
	comp=Z,1.7nm,0.8s,baz=283,slow=7.1,SNR=16						
	comp=Z,1.7nm,0.8s						
ZALV	Zalesovo Beam	45.50	47	P	P	22 45 43.8	-1.0
	comp=Z,1.3nm,0.5s,baz=274,slow=8.3,SNR=7.6						
	comp=Z,1.3nm,0.5s						
CMAR	Chiang Mai Arr	68.47	83	P	P	22 48 28.4	+0.2
	comp=Z,1.0nm,0.3s,baz=285,slow=3.5,SNR=4.2						
	comp=Z,1.0nm,0.3s						
YKA	Yellowknife Ar	75.36	341	P	P	22 49 10.1	+1.3
	comp=Z,0.2nm,0.7s,baz=33,slow=5.7,SNR=2.2						
	comp=Z,0.2nm,0.7s						

IDC 15 22:38:45.6±1.7**, 36°.77N**×**22°.55E, h0km, mb3.6**/3**, mbtmp3.5**/4**, 1D, Error ellipse: s-maj=35.1km s-min=29.8km az=141.0, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDI	Anoyia	2.40	127	Pn	Pn	22 39 25.6	-0.7
	45nm,0.8s,baz=81,slow=5.3,SNR=0.9						
IDI				Sn	Sb	22 39 58.8	-1.2
	3.0nm,0.3s,baz=254,slow=20,SNR=0.7						
TORD	Torodi Ar. Bea	30.04	224	P	P	22 44 56.6	+0.1
	0.4nm,0.8s,baz=30,slow=6.7,SNR=2.0						
	0.4nm,0.8s						
MK31	Makanchi Array	44.68	58	⇓P	P	22 47 01.6	+1.5
	0.2nm,0.4s,baz=0.0,slow=0.1,SNR=5.4						
MKAR	Makanchi Array	44.68	58	P	P	22 47 00.3	+0.1
	0.3nm,0.4s,baz=265,slow=7.6,SNR=5.0						
	0.3nm,0.4s						
ZALV	Zalesovo Beam	45.44	47	P	P	22 47 05.7	-0.3
	0.4nm,0.3s,baz=268,slow=9.5,SNR=1.9						
	0.4nm,0.3s						

IDC ***15*** *22:39:35.0±2.2, 24°.11S×179°.82W, h495km±22km, mb3.3/5, mbtmp4.2/6, Error ellipse: s-maj=35.9km s-min=25.1km az=170.0*

NEIC ***15*** *22:39:37.1±1.5, 24°.1S±0°.2×179°.9W±0°.1, h517km±21km, mb4.1/15, Error ellipse: s-maj=36.7km s-min=16.5km az=196.0*

ISC 15 22:39:37.0±0.7**, 23°.9S**±0°.2×**179°.97W**±0°.10**, h518km, n23, σ1s14**/26**, mb4.1**/13**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.44	343	P	P	22 41 18.4	-0.2
	5.1nm,0.5s,baz=158,slow=7.3,SNR=7.3						
NIUE	Niue	10.53	65	P	P	22 42 01.0	+0.8
NIUE				S	S	22 43 57.4	-0.4
ARMA	Armidale	26.03	249	P	P	22 44 30.4	+1.7
EIDS	Eidsvold	26.33	261	P	P	22 44 31.7	+0.4
EIDS				IAmb	IAmb	22 44 33.1	
	comp=Z,3.7nm,0.7s						
CTA	Charters Tower	31.50	270	P	P	22 45 17.6	+1.1
	comp=Z,6.9nm,0.4s,baz=92,slow=9.7,SNR=26						
	comp=Z,6.9nm,0.4s						
CTAO	Charters Tower	31.50	270	P	P	22 45 17.1	+0.7
COEN	Coen	36.15	279	P	P	22 45 53.9	-1.6
COEN				IAmb	IAmb	22 46 20.7	
	comp=Z,6.1nm,0.9s						
BBOO	Buckleboo	39.45	247	P	P	22 46 21.6	-0.7
BBOO				IAmb	IAmb	22 46 43.5	
	comp=Z,7.3nm,1.0s						
AS31	Alice Springs	42.05	261	P	P	22 46 43.4	+0.2
ASAR	Alice Springs	42.05	261	P	P	22 46 43.5	+0.3
	comp=Z,1.3nm,0.3s,baz=96,slow=6.8,SNR=19						
ASAR				ScP	ScP	22 51 30.3	+3.0
	comp=Z,0.4nm,0.5s,baz=101,slow=4.8,SNR=2.5						
	comp=Z,1.3nm,0.3s						
ASAR	Alice Springs	42.05	261	P	P	22 46 43.4	+0.1
WB0	Warramunga Arr	42.42	266	P	P	22 46 45.9	-0.3
WB0				IAmb	IAmb	22 46 47.0	
	comp=Z,5.2nm,0.7s						
WRA	Warramunga Arr	42.43	266	P	P	22 46 46.0	-0.2
	comp=Z,5.0nm,0.6s,baz=102,slow=8.4,SNR=55						
WRA				ScP	ScP	22 51 31.7	+2.8
	comp=Z,0.2nm,0.7s,baz=107,slow=3.0,SNR=1.1						
	comp=Z,5.0nm,0.6s						
WRA	Warramunga Arr	42.43	266	P	P	22 46 45.7	-0.5
FORT	Forrest	46.32	250	P	P	22 47 15.2	-1.0
KNRA	Kununurra	48.71	270	P	P	22 47 34.5	+0.3
KNRA				IAmb	IAmb	22 47 35.0	
	comp=Z,9.6nm,0.8s						
FITZ	Fitzroy Crossi	50.85	266	P	P	22 47 50.6	+0.6
PSA00	Pilbara Seismi	55.18	260	P	P	22 48 20.3	-0.6
PSA00				IAmb	IAmb	22 48 49.3	
	comp=Z,6.0nm,1.5s						
MBWA	Marble Bar	55.39	260	P	P	22 48 22.0	-0.4
MBWA				IAmb	IAmb	22 48 23.4	
	comp=Z,13nm,1.1s						
MORW	Morawa	56.88	250	P	P	22 48 32.1	-0.5
MORW				IAmb	IAmb	22 48 57.0	
	comp=Z,12nm,1.1s						
QSPA	South Pole Qui	66.14	180	P	P	22 49 31.6	-1.0
	comp=Z,0.8nm,0.7s,baz=332,slow=3.0,SNR=1.5						
	comp=Z,0.8nm,0.7s						
QSPA	South Pole Qui	66.14	180	P	P	22 49 32.4	-0.3
QSPA				IAmb	IAmb	22 49 32.6	
	comp=Z,1.4nm,1.1s						
TXAR	Lajitas Array	90.43	58	P	P	22 51 42.9	-0.6
	comp=Z,0.2nm,0.7s,baz=225,slow=6.2,SNR=2.9						
	comp=Z,0.2nm,0.7s						

IDC 15 23:00:59.0±6.0**, 18°.53S**×**176°.44W, h0km, mb3.3**/2**, mbtmp3.3**/2**, Error ellipse: s-maj=308.6km s-min=55.3km az=147.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.36	260	P	P	23 09 27.7	+0.3
	0.3nm,1.0s,baz=96,slow=7.2,SNR=1.5						
	0.3nm,1.0s						
ASAR	Alice Springs	46.43	255	P	P	23 09 27.4	-0.5
	0.4nm,0.6s,baz=91,slow=8.2,SNR=7.1						
	0.4nm,0.6s						
GERES	GERESS Array B	148.66	347	PKPbc	PKPbc	23 20 47.7	-0.6
	0.1nm,0.3s,baz=45,slow=1.8,SNR=3.8						

GII ***15*** *23:29:44.9±0.0, 35°.86N×27°.62E, h17km, Mm3.9/8*

DDA ***15*** *23:29:46.8±0.0, 35°.92N×27°.53E, h27km±1km, MW4.4*

MED_RC ***15*** *23:29:47.0±0.6, 35°.72N×27°.69E, h18km±2km, MW4.5/10, Moment Tensor Solution.Mantle waves: s10,c12; Duration: 1s0 Moment tensor: Scale 10^15Nm; Mrr-4.72±.79; Mθθ0.20±.55; Mφφ4.53±.50; Mrθ-0.53±1.33; Mθφ-2.05±.44; Mφr-3.52±.81; Best double couple: M0 6.19000×10^15 NP1:φs356.00000°, δ63.00000°, λ-72.00000°. NP2:φs141.00000°, δ32.00000°, λ-121.00000°. Principal axes: T 6.2500, Plg16.0000°, Azm73.0000°; N -0.1100, Plg16.0000°, Azm167.0000°; P -6.1300, Plg67.0000°, Azm299.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

NIC ***15*** *23:29:47.3±0.0, 35°.82N×27°.72E, h11km±2km, Ml4.8/9*

ISK ***15*** *23:29:47.3, 35°.94N×27°.59E, h15km, ML4.5/27*

MOS ***15*** *23:29:48.0±1.3, 35°.83N×27°.57E, h36km, mb4.6/16, Error ellipse: s-maj=5.9km s-min=3.6km az=91.1*

NEIC ***15*** *23:29:48.8±2.0, 35°.84N±0°.05×27°.65E±0°.04, h27km±5km, mb4.3/53, Error ellipse: s-maj=8.0km s-min=4.2km az=157.0*

ATH ***15*** *23:29:48.3, 35°.95N×27°.59E, h8km±1km, ML4.2/6, Error ellipse: s-maj=1.7km s-min=0.8km az=69.0*

THE ***15*** *23:29:48.0, 35°.93N×27°.62E, h2km±1km, ML4.1/6, Error ellipse: s-maj=1.3km s-min=0.5km az=352.0*

IDC ***15*** *23:29:49.7±2.1, 36°.01N×27°.50E, h35km±16km, mb4.0/29, mbtmp4.2/37, ML3.5/7, MS3.8/2, Error ellipse: s-maj=14.6km s-min=9.1km az=157.0*

ISC 15 23:29:48.0±0.8**, 35°.89N**±0°.02×**27°.62E**±0°.02**, h23km**±5km**, n536, σ1s62**/609**, mb4.3**/69**, 59C-15D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.50	228	P	Pb	23 29 58.0	-0.2
KARP				S	Sn	23 30 06.7	-1.0
	46µm,0.6s						
KARP	Karpathos	0.50	228	Pg	Pb	23 29 58.1	-0.2
KARP				Sg	Sb	23 30 05.8	+0.7
KARP	Karpathos	0.50	228	Pg	Pb	23 29 58.0	-0.2
KARP				Sg	Sb	23 30 05.2	0.0
KARP	Karpathos	0.50	228	⇑iP	Pb	23 29 58.0	-0.2
KARP				S	Sb	23 30 05.3	+0.2
KARP				AML	AML	23 30 07.0	
	56nm,0.2s						
KARP				AML	AML	23 30 07.0	
	56nm,0.2s						
KARP				AML	AML	23 30 07.3	
	79nm,0.5s						
KARP				AML	AML	23 30 07.3	
	79nm,0.5s						
KARP	Karpathos	0.50	228	P	Pb	23 29 58.0	-0.2
KARP	Karpathos	0.50	228	P	Pb	23 29 58.0	-0.2
KARP				S	Sb	23 30 05.5	+0.3
KARP				AML	AML	23 30 07.4	
	comp=N,57054µm,0.3s						
KARP				AML	AML	23 30 07.7	
	comp=E,79821µm,0.5s						
ARG	Arkhangelos	0.53	51	P	Pb	23 29 58.1	-0.6
ARG				S	Sb	23 30 05.3	-0.6
	comp=E,49µm,0.7s						
ARG	Arkhangelos	0.53	51	Pg	Pb	23 29 58.0	-0.6
ARG				Sg	Sb	23 30 05.4	-0.4
ARG	Arkhangelos	0.53	51		Pb	23 29 58.0	-0.6
ARG					Sb	23 30 05.1	-0.8
ARG	Arkhangelos	0.53	51	⇑iP	Pb	23 29 58.1	-0.6
ARG				S	Sb	23 30 05.2	-0.6
ARG				AML	AML	23 30 07.0	
	comp=E,69nm,0.6s						
ARG				AML	AML	23 30 07.0	
	comp=E,69nm,0.6s						
ARG				AML	AML	23 30 07.1	
	comp=E,106nm,0.3s						
ARG				AML	AML	23 30 07.1	
	comp=E,106nm,0.3s						
ARG	Arkhangelos	0.53	51	P	Pb	23 29 58.0	-0.6
ARG						23 30 05.1	
ARG	Arkhangelos	0.53	51	P	Pb	23 29 58.0	-0.6
ARG				S	Sb	23 30 04.9	-0.9
ARG				AML	AML	23 30 07.2	
	comp=N,68840µm,0.6s						
ARG				AML	AML	23 30 07.3	
NISR	Nisiros	0.83	331	P	Pb	23 30 03.5	-0.1
NISR				S	Sn	23 30 15.9	+0.2
	comp=N,14µm,0.6s						
NISR	Nisiros	0.83	331	P	Pb	23 30 03.5	-0.1
DAT	Datca	0.84	358	P	Pb	23 30 03.4	-0.6
DAT				S	Sb	23 30 15.4	+0.5
DAT	Datca	0.84	358	Pg	Pb	23 30 03.5	-0.6
DAT				Sg	Sb	23 30 14.6	-0.4
DAT	Datca	0.84	358	P	Pb	23 30 04.0	0.0
DAT				S	Sb	23 30 15.5	+0.5
KOSK	Kos Island	1.01	329	P	Pn	23 30 06.7	0.0
KOSK	Kos Island	1.01	329	Pg	Pn	23 30 06.7	0.0
KOSK	Kos Island	1.01	329	P	Pb	23 30 06.4	-0.4
KOSK				S	Sb	23 30 18.8	-0.8
TURN	Turunc	1.02	29	Pg	Pb	23 30 06.3	-0.7
TURN				Sg	Sn	23 30 20.5	0.0
TURN	Turunc	1.02	29	P	Pb	23 30 06.4	-0.7
TURN				S	Sb	23 30 19.4	-0.6
BDRM	Kayabasi	1.19	353	SPECP		23 30 09.0	
BDRM				P	Pn	23 30 09.1	0.0
BDRM				S	Sb	23 30 24.0	-0.7
BODT	Bodrum	1.20	348	P	Pn	23 30 09.1	-0.3
BODT				S	Sn	23 30 25.2	+0.2
BODT	Bodrum	1.20	348	Pn	Pn	23 30 09.2	-0.2
DALY	Dalyan (Mula)	1.25	42	Pn	Pn	23 30 10.2	+0.2
YER	Yerkesik	1.36	23	P	Pb	23 30 12.4	-0.4
YER				S	Sb	23 30 30.4	+0.7
YER	Yerkesik	1.36	23	Pn	Pn	23 30 12.0	+0.4
ZKR	Zakros	1.38	236	P	Pb	23 30 13.4	+0.3
ZKR				S	Sb	23 30 32.4	+2.2
	comp=N,9µm,0.6s						
ZKR	Zakros	1.38	236	Pn	Pb	23 30 13.3	+0.3
ZKR	Zakros	1.38	236	⇑iP	Pb	23 30 13.4	+0.3
ZKR				S	Sb	23 30 32.3	+2.0
ZKR				AML	AML	23 30 36.3	
	comp=N,9.8nm,1.0s						
ZKR				AML	AML	23 30 36.3	
	comp=N,9.8nm,1.0s						
ZKR				AML	AML	23 30 36.6	
	comp=N,22nm,0.6s						
ZKR				AML	AML	23 30 36.6	
	comp=N,22nm,0.6s						
ZKR	Zakros	1.38	236	P	Pb	23 30 13.2	+0.1
ZKR				S	Sb	23 30 31.3	+1.0
ZKR				AML	AML	23 30 37.5	
	comp=N,9466µm,0.7s						
ZKR				AML	AML	23 30 37.8	
	comp=E,23398µm,0.6s						
FETY	Fethiye	1.40	57	Pn	Pb	23 30 13.1	-0.4
FETY	Fethiye	1.40	57	P	Pb	23 30 13.0	-0.4
FETY				S	Sb	23 30 33.4	+2.5
IZZE	Mula-Seydike	1.41	67	SPECP		23 30 13.0	
IZZE				P	Pb	23 30 13.2	-0.5
IZZE				S	Sb	23 30 33.6	+2.4
MLSB	Milas	1.41	5	Pn	Pn	23 30 12.1	-0.2
STIA	Sitia Lasithi	1.42	242	P	Pb	23 30 14.2	+0.4
STIA				S	Sb	23 30 32.2	+0.8
STIA	Sitia Lasithi	1.42	242	P	Pb	23 30 14.1	+0.3
STIA				S	Sb	23 30 32.6	+1.2
STIA				AML	AML	23 30 38.5	
	comp=E,20688µm,0.6s						
STIA				AML	AML	23 30 40.9	
	comp=N,30341µm,0.6s						
DDIM	Aydin, Didim	1.60	349	SPECP		23 30 15.0	
DDIM				P	Pn	23 30 15.4	+0.5
DDIM				S	Sn	23 30 34.2	-0.5
KSL	Kastellorizon	1.61	80	P	Pb	23 30 16.7	-0.4
KSL				S	Sb	23 30 37.2	+0.2
	comp=N,3µm,1.0s						
KSL	Kastellorizon	1.61	80	S	Sn	23 30 35.8	+0.6
KSL				AML	AML	23 30 45.5	
	comp=N,6.0nm,1.4s						
KSL				AML	AML	23 30 55.8	
	comp=N,6.3nm,0.9s						
KSL	Kastellorizon	1.61	80	P	Pb	23 30 16.5	-0.6
AKAS	Kas	1.65	77	Pn	Pb	23 30 17.0	-0.7
AKAS	Kas	1.65	77	Pn	Pb	23 30 17.2	-0.5
AKAS	Kas	1.65	77	SPECP		23 30 17.0	
AKAS				P	Pb	23 30 17.3	-0.5
CAME	Cameli-Denizli	1.72	52	Pn	Pb	23 30 18.8	-0.2
FRMA	Ierapetra Chan	1.77	241	P	Pn	23 30 18.3	+1.2
FRMA				S	Sn	23 30 40.0	+1.1
	comp=N,3µm,0.7s						
FRMA	Ierapetra Chan	1.77	241	P	Pn	23 30 18.3	+1.2
FRMA				S	Sn	23 30 40.0	+1.1
AYDN	Tasoluk	1.78	7	SPECP		23 30 18.0	
AYDN				P	Pn	23 30 18.2	+0.8
AYDN				S	Sn	23 30 38.9	-0.5
THR8	Santorini-Mono	1.81	287	P	Pn	23 30 17.9	+0.2
SANT	Santorini	1.81	286	P	Pn	23 30 18.1	+0.3
SANT	Santorini	1.81	286	Pn	Pn	23 30 18.2	+0.4
SANT	Santorini	1.81	286		Pn	23 30 18.1	+0.3
SANT	Santorini	1.81	286	P	Pn	23 30 18.1	+0.3
SANT				AML	AML	23 30 48.3	
	comp=N,7857µm,0.4s						
SANT				AML	AML	23 30 48.8	
	comp=E,17370µm,0.5s						
GCAM	G?zelcaml?	1.84	350	Pn	Pn	23 30 18.5	+0.4
GCAM	G?zelcaml?	1.84	350	P	Pn	23 30 18.6	+0.4
GCAM				S	Sn	23 30 40.5	-0.1
CAEL	Denizli, Camel	1.84	47	SPECP		23 30 21.0	
CAEL				P	Pb	23 30 21.3	+0.2
CAEL				S	Sb	23 30 47.7	+3.8
THR6	Thira Island,	1.86	285	P	Pn	23 30 18.7	+0.3
THT2	Imerovigli	1.86	288	P	Pn	23 30 19.3	+0.9
THR3	Thira Island,	1.87	287	P	Pn	23 30 19.0	+0.5
CMBO	Columbo, Santo	1.88	289	P	Pn	23 30 19.2	+0.5
CMBO	Columbo, Santo	1.88	289	P	Pn	23 30 19.0	+0.2
TAVA	DENIZLI_Tavas	1.89	33	SPECP		23 30 21.0	
TAVA				P	Pb	23 30 21.6	-0.3
TAVA				S	Sb	23 30 45.3	+0.2
THR9	Santorini-Faro	1.89	285	P	Pn	23 30 19.6	+0.8
THR9	Santorini-Faro	1.89	285	P	Pn	23 30 19.3	+0.5
THR5	Thira Island,	1.91	287	P	Pn	23 30 19.7	+0.6
SAP3	Santorini-Thir	1.92	287	P	Pn	23 30 19.9	+0.7
SAP3	Santorini-Thir	1.92	287	P	Pn	23 30 19.9	+0.7
SMG	Samos	1.93	341	P	Pn	23 30 19.4	0.0
SMG	Samos	1.93	341	P	Pn	23 30 19.3	0.0
ELL	Elmali	2.04	64		Pb	23 30 23.9	-0.6
ELL	Elmali	2.04	64	S	Sb	23 30 48.2	-1.3
ELL	Elmali	2.04	64	P	Pb	23 30 23.9	-0.6
APE	Apeiranthos	2.06	306	⇓P	Pn	23 30 22.5	+1.3
APE	Apeiranthos	2.06	306	P	Pn	23 30 21.4	+0.2
APE	Apeiranthos	2.06	306	Pn	Pn	23 30 21.4	+0.2
APE	Apeiranthos	2.06	306	Pn	Pn	23 30 20.8	-0.4
APE				Sn	Sn	23 30 44.5	-1.6
APE	Apeiranthos	2.06	306	c iP	Pn	23 30 21.4	+0.2
APE	Apeiranthos	2.06	306	P	Pn	23 30 21.4	+0.2
APE				AML	AML	23 30 58.3	
	comp=E,3496µm,0.5s						
APE				AML	AML	23 30 59.0	
	comp=N,3432µm,0.4s						
GOLH	Golhisar	2.06	49	SPECP		23 30 24.0	
GOLH				P	Pb	23 30 24.2	-0.7
GOLH				S	Sb	23 30 50.5	+0.4
DNIZ	Denizli-Tavas-	2.08	33	SPECP		23 30 24.0	
DNIZ				P	Pb	23 30 24.4	-0.6
DNIZ				S	Sb	23 30 50.0	-0.5
APMY	Acipayam-Deniz	2.08	40	Pn	Pn	23 30 22.3	+0.7
HRKL	Herakleio	2.13	255	P	Pn	23 30 23.2	+1.1
HRKL	Herakleio	2.13	255	Pn	Pn	23 30 23.2	+1.1
HRKL	Herakleio	2.13	255	P	Pn	23 30 23.0	+0.9
IACM	Heraklion	2.15	255	P	Pn	23 30 23.9	+1.4
DGB	zmir	2.24	345	P	Pn	23 30 23.8	+0.1
DGB				S	Sn	23 30 50.1	-0.5
AKUM	Antalya-Kumluc	2.25	78	SPECP		23 30 25.0	
AKUM				P	Pn	23 30 25.6	+1.9
IDI	Anoyia	2.30	256	⇑P	Pn	23 30 25.2	+0.6
IDI	Anoyia	2.30	256	Pn	Pn	23 30 24.6	+0.1
	comp=N,15nm,0.3s,baz=44,slow=7.8,SNR=100						
IDI				Sn	Sn	23 30 51.7	-0.5
	comp=N,52nm,0.3s,baz=155,slow=9.4,SNR=12						
	comp=N,176nm,0.7s						
IDI	Anoyia	2.30	256	P	Pn	23 30 25.4	+0.8
IDI	Anoyia	2.30	256	Pn	Pn	23 30 25.0	+0.4
IDI	Anoyia	2.30	256	Pn	Pn	23 30 24.9	+0.4
IDI	Anoyia	2.30	256	P	Pn	23 30 25.9	+1.3
IDI	Anoyia	2.30	256	P	Pn	23 30 25.1	+0.4
TMBK	Timbaki Herakl	2.46	252	P	Pn	23 30 28.6	+1.9
KORT	Korkueli	2.47	62	SPECP		23 30 29.0	
KORT				P	Pb	23 30 29.6	-2.1
ZEYE	Izmir, Urla-Ze	2.51	340	P	Pn	23 30 27.5	+0.1
BLCB	Balcova	2.54	350	P	Pn	23 30 27.9	+0.2
BLCB	Balcova	2.54	350	Pn	Pn	23 30 27.9	+0.2
PRNS	Prines Rethymn	2.59	259	P	Pn	23 30 29.7	+1.2
URLA	Izmir	2.60	342	P	Pn	23 30 28.9	+0.3
BRDR	BURDUR-Merkez	2.67	47	SPECP		23 30 31.0	
BRDR				P	Pn	23 30 31.7	+2.1
MANT	Manisa	2.71	16	Pn	Pn	23 30 31.1	+0.9
MANT	Manisa	2.71	16	SPECP		23 30 31.0	
MANT				P	Pn	23 30 31.3	+1.0
MHLO	Agia Marina, M	2.72	288	P	Pn	23 30 32.0	+1.8
KULA	Kula-Manisa	2.75	17	P	Pn	23 30 31.5	+0.7
BUCA	Burdur, Bucak-	2.77	58	SPECP		23 30 34.0	
BUCA				P	Pb	23 30 34.1	-2.7
CHOS	Chios island	2.79	334	P	Pn	23 30 31.6	+0.3
PASA	Karahalli, USA	2.88	31	SPECP		23 30 34.0	
PASA				P	Pn	23 30 34.8	+2.3
KARB	zmir-Karabur	2.94	341	P	Pn	23 30 33.9	+0.7
IMMV	Iera Moni Meta	2.99	263	P	Pn	23 30 34.8	+0.8
IMMV	Iera Moni Meta	2.99	263	Pn	Pn	23 30 35.1	+1.1
IMMV	Iera Moni Meta	2.99	263	P	Pn	23 30 34.8	+0.8
AKHS	Akhisar	2.99	3	P	Pn	23 30 35.2	+1.2
ISP	Isparta	3.03	49	Pn	Pn	23 30 36.5	+1.9
ISP	Isparta	3.03	49	Pn	Pn	23 30 34.9	+0.3
ISP	Isparta	3.03	49	P	Pn	23 30 36.5	+1.9
USAK	Uak-Merkez	3.04	21	SPECP		23 30 35.0	
USAK				P	Pn	23 30 35.8	+1.1
GVDS	Gavdos	3.06	251	P	Pb	23 30 38.6	-3.2
GVDS	Gavdos	3.06	251	Pn	Pn	23 30 37.1	+2.1
GVD	Gavdhos	3.07	251	P	Pn	23 30 38.4	+3.4
GVD	Gavdhos	3.07	251	Pn	Pn	23 30 36.9	+1.9
GVD	Gavdhos	3.07	251	P	Pn	23 30 38.0	+2.9
ZEDA	zmir-Bergama	3.10	352	SPECP		23 30 35.0	
ZEDA				P	Pn	23 30 35.7	+0.2
KZIL	AFYON_Kizioren	3.11	40	SPECP		23 30 37.0	
KZIL				P	Pn	23 30 37.4	+1.7
RODP	Rodopos	3.16	265	P	Pn	23 30 37.4	+1.1
RODP	Rodopos	3.16	265	Pn	Pn	23 30 37.4	+1.1
DEMI	Demirci	3.27	15	SPECP		23 30 38.0	
DEMI				P	Pn	23 30 39.0	+1.0
KNDR	Palaiochora Ch	3.27	260	P	Pn	23 30 41.3	+3.5
KNDR	Palaiochora Ch	3.27	260	Pn	Pn	23 30 40.4	+2.6
BAGO	Egridir - ISPA	3.30	49	SPECP		23 30 40.0	
BAGO				P	Pn	23 30 40.4	+2.1
KEPZ	Antalya-Kepez	3.37	71	SPECP		23 30 41.0	
KEPZ				P	Pn	23 30 41.7	+2.4
STEP	BALIKESIR_Sava	3.49	1	SPECP		23 30 41.0	
STEP				P	Pn	23 30 41.4	+0.6
AYVA	Ayvalik	3.50	348	SPECP		23 30 40.0	
AYVA				P	Pn	23 30 41.0	+0.1
ANKY	Antikythira Is	3.51	271	P	Pn	23 30 42.6	+1.5
ANKY	Antikythira Is	3.51	271	P	Pn	23 30 42.4	+1.4
PRK	Paraskevi	3.52	343	P	Pn	23 30 41.9	+0.6
GDZ	Gediz	3.52	24	SPECP		23 30 42.0	
GDZ				P	Pn	23 30 43.0	+1.5
AFYO	Afyonkarahisar	3.60	36	SPECP		23 30 45.0	
AFYO				P	Pn	23 30 45.5	+3.1
SIGR	SIGRI	3.60	338	P	Pn	23 30 43.0	+0.6
BUHA	Balikesir, Bur	3.63	353	SPECP		23 30 43.0	
BUHA				P	Pn	23 30 43.7	+0.9
VLY	Voula,Athens	3.64	304	P	Pn	23 30 44.3	+1.4
DION	Dionisos Attik	3.67	308	P	Pn	23 30 45.0	+1.6
PTL	Penteli	3.70	307	P	Pn	23 30 46.1	+2.3
ATHU	Athens Univers	3.71	305	P	Pn	23 30 45.3	+1.5
ATHU	Athens Univers	3.71	305	P	Pn	23 30 45.3	+1.5
KTHA	Kythira Island	3.71	277	P	Pn	23 30 45.5	+1.6
KTHA	Kythira Island	3.71	277	Pn	Pn	23 30 45.4	+1.6
KTHA	Kythira Island	3.71	277	P	Pn	23 30 44.8	+0.9
BALB	Balikesir	3.75	3		Pn	23 30 45.4	+1.0
DURS	Dursunbey	3.77	10	SPECP		23 30 45.0	
DURS				P	Pn	23 30 45.4	+0.6
KOCA	Canakkale, Ayv	3.80	342	P	Pn	23 30 45.6	+0.6
OSC1	CSNet OBS 1	3.84	127	P	Pn	23 30 45.2	-0.4
OSC1				S	Sn	23 31 31.0	+1.0
BKES	Balkesir-Mer	3.85	4	SPECP		23 30 46.0	
BKES				P	Pn	23 30 46.6	+0.8
VLI	Veliai	3.87	284	P	Pn	23 30 47.7	+1.6
EREA	Eretria	3.88	312	P	Pn	23 30 47.8	+1.5
EREA	Eretria	3.88	312	P	Pn	23 30 47.5	+1.3
KRND	KRANIDI	3.89	294	P	Pn	23 30 48.1	+1.7
KYMI	Kymi, Euboea I	3.92	315	P	Pn	23 30 47.9	+1.1
BAYC	CANAKKALE_Bayr	3.94	348	SPECP		23 30 47.0	
BAYC				P	Pn	23 30 47.8	+0.7
AKMS	Akamas	3.95	101	⇑iP	Pn	23 30 47.2	+0.1
AKMS				S	Sn	23 31 33.3	+0.6
AKMS				AML	AML	23 31 38.0	
	comp=N,4.1nm,0.6s						
AKMS				AML	AML	23 31 38.0	
	comp=N,4.1nm,0.6s						
AKMS				AML	AML	23 31 39.6	

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      comp=N,4.6nm,0.8s
AKMS                                AML    AML    23 31 39.6
      comp=N,4.6nm,0.8s
ALFC  Alefka             4.13  99⥣eP    Pn     23 30 49.6 -0.1
ALFC                                S      Sn     23 31 37.7 +0.5
ALFC                                AML    AML    23 31 41.4
      comp=N,3.4nm,0.6s
ALFC                                AML    AML    23 31 41.4
      comp=N,3.4nm,0.6s
ALFC                                AML    AML    23 31 46.9
      comp=N,2.5nm,0.7s
ALFC                                AML    AML    23 31 46.9
      comp=N,2.5nm,0.7s
VILL  Villia             4.13 305   P      Pn     23 30 51.4 +1.7
NATA  Nata               4.20 104⥣iP    Pn     23 30 50.7 +0.1
NATA                                S      Sn     23 31 39.4 +0.6
NATA                                AML    AML    23 31 45.3
      comp=N,7.8nm,0.6s
NATA                                AML    AML    23 31 45.3
      comp=N,7.8nm,0.6s
NATA                                AML    AML    23 31 47.0
      comp=N,9.5nm,0.6s
NATA                                AML    AML    23 31 47.0
      comp=N,9.5nm,0.6s
LIA   Limnos Island      4.44 335   P      Pn     23 30 55.0 +1.1
SZAC  Souni              4.45 103   P      Pn     23 30 53.9 -0.1
SZAC                                AML    AML    23 31 53.8
      comp=N,3.5nm,0.6s
SZAC                                AML    AML    23 31 57.5
      comp=N,3.0nm,0.6s
BORA  Eskisehir          4.58  29          Pn     23 30 57.1 +1.3
GUR   Goura              4.70 297   P      Pn     23 31 00.5 +3.0
ASGA  Asgata             4.73 102   P      Pn     23 30 57.4 -0.5
ASGA                                AML    AML    23 31 60.0
      comp=N,2.2nm,0.7s
ASGA                                AML    AML    23 32 02.8
      comp=N,3.1nm,0.6s
CSS   Mathiatis          4.75 100   Pn     Pn     23 30 58.2  0.0
CSS   Mathiatis          4.75 100   P      Pn     23 30 57.6 -0.6
CSS   Mathiatis          4.75 100   Pn     Pn     23 30 57.4 -0.9
CSS                                 Sn     Sn     23 31 50.2 -2.5
CSS   Mathiatis          4.75 100   P      Pn     23 30 58.5 +0.2
ITM   Ithomi             4.76 287   Pn     Pn     23 31 00.6 +2.3
ITM   Ithomi             4.76 287          Pn     23 31 01.9 +3.6
ATHAL Athalassa          4.77  97   P      Pn     23 30 58.6 +0.2
SMTH  Samothraki Isl     4.86 341   P      Pn     23 31 00.5 +0.8
MVOU  Mavrovouni         4.99  98⥣eP    Pn     23 31 00.9 -0.5
ALN   Alexandroupoli     5.15 347   Pn     Pn     23 31 04.7 +1.0
ALN   Alexandroupoli     5.15 347   P      Pn     23 31 04.7 +1.0
AGG   Agios Georgios     5.24 308          Pn     23 31 07.2 +2.2
AGG   Agios Georgios     5.24 308   P      Pn     23 31 07.2 +2.2
PARAL Paralimni          5.32  98   P      Pn     23 31 07.2 +1.2
MDUB  Mudurnu            5.38  31   Pn     Pn     23 31 08.5 +1.6
RDO   Rodhopi            5.50 343          Pn     23 31 09.4 +1.0
BR231 Keskin MP Arra     5.68  44          Pn     23 31 12.8 +1.8
ANTO  Ankara             5.71  44 ⥣P      Pn     23 31 13.9 +2.5
ANTO  Ankara             5.71  44          Pn     23 31 13.0 +1.6
ANTO  Ankara             5.71  44 ⥣P      Pn     23 31 13.9 +2.5
LIT   Litokhoron         5.84 318   Pn     Pn     23 31 14.8 +1.7
LIT   Litokhoron         5.84 318   P      Pn     23 31 14.8 +1.7
BR131 Keskin Array S     6.12  49          Pn     23 31 18.9 +1.8
BR131 Keskin Array S     6.12  49c iP      Pn     23 31 18.3 +1.3
BRTR  Keskin Array B     6.12  49   Pn     Pn     23 31 18.8 +1.8
      comp=N,1.4nm,0.3s,baz=219,slow=15,SNR=58
BRTR                                Sn     Sn     23 32 27.9 +1.5
      comp=N,1.0nm,0.3s,baz=218,slow=27,SNR=5.2
BRTR                                Lg     Lg     23 33 08.2
      baz=242,slow=31
BRTR                                LR     LR     23 34 28.9
      comp=N,789nm,18.3s,baz=86,slow=46
      comp=N,7.5nm,0.6s
BRTR  Keskin Array B     6.12  49          Pn     23 31 18.4 +1.3
HNTI  Hanita             6.84 112   Pn     Pn     23 31 25.1 -1.7
HNTI                                Sn     Sn     23 32 41.0 -3.0
BHL   Bhannes            6.89 104  eP      Pn     23 31 26.6 -1.1
OFRI  `Ofer              6.91 116   Pn     Pn     23 31 26.0 -1.9
OFRI                                Sn     Sn     23 32 43.7 -2.2
FNA   Florina            6.92 317          Pn     23 31 31.0 +2.9
FNA   Florina            6.92 317   P      Pn     23 31 31.0 +2.9
BLGI  Bet Lehem HaGe     7.01 114   Pn     Pn     23 31 27.5 -1.7
BLGI                                Sn     Sn     23 32 45.3 -2.9
BLGI  Bet Lehem HaGe     7.01 114   P      Pn     23 31 28.1 -1.1
HWQ   Hawqa              7.01 101  eP      Pn     23 31 29.4  0.0
MMA0B Mount Meron ar     7.04 112   Pn     Pn     23 31 27.7 -2.0
MMA0B                               Sn     Sn     23 32 46.9 -2.1
MMAI  Mount Meron Ar     7.04 112   Pn     Pn     23 31 27.9 -1.8
      comp=N,5.1nm,0.3s,baz=305,slow=12,SNR=70
MMAI                                Sn     Sn     23 32 47.1 -2.0
      comp=N,16nm,0.3s,baz=304,slow=27,SNR=8.9
ZAHL  Zahle              7.09 104  eP      Pn     23 31 30.3 -0.2
BEIL  Beino              7.14  98  eP      Pn     23 31 30.2 -0.8
SLTI  Sal'it             7.15 118   Pn     Pn     23 31 28.9 -2.3
GEM   Giv'at Ha'Em       7.15 110   Pn     Pn     23 31 29.8 -1.4
GEM                                 Sn     Sn     23 32 47.7 -4.0
RCY   Rachaya            7.18 107  eP      Pn     23 31 30.8 -0.8
STIP  Stip               7.18 325  i Pn    Pn     23 31 35.4 +3.8
BNN   Bunyan             7.19  63          Pn     23 31 32.6 +0.8
MMLI  Mount Malkishu     7.32 116   Pn     Pn     23 31 31.9 -1.7
MMLI                                Sn     Sn     23 32 53.1 -2.9
SALP  Salfit             7.35 119   Pn     Pn     23 31 32.7 -1.2
SALP                                Sn     Sn     23 32 53.5 -3.2
SHMJ  Saham              7.44 113   P      Pn     23 31 34.4 -0.7
OHR   Ohrid              7.47 316  i Pn    Pn     23 31 41.8 +6.2
AMAZ  Amatzia            7.47 123   Pn     Pn     23 31 34.5 -1.1
AMAZ                                Sn     Sn     23 32 56.6 -3.0
QRNJ  Al-Qirein          7.49 116   P      Pn     23 31 35.3 -0.4
HMDT  Nahal Hemdat       7.49 117   Pn     Pn     23 31 33.5 -2.4
HMDT                                Sn     Sn     23 32 57.6 -2.5
VTS   Vitosha            7.53 335 ⥣P      Pn     23 31 42.9 +6.4
VTS   Vitosha            7.53 335 ⥣P      Pn     23 31 42.9 +6.4
KZIT  Kziot              7.53 129   Pn     Pn     23 31 35.4 -1.0
KZIT                                Sn     Sn     23 32 56.6 -4.5
UJAP  Al Uja             7.61 119   Pn     Pn     23 31 36.2 -1.2
UJAP                                Sn     Sn     23 33 00.2 -2.7
YTIR  Yattir             7.71 124   Pn     Pn     23 31 37.7 -1.2
RAZG  Razgrad            7.72 354 ⥣P      Pn     23 31 40.7 +1.8
DSI   Dead Sea           7.77 121   Pn     Pn     23 31 38.3 -1.3
DSI   Dead Sea           7.77 121   P      Pn     23 31 39.7 +0.1
GAZ   Gaziantep          7.83  78          Pn     23 31 40.6 +0.1
PLVB  Pleven             7.84 344 ⥣P      Pn     23 31 45.2 +4.6
BZK   Bozkurt            7.84  37   Pn     Pn     23 31 41.3 +0.7
MDBI  Mazsada            7.90 123   Pn     Pn     23 31 39.7 -1.7
MDBI  Mazsada            7.90 123   Pn     Pn     23 31 40.0 -1.4
MDBI                                Sn     Sn     23 33 07.4 -2.7
MDBI  Mazsada            7.90 123   P      Pn     23 31 40.8 -0.6
MSBI  Mazada             7.90 123   Pn     Pn     23 31 39.6 -1.8
LISJ  El Lisan           8.03 123   P      Pn     23 31 43.0 -0.2
GHAJ  Ghor Haditha       8.05 122          Pn     23 31 42.4 -1.1
GHAJ  Ghor Haditha       8.05 122   Sn     Sn     23 33 12.0 -1.8
HSUJ  Al Zarqa           8.06 115   P      Pn     23 31 42.3 -1.3
WALJ  Wala               8.07 120   P      Pn     23 31 43.1 -0.7
KARJ  KARJ               8.22 123   P      Pn     23 31 37.2 -8.6
ZFRI  Zfri               8.27 128   Pn     Pn     23 31 43.5 -3.0
PRNI  Paran              8.29 130   Pn     Pn     23 31 45.2 -1.7
SCTE  Santa Cesarea      8.35 303   Pn     Pn     23 31 47.7 +0.2
HRFI  Mount Harif        8.53 131   Sn     Sn     23 33 21.9 -3.9
ASF   Jabal al Asfar     8.54 113   Pn     Pn     23 31 49.4 -0.9
      comp=N,0.8nm,0.3s,baz=304,slow=5.6,SNR=5.2
ASF                                 Sn     Sn     23 33 22.0 -4.1
      comp=N,0.7nm,0.3s,baz=89,slow=22,SNR=1.6
TIRR  Tirgusor           8.58   4 ⥣P      Pn     23 31 52.6 +1.8
TIRR  Tirgusor           8.58   4          Pn     23 31 51.6 +0.9
TIRR  Tirgusor           8.58   4 ⥣P      Pn     23 31 52.6 +1.8
MBRI  Mt Berech          8.63 133   Pn     Pn     23 31 49.1 -2.5
MBRI  Mt Berech          8.63 133   P      Pn     23 31 51.6  0.0
EIL   Elat               8.74 133   Pn     Pn     23 31 51.6 -1.4
      comp=N,1.0nm,0.3s,baz=278,slow=2.8,SNR=21
EIL                                 Sn     Sn     23 33 23.9 -7.0
      comp=N,4.7nm,0.3s,baz=134,slow=22,SNR=4.1
AQBJ  Aqaba              8.76 132   P      Pn     23 31 53.1 -0.2
HARR  Harsova            8.80   1 ⥣P      Pn     23 31 54.9 +1.2
HARR  Harsova            8.80   1 ⥣P      Pn     23 31 54.9 +1.2
TPGR  Topolog            8.98   4 ⥣P      Pn     23 32 00.3 +4.0
PDG   Podgorica          9.21 318          Pn     23 32 01.0 +1.7
TIP   Timpagrande        9.23 294 ⥣P      Pn     23 32 02.0 +2.3
TIP   Timpagrande        9.23 294          Pn     23 32 01.0 +1.3
CFR   Carcaliu           9.29   2 ⥣P      Pn     23 32 01.5 +1.1
CFR   Carcaliu           9.29   2 ⥣P      Pn     23 32 01.5 +1.1
MLR   Muntele Rosu       9.68 353 ⥣P      Pn     23 32 09.1 +3.2
MLR   Muntele Rosu       9.68 353   Pn     Pn     23 32 05.9  0.0
      comp=N,0.2nm,0.3s,baz=183,slow=9.2,SNR=6.2
MLR                                 Sn     Sn     23 33 48.9 -5.0
      comp=N,0.1nm,0.3s,baz=271,slow=14,SNR=1.2
      comp=N,2.9nm,0.8s
MLR   Muntele Rosu       9.68 353          Pn     23 32 07.1 +1.2
MLR   Muntele Rosu       9.68 353 ⥣P      Pn     23 32 09.1 +3.2
VOIR                     9.74 349 ⥣P      Pn     23 32 07.6 +0.9
VOIR                     9.74 349 ⥣P      Pn     23 32 07.6 +0.9
MDVR  Moldovita          9.96 335 ⥣P      Pn     23 32 08.6 -1.0
PLOR  Plostina           9.98 356 ⥣P      Pn     23 32 13.5 +3.5
PLOR  Plostina           9.98 356 ⥣P      Pn     23 32 13.5 +3.5
LOT   Lotru              9.99 344 ⥣P      Pn     23 32 13.4 +3.3
VRI   Vrincioaia         9.99 356 ⥣P      Pn     23 32 13.4 +3.3
VRI   Vrincioaia         9.99 356 ⥣P      Pn     23 32 13.4 +3.3
COVR  Voineasa-Covas    10.01 354 ⥣P      Pn     23 32 13.0 +2.7
DIVS  Divibare          10.07 327          Pn     23 32 11.4 +0.2
CUC   Castrocucco       10.18 297          Pn     23 32 12.5 -0.3
GZR   Gura Zlata        10.18 340 ⥣P      Pn     23 32 15.7 +3.0
GZR   Gura Zlata        10.18 340 ⥣P      Pn     23 32 15.7 +3.0
DOPR  Dopca             10.21 351 ⥥P      Pn     23 32 16.6 +3.5
SIM   Simferopol'       10.31  27  eP      Pn     23 32 19.4 +4.9
SIM                                eS      Sn     23 34 11.9 +2.6
SIM                                 pmax   pmax
      comp=Z,23nm,0.9s
SIM                                 smax   smax
      comp=E,26nm,0.8s
SIM                                 smax   smax
      comp=N,33nm,1.0s
SURR  Surduc            10.70 339 ⥣P      Pn     23 32 21.4 +1.7
VAE   Valguarnera       10.72 282   Pn     Pn     23 32 20.1  0.0
      comp=N,12nm,1.0s,baz=5.6,slow=19,SNR=1.7
VAE                                 Sn     Sn     23 34 12.8 -6.7
      comp=N,0.9nm,0.3s,baz=170,slow=5.7,SNR=4.0
BZS   Buzias            10.73 337 ⥣P      Pn     23 32 25.1 +5.0
BZS   Buzias            10.73 337 ⥣P      Pn     23 32 25.1 +4.9
SGRT  San Giovanni R    10.96 306   Pn     Pn     23 32 24.0 +0.7
KOPT  Kop Dagi          10.97  64          Pn     23 32 25.4 +1.6
MARR  Marisel-Cluj      11.30 344 ⥣P      Pn     23 32 30.8 +2.8
DRGR                    11.50 343 ⥣P      Pn     23 32 29.7 -1.1
DRGR                    11.50 343 ⥣P      Pn     23 32 29.7 -1.1
BURAR Bucovina Array    11.86 352 ⥣P      Pn     23 32 38.0 +2.3
BURAR Bucovina Array    11.86 352   Pn     Pn     23 32 35.9 +0.2
BURAR Bucovina Array    11.86 352 ⥣P      Pn     23 32 38.0 +2.3
BUR08 Bucovina Ar. S    11.89 352   Pn     Pn     23 32 37.3 +1.3
INTR  Introdacqua       12.30 304   Pn     Pn     23 32 42.6 +0.9
NEY   Neytrino          13.77  53⥣eP    Pn     23 33 03.9 +2.1
NEY                                 pmax   pmax
      comp=Z,1.0nm,1.0s
KIV   Kislovodsk        14.08  51          Pn     23 33 07.4 +1.4
KIV   Kislovodsk        14.08  51  eP      Pn     23 33 05.5 -0.5
KIV                                 pmax   pmax
      comp=Z,3.0nm,1.0s
KBZ   Khabaz            14.10  52   Pn     P      23 33 10.7 -3.0
      baz=266,slow=7.3,SNR=4.5
      comp=Z,2.1nm,1.0s
KBZ   Khabaz            14.10  52⥣eP    P      23 33 10.1 -3.6
KBZ                                 pmax   pmax
      comp=Z,3.0nm,0.8s
GNI   Garni             14.15  67   Pn     Pn     23 33 10.4 +3.3
      comp=Z,0.2nm,0.3s,baz=8.2,slow=7.7,SNR=4.3
GNI                                 LR     LR     23 39 49.3
      comp=Z,331nm,19.6s,baz=304,slow=42
      comp=Z,2.5nm,0.8s
GNI   Garni             14.15  67          Pn     23 33 08.2 +1.0
GNI   Garni             14.15  67⥣eP    Pn     23 33 08.5 +1.4
VYHS  Vyhne             14.17 335  eP      P      23 33 16.7 +2.2
VYHS  Vyhne             14.17 335  eP      P      23 33 16.7 +2.2
SOKA  Soboth            14.32 323  ePn     Pn     23 33 12.6 +3.3
      comp=Z,3.3nm,0.7s
ZEI   Tsey              14.35  56  eP      P      23 33 18.2 +1.5
ZEI                                 pmax   pmax
      comp=Z,15nm,1.2s
OBKA  Obir              14.45 321  ePn     P      23 33 15.5 -2.2
      comp=Z,7.4nm,1.1s
RONA  Rosalia, Austr    14.49 328  ePn     P      23 33 16.4 -1.7
      comp=Z,7.0nm,0.8s
ARSA  Arzberg           14.50 325  ePn     P      23 33 17.9 -0.3
      comp=Z,6.2nm,1.3s
LANS  Liptovska Anna    14.54 338  eP      P      23 33 21.4 +2.8
LANS  Liptovska Anna    14.54 338  eP      P      23 33 21.4 +2.8
SABO  M.te Sabotino     14.61 318          Pn     23 33 13.5 +0.4
MODS  Modra-Piesok      14.63 332  eP      P      23 33 23.1 +3.5
MODS  Modra-Piesok      14.63 332  eP      P      23 33 23.1 +3.5
KEST  Kesra             14.83 275   Pn     Pn     23 33 18.4 +2.1
      comp=Z,0.1nm,0.3s,baz=297,slow=17,SNR=8.8
KEST  Kesra             14.83 275          Pn     23 33 17.3 +1.0
AKASG Malin Array Be    14.86   4   Pn     Pn     23 33 14.8 -1.6
      baz=195,slow=11,SNR=1.3
      comp=Z,0.2nm,0.2s
AKASG Malin Array Be    14.86   4   Pn     Pn     23 33 18.8 +2.4
AKASG Malin Array Be    14.86   4   P      Pn     23 33 18.8 +2.4
AKBB  Malin Array Si    14.86   4⥥eP    Pn     23 33 19.0 +2.6
CONA  Conrad Observa    14.86 328  ePn     Pn     23 33 17.8 +1.2
      comp=Z,7.2nm,1.6s
JAVC  Velka Javorina    14.88 334  eP      P      23 33 25.4 +2.9
MYKA  Terra Mystica     15.00 320  ePn     P      23 33 27.2 +3.5
      comp=Z,5.4nm,1.0s
MAUC  Maruska           15.26 335  eP      P      23 33 27.3 +0.7
ZCCA  Zocca             15.26 309          Pn     23 33 23.7 +1.7
ZCCA                                IAmb   IAmb   23 33 38.7
      comp=Z,15nm,1.2s
STAL  STALIGIAL         15.27 317          Pn     23 33 22.7 +0.7
STAL                                IAmb   IAmb   23 33 28.3
      comp=Z,13nm,1.1s
CLUD  Cludinico         15.29 318          Pn     23 33 22.6 +0.2
CLUD                                IAmb   IAmb   23 33 36.6
      comp=Z,13nm,0.9s
CIMO  Cimolais          15.44 317          Pn     23 33 24.5 +0.2
CIMO                                IAmb   IAmb   23 33 30.4
      comp=Z,12nm,1.1s
KBA   Koelnbreinsper    15.45 321  ePn     P      23 33 27.1 -1.7
      comp=Z,18nm,1.2s
MOA   Molln             15.52 324  ePn     P      23 33 29.8 +0.3
      comp=Z,8.1nm,1.5s
KRUC  Moravsky          15.53 331  eP      P      23 33 30.3 +0.7
VRAC  Vranov            15.65 332   Pn     P      23 33 31.2 +0.2
      comp=Z,0.6nm,0.3s,baz=150,slow=10,SNR=5.4
VRAC  Vranov            15.65 332  eP      P      23 33 32.3 +1.3
ABTA  Abfaltersbach     15.67 318  ePn     P      23 33 29.8 -1.5
      comp=Z,6.1nm,0.8s
MORC  Moravsky Berou    15.71 335          Pn     23 33 29.1 +1.4
MORC  Moravsky Berou    15.71 335  eP      P      23 33 33.2 +1.6
MORC  Moravsky Berou    15.71 335   P      Pn     23 33 29.1 +1.4
MORC                                pmax   pmax
      comp=Z,9.0nm,1.2s
BIOA  Bad Ischl, Aus    15.71 323  ePn     Pn     23 33 27.4 -0.4
      comp=Z,4.6nm,0.8s
CTI   Castel Tesino     15.74 315          Pn     23 33 28.3 +0.1
CTI                                 IAmb   IAmb   23 33 40.5
      comp=Z,18nm,0.9s
CTI   Castel Tesino     15.74 315   P      Pn     23 33 28.3 +0.1
CTI                                 pmax   pmax
      comp=Z,17nm,0.9s
CKRC  Cesky Krumlov     16.21 327  eP      P      23 33 38.4 +1.3
CKRC  Cesky Krumlov     16.21 327  eP      P      23 33 38.4 +1.3
KRLC  Kraliky           16.22 334  eP      P      23 33 39.3 +2.0
KRLC  Kraliky           16.22 334  eP      P      23 33 39.3 +2.0
WTTA  Wattenberg        16.46 319  ePn     P      23 33 43.5 +3.4
      comp=Z,23nm,1.8s
GEC2  GERESS Array S    16.50 326          P      23 33 39.4 -1.1
GERES GERESS Array B    16.50 326   Pn     Pn     23 33 38.4 +0.5
      comp=Z,0.2nm,0.3s,baz=130,slow=12,SNR=15
      comp=Z,2.1nm,0.7s
GERES GERESS Array B    16.50 326   Pn     Pn     23 33 39.0 +1.1
WATA  Walderalm         16.54 319  ePn     P      23 33 43.6 +2.7
      comp=Z,21nm,1.3s
DPC   Dobruska-Polom    16.61 334  eP      P      23 33 42.8 +1.2
DPC   Dobruska-Polom    16.61 334  eP      P      23 33 42.8 +1.2
AKT   Akhty             16.66  64  eP      P      23 33 44.1 +1.9
AKT                                 pmax   pmax
      comp=Z,4.0nm,1.1s
SQTA  Sankt Quirin      16.67 318  ePn     P      23 33 43.1 +0.8
      comp=Z,5.7nm,0.9s
KHC   Kasperske Hory    16.77 326   Pn     Pn     23 33 42.1 +0.9
KHC   Kasperske Hory    16.77 326  eP      P      23 33 43.2 -0.1
KHC                                ex      x      23 33 59.0
KHC   Kasperske Hory    16.77 326⥣eP    P      23 33 42.7 -0.6
KHC                                 pmax   pmax
      comp=Z,10.0nm,0.9s
MOTA  Moosalm           16.80 318  ePn     P      23 33 44.3 +0.5
      comp=Z,12nm,1.2s
FETA  Feichten          16.82 317  ePn     P      23 33 43.3 -0.7
      comp=Z,13nm,0.8s
OSTC  Ostas             16.82 334  eP      P      23 33 43.8 -0.1
OSTC                               eP      Pn     23 33 43.9 +2.0
OSTC  Ostas             16.82 334  eP      P      23 33 43.8 -0.1
FUORN Ofenpass-Fuorn    16.85 315          Pn     23 33 43.4 +0.8
CHVC  Chvalec           16.91 334  eP      P      23 33 45.5 +0.7
CHVC  Chvalec           16.91 334  eP      P      23 33 45.5 +0.7
PRU   Pruhonice         17.00 330  eP      Pn     23 33 45.0 +0.9
PRU   Pruhonice         17.00 330  eP      Pn     23 33 45.0 +0.9
RETA  Reutte            17.07 318  ePn     P      23 33 48.0 +1.2
      comp=Z,7.6nm,1.0s
DAVA  Damuels           17.44 316  ePn     P      23 33 51.5 +0.6
      comp=Z,6.1nm,0.6s
BRG   Berggiesshubel    17.93 331  eP      P      23 33 59.0 +2.9
BRG                                 Amp           23 33 59.6
      comp=Z,5.9nm,1.1s
BRG   Berggiesshubel    17.93 331  eP      P      23 33 59.0 +2.9
BRG                                 pmax   pmax
      comp=Z,6.0nm,1.1s
BNI   Bardonecchia      18.33 306   P      Pn     23 34 01.1 +0.3
BNI   Bardonecchia      18.33 306   P      Pn     23 34 01.1 +0.3
BNI                                 pmax   pmax
      comp=Z,7.0nm,1.1s
SENIN Lac Senin/Sane    18.49 311   P      P      23 34 02.0 -0.6
MNK   Minsk             18.62   0  i P     Pn     23 34 05.2 +1.2
      comp=E,1.0nm,0.8s
MNK                                i P     Pn     23 34 05.2 +1.2
      comp=N,10.0nm,0.8s
MNK                                i P     Pn     23 34 05.2 +1.2
      comp=Z,7.0nm,0.8s,baz=181
MNK                                i PP    PnPn   23 34 17.4 +1.4
MNK                                i PPP   PPP    23 34 25.1
MNK                                i S     S      23 37 33.9 -0.4
MNK                                i SS    SnSn   23 37 49.1 +3.8
MNK                                i LR    LR     23 40 17.4
MNK                                i LRM   MLR    23 41 02.5
      comp=Z,239nm,15.0s
MNK                                i LRM   MLR    23 41 29.2
      comp=N,363nm,15.2s
MNK                                i LRM   MLR    23 42 55.0
      comp=E,14nm,15.2s
MNK   Minsk             18.62   0  i P     Pn     23 34 05.1 +1.2
MNK                                i S     S      23 37 33.8 -0.4
MNK                                 pmax   pmax
      comp=N,10.0nm,0.8s
MNK                                 pmax   pmax
      comp=Z,7.0nm,0.8s
MNK                                 pmax   pmax
      comp=E,1.0nm,0.8s
MNK                                 MLR    MLR
      comp=Z,239nm,15.0s
MNK                                 MLR    MLR
      comp=N,363nm,15.0s
MNK                                 MLR    MLR
      comp=E,14nm,15.0s
CLL   Collm             18.64 330   P      P      23 34 03.9  0.0
CLL   Collm             18.64 330  eP      Pn     23 34 05.0 +0.7
      comp=Z,5.0nm,0.8s
CLL                                epP     pP     23 34 10.0 -0.1
CLL                                epPP           23 34 22.0
CLL                                ePPP    PPP    23 34 27.0
CLL                                eScP    ScP    23 42 08.0 +2.1
CLL   Collm             18.64 330  eP      Pn     23 34 05.0 +0.7
CLL                                 pmax   pmax
      comp=Z,5.0nm,0.8s
GKP   Gorka Klasztor    18.85 340  eP      Pn     23 34 08.3 +1.4
BFO   Black Forest      18.89 317   P      Pn     23 34 07.3 -0.2
BFO   Black Forest      18.89 317   P      Pn     23 34 07.3 -0.2
BFO                                 pmax   pmax
      comp=Z,5.0nm,0.7s
NACGM Naroch            19.03 359  eP      Pn     23 34 09.2 +0.3
      comp=Z,16nm,1.1s,baz=178
ECH   Echery            19.49 316   P      P      23 34 13.8 +0.5
ECH   Echery            19.49 316   P      P      23 34 13.8 +0.5
ECH                                 pmax   pmax
      comp=Z,8.0nm,1.1s
PABE  Paberze           19.78 354   P      P      23 34 16.1 -0.2
PABE                                IAmb   IAmb   23 34 21.5
      comp=Z,25nm,0.9s
PABE  Paberze           19.78 354  eP      Pn     23 34 17.8 -0.2
RAYN  Ar Rayn           19.79 124   P      P      23 34 16.4 -0.3
RAYN  Ar Rayn           19.79 124   P      P      23 34 16.4 -0.3
RAYN                                pmax   pmax
      comp=Z,5.0nm,1.0s
SSB   Saint Sauveur     19.82 305   P      P      23 34 16.5 -0.5
SSB   Saint Sauveur     19.82 305   P      P      23 34 16.5 -0.5
SSB                                 pmax   pmax
      comp=Z,4.0nm,0.8s
OBN   Obninsk           20.20  15  i P     P      23 34 21.4 +0.6
OBN                                i              23 34 37.7
OBN                                 pmax   pmax
      comp=Z,8.0nm,0.8s
VSVD  Vaisvydziai       20.26 354  eP      P      23 34 22.3 +0.9
WLF   Walferdange       20.83 318  dP      P      23 34 28.4 +0.6
      comp=Z,6.5nm,0.8s
MOS   Moscow            21.00  16  eP      P      23 34 28.4 -1.2
MOS                                e              23 34 49.5
MOS                                e              23 38 33.3
BSD   Bornholm Skovb    21.13 339  eP      P      23 34 30.1 -0.8
BHOU  Houvegnez         21.29 319  dP      P      23 34 35.3 +2.5
      comp=Z,7.2nm,0.9s
MEM   Membach           21.44 320  dP      P      23 34 35.3 +1.0
      comp=Z,6.7nm,0.9s
RCHB  Rochefort         21.60 318  dP      P      23 34 36.3 +0.2
      comp=Z,6.3nm,0.8s
BSTI  Sart Tilman       21.65 320  dP      P      23 34 39.2 +2.5
BCLA  Clavier           21.70 319  dP      P      23 34 38.5 +1.3
      comp=Z,13nm,0.7s
BELG  Belogornoye       21.76  34   P      P      23 34 37.1 -0.6
      comp=Z,15nm,0.6s,baz=352,slow=2.1,SNR=20
      comp=Z,15nm,0.6s
BELG  Belogornoye       21.76  34ceP    P      23 34 40.4 +2.7
BELG                                pmax   pmax
      comp=Z,3.0nm,1.0s
BGES  Gesves            21.80 319  dP      P      23 34 40.2 +2.0
      comp=Z,11nm,0.9s
DOU   Dourbes           21.91 318  dP      P      23 34 39.9 +0.5
      comp=Z,5.8nm,0.7s
BMRD  Maredsous         21.93 318  dP      P      23 34 41.0 +1.5
CLF   Chambon-Foret     22.31 311   P      P      23 34 43.3 -0.4
CLF                                 IAmb   IAmb   23 34 51.7
      comp=Z,19nm,1.1s
DEL   Delary            22.60 340  eP      P      23 34 45.2 -1.5
TAM   Tamanrasset       23.20 242   P      P      23 34 53.5 +0.1
TAM                                 IAmb   IAmb   23 35 01.9
      comp=Z,23nm,1.3s
TAM   Tamanrasset       23.20 242   P      P      23 34 53.5 +0.1
TAM                                 pmax   pmax
      comp=Z,23nm,1.3s
VIKU  Vikbolandet       23.75 346  eP      P      23 34 58.2 -0.1
GEYT  Alibeck           24.42  76   P      P      23 35 06.0 +1.2
      comp=Z,2.5nm,0.5s,baz=286,slow=11,SNR=9.9
      comp=Z,2.5nm,0.5s
GEYT  Alibeck           24.42  76   P      P      23 35 06.0 +1.2
GYA0B ALIBECK ARRAY     24.42  76   P      P      23 35 06.1 +1.2
AAL   Aland             24.80 351  eP      P      23 35 07.7 -0.2
UPP   Uppsala           24.85 348  eP      P      23 35 10.0 +1.6
ESBB  Sonseca Array     25.18 288   P      P      23 35 11.7  0.0
ESBB                                IAmb   IAmb   23 35 30.5
      comp=Z,13nm,1.2s
ESDC  Sonseca Array     25.18 288   P      P      23 35 10.8 -0.8
      comp=Z,3.4nm,0.7s,baz=82,slow=9.6,SNR=31
      comp=Z,3.4nm,0.7s
ESDC  Sonseca Array     25.18 288   P      P      23 35 11.6  0.0
PAB   San Pablo         25.48 288   P      P      23 35 13.5 -0.9
PAB                                 IAmb   IAmb   23 35 26.9
      comp=Z,20nm,1.4s
PAB   San Pablo         25.48 288   P      P      23 35 13.5 -0.9
PAB                                 pmax   pmax
      comp=Z,20nm,1.4s
FINES FINESS Array B    25.60 358   P      P      23 35 14.3 -0.8
      comp=Z,3.3nm,0.7s,baz=157,slow=11,SNR=16
FINES                               PcP    PcP    23 38 44.8 -0.7
      comp=Z,2.6nm,1.0s,baz=160,slow=6.1,SNR=5.3
      comp=Z,3.3nm,0.7s
FINES FINESS Array B    25.60 358   P      P      23 35 14.0 -1.1
FIA1  FINESS Array S    25.60 358   P      P      23 35 14.1 -1.1
FIA1                                IAmb   IAmb   23 35 54.3
      comp=Z,12nm,1.1s
HFS   Hagfors           25.88 344   P      P      23 35 16.9 -0.8
      comp=Z,18nm,0.8s,baz=143,slow=10,SNR=24
      comp=Z,18nm,0.8s
KLMR  Klimovskoe        26.12  13  eP      P      23 35 17.9 -2.0
KLMR                                AMP           23 35 21.4
      comp=Z,30nm,1.7s
KLMR  Klimovskoe        26.12  13  eP      P      23 35 17.9 -2.0
KLMR                                pmax   pmax
      comp=Z,30nm,1.7s
AKTO  Aktyubinsk        26.29  47   P      P      23 35 21.2 -0.4
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      comp=Z,4.2nm,0.5s,baz=260,slow=3.8,SNR=11
      comp=Z,4.2nm,0.5s
KONO  Kongsberg          26.51 339   P       P       23 35 23.4  0.0
KONO  Kongsberg          26.51 339   P       P       23 35 23.4  0.0
KONO                                 pmax    pmax
      comp=Z,44nm,1.4s
MDT   Midelt             26.72 273   P       P       23 35 24.5 -1.2
      comp=Z,2.0nm,0.8s,baz=101,slow=18,SNR=2.9
      comp=Z,2.0nm,0.8s
NC602 NORSAR Array S     26.91 343   P       P       23 35 27.9 +0.8
NC602                                IAmb    IAmb    23 35 59.6
      comp=Z,23nm,1.4s
ABKAR Akbulak array      27.07  50   P       P       23 35 29.1 +0.5
ABKAR                                IAmb    IAmb    23 36 07.8
      comp=Z,3.4nm,0.9s
ABKAR Akbulak array      27.07  50   P       P       23 35 29.5 +0.9
NAO01 NORSAR Array S     27.17 342   P       P       23 35 29.0 -0.4
NB2   NORSAR Subarra     27.26 343   P       P       23 35 29.1 -1.1
      comp=Z,2.3nm,0.7s,baz=149,slow=9.3
NOA   NORSAR Array B     27.26 343   P       P       23 35 28.8 -1.5
      comp=Z,3.9nm,0.8s,baz=146,slow=8.7,SNR=8.3
      comp=Z,3.9nm,0.8s
PBRG  Braganca           27.28 293  eP       P       23 35 32.9 +2.2
MVO   Moncorvo           27.50 292  eP       P       23 35 34.9 +2.3
PBAR  Barrancos          27.67 285  eP       P       23 35 33.0 -1.1
PVAQ  Vaqueiros          28.30 284   P       P       23 35 39.3 -0.4
EVO   Evora              28.39 286  eP       P       23 35 44.4 +3.8
EVO                                  A       A       23 35 47.8
      comp=Z,22nm,1.8s
MESJ  Messejana          28.63 285  eP       P       23 35 45.7 +3.0
MESJ                                 A       A       23 35 46.2
      comp=Z,118nm,2.0s
EKA   Eskdalemuir Ar     28.65 322   P       P       23 35 41.3 -1.3
      comp=Z,0.7nm,0.5s,baz=115,slow=10,SNR=5.5
      comp=Z,0.7nm,0.5s
ARU   Arti               29.29  36   P       P       23 35 48.3  0.0
      comp=Z,0.6nm,0.4s,baz=292,slow=24,SNR=1.7
      comp=Z,0.6nm,0.4s
ARU   Arti               29.29  36   P       P       23 35 48.1 -0.2
ARU                                  IAmb    IAmb    23 36 15.7
      comp=Z,8.4nm,1.2s
ARU   Arti               29.29  36   P       P       23 35 51.0 +2.7
ARU                                                  23 36 39.3
ARU                                  S       S       23 40 46.7 +6.8
ARU                                  SS      SnSn    23 42 13.5 +7.3
SVE   Sverdlovsk         30.48  36  eP       P       23 36 03.9 +5.1
TORD  Torodi Ar. Bea     32.51 232   P       P       23 36 17.4 +0.3
      comp=Z,8.3nm,0.6s,baz=36,slow=8.4,SNR=65
      comp=Z,8.3nm,0.6s
TORD  Torodi Ar. Bea     32.51 232   P       P       23 36 17.4 +0.3
TORD                                 IAmb    IAmb    23 36 24.4
      comp=Z,4.9nm,0.9s
CHGR  Chuyangaron        32.97  73   P       P       23 36 21.8 +0.7
CHGR  Chuyangaron        32.97  73   P       P       23 36 21.8 +0.7
CHGR                                 pmax    pmax
      comp=Z,11nm,0.7s
KKAR  Karatay Array      33.58  64   P       P       23 36 28.6 +2.3
KKAR  Karatay Array      33.58  64   P       P       23 36 28.0 +1.7
KKAR                                 IAmb    IAmb    23 36 41.9
      comp=Z,2.2nm,0.9s
KKAR  Karatay Array      33.58  64   P       P       23 36 28.6 +2.3
KKAR                                 pmax    pmax
      comp=Z,2.0nm,0.9s
ARCES ARCESS Array B     33.73 359   P       P       23 36 26.0 -1.2
      comp=Z,2.9nm,0.8s,baz=166,slow=8.2,SNR=11
      comp=Z,2.9nm,0.8s
BRVK  Borovoye           34.34  46   P       P       23 36 33.0 +0.2
BRVK                                 IAmb    IAmb    23 36 38.9
      comp=Z,2.7nm,1.0s
BRVK  Borovoye           34.34  46⇓ eP       P       23 36 32.9 +0.2
BRVK                                 pmax    pmax
      comp=Z,1.0nm,0.9s
AAK   Ala-Archa          36.54  65   P       P       23 36 51.8 -0.2
      comp=Z,0.9nm,0.6s,baz=235,slow=7.4,SNR=5.5
AAK                                  PcP     PcP     23 39 14.4 -0.7
      comp=Z,1.9nm,0.7s,baz=216,slow=4.2,SNR=4.0
      comp=Z,0.9nm,0.6s
AAK   Ala-Archa          36.54  65   P       P       23 36 52.5 +0.6
AAK   Ala-Archa          36.54  65⇑ eP       P       23 36 54.5 +2.6
AAK                                  pmax    pmax
      comp=Z,3.0nm,1.6s
NIL   Nilore             37.30  80   P       P       23 36 58.5 +0.2
NIL                                  IAmb    IAmb    23 37 08.8
      comp=Z,6.5nm,0.9s
NIL   Nilore             37.30  80   P       P       23 36 58.5 +0.2
NIL                                  pmax    pmax
      comp=Z,7.0nm,1.0s
KSH   Kashi              38.07  70   P       P       23 37 08.9 +4.0
KSH                                  sP      sP      23 37 15.4 +0.7
KSH                                  pmax    pmax
      comp=Z,2.0nm,0.5s
KURBB Kurchatov Arra     39.10  52   P       P       23 37 13.8 +0.6
      comp=Z,3.2nm,0.6s,baz=276,slow=8.8,SNR=48
KURBB                                PcP     PcP     23 39 23.7 +1.0
      comp=Z,3.2nm,0.7s,baz=267,slow=4.0,SNR=12
      comp=Z,3.2nm,0.6s
KURK  Kurchatov          39.16  51   P       P       23 37 14.0 +0.2
KURK                                 IAmb    IAmb    23 37 19.8
      comp=Z,4.8nm,0.8s
KURK  Kurchatov          39.16  51 ceP       P       23 37 14.8 +1.0
KURK                                 pmax    pmax
      comp=Z,5.0nm,0.8s
BORG  Borgarnes          40.89 330  i P      P       23 37 28.0 +0.1
DBIC  Dimbokro           41.60 233   P       P       23 37 33.7 -0.6
      comp=Z,4.7nm,0.6s,baz=50,slow=9.6,SNR=10
      comp=Z,4.7nm,0.6s
DBIC  Dimbokro           41.60 233   P       P       23 37 34.0 -0.3
DBIC                                 IAmb    IAmb    23 37 40.2
      comp=Z,20nm,1.4s
DBIC  Dimbokro           41.60 233   P       P       23 37 34.0 -0.3
DBIC                                 pmax    pmax
      comp=Z,20nm,1.5s
MK31  Makanchi Array     41.70  57   P       P       23 37 35.6 +0.7
MK31  Makanchi Array     41.70  57 ceP       P       23 37 36.3 +1.4
MKAR  Makanchi Array     41.70  57   P       P       23 37 35.6 +0.7
      comp=Z,2.0nm,0.7s,baz=279,slow=6.8,SNR=13
MKAR                                 PcP     PcP     23 39 31.3 +0.1
      comp=Z,2.0nm,0.7s,baz=279,slow=3.7,SNR=5.3
MKAR                                 ScP     ScP     23 43 16.3 -3.6
      comp=Z,0.3nm,0.7s,baz=274,slow=6.4,SNR=2.4
      comp=Z,2.0nm,0.7s
MKAR  Makanchi Array     41.70  57 ceP       P       23 37 35.9 +1.0
MKAR                                 pmax    pmax
      comp=Z,2.0nm,0.7s
TIC   Toumodi            41.72 234⇑iP        P       23 37 35.4  0.0
      comp=Z,24nm,0.7s
KIC   Kosan Boka         41.75 233⇓eP        P       23 37 35.5 -0.1
      comp=Z,4.1nm,0.5s
LIC   Lamto              42.04 233⇑iP        P       23 37 38.2 +0.3
      comp=Z,30nm,0.8s
SPITS Spitsbergen Ar     42.67 357   P       P       23 37 42.3 -0.1
SPITS                                pmax    pmax
      comp=Z,64nm,1.3s
ZAA0  Zalesovo Array     43.05  47   P       P       23 37 45.4 -0.3
ZAA0                                 IAmb    IAmb    23 37 51.2
      comp=Z,3.4nm,0.8s
ZALV  Zalesovo Beam      43.05  47   P       P       23 37 45.8  0.0
      comp=Z,3.2nm,0.6s,baz=268,slow=8.2,SNR=17
ZALV                                 PcP     PcP     23 39 34.6 -0.9
      comp=Z,0.9nm,0.5s,baz=250,slow=2.9,SNR=2.9
      comp=Z,3.2nm,0.6s
ZALV  Zalesovo Beam      43.05  47   P       P       23 37 45.5 -0.3
SCO   Scoresbysund       43.40 338   P       P       23 37 48.4 +0.1
SCO   Scoresbysund       43.40 338   P       P       23 37 48.4 +0.1
SCO                                  pmax    pmax
      comp=Z,24nm,1.5s
DGZ   Jazzator, Alta     44.85  53⇑ eP       P       23 38 01.7 +1.3
DGZ                                  pmax    pmax
      comp=Z,1.0nm,0.8s
DAG   Danmarks Havn      45.80 347  i P      P       23 38 05.8 -1.6
DAG                                  IAmb    IAmb    23 38 07.0
      comp=Z,3.3nm,0.8s
WMQ   Urumqi             45.90  61  eP       P       23 38 11.5 +2.7
NRIK  Noril'sk           46.37  25   P       P       23 38 11.9 -0.1
      comp=Z,1.5nm,0.5s,baz=228,slow=3.4,SNR=5.5
      comp=Z,1.5nm,0.5s
NRIK  Noril'sk           46.37  25   P       P       23 38 12.8 +0.8
NRIK                                 IAmb    IAmb    23 38 18.0
      comp=Z,2.6nm,0.7s
NRIK  Noril'sk           46.37  25⇑ eP       P       23 38 13.3 +1.3
NRIK                                 pmax    pmax
      comp=Z,2.0nm,0.9s
PYUN  Piuthan            47.07  83  eP       P       23 38 20.1 +1.8
      comp=Z,21nm,0.8s
DANN  Dangsing           47.59  82  eP       P       23 38 24.1 +1.7
      comp=Z,50nm,0.8s
GKN   Gorkha             48.44  82  eP       P       23 38 29.9 +1.1
NOR   Nord               48.49 352  i P      P       23 38 25.4 -2.9
NOR                                  IAmb    IAmb    23 38 27.9
      comp=Z,6.4nm,0.7s
SUMG  Summit             49.03 339  i P      P       23 38 32.0 -1.0
SUMG                                 IAmb    IAmb    23 38 33.0
      comp=Z,5.5nm,0.7s
PKIN  Phulchoki          49.23  83  eP       P       23 38 35.9 +0.9
PKI   Pulchoki           49.24  83  eP       P       23 38 36.4 +1.2
GUN   Gumba              49.48  82  eP       P       23 38 38.0 +1.0
JIRN  Jiri               49.83  82  eP       P       23 38 40.7 +1.0
      comp=Z,7.9nm,0.6s
RAMN  Ramite             50.46  83  eP       P       23 38 45.2 +0.8
DY2G  Dye2               51.32 330  i P      P       23 38 48.9 -1.4
DY2G                                 IAmb    IAmb    23 38 50.3
      comp=Z,6.0nm,0.7s
LSA   Lhasa              52.95  77   P       P       23 39 04.0 +0.9
LSA                                  IAmb    IAmb    23 39 09.9
      comp=Z,9.3nm,1.3s
LSA   Lhasa              52.95  77   P       P       23 39 04.1 +0.9
LSA                                  pmax    pmax
      comp=Z,9.0nm,1.3s
KULLO Kullorsuaq         54.42 341  i P      P       23 39 10.0 -2.8
KULLO                                IAmb    IAmb    23 39 14.9
      comp=Z,4.9nm,0.7s
ZAK   Zakamensk          54.76  49  eP       P       23 39 16.6 +0.9
ZAK                                  pmax    pmax
      comp=Z,3.0nm,1.1s
SONM  Songino Array      57.47  52   P       P       23 39 36.2 +1.0
      comp=Z,1.1nm,0.9s,baz=281,slow=7.3,SNR=10
SONM                                 PcP     PcP     23 40 29.2 +0.5
      comp=Z,1.1nm,0.8s,baz=255,slow=3.4,SNR=5.4
      comp=Z,1.1nm,0.9s
SONM  Songino Array      57.47  52   P       P       23 39 34.8 -0.4
SONM                                 IAmb    IAmb    23 39 41.9
      comp=Z,1.5nm,0.8s
ULN   Ulaanbaatar        57.88  51⇑ eP       P       23 39 39.6 +1.5
ULN                                  pmax    pmax
      comp=Z,3.0nm,0.8s
TIXI  Tiksi              59.78  21⇓ eP       P       23 39 50.4 -0.2
TIXI                                 pmax    pmax
      comp=Z,8.0nm,2.5s
LBTB  Lobatse            60.60 182   P       P       23 39 55.8 -1.1
LBTB  Lobatse            60.60 182   P       P       23 39 55.8 -1.1
LBTB                                 pmax    pmax
      comp=Z,7.0nm,1.1s
HHC   Hu-ho-hao-te       63.56  57  eP       P       23 40 19.3 +2.5
HHC                                  pmax    pmax
      comp=Z,17nm,0.9s
HHC                                  pmax    pmax
      comp=Z,160nm,4.4s
SCHQ  Schefferville      63.93 320   P       P       23 40 17.6 -1.3
      comp=Z,4.3nm,0.5s,baz=62,slow=4.7,SNR=17
      comp=Z,4.3nm,0.5s
SCHQ  Schefferville      63.93 320   P       P       23 40 17.7 -1.1
BOSA  Boshof             64.19 182   P       P       23 40 21.6 +0.7
      comp=Z,2.2nm,0.9s,baz=69,slow=5.5,SNR=1.9
      comp=Z,2.2nm,0.9s
CMAR  Chiang Mai Arr     64.50  85   P       P       23 40 23.8 +0.6
      comp=Z,0.8nm,0.3s,baz=298,slow=8.2,SNR=1.9
      comp=Z,0.8nm,0.3s
CMAR  Chiang Mai Arr     64.50  85   P       P       23 40 23.5 +0.3
XLT   XiLinHaoTe         65.23  53  eP       P       23 40 31.6 +3.9
XLT                                  pP      pP      23 40 35.8 +0.8
XLT                                  sP      sP      23 40 38.5 +1.0
XLT                                  pmax    pmax
      comp=Z,5.0nm,0.7s
XLT                                  pmax    pmax
      comp=Z,200nm,6.2s
BATG  Bathurst New B     66.93 312   P       P       23 40 38.0 -0.4
HEH   HeiHe              68.97  43  eP       P       23 40 52.0 +0.8
HEH                                  pmax    pmax
      comp=Z,330nm,5.7s
BILL  Bilibino           71.86  15  i P      P       23 41 05.7 -2.8
BILL                                e                23 41 29.2
BILL                                 pmax    pmax
      comp=Z,3.0nm,1.4s
A21K  Barrow             73.05   1   P       P       23 41 15.4 -0.1
USRK  Ussuriysk Ar.      74.90  46   P       P       23 41 26.1 -0.7
      comp=Z,3.3nm,0.6s,baz=286,slow=6.8,SNR=6.1
      comp=Z,3.3nm,0.6s
USRK  Ussuriysk Ar.      74.90  46   P       P       23 41 26.5 -0.4
USRK  Ussuriysk Ar.      74.90  46   P       P       23 41 26.5 -0.4
KSRS  Korea Array        76.24  54   P       P       23 41 33.3 -1.3
      comp=Z,1.7nm,0.8s,baz=330,slow=7.0,SNR=5.0
      comp=Z,1.7nm,0.8s
BMAR  Burnt Mountain     76.83 357   P       P       23 41 37.8 +0.2
YKA   Yellowknife Ar     77.36 343   P       P       23 41 39.1 -1.4
      comp=Z,0.7nm,0.8s,baz=52,slow=4.6,SNR=10
      comp=Z,0.7nm,0.8s
IMAR  Indian Mountai     78.45   1   P       P       23 41 46.7 +0.2
ILAR  Eielson Array      79.58 358   P       P       23 41 52.0 -0.8
      comp=Z,0.7nm,0.8s,baz=340,slow=3.4,SNR=9.9
      comp=Z,0.7nm,0.8s
ILAR  Eielson Array      79.58 358   P       P       23 41 52.0 -0.8
ULM   Lac du Bonnet      80.81 327   P       P       23 41 58.9 -0.7
      comp=Z,2.1nm,0.5s,baz=57,slow=5.6,SNR=3.8
      comp=Z,2.1nm,0.5s
BCAR  Beaver Creek A     81.02 355   P       P       23 42 00.2 -0.4
BDFB  Brasilia           87.83 249   P       P       23 42 35.9  0.0
      comp=Z,1.2nm,0.4s,baz=123,slow=8.8,SNR=2.0
      comp=Z,1.2nm,0.4s
PDAR  Pinedale Array     92.51 330   P       P       23 42 56.9 -0.7
      comp=Z,0.2nm,0.6s,baz=41,slow=8.4,SNR=2.1
      comp=Z,0.2nm,0.6s
WRA   Warramunga Arr    114.69  97   PKP     PKPdf   23 48 26.7 -0.1
      comp=Z,0.3nm,0.7s,baz=327,slow=1.4,SNR=2.1
ASAR  Alice Springs     116.22 101   PKP     PKiKP   23 48 30.0 +0.3
      comp=Z,0.8nm,0.8s,baz=356,slow=1.8,SNR=6.0
ASAR  Alice Springs     116.22 101   PKIKP   PKiKP   23 48 30.0 +0.3
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*IDC **15** 23:56:28.7±3.9, 6°.43S×102°.22E, h0^{km}, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=155.3km s-min=22.7km az=54.0*

*DJA **15** 23:56:31.5±0.5, 6°S±4°×10°2E±°, h20^{km}, M4.4/13, mb4.8/3, mB5.5/1, MLv4.2/13, Mw(mB)4.9/1*

ISC 15 23:56:30.2±1.2, **6°.43S**±0°.09×**102°.20E**±0°.09, **h10**^{km}, **n25**, σ**0^{s}.76**/22, **mb3.9**/6, **Southwest of Sumatera**

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Code  Station Name         Δ°  AZ°   Phase ID        Time       Res
                                     Op      ISC     h  m  s    ISC
MNAI  Manna               2.19  20   P       Pn      23 57 06.8 +0.1
MNAI                                 S       Sn      23 57 34.4 +0.5
LWLI  Liwa                2.32  53   P       Pn      23 57 09.4 +0.8
KASI  Kota Agung          2.45  69   P       Pn      23 57 10.7 +0.4
KASI                                 S       Sn      23 57 39.1 -1.3
MDSI  Maura Dua           2.76  46   P       Pn      23 57 15.6 +1.1
MDSI                                 S       Sn      23 57 47.2 -0.7
KSI   Kapahiang           2.79   8   P       Pn      23 57 14.7 -0.3
MASI  Maura Aman, Be      3.27   1   P       Pn      23 57 21.8 +0.2
CGJI  Cibinong            3.47  93   P       Pn      23 57 24.4  0.0
PPSI  Pulau Pagai         4.25 329   P       Pn      23 57 34.4 -0.6
CNJI  Cibinong            4.97 100   P       Pn      23 57 44.4 -0.6
PDSI  Padang              5.75 342   P       Pn      23 57 54.5 -1.2
CMJI  Cimerak             6.34 103   P       Pn      23 58 04.1 +0.3
      56nm,0.7s,0.4nm
UGM   Wanagama            8.39 101   P       Pn      23 58 32.0  0.0
CMAR  Chiang Mai Arr     24.94 353   P       P       00 01 54.1 +0.3
      2.6nm,0.9s,baz=188,slow=7.8,SNR=12
      2.6nm,0.9s
H08S2 Diego Garcia H     29.51 266   T       T       00 33 45.1
      baz=89,slow=73,SNR=11
H08S3 Diego Garcia H     29.52 266   T       T       00 34 08.9
      baz=89,slow=73,SNR=9.2
H08S1 Diego Carcia H     29.52 266   T       T       00 33 46.3
      baz=89,slow=73,SNR=9.1
H01W3 Cape Leeuwin H     30.38 160   T       T       00 35 22.2
      baz=338
H01W2 Cape Leeuwin H     30.39 160   T       T       00 34 49.8
      baz=338
H01W1 Cape Leeuwin H     30.39 160   T       T       00 35 49.8
      baz=338
WRA   Warramunga Arr     33.96 116   P       P       00 03 13.5 -0.7
      0.2nm,0.5s,baz=290,slow=12,SNR=2.4
      0.2nm,0.5s
ASAR  Alice Springs      34.95 123   P       P       00 03 22.7  0.0
      0.3nm,0.8s,baz=299,slow=8.0,SNR=1.5
      0.3nm,0.8s
SONM  Songino Array      54.16   3   P       P       00 05 55.8  0.0
      1.1nm,0.7s,baz=185,slow=8.7,SNR=12
      1.1nm,0.7s
MKAR  Makanchi Array     55.87 344   P       P       00 06 08.3 +0.3
      0.9nm,0.7s,baz=151,slow=7.8,SNR=10
      0.9nm,0.7s
ZALV  Zalesovo Beam      61.91 348   P       P       00 06 49.0 -0.8
      0.9nm,0.5s,baz=163,slow=5.4,SNR=5.4
      0.9nm,0.5s
TXAR  Lajitas Array     146.62  44   PKPbc   PKPdf   00 16 13.1 +1.7
      0.1nm,0.3s,baz=328,slow=3.2,SNR=1.4
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*TEH **16** 00:48:24.9, 37°.51N×55°.83E, h12^{km}±37^{km}, ML3.4*

*NNC **16** 00:48:24.9±1.4, 37°.93N×55°.78E, h0^{km}, mb3.5, Error ellipse: s-maj=15.1km s-min=6.4km az=37.0*

*AZER **16** 00:48:28.1±1.1, 37°.53N×55°.49E, h45^{km}±178^{km}, Error ellipse: s-maj=342.4km s-min=13.3km az=293.0*

ISC 16 00:48:23.4±0.8, **37°.67N**±0°.05×**55°.75E**±0°.03, **h10**^{km}, **n50**, σ**2^{s}.27**/62, **3C-3D, Iran-Turkmenistan border region**

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Code  Station Name         Δ°  AZ°   Phase ID        Time       Res
                                     Op      ISC     h  m  s    ISC
MRVT  Maraveh tapeh       0.27  91   Pg      Pg      00 48 30.8 +1.9
IMND  Minoodasht          0.49 214   Pg      Pg      00 48 33.5 +0.6
BJRD  Bojnurd             1.32  88   Pg      Pn      00 48 48.7 +0.7
SHRO  Shahrood            1.69 173   Pg      Pb      00 48 53.0 -1.6
GYA0B ALIBECK ARRAY       1.90  81  ⇓Pn      Pn      00 48 58.0 +2.1
GYA0B                               ⇑Sn      Sb      00 49 23.0 +1.1
IGLO  Ghaloghah           1.92 233   Pn      Pb      00 48 59.0 +0.3
SBZV  Sabzevar            1.96 130   Pn      Pb      00 48 58.0 -1.3
IEMG  Emamgholi           2.32  95   Pn      Pn      00 49 04.0 +2.0
IAKL  Akhelmad            2.63 113   Pn      Pn      00 49 07.5 +1.4
IANJ  Anjilo              2.65 214   Pn      Pn      00 49 08.4 +2.1
ISHM  Shahmirzad          2.71 227   Pn      Pn      00 49 09.9 +2.6
IPAY  Payeh               2.87 114   Pn      Pn      00 49 10.8 +1.3
IPRN  Peran               3.08 244   Pn      Pn      00 49 15.5 +3.2
IFIR  Firoozkooh          3.14 231   Pn      Pn      00 49 16.2 +2.9
IMOG  Moghan              3.27 117   Pn      Pn      00 49 16.2 +1.2
MZPU  Pul - Mazandar      3.56 251   Pn      Pn      00 49 22.1 +3.2
DAMV  Damavand            3.65 237   Pn      Pn      00 49 24.5 +4.2
IMYA  Miami               3.73 109   Pn      Pn      00 49 22.9 +1.7
TNSJ  Nastanj             3.76 169   Pn      Pn      00 49 22.2 +0.6
KLST  Kelardasht - M      3.92 254   Pn      Pn      00 49 26.4 +2.4
JRKH  Jarkhoshk           4.09 114   Pn      Pn      00 49 27.5 +1.4
CHTH  Charan              4.10 246   Pn      Pn      00 49 30.2 +3.8
TABS  Tabas               4.16 164   Pn      Pn      00 49 28.2 +1.1
TKDS  Koohdasht(Taba      4.20 164   Pn      Pn      00 49 28.4 +0.8
QALM  Alamut, Qazvin      4.26 255   Pn      Pn      00 49 31.7 +3.0
THKV  Tehran--Karaj       4.28 247   Pn      Pn      00 49 32.9 +4.1
ISFB  Sefidab             4.36 222   Pn      Pn      00 49 31.0 +1.2
TBJM  Torbat-e-JAM        4.40 122   Pn      Pn      00 49 31.7 +1.3
IGZV  Ghazvin             4.61 256   Pn      Pn      00 49 37.1 +3.7
TPRV  Parvadeh(Tabas      4.69 170   Pn      Pn      00 49 35.4 +1.1
KRSH  Karshahi            4.71 220   Pn      Pn      00 49 36.9 +2.1
ANAR  Anarak              4.76 201   Pn      Pn      00 49 36.5 +1.1
AFRZ  Afriz               5.00 147   Pn      Pn      00 49 39.6 +1.0
YZKH  Yazd                5.35 191   Pn      Pn      00 49 45.3 +1.9
SHRT  Shahrakht           5.46 136   Pn      Pn      00 49 44.9 +0.1
ASTR  Astara              5.56 281   P       Pn      00 49 47.4 +1.2
ASTR                                 S       Sn      00 50 46.3 -3.8
ZNJK  Zanjan              5.73 262   Pn      Pn      00 49 53.4 +4.7
LRK   Lerik               5.92 282   P       Pn      00 49 52.5 +1.2
LRK                                  S       Sn      00 50 57.9 -1.4
YRD   Yardimli            6.04 284   P       Pn      00 49 54.8 +1.9
YRD                                  S       Sn      00 50 59.9 -2.3
SIZA  Siyzn               6.30 305   P       Pn      00 49 59.6 +3.0
SIZA                                 S       Sn      00 51 08.9 +0.3
BSRN  Basiran             6.33 153   Pn      Pn      00 49 57.5 +0.6
PQL   Pirkuli             6.37 302   P       Pn      00 50 00.0 +2.5
PQL                                  S       Sn      00 51 09.7 -0.7
XNQ   Khinaliq            6.85 303   P       Pn      00 50 06.4 +2.3
XNQ                                  S       Sn      00 51 21.5 -0.8
QSAR  Qusar               6.94 306   P       Pn      00 50 07.5 +2.3
QSAR                                 S       Sn      00 51 23.0 -1.2
SEKA  Sheki               7.50 301   P       Pn      00 50 15.4 +2.4
SEKA                                 S       Sn      00 51 35.6 -2.5
ORD   Ordubad             7.77 282   P       Pn      00 50 18.3 +1.6
ORD                                  S       Sn      00 51 41.7 -3.1
GANJ  Ganja               7.91 295   S       Sn      00 51 44.9 -3.0
GDB   GEDABAY             8.34 295   P       Pn      00 50 26.9 +2.4
GDB                                  S       Sn      00 51 54.7 -4.1
AB31  Akbulak array      11.98  13  ⇑Pn      Pn      00 51 13.1 -1.0
      0.4nm,0.5s,baz=191,slow=12,SNR=18
AB31                                ⇓Sn      Sn      00 53 26.2 -1.5
      0.2nm,0.3s,baz=190,slow=24,SNR=5.1
AKTO  Aktyubinsk         12.87   7  ⇑Pn      Pn      00 51 25.0 -1.3
      1.0nm,0.9s
AKTO                                ⇓Sn      Sn      00 53 48.1 -1.4
      1.5nm,1.0s
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*NNC **16** 00:53:55.6±1.7, 37°.80N×55°.70E, h0^{km}, mb3.3, Error ellipse: s-maj=19.3km s-min=8.2km az=24.0*

*TEH **16** 00:53:56.8, 37°.46N×55°.86E, h8^{km}±19^{km}, ML3.0*

*AZER **16** 00:54:04.2±3.1, 37°.31N×55°.01E, h8^{km}, Error ellipse: s-maj=182.0km s-min=21.6km az=15.0*

ISC 16 00:53:56.2±0.8, **37°.64N**±0°.06×**55°.77E**±0°.03, **h10**^{km}, **n31**, σ**1^{s}.91**/38, **3C-2D, Iran-Turkmenistan border region**

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Code  Station Name         Δ°  AZ°   Phase ID        Time       Res
                                     Op      ISC     h  m  s    ISC
MRVT  Maraveh tapeh       0.26  86   Pg      Pg      00 54 02.3 +0.9
MRVT                                 Sg      Sg      00 54 07.0 +2.0
IMND  Minoodasht          0.48 217   Pg      Pg      00 54 05.6 +0.1
GYA0B ALIBECK ARRAY       1.88  81  ⇑Pn      Pn      00 54 29.7 +1.2
GYA0B                               ⇑Sn      Sb      00 54 55.4 +1.1
IGLO  Ghaloghah           1.92 234   Pn      Pn      00 54 31.4 +2.3
SBZV  Sabzevar            1.93 130   Pg      Pn      00 54 29.7 +0.4
IEMG  Emamgholi           2.30  95   Pn      Pn      00 54 36.1 +1.6
IAKL  Akhelmad            2.60 113   Pn      Pn      00 54 39.8 +1.1
ISHM  Shahmirzad          2.71 228   Pn      Pn      00 54 42.3 +2.3
IPAY  Payeh               2.84 114   Pn      Pn      00 54 42.6 +0.8
IFIR  Firoozkooh          3.14 231   Pn      Pn      00 54 48.4 +2.4
ILAS  Lasjerd             3.19 226   Pn      Pn      00 54 49.0 +2.3
IMOG  Moghan              3.25 117   Pn      Pn      00 54 48.4 +0.9
MZPU  Pul - Mazandar      3.57 252   Pn      Pn      00 54 54.6 +2.8
IMYA  Miami               3.70 109   Pn      Pn      00 54 55.7 +2.1
TNSJ  Nastanj             3.73 169   Pn      Pn      00 54 54.4 +0.4
JRKH  Jarkhoshk           4.07 114   Pn      Pn      00 54 59.7 +1.1
TKDS  Koohdasht(Taba      4.17 164   Pn      Pn      00 55 00.7 +0.7
QALM  Alamut, Qazvin      4.27 255   Pn      Pn      00 55 05.1 +3.6
ISFB  Sefidab             4.35 222   Pn      Pn      00 55 04.9 +2.4
TBJM  Torbat-e-JAM        4.37 121   Pn      Pn      00 55 03.8 +1.0
TPRV  Parvadeh(Tabas      4.67 170   Pn      Pn      00 55 06.8  0.0
KRSH  Karshahi            4.71 220   Pn      Pn      00 55 09.9 +2.5
ANAR  Anarak              4.75 201   Pn      Pn      00 55 08.5 +0.6
AFRZ  Afriz               4.97 147   Pn      Pn      00 55 11.2 +0.2
SHRT  Shahrakht           5.43 136   Pn      Pn      00 55 17.3 +0.1
ASTR  Astara              5.58 282   P       Pn      00 55 20.4 +1.2
ASTR                                 S       Sn      00 56 21.8 -1.6
LRK   Lerik               5.94 282   P       Pn      00 55 25.4 +1.0
LRK                                  S       Sn      00 56 28.6 -3.9
GLBA  Clilabad            6.01 288   P       Pn      00 55 28.0 +3.0
GLBA                                 S       Sn      00 56 32.6 -1.3
YRD   Yardimli            6.06 284   P       Pn      00 55 27.0 +1.0
YRD                                  S       Sn      00 56 31.7 -3.7
AB31  Akbulak array      11.99  13  ⇓Pn      Pn      00 56 45.6 -1.5
      0.2nm,0.5s,baz=192,slow=13,SNR=9.7
AB31                                ⇑Sn      Sn      00 59 00.9  0.0
      0.3nm,0.5s
AKTO  Aktyubinsk         12.89   6  ⇓Pn      Pn      00 56 57.1 -2.2
      0.7nm,0.8s
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*IDC **16** 00:54:55.4±0.5, 20°.01N×70°.37W, h0^{km}, mb4.1/17, mbtmp4.1/22, ML3.5/5, MS3.8/47, Error ellipse: s-maj=16.3km s-min=12.2km az=59.0*

*OSPL **16** 00:54:57.9±3.8, 20°.22N×70°.46W, h0^{km}±19^{km}, ML4.1*

*NEIC **16** 00:54:58.2±2.0, 20°.08N±0°.03×70°.45W±0°.05, h17^{km}±4^{km}, mb4.4/63, Error ellipse: s-maj=6.5km s-min=4.6km az=88.0*

*SSNC **16** 00:55:00.1±2.4, 20°.35N×70°.65W, h120^{km}±30^{km}, ML4.2*

ISC 16 00:54:57.2±1.4, **20°.08N**±0°.02×**70°.50W**±0°.04, **h16**^{km}±9^{km}, **n261**, σ**1^{s}.34**/245, **mb4.4**/40, **MS3.8**/44, **2C, Dominican Republic region**

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Code  Station Name         Δ°  AZ°   Phase ID        Time       Res
                                     Op      ISC     h  m  s    ISC
SC01  Santiago de lo      0.68 198           Pb      00 55 11.0 +0.3
SC01                                         Sn      00 55 22.2 -0.4
SC01  Santiago de lo      0.68 198  i P      Pn      00 55 11.8 -0.5
SC01                                 IAML            00 55 39.1
      comp=Z,9μm,0.8s
LOPP1 Punta Rusia, P      0.69 251  i P      Pn      00 55 12.8 +0.3
LOPP1                                IAML            00 55 34.2
      comp=Z,8μm,0.5s
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SDDR	Presa de Saban	1.32	214	Pn	Pn	00 55 21.3	+0.2
SDDR				Sn	Sg	00 55 39.6	-0.2
SDDR	Presa de Saban	1.32	214	eP	Pb	00 55 21.5	-0.2
SDDR				eS	Sg	00 55 41.0	+1.1
SDDR	Presa de Saban	1.32	214	eP	Pb	00 55 21.4	-0.2
SDDR	Presa de Saban	1.32	214	i P	Pb	00 55 22.0	+0.4
SDDR				eS	Sg	00 55 40.8	+1.0
SDDR				IAML		00 55 50.2	
	comp=Z,2µm,0.8s						
GRTK	Grand Turk	1.54	338	Pn	Pb	00 55 24.9	-0.6
GRTK				Sn	Sg	00 55 46.4	-0.7
GRTK	Grand Turk	1.54	338	eP	Pb	00 55 25.1	-0.4
GRTK	Grand Turk	1.54	338	i P	Pb	00 55 25.1	-0.4
GRTK				IAML		00 55 50.7	
	comp=Z,6µm,0.7s						
SDD	Santo Domingo	1.70	161		Pn	00 55 26.6	+0.2
SDD				Sn	Sb	00 55 48.9	-0.5
SDD	Santo Domingo	1.70	161	i P	Pb	00 55 27.3	-0.9
SDD				eS	Sb	00 55 50.3	+0.9
PODR	Polo	2.04	201	i P	Pb	00 55 34.3	+0.2
PODR				eS	Sg	00 56 03.2	+0.3
NQUSE	US Embassy, Po	2.23	228		Pn	00 55 35.1	+1.5
PAPH	Port-au-Prince	2.30	228		Pn	00 55 36.3	+1.8
PAPH	Port-au-Prince	2.30	228	eP	Pb	00 55 37.0	-1.3
PAPH				eS	Sb	00 56 06.5	0.0
PAPH	Port-au-Prince	2.30	228	i P	Pb	00 55 37.0	-1.3
PAPH				IAML		00 56 13.2	
	comp=Z,515nm,1.4s						
LOPE2	Hotel El Peder	2.35	210	i P	Pb	00 55 39.1	-0.1
LOPE2				IAML		00 56 14.4	
	comp=Z,1µm,0.5s						
PCDR	Punta Cana, DR	2.53	127	Pn	Pn	00 55 38.4	+0.7
MASC	Masc	3.51	272	eP	Pn	00 55 51.1	0.0
MASC				IAML		00 56 59.8	
	comp=E,261nm,0.4s						
MASC				IAML		00 57 00.3	
	comp=N,289nm,0.8s						
MASC	Masc	3.51	272	i P	Pn	00 55 51.3	+0.2
MASC				IAML		00 56 57.6	
	comp=Z,238nm,0.8s						
AGPR	Aguadilla, PR	3.58	116		Pn	00 55 52.1	-0.1
PRSN	Puerto Rico Se	3.67	120		Pn	00 55 53.7	+0.3
CRPR	Cabo Rojo, PR	3.81	122		Pn	00 55 56.2	+0.9
CRPR	Cabo Rojo, PR	3.81	122	eS	Sn	00 56 40.8	+0.9
MLPR	Magueyes Islan	3.88	122	Pn	Pn	00 55 56.8	+0.5
AOPR	Arecibo Observ	3.94	115		Pn	00 55 56.6	-0.5
AOPR	Arecibo Observ	3.94	115	eP	Pn	00 55 56.9	-0.2
UUPR	Utuado, UPR, P	4.01	116		Pn	00 55 57.7	-0.4
EMPR	Esperanza - Ma	4.08	112		Pn	00 55 58.4	-0.5
OBIP	Obispado Ponce	4.20	118	Pn	Pn	00 55 60.0	-0.8
CELP	Cerrillos	4.21	118	Pn	Pn	00 56 00.3	-0.5
MOAC	Moa	4.22	279	eP	Pn	00 56 00.0	-1.0
MOAC				IAML		00 57 24.9	
	comp=N,189nm,0.6s						
MOAC				IAML		00 57 27.2	
	comp=E,164nm,0.7s						
GTBY	Guantanamo Bay	4.34	269	Pn	Pn	00 56 02.5	-0.1
GTBY	Guantanamo Bay	4.34	269	eP	Pn	00 56 02.7	+0.1
GTBY	Guantanamo Bay	4.34	269	eP	Pb	00 56 10.7	-2.5
GTBY	Guantanamo Bay	4.34	269	i P	Pn	00 56 02.8	+0.2
GTBY				IAML		00 57 00.5	
	comp=Z,29nm,0.6s						
GCPR	Guaynabo City	4.53	112		Pn	00 56 04.4	-0.8
SJG	San Juan	4.55	115	Pn	Pn	00 56 04.6	-1.0
	comp=Z,15nm,0.3s,baz=312,slow=10,SNR=33						
SJG				Sn	Sn	00 56 55.7	-2.5
	comp=Z,62nm,0.3s,baz=114,slow=24,SNR=5.6						
	comp=Z,35nm,0.2s						
SJG	San Juan	4.55	115	eP	Pn	00 56 04.5	-1.0
CBYP	Canovanas	4.74	111		Pn	00 56 07.4	-0.8
HUMP	Col San Antoni	4.80	113		Pn	00 56 08.2	-0.7
RCC	Rio Carpintero	4.88	270	eP	Pn	00 56 09.9	-0.2
MTP	Monte Pirata	5.08	112		Pn	00 56 12.0	-0.8
CUPR	Culebra, Puert	5.24	109		Pn	00 56 13.8	-1.1
HLGC	Holguin	5.27	280	eP	Pn	00 56 16.3	+0.8
HLGC				eS	Sn	00 57 15.4	-0.7
STVI	Saint Thomas	5.51	107	Pn	Pn	00 56 17.9	-0.9
CDVI	St. Croix	5.90	112		Pn	00 56 21.5	-2.5
CCCC	Cccc	6.89	281	eP	Pn	00 56 31.8	-6.0
CCCC				eS	Sn	00 57 43.6	-12
MTDJ	Mount Denham	6.90	256	Pn	Pn	00 56 37.8	-0.1
MTDJ	Mount Denham	6.90	256	eP	Pn	00 56 38.1	+0.3
MTDJ	Mount Denham	6.90	256	i P	Pn	00 56 38.1	+0.3
MTDJ				IAML		00 57 57.4	
	comp=Z,46nm,5.6s						
SABA	Saba	7.29	108	Pn	Pn	00 56 41.2	-2.0
SMRT	St. Maarten	7.31	105		Pn	00 56 41.1	-2.4
AUA1	Aruba	7.54	176	Pn	Pn	00 56 47.7	+1.0
URIC	Uribia, Colomb	8.45	190		Pn	00 57 00.2	+1.1
MBFL	Flemmings, Mon	8.54	111	eP	Pn	00 57 00.3	0.0
MLYT	Lee's Yard	8.56	112	eP	Pn	00 57 00.3	-0.4
ANWB	Willy Bob	8.59	105	Pn	Pn	00 56 59.4	-1.7
ANWB	Willy Bob	8.59	105	eP	Pn	00 56 58.7	-2.3
ANBD	Bethesda, Anti	8.82	109	eP	Pn	00 57 02.4	-1.7
MGV	Manicaragua	9.08	285	eP	Pn	00 57 05.2	-2.5
GDHS	Morne Mazeau,	9.12	113		Pn	00 57 07.9	-0.5
MAGL	Barre de l'ile	9.68	114	eP	Pn	00 57 16.1	+0.1
BIRV	Birongo	10.38	156		Pn	00 57 26.5	+0.9
FDF	Fort de France	10.38	119	Pn	Pn	00 57 23.7	-2.0
BIM	Bigot	10.57	120	Pn	Pn	00 57 26.9	-1.3
BIM	Bigot	10.57	120	eP	Pn	00 57 26.6	-1.5
MPOM	Morne Pois Mar	10.78	120	Pn	Pn	00 57 31.7	+0.7
MPOM	Morne Pois Mar	10.78	120	eP	Pn	00 57 30.3	-0.7
SDV	Santo Domingo	11.13	181	Pn	Pn	00 57 36.8	+0.9
	comp=Z,0.5nm,0.3s,baz=4.0,slow=15,SNR=2.5						
SDV				Sn	Sn	00 59 39.4	-0.9
	comp=Z,1.0nm,0.3s,baz=330,slow=17,SNR=4.3						
SDV				LR	LR	01 02 10.1	
	comp=Z,336nm,21.3s,baz=14,slow=39						
	comp=Z,2.2nm,0.3s						
SDV	Santo Domingo	11.13	181	Pn	Pn	00 57 37.2	+1.2
SDV	Santo Domingo	11.13	181	eP	Pn	00 57 39.1	+3.1
SVB	Belmont	11.15	126	Pn	Pn	00 57 35.6	-0.5
BAUV	El Baul	11.32	168	Pn	Pn	00 57 39.5	+1.0
GRGR	Grenville	11.60	132	Pn	Pn	00 57 42.1	-0.2
PAMC	Pamplona, Colo	12.84	190⇑	eP	Pn	00 58 00.6	+0.9
PAMC				eS	Sn	01 00 19.1	-3.5
UREC	San Jos de Ur	13.19	202⇑	eP	P	00 58 13.3	-0.7
ZARC	Zaragoza, Cauc	13.20	199	eP	P	00 58 13.3	-0.8
ZARC				eS	Sn	01 00 30.3	-0.6
BBSR	BB Station	13.30	22	Pn	Pn	00 58 03.5	-1.9
APAC	Apartado, Choc	13.46	207	eP	P	00 58 19.7	+2.7
PTBC	PUERTO BERRIO,	13.99	196	eP	P	00 58 19.7	-3.3
PTBC				eS	Sn	01 00 47.8	-2.4
BCIP	Isla Barro Col	14.11	221	Pn	Pn	00 58 17.2	+0.7
DBBC	Dabeiba	14.11	204	eP	P	00 58 24.5	+0.1
656A	Willston	14.31	313	Pn	Pn	00 58 18.7	-0.6
RUSC	La Rusia	14.32	190	Pn	Pn	00 58 21.0	+1.0
RUSC	La Rusia	14.32	190	eP	Pn	00 58 22.9	+2.9
RUSC				eP	P	00 58 27.7	+0.6
RUSC				eS	Sn	01 00 52.6	-6.3
HELC	Santa Helena	14.64	200		Pn	00 58 25.5	+1.2
SPBC	San Pablo de B	14.75	194	eP	P	00 58 30.8	-0.6
NORC	Norcasia	15.04	197	eP	P	00 58 32.4	-2.2
CBOC	Ciudad Bolivar	15.11	202	eP	Pn	00 58 31.2	+0.8
Y60A	Bolivia	15.47	335	Pn	Pn	00 58 34.6	-0.3
GUY2C	Guyana, Caldas	15.50	198	eP	P	00 58 40.4	+0.2
ROSC	El Rosal	15.59	194	Pn	Pn	00 58 38.6	+1.6
	comp=Z,1.2nm,0.3s,baz=3.3,slow=10,SNR=6.0						
	comp=Z,3.6nm,0.4s						
ROSC	El Rosal	15.59	194	Pn	Pn	00 58 37.4	+0.5
ROSC				IAmb	IAmb	00 59 02.0	
	comp=Z,58nm,1.2s						
CHIC	Chingaza	15.67	192	eP	P	00 58 40.4	-1.6
Y58A	Scranton	16.00	331	Pn	Pn	00 58 42.3	+0.6
Y58A				IAmb	IAmb	00 58 58.9	
	comp=Z,36nm,0.8s						
BRU2	Volcan	16.27	228		P	00 58 47.2	-1.2
BRU2				IAmb	IAmb	00 59 00.9	
	comp=Z,75nm,1.3s						
X58A	Rowland	16.41	333	Pn	P	00 58 48.4	-1.2
X58A				IAmb	IAmb	00 58 59.5	
	comp=Z,19nm,0.7s						
SRBA	San Rafael, Bu	16.45	231	Pn	Pn	00 58 48.6	+0.9
RIMA	Rio Macho	16.47	233		P	00 58 50.0	-0.7
V61A	Roper	16.54	342	Pn	Pn	00 58 48.1	-0.5
PRAC	Prado	16.82	195	eP	P	00 58 56.3	+2.0
BIRD	Birdtown, Kers	16.98	331		Pn	00 58 55.1	+1.0
JTS	Las Juntas de	16.99	237	P	P	00 58 57.3	+1.0
	comp=Z,0.8nm,0.3s,baz=51,slow=4.9,SNR=7.0						
JTS				LR	LR	01 04 49.1	
	comp=Z,156nm,21.6s,baz=88,slow=35						
	comp=Z,26nm,1.1s						
JTS	Las Juntas de	16.99	237	P	P	00 58 56.0	-0.3
JTS				IAmb	IAmb	00 59 09.2	
	comp=Z,31nm,1.0s						
JTS	Las Juntas de	16.99	237	eP	P	00 59 01.1	+4.8
JACO	JACO, Garabito	17.14	235		P	00 58 58.1	+0.2
JACO				IAmb	IAmb	00 59 15.4	
	comp=Z,21nm,1.0s						
W57A	Gilead	17.20	333	Pn	Pn	00 58 57.5	+0.6
W57A				IAmb	IAmb	00 59 12.8	
	comp=Z,29nm,1.3s						
V58A	Windy Hill, Pi	17.39	336	Pn	Pn	00 58 59.4	0.0
HODGE	Hodges	17.54	326	Pn	Pn	00 59 01.3	+0.2
JAMC	Jamundi, Valle	17.81	201	eP	P	00 59 07.5	+1.9
MACC	Macarena, Meta	18.12	191	eP	Pn	00 59 06.3	-2.2
POPC	Popayan, Colom	18.44	200	eP	P	00 59 10.7	-1.9
FLOC	Florencia	19.06	196	eP	Pn	00 59 21.8	+1.9
BBAC	Balboa, Cauca	19.12	201	eP	Pn	00 59 21.8	+1.0
TKL	Tuckaleechee C	19.43	326	P	Pn	00 59 24.6	+0.4
	comp=Z,0.2nm,0.3s,baz=140,slow=13,SNR=2.5						
TKL				S	Sn	01 02 56.5	-5.3
	comp=Z,6.2nm,0.5s,baz=322,slow=21,SNR=4.7						
TKL				LR	LR	01 06 21.2	
	comp=Z,218nm,21.4s,baz=155,slow=35						
	comp=Z,3.0nm,0.8s						
TZTN	Tazewell	19.99	328	P	Pn	00 59 30.4	-0.6
BOAV	Boa Vista	20.09	150	P	P	00 59 28.5	-1.9
BOAV				IAmb	IAmb	00 59 50.2	
	comp=Z,13nm,0.9s						
BOAV	Boa Vista	20.09	150	eP	P	00 59 26.6	-3.8
BOAV	Boa Vista	20.09	150	eP	P	00 59 28.8	-1.6
SGCB	S£o Gabriel d	20.36	170	eP	P	00 59 33.2	0.0
BONI	La Bonita	20.68	200	eP	Pn	00 59 39.3	0.0
BRNJ	Basking Ridge	20.83	351	P	Pn	00 59 39.8	-0.8
OTAV	Otavalo	21.20	202	P	P	00 59 43.1	+0.3
OTAV				IAmb	IAmb	00 59 53.0	
	comp=Z,22nm,1.1s						
OTAV	Otavalo	21.20	202	eP	P	00 59 44.1	+1.3
OTAV	Otavalo	21.20	202	eP	P	00 59 45.4	+2.5
Q52A	Bidwell	21.39	334	P	P	00 59 45.5	+1.3
PLAL	Pickwick Lake	21.48	317	P	P	00 59 45.4	+0.2
PLAL				IAmb	IAmb	00 59 55.7	
	comp=Z,20nm,1.3s						
WVT	Waverly	22.07	320	P	P	00 59 52.5	+1.0
O52A	Adamsville	22.21	337	P	P	00 59 53.4	+0.3
MDP	Montagnes des	22.88	128	LR	LR	01 09 30.3	
	comp=Z,66nm,19.5s,baz=288,slow=38						
S44A	Carbondale	23.96	321	P	P	01 00 11.6	+0.7
TBTG	Tabatinga, AM	24.12	179	P	P	01 00 11.5	-1.0
TBTG	Tabatinga, AM	24.12	179	eP	P	01 00 12.5	-0.1
TEFE	Tefe	24.14	166	eP	P	01 00 12.7	0.0
X40A	Basin Creek Fa	24.42	311	P	P	01 00 16.0	+0.8
N47A	Urbana	24.45	331	P	P	01 00 15.6	+0.2
FCAR	Ozark Folk Cen	24.67	314	P	P	01 00 19.4	+1.9
FCAR				IAmb	IAmb	01 00 20.4	
	comp=Z,6.9nm,0.9s						
MACA	Manacapuru-AM	25.02	156	eP	P	01 00 20.5	-0.3
SADO	Sadowa	25.65	346	LR	LR	01 09 49.4	
	comp=Z,113nm,21.3s,baz=130,slow=35						
HHAR	Hobbs	26.12	313	P	P	01 00 31.4	+0.8
HHAR				IAmb	IAmb	01 00 35.8	
	comp=Z,8.3nm,0.9s						
MCPB	Macapa, AP	27.18	136	eP	P	01 00 42.2	+1.9
CZSB	Cruzeiro do Su	27.72	185	P	P	01 00 44.2	-0.9
CZSB				IAmb	IAmb	01 01 07.8	
	comp=Z,18nm,1.3s						
CZSB	Cruzeiro do Su	27.72	185	eP	P	01 00 45.6	+0.5
ATAH	Atahualpa	28.13	197	LR	LR	01 14 17.5	
	comp=Z,84nm,20.8s,baz=341,slow=41						
ABTX	Abilene, Hawle	28.85	302	P	P	01 00 55.7	+0.6
ABTX				IAmb	IAmb	01 00 58.3	
	comp=Z,18nm,1.4s						
WMOK	Wichita Mounta	28.92	306	P	P	01 00 56.4	+0.6
WMOK				IAmb	IAmb	01 01 00.2	
	comp=Z,7.7nm,1.3s						
SAML	Samuel	29.73	165	P	P	01 01 01.8	-1.2
SAML				IAmb	IAmb	01 01 09.2	
	comp=Z,10nm,1.2s						
SAML	Samuel	29.73	165	eP	P	01 01 01.2	-1.8
ETMB	Extrema	30.00	172	P	P	01 01 04.5	-0.9
ETMB				IAmb	IAmb	01 01 25.0	
	comp=Z,10nm,1.2s						
ETMB	Extrema	30.00	172	eP	P	01 01 05.4	0.0
NPGB	Novo Progresso	30.80	150	eP	P	01 01 11.3	-1.2
TXAR	Lajitas Array	31.42	294	P	P	01 01 20.2	+2.2
	comp=Z,2.7nm,0.6s,baz=111,slow=10,SNR=40						
TXAR				LR	LR	01 17 38.4	
	comp=Z,44nm,19.8s,baz=78,slow=43						
	comp=Z,2.7nm,0.6s						
TXAR	Lajitas Array	31.42	294	P	P	01 01 19.5	+1.4
TX32	Lajitas Array	31.42	294	P	P	01 01 19.7	+1.7
TX32				IAmb	IAmb	01 01 21.5	
	comp=Z,4.3nm,0.7s						
NNA	Nana	32.47	192	LR	LR	01 16 25.3	
	comp=Z,132nm,20.5s,baz=354,slow=40						
PDRB	Porto dos Gac	34.28	156	eP	P	01 01 41.1	-2.0
VILB	Vilhena	34.35	162	P	P	01 01 42.1	-1.5
VILB	Vilhena	34.35	162	eP	P	01 01 42.3	-1.3
SCHQ	Schefferville	34.81	4	P	P	01 01 49.1	+1.9
	comp=Z,5.1nm,1.1s,baz=192,slow=14,SNR=3.0						
SCHQ				LR	LR	01 16 00.9	
	comp=Z,83nm,18.1s,baz=214,slow=36						
	comp=Z,5.1nm,1.1s						
ANMO	Albuquerque	34.95	303	P	P	01 01 50.8	+1.9
	comp=Z,2.0nm,0.9s,baz=171,slow=8.5,SNR=4.0						
ANMO				LR	LR	01 18 31.3	
	comp=Z,62nm,18.2s,baz=206,slow=40						
	comp=Z,2.0nm,0.9s						
ANMO	Albuquerque	34.95	303	P	P	01 01 49.6	+0.7
SDCO	Great Sand Dun	35.08	308	P	P	01 01 51.0	+0.9
SDCO				IAmb	IAmb	01 01 55.5	
	comp=Z,7.4nm,1.2s						
ULM	Lac du Bonnet	36.21	332	P	P	01 02 00.7	+1.4
	comp=Z,1.2nm,0.4s,baz=162,slow=6.4,SNR=1.9						
ULM				LR	LR	01 16 10.4	
	comp=Z,147nm,20.3s,baz=77,slow=35						
	comp=Z,1.2nm,0.4s						
LPAZ	La Paz	36.21	176	P	P	01 02 00.5	+0.3
	comp=Z,1.1nm,0.6s,baz=323,slow=5.1,SNR=3.4						
LPAZ				LR	LR	01 18 11.7	
	comp=Z,140nm,18.9s,baz=3.5,slow=39						
	comp=Z,1.1nm,0.6s						
LPAZ	La Paz	36.21	176	P	P	01 02 01.3	+1.1
LPAZ				IAmb	IAmb	01 02 06.4	
	comp=Z,7.9nm,1.4s						
LPAZ	La Paz	36.21	176	eP	P	01 02 00.2	-0.1
319A	Douglas	36.53	296	P	P	01 02 03.8	+1.4
319A				IAmb	IAmb	01 02 08.5	
	comp=Z,6.3nm,0.8s						
SMTB	Santa Maria do	36.55	140	eP	P	01 02 02.7	+0.2
SIV	San Ignacio	37.02	165	LR	LR	01 16 41.8	
	comp=Z,114nm,20.8s,baz=4.5,slow=35						
PTLB	Pontes e Lacer	37.03	162	eP	P	01 02 04.8	-1.7
SNDB	Serra Nova Dou	37.04	148	eP	P	01 02 06.2	-0.4
TUC	Tucson	37.93	297	P	P	01 02 15.2	+0.9
PB16	IPOC Station P	38.19	178	P	P	01 02 15.0	-2.0
PB16				IAmb	IAmb	01 02 16.3	
	comp=Z,6.8nm,1.0s						
BBSD	Serra de San D	38.28	165	eP	P	01 02 15.4	-1.7
SALV	Santo Antonio	38.60	157	eP	P	01 02 18.1	-1.7
MNMC	Minye Minye	38.98	179	P	P	01 02 21.1	-2.1
MNMC				IAmb	IAmb	01 02 45.0	
	comp=Z,8.6nm,0.8s						
WUAZ	Wupatki	38.99	302	P	P	01 02 23.6	+0.3
P18A	Preston Nutter	39.20	309	P	P	01 02 25.8	+0.7
P17A	Butcher Ranch,	39.52	308	P	P	01 02 28.2	+0.6
P17A				IAmb	IAmb	01 02 30.9	
	comp=Z,4.8nm,0.7s						
GO01	Chusmiza	39.52	178	P	P	01 02 25.9	-2.2
GO01				IAmb	IAmb	01 02 29.1	
	comp=Z,16nm,1.4s						
PB11	IPOC Station P	39.60	179	P	P	01 02 27.0	-1.3
PB11				IAmb	IAmb	01 02 57.2	
	comp=Z,16nm,1.1s						
PDAR	Pinedale Array	39.79	314	P	P	01 02 30.6	+0.7
	comp=Z,0.7nm,0.3s,baz=119,slow=5.2,SNR=3.3						
TMUT	Trail Mountain	39.81	308	P	P	01 02 30.4	+0.2
TMUT				IAmb	IAmb	01 02 35.4	
	comp=Z,9.4nm,1.2s						
BSUT	Blindstream Ca	39.86	310	P	P	01 02 30.7	0.0
BSUT				IAmb	IAmb	01 02 36.0	
	comp=Z,7.4nm,1.1s						
ARAG	Araguaiana, MT	40.02	151	eP	P	01 02 31.1	-0.7
PIX	Pinacate	40.09	295	P	P	01 02 33.1	+0.8
PP1B	Ponte de Pedra	40.46	157	eP	P	01 02 35.1	-0.2
NLU	North Lily Min	40.64	308	P	P	01 02 37.4	+0.4
REDW	Red Top Meadow	40.89	314	P	P	01 02 39.9	+0.8
REDW				IAmb	IAmb	01 02 49.4	
	comp=Z,18nm,1.5s						
SDBA	SAO DESIDERIO	40.95	140	eP	P	01 02 39.9	+0.4
MOOW	Moose Ponds	40.97	314	P	P	01 02 40.4	+0.8
DUG	Dugway, Tooele	41.25	309	P	P	01 02 42.4	+0.5
DUG				IAmb	IAmb	01 02 47.3	
	comp=Z,8.0nm,1.4s						
RVDE	Rio Verde (Bra	41.75	158	eP	P	01 02 44.9	-1.1
BDFB	Brasilia	41.81	146	P	P	01 02 46.0	-0.6
	comp=Z,2.4nm,0.4s,baz=334,slow=11,SNR=7.3						
	comp=Z,2.4nm,0.4s						
BDFB	Brasilia	41.81	146	P	P	01 02 45.9	-0.8
BDFB				IAmb	IAmb	01 02 54.2	
	comp=Z,11nm,1.1s						
BDFB	Brasilia	41.81	146	eP	P	01 02 46.5	-0.2
FCC	Fort Churchill	42.25	342	P	P	01 02 49.8	+0.2
C2SB	Chapadao do Su	42.31	155	eP	P	01 02 50.4	-0.2
LVC	Limon Verde	42.45	178	LR	LR	01 21 32.6	
	comp=Z,101nm,21.0s,baz=336,slow=38						
AQDB	Aquidauana	42.83	159	P	P	01 02 53.7	-1.0
AQDB				IAmb	IAmb	01 03 01.1	
	comp=Z,8.6nm,1.0s						
AQDB	Aquidauana	42.83	159	eP	P	01 02 53.9	-0.8
ELK	Elko	43.18	309	LR	LR	01 24 01.7	
	comp=Z,95nm,18.6s,baz=128,slow=40						
MURT	Porto Murtinho	43.35	162	eP	P	01 02 57.8	-1.1
FRB	Frobisher Bay	43.66	1	LR	LR	01 20 34.2	
	comp=Z,194nm,20.5s,baz=188,slow=35						
IPMB	Ipameri, GO	43.69	148	eP	P	01 03 00.7	-1.2
ITRB	Iturama	44.19	152	eP	P	01 03 05.1	-0.6
NVAR	Mina Array Bea	45.00	305	P	P	01 03 14.1	+1.7
	comp=Z,1.8nm,0.6s,baz=89,slow=7.4,SNR=9.0						
NVAR				LR	LR	01 25 36.6	
	comp=Z,62nm,18.9s,baz=88,slow=41						
	comp=Z,1.8nm,0.6s						
NVAR	Mina Array Bea	45.00	305	P	P	01 03 13.3	+0.9
PMNB	Patos De Minas	45.05	147	eP	P	01 03 11.5	-1.3
AMBA	Amambai (Brazi	45.34	160	eP	P	01 03 13.4	-1.5
WVOR	Wild Horse Val	46.07	310	P	P	01 03 20.8	+0.1
NEW	Newport	46.74	318	LR	LR	01 22 52.8	
	comp=Z,98nm,18.9s,baz=104,slow=36						
CPUP	Villa Florida	47.87	164	P	P	01 03 32.7	-1.9
	comp=Z,0.7nm,0.4s,baz=354,slow=9.2,SNR=2.4						
CPUP				LR	LR	01 24 49.8	
	comp=Z,66nm,18.4s,baz=358,slow=38						
	comp=Z,0.7nm,0.4s						
PTGB	Pitanga	48.00	157	eP	P	01 03 34.9	-0.9
SFJD	Kangerlussuaq	48.61	10	LR	LR	01 24 07.8	
	comp=Z,114nm,18.4s,baz=189,slow=36						
YKA	Yellowknife Ar	52.00	336	P	P	01 04 06.1	+0.5
	comp=Z,0.9nm,0.9s,baz=117,slow=7.4,SNR=13						
YKA				LR	LR	01 26 12.0	
	comp=Z,142nm,19.7s,baz=326,slow=36						
	comp=Z,0.9nm,0.9s						
BBB	Bella Bella	54.63	320	LR	LR	01 27 40.6	
	comp=Z,97nm,18.7s,baz=160,slow=36						
BORG	Borgarnes	55.12	23	LR	LR	01 23 55.8	
	comp=Z,122nm,20.9s,baz=187,slow=32						
SUMG	Summit	55.57	11	i P	P	01 04 33.0	+0.9
RES	Resolute Bay	56.19	352	LR	LR	01 27 54.4	
	comp=Z,76nm,19.9s,baz=26,slow=35						
DLBC	Dease Lake	57.25	327	LR	LR	01 29 51.0	
	comp=Z,74nm,19.7s,baz=291,slow=36						
MDT	Midelt	59.51	63	LR	LR	01 26 07.5	
	comp=Z,87nm,19.6s,baz=346,slow=32						
ESDC	Sonseca Array	59.61	55	P	P	01 05 01.8	+1.1
	comp=Z,1.5nm,0.9s,baz=286,slow=6.9,SNR=6.9						
ESDC				LR	LR	01 28 36.2	
	comp=Z,128nm,18.0s,baz=316,slow=34						
	comp=Z,1.5nm,0.9s						
RPN	Rapa Nui	60.14	220	LR	LR	01 25 23.6	
	comp=Z,52nm,20.4s,baz=84,slow=30						
A36M	Sachs Harbour	60.45	343	P	P	01 05 06.5	+0.7
PLCA	Paso Flores	60.49	180	P	P	01 05 06.2	-0.3
	comp=Z,3.9nm,0.9s,baz=339,slow=8.2,SNR=5.6						
	comp=Z,3.9nm,0.9s						
PLCA	Paso Flores	60.49	180	P	P	01 05 05.9	-0.7
PLCA	Paso Flores	60.49	180	eP	P	01 05 06.8	+0.3
INK	Inuvik	61.62	338	LR	LR	01 32 42.9	
	comp=Z,95nm,18.8s,baz=71,slow=37						
SCRK	Sand Creek	64.91	332	P	P	01 05 37.1	+1.3
ILAR	Eielson Array	66.22	333	P	P	01 05 45.4	+1.2
	comp=Z,1.5nm,0.9s,baz=102,slow=4.6,SNR=12						
ILAR				LR	LR	01 34 29.5	
	comp=Z,134nm,20.7s,baz=77,slow=36						
	comp=Z,1.5nm,0.9s						
KTH	Kantishna Hill	67.97	332	P	P	01 05 55.6	+0.2
KDAK	Kodiak Island	69.05	325	LR	LR	01 36 00.2	
	comp=Z,84nm,21.4s,baz=113,slow=36						
TORD	Torodi Ar. Bea	69.08	83	P	P	01 06 03.1	+0.1
	comp=Z,1.4nm,0.7s,baz=290,slow=6.1,SNR=8.4						
TORD				LR	LR	01 33 16.8	
	comp=Z,28nm,19.2s,baz=250,slow=33						
	comp=Z,1.4nm,0.7s						
TORD	Torodi Ar. Bea	69.08	83	P	P	01 06 02.7	-0.3
TORD				IAmb	IAmb	01 06 22.9	
	comp=Z,4.6nm,1.4s						
IMAR	Indian Mountai	69.11	334	P	P	01 06 02.7	+0.4
HFS	Hagfors	69.94	32	LR	LR	01 34 43.0	
	comp=Z,139nm,18.0s,baz=342,slow=34						
KHC	Kasperske Hory	71.28	44	eP	P	01 06 17.7	+1.7
GERES	GERESS Array B	71.40	44	P	P	01 06 16.7	-0.1
	comp=Z,0.8nm,0.8s,baz=280,slow=3.9,SNR=6.5						
GERES				LR	LR	01 31 38.6	
	comp=Z,67nm,22.0s,baz=320,slow=31						
	comp=Z,0.8nm,0.8s						
VRAC	Vranov	73.19	43	LR	LR	01 33 52.1	
	comp=Z,109nm,20.3s,baz=336,slow=32						
ARCES	ARCESS Array B	73.45	21	P	P	01 06 28.7	+0.1
	comp=Z,5.0nm,1.0s,baz=270,slow=5.3,SNR=2.0						
	comp=Z,5.0nm,1.0s						
VAE	Valguarnera	74.15	55	LR	LR	01 38 00.9	
	comp=Z,60nm,18.0s,baz=178,slow=35						
FINES	FINESS Array B	75.67	30	P	P	01 06 43.3	+1.8
	comp=Z,2.2nm,0.9s,baz=242,slow=4.1,SNR=6.2						
	comp=Z,2.2nm,0.9s						
AKASG	Malin Array Be	80.66	39	LR	LR	01 43 35.0	
	comp=Z,61nm,18.1s,baz=336,slow=36						
TIXI	Tiksi	87.55	354	LR	LR	01 49 44.3	
	comp=Z,45nm,19.5s,baz=180,slow=38						
BRTR	Keskin Array B	87.70	48	P	P	01 07 46.6	+0.9
	comp=Z,0.6nm,0.8s,baz=308,slow=7.1,SNR=2.4						
	comp=Z,0.6nm,0.8s						
NRIK	Noril'sk	89.45	8	LR	LR	01 48 00.5	
	comp=Z,87nm,20.0s,baz=332,slow=36						
KBZ	Khabaz	92.04	42	LR	LR	01 45 47.0	
	comp=Z,45nm,21.0s,baz=324,slow=33						
ARU	Arti	92.60	26	LR	LR	01 47 57.8	
	comp=Z,44nm,18.3s,baz=300,slow=34						
EIL	Elat	92.86	57	LR	LR	01 49 55.8	
	comp=Z,22nm,18.6s,baz=238,slow=36						
MA2	Magadan	93.77	340	LR	LR	01 54 54.7	
	comp=Z,26nm,18.9s,baz=70,slow=38						
GNI	Garni	95.05	44	LR	LR	01 48 29.1	
	comp=Z,33nm,19.0s,baz=324,slow=34						
AKTO	Aktyubinsk	96.43	30	LR	LR	01 50 54.3	
	comp=Z,55nm,18.3s,baz=93,slow=35						
YAK	Yakutsk	96.60	351	LR	LR	01 52 06.5	
	comp=Z,49nm,21.8s,baz=70,slow=36						
BVAR	Borovoye Array	99.71	23	LR	LR	01 52 57.2	
	comp=Z,66nm,18.1s,baz=324,slow=35						
CTA	Charters Tower	145.52	264	PKPbc	PKPab	01 14 36.2	+0.3
	comp=Z,4.0nm,0.8s,baz=90,slow=3.0,SNR=4.8						
STKA	Stephens Creek	148.96	241	PKPbc	PKPbc	01 14 45.8	+0.8
	comp=Z,4.7nm,1.0s,baz=71,slow=18,SNR=4.2						
WRA	Warramunga Arr	156.66	266	PKP	PKPdf	01 14 52.5	-0.1
	comp=Z,1.6nm,1.1s,baz=75,slow=1.2,SNR=5.7						
ASAR	Alice Springs	157.08	257	PKP	PKPdf	01 14 52.7	-0.4
	comp=Z,0.2nm,0.3s,baz=117,slow=1.2,SNR=2.4						
ASAR				PKPab	PKPab	01 15 24.8	+1.3
	comp=Z,1.7nm,1.0s,baz=117,slow=3.3,SNR=5.5						

DJA 16 01:07:51.4±0.6,2°N±6°×12°4E±°,h295km±5km,M3.9/10, mb3.8/3,mB4.6/1,MLv3.9/10,Mw(mB)3.9/1,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GTOI	Gorontalo	1.58	234	P	Pn	01 08 34.6	0.0
GTOI				S	S	01 09 10.6	+1.6
MRSI	Marisa	2.59	245	P	Pn	01 08 44.4	+1.5
MRSI				S	S	01 09 25.5	+1.6
LUWI	Luwuk	3.01	210	P	Pn	01 08 41.8	-5.1
TNTI	Ternate	3.18	104	P	S	01 09 39.1	+4.8

LBMI	**Labuha**	**3.89**	**124**	P	Pn	01 08 57.4	+1.2
LBMI				S	S	01 09 49.2	+1.2
SANI	**Sanana**	**3.98**	**155**	P	Pn	01 08 58.4	+1.3
SANI				S	S	01 09 48.2	-1.6
MPSI	**Mapaga**	**4.56**	**254**	P	Pn	01 09 04.2	+0.5
NLAI	**Namlea**	**5.54**	**150**	P	Pn	01 09 14.3	-0.9
	13nm,0.7s,0.2nm						
SPSI	**Sidrap Palu**	**7.12**	**219**	P	Pn	01 09 33.9	-0.3
	15nm,0.7s,1µm0.1nm						

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*IDC **16** 01:11:03.8±1.1, 31°.58N×130°.84E, h0^{km}, mb3.5/6, mbtmp3.5/8, ML2.9/2, MS3.1/2, Error ellipse: s-maj=31.6km s-min=17.2km az=89.0*

*JMA **16** 01:11:07.2±0.1, 31°.9N±0°.3×131°.7E±0°.8, h37^{km}±1^{km}, MV3.3/39, HYUGANADA REGION*

JMA Felt I J1 at HYUGANADA REGION .

ISC 16 01:11:07.1±1.0**, 31°.84N**±0°.04×**131°.77E**±0°.07**, h39**^{km}±4^{km}**, n19,** σ**1^{s}48**/23**, mb3.5**/6**, 2D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNKG	**Nichinankitago**	**0.38**	**242**	*i* P	**Pn**	**01 11 15.7**	**-0.4**
JNKG				S	**Sn**	**01 11 22.4**	**-0.2**
JTSN	**Tsuno**	**0.46**	**331**	⇓*i*P	**Pn**	**01 11 16.4**	**-0.8**
JTSN				⇓S	**Sn**	**01 11 23.4**	**-1.0**
JNAR	**Kushima--Naru**	**0.53**	**233**	*i* P	**Pn**	**01 11 18.3**	**+0.1**
JNAR				S	**Sn**	**01 11 27.1**	**+1.1**
JTZ	**Takazaki**	**0.58**	**276**	*i* P	**Pn**	**01 11 17.9**	**-1.0**
JHHC	**Hyugahichiya**	**0.61**	**350**	*i* P	**Pn**	**01 11 18.9**	**-0.4**
JHHC				S	**Sn**	**01 11 27.5**	**-0.5**
JZO	**Okuchi**	**1.03**	**287**	*i* P	**Pn**	**01 11 24.9**	**-0.2**
JZO				S	**Sn**	**01 11 39.5**	**+1.1**
JIU3	**Izumi3**	**1.07**	**311**	*i* P	**Pn**	**01 11 25.9**	**+0.3**
JIU3				*e*S	**Sn**	**01 11 40.5**	**+1.2**
JTO	**Tosashimizu**	**1.34**	**41**	P	**Pn**	**01 11 29.1**	**-0.2**
JTN	**Tanegashima 3**	**1.36**	**210**	P	**Pn**	**01 11 30.4**	**+0.8**
JNU	**Nakatsue**	**1.48**	**330**	Pn	**Pn**	**01 11 32.7**	**+1.4**
	28nm,0.3s,baz=121,slow=4.1,SNR=113						
JNU				Sn	**Sn**	**01 11 52.7**	**+3.3**
	91nm,0.3s,baz=292,slow=8.4,SNR=20						
KSRS	**Korea Array**	**6.43**	**332**	LR	LR	01 15 29.0	
	comp=Z,96nm,18.3s,baz=185,slow=42						
MJAR	**Matsushiro Arr**	**7.10**	**47**	Pn	Pn	01 13 01.5	+13
	0.1nm,0.3s,baz=244,slow=14,SNR=1.5						
	1.1nm,0.3s						
KLR	**Kul'dur**	**17.37**	**360**	P	**P**	**01 15 10.3**	**+3.0**
	0.1nm,0.3s,baz=185,slow=11,SNR=2.4						
	0.8nm,0.6s						
SONM	**Songino Array**	**25.03**	**317**	P	**P**	**01 16 27.7**	**+0.1**
	0.6nm,0.8s,baz=118,slow=13,SNR=4.4						
SONM				LR	LR	01 27 35.8	
	comp=Z,72nm,19.1s,baz=291,slow=40						
	0.6nm,0.8s						
MKAR	**Makanchi Array**	**40.41**	**306**	P	**P**	**01 18 40.6**	**-0.8**
	0.2nm,0.5s,baz=82,slow=10,SNR=2.5						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**51.55**	**177**	P	**P**	**01 20 09.4**	**+0.1**
	1.3nm,1.0s,baz=354,slow=8.4,SNR=4.9						
	1.3nm,1.0s						
ASAR	**Alice Springs**	**55.23**	**178**	P	**P**	**01 20 37.5**	**+1.3**
	0.6nm,0.8s,baz=358,slow=7.5,SNR=5.0						
	0.6nm,0.8s						
ILAR	**Eielson Array**	**58.05**	**30**	P	P	01 21 01.9	+6.1
	0.1nm,0.5s,baz=285,slow=7.4,SNR=1.3						
	0.1nm,0.5s						
GEYT	**Alibeck**	**59.28**	**298**	P	**P**	**01 21 01.8**	**-3.1**
	0.6nm,0.4s,baz=17,slow=1.5,SNR=1.7						
	0.6nm,0.4s						

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*TAP **16** 01:24:12.9, 24°.88N×122°.51E, h8^{km}±1^{km}, ML2.9, D*

*JMA **16** 01:24:13.2±0.2, 25°N±1°×122°.5E±0°.7, h27^{km}, MV2.3/5, NW OFF ISHIGAKIJIMA IS*

ISC 16 01:24:11.9±1.6**, 24°.85N**±0°.04×**122°.54E**±0°.03**, h3**^{km}±17^{km}**, n55,** σ**0^{s}33**/61**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS2	**EOS2**	**0.51**	**214**	*e*P	**Pb**	**01 24 23.4**	**0.0**
	baz=209						
EOS2				*e*S	**Sb**	**01 24 31.9**	**+0.7**
	baz=209						
TWB1	**Santiao Chiao**	**0.53**	**288**	*e*P	**Pg**	**01 24 21.9**	**-0.1**
	baz=285						
JYNG	**Yonagunijimaku**	**0.54**	**137**	P	**Pb**	**01 24 24.0**	**+0.1**
JYNG				*e*S	**Sb**	**01 24 31.7**	**-0.3**
EGS		**0.56**	**270**	P	**Pg**	**01 24 22.9**	**+0.4**
	baz=266						
YOJ	**Yonaguni jima**	**0.57**	**132**	P	**Pb**	**01 24 24.7**	**+0.2**
YOJ	**Yonaguni jima**	**0.57**	**132**	P	**Pb**	**01 24 24.4**	**-0.1**
YOJ				*e*S	**Sb**	**01 24 32.8**	**-0.2**
YOJ	**Yonaguni jima**	**0.57**	**132**	*i* P	**Pb**	**01 24 24.6**	**+0.1**
	baz=132						
YOJ				*i* S	**Sb**	**01 24 32.9**	**-0.2**
	baz=132						
SXI1	**Grass Mountain**	**0.65**	**292**	P	**Pg**	**01 24 24.5**	**+0.1**
	baz=290						
TIPB	**Shuangxi**	**0.66**	**281**	P	**Pg**	**01 24 25.0**	**+0.4**
	baz=278						
TWC	**Suao**	**0.67**	**250**	*e*P	**Pg**	**01 24 24.6**	**-0.1**
	baz=245						
NWF	**Wu-fen Shan**	**0.73**	**288**	*e*P	**Pg**	**01 24 26.2**	**+0.4**
	baz=286						
WFSB	**Wu-fen Shan**	**0.73**	**288**	P	**Pg**	**01 24 26.2**	**+0.4**
	baz=286						
EOS4	**EOS4**	**0.75**	**196**	*e*P	**Pb**	**01 24 28.0**	**+0.6**
	baz=193						
TNOU	**National Taiwa**	**0.76**	**294**	P	**Pg**	**01 24 26.7**	**+0.2**
	baz=292						
NDS	**Dongshan**	**0.78**	**254**	*e*P	**Pg**	**01 24 27.0**	**+0.1**
	baz=251						
EWUT	**Wuta**	**0.80**	**240**	*e*P	**Pg**	**01 24 27.5**	**+0.2**
	baz=237						
EWUT				*e*S	**Sb**	**01 24 39.5**	**-0.2**
	baz=237						
TWE	**Neicheng**	**0.81**	**261**	*e*P	**Pg**	**01 24 27.3**	**-0.1**
	baz=258						
ENA	**Nanau**	**0.84**	**240**	*e*P	**Pg**	**01 24 27.9**	**-0.1**
	baz=237						
ENA				*e*S	**Sb**	**01 24 40.2**	**-0.5**
	baz=237						
FUSB	**Fushanzhiwuyua**	**0.87**	**265**	*e*P	**Pg**	**01 24 28.5**	**-0.1**
	baz=262						
PCYT	**Pengchaiyu**	**0.89**	**331**	*e*P	**Pg**	**01 24 29.1**	**+0.1**
	baz=332						
ENTT	**Nioudou**	**0.91**	**257**	*e*P	**Pg**	**01 24 29.2**	**-0.1**
	baz=254						
YM08	**YM08**	**0.93**	**292**	P	**Pg**	**01 24 29.6**	**0.0**
	baz=290						
YM01	**YM01**	**0.93**	**289**	P	**Pg**	**01 24 29.7**	**0.0**
	baz=287						
NWLT	**Wulai**	**0.95**	**266**	*e*P	**Pg**	**01 24 30.0**	**0.0**
	baz=263						
TWY	**Chenhua**	**0.96**	**297**	*e*P	**Pg**	**01 24 30.2**	**0.0**
	baz=295						
LATG	**Datong**	**0.97**	**252**	*e*P	**Pg**	**01 24 30.3**	**-0.3**
	baz=249						
YHNB	**Yeheng**	**1.08**	**261**	P	**Pg**	**01 24 32.5**	**0.0**
YHNB	**Yeheng**	**1.08**	**261**	P	**Pg**	**01 24 32.3**	**-0.2**
	baz=258						
ETL	**Fush Village**	**1.08**	**231**	P	**Pg**	**01 24 32.8**	**+0.2**
	baz=228						
NSK	**Sanguang**	**1.09**	**261**	P	**Pg**	**01 24 32.5**	**-0.2**
	baz=258						
NACB	**Ninganchiao**	**1.09**	**232**	P	**Pg**	**01 24 32.6**	**-0.2**
NACB	**Ninganchiao**	**1.09**	**232**	*e*P	**Pg**	**01 24 32.4**	**-0.4**
	baz=230						
NNSB	**Datong**	**1.14**	**249**	*e*P	**Pg**	**01 24 33.0**	**-0.6**
	baz=246						
NNSH	**Datong**	**1.14**	**249**	*e*P	**Pg**	**01 24 33.3**	**-0.3**
	baz=246						
NNS	**Nan Shan**	**1.14**	**249**	*e*P	**Pg**	**01 24 33.6**	**-0.1**
	baz=246						
TWD	**Chiawan**	**1.15**	**229**	*e*P	**Pb**	**01 24 34.3**	**-0.1**
	baz=226						
ETLH	**Xiulin Townshi**	**1.16**	**237**	*e*P	**Pg**	**01 24 33.8**	**-0.3**
	baz=234						
NFF	**Wufeng Townshi**	**1.31**	**261**	*e*P	**Pg**	**01 24 36.4**	**-0.6**
	baz=259						
WHF	**Hehuan Shan**	**1.36**	**239**	*e*P	**Pg**	**01 24 37.7**	**-0.2**
	baz=237						
LIOB	**Emei**	**1.40**	**262**	*e*P	**Pg**	**01 24 38.7**	**0.0**
	baz=260						
JKRS	**Kuro-shima**	**1.47**	**114**	P	**Pn**	**01 24 38.9**	**-0.3**
CHGB	**Renai**	**1.47**	**238**	*e*P	**Pn**	**01 24 39.3**	**-0.2**
	baz=236						
OWD	**Renai**	**1.53**	**235**	*e*P	**Pn**	**01 24 40.1**	**-0.1**
	baz=232						
WUSB	**Renai**	**1.55**	**237**	*e*P	**Pn**	**01 24 40.5**	**-0.1**
	baz=235						
VWDT	**VWDT**	**1.68**	**230**	*e*P	**Pn**	**01 24 42.7**	**+0.6**
	baz=228						
DPDB	**Guoxing**	**1.68**	**242**	*e*P	**Pn**	**01 24 42.5**	**+0.3**
	baz=239						
WCS	**Beigang Elemen**	**1.68**	**242**	*e*P	**Pb**	**01 24 43.0**	**-0.5**
	baz=240						
HGSD	**Ruisui**	**1.69**	**217**	*e*P	**Pn**	**01 24 42.9**	**+0.6**
	baz=215						
SMLT	**Sun Moon Lake**	**1.78**	**238**	*e*P	**Pb**	**01 24 44.5**	**-0.7**
	baz=235						
SSLB	**Suanglung**	**1.79**	**234**	P	**Pb**	**01 24 45.5**	**+0.1**
SSLB	**Suanglung**	**1.79**	**234**	*e*P	**Pb**	**01 24 44.9**	**-0.4**
	baz=232						
TYC	**Yuchr**	**1.80**	**239**	*e*P	**Pn**	**01 24 44.2**	**+0.4**
	baz=237						
YULB	**Yu-li**	**1.84**	**218**	P	**Pg**	**01 24 47.3**	**+0.1**
YULB	**Yu-li**	**1.84**	**218**	*e*P	**Pn**	**01 24 44.4**	**+0.1**
	baz=216						
ALS	**Alishan**	**2.07**	**230**	*e*P	**Pn**	**01 24 48.5**	**+0.8**
	baz=228						

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*IDC **16** 01:56:22.9±1.8, 37°.47N×141°.92E, h0^{km}, mb3.6/4, mbtmp3.5/5, ML2.3/1, Error ellipse: s-maj=42.6km s-min=24.4km az=54.0*

*JMA **16** 01:56:26.7±0.2, 37°.4N±0°.4×141°.6E±0°.8, h31^{km}±1^{km}, MV3.4/38, E OFF FUKUSHIMA PREF*

ISC 16 01:56:26.6±1.1**, 37°.38N**±0°.05×**141°.6E**±0°.1**, h21**^{km}±5^{km}**, n23,** σ**0^{s}98**/27**, mb3.6**/5**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.58**	**269**	P	**Pb**	**01 56 38.2**	**0.0**
JFK				S	**Sb**	**01 56 46.0**	**-0.1**
JMST	**Minamisoumatoc**	**0.67**	**301**	P	**Pb**	**01 56 39.2**	**-0.3**
JMST				S	**Sb**	**01 56 48.4**	**0.0**
ONAJ	**Iwakimizuishiy**	**0.70**	**247**	P	**Pb**	**01 56 39.7**	**-0.5**
ONAJ				S	**Sb**	**01 56 49.4**	**-0.1**
JMM	**Marumori**	**0.81**	**307**	P	**Pn**	**01 56 41.7**	**-1.0**
JMM				S	**Sb**	**01 56 52.4**	**+0.1**
JFFD	**Fukushimafurud**	**0.88**	**251**	P	**Pn**	**01 56 42.6**	**-1.1**
JFFD				S	**Sn**	**01 56 54.1**	**-1.8**
JOTO	**OTAMA OYAMA**	**1.03**	**280**	P	**Pn**	**01 56 45.2**	**-0.5**
JOTO				*e*S	**Sb**	**01 56 59.3**	**+0.6**
JIO	**Ouri**	**1.09**	**349**	P	**Pn**	**01 56 45.9**	**-0.6**
JIO				S	**Sn**	**01 56 59.6**	**-1.4**
JHO	**Hitachi**	**1.13**	**228**	P	**Pn**	**01 56 46.0**	**-1.2**
JOU	**Okura**	**1.23**	**323**	P	**Pb**	**01 56 49.0**	**-0.2**
JOU				S	**Sb**	**01 57 05.3**	**+0.7**
JYS	**Shirataka**	**1.48**	**305**	P	**Pb**	**01 56 53.6**	**+0.2**
JYS				*e*S	**Sb**	**01 57 12.4**	**+0.7**
JFY	**Yanaizu**	**1.52**	**272**	P	**Pb**	**01 56 53.1**	**-0.9**
MJAR	**Matsushiro Arr**	**2.85**	**254**	Pn	**Pn**	**01 57 12.1**	**+1.4**
	0.4nm,0.3s,baz=71,slow=12,SNR=5.8						
MJAR				Sn	**Sb**	**01 57 53.5**	**+2.4**
	0.4nm,0.3s,baz=83,slow=22,SNR=1.7						
	2.4nm,0.4s						
SONM	**Songino Array**	**27.72**	**303**	P	**P**	**02 02 13.7**	**+0.3**
	0.4nm,0.7s,baz=97,slow=7.5,SNR=2.4						
	0.4nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**28.20**	**122**	T	T	02 31 43.2	
	baz=314,slow=75,SNR=27						
H11N1	**WAKE ISLAND Hy**	**28.20**	**122**	T	T	02 31 43.9	
	baz=314,slow=75,SNR=26						
H11N3	**WAKE ISLAND Hy**	**28.21**	**122**	T	T	02 31 46.7	
	baz=314,slow=75,SNR=29						
H11S1	**WAKE ISLAND Hy**	**28.92**	**124**	T	T	02 32 40.0	
	baz=316,slow=76,SNR=20						
H11S3	**WAKE ISLAND Hy**	**28.92**	**124**	T	T	02 32 39.6	
	baz=316,slow=76,SNR=17						
H11S2	**WAKE ISLAND Hy**	**28.94**	**124**	T	T	02 32 40.8	
	baz=316,slow=76,SNR=18						
ZALV	**Zalesovo Beam**	**41.80**	**312**	P	**P**	**02 04 15.1**	**+0.8**
	0.5nm,0.5s,baz=98,slow=9.3,SNR=1.5						
	0.5nm,0.5s						
KRVT	**Keravat (AS076**	**42.59**	**165**	P	**P**	**02 04 21.0**	**-0.2**
	44nm,0.6s,baz=4.9,slow=2.8,SNR=2.8						
MKAR	**Makanchi Array**	**44.06**	**302**	P	**P**	**02 04 34.1**	**+1.2**
	0.7nm,0.7s,baz=86,slow=9.8,SNR=8.5						
	0.7nm,0.7s						
WRA	**Warramunga Arr**	**57.43**	**188**	P	**P**	**02 06 14.1**	**+0.4**
	0.6nm,0.9s,baz=6.3,slow=7.3,SNR=2.1						
	0.6nm,0.9s						

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*IDC **16** 02:06:09.0±2.0, 7°.82S×118°.62E, h0^{km}, mb3.3/2, mbtmp3.3/4, ML3.2/2, Error ellipse: s-maj=51.0km s-min=24.3km az=71.0*

*DJA **16** 02:06:09.0±0.4, 8°S±4°×11°9E±°, h10^{km}, M3.4/6, MLv3.4/6*

ISC 16 02:06:12.6±1.1**, 8°.02S**±0°.06×**119°.23E**±0°.07**, h34**^{km}**, n10,** σ**2^{s}26**/12**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**1.65**	**241**	P	**Pn**	**02 06 38.6**	**-0.6**
PLAI				S	**Sn**	**02 06 58.4**	**-0.8**
BSSI	**Bau Bau, Buton**	**2.24**	**34**	P	**Pn**	**02 06 46.5**	**-0.8**
BSSI				S	**Sn**	**02 07 12.5**	**-1.4**
TWSI	**Taliwang, Sumb**	**2.43**	**253**	P	**Pn**	**02 06 49.6**	**-0.4**
BASI	**Baing, Sumba**	**2.56**	**149**	P	**Pn**	**02 06 49.5**	**-2.2**
BKSI	**Bulukumba**	**2.82**	**18**	P	**Pn**	**02 06 53.5**	**-1.8**
KAPI	**Kappang**	**3.03**	**10**	Pn	**Pn**	**02 06 58.7**	**+0.6**
	4.0nm,0.3s,baz=182,slow=12,SNR=4.1						
KAPI				Sn	**Sn**	**02 07 34.9**	**+1.7**
	8.2nm,0.3s,baz=104,slow=22,SNR=7.6						
	8.6nm,0.2s						
SPSI	**Sidrap Palu**	**4.06**	**8**	P	**Pn**	**02 07 10.7**	**-1.7**
WRA	**Warramunga Arr**	**18.83**	**131**	P	**Pn**	**02 10 35.5**	**+5.1**
	0.1nm,0.3s,baz=310,slow=9.7,SNR=2.3						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**20.98**	**140**	P	Pn	02 11 00.8	+5.0
	0.8nm,0.6s,baz=317,slow=8.3,SNR=12						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**63.69**	**333**	P	**P**	**02 16 39.2**	**-1.5**
	0.3nm,0.6s,baz=141,slow=6.7,SNR=3.5						
	0.3nm,0.6s						

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*IDC **16** 02:35:52.6±2.7, 9°.76S×112°.52E, h0^{km}, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=126.6km s-min=22.4km az=49.0*

*DJA **16** 02:35:58.5±0.7, 9°S±5°×11°3E±°, h10^{km}, M3.3/6, MLv3.3/6*

ISC 16 02:35:58.8±1.2**, 9°.6S**±0°.1×**112°.84E**±0°.06**, h35**^{km}**, n11,** σ**1^{s}73**/14**, mb3.7**/5**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMJI	**Gumukmas**	**1.45**	**25**	P	**Pn**	**02 36 22.1**	**-0.4**
GMJI				S	**Sn**	**02 36 37.0**	**-3.3**
JAGI	**Jajag, Banyuwa**	**1.72**	**49**	P	**Pn**	**02 36 26.3**	**+0.1**
JAGI				S	**Sn**	**02 36 47.2**	**+0.2**
PWJI	**Pagerwojo**	**1.87**	**327**	P	**Pn**	**02 36 28.2**	**-0.1**
PWJI				S	**Sn**	**02 36 53.9**	**+3.2**
BLJI	**Banyuglugur**	**1.99**	**22**	P	**Pn**	**02 36 31.4**	**+1.4**
ABJI	**Asem Bagus**	**2.27**	**38**	P	**Pn**	**02 36 36.1**	**+2.4**
UGM	**Wanagama**	**2.83**	**306**	P	**Pn**	**02 36 41.1**	**-0.5**
WRA	**Warramunga Arr**	**23.17**	**119**	P	**P**	**02 41 03.3**	**+0.8**
	0.4nm,0.9s,baz=291,slow=11,SNR=2.6						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**24.51**	**127**	P	**P**	**02 41 15.3**	**+0.2**
	0.4nm,0.5s,baz=305,slow=9.3,SNR=6.7						
	0.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**31.07**	**334**	P	**P**	**02 42 14.5**	**+0.7**
	2.1nm,0.3s,baz=172,slow=7.3,SNR=2.4						
	2.1nm,0.3s						
SONM	**Songino Array**	**57.47**	**355**	P	**P**	**02 45 43.6**	**-0.7**
	0.5nm,0.7s,baz=180,slow=6.8,SNR=2.9						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**62.41**	**337**	P	**P**	**02 46 16.9**	**-1.3**
	0.3nm,0.4s,baz=146,slow=7.1,SNR=5.7						
	0.3nm,0.4s						

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*IDC **16** 02:42:34.0±3.2, 59°.11S×26°.03W, h0^{km}, mb4.1/2, mbtmp4.0/2, MS3.6/2, Error ellipse: s-maj=216.1km s-min=49.2km az=97.0*

ISC 16 02:42:41.0±1.5**, 59°.5S**±0°.2×**26°.1W**±0°.5**, h50**^{km}**, n11,** σ**2^{s}87**/12**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**13.39**	**154**	P	**P**	**02 45 55.0**	**-1.1**
VNA3	**Neumayer Olymp**	**13.55**	**157**	P	**P**	**02 45 57.1**	**-0.8**
VNA3				S	**Sn**	**02 48 17.2**	**-1.8**
VNA2	**Neumayer--Watz**	**13.79**	**154**	P	**P**	**02 46 00.1**	**-0.5**
	baz=319,slow=12						
VNA2				S	**Sn**	**02 48 24.1**	**-0.8**
	baz=313,slow=25						
SNAA	**Sanae**	**15.37**	**152**	P	**P**	**02 46 21.4**	**+3.2**
SNAA				S	**Sn**	**02 49 01.8**	**-1.5**
TROLL	**Troll, Antarti**	**16.92**	**149**	P	**P**	**02 46 42.4**	**+7.0**
SUR	**Sutherland**	**41.10**	**70**	LR	LR	03 03 15.7	
	comp=Z,44nm,20.6s,baz=160,slow=30						
TORD	**Torodi Ar. Bea**	**75.79**	**28**	P	**P**	**02 54 19.6**	**-1.8**
	0.8nm,0.6s,baz=200,slow=6.4,SNR=13						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**95.52**	**162**	P	**P**	**02 56 02.4**	**+1.9**
	0.5nm,0.8s,baz=184,slow=3.7,SNR=4.1						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**99.24**	**161**	LR	LR	03 40 06.8	
	comp=Z,39nm,19.0s,baz=210,slow=35						
YKA	**Yellowknife Ar**	**139.09**	**315**	PKP	**PKPdf**	**03 01 59.8**	**-0.6**
	0.5nm,0.8s,baz=126,slow=2.6,SNR=5.6						
SONM	**Songino Array**	**150.17**	**92**	PKPbc	**PKPbc**	**03 02 25.2**	**-0.1**
	0.9nm,0.7s,baz=221,slow=4.2,SNR=5.4						

IDC 16 02:56:54.3±2.3**, 9°.94S**×**124°.28E, h0**^{km}**, mb3.2**/1**, mbtmp3.5**/3**, ML3.6**/2**, Error ellipse: s-maj=203.9km s-min=34.0km az=55.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.90**	**137**	Pn	Pn	03 00 12.3	-0.5
	0.2nm,0.3s,baz=316,slow=14,SNR=11						
WRA				Sn	Sn	03 02 42.0	-6.0
	0.2nm,0.3s,baz=314,slow=23,SNR=4.4						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**16.46**	**147**	Pn	Pn	03 00 47.3	+0.4
	0.2nm,0.3s,baz=319,slow=11,SNR=19						
ASAR				Sn	Sn	03 03 43.6	-6.7
	0.1nm,0.3s,baz=310,slow=21,SNR=2.9						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**67.76**	**330**	P	P	03 07 53.9	0.0
	0.2nm,0.6s,baz=137,slow=7.0,SNR=1.5						
	0.2nm,0.6s						

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*IDC **16** 03:00:54.7±1.2, 39°.77N×20°.81E, h0^{km}, mb3.5/5, mbtmp3.3/10, ML3.1/5, Error ellipse: s-maj=20.2km s-min=19.0km az=83.0*

*BEO **16** 03:00:56.1±0.6, 39°.54N×21°.13E, h0^{km}, ML3.2/8*

*TIR **16** 03:00:57.7, 39°.75N×20°.69E, h20^{km}±2^{km}, Md3.3*

*THE **16** 03:00:58.3, 39°.75N×20°.75E, h6^{km}±1^{km}, ML3.4/20, Error ellipse: s-maj=1.3km s-min=0.5km az=282.0*

*PDG **16** 03:00:58.1±0.4, 39°.73N×20°.75E, h11^{km}±1^{km}, ML3.4/11, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*

*ATH **16** 03:00:58.3, 39°.74N×20°.73E, h6^{km}±1^{km}, ML3.3/17, Error ellipse: s-maj=1.1km s-min=0.6km az=314.0*

ISC 16 03:00:57.9±0.8**, 39°.73N**±0°.01×**20°.73E**±0°.01**, h14**^{km}±5^{km}**, n160,** σ**1^{s}54**/233**, mb3.5**/4**, 18C-10D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAN	**Janina**	**0.12**	**128**	P	**Pg**	**03 01 01.2**	**-0.2**
JAN				S	**Sg**	**03 01 03.4**	**-0.2**
	57µm,0.3s						
JAN	**Janina**	**0.12**	**128**	P	**Pg**	**03 01 01.4**	**+0.1**
JAN				S	**Sg**	**03 01 03.3**	**-0.4**
JAN				AML	AML	03 01 04.7	
JAN				AML	AML	03 01 04.8	
	comp=E,84866µm,0.2s						
IGT	**Igoumenitsa**	**0.36**	**238**	P	**Pg**	**03 01 05.0**	**-0.4**
IGT				S	**Sg**	**03 01 11.5**	**+1.1**
	comp=E,14µm,0.4s						
IGT	**Igoumenitsa**	**0.36**	**238**	P	**Pg**	**03 01 05.2**	**-0.2**
	baz=233						
IGT				S	**Sg**	**03 01 11.6**	**+1.1**
	baz=233						
IGT	**Igoumenitsa**	**0.36**	**238**	P	**Pg**	**03 01 05.2**	**-0.2**
IGT				S	**Sg**	**03 01 10.8**	**+0.4**
IGT				AML	AML	03 01 14.5	
	comp=N,31137µm,0.4s						
IGT				AML	AML	03 01 15.3	
	comp=E,22973µm,0.3s						
LSK	**Leskovik**	**0.43**	**347**	P	**Pg**	**03 01 06.4**	**-0.2**
LSK				S	**Sg**	**03 01 12.9**	**+0.3**
	comp=E,16µm,0.5s						
LSK	**Leskovik**	**0.43**	**347**	P	**Pg**	**03 01 06.4**	**-0.2**
	baz=350						
LSK				S	**Sb**	**03 01 13.6**	**-0.2**
	baz=350						
KPRO	**Kipourio**	**0.54**	**65**	P	**Pg**	**03 01 08.3**	**-0.2**
KPRO				S	**Sg**	**03 01 15.8**	**0.0**
	comp=E,9µm,0.3s						
KPRO	**Kipourio**	**0.54**	**65**	P	**Pg**	**03 01 08.3**	**-0.2**
KPRO				S	**Sg**	**03 01 15.8**	**0.0**
KPRO				AML	AML	03 01 17.5	
	comp=N,16162µm,0.3s						
KPRO				AML	AML	03 01 21.5	
	comp=E,15650µm,0.5s						
PENT	**Pentalofos**	**0.56**	**34**	P	**Pg**	**03 01 08.8**	**-0.2**
PENT				S	**Sg**	**03 01 16.5**	**-0.1**
PENT	**Pentalofos**	**0.56**	**34**	P	**Pg**	**03 01 08.9**	**-0.2**
PENT				S	**Sg**	**03 01 16.2**	**-0.3**
PENT				AML	AML	03 01 18.4	
	comp=E,5178µm,0.5s						
PENT				AML	AML	03 01 19.5	
	comp=N,1880µm,0.2s						
SRN	**Sarande**	**0.58**	**285**	P	**Pg**	**03 01 07.9**	**-1.5**
SRN				S	**Sb**	**03 01 18.7**	**+0.7**
	comp=N,6µm,0.5s						
SRN	**Sarande**	**0.58**	**285**	P	**Pg**	**03 01 08.1**	**-1.4**
	baz=285						
SRN				S	**Sg**	**03 01 18.1**	**+1.0**
	baz=285						
KASA	**Kassiopi**	**0.61**	**272**	P	**Pg**	**03 01 09.6**	**-0.4**
KASA				S	**Sg**	**03 01 18.1**	**-0.1**
KASA				AML	AML	03 01 23.0	
	comp=N,9623µm,0.6s						
KASA				AML	AML	03 01 23.4	
	comp=E,8926µm,0.3s						
KEK	**Kerkira**	**0.72**	**269**	P	**Pg**	**03 01 12.0**	**0.0**
KEK				S	**Sb**	**03 01 23.6**	**+1.6**
	comp=E,2µm,0.3s						
KEK	**Kerkira**	**0.72**	**269**	P	**Pg**	**03 01 11.9**	**0.0**
KEK				S	**Sg**	**03 01 21.9**	**+0.4**
KEK				AML	AML	03 01 29.4	
	comp=E,5314µm,0.2s						
KEK				AML	AML	03 01 30.7	
	comp=N,3971µm,0.4s						
KBN	**Korca**	**0.90**	**3**	P	**Pg**	**03 01 14.2**	**-1.1**
KBN				S	**Sg**	**03 01 27.0**	**-0.1**
	comp=N,942nm,0.6s						
KBN	**Korca**	**0.90**	**3**	P	**Pg**	**03 01 14.5**	**-0.8**
	baz=4.0						
KBN				S	**Sg**	**03 01 26.9**	**-0.1**
	baz=4.0						
TSLK	**Tsoukalades, L**	**0.90**	**184**	P	**Pg**	**03 01 15.2**	**-0.2**
TSLK				S	**Sb**	**03 01 29.8**	**+2.6**
	comp=N,2µm,0.6s						
TSLK	**Tsoukalades, L**	**0.90**	**184**	P	**Pg**	**03 01 15.3**	**-0.1**
TSLK				S	**Sg**	**03 01 27.9**	**+0.7**
LKD2	**Lefkada island**	**0.94**	**184**	P	**Pg**	**03 01 16.0**	**-0.1**
LKD2				S	**Sb**	**03 01 30.7**	**+2.4**
	comp=N,1µm,0.6s						
LKD2	**Lefkada island**	**0.94**	**184**	P	**Pg**	**03 01 15.8**	**-0.3**
LKD2				S	**Sg**	**03 01 29.3**	**+0.8**
LKD2				AML	AML	03 01 36.9	
	comp=N,2839µm,0.4s						
LKD2				AML	AML	03 01 36.9	
	comp=E,2084µm,0.6s						
KZN	**Kozani**	**0.98**	**54**	P	**Pb**	**03 01 16.9**	**+0.1**
KZN				S	**Sb**	**03 01 30.9**	**+1.2**
	comp=E,2µm,0.6s						
KZN	**Kozani**	**0.98**	**54**	P	**Pb**	**03 01 17.0**	**+0.1**
KZN				S	**Sb**	**03 01 30.0**	**+0.3**
KZN				AML	AML	03 01 34.7	
	comp=E,5218µm,0.6s						
KZN				AML	AML	03 01 36.6	
	comp=N,2605µm,0.6s						
THL	**Klokotos Trika**	**1.00**	**99**	P	**Pg**	**03 01 16.1**	**-1.2**

THL				S	Sb	03 01 30.8	+0.7
	comp=N,815nm,0.7s						
THL	Klokotos Trika	1.00	99	P	Pg	03 01 16.2	-1.1
THL				S	Sb	03 01 31.1	+1.0
THL				AML	AML	03 01 35.6	
	comp=N,1969µm,0.8s						
THL				AML	AML	03 01 36.6	
	comp=E,1290µm,0.7s						
NYDR	Nydri-Lefkada	1.01	181	P	Pg	03 01 17.1	-0.4
NYDR				S	Sb	03 01 32.9	+2.6
	comp=E,958nm,0.7s						
EVGI	Lefkada island	1.11	183	P	Pg	03 01 18.5	-0.8
EVGI				S	Sn	03 01 36.2	+2.2
	comp=E,1µm,0.5s						
EVGI	Lefkada island	1.11	183	P	Pg	03 01 19.0	-0.3
EVGI				S	Sb	03 01 34.7	+1.7
EVR	Evrytania	1.16	134	P	Pg	03 01 20.0	-0.4
EVR				S	Sn	03 01 36.9	+1.4
	comp=E,1µm,0.6s						
EVR	Evrytania	1.16	134	P	Pg	03 01 20.2	-0.2
EVR				S	Sb	03 01 36.2	+1.4
FNA	Florina	1.16	25	P	Pg	03 01 19.0	-1.4
FNA				S	Sb	03 01 35.9	+1.1
	comp=E,1µm,0.7s						
FNA	Florina	1.16	25	*e*Pg	Pg	03 01 19.5	-0.9
FNA				*e*Sg	Sn	03 01 36.9	+1.4
FNA	Florina	1.16	25	P	Pg	03 01 19.6	-0.9
FNA				S	Sb	03 01 35.5	+0.7
FNA				AML	AML	03 01 40.9	
	comp=N,2818µm,0.6s						
FNA				AML	AML	03 01 43.0	
	comp=E,2114µm,0.5s						
VLO	Vlora	1.20	308	P	Pg	03 01 20.9	-0.2
VLO				S	Sn	03 01 39.2	+2.8
	comp=E,4µm,0.6s						
VLO	Vlora	1.20	308	P	Pn	03 01 22.1	+1.8
	baz=309						
VLO				S	Sg	03 01 36.0	-0.8
	baz=309						
KTI	Kastanea	1.25	58	P	Pg	03 01 20.9	-1.2
PVO	Paravola	1.27	151	P	Pn	03 01 21.0	-0.2
PVO				S	Sn	03 01 40.8	+2.8
	comp=E,2µm,0.7s						
PVO	Paravola	1.27	151	P	Pn	03 01 21.3	+0.1
PVO				S	Sg	03 01 39.2	+0.3
FSK	Fiskardo	1.27	186	P	Pn	03 01 21.8	+0.5
FSK				S	Sb	03 01 39.2	+1.3
FSK				AML	AML	03 01 48.7	
	comp=E,1976µm,0.4s						
FSK				AML	AML	03 01 52.7	
	comp=N,1304µm,0.8s						
LRSO	Larissa Observ	1.28	92	P	Pn	03 01 21.7	+0.3
LRSO				S	Sn	03 01 40.7	+2.4
	comp=N,2µm,0.9s						
LRSO	Larissa Observ	1.28	92	P	Pn	03 01 21.7	+0.3
MAKR	Makrakomi, Fth	1.30	123	P	Pn	03 01 22.1	+0.5
MAKR				S	Sn	03 01 40.5	+1.7
	comp=N,3µm,0.6s						
MAKR	Makrakomi, Fth	1.30	123	P	Pn	03 01 22.2	+0.5
MAKR				S	Sg	03 01 39.6	-0.2
MAKR				AML	AML	03 01 49.2	
	comp=N,5376µm,0.7s						
MAKR				AML	AML	03 01 49.5	
	comp=E,6374µm,0.6s						
OHR	Ohrid	1.38	2	*e*Pg	Pg	03 01 24.6	0.0
OHR				*e*Sg	Sn	03 01 46.3	+5.4
OHR	Ohrid	1.38	2	*i* Pn	Pg	03 01 24.4	-0.2
OHR				*i* Sn	Sn	03 01 46.1	+5.2
LIT	Litokhoron	1.40	74	P	Pn	03 01 22.9	-0.2
LIT				S	Sb	03 01 41.9	+0.3
LIT	Litokhoron	1.40	74	P	Pn	03 01 23.4	+0.3
AGG	Agios Georgios	1.43	119	P	Pn	03 01 24.0	+0.6
AGG				S	Sn	03 01 43.5	+1.6
	comp=E,690nm,0.8s						
AGG	Agios Georgios	1.43	119	P	Pn	03 01 24.0	+0.6
AGG				S	Sb	03 01 42.9	+0.7
AGG				AML	AML	03 01 48.6	
	comp=N,1516µm,1.1s						
AGG				AML	AML	03 01 50.9	
	comp=E,1258µm,0.5s						
ANX	Ano Chora	1.46	140	P	Pn	03 01 24.4	+0.4
ANX				S	Sn	03 01 43.5	+0.6
ANX				AML	AML	03 01 53.0	
	comp=N,2907µm,0.7s						
ANX				AML	AML	03 01 54.8	
	comp=E,2586µm,0.4s						
KEF4	Livadi, Kephal	1.49	189	P	Pn	03 01 24.7	+0.5
VLS	Valsamata	1.55	184	P	Pn	03 01 25.6	+0.5
VLS				S	Sn	03 01 46.4	+1.3
VLS				AML	AML	03 01 53.7	
	comp=N,1415µm,0.4s						
VLS				AML	AML	03 01 54.5	
	comp=E,1301µm,0.4s						
EFP	Efpalio	1.59	145	P	Pn	03 01 26.9	+1.3
PSDA	Pessada-Kefalo	1.62	184	P	Pn	03 01 26.5	+0.6
SERG	Sergoula	1.67	141	P	Pn	03 01 28.1	+1.3
TIR	Tirane	1.75	338	⇑P	Pn	03 01 29.2	+1.4
TIR	Tirane	1.75	338	P	Pb	03 01 30.5	+0.8
	baz=339						
TIR				S	Sg	03 01 53.7	-0.5
	baz=339						
TIR	Tirane	1.75	338	*e*Pn	Pb	03 01 30.2	+0.4
GRG	Griva	1.77	46	P	Pn	03 01 28.4	+0.3
SCTE	Santa Cesarea	1.78	282	P	Pn	03 01 28.4	+0.2
AXAR	Agios Charalam	1.78	122	P	Pn	03 01 29.7	+1.5
THE	Thessaloniki	1.94	61	P	Pn	03 01 31.3	+1.0
XOR	Xorichti	1.94	100	P	Pn	03 01 31.4	+1.0
XOR				S	Sn	03 01 54.6	+0.1
XOR				AML	AML	03 02 04.2	
	comp=E,665µm,1.0s						
XOR				AML	AML	03 02 06.0	
	comp=N,1462µm,0.6s						
PHP	Peshkopia	1.97	354	P	Pb	03 01 34.5	+0.9
	baz=355						
PHP				S	Sb	03 01 59.1	+1.2
	baz=355						
NEO	Neokhori	1.97	102	P	Pn	03 01 32.3	+1.4
LTHK	Lithakia	2.02	178	P	Pn	03 01 32.3	+0.8
VAY	Valandovo	2.12	41	*e*Pn	Pn	03 01 33.9	+1.0
VAY				*e*Sg	Sb	03 02 02.2	-0.1
VAY	Valandovo	2.12	41	*i* Pn	Pn	03 01 34.1	+1.2
VAY				*i* Sn	Sn	03 02 00.9	+1.8
KNT	Kendrikon	2.19	48	P	Pn	03 01 34.4	+0.5
STIP	Stip	2.25	29	*i* Pn	Pb	03 01 38.4	0.0
SOH	Sokhos	2.28	61	P	Pn	03 01 36.7	+1.5
SOH				S	Sn	03 02 03.0	-0.1
SOH				AML	AML	03 02 08.9	
	comp=E,898µm,0.5s						
SOH				AML	AML	03 02 13.2	
	comp=N,338µm,0.6s						
SKO	Skopje	2.31	13	*i* Pn	Pb	03 01 38.7	-0.5
ULC	Ulcinj	2.50	334	⇓*i*Pn	Pn	03 01 39.0	+0.8
ULC				*i* Sn	Sb	03 02 12.2	-1.1
SRS	Serrai	2.59	57	*e*Pg	Pn	03 01 40.2	+0.9
SRS				*e*Sg	Sn	03 02 12.0	+1.4
SRS	Serrai	2.59	57	P	Pn	03 01 40.2	+0.9
BCI	Bajram Curri	2.68	349	P	Pb	03 01 44.3	-1.4
	baz=350						
BCI				S	Sb	03 02 18.1	-0.4
	baz=350						
DRME	Dracevica, Mon	2.72	335	*e*Pn	Pn	03 01 42.3	+1.1
DRME	Dracevica, Mon	2.72	335	⇑*i*Pn	Pn	03 01 42.5	+1.3
DRME				*i* Sn	Sn	03 02 17.7	+3.8
KOKK	Kokkinochori,	2.73	65	P	Pn	03 01 42.4	+1.1
PDG	Podgorica	2.92	338	⇑P	Pn	03 01 45.2	+1.3
PDG	Podgorica	2.92	338	⇓*i*Pn	Pn	03 01 45.4	+1.5
PDG				*i* Sn	Sn	03 02 22.3	+3.5
BUM	Brajici-Budva	2.92	332	⇓*i*Pn	Pn	03 01 44.6	+0.6
BUM				*i* Sn	Sn	03 02 22.4	+3.5
PYL	PYLOS	2.94	164	P	Pn	03 01 45.2	+1.0
PRVS	Prvonek	2.96	20	*e*Pn	Pn	03 01 46.3	+1.8
TIP	Timpagrande	3.12	261	⇑P	Pn	03 01 46.8	0.0
TIP				⇑S	Sn	03 02 23.6	-0.3
CEME	Cevo	3.13	335	⇓*i*Pn	Pn	03 01 47.4	+0.5
CEME				*i* Sn	Sn	03 02 27.8	+3.7
THAS	Thassos island	3.18	73	P	Pn	03 01 47.4	-0.1
BARS	Barje	3.19	14	*e*Pn	Pn	03 01 49.8	+2.1
HCY	Herceg Novi	3.20	329	*e*Pn	Pn	03 01 47.1	-0.7
HCY	Herceg Novi	3.20	329	⇑*i*Pn	Pn	03 01 47.8	0.0
HCY				*i* Sn	Sn	03 02 29.4	+3.7
IVA	Berane	3.20	349	⇓*i*Pn	Pn	03 01 50.0	+2.1
IVA				*i* Sn	Sn	03 02 29.2	+3.3
MATE	Matera	3.22	288	⇑P	Pn	03 01 48.2	+0.2
MATE				⇓S	Sn	03 02 26.2	+0.1
KOME	Kolasin	3.25	344	⇑*i*Pn	Pn	03 01 50.4	+1.8
KOME				*i* Sn	Sn	03 02 30.6	+3.5
NKME	Niksic	3.32	337	⇑*i*Pn	Pn	03 01 50.9	+1.5
NKME				*i* Sn	Sn	03 02 31.8	+3.1
VTS	Vitosha	3.45	32	⇑P	Pn	03 01 54.6	+3.3
VTS				⇑S	Sn	03 02 36.3	+4.2
TREB	Trebinje	3.48	330	*e*Pn	Pn	03 01 51.4	-0.3
SELS	Selova	3.50	5	*e*Pn	Pn	03 01 54.1	+2.2
BRY	Bratogost	3.58	333	*e*Pn	Pn	03 01 53.0	0.0
BRY	Bratogost	3.58	333	⇓*i*Pn	Pn	03 01 54.7	+1.7
BRY				*i* Sn	Sn	03 02 38.3	+3.2
SJES	Sjenica	3.58	351	*e*Pn	Pn	03 01 55.5	+2.5
SJES	Sjenica	3.58	351	*e*Pn	Pn	03 01 55.1	+2.1
PLE	Pljevlja	3.74	345	⇓*i*Pn	Pn	03 01 56.9	+1.6
PLE				*i* Sn	Sn	03 02 41.7	+2.6
CUC	Castrocucco	3.79	276	P	Pn	03 01 57.1	+1.2
IVAS	Ivanjica	3.87	354	*e*Pn	Pn	03 01 58.5	+1.5
STON	Ston	3.88	325	*e*Pn	Pn	03 01 56.6	-0.5
RUDO	Rudo	4.02	346	*e*Pn	Pn	03 01 59.5	+0.5
GRUS	Gruza	4.16	360	*e*Pn	Pn	03 02 01.4	+0.5
ZAGS	Zajecar	4.23	15	*e*Pn	Pn	03 02 04.1	+2.2
BBLS	Lazići	4.25	347	*e*Pn	Pn	03 02 05.3	+3.0
DIVS	Divibare	4.40	353	*e*Pn	Pn	03 02 06.1	+1.7
DIVS	Divibare	4.40	353	*e*Pn	Pn	03 02 05.2	+0.8
TRUS	Trudelj	4.50	357	*e*Pn	Pn	03 02 07.1	+1.5
RICI	Ricice	4.63	326	*e*Pn	Pn	03 02 07.1	-0.3
PLVB	Pleven	4.68	37	⇑P	Pn	03 02 10.1	+2.0
KUBS	Kucevo	4.73	8	*e*Pn	Pn	03 02 12.0	+3.2
KIJV	Kijevo	5.36	324	*e*Pn	Pn	03 02 17.5	+0.1
MGRS	Mrkonjic Grad	5.42	331	*e*Pn	Pn	03 02 18.4	+0.2
VAE	Valguarnera	5.44	248	Sn	Sn	03 03 19.5	-1.4
	comp=N,1.4nm,0.3s,baz=18,slow=20,SNR=1.6						
ZIRJ	Zirje	5.47	317	*e*Pn	Pn	03 02 19.0	+0.1
FRGS	Fruska Gora	5.47	353	⇑P	Pn	03 02 19.5	+0.6
FRGS	Fruska Gora	5.47	353	*e*Pn	Pn	03 02 18.7	-0.2
IDI	Anoyia	5.53	142	Pn	Pn	03 02 19.5	-0.3
	comp=N,0.6nm,0.3s,baz=297,slow=7.1,SNR=9.0						
IDI				Sn	Sn	03 03 20.6	-2.6
	comp=N,0.8nm,0.3s,baz=251,slow=22,SNR=2.0						
	comp=N,5.2nm,0.8s						
MORI	Morici	5.58	319	*e*Pn	Pn	03 02 20.1	-0.4
BLY	Banja Luka	5.67	333	*e*Pn	Pn	03 02 19.3	-2.3
A050A	Klekovaca	5.69	328	*e*Pn	Pn	03 02 22.7	+0.7
GZR	Gura Zlata	5.86	14	⇓P	Pn	03 02 27.0	+2.6
GZR				⇑S	Sn	03 03 33.0	+1.7
BZS	Buzias	5.92	6	⇓P	Pn	03 02 27.2	+2.1
BZS				⇑S	Sn	03 03 33.6	+0.9
A051A	Mrakovica	5.99	333	*e*Pn	Pn	03 02 25.6	-0.6
DUGI	Dugi Otok	6.01	317	*e*Pn	Pn	03 02 26.3	0.0
UDBI	Udbina	6.05	324	*e*Pn	Pn	03 02 28.1	+1.1
VIRC	Vir	6.22	319	*e*Pn	Pn	03 02 29.4	+0.2
NVLJ	Novalja	6.50	320	*e*Pn	Pn	03 02 32.8	-0.3
NVLJ				Sn	Sn	03 03 43.5	-3.5
VOIR		6.53	28	⇑P	Pn	03 02 35.5	+1.9
MLR	Muntele Rosu	6.92	32	⇑P	Pn	03 02 42.6	+3.6
MLR	Muntele Rosu	6.92	32	Pn	Pn	03 02 37.7	-1.3
	comp=N,0.1nm,0.3s,baz=151,slow=19,SNR=3.2						
MLR				Sn	Sn	03 04 02.1	+4.5
	comp=N,0.2nm,0.3s,baz=284,slow=16,SNR=1.2						
	comp=N,0.5nm,0.4s						
BOJS	Bojanci	7.04	327	*e*Pn	Pn	03 02 39.0	-1.6
CRES	Cresnjev	7.22	329	*e*Pn	Pn	03 02 42.4	-0.6
VRI	Vrincioaia	7.55	34	⇑P	Pn	03 02 50.5	+3.0
SKDS	Skadanscina	7.64	322	*e*Pn	Pn	03 02 47.5	-1.2
SOKA	Soboth	8.10	331	*e*Pn	Pn	03 02 54.8	-0.3
	comp=N,2.1nm,0.4s						
OBKA	Obir	8.14	328	*e*Pn	Pn	03 02 56.0	+0.3
	comp=N,2.9nm,0.3s						
ARSA	Arzberg	8.42	335	*e*Pn	Pn	03 03 04.3	+4.9
	comp=N,1.4nm,0.5s						
CONA	Conrad Observa	8.92	338	*e*Pn	Pn	03 03 15.6	+9.3
	comp=N,0.4nm,0.3s						
KBA	Koelnbreinsper	9.10	326	*e*Pn	Pn	03 03 10.5	+1.6
	comp=N,0.5nm,0.3s						
ABTA	Abfaltersbach	9.23	322	*e*Pn	Pn	03 03 11.7	+1.1
	comp=N,0.7nm,0.3s						
BRTR	Keskin Array B	9.95	86	Pn	Pn	03 03 19.6	-0.9
	baz=264,slow=11,SNR=1.7						
	comp=N,0.1nm,0.4s						
WTTA	Wattenberg	10.01	322	*e*Pn	Pn	03 03 22.5	+1.1
	comp=N,1.4nm,0.4s						
SQTA	Sankt Quirin	10.19	320	*e*Pn	Pn	03 03 24.7	+0.9
	comp=N,1.0nm,0.3s						
FETA	Feichten	10.30	318	*e*Pn	Pn	03 03 31.6	+6.3
	comp=N,0.4nm,0.3s						
MOTA	Moosalm	10.33	321	*e*Pn	Pn	03 03 26.3	+0.6
	comp=N,1.9nm,0.5s						
GERES	GERESS Array B	10.41	333	Pn	Pn	03 03 26.9	+0.2
	comp=N,0.1nm,0.3s,baz=153,slow=13,SNR=2.0						
	comp=N,0.2nm,0.3s						
ESDC	Sonseca Array	18.99	278	P	P	03 05 16.9	-2.2
	baz=120,slow=9.4,SNR=1.7						
	comp=N,0.5nm,0.8s						
HFS	Hagfors	20.90	350	P	P	03 05 38.4	-1.2
	comp=N,1.7nm,0.5s,baz=151,slow=9.7,SNR=2.2						
	comp=N,1.7nm,0.5s						
FINES	FINESS Array B	21.99	7	P	P	03 05 48.2	-3.0
	comp=N,1.0nm,0.5s,baz=186,slow=13,SNR=1.7						
	comp=N,1.0nm,0.5s						
NB2	NORSAR Subarra	22.14	348	P	P	03 05 51.7	-1.2
	comp=Z,1.0nm,0.8s,baz=156,slow=9.3						
NB2	NORSAR Subarra	22.14	348	P	P	03 05 52.1	-0.8
	baz=157,slow=9.3						
NOA	NORSAR Array B	22.14	348	P	P	03 05 51.7	-1.2
	comp=Z,1.4nm,1.0s,baz=163,slow=11,SNR=1.7						
	comp=Z,1.4nm,1.0s						
TORD	Torodi Ar. Bea	31.35	218	P	P	03 07 17.5	-0.6
	comp=Z,0.5nm,0.6s,baz=33,slow=9.0,SNR=4.6						
	comp=Z,0.5nm,0.6s						
MKAR	Makanchi Array	44.37	60	P	P	03 09 06.3	-1.3
	comp=Z,0.5nm,0.5s,baz=280,slow=7.3,SNR=13						
	comp=Z,0.5nm,0.5s						

ISK ***16*** *03:03:42.9, 34°.55N×24°.66E, h10^{km}, ML3.2/8*
IDC ***16*** *03:03:43.6±2.9, 34°.59N×24°.70E, h13^{km}±17^{km}, mb3.7/4, mbtmp3.8/8, ML4.0/4, MS4.1/1, Error ellipse: s-maj=27.8km s-min=17.1km az=108.0*
THE ***16*** *03:03:46.6, 34°.74N×24°.57E, h6^{km}±1^{km}, ML3.0/7, Error ellipse: s-maj=1.7km s-min=0.6km az=346.0*
ATH ***16*** *03:03:47.2, 34°.77N×24°.54E, h8^{km}±2^{km}, ML3.0/9, Error ellipse: s-maj=2.7km s-min=0.8km az=351.0*
ISC 16 03:03:45.0±1.2**, 34°.73N**±0°.05×**24°.58E**±0°.02**, h17**^{km}±8^{km}**, n47, σ1^{s}60**/72**, mb3.7**/4**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TMBK	Timbaki Herakl	0.37	24	P	Pn	03 03 54.8	-0.9
TMBK				S	Sb	03 03 59.7	+0.9
TMBK	Timbaki Herakl	0.37	24	P	Pn	03 03 54.0	-1.7
TMBK				S	Sb	03 03 59.0	+0.2
TMBK				AML	AML	03 04 04.7	
	comp=N,9115µm,0.3s						
TMBK				AML	AML	03 04 05.5	
	comp=E,10870µm,0.3s						
GVDS	Gavdos	0.42	286	P	Pn	03 03 55.0	-1.3
GVDS				S	Sn	03 04 02.3	-1.3
	comp=E,5µm,0.4s						
GVDS	Gavdos	0.42	286	Pg	Pn	03 03 55.0	-1.3
GVDS				Sg	Sn	03 04 03.1	-0.5
GVD	Gavdhos	0.42	285	P	Pb	03 03 54.7	+0.7
GVD				S	Sb	03 04 01.3	+1.3
	comp=E,6µm,0.3s						
GVD	Gavdhos	0.42	285	Pg	Pb	03 03 54.7	+0.7
GVD				Sg	Sn	03 04 02.3	-1.4
GVD	Gavdhos	0.42	285	P	Pb	03 03 54.6	+0.6
GVD				S	Sb	03 03 59.9	-0.1
GVD				AML	AML	03 04 08.5	
	comp=E,13029µm,0.3s						
GVD				AML	AML	03 04 09.7	
	comp=N,12371µm,0.4s						
IDI	Anoyia	0.61	25	Pg	Pn	03 03 57.6	-1.4
	comp=N,21nm,0.3s,baz=279,slow=8.8,SNR=62						
IDI				Lg	Lg	03 04 07.2	
	comp=N,38nm,0.3s,baz=316,slow=20,SNR=12						
IDI	Anoyia	0.61	25	P	Pn	03 03 57.9	-1.1
IDI				S	Sn	03 04 08.3	-0.3
	comp=N,608nm,0.7s						
IDI	Anoyia	0.61	25	Pg	Pn	03 03 58.0	-1.1
IDI				Sg	Sn	03 04 09.2	+0.6
IDI	Anoyia	0.61	25	P	Pn	03 03 58.0	-1.1
IDI				S	Sb	03 04 06.5	+0.8
IDI				AML	AML	03 04 12.1	
	comp=E,1259µm,0.5s						
IDI				AML	AML	03 04 16.5	
	comp=N,1361µm,0.5s						
PRNS	Prines Rethymn	0.64	354	P	Pn	03 03 58.4	-0.9
PRNS				S	Sb	03 04 08.0	+1.7
KSTL	Kastelli Herak	0.70	35	P	Pn	03 04 01.6	+1.4
KSTL				S	Sn	03 04 13.5	+2.9
IACM	Heraklion	0.70	35	P	Pn	03 03 59.6	-0.6
HRKL	Herakleio	0.72	36	P	Pn	03 04 00.1	-0.4
HRKL				S	Sn	03 04 11.8	+0.7
HRKL	Herakleio	0.72	36	Pg	Pn	03 03 59.6	-0.9
HRKL	Herakleio	0.72	36	P	Pn	03 04 00.5	+0.1
HRKL				S	Sn	03 04 11.1	0.0
HRKL				AML	AML	03 04 26.0	
	comp=N,9625µm,0.8s						
HRKL				AML	AML	03 04 30.1	
	comp=E,10843µm,0.8s						
IMMV	Iera Moni Meta	0.88	326	P	Pn	03 04 02.2	-0.4
IMMV				S	Sn	03 04 15.7	+0.7
	comp=E,1µm,0.5s						
IMMV	Iera Moni Meta	0.88	326	Pg	Pn	03 04 02.8	+0.2
IMMV	Iera Moni Meta	0.88	326	P	Pn	03 04 02.5	-0.1
IMMV				S	Sb	03 04 14.2	+0.9
IMMV				AML	AML	03 04 24.9	
	comp=E,4027µm,0.7s						
IMMV				AML	AML	03 04 26.4	
	comp=N,1999µm,0.9s						
KNDR	Palaiochora Ch	0.89	305	P	Pn	03 04 03.3	+0.6
KNDR				S	Sn	03 04 17.4	+2.1
KNDR	Palaiochora Ch	0.89	305	Pn	Pn	03 04 03.6	+0.9
KNDR				Sn	Sn	03 04 19.5	+4.2
KNDR	Palaiochora Ch	0.89	305	P	Pn	03 04 03.4	+0.7
KNDR				S	Sn	03 04 15.7	+0.4
KNDR				AML	AML	03 04 23.6	
	comp=E,2544µm,0.4s						
KNDR				AML	AML	03 04 25.9	
	comp=N,2546µm,0.7s						
CHAN	Chania	0.90	331	P	Pn	03 04 02.9	0.0
CHAN				S	Sg	03 04 14.8	+0.4
CHAN				AML	AML	03 04 26.1	
	comp=E,2293µm,0.6s						
CHAN				AML	AML	03 04 28.2	
	comp=N,2664µm,0.6s						
FRMA	Ierapetra Chan	0.99	73	P	Pn	03 04 07.7	+3.5
FRMA				S	Sn	03 04 22.3	+4.5
FRMA	Ierapetra Chan	0.99	73	P	Pn	03 04 08.1	+3.9
FRMA				S	Sn	03 04 23.2	+5.5
FRMA				AML	AML	03 04 29.9	
	comp=E,820µm,0.6s						
FRMA				AML	AML	03 04 33.2	
	comp=N,1016µm,0.6s						
RODP	Rodopos	1.07	321	P	Pg	03 04 06.1	+0.4
RODP	Rodopos	1.07	321	Pn	Pg	03 04 07.1	+1.4
RODP				Sn	Sn	03 04 24.4	+4.7
STIA	Sitia Lasithi	1.33	69	P	Pg	03 04 10.8	+0.2
STIA	Sitia Lasithi	1.33	69	P	Pg	03 04 11.1	+0.5
ZKR	Zakros	1.40	74	P	Pg	03 04 11.6	-0.4
ZKR				S	Sg	03 04 30.7	+0.5
	comp=N,218nm,0.8s						
ZKR	Zakros	1.40	74	Pn	Pb	03 04 09.1	-1.6
ZKR	Zakros	1.40	74	P	Pg	03 04 12.3	+0.4
ZKR				S	Sg	03 04 31.0	+0.8
ZKR				AML	AML	03 04 42.3	
	comp=N,279µm,0.9s						
ZKR				AML	AML	03 04 46.9	
	comp=E,590µm,0.8s						
ANKY	Antikythira Is	1.54	318	P	Pg	03 04 13.9	-0.8
ANKY				S	Sg	03 04 34.3	-0.4
	comp=E,352nm,0.6s						
ANKY	Antikythira Is	1.54	318	P	Pg	03 04 13.7	-1.0
SANT	Santorini	1.79	23	Pn	Pb	03 04 16.6	-0.8
KTHA	Kythira Island	1.96	321	Pn	Pb	03 04 19.2	-1.1
KARP	Karpathos	2.27	68	P	Pb	03 04 24.4	-1.1
KARP				S	Sb	03 04 51.8	-1.5
	comp=E,160nm,1.2s						
MMAI	Mount Meron Ar	9.16	98	Pn	Pn	03 05 54.2	-2.3
	comp=E,0.9nm,0.3s,baz=267,slow=39,SNR=2.3						
	comp=E,2.4nm,0.8s						
VRAC	Vranov	15.71	340	Pn	P	03 07 27.8	-1.6
	comp=E,0.2nm,0.3s,baz=77,slow=23,SNR=3.9						
	comp=E,2.1nm,0.7s						
GERES	GERESS Array B	16.24	334	Pn	P	03 07 35.2	-0.2
	comp=E,0.1nm,0.3s,baz=148,slow=13,SNR=9.0						
	comp=E,1.1nm,0.6s						
AKASG	Malin Array Be	16.32	11	Pn	Pn	03 07 33.9	+0.6
	comp=E,1.8nm,0.3s,baz=201,slow=10,SNR=17						
	comp=E,1.1nm,0.4s						
FINES	FINESS Array B	26.75	2	P	P	03 09 23.5	0.0
	comp=E,1.9nm,0.9s,baz=205,slow=12,SNR=3.4						
	comp=E,1.9nm,0.9s						
TORD	Torodi Ar. Bea	29.85	230	P	P	03 09 50.3	-1.3
	comp=E,0.4nm,0.5s,baz=32,slow=8.7,SNR=4.9						
	comp=E,0.4nm,0.5s						
ARCES	ARCESS Array B	34.86	1	LR	LR	03 27 43.8	
	comp=E,289nm,18.6s,baz=206,slow=41						
MKAR	Makanchi Array	44.41	56	P	P	03 11 54.0	-0.8
	comp=E,0.5nm,0.5s,baz=268,slow=8.5,SNR=8.7						
	comp=E,0.5nm,0.5s						
ZALV	Zalesovo Beam	45.65	46	P	P	03 12 03.5	-1.0
	comp=E,0.7nm,0.5s,baz=257,slow=12,SNR=3.5						
	comp=E,0.7nm,0.5s						

IDC 16 03:11:36.5±3.7**, 1°.47N**×**126°.92E, h369**^{km}±40^{km}**, mb2.9**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=152.5km s-min=14.7km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.49	161	P	P	03 16 05.5	-0.4
	0.5nm,0.3s,baz=341,slow=10,SNR=15						
WRA				S	S	03 19 45.9	+0.7
	0.3nm,0.8s,baz=334,slow=22,SNR=4.6						
	0.5nm,0.3s						
ASAR	Alice Springs	25.90	165	P	P	03 16 36.9	+0.4
	0.4nm,0.5s,baz=355,slow=8.3,SNR=11						
	0.4nm,0.5s						
MKAR	Makanchi Array	59.51	326	P	P	03 21 02.1	-0.1
	0.5nm,0.5s,baz=114,slow=8.4,SNR=9.7						
	0.5nm,0.5s						

NOU 16 03:18:52.8, 19°.07S×**169°.54E, h253**^{km}**, MLv4.1**/11**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.85	316	P	Pn	03 19 34.8	+0.5
LIFNC	LIFOU	2.75	231	P	Pn	03 19 42.1	-0.7
YATNC	Mamie plateau,	3.87	219	P	Pn	03 19 53.9	-1.4
DZM	Mont Dzumac	4.16	224	P	Pn	03 19 59.1	+0.4
OUENC	Ouen Island, N	4.18	217	P	Pn	03 19 59.2	+0.4
NOUC	Port Laguerre	4.28	225	P	Pn	03 20 00.3	+0.3
ONTNC	Ouen Toro	4.33	221	P	Pn	03 20 00.9	+0.3
KOUNC	Koumac, New Ca	5.16	253	P	Pn	03 20 11.5	+0.9

TAP ***16*** *03:30:06.3, 24°.88N×122°.50E, h9^{km}, ML3.2, D*
JMA ***16*** *03:30:06.5±0.2, 25°N±1°×122°.5E±0°.4, h2^{km}±3^{km}, MV2.3/5, NW OFF ISHIGAKIJIMA IS*
ISC 16 03:30:06.2±1.1**, 24°.86N**±0°.04×**122°.49E**±0°.03**, h11**^{km}±11^{km}**, n37, σ0^{s}48**/66**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.48	288	*e*P	Pg	03 30 15.7	+0.1
	baz=285						
EOS2	EOS2	0.49	209	*e*P	Pb	03 30 16.7	-0.2
	baz=208						
EOS2				*e*S	Sb	03 30 25.4	+1.4
	baz=208						
EGS		0.51	269	*i* P	Pg	03 30 16.2	+0.1
	baz=265						
EGS				*i* S	Sg	03 30 23.3	+0.4
	baz=265						
JYNG	Yonagunijimaku	0.58	134	P	Pg	03 30 17.4	0.0
JYNG				*e*S	Sg	03 30 24.8	-0.2
SXI1	Grass Mountain	0.61	293	*i* P	Pg	03 30 17.9	-0.1
	baz=290						
SXI1				*e*S	Sg	03 30 25.8	-0.2
	baz=290						
YOJ	Yonaguni jima	0.61	130	P	Pg	03 30 17.9	-0.2
YOJ				*e*S	Sg	03 30 26.2	0.0
YOJ	Yonaguni jima	0.61	130	*i* P	Pg	03 30 18.1	0.0
	baz=132						
YOJ				S	Sg	03 30 26.3	0.0

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      baz=132
TIPB  Shuangxi              0.62 281 i P  Pg    03 30 18.2  0.0
      baz=278
TIPB                                 eS   Sg    03 30 27.1 +0.8
      baz=278
TWC   Suao                  0.63 247 eP   Pg    03 30 18.0 -0.5
      baz=244
TWC                                  eS   Sb    03 30 28.2 +0.1
      baz=244
NWF   Wu-fen Shan           0.68 289 P    Pg    03 30 19.5 +0.1
      baz=286
NWF                                  eS   Sg    03 30 28.2 -0.1
      baz=286
WFSB  Wu-fen Shan           0.68 289 i P  Pg    03 30 19.4  0.0
      baz=286
TNOU  National Taiwa        0.71 294 i P  Pg    03 30 19.8 -0.2
      baz=291
NDS   Dongshan              0.74 253 eP   Pg    03 30 20.3 -0.2
      baz=250
EOS4  EOS4                  0.75 192 eP   Pb    03 30 21.2 +0.2
      baz=192
EOS4                                 eS   Sn    03 30 32.9 -0.6
      baz=192
TWE   Neicheng              0.76 260 P    Pg    03 30 20.6 -0.3
      baz=257
TWE                                  i S  Sg    03 30 31.3 +0.4
      baz=257
EWUT  Wuta                  0.77 238 eP   Pg    03 30 20.8 -0.2
      baz=236
EWUT                                 eS   Sb    03 30 33.2 +1.2
      baz=236
ENA   Nanau                 0.81 238 eP   Pg    03 30 21.3 -0.5
      baz=236
ENA                                  eS   Sb    03 30 33.7 +0.6
      baz=236
FUSB  Fushanzhiwuyua        0.83 264 P    Pg    03 30 21.8 -0.3
      baz=261
FUSB                                 S    Sg    03 30 33.5 +0.5
      baz=261
TWA   Mucha                 0.83 279 P    Pg    03 30 22.2 -0.1
      baz=276
TWA                                  i S  Sg    03 30 33.4 +0.2
      baz=276
PCYT  Pengchaiyu            0.86 334 i P  Pg    03 30 22.1 -0.7
      baz=332
ENTT  Nioudou               0.87 256 P    Pg    03 30 23.2 +0.2
      baz=253
ENTT                                 eS   Sg    03 30 34.2  0.0
      baz=253
YM08  YM08                  0.88 292 P    Pg    03 30 23.1 -0.1
      baz=290
NHDH  Xindian Distri        0.89 277 eP   Pg    03 30 22.3 -1.0
      baz=275
NHDH                                 S    Sg    03 30 35.3 +0.5
      baz=275
YM01  YM01                  0.89 289 P    Pg    03 30 23.2 -0.1
      baz=287
YM01                                 i S  Sg    03 30 35.0 +0.2
      baz=287
NWLT  Wulai                 0.90 265 P    Pg    03 30 23.0 -0.5
      baz=263
NWLT                                 i S  Sg    03 30 35.8 +0.4
      baz=263
TWY   Chenhua               0.91 298 eP   Pg    03 30 23.8  0.0
      baz=295
TWY                                  S    Sg    03 30 35.7 +0.1
      baz=295
TATO  Taipei                0.92 278 P    Pg    03 30 23.5 -0.4
      baz=275
TATO                                 eS   Sg    03 30 34.3 -1.6
      baz=275
LATG  Datong                0.94 250 i P  Pg    03 30 24.0 -0.2
      baz=248
LATG                                 S    Sb    03 30 37.0 +0.1
      baz=248
ANP   Anpu                  0.94 291 P    Pg    03 30 24.1 -0.2
      baz=288
ANP                                  S    Sg    03 30 36.2 -0.4
      baz=288
YHNB  Yeheng                1.03 260 i P  Pg    03 30 25.5 -0.5
      baz=258
YHNB                                 S    Sg    03 30 39.9 +0.4
      baz=258
NSK   Sanguang              1.05 260 i P  Pg    03 30 25.7 -0.6
      baz=258
NACB  Ninganchiao           1.06 230 P    Pg    03 30 25.9 -0.7
      baz=229
NACB                                 i S  Sb    03 30 40.9 +0.3
      baz=229
NNSB  Datong                1.09 247 P    Pg    03 30 27.0 -0.2
      baz=246
NNSB                                 S    Sg    03 30 41.3 -0.2
      baz=246
NNS   Nan Shan              1.10 248 P    Pg    03 30 27.3  0.0
      baz=246
NNS                                  S    Sg    03 30 41.2 -0.5
      baz=246
ETLH  Xiulin Townshi        1.12 235 i P  Pg    03 30 27.2 -0.7
      baz=234
ETLH                                 i S  Sg    03 30 42.5  0.0
      baz=234
TWD   Chiawan               1.12 227 i P  Pg    03 30 27.2 -0.6
      baz=225
TWD                                  S    Sg    03 30 42.1 -0.3
      baz=225
IRIF  Iriomote-Funau        1.24 114 eP   Pg    03 30 29.8 -0.3
```

MOS ***16*** *03:41:02.4±0.8, 52°.75N×172°.92E, h66^{km}, mb4.6/20, Error ellipse: s-maj=8.4km s-min=6.4km az=30.8*

KRSC ***16*** *03:41:02.0±1.6, 52°.71N×172°.56E, h48^{km}±31^{km}, Ml4.7*

IDC ***16*** *03:41:03.9±0.5, 52°.84N×173°.02E, h61^{km}±5^{km}, mb3.9/19, mbtmp4.2/20, MS3.0/6, Error ellipse: s-maj=18.7km s-min=7.7km az=1.0*

NEIC ***16*** *03:41:04.7±1.0, 52°.8N±0°.1×173°.0E±0°.1, h65^{km}±7^{km}, mb4.4/104, ML4.1(AEIC), Error ellipse: s-maj=17.1km s-min=9.5km az=181.0*

AEIC ***16*** *03:41:04.7±1.8, 52°.5N±0°.1×172°.82E±0°.09, h37^{km}±6^{km}, Error ellipse: s-maj=16.1km s-min=7.8km az=168.0*

ISC 16 03:41:02.4±0.5**, 52°.74N**±0°.07×**172°.84E**±0°.04**, h50^{km}, n218,** σ1^{s}.**69**/245**, mb4.4**/63**, MS3.1**/4**, 9C-2D, Near Islands**

```
Code  Station Name            Δ°  AZ°  Phase ID        Time     Res
                                       Op   ISC      h  m  s    ISC
SHEM  Shemya Is, Ala        0.77  90 P    Pn    03 41 18.7 +1.7
      800nm,0.2s,baz=274,slow=2.4,SNR=652
SHEM                                 S    Sn    03 41 29.5 +1.9
      9µm,0.3s,baz=203,slow=21,SNR=67
SMY   Shemya                0.77  90      Pn    03 41 18.9 +1.9
SMY                                  Sn   Sn    03 41 29.6 +2.0
SMY   Shemya                0.77  90 P    Pn    03 41 18.9 +1.9
SMY                                             03 41 29.6
BKI   Bering                4.75 304 P    Pn    03 42 14.2 +2.9
BKI                                  S    Sn    03 43 02.5 -2.5
BKI   Bering                4.75 304 eP   Pn    03 42 14.2 +2.9
BKI                                  eS   Sn    03 43 02.5 -2.5
KIWB  Kanaga Island         6.21  94      Pn    03 42 32.5 +1.1
ADK   Adak                  6.48  93      Pn    03 42 36.2 +1.1
ADK   Adak                  6.48  93 P    Pn    03 42 36.3 +1.1
GSTR  Great Sitkin T        6.83  91      Pn    03 42 40.7 +0.9
SMKR  Semkarok              7.63 305 P    Pn    03 42 53.9 +2.9
SMKR                                 S    Sn    03 44 15.7 -0.3
SMKR  Semkarok              7.63 305 eP   Pn    03 42 53.9 +2.9
SMKR                                 eS   Sn    03 44 15.7 -0.3
TUMD  Tumrok D              7.74 294 eP   Pn    03 42 54.9 +2.6
TUMD                                 eS   Sn    03 44 17.9 -0.7
SPN   Mys Shipunski         7.76 278 P    Pn    03 42 53.7 +1.1
SPN                                  S    Sn    03 44 14.8 -4.1
SPN   Mys Shipunski         7.76 278 eP   Pn    03 42 53.7 +1.1
SPN                                  eS   Sn    03 44 14.8 -4.1
BZGR  Bezymyannyi-Gr        7.79 299 P    Pn    03 42 56.1 +3.0
BZGR                                 S    Sn    03 44 18.6 -1.2
BZGR  Bezymyannyi-Gr        7.79 299 eP   Pn    03 42 56.1 +3.0
BZGR                                 eS   Sn    03 44 18.6 -1.2
BZP   Bezymyannyi-Pe        7.86 299 eP   Pn    03 42 57.7 +3.6
BZMR  Bezymyannaya          7.89 299 P    Pn    03 42 57.8 +3.2
BZMR  Bezymyannaya          7.89 299 eP   Pn    03 42 57.8 +3.2
TUMR  Tumrok                7.90 294 P    Pn    03 42 54.9 +0.3
TUMR                                 S    Sn    03 44 17.9 -4.7
TUMR  Tumrok                7.90 294 eP   Pn    03 42 58.0 +3.4
TUMR                                 eS   Sn    03 44 21.0 -1.6
BZWR  Bezymyannyi-We        7.90 299 P    Pn    03 42 58.1 +3.4
BZWR                                 S    Sn    03 44 22.7  0.0
BZWR  Bezymyannyi-We        7.90 299 eP   Pn    03 42 58.1 +3.4
BZWR                                 eS   Sn    03 44 22.7  0.0
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KMNR  Kamenistaya           7.98 297 P    Pn    03 42 58.9 +3.2
KMNR                                 S    Sn    03 44 24.9 +0.5
KMNR  Kamenistaya           7.98 297 eP   Pn    03 42 58.9 +3.2
KMNR                                 eS   Sn    03 44 24.9 +0.5
KIRR  Kirishev              7.98 299 P    Pn    03 42 59.9 +4.1
KIRR                                 S    Sn    03 44 25.0 +0.4
KIRR  Kirishev              7.98 299 eP   Pn    03 42 59.9 +4.1
KIRR                                 eS   Sn    03 44 25.0 +0.4
SDLR  Sedlovina             8.44 279 P    Pn    03 43 05.2 +3.2
SDLR                                 S    Sn    03 44 32.2 -3.6
SDLR  Sedlovina             8.44 279 eP   Pn    03 43 05.2 +3.2
SDLR                                 eS   Sn    03 44 32.2 -3.6
UGLR  Uglovaya              8.47 279 P    Pn    03 43 05.6 +3.1
UGLR                                 S    Sn    03 44 34.4 -2.3
UGLR  Uglovaya              8.47 279 eP   Pn    03 43 05.6 +3.1
UGLR                                 eS   Sn    03 44 34.4 -2.3
SMAR  Somma                 8.49 279 P    Pn    03 43 05.5 +2.8
SMAR                                 S    Sn    03 44 36.0 -1.1
SMAR  Somma                 8.49 279 eP   Pn    03 43 05.5 +2.8
SMAR                                 eS   Sn    03 44 36.0 -1.1
AVH   Avacha                8.52 279 P    Pn    03 43 06.3 +3.2
AVH                                  S    Sn    03 44 36.2 -1.7
AVH   Avacha                8.52 279 eP   Pn    03 43 06.3 +3.2
AVH                                  eS   Sn    03 44 36.2 -1.7
KRX   Arik                  8.57 280 P    Pn    03 43 06.8 +2.9
KRX                                  S    Sn    03 44 35.6 -3.6
KRX   Arik                  8.57 280 eP   Pn    03 43 06.8 +2.9
KRX                                  eS   Sn    03 44 35.6 -3.6
PET   Petropavlovsk         8.59 278 eP   Pn    03 43 07.4 +3.5
PET                                  eS   Sn    03 44 39.5 +0.2
PET                                  pmax pmax
      comp=Z,21nm,0.5s
MTVR  Mutnovka              8.92 274 P    Pn    03 43 11.7 +3.0
MTVR  Mutnovka              8.92 274 eP   Pn    03 43 11.7 +3.0
GRL   Gorelyy               8.98 275 P    Pn    03 43 12.9 +3.5
GRL                                  S    Sn    03 44 46.6 -2.6
GRL   Gorelyy               8.98 275 eP   Pn    03 43 12.9 +3.5
GRL                                  eS   Sn    03 44 46.6 -2.6
GNL   Ganaly                8.99 282 P    Pn    03 43 13.1 +3.5
GNL                                  S    Sn    03 44 47.0 -2.4
GNL   Ganaly                8.99 282 eP   Pn    03 43 13.1 +3.5
GNL                                  eS   Sn    03 44 47.0 -2.4
PEA0B Petropavlovsk-        9.16 278 Pn   Pn    03 43 15.4 +3.6
PEA0B Petropavlovsk-        9.16 278⇑iP   Pn    03 43 15.0 +3.3
PETK  Petropavlovsk-        9.16 278 P    Pn    03 43 14.2 +2.5
      comp=Z,13nm,0.4s,baz=97,slow=19,SNR=42
PETK                                 S    Sn    03 44 50.9 -2.4
      comp=Z,10nm,0.5s,baz=140,slow=7.0,SNR=3.6
PETK                                 LR   LR    03 47 02.8
      comp=Z,49nm,18.6s,baz=69,slow=39
PETK  Petropavlovsk-        9.16 278 Pn   Pn    03 43 15.2 +3.5
SPIA  Saint Paul Isl       10.69  59      Pn    03 43 34.7 +2.1
MA2   Magadan              14.03 308 P    P     03 44 26.3 +1.7
      comp=Z,13nm,0.6s,baz=92,slow=7.9,SNR=9.9
MA2                                  LR   LR    03 49 22.9
      comp=Z,31nm,20.8s,baz=239,slow=36
MA2   Magadan              14.03 308 Pn   P     03 44 22.7 -1.9
MA2   Magadan              14.03 308⇑eP   Pn    03 44 19.6 +1.4
MA2                                  pmax pmax
      comp=Z,4.0nm,1.0s
SEY   Seymchan             14.86 321 P    P     03 44 35.1 +1.3
      comp=Z,7.0nm,0.5s,baz=125,slow=12,SNR=12
SEY   Seymchan             14.86 321⇑eP   Pn    03 44 27.3 -1.7
SEY                                  pmax pmax
      comp=Z,6.0nm,1.0s
BILL  Bilibino             15.68 351 Pn   P     03 44 41.3 -1.6
BILL  Bilibino             15.68 351⇑eP   P     03 44 41.8 -1.1
BILL                                 pmax pmax
      comp=Z,15nm,1.7s
BILL                                 MLR  MLR
      comp=Z,21nm,14.0s
ANM   Nome                 16.29  35      P     03 44 48.6 -1.1
ANM   Nome                 16.29  35 P    P     03 44 48.6 -1.1
ANM                                  pmax pmax
      comp=Z,3.0nm,0.8s
P18K  Big Mountain,        18.89  57      Pn    03 45 18.9 -0.6
P18K                                 IAmb IAmb  03 45 22.2
      comp=Z,33nm,1.1s
ILSW  Iliamna Southw       20.01  55 P    P     03 45 29.8 -1.0
ILSW                                 IAmb IAmb  03 46 02.0
      comp=Z,16nm,1.1s
KDAK  Kodiak Island        20.19  62 P    P     03 45 30.9 -1.6
      comp=Z,14nm,0.3s,baz=290,slow=2.7,SNR=60
KDAK                                 LR   LR    03 53 11.8
      comp=Z,23nm,21.9s,baz=154,slow=36
      comp=Z,14nm,0.3s
KDAK  Kodiak Island        20.19  62 P    P     03 45 31.5 -1.0
KDAK                                 IAmb IAmb  03 45 32.1
      comp=Z,35nm,1.1s
KDAK  Kodiak Island        20.19  62 P    P     03 45 31.5 -1.0
KDAK                                 pmax pmax
      comp=Z,35nm,1.1s
K20K  Telida               20.23  45 P    Pn    03 45 33.5 -1.8
RSO   Redoubt South        20.26  54 P    Pn    03 45 34.5 -1.3
M20K  Styx River           20.30  50 P    Pn    03 45 34.9 -1.4
M20K                                 IAmb IAmb  03 45 58.9
      comp=Z,26nm,1.5s
PPLA  Purkeypile           20.94  47 P    Pn    03 45 41.7 -2.1
PPLA                                 IAmb IAmb  03 45 46.0
      comp=Z,38nm,1.5s
SKT   Skwentna             21.07  50 P    P     03 45 43.1 +1.1
SKT                                  IAmb IAmb  03 45 46.4
      comp=Z,19nm,1.2s
CAST  Castle Rocks         21.11  46 P    P     03 45 43.4 +0.9
IMAR  Indian Mountai       21.24  38 P    P     03 45 43.6 -0.2
H21K  Melozitna Rive       21.48  40 P    P     03 45 45.5 -0.9
H21K                                 IAmb IAmb  03 45 49.9
      comp=Z,28nm,1.5s
KTH   Kantishna Hill       21.65  46 P    P     03 45 49.2 +0.9
O22K  Cooper Landing       21.75  54 P    P     03 45 49.1 -0.2
BPAW  Bear Paw Mtn.        21.75  44 P    P     03 45 49.6 +0.2
TRF   Thorofare Moun       21.91  46 P    P     03 45 51.8 +0.7
TRF                                  IAmb IAmb  03 45 53.7
      comp=Z,23nm,1.4s
MLY   Manley               22.11  42 P    P     03 45 53.3 +0.2
BWN   Browne               22.42  45 P    P     03 45 57.7 +1.3
KNK   Knik Glacier         22.44  52 P    P     03 45 56.0 -0.8
SML   Sawmill              22.54  51 P    P     03 45 57.5 -0.4
MCK   McKinley             22.56  46 P    P     03 45 57.5 -0.5
MCK                                  IAmb IAmb  03 45 59.6
      comp=Z,9.8nm,0.7s
MCK   McKinley             22.56  46 P    P     03 45 57.5 -0.5
MCK                                  pmax pmax
      comp=Z,10.0nm,0.7s
NEA2  Nenana               22.68  44 P    P     03 45 59.2  0.0
I23K  Minto, Yukon-K       22.70  42 P    P     03 45 59.5 +0.1
SCM   Sheep Creek Mo       23.02  51 P    P     03 46 02.0 -0.8
SCM                                  IAmb IAmb  03 46 04.3
      comp=Z,21nm,0.8s
SCM   Sheep Creek Mo       23.02  51 P    P     03 46 02.0 -0.8
SCM                                  pmax pmax
      comp=Z,21nm,0.8s
WRH   Wood River Hil       23.07  44 P    P     03 46 02.8 -0.4
MDM   Murphy Dome          23.12  43 P    P     03 46 03.1 -0.6
CCB   Clear Creek Bu       23.23  44 P    P     03 46 04.4 -0.4
TCOL  CIGO, UAF Yank       23.25  43 P    P     03 46 05.0  0.0
TCOL                                 IAmb IAmb  03 46 30.1
      comp=Z,13nm,1.0s
COLA  College              23.26  43 P    P     03 46 04.9 -0.1
COLA                                 IAmb IAmb  03 46 30.1
      comp=Z,13nm,1.0s
COLA  College              23.26  43 P    P     03 46 04.9 -0.1
COLA                                 pmax pmax
      comp=Z,13nm,1.0s
H24K  Noodor Dome          23.48  41 P    P     03 46 06.6 -0.6
POKR  Poker Plat Res       23.48  43 P    P     03 46 07.1 -0.1
POKR                                 IAmb IAmb  03 46 09.4
      comp=Z,11nm,0.9s
HDA   Harding Lake         23.54  45 P    P     03 46 07.7 -0.1
IL31                       23.64  44 P    P     03 46 07.3 -1.3
IL31                                 IAmb IAmb  03 46 09.2
      comp=Z,16nm,1.4s
ILAR  Eielson Array        23.64  44 P    P     03 46 07.2 -1.5
      comp=Z,3.1nm,0.7s,baz=248,slow=8.7,SNR=44
      comp=Z,3.1nm,0.7s
KLU   Klutina              23.66  52 P    P     03 46 08.0 -1.0
KLU                                  IAmb IAmb  03 46 17.7
      comp=Z,17nm,1.2s
PAX   Paxson               23.99  48 P    P     03 46 11.9 -0.1
PAX                                  IAmb IAmb  03 46 13.1
      comp=Z,9.2nm,0.9s
PAX   Paxson               23.99  48 P    P     03 46 11.9 -0.1
PAX                                  pmax pmax
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      comp=Z,9.0nm,0.9s
PRP   Porcupine Dome       24.35  42 P    P     03 46 15.0 -0.4
PRP                                  IAmb IAmb  03 46 16.0
      comp=Z,6.9nm,0.7s
RIDG  Independent Ri       24.35  47 P    P     03 46 14.3 -1.0
RIDG                                 IAmb IAmb  03 46 16.5
      comp=Z,30nm,1.4s
YAK   Yakutsk              24.60 309 P    P     03 46 17.8 +0.4
      comp=Z,12nm,0.4s,baz=97,slow=1.1,SNR=4.8
      comp=Z,12nm,0.4s
YAK   Yakutsk              24.60 309 eP   P     03 46 17.9 +0.4
YAK                                  pmax pmax
      comp=Z,25nm,0.8s
YAK                                  pmax pmax
      comp=N,2.0nm,0.8s
YAK                                  pmax pmax
      comp=E,8.0nm,1.0s
GLB   Gilahina Butte       24.68  52 P    P     03 46 17.9 -0.3
DOT   Dot Lake             24.69  47 P    P     03 46 17.5 -0.9
FYU   Fort Yukon           24.70  40 P    P     03 46 18.1 -0.2
FYU                                  IAmb IAmb  03 46 20.5
      comp=Z,13nm,1.0s
SCRK  Sand Creek           24.76  46 P    P     03 46 18.3 -0.8
MCARA McCarthy VSAT        25.05  52 P    P     03 46 21.3 -0.3
BMAR  Burnt Mountain       25.15  38 P    P     03 46 22.7 +0.2
K27K  Chicken              25.60  46 P    P     03 46 26.2 -0.4
M27K  Edge Creek, AK       25.61  50 P    P     03 46 27.2 +0.5
M27K                                 IAmb IAmb  03 46 30.4
      comp=Z,12nm,1.1s
L27K  Beaver Creek,        25.65  48 P    P     03 46 27.5 +0.5
BARN  Barnard Glacie       25.72  53 P    P     03 46 27.5 -0.4
BARN                                 IAmb IAmb  03 46 31.9
      comp=Z,16nm,1.0s
KLR   Kul'dur              25.85 279 P    P     03 46 29.7 +0.8
      comp=Z,0.8nm,0.6s,baz=349,slow=5.0,SNR=4.5
KLR                                  LR   LR    03 57 02.3
      comp=Z,44nm,21.5s,baz=329,slow=37
      comp=Z,0.8nm,0.6s
KLR   Kul'dur              25.85 279⇓eP   P     03 46 29.9 +1.0
KLR                                  pmax pmax
      comp=Z,1.0nm,0.9s
EGAK  Eagle                26.07  45 P    P     03 46 29.6 -1.1
EGAK                                 IAmb IAmb  03 46 31.0
      comp=Z,7.8nm,0.7s
TIXI  Tiksi                26.92 331 P    P     03 46 37.9 -0.4
      comp=Z,6.0nm,0.7s,baz=90,slow=4.8,SNR=9.6
      comp=Z,6.0nm,0.7s
TIXI  Tiksi                26.92 331 P    P     03 46 38.7 +0.4
TIXI  Tiksi                26.92 331⇑eP   P     03 46 38.2 -0.1
TIXI                                 pmax pmax
      comp=Z,5.0nm,0.7s
INK   Inuvik               29.42  38 P    P     03 46 59.9 -0.7
      comp=Z,1.2nm,0.3s,baz=271,slow=7.6,SNR=22
      comp=Z,1.2nm,0.3s
INK   Inuvik               29.42  38 P    P     03 47 00.3 -0.4
INK   Inuvik               29.42  38 P    P     03 47 00.3 -0.4
INK                                  pmax pmax
      comp=Z,4.0nm,1.2s
C36M  Paulatuk             32.87  36 P    P     03 47 30.5 -0.5
HIA   Hailar               32.96 286⇑eP   P     03 47 32.8 +0.7
HIA                                  pmax pmax
      comp=Z,2.0nm,0.6s
H11N2 WAKE ISLAND Hy       33.26 190 T    T     04 23 02.2
      baz=6.1,slow=76,SNR=244
H11N3 WAKE ISLAND Hy       33.27 190 T    T     04 23 01.8
      baz=6.1,slow=76,SNR=331
H11N1 WAKE ISLAND Hy       33.28 190 T    T     04 23 03.5
      baz=6.1,slow=76,SNR=343
H11S1 WAKE ISLAND Hy       34.49 190 T    T     04 24 34.4
      baz=6.1,slow=76,SNR=451
H11S3 WAKE ISLAND Hy       34.51 190 T    T     04 24 35.5
      baz=6.1,slow=76,SNR=481
H11S2 WAKE ISLAND Hy       34.51 190 T    T     04 24 34.7
      baz=6.1,slow=76,SNR=352
YKA   Yellowknife Ar       38.02  46 P    P     03 48 14.4 -0.8
      comp=Z,3.3nm,0.7s,baz=289,slow=8.0,SNR=36
      comp=Z,3.3nm,0.7s
YKA   Yellowknife Ar       38.02  46 eP   P     03 48 15.0 -0.2
YKA                                  pmax pmax
      comp=Z,3.0nm,0.7s
SONM  Songino Array        41.38 291 P    P     03 48 44.5 +1.1
      comp=Z,0.5nm,0.5s,baz=58,slow=8.5,SNR=4.6
SONM                                 pP   sP    03 49 00.1 -2.0
      comp=Z,1.2nm,0.6s,baz=61,slow=7.9,SNR=10.0
      comp=Z,0.5nm,0.5s
B08A  Colville Reser       41.88  68 P    P     03 48 47.4  0.0
B08A                                 IAmb IAmb  03 48 48.1
      comp=Z,5.7nm,0.8s
HHC   Hu-ho-hao-te         42.36 279 eP   P     03 48 54.6 +3.1
HHC                                  pmax pmax
      comp=Z,18nm,0.7s
HHC                                  pmax pmax
      comp=Z,180nm,6.6s
NEW   Newport              43.17  67 P    P     03 48 57.5 -0.4
NEW                                  IAmb IAmb  03 48 58.4
      comp=Z,5.4nm,0.8s
NEW   Newport              43.17  67 P    P     03 48 57.5 -0.4
NEW                                  pmax pmax
      comp=Z,5.0nm,0.8s
YBH   Yreka Blue Hor       43.72  78 LR   LR    04 03 24.8
      comp=Z,28nm,18.8s,baz=326,slow=31
WALA  Waterton Lakes       44.50  64 P    P     03 49 08.6 -0.2
PAHR  Pah Rah Range        46.96  78 P    P     03 49 28.1 -0.1
PAHR                                 IAmb IAmb  03 49 28.5
      comp=Z,4.0nm,0.9s
HRY   Holter Researc       47.00  66 P    P     03 49 27.9 -0.5
EGMT  Eagleton             47.36  63 P    P     03 49 30.4 -0.7
EGMT                                 IAmb IAmb  03 49 31.2
      comp=Z,5.6nm,0.7s
HLID  Hailey               47.45  70 P    P     03 49 31.1 -1.0
MCMT  McKenzie Canyo       47.56  68 P    P     03 49 32.5 -0.5
BOZ   Bozeman (W)          47.78  67 P    P     03 49 33.6 -0.9
BOZ                                  IAmb IAmb  03 49 34.8
      comp=Z,5.2nm,0.8s
BOZ   Bozeman (W)          47.78  67 P    P     03 49 33.6 -0.9
BOZ                                  pmax pmax
      comp=Z,5.0nm,0.8s
NVAR  Mina Array Bea       48.42  78 P    P     03 49 39.3 -0.4
      comp=Z,1.2nm,0.6s,baz=295,slow=7.4,SNR=8.6
NVAR                                 PcP  PcP   03 51 05.8 +0.5
      comp=Z,0.4nm,0.5s,baz=301,slow=4.1,SNR=3.7
      comp=Z,1.2nm,0.6s
YHL   Hebgen Lake          48.49  67 P    P     03 49 40.1 -0.1
ELK   Elko                 48.74  74 P    P     03 49 42.0 -0.1
ELK   Elko                 48.74  74 P    P     03 49 42.0 -0.1
ELK                                  pmax pmax
      comp=Z,3.0nm,1.0s
H17A  Grant Village        49.11  67 P    P     03 49 44.7 -0.2
H17A                                 IAmb IAmb  03 49 46.8
      comp=Z,4.9nm,0.9s
IMW   Indian Meadow        49.22  68 P    P     03 49 45.8  0.0
IMW                                  IAmb IAmb  03 49 46.7
      comp=Z,3.4nm,1.0s
FLWY  Flagg Ranch          49.24  68 P    P     03 49 46.0 +0.2
RLMT  Red Lodge            49.39  66 P    P     03 49 46.8 -0.1
RLMT                                 IAmb IAmb  03 49 48.0
      comp=Z,9.0nm,1.2s
HVU   Hansel Valley        49.51  71 P    P     03 49 47.4 -0.4
HVU                                  IAmb IAmb  03 49 49.0
      comp=Z,3.0nm,0.8s
HVU   Hansel Valley        49.51  71 P    P     03 49 47.4 -0.4
HVU                                  pmax pmax
      comp=Z,3.0nm,0.8s
SPUT  South Promonto       50.00  72 P    P     03 49 51.6  0.0
R11A  Troy Canyon, C       50.09  77 P    P     03 49 52.3  0.0
R11A                                 IAmb IAmb  03 49 52.9
      comp=Z,4.6nm,1.2s
DUG   Dugway, Tooele       50.51  73 P    P     03 49 55.6 +0.2
DUG                                  IAmb IAmb  03 49 56.5
      comp=Z,5.1nm,0.9s
DUG   Dugway, Tooele       50.51  73 P    P     03 49 55.6 +0.2
DUG                                  pmax pmax
      comp=Z,5.0nm,1.0s
TPNV  Topopah Spring       50.62  78 P    P     03 49 56.2 -0.2
TPNV                                 IAmb IAmb  03 49 57.1
      comp=Z,4.3nm,0.8s
TPNV  Topopah Spring       50.62  78 P    P     03 49 56.2 -0.2
TPNV                                 pmax pmax
      comp=Z,4.0nm,0.9s
BW06  Boulder Array        50.71  68 P    P     03 49 56.8 -0.3
BW06                                 IAmb IAmb  03 49 57.5
      comp=Z,5.3nm,0.9s
PD31  Pinedale Array       50.71  68 P    P     03 49 56.9 -0.2
PD31                                 IAmb IAmb  03 49 57.5
      comp=Z,4.7nm,0.9s
PDAR  Pinedale Array       50.71  68 P    P     03 49 56.6 -0.5
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                comp=Z,3.0nm,0.6s,baz=311,slow=3.0,SNR=40
                comp=Z,3.0nm,0.6s
PDAR   Pinedale Array     50.71  68  P        P          03 49 56.8  -0.3
PRN    Pahroc Range       51.03  77  P        P          03 49 59.5  +0.1
PRN                                  IAmb     IAmb       03 50 00.4
                comp=Z,7.9nm,1.2s
NLU    North Lily Min     51.09  73  P        P          03 49 59.4  -0.5
NLU                                  IAmb     IAmb       03 50 00.7
                comp=Z,4.4nm,1.1s
GSC    Goldstone, Bar     51.40  80  P        P          03 50 02.1   0.0
GSC                                  IAmb     IAmb       03 50 03.2
                comp=Z,7.4nm,1.1s
GSC    Goldstone, Bar     51.40  80  P        P          03 50 02.1   0.0
GSC                                  pmax     pmax
                comp=Z,7.0nm,1.2s
BSUT   Blindstream Ca     51.47  71  P        P          03 50 02.6  -0.3
BSUT                                 IAmb     IAmb       03 50 04.3
                comp=Z,10.0nm,1.5s
TMUT   Trail Mountain     52.03  73  P        P          03 50 07.0   0.0
RDMU   Red Mountain       52.13  70  P        P          03 50 07.9  +0.2
Q16A   Castle Valley      52.30  73  P        P          03 50 09.1  +0.2
Q16A                                 IAmb     IAmb       03 50 09.7
                comp=Z,3.7nm,0.7s
SRU    San Rafael Swe     52.55  72  P        P          03 50 10.9  +0.2
SRU    San Rafael Swe     52.55  72  P        P          03 50 10.9  +0.2
SRU                                  pmax     pmax
                comp=Z,7.0nm,0.7s
RSSD   Black Hills        52.90  64  IAmb     IAmb       03 50 13.3
                comp=Z,3.7nm,0.7s
RSSD                                 P        P          03 50 13.6  +0.3
ULM    Lac du Bonnet      53.14  53  P        P          03 50 14.0  -0.6
                comp=Z,2.3nm,0.3s,baz=319,slow=8.2,SNR=5.0
                comp=Z,2.3nm,0.3s
ULM    Lac du Bonnet      53.14  53 eP        P          03 50 14.4  -0.3
ULM                                  pmax     pmax
                comp=Z,2.0nm,0.3s
O20A   White River Ci     53.18  70  P        P          03 50 15.6  +0.2
U15A   North Rim          53.32  76  P        P          03 50 16.6   0.0
U15A                                 IAmb     IAmb       03 50 17.8
                comp=Z,4.2nm,0.9s
PV11   David Mesa, Pa     54.05  72  P        P          03 50 21.9  +0.1
PV13   Radium Mtn., P     54.17  72  P        P          03 50 22.6  -0.2
WMQ    Urumqi             54.19 297 eP        P          03 50 27.8  +5.2
KURK   Kurchatov          54.24 309  P        P          03 50 23.1  +0.3
KURK                                 IAmb     IAmb       03 50 23.7
                comp=Z,5.4nm,0.9s
KURK   Kurchatov          54.24 309⇑eP        P          03 50 23.0  +0.3
KURK                                 pmax     pmax
                comp=Z,11nm,1.7s
ISCO   Idaho Springs      54.90  69  P        P          03 50 27.9  -0.2
ISCO                                 IAmb     IAmb       03 50 29.6
                comp=Z,3.8nm,0.8s
ISCO   Idaho Springs      54.90  69  P        P          03 50 27.9  -0.2
ISCO                                 pmax     pmax
                comp=Z,4.0nm,0.8s
MK31   Makanchi Array     55.05 303  P        P          03 50 28.2  -0.4
MK31   Makanchi Array     55.05 303ceP        P          03 50 28.3  -0.4
MKAR   Makanchi Array     55.05 303  P        P          03 50 28.3  -0.4
                comp=Z,1.0nm,0.6s,baz=54,slow=6.5,SNR=15
                comp=Z,1.0nm,0.6s
S22A   4UR Ranch, Cre     55.61  71  P        P          03 50 33.2   0.0
X18A   Snowflake          56.01  76  P        P          03 50 35.7  -0.3
SDCO   Great Sand Dun     56.37  70  P        P          03 50 38.0  -0.6
SDCO                                 IAmb     IAmb       03 50 40.1
                comp=Z,6.1nm,1.1s
BVAR   Borovoye Array     56.39 315  LR       LR         04 14 36.8
                comp=Z,60nm,18.5s,baz=326,slow=36
KSCO   Kaye Shedlock'     57.12  67  P        P          03 50 43.9  +0.2
T25A   Trinidad           57.41  70  P        P          03 50 45.8  -0.2
ANMO   Albuquerque        57.77  73  P        P          03 50 48.5  +0.1
ANMO   Albuquerque        57.77  73⇓eP        P          03 50 49.0  +0.6
ANMO                                 pmax     pmax
                comp=Z,16nm,2.5s
ARU    Arti               58.59 324⇑iP        P          03 50 52.4  -1.1
ARU                                  pmax     pmax
                comp=Z,2.0nm,0.9s
SCHQ   Schefferville      61.98  34  P        P          03 51 15.9  -0.9
                comp=Z,3.2nm,0.8s,baz=339,slow=7.2,SNR=5.8
                comp=Z,3.2nm,0.8s
POST   Post               61.98  72  P        P          03 51 17.2   0.0
POST                                 IAmb     IAmb       03 51 18.1
                comp=Z,6.6nm,0.9s
FINES  FINESS Array B     63.14 343  P        P          03 51 23.7  -0.6
                comp=Z,1.5nm,0.7s,baz=26,slow=6.3,SNR=9.1
                comp=Z,1.5nm,0.7s
R40A   Maddies Statio     63.32  61  P        P          03 51 24.8  -1.1
TX31   Lajitas Ar. Si     63.44  76  P        P          03 51 27.3  +0.3
TX32   Lajitas Array      63.44  76  P        P          03 51 27.3  +0.3
TXAR   Lajitas Array      63.44  76  P        P          03 51 27.1  +0.1
                comp=Z,5.6nm,0.7s,baz=306,slow=5.6,SNR=38
TXAR                                 pP       sP         03 51 44.7  -2.0
                comp=Z,0.6nm,0.5s,baz=299,slow=6.0,SNR=2.2
                comp=Z,5.6nm,0.7s
ABKAR  Akbulak array      63.59 318  P        P          03 51 28.0  +0.4
ABKAR                                IAmb     IAmb       03 51 44.5
                comp=Z,5.0nm,1.4s
NOA    NORSAR Array B     65.63 350  P        P          03 51 40.1  -0.6
                comp=Z,0.3nm,0.5s,baz=1.0,slow=5.9,SNR=2.0
                comp=Z,0.3nm,0.5s
PMG    Port Moresby       65.68 208  P        P          03 51 42.5  +1.0
PMG    Port Moresby       65.68 208  P        P          03 51 42.5  +1.0
PMG                                  pmax     pmax
                comp=Z,35nm,1.2s
LUWI   Luwuk              67.92 236  P        P          03 51 56.0  +0.2
CLTN   Cedars of Leba     68.10  59  P        P          03 51 56.5  -0.2
WB0    Warramunga Arr     79.53 217  P        P          03 53 03.8  +0.1
WB0                                  IAmb     IAmb       03 53 39.7
                comp=Z,10nm,1.4s
WRA    Warramunga Arr     79.72 217  P        P          03 53 05.2  +0.5
                comp=Z,1.0nm,0.8s,baz=31,slow=6.3,SNR=6.5
WRA                                  pP       sP         03 53 23.0  -1.4
                comp=Z,0.6nm,0.8s,baz=32,slow=6.1,SNR=3.6
                comp=Z,1.0nm,0.8s
WRA    Warramunga Arr     79.72 217 eP        P          03 53 05.6  +0.9
WRA                                  pmax     pmax
                comp=Z,1.0nm,0.7s
ASAR   Alice Springs      83.29 215  P        P          03 53 24.2  +0.7
                comp=Z,0.5nm,0.5s,baz=8.2,slow=5.2,SNR=5.2
ASAR                                 pP       sP         03 53 42.2  -1.0
                comp=Z,0.4nm,0.3s,baz=27,slow=5.2,SNR=2.9
                comp=Z,0.5nm,0.5s
ESDC   Sonseca Array      87.92 358  P        P          03 53 46.3  -0.2
                comp=Z,0.4nm,0.8s,baz=313,slow=4.9,SNR=1.7
                comp=Z,0.4nm,0.8s
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*NEIC **16** 03:47:36.3±1.2,24°.07S±0°.08×66°.8W±0°.1,h242km±11km, mb4.3/5,ML4.4(GUC),Error ellipse: s-maj=17.2km s-min=11.3km az=101.0*

*SJA **16** 03:47:38.4±1.7,23°.99S×66°.71W,h180km,ML4.0,MW3.9, Hypocentre not reviewed by the ISC*

*GUC **16** 03:47:38.4±0.7,23°.97S×67°.10W,h245km±10km,ML4.4*

ISC 16 03:47:34.5±0.9,**24°.02S**±0°.05×**66°.88W**±0°.09,**h250**km,**n55**, σ1^{s}**84**/64,**3C,Salta Province**

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Code   Station Name        Δ°   AZ°     Phase ID          Time      Res
                                       Op       ISC      h  m  s    ISC
HJA    Humahuaca          1.57  59 eP                    03 48 12.5
HJA                                eS                    03 48 36.1
YJA    Yavi               2.22  35 eP                    03 48 19.4
YJA                                eS                    03 48 48.9
LVC    Limon Verde        2.34 306          Pn           03 48 22.0  +1.4
LVC    Limon Verde        2.34 306 i P      Pn           03 48 21.8  +1.2
LVC                                eS       S            03 48 55.3  -1.6
LVC    Limon Verde        2.34 306 eP                    03 48 21.9
LVC                                eS                    03 48 55.9
PB15   IPOC Station P     2.51 288          Pn           03 48 24.0  +1.8
PB15   IPOC Station P     2.51 288⇑iP       Pn           03 48 24.0  +1.8
PB15                               eS       S            03 48 58.1  -1.6
PB15   IPOC Station P     2.51 288 eP                    03 48 23.9
PB15                               eS                    03 48 58.8
PB15                                IAML                 03 49 02.6
                comp=Z,2µm,0.1s
GO02   Mina Guanaco       2.72 245  Pn      Pn           03 48 26.0  +1.6
GO02   Mina Guanaco       2.72 245 i P      Pn           03 48 26.1  +1.8
GO02                               eS       S            03 49 03.2  -0.5
GO02                                IAML                 03 49 05.9
                comp=N,627nm,0.1s
GO02   Mina Guanaco       2.72 245 eP                    03 48 26.2
GO02                               eS                    03 49 03.5
PB06   IPOC Station P     2.80 297          Pn           03 48 26.8  +1.7
PB06   IPOC Station P     2.80 297⇑iP       Pn           03 48 26.9  +1.9
PB06                               eS       S            03 49 03.0  -2.0
PB06                                IAML                 03 49 05.8
                comp=N,583nm,0.2s
PB06   IPOC Station P     2.80 297 eP                    03 48 26.9
PB06                               eS                    03 49 03.5
PB06                                IAML                 03 49 05.9
                comp=Z,311nm,0.1s
PB09   IPOC Station P     3.11 315          Pn           03 48 30.6  +2.1
PB09   IPOC Station P     3.11 315 eP       Pn           03 48 30.5  +2.1
PB09   IPOC Station P     3.11 315 eP                    03 48 30.4
PB09                               eS                    03 49 09.2
PB14   IPOC Station P     3.27 259  Pn      Pn           03 48 32.4  +2.0
PB14   IPOC Station P     3.27 259 eP       Pn           03 48 32.3  +2.0
PB14   IPOC Station P     3.27 259 eP                    03 48 32.6
PB14                               eS                    03 49 13.4
PB14                                IAML                 03 49 16.2
                comp=Z,238nm,0.4s
PB03   IPOC Station P     3.30 306          Pn           03 48 32.0  +1.5
PB03   IPOC Station P     3.30 306⇑iP       Pn           03 48 32.2  +1.7
PB03                               eS       S            03 49 12.4  -2.4
PB03   IPOC Station P     3.30 306 eP                    03 48 32.4
PB03                               eS                    03 49 13.3
PB03                                IAML                 03 49 17.1
                comp=Z,269nm,0.1s
PB10   IPOC Station P     3.41 278  Pn      Pn           03 48 33.5  +1.9
PB10   IPOC Station P     3.41 278 i P      Pn           03 48 33.9  +2.3
PB10                               eS       S            03 49 14.7  -2.0
PB10   IPOC Station P     3.41 278 eP                    03 48 33.7
PB10                               eS                    03 49 16.2
PB10                                IAML                 03 49 19.1
                comp=Z,170nm,0.3s
PB04   IPOC Station P     3.45 298          Pn           03 48 34.0  +1.8
PB04   IPOC Station P     3.45 298 i P      Pn           03 48 34.0  +1.8
PB04                               eS       S            03 49 15.8  -2.1
PB04   IPOC Station P     3.45 298 eP                    03 48 34.2
PB04                               eS                    03 49 17.2
PB04                                IAML                 03 49 20.2
                comp=Z,209nm,0.1s
AC02   Maricunga          3.47 216          Pn           03 48 33.0  +0.3
PB07   IPOC Station P     3.59 309          Pn           03 48 35.2  +1.3
PB07   IPOC Station P     3.59 309 i P      Pn           03 48 35.6  +1.7
PB07                               eS       S            03 49 18.3  -2.5
PB07   IPOC Station P     3.59 309 eP                    03 48 35.7
PB07                               eS                    03 49 19.9
PB07                                IAML                 03 49 23.1
                comp=Z,127nm,0.3s
PB01   IPOC Station P     3.82 320          Pn           03 48 38.2  +1.8
PB01   IPOC Station P     3.82 320 i P      Pn           03 48 38.0  +1.6
PB01                               eS       S            03 49 23.8  -1.7
PB01   IPOC Station P     3.82 320 eP                    03 48 38.1
PB01                               eS                    03 49 24.9
PB01                                IAML                 03 49 27.4
                comp=Z,95nm,0.2s
PB02   IPOC Station P     3.87 313          Pn           03 48 38.4  +1.4
PB02   IPOC Station P     3.87 313 i P      Pn           03 48 38.5  +1.4
PB02                               eS       S            03 49 24.0  -2.5
PB02   IPOC Station P     3.87 313 eP                    03 48 38.6
PB02                               eS                    03 49 25.0
PB02                                IAML                 03 49 26.6
                comp=Z,194nm,0.4s
AC01   Pan de Azucar      3.99 237  Pn      Pn           03 48 39.5  +1.3
AC01   Pan de Azucar      3.99 237 eP       Pn           03 48 39.5  +1.3
PB08   IPOC Station P     4.40 331          Pn           03 48 45.9  +2.3
PB08   IPOC Station P     4.40 331 eP       Pn           03 48 45.8  +2.3
PB08   IPOC Station P     4.40 331 eP                    03 48 45.8
PB08                               eS                    03 49 39.0
CYA    Choya              4.51 168 eP                    03 48 46.2
CYA                                eS                    03 49 25.3
TA01   Diego Aracena      4.60 318  Pn      Pn           03 48 47.2  +1.6
TA01   Diego Aracena      4.60 318 i P      Pn           03 48 47.1  +1.6
GO03   Copiap             4.67 220  Pn      Pn           03 48 47.8  +1.4
GO03   Copiap             4.67 220 eP       Pn           03 48 47.7  +1.4
GO03   Copiap             4.67 220 eP                    03 48 48.2
GO03                               eS                    03 49 42.1
GO01   Chusmiza           4.83 333          Pn           03 48 50.8  +2.0
PB11   IPOC Station P     4.96 328  Pn      Pn           03 48 51.1  +1.0
PB11   IPOC Station P     4.96 328 eP       Pn           03 48 51.1  +1.0
PSGC   Pisagua            5.33 325 eP       Pn           03 48 55.0  +0.4
PSGCX  Pisagua            5.33 325          Pn           03 48 55.1  +0.5
MNMC   Minye Minye        5.48 332          Pn           03 48 58.3  +1.7
MNMC   Minye Minye        5.48 332 eP       Pn           03 48 58.2  +1.6
AC04   Llanos de Chal     5.62 221  Pn      Pn           03 48 59.2  +1.3
AC04   Llanos de Chal     5.62 221 eP       Pn           03 48 59.3  +1.3
AC05   El Transito        5.68 212  Pn      Pn           03 48 59.7  +0.9
LCO    Las Campanas       6.04 214  Pn      Pn           03 49 04.7  +1.3
PB16   IPOC Station P     6.17 336          Pn           03 49 07.5  +2.1
PB12   IPOC Station P     6.27 328  Pn      Pn           03 49 07.3  +1.1
PB18   Visviri            6.84 339          Pn           03 49 17.1  +3.3
GO04   Tololo Observa     7.06 209  Pn      Pn           03 49 16.7  +0.6
LPAZ   La Paz             7.78 351  Pn      Pn           03 49 28.6  +2.8
TRQA   Tornquist         14.61 165          P            03 50 50.7  +0.8
LL04   Puerto Octay      17.47 194  P       Pn           03 51 21.9  -1.8
LL04                                IAmb    IAmb         03 51 32.2
                comp=Z,19nm,1.4s
BDFB   Brasilia          19.59  68  P       Pn           03 51 45.3  -3.7
BDFB                                IAmb    IAmb         03 52 23.1
                comp=Z,10nm,1.4s
CELP   Cerrillos         41.84   0  P       P            03 55 02.9  +2.6
CELP                                IAmb    IAmb         03 55 38.5
                comp=Z,12nm,1.1s
SMRT   St. Maarten       41.98   5  P       P            03 55 02.5  +1.1
TORD   Torodi Ar. Bea    76.47  69  P       P            03 58 58.9  +1.6
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*VAO **16** 04:12:05.7±0.4,21°.37S×68°.24W,h108km±4km,mb4.5*

*IDC **16** 04:12:05.7±0.8,21°.47S×68°.24W,h117km±9km,mb3.9/12, mbtmp4.4/15,MS3.2/5,Error ellipse: s-maj=17.0km s-min=14.5km az=119.0*

*NEIC **16** 04:12:05.9±1.9,21°.50S±0°.05×68°.32W±0°.07,h115km±5km, mb4.5/69,Mwr4.5/42,Mwr4.6(GUC),Error ellipse: s-maj=9.9km s-min=6.6km az=81.0,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-5.83; $M_{\theta\theta}$-0.10; $M_{\phi\phi}$5.92; $M_{r\theta}$0.98; $M_{\theta\phi}$-1.50; $M_{\phi r}$-5.00; Fault plane solution: $M_0$7.92000×10^{15} NP1:ϕ_s165.19000°, δ24.98000°,λ-92.72000°. NP2:ϕ_s348.19000°,δ65.05000°, λ-88.73000°. Principal axes: T 8.1325, Plg20.0000°, Azm77.0000°; N -0.4462, Plg1.0000°, Azm168.0000°; P -7.6863, Plg70.0000°, Azm261.0000°;*

*NEIC **16** 04:12:05.9,21°.49S×68°.31W,h116km*

*SJA **16** 04:12:05.3±1.3,21°.51S×68°.37W,h100km,ML4.3,MW4.1, Hypocentre not reviewed by the ISC*

*GUC **16** 04:12:06.0±0.8,21°.52S×68°.39W,h123km±6km,ML4.5*

ISC 16 04:12:05.4±0.5,**21°.45S**±0°.03×**68°.26W**±0°.05,**h115**km±5km, **n201**,σ1^{s}**21**/219,**mb4.5**/38,**12C,Chile-Bolivia border region**

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Code   Station Name        Δ°   AZ°     Phase ID          Time      Res
                                       Op       ISC      h  m  s    ISC
PB09   IPOC Station P     0.98 249          Pn           04 12 26.8  -0.2
PB09                                Sn      Sn           04 12 43.1  -0.1
PB09   IPOC Station P     0.98 249⇑iP       Pn           04 12 27.0  +0.1
PB09                               eS       Sn           04 12 43.5  +0.2
PB09                                IAML                 04 12 45.8
                comp=E,11µm,0.5s
PB01   IPOC Station P     1.21 289          Pn           04 12 28.9  -0.5
PB01                                Sn      Sn           04 12 46.5  -0.9
PB01   IPOC Station P     1.21 289⇑iP       Pn           04 12 29.0  -0.4
PB01                               eS       Sn           04 12 46.7  -0.8
PB01                                IAML                 04 12 48.4
                comp=N,14µm,0.4s
PB01   IPOC Station P     1.21 289 eP                    04 12 29.0
PB01                                IAML                 04 12 47.5
                comp=Z,7µm,0.2s
LVC    Limon Verde        1.30 207  P       Pn           04 12 30.3  -0.3
                comp=Z,4µm,0.4s,baz=1.8,slow=8.4,SNR=2999
LVC                                 S       Sn           04 12 50.1  +0.3
                comp=Z,1µm,0.4s,baz=275,slow=19,SNR=26
LVC    Limon Verde        1.30 207  Pn      Pn           04 12 30.5  -0.1
LVC                                 Sn      Sn           04 12 48.8  -1.0
LVC    Limon Verde        1.30 207⇑iP       Pn           04 12 30.7   0.0
LVC                                eS       Sn           04 12 48.8  -1.0
LVC    Limon Verde        1.30 207 eP       Pn           04 12 30.7   0.0
LVC    Limon Verde        1.30 207 eP                    04 12 30.8
LVC                                 IAML                 04 12 51.5
                comp=Z,721nm,0.7s
PB03   IPOC Station P     1.51 246          Pn           04 12 31.8  -1.0
PB03   IPOC Station P     1.51 246⇑iP       Pn           04 12 31.7  -1.0
PB03                               eS       Sn           04 12 52.2  -1.4
PB03                                IAML                 04 12 54.0
                comp=N,5µm,0.2s
PB02   IPOC Station P     1.53 274          Pn           04 12 32.1  -0.8
PB02   IPOC Station P     1.53 274⇑iP       Pn           04 12 32.0  -0.9
PB02                               eS       Sn           04 12 52.4  -1.5
PB02   IPOC Station P     1.53 274 eP                    04 12 32.2
PB02                                IAML                 04 12 57.7
                comp=Z,24µm,0.4s
PB07   IPOC Station P     1.54 259          Pn           04 12 32.2  -0.9
PB07   IPOC Station P     1.54 259⇑iP       Pn           04 12 32.2  -0.9
PB07                               eS       Sn           04 12 52.6  -1.6
PB07                                IAML                 04 12 53.5
                comp=E,10µm,0.2s
PB07   IPOC Station P     1.54 259 eP                    04 12 32.2
PB07                                IAML                 04 12 56.8
                comp=Z,6µm,0.4s
PB08   IPOC Station P     1.54 327          Pn           04 12 34.7  +1.3
PB08   IPOC Station P     1.54 327⇑iP       Pn           04 12 34.8  +1.3
PB08                               eS       Sn           04 12 56.2  +1.5
PB08                                IAML                 04 13 00.6
                comp=E,5µm,0.3s
PB08   IPOC Station P     1.54 327 eP                    04 12 34.9
PB08                                IAML                 04 12 57.8
                comp=Z,2µm,0.8s
PB06   IPOC Station P     1.75 224          Pn           04 12 35.0  -0.7
PB06   IPOC Station P     1.75 224⇑iP       Pn           04 12 34.9  -0.7
PB06                               eS       Sn           04 12 56.3  -2.3
PB06                                IAML                 04 12 59.0
                comp=E,3µm,0.2s
PB06   IPOC Station P     1.75 224 eP                    04 12 35.0
PB06                                IAML                 04 13 01.5
                comp=Z,1µm,0.2s
PB04   IPOC Station P     1.96 243          Pn           04 12 36.7  -1.6
PB04   IPOC Station P     1.96 243 eP       Pn           04 12 36.8  -1.6
PB04                                IAML                 04 13 10.4
                comp=E,4µm,0.2s
PB04   IPOC Station P     1.96 243 eP                    04 12 36.7
PB04                                IAML                 04 13 10.8
                comp=Z,2µm,0.2s
GO01   Chusmiza           1.97 334          Pn           04 12 39.6  +0.8
TA01   Diego Aracena      2.00 296          Pn           04 12 37.9  -0.6
TA01   Diego Aracena      2.00 296⇑iP       Pn           04 12 37.8  -0.8
TA01                               eS       Sn           04 13 02.1  -1.8
TA01   Diego Aracena      2.00 296 eP                    04 12 37.0
TA01                                IAML                 04 13 07.9
                comp=Z,3µm,0.3s
PB15   IPOC Station P     2.08 212          Pn           04 12 39.2  -0.6
PB15   IPOC Station P     2.08 212⇑iP       Pn           04 12 39.3  -0.6
PB15                               eS       Sn           04 13 05.2  -1.0
PB15   IPOC Station P     2.08 212 eP                    04 12 38.0
PB15                                IAML                 04 13 16.1
                comp=Z,4µm,0.4s
PB11   IPOC Station P     2.13 322          Pn           04 12 40.6  +0.1
PB11   IPOC Station P     2.13 322⇑eP       Pn           04 12 40.5  +0.1
PB11                               eS       Sn           04 13 06.7  -0.4
PB11                                IAML                 04 13 10.0
                comp=E,6µm,0.3s
PB11   IPOC Station P     2.13 322 eP                    04 12 40.5
PB11                                IAML                 04 13 11.7
                comp=Z,3µm,0.3s
PSGC   Pisagua            2.54 316⇑iP       Pn           04 12 44.6  -1.1
PSGC                               eS       Sn           04 13 13.8  -2.7
PSGCX  Pisagua            2.54 316          Pn           04 12 44.7  -0.9
PSGCX  Pisagua            2.54 316 eP                    04 12 44.0
PSGCX                               IAML                 04 13 15.9
                comp=Z,2µm,0.4s
MNMC   Minye Minye        2.62 331          Pn           04 12 47.9  +1.0
MNMC   Minye Minye        2.62 331 eP       Pn           04 12 47.5  +0.6
MNMC                               eS       Sn           04 13 19.6  +0.9
MNMC                                IAML                 04 13 28.3
                comp=N,4µm,0.3s
MNMCX  Minye Minye        2.62 331 eP                    04 12 47.9
MNMCX                               IAML                 04 13 28.9
                comp=Z,1µm,0.2s
YJA    Yavi               2.65 106 eP                    04 12 50.0
YJA                                 IAML                 04 13 29.8
                comp=Z,37nm,0.8s
PB10   IPOC Station P     2.95 225  Pn      Pn           04 12 49.4  -1.6
PB10   IPOC Station P     2.95 225 eP       Pn           04 12 49.5  -1.4
PB10                                IAML                 04 13 34.3
                comp=E,628nm,0.3s
PB10   IPOC Station P     2.95 225 eP                    04 12 50.2
PB10                                IAML                 04 13 38.3
                comp=Z,463nm,0.4s
PB16   IPOC Station P     3.31 339          Pn           04 12 57.9  +1.7
PB16   IPOC Station P     3.31 339 eP       Pn           04 12 58.1  +1.8
PB16   IPOC Station P     3.31 339 eP                    04 12 57.0
PB16                                IAML                 04 13 51.2
                comp=Z,293nm,0.7s
PB12   IPOC Station P     3.42 325  Pn      Pn           04 12 56.0  -1.3
PB12   IPOC Station P     3.42 325 eP       Pn           04 12 55.9  -1.4
PB12                                IAML                 04 13 45.3
                comp=N,1µm,0.2s
PB12   IPOC Station P     3.42 325 eP                    04 12 55.0
PB12                                IAML                 04 14 04.6
                comp=Z,657nm,0.8s
AP01   Chacalluta         3.63 327          Pn           04 12 59.3  -0.7
AP01   Chacalluta         3.63 327 eP                    04 12 59.0
AP01                                IAML                 04 13 54.1
                comp=Z,1µm,0.1s
PB14   IPOC Station P     3.73 212  Pn      Pn           04 13 00.3  -1.2
GO02   Mina Guanaco       3.90 198  Pn      Pn           04 13 02.9  -0.9
GO02   Mina Guanaco       3.90 198 eP       Pn           04 13 02.6  -1.1
GO02   Mina Guanaco       3.90 198 eP                    04 13 02.6
PB18   Visviri            4.01 343          Pn           04 13 07.6  +2.1
PB18   Visviri            4.01 343 eP       Pn           04 13 09.2  +3.8
LPAZ   La Paz             5.13   1 eP                    04 13 23.0
LPAZ   La Paz             5.13   1  P       Pn           04 13 22.9  +2.2
                comp=Z,61nm,0.5s,baz=170,slow=6.8,SNR=137
LPAZ                                S       Sn           04 14 14.4  -4.8
                comp=Z,28nm,0.8s,baz=154,slow=15,SNR=3.5
LPAZ                                LR      LR           04 15 50.7
                comp=Z,136nm,21.4s,baz=252,slow=44
LPAZ   La Paz             5.13   1          Pn           04 13 22.5  +1.8
LPAZ   La Paz             5.13   1 eP       Pn           04 13 20.6  -0.2
AC01   Pan de Azucar      5.15 204  Pn      Pn           04 13 17.3  -3.0
AC01   Pan de Azucar      5.15 204 eP       Pn           04 13 17.2  -3.0
AC02   Maricunga          5.42 188          Pn           04 13 23.3  -1.1
GO03   Copiap             6.38 196          Pn           04 13 33.6  -3.3
BBSD   Serra de San D     8.37  61 eP       Pn           04 14 02.7  -1.4
SIV    San Ignacio        8.71  53  P       Pn           04 14 07.6  -0.9
                comp=Z,85nm,0.7s,baz=240,slow=11,SNR=375
SIV                                 S       Sn           04 15 39.7  -5.4
                comp=Z,9.2nm,0.6s,baz=319,slow=20,SNR=6.4
SIV                                 LR      LR           04 18 05.1
                comp=Z,163nm,19.0s,baz=300,slow=41
VACA   Villa Angela C     9.23 133 eP       Pn           04 14 16.1  +0.6
MURT   Porto Murtinho     9.91  93 eP       Pn           04 14 23.6  -1.3
CFA    Coronel Fontan    10.12 180  LR      LR           04 19 12.5
                comp=Z,151nm,18.4s,baz=71,slow=42
PTLB   Pontes e Lacer    10.51  57  Pn      Pn           04 14 32.0  -0.9
PTLB   Pontes e Lacer    10.51  57 eP       Pn           04 14 31.7  -1.3
CPUP   Villa Florida     11.12 118  P       Pn           04 14 37.8  -3.2
                comp=Z,4.1nm,0.8s,baz=297,slow=12,SNR=7.6
CPUP   Villa Florida     11.12 118          Pn           04 14 40.1  -0.9
VILB   Vilhena           11.43  44          Pn           04 14 44.9  -0.4
VILB   Vilhena           11.43  44 eP       Pn           04 14 45.1  -0.2
ETMB   Extrema           11.73  10          Pn           04 14 47.2  -2.1
ETMB   Extrema           11.73  10 eP       Pn           04 14 47.5  -1.7
AQDB   Aquidauana        11.78  88          Pn           04 14 49.9   0.0
AQDB   Aquidauana        11.78  88 eP       Pn           04 14 49.5  -0.4
AMBA   Amambai (Brazi    12.38  99 eP       Pn           04 14 57.9  +0.1
SALV   Santo Antonio     13.12  67 eP       Pn           04 15 05.9  -1.6
PP1B   Ponte de Pedra    13.18  75 eP       Pn           04 15 08.3   0.0
ITQB   Itaqui            13.31 130 eP       Pn           04 15 10.0  +0.2
SAML   Samuel            13.35  22          Pn           04 15 09.6  -1.0
SAML   Samuel            13.35  22 eP       Pn           04 15 08.6  -1.9
MCR1   Marechal Candi    13.44 106 eP       Pn           04 15 13.3  +1.7
CZSB   Cruzeiro do Su    14.30 342  Pn      Pn           04 15 23.7  +1.1
CZSB   Cruzeiro do Su    14.30 342 eP       Pn           04 15 23.5  +0.8
FRBT   Francisco Belt    14.63 111 eP       Pn           04 15 28.4  +1.6
RODS   Rosario do Sul    14.71 130 eP       Pn           04 15 29.2  +1.4
C2SB   Chapadao do Su    14.73  82 eP       Pn           04 15 29.3  +1.2
PDRB   Porto dos Gac     14.75  50 eP       Pn           04 15 29.2  +0.7
PTGB   Pitanga           15.26 105 eP       P            04 15 37.2  +0.2
ALGR   Alto Alegre (B    15.61 121 eP       P            04 15 40.1  -0.8
ITAB   Concordia         15.78 115 eP       P            04 15 43.0  +0.2
PCMB   Pacaembu          15.82  94 eP       P            04 15 43.0  -0.3
CLDB   Colider           15.92  51 eP       P            04 15 44.5  +0.1
ARAG   Araguaiana, MT    16.60  73 eP       P            04 15 52.6  +0.7
ITRB   Iturama           16.85  87 eP       P            04 15 56.5  +1.8
TBTG   Tabatinga, AM     17.23 354  P       P            04 15 58.8  -0.1
TBTG   Tabatinga, AM     17.23 354 eP       Pn           04 15 59.7  +0.6
FRTB   Fartura           17.39 100 eP       Pn           04 16 02.4  +1.3
TRQA   Tornquist         17.42 163  P       P            04 16 00.4  -0.4
TRQA                                IAmb    IAmb         04 16 02.6
                comp=Z,27nm,1.1s
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CNLB	Canela	17.56	120	*e*P	Pn	04 16 03.2	+0.2
TEFE	Tefe	18.18	12	*e*P	P	04 16 09.5	+0.3
GO06	Curarrehue	18.29	188	P	P	04 16 09.6	-0.8
BB19B	Bebedouro	18.40	92	*e*P	P	04 16 12.4	+0.7
TER01	Tubaro-SC	18.71	116	*e*P	Pn	04 16 16.8	+0.1
SNDB	Serra Nova Dou	18.77	63	*e*P	P	04 16 16.2	+0.5
NPGB	Novo Progresso	18.99	43	*e*P	P	04 16 17.3	-0.8
IPMB	Ipameri, GO	19.18	83	*e*P	P	04 16 20.4	+0.1
RCLB	Rio Claro- Sao	19.26	97	*e*P	P	04 16 21.0	-0.1
PLCA	Paso Flores	19.32	185	P	P	04 16 20.4	-1.3
	comp=Z,3.4nm,0.6s,baz=359,slow=11,SNR=17						
PLCA	Paso Flores	19.32	185	*e*P	P	04 16 22.5	+0.8
SPB	Sao Paulo	19.36	100	*e*P	P	04 16 22.4	+0.3
PET01	Itanhaem-SP	19.54	102	*e*P	P	04 16 24.7	+0.6
MACA	Manacapuru-AM	19.61	23	P	P	04 16 23.7	-1.2
MACA	Manacapuru-AM	19.61	23	*e*P	P	04 16 23.7	-1.2
LL04	Puerto Octay	19.72	189	P	P	04 16 25.2	-0.6
LL04				IAmb	IAmb	04 16 26.8	
	comp=Z,21nm,1.1s						
VAO	Valinhos	19.77	98	*e*P	P	04 16 25.4	-1.3
BDFB	Brasilia	20.04	77	P	P	04 16 28.2	-1.4
	comp=Z,7.1nm,1.0s,baz=257,slow=14,SNR=7.6						
	comp=Z,7.1nm,1.0s						
BDFB	Brasilia	20.04	77	P	P	04 16 29.0	-0.6
BDFB				IAmb	IAmb	04 16 31.0	
	comp=Z,21nm,1.4s						
BDFB	Brasilia	20.04	77	*e*P	P	04 16 29.0	-0.6
PMNB	Patos De Minas	20.71	86	*e*P	P	04 16 36.5	-0.3
ITTB	Itaituba	20.88	37	*e*P	P	04 16 38.1	-0.5
PARB	Paraibuna	21.02	99	*e*P	P	04 16 39.4	-0.7
SGCB	S£o Gabriel d	21.23	3	*e*P	P	04 16 41.3	-1.0
LL02	Futaleuf	21.89	187	P	P	04 16 47.9	-1.1
LL02				IAmb	IAmb	04 16 51.1	
	comp=Z,13nm,1.1s						
PRPB	Parauapebas	23.44	52	*e*P	P	04 17 03.9	-0.7
SMTB	Santa Maria do	23.51	61	*e*P	P	04 17 05.8	+0.6
JANB	Januaria	23.60	78	*e*P	P	04 17 06.3	+0.1
OTAV	Otavalo	23.74	334	P	P	04 17 07.7	-0.1
OTAV	Otavalo	23.74	334	*e*P	P	04 17 08.7	+0.9
MALB	Monte Alegre	23.77	37	*e*P	P	04 17 06.9	-0.7
DUB01	Friburgo-RJ	24.04	96	*e*P	P	04 17 11.8	+1.7
SDBA	SAO DESIDERIO	24.06	72	*e*P	P	04 17 10.4	+0.1
BOAV	Boa Vista	24.88	19	*e*P	P	04 17 18.8	+1.2
MCPB	Macapa, AP	26.26	39	*e*P	P	04 17 31.1	+1.0
ROSC	El Rosal	26.79	347	LR	LR	04 30 26.6	
	comp=Z,65nm,18.2s,baz=138,slow=41						
GO08	Villa O'Higgin	27.18	186	P	P	04 17 37.8	-0.2
GO08				IAmb	IAmb	04 17 41.9	
	comp=Z,7.0nm,0.8s						
RUSC	La Rusia	27.58	350	P	P	04 17 42.8	+0.3
RUSC				IAmb	IAmb	04 17 52.6	
	comp=Z,14nm,0.8s						
BAUV	El Baul	30.20	0	P	P	04 18 05.0	-0.1
SDV	Santo Domingo	30.23	355	LR	LR	04 32 36.5	
	comp=Z,52nm,19.2s,baz=129,slow=41						
TOSP	Speyside	33.41	14	P	P	04 18 34.3	+1.0
CELP	Cerrillos	39.31	3	P	P	04 19 23.0	-0.4
SJG	San Juan	39.37	3	P	P	04 19 22.4	-1.5
UUPR	Utuado, UPR, P	39.48	2	P	P	04 19 23.4	-1.4
ZAIG	Zacatecas	55.22	321	P	P	04 21 26.6	-0.5
ZAIG				IAmb	IAmb	04 21 29.8	
	comp=Z,8.3nm,1.0s						
SWET	Sewanee	58.80	343	P	P	04 21 51.7	0.0
V48A	Smith Brothers	59.53	343	P	P	04 21 56.4	-0.3
W45A	Hickory Valley	59.70	340	P	P	04 21 57.3	-0.5
CLTN	Cedars of Leba	59.73	343	P	P	04 21 58.4	+0.4
WLAR	White Oak Lake	59.73	336	P	P	04 21 59.0	+1.0
WVT	Waverly	60.18	342	P	P	04 22 00.7	-0.4
T50A	Nancy	60.22	345	P	P	04 22 01.1	-0.2
T50A				IAmb	IAmb	04 22 01.8	
	comp=Z,7.3nm,0.7s						
MIAR	Mount Ida	60.66	336	P	P	04 22 04.2	-0.2
T47A	Sharon Grove	60.78	343	P	P	04 22 05.5	+0.3
TXAR	Lajitas Array	60.93	325	P	P	04 22 06.8	+0.3
	comp=Z,0.6nm,0.7s,baz=157,slow=6.8,SNR=3.9						
	comp=Z,0.6nm,0.7s						
T45A	Paducah	61.25	341	P	P	04 22 08.4	+0.1
CGM3	Cape Girardeau	61.81	341	P	P	04 22 11.9	-0.2
CGM3				IAmb	IAmb	04 22 12.6	
	comp=Z,8.0nm,0.8s						
S44A	Carbondale	62.06	341	P	P	04 22 13.8	0.0
HHAR	Hobbs	62.34	337	P	P	04 22 15.5	-0.2
HHAR				IAmb	IAmb	04 22 16.5	
	comp=Z,7.4nm,1.0s						
FVM	French Village	62.68	340	P	P	04 22 17.8	-0.2
CCM	Cathedral Cave	63.01	340	P	P	04 22 19.8	-0.2
CCM				IAmb	IAmb	04 22 20.6	
	comp=Z,9.6nm,0.8s						
S39A	Bolivar	63.38	338	P	P	04 22 22.4	-0.2
S39A				IAmb	IAmb	04 22 23.3	
	comp=Z,10nm,0.8s						
ANMO	Albuquerque	66.79	326	P	P	04 22 45.2	+0.3
TUC	Tucson	67.17	322	P	P	04 22 47.0	-0.3
TUC				IAmb	IAmb	04 22 49.2	
	comp=Z,5.0nm,1.1s						
214A	Organ Pipe Nat	68.11	320	P	P	04 22 53.2	+0.1
214A				IAmb	IAmb	04 22 56.0	
	comp=Z,10nm,1.2s						
DBIC	Dimbokro	68.14	73	P	P	04 22 53.9	+0.3
	comp=Z,9.8nm,0.8s,baz=252,slow=7.2,SNR=13						
	comp=Z,9.8nm,0.8s						
DBIC	Dimbokro	68.14	73	P	P	04 22 53.6	0.0
DBIC				IAmb	IAmb	04 22 55.0	
	comp=Z,9.8nm,0.8s						
PIX	Pinacate	68.22	319	P	P	04 22 53.9	+0.1
SDCO	Great Sand Dun	68.51	329	P	P	04 22 57.1	+1.3
SFX	San Felipe	68.72	318	P	P	04 22 57.6	+0.8
SFX				IAmb	IAmb	04 22 59.5	
	comp=Z,8.1nm,1.0s						
QSPA	South Pole Qui	68.74	180	P	P	04 22 57.3	+0.6
QSPA				IAmb	IAmb	04 22 59.2	
	comp=Z,7.1nm,0.8s						
X16A	Lo Mia Camp, P	69.08	323	P	P	04 22 59.6	+0.3
U15A	North Rim	71.02	324	P	P	04 23 10.9	-0.3
U15A				IAmb	IAmb	04 23 14.6	
	comp=Z,10nm,1.4s						
KNB	Kanab	71.74	324	P	P	04 23 15.0	-0.4
KNB				IAmb	IAmb	04 23 18.8	
	comp=Z,21nm,1.2s						
LCMT	Little Creek M	71.97	323	P	P	04 23 16.7	0.0
P18A	Preston Nutter	72.31	327	P	P	04 23 20.1	+1.2
CCUT	Cedar City	72.42	324	P	P	04 23 20.8	+1.2
CCUT				IAmb	IAmb	04 23 22.9	
	comp=Z,7.1nm,0.9s						
P17A	Butcher Ranch,	72.44	327	P	P	04 23 21.1	+1.6
P17A				IAmb	IAmb	04 23 21.9	
	comp=Z,14nm,1.2s						
MSU	Marysvale	72.48	325	P	P	04 23 21.2	+1.4
MVU	Marysvale	72.49	325	P	P	04 23 21.5	+1.6
MVU				IAmb	IAmb	04 23 22.8	
	comp=Z,20nm,0.9s						
BSUT	Blindstream Ca	73.25	327	P	P	04 23 26.0	+1.5
BSUT				IAmb	IAmb	04 23 26.6	
	comp=Z,4.3nm,0.9s						
PRN	Pahroc Range	73.26	323	P	P	04 23 25.9	+1.5
QSM	Queen of Sheba	73.31	321	P	P	04 23 26.2	+1.7
QSM				IAmb	IAmb	04 23 27.0	
	comp=Z,5.7nm,1.1s						
GWY	Greenwater Val	73.35	321	P	P	04 23 26.5	+1.6
GWY				IAmb	IAmb	04 23 27.4	
	comp=Z,8.7nm,1.1s						
TPNV	Topopah Spring	73.63	322	P	P	04 23 28.0	+1.4
TPNV				IAmb	IAmb	04 23 29.7	
	comp=Z,4.6nm,0.9s						
WCT	Wildcat Mounta	73.74	321	P	P	04 23 29.2	+2.2
WCT				IAmb	IAmb	04 23 30.3	
	comp=Z,7.2nm,1.1s						
SPR3	Spring Creek 3	73.99	324	P	P	04 23 29.9	+1.1
R11A	Troy Canyon, C	74.22	323	P	P	04 23 31.2	+1.2
PDAR	Pinedale Array	74.37	330	P	P	04 23 31.2	+0.4
	comp=Z,0.4nm,0.7s,baz=160,slow=4.7,SNR=4.4						
	comp=Z,0.4nm,0.7s						
LCH	Last Change Ra	74.63	321	P	P	04 23 33.2	+0.9
SPUT	South Promonto	74.68	327	P	P	04 23 33.8	+1.2
BGU	Big Grassy Mou	74.70	326	P	P	04 23 34.0	+1.3
DSP	Deep Springs	74.92	321	P	P	04 23 35.3	+1.6
TPH	Tonopah	74.96	322	P	P	04 23 34.0	-0.3
TPH				IAmb	IAmb	04 23 37.0	
	comp=Z,24nm,1.2s						
ULM	Lac du Bonnet	75.45	342	P	P	04 23 36.3	-0.3
	comp=Z,2.4nm,0.7s,baz=178,slow=3.9,SNR=4.3						
	comp=Z,2.4nm,0.7s						
NVAR	Mina Array Bea	75.83	322	P	P	04 23 39.2	-0.1
	comp=Z,1.8nm,0.9s,baz=148,slow=6.6,SNR=9.4						
	comp=Z,1.8nm,0.9s						
SCHQ	Schefferville	75.98	1	P	P	04 23 39.0	-0.4
	comp=Z,3.6nm,0.7s,baz=209,slow=5.1,SNR=8.2						
	comp=Z,3.6nm,0.7s						
KVN	Kaiserville	76.13	322	P	P	04 23 42.0	+1.0
KVN				IAmb	IAmb	04 23 43.2	
	comp=Z,4.4nm,0.9s						
TORD	Torodi Ar. Bea	76.77	70	P	P	04 23 44.8	0.0
	comp=Z,8.8nm,0.8s,baz=252,slow=5.2,SNR=43						
	comp=Z,8.8nm,0.8s						
TORD	Torodi Ar. Bea	76.77	70	P	P	04 23 44.8	0.0
TORD				IAmb	IAmb	04 23 45.7	
	comp=Z,9.2nm,0.9s						
PAHR	Pah Rah Range	77.31	322	P	P	04 23 48.3	+0.8
PAHR				IAmb	IAmb	04 23 50.3	
	comp=Z,10nm,0.9s						
HLID	Hailey	77.32	327	P	P	04 23 49.0	+1.4
HLID				IAmb	IAmb	04 23 50.4	
	comp=Z,4.1nm,0.9s						
BOSA	Boshof	82.94	118	P	P	04 24 18.6	+0.5
	comp=Z,1.4nm,0.5s,baz=260,slow=3.7,SNR=6.6						
	comp=Z,1.4nm,0.5s						
FRB	Frobisher Bay	84.91	360	P	P	04 24 26.7	-0.2
	comp=Z,1.2nm,0.7s,baz=110,slow=6.6,SNR=3.8						
	comp=Z,1.2nm,0.7s						
ESDC	Sonseca Array	85.37	44	P	P	04 24 30.6	+0.7
	comp=Z,1.7nm,0.9s,baz=232,slow=5.4,SNR=7.6						
	comp=Z,1.7nm,0.9s						
YKA	Yellowknife Ar	91.34	340	P	P	04 24 58.1	+0.4
	comp=Z,4.0nm,0.7s,baz=134,slow=4.7,SNR=64						
YKA				pP	pP	04 25 30.8	+1.9
	comp=Z,0.4nm,0.6s,baz=132,slow=4.6,SNR=2.1						
	comp=Z,4.0nm,0.7s						
ASAR	Alice Springs	130.24	207	PKP	PKPdf	04 31 02.5	-0.3
	comp=Z,0.6nm,0.5s,baz=165,slow=5.4,SNR=6.3						
WRA	Warramunga Arr	133.30	210	PKP	PKPdf	04 31 08.9	+0.2
	comp=Z,0.7nm,0.6s,baz=155,slow=1.8,SNR=12						
ZALV	Zalesovo Beam	141.65	26	PKP	PKPdf	04 31 23.0	+0.1
	comp=Z,0.5nm,0.4s,baz=357,slow=4.9,SNR=2.8						
MKAR	Makanchi Array	145.24	36	PKPbc	PKPdf	04 31 29.8	+0.2
	comp=Z,6.8nm,0.8s,baz=318,slow=3.4,SNR=60						
MKAR				pPKP	pPKPdf	04 32 03.6	+1.5
	comp=Z,2.3nm,0.9s,baz=339,slow=3.0,SNR=4.8						
KLR	Kul'dur	148.03	335	PKPbc	PKPdf	04 31 35.4	+1.3
	comp=Z,1.0nm,0.6s,baz=44,slow=9.4,SNR=5.2						
SONM	Songino Array	153.32	8	PKPbc	PKPbc	04 31 50.3	+0.2
	comp=Z,0.3nm,0.5s,baz=299,slow=1.5,SNR=3.0						

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*IDC **16** 04:17:41.8±3.3, 53°.48N×90°.68E, h0^{km}, mbtmp2.9/3, ML2.5/3, Error ellipse: s-maj=27.9km s-min=22.9km az=56.0*

*NNC **16** 04:17:44.7±1.3, 53°.21N×90°.48E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=10.9km s-min=7.9km az=83.0, Suspected Mining explosion.*

ISC 16 04:17:44.5±4.2, **53°.3N**±0°.1×**90°.5E**±0°.2, **h0^{km}, n8,** σ**0ˢ.92**/10, **2C-6D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.43	283	I	I	04 43 00.0	
	baz=92,slow=335,SNR=2.3						
ZAA0	Zalesovo Array	3.43	283	⇓Pn	Pn	04 18 39.8	+0.7
	0.5nm,0.6s						
ZAA0				⇓Lg	Lg	04 19 34.6	
	6.5nm,0.9s						
ZALV	Zalesovo Beam	3.43	283	Pn	Pn	04 18 38.8	-0.4
	0.8nm,0.3s,baz=97,slow=15,SNR=8.9						
ZALV				Lg	Lg	04 19 32.2	
	1.0nm,0.3s,baz=99,slow=29,SNR=6.3						
	1.8nm,0.3s						
KURBB	Kurchatov Arra	7.85	255	Pn	Pn	04 19 38.9	-1.0
	0.1nm,0.3s,baz=64,slow=16,SNR=4.7						
KURBB				Sn	Sn	04 21 09.6	+0.2
	baz=66,slow=26,SNR=4.1						
KURBB				Lg	Lg	04 21 58.4	
	baz=65,slow=29,SNR=4.6						
	0.7nm,0.6s						
KURBB	Kurchatov Arra	7.85	255	⇓Pn	Pn	04 19 38.7	-1.2
	2.0nm,0.5s						
KURBB				⇑Sn	Sn	04 21 10.5	+1.1
	15nm,1.1s						
KURBB				⇓Lg	Lg	04 21 52.2	
	18nm,0.8s						
MK31	Makanchi Array	8.38	222	⇓Pn	Pn	04 19 46.8	-0.4
	0.2nm,0.5s,baz=35,slow=12,SNR=9.2						
MK31				⇑Sn	Sn	04 21 22.0	-0.5
	2.3nm,1.2s,baz=35,slow=13,SNR=4.3						
MK31				⇓Lg	Lg	04 22 08.8	
	4.5nm,1.1s						
MKAR	Makanchi Array	8.38	222	Pn	Pn	04 19 48.2	+1.1
	0.2nm,0.3s,baz=34,slow=12,SNR=8.3						
MKAR				Sn	Sn	04 21 22.6	+0.2
	baz=40,slow=11,SNR=2.2						
MKAR				Lg	Lg	04 22 15.5	
	baz=30,slow=26,SNR=3.6						
	0.3nm,0.4s						
SONM	Songino Array	11.50	112	Lg	Lg	04 23 39.1	
	baz=297,slow=29,SNR=5.1						

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*IDC **16** 04:37:00.5±1.5, 42°.07S×173°.86E, h0^{km}, mb3.6/2, mbtmp3.7/4, ML3.6/2, MS2.6/1, Error ellipse: s-maj=44.4km s-min=25.0km az=141.0*

*WEL **16** 04:37:00, 42°.32S×173°.93E, h15^{km}, ML3.8, Mw3.8, Moment Tensor Solution. s5 Moment tensor: Scale 10^{14} Nm; M$_{rr}$3.80; M$_{\theta\theta}$0.47; M$_{\phi\phi}$-4.26; M$_{r\theta}$2.57; M$_{\theta\phi}$-3.06; M$_{\phi r}$2.92; Fault plane solution: M$_0$6.22000×10^{14} NP1: ϕ_s186.00000°, δ29.00000°, λ59.00000°. NP2:ϕ_s40.00000°, δ66.00000°, λ106.00000°. Principal axes: T -70.7600, Plg66.0000°, Azm338.0000°; N 17.1000, Plg14.0000°, Azm213.0000°; P 53.6500, Plg19.0000°, Azm118.0000°;*

*NOU **16** 04:37:02.9, 42°.41S×174°.01E, h10^{km}, MLv4.1/12, Off E. Coast of S. Island, N.Z.*

*WEL **16** 04:37:03.4±0.5, 42°S±3°×17°4E±°, h12^{km}±4^{km}, M3.8/29, ML4.0/29, MLv3.8/29, Error ellipse: s-maj=0.0km s-min=0.0km az=131.4, confirmed*

ISC 16 04:37:01.9±1.4, **42°.37S**±0°.03×**174°.01E**±0°.04, **h12^{km}**±10^{km}, **n119,** σ**1ˢ.64**/125, **Off east coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.35	262	P	Pb	04 37 10.6	+0.5
KHZ	Kahutara	0.35	262	P	Pb	04 37 10.4	+0.4
KHZ				S	Sb	04 37 15.7	+0.1
CMWZ	Cape Campbell	0.64	14	P	Pn	04 37 17.1	+0.4
CMWZ				S	Sb	04 37 24.2	+0.4
BSWZ	Blackbirch Sta	0.66	351	P	Pb	04 37 15.4	+0.1
BSWZ				S	Sb	04 37 24.6	+0.2
GVZ	Greta Valley S	0.94	230	P	Pn	04 37 22.5	+1.6
TUWZ	Tuamarina	0.94	357	P	Pb	04 37 20.8	+0.7
THZ	Tophouse	1.02	306	P	Pg	04 37 21.1	-0.5
THZ				S	Sg	04 37 33.2	-1.7
TCW	Tory Channel	1.17	10	P	Pn	04 37 24.8	+0.7
TCW				S	Sn	04 37 40.7	+0.7
SNZO	South Karori	1.18	26	P	Pg	04 37 25.7	+1.2
WEL	Wellington	1.22	28	P	Pg	04 37 26.2	+0.8
PLWZ	Palliser	1.22	50	P	Pn	04 37 26.3	+1.4
NNZ	Nelson	1.24	338	P	Pb	04 37 25.3	+0.1
AMCZ	Amberley	1.29	231	P	Pg	04 37 27.3	+0.7
MRNZ	Matariki Terra	1.34	316	P	Pb	04 37 27.1	0.0
LTZ	Lake Taylor	1.35	252	P	Pb	04 37 27.6	+0.4
PAWZ	Paruwai Farm	1.45	48	P	Pn	04 37 29.0	+1.1
CAW	Cannon Point	1.49	33	P	Pn	04 37 29.7	+1.3
TKNZ	Takaka Hill	1.55	329	P	Pb	04 37 30.3	-0.2
DUWZ	D'Urville Isla	1.57	358	P	Pn	04 37 30.3	+0.8
TRWZ	Traveller	1.58	53	P	Pn	04 37 31.1	+1.3
MTW	Mount Morrison	1.65	43	P	Pn	04 37 31.6	+1.0
KIW	Kapiti Island	1.65	24	P	Pn	04 37 32.1	+1.4
MQZ	McQueen's Vall	1.67	216	P	Pn	04 37 31.7	+0.8
AKCZ	Akaroa Harbour	1.71	208	P	Pn	04 37 33.0	+1.5
OXZ	Oxford	1.74	236	P	Pn	04 37 32.5	+0.6
DSZ	Denniston Nort	1.75	290	P	Pn	04 37 33.2	+1.0
OGWZ	Otaki Gorge	1.78	30	P	Pn	04 37 33.6	+1.2
HOWZ	Holdsworth Sta	1.85	38	P	Pn	04 37 34.7	+1.2
TMWZ	Te Maipa	1.89	49	P	Pn	04 37 35.0	+1.0
QRZ	Quartz Range	1.90	324	P	Pb	04 37 35.9	-0.6
QRZ	Quartz Range	1.90	324	P	Pb	04 37 35.4	-1.0
INZ	Inchbonnie	1.93	258	P	Pn	04 37 36.0	+1.5
RACZ	Rakaia	1.93	225	P	Pn	04 37 35.4	+0.9
MRZ	Mangatainoka R	2.07	35	P	Pn	04 37 37.4	+0.9
TIWZ	Tintock	2.12	42	P	Pn	04 37 38.0	+0.8
MHCZ	Mount Hutt	2.14	236	P	Pn	04 37 37.9	+0.4
WACZ	Wakanui South	2.24	225	P	Pn	04 37 39.7	+1.0
PRWZ	Pori Road	2.33	40	P	Pn	04 37 41.5	+1.3
POWZ	Post Office Ro	2.38	34	P	Pn	04 37 42.3	+1.6
BFZ	Birch Farm	2.38	46	P	Pn	04 37 41.5	+0.8
BFZ	Birch Farm	2.38	46	P	Pn	04 37 41.4	+0.6
WVZ	Waitaha Valley	2.51	253	P	Pn	04 37 43.8	+1.2
RPZ	Rata Peaks	2.55	237	Pn	Pn	04 37 43.8	+0.6
	42nm,0.3s,baz=50,slow=3.6,SNR=283						
RPZ				Sn	Sn	04 38 13.5	-0.6
	35nm,0.3s,baz=12,slow=20,SNR=20						
RPZ				LR	LR	04 38 43.0	
	comp=Z,117nm,18.6s,baz=26,slow=39						
	120nm,0.4s						
RPZ	Rata Peaks	2.55	237	P	Pn	04 37 43.7	+0.6
RPZ	Rata Peaks	2.55	237	P	Pn	04 37 43.5	+0.4
ARCZ	Arundel	2.60	232	P	Pn	04 37 44.5	+0.6
DVHZ	Dannevirke	2.63	39	P	Pn	04 37 44.5	+0.3
WAZ	Wanganui	2.71	16	P	Pn	04 37 48.3	+2.9
TSZ	Takapari Road	2.74	33	P	Pn	04 37 47.1	+1.4
LREZ	Lake Rotokare	2.92	6	P	Pb	04 37 55.3	+1.4
NMEZ	Namu Road	2.95	358	P	Pb	04 37 54.6	+0.1
PNHZ	Pukenui	2.96	35	P	Pn	04 37 49.2	+0.5
TMZ	Timaru	2.98	226	P	Pn	04 37 49.9	+1.0
KHEZ	Kahui Hut	3.07	0	P	Pb	04 37 54.3	-2.2
NEZ	North Egmont	3.10	1	P	Pb	04 37 54.6	-2.3
PKE	Pukeiti	3.17	360	P	Pn	04 37 54.7	+3.0
DREZ	Durham Road	3.18	3	P	Pb	04 37 56.3	-2.0
MTVZ	Mangateitei	3.18	21	P	Pn	04 37 54.5	+2.7
PKVZ	Pokaka	3.24	19	P	Pn	04 37 54.8	+2.2
MOVZ	Moawhango	3.24	25	P	Pn	04 37 53.8	+1.1
WNVZ	Wahianoa	3.27	22	P	Pn	04 37 55.1	+2.0
BHHZ	Black Hill Sta	3.27	29	P	Pn	04 37 54.2	+1.1
TRVZ	Turoa	3.28	21	P	Pn	04 37 57.4	+4.1
VRZ	Vera Road	3.29	10	P	Pn	04 37 55.8	+2.6
FOZ	Fox Glacier	3.29	248	P	Pn	04 37 54.7	+1.5
WHVZ	Whangaehu Hut	3.31	22	P	Pn	04 37 55.9	+2.2
FWVZ	Far West T-bar	3.32	21	P	Pn	04 37 56.1	+2.2
TUVZ	Tukino	3.34	23	P	Pn	04 37 55.9	+1.9
KAHZ	Kahuranaki	3.36	41	P	Pn	04 37 55.2	+0.9
NGZ	Ngauruhoe	3.41	21	P	Pn	04 37 57.2	+2.1
SNVZ	South Ngauruho	3.41	22	P	Pn	04 37 56.9	+1.8
OTVZ	Oturere	3.44	22	P	Pn	04 37 57.1	+1.7
LBZ	Lake Benmore	3.44	233	P	Pn	04 37 56.3	+1.0
NNVZ	North Ngauruho	3.46	21	P	Pn	04 37 57.9	+2.2
KWHZ	Kaweka Forest	3.46	33	P	Pn	04 37 56.5	+0.8
WTVZ	West Tongariro	3.46	21	P	Pn	04 37 57.8	+2.1
TWVZ	Taurewa	3.47	19	P	Pn	04 37 57.7	+1.9
ETVZ	East Tongariro	3.48	22	P	Pn	04 37 57.8	+1.9
TMVZ	Te Maari	3.49	22	P	Pn	04 37 58.0	+1.9
KRVZ	Karewarewa	3.50	21	P	Pn	04 37 58.9	+2.7
NTVZ	North Tongarir	3.50	22	P	Pn	04 37 58.1	+1.8
ODZ	Otahua Downs	3.62	221	P	Pn	04 37 58.8	+1.0
ODZ	Otahua Downs	3.62	221	P	Pn	04 37 58.6	+0.9
KATZ	Kakaramea	3.62	21	P	Pb	04 38 05.2	-0.8
RITZ	Rihia Road	3.67	23	P	Pn	04 38 02.5	+4.0
BKZ	Black Stump Fm	3.71	31	P	Pn	04 38 00.1	+1.0
BKZ	Black Stump Fm	3.71	31	P	Pn	04 37 59.3	+0.2
NMHZ	Naumai	3.90	34	P	Pn	04 38 07.2	+5.5
HIZ	Hauiti	3.90	10	P	Pn	04 38 04.1	+2.4
HIZ	Hauiti	3.90	10	P	Pn	04 38 04.3	+2.6
MTHZ	Maungataniwha	4.12	32	P	Pb	04 38 12.2	-2.1
RAHZ	Arahi	4.17	35	P	Pn	04 38 09.9	+4.6
JCZ	Jackson Bay	4.18	244	P	Pn	04 38 06.5	+0.9
JCZ	Jackson Bay	4.18	244	P	Pn	04 38 06.3	+0.7
TLZ	Tolley Road	4.20	17	P	Pn	04 38 08.2	+2.4
HHSZ	Highcliff Hill	4.29	214	P	Pn	04 38 08.2	+1.2
RTZ	Ruatahuna	4.38	32	P	Pn	04 38 09.9	+1.6
WKZ	Wanaka	4.38	234	P	Pn	04 38 08.6	+0.4
EAZ	Earnscleugh	4.45	228	P	Pn	04 38 09.7	+0.6
URZ	Urewera	4.74	31	Pn	Pn	04 38 10.6	-2.5
	0.6nm,0.3s,baz=199,slow=8.1,SNR=2.1						
URZ				Sn	Sn	04 39 05.7	-2.2
	5.1nm,0.3s,baz=221,slow=7.2,SNR=7.3						
	8.1nm,0.9s						
URZ	Urewera	4.74	31	P	Pn	04 38 14.8	+1.7
TOZ	Tahuroa Road	4.77	14	P	Pn	04 38 15.3	+1.7
MLZ	Mavora Lakes	5.21	233	P	Pn	04 38 19.7	+0.1
RUGZ	Raukumara Rang	5.22	34	P	Pn	04 38 21.5	+1.7
AWAZ	Awhitu Peninsu	5.32	5	P	Pn	04 38 23.3	+2.2
SYZ	Scrubby Hill	5.43	218	P	Pn	04 38 23.7	+1.0
SYZ	Scrubby Hill	5.43	218	P	Pn	04 38 24.5	+1.8
MBAZ	Motutapu North	5.63	7	P	Pn	04 38 30.1	+4.6
WIAZ	Waiheke Island	5.63	9	P	Pn	04 38 27.6	+2.1
ABAZ	Army Bay	5.79	7	P	Pn	04 38 28.8	+1.1
DCZ	Deep Cove	5.84	236	P	Pn	04 38 28.1	-0.2
APZ	The Paps	6.20	222	P	Pn	04 38 34.4	+1.3
CTZ	Chatham Island	7.00	104	P	Pn	04 38 45.7	+1.5
CTZ	Chatham Island	7.00	104	P	Pn	04 38 45.9	+1.7
ASAR	Alice Springs	38.03	287	P	P	04 44 17.4	-2.8
	0.2nm,0.4s,baz=119,slow=7.5,SNR=5.7						
	0.2nm,0.4s						
WRA	Warramunga Arr	40.16	291	P	P	04 44 37.8	-0.2
	1.1nm,0.7s,baz=129,slow=7.5,SNR=10						
	1.1nm,0.7s						
YKA	Yellowknife Ar	119.00	30	PKP	PKPdf	04 55 49.4	+0.1
	0.1nm,0.8s,baz=204,slow=2.6,SNR=1.8						
MKAR	Makanchi Array	120.21	307	PKP	PKPdf	04 55 52.4	+0.2
	0.2nm,0.7s,baz=93,slow=2.9,SNR=2.3						
TORD	Torodi Ar. Bea	150.13	195	PKPbc	PKPbc	04 56 53.9	+0.9
	0.1nm,0.3s,baz=145,slow=2.0,SNR=1.4						

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*IDC **16** 04:53:12.6±2.3, 10°.09S×124°.31E, h0^{km}, mb3.4/1, mbtmp3.6/3, ML3.5/2, Error ellipse: s-maj=217.8km s-min=34.0km az=54.0*

*DJA **16** 04:53:15.4±0.4, 10°S±4°×12°4E±°, h10^{km}, M4.2/6, mb4.4/3, MLv4.1/6*

ISC 16 04:53:14.6±1.0, **10°.04S**±0°.08×**124°.3E**±0°.1, **h10^{km}, n7,** σ**2ˢ.23**/8, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.29	350	P	Pg	04 53 19.2	-1.3
SOEI				S	Sg	04 53 22.3	-2.2
BASI	Baing, Sumba	3.69	267	P	Pn	04 54 11.9	+0.2
PLAI	Plampang	6.56	280	P	Pn	04 54 53.1	+1.8
	13nm,0.8s,0.1nm						
MSAI	Masohi	8.07	35	P	Pn	04 55 15.3	+3.2
WRA	Warramunga Arr	13.80	137	Pn	Pn	04 56 28.3	-2.1
	0.2nm,0.3s,baz=313,slow=13,SNR=13						
WRA				Sn	Sn	04 58 53.8	-10
	0.1nm,0.3s,baz=320,slow=25,SNR=3.6						
	0.6nm,0.4s						
ASAR	Alice Springs	16.35	147	Pn	Pn	04 57 04.2	-0.3
	0.3nm,0.3s,baz=320,slow=12,SNR=17						
ASAR				Sn	Sn	04 59 58.7	-7.4
	0.1nm,0.3s,baz=312,slow=21,SNR=2.4						
	1.1nm,0.5s						
MKAR	Makanchi Array	67.87	330	P	P	05 04 13.1	-0.2
	0.2nm,0.5s,baz=139,slow=5.3,SNR=2.6						
	0.2nm,0.5s						

NNC 16 05:26:43.1±2.5, **54°.75N×83°.77E, h0^{km}, mb3.5, mpv2.7, 4C-5D, Error ellipse: s-maj=20.3km s-min=8.2km az=16.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.01	142	⇓P	Pg	05 27 02.4	0.0
	0.1nm,0.1s						
ZAA0				⇑S	Sb	05 27 16.4	-0.8
	2.1nm,0.4s						
KURK	Kurchatov	5.11	220	⇑Pg	Pg	05 28 18.4	-2.5
	7.4nm,1.4s						
KURK				⇑Sn	Sn	05 28 58.7	-1.7
	1.2nm,0.5s						
KURK				⇓Lg	Lg	05 29 29.5	
	4.2nm,0.6s						
KURBB	Kurchatov Arra	5.21	220	⇑Pg	Pg	05 28 19.5	-3.4
	1.6nm,0.7s						
KURBB				⇓Sn	Sn	05 29 04.2	+1.2
	3.7nm,0.6s						
KURBB				⇓Lg	Lg	05 29 34.3	
	9.7nm,0.7s						
MK31	Makanchi Array	8.02	187	Pn	Pn	05 28 40.0	-0.8
	0.4nm,0.6s,baz=16,slow=13,SNR=9.2						
MK31				⇓Lg	Lg	05 30 58.8	
	0.4nm,0.6s						

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*IDC **16** 05:31:06.2±1.8, 37°.34N×141°.60E, h0^{km}, mb3.6/6,* *mbtmp3.5/7, ML2.4/1, Error ellipse: s-maj=37.7km s-min=31.2km az=95.0*

*JMA **16** 05:31:10.4±0.2, 37°.2N±0°.4×141°.4E±0°.9, h28^{km}±1^{km}, MV3.5/35, E OFF FUKUSHIMA PREF*

ISC 16 05:31:09.9±2.4**, 37°.20N**±0°.05×**141°.5E**±0°.1**, h23**^{km}±14^{km}**, n20, σ0^{s}.70**/22**, mb3.6**/6**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	0.49	290	P	Pb	05 31 19.9	0.0
JFK				*e*S	Sb	05 31 26.5	-0.2
ONAJ	Iwakimizuishiy	0.53	259	P	Pb	05 31 20.8	+0.1
ONAJ				*e*S	Sb	05 31 28.2	+0.3
JMST	Minamisoumatoc	0.69	320	*i* P	Pb	05 31 23.3	0.0
JMST				*e*S	Sb	05 31 32.4	0.0
JFFD	Fukushimafurud	0.72	261	*i* P	Pb	05 31 24.0	+0.2
JFFD				S	Sb	05 31 33.6	+0.3
JMM	Marumori	0.84	322	*i* P	Pn	05 31 25.8	-0.6
JMM				S	Sb	05 31 37.0	+0.2
JHO	Hitachi	0.92	230	P	Pn	05 31 26.5	-1.0
JHO				S	Sb	05 31 38.9	-0.1
JOTO	OTAMA OYAMA	0.96	292	*i* P	Pb	05 31 28.4	+0.5
JOTO				S	Sn	05 31 41.2	+0.3
MJAR	Matsushiro Arr	2.68	257	Pn	Pn	05 31 52.3	+0.6
	0.5nm,0.3s,baz=66,slow=11,SNR=13						
MJAR				Sn	Sb	05 32 28.1	-1.6
	0.4nm,0.3s,baz=76,slow=21,SNR=5.9						
	3.2nm,0.4s						
SONM	Songino Array	27.72	304	P	P	05 36 57.5	+1.0
	0.3nm,0.5s,baz=96,slow=4.3,SNR=2.5						
	0.3nm,0.5s						
H11N2	WAKE ISLAND Hy	28.21	121	T	T	06 06 30.9	
	baz=314,slow=75,SNR=111						
H11N1	WAKE ISLAND Hy	28.22	121	T	T	06 06 31.8	
	baz=314,slow=75,SNR=121						
H11N3	WAKE ISLAND Hy	28.23	121	T	T	06 06 32.5	
	baz=314,slow=75,SNR=120						
H11S1	WAKE ISLAND Hy	28.93	123	T	T	06 07 23.0	
	baz=316,slow=76,SNR=40						
H11S3	WAKE ISLAND Hy	28.93	123	T	T	06 07 22.4	
	baz=316,slow=76,SNR=45						
H11S2	WAKE ISLAND Hy	28.94	123	T	T	06 07 28.6	
	baz=316,slow=76,SNR=20						
ZALV	Zalesovo Beam	41.82	312	P	P	05 38 57.2	-0.5
	0.8nm,0.7s,baz=98,slow=8.1,SNR=3.8						
	0.8nm,0.7s						
MKAR	Makanchi Array	44.05	302	P	P	05 39 15.2	-0.7
	0.4nm,0.7s,baz=88,slow=11,SNR=4.7						
	0.4nm,0.7s						
WRA	Warramunga Arr	57.23	188	P	P	05 40 56.4	+1.0
	0.6nm,1.1s,baz=3.2,slow=7.3,SNR=2.3						
	0.6nm,1.1s						
FINES	FINESS Array B	68.68	332	P	P	05 42 11.4	+0.4
	1.0nm,0.8s,baz=69,slow=7.6,SNR=1.7						
	1.0nm,0.8s						
AKASG	Malin Array Be	74.18	322	P	P	05 42 43.4	-1.1
	0.2nm,0.2s,baz=45,slow=5.4,SNR=1.3						
	0.2nm,0.2s						

IDC 16 06:01:04.2±5.7**, 7°.07S**×**148°.64E, h131**^{km}±38^{km}**, mb3.0**/1**, mbtmp3.5**/3**, Error ellipse: s-maj=118.3km s-min=52.4km az=120.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	2.75	212	P	Pn	06 01 48.9	+1.3
	45nm,0.5s,baz=20,slow=5.7,SNR=11						
PMG				S	Sn	06 02 21.0	0.0
	10.0nm,0.3s,baz=20,slow=21,SNR=1.5						
WRA	Warramunga Arr	18.87	226	P	P	06 05 13.5	-1.0
	0.4nm,0.4s,baz=52,slow=11,SNR=10						
ASAR	Alice Springs	21.74	219	P	P	06 05 46.4	+1.0
	0.7nm,0.5s,baz=53,slow=8.9,SNR=16						
	0.7nm,0.5s						
TORD	Torodi Ar. Bea	146.93	283	PKPbc	PKPdf	06 20 31.3	+1.0
	0.5nm,0.7s,baz=71,slow=3.5,SNR=3.3						

NOU 16 06:02:58.6, 16°.78S×**167°.62E, h7**^{km}**, MLv4.1**/11**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	1.08	150	P	Pn	06 03 20.2	0.0
RTV	Rentapao	1.27	143	P	Pg	06 03 23.2	+0.3
KOUNC	Koumac, New Ca	4.90	220	P	Pn	06 04 13.7	+0.9
YATNC	Mamie plateau,	5.30	187	P	Pn	06 04 17.1	-1.1
DZM	Mont Dzumac	5.38	192	P	Pn	06 04 19.3	-0.1
NOUC	Port Laguerre	5.44	193	P	Pn	06 04 20.0	-0.1

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*BJI **16** 06:30:42.0±0.0, 20°.19S×173°.01W, h14^{km}, mb5.0/35, mB5.6/19, Ms5.0/5, Ms7 4.8/6*

*IDC **16** 06:30:42.6±0.5, 20°.25S×173°.75W, h0^{km}, mb4.6/18, mbtmp4.6/19, ML4.8/1, MS4.2/47, Error ellipse: s-maj=20.7km s-min=13.7km az=136.0*

*NEIC **16** 06:30:42.2±1.3, 20°.44S±0°.07×173°.13W±0°.07, h10^{km}±1^{km}, mb5.2/79, Error ellipse: s-maj=11.6km s-min=11.0km az=229.0*

*GCMT **16** 06:30:48.2±0.2, 20°.34S±0°.02×173°.15W±0°.01, h17^{km}, MW5.0/112, Moment Tensor Solution. s43,c53; s112,c151; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.46±.15; $M_{\theta\theta}$-0.51±.10; $M_{\phi\phi}$-2.95±.10; $M_{r\theta}$0.95±.28; $M_{\theta\phi}$-0.71±.06; $M_{\phi r}$1.08±.22; Best double couple: $M_0$3.59500×10^{16} NP1:ϕ_s24.00000°, δ56.00000°, λ100.00000°. NP2:ϕ_s187.00000°, δ35.00000°, λ76.00000°. Principal axes: T 3.7980, Plg76.0000°, Azm325.0000°; N -0.4070, Plg8.0000°, Azm199.0000°; P -3.3920, Plg11.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 06:30:42.7±0.3**, 20°.47S**±0°.07×**173°.26W**±0°.05**, h10**^{km}**, n275, σ1^{s}.63**/239**, mb5.1**/70**, MS4.3**/49**, 12C-6D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	3.43	67	P	Pn	06 31 33.0	-3.3
	baz=3.2						
NIUE	Niue	3.43	67		Pn	06 31 32.7	-3.5
AFI	Afiamalu	6.67	12	Pn	Pn	06 32 14.3	-6.7
	34nm,0.3s,baz=236,slow=8.1,SNR=26						
AFI				Sn	Sn	06 33 22.7	-14
	8.1nm,0.3s,baz=276,slow=16,SNR=4.1						
MSVF	Nonsavu	8.66	287	Pn	Pn	06 32 51.1	+2.9
	1.7nm,0.3s,baz=118,slow=11,SNR=23						
MSVF				LR	LR	06 35 42.7	
	comp=Z,4µm,18.4s,baz=133,slow=37						
MSVF	Nonsavu	8.66	287	Pn	Pn	06 32 49.5	+1.3
RAO	Raoul Island	9.71	205	LR	LR	06 37 15.7	
	comp=Z,687nm,18.0s,baz=149,slow=40						
RAO	Raoul Island	9.71	205	Pn	Pn	06 33 02.6	+0.1
RAR	Rarotonga	12.63	96	Pn	Pn	06 33 40.7	-1.9
	8.6nm,0.3s,baz=274,slow=8.6,SNR=28						
RAR				Sn	Sn	06 35 51.3	-12
	1.4nm,0.3s,baz=295,slow=24,SNR=1.8						
RAR				LR	LR	06 38 34.7	
	comp=Z,1µm,18.5s,baz=234,slow=36						
RAR	Rarotonga	12.63	96	Pn	Pn	06 33 40.4	-2.1
PINNC	Pines Island,	18.08	260	P	Pn	06 34 54.2	+0.1
PINNC				IAmb	IAmb	06 34 54.4	
	comp=Z,157nm,1.4s						
OUENC	Ouen Island, N	18.63	260	P	P	06 35 00.1	-0.5
OUENC				IAmb	IAmb	06 35 04.6	
	comp=Z,174nm,1.5s						
ONTNC	Ouen Toro	18.98	261	P	P	06 35 04.8	+0.4
ONTNC				IAmb	IAmb	06 35 14.6	
	comp=Z,140nm,1.4s						
DZM	Mont Dzumac	18.98	262	*e*Pn	P	06 35 03.2	-1.4
	comp=Z,145nm,1.4s						
DZM				*e*S	Sn	06 38 38.4	+0.3
	comp=Z,377nm,23.1s						
DZM				*e*LR	LR	06 39 34.7	
	comp=Z,2µm,24.4s						
DZM	Mont Dzumac	18.98	262	P	P	06 35 04.6	-0.1
	comp=Z,15nm,0.7s,baz=81,slow=15,SNR=11						
DZM	Mont Dzumac	18.98	262	P	P	06 35 04.7	+0.1
URZ	Urewera	19.59	203	P	Pn	06 35 14.2	+1.9
	comp=Z,2.7nm,0.3s,baz=62,slow=3.4,SNR=13						
URZ				S	S	06 38 39.4	-13
	comp=Z,9.2nm,0.8s,baz=100,slow=14,SNR=2.0						
	comp=Z,21nm,0.7s						
KOUNC	Koumac, New Ca	21.03	266	P	P	06 35 27.5	+0.6
KOUNC				IAmb	IAmb	06 35 42.1	
	comp=Z,80nm,1.0s						
TBI	Tubuai	22.26	102	*e*LR	LR	06 40 55.8	
	comp=Z,6µm,30.0s						
PAE	Paea	22.55	87	*e*T	T	06 59 11.4	
	comp=Z,1.9nm,0.3s						
PPT2	Papeete2	22.57	87	*e*P	P	06 35 42.6	-0.8
	comp=Z,167nm,33.8s						
PPT2				*e*LR	LR	06 41 05.7	
	comp=Z,832nm,28.8s						
PPT2				*e*LR	LR	06 41 05.9	
	comp=Z,986nm,25.5s						
PPT	Papeete	22.57	87	LR	LR	06 43 07.8	
	comp=Z,864nm,18.0s,baz=253,slow=32						
SNZO	South Karori	23.16	204	P	P	06 35 52.7	+3.5
SNZO				IAmb	IAmb	06 36 08.6	
	comp=Z,82nm,1.4s						
RPZ	Rata Peaks	26.63	206	P	P	06 36 23.5	+2.1
	comp=Z,5.3nm,0.6s,baz=261,slow=2.0,SNR=5.1						
	comp=Z,5.3nm,0.6s						
HNR	Honiara	28.07	289	LR	LR	06 46 11.5	
	comp=Z,5µm,18.2s,baz=126,slow=34						
ARMA	Armidale	33.10	245	P	P	06 37 18.6	-0.6
	baz=33,SNR=5.9						
ARMA	Armidale	33.10	245	P	P	06 37 19.7	+0.5
ARMA				IAmb	IAmb	06 37 51.4	
	comp=Z,110nm,1.9s						
EIDS	Eidsvold	33.14	255	P	P	06 37 17.8	-1.6
	baz=33,SNR=5.0						
EIDS	Eidsvold	33.14	255	P	P	06 37 18.4	-1.0
TAOE	Nuku Hiva Isla	33.97	75	*e*S	S	06 42 49.3	-2.9
	comp=Z,118nm,27.2s						
TAOE				*e*LR	LR	06 46 21.7	
	comp=Z,623nm,24.3s						
MGCD	Mangrove Creek	34.07	241	P	P	06 37 27.7	+0.3
	baz=34,SNR=5.3						
RMQ	Roma	35.26	253	P	P	06 37 36.8	-1.0
	baz=35,SNR=5.7						
CAN	Canberra	36.25	238	P	P	06 37 46.8	+0.5
CAN				IAmb	IAmb	06 39 01.5	
	comp=Z,118nm,2.0s						
MILA	Mila	36.58	235	P	P	06 37 49.2	+0.1
	baz=37,SNR=3.7						
KRVT	Keravat (AS076	37.39	291	LR	LR	06 51 56.0	
	comp=Z,327nm,18.1s,baz=244,slow=34						
CTA	Charters Tower	37.91	263	LR	LR	06 52 01.2	
	comp=Z,540nm,19.6s,baz=89,slow=34						
CTAO	Charters Tower	37.91	263	P	P	06 37 58.8	-1.7
CMSA	Cobar Meteorol	38.31	245	P	P	06 38 02.7	-1.0
	baz=38,SNR=6.8						
QLP	Quilpie	39.31	253	P	P	06 38 10.9	-1.3
	baz=40,SNR=4.7						
TOO	Toolangi	39.54	235	P	P	06 38 14.2	+0.2
	baz=40,SNR=8.4						
TOO	Toolangi	39.54	235	P	P	06 38 14.6	+0.6
TOO				IAmb	IAmb	06 39 09.1	
	comp=Z,122nm,1.9s						
PMG	Port Moresby	39.69	280	LR	LR	06 53 26.9	
	comp=Z,270nm,19.5s,baz=154,slow=35						
PMG	Port Moresby	39.69	280	P	P	06 38 13.3	-2.2
PMG				IAmb	IAmb	06 38 13.9	
	comp=Z,42nm,1.1s						
TAU	Tasmania Unive	39.83	227	P	P	06 38 17.1	+0.9
TAU				IAmb	IAmb	06 39 11.0	
	comp=Z,121nm,1.4s						
MTSU	Mount Surprise	40.03	266	P	P	06 38 16.2	-2.1
	baz=40,SNR=14						
STKA	Stephens Creek	41.81	245	P	P	06 38 31.9	-0.9
	comp=Z,4.5nm,0.5s,baz=96,slow=11,SNR=19						
STKA				LR	LR	06 53 54.8	
	comp=Z,400nm,19.0s,baz=62,slow=34						
	comp=Z,4.5nm,0.5s						
STKA	Stephens Creek	41.81	245	P	P	06 38 32.2	-0.6
	baz=42,SNR=8.3						
COEN	Coen	42.02	272	P	P	06 38 32.4	-2.3
	baz=42,SNR=5.6						
COEN	Coen	42.02	272	P	P	06 38 32.8	-1.9
HTT	Hallett	44.18	243	P	P	06 38 51.4	-0.6
	baz=44,SNR=3.3						
BBOO	Buckleboo	46.55	244	P	P	06 39 09.8	-1.0
	baz=47,SNR=9.5						
BBOO	Buckleboo	46.55	244	P	P	06 39 10.3	-0.5
ASAR	Alice Springs	48.85	256	P	P	06 39 26.4	-2.4
	comp=Z,10nm,1.0s,baz=88,slow=9.0,SNR=62						
ASAR				PcP	PcP	06 40 53.9	+0.4
	comp=Z,3.3nm,0.7s,baz=97,slow=4.1,SNR=6.0						
ASAR				S	S	06 46 23.6	-8.9
	comp=Z,0.5nm,0.9s,baz=93,slow=16,SNR=3.3						
ASAR				LR	LR	06 59 08.1	
	comp=Z,462nm,18.9s,baz=102,slow=35						
	comp=Z,10nm,1.0s						
WC3	Warramunga Arr	48.97	261	P	P	06 39 27.3	-2.4
	baz=49						
WRA	Warramunga Arr	49.00	261	P	P	06 39 26.8	-3.2
	comp=Z,13nm,1.0s,baz=98,slow=8.6,SNR=55						
WRA				PcP	PcP	06 40 54.8	+0.8
	comp=Z,4.3nm,1.0s,baz=95,slow=3.2,SNR=3.3						
WRA				S	S	06 46 29.2	-5.5
	comp=Z,0.3nm,0.8s,baz=108,slow=13,SNR=2.2						
WRA				LR	LR	06 59 05.4	
	comp=Z,308nm,18.4s,baz=95,slow=35						
	comp=Z,13nm,1.0s						
KDU	Kakadu	52.40	270	P	P	06 39 53.2	-2.5
	baz=52,SNR=5.1						
GUMO	Guam	53.29	306	LR	LR	07 00 25.4	
	comp=Z,106nm,20.0s,baz=120,slow=34						
FORT	Forrest	53.38	246	P	P	06 40 01.7	-1.0
	baz=54,SNR=8.7						
FORT	Forrest	53.38	246	P	P	06 40 01.9	-0.9
MTN	Manton Dam	53.61	269	P	P	06 40 02.7	-1.9
	baz=54						
MTN	Manton Dam	53.61	269	P	P	06 40 03.5	-1.1
MTN				IAmb	IAmb	06 40 06.8	
	comp=Z,18nm,0.7s						
WRKA	Warakurna	53.74	253	P	P	06 40 03.8	-1.7
	baz=54,SNR=31						
KNRA	Kununurra	55.09	265	P	P	06 40 13.3	-2.1
	baz=55,SNR=7.5						
KNRA	Kununurra	55.09	265	P	P	06 40 13.5	-1.9
KNRA				IAmb	IAmb	06 40 14.6	
	comp=Z,30nm,1.1s						
FAKI	Fak Fak	55.84	281	P	P	06 40 19.0	-1.8
FAKI				IAmb	IAmb	06 40 19.8	
	comp=Z,28nm,1.1s						
FITZ	Fitzroy Crossi	57.43	261	P	P	06 40 30.9	-1.2
	baz=58						
FITZ	Fitzroy Crossi	57.43	261	P	P	06 40 31.0	-1.1
SIJI	Sorong	57.55	283	LR	LR	07 05 17.0	
	comp=Z,210nm,18.8s,baz=116,slow=36						
RPN	Rapa Nui	58.33	110	LR	LR	07 00 38.9	
	comp=Z,328nm,18.7s,baz=199,slow=30						
VNDA	Vanda	58.38	186	LR	LR	07 03 15.3	
	comp=Z,123nm,19.3s,baz=316,slow=33						
SOEI	Soe	60.95	270	P	P	06 40 56.1	-0.5
TNTI	Ternate	61.77	282	P	P	06 41 01.0	-1.1
PSA00	Pilbara Seismi	62.00	256	P	P	06 41 02.3	-1.3
PSA00				IAmb	IAmb	06 41 06.1	
	comp=Z,24nm,1.6s						
KLBR	Kellerberrin	62.09	244	P	P	06 41 03.8	-0.2
	baz=62,SNR=8.4						
MBWA	Marble Bar	62.19	256	P	P	06 41 04.4	-0.5
MBWA				IAmb	IAmb	06 41 05.9	
	comp=Z,42nm,1.4s						
NWAO	Narrogin (SRO)	62.35	243	P	P	06 41 06.0	+0.3
BLDU	Ballidu	63.12	245	P	P	06 41 10.1	-0.8
	baz=63,SNR=6.0						
MMRI	Maumere	63.20	271	P	P	06 41 09.8	-1.8
MORW	Morawa	63.94	247	P	P	06 41 16.0	-0.4
	baz=64,SNR=3.8						
MORW	Morawa	63.94	247	P	P	06 41 16.0	-0.4
LUWI	Luwuk	65.31	279	P	P	06 41 24.9	-0.6
CASY	Casey	65.90	205	P	P	06 41 29.0	+0.5
DAV	Davao City (W)	66.03	288	LR	LR	07 09 51.3	
	comp=Z,108nm,18.0s,baz=35,slow=36						
KAPI	Kappang	66.72	273	P	P	06 41 33.2	-1.4
KAPI				IAmb	IAmb	06 41 56.2	
	comp=Z,16nm,1.1s						
GIRL	Giralia	66.83	253	P	P	06 41 34.8	-0.3
TOLI2	Tolitoli	67.96	280	P	P	06 41 41.0	-1.5
TOLI2				IAmb	IAmb	06 41 52.6	
	comp=Z,23nm,0.9s						
QSPA	South Pole Qui	69.60	180	P	P	06 41 55.5	+3.5
	comp=Z,5.1nm,0.9s,baz=86,slow=1.9,SNR=10						
	comp=Z,5.1nm,0.9s						
MJAR	Matsushiro Arr	72.91	321	P	P	06 42 11.3	-0.9
	comp=Z,11nm,0.9s,baz=149,slow=5.8,SNR=16						
MJAR				LR	LR	07 09 21.1	
	comp=Z,96nm,19.2s,baz=130,slow=32						
	comp=Z,11nm,0.9s						
MAJO	Matsushiro	72.91	321	P	P	06 42 11.9	-0.3
MAJO				IAmb	IAmb	06 42 12.0	
	comp=Z,13nm,0.8s						
JOW	Kunigami	73.61	307	LR	LR	07 12 39.9	
	comp=Z,130nm,18.9s,baz=36,slow=34						
SHEM	Shemya Is, Ala	73.71	352	LR	LR	07 09 09.1	
	comp=Z,147nm,20.8s,baz=114,slow=31						
JHS	Saijyo	75.05	317	P	P	06 42 22.5	-2.3
JHS				IAmb	IAmb	06 42 27.1	
	comp=Z,32nm,1.0s						
JNU	Nakatsue	75.38	314	LR	LR	07 13 00.7	
	comp=Z,67nm,19.5s,baz=127,slow=34						
LPIG	La Paz	75.61	57	LR	LR	07 10 35.3	
	comp=Z,261nm,18.2s,baz=212,slow=32						
ASAJ	Asahikawa	75.91	329	LR	LR	07 14 59.5	
	comp=Z,54nm,18.1s,baz=168,slow=35						
EDW2	Edwards Air Fo	76.03	44	P	P	06 42 33.2	+2.7
	baz=232						
PFO	Pinyon Flats O	76.30	46	LR	LR	07 12 35.1	
	comp=Z,132nm,18.1s,baz=234,slow=33						
PFO	Pinyon Flats O	76.30	46	P	P	06 42 35.4	+3.3
	baz=234						
SDPT	Sand Point	76.30	7	P	P	06 42 30.0	-1.3
TPFO	Pinon Flats	76.30	46	P	P	06 42 34.9	+2.8
	baz=234						
SWSC	Sam W. Stewart	76.35	47	P	P	06 42 36.1	+3.8
	baz=234						
BELC	Belle Mtn. Jos	76.83	46	P	P	06 42 37.6	+2.4
	baz=234						
CWC	Cottonwood Cre	76.93	43	P	P	06 42 37.9	+2.2
	baz=232						
BC3	Big Chuckawall	77.00	46	P	P	06 42 39.4	+3.4
	baz=234						
MPMC	Manual Prospec	77.08	43	P	P	06 42 38.8	+2.2
	baz=232						
WAKR	Walker	77.36	40	IAmb	IAmb	06 42 56.7	
	comp=Z,35nm,2.0s						
NACB	Ninganchiao	77.39	302	P	P	06 42 37.1	-1.2
PETK	Petropavlovsk-	77.48	343	P	P	06 42 38.2	+0.1
	comp=Z,19nm,1.0s,baz=105,slow=9.3,SNR=8.8						
PETK				LR	LR	07 12 37.0	
	comp=Z,81nm,21.9s,baz=161,slow=33						
	comp=Z,19nm,1.0s						
IRM	Iron Mountain	77.50	46	P	P	06 42 41.8	+3.0
	baz=234						
YBH	Yreka Blue Hor	77.56	36	P	P	06 42 41.2	+2.2
	comp=Z,3.3nm,1.0s,baz=259,slow=5.2,SNR=5.0						
YBH				LR	LR	07 10 38.3	
	comp=Z,215nm,19.3s,baz=222,slow=31						
	comp=Z,3.3nm,1.0s						
GRAC	Grapevine Rang	77.72	43	P	P	06 42 42.6	+2.7
	baz=232						
TPUB	Ta-pu	77.74	301	P	P	06 42 39.1	-1.2
YERR	Yerington	77.79	40	IAmb	IAmb	06 42 59.6	
	comp=Z,21nm,1.5s						
KSM	Kuching	77.82	276	P	P	06 42 40.3	-0.7
KSM				IAmb	IAmb	06 42 42.5	
	comp=Z,35nm,1.0s						
214A	Organ Pipe Nat	77.88	49	P	P	06 42 43.5	+2.6
	baz=236						
YSS	Yuzh-Sakhalins	77.94	331	P	P	06 42 41.3	+0.5
YSS				IAmb	IAmb	06 42 42.4	
	comp=Z,33nm,1.0s						
NVAR	Mina Array Bea	78.01	41	P	P	06 42 43.6	+1.8
	comp=Z,2.3nm,0.6s,baz=226,slow=8.6,SNR=18						
NVAR				LR	LR	07 13 49.9	
	comp=Z,165nm,18.4s,baz=219,slow=33						
	comp=Z,2.3nm,0.6s						
PDMCI	Parker Dam,Lak	78.26	47	P	P	06 42 45.7	+2.8
	baz=235						
KVN	Kaiserville	78.52	41	IAmb	IAmb	06 42 47.8	
	comp=Z,23nm,1.8s						
BELA	Belgrano 2	78.99	172	P	P	06 42 46.2	-0.1
BELA				IAmb	IAmb	06 45 17.1	
	comp=Z,32nm,1.0s						
TUC	Tucson	79.51	50	P	P	06 42 52.6	+2.6
	baz=238						
R11A	Troy Canyon, C	79.66	42	P	P	06 42 49.5	-1.3
R11A	Troy Canyon, C	79.66	42	P	P	06 42 53.1	+2.3
	baz=234						
KDAK	Kodiak Island	79.84	11	LR	LR	07 11 59.3	
	comp=Z,163nm,20.4s,baz=212,slow=31						
KSRS	Korea Array	79.87	316	P	P	06 42 51.9	+0.2
	comp=Z,6.9nm,1.0s,baz=132,slow=5.5,SNR=19						
KSRS				LR	LR	07 15 30.7	
	comp=Z,53nm,18.8s,baz=130,slow=34						
	comp=Z,6.9nm,1.0s						
ELK	Elko	81.30	41	LR	LR	07 15 25.9	
	comp=Z,247nm,18.0s,baz=242,slow=33						
ELK	Elko	81.30	41	P	P	06 43 02.0	+2.4
USRK	Ussuriysk Ar.	81.51	324	LR	LR	07 14 59.8	
	comp=Z,221nm,19.3s,baz=131,slow=33						
121A	Cookes Peak, D	81.79	51	P	P	06 43 05.2	+2.9
	baz=239						
Y22A	Socorro	83.09	50	P	P	06 43 11.1	+2.0
	baz=240						
MDJ	Mudanjiang	83.11	323	P	P	06 43 09.3	+0.6
MDJ				pP	PcP	06 43 12.6	-0.7
MDJ				PcP	sP	06 43 14.3	+5.1
MDJ				S	S	06 53 27.5	-1.0
MDJ				ScS	ScS	06 53 40.6	-2.0
MDJ				pmax	pmax		
	comp=Z,17nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,300nm,5.8s						
MDJ				LR	LR		
	comp=Z,340nm,20.8s						
MNTX	Cornudas Mount	83.15	53	P	P	06 43 12.2	+2.9
	baz=241						
MNTX	Cornudas Mount	83.15	53	P	P	06 43 11.5	+2.2
	baz=241						
NJ2	Nanjing	83.33	308	*e*P	P	06 43 10.6	+0.5
NJ2				pP	PcP	06 43 15.3	+0.8
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
TX31	Lajitas Ar. Si	83.33	55	P	P	06 43 12.3	+2.0
	baz=242						
TXAR	Lajitas Array	83.33	55	P	P	06 43 12.7	+2.3
	comp=Z,1.1nm,0.8s,baz=217,slow=7.4,SNR=10						
TXAR				LR	LR	07 14 06.7	
	comp=Z,94nm,18.3s,baz=198,slow=31						
	comp=Z,1.1nm,0.8s						
HLID	Hailey	83.46	39	P	P	06 43 12.9	+2.2
	baz=234						
MVCO	Mesa Verde	83.69	47	P	P	06 43 14.9	+2.8
	baz=238						
ANMO	Albuquerque	83.96	49	LR	LR	07 16 15.9	
	comp=Z,126nm,18.2s,baz=318,slow=32						
ANMO	Albuquerque	83.96	49	P	P	06 43 16.5	+3.0
	baz=240						
ANMO	Albuquerque	83.96	49	P	P	06 43 15.8	+2.3
	baz=240						
BSUT	Blindstream Ca	83.98	43	IAmb	IAmb	06 43 20.0	
	comp=Z,31nm,1.7s						
TTA	Tatalina	84.23	8	P	P	06 43 15.8	+1.7
	baz=196						
RDMU	Red Mountain	84.76	43	IAmb	IAmb	06 43 23.2	
	comp=Z,19nm,1.6s						
NEW	Newport	84.81	34	LR	LR	07 17 01.8	
	comp=Z,466nm,18.1s,baz=198,slow=33						
KLR	Kul'dur	84.83	327	P	P	06 43 17.3	-0.1
	comp=Z,2.2nm,1.0s,baz=97,slow=8.1,SNR=4.3						
KLR				LR	LR	07 14 36.4	
	comp=Z,66nm,20.3s,baz=110,slow=31						
	comp=Z,2.2nm,1.0s						
MA2	Magadan	85.01	343	P	P	06 43 18.0	-0.1
	comp=Z,3.3nm,0.5s,baz=155,slow=19,SNR=4.3						
MA2				LR	LR	07 21 36.8	
	comp=Z,63nm,18.1s,baz=166,slow=36						
	comp=Z,3.3nm,0.5s						
BNX	BinXian	85.03	323	⇑P	P	06 43 18.5	+0.1
BNX				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BNX				pmax	pmax		
	comp=Z,97nm,3.9s						
CN2	Changchun	85.05	320	*e*P	P	06 43 19.0	+0.4
CN2				*e*sP	pwP	06 43 26.0	-4.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
S22A	4UR Ranch, Cre	85.11	47	P	P	06 43 22.6	+3.2
	baz=239						
CMIG	Matias Romero	85.46	70	LR	LR	07 15 13.0	
	comp=Z,189nm,18.2s,baz=228,slow=31						
TRF	Thorofare Moun	85.56	10	P	P	06 43 20.2	-0.7
TRF				IAmb	IAmb	06 43 34.8	

	comp=Z,22nm,1.4s						
BW06	**Boulder Array**	**85.94**	**41**	P	**P**	**06 43 25.5**	**+2.1**
	baz=237						
PDAR	**Pinedale Array**	**85.94**	**41**	P	**P**	**06 43 24.8**	**+1.4**
	comp=Z,1.2nm,0.8s,baz=207,slow=3.8,SNR=9.3						
PDAR				LR	LR	07 20 20.4	
	comp=Z,119nm,18.0s,baz=264,slow=35						
	comp=Z,1.2nm,0.8s						
SDCO	**Great Sand Dun**	**86.02**	**47**	P	**P**	**06 43 25.5**	**+1.6**
	baz=240						
MCK	**McKinley**	**86.05**	**11**	IAmb	IAmb	06 43 36.8	
	comp=Z,14nm,1.0s						
MCK	**McKinley**	**86.05**	**11**	P	**P**	**06 43 24.0**	**+0.9**
	baz=203						
MSTX	**Muleshoe**	**86.16**	**52**	P	**P**	**06 43 26.5**	**+2.0**
	baz=242						
M27K	**Edge Creek, AK**	**86.22**	**14**	IAmb	IAmb	06 43 26.6	
	comp=Z,28nm,1.5s						
BOZ	**Bozeman (W)**	**86.26**	**38**	P	**P**	**06 43 27.4**	**+2.6**
	baz=236						
DLBC	**Dease Lake**	**86.35**	**21**	LR	LR	07 15 29.8	
	comp=Z,104nm,19.8s,baz=220,slow=31						
TIA	**Tai'an**	**86.58**	**311**	P	**P**	**06 43 27.4**	**+1.0**
TIA				pmax	pmax		
	comp=Z,15nm,1.1s						
JCT	**Junction City**	**86.84**	**56**	P	**P**	**06 43 28.1**	**+0.2**
	baz=244						
WRH	**Wood River Hil**	**86.88**	**11**	P	**P**	**06 43 26.5**	**-0.6**
WRH				IAmb	IAmb	06 43 31.6	
	comp=Z,24nm,1.3s						
HDA	**Harding Lake**	**87.03**	**11**	IAmb	IAmb	06 43 49.2	
	comp=Z,8.6nm,0.9s						
HDA	**Harding Lake**	**87.03**	**11**	P	**P**	**06 43 28.5**	**+0.6**
	baz=204						
CCB	**Clear Creek Bu**	**87.09**	**11**	P	**P**	**06 43 27.7**	**-0.4**
H21K	**Melozitna Rive**	**87.26**	**8**	IAmb	IAmb	06 43 38.0	
	comp=Z,16nm,1.6s						
H21K	**Melozitna Rive**	**87.26**	**8**	P	**P**	**06 43 30.6**	**+1.6**
	baz=199						
I23K	**Minto, Yukon-K**	**87.29**	**10**	P	**P**	**06 43 32.5**	**+3.3**
	baz=202						
MDM	**Murphy Dome**	**87.31**	**10**	P	**P**	**06 43 28.6**	**-0.7**
MDM				IAmb	IAmb	06 44 14.8	
	comp=Z,30nm,1.7s						
ILAR	**Eielson Array**	**87.37**	**11**	P	**P**	**06 43 29.8**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=229,slow=5.7,SNR=15						
	comp=Z,1.1nm,0.6s						
SEY	**Seymchan**	**87.42**	**345**	P	**P**	**06 43 30.2**	**+0.4**
	comp=Z,11nm,1.0s,baz=151,slow=8.8,SNR=20						
	comp=Z,11nm,1.0s						
HEH	**HeiHe**	**87.68**	**326**	*e*P	**P**	**06 43 31.5**	**+0.1**
HEH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HEH				pmax	pmax		
	comp=Z,170nm,5.2s						
H22K	**Ishtalitna Cre**	**87.68**	**9**	P	**P**	**06 43 32.0**	**+0.9**
	baz=200						
L29M	**L29M**	**87.76**	**15**	P	**P**	**06 43 33.1**	**+1.5**
	baz=212						
ABTX	**Abilene, Hawle**	**87.90**	**54**	P	**P**	**06 43 33.7**	**+0.8**
	baz=244						
DAWY	**Dawson**	**88.27**	**14**	IAmb	IAmb	06 43 37.6	
	comp=Z,19nm,1.6s						
DAWY	**Dawson**	**88.27**	**14**	P	**P**	**06 43 35.5**	**+1.5**
	baz=211						
HNS	**HongShan**	**88.85**	**311**	⇑P	**P**	**06 43 38.3**	**+1.1**
HNS				pmax	pmax		
	comp=Z,12nm,1.4s						
RPSI	**Rantau Prapat**	**88.89**	**273**	P	**P**	**06 43 37.0**	**-1.0**
RPSI				IAmb	IAmb	06 43 50.7	
	comp=Z,23nm,1.1s						
BJI	**Beijing**	**89.04**	**314**	P	**P**	**06 43 38.9**	**+0.9**
BJI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
LYN	**LuoYang**	**89.23**	**307**	*e*P	**P**	**06 43 40.8**	**+1.7**
LYN				sP	pwP	06 43 50.4	-0.9
LYN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
VA03	**San Esteban**	**89.23**	**125**	P	**P**	**06 43 37.3**	**-2.2**
VA03				IAmb	IAmb	06 45 23.7	
	comp=Z,19nm,1.1s						
BILL	**Bilibino**	**89.52**	**352**	P	**P**	**06 43 39.8**	**+0.1**
BILL				IAmb	IAmb	06 43 41.6	
	comp=Z,16nm,1.4s						
I29M	**Ogilvie Camp,**	**89.62**	**14**	P	**P**	**06 43 38.2**	**-2.0**
I29M				IAmb	IAmb	06 44 21.5	
	comp=Z,14nm,1.5s						
RSSD	**Black Hills**	**90.09**	**42**	P	**P**	**06 43 44.7**	**+1.5**
	baz=241						
RSSD	**Black Hills**	**90.09**	**42**	P	**P**	**06 43 44.2**	**+1.0**
	baz=241						
EPYK	**Eagle Plains**	**90.83**	**14**	P	**P**	**06 43 47.6**	**+1.7**
	baz=214						
XLT	**XiLinHaoTe**	**90.90**	**317**	*e*P	**P**	**06 43 45.5**	**-1.3**
XLT				pP	PcP	06 43 50.3	+2.5
XLT				sP	sP	06 43 52.1	+4.8
XLT				pmax	pmax		
	comp=Z,8.0nm,1.4s						
XLT				pmax	pmax		
	comp=Z,200nm,5.6s						
R32A	**Long Quarter,**	**91.08**	**49**	P	**P**	**06 43 48.6**	**+0.9**
	baz=244						
XAN	**Xi'an**	**91.69**	**306**	⇑P	**P**	**06 43 51.6**	**+1.0**
XAN				pP	sP	06 43 56.3	+5.1
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
NNA	**Nana**	**91.76**	**103**	LR	LR	07 15 18.5	
	comp=Z,120nm,21.9s,baz=168,slow=29						
JTS	**Las Juntas de**	**91.97**	**80**	LR	LR	07 19 20.2	
	comp=Z,140nm,18.1s,baz=249,slow=32						
ATAH	**Atahualpa**	**92.06**	**98**	LR	LR	07 18 27.2	
	comp=Z,266nm,18.1s,baz=224,slow=31						
DGMT	**Dagmar**	**92.09**	**38**	P	**P**	**06 43 54.8**	**+2.6**
	baz=241						
DGMT	**Dagmar**	**92.09**	**38**	P	**P**	**06 43 53.8**	**+1.7**
	baz=241						
F31M	**Tsiigehtchic**	**92.39**	**14**	P	**P**	**06 43 54.4**	**+1.4**
	baz=216						
HHC	**Hu-ho-hao-te**	**92.55**	**313**	*e*P	**P**	**06 43 55.1**	**+0.5**
HHC				pmax	pmax		
	comp=Z,29nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,6.4s						
INK	**Inuvik**	**93.13**	**14**	LR	LR	07 23 45.3	
	comp=Z,98nm,18.2s,baz=261,slow=34						
PHRA	**Phrae**	**93.18**	**288**	P	**P**	**06 43 57.0**	**-0.9**
YAK	**Yakutsk**	**93.80**	**337**	LR	LR	07 22 30.9	
	comp=Z,49nm,19.3s,baz=354,slow=33						
CMAR	**Chiang Mai Arr**	**94.31**	**288**	P	**P**	**06 44 04.0**	**+0.9**
	comp=Z,3.9nm,0.6s,baz=123,slow=3.0,SNR=20						
CMAR				LR	LR	07 25 30.9	
	comp=Z,35nm,19.5s,baz=100,slow=35						
	comp=Z,3.9nm,0.6s						
CHTO	**Chiang Mai**	**94.43**	**288**	P	**P**	**06 44 02.5**	**-1.1**
CD2	**Chengdu**	**94.55**	**301**	*e*P	**P**	**06 44 03.4**	**-0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH	**PanZhiHua**	**94.65**	**296**	P	**P**	**06 44 05.6**	**+1.0**
PZH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,4.3s						
YKA	**Yellowknife Ar**	**94.67**	**23**	P	**P**	**06 44 04.5**	**+0.9**
	comp=Z,0.8nm,1.1s,baz=237,slow=4.5,SNR=6.4						
YKA				LR	LR	07 21 35.8	
	comp=Z,61nm,18.4s,baz=282,slow=32						
	comp=Z,0.8nm,1.1s						
S39A	**Bolivar**	**94.68**	**52**	P	**P**	**06 44 04.7**	**+0.3**
	baz=248						
ECSD	**EROS Data Cent**	**94.73**	**45**	P	**P**	**06 44 03.2**	**-1.2**
ECSD				IAmb	IAmb	06 44 10.3	
	comp=Z,24nm,1.4s						
ECSD	**EROS Data Cent**	**94.73**	**45**	P	**P**	**06 44 06.0**	**+1.6**
	baz=246						
ECSD	**EROS Data Cent**	**94.73**	**45**	P	**P**	**06 44 04.9**	**+0.5**
	baz=246						
P38A	**Dawn**	**95.26**	**50**	P	**P**	**06 44 06.9**	**0.0**
	baz=248						
R40A	**Maddies Statio**	**95.68**	**51**	P	**P**	**06 44 10.2**	**+1.4**
	baz=248						
LZH	**Lanzhou**	**96.31**	**306**	*e*P	**P**	**06 44 15.1**	**+3.1**
LZH				pP	pwP	06 44 18.5	-5.7
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
TNCH	**TengChong**	**96.89**	**294**	*e*P	**P**	**06 44 14.8**	**-0.1**
TNCH				pmax	pmax		
	comp=Z,200nm,3.2s						
ULM	**Lac du Bonnet**	**97.76**	**39**	LR	LR	07 23 35.3	
	comp=Z,257nm,18.5s,baz=269,slow=32						
LPAZ	**La Paz**	**97.94**	**111**	LR	LR	07 22 03.5	
	comp=Z,164nm,18.2s,baz=154,slow=31						
SONM	**Songino Array**	**98.68**	**318**	PP	**PP**	**06 48 26.9**	**+3.2**
	comp=Z,0.7nm,0.8s,baz=116,slow=6.9,SNR=3.9						
TIXI	**Tiksi**	**99.89**	**344**	LR	LR	07 30 58.9	
	comp=Z,38nm,18.2s,baz=359,slow=36						
WMQ	**Urumqi**	**110.28**	**310**	*e*PKP	**PKiKP**	**06 49 14.3**	**-0.9**
ZALV	**Zalesovo Beam**	**113.26**	**321**	PKiKP	**PKiKP**	**06 49 20.6**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=166,slow=1.9,SNR=5.1						
MKAR	**Makanchi Array**	**114.42**	**313**	PKiKP	**PKiKP**	**06 49 23.1**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=140,slow=0.1,SNR=10						
KKAR	**Karatay Array**	**122.70**	**309**		**PKPdf**	**06 49 37.9**	**-1.1**
GURO	**Guroymak-BITLI**	**144.67**	**308**		**PKPdf**	**06 50 19.9**	**-0.3**
AKASG	**Malin Array Be**	**145.01**	**335**	PKP	**PKPdf**	**06 50 19.5**	**-0.7**
	comp=Z,5.6nm,0.6s,baz=36,slow=4.2,SNR=39						
EDMD	**Edmundbyers**	**145.06**	**9**	*e*P	**PKPdf**	**06 50 20.2**	**+0.1**
HPK	**Haverah Park**	**145.96**	**9**	*e*P	**PKPab**	**06 50 22.7**	**-0.1**
WLF1	**Llynfaes**	**146.13**	**12**	*e*P	**PKiKP**	**06 50 24.8**	**-1.3**
HLM1	**Long Mynd**	**147.15**	**11**	*e*P	**PKPab**	**06 50 26.3**	**-1.2**
SORM	**Soroca**	**147.36**	**333**	⇑P	**PKPab**	**06 50 27.4**	**-1.1**
CLL	**Collm**	**148.83**	**352**		**PKiKP**	**06 50 31.8**	**0.0**
CLL	**Collm**	**148.83**	**352**	*e*PKPdf	**PKPdf**	**06 50 27.0**	**+0.5**
CLL				*i* PKPbc	**PKiKP**	**06 50 31.1**	**-0.7**
	comp=Z,39nm,1.7s						
CLL				*e*pPKPab	**sPKPab**	**06 50 37.0**	**+2.2**
CLL				*e*x	x	06 50 44.0	
CHVC	**Chvalec**	**149.05**	**348**	*e*PKP	**PKiKP**	**06 50 32.1**	**-0.3**
OSTC	**Ostas**	**149.05**	**348**	*e*PKP	**PKiKP**	**06 50 33.2**	**+0.8**
BURAR	**Bucovina Array**	**149.06**	**335**	⇑P	**PKiKP**	**06 50 32.4**	**-0.2**
BRG	**Berggiesshubel**	**149.13**	**351**	*e*PKP	**PKiKP**	**06 50 32.7**	**+0.3**
BRG				Amp		06 50 34.9	
	comp=Z,15nm,1.2s						
BRG	**Berggiesshubel**	**149.13**	**351**	P	PKPab	06 50 47.5	+12
BRG				Amp		06 50 48.2	
	comp=Z,9.7nm,1.0s						
UPC	**Upice**	**149.14**	**348**	*e*PKP	**PKiKP**	**06 50 32.7**	**+0.2**
DPC	**Dobruska-Polom**	**149.23**	**348**	*e*PKP	**PKiKP**	**06 50 33.0**	**+0.2**
ILGA	**Ilgaz**	**149.25**	**318**		**PKiKP**	**06 50 34.3**	**+0.9**
KRLC	**Kraliky**	**149.40**	**347**	*e*PKP	**PKiKP**	**06 50 33.0**	**-0.1**
MORC	**Moravsky Berou**	**149.52**	**346**		**PKiKP**	**06 50 33.6**	**+0.2**
MORC	**Moravsky Berou**	**149.52**	**346**	*e*PKP	**PKiKP**	**06 50 33.1**	**-0.3**
CFR	**Carcaliu**	**149.68**	**329**	⇑P	**PKiKP**	**06 50 34.2**	**+0.5**
TPGR	**Topolog**	**149.78**	**329**	⇑P	**PKiKP**	**06 50 34.8**	**+0.8**
VRI	**Vrincioaia**	**149.81**	**332**	⇓P	**PKiKP**	**06 50 34.1**	**0.0**
MAUC	**Maruska**	**149.84**	**346**	*e*PKP	**PKiKP**	**06 50 34.9**	**+0.9**
PRU	**Pruhonice**	**149.90**	**350**	*e*PKP	**PKPab**	**06 50 43.5**	**+4.9**
BRTR	**Keskin Array B**	**150.02**	**316**	PKPbc	**PKiKP**	**06 50 34.4**	**-0.5**
	comp=Z,2.8nm,0.8s,baz=18,slow=5.2,SNR=13						
COVR	**Voineasa-Covas**	**150.06**	**332**	⇑P	**PKiKP**	**06 50 34.6**	**0.0**
HARR	**Harsova**	**150.14**	**329**	⇓P	**PKiKP**	**06 50 35.6**	**+0.9**
VRAC	**Vranov**	**150.16**	**347**	*e*PKP	**PKiKP**	**06 50 35.2**	**+0.5**
DOPR	**Dopca**	**150.31**	**333**	⇓P	**PKiKP**	**06 50 36.5**	**+1.4**
JAVC	**Velka Javorina**	**150.35**	**345**	*e*PKP	**PKiKP**	**06 50 36.9**	**+1.8**
KRUC	**Moravsky**	**150.44**	**347**	*e*PKP	**PKiKP**	**06 50 35.7**	**+0.5**
MLR	**Muntele Rosu**	**150.45**	**332**	⇓P	**PKiKP**	**06 50 35.9**	**+0.3**
MARR	**Marisel-Cluj**	**150.63**	**337**	⇑P	**PKiKP**	**06 50 36.7**	**+0.8**
VOIR		**150.88**	**333**	⇑P	**PKiKP**	**06 50 37.3**	**+0.9**
KHC	**Kasperske Hory**	**150.88**	**351**	*e*PKP	**PKiKP**	**06 50 36.4**	**+0.2**
KHC				*e*x	x	06 50 55.5	
CKRC	**Cesky Krumlov**	**151.07**	**350**	*e*PKP	**PKiKP**	**06 50 37.1**	**+0.5**
ARR	**Arges**	**151.11**	**333**	⇓P	**PKiKP**	**06 50 38.4**	**+1.5**
GERES	**GERESS Array B**	**151.14**	**350**	PKPbc	**PKiKP**	**06 50 37.2**	**+0.4**
	comp=Z,1.6nm,0.9s,baz=53,slow=3.8,SNR=12						
CONA	**Conrad Observa**	**151.63**	**347**	*e*pPKP	**PKiKP**	**06 50 39.0**	**+1.1**
	comp=Z,16nm,1.7s						
RONA	**Rosalia, Austr**	**151.75**	**346**	*e*pPKP	**PKiKP**	**06 50 39.2**	**+1.1**
	comp=Z,5.9nm,0.8s						
GZR	**Gura Zlata**	**151.84**	**336**	⇑P	**PKiKP**	**06 50 39.1**	**+0.8**
BZS	**Buzias**	**152.09**	**337**	⇑P	**PKiKP**	**06 50 39.6**	**+0.9**
BIOA	**Bad Ischl, Aus**	**152.27**	**350**	*e*pPKP	**PKiKP**	**06 50 40.7**	**+1.6**
	comp=Z,10nm,1.2s						
HERR	**Herculane**	**152.41**	**335**	⇓P	**PKiKP**	**06 50 40.3**	**+0.9**
RETA	**Reutte**	**152.85**	**354**	*e*pPKP	**PKiKP**	**06 50 42.2**	**+1.9**
	comp=Z,9.3nm,1.5s						
MOTA	**Moosalm**	**152.96**	**353**	*e*PKiKP	**PKiKP**	**06 50 40.7**	**0.0**
	comp=Z,9.5nm,1.1s						
WTTA	**Wattenberg**	**152.97**	**353**	*e*pPKP	**PKiKP**	**06 50 42.4**	**+1.6**
	comp=Z,7.0nm,1.0s						
DAVA	**Damuels**	**153.13**	**355**	*e*pPKP	**PKiKP**	**06 50 42.6**	**+1.5**
	comp=Z,12nm,1.4s						
MYKA	**Terra Mystica**	**153.30**	**349**	*e*PKiKP	**PKiKP**	**06 50 42.0**	**+0.7**
	comp=Z,3.5nm,0.6s						
FETA	**Feichten**	**153.31**	**354**	*e*pPKP	**PKiKP**	**06 50 42.6**	**+1.2**
	comp=Z,12nm,1.6s						
ABTA	**Abfaltersbach**	**153.37**	**351**	*e*pPKP	**PKiKP**	**06 50 42.4**	**+1.0**
	comp=Z,9.4nm,1.2s						
TORD	**Torodi Ar. Bea**	**171.26**	**146**	PKP	**PKPdf**	**06 50 51.7**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=327,slow=0.7,SNR=2.5						
TORD				PKPab	**sPKPab**	**06 52 13.8**	**+1.0**
	comp=Z,0.3nm,0.8s,baz=204,slow=3.2,SNR=1.4						

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*NEIC **16** 06:49:07.7±1.1, 26°.59N±0°.10×127°.78E±0°.08, h50^{km}±7^{km}, mb4.0/10, Error ellipse: s-maj=16.7km s-min=4.2km az=145.0*

*IDC **16** 06:49:08.4±1.4, 26°.61N×128°.04E, h52^{km}±16^{km}, mb3.7/9, mbtmp4.1/10, ML4.7/1, Error ellipse: s-maj=36.9km s-min=14.8km az=68.0*

*JMA **16** 06:49:08.5±0.1, 26°.7N±0°.4×127°.8E±0°.5, h58^{km}±1^{km}, MD3.9/11, MV4.0/11, NEAR OKINAWAJIMA ISLAND*

JMA Felt II J1 at NEAR OKINAWAJIMA ISLAND .

ISC 16 06:49:08.3±0.7**, 26°.66N**±0°.05×**127°.83E**±0°.05**, h58**^{km}±6^{km}**, n64,** σ**1^{s}.39**/62**, mb4.0**/14**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNTH	**Nagotoyohara**	**0.22**	**129**	*i* P	**Pn**	**06 49 17.9**	**+0.3**
JNTH				S	**Sn**	**06 49 24.5**	**+0.2**
JNTH	**Nagotoyohara**	**0.22**	**129**	A	A	06 49 17.9	
	comp=E,20nm,0.3s,comp=E,13nm,0.2s						
JIH	**Iheya**	**0.40**	**18**	*i* P	**Pn**	**06 49 19.2**	**+0.1**
JIH				S	**Sn**	**06 49 26.8**	**0.0**
JIH	**Iheya**	**0.40**	**18**	A	A	06 49 19.2	
	comp=E,24nm,0.6s,comp=E,21nm,0.7s						
JOW	**Kunigami**	**0.44**	**66**	P	**Pn**	**06 49 19.4**	**0.0**
	6µm,0.2s,baz=254,slow=8.9,SNR=3573						
JOW				S	**Sn**	**06 49 27.1**	**-0.4**
	15µm,0.2s,baz=132,slow=26,SNR=56						
JOW	**Kunigami**	**0.44**	**66**	P	**Pn**	**06 49 19.7**	**+0.3**
JOW	**Kunigami**	**0.44**	**66**	*i* P	**Pn**	**06 49 19.5**	**0.0**
JOW				S	**Sn**	**06 49 27.3**	**-0.2**
JOW	**Kunigami**	**0.44**	**66**	A	A	06 49 19.5	
	comp=E,40nm,0.3s,comp=E,50nm,0.3s						
JJT3	**Tamagusuku3**	**0.51**	**184**	*i* P	**Pn**	**06 49 21.2**	**+0.9**
JJT3				S	**Sn**	**06 49 30.2**	**+1.3**
JAGN	**Aguni-jima**	**0.53**	**263**	*i* P	**Pn**	**06 49 20.6**	**+0.3**
JAGN				S	**Sn**	**06 49 29.6**	**+0.4**
JAGN	**Aguni-jima**	**0.53**	**263**	A	A	06 49 20.6	
	comp=E,40nm,0.4s,comp=E,41nm,0.5s						
JYRO	**Yoronjima**	**0.67**	**57**	*i* P	**Pn**	**06 49 22.0**	**0.0**
JYRO				*e*S	**Sn**	**06 49 31.9**	**-0.1**
JOKE	**Okinoerabujima**	**0.96**	**43**	*i* P	**Pn**	**06 49 25.6**	**-0.2**
JOKE				*e*S	**Sn**	**06 49 38.5**	**-0.3**
JOKE	**Okinoerabujima**	**0.96**	**43**	A	A	06 49 25.6	
	comp=E,4.0nm,0.9s,comp=E,5.0nm,0.8s						
JKE	**Kume jima 2**	**0.99**	**251**	*i* P	**Pn**	**06 49 26.1**	**0.0**
JKE				S	**Sn**	**06 49 39.5**	**+0.2**
JKE	**Kume jima 2**	**0.99**	**251**	A	A	06 49 26.1	
	comp=E,4.0nm,1.0s,comp=E,6.0nm,0.5s						
JTK	**Tokunoshima**	**1.50**	**41**	*i* P	**Pn**	**06 49 32.7**	**-0.3**
JTK				*e*S	**Sn**	**06 49 51.1**	**-0.5**
JMZ	**Minamidaito 2**	**3.16**	**105**	P	**Pn**	**06 49 56.1**	**+0.5**
YOJ	**Yonaguni jima**	**4.87**	**244**	Pn	**Pn**	**06 50 17.8**	**-1.2**
YOJ	**Yonaguni jima**	**4.87**	**244**	P	**Pn**	**06 50 18.4**	**-0.6**
JSU	**Suzuyama**	**5.35**	**25**	Pn	**Pn**	**06 50 25.7**	**+0.1**
TATO	**Taipei**	**5.95**	**255**	Pn	**Pn**	**06 50 32.0**	**-1.8**
YHNB	**Yeheng**	**6.15**	**253**	P	**Pn**	**06 50 38.1**	**+1.5**
NACB	**Ninganchiao**	**6.15**	**248**	Pn	**Pn**	**06 50 35.0**	**-1.7**
NACB	**Ninganchiao**	**6.15**	**248**	P	**Pn**	**06 50 35.3**	**-1.3**
YULB	**Yu-li**	**6.76**	**243**	Pn	**Pn**	**06 50 41.8**	**-3.1**
YULB	**Yu-li**	**6.76**	**243**	P	**Pn**	**06 50 41.8**	**-3.1**
SSLB	**Suanglung**	**6.85**	**247**	Pn	**Pn**	**06 50 44.3**	**-1.8**
SSLB	**Suanglung**	**6.85**	**247**	P	**Pn**	**06 50 44.6**	**-1.6**
JNU	**Nakatsue**	**6.96**	**22**	P	**Pn**	**06 50 49.0**	**+1.3**
	14nm,0.3s,baz=217,slow=2.3,SNR=54						
	56nm,0.5s						
JNU	**Nakatsue**	**6.96**	**22**	Pn	**Pn**	**06 50 48.7**	**+1.0**
TWGBT	**Beinan**	**7.23**	**240**	P	**Pn**	**06 50 48.2**	**-3.1**
TWG	**Pinlang**	**7.23**	**240**	Pn	**Pn**	**06 50 47.5**	**-3.8**
TPUB	**Ta-pu**	**7.34**	**244**	Pn	**Pn**	**06 50 51.4**	**-1.4**
TPUB	**Ta-pu**	**7.34**	**244**	P	**Pn**	**06 50 52.0**	**-0.8**
JMN	**Monobe**	**8.78**	**35**	Pn	**Pn**	**06 51 11.0**	**-1.5**
JHS	**Saijyo**	**9.47**	**27**	Pn	**Pn**	**06 51 19.7**	**-2.4**
JGF	**Kuroka**	**12.08**	**40**	Pn	**Pn**	**06 51 55.9**	**-1.8**
MAJO	**Matsushiro**	**13.23**	**39**	Pn	**Pn**	**06 52 13.7**	**+0.3**
SONM	**Songino Array**	**27.00**	**327**	P	**P**	**06 54 48.2**	**+3.4**
	0.7nm,0.3s,baz=140,slow=11,SNR=5.7						
	0.7nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**36.46**	**93**	T	T	07 34 30.6	
	baz=291,slow=74,SNR=3.3						
H11N1	**WAKE ISLAND Hy**	**36.46**	**93**	T	T	07 34 22.9	
	baz=291						
H11N3	**WAKE ISLAND Hy**	**36.48**	**93**	T	T	07 34 25.4	
	baz=291,slow=74,SNR=3.7						
H11S3	**WAKE ISLAND Hy**	**36.68**	**95**	T	T	07 34 44.6	
	baz=290,slow=75,SNR=4.4						
H11S1	**WAKE ISLAND Hy**	**36.69**	**95**	T	T	07 34 47.2	
	baz=290,slow=75,SNR=4.2						
H11S2	**WAKE ISLAND Hy**	**36.70**	**95**	T	T	07 34 53.5	
	baz=290,slow=75,SNR=4.6						
MK31	**Makanchi Array**	**40.98**	**312**		**P**	**06 56 46.1**	**+0.6**
MKAR	**Makanchi Array**	**40.98**	**312**	P	**P**	**06 56 47.0**	**+1.5**
	2.1nm,0.6s,baz=99,slow=10,SNR=19						
	2.1nm,0.6s						
ZALV	**Zalesovo Beam**	**41.69**	**323**	P	**P**	**06 56 52.2**	**+1.1**
	1.0nm,0.5s,baz=104,slow=9.1,SNR=3.9						
	1.0nm,0.5s						
SMY	**Shemya**	**43.08**	**40**	P	**P**	**06 57 02.8**	**+0.4**
TARG	**Taragay, Kyrgy**	**43.42**	**303**	P	**P**	**06 57 03.8**	**-2.1**
TARG				IAmb	IAmb	06 57 14.2	
	comp=Z,1.5nm,0.8s						
KURK	**Kurchatov**	**44.26**	**316**	P	**P**	**06 57 11.4**	**-0.5**
KURK				IAmb	IAmb	06 57 19.3	
	comp=Z,2.3nm,1.1s						
KURBB	**Kurchatov Arra**	**44.30**	**316**	P	**P**	**06 57 13.5**	**+1.3**
	comp=Z,1.0nm,0.3s,baz=104,slow=9.0,SNR=6.2						
	comp=Z,1.0nm,0.3s						
FITZ	**Fitzroy Crossi**	**44.54**	**183**	P	**P**	**06 57 13.3**	**-1.2**
WB0	**Warramunga Arr**	**46.59**	**171**	P	**P**	**06 57 29.7**	**-0.9**
WB0				IAmb	IAmb	06 57 56.0	
	comp=Z,2.9nm,1.0s						
WRA	**Warramunga Arr**	**46.75**	**172**	P	**P**	**06 57 31.6**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=353,slow=8.5,SNR=21						
	comp=Z,2.1nm,0.6s						
WB2	**Warramunga Arr**	**46.75**	**172**	P	**P**	**06 57 30.9**	**-1.0**
BVAR	**Borovoye Array**	**49.72**	**318**	P	**P**	**06 57 56.3**	**+1.8**
	comp=Z,0.6nm,0.3s,baz=99,slow=8.1,SNR=4.4						
	comp=Z,0.6nm,0.3s						
AS31	**Alice Springs**	**50.37**	**173**	P	**P**	**06 57 59.5**	**-0.2**
AS31				IAmb	IAmb	06 58 01.3	
	comp=Z,1.7nm,1.2s						
ASAR	**Alice Springs**	**50.37**	**173**	P	**P**	**06 58 00.2**	**+0.4**
	comp=Z,1.2nm,0.5s,baz=2.6,slow=13,SNR=39						
	comp=Z,1.2nm,0.5s						
ABKAR	**Akbulak array**	**56.09**	**313**	P	**P**	**06 58 41.8**	**+0.4**
ABKAR				IAmb	IAmb	06 58 54.0	
	comp=Z,1.2nm,0.9s						
STKA	**Stephens Creek**	**59.67**	**166**	P	**P**	**06 59 06.5**	**-0.1**
	comp=Z,1.8nm,0.7s,baz=0.0,slow=10,SNR=3.3						
	comp=Z,1.8nm,0.7s						
STKA	**Stephens Creek**	**59.67**	**166**	P	**P**	**06 59 06.0**	**-0.7**
STKA				IAmb	IAmb	06 59 13.5	
	comp=Z,2.9nm,1.4s						
YKA	**Yellowknife Ar**	**78.29**	**25**	P	**P**	**07 01 02.2**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=303,slow=5.8,SNR=5.0						
	comp=Z,0.2nm,0.7s						

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*IDC **16** 07:04:43.9±1.0, 50°.04N×78°.70E, h0^{km}, mbtmp2.8/3, ML2.1/2, Error ellipse: s-maj=15.4km s-min=6.8km az=66.0*

*NNC **16** 07:04:43.4±0.4, 50°.02N×78°.66E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=7.6km s-min=2.3km az=76.0, Suspected Mining explosion.*

ISC 16 07:04:43.9±0.8**, 50°.01N**±0°.03×**78°.62E**±0°.06**, h0**^{km}**, n23,** σ**0^{s}.79**/36**, 20C-8D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.58**	**353**	⇑P	**Pg**	**07 04 54.7**	**-0.3**
KUR07				⇓S	**Sg**	**07 05 03.4**	**+0.9**
KUR06	**Kurchatov Arra**	**0.60**	**354**	⇑P	**Pg**	**07 04 55.1**	**-0.2**
KUR06				⇑S	**Sg**	**07 05 03.9**	**+0.8**
KUR14	**Kurchatov Arra**	**0.61**	**358**	⇑P	**Pg**	**07 04 55.1**	**-0.4**
KUR14				⇓S	**Sg**	**07 05 03.9**	**+0.5**
KUR15	**Kurchatov Arra**	**0.61**	**356**	⇓P	**Pg**	**07 04 55.1**	**-0.5**
KUR15				⇑S	**Sg**	**07 05 04.1**	**+0.5**
KURBB	**Kurchatov Arra**	**0.62**	**355**	Pg	**Pg**	**07 04 55.6**	**-0.1**
	2.4nm,0.3s,baz=166,slow=18,SNR=50						
KURBB				Lg	Lg	07 05 04.2	
	5.2nm,0.3s,baz=145,slow=44,SNR=34						
KURBB	**Kurchatov Arra**	**0.62**	**355**	⇑P	**Pg**	**07 04 55.3**	**-0.4**
	14nm,0.3s						
KURBB				⇓S	**Sg**	**07 05 04.7**	**+0.9**
	101nm,0.5s						
KUR16	**Kurchatov Arra**	**0.62**	**353**	⇑P	**Pg**	**07 04 55.5**	**-0.4**
KUR16				⇑S	**Sg**	**07 05 04.4**	**+0.5**
KUR17	**Kurchatov Arra**	**0.63**	**351**	⇑P	**Pg**	**07 04 55.6**	**-0.4**
KUR05	**Kurchatov Arra**	**0.64**	**355**	⇑P	**Pg**	**07 04 55.6**	**-0.5**
KUR05				⇑S	**Sg**	**07 05 04.8**	**+0.4**
KUR04	**Kurchatov Arra**	**0.66**	**356**	⇑P	**Pg**	**07 04 56.1**	**-0.4**
KUR04				⇑S	**Sg**	**07 05 05.4**	**+0.5**
KURK	**Kurchatov**	**0.71**	**360**	⇑P	**Pg**	**07 04 56.6**	**-0.8**
	7.8nm,0.5s						
KURK				⇑S	**Sg**	**07 05 06.4**	**-0.2**
	18nm,0.5s						
MAKZ	**Makanchi**	**3.91**	**144**	⇑Pn	**Pn**	**07 05 45.4**	**+0.2**
	0.6nm,0.5s						
MAKZ				⇑Pg	**Pb**	**07 05 54.2**	**+0.6**
	1.4nm,0.5s						
MAKZ				⇓Lg	Lg	07 06 45.9	
	6.5nm,0.7s						
MK31	**Makanchi Array**	**4.04**	**141**	⇑Pn	**Pn**	**07 05 46.6**	**-0.4**
	0.1nm,0.1s,baz=322,slow=10,SNR=2.9						
MK31				⇑Pg	**Pb**	**07 05 55.4**	**-0.5**
	1.1nm,0.5s,baz=318,slow=14,SNR=5.1						
MK31				Lg	Lg	07 06 49.7	
	4.2nm,0.5s,baz=327,slow=25,SNR=15						
MKAR	**Makanchi Array**	**4.04**	**141**	Pn	**Pn**	**07 05 47.6**	**+0.5**
	0.4nm,0.3s,baz=321,slow=9.9,SNR=5.1						
MKAR				Pg	**Pb**	**07 05 54.8**	**-1.1**
	0.6nm,0.3s,baz=328,slow=16,SNR=6.3						
MKAR				Lg	Lg	07 06 49.6	
	1.4nm,0.3s,baz=336,slow=26,SNR=12						
ZSN	**Zaisan**	**4.86**	**119**	Pg	**Pb**	**07 06 10.8**	**+0.9**
	2.6nm,0.3s						
ZSN				Lg	Lg	07 07 08.1	
	6.3nm,0.4s						
I46RU	**ZALESOVO INFRA**	**5.50**	**42**	I	I	07 37 40.0	
	baz=223,slow=331,SNR=6.1						
ZALV	**Zalesovo Beam**	**5.50**	**42**	Pn	**Pn**	**07 06 07.7**	**+0.7**
	0.9nm,0.3s,baz=232,slow=14,SNR=9.7						
ZALV				Sn	**Sn**	**07 07 09.9**	**-1.0**
	0.2nm,0.3s,baz=222,slow=20,SNR=1.3						
ZALV				Lg	Lg	07 07 33.6	
	0.2nm,0.3s,baz=230,slow=48,SNR=1.6						
	1.7nm,0.3s						
BVA0	**Borovoye Array**	**5.96**	**304**	⇑Sn	**Sn**	**07 07 22.9**	**+0.6**
	1.3nm,0.5s,baz=117,slow=22,SNR=7.0						
BVA0				⇓Lg	Lg	07 07 51.4	
	2.9nm,0.9s,baz=117,slow=22,SNR=7.0						
BVAR	**Borovoye Array**	**5.96**	**304**	Pn	**Pn**	**07 06 11.6**	**-1.8**
	baz=124,slow=17,SNR=2.2						
BVAR				Sn	**Sn**	**07 07 23.9**	**+1.6**
	0.1nm,0.3s,baz=114,slow=22,SNR=13						
BVAR				Lg	Lg	07 07 54.7	
	0.1nm,0.3s,baz=115,slow=27,SNR=1.6						
	0.2nm,0.3s						
BRVK	**Borovoye**	**6.03**	**304**	⇓Sn	**Sn**	**07 07 24.1**	**+0.1**
	2.8nm,0.6s						
BRVK				⇓Lg	Lg	07 07 55.0	
	1.2nm,0.5s						
CHKK	**Chushkaly**	**6.26**	**191**	Pg	**Pg**	**07 06 45.1**	**+1.3**
	0.9nm,0.1s						
CHKK				Lg	Lg	07 08 06.7	
	6.5nm,0.3s						
KPKS	**Kokpek**	**6.55**	**180**	Pg	**Pg**	**07 06 49.2**	**-0.1**
	1.3nm,0.2s						
KPKS				Lg	Lg	07 08 13.7	
	4.4nm,0.3s						
PDGK	**Podgornoye**	**6.71**	**175**	Pg	**Pg**	**07 06 50.8**	**-1.6**
	0.8nm,0.3s						
PDGK				Lg	Lg	07 08 16.9	
	1.4nm,0.4s						

GUC **16** *07:05:11.3±0.6, 34°.00S×72°.12W, h19km±10km, ML4.3*
NEIC **16** *07:05:11.9±1.4, 34°.03S±0°.04×72°.20W±0°.06, h22km±4km, mb4.9/36, Mwr4.5/73, ML4.3(GUC), Error ellipse: s-maj=7.0km s-min=5.6km az=88.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}4.16; $M_{\theta\theta}$0.34; $M_{\phi\phi}$-4.49; $M_{r\theta}$1.69; $M_{\theta\phi}$-0.62; $M_{\phi r}$-6.05; Fault plane solution: $M_0$7.66000×10^{15} NP1:ϕ_s168.70000°, δ73.34000°, λ78.17000°. NP2:ϕ_s24.85000°, δ20.34000°, λ124.42000°. Principal axes: T 7.7003, Plg60.0000°, Azm62.0000°; N -0.0913, Plg11.0000°, Azm172.0000°; P -7.6090, Plg27.0000°, Azm268.0000°;*
VAO **16** *07:05:12.4±0.4, 33°.90S×72°.32W, h23km, mb4.7*
NEIC **16** *07:05:12.3, 34°.01S×72°.18W, h25km*
IDC **16** *07:05:16.0±2.2, 33°.98S×72°.04W, h49km±19km, mb4.1/11, mbtmp4.4/16, ML4.2/5, MS4.1/20, Error ellipse: s-maj=20.0km s-min=15.2km az=99.0*
ISC 16 07:05:11.3±1.1**, 33°.99S**±0°.02×**72°.16W**±0°.04**, h17**km±6km**, n215, σ1s.09**/225**, mb4.8**/26**, MS4.2**/20**, 4C-12D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BO03	**Pichilemu**	**0.53**	**162**	*e*P	**Pg**	**07 05 22.5**	**+0.7**
BO03				*e*S	**Sb**	**07 05 30.0**	**+0.4**
BO03				IAML		07 05 30.9	
	comp=N,19µm,0.3s						
VA05	**Santo Domingo**	**0.56**	**54**		**Pn**	**07 05 23.5**	**-1.0**
VA05					**Sn**	**07 05 31.6**	**-1.8**
VA05	**Santo Domingo**	**0.56**	**54**	*e*P	**Pn**	**07 05 23.5**	**-1.0**
VA05				*e*S	**Sn**	**07 05 31.4**	**-2.1**
VA05				IAML		07 05 35.3	
	comp=N,39µm,0.2s						
MT01	**Popeta**	**0.77**	**81**		**Pg**	**07 05 26.1**	**-0.1**
MT01				Sn	**Sn**	**07 05 37.0**	**-1.5**
MT01	**Popeta**	**0.77**	**81**	⇓*i*P	**Pn**	**07 05 26.4**	**-1.0**
MT01				*e*S	**Sn**	**07 05 36.7**	**-1.8**
MT01				IAML		07 05 38.9	
	comp=E,13µm,0.3s						
BO01	**Tunca**	**0.98**	**114**		**Pb**	**07 05 28.9**	**-0.9**
BO01	**Tunca**	**0.98**	**114**	⇓*i*P	**Pb**	**07 05 29.2**	**-0.6**
BO01				*e*S	**Sb**	**07 05 40.5**	**-1.9**
BO01				IAML		07 05 54.9	
	comp=E,5µm,0.4s						
MT09	**Talagante**	**1.00**	**78**		**Pn**	**07 05 29.9**	**-0.7**
MT09	**Talagante**	**1.00**	**78**	⇓*i*P	**Pn**	**07 05 30.0**	**-0.7**
MT09				*e*S	**Sn**	**07 05 44.4**	**-0.1**
MT09				IAML		07 05 48.8	
	comp=N,15µm,0.3s						
GO05	**Huala**	**1.03**	**169**		**Pn**	**07 05 30.6**	**-0.4**
GO05				Sn	**Sb**	**07 05 43.8**	**-0.3**
GO05	**Huala**	**1.03**	**169**	*e*P	**Pn**	**07 05 30.8**	**-0.3**
GO05				*e*S	**Sb**	**07 05 44.0**	**-0.1**
GO05				IAML		07 05 46.7	
	comp=E,12µm,0.7s						
VA01	**Torpederas**	**1.06**	**24**		**Pg**	**07 05 31.4**	**-0.3**
VA01	**Torpederas**	**1.06**	**24**	*e*P	**Pg**	**07 05 31.4**	**-0.3**
VA01				*e*S	**Sg**	**07 05 45.7**	**+0.2**
VA01				IAML		07 05 51.3	
	comp=E,6µm,0.6s						
MT02	**Curacav**	**1.12**	**50**		**Pn**	**07 05 31.6**	**-0.6**
MT02	**Curacav**	**1.12**	**50**	⇓*i*P	**Pb**	**07 05 32.1**	**-0.2**
MT02				*e*S	**Sn**	**07 05 46.4**	**-0.9**
MT02				IAML		07 05 55.6	
	comp=N,7µm,0.8s						
MT05	**Renca**	**1.33**	**64**		**Pb**	**07 05 35.5**	**-0.3**
MT05	**Renca**	**1.33**	**64**	⇓*i*P	**Pb**	**07 05 35.2**	**-0.6**
MT05				*e*S	**Sg**	**07 05 53.9**	**-0.4**
MT05				IAML		07 06 06.6	
	comp=E,10µm,0.3s						
MT12	**Pirque**	**1.37**	**80**	*e*P	**Pb**	**07 05 35.9**	**-0.5**
MT12				*e*S	**Sg**	**07 05 55.7**	**+0.3**
MT12				IAML		07 06 00.8	
	comp=N,13µm,0.6s						
BO02	**Sierra Bellavi**	**1.39**	**125**		**Pb**	**07 05 35.9**	**-1.0**
BO02	**Sierra Bellavi**	**1.39**	**125**	*e*P	**Pb**	**07 05 36.3**	**-0.6**
BO02				*e*S	**Sg**	**07 05 55.1**	**-1.2**
ROC1	**El Roble**	**1.39**	**44**		**Pb**	**07 05 36.8**	**-0.2**
ROCH	**El Roble**	**1.40**	**44**	⇓*i*P	**Pb**	**07 05 36.6**	**-0.4**
ROCH				*e*P	**Pb**	**07 05 36.7**	**-0.4**
ROCH				*e*S	**Sg**	**07 05 55.1**	**-1.4**
ROCH				*e*S	**Sb**	**07 05 56.7**	**+1.9**
ROCH				IAML		07 06 04.6	
	comp=E,15µm,0.7s						
ROCH				IAML		07 06 04.6	
	comp=E,12µm,0.2s						
MT03	**Universidad Ad**	**1.46**	**71**		**Pb**	**07 05 37.4**	**-0.7**
MT03	**Universidad Ad**	**1.46**	**71**	⇓*i*P	**Pb**	**07 05 37.4**	**-0.7**
MT03				*e*S	**Sg**	**07 05 57.9**	**-0.6**
MT03				IAML		07 06 08.6	
	comp=E,9µm,0.4s						
PEL	**Peldehue**	**1.49**	**56**		**Pb**	**07 05 38.5**	**-0.1**
PEL	**Peldehue**	**1.49**	**56**	⇓*i*P	**Pb**	**07 05 38.3**	**-0.3**
PEL				*e*S	**Sg**	**07 05 58.7**	**-0.8**
PEL				IAML		07 06 07.7	
	comp=E,11µm,0.5s						
MT10	**Hacienda Santa**	**1.53**	**63**	⇓*i*P	**Pb**	**07 05 39.2**	**-0.1**
MT10				*e*S	**Sg**	**07 06 00.4**	**-0.3**
MT13	**San Alfonso**	**1.58**	**82**		**Pb**	**07 05 39.1**	**-1.0**
MT13	**San Alfonso**	**1.58**	**82**	*e*P	**Pb**	**07 05 39.4**	**-0.7**
MT13				*e*S	**Sg**	**07 06 02.1**	**-0.2**
MT13				IAML		07 06 05.2	
	comp=E,11µm,0.1s						
VA06	**Catapilco**	**1.60**	**27**		**Pn**	**07 05 39.0**	**+0.2**
VA06	**Catapilco**	**1.60**	**27**	⇑*i*P	**Pn**	**07 05 38.9**	**+0.2**
VA06				*e*S	**Sg**	**07 06 01.9**	**-0.9**
VA06				IAML		07 06 11.3	
	comp=E,12µm,0.6s						
LMEL	**Las Melosas**	**1.63**	**86**		**Pb**	**07 05 40.4**	**-0.7**
LMEL	**Las Melosas**	**1.63**	**86**	*e*P	**Pb**	**07 05 40.5**	**-0.6**
LMEL				*e*S	**Sg**	**07 06 03.5**	**-0.5**
LMEL				IAML		07 06 04.0	
	comp=N,7µm,0.5s						
FCH	**Farellones**	**1.69**	**68**	⇓*i*P	**Pb**	**07 05 41.2**	**-1.0**
FCH				*e*S	**Sg**	**07 06 04.3**	**-1.7**
FCH				IAML		07 06 08.5	
	comp=N,7µm,0.2s						
MT04	**Ro Olivares**	**1.79**	**71**	⇓*i*P	**Pb**	**07 05 42.5**	**-1.2**
MT04				*e*S	**Sb**	**07 06 04.3**	**-1.6**
MT04				IAML		07 06 12.8	
	comp=N,6µm,0.8s						
VA03	**San Esteban**	**1.82**	**48**		**Pb**	**07 05 43.0**	**-1.2**
VA03	**San Esteban**	**1.82**	**48**	⇑*i*P	**Pb**	**07 05 43.3**	**-0.9**
VA03				*e*S	**Sg**	**07 06 12.2**	**+2.3**
MT08	**Bocatoma Ro**	**1.87**	**74**	*i* P	**Pb**	**07 05 43.9**	**-1.2**
MT08				*e*S	**Sb**	**07 06 08.7**	**+0.4**
BI05	**Punta Hualpn**	**2.88**	**197**	Pn	**Pn**	**07 05 55.2**	**-1.2**
CO02	**Combarbal**	**2.95**	**20**		**Pn**	**07 05 58.1**	**+0.6**
CO02	**Combarbal**	**2.95**	**20**	⇑*i*P	**Pn**	**07 05 57.7**	**+0.2**
CO02				*e*S	**Sn**	**07 06 31.9**	**-0.7**
CO06	**Fray Jorge**	**3.34**	**8**	Pn	**Pn**	**07 06 01.4**	**-1.3**
CO03	**El Pedregal**	**3.38**	**22**		**Pn**	**07 06 03.5**	**+0.1**
CO03	**El Pedregal**	**3.38**	**22**	*e*P	**Pn**	**07 06 04.4**	**+1.0**
CO03				*e*S	**Sn**	**07 06 46.0**	**+2.7**
GO04	**Tololo Observa**	**3.98**	**17**		**Pn**	**07 06 12.4**	**+0.7**
CFA	**Coronel Fontan**	**4.07**	**55**	P	**Pn**	**07 06 15.2**	**+2.4**
	comp=N,15nm,0.3s,baz=229,slow=13,SNR=146						
CFA				S	**Sn**	**07 07 02.1**	**+1.9**
	comp=N,205nm,0.6s,baz=27,slow=22,SNR=3.7						
CFA				LR	LR	07 08 02.1	
	comp=N,4µm,18.1s,baz=227,slow=42						
	comp=N,144nm,0.6s						
CO05	**La Serena**	**4.13**	**11**		**Pn**	**07 06 13.6**	**-0.1**
CO05	**La Serena**	**4.13**	**11**	⇓*i*P	**Pn**	**07 06 13.5**	**-0.2**
CO05				*e*S	**Sn**	**07 06 59.7**	**-2.0**
CO01	**Juntas del Tor**	**4.37**	**24**		**Pn**	**07 06 18.1**	**+0.9**
LC02	**Puerto Saavedr**	**4.89**	**191**	Pn	**Pn**	**07 06 24.3**	**+0.2**
LCO	**Las Campanas**	**5.12**	**14**	Pn	**Pn**	**07 06 27.1**	**-0.3**
AC05	**El Transito**	**5.39**	**18**		**Pn**	**07 06 31.0**	**0.0**
VA04	**Juan Fernndez**	**5.56**	**272**	Pn	**Pn**	**07 06 31.8**	**-1.5**
GO06	**Curarrehue**	**5.61**	**175**	Pn	**Pn**	**07 06 34.2**	**+0.2**
H03S1	**Juan Fernandez**	**5.61**	**270**	T	T	07 12 20.6	
	baz=92,slow=75,SNR=2417						
H03S3	**Juan Fernandez**	**5.61**	**270**	T	T	07 12 21.9	
	baz=92,slow=75,SNR=3103						
H03S2	**Juan Fernandez**	**5.63**	**270**	T	T	07 12 27.6	
	baz=92,slow=75,SNR=2133						
LR03	**Panguipulli**	**5.63**	**181**		**Pn**	**07 06 35.0**	**+0.7**
H03N1	**Juan Fernandez**	**5.65**	**274**	T	T	07 12 40.9	
	baz=98,slow=74,SNR=34						
H03N3	**Juan Fernandez**	**5.66**	**274**	T	T	07 12 40.5	
	baz=98,slow=74,SNR=28						
H03N2	**Juan Fernandez**	**5.67**	**274**	T	T	07 12 33.2	
	baz=98,slow=74,SNR=42						
AC04	**Llanos de Chal**	**5.84**	**9**	Pn	**Pn**	**07 06 36.1**	**-1.1**
LR04	**Corral**	**5.96**	**189**		**Pn**	**07 06 36.9**	**-1.9**
GO03	**Copiap**	**6.59**	**15**		**Pn**	**07 06 46.6**	**-0.9**
PLCA	**Paso Flores**	**6.85**	**170**	P	**Pn**	**07 06 52.8**	**+1.7**
	comp=N,1.1nm,0.3s,baz=333,slow=10,SNR=55						
PLCA				S	**Sn**	**07 08 14.8**	**+6.1**
	comp=N,17nm,0.9s,baz=43,slow=17,SNR=1.0						
PLCA				LR	LR	07 09 53.1	
	comp=N,797nm,20.5s,baz=350,slow=40						
	comp=N,7.4nm,0.5s						
LL05	**Los Muermos**	**7.47**	**188**	Pn	**Pn**	**07 06 59.2**	**-0.4**
AC02	**Maricunga**	**7.60**	**21**		**Pn**	**07 07 01.3**	**-0.4**
GO07	**Milladeo Hill,**	**9.19**	**187**		**Pn**	**07 07 21.7**	**-1.3**
TRQA	**Tornquist**	**9.19**	**119**		**Pn**	**07 07 24.3**	**+1.2**
AY01	**Puyuhuapi**	**10.42**	**182**	Pn	**Pn**	**07 07 40.0**	**+0.1**
LVC	**Limon Verde**	**11.69**	**15**	P	**Pn**	**07 07 59.0**	**+1.2**
	comp=N,0.8nm,0.3s,baz=210,slow=8.3,SNR=4.5						
LVC				S	Sn	07 10 21.2	+13
	comp=N,15nm,0.8s,baz=153,slow=17,SNR=3.5						
LVC				LR	LR	07 12 43.2	
	comp=N,1000nm,18.6s,baz=209,slow=38						
	comp=N,3.7nm,0.5s						
MECA	**Mercedes**	**12.80**	**72**	*e*P	**Pn**	**07 08 15.0**	**+2.5**
ITQB	**Itaqui**	**13.89**	**76**		**Pn**	**07 08 27.8**	**+0.4**
PB11	**IPOC Station P**	**14.35**	**10**		**Pn**	**07 08 34.6**	**+0.7**
GO01	**Chusmiza**	**14.51**	**11**		**Pn**	**07 08 36.0**	**-0.4**
RODS	**Rosario do Sul**	**14.82**	**80**	*e*P	**Pn**	**07 08 40.5**	**+0.4**
CPUP	**Villa Florida**	**14.92**	**63**	P	**Pn**	**07 08 42.2**	**+0.8**
	comp=N,0.1nm,0.3s,baz=229,slow=12,SNR=7.5						
CPUP				S	**Sn**	**07 11 29.6**	**+3.2**
	comp=N,9.0nm,1.0s,baz=316,slow=20,SNR=2.5						
CPUP				LR	LR	07 15 07.5	
	comp=N,1µm,18.2s,baz=240,slow=40						
	comp=N,3.6nm,0.8s						
MNMC	**Minye Minye**	**14.98**	**9**		**Pn**	**07 08 42.4**	**-0.1**
MNMC				IAmb	IAmb	07 08 51.0	
	comp=Z,42nm,0.8s						
AZCA	**Azaras, Argent**	**15.06**	**71**	*e*P	**Pn**	**07 08 43.6**	**+0.3**
PB12	**IPOC Station P**	**15.40**	**7**		**Pn**	**07 08 49.2**	**+1.2**
CRSM	**Crissiumal (Br**	**16.86**	**72**	*e*P	**P**	**07 09 08.5**	**0.0**
ALGR	**Alto Alegre (B**	**17.13**	**78**	*e*P	**P**	**07 09 13.2**	**+1.5**
MURT	**Porto Murtinho**	**17.77**	**50**	*e*P	**P**	**07 09 18.2**	**-0.4**
LPAZ	**La Paz**	**18.00**	**13**	P	**P**	**07 09 22.4**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=187,slow=6.5,SNR=54						
	comp=Z,28nm,0.8s						
FRBT	**Francisco Belt**	**18.35**	**69**	*e*P	**P**	**07 09 25.3**	**+0.2**
MCR1	**Marechal Candi**	**18.43**	**64**	*e*P	**Pn**	**07 09 26.3**	**+0.3**
ITAB	**Concordia**	**18.49**	**74**	P	**Pn**	**07 09 26.3**	**-0.5**
ITAB	**Concordia**	**18.49**	**74**	*e*P	**Pn**	**07 09 26.9**	**+0.1**
AMBA	**Amambai (Brazi**	**18.66**	**58**	*e*P	**Pn**	**07 09 29.1**	**+0.2**
CNLB	**Canela**	**18.72**	**81**	*e*P	**Pn**	**07 09 30.1**	**+0.5**
BBSD	**Serra de San D**	**19.68**	**35**	*e*P	**P**	**07 09 39.2**	**-0.5**
PTGB	**Pitanga**	**19.78**	**67**	*e*P	**Pn**	**07 09 41.2**	**-1.2**
AQDB	**Aquidauana**	**19.85**	**51**	P	**P**	**07 09 41.3**	**-0.2**
AQDB	**Aquidauana**	**19.85**	**51**	*e*P	**Pn**	**07 09 42.0**	**-1.2**
PANT	**Pantanal (Braz**	**20.38**	**47**	*e*P	**P**	**07 09 47.3**	**+0.1**
SIV	**San Ignacio**	**20.52**	**32**	P	**P**	**07 09 48.2**	**-0.7**
	comp=Z,12nm,0.6s,baz=211,slow=7.5,SNR=67						
SIV				LR	LR	07 19 09.4	
	comp=Z,820nm,19.0s,baz=228,slow=41						
	comp=Z,12nm,0.6s						
TIJ01	**Guaruva-PR**	**21.86**	**73**	*e*P	**P**	**07 10 03.5**	**+0.1**
PTLB	**Pontes e Lacer**	**21.89**	**36**	P	**P**	**07 10 03.2**	**-0.2**
PTLB	**Pontes e Lacer**	**21.89**	**36**	*e*P	**P**	**07 10 03.3**	**-0.2**
FRTB	**Fartura**	**22.44**	**68**	*e*P	**P**	**07 10 10.6**	**+1.1**
PP1B	**Ponte de Pedra**	**22.49**	**48**	*e*P	**P**	**07 10 09.1**	**-1.0**
SALV	**Santo Antonio**	**23.34**	**44**	*e*P	**P**	**07 10 17.4**	**-1.4**
VILB	**Vilhena**	**23.60**	**30**	P	**P**	**07 10 20.7**	**-0.8**
VILB				IAmb	IAmb	07 10 22.7	
	comp=Z,36nm,0.7s						
VILB	**Vilhena**	**23.60**	**30**	*e*P	**P**	**07 10 21.3**	**-0.1**
SPB	**Sao Paulo**	**23.96**	**71**	P	**P**	**07 10 24.5**	**-0.4**
SPB				IAmb	IAmb	07 10 25.9	
	comp=Z,33nm,0.7s						
SPB	**Sao Paulo**	**23.96**	**71**	*e*P	**P**	**07 10 25.3**	**+0.4**
ITRB	**Iturama**	**24.03**	**59**	*e*P	**P**	**07 10 24.3**	**-1.3**
RCLB	**Rio Claro- Sao**	**24.51**	**68**	*e*P	**P**	**07 10 30.0**	**0.0**
BB19B	**Bebedouro**	**24.53**	**64**	*e*P	**P**	**07 10 28.2**	**-1.9**
ETMB	**Extrema**	**24.67**	**14**	P	**P**	**07 10 31.7**	**+0.4**
ARAG	**Araguaiana, MT**	**25.84**	**50**	*e*P	**P**	**07 10 40.9**	**-1.1**
CZSB	**Cruzeiro do Su**	**26.14**	**359**	P	**P**	**07 10 45.6**	**+1.0**
CZSB				IAmb	IAmb	07 10 53.5	
	comp=Z,27nm,1.1s						
SAML	**Samuel**	**26.26**	**20**	P	**P**	**07 10 45.2**	**-0.6**
SAML				IAmb	IAmb	07 10 49.3	
	comp=Z,19nm,0.8s						
SAML	**Samuel**	**26.26**	**20**	*e*P	**P**	**07 10 46.2**	**+0.5**
PDRB	**Porto dos Gac**	**26.36**	**36**	*e*P	**P**	**07 10 46.2**	**-0.5**
IPMB	**Ipameri, GO**	**26.69**	**59**	*e*P	**P**	**07 10 49.8**	**0.0**
BSCB	**Bom Sucesso**	**27.43**	**69**	*e*P	**P**	**07 10 55.9**	**-0.5**
PMNB	**Patos De Minas**	**27.62**	**63**	*e*P	**P**	**07 10 59.7**	**+1.5**
VAS01	**Vassouras-RJ**	**27.79**	**73**	*e*P	**P**	**07 10 59.5**	**-0.1**
BDFB	**Brasilia**	**28.41**	**56**	P	**P**	**07 11 04.0**	**-1.2**
	comp=Z,7.2nm,0.9s,baz=224,slow=8.6,SNR=14						
BDFB				LR	LR	07 23 37.0	
	comp=Z,773nm,19.4s,baz=203,slow=39						
	comp=Z,7.2nm,0.9s						
BDFB	**Brasilia**	**28.41**	**56**	*e*P	**P**	**07 11 04.4**	**-0.8**
DUB01	**Friburgo-RJ**	**28.74**	**73**	*e*P	**P**	**07 11 08.6**	**+0.5**
SNDB	**Serra Nova Dou**	**29.02**	**46**	*e*P	**P**	**07 11 09.8**	**-0.8**
TBTG	**Tabatinga, AM**	**29.73**	**5**	P	**P**	**07 11 17.6**	**+0.8**
NPGB	**Novo Progresso**	**30.99**	**34**	*e*P	**P**	**07 11 26.8**	**-1.2**
TEFE	**Tefe**	**31.13**	**15**	*e*P	**P**	**07 11 29.7**	**+0.6**
PMSA	**Palmer Station**	**31.21**	**173**	LR	LR	07 23 21.5	
	comp=Z,473nm,18.8s,baz=312,slow=35						
JANB	**Januaria**	**31.42**	**60**	*e*P	**P**	**07 11 31.3**	**-0.5**
SJMB	**Sao Joao De Ma**	**31.51**	**69**	*e*P	**P**	**07 11 32.5**	**0.0**
MACA	**Manacapuru-AM**	**32.49**	**22**	P	**P**	**07 11 40.2**	**-0.9**
MACA	**Manacapuru-AM**	**32.49**	**22**	*e*P	**P**	**07 11 40.8**	**-0.3**
RPN	**Rapa Nui**	**32.60**	**272**	LR	LR	07 21 24.8	
	comp=Z,378nm,18.9s,baz=95,slow=30						
SDBA	**SAO DESIDERIO**	**32.82**	**56**	*e*P	**P**	**07 11 42.9**	**-1.2**
ITTB	**Itaituba**	**33.20**	**31**	*e*P	**P**	**07 11 46.3**	**-1.0**
GUA01	**Guaratinga, BA**	**33.81**	**67**	*e*P	**P**	**07 11 51.9**	**-0.8**
SGCB	**S£o Gabriel d**	**34.03**	**9**	*e*P	**P**	**07 11 54.0**	**-0.5**
PRPB	**Parauapebas**	**34.56**	**42**	*e*P	**P**	**07 11 58.2**	**-1.0**
MALB	**Monte Alegre**	**36.09**	**31**	*e*P	**P**	**07 12 12.1**	**-0.2**
PRAC	**Prado**	**37.59**	**356**	*e*P	**P**	**07 12 26.7**	**+1.6**
ORTC	**Ortega, Tolima**	**37.81**	**355**	*e*P	**P**	**07 12 28.6**	**+1.6**
BOAV	**Boa Vista**	**37.82**	**19**	P	**P**	**07 12 26.0**	**-1.0**
BOAV	**Boa Vista**	**37.82**	**19**	*e*P	**P**	**07 12 26.9**	**-0.1**
MCPB	**Macapa, AP**	**38.40**	**34**	*e*P	**P**	**07 12 31.8**	**-0.1**
GUY2C	**Guyana, Caldas**	**39.12**	**355**	*e*P	**P**	**07 12 41.1**	**+2.7**
RUSC	**La Rusia**	**39.68**	**359**	P	**P**	**07 12 43.9**	**+0.8**
RUSC				IAmb	IAmb	07 12 46.8	
	comp=Z,53nm,1.4s						
RUSC	**La Rusia**	**39.68**	**359**	*e*P	**P**	**07 12 46.0**	**+2.8**
CBOC	**Ciudad Bolivar**	**39.80**	**354**	*e*P	**P**	**07 12 45.0**	**+1.1**
HELC	**Santa Helena**	**40.09**	**355**	*e*P	**P**	**07 12 47.9**	**+1.4**
ROSB	**Rosrio**	**40.50**	**46**	*e*P	**P**	**07 12 49.0**	**-0.5**
DBBC	**Dabeiba**	**40.96**	**354**	*e*P	**P**	**07 12 54.6**	**+1.3**
SDV	**Santo Domingo**	**42.66**	**2**	P	**P**	**07 13 07.4**	**+0.1**
	comp=Z,7.3nm,0.8s,baz=209,slow=11,SNR=7.1						
	comp=Z,7.3nm,0.8s						
SDV	**Santo Domingo**	**42.66**	**2**	*e*P	**P**	**07 13 07.8**	**+0.4**
BAUV	**El Baul**	**42.88**	**6**	P	**P**	**07 13 08.8**	**-0.1**
MDP	**Montagnes des**	**43.04**	**29**	LR	LR	07 32 54.7	
	comp=Z,417nm,18.5s,baz=195,slow=39						
NBCL	**Cascavel-CE**	**43.22**	**54**	*e*P	**P**	**07 13 11.4**	**-0.4**
SNAA	**Sanae**	**51.63**	**158**	LR	LR	07 33 27.8	
	comp=Z,74nm,21.1s,baz=103,slow=33						
SNAA	**Sanae**	**51.63**	**158**	P	**P**	**07 14 17.2**	**+0.6**
SNAA				IAmb	IAmb	07 14 28.2	
	comp=Z,14nm,1.2s						
MLPR	**Magueyes Islan**	**51.90**	**6**	P	**P**	**07 14 18.4**	**-0.6**
CRPR	**Cabo Rojo, PR**	**51.93**	**6**	P	**P**	**07 14 19.0**	**-0.2**
CRPR				IAmb	IAmb	07 14 20.4	
	comp=Z,20nm,0.8s						
OBIP	**Obispado Ponce**	**52.01**	**7**	P	**P**	**07 14 19.4**	**-0.5**
OBIP				IAmb	IAmb	07 14 32.9	
	comp=Z,19nm,1.1s						
CELP	**Cerrillos**	**52.05**	**7**	P	**P**	**07 14 20.1**	**-0.1**
CELP				IAmb	IAmb	07 14 21.9	
	comp=Z,18nm,0.8s						
QSPA	**South Pole Qui**	**56.24**	**180**	P	**P**	**07 14 51.5**	**+1.1**
	comp=Z,4.6nm,0.9s,baz=154,slow=0.8,SNR=10						
QSPA				LR	LR	07 36 52.2	
	comp=Z,46nm,20.8s,baz=281,slow=34						
	comp=Z,4.6nm,0.9s						
QSPA	**South Pole Qui**	**56.24**	**180**	P	**P**	**07 14 51.6**	**+1.1**
QSPA				IAmb	IAmb	07 15 07.3	
	comp=Z,19nm,1.2s						
TAOE	**Nuku Hiva Isla**	**66.87**	**275**	*e*LR	LR	07 36 10.8	
	comp=Z,95nm,22.6s						
TBI	**Tubuai**	**67.22**	**257**	*e*LR	LR	07 36 20.0	
	comp=Z,981nm,27.0s						
TBI				*e*LR	LR	07 36 20.2	
	comp=Z,3µm,24.5s						
TBI	**Tubuai**	**67.22**	**257**	*e*T	T	08 29 16.9	
	comp=Z,4.5nm,0.3s						
MEH	**Mehetia**	**68.75**	**262**	*e*T	T	08 31 12.1	
	comp=Z,8.9nm,0.2s						
TXAR	**Lajitas Array**	**69.68**	**331**	P	**P**	**07 16 21.6**	**+1.5**
	comp=Z,0.5nm,0.5s,baz=154,slow=8.7,SNR=14						
	comp=Z,0.5nm,0.5s						
SWET	**Sewanee**	**70.05**	**348**	P	**P**	**07 16 22.7**	**+0.5**
PPT2	**Papeete2**	**70.14**	**262**	*e*S	**S**	**07 25 32.8**	**-1.3**
	comp=Z,64nm,23.8s						
PPT2	**Papeete2**	**70.14**	**262**	*e*LR	LR	07 37 41.0	
	comp=Z,167nm,27.2s						
PLAL	**Pickwick Lake**	**70.22**	**346**	P	**P**	**07 16 23.1**	**0.0**
PLAL				IAmb	IAmb	07 16 34.7	
	comp=Z,6.7nm,0.8s						
V52A	**Sevierville**	**70.29**	**350**	P	**P**	**07 16 23.3**	**-0.3**
V52A				IAmb	IAmb	07 16 32.7	
	comp=Z,10nm,1.1s						
V51A	**Loudon**	**70.36**	**349**	P	**P**	**07 16 24.2**	**+0.2**
V51A				IAmb	IAmb	07 16 36.9	
	comp=Z,7.7nm,1.0s						
V48A	**Smith Brothers**	**70.71**	**347**	P	**P**	**07 16 26.6**	**+0.4**
WVT	**Waverly**	**71.28**	**347**		**P**	**07 16 29.4**	**-0.2**
U49A	**Red Boiling Sp**	**71.28**	**348**	P	**P**	**07 16 29.1**	**-0.5**
U49A				IAmb	IAmb	07 17 09.0	
	comp=Z,12nm,1.2s						
S57A	**Dark Hollow, R**	**71.67**	**354**	P	**P**	**07 16 32.1**	**+0.2**
S57A				IAmb	IAmb	07 16 33.5	
	comp=Z,10nm,1.0s						
BBTS	**Babate**	**71.70**	**57**	LR	LR	07 47 00.4	
	comp=Z,360nm,19.9s,baz=230,slow=35						
LCAR	**Lake Charles**	**71.92**	**344**	P	**P**	**07 16 33.3**	**-0.1**
LCAR				IAmb	IAmb	07 16 34.2	
	comp=Z,7.4nm,0.8s						
FCAR	**Ozark Folk Cen**	**71.98**	**343**	P	**P**	**07 16 34.1**	**+0.3**
R55A	**Marlinton**	**72.29**	**353**	P	**P**	**07 16 36.7**	**+1.0**
ACSO	**Alum Creek Sta**	**74.53**	**351**	P	**P**	**07 16 49.0**	**+0.2**
ACSO				IAmb	IAmb	07 16 49.7	
	comp=Z,12nm,0.8s						
DBIC	**Dimbokro**	**75.27**	**71**	P	**P**	**07 16 53.8**	**0.0**
	comp=Z,3.7nm,0.6s,baz=235,slow=4.9,SNR=7.8						
DBIC				LR	LR	07 48 29.2	
	comp=Z,133nm,18.8s,baz=219,slow=34						
	comp=Z,3.7nm,0.6s						
RAR	**Rarotonga**	**76.56**	**253**	LR	LR	07 41 43.1	
	comp=Z,80nm,19.5s,baz=154,slow=28						
TSUM	**Tsumeb**	**79.31**	**106**	LR	LR	07 48 13.2	
	comp=Z,229nm,18.4s,baz=156,slow=32						
BOSA	**Boshof**	**80.16**	**118**	P	**P**	**07 17 21.6**	**+0.6**
	comp=Z,2.4nm,0.6s,baz=238,slow=3.5,SNR=9.9						
	comp=Z,2.4nm,0.6s						
F36A	**Milaca**	**81.80**	**345**	P	**P**	**07 17 28.6**	**-0.4**
RPZ	**Rata Peaks**	**83.59**	**221**	LR	LR	07 47 36.9	
	comp=Z,74nm,18.3s,baz=208,slow=30						
URZ	**Urewera**	**83.59**	**228**	LR	LR	07 48 11.6	
	comp=Z,86nm,19.0s,baz=262,slow=31						
PDAR	**Pinedale Array**	**83.71**	**333**	P	**P**	**07 17 40.5**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=142,slow=7.3,SNR=4.9						
	comp=Z,0.4nm,0.6s						
NVAR	**Mina Array Bea**	**83.82**	**325**	P	**P**	**07 17 41.4**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=133,slow=6.5,SNR=4.8						
	comp=Z,0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**84.30**	**70**	P	**P**	**07 17 42.7**	**0.0**
	comp=Z,7.9nm,0.8s,baz=261,slow=4.4,SNR=43						
	comp=Z,7.9nm,0.8s						
ULM	**Lac du Bonnet**	**86.46**	**345**	P	**P**	**07 17 52.8**	**+0.2**
	comp=Z,2.9nm,0.6s,baz=150,slow=2.2,SNR=4.7						
	comp=Z,2.9nm,0.6s						
AFI	**Afiamalu**	**90.11**	**253**	LR	LR	07 52 49.5	
	comp=Z,71nm,18.0s,baz=96,slow=32						
MDT	**Midelt**	**91.89**	**51**	LR	LR	07 59 50.6	
	comp=Z,89nm,18.1s,baz=260,slow=36						
ESDC	**Sonseca Array**	**96.64**	**46**	LR	LR	08 03 27.3	
	comp=Z,70nm,19.3s,baz=182,slow=36						
DZM	**Mont Dzumac**	**101.16**	**234**	*e*LR	LR	07 52 03.8	
	comp=Z,119nm,28.3s						
YKA	**Yellowknife Ar**	**102.02**	**341**	P	**Pdif**	**07 19 03.5**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=142,slow=4.5,SNR=6.8						
ASAR	**Alice Springs**	**117.53**	**207**	PKP	**PKPdf**	**07 23 55.5**	**-1.2**
	comp=Z,0.3nm,0.9s,baz=110,slow=1.4,SNR=3.4						
WRA	**Warramunga Arr**	**120.72**	**209**	PKP	**PKPdf**	**07 24 02.4**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=158,slow=1.7,SNR=8.4						
BRTR	**Keskin Array B**	**121.92**	**61**	PKP	**PKiKP**	**07 24 04.6**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=241,slow=3.0,SNR=3.1						
AKASG	**Malin Array Be**	**122.26**	**47**	PKP	**PKPdf**	**07 24 04.0**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=262,slow=1.9,SNR=6.6						
FINES	**FINESS Array B**	**123.04**	**35**	PKP	**PKiKP**	**07 24 06.0**	**-0.2**
	comp=Z,2.6nm,1.0s,baz=284,slow=5.6,SNR=1.9						
H11S2	**WAKE ISLAND Hy**	**125.67**	**269**	T	T	09 43 20.8	
	baz=118,slow=74,SNR=11						
H11S1	**WAKE ISLAND Hy**	**125.68**	**269**	T	T	09 43 19.2	
	baz=118,slow=74,SNR=10						
H11S3	**WAKE ISLAND Hy**	**125.69**	**269**	T	T	09 43 19.0	
	baz=118,slow=74,SNR=8.5						
BVAR	**Borovoye Array**	**147.34**	**43**	PKPbc	**PKPbc**	**07 24 52.3**	**-1.2**
	comp=Z,5.5nm,0.6s,baz=343,slow=4.6,SNR=20						
AAK	**Ala-Archa**	**152.59**	**62**	PKPbc	**PKPbc**	**07 25 07.4**	**+0.5**
	comp=Z,3.8nm,0.6s,baz=180,slow=4.5,SNR=12						
AAK				PKPab	**PKPab**	**07 25 15.8**	**-1.7**
	comp=Z,4.3nm,0.9s,baz=273,slow=7.2,SNR=5.8						
KURBB	**Kurchatov Arra**	**152.93**	**43**	PKPbc	**PKPbc**	**07 25 07.7**	**+0.5**
	comp=Z,3.0nm,0.5s,baz=300,slow=2.9,SNR=16						
KURBB				PKPab	**PKPab**	**07 25 15.5**	**-2.9**
	comp=Z,0.8nm,0.4s,baz=298,slow=3.1,SNR=5.5						
ZALV	**Zalesovo Beam**	**154.27**	**32**	PKP	**PKPdf**	**07 25 01.6**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=225,slow=0.6,SNR=6.1						
ZALV				PKPbc	**PKPbc**	**07 25 10.4**	**+0.5**
	comp=Z,7.2nm,0.6s,baz=301,slow=3.2,SNR=29						
MKAR	**Makanchi Array**	**156.84**	**49**	PKP	**PKPdf**	**07 25 04.9**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=329,slow=1.7,SNR=3.7						
MKAR				PKPab	**PKPab**	**07 25 35.0**	**-0.3**
	comp=Z,1.9nm,0.6s,baz=294,slow=4.4,SNR=12						
SONM	**Songino Array**	**166.13**	**4**	PKPab	**PKPab**	**07 26 15.4**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=344,slow=2.1,SNR=4.1						
KMI	**Kunming**	**170.11**	**152**	⇑PKP	**PKPdf**	**07 25 15.6**	**-3.2**
KMI				pPKP	pPKPdf	07 25 24.1	-0.4
PZH	**PanZhiHua**	**170.87**	**143**	PKP	**PKPdf**	**07 25 18.3**	**-0.7**

NNC 16 07:15:44.9±3.2**, 37°.06N**×**70°.74E, h0**km**, mb3.6, mpv3.2, 1C-3D, Error ellipse: s-maj=29.1km s-min=25.0km az=112.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.55**	**23**	⇓P	Pn	07 17 09.5	+0.3
	0.5nm,0.6s						
AML				⇓S	Sn	07 18 15.2	+1.3
	3.0nm,0.6s						
KK31	**Karatay Array**	**6.04**	**358**	P	Pn	07 17 16.8	+1.3
	1.2nm,0.3s,baz=180,slow=12,SNR=36						
KK31				⇑S	Sn	07 18 26.2	+0.9
	1.2nm,0.4s,baz=184,slow=15,SNR=9.1						
TKM2	**Tokmak 2**	**6.94**	**31**	⇓P	Pn	07 17 26.9	-1.1
	2.8nm,0.8s						
AB31	**Akbulak array**	**14.49**	**331**	P	Pn	07 19 09.7	-1.5
	1.0nm,0.8s,baz=168,slow=11,SNR=10						

WEL 16 07:29:46.2±1.9**, 37°S**±10°×**17°9E**±1°3**, h12**km±9km**, M3.4**/13**, ML3.8**/12**, MLv3.4**/13**, Error ellipse: s-maj=0.0km s-min=0.0km az=106.9, confirmed, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.74**	**225**	P	Pg	07 30 00.1	-0.3
MXZ				S	Sg	07 30 08.0	-2.1
WMGZ	**Waiomatatini S**	**0.89**	**209**	P	Pn	07 30 04.2	-0.3
WMGZ				S	Sb	07 30 16.3	+0.9
PKGZ	**Pakihiroa**	**1.10**	**220**	P	Pb	07 30 06.4	-0.8
PUZ	**Puketiti**	**1.17**	**209**	P	Pb	07 30 07.9	-0.5
PUZ				S	Sb	07 30 22.9	-0.6
HAZ	**Te Kaha**	**1.18**	**233**	P	Pb	07 30 06.9	-1.7
HAZ				S	Sn	07 30 24.5	-0.1
TWGZ	**Tauwhareparae**	**1.37**	**214**	P	Pn	07 30 11.1	-0.2
RUGZ	**Raukumara Rang**	**1.38**	**228**	P	Pn	07 30 11.0	-0.4
WIZ	**White Island**	**1.50**	**251**	P	Pn	07 30 13.2	+0.2
CNGZ	**Carnagh Statio**	**1.56**	**203**	P	Pn	07 30 13.7	-0.1
TKGZ	**Te Karaka**	**1.65**	**212**	P	Pn	07 30 14.8	-0.3
MWZ	**Matawai**	**1.72**	**221**	P	Pn	07 30 15.7	-0.4

RAGZ	Rawiri	1.90	220	P	Pn	07 30 18.6	0.0
URZ	Urewera	1.91	230	P	Pn	07 30 18.7	+0.1
RIGZ	Rimuhau	1.91	210	P	Pn	07 30 16.2	-2.5
EDRZ	Edgecumbe	2.06	238	P	Pb	07 30 22.3	-1.4
OPRZ	Ohinepanea	2.08	247	P	Pn	07 30 21.0	+0.1
MYRZ	Mayor Island	2.19	263	P	Pn	07 30 23.8	+1.3
RTZ	Ruatahuna	2.22	225	P	Pn	07 30 22.7	-0.3
MUGZ	Murupara	2.25	230	P	Pn	07 30 23.1	-0.3
MHGZ	Mahia Peninsul	2.26	201	P	Pn	07 30 22.4	-1.1
MKRZ	Makatiti	2.26	240	P	Pn	07 30 24.8	+1.1
TARZ	Mount Tarawera	2.29	238	P	Pb	07 30 26.3	-1.2
RAHZ	Arahi	2.38	218	P	Pn	07 30 24.5	-0.8
MTHZ	Maungataniwha	2.46	222	P	Pn	07 30 26.2	-0.1
PRRZ	Plateau Road	2.50	234	P	Pn	07 30 24.4	-2.4
ALRZ	Allen Road	2.57	233	P	Pn	07 30 27.5	-0.3
KUZ	Kuaotunu	2.62	276	P	Pn	07 30 28.0	-0.4
NMHZ	Naumai	2.66	219	P	Pn	07 30 28.8	-0.3
MRHZ	Matea Rd	2.69	228	P	Pn	07 30 29.5	+0.1
ARHZ	Aropaoanui	2.70	214	P	Pn	07 30 28.7	-0.9
TOZ	Tahuroa Road	2.84	255	P	Pn	07 30 31.1	-0.4
BKZ	Black Stump Fm	2.88	222	P	Pn	07 30 31.3	-0.7
GRZ	Great Barrier	2.93	285	P	Pn	07 30 34.6	+2.0
MCHZ	McNeill Hill	2.99	216	P	Pn	07 30 32.2	-1.3
WIAZ	Waiheke Island	3.08	274	P	Pn	07 30 35.2	+0.4
KWHZ	Kaweka Forest	3.10	219	P	Pn	07 30 33.8	-1.4
KAHZ	Kahuranaki	3.20	210	P	Pn	07 30 34.1	-2.3
ETAZ	East Tamaki Re	3.23	270	P	Pn	07 30 37.9	+1.0
MBAZ	Motutapu North	3.27	274	P	Pn	07 30 38.6	+1.2
TMVZ	Te Maari	3.30	230	P	Pn	07 30 37.2	-0.6
NTVZ	North Tongarir	3.31	231	P	Pn	07 30 37.5	-0.5
ETVZ	East Tongariro	3.31	230	P	Pn	07 30 37.3	-0.7
KRVZ	Karewarewa	3.33	231	P	Pn	07 30 38.2	0.0
BHHZ	Black Hill Sta	3.34	222	P	Pn	07 30 37.6	-0.8
OTVZ	Oturere	3.35	230	P	Pn	07 30 38.5	-0.1
NNVZ	North Ngauruho	3.37	231	P	Pn	07 30 38.9	+0.1
WTVZ	West Tongariro	3.37	231	P	Pn	07 30 39.9	+1.0
SNVZ	South Ngauruho	3.38	230	P	Pn	07 30 38.4	-0.7
NGZ	Ngauruhoe	3.40	230	P	Pn	07 30 38.7	-0.6
TUVZ	Tukino	3.42	229	P	Pn	07 30 40.1	+0.5
TWVZ	Taurewa	3.44	233	P	Pn	07 30 40.5	+0.7
MOVZ	Moawhango	3.46	226	P	Pn	07 30 39.7	-0.3
AWAZ	Awhitu Peninsu	3.46	268	P	Pn	07 30 40.3	+0.4
FWVZ	Far West T-bar	3.48	230	P	Pn	07 30 41.2	+0.8
WNVZ	Wahianoa	3.50	228	P	Pn	07 30 39.5	-1.1
WTAZ	Waiatarua	3.52	271	P	Pn	07 30 43.1	+2.3
RVAZ	Riverhead Bore	3.53	273	P	Pn	07 30 42.1	+1.2
HIZ	Hauiti	3.57	245	P	Pn	07 30 43.2	+1.8
PNHZ	Pukenui	3.59	216	P	Pn	07 30 39.6	-2.3
WPHZ	Waipukurau	3.60	213	P	Pn	07 30 39.5	-2.4
MTVZ	Mangateitei	3.61	229	P	Pn	07 30 41.4	-0.7
WCZ	Waipu Caves	3.88	285	P	Pn	07 30 47.1	+1.3
VRZ	Vera Road	3.91	237	P	Pn	07 30 47.0	+0.8
WAZ	Wanganui	4.13	228	P	Pn	07 30 48.9	-0.3
MRZ	Mangatainoka R	4.47	215	P	Pn	07 30 51.2	-2.6
PKE	Pukeiti	4.47	240	P	Pn	07 30 57.3	+3.4
KHEZ	Kahui Hut	4.50	239	P	Pn	07 30 57.5	+3.1
WEL	Wellington	5.34	216	P	Pn	07 31 02.9	-2.9
CTZ	Chatham Island	7.48	155	P	Pn	07 31 34.7	-0.5

EST ***16*** *07:46:21.1±0.1, 59°.21N×27°.36E, $h0^{km}$, ML2.3(HEL), Confirmed Induced event*
HEL ***16*** *07:46:21.3, 59°.21N×27°.32E, $h0^{km}$, ML2.2, Confirmed Induced event*
IDC ***16*** *07:46:22.9±0.8, 59°.35N×27°.40E, $h0^{km}$, mb3.3/3, mbtmp3.4/8, ML2.5/4, Error ellipse: s-maj=10.6km s-min=6.4km az=73.0*
LVSN ***16*** *07:46:22.4±3.6, 59°.15N×27°.39E, $h0^{km}$±36^{km}, ML2.9*
ISC 16 07:46:20.3±0.6**, 59°.22N**±0°.02×**27°.32E**±0°.02**, $h0^{km}$, n51,** σ**1^{s}62**/92**, mb3.5**/4**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EE04	Vaivara Sinima	0.33	61	*e*P	Pg	07 46 27.3	+0.8
EE04				*e*S	Sg	07 46 31.6	+0.8
EE03	Tooma soojaam,	0.64	238	*e*P	Pg	07 46 32.7	+0.2
EE03				*e*S	Sg	07 46 40.6	-0.2
ARBE	Arbavere	0.72	288	*e*P	Pg	07 46 34.9	+0.8
ARBE				AML	AML	07 46 57.3	
	comp=E,3µm,0.9s						
ARBE				AML	AML	07 46 59.4	
	comp=Z,1µm,0.8s						
ARBE				AML	AML	07 47 04.5	
	comp=N,1µm,0.7s						
ARBE	Arbavere	0.72	288	*e*P	Pg	07 46 34.3	+0.2
ARBE				*e*S	Sg	07 46 43.4	+0.1
VSU	Vasula	0.81	202	*e*P	Pg	07 46 36.2	+0.3
VSU				*e*S	Sg	07 46 45.9	-0.6
VSU				AML	AML	07 47 03.6	
	comp=Z,512nm,0.9s						
VSU				AML	AML	07 47 19.0	
	comp=N,532nm,0.7s						
VSU				AML	AML	07 47 19.9	
	comp=E,531nm,0.8s						
VSU	Vasula	0.81	202	*e*P	Pg	07 46 35.7	-0.2
VSU	Vasula	0.81	202	*e*P	Pg	07 46 36.0	+0.1
VSU				*e*S	Sg	07 46 45.9	-0.6
VJF	Virojoki	1.33	5	*e*P	Pg	07 46 44.8	-1.0
VJF				*e*PB	Pn	07 46 45.6	-0.5
VJF				*e*S	Sg	07 47 02.8	-0.3
VJF				MSG		07 47 04.2	
	comp=Z,41nm,0.3s						
EE07	Piusa Caves, O	1.38	177	*e*P	Pg	07 46 45.3	-1.5
EE07				*e*PN	Pb	07 46 47.1	+0.2
EE07				*e*S	Sg	07 47 03.0	-1.6
EE07				*e*SN	Sn	07 47 06.6	+0.9
PVF	Pernaja	1.52	332	*e*P	Pn	07 46 48.5	-0.2
PVF				*e*PG	Pb	07 46 49.3	-0.1
PVF				*e*SB	Sg	07 47 08.9	-0.3
PVF				MSG		07 47 09.8	
	comp=Z,17nm,0.2s						
PVF				*e*SN	Sn	07 47 11.5	+2.2
HEL1	Helsinki	1.57	309	*e*PN	Pb	07 46 50.3	+0.2
HEL1				*e*SG	Sn	07 47 10.1	-0.2
MEF	Metsahovi	1.79	305	*e*P	Pb	07 46 54.1	+0.2
MEF				AML	AML	07 46 54.4	
	comp=Z,62nm,0.3s						
MEF				AML	AML	07 46 54.6	
	comp=E,93nm,0.8s						
MEF				*e*S	Sn	07 47 16.3	+0.5
MEF				AML	AML	07 47 31.6	
	comp=N,56nm,0.7s						
MEF	Metsahovi	1.79	305	*e*P	Pb	07 46 53.8	-0.1
MEF	Metsahovi	1.79	305	*e*P	Pn	07 46 53.0	+0.6
MEF				*e*PG	Pb	07 46 54.1	+0.2
MEF				*e*S	Sn	07 47 16.3	+0.5
MEF				MSG		07 47 17.1	
	comp=Z,24nm,0.2s						
NUR	Nurmijrvi	1.87	315	*e*P	Pn	07 46 54.4	+0.9
NUR				*e*PG	Pb	07 46 55.6	+0.3
NUR				*e*SG	Sb	07 47 19.6	+0.4
NUR				MSG		07 47 21.7	
	comp=Z,23nm,0.2s						
MTSE	Matsula	1.88	256	*e*P	Pb	07 46 55.1	-0.4
MTSE				*e*S	Sb	07 47 19.1	-0.4
MTSE	Matsula	1.88	256	*e*P	Pb	07 46 54.9	-0.6
MTSE	Matsula	1.88	256	*e*P	Pn	07 46 54.0	+0.3
MTSE				*e*PG	Pb	07 46 55.2	-0.3
MTSE				*e*S	Sb	07 47 18.9	-0.7
EE01	Perakula, Nova	1.90	271	*e*P	Pn	07 46 54.5	+0.6
EE01				*e*PN	Pb	07 46 54.9	-1.0
EE01				*e*SN	Sb	07 47 19.6	-0.4
FIA0	FINESS Array S	2.32	345	*e*P	Pn	07 47 00.8	+1.1
FIA0				*e*PB	Pb	07 47 02.2	-0.7
FIA0				*e*SB	Sn	07 47 31.1	+2.2
FIA0				*e*SG	Sb	07 47 32.8	+0.7
FIA0				MSG		07 47 34.3	
	comp=Z,20nm,0.2s						
FINES	FINESS Array B	2.32	345	Pn	Pn	07 47 00.5	+0.8
	comp=Z,2.6nm,0.3s,baz=160,slow=14,SNR=48						
FINES				Sn	Sn	07 47 30.0	+1.2
	comp=Z,9.9nm,0.3s,baz=168,slow=26,SNR=40						
FINES				Lg	Lg	07 47 33.1	
	comp=Z,9.9nm,0.3s,baz=162,slow=29,SNR=17						
FINES				Rg	Rg	07 47 44.9	
	comp=Z,350nm,1.1s,baz=153,slow=21,SNR=28						
	comp=Z,27nm,0.7s						
FIA1	FINESS Array S	2.32	345	*e*P	Pn	07 47 00.8	+1.1
FIA1				*e*PB	Pb	07 47 02.2	-0.7
FIA1				*e*SB	Sn	07 47 31.0	+2.1
FIA1				*e*SG	Sb	07 47 33.1	+1.0
FIA1				MSG		07 47 34.3	
	comp=Z,19nm,0.2s						
EE06	Soera, Palade,	2.32	266	*e*PB	Pb	07 47 02.2	-0.7
EE06				*e*SB	Sb	07 47 31.7	-0.4
RUF	Ruokolahti	2.36	19	*e*P	Pn	07 47 01.1	+0.8
RUF				*e*PB	Pb	07 47 02.2	-1.4
RUF				*e*SB	Sb	07 47 33.0	-0.3
RUF				MSG		07 47 35.1	
	comp=Z,21nm,0.3s						
KAF	Kangasniemi	2.95	351	*e*P	Pn	07 47 09.6	+1.2
KAF				*e*PB	Pb	07 47 12.1	-1.6
KAF				*e*SG	Sb	07 47 52.2	+2.0
KAF				MSG		07 47 53.4	
	comp=Z,11nm,0.2s						
SLIT	Slitere, Latvi	3.09	241	AML	AML	07 48 03.6	
	comp=N,596nm,0.7s						
SLIT				AML	AML	07 48 05.6	
	comp=E,571nm,0.7s						
SLIT				AML	AML	07 48 10.7	
	comp=Z,161nm,0.9s						
SLIT	Slitere, Latvi	3.09	241	*e*P	Pg	07 47 19.2	-0.2
SLIT	Slitere, Latvi	3.09	241	*e*SG	Sb	07 47 54.8	+0.6
KEF	Keuruu	3.20	339	*e*P	Pn	07 47 13.2	+1.5
KEF				*e*PB	Pb	07 47 15.8	-2.1
KEF				*e*SG	Sb	07 47 59.6	+2.3
KEF				MSG		07 48 09.3	
	comp=Z,10nm,0.3s						
RAF	Rauma	3.32	305	*e*P	Pn	07 47 16.1	+2.8
RAF				*e*S	Sn	07 47 55.9	+2.4
RAF				AML	AML	07 47 59.2	
	comp=Z,27nm,0.8s						
RAF				AML	AML	07 48 13.9	
	comp=E,28nm,0.5s						
RAF				AML	AML	07 48 14.8	
	comp=N,27nm,0.7s						
RAF	Rauma	3.32	305	*e*P	Pn	07 47 15.7	+2.3
RAF	Rauma	3.32	305	*e*P	Pn	07 47 15.3	+2.0
KPF	Kankaanpaa	3.69	318	*e*P	Pn	07 47 19.8	+1.3
KPF				MSG		07 48 19.0	
	comp=Z,8.6nm,0.3s						
ISAL	Salakas	3.71	191	*e*P	Pb	07 47 26.3	-0.4
AAL	Aland	3.83	288	*e*SG	Sb	07 48 19.6	+3.9
PABE	Paberze	4.14	207	*e*P	Pb	07 47 31.5	-2.5
PABE	Paberze	4.14	207	*e*SG	Sb	07 48 28.3	+3.9
JOF	Joensuu	4.19	26	*e*P	Pn	07 47 26.4	+1.0
JOF				MSG		07 48 35.1	
	comp=Z,3.6nm,0.3s						
NIF	Nilsia	4.20	3	*e*P	Pn	07 47 27.4	+1.9
NIF				MSG		07 48 34.5	
	comp=Z,5.3nm,0.2s						
NACGM	Naroch	4.33	184	*e*P	Pb	07 47 39.1	+1.8
	comp=E,951nm,0.7s						
VAF	Ylistaro	4.45	332	*e*P	Pn	07 47 31.0	+2.1
RMF	Romuvaara	5.17	13	MSG		07 49 01.6	
	comp=Z,6.5nm,0.3s						
OUF	Merijarvi	5.31	348	*e*P	Pn	07 47 42.5	+1.7
HFS	Hagfors	6.96	283	Pn	Pn	07 48 04.4	+0.9
	comp=Z,0.2nm,0.3s,baz=115,slow=13,SNR=5.1						
HFS				Sn	Sn	07 49 20.0	-3.2
	comp=Z,0.3nm,0.3s,baz=97,slow=26,SNR=2.2						
HFS				Lg	Lg	07 49 57.7	
	comp=Z,1.1nm,0.3s,baz=82,slow=33,SNR=7.0						
	comp=Z,3.3nm,0.7s						
NOA	NORSAR Array B	8.24	290	Pn	Pn	07 48 19.8	-1.3
	baz=106,slow=18,SNR=5.7						
NOA				Sn	Sn	07 49 51.2	-3.6
	baz=117,slow=14,SNR=3.8						
NOA				Lg	Lg	07 50 38.6	
	comp=Z,0.1nm,0.3s,baz=144,slow=16,SNR=3.3						
	comp=Z,0.7nm,0.6s						
AKASG	Malin Array Be	8.60	172	Pn	Pn	07 48 25.9	-0.1
	comp=Z,1.7nm,0.4s,baz=352,slow=12,SNR=20						
AKASG				Sn	Sn	07 50 01.7	-1.9
	baz=351,slow=22						
AKASG				Lg	Lg	07 50 49.2	
	comp=Z,0.9nm,0.3s,baz=355,slow=30,SNR=2.8						
ARCES	ARCESS Array B	10.39	356	Pn	Pn	07 48 48.7	-1.7
	comp=Z,0.2nm,0.3s,baz=172,slow=14,SNR=12						
ARCES				Sn	Sn	07 50 39.4	-8.0
	comp=Z,0.1nm,0.3s,baz=178,slow=24,SNR=1.4						
ARCES				Lg	Lg	07 51 42.3	
	comp=Z,0.3nm,0.3s,baz=165,slow=33,SNR=5.7						
	comp=Z,0.6nm,0.3s						
MKAR	Makanchi Array	34.31	86	P	P	07 53 08.4	+0.2
	comp=Z,0.3nm,0.6s,baz=326,slow=6.3,SNR=4.7						
	comp=Z,0.3nm,0.6s						
SONM	Songino Array	45.62	68	P	P	07 54 43.2	+1.1
	comp=Z,0.7nm,1.0s,baz=311,slow=14,SNR=3.6						
	comp=Z,0.7nm,1.0s						
TORD	Torodi Ar. Bea	49.79	213	P	P	07 55 14.2	-0.4
	comp=Z,0.5nm,0.7s,baz=1.1,slow=6.3,SNR=4.5						
YKA	Yellowknife Ar	55.14	340	P	P	07 55 54.2	+0.4
	comp=Z,0.3nm,0.9s,baz=18,slow=6.7,SNR=3.5						
	comp=Z,0.3nm,0.9s						

MOS ***16*** *07:55:41.7±0.8, 57°.16N×154°.42W, $h29^{km}$, mb4.9/42, Error ellipse: s-maj=12.0km s-min=5.3km az=91.4*
IDC ***16*** *07:55:44.4±0.5, 57°.20N×154°.45W, $h35^{km}$±3^{km}, mb4.4/37, mbtmp4.5/39, ML3.9/2, MS3.7/30, Error ellipse: s-maj=14.5km s-min=8.4km az=24.0*
AEIC ***16*** *07:55:45.2±2.9, 57°.02N±0°.07×154°.17W±0°.10, $h43^{km}$±6^{km}, ML4.4, mb4.7/89(NEIC), ML4.6/48(NEIC), Error ellipse: s-maj=10.9km s-min=7.0km az=157.0*
NEIC ***16*** *07:55:46±3.0, 57°.12N±0°.07×154°.2W±0°.1, $h54^{km}$±7^{km}, Error ellipse: s-maj=10.9km s-min=6.9km az=148.0*
ISC 16 07:55:44.3±0.4**, 57°.17N**±0°.05×**154°.20W**±0°.03**, $h38^{km}$**±3^{km}**, $h39^{km}$:pP-P, n632,** σ**1^{s}36**/658**, mb4.7**/124**, MS3.7**/26**, 18C-2D, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHAK	Old Harbor	0.50	83		Pn	07 55 55.6	+0.7
OHAK	Old Harbor	0.50	83	P	Pn	07 55 55.6	+0.7
OHAK	Old Harbor	0.50	83	P	Pn	07 55 55.6	+0.7
	baz=248,SNR=1000						
OHAK				S	Sn	07 56 04.6	+2.2
	baz=248						
KDAK	Kodiak Island	1.07	54	Pg	Pn	07 56 03.9	+1.2
	128nm,0.3s,baz=204,slow=6.6,SNR=2053						
KDAK				Lg	Lg	07 56 19.2	
	824nm,0.3s,baz=244,slow=8.0,SNR=18						
KDAK	Kodiak Island	1.07	54		Pn	07 56 04.0	+1.2
KDAK				IAML		07 56 23.7	
	18µm,0.3s						
KDAK				IAML		07 56 25.9	
	9µm,0.7s						
R17K	Ugashik Creek	1.27	293	P	Pn	07 56 06.6	+1.0
	baz=116						
R17K				S	Sn	07 56 24.6	+3.2
	baz=116						
Q17K	Contact Creek	1.43	321	P	Pn	07 56 09.5	+1.8
	baz=142,SNR=436						
Q17K				S	Sn	07 56 29.3	+4.1
	baz=142						
Q18K	Katmai Hardscr	1.55	344	P	Pn	07 56 11.7	+2.2
	baz=164,SNR=225						
Q18K				S	Sn	07 56 33.5	+5.2
	baz=164						
Q20K	Shuyak Island	1.74	33	P	Pn	07 56 13.9	+2.0
	baz=212,SNR=13						
Q19K	Cape Douglas,	1.79	9		Pn	07 56 15.0	+2.3
Q19K	Cape Douglas,	1.79	9	P	Pn	07 56 15.6	+2.9
	baz=188,SNR=57						
R16K	Pilot Point	1.87	284	P	Pn	07 56 15.4	+1.7
	baz=105,SNR=78						
Q16K	King Salmon	2.00	320	P	Pn	07 56 17.0	+1.5
	baz=140,SNR=158						
P18K	Big Mountain,	2.30	347	Pn	Pn	07 56 21.3	+1.6
P18K				IAML		07 57 05.7	
	comp=E,2µm,0.9s						
P18K	Big Mountain,	2.30	347	P	Pn	07 56 21.6	+1.9
	baz=166,SNR=77						
CHGN	Chignik	2.48	251	Pn	Pn	07 56 21.4	-0.6
CHGN				IAML		07 57 07.6	
	comp=E,2µm,1.2s						
CHGN	Chignik	2.48	251	P	Pn	07 56 21.4	-0.6
	baz=71,SNR=12						
P16K	Nushagak River	2.75	315	P	Pn	07 56 27.1	+1.4
	baz=133,SNR=46						
CNPM	China Poot	2.84	32	Pn	Pn	07 56 29.0	+2.0
CNPM				IAML		07 57 26.0	
	comp=N,1µm,0.9s						
CNPM				IAML		07 57 28.1	
	comp=E,1µm,0.8s						
HOM	Homer	2.84	27		Pn	07 56 29.1	+2.1
HOM	Homer	2.84	27	P	Pn	07 56 29.4	+2.4
	baz=208						
HOM				S	Sn	07 57 04.2	+4.3
	baz=208						
ILSW	Iliamna Southw	2.88	11		Pn	07 56 29.4	+1.7
O17K	Koliganek Bris	3.02	331	P	Pn	07 56 32.1	+2.5
	baz=150						
O19K	Port Alsworth	3.04	359		Pn	07 56 32.0	+2.3
O19K				IAML		07 57 24.3	
	comp=N,2µm,0.5s						
O19K	Port Alsworth	3.04	359	P	Pn	07 56 32.2	+2.4
	baz=178						
O20K	Slope Mountain	3.04	15	P	Pn	07 56 32.1	+2.3
	baz=195,SNR=15						
BRLK	Bradley Lake	3.14	32		Pn	07 56 32.0	+0.9
BRLK				IAML		07 57 29.6	
	comp=N,928nm,0.8s						
BRLK				IAML		07 57 35.5	
	comp=E,1µm,1.1s						
BRSE	Bradley Lake S	3.16	34		Pn	07 56 32.8	+1.4
BRSE	Bradley Lake S	3.16	34	P	Pn	07 56 32.8	+1.4
	baz=215,SNR=17						
O16K	Kokwok River B	3.18	322	P	Pn	07 56 33.3	+1.5
	baz=140						
RSO	Redoubt South	3.39	12		Pn	07 56 37.2	+2.4
RDJH	Redoubt Jeurge	3.51	11		Pn	07 56 38.9	+2.5
N19K	Bonanza Creek	3.66	358		Pn	07 56 41.0	+2.6
N19K				IAML		07 57 46.5	
	comp=E,753nm,0.8s						
N19K				IAML		07 57 47.9	
	comp=N,709nm,1.0s						
N19K	Bonanza Creek	3.66	358	P	Pn	07 56 41.0	+2.6
	baz=177						
SEW	Seward	3.85	38	Pn	Pn	07 56 41.2	+0.3
SEW	Seward	3.85	38	P	Pn	07 56 41.5	+0.5
	baz=221,SNR=8.4						
SLKM	Skilak Lake	3.94	30		Pn	07 56 43.2	+1.1
CAPN	Captain Cook N	3.94	22		Pn	07 56 45.1	+3.0
CAPN	Captain Cook N	3.94	22	P	Pn	07 56 44.8	+2.7
	baz=204						
SDPT	Sand Point	3.94	245	Pn	Pn	07 56 43.9	+1.8
SDPT				IAML		07 57 55.3	
	comp=E,1µm,1.3s						
SDPT				IAML		07 58 00.6	
	comp=N,982nm,1.5s						
SDPT	Sand Point	3.94	245	P	Pn	07 56 44.0	+1.8
SDPT	Sand Point	3.94	245	P	Pn	07 56 42.6	+0.5
	baz=62						
SVW2	Sparrevohn	4.01	350		Pn	07 56 45.2	+2.1
SVW2				IAML		07 57 53.6	
	comp=E,595nm,0.7s						
SVW2				IAML		07 57 58.6	
	comp=N,493nm,0.8s						
O22K	Cooper Landing	4.06	33		Pn	07 56 44.9	+1.1
O22K	Cooper Landing	4.06	33	P	Pn	07 56 44.8	+1.1
	baz=216,SNR=19						
N16K	Nishlik Lake	4.08	326	P	Pn	07 56 46.2	+2.1
	baz=143,SNR=63						
SPCR	Spurr Chakacha	4.18	13	P	Pn	07 56 47.0	+1.6
	baz=194,SNR=10						
SPU	Mount Spurr	4.18	14		Pn	07 56 47.6	+2.2
P23K	Montague Islan	4.55	49	P	Pn	07 56 51.9	+1.3
	baz=233						
P23K				S	Sn	07 57 41.6	-0.5
	baz=233						
RC01	Rabbit Creek A	4.56	28		Pn	07 56 52.1	+1.5
RC01	Rabbit Creek A	4.56	28	P	Pn	07 56 51.8	+1.2
	baz=211,SNR=21						
S12K	Black Hills	4.60	255	P	Pn	07 56 51.3	+0.1
	baz=70						
SUA	Susitna One	4.66	21		Pn	07 56 53.9	+1.8
SUA				IAML		07 58 04.1	
	comp=E,754nm,1.1s						
SUA	Susitna One	4.66	21	P	Pn	07 56 53.7	+1.6
	baz=203,SNR=34						
MID	Middleton Isla	4.73	58	P	Pn	07 56 54.7	+1.8
M19K	Big River Lodg	4.75	359		Pn	07 56 55.5	+2.2
M19K				IAML		07 58 18.7	
	comp=E,273nm,0.9s						
M19K	Big River Lodg	4.75	359	P	Pn	07 56 55.7	+2.4
	baz=179						
M20K	Styx River	4.76	6		Pn	07 56 56.4	+2.9
M20K				IAML		07 58 21.1	
	comp=E,267nm,0.9s						
M20K	Styx River	4.76	6	P	Pn	07 56 56.2	+2.7
	baz=187						
PWL	Port Wells	4.79	37	Pn	Pn	07 56 54.5	+0.7
PWL				IAML		07 57 53.7	
	comp=N,490nm,0.5s						
PWL				IAML		07 57 55.4	
	comp=E,380nm,0.5s						
PWL	Port Wells	4.79	37	P	Pn	07 56 54.5	+0.7
	baz=221,SNR=18						
PWL				S	Sn	07 57 46.8	-1.1
	baz=221						
SKT	Skwentna	5.02	15		Pn	07 56 58.6	+1.7
SKT	Skwentna	5.02	15	P	Pn	07 56 58.5	+1.5
	baz=196,SNR=9.6						
L19K	White Mountain	5.04	357		Pn	07 56 59.3	+2.0
L19K				IAML		07 58 30.6	
	comp=N,549nm,0.8s						
L19K				IAML		07 58 40.3	
	comp=E,503nm,1.4s						
L19K	White Mountain	5.04	357	P	Pn	07 57 00.1	+2.8
	baz=176						
PMR	Palmer	5.14	28		Pn	07 56 59.1	+0.5
PMR	Palmer	5.14	28	P	Pn	07 56 59.2	+0.5
PMR	Palmer	5.14	28	P	Pn	07 56 59.1	+0.5
PMR	Palmer	5.14	28	P	Pn	07 56 59.3	+0.7
	baz=212						
PMR				S	Sn	07 57 55.3	-1.2
	baz=212						
KNK	Knik Glacier	5.18	32		Pn	07 56 59.8	+0.6
KNK				IAML		07 58 26.2	
	comp=E,430nm,0.6s						
KNK				IAML		07 58 37.7	
	comp=N,329nm,0.9s						
KNK	Knik Glacier	5.18	32	P	Pn	07 56 59.8	+0.6
	baz=216,SNR=5.4						
L20K	Farewell, AK	5.33	2	P	Pn	07 57 03.9	+2.6
	baz=182						
SML	Sawmill	5.53	30		Pn	07 57 05.3	+1.2
SML	Sawmill	5.53	30	P	Pn	07 57 05.4	+1.4
	baz=214						
EYAK	Cordova Ski Ar	5.54	49		Pn	07 57 04.5	+0.3
EYAK	Cordova Ski Ar	5.54	49	P	Pn	07 57 04.9	+0.8
EYAK	Cordova Ski Ar	5.54	49	P	Pn	07 57 04.3	+0.2
	baz=235						
CUT	Chulitna	5.62	19		Pn	07 57 08.4	+3.3
CUT	Chulitna	5.62	19	P	Pn	07 57 06.5	+1.4
	baz=202,SNR=5.9						
M23K	Glacier View	5.69	33	P	Pn	07 57 07.3	+1.1
	baz=217,SNR=8.5						
PPLA	Purkeypile	5.84	9		Pn	07 57 10.4	+2.1
PPLA	Purkeypile	5.84	9	P	Pn	07 57 10.7	+2.4
	baz=190						
SCM	Sheep Creek Mo	5.84	34		Pn	07 57 09.3	+0.9
SCM	Sheep Creek Mo	5.84	34	P	Pn	07 57 09.3	+0.9
SCM	Sheep Creek Mo	5.84	34	P	Pn	07 57 09.5	+1.1
	baz=219,SNR=12						
TTA	Tatalina	5.86	352	Pn	Pn	07 57 10.9	+2.4
TTA	Tatalina	5.86	352	P	Pn	07 57 11.3	+2.8
TTA	Tatalina	5.86	352	P	Pn	07 57 10.9	+2.4
TTA	Tatalina	5.86	352	P	Pn	07 57 11.0	+2.4
	baz=170,SNR=25						
DIV	Divide	5.88	44		Pn	07 57 09.8	+0.9
KLU	Klutina	6.06	41		Pn	07 57 11.9	+0.6
KLU	Klutina	6.06	41	P	Pn	07 57 12.3	+1.0
	baz=227,SNR=12						
K20K	Telida	6.21	1		Pn	07 57 15.7	+2.3
K20K	Telida	6.21	1	P	Pn	07 57 15.5	+2.2
	baz=180,SNR=30						
CAST	Castle Rocks	6.36	9		Pn	07 57 16.9	+1.5
CAST	Castle Rocks	6.36	9	P	Pn	07 57 17.5	+2.1
	baz=190,SNR=42						
M24K	Tolsona, Glenn	6.41	36		Pn	07 57 17.0	+0.9
M24K	Tolsona, Glenn	6.41	36	P	Pn	07 57 17.8	+1.7
	baz=222,SNR=11						
TRF	Thorofare Moun	6.60	15		Pn	07 57 20.1	+1.4
TRF	Thorofare Moun	6.60	15	P	Pn	07 57 20.6	+1.9
	baz=198						
KTH	Kantishna Hill	6.61	13		Pn	07 57 20.9	+2.0
N25K	Chitina, Valde	6.62	44		Pn	07 57 19.9	+0.9
N25K	Chitina, Valde	6.62	44	P	Pn	07 57 19.6	+0.6

	baz=231						
RND	**Reindeer**	**6.80**	**21**		**Pn**	**07 57 23.0**	**+1.6**
RND	**Reindeer**	**6.80**	**21**	P	**Pn**	**07 57 23.0**	**+1.6**
CHUM	**Lake Minchumin**	**6.80**	**7**		**Pn**	**07 57 23.1**	**+1.7**
CHUM	**Lake Minchumin**	**6.80**	**7**	P	**Pn**	**07 57 23.1**	**+1.7**
	baz=188						
GLB	**Gilahina Butte**	**6.83**	**47**		**Pn**	**07 57 22.8**	**+1.0**
VRDI	**Verde Repeater**	**6.86**	**49**		**Pn**	**07 57 23.0**	**+0.7**
HARP	**HAARP**	**6.95**	**37**	P	**Pn**	**07 57 25.3**	**+1.8**
	baz=224,SNR=7.4						
MCK	**McKinley**	**7.08**	**19**		**Pn**	**07 57 26.6**	**+1.4**
MCK	**McKinley**	**7.08**	**19**	P	**Pn**	**07 57 26.6**	**+1.4**
MCK	**McKinley**	**7.08**	**19**	P	**Pn**	**07 57 26.9**	**+1.6**
	baz=203,SNR=12						
MCARA	**McCarthy VSAT**	**7.12**	**49**		**Pn**	**07 57 27.3**	**+1.6**
MCARA	**McCarthy VSAT**	**7.12**	**49**	P	**Pn**	**07 57 26.9**	**+1.1**
	baz=238						
BPAW	**Bear Paw Mtn.**	**7.13**	**11**		**Pn**	**07 57 27.4**	**+1.4**
BPAW	**Bear Paw Mtn.**	**7.13**	**11**	P	**Pn**	**07 57 27.5**	**+1.6**
	baz=194,SNR=5.3						
KIAG	**Kiagna River**	**7.17**	**53**		**Pn**	**07 57 27.2**	**+0.5**
BALM	**Baldy**	**7.23**	**53**		**Pn**	**07 57 27.8**	**+0.4**
PTPK	**Patty Peak**	**7.25**	**51**		**Pn**	**07 57 28.4**	**+0.6**
PAX	**Paxson**	**7.27**	**33**		**Pn**	**07 57 28.6**	**+0.7**
PAX	**Paxson**	**7.27**	**33**	P	**Pn**	**07 57 28.6**	**+0.7**
PAX	**Paxson**	**7.27**	**33**	P	**Pn**	**07 57 28.8**	**+0.9**
	baz=220,SNR=13						
BWN	**Browne**	**7.40**	**16**		**Pn**	**07 57 30.5**	**+0.9**
BARN	**Barnard Glacie**	**7.54**	**54**		**Pn**	**07 57 32.9**	**+1.1**
SAMH	**Samovar Hills**	**7.61**	**61**		**Pn**	**07 57 32.6**	**+0.2**
CTG	**Chitna Glacier**	**7.64**	**55**	P	**Pn**	**07 57 33.7**	**+0.7**
	baz=245						
CTGM	**Chitina Glacie**	**7.64**	**55**		**Pn**	**07 57 33.4**	**+0.3**
M26K	**Nabesna, AK**	**7.71**	**42**		**Pn**	**07 57 35.4**	**+1.5**
M26K	**Nabesna, AK**	**7.71**	**42**	P	**Pn**	**07 57 34.8**	**+0.9**
	baz=231						
GCSA	**Galena City Sc**	**7.72**	**351**		**Pn**	**07 57 36.0**	**+2.1**
GCSA	**Galena City Sc**	**7.72**	**351**	P	**Pn**	**07 57 36.2**	**+2.3**
	baz=169,SNR=38						
UNV	**Unalaska Valle**	**7.74**	**250**		**Pn**	**07 57 33.3**	**-0.8**
UNV	**Unalaska Valle**	**7.74**	**250**	P	**Pn**	**07 57 33.7**	**-0.4**
	baz=60						
LOGN	**Logan Glacier**	**7.74**	**56**		**Pn**	**07 57 34.5**	**+0.1**
K24K	**Donnelly Dome**	**7.85**	**28**	P	**Pn**	**07 57 37.9**	**+2.2**
	baz=215,SNR=18						
PCA	**Pinnacle**	**7.85**	**62**		**Pn**	**07 57 35.8**	**0.0**
PINM	**Pinnacle**	**7.85**	**62**	P	**Pn**	**07 57 35.8**	**0.0**
	baz=253						
NEA2	**Nenana**	**7.86**	**16**		**Pn**	**07 57 35.6**	**-0.3**
NEA2	**Nenana**	**7.86**	**16**	P	**Pn**	**07 57 35.9**	**0.0**
	baz=200,SNR=13						
WRH	**Wood River Hil**	**7.91**	**20**		**Pn**	**07 57 36.9**	**+0.3**
L26K	**Log Cabin Wild**	**7.99**	**38**		**Pn**	**07 57 40.1**	**+2.4**
L26K	**Log Cabin Wild**	**7.99**	**38**	P	**Pn**	**07 57 40.3**	**+2.6**
	baz=227,SNR=9.2						
RIDG	**Independent Ri**	**8.05**	**31**		**Pn**	**07 57 39.9**	**+1.4**
RIDG	**Independent Ri**	**8.05**	**31**	P	**Pn**	**07 57 39.9**	**+1.4**
	baz=219						
MLY	**Manley**	**8.07**	**11**		**Pn**	**07 57 39.8**	**+1.0**
MLY	**Manley**	**8.07**	**11**	P	**Pn**	**07 57 39.5**	**+0.8**
	baz=193,SNR=17						
HDA	**Harding Lake**	**8.08**	**23**		**Pn**	**07 57 40.4**	**+1.5**
HDA	**Harding Lake**	**8.08**	**23**	P	**Pn**	**07 57 40.4**	**+1.5**
	baz=209,SNR=11						
O28M	**Mount Upton**	**8.09**	**58**	P	**Pn**	**07 57 39.9**	**+0.6**
	baz=249						
M27K	**Edge Creek, AK**	**8.11**	**45**		**Pn**	**07 57 41.1**	**+1.7**
M27K	**Edge Creek, AK**	**8.11**	**45**	P	**Pn**	**07 57 40.8**	**+1.4**
	baz=235						
BCPM	**Bancas Point**	**8.11**	**64**		**Pn**	**07 57 39.4**	**0.0**
I21K	**Tanana**	**8.11**	**7**		**Pn**	**07 57 40.6**	**+1.2**
I21K	**Tanana**	**8.11**	**7**	P	**Pn**	**07 57 40.3**	**+1.0**
	baz=188						
CCB	**Clear Creek Bu**	**8.12**	**20**		**Pn**	**07 57 39.5**	**0.0**
PNL	**Peninsula**	**8.17**	**66**		**Pn**	**07 57 39.6**	**-0.5**
PNL	**Peninsula**	**8.17**	**66**	P	**Pn**	**07 57 40.2**	**+0.1**
PNL	**Peninsula**	**8.17**	**66**	P	**Pn**	**07 57 39.9**	**-0.2**
	baz=258						
DOT	**Dot Lake**	**8.21**	**33**		**Pn**	**07 57 41.4**	**+0.7**
COLA	**College**	**8.32**	**19**		**Pn**	**07 57 42.6**	**+0.5**
COLA	**College**	**8.32**	**19**	P	**Pn**	**07 57 43.4**	**+1.2**
COLA	**College**	**8.32**	**19**	*i* P	**Pn**	**07 57 42.5**	**+0.3**
MDM	**Murphy Dome**	**8.34**	**18**		**Pn**	**07 57 42.9**	**+0.5**
I23K	**Minto, Yukon-K**	**8.34**	**14**		**Pn**	**07 57 42.6**	**+0.2**
I23K	**Minto, Yukon-K**	**8.34**	**14**	P	**Pn**	**07 57 42.9**	**+0.4**
	baz=198,SNR=15						
YUK3	**Moose Creek**	**8.38**	**51**	P	**Pn**	**07 57 44.4**	**+1.2**
	baz=242,SNR=12						
ILAR	**Eielson Array**	**8.41**	**22**	Pn	**Pn**	**07 57 42.9**	**-0.5**
	comp=N,1.8nm,0.3s,baz=209,slow=14,SNR=65						
ILAR				Sn	**Sn**	**07 59 14.2**	**-2.9**
	comp=N,2.7nm,0.3s,baz=221,slow=16,SNR=6.9						
ILAR				LR	LR	08 01 24.1	
	comp=N,379nm,20.3s,baz=211,slow=40						
YUK8	**Steele Glacier**	**8.47**	**55**	P	**Pn**	**07 57 45.4**	**+0.9**
	baz=246,SNR=12						
SCRK	**Sand Creek**	**8.47**	**32**		**Pn**	**07 57 44.5**	**0.0**
SCRK	**Sand Creek**	**8.47**	**32**	P	**Pn**	**07 57 45.4**	**+0.9**
	baz=220,SNR=6.6						
BVCY	**Beaver Creek**	**8.53**	**46**	P	**Pn**	**07 57 45.8**	**+0.6**
	baz=237						
L27K	**Beaver Creek,**	**8.54**	**41**		**Pn**	**07 57 46.1**	**+0.8**
L27K	**Beaver Creek,**	**8.54**	**41**	P	**Pn**	**07 57 46.4**	**+1.1**
	baz=231						
H21K	**Melozitna Rive**	**8.55**	**4**		**Pn**	**07 57 46.8**	**+1.5**
H21K	**Melozitna Rive**	**8.55**	**4**	P	**Pn**	**07 57 46.7**	**+1.4**
	baz=185						
POKR	**Poker Plat Res**	**8.62**	**19**		**Pn**	**07 57 46.9**	**+0.6**
POKR	**Poker Plat Res**	**8.62**	**19**	P	**Pn**	**07 57 46.8**	**+0.5**
	baz=205,SNR=6.0						
O29M	**Mount Kennedy**	**8.71**	**62**	P	**Pn**	**07 57 48.4**	**+0.7**
	baz=255,SNR=17						
SPIA	**Saint Paul Isl**	**8.72**	**277**		**Pn**	**07 57 48.3**	**+0.6**
SPIA	**Saint Paul Isl**	**8.72**	**277**	P	**Pn**	**07 57 48.2**	**+0.6**
	baz=84,SNR=9.1						
H22K	**Ishtalitna Cre**	**8.86**	**8**	P	**Pn**	**07 57 50.7**	**+1.1**
	baz=190						
H23K	**Yukon River**	**8.97**	**12**		**Pn**	**07 57 51.8**	**+0.7**
H23K	**Yukon River**	**8.97**	**12**	P	**Pn**	**07 57 51.8**	**+0.7**
	baz=196						
YUK4	**Talbot Arm**	**8.99**	**56**	P	**Pn**	**07 57 54.0**	**+2.4**
	baz=248						
K27K	**Chicken**	**9.09**	**36**		**Pn**	**07 57 54.9**	**+2.1**
K27K	**Chicken**	**9.09**	**36**	P	**Pn**	**07 57 53.9**	**+1.2**
	baz=226						
ANM	**Nome**	**9.19**	**328**		**Pn**	**07 57 55.8**	**+1.7**
ANM	**Nome**	**9.19**	**328**	P	**Pn**	**07 57 55.8**	**+1.7**
ANM	**Nome**	**9.19**	**328**	P	**Pn**	**07 57 56.4**	**+2.3**
	baz=139,SNR=24						
H24K	**Noodor Dome**	**9.21**	**16**		**Pn**	**07 57 55.3**	**+0.9**
H24K	**Noodor Dome**	**9.21**	**16**	P	**Pn**	**07 57 54.7**	**+0.4**
	baz=202						
PRP	**Porcupine Dome**	**9.35**	**23**		**Pn**	**07 57 57.7**	**+1.3**
PRP	**Porcupine Dome**	**9.35**	**23**	P	**Pn**	**07 57 57.4**	**+1.0**
	baz=210						
HYT	**Haines Junctio**	**9.36**	**60**		**Pn**	**07 57 57.2**	**+0.7**
G21K	**Allakaket**	**9.39**	**2**	P	**Pn**	**07 57 58.8**	**+2.0**
	baz=182						
P30M	**Million Dollar**	**9.46**	**65**	P	**Pn**	**07 57 59.2**	**+1.3**
	baz=258						
M29M	**Somme Creek**	**9.52**	**50**	P	**Pn**	**07 57 59.9**	**+1.2**
	baz=243						
PLBC	**Pleasant Camp**	**9.66**	**69**	P	**Pn**	**07 58 01.1**	**+0.5**
	baz=263						
S31K	**Pelican**	**9.69**	**78**	P	**Pn**	**07 57 59.5**	**-1.4**
	baz=272						
I26K	**Coal Creek Min**	**9.73**	**28**		**Pn**	**07 58 01.9**	**+0.4**
I26K	**Coal Creek Min**	**9.73**	**28**	P	**Pn**	**07 58 01.6**	**0.0**
	baz=218						
N30M	**Aishikik Lake**	**9.74**	**57**	P	**Pn**	**07 58 01.7**	**0.0**
	baz=251						
G23K	**Bananza Creek**	**9.78**	**10**	P	**Pn**	**07 58 02.1**	**-0.1**
	baz=193,SNR=13						
EGAK	**Eagle**	**9.90**	**34**		**Pn**	**07 58 04.6**	**+0.7**
EGAK	**Eagle**	**9.90**	**34**	P	**Pn**	**07 58 04.6**	**+0.7**
	baz=225,SNR=8.6						
L29M	**L29M**	**9.97**	**47**	P	**Pn**	**07 58 05.2**	**+0.4**
	baz=240						
O30N	**Mendenhall**	**10.02**	**61**	P	**Pn**	**07 58 05.5**	**0.0**
	baz=256						
DAWY	**Dawson**	**10.02**	**40**		**Pn**	**07 58 06.4**	**+0.9**
DAWY	**Dawson**	**10.02**	**40**	P	**Pn**	**07 58 06.5**	**+0.9**
	baz=233						
G24K	**Hadweenzic Riv**	**10.07**	**15**	P	**Pn**	**07 58 05.8**	**-0.4**
	baz=201						
F21K	**Alatna River**	**10.10**	**2**	P	**Pn**	**07 58 07.4**	**+0.9**
	baz=182						
SKAG	**Skagway**	**10.19**	**69**		**Pn**	**07 58 08.2**	**+0.5**
SKAG	**Skagway**	**10.19**	**69**	P	**Pn**	**07 58 09.1**	**+1.4**
SKAG	**Skagway**	**10.19**	**69**	P	**Pn**	**07 58 07.0**	**-0.7**
	baz=264						
COLD	**Coldfoot**	**10.27**	**9**		**Pn**	**07 58 09.0**	**+0.2**
COLD	**Coldfoot**	**10.27**	**9**	P	**Pn**	**07 58 08.9**	**0.0**
	baz=192						
M30M	**Minto, Yukon**	**10.28**	**51**	Pn	**Pn**	**07 58 09.5**	**+0.5**
M30M	**Minto, Yukon**	**10.28**	**51**	P	**Pn**	**07 58 10.0**	**+1.0**
	baz=245						
FYU	**Fort Yukon**	**10.33**	**20**		**Pn**	**07 58 09.4**	**-0.2**
N31M	**Braeburn, Yuko**	**10.35**	**58**		**Pn**	**07 58 11.1**	**+1.1**
G25K	**Bearman Lake**	**10.35**	**18**	P	**Pn**	**07 58 09.6**	**-0.3**
	baz=205						
I27K	**Kandik River**	**10.37**	**30**	P	**Pn**	**07 58 10.6**	**+0.3**
	baz=221						
F22K	**John River**	**10.42**	**4**	P	**Pn**	**07 58 13.2**	**+2.3**
	baz=186						
K29M	**Barlow Dome**	**10.58**	**44**	P	**Pn**	**07 58 13.7**	**+0.5**
	baz=238						
S32K	**Killisnoo**	**10.62**	**80**	P	**Pn**	**07 58 13.2**	**-0.4**
	baz=276						
TNA	**Tin City**	**10.66**	**328**		**Pn**	**07 58 17.1**	**+2.9**
TNA	**Tin City**	**10.66**	**328**	P	**Pn**	**07 58 17.1**	**+2.9**
	baz=136,SNR=46						
F24K	**Squaw Lake**	**10.79**	**13**	P	**Pn**	**07 58 16.4**	**+0.4**
	baz=198						
H27K	**Steamboat Moun**	**10.88**	**28**	P	**Pn**	**07 58 17.4**	**+0.2**
	baz=219						
G26K	**Porcupine Rive**	**10.95**	**22**	P	**Pn**	**07 58 19.1**	**+1.0**
	baz=211						
P32M	**Atlin**	**11.02**	**69**	P	**Pn**	**07 58 18.8**	**-0.3**
	baz=266						
E22K	**Anaktuvuk Pass**	**11.06**	**5**	P	**Pn**	**07 58 20.5**	**+0.8**
	baz=187						
MAYO	**Mayo, Yukon**	**11.09**	**47**	P	**Pn**	**07 58 21.1**	**+1.0**
	baz=242						
E23K	**Chandalar**	**11.13**	**9**	P	**Pn**	**07 58 20.8**	**+0.1**
	baz=193						
F25K	**Christian Rive**	**11.18**	**17**	P	**Pn**	**07 58 21.3**	**0.0**
	baz=204						
M31M	**Drury Creek, Y**	**11.19**	**55**		**Pn**	**07 58 22.2**	**+0.8**
M31M	**Drury Creek, Y**	**11.19**	**55**	P	**Pn**	**07 58 22.3**	**+0.8**
	baz=252						
I29M	**Ogilvie Camp,**	**11.19**	**36**		**Pn**	**07 58 22.9**	**+1.4**
I29M	**Ogilvie Camp,**	**11.19**	**36**	P	**Pn**	**07 58 23.2**	**+1.7**
	baz=230						
E24K	**Your Creek**	**11.26**	**11**	P	**Pn**	**07 58 22.1**	**-0.3**
	baz=196						
G27K	**Doyon Strip**	**11.30**	**26**	P	**Pn**	**07 58 23.5**	**+0.5**
	baz=217						
F26K	**Sheenjek River**	**11.53**	**19**	P	**Pn**	**07 58 26.4**	**+0.4**
	baz=208						
T33K	**Petersburg**	**11.59**	**83**	P	**Pn**	**07 58 26.4**	**-0.5**
	baz=280						
RDOG	**Red Dog Mine**	**11.62**	**344**	P	**Pn**	**07 58 28.5**	**+1.1**
	baz=156,SNR=7.5						
FARO	**Faro, Yukon**	**11.66**	**56**		**Pn**	**07 58 28.5**	**+0.6**
FARO	**Faro, Yukon**	**11.66**	**56**	P	**Pn**	**07 58 29.0**	**+1.0**
	baz=253						
E25K	**Arctic Village**	**11.67**	**16**	P	**Pn**	**07 58 27.2**	**-0.8**
	baz=204						
D23K	**Nanushuk River**	**11.95**	**6**	P	**Pn**	**07 58 32.2**	**+0.4**
	baz=189						
EPYK	**Eagle Plains**	**12.34**	**35**		**Pn**	**07 58 39.1**	**+1.9**
EPYK	**Eagle Plains**	**12.34**	**35**	P	**Pn**	**07 58 38.8**	**+1.5**
	baz=230						
E27K	**Coleen River**	**12.45**	**22**	P	**Pn**	**07 58 39.8**	**+1.2**
	baz=213						
D25K	**Kavik River**	**12.69**	**13**	P	**Pn**	**07 58 40.5**	**-1.3**
	baz=200						
C24K	**Franklin Bluff**	**12.83**	**9**	P	**Pn**	**07 58 43.2**	**-0.6**
	baz=193						
G30M	**tAoh Zraii Nji**	**12.89**	**33**	P	**Pn**	**07 58 44.4**	**-0.3**
	baz=228						
DLBC	**Dease Lake**	**12.94**	**74**	Pn	**Pn**	**07 58 46.0**	**+0.6**
	comp=N,0.2nm,0.3s,baz=250,slow=25,SNR=1.6						
DLBC				LR	LR	08 03 30.6	
	comp=N,258nm,19.1s,baz=292,slow=36						
	comp=N,0.7nm,0.4s						
DLBC	**Dease Lake**	**12.94**	**74**	Pn	**Pn**	**07 58 46.3**	**+0.9**
C27K	**Jago River**	**13.33**	**16**	P	**Pn**	**07 58 51.1**	**+0.6**
	baz=205						
C26K	**Camden Bay**	**13.43**	**14**	P	**Pn**	**07 58 52.6**	**+0.7**
	baz=202						
F31M	**Tsiigehtchic**	**13.93**	**34**	P	**Pn**	**07 58 57.6**	**-1.2**
	baz=232,SNR=15						
A21K	**Barrow**	**14.25**	**357**	P	**Pn**	**07 59 02.2**	**-0.9**
	baz=175						
INK	**Inuvik**	**14.54**	**32**	Pn	**Pn**	**07 59 07.2**	**+0.2**
	comp=N,0.5nm,0.3s,baz=226,slow=12,SNR=17						
INK				LR	LR	08 05 16.6	
	comp=N,314nm,19.8s,baz=224,slow=39						
	comp=N,3.3nm,0.6s						
INK	**Inuvik**	**14.54**	**32**		**Pn**	**07 59 08.2**	**+1.2**
INK	**Inuvik**	**14.54**	**32**	P	**Pn**	**07 59 08.2**	**+1.2**
INK	**Inuvik**	**14.54**	**32**	P	**Pn**	**07 59 06.5**	**-0.5**
	baz=230,SNR=6.9						
BBB	**Bella Bella**	**15.84**	**97**	LR	LR	08 04 19.0	
	comp=N,277nm,20.1s,baz=284,slow=32						
KOTAN	**Kotaneelee Air**	**15.90**	**67**	P	**Pn**	**07 59 23.7**	**-1.1**
	baz=272						
WRGLY	**Wrigley**	**16.32**	**55**	P	**Pn**	**07 59 30.6**	**+0.4**
	baz=262						
C36M	**Paulatuk**	**17.98**	**35**	P	**P**	**07 59 51.0**	**+0.1**
C36M	**Paulatuk**	**17.98**	**35**	P	**P**	**07 59 49.6**	**-1.3**
	baz=242,SNR=36						
SHEM	**Shemya Is, Ala**	**18.64**	**270**	LR	LR	08 07 53.1	
	comp=N,126nm,18.8s,baz=346,slow=39						
A36M	**Sachs Harbour**	**19.05**	**27**	P	**Pn**	**08 00 04.6**	**+0.9**
A36M				IAmb	IAmb	08 00 06.8	
	comp=Z,55nm,0.8s						
A36M	**Sachs Harbour**	**19.05**	**27**	P	**P**	**08 00 02.7**	**0.0**
	baz=234,SNR=70						
WAPA	**Wapiti River**	**19.43**	**81**	P	**Pn**	**08 00 08.8**	**+0.3**
YKA	**Yellowknife Ar**	**20.35**	**58**	P	**P**	**08 00 17.9**	**+1.0**
	comp=Z,10nm,0.8s,baz=270,slow=10,SNR=76						
YKA				PcP	**PcP**	**08 04 28.1**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=263,slow=1.4,SNR=11						
YKA				LR	LR	08 08 49.8	
	comp=Z,165nm,18.3s,baz=306,slow=38						
	comp=Z,10nm,0.8s						
BILL	**Bilibino**	**20.76**	**318**	*ce*P	**P**	**08 00 21.1**	**-0.3**
BILL				*i* *SP	**pP**	**08 00 30.6**	**-0.6**
BILL				*e*		08 00 36.9	
BILL				*e*S	**S**	**08 04 09.7**	**-1.0**
BILL				*e*		08 04 32.1	
BILL				SSS	SSS	08 04 50.0	
BILL				pmax	pmax		
	comp=Z,13nm,0.9s						
BILL				MLR	MLR		
	comp=Z,121nm,16.0s						
BRLDA	**Berland Lookou**	**20.84**	**83**	P	**P**	**08 00 22.9**	**+0.5**
LON	**Longmire**	**22.30**	**104**	P	**P**	**08 00 40.4**	**+2.2**
LON	**Longmire**	**22.30**	**104**	P	**P**	**08 00 40.4**	**+2.2**
LON				pmax	pmax		
	comp=Z,19nm,1.3s						
LTY	**Liberty**	**22.59**	**102**	P	**P**	**08 00 42.8**	**+1.5**
LTY				IAmb	IAmb	08 00 59.3	
	comp=Z,20nm,1.1s						
B08A	**Colville Reser**	**22.64**	**98**	P	**P**	**08 00 42.4**	**+0.6**
B08A				IAmb	IAmb	08 00 60.0	
	comp=Z,20nm,1.2s						
C09A	**Chrisman Ranch**	**23.55**	**98**	P	**P**	**08 00 52.5**	**+1.7**
NEW	**Newport**	**23.89**	**96**	P	**P**	**08 00 55.5**	**+1.4**
	comp=Z,5.9nm,0.9s,baz=248,slow=2.5,SNR=7.8						
NEW				LR	LR	08 08 51.3	
	comp=Z,190nm,21.1s,baz=297,slow=33						
	comp=Z,5.9nm,0.9s						
NEW	**Newport**	**23.89**	**96**	P	**P**	**08 00 55.0**	**+0.9**
NEW	**Newport**	**23.89**	**96**	P	**P**	**08 00 55.0**	**+0.9**
NEW				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NEW	**Newport**	**23.89**	**96**	P	**P**	**08 00 51.9**	**-2.3**
	baz=306,SNR=5.5						
PINE	**Pine Mountain**	**24.75**	**108**	P	**P**	**08 01 02.0**	**-0.1**
PINE				IAmb	IAmb	08 01 21.6	
	comp=Z,15nm,1.0s						
G08A	**Pilot Rock**	**24.76**	**103**	P	**P**	**08 01 03.5**	**+1.3**
J05D	**Fort Rock, OR**	**24.95**	**110**	P	**P**	**08 01 05.3**	**+1.4**
WALA	**Waterton Lakes**	**25.18**	**91**	P	**P**	**08 01 06.9**	**+1.0**
WALA				IAmb	IAmb	08 01 25.7	
	comp=Z,27nm,1.1s						
YBH	**Yreka Blue Hor**	**25.34**	**114**	P	**P**	**08 01 09.1**	**+1.7**
	comp=Z,3.7nm,0.8s,baz=312,slow=3.6,SNR=8.1						
YBH				LR	LR	08 08 53.9	
	comp=Z,180nm,19.8s,baz=332,slow=31						
	comp=Z,3.7nm,0.8s						
SEY	**Seymchan**	**26.59**	**305**	P	**P**	**08 01 16.6**	**-1.9**
	comp=Z,1.7nm,0.9s,baz=118,slow=10,SNR=4.7						
	comp=Z,1.7nm,0.9s						
SEY	**Seymchan**	**26.59**	**305**	*ce*P	**P**	**08 01 16.5**	**-1.9**
SEY				pmax	pmax		
	comp=Z,7.0nm,2.2s						
WVOR	**Wild Horse Val**	**26.90**	**108**	P	**P**	**08 01 23.6**	**+2.1**
WVOR	**Wild Horse Val**	**26.90**	**108**	P	**P**	**08 01 23.6**	**+2.1**
WVOR				pmax	pmax		
	comp=Z,11nm,1.2s						
PETK	**Petropavlovsk-**	**27.33**	**282**	P	**P**	**08 01 22.8**	**-2.4**
	comp=Z,1.3nm,0.4s,baz=79,slow=10,SNR=4.4						
	comp=Z,1.3nm,0.4s						
MFID	**Camas Ranch**	**27.69**	**103**	P	**P**	**08 01 29.9**	**+1.4**
HRY	**Holter Researc**	**27.70**	**94**	P	**P**	**08 01 29.6**	**+0.9**
EGMT	**Eagleton**	**28.04**	**90**	P	**P**	**08 01 32.4**	**+0.8**
EGMT				IAmb	IAmb	08 01 33.8	
	comp=Z,13nm,0.8s						
EGMT	**Eagleton**	**28.04**	**90**	P	**P**	**08 01 31.2**	**-0.5**
	baz=306,SNR=12						
RES	**Resolute Bay**	**28.08**	**29**	P	**P**	**08 01 32.2**	**+0.7**
	comp=Z,1.9nm,0.6s,baz=257,slow=11,SNR=16						
	comp=Z,1.9nm,0.6s						
RES	**Resolute Bay**	**28.08**	**29**	P	**P**	**08 01 32.3**	**+0.7**
RES	**Resolute Bay**	**28.08**	**29**	P	**P**	**08 01 32.3**	**+0.7**
RES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MA2	**Magadan**	**28.27**	**298**	LR	LR	08 14 14.2	
	comp=Z,118nm,18.6s,baz=74,slow=39						
MCMT	**McKenzie Canyo**	**28.34**	**98**	P	**P**	**08 01 35.2**	**+0.7**
HLID	**Hailey**	**28.34**	**101**	P	**P**	**08 01 35.1**	**+0.6**
HLID	**Hailey**	**28.34**	**101**	P	**P**	**08 01 34.4**	**-0.1**
	baz=313						
BOZ	**Bozeman (W)**	**28.50**	**95**	P	**P**	**08 01 36.4**	**+0.6**
	baz=309						
PAHR	**Pah Rah Range**	**28.52**	**113**	P	**P**	**08 01 36.3**	**+0.2**
GCMT	**Greycliff**	**29.44**	**93**	P	**P**	**08 01 46.7**	**+2.5**
YMR	**Madison River**	**29.46**	**96**	P	**P**	**08 01 45.9**	**+1.5**
YMR				IAmb	IAmb	08 01 47.9	
	comp=Z,17nm,1.0s						
YNR	**Norris Junctio**	**29.58**	**96**	P	**P**	**08 01 47.4**	**+1.8**
YNR				IAmb	IAmb	08 02 04.9	
	comp=Z,19nm,1.2s						
KVN	**Kaiserville**	**29.67**	**112**	P	**P**	**08 01 46.9**	**+0.6**
KVN	**Kaiserville**	**29.67**	**112**	P	**P**	**08 01 46.9**	**+0.6**
KVN				pmax	pmax		
	comp=Z,9.0nm,1.4s						
H17A	**Grant Village**	**29.85**	**96**	P	**P**	**08 01 49.9**	**+2.0**
H17A				IAmb	IAmb	08 01 52.6	
	comp=Z,10nm,0.9s						
H17A	**Grant Village**	**29.85**	**96**	P	**P**	**08 01 48.5**	**+0.5**
	baz=311,SNR=10						
ELK	**Elko**	**29.88**	**106**	P	**P**	**08 01 50.2**	**+2.0**
	comp=Z,3.2nm,0.9s,baz=323,slow=5.7,SNR=6.0						
ELK				LR	LR	08 11 14.3	
	comp=Z,104nm,21.1s,baz=271,slow=31						
	comp=Z,3.2nm,0.9s						
ELK	**Elko**	**29.88**	**106**	P	**P**	**08 01 49.4**	**+1.2**
ELK	**Elko**	**29.88**	**106**	P	**P**	**08 01 49.4**	**+1.2**
ELK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
FLWY	**Flagg Ranch**	**29.99**	**97**	P	**P**	**08 01 51.6**	**+2.5**
FLWY				IAmb	IAmb	08 01 53.1	
	comp=Z,16nm,0.9s						
NVAR	**Mina Array Bea**	**30.04**	**113**	P	**P**	**08 01 51.9**	**+2.2**
	comp=Z,3.7nm,0.7s,baz=307,slow=9.1,SNR=29						
NVAR				pP	**pP**	**08 02 02.6**	**+2.2**
	comp=Z,2.2nm,0.8s,baz=305,slow=9.3,SNR=5.0						
NVAR				PcP	**PcP**	**08 04 51.4**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=295,slow=2.2,SNR=8.9						
NVAR				LR	LR	08 12 12.0	
	comp=Z,208nm,18.6s,baz=330,slow=33						
	comp=Z,3.7nm,0.7s						
LHV	**Little Huntoon**	**30.08**	**114**	P	**P**	**08 01 52.3**	**+2.7**
RLMT	**Red Lodge**	**30.09**	**94**	P	**P**	**08 01 50.3**	**+0.3**
	baz=310						
MDPB	**Devils Postpil**	**30.27**	**115**	P	**P**	**08 01 52.2**	**+0.5**
OMMB	**Old Mammoth Mi**	**30.33**	**115**	P	**P**	**08 01 53.8**	**+1.5**
OMMB				IAmb	IAmb	08 01 55.9	
	comp=Z,7.0nm,0.9s						
LAO	**LASA Array**	**30.76**	**89**	P	**P**	**08 01 57.4**	**+1.6**
LAO	**LASA Array**	**30.76**	**89**	P	**P**	**08 01 56.4**	**+0.6**
	baz=308						
DGMT	**Dagmar**	**30.80**	**85**	P	**P**	**08 01 55.6**	**-0.4**
	baz=305						
TPH	**Tonopah**	**30.86**	**112**	P	**P**	**08 01 57.7**	**+0.9**
TPH				IAmb	IAmb	08 01 59.9	
	comp=Z,21nm,0.9s						
TPH	**Tonopah**	**30.86**	**112**	P	**P**	**08 01 57.7**	**+0.9**
TPH				pmax	pmax		
	comp=Z,21nm,0.9s						
FCC	**Fort Churchill**	**31.00**	**61**	P	**P**	**08 01 58.6**	**+1.0**
FCC				IAmb	IAmb	08 02 00.1	
	comp=Z,19nm,1.1s						
FCC	**Fort Churchill**	**31.00**	**61**	P	**P**	**08 01 58.6**	**+1.0**
FCC				pmax	pmax		
	comp=Z,19nm,1.1s						
MZP	**Montezuma Peak**	**31.06**	**113**	P	**P**	**08 02 00.5**	**+1.7**
HWUT	**Hardware Ranch**	**31.21**	**101**	P	**P**	**08 02 00.9**	**+1.0**
HWUT				IAmb	IAmb	08 02 17.7	
	comp=Z,12nm,1.5s						
LCH	**Last Change Ra**	**31.30**	**114**	P	**P**	**08 02 02.6**	**+2.0**
Q12A	**Willow Creek R**	**31.35**	**108**	P	**P**	**08 02 02.5**	**+1.4**
Q12A				IAmb	IAmb	08 02 04.6	
	comp=Z,8.2nm,0.8s						
R11A	**Troy Canyon, C**	**31.48**	**110**	P	**P**	**08 02 03.9**	**+1.7**
R11A	**Troy Canyon, C**	**31.48**	**110**	P	**P**	**08 02 03.6**	**+1.3**
	baz=319,SNR=15						
BW06	**Boulder Array**	**31.49**	**98**	P	**P**	**08 02 03.7**	**+1.3**
BW06				IAmb	IAmb	08 02 05.0	
	comp=Z,5.0nm,0.6s						
BW06	**Boulder Array**	**31.49**	**98**	P	**P**	**08 02 03.6**	**+1.3**
	baz=313,SNR=8.6						
PDAR	**Pinedale Array**	**31.49**	**98**	P	**P**	**08 02 04.2**	**+1.8**
	comp=Z,4.5nm,0.5s,baz=319,slow=4.6,SNR=63						
PDAR				pP	**pP**	**08 02 14.2**	**+1.0**
	comp=Z,2.4nm,0.6s,baz=310,slow=4.2,SNR=9.9						
PDAR				LR	LR	08 12 58.2	
	comp=Z,57nm,20.8s,baz=314,slow=33						
	comp=Z,4.5nm,0.5s						
DUG	**Dugway, Tooele**	**31.55**	**105**	P	**P**	**08 02 03.3**	**+0.4**
	baz=316						
GRAC	**Grapevine Rang**	**31.62**	**114**	P	**P**	**08 02 04.8**	**+1.5**
	baz=321,SNR=8.6						
SMMC	**Simmler**	**31.67**	**119**	P	**P**	**08 02 03.9**	**+0.1**
	baz=324						
VES	**Vestal, Richgr**	**31.69**	**117**	P	**P**	**08 02 04.0**	**+0.1**
	baz=323						
CWC	**Cottonwood Cre**	**31.70**	**115**	P	**P**	**08 02 05.0**	**+0.8**
	baz=322						
TPNV	**Topopah Spring**	**32.22**	**112**	P	**P**	**08 02 07.2**	**-1.6**
	baz=321,SNR=6.3						
FURC	**Furnace Creek,**	**32.28**	**114**	P	**P**	**08 02 07.3**	**-1.8**
	baz=322						
MPMC	**Manual Prospec**	**32.30**	**115**	P	**P**	**08 02 10.2**	**+0.7**
	baz=322,SNR=8.7						
GWY	**Greenwater Val**	**32.60**	**114**	P	**P**	**08 02 13.0**	**+0.9**
GWY				IAmb	IAmb	08 02 15.2	
	comp=Z,7.3nm,0.8s						
LRMC	**Laurel Mtn Rad**	**32.66**	**116**	P	**P**	**08 02 11.9**	**-0.7**
	baz=323						
QSM	**Queen of Sheba**	**32.68**	**114**	P	**P**	**08 02 14.1**	**+1.5**
QSM				IAmb	IAmb	08 02 15.9	
	comp=Z,10nm,1.1s						
SHOC	**Shoshone, Teco**	**33.02**	**114**	P	**P**	**08 02 16.6**	**+0.9**
	baz=322						
MVU	**Marysvale**	**33.11**	**106**	P	**P**	**08 02 18.8**	**+2.1**
MSU	**Marysvale**	**33.12**	**106**	P	**P**	**08 02 19.0**	**+2.3**
MSU	**Marysvale**	**33.12**	**106**	P	**P**	**08 02 19.0**	**+2.3**
K22A	**Casper**	**33.21**	**95**	P	**P**	**08 02 18.3**	**+0.9**
K22A				IAmb	IAmb	08 02 34.8	
	comp=Z,7.3nm,1.1s						
K22A	**Casper**	**33.21**	**95**	P	**P**	**08 02 17.8**	**+0.4**
	baz=312						
GSC	**Goldstone, Bar**	**33.23**	**115**	P	**P**	**08 02 18.4**	**+0.9**
	baz=323						
TIXI	**Tiksi**	**33.45**	**326**	LR	LR	08 16 13.9	
	comp=Z,55nm,19.8s,baz=20,slow=37						
TIXI	**Tiksi**	**33.45**	**326**	*i* P	**P**	**08 02 17.9**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.4s						
RWWY	**Rawlins**	**33.49**	**97**	P	**P**	**08 02 21.3**	**+1.4**
SRU	**San Rafael Swe**	**33.55**	**104**	P	**P**	**08 02 22.5**	**+2.1**

SRU	San Rafael Swe	33.55	104	P	P	08 02 22.5	+2.1
SRU				pmax	pmax		
	comp=Z,27nm,0.9s						
RSSD	Black Hills	33.58	91	P	P	08 02 21.9	+1.2
RSSD	Black Hills	33.58	91	P	P	08 02 21.9	+1.2
RSSD				pmax	pmax		
	comp=Z,15nm,0.7s						
RSSD	Black Hills	33.58	91	P	P	08 02 22.5	+1.8
	baz=311						
MDND	Maddock	33.66	82	P	P	08 02 22.2	+1.2
	baz=307						
BFSC	Mount Baldy Ra	33.67	117	P	P	08 02 22.6	+1.2
	baz=324						
LCMT	Little Creek M	33.70	109	P	P	08 02 23.5	+1.8
LCMT				IAmb	IAmb	08 02 25.1	
	comp=Z,5.6nm,0.9s						
FMP	Fort Macarthur	33.79	118	P	P	08 02 23.5	+1.2
	baz=325						
HEC	Hector,Ludlow	33.84	115	P	P	08 02 24.6	+1.8
	baz=323						
V12A	Nelson	33.87	112	P	P	08 02 24.6	+1.4
V12A				IAmb	IAmb	08 02 26.8	
	comp=Z,9.2nm,0.9s						
O20A	White River Ci	34.03	100	P	P	08 02 26.0	+1.4
O20A	White River Ci	34.03	100	P	P	08 02 25.6	+1.1
	baz=316,SNR=17						
GMRC	Granite Mounta	34.21	114	P	P	08 02 26.7	+0.6
	baz=323						
ULM	Lac du Bonnet	34.25	76	P	P	08 02 27.2	+1.1
	comp=Z,10.0nm,0.9s,baz=294,slow=9.9,SNR=10						
ULM				LR	LR	08 16 09.2	
	comp=Z,164nm,19.1s,baz=344,slow=36						
	comp=Z,10.0nm,0.9s						
TULEG	Thule	34.36	24	eP	P	08 02 27.4	+0.6
TULEG				IAmb	IAmb	08 02 28.5	
	comp=Z,3.4nm,0.8s						
BELC	Belle Mtn. Jos	34.67	115	P	P	08 02 31.6	+1.5
	baz=324						
N23A	Red Feather La	34.73	97	P	P	08 02 32.4	+1.7
	baz=314						
PFO	Pinyon Flats O	34.76	116	LR	LR	08 13 57.1	
	comp=Z,121nm,20.3s,baz=7.0,slow=31						
PFO	Pinyon Flats O	34.76	116	P	P	08 02 31.7	+0.8
PFO				IAmb	IAmb	08 02 33.5	
	comp=Z,9.1nm,1.2s						
PFO	Pinyon Flats O	34.76	116	i P	P	08 02 32.0	+1.1
PFO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PFO	Pinyon Flats O	34.76	116	P	P	08 02 32.2	+1.3
	baz=324						
TPFO	Pinon Flats	34.77	116	P	P	08 02 31.9	+1.0
	baz=324						
PV23	Carpenter Ridg	34.84	103	P	P	08 02 33.2	+1.6
IRM	Iron Mountain	34.97	114	P	P	08 02 33.6	+1.1
	baz=323,SNR=12						
109C	Camp Elliot, M	35.03	118	P	P	08 02 34.4	+1.4
	baz=325						
PV07	Paradox Valley	35.04	102	P	P	08 02 34.7	+1.4
PV07				IAmb	IAmb	08 02 36.1	
	comp=Z,13nm,0.9s						
PV13	Radium Mtn., P	35.16	103	P	P	08 02 35.7	+1.3
BC3	Big Chuckawall	35.22	115	P	P	08 02 36.0	+1.2
	baz=324						
PDMCI	Parker Dam,Lak	35.35	113	P	P	08 02 37.7	+1.9
	baz=323						
MONP2	Monument Peak	35.36	117	P	P	08 02 37.4	+1.3
	baz=325						
AGMN	Agassiz Nation	35.40	79	P	P	08 02 37.1	+1.1
AGMN				IAmb	IAmb	08 02 38.0	
	comp=Z,14nm,0.8s						
AGMN	Agassiz Nation	35.40	79	P	P	08 02 36.5	+0.4
	baz=307,SNR=6.2						
BLYC	Blythe	35.60	114	P	P	08 02 39.8	+1.8
BLYC				IAmb	IAmb	08 02 41.1	
	comp=Z,14nm,0.8s						
SWSC	Sam W. Stewart	35.62	116	P	P	08 02 39.3	+1.2
	baz=324						
ISCO	Idaho Springs	35.68	98	P	P	08 02 39.9	+0.9
	baz=315						
IKP	In-Ko-Pah, Jac	35.71	117	P	P	08 02 39.0	0.0
	baz=325						
WUAZ	Wupatki	35.81	109	P	P	08 02 41.9	+1.9
WUAZ				IAmb	IAmb	08 02 43.3	
	comp=Z,9.5nm,1.1s						
WUAZ	Wupatki	35.81	109	P	P	08 02 40.6	+0.7
	baz=321						
GLA	Glamis	36.01	115	P	P	08 02 42.8	+1.3
	baz=324						
MVCO	Mesa Verde	36.03	104	P	P	08 02 43.0	+1.1
MVCO				IAmb	IAmb	08 02 44.3	
	comp=Z,6.6nm,0.8s						
MVCO	Mesa Verde	36.03	104	P	P	08 02 42.6	+0.7
	baz=318,SNR=8.2						
S22A	4UR Ranch, Cre	36.52	101	P	P	08 02 48.0	+1.8
	baz=318						
Q24A	Divide	36.53	98	P	P	08 02 47.7	+1.4
	baz=316						
YAK	Yakutsk	36.76	310	LR	LR	08 17 17.9	
	comp=Z,111nm,18.2s,baz=89,slow=35						
113A	Mohawk Valley,	36.77	114	P	P	08 02 49.4	+1.6
OGNE	Ogallala	36.82	93	P	P	08 02 49.2	+0.8
	baz=314						
W18A	Petrified Fore	36.97	107	P	P	08 02 51.4	+1.6
	baz=320						
SDCO	Great Sand Dun	37.23	100	P	P	08 02 52.7	+0.6
	baz=317,SNR=9.0						
X18A	Snowflake	37.31	108	P	P	08 02 53.8	+1.1
X18A				IAmb	IAmb	08 02 56.1	
	comp=Z,6.1nm,0.7s						
SFX	San Felipe	37.64	117	P	P	08 02 56.9	+1.5
SFX				IAmb	IAmb	08 02 58.1	
	comp=Z,5.4nm,0.9s						
NEEM	North Greenlan	37.71	20	i P	P	08 02 56.1	+0.4
NEEM				IAmb	IAmb	08 02 57.5	
	comp=Z,26nm,1.0s						
KULLO	Kullorsuaq	37.79	26	i P	P	08 02 56.7	+0.6
KULLO				IAmb	IAmb	08 02 57.5	
	comp=Z,13nm,0.9s						
KSCO	Kaye Shedlock’	37.86	96	P	P	08 02 59.1	+1.8
	baz=316						
ECSD	EROS Data Cent	37.88	85	P	P	08 02 57.0	-0.2
	baz=311						
214A	Organ Pipe Nat	37.90	114	P	P	08 02 57.1	-0.4
	baz=324,SNR=5.8						
EYMN	Ely	37.94	76	P	P	08 02 57.7	0.0
	baz=308,SNR=7.7						
T25A	Trinidad	38.26	100	P	P	08 03 02.2	+1.4
	baz=318,SNR=5.4						
TUC	Tucson	38.63	111	P	P	08 03 04.4	+0.6
	baz=323						
YSS	Yuzh-Sakhalins	38.73	283	eP	P	08 03 00.4	-3.9
ANMO	Albuquerque	38.82	104	LR	LR	08 19 23.9	
	comp=Z,78nm,18.1s,baz=50,slow=36						
ANMO	Albuquerque	38.82	104	ceP	P	08 03 07.0	+1.5
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.7s						
ANMO	Albuquerque	38.82	104	P	P	08 03 06.5	+1.0
	baz=320						
UPNV	Upernavik	38.95	28	i P	P	08 03 06.7	+0.9
UPNV				IAmb	IAmb	08 03 18.4	
	comp=Z,5.5nm,0.7s						
SPMN	Marine on St.	38.96	81	P	P	08 03 06.4	+0.2
	baz=310,SNR=5.7						
CBKS	Cedar Bluff	39.57	94	P	P	08 03 13.4	+1.9
	baz=316						
NOR	Nord	39.61	9	i P	P	08 03 11.4	+0.1
NOR				IAmb	IAmb	08 03 13.9	
	comp=Z,2.3nm,0.7s						
FRB	Frobisher Bay	39.70	44	LR	LR	08 20 14.3	
	comp=Z,137nm,19.6s,baz=354,slow=37						
121A	Cookes Peak, D	40.00	108	P	P	08 03 16.9	+1.7
121A				IAmb	IAmb	08 03 18.8	
	comp=Z,16nm,1.2s						
121A	Cookes Peak, D	40.00	108	P	P	08 03 16.3	+1.1
	baz=322,SNR=5.5						
N35A	Tabor	40.36	88	P	P	08 03 19.2	+1.2
ASAJ	Asahikawa	40.66	279	LR	LR	08 20 03.4	
	comp=Z,69nm,20.4s,baz=14,slow=36						
AMTX	Amarillo	41.41	100	P	P	08 03 28.5	+1.7
	baz=319						
MSTX	Muleshoe	41.52	101	P	P	08 03 28.1	+0.4
MSTX				IAmb	IAmb	08 03 30.2	
	comp=Z,15nm,1.1s						
MSTX	Muleshoe	41.52	101	P	P	08 03 28.9	+1.1
	baz=320						
JFWS	Jewell Farm	41.87	81	P	P	08 03 29.9	-0.4
	baz=313						
MNTX	Cornudas Mount	41.91	106	P	P	08 03 33.2	+2.4
	baz=322,SNR=22						
GDL2	Guadalupe Moun	42.05	105	P	P	08 03 33.7	+1.6
HTMS	Hat Mesa	42.22	104	P	P	08 03 34.9	+1.5
KLR	Kul'dur	42.99	292	LR	LR	08 24 43.3	
	comp=Z,53nm,18.3s,baz=50,slow=41						
KLR	Kul'dur	42.99	292	ceP	P	08 03 39.2	-0.2
KLR				pmax	pmax		
	comp=Z,7.0nm,1.3s						
WMOK	Wichita Mounta	43.09	97	P	P	08 03 41.9	+1.5
WMOK				IAmb	IAmb	08 03 58.0	
	comp=Z,12nm,1.2s						
WMOK	Wichita Mounta	43.09	97	P	P	08 03 41.9	+1.5
WMOK				pmax	pmax		
	comp=Z,12nm,1.3s						
WMOK	Wichita Mounta	43.09	97	P	P	08 03 40.2	-0.2
	baz=319						
P40A	Paris	43.25	86	P	P	08 03 42.0	+0.4
P40A				IAmb	IAmb	08 03 42.7	
	comp=Z,9.2nm,0.7s						
SUMG	Summit	43.26	23	i P	P	08 03 42.7	+1.0
DAG	Danmarks Havn	43.41	14	i P	P	08 03 42.0	-0.4
SFJD	Kangerlussuaq	43.88	33	eP	P	08 03 47.5	+1.2
R40A	Maddies Statio	44.01	88	P	P	08 03 47.7	0.0
R40A				IAmb	IAmb	08 03 48.4	
	comp=Z,14nm,0.7s						
HDIL	Hopedale	44.02	83	P	P	08 03 48.0	+0.3
HDIL	Hopedale	44.02	83	P	P	08 03 47.5	-0.2
	baz=315,SNR=10						
ABTX	Abilene, Hawle	44.23	100	P	P	08 03 48.1	-1.5
	baz=320						
TXAR	Lajitas Array	44.68	107	P	P	08 03 55.0	+1.7
	comp=Z,8.0nm,0.8s,baz=314,slow=5.9,SNR=81						
TXAR				PcP	PcP	08 05 35.2	0.0
	comp=Z,1.3nm,0.7s,baz=193,slow=0.6,SNR=7.0						
	comp=Z,8.0nm,0.8s						
TXAR	Lajitas Array	44.68	107	P	P	08 03 54.3	+1.1
TXAR	Lajitas Array	44.68	107	P	P	08 03 54.3	+1.1
CCM	Cathedral Cave	44.74	87	P	P	08 03 53.2	-0.4
	baz=316						
DBG	Daneborg	45.26	16	i P	P	08 03 56.6	-0.6
SFIN	Lafayette	45.33	82	P	P	08 03 58.8	+0.6
SFIN	Lafayette	45.33	82	P	P	08 03 58.5	+0.3
	baz=315						
ICESG	Greenland Ices	45.46	27	i P	P	08 03 59.2	-0.1
ICESG				eP	P	08 03 59.6	+0.3
DY2G	Dye2	45.52	32	eP	P	08 03 59.2	-0.5
SCHQ	Schefferville	45.70	54	P	P	08 04 01.7	+0.7
	comp=Z,6.1nm,0.6s,baz=321,slow=6.9,SNR=25						
SCHQ				LR	LR	08 23 41.2	
	comp=Z,112nm,19.6s,baz=210,slow=37						
	comp=Z,6.1nm,0.6s						
JCT	Junction City	45.81	102	P	P	08 04 03.5	+1.3
	baz=322,SNR=11						
OLIL	Olney	45.96	84	P	P	08 04 03.5	+0.3
MIAR	Mount Ida	46.06	93	P	P	08 04 03.8	-0.2
	baz=319						
NRIK	Noril'sk	46.17	334	P	P	08 04 05.0	+0.5
	comp=Z,10nm,0.6s,baz=51,slow=6.8,SNR=20						
	comp=Z,10nm,0.6s						
NRIK	Noril'sk	46.17	334	ceP	P	08 04 04.7	+0.2
NRIK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
O48B	Farmland	46.46	80	P	P	08 04 05.9	-1.2
	baz=315						
BLO	Bloomington	46.50	82	P	P	08 04 07.7	+0.3
BLO	Bloomington	46.50	82	P	P	08 04 07.7	+0.3
BLO				pmax	pmax		
	comp=Z,30nm,0.7s						
435B	Jarrell	46.76	99	P	P	08 04 10.7	+1.1
	baz=321						
P49A	Miami Univ. Ec	47.21	81	P	P	08 04 12.8	-0.2
	baz=316						
WCI	Wyandotte Cave	47.30	83	P	P	08 04 14.3	+0.5
	baz=317						
NATX	Nacogdoches	47.59	96	P	P	08 04 16.9	+1.0
	baz=320						
ACSO	Alum Creek Sta	47.64	79	P	P	08 04 15.4	-1.0
	baz=316						
833A	Chaparral WMA,	47.73	103	P	P	08 04 15.8	-1.3
	baz=323						
ERPA	Erie	47.89	75	P	P	08 04 17.4	-0.8
	baz=315						
WVT	Waverly	48.01	86	P	P	08 04 19.7	+0.5
WVT	Waverly	48.01	86	P	P	08 04 19.7	+0.5
WVT				pmax	pmax		
	comp=Z,13nm,0.7s						
WVT	Waverly	48.01	86	P	P	08 04 19.4	+0.2
	baz=318						
R50A	Paris	48.33	82	P	P	08 04 22.2	+0.6
OXF	Oxford	48.35	89	P	P	08 04 21.7	-0.2
	baz=319						
MJAR	Matsushiro Arr	48.36	275	LR	LR	08 27 04.6	
	comp=Z,48nm,18.7s,baz=80,slow=39						
PLAL	Pickwick Lake	48.73	88	P	P	08 04 25.4	+0.7
CLTN	Cedars of Leba	48.85	85	P	P	08 04 26.4	+0.7
S51A	Beattyville	49.19	82	P	P	08 04 28.6	+0.3
VBMS	Vicksburg	49.48	92	P	P	08 04 31.4	+0.8
	baz=320						
MCWV	Mont Chateau	49.73	77	P	P	08 04 31.4	-0.9
	baz=316						
BINY	Binghamton	49.92	72	P	P	08 04 33.4	-0.4
	baz=316						
TZTN	Tazewell	50.02	83	P	P	08 04 35.1	+0.5
	baz=318						
SSPA	Standing Stone	50.05	75	P	P	08 04 34.6	-0.2
	baz=316						
FPAL	Fort Paine	50.40	86	P	P	08 04 37.9	+0.3
TKL	Tuckaleechee C	50.56	84	LR	LR	08 26 40.7	
	comp=Z,166nm,18.1s,baz=308,slow=37						
LRAL	Lakeview Retre	50.78	88	P	P	08 04 39.9	-0.5
	baz=320						
V53A	Saluda	51.07	83	P	P	08 04 43.1	+0.5
BRAL	Brewton	52.18	90	P	P	08 04 50.0	-0.9
	baz=320						
KSRS	Korea Array	53.21	284	P	P	08 04 58.4	0.0
	comp=Z,2.0nm,0.7s,baz=41,slow=7.3,SNR=8.5						
KSRS				pP	pP	08 05 09.1	-0.6
	comp=Z,6.2nm,0.9s,baz=46,slow=6.6,SNR=11						
	comp=Z,2.0nm,0.7s						
BORG	Borgarnes	53.24	23	LR	LR	08 32 26.0	
	comp=Z,85nm,19.7s,baz=25,slow=41						
ARCES	ARCESS Array B	53.60	0	P	P	08 05 00.2	-0.7
	comp=Z,4.6nm,0.7s,baz=39,slow=7.8,SNR=20						
ARCES				PcP	PcP	08 06 07.2	+0.3
	comp=Z,5.5nm,0.8s,baz=335,slow=5.4,SNR=5.1						
	comp=Z,4.6nm,0.7s						
ULN	Ulaanbaatar	55.65	306	ceP	P	08 05 16.5	+0.3
ULN				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SONM	Songino Array	55.96	307	P	P	08 05 18.7	+0.3
	comp=Z,4.4nm,0.9s,baz=46,slow=6.8,SNR=24						
SONM				PcP	PcP	08 06 16.8	+0.3
	comp=Z,2.0nm,0.6s,baz=80,slow=2.5,SNR=1.6						
SONM				LR	LR	08 30 28.5	
	comp=Z,159nm,20.3s,baz=12,slow=37						
	comp=Z,4.4nm,0.9s						
SONM	Songino Array	55.96	307	P	P	08 05 18.6	+0.2
SONM				IAmb	IAmb	08 05 29.9	
	comp=Z,5.7nm,1.0s						
SONM	Songino Array	55.96	307	P	P	08 05 18.6	+0.2
SONM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ADZR	Andozero	58.85	354	eP	P	08 05 36.1	-2.2
ADZR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
HHC	Hu-ho-hao-te	58.94	298	eP	P	08 05 40.4	+0.9
HHC				pmax	pmax		
	comp=Z,17nm,0.8s						
HHC				pmax	pmax		
	comp=Z,260nm,4.7s						
ZALV	Zalesovo Beam	59.29	324	P	P	08 05 41.6	0.0
	comp=Z,6.4nm,0.7s,baz=30,slow=7.1,SNR=14						
ZALV				LR	LR	08 33 50.0	
	comp=Z,87nm,18.1s,baz=31,slow=39						
	comp=Z,6.4nm,0.7s						
NB2	NORSAR Subarra	61.58	8	P	P	08 05 57.9	+0.8
	comp=Z,2.6nm,0.7s,baz=351,slow=6.9						
NOA	NORSAR Array B	61.58	8	P	P	08 05 57.5	+0.4
	comp=Z,6.9nm,0.9s,baz=352,slow=6.7,SNR=14						
NOA				pP	pP	08 06 08.2	-0.5
	comp=Z,4.7nm,0.9s,baz=351,slow=6.8,SNR=6.7						
	comp=Z,6.9nm,0.9s						
FINES	FINESS Array B	61.73	360	P	P	08 05 58.2	+0.3
	comp=Z,4.1nm,0.6s,baz=12,slow=7.9,SNR=19						
	comp=Z,4.1nm,0.6s						
KLMR	Klimovskoe	61.83	352	eP	P	08 05 57.2	-1.5
KLMR				AMP		08 05 59.9	
	comp=Z,22nm,1.4s						
KLMR				epP	pP	08 06 07.8	-2.4
KLMR	Klimovskoe	61.83	352	eP	P	08 05 57.1	-1.6
KLMR				e*PP	pP	08 06 07.8	-2.4
KLMR				pmax	pmax		
	comp=Z,22nm,1.4s						
DGZ	Jazzator, Alta	61.99	320	i P	P	08 06 00.6	+0.5
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.9s						
HFS	Hagfors	62.65	7	P	P	08 06 04.6	+0.4
	comp=Z,16nm,0.9s,baz=53,slow=5.7,SNR=21						
	comp=Z,16nm,0.9s						
KONO	Kongsberg	62.83	9	ceP	P	08 06 06.4	+1.0
KONO				pmax	pmax		
	comp=Z,56nm,2.5s						
KIRV	Kirov	63.07	346	ceP	P	08 06 07.4	+0.4
LYN	LuoYang	63.43	293	⇑P	P	08 06 10.1	+0.3
LYN				pP	pP	08 06 20.8	-0.5
LYN				sP	sP	08 06 27.5	+1.9
LYN				pmax	pmax		
	comp=Z,18nm,0.9s						
ARU	Arti	63.72	340	P	P	08 06 11.0	-0.3
	comp=Z,5.8nm,0.6s,baz=336,slow=4.7,SNR=8.8						
ARU				pP	pP	08 06 21.8	-1.1
	comp=Z,11nm,0.6s,baz=25,slow=3.6,SNR=5.2						
ARU				LR	LR	08 38 39.8	
	comp=Z,63nm,19.2s,baz=194,slow=40						
	comp=Z,5.8nm,0.6s						
ARU	Arti	63.72	340	d iP	P	08 06 10.9	-0.4
ARU				*PP	pP	08 06 21.5	-1.4
ARU						08 08 28.9	
ARU				S	S	08 14 43.5	+0.8
ARU				SS	SS	08 18 48.5	-1.2
ARU				pmax	pmax		
	comp=Z,13nm,0.9s						
KURK	Kurchatov	64.02	326	P	P	08 06 13.4	0.0
KURK				IAmb	IAmb	08 06 25.3	
	comp=Z,5.7nm,0.8s						
KURK	Kurchatov	64.02	326	ceP	P	08 06 13.5	0.0
KURK				pmax	pmax		
	comp=Z,17nm,2.5s						
KURBB	Kurchatov Arra	64.13	326	P	P	08 06 14.2	0.0
	comp=Z,5.1nm,0.9s,baz=28,slow=6.2,SNR=25						
	comp=Z,5.1nm,0.9s						
BRVK	Borovoye	64.28	332	P	P	08 06 15.1	0.0
BRVK				IAmb	IAmb	08 06 15.8	
	comp=Z,9.7nm,0.8s						
BRVK	Borovoye	64.28	332	P	P	08 06 15.1	0.0
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BVAR	Borovoye Array	64.28	332	P	P	08 06 14.9	-0.2
	comp=Z,13nm,0.7s,baz=30,slow=7.1,SNR=55						
BVAR				pP	pP	08 06 25.9	-0.8
	comp=Z,12nm,0.7s,baz=29,slow=6.7,SNR=16						
	comp=Z,13nm,0.7s						
VSU	Vasula	64.72	359	i P	P	08 06 17.8	0.0
VSU				pmax	pmax		
	comp=Z,50nm,0.7s						
GTA	Gaotai	65.54	305	eP	P	08 06 23.4	-0.3
GTA				pP	pP	08 06 34.5	-0.8
GTA				sP	sP	08 06 40.8	+1.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
XAN	Xi'an	65.60	295	P	P	08 06 23.4	-0.6
XAN				pP	pP	08 06 34.1	-1.5
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
WHN	Wuhan	65.66	289	P	P	08 06 27.0	+2.6
MK31	Makanchi Array	66.25	321	⇓iP	P	08 06 27.6	-0.4
MKAR	Makanchi Array	66.25	321	P	P	08 06 27.5	-0.5
	comp=Z,3.6nm,0.8s,baz=44,slow=6.5,SNR=25						
MKAR				pP	pP	08 06 38.1	-1.5
	comp=Z,4.2nm,0.7s,baz=32,slow=6.9,SNR=14						
	comp=Z,3.6nm,0.8s						
MKAR	Makanchi Array	66.25	321	P	P	08 06 28.0	0.0
LZH	Lanzhou	66.40	300	eP	P	08 06 29.1	-0.2
LZH				pP	pP	08 06 40.5	-0.4
LZH				sP	sP	08 06 48.8	+3.6
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
WMQ	Urumqi	66.87	316	eP	P	08 06 36.3	+4.3
WMQ				pP	pP	08 06 46.6	+2.9
WMQ				PcP	PcP	08 07 04.8	+4.3
WMQ				pmax	pmax		
	comp=Z,27nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,310nm,4.5s						
OBN	Obninsk	67.74	353	⇑iP	P	08 06 36.3	-0.9
OBN				i *PP	pP	08 06 46.5	-2.4
OBN				e*SP	sP	08 06 51.3	-2.0
OBN						08 07 05.0	
OBN						08 09 13.0	
OBN				PPP	PPP	08 10 50.0	
OBN				SS	SS	08 19 58.0	+6.1
OBN				pmax	pmax		
	comp=Z,7.0nm,0.4s						
MNK	Minsk	68.68	359	i P	P	08 06 34.8	-8.3
	comp=E,5.0nm,1.3s						
MNK				i P	P	08 06 34.8	-8.3
	comp=Z,12nm,0.7s,baz=1.3						
MNK				i P	P	08 06 38.8	-4.3
	comp=N,50nm,0.8s						
MNK				i PP	PP	08 09 12.1	-2.1
MNK				i PPP	PPP	08 10 46.3	
MNK				i S	S	08 15 30.0	-13
MNK				i SS	SS	08 20 02.8	-3.7
MNK				i SSS	SSS	08 22 14.1	
MNK				i LQ	LQ	08 31 57.2	
MNK				i LR	LR	08 35 58.9	
MNK	Minsk	68.68	359	i P	P	08 06 34.8	-8.3
MNK				i		08 09 12.1	
MNK				pmax	pmax		
	comp=E,5.0nm,1.3s						
MNK				pmax	pmax		
	comp=Z,12nm,0.7s						
MNK				pmax	pmax		
	comp=N,50nm,0.8s						
BELG	Belogornoye	69.34	346	P	P	08 06 47.1	-0.2
	comp=N,12nm,0.6s,baz=285,slow=1.3,SNR=7.9						
BELG				pP	pP	08 06 58.2	-0.7
	comp=N,23nm,0.7s,baz=212,slow=1.5,SNR=9.2						
	comp=N,12nm,0.6s						
BELG	Belogornoye	69.34	346	i P	P	08 06 46.8	-0.5
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKTO	Aktyubinsk	69.52	339	P	P	08 06 48.3	-0.1
	comp=Z,5.4nm,0.8s,baz=5.2,slow=4.8,SNR=15						
	comp=Z,5.4nm,0.8s						
ABKAR	Akbulak array	70.24	337	P	P	08 06 53.0	+0.1
GOMU	GeErMu	70.41	307	P	P	08 06 54.5	-0.1
GOMU				pP	pP	08 07 01.3	-5.0
GOMU				sP	sP	08 07 04.3	-6.4
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CLL	Collm	71.38	8	eP	P	08 07 00.0	+0.3
	comp=Z,5.0nm,0.8s						
CLL				epP	pP	08 07 12.0	+0.5
CLL	Collm	71.38	8	eP	P	08 07 00.0	+0.3
CLL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRG	Berggiesshubel	71.88	8	eP	P	08 07 03.6	+0.7
BRG				Amp		08 07 04.4	
	comp=Z,7.4nm,1.0s						
BRG				pP	pP	08 07 17.9	+3.3
BRG				Amp		08 07 18.6	
	comp=Z,8.3nm,1.0s						
BRG				Amp		08 47 59.6	
	comp=Z,6.9nm,1.1s						
BRG				⇑iPKP		08 48 04.6	
BRG				Amp		08 48 05.6	
	comp=Z,84nm,1.0s						
BRG				PKPab		08 48 14.2	
BRG				Amp		08 48 14.5	
	comp=Z,31nm,1.0s						
BRG				pPKP		08 50 16.9	
BRG				Amp		08 50 19.0	
	comp=Z,26nm,1.4s						
BRG	Berggiesshubel	71.88	8	eP	P	08 07 03.5	+0.7
BRG						08 07 17.8	
BRG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TKM2	Tokmak 2	71.90	324	P	P	08 07 04.4	+1.1

	SNR=7.8						
USP	Ospenovka	71.94	325	P	P	08 07 03.7	+0.4
	SNR=7.8						
TARG	Taragay, Kyrgy	72.24	322	P	P	08 07 07.0	+1.4
TARG				IAmb	IAmb	08 07 29.3	
	comp=Z,5.5nm,1.0s						
TARG	Taragay, Kyrgy	72.24	322	P	P	08 07 07.0	+1.4
TARG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ULHL	Ulahol	72.30	323	P	P	08 07 06.6	+0.9
	SNR=6.2						
CHVC	Chvalec	72.31	7	*e*P	P	08 07 06.2	+0.8
CHVC	Chvalec	72.31	7	*e*P	P	08 07 06.2	+0.8
KBK	Karagaybulak	72.34	324	P	P	08 07 06.9	+1.0
	SNR=6.1						
NKC	Novy Kostel	72.40	9	*e*P	P	08 07 06.8	+0.9
NKC				*e*pP	pP	08 07 20.4	+2.7
NKC	Novy Kostel	72.40	9	*e*P	P	08 07 06.8	+0.9
NKC				*e*		08 07 20.4	
AKASG	Malin Array Be	72.46	358	P	P	08 07 06.0	-0.2
	comp=Z,4.2nm,0.6s,baz=7.8,slow=5.6,SNR=29						
AKASG				pP	pP	08 07 17.3	-0.7
	comp=Z,1.7nm,0.5s,baz=3.3,slow=5.3,SNR=2.4						
	comp=Z,4.2nm,0.6s						
AKASG	Malin Array Be	72.46	358	*ce*P	P	08 07 06.0	-0.2
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.7s						
AKBB	Malin Array Si	72.46	358	*ce*P	P	08 07 06.2	0.0
AAK	Ala-Archa	72.51	324	P	P	08 07 07.9	+1.0
	SNR=6.8						
AAK	Ala-Archa	72.51	324	P	P	08 07 07.8	+0.9
	comp=Z,5.7nm,0.6s,baz=168,slow=2.1,SNR=18						
	comp=Z,5.7nm,0.6s						
AAK	Ala-Archa	72.51	324	P	P	08 07 07.2	+0.3
AAK				IAmb	IAmb	08 07 19.3	
	comp=Z,11nm,0.8s						
AAK	Ala-Archa	72.51	324	*ce*P	P	08 07 07.7	+0.9
AAK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
DPC	Dobruska-Polom	72.56	6	*e*P	P	08 07 07.7	+0.8
DPC				*e*x	x	08 07 19.3	
DPC	Dobruska-Polom	72.56	6	*e*P	P	08 07 07.7	+0.8
DPC				*e*		08 07 19.3	
EKS2	Erkin-Say	72.71	325	P	P	08 07 09.2	+1.2
	SNR=6.0						
PRU	Pruhonice	72.81	8	*e*P	P	08 07 09.3	+1.0
PRU	Pruhonice	72.81	8	*e*P	P	08 07 09.3	+1.0
AML	Almayashu	73.22	325	P	P	08 07 12.5	+1.1
	SNR=8.1						
KKAR	Karatay Array	73.30	327	P	P	08 07 11.3	-0.1
KKAR	Karatay Array	73.30	327	P	P	08 07 11.3	-0.1
KHC	Kasperske Hory	73.59	8	P	P	08 07 14.0	+1.0
KHC				IAmb	IAmb	08 07 15.4	
	comp=Z,7.3nm,0.9s						
KHC	Kasperske Hory	73.59	8	*e*P	P	08 07 14.5	+1.5
KHC				*e*pP	pP	08 07 26.7	+1.9
KHC	Kasperske Hory	73.59	8	*e*P	P	08 07 14.5	+1.5
KHC				*e*		08 07 26.7	
MAUC	Maruska	73.63	5	*e*P	P	08 07 13.7	+0.5
GERES	GERESS Array B	73.88	8	P	P	08 07 15.9	+1.1
	comp=Z,3.0nm,0.6s,baz=356,slow=4.3,SNR=18						
GERES				pP	pP	08 07 26.0	-0.6
	comp=Z,2.2nm,0.7s,baz=355,slow=4.4,SNR=6.4						
	comp=Z,3.0nm,0.6s						
CKRC	Cesky Krumlov	73.95	8	*e*P	P	08 07 15.7	+0.6
CKRC	Cesky Krumlov	73.95	8	*e*P	P	08 07 15.7	+0.6
KSH	Kashi	74.84	322	P	P	08 07 24.3	+3.7
KSH				pP	pP	08 07 35.4	+3.0
KSH				PcP	PcP	08 07 37.0	+2.6
KSH				sP	sP	08 07 43.3	+6.6
KSH				pmax	pmax		
	comp=Z,11nm,0.8s						
MOA	Molln	74.91	8	*e*pP	pP	08 07 33.7	+1.2
	comp=Z,5.5nm,0.4s						
CONA	Conrad Observa	74.95	7	*e*P	P	08 07 22.3	+1.3
	comp=Z,4.1nm,0.7s						
MOTA	Moosalm	75.14	10	*e*P	P	08 07 23.5	+1.3
	comp=Z,10nm,1.2s						
WATA	Walderalm	75.19	10	*e*P	P	08 07 23.9	+1.4
	comp=Z,7.7nm,0.7s						
WTTA	Wattenberg	75.27	10	*e*P	P	08 07 24.3	+1.3
	comp=Z,11nm,0.8s						
SQTA	Sankt Quirin	75.27	10	*e*P	P	08 07 24.1	+1.1
	comp=Z,11nm,0.8s						
PZH	PanZhiHua	75.31	296	P	P	08 07 25.1	+1.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
FETA	Feichten	75.42	11	*e*P	P	08 07 25.5	+1.6
	comp=Z,9.8nm,1.0s						
ARSA	Arzberg	75.60	7	*e*P	P	08 07 26.3	+1.6
	comp=Z,1.8nm,0.6s						
KBA	Koelnbreinsper	75.61	9	*e*P	P	08 07 26.5	+1.6
	comp=Z,9.6nm,0.9s						
SOKA	Soboth	76.14	8	*e*P	P	08 07 29.3	+1.5
	comp=Z,4.2nm,0.6s						
OBKA	Obir	76.27	8	*e*P	P	08 07 29.7	+1.2
	comp=Z,19nm,0.8s						
PGAV	Gavieira, Arco	77.17	25	*e*P	P	08 07 35.2	+1.4
PGAV				A	A	08 07 48.2	
	comp=Z,33nm,1.7s						
PBRG	Braganca	77.67	24	*e*P	P	08 07 38.2	+1.7
MLR	Muntele Rosu	77.71	360	P	P	08 07 38.1	+1.4
	comp=Z,2.6nm,0.5s,baz=306,slow=6.3,SNR=4.6						
	comp=Z,2.6nm,0.5s						
POLO	Lamas de Olo	77.84	25	*e*P	P	08 07 39.6	+2.1
PVRL	Vila Real	77.95	25	*e*P	P	08 07 39.9	+1.8
MSSA	Maissana	77.97	12	P	P	08 07 38.6	+0.4
MSSA				IAmb	IAmb	08 07 38.9	
	comp=Z,7.2nm,0.7s						
MSVF	Nonsavu	78.13	207	LR	LR	08 33 48.6	
	comp=Z,270nm,20.2s,baz=343,slow=29						
MVO	Moncorvo	78.22	25	*e*P	P	08 07 41.3	+1.7
KIV	Kislovodsk	78.26	348	*e*P	P	08 07 40.5	+0.7
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
PVIS	Viseu	78.44	25	*e*P	P	08 07 42.7	+1.9
KBZ	Khabaz	78.45	347	P	P	08 07 42.1	+1.4
	comp=Z,7.5nm,0.8s,baz=248,slow=2.5,SNR=20						
	comp=Z,7.5nm,0.8s						
KBZ	Khabaz	78.45	347	*ce*P	P	08 07 41.0	+0.3
KBZ				pmax	pmax		
	comp=Z,12nm,0.9s						
SHA1	Shidzhatmaz	78.47	348	*i* P	P	08 07 41.3	+0.1
DAV	Davao City (W)	78.79	266	LR	LR	08 39 46.6	
	comp=Z,50nm,20.2s,baz=50,slow=34						
MTE	Manteigas	78.83	25	*e*P	P	08 07 44.6	+1.7
PCAS	Casmilo, Conde	78.93	26	*e*P	P	08 07 45.1	+1.7
ZEI	Tsey	79.26	347	*e*P	P	08 07 45.2	-0.2
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PCBR	Castelo Branco	79.37	25	*e*P	P	08 07 47.0	+1.2
AKT	Akhty	80.00	343	*e*P	P	08 07 49.9	+0.5
AKT				*e*		08 07 57.8	
AKT				pmax	pmax		
	comp=Z,11nm,0.9s						
RUSC	La Rusia	80.26	94	P	P	08 07 51.2	-0.4
RUSC				IAmb	IAmb	08 07 51.5	
	comp=Z,17nm,1.1s						
ESDC	Sonseca Array	80.32	23	P	P	08 07 52.5	+1.4
	comp=Z,6.7nm,0.6s,baz=340,slow=5.0,SNR=32						
	comp=Z,6.7nm,0.6s						
BAUV	El Baul	80.47	88	P	P	08 07 51.4	-0.7
PNCL	Nicolau / Gran	80.76	27	*e*P	P	08 07 54.9	+1.5
NIL	Nilore	81.07	322	P	P	08 07 55.5	+0.4
NIL	Nilore	81.07	322	P	P	08 07 55.5	+0.4
NIL				pmax	pmax		
	comp=Z,15nm,0.8s						
GEYT	Alibeck	81.42	335	P	P	08 07 57.6	+0.7
	comp=Z,3.9nm,0.7s,baz=270,slow=5.9,SNR=7.4						
	comp=Z,3.9nm,0.7s						
GEYT	Alibeck	81.42	335	P	P	08 07 57.8	+0.9
GEYT				IAmb	IAmb	08 07 58.6	
	comp=Z,6.2nm,0.9s						
GEYT	Alibeck	81.42	335	P	P	08 07 57.8	+0.9
GEYT				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GNI	Garni	81.74	345	*ce*P	P	08 08 00.5	+1.7
GNI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
FNA	Florina	82.35	3	P	P	08 08 01.6	-0.1
FNA				IAmb	IAmb	08 08 02.9	
	comp=Z,6.2nm,1.2s						
FNA	Florina	82.35	3	P	P	08 08 01.6	-0.1
FNA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BR131	Keskin Array S	83.25	354	*i* P	P	08 08 06.9	+0.3
BRTR	Keskin Array B	83.25	354	P	P	08 08 07.2	+0.6
	comp=Z,3.6nm,0.8s,baz=18,slow=2.4,SNR=15						
	comp=Z,3.6nm,0.8s						
BRTR	Keskin Array B	83.25	354	P	P	08 08 06.6	0.0
CMAR	Chiang Mai Arr	83.46	294	P	P	08 08 07.5	-0.3
	comp=Z,3.1nm,0.5s,baz=7.7,slow=5.7,SNR=18						
CMAR				pP	pP	08 08 19.1	-0.6
	comp=Z,2.0nm,0.3s,baz=12,slow=5.0,SNR=2.4						
	comp=Z,3.1nm,0.5s						
CMAR	Chiang Mai Arr	83.46	294	*ce*P	P	08 08 07.5	-0.3
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CTA	Charters Tower	91.53	234	P	P	08 08 46.3	-0.3
	comp=Z,4.3nm,1.0s,baz=14,slow=5.7,SNR=4.4						
CTA				LR	LR	08 45 32.2	
	comp=Z,66nm,19.7s,baz=255,slow=33						
	comp=Z,4.3nm,1.0s						
WRA	Warramunga Arr	96.97	244	P	P	08 09 09.7	-1.8
	comp=Z,0.7nm,0.9s,baz=33,slow=5.7,SNR=3.4						
	comp=Z,0.7nm,0.9s						
QSPA	South Pole Qui	146.95	180	PKPbc	PKPbc	08 15 20.5	-0.6
	comp=Z,13nm,0.8s,baz=360,slow=0.3,SNR=55						
BOSA	Boshof	151.46	1	PKPbc	PKPbc	08 15 33.2	-0.4
	comp=Z,5.3nm,0.8s,baz=28,slow=3.1,SNR=8.9						

IDC 16 08:05:52.7±3.3**, 53°.60N**×**87°.81E, h0^{km}, mbtmp2.9**/2**, ML2.5**/2**, Error ellipse: s-maj=28.4km s-min=15.7km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.81	282	I	I	08 18 50.0	
	baz=97,slow=309,SNR=8.5						
ZALV	Zalesovo Beam	1.81	282	Pg	Pn	08 06 25.6	+0.5
	1.0nm,0.3s,baz=100,slow=14,SNR=6.5						
ZALV				Lg	Lg	08 06 49.7	
	2.1nm,0.3s,baz=106,slow=23,SNR=8.2						
KURBB	Kurchatov Arra	6.45	246	Pn	Pn	08 07 29.6	+0.9
	baz=64,slow=14,SNR=2.2						
KURBB				Lg	Lg	08 09 16.8	
	baz=62,slow=32,SNR=4.5						
	0.5nm,0.5s						
MKAR	Makanchi Array	7.67	210	Pn	Pn	08 07 47.2	+1.5
	0.2nm,0.3s,baz=31,slow=14,SNR=5.7						
MKAR				Sn	Sn	08 09 11.9	-1.4
	0.1nm,0.3s,baz=30,slow=21,SNR=2.7						
MKAR				Lg	Lg	08 09 57.4	
	baz=26,slow=30,SNR=2.6						
	0.3nm,0.4s						

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*NOU **16** 08:06:33.4, 36°.01S×177°.88W, h0^{km}, MLv4.4/5, East of North Island, N.Z.*

*WEL **16** 08:07:12.7±1.4, 37°S±6°×17°9E±1°2, h18^{km}±9^{km}, M3.3/18, ML3.7/18, MLv3.3/18, Error ellipse: s-maj=0.0km s-min=0.0km az=92.7, confirmed*

ISC 16 08:07:09.5±2.6**, 37°.09S**±0°.07×**179°.1E**±0°.1**, h10^{km}, n69, σ1^{s}13**/73**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.80	233	P	Pg	08 07 24.9	0.0
WMGZ	Waiomatatini S	0.92	217	P	Pb	08 07 28.9	+1.4
WMGZ				S	Sb	08 07 41.1	+1.4
PKGZ	Pakihiroa	1.15	225	P	Pg	08 07 31.3	-0.3
PKGZ				S	Sg	08 07 45.6	-0.9
PUZ	Puketiti	1.19	214	P	Pb	08 07 32.7	+0.4
PUZ				S	Sg	08 07 48.1	+0.1
HAZ	Te Kaha	1.25	237	P	Pg	08 07 31.7	-1.8
TWGZ	Tauwhareparae	1.41	219	P	Pn	08 07 36.3	+1.0
RUGZ	Raukumara Rang	1.44	232	P	Pn	08 07 35.8	0.0
CNGZ	Carnagh Statio	1.57	207	P	Pn	08 07 38.5	+1.1
CNGZ				S	Sn	08 07 58.0	+0.2
TKGZ	Te Karaka	1.68	216	P	Pn	08 07 39.7	+0.8
MWZ	Matawai	1.77	225	P	Pn	08 07 40.7	+0.5
RIGZ	Rimuhau	1.94	213	P	Pn	08 07 42.8	+0.2
RAGZ	Rawiri	1.94	223	P	Pn	08 07 43.3	+0.6
URZ	Urewera	1.97	233	P	Pn	08 07 43.6	+0.6
URZ	Urewera	1.97	233	P	Pn	08 07 43.4	+0.5
URZ				S	Sn	08 08 05.3	-2.5
EDRZ	Edgecumbe	2.14	241	P	Pg	08 07 49.4	-1.1
OPRZ	Ohinepanea	2.17	249	P	Pn	08 07 45.5	-0.2
SNGZ	Shannon Statio	2.19	219	P	Pn	08 07 46.4	+0.3
MHGZ	Mahia Peninsul	2.27	204	P	Pn	08 07 47.2	+0.1
RTZ	Ruatahuna	2.27	227	P	Pn	08 07 47.5	+0.3
MYRZ	Mayor Island	2.30	264	P	Pn	08 07 48.3	+0.8
MUGZ	Murupara	2.31	232	P	Pn	08 07 47.8	+0.1
TGRZ	Tauranga	2.35	253	P	Pn	08 07 49.6	+1.3
RAHZ	Arahi	2.43	220	P	Pn	08 07 49.3	0.0
HLRZ	Highlands Stat	2.48	241	P	Pn	08 07 52.3	+2.3
MTHZ	Maungataniwha	2.51	225	P	Pn	08 07 51.0	+0.5
HSRZ	Hossack Road	2.58	241	P	Pb	08 07 56.2	+0.3
KMRZ	Kaimai	2.63	252	P	Pn	08 07 52.9	+0.8
ALRZ	Allen Road	2.64	235	P	Pn	08 07 52.3	+0.1
NMHZ	Naumai	2.71	221	P	Pn	08 07 53.5	+0.3
KUZ	Kuaotunu	2.73	276	P	Pn	08 07 52.5	-1.0
KUZ	Kuaotunu	2.73	276	P	Pn	08 07 52.5	-1.0
BKZ	Black Stump Fm	2.93	224	P	Pn	08 07 56.1	-0.1
BKZ	Black Stump Fm	2.93	224	P	Pn	08 07 56.1	-0.1
TOZ	Tahuroa Road	2.94	256	P	Pn	08 07 55.5	-0.8
MCHZ	McNeill Hill	3.02	218	P	Pn	08 07 57.0	-0.4
GRZ	Great Barrier	3.05	285	P	Pn	08 07 59.2	+1.4
KWHZ	Kaweka Forest	3.15	221	P	Pn	08 07 58.4	-0.8
WIAZ	Waiheke Island	3.19	274	P	Pn	08 07 59.4	-0.4
KAHZ	Kahuranaki	3.22	212	P	Pn	08 07 58.9	-1.3
KATZ	Kakaramea	3.29	234	P	Pn	08 08 04.7	+3.4
ETAZ	East Tamaki Re	3.35	271	P	Pn	08 08 01.8	0.0
TMVZ	Te Maari	3.36	232	P	Pn	08 08 02.2	0.0
ETVZ	East Tongariro	3.37	232	P	Pn	08 08 02.0	-0.3
NTVZ	North Tongarir	3.37	232	P	Pn	08 08 02.6	+0.2
MBAZ	Motutapu North	3.39	274	P	Pn	08 08 02.9	+0.5
BHHZ	Black Hill Sta	3.39	224	P	Pn	08 08 03.0	+0.4
OTVZ	Oturere	3.42	232	P	Pn	08 08 02.9	-0.1
NNVZ	North Ngauruho	3.43	232	P	Pn	08 08 04.2	+1.0
WTVZ	West Tongariro	3.44	233	P	Pn	08 08 05.8	+2.6
SNVZ	South Ngauruho	3.44	231	P	Pn	08 08 03.4	-0.1
NGZ	Ngauruhoe	3.46	232	P	Pn	08 08 03.7	0.0
MOVZ	Moawhango	3.51	228	P	Pn	08 08 05.3	+1.1
WNVZ	Wahianoa	3.56	230	P	Pn	08 08 05.2	+0.3
AWAZ	Awhitu Peninsu	3.57	269	P	Pn	08 08 05.1	+0.2
RVAZ	Riverhead Bore	3.64	274	P	Pn	08 08 06.3	+0.4
HIZ	Hauiti	3.66	246	P	Pn	08 08 07.8	+1.6
HIZ	Hauiti	3.66	246	P	Pn	08 08 07.8	+1.6
MTVZ	Mangateitei	3.67	230	P	Pn	08 08 06.5	0.0
PKVZ	Pokaka	3.69	232	P	Pn	08 08 07.6	+0.9
TSZ	Takapari Road	3.86	219	P	Pn	08 08 09.1	+0.1
VRZ	Vera Road	3.99	238	P	Pn	08 08 11.5	+0.8
WCZ	Waipu Caves	4.00	285	P	Pn	08 08 11.7	+0.8
WAZ	Wanganui	4.19	229	P	Pn	08 08 13.7	+0.1
BFZ	Birch Farm	4.23	211	P	Pn	08 08 11.0	-3.0
PREZ	Palmer Road	4.50	238	P	Pn	08 08 17.3	-0.5
MRZ	Mangatainoka R	4.51	217	P	Pn	08 08 16.2	-1.7
NEZ	North Egmont	4.51	240	P	Pn	08 08 20.1	+2.1
PKE	Pukeiti	4.55	241	P	Pn	08 08 21.3	+2.8
KHEZ	Kahui Hut	4.58	240	P	Pn	08 08 21.9	+3.0

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*NEIC **16** 08:08:04.1, 24°.14S×66°.80W, h190^{km}*

*NEIC **16** 08:08:04.1, 24°.24S×67°.02W, h190^{km}, Moment Tensor Solution. Duration: 1^{s}7 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.82; $M_{\theta\theta}$0.66; $M_{\phi\phi}$4.17; $M_{r\theta}$0.37; $M_{\theta\phi}$1.82; $M_{\phi r}$-1.92; Fault plane solution: $M_0$5.26000×10^{16} NP1:ϕ_s11.31000°, δ55.37000°, λ-103.71000°. NP2:ϕ_s214.55000°, δ36.93000°, λ-71.06000°. Principal axes: T 5.2108, Plg9.0000°, Azm111.0000°; N 0.0990, Plg11.0000°, Azm19.0000°; P -5.3098, Plg75.0000°, Azm240.0000°;*

*NEIC **16** 08:08:05.7±2.1, 24°.15S±0°.05×66°.86W±0°.08, h177^{km}±4^{km}, mb5.2/141, Mww5.1/39 Error ellipse: s-maj=10.5km s-min=7.5km az=77.0*

*MOS **16** 08:08:06.0±1.3, 24°.09S×66°.93W, h189^{km}, mb5.2/16, Error ellipse: s-maj=11.9km s-min=6.1km az=101.8*

*BJI **16** 08:08:06.0±0.0, 24°.10S×66°.80W, h174^{km}, mB5.5/3*

*IDC **16** 08:08:06.7±0.8, 24°.07S×66°.79W, h182^{km}±6^{km}, mb4.6/21, mbtmp5.1/29, Error ellipse: s-maj=10.8km s-min=7.5km az=64.0*

*VAO **16** 08:08:07.1±0.3, 24°.10S×66°.88W, h190^{km}, mb5.0*

*SJA **16** 08:08:07.7±1.9, 24°.13S×66°.96W, h175^{km}, ML5.2, MW4.9, Hypocentre not reviewed by the ISC*

*GUC **16** 08:08:08.5±0.5, 23°.87S×67°.50W, h238^{km}±6^{km}, ML5.4*

*GCMT **16** 08:08:10.7±0.2, 24°.24S±0°.02×67°.07W±0°.02, h205^{km}±1^{km}, MW5.2/114, Moment Tensor Solution. s54,c67; s114,c160; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-6.22±.14; $M_{\theta\theta}$0.30±.17; $M_{\phi\phi}$5.92±.21; $M_{r\theta}$0.59±.13; $M_{\theta\phi}$1.73±.19; $M_{\phi r}$-1.97±.17; Best double couple: $M_0$6.64300×10^{16} NP1:ϕ_s6.00000°, δ53.00000°, λ-102.00000°. NP2:ϕ_s205.00000°, δ38.00000°, λ-75.00000°. Principal axes: T 6.6470, Plg8.0000°, Azm105.0000°; N -0.0100, Plg9.0000°, Azm13.0000°; P -6.6400, Plg78.0000°, Azm234.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 08:08:05.7±0.5**, 24°.13S**±0°.03×**66°.90W**±0°.04**, h178^{km}**±4^{km}**, h179^{km}:pP-P, n852, σ1^{s}14**/918**, mb5.2**/93**, 23C-3D, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.40	115	*e*P		08 08 40.0	
HJA	Humahuaca	1.64	56	*e*P		08 08 43.2	
HJA				*e*S		08 09 10.8	
YJA	Yavi	2.33	33	*e*P		08 08 50.2	
YJA				*e*S		08 09 20.5	
LVC	Limon Verde	2.39	309	P	Pn	08 08 49.7	+2.3
	3μm,0.6s,baz=131,slow=5.9,SNR=3106						
LVC				S	Sn	08 09 21.9	+2.1
	10μm,0.9s,baz=139,slow=9.8,SNR=53						
LVC	Limon Verde	2.39	309		Pn	08 08 49.1	+1.7
LVC				Sn	Sn	08 09 21.0	+1.2
LVC	Limon Verde	2.39	309	*i* P	Pn	08 08 49.8	+2.3
LVC				*e*S	Sn	08 09 21.7	+1.9
LVC	Limon Verde	2.39	309	*e*P	Pn	08 08 49.5	+2.0
LVC	Limon Verde	2.39	309	*e*P		08 08 49.8	
LVC				*e*S		08 09 22.0	
LVC				IAML		08 09 25.1	
	comp=Z,4μm,1.1s						
PB15	IPOC Station P	2.53	291		Pn	08 08 50.3	+1.3
PB15				Sn	Sn	08 09 23.0	+0.6
PB15	IPOC Station P	2.53	291	⇑*i*P	Pn	08 08 51.0	+2.1
PB15				*e*S	Sn	08 09 23.7	+1.2
PB15	IPOC Station P	2.53	291	*e*P		08 08 51.0	
PB15				*e*S		08 09 24.3	
PB15				IAML		08 09 27.0	
	comp=Z,22μm,0.2s						
GO02	Mina Guanaco	2.66	247		Pn	08 08 51.8	+1.3
GO02				Sn	Sn	08 09 26.0	+0.8
GO02	Mina Guanaco	2.66	247	⇑*i*P	Pn	08 08 52.3	+1.8
GO02				*e*S	Sn	08 09 26.5	+1.3
GO02				IAML		08 09 27.6	
	comp=E,16μm,0.5s						
GO02	Mina Guanaco	2.66	247	*e*P		08 08 52.2	
GO02				*e*S		08 09 26.6	
PB06	IPOC Station P	2.84	299		Pn	08 08 53.9	+1.4
PB06				Sn	Sn	08 09 29.4	+0.5
PB06	IPOC Station P	2.84	299	⇑*i*P	Pn	08 08 54.2	+1.7
PB06				*e*S	Sn	08 09 28.8	-0.1
PB06				IAML		08 09 32.4	
	comp=N,8μm,0.1s						
PB06	IPOC Station P	2.84	299	*e*P		08 08 54.3	
PB06				*e*S		08 09 29.8	
PB06				IAML		08 09 32.2	
	comp=Z,7μm,0.5s						
PB09	IPOC Station P	3.17	317		Pn	08 08 58.1	+1.5
PB09	IPOC Station P	3.17	317	⇑*i*P	Pn	08 08 58.7	+2.1
PB09				*e*S	Sn	08 09 36.5	+0.3
PB09				IAML		08 09 39.1	
	comp=N,6μm,0.5s						
PB09	IPOC Station P	3.17	317	*e*P		08 08 58.7	
PB09				*e*S		08 09 37.7	
PB09				IAML		08 09 40.2	
	comp=Z,4μm,1.1s						
PB14	IPOC Station P	3.24	261		Pn	08 08 58.1	+0.6
PB14				Sn	Sn	08 09 35.9	-1.9
PB14	IPOC Station P	3.24	261	⇑*i*P	Pn	08 08 58.4	+0.9
PB14				*e*S	Sn	08 09 36.0	-1.8
PB14				IAML		08 09 37.3	
	comp=E,3μm,0.4s						
PB14	IPOC Station P	3.24	261	*e*P		08 08 58.6	
PB14				*e*S		08 09 37.2	
PB14				IAML		08 09 40.1	
	comp=Z,4μm,0.5s						
PB10	IPOC Station P	3.41	280		Pn	08 08 59.6	+0.3
PB10	IPOC Station P	3.41	280	⇑*i*P	Pn	08 09 00.5	+1.2
PB10				*e*S	Sn	08 09 39.6	-1.5
PB10				IAML		08 09 41.8	
	comp=N,4μm,0.7s						
PB10	IPOC Station P	3.41	280	*e*P		08 09 00.4	
PB10				*e*S		08 09 41.0	
PB10				IAML		08 09 44.8	
	comp=Z,6μm,0.5s						
PB04	IPOC Station P	3.49	300		Pn	08 09 00.9	+0.4
PB04	IPOC Station P	3.49	300	⇑*i*P	Pn	08 09 01.5	+1.0
PB04				*e*S	Sn	08 09 41.3	-1.9
PB04				IAML		08 09 48.5	
	comp=N,10μm,0.8s						
PB04	IPOC Station P	3.49	300	*e*P		08 09 01.4	
PB04				*e*S		08 09 42.5	
PB04				IAML		08 09 47.8	
	comp=Z,3μm,0.4s						
PB07	IPOC Station P	3.65	310		Pn	08 09 03.0	+0.4
PB07	IPOC Station P	3.65	310	⇑*i*P	Pn	08 09 03.5	+0.9
PB07				*e*S	Sn	08 09 44.9	-2.0
PB07	IPOC Station P	3.65	310	*e*P		08 09 03.5	
PB07				*e*S		08 09 45.6	
PB07				IAML		08 09 48.0	
	comp=Z,4μm,0.7s						
PB01	IPOC Station P	3.90	322		Pn	08 09 05.9	+0.3
PB01	IPOC Station P	3.90	322	⇑*i*P	Pn	08 09 06.3	+0.7
PB01				*e*S	Sn	08 09 50.8	-1.5
PB01	IPOC Station P	3.90	322	*e*P		08 09 06.3	
PB01				*e*S		08 09 46.9	
PB01				IAML		08 09 56.5	
	comp=Z,3μm,0.5s						
AC01	Pan de Azucar	3.91	238		Pn	08 09 05.2	-0.4
AC01	Pan de Azucar	3.91	238	⇑*i*P	Pn	08 09 05.5	-0.2
AC01				*e*S	Sn	08 09 49.9	-2.6
AC01	Pan de Azucar	3.91	238	*e*P		08 09 05.5	
AC01				*e*S		08 09 44.9	
AC01				IAML		08 09 52.4	
	comp=Z,2μm,0.8s						
PB02	IPOC Station P	3.94	315		Pn	08 09 06.8	+0.6
PB02	IPOC Station P	3.94	315	⇑*i*P	Pn	08 09 06.7	+0.6
PB02				*e*S	Sn	08 09 50.9	-2.5
PB02	IPOC Station P	3.94	315	*e*P		08 09 06.6	
PB02				*e*S		08 09 52.9	
PB02				IAML		08 09 56.7	
	comp=Z,5μm,0.4s						
TINO	Tinogasta	3.96	189	*e*P		08 09 09.3	
TINO				*e*S		08 09 54.9	
CYA	Choya	4.40	167	⇑*i*P	Pn	08 09 14.2	+2.2
CYA				*e*S	Sn	08 10 00.6	-3.3
CYA	Choya	4.40	167	*e*P		08 09 14.2	
CYA				*e*S		08 10 05.0	
PB08	IPOC Station P	4.49	332		Pn	08 09 14.3	+0.8
PB08	IPOC Station P	4.49	332	⇑*i*P	Pn	08 09 15.0	+1.5
PB08				*e*S	Sn	08 10 06.0	-0.5
PB08	IPOC Station P	4.49	332	*e*P		08 09 14.9	
PB08				*e*S		08 10 06.3	
PB08				IAML		08 10 11.0	
	comp=Z,2μm,0.7s						
GO03	Copiap	4.57	220	*e*P		08 09 14.1	
GO03				*e*S		08 10 07.0	
GO03	Copiap	4.58	220		Pn	08 09 14.0	-0.2
GO03	Copiap	4.58	220	⇑*i*P	Pn	08 09 13.6	-0.6
GO03				*e*S	Sn	08 10 05.3	-2.6
TA01	Diego Aracena	4.67	319		Pn	08 09 15.1	-0.4
TA01	Diego Aracena	4.67	319	*e*P	Pn	08 09 14.6	-0.9
TA01	Diego Aracena	4.67	319	*e*P		08 09 14.7	
TA01				*e*S		08 10 03.5	
TA01				IAML		08 10 17.0	
	comp=Z,1μm,0.5s						
GO01	Chusmiza	4.93	334		Pn	08 09 19.5	+0.3
PB11	IPOC Station P	5.05	329		Pn	08 09 20.0	-0.5
PB11	IPOC Station P	5.05	329	⇑*i*P	Pn	08 09 20.1	-0.5
PB11				*e*S	Sn	08 10 15.9	-3.2
PB11	IPOC Station P	5.05	329	*e*P		08 09 20.1	
PB11				*e*S		08 10 15.6	

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PB11                                 IAML          08 10 19.9
      comp=Z,2µm,0.5s
PSGC  Pisagua            5.42 326  eP      Pn      08 09 23.4  -1.9
PSGC                               eS      Sn      08 10 22.8  -4.9
PSGCX Pisagua            5.42 326          Pn      08 09 24.3  -1.0
PSGCX Pisagua            5.42 326  eP              08 09 23.4
PSGCX                              eS              08 10 13.0
PSGCX                                IAML          08 10 36.0
      comp=Z,1µm,0.8s
AC04  Llanos de Chal     5.53 222          Pn      08 09 25.4  -1.1
AC04  Llanos de Chal     5.53 222  eP      Pn      08 09 25.4  -1.1
AC04                               eS      Sn      08 10 26.1  -3.9
MNMC  Minye Minye        5.57 333          Pn      08 09 28.0  +0.5
MNMC  Minye Minye        5.57 333⇑iP      Pn      08 09 27.2  -0.3
MNMC                               eS      Sn      08 10 29.2  -2.4
AC05  El Transito        5.58 212          Pn      08 09 26.9  -0.4
AC05  El Transito        5.58 212  i P     Pn      08 09 27.2  -0.1
AC05                               eS      Sn      08 10 29.1  -2.3
LCO   Las Campanas       5.93 214   Pn     Pn      08 09 30.8  -1.3
LCO   Las Campanas       5.93 214   P      Pn      08 09 30.8  -1.3
PB16  IPOC Station P     6.26 337          Pn      08 09 36.7  -0.1
PB12  IPOC Station P     6.35 329   Pn     Pn      08 09 36.7  -0.8
CO01  Juntas del Tor     6.48 205          Pn      08 09 39.5  +0.3
AP01  Chacalluta         6.57 330          Pn      08 09 39.8  -0.5
VACA  Villa Angela C     6.58 123  eP      Pn      08 09 41.8  +1.5
CO05  La Serena          6.94 213          Pn      08 09 42.9  -2.2
PB18  Visviri            6.94 339          Pn      08 09 46.5  +0.8
GO04  Tololo Observa     6.95 209          Pn      08 09 43.9  -1.5
CO03  El Pedregal        7.48 206          Pn      08 09 50.3  -2.0
CFA   Coronel Fontan     7.54 189   P      Pn      08 09 53.2  +0.2
      comp=Z,22nm,0.3s,baz=4.7,slow=12,SNR=7.3
CFA                                 S      Sn      08 11 12.4  -5.4
      comp=Z,145nm,0.3s,baz=204,slow=15,SNR=20
ZON   Zonda              7.55 192   Pn     Pn      08 09 53.3  +0.2
ZON   Zonda              7.55 192   P      Pn      08 09 53.3  +0.2
ESFA  Espinillo Form     7.70  98  eP      Pn      08 09 55.3  +0.2
CO06  Fray Jorge         7.76 212          Pn      08 09 54.3  -1.5
LPAZ  La Paz             7.89 351   P      Pn      08 09 59.2  +1.0
      comp=Z,45nm,0.4s,baz=152,slow=8.6,SNR=136
LPAZ                                S      Sn      08 11 26.1  -1.0
      comp=Z,57nm,0.9s,baz=29,slow=19,SNR=2.3
LPAZ  La Paz             7.89 351  eP      Pn      08 09 59.3  +1.0
CO02  Combarbal          7.93 206          Pn      08 09 56.0  -2.1
MURT  Porto Murtinho     8.91  76  eP      Pn      08 10 10.2  -0.8
CPUP  Villa Florida      8.93 106   P      Pn      08 10 11.2  -0.1
      comp=Z,33nm,0.8s,baz=281,slow=10,SNR=38
BBSD  Serra de San D     9.07  42  eP      Pn      08 10 13.1  -0.2
VA03  San Esteban        9.18 200          Pn      08 10 13.7  -0.9
MECA  Mercedes           9.34 125  eP      Pn      08 10 17.6  +0.9
ROC1  El Roble           9.53 201          Pn      08 10 17.2  -2.0
MT08  Bocatoma Ro        9.67 196          Pn      08 10 22.8  +1.6
SIV   San Ignacio        9.77  35   P      Pn      08 10 21.9  -0.5
      comp=Z,34nm,0.5s,baz=217,slow=10,SNR=38
SIV                                 S      Sn      08 11 59.7   -12
      comp=Z,22nm,0.8s,baz=233,slow=12,SNR=4.0
MT02  Curacav            9.82 201          Pn      08 10 19.6  -3.3
MT13  San Alfonso       10.03 196   Pn     Pn      08 10 25.6  -0.1
LMEL  Las Melosas       10.10 196          Pn      08 10 26.9  +0.1
MT01  Popeta            10.42 200          Pn      08 10 27.9  -2.8
AZCA  Azaras, Argent    10.56 114  eP      Pn      08 10 33.9  +1.2
ITQB  Itaqui            10.70 123   Pn     Pn      08 10 34.4   0.0
ITQB  Itaqui            10.70 123  eP      Pn      08 10 33.7  -0.7
PANT  Pantanal (Braz    10.85  64  eP      Pn      08 10 35.7  -0.7
AQDB  Aquidauana        10.98  73   Pn     Pn      08 10 37.0  -1.2
AQDB  Aquidauana        10.98  73  eP      Pn      08 10 37.8  -0.4
AMBA  Amambai (Brazi    10.99  86  eP      Pn      08 10 37.7  -0.6
BO02  Sierra Bellavi    11.15 197          Pn      08 10 40.1  -0.2
PTLB  Pontes e Lacer    11.31  42   Pn     Pn      08 10 41.8  -0.6
PTLB  Pontes e Lacer    11.31  42  eP      Pn      08 10 42.1  -0.3
MCR1  Marechal Candi    11.73  94  eP      Pn      08 10 47.9  +0.1
CRSM  Crissiumal (Br    12.05 109  eP      Pn      08 10 52.1  +0.2
RODS  Rosario do Sul    12.11 123  eP      Pn      08 10 52.3  -0.2
FRBT  Francisco Belt    12.67 101  eP      Pn      08 10 59.6  -0.3
VILB  Vilhena           12.80  31          Pn      08 11 02.8  +1.2
VILB  Vilhena           12.80  31  eP      Pn      08 11 02.5  +0.9
PP1B  Ponte de Pedra    12.97  62  eP      Pn      08 11 02.7  -1.0
ALGR  Alto Alegre (B    13.26 113  eP      Pn      08 11 07.5  +0.2
SALV  Santo Antonio     13.33  54  eP      Pn      08 11 07.8  -0.4
CPSB  Cacapava Do Su    13.49 121  eP      Pn      08 11 09.8  -0.4
PTGB  Pitanga           13.53  96  eP      Pn      08 11 11.2  +0.5
ITAB  Concordia         13.67 106          Pn      08 11 11.4  -1.0
ITAB  Concordia         13.67 106  eP      Pn      08 11 12.6  +0.3
PLTB  Pedras Altas      13.98 126          Pn      08 11 15.1  -1.3
PLTB  Pedras Altas      13.98 126  eP      Pn      08 11 15.5  -0.9
VA04  Juan Fernndez     14.10 225          Pn      08 11 17.8  +0.2
ETMB  Extrema           14.25   3          Pn      08 11 19.1  -0.7
ETMB  Extrema           14.25   3  eP      Pn      08 11 18.7  -1.0
TRQA  Tornquist         14.50 164   P      Pn      08 11 21.6  -1.1
TRQA  Tornquist         14.50 164   P      Pn      08 11 21.6  -1.1
PCMB  Pacaembu          14.63  83  eP      Pn      08 11 24.2  -0.2
CNLB  Canela            15.23 113  eP      Pn      08 11 30.9  -0.9
NNA   Nana              15.33 320   P      P       08 11 34.9  +1.1
      comp=Z,54nm,0.7s,baz=158,slow=12,SNR=34
NNA                                 S      Sn      08 14 18.3  -6.2
      comp=Z,10nm,0.6s,baz=218,slow=18,SNR=2.7
NNA   Nana              15.33 320   P      Pn      08 11 33.3  +0.2
NNA   Nana              15.33 320ceP       Pn      08 11 33.1   0.0
NNA                                pmax    pmax
      comp=Z,385nm,1.7s
SAML  Samuel            15.51  14   P      Pn      08 11 34.1  -1.1
SAML  Samuel            15.51  14   P      Pn      08 11 34.1  -1.1
SAML  Samuel            15.51  14  eP      Pn      08 11 34.9  -0.3
PDRB  Porto dos Gac     15.76  40  eP      Pn      08 11 38.1  -0.2
GO06  Curarrehue        15.88 193   P      Pn      08 11 39.2  -0.5
FRTB  Fartura           15.89  91  eP      Pn      08 11 39.7  -0.2
ITRB  Iturama           15.96  77  eP      P       08 11 40.9  +0.1
LR03  Panguipulli       16.13 195   P      P       08 11 42.2  -0.2
TIJ01 Guaruva-PR        16.30  98  eP      Pn      08 11 45.4  +0.5
ARAG  Araguaiana, MT    16.46  62  eP      Pn      08 11 46.7  -0.2
PLCA  Paso Flores       16.84 190   P      Pn      08 11 51.1   0.0
      comp=Z,6.9nm,0.4s,baz=349,slow=10,SNR=70
PLCA                               PcP     PcP     08 16 28.4  +0.7
      comp=Z,5.6nm,0.8s,baz=331,slow=4.3,SNR=5.5
PLCA  Paso Flores       16.84 190  eP      P       08 11 49.5  -0.8
CLDB  Colider           16.89  41  eP      P       08 11 50.9  -0.2
BB19B Bebedouro         17.23  83  eP      P       08 11 55.0  +0.2
CZSB  Cruzeiro do Su    17.23 340   P      P       08 11 53.3  -1.5
CZSB  Cruzeiro do Su    17.23 340  eP      P       08 11 53.6  -1.2
LL04  Puerto Octay      17.36 194   P      P       08 11 55.3  -0.6
LL03  Petrohue          17.57 194   P      P       08 11 58.0  -0.3
SPB   Sao Paulo         17.81  92   P      P       08 12 01.1   0.0
SPB   Sao Paulo         17.81  92  eP      P       08 12 01.8  +0.7
RCLB  Rio Claro- Sao    17.88  88  eP      P       08 12 01.7  -0.1
PET01 Itanhaem-SP       17.90  95  eP      P       08 12 01.7  -0.3
LL05  Los Muermos       18.08 196   P      P       08 12 03.4  -0.4
IPMB  Ipameri, GO       18.47  74  eP      P       08 12 08.8  +0.4
LL06  Loncomilla        18.88 196   P      P       08 12 12.6  +0.1
SNDB  Serra Nova Dou    19.11  53  eP      P       08 12 14.8  -0.5
LL02  Futaleuf          19.44 191   P      P       08 12 18.5  -0.1
PARB  Paraibuna         19.49  92  eP      P       08 12 18.6  -0.8
BDFB  Brasilia          19.65  68   P      P       08 12 21.7  +0.6
      comp=Z,216nm,0.6s,baz=241,slow=10,SNR=320
BDFB  Brasilia          19.65  68  eP      P       08 12 21.2   0.0
GO07  Milladeo Hill,    19.74 195   P      P       08 12 21.2  -0.6
PMNB  Patos De Minas    19.84  78  eP      P       08 12 22.6  -0.6
TBTG  Tabatinga, AM     20.04 351   P      P       08 12 25.7  +0.5
TBTG  Tabatinga, AM     20.04 351  eP      P       08 12 26.0  +0.8
ATAH  Atahualpa         20.18 325   P      P       08 12 29.1  +1.9
      comp=Z,4.2nm,0.7s,baz=183,slow=6.9,SNR=2.9
NPGB  Novo Progresso    20.28  35  eP      P       08 12 25.3  -2.5
TEFE  Tefe              20.62   6  eP      P       08 12 30.3  -1.0
BSCB  Bom Sucesso       20.66  86  eP      P       08 12 31.4  -0.5
AY01  Puyuhuapi         20.78 192   P      P       08 12 32.0  -0.8
VAS01 Vassouras-RJ      21.63  90  eP      P       08 12 40.8  -1.3
MACA  Manacapuru-AM     21.70  17   P      P       08 12 40.4  -2.4
MACA  Manacapuru-AM     21.70  17  eP      P       08 12 40.6  -2.2
COYC  Coyhaique         21.80 190   P      P       08 12 42.4  -1.1
ITTB  Itaituba          22.40  30  eP      P       08 12 47.8  -1.9
DUB01 Friburgo-RJ       22.64  90  eP      P       08 12 51.2  -0.8
JANB  Januaria          23.09  71  eP      P       08 12 54.7  -1.3
SGCB  S£o Gabriel d     23.87 360  eP      P       08 13 02.3  -0.7
SDBA  SAO DESIDERIO     23.88  65  eP      P       08 13 02.0  -1.2
SMTB  Santa Maria do    23.89  54  eP      P       08 13 02.2  -1.1
PRPB  Parauapebas       24.25  45  eP      P       08 13 04.3  -2.2
ALF01 Guarapari-ES      24.44  87  eP      P       08 13 07.5  -0.7
SJMB  Sao Joao De Ma    24.52  82  eP      P       08 13 08.0  -1.0
GO08  Villa O’Higgin    24.70 189   P      P       08 13 10.3  +0.1
GO08                               IAmb    IAmb    08 13 14.5
      comp=Z,113nm,1.2s
MALB  Monte Alegre      25.30  31  eP      P       08 13 14.4  -1.6
GUA01 Guaratinga, BA    26.45  79  eP      P       08 13 25.6  -0.8
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BONI  La Bonita         26.53 336  eP      P       08 13 28.4  +1.0
OTAV  Otavalo           26.69 334   P      P       08 13 28.2  -0.9
OTAV  Otavalo           26.69 334   P      P       08 13 28.2  -0.9
OTAV                               pmax    pmax
      comp=Z,10.0nm,1.0s
OTAV  Otavalo           26.69 334  eP      P       08 13 29.3  +0.2
FLF1  Flavio Alfaro-    26.76 330  eP      P       08 13 32.2  +3.1
FLOC  Florencia         26.94 340  eP      P       08 13 30.3  -0.5
MACC  Macarena, Meta    26.98 345  eP      P       08 13 30.3  -0.8
ABR01 Abrolhos, BA      27.00  82  eP      P       08 13 30.6  -0.6
BOAV  Boa Vista         27.09  14  eP      P       08 13 29.3  -2.7
BOAV  Boa Vista         27.09  14  eP      P       08 13 32.0   0.0
CMBC  Cumbal            27.09 335  eP      P       08 13 34.2  +1.6
GCUF  Volcan Galeras    27.17 337  eP      P       08 13 38.0  +4.7
CRUC  La Cruz           27.35 338  eP      P       08 13 38.0  +3.2
GO09  Cerro Castillo    27.42 187   P      P       08 13 34.1  -0.5
GARC  Garzon, Huila     27.46 341  eP      P       08 13 36.1  +0.4
MCPB  Macapa, AP        27.66  33  eP      P       08 13 36.3  -0.9
MG05  Puerto Natales    27.84 187   P      P       08 13 38.3   0.0
BBAC  Balboa, Cauca     27.88 337  eP      P       08 13 40.0  +0.7
BETC  Betania           27.92 342  eP      P       08 13 40.0  +0.5
POPC  Popayan, Colom    28.17 339  eP      P       08 13 42.9  +1.0
EFI   East Falkland     28.32 168   P      P       08 13 43.3  +0.6
EFI                                IAmb    IAmb    08 13 53.5
      comp=Z,96nm,1.3s
EFI   East Falkland     28.32 168  i P     P       08 13 44.0  +1.4
PTGC  Puerto Gaitan,    28.62 349  eP      P       08 13 40.9  -4.7
MG02  Cerro Sombrero    28.66 183   P      P       08 13 46.1  +0.6
JAMC  Jamundi, Valle    28.80 339  eP      P       08 13 47.7  +0.2
VILC  Villavicencio,    28.84 346  eP      P       08 13 46.7  -1.0
ORTC  Ortega, Tolima    29.03 343  eP      P       08 13 48.7  -0.7
CHIC  Chingaza          29.35 346  eP      P       08 13 51.6  -1.0
ROSC  El Rosal          29.69 345   P      P       08 13 56.2  +0.6
      comp=Z,15nm,0.5s,baz=216,slow=20,SNR=7.1
      comp=Z,15nm,0.5s
MALC  Bahia Malaga      29.77 339  eP      P       08 13 57.4  +1.6
MG03  Isla Dawson       29.80 184   P      P       08 13 55.4  -0.2
MG03                               IAmb    IAmb    08 13 57.1
      comp=Z,36nm,0.8s
GUY2C Guyana, Caldas    30.32 343  eP      P       08 14 00.2  -1.0
RUSC  La Rusia          30.45 348   P      P       08 14 01.4  -0.9
RUSC  La Rusia          30.45 348  eP      P       08 14 01.2  -1.1
ROSB  Rosrio            30.48  50  eP      P       08 14 00.4  -1.7
USHA  Ushuaia           30.68 182   P      P       08 14 04.6  +1.2
      comp=Z,14nm,0.4s,baz=24,slow=6.2,SNR=13
      comp=Z,14nm,0.4s
MG01  Puerto William    30.77 181   P      P       08 14 04.0  -0.1
MG01                               IAmb    IAmb    08 14 05.3
      comp=Z,52nm,0.7s
CBOC  Ciudad Bolivar    31.11 342  eP      P       08 14 08.0  +0.2
HELC  Santa Helena      31.29 343  eP      P       08 14 08.0  -1.6
PTBC  PUERTO BERRIO,    31.36 345  eP      P       08 14 08.0  -1.9
PAMC  Pamplona, Colo    31.79 349  eP      P       08 14 12.8  -1.3
MPGF  Montagnes des     32.21  27   P      P       08 14 15.7  -1.6
MPGF                               pP      pP      08 14 54.0  -1.6
MPGF                               sP      sP      08 15 14.6  -2.1
PAYG  Puerto Ayora      32.52 312   P      P       08 14 22.1  +2.2
PAYG                               pP      pP      08 15 01.3  +3.4
UREC  San Jos de Ur     32.79 344  eP      P       08 14 19.6  -2.7
BAUV  El Baul           32.89 358   P      P       08 14 21.6  -1.6
BAUV                               IAmb    IAmb    08 14 23.0
      comp=Z,75nm,0.8s
BAUV  El Baul           32.89 358  e       P       08 14 20.8  -2.4
SDV   Santo Domingo     33.02 353   P      P       08 14 22.7  -1.8
SDV   Santo Domingo     33.02 353  eP      P       08 14 23.1  -1.4
NBCL  Cascavel-CE       33.93  59  eP      P       08 14 31.5  -0.7
BIRV  Birongo           34.40   1   P      P       08 14 35.3  -0.9
SJCC  San Jacinto, C    34.78 346  eP      P       08 14 37.0  -2.5
RCBR  Riachuelo         34.90  64  eP      P       08 14 39.8  -0.8
RCBR  Riachuelo         34.90  64   P      P       08 14 40.2  -0.3
TOSP  Speyside          35.76  11   P      P       08 14 47.5  -0.2
TOSP  Speyside          35.76  11  e       P       08 14 48.1  +0.3
GRGR  Grenville         36.41   9   P      P       08 14 52.6  -0.6
GRGR  Grenville         36.41   9  e       P       08 14 52.8  -0.4
GRHS  Sauteurs          36.50   9  e       P       08 14 45.3  -8.8
GCMP  Grenada, Carri    36.78   9  e       P       08 14 54.3  -2.2
SRBA  San Rafael, Bu    36.85 332   P      P       08 14 59.0  +1.8
SRBA                               IAmb    IAmb    08 15 00.5
      comp=Z,64nm,1.3s
PEZE  Perez Zeledon,    37.12 332   P      P       08 15 01.0  +1.5
RIMA  Rio Macho         37.55 332   P      P       08 15 04.2  +1.0
SVB   Belmont           37.58   9  e       P       08 15 02.5  -0.7
HOPE  Hope Point        37.69 151   P      P       08 15 04.4  +0.8
HOPE                               IAmb    IAmb    08 15 05.8
      comp=Z,48nm,0.9s
HOPE  Hope Point        37.69 151   P      P       08 15 04.4  +0.8
HOPE                               pmax    pmax
      comp=Z,48nm,1.0s
HOPE  Hope Point        37.69 151   P      P       08 15 04.2  +0.5
HDC   Heredia           37.87 332  eP      P       08 15 06.1  +0.3
MCLT  Moule a Chique    38.06   9  e       P       08 15 06.2  -1.0
SLB   Belfond           38.16   9  e       P       08 15 07.2  -0.9
SLBI  Saint Lucia, B    38.36   9  e       P       08 15 08.6  -1.1
JTS   Las Juntas de     38.49 331  i P     P       08 15 12.2  +1.3
JTS                                pmax    pmax
      comp=Z,38nm,1.2s
JTS   Las Juntas de     38.49 331   P      P       08 15 12.9  +2.0
JTS                                pP      pP      08 15 53.5  +3.2
DUNO  Dulce Nombre,     38.55 330   P      P       08 15 12.0  +0.7
DUNO                               IAmb    IAmb    08 15 14.5
      comp=Z,42nm,1.0s
COVE  Coope Vega, Sa    38.63 332   P      P       08 15 13.4  +1.4
MPOM  Morne Pois Mar    38.79   9  e       P       08 15 12.2  -1.1
BIM   Bigot             38.83   9  e       P       08 15 13.0  -0.7
FDF   Fort de France    39.03   9   P      P       08 15 13.7  -1.6
FDF   Fort de France    39.03   9   P      P       08 15 13.7  -1.6
FDF                                pmax    pmax
      comp=Z,166nm,1.0s
FDF   Fort de France    39.03   9  e       P       08 15 13.4  -2.0
FDF   Fort de France    39.03   9   P      P       08 15 14.1  -1.2
SVN   Savane Anatole    39.14   9   P      P       08 15 15.2  -1.0
ESPN  Las Esperanzas    39.91 333   P      P       08 15 23.4  +0.8
ACON  Acoyapa           40.08 332   P      P       08 15 24.8  +0.8
CBE   Ff, Capester      40.29   8  e       P       08 15 21.3  -4.4
PMSA  Palmer Station    40.68 178   P      P       08 15 29.5  +1.2
      comp=Z,13nm,0.6s,baz=27,slow=9.4,SNR=12
      comp=Z,13nm,0.6s
PMSA  Palmer Station    40.68 178   P      P       08 15 29.6  +1.3
PMSA                               IAmb    IAmb    08 16 00.1
      comp=Z,112nm,1.6s
PMSA  Palmer Station    40.68 178  eP      P       08 15 28.7  +0.4
ANBD  Bethesda, Anti    41.23   7  e       P       08 15 28.2  -5.2
ANWB  Willy Bob         41.84   7  e       P       08 15 35.4  -2.9
MLPR  Magueyes Islan    41.85 360   P      P       08 15 36.4  -1.9
MLPR                               IAmb    IAmb    08 15 38.8
      comp=Z,64nm,0.6s
CRPR  Cabo Rojo, PR     41.88 360   P      P       08 15 36.8  -1.8
OBIP  Obispado Ponce    41.92   0   P      P       08 15 35.8  -3.1
CELP  Cerrillos         41.95   0   P      P       08 15 37.2  -2.0
SJG   San Juan          41.99   1   P      P       08 15 37.5  -2.0
SJG                                IAmb    IAmb    08 15 38.1
      comp=Z,50nm,0.8s
SJG   San Juan          41.99   1   P      P       08 15 37.5  -2.0
SJG                                pmax    pmax
      comp=Z,50nm,0.8s
SJG   San Juan          41.99   1   P      P       08 15 37.2  -2.3
PRSN  Puerto Rico Se    42.09 360   P      P       08 15 38.1  -2.2
PRSN                               IAmb    IAmb    08 15 39.0
      comp=Z,62nm,0.8s
UUPR  Utuado, UPR, P    42.13   0   P      P       08 15 38.1  -2.5
AOPR  Arecibo Observ    42.22   0   P      P       08 15 38.8  -2.5
AOPR                               IAmb    IAmb    08 15 39.9
      comp=Z,39nm,0.7s
PCDR  Punta Cana, DR    42.41 358   P      P       08 15 41.8  -1.1
SDDR  Presa de Saban    43.07 354   P      P       08 15 46.5  -1.7
MTDJ  Mount Denham      43.36 345   P      P       08 15 50.2  -0.5
GRTK  Grand Turk        45.56 354   P      P       08 16 06.5  -1.3
GRTK                               IAmb    IAmb    08 16 52.2
      comp=Z,92nm,1.2s
HUEH  Huehuetenango     45.99 326   P      P       08 16 12.1  +0.5
HUEH                               IAmb    IAmb    08 16 13.4
      comp=Z,78nm,0.7s
PETF  Flores            46.55 329   P      P       08 16 16.2  +0.4
CCIG  Comitan           47.13 326   P      P       08 16 20.8  +0.4
TEIG  Tepich            48.76 333   P      P       08 16 32.0  -0.7
SOR   Soroa             49.20 340   P      P       08 16 35.6  -0.4
SOR                                IAmb    IAmb    08 16 37.1
      comp=Z,70nm,0.9s
SOR   Soroa             49.20 340   P      P       08 16 35.6  -0.4
SOR                                pmax    pmax
      comp=Z,70nm,0.9s
061Z  Ochoppi           51.52 344   P      P       08 16 53.9  +0.5
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      baz=164
TLIG  Tlapa             51.70 320   P      P       08 16 55.9  +0.9
DWPF  Disney Wildern    53.80 344   P      P       08 17 10.0   0.0
      baz=164
DWPF  Disney Wildern    53.80 344   P      P       08 17 10.1   0.0
BELA  Belgrano 2        55.90 172   P      P       08 17 24.7  +0.2
BELA                               IAmb    IAmb    08 17 25.9
      comp=Z,19nm,0.7s
456A  Hilliard          56.44 344   P      P       08 17 29.0  +0.1
      baz=163
553A  Crawfordville     56.57 342   P      P       08 17 30.6  +0.8
      baz=161
VNA3  Neumayer Olymp    57.00 161   P      P       08 17 33.1  +0.8
VNA3  Neumayer Olymp    57.00 161   PcP    PcP     08 18 25.9  +0.5
VNA1  Neumayer--Stat    57.19 160   P      P       08 17 34.9  +1.2
TIGA  Tifton            57.52 343   P      P       08 17 35.9  -0.6
      baz=162
TIGA  Tifton            57.52 343   P      P       08 17 36.2  -0.2
      baz=162
VNA2  Neumayer--Watz    57.56 160   P      P       08 17 37.2  +0.8
      baz=288,slow=7.0
VNA2  Neumayer--Watz    57.56 160   PcP    PcP     08 18 27.7  +0.1
      baz=286,slow=3.0
255A  Hazlehurst        57.70 344   P      P       08 17 37.6  -0.1
      baz=163
352A  Blakely           57.93 342   P      P       08 17 38.5  -0.8
352A  Blakely           57.93 342   P      P       08 17 38.7  -0.5
      baz=161,SNR=14
ZAIG  Zacatecas         58.09 321   P      P       08 17 41.8  +0.8
ZAIG                               IAmb    IAmb    08 17 43.8
      comp=Z,32nm,1.1s
BRAL  Brewton           58.28 340   P      P       08 17 41.2  -0.5
BRAL  Brewton           58.28 340   P      P       08 17 41.5  -0.2
      baz=158,SNR=7.7
BRAL  Brewton           58.28 340   P      P       08 17 41.9  +0.2
      baz=158,SNR=7.7
NHSC  New Hope          58.31 347   P      P       08 17 42.4  +0.5
      baz=166,SNR=6.0
NHSC  New Hope          58.31 347   P      P       08 17 42.9  +0.9
      baz=166,SNR=6.0
154A  Montrose          58.51 344   P      P       08 17 43.1  -0.2
      baz=163,SNR=10
250A  Grady             58.79 341   P      P       08 17 44.7  -0.6
250A                               IAmb    IAmb    08 17 45.7
      comp=Z,69nm,1.0s
250A  Grady             58.79 341   P      P       08 17 44.8  -0.5
      baz=159,SNR=12
Y60A  Bolivia           58.81 349   P      P       08 17 45.7  +0.4
      baz=168
Y60A                                P      P       08 17 45.7  +0.4
      baz=168
HAW   Hawthorne Fire    58.87 346   P      P       08 17 46.1  +0.3
      baz=164,SNR=11
Y58A  Scranton          58.98 348   P      P       08 17 47.1  +0.6
      baz=166
Y58A                                P      P       08 17 47.1  +0.6
      baz=166
152A  Waverly Hall      58.99 342   P      P       08 17 45.9  -0.8
152A                               IAmb    IAmb    08 17 46.5
      comp=Z,27nm,0.7s
152A  Waverly Hall      58.99 342   P      P       08 17 46.0  -0.6
      baz=161,SNR=12
SNAA  Sanae             59.19 161   P      P       08 17 48.3  +0.6
SNAA  Sanae             59.19 161   PcP    PcP     08 18 34.7  +0.6
SNAA  Sanae             59.19 161ceP       P       08 17 48.1  +0.4
SNAA                               pmax    pmax
      comp=Z,34nm,1.3s
Y57A  Sumter            59.23 347   P      P       08 17 48.3   0.0
Y57A                               IAmb    IAmb    08 17 49.5
      comp=Z,75nm,1.1s
Y57A  Sumter            59.23 347   P      P       08 17 48.6  +0.3
      baz=166,SNR=5.0
Y57A                                P      P       08 17 48.6  +0.3
      baz=166,SNR=5.0
X58A  Rowland           59.55 348   P      P       08 17 50.7  +0.3
      baz=167,SNR=6.5
X58A                                P      P       08 17 50.7  +0.3
      baz=167,SNR=6.5
JSC   Jenkinsville      59.67 346   P      P       08 17 51.1  -0.2
JSC                                IAmb    IAmb    08 17 52.3
      comp=Z,46nm,0.9s
JSC   Jenkinsville      59.67 346   P      P       08 17 51.1  -0.2
JSC                                pmax    pmax
      comp=Z,46nm,0.9s
JSC   Jenkinsville      59.67 346   P      P       08 17 51.6  +0.3
      baz=165,SNR=12
Z51A  Franklin          59.73 342   P      P       08 17 51.1  -0.6
      baz=161
344A  Westbrook Farm    59.79 336   P      P       08 17 52.2  +0.1
      baz=155,SNR=5.7
HODGE Hodges            59.85 345   P      P       08 17 52.2  -0.3
HODGE Hodges            59.85 345   P      P       08 17 52.5   0.0
      baz=164,SNR=5.6
BIRD  Birdtown, Kers    59.86 347   P      P       08 17 53.0  +0.5
      baz=166,SNR=8.1
Y52A  Lilburn           59.94 344   P      P       08 17 52.4  -0.7
Y52A                               IAmb    IAmb    08 17 53.6
      comp=Z,38nm,0.8s
Y52A  Lilburn           59.94 344   P      P       08 17 52.6  -0.5
      baz=162,SNR=11
Y52A                                P      P       08 17 52.6  -0.5
      baz=162,SNR=11
CNNC  Cliffs of the     59.96 350   P      P       08 17 53.2   0.0
      baz=168
LRAL  Lakeview Retre    59.99 341   P      P       08 17 52.6  -0.9
LRAL                               IAmb    IAmb    08 17 53.7
      comp=Z,46nm,1.2s
LRAL  Lakeview Retre    59.99 341   P      P       08 17 52.6  -0.9
      baz=159,SNR=12
LRAL  Lakeview Retre    59.99 341   P      P       08 17 52.9  -0.6
      baz=159,SNR=12
W57A  Gilead            60.25 348   P      P       08 17 54.9  -0.3
W57A                               IAmb    IAmb    08 17 56.3
      comp=Z,39nm,0.8s
W57A  Gilead            60.25 348   P      P       08 17 55.3  +0.1
      baz=166,SNR=9.0
W57A                                P      P       08 17 55.3  +0.1
      baz=166,SNR=9.0
PAULI Pauline           60.31 346   P      P       08 17 56.0  +0.3
      baz=164,SNR=5.6
342B  Flagon Creek P    60.32 335   P      P       08 17 56.7  +1.0
      baz=153,SNR=18
VBMS  Vicksburg         60.41 337   P      P       08 17 55.6  -0.7
VBMS                               IAmb    IAmb    08 17 57.3
      comp=Z,57nm,1.2s
VBMS  Vicksburg         60.41 337   P      P       08 17 56.3   0.0
      baz=155
Z47A  Carrollton        60.48 340   P      P       08 17 56.2  -0.6
      baz=158,SNR=7.2
735A  Kenedy            60.50 329   P      P       08 17 57.8  +0.7
      baz=148
HKT   Hockley           60.53 331   P      P       08 17 57.5  +0.4
HKT   Hockley           60.53 331   P      P       08 17 57.5  +0.4
HKT                                pmax    pmax
      comp=Z,24nm,1.1s
HKT   Hockley           60.53 331   P      P       08 17 57.3  +0.2
Y49A  Blount Mountai    60.59 341   P      P       08 17 56.8  -0.8
      baz=160,SNR=7.4
CASEE Lake Jocassee     60.74 345   P      P       08 17 58.7  +0.2
      baz=163,SNR=8.7
X51A  Calhoun           60.82 343   P      P       08 17 58.9  -0.2
      baz=161,SNR=20
X51A                                P      P       08 17 58.9  -0.2
      baz=161,SNR=20
833A  Chaparral WMA,    60.83 327   P      P       08 17 59.7  +0.5
      baz=146,SNR=49
833A  Chaparral WMA,    60.83 327   P      P       08 17 59.7  +0.5
      baz=146,SNR=49
TROLL Troll, Antarti    60.91 161   P      P       08 18 00.3  +0.9
TROLL Troll, Antarti    60.91 161   PcP    PcP     08 18 42.1  +1.0
FPAL  Fort Paine        61.00 342   P      P       08 17 59.5  -0.8
FPAL                               IAmb    IAmb    08 18 00.6
      comp=Z,36nm,0.7s
W52A  Murphy            61.08 344   P      P       08 18 00.6  -0.2
      baz=162,SNR=5.8
143A  Socs Landing,     61.16 336   P      P       08 18 00.7  -0.7
143A  Socs Landing,     61.16 336   P      P       08 18 02.6  +1.1
      baz=154
V55A  Taylorsville      61.18 347   P      P       08 18 01.8  +0.3
      baz=165,SNR=13
V55A                                P      P       08 18 01.8  +0.3
      baz=165,SNR=13
X48A  Hartselle         61.33 341   P      P       08 18 02.2  -0.3
      baz=159,SNR=33
V53A  Saluda            61.35 345   P      P       08 18 02.2  -0.5
V53A                               IAmb    IAmb    08 18 02.9
      comp=Z,20nm,0.7s
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V53A	Saluda	61.35	345	P	P	08 18 02.4	-0.3
	baz=163,SNR=6.7						
V53A				P	P	08 18 02.4	-0.3
	baz=163,SNR=6.7						
U56A	King	61.49	348	P	P	08 18 04.1	+0.6
	baz=166						
U56A				P	P	08 18 04.1	+0.6
	baz=166						
W50A	Signal Mountai	61.54	343	P	P	08 18 03.5	-0.4
	baz=161,SNR=16						
CPCT	Cooper Cave	61.56	344	P	P	08 18 03.2	-0.9
CPCT				IAmb	IAmb	08 18 04.5	
	comp=Z,26nm,0.7s						
Y45A	Yeager Farm, C	61.57	339	P	P	08 18 03.9	-0.2
	baz=156,SNR=13						
TKL	Tuckaleechee C	61.57	344	P	P	08 18 03.5	-0.6
	baz=162,SNR=7.4						
NATX	Nacogdoches	61.59	333	P	P	08 18 04.8	+0.5
NATX	Nacogdoches	61.59	333	P	P	08 18 05.1	+0.7
	baz=151,SNR=12						
NATX	Nacogdoches	61.59	333	P	P	08 18 05.3	+1.0
	baz=151,SNR=12						
V52A	Sevierville	61.71	345	P	P	08 18 04.2	-0.8
V52A	Sevierville	61.71	345	P	P	08 18 04.3	-0.7
	baz=163,SNR=7.2						
SWET	Sewanee	61.72	342	P	P	08 18 04.5	-0.6
V51A	Loudon	61.86	344	P	P	08 18 05.0	-1.0
V51A	Loudon	61.86	344	P	P	08 18 05.3	-0.7
	baz=162						
U54A	Nelsons Funny	61.95	346	P	P	08 18 06.5	-0.2
	baz=165,SNR=12						
U54A				P	P	08 18 06.5	-0.2
	baz=165,SNR=12						
435B	Jarrell	62.02	330	P	P	08 18 06.8	-0.4
435B				IAmb	IAmb	08 18 08.4	
	comp=Z,24nm,0.6s						
435B	Jarrell	62.02	330	P	P	08 18 07.4	+0.2
	baz=148						
435B	Jarrell	62.02	330	P	P	08 18 07.8	+0.6
	baz=148						
OXF	Oxford	62.12	339	P	P	08 18 06.5	-1.3
OXF	Oxford	62.12	339	P	P	08 18 06.5	-1.3
OXF				pmax	pmax		
	comp=Z,66nm,0.8s						
OXF	Oxford	62.12	339	P	P	08 18 06.6	-1.2
	baz=157,SNR=12						
OXF	Oxford	62.12	339	P	P	08 18 07.0	-0.7
	baz=157,SNR=12						
PLAL	Pickwick Lake	62.13	340	P	P	08 18 06.5	-1.3
PLAL				IAmb	IAmb	08 18 07.8	
	comp=Z,34nm,0.8s						
237A	Washetta, Mont	62.28	332	P	P	08 18 09.5	+0.6
BLA	Blacksburg	62.33	348	P	P	08 18 09.5	+0.3
	baz=166						
TZTN	Tazewell	62.36	345	P	P	08 18 08.7	-0.7
	baz=163						
CCAR	Cane Creek	62.39	337	P	P	08 18 09.4	-0.1
CCAR				IAmb	IAmb	08 18 11.0	
	comp=Z,53nm,0.9s						
CCAR	Cane Creek	62.39	337	P	P	08 18 10.3	+0.7
	baz=154,SNR=5.3						
V48A	Smith Brothers	62.46	342	P	P	08 18 09.4	-0.6
	baz=160,SNR=28						
W45A	Hickory Valley	62.64	340	P	P	08 18 10.7	-0.5
	baz=157						
CLTN	Cedars of Leba	62.65	342	P	P	08 18 10.4	-0.8
CLTN				IAmb	IAmb	08 18 11.6	
	comp=Z,42nm,0.7s						
WLAR	White Oak Lake	62.68	336	P	P	08 18 11.8	+0.3
JCT	Junction City	62.81	328	P	P	08 18 12.4	-0.1
	baz=146,SNR=33						
JCT	Junction City	62.81	328	P	P	08 18 12.7	+0.2
	baz=146,SNR=33						
U49A	Red Boiling Sp	62.90	343	P	P	08 18 11.8	-1.1
U49A				IAmb	IAmb	08 18 12.5	
	comp=Z,23nm,0.6s						
U49A	Red Boiling Sp	62.90	343	P	P	08 18 11.9	-1.0
	baz=161,SNR=10						
WHTX	Lake Whitney,	62.99	331	P	P	08 18 13.5	-0.1
	baz=149,SNR=11						
WHTX	Lake Whitney,	62.99	331	P	P	08 18 14.0	+0.4
	baz=149,SNR=11						
Z38A	Mt. Pleasant	63.04	334	P	P	08 18 14.5	+0.7
	baz=151						
S54A	Dingess, Beckl	63.08	347	P	P	08 18 13.5	-0.6
S54A				IAmb	IAmb	08 18 14.9	
	comp=Z,41nm,0.8s						
S54A	Dingess, Beckl	63.08	347	P	P	08 18 14.0	-0.1
	baz=165,SNR=7.9						
S54A				P	P	08 18 14.0	-0.1
	baz=165,SNR=7.9						
WVT	Waverly	63.12	341	P	P	08 18 13.4	-0.9
WVT	Waverly	63.12	341	P	P	08 18 13.4	-0.9
WVT				pmax	pmax		
	comp=Z,96nm,0.7s						
WVT	Waverly	63.12	341	P	P	08 18 13.4	-0.9
	baz=159						
WVT	Waverly	63.12	341	P	P	08 18 13.5	-0.9
	baz=159,SNR=58						
WVT	Waverly	63.12	341	P	P	08 18 13.4	-0.9
T50A	Nancy	63.13	344	P	P	08 18 13.6	-0.8
	baz=162						
T50A				P	P	08 18 13.6	-0.8
	baz=162						
SLBS	Sierra La Lagu	63.28	316	P	P	08 18 17.5	+1.7
FW13	Cleburne	63.29	331	P	P	08 18 15.0	-0.6
FW13				IAmb	IAmb	08 18 16.4	
	comp=Z,38nm,0.6s						
MIAR	Mount Ida	63.62	336	P	P	08 18 16.7	-1.0
MIAR				IAmb	IAmb	08 18 18.7	
	comp=Z,26nm,0.8s						
MIAR	Mount Ida	63.62	336	P	P	08 18 16.7	-1.0
MIAR				pmax	pmax		
	comp=Z,26nm,0.9s						
MIAR	Mount Ida	63.62	336	P	P	08 18 17.4	-0.3
	baz=153,SNR=16						
MIAR	Mount Ida	63.62	336	P	P	08 18 17.8	+0.1
	baz=153,SNR=16						
T47A	Sharon Grove	63.71	342	P	P	08 18 17.4	-0.8
	baz=159,SNR=33						
TXAR	Lajitas Array	63.84	324	P	P	08 18 19.8	+0.4
	comp=Z,7.8nm,0.7s,baz=152,slow=8.5,SNR=66						
	comp=Z,7.8nm,0.7s						
TX31	Lajitas Ar. Si	63.84	324	P	P	08 18 19.2	-0.1
TX31				IAmb	IAmb	08 18 20.4	
	comp=Z,29nm,0.8s						
TX31	Lajitas Ar. Si	63.84	324	P	P	08 18 19.9	+0.5
	baz=143,SNR=26						
HICK	Hickman	63.92	340	P	P	08 18 19.1	-0.5
Z35A	Perchaven, San	64.05	332	P	P	08 18 20.5	0.0
Z35A	Perchaven, San	64.05	332	P	P	08 18 21.0	+0.5
	baz=149,SNR=13						
LCAR	Lake Charles	64.12	338	P	P	08 18 20.2	-0.6
	baz=155,SNR=12						
Q54A	Coxs Mills	64.13	348	P	P	08 18 20.6	-0.3
	baz=166						
Q54A				P	P	08 18 20.6	-0.3
	baz=166						
FW03	Perrin-Whitt E	64.15	331	P	P	08 18 21.4	+0.2
FW03				IAmb	IAmb	08 18 22.4	
	comp=Z,36nm,0.7s						
T45B	Paducah	64.18	341	P	P	08 18 20.6	-0.6
	baz=158,SNR=8.7						
R50A	Paris	64.20	345	P	P	08 18 20.6	-0.8
	baz=162,SNR=5.3						
R50A				P	P	08 18 20.6	-0.8
	baz=162,SNR=5.3						
FCAR	Ozark Folk Cen	64.29	337	P	P	08 18 20.8	-1.2
X37A	Clayton	64.35	334	P	P	08 18 22.8	+0.3
X37A				IAmb	IAmb	08 18 24.0	
	comp=Z,32nm,0.9s						
X37A	Clayton	64.35	334	P	P	08 18 22.7	+0.2
	baz=151,SNR=15						
Q52A	Bidwell	64.39	347	P	P	08 18 22.2	-0.4
	baz=164						
Q52A				P	P	08 18 22.2	-0.4
	baz=164						
R49A	Shelbyville	64.42	344	P	P	08 18 22.1	-0.7
	baz=162						
R49A				P	P	08 18 22.1	-0.7
	baz=162						
ABTX	Abilene, Hawle	64.51	330	P	P	08 18 23.6	0.0
	baz=147,SNR=9.6						
ABTX	Abilene, Hawle	64.51	330	P	P	08 18 23.7	+0.1
	baz=147,SNR=9.6						
PBMO	Poplar Bluff	64.52	339	P	P	08 18 23.0	-0.5
	baz=156						
MCWV	Mont Chateau	64.60	349	P	P	08 18 23.9	-0.1
	baz=167						
WCI	Wyandotte Cave	64.65	343	P	P	08 18 23.4	-1.0
	baz=160						
WCI	Wyandotte Cave	64.65	343	P	P	08 18 23.3	-1.0
	baz=160,SNR=23						
WCI	Wyandotte Cave	64.65	343	P	P	08 18 23.2	-1.1
P53A	Whipple	64.72	348	P	P	08 18 24.7	-0.1
P53A				IAmb	IAmb	08 18 25.8	
	comp=Z,42nm,1.1s						
P53A	Whipple	64.72	348	P	P	08 18 24.6	-0.2
	baz=165,SNR=6.3						
P53A				P	P	08 18 24.6	-0.2
	baz=165,SNR=6.3						
CGM3	Cape Girardeau	64.75	340	P	P	08 18 24.2	-0.8
CGM3				IAmb	IAmb	08 18 24.6	
	comp=Z,29nm,0.6s						
WTFS	Witchita Falls	64.94	331	P	P	08 18 25.9	-0.4
WTFS				IAmb	IAmb	08 18 27.2	
	comp=Z,63nm,0.6s						
U40A	Yellville	64.97	337	P	P	08 18 26.2	-0.3
	baz=154,SNR=17						
U40A				P	P	08 18 26.2	-0.3
	baz=154,SNR=17						
T42A	Van Buren	64.97	339	P	P	08 18 25.6	-0.8
	baz=156						
S44A	Carbondale	64.99	341	P	P	08 18 25.7	-0.8
	baz=158,SNR=9.5						
P52A	Corning	65.01	347	P	P	08 18 26.0	-0.6
	baz=165,SNR=5.7						
P51A	Williamsport	65.06	346	P	P	08 18 26.4	-0.5
	baz=164						
P51A				P	P	08 18 26.4	-0.5
	baz=164						
PAL	Palisades	65.13	354	P	P	08 18 26.9	-0.4
	baz=173						
SSPA	Standing Stone	65.24	351	P	P	08 18 27.7	-0.4
	baz=169						
O52A	Adamsville	65.42	347	P	P	08 18 28.6	-0.6
	baz=165						
O52A				P	P	08 18 28.6	-0.6
	baz=165						
O53A	New Philadelph	65.42	348	P	P	08 18 28.9	-0.4
	baz=166						
W35A	Tecumseh	65.45	333		P	08 18 29.3	-0.2
P49A	Miami Univ. Ec	65.49	345	P	P	08 18 28.5	-1.2
	baz=162,SNR=11						
P49A	Miami Univ. Ec	65.49	345	P	P	08 18 28.7	-1.0
	baz=162,SNR=11						
ODSA	Odessa	65.49	327	P	P	08 18 29.8	-0.2
ODSA				IAmb	IAmb	08 18 30.8	
	comp=Z,45nm,0.7s						
P48A	Milroy	65.59	344	P	P	08 18 28.8	-1.5
	baz=161,SNR=8.5						
P48A				P	P	08 18 28.8	-1.5
	baz=161,SNR=8.5						
BLO	Bloomington	65.60	343	P	P	08 18 29.2	-1.2
BLO	Bloomington	65.60	343	P	P	08 18 29.2	-1.2
BLO				pmax	pmax		
	comp=Z,49nm,0.6s						
U38A	Gravette	65.60	336	P	P	08 18 30.1	-0.4
	baz=152,SNR=9.2						
OLIL	Olney	65.62	342	P	P	08 18 29.3	-1.2
	baz=159,SNR=5.9						
FVM	French Village	65.62	340	P	P	08 18 30.0	-0.6
	baz=156,SNR=22						
TUL1	Leonard	65.67	335	P	P	08 18 30.7	-0.3
	baz=151,SNR=13						
TUL1	Leonard	65.67	335	P	P	08 18 30.8	-0.1
	baz=151,SNR=13						
ACSO	Alum Creek Sta	65.76	347	P	P	08 18 30.8	-0.7
	baz=164,SNR=8.9						
KSPA	Keystone Colle	65.87	353	P	P	08 18 32.7	+0.6
	baz=171						
N53A	Lisbon	65.89	348	P	P	08 18 32.5	+0.2
	baz=166						
N53A				P	P	08 18 32.5	+0.2
	baz=166						
WMOK	Wichita Mounta	65.90	332		P	08 18 32.1	-0.4
WMOK				IAmb	IAmb	08 19 32.2	
	comp=Z,21nm,0.4s						
WMOK	Wichita Mounta	65.90	332	P	P	08 18 32.1	-0.4
WMOK				pmax	pmax		
	comp=Z,21nm,0.4s						
WMOK	Wichita Mounta	65.90	332	P	P	08 18 31.9	-0.7
	baz=148,SNR=8.2						
CCM	Cathedral Cave	65.95	339	P	P	08 18 32.3	-0.4
	baz=156						
CCM	Cathedral Cave	65.95	339	P	P	08 18 32.3	-0.4
	baz=156,SNR=43						
CCM	Cathedral Cave	65.95	339	P	P	08 18 32.1	-0.6
OK025	Westminster Rd	66.01	333		P	08 18 32.5	-0.6
O49A	Covington	66.02	345	P	P	08 18 32.0	-1.1
	baz=163,SNR=5.8						
O49A				P	P	08 18 32.0	-1.1
	baz=163,SNR=5.8						
QSPA	South Pole Qui	66.07	180	P	P	08 18 34.4	+1.1
	comp=Z,34nm,0.5s,baz=318,slow=0.6,SNR=402						
	comp=Z,34nm,0.5s						
QSPA	South Pole Qui	66.07	180	P	P	08 18 33.9	+0.6
QSPA	South Pole Qui	66.07	180	P	P	08 18 34.5	+1.1
M55A	Ridgway	66.19	350	P	P	08 18 34.4	+0.2
	baz=168						
M55A				P	P	08 18 34.4	+0.2
	baz=168						
O48B	Farmland	66.28	345	P	P	08 18 33.6	-1.1
	baz=162,SNR=9.6						
O48B	Farmland	66.28	345	P	P	08 18 33.7	-1.1
	baz=162,SNR=9.6						
S39A	Bolivar	66.33	337	P	P	08 18 35.0	-0.1
	baz=154,SNR=39						
GDL2	Guadalupe Moun	66.47	326	P	P	08 18 36.6	+0.3
R40A	Maddies Statio	66.50	338	P	P	08 18 35.7	-0.5
R40A	Maddies Statio	66.50	338	P	P	08 18 35.5	-0.7
	baz=155,SNR=22						
BINY	Binghamton	66.53	353	P	P	08 18 36.7	+0.4
	baz=171						
ALLY	Alegheny Colle	66.59	349	P	P	08 18 36.9	+0.2
	baz=167						
MNTX	Cornudas Mount	66.61	325	P	P	08 18 36.6	-0.5
	baz=142,SNR=44						
MNTX	Cornudas Mount	66.61	325	P	P	08 18 36.9	-0.2
	baz=142,SNR=44						
L56A	Greenwood	66.67	351	P	P	08 18 37.7	+0.5
	baz=169						
L56A				P	P	08 18 37.7	+0.5
	baz=169						
N49A	Columbus Grove	66.69	346	P	P	08 18 36.7	-0.6
	baz=163,SNR=8.3						
N49A				P	P	08 18 36.7	-0.6
	baz=163,SNR=8.3						
T35B	Sooner Cattle	66.83	334	P	P	08 18 38.2	-0.1
	baz=151,SNR=10						
P43A	Skaggs, Pawnee	66.87	341	P	P	08 18 37.5	-1.0
	baz=158,SNR=9.2						
SFIN	Lafayette	66.88	343	P	P	08 18 37.0	-1.5
	baz=160,SNR=8.6						
SFIN	Lafayette	66.88	343	P	P	08 18 37.3	-1.3
	baz=160,SNR=8.6						
N47A	Urbana	67.00	345	P	P	08 18 38.0	-1.3
	baz=161,SNR=9.2						
N47A				P	P	08 18 38.0	-1.3
	baz=161,SNR=9.2						
ERPA	Erie	67.02	349	P	P	08 18 39.4	+0.1
	baz=167						
O44A	Mansfield	67.04	342	P	P	08 18 37.8	-1.7
	baz=159,SNR=7.3						
MSTX	Muleshoe	67.10	328	P	P	08 18 40.0	-0.2
MSTX	Muleshoe	67.10	328	P	P	08 18 40.4	+0.2
	baz=145,SNR=25						
MSTX	Muleshoe	67.10	328	P	P	08 18 40.5	+0.2
	baz=145,SNR=25						
AMTX	Amarillo	67.33	329	P	P	08 18 41.6	0.0
	baz=146						
P40A	Paris	67.55	339	P	P	08 18 42.1	-0.6
	baz=155,SNR=23						
NOKA	Waynoka	67.58	333	P	P	08 18 43.1	+0.1
HDIL	Hopedale	67.65	342	P	P	08 18 42.2	-1.2
	baz=158,SNR=18						
HDIL	Hopedale	67.65	342	P	P	08 18 42.4	-0.9
	baz=158,SNR=18						
L48A	N Adams	67.72	346	P	P	08 18 42.8	-0.9
	baz=163,SNR=6.2						
L48A				P	P	08 18 42.8	-0.9
	baz=163,SNR=6.2						
DBIC	Dimbokro	67.75	71	P	P	08 18 43.8	-0.8
	comp=Z,7.2nm,0.6s,baz=243,slow=4.9,SNR=12						
	comp=Z,7.2nm,0.6s						
DBIC	Dimbokro	67.75	71	P	P	08 18 43.6	-1.0
P38A	Dawn	68.13	338	P	P	08 18 46.2	-0.2
	baz=154,SNR=26						
N41A	Harden Midland	68.25	341	P	P	08 18 46.3	-0.9
N41A	Harden Midland	68.25	341	P	P	08 18 46.2	-0.9
	baz=156,SNR=15						
121A	Cookes Peak, D	68.54	324	P	P	08 18 50.9	+1.6
	baz=140,SNR=20						
121A	Cookes Peak, D	68.54	324	P	P	08 18 51.0	+1.6
	baz=140,SNR=20						
KSU1	Kansas State U	68.77	336	P	P	08 18 49.9	-0.5
	baz=151,SNR=8.6						
LONY	Lake Ozonia	68.78	354	P	P	08 18 50.8	+0.5
	baz=172						
R32A	Long Quarter,	69.01	334	P	P	08 18 51.7	-0.2
R32A	Long Quarter,	69.01	334	P	P	08 18 52.1	+0.1
	baz=149,SNR=13						
N38A	Joes South For	69.08	339	P	P	08 18 51.7	-0.5
	baz=154,SNR=9.6						
L42A	Oliver, Polo	69.09	342	P	P	08 18 50.8	-1.5
L42A				IAmb	IAmb	08 18 52.3	
	comp=Z,39nm,0.7s						
L42A	Oliver, Polo	69.09	342	P	P	08 18 51.5	-0.8
	baz=158,SNR=11						
PKME	Peaks-Kenny Pk	69.10	358	P	P	08 18 52.9	+0.6
	baz=178						
Y22A	Socorro	69.19	325	P	P	08 18 54.8	+1.5
	baz=141,SNR=5.8						
Y22D	IRIS PASSCAL I	69.27	325	P	P	08 18 52.7	-1.1
	baz=141						
Y22F	Passcal Instru	69.27	325	P	P	08 18 52.8	-1.0
	baz=141						
K43A	Burlington	69.38	343	P	P	08 18 53.5	-0.5
	baz=159,SNR=9.7						
L40A	Anamosa	69.60	341	P	P	08 18 54.7	-0.7
	baz=156,SNR=23						
ANMO	Albuquerque	69.71	326	P	P	08 18 57.6	+1.1
	comp=Z,22nm,0.8s,baz=229,slow=6.4,SNR=87						
	comp=Z,22nm,0.8s						
ANMO	Albuquerque	69.71	326	P	P	08 18 57.2	+0.7
ANMO				IAmb	IAmb	08 18 58.8	
	comp=Z,30nm,0.9s						
ANMO	Albuquerque	69.71	326	P	P	08 18 57.5	+1.1
	baz=142						
ANMO	Albuquerque	69.71	326	P	P	08 18 57.8	+1.3
	baz=142,SNR=43						
ANMO	Albuquerque	69.71	326	P	P	08 18 57.6	+1.1
CBKS	Cedar Bluff	69.76	333	P	P	08 18 57.2	+0.7
	baz=148,SNR=11						
CBKS	Cedar Bluff	69.76	333	P	P	08 18 57.4	+0.8
	baz=148,SNR=11						
N35A	Tabor	69.97	337	P	P	08 18 57.2	-0.5
	baz=152,SNR=6.0						
TUC	Tucson	70.04	321	P	P	08 18 59.6	+1.1
	baz=138						
TUC	Tucson	70.04	321	P	P	08 18 59.8	+1.3
SCIA	State Center	70.08	339	P	P	08 18 58.0	-0.3
	baz=154						
JFWS	Jewell Farm	70.10	342	P	P	08 18 58.2	-0.2
	baz=157,SNR=21						
TRQ	Mont Tremblant	70.36	354	P	P	08 18 59.7	-0.3
T25A	Trinidad	70.45	329	P	P	08 19 02.2	+1.2
	baz=144,SNR=25						
GLMI	Grayling	70.51	347	P	P	08 19 00.5	-0.3
	baz=163						
K38A	Parkersburg	70.61	340	P	P	08 19 00.8	-0.7
	baz=155,SNR=6.9						
I42A	Draeger Farm,	70.64	343	P	P	08 19 01.5	-0.2
	baz=159,SNR=9.7						
214A	Organ Pipe Nat	70.96	320	P	P	08 19 04.3	+0.3
214A				IAmb	IAmb	08 19 06.8	
	comp=Z,76nm,1.6s						
214A	Organ Pipe Nat	70.96	320	P	P	08 19 05.6	+1.6
	baz=136,SNR=26						
PIX	Pinacate	71.07	319	P	P	08 19 04.9	+0.4
I40A	Norwalk	71.11	342	P	P	08 19 04.0	-0.5
	baz=157,SNR=9.1						
KSCO	Kaye Shedlock’	71.16	331	P	P	08 19 06.2	+1.1
	baz=146,SNR=9.7						
KSCO	Kaye Shedlock’	71.16	331	P	P	08 19 06.2	+1.1
	baz=146,SNR=9.7						
L34A	Svendsen Farm,	71.20	337	P	P	08 19 05.0	-0.1
	baz=152,SNR=5.5						
BGNE	Belgrade	71.36	336	P	P	08 19 06.5	+0.4
	baz=150,SNR=7.9						
BGNE	Belgrade	71.36	336	P	P	08 19 06.5	+0.4
	baz=150,SNR=7.9						
SDCO	Great Sand Dun	71.45	329	P	P	08 19 07.7	+0.6
SDCO	Great Sand Dun	71.45	329	P	P	08 19 08.3	+1.3
	baz=143,SNR=38						
W18A	Petrified Fore	71.56	324	P	P	08 19 09.1	+1.4
	baz=139,SNR=6.7						
E46A	Sault Ste Mari	71.92	347	P	P	08 19 09.0	-0.3
	baz=163,SNR=10						
I37B	Waseca	72.04	340	P	P	08 19 09.9	-0.2
	baz=155,SNR=19						
S22A	4UR Ranch, Cre	72.09	328	P	P	08 19 12.1	+1.1
	baz=142,SNR=17						
Q24A	Divide	72.26	330	P	P	08 19 13.0	+1.1
	baz=144,SNR=13						
G40A	Rib Lake	72.26	343	P	P	08 19 10.9	-0.5
	baz=158,SNR=6.5						
VTX	Valle De La Tr	72.36	317	P	P	08 19 13.6	+1.2
E43A	Lone Tree Farm	72.50	346	P	P	08 19 12.1	-0.6
	baz=161,SNR=5.3						
MVCO	Mesa Verde	72.51	326	P	P	08 19 13.8	+0.5
MVCO				IAmb	IAmb	08 19 15.7	
	comp=Z,101nm,1.6s						
MVCO	Mesa Verde	72.51	326	P	P	08 19 14.5	+1.2
	baz=141,SNR=27						
OGNE	Ogallala	72.51	333	P	P	08 19 13.8	+0.7
	baz=147,SNR=6.6						
OGNE	Ogallala	72.51	333	P	P	08 19 14.1	+1.0
	baz=147,SNR=6.6						
WUAZ	Wupatki	72.74	323	P	P	08 19 15.7	+1.0
WUAZ				IAmb	IAmb	08 19 17.4	
	comp=Z,40nm,0.9s						
WUAZ	Wupatki	72.74	323	P	P	08 19 16.3	+1.6
	baz=138,SNR=31						
ECSD	EROS Data Cent	72.84	338	P	P	08 19 14.3	-0.5
ECSD				IAmb	IAmb	08 19 15.7	
	comp=Z,70nm,1.2s						
ECSD	EROS Data Cent	72.84	338	P	P	08 19 14.6	-0.2
	baz=152,SNR=28						
ECSD	EROS Data Cent	72.84	338	P	P	08 19 15.0	+0.2
	baz=152,SNR=28						
ESJX	Sierra Juarez	72.89	318	P	P	08 19 16.3	+0.7
GLA	Glamis	72.94	319	P	P	08 19 17.3	+1.6
	baz=135,SNR=9.8						
SPMN	Marine on St.	72.95	341	P	P	08 19 14.9	-0.5
	baz=155,SNR=7.2						
SPMN	Marine on St.	72.95	341	P	P	08 19 14.9	-0.5
	baz=155,SNR=7.2						
ISCO	Idaho Springs	73.14	330	P	P	08 19 18.2	+1.1
	baz=143,SNR=19						
PDMCI	Parker Dam,Lak	73.42	321	P	P	08 19 19.7	+1.3
	baz=136						
IKP	In-Ko-Pah, Jac	73.43	318	P	P	08 19 20.2	+1.5
	baz=134,SNR=8.1						
SWSC	Sam W. Stewart	73.45	319	P	P	08 19 20.2	+1.6
	baz=134,SNR=6.9						
D41A	Chassel	73.51	345	P	P	08 19 19.0	+0.3
	baz=159,SNR=10.0						
BC3	Big Chuckawall	73.73	319	P	P	08 19 21.7	+1.3
	baz=135,SNR=32						
F36A	Milaca	73.75	341	P	P	08 19 18.7	-1.4
F36A				IAmb	IAmb	08 19 20.5	
	comp=Z,46nm,0.8s						
F36A	Milaca	73.75	341	P	P	08 19 19.6	-0.5
	baz=155,SNR=29						
MONP2	Monument Peak	73.79	318	P	P	08 19 22.4	+1.5
	baz=134,SNR=9.7						
E38A	The Farm, Brul	73.86	343	P	P	08 19 20.1	-0.6
	baz=157,SNR=9.2						
IRM	Iron Mountain	73.90	320	P	P	08 19 22.7	+1.4
	baz=135,SNR=23						
U15A	North Rim	73.92	323	P	P	08 19 22.8	+1.1
NEE2	Needles Airpor	74.03	321	P	P	08 19 23.3	+1.3
	baz=135						
N23A	Red Feather La	74.17	330	P	P	08 19 24.0	+0.9
N23A	Red Feather La	74.17	330	P	P	08 19 24.3	+1.3
	baz=143,SNR=13						
109C	Camp Elliot, M	74.20	318	P	P	08 19 24.1	+1.1
	baz=133						
SUSD	Miller	74.28	337	P	P	08 19 23.1	-0.1
	baz=150						
BELC	Belle Mtn. Jos	74.30	319	P	P	08 19 25.3	+1.6

	baz=134,SNR=12						
TPFO	Pinon Flats	74.30	319	P	P	08 19 25.2	+1.4
	baz=134,SNR=14						
PFO	Pinyon Flats O	74.31	319	P	P	08 19 24.7	+0.9
	comp=Z,19nm,1.0s,baz=123,slow=4.8,SNR=30						
	comp=Z,19nm,1.0s						
PFO	Pinyon Flats O	74.31	319	*i* P	P	08 19 24.2	+0.4
PFO				pmax	pmax		
	comp=Z,31nm,0.9s						
PFO	Pinyon Flats O	74.31	319	P	P	08 19 25.3	+1.5
	baz=134,SNR=14						
VNDA	Vanda	74.59	190	P	P	08 19 26.1	+1.5
	comp=Z,10nm,1.0s,baz=128,slow=2.2,SNR=9.0						
	comp=Z,10nm,1.0s						
F33A	5 Mile Ranch,	74.59	339	P	P	08 19 24.6	-0.4
	baz=152,SNR=11						
O20A	White River Ci	74.64	328	P	P	08 19 27.1	+1.4
	baz=141,SNR=22						
GMRC	Granite Mounta	74.64	320	P	P	08 19 27.4	+1.7
	baz=135,SNR=25						
MURC	Murrieta	74.74	318	P	P	08 19 27.6	+1.5
	baz=133,SNR=10						
ELS	Elsinore Mount	74.92	318	P	P	08 19 28.1	+0.8
ELS				IAmb	IAmb	08 19 29.7	
	comp=Z,34nm,0.8s						
BBRC	Big Bear Solar	75.03	319	P	P	08 19 29.9	+1.8
	baz=134,SNR=8.9						
HEC	Hector,Ludlow	75.07	320	P	P	08 19 30.0	+1.8
	baz=134,SNR=26						
EYMN	Ely	75.08	343	P	P	08 19 27.1	-0.6
	baz=157,SNR=7.4						
EYMN	Ely	75.08	343	P	P	08 19 27.0	-0.7
	baz=157,SNR=7.4						
TUQ	Turquoise Moun	75.25	320	P	P	08 19 30.8	+1.6
	baz=135,SNR=7.0						
CIS	Catalina Islan	75.36	317	P	P	08 19 31.1	+1.4
	baz=132						
BFSC	Mount Baldy Ra	75.46	318	P	P	08 19 31.6	+1.2
	baz=133,SNR=8.9						
FMP	Fort Macarthur	75.49	318	P	P	08 19 31.8	+1.4
	baz=133						
RRX	Edison Barstow	75.50	319	P	P	08 19 32.2	+1.8
	baz=134						
GSC	Goldstone, Bar	75.68	320	P	P	08 19 33.2	+1.7
	baz=134,SNR=19						
SHOC	Shoshone, Teco	75.78	321	P	P	08 19 33.4	+1.3
	baz=134						
K22A	Casper	75.84	331	P	P	08 19 33.5	+1.1
	baz=143,SNR=11						
K22A	Casper	75.84	331	P	P	08 19 33.8	+1.4
	baz=143,SNR=11						
DECC	Green Verdugo	75.88	318	P	P	08 19 34.2	+1.5
	baz=133						
SNCC	San Nicolas Is	75.94	317	P	P	08 19 33.8	+0.8
	baz=132						
RSSD	Black Hills	75.97	333	P	P	08 19 33.6	+0.4
RSSD	Black Hills	75.97	333	P	P	08 19 33.6	+0.4
RSSD				pmax	pmax		
	comp=Z,20nm,1.0s						
RSSD	Black Hills	75.97	333	P	P	08 19 33.8	+0.6
	baz=145						
RSSD	Black Hills	75.97	333	P	P	08 19 33.9	+0.8
	baz=145,SNR=18						
B35A	Bob, Littlefor	76.07	342	P	P	08 19 32.7	-0.6
B35A				IAmb	IAmb	08 19 34.0	
	comp=Z,56nm,0.7s						
B35A	Bob, Littlefor	76.07	342	P	P	08 19 33.0	-0.3
	baz=155,SNR=30						
EDW2	Edwards Air Fo	76.10	319	P	P	08 19 35.0	+1.1
	baz=133,SNR=9.0						
BSUT	Blindstream Ca	76.18	327	P	P	08 19 35.9	+1.2
GWY	Greenwater Val	76.21	321	P	P	08 19 35.1	+0.5
GWY				IAmb	IAmb	08 19 36.9	
	comp=Z,33nm,0.9s						
LRMC	Laurel Mtn Rad	76.32	319	P	P	08 19 36.6	+1.4
	baz=133						
TPNV	Topopah Spring	76.50	321	P	P	08 19 38.2	+1.9
	baz=135,SNR=24						
SCZ2	Santa Cruz Isl	76.51	317	P	P	08 19 37.4	+1.2
	baz=132						
FURC	Furnace Creek,	76.52	321	P	P	08 19 37.9	+1.8
	baz=134,SNR=27						
TORD	Torodi Ar. Bea	76.53	69	P	P	08 19 36.2	-0.5
	comp=Z,16nm,0.5s,baz=253,slow=5.1,SNR=132						
	comp=Z,16nm,0.5s						
TORD	Torodi Ar. Bea	76.53	69	P	P	08 19 35.5	-1.2
MPMC	Manual Prospec	76.60	320	P	P	08 19 37.9	+1.0
	baz=134,SNR=14						
WCT	Wildcat Mounta	76.61	321	P	P	08 19 37.8	+1.0
AGMN	Agassiz Nation	76.64	341	P	P	08 19 36.5	0.0
	baz=153,SNR=16						
E28A	Huff	76.74	337	P	P	08 19 37.8	+0.6
	baz=149,SNR=8.8						
ARVC	Arvin	76.77	318	P	P	08 19 38.8	+1.2
	baz=132						
SPR3	Spring Creek 3	76.89	324	P	P	08 19 39.3	+0.6
SPR3				IAmb	IAmb	08 19 40.9	
	comp=Z,68nm,1.5s						
ISA	Isabella, Lake	76.92	319	P	P	08 19 40.1	+1.6
	baz=133,SNR=7.7						
DUG	Dugway, Tooele	76.97	326	P	P	08 19 40.1	+1.3
	baz=138,SNR=21						
R11A	Troy Canyon, C	77.11	323	P	P	08 19 40.8	+1.1
R11A				IAmb	IAmb	08 19 42.7	
	comp=Z,48nm,1.4s						
R11A	Troy Canyon, C	77.11	323	P	P	08 19 41.4	+1.7
	baz=135,SNR=39						
GRAC	Grapevine Rang	77.18	321	P	P	08 19 41.5	+1.6
	baz=134,SNR=9.6						
Q12A	Willow Creek R	77.19	324	P	P	08 19 41.4	+1.3
Q12A				IAmb	IAmb	08 19 42.6	
	comp=Z,38nm,1.0s						
CWC	Cottonwood Cre	77.21	320	P	P	08 19 41.7	+1.5
	baz=133						
PKM	Mcpherson Peak	77.21	318	P	P	08 19 41.9	+1.6
	baz=132,SNR=17						
BW06	Boulder Array	77.31	329	P	P	08 19 41.4	+0.6
	baz=141,SNR=15						
PDAR	Pinedale Array	77.31	329	P	P	08 19 41.2	+0.5
	comp=Z,4.7nm,0.6s,baz=132,slow=7.7,SNR=62						
	comp=Z,4.7nm,0.6s						
HWUT	Hardware Ranch	77.39	327	P	P	08 19 41.1	0.0
VES	Vestal, Richgr	77.40	319	P	P	08 19 42.4	+1.3
	baz=132,SNR=25						
MDND	Maddock	77.45	338	P	P	08 19 41.8	+0.7
	baz=150,SNR=12						
MDND	Maddock	77.45	338	P	P	08 19 41.8	+0.7
	baz=150,SNR=12						
SMMC	Simmler	77.61	318	P	P	08 19 44.0	+1.7
	baz=132,SNR=9.2						
SPUT	South Promonto	77.61	327	P	P	08 19 42.8	+0.5
SPUT				IAmb	IAmb	08 19 44.5	
	comp=Z,119nm,1.7s						
TIN	Tinemaha, Big	77.72	320	P	P	08 19 44.6	+1.6
	baz=133,SNR=5.0						
VOG	Valley Oaks Go	77.90	319	P	P	08 19 44.0	+0.1
	baz=132						
HVU	Hansel Valley	78.12	327	P	P	08 19 45.0	-0.2
HVU	Hansel Valley	78.12	327	P	P	08 19 45.0	-0.2
HVU				pmax	pmax		
	comp=Z,17nm,0.8s						
ULM	Lac du Bonnet	78.38	341	P	P	08 19 45.9	-0.3
	comp=Z,31nm,0.6s,baz=152,slow=5.8,SNR=47						
	comp=Z,31nm,0.6s						
ULM	Lac du Bonnet	78.38	341	P	P	08 19 45.6	-0.6
ULM				IAmb	IAmb	08 19 46.4	
	comp=Z,36nm,0.6s						
ELK	Elko	78.64	325	P	P	08 19 48.9	+0.7
	comp=Z,17nm,1.0s,baz=143,slow=3.7,SNR=36						
	comp=Z,17nm,1.0s						
SCHQ	Schefferville	78.64	0	P	P	08 19 47.1	-0.4
	comp=Z,8.8nm,0.6s,baz=189,slow=4.0,SNR=39						
	comp=Z,8.8nm,0.6s						
SCHQ	Schefferville	78.64	0	P	P	08 19 46.6	-0.9
NVAR	Mina Array Bea	78.70	321	P	P	08 19 49.6	+1.1
	comp=Z,5.0nm,0.7s,baz=150,slow=6.3,SNR=47						
	comp=Z,5.0nm,0.7s						
FLWY	Flagg Ranch	78.85	329	P	P	08 19 50.4	+1.2
LAO	LASA Array	78.95	334	P	P	08 19 50.1	+0.7
	baz=144,SNR=20						
RLMT	Red Lodge	79.00	331	P	P	08 19 50.7	+0.7
RLMT	Red Lodge	79.00	331	P	P	08 19 51.1	+1.2
	baz=141,SNR=22						
KVN	Kaiserville	79.01	322	P	P	08 19 50.5	+0.4
KVN				IAmb	IAmb	08 19 52.1	
	comp=Z,34nm,0.9s						
KVN	Kaiserville	79.01	322	P	P	08 19 50.5	+0.4
KVN				pmax	pmax		
	comp=Z,34nm,0.9s						
H17A	Grant Village	79.03	330	P	P	08 19 52.1	+1.9
	baz=140,SNR=7.8						
DGMT	Dagmar	79.62	336	P	P	08 19 54.1	+1.2
	baz=146,SNR=33						
DGMT	Dagmar	79.62	336	P	P	08 19 54.2	+1.2
	baz=146,SNR=33						
GCMT	Greycliff	79.70	331	P	P	08 19 53.7	+0.1
PAHR	Pah Rah Range	80.19	322	P	P	08 19 57.1	+0.8
PAHR				IAmb	IAmb	08 19 58.9	
	comp=Z,53nm,1.0s						
HLID	Hailey	80.25	327	P	P	08 19 58.4	+1.7
	baz=137,SNR=67						
BOZ	Bozeman (W)	80.44	330	P	P	08 19 58.3	+0.7
	baz=139,SNR=6.8						
BOSA	Boshof	80.59	117	P	P	08 19 59.2	+0.2
	comp=Z,14nm,0.5s,baz=259,slow=4.1,SNR=37						
	comp=Z,14nm,0.5s						
MAW	Mawson	81.28	163	P	P	08 20 02.4	+0.8
	comp=Z,49nm,0.9s,baz=228,slow=6.8,SNR=9.4						
	comp=Z,49nm,0.9s						
EGMT	Eagleton	81.47	333	P	P	08 20 03.3	+0.3
	baz=141,SNR=21						
PLID	Pearl Lake	82.14	327	P	P	08 20 06.7	0.0
PLID				IAmb	IAmb	08 20 08.6	
	comp=Z,43nm,0.8s						
MSO	Missoula	82.42	330	P	P	08 20 09.0	+1.1
	baz=138,SNR=11						
PCVE	Castro Verde	82.65	43	*e*P	P	08 20 10.4	+1.2
MESJ	Messejana	82.66	43	*e*P	P	08 20 10.4	+1.1
PMTG	Montargil	83.42	42	*e*P	P	08 20 13.9	+0.8
YBH	Yreka Blue Hor	83.42	321	P	P	08 20 12.5	-0.6
	comp=Z,7.4nm,0.8s,baz=103,slow=2.2,SNR=16						
	comp=Z,7.4nm,0.8s						
PBAR	Barrancos	83.61	43	*e*P	P	08 20 14.8	+0.7
J04A	Umpqua Nationa	84.07	323	P	P	08 20 17.0	+0.4
J04A				IAmb	IAmb	08 20 18.2	
	comp=Z,32nm,0.7s						
PMRV	Marv??o	84.15	42	*e*P	P	08 20 17.4	+0.6
PCBR	Castelo Branco	84.35	42	*e*P	P	08 20 18.5	+0.7
DBO	Dodson Butte	84.62	322	P	P	08 20 19.8	+0.6
DBO				IAmb	IAmb	08 20 21.4	
	comp=Z,77nm,1.5s						
PVIS	Viseu	84.64	41	*e*P	P	08 20 19.3	0.0
MTE	Manteigas	84.65	41	*e*P	P	08 20 20.0	+0.6
NEW	Newport	84.95	329	P	P	08 20 20.4	-0.3
	baz=135,SNR=6.2						
PVRL	Vila Real	85.09	41	*e*P	P	08 20 22.3	+0.8
POLO	Lamas de Olo	85.10	40	*e*P	P	08 20 22.1	+0.4
PCAB	Cabril	85.17	40	*e*P	P	08 20 22.4	+0.5
PGAV	Gavieira, Arco	85.19	40	*e*P	P	08 20 22.3	+0.2
MVO	Moncorvo	85.43	41	*e*P	P	08 20 23.9	+0.6
MVO				A	A	08 20 24.5	
	comp=Z,31nm,0.9s						
FCC	Fort Churchill	85.61	346	P	P	08 20 23.6	+0.1
FCC				IAmb	IAmb	08 20 24.8	
	comp=Z,47nm,0.8s						
FCC	Fort Churchill	85.61	346	P	P	08 20 23.6	+0.1
FCC				pmax	pmax		
	comp=Z,47nm,0.9s						
LTY	Liberty	85.98	327	P	P	08 20 25.8	0.0
LTY				IAmb	IAmb	08 20 27.1	
	comp=Z,86nm,1.7s						
PBRG	Braganca	85.99	41	*e*P	P	08 20 26.5	+0.5
PAB	San Pablo	86.11	43	P	P	08 20 27.2	+0.6
PAB				IAmb	IAmb	08 20 28.3	
	comp=Z,34nm,1.2s						
PAB	San Pablo	86.11	43	P	P	08 20 27.3	+0.6
PAB				pmax	pmax		
	comp=Z,34nm,1.2s						
ESDC	Sonseca Array	86.43	44	P	P	08 20 28.7	+0.5
	comp=Z,5.8nm,0.8s,baz=243,slow=4.6,SNR=24						
	comp=Z,5.8nm,0.8s						
ESDC	Sonseca Array	86.43	44	P	P	08 20 28.5	+0.3
ESDC				IAmb	IAmb	08 20 30.1	
	comp=Z,53nm,1.9s						
CASY	Casey	89.85	179	P	P	08 20 45.1	+1.1
CASY				IAmb	IAmb	08 20 45.8	
	comp=Z,28nm,0.7s						
KEST	Kesra	93.42	52	P	P	08 21 01.0	-0.1
	comp=Z,4.7nm,0.8s,baz=297,slow=6.8,SNR=3.8						
	comp=Z,4.7nm,0.8s						
YKA	Yellowknife Ar	94.28	340	P	P	08 21 04.2	0.0
	comp=Z,12nm,0.7s,baz=133,slow=4.7,SNR=317						
YKA				PKiKP	PKiKP	08 25 46.3	-0.5
	comp=Z,0.2nm,0.7s,baz=128,slow=3.0,SNR=3.2						
YKA				PKKPbc	PKKPdf	08 38 03.8	-2.2
	baz=315,slow=3.0,SNR=4.1						
	comp=Z,12nm,0.7s						
YKA	Yellowknife Ar	94.28	340	P	P	08 21 03.5	-0.7
KOTAN	Kotaneelee Air	95.97	335	P	P	08 21 12.6	+0.6
	baz=130						
T35M	Bob Quinn	96.66	330	P	P	08 21 15.8	+0.6
	baz=125						
DLBC	Dease Lake	97.39	332	P	Pdif	08 21 19.2	+0.7
	baz=125						
S34M	Telegraph Cree	97.58	331	P	Pdif	08 21 20.1	+0.7
	baz=124						
WTLY	Watson Lake, Y	97.84	334	P	Pdif	08 21 21.2	+0.7
	baz=126						
R32K	Eaglecrest	99.29	330	P	Pdif	08 21 27.9	+1.0
	baz=121						
P33M	Teslin, Yukon	99.56	332	P	Pdif	08 21 28.9	+0.6
	baz=122						
P32M	Atlin	99.62	332	P	Pdif	08 21 28.8	+0.4
	baz=122						
S31K	Pelican	99.91	330	P	Pdif	08 21 29.5	-0.2
	baz=120						
FARO	Faro, Yukon	100.85	334	P	Pdif	08 21 34.0	+0.1
	baz=122						
N31M	Braeburn, Yuko	101.46	333	P	Pdif	08 21 37.8	+1.2
	baz=120						
GERES	GERESS Array B	101.92	42	PKiKP	PKiKP	08 26 00.8	-0.1
	comp=Z,0.5nm,0.6s,baz=253,slow=1.0,SNR=2.7						
N30M	Aishikik Lake	102.00	332	P	Pdif	08 21 40.4	+1.4
	baz=118						
M30M	Minto, Yukon	102.41	334	P	Pdif	08 21 41.2	+0.4
	baz=118						
CLL	Collm	102.47	39	*e*Pdif	Pdif	08 21 44.0	+2.8
M29M	Somme Creek	103.04	333	P	Pdif	08 21 44.2	+0.5
	baz=117						
L29M	L29M	103.21	334	P	Pdif	08 21 45.3	+0.9
	baz=117						
K29M	Barlow Dome	103.30	335	P	Pdif	08 21 45.3	+0.4
	baz=118						
CTG	Chitna Glacier	103.61	331	P	Pdif	08 21 46.5	+0.2
	baz=115						
F31M	Tsiigehtchic	103.68	339	P	Pdif	08 21 46.7	+0.5
	baz=120						
A36M	Sachs Harbour	103.72	344	P	Pdif	08 21 46.2	-0.1
	baz=127						
INK	Inuvik	104.05	339	Pdiff	Pdif	08 21 47.9	0.0
	comp=Z,1.8nm,1.0s,baz=114,slow=4.6,SNR=5.0						
DAWY	Dawson	104.14	334	P	Pdif	08 21 48.0	-0.5
	baz=116						
EPYK	Eagle Plains	104.18	337	P	Pdif	08 21 48.0	-0.6
	baz=118						
I29M	Ogilvie Camp,	104.30	336	P	Pdif	08 21 49.6	+0.5
	baz=117						
M27K	Edge Creek, AK	104.43	332	P	Pdif	08 21 50.3	+0.4
	baz=114						
L27K	Beaver Creek,	104.70	333	P	Pdif	08 21 51.1	+0.2
	baz=114						
ILAR	Eielson Array	107.41	334	PKiKP	PKiKP	08 26 10.1	-0.3
	comp=Z,0.2nm,0.4s,baz=181,slow=0.4,SNR=4.5						
F25K	Christian Rive	107.89	337	P	PKiKP	08 26 11.4	0.0
	baz=110						
E25K	Arctic Village	108.04	337	P	PKiKP	08 26 11.3	-0.3
	baz=110						
H24K	Noodor Dome	108.15	335	P	PKiKP	08 26 11.5	-0.3
	baz=108						
I23K	Minto, Yukon-K	108.53	334	P	PKiKP	08 26 13.4	+1.0
	baz=107						
D25K	Kavik River	108.71	338	P	PKiKP	08 26 12.9	+0.1
	baz=108						
E24K	Your Creek	109.06	337	P	PKiKP	08 26 13.2	-0.3
	baz=107						
CAST	Castle Rocks	109.19	332	P	PKiKP	08 26 13.2	-0.6
	baz=105						
G23K	Bananza Creek	109.24	335	P	PKiKP	08 26 14.1	+0.2
	baz=106						
O19K	Port Alsworth	109.37	328	P	PKiKP	08 26 14.1	-0.1
	baz=105						
CHUM	Lake Minchumin	109.41	332	P	PKiKP	08 26 12.8	-1.4
	baz=105						
COLD	Coldfoot	109.45	336	P	PKiKP	08 26 14.6	+0.5
	baz=106						
E23K	Chandalar	109.47	337	P	PKiKP	08 26 14.0	-0.4
	baz=106						
H22K	Ishtalitna Cre	109.55	334	P	PKiKP	08 26 13.7	-0.8
	baz=105						
I21K	Tanana	109.61	333	P	PKiKP	08 26 13.1	-1.3
	baz=105						
C24K	Franklin Bluff	109.61	339	P	PKiKP	08 26 14.6	+0.2
	baz=106						
H21K	Melozitna Rive	110.06	334	P	PKiKP	08 26 15.6	+0.2
	baz=104						
E22K	Anaktuvuk Pass	110.28	337	P	PKiKP	08 26 15.3	-0.5
	baz=104						
G21K	Allakaket	110.54	335	P	PKiKP	08 26 16.3	+0.1
	baz=103						
F21K	Alatna River	110.69	335	P	PKiKP	08 26 16.1	-0.5
	baz=103						
TTA	Tatalina	110.80	331	P	PKiKP	08 26 17.3	+0.4
	baz=102						
P16K	Nushagak River	110.92	326	P	PKiKP	08 26 16.7	-0.4
	baz=102						
GCSA	Galena City Sc	111.54	333	P	PKiKP	08 26 18.3	+0.2
	baz=101						
AKASG	Malin Array Be	112.07	43	PKiKP	PKiKP	08 26 18.9	-0.7
	comp=Z,1.8nm,0.4s,baz=262,slow=2.7,SNR=17						
AKASG				PKKPbc	PKKPbc	08 37 11.8	-1.2
	comp=Z,0.2nm,0.2s,baz=53,slow=3.7,SNR=4.3						
AKBB	Malin Array Si	112.07	43*c*	*i* PKIKP	PKiKP	08 26 19.6	0.0
A21K	Barrow	112.55	340	P	PKiKP	08 26 20.1	+0.2
	baz=98						
BRTR	Keskin Array B	112.81	55	PKiKP	PKiKP	08 26 21.5	-0.1
	comp=Z,1.4nm,0.7s,baz=192,slow=4.7,SNR=7.5						
RDOG	Red Dog Mine	114.38	336	P	PKPdf	08 26 23.2	-0.3
	baz=94						
ANM	Nome	115.14	332	P	PKiKP	08 26 25.1	0.0
	baz=93						
TNA	Tin City	116.26	333	P	PKPdf	08 26 26.8	-0.3
	baz=91						
OBN	Obninsk	117.06	39⇓	*i* PKIKP	PKPdf	08 26 28.4	-0.6
OBN				SS	SS	08 43 45.0	+8.9
OBN				SSS	SSS	08 47 56.0	
OBN				pmax	pmax		
	comp=Z,16nm,0.6s						
KLMR	Klimovskoe	118.74	32	*e*PKPdf	PKPdf	08 26 30.3	-1.8
KLMR				AMP		08 26 32.8	
	comp=Z,11nm,0.9s						
KLMR	Klimovskoe	118.74	32	*e*PKIKP	PKPdf	08 26 30.3	-1.8
KLMR				pmax	pmax		
	comp=Z,11nm,0.9s						
SHA1	Shidzhatmaz	120.11	52	*i* PKIKP	PKPdf	08 26 35.1	-0.5
KIV	Kislovodsk	120.16	52	*e*PKIKP	PKPdf	08 26 34.9	-0.6
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KBZ	Khabaz	120.29	52	PKP	PKiKP	08 26 35.7	0.0
	comp=Z,5.0nm,0.8s,baz=233,slow=2.7,SNR=13						
ZEI	Tsey	120.93	53	*i* PKIKP	PKPdf	08 26 36.8	-0.4
ZEI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GNI	Garni	121.29	56*c*	*i* PKIKP	PKiKP	08 26 39.5	+1.5
GNI				pmax	pmax		
	comp=Z,18nm,2.5s						
BELG	Belogornoye	123.62	42	*i* PKIKP	PKPdf	08 26 41.0	-0.7
BILL	Bilibino	125.64	338*c*	*i* PKIKP	PKiKP	08 26 45.4	-0.2
BILL						08 28 41.0	
BILL				PS	PS	08 38 49.0	+5.7
BILL				PPS	PPS	08 40 23.0	
BILL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ASAR	Alice Springs	128.38	205	PKP	PKPdf	08 26 51.6	-0.3
	comp=Z,9.2nm,0.7s,baz=144,slow=2.0,SNR=66						
ASAR				SKPbc	SKiKP	08 29 53.5	-18
	comp=Z,0.3nm,0.4s,baz=149,slow=3.5,SNR=4.9						
ARU	Arti	129.23	36	*i* PKIKP	PKiKP	08 26 53.0	-0.1
ARU						08 29 02.7	
ARU				SS	SS	08 46 02.5	-7.1
WRA	Warramunga Arr	131.55	207	PKP	PKPdf	08 26 58.0	0.0
	comp=Z,6.5nm,0.5s,baz=156,slow=1.8,SNR=6.2						
WRA				SKPbc	SKPbc	08 30 05.6	-1.2
	comp=Z,3.2nm,0.8s,baz=154,slow=3.8,SNR=11						
WRA	Warramunga Arr	131.55	207	PKIKP	PKPdf	08 26 58.0	0.0
GEYT	Alibeck	131.56	60	PKP	PKPdf	08 26 57.8	+0.4
	comp=Z,2.3nm,0.6s,baz=251,slow=17,SNR=4.0						
NRIK	Noril'sk	132.27	12	PKP	PKPdf	08 26 58.2	+0.4
	comp=Z,1.3nm,0.3s,baz=293,slow=7.0,SNR=4.3						
SEY	Seymchan	133.24	337	PKP	PKiKP	08 27 00.3	-0.6
	comp=Z,8.0nm,0.6s,baz=98,slow=3.7,SNR=16						
SEY				PP	PP	08 29 26.9	-1.9
	comp=Z,1.7nm,0.7s,baz=66,slow=4.2,SNR=5.8						
PETK	Petropavlovsk-	135.77	323	PKP	PKPdf	08 27 05.2	+0.5
	comp=Z,7.6nm,0.8s,baz=186,slow=2.9,SNR=10						
MA2	Magadan	135.89	333	PKP	PKPdf	08 27 04.9	+0.1
	comp=Z,4.6nm,0.6s,baz=46,slow=4.6,SNR=4.9						
BRVK	Borovoye	136.77	37	*i* PKIKP	PKPdf	08 27 07.1	+0.5
BRZS	Berezniki	139.42	40	*i* PKP	PKPdf	08 27 11.5	-0.2
	baz=40						
BRZS	Berezniki	139.42	40	*i* PKIKP	PKPdf	08 27 11.4	-0.2
BTLS	Baital	142.16	47	*e*PKP	PKPdf	08 27 15.7	-1.1
	baz=47						
BTLS	Baital	142.16	47	*e*PKIKP	PKPdf	08 27 15.6	-1.1
KURK	Kurchatov	142.43	36	*i* PKIKP	PKPdf	08 27 16.8	-0.2
AML	Almayashu	142.82	51	P	PKPdf	08 27 15.5	-3.0
	SNR=11						
USP	Ospenovka	143.05	49	P	PKPbc	08 27 15.9	+0.1
	SNR=5.5						
SGDS	Sogindy	143.08	49	*e*PKP	PKPbc	08 27 17.1	+1.2
	baz=49						
SGDS	Sogindy	143.08	49	*e*PKIKP	PKPbc	08 27 17.1	+1.2
AAK	Ala-Archa	143.24	50	*i* PKIKP	PKPbc	08 27 17.2	+0.7
UCH	Uchtor	143.38	51	P	PKPbc	08 27 16.9	-0.4
	SNR=10						
ZALV	Zalesovo Beam	143.47	28	PKhKP	PKPpre	08 27 16.6	
	comp=Z,30nm,0.6s,baz=305,slow=4.2,SNR=30						
ZALV				SKPbc	SKPbc	08 30 39.6	-0.8
	comp=Z,2.1nm,0.8s,baz=270,slow=1.5,SNR=3.6						
KBK	Karagaybulak	143.56	50	P	PKPbc	08 27 18.2	+0.8
	SNR=6.9						
TKM2	Tokmak 2	143.93	49	P	PKPbc	08 27 18.9	+0.4
	SNR=15						
KUU	Kurty	144.10	48	*e*PKP	PKPbc	08 27 18.9	+0.2
	baz=48						
KUU	Kurty	144.10	48	*e*PKIKP	PKPbc	08 27 18.8	+0.1
CHKK	Chushkaly	144.55	47	*e*PKP	PKPbc	08 27 20.0	-0.1
	baz=47						
CHKK	Chushkaly	144.55	47	*e*PKIKP	PKPab	08 27 20.0	0.0
ULHL	Ulahol	144.60	50	P	PKPdf	08 27 21.7	+0.3
	SNR=44						
SOEI	Soe	144.60	199		PKPdf	08 27 21.8	-0.3
PALK	Pallekele	144.72	113		PKPab	08 27 21.3	-0.2
PALK	Pallekele	144.72	113	PKIKP	PKPab	08 27 21.3	-0.2
TNSS	Tian-Shan	144.82	49	*e*PKP	PKPbc	08 27 20.8	-0.7
	baz=49						
TNSS	Tian-Shan	144.82	49	*e*PKIKP	PKPbc	08 27 20.7	-0.8
MDOK	Medeo	144.84	48	*e*PKP	PKPbc	08 27 20.8	-0.4
	baz=48						
MDOK				*e*PKiKP	PKiKP	08 27 24.6	-1.0
	baz=48						
MDOK	Medeo	144.84	48	*e*PKIKP	PKPbc	08 27 20.8	-0.4
TYV	Tymovskoe	144.90	327	*e*PKIKP	PKPdf	08 27 21.6	+0.3
TYV				pmax	pmax		
	comp=Z,56nm,0.8s						
TYV				pmax	pmax		
	comp=Z,200nm,2.3s						
TDK	Taldyqorghan	145.03	45	*e*PKPab	PKPbc	08 27 20.6	-0.9
	baz=45						
TDK	Taldyqorghan	145.03	45	*e*PKP2	PKPbc	08 27 20.6	-0.9
KSH	Kashi	145.19	55	PKP	PKPdf	08 27 22.3	-0.1
KSH				PP	PP	08 30 46.3	+2.9
ZHN	Zhinishke	145.78	48	*i* PKPab	PKPbc	08 27 23.9	-0.2
	baz=48						
ZHN	Zhinishke	145.78	48	*i* PKP2	PKPbc	08 27 23.9	-0.2
SATY	Saty	145.81	48	*e*PKPab	PKPbc	08 27 24.0	-0.2
	baz=48						
SATY	Saty	145.81	48	*e*PKP2	PKPbc	08 27 24.0	-0.2
KPKS	Kokpek	145.84	47	*e*PKPab	PKPbc	08 27 24.2	0.0
	baz=47						
KPKS	Kokpek	145.84	47	*e*PKP2	PKPbc	08 27 24.2	0.0
UZB	Uzynbulak	146.19	47	*e*PKPab	PKPbc	08 27 25.0	-0.3
	baz=48						
UZB	Uzynbulak	146.19	47	*e*PKP2	PKPbc	08 27 25.0	-0.3
MMRI	Maumere	146.23	196		PKPdf	08 27 25.0	+0.3
SHLS	Shalkode	146.48	47	*e*PKPbc	PKPbc	08 27 25.9	-0.2
	baz=47						
SHLS	Shalkode	146.48	47	*e*PKP2	PKPbc	08 27 25.9	-0.2
MK31	Makanchi Array	146.56	40		PKPdf	08 27 24.5	+0.2
MK31	Makanchi Array	146.56	40	PKIKP	PKPdf	08 27 24.5	+0.2
MKAR	Makanchi Array	146.56	40	PKPbc	PKPdf	08 27 25.1	+0.8
	comp=Z,62nm,0.7s,baz=295,slow=1.5,SNR=209						

MKAR				PKPab	**PKPbc**	**08 27 26.8**	**+0.7**
	comp=Z,49nm,0.6s,baz=302,slow=3.3,SNR=151						
HYB	**Hyderabad**	**147.07**	**95**	*e*PKPab	**PKPbc**	**08 27 28.7**	**+0.3**
YSS	**Yuzh-Sakhalins**	**147.15**	**321**	PKPdf	**PKPdf**	**08 27 25.7**	**+0.5**
YSS	**Yuzh-Sakhalins**	**147.15**	**321**	*e*PKIKP	**PKPdf**	**08 27 25.7**	**+0.5**
YSS				pmax	pmax		
	comp=Z,50nm,0.7s						
ZSN	**Zaisan**	**147.66**	**37**	*e*PKP	**PKPdf**	**08 27 25.3**	**-0.8**
	baz=37						
ZSN				*e*PKPbc	**PKPbc**	**08 27 27.4**	**-1.7**
	baz=37						
ZSN				*e*PKiKP	**PKiKP**	**08 27 30.1**	**-0.9**
	baz=37						
ZSN				*i* PP	**PP**	**08 30 57.7**	**+0.5**
	baz=37						
ZSN	**Zaisan**	**147.66**	**37**	*e*PKIKP	**PKPdf**	**08 27 25.3**	**-0.8**
ZSN				*i*		08 27 30.0	
ZSN				*i*		08 30 57.6	
GUMO	**Guam**	**148.24**	**257**	PKPbc	**PKPbc**	**08 27 31.4**	**-0.1**
	comp=Z,126nm,0.9s,baz=196,slow=9.1,SNR=5.4						
ZEA	**Zeya**	**148.58**	**344**	*e*PKP2	**PKPbc**	**08 27 31.3**	**+0.1**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=N,20nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.2s						
ERM	**Erimo**	**149.36**	**313***c*	*i*PKP2	**PKiKP**	**08 27 36.0**	**+1.4**
ERM				pmax	pmax		
	comp=Z,100nm,1.3s						
MOY	**Mondy**	**150.98**	**16**	*e*PKIKP	**PKiKP**	**08 27 38.2**	**+0.4**
MOY				pmax	pmax		
	comp=Z,30nm,1.9s						
WMQ	**Urumqi**	**151.38**	**40**	*e*PKPbc	**PKPdf**	**08 27 30.5**	**-1.7**
HEH	**HeiHe**	**151.65**	**340**	*e*PKPbc	**PKPbc**	**08 27 38.0**	**-0.7**
TEY	**Ternei**	**151.74**	**323**	⇓*i*PKIKP	**PKPbc**	**08 27 38.8**	**-0.3**
TEY				pmax	pmax		
	comp=N,10.0nm,0.7s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.7s						
TEY				pmax	pmax		
	comp=Z,40nm,0.7s						
USRK	**Ussuriysk Ar.**	**154.72**	**327**	PKP	**PKPdf**	**08 27 36.8**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=219,slow=1.2,SNR=6.5						
USRK				PKPbc	**PKiKP**	**08 27 45.9**	**+0.3**
	comp=Z,3.7nm,0.5s,baz=13,slow=1.9,SNR=8.0						
MJAR	**Matsushiro Arr**	**155.13**	**306**	PKPbc	PKPdf	08 27 47.0	+9.2
	comp=Z,1.7nm,0.4s,baz=245,slow=0.3,SNR=7.3						
MJAR				PKPab	**PKPab**	**08 28 03.5**	**+0.1**
	comp=Z,16nm,0.9s,baz=70,slow=2.1,SNR=19						
MDJ	**Mudanjiang**	**155.54**	**331**	PKP	**PKPdf**	**08 27 38.3**	**+0.3**
MDJ				pPKP	pPKPdf	08 28 25.6	-0.6
MDJ				sPKP		08 28 45.9	
MDJ				SS	SS	08 51 11.8	-0.7
MDJ				AMB	AMB		
	comp=Z,290nm,5.7s						
SONM	**Songino Array**	**155.75**	**11**	PKP	**PKPdf**	**08 27 39.0**	**+0.6**
	comp=Z,3.2nm,0.9s,baz=258,slow=1.6,SNR=19						
SONM				PKPbc	PKPbc	08 27 48.0	
	comp=Z,2.8nm,0.7s,baz=263,slow=1.3,SNR=11						
SONM				PKPab	**PKPab**	**08 28 05.4**	**-0.3**
	comp=Z,4.9nm,0.7s,baz=320,slow=4.2,SNR=15						
CN2	**Changchun**	**157.92**	**336**	*e*PKP	**PKPdf**	**08 27 42.3**	**+1.2**
XLT	**XiLinHaoTe**	**160.13**	**354**	*i* PKP	**PKPdf**	**08 27 44.6**	**+0.8**
XLT				PKPab	**PKPab**	**08 28 25.3**	**+0.6**
XLT				PP	**PP**	**08 32 11.3**	**+4.9**
XLT				AMB	AMB		
	comp=Z,280nm,5.8s						
GOMU	**GeErMu**	**160.17**	**48**	PKP	**PKPdf**	**08 27 45.4**	**+0.9**
GOMU				PKPab	**PKPab**	**08 28 27.0**	**+1.4**
GTA	**Gaotai**	**161.07**	**33**	⇓PKP	**PKPdf**	**08 27 45.6**	**+0.6**
GTA				PKPab	**PKPab**	**08 28 29.4**	**+0.3**
KSRS	**Korea Array**	**161.64**	**320**	PKP	**PKPdf**	**08 27 45.6**	**+0.1**
	comp=Z,1.7nm,0.5s,baz=54,slow=1.5,SNR=12						
KSRS				PKPab	**PKPab**	**08 28 31.9**	**+0.5**
	comp=Z,2.5nm,0.7s,baz=44,slow=3.9,SNR=11						
KSRS				PP	**PP**	**08 32 17.4**	**+2.3**
	comp=Z,0.5nm,0.3s,baz=32,slow=7.4,SNR=4.2						
HHC	**Hu-ho-hao-te**	**163.28**	**4**	*e*PKP	**PKPdf**	**08 27 47.3**	**+0.1**
BTO	**Baotou**	**163.37**	**8**	*e*PKP	**PKPdf**	**08 27 48.4**	**+1.1**
CMAR	**Chiang Mai Arr**	**165.65**	**110**	PKP	**PKPdf**	**08 27 49.8**	**0.0**
	comp=Z,2.1nm,0.4s,baz=237,slow=2.4,SNR=12						
CMAR				PKPab	**PKPab**	**08 28 49.6**	**-0.1**
	comp=Z,1.8nm,0.3s,baz=257,slow=5.1,SNR=6.9						
TIA	**Tai'an**	**167.47**	**345**	PKP	**PKPdf**	**08 27 51.4**	**+0.7**
TIA				pPKP	**pPKPdf**	**08 28 39.8**	**+0.9**
CD2	**Chengdu**	**169.31**	**49**	PKP	**PKPdf**	**08 27 48.8**	**-3.3**
PZH	**PanZhiHua**	**169.45**	**75**	PKP	**PKPdf**	**08 27 48.6**	**-3.8**
XAN	**Xi'an**	**169.47**	**19**	PKP	**PKPdf**	**08 27 52.8**	**+0.7**
XAN				PKPab	**PKPab**	**08 29 05.8**	**-0.2**
KMI	**Kunming**	**170.52**	**82**	⇑PKP	**PKPdf**	**08 27 49.8**	**-3.4**
NJ2	**Nanjing**	**170.62**	**329**	*e*PKP	**PKPdf**	**08 27 50.1**	**-2.6**

ROM 16 08:12:28.7±0.1**, 42°.777N**±0°.003×**13°.206E**±0°.004**, h9**km**, ML1.1**/5**, Error ellipse: s-maj=0.3km s-min=0.2km az=111.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1214	**Arquata del Tr**	**0.02**	**172**	P	Pg	08 12 30.2	-0.3
T1214				S	Sg	08 12 31.2	-0.6
T1245	**Castelsantange**	**0.08**	**351**	P	Pg	08 12 31.4	+0.2
T1245				S	Sg	08 12 33.0	+0.2
T1245				AML	AML		
	comp=E,835µm,0.8s						
T1245				AML	AML		
	comp=E,839µm,0.8s						
T1245				AML	AML		
	comp=E,834µm,0.8s						
T1245				AML	AML		
	comp=N,1155µm,0.3s						
T1245				AML	AML		
	comp=E,834µm,1.2s						
T1245				AML	AML		
	comp=N,1230µm,0.3s						
T1212	**Cascia, Frazio**	**0.12**	**258**	P	Pg	08 12 32.0	+0.5
T1212				S	Sg	08 12 34.2	+0.7
T1212				AML	AML		
	comp=N,174µm,0.3s						
T1212				AML	AML		
	comp=E,155µm,0.6s						
T1212				AML	AML		
	comp=E,155µm,1.4s						
T1218	**Civita (PG)**	**0.13**	**212**	P	Pg	08 12 32.2	+0.6
T1218				S	Sg	08 12 34.8	+1.1
T1218				AML	AML		
	comp=E,208µm,1.4s						
T1218				AML	AML		
	comp=N,209µm,0.7s						
T1218				AML	AML		
	comp=E,207µm,1.4s						
T1218				AML	AML		
	comp=E,140µm,1.4s						
T1218				AML	AML		
	comp=E,140µm,0.6s						
T1218				AML	AML		
	comp=E,207µm,0.6s						
T1218				AML	AML		
	comp=N,179µm,0.2s						
T1218				AML	AML		
	comp=N,209µm,1.3s						
MMO1	**Montemonaco**	**0.15**	**36**	P	Pg	08 12 32.7	+0.6
MMO1				S	Sg	08 12 35.4	+1.0
SMA1	**SAN MARTINO**	**0.17**	**147**	P	Pg	08 12 33.2	+0.7
SMA1				S	Sg	08 12 36.1	+1.1
SMA1				AML	AML		
	comp=E,99µm,1.0s						
SMA1				AML	AML		
	comp=N,132µm,0.4s						
SMA1				AML	AML		
	comp=E,99µm,1.0s						
T1241	**Roccafluvione,**	**0.18**	**64**	P	Pg	08 12 33.4	+0.8
T1241				S	Sg	08 12 36.8	+1.6
T1241				AML	AML		
	comp=E,76µm,0.9s						
T1241				AML	AML		
	comp=E,76µm,0.9s						
T1241				AML	AML		
	comp=N,56µm,0.4s						
T1241				AML	AML		
	comp=E,76µm,1.1s						
T1217	**Poggiodomo (PG**	**0.21**	**252**	P	Pg	08 12 33.7	+0.6
T1217				S	Sg	08 12 37.4	+1.3
T1256	**Bolognola (MC)**	**0.23**	**4**	P	Pg	08 12 34.0	+0.5
T1256				S	Sg	08 12 38.1	+1.4
RM33	**Pellescritta (**	**0.27**	**179**	P	Pg	08 12 34.8	+0.7
RM33				S	Sb	08 12 39.5	-1.0
RM33				AML	AML		
	comp=E,52µm,1.4s						
RM33				AML	AML		
	comp=N,49µm,1.4s						
RM33				AML	AML		
	comp=N,49µm,1.4s						
RM33				AML	AML		
	comp=E,52µm,1.4s						
RM33				AML	AML		
	comp=N,49µm,0.6s						
FDMO	**Fiordimonte**	**0.27**	**342**	P	Pb	08 12 35.5	-0.4
FDMO				AML	AML		
	comp=E,136µm,0.5s						
FDMO				AML	AML		
	comp=N,136µm,0.1s						
T1219	**Muccia, Frazio**	**0.31**	**332**	P	Pg	08 12 35.7	+0.7
T1219				S	Sb	08 12 40.8	-1.1
TERO	**Teramo**	**0.33**	**118**	P	Pg	08 12 35.8	+0.5
TERO				S	Sb	08 12 41.2	-1.1
T1220	**Camerino, Fraz**	**0.34**	**346**	P	Pg	08 12 36.2	+0.7
T1220				AML	AML		
	comp=N,196µm,1.6s						
T1220				AML	AML		
	comp=E,185µm,0.6s						
T1220				AML	AML		
	comp=N,196µm,0.4s						
T1211	**Morro Reatino**	**0.36**	**227**	P	Pb	08 12 36.6	-0.6
T1211				S	Sb	08 12 42.4	-0.6
EL6	**Elcito**	**0.56**	**352**	S	Sb	08 12 49.6	+0.8

ROM 16 08:13:14.4±0.5**, 43°.49N**±0°.02×**12°.81E**±0°.05**, h0km, ML0.1**/3**, Error ellipse: s-maj=3.9km s-min=1.6km az=258.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SSFR	**Montelago di S**	**0.06**	**202**	P	Pg	08 13 16.3	+0.7
FRON	**Frontone**	**0.07**	**292**	P	Pg	08 13 16.1	+0.3
FRON				AML	AML		
	comp=E,39µm,1.5s						
FRON				AML	AML		
	comp=N,111µm,0.5s						
FRON				AML	AML		
	comp=N,39µm,0.3s						
FRON				AML	AML		
	comp=N,111µm,1.5s						
MPAG	**Monte Paganucc**	**0.14**	**344**	P	Pg	08 13 17.6	+0.4
FOSV	**Fossato di Vic**	**0.20**	**191**	P	Pg	08 13 18.4	+0.2
FOSV				AML	AML		
	comp=N,10µm,1.1s						
FOSV				AML	AML		
	comp=N,10µm,0.9s						
PIEI	**Pieia**	**0.21**	**282**	P	Pg	08 13 18.7	+0.3
PIEI				AML	AML		
	comp=E,10µm,0.2s						
PIEI				AML	AML		
	comp=N,11µm,1.2s						

WEL 16 08:16:31.5±1.1**, 42°S**±6°×**17°3E**±°**, h67km**±9km**, M1.7**/5**, ML2.1**/7**, MLv1.7**/5**, Error ellipse: s-maj=0.0km s-min=0.0km az=88.2, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THZ	**Tophouse**	**0.18**	**191**	P	Pn	08 16 42.7	+1.0
THZ				S	Sn	08 16 51.4	+2.1
MRNZ	**Matariki Terra**	**0.24**	**322**	P	Pn	08 16 43.3	+1.4
MRNZ				S	Sn	08 16 52.5	+2.9
NNZ	**Nelson**	**0.49**	**41**	P	Pn	08 16 45.2	+1.3
NNZ				S	Sn	08 16 55.9	+2.9
TKNZ	**Takaka Hill**	**0.55**	**1**	P	Pn	08 16 45.9	+1.3
TKNZ				S	Sn	08 16 56.8	+2.6
BSWZ	**Blackbirch Sta**	**0.70**	**101**	P	Pn	08 16 47.7	+1.4
TUWZ	**Tuamarina**	**0.76**	**79**	P	Pn	08 16 47.9	+1.1
QRZ	**Quartz Range**	**0.82**	**337**	P	Pn	08 16 48.6	+1.0
DSZ	**Denniston Nort**	**0.88**	**259**	P	Pn	08 16 48.4	+0.1
KHZ	**Kahutara**	**0.94**	**152**	P	Pn	08 16 49.1	+0.1
TCW	**Tory Channel**	**1.06**	**70**	P	Pn	08 16 51.6	+1.0
DUWZ	**D'Urville Isla**	**1.07**	**43**	P	Pn	08 16 52.1	+1.4
LTZ	**Lake Taylor**	**1.30**	**203**	P	Pn	08 16 53.0	-0.7
GVZ	**Greta Valley S**	**1.38**	**177**	P	Pn	08 16 54.0	-0.8
INZ	**Inchbonnie**	**1.60**	**224**	P	Pn	08 16 57.2	-0.5
KIW	**Kapiti Island**	**1.64**	**65**	P	Pn	08 16 58.4	+0.2
CAW	**Cannon Point**	**1.66**	**74**	P	Pn	08 16 58.1	-0.4
OXZ	**Oxford**	**1.87**	**201**	P	Pn	08 16 59.3	-2.0
MQZ	**McQueen's Vall**	**2.13**	**186**	P	Pn	08 17 02.2	-2.6
MHCZ	**Mount Hutt**	**2.20**	**207**	P	Pn	08 17 03.8	-2.0
PREZ	**Palmer Road**	**2.42**	**23**	P	Pn	08 17 10.5	+1.6
PKE	**Pukeiti**	**2.52**	**19**	P	Pn	08 17 11.7	+1.6
VRZ	**Vera Road**	**2.82**	**30**	P	Pn	08 17 15.7	+1.5
TRVZ	**Turoa**	**3.02**	**42**	P	Pn	08 17 19.7	+2.5
TMZ	**Timaru**	**3.14**	**206**	P	Pn	08 17 16.1	-2.5

PRU 16 08:21:40.1±0.0**, 50°.24N**×**18°.75E, h0km, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.56**	**224**	*e*PG	Pg	08 21 50.8	0.0
OKC				*e*SG	Sg	08 21 57.8	-0.2
	comp=Z,5.7nm,0.4s						
OKC	**Ostrava-Krasne**	**0.56**	**224**	*e*P	Pg	08 21 50.8	0.0
MORC	**Moravsky Berou**	**0.91**	**240**	*e*PG	Pg	08 21 57.4	-0.1
MORC				*e*SG	Sg	08 22 08.8	-0.4
MAUC	**Maruska**	**1.06**	**215**	*e*SG	Sg	08 22 13.6	-0.5
DPC	**Dobruska-Polom**	**1.56**	**275**	*e*PG	Pn	08 22 08.4	-0.7
DPC				*e*SG	Sb	08 22 30.2	0.0

BJI ***16*** *08:29:12.5±0.0, 23°.21S×179°.62E, h535km, mb4.9/53, mB5.0/34*

MOS ***16*** *08:29:13.9±0.8, 23°.63S×179°.10E, h545km, mb5.0/24, Error ellipse: s-maj=12.5km s-min=11.0km az=90.4*

NOU ***16*** *08:29:14.5, 23°.54S×179°.47E, h570km, mb5.1/83, South of Fiji Islands*

NEIC ***16*** *08:29:14.1±1.3, 23°.72S±0°.08×179°.2E±0°.1, h537km±7km, mb5.0/81, Error ellipse: s-maj=14.4km s-min=11.7km az=98.0*

IDC ***16*** *08:29:15.2±0.5, 23°.60S×179°.09E, h550km±4km, mb4.4/33, mbtmp5.3/35, Error ellipse: s-maj=8.3km s-min=6.9km az=169.0*

GCMT ***16*** *08:29:18.1±0.2, 23°.58S±0°.02×179°.15E±0°.02, h555km±1km, MW5.4/119, Moment Tensor Solution. s119,c198; Duration: 1s.2 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.49±.03; $M_{\theta\theta}$1.20±.05; $M_{\phi\phi}$0.28±.05; $M_{r\theta}$0.20±.06; $M_{\theta\phi}$-0.90±.04; $M_{\phi r}$-0.17±.05; Best double couple: $M_0$1.64300×10^{17} NP1:ϕ_s303.00000°, δ50.00000°, λ-88.00000°. NP2:ϕ_s120.00000°, δ41.00000°, λ-93.00000°. Principal axes: T 1.7740, Plg5.0000°, Azm32.0000°; N -0.2690, Plg2.0000°, Azm122.0000°; P -1.5110, Plg85.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 16 08:29:14.4±0.3**, 23°.65S**±0°.04×**179°.18E**±0°.04**, h547km**±3km**, h547km:pP-P, n933,** σ**1s.20**/1038**, mb5.0**/125**, 58C-69D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**5.71**	**20**	P	**P**	**08 30 50.8**	**+0.5**
MSVF	**Nonsavu**	**5.98**	**350**	P	**P**	**08 30 52.6**	**-0.3**
	79nm,0.5s,baz=176,slow=4.9,SNR=115						
MSVF				S	**S**	**08 32 12.7**	**-0.6**
	226nm,0.9s,baz=177,slow=19,SNR=9.6						
MSVF	**Nonsavu**	**5.98**	**350**	P	**P**	**08 30 52.0**	**-0.9**
MSVF	**Nonsavu**	**5.98**	**350**	P	**P**	**08 30 52.8**	**-0.1**
MSVF	**Nonsavu**	**5.98**	**350***c*	*i*P	**P**	**08 30 52.2**	**-0.7**
RIZ	**Raoul Island**	**6.15**	**156**	P	**P**	**08 30 53.0**	**-1.1**
RIZ				S	S	08 32 25.4	+10
RAO	**Raoul Island**	**6.16**	**156**	P	**P**	**08 30 52.7**	**-1.5**
	331nm,0.3s,baz=270,slow=20,SNR=2.0						
RAO				S	**S**	**08 32 16.2**	**+0.3**
	967nm,0.6s,baz=73,slow=19,SNR=3.1						
GLKZ	**Green Lake**	**6.17**	**156**	P	**P**	**08 30 56.9**	**+2.7**
GLKZ				S	**S**	**08 32 15.1**	**-1.0**
TAVE	**Taveuni**	**6.96**	**7**	P	**P**	**08 31 02.8**	**+0.8**
YSA	**Yasawairara**	**7.08**	**347**	P	**P**	**08 31 03.3**	**+0.2**
PINNC	**Pines Island,**	**10.85**	**273**		**P**	**08 31 41.4**	**+0.4**
NIUE	**Niue**	**11.12**	**68**	P	**P**	**08 31 43.1**	**-0.8**
	baz=11,SNR=62						
NIUE	**Niue**	**11.12**	**68**	P	**P**	**08 31 43.1**	**-0.8**
NIUE	**Niue**	**11.12**	**68**	P	**P**	**08 31 43.3**	**-0.7**
NFK	**Norfolk Island**	**11.42**	**240**	P	**P**	**08 31 47.0**	**+0.1**
	baz=12,SNR=7.8						
LIFNC	**LIFOU**	**11.42**	**282**	P	**P**	**08 31 47.1**	**+0.1**
LIFNC	**LIFOU**	**11.42**	**282**	P	**P**	**08 31 48.4**	**+1.4**
YATNC	**Mamie plateau,**	**11.44**	**276**	P	**P**	**08 31 51.5**	**+4.3**
RTV	**Rentapao**	**11.62**	**298**	P	**P**	**08 31 51.2**	**+2.1**
	233nm,1.2s						
DZM	**Mont Dzumac**	**11.85**	**275**	*e*Pn	**P**	**08 31 50.0**	**-1.5**
	68nm,1.2s						
DZM				*e*Sn	**S**	**08 33 56.9**	**-3.9**
	138nm,1.6s						
DZM	**Mont Dzumac**	**11.85**	**275**	P	**P**	**08 31 51.9**	**+0.4**
	15nm,0.8s,baz=115,slow=10,SNR=15						
DZM				S	**S**	**08 34 03.0**	**+2.3**
	21nm,1.2s,baz=135,slow=20,SNR=1.5						
DZM	**Mont Dzumac**	**11.85**	**275**	P	**P**	**08 31 52.0**	**+0.5**
DZM	**Mont Dzumac**	**11.85**	**275**	P	**P**	**08 31 54.6**	**+3.1**
DVP	**Devils Point**	**11.85**	**298**	P	**P**	**08 31 53.3**	**+1.8**
	792nm,1.1s						
NOUC	**Port Laguerre**	**11.97**	**275**	P	**P**	**08 31 54.8**	**+2.1**
AFI	**Afiamalu**	**12.92**	**43**	P	**P**	**08 31 59.0**	**-3.7**
	827nm,0.9s,baz=23,slow=2.2,SNR=97						
AFI				S	S	08 34 10.6	-11
	46nm,0.5s,baz=18,slow=20,SNR=2.9						
WCZ	**Waipu Caves**	**12.94**	**198**	P	P	08 32 08.0	+5.4
KUZ	**Kuaotunu**	**13.39**	**192**	P	**P**	**08 32 08.9**	**+1.8**
MYRZ	**Mayor Island**	**13.82**	**190**	P	**P**	**08 32 15.5**	**+3.8**
MXZ	**Matakaoa Point**	**13.89**	**183**		**P**	**08 32 11.2**	**-1.1**
MXZ	**Matakaoa Point**	**13.89**	**183**	P	**P**	**08 32 11.9**	**-0.4**
MXZ	**Matakaoa Point**	**13.89**	**183**	P	**P**	**08 32 11.7**	**-0.6**
MXZ				S	**S**	**08 34 42.0**	**+3.3**
WIZ	**White Island**	**13.94**	**187**	P	**P**	**08 32 14.6**	**+1.8**
HAZ	**Te Kaha**	**14.11**	**185**	P	**P**	**08 32 13.6**	**-1.0**
HAZ				S	**S**	**08 34 44.9**	**+1.9**
WMGZ	**Waiomatatini S**	**14.14**	**182**	P	**P**	**08 32 14.0**	**-0.9**
KOUNC	**Koumac, New Ca**	**14.14**	**280**	P	**P**	**08 32 18.5**	**+3.3**
PKGZ	**Pakihiroa**	**14.23**	**184**	P	**P**	**08 32 14.7**	**-1.1**
OPRZ	**Ohinepanea**	**14.33**	**188**	P	**P**	**08 32 17.8**	**+1.0**
RUGZ	**Raukumara Rang**	**14.33**	**185**	P	**P**	**08 32 15.8**	**-1.2**
PUZ	**Puketiti**	**14.40**	**183**	P	**P**	**08 32 16.0**	**-1.5**
EDRZ	**Edgecumbe**	**14.56**	**188**	P	**P**	**08 32 20.7**	**+1.3**
URZ	**Urewera**	**14.67**	**186**	P	**P**	**08 32 18.1**	**-2.3**
	530nm,0.7s,baz=101,slow=3.1,SNR=105						
URZ				S	**S**	**08 34 48.0**	**-5.6**
	146nm,0.5s,baz=336,slow=20,SNR=13						
CNGZ	**Carnagh Statio**	**14.81**	**183**	P	**P**	**08 32 20.8**	**-1.0**
RAGZ	**Rawiri**	**14.88**	**185**	P	**P**	**08 32 21.3**	**-1.3**
RTZ	**Ruatahuna**	**15.04**	**187**	P	**P**	**08 32 20.7**	**-3.5**
HIZ	**Hauiti**	**15.27**	**193**	P	**P**	**08 32 28.6**	**+2.0**
HIZ	**Hauiti**	**15.27**	**193**	P	**P**	**08 32 28.5**	**+1.9**
BKZ	**Black Stump Fm**	**15.64**	**188**	P	**P**	**08 32 27.2**	**-3.1**
BKZ	**Black Stump Fm**	**15.64**	**188**	P	**P**	**08 32 29.2**	**-1.2**
NEZ	**North Egmont**	**16.16**	**194**	P	**P**	**08 32 38.3**	**+2.8**
KHEZ	**Kahui Hut**	**16.20**	**194**	P	**P**	**08 32 39.0**	**+3.1**
BFZ	**Birch Farm**	**17.16**	**188**	P	**P**	**08 32 42.8**	**-1.8**
BFZ	**Birch Farm**	**17.16**	**188**	P	**P**	**08 32 42.8**	**-1.8**
MRZ	**Mangatainoka R**	**17.23**	**189**		**P**	**08 32 42.0**	**-3.2**
DUWZ	**D'Urville Isla**	**17.67**	**193**	P	**P**	**08 32 47.1**	**-2.1**
MTW	**Mount Morrison**	**17.73**	**189**	P	**P**	**08 32 48.4**	**-1.4**
TRWZ	**Traveller**	**17.94**	**189**	P	**P**	**08 32 50.1**	**-1.6**
TCW	**Tory Channel**	**17.99**	**192**	P	**P**	**08 32 51.7**	**-0.4**
TCW	**Tory Channel**	**17.99**	**192**	P	**P**	**08 32 53.8**	**+1.7**
SNZO	**South Karori**	**18.01**	**191**	P	**P**	**08 32 51.5**	**-0.8**
SNZO	**South Karori**	**18.01**	**191**	P	**P**	**08 32 51.9**	**-0.4**
QRZ	**Quartz Range**	**18.02**	**197**	P	**P**	**08 32 53.9**	**+1.5**
QRZ	**Quartz Range**	**18.02**	**197**	P	**P**	**08 32 53.4**	**+1.0**
BHW	**Baring Head**	**18.07**	**190**	P	**P**	**08 32 51.0**	**-1.9**
TKNZ	**Takaka Hill**	**18.10**	**195**	P	**P**	**08 32 52.6**	**-0.6**
PLWZ	**Palliser**	**18.17**	**189**	P	**P**	**08 32 51.8**	**-2.1**
NNZ	**Nelson**	**18.18**	**194**	P	**P**	**08 32 53.4**	**-0.5**
TUWZ	**Tuamarina**	**18.27**	**193**	P	**P**	**08 32 53.4**	**-1.2**
KHZ	**Kahutara**	**19.30**	**193**	P	**P**	**08 33 03.3**	**-0.7**
CTZ	**Chatham Island**	**20.33**	**171**	P	**P**	**08 33 14.2**	**+0.8**
RPZ	**Rata Peaks**	**21.10**	**197**	P	**P**	**08 33 20.3**	**-0.1**
	78nm,0.6s,baz=345,slow=2.1,SNR=42						
	78nm,0.6s						
RPZ	**Rata Peaks**	**21.10**	**197**	P	**P**	**08 33 21.0**	**+0.5**
JCZ	**Jackson Bay**	**22.09**	**200**	P	**P**	**08 33 29.9**	**+0.5**
ODZ	**Otahua Downs**	**22.45**	**196**	P	**P**	**08 33 31.6**	**-0.9**
DCZ	**Deep Cove**	**23.86**	**201**	P	**P**	**08 33 44.3**	**-0.7**
WHZ	**Wether Hill Ro**	**23.98**	**200**	P	**P**	**08 33 46.2**	**+0.1**
SYZ	**Scrubby Hill**	**24.23**	**197**	P	**P**	**08 33 48.4**	**+0.2**
PYZ	**Puysegur Point**	**24.63**	**201**	P	**P**	**08 33 52.6**	**+0.7**
ARMA	**Armidale**	**25.41**	**249**	P	**P**	**08 34 00.3**	**+1.1**
	baz=26,SNR=49						
ARMA	**Armidale**	**25.41**	**249**	P	**P**	**08 34 00.5**	**+1.4**
ARMA	**Armidale**	**25.41**	**249**	P	**P**	**08 34 01.5**	**+2.4**
EIDS	**Eidsvold**	**25.61**	**260**	P	**P**	**08 34 01.8**	**+1.0**
	baz=26,SNR=15						
EIDS	**Eidsvold**	**25.61**	**260**	P	**P**	**08 34 01.4**	**+0.6**
EIDS	**Eidsvold**	**25.61**	**260**	P	**P**	**08 34 02.3**	**+1.5**
MGCD	**Mangrove Creek**	**26.39**	**243**	P	**P**	**08 34 08.6**	**+1.0**
	baz=26,SNR=43						
MGCD	**Mangrove Creek**	**26.39**	**243**	P	**P**	**08 34 09.2**	**+1.6**
	141nm,0.5s						
SYDH	**Sydney Hard Ro**	**26.82**	**242**	P	**P**	**08 34 14.5**	**+3.1**
RMQ	**Roma**	**27.67**	**258**	P	**P**	**08 34 19.9**	**+1.0**
	baz=28,SNR=17						
RMQ	**Roma**	**27.67**	**258**	P	**P**	**08 34 21.6**	**+2.7**
CNB	**Canberra Magne**	**28.33**	**239**	P	**P**	**08 34 27.0**	**+2.3**
CAN	**Canberra**	**28.62**	**239**	P	**P**	**08 34 27.9**	**+0.7**
CAN	**Canberra**	**28.62**	**239**	P	**P**	**08 34 29.1**	**+2.0**
CAN	**Canberra**	**28.62**	**239**	P	**P**	**08 34 27.9**	**+0.7**
TBI	**Tubuai**	**28.73**	**96**	*e*sP	**sP**	**08 37 00.4**	**+1.5**
	2µm,32.5s						
TBI				*e*S	**S**	**08 38 41.4**	**+1.9**
	917nm,44.5s						
TBI				*e*sS	sS	08 41 21.7	-3.9
	988nm,25.0s						
YNG	**Young**	**28.84**	**241**	P	**P**	**08 34 30.3**	**+1.2**
	68nm,1.3s						
MILA	**Mila**	**29.02**	**236**	P	**P**	**08 34 31.6**	**+1.1**
	baz=29,SNR=7.1						
MILA	**Mila**	**29.02**	**236**	P	**P**	**08 34 32.9**	**+2.3**
PAE	**Paea**	**29.79**	**84**	*e*T	T	09 01 18.3	
	2.4nm,0.3s						
PPT2	**Papeete2**	**29.82**	**84**	*e*sP	**sP**	**08 37 10.4**	**+2.3**
	187nm,15.5s						
PPT2				*e*S	**S**	**08 38 57.8**	**+1.3**
	112nm,13.5s						
PPT2	**Papeete2**	**29.82**	**84**	*e*T	T	09 01 19.1	
	1.7nm,0.3s						
TV1H	**Townsville Har**	**30.42**	**272**	P	**P**	**08 34 43.5**	**+0.7**
	52nm,1.1s						
CMSA	**Cobar Meteorol**	**30.61**	**248**	P	**P**	**08 34 45.4**	**+1.1**
	baz=31,SNR=235						
CMSA	**Cobar Meteorol**	**30.61**	**248**	P	**P**	**08 34 45.7**	**+1.4**
CTA	**Charters Tower**	**30.72**	**270**	P	**P**	**08 34 46.3**	**+0.8**
	152nm,0.4s,baz=94,slow=9.8,SNR=426						
CTA				PcP	**PcP**	**08 37 26.9**	**+0.7**
	11nm,0.7s,baz=101,slow=3.0,SNR=5.5						
CTA				S	**S**	**08 39 10.3**	**0.0**
	14nm,1.1s,baz=330,slow=19,SNR=22						
	152nm,0.4s						
CTAO	**Charters Tower**	**30.72**	**270**	P	**P**	**08 34 46.3**	**+0.8**
CTAO	**Charters Tower**	**30.72**	**270**	P	**P**	**08 34 46.6**	**+1.1**
CTAO	**Charters Tower**	**30.72**	**270**	P	**P**	**08 34 46.3**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,173nm,0.5s						
CTAO	**Charters Tower**	**30.72**	**270**	⇓P	**P**	**08 34 46.3**	**+0.8**
CTAO				PcP	**PcP**	**08 37 26.7**	**+0.5**
GLAD	**Gladstone**	**31.28**	**229**	P	**P**	**08 34 50.9**	**+1.0**
QLP	**Quilpie**	**31.72**	**257**	P	**P**	**08 34 54.5**	**+0.6**
	baz=32,SNR=104						
QLP	**Quilpie**	**31.72**	**257**	P	**P**	**08 34 55.2**	**+1.3**
TOO	**Toolangi**	**31.96**	**236**	P	**P**	**08 34 57.2**	**+1.5**
	baz=32,SNR=22						
TOO	**Toolangi**	**31.96**	**236**	P	**P**	**08 34 57.3**	**+1.5**
TOO				IAmb	IAmb	08 34 58.3	
	comp=Z,64nm,0.9s						
TOO	**Toolangi**	**31.96**	**236**	P	**P**	**08 34 57.3**	**+1.5**
TOO	**Toolangi**	**31.96**	**236**	P	**P**	**08 34 57.3**	**+1.5**
TOO				pmax	pmax		
	comp=Z,64nm,1.0s						
KRVT	**Keravat (AS076**	**32.50**	**302**	P	**P**	**08 34 59.7**	**-0.9**
	comp=Z,84nm,0.9s,baz=176,slow=1.7,SNR=16						
	comp=Z,84nm,0.9s						
TAU	**Tasmania Unive**	**32.56**	**226**	P	**P**	**08 35 01.4**	**+0.6**
TAU	**Tasmania Unive**	**32.56**	**226**	P	**P**	**08 35 01.6**	**+0.8**

	comp=Z,102nm,2.4s						
TAU	Tasmania Unive	32.56	226	P	P	08 35 01.4	+0.6
TAU				pmax	pmax		
	comp=Z,284nm,1.8s						
MTSU	Mount Surprise	32.97	273	P	P	08 35 05.3	+0.6
	baz=33,SNR=146						
MTSU	Mount Surprise	32.97	273	P	P	08 35 05.8	+1.1
BRAT	Ballarat	33.15	237	P	P	08 35 07.5	+1.7
	comp=Z,58nm,1.0s						
PMG	Port Moresby	33.70	289	P	P	08 35 11.0	+0.3
	comp=Z,234nm,0.8s,baz=98,slow=4.7,SNR=39						
	comp=Z,234nm,0.8s						
PMG	Port Moresby	33.70	289	P	P	08 35 10.1	-0.7
PMG	Port Moresby	33.70	289	P	P	08 35 11.8	+1.0
PMG	Port Moresby	33.70	289	P	P	08 35 11.9	+1.1
PMG	Port Moresby	33.70	289	*ce*P	P	08 35 10.6	-0.2
PMG				pmax	pmax		
	comp=Z,219nm,0.8s						
PMG	Port Moresby	33.70	289	P	P	08 35 10.9	+0.1
STKA	Stephens Creek	34.12	248	P	P	08 35 15.0	+0.9
	comp=Z,21nm,0.5s,baz=95,slow=11,SNR=88						
STKA				PcP	PcP	08 37 35.5	-0.1
	comp=Z,4.9nm,0.4s,baz=113,slow=3.5,SNR=4.1						
STKA				S	S	08 40 01.5	-0.2
	comp=Z,3.6nm,0.8s,baz=228,slow=16,SNR=2.8						
STKA				ScP	ScP	08 40 31.2	+2.3
	comp=Z,5.6nm,0.8s,baz=162,slow=3.2,SNR=3.9						
	comp=Z,21nm,0.5s						
STKA	Stephens Creek	34.12	248	P	P	08 35 15.2	+1.0
	baz=34,SNR=96						
STKA	Stephens Creek	34.12	248	P	P	08 35 15.5	+1.4
STKA	Stephens Creek	34.12	248	*i* P	P	08 35 14.6	+0.5
XMAS	Kiritimati	34.20	45	P	P	08 35 15.0	0.0
XMAS	Kiritimati	34.20	45	P	P	08 35 15.2	+0.3
ARPS	Mount Arapiles	34.60	239	P	P	08 35 19.1	+1.1
	baz=35,SNR=8.7						
ARPS	Mount Arapiles	34.60	239	P	P	08 35 18.9	+0.9
	comp=Z,72nm,0.9s						
INKA	Innaminka	34.78	255	P	P	08 35 21.5	+1.9
COEN	Coen	35.33	279	P	P	08 35 24.9	+0.5
	baz=35,SNR=23						
COEN	Coen	35.33	279	P	P	08 35 24.2	-0.2
COEN	Coen	35.33	279	P	P	08 35 24.7	+0.3
	comp=Z,58nm,1.1s						
HTT	Hallett	36.49	245	P	P	08 35 34.5	+0.6
	baz=37,SNR=23						
HTT	Hallett	36.49	245	P	P	08 35 34.8	+0.9
QIS	Mount Isa	36.72	267	P	P	08 35 35.7	-0.1
	baz=37,SNR=29						
QIS	Mount Isa	36.72	267	P	P	08 35 36.0	+0.2
LCRK	Leigh Creek	36.95	250	P	P	08 35 38.4	+0.8
BBOO	Buckleboo	38.85	247	P	P	08 35 53.1	0.0
	baz=39,SNR=50						
BBOO	Buckleboo	38.85	247	P	P	08 35 52.5	-0.5
BBOO				IAmb	IAmb	08 35 53.9	
	comp=Z,44nm,1.1s						
BBOO	Buckleboo	38.85	247	P	P	08 35 53.2	+0.1
OOD	Oodnadatta	39.25	255	P	P	08 35 57.7	+1.4
MULG	Mulgathing	40.55	251	P	P	08 36 07.0	+0.3
AS01	Alice Springs	41.29	261	P	P	08 36 12.2	-0.5
	comp=Z,73nm,0.9s						
ASAR	Alice Springs	41.33	261	P	P	08 36 13.2	+0.1
	comp=Z,35nm,0.7s,baz=94,slow=7.5,SNR=438						
ASAR				PcP	PcP	08 37 58.6	+0.1
	comp=Z,12nm,0.8s,baz=102,slow=3.9,SNR=14						
ASAR				ScP	ScP	08 40 59.4	+2.7
	comp=Z,6.6nm,1.1s,baz=99,slow=4.0,SNR=6.4						
ASAR				S	S	08 41 46.1	-2.4
	comp=Z,4.7nm,1.0s,baz=96,slow=14,SNR=11						
ASAR				PKiKP	PKiKP	08 45 02.8	-1.4
	comp=Z,0.8nm,0.7s,baz=95,slow=1.1,SNR=4.1						
ASAR				P3KPbc		09 05 33.4	
	comp=Z,0.4nm,0.7s,baz=284,slow=4.3,SNR=6.1						
	comp=Z,35nm,0.7s						
TAOE	Nuku Hiva Isla	41.56	76	*e*S	S	08 41 50.7	-1.3
	comp=Z,166nm,24.1s						
WRAB	Tennant Creek	41.66	266	P	P	08 36 15.3	-0.4
WRAB	Tennant Creek	41.66	266	⇓P	P	08 36 15.1	-0.6
WRAB				PcP	PcP	08 37 59.7	+0.1
WRAB				ScP	ScP	08 41 00.8	+2.8
WRA	Warramunga Arr	41.67	266	P	P	08 36 15.4	-0.4
	comp=Z,29nm,0.4s,baz=90,slow=6.0,SNR=975						
WRA				PcP	PcP	08 37 59.5	-0.1
	comp=Z,16nm,0.9s,baz=100,slow=4.2,SNR=12						
WRA				ScP	ScP	08 40 57.7	-0.3
	comp=Z,8.3nm,1.0s,baz=96,slow=4.1,SNR=9.6						
WRA				S	S	08 41 49.9	-3.5
	comp=Z,4.0nm,0.9s,baz=94,slow=14,SNR=9.1						
WRA				PKiKP	PKiKP	08 45 02.8	-1.8
	comp=Z,1.6nm,0.9s,baz=76,slow=0.5,SNR=5.4						
	comp=Z,29nm,0.4s						
GENI	Genyem	43.13	293	P	P	08 36 27.3	0.0
	comp=Z,131nm,1.3s						
SMPI	Sarmi	44.69	293	P	P	08 36 39.4	+0.1
	comp=Z,45nm,1.7s,comp=Z,2µm						
KDU	Kakadu	45.52	275	P	P	08 36 44.9	-0.7
	baz=46,SNR=22						
KDU	Kakadu	45.52	275	P	P	08 36 45.3	-0.3
FORT	Forrest	45.69	249	P	P	08 36 46.4	-0.4
	baz=46,SNR=68						
FORT	Forrest	45.69	249	P	P	08 36 45.9	-0.8
FORT	Forrest	45.69	249	P	P	08 36 46.6	-0.2
WRKA	Warakurna	46.16	257	P	P	08 36 50.3	-0.2
	baz=46,SNR=121						
WRKA	Warakurna	46.16	257	P	P	08 36 50.5	+0.1
MTN	Manton Dam	46.69	275	P	P	08 36 53.9	-0.6
	baz=47,SNR=6.0						
MTN	Manton Dam	46.69	275	P	P	08 36 54.2	-0.3
MTN				IAmb	IAmb	08 36 54.7	
	comp=Z,21nm,0.5s						
KNRA	Kununurra	47.94	270	P	P	08 37 03.7	-0.1
	baz=48,SNR=46						
KNRA	Kununurra	47.94	270	P	P	08 37 03.2	-0.6
KNRA	Kununurra	47.94	270	P	P	08 37 04.0	+0.2
DRV	Dumont d’Urvil	49.53	199	P	P	08 37 15.2	+0.4
DRV				PcP	PcP	08 38 26.3	-0.2
DRV				ScP	ScP	08 41 29.1	-0.7
HMH	Humu‘ula Sheep	49.59	32	P	P	08 37 16.4	+0.1
FAKI	Fak Fak	49.79	287	P	P	08 37 16.8	-0.8
	comp=Z,45nm,1.4s						
HPAH	Hawaii Prepara	49.85	31	P	P	08 37 18.0	+0.1
HPAH				IAmb	IAmb	08 37 20.9	
	comp=Z,76nm,0.9s						
GUMO	Guam	49.95	314	P	P	08 37 18.2	-0.5
	comp=Z,100nm,1.0s,baz=198,slow=14,SNR=4.0						
	comp=Z,100nm,1.0s						
FITZ	Fitzroy Crossi	50.10	266	P	P	08 37 19.8	0.0
KMBL	Kambalda	50.92	248	P	P	08 37 25.8	+0.1
	comp=Z,24nm,1.1s						
SIJI	Sorong	51.64	289	P	P	08 37 30.6	-0.5
	comp=Z,104nm,0.8s,baz=78,slow=9.3,SNR=29						
	comp=Z,104nm,0.8s						
KLBR	Kellerberrin	54.39	247	P	P	08 37 50.1	-0.4
	baz=54,SNR=28						
KLBR	Kellerberrin	54.39	247	P	P	08 37 50.5	+0.1
MEEK	Meekatharra	54.46	253	P	P	08 37 50.2	-0.9
	baz=54,SNR=13						
MEEK	Meekatharra	54.46	253	P	P	08 37 50.8	-0.3
PSA00	Pilbara Seismi	54.47	260	P	P	08 37 49.9	-1.2
PSA00	Pilbara Seismi	54.47	260	P	P	08 37 50.9	-0.2
VNDA	Vanda	54.57	185	P	P	08 37 52.0	+1.1
	comp=Z,2.7nm,0.8s,baz=9.7,slow=7.7,SNR=7.9						
VNDA				PcP	PcP	08 38 46.1	+0.6
	comp=Z,4.6nm,0.8s,baz=300,slow=1.2,SNR=6.1						
VNDA	Vanda	54.57	185	P	P	08 37 52.4	+1.5
VNDA				PcP	PcP	08 38 46.3	+0.8
NWAO	Narrogin (SRO)	54.65	245	P	P	08 37 52.1	-0.1
	baz=55,SNR=12						
NWAO				P	P	08 37 52.1	-0.1
	baz=55,SNR=12						
NWAO	Narrogin (SRO)	54.65	245	P	P	08 37 51.7	-0.6
NWAO	Narrogin (SRO)	54.65	245	P	P	08 37 52.2	-0.1
NWAO	Narrogin (SRO)	54.65	245	P	P	08 37 51.7	-0.6
NWAO				pmax	pmax		
	comp=Z,44nm,1.4s						
NWAO	Narrogin (SRO)	54.65	245	P	P	08 37 51.9	-0.3
RKGY	Rocky Gully	54.67	243	P	P	08 37 52.5	+0.2
	baz=55,SNR=5.2						
MBWA	Marble Bar	54.67	260	P	P	08 37 51.3	-1.2
MBWA				IAmb	IAmb	08 37 53.0	
	comp=Z,40nm,0.7s						
MBWA	Marble Bar	54.67	260	P	P	08 37 52.2	-0.4
MBWA	Marble Bar	54.67	260	P	P	08 37 52.0	-0.6
BLDU	Ballidu	55.42	248	P	P	08 37 57.2	-0.5
	baz=55,SNR=47						
BLDU	Ballidu	55.42	248	P	P	08 37 57.4	-0.3
MUN	Mundaring	55.64	246	P	P	08 37 59.2	+0.1
	baz=56,SNR=7.0						
MUN	Mundaring	55.64	246	P	P	08 37 59.8	+0.7
SANI	Sanana	55.72	284	P	P	08 37 59.0	-0.9
	comp=Z,55nm,1.3s,comp=Z,831nm						
MORW	Morawa	56.25	250	P	P	08 38 03.1	-0.3
	baz=56,SNR=16						
MORW	Morawa	56.25	250	P	P	08 38 02.9	-0.6
MORW	Morawa	56.25	250	P	P	08 38 03.5	+0.1
MMRI	Maumere	56.35	275	P	P	08 38 03.3	-1.0
MMRI				IAmb	IAmb	08 38 04.7	
	comp=Z,105nm,1.0s						
MMRI	Maumere	56.35	275	P	P	08 38 04.5	+0.2
	comp=Z,120nm,0.8s						
MMRI	Maumere	56.35	275	P	P	08 38 04.0	-0.3
	comp=Z,123nm,0.8s						
BASI	Baing, Sumba	57.28	273	P	P	08 38 11.1	+0.5
	comp=Z,145nm,1.4s,comp=Z,2µm						
CCD	Concordia, Ant	58.78	194	⇓P	P	08 38 20.8	+0.5
CCD				PcP	PcP	08 39 02.5	-0.2
LUWI	Luwuk	59.04	284	P	P	08 38 22.7	+0.2
	comp=Z,102nm,1.1s,comp=Z,4µm						
GIRL	Giralia	59.24	257	P	P	08 38 24.8	+1.1
	baz=59,SNR=12						
GIRL	Giralia	59.24	257	P	P	08 38 24.7	+0.9
BKSI	Bulukumba	59.58	278	P	P	08 38 25.3	-0.9
	comp=Z,75nm,0.8s,comp=Z,550nm						
GTOI	Gorontalo	59.59	286	P	P	08 38 26.7	+0.5
	comp=Z,32nm,0.9s,comp=Z,310nm						
CASY	Casey	60.01	206	P	P	08 38 27.5	-0.6
CASY	Casey	60.01	206	P	P	08 38 27.9	-0.2
KAPI	Kappang	60.05	278	P	P	08 38 29.1	-0.2
	comp=Z,10.0nm,0.6s,baz=133,slow=2.1,SNR=9.8						
	comp=Z,10.0nm,0.6s						
KAPI	Kappang	60.05	278	*d i*P	P	08 38 28.8	-0.5
KAPI				pmax	pmax		
	comp=Z,51nm,1.7s						
PLAI	Plampang	60.36	273	P	P	08 38 31.3	0.0
PLAI	Plampang	60.36	273	P	P	08 38 31.0	-0.3
	comp=Z,190nm,1.0s,comp=Z,2µm						
TWSI	Taliwang, Sumb	61.21	273	P	P	08 38 36.8	-0.1
	comp=Z,92nm,1.3s,comp=Z,777nm						
TOLI2	Tolitoli	61.79	285	P	P	08 38 40.3	-0.4
TOLI2				IAmb	IAmb	08 38 40.6	
	comp=Z,45nm,0.9s						
TOLI2	Tolitoli	61.79	285	P	P	08 38 41.5	+0.8
MPSI	Mapaga	62.22	284	P	P	08 38 42.6	-0.9
	comp=Z,49nm,1.0s						
IGBI	Denpasar	62.77	272	P	P	08 38 47.3	+0.2
	comp=Z,124nm,1.3s						
SRBI	Singaraja	62.98	273	P	P	08 38 48.3	-0.1
	comp=Z,82nm,1.0s						
JAGI	Jajag, Banyuwa	63.81	272	P	P	08 38 52.3	-1.5
JAGI				IAmb	IAmb	08 38 53.3	
	comp=Z,48nm,0.9s						
RPN	Rapa Nui	63.87	110	P	P	08 38 55.0	+1.1
	comp=Z,46nm,0.6s,baz=315,slow=4.6,SNR=4.1						
	comp=Z,46nm,0.6s						
BBKI	Banjar Baru	65.14	277	P	P	08 39 02.8	+0.6
GRJI	Gresik	65.93	273	P	P	08 39 07.7	+0.6
	comp=Z,233nm,1.0s,comp=Z,2µm						
PWJI	Pagerwojo	66.13	272	P	P	08 39 07.8	-0.5
	comp=Z,53nm,0.7s						
QSPA	South Pole Qui	66.43	180	P	P	08 39 10.9	+1.5
	comp=Z,50nm,0.9s,baz=284,slow=0.6,SNR=98						
	comp=Z,50nm,0.9s						
QSPA	South Pole Qui	66.43	180	P	P	08 39 10.7	+1.3
QSPA				IAmb	IAmb	08 39 12.1	
	comp=Z,87nm,1.1s						
QSPA	South Pole Qui	66.43	180	⇓P	P	08 39 11.0	+1.5
QSPA				PcP	PcP	08 39 37.0	+3.0
UGM	Wanagama	67.34	271	P	P	08 39 15.1	-0.8
KPJI	Karang Pucung	69.02	271	P	P	08 39 25.8	-0.2
	comp=Z,78nm,0.6s						
JOW	Kunigami	70.27	313	P	P	08 39 33.3	+0.1
JGF	Kuroka	70.99	325	P	P	08 39 37.6	+0.4
MJAR	Matsushiro Arr	71.27	326	P	P	08 39 38.5	-0.3
	comp=Z,28nm,0.9s,baz=160,slow=5.7,SNR=35						
	comp=Z,28nm,0.9s						
MAJO	Matsushiro	71.27	326	*i* P	P	08 39 38.9	+0.1
MAJO				pmax	pmax		
	comp=Z,36nm,0.9s						
MAJO	Matsushiro	71.27	326	P	P	08 39 38.8	-0.1
JMN	Monobe	71.51	321	P	P	08 39 40.5	+0.2
JMN				IAmb	IAmb	08 39 42.0	
	comp=Z,58nm,1.2s						
JSU	Suzuyama	71.98	318	P	P	08 39 43.8	+0.7
JSU				IAmb	IAmb	08 39 44.2	
	comp=Z,68nm,0.9s						
CGJI	Cibinong	72.27	270	P	P	08 39 44.0	-1.1
JNU	Nakatsue	72.84	319	P	P	08 39 47.8	-0.3
	comp=Z,27nm,0.8s,baz=85,slow=4.7,SNR=16						
	comp=Z,27nm,0.8s						
JNU	Nakatsue	72.84	319	P	P	08 39 48.3	+0.3
JNU				IAmb	IAmb	08 39 49.0	
	comp=Z,46nm,1.0s						
JHS	Saijyo	72.86	322	P	P	08 39 48.6	+0.5
JHS				IAmb	IAmb	08 39 49.7	
	comp=Z,70nm,1.0s						
TPUB	Ta-pu	73.56	305	P	P	08 39 51.4	-1.0
PPBI	Pangkal Pinang	73.61	275	P	P	08 39 53.1	+0.3
KASI	Kota Agung	73.78	271	P	P	08 39 53.7	-0.1
YHNB	Yeheng	73.80	307	P	P	08 39 54.5	+0.7
YHNB				IAmb	IAmb	08 39 54.5	
	comp=Z,55nm,1.0s						
MDSI	Maura Dua	74.48	272	P	P	08 39 56.3	-1.5
KIWB	Kanaga Island	75.24	2	P	P	08 40 00.8	-0.3
JKA	Kamikawa-asahi	75.30	334	P	P	08 40 03.7	+2.1
JKA				IAmb	IAmb	08 40 04.7	
	comp=Z,60nm,1.1s						
ASAJ	Asahikawa	75.31	334	P	P	08 40 02.7	+1.0
	comp=Z,28nm,0.9s,baz=237,slow=8.4,SNR=12						
	comp=Z,28nm,0.9s						
ASAJ	Asahikawa	75.31	334	P	P	08 40 03.7	+2.0
ASAJ				pmax	pmax		
	comp=Z,60nm,1.1s						
KSI	Kapahiang	76.26	272	P	P	08 40 06.6	-1.2
BELA	Belgrano 2	76.78	173	P	P	08 40 09.3	-0.1
BELA				IAmb	IAmb	08 40 10.7	
	comp=Z,61nm,0.7s						
NIKH	Nikolski High	77.00	7	P	P	08 40 09.7	-1.1
	baz=191						
TJN	Taejon	77.17	319	*ce*P	P	08 40 12.6	+0.5
KSRS	Korea Array	77.57	321	P	P	08 40 14.8	+0.6
	comp=Z,14nm,0.8s,baz=137,slow=5.8,SNR=58						
	comp=Z,14nm,0.8s						
YSS	Yuzh-Sakhalins	77.59	335	*e*P	P	08 40 14.9	+0.8
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
YSS				pmax	pmax		
	comp=Z,500nm,4.6s						
UNV	Unalaska Valle	78.16	9	P	P	08 40 15.3	-1.7
	baz=193						
SDSI	Sungai Dareh	78.41	274	P	P	08 40 17.6	-1.7
PET	Petropavlovsk	78.41	348	*ce*P	P	08 40 17.6	-0.8
PET				pmax	pmax		
	comp=Z,63nm,2.5s						
PEA0B	Petropavlovsk-	78.68	347	*ce*P	P	08 40 20.8	+0.9
PETK	Petropavlovsk-	78.68	347	P	P	08 40 20.2	+0.3
	comp=Z,42nm,0.9s,baz=157,slow=7.9,SNR=28						
	comp=Z,42nm,0.9s						
PMSA	Palmer Station	79.43	157	P	P	08 40 24.5	+0.7
	comp=Z,56nm,0.9s,baz=225,slow=4.6,SNR=10						
	comp=Z,56nm,0.9s						
FALS	False Pass	79.60	10	P	P	08 40 23.1	-1.5
	baz=196						
UGL	Uglegorsk	79.61	336	*e*P	P	08 40 25.0	+0.2
UGL				pmax	pmax		
	comp=Z,60nm,0.9s						
NJ2	Nanjing	79.93	311	⇓P	P	08 40 27.4	+0.5
NJ2				pmax	pmax		
	comp=Z,30nm,0.9s						
USA0B	Ussuriysk Arra	80.15	328	⇓*i*P	P	08 40 27.8	0.0
USRK	Ussuriysk Ar.	80.15	328	P	P	08 40 27.6	-0.1
	comp=Z,25nm,0.9s,baz=152,slow=4.6,SNR=38						
	comp=Z,25nm,0.9s						
TYV	Tymovskoe	80.88	338	*e*P	P	08 40 32.4	+1.0
TYV				*e*S	S	08 49 49.5	-5.4
TYV				pmax	pmax		
	comp=Z,300nm,3.3s						
TYV				pmax	pmax		
	comp=Z,46nm,1.1s						
TYV				smax	smax		
	comp=N,200nm,5.9s						
TYV				smax	smax		
	comp=E,900nm,5.9s						
MDJ	Mudanjiang	81.64	327	P	P	08 40 36.0	+0.5
MDJ				PcP	PcP	08 40 39.5	-0.1
MDJ				sP	sP	08 43 27.6	+1.0
MDJ				S	S	08 50 07.3	+4.5
MDJ				ScS	ScS	08 50 16.9	+1.5
MDJ				sS	sS	08 53 32.0	+2.0
MDJ				pmax	pmax		
	comp=E,47nm,1.0s						
MDJ				pmax	pmax		
	comp=E,240nm,9.5s						
MDJ	Mudanjiang	81.64	327	P	P	08 40 35.7	+0.2
MDJ				IAmb	IAmb	08 40 37.4	
	comp=Z,42nm,1.0s						
SCZ2	Santa Cruz Isl	81.65	47	P	P	08 40 36.3	+0.4
	baz=234						
KULM	Kulim	81.66	279	P	P	08 40 35.9	-0.4
KULM				IAmb	IAmb	08 40 37.3	
	comp=Z,36nm,1.0s						
CHGN	Chignik	81.87	12	P	P	08 40 35.4	-0.9
	baz=201						
PKM	Mcpherson Peak	82.05	47	P	P	08 40 38.6	+0.5
	baz=234						
SAO	San Andreas Ge	82.10	44	P	P	08 40 39.4	+1.3
SAO	San Andreas Ge	82.10	44	P	P	08 40 39.4	+1.3
SAO				pmax	pmax		
	comp=Z,22nm,1.0s						
SMMC	Simmler	82.18	46	P	P	08 40 39.5	+1.0
	baz=234						
WHN	Wuhan	82.25	308	P	P	08 40 39.8	+0.9
WHN				pmax	pmax		
	comp=Z,110nm,1.0s						
BCW	Bitter Crk WRg	82.35	47	P	P	08 40 40.8	+1.3
BCW				IAmb	IAmb	08 40 41.9	
	comp=Z,29nm,0.8s						
MG05	Puerto Natales	82.38	143	P	P	08 40 40.0	+0.7
MG05				IAmb	IAmb	08 40 41.5	
	comp=Z,57nm,0.8s						
MG03	Isla Dawson	82.40	146	P	P	08 40 39.6	+0.3
MG03				IAmb	IAmb	08 40 40.9	
	comp=Z,31nm,0.7s						
OSI	Osito Audit: C	82.62	47	P	P	08 40 40.6	-0.2
	baz=235						
DECC	Green Verdugo	82.68	48	P	P	08 40 40.5	-0.5
	baz=235						
109C	Camp Elliot, M	82.76	50	P	P	08 40 41.5	+0.1
	baz=236						
GSI	Gunungsitoli	82.83	275	P	P	08 40 46.6	+4.3
ARVC	Arvin	82.85	47	P	P	08 40 42.5	+0.7
	baz=234						
VTX	Valle De La Tr	82.86	51	P	P	08 40 43.0	+0.9
ESJX	Sierra Juarez	83.08	51	P	P	08 40 44.3	+1.0
MURC	Murrieta	83.09	49	P	P	08 40 43.5	+0.3
	baz=236,SNR=5.9						
VES	Vestal, Richgr	83.09	46	P	P	08 40 43.4	+0.3
	baz=234						
BFSC	Mount Baldy Ra	83.13	48	P	P	08 40 43.6	+0.1
	baz=235,SNR=6.1						
GRNR	Gornyy	83.14	334	⇓*i*P	P	08 40 44.3	+1.4
GRNR				pmax	pmax		
	comp=E,5.0nm,1.1s						
GRNR				pmax	pmax		
	comp=N,8.0nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.1s						
VOG	Valley Oaks Go	83.17	46	P	P	08 40 43.7	+0.3
	baz=234						
R16K	Pilot Point	83.22	12	P	P	08 40 42.6	-0.5
	baz=201						
MONP2	Monument Peak	83.23	50	P	P	08 40 44.5	+0.4
	baz=236,SNR=11						
CN2	Changchun	83.24	324	⇓P	P	08 40 43.8	+0.2
CN2				*e*pP	pP	08 42 41.3	+1.2
CN2				*e*S	S	08 50 20.3	+1.5
CN2				pmax	pmax		
	comp=Z,80nm,1.2s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
EDW2	Edwards Air Fo	83.27	47	P	P	08 40 44.2	+0.2
	baz=235,SNR=11						
IKP	In-Ko-Pah, Jac	83.32	50	P	P	08 40 44.8	+0.4
	baz=236,SNR=12						
SLBS	Sierra La Lagu	83.33	61	P	P	08 40 45.8	+1.1
SLBS				IAmb	IAmb	08 40 47.3	
	comp=Z,34nm,0.8s						
ISA	Isabella, Lake	83.39	47	P	P	08 40 44.8	+0.2
	baz=235						
TIA	Tai'an	83.52	314	P	P	08 40 45.5	+0.3
TIA				pmax	pmax		
	comp=Z,79nm,1.0s						
R17K	Ugashik Creek	83.53	13	P	P	08 40 44.5	-0.1
	baz=202						
BNX	BinXian	83.53	326	⇓P	P	08 40 44.8	-0.2
BNX				pmax	pmax		
	comp=Z,21nm,1.0s						
BNX				pmax	pmax		
	comp=Z,100nm,6.0s						
CMB	Columbia Colle	83.54	44	P	P	08 40 45.7	+0.4
CMB	Columbia Colle	83.54	44	P	P	08 40 45.7	+0.4
CMB				pmax	pmax		
	comp=Z,25nm,1.0s						
MG02	Cerro Sombrero	83.58	145	P	P	08 40 46.4	+1.2
PFO	Pinyon Flats O	83.61	49	P	P	08 40 46.5	+0.6
	comp=Z,5.1nm,0.8s,baz=263,slow=6.0,SNR=6.5						
	comp=Z,5.1nm,0.8s						
PFO	Pinyon Flats O	83.61	49	*i* P	P	08 40 45.6	-0.2
PFO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PFO	Pinyon Flats O	83.61	49	P	P	08 40 46.4	+0.6
	baz=236						
TPFO	Pinon Flats	83.61	49	P	P	08 40 46.6	+0.7
	baz=236,SNR=5.8						
BBRC	Big Bear Solar	83.65	48	P	P	08 40 46.5	+0.3
	baz=236						
SWSC	Sam W. Stewart	83.70	50	P	P	08 40 47.0	+0.8
	baz=237,SNR=15						
LRMC	Laurel Mtn Rad	83.82	47	P	P	08 40 47.4	+0.5
	baz=235						
OHAK	Old Harbor	83.82	15	P	P	08 40 46.0	0.0
	baz=205						
RRX	Edison Barstow	83.94	48	P	P	08 40 48.0	+0.7
	baz=236						
KLR	Kul'dur	83.95	331	P	P	08 40 47.5	+0.6
	comp=Z,5.9nm,0.7s,baz=115,slow=2.9,SNR=18						
	comp=Z,5.9nm,0.7s						
KLR	Kul'dur	83.95	331	*ce*P	P	08 40 48.0	+1.1
KLR				pmax	pmax		
	comp=Z,25nm,1.5s						
CWC	Cottonwood Cre	84.10	46	P	P	08 40 48.9	+0.7
	baz=235						
BELC	Belle Mtn. Jos	84.14	49	P	P	08 40 49.4	+0.9
	baz=236,SNR=15						
Q17K	Contact Creek	84.21	13	P	P	08 40 47.6	-0.5
	baz=203						
MPMC	Manual Prospec	84.28	47	P	P	08 40 50.0	+0.8
	baz=235,SNR=17						
GSC	Goldstone, Bar	84.31	48	P	P	08 40 49.9	+0.7
	baz=236,SNR=13						
BC3	Big Chuckawall	84.33	50	P	P	08 40 50.4	+1.0
	baz=237,SNR=13						
TIN	Tinemaha, Big	84.35	46	P	P	08 40 50.2	+0.8
	baz=235						
HEC	Hector,Ludlow	84.37	48	P	P	08 40 50.0	+0.5
	baz=236,SNR=7.6						
YBH	Yreka Blue Hor	84.37	40	P	P	08 40 50.0	+0.6
	comp=Z,10nm,0.9s,baz=108,slow=0.6,SNR=15						
	comp=Z,10nm,0.9s						
YBH	Yreka Blue Hor	84.37	40	P	P	08 40 50.7	+1.3
YBH	Yreka Blue Hor	84.37	40	P	P	08 40 50.7	+1.3
YBH				pmax	pmax		
	comp=Z,14nm,1.0s						
Q16K	King Salmon	84.44	12	P	P	08 40 49.0	-0.1
	baz=202						
GLA	Glamis	84.44	50	P	P	08 40 51.4	+1.5
	baz=237,SNR=7.1						
P16K	Nushagak River	84.51	12	P	P	08 40 49.1	-0.3
	baz=201						
TROLL	Troll, Antarti	84.57	181	P	P	08 40 50.0	0.0
PIX	Pinacate	84.63	52	P	P	08 40 51.5	+0.8
DSP	Deep Springs	84.70	45	P	P	08 40 51.6	+0.6
Q18K	Katmai Hardscr	84.74	13	P	P	08 40 50.4	-0.4
	baz=204						
HUMO	Hull Mountain	84.78	39	P	P	08 40 52.2	+1.0
HUMO				IAmb	IAmb	08 40 54.0	
	comp=Z,42nm,1.2s						
GMRC	Granite Mounta	84.81	49	P	P	08 40 52.6	+0.9
	baz=236,SNR=8.7						
IRM	Iron Mountain	84.82	49	P	P	08 40 53.0	+1.3

	baz=237,SNR=16						
GRAC	Grapevine Rang	84.89	46	P	P	08 40 53.1	+1.1
	baz=235,SNR=6.7						
GWY	Greenwater Val	84.90	47	P	P	08 40 52.2	+0.1
FURC	Furnace Creek,	84.92	47	P	P	08 40 52.7	+0.7
	baz=236,SNR=6.9						
SNAA	Sanae	84.93	179	P	P	08 40 51.1	-0.6
SNAA	Sanae	84.93	179	P	P	08 40 51.0	-0.6
SNAA	Sanae	84.93	179	*i* P	P	08 40 50.5	-1.1
SNAA				pmax	pmax		
	comp=Z,27nm,1.5s						
TUQ	Turquoise Moun	84.98	48	P	P	08 40 53.2	+0.7
	baz=236,SNR=6.9						
SHOC	Shoshone, Teco	85.00	47	P	P	08 40 53.0	+0.5
	baz=236,SNR=7.3						
O16K	Kokwok River B	85.02	11	P	P	08 40 52.1	+0.2
	baz=201						
NVAR	Mina Array Bea	85.10	44	P	P	08 40 53.9	+0.7
	comp=Z,7.5nm,0.8s,baz=224,slow=8.6,SNR=46						
NVAR				PKKPbc	PKKPbc	08 58 57.6	+0.8
	comp=Z,0.6nm,0.6s,baz=75,slow=3.7,SNR=5.1						
	comp=Z,7.5nm,0.8s						
VNA3	Neumayer Olymp	85.16	177	P	P	08 40 52.2	-0.5
HSIG		85.19	56	P	P	08 40 54.2	+0.6
HSIG				IAmb	IAmb	08 40 55.9	
	comp=Z,36nm,1.0s						
Q20K	Shuyak Island	85.28	14	P	P	08 40 53.2	0.0
	baz=206						
Q19K	Cape Douglas,	85.29	14	P	P	08 40 53.0	-0.4
	baz=205						
214A	Organ Pipe Nat	85.31	52	P	P	08 40 55.4	+1.3
	baz=238						
O17K	Koliganek Bris	85.37	12	P	P	08 40 53.1	-0.5
	baz=202						
P18K	Big Mountain,	85.38	13	P	P	08 40 52.7	-1.0
	baz=203						
NEE2	Needles Airpor	85.52	49	P	P	08 40 56.1	+1.1
	baz=237,SNR=6.2						
VNA2	Neumayer--Watz	85.57	178	P	P	08 40 54.4	-0.2
	baz=181,slow=5.0						
KVN	Kaiserville	85.58	44	P	P	08 40 56.0	+0.5
KVN	Kaiserville	85.58	44	P	P	08 40 56.0	+0.5
KVN				pmax	pmax		
	comp=Z,11nm,0.8s						
COYC	Coyhaique	85.59	138	P	P	08 40 56.3	+1.1
PDMCI	Parker Dam,Lak	85.60	50	P	P	08 40 56.4	+1.0
	baz=238,SNR=9.4						
TPNV	Topopah Spring	85.60	47	P	P	08 40 56.5	+0.9
	baz=236,SNR=9.3						
ENH	Enshi	85.68	306	P	P	08 40 56.0	+0.1
ENH				IAmb	IAmb	08 40 57.4	
	comp=Z,48nm,1.0s						
N16K	Nishlik Lake	85.73	11	P	P	08 40 56.3	+0.9
	baz=200						
LYN	LuoYang	85.75	311	⇓P	P	08 40 56.9	+0.8
LYN				SS	SS	08 56 35.8	-1.4
LYN				pmax	pmax		
	comp=Z,36nm,1.2s						
LYN				pmax	pmax		
	comp=Z,340nm,4.8s						
GO07	Milladeo Hill,	85.78	135	P	P	08 40 57.5	+1.3
HNS	HongShan	85.78	314	⇓P	P	08 40 57.1	+1.0
HNS				pmax	pmax		
	comp=Z,39nm,1.2s						
VNA1	Neumayer--Stat	85.81	178	P	P	08 40 55.7	0.0
V12A	Nelson	85.87	48	P	P	08 40 57.5	+0.7
MA2	Magadan	86.15	346	P	P	08 40 57.4	+0.1
	comp=Z,41nm,0.9s,baz=143,slow=5.2,SNR=16						
	comp=Z,41nm,0.9s						
MA2	Magadan	86.15	346	*ce*P	P	08 40 57.0	-0.4
MA2				pmax	pmax		
	comp=Z,59nm,0.9s						
J05D	Fort Rock, OR	86.19	39	P	P	08 40 59.1	+1.0
O19K	Port Alsworth	86.31	13	P	P	08 40 57.5	-0.5
	baz=204						
BJT	Baijiatuau	86.32	317	P	P	08 40 59.3	+0.6
BJT	Baijiatuau	86.32	317	P	P	08 40 59.3	+0.6
BJT				pmax	pmax		
	comp=Z,16nm,0.8s						
BJI	Beijing	86.33	317	P	P	08 40 59.3	+0.6
BJI				PcP	PcP	08 41 00.6	+0.3
BJI				S	S	08 50 53.4	+4.7
BJI				pmax	pmax		
	comp=Z,15nm,0.8s						
HOM	Homer	86.40	14	P	P	08 40 57.2	-1.3
	baz=207						
O20K	Slope Mountain	86.56	14	P	P	08 40 58.6	-0.7
	baz=206						
HEH	HeiHe	86.65	330	*e*P	P	08 40 59.9	0.0
HEH				pmax	pmax		
	comp=Z,29nm,1.2s						
HEH				pmax	pmax		
	comp=Z,160nm,6.6s						
PINE	Pine Mountain	86.67	39	P	P	08 41 01.4	+0.9
PINE				IAmb	IAmb	08 41 03.0	
	comp=Z,65nm,1.3s						
BRSE	Bradley Lake S	86.68	15	P	P	08 40 59.9	0.0
	baz=207						
R11A	Troy Canyon, C	86.81	46	P	P	08 41 01.8	+0.5
R11A	Troy Canyon, C	86.81	46	P	P	08 41 01.7	+0.5
	baz=236,SNR=5.7						
N19K	Bonanza Creek	86.84	13	P	P	08 41 00.5	-0.3
	baz=204						
TUC	Tucson	86.97	53	P	P	08 41 03.6	+1.6
	baz=240						
WVOR	Wild Horse Val	87.21	41	P	P	08 41 03.8	+0.8
WVOR				IAmb	IAmb	08 41 05.1	
	comp=Z,30nm,1.1s						
WVOR	Wild Horse Val	87.21	41	P	P	08 41 03.8	+0.8
WVOR				pmax	pmax		
	comp=Z,30nm,1.1s						
TIY	Taiyuan	87.47	313	P	P	08 41 05.1	+0.9
TIY				S	S	08 51 06.9	+7.2
TIY				pmax	pmax		
	comp=Z,40nm,0.7s						
CAPN	Captain Cook N	87.50	14	P	P	08 41 06.4	+2.8
	baz=207						
O22K	Cooper Landing	87.57	15	P	P	08 41 03.5	-0.5
	baz=208						
SPCR	Spurr Chakacha	87.66	13	P	P	08 41 03.2	-1.4
	baz=206						
M19K	Big River Lodg	87.86	12	P	P	08 41 04.9	-0.4
	baz=204						
KNB	Kanab	87.95	48	P	P	08 41 07.4	+0.8
KNB				IAmb	IAmb	08 41 09.0	
	comp=Z,30nm,1.3s						
KNB	Kanab	87.95	48	P	P	08 41 07.4	+0.8
KNB				pmax	pmax		
	comp=Z,30nm,1.3s						
XAN	Xi'an	88.00	309	⇓*i*P	P	08 41 07.4	+0.7
XAN				pP	pP	08 43 04.3	-0.6
XAN				pmax	pmax		
	comp=Z,44nm,1.0s						
U15A	North Rim	88.00	49	P	P	08 41 07.7	+0.7
U15A				IAmb	IAmb	08 41 09.4	
	comp=Z,26nm,0.8s						
L19K	White Mountain	88.02	12	P	P	08 41 06.1	-0.1
	baz=204						
M20K	Styx River	88.08	13	P	P	08 41 05.9	-0.7
	baz=205						
RC01	Rabbit Creek A	88.11	15	P	P	08 41 06.5	-0.1
	baz=208,SNR=8.5						
WUAZ	Wupatki	88.17	50	P	P	08 41 08.4	+0.8
	baz=239						
SUA	Susitna One	88.21	14	P	P	08 41 06.7	-0.5
SUA				IAmb	IAmb	08 41 07.6	
	comp=Z,29nm,0.9s						
SUA	Susitna One	88.21	14	P	P	08 41 06.3	-0.9
	baz=207,SNR=9.2						
PWL	Port Wells	88.24	15	P	P	08 41 06.3	-0.8
	baz=210						
HPIG		88.28	60	P	P	08 41 09.2	+0.7
HPIG				IAmb	IAmb	08 41 10.5	
	comp=Z,26nm,0.8s						
L20K	Farewell, AK	88.48	12	P	P	08 41 07.7	-0.6
	baz=204						
TTA	Tatalina	88.50	11	P	P	08 41 08.2	-0.3
	baz=203,SNR=6.4						
SKT	Skwentna	88.50	13	P	P	08 41 07.5	-0.9
	baz=207						
XLT	XiLinHaoTe	88.61	320	⇓*i*P	P	08 41 09.4	0.0
XLT				pmax	pmax		
	comp=Z,25nm,1.1s						
XLT				pmax	pmax		
	comp=Z,90nm,4.5s						
CRAG	Craig	88.65	25	P	P	08 41 10.1	+1.0
	baz=223						
KNK	Knik Glacier	88.69	15	P	P	08 41 09.1	-0.2
KNK				IAmb	IAmb	08 41 10.2	
	comp=Z,28nm,0.8s						
KNK	Knik Glacier	88.69	15	P	P	08 41 09.1	-0.2
	baz=209						
PMR	Palmer	88.69	15	P	P	08 41 08.5	-0.7
	baz=209,SNR=7.3						
G08A	Pilot Rock	88.70	39	P	P	08 41 10.6	+0.8
G08A				IAmb	IAmb	08 41 11.8	
	comp=Z,52nm,1.5s						
CMAR	Chiang Mai Arr	88.73	291	P	P	08 41 11.4	+1.0
	comp=Z,14nm,1.0s,baz=132,slow=3.1,SNR=64						
CMAR				pP	pP	08 43 10.8	+2.0
	comp=Z,0.9nm,0.3s,baz=136,slow=3.7,SNR=1.8						
CMAR				PP	PP	08 44 50.2	+0.6
	comp=Z,1.3nm,0.3s,baz=129,slow=5.7,SNR=6.3						
CMAR				PKKPbc	PKKPbc	08 58 48.0	+1.0
	comp=Z,2.7nm,0.3s,baz=294,slow=5.1,SNR=11						
	comp=Z,14nm,1.0s						
ANM	Nome	88.74	7	P	P	08 41 09.0	-0.4
	baz=194						
SEY	Seymchan	88.87	348	P	P	08 41 10.2	+0.2
	comp=Z,30nm,0.9s,baz=146,slow=5.5,SNR=71						
SEY				PKKPbc	PKKPbc	08 58 46.5	-2.0
	comp=Z,2.0nm,0.7s,baz=166,slow=4.7,SNR=8.0						
	comp=Z,30nm,0.9s						
SEY	Seymchan	88.87	348	*ce*P	P	08 41 10.1	+0.1
SEY				pmax	pmax		
	comp=Z,47nm,1.0s						
PLCA	Paso Flores	88.98	135	P	P	08 41 12.2	+0.8
	comp=Z,9.1nm,0.8s,baz=213,slow=6.3,SNR=17						
PLCA				pP	pP	08 43 12.2	+1.4
	comp=Z,1.9nm,0.9s,baz=230,slow=7.9,SNR=1.8						
	comp=Z,9.1nm,0.8s						
SIT	Sitka	89.02	23	P	P	08 41 11.6	+0.8
	baz=221						
U33K	Whale Pass	89.13	24	P	P	08 41 10.5	-0.8
	baz=223						
W18A	Petrified Fore	89.13	51	P	P	08 41 13.1	+0.9
	baz=240						
ZEA	Zeya	89.14	332	*e*P	P	08 41 12.3	+0.8
V35K	Ketchikan	89.14	26	P	P	08 41 12.1	+0.7
	baz=224						
CUT	Chulitna	89.15	14	P	P	08 41 10.7	-0.7
	baz=208,SNR=5.4						
PPLA	Purkeypile	89.19	13	P	P	08 41 11.1	-0.6
	baz=206						
M23K	Glacier View	89.19	15	P	P	08 41 11.3	-0.3
	baz=210						
K20K	Telida	89.25	12	P	P	08 41 11.4	-0.4
	baz=204,SNR=8.2						
121A	Cookes Peak, D	89.28	54	P	P	08 41 14.5	+1.6
	baz=241						
121A	Cookes Peak, D	89.28	54	P	P	08 41 14.2	+1.2
	baz=241						
SCM	Sheep Creek Mo	89.33	15	P	P	08 41 12.0	-0.3
SCM	Sheep Creek Mo	89.33	15	P	P	08 41 12.0	-0.3
SCM				pmax	pmax		
	comp=Z,33nm,0.9s						
SCM	Sheep Creek Mo	89.33	15	P	P	08 41 12.1	-0.3
	baz=210						
KLU	Klutina	89.38	16	P	P	08 41 12.5	0.0
	baz=212						
TNA	Tin City	89.47	5	P	P	08 41 12.9	+0.2
	baz=192						
S32K	Killisnoo	89.60	23	P	P	08 41 13.2	-0.2
	baz=221						
DUG	Dugway, Tooele	89.62	45	P	P	08 41 15.0	+0.7
	baz=238,SNR=11						
WRAK	Wrangell Islan	89.64	25	P	P	08 41 14.5	+0.8
	baz=223						
CAST	Castle Rocks	89.69	12	P	P	08 41 12.1	-1.7
CAST				IAmb	IAmb	08 41 13.3	
	comp=Z,21nm,0.9s						
CAST	Castle Rocks	89.69	12	P	P	08 41 12.4	-1.5
	baz=206,SNR=16						
PNL	Peninsula	89.70	20	P	P	08 41 13.4	-0.6
	baz=217						
HHC	Hu-ho-hao-te	89.71	315	*e*P	P	08 41 16.1	+1.5
HHC				pmax	pmax		
	comp=Z,36nm,1.0s						
HHC				pmax	pmax		
	comp=Z,340nm,5.4s						
PINM	Pinnacle	89.78	19	P	P	08 41 14.3	-0.1
	baz=217						
N25K	Chitina, Valde	89.81	16	P	P	08 41 14.7	+0.2
	baz=213						
M24K	Tolsona, Glenn	89.84	16	P	P	08 41 13.8	-0.8
	baz=211						
PZH	PanZhiHua	89.90	299	P	P	08 41 17.3	+1.4
PZH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,5.4s						
NLU	North Lily Min	89.98	46	P	P	08 41 17.1	+1.1
GCSA	Galena City Sc	90.04	10	P	P	08 41 15.1	-0.3
	baz=202,SNR=8.8						
MCARA	McCarthy VSAT	90.04	17	P	P	08 41 15.7	+0.1
	baz=214						
CHUM	Lake Minchumin	90.06	12	P	P	08 41 14.4	-1.1
	baz=206,SNR=6.5						
TRF	Thorofare Moun	90.08	13	P	P	08 41 15.1	-0.8
TRF				IAmb	IAmb	08 41 15.8	
	comp=Z,18nm,0.9s						
TRF	Thorofare Moun	90.08	13	P	P	08 41 14.8	-1.1
	baz=208,SNR=6.9						
BARN	Barnard Glacie	90.15	18	P	P	08 41 16.4	+0.1
BARN				IAmb	IAmb	08 41 18.3	
	comp=Z,36nm,1.1s						
CTG	Chitna Glacier	90.17	18	P	P	08 41 16.7	+0.4
	baz=216						
CD2	Chengdu	90.31	304	P	P	08 41 18.0	+0.4
O28M	Mount Upton	90.34	19	P	P	08 41 17.4	+0.1
	baz=217						
HLID	Hailey	90.41	42	P	P	08 41 18.6	+0.8
	baz=237,SNR=8.8						
O29M	Mount Kennedy	90.45	20	P	P	08 41 16.3	-1.3
	baz=218						
PLBC	Pleasant Camp	90.50	21	P	P	08 41 17.7	+0.1
	baz=220						
BPAW	Bear Paw Mtn.	90.52	13	P	P	08 41 16.9	-0.7
	baz=207						
Y22A	Socorro	90.55	53	P	P	08 41 19.1	+0.3
	baz=242						
SRU	San Rafael Swe	90.58	47	P	P	08 41 19.4	+0.6
SRU	San Rafael Swe	90.58	47	P	P	08 41 19.4	+0.6
SRU				pmax	pmax		
	comp=Z,35nm,0.8s						
BTO	Baotou	90.58	315	*e*P	P	08 41 20.8	+2.1
BTO				pP	pwP	08 43 20.5	-2.4
BTO				sP	sP	08 44 13.4	+1.6
BTO				PP	PP	08 45 09.3	+5.4
BTO				S	S	08 51 21.9	-6.0
BTO				sS	sS	08 54 58.9	-2.2
BTO				pmax	pmax		
	comp=Z,68nm,1.3s						
BTO				pmax	pmax		
	comp=Z,800nm,8.6s						
MCK	McKinley	90.62	14	P	P	08 41 17.3	-0.9
	baz=209						
MNTX	Cornudas Mount	90.69	56	P	P	08 41 20.4	+1.2
	baz=242,SNR=24						
MNTX	Cornudas Mount	90.69	56	P	P	08 41 20.3	+1.0
	baz=242						
PAX	Paxson	90.75	15	P	P	08 41 18.0	-0.8
	baz=212						
P30M	Million Dollar	90.82	20	P	P	08 41 19.9	+0.7
	baz=219						
T35M	Bob Quinn	90.86	25	P	P	08 41 20.1	+0.7
	baz=225						
YUK8	Steele Glacier	90.88	18	P	P	08 41 19.5	-0.2
	baz=217,SNR=5.6						
M26K	Nabesna, AK	90.90	17	P	P	08 41 19.2	-0.3
	baz=214						
TX31	Lajitas Ar. Si	90.94	58	P	P	08 41 21.8	+1.2
	baz=243						
TXAR	Lajitas Array	90.94	58	P	P	08 41 21.8	+1.2
	comp=Z,9.5nm,0.8s,baz=213,slow=6.6,SNR=116						
TXAR				PKKPbc	PKKPbc	08 58 43.0	+0.9
	comp=Z,0.8nm,0.7s,baz=92,slow=3.9,SNR=10						
	comp=Z,9.5nm,0.8s						
MVCO	Mesa Verde	91.02	50	P	P	08 41 21.4	+0.4
	baz=241						
YUK3	Moose Creek	91.07	18	P	P	08 41 20.9	+0.3
	baz=216,SNR=12						
BSUT	Blindstream Ca	91.14	46	P	P	08 41 21.9	+0.3
M27K	Edge Creek, AK	91.16	17	P	P	08 41 20.5	-0.3
M27K				IAmb	IAmb	08 41 22.3	
	comp=Z,16nm,0.9s						
M27K	Edge Creek, AK	91.16	17	P	P	08 41 21.1	+0.3
	baz=215,SNR=8.7						
HWUT	Hardware Ranch	91.16	45	P	P	08 41 21.6	+0.1
S34M	Telegraph Cree	91.18	24	P	P	08 41 21.6	+0.7
	baz=224						
HYT	Haines Junctio	91.19	20	P	P	08 41 21.1	+0.1
	baz=219						
YUK4	Talbot Arm	91.25	19	P	P	08 41 22.0	+0.6
	baz=218						
I21K	Tanana	91.29	12	P	P	08 41 20.6	-0.6
	baz=206,SNR=6.7						
L26K	Log Cabin Wild	91.32	16	P	P	08 41 21.3	-0.2
	baz=214						
K24K	Donnelly Dome	91.39	15	P	P	08 41 21.6	-0.1
	baz=212,SNR=5.7						
MLY	Manley	91.39	12	P	P	08 41 20.5	-1.3
	baz=207						
ANMO	Albuquerque	91.40	52	P	P	08 41 23.2	+0.6
	comp=Z,6.0nm,0.9s,baz=312,slow=6.1,SNR=19						
	comp=Z,6.0nm,0.9s						
ANMO	Albuquerque	91.40	52	*i* P	P	08 41 22.9	+0.2
ANMO				pmax	pmax		
	comp=Z,11nm,1.1s						
ANMO	Albuquerque	91.40	52	P	P	08 41 23.5	+0.8
	baz=242						
ANMO	Albuquerque	91.40	52	P	P	08 41 23.1	+0.4
	baz=242						
NEW	Newport	91.45	37	P	P	08 41 22.0	-0.4
	baz=235						
BVCY	Beaver Creek	91.48	17	P	P	08 41 21.5	-0.7
	baz=216,SNR=6.7						
P32M	Atlin	91.48	22	P	P	08 41 21.4	-0.9
	baz=222						
Q32M	Nakina River	91.53	23	P	P	08 41 22.0	-0.7
	baz=223						
RIDG	Independent Ri	91.55	15	P	P	08 41 21.9	-0.6
	baz=213						
H21K	Melozitna Rive	91.57	11	P	P	08 41 22.0	-0.5
	baz=206						
O30N	Mendenhall	91.59	20	P	P	08 41 21.8	-1.0
	baz=220						
HDA	Harding Lake	91.64	14	P	P	08 41 21.7	-1.1
	baz=211						
L27K	Beaver Creek,	91.75	17	P	P	08 41 23.2	-0.2
	baz=215						
I23K	Minto, Yukon-K	91.77	13	P	P	08 41 22.9	-0.5
	baz=209						
N30M	Aishikik Lake	91.81	19	P	P	08 41 23.5	-0.3
	baz=219						
TCOL	CIGO, UAF Yank	91.84	13	P	P	08 41 22.8	-0.9
	baz=210						
COLA	College	91.85	13	P	P	08 41 22.9	-0.8
	baz=210						
TNCH	TengChong	91.88	296	P	P	08 41 27.8	+2.7
TNCH				pmax	pmax		
	comp=Z,110nm,4.0s						
BILL	Bilibino	91.91	355	*c i*P	P	08 41 24.0	0.0
BILL				*i* *PP	pP	08 43 22.5	-0.5
BILL						08 45 12.0	
BILL						08 51 08.0	
BILL				S	S	08 51 44.0	+5.8
BILL				SS	SS	08 58 10.0	+5.8
BILL				pmax	pmax		
	comp=Z,20nm,0.9s						
SCRK	Sand Creek	91.96	15	P	P	08 41 24.4	0.0
	baz=213						
ILAR	Eielson Array	91.97	14	P	P	08 41 23.1	-1.2
	comp=Z,1.6nm,0.6s,baz=234,slow=5.4,SNR=34						
ILAR				pP	pP	08 43 24.1	+0.7
	comp=Z,2.3nm,0.9s,baz=230,slow=6.3,SNR=4.2						
ILAR				PP	PP	08 45 14.8	+0.8
	comp=Z,4.0nm,1.3s,baz=230,slow=7.1,SNR=4.3						
ILAR				PKiKP	PKiKP	08 46 11.1	+0.4
	comp=Z,0.4nm,0.7s,baz=184,slow=6.1,SNR=4.1						
	comp=Z,1.6nm,0.6s						
H22K	Ishtalitna Cre	92.05	12	P	P	08 41 25.2	+0.5
	baz=207						
POKR	Poker Plat Res	92.15	13	P	P	08 41 25.5	+0.4
	baz=210						
M29M	Somme Creek	92.18	18	P	P	08 41 25.8	+0.3
	baz=218,SNR=7.3						
G21K	Allakaket	92.23	11	P	P	08 41 25.0	-0.5
	baz=205						
H23K	Yukon River	92.33	12	P	P	08 41 24.9	-1.2
	baz=208						
RDOG	Red Dog Mine	92.39	7	P	P	08 41 26.0	-0.2
	baz=196,SNR=13						
S22A	4UR Ranch, Cre	92.45	50	P	P	08 41 27.7	+0.1
S22A				IAmb	IAmb	08 41 29.5	
	comp=Z,11nm,1.0s						
S22A	4UR Ranch, Cre	92.45	50	P	P	08 41 28.1	+0.5
	baz=242,SNR=14						
MSO	Missoula	92.45	39	P	P	08 41 26.5	-0.6
	baz=238						
K27K	Chicken	92.48	16	P	P	08 41 26.7	0.0
	baz=215						
O20A	White River Ci	92.61	47	P	P	08 41 28.6	+0.5
	baz=241,SNR=5.7						
M30M	Minto, Yukon	92.77	19	P	P	08 41 27.8	-0.3
	baz=220,SNR=9.0						
L29M	L29M	92.80	18	P	P	08 41 28.0	-0.2
	baz=218,SNR=10						
F21K	Alatna River	92.88	10	P	P	08 41 27.8	-0.7
	baz=205						
PRP	Porcupine Dome	92.91	14	P	P	08 41 29.0	+0.2
	baz=212						
G23K	Bananza Creek	93.03	12	P	P	08 41 28.4	-0.8
	baz=208						
BW06	Boulder Array	93.03	44	P	P	08 41 30.0	0.0
	baz=240,SNR=5.3						
PDAR	Pinedale Array	93.03	44	P	P	08 41 29.9	-0.2
	comp=Z,2.9nm,0.8s,baz=208,slow=2.9,SNR=25						
PDAR				pP	pwP	08 43 33.0	+0.9
	comp=Z,1.1nm,0.8s,baz=210,slow=4.3,SNR=4.2						
PDAR				PKKPbc	PKKPbc	08 58 36.8	-0.7
	comp=Z,0.6nm,0.7s,baz=81,slow=5.1,SNR=6.4						
	comp=Z,2.9nm,0.8s						
BOZ	Bozeman (W)	93.17	41	P	P	08 41 30.2	-0.3
	baz=239,SNR=5.8						
H17A	Grant Village	93.20	43	P	P	08 41 32.3	+1.4
	baz=240						
DAWY	Dawson	93.20	17	P	P	08 41 30.2	+0.1
	baz=217,SNR=9.8						
M31M	Drury Creek, Y	93.21	20	P	P	08 41 29.5	-0.6
	baz=222						
I26K	Coal Creek Min	93.27	15	P	P	08 41 29.8	-0.5
	baz=214						
EGAK	Eagle	93.32	16	P	P	08 41 30.3	-0.3
	baz=216,SNR=6.2						
F22K	John River	93.35	11	P	P	08 41 30.5	-0.1
	baz=206						
SDCO	Great Sand Dun	93.38	50	P	P	08 41 32.1	+0.3
SDCO				IAmb	IAmb	08 41 33.1	
	comp=Z,7.7nm,0.9s						
SDCO	Great Sand Dun	93.38	50	P	P	08 41 32.3	+0.5
	baz=243,SNR=10						
SDCO	Great Sand Dun	93.38	50	P	P	08 41 32.3	+0.5
	baz=243						
COLD	Coldfoot	93.45	11	P	P	08 41 31.1	0.0
	baz=208						
CO02	Combarbal	93.49	126	P	P	08 41 32.4	0.0
K29M	Barlow Dome	93.54	18	P	P	08 41 31.4	-0.3
	baz=219,SNR=8.9						
FARO	Faro, Yukon	93.56	20	P	P	08 41 31.7	0.0
	baz=223						
MSTX	Muleshoe	93.67	55	P	P	08 41 33.9	+0.9
	baz=244						
MAYO	Mayo, Yukon	93.81	18	P	P	08 41 33.6	+0.7
MAYO	Mayo, Yukon	93.81	18	P	P	08 41 32.8	0.0
	baz=220,SNR=5.5						
G25K	Bearman Lake	93.85	13	P	P	08 41 32.6	-0.3
	baz=212						
T25A	Trinidad	93.88	51	P	P	08 41 33.9	-0.1
	baz=243						
I27K	Kandik River	93.88	15	P	P	08 41 33.0	-0.2
	baz=216						
833A	Chaparral WMA,	93.89	61	P	P	08 41 34.7	+0.7
	baz=245						
833A	Chaparral WMA,	93.89	61	P	P	08 41 34.5	+0.5
	baz=245						
CO03	El Pedregal	93.90	126	P	P	08 41 34.0	-0.3
CO03				IAmb	IAmb	08 41 35.6	
	comp=Z,14nm,0.8s						
E22K	Anaktuvuk Pass	93.98	10	P	P	08 41 32.7	-0.8
	baz=206						

F24K	Squaw Lake	94.14	12	P	P	08 41 33.3	-1.0
	baz=210						
Q24A	Divide	94.18	49	P	P	08 41 35.6	+0.1
	baz=243						
ISCO	Idaho Springs	94.24	48	P	P	08 41 36.0	+0.3
	baz=243						
ISCO	Idaho Springs	94.24	48	P	P	08 41 36.3	+0.5
	baz=243						
E23K	Chandalar	94.29	11	P	P	08 41 34.4	-0.6
	baz=208						
H27K	Steamboat Moun	94.42	15	P	P	08 41 35.5	0.0
	baz=216						
JCT	Junction City	94.46	59	P	P	08 41 37.2	+0.6
	baz=245						
JCT	Junction City	94.46	59	P	P	08 41 36.6	0.0
	baz=245						
G26K	Porcupine Rive	94.50	14	P	P	08 41 35.5	-0.3
	baz=214						
E24K	Your Creek	94.51	12	P	P	08 41 35.7	-0.2
	baz=209						
I29M	Ogilvie Camp,	94.52	17	P	P	08 41 35.6	-0.4
	baz=218,SNR=5.1						
F25K	Christian Rive	94.65	13	P	P	08 41 35.3	-1.3
	baz=212						
G27K	Doyon Strip	94.86	15	P	P	08 41 37.7	+0.2
	baz=216						
D23K	Nanushuk River	94.91	10	P	P	08 41 37.1	-0.6
	baz=208						
K22A	Casper	94.94	45	P	P	08 41 38.7	0.0
	baz=242						
F26K	Sheenjek River	95.04	13	P	P	08 41 38.4	+0.1
	baz=213						
E25K	Arctic Village	95.11	13	P	P	08 41 38.2	-0.5
	baz=212						
ABTX	Abilene, Hawle	95.47	57	P	P	08 41 41.4	+0.2
	baz=245						
ABTX	Abilene, Hawle	95.47	57	P	P	08 41 41.7	+0.6
	baz=245						
EGMT	Eagleton	95.50	40	P	P	08 41 40.9	-0.1
	baz=240						
EPYK	Eagle Plains	95.72	16	P	P	08 41 41.1	-0.4
	baz=220						
C24K	Franklin Bluff	95.92	11	P	P	08 41 41.2	-1.0
	baz=209						
KSCO	Kaye Shedlock'	95.96	50	P	P	08 41 43.9	+0.6
	baz=244						
KSCO	Kaye Shedlock'	95.96	50	P	P	08 41 44.0	+0.7
	baz=244						
D25K	Kavik River	95.98	12	P	P	08 41 41.9	-0.7
	baz=211						
E27K	Coleen River	96.00	14	P	P	08 41 42.5	-0.1
	baz=216						
ULN	Ulaanbaatar	96.05	320c	eP	P	08 41 43.5	0.0
ULN				pmax	pmax		
	comp=Z,14nm,1.3s						
ULN	Ulaanbaatar	96.05	320	P	P	08 41 43.7	+0.2
A21K	Barrow	96.21	8	P	P	08 41 43.2	-0.3
	baz=202						
G30M	tAoh Zraii Nji	96.31	16	P	P	08 41 43.6	-0.5
	baz=220						
SONM	Songino Array	96.42	320	P	P	08 41 44.5	-0.7
	comp=Z,4.8nm,1.1s,baz=138,slow=4.2,SNR=20						
SONM				PP	PP	08 45 44.5	-4.2
	comp=Z,1.4nm,1.1s,baz=140,slow=7.3,SNR=3.9						
SONM				PKKPbc	PKKPbc	08 58 27.5	-1.1
	comp=Z,3.2nm,0.9s,baz=256,slow=2.6,SNR=14						
	comp=Z,4.8nm,1.1s						
C27K	Jago River	96.75	12	P	P	08 41 45.7	-0.2
	baz=214						
C26K	Camden Bay	96.76	12	P	P	08 41 46.0	0.0
	baz=213						
GTA	Gaotai	96.95	310	eP	P	08 41 48.4	+0.6
GTA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
LAO	LASA Array	96.99	42	P	P	08 41 48.1	+0.5
	baz=243						
LAO	LASA Array	96.99	42	P	P	08 41 48.8	+1.2
	baz=243						
WMOK	Wichita Mounta	96.99	55	P	P	08 41 49.9	+2.0
	baz=246						
WMOK	Wichita Mounta	96.99	55	P	P	08 41 50.0	+2.0
	baz=246						
RSSD	Black Hills	97.22	45	P	P	08 41 49.3	+0.4
	baz=244						
RSSD	Black Hills	97.22	45	P	P	08 41 49.4	+0.4
	baz=244						
F31M	Tsiigehtchic	97.30	17	P	P	08 41 48.4	+0.1
	baz=223						
CBKS	Cedar Bluff	97.93	51	P	P	08 41 52.6	+0.5
	baz=246						
INK	Inuvik	97.99	16	P	Pdif	08 41 50.5	-0.9
	comp=Z,2.8nm,0.8s,baz=222,slow=5.2,SNR=11						
INK				PKKPbc	PKKPbc	08 58 22.6	-2.2
	comp=Z,0.3nm,0.3s,baz=0.0,slow=3.0,SNR=6.9						
	comp=Z,2.8nm,0.8s						
INK	Inuvik	97.99	16	P	Pdif	08 41 50.9	-0.6
	baz=223						
YKA	Yellowknife Ar	100.46	26	P	Pdif	08 42 02.5	-0.1
	comp=Z,0.4nm,0.8s,baz=245,slow=4.5,SNR=7.6						
YKA				PKiKP	PKiKP	08 46 24.6	-1.0
	comp=Z,0.8nm,0.8s,baz=233,slow=1.3,SNR=9.0						
YKA				PKKPbc	PKKPbc	08 58 14.6	-3.0
	comp=Z,0.6nm,0.6s,baz=49,slow=2.3,SNR=16						
C36M	Paulatuk	101.22	18	P	Pdif	08 42 05.6	-0.2
	baz=231						
ECSD	EROS Data Cent	101.99	47	P	Pdif	08 42 10.0	+0.1
	baz=249						
A36M	Sachs Harbour	102.58	15	P	Pdif	08 42 11.8	0.0
	baz=231						
ZSN	Zaisan	109.86	314	ePKiKP	PKiKP	08 46 42.3	-1.2
	baz=314						
ZALV	Zalesovo Beam	111.28	321	PKiKP	PKiKP	08 46 44.2	-1.8
	comp=Z,1.2nm,0.4s,baz=114,slow=1.8,SNR=6.3						
MK31	Makanchi Array	111.43	313	i PKIKP	PKiKP	08 46 45.2	-1.4
MKAR	Makanchi Array	111.43	313	Pdiff	Pdif	08 42 52.7	+0.9
	comp=Z,0.9nm,0.8s,baz=104,slow=6.1,SNR=6.7						
MKAR				PKiKP	PKiKP	08 46 45.3	-1.3
	comp=Z,3.2nm,0.8s,baz=71,slow=2.9,SNR=16						
MKAR				PKKPbc	PKKPbc	08 57 43.2	-0.7
	comp=Z,1.9nm,0.8s,baz=282,slow=4.0,SNR=14						
SHLS	Shalkode	112.65	309	ePKiKP	PKiKP	08 46 47.3	-1.9
	baz=309						
SHLS	Shalkode	112.65	309	i PKIKP	PKiKP	08 46 47.2	-1.9
KPKS	Kokpek	113.27	309	ePKiKP	PKiKP	08 46 48.9	-1.4
	baz=309						
KPKS	Kokpek	113.27	309	i PKIKP	PKiKP	08 46 48.9	-1.4
SATY	Saty	113.39	308	ePKiKP	PKiKP	08 46 49.4	-1.2
	baz=308						
SATY	Saty	113.39	308	i PKIKP	PKiKP	08 46 49.3	-1.2
MDOK	Medeo	114.39	308	ePKP	PKPdf	08 46 51.1	-1.4
	baz=308						
MDOK	Medeo	114.39	308	ePKIKP	PKPdf	08 46 51.1	-1.4
TNSS	Tian-Shan	114.44	308	ePKP	PKPdf	08 46 51.9	-1.1
	baz=308						
TNSS	Tian-Shan	114.44	308	ePKIKP	PKPdf	08 46 51.8	-1.1
KURK	Kurchatov	114.50	317c	iPKIKP	PKPdf	08 46 51.2	-1.0
KURK				pmax	pmax		
	comp=Z,15nm,1.0s						
KURK	Kurchatov	114.50	317	P	PKPdf	08 46 51.5	-0.7
KSH	Kashi	114.51	304	PKP	PKPdf	08 46 52.8	0.0
KURBB	Kurchatov Arra	114.55	317	PKP	PKPdf	08 46 51.2	-1.2
	comp=Z,6.9nm,0.8s,baz=97,slow=1.9,SNR=55						
KURBB				PP	PP	08 47 54.5	-5.5
	comp=Z,1.7nm,1.0s,baz=98,slow=7.0,SNR=5.8						
KURBB				PKKPbc	PKKPbc	08 57 33.2	-0.3
	comp=Z,2.8nm,0.9s,baz=274,slow=3.9,SNR=17						
CHKK	Chushkaly	114.55	309	ePKP	PKPdf	08 46 51.0	-1.6
	baz=309						
CHKK	Chushkaly	114.55	309	ePKIKP	PKPdf	08 46 51.0	-1.6
ULHL	Ulahol	114.81	307	P	PKPdf	08 46 53.2	-0.2
	SNR=8.7						
KUU	Kurty	115.02	309	ePKP	PKPdf	08 46 52.4	-1.1
	baz=309						
KUU	Kurty	115.02	309	ePKIKP	PKPdf	08 46 52.4	-1.1
TKM2	Tokmak 2	115.39	308	P	PKPdf	08 46 53.6	-0.9
	SNR=7.8						
UCH	Uchtor	116.07	307	P	PKPdf	08 46 55.8	-0.4
	SNR=9.9						
AAK	Ala-Archa	116.15	307	PKKPbc	PKKPbc	08 57 27.1	-1.0
	comp=Z,3.9nm,0.6s,baz=268,slow=1.1,SNR=6.4						
AAK	Ala-Archa	116.15	307c	iPKIKP	PKPdf	08 46 55.8	-0.1
AAK				pmax	pmax		
	comp=Z,8.0nm,1.7s						
SGDS	Sogindy	116.17	308	ePKP	PKPdf	08 46 54.9	-1.0
	baz=308						
SGDS	Sogindy	116.17	308	ePKIKP	PKPdf	08 46 54.8	-1.0
USP	Ospenovka	116.24	308	P	PKPdf	08 46 55.2	-0.7
	SNR=7.2						
AML	Almayashu	116.66	307	P	PKPdf	08 46 57.0	-0.3
	SNR=13						
EKS2	Erkin-Say	116.68	307	P	PKPdf	08 46 56.8	-0.1
	SNR=6.2						
BTLS	Baital	116.81	310	i PKP	PKPdf	08 46 56.0	-0.9
	baz=310						
BTLS	Baital	116.81	310	i PKIKP	PKPdf	08 46 56.0	-0.9
TULEG	Thule	117.92	14	i P	PKPdf	08 46 55.5	-2.6
BRZS	Berezniki	118.21	315	ePKP	PKPdf	08 46 58.0	-1.4
	baz=315						
BRZS	Berezniki	118.21	315	ePKIKP	PKPdf	08 46 58.0	-1.4
MSEY	Mahe Island	118.35	250	P	PKiKP	08 47 01.4	+0.5
KBL	Kabul	119.06	298	P	PKiKP	08 47 02.0	0.0
BDFB	Brasilia	119.57	126	PKP	PKPdf	08 47 02.5	-0.8
	comp=Z,8.1nm,0.7s,baz=192,slow=2.6,SNR=15						
BDFB				PKKPbc	PKKPbc	08 57 16.4	+0.4
	comp=Z,1.5nm,0.6s,baz=33,slow=2.8,SNR=3.5						
BVAR	Borovoye Array	119.75	319	PKP	PKPdf	08 47 01.6	-0.7
	comp=Z,5.5nm,0.3s,baz=82,slow=2.1,SNR=47						
BVAR				PKKPbc	PKKPbc	08 57 15.2	-0.3
	comp=Z,0.8nm,0.6s,baz=316,slow=6.2,SNR=4.9						
BRVK	Borovoye	119.82	319c	iPKIKP	PKPdf	08 47 01.7	-0.7
BRVK				pmax	pmax		
	comp=Z,20nm,1.3s						
BRVK	Borovoye	119.82	319	P	PKPdf	08 47 02.1	-0.3
SUR	Sutherland	120.58	201	P	PKiKP	08 47 05.2	+0.2
NEEM	North Greenlan	121.17	11	i P	PKPdf	08 47 02.5	-2.2
KULLO	Kullorsuaq	121.34	15	i P	PKPdf	08 47 02.3	-2.5
BOSA	Boshof	122.29	207	PKP	PKiKP	08 47 08.4	0.0
	comp=Z,14nm,0.8s,baz=128,slow=1.9,SNR=18						
UPNV	Upernavik	122.42	17	i P	PKPdf	08 47 04.9	-1.9
SCHQ	Schefferville	122.75	39	PKP	PKPdf	08 47 07.1	-0.9
	comp=Z,8.5nm,0.9s,baz=40,slow=6.0,SNR=7.9						
SCHQ				PKKPbc	PKKPbc	08 57 04.0	-0.4
	comp=Z,2.3nm,0.9s,baz=93,slow=4.6,SNR=4.6						
NUUG	Nuugaatsiaq	123.81	18	i P	PKPdf	08 47 08.2	-1.3
NGCH	Negor - Chabah	124.05	285	P	PKiKP	08 47 12.7	+0.9
SPA0	Spitsbergen Ar	124.81	356	ePKPdf	PKPdf	08 47 11.1	-0.3
SPITS	Spitsbergen Ar	124.81	356	PKKPbc	PKKPbc	08 56 55.4	-1.5
	comp=Z,17nm,1.0s,baz=129,slow=2.4,SNR=4.4						
JLN	Jalan Bani Buh	124.86	281	P	PKPdf	08 47 13.2	+0.2
SVE	Sverdlovsk	125.03	324	ePKIKP	PKPdf	08 47 11.9	-0.4
SVE				pmax	pmax		
	comp=Z,29nm,1.0s						
ILULI	Ilulissat	125.58	20	i P	PKPdf	08 47 11.2	-1.8
WSAR	Wadi Sarin	125.82	282	P	PKiKP	08 47 15.4	+0.1
MHTO	MHTO	125.88	279	P	PKiKP	08 47 15.3	-0.2
	SNR=9.2						
DQM	DQM	126.00	278	P	PKiKP	08 47 15.8	+0.1
JMDO	Jabal Madar	126.09	281	P	PKPdf	08 47 15.6	+0.1
DAG	Danmarks Havn	126.10	5	i P	PKPdf	08 47 11.3	-2.5
ARU	Arti	126.24	324	PKP	PKPdf	08 47 14.5	-0.1
	comp=Z,10nm,0.4s,baz=54,slow=1.1,SNR=30						
ARU	Arti	126.24	324	i PKIKP	PKPdf	08 47 14.3	-0.3
ARU						08 49 15.4	
ARU						08 53 34.0	
SMDO	Samad	126.30	282	P	PKiKP	08 47 16.2	-0.2
	SNR=5.3						
SUMG	Summit	126.81	13	i P	PKPdf	08 47 15.5	-0.3
BSY	Bisya	126.99	281	P	PKPdf	08 47 17.1	0.0
AKTO	Aktyubinsk	127.60	316	PKP	PKPdf	08 47 17.4	0.0
	comp=Z,13nm,0.8s,baz=84,slow=2.1,SNR=34						
GEYT	Alibeck	128.19	300	PKP	PKiKP	08 47 19.5	-0.2
	comp=Z,12nm,0.8s,baz=222,slow=2.0,SNR=18						
DBG	Daneborg	128.26	7	i P	PKPdf	08 47 15.5	-2.5
RBK	Rabkut	128.38	274	P	PKiKP	08 47 20.3	-0.3
HATD	Hatta, Dubai	128.38	284	P	PKiKP	08 47 20.3	-0.1
	SNR=6.0						
ASHO	Ashiyiah	128.42	283	P	PKiKP	08 47 20.3	-0.2
	SNR=6.3						
ALNE	Al Ain	128.57	283	P	PKiKP	08 47 20.9	+0.1
	SNR=5.3						
DY2G	Dye2	128.58	21	i P	PKPdf	08 47 17.1	-2.0
WHFO	Wadi Hawf	128.89	274	P	PKPdf	08 47 21.2	+0.3
ICESG	Greenland Ices	128.96	17	i P	PKPdf	08 47 18.8	-1.1
ABTO	Aybut	129.16	274	P	PKiKP	08 47 21.8	-0.4
KIRV	Kirov	130.31	328	PKP	PKPdf	08 47 22.1	-0.1
	comp=Z,22nm,0.7s,baz=48,slow=4.9,SNR=7.7						
KIRV				SKPbc	SKPbc	08 49 54.1	-0.6
	comp=Z,15nm,0.7s,baz=127,slow=2.0,SNR=5.4						
KIRV	Kirov	130.31	328c	iPKIKP	PKPdf	08 47 22.3	0.0
MZR	Muzera	130.39	281	P	PKiKP	08 47 24.2	-0.3
IVI	Ivigtut	130.53	28	i P	PKPdf	08 47 21.7	-0.9
JRN	Qarnain Island	131.33	283	P	PKiKP	08 47 25.9	-0.4
ARA0	ARCESS Array S	131.49	348	ePKPdf	PKPdf	08 47 23.9	-0.4
ARCES	ARCESS Array B	131.49	348	PKP	PKPdf	08 47 23.6	-0.6
	comp=Z,14nm,0.8s,baz=79,slow=2.8,SNR=24						
ARCES				SKPbc	SKPbc	08 49 58.6	-0.2
	comp=Z,13nm,0.8s,baz=20,slow=3.3,SNR=13						
ISOG	Isortoq, Green	131.51	20	eP	PKPdf	08 47 24.1	-0.2
SCO	Scoresbysund	131.54	9	eP	PKPdf	08 47 23.3	-1.0
NRS	Narsarsuaq	131.72	27	i P	PKiKP	08 47 36.1	+10
ANGG	Ammassalik, Gr	131.89	20	eP	PKPdf	08 47 24.1	-0.9
LSZ	Lusaka	132.03	219	P	PKiKP	08 47 27.9	-0.3
KTK1	Kautokeino	132.36	349	ePKPdf	PKPdf	08 47 24.9	-1.0
TRO	Tromso	132.51	351	ePKPdf	PKPdf	08 47 26.1	-0.1
BELG	Belogornoye	133.47	321	PKP	PKPdf	08 47 28.1	-0.3
	comp=Z,50nm,0.8s,baz=216,slow=0.7,SNR=23						
BELG				SKPbc	SKPbc	08 50 05.5	-0.4
	comp=Z,26nm,0.9s,baz=220,slow=1.8,SNR=5.2						
KLMR	Klimovskoe	133.63	334	ePKPdf	PKPdf	08 47 26.6	-1.9
KLMR				AMP		08 47 33.6	
	comp=Z,33nm,1.8s						
KLMR				ePP	PP	08 50 04.6	-0.7
KLMR	Klimovskoe	133.63	334	ePKIKP	PKPdf	08 47 26.5	-1.9
KLMR				e		08 50 04.6	
KLMR				pmax	pmax		
	comp=Z,33nm,1.8s						
TSUM	Tsumeb	133.78	204	SKPbc	SKPbc	08 50 09.3	+1.0
	comp=Z,4.9nm,0.8s,baz=115,slow=5.5,SNR=5.7						
KMBO	Kilima Mbogo	135.56	242	P	PKPdf	08 47 34.6	+0.7
AKT	Akhty	136.00	306	ePKIKP	PKPdf	08 47 33.5	-0.2
AKT				e		08 49 40.1	
AKT				e		08 50 18.0	
AKT				pmax	pmax		
	comp=Z,19nm,0.8s						
VRH	Novokhopyorsk	137.31	321	ePKIKP	PKPdf	08 47 35.3	-0.3
VRH				pmax	pmax		
	comp=Z,29nm,0.8s						
FINES	FINESS Array B	137.97	341	PKhKP	PKPpre	08 47 28.9	
	comp=Z,1.8nm,0.4s,baz=53,slow=4.2,SNR=12						
FINES				PKP	PKPdf	08 47 36.9	+0.4
	comp=Z,10.0nm,0.8s,baz=58,slow=1.9,SNR=8.3						
FINES				SKPbc	SKPbc	08 50 18.8	-0.5
	comp=Z,12nm,0.8s,baz=52,slow=3.7,SNR=15						
OBN	Obninsk	138.16	328d	iPKIKP	PKPdf	08 47 36.3	-0.7
OBN				pmax	pmax		
	comp=Z,202nm,4.1s						
LPSR	Galich'ya Gora	138.25	324	ePKIKP	PKPdf	08 47 36.3	-1.0
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GNI	Garni	138.44	304c	iPKIKP	PKPdf	08 47 38.3	0.0
GNI				pmax	pmax		
	comp=Z,27nm,1.7s						
VORR	Voronezh	138.53	323	ePKIKP	PKPdf	08 47 38.4	+0.6
VORR				pmax	pmax		
	comp=Z,51nm,0.5s						
ZEI	Tsey	138.56	308	i PKIKP	PKPdf	08 47 38.0	-0.5
ZEI				pmax	pmax		
	comp=Z,11nm,0.9s						
VSR	Storozhevoye	138.76	322	ePKIKP	PKPdf	08 47 37.0	-1.3
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VORD	Divnogorie	138.80	322	ePKIKP	PKPdf	08 47 37.7	-0.7
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KBZ	Khabaz	139.04	310	PKhKP	PKPpre	08 47 29.6	
	comp=Z,1.3nm,0.8s,baz=321,slow=6.5,SNR=2.4						
KBZ	Khabaz	139.04	310c	iPKIKP	PKPdf	08 47 38.9	-0.1
KIV	Kislovodsk	139.13	311	ePKIKP	PKPdf	08 47 37.8	-1.5
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NB2	NORSAR Subarra	141.71	351	PKP	PKPdf	08 47 38.6	-4.8
	comp=Z,14nm,1.2s,baz=16,slow=3.2						
NB2				SKPa		08 50 28.8	
	comp=Z,2.1nm,0.7s,baz=16,slow=2.8						
NOA	NORSAR Array B	141.71	351	PKhKP	PKPpre	08 47 38.4	
	comp=Z,11nm,0.7s,baz=16,slow=4.8,SNR=41						
NOA				SKPbc	SKPbc	08 50 29.3	0.0
	comp=Z,4.0nm,0.8s,baz=15,slow=4.2,SNR=7.8						
NC602	NORSAR Array S	141.95	350	ePKPdf	PKPdf	08 47 39.0	-4.8
ANN	Anapa	142.44	314	i PKIKP	PKiKP	08 47 50.6	+2.2
ANN				pmax	pmax		
	comp=Z,118nm,1.2s						
SKAR	Skarslia	142.45	353	ePKPdf	PKPdf	08 47 41.5	-3.2
MNK	Minsk	142.48	333	i PKP	PKPdf	08 47 40.7	-4.1
	comp=E,4.0nm,1.1s						
MNK				i PKP	PKPdf	08 47 40.7	-4.1
	comp=N,52nm,1.1s						
MNK				i PKP	PKPdf	08 47 40.7	-4.1
	comp=Z,44nm,0.7s,baz=46						
MNK				i pPKP	pPKPdf	08 49 47.5	-4.3
MNK				i sPKP		08 50 40.2	
MNK				i PP	PP	08 50 55.7	-3.7
MNK				i PPP	PPP	08 54 10.9	
MNK				i SKKS		09 03 13.4	
MNK				i SS	SS	09 08 50.6	-0.8
MNK				i SSS	SSS	09 14 21.2	
MNK				i LR	LR	09 43 55.5	
MNK	Minsk	142.48	333	i PKHKP	PKPpre	08 47 40.7	
MNK				i		08 50 55.6	
MNK				i SS	SS	09 08 50.5	-0.9
MNK				i SSS	SSS	09 14 21.2	
MNK				pmax	pmax		
	comp=E,4.0nm,1.1s						
MNK				pmax	pmax		
	comp=N,52nm,1.1s						
MNK				pmax	pmax		
	comp=Z,44nm,0.7s						
NACGM	Naroch	142.65	334	ePKP	PKPdf	08 47 42.7	-2.4
	comp=E,3µm,0.9s						
ASK	Askoy	142.95	355	ePKPdf	PKPdf	08 47 43.0	-2.5
VIKU	Vikbolandet	143.00	345	eP	PKPdf	08 47 42.1	-3.5
BER	Bergen	143.04	355	ePKPbc	PKPab	08 47 43.2	0.0
PABE	Paberze	143.29	336	eP	PKPbc	08 47 44.6	-0.1
ODD1	Odda	143.39	354	ePKPbc	PKPab	08 47 44.1	-0.5
LRW	Lerwick	143.54	0	eP	PKPab	08 47 44.6	-0.6
PBUR	Paburge	143.60	339	eP	PKPab	08 47 45.1	-0.4
BLS5	Blasjo	143.88	354	ePKPbc	PKPbc	08 47 45.8	-0.7
KMY	Karmoy	144.21	355	ePKPdf	PKPbc	08 47 47.3	-0.1
AKASG	Malin Array Be	144.35	327	PKP	PKPbc	08 47 47.2	-0.9
	comp=E,26nm,0.7s,baz=38,slow=4.1,SNR=147						
AKASG				SKPbc	SKPbc	08 50 35.7	-0.2
	comp=E,0.7nm,0.4s,baz=34,slow=3.2,SNR=4.1						
SIM	Simferopol'	144.55	315	ePKIKP	PKPab	08 47 49.3	-0.2
SIM				pmax	pmax		
	comp=Z,69nm,0.6s						
SNART	Snartemo	144.87	353	ePKPdf	PKPdf	08 47 48.9	0.0
DEL	Delary	145.49	346	eP	PKPdf	08 47 50.0	0.0
ASF	Jabal al Asfar	145.74	293	PKPbc	PKPbc	08 47 53.3	+0.3
	comp=Z,29nm,0.8s,baz=119,slow=1.0,SNR=27						
BZK	Bozkurt	145.81	311	⇓P	PKPdf	08 47 49.8	-1.2
MCD	Coleburn Disti	146.05	2	eP	PKPbc	08 47 52.2	-0.7
KPL	Plockton	146.16	5	eP	PKPbc	08 47 53.0	-0.2
SORM	Soroca	146.36	324	⇑P	PKPbc	08 47 53.7	-0.3
SORM	Soroca	146.36	324	⇑PKP2	PKPbc	08 47 53.7	-0.3
BSD	Bornholm Skovb	146.47	344	eP	PKPdf	08 47 52.1	+0.5
DRUM	Mains of Drumt	146.75	2	eP	PKPbc	08 47 53.6	-1.2
KIS	Kishinev	146.75	322	ePKHKP	PKPpre	08 47 50.0	
KIS				pmax	pmax		
	comp=Z,50nm,0.2s						
MILM	Milestii Mici	146.80	322	⇓iPKP	PKPbc	08 47 54.0	-1.3
	comp=Z,160nm,0.8s						
MILM	Milestii Mici	146.80	322d	iPKIKP	PKPbc	08 47 54.0	-1.3
MILM				pmax	pmax		
	comp=Z,160nm,0.8s						
BR131	Keskin Array S	146.83	307	P	PKPdf	08 47 53.6	+0.5
	SNR=19						
BRTR	Keskin Array B	146.83	307	PKPbc	PKPbc	08 47 55.5	-0.4
	comp=Z,22nm,0.7s,baz=132,slow=3.9,SNR=56						
MMAI	Mount Meron Ar	146.91	295	PKPbc	PKPbc	08 47 56.6	+0.5
	comp=Z,16nm,0.4s,baz=71,slow=3.6,SNR=55						
MMAI				pPKPbc	pPKPab	08 50 01.5	+0.6
	comp=Z,15nm,1.0s,baz=46,slow=4.2,SNR=3.4						
INVG	Invergeldie, C	147.17	3	eP	PKPbc	08 47 55.2	-0.8
LAWE	Loch Awe, Argy	147.25	5	eP	PKPbc	08 47 55.9	-0.3
BEL	Belsk	147.33	335	ePKPbc	PKPbc	08 47 56.8	+0.2
ANTO	Ankara	147.40	308	⇓P	PKPbc	08 47 57.7	+0.5
ANTO	Ankara	147.40	308	⇓PKP2	PKPbc	08 47 57.7	+0.5
ANTO	Ankara	147.40	308	P	PKPdf	08 47 54.6	+0.7
GKP	Gorka Klasztor	147.41	340	ePKPbc	PKPbc	08 47 56.6	0.0
GKP	Gorka Klasztor	147.41	340	eP	PKPdf	08 47 53.1	-0.2
LVV	L'vov	147.44	330	ePKP2	PKPbc	08 47 56.6	-0.3
EIL	Elat	147.56	288	PKPbc	PKPbc	08 47 58.0	+0.1
	comp=Z,44nm,0.8s,baz=40,slow=1.0,SNR=10						
TLCR		147.74	319	⇑P	PKPbc	08 47 58.0	+0.2
TLCR		147.74	319	⇑PKP2	PKPbc	08 47 58.0	+0.2
CFR	Carcaliu	148.15	320	⇑P	PKPbc	08 47 58.8	0.0
CFR	Carcaliu	148.15	320	⇑PKP2	PKPbc	08 47 58.8	0.0
TPGR	Topolog	148.16	319	⇓P	PKPbc	08 47 59.5	+0.5
EKA	Eskdalemuir Ar	148.31	3	PKPbc	PKPbc	08 47 58.0	-0.9
	comp=Z,14nm,0.6s,baz=354,slow=1.7,SNR=9.1						
EKA				pPKPbc	pPKPab	08 50 07.0	+1.4
	comp=Z,11nm,0.9s,baz=343,slow=2.1,SNR=9.3						
BURAR	Bucovina Array	148.34	326	⇑P	PKiKP	08 48 00.1	-0.5
BURAR	Bucovina Array	148.34	326	⇑PKP2	PKiKP	08 48 00.1	-0.5
TIRR	Tirgusor	148.37	318	⇓P	PKPbc	08 47 59.8	+0.4
TIRR	Tirgusor	148.37	318	⇓PKP2	PKPbc	08 47 59.8	+0.4
NEWG	New Galloway	148.47	4	eP	PKPbc	08 47 57.2	-2.1
MFTR	Murfatlar	148.51	318	⇓P	PKPbc	08 47 60.0	+0.2
HARR	Harsova	148.54	319	⇑P	PKiKP	08 48 00.4	-0.5
HARR	Harsova	148.54	319	⇑PKP2	PKiKP	08 48 00.4	-0.5
VRI	Vrincioaia	148.59	322	⇓P	PKPbc	08 47 59.9	-0.1
VRI	Vrincioaia	148.59	322	⇓PKHKP	PKPpre	08 47 59.9	
MANR	Mangalia	148.59	317	⇑P	PKPbc	08 48 00.2	+0.2
PLOR	Plostina	148.64	322	⇓P	PKPbc	08 47 59.9	-0.2
PLOR	Plostina	148.64	322	⇓PKHKP	PKPpre	08 47 59.9	
GAL1	Galloway	148.69	4	eP	PKPbc	08 47 59.0	-0.8
EDMD	Edmundbyers	148.85	1	eP	PKPbc	08 47 59.4	-0.9
COVR	Voineasa-Covas	148.90	322	⇑P	PKPbc	08 48 00.5	-0.3
OJC	Ojcow	148.98	334	ePKPbc	PKPbc	08 48 00.7	-0.1
STHS	Stebnicka Huta	148.99	332	ePKHKP	PKPpre	08 48 00.7	
STHS	Stebnicka Huta	148.99	332	ePKP	PKPbc	08 48 00.7	-0.1
RUE	Ruedersdorf	149.13	343	eP	PKPdf	08 47 57.2	+1.1
ARCR	ARCALIA	149.13	325	⇑P	PKiKP	08 48 01.7	-0.4
MLR	Muntele Rosu	149.25	322	⇑P	PKPbc	08 48 01.5	-0.3
MLR	Muntele Rosu	149.25	322	PKP	PKPdf	08 47 55.9	-0.8
	comp=Z,7.0nm,1.0s,baz=320,slow=6.9,SNR=4.4						
MLR				PKPbc	PKPbc	08 48 01.2	-0.5
	comp=Z,38nm,1.0s,baz=33,slow=4.4,SNR=23						
MLR	Muntele Rosu	149.25	322	⇑PKHKP	PKPpre	08 48 01.5	
DOPR	Dopca	149.28	323	⇓P	PKiKP	08 48 02.3	-0.2
TRPA	Tarpa	149.33	329	⇑P	PKPbc	08 48 01.7	+0.1
NIE	Niedzica	149.39	332	ePKPbc	PKiKP	08 48 03.0	+0.4
SECR		149.45	321	⇑P	PKPbc	08 48 02.3	+0.2
HPK	Haverah Park	149.73	1	eP	PKPbc	08 48 01.9	-0.5
CBBR	Cluj-Babes-Bol	149.75	326	⇓P	PKiKP	08 48 03.2	-0.2
CJR	Cluj-Napoca	149.76	326	⇓P	PKPbc	08 48 03.1	+0.3
CJR	Cluj-Napoca	149.76	326	⇓PKHKP	PKPpre	08 48 03.1	
KSP	Ksiaz	149.78	338	ePKPbc	PKiKP	08 48 03.0	-0.3
VOIR		149.79	322	⇑P	PKPbc	08 48 02.9	-0.1
VOIR		149.79	322	⇑PKHKP	PKPpre	08 48 02.9	
MESR	Meseseni	149.80	327	⇑P	PKPbc	08 48 02.9	0.0
OKC	Ostrava-Krasne	149.94	335	⇑ePKP	PKPbc	08 48 02.6	-0.4
OKC	Ostrava-Krasne	149.94	335	ePKHKP	PKPpre	08 48 02.6	
LANS	Liptovska Anna	149.95	333	ePKHKP	PKPpre	08 48 04.6	
LANS	Liptovska Anna	149.95	333	ePKP	PKiKP	08 48 04.6	+0.8
RAZG	Razgrad	150.01	318	⇓P	PKPbc	08 48 02.8	-0.6
MARR	Marisel-Cluj	150.04	326	⇑P	PKPbc	08 48 03.7	+0.2
OSTC	Ostas	150.05	338	⇑ePKP	PKPbc	08 48 02.3	-1.0
OSTC	Ostas	150.05	338	ePKIKP	PKPbc	08 48 02.3	-1.0
ARR	Arges	150.06	323	⇓P	PKiKP	08 48 05.2	+1.0
CHVC	Chvalec	150.08	338	ePKPDF	PKPbc	08 48 03.2	-0.2
CHVC	Chvalec	150.08	338	ePKIKP	PKPbc	08 48 03.2	-0.2
UPC	Upice	150.16	338	⇑ePKP	PKPbc	08 48 03.4	-0.2
UPC	Upice	150.16	338	ePKIKP	PKPbc	08 48 03.4	-0.2
WPS	Cemaes, Angles	150.16	4	eP	PKPbc	08 48 02.7	-0.7
DRGR		150.17	327	⇑P	PKPbc	08 48 03.8	0.0
DRGR		150.17	327	⇑PKIKP	PKPbc	08 48 03.8	0.0
WME	Myndd Eilian	150.18	4	eP	PKPbc	08 48 03.0	-0.5
DPC	Dobruska-Polom	150.19	338	⇑ePKP	PKPbc	08 48 03.5	-0.2
DPC				ePKPAB	PKPab	08 48 12.7	+0.5
DPC	Dobruska-Polom	150.19	338	ePKIKP	PKPbc	08 48 03.5	-0.2
DPC				e		08 48 12.7	
MORC	Moravsky Berou	150.22	336	⇓P	PKPbc	08 48 03.9	+0.1
MORC	Moravsky Berou	150.22	336	ePKP	PKPdf	08 47 58.0	0.0
MORC				e		08 48 03.8	
MORC				e		08 48 12.7	
MORC	Moravsky Berou	150.22	336	⇓PKIKP	PKPbc	08 48 03.9	+0.1
KRLC	Kraliky	150.25	337	⇑ePKP	PKPbc	08 48 04.0	+0.2
KRLC	Kraliky	150.25	337	ePKIKP	PKPbc	08 48 04.0	+0.2
WLF1	Llynfaes	150.28	4	eP	PKPbc	08 48 03.3	-0.4
LBWR	Ladybower, Pea	150.28	1	eP	PKPbc	08 48 03.2	-0.6
CLL	Collm	150.39	342	ePKPdf	PKPdf	08 48 01.0	+2.9
CLL				⇓iPKPbc	PKPbc	08 48 04.1	+0.1
	comp=Z,131nm,0.9s						
CLL				⇑iPKPab	PKPab	08 48 12.8	-0.1

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             comp=Z,43nm,1.0s
CLL                                    epPKPbc  pPKPbc   08 50 10.0 +0.1
CLL                                    ex       x        08 50 16.0
CLL   Collm                150.39 342⇓ePKIKP   PKPdf    08 48 01.0 +2.9
CLL                                    i                 08 48 12.8
CLL                                    e                 08 50 10.0
CLL                                     pmax    pmax
             comp=Z,131nm,0.9s
CLL                                     pmax    pmax
             comp=Z,43nm,1.0s
MAUC  Maruska              150.44 335  ePKPDF   PKPdf    08 47 59.1 +0.7
MAUC                                  ⇑ePKP     PKiKP    08 48 04.6 -0.2
YLL   Llanberis            150.44   4  eP       PKPbc    08 48 03.3 -0.8
LOT   Lotru                150.49 324 ⇓P        PKPbc    08 48 04.2 -0.5
BRG   Berggiesshubel       150.51 341  ePKIKP   PKPdf    08 47 57.9 -0.4
BRG                                     pmax    pmax
             comp=Z,7.0nm,1.1s
PVCC  Panska Ves           150.62 340⇑ePKP     PKPbc    08 48 04.4 -0.2
PVCC                                   ePKPAB   PKPab    08 48 14.5 +0.6
PVCC  Panska Ves           150.62 340  ePKIKP   PKPbc    08 48 04.4 -0.2
PVCC                                   e                 08 48 14.5
VYHS  Vyhne                150.72 333  ePKIKP   PKPbc    08 48 05.0 +0.1
VYHS                                   e                 08 48 14.3
VYHS  Vyhne                150.72 333  ePKP     PKPbc    08 48 05.0 +0.1
VYHS                                   e                 08 48 14.3
FOEL  Foel Wylfa           150.75   3  eP       PKPbc    08 48 03.5 -1.3
JAVC  Velka Javorina       150.91 334  ePKP     PKPdf    08 48 00.1 +1.0
JAVC                                   e                 08 48 06.5
WACR  West Acre            150.95 358  eP       PKPbc    08 48 04.7 -0.5
VRAC  Vranov               150.96 336   PKPbc   PKPbc    08 48 05.4 -0.1
             comp=Z,14nm,1.0s,baz=74,slow=0.4,SNR=13
VRAC  Vranov               150.96 336  ePKP     PKPdf    08 47 59.0 -0.1
VRAC                                   e                 08 48 05.3
VRAC                                   e                 08 48 15.9
SIRR  Siria                151.06 327 ⇑P        PKiKP    08 48 06.2  0.0
GZR   Gura Zlata           151.06 324 ⇓P        PKPbc    08 48 05.4 -0.5
GZR   Gura Zlata           151.06 324 ⇓PKIKP    PKPbc    08 48 05.4 -0.5
PRU   Pruhonice            151.09 339⇑ePKP     PKPbc    08 48 05.4 -0.3
PRU                                    ex       PKPab    08 48 16.3 +0.4
PRU   Pruhonice            151.09 339  ePKIKP   PKPbc    08 48 05.4 -0.3
PRU                                    e                 08 48 16.3
HLM1  Long Mynd            151.13   3  eP       PKPdf    08 47 58.6 -0.7
SURR  Surduc               151.17 326 ⇓P        PKPbc    08 48 05.8 -0.2
KRUC  Moravsky             151.23 336  ePKP     PKPdf    08 47 59.3 -0.2
KRUC                                   e                 08 48 06.0
KRUC                                   e                 08 48 16.8
PLVB  Pleven               151.25 319 ⇓P        PKPbc    08 48 06.1 -0.2
MODS  Modra-Piesok         151.45 334  ePKIKP   PKiKP    08 48 07.2 +0.3
MODS                                   e                 08 48 18.2
MODS  Modra-Piesok         151.45 334  ePKP     PKiKP    08 48 07.1 +0.2
MODS                                   e                 08 48 18.2
LPW   Lampeter             151.47   4  eP       PKPbc    08 48 05.4 -1.1
NKC   Novy Kostel          151.51 342⇑ePKP     PKiKP    08 48 06.9 -0.1
NKC                                    ePKPAB   PKPab    08 48 17.6 -0.1
NKC   Novy Kostel          151.51 342  ePKIKP   PKiKP    08 48 06.9 -0.1
NKC                                    e                 08 48 17.6
BZS   Buzias               151.52 326 ⇓P        PKPbc    08 48 06.5 -0.3
BZS   Buzias               151.52 326 ⇓PKIKP    PKPbc    08 48 06.5 -0.3
RSBS  Rosebush, Pemb       151.58   5  eP       PKPbc    08 48 04.5 -2.3
HERR  Herculane            151.59 324 ⇓P        PKPbc    08 48 07.0  0.0
MONM  Monmouth             151.81   3  eP       PKPbc    08 48 06.2 -1.0
MDVR  Moldovita            152.03 324 ⇓P        PKPbc    08 48 07.5 -0.6
KHC   Kasperske Hory       152.15 340  ePKPDF   PKPdf    08 48 01.6 +0.7
KHC                                   ⇑ePKP     PKPbc    08 48 07.8 -0.4
KHC                                    ePKPAB   PKPab    08 48 20.9 +0.4
KHC   Kasperske Hory       152.15 340  ePKIKP   PKPdf    08 48 01.6 +0.7
KHC                                    e                 08 48 20.9
CKRC  Cesky Krumlov        152.18 338  ePKPDF   PKPdf    08 48 00.5 -0.5
CKRC                                  ⇑ePKP     PKPbc    08 48 07.8 -0.4
CKRC                                   ePKPAB   PKPab    08 48 20.7 +0.1
CKRC  Cesky Krumlov        152.18 338  ePKIKP   PKPdf    08 48 00.5 -0.5
CKRC                                   e                 08 48 20.7
GERES GERESS Array B       152.36 339   PKP     PKPdf    08 48 00.9 -0.4
             comp=Z,1.0nm,0.7s,baz=297,slow=0.9,SNR=8.1
GERES                                   PKPbc   PKPbc    08 48 08.3 -0.4
             comp=Z,9.2nm,0.8s,baz=22,slow=1.4,SNR=32
GERES                                   PKPab   PKPab    08 48 21.5 +0.1
             comp=Z,5.4nm,0.8s,baz=35,slow=4.9,SNR=9.5
GERES                                   pPKPbc  pPKPbc   08 50 15.7 +0.8
             comp=Z,1.0nm,0.8s,baz=85,slow=4.7,SNR=2.1
CONA  Conrad Observa       152.37 335  i PKP    PKPdf    08 48 00.9 -0.5
             comp=Z,10nm,1.4s
CONA                                   i PKP    PKiKP    08 48 09.1 +0.2
             comp=Z,26nm,0.9s,SNR=8.9
CONA                                   ePKP     PKPab    08 48 22.5 +1.0
             comp=Z,24nm,0.9s
RONA  Rosalia, Austr       152.39 335  ePKP     PKPdf    08 48 01.0 -0.4
             comp=Z,6.0nm,0.9s
RONA                                   i PKP    PKPbc    08 48 08.8  0.0
             comp=Z,28nm,0.8s,SNR=8.0
RONA                                   ePKP     PKPab    08 48 22.5 +0.9
             comp=Z,33nm,1.3s
MORH  Mrgy, Hungar         152.55 330 ⇓P        PKPbc    08 48 08.8 -0.2
MEM   Membach              152.57 351  dPKP     PKPbc    08 48 08.8 -0.2
MEM                                    dPKPab   PKPab    08 48 22.3 +0.2
BTNL  Ternell              152.57 350  dPKPdf   PKPdf    08 48 01.1 -0.4
BTNL                                   dPKP     PKPbc    08 48 08.2 -0.8
BTNL                                   dPKPab   PKPab    08 48 22.1 -0.1
BSTI  Sart Tilman          152.66 351  dPKP     PKPbc    08 48 09.0 -0.2
BSTI                                   dPKPab   PKPab    08 48 22.4 -0.1
FRGS  Fruska Gora          152.76 327 ⇑P        PKPbc    08 48 09.1 -0.5
BHOU  Houvegnez            152.82 350  dPKPab   PKPab    08 48 23.2  0.0
BCLA  Clavier              152.85 351  dPKP     PKPab    08 48 22.7 -0.6
SNF   Seneffe              152.89 353  dPKP     PKiKP    08 48 09.7  0.0
SNF                                    dPKPab   PKPab    08 48 23.4 -0.1
BGES  Gesves               152.92 352  dPKPab   PKPab    08 48 23.1 -0.5
MOA   Molln                153.02 337  ePKP     PKPdf    08 48 01.5 -0.7
             comp=Z,3.8nm,0.9s
MOA                                    ePKP     PKPbc    08 48 09.8 -0.3
             comp=Z,7.3nm,0.8s
MOA                                    ePKP     PKPab    08 48 25.2 +0.9
             comp=Z,22nm,1.2s
BMRD  Maredsous            153.04 352  dPKP     PKPbc    08 48 09.8 -0.2
BMRD                                   dPKPab   PKPab    08 48 23.6 -0.5
ARSA  Arzberg              153.06 335  ePKP     PKPdf    08 48 01.7 -0.6
             comp=Z,4.3nm,1.1s
ARSA                                   ePKP     PKPbc    08 48 09.9 -0.3
             comp=Z,3.6nm,0.8s
ARSA                                   ePKP     PKPab    08 48 25.1 +0.7
             comp=Z,11nm,1.6s
RCHB  Rochefort            153.12 351  dPKP     PKPbc    08 48 10.1 -0.1
RCHB                                   dPKPab   PKPab    08 48 24.4 -0.1
DOU   Dourbes              153.26 352  dPKP     PKiKP    08 48 10.6 +0.1
DOU                                    dPKPab   PKPab    08 48 24.7 -0.4
BIOA  Bad Ischl, Aus       153.38 338  ePKP     PKPab    08 48 26.7 +0.9
             comp=Z,15nm,0.6s
WLF   Walferdange          153.46 350  dPKP     PKiKP    08 48 11.2 +0.2
WLF                                    dPKPab   PKPab    08 48 26.1 +0.2
VAY   Valandovo            153.68 318  i P      PKPab    08 48 27.5 +0.3
STIP  Stip                 153.69 319  i P      PKPab    08 48 26.7 -0.6
GROS  Grobnik              153.71 334  i PKPdf  PKPdf    08 48 02.2 -1.1
GROS                                   ePKPbc   PKPbc    08 48 10.6 -1.1
SOKA  Soboth               153.72 335  i PKP    PKPdf    08 48 02.5 -0.9
             comp=Z,13nm,1.3s,SNR=5.6
SOKA                                   ePKP     PKPbc    08 48 11.3 -0.4
             comp=Z,14nm,1.2s
SOKA                                   ePKP     PKPab    08 48 27.2 -0.1
             comp=Z,22nm,1.3s
SKO   Skopje               153.97 320  i P      PKPab    08 48 29.7 +1.2
KBA   Koelnbreinsper       154.01 338  ePKP     PKPdf    08 48 02.6 -1.2
             comp=Z,12nm,1.7s
KBA                                    ePKP     PKPbc    08 48 11.8 -0.6
             comp=Z,9.5nm,0.8s
KBA                                    ePKP     PKPab    08 48 29.9 +1.3
             comp=Z,6.7nm,0.6s
OBKA  Obir                 154.05 335  ePKP     PKPdf    08 47 58.3 -5.5
             comp=Z,1.4nm,0.5s
OBKA                                   ePKP     PKPab    08 48 28.2 -0.6
             comp=Z,18nm,1.1s
MYKA  Terra Mystica        154.28 337  ePKP     PKPdf    08 48 03.0 -1.1
             comp=Z,7.2nm,1.2s
MYKA                                   ePKP     PKiKP    08 48 12.0 -0.9
             comp=Z,9.6nm,0.8s
MYKA                                   i PKP    PKPab    08 48 29.2 -0.5
             comp=Z,16nm,0.9s,SNR=4.3
WATA  Walderalm            154.36 340  ePKP     PKPdf    08 48 03.8 -0.5
             comp=Z,6.5nm,0.7s
WATA                                   ePKP     PKPab    08 48 30.2 +0.1
             comp=Z,9.2nm,0.6s
WTTA  Wattenberg           154.41 340  i PKP    PKPdf    08 48 03.9 -0.5
             comp=Z,18nm,1.4s
WTTA                                   ePKP     PKPab    08 48 30.9 +0.5
             comp=Z,18nm,0.8s
RETA  Reutte               154.47 342  ePKP     PKPdf    08 48 03.6 -0.7
             comp=Z,6.8nm,1.2s
RETA                                   i PKP    PKPab    08 48 30.9 +0.5
             comp=Z,32nm,1.1s,SNR=5.7
MOTA  Moosalm              154.50 341  i PKP    PKPdf    08 48 04.0 -0.5
             comp=Z,7.0nm,0.7s
MOTA                                   i PKiKP  PKiKP    08 48 13.0 -0.4
             comp=Z,15nm,0.9s
MOTA                                   i PKP    PKPab    08 48 30.5 -0.2
             comp=Z,30nm,1.2s
VISS  Visnje               154.51 334  i PKPdf  PKPdf    08 48 03.6 -0.7
VISS                                   i PKPbc  PKiKP    08 48 12.9 -0.3
VISS                                   i PKPab  PKPab    08 48 30.2 -0.5
ABTA  Abfaltersbach        154.58 338  i PKP    PKPdf    08 48 03.6 -0.9
             comp=Z,21nm,1.1s,SNR=6.9
ABTA                                   ePKP     PKiKP    08 48 12.8 -0.7
             comp=Z,14nm,0.9s
ABTA                                   ePKP     PKPab    08 48 30.4 -0.6
             comp=Z,21nm,1.0s
SQTA  Sankt Quirin         154.58 341  ePKP     PKPdf    08 48 04.4 -0.2
             comp=Z,7.6nm,0.8s
SQTA                                   ePKP     PKiKP    08 48 13.4 -0.1
             comp=Z,8.0nm,0.7s
SQTA                                   ePKP     PKPab    08 48 31.3 +0.3
             comp=Z,20nm,0.9s
VOJS  Vojsko               154.70 336  ePKPdf   PKPdf    08 48 03.5 -1.2
IDI   Anoyia               154.86 303   PKPbc   PKiKP    08 48 14.3 -0.1
             comp=Z,14nm,0.9s,baz=50,slow=5.8,SNR=4.1
OHR   Ohrid                154.88 319  i P      PKPab    08 48 33.1 +0.6
DAVA  Damuels              154.90 343  ePKP     PKPdf    08 48 04.1 -0.9
             comp=Z,8.9nm,1.1s
DAVA                                   i PKP    PKPab    08 48 32.8 +0.4
             comp=Z,25nm,1.0s,SNR=5.4
FETA  Feichten             154.90 341  i PKP    PKPdf    08 48 04.5 -0.6
             comp=Z,17nm,1.0s,SNR=6.2
FETA                                   ePKP     PKiKP    08 48 14.1 -0.1
             comp=Z,9.4nm,0.9s
FETA                                   ePKP     PKPab    08 48 32.8 +0.3
             comp=Z,19nm,1.3s
PGAV  Gavieira, Arco       160.71  17  ePKPdf   PKPdf    08 48 12.3 +0.2
PGAV  Gavieira, Arco       160.71  17  ePKPab   PKPab    08 48 54.4 -3.3
PCAB  Cabril               161.01  17  ePKPdf   PKPdf    08 48 13.0 +0.6
PCAB  Cabril               161.01  17  ePKPab   PKPab    08 48 59.4 +0.4
PBRG  Braganca             161.23  14  ePKPdf   PKPdf    08 48 12.4 -0.2
PBRG  Braganca             161.23  14  ePKPab   PKPab    08 48 59.8 -0.2
POLO  Lamas de Olo         161.38  17  ePKPdf   PKPdf    08 48 13.3 +0.4
POLO  Lamas de Olo         161.38  17  ePKPab   PKPab    08 49 01.1 +0.4
PVRL  Vila Real            161.50  17  ePKPab   PKPab    08 49 00.8 -0.3
MVO   Moncorvo             161.78  15  ePKPdf   PKPdf    08 48 14.2 +1.0
MVO   Moncorvo             161.78  15  ePKPab   PKPab    08 49 03.2 +0.8
PVIS  Viseu                161.97  18  ePKPdf   PKPdf    08 48 13.4  0.0
PVIS  Viseu                161.97  18  ePKPab   PKPab    08 49 03.5 +0.2
PVIS                                   eLQ      LQ       08 51 10.8
LIC   Lamto                162.21 166⇑iPKIKP   PKPdf    08 48 14.0 -0.4
             comp=Z,67nm,0.9s
LIC   Lamto                162.21 166⇑iPKP2    PKPab    08 49 05.3 +0.5
             comp=Z,94nm,0.9s
MTE   Manteigas            162.36  17  ePKPdf   PKPdf    08 48 14.6 +0.8
MTE   Manteigas            162.36  17  ePKPab   PKPab    08 49 05.5 +0.5
KIC   Kosan Boka           162.40 167⇑iPKIKP   PKPdf    08 48 14.0 -0.6
             comp=Z,12nm,0.8s
KIC   Kosan Boka           162.40 167⇑iPKP2    PKPab    08 49 06.1 +0.5
             comp=Z,14nm,0.9s
TIC   Toumodi              162.62 166⇓ePKIKP   PKPdf    08 48 14.0 -0.8
             comp=Z,52nm,0.9s
TIC   Toumodi              162.62 166⇑iPKP2    PKPab    08 49 07.2 +0.6
             comp=Z,37nm,0.9s
DBIC  Dimbokro             162.68 166   PKP     PKPdf    08 48 14.5 -0.3
             comp=Z,19nm,1.0s,baz=132,slow=0.4,SNR=14
PCBR  Castelo Branco       162.90  18  ePKPdf   PKPdf    08 48 15.2 +0.9
PCBR  Castelo Branco       162.90  18  ePKPab   PKPab    08 49 06.7 -0.6
ESDC  Sonseca Array        163.80   9   PKP     PKPdf    08 48 14.7 -0.5
             comp=Z,1.3nm,0.9s,baz=359,slow=3.1,SNR=6.1
ESDC                                    PKPab   PKPab    08 49 11.2 -0.1
             comp=Z,7.4nm,0.9s,baz=342,slow=3.8,SNR=19
PNCL  Nicolau / Gran       164.15  23  ePKPdf   PKPdf    08 48 16.3 +0.8
PNCL  Nicolau / Gran       164.15  23  ePKPab   PKPab    08 49 09.1 -3.7
PBEJ  Beja                 164.45  21  ePKPdf   PKPdf    08 48 16.9 +1.1
MESJ  Messejana            164.50  22  ePKPdf   PKPdf    08 48 15.8  0.0
TORD  Torodi Ar. Bea       169.29 193   PKP     PKPdf    08 48 18.9 -1.0
             comp=Z,15nm,1.1s,baz=7.6,slow=0.9,SNR=41
TORD                                    pPKPab  pPKPab   08 51 36.5 +0.8
             comp=Z,3.1nm,1.0s,baz=180,slow=4.9,SNR=5.8
TORD                                    PP      PP       08 53 26.1 +0.8
             comp=Z,5.2nm,1.0s,baz=157,slow=4.5,SNR=8.2
MDT   Midelt               170.28  19   PKP     PKPdf    08 48 20.1  0.0
             comp=Z,13nm,0.8s,baz=89,slow=0.6,SNR=21
```

IDC 16 08:32:49.2±596.0, 54°.39N×0°.79E, h0km, Error ellipse: s-maj=335.9km s-min=188.6km az=109.0, North Sea

```
Code  Station Name           Δ°   AZ°    Phase ID          Time     Res
                                         Op       ISC      h  m  s   ISC
I26DE FREYUNG INFRAS       9.76 119      I        I        09 32 40.0
             baz=311,slow=324,SNR=1.0
I43RU DUBNA INFRASON      20.58  69      I        I        10 38 40.0
             baz=277,slow=318,SNR=1.4
I31KZ AKTYUBINSK INF      34.33  73      I        I        12 06 00.0
             baz=299,slow=327,SNR=0.7
```

IDC 16 08:40:19.3±597.0, 54°.60N×1°.00E, h0km, Error ellipse: s-maj=336.4km s-min=186.4km az=111.0, North Sea

```
Code  Station Name           Δ°   AZ°    Phase ID          Time     Res
                                         Op       ISC      h  m  s   ISC
I26DE FREYUNG INFRAS       9.76 121      I        I        09 40 20.0
             baz=313,slow=324,SNR=1.3
I43RU DUBNA INFRASON      20.39  69      I        I        10 45 40.0
             baz=277,slow=315,SNR=1.6
I31KZ AKTYUBINSK INF      34.15  73      I        I        12 12 24.0
             baz=300,slow=333,SNR=1.0
```

IDC 16 08:40:52.2±2.2, 5°.67N×126°.34E, h0km, mb3.6/4, mbtmp3.6/4, MS3.4/3, Error ellipse: s-maj=217.0km s-min=21.8km az=66.0, Mindanao

```
Code  Station Name           Δ°   AZ°    Phase ID          Time     Res
                                         Op       ISC      h  m  s   ISC
GUMO  Guam                19.88  65      LR       LR       08 53 19.1
             comp=Z,21nm,19.7s,baz=114,slow=38
WRA   Warramunga Arr      26.64 163      P        P        08 46 33.0 +0.2
             0.3nm,0.4s,baz=343,slow=9.5,SNR=6.2
             0.3nm,0.4s
ASAR  Alice Springs       30.08 166      P        P        08 47 03.3 -0.2
             0.4nm,0.7s,baz=342,slow=7.4,SNR=9.3
             0.4nm,0.7s
SONM  Songino Array       45.35 341      LR       LR       09 09 59.2
             comp=Z,80nm,18.3s,baz=160,slow=38
MKAR  Makanchi Array      55.76 325      P        P        08 50 31.6 +0.7
             0.3nm,0.4s,baz=121,slow=7.5,SNR=6.7
             0.3nm,0.4s
KURBB Kurchatov Arra      59.91 327      P        P        08 50 59.2 -0.7
             0.4nm,0.5s,baz=132,slow=6.4,SNR=6.5
             0.4nm,0.5s
BVAR  Borovoye Array      65.50 327      LR       LR       09 20 52.6
             comp=Z,86nm,18.6s,baz=347,slow=37
```

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*IDC **16** 08:41:28.3±1.9, 54°.73N×83°.81E, h0km, mbtmp2.8/3, ML2.1/3, Error ellipse: s-maj=18.7km s-min=10.6km az=22.0*

*NNC **16** 08:41:28.1±2.6, 54°.84N×84°.22E, h0km, mb3.7, mpv2.7, Error ellipse: s-maj=27.9km s-min=12.5km az=41.0, Suspected Mining explosion.*

ISC 16 08:41:33.1±5.4, 54°.4N±0°.4×84°.04E±0°.07, h0km, n9, σ1ˢ21/8, 2C-4D, Southwestern Siberia

```
Code  Station Name           Δ°   AZ°    Phase ID          Time     Res
                                         Op       ISC      h  m  s   ISC
I46RU ZALESOVO INFRA       0.62 131      I        I        08 47 37.9
             baz=318,slow=322,SNR=2.8
ZAA0  Zalesovo Array       0.62 131     ⇓P        Pb       08 41 46.3 -0.5
             0.4nm,0.3s
ZAA0                                    ⇓S        Sn       08 42 00.0 +0.3
             1.5nm,0.4s
ZALV  Zalesovo Beam        0.62 131      Pg       Pb       08 41 46.4 -0.4
             1.2nm,0.3s,baz=330,slow=17,SNR=18
ZALV                                     Lg       Lg       08 42 00.9
             6.1nm,0.3s,baz=326,slow=28,SNR=21
KURK  Kurchatov            4.92 224     ⇑Pn       Pn       08 42 49.8 +1.6
             3.6nm,1.0s
KURK                                    ⇓Lg       Lg       08 44 15.4
             4.5nm,0.6s
KURBB Kurchatov Arra       5.03 224      Pn       Pn       08 42 48.0 -1.7
             baz=39,slow=14,SNR=6.6
KURBB                                    Pg       Pb       08 43 01.4 -0.5
             baz=38,slow=16,SNR=16
KURBB                                    Lg       Lg       08 44 08.4
             0.1nm,0.3s,baz=44,slow=32,SNR=2.9
             0.6nm,0.7s
KURBB Kurchatov Arra       5.03 224     ⇓Pn       Pn       08 42 50.8 +1.1
             4.3nm,1.1s,baz=40,slow=16
KURBB                                   ⇑Lg       Lg       08 44 19.4
             8.0nm,0.7s
MKAR  Makanchi Array       7.65 189      Pn       Pn       08 43 26.1 +0.3
             baz=14,slow=13,SNR=2.6
MKAR                                     Lg       Lg       08 45 43.9
             0.1nm,0.3s,baz=12,slow=29,SNR=4.6
             0.2nm,0.5s
BVAR  Borovoye Array       8.21 266      Pn       Pn       08 43 25.8 -7.6
             baz=71,slow=14,SNR=4.8
             0.8nm,0.5s
BVAR  Borovoye Array       8.21 266      P        Pn       08 43 25.8 -7.6
```

VIE 16 08:46:41.0, 48°.23N×14°.97E, h0km, mb1.3/1, ml1.4/2 8 km E of Grein Suspected Mining explosion., Austria

```
Code  Station Name           Δ°   AZ°    Phase ID          Time     Res
                                         Op       ISC      h  m  s   ISC
MOA   Molln                0.61 232      Pg       Pg       08 46 53.4 +0.8
             0.5nm,0.1s
MOA                                     eSg       Sg       08 47 01.9 +1.4
             1.9nm,0.2s
CONA  Conrad Observa       0.67 116      Pg       Pg       08 46 54.1 +0.3
             0.9nm,0.2s
CONA                                    eSg       Sg       08 47 03.4 +1.0
             2.7nm,0.2s
KRUC  Moravsky             1.26  48     ePG       Pg       08 47 04.5 -0.7
KRUC                                    eSG       Sg       08 47 21.1 -0.4
VRAC  Vranov               1.52  44     ePG       Pn       08 47 09.2 -0.3
VRAC                                    eSG       Sg       08 47 29.7 -0.2
```

IDC 16 08:47:51.7±424.0, 54°.09N×101°.19E, h0km, Error ellipse: s-maj=170.0km s-min=119.1km az=151.0, Southwestern Siberia

```
Code  Station Name           Δ°   AZ°    Phase ID          Time     Res
                                         Op       ISC      h  m  s   ISC
I34MN SONGINO INFRAS       7.11 150      I        I        09 30 50.0
             baz=333,slow=329,SNR=1.3
I46RU ZALESOVO INFRA       9.64 276      I        I        09 50 40.0
             baz=80,slow=333,SNR=1.0
I45RU USSURIYSK INFR      22.27 104      I        I        11 04 10.0
             baz=307,slow=330,SNR=0.6
```

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*IDC **16** 08:57:59.6±1.1, 36°.65N×98°.37W, h0km, mb3.0/1, mbtmp3.2/5, ML3.8/3, MS3.2/1, Error ellipse: s-maj=14.8km s-min=12.4km az=169.0*

*TUL **16** 08:57:59.6±0.5, 36°.70N±0°.01×98°.43W±0°.01, h6km±5km, ML3.8, mb_Lg3.5/94(NEIC), ML3.7/32(NEIC), Error ellipse: s-maj=2.2km s-min=1.3km az=148.0*

*NEIC **16** 08:58:00.3±0.5, 36°.705N±0°.007×98°.43W±0°.02, h7km±6km, Error ellipse: s-maj=2.0km s-min=1.0km az=104.0*

*ANF **16** 08:58:01.3±2.4, 36°.72N×98°.43W, h15km±17km, ML4.3/9, Error ellipse: s-maj=7.6km s-min=5.0km az=76.0*

ISC 16 08:58:00.4±1.0, 36°.69N±0°.02×98°.41W±0°.02, h6km±8km, n137, σ0ˢ96/103, Oklahoma

```
Code  Station Name           Δ°   AZ°    Phase ID          Time     Res
                                         Op       ISC      h  m  s   ISC
OK032 Salt Plains WL       0.20  54               Pg       08 58 04.0 -0.4
OK032                                    Sg       Sg       08 58 07.3 +0.3
OK032                                    IAML              08 58 07.6
             17µm,0.2s
OK032                                    IAML              08 58 07.6
             17µm,0.2s
OK035 E0210 Rd and N       0.24 275      Pg       Pg       08 58 04.6 -0.6
OK035                                    Sg       Sg       08 58 08.2 -0.2
OK035                                    IAML              08 58 08.4
             14µm,0.5s
OK038 West end E0370       0.34 232               Pg       08 58 06.5 -0.5
OK038                                    Sg       Sg       08 58 11.4 -0.1
CROK  Carrier              0.39 118      Pg       Pg       08 58 07.8 -0.1
CROK                                     Sg       Sg       08 58 13.8 +0.7
CROK                                     IAML              08 58 14.1
             comp=E,6µm,0.3s
NOKA  Waynoka              0.42 263      Pg       Pg       08 58 07.8 -0.9
NOKA                                     IAML              08 58 20.6
             comp=N,4µm,0.2s
KAN14 Manchester OK        0.45  53               Pg       08 58 08.5 -0.6
KAN14                                    Sg       Sg       08 58 15.1 +0.1
KAN14                                    IAML              08 58 15.3
             comp=N,5µm,0.5s
GC02  Grant County #       0.47  69               Pg       08 58 09.0 -0.5
U32A  Winter Ranch,        0.57 237      Pg       Pg       08 58 10.4 -0.9
U32A                                     IAML              08 58 18.9
             comp=N,4µm,0.1s
U32A  Winter Ranch,        0.57 237      P        Pg       08 58 10.5 -0.8
             baz=55,SNR=131
U32A                                     S        Sg       08 58 18.6 -0.1
             baz=55
KAN05 Bluff City Nor       0.60  45               Pg       08 58 11.3 -0.7
KAN05                                    IAML              08 58 20.4
             comp=N,6µm,0.2s
KAN05                                    IAML              08 58 20.4
             comp=E,5µm,0.2s
KAN17 Caldwell West        0.63  55               Pg       08 58 11.7 -0.8
KAN08 Anthony NE Sta       0.64  33               Pg       08 58 11.9 -0.9
KAN12 Harper NE Stat       0.69  28               Pg       08 58 12.9 -0.9
KAN01 Argonia South        0.70  48               Pg       08 58 13.2 -0.7
KAN06 Argonia West S       0.71  38               Pg       08 58 13.3 -0.8
KAN09 Caldwell North       0.78  54               Pg       08 58 14.4 -1.0
KAN13 South Haven SW       0.81  66               Pg       08 58 15.2 -0.9
KS21  Milan North St       0.85  45               Pg       08 58 15.9 -0.8
KS20  Mayfield South       0.87  51               Pg       08 58 16.2 -1.0
BLOK  Blackwell            0.96  85               Pg       08 58 17.9 -1.0
BLOK                                     IAML              08 58 32.8
             comp=N,3µm,0.2s
ELIS  Ellis County         1.02 233               Pg       08 58 18.9 -1.2
ELIS                                     IAML              08 58 38.8
             comp=N,3µm,0.2s
ELIS                                     IAML              08 58 43.8
             comp=E,2µm,0.3s
CSTR  Hydro, Custer        1.06 192      Pg       Pg       08 58 19.9 -0.9
OK029 Liberty Lake         1.18 139      Pg       Pg       08 58 21.6 -1.4
OK029                                    IAML              08 58 40.6
             comp=E,2µm,0.4s
OK029                                    IAML              08 58 40.6
             comp=E,2µm,0.4s
OK050 Pawnee Station       1.19 104               Pg       08 58 22.0 -1.2
OK050                                    IAML              08 58 43.1
             comp=E,2µm,0.2s
OK046 Pawnee Station       1.24 103               Pg       08 58 23.0 -1.3
OK046                                    IAML              08 58 46.2
             comp=E,2µm,0.2s
OK051 E0350 and S346       1.28  98      Pg       Pn       08 58 23.6 -1.3
OK025 Westminster Rd       1.40 142               Pn       08 58 25.4 -1.2
QUOK  Quay                 1.47 110               Pn       08 58 26.6 -0.8
OK052 Battle Ridge R       1.47 118               Pn       08 58 26.8 -0.7
OKCSW OKLAHOMA CITY        1.50 148               Pn       08 58 27.1 -0.9
OKCSW                                    IAmb_Lg           08 58 50.4
             comp=Z,285nm,0.7s
T35A  Sooner Cattle        1.54  81      Pg       Pn       08 58 27.8 -0.7
T35B  Sooner Cattle        1.54  81      P        Pn       08 58 28.0 -0.5
             baz=263,SNR=316
T35B                                     S        Sb       08 58 49.1 -0.1
             baz=263
FNO   Franklin             1.64 150               Pn       08 58 29.4 -0.5
R32A  Long Quarter,        1.75 352               Pn       08 58 31.4 -0.1
R32A  Long Quarter,        1.75 352      P        Pn       08 58 31.3 -0.1
             baz=172,SNR=192
R32A                                     S        Sb       08 58 54.8 -0.4
             baz=172
WMOK  Wichita Mounta       1.97 189               Pn       08 58 34.2 -0.2
WMOK  Wichita Mounta       1.97 189      P        Pn       08 58 33.9 -0.5
             baz=8.2
WMOK                                     S        Sb       08 59 00.9 -0.6
             baz=8.2
WMOK  Wichita Mounta       1.97 189      P        Pn       08 58 33.9 -0.5
             baz=8.2,SNR=161
WMOK                                     S        Sb       08 59 00.9 -0.6
             baz=8.2
W35A  Tecumseh             1.97 140               Pn       08 58 34.4 -0.1
TUL1  Leonard              2.25 109      IAmb_Lg           08 59 13.9
             comp=Z,221nm,0.8s
TUL1  Leonard              2.25 109      P        Pn       08 58 39.1 +0.9
```

	baz=291						
TUL1				S	Sn	08 59 06.9	+0.6
	baz=291						
TUL1	Leonard	2.25	109	P	Pn	08 58 37.9	-0.4
	baz=291,SNR=139						
TUL1				S	Sn	08 59 06.9	+0.6
	baz=291						
CBKS	Cedar Bluff	2.37	334		Pn	08 58 39.7	-0.2
CBKS				IAmb_Lg		08 59 19.3	
	comp=Z,168nm,0.9s						
CBKS	Cedar Bluff	2.37	334	P	Pn	08 58 40.7	+0.7
	baz=154						
CBKS				Sb	Sb	08 59 12.4	-0.8
	baz=154						
CBKS	Cedar Bluff	2.37	334	P	Pn	08 58 39.7	-0.2
	baz=154,SNR=45						
CBKS				S	Sb	08 59 12.2	-0.9
	baz=154						
KSU1	Kansas State U	2.80	30		Pn	08 58 45.9	+0.1
KSU1	Kansas State U	2.80	30	P	Pn	08 58 46.1	+0.3
	baz=211						
KSU1	Kansas State U	2.80	30	P	Pn	08 58 45.9	+0.1
	baz=211,SNR=6.2						
LOOK	Love County	2.87	159		Pn	08 58 46.7	-0.1
AMTX	Amarillo	3.21	237	P	Pb	08 58 58.1	+0.1
	baz=54						
X37A	Clayton	3.24	129		Pn	08 58 51.7	-0.1
X37A				IAmb_Lg		08 59 51.5	
	comp=Z,124nm,1.1s						
X37A	Clayton	3.24	129	P	Pn	08 58 51.4	-0.5
	baz=311,SNR=88						
U38A	Gravette	3.25	93		Pn	08 58 51.4	-0.5
U38A	Gravette	3.25	93	P	Pn	08 58 51.9	-0.1
	baz=276,SNR=23						
Z35A	Perchaven, San	3.48	164	P	Pn	08 58 54.9	-0.3
	baz=344,SNR=39						
HHAR	Hobbs	3.62	95		Pn	08 58 56.7	-0.4
FW03	Perrin-Whitt E	3.65	175	IAmb_Lg		09 00 02.3	
	comp=Z,45nm,0.7s						
FW06	Azle	3.77	169	IAmb_Lg		09 00 02.7	
	comp=Z,31nm,0.7s						
FW07	Weatherford	4.01	172	IAmb_Lg		09 00 12.1	
	comp=Z,39nm,0.9s						
KSCO	Kaye Shedlock'	4.07	306	IAmb_Lg		09 00 13.5	
	comp=Z,135nm,0.7s						
N33B	J Bar K, Exete	4.11	10	P	Pn	08 59 02.3	-1.6
	baz=191						
N33B				S	Sn	08 59 50.1	-2.2
	baz=191						
N33A	J Bar K, Exete	4.12	10	IAmb_Lg		09 00 18.2	
	comp=Z,132nm,0.7s						
ABTX	Abilene, Hawle	4.18	194	P	Pn	08 59 03.9	-0.9
	baz=13						
S39A	Bolivar	4.18	75	P	Pn	08 59 04.1	-0.7
	baz=258,SNR=41						
FW16	Waxahatchie	4.38	163	IAmb_Lg		09 00 26.7	
	comp=Z,108nm,1.2s						
FW14	Alvarado	4.39	166	IAmb_Lg		09 00 26.7	
	comp=Z,43nm,0.8s						
FW13	Cleburne	4.40	169	IAmb_Lg		09 00 26.7	
	comp=Z,30nm,0.9s						
POST	Post	4.42	216	IAmb_Lg		09 00 31.8	
	comp=Z,77nm,0.8s						
Z38A	Mt. Pleasant	4.43	140	IAmb_Lg		09 00 23.4	
	comp=Z,67nm,0.8s						
Z38A	Mt. Pleasant	4.43	140	S	Sn	09 00 00.8	+0.8
	baz=322						
MIAR	Mount Ida	4.48	117	IAmb_Lg		09 00 30.0	
	comp=Z,74nm,0.9s						
MIAR	Mount Ida	4.48	117	S	Sn	09 00 01.2	-0.1
	baz=300						
MIAR	Mount Ida	4.48	117	P	Pn	08 59 08.7	-0.1
	baz=300,SNR=30						
MSTX	Muleshoe	4.48	234	P	Pn	08 59 08.4	-0.6
	baz=51						
MSTX				S	Sn	09 00 01.5	0.0
	baz=51						
U40A	Yellville	4.49	93	P	Pn	08 59 08.6	-0.4
	baz=276,SNR=25						
U40A				P	Pn	08 59 08.6	-0.4
	baz=276,SNR=25						
N35A	Tabor	4.70	27	S	Sn	09 00 07.0	+0.3
	baz=208						
BGNE	Belgrade	4.72	2	P	Pn	08 59 11.5	-0.7
	baz=183						
BGNE	Belgrade	4.72	2	P	Pn	08 59 11.3	-0.9
	baz=183,SNR=9.9						
WHTX	Lake Whitney,	4.75	170	P	Pn	08 59 12.3	-0.3
	baz=351						
WHTX	Lake Whitney,	4.75	170	P	Pn	08 59 11.9	-0.7
	baz=351,SNR=19						
P38A	Dawn	4.83	51	IAmb_Lg		09 00 41.4	
	comp=Z,51nm,0.7s						
P38A	Dawn	4.83	51	P	Pn	08 59 13.5	-0.3
	baz=234,SNR=12						
OGNE	Ogallala	5.11	327	IAmb_Lg		09 00 50.0	
	comp=Z,106nm,0.7s						
OGNE	Ogallala	5.11	327	P	Pn	08 59 18.3	+0.7
	baz=145						
OGNE	Ogallala	5.11	327	P	Pn	08 59 18.2	+0.6
	baz=145,SNR=11						
R40A	Maddies Statio	5.14	70	IAmb_Lg		09 00 48.3	
	comp=Z,54nm,0.8s						
R40A	Maddies Statio	5.14	70	P	Pn	08 59 17.3	-0.6
	baz=254,SNR=16						
237A	Washetta, Mont	5.14	155	P	Pn	08 59 16.9	-1.1
	baz=336,SNR=7.1						
WHAR	Wooly Hollow	5.16	104	IAmb_Lg		09 00 49.0	
	comp=Z,101nm,1.1s						
WLAR	White Oak Lake	5.27	123	IAmb_Lg		09 00 57.4	
	comp=Z,94nm,0.8s						
UALR	University of	5.29	109	IAmb_Lg		09 00 57.0	
	comp=Z,104nm,1.1s						
N38A	Joes South For	5.76	43	P	Pn	08 59 25.8	-0.6
	baz=226						
CCM	Cathedral Cave	5.87	74	IAmb_Lg		09 01 08.5	
	comp=Z,67nm,0.9s						
LCAR	Lake Charles	5.89	94	IAmb_Lg		09 01 08.2	
	comp=Z,40nm,0.8s						
435B	Jarrell	5.93	173	IAmb_Lg		09 01 11.8	
	comp=Z,65nm,0.7s						
K31A	O'Neill	5.94	358	IAmb_Lg		09 01 19.3	
	comp=Z,86nm,0.8s						
CCAR	Cane Creek	6.09	115	IAmb_Lg		09 01 28.5	
	comp=Z,57nm,0.8s						
JCT	Junction City	6.30	191	P	Pn	08 59 31.8	-2.1
	baz=10.0						
PBMO	Poplar Bluff	6.41	87	IAmb_Lg		09 01 26.5	
	comp=Z,47nm,0.7s						
ISCO	Idaho Springs	6.46	301	IAmb_Lg		09 01 31.5	
	comp=Z,40nm,0.7s						
ISCO	Idaho Springs	6.46	301	P	Pn	08 59 35.9	-0.5
	baz=116						
FVM	French Village	6.49	76	IAmb_Lg		09 01 25.1	
	comp=Z,56nm,1.0s						
FVM	French Village	6.49	76	P	Pn	08 59 36.2	-0.4
	baz=261						
SCIA	State Center	6.59	36	IAmb_Lg		09 01 44.8	
	comp=Z,71nm,0.7s						
ANMO	Albuquerque	6.76	258	Pn	Pn	08 59 41.1	+0.6
	comp=Z,0.4nm,0.3s,baz=165,slow=12,SNR=2.0						
ANMO				Pg	Pb	09 00 02.5	+3.9
	comp=Z,1.1nm,0.3s,baz=156,slow=19,SNR=16						
ANMO				Lg	Lg	09 01 35.1	
	comp=Z,1.6nm,0.3s,baz=57,slow=16,SNR=5.1						
SLM	Saint Louis	6.77	71	IAmb_Lg		09 01 53.6	
	comp=Z,36nm,0.8s						
PARMO	Parma	6.96	88	IAmb_Lg		09 01 45.7	
	comp=Z,77nm,0.7s						
143A	Socs Landing,	7.00	123	IAmb_Lg		09 02 03.0	
	comp=Z,51nm,0.8s						
PVMO	Portageville	7.02	90	IAmb_Lg		09 01 54.7	
	comp=Z,51nm,0.8s						
CGM3	Cape Girardeau	7.03	82	IAmb_Lg		09 01 39.6	
	comp=Z,47nm,0.9s						
PHWY	Pilot Hill	7.17	312	IAmb_Lg		09 02 04.3	
	comp=Z,37nm,0.8s						
ECSD	EROS Data Cent	7.17	10	IAmb_Lg		09 01 47.8	
	comp=Z,57nm,1.0s						
ECSD	EROS Data Cent	7.17	10	P	Pn	08 59 43.8	-2.1
	baz=192						
ECSD	EROS Data Cent	7.17	10	P	Pn	08 59 43.5	-2.4
	baz=192						
N23A	Red Feather La	7.23	308	IAmb_Lg		09 01 59.7	
	comp=Z,71nm,0.7s						
S44A	Carbondale	7.38	79	IAmb_Lg		09 02 00.7	
	comp=Z,38nm,0.7s						
Y22D	IRIS PASSCAL I	7.42	252	IAmb_Lg		09 02 10.9	
	comp=Z,54nm,0.9s						
P43A	Skaggs, Pawnee	7.60	64	IAmb_Lg		09 02 15.7	
	comp=Z,53nm,0.8s						
W45A	Hickory Valley	7.64	99	IAmb_Lg		09 02 04.8	
	comp=Z,50nm,0.8s						
Y45A	Yeager Farm, C	7.78	109	IAmb_Lg		09 02 28.1	
	comp=Z,34nm,0.7s						
T45A	Paducah	7.84	85	IAmb_Lg		09 02 15.3	
	comp=Z,60nm,0.8s						
VBMS	Vicksburg	7.89	122	IAmb_Lg		09 02 32.2	
	comp=Z,44nm,1.3s						
I37A	Lemond, Waseca	8.26	26	IAmb_Lg		09 02 30.4	
	comp=Z,45nm,0.8s						
RWWY	Rawlins	8.46	309	IAmb_Lg		09 02 35.4	
	comp=Z,29nm,0.9s						
O44A	Mansfield	8.54	63	IAmb_Lg		09 02 38.9	
	comp=Z,53nm,0.7s						
TXAR	Lajitas Array	8.56	213	Pn	Pn	09 00 03.0	-2.0
	comp=Z,0.3nm,0.3s,baz=39,slow=11,SNR=18						
TXAR				Pg	Pg	09 00 36.5	-7.8
	comp=Z,0.7nm,0.3s,baz=33,slow=14,SNR=5.9						
TXAR				Lg	Lg	09 02 24.7	
	comp=Z,2.3nm,0.3s,baz=29,slow=26,SNR=8.9						
	comp=Z,0.3nm,0.3s						
RSSD	Black Hills	8.57	332	P	Pn	09 00 05.1	-0.2
	baz=148,SNR=7.6						
K22A	Casper	8.64	316	IAmb_Lg		09 02 48.0	
	comp=Z,33nm,0.8s						
JFWS	Jewell Farm	8.84	43	IAmb_Lg		09 03 03.5	
	comp=Z,38nm,0.7s						
F33A	5 Mile Ranch,	9.28	9	IAmb_Lg		09 02 54.7	
	comp=Z,30nm,1.0s						
I40A	Norwalk	9.34	37	IAmb_Lg		09 03 07.5	
	comp=Z,24nm,0.9s						
SPMN	Marine on St.	9.52	25	IAmb_Lg		09 03 02.7	
	comp=Z,27nm,0.9s						
PDAR	Pinedale Array	10.51	309	Pn	Pn	09 00 33.9	+2.0
	comp=Z,0.1nm,0.3s,baz=118,slow=17,SNR=2.7						
PDAR				Pg		09 01 14.8	
	comp=Z,0.5nm,0.3s,baz=114,slow=16,SNR=5.9						
PDAR				Lg	Lg	09 03 27.8	
	comp=Z,1.0nm,0.3s,baz=114,slow=33,SNR=10						
	comp=Z,0.2nm,0.4s						
TKL	Tuckaleechee C	11.88	91	Pn	Pn	09 00 48.6	-1.7
	comp=Z,0.4nm,0.3s,baz=276,slow=10,SNR=5.5						
TKL				Lg	Lg	09 04 05.2	
	comp=Z,0.2nm,0.3s,baz=183,slow=19,SNR=1.9						
	comp=Z,2.0nm,0.6s						
ULM	Lac du Bonnet	13.68	7	Lg	Lg	09 05 03.0	
	comp=Z,0.5nm,0.3s,baz=274,slow=20,SNR=3.7						
NEW	Newport	17.96	316	LR	LR	09 09 46.1	
	comp=Z,65nm,18.0s,baz=118,slow=39						
YKA	Yellowknife Ar	27.72	344	P	P	09 03 50.5	+1.2
	comp=Z,0.2nm,0.8s,baz=139,slow=9.5,SNR=2.4						
	comp=Z,0.2nm,0.8s						

NNC ***16*** *09:04:25.0±0.9, 54°.13N×87°.40E, h0^{km}, mb2.8, mpv2.7, Error ellipse: s-maj=9.2km s-min=5.2km az=5.0, Suspected Mining explosion.*

IDC ***16*** *09:04:26.3±3.3, 54°.20N×87°.43E, h0^{km}, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=27.7km s-min=19.3km az=48.0*

ISC 16 09:04:26.2±4.6**, 54°.4N**±0°.2×**87°.2E**±0°.2**, h0^{km}, n8,** σ**0^{s}.97**/8**, 5C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.44	254	I	I	09 14 20.0	
	baz=79,slow=339,SNR=2.4						
ZAA0	Zalesovo Array	1.44	254	⇑P	Pg	09 04 52.9	-0.9
	0.4nm,0.2s						
ZAA0				⇓S	Sn	09 05 14.0	+0.8
	1.3nm,0.3s						
ZALV	Zalesovo Beam	1.44	254	Pg	Pn	09 04 53.9	+0.3
	5.4nm,0.3s,baz=82,slow=16,SNR=44						
ZALV				Lg	Lg	09 05 15.7	
	2.7nm,0.3s,baz=80,slow=24,SNR=8.9						
KURK	Kurchatov	6.37	238	⇑Sn	Sn	09 07 14.8	+0.3
	0.5nm,0.5s						
KURK				⇑Lg	Lg	09 07 47.0	
	5.0nm,1.2s						
KURBB	Kurchatov Arra	6.47	238	Pn	Pn	09 06 04.2	+1.6
	0.1nm,0.3s,baz=54,slow=13,SNR=5.2						
KURBB				Lg	Lg	09 07 53.7	
	baz=50,slow=28,SNR=2.6						
	0.5nm,0.3s						
KURBB	Kurchatov Arra	6.47	238	⇑Pn	Pn	09 06 01.8	-0.8
	0.9nm,0.4s						
KURBB				⇑Sn	Sn	09 07 17.0	0.0
	3.0nm,0.8s						
KURBB				⇓Lg	Lg	09 07 48.3	
	5.0nm,1.1s						
MK31	Makanchi Array	8.19	204	Pn	Pn	09 06 22.3	-4.0
	0.1nm,0.2s,baz=26,slow=14,SNR=4.4						
MK31				Lg	Lg	09 08 39.0	
	0.1nm,0.1s,baz=309,slow=39,SNR=3.0						
MKAR	Makanchi Array	8.19	204	Pn	Pn	09 06 26.4	+0.2
	0.1nm,0.3s,baz=28,slow=15,SNR=2.3						
MKAR				Lg	Lg	09 08 42.1	
	baz=26,slow=30,SNR=2.4						
	0.1nm,0.3s						

TIF ***16*** *09:09:51.9, 43°.61N×44°.65E, h32^{km}±5^{km}*

MOS ***16*** *09:09:53.6±0.0, 43°.39N×44°.54E, h10^{km}, MPVA3.6*

NORS ***16*** *09:09:53.6±0.0, 43°.38N×44°.60E, h10^{km}, MPVA3.7*

DRS ***16*** *09:09:56.0±0.0, 43°.49N×44°.34E, h23^{km}*

ISC 16 09:09:55.0±0.7**, 43°.38N**±0°.02×**44°.56E**±0°.01**, h10^{km}, n92,** σ**1^{s}.04**/161**, 4C, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTKR	Batakoyurt	0.01	255	*e*Pg	Pg	09 09 55.7	-1.2
BTKR				*e*Sg	Sg	09 09 58.0	-0.2
BTKR	Batakoyurt	0.01	255	*e*PG	Pg	09 09 55.7	-1.2
ARNR	Ardon	0.28	226	*i* Pg	Pb	09 10 01.1	-1.1
ARNR				*e*Sg	Sb	09 10 06.8	-0.1
ARNR	Ardon	0.28	226	*i* PG	Pb	09 10 01.4	-0.7
ARNR				pmax	pmax		
	comp=Z,514nm,0.2s						
VLKR	Vladikavkaz	0.34	165	*e*Pg	Pn	09 10 04.9	-1.2
VLKR				*e*Sg	Sb	09 10 13.4	+4.7
VLKR	Vladikavkaz	0.34	165	*e*PG	Pn	09 10 04.9	-1.2
VLKR				*e*S	Sb	09 10 13.4	+4.7
STDR	Stavd-Durt	0.36	269	*i* Pg	Pb	09 10 02.6	-0.9
STDR				*e*Sg	Sb	09 10 10.4	+1.2
STDR	Stavd-Durt	0.36	269	⇑*i*PG	Pb	09 10 03.2	-0.3
STDR				*e*S	Sb	09 10 11.1	+1.9
TRKR	Terskaya	0.37	20	*e*Pg	Pg	09 10 02.5	+0.1
TRKR				*e*Sg	Sb	09 10 09.7	+0.2
TRKR	Terskaya	0.37	20	*e*PG	Pg	09 10 02.5	+0.1
TRKR				*e*S	Sb	09 10 09.7	+0.2
KMGR	Komgaron	0.39	144	*e*Pg	Pg	09 10 02.5	-0.3
KMGR				*e*Sg	Sg	09 10 08.0	+0.1
PRTR	Priterechnaya	0.43	332	*e*Pg	Pb	09 10 05.0	+0.3
PRTR				*e*Sg	Sb	09 10 12.5	+1.3
PRTR	Priterechnaya	0.43	332	*e*PG	Pn	09 10 05.9	-1.3
PRTR				*e*S	Sb	09 10 12.9	+1.8
KORR	Kora	0.46	231	*e*Pg	Pb	09 10 04.6	-0.7
KORR				*e*Sg	Sb	09 10 14.1	+2.0
KORR	Kora	0.46	231	*e*PG	Pb	09 10 04.6	-0.7
KORR				*e*S	Sb	09 10 14.1	+2.0
LSNR	Lesken	0.54	260	*i* Pg	Pb	09 10 06.8	+0.1
LSNR				*e*Sg	Sn	09 10 16.5	-1.5
LSNR	Lesken	0.54	260	⇑*i*PG	Pb	09 10 07.0	+0.4
LSNR				*e*S	Sn	09 10 17.5	-0.5
LACR	Lac	0.58	199	*i* Pg	Pg	09 10 06.4	+0.1
LACR				*e*Sg	Sb	09 10 16.3	+0.7
LACR	Lac	0.58	199	⇑*i*PG	Pg	09 10 06.4	+0.1
LACR				*e*S	Sb	09 10 16.3	+0.7
NCK	Nalchik	0.71	280	*e*Pg	Pg	09 10 08.5	-0.3
NCK				*e*Sg	Sb	09 10 19.9	+0.6
NCK	Nalchik	0.71	280	*e*PG	Pg	09 10 08.5	-0.3
PNSH	Pansheti	0.74	177	*e*Pg	Pg	09 10 08.2	-1.2
PNSH				*e*Sg	Sn	09 10 24.4	+1.3
PNSH	Pansheti	0.74	177	PG	Pg	09 10 08.2	-1.2
PNSH				S	Sn	09 10 24.4	+1.3
PNSH	Pansheti	0.74	177	P	Pg	09 10 08.2	-1.2
PNSH				S	Sn	09 10 24.4	+1.3
ZEI	Tsey	0.76	220	*e*Pg	Pb	09 10 10.2	-0.2
ZEI				*e*Sg	Sn	09 10 22.2	-1.4
ZEI	Tsey	0.76	220	*e*PG	Pb	09 10 10.2	-0.2
ZEI				*e*S	Sn	09 10 22.2	-1.4
SHTL	Shatili	0.84	148	*e*Pg	Pg	09 10 10.9	-0.4
SHTL				*e*Sg	Sn	09 10 26.7	+1.2
SHTL	Shatili	0.84	148	PG	Pg	09 10 10.9	-0.4
SHTL				S	Sn	09 10 26.7	+1.2
SHTL	Shatili	0.84	148	P	Pg	09 10 10.9	-0.4
SHTL				S	Sn	09 10 26.7	+1.2
DIGR	Digorskoe uzhe	0.86	237	*e*Pg	Pb	09 10 11.7	-0.4
DIGR				*e*Sg	Sn	09 10 25.3	-0.8
DIGR	Digorskoe uzhe	0.86	237	*i* PG	Pb	09 10 11.7	-0.4
DIGR				pmax	pmax		
	comp=Z,35nm,0.2s						
GUDG	Gudauri	0.91	184	*e*Pg	Pg	09 10 11.8	-0.8
GUDG	Gudauri	0.91	184	PG	Pg	09 10 11.8	-0.8
GUDG	Gudauri	0.91	184	P	Pg	09 10 11.8	-0.8
GROC	Groznyy	0.92	100	*e*Pg	Pb	09 10 13.4	+0.3
GROC				*e*Sg	Sn	09 10 27.6	+0.3
KBTC	Kuba-Taba	0.94	298	*e*Pg	Pb	09 10 13.3	-0.2
KBTC				*e*Sg	Sn	09 10 28.8	+0.8
KBTC	Kuba-Taba	0.94	298	*e*PG	Pb	09 10 13.3	-0.2
KBTC				*e*S	Sn	09 10 28.8	+0.8
ONI	Oni	1.13	226	*e*Pg	Pn	09 10 16.7	-0.2
ONI				*e*Sg	Sn	09 10 33.9	+1.4
ONI	Oni	1.13	226	PG	Pn	09 10 16.7	-0.2
ONI				S	Sn	09 10 33.9	+1.4
ONI	Oni	1.13	226	P	Pn	09 10 16.7	-0.2
ONI				S	Sn	09 10 33.9	+1.4
KBZ	Khabaz	1.26	287	⇑*e*PG	Pn	09 10 17.6	-1.0
PYA1	Pyatigorsk	1.26	303	*e*Pg	Pn	09 10 18.0	-0.8
PYA1				*e*Sg	Sn	09 10 36.2	+0.4
NEY	Neytrino	1.34	265	*e*Pg	Pn	09 10 19.2	-0.8
NEY				*e*Sg	Sg	09 10 39.0	+0.7
NEY	Neytrino	1.34	265	*e*PG	Pn	09 10 19.6	-0.4
NEY				*e*S	Sg	09 10 39.6	+1.3
BEYR	Belyy Ugol+	1.41	297	*e*Pg	Pn	09 10 20.3	-0.6
BEYR				*e*Sg	Sg	09 10 40.1	-0.4
BTLR	Botlikh	1.41	120	*e*Pg	Pn	09 10 20.6	-0.3
	comp=Z,34nm,0.4s						
BTLR				*e*Sg	Sg	09 10 41.0	+0.5
	comp=Z,361nm,0.4s						
BTLR	Botlikh	1.41	120	*e*PG	Pn	09 10 20.6	-0.3
BTLR				*e*S	Sg	09 10 41.0	+0.5
SHA1	Shidzhatmaz	1.43	285	*e*Pg	Pn	09 10 21.1	-0.1
SHA1				*e*Sg	Sg	09 10 42.0	+1.0
SHA1	Shidzhatmaz	1.43	285	*e*PG	Pn	09 10 21.1	-0.1
SHA1				*e*S	Sg	09 10 42.0	+1.0
KIV0	Kislovodsk Arr	1.47	294	*e*Pg	Pn	09 10 21.1	-0.6
KIV0				*e*Sg	Sg	09 10 42.7	+0.4
KIV	Kislovodsk	1.48	294	*e*Pg	Pn	09 10 21.3	-0.5
KIV				*e*Sg	Sg	09 10 42.0	-0.5
DLMR	Dylym	1.55	101	*e*Pg	Pn	09 10 22.1	-0.5
DLMR				*e*Sg	Sg	09 10 44.7	-0.1
DLMR	Dylym	1.55	101	*e*PG	Pn	09 10 22.1	-0.5
DLMR				*i* S	Sg	09 10 44.3	-0.4
DLMR				pmax	pmax		
	comp=Z,67nm,0.3s						
DLMR				smax	smax		
	comp=N,376nm,0.5s						
DBC	Dubki	1.70	101	*e*Pg	Pn	09 10 24.8	0.0
	comp=N,14nm,0.4s						
DBC				*e*Sg	Sb	09 10 48.7	+0.9
	comp=N,111nm,0.6s						
DBC	Dubki	1.70	101	*e*PN	Pn	09 10 24.8	0.0
DBC				*i* S	Sg	09 10 49.4	-0.3
DBC				pmax	pmax		
	comp=Z,15nm,0.4s						
DBC				smax	smax		
	comp=E,55nm,0.4s						
UNCR	Uncukul	1.77	111	*e*Pg	Pn	09 10 26.4	+0.6
	comp=E,32nm,0.5s						
UNCR				*e*Sg	Sg	09 10 51.2	-0.6
	comp=E,28nm,0.3s						
UNCR	Uncukul	1.77	111	*e*PN	Pn	09 10 26.3	+0.6
UNCR				*i* S	Sg	09 10 52.5	+0.6
UNCR				pmax	pmax		
	comp=Z,32nm,0.5s						
UNCR				smax	smax		
	comp=E,111nm,0.5s						
HNZR	Khunzah	1.78	117	*e*PN	Pn	09 10 26.3	+0.3
HNZR				*i* S	Sg	09 10 52.3	-0.1
HNZR				pmax	pmax		
	comp=Z,20nm,0.3s						
HNZR				smax	smax		
	comp=N,30nm,0.5s						
XNZR	Khunzakh	1.78	117	*e*Pg	Pn	09 10 26.4	+0.3
	comp=N,19nm,0.3s						
XNZR				*e*Sg	Sg	09 10 51.7	-0.7
	comp=N,39nm,0.4s						
KRNR	Karanay	1.81	107	*e*Pg	Pb	09 10 27.3	-0.9
	comp=N,10.0nm,0.3s						
KRNR				*e*Sg	Sg	09 10 52.8	-0.4
	comp=N,27nm,0.4s						
KRNR	Karanay	1.81	107	*e*PN	Pb	09 10 27.3	-0.9
KRNR				*i* S	Sg	09 10 52.7	-0.4
KRNR				pmax	pmax		
	comp=Z,11nm,0.3s						
KRNR				smax	smax		
	comp=N,48nm,0.5s						
ALER	Alexandrovskoy	1.82	320	*e*Pg	Pn	09 10 26.0	-0.5
ALER				*e*Sg	Sb	09 10 51.7	+0.3
BRNG	Burnasheti	1.83	197	PN	Pb	09 10 29.0	+0.3
BRNG	Burnasheti	1.83	197	P	Pb	09 10 29.0	+0.3
TRLG	Trialeti	1.86	191	*e*Pg	Pb	09 10 28.0	-1.3
TRLG	Trialeti	1.86	191	PN	Pb	09 10 28.0	-1.3
TRLG	Trialeti	1.86	191	P	Pb	09 10 28.0	-1.3
ARKR	Arakani	1.95	113	*e*Pg	Pn	09 10 28.6	+0.3
	comp=N,1.0nm,0.5s						
ARKR				*e*Sg	Sb	09 10 55.6	+0.6
	comp=N,126nm,0.5s						
ARKR	Arakani	1.95	113	*e*PN	Pn	09 10 28.5	+0.3
ARKR				*i* S	Sb	09 10 56.1	+1.1
ARKR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARKR				pmax	pmax		
	comp=N,36nm,0.4s						
ARKR				smax	smax		
	comp=N,31nm,0.5s						
BUJR	Buynaksk	1.95	106	*e*Pg	Pn	09 10 28.8	+0.6
	comp=N,48nm,0.2s						
BUJR				*e*Sg	Sb	09 10 55.9	+0.9
	comp=N,96nm,0.5s						
BUJR	Buynaksk	1.95	106	*e*PN	Pn	09 10 28.7	+0.6
BUJR				*i* S	Sb	09 10 56.2	+1.2
BUJR				pmax	pmax		
	comp=Z,49nm,0.2s						
BUJR				smax	smax		
	comp=E,141nm,0.6s						
GOF	Gofitskoye	2.00	328	*e*Pg	Pn	09 10 28.2	-0.7
GOF				*e*Sg	Sb	09 10 55.4	-1.1
DGRG	David-gareji	2.02	162	*e*Pg	Pb	09 10 30.4	-1.4
DGRG	David-gareji	2.02	162	PN	Pb	09 10 30.4	-1.4
DGRG	David-gareji	2.02	162	P	Pb	09 10 30.4	-1.4
GNBR	Gunib	2.02	118	*e*Pg	Pn	09 10 29.7	+0.4
	comp=E,10.0nm,0.3s						
GNBR				*e*Sg	Sb	09 10 57.5	+0.3
	comp=E,52nm,0.4s						
GNBR	Gunib	2.02	118	*e*PN	Pn	09 10 29.6	+0.4
GNBR				*i* S	Sb	09 10 58.2	+1.0
GNBR				pmax	pmax		
	comp=Z,11nm,0.3s						
GNBR				smax	smax		
	comp=E,81nm,0.6s						
ABS	Abastumani	2.07	219	*e*Pg	Pb	09 10 32.4	-0.3
ABS	Abastumani	2.07	219	PN	Pb	09 10 32.4	-0.3
ABS	Abastumani	2.07	219	P	Pb	09 10 32.4	-0.3
DOMR	Dombai	2.14	269	*e*Pg	Pg	09 10 35.7	-0.3
DOMR				*e*Sg	Sb	09 11 01.5	+0.8
KMKR	Kumukh	2.25	123	*e*Pn	Pn	09 10 33.5	+1.1
	comp=E,13nm,0.5s						
KMKR				*e*Sn	Sb	09 11 04.5	+0.7
	comp=E,52nm,0.4s						
KMKR	Kumukh	2.25	123	*e*PN	Pn	09 10 33.5	+1.1
KMKR				*e*S	Sb	09 11 04.4	+0.7
KMKR				*i* S	Sg	09 11 05.2	-2.0
KMKR				pmax	pmax		
	comp=Z,13nm,0.5s						
KMKR				smax	smax		
	comp=E,53nm,0.4s						
KMKR				smax	smax		
	comp=N,61nm,0.6s						
KMKR				smax	smax		
	comp=N,48nm,0.3s						
ARXR	Arkhyz	2.40	276	*e*Pn	Pn	09 10 35.4	+0.9
ARXR				*e*Sn	Sb	09 11 05.7	-2.3
ARXR	Arkhyz	2.40	276	*i* PN	Pn	09 10 34.6	+0.1
SGKR	Sergokala	2.46	111	*e*Pn	Pn	09 10 35.0	-0.1

SGKR				*e*Sn	**Sb**	**09 11 08.1**	**-1.5**
AHMR	**Akhmetovskaya**	**2.66**	**288**	*e*Pn	**Pg**	**09 10 46.1**	**+0.1**
AHMR				*e*Sn	**Sg**	**09 11 20.8**	**+0.3**
AHMR	**Akhmetovskaya**	**2.66**	**288**	*i* PN	**Pn**	**09 10 37.0**	**-1.0**
GNI	**Garni**	**3.23**	**177**	*e*Pn	**Pn**	**09 10 44.5**	**-1.3**
GNI	**Garni**	**3.23**	**177**	*i* PN	**Pn**	**09 10 43.5**	**-2.4**
GUZR	**Guzeripl'**	**3.28**	**282**	*e*Pn	**Pn**	**09 10 46.5**	**0.0**
GUZR				*e*Sn	**Sn**	**09 11 28.1**	**+2.5**
GUZR	**Guzeripl'**	**3.28**	**282**	*i* PN	**Pn**	**09 10 45.9**	**-0.6**

FUNV ***16*** *09:11:48.6, 10°.98N×62°.09W, h18^{km}, MW3.3*
TRN ***16*** *09:11:48.1, 11°.01N×61°.91W, h107^{km}, MD3.0*
ISC 16 09:11:45.3±1.6, **10°.94N**±0°.05×**62°.02W**±0°.05,
h116^{km}±13^{km}, **n18**, σ**1^{s}.52**/28, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	**0.67**	**115**	*e*	**Pn**	**09 12 01.9**	**-2.1**
TRN	**Trinidad (W)**	**0.67**	**115**	*e*P	**Pn**	**09 12 05.8**	**+1.8**
TRN				*e*S	**Sn**	**09 12 18.5**	**+0.4**
TBH	**Brigand Hill**	**1.04**	**116**	*e*P	**Pn**	**09 12 08.7**	**+1.3**
TBH				*e*S	**Sn**	**09 12 24.3**	**+0.2**
CRUV	**Carupano**	**1.22**	**258**	*e*P	**Pn**	**09 12 10.1**	**+0.8**
CRUV				*e*S	**Sn**	**09 12 26.3**	**-1.3**
GRGR	**Grenville**	**1.24**	**17**	*e*P	**Pn**	**09 12 10.5**	**+0.9**
GRGR				*e*S	**Sn**	**09 12 27.3**	**-0.7**
GRHS	**Sauteurs**	**1.33**	**16**	*e*P	**Pn**	**09 12 11.4**	**+0.9**
GRHS				*e*S	**Sn**	**09 12 29.1**	**-0.6**
TOSP	**Speyside**	**1.50**	**76**	*e*	Pn	09 12 06.5	-6.0
TOSP	**Speyside**	**1.50**	**76**	*e*P	**Pn**	**09 12 13.2**	**+0.7**
TOSP				*e*S	**Sn**	**09 12 31.9**	**-1.3**
GCMP	**Grenada, Carri**	**1.65**	**21**	*e*P	**Pn**	**09 12 14.9**	**+0.7**
GCMP				*e*S	**Sn**	**09 12 34.6**	**-1.6**
SVOC	**Richmond Hill,**	**2.34**	**19**	*e*S	**Sn**	**09 12 51.1**	**-0.6**
SVB	**Belmont**	**2.44**	**18**	*e*P	**Pn**	**09 12 25.9**	**+1.7**
SVB				*e*S	**Sn**	**09 12 53.1**	**-1.0**
MCLT	**Moule a Chique**	**2.95**	**21**	*e*S	**Sn**	**09 13 03.4**	**-2.6**
SLBI	**Saint Lucia, B**	**3.23**	**18**	*e*P	**Pn**	**09 12 36.1**	**+1.5**
SLBI				*e*S	**Sn**	**09 13 11.6**	**-1.0**
PRGV	**PARIAGUAN**	**3.37**	**230**	*e*P	**Pn**	**09 12 38.6**	**+2.1**
PRGV				*e*S	**Sn**	**09 13 16.4**	**+0.5**
BIRV	**Birongo**	**4.20**	**264**	*e*P	**Pn**	**09 12 49.2**	**+1.7**
MERV	**Las Mercedes**	**4.53**	**249**	*e*S	**Sn**	**09 13 43.9**	**+0.1**
CACV	**CAICARA DEL OR**	**5.58**	**233**	*e*P	**Pn**	**09 13 03.2**	**-2.9**
CACV				*e*S	Sn	09 13 58.3	-11
BAUV	**El Baul**	**6.25**	**252**	*e*P	**Pn**	**09 13 16.5**	**+1.3**
BAUV				*e*S	**Sn**	**09 14 23.2**	**-2.1**

HVO ***16*** *09:49:25.7±2.7, 20°.13N±0°.08×155°.8W±0°.1, h24^{km}±8^{km},*
ML2.3/8, ML2.7/34(NEIC), Error ellipse: s-maj=17.3km
s-min=7.1km az=53.0
NEIC 16 09:49:23.9±0.7, **20°.13N**±0°.06×**155°.77W**±0°.07, **h33**^{km}±9^{km},
Error ellipse: s-maj=9.6km s-min=9.4km az=131.0,
Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HPAH	**Hawaii Prepara**	**0.12**	**147**		Pb	09 49 30.1	+0.1
HPAH					Sb	09 49 33.4	-0.7
HPAH	**Hawaii Prepara**	**0.12**	**147**	IAML		09 49 33.5	
	comp=E,543nm,0.1s						
HPAH				IAML		09 49 33.7	
	comp=N,632nm,0.1s						
MHA	**Mahukona**	**0.14**	**294**		Pb	09 49 30.1	+0.1
MHA					Sb	09 49 33.6	-0.6
POHA	**Pohakuloa**	**0.43**	**149**		Pn	09 49 34.1	0.0
POHA					Sb	09 49 40.3	-0.1
POHA	**Pohakuloa**	**0.43**	**149**	IAML		09 49 40.8	
	comp=N,646nm,0.1s						
POHA				IAML		09 49 41.0	
	comp=N,707nm,0.1s						
HUH	**Hualalai**	**0.45**	**189**		Pn	09 49 34.6	+0.3
HUH	**Hualalai**	**0.45**	**189**	IAML		09 49 43.1	
	comp=E,438nm,0.4s						
HUH				IAML		09 49 47.0	
	comp=N,414nm,0.2s						
KHLU	**Kahalu`u**	**0.55**	**193**		Pb	09 49 35.0	-0.4
KHLU					Pn	09 49 41.9	+6.4
HMH	**Humu‘ula Sheep**	**0.59**	**153**		Pn	09 49 44.2	+8.0
HMH	**Humu‘ula Sheep**	**0.59**	**153**		Pn	09 49 36.4	+0.2
HMH	**Humu‘ula Sheep**	**0.59**	**153**	IAML		09 49 41.7	
	comp=E,226nm,4.0s						
HMH				IAML		09 49 42.0	
	comp=N,140nm,3.3s						
ALEP	**Alea Permanent**	**0.60**	**169**		Pn	09 49 36.6	+0.3
ALEP					Pb	09 49 44.6	+8.2
CPH	**Captain Cook**	**0.66**	**193**		Pn	09 49 36.6	-0.3
MWH	**Moku‘aweowe**	**0.66**	**166**		Pn	09 49 37.1	-0.3
MWH	**Moku‘aweowe**	**0.66**	**166**	IAML		09 49 56.5	
	comp=E,267nm,1.3s						
MWH				IAML		09 49 59.5	
	comp=N,253nm,1.9s						
MLH	**Mauna Loa**	**0.73**	**151**		Pb	09 49 47.1	+8.7
MLH	**Mauna Loa**	**0.73**	**151**		Pn	09 49 38.1	+0.1
MLH				IAML		09 49 59.6	
	comp=N,219nm,2.0s						
MLH	**Mauna Loa**	**0.73**	**151**	IAML		09 49 45.1	
	comp=E,162nm,1.7s						
HLK	**Haleakala**	**0.77**	**324**		Pn	09 49 37.6	-1.1
HLK					Sn	09 49 46.3	-3.1
HLK	**Haleakala**	**0.77**	**324**	IAML		09 50 04.7	
	comp=E,195nm,3.5s						
RSD	**Rainshed**	**0.81**	**145**		Pn	09 49 39.4	+0.3
RSD					Pb	09 49 49.2	+10
RSD	**Rainshed**	**0.81**	**145**	IAML		09 49 49.3	
	comp=N,352nm,3.3s						
RSD				IAML		09 50 01.2	
	comp=E,289nm,1.7s						
AIN	**Ainahou**	**0.81**	**159**		Pn	09 49 39.3	+0.1
AIN	**Ainahou**	**0.81**	**159**	IAML		09 49 46.0	
	comp=N,243nm,2.1s						
AIN				IAML		09 49 54.7	
	comp=E,145nm,1.0s						
UWB	**Uwekahuna B**	**0.84**	**147**		Pn	09 49 39.5	-0.1
UWB	**Uwekahuna B**	**0.84**	**147**	IAML		09 49 57.6	
	comp=E,238nm,1.6s						
HATHI	**Halema‘uma‘u T**	**0.85**	**146**		Pn	09 49 39.5	-0.2
KHU	**Kahuku**	**0.89**	**171**		Pn	09 49 40.0	-0.4
KHU					Pb	09 49 50.3	+9.1
KHU	**Kahuku**	**0.89**	**171**	IAML		09 49 56.2	
	comp=N,296nm,3.6s						
KHU				IAML		09 50 04.9	
	comp=E,276nm,4.2s						
PUH	**Pauahi**	**0.91**	**145**		Pb	09 49 51.1	+10
PUH	**Pauahi**	**0.91**	**145**	IAML		09 50 13.8	
	comp=E,173nm,1.6s						
KNHH	**Kane Nui o Ham**	**0.93**	**143**		Pn	09 49 40.8	0.0
KNHH					Sn	09 49 52.0	-1.1
HLP	**Hilina Pali**	**0.94**	**153**		Pn	09 49 40.8	0.0
HLP					Sn	09 49 51.8	-1.3
HTC	**Hot Caves**	**0.95**	**159**		Pn	09 49 41.0	0.0
STCH	**Steam Cracks**	**0.95**	**141**		Pn	09 49 40.9	-0.2
STCH					Sn	09 49 52.1	-1.5
JOKA	**Jonika Flow**	**1.00**	**134**		Pn	09 49 41.5	-0.1

NAO ***16*** *09:50:30.6±1.8, 78°.68N×4°.64E, ML3.9*
BER ***16*** *09:50:32.7±3.7, 78°.68N×4°.94E, h10^{km}, ML3.1,*
ML3.9(NAO), Confirmed Earthquake
DNK ***16*** *09:50:35.9±4.8, 78°.86N×5°.25E, h36^{km}±32^{km}, ML2.6*
IEPN ***16*** *09:50:36.0, 78°.68N×6°.08E, h10^{km}*
KOLA ***16*** *09:50:36.0, 78°.55N×6°.92E, h0^{km}, ML2.8, Greenland*
sea,Knipovich ridge, middle
IDC ***16*** *09:50:37.8±1.1, 79°.28N×7°.34E, h0^{km}, mb3.8/9,*
mbtmp3.8/10, ML3.0/1, MS3.4/8, Error ellipse:
s-maj=28.0km s-min=18.7km az=43.0
ISC 16 09:50:31.4±0.7, **78°.62N**±0°.05×**4°.80E**±0°.04, **h10**^{km}, **n54**,
σ**3^{s}.26**/71, **mb3.9**/9, **MS3.4**/7, **2C**, **Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.43**	**74**	Pn	**Pn**	**09 50 56.4**	**-0.9**
KBS				Lg	Lg	09 51 11.8	
KBS	**Kingsbay**	**1.43**	**74**	⇑*i*P	**Pn**	**09 50 55.6**	**-1.7**
KBS				*e*S	**Sn**	**09 51 10.8**	**-5.3**
KBS	**Kingsbay**	**1.43**	**74**	P	**Pn**	**09 50 55.8**	**-1.5**
KBS				S	**Sn**	**09 51 10.9**	**-5.2**
KBS	**Kingsbay**	**1.43**	**74**	*i* P	**Pn**	**09 50 55.4**	**-1.9**
KBS				*i* S	**Sn**	**09 51 12.7**	**-3.4**
KBS	**Kingsbay**	**1.43**	**74**	*e*P	**Pn**	**09 50 56.3**	**-1.0**
KBS				*e*S	**Sn**	**09 51 12.1**	**-4.0**
KBS				IAML		09 51 13.7	
	comp=Z,291nm,0.5s						
BRBB	**Barentsburg B**	**1.98**	**101**	Pn	**Pn**	**09 51 05.2**	**+0.3**
BRBB				Sn	**Sn**	**09 51 25.6**	**-4.0**
BRBB	**Barentsburg B**	**1.98**	**101**	P	**Pn**	**09 51 05.0**	**+0.1**
BRBB				S	**Sn**	**09 51 24.7**	**-5.0**
BRBB	**Barentsburg B**	**1.98**	**101**	*e*P	**Pn**	**09 51 05.3**	**+0.5**
BRBB				*e*S	**Sn**	**09 51 26.4**	**-3.2**
BRBA	**Barentsburg A**	**2.00**	**102**	Pn	**Pn**	**09 51 05.8**	**+0.8**
BRBA				Sn	**Sn**	**09 51 27.1**	**-2.9**
BRBA	**Barentsburg A**	**2.00**	**102**	*e*P	**Pn**	**09 51 05.8**	**+0.8**
BRBA				*e*S	**Sn**	**09 51 26.4**	**-3.6**
BRBA				IAML		09 51 30.3	
	comp=Z,399nm,0.4s						
SPA0	**Spitsbergen Ar**	**2.38**	**95**	Pn	**Pn**	**09 51 11.3**	**+0.9**
	baz=277,slow=14						
SPA0				Sn	**Sn**	**09 51 36.5**	**-3.0**
	baz=264,slow=18						
SPA0	**Spitsbergen Ar**	**2.38**	**95**	⇑*i*P	**Pn**	**09 51 11.1**	**+0.7**
SPA0				*i* S	**Sn**	**09 51 37.1**	**-2.4**
SPA0	**Spitsbergen Ar**	**2.38**	**95**	Pn	**Pn**	**09 51 11.3**	**+0.9**
	baz=277,slow=14						
SPA0				Sn	**Sn**	**09 51 36.5**	**-3.0**
	baz=264,slow=18						
SPITS	**Spitsbergen Ar**	**2.38**	**95**	P	**Pn**	**09 51 10.3**	**-0.1**
SPITS				S	**Sn**	**09 51 37.4**	**-2.2**
HSPB	**Hornsund (broa**	**2.80**	**120**	Pn	**Pn**	**09 51 16.7**	**+0.6**
HSPB				Sn	**Sn**	**09 51 46.7**	**-3.0**
HSPB	**Hornsund (broa**	**2.80**	**120**	*e*P	**Pn**	**09 51 16.6**	**+0.6**
HSPB				*e*S	**Sn**	**09 51 46.4**	**-3.4**
HSPB	**Hornsund (broa**	**2.80**	**120**	P	**Pn**	**09 51 16.9**	**+0.8**
HSPB				S	**Sn**	**09 51 47.0**	**-2.8**
HSPB	**Hornsund (broa**	**2.80**	**120**	*e*P	**Pn**	**09 51 17.0**	**+1.0**
HSPB				*e*S	**Sn**	**09 51 46.4**	**-3.4**
HSPB				IAML		09 51 49.8	
	comp=Z,142nm,0.2s						
NOR	**Nord**	**4.72**	**319**	Pn	**Pn**	**09 51 42.0**	**-0.5**
NOR				Sn	**Sn**	**09 52 32.2**	**-4.9**
NOR	**Nord**	**4.72**	**319**	*i* P	**Pn**	**09 51 41.6**	**-0.9**
NOR				*i* S	**Sn**	**09 52 29.4**	**-7.7**
NOR				IAML		09 52 34.4	
	comp=Z,30nm,0.7s						
NOR	**Nord**	**4.72**	**319**	*e*P	**Pn**	**09 51 42.0**	**-0.5**
NOR				*e*S	**Sn**	**09 52 31.0**	**-6.2**
HOPEN	**Hopen**	**4.83**	**106**	Pn	**Pn**	**09 51 44.0**	**+0.1**
HOPEN				Sn	**Sn**	**09 52 35.3**	**-4.6**
HOPEN	**Hopen**	**4.83**	**106**	*e*P	**Pn**	**09 51 43.5**	**-0.5**
HOPEN				*e*S	**Sn**	**09 52 34.9**	**-5.0**
HOPEN	**Hopen**	**4.83**	**106**	*e*P	**Pn**	**09 51 43.9**	**-0.1**
HOPEN				*e*S	**Sn**	**09 52 35.1**	**-4.8**
HOPEN				IAML		09 52 37.9	
	comp=Z,132nm,0.3s						
DAG	**Danmarks Havn**	**5.32**	**261**	*i* P	**Pn**	**09 51 51.4**	**+0.7**
DAG				*i* S	**Sn**	**09 52 46.6**	**-5.2**
DAG				IAML		09 52 52.7	
	comp=Z,37nm,0.6s						
DAG	**Danmarks Havn**	**5.32**	**261**	*e*P	**Pn**	**09 51 51.6**	**+1.0**
DAG				*e*S	**Sn**	**09 52 46.4**	**-5.5**
DBG	**Daneborg**	**7.22**	**246**	Pn	**Pn**	**09 52 17.6**	**+0.8**
DBG				Sn	**Sn**	**09 53 33.4**	**-5.3**
DBG	**Daneborg**	**7.22**	**246**	*i* P	**Pn**	**09 52 17.8**	**+1.0**
DBG				*i* S	**Sn**	**09 53 32.5**	**-6.3**
DBG				IAML		09 53 38.6	
	comp=Z,14nm,0.5s						
DBG	**Daneborg**	**7.22**	**246**	*e*P	**Pn**	**09 52 17.4**	**+0.6**
DBG				*e*S	Sn	09 53 31.6	-7.1
ZFI2	**Zemlya Franca-**	**7.80**	**54**	*e*P	**Pn**	**09 52 24.3**	**-0.4**
ZFI2				*e*S	Sn	09 53 43.3	-10
ZFI	**Zemlya Franca-**	**7.80**	**54**	*e*P	**Pn**	**09 52 24.2**	**-0.5**
ZFI				*e*S	Sn	09 53 43.3	-10
OMEGA	**Omega**	**7.82**	**54**	*e*P	**Pn**	**09 52 24.3**	**-0.6**
OMEGA				*e*S	Sn	09 53 42.7	-11
	comp=Z,67nm,1.1s						
ARA0	**ARCESS Array S**	**10.64**	**138**	Sn	**Sn**	**09 54 57.1**	**-5.5**
	baz=332,slow=18						
ARA0	**ARCESS Array S**	**10.64**	**138**	Sn	**Sn**	**09 54 57.1**	**-5.5**
	baz=332,slow=18						
ARCES	**ARCESS Array B**	**10.64**	**138**	Pn	Pn	09 53 10.5	+6.9
	comp=Z,0.1nm,0.3s,baz=340,slow=13,SNR=2.5						
ARCES				Sn	**Sn**	**09 54 58.4**	**-4.2**
	comp=Z,0.2nm,0.3s,baz=344,slow=19,SNR=1.6						
	comp=Z,7.3nm,1.0s						
SCO	**Scoresbysund**	**10.68**	**235**	*i* P	**Pn**	**09 53 06.0**	**+1.9**
SCO				*i* S	Sn	09 54 55.9	-7.6
NEEM	**North Greenlan**	**11.27**	**292**	*i* P	**Pn**	**09 53 10.4**	**-2.0**
NEEM				*i* S	Sn	09 55 03.9	-14
SUMG	**Summit**	**12.01**	**263**	*i* P	**Pn**	**09 53 22.9**	**+0.4**
SUMG				*i* S	Sn	09 55 26.2	-10
NOA	**NORSAR Array B**	**17.79**	**170**	P	P	09 54 49.0	+10
	comp=Z,1.5nm,0.8s,baz=335,slow=13,SNR=4.2						
SFJD	**Kangerlussuaq**	**19.00**	**264**	LR	LR	10 02 32.5	
	comp=Z,85nm,21.3s,baz=30,slow=36						
NRIK	**Noril'sk**	**22.30**	**68**	P	**P**	**09 55 30.2**	**+1.9**
	comp=Z,6.5nm,0.7s,baz=327,slow=9.5,SNR=5.0						
	comp=Z,6.5nm,0.7s						
FRB	**Frobisher Bay**	**25.43**	**277**	LR	LR	10 06 44.1	
	comp=Z,70nm,19.5s,baz=278,slow=37						
BVAR	**Borovoye Array**	**33.83**	**99**	P	**P**	**09 57 17.5**	**+4.2**
	comp=Z,1.5nm,0.8s,baz=339,slow=7.9,SNR=6.3						
BVAR				LR	LR	10 13 32.3	
	comp=Z,101nm,18.4s,baz=330,slow=41						
	comp=Z,1.5nm,0.8s						
ZALV	**Zalesovo Beam**	**35.82**	**84**	P	**P**	**09 57 34.4**	**+4.1**
	comp=Z,0.3nm,0.3s,baz=347,slow=12,SNR=1.2						
ZALV				LR	LR	10 15 14.5	
	comp=Z,37nm,18.9s,baz=306,slow=42						
	comp=Z,0.3nm,0.3s						
ILAR	**Eielson Array**	**35.84**	**340**	P	**P**	**09 57 34.3**	**+3.8**
	comp=Z,0.5nm,0.8s,baz=7.9,slow=7.4,SNR=6.8						
	comp=Z,0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**37.72**	**92**	P	**P**	**09 57 50.1**	**+3.5**
	comp=Z,2.1nm,0.9s,baz=337,slow=8.1,SNR=10						
	comp=Z,2.1nm,0.9s						
KBZ	**Khabaz**	**37.97**	**133**	P	P	09 57 59.1	+10
	comp=Z,1.9nm,0.9s,baz=252,slow=3.7,SNR=3.5						
	comp=Z,1.9nm,0.9s						
MKAR	**Makanchi Array**	**42.12**	**90**	P	**P**	**09 58 26.7**	**+3.5**
	comp=Z,1.1nm,0.8s,baz=336,slow=6.8,SNR=7.6						
	comp=Z,1.1nm,0.8s						
KEST	**Kesra**	**43.04**	**175**	P	P	09 58 44.0	+13
	comp=Z,2.7nm,0.6s,baz=326,slow=7.3,SNR=2.2						
	comp=Z,2.7nm,0.6s						
AAK	**Ala-Archa**	**44.58**	**100**	LR	LR	10 18 39.0	
	comp=Z,50nm,20.5s,baz=340,slow=38						
SONM	**Songino Array**	**45.78**	**67**	LR	LR	10 19 04.0	
	comp=Z,64nm,19.0s,baz=334,slow=38						
TKL	**Tuckaleechee C**	**55.05**	**277**	LR	LR	10 22 52.4	
	comp=Z,24nm,20.4s,baz=26,slow=35						
TXAR	**Lajitas Array**	**64.99**	**294**	P	P	10 01 20.2	+9.1
	comp=Z,0.2nm,0.8s,baz=38,slow=4.6,SNR=3.5						
	comp=Z,0.2nm,0.8s						
LPIG	**La Paz**	**71.28**	**299**	LR	LR	10 36 46.6	
	comp=Z,32nm,19.1s,baz=12,slow=39						

IDC 16 09:54:16.0±3.8, **4°.37S**×**126°.70E**, **h391**^{km}±54^{km}, **mb3.2**/2,
mbtmp3.9/3, **Error ellipse: s-maj=123.5km**
s-min=65.0km az=61.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.17**	**155**	P	P	09 57 52.3	+0.1
	0.8nm,0.5s,baz=332,slow=10,SNR=13						
WRA				S	S	10 00 51.8	+0.5
	0.5nm,0.5s,baz=335,slow=20,SNR=4.0						
ASAR	**Alice Springs**	**20.40**	**161**	P	P	09 58 24.7	-0.1
	2.3nm,0.5s,baz=346,slow=13,SNR=96						
ASAR				S	S	10 01 49.0	+1.0
	2.2nm,1.0s,baz=342,slow=20,SNR=4.1						
	2.3nm,0.5s						
STKA	**Stephens Creek**	**30.73**	**155**	P	P	09 59 56.7	0.0
	1.0nm,0.4s,baz=319,slow=9.2,SNR=2.9						
	1.0nm,0.4s						

ROM 16 09:55:02.0±0.1, **37°.834N**±0°.006×**15°.176E**±0°.009,
h17^{km}±2^{km}, **ML2.3**/34, **2C**, **Error ellipse: s-maj=0.8km**
s-min=0.3km az=125.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AIO	**Antillo**	**0.14**	**18**	⇑P	Pg	09 55 06.2	0.0
AIO				S	Sb	09 55 09.1	-0.1
AIO				AML	AML		
	comp=E,2225μm,0.2s						
AIO				AML	AML		
	comp=N,1232μm,0.4s						
AIO				AML	AML		
	comp=E,2225μm,1.8s						
AIO				AML	AML		
	comp=E,2226μm,0.2s						
AIO				AML	AML		
	comp=N,1231μm,0.4s						
EMSG	**Monte Spagnolo**	**0.18**	**266**	P	Pg	09 55 06.8	+0.1
EMSG				AML	AML		
	comp=N,3138μm,0.5s						
EMSG				AML	AML		
	comp=E,4400μm,0.3s						
NOV	**Novara**	**0.20**	**351**	⇑P	Pg	09 55 06.8	-0.1
NOV				S	Sb	09 55 10.8	+0.1
NOV				AML	AML		
	comp=E,2400μm,0.4s						
NOV				AML	AML		
	comp=N,1480μm,1.6s						
NOV				AML	AML		
	comp=E,2400μm,1.6s						
NOV				AML	AML		
	comp=N,1450μm,0.3s						
NOV				AML	AML		
	comp=E,2402μm,1.6s						
EPZF	**Pizzo Felice**	**0.25**	**268**	P	Pg	09 55 07.7	-0.1
EPZF				S	Sb	09 55 12.7	+0.3
EPZF				AML	AML		
	comp=E,2280μm,1.0s						
EPZF				AML	AML		
	comp=N,2895μm,0.4s						
EPZF				AML	AML		
	comp=N,2895μm,1.6s						
EPZF				AML	AML		
	comp=N,2894μm,0.4s						
EPZF				AML	AML		
	comp=E,2011μm,0.3s						
MUCR	**Ucria**	**0.32**	**311**	P	Pg	09 55 08.4	-0.4
MUCR				S	Sg	09 55 13.3	-0.2
MUCR				AML	AML		
	comp=N,641μm,0.4s						
MUCR				AML	AML		
	comp=E,1024μm,0.3s						
MUCR				AML	AML		
	comp=E,1027μm,0.3s						
MUCR				AML	AML		
	comp=N,641μm,0.4s						
MUCR				AML	AML		
	comp=N,641μm,1.6s						
EPOZ	**Pozzillo**	**0.33**	**193**	P	Pg	09 55 07.4	-1.6
EPOZ				AML	AML		
	comp=N,1810μm,0.3s						
EPOZ				AML	AML		
	comp=E,1496μm,0.6s						
MNO	**Monte Soro**	**0.39**	**285**	P	Pg	09 55 10.2	0.0
MNO				S	Sb	09 55 16.9	+0.4
MNO				AML	AML		
	comp=E,954μm,1.0s						
MNO				AML	AML		
	comp=N,746μm,0.6s						
MNO				AML	AML		
	comp=N,746μm,1.4s						
MNO				AML	AML		
	comp=E,750μm,0.4s						
MNO				AML	AML		
	comp=N,746μm,0.6s						
MILZ	**Milazzo**	**0.44**	**6**	P	Pg	09 55 10.9	0.0
MILZ				S	Sb	09 55 17.7	+0.1
MILZ				AML	AML		
	comp=N,252μm,0.3s						
MILZ				AML	AML		
	comp=E,320μm,0.6s						
MILZ				AML	AML		
	comp=N,252μm,0.3s						
MILZ				AML	AML		
	comp=E,320μm,0.6s						
GALF	**Gagliano Caste**	**0.50**	**256**	P	Pb	09 55 12.4	0.0
GALF				AML	AML		
	comp=E,416μm,0.5s						
GALF				AML	AML		
	comp=N,310μm,0.6s						
GALF				AML	AML		
	comp=E,417μm,0.5s						
GALF				AML	AML		
	comp=N,310μm,0.6s						
MSRU	**Castanea**	**0.50**	**31**	P	Pg	09 55 12.1	0.0
MSRU				S	Sb	09 55 20.1	+0.7
MSRU				AML	AML		
	comp=E,312μm,0.3s						
MSRU				AML	AML		
	comp=N,240μm,0.8s						
MSRU				AML	AML		
	comp=N,203μm,0.4s						
MSRU				AML	AML		
	comp=E,311μm,0.3s						
MSFR	**San Fratello**	**0.50**	**293**	P	Pg	09 55 11.8	-0.3
MSFR				AML	AML		
	comp=E,161μm,1.0s						
MSFR				AML	AML		
	comp=N,152μm,1.4s						
MSFR				AML	AML		
	comp=N,152μm,0.6s						
MSFR				AML	AML		
	comp=N,120μm,0.4s						
MSFR				AML	AML		
	comp=E,159μm,0.7s						
HLNI	**Lentini**	**0.54**	**207**	P	Pg	09 55 12.1	-0.7
HLNI				S	Sb	09 55 20.4	-0.2
HLNI				AML	AML		
	comp=E,310μm,0.9s						
HLNI				AML	AML		
	comp=N,316μm,1.3s						
HLNI				AML	AML		
	comp=N,316μm,0.7s						
HLNI				AML	AML		
	comp=E,310μm,0.1s						
HLNI				AML	AML		
	comp=N,246μm,0.2s						
HAGA	**Augusta**	**0.55**	**182**	P	Pg	09 55 12.4	-0.5
HAGA				AML	AML		
	comp=E,440μm,1.3s						
HAGA				AML	AML		
	comp=N,516μm,1.2s						
HAGA				AML	AML		
	comp=N,516μm,0.8s						
HAGA				AML	AML		
	comp=E,440μm,0.7s						
HAGA				AML	AML		
	comp=N,354μm,0.1s						
HAGA				AML	AML		
	comp=E,361μm,0.2s						
VPL	**Vulcano Piano**	**0.56**	**344**	P	Pg	09 55 13.3	0.0
VPL				AML	AML		
	comp=N,1680μm,1.2s						
VPL				AML	AML		
	comp=E,2030μm,0.3s						
VPL				AML	AML		
	comp=N,1680μm,0.8s						
VPL				AML	AML		
	comp=E,2032μm,0.3s						
VPL				AML	AML		
	comp=N,1635μm,0.4s						
MSCL	**Scilla**	**0.63**	**51**	P	Pb	09 55 14.6	0.0
LLI	**Lipari**	**0.64**	**344**	P	Pn	09 55 15.9	-0.4
SOI	**Samo**	**0.73**	**71**	P	Pg	09 55 16.5	0.0
PLLN	**Pollina**	**0.83**	**281**	P	Pg	09 55 18.4	+0.1
PLLN				AML	AML		
	comp=E,536μm,0.6s						
PLLN				AML	AML		
	comp=N,428μm,1.5s						
PLLN				AML	AML		
	comp=N,428μm,0.5s						
PLLN				AML	AML		
	comp=E,536μm,0.6s						
PLLN				AML	AML		
	comp=N,401μm,0.6s						
RAFF	**Raffo Rosso**	**0.89**	**227**	P	Pb	09 55 18.3	-0.7
RAFF				AML	AML		
	comp=N,129μm,0.6s						
RAFF				AML	AML		
	comp=E,118μm,0.4s						
CSLB	**Castelbuono**	**0.89**	**277**	P	Pb	09 55 19.0	-0.1
CSLB				AML	AML		
	comp=E,47μm,0.5s						
CSLB				AML	AML		
	comp=N,52μm,1.1s						

CSLB				AML	AML		
	comp=N,52µm,0.9s						
CSLB				AML	AML		
	comp=E,47µm,1.5s						
CSLB				AML	AML		
	comp=E,47µm,0.5s						
CSLB				AML	AML		
	comp=N,49µm,0.7s						
HMDC	Modica	0.93	200	P	Pb	09 55 18.7	-1.0
HMDC				S	Sg	09 55 32.4	+0.1
HMDC				AML	AML		
	comp=N,848µm,0.5s						
HMDC				AML	AML		
	comp=E,682µm,0.6s						
HMDC				AML	AML		
	comp=E,645µm,0.2s						
HMDC				AML	AML		
	comp=N,847µm,0.5s						
IACL	Alicudi	0.95	317	P	Pb	09 55 19.0	-1.1

ROM 16 09:55:55.5±0.2**,37°.857N**±0°.009×**15°.16E**±0°.01**,h16**^{km}±1^{km}**, ML1.7**/6**,1C,Error ellipse: s-maj=1.0km s-min=0.8km az=323.0,Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AIO	Antillo	0.13	27	⇑P	Pg	09 55 59.2	-0.1
AIO				S	Sb	09 56 02.5	+0.2
EMSG	Monte Spagnolo	0.17	258	P	Pg	09 55 60.0	0.0
NOV	Novara	0.17	354	P	Pg	09 55 59.8	-0.1
NOV				S	Sb	09 56 03.8	+0.2
EPZF	Pizzo Felice	0.24	262	P	Pg	09 56 00.8	-0.2
EPZF				S	Sb	09 56 06.3	+0.7
MUCR	Ucria	0.29	310	P	Pg	09 56 01.6	-0.2
MUCR				S	Sg	09 56 06.4	+0.3
EPOZ	Pozzillo	0.35	190	P	Pg	09 56 00.5	-2.2
MNO	Monte Soro	0.38	282	P	Pg	09 56 03.5	+0.2
MNO				S	Sb	09 56 10.1	+0.5
MNO				AML	AML		
	comp=E,298µm,0.8s						
MNO				AML	AML		
	comp=N,356µm,1.3s						
MNO				AML	AML		
	comp=N,317µm,1.1s						
MILZ	Milazzo	0.42	8	P	Pg	09 56 03.9	-0.1
MILZ				S	Sb	09 56 10.7	+0.1
MSFR	San Fratello	0.48	292	P	Pg	09 56 04.8	-0.3
MSFR				AML	AML		
	comp=E,68µm,0.8s						
MSFR				AML	AML		
	comp=N,60µm,1.3s						
MSRU	Castanea	0.49	34	P	Pg	09 56 05.4	+0.1
MSRU				S	Sb	09 56 13.2	+0.5
MSRU				AML	AML		
	comp=N,45µm,0.5s						
MSRU				AML	AML		
	comp=E,58µm,0.9s						
MSRU				AML	AML		
	comp=E,116µm,0.3s						
MSRU				AML	AML		
	comp=N,71µm,0.2s						
VPL	Vulcano Piano	0.54	345	P	Pb	09 56 06.5	-0.1
VPL				AML	AML		
	comp=N,273µm,1.7s						
VPL				AML	AML		
	comp=E,621µm,0.3s						
VPL				AML	AML		
	comp=N,506µm,0.6s						

IDC 16 10:08:42.0±1.4**,4°.89S**×**150°.84E,h0**^{km}**,mb3.9**/2**, mbtmp4.0**/2**,MS2.9**/1**,Error ellipse: s-maj=78.1km s-min=17.3km az=147.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.31	64	Pn	Pn	10 09 08.4	+0.8
	146nm,0.3s,baz=238,slow=1.8,SNR=134						
KRVT				Sn	Sb	10 09 25.2	+0.3
	208nm,0.3s,baz=274,slow=22,SNR=8.4						
GUMO	Guam	19.29	342	LR	LR	10 20 08.5	
	comp=Z,34nm,18.8s,baz=305,slow=36						
WRA	Warramunga Arr	21.96	226	P	P	10 13 37.9	+0.3
	2.5nm,0.4s,baz=52,slow=10,SNR=24 2.5nm,0.4s						
ASAR	Alice Springs	24.80	220	P	P	10 14 06.0	-0.1
	2.1nm,0.7s,baz=55,slow=9.0,SNR=26 2.1nm,0.7s						
TORD	Torodi Ar. Bea	148.47	287	PKPbc	PKPbc	10 28 30.6	-1.2
	0.3nm,0.4s,baz=86,slow=3.1,SNR=4.3						

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*NOU **16** 10:15:34.2,40°.72S×172°.14E,h0^{km},MLv3.5/10,Off W. Coast of S. Island, N.Z.*

*WEL **16** 10:15:35.0±0.7,41°S±3°×17°2E±°,h2^{km},M3.1/12, ML3.4/12,MLv3.1/12,Error ellipse: s-maj=0.0km s-min=0.0km az=98.8,confirmed*

ISC 16 10:15:32.6±1.7**,40°.69S**±0°.03×**172°.15E**±0°.05**,h1**^{km}±13^{km}**, n94,**σ**1^{s}.59**/101**,Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QRZ	Quartz Range	0.32	115	P	Pg	10 15 39.1	+0.5
QRZ	Quartz Range	0.32	115	P	Pg	10 15 39.4	+0.7
QRZ				S	Sg	10 15 42.1	-0.6
TKNZ	Takaka Hill	0.70	119	P	Pg	10 15 46.5	+0.4
TKNZ				S	Sg	10 15 54.5	-0.6
MRNZ	Matariki Terra	0.84	147	P	Pg	10 15 49.4	+0.7
MRNZ				S	Sg	10 15 60.0	+0.3
NNZ	Nelson	1.07	120	P	Pg	10 15 53.1	0.0
NNZ				S	Sg	10 16 06.6	-0.2
DSZ	Denniston Nort	1.08	194	P	Pn	10 15 55.0	-0.1
DSZ				S	Sn	10 16 09.9	-0.9
THZ	Tophouse	1.21	152	P	Pn	10 15 55.8	-1.0
THZ				S	Sb	10 16 11.9	-0.7
DUWZ	D’Urville Isla	1.35	95	P	Pn	10 15 58.4	-0.3
DUWZ				S	Sb	10 16 15.5	-1.0
TUWZ	Tuamarina	1.54	119	P	Pn	10 16 01.2	-0.1
BSWZ	Blackbirch Sta	1.65	129	P	Pb	10 16 04.2	+0.3
BSWZ				S	Sg	10 16 25.8	+0.1
TCW	Tory Channel	1.69	109	P	Pb	10 16 04.3	-0.2
TCW				S	Sb	10 16 26.7	+0.4
NMEZ	Namu Road	1.84	47	P	Pb	10 16 07.5	+0.4
CMWZ	Cape Campbell	1.88	125	P	Pg	10 16 09.1	+0.5
NBEZ	Newall Road No	1.94	43	P	Pn	10 16 06.5	-0.3
KHEZ	Kahui Hut	2.00	46	P	Pb	10 16 09.2	-0.6
KHEZ	Kahui Hut	2.00	46	P	Pb	10 16 09.0	-0.8
KHZ	Kahutara	2.01	149	P	Pb	10 16 10.1	+0.1
KHZ	Kahutara	2.01	149	P	Pn	10 16 01.1	-6.7
SNZO	South Karori	2.03	109	P	Pb	10 16 10.2	-0.1
PREZ	Palmer Road	2.05	49	P	Pb	10 16 09.9	-0.7
PKE	Pukeiti	2.06	44	P	Pb	10 16 09.9	-0.9
NEZ	North Egmont	2.06	47	P	Pb	10 16 10.1	-0.8
WEL	Wellington	2.07	107	P	Pb	10 16 10.7	-0.2
LTZ	Lake Taylor	2.09	178	P	Pb	10 16 10.2	-1.2
INZ	Inchbonnie	2.10	194	P	Pb	10 16 10.4	-1.1
KIW	Kapiti Island	2.10	96	P	Pb	10 16 10.3	-1.2
LREZ	Lake Rotokare	2.12	55	P	Pb	10 16 10.9	-0.9
CAW	Cannon Point	2.25	102	P	Pb	10 16 12.6	-1.5
OGWZ	Otaki Gorge	2.29	94	P	Pb	10 16 13.8	-1.1
WAZ	Wanganui	2.36	68	P	Pb	10 16 14.2	-1.8
GVZ	Greta Valley S	2.37	164	P	Pb	10 16 15.3	-0.8
PLWZ	Palliser	2.50	112	P	Pb	10 16 16.9	-1.4
VRZ	Vera Road	2.54	53	P	Pn	10 16 16.3	+1.2
HOWZ	Holdsworth Sta	2.56	96	P	Pb	10 16 18.4	-1.0
PAWZ	Paruwai Farm	2.57	107	P	Pb	10 16 18.5	-1.0
MTW	Mount Morrison	2.58	101	P	Pb	10 16 19.1	-0.6
MRZ	Mangatainoka R	2.60	90	P	Pb	10 16 17.9	-2.2
WVZ	Waitaha Valley	2.60	203	P	Pn	10 16 17.2	+1.3
OXZ	Oxford	2.63	182	P	Pn	10 16 17.5	+1.2
POWZ	Post Office Ro	2.77	85	P	Pb	10 16 24.5	+1.5
PKVZ	Pokaka	2.83	61	P	Pn	10 16 20.6	+1.7
TIWZ	Tintock	2.84	93	P	Pb	10 16 23.8	-0.3
MTVZ	Mangateitei	2.86	64	P	Pb	10 16 21.7	-2.8
TMWZ	Te Maipa	2.86	100	P	Pb	10 16 25.0	+0.5
MHCZ	Mount Hutt	2.87	189	P	Pn	10 16 21.0	+1.4
TRVZ	Turoa	2.96	63	P	Pn	10 16 22.4	+1.5
WNVZ	Wahianoa	2.98	64	P	Pn	10 16 22.9	+1.7
TSZ	Takapari Road	2.98	79	P	Pb	10 16 25.4	-1.1
FWVZ	Far West T-bar	2.98	62	P	Pn	10 16 23.2	+1.9
HIZ	Hauiti	3.02	45	P	Pn	10 16 23.0	+1.4
HIZ	Hauiti	3.02	45	P	Pn	10 16 22.9	+1.4
MQZ	McQueen’s Vall	3.04	173	P	Pn	10 16 23.6	+1.8
TUVZ	Tukino	3.04	63	P	Pn	10 16 24.2	+2.2
MOVZ	Moawhango	3.05	66	P	Pb	10 16 25.2	-2.5
NGZ	Ngauruhoe	3.05	61	P	Pn	10 16 23.9	+1.7
SNVZ	South Ngauruho	3.07	62	P	Pn	10 16 24.3	+1.8
WTVZ	West Tongariro	3.08	60	P	Pb	10 16 25.1	-3.2
DVHZ	Dannevirke	3.08	84	P	Pb	10 16 27.9	-0.5
NNVZ	North Ngauruho	3.08	61	P	Pn	10 16 24.7	+2.1
OTVZ	Oturere	3.10	62	P	Pn	10 16 24.8	+1.9
BFZ	Birch Farm	3.11	91	P	Pn	10 16 24.1	+1.2
BFZ	Birch Farm	3.11	91	P	Pb	10 16 29.2	+0.5
KRVZ	Karewarewa	3.12	60	P	Pn	10 16 25.4	+2.3
RPZ	Rata Peaks	3.13	195	P	Pn	10 16 24.2	+1.1
RPZ	Rata Peaks	3.13	195	P	Pn	10 16 24.8	+1.7
NTVZ	North Tongarir	3.14	61	P	Pn	10 16 25.8	+2.4
ETVZ	East Tongariro	3.15	62	P	Pb	10 16 26.6	-2.9
TMVZ	Te Maari	3.15	61	P	Pn	10 16 26.0	+2.5
PNHZ	Pukenui	3.19	77	P	Pb	10 16 28.3	-1.9
KATZ	Kakaramea	3.22	59	P	Pn	10 16 26.6	+2.1
BHHZ	Black Hill Sta	3.23	69	P	Pb	10 16 28.7	-2.2
FOZ	Fox Glacier	3.33	211	P	Pn	10 16 26.6	+0.7
ARCZ	Arundel	3.33	192	P	Pn	10 16 27.1	+1.1
KWHZ	Kaweka Forest	3.51	70	P	Pb	10 16 32.9	-2.7
TLZ	Tolley Road	3.52	49	P	Pn	10 16 29.6	+1.0
BKZ	Black Stump Fm	3.67	67	P	Pn	10 16 33.2	+2.6
BKZ	Black Stump Fm	3.67	67	P	Pn	10 16 34.0	+3.4
TMZ	Timaru	3.79	193	P	Pn	10 16 33.0	+0.9
NMHZ	Naumai	3.92	68	P	Pb	10 16 38.4	-4.1
TOZ	Tahuroa Road	3.94	42	P	Pn	10 16 35.9	+1.7
LBZ	Lake Benmore	3.97	201	P	Pn	10 16 36.7	+2.0
MTHZ	Maungataniwha	4.05	65	P	Pn	10 16 38.5	+2.6
AWAZ	Awhitu Peninsu	4.11	29	P	Pn	10 16 38.9	+2.3
JCZ	Jackson Bay	4.20	215	P	Pn	10 16 38.9	+1.0
JCZ	Jackson Bay	4.20	215	P	Pn	10 16 38.7	+0.7
WTAZ	Waiatarua	4.20	27	P	Pn	10 16 40.6	+2.7
MBAZ	Motutapu North	4.47	30	P	Pn	10 16 44.0	+2.5
ODZ	Otahua Downs	4.49	194	P	Pn	10 16 42.4	+0.6
ODZ	Otahua Downs	4.49	194	P	Pn	10 16 42.2	+0.4
WIAZ	Waiheke Island	4.54	32	P	Pn	10 16 45.4	+3.0
WKZ	Wanaka	4.73	208	P	Pn	10 16 46.8	+1.6
MWZ	Matawai	4.78	62	P	Pb	10 16 51.5	-5.6
WCZ	Waipu Caves	5.05	21	P	Pn	10 16 51.8	+2.3
MSZ	Milford Sound	5.05	217	P	Pn	10 16 50.2	+0.7

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*IDC **16** 10:40:36.5±4.2,15°.76N×97°.04W,h0^{km},mb3.6/5, mbtmp3.6/7,ML3.2/2,MS2.5/2,Error ellipse: s-maj=74.4km s-min=16.6km az=168.0*

*MEX **16** 10:40:42.3±1.0,16°.00N×97°.13W,h16^{km}±3^{km},MD4.3*

ISC 16 10:40:39.0±1.1**,16°.17N**±0°.03×**97°.07W**±0°.02**,h4**^{km}±9^{km}**, n61,**σ**2^{s}.05**/104**,mb3.6**/4**,Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PEIG	Puerto Escondi	0.19	203	*i* P	Pg	10 40 43.9	+1.2
PEIG				*i* S	Sg	10 40 46.0	+0.8
PANG	Puerto Angel	0.76	131	*e*P	Pg	10 40 53.6	-0.1
PANG				*e*S	Sg	10 41 01.9	-1.8
YOIG	Yosondua	0.82	326	*e*P	Pb	10 40 56.4	+0.3
YOIG				*i* S	Sb	10 41 08.1	+0.6
OXBJ	Oaxaca	0.95	21	*e*P	Pn	10 40 59.8	+0.4
OXBJ				*e*S	Sn	10 41 13.5	-0.1
VHO	Vista Hermosa	0.95	20	*i* P	Pn	10 40 59.8	+0.4
VHO				*i* S	Sn	10 41 13.6	0.0
HUIG	Huatulco	1.01	113	*e*P	Pb	10 40 58.6	-0.5
HUIG				*e*S	Sg	10 41 11.4	-0.1
PNIG	Pinotepa	1.04	282	*i* P	Pb	10 40 58.3	-1.3
PNIG				*i* S	Sb	10 41 11.1	-2.4
TXIG	Tlaxiaco	1.27	328	*i* P	Pb	10 41 04.1	+0.4
TXIG				*e*S	Sb	10 41 20.6	+0.2
HLIG	Huajuapan de L	1.79	337	*e*P	Pb	10 41 12.6	0.0
HLIG				*e*S	Sb	10 41 35.7	+0.2
MGIG	Malinaltepec	1.83	305	*e*P	Pn	10 41 11.8	+0.3
MGIG				*e*S	Sn	10 41 34.9	-0.3
TOIG	Toxpalan	1.92	0	*e*P	Pb	10 41 14.9	+0.3
TOIG				*e*S	Sb	10 41 38.2	-0.7
NEUV	Arroyo Zacate	1.96	38	*e*P	Pb	10 41 15.2	-0.1
NEUV				*e*S	Sg	10 41 42.1	+0.2
TLIG	Tlapa	1.99	314	*e*P	Pn	10 41 14.9	+1.3
TLIG				*e*S	Sn	10 41 33.5	-5.6
FTIG	Fresnillo de T	2.00	330	*e*P	Pb	10 41 15.8	-0.3
FTIG				*e*S	Sb	10 41 41.9	+0.4
HMTT	Tlapaneco	2.15	319	*e*P	Pb	10 41 18.5	-0.2
HMTT				*e*S	Sb	10 41 45.1	-0.7
TPIG	Tehuac#an	2.25	353	*e*P	Pn	10 41 16.5	-0.7
TPIG				*e*S	Sn	10 41 41.5	-4.1
CMIG	Matias Romero	2.29	66	Pn	Pn	10 41 18.3	+0.6
	4.9nm,0.3s,baz=242,slow=14,SNR=55						
CMIG				Pg	Pb	10 41 21.8	+0.9
	68nm,0.3s,baz=248,slow=14,SNR=107						
CMIG				LR	LR	10 41 48.3	
	comp=Z,56nm,19.7s,baz=266,slow=29						
CMIG				Sn	Sb	10 41 49.7	+0.1
	38nm,0.3s,baz=198,slow=20,SNR=6.0						
CMIG				Lg	Lg	10 41 55.0	
	211nm,0.3s,baz=202,slow=13,SNR=17 19nm,0.3s						
CMIG	Matias Romero	2.29	66	*e*P	Pn	10 41 18.2	+0.6
CMIG				*e*S	Sn	10 41 46.2	-0.1
NILT	Santiago Nilte	2.39	80	*i* P	Pn	10 41 19.5	+0.5
NILT				*e*S	Sn	10 41 49.4	+0.7
OZST	Orizaba	2.67	360	*e*P	Pb	10 41 25.8	-1.8
OZST				*e*S	Sn	10 41 57.5	+1.5
MEIG	Mezcala	3.00	306	*e*P	Pn	10 41 29.1	+1.7
MEIG				*e*S	Sn	10 42 03.2	-0.6
PMUV	Sontecomapan	3.01	38	*e*P	Pn	10 41 26.6	-1.0
PMUV				*e*S	Sn	10 42 05.3	+1.2
CAIG	El Cayaco	3.18	286	*e*P	Pn	10 41 29.2	-0.7
JAUV	Jalcomulco	3.19	5	*e*P	Pn	10 41 31.1	+1.1
JAUV				*i* S	Sb	10 42 12.8	-2.8
PLIG	Platanillo	3.20	314	*e*P	Pb	10 41 38.3	+1.7
PLIG				*e*S	Sn	10 42 09.1	+0.1
YAIG	Yautepec	3.28	325	*e*P	Pn	10 41 34.2	+2.7
YAIG				*e*S	Sn	10 42 11.3	+0.2
AMVM	AMECAMECA	3.37	331	*i* P	Pb	10 41 40.4	+0.9
AMVM				*e*S	Sb	10 42 19.5	-1.5
MPVM	San Francisco	3.54	329	*e*P	Pn	10 41 38.1	+3.1
MPVM				*e*S	Sn	10 42 19.5	+2.2
LVIG	Laguna Verde	3.59	10	*e*P	Pn	10 41 36.2	+0.7
LVIG				*e*S	Sb	10 42 23.0	-4.0
MAVM	Malinalco, Edo	3.61	321	*e*P	Pg	10 41 48.2	0.0
MAVM				*e*S	Sb	10 42 30.9	+3.1
THVM	De Xico	3.61	330	*e*P	Pn	10 41 31.1	-4.9
THVM				*i* S	Sn	10 42 21.8	+2.6
TLVM	San Miguel Top	3.62	327	*i* P	Pb	10 41 43.2	-0.5
TLVM				*e*S	Sn	10 42 21.3	+1.8
XCVM	Xochimilco	3.63	328	*e*P	Pb	10 41 42.2	-1.7
XCVM				*e*S	Sn	10 42 21.9	+2.2
CUP5	Mexico City	3.73	328	*e*P	Pb	10 41 42.6	-3.1
CUP5				*i* S	Sn	10 42 23.9	+1.7
AOVM	Tlapan	3.75	326	*e*P	Pn	10 41 39.2	+1.1
AOVM				*e*S	Sn	10 42 24.3	+1.3
BJVM	Benito Juarez	3.76	328	*e*S	Sn	10 42 19.1	-3.9
ARIG	Puente Sto Nin	3.77	304	*e*P	Pn	10 41 39.0	+1.1
ARIG				*e*S	Sn	10 42 20.7	-2.1
PBVM	Pinon	3.77	330	*e*P	Pb	10 41 42.5	-3.8
PBVM				*e*S	Sn	10 42 25.1	+2.2
INVM	La Marquesa	3.81	325	*e*P	Pn	10 41 42.9	+4.1
INVM				*e*S	Sn	10 42 26.9	+2.7
MHVM	Bosque de Chap	3.81	328	*e*P	Pb	10 41 46.5	-0.6
MHVM				*e*S	Sb	10 42 31.4	-2.3
CJVM	Cuajimalpa	3.81	327	*e*P	Pn	10 41 42.4	+3.7
CJVM				*e*S	Sn	10 42 24.6	+0.4
GMVM	Gustavo A Made	3.83	330	*e*P	Pn	10 41 42.1	+3.0
GMVM				*e*S	Sn	10 42 24.2	-0.6
PTVM	Pico Tres Padr	3.92	331	*e*P	Pb	10 41 50.4	+1.5
PTVM				*e*S	Sn	10 42 27.4	+0.5
VTVM	Tizayuca	3.93	336	*e*P	Pb	10 41 46.4	-2.7
VTVM				*e*S	Sb	10 42 32.8	-4.4
TOVM	TOLUCA	3.97	322	*e*P	Pn	10 41 43.5	+2.5
TOVM				*e*S	Sn	10 42 28.6	+0.4
CXUV	Coxquihui	4.01	353	*e*P	Pn	10 41 43.9	+2.6
CXUV				*i* S	Sb	10 42 36.0	-3.2
ZUVM	ZUMPANGO	4.11	333	*i* P	Pb	10 41 52.5	+0.4
ZUVM				*e*S	Sn	10 42 31.9	+0.4
ATVM	ATLACOMULCO	4.44	324	*e*P	Pn	10 41 46.3	-1.1
ATVM				*e*S	Sn	10 42 41.5	+1.8
ZIIG	Zihuatanejo	4.44	289	*i* P	Pn	10 41 47.7	+0.5
ZIIG				*e*S	Sn	10 42 33.8	-5.6
DEIG	Demacu	4.51	336	*e*P	Pn	10 41 52.5	+4.1
DEIG				*e*S	Sn	10 42 45.0	+3.5
ACIG	Acambay	4.63	325	*e*S	Sn	10 42 35.2	-9.2
CTUV	Llano Grande	5.41	347	*e*	Pb	10 42 10.5	-3.6
TXAR	Lajitas Array	14.44	336	Pn	P	10 44 08.2	-3.2
	baz=156,slow=14,SNR=5.2						
TXAR				LR	LR	10 50 41.2	
	comp=Z,37nm,20.7s,baz=117,slow=41 0.8nm,1.0s						
ANMO	Albuquerque	20.50	338	P	Pn	10 45 21.1	+0.6
	1.6nm,0.8s,baz=240,slow=10,SNR=7.4 1.6nm,0.8s						
NVAR	Mina Array Bea	28.98	324	P	P	10 46 43.0	+3.0
	0.3nm,0.7s,baz=138,slow=8.3,SNR=2.8 0.3nm,0.7s						
SCHQ	Schefferville	45.09	24	P	P	10 48 55.9	-0.3
	3.2nm,0.9s,baz=236,slow=8.4,SNR=3.6 3.2nm,0.9s						
YKA	Yellowknife Ar	47.89	349	P	P	10 49 18.5	+0.5
	0.5nm,0.7s,baz=155,slow=7.3,SNR=9.1 0.5nm,0.7s						
H03N2	Juan Fernandez	52.28	161	T	T	11 46 06.5	
	baz=338,slow=77,SNR=16						
H03N1	Juan Fernandez	52.29	161	T	T	11 45 57.9	
	baz=338,slow=77,SNR=25						
H03N3	Juan Fernandez	52.30	161	T	T	11 45 56.7	
	baz=338,slow=77,SNR=10						
ILAR	Eielson Array	58.95	338	P	P	10 50 40.3	+1.0
	0.3nm,0.7s,baz=157,slow=5.9,SNR=1.2 0.3nm,0.7s						

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*IDC **16** 11:04:08.3±2.2,1°.52N×126°.45E,h0^{km},mb3.3/3, mbtmp3.4/3,Error ellipse: s-maj=171.8km s-min=27.8km az=65.0*

*DJA **16** 11:04:14.4±1.4,1°N±6°×12°7E±1°9,h53^{km}±53^{km},M3.1/4, MLv3.1/4*

ISC 16 11:04:14.4±1.5**,1°.5N**±0°.2×**126°.6E**±0°.2**,h47**^{km}**,n5,**σ**0^{s}.49**/7**, mb3.3**/3**,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.08	133	P	Pn	11 04 32.6	-0.6
TNTI				S	Sn	11 04 47.8	+0.7
LBMI	Labuha	2.33	157	P	Pn	11 04 50.2	-0.1
LBMI				S	Sn	11 05 17.7	-0.1
WRA	Warramunga Arr	22.65	161	P	P	11 09 11.7	0.0
	0.9nm,0.5s,baz=339,slow=11,SNR=17 0.9nm,0.5s						
ASAR	Alice Springs	26.03	165	P	P	11 09 43.6	+0.2
	0.2nm,0.4s,baz=348,slow=13,SNR=8.1 0.2nm,0.4s						
MKAR	Makanchi Array	59.28	326	P	P	11 14 11.4	+0.1
	0.1nm,0.4s,baz=119,slow=8.0,SNR=2.4 0.1nm,0.4s						

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*IDC **16** 11:18:14.7±1.1,41°.95N×81°.47E,h0^{km},mb3.9/8, mbtmp3.8/15,ML3.1/7,MS3.4/2,Error ellipse: s-maj=16.1km s-min=13.8km az=118.0*

*SOME **16** 11:18:14.5,42°.05N×81°.35E,h10^{km}*

*NNC **16** 11:18:17.1±0.6,42°.10N×81°.24E,h0^{km},mb4.6,mpv4.4, Error ellipse: s-maj=4.5km s-min=3.4km az=169.0*

*MOS **16** 11:18:18.0±1.4,42°.06N×81°.42E,h30^{km},mb4.4/4,Error ellipse: s-maj=8.7km s-min=6.1km az=112.5*

*NEIC **16** 11:18:22.1±1.4,42°.2N±0°.1×81°.3E±0°.1,h32^{km}±7^{km}, mb4.3/5,Error ellipse: s-maj=17.6km s-min=10.2km az=136.0*

ISC 16 11:18:17.6±0.6**,42°.02N**±0°.05×**81°.30E**±0°.04**,h10**^{km}**,n115,** σ**1^{s}.72**/126**,mb3.9**/9**,20C-5D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	1.77	311	P	Pn	11 18 43.5	-4.8
	272nm,0.7s						
SHLS				S	Sn	11 19 04.9	-6.1
	1µm,0.5s						
SHLS	Shalkode	1.77	311	*e*P	Pn	11 18 43.5	-4.8
	272nm,0.7s						
SHLS				*e*S	Sn	11 19 05.0	-6.1
	1µm,0.5s						
SHLS	Shalkode	1.77	311	*e*PN	Pn	11 18 43.6	-4.8
PDGK	Podgornoye	1.87	315	P	Pn	11 18 48.8	-0.9
	98nm,0.6s						
PDGK				S	Sn	11 19 13.9	+0.4
	214nm,0.5s						
PDGK	Podgornoye	1.87	315	⇓P	Pn	11 18 49.0	-0.8
	206nm,0.8s						
PDGK				⇑S	Sn	11 19 13.2	-0.3
	678nm,1.1s						
PDGK	Podgornoye	1.87	315	PN	Pn	11 18 49.0	-0.8
PDGK				S	Sn	11 19 13.2	-0.3
UZB	Uzynbulak	2.02	305	Pg	Pn	11 18 52.3	+0.4
	412nm,0.5s						
UZB				Lg	Lg	11 19 19.9	
	274nm,0.4s						
UZB	Uzynbulak	2.02	305	*e*Pg	Pn	11 18 52.4	+0.4
	412nm,0.5s						
UZB				*e*Lg	Lg	11 19 19.9	
	274nm,0.4s						
SATY	Saty	2.38	297	Pg	Pn	11 18 58.6	+1.8
	244nm,0.8s						
SATY				Lg	Lg	11 19 30.8	
	309nm,0.6s						
SATY	Saty	2.38	297	*e*Pg	Pn	11 18 58.6	+1.8
	244nm,0.8s						
SATY				*e*Lg	Lg	11 19 30.8	
	309nm,0.6s						
ZHN	Zhinishke	2.41	299	Pg	Pn	11 18 59.3	+2.2
	166nm,0.0s						
ZHN				Lg	Lg	11 19 31.5	
	497nm,0.4s						
ZHN	Zhinishke	2.41	299	*e*Pg	Pn	11 18 59.3	+2.2
	166nm,0.0s						
ZHN				*e*Lg	Lg	11 19 31.5	
	497nm,0.4s						
KPKS	Kokpek	2.41	308	Pg	Pn	11 18 58.2	+1.0
	394nm,0.1s						
KPKS				Lg	Lg	11 19 30.1	
	900nm,0.6s						
KPKS	Kokpek	2.41	308	*e*Pg	Pn	11 18 58.2	+1.0
	394nm,0.1s						
KPKS				*e*Lg	Lg	11 19 30.1	
	900nm,0.6s						
KPKS	Kokpek	2.41	308	*e*PN	Pn	11 18 57.8	+0.7
DJR	Jarkent	2.56	335	Pg	Pn	11 19 01.0	+1.8
	240nm,0.5s						
DJR				Lg	Lg	11 19 34.9	
	476nm,0.5s						
DJR	Jarkent	2.56	335	*e*Pg	Pn	11 19 01.0	+1.8
	240nm,0.5s						
DJR				*e*Lg	Lg	11 19 34.9	
	476nm,0.5s						
TARG	Taragay, Kyrgy	2.62	265	Pn	Pn	11 19 02.4	+2.0
TARG	Taragay, Kyrgy	2.62	265	PN	Pn	11 19 02.4	+2.0
KURS	Kuram	2.73	304	Pg	Pn	11 19 04.2	+2.7
	202nm,0.5s						
KURS				Lg	Lg	11 19 40.4	
	272nm,0.6s						
KURS	Kuram	2.73	304	*e*Pg	Pn	11 19 04.2	+2.7
	202nm,0.5s						
KURS				*e*Lg	Lg	11 19 40.4	
	272nm,0.6s						
KDJ	Kajisay	3.07	273	Pn	Pn	11 19 08.7	+2.4
KDJ	Kajisay	3.07	273	PN	Pn	11 19 08.7	+2.4
MDOK	Medeo	3.34	291	⇑Pn	Pn	11 19 11.1	+1.1
	60nm,0.6s						
MDOK				Pg	Pb	11 19 15.4	-1.6
	64nm,0.2s						
MDOK				Lg	Lg	11 19 59.8	
	130nm,0.8s						
MDOK				⇑Lg	Lg	11 20 00.5	
	218nm,0.8s						
MDOK	Medeo	3.34	291	PN	Pn	11 19 11.9	+1.9
ARXS	Arharly	3.36	312	*e*PN	Pn	11 19 15.2	+5.1
TNSS	Tian-Shan	3.37	289	Pg	Pb	11 19 17.5	-0.2
	52nm,0.3s						
TNSS				Lg	Lg	11 20 03.2	
	49nm,0.6s						
TNSS	Tian-Shan	3.37	289	*e*Pg	Pb	11 19 17.5	-0.2
	52nm,0.3s						
TNSS				*e*Lg	Lg	11 20 03.2	
	49nm,0.6s						
KNDC	Almaty	3.41	292	⇑Pg	Pb	11 19 18.1	-0.1
	77nm,0.6s						
KNDC				⇑Lg	Lg	11 20 03.1	
	387nm,0.9s						

KNDC	**Almaty**	3.41	292	PN	Pb	11 19 18.5	+0.3
AAA	**Alma-Ata**	3.45	292	Pg	Pb	11 19 18.2	-0.5
	67nm,0.2s						
AAA				Lg	Lg	11 20 04.7	
	219nm,0.6s						
AAA	**Alma-Ata**	3.45	292	*e*Pg	Pb	11 19 18.2	-0.5
	67nm,0.2s						
AAA				*e*Lg	Lg	11 20 04.7	
	219nm,0.6s						
IZV	**Izvestkoviy**	3.61	288	Pg	Pb	11 19 21.2	-0.4
	32nm,0.6s						
IZV				Lg	Lg	11 20 09.7	
	224nm,0.7s						
IZV	**Izvestkoviy**	3.61	288	*e*Pg	Pb	11 19 21.2	-0.4
	32nm,0.6s						
IZV				*e*Lg	Lg	11 20 09.7	
	224nm,0.7s						
TDK	**Taldyqorghan**	3.65	326	Pg	Pb	11 19 21.1	-1.1
	197nm,0.4s						
TDK				Lg	Lg	11 20 09.4	
	360nm,0.7s						
TDK	**Taldyqorghan**	3.65	326	*e*Pg	Pb	11 19 21.1	-1.1
	197nm,0.4s						
TDK				*e*Lg	Lg	11 20 09.4	
	360nm,0.7s						
CHKK	**Chushkaly**	3.66	302	Pg	Pb	11 19 21.5	-0.8
	11nm,0.1s						
CHKK				Lg	Lg	11 20 10.2	
	64nm,0.6s						
CHKK	**Chushkaly**	3.66	302	*e*Pg	Pb	11 19 21.5	-0.8
	11nm,0.1s						
CHKK				*e*Lg	Lg	11 20 10.2	
	64nm,0.6s						
MTBS	**Maitube**	3.76	289	Pg	Pb	11 19 23.7	-0.4
	44nm,0.6s						
MTBS				Lg	Lg	11 20 13.6	
	61nm,0.5s						
MTBS	**Maitube**	3.76	289	*e*Pg	Pb	11 19 23.7	-0.4
	44nm,0.6s						
MTBS				*e*Lg	Lg	11 20 13.6	
	61nm,0.5s						
BOOM	**Boomskoye usch**	4.00	279	Pn	Pn	11 19 21.1	+1.9
BOOM	**Boomskoye usch**	4.00	279	PN	Pn	11 19 21.1	+1.9
KST	**Kastek**	4.07	286	Pg	Pb	11 19 29.4	0.0
	27nm,0.4s						
KST				Lg	Lg	11 20 23.9	
	119nm,0.9s						
KST	**Kastek**	4.07	286	*e*Pg	Pb	11 19 29.4	0.0
	27nm,0.4s						
KST				*e*Lg	Lg	11 20 23.9	
	119nm,0.9s						
KUU	**Kurty**	4.09	299	Pg	Pb	11 19 29.9	+0.2
	64nm,0.5s						
KUU				Lg	Lg	11 20 24.8	
	85nm,0.8s						
KUU	**Kurty**	4.09	299	*e*Pg	Pb	11 19 29.9	+0.2
	64nm,0.5s						
KUU				*e*Lg	Lg	11 20 24.8	
	85nm,0.8s						
TKM2	**Tokmak 2**	4.31	284	⇑Pn	Pn	11 19 25.2	+1.8
	20nm,0.9s						
TKM2				⇑Pg	Pb	11 19 36.5	+2.9
	50nm,0.9s						
TKM2				⇓Lg	Lg	11 20 32.9	
	95nm,0.9s						
TKM2	**Tokmak 2**	4.31	284	PN	Pn	11 19 25.2	+1.8
TKM2				P	Pb	11 19 36.5	+2.9
KSH	**Kashi**	4.75	240	Pn	Pb	11 19 40.4	-0.6
KSH				Sn	Sb	11 20 38.6	+0.3
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KSH				smax	smax		
	comp=N,67nm,0.9s						
KSH				smax	smax		
	comp=E,93nm,0.9s						
KSH				LR	LR		
	comp=N,260nm,7.0s						
KSH				LR	LR		
	comp=E,280nm,6.7s						
KSH				LR	LR		
	comp=Z,240nm,5.9s						
MAKZ	**Makanchi**	4.81	6	Pn	Pn	11 19 30.6	+0.5
MAKZ	**Makanchi**	4.81	6	⇓Pn	Pn	11 19 30.5	+0.5
	comp=Z,75nm,1.2s						
MAKZ				⇑Sn	Sn	11 20 26.9	+1.0
	comp=Z,70nm,1.0s						
MAKZ				⇑Lg	Lg	11 20 47.1	
	comp=Z,145nm,0.8s						
MAKZ	**Makanchi**	4.81	6	PN	Pn	11 19 30.6	+0.5
MK31	**Makanchi Array**	4.83	8		Pn	11 19 30.7	+0.4
MK31	**Makanchi Array**	4.83	8	⇑Pn	Pn	11 19 30.6	+0.3
	comp=Z,22nm,0.8s,baz=187,slow=16,SNR=103						
MK31				⇑Pg	Pb	11 19 44.8	+2.6
	comp=Z,48nm,1.1s,baz=184,slow=16,SNR=6.6						
MK31				⇑Lg	Lg	11 20 48.2	
	comp=Z,140nm,0.8s,baz=192,slow=31,SNR=13						
MK31	**Makanchi Array**	4.83	8	*i* PN	Pn	11 19 31.1	+0.8
MKAR	**Makanchi Array**	4.83	8	Pn	Pn	11 19 31.0	+0.7
	comp=Z,1.5nm,0.3s,baz=185,slow=13,SNR=78						
MKAR				Pg	Pb	11 19 42.9	+0.6
	comp=Z,2.4nm,0.3s,baz=189,slow=17,SNR=17						
MKAR				Lg	Lg	11 20 47.1	
	comp=Z,15nm,0.3s,baz=85,slow=16,SNR=8.1						
	comp=Z,13nm,0.7s						
MKAR	**Makanchi Array**	4.83	8	Pn	Pn	11 19 30.7	+0.4
WMQ	**Urumqi**	5.03	67	*e*P	Pn	11 19 33.5	+0.3
WMQ				smax	smax		
	comp=N,160nm,1.7s						
WMQ				smax	smax		
	comp=E,170nm,1.3s						
AAK	**Ala-Archa**	5.08	279	Pn	Pn	11 19 37.4	+3.5
	comp=E,0.3nm,0.3s,baz=105,slow=11,SNR=4.4						
AAK				Pg	Pb	11 19 50.1	+3.4
	comp=E,2.5nm,0.3s,baz=90,slow=10,SNR=18						
AAK				Lg	Lg	11 20 59.7	
	comp=E,2.0nm,0.3s,baz=273,slow=16,SNR=6.3						
	comp=E,4.8nm,0.8s						
AAK	**Ala-Archa**	5.08	279		Pn	11 19 35.9	+2.0
SGDS	**Sogindy**	5.12	289	Pg	Pb	11 19 48.5	+1.3
	comp=E,14nm,0.2s						
SGDS				Lg	Lg	11 20 56.2	
	comp=E,44nm,1.3s						
AML	**Almayashu**	5.66	274	⇑Pg	Pb	11 20 01.2	+4.6
	comp=E,5.5nm,0.8s						
AML				⇓Lg	Lg	11 21 16.1	
	comp=E,29nm,1.2s						
AML	**Almayashu**	5.66	274	PN	Pb	11 20 01.2	+4.6
ZSN	**Zaisan**	6.00	24	Pg	Pb	11 20 02.1	-0.1
	comp=E,11nm,0.1s						
ZSN				Lg	Lg	11 21 19.8	
	comp=E,70nm,1.4s						
ZSN	**Zaisan**	6.00	24	*e*Pg	Pb	11 20 02.1	-0.1
	comp=E,11nm,0.1s						
ZSN				*e*Lg	Lg	11 21 19.8	
	comp=E,70nm,1.4s						
MRKS	**Merke**	6.02	280	Pg	Pb	11 20 06.3	+3.6
	comp=E,7.1nm,1.6s						
MRKS				Lg	Lg	11 21 26.7	
	comp=E,17nm,1.1s						
MRKS	**Merke**	6.02	280	*e*Pg	Pb	11 20 06.3	+3.6
	comp=E,7.1nm,1.6s						
MRKS				*e*Lg	Lg	11 21 26.8	
	comp=E,17nm,1.1s						
BTLS	**Baital**	6.08	302	*e*Pg	Pb	11 20 06.1	+2.6
	comp=E,19nm,1.1s						
BTLS				*e*Lg	Lg	11 21 25.8	
	comp=E,18nm,1.3s						
BTLS	**Baital**	6.08	302	*e*PN	Pb	11 20 04.0	+0.5
KK31	**Karatay Array**	8.04	281	Pg	Pb	11 20 42.6	+5.8
	comp=E,5.4nm,0.8s,baz=84,slow=16,SNR=18						
KK31				⇑Lg	Lg	11 22 31.5	
	comp=E,9.8nm,0.7s,baz=88,slow=27,SNR=5.0						
DGZ	**Jazzator, Alta**	8.79	27	⇑*i*P	Pn	11 20 25.8	+1.0
KURBB	**Kurchatov Arra**	8.82	348	Pn	Pn	11 20 25.6	+0.6
	comp=E,0.1nm,0.3s,baz=172,slow=12,SNR=10						
KURBB				Pg	Pg	11 20 52.1	-14
	comp=E,0.1nm,0.3s,baz=184,slow=12,SNR=7.6						
KURBB				Sn	Sn	11 22 04.1	-0.2
	comp=E,0.2nm,0.3s,baz=206,slow=27,SNR=2.4						
KURBB				Lg	Lg	11 22 52.5	
	comp=E,0.3nm,0.3s,baz=172,slow=32,SNR=5.0						
	comp=E,0.7nm,0.2s						
OTUK	**Ortayu**	8.88	318	⇑Pn	Pn	11 20 26.0	+0.2
	comp=E,5.9nm,0.8s						
OTUK				⇑Sn	Sn	11 22 06.5	+0.6
	comp=E,10nm,0.8s						
OTUK				⇑Lg	Lg	11 22 57.5	
	comp=E,16nm,0.8s						
OTUK	**Ortayu**	8.88	318	P	Pn	11 20 26.4	+0.5
OTUK				S	Sn	11 22 06.5	+0.6
KURK	**Kurchatov**	8.89	349	Pn	Pn	11 20 25.6	-0.5
KURK	**Kurchatov**	8.89	349	⇓Pn	Pn	11 20 24.3	-1.7
	comp=E,7.2nm,0.6s						
KURK	**Kurchatov**	8.89	349	P	Pn	11 20 25.6	-0.5
KURK						11 22 04.1	
CHGR	**Chuyangaron**	9.86	254	Pn	Pn	11 20 40.2	+0.8
CHGR	**Chuyangaron**	9.86	254	P	Pn	11 20 40.2	+0.8
NIL	**Nilore**	10.49	220		Pn	11 20 50.2	+2.1
NIL	**Nilore**	10.49	220	P	Pn	11 20 50.2	+2.1
GOMU	**GeErMu**	12.00	115	P	Pn	11 21 07.4	-1.5
GOMU				pP		11 21 25.5	
GOMU				sP		11 21 31.3	
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,140nm,5.5s						
ZAA0	**Zalesovo Array**	12.17	10	Pn	Pn	11 21 09.7	-1.2
ZAA0	**Zalesovo Array**	12.17	10	⇑Pn	Pn	11 21 08.9	-1.9
	comp=Z,1.3nm,1.1s						
ZALV	**Zalesovo Beam**	12.17	10	Pn	Pn	11 21 09.3	-1.5
	comp=Z,0.3nm,0.3s,baz=191,slow=14,SNR=9.7						
ZALV				Lg	Lg	11 24 36.3	
	comp=Z,0.4nm,0.3s,baz=186,slow=25,SNR=4.1						
ZALV				LR	LR	11 25 17.9	
	comp=Z,71nm,19.1s,baz=350,slow=35						
	comp=Z,1.5nm,0.5s						
BVAR	**Borovoye Array**	13.23	330	Pn	Pn	11 21 24.5	-0.9
	baz=129,slow=14,SNR=3.6						
BVAR				Lg	Lg	11 25 17.0	
	baz=139,slow=25,SNR=5.0						
	comp=Z,0.6nm,0.6s						
BRVK	**Borovoye**	13.30	330	*i* P	Pn	11 21 25.4	-0.9
ABKAR	**Akbulak array**	16.56	303	Pn	Pn	11 22 07.6	-2.2
AKTO	**Aktyubinsk**	18.12	306	P	Pn	11 22 28.2	-1.0
	comp=Z,0.1nm,0.3s,baz=85,slow=11,SNR=3.2						
	comp=Z,1.8nm,0.8s						
GEYT	**Alibeck**	18.21	265	P	Pn	11 22 29.9	-0.6
	comp=Z,0.6nm,0.3s,baz=46,slow=12,SNR=1.7						
	comp=Z,0.8nm,0.4s						
SONM	**Songino Array**	18.66	63	P	P	11 22 35.6	0.0
	comp=Z,1.7nm,0.8s,baz=262,slow=11,SNR=6.4						
SONM	**Songino Array**	18.66	63	P	P	11 22 37.0	+1.4
SONM	**Songino Array**	18.66	63	P	P	11 22 37.0	+1.4
SONM				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ULN	**Ulaanbaatar**	19.10	63	*i* P	Pn	11 22 44.5	+3.2
ULN				pmax	pmax		
	comp=Z,5.0nm,1.7s						
ARU	**Arti**	20.56	322	P	P	11 22 56.2	0.0
	comp=Z,6.0nm,0.2s,baz=120,slow=7.3,SNR=11						
	comp=Z,6.0nm,0.2s						
ARU	**Arti**	20.56	322	P	P	11 22 56.1	0.0
ARU				IAmb	IAmb	11 22 59.8	
	comp=Z,19nm,1.1s						
ARU	**Arti**	20.56	322*c*	*i*P	P	11 22 56.1	0.0
ARU						11 23 13.5	
ARU				S	S	11 26 47.9	+2.0
ARU				SS	SnSn	11 27 05.4	+0.9
ARU				pmax	pmax		
	comp=Z,25nm,1.3s						
NRIK	**Noril'sk**	27.58	5	P	P	11 24 04.5	+0.1
NRIK				IAmb	IAmb	11 24 07.6	
	comp=Z,3.0nm,0.8s						
NRIK	**Noril'sk**	27.58	5	*i* P	P	11 24 04.5	+0.1
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
CMAR	**Chiang Mai Arr**	27.89	142	P	P	11 24 05.0	-2.7
	comp=Z,0.4nm,0.3s,baz=326,slow=7.9,SNR=1.1						
	comp=Z,0.4nm,0.3s						
CMAR	**Chiang Mai Arr**	27.89	142	P	P	11 24 05.0	-2.7
GURO	**Guroymak-BITLI**	29.97	277	P	P	11 24 27.5	+1.2
BRTR	**Keskin Array B**	35.75	283	P	P	11 25 16.4	-0.2
	comp=Z,1.3nm,0.7s,baz=98,slow=8.5,SNR=7.5						
	comp=Z,1.3nm,0.7s						
BRTR	**Keskin Array B**	35.75	283	P	P	11 25 17.3	+0.7
BRTR	**Keskin Array B**	35.75	283	*i* P	P	11 25 17.5	+0.8
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	37.90	320	P	P	11 25 34.3	-0.2
	comp=Z,1.4nm,0.8s,baz=132,slow=8.3,SNR=1.7						
	comp=Z,1.4nm,0.8s						
FINES	**FINESS Array B**	37.90	320	P	P	11 25 33.8	-0.7
MLR	**Muntele Rosu**	39.47	294	LR	LR	11 43 51.0	
	comp=Z,133nm,19.2s,baz=310,slow=39						
NB2	**NORSAR Subarra**	45.08	320	P	P	11 26 32.9	-0.6
	comp=Z,1.8nm,0.6s,baz=83,slow=7.9						
NOA	**NORSAR Array B**	45.08	320	P	P	11 26 33.0	-0.4
	comp=Z,1.1nm,0.5s,baz=83,slow=7.2,SNR=8.2						
	comp=Z,1.1nm,0.5s						
BNI	**Bardonecchia**	52.37	300	P	P	11 27 29.8	0.0
BNI				IAmb	IAmb	11 27 31.8	
	comp=Z,3.8nm,0.8s						
BNI	**Bardonecchia**	52.37	300	P	P	11 27 29.8	0.0
BNI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ILAR	**Eielson Array**	67.07	20	P	P	11 29 09.3	-1.3
	comp=Z,0.5nm,0.8s,baz=318,slow=4.6,SNR=6.4						
	comp=Z,0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	73.64	273	P	P	11 29 51.0	-0.5
	comp=Z,2.1nm,1.0s,baz=37,slow=4.3,SNR=8.8						
	comp=Z,2.1nm,1.0s						
YKA	**Yellowknife Ar**	75.05	8	P	P	11 29 58.2	-0.8
	comp=Z,0.7nm,0.9s,baz=343,slow=5.3,SNR=8.6						
	comp=Z,0.7nm,0.9s						

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*IDC **16** 11:33:60.0±3.6, 52.°85N×107.°46E, h0^{km}, mb4.0/1, mbtmp3.6/5, ML2.9/4, MS3.3/2, Error ellipse: s-maj=59.6km s-min=27.6km az=76.0*
*MOS **16** 11:34:01.8±1.2, 52.°61N×106.°97E, h10^{km}, mb4.3/1, Error ellipse: s-maj=12.0km s-min=8.6km az=53.8*
MOS Felt (II) at Tyrgan.
*BYKL **16** 11:34:03.0±0.1, 52.°74N×106.°80E, h15^{km}±2^{km}, FELT I=II MSK at Yelantsy, Tyrgan*
ISC 16 11:34:03.1±0.6, **52.°76N**±0.°02×**106.°83E**±0.°02, **h10**^{km}**, n55, σ2.**^{s}**26**/101, **5C-6D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZRHB	**Zarechye**	0.29	136	⇑*i*Pg	Pg	11 34 08.8	-0.1
ZRHB				*e*Sg	Sg	11 34 13.0	+0.2
ZRHB				Pmax			
	858nm,0.2s						
ZRHB				Smax			
	9µm,0.6s						
TRG	**Tyrgan**	0.29	270	⇓*i*Pg	Pg	11 34 08.8	-0.2
TRG				*e*Sg	Sg	11 34 12.6	-0.4
TRG				Pmax			
	1µm,0.1s						
TRG				Smax			
	7µm,0.2s						
TRG	**Tyrgan**	0.29	270	⇓*i*PG	Pg	11 34 08.8	-0.2
TRG				*e*		11 34 13.1	
TRG				pmax	pmax		
	comp=Z,1µm,0.1s						
TRG				smax	smax		
	comp=N,7µm,0.2s						
FFNB	**Fofonovo**	0.72	183	*e*Pg	Pg	11 34 15.7	-1.3
FFNB				*e*Sg	Sg	11 34 24.9	-1.4
FFNB				*e*Sb	Sn	11 34 29.4	-1.0
KAB	**Kabansk**	0.72	189	*e*Pg	Pg	11 34 16.0	-1.0
KAB				*e*Pb	Pb	11 34 17.5	-0.3
KAB				*e*Sg	Sg	11 34 25.5	-0.9
KAB				*e*Sb	Sn	11 34 29.5	-1.0
KAB				max			
	comp=N,484nm,0.1s						
KAB				max			
	comp=N,2µm,0.3s						
KELR	**Kotokel**	0.76	90	⇑*i*Pg	Pg	11 34 16.6	-1.2
KELR				*e*Pb	Pb	11 34 19.1	+0.6
KELR				*e*Sg	Sg	11 34 26.8	-0.9
KELR				*e*Sb	Sb	11 34 29.7	+0.8
OGRR	**Ongureny**	1.00	27	⇓*i*Pg	Pg	11 34 21.6	-0.7
OGRR				*e*Sg	Sg	11 34 35.7	+0.4
OGRR				Pmax			
	comp=N,99nm,0.1s						
OGRR				Smax			
	comp=N,1µm,0.4s						
OGRR	**Ongureny**	1.00	27	⇓*i*PG	Pn	11 34 24.6	+1.4
OGRR				*e*		11 34 38.7	
OGRR				pmax	pmax		
	comp=Z,98nm,0.2s						
OGRR				smax	smax		
	comp=E,1µm,0.4s						
BGT	**Bolshoye Golou**	1.13	231	*e*Pg	Pb	11 34 23.6	-1.1
BGT				*e*		11 34 26.4	
BGT				*e*		11 34 27.7	
BGT				*e*Sg	Sg	11 34 37.8	-1.6
BGT				*e*Sb	Sn	11 34 40.1	-0.5
BGT				Pmax			
	comp=E,275nm,0.2s						
BGT				max			
	comp=E,1µm,0.3s						
MXMB	**Maximikha**	1.26	66	*e*Pg	Pn	11 34 26.3	-0.6
MXMB				*e*Sg	Sb	11 34 43.8	+0.5
LSTR	**Listvyanka**	1.52	235	*e*Pg	Pn	11 34 29.7	-0.6
LSTR				*e*Pb	Pb	11 34 30.6	-0.8
LSTR				*e*Sg	Sn	11 34 49.3	-0.9
LSTR				*e*Sb	Sg	11 34 50.9	-1.0
LSTR				max			
	comp=E,121nm,0.2s						
LSTR				max			
	comp=E,615nm,0.3s						
LSTR	**Listvyanka**	1.52	235	⇑*i*PG	Pn	11 34 29.8	-0.6
LSTR				*e*		11 34 49.3	
LSTR				pmax	pmax		
	comp=Z,120nm,0.2s						
LSTR				smax	smax		
	comp=E,578nm,0.4s						
IRK	**Irkutsk**	1.65	253	*e*Pg	Pn	11 34 32.3	+0.2
IRK				*e*Pb	Pb	11 34 32.8	-0.8
IRK				*e*Sg	Sb	11 34 53.4	-1.0
IRK				max			
	comp=E,537nm,0.2s						
IRK				Smax			
	comp=E,4µm,0.4s						
IRK	**Irkutsk**	1.65	253	*e*PN	Pb	11 34 32.8	-0.8
IRK				*e*		11 34 54.0	
IRK				pmax	pmax		
	comp=Z,505nm,0.2s						
IRK				smax	smax		
	comp=E,4µm,0.4s						
IVK	**Ivanovka**	1.77	238	*e*Pn	Pn	11 34 33.7	-0.1
IVK				*e*Pg	Pb	11 34 34.4	-1.2
IVK				*e*Sg	Sb	11 34 57.5	-0.4
IVK				Pmax			
	comp=E,121nm,0.4s						
IVK				Smax			
	comp=E,893nm,0.3s						
IVK	**Ivanovka**	1.77	238	⇑*i*PN	Pn	11 34 33.6	-0.2
IVK				*e*		11 34 56.4	
IVK				pmax	pmax		
	comp=Z,88nm,0.2s						
IVK				smax	smax		
	comp=E,890nm,0.3s						
SYVR	**Suvo**	2.11	64	*e*Pn	Pn	11 34 38.6	+0.1
SYVR				*e*Pg	Pb	11 34 40.7	-0.7
SYVR				*e*		11 34 46.2	
SYVR				*e*Sg	Sb	11 35 09.1	+1.5
SYVR				max			
	comp=E,75nm,0.7s						
SYVR				Smax			
	comp=E,382nm,0.2s						
SYVR	**Suvo**	2.11	64	*e*PN	Pn	11 34 38.4	-0.1
SYVR				*e*		11 34 42.3	
SYVR				*e*		11 35 09.3	
SYVR				pmax	pmax		
	comp=Z,77nm,0.6s						
SYVR				smax	smax		
	comp=E,394nm,0.4s						
TLY	**Talaya**	2.24	242	*e*Pn	Pn	11 34 40.2	-0.1
TLY				*e*Pg	Pb	11 34 42.8	-0.9
TLY				*e*		11 35 08.5	
TLY				*e*Sg	Sb	11 35 11.4	0.0
TLY				Pmax			
	comp=E,84nm,0.4s						
TLY				Smax			
	comp=E,421nm,0.4s						
TLY	**Talaya**	2.24	242	*e*PN	Pn	11 34 40.1	-0.2
TLY				*e*		11 34 42.9	
TLY				*e*		11 35 11.1	
TLY				pmax	pmax		
	comp=Z,84nm,0.3s						
TLY				smax	smax		
	comp=E,425nm,0.5s						
ARS	**Arshan**	2.83	254	*e*Pn	Pn	11 34 48.4	-0.1
ARS				*e*Pg	Pb	11 34 52.3	-1.5
ARS				*e*PgPg	PnPn	11 34 54.9	-0.7
ARS				*e*		11 35 25.6	
ARS				*e*Sg	Sb	11 35 29.0	+0.5
ARS				max			
	comp=E,187nm,0.3s						
ARS				Smax			
	comp=E,1µm,0.4s						
ARS	**Arshan**	2.83	254	*e*PN	Pn	11 34 48.2	-0.3
ARS				*e*		11 34 52.3	
ARS				*e*		11 35 28.1	
ARS				pmax	pmax		
	comp=Z,188nm,0.3s						
ARS				smax	smax		
	comp=E,1µm,0.4s						
ZAK	**Zakamensk**	3.25	224	*e*Pn	Pn	11 34 54.4	+0.2
ZAK				*e*Pg	Pb	11 35 00.6	-0.4
ZAK				*e*		11 35 34.9	
ZAK				*e*Sg	Sg	11 35 43.3	-4.2
ZAK				Pmax			
	comp=E,27nm,0.4s						
ZAK				Smax			
	comp=E,119nm,0.3s						
ZAK	**Zakamensk**	3.25	224	*e*PN	Pn	11 34 54.5	+0.2
ZAK				*e*		11 35 00.6	
ZAK				*e*		11 35 43.7	
ZAK				pmax	pmax		
	comp=Z,13nm,0.1s						
ZAK				smax	smax		
	comp=N,119nm,0.3s						
YLYR	**Ulyunkhan**	3.33	49	⇓*i*Pn	Pn	11 34 55.7	+0.4
YLYR				*e*Pg	Pb	11 35 02.5	+0.3
YLYR				*e*PgPg	Pg	11 35 08.3	+1.4
YLYR				*e*Sn	Sn	11 35 34.5	-0.4
YLYR				*e*Sg	Sb	11 35 46.2	+3.4
YLYR				max			
	comp=N,23nm,0.9s						
YLYR				Smax			
	comp=N,102nm,1.1s						
YLYR	**Ulyunkhan**	3.33	49	⇓*i*PN	Pn	11 34 55.7	+0.4
YLYR				*e*		11 35 03.3	
YLYR				*e*		11 35 46.6	
YLYR				pmax	pmax		
	comp=Z,20nm,0.4s						
YLYR				smax	smax		
	comp=N,102nm,1.1s						
MOY	**Mondy**	3.75	255	*e*	Pn	11 35 03.0	+1.8
MOY				*e*Pg	Pb	11 35 10.2	+0.7
MOY				*e*		11 35 48.8	
MOY				*e*Sg	Sb	11 35 57.7	+2.6
MOY				Pmax			
	comp=N,178nm,0.8s						
MOY				Smax			
	comp=N,252nm,0.8s						
MOY	**Mondy**	3.75	255	*e*PN	Pn	11 35 03.2	+2.0
MOY				*e*		11 35 11.3	
MOY				*e*		11 35 56.3	
MOY				pmax	pmax		
	comp=Z,168nm,0.5s						
MOY				smax	smax		
	comp=N,251nm,0.7s						
KMO	**Kumora**	4.04	38	*e*Pg	Pb	11 35 15.8	+1.4
KMO				*e*		11 35 57.7	
KMO				*e*Sg	Sb	11 36 08.4	+5.1
KMO				Pmax			
	comp=N,34nm,0.5s						
KMO				Smax			
	comp=N,169nm,1.0s						
CIT	**Chita**	4.18	98	*e*Pn	Pn	11 35 06.0	-1.0
CIT				*e*Pg	Pb	11 35 17.8	+1.0
CIT				*e*Sn	Sn	11 35 53.4	-2.6
CIT				*e*Sg	Sb	11 36 12.3	+4.9
CIT				Pmax			
	comp=N,119nm,0.3s						
CIT				Smax			
	comp=N,270nm,0.7s						
ORL	**Orlik**	4.28	270	⇑*i*Pn	Pn	11 35 09.4	+1.0
ORL				*e*Pg	Pb	11 35 19.0	+0.5
ORL				*e*		11 36 01.0	
ORL				*e*Sg	Sb	11 36 14.0	+3.8
ORL				Pmax			

	comp=N,21nm,0.5s						
ORL				Smax			
	comp=N,100nm,1.1s						
YOA	Uoyan	4.42	38	*e*Sg	Sg	11 36 21.8	-3.3
YOA				Smax			
	comp=N,439nm,1.3s						
KPC	Khapcheranga	4.64	129	*e*Pg	Pb	11 35 26.2	+1.6
KPC				*e*Sg	Sb	11 36 26.1	+5.6
KPC				Pmax			
	comp=N,23nm,0.4s						
KPC				Smax			
	comp=N,199nm,0.9s						
KPC	Khapcheranga	4.64	129	*e*PN	Pn	11 35 11.3	-2.0
KPC				*e*		11 35 24.1	
KPC				*e*		11 36 24.8	
KPC				pmax	pmax		
	comp=Z,23nm,0.4s						
KPC				smax	smax		
	comp=E,199nm,1.2s						
UKT	Uakit	4.84	53	*e*Pn	Pn	11 35 16.6	+0.5
UKT				*e*Pg	Pb	11 35 30.2	+2.1
UKT				*e*Sn	Sn	11 36 11.5	-0.7
UKT				*e*Sg	Sg	11 36 34.0	-4.5
UKT				Pmax			
	comp=E,12nm,1.3s						
UKT				Smax			
	comp=E,61nm,1.6s						
ULN	Ulaanbaatar	4.90	178	*i* PN	Pn	11 35 13.0	-4.0
SONM	Songino Array	4.94	183	Pn	Pn	11 35 17.4	-0.1
	comp=E,0.6nm,0.3s,baz=358,slow=12,SNR=11						
SONM				Pg	Pb	11 35 31.8	+2.0
	comp=E,2.3nm,0.3s,baz=358,slow=18,SNR=16						
SONM				Lg	Lg	11 36 35.4	
	comp=E,14nm,0.3s,baz=3.3,slow=27,SNR=18						
	comp=E,0.8nm,0.3s						
SVKR	Severomuysk	5.17	47	*e*Sg	Sg	11 36 45.2	-3.8
SVKR				Smax			
	comp=E,153nm,1.2s						
KNGR	Kungurtug, Tuv	6.18	253	*e*Pg	Pb	11 35 54.4	+3.5
KNGR				*e*		11 36 44.5	
KNGR				*e*Sg	Sg	11 37 15.0	-6.4
NLYR	Nelyaty	6.36	51	*e*Pn	Pn	11 35 37.4	+0.5
NLYR				max		11 36 01.0	
	comp=E,10.0nm,0.8s						
NLYR				*e*		11 36 53.9	
NLYR				*e*		11 36 56.3	
NLYR				*e*Sg	Sg	11 37 19.9	-7.3
NLYR				Smax			
	comp=E,87nm,1.6s						
BOD	Bodaibo	6.51	36	*e*Sg	Sg	11 37 25.5	-6.6
BOD				Smax			
	comp=E,38nm,1.4s						
CRS	Chara	7.80	53	*e*Sg	Sg	11 38 05.3	-7.8
CRS				Smax			
	comp=E,56nm,2.4s						
TUP	Tupik	7.99	73	*e*Pn	Pn	11 35 58.6	-0.6
TUP				*e*		11 36 06.7	
TUP				*e*Sg	Sg	11 38 10.7	-8.5
TUP				max			
	comp=E,3.0nm,0.3s						
TUP				Smax			
	comp=E,86nm,1.0s						
KHNR	Khani	8.65	56	*e*Sg	Sg	11 38 31.3	-9.3
YKLR	Yuktali	9.40	60	*e*Sg	Sg	11 38 54.5	
DGZ	Jazzator, Alta	12.53	264	*i* P	Pn	11 37 04.1	+2.6
ZALV	Zalesovo Beam	13.19	284	Pn	Pn	11 37 12.2	+1.9
	comp=E,0.3nm,0.3s,baz=90,slow=12,SNR=4.3						
ZALV				Lg	Lg	11 40 55.3	
	comp=E,0.2nm,0.3s,baz=79,slow=23,SNR=4.5						
	comp=E,0.5nm,0.4s						
ZALV	Zalesovo Beam	13.19	284	*i* P	Pn	11 37 13.3	+3.0
MKAR	Makanchi Array	16.89	259	Pn	P	11 38 02.0	+0.5
	comp=E,0.1nm,0.3s,baz=63,slow=10,SNR=5.0						
MKAR				LR	LR	11 44 11.4	
	comp=E,61nm,19.6s,baz=304,slow=35						
	comp=E,0.4nm,0.6s						
MKAR	Makanchi Array	16.89	259	*i* P	P	11 38 03.5	+2.0
KURK	Kurchatov	17.55	275	P	P	11 38 10.1	+1.4
KURBB	Kurchatov Arra	17.63	274	P	P	11 38 10.1	+0.5
	baz=79,slow=11,SNR=1.7						
	comp=E,0.7nm,0.3s						
FINES	FINESS Array B	41.98	315	P	P	11 41 53.8	0.0
	comp=E,2.6nm,1.0s,baz=69,slow=7.6,SNR=5.0						
	comp=E,2.6nm,1.0s						
FINES	FINESS Array B	41.98	315	*i* P	P	11 41 54.0	+0.2
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
IDI	Anoyia	58.23	288	LR	LR	12 14 59.2	
	comp=Z,34nm,18.8s,baz=278,slow=42						

IDC 16 11:36:56.3±53.0**,15°.58S**×**172°.50W,h0^{km},mb4.1**/3**, mbtmp4.1**/3**,Error ellipse: s-maj=1035.0km s-min=186.1km az=79.0,Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	44.70	240	P	P	11 45 11.6	+0.3
	1.9nm,0.7s,baz=73,slow=11,SNR=4.3						
	1.9nm,0.7s						
WRA	Warramunga Arr	50.65	257	P	P	11 45 57.4	-0.3
	0.5nm,0.6s,baz=94,slow=7.0,SNR=13						
	0.5nm,0.6s						
ASAR	Alice Springs	50.88	252	P	P	11 45 59.3	-0.2
	5.5nm,0.5s,baz=90,slow=7.9,SNR=183						
	5.5nm,0.5s						

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*IDC **16** 11:40:23.7±1.9,53°.88N×165°.33W,h0^{km},mb3.4/6, mbtmp3.6/7,ML3.1/1,Error ellipse: s-maj=49.1km s-min=20.8km az=173.0*

*AEIC **16** 11:40:27.9±3.3,53°.67N±0°.08×165°.38W±0°.07,h59^{km}±8^{km}, Error ellipse: s-maj=11.8km s-min=5.9km az=187.0*

*NEIC **16** 11:40:28.1±2.3,53°.66N±0°.10×165°.27W±0°.07, h25^{km}±11^{km},mb3.7/12,ML3.5/6,ML3.4(AEIC),Error ellipse: s-maj=15.0km s-min=4.8km az=164.0*

ISC 16 11:40:27.9±1.0**,53°.6N**±0°.1×**165°.18W**±0°.06**,h35^{km},n57,** σ**1^{s}.68**/49**,mb3.5**/6**,Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUT	Akutan	0.62	326		Pn	11 40 40.4	+0.1
AKUT				IAML		11 40 51.7	
	comp=E,1µm,0.5s						
UNV	Unalaska Valle	0.82	286		Pn	11 40 42.0	-1.0
UNV	Unalaska Valle	0.82	286		Sn	11 40 52.5	-1.4
FALS	False Pass	1.61	39		Pn	11 40 55.0	+1.2
NIKH	Nikolski High	2.30	255		Pn	11 41 02.3	-1.0
CLES	Cleveland East	2.95	256	Pn	Pn	11 41 14.4	+2.2
CLES				IAML		11 41 57.2	
	comp=N,269nm,1.8s						
CLES				IAML		11 42 15.2	
	comp=E,247nm,1.2s						
SDPT	Sand Point	3.24	56	Pn	Pn	11 41 18.5	+2.3
SDPT				IAML		11 41 57.8	
	comp=N,126nm,2.3s						
SDPT				IAML		11 42 09.1	
	comp=E,160nm,1.9s						
SPIA	Saint Paul Isl	4.59	323		Pn	11 41 35.5	+0.9
ADK	Adak	7.20	261	Pn	Pn	11 42 13.4	+2.8
P18K	Big Mountain,	7.97	40	Pn	Pn	11 42 25.0	+3.8
KDAK	Kodiak Island	8.24	55	Pn	Pn	11 42 25.0	+0.2
	comp=E,0.3nm,0.3s,baz=203,slow=7.7,SNR=2.5						
KDAK				Sn	Sn	11 43 54.3	-2.2
	baz=296,slow=21						
	comp=E,17nm,1.0s						
Q19K	Cape Douglas,	8.33	46	Pn	Pn	11 42 27.7	+1.7
N19K	Bonanza Creek	9.24	34	Pn	Pn	11 42 42.1	+3.5
RSO	Redoubt South	9.62	40	Pn	Pn	11 42 44.5	+0.6
M20K	Styx River	10.47	33	Pn	Pn	11 42 59.1	+3.7
ANM	Nome	10.97	360	Pn	Pn	11 43 05.8	+3.6
SUA	Susitna One	11.01	39	Pn	Pn	11 43 04.4	+1.5
SKT	Skwentna	11.07	35	Pn	Pn	11 43 05.9	+2.4
RC01	Rabbit Creek A	11.18	42	Pn	Pn	11 43 05.5	+0.5
K20K	Telida	11.34	26	Pn	Pn	11 43 07.6	+0.4
KNK	Knik Glacier	11.87	42	Pn	Pn	11 43 15.6	+1.1
SCM	Sheep Creek Mo	12.55	42	Pn	Pn	11 43 24.5	+0.6
KLU	Klutina	12.95	45	Pn	Pn	11 43 28.9	-0.4
M24K	Tolsona, Glenn	13.16	42	Pn	Pn	11 43 32.2	+0.1
I21K	Tanana	13.35	25	Pn	Pn	11 43 36.3	+1.7
N25K	Chitina, Valde	13.57	46	Pn	Pn	11 43 36.8	-1.0
M26K	Nabesna, AK	14.60	44	Pn	Pn	11 43 52.0	+0.2
DOT	Dot Lake	14.81	39	Pn	P	11 43 57.3	-2.6
SCRK	Sand Creek	15.02	38	Pn	Pn	11 43 59.1	+1.7
M27K	Edge Creek, AK	15.05	45	Pn	Pn	11 43 58.1	+0.2
L27K	Beaver Creek,	15.38	43	Pn	Pn	11 44 02.7	+0.6
L27K				IAmb	IAmb	11 44 15.7	
	comp=Z,7.3nm,1.4s						
BCAR	Beaver Creek A	15.40	43	Pn	Pn	11 44 03.0	+0.7
I26K	Coal Creek Min	16.08	35	Pn	Pn	11 44 11.9	+1.0
EGAK	Eagle	16.48	38	Pn	Pn	11 44 16.8	+0.6
BMAR	Burnt Mountain	17.02	28	Pn	P	11 44 24.1	-0.4
M30M	Minto, Yukon	17.33	48	Pn	Pn	11 44 25.9	-0.9
N31M	Braeburn, Yuko	17.49	52	Pn	Pn	11 44 27.4	-1.4
M31M	Drury Creek, Y	18.30	50	P	Pn	11 44 40.5	+1.8
M31M				IAmb	IAmb	11 45 07.3	
	comp=Z,8.7nm,1.3s						
P33M	Teslin, Yukon	18.71	56	P	Pn	11 44 45.1	+1.4
P33M				IAmb	IAmb	11 45 17.1	
	comp=Z,12nm,1.4s						
FARO	Faro, Yukon	18.79	50	P	Pn	11 44 45.3	+0.7
FARO				IAmb	IAmb	11 44 48.2	
	comp=Z,6.2nm,1.0s						
EPYK	Eagle Plains	18.88	36	P	P	11 44 45.2	+0.3
EPYK				IAmb	IAmb	11 44 49.3	
	comp=Z,3.7nm,1.0s						
INK	Inuvik	20.90	33	P	P	11 45 05.7	-1.1
	comp=Z,0.7nm,0.4s,baz=254,slow=10,SNR=5.0						
	comp=Z,0.7nm,0.4s						
PETK	Petropavlovsk-	22.00	284	P	P	11 45 19.3	+0.5
	comp=Z,0.6nm,0.5s,baz=90,slow=11,SNR=8.3						
	comp=Z,0.6nm,0.5s						
A36M	Sachs Harbour	25.11	28	P	P	11 45 50.0	+1.1
A36M				IAmb	IAmb	11 45 53.0	
	comp=Z,1.6nm,0.8s						
YKA	Yellowknife Ar	27.49	51	P	P	11 46 11.1	+0.6
	comp=Z,0.3nm,0.6s,baz=274,slow=8.9,SNR=7.5						
	comp=Z,0.3nm,0.6s						
H11N2	WAKE ISLAND Hy	40.06	223	T	T	12 30 43.5	
	baz=25,slow=76,SNR=52						
H11N3	WAKE ISLAND Hy	40.07	223	T	T	12 30 45.5	
	baz=25,slow=76,SNR=79						
H11N1	WAKE ISLAND Hy	40.08	223	T	T	12 30 45.2	
	baz=25,slow=76,SNR=66						
H11S1	WAKE ISLAND Hy	41.24	223	T	T	12 32 14.8	
	baz=25,slow=76,SNR=89						
H11S2	WAKE ISLAND Hy	41.26	223	T	T	12 32 11.7	
	baz=25,slow=76,SNR=84						
H11S3	WAKE ISLAND Hy	41.26	223	T	T	12 32 12.0	
	baz=25,slow=76,SNR=70						
TXAR	Lajitas Array	50.24	93	P	P	11 49 21.8	+1.3
	comp=Z,0.3nm,0.7s,baz=297,slow=4.4,SNR=4.8						
	comp=Z,0.3nm,0.7s						
MKAR	Makanchi Array	64.74	315	P	P	11 51 00.4	-1.9
	comp=Z,0.2nm,0.4s,baz=50,slow=6.1,SNR=2.4						
	comp=Z,0.2nm,0.4s						
FINES	FINESS Array B	64.93	354	P	P	11 51 02.1	-1.2
	comp=Z,1.3nm,0.8s,baz=12,slow=7.5,SNR=1.7						
	comp=Z,1.3nm,0.8s						
H03N2	Juan Fernandez	114.08	114	T	T	14 03 31.9	
	baz=322,slow=77,SNR=67						
H03N1	Juan Fernandez	114.09	114	T	T	14 03 33.2	
	baz=322,slow=77,SNR=130						
H03N3	Juan Fernandez	114.09	114	T	T	14 03 32.4	
	baz=322,slow=77,SNR=135						

IDC 16 11:55:51.2±2.9**,32°.97S**×**179°.03W,h0^{km},mb3.7**/2**, mbtmp3.9**/3**,ML4.0**/1**,Error ellipse: s-maj=68.1km s-min=44.6km az=119.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.14	210	Pn	Pn	11 57 22.3	-1.0
	3.7nm,0.3s,baz=79,slow=10,SNR=16						
URZ				Sn	Sn	11 58 27.2	-7.0
	4.9nm,0.3s,baz=146,slow=23,SNR=7.5						
	14nm,0.4s						
ASAR	Alice Springs	42.17	270	P	P	12 03 45.8	-0.1
	0.5nm,0.5s,baz=114,slow=7.3,SNR=4.4						
	0.5nm,0.5s						
WRA	Warramunga Arr	43.39	275	P	P	12 03 55.7	-0.1
	0.6nm,0.4s,baz=114,slow=8.1,SNR=11						
	0.6nm,0.4s						
FINES	FINESS Array B	147.22	338	PKPbc	PKPbc	12 15 35.1	-0.6
	1.4nm,0.7s,baz=29,slow=4.4,SNR=8.1						

NOU 16 12:02:06.4,17°.66S×**168°.92E,h170^{km},MLv3.6**/8**, Vanuatu Islands,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	0.49	254	P	Pn	12 02 30.9	+0.9
DVP	Devils Point	0.70	265	P	Pn	12 02 32.3	+1.3
LIFNC	LIFOU	3.48	207	P	Pn	12 03 00.5	-0.1
DZM	Mont Dzumac	4.97	208	P	Pn	12 03 19.7	-0.1
PINNC	Pines Island,	5.12	195	P	Pn	12 03 21.8	+0.1

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*IDC **16** 12:13:37.1±1.1,13°.07N×143°.48E,h212^{km}±13^{km},mb3.3/9, mbtmp3.9/9,Error ellipse: s-maj=32.4km s-min=13.5km az=99.0*

ISC 16 12:13:36.1±0.7**,13°.1N**±0°.1×**143°.3E**±0°.1**,h200^{km},n10,** σ**0^{s}.96**/11**,mb3.4**/9**,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.65	72	P	Pn	12 14 12.5	+1.4
	86nm,0.4s,baz=228,slow=5.0,SNR=100						
GUMO				S	Sn	12 14 38.1	-0.3
	264nm,0.3s,baz=213,slow=6.4,SNR=6.6						
WRA	Warramunga Arr	33.97	195	P	P	12 20 01.2	+0.3
	3.0nm,0.6s,baz=16,slow=9.5,SNR=52						
	3.0nm,0.6s						
ASAR	Alice Springs	37.65	194	P	P	12 20 32.1	0.0
	0.6nm,0.6s,baz=19,slow=10,SNR=9.0						
	0.6nm,0.6s						
STKA	Stephens Creek	44.73	182	P	P	12 21 29.2	-0.4
	0.9nm,0.4s,baz=23,slow=12,SNR=3.3						
	0.9nm,0.4s						
MKAR	Makanchi Array	60.77	316	P	P	12 23 28.1	+1.1
	0.2nm,0.5s,baz=97,slow=7.5,SNR=5.0						
	0.2nm,0.5s						
BVAR	Borovoye Array	69.35	322	P	P	12 24 22.8	+0.8
	1.6nm,0.5s,baz=111,slow=7.4,SNR=7.8						
	1.6nm,0.5s						
ILAR	Eielson Array	69.69	25	P	P	12 24 22.8	-1.1
	0.2nm,0.5s,baz=250,slow=5.9,SNR=7.1						
	0.2nm,0.5s						
YKA	Yellowknife Ar	84.03	27	P	P	12 25 43.4	-0.5
	0.1nm,0.5s,baz=291,slow=5.2,SNR=3.0						
	0.1nm,0.5s						
NVAR	Mina Array Bea	88.46	51	P	P	12 26 06.2	-0.1
	0.3nm,0.7s,baz=256,slow=7.3,SNR=2.7						
	0.3nm,0.7s						
FINES	FINESS Array B	90.95	335	P	P	12 26 15.8	-1.4
	3.3nm,1.0s,baz=52,slow=4.3,SNR=9.1						
	3.3nm,1.0s						

IDC 16 12:18:59.8±4.4**,4°.97S**×**134°.01E,h0^{km},mb3.9**/1**, mbtmp3.4**/4**,ML3.1**/3**,Error ellipse: s-maj=218.9km s-min=27.6km az=75.0,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.91	326	Pn	Pn	12 20 15.9	+1.0
	1.0nm,0.3s,baz=216,slow=20,SNR=7.6						
SIJI				Sn	Sn	12 21 04.3	-8.2
	0.8nm,0.3s,baz=214,slow=22,SNR=1.6						
	3.7nm,0.3s						
WRA	Warramunga Arr	14.89	179	Pn	Pn	12 22 31.5	-0.3
	0.1nm,0.3s,baz=353,slow=13,SNR=1.9						
WRA				Sn	Sn	12 25 06.5	-11
	baz=352,slow=24,SNR=1.2						
	0.2nm,0.6s						
ASAR	Alice Springs	18.59	180	P	Pn	12 23 19.0	+0.1
	0.1nm,0.3s,baz=5.3,slow=11,SNR=8.0						
	0.3nm,0.5s						
MKAR	Makanchi Array	68.80	325	P	P	12 30 05.7	-0.2
	0.8nm,0.7s,baz=115,slow=7.8,SNR=9.9						
	0.8nm,0.7s						

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*IDC **16** 12:24:23.9±1.9,20°.01S×178°.09W,h573^{km}±16^{km}, mb3.3/10,mbtmp4.3/12,Error ellipse: s-maj=38.4km s-min=13.6km az=147.0*

ISC 16 12:24:23.4±1.2**,20°.0S**±0°.3×**178°.1W**±0°.2**,h569^{km},n17,** σ**0^{s}.73**/18**,mb3.9**/10**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.33	301	P	P	12 25 49.1	-0.2
	53nm,0.4s,baz=277,slow=22,SNR=137						
AFI	Afiamalu	8.53	46	P	P	12 26 19.5	-7.6
	38nm,1.0s,baz=215,slow=12,SNR=2.6						
AFI				S	S	12 27 56.8	-12
	16nm,0.4s,baz=33,slow=19,SNR=8.0						
DZM	Mont Dzumac	14.62	259	P	P	12 27 29.9	+1.0
	4.4nm,0.5s,baz=98,slow=21,SNR=9.9						
CTA	Charters Tower	33.49	264	P	P	12 30 17.0	+0.3
	7.2nm,0.6s,baz=100,slow=9.3,SNR=26						
	7.2nm,0.6s						
STKA	Stephens Creek	37.96	244	P	P	12 30 53.0	-0.4
	2.0nm,0.6s,baz=10,slow=9.0,SNR=3.6						
	2.0nm,0.6s						
ASAR	Alice Springs	44.59	256	P	P	12 31 45.8	-0.1
	7.0nm,0.6s,baz=92,slow=8.2,SNR=62						
ASAR				PcP	PcP	12 33 16.2	-0.3
	0.4nm,0.5s,baz=110,slow=4.3,SNR=2.2						
ASAR				S	S	12 37 41.3	+0.1
	0.4nm,0.7s,baz=90,slow=15,SNR=3.3						
	7.0nm,0.6s						
WRA	Warramunga Arr	44.62	262	P	P	12 31 45.6	-0.7
	4.8nm,0.5s,baz=97,slow=8.5,SNR=88						
WRA				S	S	12 37 40.4	-1.3
	0.6nm,1.0s,baz=96,slow=13,SNR=3.6						
	4.8nm,0.5s						
MJAR	Matsushiro Arr	69.79	324	P	P	12 34 37.4	+0.1
	1.7nm,0.5s,baz=155,slow=6.2,SNR=10						
	1.7nm,0.5s						
PETK	Petropavlovsk-	75.79	345	P	P	12 35 11.2	0.0
	1.2nm,0.6s,baz=122,slow=7.5,SNR=5.6						
	1.2nm,0.6s						
KSRS	Korea Array	76.49	319	P	P	12 35 16.3	+0.9
	0.5nm,0.5s,baz=120,slow=7.1,SNR=2.0						
	0.5nm,0.5s						
TXAR	Lajitas Array	86.83	57	P	P	12 36 09.2	+0.8
	0.3nm,0.6s,baz=226,slow=6.5,SNR=3.4						
	0.3nm,0.6s						
ILAR	Eielson Array	87.85	13	P	P	12 36 11.5	-0.8
	0.4nm,0.5s,baz=214,slow=5.1,SNR=12						
	0.4nm,0.5s						
CMAR	Chiang Mai Arr	89.91	290	P	P	12 36 23.9	+1.0
	0.7nm,0.5s,baz=129,slow=2.9,SNR=6.8						
	0.7nm,0.5s						
MKAR	Makanchi Array	110.83	314	PKiKP	PKiKP	12 41 51.5	-0.7
	0.2nm,0.5s,baz=76,slow=1.1,SNR=2.3						
AKASG	Malin Array Be	142.56	331	PKhKP	PKPpre	12 42 48.3	
	1.0nm,0.4s,baz=36,slow=4.1,SNR=7.5						
BRTR	Keskin Array B	146.48	313	PKPbc	PKPbc	12 43 01.6	-0.2
	0.9nm,0.5s,baz=137,slow=4.7,SNR=5.6						
GERES	GERESS Array B	149.72	345	PKPbc	PKPbc	12 43 08.6	-0.9
	0.4nm,0.5s,baz=36,slow=5.0,SNR=4.2						

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*ISN **16** 12:28:11.3±1.1,33°.74N×48°.86E,h10^{km}±24^{km},ML3.4*

*TEH **16** 12:28:12.9,33°.75N×48°.80E,h11^{km}±30^{km},ML3.5*

ISC 16 12:28:13.2±1.0**,33°.78N**±0°.04×**48°.72E**±0°.04**,h11^{km},n45,** σ**2^{s}.14**/49**,Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSAM	Samen	0.44	347	Pg	Pg	12 28 21.9	0.0
HSAM				Sg	Sg	12 28 28.5	+0.8
IDOB	Doab	0.45	271	Pg	Pg	12 28 22.5	+0.4
IKFM	Kafar-mosalman	0.77	251	Pg	Pg	12 28 28.2	+0.2
IBZA	Bozab	0.99	314	Pg	Pg	12 28 32.1	-0.1
KHMZ	Khomeyn	1.03	92	Pg	Pb	12 28 29.4	-3.8
IKOM	Komasi	1.08	292	Pg	Pb	12 28 34.1	+0.2
HAGD	Aghdareh	1.09	18	Pg	Pg	12 28 32.3	-1.9
ASAO	Ashtian	1.32	55	Pg	Pn	12 28 36.3	-1.6
KER	Kermanshah	1.45	295	Pg	Pb	12 28 40.3	+0.1
KCHF	Cheshme Sefid,	1.48	290	Pg	Pg	12 28 41.1	-0.5
SNGE	Sanandaj	1.73	319	Pg	Pg	12 28 45.9	-0.5
IGHG	Ghaleghazi	1.87	288	Pn	Pg	12 28 49.4	+0.4
IRAZ	Razeghan	1.90	31	Pn	Pn	12 28 46.6	+0.8
ILBA	Ilam Banvizeh	2.10	266	Pn	Pb	12 28 51.1	-0.2
IDHR	Dehrash	2.14	296	Pn	Pb	12 28 52.5	+0.5
AMIS	Naft Sefid	2.17	167	Pn	Pn	12 28 50.7	+1.4
IQOM	Qom	2.21	61	Pn	Pn	12 28 51.3	+1.2
QAMS	Qamsar	2.23	90	Pn	Pn	12 28 51.3	+1.0
GHVR	GHOM	2.25	71	Pn	Pn	12 28 51.8	+1.4
SHK1	Shahrekord	2.33	128	Pn	Pn	12 28 52.6	+1.0
IBDR	Badra	2.43	255	*e*Pn	Pn	12 28 55.0	+2.2
IBDR				*e*Sn	Sb	12 29 27.0	+0.3
IMHD	Mahdasht	2.48	40	Pn	Pn	12 28 56.8	+3.2
IVRN	Varamin	2.77	63	Pn	Pn	12 29 00.2	+2.7
THKV	Tehran--Karaj	2.77	39	Pn	Pn	12 29 00.0	+2.3
IBRJ	Brojen	2.84	130	Pn	Pn	12 28 59.0	+0.3
KRSH	Karshahi	2.85	85	Pn	Pn	12 29 01.5	+2.7
ZNJK	Zanjan	2.88	359	Pn	Pn	12 29 00.6	+1.3
CHTH	Charan	2.90	42	Pn	Pn	12 29 01.7	+2.1
ISFB	Sefidab	2.98	78	Pn	Pn	12 29 02.5	+2.1
RAFI	Al-Rafai	3.01	228	*e*Pn	Pn	12 29 03.0	+2.3
RAFI				*e*Sn	Sb	12 29 41.0	-2.4
RAFI				AML	AML	12 29 41.7	
	comp=N,353nm,0.4s						
RAFI				AML	AML	12 29 43.5	
	comp=E,370nm,0.4s						
QALM	Alamut, Qazvin	3.08	30	Pn	Pn	12 29 05.4	+3.4
DAMV	Damavand	3.25	55	Pn	Pn	12 29 06.1	+1.7
IDMV	Damavand	3.26	56	Pn	Pn	12 29 06.5	+2.0
GIDE	GILAN DEYLAMAN	3.28	17	Pn	Pn	12 29 06.1	+1.4
KLST	Kelardasht - M	3.33	34	Pn	Pn	12 29 08.9	+3.3
MZPU	Pul - Mazandar	3.53	41	Pn	Pn	12 29 11.1	+2.9
NASN	Na'in	3.56	105	Pn	Pn	12 29 10.1	+1.4
BHD	Baghdad	3.66	263	*e*Pn	Pn	12 29 13.0	+3.3
BHD				*e*Sn	Sb	12 29 58.0	-4.2
BHD				AML	AML	12 29 59.9	
	comp=E,204nm,0.4s						
IFIR	Firoozkooh	3.81	60	Pn	Pn	12 29 14.2	+2.2
IPRN	Peran	3.85	49	Pn	Pn	12 29 15.5	+3.0
IKRK	Kirkuk	3.96	295	*e*Pn	Pn	12 29 17.0	+3.2
IKRK				*e*Sn	Sb	12 30 05.0	-5.8
IKRK				AML	AML	12 30 18.2	
	comp=E,45nm,0.6s						
IKRK				AML	AML	12 30 33.8	
	comp=N,52nm,0.5s						
ANAR	Anarak	4.23	97	Pn	Pn	12 29 18.6	+0.9
YZKH	Yazd	5.12	104	Pn	Pn	12 29 31.4	+1.5
SHRO	Shahrood	6.38	68	Pn	Pn	12 29 48.9	+1.6
TABS	Tabas	7.00	89	Pn	Pn	12 29 57.4	+1.6

TEH 16 12:29:22.1,29°.62N×**57°.58E,h15^{km}**±17^{km}**,ML3.9, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHMN	Cheshme madani	0.24	353	Pg	Pg	12 29 27.2	-0.4
CHMN				Sg	Sg	12 29 31.5	+0.1
NGRK	Negar Kerman	0.74	272	Pg	Pg	12 29 35.5	-1.1
TVBK	TV Kerman	0.80	297	Pg	Pg	12 29 36.7	-0.9
KBAM	BAM	0.91	122	Pg	Pb	12 29 39.0	-0.6
KBAM				Sg	Sb	12 29 51.3	-0.2
KHGB	Koh Gabri	1.21	309	Pg	Pn	12 29 43.8	-1.0
ZRDN	Zarand Kerman	1.61	326	Pg	Pb	12 29 51.5	-0.3
KHNJ	Kahnooj	1.67	176	Pg	Pn	12 29 50.6	-0.3
IBND	Bandar-abas	2.35	203	Pn	Pb	12 30 03.2	-0.9
IBAF	Bafgh	2.62	319	Pn	Pb	12 30 06.6	-2.2
BSRN	Basiran	2.69	29	Pn	Pn	12 30 06.9	+1.8
NHDN	Nehbandan	2.77	50	Pn	Pn	12 30 08.3	+2.2
ZHDN	Zahedan	2.83	94	Pn	Pn	12 30 09.3	+2.4
IMEH	Mehriz	3.10	305	Pn	Pn	12 30 12.5	+1.7
ITEG	Tejag	3.42	17	Pn	Pn	12 30 17.6	+2.5
TPRV	Parvadeh(Tabas	3.48	348	Pn	Pn	12 30 18.5	+2.6
IDAH	Dahanechah	3.68	32	Pn	Pn	12 30 21.0	+2.3
JASK	Jask - Hormozg	3.75	176	Pn	Pn	12 30 22.2	+2.8
YZKH	Yazd	3.77	318	Pn	Pn	12 30 23.1	+3.3
AFRZ	Afriz	3.99	18	Pn	Pn	12 30 25.0	+2.2
TKDS	Koohdasht(Taba	4.00	355	Pn	Pn	12 30 26.1	+3.1
TABS	Tabas	4.04	355	Pn	Pn	12 30 26.0	+2.5
GHIR	Ghir-Karzin	4.24	253	Pn	Pn	12 30 29.6	+3.3
TNSJ	Nastanj	4.41	349	Pn	Pn	12 30 31.5	+2.9
SHRT	Shahrakht	4.63	29	Pn	Pn	12 30 34.6	+2.9
SRVN	Saravan	4.79	116	Pn	Pn	12 30 37.0	+3.2
SBZV	Sabzevar	6.75	0	Pn	Pn	12 31 04.3	+3.5

WEL 16 12:44:01.7±0.6**,41°S**±4°×**17°5E**±°**,h5^{km}**±3^{km}**,M2.3**/10**, ML2.5**/11**,MLv2.3**/10**,Error ellipse: s-maj=0.0km s-min=0.0km az=155.6,confirmed,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WEL	Wellington	0.26	36	P	Pb	12 44 08.0	-0.9
TCW	Tory Channel	0.36	323	P	Pg	12 44 09.5	+0.9
CMWZ	Cape Campbell	0.36	226	P	Pg	12 44 09.4	+0.7
TUWZ	Tuamarina	0.47	278	P	Pg	12 44 10.9	+0.1
PLWZ	Palliser	0.53	98	P	Pg	12 44 12.1	+0.3
CAW	Cannon Point	0.54	45	P	Pg	12 44 12.7	+0.6
BSWZ	Blackbirch Sta	0.56	247	P	Pg	12 44 12.5	0.0
BSWZ				S	Sg	12 44 21.0	+1.3
PAWZ	Paruwai Farm	0.66	80	P	Pg	12 44 14.6	+0.3
PAWZ				S	Sg	12 44 23.9	+1.0
KIW	Kapiti Island	0.68	23	P	Pg	12 44 15.3	+0.5
MTW	Mount Morrison	0.78	65	P	Pg	12 44 17.1	+0.4
OGWZ	Otaki Gorge	0.82	34	P	Pg	12 44 17.6	+0.2
DUWZ	D’Urville Isla	0.84	325	P	Pg	12 44 18.3	+0.5
TRWZ	Traveller	0.85	84	P	Pb	12 44 18.6	-0.4
TRWZ				S	Sn	12 44 32.2	-1.1
NNZ	Nelson	0.93	287	P	Pg	12 44 19.2	-0.4
HOWZ	Holdsworth Sta	0.93	51	P	Pg	12 44 19.8	+0.3
TMWZ	Te Maipa	1.07	69	P	Pg	12 44 21.6	-0.7
MRZ	Mangatainoka R	1.13	43	P	Pg	12 44 22.9	-0.5
KHZ	Kahutara	1.20	219	P	Pg	12 44 22.7	-2.0
TIWZ	Tintock	1.23	55	P	Pg	12 44 24.4	-0.8
TKNZ	Takaka Hill	1.29	290	P	Pg	12 44 24.0	-2.5
MRNZ	Matariki Terra	1.36	273	P	Pn	12 44 26.5	-0.8
PRWZ	Pori Road	1.42	49	P	Pn	12 44 27.4	-0.8
POWZ	Post Office Ro	1.43	40	P	Pn	12 44 27.8	-0.5
QRZ	Quartz Range	1.67	293	P	Pn	12 44 31.5	-0.1
WAZ	Wanganui	1.77	11	P	Pg	12 44 35.1	-0.4
GVZ	Greta Valley S	1.86	217	P	Pn	12 44 33.2	-1.1
PREZ	Palmer Road	2.17	352	P	Pb	12 44 41.3	-0.2
MTVZ	Mangateitei	2.22	18	P	Pb	12 44 42.2	-0.1
KHEZ	Kahui Hut	2.24	349	P	Pb	12 44 42.6	0.0
MOVZ	Moawhango	2.27	24	P	Pb	12 44 42.6	-0.7
WNVZ	Wahianoa	2.30	20	P	Pb	12 44 43.6	-0.3
BHHZ	Black Hill Sta	2.31	30	P	Pb	12 44 43.9	+0.1
PKE	Pukeiti	2.34	349	P	Pb	12 44 44.3	-0.1
FWVZ	Far West T-bar	2.36	19	P	Pb	12 44 44.4	-0.4
VRZ	Vera Road	2.37	4	P	Pb	12 44 43.7	-1.2
TUVZ	Tukino	2.38	21	P	Pb	12 44 44.8	-0.2
NGZ	Ngauruhoe	2.45	19	P	Pb	12 44 46.3	+0.1
SNVZ	South Ngauruho	2.45	20	P	Pb	12 44 45.9	-0.4
OTVZ	Oturere	2.48	20	P	Pb	12 44 45.9	-0.9
NNVZ	North Ngauruho	2.49	19	P	Pb	12 44 47.0	0.0
WTVZ	West Tongariro	2.50	19	P	Pb	12 44 46.8	-0.4
KWHZ	Kaweka Forest	2.51	35	P	Pg	12 44 50.7	+1.0
ETVZ	East Tongariro	2.51	21	P	Pb	12 44 47.0	-0.4
TMVZ	Te Maari	2.53	21	P	Pb	12 44 47.3	-0.4
KRVZ	Karewarewa	2.54	19	P	Pb	12 44 47.8	0.0
NTVZ	North Tongarir	2.54	20	P	Pb	12 44 47.2	-0.6
BKZ	Black Stump Fm	2.75	33	P	Pb	12 44 51.7	+0.3
WVZ	Waitaha Valley	3.25	240	P	Pn	12 44 50.5	-2.8

WEL 16 12:46:41.9±0.5,**42°S**±4°×**17°3E**±°,**h33**$^{\text{km}}$,**M1.9**/5,**ML2.1**/9,
MLv1.9/5,**Error ellipse: s-maj=0.0km s-min=0.0km**
az=119.4,confirmed,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THZ	Tophouse	0.41	6	P	Pn	12 46 51.9	+0.3
THZ				S	Sn	12 46 58.6	+0.6
KHZ	Kahutara	0.57	116	P	Pn	12 46 54.2	+0.6
KHZ				S	Sn	12 47 03.4	+1.5
LTZ	Lake Taylor	0.75	215	P	Pb	12 46 56.6	+0.1
MRNZ	Matariki Terra	0.77	355	P	Pn	12 46 56.5	0.0
GVZ	Greta Valley S	0.81	170	P	Pb	12 46 57.3	-0.2
GVZ				S	Sb	12 47 08.9	+0.7
DSZ	Denniston Nort	0.89	298	P	Pn	12 46 58.1	0.0
NNZ	Nelson	1.03	23	P	Pn	12 47 00.1	+0.1
TUWZ	Tuamarina	1.10	48	P	Pn	12 47 01.5	+0.5
TUWZ				S	Sb	12 47 15.9	-0.6
INZ	Inchbonnie	1.18	241	P	Pn	12 47 02.5	+0.4
QRZ	Quartz Range	1.36	350	P	Pn	12 47 04.6	0.0
TCW	Tory Channel	1.44	49	P	Pn	12 47 06.3	+0.7
TCW				S	Sn	12 47 24.2	+0.9
PKE	Pukeiti	3.10	17	P	Pn	12 47 30.0	+1.5
BKZ	Black Stump Fm	4.08	44	P	Pn	12 47 43.2	+1.1

IDC 16 12:54:41.7±4.9,**2°.67S**×**139°.61E**,**h0**$^{\text{km}}$,**mb3.3**/2,
mbtmp3.3/3,**ML3.2**/1,**Error ellipse: s-maj=192.6km**
s-min=31.0km az=88.0,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.92	196	P	Pn	12 58 51.4	-1.2
	0.1nm,0.3s,baz=17,slow=12,SNR=5.2						
	0.6nm,0.7s						
ASAR	Alice Springs	21.59	194	P	P	12 59 33.5	+0.2
	0.6nm,0.7s,baz=17,slow=9.9,SNR=9.3						
	0.6nm,0.7s						
MKAR	Makanchi Array	70.31	322	P	P	13 05 57.5	+0.2
	0.4nm,0.8s,baz=111,slow=5.4,SNR=3.7						
	0.4nm,0.8s						

NOU ***16*** *13:02:31.6,42°.80S×173°.11E,h11*$^{\text{km}}$*,MLv3.6/11,South Island, New Zealand*
WEL ***16*** *13:02:31.8±0.3,43°S±2°×17°3E±°,h8*$^{\text{km}}$*±4*$^{\text{km}}$*,M3.1/14,*
ML3.4/14,MLv3.1/14,Error ellipse: s-maj=0.0km
s-min=0.0km az=108.6,confirmed
ISC 16 13:02:32.1±1.0,**42°.68S**±0°.03×**172°.95E**±0°.03,**h17**$^{\text{km}}$±8$^{\text{km}}$,
n69,σ1.ˢ**35**/76,**South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	Greta Valley S	0.30	168	P	Pg	13 02 39.1	+0.5
GVZ				S	Sg	13 02 45.1	+2.1
KHZ	Kahutara	0.51	59	P	Pb	13 02 42.0	-0.5
KHZ	Kahutara	0.51	59	P	Pb	13 02 42.1	-0.5
LTZ	Lake Taylor	0.51	258	P	Pg	13 02 41.6	-0.8
LTZ				S	Sg	13 02 49.1	-0.3
AMCZ	Amberley	0.55	204	P	Pb	13 02 43.8	+0.5
THZ	Tophouse	0.91	358	P	Pg	13 02 48.3	-1.6
THZ				S	Sg	13 02 59.5	-2.4
OXZ	Oxford	0.93	226	P	Pb	13 02 49.8	0.0
OXZ				S	Sn	13 03 03.7	+0.2
MQZ	McQueen’s Vall	1.05	192	P	Pb	13 02 51.4	-0.4
MQZ				S	Sn	13 03 06.4	+0.1
INZ	Inchbonnie	1.11	267	P	Pb	13 02 52.2	-0.7
BSWZ	Blackbirch Sta	1.18	36	P	Pb	13 02 54.1	+0.1
AKCZ	Akaroa Harbour	1.20	181	P	Pb	13 02 53.6	-0.8
RACZ	Rakaia	1.21	209	P	Pb	13 02 53.7	-0.8
RACZ				S	Sn	13 03 11.8	+1.6
DSZ	Denniston Nort	1.26	317	P	Pn	13 02 54.8	-0.2
MRNZ	Matariki Terra	1.28	353	P	Pn	13 02 55.1	-0.2
MRNZ				S	Sb	13 03 12.1	+0.1
CMWZ	Cape Campbell	1.32	46	P	Pg	13 02 57.1	-0.4
MHCZ	Mount Hutt	1.33	229	P	Pn	13 02 55.6	-0.3
TUWZ	Tuamarina	1.45	31	P	Pn	13 02 58.3	+0.8
NNZ	Nelson	1.49	12	P	Pn	13 02 58.4	+0.3
WACZ	Wakanui South	1.50	212	P	Pn	13 02 57.9	-0.4
TKNZ	Takaka Hill	1.64	0	P	Pn	13 03 01.2	+1.0
WVZ	Waitaha Valley	1.68	256	P	Pn	13 03 01.3	+0.6
RPZ	Rata Peaks	1.73	233	P	Pn	13 03 02.1	+0.6
RPZ	Rata Peaks	1.73	233	P	Pn	13 03 01.1	-0.4
TCW	Tory Channel	1.77	34	P	Pn	13 03 02.3	+0.5
ARCZ	Arundel	1.81	225	P	Pn	13 03 02.3	-0.3
QRZ	Quartz Range	1.88	350	P	Pn	13 03 04.6	+1.2
QRZ	Quartz Range	1.88	350	P	Pn	13 03 04.2	+0.8
SNZO	South Karori	1.89	44	P	Pn	13 03 03.9	+0.4
WEL	Wellington	1.94	45	P	Pn	13 03 04.5	+0.3
DUWZ	D’Urville Isla	2.01	21	P	Pn	13 03 06.7	+1.5
PLWZ	Palliser	2.04	58	P	Pn	13 03 05.1	-0.6
TMZ	Timaru	2.22	219	P	Pn	13 03 07.5	-0.7
CAW	Cannon Point	2.22	46	P	Pn	13 03 08.0	-0.2
PAWZ	Paruwai Farm	2.25	56	P	Pn	13 03 07.9	-0.7
KIW	Kapiti Island	2.33	40	P	Pn	13 03 10.0	+0.4
FOZ	Fox Glacier	2.45	249	P	Pn	13 03 12.4	+1.1
OGWZ	Otaki Gorge	2.49	43	P	Pn	13 03 11.8	0.0
HOWZ	Holdsworth Sta	2.61	48	P	Pn	13 03 12.9	-0.6
LBZ	Lake Benmore	2.64	229	P	Pn	13 03 14.0	0.0
MRZ	Mangatainoka R	2.81	45	P	Pn	13 03 15.6	-0.7
ODZ	Otahua Downs	2.90	214	P	Pn	13 03 16.9	-0.5
ODZ	Otahua Downs	2.90	214	P	Pn	13 03 16.7	-0.8
POWZ	Post Office Ro	3.11	44	P	Pn	13 03 19.8	-0.6
BFZ	Birch Farm	3.17	52	P	Pn	13 03 21.3	+0.1
WAZ	Wanganui	3.30	28	P	Pn	13 03 25.6	+2.7
JCZ	Jackson Bay	3.34	244	P	Pn	13 03 24.9	+1.2
JCZ	Jackson Bay	3.34	244	P	Pn	13 03 23.3	-0.4
DVHZ	Dannevirke	3.39	47	P	Pn	13 03 22.7	-1.5
KHEZ	Kahui Hut	3.47	14	P	Pn	13 03 27.6	+2.2
KHEZ	Kahui Hut	3.47	14	P	Pn	13 03 29.2	+3.8
NBEZ	Newall Road No	3.47	12	P	Pn	13 03 29.4	+4.0
NEZ	North Egmont	3.51	15	P	Pn	13 03 30.4	+4.5
PKE	Pukeiti	3.56	13	P	Pn	13 03 30.2	+3.5
EAZ	Earnscleugh	3.67	225	P	Pn	13 03 27.9	-0.1
VRZ	Vera Road	3.80	22	P	Pn	13 03 32.5	+2.7
WNVZ	Wahianoa	3.90	32	P	Pn	13 03 32.3	+1.0
FWVZ	Far West T-bar	3.94	31	P	Pn	13 03 32.8	+0.8
NGZ	Ngauruhoe	4.03	31	P	Pn	13 03 34.2	+1.0
SNVZ	South Ngauruho	4.04	31	P	Pn	13 03 34.0	+0.7
OTVZ	Oturere	4.07	31	P	Pn	13 03 34.7	+1.0
NNVZ	North Ngauruho	4.08	31	P	Pn	13 03 34.7	+0.9
WTVZ	West Tongariro	4.08	30	P	Pn	13 03 34.7	+0.9
ETVZ	East Tongariro	4.11	31	P	Pn	13 03 34.9	+0.7
KRVZ	Karewarewa	4.12	31	P	Pn	13 03 35.5	+1.2
TMVZ	Te Maari	4.12	31	P	Pn	13 03 35.1	+0.7
HIZ	Hauiti	4.40	20	P	Pn	13 03 39.1	+1.0
HIZ	Hauiti	4.40	20	P	Pn	13 03 40.3	+2.1
BKZ	Black Stump Fm	4.41	39	P	Pn	13 03 38.7	+0.4
SYZ	Scrubby Hill	4.72	214	P	Pn	13 03 41.9	-0.6

IDC 16 13:24:38.8±610.0,**54°.68N**×**0°.48E**,**h0**$^{\text{km}}$,**Error ellipse:**
s-maj=343.0km s-min=192.1km az=110.0,North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I26DE	FREYUNG INFRAS	10.06	120	I	I	14 27 40.0	
	0.1nm,0.5s,baz=311,slow=324,SNR=2.0						
I43RU	DUBNA INFRASON	20.65	69	I	I	15 31 40.0	
	0.1nm,0.8s,baz=278,slow=318,SNR=4.4						
I31KZ	AKTYUBINSK INF	34.41	73	I	I	16 55 50.0	
	baz=302,slow=334,SNR=1.8						

TIF ***16*** *13:37:29.6,43°.25N×45°.11E,h12*$^{\text{km}}$*±1*$^{\text{km}}$
MOS ***16*** *13:37:29.7±0.0,43°.15N×45°.14E,h12*$^{\text{km}}$*,MPVA3.6*
NORS ***16*** *13:37:30.0±0.0,43°.14N×45°.15E,h16*$^{\text{km}}$*,MPVA3.7*
DRS ***16*** *13:37:31.9±0.0,43°.11N×45°.06E,h17*$^{\text{km}}$
ISC 16 13:37:30.4±1.0,**43°.16N**±0°.03×**45°.14E**±0°.02,**h16**$^{\text{km}}$±9$^{\text{km}}$,
n42,σ1.ˢ**08**/77,**Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMGR	Komgaron	0.23	243	*i* Pg	Pb	13 37 35.7	-0.5
KMGR				*e*Sg	Sb	13 37 40.5	+0.4
VLKR	Vladikavkaz	0.36	252	*e*Pg	Pb	13 37 38.1	-0.3
VLKR				*e*Sg	Sb	13 37 45.0	+1.1
GROC	Groznyy	0.48	85	*e*Pg	Pn	13 37 41.4	-1.2
	4.0nm,0.4s						
GROC				*e*Sg	Sn	13 37 48.9	-1.8
	56nm,0.2s						
BTKR	Batakoyurt	0.49	296	*e*Pg	Pn	13 37 42.1	-0.7
BTKR				*e*Sg	Sn	13 37 50.4	-0.6
SHTL	Shatili	0.50	179	*e*Pg	Pn	13 37 41.9	-1.2
SHTL	Shatili	0.50	179	P	Pn	13 37 41.9	-1.2
TRKR	Terskaya	0.64	332	*e*Pg	Pn	13 37 44.3	-0.5
TRKR				*e*Sg	Sn	13 37 54.1	-0.5
PNSH	Pansheti	0.65	217	*e*Pg	Pn	13 37 43.9	-1.3
PNSH	Pansheti	0.65	217	P	Pn	13 37 43.9	-1.3
LACR	Lac	0.70	242	*e*Pg	Pn	13 37 44.8	-1.1
LACR				*e*Sg	Sn	13 37 57.6	+1.2
KORR	Kora	0.79	265	*e*Pg	Pn	13 37 48.1	+1.1
KORR				*e*Sg	Sn	13 38 00.5	+2.0
STDR	Stavd-Durt	0.82	285	*e*Pg	Pn	13 37 47.5	+0.3
STDR				*e*Sg	Sn	13 38 00.9	+1.9
GUDG	Gudauri	0.85	215	*e*Pg	Pn	13 37 47.3	-0.6
GUDG				*e*Sg	Sn	13 38 00.6	+0.4
GUDG	Gudauri	0.85	215	P	Pn	13 37 47.3	-0.6
GUDG				S	Sn	13 38 00.6	+0.4
PRTR	Priterechnaya	0.86	314	*e*Pg	Pn	13 37 48.2	+0.3
PRTR				*e*Sg	Sn	13 38 01.1	+0.9
BTLR	Botlikh	0.93	122	*e*Pg	Pn	13 37 49.2	+0.3
	56nm,0.2s						
BTLR				*e*Sg	Sn	13 38 02.8	+0.8
	74nm,0.2s						
LSNR	Lesken	0.97	277	*e*Pg	Pn	13 37 49.9	+0.4
LSNR				*e*Sg	Sn	13 38 05.6	+2.7
ZEI	Tsey	0.98	248	*e*Pg	Pn	13 37 49.5	-0.3
ZEI				*e*Sg	Sn	13 38 04.1	+0.6
DLMR	Dylym	1.09	94	*e*Pg	Pg	13 37 52.5	+1.0
	74nm,0.2s						
DLMR				*e*Sg	Sn	13 38 08.7	+2.8
	57nm,0.2s						
DIGR	Digorskoe uzhe	1.18	258	*e*Pg	Pg	13 37 52.3	-0.9
DIGR				*e*Sg	Sg	13 38 08.5	-0.1
DBC	Dubki	1.24	96	*e*Pg	Pg	13 37 54.6	+0.2
DBC				*e*Sg	Sg	13 38 11.8	+1.2
UNCR	Uncukul	1.29	110	*e*Pg	Pg	13 37 55.2	-0.1
UNCR				*e*Sg	Sg	13 38 13.4	+1.3
XNZR	Khunzakh	1.30	118	*e*Pg	Pg	13 37 55.5	0.0
XNZR				*e*Sg	Sg	13 38 14.0	+1.4
KRNR	Karanay	1.33	104	*e*Pg	Pg	13 37 55.6	-0.6
KRNR				*e*Sg	Sg	13 38 14.4	+0.8
ONI	Oni	1.37	246	*e*Pg	Pg	13 37 56.1	-0.7
ONI				*e*Sg	Sg	13 38 15.3	+0.7
ONI	Oni	1.37	246	P	Pg	13 37 56.1	-0.7
ONI				S	Sg	13 38 15.3	+0.7
KBTC	Kuba-Taba	1.42	298	*e*Pg	Pb	13 37 56.6	-0.1
KBTC				*e*Sg	Sg	13 38 16.5	+0.1
ARKR	Arakani	1.47	112	*e*Pg	Pg	13 37 58.8	+0.1
ARKR				*e*Sg	Sg	13 38 19.9	+2.0
BUJR	Buynaksk	1.48	102	*e*Pg	Pg	13 37 59.2	+0.3
BUJR				*e*Sg	Sg	13 38 20.4	+2.2
GNBR	Gunib	1.54	119	*e*Pg	Pg	13 37 59.4	-0.7
GNBR				*e*Sg	Sg	13 38 20.9	+0.7
LGD	Lagodekhi	1.55	148	*e*Pg	Pg	13 38 00.1	-0.2
LGD	Lagodekhi	1.55	148	P	Pg	13 38 00.1	-0.2
KBZ	Khabaz	1.73	290	*e*Pg	Pn	13 38 00.1	+0.2
KBZ				*e*Sg	Sb	13 38 23.6	+0.3
PYA1	Pyatigorsk	1.74	302	*e*Pg	Pb	13 38 01.4	-0.6
PYA1				*e*Sg	Sb	13 38 23.8	+0.1
KMKR	Kumukh	1.77	125	*e*Pg	Pb	13 38 02.8	+0.1
KMKR				*e*Sg	Sg	13 38 27.2	-0.3
NEY	Neytrino	1.77	274	*e*Pg	Pb	13 38 01.3	-1.4
NEY				*e*Sg	Sb	13 38 24.7	0.0
BEYR	Belyy Ugol+	1.89	298	*e*Pg	Pb	13 38 04.1	-0.5
BEYR				*e*Sg	Sb	13 38 28.4	+0.3
SHA1	Shidzhatmaz	1.90	289	*e*Pg	Pb	13 38 04.3	-0.5
SHA1				*e*Sg	Sb	13 38 29.0	+0.6
KIV	Kislovodsk	1.96	295	*e*Pg	Pb	13 38 05.0	-0.7
KIV				*e*Sg	Sb	13 38 30.1	+0.2
SGKR	Sergokala	1.98	110	*e*Pg	Pn	13 38 00.0	-3.3
SGKR				*e*Sg	Sg	13 38 32.9	-1.2
ALER	Alexandrovskoy	2.27	316	*e*Pn	Pb	13 38 09.3	-1.8
ALER				*e*Sn	Sb	13 38 37.7	-1.2
GNI	Garni	3.02	186	*e*Pn	Pb	13 38 23.9	-0.1

UCR 16 13:57:06.9±1.4,**9°.63N**×**84°.89W**,**h17**$^{\text{km}}$±5$^{\text{km}}$,**MW3.7**,
2C-3D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAFE	Finca La Fe, P	0.18	353	*e*P	Pb	13 57 11.8	-0.1
LAFE				*e*S	Sb	13 57 15.6	+0.4
JACO	JACO, Garabito	0.23	81	*e*P	Pb	13 57 12.4	-0.2
JACO				*e*S	Sb	13 57 16.8	+0.3
ARZA	Esparza	0.42	31	*e*P	Pb	13 57 16.0	0.0
ARZA				*e*S	Sb	13 57 22.3	+0.2
POPE	POPE, Guanacas	0.57	320	*e*P	Pg	13 57 17.6	-0.7
SRA1	San Ramn	0.61	41	*e*P	Pg	13 57 18.0	-1.0
INDI	Punta indio, G	0.65	292	*e*P	Pg	13 57 19.4	-0.4
JTS	Las Juntas de	0.67	355	*e*P	Pg	13 57 18.8	-1.3
MTEVE	Monteverde	0.69	5	*e*P	Pg	13 57 19.6	-1.0
TCS1	Tacares	0.71	54	*e*P	Pb	13 57 20.4	-0.5
NARJA	Naranjal	0.73	298	*e*P	Pb	13 57 21.1	-0.2
NICO	Nicoya	0.75	313	*e*P	Pg	13 57 21.5	0.0
SANTA	Santa Ana	0.76	66	*e*P	Pb	13 57 20.9	-0.8
BELE	Belen	0.77	63	*e*P	Pb	13 57 21.1	-0.9
LLNJ	Naranjito	0.79	101	*e*P	Pb	13 57 16.9	-5.3
LLNJ				*e*S	Sn	13 57 34.4	-0.3
SOCE	Pocosol	0.80	19	*e*P	Pb	13 57 21.4	-0.9
CASO	Castillo	0.82	11	⇓*e*P	Pb	13 57 21.8	-0.9
CPMI	Catarata Coope	0.82	37	*e*P	Pb	13 57 21.9	-0.9
ABE2	San Pablo	0.83	84	*e*P	Pb	13 57 22.0	-1.0
ABE2				*e*S	Sb	13 57 34.0	+0.1
JUD3	Juan Diaz 3	0.84	310	*e*P	Pb	13 57 22.1	-0.9
ARE1	Arenal 1	0.85	11	*e*P	Pb	13 57 22.4	-0.8
HDC	Heredia	0.85	64	*e*P	Pb	13 57 22.6	-0.7
HDC3	Heredia 3	0.85	64	*e*P	Pb	13 57 22.6	-0.7
SGBR	La Fortuna	0.86	9	*e*P	Pb	13 57 22.4	-1.0
VPS6	Volcano Poas	0.86	49	*e*P	Pb	13 57 22.6	-0.9
CRPO	Crater poas	0.86	49	*e*P	Pb	13 57 22.6	-1.0
POA5	Crater Von Fra	0.87	48	*e*P	Pb	13 57 22.6	-1.1
VACR	Volcan Arenal	0.87	14	*e*P	Pb	13 57 22.7	-0.9
VPTE	Poasito	0.87	51	*e*P	Pb	13 57 22.9	-0.8
CEDE	Laguna Cedeo	0.88	12	⇓*i*P	Pb	13 57 22.9	-0.8
CEDE				*e*S	Sg	13 57 35.9	+0.3
TABAC	Tabacon	0.88	8	⇓*e*P	Pb	13 57 22.9	-0.8
TABAC				*e*S	Sn	13 57 36.8	-0.2
LCR2	La Lucha 2	0.88	82	*e*P	Pb	13 57 22.6	-1.2
ORTG	Ortega, Santa	0.92	323	*e*P	Pb	13 57 23.6	-0.9
CORON	Coronado	0.94	68	*e*P	Pb	13 57 24.2	-0.6
OCM	Ochomogo	0.95	74	*e*P	Pb	13 57 23.8	-1.3
CVIMO	Finca Echandi	1.01	67	*e*P	Pb	13 57 25.4	-0.7
HATIL	Hatillo	1.04	310	*e*P	Pb	13 57 25.8	-0.7
CUI	Cuipilapa	1.06	345	*e*P	Pb	13 57 25.8	-1.1
CUI				*e*S	Sn	13 57 41.6	+0.1
EDDO	Dominical	1.08	110	*e*P	Pb	13 57 25.6	-1.5
EDDO				*e*S	Sg	13 57 42.2	+0.3
COLC	Colonia	1.08	343	*e*P	Pb	13 57 25.6	-1.6
VICA	Volcano Irazu	1.09	71	*e*P	Pb	13 57 26.4	-1.1
CDM	Cerro de Muert	1.11	94	*e*P	Pb	13 57 27.0	-1.0
GUAB	Guayabo de Bag	1.13	343	*e*P	Pn	13 57 26.9	-1.0
GUAB				*e*S	Sg	13 57 43.4	-0.2
ALIBA	Liberia Airpor	1.16	326	*e*P	Pn	13 57 27.9	-0.5
CLARA	Aguas Claras	1.19	346	*e*P	Pn	13 57 27.7	-1.0
COVE	Coope Vega, Sa	1.19	24	*e*P	Pn	13 57 27.5	-1.3
VTCV	VTCV, Calle Va	1.20	73	*e*P	Pn	13 57 28.5	-0.6
VMAR	Armenia, Volca	1.20	349	*e*P	Pn	13 57 28.1	-0.9
VMAR				*e*P	Pb	13 57 28.1	-1.2
VMAR				*e*S	Sn	13 57 45.0	+0.1
GPS2	Hotel Rincn d	1.21	338	*e*P	Pn	13 57 28.3	-0.8
GPS2				*e*P	Pg	13 57 30.4	+0.1
GPS2				*e*S	Sn	13 57 45.5	+0.4
CANAL	Canalete	1.21	352	⇑*e*P	Pn	13 57 28.2	-0.9
CANAL				*e*S	Sg	13 57 46.2	0.0
GP14	Hacienda Santa	1.21	338	*e*P	Pn	13 57 28.3	-0.8
GPS3	Bodega del ICE	1.22	337	*e*P	Pn	13 57 28.8	-0.4
VERA	Finca Concepci	1.22	1	*e*P	Pn	13 57 28.3	-0.9
VERA				*e*S	Sg	13 57 47.5	+1.0
GPS1	Guardaparques	1.23	338	*e*P	Pn	13 57 29.0	-0.4
GPS1				*e*S	Sn	13 57 46.0	+0.4
LAPC	Finca la Perla	1.25	335	*e*P	Pn	13 57 28.6	-1.1
LAPC				*e*S	Sb	13 57 45.1	-0.9
VORI	VORI	1.27	339	*e*P	Pn	13 57 29.2	-0.8
VORI				*e*S	Sg	13 57 47.5	-0.6
BUEV	Buena Vista	1.27	336	⇑*e*P	Pn	13 57 29.1	-0.9
RVSTA	Santa Teresita	1.27	74	*e*P	Pn	13 57 29.6	-0.4
GBS3	Finca Las Img	1.28	334	*e*P	Pn	13 57 29.1	-1.0
HZTE	Horizontes, Gu	1.29	327	*e*P	Pn	13 57 29.8	-0.3
GB1A	Borinquen Arri	1.29	337	*e*P	Pn	13 57 29.3	-0.9
GB1A				*e*S	Sb	13 57 46.4	-0.6
RVLA	Villa Bonita	1.37	69	*e*P	Pn	13 57 31.6	+0.4
RVLA				*e*S	Sg	13 57 51.4	+0.2
LCOCO	El Coco	1.39	71	*e*P	Pb	13 57 33.0	+0.5
LCOCO				*e*S	Sg	13 57 52.5	+0.6
BATAN	Batan	1.56	72	*e*P	Pb	13 57 35.4	0.0
EDBA	Buenos Aires	1.66	106	*e*P	Pn	13 57 34.9	-0.4
EDP2	Potrero Grande	1.79	110	*e*P	Pn	13 57 37.3	+0.2
ACON	Acoyapa	2.34	353	*e*P	Pn	13 57 44.6	-0.1

BUC 16 14:04:45.0±0.2,**46°.07N**×**21°.73E**,**h6**$^{\text{km}}$±3$^{\text{km}}$,**ml1.5**/4,
11C-7D,Error ellipse: s-maj=1.8km s-min=1.0km
az=104.0,Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRR	Siria	0.20	346	⇓P	Pg	14 04 49.3	+0.3
SIRR				⇓S	Sg	14 04 51.7	0.0
SIRR	Siria	0.20	346	⇓P	Pg	14 04 49.3	+0.3
SIRR				⇑S	Sg	14 04 52.0	+0.2
BZS	Buzias	0.46	190	⇑P	Pg	14 04 53.8	-0.2
BZS				⇑S	Sg	14 04 59.9	-0.1
DRGR		0.99	43	⇓P	Pg	14 05 04.0	-0.1
DRGR				⇑S	Sb	14 05 17.8	-0.3
DRGR		0.99	43	⇑P	Pg	14 05 04.2	+0.1
DRGR				⇑S	Sb	14 05 17.8	-0.3
GZR	Gura Zlata	1.00	132	⇓P	Pg	14 05 04.1	-0.1
GZR				⇑S	Sb	14 05 18.6	+0.3
GZR	Gura Zlata	1.00	132	⇑P	Pg	14 05 04.3	+0.1
GZR				⇑S	Sb	14 05 18.6	+0.3
MARR	Marisel-Cluj	1.14	57	⇑P	Pb	14 05 07.1	-0.1
MARR				⇑S	Sb	14 05 22.5	+0.2
HERR	Herculane	1.28	158	⇓P	Pn	14 05 09.5	-0.1
MDVR	Moldovita	1.29	180	⇓S	Sn	14 05 28.2	+0.8

IDC 16 14:07:19.7±2.9,**31°.56S**×**178°.23W**,**h0**$^{\text{km}}$,**mb4.3**/3,
mbtmp4.2/4,**ML3.3**/1,**Error ellipse: s-maj=63.0km**
s-min=46.1km az=123.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.70	209	Pn	Pn	14 09 13.1	0.0
	0.5nm,0.3s,baz=315,slow=19,SNR=1.3						
URZ				Sn	Sn	14 10 33.4	-7.5
	2.3nm,0.3s,baz=357,slow=24,SNR=8.4						
	2.6nm,0.3s						
CTA	Charters Tower	33.81	281	P	P	14 14 05.1	+1.4
	3.0nm,0.6s,baz=94,slow=10,SNR=5.4						
	3.0nm,0.6s						
ASAR	Alice Springs	42.86	268	P	P	14 15 19.4	-0.6
	1.2nm,0.4s,baz=107,slow=7.1,SNR=67						
	1.2nm,0.4s						
WRA	Warramunga Arr	43.95	273	P	P	14 15 28.1	-0.7
	2.7nm,0.3s,baz=113,slow=7.8,SNR=116						
	2.7nm,0.3s						
FINES	FINESS Array B	146.16	339	PKPbc	PKPdf	14 27 00.4	+0.2
	2.1nm,1.0s,baz=64,slow=3.2,SNR=7.6						

NEIC ***16*** *14:07:42.8±1.7,23°.48S±0°.07×67°.1W±0°.1,h237*$^{\text{km}}$*±10*$^{\text{km}}$*,*
mb4.2/4,Mwr4.4(GUC),Error ellipse: s-maj=19.6km
s-min=10.4km az=91.0
IDC ***16*** *14:07:42.7±0.9,23°.38S×66°.76W,h182*$^{\text{km}}$*±8*$^{\text{km}}$*,mb3.5/9,*
mbtmp4.0/16,MS2.0/1,Error ellipse: s-maj=13.6km
s-min=12.3km az=73.0
SJA ***16*** *14:07:43.1±0.6,23°.36S×66°.90W,h197*$^{\text{km}}$*±5*$^{\text{km}}$*,ML4.2,*
MW3.9,Hypocentre not reviewed by the ISC
VAO ***16*** *14:07:43.7±0.3,23°.48S×67°.33W,h242*$^{\text{km}}$*,mb4.0*
GUC ***16*** *14:07:44.2±0.7,23°.43S×67°.22W,h229*$^{\text{km}}$*±10*$^{\text{km}}$*,ML4.6*
ISC 16 14:07:43.4±0.6,**23°.47S**±0°.04×**67°.09W**±0°.06,**h210**$^{\text{km}}$±7$^{\text{km}}$,
n116,σ1.ˢ**66**/132,**mb3.8**/10,**11C-1D,Chile-Argentina**
border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HJA	Humahuaca	1.56	81	*e*P		14 08 16.9	
HJA				*e*S		14 08 41.5	
LVC	Limon Verde	1.88	297	P	Pn	14 08 22.5	+0.5
	102nm,0.3s,baz=107,slow=7.1,SNR=229						
LVC				LR	LR	14 08 44.9	
	comp=Z,38nm,20.9s,baz=168,slow=29						
LVC				S	S	14 08 51.9	+0.3
	144nm,0.4s,baz=127,slow=20,SNR=29						
LVC	Limon Verde	1.88	297		Pn	14 08 22.8	+0.7
LVC				Sn	S	14 08 51.7	+0.2
LVC	Limon Verde	1.88	297	⇑*i*P	Pn	14 08 22.8	+0.7
LVC				*i* S	S	14 08 51.9	+0.3
LVC	Limon Verde	1.88	297	*e*P	Pn	14 08 22.6	+0.7
LVC	Limon Verde	1.88	297	*e*P		14 08 22.7	
LVC				*e*S		14 08 52.8	
SLA	San Lorenzo	1.91	131	*e*P		14 08 21.0	
YJA	Yavi	1.94	49	*e*P		14 08 20.6	
YJA				*e*S		14 08 47.0	
PB15	IPOC Station P	2.21	276		Pn	14 08 26.1	+1.1
PB15	IPOC Station P	2.21	276	⇑*i*P	Pn	14 08 26.2	+1.1
PB15				*e*S	S	14 08 58.2	+1.2
PB15	IPOC Station P	2.21	276	*e*P		14 08 26.3	
PB15				*e*S		14 08 58.8	
PB15				IAML		14 09 00.5	
	comp=Z,2µm,0.4s						
PB06	IPOC Station P	2.41	288		Pn	14 08 28.3	+1.1
PB06				Sn	S	14 09 00.9	+0.1
PB06	IPOC Station P	2.41	288	⇑*i*P	Pn	14 08 28.4	+1.1
PB06				*e*S	S	14 09 01.3	+0.5

PB06				IAML		14 09 02.2	
	comp=N,968nm,0.5s						
PB06	IPOC Station P	2.41	288	eP		14 08 28.2	
PB06				eS		14 09 01.5	
PB06				IAML		14 09 05.5	
	comp=Z,522nm,0.5s						
PB09	IPOC Station P	2.59	309		Pn	14 08 30.4	+1.1
PB09	IPOC Station P	2.59	309	⇑iP	Pn	14 08 30.3	+1.1
PB09				eS	S	14 09 04.8	+0.3
PB09	IPOC Station P	2.59	309	eP		14 08 30.4	
PB09				eS		14 09 06.1	
PB09				IAML		14 09 11.8	
	comp=Z,264nm,0.3s						
PB03	IPOC Station P	2.84	299		Pn	14 08 32.7	+0.8
PB03				Sn	S	14 09 08.6	-0.8
PB03	IPOC Station P	2.84	299	⇑eP	Pn	14 08 32.7	+0.8
PB03				eS	S	14 09 08.7	-0.7
PB03				IAML		14 09 10.0	
	comp=N,1µm,0.4s						
PB03	IPOC Station P	2.84	299	eP		14 08 32.6	
PB03				eS		14 09 09.3	
PB03				IAML		14 09 10.5	
	comp=Z,669nm,0.3s						
GO02	Mina Guanaco	2.84	233		Pn	14 08 33.4	+1.3
GO02	Mina Guanaco	2.84	233	⇓iP	Pn	14 08 33.3	+1.2
GO02				eS	S	14 09 11.0	+1.3
GO02				IAML		14 09 12.5	
	comp=N,1µm,0.4s						
GO02	Mina Guanaco	2.84	233	eP		14 08 33.5	
GO02				eS		14 09 11.7	
PB04	IPOC Station P	3.04	291		Pn	14 08 35.0	+0.7
PB04	IPOC Station P	3.04	291	⇑iP	Pn	14 08 35.2	+0.9
PB04				eS	S	14 09 13.3	-0.3
PB04				IAML		14 09 21.1	
	comp=N,571nm,0.4s						
PB04	IPOC Station P	3.04	291	eP		14 08 35.5	
PB04				eS		14 09 14.5	
PB04				IAML		14 09 20.7	
	comp=Z,324nm,0.5s						
PB07	IPOC Station P	3.11	303		Pn	14 08 35.3	+0.1
PB07	IPOC Station P	3.11	303	⇑iP	Pn	14 08 35.8	+0.7
PB07				eS	S	14 09 13.8	-1.3
PB07	IPOC Station P	3.11	303	eP		14 08 35.7	
PB07				eS		14 09 14.4	
PB07				IAML		14 09 16.2	
	comp=Z,509nm,0.4s						
PB10	IPOC Station P	3.18	268		Pn	14 08 37.1	+1.4
PB10	IPOC Station P	3.18	268	⇑iP	Pn	14 08 37.1	+1.4
PB10				eS	S	14 09 15.5	-0.8
PB10	IPOC Station P	3.18	268	eP		14 08 37.2	
PB10				eS		14 09 16.4	
PB10				IAML		14 09 20.2	
	comp=Z,162nm,0.4s						
PB14	IPOC Station P	3.24	248	Pn	Pn	14 08 37.9	+1.2
PB14	IPOC Station P	3.24	248	eP	Pn	14 08 38.0	+1.2
PB14				eS	S	14 09 17.8	-0.4
PB01	IPOC Station P	3.28	317		Pn	14 08 37.2	+0.2
PB01	IPOC Station P	3.28	317	⇑eP	Pn	14 08 37.2	+0.2
PB01				eS	S	14 09 17.5	-1.1
PB01	IPOC Station P	3.28	317	eP		14 08 37.3	
PB01				IAML		14 09 20.3	
	comp=Z,401nm,0.2s						
PB02	IPOC Station P	3.36	309		Pn	14 08 38.2	+0.2
PB02	IPOC Station P	3.36	309	⇑iP	Pn	14 08 38.3	+0.2
PB02				eS	S	14 09 18.7	-1.7
PB02	IPOC Station P	3.36	309	eP		14 08 38.5	
PB02				eS		14 09 19.0	
PB02				IAML		14 09 20.0	
	comp=Z,835nm,0.3s						
PB08	IPOC Station P	3.83	329		Pn	14 08 44.6	+0.7
PB08	IPOC Station P	3.83	329	⇑iP	Pn	14 08 44.8	+0.9
PB08				eS	S	14 09 30.5	-0.4
PB08	IPOC Station P	3.83	329	eP		14 08 45.1	
PB08				eS		14 09 31.3	
PB08				IAML		14 09 32.9	
	comp=Z,231nm,0.3s						
AC02	Maricunga	3.83	208	Pn	Pn	14 08 45.1	+1.1
TA01	Diego Aracena	4.07	315	Pn	Pn	14 08 46.1	-0.4
TA01	Diego Aracena	4.07	315	eP	Pn	14 08 46.4	-0.1
TA01	Diego Aracena	4.07	315	eP		14 08 46.9	
TA01				eS		14 09 34.6	
TA01				IAML		14 09 38.7	
	comp=Z,161nm,0.5s						
AC01	Pan de Azucar	4.16	229	Pn	Pn	14 08 47.7	+0.1
AC01	Pan de Azucar	4.16	229	eP	Pn	14 08 47.7	+0.1
AC01	Pan de Azucar	4.16	229	eP		14 08 47.7	
AC01				eS		14 09 37.3	
GO01	Chusmiza	4.26	332	Pn	Pn	14 08 49.8	+0.5
PB11	IPOC Station P	4.39	327	Pn	Pn	14 08 50.1	-0.6
PB11	IPOC Station P	4.39	327	eP	Pn	14 08 50.1	-0.6
TINO	Tinogasta	4.60	185	eP		14 08 55.4	
TINO				eS		14 09 32.3	
PSGCX	Pisagua	4.78	323		Pn	14 08 54.1	-1.3
PSGCX	Pisagua	4.78	323	eP		14 08 54.2	
PSGCX				eS		14 09 45.7	
PSGCX				IAML		14 09 49.2	
	comp=Z,229nm,0.5s						
MNMC	Minye Minye	4.91	331		Pn	14 08 57.3	0.0
MNMC	Minye Minye	4.91	331	eP	Pn	14 08 57.3	0.0
MNMCX	Minye Minye	4.91	331	eP		14 08 57.3	
MNMCX				eS		14 09 53.1	
MNMCX				IAML		14 09 55.7	
	comp=Z,339nm,0.6s						
GO03	Copiap	5.00	214		Pn	14 08 57.9	-0.2
GO03	Copiap	5.00	214	eP		14 08 58.0	
GO03				eS		14 09 56.1	
PB16	IPOC Station P	5.58	336		Pn	14 09 06.7	+0.5
PB12	IPOC Station P	5.70	327	Pn	Pn	14 09 05.8	-1.3
AC04	Llanos de Chal	5.93	216	Pn	Pn	14 09 08.6	-1.3
AC05	El Transito	6.07	207		Pn	14 09 11.3	-0.5
LCO	Las Campanas	6.40	210	Pn	Pn	14 09 15.1	-1.2
CO01	Juntas del Tor	7.02	202	Pn	Pn	14 09 23.7	-0.5
LPAZ	La Paz	7.21	352	P	Pn	14 09 26.6	-0.5
	comp=Z,14nm,0.3s,baz=148,slow=5.2,SNR=64						
LPAZ				S	S	14 10 46.5	-2.9
	comp=Z,4.2nm,0.5s,baz=78,slow=23,SNR=1.7						
LPAZ	La Paz	7.21	352	Pn	Pn	14 09 27.2	0.0
LPAZ	La Paz	7.21	352	eP	Pn	14 09 27.1	0.0
GO04	Tololo Observa	7.46	206		Pn	14 09 27.8	-2.0
CO03	El Pedregal	8.01	203		Pn	14 09 34.9	-2.0
CFA	Coronel Fontan	8.17	187	P	Pn	14 09 38.5	-0.4
	comp=Z,3.4nm,0.3s,baz=55,slow=18,SNR=15						
CFA				S	S	14 11 04.7	-6.5
	comp=Z,9.3nm,0.5s,baz=7.7,slow=16,SNR=10						
CO06	Fray Jorge	8.24	208	Pn	Pn	14 09 37.3	-2.5
CO02	Combarbal	8.46	203	Pn	Pn	14 09 41.5	-1.1
CPUP	Villa Florida	9.31	110	P	Pn	14 09 49.8	-3.8
	comp=Z,2.0nm,0.8s,baz=314,slow=9.6,SNR=3.8						
SIV	San Ignacio	9.35	38	P	Pn	14 09 50.3	-4.0
	comp=Z,10nm,0.5s,baz=210,slow=13,SNR=37						
SIV				S	S	14 11 20.9	-18
	comp=Z,1.3nm,0.6s,baz=234,slow=14,SNR=3.5						
BO02	Sierra Bellavi	11.74	195		Pn	14 10 24.5	-0.2
VILB	Vilhena	12.33	33		Pn	14 10 30.1	-2.3
VILB	Vilhena	12.33	33	eP	Pn	14 10 31.4	-1.0
CRSM	Crissiumal (Br	12.45	112	eP	Pn	14 10 35.0	+1.4
SALV	Santo Antonio	13.10	57	eP	Pn	14 10 43.9	+1.9
ETMB	Extrema	13.60	4		Pn	14 10 45.3	-2.8
ETMB	Extrema	13.60	4	eP	Pn	14 10 46.8	-1.3
ALGR	Alto Alegre (B	13.70	116	eP	Pn	14 10 50.4	+1.0
PTGB	Pitanga	13.78	98	eP	P	14 10 52.6	+0.3
CPSB	Cacapava Do Su	13.99	123	eP	Pn	14 10 53.6	+0.8
ITAB	Concordia	14.03	109	eP	Pn	14 10 54.0	+0.6
PLTB	Pedras Altas	14.52	128		Pn	14 10 56.9	-2.5
PLTB	Pedras Altas	14.52	128	eP	Pn	14 10 58.6	-0.8
SAML	Samuel	14.91	15	P	Pn	14 11 02.5	-1.8
SAML	Samuel	14.91	15	eP	Pn	14 11 03.2	-1.1
TRQA	Tornquist	15.19	164		P	14 11 03.9	-3.8
PDRB	Porto dos Gac	15.37	42	eP	P	14 11 08.2	-1.7
CNLB	Canela	15.66	115	eP	P	14 11 13.0	-0.1
ITRB	Iturama	16.00	80	eP	P	14 11 16.0	-0.8
FRTB	Fartura	16.09	93	eP	P	14 11 18.4	+0.6
GO06	Curarrehue	16.49	192	P	P	14 11 19.2	-3.0
BB19B	Bebedouro	17.34	86	eP	P	14 11 30.6	-1.0
PLCA	Paso Flores	17.46	189	P	Pn	14 11 35.0	+0.4
	comp=Z,1.0nm,0.4s,baz=15,slow=10,SNR=11						
PLCA	Paso Flores	17.46	189	P	P	14 11 29.6	-3.1
PLCA				IAmb	IAmb	14 11 42.3	
	comp=Z,5.1nm,0.6s						
PLCA	Paso Flores	17.46	189	eP	P	14 11 30.6	-2.2
PET01	Itanhaem-SP	18.14	97	eP	P	14 11 39.6	-0.5
IPMB	Ipameri, GO	18.47	76	eP	P	14 11 44.0	+0.1
VAO	Valinhos	18.50	93	eP	P	14 11 43.6	-0.6
SNDB	Serra Nova Dou	18.87	55	eP	P	14 11 47.2	-1.0
BDFB	Brasilia	19.57	70	P	P	14 11 54.6	-1.2
	comp=Z,2.2nm,0.5s,baz=227,slow=9.6,SNR=3.1						
BDFB	Brasilia	19.57	70	eP	P	14 11 55.6	-0.2
PARB	Paraibuna	19.70	94	eP	P	14 11 56.6	-0.5
NPGB	Novo Progresso	19.84	36	eP	P	14 11 57.1	-1.5
PMNB	Patos De Minas	19.89	80	eP	P	14 11 59.0	-0.1
TEFE	Tefe	19.98	7	eP	P	14 11 59.4	-0.7
BSCB	Bom Sucesso	20.80	88	eP	P	14 12 09.3	+0.4
ITTB	Itaituba	21.93	32	eP	P	14 12 18.4	-1.8
DUB01	Friburgo-RJ	22.82	91	eP	P	14 12 28.7	+0.2
JANB	Januaria	23.05	73	eP	P	14 12 29.3	-1.3
SMTB	Santa Maria do	23.65	55	eP	P	14 12 34.8	-1.2
SDBA	SAO DESIDERIO	23.76	66	eP	P	14 12 35.9	-1.2
MALB	Monte Alegre	24.82	32	eP	P	14 12 44.9	-1.6
BOAV	Boa Vista	26.49	15	P	P	14 12 59.3	-2.2
BOAV				IAmb	IAmb	14 13 04.9	
	comp=Z,3.1nm,0.5s						
BOAV	Boa Vista	26.49	15	eP	P	14 13 00.4	-1.2
VNA3	Neumayer Olymp	57.68	161	P	P	14 17 15.1	+3.5
VNA2	Neumayer--Watz	58.24	160	P	P	14 17 18.4	+3.0
	baz=303,slow=8.0						
SNAA	Sanae	59.88	161	P	P	14 17 29.3	+2.5
TXAR	Lajitas Array	63.20	324	P	P	14 17 52.2	+2.7
	comp=Z,0.1nm,0.4s,baz=146,slow=7.1,SNR=3.2						
	comp=Z,0.1nm,0.4s						
QSPA	South Pole Qui	66.74	180	P	P	14 18 15.2	+3.4
	comp=Z,3.2nm,0.5s,baz=328,slow=1.2,SNR=35						
	comp=Z,3.2nm,0.5s						
TORD	Torodi Ar. Bea	76.45	69	P	P	14 19 10.7	+0.2
	comp=Z,0.7nm,0.5s,baz=258,slow=5.8,SNR=9.3						
	comp=Z,0.7nm,0.5s						
PDAR	Pinedale Array	76.65	329	P	P	14 19 14.4	+3.1
	comp=Z,0.4nm,0.6s,baz=143,slow=3.2,SNR=3.6						
	comp=Z,0.4nm,0.6s						
SCHQ	Schefferville	77.98	0	P	P	14 19 19.6	+1.6
	comp=Z,2.5nm,0.7s,baz=258,slow=5.5,SNR=4.6						
	comp=Z,2.5nm,0.7s						
NVAR	Mina Array Bea	78.07	321	P	P	14 19 23.1	+3.9
	comp=Z,0.2nm,0.5s,baz=95,slow=5.9,SNR=2.2						
	comp=Z,0.2nm,0.5s						
BOSA	Boshof	81.05	117	P	P	14 19 36.8	+1.3
	comp=Z,0.8nm,0.4s,baz=168,slow=5.2,SNR=3.0						
	comp=Z,0.8nm,0.4s						
ESDC	Sonseca Array	86.07	44	P	P	14 20 01.4	+0.8
	comp=Z,0.3nm,0.7s,baz=225,slow=18,SNR=1.6						
	comp=Z,0.3nm,0.7s						
YKA	Yellowknife Ar	93.60	340	P	P	14 20 37.5	+2.4
	comp=Z,0.5nm,0.5s,baz=132,slow=4.6,SNR=14						
	comp=Z,0.5nm,0.5s						
ASAR	Alice Springs	128.90	205	PKP	PKiKP	14 26 29.4	+2.0
	comp=Z,0.3nm,0.6s,baz=123,slow=1.5,SNR=1.8						
WRA	Warramunga Arr	132.06	208	PKP	PKiKP	14 26 35.7	+1.8
	comp=Z,0.3nm,0.5s,baz=149,slow=1.8,SNR=1.8						
WRA				SKPbc	SKiKP	14 29 44.1	-5.8
	comp=Z,0.6nm,0.7s,baz=158,slow=3.5,SNR=6.0						
MKAR	Makanchi Array	146.16	39	PKPbc	PKiKP	14 27 00.6	-1.2
	comp=Z,0.6nm,0.8s,baz=286,slow=4.9,SNR=4.0						
PZH	PanZhiHua	169.43	71	PKP	PKPdf	14 27 19.8	-6.4

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*IDC **16** 14:12:10.4±2.9, 6°.32S×147°.43E, h33^{km}±20^{km}, mb4.2/26, mbtmp4.4/28, ML4.8/2, MS3.4/30, Error ellipse: s-maj=19.1km s-min=11.6km az=89.0*

*NEIC **16** 14:12:15.7±2.7, 6°.41S±0°.06×147°.26E±0°.09, h84^{km}±5^{km}, mb4.7/44, Error ellipse: s-maj=13.3km s-min=8.8km az=82.0*

*DJA **16** 14:12:15.9±0.3, 6°S±3°×14°7E±°, h74^{km}±2^{km}, M4.8/60, mb5.0/60, mB5.3/12, MLv5.0/2, Mw(mB)4.7/12, MwMwp6.0/1, Mwp6.0/1*

ISC 16 14:12:14.0±0.4, **6°.42S**±0°.05×**147°.26E**±0°.06, **h63^{km}, n163,** σ**1^{s}.68**/156, **mb4.7**/73, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.97	182	Pn	Pn	14 13 00.0	+1.3
	134nm,0.3s,baz=32,slow=7.3,SNR=304						
PMG				Sn	Sn	14 13 35.0	+1.9
	119nm,0.3s,baz=57,slow=23,SNR=2.4						
PMG				LR	LR	14 14 31.5	
	comp=Z,581nm,19.7s,baz=15,slow=46						
KRVT	Keravat (AS076	5.19	66	Pn	Pn	14 13 29.6	+0.5
	5.9nm,0.3s,baz=252,slow=20,SNR=4.9						
KRVT				LR	LR	14 15 47.8	
	comp=Z,209nm,18.2s,baz=356,slow=44						
RABL	Rabaul	5.37	66		Pn	14 13 33.0	+1.4
COEN	Coen	8.50	208	Pn	Pn	14 14 15.1	+0.6
SMPI	Sarmi	9.59	297	P	Pn	14 14 29.7	+0.4
	23nm,1.1s						
HNR	Honiara	12.92	104	LR	LR	14 18 40.8	
	comp=Z,990nm,20.1s,baz=338,slow=30						
CTA	Charters Tower	13.62	184	Pn	Pn	14 15 26.4	+2.1
	1.4nm,0.3s,baz=2.9,slow=13,SNR=30						
CTA				LR	LR	14 20 12.5	
	comp=Z,125nm,18.9s,baz=359,slow=35						
CTAO	Charters Tower	13.62	184	Pn	Pn	14 15 26.6	+2.2
FAKI	Fak Fak	15.35	282	P	P	14 15 50.4	-0.1
FAKI				IAmb	IAmb	14 15 56.6	
	comp=Z,35nm,0.9s						
FAKI	Fak Fak	15.35	282	P	Pn	14 15 49.3	+2.3
	comp=Z,50nm,1.1s						
SIJI	Sorong	16.88	288	P	P	14 16 07.9	+0.5
	comp=Z,3.8nm,0.3s,baz=88,slow=12,SNR=14						
SIJI				LR	LR	14 24 20.6	
	comp=Z,122nm,21.4s,baz=94,slow=43						
	comp=Z,32nm,0.6s						
MTN	Manton Dam	17.12	247		Pn	14 16 10.1	+0.9
MTN				IAmb	IAmb	14 16 42.2	
	comp=Z,43nm,1.5s						
BNDI	Bandanaira	17.37	275	P	P	14 16 15.4	+2.6
	comp=Z,122nm,1.0s						
WB0	Warramunga Arr	18.23	222		P	14 16 21.4	-0.8
WRAB	Tennant Creek	18.37	222	P	P	14 16 21.1	-2.8
WRAB				IAmb	IAmb	14 16 25.0	
	comp=Z,22nm,0.7s						
WRAB	Tennant Creek	18.37	222	P	P	14 16 24.7	+0.9
WB2	Warramunga Arr	18.38	222		P	14 16 22.3	-1.6
WRA	Warramunga Arr	18.39	222	P	P	14 16 24.6	+0.6
	comp=Z,2.5nm,0.3s,baz=48,slow=11,SNR=45						
WRA				S	Sn	14 19 41.1	-8.5
	comp=Z,0.7nm,0.5s,baz=44,slow=24,SNR=1.5						
WRA				PcP	PcP	14 20 53.4	+0.4
	comp=Z,1.8nm,0.5s,baz=28,slow=1.6,SNR=1.6						
WRA				LR	LR	14 24 18.7	
	comp=Z,90nm,22.0s,baz=64,slow=39						
WRA				ScP	ScP	14 24 26.2	+2.9
	comp=Z,0.9nm,0.7s,baz=50,slow=2.4,SNR=1.6						
	comp=Z,6.8nm,0.5s						
WRA	Warramunga Arr	18.39	222	P	P	14 16 22.0	-2.0
MSAI	Masohi	18.51	279	P	Pn	14 16 28.5	+2.3
	comp=Z,8.6nm,0.5s,comp=Z,215nm						
AAI	Ambon	19.18	277	P	Pn	14 16 35.2	+1.0
	comp=Z,117nm,0.7s,comp=Z,1µm						
EIDS	Eidsvold	19.20	169		Pn	14 16 34.7	+0.4
RMQ	Roma	20.01	176	P	Pn	14 16 45.0	+1.1
GUMO	Guam	20.02	353	LR	LR	14 23 12.2	
	comp=Z,62nm,20.8s,baz=111,slow=33						
QLP	Quilpie	20.26	188	P	Pn	14 16 46.6	-0.2
NLAI	Namlea	20.33	278	P	Pn	14 16 47.7	0.0
	comp=Z,25nm,0.5s,comp=Z,2µm						
KNRA	Kununurra	20.33	242	P	P	14 16 45.5	+0.3
KNRA				IAmb	IAmb	14 16 46.7	
	comp=Z,25nm,0.6s						
KNRA	Kununurra	20.33	242	P	P	14 16 45.9	+0.7
LBMI	Labuha	20.53	285	P	Pn	14 16 50.4	+0.3
	comp=Z,175nm,1.1s,comp=Z,2µm						
TNTI	Ternate	21.10	289	P	P	14 16 55.2	+1.7
	comp=Z,21nm,1.1s						
AS01	Alice Springs	21.39	215	P	P	14 16 57.8	+1.2
AS31	Alice Springs	21.42	215	P	P	14 16 58.1	+1.2
AS31				IAmb	IAmb	14 17 01.7	
	comp=Z,14nm,0.3s						
ASAR	Alice Springs	21.42	215	P	P	14 16 57.8	+0.9
	comp=Z,6.9nm,0.4s,baz=55,slow=8.8,SNR=186						
ASAR				S	S	14 20 50.8	-0.6
	comp=Z,3.3nm,0.9s,baz=39,slow=21,SNR=3.0						
ASAR				ScP	ScP	14 24 35.1	+4.9
	comp=Z,1.8nm,0.9s,baz=43,slow=4.2,SNR=5.6						
ASAR				LR	LR	14 26 03.9	
	comp=Z,87nm,18.8s,baz=38,slow=39						
	comp=Z,6.9nm,0.4s						
SANI	Sanana	21.64	281	P	P	14 17 03.5	+4.2
SANI	Sanana	21.64	281	P	P	14 17 00.0	+0.7
	comp=Z,57nm,0.9s						
INKA	Innaminka	22.09	195	P	P	14 17 05.9	+1.9
AULRC	Lightning Ridg	22.90	178	P	P	14 17 14.3	+1.7
SOEI	Soe	23.00	260	P	P	14 17 15.7	+1.8
SOEI				IAmb	IAmb	14 17 34.2	
	comp=Z,39nm,0.9s						
SOEI	Soe	23.00	260	P	P	14 17 15.6	+1.8
SOEI	Soe	23.00	260	P	P	14 17 15.5	+1.6
	comp=Z,47nm,0.9s						
OOD	Oodnadatta	23.93	206	P	P	14 17 23.2	+1.0
FITZ	Fitzroy Crossi	24.07	239	P	P	14 17 24.1	+0.5
DZM	Mont Dzumac	24.20	132	P	P	14 17 24.3	-0.6
	comp=Z,8.5nm,1.0s,baz=248,slow=19,SNR=1.6						
DZM				LR	LR	14 25 39.9	
	comp=Z,163nm,21.5s,baz=15,slow=34						
	comp=Z,8.5nm,1.0s						
ARMA	Armidale	24.23	171	P	P	14 17 25.9	+0.8
ARMA				IAmb	IAmb	14 17 28.8	
	comp=Z,36nm,1.4s						
MMRI	Maumere	24.90	263	P	P	14 17 29.2	-2.0
MMRI	Maumere	24.90	263	P	P	14 17 32.5	+1.2
MMRI	Maumere	24.90	263	P	P	14 17 32.2	+0.9
	comp=Z,114nm,0.7s,comp=Z,1µm						
MMRI				pP	pP	14 17 48.6	+1.8
	comp=Z,114nm,0.7s,comp=Z,1µm						
LUWI	Luwuk	25.00	281	P	P	14 17 31.9	-0.3
LUWI	Luwuk	25.00	281	P	P	14 17 35.5	+3.3
LUWI	Luwuk	25.00	281	P	P	14 17 34.4	+2.2
	comp=Z,164nm,0.9s,comp=Z,3µm						
LUWI				pP	pP	14 17 49.8	+2.1
	comp=Z,164nm,0.9s,comp=Z,3µm						
GTOI	Gorontalo	25.19	285	P	P	14 17 36.8	+2.9
	comp=Z,80nm,0.7s,comp=Z,692nm						
LCRK	Leigh Creek	25.37	198	P	P	14 17 38.3	+3.0
STKA	Stephens Creek	25.88	191	P	P	14 17 40.0	0.0
	comp=Z,2.6nm,0.5s,baz=337,slow=16,SNR=4.4						
STKA				LR	LR	14 27 40.8	
	comp=Z,62nm,21.5s,baz=30,slow=36						
	comp=Z,2.6nm,0.5s						
STKA	Stephens Creek	25.88	191	P	P	14 17 39.9	0.0
WRKA	Warakurna	25.93	222	P	P	14 17 40.9	+0.4
MRSI	Marisa	26.18	284	P	P	14 17 43.2	+0.4
	comp=Z,30nm,0.6s						
BSSI	Bau Bau, Buton	26.61	269	P	P	14 17 48.3	+1.6
	comp=Z,35nm,1.2s						
BASI	Baing, Sumba	26.66	260	P	P	14 17 49.1	+1.9
	comp=Z,88nm,0.8s						
BKSI	Bulukumba	27.01	271	P	P	14 17 52.1	+1.7
	comp=Z,6.8nm,0.7s						
KAPI	Kappang	27.40	271	P	P	14 17 54.9	+1.0
	comp=Z,7.4nm,0.9s,baz=90,slow=5.5,SNR=6.3						
KAPI				LR	LR	14 30 10.0	
	comp=Z,21nm,21.3s,baz=86,slow=39						
	comp=Z,7.4nm,0.9s						
KAPI	Kappang	27.40	271	P	P	14 17 56.8	+2.9
	comp=Z,13nm,1.3s						
TOLI2	Tolitoli	27.46	285	P	P	14 17 53.7	-0.8
TOLI2				IAmb	IAmb	14 17 56.0	
	comp=Z,21nm,0.9s						
TOLI2	Tolitoli	27.46	285	P	P	14 17 55.5	+1.1
MPSI	Mapaga	28.11	283	P	P	14 18 01.1	+0.9
	comp=Z,16nm,0.8s						
BBOO	Buckleboo	28.25	200	P	P	14 17 59.5	-1.8
BBOO				IAmb	IAmb	14 18 10.4	
	comp=Z,42nm,1.5s						
CAN	Canberra	28.81	177	P	P	14 18 06.8	+0.6
CAN				IAmb	IAmb	14 18 30.4	
	comp=Z,56nm,1.5s						
PLAI	Plampang	29.31	263	P	P	14 18 10.3	-0.6
PLAI	Plampang	29.31	263	P	P	14 18 09.9	-1.0
	comp=Z,21nm,0.7s						
TWSI	Taliwang, Sumb	30.19	264	P	P	14 18 17.7	-1.0
	comp=Z,13nm,0.7s						
FORT	Forrest	30.20	214	P	P	14 18 15.9	-2.6
FORT				IAmb	IAmb	14 18 22.0	
	comp=Z,17nm,0.8s						
MBWA	Marble Bar	30.40	238	P	P	14 18 17.3	-3.2
MBWA				IAmb	IAmb	14 18 40.6	
	comp=Z,18nm,1.2s						
PSA00	Pilbara Seismi	30.48	238	P	P	14 18 19.6	-1.6
PSA00				IAmb	IAmb	14 18 23.0	
	comp=Z,16nm,1.1s						
MYLDM	Lahad Datu	30.93	291	P	P	14 18 23.5	-1.7
MYLDM				IAmb	IAmb	14 19 05.4	
	comp=Z,28nm,1.4s						
IGBI	Denpasar	31.91	264	P	P	14 18 33.1	-0.7
	comp=Z,46nm,0.8s,comp=Z,1µm						
MSVF	Nonsavu	32.09	113	LR	LR	14 28 46.1	
	comp=Z,82nm,21.0s,baz=222,slow=31						
JAGI	Jajag, Banyuwa	32.88	264	P	P	14 18 40.6	-1.8
JAGI	Jajag, Banyuwa	32.88	264	P	P	14 18 42.1	-0.2
	comp=Z,19nm,1.1s						
JCJ	Chichijima	33.67	352	LR	LR	14 29 03.0	
	comp=Z,54nm,20.4s,baz=90,slow=30						
MEEK	Meekatharra	33.88	230	P	P	14 18 51.9	+1.0
SBUM	Sibu	36.07	283	P	P	14 19 10.3	+0.4
SBUM				IAmb	IAmb	14 19 13.1	
	comp=Z,14nm,1.0s						
MORW	Morawa	37.09	229	P	P	14 19 17.6	-0.8
KLBR	Kellerberrin	37.25	224	P	P	14 19 20.0	+0.3
KSM	Kuching	37.71	281	P	P	14 19 27.4	+3.6
	comp=Z,10nm,1.0s						
JOW	Kunigami	37.83	332	LR	LR	14 32 31.0	
	comp=Z,52nm,19.7s,baz=115,slow=32						
KPJI	Karang Pucung	38.05	266	P	P	14 19 27.7	+1.0
	comp=Z,18nm,0.6s						
NWAO	Narrogin (SRO)	38.39	223	P	P	14 19 30.1	+0.8
	comp=Z,6.1nm,0.6s,baz=72,slow=8.4,SNR=8.1						
	comp=Z,6.1nm,0.6s						
NWAO	Narrogin (SRO)	38.39	223	P	P	14 19 29.3	0.0
CMJI	Cimerak	38.52	266	P	P	14 19 30.4	-0.3
	comp=Z,46nm,1.4s						
BBJI	Bungbulang	39.32	266	P	P	14 19 37.8	+0.4
CNJI	Cibinong	39.84	266	P	P	14 19 42.0	+0.3
	comp=Z,34nm,0.9s						
SKJI	Sukabumi	40.42	267	P	P	14 19 46.3	-0.2
	comp=Z,100nm,0.7s						
AFI	Afiamalu	40.96	104	LR	LR	14 33 39.4	
	comp=Z,82nm,20.4s,baz=264,slow=32						
CGJI	Cibinong	41.29	267	P	P	14 19 54.5	+0.9
	comp=Z,31nm,0.7s						
TKNZ	Takaka Hill	41.41	150	P	P	14 19 55.3	+1.1
NNZ	Nelson	41.75	150	P	P	14 19 57.8	+0.7
NNZ				IAmb	IAmb	14 20 30.8	
	comp=Z,9.5nm,1.1s						
THZ	Tophouse	41.93	151	P	P	14 19 59.0	+0.5
THZ				IAmb	IAmb	14 20 01.1	
	comp=Z,9.2nm,0.8s						
JNU	Nakatsue	42.29	339	P	P	14 20 00.8	-0.7
	comp=Z,3.2nm,0.7s,baz=216,slow=20,SNR=2.2						
JNU				LR	LR	14 33 56.6	
	comp=Z,77nm,21.2s,baz=178,slow=31						
	comp=Z,3.2nm,0.7s						
MRZ	Mangatainoka R	42.47	148	P	P	14 20 03.0	0.0
MRZ				IAmb	IAmb	14 20 28.1	
	comp=Z,29nm,1.4s						
RPZ	Rata Peaks	42.62	154	P	P	14 20 04.3	+0.1
	comp=Z,5.5nm,0.7s,baz=236,slow=3.6,SNR=4.9						
RPZ				LR	LR	14 36 40.7	
	comp=Z,61nm,18.0s,baz=312,slow=34						
	comp=Z,5.5nm,0.7s						
MJAR	Matsushiro Arr	43.57	349	LR	LR	14 34 48.5	
	comp=Z,100nm,21.7s,baz=173,slow=31						
RGRI	Rengat	45.22	276	P	P	14 20 27.5	+2.1
	comp=Z,151µm,0.7s						
SDSI	Sungai Dareh	46.03	275	P	P	14 20 32.7	+0.9
	comp=Z,16nm,0.9s,comp=Z,1µm						
NJ2	Nanjing	46.87	326	eP	P	14 20 38.9	+0.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSRS	Korea Array	47.23	339	P	P	14 20 40.3	-0.4
	comp=Z,2.9nm,0.8s,baz=159,slow=8.8,SNR=12						
KSRS				LR	LR	14 40 39.5	
	comp=Z,21nm,18.2s,baz=155,slow=36						
	comp=Z,2.9nm,0.8s						
IPM	Ipoh	47.41	282	P	P	14 20 41.8	-0.8
IPM	Ipoh	47.41	282	P	P	14 20 44.3	+1.7
KULM	Kulim	47.95	283	P	P	14 20 46.6	-0.2
SKLT	Songkhla	48.44	285	P	P	14 20 52.7	+2.2
SRIT	Nakonsritamara	49.79	287	P	P	14 21 03.3	+2.4
GSI	Gunungsitoli	50.18	277	P	P	14 21 01.1	-2.7
GSI	Gunungsitoli	50.18	277	P	P	14 21 04.7	+0.9
GSI	Gunungsitoli	50.18	277	P	P	14 21 04.5	+0.7
	comp=Z,43nm,0.7s						
KCSI	Kotacane, Aceh	50.38	280	P	P	14 21 05.6	+0.2
	comp=Z,33nm,1.1s						
ASAJ	Asahikawa	50.48	356	P	P	14 21 04.8	-0.6
	comp=Z,2.5nm,0.7s,baz=129,slow=14,SNR=1.9						

ASAJ				LR	LR	14 43 40.8	
	comp=Z,21nm,18.2s,baz=144,slow=38						
	comp=Z,2.5nm,0.7s						
TIA	**Tai'an**	**50.96**	**328**	P	**P**	**14 21 09.3**	**0.0**
TIA				pmax	pmax		
	comp=Z,3µm,0.7s						
SNSI	**Sinabang, Aceh**	**51.60**	**278**	P	**P**	**14 21 15.2**	**+0.7**
	comp=Z,34nm,0.7s						
MLSI	**Meulaboh, Aceh**	**51.87**	**281**	P	**P**	**14 21 16.6**	**+0.1**
	comp=Z,19nm,0.8s						
USRK	**Ussuriysk Ar.**	**52.23**	**346**	LR	LR	14 42 27.6	
	comp=Z,31nm,18.0s,baz=103,slow=35						
CMAR	**Chiang Mai Arr**	**53.67**	**298**	P	**P**	**14 21 30.9**	**+1.2**
	comp=Z,1.8nm,0.5s,baz=124,slow=6.1,SNR=12						
CMAR				LR	LR	14 47 59.1	
	comp=Z,12nm,18.7s,baz=185,slow=40						
	comp=Z,1.8nm,0.5s						
XAN	**Xi'an**	**54.16**	**321**	P	**P**	**14 21 32.8**	**-0.3**
XAN				pP	pP	14 21 52.3	+1.8
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KLR	**Kul'dur**	**57.05**	**348**	P	**P**	**14 21 53.9**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=182,slow=2.9,SNR=6.9						
KLR				LR	LR	14 44 41.5	
	comp=Z,20nm,18.8s,baz=152,slow=34						
	comp=Z,1.2nm,0.5s						
HHC	**Hu-ho-hao-te**	**57.32**	**328**	*e*P	**P**	**14 21 58.8**	**+3.2**
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,4.9s						
PEA0B	**Petropavlovsk-**	**59.96**	**7**	P	**P**	**14 22 13.0**	**-0.6**
PETK	**Petropavlovsk-**	**59.96**	**7**	P	**P**	**14 22 14.2**	**+0.7**
	comp=Z,4.2nm,0.8s,baz=162,slow=5.6,SNR=17						
PETK				LR	LR	14 43 26.1	
	comp=Z,21nm,21.2s,baz=162,slow=31						
	comp=Z,4.2nm,0.8s						
ULN	**Ulaanbaatar**	**64.60**	**331**	P	**P**	**14 22 44.9**	**-0.1**
SONM	**Songino Array**	**64.89**	**331**	P	**P**	**14 22 47.0**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=149,slow=8.1,SNR=10.0						
	comp=Z,1.6nm,0.7s						
SONM	**Songino Array**	**64.89**	**331**	P	**P**	**14 22 43.6**	**-3.2**
CASY	**Casey**	**64.92**	**195**	P	**P**	**14 22 45.2**	**-1.3**
MA2	**Magadan**	**65.84**	**2**	P	**P**	**14 22 52.3**	**-0.3**
	comp=Z,3.2nm,0.6s,baz=204,slow=19,SNR=2.9						
	comp=Z,3.2nm,0.6s						
PALK	**Pallekele**	**67.77**	**281**	P	**P**	**14 23 04.5**	**-1.3**
PALK				IAmb	IAmb	14 23 08.4	
	comp=Z,11nm,0.9s						
SEY	**Seymchan**	**69.26**	**3**	P	**P**	**14 23 13.8**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=155,slow=18,SNR=3.5						
	comp=Z,1.0nm,0.6s						
VNDA	**Vanda**	**71.48**	**177**	P	**P**	**14 23 27.9**	**+0.5**
	comp=Z,4.3nm,0.8s,baz=329,slow=6.0,SNR=8.5						
	comp=Z,4.3nm,0.8s						
VNDA	**Vanda**	**71.48**	**177**	P	**P**	**14 23 27.2**	**-0.3**
VNDA				IAmb	IAmb	14 23 46.5	
	comp=Z,13nm,1.4s						
WMQ	**Urumqi**	**73.27**	**319**	*e*P	**P**	**14 23 37.8**	**-1.0**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MKAR	**Makanchi Array**	**77.98**	**320**	P	**P**	**14 24 05.1**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=99,slow=8.1,SNR=22						
MKAR				LR	LR	14 59 32.8	
	comp=Z,29nm,19.2s,baz=334,slow=36						
	comp=Z,2.5nm,0.8s						
MAKZ	**Makanchi**	**78.18**	**320**	P	**P**	**14 24 05.6**	**-1.1**
TIXI	**Tiksi**	**78.85**	**354**	P	**P**	**14 24 08.6**	**-1.2**
	comp=Z,0.7nm,0.2s,baz=90,slow=20,SNR=8.4						
	comp=Z,0.7nm,0.2s						
ZAA0	**Zalesovo Array**	**79.50**	**328**	P	**P**	**14 24 11.9**	**-1.8**
ZAA0				IAmb	IAmb	14 24 13.1	
	comp=Z,5.6nm,0.6s						
ZALV	**Zalesovo Beam**	**79.50**	**328**	P	**P**	**14 24 12.4**	**-1.2**
	comp=Z,5.5nm,0.5s,baz=108,slow=6.1,SNR=26						
	comp=Z,5.5nm,0.5s						
ZALV	**Zalesovo Beam**	**79.50**	**328**	P	**P**	**14 24 11.8**	**-1.9**
KDAK	**Kodiak Island**	**80.15**	**28**	LR	LR	14 52 16.2	
	comp=Z,44nm,20.4s,baz=340,slow=30						
KURBB	**Kurchatov Arra**	**81.72**	**323**	P	**P**	**14 24 24.9**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=108,slow=4.1,SNR=11						
	comp=Z,0.7nm,0.5s						
AAK	**Ala-Archa**	**81.81**	**315**	P	**P**	**14 24 26.8**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=168,slow=8.4,SNR=3.9						
AAK				LR	LR	15 02 40.0	
	comp=Z,20nm,18.6s,baz=342,slow=37						
	comp=Z,0.9nm,0.6s						
CAST	**Castle Rocks**	**83.11**	**23**	P	**P**	**14 24 30.2**	**-2.5**
QSPA	**South Pole Qui**	**83.55**	**180**	P	**P**	**14 24 34.3**	**-0.8**
IMAR	**Indian Mountai**	**83.79**	**21**	P	**P**	**14 24 34.0**	**-2.1**
MLY	**Manley**	**84.41**	**22**	P	**P**	**14 24 37.9**	**-1.4**
NRIK	**Noril'sk**	**85.75**	**342**	P	**P**	**14 24 44.9**	**-1.0**
	comp=Z,2.0nm,0.4s,baz=118,slow=5.6,SNR=2.4						
	comp=Z,2.0nm,0.4s						
ILAR	**Eielson Array**	**85.76**	**23**	P	**P**	**14 24 43.7**	**-2.4**
	comp=Z,1.5nm,0.8s,baz=248,slow=5.1,SNR=24						
	comp=Z,1.5nm,0.8s						
ILAR	**Eielson Array**	**85.76**	**23**	P	**P**	**14 24 44.0**	**-2.0**
BVAR	**Borovoye Array**	**87.25**	**324**	P	**P**	**14 24 52.1**	**-1.4**
	comp=Z,3.4nm,0.5s,baz=108,slow=6.1,SNR=21						
	comp=Z,3.4nm,0.5s						
BRVK	**Borovoye**	**87.33**	**324**	P	**P**	**14 24 51.8**	**-2.1**
BRVK				IAmb	IAmb	14 24 53.5	
	comp=Z,6.2nm,1.2s						
BMAR	**Burnt Mountain**	**87.69**	**21**	P	**P**	**14 24 53.5**	**-2.0**
INK	**Inuvik**	**91.95**	**21**	P	**P**	**14 25 14.1**	**-1.1**
	comp=Z,1.3nm,0.9s,baz=228,slow=5.0,SNR=3.1						
	comp=Z,1.3nm,0.9s						
YBH	**Yreka Blue Hor**	**94.25**	**49**	LR	LR	14 59 02.8	
	comp=Z,26nm,20.6s,baz=294,slow=30						
NVAR	**Mina Array Bea**	**97.42**	**52**	LR	LR	15 03 27.1	
	comp=Z,22nm,18.3s,baz=310,slow=32						
PFO	**Pinyon Flats O**	**98.74**	**57**	LR	LR	15 02 25.6	
	comp=Z,32nm,19.5s,baz=228,slow=31						
YKA	**Yellowknife Ar**	**99.42**	**28**	P	**Pdif**	**14 25 48.2**	**-1.1**
	comp=Z,0.4nm,0.9s,baz=273,slow=4.6,SNR=4.2						
	comp=Z,0.4nm,0.9s						
GERES	**GERESS Array B**	**122.39**	**325**	PKP	**PKPdf**	**14 31 01.7**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=82,slow=2.3,SNR=9.4						
LPAZ	**La Paz**	**138.34**	**123**	PKP	**PKPdf**	**14 31 35.2**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=21,slow=6.3,SNR=3.9						
TORD	**Torodi Ar. Bea**	**145.44**	**284**	PKPbc	**PKPdf**	**14 31 46.7**	**+0.7**
	comp=Z,23nm,0.8s,baz=77,slow=3.9,SNR=109						
DBIC	**Dimbokro**	**152.29**	**272**	PKPbc	**PKPbc**	**14 32 04.0**	**+0.2**
	comp=Z,5.0nm,0.7s,baz=19,slow=2.5,SNR=7.0						
DBIC				PKPab	**PKPab**	**14 32 14.7**	**+0.7**
	comp=Z,3.2nm,0.5s,baz=93,slow=3.0,SNR=5.5						
BDFB	**Brasilia**	**153.37**	**146**	PKPbc	**PKPbc**	**14 32 06.0**	**-0.3**
	comp=Z,4.7nm,0.8s,baz=125,slow=3.6,SNR=5.9						

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*IDC **16** 14:24:53.9±2.7, 18°.97S×169°.27E, h203km±24km, mb3.4/8, mbtmp3.9/9, Error ellipse: s-maj=31.7km s-min=23.1km az=152.0*

*NOU **16** 14:25:00.9, 19°.07S×168°.99E, h148km, MLv3.9/13, Vanuatu Islands*

ISC 16 14:24:53.8±0.9**, 18°.97S**±0°.08×**169°.3E**±0°.1**, h200**km**, n19,** σ**1ˢ84**/21**, mb3.6**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	**Rentapao**	**1.44**	**324**	P	**Pn**	**14 25 29.9**	**+2.9**
DVP	**Devils Point**	**1.63**	**319**	P	**Pn**	**14 25 31.0**	**+2.3**
LIFNC	**LIFOU**	**2.65**	**227**	P	**Pn**	**14 25 40.1**	**+0.8**
YATNC	**Mamie plateau,**	**3.81**	**216**	P	**Pn**	**14 25 54.0**	**+0.7**
PINNC	**Pines Island,**	**4.02**	**205**	P	**Pn**	**14 25 59.0**	**+3.2**
DZM	**Mont Dzumac**	**4.08**	**221**	P	**Pn**	**14 25 58.2**	**+1.5**
	12nm,0.6s,baz=41,slow=20,SNR=15						
DZM				S	**Sn**	**14 26 45.0**	**-1.3**
	6.4nm,0.5s,baz=97,slow=22,SNR=1.3						
DZM	**Mont Dzumac**	**4.08**	**221**	P	**Pn**	**14 25 58.8**	**+2.0**
OUENC	**Ouen Island, N**	**4.13**	**213**	P	**Pn**	**14 26 00.5**	**+3.3**
ONTNC	**Ouen Toro**	**4.26**	**218**	P	**Pn**	**14 26 01.3**	**+2.5**
KOUNC	**Koumac, New Ca**	**4.98**	**251**	P	**Pn**	**14 26 10.1**	**+2.1**
CTA	**Charters Tower**	**21.75**	**263**	P	**P**	**14 29 30.2**	**+0.4**
	1.6nm,0.7s,baz=82,slow=7.1,SNR=1.7						
	1.6nm,0.7s						
WRA	**Warramunga Arr**	**32.95**	**262**	P	**P**	**14 31 08.6**	**-1.2**
	0.5nm,0.5s,baz=85,slow=8.4,SNR=7.6						
WRA				PcP	**PcP**	**14 33 48.4**	**-0.9**
	0.2nm,0.9s,baz=91,slow=6.5,SNR=2.6						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**33.25**	**256**	P	**P**	**14 31 12.2**	**-0.2**
	2.6nm,0.5s,baz=81,slow=8.8,SNR=95						
ASAR				PcP	**PcP**	**14 33 49.1**	**-1.0**
	0.1nm,0.7s,baz=102,slow=3.2,SNR=2.0						
	2.6nm,0.5s						
QSPA	**South Pole Qui**	**71.08**	**180**	P	**P**	**14 35 50.6**	**+0.5**
	2.1nm,1.1s,baz=304,slow=22,SNR=2.3						
	2.1nm,1.1s						
PETK	**Petropavlovsk-**	**72.48**	**353**	P	**P**	**14 35 58.8**	**+0.5**
	1.6nm,0.8s,baz=98,slow=7.6,SNR=4.2						
	1.6nm,0.8s						
SONM	**Songino Array**	**87.04**	**323**	P	**P**	**14 37 15.6**	**-1.2**
	0.5nm,0.7s,baz=106,slow=5.1,SNR=2.3						
	0.5nm,0.7s						
NVAR	**Mina Array Bea**	**88.58**	**48**	P	**P**	**14 37 23.6**	**-0.8**
	0.1nm,0.3s,baz=272,slow=6.0,SNR=1.6						
	0.1nm,0.3s						
ILAR	**Eielson Array**	**89.96**	**17**	P	**P**	**14 37 29.2**	**-0.7**
	0.5nm,0.7s,baz=246,slow=5.4,SNR=6.8						
	0.5nm,0.7s						
GERES	**GERESS Array B**	**144.28**	**332**	PKP	PKPbc	14 44 05.1	+0.3
	0.3nm,0.4s,baz=15,slow=8.1,SNR=2.5						

ROM 16 14:29:12.6±0.0**, 43°.098N**±0°.002×**13°.201E**±0°.004**, h9**km**, ML2.4**/42**, 17C-9D, Error ellipse: s-maj=0.2km s-min=0.2km az=262.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1220	**Camerino, Fraz**	**0.08**	**279**	P	Pg	14 29 15.2	+0.3
T1220				S	Sg	14 29 17.2	+0.6
T1220				AML	AML		
	comp=E,27300µm,0.4s						
T1220				AML	AML		
	comp=N,18750µm,0.3s						
T1220				AML	AML		
	comp=E,27350µm,0.4s						
T1220				AML	AML		
	comp=N,18750µm,0.3s						
T1256	**Bolognola (MC)**	**0.09**	**169**	P	Pg	14 29 15.4	+0.2
T1256				S	Sg	14 29 17.2	+0.2
T1256				AML	AML		
	comp=E,4430µm,0.9s						
T1256				AML	AML		
	comp=N,5655µm,0.5s						
T1256				AML	AML		
	comp=E,4425µm,0.9s						
T1256				AML	AML		
	comp=E,4675µm,0.5s						
T1256				AML	AML		
	comp=E,4425µm,1.1s						
T1256				AML	AML		
	comp=N,5900µm,0.5s						
FDMO	**Fiordimonte**	**0.10**	**234**	P	Pg	14 29 15.6	+0.4
FDMO				S	Sg	14 29 17.5	+0.5
FDMO				AML	AML		
	comp=E,10150µm,0.2s						
FDMO				AML	AML		
	comp=N,6070µm,0.2s						
GUMA	**Gualdo di Mace**	**0.10**	**110**	P	Pg	14 29 15.9	+0.7
GUMA				S	Sg	14 29 18.2	+1.1
GUMA				AML	AML		
	comp=E,10060µm,0.4s						
GUMA				AML	AML		
	comp=N,10350µm,0.2s						
GUMA				AML	AML		
	comp=E,14950µm,0.3s						
GUMA				AML	AML		
	comp=E,10060µm,0.4s						
GUMA				AML	AML		
	comp=N,10350µm,0.2s						
GUMA				AML	AML		
	comp=N,10475µm,1.6s						
GUMA				AML	AML		
	comp=E,10060µm,1.6s						
GUMA				AML	AML		
	comp=N,10475µm,0.4s						
MDAR	**Monte D'Aria**	**0.10**	**336**	P	Pg	14 29 15.6	+0.3
MDAR				S	Sg	14 29 17.5	+0.3
MDAR				AML	AML		
	comp=E,3815µm,0.3s						
MDAR				AML	AML		
	comp=N,2925µm,0.6s						
MDAR				AML	AML		
	comp=E,3820µm,0.2s						
MDAR				AML	AML		
	comp=N,2925µm,0.6s						
SSM1	**San Severino M**	**0.13**	**352**	P	Pg	14 29 16.1	+0.5
SSM1				S	Sg	14 29 18.7	+0.9
T1219	**Muccia, Frazio**	**0.15**	**254**	P	Pg	14 29 16.5	+0.6
T1219				S	Sg	14 29 19.2	+1.1
T1219				AML	AML		
	comp=E,2105µm,0.5s						
T1219				AML	AML		
	comp=E,1985µm,0.1s						
T1219				AML	AML		
	comp=N,1940µm,0.2s						
T1219				AML	AML		
	comp=N,1985µm,0.2s						
GAG1	**Gagliole**	**0.17**	**325**	P	Pg	14 29 16.9	+0.6
GAG1				S	Sg	14 29 20.1	+1.3
GAG1				AML	AML		
	comp=E,4490µm,0.3s						
GAG1				AML	AML		
	comp=N,4520µm,1.1s						
MC2	**Monte Cornacci**	**0.18**	**182**	P	Pg	14 29 17.2	+0.6
MC2				S	Sg	14 29 20.6	+1.3
SEF1	**Sefro**	**0.19**	**285**	P	Pg	14 29 17.2	+0.6
SEF1				S	Sg	14 29 21.1	+1.7
MMO1	**Montemonaco**	**0.22**	**155**	P	Pg	14 29 17.5	+0.4
MMO1				S	Sg	14 29 21.3	+1.2
CESI	**CESI - Serrava**	**0.24**	**247**	P	Pg	14 29 18.2	+0.8
CESI				S	Sg	14 29 22.5	+1.8
CESI				AML	AML		
	comp=E,1820µm,0.2s						
CESI				AML	AML		
	comp=N,1875µm,0.7s						
T1245	**Castelsantange**	**0.24**	**182**	P	Pg	14 29 18.2	+0.6
T1245				S	Sg	14 29 22.5	+1.6
EL6	**Elcito**	**0.24**	**343**	P	Pg	14 29 18.2	+0.6
EL6				S	Sg	14 29 22.6	+1.6
EL6				AML	AML		
	comp=E,2810µm,0.2s						
EL6				AML	AML		
	comp=N,2690µm,0.8s						
EL6				AML	AML		
	comp=N,2690µm,1.2s						
T1216	**Preci, Frazion**	**0.25**	**213**	P	Pg	14 29 18.2	+0.6
T1216				S	Sg	14 29 22.5	+1.5
SNTG	**Esanatoglia**	**0.25**	**310**	P	Pg	14 29 18.1	+0.5
SNTG				S	Sg	14 29 22.5	+1.5
SNTG				AML	AML		
	comp=N,1088µm,0.5s						
SNTG				AML	AML		
	comp=E,950µm,1.0s						
SNTG				AML	AML		
	comp=N,1003µm,0.6s						
SNTG				AML	AML		
	comp=E,1030µm,1.0s						
SNTG				AML	AML		
	comp=N,1088µm,0.5s						
SNTG				AML	AML		
	comp=N,1088µm,0.5s						
SNTG				AML	AML		
	comp=N,1003µm,1.4s						
SNTG				AML	AML		
	comp=E,1030µm,1.0s						
CING	**Cingoli**	**0.28**	**359**	P	Pg	14 29 18.6	+0.4
CING				S	Sb	14 29 23.8	-0.7
CING				AML	AML		
	comp=E,1140µm,0.2s						
CING				AML	AML		
	comp=N,930µm,0.2s						
T1241	**Roccafluvione,**	**0.29**	**145**	P	Pg	14 29 19.1	+0.6
T1241				S	Sb	14 29 24.2	-0.8
T1241				AML	AML		
	comp=E,1083µm,0.2s						
T1241				AML	AML		
	comp=E,1168µm,0.2s						
T1241				AML	AML		
	comp=N,823µm,0.1s						
T1241				AML	AML		
	comp=N,924µm,0.1s						
T1214	**Arquata del Tr**	**0.34**	**179**	P	Pg	14 29 20.1	+0.7
T1214				S	Sb	14 29 25.8	-0.6
T1214				AML	AML		
	comp=E,1310µm,0.2s						
T1214				AML	AML		
	comp=E,1365µm,0.2s						
T1214				AML	AML		
	comp=N,1505µm,0.3s						
T1214				AML	AML		
	comp=N,1530µm,1.4s						
T1212	**Cascia, Frazio**	**0.36**	**198**	P	Pg	14 29 20.3	+0.5
T1212				S	Sb	14 29 26.3	-0.7
T1212				AML	AML		
	comp=N,742µm,0.5s						
T1212				AML	AML		
	comp=E,886µm,0.2s						
T1212				AML	AML		
	comp=E,868µm,0.2s						
T1212				AML	AML		
	comp=N,693µm,0.6s						
FOSV	**Fossato di Vic**	**0.38**	**302**	⇑P	Pg	14 29 20.6	+0.6
FOSV				AML	AML		
	comp=N,1595µm,0.2s						
FOSV				AML	AML		
	comp=E,2050µm,0.3s						
OFFI	**Offida**	**0.39**	**114**	P	Pb	14 29 22.3	+0.6
OFFI				AML	AML		
	comp=E,936µm,0.3s						
OFFI				AML	AML		
	comp=N,948µm,0.3s						
OFFI				AML	AML		
	comp=E,936µm,1.7s						
ASSB	**Assisi San Ben**	**0.40**	**262**	⇑P	Pg	14 29 21.0	+0.5
ASSB				AML	AML		
	comp=E,834µm,1.2s						
ASSB				AML	AML		
	comp=N,1355µm,0.2s						
PP3	**Marolino**	**0.41**	**47**	⇑P	Pb	14 29 22.2	+0.2
PP3				AML	AML		
	comp=E,1670µm,0.2s						
PP3				AML	AML		
	comp=N,1335µm,0.3s						
PP3				AML	AML		
	comp=N,1335µm,0.3s						
PP3				AML	AML		
	comp=N,1445µm,0.3s						
PP3				AML	AML		
	comp=E,1595µm,0.2s						
ATCC	**AVT- Casa Cast**	**0.42**	**282**	⇑P	Pg	14 29 21.5	+0.7
ATCC				AML	AML		
	comp=E,838µm,1.1s						
ATCC				AML	AML		
	comp=N,1770µm,0.3s						
T1218	**Civita (PG)**	**0.43**	**188**	⇑P	Pg	14 29 21.6	+0.5
T1218				AML	AML		
	comp=E,522µm,0.2s						
T1218				AML	AML		
	comp=N,622µm,0.1s						
T1218				AML	AML		
	comp=E,476µm,0.2s						
T1218				AML	AML		
	comp=N,639µm,0.1s						
T1218				AML	AML		
	comp=E,522µm,0.2s						
T1218				AML	AML		
	comp=E,476µm,0.2s						
T1218				AML	AML		
	comp=N,640µm,0.1s						
T1218				AML	AML		
	comp=E,476µm,1.8s						
T1218				AML	AML		
	comp=E,522µm,1.8s						
T1217	**Poggiodomo (PG**	**0.43**	**207**	⇑P	Pg	14 29 21.6	+0.5
T1217				AML	AML		
	comp=N,742µm,0.2s						
T1217				AML	AML		
	comp=E,536µm,0.6s						
ARVD	**Arcevia**	**0.44**	**335**	P	Pg	14 29 21.7	+0.4
ARVD				S	Sb	14 29 29.7	+0.4
ARVD				AML	AML		
	comp=E,674µm,0.2s						
ARVD				AML	AML		
	comp=N,306µm,0.8s						
SSFR	**Montelago di S**	**0.46**	**318**	⇓P	Pg	14 29 22.0	+0.5
SSFR				S	Sb	14 29 30.0	+0.3
SSFR				AML	AML		
	comp=N,3075µm,0.2s						
SSFR				AML	AML		
	comp=E,3190µm,0.2s						
SSFR				AML	AML		
	comp=N,3065µm,0.2s						
SSFR				AML	AML		
	comp=E,3060µm,0.2s						
SMA1	**SAN MARTINO**	**0.48**	**168**	⇑P	Pg	14 29 22.5	+0.6
SMA1				AML	AML		
	comp=E,392µm,1.4s						
SMA1				AML	AML		
	comp=N,454µm,0.4s						
MURB	**Monte Urbino**	**0.52**	**289**	⇑P	Pg	14 29 23.3	+0.6
MURB				S	Sb	14 29 32.3	+0.7
MURB				AML	AML		
	comp=E,1026µm,1.1s						
MURB				AML	AML		
	comp=E,1026µm,1.1s						
MURB				AML	AML		
	comp=N,870µm,0.3s						
MURB				AML	AML		
	comp=N,956µm,0.3s						
MURB				AML	AML		
	comp=E,1135µm,0.3s						
MURB				AML	AML		
	comp=E,1026µm,0.9s						
ATFO	**Monte Foce - G**	**0.53**	**300**	⇑P	Pg	14 29 23.4	+0.5
ATFO				S	Sb	14 29 32.5	+0.5
ATFO				AML	AML		
	comp=N,374µm,0.3s						
ATFO				AML	AML		
	comp=E,346µm,1.5s						
ATFO				AML	AML		
	comp=E,346µm,0.5s						
FRON	**Frontone**	**0.55**	**321**	⇓P	Pg	14 29 23.6	+0.4
FRON				AML	AML		
	comp=E,374µm,1.1s						
FRON				AML	AML		
	comp=N,852µm,0.2s						
FRON				AML	AML		
	comp=N,852µm,0.2s						
MOMA	**Monte Martano**	**0.55**	**238**	⇓P	Pg	14 29 23.7	+0.4
MOMA				S	Sb	14 29 32.9	+0.5
MOMA				AML	AML		
	comp=N,480µm,0.2s						
MOMA				AML	AML		
	comp=E,481µm,1.1s						
MOMA				AML	AML		
	comp=E,481µm,0.9s						
TERO	**Teramo**	**0.56**	**148**	⇑P	Pg	14 29 23.6	+0.1
TERO				AML	AML		
	comp=N,397µm,0.6s						
TERO				AML	AML		
	comp=E,522µm,0.7s						
TERO				AML	AML		
	comp=E,498µm,0.7s						
TERO				AML	AML		
	comp=N,422µm,0.6s						
MPAG	**Monte Paganucc**	**0.62**	**329**	⇓P	Pg	14 29 25.1	+0.5
MPAG				S	Sb	14 29 35.6	+1.1
MPAG				AML	AML		
	comp=E,419µm,0.3s						
MPAG				AML	AML		
	comp=N,270µm,0.3s						
ATVO	**AVT- Monte Val**	**0.65**	**296**	⇑P	Pg	14 29 25.4	+0.3
ATVO				AML	AML		
	comp=E,263µm,0.3s						
ATVO				AML	AML		
	comp=N,188µm,0.8s						
ATVO				AML	AML		
	comp=N,188µm,1.2s						
PIEI	**Pieia**	**0.65**	**312**	⇑P	Pg	14 29 25.3	+0.1
PIEI				S	Sb	14 29 36.1	+0.7
PIEI				AML	AML		
	comp=E,382µm,0.4s						
PIEI				AML	AML		
	comp=N,358µm,0.2s						
CESX	**Cesi**	**0.67**	**223**	⇑P	Pb	14 29 26.9	+0.5
CESX				AML	AML		
	comp=E,272µm,0.5s						
CESX				AML	AML		
	comp=N,221µm,0.6s						
CESX				AML	AML		
	comp=N,221µm,1.4s						
FSSB	**Fossombrone**	**0.67**	**333**	⇓P	Pb	14 29 26.1	-0.3
FSSB				S	Sn	14 29 37.8	-1.1
FSSB				AML	AML		
	comp=E,1770µm,0.3s						
FSSB				AML	AML		

	comp=N,1415µm,0.3s						
ATPI	**Pietralunga -**	**0.68**	**301**	⇓P	Pg	14 29 26.2	+0.4
ATPI	 comp=N,224µm,0.3s			AML	AML		
ATPI	 comp=E,208µm,0.3s			AML	AML		
NARO	**Abbazia di Nar**	**0.68**	**319**	⇓P	Pg	14 29 25.9	+0.1
NARO				S	Sb	14 29 37.4	+1.2
NARO	 comp=E,242µm,1.0s			AML	AML		
NARO	 comp=N,156µm,0.8s			AML	AML		
GIGS	**Gran Sasso**	**0.70**	**157**	⇑P	Pg	14 29 26.4	+0.2
GIGS				S	Sb	14 29 37.3	+0.5
GIGS	 comp=N,48µm,0.7s			AML	AML		
GIGS	 comp=E,61µm,1.5s			AML	AML		
GIGS	 comp=E,61µm,0.5s			AML	AML		
GIGS	 comp=N,48µm,1.3s			AML	AML		
T1222	**Castel Sant'An**	**0.71**	**190**	S	Sb	14 29 37.7	+0.8
T1222	 comp=N,104µm,1.3s			AML	AML		
T1222	 comp=N,104µm,0.7s			AML	AML		
T1222	 comp=E,142µm,0.4s			AML	AML		
PE3	**Peglio**	**0.79**	**320**	P	Pg	14 29 27.4	-0.4
BADI	**Badiali**	**0.81**	**301**	⇓P	Pb	14 29 28.5	-0.3
VCEL	**Villa Celiera**	**0.85**	**146**	⇑P	Pg	14 29 29.1	+0.2
VCEL	 comp=E,217µm,1.6s			AML	AML		
VCEL	 comp=E,216µm,1.6s			AML	AML		
VCEL	 comp=N,240µm,0.7s			AML	AML		
VCEL	 comp=N,240µm,1.3s			AML	AML		
PARC	**Parchiule**	**0.89**	**308**	⇑P	Pb	14 29 30.1	-0.1
PARC				S	Sn	14 29 45.4	+1.0
PARC	 comp=E,98µm,0.3s			AML	AML		
PARC	 comp=N,121µm,0.7s			AML	AML		
PARC	 comp=E,98µm,1.7s			AML	AML		
CAFI	**Castiglion Fio**	**0.93**	**285**	⇑P	Pb	14 29 30.8	-0.1
CAFI	 comp=N,61µm,0.8s			AML	AML		
CAFI	 comp=E,72µm,0.7s			AML	AML		
DUGI	**Dugi Otok**	**1.62**	**56**	*e*Pn	Pn	14 29 41.5	+0.3
DUGI				Sn	Sb	14 30 03.7	+0.6
VIRC	**Vir**	**1.80**	**48**	*e*Pn	Pn	14 29 44.2	+0.6
VIRC				Sn	Sb	14 30 08.1	-0.2
BRJN	**Brijuni**	**1.85**	**12**	⇓P	Pn	14 29 45.2	+0.8
ZIRJ	**Zirje**	**1.87**	**72**	Sn	Sb	14 30 09.3	-0.8
NVLJ	**Novalja**	**1.90**	**39**	Sn	Sb	14 30 10.7	-0.4
PTRJ	**Pietraroja**	**1.99**	**150**	P	Pg	14 29 52.2	+1.4
VITU	**Vitulano (BN)**	**2.19**	**150**	P	Pb	14 29 51.4	-0.9
VITU				S	Sn	14 30 14.5	-1.8
UDBI	**Udbina**	**2.34**	**52**	Sn	Sb	14 30 23.0	-1.0
CSFT	**Campi Flegrei**	**2.37**	**163**	P	Pb	14 29 55.3	-0.1
KIJV	**Kijevo**	**2.50**	**68**	Sn	Sb	14 30 26.6	-1.9

ROM 16 14:30:03.6±0.4**, 42°.945N**±0°.008×**13°.11E**±0°.01**, h10**^{km}±1^{km}**, ML1.5**/4**, 1C, Error ellipse: s-maj=1.2km s-min=0.4km az=66.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FEMA	**Monte Fema**	**0.04**	**292**	P	Pg	14 30 06.2	+0.4
FEMA				S	Sg	14 30 07.8	+0.5
MC2	**Monte Cornacci**	**0.07**	**118**	P	Pg	14 30 05.8	-0.2
MC2				S	Sg	14 30 07.5	-0.4
T1216	**Preci, Frazion**	**0.08**	**230**	P	Pg	14 30 06.5	+0.4
T1216				S	Sg	14 30 08.2	+0.4
FDMO	**Fiordimonte**	**0.09**	**351**	P	Pg	14 30 06.7	+0.6
FDMO				S	Sg	14 30 08.8	+0.8
FDMO	 comp=E,120µm,0.2s			AML	AML		
FDMO	 comp=N,194µm,0.2s			AML	AML		
FDMO	 comp=N,194µm,1.8s			AML	AML		
FDMO	 comp=E,120µm,1.8s			AML	AML		
T1245	**Castelsantange**	**0.11**	**146**	P	Pg	14 30 06.9	+0.5
T1245				S	Sg	14 30 09.3	+0.8
T1256	**Bolognola (MC)**	**0.11**	**55**	⇑P	Pg	14 30 04.8	-1.7
T1256	 comp=E,356µm,0.8s			AML	AML		
T1256	 comp=N,480µm,0.8s			AML	AML		
T1256	 comp=N,480µm,0.8s			AML	AML		
T1256	 comp=N,480µm,1.2s			AML	AML		
T1219	**Muccia, Frazio**	**0.13**	**327**	P	Pg	14 30 06.8	+0.1
T1219				S	Sg	14 30 08.9	0.0
CESI	**CESI - Serrava** comp=E,274µm,0.1s	**0.16**	**292**	AML	AML		
CESI	 comp=N,457µm,0.1s			AML	AML		
T1220	**Camerino, Fraz**	**0.17**	**355**	P	Pg	14 30 07.8	+0.5
T1220				S	Sg	14 30 11.4	+1.6

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*DDA **16** 14:46:21.7±0.0, 35°.85N×28°.38E, h7^{km}±4^{km}, ML2.1*
*ISK **16** 14:46:21.5, 35°.76N×28°.37E, h30^{km}, ML2.3/10*
*NIC **16** 14:46:22.4±0.0, 35°.85N×28°.50E, h32^{km}±20^{km}, Ml3.2/4*
ISC 16 14:46:22.4±1.3**, 35°.84N**±0°.04×**28°.45E**±0°.04**, h32**^{km}±13^{km}**, n27, σ0^{s}.72**/42**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.46**	**326**	Pg	**Pn**	**14 46 33.0**	**+0.2**
ARG				Sg	**Sn**	**14 46 40.9**	**+1.0**
ARG	**Arkhangelos**	**0.46**	**326**	P	**Pn**	**14 46 33.0**	**+0.2**
ARG				S	**Sn**	**14 46 40.5**	**+0.6**
IZZE	**Mula-Seydike**	**0.87**	**46**	P	**Pb**	**14 46 38.9**	**-0.2**
IZZE				S	**Sb**	**14 46 51.0**	**+0.6**
IZZE	 comp=N,113nm,0.5s			*i* AML	AML	14 46 52.0	
IZZE	 comp=E,73nm,0.4s			*i* AML	AML	14 46 52.0	
FETY	**Fethiye**	**0.95**	**33**	Pg	**Pb**	**14 46 40.3**	**-0.1**
FETY				Sg	**Sb**	**14 46 54.2**	**+1.5**
FETY	**Fethiye**	**0.95**	**33**	P	**Pb**	**14 46 41.2**	**+0.8**
FETY				S	**Sb**	**14 46 54.7**	**+2.0**
TURN	**Turunc**	**0.95**	**350**	Pg	**Pn**	**14 46 39.9**	**+0.4**
TURN	**Turunc**	**0.95**	**350**	P	**Pn**	**14 46 39.6**	**+0.1**
TURN				S	**Sb**	**14 46 52.5**	**-0.2**
KSL	**Kastellorizon**	**0.97**	**71**	P	**Pb**	**14 46 40.3**	**-0.5**
KSL				S	**Sb**	**14 46 53.5**	**+0.1**
DALY	**Dalyan (Mula)**	**0.99**	**10**	Pg	**Pb**	**14 46 40.6**	**-0.5**
AKAS	**Kas**	**1.02**	**67**	Pn	**Pb**	**14 46 41.6**	**0.0**
AKAS	**Kas**	**1.02**	**67**	P	**Pb**	**14 46 41.8**	**+0.2**
AKAS				S	**Sb**	**14 46 54.5**	**-0.3**
AKAS	 comp=E,52nm,0.9s			*i* AML	AML	14 46 57.0	
AKAS	 comp=N,53nm,0.6s			*i* AML	AML	14 46 58.0	
KARP	**Karpathos**	**1.09**	**255**	P	**Pn**	**14 46 41.6**	**+0.1**
KARP				S	**Sn**	**14 46 55.6**	**+0.2**
KARP	 0.3nm,0.1s			AML	AML	14 46 55.7	
KARP	 0.3nm,0.1s			AML	AML	14 46 55.7	
DAT	**Datca**	**1.14**	**322**	Pn	**Pn**	**14 46 42.2**	**0.0**
DAT	**Datca**	**1.14**	**322**	P	**Pn**	**14 46 42.0**	**-0.2**
DAT				S	**Sn**	**14 46 55.6**	**-1.1**
DAT	 comp=N,38nm,0.2s			*i* AML	AML	14 46 57.0	
DAT	 comp=E,34nm,0.5s			*i* AML	AML	14 47 00.0	
CAME	**Cameli-Denizli**	**1.30**	**32**	Pn	**Pb**	**14 46 45.6**	**-0.8**
CAME				Sn	**Sb**	**14 47 02.5**	**-0.4**
YER	**Yerkesik**	**1.30**	**354**	Pn	**Pn**	**14 46 44.9**	**+0.5**
BODT	**Bodrum**	**1.53**	**323**	Pn	**Pn**	**14 46 47.1**	**-0.4**
TAVA	**DENIZLI_Tavas**	**1.67**	**13**	P	**Pn**	**14 46 50.2**	**+0.7**
TAVA				S	**Sb**	**14 47 11.2**	**-2.1**
APMY	**Acipayam-Deniz**	**1.77**	**23**	Pn	**Pn**	**14 46 51.8**	**+0.9**
DNIZ	**Denizli-Tavas-**	**1.85**	**15**	P	**Pn**	**14 46 51.8**	**-0.1**
DNIZ				S	**Sn**	**14 47 14.3**	**0.0**
ZKR	**Zakros**	**1.96**	**249**	P	**Pn**	**14 46 54.2**	**+0.8**
AKMS	**Akamas**	**3.28**	**103**	P	**Pn**	**14 47 11.4**	**-0.1**
AKMS				S	**Sn**	**14 47 49.4**	**0.0**
AKMS	 0.2nm,0.4s			AML	AML	14 47 50.1	
AKMS	 0.2nm,0.4s			AML	AML	14 47 50.1	
AKMS	 0.2nm,0.7s			AML	AML	14 47 52.3	
AKMS	 0.2nm,0.7s			AML	AML	14 47 52.3	
OSC1	**CSNet OBS 1**	**3.30**	**134**	S	**Sn**	**14 47 50.2**	**+0.4**
ALFC	**Alefka**	**3.45**	**100**	P	**Pn**	**14 47 13.9**	**-0.1**
ALFC	 0.1nm,0.3s			AML	AML	14 47 53.1	
ALFC	 0.1nm,0.6s			AML	AML	14 47 58.0	
NATA	**Nata**	**3.53**	**106**	P	**Pn**	**14 47 15.0**	**-0.1**
TROD	**Troodos**	**3.72**	**103**	P	**Pn**	**14 47 17.5**	**-0.3**
TROD	 0.1nm,1.6s			AML	AML	14 47 58.9	
TROD	 0.1nm,1.6s			AML	AML	14 47 58.9	
TROD				S	**Sn**	**14 47 59.8**	**-0.7**
SZAC	**Souni**	**3.78**	**105**	P	**Pn**	**14 47 18.7**	**+0.1**

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*TAP **16** 14:47:15.2, 24°.79N×122°.33E, h12^{km}, ML3.1, D*
*JMA **16** 14:47:17.4±0.1, 24°.7N±0°.8×122°.3E±0°.3, h36^{km}±4^{km}, MV2.0/7, TAIWAN REGION*
ISC 16 14:47:14.7±1.1**, 24°.81N**±0°.03×**122°.35E**±0°.02**, h13**^{km}±9^{km}**, n89, σ0^{s}.71**/127**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS	 baz=278	**0.38**	**275**	*i* P	**Pb**	**14 47 23.1**	**-0.1**
TWB1	**Santiao Chiao** baz=304	**0.38**	**301**	*i* P	**Pb**	**14 47 23.5**	**+0.2**
EOS2	**EOS2** baz=206	**0.40**	**195**	P	**Pn**	**14 47 25.1**	**-1.1**
TWC	**Suao** baz=255	**0.50**	**246**	*i* P	**Pg**	**14 47 23.9**	**-0.5**
TWC	 baz=255			S	**Sb**	**14 47 32.5**	**+0.1**
TIPB	**Shuangxi** baz=291	**0.50**	**289**	P	**Pn**	**14 47 26.5**	**-1.1**
SXI1	**Grass Mountain** baz=306	**0.51**	**303**	P	**Pn**	**14 47 26.6**	**-1.3**
ILA	**Ilan** baz=267	**0.55**	**265**	*e*P	**Pn**	**14 47 27.6**	**-0.6**
WFSB	**Wu-fen Shan** baz=299	**0.57**	**297**	P	**Pn**	**14 47 28.3**	**-0.3**
NDS	**Dongshan** baz=246	**0.60**	**253**	P	**Pb**	**14 47 27.0**	**-0.1**
TNOU	**National Taiwa** baz=304	**0.62**	**303**	P	**Pn**	**14 47 28.2**	**-1.1**
TNOU	 baz=304			S	**Sb**	**14 47 37.0**	**+1.0**
TWE	**Neicheng** baz=263	**0.62**	**262**	*i* P	**Pg**	**14 47 26.6**	**-0.3**
EWUT	**Wuta** baz=245	**0.63**	**235**	P	**Pg**	**14 47 27.1**	**+0.1**
EWUT	 baz=245			S	**Sb**	**14 47 37.0**	**+0.6**
JYNG	**Yonagunijimaku**	**0.65**	**123**	P	**Pn**	**14 47 30.1**	**+0.4**
JYNG				*e*S	**Sn**	**14 47 40.1**	**+0.2**
ENA	**Nanau** baz=235	**0.67**	**235**	*i* P	**Pg**	**14 47 27.4**	**-0.4**
EOS4	**EOS4** baz=181	**0.69**	**182**	P	**Pn**	**14 47 29.7**	**-0.1**
FUSB	**Fushanzhiwuyua** baz=258	**0.69**	**266**	P	**Pb**	**14 47 28.8**	**+0.1**
YOJ	**Yonaguni jima**	**0.70**	**120**	*e*P	**Pn**	**14 47 31.1**	**+0.8**
YOJ				*e*S	**Sn**	**14 47 40.5**	**-0.4**
YOJ	**Yonaguni jima** baz=118	**0.70**	**120**	P	**Pb**	**14 47 28.8**	**+0.1**
TWA	**Mucha** baz=285	**0.71**	**284**	*i* P	**Pn**	**14 47 30.1**	**-0.4**
TWA	 baz=285			S	**Sn**	**14 47 40.5**	**-1.0**
ENTT	**Nioudou** baz=257	**0.73**	**257**	*i* P	**Pg**	**14 47 28.7**	**-0.1**
ENTT	 baz=257			S	**Sb**	**14 47 39.7**	**+0.5**
NHDH	**Xindian Distri** baz=269	**0.76**	**282**	P	**Pn**	**14 47 30.7**	**-0.5**
NWLT	**Wulai** baz=288	**0.77**	**268**	P	**Pb**	**14 47 30.4**	**+0.5**
NWLT	 baz=288			S	**Sn**	**14 47 42.0**	**-0.8**
YM01	**YM01** baz=296	**0.78**	**295**	P	**Pn**	**14 47 31.4**	**-0.1**
YM01	 baz=296			S	**Sn**	**14 47 42.0**	**-1.1**
YM08	**YM08** baz=300	**0.78**	**299**	P	**Pn**	**14 47 31.2**	**-0.3**
LATG	**Datong** baz=250	**0.80**	**250**	P	**Pg**	**14 47 30.0**	**-0.1**
TWY	**Chenhua** baz=306	**0.82**	**304**	*i* P	**Pb**	**14 47 30.6**	**-0.2**
ANP	**Anpu** baz=298	**0.84**	**297**	*i* P	**Pn**	**14 47 32.1**	**-0.2**
PCYT	**Pengchaiyu** baz=344	**0.85**	**343**	*i* P	**Pn**	**14 47 32.7**	**+0.3**
NTST	**Danshui** baz=305	**0.89**	**294**	S	**Sn**	**14 47 45.5**	**-0.1**
TWS1	**Kuangyinshan** baz=290	**0.89**	**289**	P	**Pb**	**14 47 32.2**	**+0.2**
TWS1	 baz=290			S	**Sn**	**14 47 45.7**	**0.0**
YHNB	**Yeheng** baz=274	**0.89**	**261**	P	**Pb**	**14 47 32.2**	**+0.1**
NSK	**Sanguang** baz=262	**0.91**	**262**	*i* P	**Pb**	**14 47 32.0**	**-0.3**
NSK	 baz=262			S	**Sn**	**14 47 46.8**	**+0.4**
ETL	**Fush Village** baz=225	**0.93**	**226**	P	**Pb**	**14 47 32.2**	**-0.5**
NACB	**Ninganchiao** baz=227	**0.93**	**227**	P	**Pb**	**14 47 32.3**	**-0.5**
NNSB	**Datong** baz=247	**0.96**	**247**	P	**Pb**	**14 47 32.7**	**-0.5**
NNSB	 baz=247			S	**Sn**	**14 47 47.0**	**-0.5**
NNS	**Nan Shan** baz=248	**0.96**	**248**	*i* P	**Pg**	**14 47 33.3**	**0.0**
ETLH	**Xiulin Townshi** baz=232	**0.99**	**233**	P	**Pg**	**14 47 33.8**	**-0.1**
ETLH	 baz=232			S	**Sb**	**14 47 46.3**	**-0.6**
TWD	**Chiawan** baz=230	**1.00**	**223**	*i* P	**Pb**	**14 47 33.5**	**-0.4**
TWD	 baz=230			S	**Sn**	**14 47 49.6**	**+1.2**
NFF	**Wufeng Townshi** baz=261	**1.13**	**261**	P	**Pg**	**14 47 37.0**	**+0.5**
NFF	 baz=261			S	**Sn**	**14 47 52.4**	**+0.6**
WHF	**Hehuan Shan** baz=235	**1.19**	**236**	*i* P	**Pb**	**14 47 37.1**	**-0.2**
WHF	 baz=235			S	**Sn**	**14 47 54.2**	**+0.6**
TWT	**Tachien** baz=242	**1.20**	**243**	*i* P	**Pg**	**14 47 38.1**	**+0.2**
TWT	 baz=242			S	**Sg**	**14 47 55.2**	**+1.7**
TDCB	**Techi** baz=242	**1.22**	**243**	P	**Pg**	**14 47 39.2**	**+1.1**
TDCB	 baz=242			S	**Sg**	**14 47 55.5**	**+1.5**
LIOB	**Emei** baz=262	**1.22**	**263**	P	**Pg**	**14 47 38.3**	**+0.1**
LIOB	 baz=262			S	**Sg**	**14 47 54.0**	**-0.1**
NSTT	**Nanjuang** baz=261	**1.24**	**262**	*i* P	**Pg**	**14 47 39.6**	**+1.1**
NSTT	 baz=261			S	**Sg**	**14 47 55.0**	**+0.4**
ESL	**Shilin** baz=201	**1.30**	**220**	*i* P	**Pg**	**14 47 39.4**	**-0.2**
CHGB	**Renai** baz=235	**1.30**	**235**	P	**Pg**	**14 47 39.5**	**-0.3**
OWD	**Renai** baz=246	**1.37**	**232**	P	**Pg**	**14 47 40.5**	**-0.5**
OWD	 baz=246			S	**Sg**	**14 48 00.1**	**+1.3**
WHP	**Taichung City** baz=247	**1.38**	**248**	P	**Pg**	**14 47 41.6**	**+0.4**
WHP	 baz=247			S	**Sg**	**14 47 59.0**	**-0.2**
WUSB	**Renai** baz=218	**1.39**	**234**	P	**Pb**	**14 47 40.8**	**+0.2**
EGFH	**Guangfu** baz=198	**1.41**	**217**	P	**Pn**	**14 47 40.1**	**0.0**
NMLH	**Miaoli** baz=258	**1.44**	**259**	P	**Pg**	**14 47 42.0**	**-0.4**
NMLH	 baz=258			S	**Sg**	**14 48 01.5**	**+0.3**
TWQ1	**Liyutan** baz=272	**1.50**	**252**	P	**Pg**	**14 47 43.5**	**-0.1**
TWQ1	 baz=272			S	**Sg**	**14 48 02.6**	**-0.5**
WCS	**Beigang Elemen** baz=240	**1.51**	**240**	P	**Pb**	**14 47 43.0**	**+0.4**
WCS	 baz=240			S	**Sg**	**14 48 03.2**	**-0.1**
VWDT	**VWDT** baz=208	**1.52**	**227**	P	**Pb**	**14 47 43.2**	**+0.4**
VWDT	 baz=208			S	**Sb**	**14 48 02.4**	**+0.4**
HGSD	**Ruisui** baz=198	**1.56**	**213**	P	**Pb**	**14 47 43.1**	**-0.4**
EHY	**Hungye** baz=214	**1.60**	**216**	*i* P	**Pb**	**14 47 43.9**	**-0.2**
SMLT	**Sun Moon Lake** baz=248	**1.61**	**235**	*i* P	**Pb**	**14 47 44.2**	**-0.1**
SMLT	 baz=248			S	**Sg**	**14 48 06.3**	**-0.3**
JKRS	**Kuro-shima**	**1.62**	**110**	*e*P	**Pg**	**14 47 44.9**	**-0.9**
JKRS				*e*S	**Sb**	**14 48 05.1**	**+0.4**
WDJ	**Dajia District** baz=271	**1.62**	**254**	*e*S	**Sb**	**14 48 05.4**	**+0.6**
SSLB	**Suanglung** baz=230	**1.63**	**232**	P	**Pb**	**14 47 45.1**	**+0.5**
TYC	**Yuchr** baz=249	**1.63**	**237**	*i* P	**Pg**	**14 47 46.2**	**+0.2**
TYC	 baz=249			S	**Sg**	**14 48 06.6**	**-0.6**
TCU	**Taichung** baz=266	**1.66**	**247**	S	**Sb**	**14 48 06.6**	**+0.6**
JIJ	**Ishigaki jima**	**1.69**	**105**	*e*P	**Pg**	**14 47 46.9**	**-0.3**
YULB	**Yu-li** baz=213	**1.71**	**214**	P	**Pn**	**14 47 44.3**	**0.0**
EYUL	**Yuli** baz=211	**1.73**	**213**	P	**Pn**	**14 47 45.1**	**+0.5**
WHYT	**Xinyi Township** baz=214	**1.76**	**231**	P	**Pb**	**14 47 47.1**	**+0.3**
WHYT	 baz=214			S	**Sg**	**14 48 10.2**	**-1.1**
WJS	**Zhushan** baz=236	**1.77**	**237**	P	**Pg**	**14 47 48.6**	**-0.2**
WJS	 baz=236			S	**Sg**	**14 48 11.9**	**+0.1**
WNT	**Mingjian** baz=238	**1.78**	**239**	*e*P	**Pg**	**14 47 48.1**	**-0.7**
FULB	**Fuli** baz=194	**1.87**	**211**	P	**Pn**	**14 47 46.1**	**-0.4**
ALS	**Alishan** baz=209	**1.91**	**228**	P	**Pb**	**14 47 50.4**	**+0.8**
ALS	 baz=209			S	**Sb**	**14 48 14.6**	**+1.0**
CHN5	**Tsauling** baz=230	**1.94**	**232**	P	**Pb**	**14 47 50.9**	**+0.8**
EHD	**Haiduan** baz=211	**1.96**	**212**	P	**Pn**	**14 47 48.1**	**+0.4**
WDLH	**Douliu** baz=254	**1.99**	**236**	S	**Sg**	**14 48 17.4**	**-1.4**
WRL	**Guolierlin Hig** baz=259	**2.01**	**244**	S	**Sb**	**14 48 16.8**	**+0.7**
ELDTW	**Lidau** baz=202	**2.02**	**217**	*e*P	**Pb**	**14 47 50.2**	**-1.2**
EDH	**Donghe** baz=193	**2.06**	**208**	P	**Pn**	**14 47 49.7**	**+0.6**
EDH	 baz=193			S	**Sn**	**14 48 13.4**	**-1.3**
WCKO	**Fanlu** baz=211	**2.10**	**230**	P	**Pb**	**14 47 52.4**	**-0.2**
WCKO	 baz=211			S	**Sb**	**14 48 19.4**	**+0.7**
CHN4	**Tsaushan** baz=210	**2.16**	**228**	*i* P	**Pb**	**14 47 54.5**	**+0.7**
CHN4	 baz=210			S	**Sb**	**14 48 21.3**	**+0.7**
STYH	**Taoyuan** baz=204	**2.18**	**222**	P	**Pb**	**14 47 53.0**	**-1.0**
WTP	**Ta-pu** baz=208	**2.22**	**226**	*i* P	**Pb**	**14 47 54.2**	**-0.5**
WTP	 baz=208			S	**Sb**	**14 48 20.9**	**-1.3**
TWK	**Hsinying** baz=210	**2.29**	**228**	*i* P	**Pb**	**14 47 55.7**	**-0.2**
CHN1	**Nanshi** baz=210	**2.32**	**226**	*i* P	**Pb**	**14 47 55.1**	**-1.3**
CHN1	 baz=210			S	**Sb**	**14 48 24.5**	**-0.6**
WSL	**Shuilin Townsh** baz=252	**2.32**	**237**	P	**Pb**	**14 47 55.9**	**-0.6**
WSL	 baz=252			S	**Sb**	**14 48 25.9**	**+0.9**
SGST	**Jiashian** baz=206	**2.36**	**224**	P	**Pb**	**14 47 55.3**	**-1.8**
SCST	**Cishan** baz=220	**2.56**	**222**	P	**Pb**	**14 47 59.1**	**-1.4**
VWUC	**VWUC** baz=274	**2.64**	**275**	P	**Pn**	**14 47 56.9**	**-0.1**
MASBT	**Mashibuluo** baz=202	**2.69**	**216**	P	**Pn**	**14 47 59.7**	**+1.9**
EAST	**Anshuo** baz=207	**2.78**	**210**	P	**Pn**	**14 47 59.0**	**0.0**
SMST	**Manzhou Townsh** baz=195	**3.10**	**207**	P	**Pn**	**14 48 05.5**	**+2.1**

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*UCR **16** 14:59:42.9±1.2, 9°.34N×82°.53W, h6^{km}±10^{km}, MW3.5*
*UPA **16** 14:59:43.3±0.6, 9°.23N×82°.49W, h2^{km}±3^{km}, MW3.3*
ISC 16 14:59:43.3±1.1**, 9°.34N**±0°.04×**82°.54W**±0°.04**, h19**^{km}±3^{km}**, n16, σ0^{s}.98**/32**, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNI2	**El Empalme, Bo**	**0.11**	**36**	*e*P	**Pg**	**14 59 47.5**	**+0.3**
CNI2				*e*S	**Sg**	**14 59 50.7**	**+1.0**
BC3P	**Paso Ancho**	**0.52**	**188**	*e*P	**Pb**	**14 59 53.2**	**-0.8**
BC3P				*e*S	**Sb**	**15 00 01.1**	**-0.1**
BRU2	**Volcan**	**0.56**	**196**	*e*P	**Pb**	**14 59 53.8**	**-0.8**
BRU2				*e*S	**Sb**	**15 00 01.9**	**-0.3**
MLIR3	**Monte Lirio, C**	**0.61**	**208**	*e*P	**Pb**	**14 59 54.8**	**-0.6**
MLIR3				*e*S	**Sb**	**15 00 04.6**	**+1.0**
BCO2	**Palmira**	**0.61**	**179**	*e*P	**Pb**	**14 59 54.5**	**-1.0**
BCO2				*e*S	**Sb**	**15 00 03.6**	**-0.1**
PTAR3	**Potrerillos Ar**	**0.64**	**176**	*e*P	**Pb**	**14 59 55.1**	**-0.8**
PTAR3				*e*S	**Sb**	**15 00 04.2**	**-0.3**
EDSV	**San Vito**	**0.67**	**220**	*e*P	**Pn**	**14 59 59.0**	**+1.0**
EDSV				*e*S	**Sb**	**15 00 05.8**	**+0.5**
EDP2	**Potrero Grande**	**0.71**	**243**	*e*P	**Pg**	**14 59 56.8**	**-0.5**
EDP2				*e*S	**Sg**	**15 00 07.2**	**+0.4**
EDBA	**Buenos Aires**	**0.75**	**257**	*e*P	**Pn**	**15 00 00.9**	**+2.0**
EDBA				*e*S	**Sg**	**15 00 09.3**	**+1.3**
EDAD	**Golfito**	**0.92**	**223**	*e*P	**Pg**	**15 00 00.7**	**-0.6**
EDAD				*e*S	**Sb**	**15 00 13.2**	**+0.6**
PTPM	**Petroterminale**	**1.17**	**197**	*e*P	**Pg**	**15 00 04.3**	**-1.8**
PTPM				*e*S	**Sn**	**15 00 21.7**	**+1.4**
LCOCO	**El Coco**	**1.25**	**307**	*e*P	**Pn**	**15 00 05.7**	**-0.2**
LCOCO				*e*S	**Sg**	**15 00 23.1**	**-0.8**
RVSTA	**Santa Teresita**	**1.27**	**300**	*e*P	**Pn**	**15 00 05.5**	**-0.6**
RVSTA				*e*S	**Sg**	**15 00 23.6**	**-0.9**
RVLA	**Villa Bonita**	**1.29**	**307**	*e*P	**Pn**	**15 00 06.1**	**-0.3**
RVLA				*e*S	**Sg**	**15 00 24.1**	**-1.1**
EDDO	**Dominical**	**1.31**	**267**	*e*P	**Pn**	**15 00 06.0**	**-0.7**
EDDO				*e*S	**Sg**	**15 00 25.7**	**-0.2**
ABE2	**San Pablo**	**1.54**	**284**	*e*P	**Pn**	**15 00 10.9**	**+0.9**
ABE2				*e*S	**Sn**	**15 00 31.6**	**+1.9**

ROM 16 15:00:05.3±0.0**, 42°.771N**±0°.002×**13°.064E**±0°.003**, h11**^{km}**, ML1.3**/7**, 2C-2D, Error ellipse: s-maj=0.2km s-min=0.2km az=297.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1212	Cascia, Frazio	0.02	217	P	Pg	15 00 07.6	+0.2
T1212				S	Sg	15 00 08.9	+0.1
T1212				AML	AML		
	comp=E,538µm,0.4s						
T1212				AML	AML		
	comp=N,520µm,0.1s						
T1212				AML	AML		
	comp=N,522µm,0.1s						
T1212				AML	AML		
	comp=E,512µm,0.4s						
T1214	Arquata del Tr	0.11	96	⇑P	Pg	15 00 08.6	+0.3
T1214				S	Sg	15 00 10.7	+0.4
T1214				AML	AML		
	comp=N,198µm,1.5s						
T1214				AML	AML		
	comp=E,236µm,0.2s						
T1218	Civita (PG)	0.11	160	⇓P	Pg	15 00 08.6	+0.4
T1218				S	Sg	15 00 10.8	+0.5
T1218				AML	AML		
	comp=N,215µm,1.0s						
T1218				AML	AML		
	comp=E,178µm,0.1s						
T1218				AML	AML		
	comp=N,215µm,1.0s						
T1217	Poggiodomo (PG	0.11	239	P	Pg	15 00 08.7	+0.5
T1217				S	Sg	15 00 11.0	+0.6
T1217				AML	AML		
	comp=E,100µm,1.2s						
T1217				AML	AML		
	comp=N,154µm,0.4s						
T1217				AML	AML		
	comp=E,100µm,1.2s						
T1217				AML	AML		
	comp=N,154µm,0.4s						
T1217				AML	AML		
	comp=E,100µm,0.8s						
T1216	Preci, Frazion	0.12	344	P	Pg	15 00 08.9	+0.5
T1216				S	Sg	15 00 11.3	+0.7
T1245	Castelsantange	0.12	47	P	Pg	15 00 08.8	+0.4
T1245				S	Sg	15 00 11.2	+0.5
T1245				AML	AML		
	comp=E,442µm,0.3s						
T1245				AML	AML		
	comp=E,448µm,1.1s						
T1245				AML	AML		
	comp=E,442µm,0.3s						
T1245				AML	AML		
	comp=N,398µm,0.7s						
T1245				AML	AML		
	comp=N,342µm,0.3s						
T1245				AML	AML		
	comp=N,398µm,1.3s						
T1245				AML	AML		
	comp=N,342µm,1.7s						
T1245				AML	AML		
	comp=E,448µm,0.9s						
MC2	Monte Cornacci	0.17	33	P	Pg	15 00 09.7	+0.5
MC2				S	Sg	15 00 12.9	+1.0
CESI	CESI - Serrava	0.26	333	P	Pg	15 00 11.4	+0.7
CESI				S	Sb	15 00 15.6	-1.1
T1256	Bolognola (MC)	0.26	27	⇓P	Pg	15 00 11.2	+0.4
T1256				S	Sg	15 00 15.5	+1.0
T1211	Morro Reatino	0.28	213	P	Pg	15 00 11.6	+0.5
T1211				S	Sb	15 00 16.1	-1.1
T1241	Roccafluvione,	0.28	72	⇑P	Pg	15 00 11.4	+0.3
T1241				S	Sb	15 00 16.2	-1.1
T1241				AML	AML		
	comp=E,72µm,0.3s						
T1241				AML	AML		
	comp=N,43µm,1.3s						
T1241				AML	AML		
	comp=N,43µm,0.7s						
T1219	Muccia, Frazio	0.29	352	P	Pg	15 00 11.7	+0.5
T1219				S	Sg	15 00 16.1	+1.0
TERO	Teramo	0.42	110	P	Pg	15 00 13.7	0.0
TERO				S	Sg	15 00 20.2	+0.9
TERO				AML	AML		
	comp=N,29µm,1.4s						
TERO				AML	AML		
	comp=E,31µm,1.2s						
TERO				AML	AML		
	comp=N,29µm,0.6s						

ROM 16 15:00:41.1±0.1**, 42°.799N**±0°.006×**13°.104E**±0°.007**, h10**km**, ML0.8**/1**, 1C, Error ellipse: s-maj=0.8km s-min=0.5km az=146.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1212	Cascia, Frazio	0.07	223	P	Pg	15 00 43.8	+0.4
T1212				S	Sg	15 00 45.4	+0.3
T1245	Castelsantange	0.08	47	P	Pg	15 00 44.1	+0.4
T1245				S	Sg	15 00 45.9	+0.3
T1245				AML	AML		
	comp=E,82µm,1.1s						
T1245				AML	AML		
	comp=N,93µm,0.1s						
T1214	Arquata del Tr	0.09	117	P	Pg	15 00 44.1	+0.3
T1214				S	Sg	15 00 45.9	+0.2
MC2	Monte Cornacci	0.13	29	P	Pb	15 00 47.5	+1.7
MC2				S	Sg	15 00 52.3	+5.6
FEMA	Monte Fema	0.17	346	P	Pb	15 00 46.1	-0.3
T1219	Muccia, Frazio	0.27	345	⇑P	Pg	15 00 47.1	+0.5
T1219				S	Sb	15 00 51.6	-1.1
RM33	Pellescritta (	0.30	164	S	Sg	15 00 50.8	-0.5

IDC 16 15:05:40.0±8.0**, 5°.51S**×**154°.30E, h118**km±53km**, mb3.0**/3**, mbtmp3.4**/4**, Error ellipse: s-maj=81.1km s-min=33.4km az=94.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	2.56	298	P	Pn	15 06 20.0	-0.6
	19nm,0.4s,baz=111,slow=14,SNR=1.6						
KRVT				S	Sn	15 06 52.6	+0.8
	36nm,0.6s,baz=141,slow=13,SNR=1.8						
WRA	Warramunga Arr	24.14	232	P	P	15 10 45.5	+0.2
	1.4nm,0.7s,baz=55,slow=9.7,SNR=21						
	1.4nm,0.7s						
ASAR	Alice Springs	26.68	225	P	P	15 11 07.8	-0.4
	0.2nm,0.4s,baz=57,slow=9.5,SNR=12						
	0.2nm,0.4s						
MKAR	Makanchi Array	81.84	319	P	P	15 17 46.4	+0.2
	0.1nm,0.6s,baz=93,slow=7.2,SNR=1.7						
	0.1nm,0.6s						

IDC 16 15:18:09.6±2.7**, 5°.86S**×**130°.37E, h0**km**, mb3.2**/1**, mbtmp3.0**/3**, ML2.9**/2**, Error ellipse: s-maj=157.4km s-min=33.4km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.52	165	Pn	Pn	15 21 36.6	0.0
	0.1nm,0.3s,baz=348,slow=14,SNR=5.8						
WRA				Sn	Sn	15 24 02.6	-16
	0.1nm,0.3s,baz=335,slow=22,SNR=6.4						
	0.7nm,1.1s						
ASAR	Alice Springs	18.03	169	P	Pn	15 22 21.8	0.0
	baz=342,slow=9.9,SNR=5.7						
	0.1nm,0.5s						
MKAR	Makanchi Array	67.48	326	P	P	15 29 07.5	0.0
	0.2nm,0.9s,baz=120,slow=7.5,SNR=1.4						
	0.2nm,0.9s						

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*IDC **16** 15:22:28.3±4.3, 11°.83N×85°.68W, h0km, mb3.3/4, mbtmp3.3/4, MS2.8/3, Error ellipse: s-maj=127.7km s-min=78.5km az=60.0*

*UCR **16** 15:22:34.2±1.5, 11°.19N×86°.79W, h21km±8km, MW4.1*

*INET **16** 15:22:36.1±1.2, 11°.32N×86°.67W, h14km±7km, MW3.9*

ISC 16 15:22:33.5±1.4**, 11°.27N**±0°.04×**86°.73W**±0°.05**, h18**km±9km**, n57, σ0ˢ.80**/64**, mb3.3**/4**, 3C, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASN	Masaya	0.91	38	*e*P	Pn	15 22 51.7	+0.3
COPN	Copaltepe	0.92	9	*e*P	Pn	15 22 51.4	-0.1
TISN	Laguna Tiscapa	0.98	27	*e*P	Pn	15 22 52.7	+0.3
MGAN	Managua	0.99	28	*e*P	Pn	15 22 52.9	+0.4
MGAN				*e*P	Pn	15 22 53.0	+0.4
WILN	Americas 2	1.03	31	*e*P	Pn	15 22 53.4	+0.3
LCRUZ	La Cruz	1.10	100	*e*P	Pb	15 22 54.2	+0.2
LCRUZ				*e*S	Sn	15 23 09.9	+1.2
MOMN	Momotombo	1.15	9	*e*P	Pb	15 22 54.9	+0.1
HUEN		1.19	27	*e*P	Pn	15 22 55.7	+0.4
CNGN	Cerro Negro	1.22	1	*e*P	Pn	15 22 56.0	+0.3
CNGN				*e*S	Sg	15 23 13.4	+0.2
HZTE	Horizontes, Gu	1.24	116	*e*P	Pb	15 22 57.1	+0.6
HZTE	Horizontes, Gu	1.24	116	*e*P	Pb	15 22 56.9	+0.4
ALIBA	Liberia Airpor	1.34	120	*e*P	Pb	15 22 58.9	+0.7
LAPC	Finca la Perla	1.37	111	*e*P	Pn	15 22 58.5	+0.7
LAPC				*e*S	Sg	15 23 17.7	-0.1
BUEV	Buena Vista	1.38	110	*e*P	Pn	15 22 58.5	+0.6
GB1A	Borinquen Arri	1.38	109	*e*P	Pn	15 22 58.4	+0.4
HATIL	Hatillo	1.40	134	*e*P	Pn	15 22 57.6	-0.6
VRLE	La Escondida,	1.42	110	*e*P	Pn	15 22 59.0	+0.5
VORI	VORI	1.43	108	*e*P	Pn	15 22 59.4	+0.6
GPS3	Bodega del ICE	1.44	111	*e*P	Pn	15 22 59.7	+1.0
GPS1	Guardaparques	1.44	110	*e*P	Pn	15 22 59.5	+0.7
GPS2	Hotel Rincn d	1.45	111	*e*P	Pn	15 22 59.8	+0.9
GPS2				*e*S	Sg	15 23 20.1	-0.2
GP14	Hacienda Santa	1.45	110	*e*P	Pn	15 22 59.9	+1.0
GP14				*e*S	Sg	15 23 19.3	-1.2
CRIN	San Cristobal	1.46	348	*e*P	Pn	15 22 59.7	+0.7
CRIN				*e*S	Sg	15 23 19.5	-1.1
CRIN	San Cristobal	1.46	348	*e*P	Pn	15 22 59.7	+0.7
GP77	Hacienda Santa	1.47	110	*e*P	Pn	15 23 00.1	+0.9
ORTG	Ortega, Santa	1.54	126	*e*P	Pb	15 23 02.1	+0.5
SAJU	San Juanillo,	1.56	140	⇑*i*P	Pg	15 23 04.0	+0.5
BOAB	BOACO BROADBAN	1.57	42	*e*P	Pn	15 23 00.7	+0.2
GUAB	Guayabo de Bag	1.58	111	*e*P	Pn	15 23 01.7	+1.1
CLARA	Aguas Claras	1.60	107	*e*P	Pb	15 23 02.2	-0.3
COLC	Colonia	1.61	112	*e*P	Pn	15 23 02.4	+1.2
VMAR	Armenia, Volca	1.65	106	⇑*i*P	Pn	15 23 02.6	+1.0
VMAR				*e*P	Pn	15 23 02.7	+1.0
VMAR				*e*S	Sb	15 23 24.4	+0.4
CUI	Cuipilapa	1.65	111	*e*P	Pb	15 23 03.2	-0.3
ACON	Acoyapa	1.68	65	⇑*e*P	Pn	15 23 02.3	+0.3
CANAL	Canalete	1.70	105	*e*P	Pn	15 23 03.1	+0.8
CANAL				*e*S	Sb	15 23 25.1	-0.3
NARJA	Naranjal	1.74	138	*e*P	Pb	15 23 05.2	+0.2
MATN	Matagalpa	1.83	25	*e*P	Pn	15 23 04.5	+0.4
INDI	Punta indio, G	1.84	139	*e*P	Pn	15 23 03.6	-0.7
VERA	Finca Concepci	1.87	103	*e*P	Pn	15 23 05.6	+1.0
VERA				*e*S	Sb	15 23 30.1	-0.2
JTS	Las Juntas de	2.00	119	*e*P	Pn	15 23 08.4	+2.0
JTS	Las Juntas de	2.00	119	*e*P	Pn	15 23 08.5	+2.0
TABAC	Tabacon	2.08	111	*e*P	Pb	15 23 10.8	+0.1
CEDE	Laguna Cedeo	2.14	111	*e*P	Pb	15 23 11.2	-0.6
SOMN	Somoto	2.14	3	*e*P	Pb	15 23 12.1	+0.3
LAFE	Finca La Fe, P	2.31	129	*e*P	Pn	15 23 10.1	-0.5
LAFE	Finca La Fe, P	2.31	129	*e*P	Pn	15 23 10.1	-0.5
PACA	Pacayal	2.68	325	*e*P	Pn	15 23 18.0	+2.0
TGUH	Tegucigalpa,Un	2.82	349	*e*P	Pn	15 23 19.2	+1.4
SDV	Santo Domingo	16.02	97	LR	LR	15 32 43.9	
	comp=Z,28nm,18.2s,baz=63,slow=41						
ATAH	Atahualpa	20.08	155	LR	LR	15 33 52.1	
	comp=Z,41nm,20.4s,baz=338,slow=34						
TXAR	Lajitas Array	23.93	321	P	P	15 27 46.6	-0.1
	0.6nm,0.5s,baz=137,slow=12,SNR=8.8						
	0.6nm,0.5s						
LPIG	La Paz	25.78	303	LR	LR	15 39 25.7	
	comp=Z,21nm,19.8s,baz=45,slow=39						
PDAR	Pinedale Array	37.14	332	P	P	15 29 42.3	-1.2
	0.3nm,0.6s,baz=126,slow=14,SNR=2.7						
	0.3nm,0.6s						
NVAR	Mina Array Bea	39.05	319	P	P	15 29 58.6	-1.2
	0.4nm,0.8s,baz=98,slow=10,SNR=2.1						
	0.4nm,0.8s						
YKA	Yellowknife Ar	54.93	345	P	P	15 31 58.2	-4.9
	0.2nm,0.5s,baz=145,slow=6.7,SNR=3.0						
	0.2nm,0.5s						
ASAR	Alice Springs	139.47	247	PKP	PKPdf	15 42 00.6	-0.2
	0.3nm,1.0s,baz=82,slow=1.7,SNR=1.5						
WRA	Warramunga Arr	139.60	252	PKP	PKPdf	15 42 01.0	-0.1
	0.1nm,0.3s,baz=90,slow=2.3,SNR=2.4						

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*NEIC **16** 15:25:25.7±2.4, 17°.13S±0°.06×71°.01W±0°.09, h128km±4km, mb4.3/10, ML4.3(GUC), Error ellipse: s-maj=12.8km s-min=8.9km az=94.0*

*VAO **16** 15:25:26.1±0.6, 17°.02S×71°.05W, h121km, mb4.4*

*IDC **16** 15:25:26.8±0.6, 17°.15S×70°.77W, h112km±5km, mb3.6/8, mbtmp4.1/13, MS3.9/1, Error ellipse: s-maj=12.9km s-min=10.4km az=179.0*

*GUC **16** 15:25:27.4±0.8, 17°.14S×71°.00W, h117km±7km, ML4.3*

ISC 16 15:25:26.0±0.5**, 17°.11S**±0°.04×**70°.95W**±0°.06**, h116**km±5km**, n117, σ1ˢ.55**/139**, mb4.1**/12**, 3C-3D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AP01	Chacalluta	1.38	155		Pn	15 25 52.8	+1.0
AP01				Sn	Sn	15 26 11.8	+0.4
AP01	Chacalluta	1.38	155	*e*P	Pn	15 25 52.8	+1.0
AP01				*i* S	Sn	15 26 12.4	+1.0
AP01				IAML		15 26 13.8	
	comp=N,19µm,0.2s						
PB18	Visviri	1.48	109		Pn	15 25 55.1	+1.7
PB18				Sn	Sn	15 26 16.3	+2.0
PB18	Visviri	1.48	109	⇓*i*P	Pn	15 25 55.2	+1.7
PB18				*i* S	Sn	15 26 17.4	+3.0
PB12	IPOC Station P	1.61	159	Pn	Pn	15 25 55.5	+0.8
PB12				Sn	Sn	15 26 16.1	-0.3
PB12	IPOC Station P	1.61	159	⇑*i*P	Pn	15 25 55.4	+0.8
PB12				*i* S	Sn	15 26 16.5	+0.2
PB12				IAML		15 26 18.5	
	comp=E,4µm,0.2s						
PB16	IPOC Station P	1.84	132		Pn	15 25 58.4	+0.6
PB16				Sn	Sn	15 26 23.0	+1.0
PB16	IPOC Station P	1.84	132	⇓*i*P	Pn	15 25 59.0	+1.2
PB16				*i* S	Sn	15 26 23.0	+1.0
PB16				IAML		15 26 26.1	
	comp=N,885nm,0.5s						
MNMC	Minye Minye	2.39	148		Pn	15 26 05.6	+1.2
MNMC				Sn	Sn	15 26 30.8	-3.2
MNMC	Minye Minye	2.39	148	⇓*i*P	Pn	15 26 05.7	+1.2
PSGC	Pisagua	2.60	163	⇑*i*P	Pn	15 26 07.7	+0.6
PSGC				*i* S	Sn	15 26 37.2	-1.3
PSGC				IAML		15 26 40.0	
	comp=N,1µm,0.2s						
PSGCX	Pisagua	2.60	163		Pn	15 26 07.5	+0.5
PSGCX				Sn	Sn	15 26 36.1	-2.4
LPAZ	La Paz	2.82	74	P	Pn	15 26 11.0	+0.6
	comp=N,299nm,0.3s,baz=292,slow=7.3,SNR=1355						
LPAZ				S	Sn	15 26 42.9	-1.5
	comp=N,88nm,0.5s,baz=174,slow=25,SNR=6.9						
LPAZ	La Paz	2.82	74	Pn	Pn	15 26 11.3	+0.9
LPAZ				Sn	Sn	15 26 44.0	-0.4
LPAZ	La Paz	2.82	74	*e*P	Pn	15 26 11.3	+0.9
PB11	IPOC Station P	2.91	155	Pn	Pn	15 26 11.6	+0.5
PB11				Sn	Sn	15 26 44.2	-1.7
PB11	IPOC Station P	2.91	155	*e*P	Pn	15 26 11.7	+0.5
PB11				*i* S	Sn	15 26 44.4	-1.5
PB11				IAML		15 26 52.3	
	comp=E,714nm,0.5s						
GO01	Chusmiza	3.04	147		Pn	15 26 15.5	+2.3
TA02	Huaiquique	3.24	166		Pn	15 26 16.0	+0.7
PB08	IPOC Station P	3.46	151		Pn	15 26 19.9	+1.2
PB08				Sn	Sn	15 26 58.1	-1.2
PB08	IPOC Station P	3.46	151	*e*P	Pn	15 26 20.2	+1.5
PB08				*i* S	Sn	15 26 59.4	0.0
PB08				IAML		15 27 01.8	
	comp=N,894nm,0.4s						
TA01	Diego Aracena	3.52	168	Pn	Pn	15 26 19.7	+0.7
TA01				Sn	Sn	15 26 55.6	-4.4
TA01	Diego Aracena	3.52	168	⇑*i*P	Pn	15 26 19.7	+0.7
TA01				*i* S	Sn	15 26 57.8	-2.2
TA01				IAML		15 27 01.8	
	comp=E,666nm,0.3s						
PB01	IPOC Station P	4.15	161		Pn	15 26 28.3	+0.7
PB01				Sn	Sn	15 27 11.0	-4.4
PB02	IPOC Station P	4.31	167	Pn	Pn	15 26 30.5	+0.8
PB07	IPOC Station P	4.70	168		Pn	15 26 35.5	+0.5
PB09	IPOC Station P	4.94	161		Pn	15 26 39.6	+1.4
PB03	IPOC Station P	5.04	167		Pn	15 26 40.0	+0.4
PB04	IPOC Station P	5.25	172		Pn	15 26 42.6	+0.1
PB06	IPOC Station P	5.72	167		Pn	15 26 48.8	0.0
LVC	Limon Verde	5.80	161	P	Pn	15 26 51.4	+1.3
	comp=E,14nm,0.3s,baz=326,slow=12,SNR=64						
LVC				S	Sn	15 27 52.8	-2.7
	comp=E,64nm,0.5s,baz=297,slow=11,SNR=9.1						
LVC	Limon Verde	5.80	161	Pn	Pn	15 26 51.0	+1.0
LVC	Limon Verde	5.80	161	*e*P	Pn	15 26 50.4	+0.3
PB15	IPOC Station P	6.23	167		Pn	15 26 55.6	0.0
PB10	IPOC Station P	6.38	177	Pn	Pn	15 26 57.1	-0.5
PB14	IPOC Station P	7.50	176	Pn	Pn	15 27 11.7	-1.3
NNA	Nana	7.65	311	P	Pn	15 27 18.1	+3.3
	comp=E,7.6nm,0.3s,baz=204,slow=13,SNR=4.1						
NNA				S	Sn	15 28 40.1	+0.2
	comp=E,8.2nm,0.3s,baz=220,slow=17,SNR=1.9						
NNA	Nana	7.65	311	Pn	Pn	15 27 14.8	0.0
GO02	Mina Guanaco	8.12	171		Pn	15 27 20.3	-1.1
ETMB	Extrema	8.58	33	Pn	Pn	15 27 25.4	-2.1
ETMB	Extrema	8.58	33	*e*P	Pn	15 27 24.8	-2.7
AC01	Pan de Azucar	9.00	178	Pn	Pn	15 27 31.3	-1.7
CZSB	Cruzeiro do Su	9.48	349	Pn	Pn	15 27 37.2	-2.3
CZSB	Cruzeiro do Su	9.48	349	*e*P	Pn	15 27 37.0	-2.5
SIV	San Ignacio	9.54	85	P	Pn	15 27 37.9	-2.4
	comp=E,23nm,0.4s,baz=269,slow=10,SNR=62						
SIV				LR	LR	15 32 02.2	
	comp=E,63nm,20.7s,baz=118,slow=42						
AC02	Maricunga	9.83	170	Pn	Pn	15 27 44.9	+0.3
GO03	Copiap	10.46	177	Pn	Pn	15 27 52.5	-0.3
SAML	Samuel	11.09	44		Pn	15 27 55.6	-5.6
VILB	Vilhena	11.17	70		Pn	15 27 58.0	-4.4
PTLB	Pontes e Lacer	11.46	83	Pn	Pn	15 28 02.7	-3.6
AC05	El Transito	11.69	177	Pn	Pn	15 28 08.1	-1.2
LCO	Las Campanas	11.85	179	Pn	Pn	15 28 09.2	-2.4
CO01	Juntas del Tor	12.84	177	Pn	Pn	15 28 23.7	-0.8
GO04	Tololo Observa	13.01	179	Pn	Pn	15 28 24.5	-2.2
CO06	Fray Jorge	13.52	183	Pn	Pn	15 28 30.9	-2.2
CO03	El Pedregal	13.67	179	Pn	Pn	15 28 32.9	-2.3
CFA	Coronel Fontan	14.64	171	P	Pn	15 28 47.7	+0.2
	comp=E,1.6nm,0.4s,baz=322,slow=16,SNR=2.3						
SALV	Santo Antonio	14.68	88	*e*P	Pn	15 28 48.3	+0.2
RVDE	Rio Verde (Bra	15.34	100	*e*P	Pn	15 28 57.9	+1.4
CLDB	Colider	15.95	69	*e*P	Pn	15 29 04.8	+0.8
AMBA	Amambai (Brazi	16.07	114	*e*P	Pn	15 29 06.1	+0.7
SGCB	S£o Gabriel d	17.31	13	*e*P	P	15 29 19.1	-1.1
MCR1	Marechal Candi	17.41	118	*e*P	Pn	15 29 22.6	+0.8
AZCA	Azaras, Argent	17.59	131	*e*P	Pn	15 29 24.4	+0.5
H03N1	Juan Fernandez	17.77	202	P	Pn	15 29 33.3	+7.6
H03N1				T	T	15 47 19.0	
	baz=27,slow=73,SNR=67						
H03N2	Juan Fernandez	17.78	202	P	Pn	15 29 33.2	+7.4
H03N2				T	T	15 47 19.0	
	baz=27,slow=73,SNR=110						
H03N3	Juan Fernandez	17.79	202	P	Pn	15 29 33.1	+7.1
H03N3				T	T	15 47 18.1	
	baz=27,slow=73,SNR=95						
ITQB	Itaqui	18.12	136	*e*P	P	15 29 29.1	+0.1
NPGB	Novo Progresso	18.21	59	*e*P	P	15 29 29.6	-0.7
ARAG	Araguaiana, MT	18.41	88	*e*P	P	15 29 31.5	-0.8
CRSM	Crissiumal (Br	18.73	126	*e*P	P	15 29 37.1	+1.4
FRBT	Francisco Belt	18.82	121	*e*P	P	15 29 36.5	-0.2
PCMB	Pacaembu	19.10	107	*e*P	P	15 29 39.6	-0.3
PTGB	Pitanga	19.18	116	*e*P	P	15 29 41.2	+0.4
RODS	Rosario do Sul	19.50	135	*e*P	P	15 29 44.8	+0.7
ITTB	Itaituba	19.56	51	*e*P	P	15 29 43.9	-1.0
SNDB	Serra Nova Dou	19.69	78	*e*P	P	15 29 45.6	-0.7
ITRB	Iturama	19.71	101	*e*P	P	15 29 46.5	0.0
ITAB	Concordia	20.11	123	P	P	15 29 48.5	-2.2
ITAB				IAmb	IAmb	15 29 54.1	
	comp=Z,15nm,1.0s						
ITAB	Concordia	20.11	123	*e*P	P	15 29 50.9	+0.3
ALGR	Alto Alegre (B	20.16	128	*e*P	P	15 29 52.0	+0.6
CPSB	Cacapava Do Su	20.75	133	*e*P	P	15 29 58.9	+1.4
FRTB	Fartura	20.99	111	*e*P	P	15 29 59.7	-0.6
PLTB	Pedras Altas	21.45	136	P	P	15 30 03.5	-1.7
PLTB				IAmb	IAmb	15 30 07.6	
	comp=Z,14nm,1.2s						
BOAV	Boa Vista	21.94	29	P	P	15 30 09.4	-0.9
BOAV				IAmb	IAmb	15 30 11.8	
	comp=Z,21nm,1.2s						
BOAV	Boa Vista	21.94	29	*e*P	P	15 30 09.8	-0.6
BDFB	Brasilia	22.05	90	P	P	15 30 09.6	-2.1
	comp=Z,3.9nm,0.4s,baz=263,slow=9.6,SNR=4.3						
	comp=Z,3.9nm,0.4s						
BDFB	Brasilia	22.05	90	P	P	15 30 09.8	-1.9
BDFB	Brasilia	22.05	90	*e*P	P	15 30 10.7	-1.0
CNLB	Canela	22.07	127	*e*P	P	15 30 12.8	+1.2
MALB	Monte Alegre	22.34	49	*e*P	P	15 30 13.6	-0.8
RUSC	La Rusia	22.95	355	P	P	15 30 19.0	-2.0
RUSC				IAmb	IAmb	15 30 21.9	
	comp=Z,5.2nm,0.5s						
VAO	Valinhos	23.26	109	*e*P	P	15 30 23.0	-0.5
PRPB	Parauapebas	23.35	65	*e*P	P	15 30 23.1	-1.2
PMNB	Patos De Minas	23.37	97	*e*P	P	15 30 24.0	-0.6
PLCA	Paso Flores	23.55	179	P	P	15 30 28.1	+2.2
	comp=Z,1.7nm,0.7s,baz=350,slow=4.9,SNR=4.0						
	comp=Z,1.7nm,0.7s						
PLCA	Paso Flores	23.55	179	P	P	15 30 26.5	+0.6
SMTB	Santa Maria do	24.17	73	*e*P	P	15 30 31.4	-0.4
PARB	Paraibuna	24.54	109	*e*P	P	15 30 35.2	+0.1
MCPB	Macapa, AP	24.96	50	*e*P	P	15 30 38.5	-0.4
JANB	Januaria	25.67	89	*e*P	P	15 30 45.1	-0.2
SDV	Santo Domingo	25.83	1	LR	LR	15 42 01.0	
	comp=Z,262nm,19.8s,baz=236,slow=38						
BAUV	El Baul	26.04	7	P	P	15 30 46.9	-1.7
BAUV				IAmb	IAmb	15 31 19.6	
	comp=Z,17nm,1.1s						
MLPR	Magueyes Islan	35.07	6	P	P	15 32 05.9	-2.1
AOPR	Arecibo Observ	35.47	7	P	P	15 32 09.2	-2.2
TXAR	Lajitas Array	55.94	325	P	P	15 34 54.1	+1.7
	comp=Z,0.4nm,0.6s,baz=151,slow=8.0,SNR=4.7						
TXAR				pP	pP	15 35 21.3	+0.1
	comp=Z,0.2nm,0.5s,baz=150,slow=10,SNR=2.7						
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	69.36	331	P	P	15 36 23.8	+2.4
	comp=Z,0.2nm,0.6s,baz=108,slow=8.6,SNR=2.0						
	comp=Z,0.2nm,0.6s						
DBIC	Dimbokro	69.44	76	P	P	15 36 21.5	-0.7
	comp=Z,4.3nm,0.5s,baz=259,slow=7.6,SNR=7.3						
	comp=Z,4.3nm,0.5s						
TORD	Torodi Ar. Bea	77.77	72	P	P	15 37 10.6	-0.4
	comp=Z,2.5nm,0.5s,baz=257,slow=5.1,SNR=29						
TORD				pP	pP	15 37 39.3	-2.5
	comp=Z,1.8nm,0.7s,baz=259,slow=5.5,SNR=5.0						
	comp=Z,2.5nm,0.5s						
ESDC	Sonseca Array	84.11	46	P	P	15 37 45.0	+0.8
	comp=Z,1.6nm,0.8s,baz=262,slow=5.6,SNR=9.0						
	comp=Z,1.6nm,0.8s						
YKA	Yellowknife Ar	86.43	341	P	P	15 37 56.6	+1.5
	comp=Z,0.3nm,0.6s,baz=138,slow=5.7,SNR=6.4						
YKA				pP	pP	15 38 25.3	-0.4
	comp=Z,0.5nm,0.6s,baz=134,slow=5.2,SNR=5.0						
	comp=Z,0.3nm,0.6s						
ASAR	Alice Springs	132.76	212	PKP	PKiKP	15 44 30.2	+0.9
	comp=Z,0.3nm,0.9s,baz=110,slow=1.8,SNR=4.1						
ASAR				pPKP	pPKPdf	15 44 59.6	-0.5
	comp=Z,0.5nm,0.9s,baz=106,slow=2.6,SNR=3.5						
WRA	Warramunga Arr	135.59	215	PKP	PKiKP	15 44 36.0	+0.9
	comp=Z,0.3nm,0.4s,baz=140,slow=1.6,SNR=7.9						
WRA				pPKP	pPKPdf	15 45 05.2	-0.2
	comp=Z,0.4nm,0.8s,baz=136,slow=1.8,SNR=1.9						
ZALV	Zalesovo Beam	138.70	22	PKP	PKPdf	15 44 38.0	-0.2
	comp=Z,0.3nm,0.4s,baz=232,slow=7.1,SNR=1.8						
MKAR	Makanchi Array	143.04	31	PKP	PKPbc	15 44 44.7	+1.3
	comp=Z,0.2nm,0.5s,baz=316,slow=3.0,SNR=4.7						
MJAR	Matsushiro Arr	147.77	313	PKPbc	PKiKP	15 44 59.7	+0.2
	comp=Z,0.5nm,0.4s,baz=149,slow=3.6,SNR=2.4						
MJAR				pPKPbc	pPKPdf	15 45 27.5	+0.6
	comp=Z,1.0nm,0.5s,baz=21,slow=2.4,SNR=2.7						
SONM	Songino Array	149.28	4	PKPbc	PKiKP	15 45 02.8	+0.4
	comp=Z,0.7nm,0.5s,baz=353,slow=0.9,SNR=4.7						
SONM				pPKPbc	pPKPbc	15 45 33.0	-0.4
	comp=Z,0.6nm,0.5s,baz=315,slow=1.7,SNR=3.9						

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*TIF **16** 15:29:33.7, 43°.33N×41°.56E, h28km±1km*

*MOS **16** 15:29:35.1±0.0, 43°.24N×41°.74E, h10km, MPVA3.8*

*NORS **16** 15:29:36.3±0.0, 43°.25N×41°.83E, h2km, MPVA3.6*

ISC 16 15:29:35.1±1.0**, 43°.24N**±0°.02×**41°.74E**±0°.02**, h5**km±8km**, n31, σ0ˢ.76**/60**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DOMR	Dombai	0.10	304	*i* Pg	Pg	15 29 37.6	+0.3
DOMR				*i* Sg	Sg	15 29 39.2	+0.4
ARXR	Arkhyz	0.47	314	*i* Pg	Pg	15 29 44.1	0.0
ARXR				*i* Sg	Sg	15 29 50.5	+0.3
NEY	Neytrino	0.72	89	*i* Pg	Pg	15 29 48.3	-0.7
NEY				*i* Sg	Sg	15 29 57.3	-1.0
SHA1	Shidzhatmaz	0.84	53	*i* Pg	Pg	15 29 51.3	+0.2
SHA1				*i* Sg	Sg	15 30 02.4	+0.4

KBZ	Khabaz	0.98	59	*i* Pg	Pg	15 29 53.6	-0.3
KBZ				*i* Sg	Sg	15 30 06.5	0.0
KIV	Kislovodsk	1.00	44	*i* Pg	Pb	15 29 54.3	-0.5
KIV				*i* Sg	Sb	15 30 07.5	-0.8
KIV0	Kislovodsk Arr	1.00	44	*i* Pg	Pb	15 29 54.4	-0.5
KIV0				*i* Sg	Sb	15 30 07.7	-0.7
AHMR	Akhmetovskaya	1.05	332	*i* Pg	Pg	15 29 55.0	-0.1
AHMR				*i* Sg	Sb	15 30 09.6	-0.2
BEYR	Belyy Ugol+	1.10	45	*i* Pg	Pb	15 29 56.2	-0.4
BEYR				*i* Sg	Sb	15 30 10.7	-0.6
RPOR	Krasnaya Polya	1.17	294	*e*Pg	Pb	15 29 56.9	-0.8
RPOR				*e*Sg	Sn	15 30 13.5	-0.9
VSLR	Vesyoloye	1.26	281	*i* Pg	Pn	15 29 59.0	-0.4
VSLR				*e*Sg	Sn	15 30 17.1	+0.4
TKB	Tkibuli	1.28	133	*e*Pg	Pg	15 29 59.8	+0.2
TKB				*e*Sg	Sn	15 30 19.2	+2.1
TKB	Tkibuli	1.28	133	P	Pg	15 29 59.8	+0.2
TKB				S	Sn	15 30 19.2	+2.1
PYA1	Pyatigorsk	1.29	50	*e*Pg	Pg	15 29 59.4	-0.3
PYA1				*e*Sg	Sn	15 30 16.7	-0.6
KBTC	Kuba-Taba	1.35	64	*i* Pg	Pg	15 30 01.3	+0.4
KBTC				*i* Sg	Sg	15 30 19.1	+0.7
DIGR	Digorskoe uzhe	1.39	103	*e*Pg	Pb	15 30 01.3	-0.3
DIGR				*e*Sg	Sg	15 30 21.1	+1.3
GUZR	Guzeripl'	1.40	303	*e*Pg	Pn	15 30 00.9	-0.3
GUZR				*e*Sg	Sg	15 30 19.9	-0.1
ONI	Oni	1.42	117	*e*Pg	Pn	15 30 01.1	-0.4
ONI				*e*Sg	Sg	15 30 20.4	-0.2
ONI	Oni	1.42	117	P	Pn	15 30 01.1	-0.4
ONI				S	Sg	15 30 20.4	-0.2
SOC	Sochi	1.51	284	*i* Pg	Pb	15 30 03.5	0.0
SOC				*i* Sg	Sg	15 30 23.4	-0.2
BATM	Batumi	1.63	181	*e*Pg	Pn	15 30 04.5	+0.1
BATM				*e*Sg	Sb	15 30 27.0	+0.5
BATM	Batumi	1.63	181	P	Pn	15 30 04.5	+0.1
BATM				S	Sb	15 30 27.0	+0.5
ZEI	Tsey	1.65	105	*e*Pg	Pg	15 30 06.8	+0.1
ZEI				*e*Sg	Sg	15 30 29.4	+1.3
ABS	Abastumani	1.68	151	*e*Pg	Pb	15 30 05.8	-0.8
ABS				*e*Sg	Sg	15 30 28.6	-0.5
ABS	Abastumani	1.68	151	P	Pb	15 30 05.8	-0.8
ABS				S	Sg	15 30 28.6	-0.5
ALER	Alexandrovskoy	1.75	29	*e*Pg	Pg	15 30 09.0	+0.5
ALER				*e*Sg	Sg	15 30 32.5	+1.3
LACR	Lac	1.92	101	*e*Pg	Pg	15 30 11.9	0.0
LACR				*e*Sg	Sb	15 30 35.3	+0.3
GOYR	Goytkh	1.99	301	*e*Pg	Pb	15 30 11.2	-0.4
GOYR				*e*Sg	Sb	15 30 35.8	-0.8
SHTL	Shatili	2.58	102	*e*Pn	Pb	15 30 20.3	-1.5
SHTL	Shatili	2.58	102	P	Pb	15 30 20.3	-1.5
ERBR	Yeremizino-Bor	2.63	341	*e*Pn	Pn	15 30 19.9	+1.7
ERBR				*e*Sn	Sn	15 30 51.2	+0.8

WEL 16 15:30:37.5±0.6,**42°S**±2°×**17°3E**±°,**h5**^{km}±2^{km},**M2.7**/7,
ML2.9/7,**MLv2.7**/7,**Error ellipse: s-maj=0.0km**
s-min=0.0km az=82.4,confirmed,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.09	133	P	Pg	15 30 39.2	-0.2
KHZ				S	Sg	15 30 40.9	+0.2
GVZ	Greta Valley S	0.68	207	P	Pg	15 30 51.2	+0.5
GVZ				S	Sb	15 31 01.7	0.0
BSWZ	Blackbirch Sta	0.71	26	P	Pg	15 30 51.7	+0.5
THZ	Tophouse	0.72	325	P	Pg	15 30 51.5	+0.2
THZ				S	Sg	15 31 01.4	+0.7
CMWZ	Cape Campbell	0.83	43	P	Pn	15 30 55.4	-0.5
CMWZ				S	Sn	15 31 10.8	+2.3
LTZ	Lake Taylor	0.97	244	P	Pg	15 30 55.6	-0.6
LTZ				S	Sb	15 31 09.9	-0.1
TUWZ	Tuamarina	1.00	22	P	Pg	15 30 56.9	+0.3
TUWZ				S	Sb	15 31 11.2	+0.5
AMCZ	Amberley	1.01	215	P	Pg	15 30 56.9	+0.1
MRNZ	Matariki Terra	1.09	331	P	Pg	15 30 58.2	-0.1
MRNZ				S	Sn	15 31 15.1	+0.2
NNZ	Nelson	1.14	357	P	Pg	15 30 58.8	-0.5
TCW	Tory Channel	1.30	29	P	Pn	15 31 01.7	-0.6
DSZ	Denniston Nort	1.37	296	P	Pn	15 31 03.4	0.0
TKNZ	Takaka Hill	1.37	344	P	Pn	15 31 03.1	-0.3
OXZ	Oxford	1.42	227	P	Pn	15 31 01.9	-2.2
WEL	Wellington	1.46	43	P	Pn	15 31 03.7	-0.8
MQZ	McQueen's Vall	1.47	203	P	Pn	15 31 01.9	-2.8
INZ	Inchbonnie	1.53	255	P	Pn	15 31 05.1	-0.4
PLWZ	Palliser	1.56	60	P	Pn	15 31 04.0	-2.0
AKCZ	Akaroa Harbour	1.57	194	P	Pn	15 31 03.5	-2.5
DUWZ	D'Urville Isla	1.59	13	P	Pn	15 31 06.4	0.0
RACZ	Rakaia	1.67	215	P	Pn	15 31 04.8	-2.7
QRZ	Quartz Range	1.68	335	P	Pb	15 31 08.2	-0.7
PAWZ	Paruwai Farm	1.77	57	P	Pn	15 31 06.7	-2.2
MHCZ	Mount Hutt	1.81	229	P	Pn	15 31 07.2	-2.3
KIW	Kapiti Island	1.85	37	P	Pn	15 31 09.3	-0.6
WACZ	Wakanui South	1.98	216	P	Pn	15 31 09.4	-2.3
WVZ	Waitaha Valley	2.12	249	P	Pn	15 31 13.2	-0.5
RPZ	Rata Peaks	2.22	232	P	Pn	15 31 13.1	-2.0
ARCZ	Arundel	2.30	226	P	Pn	15 31 13.9	-2.2
FOZ	Fox Glacier	2.92	245	P	Pn	15 31 26.4	+1.8
NBEZ	Newall Road No	3.10	6	P	Pb	15 31 31.0	-2.2
PKE	Pukeiti	3.19	8	P	Pn	15 31 31.2	+2.9
VRZ	Vera Road	3.38	18	P	Pn	15 31 33.3	+2.4
WNVZ	Wahianoa	3.44	29	P	Pb	15 31 35.5	-3.5
HIZ	Hauiti	3.99	16	P	Pb	15 31 43.8	-4.4

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*NEIC **16** 15:38:10.6±2.0, 4°.89N±0°.05×72°.60W±0°.05, h17^{km}±3^{km}, mb5.2/460, Error ellipse: s-maj=6.7km s-min=6.3km az=149.0*
*VAO **16** 15:38:12.5±0.4, 4°.76N×72°.56W, h12^{km}, mb5.3*
*RSNC **16** 15:38:12.6±1.6, 4°.84N×72°.64W, h0^{km}±5^{km}, Mb5.1, ML4.8, Mw4.8, Fault plane solution: NP1:φs140.00000°, δ29.00000°, λ65.00000°.*
*IDC **16** 15:38:13.1±1.9, 4°.86N×72°.71W, h34^{km}±15^{km}, mb4.5/29, mbtmp4.7/35, ML4.3/6, MS3.9/31, Error ellipse: s-maj=12.7km s-min=9.4km az=65.0*
ISC 16 15:38:09.5±1.0,**4°.78N**±0°.02×**72°.67W**±0°.02,**h15**^{km}±6^{km},
n930,σ1ˢ70/864,**mb5.2**/246,**MS3.9**/28**,27C-3D,Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTGC	Puerto Gaitan,	0.78	137	⇑*i*P	Pn	15 38 27.8	+1.8
PTGC				*e*S	Sn	15 38 39.2	+1.7
PTGC				*i*		15 38 45.5	
	comp=Z,11µm,0.2s						
CHIC	Chingaza	1.07	262	⇑*i*P	Pn	15 38 30.6	+0.3
CHIC				*e*S	Sn	15 38 44.5	-0.6
CHIC				*i*		15 38 56.7	
	comp=Z,9µm,0.4s						
RUSC	La Rusia	1.18	339		Pn	15 38 32.0	+0.2
RUSC				Sg	Sb	15 38 45.5	-1.6
RUSC	La Rusia	1.18	339	⇑*i*P	Pg	15 38 32.8	+0.5
RUSC				*e*S	Sb	15 38 47.5	+0.3
RUSC				*i*		15 38 54.9	
	comp=Z,19µm,0.4s						
VILC	Villavicencio,	1.22	237	⇑*i*P	Pg	15 38 33.9	+0.8
VILC				*e*S	Sn	15 38 53.7	+5.3
VILC				*i*		15 38 57.7	
	comp=Z,29µm,0.3s						
SPBC	San Pablo de B	1.65	302	⇑*i*P	Pb	15 38 40.0	+0.4
SPBC				*e*S	Sg	15 39 01.6	-1.0
ROSC	El Rosal	1.65	272	Pg	Pg	15 38 42.2	+0.9
	comp=Z,3µm,0.3s,baz=106,slow=5.8,SNR=1775						
ROSC				Lg	Lg	15 39 05.8	
	comp=Z,3µm,0.3s,baz=110,slow=15,SNR=6.9						
ROSC				LR	LR	15 39 38.7	
	comp=Z,10µm,18.4s,baz=95,slow=53						
ROSC	El Rosal	1.65	272		Pg	15 38 41.9	+0.7
ROSC					Sg	15 39 03.2	+0.5
ROSC	El Rosal	1.65	272	⇑*i*P	Pg	15 38 42.1	+0.9
ROSC				*e*S	Sg	15 39 06.0	+3.2
ROSC				*i*		15 39 11.7	
	comp=Z,28µm,0.5s						
TAMC	Tame, Arauca	1.86	28	⇑*i*P	Pg	15 38 45.2	-0.1
TAMC				*e*S	Sg	15 39 10.6	+1.1
TAMC				*i*		15 39 22.4	
	comp=Z,11µm,0.5s						
BARC	Barichara	1.87	344	⇑*i*P	Pb	15 38 44.0	+0.5
BARC				*e*S	Sg	15 39 08.8	-1.0
BARC				*i*		15 39 11.5	
	comp=Z,27µm,0.4s						
NORC	Norcasia	2.33	290	⇑*e*P	Pn	15 38 48.8	+1.5
NORC				*e*S	Sg	15 39 21.7	-2.7
NORC				*i*		15 39 23.4	
	comp=Z,17µm,0.6s						
PRAC	Prado	2.45	245		Pb	15 38 52.4	-1.0
PRAC				Sn	Sb	15 39 23.6	+0.2
PRAC	Prado	2.45	245	⇑*i*P	Pb	15 38 52.8	-0.6
PRAC				*e*S	Sb	15 39 24.3	+0.9
PRAC				*i*		15 39 37.5	
	comp=Z,5µm,0.5s						
PTBC	PUERTO BERRIO,	2.50	315	⇑*i*P	Pn	15 38 50.8	+1.2
PTBC				*e*S	Sb	15 39 25.6	+1.0
PTBC				*i*		15 39 27.1	
	comp=Z,10µm,0.3s						
BRRC	Barranca, Sant	2.54	336	⇑*i*P	Pb	15 38 52.9	-1.8
BRRC				*e*S	Sb	15 39 27.3	+1.6
BRRC				*i*		15 39 35.0	
	comp=Z,4µm,0.3s						
PAMC	Pamplona, Colo	2.54	359	⇑*i*P	Pb	15 38 53.8	-1.3
PAMC				*e*S	Sb	15 39 26.3	-0.1
PAMC				*i*		15 39 34.6	
	comp=Z,8µm,0.3s						
ORTC	Ortega, Tolima	2.71	252	⇑*i*P	Pb	15 38 55.4	-2.4
ORTC				*e*S	Sg	15 39 33.6	-3.2
ORTC				*i*		15 39 38.3	
	comp=Z,8µm,0.6s						
GUY2C	Guyana, Caldas	2.72	279	⇑*i*P	Pb	15 38 56.0	-2.2
GUY2C				*e*S	Sb	15 39 31.6	0.0
GUY2C				*i*		15 39 38.8	
	comp=Z,2µm,0.5s						
ANIL	Santa Ana	2.74	264	⇑*e*P	Pn	15 38 55.3	+2.1
ANIL				*e*S	Sg	15 39 34.5	-3.3
ANIL				*i*		15 39 43.5	
	comp=Z,6µm,0.5s						
NIZA	Niza - Manizal	2.81	276	*e*P	Pn	15 38 56.1	+2.1
NIZA				*e*S	Sb	15 39 33.8	0.0
MACC	Macarena, Meta	2.87	204	*e*P	Pb	15 38 57.2	-3.2
MACC				*e*S	Sb	15 39 34.8	-0.6
MACC				*i*		15 39 54.6	
	comp=Z,9µm,0.9s						
HELC	Santa Helena	3.17	296		Pn	15 39 00.6	+1.4
HELC				Sn	Sn	15 39 39.0	+1.9
HELC	Santa Helena	3.17	296	⇑*i*P	Pn	15 39 00.9	+1.7
HELC				*e*S	Sb	15 39 44.7	+0.2
HELC				*i*		15 39 52.7	
	comp=Z,2µm,0.5s						
BETC	Betania	3.46	233	*e*P	Pb	15 39 06.5	-4.1
BETC				*e*S	Sb	15 39 50.1	-2.5
ZARC	Zaragoza, Cauc	3.46	321	*e*P	Pn	15 39 03.8	+0.9
ZARC				*e*S	Sn	15 39 44.3	+0.6
ZARC				*i*		15 40 04.9	
	comp=Z,3µm,0.4s						
CBOC	Ciudad Bolivar	3.50	288	⇑*e*P	Pn	15 39 05.9	+2.4
CBOC				*e*S	Sb	15 39 56.1	+2.5
CBOC				*i*		15 40 05.4	
	comp=Z,1µm,0.7s						
YOTC	Yotoco, Valle	3.75	258	⇑*e*P	Pn	15 39 09.2	+2.3
YOTC				*e*S	Sb	15 39 59.1	-1.8
GARC	Garzon, Huila	3.82	228	*e*P	Pn	15 39 11.2	+3.3
GARC				*e*S	Sg	15 40 07.0	-5.3
GARC				*i*		15 40 08.4	
	comp=Z,5µm,0.3s						
UREC	San Jos de Ur	4.10	316	⇑*i*P	Pn	15 39 13.4	+1.8
UREC				*e*S	Sn	15 40 01.2	+1.7
UREC				*i*		15 40 19.8	
	comp=Z,1µm,0.4s						
DBBC	Dabeiba	4.17	302	*e*P	Pn	15 39 15.6	+3.0
DBBC				*e*S	Sb	15 40 08.0	-4.8
DBBC				*i*		15 40 25.9	
	comp=Z,578nm,0.7s						
JAMC	Jamundi, Valle	4.29	249	⇑*e*P	Pn	15 39 17.2	+2.8
JAMC				*e*S	Sn	15 40 06.5	+2.2
JAMC				*i*		15 40 10.7	
	comp=Z,474nm,0.6s						
FLOC	Florencia	4.36	223	*e*P	Pn	15 39 18.2	+3.0
FLOC				*e*S	Sg	15 40 24.3	-5.2
FLOC				*i*		15 40 27.5	
	comp=Z,815nm,0.3s						
SDV	Santo Domingo	4.55	26	Pn	Pn	15 39 20.8	+2.8
	comp=Z,63nm,0.3s,baz=210,slow=12,SNR=95						
SDV				Sn	Sn	15 40 12.3	+1.6
	comp=Z,200nm,0.3s,baz=255,slow=20,SNR=3.1						
SDV				Lg	Lg	15 40 28.6	
	comp=Z,139nm,0.3s,baz=23,slow=17,SNR=2.3						
	comp=Z,170nm,0.2s						
SDV	Santo Domingo	4.55	26	Pn	Pn	15 39 19.7	+1.7
SDV				Sn	Sn	15 40 06.7	-4.1
SDV	Santo Domingo	4.55	26	*e*P	Pn	15 39 20.3	+2.3
POPC	Popayan, Colom	4.58	241	⇑*i*P	Pn	15 39 21.9	+3.5
POPC				*e*S	Sg	15 40 30.0	-6.6
PIZC	Pizarro, Choco	4.68	272	*e*P	Pn	15 39 25.0	+5.4
PIZC				*e*S	Sb	15 40 29.5	+2.0
MALC	Bahia Malaga	4.72	261	⇑*e*P	Pn	15 39 23.8	+3.7
MALC				*e*S	Sn	15 40 20.0	+5.4
LL1C	La Loma 1 Cana	4.81	350	*e*P	Pn	15 39 25.6	+4.2
LL1C				*e*S	Sb	15 40 28.2	-3.1
SOLC	Bahia Solano	4.93	287	*e*S	Sb	15 40 28.8	-6.0
APAC	Apartado, Choc	4.97	309	⇑*i*P	Pn	15 39 26.0	+2.4
APAC				*e*S	Sb	15 40 31.8	-4.1
APAC				*i*		15 40 56.3	
	comp=Z,752nm,0.6s						
ARGC	Ariguani, Magd	5.28	343	⇑*e*P	Pn	15 39 32.8	+4.9
ARGC				*e*S	Sn	15 40 35.2	+6.7
ARGC				*i*		15 40 52.2	
	comp=Z,352nm,0.4s						
BBAC	Balboa, Cauca	5.33	239	*e*P	Pn	15 39 31.9	+3.2
BBAC				*e*S	Sg	15 40 56.2	-4.6
CRUC	La Cruz	5.34	233	*e*P	Pn	15 39 33.2	+4.3
CRUC				*e*S	Sg	15 40 55.9	-5.0
LCBC	Los crdobas,	5.47	318	⇓*e*P	Pn	15 39 32.1	+1.7
LCBC				*e*S	Sn	15 40 35.8	+2.7
LCBC				*i*		15 41 16.6	
	comp=Z,253nm,0.5s						
SJCC	San Jacinto, C	5.66	334	⇑*i*P	Pn	15 39 34.8	+1.6
SJCC				*e*S	Sn	15 40 38.3	+0.3
SJCC				*i*		15 40 52.1	
	comp=Z,428nm,0.4s						
GR1C	Gorgona, Isla	5.76	252	⇓*e*P	Pn	15 39 35.8	+1.3
GR1C				*e*S	Sn	15 40 35.6	-4.8
GR1C				*i*		15 40 45.1	
	comp=Z,1µm,0.6s						
GCUF	Volcan Galeras	5.86	233	*e*P	Pn	15 39 39.9	+3.7
GCUF				*e*S	Sb	15 41 08.6	+6.9
GCUF				*i*		15 41 26.7	
	comp=Z,202nm,0.6s						
BAUV	El Baul	6.18	48	Pn	Pn	15 39 41.1	+0.8
BAUV				Pg	Pg	15 40 08.5	+0.6
BAUV				Sn	Sn	15 40 49.3	-1.4
CRJC	Cerrejon, Guaj	6.20	358	⇑*e*P	Pn	15 39 41.9	+1.3
CRJC				*e*S	Sn	15 40 51.9	+0.5
CRJC				*i*		15 41 00.4	
	comp=Z,996nm,0.5s						
BONI	La Bonita	6.49	229	*e*P	Pb	15 39 53.3	-8.9
BONI				*e*S	Sb	15 41 27.5	+7.8
BONI				*i*		15 41 46.7	
	comp=Z,276nm,0.7s						
UPD2	Meteti	6.50	305	*e*P	Pn	15 39 45.7	+1.1
TULM	Tulcn-Chalpat	6.51	232	*e*P	Pb	15 39 54.0	-8.9
TULM				*e*S	Sg	15 41 31.8	-7.0
TULM				*i*		15 41 43.4	
	comp=Z,149nm,0.6s						
SMRC	Santa Marta, M	6.53	346	*e*P	Pn	15 39 47.4	+2.4
SMRC				*e*S	Sn	15 41 00.4	+1.2
SMRC				*i*		15 41 17.8	
	comp=Z,282nm,0.5s						
TUMC	Tumaco	6.72	244		Pn	15 39 50.0	+2.3
TUMC				Sn	Sn	15 41 06.4	+2.3
TUMC	Tumaco	6.72	244	*e*P	Pn	15 39 48.8	+1.1
URIC	Uribia, Colomb	6.91	6		Pn	15 39 49.4	-0.9
URIC				Sn	Sn	15 41 04.0	-4.7
URIC	Uribia, Colomb	6.91	6	*e*P	Pn	15 39 50.8	+0.6
URIC				*e*S	Sn	15 41 05.0	-3.6
URIC				*i*		15 41 11.1	
	comp=Z,176nm,0.6s						
CUSE	Cuicocha Este	7.25	232	*e*P	Pn	15 40 01.3	+6.0
CUSE				*e*S	Sg	15 42 00.3	-2.0
OTAV	Otavalo	7.33	232		Pn	15 40 01.2	+4.7
OTAV	Otavalo	7.33	232	⇓*i*P	Pn	15 40 03.2	+6.8
OTAV				*e*S	Sg	15 42 01.0	-3.9
SGCB	S£o Gabriel d	7.44	131	*e*P	Pn	15 39 59.1	+1.5
AUA1	Aruba	8.11	19	Pn	Pn	15 40 05.7	-1.0
AUA1	Aruba	8.11	19	*e*P	Pn	15 39 58.0	-8.7
AUA1				*e*S	Sn	15 41 39.8	+1.5
AZU	Azuero	8.13	292	*e*P	Pn	15 40 08.0	+1.0
AZU				*e*S		15 42 55.0	
HATO	Hato, Curacao	8.22	26	Pn	Pn	15 40 06.6	-1.6
BCIP	Isla Barro Col	8.35	302	Pn	Pn	15 40 09.4	-0.6
BCIP	Isla Barro Col	8.35	302	*e*P	Pn	15 40 10.7	+0.7
BIRV	Birongo	8.50	48	Pn	Pn	15 40 13.3	+1.2
TBTG	Tabatinga, AM	9.32	163		Pn	15 40 24.9	+1.5
TBTG	Tabatinga, AM	9.32	163	*e*P	Pn	15 40 25.2	+1.8
BRU2	Volcan	10.72	292		Pn	15 40 44.4	+1.7
BRU2	Volcan	10.72	292	*e*P	Pn	15 40 45.4	+2.7
CDITO	Canoas	10.81	291	Pn	Pn	15 40 45.4	+1.6
SRBA	San Rafael, Bu	11.50	293		Pn	15 40 55.1	+1.8
TEFE	Tefe	11.50	136	*e*P	Pn	15 40 53.7	+0.5
PEZE	Perez Zeledon,	11.84	293		Pn	15 40 59.7	+1.6
PRVC	Isla de Provid	12.11	315		Pn	15 41 00.5	-1.0
RIMA	Rio Macho	12.16	295		Pn	15 41 03.9	+1.5
BOAV	Boa Vista	12.35	101	Pn	Pn	15 41 02.6	-2.2
BOAV	Boa Vista	12.35	101	*e*P	Pn	15 41 03.3	-1.6
CZSB	Cruzeiro do Su	12.43	180		Pn	15 41 05.8	-0.1
CZSB	Cruzeiro do Su	12.43	180	*e*P	Pn	15 41 08.4	+2.5
HDC	Heredia	12.48	295	Pn	Pn	15 41 05.7	-1.1
JACO	JACO, Garabito	12.85	293	Pn	Pn	15 41 11.2	-0.5
COVE	Coope Vega, Sa	13.04	298		Pn	15 41 13.7	-0.5
GRGR	Grenville	13.11	55	Pn	Pn	15 41 16.2	+0.9
ATAH	Atahualpa	13.14	206	Pn	Pn	15 41 19.5	+3.4
	comp=Z,0.5nm,0.3s,baz=49,slow=12,SNR=3.8						
ATAH				Sn	Sn	15 43 50.9	+8.5
	comp=Z,0.4nm,0.3s,baz=65,slow=18,SNR=1.3						
ATAH				LR	LR	15 46 59.1	
	comp=Z,348nm,21.1s,baz=36,slow=40						
	comp=Z,6.5nm,0.7s						
JTS	Las Juntas de	13.35	295	Pn	Pn	15 41 21.3	+2.7
	comp=Z,0.6nm,0.3s,baz=116,slow=12,SNR=7.5						
JTS				LR	LR	15 46 47.2	
	comp=Z,2µm,19.6s,baz=96,slow=39						
	comp=Z,16nm,0.9s						
JTS	Las Juntas de	13.35	295	Pn	Pn	15 41 18.7	+0.1
ESPN	Las Esperanzas	13.66	303		Pn	15 41 20.0	-2.8
PAPH	Port-au-Prince	13.66	1	Pn	Pn	15 41 20.6	-2.3
HOJ	Hope	13.74	343	*i* P	Pn	15 41 26.5	+2.7
DUNO	Dulce Nombre,	13.76	293	Pn	Pn	15 41 23.9	-0.3
GWJ	Greenwich	13.80	344	*i* P	Pn	15 41 28.3	+3.6
STH	Stony Hill	13.82	343	*i* P	Pn	15 41 28.3	+3.3
ORTG	Ortega, Santa	13.84	294	Pn	Pn	15 41 24.2	-1.1
SVB	Belmont	14.07	52	Pn	Pn	15 41 24.8	-3.6
HZTE	Horizontes, Gu	14.10	295		Pn	15 41 28.1	-0.7
SDDR	Presa de Saban	14.18	5	Pn	Pn	15 41 29.7	-0.2
SDDR	Presa de Saban	14.18	5	*e*P	Pn	15 41 31.1	+1.1
SDDR				*e*S	Sn	15 44 00.5	-6.6
SDDR				*i*		15 44 23.3	
	comp=Z,21nm,0.6s						
MTDJ	Mount Denham	14.19	341	Pn	Pn	15 41 28.2	-1.8
MTDJ	Mount Denham	14.19	341	*e*P	Pn	15 41 31.0	+0.9
MLPR	Magueyes Islan	14.22	22	Pn	Pn	15 41 29.0	-1.3
CRPR	Cabo Rojo, PR	14.22	22		Pn	15 41 27.6	-2.8
BBJ	Bamboo Saint A	14.25	342	*i* P	Pn	15 41 34.6	+3.7
PCDR	Punta Cana, DR	14.28	17	Pn	Pn	15 41 28.6	-2.6
ACON	Acoyapa	14.28	301		Pn	15 41 31.1	-0.2
MACA	Manacapuru-AM	14.34	123		Pn	15 41 29.8	-2.3
PRSN	Puerto Rico Se	14.40	22		Pn	15 41 31.6	-1.3
OBIP	Obispado Ponce	14.45	24		Pn	15 41 29.5	-4.2
CELP	Cerrillos	14.49	24		Pn	15 41 30.6	-3.6
UUPR	Utuado, UPR, P	14.60	23	Pn	Pn	15 41 33.2	-2.5
AGPR	Aguadilla, PR	14.65	21	Pn	Pn	15 41 33.9	-2.3
AOPR	Arecibo Observ	14.67	23		Pn	15 41 33.0	-3.6
SJG	San Juan	14.70	25	Pn	Pn	15 41 36.1	-1.0
	comp=Z,8.9nm,0.3s,baz=213,slow=13,SNR=9.1						
SJG				Sn	Sn	15 44 08.9	-11
	comp=Z,3.4nm,0.3s,baz=168,slow=20,SNR=1.5						
	comp=Z,25nm,0.2s						
SJG	San Juan	14.70	25		Pn	15 41 33.1	-3.9
HUMP	Col San Antoni	14.86	26		Pn	15 41 33.5	-5.6
EMPR	Esperanza - Ma	14.88	23		Pn	15 41 36.3	-3.1
GCPR	Guaynabo City	14.91	25		Pn	15 41 36.5	-3.3
BOAB	BOACO BROADBAN	14.93	302		Pn	15 41 39.7	-0.5
MTP	Monte Pirata	14.95	27		Pn	15 41 37.1	-3.3
CBYP	Canovanas	14.97	26	Pn	Pn	15 41 37.0	-3.7
CDVI	St. Croix	15.03	30	Pn	Pn	15 41 39.2	-2.3
MPOM	Morne Pois Mar	15.08	50	Pn	Pn	15 41 40.2	-1.9
GTBY	Guantanamo Bay	15.24	351	Pn	Pn	15 41 43.0	-1.2
GTBY				IAmb	IAmb	15 41 51.9	
	comp=Z,70nm,0.8s						
CUPR	Culebra, Puert	15.26	28		Pn	15 41 43.7	-0.8
MATN	Matagalpa	15.39	303		Pn	15 41 46.0	-0.4
STVI	Saint Thomas	15.45	29		Pn	15 41 45.2	-1.8
STVI				IAmb	IAmb	15 41 54.4	
	comp=Z,51nm,0.6s						
CNGN	Cerro Negro	15.84	300		Pn	15 41 48.7	-3.5
CNGN				IAmb	IAmb	15 41 59.5	
	comp=Z,164nm,0.9s						
ETMB	Extrema	15.86	156		Pn	15 41 49.9	-2.5
ABD	La Joyeuse, An	15.98	43	Pn	Pn	15 41 50.8	-3.1
SMRT	St. Maarten	16.19	35	Pn	Pn	15 41 51.8	-4.7
CRIN	San Cristobal	16.24	300		Pn	15 41 53.9	-3.4
SAML	Samuel	16.59	145		Pn	15 41 59.3	-2.5
TGUH	Tegucigalpa,Un	17.09	304	P	Pn	15 42 07.8	-0.3
TGUH				IAmb	IAmb	15 42 12.5	
	comp=Z,165nm,0.9s						
NNA	Nana	17.17	194	P	P	15 42 12.1	+1.5
	comp=Z,1.2nm,0.3s,baz=302,slow=14,SNR=1.4						
NNA				S	S	15 45 30.8	+1.7
	comp=Z,6.1nm,0.3s,baz=306,slow=17,SNR=1.4						
NNA				LR	LR	15 50 23.6	
	comp=Z,393nm,21.1s,baz=348,slow=42						
	comp=Z,4.2nm,0.3s						
PAYG	Puerto Ayora	18.42	253	P	P	15 42 24.1	-0.3
ESQI	Esquipulas	19.08	302	P	P	15 42 31.7	0.0
ESQI				IAmb	IAmb	15 42 35.1	
	comp=Z,162nm,0.8s						
ITTB	Itaituba	19.20	118	*e*P	P	15 42 33.4	+0.4
MALB	Monte Alegre	19.53	109	*e*P	P	15 42 36.2	-0.4
MDP	Montagnes des	19.95	88	P	Pn	15 42 43.6	+0.7
	comp=Z,2.5nm,0.3s,baz=254,slow=11,SNR=8.5						
MDP				S	S	15 46 16.1	-9.3
	comp=Z,31nm,1.1s,baz=259,slow=22,SNR=2.3						
	comp=Z,29nm,0.8s						
SOR	Soroa	20.51	332	P	P	15 42 45.9	-1.3
SOR				IAmb	IAmb	15 42 51.1	
	comp=Z,72nm,1.1s						
PETF	Flores	20.73	307	P	P	15 42 50.4	+0.7
PETF				IAmb	IAmb	15 42 54.9	
	comp=Z,120nm,1.0s						
NPGB	Novo Progresso	20.89	124	*e*P	Pn	15 42 53.2	-0.7
MCPB	Macapa, AP	21.21	103	*e*P	P	15 42 56.2	+1.3
LPAZ	La Paz	21.41	168	P	P	15 43 00.6	+3.1
	comp=Z,53nm,0.7s,baz=350,slow=12,SNR=119						
LPAZ				S	Sn	15 47 00.5	-2.5
	comp=Z,4.5nm,0.9s,baz=297,slow=18,SNR=1.7						
LPAZ				LR	LR	15 51 44.5	
	comp=Z,908nm,20.1s,baz=336,slow=38						
	comp=Z,53nm,0.7s						
LPAZ	La Paz	21.41	168	P	P	15 43 00.0	+2.5
LPAZ				IAmb	IAmb	15 43 02.9	
	comp=Z,103nm,1.0s						
LPAZ	La Paz	21.41	168	*e*P	P	15 43 00.8	+3.3
VILB	Vilhena	21.54	145	P	P	15 42 59.7	+1.4
VILB	Vilhena	21.54	145	*e*P	P	15 43 00.4	+2.1
TEIG	Tepich	21.60	317	P	P	15 42 59.3	+0.4
TEIG				IAmb	IAmb	15 43 03.0	
	comp=Z,99nm,0.7s						
CCIG	Comitan	22.27	302	P	P	15 43 04.3	-2.1
CCIG				IAmb	IAmb	15 43 26.7	
	comp=Z,89nm,1.2s						
PB18	Visviri	22.45	172	P	P	15 43 09.7	+1.1
PB18				IAmb	IAmb	15 43 18.7	
	comp=Z,82nm,1.5s						
CLDB	Colider	22.89	133	*e*P	P	15 43 15.0	+2.2
PB16	IPOC Station P	23.18	172	P	P	15 43 15.8	-0.5
PB12	IPOC Station P	23.36	174	P	P	15 43 16.7	-1.0
SIV	San Ignacio	23.61	151	P	P	15 43 22.2	+2.1
	comp=Z,24nm,0.8s,baz=319,slow=10.0,SNR=58						
SIV				LR	LR	15 53 05.8	
	comp=Z,2µm,19.8s,baz=301,slow=38						
	comp=Z,24nm,0.8s						
MNMC	Minye Minye	23.95	173	P	P	15 43 23.2	-0.4
PTLB	Pontes e Lacer	24.16	147	P	P	15 43 25.0	-0.2
PTLB				IAmb	IAmb	15 43 33.8	
	comp=Z,63nm,0.9s						
PTLB	Pontes e Lacer	24.16	147	*e*P	P	15 43 27.0	+1.8
PSGCX	Pisagua	24.35	174	P	P	15 43 27.1	0.0
GO01	Chusmiza	24.53	172	P	P	15 43 28.1	-1.1
PB11	IPOC Station P	24.57	173	P	P	15 43 28.5	-0.6
PB11				IAmb	IAmb	15 43 30.9	
	comp=Z,57nm,0.8s						

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DWPF  Disney Wildern   24.66 341  P     P     15 43 27.1 -2.6
DWPF  Disney Wildern   24.66 341  P     P     15 43 30.2 +0.5
      baz=158
BBSD  Serra de San D   24.87 152 eP     P     15 43 33.3 +1.6
CMIG  Matias Romero    24.97 301  P     P     15 43 30.9 -1.8
      comp=Z,3.9nm,0.7s,baz=146,slow=3.6,SNR=2.7
CMIG                              LR    LR    15 55 26.0
      comp=Z,217nm,18.9s,baz=174,slow=42
PB08  IPOC Station P   25.00 172  P     P     15 43 32.8 -0.6
PB08                              IAmb  IAmb  15 43 45.1
      comp=Z,58nm,1.1s
TA02  Huaiquique       25.02 174  P     P     15 43 32.7 -0.3
TA02                              IAmb  IAmb  15 43 41.4
      comp=Z,124nm,1.4s
PRPB  Parauapebas      25.28 115 eP     P     15 43 36.9 +1.4
TA01  Diego Aracena    25.30 175  P     P     15 43 35.3 -0.3
TMAB  Tom-Au,PA,Br     25.56 106 eP     P     15 43 40.1 +2.1
PB01  IPOC Station P   25.85 173  P     P     15 43 40.9 +0.3
PB01                              IAmb  IAmb  15 43 48.7
      comp=Z,118nm,1.5s
PB02  IPOC Station P   26.08 174  P     P     15 43 43.3 +0.6
PB02                              IAmb  IAmb  15 43 52.4
      comp=Z,88nm,1.1s
656A  Willston         26.18 340  P     P     15 43 42.5 -1.0
656A  Willston         26.18 340  P     P     15 43 46.1 +2.6
      baz=157
PB07  IPOC Station P   26.48 174  P     P     15 43 46.3 -0.2
PB07                              IAmb  IAmb  15 43 54.6
      comp=Z,58nm,1.1s
SALV  Santo Antonio    26.54 141 eP     P     15 43 49.1 +2.2
PB09  IPOC Station P   26.62 173  P     P     15 43 48.2 +0.5
PB09                              IAmb  IAmb  15 43 56.2
      comp=Z,110nm,1.5s
PB03  IPOC Station P   26.82 174  P     P     15 43 49.4 -0.1
PB03                              IAmb  IAmb  15 43 57.4
      comp=Z,72nm,1.3s
SNDB  Serra Nova Dou   27.00 128 eP     P     15 43 53.5 +2.5
PB04  IPOC Station P   27.06 175  P     P     15 43 52.3 +0.6
PB04                              IAmb  IAmb  15 44 00.9
      comp=Z,53nm,1.0s
LVC   Limon Verde      27.47 172  P     P     15 43 57.6 +2.0
      comp=Z,16nm,0.9s,baz=8.8,slow=6.3,SNR=12
LVC                               LR    LR    15 55 43.1
      comp=Z,260nm,18.1s,baz=318,slow=38
      comp=Z,16nm,0.9s
LVC   Limon Verde      27.47 172  P     P     15 43 56.5 +1.0
LVC                               IAmb  IAmb  15 44 04.2
      comp=Z,55nm,1.1s
LVC   Limon Verde      27.47 172 eP     P     15 43 57.5 +1.9
PB06  IPOC Station P   27.48 174  P     P     15 43 55.7 +0.3
PB06                              IAmb  IAmb  15 44 06.4
      comp=Z,42nm,1.2s
553A  Crawfordville    27.61 338  P     P     15 43 56.2 -0.1
PB15  IPOC Station P   27.99 174  P     P     15 44 00.6 +0.6
PB10  IPOC Station P   28.20 176  P     P     15 44 02.1 +0.5
PP1B  Ponte de Pedra   28.34 142 eP     P     15 44 05.0 +2.0
TLIG  Tlapa            28.35 299  P     P     15 44 02.7 -0.6
TIGA  Tifton           28.44 340  P     P     15 44 03.5 -0.2
TIGA  Tifton           28.44 340  P     P     15 44 04.4 +0.7
      baz=156
TIGA  Tifton           28.44 340  P     P     15 44 06.0 +2.3
      baz=156
SMTB  Santa Maria do   28.44 118 eP     P     15 44 06.3 +2.3
451A  Vernon           28.50 336  P     P     15 44 03.6 -0.7
352A  Blakely          28.95 338  P     P     15 44 07.7 -0.6
352A  Blakely          28.95 338  P     P     15 44 10.6 +2.3
      baz=154
ARAG  Araguaiana, MT   28.99 135 eP     P     15 44 10.4 +1.5
PB14  IPOC Station P   29.31 176  P     P     15 44 11.7 -0.2
PB14                              IAmb  IAmb  15 44 20.2
      comp=Z,35nm,1.2s
154A  Montrose         29.36 342  P     P     15 44 10.9 -1.0
RVDE  Rio Verde (Bra   29.40 144 eP     P     15 44 15.3 +2.8
ROSB  Rosrio           29.52 104 eP     P     15 44 15.4 +1.8
BRAL  Brewton          29.53 334  P     P     15 44 12.5 -0.9
BRAL                              IAmb  IAmb  15 44 16.7
      comp=Z,54nm,0.9s
BRAL  Brewton          29.53 334  P     P     15 44 14.5 +1.0
      baz=150
250A  Grady            29.91 336  P     P     15 44 17.9 +1.0
250A  Grady            29.91 336  P     P     15 44 19.1 +2.2
      baz=152,SNR=8.7
GO02  Mina Guanaco     29.91 174  P     P     15 44 17.4 +0.2
152A  Waverly Hall     29.95 339  P     P     15 44 18.4 +1.2
152A  Waverly Hall     29.95 339  P     P     15 44 19.3 +2.2
      baz=155,SNR=34
AQDB  Aquidauana       30.13 147  P     P     15 44 20.1 +1.3
AQDB  Aquidauana       30.13 147 eP     P     15 44 21.0 +2.1
C2SB  Chapadao do Su   30.48 141 eP     P     15 44 25.3 +3.3
HODGE Hodges           30.63 344  P     P     15 44 22.8 -0.4
HODGE                             IAmb  IAmb  15 44 25.9
      comp=Z,30nm,1.1s
HODGE Hodges           30.63 344  P     P     15 44 25.4 +2.3
      baz=161,SNR=7.8
Z51A  Franklin         30.69 339  P     P     15 44 24.7 +1.0
Z51A  Franklin         30.69 339  P     P     15 44 26.1 +2.3
      baz=155,SNR=17
Y52A  Lilburn          30.82 341  P     P     15 44 25.6 +0.7
Y52A  Lilburn          30.82 341  P     P     15 44 27.0 +2.1
      baz=157,SNR=14
Y52A                              P     P     15 44 27.0 +2.1
      baz=157,SNR=14
W57A  Gilead           30.97 348  P     P     15 44 27.4 +1.2
W57A  Gilead           30.97 348  P     P     15 44 27.9 +1.7
      baz=166
W57A                              P     P     15 44 27.9 +1.7
      baz=166
PAULI Pauline          31.07 345  P     P     15 44 27.2 +0.2
PAULI                             IAmb  IAmb  15 44 30.3
      comp=Z,21nm,1.0s
LRAL  Lakeview Retre   31.13 336  P     P     15 44 27.5 -0.1
LRAL                              IAmb  IAmb  15 44 30.4
      comp=Z,42nm,0.9s
LRAL  Lakeview Retre   31.13 336  P     P     15 44 28.4 +0.8
      baz=151,SNR=11
LRAL  Lakeview Retre   31.13 336  P     P     15 44 29.6 +2.0
      baz=151,SNR=11
KMSC  Kings Mountain   31.26 346  P     P     15 44 27.9 -0.8
KMSC  Kings Mountain   31.26 346  P     P     15 44 29.8 +1.1
      baz=163
V58A  Windy Hill, Pi   31.43 350  P     P     15 44 30.3 +0.2
V58A  Windy Hill, Pi   31.43 350  P     P     15 44 31.6 +1.4
      baz=168
V58A                              P     P     15 44 31.6 +1.4
      baz=168
344A  Westbrook Farm   31.50 330  P     P     15 44 31.5 +0.7
BG3   Lake Jocassee    31.53 344  P     P     15 44 32.5 +1.4
BG3                               IAmb  IAmb  15 44 35.0
      comp=Z,52nm,1.2s
CASEE Lake Jocassee    31.53 344  P     P     15 44 33.5 +2.4
      baz=160,SNR=7.5
AC02  Maricunga        31.61 174  IAmb  IAmb  15 44 41.9
      comp=Z,32nm,1.1s
Y49A  Blount Mountai   31.63 338  P     P     15 44 32.1 +0.1
Y49A  Blount Mountai   31.63 338  P     P     15 44 33.7 +1.7
      baz=153,SNR=18
Z47A  Carrollton       31.71 335  P     P     15 44 31.8 -0.9
Z47A  Carrollton       31.71 335  P     P     15 44 34.6 +1.9
      baz=150,SNR=6.9
X51A  Calhoun          31.72 341  P     P     15 44 32.6 -0.2
X51A                              IAmb  IAmb  15 44 35.4
      comp=Z,41nm,0.8s
X51A  Calhoun          31.72 341  P     P     15 44 34.5 +1.7
      baz=156,SNR=7.4
X51A                              P     P     15 44 34.5 +1.7
      baz=156,SNR=7.4
BDFB  Brasilia         31.74 130  P     P     15 44 35.1 +1.9
      comp=Z,28nm,1.1s,baz=305,slow=12,SNR=17
BDFB                              LR    LR    15 58 09.3
      comp=Z,2µm,18.9s,baz=320,slow=38
      comp=Z,28nm,1.1s
BDFB  Brasilia         31.74 130  P     P     15 44 34.1 +0.8
BDFB  Brasilia         31.74 130 eP     P     15 44 36.1 +2.8
V55A  Taylorsville     31.91 347  P     P     15 44 34.5 +0.1
V55A                              IAmb  IAmb  15 44 37.5
      comp=Z,68nm,1.6s
W52A  Murphy           31.91 342  P     P     15 44 34.8 +0.3
W52A  Murphy           31.91 342  P     P     15 44 36.9 +2.4
      baz=158,SNR=22
FPAL  Fort Paine       31.95 340  P     P     15 44 35.7 +0.8
VBMS  Vicksburg        32.01 331  P     P     15 44 35.5 +0.2
VBMS                              IAmb  IAmb  15 44 44.8
      comp=Z,36nm,0.8s
VBMS  Vicksburg        32.01 331  P     P     15 44 36.5 +1.2
      baz=145
V53A  Saluda           32.13 344  P     P     15 44 36.4 -0.1
V53A                              IAmb  IAmb  15 44 39.6
      comp=Z,31nm,0.9s
V53A  Saluda           32.13 344  P     P     15 44 38.8 +2.4
      baz=161,SNR=7.2
V53A                              P     P     15 44 38.8 +2.4
      baz=161,SNR=7.2
342A  Flagon Creek P   32.26 327  P     P     15 44 38.8 +1.2
GO03  Copiap           32.27 176  P     P     15 44 39.3 +1.6
T59A  Double "B" Far   32.35 353  P     P     15 44 37.9 -0.3
T59A                              IAmb  IAmb  15 44 41.2
      comp=Z,61nm,1.4s
T59A  Double "B" Far   32.35 353  P     P     15 44 39.9 +1.7
      baz=171
T59A                              P     P     15 44 39.9 +1.7
      baz=171
TKL   Tuckaleechee C   32.39 343  P     P     15 44 39.9 +1.2
      comp=Z,21nm,1.0s,baz=160,slow=8.4,SNR=11
      comp=Z,21nm,1.0s
TKL   Tuckaleechee C   32.39 343  P     P     15 44 38.4 -0.3
TKL                               IAmb  IAmb  15 44 42.1
      comp=Z,29nm,1.0s
TKL   Tuckaleechee C   32.39 343  P     P     15 44 40.2 +1.5
      baz=159,SNR=8.0
X48A  Hartselle        32.40 337  P     P     15 44 39.9 +1.1
X48A  Hartselle        32.40 337  P     P     15 44 40.3 +1.6
      baz=152,SNR=30
CPCT  Cooper Cave      32.42 342  P     P     15 44 39.8 +0.8
W50A  Signal Mountai   32.45 340  P     P     15 44 39.9 +0.7
W50A  Signal Mountai   32.45 340  P     P     15 44 41.3 +2.0
      baz=156,SNR=19
SDBA  SAO DESIDERIO    32.45 122 eP     P     15 44 41.5 +2.0
AMBA  Amambai (Brazi   32.51 149 eP     P     15 44 41.5 +1.7
V52A  Sevierville      32.51 343  P     P     15 44 39.9 +0.2
V52A                              IAmb  IAmb  15 44 43.1
      comp=Z,54nm,1.2s
V52A  Sevierville      32.51 343  P     P     15 44 41.7 +1.9
      baz=159,SNR=6.8
ESFA  Espinillo Form   32.62 156 eP     P     15 44 43.8 +3.1
T57A  Hurt             32.63 350  IAmb  IAmb  15 44 43.1
      comp=Z,32nm,0.8s
T57A  Hurt             32.63 350  P     P     15 44 41.8 +1.1
      baz=168,SNR=8.1
T57A                              P     P     15 44 41.8 +1.1
      baz=168,SNR=8.1
SWET  Sewanee          32.68 340  P     P     15 44 41.3 +0.1
SWET                              IAmb  IAmb  15 44 43.8
      comp=Z,49nm,1.1s
U54A  Nelsons Funny    32.69 346  P     P     15 44 43.5 +2.1
      baz=163,SNR=13
U54A                              P     P     15 44 43.5 +2.1
      baz=163,SNR=13
V51A  Loudon           32.70 342  P     P     15 44 41.8 +0.5
V51A  Loudon           32.70 342  P     P     15 44 43.6 +2.2
      baz=158,SNR=24
ITRB  Iturama          32.76 139 eP     P     15 44 44.2 +2.1
Y45A  Yeager Farm, C   32.92 334  P     P     15 44 42.4 -0.9
BLA   Blacksburg       33.05 349  P     P     15 44 45.8 +1.4
      baz=166
IPMB  Ipameri, GO      33.07 134 eP     P     15 44 46.1 +1.2
TZTN  Tazewell         33.16 344  P     P     15 44 45.7 +0.3
TZTN                              IAmb  IAmb  15 44 48.3
      comp=Z,36nm,1.0s
TZTN  Tazewell         33.16 344  P     P     15 44 46.7 +1.4
      baz=160,SNR=6.8
TZTN  Tazewell         33.16 344  P     P     15 44 47.4 +2.0
      baz=160,SNR=6.8
PLAL  Pickwick Lake    33.27 337  P     P     15 44 46.5 +0.2
S57A  Dark Hollow, R   33.33 351  P     P     15 44 46.5 -0.3
S57A                              IAmb  IAmb  15 44 49.3
      comp=Z,30nm,0.8s
S57A  Dark Hollow, R   33.33 351  P     P     15 44 48.4 +1.6
      baz=168,SNR=7.7
S57A                              P     P     15 44 48.4 +1.6
      baz=168,SNR=7.7
R58B  Mineral          33.37 352  P     P     15 44 48.0 +0.9
OXF   Oxford           33.41 334  P     P     15 44 48.7 +1.1
      baz=148
V48A  Smith Brothers   33.46 339  P     P     15 44 50.0 +2.0
      baz=154,SNR=56
AC05  El Transito      33.50 176  P     P     15 44 49.4 +0.8
AC05                              IAmb  IAmb  15 44 56.8
      comp=Z,18nm,0.8s
PCMB  Pacaembu         33.58 142 eP     P     15 44 50.7 +1.5
LCO   Las Campanas     33.65 177  P     P     15 44 51.1 +1.1
LCO                               IAmb  IAmb  15 44 58.4
      comp=Z,44nm,1.4s
S54A  Dingess, Beckl   33.80 348  P     P     15 44 53.4 +2.4
      baz=164
S54A                              P     P     15 44 53.4 +2.4
      baz=164
U49A  Red Boiling Sp   33.80 341  IAmb  IAmb  15 44 53.5
      comp=Z,34nm,0.7s
U49A  Red Boiling Sp   33.80 341  P     P     15 44 52.5 +1.5
      baz=156,SNR=16
NATX  Nacogdoches      33.85 325  P     P     15 44 51.8 +0.3
      baz=138
W45A  Hickory Valley   33.87 335  P     P     15 44 53.2 +1.6
      baz=149,SNR=8.5
R55A  Marlinton        34.03 349  IAmb  IAmb  15 44 56.3
      comp=Z,17nm,0.8s
R55A  Marlinton        34.03 349  P     P     15 44 55.2 +2.2
      baz=167
R55A                              P     P     15 44 55.2 +2.2
      baz=167
WVT   Waverly          34.18 338  P     P     15 44 54.4 +0.1
WVT   Waverly          34.18 338  P     P     15 44 55.0 +0.8
      baz=152
WVT   Waverly          34.18 338  P     P     15 44 55.3 +1.1
      baz=152,SNR=55
S51A  Beattyville      34.20 344  IAmb  IAmb  15 44 57.2
      comp=Z,36nm,0.8s
S51A  Beattyville      34.20 344  P     P     15 44 56.1 +1.7
      baz=160,SNR=11
S51A                              P     P     15 44 56.1 +1.7
      baz=160,SNR=11
MCR1  Marechal Candi   34.26 149 eP     P     15 44 58.8 +3.7
CPUP  Villa Florida    34.31 155  P     P     15 44 55.0 -0.5
      comp=Z,5.6nm,0.9s,baz=318,slow=6.8,SNR=7.4
CPUP  Villa Florida    34.31 155  P     P     15 44 54.5 -1.0
JANB  Januaria         34.32 126 eP     P     15 44 57.5 +1.8
R53A  Hurricane        34.45 347  IAmb  IAmb  15 44 59.5
      comp=Z,43nm,1.2s
833A  Chaparral WMA,   34.53 316  P     P     15 44 56.7 -0.7
      baz=128,SNR=12
833A  Chaparral WMA,   34.53 316  P     P     15 44 56.7 -0.7
      baz=128,SNR=12
Q56A  Snyder Ridge,    34.62 351  IAmb  IAmb  15 45 01.5
      comp=Z,36nm,1.1s
CO01  Juntas del Tor   34.65 176  P     P     15 45 00.0 +1.4
T47A  Sharon Grove     34.68 339  P     P     15 44 59.9 +1.4
      baz=154,SNR=26
PMNB  Patos De Minas   34.72 133 eP     P     15 45 01.2 +2.0
Q54A  Coxs Mills       34.85 349  P     P     15 44 59.7 -0.3
Q54A                              IAmb  IAmb  15 45 03.1
      comp=Z,57nm,1.4s
Q54A  Coxs Mills       34.85 349  P     P     15 45 02.3 +2.3
      baz=166
Q54A                              P     P     15 45 02.3 +2.3
      baz=166
P57A  Homestead Farm   34.88 353  IAmb  IAmb  15 45 03.9
      comp=Z,42nm,1.2s
P57A  Homestead Farm   34.88 353  P     P     15 45 03.0 +2.7
      baz=171
P57A                              P     P     15 45 03.0 +2.7
      baz=171
435B  Jarrell          34.92 321  IAmb  IAmb  15 45 21.7
      comp=Z,22nm,0.8s
435B  Jarrell          34.92 321  P     P     15 45 01.1 +0.4
      baz=133
BB19B Bebedouro        34.94 138 eP     P     15 45 03.0 +1.9
X40A  Basin Creek Fa   34.98 330  P     P     15 44 59.2 -2.0
X40A  Basin Creek Fa   34.98 330  P     P     15 45 00.5 -0.7
      baz=143,SNR=5.3
X40A                              P     P     15 45 00.5 -0.7
      baz=143,SNR=5.3
R50A  Paris            35.00 344  P     P     15 45 03.5 +2.1
      baz=159,SNR=29
R50A                              P     P     15 45 03.5 +2.1
      baz=159,SNR=29
Q52A  Bidwell          35.12 347  IAmb  IAmb  15 45 05.3
      comp=Z,50nm,0.9s
Q52A  Bidwell          35.12 347  P     P     15 45 04.6 +2.3
      baz=163,SNR=5.9
Q52A                              P     P     15 45 04.6 +2.3
      baz=163,SNR=5.9
R49A  Shelbyville      35.25 343  IAmb  IAmb  15 45 05.9
      comp=Z,28nm,0.7s
R49A  Shelbyville      35.25 343  P     P     15 45 05.0 +1.5
      baz=158,SNR=9.5
R49A                              P     P     15 45 05.0 +1.5
      baz=158,SNR=9.5
MCWV  Mont Chateau     35.32 350  P     P     15 45 05.8 +1.8
      baz=168
MIAR  Mount Ida        35.40 329  P     P     15 45 04.5 -0.3
      baz=142
P53A  Whipple          35.44 348  IAmb  IAmb  15 45 09.7
      comp=Z,18nm,0.8s
CO03  El Pedregal      35.47 177  P     P     15 45 06.2 +0.6
CO03                              IAmb  IAmb  15 45 14.7
      comp=Z,90nm,1.9s
LCAR  Lake Charles     35.49 334  P     P     15 45 06.0 +0.5
      baz=147,SNR=8.1
PTGB  Pitanga          35.52 147 eP     P     15 45 08.2 +2.2
WCI   Wyandotte Cave   35.53 341  P     P     15 45 05.4 -0.5
WCI   Wyandotte Cave   35.53 341  P     P     15 45 06.9 +0.9
      baz=156
WCI   Wyandotte Cave   35.53 341  P     P     15 45 07.6 +1.7
      baz=156,SNR=18
WHTX  Lake Whitney,    35.67 322  P     P     15 45 07.8 +0.6
      baz=134
P52A  Corning          35.74 347  P     P     15 45 08.8 +1.2
      baz=164,SNR=11
LUPA  Lehigh Univers   35.74 356  IAmb  IAmb  15 45 10.9
      comp=Z,42nm,1.0s
USIN  University of    35.75 340  P     P     15 45 07.9 +0.1
P51A  Williamsport     35.80 346  P     P     15 45 10.4 +2.2
      baz=162,SNR=10
P51A                              P     P     15 45 10.4 +2.2
      baz=162,SNR=10
FRTB  Fartura          35.92 142 eP     P     15 45 11.0 +1.6
FRBT  Francisco Belt   36.00 149 eP     P     15 45 12.1 +1.9
SSPA  Standing Stone   36.01 353  P     P     15 45 10.1 +0.1
SSPA                              IAmb  IAmb  15 45 19.2
      comp=Z,33nm,1.2s
SSPA  Standing Stone   36.01 353  P     P     15 45 11.9 +2.0
      baz=171
S44A  Carbondale       36.09 337  P     P     15 45 11.5 +0.8
      baz=151,SNR=13
O52A  Adamsville       36.14 348  IAmb  IAmb  15 45 14.1
      comp=Z,58nm,1.1s
O52A  Adamsville       36.14 348  P     P     15 45 13.1 +2.0
      baz=164,SNR=6.1
O52A                              P     P     15 45 13.1 +2.0
      baz=164,SNR=6.1
O53A  New Philadelph   36.14 349  IAmb  IAmb  15 45 19.5
      comp=Z,24nm,0.8s
O53A  New Philadelph   36.14 349  P     P     15 45 11.3 +0.2
      baz=165
JCT   Junction City    36.16 318  P     P     15 45 08.8 -2.7
JCT                               IAmb  IAmb  15 45 19.5
      comp=Z,13nm,0.7s
JCT   Junction City    36.16 318  P     P     15 45 11.1 -0.3
      baz=130
T42A  Van Buren        36.27 335  IAmb  IAmb  15 45 13.7
      comp=Z,75nm,1.7s
T42A  Van Buren        36.27 335  P     P     15 45 12.7 +0.4
      baz=148
P49A  Miami Univ. Ec   36.27 344  IAmb  IAmb  15 45 16.0
      comp=Z,71nm,1.6s
P49A  Miami Univ. Ec   36.27 344  P     P     15 45 13.2 +0.9
      baz=159
ZON   Zonda            36.32 174  IAmb  IAmb  15 45 21.8
      comp=Z,53nm,1.3s
X37A  Clayton          36.37 328  P     P     15 45 11.8 -1.4
X37A                              IAmb  IAmb  15 46 34.8
      comp=Z,18nm,0.5s
P48A  Milroy           36.41 343  IAmb  IAmb  15 45 15.4
      comp=Z,32nm,0.8s
P48A  Milroy           36.41 343  P     P     15 45 14.5 +1.1
      baz=158,SNR=7.7
P48A                              P     P     15 45 14.5 +1.1
      baz=158,SNR=7.7
CFA   Coronel Fontan   36.43 174  P     P     15 45 14.6 +0.9
      comp=Z,4.2nm,0.7s,baz=351,slow=9.1,SNR=6.6
CFA                               LR    LR    16 03 56.3
      comp=Z,173nm,18.0s,baz=66,slow=42
      comp=Z,4.2nm,0.7s
U40A  Yellville        36.49 332  P     P     15 45 14.5 +0.3
      baz=145,SNR=17
U40A                              P     P     15 45 14.5 +0.3
      baz=145,SNR=17
ACSO  Alum Creek Sta   36.50 347  P     P     15 45 14.8 +0.6
      baz=162,SNR=11
ACSO  Alum Creek Sta   36.50 347  P     P     15 45 16.2 +2.1
      baz=162,SNR=11
RCLB  Rio Claro- Sao   36.54 139 eP     P     15 45 17.2 +2.4
OLIL  Olney            36.59 340  P     P     15 45 16.1 +1.1
      baz=154,SNR=8.4
M57A  Sunshine Farm,   36.62 354  IAmb  IAmb  15 45 18.4
      comp=Z,22nm,0.9s
M57A  Sunshine Farm,   36.62 354  P     P     15 45 17.7 +2.6
      baz=172
M57A                              P     P     15 45 17.7 +2.6
      baz=172
KSPA  Keystone Colle   36.72 356  P     P     15 45 18.1 +2.1
      baz=175
CRSM  Crissiumal (Br   36.78 152 eP     P     15 45 16.9 +0.2
O49A  Covington        36.79 345  IAmb  IAmb  15 45 19.9
      comp=Z,32nm,1.1s
FVM   French Village   36.80 336  P     P     15 45 17.6 +0.8
      baz=149,SNR=34
LOOK  Love County      36.92 325  IAmb  IAmb  15 45 33.1
      comp=Z,27nm,1.0s
M55A  Ridgway          36.94 352  P     P     15 45 17.4 -0.5
M55A                              IAmb  IAmb  15 45 22.0
      comp=Z,105nm,1.9s
HHAR  Hobbs            36.95 331  IAmb  IAmb  15 46 12.3
      comp=Z,14nm,0.6s
N51A  Ashland          37.02 348  IAmb  IAmb  15 45 22.0
      comp=Z,26nm,0.8s
Q44A  Meyer Farm, Va   37.07 339  P     P     15 45 19.4 +0.4
      baz=152,SNR=9.3
O48B  Farmland         37.07 344  P     P     15 45 19.8 +0.7
      baz=159,SNR=10
O48B  Farmland         37.07 344  P     P     15 45 20.4 +1.4
      baz=159,SNR=10
P46A  Rosedale         37.09 341  P     P     15 45 20.5 +1.3
      baz=155,SNR=23
CCM   Cathedral Cave   37.20 335  P     P     15 45 19.5 -0.6
CCM   Cathedral Cave   37.20 335  P     P     15 45 20.5 +0.4
      baz=148
CCM   Cathedral Cave   37.20 335  P     P     15 45 20.6 +0.4
      baz=148,SNR=31
VAO   Valinhos         37.32 139 eP     P     15 45 23.2 +1.7
BINY  Binghamton       37.38 356  P     P     15 45 22.7 +1.0
      baz=174
VA03  San Esteban      37.39 177  P     P     15 45 22.4 +0.5
VA03                              IAmb  IAmb  15 45 31.6
      comp=Z,48nm,0.9s
SPB   Sao Paulo        37.43 140 eP     P     15 45 23.7 +1.4
N49A  Columbus Grove   37.44 346  IAmb  IAmb  15 45 24.5
      comp=Z,48nm,1.1s
N49A  Columbus Grove   37.44 346  P     P     15 45 23.7 +1.6
      baz=161,SNR=8.7
N49A                              P     P     15 45 23.7 +1.6
      baz=161,SNR=8.7
ABTX  Abilene, Hawle   37.45 321  IAmb  IAmb  15 45 24.2
      comp=Z,73nm,1.3s
ABTX  Abilene, Hawle   37.45 321  P     P     15 45 22.6 +0.1
      baz=132,SNR=6.7
ABTX  Abilene, Hawle   37.45 321  P     P     15 45 22.7 +0.2
      baz=132,SNR=6.7
L56A  Greenwood        37.45 354  IAmb  IAmb  15 45 25.5
      comp=Z,42nm,1.1s
L56A  Greenwood        37.45 354  P     P     15 45 24.0 +1.7
      baz=172
L56A                              P     P     15 45 24.0 +1.7
      baz=172
BSCB  Bom Sucesso      37.48 134 eP     P     15 45 24.8 +1.9
ITAB  Concordia        37.51 149  P     P     15 45 22.3 -0.6
ITAB                              IAmb  IAmb  15 45 30.0
      comp=Z,85nm,1.4s
ITAB  Concordia        37.51 149 eP     P     15 45 25.2 +2.3
L61B  Northampton      37.51 360  P     P     15 45 23.2 +0.5
      baz=180
ITQB  Itaqui           37.55 157  P     P     15 45 22.0 -1.2
HRV   Adam Dziewonsk   37.58   1  P     P     15 45 24.1 +0.8
      baz=182
M50A  Fremont          37.63 347  P     P     15 45 25.8 +2.1
      baz=163,SNR=5.1
M50A                              P     P     15 45 25.8 +2.1
      baz=163,SNR=5.1
ERPA  Erie             37.75 351  P     P     15 45 26.3 +1.5
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	baz=168						
SFIN	Lafayette	37.75	342	P	P	15 45 25.3	+0.5
	baz=156,SNR=17						
SFIN	Lafayette	37.75	342	P	P	15 45 25.8	+1.0
	baz=156,SNR=17						
N47A	Urbana	37.80	344	P	P	15 45 24.1	-1.1
N47A	Urbana	37.80	344	P	P	15 45 26.2	+1.0
	baz=158,SNR=15						
N47A				P	P	15 45 26.2	+1.0
	baz=158,SNR=15						
S39A	Bolivar	37.80	333	P	P	15 45 25.1	-0.1
	baz=145						
R40A	Maddies Statio	37.83	335	P	P	15 45 25.4	-0.1
	baz=147,SNR=7.9						
P43A	Skaggs, Pawnee	37.90	339	P	P	15 45 26.9	+0.8
	baz=152,SNR=8.9						
FNO	Franklin	37.97	326	IAmb	IAmb	15 45 28.1	
	comp=Z,40nm,0.7s						
O44A	Mansfield	37.99	340	P	P	15 45 24.7	-2.1
O44A				IAmb	IAmb	15 45 28.7	
	comp=Z,72nm,1.3s						
PET01	Itanhaem-SP	38.03	141	*e*P	P	15 45 29.1	+1.7
MT08	Bocatoma Ro	38.10	176	IAmb	IAmb	15 45 37.8	
	comp=Z,33nm,1.1s						
TXAR	Lajitas Array	38.16	313	P	P	15 45 28.8	+0.2
	comp=Z,7.7nm,0.7s,baz=128,slow=9.1,SNR=70						
TXAR				PcP	PcP	15 47 44.4	+1.1
	comp=Z,2.5nm,0.9s,baz=130,slow=5.0,SNR=4.0						
TXAR				LR	LR	16 02 52.4	
	comp=Z,55nm,21.8s,baz=117,slow=39						
	comp=Z,7.7nm,0.7s						
TX31	Lajitas Ar. Si	38.17	313	IAmb	IAmb	15 45 29.8	
	comp=Z,27nm,0.8s						
TX31	Lajitas Ar. Si	38.17	313	P	P	15 45 28.8	+0.2
	baz=124,SNR=21						
TX32	Lajitas Array	38.17	313	P	P	15 45 28.0	-0.6
OK052	Battle Ridge R	38.19	328	IAmb	IAmb	15 45 30.7	
	comp=Z,28nm,0.8s						
RCBR	Riachuelo	38.19	106	*e*P	P	15 45 31.3	+2.3
ALGR	Alto Alegre (B	38.36	152	*e*P	P	15 45 31.6	+1.5
MT09	Talagante	38.38	178	P	P	15 45 30.6	+0.3
MT09				IAmb	IAmb	15 45 38.8	
	comp=Z,73nm,1.2s						
MT13	San Alfonso	38.38	177	P	P	15 45 31.2	+0.9
MT13				IAmb	IAmb	15 45 39.5	
	comp=Z,35nm,1.1s						
WMOK	Wichita Mounta	38.38	324	P	P	15 45 29.5	-0.8
	baz=135,SNR=8.5						
WMOK	Wichita Mounta	38.38	324	P	P	15 45 29.9	-0.4
	baz=135,SNR=8.5						
OK029	Liberty Lake	38.40	327	IAmb	IAmb	15 45 31.0	
	comp=Z,26nm,0.8s						
PARB	Paraibuna	38.44	138	*e*P	P	15 45 33.4	+2.5
L48A	N Adams	38.47	346	IAmb	IAmb	15 45 32.9	
	comp=Z,75nm,1.4s						
J57A	Williamstown	38.58	356	IAmb	IAmb	15 45 34.1	
	comp=Z,46nm,0.8s						
HDIL	Hopedale	38.63	340	P	P	15 45 31.8	-0.4
	baz=153,SNR=9.8						
HDIL	Hopedale	38.63	340	P	P	15 45 32.3	+0.1
	baz=153,SNR=9.8						
RODS	Rosario do Sul	38.73	155	*e*P	P	15 45 33.0	-0.2
P40A	Paris	38.78	336	IAmb	IAmb	15 45 35.0	
	comp=Z,45nm,0.8s						
P40A	Paris	38.78	336	P	P	15 45 33.4	-0.1
	baz=148,SNR=19						
GUA01	Guaratinga, BA	38.81	124	*e*P	P	15 45 37.5	+3.4
SJMB	Sao Joao De Ma	38.82	128	*e*P	P	15 45 37.7	+3.6
POST	Post	38.92	320	IAmb	IAmb	15 45 35.9	
	comp=Z,54nm,1.0s						
ODSA	Odessa	39.01	318	IAmb	IAmb	15 45 38.2	
	comp=Z,20nm,0.9s						
L46A	Eue Claire	39.02	344	P	P	15 45 35.3	-0.2
L46A	Eue Claire	39.02	344	P	P	15 45 36.5	+1.1
	baz=158,SNR=5.4						
L46A				P	P	15 45 36.5	+1.1
	baz=158,SNR=5.4						
VAS01	Vassouras-RJ	39.25	134	*e*P	P	15 45 39.7	+2.0
N41A	Harden Midland	39.33	338	IAmb	IAmb	15 45 38.8	
	comp=Z,51nm,0.8s						
N41A	Harden Midland	39.33	338	P	P	15 45 38.1	0.0
	baz=150,SNR=12						
BO02	Sierra Bellavi	39.40	178	P	P	15 45 39.1	+0.3
BO02				IAmb	IAmb	15 45 47.6	
	comp=Z,59nm,1.2s						
P38A	Dawn	39.48	334	P	P	15 45 39.1	-0.2
	baz=146,SNR=7.8						
CPSB	Cacapava Do Su	39.53	153	*e*P	P	15 45 41.3	+1.4
GO05	Huala	39.58	179	IAmb	IAmb	15 45 49.2	
	comp=Z,52nm,1.1s						
L44A	Lake County Fo	39.64	342	P	P	15 45 40.7	+0.1
	baz=156						
ELIS	Ellis County	39.69	325	IAmb	IAmb	15 45 43.7	
	comp=Z,68nm,1.4s						
LONY	Lake Ozonia	39.72	358	P	P	15 45 40.8	-0.4
	baz=177						
J47A	Sunmer	39.78	346	P	P	15 45 41.0	-0.8
J47A	Sunmer	39.78	346	P	P	15 45 43.1	+1.3
	baz=161,SNR=6.2						
J47A				P	P	15 45 43.1	+1.3
	baz=161,SNR=6.2						
NOKA	Waynoka	39.82	326	IAmb	IAmb	15 45 43.9	
	comp=Z,95nm,1.4s						
DUB01	Friburgo-RJ	39.90	133	*e*P	P	15 45 44.9	+1.7
I49A	Point Hope	40.02	349	P	P	15 45 44.9	+1.2
	baz=164						
I49A				P	P	15 45 44.9	+1.2
	baz=164						
L42A	Oliver, Polo	40.05	340	IAmb	IAmb	15 45 44.8	
	comp=Z,38nm,0.9s						
L42A	Oliver, Polo	40.05	340	P	P	15 45 44.2	+0.1
	baz=153						
AMTX	Amarillo	40.22	322	IAmb	IAmb	15 45 52.6	
	comp=Z,29nm,0.7s						
AMTX	Amarillo	40.22	322	P	P	15 45 45.8	+0.1
	baz=132						
AMTX	Amarillo	40.22	322	P	P	15 45 45.8	+0.1
	baz=132,SNR=11						
SADO	Sadowa	40.23	353	IAmb	IAmb	15 45 53.6	
	comp=Z,54nm,1.4s						
K43A	Burlington	40.25	342	P	P	15 45 45.2	-0.5
K43A	Burlington	40.25	342	P	P	15 45 45.8	+0.2
	baz=155,SNR=6.6						
ALF01	Guarapari-ES	40.25	130	*e*P	P	15 45 48.4	+2.4
MSTX	Muleshoe	40.31	320	IAmb	IAmb	15 45 48.6	
	comp=Z,56nm,1.2s						
MSTX	Muleshoe	40.31	320	P	P	15 45 46.0	-0.5
	baz=129,SNR=14						
MSTX	Muleshoe	40.31	320	P	P	15 45 46.3	-0.2
	baz=129,SNR=14						
PKME	Peaks-Kenny Pk	40.43	4	P	P	15 45 47.2	0.0
	baz=185						
KSU1	Kansas State U	40.47	331	IAmb	IAmb	15 45 47.5	
	comp=Z,26nm,0.6s						
KSU1	Kansas State U	40.47	331	P	P	15 45 46.9	-0.8
	baz=141						
SLBS	Sierra La Lagu	40.53	301	P	P	15 45 49.4	+1.0
SLBS				IAmb	IAmb	15 45 51.6	
	comp=Z,58nm,1.8s						
L40A	Anamosa	40.65	339	IAmb	IAmb	15 45 54.8	
	comp=Z,33nm,0.8s						
L40A	Anamosa	40.65	339	P	P	15 45 48.7	-0.3
	baz=151						
MNTX	Cornudas Mount	40.71	315	P	P	15 45 50.0	+0.3
	baz=124,SNR=50						
LPIG	La Paz	41.00	302	LR	LR	16 02 58.9	
	comp=Z,93nm,18.5s,baz=120,slow=36						
JFWS	Jewell Farm	41.05	340	P	P	15 45 51.3	-1.1
JFWS	Jewell Farm	41.05	340	P	P	15 45 52.6	+0.2
	baz=153,SNR=14						
SCIA	State Center	41.27	337	P	P	15 45 54.2	+0.1
	baz=148						
I42A	Draeger Farm,	41.50	342	IAmb	IAmb	15 45 57.4	
	comp=Z,48nm,0.7s						
I42A	Draeger Farm,	41.50	342	P	P	15 45 56.5	+0.5
	baz=155,SNR=11						
G45A	Suttons Bay	41.68	346	P	P	15 45 58.8	+1.4
	baz=160						
G45A				P	P	15 45 58.8	+1.4
	baz=160						
H43A	Windswept, Lux	41.70	344	P	P	15 45 58.5	+0.9
	baz=157,SNR=8.0						
K38A	Parkersburg	41.73	338	P	P	15 45 57.0	-0.9
K38A				IAmb	IAmb	15 45 58.8	
	comp=Z,76nm,1.2s						
K38A	Parkersburg	41.73	338	P	P	15 45 58.0	+0.1
	baz=149						
CBKS	Cedar Bluff	41.85	328	P	P	15 45 58.9	-0.1
	baz=137						
I40A	Norwalk	42.05	341	IAmb	IAmb	15 46 07.7	
	comp=Z,42nm,1.1s						
I40A	Norwalk	42.05	341	P	P	15 46 00.8	+0.4
	baz=153						
E46A	Sault Ste Mari	42.64	348	IAmb	IAmb	15 46 07.3	
	comp=Z,51nm,0.8s						
E46A	Sault Ste Mari	42.64	348	P	P	15 46 06.0	+0.8
	baz=163,SNR=15						
121A	Cookes Peak, D	42.87	314	IAmb	IAmb	15 46 10.0	
	comp=Z,35nm,0.9s						
121A	Cookes Peak, D	42.87	314	P	P	15 46 08.7	+1.1
	baz=122,SNR=20						
121A	Cookes Peak, D	42.87	314	P	P	15 46 08.9	+1.3
	baz=122,SNR=20						
F42A	Maple Grove Fa	42.99	344	P	P	15 46 07.5	-0.6
F42A	Maple Grove Fa	42.99	344	P	P	15 46 09.0	+0.9
	baz=157						
I37B	Waseca	43.13	338	P	P	15 46 09.1	-0.2
	baz=149,SNR=7.8						
G40A	Rib Lake	43.14	342	IAmb	IAmb	15 46 19.1	
	comp=Z,27nm,0.8s						
G40A	Rib Lake	43.14	342	P	P	15 46 10.2	+0.8
	baz=154,SNR=14						
E43A	Lone Tree Farm	43.26	346	IAmb	IAmb	15 46 12.8	
	comp=Z,23nm,0.8s						
E43A	Lone Tree Farm	43.26	346	P	P	15 46 11.1	+0.8
	baz=159,SNR=7.7						
ANMO	Albuquerque	43.32	318	LR	LR	16 09 45.7	
	comp=Z,42nm,18.1s,baz=222,slow=44						
ANMO	Albuquerque	43.32	318	P	P	15 46 11.1	-0.1
ANMO	Albuquerque	43.32	318	P	P	15 46 11.7	+0.5
	baz=126						
ANMO	Albuquerque	43.32	318	P	P	15 46 11.9	+0.7
	baz=126,SNR=14						
319A	Douglas	43.36	312	P	P	15 46 11.5	0.0
319A				IAmb	IAmb	15 46 13.8	
	comp=Z,25nm,0.9s						
T25A	Trinidad	43.36	322	P	P	15 46 11.1	-0.4
T25A	Trinidad	43.36	322	P	P	15 46 12.6	+1.0
	baz=130,SNR=5.7						
KSCO	Kaye Shedlock’	43.57	326	P	P	15 46 13.0	-0.1
	baz=134						
COWI	Conover	43.58	343	IAmb	IAmb	15 46 14.7	
	comp=Z,64nm,1.2s						
DUN6	Lazy B Ranch	43.82	314	IAmb	IAmb	15 46 17.5	
	comp=Z,48nm,0.8s						
SPMN	Marine on St.	43.96	339	IAmb	IAmb	15 46 16.9	
	comp=Z,74nm,1.5s						
SPMN	Marine on St.	43.96	339	P	P	15 46 16.3	+0.4
	baz=150						
SPMN	Marine on St.	43.96	339	P	P	15 46 16.1	+0.1
	baz=150						
GO06	Curarrehue	44.16	179	P	P	15 46 18.0	+0.3
GO06				IAmb	IAmb	15 46 25.9	
	comp=Z,22nm,0.9s						
ECSD	EROS Data Cent	44.17	335	P	P	15 46 16.5	-1.2
ECSD				IAmb	IAmb	15 46 18.4	
	comp=Z,67nm,1.6s						
ECSD	EROS Data Cent	44.17	335	P	P	15 46 17.1	-0.7
	baz=144,SNR=14						
D41A	Chassel	44.30	344	P	P	15 46 19.4	+0.8
	baz=157						
SDCO	Great Sand Dun	44.42	322	P	P	15 46 20.7	+0.6
	baz=129,SNR=18						
SDCO	Great Sand Dun	44.42	322	P	P	15 46 21.2	+1.1
	baz=129,SNR=18						
E38A	The Farm, Brul	44.76	342	IAmb	IAmb	15 46 23.5	
	comp=Z,30nm,1.2s						
E38A	The Farm, Brul	44.76	342	P	P	15 46 22.7	+0.4
	baz=153,SNR=5.4						
F36A	Milaca	44.77	339	IAmb	IAmb	15 46 32.5	
	comp=Z,21nm,0.8s						
F36A	Milaca	44.77	339	P	P	15 46 22.5	+0.1
	baz=150,SNR=13						
TUC	Tucson	44.93	312	P	P	15 46 23.9	-0.2
TUC	Tucson	44.93	312	P	P	15 46 24.4	+0.3
	baz=119						
Q24A	Divide	44.99	324	P	P	15 46 24.5	-0.3
	baz=131						
S22A	4UR Ranch, Cre	45.24	321	P	P	15 46 27.6	+0.9
	baz=128,SNR=14						
PLCA	Paso Flores	45.33	178	P	P	15 46 28.3	+1.3
	comp=Z,8.0nm,0.9s,baz=0.1,slow=9.3,SNR=12						
	comp=Z,8.0nm,0.9s						
PLCA	Paso Flores	45.33	178	P	P	15 46 27.9	+0.8
PLCA				IAmb	IAmb	15 46 35.3	
	comp=Z,35nm,1.1s						
PLCA	Paso Flores	45.33	178	*e*P	P	15 46 29.1	+2.0
X18A	Snowflake	45.47	315	IAmb	IAmb	15 46 30.5	
	comp=Z,32nm,0.7s						
LL04	Puerto Octay	45.47	180	IAmb	IAmb	15 46 35.8	
	comp=Z,36nm,0.9s						
W18A	Petrified Fore	45.63	316	P	P	15 46 30.4	+0.7
	baz=123,SNR=6.8						
SUSD	Miller	45.75	334	P	P	15 46 29.4	-0.9
	baz=142						
F33A	5 Mile Ranch,	45.78	337	P	P	15 46 28.3	-2.1
ISCO	Idaho Springs	45.81	324	P	P	15 46 31.6	+0.4
	baz=131,SNR=8.7						
ISCO	Idaho Springs	45.81	324	P	P	15 46 32.4	+1.2
	baz=131,SNR=8.7						
EYMN	Ely	45.94	342	P	P	15 46 31.9	+0.2
	baz=153,SNR=36						
MVCO	Mesa Verde	45.98	319	IAmb	IAmb	15 46 34.1	
	comp=Z,49nm,1.4s						
MVCO	Mesa Verde	45.98	319	P	P	15 46 33.0	+0.5
	baz=126,SNR=12						
214A	Organ Pipe Nat	46.28	311	IAmb	IAmb	15 46 36.8	
	comp=Z,23nm,1.1s						
214A	Organ Pipe Nat	46.28	311	P	P	15 46 35.4	+0.8
	baz=117,SNR=7.8						
X16A	Lo Mia Camp, P	46.46	314	P	P	15 46 35.1	-1.1
N23A	Red Feather La	46.72	325	IAmb	IAmb	15 47 13.4	
	comp=Z,15nm,1.1s						
N23A	Red Feather La	46.72	325	P	P	15 46 38.5	+0.3
	baz=131,SNR=5.7						
PV13	Radium Mtn., P	46.74	320	IAmb	IAmb	15 46 40.3	
	comp=Z,27nm,0.7s						
PV07	Paradox Valley	46.80	321	IAmb	IAmb	15 46 40.8	
	comp=Z,30nm,1.4s						
WUAZ	Wupatki	46.98	316	P	P	15 46 41.0	+0.7
	baz=122,SNR=27						
B35A	Bob, Littlefor	47.01	341	P	P	15 46 39.0	-1.1
B35A	Bob, Littlefor	47.01	341	P	P	15 46 39.8	-0.3
	baz=151,SNR=24						
PV23	Carpenter Ridg	47.04	321	IAmb	IAmb	15 46 48.0	
	comp=Z,9.5nm,0.7s						
Y14A	Wickenburg	47.35	313	IAmb	IAmb	15 46 44.7	
	comp=Z,9.7nm,0.7s						
RPN	Rapa Nui	47.55	226	LR	LR	16 02 55.2	
	comp=Z,65nm,19.0s,baz=61,slow=31						
O20A	White River Ci	47.58	323	P	P	15 46 45.7	+0.8
	baz=128						
AGMN	Agassiz Nation	47.68	339	P	P	15 46 45.4	+0.1
	baz=148,SNR=9.9						
LL02	Futaleuf	47.75	179	P	P	15 46 45.9	0.0
LL02				IAmb	IAmb	15 46 53.8	
	comp=Z,22nm,1.0s						
RSSD	Black Hills	47.91	330	P	P	15 46 46.6	-0.9
RSSD	Black Hills	47.91	330	P	P	15 46 47.4	0.0
	baz=136						
U15A	North Rim	48.09	316	IAmb	IAmb	15 46 51.1	
	comp=Z,22nm,0.9s						
E28A	Huff	48.18	334	IAmb	IAmb	15 46 57.3	
	comp=Z,24nm,0.8s						
K22A	Casper	48.21	327	P	P	15 46 50.2	+0.5
	baz=132						
GLA	Glamis	48.29	311	P	P	15 46 49.8	-0.6
GLA	Glamis	48.29	311	P	P	15 46 50.7	+0.3
	baz=116,SNR=5.9						
PDMCI	Parker Dam,Lak	48.35	313	P	P	15 46 51.3	+0.5
	baz=118						
BLYC	Blythe	48.38	312	IAmb	IAmb	15 46 58.4	
	comp=Z,13nm,0.8s						
SRU	San Rafael Swe	48.38	320	IAmb	IAmb	15 47 26.6	
	comp=Z,19nm,0.7s						
PKCU	Pink Cliffs	48.63	317	IAmb	IAmb	15 46 55.3	
	comp=Z,24nm,1.1s						
Q16A	Castle Valley	48.69	320	IAmb	IAmb	15 47 26.2	
	comp=Z,15nm,0.7s						
ESJX	Sierra Juarez	48.70	309	P	P	15 46 53.4	-0.3
MDND	Maddock	48.73	336	P	P	15 46 54.1	+0.6
	baz=143						
MDND	Maddock	48.73	336	P	P	15 46 53.6	+0.2
	baz=143						
KNB	Kanab	48.76	317	IAmb	IAmb	15 46 56.2	
	comp=Z,30nm,0.9s						
NEE2	Needles Airpor	48.92	313	P	P	15 46 55.4	+0.3
	baz=118						
AY01	Puyuhuapi	48.98	180	IAmb	IAmb	15 47 03.1	
	comp=Z,26nm,1.2s						
SWSC	Sam W. Stewart	48.98	310	P	P	15 46 56.4	+0.8
	baz=115						
IRM	Iron Mountain	49.02	312	P	P	15 46 56.3	+0.3
	baz=117,SNR=15						
BC3	Big Chuckawall	49.03	311	P	P	15 46 55.9	-0.2
	baz=116,SNR=8.0						
LCMT	Little Creek M	49.04	316	P	P	15 46 56.2	0.0
LCMT				IAmb	IAmb	15 46 58.2	
	comp=Z,25nm,0.9s						
IKP	In-Ko-Pah, Jac	49.09	310	P	P	15 46 57.4	+0.8
	baz=115						
SZCU	Shurtz Canyon	49.24	317	IAmb	IAmb	15 46 59.2	
	comp=Z,14nm,0.6s						
TCRU	Three Creeks R	49.35	319	IAmb	IAmb	15 47 00.6	
	comp=Z,25nm,0.8s						
ULM	Lac du Bonnet	49.35	341	P	P	15 46 57.6	-0.5
	comp=Z,9.1nm,0.4s,baz=138,slow=8.4,SNR=18						
	comp=Z,9.1nm,0.4s						
ULM	Lac du Bonnet	49.35	341	P	P	15 46 56.7	-1.4
ULM				IAmb	IAmb	15 47 04.9	
	comp=Z,30nm,1.1s						
BSUT	Blindstream Ca	49.36	322	P	P	15 46 58.4	-0.4
BSUT				IAmb	IAmb	15 47 00.5	
	comp=Z,14nm,0.8s						
MONP2	Monument Peak	49.43	310	P	P	15 47 00.2	+0.9
	baz=115						
V12A	Nelson	49.54	314	P	P	15 46 58.9	-1.0
V12A				IAmb	IAmb	15 47 09.2	
	comp=Z,26nm,0.8s						
BELC	Belle Mtn. Jos	49.59	312	P	P	15 47 01.1	+0.6
	baz=116,SNR=10						
MPU	Maple Canyon	49.60	321	IAmb	IAmb	15 47 08.6	
	comp=Z,20nm,0.8s						
GMRC	Granite Mounta	49.69	313	P	P	15 47 01.7	+0.6
	baz=117,SNR=9.2						
TPFO	Pinon Flats	49.76	311	P	P	15 47 02.0	+0.3
	baz=115						
PFO	Pinyon Flats O	49.76	311	LR	LR	16 09 19.5	
	comp=Z,63nm,21.6s,baz=77,slow=38						
PFO	Pinyon Flats O	49.76	311	P	P	15 47 00.3	-1.4
PFO	Pinyon Flats O	49.76	311	P	P	15 47 02.4	+0.7
	baz=115						
BW06	Boulder Array	49.99	325	P	P	15 47 02.7	-0.8
BW06	Boulder Array	49.99	325	P	P	15 47 03.4	0.0
	baz=129						
PDAR	Pinedale Array	49.99	325	P	P	15 47 03.1	-0.4
	comp=Z,2.9nm,0.7s,baz=132,slow=8.9,SNR=19						
PDAR				PcP	PcP	15 48 23.0	-0.5
	comp=Z,1.3nm,0.7s,baz=94,slow=4.5,SNR=1.5						
PDAR				LR	LR	16 11 51.1	
	comp=Z,91nm,18.4s,baz=123,slow=40						
	comp=Z,2.9nm,0.7s						
SCHQ	Schefferville	50.13	4	P	P	15 47 04.8	+0.8
	comp=Z,8.0nm,0.8s,baz=189,slow=6.6,SNR=21						
	comp=Z,8.0nm,0.8s						
SCHQ	Schefferville	50.13	4	P	P	15 47 03.1	-0.8
TUQ	Turquoise Moun	50.17	313	P	P	15 47 04.8	0.0
	baz=117,SNR=7.8						
HEC	Hector,Ludlow	50.20	312	P	P	15 47 05.6	+0.6
	baz=116,SNR=10						
MURC	Murrieta	50.32	310	P	P	15 47 05.9	+0.1
	baz=115						
BBRC	Big Bear Solar	50.39	311	P	P	15 47 07.0	+0.4
	baz=115						
DUG	Dugway, Tooele	50.45	320	P	P	15 47 07.2	+0.3
	baz=124,SNR=6.9						
PRN	Pahroc Range	50.49	316	P	P	15 47 07.1	-0.1
SHOC	Shoshone, Teco	50.64	314	P	P	15 47 08.7	+0.5
	baz=117,SNR=7.7						
GSC	Goldstone, Bar	50.76	313	IAmb	IAmb	15 47 11.0	
	comp=Z,16nm,0.8s						
GSC	Goldstone, Bar	50.76	313	P	P	15 47 09.8	+0.6
	baz=116,SNR=7.5						
LAO	LASA Array	50.82	331	P	P	15 47 09.5	0.0
	baz=135						
BGU	Big Grassy Mou	50.99	321	IAmb	IAmb	15 47 12.2	
	comp=Z,18nm,0.7s						
REDW	Red Top Meadow	51.10	325	P	P	15 47 11.4	-0.4
REDW				IAmb	IAmb	15 47 20.7	
	comp=Z,23nm,0.9s						
TPNV	Topopah Spring	51.11	315	P	P	15 47 12.5	+0.5
	baz=118						
Q12A	Willow Creek R	51.16	318	P	P	15 47 11.6	-0.6
Q12A				IAmb	IAmb	15 47 14.0	
	comp=Z,20nm,0.9s						
DGMT	Dagmar	51.16	333	IAmb	IAmb	15 47 13.5	
	comp=Z,22nm,0.7s						
DGMT	Dagmar	51.16	333	P	P	15 47 12.8	+0.9
	baz=138,SNR=8.4						
HVU	Hansel Valley	51.32	322	P	P	15 47 13.1	-0.3
R11A	Troy Canyon, C	51.32	317	P	P	15 47 14.4	+0.9
	baz=120,SNR=20						
FURC	Furnace Creek,	51.32	314	P	P	15 47 14.1	+0.8
	baz=117						
RLMT	Red Lodge	51.33	327	P	P	15 47 13.7	+0.2
	baz=130						
EDW2	Edwards Air Fo	51.45	312	P	P	15 47 14.9	+0.5
	baz=115,SNR=9.2						
LRMC	Laurel Mtn Rad	51.48	312	P	P	15 47 15.3	+0.7
	baz=116,SNR=11						
CCAC	Calif City Air	51.59	312	IAmb	IAmb	15 47 17.2	
	comp=Z,35nm,0.8s						
MPMC	Manual Prospec	51.59	313	P	P	15 47 16.1	+0.5
	baz=116,SNR=8.1						
GRAC	Grapevine Rang	51.92	314	P	P	15 47 18.7	+0.8
	baz=117						
SNCC	San Nicolas Is	51.96	309	P	P	15 47 18.0	-0.1
	baz=112						
ISA	Isabella, Lake	52.14	312	P	P	15 47 19.8	+0.3
	baz=115						
ARVC	Arvin	52.18	312	P	P	15 47 20.7	+0.9
	baz=114						
CWC	Cottonwood Cre	52.19	313	P	P	15 47 20.3	+0.3
	baz=116						
LCH	Last Change Ra	52.23	314	IAmb	IAmb	15 47 22.2	
	comp=Z,29nm,1.3s						
ELK	Elko	52.31	319	LR	LR	16 12 51.6	
	comp=Z,38nm,19.9s,baz=88,slow=40						
QLMT	Earthquake Lak	52.33	326	P	P	15 47 21.2	+0.2
SCZ2	Santa Cruz Isl	52.33	310	P	P	15 47 21.2	+0.3
	baz=113						
DSP	Deep Springs	52.52	314	IAmb	IAmb	15 47 24.5	
	comp=Z,31nm,1.0s						
TIN	Tinemaha, Big	52.57	314	P	P	15 47 23.8	+1.0
	baz=116						
VES	Vestal, Richgr	52.66	312	P	P	15 47 23.9	+0.6
	baz=115						
PKM	Mcpherson Peak	52.82	311	P	P	15 47 25.4	+0.7
	baz=114						
BOZ	Bozeman (W)	52.92	326	P	P	15 47 25.7	+0.5
	baz=128,SNR=8.5						
SMMC	Simmler	53.13	311	P	P	15 47 27.3	+0.5
	baz=114,SNR=5.4						
NVAR	Mina Array Bea	53.24	316	P	P	15 47 28.6	+0.8
	comp=Z,12nm,0.5s,baz=122,slow=6.9,SNR=117						
NVAR				PcP	PcP	15 48 36.6	+1.0
	comp=Z,0.7nm,0.7s,baz=116,slow=4.2,SNR=1.4						
NVAR				LR	LR	16 14 26.1	
	comp=Z,53nm,19.0s,baz=118,slow=41						
	comp=Z,12nm,0.5s						
LHV	Little Huntoon	53.30	315	IAmb	IAmb	15 47 30.2	
	comp=Z,52nm,1.4s						
DLMT	Dillon	53.31	326	P	P	15 47 27.9	-0.3
DLMT				IAmb	IAmb	15 47 44.4	
	comp=Z,32nm,1.6s						
HLID	Hailey	53.32	323	P	P	15 47 28.7	+0.5
	baz=124,SNR=7.6						
MDPB	Devils Postpil	53.43	314	IAmb	IAmb	15 47 31.2	
	comp=Z,20nm,0.8s						
EGMT	Eagleton	53.49	330	P	P	15 47 29.6	+0.3
	baz=132						
LRM	Limekiln Ridge	53.51	326	P	P	15 47 29.3	-0.4
WAKR	Walker	54.06	315	IAmb	IAmb	15 47 36.0	
	comp=Z,57nm,1.8s						
PMPB	Monarch Peak	54.09	312	IAmb	IAmb	15 47 41.3	
	comp=Z,23nm,0.8s						
YERR	Yerington	54.14	316	P	P	15 47 34.1	-0.3
BBGB	Big Mountain B	54.41	312	IAmb	IAmb	15 47 50.5	
	comp=Z,26nm,1.0s						
PAHR	Pah Rah Range	54.57	316	P	P	15 47 37.5	0.0
PAHR				IAmb	IAmb	15 47 38.9	
	comp=Z,11nm,0.7s						
MSO	Missoula	54.94	326	P	P	15 47 40.3	+0.3

	baz=126						
FFC	Flin Flon	55.15	340	P	P	15 47 40.4	-0.7
FFC				IAmb	IAmb	15 47 41.5	
	comp=Z,23nm,1.5s						
WVOR	Wild Horse Val	55.36	320	P	P	15 47 42.9	-0.2
WVOR				IAmb	IAmb	15 47 45.2	
	comp=Z,60nm,1.6s						
WALA	Waterton Lakes	56.27	329	IAmb	IAmb	15 48 50.3	
	comp=Z,24nm,1.6s						
FCC	Fort Churchill	56.35	347	P	P	15 47 48.7	-1.0
G08A	Pilot Rock	56.99	323	IAmb	IAmb	15 47 56.1	
	comp=Z,17nm,0.8s						
KCPM	Cahto Peak	57.49	315	IAmb	IAmb	15 48 00.6	
	comp=Z,32nm,0.9s						
PINE	Pine Mountain	57.49	320	P	P	15 47 58.1	-0.3
PINE				IAmb	IAmb	15 48 00.4	
	comp=Z,39nm,1.1s						
NEW	Newport	57.53	326	P	P	15 47 58.4	+0.1
	baz=124						
YBH	Yreka Blue Hor	57.73	317	LR	LR	16 16 42.1	
	comp=Z,48nm,20.0s,baz=158,slow=40						
YBH	Yreka Blue Hor	57.73	317	IAmb	IAmb	15 47 59.8	
	comp=Z,11nm,0.7s						
C09A	Chrisman Ranch	57.92	325	IAmb	IAmb	15 48 09.4	
	comp=Z,26nm,1.2s						
I04A	Tendick Farm,	58.44	320	P	P	15 48 04.2	-0.5
H04A	Detroit Lake	58.70	321	IAmb	IAmb	15 48 15.1	
	comp=Z,21nm,0.9s						
B08A	Colville Reser	58.81	325	IAmb	IAmb	15 48 08.2	
	comp=Z,10nm,0.8s						
BRLDA	Berland Lookou	61.06	332	P	P	15 48 21.4	-1.3
LLLB	Lillooet	61.41	327	IAmb	IAmb	15 48 25.7	
	comp=Z,16nm,1.1s						
WAPA	Wapiti River	62.57	332	IAmb	IAmb	15 48 33.1	
	comp=Z,11nm,0.6s						
YKA	Yellowknife Ar	65.32	340	P	P	15 48 50.6	-0.1
	comp=Z,9.1nm,0.5s,baz=134,slow=6.7,SNR=202						
	comp=Z,9.1nm,0.5s						
PNCL	Nicolau / Gran	66.81	51	*e*P	P	15 49 01.5	+0.8
PCAS	Casmilo, Conde	67.27	49	*e*P	P	15 49 07.4	+3.7
DBIC	Dimbokro	67.45	85	P	P	15 49 05.8	+0.5
	comp=Z,9.7nm,0.8s,baz=276,slow=8.4,SNR=10						
DBIC				LR	LR	16 15 42.6	
	comp=Z,88nm,21.5s,baz=270,slow=33						
	comp=Z,9.7nm,0.8s						
DBIC	Dimbokro	67.45	85	P	P	15 49 05.4	+0.1
DBIC				IAmb	IAmb	15 49 12.7	
	comp=Z,20nm,1.1s						
KOTAN	Kotaneelee Air	67.48	335	P	P	15 49 05.5	+0.9
	baz=122						
PESTR	Estremoz	67.69	50	*e*P	P	15 49 11.8	+5.4
PVIS	Viseu	67.87	48	*e*P	P	15 49 05.1	-2.4
PGAV	Gavieira, Arco	67.89	47	*e*P	P	15 49 08.4	+0.7
POLO	Lamas de Olo	68.10	47	*e*P	P	15 49 15.7	+6.7
MVO	Moncorvo	68.61	48	*e*P	P	15 49 13.6	+1.4
T35M	Bob Quinn	68.79	330	P	P	15 49 13.4	+0.5
	baz=116						
WRGLY	Wrigley	68.96	338	P	P	15 49 14.6	+0.8
	baz=124						
PBRG	Braganca	68.97	47	*e*P	P	15 49 13.3	-1.0
DLBC	Dease Lake	69.32	332	P	P	15 49 17.2	+0.9
	baz=116						
S34M	Telegraph Cree	69.62	331	P	P	15 49 18.8	+0.8
	baz=115						
Q32M	Nakina River	70.60	332	P	P	15 49 24.7	+0.4
	baz=114						
ESDC	Sonseca Array	70.61	50	P	P	15 49 25.7	+1.2
	comp=Z,2.3nm,0.9s,baz=259,slow=6.0,SNR=7.0						
	comp=Z,2.3nm,0.9s						
SUMG	Summit	70.90	10	*i* P	P	15 49 26.0	-0.1
S32K	Killisnoo	71.14	330	P	P	15 49 28.2	+0.9
	baz=112						
P33M	Teslin, Yukon	71.37	333	P	P	15 49 29.7	+0.9
	baz=114,SNR=5.6						
R32K	Eaglecrest	71.42	331	P	P	15 49 29.4	+0.4
	baz=112						
P32M	Atlin	71.54	332	P	P	15 49 30.2	+0.5
	baz=113						
TULEG	Thule	71.73	1	P	P	15 49 31.1	+0.6
TULEG				IAmb	IAmb	15 49 32.8	
	comp=Z,38nm,1.4s						
N32M	Quiet Lake	71.88	334	P	P	15 49 32.7	+1.0
	baz=114						
SKAG	Skagway	72.25	332	P	P	15 49 34.7	+0.8
	baz=112						
FARO	Faro, Yukon	72.44	335	P	P	15 49 35.8	+0.7
	baz=114						
M31M	Drury Creek, Y	72.88	334	P	P	15 49 38.6	+1.0
	baz=113,SNR=5.9						
O30N	Mendenhall	73.08	333	P	P	15 49 40.2	+1.3
	baz=111,SNR=12						
N31M	Braeburn, Yuko	73.21	333	IAmb	IAmb	15 49 41.9	
	comp=Z,31nm,0.9s						
N31M	Braeburn, Yuko	73.21	333	P	P	15 49 40.8	+1.2
	baz=112,SNR=7.4						
P30M	Million Dollar	73.26	332	P	P	15 49 40.3	+0.3
	baz=110						
TORD	Torodi Ar. Bea	73.72	78	P	P	15 49 43.3	-0.2
	comp=Z,1.9nm,0.7s,baz=280,slow=5.3,SNR=14						
TORD				LR	LR	16 21 27.2	
	comp=Z,190nm,18.6s,baz=267,slow=35						
	comp=Z,1.9nm,0.7s						
HYT	Haines Junctio	73.75	332	P	P	15 49 42.9	-0.1
	baz=110						
N30M	Aishikik Lake	73.78	333	P	P	15 49 43.9	+0.8
	baz=110						
MAYO	Mayo, Yukon	74.05	335	IAmb	IAmb	15 49 47.3	
	comp=Z,25nm,0.8s						
MAYO	Mayo, Yukon	74.05	335	P	P	15 49 45.9	+1.3
	baz=112						
M30M	Minto, Yukon	74.06	334	IAmb	IAmb	15 49 46.5	
	comp=Z,26nm,0.8s						
M30M	Minto, Yukon	74.06	334	P	P	15 49 45.3	+0.7
	baz=111,SNR=16						
O29M	Mount Kennedy	74.08	332	P	P	15 49 45.6	+0.7
	baz=109						
YUK6	Outpost Mounta	74.19	332	P	P	15 49 46.7	+1.0
	baz=109						
YUK4	Talbot Arm	74.45	333	P	P	15 49 48.2	+1.1
	baz=109,SNR=5.5						
EKA	Eskdalemuir Ar	74.50	34	P	P	15 49 47.3	+0.1
	comp=Z,3.5nm,1.0s,baz=262,slow=4.8,SNR=2.8						
	comp=Z,3.5nm,1.0s						
A36M	Sachs Harbour	74.51	345	P	P	15 49 47.5	+0.5
	baz=125,SNR=74						
M29M	Somme Creek	74.73	334	P	P	15 49 49.7	+1.1
	baz=110						
F31M	Tsiigehtchic	74.79	340	P	P	15 49 49.1	+0.4
	baz=115,SNR=7.1						
L29M	L29M	74.82	335	P	P	15 49 50.1	+1.0
	baz=110						
K29M	Barlow Dome	74.82	335	P	P	15 49 50.1	+0.9
	baz=111						
YUK8	Steele Glacier	74.94	333	P	P	15 49 50.8	+0.7
	baz=108						
O28M	Mount Upton	74.98	332	P	P	15 49 51.2	+0.8
	baz=108						
INK	Inuvik	75.09	340	LR	LR	16 25 10.8	
	comp=Z,257nm,18.6s,baz=175,slow=38						
INK	Inuvik	75.09	340	P	P	15 49 49.9	-0.5
INK				IAmb	IAmb	15 49 51.9	
	comp=Z,12nm,0.8s						
INK	Inuvik	75.09	340	P	P	15 49 51.0	+0.6
	baz=116,SNR=14						
YUK3	Moose Creek	75.41	333	P	P	15 49 53.6	+0.9
	baz=108,SNR=11						
EPYK	Eagle Plains	75.43	338	IAmb	IAmb	15 49 54.1	
	comp=Z,13nm,0.8s						
EPYK	Eagle Plains	75.43	338	P	P	15 49 52.7	+0.2
	baz=112,SNR=8.9						
G30M	tAoh Zraii Nji	75.48	339	P	P	15 49 53.8	+1.0
	baz=113						
CTGM	Chitina Glacie	75.57	332	IAmb	IAmb	15 49 56.2	
	comp=Z,23nm,0.8s						
CTG	Chitna Glacier	75.58	332	P	P	15 49 54.5	+0.9
	baz=106						
DAWY	Dawson	75.67	335	P	P	15 49 54.5	+0.6
	baz=109						
I29M	Ogilvie Camp,	75.67	337	P	P	15 49 54.4	+0.5
	baz=110,SNR=6.3						
BARN	Barnard Glacie	75.75	332	IAmb	IAmb	15 50 02.9	
	comp=Z,19nm,0.8s						
BVCY	Beaver Creek	75.78	334	P	P	15 49 55.8	+1.2
	baz=107,SNR=11						
M27K	Edge Creek, AK	76.22	333	IAmb	IAmb	15 49 59.9	
	comp=Z,27nm,0.8s						
M27K	Edge Creek, AK	76.22	333	P	P	15 49 58.2	+1.0
	baz=106						
L27K	Beaver Creek,	76.40	334	IAmb	IAmb	15 50 00.6	
	comp=Z,20nm,0.8s						
L27K	Beaver Creek,	76.40	334	P	P	15 49 59.7	+1.6
	baz=106						
MCARA	McCarthy VSAT	76.48	332	IAmb	IAmb	15 50 01.4	
	comp=Z,34nm,0.9s						
MCARA	McCarthy VSAT	76.48	332	P	P	15 50 00.2	+1.7
	baz=105,SNR=5.9						
EGAK	Eagle	76.62	336	P	P	15 49 59.6	+0.4
EGAK				IAmb	IAmb	15 50 01.8	
	comp=Z,25nm,0.9s						
EGAK	Eagle	76.62	336	P	P	15 50 00.1	+0.9
	baz=108,SNR=14						
VRDI	Verde Repeater	76.64	332	IAmb	IAmb	15 50 01.9	
	comp=Z,23nm,0.8s						
M26K	Nabesna, AK	76.73	333	P	P	15 50 01.1	+1.1
	baz=105						
K27K	Chicken	76.78	335	P	P	15 50 01.6	+1.4
	baz=106						
GLB	Gilahina Butte	76.86	332	IAmb	IAmb	15 50 03.1	
	comp=Z,20nm,0.8s						
L26K	Log Cabin Wild	77.06	334	IAmb	IAmb	15 50 04.2	
	comp=Z,26nm,0.8s						
L26K	Log Cabin Wild	77.06	334	P	P	15 50 02.7	+0.9
	baz=105,SNR=17						
I27K	Kandik River	77.06	337	P	P	15 50 02.6	+0.8
	baz=107,SNR=23						
H27K	Steamboat Moun	77.21	337	P	P	15 50 03.2	+0.6
	baz=108						
N25K	Chitina, Valde	77.26	332	IAmb	IAmb	15 50 08.4	
	comp=Z,14nm,0.8s						
N25K	Chitina, Valde	77.26	332	P	P	15 50 04.0	+0.9
	baz=104,SNR=5.9						
G27K	Doyon Strip	77.44	338	P	P	15 50 03.9	0.0
	baz=108						
EYAK	Cordova Ski Ar	77.57	331	P	P	15 50 05.8	+1.2
	baz=102						
SCRK	Sand Creek	77.58	335	IAmb	IAmb	15 50 07.0	
	comp=Z,17nm,1.0s						
SCRK	Sand Creek	77.58	335	P	P	15 50 06.0	+1.1
	baz=105,SNR=9.9						
I26K	Coal Creek Min	77.59	336	P	P	15 50 05.3	+0.6
	baz=106						
HARP	HAARP	77.71	333	P	P	15 50 06.4	+1.0
	baz=103						
E27K	Coleen River	77.84	339	P	P	15 50 06.8	+0.7
	baz=108,SNR=22						
KLU	Klutina	77.86	332	P	P	15 50 06.7	+0.3
KLU				IAmb	IAmb	15 50 15.0	
	comp=Z,18nm,1.0s						
KLU	Klutina	77.86	332	P	P	15 50 07.4	+1.0
	baz=102						
RIDG	Independent Ri	77.89	334	IAmb	IAmb	15 50 08.6	
	comp=Z,31nm,0.9s						
RIDG	Independent Ri	77.89	334	P	P	15 50 07.8	+1.3
	baz=104,SNR=14						
PAX	Paxson	77.98	333	IAmb	IAmb	15 50 15.1	
	comp=Z,24nm,1.0s						
PAX	Paxson	77.98	333	P	P	15 50 07.8	+0.8
	baz=103,SNR=15						
M24K	Tolsona, Glenn	78.11	333	P	P	15 50 08.8	+1.0
	baz=102,SNR=7.7						
G26K	Porcupine Rive	78.28	338	P	P	15 50 08.8	+0.3
	baz=106						
K24K	Donnelly Dome	78.31	334	P	P	15 50 08.8	+0.1
	baz=103,SNR=6.4						
SCM	Sheep Creek Mo	78.58	332	P	P	15 50 10.7	+0.3
	baz=101,SNR=8.0						
PRP	Porcupine Dome	78.60	336	IAmb	IAmb	15 50 12.5	
	comp=Z,20nm,0.8s						
PRP	Porcupine Dome	78.60	336	P	P	15 50 11.2	+0.7
	baz=104,SNR=12						
F26K	Sheenjek River	78.62	338	P	P	15 50 11.0	+0.6
	baz=105						
FYU	Fort Yukon	78.74	337	P	P	15 50 10.6	-0.5
FYU				IAmb	IAmb	15 50 15.2	
	comp=Z,27nm,1.2s						
M23K	Glacier View	78.76	332	P	P	15 50 12.2	+0.9
	baz=101,SNR=7.2						
PWL	Port Wells	78.88	331	P	P	15 50 12.2	+0.3
	baz=100						
HDA	Harding Lake	78.94	335	IAmb	IAmb	15 50 13.6	
	comp=Z,25nm,0.8s						
HDA	Harding Lake	78.94	335	P	P	15 50 12.3	+0.1
	baz=102,SNR=17						
IL31		78.99	335	IAmb	IAmb	15 50 13.7	
	comp=Z,10nm,0.7s						
ILAR	Eielson Array	78.99	335	P	P	15 50 12.8	+0.3
	comp=Z,8.0nm,0.7s,baz=108,slow=4.5,SNR=105						
ILAR				PP	PP	15 53 06.9	-4.4
	comp=Z,0.8nm,1.1s,baz=106,slow=6.2,SNR=4.4						
ILAR				LR	LR	16 28 41.8	
	comp=Z,43nm,18.2s,baz=98,slow=38						
	comp=Z,8.0nm,0.7s						
C27K	Jago River	79.00	340	P	P	15 50 13.4	+1.0
	baz=106						
PPT	Papeete	79.02	251	LR	LR	16 18 33.0	
	comp=Z,38nm,18.0s,baz=133,slow=31						
KNK	Knik Glacier	79.03	332	IAmb	IAmb	15 50 15.0	
	comp=Z,34nm,0.9s						
KNK	Knik Glacier	79.03	332	P	P	15 50 13.5	+0.7
	baz=100,SNR=7.7						
SML	Sawmill	79.05	332	P	P	15 50 12.7	-0.2
SML	Sawmill	79.05	332	P	P	15 50 13.8	+0.9
	baz=100						
G25K	Bearman Lake	79.12	337	P	P	15 50 14.2	+1.1
	baz=103						
F25K	Christian Rive	79.15	338	P	P	15 50 14.5	+1.2
	baz=104						
E25K	Arctic Village	79.25	339	P	P	15 50 15.1	+1.2
	baz=104,SNR=17						
POKR	Poker Plat Res	79.29	335	IAmb	IAmb	15 50 16.6	
	comp=Z,25nm,1.1s						
POKR	Poker Plat Res	79.29	335	P	P	15 50 15.1	+1.0
	baz=102,SNR=6.9						
SEW	Seward	79.30	330	P	P	15 50 15.0	+0.8
	baz=99						
PMR	Palmer	79.38	332	P	P	15 50 15.0	+0.3
	baz=100						
COLA	College	79.42	335	P	P	15 50 14.7	0.0
COLA				IAmb	IAmb	15 50 23.7	
	comp=Z,14nm,0.9s						
COLA	College	79.42	335	P	P	15 50 15.3	+0.5
	baz=101						
TCOL	CIGO, UAF Yank	79.42	335	IAmb	IAmb	15 50 23.8	
	comp=Z,14nm,0.8s						
TCOL	CIGO, UAF Yank	79.42	335	P	P	15 50 15.0	+0.2
	baz=101						
C26K	Camden Bay	79.48	340	P	P	15 50 16.2	+1.2
	baz=105						
O22K	Cooper Landing	79.49	331	P	P	15 50 15.3	+0.1
	baz=99						
RC01	Rabbit Creek A	79.59	331	P	P	15 50 16.3	+0.5
	baz=99						
MDM	Murphy Dome	79.59	335	IAmb	IAmb	15 50 17.4	
	comp=Z,26nm,1.1s						
H24K	Noodor Dome	79.62	336	IAmb	IAmb	15 50 17.9	
	comp=Z,13nm,0.8s						
H24K	Noodor Dome	79.62	336	P	P	15 50 17.0	+1.1
	baz=102						
SENIN	Lac Senin/Sane	79.63	44	IAmb	IAmb	15 50 25.0	
	comp=Z,33nm,0.9s						
G24K	Hadweenzic Riv	79.64	337	P	P	15 50 17.1	+1.1
	baz=102						
MCK	McKinley	79.67	334	IAmb	IAmb	15 50 18.0	
	comp=Z,18nm,0.9s						
MCK	McKinley	79.67	334	P	P	15 50 16.4	+0.2
	baz=100,SNR=8.3						
D25K	Kavik River	79.82	340	P	P	15 50 17.6	+0.6
	baz=104						
NEA2	Nenana	79.88	335	P	P	15 50 17.3	0.0
NEA2				IAmb	IAmb	15 50 18.9	
	comp=Z,32nm,0.8s						
NEA2	Nenana	79.88	335	P	P	15 50 17.7	+0.4
	baz=100,SNR=18						
BRSE	Bradley Lake S	79.88	330	P	P	15 50 18.0	+0.6
	baz=98						
F24K	Squaw Lake	79.97	338	P	P	15 50 19.3	+1.5
	baz=102						
CUT	Chulitna	80.04	332	P	P	15 50 18.7	+0.5
	baz=99						
I23K	Minto, Yukon-K	80.10	335	IAmb	IAmb	15 50 20.2	
	comp=Z,18nm,1.1s						
I23K	Minto, Yukon-K	80.10	335	P	P	15 50 19.3	+0.8
	baz=100,SNR=11						
SUA	Susitna One	80.13	332	IAmb	IAmb	15 50 20.5	
	comp=Z,27nm,0.7s						
SUA	Susitna One	80.13	332	P	P	15 50 19.2	+0.3
	baz=98,SNR=9.3						
TRF	Thorofare Moun	80.22	334	IAmb	IAmb	15 50 20.9	
	comp=Z,21nm,0.6s						
TRF	Thorofare Moun	80.22	334	P	P	15 50 19.7	+0.3
	baz=99,SNR=9.0						
H23K	Yukon River	80.29	336	P	P	15 50 20.6	+1.1
	baz=100						
E24K	Your Creek	80.31	338	P	P	15 50 20.6	+0.9
	baz=101						
HOM	Homer	80.33	330	P	P	15 50 20.0	+0.2
	baz=97						
KTH	Kantishna Hill	80.51	334	P	P	15 50 20.3	-0.5
KTH				IAmb	IAmb	15 50 22.2	
	comp=Z,22nm,0.6s						
SKT	Skwentna	80.57	332	IAmb	IAmb	15 50 22.6	
	comp=Z,22nm,0.9s						
SKT	Skwentna	80.57	332	P	P	15 50 21.4	+0.2
	baz=98,SNR=7.6						
KDAK	Kodiak Island	80.60	328	P	P	15 50 21.1	-0.1
	comp=Z,17nm,0.8s,baz=166,slow=3.5,SNR=7.0						
KDAK				LR	LR	16 28 46.6	
	comp=Z,60nm,19.7s,baz=73,slow=38						
	comp=Z,17nm,0.8s						
BPAW	Bear Paw Mtn.	80.62	334	IAmb	IAmb	15 50 22.8	
	comp=Z,26nm,0.8s						
BPAW	Bear Paw Mtn.	80.62	334	P	P	15 50 21.6	+0.2
	baz=98,SNR=16						
G23K	Bananza Creek	80.64	337	P	P	15 50 22.9	+1.5
	baz=100						
MLY	Manley	80.66	335	IAmb	IAmb	15 50 22.9	
	comp=Z,16nm,0.8s						
MLY	Manley	80.66	335	P	P	15 50 21.9	+0.3
	baz=99,SNR=17						
C24K	Franklin Bluff	80.71	340	P	P	15 50 23.0	+1.3
	baz=101						
E23K	Chandalar	80.72	338	P	P	15 50 22.6	+0.7
	baz=100						
KEST	Kesra	80.75	55	P	P	15 50 23.5	+0.8
	comp=Z,9.2nm,1.1s,baz=290,slow=19,SNR=3.2						
	comp=Z,9.2nm,1.1s						
SPCR	Spurr Chakacha	80.79	331	P	P	15 50 22.7	+0.3
	baz=97						
COLD	Coldfoot	80.79	337	IAmb	IAmb	15 50 24.7	
	comp=Z,16nm,0.8s						
COLD	Coldfoot	80.79	337	P	P	15 50 23.5	+1.3
	baz=100						
O20K	Slope Mountain	80.87	330	P	P	15 50 23.2	+0.4
	baz=96						
OHAK	Old Harbor	80.92	327	P	P	15 50 23.1	+0.1
	baz=95						
PPLA	Purkeypile	80.99	333	P	P	15 50 23.7	+0.2
	baz=97,SNR=14						
CAST	Castle Rocks	81.01	333	P	P	15 50 23.1	-0.4
CAST				IAmb	IAmb	15 50 24.5	
	comp=Z,27nm,0.7s						
CAST	Castle Rocks	81.01	333	P	P	15 50 23.5	0.0
	baz=97,SNR=26						
H22K	Ishtalitna Cre	81.05	336	P	P	15 50 24.4	+0.8
	baz=98						
P19K	Oil Pt	81.13	330	P	P	15 50 24.6	+0.4
	baz=96						
CHUM	Lake Minchumin	81.17	334	P	P	15 50 24.4	+0.2
	baz=97,SNR=17						
I21K	Tanana	81.20	335	P	P	15 50 24.8	+0.4
	baz=98						
G22K	Bettles	81.25	337	P	P	15 50 25.4	+0.8
	baz=98						
D23K	Nanushuk River	81.26	339	P	P	15 50 26.2	+1.6
	baz=99,SNR=15						
Q19K	Cape Douglas,	81.27	329	P	P	15 50 25.3	+0.4
	baz=95						
M20K	Styx River	81.31	332	IAmb	IAmb	15 50 26.2	
	comp=Z,16nm,0.7s						
M20K	Styx River	81.31	332	P	P	15 50 25.6	+0.5
	baz=96						
DAVOX	Davos/Dischmat	81.43	44	P	P	15 50 27.4	+1.1
	comp=Z,4.3nm,0.7s,baz=281,slow=7.5,SNR=7.8						
	comp=Z,4.3nm,0.7s						
DAVA	Damuels	81.45	43	*e*pP	P	15 50 28.4	+2.1
	comp=Z,21nm,1.1s						
E22K	Anaktuvuk Pass	81.55	338	P	P	15 50 26.6	+0.3
	baz=98,SNR=7.2						
F22K	John River	81.59	338	P	P	15 50 27.3	+0.8
	baz=98						
H21K	Melozitna Rive	81.60	336	P	P	15 50 26.9	+0.4
	baz=97						
L20K	Farewell, AK	81.72	332	P	P	15 50 27.4	+0.2
	baz=96,SNR=9.7						
O19K	Port Alsworth	81.72	330	P	P	15 50 27.4	+0.1
	baz=95						
N19K	Bonanza Creek	81.86	331	P	P	15 50 27.9	-0.1
	baz=95						
K20K	Telida	81.89	333	IAmb	IAmb	15 50 29.2	
	comp=Z,15nm,0.7s						
K20K	Telida	81.89	333	P	P	15 50 28.2	+0.1
	baz=95,SNR=10.0						
M19K	Big River Lodg	81.91	332	P	P	15 50 28.5	+0.3
	baz=95						
Q18K	Katmai Hardscr	81.95	328	P	P	15 50 28.7	0.0
	baz=94						
G21K	Allakaket	81.99	336	P	P	15 50 29.4	+0.8
	baz=96						
FETA	Feichten	82.02	43	*e*P	P	15 50 29.6	+0.2
	comp=Z,10nm,1.2s						
F21K	Alatna River	82.06	337	P	P	15 50 29.6	+0.7
	baz=96						
RETA	Reutte	82.06	43	*e*pP	pP	15 50 32.7	-1.9
	comp=Z,9.4nm,1.6s						
P18K	Big Mountain,	82.12	329	P	P	15 50 28.9	-0.5
	baz=94						
L19K	White Mountain	82.15	332	IAmb	IAmb	15 50 30.5	
	comp=Z,16nm,1.1s						
L19K	White Mountain	82.15	332	P	P	15 50 29.8	+0.3
	baz=95						
Q17K	Contact Creek	82.39	328	P	P	15 50 30.8	-0.1
	baz=93						
R17K	Ugashik Creek	82.62	327	P	P	15 50 32.1	+0.1
	baz=93						
WTTA	Wattenberg	82.65	43	*e*pP	pP	15 50 36.1	-1.7
	comp=Z,8.9nm,0.9s						
TTA	Tatalina	82.74	333	P	P	15 50 32.8	+0.2
	baz=94						
Q16K	King Salmon	82.81	328	P	P	15 50 32.8	-0.1
	baz=92,SNR=5.2						
NOA	NORSAR Array B	82.88	29	P	P	15 50 34.5	+1.1
	comp=Z,1.0nm,0.8s,baz=267,slow=6.7,SNR=2.3						
	comp=Z,1.0nm,0.8s						
O17K	Koliganek Bris	83.09	330	P	P	15 50 34.7	+0.3
	baz=92						
GCSA	Galena City Sc	83.23	335	P	P	15 50 35.7	+0.7
	baz=93						
ABTA	Abfaltersbach	83.24	44	*e*P	P	15 50 34.2	-1.4
	comp=Z,6.9nm,0.8s						
CLUD	Cludinico	83.50	44	IAmb	IAmb	15 50 44.5	
	comp=Z,16nm,0.8s						
P16K	Nushagak River	83.52	329	P	P	15 50 36.6	0.0
	baz=91,SNR=6.9						
A21K	Barrow	83.56	341	IAmb	IAmb	15 50 38.7	
	comp=Z,20nm,0.9s						
A21K	Barrow	83.56	341	P	P	15 50 37.1	+0.6
	baz=94,SNR=12						
O16K	Kokwok River B	83.59	329	P	P	15 50 37.1	+0.2
	baz=91						
CLL	Collm	83.59	39	*e*P	P	15 50 38.0	+0.9
	comp=Z,14nm,1.6s						
KBA	Koelnbreinsper	83.81	43	*e*pP	pP	15 50 41.9	-1.9
	comp=Z,9.7nm,1.0s						
KHC	Kasperske Hory	83.96	41	*e*P	P	15 50 43.6	+4.4
PRED	Cave del Predi	83.97	44	P	P	15 50 38.6	-0.7
PRED				IAmb	IAmb	15 50 48.2	
	comp=Z,12nm,1.0s						
GERES	GERESS Array B	84.04	42	P	P	15 50 39.9	+0.3
	comp=Z,1.6nm,0.9s,baz=234,slow=5.9,SNR=8.4						
	comp=Z,1.6nm,0.9s						
MOA	Molln	84.43	43	*e*pP	pP	15 50 45.4	-1.4
	comp=Z,6.5nm,0.4s						
BELA	Belgrano 2	85.12	172	P	P	15 50 44.1	-0.2
BELA				IAmb	IAmb	15 50 51.7	
	comp=Z,37nm,1.7s						
SPITS	Spitsbergen Ar	85.16	12	P	P	15 50 45.6	+0.9
	comp=Z,11nm,0.9s,baz=221,slow=15,SNR=1.7						
SPITS				LR	LR	16 29 42.8	
	comp=Z,69nm,18.2s,baz=194,slow=36						
	comp=Z,11nm,0.9s						
CONA	Conrad Observa	85.50	42	*e*PcP	PcP	15 50 49.3	-0.7
	comp=Z,9.9nm,1.6s						
RDOG	Red Dog Mine	85.69	338	P	P	15 50 47.5	+0.1
	baz=88						
DPC	Dobruska-Polom	85.71	40	*e*P	P	15 50 49.8	+1.8

KRLC	Kraliky	86.02	40	*e*P	P	15 50 51.7	+2.2
ANM	Nome	86.89	334	P	P	15 50 53.7	+0.3
	baz=85,SNR=5.9						
TNA	Tin City	87.86	336	IAmb	IAmb	15 51 00.5	
	comp=Z,11nm,1.0s						
TNA	Tin City	87.86	336	P	P	15 50 58.5	+0.5
	baz=83,SNR=9.4						
SNAA	Sanae	88.27	163	P	P	15 51 00.3	+0.4
	comp=Z,1.9nm,0.7s,baz=265,slow=9.5,SNR=5.9						
SNAA				LR	LR	16 30 30.4	
	comp=Z,96nm,20.2s,baz=182,slow=36						
	comp=Z,1.9nm,0.7s						
ARCES	ARCESS Array B	88.42	20	P	P	15 51 00.2	-0.4
	comp=Z,5.4nm,1.0s,baz=313,slow=6.0,SNR=1.8						
	comp=Z,5.4nm,1.0s						
UNV	Unalaska Valle	88.44	324	P	P	15 51 01.5	+0.4
	baz=84						
FINES	FINESS Array B	90.01	28	P	P	15 51 08.8	+0.6
	comp=Z,1.5nm,0.9s,baz=276,slow=5.4,SNR=1.5						
	comp=Z,1.5nm,0.9s						
TSUM	Tsumeb	91.79	109	LR	LR	16 29 19.4	
	comp=Z,173nm,20.2s,baz=298,slow=33						
MLR	Muntele Rosu	92.64	44	P	P	15 51 21.5	+0.5
	comp=Z,1.4nm,0.5s,baz=261,slow=19,SNR=2.1						
	comp=Z,1.4nm,0.5s						
IDI	Anoyia	93.42	54	LR	LR	16 32 00.8	
	comp=Z,19nm,20.0s,baz=314,slow=35						
QSPA	South Pole Qui	94.81	180	P	P	15 51 32.1	+1.7
	comp=Z,3.2nm,1.0s,baz=209,slow=4.4,SNR=5.6						
	comp=Z,3.2nm,1.0s						
SUR	Sutherland	95.47	122	LR	LR	16 32 36.2	
	comp=Z,232nm,18.3s,baz=256,slow=34						
BILL	Bilibino	96.70	341	P	P	15 51 37.9	-1.0
BILL				IAmb	IAmb	15 51 47.7	
	comp=Z,10nm,1.4s						
LBTB	Lobatse	99.48	114	LR	LR	16 34 16.2	
	comp=Z,95nm,19.9s,baz=190,slow=34						
AFI	Afiamalu	99.96	257	LR	LR	16 28 26.4	
	comp=Z,45nm,20.8s,baz=114,slow=30						
ZALV	Zalesovo Beam	118.52	15	PKP	PKPdf	15 56 55.4	-1.2
	comp=Z,0.4nm,0.5s,baz=306,slow=3.2,SNR=1.4						
KURBB	Kurchatov Arra	119.50	21	PKP	PKPdf	15 56 57.8	-0.8
	comp=Z,0.2nm,0.3s,baz=325,slow=1.5,SNR=1.3						
MKAR	Makanchi Array	124.07	21	PKP	PKPdf	15 57 07.3	-0.3
	comp=Z,0.3nm,0.5s,baz=319,slow=2.4,SNR=6.7						
SONM	Songino Array	127.60	1	PKP	PKPdf	15 57 14.7	+0.3
	comp=Z,0.9nm,0.9s,baz=4.4,slow=2.1,SNR=4.3						
WMQ	Urumqi	128.48	18	*e*P	PKiKP	15 57 17.1	+0.3
CN2	Changchun	128.96	343	*e*P	PKPdf	15 57 12.8	-4.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MJAR	Matsushiro Arr	129.77	327	PKP	PKiKP	15 57 19.5	-0.1
	comp=Z,0.7nm,0.5s,baz=67,slow=6.0,SNR=2.8						
KSRS	Korea Array	133.81	337	PKP	PKPdf	15 57 26.6	+0.3
	comp=Z,1.0nm,0.7s,baz=30,slow=2.4,SNR=4.5						
HHC	Hu-ho-hao-te	134.43	356	*e*P	PKPdf	15 57 22.8	-4.8
GTA	Gaotai	135.49	8	*e*PKPbc	PKiKP	15 57 31.8	+0.6
GTA				sPKP		15 57 38.9	
STKA	Stephens Creek	138.09	226	PKP	PKiKP	15 57 36.8	+0.3
	comp=Z,2.0nm,0.8s,baz=113,slow=7.7,SNR=2.1						
LZH	Lanzhou	139.22	4	*e*PKP	PKPdf	15 57 31.1	-5.6
LZH				sPKP		15 57 40.0	
NJ2	Nanjing	141.77	344	*e*P	PKPdf	15 57 40.3	-0.8
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
CD2	Chengdu	144.35	5	PKP	PKPab	15 57 43.9	+0.1
KAAM	Kaadhehdhoo	145.30	82		PKPbc	15 57 45.6	-2.0
ASAR	Alice Springs	148.24	231	PKPbc	PKPbc	15 57 54.4	-1.5
	comp=Z,3.9nm,0.7s,baz=123,slow=3.5,SNR=23						
ASAR	Alice Springs	148.24	231		PKPdf	15 57 54.2	+1.6
PZH	PanZhiHua	148.43	10	PKPbc	PKiKP	15 57 57.5	-0.6
SSLB	Suanglung	148.65	336		PKPbc	15 57 55.7	-1.2
TNCH	TengChong	149.16	16	PKPbc	PKPdf	15 57 51.1	-3.1
TNCH				PKPab	PKPab	15 58 01.8	-0.8
TNCH				PP	PP	16 01 40.1	+12
TNCH				AMB	AMB		
	comp=Z,84nm,6.0s						
WRA	Warramunga Arr	149.70	238	PKP	PKPdf	15 57 54.9	-0.1
	comp=Z,1.5nm,0.7s,baz=109,slow=1.6,SNR=21						
WRA				PKPbc	PKiKP	15 58 00.6	-0.1
	comp=Z,6.2nm,0.7s,baz=110,slow=2.8,SNR=30						
WRA	Warramunga Arr	149.70	238	PKPdf	PKPdf	15 57 51.3	-3.7
WRA					PKPbc	15 57 59.7	+0.1
WB0	Warramunga Arr	149.73	238	PKPdf	PKPdf	15 57 54.9	-0.2
WB0					PKPbc	15 58 00.1	+0.4
PALK	Pallekele	150.85	66	PKPbc	PKiKP	15 58 03.5	+0.2
	comp=Z,6.7nm,0.9s,baz=237,slow=0.6,SNR=2.1						
CMAR	Chiang Mai Arr	155.47	19	PKP	PKPdf	15 58 05.1	+1.6
	comp=Z,0.2nm,0.3s,baz=318,slow=1.2,SNR=2.4						

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*IDC **16** 15:39:14.6±2.7, 52.°41N×173.°00E, h0^{km}, mb3.3/4, mbtmp3.3/5, ML2.5/1, Error ellipse: s-maj=71.4km s-min=17.8km az=171.0*

ISC 16 15:39:18.3±3.1**, 52.°2N**±0.°5×**173.°1E**±0.°2**, h35**^{km}**, n12,** σ**0.^{s}33**/7**, mb2.9**/3**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHEM	Shemya Is, Ala	0.81	52	Pn	Pn	15 39 32.8	-0.4
	27nm,0.3s,baz=244,slow=15,SNR=20						
SHEM				Sn	Sn	15 39 44.2	+0.2
	43nm,0.3s,baz=280,slow=19,SNR=6.5						
PETK	Petropavlovsk-	9.37	281	Pn	Pn	15 41 30.7	-0.1
	0.2nm,0.3s,baz=86,slow=21,SNR=12						
	1.1nm,0.6s						
KDAK	Kodiak Island	20.32	61	P	P	15 43 50.9	-0.1
	6.6nm,0.9s,baz=302,slow=9.5,SNR=1.1						
	6.6nm,0.9s						
ILAR	Eielson Array	23.91	43	P	P	15 44 28.4	-0.1
	0.4nm,0.9s,baz=250,slow=8.6,SNR=5.5						
	0.4nm,0.9s						
H11N2	WAKE ISLAND Hy	32.80	191	T	T	16 20 44.5	
	baz=5.4						
H11N3	WAKE ISLAND Hy	32.81	191	T	T	16 20 43.4	
	baz=5.4						
H11N1	WAKE ISLAND Hy	32.81	191	T	T	16 21 08.8	
	baz=5.4						
H11S1	WAKE ISLAND Hy	34.02	191	T	T	16 22 21.0	
	baz=1.8						
H11S3	WAKE ISLAND Hy	34.04	191	T	T	16 22 22.9	
	baz=1.8						
H11S2	WAKE ISLAND Hy	34.04	191	T	T	16 22 26.4	
	baz=1.8						
YKA	Yellowknife Ar	38.28	46	P	P	15 46 35.2	+0.4
	0.1nm,0.6s,baz=287,slow=8.2,SNR=2.7						
	0.1nm,0.6s						
MKAR	Makanchi Array	55.43	303	P	P	15 48 49.0	0.0
	0.2nm,0.8s,baz=38,slow=5.7,SNR=1.7						
	0.2nm,0.8s						

PGC 16 15:49:53.6±0.1**, 50.°56N**×**130.°27W, h10**^{km}**, MLSn3.1**/20**, Mw3.7**/20**, 202km west of Pt. Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.37	86	P	Pn	15 50 16.7	-2.1
HOLB				S	Sb	15 50 32.5	-4.4
PACB	Port Alice, BC	1.78	93	Pn	Pn	15 50 22.2	-2.2
PACB				Sn	Sn	15 50 43.0	-4.0
HG4B	Hotspring	1.83	342	Pn	Pn	15 50 22.1	-3.0
HG4B				Sn	Sn	15 50 43.9	-4.4
MAYB	Maynard	1.99	93	Pn	Pn	15 50 25.4	-2.0
BBB	Bella Bella	2.12	39	Pn	Pn	15 50 27.9	-1.1
BBB				Sn	Sn	15 50 51.1	-4.2
EDB	Eliza Dome	2.14	108	Pn	Pn	15 50 26.8	-2.5
EDB				Sn	Sn	15 50 52.4	-3.5
BNB	Barry Inlet	2.22	336	Pn	Pn	15 50 27.8	-2.7
WOSB	Woss	2.41	98	Pn	Pn	15 50 31.6	-1.5
WOSB				Sn	Sn	15 50 58.4	-4.2
ETB	Estevan Point	2.69	115	Pn	Pn	15 50 34.9	-2.0
NCRB	Newcastle Ridg	2.70	92	Pn	Pn	15 50 35.6	-1.6
MOBC	Moresby Island	2.79	339	Pn	Pn	15 50 36.1	-2.3
BNAB	Bonilla	2.95	356	Pn	Pn	15 50 39.2	-1.2
CBB	Campbell River	3.19	98	Pn	Pn	15 50 42.8	-1.0
CBB				Sn	Sn	15 51 19.0	-2.8
GRNB	Grenville Isla	3.30	3	Pn	Pn	15 50 43.6	-1.7
GRNB				Sn	Sn	15 51 20.3	-4.3
OZB	Mount Ozzard	3.49	115	Pn	Pn	15 50 46.0	-2.0
OZB				Sn	Sn	15 51 23.1	-6.2
MBLB	Minette Bay Lo	3.62	16	Sn	Sn	15 51 30.3	-2.2
KITB	Kitimat	3.66	15	Pn	Pn	15 50 49.3	-1.0
KITB				Sn	Sn	15 51 31.6	-1.9
B928	Bamfield	3.76	115	Pn	Pn	15 50 50.5	-1.0
BFSB	Bamfield	3.76	115	Pn	Pn	15 50 50.5	-1.0
TXB	Texada	3.85	101	Pn	Pn	15 50 52.0	-0.9
MGB	Mount Grey	3.94	111	Pn	Pn	15 50 52.6	-1.6
SHB	Sechelt	4.23	101	Pn	Pn	15 50 57.4	-0.8
PFB	Port Renfrew	4.29	115	Pn	Pn	15 50 57.8	-1.1
OCP	Olym-Cheeka Pk	4.33	119	Pn	Pn	15 50 59.0	-0.5
BIB	Bowen Island	4.64	102	Pn	Pn	15 51 05.0	+1.3
OBC	Olympics--Boni	4.78	120	Pn	Pn	15 51 06.3	+0.6
STW	Striped Peak	4.94	117	Pn	Pn	15 51 08.2	+0.4
SNB	Saturna Island	4.95	108	Pn	Pn	15 51 08.9	+1.0
OSD	Olympics--Snow	5.11	120	Pn	Pn	15 51 11.6	+1.3
HNBB	Haney	5.13	101	Pn	Pn	15 51 11.4	+0.9
MCW	Mount Constitu	5.19	108	Pn	Pn	15 51 12.4	+1.1
FSB	Fort Saint Jam	5.34	40	Pn	Pn	15 51 13.7	+0.3
FSJB	Fort St James	5.34	41	Pn	Pn	15 51 13.8	+0.4
LLLB	Lillooet	5.35	86	Pn	Pn	15 51 13.4	-0.1
VDB	Vedder Mountai	5.51	103	Pn	Pn	15 51 16.6	+1.0
CMW	Cultus Mountai	5.73	109	Pn	Pn	15 51 20.1	+1.3
JCW	Jim Creek	5.94	110	Pn	Pn	15 51 22.9	+1.2
RPW	Rockport	6.08	107	Pn	Pn	15 51 24.4	+0.8
GPW	Glacier Peak	6.45	109	Pn	Pn	15 51 30.0	+1.1
B08A	Colville Reser	7.46	103	Pn	Pn	15 51 43.3	+0.8
NBC5	NorthernBC 5	8.28	30	Pn	Pn	15 51 55.2	+1.5

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*NEIC **16** 15:50:28.7, 36.°10N×120.°22W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.46; M$_{\theta\theta}$-1.01; M$_{\phi\phi}$0.55; M$_{r\theta}$-0.25; M$_{\theta\phi}$1.15; M$_{\phi r}$0.34; Fault plane solution: M$_0$1.45000×10^{14} NP1:ϕ_s73.00000°, δ72.00000°, λ3.00000°. NP2:ϕ_s342.00000°, δ87.00000°, λ162.00000°. Principal axes: T 1.2095, Plg15.0000°, Azm296.0000°; N 0.4737, Plg72.0000°, Azm152.0000°; P -1.6832, Plg10.0000°, Azm29.0000°;*

*NCEDC **16** 15:50:28.7±2.4, 36.°10N±0.°01×120.°22W±0.°02, h9^{km}±6^{km}, Mwr3.4/4, ML3.3/110(NEIC) Error ellipse: s-maj=1.8km s-min=1.5km az=102.0*

*NEIC **16** 15:50:28.7±2.0, 36.°10N±0.°01×120.°20W±0.°02, h23^{km}±8^{km}, Error ellipse: s-maj=2.6km s-min=1.5km az=51.0*

*ANF **16** 15:50:29.6±0.5, 36.°07N×120.°15W, h13^{km}±2^{km}, ML3.5/29, Error ellipse: s-maj=3.8km s-min=1.7km az=120.0*

ISC 16 15:50:28.8±0.9**, 36.°10N**±0.°02×**120.°20W**±0.°02**, h15**^{km}±7^{km}**, n212,** σ**0.^{s}82**/230**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PKEM	Kettleman Hill	0.08	121		Pg	15 50 32.0	+0.2
CTM	Castle Mountai	0.21	213		Pg	15 50 33.8	+0.2
PSRM	Scobie Ranch	0.26	195		Pb	15 50 34.9	-0.2
PDRM	Domengine Ranc	0.27	329		Pb	15 50 35.5	+0.1
PHFM	Heflinger Ranc	0.28	217		Pb	15 50 35.2	-0.3
GHC	Gold Hill	0.30	205		Pb	15 50 35.4	-0.5
PSTM	Stockdale Moun	0.31	235		Pb	15 50 35.8	-0.2
PHAM	Harlan Ranch	0.31	211		Pb	15 50 35.9	-0.2
PMRM	Maxey Ranch	0.32	186		Pb	15 50 36.2	-0.1
PKD	Bear Valley Ra	0.32	240		Pb	15 50 36.0	-0.3
PSMM	Smith Mountain	0.32	264		Pb	15 50 36.2	-0.1
PSNM	Stone Corral	0.33	194		Pb	15 50 36.1	-0.2
PWMM	Westland Maint	0.33	358		Pb	15 50 37.7	+1.3
PVCM	Vineyard Canyo	0.33	237		Pb	15 50 36.1	-0.3
PJUM	Juniper Ridge	0.34	291		Pb	15 50 36.4	-0.3
PKLM	Kerr Lake	0.35	199		Pb	15 50 36.5	-0.2
PWKM	Work Ranch	0.39	221		Pb	15 50 37.3	-0.1
PPO	Portuguese Can	0.41	235		Pb	15 50 37.9	0.0
TRAM	Private Proper	0.43	188		Pb	15 50 38.1	-0.1
TCHL	Shandon	0.45	202		Pb	15 50 38.5	+0.1
PMPB	Monarch Peak	0.50	283		Pb	15 50 39.2	-0.2
PMPB				Sg	Sb	15 50 47.8	+1.3
PMPB				IAML		15 50 53.9	
	comp=N,1µm,0.8s						
PMPB				IAML		15 50 55.5	
	comp=E,2µm,1.0s						
TRAY	Twisselman Ran	0.56	174		Pb	15 50 40.5	+0.3
TSCN	Private Proper	0.57	192		Pb	15 50 40.8	+0.3
TSCN					Sn	15 50 50.9	-0.8
TCAS	Cass Winery, P	0.57	211		Pb	15 50 40.5	-0.1
PANM	San Antonio Re	0.66	241		Pb	15 50 42.2	+0.2
TSCS	Shell Creek So	0.68	191		Pb	15 50 42.5	+0.2
TSCS					Sb	15 50 52.3	+0.9
VOG	Valley Oaks Go	0.69	72		Pb	15 50 42.6	+0.1
VOG	Valley Oaks Go	0.69	72	P	Pb	15 50 42.6	+0.1
	baz=252,SNR=6.1						
VOG				S	Sb	15 50 52.3	+0.3
	baz=252						
RAMR	Ramage Ranch	0.72	230		Pb	15 50 43.1	+0.1
RAMR					Sn	15 50 54.5	-0.8
LRV	Little Rabbit	0.74	296		Pb	15 50 43.5	+0.2
PHSB	Hesperia Broad	0.75	248		Pb	15 50 43.9	+0.3
PHSB					Sb	15 50 54.8	+1.2
PCCM	Crazy Canyon	0.78	269		Pb	15 50 44.3	+0.1
RCTC	Rector, Farmer	0.80	75		Pg	15 50 44.1	-0.1
RCTC					Sb	15 50 55.4	+0.4
SMMC	Simmler	0.81	168		Pb	15 50 44.8	+0.3
SMMC	Simmler	0.81	168	P	Pb	15 50 44.8	+0.3
	baz=347,SNR=139						
SMMC				S	Sb	15 50 55.2	0.0
	baz=347						
BBNM	San Benito	0.82	300		Pb	15 50 44.8	0.0
PTAM	Tassajara Cree	0.82	210		Pb	15 50 44.8	-0.1
BBGB	Big Mountain B	0.83	305		Pb	15 50 45.0	+0.1
BBGB				IAML		15 51 07.3	
	comp=N,2µm,0.7s						
BBGB				IAML		15 51 09.0	
	comp=E,2µm,0.8s						
CARC	Carrizo Plain	0.84	160		Pb	15 50 45.3	+0.1
BAVM	Antelope Valle	0.86	309		Pg	15 50 45.5	0.0
BPIM	Pinnacles	0.87	296		Pg	15 50 45.2	-0.5
EFD	Emergency Oper	0.89	209		Pb	15 50 46.2	+0.3
ARDC	Alexander Ranc	0.90	225		Pb	15 50 46.4	+0.2
BSGM	Shirttail Gulc	0.91	290		Pg	15 50 46.3	0.0
MRHM	Rocky Hill	0.92	78		Pg	15 50 45.9	-0.6
BCH	Branch Mountai	0.92	174		Pb	15 50 46.8	+0.2
BVL	Bear Valley	0.93	301		Pb	15 50 46.9	+0.3
VES	Vestal, Richgr	0.94	106		Pg	15 50 46.6	-0.4
VES	Vestal, Richgr	0.94	106	P	Pg	15 50 46.4	-0.5
	baz=286,SNR=8.3						
VES				S	Sb	15 50 60.0	+0.9
	baz=286						
CRGC	Crocker Grade	0.94	156		Pb	15 50 47.1	+0.2
LSDC	Los Osos Digit	0.96	213		Pn	15 50 48.0	+0.2
PAPM	Alder Peak	0.96	259		Pb	15 50 46.9	-0.3
DPD	Davis Peak	0.99	209		Pn	15 50 48.1	-0.1
VPDC	Valencia Peak	1.02	213		Pn	15 50 49.0	+0.4
BSMM	Soledad Missio	1.03	286		Pb	15 50 48.3	-0.2
DCD	Diablo Creek	1.03	211		Pn	15 50 49.0	+0.3
BJOM	Mount Johnson	1.04	300		Pb	15 50 48.3	-0.2
SCZ	Santa Cruz	1.09	297		Pb	15 50 49.1	-0.2
BCWM	Chews Ridge	1.13	281		Pb	15 50 49.4	-0.7
HAST	Hastings Reser	1.13	285		Pb	15 50 49.5	-0.5
BSLM	Silva Ranch	1.15	306		Pg	15 50 51.1	+0.2
SPG2	Springville 2	1.16	85		Pb	15 50 50.0	-0.6
SAO	San Andreas Ge	1.20	304		Pn	15 50 50.8	-0.3
SAO				Sg	Sg	15 51 07.8	+0.1
BSRM	Salinas Radio	1.21	298		Pn	15 50 51.1	0.0
FRP	Fremont Peak	1.23	302		Pn	15 50 51.1	-0.4
BPCNC	Pine Canyon	1.25	292		Pn	15 50 51.4	-0.3
PKM	Mcpherson Peak	1.25	165		Pg	15 50 52.8	-0.1
PKM	Mcpherson Peak	1.25	165	P	Pn	15 50 52.0	+0.1
	baz=345,SNR=59						
PKM				S	Sg	15 51 09.3	0.0
	baz=345						
PACP	Pacheco Peak	1.26	316		Pb	15 50 52.3	0.0
HSFM	Saint Francis	1.27	304		Pb	15 50 52.4	+0.1
SLD	San Luis Dam	1.27	320		Pn	15 50 52.0	-0.1
MYLM	Yosemite Lake	1.29	352		Pn	15 50 52.2	-0.1
HPCM	Pacheco Lake	1.29	318		Pn	15 50 52.4	0.0
HFEM	San Felipe	1.31	312		Pn	15 50 52.6	0.0
BCW	Bitter Crk WRg	1.33	151		Pn	15 50 52.1	-0.8
BCW				IAML		15 51 20.5	
	comp=N,638nm,0.6s						
BCW				IAML		15 51 21.2	
	comp=E,938nm,0.5s						
WOFM	Oak Flat	1.33	115		Pn	15 50 52.9	-0.1
HTUM	Tustin Road	1.37	302		Pn	15 50 53.5	+0.1
WASM	Alta Sierra Ca	1.38	105		Pn	15 50 53.8	0.0
FIGC	Figueroa Mtn.	1.38	173		Pb	15 50 54.4	0.0
CDC	Canada Road	1.39	312		Pn	15 50 53.3	-0.3
KCC	Kaiser Creek	1.41	30		Pb	15 50 54.6	-0.2
ISA	Isabella, Lake	1.47	107	Pn	Pn	15 50 54.7	-0.1
ISA				IAML		15 51 17.6	
	comp=E,509nm,0.4s						
ISA				IAML		15 51 22.3	
	comp=N,527nm,0.6s						
ISA	Isabella, Lake	1.47	107	P	Pn	15 50 55.0	+0.2
	baz=288,SNR=45						
ISA				S	Sb	15 51 14.5	+0.2
	baz=288						
HMOM	Monterey	1.48	290		Pn	15 50 54.5	-0.4
ARVC	Arvin	1.48	131		Pn	15 50 54.8	-0.1
ARVC	Arvin	1.48	131	P	Pn	15 50 54.7	-0.2
	baz=311,SNR=14						
ARVC				S	Sb	15 51 14.7	0.0
	baz=311						
TEJ	El Tejon	1.51	125		Pn	15 50 54.6	-0.7
CMPM	Mikes Peak	1.54	325		Pn	15 50 55.6	-0.2
NJQ	Nojoqui County	1.57	179		Pn	15 50 56.6	+0.5
JLAB	Laurel Hill	1.62	311		Pn	15 50 56.3	-0.6
JTGM	Trout Gulch Ro	1.64	305		Pn	15 50 56.2	-0.8
ARN	Arnold Ranch	1.64	320		Pn	15 50 57.1	-0.1
CCOB	Coe Ranch Numb	1.65	315		Pn	15 50 57.2	-0.1
MHC	Mount Hamilton	1.69	317		Pn	15 50 58.2	+0.2
CWC	Cottonwood Cre	1.74	78		Pb	15 51 00.3	-0.3
CWC	Cottonwood Cre	1.74	78	Pb	Pb	15 51 00.4	-0.2
	baz=259						
CWC				Sb	Sb	15 51 23.6	+1.2
	baz=259						
MRDM	Red Cones	1.75	31		Pb	15 51 00.4	-0.3
MDPB	Devils Postpil	1.77	30		Pb	15 51 00.7	-0.4
MMPM	Mammoth Pass	1.77	32		Pb	15 51 01.0	-0.2
OMMB	Old Mammoth Mi	1.79	32		Pb	15 51 00.8	-0.6
MINS	Minaret Summit	1.79	30		Pb	15 51 01.4	-0.2
MLIM	Lincoln Peak	1.80	31		Pb	15 51 01.7	0.0
MTUM	Tungsten Hills	1.81	46		Pb	15 51 01.6	-0.1
MDYM	Dry Creek	1.82	31		Pb	15 51 02.1	+0.2
MLCM	Laurel Creek C	1.82	34		Pb	15 51 01.9	-0.1
MMLB	Mammoth Lakes	1.83	32		Pb	15 51 02.4	+0.2
MGPM	Gravel Pit	1.84	34		Pb	15 51 02.3	0.0
MCVM	Convict Lake	1.84	36		Pb	15 51 02.3	-0.1
TIN	Tinemaha, Big	1.84	59		Pb	15 51 02.3	0.0
TIN	Tinemaha, Big	1.84	59	Pb	Pb	15 51 02.3	0.0
	baz=240						
TIN				Sb	Sg	15 51 27.4	-0.8
	baz=240						
MDCM	Deadman Creek	1.85	30		Pb	15 51 02.2	-0.3
MEMM	East Mammoth H	1.86	33		Pb	15 51 02.8	+0.2
MCBM	Casa Benchmark	1.86	34		Pb	15 51 02.8	+0.2
MCSM	Casa Diablo Ho	1.86	33		Pb	15 51 02.7	0.0
WNMM	Nine Mile Cany	1.88	97		Pb	15 51 02.5	-0.3
MDRNC	Doe Ridge	1.88	35		Pb	15 51 03.0	+0.1
MCUB	Copperopolis B	1.90	350		Pn	15 51 01.0	+0.4
LMCR	Lookout Mounta	1.91	31		Pb	15 51 03.7	+0.3
MLHM	Little Hot Cre	1.92	35		Pb	15 51 03.9	+0.2
CMB	Columbia Colle	1.93	356	Pn	Pn	15 51 02.0	+0.8
CMB				IAML		15 51 33.4	
	comp=N,159nm,0.8s						
CMB				IAML		15 51 33.9	
	comp=E,158nm,0.8s						
MFBM	Five Bridges	1.94	47		Pb	15 51 04.2	+0.3
JSCM	Stevens Creek	1.95	308		Pn	15 51 01.4	+0.1
WCSM	Coso Springs S	1.97	92		Pb	15 51 04.2	-0.2
CGO	Cerro Gordo	1.98	76		Pb	15 51 04.6	-0.2
POCCA	Poleta Canyon	1.99	50		Pb	15 51 05.0	+0.2
CVLM	Vallecito	2.01	320		Pn	15 51 03.5	+1.3
CCAC	Calif City Air	2.01	118		Pn	15 51 03.5	+1.2
CCAC				IAML		15 51 40.6	
	comp=N,406nm,1.1s						
CCAC				IAML		15 51 41.2	
	comp=E,343nm,0.7s						
MCDM	Chidago Canyon	2.01	44		Pb	15 51 05.3	+0.1
JPSM		2.05	303		Pn	15 51 02.7	0.0
BENR	Benton	2.07	39		Pb	15 51 05.8	-0.5
MRCM	Red Rock Canyo	2.07	40		Pb	15 51 05.6	-0.6
MGNR	McGee Canyon	2.09	35		Pb	15 51 06.8	+0.3
MLNR	Milner Canyon	2.10	44		Pb	15 51 06.6	-0.2
LUL	Lundy Lake	2.11	22		Pb	15 51 06.6	-0.3
LRMC	Laurel Mtn Rad	2.14	106	P	Pn	15 51 04.8	+0.7
	baz=288						
LRMC				Sb	Sb	15 51 34.5	+0.8
	baz=288						
SCZ2	Santa Cruz Isl	2.15	167	Pb	Pb	15 51 08.0	+0.4
	baz=348						
EDW2	Edwards Air Fo	2.17	124	P	Pn	15 51 05.1	+0.6
	baz=305,SNR=49						
DSP	Deep Springs	2.19	54		Pb	15 51 06.8	-1.2
DSP				IAML		15 51 38.0	
	comp=E,220nm,1.0s						
DSP				IAML		15 51 52.8	
	comp=N,152nm,1.5s						
MPMC	Manual Prospec	2.19	90	Pb	Pb	15 51 08.4	+0.1
	baz=272,SNR=118						
MPMC				Sb	Sg	15 51 37.6	-1.7
	baz=272						
LCH	Last Change Ra	2.34	60	Pn	Pn	15 51 08.5	+1.6
LCH				IAML		15 51 41.9	
	comp=E,274nm,0.6s						
LCH				IAML		15 51 42.3	
	comp=N,137nm,0.7s						
HCK	Huntoon Valley	2.35	33		Pb	15 51 10.5	-0.3
DECC	Green Verdugo	2.40	140	Sb	Sb	15 51 42.9	+1.8
	baz=321						
GRAC	Grapevine Rang	2.45	68		Pn	15 51 04.9	-3.3
GRAC	Grapevine Rang	2.45	68		Pb	15 51 11.3	-1.2
GRAC				IAML		15 51 48.9	
	comp=N,340nm,0.6s						
GRAC				IAML		15 51 51.7	
	comp=E,393nm,0.7s						
GRAC	Grapevine Rang	2.45	68	Pb	Pb	15 51 14.1	+1.6
	baz=249						
GRAC				Sb	Sg	15 51 45.5	-1.9
	baz=249						
WAKR	Walker	2.47	14		Pn	15 51 09.2	+0.5
WAKR				IAML		15 51 51.6	
	comp=E,280nm,0.8s						
LHV	Little Huntoon	2.53	32		Pn	15 51 10.8	+1.4
PASC	Pasadena Art C	2.54	139		Pn	15 51 11.1	+1.7
QSM	Queen of Sheba	2.70	92		Pn	15 51 13.1	+1.4
QSM				IAML		15 52 04.2	
	comp=N,115nm,0.8s						
QSM				IAML		15 52 08.2	
	comp=E,89nm,0.7s						
FURC	Furnace Creek,	2.72	81	Pg	Pg	15 51 20.7	-0.1
	baz=263						
MZP	Montezuma Peak	2.76	54		Pn	15 51 14.7	+1.9
NVAR	Mina Array Bea	2.77	32		Pn	15 51 14.1	+1.2
BFSC	Mount Baldy Ra	2.79	131	P	Pn	15 51 13.8	+0.8
	baz=312						
NV11	Mina Array Sit	2.84	34		Pn	15 51 16.2	+2.5
NV11				IAML		15 51 59.3	
	comp=N,75nm,1.0s						
GWY	Greenwater Val	2.86	87		Pn	15 51 15.3	+1.3
GWY				IAML		15 52 00.3	
	comp=E,93nm,0.7s						
GWY				IAML		15 52 02.4	
	comp=N,70nm,0.6s						
EMB	Emerald Bay	2.87	1		Pn	15 51 16.4	+2.2
EMB				IAML		15 52 02.1	
	comp=N,168nm,0.7s						
EMB				IAML		15 52 02.6	
	comp=E,131nm,0.7s						
GSC	Goldstone, Bar	2.87	105	Pn	Pn	15 51 15.4	+1.2
GSC				IAML		15 52 09.8	
	comp=E,146nm,0.7s						
GSC				IAML		15 52 12.2	
	comp=N,78nm,1.0s						
MCCM	Marconi Confer	2.96	314	Pn	Pn	15 51 16.0	+0.8
MCCM				IAML		15 52 05.5	
	comp=N,56nm,2.2s						
MCCM				IAML		15 52 57.9	
	comp=E,57nm,2.1s						
WCT	Wildcat Mounta	2.96	76		Pn	15 51 17.1	+1.8
WCT				IAML		15 52 03.3	
	comp=E,60nm,0.5s						
YERR	Yerington	2.97	15		Pn	15 51 17.7	+2.0
YERR				IAML		15 52 08.7	
	comp=N,171nm,0.9s						
YERR				IAML		15 52 12.7	
	comp=E,175nm,1.0s						
NBPM	Berryessa Peak	3.01	329		Pn	15 51 13.8	-2.2
TPH	Tonopah	3.09	50		Pn	15 51 18.8	+1.6
SHOC	Shoshone, Teco	3.19	93	P	Pn	15 51 19.8	+1.4
	baz=275						
MPK	Martis Peak	3.19	2	Pn	Pn	15 51 20.5	+1.8
BBRC	Big Bear Solar	3.25	123	Pb	Pb	15 51 26.8	+0.5
	baz=305						
TPNV	Topopah Spring	3.29	74		Pn	15 51 20.2	+0.3

TPNV				IAML		15 52 15.4	
	comp=E,126nm,0.8s						
TPNV				IAML		15 52 15.7	
	comp=E,80nm,0.6s						
TPNV	**Topopah Spring**	**3.29**	**74**	Pb	**Pb**	**15 51 28.2**	**+1.3**
	baz=256,SNR=24						
ELS	**Elsinore Mount**	**3.34**	**136**		**Pn**	**15 51 20.7**	**+0.1**
KVN	**Kaiserville**	**3.38**	**29**		**Pn**	**15 51 20.7**	**-0.6**
KVN				IAML		15 52 20.2	
	comp=N,47nm,1.1s						
KVN				IAML		15 52 20.6	
	comp=E,38nm,0.9s						
HEC	**Hector,Ludlow**	**3.40**	**111**	P	**Pn**	**15 51 22.1**	**+0.7**
	baz=293						
GWKM	**Walker Ridge**	**3.46**	**329**		**Pn**	**15 51 19.6**	**-2.6**
TUQ	**Turquoise Moun**	**3.54**	**100**	P	**Pn**	**15 51 24.5**	**+1.1**
	baz=282						
ORV	**Oroville**	**3.59**	**344**		**Pn**	**15 51 24.9**	**+0.9**
Q09A	**Carvers**	**3.63**	**40**	Pn	**Pn**	**15 51 25.3**	**+0.7**
PAHR	**Pah Rah Range**	**3.65**	**10**		**Pn**	**15 51 26.5**	**+1.6**
PAHR				IAML		15 52 26.9	
	comp=N,104nm,1.0s						
PAHR				IAML		15 52 27.4	
	comp=E,66nm,1.0s						
HOPS	**Hopland Field**	**3.68**	**322**	Pn	**Pn**	**15 51 26.3**	**+1.1**
HOPS				IAML		15 53 37.5	
	comp=N,36nm,2.8s						
S11A	**Rachel**	**3.88**	**65**		**Pn**	**15 51 29.8**	**+1.7**
GMRC	**Granite Mounta**	**3.93**	**108**	P	**Pn**	**15 51 29.1**	**+0.3**
	baz=291						
PFO	**Pinyon Flats O**	**3.95**	**128**		**Pn**	**15 51 29.4**	**+0.3**
PFO	**Pinyon Flats O**	**3.95**	**128**	P	**Pn**	**15 51 29.6**	**+0.5**
	baz=310						
TPFO	**Pinon Flats**	**3.96**	**128**	P	**Pn**	**15 51 29.8**	**+0.7**
	baz=310						
PMD	**Palm Desert**	**3.98**	**127**		**Pn**	**15 51 29.9**	**+0.6**
BELC	**Belle Mtn. Jos**	**4.03**	**120**	P	**Pn**	**15 51 30.4**	**+0.3**
	baz=302						
SHPR	**Sheep Range**	**4.09**	**83**		**Pn**	**15 51 32.1**	**+1.2**
R11A	**Troy Canyon, C**	**4.31**	**57**		**Pn**	**15 51 34.5**	**+0.6**
R11A				IAML		15 52 57.0	
	comp=E,20nm,0.8s						
R11A	**Troy Canyon, C**	**4.31**	**57**	Pb	**Pb**	**15 51 43.6**	**-0.7**
	baz=240						
PRN	**Pahroc Range**	**4.33**	**71**		**Pn**	**15 51 35.1**	**+0.8**
V12A	**Nelson**	**4.36**	**93**		**Pn**	**15 51 34.5**	**0.0**
KCPM	**Cahto Peak**	**4.47**	**324**	Pn	**Pn**	**15 51 36.3**	**+0.2**
KCPM				IAML		15 53 21.2	
	comp=E,33nm,3.0s						
KCPM				IAML		15 54 06.3	
	comp=N,28nm,3.4s						
MONP2	**Monument Peak**	**4.47**	**135**	P	**Pn**	**15 51 37.5**	**+1.2**
	baz=317						
BAR	**Barrett**	**4.49**	**139**	Pn	**Pn**	**15 51 36.2**	**-0.2**
IRM	**Iron Mountain**	**4.57**	**114**	P	**Pn**	**15 51 38.5**	**+1.0**
	baz=296						
BC3	**Big Chuckawall**	**4.60**	**121**	P	**Pn**	**15 51 36.7**	**-1.2**
	baz=303						
PLTX	**Planet X, Gerl**	**4.63**	**7**	Pn	**Pn**	**15 51 37.8**	**-0.5**
CBX	**Cerro Bola**	**4.78**	**141**	Pn	**Pn**	**15 51 41.0**	**+0.5**
CBX				IAML		15 53 28.5	
	comp=E,15nm,1.2s						
KMRM	**Mail Ridge**	**4.96**	**327**	Pn	**Pn**	**15 51 44.3**	**+1.6**
KMRM				IAML		15 52 27.7	
	comp=E,28nm,3.0s						
KMRM				IAML		15 54 29.7	
	comp=N,27nm,1.9s						
CCX	**Cicese**	**5.14**	**144**	Pn	**Pn**	**15 51 45.7**	**+0.4**
Q12A	**Willow Creek R**	**5.17**	**54**		**Pn**	**15 51 46.8**	**+1.0**
Q12A				IAML		15 53 22.4	
	comp=E,24nm,0.9s						
Q12A				IAML		15 53 34.5	
	comp=N,35nm,1.0s						
W13A	**Hualapai Mount**	**5.24**	**99**		**Pn**	**15 51 46.7**	**-0.1**
UABX	**UABC, Campus M**	**5.24**	**130**	Pn	**Pn**	**15 51 47.6**	**+1.0**
KMPM	**Mount Pierce**	**5.30**	**326**	Pn	**Pn**	**15 51 48.4**	**+0.9**
ESJX	**Sierra Juarez**	**5.40**	**138**	Pn	**Pn**	**15 51 50.0**	**+1.1**
CPBX	**Cerro Prieto**	**5.47**	**131**	Pn	**Pn**	**15 51 50.7**	**+1.0**
SPR3	**Spring Creek 3**	**5.48**	**56**		**Pn**	**15 51 51.1**	**+0.9**
CCUT	**Cedar City**	**5.67**	**73**		**Pn**	**15 51 53.4**	**+0.6**
LCMT	**Little Creek M**	**5.67**	**79**	Pn	**Pn**	**15 51 53.1**	**+0.4**
SZCU	**Shurtz Canyon**	**5.89**	**73**		**Pn**	**15 51 56.0**	**+0.2**
VTX	**Valle De La Tr**	**5.97**	**141**	Pn	**Pn**	**15 51 56.2**	**-0.4**
ELK	**Elko**	**6.05**	**39**	Pn	**Pn**	**15 51 55.7**	**-2.3**
U15A	**North Rim**	**6.39**	**85**	Pn	**Pn**	**15 52 01.1**	**-1.7**
WVOR	**Wild Horse Val**	**6.43**	**10**		**Pn**	**15 52 01.8**	**-1.3**
MSU	**Marysvale**	**6.83**	**67**	Pn	**Pn**	**15 52 06.8**	**-1.9**

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*IDC **16** 15:52:17.3±4.3, 26°.07S×28°.83E, h0^{km}, mb4.0/2, mbtmp3.8/3, ML2.7/1, Error ellipse: s-maj=79.2km s-min=21.2km az=121.0*

*BUL **16** 15:52:22.9±1.0, 26°.47S×29°.53E, h10^{km}±12^{km}, MD3.4*

ISC 16 15:52:13.2±1.2**, 26°.32S**±0°.08×**29°.52E**±0°.08**, h10**^{km}**, n9, σ2**^{s}**45**/13**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOPA	**Mopani**	**3.27**	**32**	*i* P	**Pb**	**15 53 10.3**	**-1.1**
MOPA				*i* S	**Sn**	**15 53 45.9**	**+2.3**
LBTB	**Lobatse**	**3.77**	**289**	*i* P	**Pb**	**15 53 18.3**	**-1.6**
LBTB				*i* S	**Sn**	**15 54 00.2**	**+4.1**
MUSN	**Musina, Limpop**	**4.03**	**5**	*i* P	**Pb**	**15 53 23.9**	**-0.5**
MUSN				*i* S	**Sb**	**15 54 08.0**	**-5.1**
BOSA	**Boshof**	**4.42**	**238**	Pn	**Pn**	**15 53 21.8**	**+1.2**
	0.3nm,0.3s,baz=55,slow=15,SNR=23						
BOSA				Pg	**Pb**	**15 53 29.7**	**-1.4**
	1.5nm,0.3s,baz=56,slow=16,SNR=6.1						
BOSA				Sn	**Sn**	**15 54 10.8**	**-1.4**
	4.7nm,0.3s,baz=60,slow=7.7,SNR=5.5						
BOSA				Lg	Lg	15 54 27.4	
	8.6nm,0.3s,baz=44,slow=19,SNR=5.4 1.8nm,0.5s						
BOSA	**Boshof**	**4.42**	**238**	*i* P	Pn	15 53 26.8	+6.2
BOSA				*i* S	**Sn**	**15 54 12.3**	**+0.1**
I47ZA	**BOSHOF INFRASO**	**4.44**	**238**	I	I	16 17 30.0	
	baz=52,slow=317,SNR=14						
KRI	**Karoi**	**9.44**	**1**	*i* P	**Pn**	**15 54 29.9**	**+0.4**
KRI				*i* S	Sn	15 56 01.0	-15
DBIC	**Dimbokro**	**46.77**	**310**	P	**P**	**16 00 43.2**	**+0.1**
	1.5nm,0.4s,baz=124,slow=7.3,SNR=2.0 1.5nm,0.4s						
TORD	**Torodi Ar. Bea**	**47.66**	**322**	P	**P**	**16 00 51.3**	**+1.3**
	1.0nm,0.7s,baz=135,slow=6.9,SNR=6.9 1.0nm,0.7s						

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*NCEDC **16** 16:09:57.0±1.8, 40°.61N±0°.02×121°.84W±0°.02, h17^{km}±6^{km}, ML3.1/18, ML2.9/106(NEIC), Error ellipse: s-maj=2.7km s-min=2.4km az=224.0*

NEIC 16 16:09:56.2±2.1**, 40°.61N**±0°.02×**121°.85W**±0°.03**, h20**^{km}±7^{km}**,**
Error ellipse: s-maj=3.8km s-min=2.4km az=95.0,
Northern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LDBM	**Digger Butte**	**0.19**	**165**		Pg	16 10 01.6	+0.3
LMEM	**Manzanita Entr**	**0.23**	**109**		Pg	16 10 02.2	+0.3
LSHM	**Sage Hen Hill**	**0.23**	**322**		Pg	16 10 02.1	+0.2
HATC	**Hat Creek Radi**	**0.36**	**55**		Pb	16 10 04.4	+0.4
HATC					Sb	16 10 10.2	+0.9
LTCM	**Tuscan Springs**	**0.45**	**208**		Pb	16 10 06.2	+0.6
LTIM	**Timbered Crate**	**0.63**	**26**		Pg	16 10 09.1	+0.3
M03C	**McCloud**	**0.69**	**343**		Pg	16 10 10.1	+0.1
M03C					Sg	16 10 19.5	+0.2
LBFM	**Black Fox Moun**	**0.73**	**358**		Pg	16 10 11.1	+0.3
LBKM	**Bonanza King**	**0.78**	**308**		Pb	16 10 10.9	-0.3
LGPM	**Granite Peak**	**0.80**	**292**		Pb	16 10 11.1	-0.5
LBPM	**Beegum Peak**	**0.84**	**250**		Pb	16 10 12.1	-0.1
LCSM	**College of the**	**0.90**	**333**		Pb	16 10 13.3	0.0
LMPM	**Military Pass**	**0.91**	**345**		Pg	16 10 13.9	-0.1
GROM	**Round Mountain**	**0.94**	**222**		Pb	16 10 13.6	-0.3
OGOM	**Van Goodin Ran**	**0.97**	**169**		Pb	16 10 14.2	-0.2
LMHM	**Little Mount H**	**0.98**	**9**		Pn	16 10 15.1	0.0
LGMM	**Garner Mountai**	**0.99**	**1**		Pg	16 10 15.4	-0.1
OBHM	**Bloomer Hill**	**1.00**	**163**		Pn	16 10 15.1	-0.1
KHBM	**Hayfork Bally**	**1.04**	**273**		Pb	16 10 15.5	-0.2
GVV	**Valley View**	**1.05**	**217**		Pb	16 10 15.3	-0.5
LHEM	**Herd Peak**	**1.05**	**345**		Pn	16 10 16.4	+0.3
ORV	**Oroville**	**1.09**	**166**		Pn	16 10 15.6	-0.8
ORV				IAML		16 10 39.6	
	comp=E,275nm,0.7s						
KPK	**Kanaka Peak**	**1.11**	**158**		Pb	16 10 16.8	+0.1
LAMM	**Antelope Mount**	**1.16**	**330**		Pn	16 10 17.1	-0.4
M04C	**Macdoel**	**1.17**	**0**		Pg	16 10 18.7	-0.3
PAM	**Palermo**	**1.19**	**168**		Pb	16 10 18.4	+0.4
OWYM	**Wyandotte**	**1.19**	**166**		Pb	16 10 18.2	+0.1
KBNM	**Bluenose Ridge**	**1.25**	**236**		Pb	16 10 19.5	+0.3
OSTM	**Stimpson Lane**	**1.26**	**171**		Pb	16 10 19.0	-0.2
B040	**Montague**	**1.29**	**341**		Pb	16 10 19.7	-0.1
YBH	**Yreka Blue Hor**	**1.29**	**330**		Pn	16 10 19.1	-0.2
YBH					Sb	16 10 37.1	+0.9
YBH				IAML		16 10 40.8	
	comp=E,352nm,0.7s						
YBH				IAML		16 10 40.9	
	comp=N,252nm,0.8s						
GFC	**Funks Creek**	**1.33**	**195**		Pn	16 10 20.0	+0.4
OSUM	**Sutter Buttes**	**1.34**	**180**		Pb	16 10 20.3	-0.3
BEKR	**Beckworth**	**1.36**	**123**		Pb	16 10 21.7	+0.6
SUTB	**Sutter Butte**	**1.38**	**178**		Pn	16 10 20.5	+0.1
KOMM	**Orleans Mounta**	**1.39**	**299**		Pb	16 10 21.1	-0.4
GHMM	**Hull Mountain**	**1.39**	**217**		Pn	16 10 21.0	+0.4
KHMM	**Horse Mountain**	**1.45**	**281**		Pb	16 10 23.5	+0.8
KHMM				IAML		16 10 47.3	
	comp=N,194nm,0.8s						
KHMM				IAML		16 10 50.9	
	comp=E,271nm,0.7s						
KRKM	**Rackout Spring**	**1.46**	**225**		Pb	16 10 23.2	+0.4
KMRM	**Mail Ridge**	**1.47**	**255**		Pb	16 10 23.6	+0.6
KMRM				IAML		16 10 48.7	
	comp=N,285nm,0.6s						
KMRM				IAML		16 10 51.6	
	comp=E,217nm,0.8s						
KIPM	**Iron Peak**	**1.48**	**238**		Pb	16 10 23.8	+0.6
KBSM	**Bell Springs**	**1.50**	**243**		Pb	16 10 24.2	+0.7
KCRM	**Chalk Rock**	**1.51**	**264**		Pb	16 10 24.4	+0.7
KFPM	**Farley Peak**	**1.55**	**232**		Pb	16 10 24.6	+0.3
KCPM	**Cahto Peak**	**1.62**	**236**		Pb	16 10 24.8	-0.7
KCPM				IAML		16 10 54.6	
	comp=N,153nm,0.7s						
KCPM				IAML		16 11 02.6	
	comp=E,196nm,0.8s						
HOG	**Hogback Mounta**	**1.63**	**4**		Pb	16 10 26.2	+0.4
L04D	**Klamath Falls**	**1.64**	**348**		Pb	16 10 25.9	0.0
JCC	**Jacoby Creek,**	**1.67**	**278**		Pb	16 10 26.1	-0.2
JCC				IAML		16 10 55.3	
	comp=N,101nm,1.4s						
JCC				IAML		16 10 55.9	
	comp=E,126nm,1.0s						
DONR	**Donner Summit**	**1.72**	**136**		Pb	16 10 27.7	+0.4
MOD	**Modoc Plateau**	**1.74**	**42**		Pn	16 10 26.4	+0.9
MOD				IAML		16 10 53.6	
	comp=N,215nm,1.0s						
KMPM	**Mount Pierce**	**1.74**	**264**		Pn	16 10 26.5	+1.1
KMPM				IAML		16 11 00.1	
	comp=E,132nm,0.7s						
KMPM				IAML		16 11 00.6	
	comp=N,148nm,0.7s						
PEAR	**Peavine Mounta**	**1.76**	**124**		Pb	16 10 27.4	-0.6
GTC	**Three Chop Rid**	**1.78**	**228**		Pn	16 10 27.0	+1.1
MNRC	**McLaughlin Min**	**1.79**	**195**		Pn	16 10 26.5	+0.5
GWRM	**Wonder Ranch**	**1.79**	**219**		Pb	16 10 27.6	-0.7
AFDM	**Forest Hills D**	**1.79**	**158**		Pb	16 10 28.2	-0.2
AFDM	**Forest Hills D**	**1.79**	**158**	IAML		16 10 55.5	
	comp=N,122nm,0.4s						
AFDM				IAML		16 10 58.7	
	comp=E,117nm,0.7s						
GHLM	**Highland Sprin**	**1.81**	**210**		Pb	16 10 28.0	-0.7
PLTX	**Planet X, Gerl**	**1.81**	**86**		Pn	16 10 27.2	+0.7
KSMM	**Slide Mountain**	**1.83**	**257**		Pb	16 10 28.2	-0.8
NMTM	**Middletown**	**1.86**	**194**		Pb	16 10 28.5	-1.0
HOPS	**Hopland Field**	**1.87**	**211**	Pn	Pn	16 10 27.9	+0.8
MPK	**Martis Peak**	**1.92**	**133**		Pb	16 10 30.9	+0.2
MPK				IAML		16 11 04.4	
	comp=N,166nm,0.9s						
GDXM	**Geysers**	**1.94**	**202**	Pn	Pn	16 10 28.2	+0.1
NBPM	**Berryessa Peak**	**1.96**	**188**		Pb	16 10 29.8	-1.4
L02F	**Cave Junction**	**1.99**	**320**		Pb	16 10 30.3	-1.4
L02F				IAML		16 11 05.3	
	comp=E,113nm,0.8s						
K04D	**Chiloquin, OR**	**2.01**	**2**		Pb	16 10 31.5	-0.7
K04D				IAML		16 11 23.5	
	comp=E,146nm,1.0s						
PAHR	**Pah Rah Range**	**2.10**	**115**		Pn	16 10 31.4	+1.1
PAHR				IAML		16 11 05.3	
	comp=N,58nm,1.2s						
EMB	**Emerald Bay**	**2.12**	**140**		Pn	16 10 31.8	+1.1
HUMO	**Hull Mountain**	**2.16**	**338**		Pn	16 10 31.7	+0.6
GGUM	**Gualala**	**2.17**	**216**		Pn	16 10 32.6	+1.4
K05A	**Summer Lake**	**2.23**	**18**		Pb	16 10 34.2	-1.7
K05A				IAML		16 11 10.8	
	comp=E,78nm,1.2s						
K05A				IAML		16 11 13.3	
	comp=N,76nm,1.4s						
BBOR	**Butler Butte**	**2.36**	**345**		Pb	16 10 36.4	-1.7
K02D	**Willamette Mer**	**2.49**	**327**		Pb	16 10 38.0	-2.3
YERR	**Yerington**	**2.58**	**128**		Pn	16 10 39.4	+2.3
YERR				IAML		16 11 21.7	
	comp=N,45nm,0.5s						
MCCM	**Marconi Confer**	**2.59**	**198**	Pn	Pb	16 10 39.6	-2.3
MCCM				IAML		16 11 08.1	
	comp=N,52nm,1.8s						
MCCM				IAML		16 11 23.7	
	comp=E,48nm,2.4s						
J04A	**Umpqua Nationa**	**2.63**	**356**		Pb	16 10 40.7	-2.1
J05D	**Fort Rock, OR**	**2.71**	**10**		Pb	16 10 41.6	-2.5
WAKR	**Walker**	**2.81**	**138**		Pn	16 10 42.9	+2.7
WAKR				IAML		16 11 34.0	
	comp=E,33nm,0.8s						
CMB	**Columbia Colle**	**2.81**	**156**		Pn	16 10 41.3	+1.2
CMB				IAML		16 11 28.5	
	comp=E,45nm,0.7s						
CMB				IAML		16 11 28.5	
	comp=N,37nm,0.6s						
J01E	**Myrtle Point**	**2.98**	**329**	Pn	Pn	16 10 45.2	+2.8
J01E				IAML		16 11 35.4	
	comp=N,55nm,2.8s						
J01E				IAML		16 11 49.1	
	comp=E,63nm,2.4s						
WVOR	**Wild Horse Val**	**3.02**	**52**		Pn	16 10 43.8	+0.7
WVOR				IAML		16 11 40.0	
	comp=E,29nm,1.1s						
I04A	**Tendick Farm,**	**3.21**	**353**		Pn	16 10 47.2	+1.6
PINE	**Pine Mountain**	**3.25**	**12**		Pn	16 10 48.8	+2.6
PINE				IAML		16 12 28.1	
	comp=E,21nm,4.2s						
I03D	**Drain, OR**	**3.28**	**341**	Pn	Pn	16 10 45.9	-0.5
I03D				IAML		16 12 04.1	
	comp=E,32nm,2.5s						
I03D				IAML		16 12 29.4	
	comp=N,30nm,3.1s						
KVN	**Kaiserville**	**3.28**	**117**		Pn	16 10 48.8	+2.1
KVN				IAML		16 11 41.5	
	comp=E,25nm,1.5s						
KVN				IAML		16 11 44.9	
	comp=N,24nm,1.4s						
LHV	**Little Huntoon**	**3.50**	**131**		Pn	16 10 52.2	+2.6
LHV				IAML		16 12 03.1	
	comp=N,34nm,1.2s						
LHV				IAML		16 12 13.1	
	comp=E,29nm,0.9s						
NVAR	**Mina Array Bea**	**3.50**	**127**		Pn	16 10 52.3	+2.5
NV11	**Mina Array Sit**	**3.59**	**126**		Pn	16 10 49.5	-1.4
NV11				IAML		16 12 02.0	
	comp=E,16nm,1.4s						
MDPB	**Devils Postpil**	**3.67**	**143**		Pn	16 10 50.8	-1.3
MDPB				IAML		16 11 59.7	
	comp=E,32nm,0.9s						
MDPB				IAML		16 11 59.0	
	comp=N,28nm,0.8s						
BUCK	**Buck Mountain**	**3.68**	**347**	Pn	Pn	16 10 51.4	-0.7
J08A	**Circle Bar Ran**	**3.72**	**41**		Pn	16 10 53.0	+0.3
J08A				IAML		16 12 03.9	
	comp=E,17nm,1.1s						
J08A				IAML		16 12 07.8	
	comp=N,21nm,1.2s						
OMMB	**Old Mammoth Mi**	**3.73**	**143**		Pn	16 10 51.5	-1.4
OMMB				IAML		16 12 04.9	
	comp=N,14nm,0.9s						
I05D	**Terrebonne, OR**	**3.74**	**6**		Pn	16 10 52.5	-0.4
I05D				IAML		16 11 26.8	
	comp=E,31nm,4.1s						
I02E	**Swisshome, OR**	**3.79**	**338**	Pn	Pn	16 10 53.0	-0.6
SAO	**San Andreas Ge**	**3.85**	**175**		Pn	16 10 53.1	-1.3
I07A	**Izee**	**3.88**	**26**		Pn	16 10 53.4	-1.4
H04D	**Lebanon**	**3.96**	**351**	Pn	Pn	16 10 53.9	-2.0
BBGB	**Big Mountain B**	**4.08**	**171**		Pn	16 10 56.6	-0.9
H04A	**Detroit Lake**	**4.08**	**357**	Pn	Pn	16 10 54.9	-2.6
H04A				IAML		16 11 38.2	
	comp=N,15nm,3.2s						
H04A				IAML		16 12 19.8	
	comp=E,21nm,3.3s						
COR	**Corvallis**	**4.11**	**345**	Pn	Pn	16 10 56.5	-1.5
TPH	**Tonopah**	**4.39**	**124**		Pn	16 11 00.0	-1.9
DSP	**Deep Springs**	**4.43**	**136**		Pn	16 11 00.6	-1.7
MZP	**Montezuma Peak**	**4.53**	**129**		Pn	16 11 01.8	-2.1
LCH	**Last Change Ra**	**4.70**	**134**		Pn	16 11 04.5	-1.7
ELK	**Elko**	**5.03**	**86**		Pn	16 11 10.0	-0.8
MFID	**Camas Ranch**	**5.29**	**56**		Pn	16 11 15.7	+1.5
MFID				IAML		16 11 58.7	
	comp=E,7.9nm,4.6s						
MFID				IAML		16 14 38.1	
	comp=E,8.5nm,4.7s						
R11A	**Troy Canyon, C**	**5.35**	**113**	Pn	Pn	16 11 14.1	-1.0
R11A				IAML		16 14 16.7	
	comp=E,4.6nm,4.9s						
F03A	**Seaside**	**5.46**	**347**	Pn	Pn	16 11 16.2	-0.3
Q12A	**Willow Creek R**	**5.63**	**104**	Pn	Pn	16 11 16.0	-2.9
QSM	**Queen of Sheba**	**6.07**	**138**		Pn	16 11 24.2	-0.7

ROM 16 16:10:39.9±0.1**, 42°.621N**±0°.009×**13°.326E**±0°.007**,**
h9^{km}**, ML1.3**/3**, Error ellipse: s-maj=1.0km s-min=0.5km**
az=165.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.14**	**216**	P	Pg	16 10 43.6	+0.6
RM33				S	Sg	16 10 46.2	+0.9
RM33				AML	AML		
	comp=E,74µm,0.6s						
RM33				AML	AML		
	comp=N,78µm,1.1s						
T1214	**Arquata del Tr**	**0.16**	**328**	P	Pg	16 10 44.6	+1.2
TERO	**Teramo**	**0.20**	**89**	P	Pg	16 10 44.8	+0.7
TERO				S	Sg	16 10 48.2	+1.2
TERO				AML	AML		
	comp=N,135µm,0.1s						
TERO				AML	AML		
	comp=E,128µm,0.2s						
T1212	**Cascia, Frazio**	**0.24**	**302**	P	Pg	16 10 44.8	-0.1
MMO1	**Montemonaco**	**0.28**	**0**	P	Pg	16 10 43.0	-2.5
T1217	**Poggiodomo (PG**	**0.30**	**288**	P	Pb	16 10 47.0	-0.6
T1217				S	Sb	16 10 51.5	-1.2
T1211	**Morro Reatino**	**0.36**	**256**	P	Pg	16 10 47.6	+0.6
T1211				S	Sb	16 10 53.3	-1.0

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*NCEDC **16** 16:15:09.2±2.3, 36°.936N±0°.009×121°.68W±0°.01, h11^{km}±2^{km}, Md3.0/122, ML2.6/70(NEIC), Error ellipse: s-maj=1.5km s-min=1.3km az=82.0*

NEIC 16 16:15:08.7±1.1**, 36°.92N**±0°.01×**121°.72W**±0°.02**, h18**^{km}±1^{km}**,**
Error ellipse: s-maj=2.5km s-min=1.7km az=88.0,
Central California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANZ	**Anzar Road**	**0.11**	**108**		Pb	16 15 11.7	0.0
HTUM	**Tustin Road**	**0.11**	**146**		Pg	16 15 12.2	-0.2
HTUM					Sg	16 15 14.4	-0.5
JTGM	**Trout Gulch Ro**	**0.17**	**311**		Pg	16 15 14.4	+1.3
HSFM	**Saint Francis**	**0.21**	**121**		Pg	16 15 13.5	-0.2
CDC	**Canada Road**	**0.22**	**60**		Pg	16 15 13.6	-0.3
HCAM	**Canada Road**	**0.22**	**60**		Pg	16 15 13.6	-0.3
HCAM					Sg	16 15 17.0	-0.5
JLAB	**Laurel Hill**	**0.24**	**357**		Pg	16 15 14.2	0.0
JLAB					Sg	16 15 18.0	+0.1
FRP	**Fremont Peak**	**0.25**	**132**		Pg	16 15 14.0	-0.4
CADM	**Anderson Res.**	**0.26**	**17**		Pg	16 15 14.4	-0.1
HFEM	**San Felipe**	**0.26**	**76**		Pg	16 15 14.4	-0.2
SAO	**San Andreas Ge**	**0.27**	**125**		Pg	16 15 14.3	-0.4
BSRM	**Salinas Radio**	**0.30**	**147**		Pg	16 15 15.1	-0.1
BSLM	**Silva Ranch**	**0.33**	**115**		Pb	16 15 16.4	+0.3
CCOB	**Coe Ranch Numb**	**0.34**	**6**		Pb	16 15 16.7	+0.4
BPCNC	**Pine Canyon**	**0.35**	**168**		Pb	16 15 16.7	+0.2
JJOM	**Saint Joseph's**	**0.35**	**325**		Pg	16 15 16.2	0.0
HMOM	**Monterey**	**0.35**	**207**		Pb	16 15 16.9	+0.4
PACP	**Pacheco Peak**	**0.36**	**75**		Pg	16 15 16.2	0.0
HPCM	**Pacheco Lake**	**0.38**	**68**		Pg	16 15 16.6	-0.1
SCCB	**Santa Clara Co**	**0.39**	**343**		Pb	16 15 17.2	+0.1
SCZ	**Santa Cruz**	**0.41**	**141**		Pg	16 15 16.7	-0.4
MHC	**Mount Hamilton**	**0.43**	**8**		Pb	16 15 17.9	0.0
SLD	**San Luis Dam**	**0.43**	**69**		Pg	16 15 17.5	0.0
SLD					Sg	16 15 23.1	-0.3
BJOM	**Mount Johnson**	**0.44**	**131**		Pg	16 15 17.4	-0.2
JSGM	**Saratoga Golf**	**0.45**	**324**		Pb	16 15 18.1	0.0
ARN	**Arnold Ranch**	**0.46**	**19**		Pb	16 15 18.3	0.0
JSCM	**Stevens Creek**	**0.49**	**319**		Pg	16 15 18.6	0.0
JSJM	**St Joseph**	**0.51**	**325**		Pb	16 15 19.6	+0.5
JBMM	**Black Mountain**	**0.53**	**319**		Pg	16 15 19.3	0.0
CALM	**Calaveras Res.**	**0.54**	**353**		Pb	16 15 19.9	+0.3
CMPM	**Mikes Peak**	**0.54**	**36**		Pb	16 15 19.8	+0.1
HAST	**Hastings Reser**	**0.55**	**166**		Pb	16 15 19.8	0.0
HAST					Sb	16 15 27.3	+0.1
BVL	**Bear Valley**	**0.55**	**129**		Pg	16 15 19.3	-0.3
JPSM		**0.57**	**299**		Pb	16 15 20.4	+0.2
JFP	**Foothills Park**	**0.58**	**320**		Pb	16 15 20.5	+0.2
BSMM	**Soledad Missio**	**0.58**	**156**		Pb	16 15 20.4	0.0
SCKWR	**San Luis Creek**	**0.58**	**63**		Pb	16 15 20.9	+0.6
JSFB	**Stanford Teles**	**0.61**	**323**		Pb	16 15 21.1	+0.3
BPIM	**Pinnacles**	**0.62**	**134**		Pg	16 15 20.3	-0.6
BAVM	**Antelope Valle**	**0.62**	**116**		Pg	16 15 20.8	-0.1
BCWM	**Chews Ridge**	**0.62**	**168**		Pb	16 15 21.3	+0.2
BSGM	**Shirttail Gulc**	**0.63**	**143**		Pg	16 15 20.6	-0.5
JRSC	**Jasper Ridge**	**0.64**	**320**		Pg	16 15 21.3	0.0
BBGB	**Big Mountain B**	**0.64**	**122**		Pb	16 15 21.6	+0.1
BBGB	**Big Mountain B**	**0.64**	**122**	Sg	Sb	16 15 31.4	+1.2
BGH	**Bear Gulch**	**0.65**	**311**		Pg	16 15 21.5	0.0
COSM	**Mount Oso**	**0.65**	**25**		Pb	16 15 22.0	+0.4
BBNM	**San Benito**	**0.66**	**128**		Pg	16 15 21.8	+0.1
WENL	**Wente Vineyard**	**0.70**	**358**		Pn	16 15 23.2	-0.6
CVLM	**Vallecito**	**0.71**	**353**		Pn	16 15 23.5	-0.4
CNIC	**Niles Canyon**	**0.71**	**344**		Pg	16 15 23.1	+0.3
LRV	**Little Rabbit**	**0.75**	**131**		Pg	16 15 23.4	0.0
JCHM	**Cahill Ridge**	**0.79**	**319**		Pg	16 15 24.2	-0.1
C055	**Cottonwood Ave**	**0.80**	**337**	Pg	Pb	16 15 23.7	-0.4
C055				Sg	Sb	16 15 33.6	-0.9
JCPM	**Coyote Point**	**0.82**	**325**		Pg	16 15 24.8	0.0
CSLM	**San Leandro Hi**	**0.86**	**339**		Pg	16 15 25.6	+0.1
SAC	**San Andreas**	**0.86**	**320**		Pb	16 15 25.1	-0.1
CMOB	**Morgan Territo**	**0.89**	**356**		Pb	16 15 25.9	+0.2
CBSNC	**Byron Hot Spri**	**0.90**	**4**		Pn	16 15 27.5	+1.0
JSBM	**San Bruno Moun**	**0.93**	**325**		Pb	16 15 26.4	+0.1
JMGM	**Milagra Ridge**	**0.94**	**320**		Pb	16 15 26.1	-0.3
BGC	**Bolinger Road**	**0.94**	**343**		Pg	16 15 26.7	-0.2
PCCM	**Crazy Canyon**	**0.94**	**151**		Pg	16 15 26.9	-0.1
CRHM	**Round Hill Res**	**0.96**	**347**		Pb	16 15 26.0	-0.9
PMPB	**Monarch Peak**	**1.02**	**133**		Pb	16 15 27.7	-0.2
PMPB	**Monarch Peak**	**1.02**	**133**	Sg	Sn	16 15 42.0	-0.1
BKS	**Berkeley--Byer**	**1.04**	**337**		Pb	16 15 27.6	-0.6
CVPM	**Vollmer Peak**	**1.04**	**338**		Pb	16 15 27.8	-0.5
PAPM	**Alder Peak**	**1.04**	**164**		Pb	16 15 28.4	+0.1
VAK	**Adit at Lawren**	**1.05**	**336**		Pb	16 15 27.6	-0.7
JPRM	**Presidio of Sa**	**1.06**	**326**		Pn	16 15 28.6	-0.1
MYLM	**Yosemite Lake**	**1.14**	**66**		Pn	16 15 28.6	-1.1
CPIM	**Pinole Ridge**	**1.14**	**340**		Pn	16 15 29.4	-0.4
PJUM	**Juniper Ridge**	**1.14**	**127**		Pn	16 15 29.6	-0.3
CPMM	**Point Molate**	**1.17**	**332**		Pn	16 15 29.8	-0.3
PHSB	**Hesperia Broad**	**1.22**	**154**		Pn	16 15 30.7	-0.2
PSMM	**Smith Mountain**	**1.24**	**133**		Pn	16 15 31.2	-0.1
FARB	**Farallon Islan**	**1.28**	**308**		Pn	16 15 30.9	-0.8
PANM	**San Antonio Re**	**1.31**	**150**		Pn	16 15 32.4	+0.2
PHCM	**Hearst Castle**	**1.32**	**159**		Pn	16 15 32.3	+0.1
PKD	**Bear Valley Ra**	**1.36**	**135**		Pn	16 15 32.1	-0.8
MCUB	**Copperopolis B**	**1.37**	**39**		Pn	16 15 32.2	-0.7
PPO	**Portuguese Can**	**1.38**	**139**		Pn	16 15 33.2	+0.1
PVCM	**Vineyard Canyo**	**1.38**	**136**		Pn	16 15 32.7	-0.4
PSTM	**Stockdale Moun**	**1.39**	**135**		Pn	16 15 32.7	-0.6
SNT	**Sears Point**	**1.39**	**335**		Pn	16 15 33.4	+0.2
NOLM	**Olema**	**1.41**	**323**		Pn	16 15 32.8	-0.7
RAMR	**Ramage Ranch**	**1.45**	**152**		Pn	16 15 34.1	0.0
PWKM	**Work Ranch**	**1.47**	**138**		Pn	16 15 34.2	-0.2
PHFM	**Heflinger Ranc**	**1.48**	**134**		Pn	16 15 34.1	-0.5
PHAM	**Harlan Ranch**	**1.52**	**135**		Pn	16 15 34.8	-0.2
MCCM	**Marconi Confer**	**1.53**	**323**		Pn	16 15 34.6	-0.6
MCCM	**Marconi Confer**	**1.53**	**323**	IAML		16 16 05.9	
	comp=N,79nm,1.1s						
MCCM				IAML		16 16 07.3	

	comp=E,92nm,1.4s						
CMB	Columbia Colle	1.54	43	Pn	Pn	16 15 35.0	-0.4
CMB				IAML		16 15 58.7	
	comp=E,64nm,0.7s						
ARDC	Alexander Ranc	1.57	157		Pn	16 15 35.3	-0.4
PSRM	Scobie Ranch	1.57	132		Pn	16 15 35.6	-0.1
PKLM	Kerr Lake	1.60	135		Pn	16 15 36.0	-0.1
TCAS	Cass Winery, P	1.61	144		Pn	16 15 36.3	+0.1
TCHL	Shandon	1.63	139		Pn	16 15 36.6	+0.2
NTYM	Taylor	1.65	333		Pn	16 15 35.9	-0.9
TRAM	Private Proper	1.71	136		Pn	16 15 37.4	-0.2
PTAM	Tassajara Cree	1.73	151		Pn	16 15 38.6	+0.6
TSCN	Private Proper	1.76	141		Pn	16 15 38.4	0.0
NBPM	Berryessa Peak	1.79	348		Pn	16 15 39.1	+0.5
VPDC	Valencia Peak	1.81	157		Pn	16 15 38.6	-0.4
TSCS	Shell Creek So	1.84	143		Pn	16 15 38.9	-0.6
DCD	Diablo Creek	1.85	157		Pn	16 15 39.0	-0.5
DPD	Davis Peak	1.85	155		Pn	16 15 39.5	0.0
TRAY	Twisselman Ran	1.88	136		Pn	16 15 39.8	-0.2
NMTM	Middletown	1.97	343		Pn	16 15 41.2	0.0
AFDM	Forest Hills D	2.11	16	Pn	Pn	16 15 43.4	+0.3
MDPB	Devils Postpil	2.22	71		Pn	16 15 45.7	+0.8
OMMB	Old Mammoth Mi	2.28	71		Pn	16 15 46.7	+1.0
OMMB				IAML		16 16 22.9	
	comp=N,45nm,0.8s						
OMMB				IAML		16 16 25.8	
	comp=E,33nm,0.8s						
SUTB	Sutter Butte	2.31	359		Pb	16 15 49.7	-0.1
HOPS	Hopland Field	2.33	333	Pn	Pn	16 15 46.2	+0.1
HOPS				IAML		16 16 38.8	
	comp=N,37nm,1.9s						
HOPS				IAML		16 16 47.0	
	comp=E,35nm,1.8s						
WAKR	Walker	2.41	48		Pn	16 15 48.1	+0.7
WAKR				IAML		16 16 27.3	
	comp=E,44nm,0.7s						
WAKR				IAML		16 16 31.6	
	comp=N,28nm,0.7s						
EMB	Emerald Bay	2.42	31		Pn	16 15 46.8	-0.8
EMB				IAML		16 16 34.1	
	comp=N,49nm,0.8s						
EMB				IAML		16 16 40.4	
	comp=E,37nm,0.8s						
ORV	Oroville	2.64	4		Pn	16 15 50.5	+0.1
BCW	Bitter Crk WRg	2.72	136		Pn	16 15 52.1	+0.5
BCW				IAML		16 16 16.3	
	comp=N,27nm,2.3s						
BCW				IAML		16 16 42.9	
	comp=E,34nm,0.7s						
MPK	Martis Peak	2.72	29	Pn	Pn	16 15 51.6	-0.2
YERR	Yerington	2.85	43		Pn	16 15 54.4	+1.0
YERR				IAML		16 16 47.5	
	comp=N,29nm,0.9s						
LHV	Little Huntoon	2.88	62		Pn	16 15 53.2	-0.5
LHV				IAML		16 16 42.3	
	comp=N,29nm,0.8s						
LHV				IAML		16 16 54.1	
	comp=E,31nm,0.7s						
ISA	Isabella, Lake	2.91	115		Pn	16 15 54.0	-0.2
DSP	Deep Springs	3.03	80		Pn	16 15 55.0	-0.8
DSP				IAML		16 16 46.7	
	comp=E,12nm,0.9s						
DSP				IAML		16 16 55.1	
	comp=N,12nm,0.9s						
NVAR	Mina Array Bea	3.10	60		Pn	16 15 57.0	0.0
KCPM	Cahto Peak	3.13	333	Pn	Pn	16 15 57.0	-0.3
KCPM				IAML		16 17 21.0	
	comp=E,31nm,2.4s						
NV11	Mina Array Sit	3.21	61		Pn	16 15 59.3	+1.0
LCH	Last Change Ra	3.27	83		Pn	16 16 00.3	+1.1
LCH				IAML		16 16 58.9	
	comp=E,13nm,0.8s						
PAHR	Pah Rah Range	3.34	33		Pn	16 16 00.8	+0.7
PAHR				IAML		16 17 00.1	
	comp=E,13nm,1.8s						
PAHR				IAML		16 17 00.7	
	comp=N,8.5nm,1.1s						
CCAC	Calif City Air	3.48	119	Pn	Pn	16 16 03.6	+1.5
CCAC				IAML		16 17 13.6	
	comp=E,20nm,1.8s						
CCAC				IAML		16 17 23.3	
	comp=N,22nm,2.1s						
GRAC	Grapevine Rang	3.49	87		Pn	16 16 03.8	+1.6
MZP	Montezuma Peak	3.54	76		Pn	16 16 02.0	-1.1
KVN	Kaiserville	3.57	52		Pn	16 16 02.6	-0.7
KVN				IAML		16 17 03.3	
	comp=N,7.3nm,1.3s						
KVN				IAML		16 17 03.7	
	comp=E,7.6nm,0.7s						
KMRM	Mail Ridge	3.65	335	Pn	Pn	16 16 04.1	-0.3
KMPM	Mount Pierce	3.97	332	Pn	Pn	16 16 09.2	+0.5
QSM	Queen of Sheba	4.03	102		Pn	16 16 10.2	+0.7
QSM				IAML		16 17 28.9	
	comp=N,5.1nm,4.0s						
QSM				IAML		16 17 48.3	
	comp=E,5.6nm,4.8s						
WCT	Wildcat Mounta	4.09	90		Pn	16 16 10.9	+0.5
WCT				IAML		16 16 58.0	
	comp=E,6.6nm,2.6s						
GWY	Greenwater Val	4.13	99		Pn	16 16 09.8	-1.3
GWY				IAML		16 16 58.7	
	comp=E,7.8nm,5.0s						
GWY				IAML		16 17 23.8	
	comp=N,4.9nm,4.5s						

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*DNK **16** 16:18:38.0±2.0, 55.°97N×15.°62E, h5^{km}±17^{km}, ML1.9, Explosion*

UPP 16 16:18:38.0±0.3**, 55.°98N×15.°55E, h0**^{km}**, ML2.6, Suspected explosion, Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLEU	Blekinge	0.35	25	P	Pg	16 18 44.8	0.0
BLEU				S	Sg	16 18 49.6	+0.2
BLEU	Blekinge	0.35	25	*i* P	Pg	16 18 44.7	-0.1
BLEU				*i* S	Sg	16 18 49.4	+0.1
BSD	Bornholm Skovb	0.94	203	*i* P	Pg	16 18 55.6	-0.4
BSD				IAML		16 19 13.1	
	comp=Z,14nm,0.2s						
VXJU	Vaexsjoe	1.00	340	P	Pg	16 18 56.7	-0.5
DEL	Delary	1.06	298	P	Pg	16 18 57.7	-0.5
DEL				S	Sg	16 19 11.8	-0.1
DEL	Delary	1.06	298	*i* P	Pg	16 18 57.0	-1.3
LUNU	Lund	1.24	254	P	Pg	16 19 01.0	-0.7
LUNU	Lund	1.24	254	*i* P	Pg	16 19 01.1	-0.7
OSKU	Oskarshamn	1.25	14	P	Pg	16 19 01.2	-0.7
BJUU	Bjuv	1.42	275	P	Pn	16 19 03.9	-1.1
BJUU				S	Sb	16 19 23.9	-0.1
BJUU	Bjuv	1.42	275	*i* P	Pn	16 19 03.8	-1.2
BYXU	Byxelkrok	1.54	31	P	Pn	16 19 06.1	-0.5
EKSU	Eksjoe	1.60	355	P	Pn	16 19 07.3	-0.2
GNOU	Gnosjoe	1.64	324	P	Pn	16 19 08.2	0.0
FABU	Falkenberg	1.87	304	*i* P	Pn	16 19 10.1	-1.1
FABU				*i* S	Sn	16 19 36.1	+0.5
BORU	Boraas	2.25	318	*i* P	Pb	16 19 18.8	-0.8
ONAU	Onsala	2.46	307	*i* P	Pn	16 19 19.5	+0.3
TJOU	Tjoern	2.97	315	*i* P	Pb	16 19 32.0	+0.3

UPP 16 16:18:46.0±0.4**, 56.°00N×15.°53E, h0**^{km}**, ML2.6, Suspected explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VXJU	Vaexsjoe	0.98	341	P	Pg	16 19 04.2	-0.6
VXJU	Vaexsjoe	0.98	341	P	Pg	16 19 04.2	-0.6
DEL	Delary	1.04	298	P	Pg	16 19 05.3	-0.5
DEL	Delary	1.04	298	P	Pg	16 19 05.3	-0.5
LUNU	Lund	1.23	253	P	Pg	16 19 08.7	-0.9
LUNU				S	Sb	16 19 26.4	-0.1
OSKU	Oskarshamn	1.24	15	P	Pg	16 19 09.1	-0.6
OSKU	Oskarshamn	1.24	15	P	Pg	16 19 09.1	-0.6
BJUU	Bjuv	1.41	274	P	Pn	16 19 12.0	-0.8
BJUU	Bjuv	1.41	274	P	Pn	16 19 12.0	-0.8
BYXU	Byxelkrok	1.53	32	P	Pn	16 19 13.9	-0.6
BYXU	Byxelkrok	1.53	32	P	Pn	16 19 13.9	-0.6
EKSU	Eksjoe	1.58	356	P	Pn	16 19 14.9	-0.3
EKSU	Eksjoe	1.58	356	P	Pn	16 19 14.9	-0.3
GNOU	Gnosjoe	1.62	324	P	Pn	16 19 15.7	-0.1
GNOU	Gnosjoe	1.62	324	P	Pn	16 19 15.7	-0.1
VSTU	Vaestervik	1.75	18	P	Pn	16 19 17.8	+0.2
VSTU	Vaestervik	1.75	18	P	Pn	16 19 17.8	+0.2
FABU	Falkenberg	1.85	304	P	Pn	16 19 19.5	+0.5
FABU	Falkenberg	1.85	304	P	Pn	16 19 19.5	+0.5
LNKU	Linkoeping	2.23	360	P	Pb	16 19 25.7	-1.4
LNKU	Linkoeping	2.23	360	P	Pb	16 19 25.7	-1.4

ROM 16 16:41:21.6±0.1**, 43.°084N**±0.°002×**12.°999E**±0.°004**, h14**^{km}**, ML1.5**/11**, 3C-4D, Error ellipse: s-maj=0.3km s-min=0.0km az=75.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1220	Camerino, Fraz	0.07	68	P	Pg	16 41 24.7	+0.3
T1220				S	Sg	16 41 26.9	+0.5
T1220				AML	AML		
	comp=E,754μm,0.2s						
T1220				AML	AML		
	comp=N,1060μm,1.2s						
T1220				AML	AML		
	comp=N,1061μm,1.2s						
T1220				AML	AML		
	comp=N,1061μm,0.8s						
T1220				AML	AML		
	comp=E,754μm,0.2s						
SEF1	Sefro	0.07	329	P	Pg	16 41 24.7	+0.2
SEF1				S	Sg	16 41 26.8	+0.4
FDMO	Fiordimonte	0.08	126	P	Pg	16 41 24.7	+0.2
FDMO				S	Sg	16 41 26.8	+0.2
FDMO				AML	AML		
	comp=E,829μm,0.2s						
FDMO				AML	AML		
	comp=N,946μm,0.2s						
FDMO				AML	AML		
	comp=E,829μm,1.8s						
FDMO				AML	AML		
	comp=N,946μm,1.8s						
CESI	CESI - Serrava	0.10	221	P	Pb	16 41 25.2	-0.3
CESI				S	Sb	16 41 27.6	-0.4
CESI				AML	AML		
	comp=E,460μm,0.1s						
CESI				AML	AML		
	comp=N,418μm,0.3s						
SNTG	Esanatoglia	0.18	346	P	Pg	16 41 26.1	+0.3
SNTG				S	Sg	16 41 29.3	+0.6
SNTG				AML	AML		
	comp=E,192μm,0.1s						
SNTG				AML	AML		
	comp=N,154μm,0.3s						
T1256	Bolognola (MC)	0.18	115	P	Pg	16 41 26.3	+0.3
T1256				S	Sg	16 41 29.6	+0.7
T1256				AML	AML		
	comp=E,145μm,0.5s						
T1256				AML	AML		
	comp=N,116μm,0.3s						
T1216	Preci, Frazion	0.19	176	⇑P	Pg	16 41 26.3	+0.3
T1216				S	Sb	16 41 29.9	-0.7
MC2	Monte Cornacci	0.22	141	P	Pg	16 41 26.9	+0.3
MC2				S	Sb	16 41 31.0	-0.6
GUMA	Gualdo di Mace	0.25	95	⇓P	Pb	16 41 27.7	-0.2
GUMA				AML	AML		
	comp=N,161μm,0.2s						
GUMA				AML	AML		
	comp=E,245μm,0.2s						
ASSB	Assisi San Ben	0.25	261	P	Pg	16 41 27.5	+0.4
ASSB				AML	AML		
	comp=E,78μm,0.5s						
ASSB				AML	AML		
	comp=N,61μm,0.5s						
ASSB				AML	AML		
	comp=E,78μm,1.5s						
EL6	Elcito	0.26	17	P	Pg	16 41 27.5	+0.3
EL6				S	Sb	16 41 31.9	-0.6
EL6				AML	AML		
	comp=E,315μm,0.2s						
EL6				AML	AML		
	comp=N,306μm,0.5s						
EL6				AML	AML		
	comp=N,306μm,0.5s						
EL6				AML	AML		
	comp=E,314μm,0.2s						
T1245	Castelsantange	0.27	149	P	Pg	16 41 27.5	+0.2
T1245				AML	AML		
	comp=N,64μm,1.3s						
T1245				AML	AML		
	comp=E,77μm,0.2s						
FOSV	Fossato di Vic	0.27	321	P	Pg	16 41 26.0	-1.4
ATCC	AVT- Casa Cast	0.28	291	⇓P	Pg	16 41 28.0	+0.5
ATCC				AML	AML		
	comp=N,64μm,0.5s						
ATCC				AML	AML		
	comp=E,100μm,0.3s						
MMO1	Montemonaco	0.30	127	⇑P	Pg	16 41 28.1	+0.2
MMO1				S	Sg	16 41 32.9	+0.8
T1212	Cascia, Frazio	0.33	174	⇓P	Pg	16 41 28.7	+0.2
T1214	Arquata del Tr	0.36	155	⇑P	Pg	16 41 29.0	+0.1
SSFR	Montelago di S	0.39	336	⇓P	Pg	16 41 29.9	+0.4
SSFR				AML	AML		
	comp=E,119μm,0.8s						
SSFR				AML	AML		
	comp=N,100μm,0.1s						
SSFR				AML	AML		
	comp=E,119μm,1.2s						
T1241	Roccafluvione,	0.39	125	P	Pg	16 41 29.7	+0.3
OFFI	Offida	0.53	106	S	Sb	16 41 39.8	-0.3

ROM 16 16:42:12.6±0.1**, 43.°044N**±0.°004×**13.°103E**±0.°006**, h9**^{km}**, ML1.1**/4**, 1C-2D, Error ellipse: s-maj=0.6km s-min=0.3km az=51.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1220	Camerino, Fraz	0.07	351	P	Pg	16 42 14.7	+0.1
T1220				S	Sg	16 42 16.3	+0.2
T1220				AML	AML		
	comp=E,367μm,0.4s						
T1220				AML	AML		
	comp=N,426μm,0.5s						
T1220				AML	AML		
	comp=E,368μm,0.4s						
T1220				AML	AML		
	comp=E,368μm,1.6s						
T1220				AML	AML		
	comp=N,425μm,0.5s						
T1219	Muccia, Frazio	0.07	279	P	Pg	16 42 14.9	+0.2
T1219				S	Sg	16 42 16.4	+0.2
T1219				AML	AML		
	comp=E,202μm,0.2s						
T1219				AML	AML		
	comp=N,396μm,0.2s						
T1256	Bolognola (MC)	0.10	113	P	Pg	16 42 15.3	+0.2
T1256				S	Sg	16 42 17.2	+0.3
T1256				AML	AML		
	comp=E,87μm,0.4s						
T1256				AML	AML		
	comp=N,84μm,1.4s						
T1256				AML	AML		
	comp=N,85μm,1.4s						
T1256				AML	AML		
	comp=E,87μm,0.4s						
MC2	Monte Cornacci	0.15	154	⇑P	Pg	16 42 16.3	+0.5
MC2				S	Sg	16 42 19.0	+0.8
GAG1	Gagliole	0.20	352	S	Sg	16 42 19.4	+0.1
T1245	Castelsantange	0.20	162	P	Pg	16 42 17.5	+0.8
T1245				S	Sg	16 42 21.2	+1.7
T1245				AML	AML		
	comp=E,54μm,1.1s						
T1245				AML	AML		
	comp=E,54μm,1.1s						
T1245				AML	AML		
	comp=N,59μm,1.5s						
T1245				AML	AML		
	comp=N,59μm,0.5s						
T1245				AML	AML		
	comp=E,54μm,0.9s						
MMO1	Montemonaco	0.22	131	P	Pg	16 42 18.3	+1.3
SNTG	Esanatoglia	0.24	331	P	Pg	16 42 18.6	+1.1
SNTG				S	Sg	16 42 22.6	+1.8
EL6	Elcito	0.28	360	S	Sg	16 42 18.9	-3.3
T1214	Arquata del Tr	0.29	165	⇓P	Pb	16 42 19.5	-0.7
T1214				S	Sb	16 42 24.2	-0.9
T1212	Cascia, Frazio	0.30	188	⇓P	Pg	16 42 19.0	+0.6
T1212				S	Sb	16 42 24.2	-1.0
T1241	Roccafluvione,	0.30	128	P	Pg	16 42 19.2	+0.6
T1241				S	Sb	16 42 24.3	-1.0

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*IDC **16** 16:46:43.6±2.7, 37.°20N×141.°64E, h0^{km}, mb3.1/2, mbtmp3.0/3, ML2.1/1, Error ellipse: s-maj=47.4km s-min=35.3km az=48.0*

*JMA **16** 16:46:47.1±0.1, 37.°2N±0.°2×141.°2E±0.°7, h17^{km}±1^{km}, MV2.9/39, E OFF FUKUSHIMA PREF*

ISC 16 16:46:46.2±2.1**, 37.°22N**±0.°04×**141.°28E**±0.°10**, h13**^{km}±11^{km}**, n17, σ0s84**/19**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.36	295	P	Pg	16 46 53.5	+0.1
JFK				S	Sg	16 46 58.6	+0.3
ONAJ	Iwakimizuishiy	0.40	254	P	Pg	16 46 54.7	+0.5
ONAJ				*e*S	Sg	16 46 59.7	+0.1
JFFD	Fukushimafurud	0.59	258	*i* P	Pg	16 46 57.7	0.0
JFFD				S	Sb	16 47 05.9	-0.8
JMST	Minamisoumatoc	0.60	328	P	Pg	16 46 57.8	-0.1
JMST				S	Sb	16 47 06.5	-0.4
JMM	Marumori	0.76	329	P	Pb	16 47 00.7	-0.6
JMM				S	Sg	16 47 11.2	+0.4
JOTO	OTAMA OYAMA	0.83	295	*i* P	Pb	16 47 02.3	-0.2
JOTO				S	Sg	16 47 13.3	+0.2
JHO	Hitachi	0.83	224	P	Pb	16 47 02.2	-0.4
JHO				*e*S	Sb	16 47 13.2	-0.5
JSB	Shiboa	1.12	258	P	Pg	16 47 08.0	+0.3
MJAR	Matsushiro Arr	2.55	256	Pn	Pb	16 47 29.7	-2.2
	0.3nm,0.3s,baz=80,slow=27,SNR=12						
MJAR				Sn	Sb	16 48 05.1	+1.8
	0.6nm,0.3s,baz=40,slow=23,SNR=1.8						
	1.8nm,0.4s						
H11N2	WAKE ISLAND Hy	28.33	121	T	T	17 22 19.1	
	baz=314,slow=76,SNR=26						
H11N1	WAKE ISLAND Hy	28.34	121	T	T	17 22 19.8	
	baz=314,slow=76,SNR=30						
H11N3	WAKE ISLAND Hy	28.35	121	T	T	17 22 20.4	
	baz=314,slow=76,SNR=33						
H11S1	WAKE ISLAND Hy	29.05	123	T	T	17 23 10.5	
	baz=315,slow=75,SNR=9.9						
H11S3	WAKE ISLAND Hy	29.05	123	T	T	17 23 09.2	
	baz=315,slow=75,SNR=8.0						
H11S2	WAKE ISLAND Hy	29.06	123	T	T	17 23 15.0	
	baz=315,slow=75,SNR=6.5						
MKAR	Makanchi Array	43.93	302	P	P	16 54 53.3	+0.6
	0.2nm,0.8s,baz=89,slow=7.6,SNR=2.2						
	0.2nm,0.8s						
WRA	Warramunga Arr	57.23	188	P	P	16 56 33.5	+0.2
	0.3nm,0.8s,baz=26,slow=7.2,SNR=1.4						
	0.3nm,0.8s						

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*IDC **16** 16:57:41.3±3.8, 11.°26N×86.°77W, h0^{km}, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=78.3km s-min=64.9km az=169.0*

*INET **16** 16:58:06.9±0.7, 12.°52N×87.°20W, h98^{km}±5^{km}, ML3.6*

*SNET **16** 16:58:07.6±0.6, 12.°77N×87.°28W, h117^{km}±6^{km}, ML3.5*

ISC 16 16:58:05.1±1.5**, 12.°4N**±0.°1×**87.°26W**±0.°06**, h109**^{km}±10^{km}**, n27, σ0s70**/31**, mb3.3**/3**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.39	32	*e*P	Pn	16 58 21.5	+0.3
CRIN				*e*S	Sn	16 58 34.2	+0.8
CNGN	Cerro Negro	0.57	76	*e*P	Pn	16 58 22.5	+0.2
CNGN				*e*S	Sn	16 58 34.8	-0.4
COPN	Copaltepe	0.68	106	*e*P	Pn	16 58 23.8	+0.6
MOMN	Momotombo	0.71	87	*e*P	Pn	16 58 23.5	+0.1
TISN	Laguna Tiscapa	0.99	103	*e*P	Pn	16 58 26.3	+0.2
CRUN	El Crucero	1.01	112	*e*P	Pn	16 58 17.2	-9.3
HUEN		1.06	91	*e*P	Pn	16 58 27.4	+0.5
LCND	La Caada	1.12	327	*e*P	Pn	16 58 27.1	-0.3
LCND				*e*S	Sn	16 58 43.3	-1.1
LCND				IAML		16 58 47.7	
	comp=Z,757nm,0.3s						
SOMN	Somoto	1.22	31	*e*P	Pn	16 58 30.5	+1.8
MATN	Matagalpa	1.42	67	*e*P	Pn	16 58 30.6	-0.3
MATN				*e*S	Sn	16 58 49.3	-1.2
VSM	San Miguel	1.45	317	*e*P	Pn	16 58 32.4	+1.0
LCY	Lacayo	1.46	316	*e*P	Pn	16 58 31.9	+0.5
PACA	Pacayal	1.51	317	*e*P	Pn	16 58 32.4	+0.4
PACA				*e*S	Sn	16 58 52.0	-0.5
PACA	Pacayal	1.51	317	*e*P	Pn	16 58 32.7	+0.7
BOAB	BOACO BROADBAN	.56	87	*e*P	Pn	16 58 32.9	+0.4
BOAB				*e*S	Sn	16 58 53.5	+0.1
ALJI	Alcalda de J	1.59	307	*e*P	Pn	16 58 33.4	+0.4
ALJI				*e*S	Sn	16 58 53.9	-0.2
COEB	Comit de Eme	1.67	312	*e*P	Pn	16 58 34.3	+0.2
COEB				IAML		16 59 04.4	
	comp=Z,460nm,0.3s						
SCLA	Alcaldia de Sa	1.95	313	*e*P	Pn	16 58 38.0	+0.6
SCLA				*e*S	Sn	16 59 01.3	-0.8
ACON	Acoyapa	2.08	101	*e*P	Pn	16 58 39.6	+0.5
SJTE	Alcalda de S	2.10	306	*e*P	Pn	16 58 40.3	+0.9
LFRS	El Faro	2.15	306	*e*P	Pn	16 58 40.7	+0.7
LFRS				*e*S	Sn	16 59 06.6	-0.3
NUBE	Las Nubes	2.89	302	*e*P	Pn	16 58 50.3	+0.5
TXAR	Lajitas Array	22.75	320	P	P	17 02 58.0	-0.4
	comp=Z,0.2nm,0.4s,baz=155,slow=11,SNR=3.7						
	comp=Z,0.2nm,0.4s						
SCHQ	Schefferville	45.30	17	P	P	17 06 08.5	-3.4
	comp=Z,1.4nm,0.4s,baz=226,slow=9.3,SNR=9.2						
	comp=Z,1.4nm,0.4s						
YKA	Yellowknife Ar	53.74	345	P	P	17 07 12.5	-3.3
	comp=Z,0.2nm,0.5s,baz=136,slow=7.7,SNR=5.3						
	comp=Z,0.2nm,0.5s						
ASAR	Alice Springs	139.41	248	PKP	PKPdf	17 17 11.0	-9.4
	comp=Z,0.2nm,0.6s,baz=117,slow=3.4,SNR=4.1						
WRA	Warramunga Arr	139.42	254	PKP	PKPdf	17 17 11.7	-8.8
	comp=Z,0.4nm,1.0s,baz=88,slow=2.3,SNR=2.6						

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*BJI **16** 17:16:39.5±0.0, 4.°60N×127.°90E, h88^{km}, mb4.7/55, mB5.0/25, Ms4.4/3, Ms7 4.2/3*

*MAN **16** 17:16:43.9, 5.°37N×127.°76E, h59^{km}, mb5.5, ML4.5, MS4.8*

*IDC **16** 17:16:43.4±1.2, 5.°00N×127.°62E, h80^{km}±10^{km}, mb4.1/22, mbtmp4.4/25, MS3.4/17, Error ellipse: s-maj=16.8km s-min=8.8km az=63.0*

*NEIC **16** 17:16:44.4±1.5, 5.°06N±0.°05×127.°74E±0.°09, h83^{km}±8^{km}, mb4.9/64, Error ellipse: s-maj=13.1km s-min=5.0km az=68.0*

*DJA **16** 17:16:45.2±0.3, 5°N±2°×12°8E±°, h88^{km}±3^{km}, M4.6/60, mB5.2/12, mb4.7/60, MLv4.8/12, Mw(mB)4.5/12*

ISC 16 17:16:43.3±0.3**, 5.°02N**±0.°04×**127.°71E**±0.°05**, h80**^{km}**, n237, σ1s72**/261**, mb4.7**/77**, 15C-6D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	2.40	323	⇑*e*P	Pn	17 17 19.5	-1.1
MATI				*e*S	Sn	17 17 45.1	-4.0
SGSI	Sangihe	2.54	239	P	Pn	17 17 22.3	-0.2
DAV	Davao City (W)	2.94	314	P	Pn	17 17 28.3	+0.5
	262nm,0.3s,baz=214,slow=3.8,SNR=5.8						
DAV				S	Sn	17 18 01.1	-1.1
	2μm,0.7s,baz=233,slow=8.1,SNR=14						
DAV	Davao City (W)	2.94	314		Pn	17 17 28.8	+0.9
DAV				Sn	Sn	17 18 01.4	-0.8
GSPH	General Santos	2.94	291	⇑*e*P	Pn	17 17 25.4	-2.7
GSPH				*i* S	Sn	17 17 58.3	-4.1
CDOP	Cateel, Davao	3.02	335	⇑*e*P	Pn	17 17 27.2	-1.8
CDOP				*e*S	Sn	17 17 57.8	-6.5
KCP	Kidapawan	3.27	307	⇑*i*P	Pn	17 17 31.9	-0.5
KCP				*i* S	Sn	17 18 09.0	-1.3
BIPH	Bislig	3.42	337	⇓*i*P	Pn	17 17 32.1	-2.3
BIPH				*e*S	Sn	17 18 02.2	-12
SKMP	Bagumbayan, Su	3.48	296	⇑*e*P	Pn	17 17 35.1	-0.2
SKMP				*e*S	Sn	17 18 17.5	+2.1
BUKP	Musuan	3.87	317	⇓*e*P	Pn	17 17 41.1	+0.5
BUKP				*e*S	Sn	17 18 23.5	-1.5
TASP	Talacogon, Agu	3.90	331	⇑*e*P	Pn	17 17 41.7	+0.7
TASP				*e*S	Sn	17 18 24.3	-1.3
CTBH	Cotabato--PC H	4.08	303	⇑*i*P	Pn	17 17 42.8	-0.6
TNTI	Ternate	4.23	185	Pn	Pn	17 17 47.0	+1.6
TNTI	Ternate	4.23	185	P	Pn	17 17 49.9	+4.5
TNTI	Ternate	4.23	185	P	Pn	17 17 47.2	+1.8
BUTP	Butuan	4.44	332	⇑*e*P	Pn	17 17 48.6	+0.3
BUTP				*e*S	Sn	17 18 38.8	0.0
CGP	Cagayan de Oro	4.54	319	⇑*i*P	Pn	17 17 50.3	+0.6
CGP				*i* S	Sn	17 18 38.4	-2.9
GLSP	General Luna,	4.99	342	⇑*e*P	Pn	17 17 53.7	-2.1
GLSP				*e*S	Sn	17 18 44.0	-8.2
LBMI	Labuha	5.62	182	P	Pn	17 18 05.9	+1.5

	76nm,0.8s,1µm0.4nm						
GHBP	Garcia Hernand	5.68	324	⇓*e*P	Pn	17 18 05.2	-0.1
GHBP				*e*S	Sn	17 19 06.1	-3.0
MSLP	Maasin	5.81	331	⇑*e*P	Pn	17 18 04.6	-2.4
MSLP				*e*S	Sn	17 19 08.8	-3.6
ZCP	Zamboanga City	5.92	289	⇑*e*P	Pn	17 18 05.0	-3.4
ZCP				*e*S	Sn	17 19 10.1	-4.8
TABP	Talibon, Bohol	6.05	327	⇓*e*P	Pn	17 18 09.4	-0.9
TABP				*e*S	Sn	17 19 10.5	-7.7
SNPH	Sibulan	6.17	314	*e*P	Pn	17 18 13.2	+1.1
SNPH				*e*S	Sn	17 19 08.7	-13
GTOI	Gorontalo	6.40	227	P	Pn	17 18 15.2	+0.2
	130nm,0.6s,1µm0.5nm						
LLP	Lapu-Lapu	6.44	325	⇓*e*P	Pn	17 18 15.3	-0.3
LLP				*e*S	Sn	17 19 24.7	-3.0
SIJI	Sorong	6.84	149	P	Pn	17 18 20.6	-0.5
	17nm,0.3s,baz=338,slow=14,SNR=46						
SIJI				S	Sn	17 19 31.6	-6.0
	16nm,0.3s,baz=343,slow=23,SNR=4.0						
SANI	Sanana	7.22	194	P	Pn	17 18 25.2	-1.1
	28nm,0.6s,717nm0.2nm						
MRSI	Marisa	7.31	232	P	Pn	17 18 27.4	-0.1
	289nm,0.6s,3µm1.1nm						
LUWI	Luwuk	7.78	219	Pn	Pn	17 18 35.8	+1.9
LUWI	Luwuk	7.78	219	P	Pn	17 18 36.9	+3.0
	167nm,1.0s						
LUWI	Luwuk	7.78	219	P	Pn	17 18 35.8	+1.9
	170nm,0.9s,2µm0.6nm						
TOLI2	Tolitoli	7.93	241	Pn	Pn	17 18 35.0	-0.9
RCP	Roxas	8.14	323	⇓*e*P	Pn	17 18 39.7	+0.8
NLAI	Namlea	8.22	184	P	Pn	17 18 41.6	+1.6
	22nm,0.4s,5µm						
AAI	Ambon	8.66	177	P	Pn	17 18 49.6	+3.7
	28nm,0.8s						
MPSI	Mapaga	9.08	239	P	Pn	17 18 52.8	+1.2
	26nm,0.8s						
FAKI	Fak Fak	9.10	150		Pn	17 18 52.7	+0.8
FAKI	Fak Fak	9.10	150	P	Pn	17 18 53.7	+1.8
	18nm,0.5s						
RKPI	Ransiki, Papua	9.16	135	P	Pn	17 18 54.6	+1.9
	54nm,0.7s,1µm						
MYLDM	Lahad Datu	9.17	271	Pn	Pn	17 18 53.9	+1.0
SRPI	Serui, Papua	10.93	129	P	Pn	17 19 19.2	+2.3
	34nm,0.6s,1µm						
KKM	Kota Kinabalu	11.48	276	Pn	Pn	17 19 25.9	+1.4
SPSI	Sidrap Palu	11.93	222	P	Pn	17 19 30.6	0.0
	29nm,0.7s						
BKB	Balikpapan	12.47	240	Pn	Pn	17 19 37.9	+0.1
BKB	Balikpapan	12.47	240	P	Pn	17 19 38.7	+0.9
	102nm,0.9s						
KAPI	Kappang	12.74	219	P	Pn	17 19 40.8	-0.7
	4.0nm,0.5s,baz=13,slow=3.1,SNR=5.3						
KAPI				LR	LR	17 24 54.4	
	comp=Z,120nm,21.8s,baz=36,slow=39						
KAPI	Kappang	12.74	219	P	Pn	17 19 44.7	+3.2
	12nm,1.1s						
BKSI	Bulukumba	12.76	217	P	Pn	17 19 43.4	+1.6
	14nm,0.8s						
SMPI	Sarmi	13.01	122	P	Pn	17 19 47.2	+2.1
	18nm,0.6s						
BSSI	Bau Bau, Buton	13.22	213	P	Pn	17 19 49.6	+1.7
	19nm,0.5s						
GENI	Genyem	14.56	121	P	P	17 20 10.9	+1.1
	136nm,0.9s						
GENI	Genyem	14.56	121	P	P	17 20 10.4	+0.6
	136nm,1.2s,2µm						
MMRI	Maumere	14.62	202	P	P	17 20 09.4	-1.0
	19nm,0.7s						
SOEI	Soe	15.07	193	Pn	Pn	17 20 12.8	+0.7
SOEI	Soe	15.07	193	P	P	17 20 14.5	-1.0
	31nm,1.0s						
BBKI	Banjar Baru	15.37	237	P	P	17 20 16.5	-2.2
	47nm,0.8s						
SBUM	Sibu	15.66	261		P	17 20 20.5	-1.5
PLAI	Plampang	16.94	216	P	P	17 20 37.0	+0.8
	29nm,0.7s						
PLAI	Plampang	16.94	216	P	P	17 20 36.3	+0.1
	30nm,0.7s						
TWSI	Taliwang, Sumb	17.41	218	P	P	17 20 43.1	+1.7
	71nm,0.9s						
KSM	Kuching	17.72	259		Pn	17 20 45.1	+0.1
KSM	Kuching	17.72	259	P	Pn	17 20 46.2	+1.2
	110nm,0.8s						
PBKI	Pangkalan Bun	17.76	245	P	Pn	17 20 46.1	+0.6
	43nm,0.8s						
MTN	Manton Dam	18.07	169	P	P	17 20 46.6	-1.9
GUMO	Guam	18.95	62	LR	LR	17 26 47.0	
	comp=Z,98nm,21.6s,baz=208,slow=32						
JAGI	Jajag, Banyuwa	19.03	225		P	17 20 58.0	-1.1
JAGI	Jajag, Banyuwa	19.03	225	P	Pn	17 20 59.7	-1.0
	31nm,0.7s						
YULB	Yu-li	19.29	342	P	P	17 20 59.9	-2.0
TPUB	Ta-pu	19.42	340	P	P	17 21 01.1	-2.3
SSLB	Suanglung	19.77	341	P	P	17 21 05.6	-1.5
YHNB	Yeheng	20.47	343	P	P	17 21 13.3	-1.4
PWJI	Pagerwojo	20.48	231	P	P	17 21 14.6	-0.3
	11nm,0.6s						
KNRA	Kununurra	20.59	177	P	P	17 21 16.7	+0.7
KNMB	Chin-men Tao	21.31	336	P	P	17 21 24.6	+0.9
JOW	Kunigami	21.70	1	P	P	17 21 28.4	+0.6
	5.3nm,0.4s,baz=158,slow=12,SNR=8.1						
	5.3nm,0.4s						
JOW	Kunigami	21.70	1	P	P	17 21 28.2	+0.3
QIZ	Qiongzhong	22.31	310	P	P	17 21 33.7	-0.8
FITZ	Fitzroy Crossi	23.06	185	P	P	17 21 42.8	+0.6
MYKOM	Kota Tinggi	24.02	263	P	P	17 21 51.1	0.0
MYKOM				IAmb	IAmb	17 21 53.1	
	comp=Z,29nm,0.7s						
PMG	Port Moresby	24.11	126	LR	LR	17 32 29.5	
	comp=Z,92nm,18.7s,baz=338,slow=39						
PMG	Port Moresby	24.11	126	P	P	17 21 50.1	-1.7
BTDF	Bukit Timah Da	24.16	262	P	P	17 21 53.7	+1.3
	comp=Z,20nm,0.8s						
COEN	Coen	24.31	141	P	P	17 21 50.7	-3.0
CGJI	Cibinong	24.82	242	P	P	17 21 58.5	+0.1
	comp=Z,48nm,0.9s						
WB0	Warramunga Arr	25.49	165	P	P	17 22 04.0	-0.4
WB0				IAmb	IAmb	17 22 06.4	
	comp=Z,17nm,0.5s						
WRAB	Tennant Creek	25.64	165	P	P	17 22 05.6	-0.1
WRAB	Tennant Creek	25.64	165	P	P	17 22 05.9	+0.2
	comp=Z,15nm,0.9s						
WRA	Warramunga Arr	25.65	165	P	P	17 22 05.5	-0.3
	comp=Z,6.8nm,0.7s,baz=338,slow=10,SNR=74						
WRA				S	S	17 26 23.6	-4.9
	comp=Z,1.3nm,1.0s,baz=352,slow=15,SNR=3.5						
WRA				ScP	ScP	17 29 05.9	-1.4
	comp=Z,1.6nm,0.7s,baz=341,slow=3.0,SNR=12						
WRA				LR	LR	17 32 14.5	
	comp=Z,45nm,19.8s,baz=322,slow=36						
	comp=Z,6.8nm,0.7s						
WRA	Warramunga Arr	25.65	165	P	P	17 22 05.4	-0.3
WB2	Warramunga Arr	25.65	165	P	P	17 22 05.4	-0.4
WB1	Warramunga Ar.	25.66	165	P	P	17 22 06.1	+0.2
KRVT	Keravat (AS076	26.00	110	P	P	17 22 10.3	+1.3
	comp=Z,38nm,0.7s,baz=231,slow=6.5,SNR=1.8						
KRVT				LR	LR	17 31 29.4	
	comp=Z,86nm,19.7s,baz=74,slow=34						
	comp=Z,38nm,0.7s						
IPM	Ipoh	26.59	270		P	17 22 13.7	-0.8
IPM				IAmb	IAmb	17 22 14.9	
	comp=Z,24nm,0.7s						
IPM	Ipoh	26.59	270	P	P	17 22 15.2	+0.8
	comp=Z,36nm,0.9s						
KULM	Kulim	26.95	272	P	P	17 22 16.9	-0.6
MBWA	Marble Bar	27.16	196	P	P	17 22 19.4	0.0
MBWA				IAmb	IAmb	17 23 02.0	
	comp=Z,35nm,1.3s						
PSA00	Pilbara Seismi	27.52	196	P	P	17 22 22.2	-0.4
PSA00				IAmb	IAmb	17 22 35.6	
	comp=Z,27nm,1.2s						
QIS	Mount Isa	27.97	156	P	P	17 22 27.6	+0.9
	comp=Z,16nm,0.6s						
JNU	Nakatsue	28.12	6	P	P	17 22 27.1	-0.7
	comp=Z,4.9nm,0.8s,baz=291,slow=5.3,SNR=6.3						
	comp=Z,4.9nm,0.8s						
NJ2	Nanjing	28.15	344	*e*P	P	17 22 29.8	+1.8
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PSI	Prapat	28.80	267	P	P	17 22 35.1	+0.9
	comp=Z,13nm,1.2s						
RPSI	Rantau Prapat	28.81	266	P	P	17 22 33.0	-1.1
AS31	Alice Springs	29.14	168	P	P	17 22 37.5	+0.5
ASAR	Alice Springs	29.14	168	P	P	17 22 37.2	+0.2
	comp=Z,3.7nm,0.4s,baz=352,slow=7.4,SNR=273						
ASAR				PcP	PcP	17 25 42.7	-0.5
	comp=Z,0.7nm,0.8s,baz=341,slow=2.5,SNR=2.8						
ASAR				ScP	ScP	17 29 16.9	-1.0
	comp=Z,1.6nm,0.8s,baz=340,slow=2.7,SNR=9.5						
ASAR				LR	LR	17 35 13.6	
	comp=Z,71nm,18.3s,baz=246,slow=38						
	comp=Z,3.7nm,0.4s						
ASAR	Alice Springs	29.14	168	P	P	17 22 37.6	+0.6
AS01	Alice Springs	29.15	168	P	P	17 22 38.7	+1.6
	comp=Z,7.4nm,0.9s						
PBSI	Pulau Batu	29.82	261	P	P	17 22 42.8	-0.3
	comp=Z,77nm,1.2s						
PHRA	Phrae	29.99	299	P	P	17 22 44.9	+0.3
JHJ2	Mitsune	30.15	21	P	P	17 22 46.8	+0.9
JHS	Saijyo	30.25	9	P	P	17 22 47.1	+0.4
JHS				IAmb	IAmb	17 23 43.5	
	comp=Z,75nm,1.9s						
GSI	Gunungsitoli	30.30	264	P	P	17 22 45.8	-1.7
GSI				IAmb	IAmb	17 23 07.7	
	comp=Z,13nm,0.8s						
GSI	Gunungsitoli	30.30	264	P	P	17 22 46.4	-1.0
	comp=Z,24nm,0.8s						
ENH	Enshi	30.43	328	P	P	17 22 48.6	+0.1
ENH				IAmb	IAmb	17 22 51.1	
	comp=Z,10nm,0.6s						
ENH	Enshi	30.43	328	P	P	17 22 50.6	+2.2
	comp=Z,14nm,0.8s						
ENH	Enshi	30.43	328	P	P	17 22 49.5	+1.1
PATS	Pohnpei	30.50	85	P	P	17 22 47.8	-1.3
CRAI	Chiangrai	30.58	302	P	P	17 22 50.0	+0.2
CRAI				IAmb	IAmb	17 22 51.1	
	comp=Z,21nm,0.6s						
LHMI	Lhok Sumawe	30.63	272	P	P	17 22 51.8	+1.4
	comp=Z,80nm,0.7s						
CTA	Charters Tower	30.90	144	LR	LR	17 36 12.3	
	comp=Z,50nm,20.4s,baz=292,slow=38						
CTAO	Charters Tower	30.90	144	P	P	17 22 53.1	+0.5
CM31	Chiang Mai Arr	31.10	298	P	P	17 22 54.1	-0.3
CM31				IAmb	IAmb	17 22 56.0	
	comp=Z,11nm,0.7s						
CMAR	Chiang Mai Arr	31.10	298	P	P	17 22 54.8	+0.4
	comp=Z,7.8nm,0.7s,baz=105,slow=7.0,SNR=88						
CMAR				ScP	ScP	17 29 23.9	-0.4
	comp=Z,1.4nm,0.9s,baz=114,slow=1.2,SNR=11						
CMAR				LR	LR	17 36 04.0	
	comp=Z,28nm,18.5s,baz=110,slow=37						
	comp=Z,7.8nm,0.7s						
CMAR	Chiang Mai Arr	31.10	298	P	P	17 22 54.4	0.0
KMI	Kunming	31.20	312	⇑P	P	17 22 57.0	+1.5
KMI				pmax	pmax		
	comp=Z,19nm,0.5s						
MLSI	Meulaboh, Aceh	31.21	270	P	P	17 22 55.2	-0.2
	comp=Z,40nm,0.7s						
CHTO	Chiang Mai	31.23	298	P	P	17 22 55.4	-0.2
KSRS	Korea Array	32.29	0	P	P	17 23 04.2	-0.3
	comp=Z,1.1nm,0.6s,baz=178,slow=9.6,SNR=5.8						
	comp=Z,1.1nm,0.6s						
TIA	Tai'an	32.54	344	P	P	17 23 08.0	+1.2
TIA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
PZH	PanZhiHua	32.74	313	P	P	17 23 11.4	+2.6
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,110nm,5.4s						
XAN	Xi'an	33.74	331	⇑P	P	17 23 17.4	0.0
XAN				pP	pP	17 23 34.5	+0.5
XAN				pmax	pmax		
	comp=Z,27nm,0.7s						
XAN	Xi'an	33.74	331	P	P	17 23 17.3	0.0
HNS	HongShan	34.35	341	⇑P	P	17 23 22.8	+0.3
HNS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TNCH	TengChong	34.35	308	P	P	17 23 22.8	-0.2
TNCH				pP	pwP	17 23 44.0	-4.0
TNCH				sP	sP	17 23 54.8	+6.3
TNCH				S	S	17 28 44.6	-0.6
TNCH				pmax	pmax		
	comp=Z,11nm,1.3s						
TNCH				pmax	pmax		
	comp=Z,74nm,3.8s						
MND	Mandalay	34.93	302	P	P	17 23 27.9	+0.1
	comp=Z,12nm,0.9s						
HNR	Honiara	35.19	114	LR	LR	17 37 16.7	
	comp=Z,490nm,20.5s,baz=234,slow=35						
BJI	Beijing	36.39	345	P	P	17 23 44.5	+4.6
BJI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
RMQ	Roma	37.37	148	P	P	17 23 50.3	+1.8
	comp=Z,4.4nm,0.7s						
LZH	Lanzhou	37.92	328	*e*P	P	17 23 51.3	-1.9
LZH				pP	pP	17 24 13.6	+3.6
LZH				pmax	pmax		
	comp=Z,30nm,0.9s						
HHC	Hu-ho-hao-te	38.51	340	*e*P	P	17 23 59.8	+1.8
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,220nm,5.6s						
BTO	Baotou	38.84	338	*e*P	P	17 24 07.5	+6.7
BTO				pP	sP	17 24 25.8	0.0
BTO				S	S	17 30 06.9	+14
BTO				sS	sS	17 30 30.6	+8.1
BTO				SS	SS	17 32 48.5	+1.3
BTO				pmax	pmax		
	comp=Z,25nm,0.9s						
BTO				pmax	pmax		
	comp=Z,520nm,4.3s						
STKA	Stephens Creek	39.00	161	P	P	17 24 02.5	+0.4
	comp=Z,7.1nm,0.4s,baz=347,slow=7.4,SNR=38						
STKA				ScP	ScP	17 29 52.9	+0.5
	comp=Z,1.9nm,0.9s,baz=337,slow=6.4,SNR=4.2						
STKA				LR	LR	17 41 23.5	
	comp=Z,44nm,19.1s,baz=205,slow=38						
	comp=Z,7.1nm,0.4s						
STKA	Stephens Creek	39.00	161	P	P	17 24 02.3	+0.2
STKA	Stephens Creek	39.00	161	P	P	17 24 03.0	+0.9
	comp=Z,3.3nm,1.5s						
USRK	Ussuriysk Ar.	39.21	5	P	P	17 24 03.9	+0.3
	comp=Z,3.6nm,0.5s,baz=181,slow=7.9,SNR=9.8						
	comp=Z,3.6nm,0.5s						
MDJ	Mudanjiang	39.48	2	P	P	17 24 06.4	+0.5
MDJ				ScS	ScS	17 34 03.3	-2.9
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,200nm,5.9s						
MDJ				LR	LR		
	comp=Z,210nm,6.8s						
MDJ				LR	LR		
	comp=Z,220nm,5.5s						
MDJ				LR	LR		
	comp=Z,190nm,6.1s						
MDJ	Mudanjiang	39.48	2	P	P	17 24 06.5	+0.5
SHL	Shillong	39.93	305	P	P	17 24 10.3	+0.1
ASAJ	Asahikawa	41.09	16	P	P	17 24 20.4	+1.1
	comp=Z,1.6nm,0.4s,baz=236,slow=11,SNR=7.0						
	comp=Z,1.6nm,0.4s						
LSA	Lhasa	42.35	310	P	P	17 24 31.3	+1.0
LSA				pmax	pmax		
	comp=Z,13nm,1.1s						
LSA	Lhasa	42.35	310	P	P	17 24 31.4	+1.0
LSA				IAmb	IAmb	17 24 33.8	
	comp=Z,8.4nm,0.6s						
LSA	Lhasa	42.35	310	P	P	17 24 31.4	+1.0
GTA	Gaotai	42.52	328	*e*P	P	17 24 31.9	+0.7
GTA				pP	pP	17 24 49.6	+1.3
GTA				pmax	pmax		
	comp=Z,6.0nm,1.5s						
GOMU	GeErMu	43.30	320	P	P	17 24 39.8	+1.9
GOMU				pP	pwP	17 25 02.8	0.0
GOMU				sP	sP	17 25 13.5	+9.5
GOMU				PcP	PcP	17 26 27.3	+1.7
GOMU				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TAPN	Taplejung	44.07	305	*e*P	P	17 24 44.5	+0.5
	comp=Z,38nm,0.5s						
ODAN	Odare	44.14	304	*e*P	P	17 24 44.9	+0.3
RAMN	Ramite	44.83	304	*e*P	P	17 24 50.5	+0.4
	comp=Z,75nm,0.9s						
JIRN	Jiri	45.43	304	*e*P	P	17 24 55.3	+0.3
	comp=Z,53nm,0.5s						
GUN	Gumba	45.78	305	*e*P	P	17 24 58.0	+0.3
	comp=Z,77nm,0.5s						
PKI	Pulchoki	46.04	304	*e*P	P	17 24 59.5	-0.2
PKIN	Phulchoki	46.05	304	*e*P	P	17 24 59.5	-0.3
	comp=Z,17nm,0.4s						
ULN	Ulaanbaatar	46.22	341	P	P	17 25 00.8	+0.2
ULN	Ulaanbaatar	46.22	341	P	P	17 25 00.8	+0.2
KKN	Kakani	46.23	304	*e*P	P	17 25 01.0	-0.1
DMN	Daman	46.31	304	*e*P	P	17 25 01.8	+0.1
SONM	Songino Array	46.41	340	P	P	17 25 01.5	-0.6
	comp=Z,0.6nm,0.3s,baz=156,slow=9.3,SNR=7.8						
	comp=Z,0.6nm,0.3s						
SONM	Songino Array	46.41	340	P	P	17 25 01.6	-0.4
PALK	Pallekele	46.77	275	LR	LR	17 45 55.8	
	comp=Z,51nm,18.4s,baz=223,slow=38						
GKN	Gorkha	46.84	304	*e*P	P	17 25 05.6	-0.1
	comp=Z,24nm,0.5s						
KOLN	Koldanda	47.61	303	*e*P	P	17 25 12.2	+0.4
DANN	Dangsing	47.68	304	*e*P	P	17 25 12.6	+0.1
	comp=Z,128nm,0.5s						
PYUN	Piuthan	48.23	304	*e*P	P	17 25 17.1	+0.5
	comp=Z,65nm,0.5s						
WMQ	Urumqi	52.25	324	*e*P	P	17 25 48.1	+1.6
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
PETK	Petropavlovsk-	53.88	22	P	P	17 25 59.7	+1.4
	comp=Z,2.3nm,0.7s,baz=195,slow=3.4,SNR=11						
	comp=Z,2.3nm,0.7s						
YAK	Yakutsk	56.91	1	P	P	17 26 19.0	-0.8
YAK				IAmb	IAmb	17 26 21.2	
	comp=Z,9.4nm,0.7s						
YAK	Yakutsk	56.91	1	P	P	17 26 19.8	0.0
MK31	Makanchi Array	57.07	324	P	P	17 26 21.7	+0.4
MK31				IAmb	IAmb	17 26 24.0	
	comp=Z,7.6nm,0.5s						
MKAR	Makanchi Array	57.07	324	P	P	17 26 22.1	+0.8
	comp=Z,14nm,0.6s,baz=114,slow=7.4,SNR=234						
MKAR				ScP	ScP	17 31 06.9	-1.3
	comp=Z,0.3nm,0.6s,baz=114,slow=4.4,SNR=3.0						
MKAR				LR	LR	17 52 00.7	
	comp=Z,38nm,18.3s,baz=310,slow=37						
	comp=Z,14nm,0.6s						
MKAR	Makanchi Array	57.07	324	P	P	17 26 21.6	+0.2
MA2	Magadan	57.23	14	LR	LR	17 54 17.4	
	comp=Z,20nm,18.1s,baz=318,slow=39						
MAKZ	Makanchi	57.26	324	P	P	17 26 23.1	+0.4
MAKZ				IAmb	IAmb	17 26 25.4	
	comp=Z,11nm,0.6s						
MAKZ	Makanchi	57.26	324	P	P	17 26 23.4	+0.8
MAKZ				pP	pP	17 26 44.5	+3.8
KSH	Kashi	57.84	314	P	P	17 26 29.3	+2.3
KSH				pmax	pmax		
	comp=Z,9.0nm,1.2s						
NIL	Nilore	57.93	307	P	P	17 26 27.7	+0.1
NIL	Nilore	57.93	307	P	P	17 26 28.2	+0.6
NIL				sP	sP	17 26 57.6	+3.2
TKM2	Tokmak 2	59.44	318	P	P	17 26 39.2	+1.1
	SNR=7.5						
KBK	Karagaybulak	59.77	317	P	P	17 26 41.5	+1.1
	SNR=5.3						
ZAA0	Zalesovo Array	59.90	332	P	P	17 26 40.1	-0.7
ZAA0				IAmb	IAmb	17 26 43.4	
	comp=Z,5.0nm,0.5s						
ZALV	Zalesovo Beam	59.90	332	P	P	17 26 40.5	-0.3
	comp=Z,3.6nm,0.4s,baz=120,slow=6.2,SNR=19						
	comp=Z,3.6nm,0.4s						
ZALV	Zalesovo Beam	59.90	332	P	P	17 26 39.9	-0.9
UCH	Uchtor	59.90	317	P	P	17 26 43.4	+1.7
	SNR=14						
AAK	Ala-Archa	60.08	317	P	P	17 26 43.7	+1.2
	SNR=5.2						
AAK	Ala-Archa	60.08	317	LR	LR	17 55 22.6	
	comp=Z,58nm,19.0s,baz=86,slow=39						
AAK	Ala-Archa	60.08	317	P	P	17 26 43.2	+0.8
AAK				IAmb	IAmb	17 26 44.9	
	comp=Z,3.6nm,0.5s						
AAK	Ala-Archa	60.08	317	P	P	17 26 43.5	+1.0
AAK				pP	sP	17 27 04.7	-4.0
USP	Ospenovka	60.32	318	P	P	17 26 44.8	+0.8
	SNR=14						
AML	Almayashu	60.43	316	P	P	17 26 46.6	+1.5
	SNR=12						
EKS2	Erkin-Say	60.57	317	P	P	17 26 47.3	+1.5
	SNR=15						
KURK	Kurchatov	61.20	327	P	P	17 26 49.7	0.0
KURK	Kurchatov	61.20	327	P	P	17 26 50.2	+0.5
KURK				pP	sP	17 27 11.7	-4.1
KURK				sP	pwP	17 27 19.1	+1.7
KBL	Kabul	61.53	307	P	P	17 26 52.9	+0.4
KBL				IAmb	IAmb	17 26 53.8	
	comp=Z,13nm,0.8s						
GAR	Garm	61.78	312	P	P	17 26 54.4	+0.4
CHGR	Chuyangaron	62.55	311	P	P	17 26 59.4	+0.3
CHGR				IAmb	IAmb	17 27 01.8	
	comp=Z,22nm,1.1s						
AFI	Afiamalu	62.91	108	LR	LR	17 48 57.2	
	comp=Z,28nm,21.1s,baz=214,slow=31						
KK31	Karatay Array	62.97	316	P	P	17 27 02.1	+0.4
KK31				IAmb	IAmb	17 27 03.2	
	comp=Z,9.0nm,0.8s						
KKAR	Karatay Array	62.97	316	P	P	17 27 02.0	+0.2
KKAR				IAmb	IAmb	17 27 03.2	
	comp=Z,9.0nm,0.8s						
TIXI	Tiksi	66.56	0	P	P	17 27 24.2	-0.2
TIXI	Tiksi	66.56	0	P	P	17 27 24.3	-0.2
TIXI				pP	pP	17 27 45.9	+3.2
BVAR	Borovoye Array	66.79	326	LR	LR	18 01 04.0	
	comp=Z,38nm,18.1s,baz=323,slow=40						
BRVK	Borovoye	66.86	326	P	P	17 27 27.1	+0.4
BRVK				IAmb	IAmb	17 27 28.0	
	comp=Z,21nm,1.3s						
BRVK	Borovoye	66.86	326	P	P	17 27 27.2	+0.4
BRVK				pP	pP	17 27 48.9	+3.7
NRIK	Noril'sk	69.42	346	P	P	17 27 42.4	-0.1
	comp=Z,1.6nm,0.5s,baz=138,slow=7.0,SNR=6.4						
	comp=Z,1.6nm,0.5s						
NRIK	Noril'sk	69.42	346	P	P	17 27 41.1	-1.4
GEYT	Alibeck	70.86	308	P	P	17 27 53.4	+1.4
	comp=Z,5.5nm,0.6s,baz=133,slow=6.3,SNR=15						
	comp=Z,5.5nm,0.6s						
GYA0B	ALIBECK ARRAY	70.86	308	P	P	17 27 53.1	+1.1
GYA0B				IAmb	IAmb	17 27 54.2	
	comp=Z,7.3nm,0.7s						
ABKAR	Akbulak array	71.78	320	P	P	17 27 57.3	0.0
ABKAR				IAmb	IAmb	17 28 00.3	
	comp=Z,7.1nm,0.7s						
AKTO	Aktyubinsk	73.27	321	LR	LR	18 02 34.0	
	comp=Z,26nm,19.4s,baz=69,slow=38						
ARU	Arti	74.38	327	P	P	17 28 11.9	-0.5
RAYN	Ar Rayn	80.88	293	P	P	17 28 49.7	+0.3
RAYN				IAmb	IAmb	17 28 51.5	
	comp=Z,7.1nm,0.7s						
KBZ	Khabaz	82.81	313	P	P	17 28 58.9	-0.1
	comp=Z,1.5nm,0.9s,baz=213,slow=4.2,SNR=2.3						
	comp=Z,1.5nm,0.9s						
WRH	Wood River Hil	83.00	26	P	P	17 28 59.8	+0.3
WRH				IAmb	IAmb	17 29 00.1	
	comp=Z,28nm,1.9s						
H24K	Noodor Dome	83.16	24	P	P	17 29 01.0	+0.5
H24K				IAmb	IAmb	17 29 12.3	
	comp=Z,17nm,1.6s						
SCM	Sheep Creek Mo	83.23	28	P	P	17 29 00.1	-0.8
ILAR	Eielson Array	83.53	25	P	P	17 29 02.1	-0.2
	comp=Z,0.4nm,0.5s,baz=256,slow=5.6,SNR=8.5						
	comp=Z,0.4nm,0.5s						
KLU	Klutina	83.89	29	P	P	17 29 05.1	+0.8
RIDG	Independent Ri	84.40	27	P	P	17 29 07.2	+0.4
BMAR	Burnt Mountain	84.52	23		P	17 29 09.6	+2.2
GLB	Gilahina Butte	84.90	29	P	P	17 29 10.6	+1.2
GLB				IAmb	IAmb	17 31 38.1	
	comp=Z,35nm,1.6s						
VRDI	Verde Repeater	85.08	29	P	P	17 29 11.0	+0.5
L27K	Beaver Creek,	85.78	27	P	P	17 29 14.4	+0.7
L27K				IAmb	IAmb	17 31 14.8	
	comp=Z,26nm,1.9s						
BARN	Barnard Glacie	85.96	29	P	P	17 29 14.4	-0.4
CTGM	Chitina Glacie	86.12	29	P	P	17 29 14.9	-0.7
ARCES	ARCESS Array B	89.58	340	P	P	17 29 30.8	-1.0
	comp=Z,4.5nm,1.0s,baz=80,slow=5.4,SNR=7.2						
	comp=Z,4.5nm,1.0s						
BRTR	Keskin Array B	89.95	310	P	P	17 29 32.9	-1.5
	comp=Z,0.7nm,0.8s,baz=119,slow=4.6,SNR=5.4						
	comp=Z,0.7nm,0.8s						
FINES	FINESS Array B	91.16	332	P	P	17 29 37.8	-1.5
	comp=Z,1.3nm,0.7s,baz=72,slow=6.2,SNR=5.3						
	comp=Z,1.3nm,0.7s						
AKASG	Malin Array Be	91.51	321	P	P	17 29 39.6	-1.4
	comp=Z,0.4nm,0.4s,baz=54,slow=4.4,SNR=8.2						
	comp=Z,0.4nm,0.4s						
TORD	Torodi Ar. Bea	123.43	289	PKP	PKiKP	17 35 32.5	-0.2
	comp=Z,0.4nm,0.6s,baz=72,slow=1.5,SNR=2.7						

UCR 16 17:26:57.9±1.6, 9°.57N×84°.86W, h17^{km}±8^{km}, MW3.6, 6C-7D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JACO	JACO, Garabito	0.21	65	⇑eP	Pg	17 27 02.6	-0.4
JACO				eS	Sg	17 27 06.4	0.0
LAFE	Finca La Fe, P	0.24	347	⇓eP	Pg	17 27 03.5	+0.1
LAFE				eS	Sb	17 27 08.0	+0.1
ARZA	Esparza	0.46	24	eP	Pg	17 27 07.2	+0.1
NYURE	Nandayure	0.58	317	eP	Pg	17 27 09.0	-0.4
POPE	POPE, Guanacas	0.63	321	⇓eP	Pg	17 27 09.7	-0.8
INDI	Punta indio, G	0.70	295	eP	Pb	17 27 11.4	-0.3
JUNT	Juntas	0.71	352	eP	Pb	17 27 10.6	-1.3
JTS	Las Juntas de	0.72	352	⇓eP	Pb	17 27 10.6	-1.4
NARJA	Naranjal	0.79	300	eP	Pg	17 27 13.4	+0.1
ABE2	San Pablo	0.80	80	eP	Pb	17 27 13.1	-0.5
DUNO	Dulce Nombre,	0.81	309	eP	Pb	17 27 12.8	-0.7
NICO	Nicoya	0.81	314	eP	Pb	17 27 12.9	-0.6
SOCE	Pocosol	0.84	16	⇓eP	Pb	17 27 12.9	-1.1
CPMI	Catarata Coope	0.85	33	eP	Pb	17 27 13.0	-1.3
LCR2	La Lucha 2	0.85	78	eP	Pb	17 27 12.8	-1.6
CRPO	Crater poas	0.88	45	eP	Pb	17 27 13.4	-1.5
VPTE	Poasito	0.88	47	eP	Pb	17 27 13.7	-1.2
POA5	Crater Von Fra	0.88	44	eP	Pb	17 27 13.4	-1.5
JUD3	Juan Diaz 3	0.90	311	eP	Pb	17 27 14.5	-0.5
SGBR	La Fortuna	0.91	6	eP	Pb	17 27 14.2	-1.0
SGBR				eS	Sb	17 27 26.9	0.0
FORC	Fortuna	0.91	12	⇑eP	Pb	17 27 14.3	-0.9
FORC				eS	Sn	17 27 28.4	-0.3
VACR	Volcan Arenal	0.91	11	eP	Pb	17 27 14.2	-1.2
CEDE	Laguna Cedeo	0.92	9	eP	Pb	17 27 14.7	-0.8
TABAC	Tabacon	0.93	5	⇓iP	Pb	17 27 14.8	-0.8
TABAC				eS	Sn	17 27 31.4	+2.2
OCM	Ochomogo	0.94	70	eP	Pb	17 27 14.2	-1.6
SAJU	San Juanillo,	0.98	300	eP	Pb	17 27 16.2	-0.2
ORTG	Ortega, Santa	0.99	323	eP	Pb	17 27 15.6	-1.0
RIMA	Rio Macho	1.00	79	eP	Pb	17 27 15.1	-1.7
COTE	Lago Cote	1.00	357	⇑iP	Pb	17 27 15.9	-0.9
COTE				eS	Sb	17 27 28.8	-0.9
ACAL	Aguas Claras	1.07	350	⇓iP	Pb	17 27 16.9	-1.2
ACAL				eS	Sg	17 27 33.0	+0.2
CDM	Cerro de Muert	1.08	91	eP	Pb	17 27 17.5	-0.9
HATIL	Hatillo	1.10	311	eP	Pb	17 27 17.7	-0.9
CUI	Cuipilapa	1.12	344	⇑eP	Pn	17 27 17.7	-1.2
CUI				eS	Sg	17 27 34.3	-0.1
MOTZ	Rio Naranjo	1.13	349	⇑eP	Pn	17 27 18.1	-0.9
MOTZ				eS	Sg	17 27 34.9	+0.4
COLC	Colonia	1.14	343	eP	Pn	17 27 18.0	-1.2
GUAB	Guayabo de Bag	1.19	342	eP	Pn	17 27 18.7	-1.1
GUAB				eS	Sg	17 27 36.2	-0.2
COVE	Coope Vega, Sa	1.23	21	eP	Pn	17 27 19.0	-1.3
CLARA	Aguas Claras	1.25	345	eP	Pn	17 27 19.8	-0.8
CLARA				eS	Sg	17 27 38.0	-0.3
VMAR	Armenia, Volca	1.26	348	eP	Pn	17 27 19.9	-0.9
VMAR				⇑eP	Pb	17 27 20.1	-1.2
VMAR				eS	Sg	17 27 38.3	-0.5
GP77	Hacienda Santa	1.27	339	eP	Pn	17 27 20.1	-0.8
GP77				eS	Sg	17 27 39.0	-0.2
GPS2	Hotel Rincn d	1.27	337	eP	Pn	17 27 20.0	-1.0
GP14	Hacienda Santa	1.27	338	eP	Pn	17 27 20.2	-0.8
GPS1	Guardaparques	1.29	338	eP	Pn	17 27 20.1	-1.2
VRLE	La Escondida,	1.31	337	⇓eP	Pn	17 27 20.5	-1.0
VORI	VORI	1.33	339	eP	Pn	17 27 21.0	-0.9
BUEV	Buena Vista	1.33	336	eP	Pn	17 27 21.0	-0.9
HZTE	Horizontes, Gu	1.35	327	eP	Pn	17 27 21.6	-0.4
GB1A	Borinquen Arri	1.35	337	eP	Pn	17 27 21.2	-0.9
RVLA	Villa Bonita	1.36	67	eP	Pn	17 27 22.1	0.0
LCOCO	El Coco	1.38	68	eP	Pb	17 27 22.8	-0.4
SRBA	San Rafael, Bu	1.51	103	eP	Pn	17 27 23.5	-0.8
TRT1	Tortuguero	1.53	48	eP	Pn	17 27 23.9	-0.5
EDP2	Potrero Grande	1.75	108	eP	Pg	17 27 31.9	+0.4

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*IDC **16** 17:28:13.2±1.4, 0°.20S×123°.01E, h0^{km}, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=170.9km s-min=24.2km az=65.0*

*DJA **16** 17:28:23.0±0.2, 0°S±3°×12°3E±°, h46^{km}±14^{km}, M4.0/12, mb4.1/6, mB4.8/3, MLv3.9/12, Mw(mB)4.0/3*

ISC 16 17:28:22.9±0.9, **0°.25S**±0°.06×**123°.05E**±0°.08, **h100**^{km}, **n14**, σ**2^{s}21**/17, **mb3.3**/4, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	Luwuk	0.83	200	P	Pn	17 28 39.0	-2.6
LUWI				S	Sn	17 28 52.4	-3.2
GTOI	Gorontalo	0.88	357	P	Pn	17 28 41.2	-0.9
GTOI				S	Sn	17 28 55.3	-1.2
MRSI	Marisa	1.33	303	P	Pn	17 28 44.6	-2.5
MRSI				S	Sn	17 29 01.3	-4.0
MPSI	Mapaga	3.21	281	P	Pn	17 29 12.1	+0.7
SANI	Sanana	3.44	121	P	Pn	17 29 11.9	-2.6
SPSI	Sidrap Palu	4.93	222	P	Pn	17 29 35.0	+0.2
NLAI	Namlea	5.02	126	P	Pn	17 29 35.5	-0.4
BKSI	Bulukumba	5.82	210	P	Pn	17 29 47.3	+0.5
	6.7nm,0.9s,0.0nm						
AAI	Ambon	6.17	124	P	Pn	17 29 51.0	-0.5
	31nm,0.6s,763nm0.2nm						
FAKI	Fak Fak	9.57	106	P	Pn	17 30 35.9	-1.9
WRA	Warramunga Arr	22.48	151	P	P	17 33 13.8	-0.3
	0.3nm,0.8s,baz=327,slow=11,SNR=2.4						
	0.3nm,0.8s						
ASAR	Alice Springs	25.55	156	P	P	17 33 45.4	+2.8
	0.2nm,0.6s,baz=337,slow=9.3,SNR=1.6						
	0.2nm,0.6s						
SONM	Songino Array	50.04	345	P	P	17 37 09.3	+1.8
	0.9nm,0.7s,baz=170,slow=8.7,SNR=4.2						
	0.9nm,0.7s						
MKAR	Makanchi Array	58.85	328	P	P	17 38 13.1	+1.9
	0.3nm,0.4s,baz=127,slow=8.4,SNR=1.8						
	0.3nm,0.4s						

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*MAN **16** 17:28:34.6, 13°.92N×120°.58E, h186^{km}, mb5.2, ML4.2, MS4.4*

*NEIC **16** 17:28:35.7±1.5, 13°.93N±0°.07×120°.8E±0°.1, h204^{km}±7^{km}, mb4.4/68, Error ellipse: s-maj=15.0km s-min=10.5km az=75.0*

*DJA **16** 17:28:36.2±0.5, 14°N±4°×12°1E±°, h206^{km}±4^{km}, M4.5/49, mB5.2/10, mb4.4/49, Mw(mB)4.6/10*

*IDC **16** 17:28:40.6±2.0, 13°.82N×120°.71E, h260^{km}±19^{km}, mb3.6/21, mbtmp4.2/23, Error ellipse: s-maj=19.4km s-min=7.4km az=66.0*

ISC 16 17:28:34.5±0.5, **13°.91N**±0°.03×**120°.67E**±0°.04, **h194**^{km}±4^{km}, **n188**, σ**1^{s}46**/212, **mb4.3**/65, **18C-8D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	Tagaytay City	0.32	53	⇓eP	Pn	17 29 01.9	+1.5
TGY				i S	Sn	17 29 14.9	-5.6
LUBP	Lubang	0.45	247	⇑eP	Pn	17 29 00.4	-0.3
LUBP				eS	Sn	17 29 18.3	-2.6
QVP	Quezon City--P	0.78	24	⇑eP	Pn	17 29 03.0	+0.8
LQP	Lukban	0.86	76	⇑iP	Pn	17 29 03.8	+0.8
LQP				i S	Sn	17 29 19.6	-5.3
BOAC	Boac	1.22	111	⇑eP	Pn	17 29 06.0	+0.7
BOAC				eS	Sn	17 29 30.2	+1.1
PCPH	Palayan	1.69	14	⇑eP	Pn	17 29 09.8	+0.3
PCPH				eS	Sn	17 29 36.1	-0.7
GQP	Guinayangan	1.72	90	⇓eP	Pn	17 29 04.1	-5.6
GQP				eS	Sn	17 29 38.3	+1.2
BUSP	Coron	1.95	194	⇑eP	Pn	17 29 12.4	+0.3
BUSP				eS	Sn	17 29 41.2	-0.1
JCNP	Jose Panganiba	2.00	79	⇑eP	Pn	17 29 13.4	+0.9
JCNP				eS	Sn	17 29 43.3	+1.2
BALP	Baler	2.02	26	⇑eP	Pn	17 29 13.6	+0.8
BALP				eS	Sn	17 29 43.3	+0.6
OTRP	Odiongan	2.02	139	⇑eP	Pn	17 29 13.0	+0.2
OTRP				eS	Sn	17 29 41.8	-0.8
SMPP	San Manuel, Pa	2.23	0	⇑eP	Pn	17 29 15.4	+0.4
SMPP				eS	Sn	17 29 45.0	-1.8
IBAJ	Ibajay, Aklan	2.54	145	⇓iP	Pn	17 29 19.4	+0.9
RCP	Roxas	3.09	139	⇓iP	Pn	17 29 26.4	+1.5
SAMP	Sagada Mountai	3.16	4	⇑eP	Pn	17 29 25.9	+0.1
SAMP				eS	Sn	17 30 05.5	-0.5
CAUP	Cauayan	3.22	20	⇑eP	Pn	17 29 27.7	+1.4
CAUP				eS	Sn	17 30 25.4	+18
MMPH	Masbate	3.26	118	⇑eP	Pn	17 29 27.5	+0.6
PALP	Palanan	3.56	28	⇑eP	Pn	17 29 31.9	+1.3
PALP				eS	Sn	17 30 17.0	+2.3
ABRA	Dolores	3.72	1	⇑eP	Pn	17 29 32.1	-0.4
ABRA				eS	Sn	17 30 18.9	+0.7
CVP	Callao Caves	3.93	16	⇑iP	Pn	17 29 36.0	+0.8
PPR	Puerto Princes	4.53	205	⇓iP	Pn	17 29 44.6	+1.9
LLP	Lapu-Lapu	4.81	138	⇓eP	Pn	17 29 47.2	+0.9
LLP				eS	Sn	17 30 49.7	+6.8
SNPH	Sibulan	5.19	151	eP	Pn	17 29 53.0	+1.7
MSLP	Maasin	5.55	132	⇓eP	Pn	17 29 56.9	+0.9
SCPH	Surigao	6.25	130	eP	Pn	17 30 07.0	+2.1
CGP	Cagayan de Oro	6.70	144	⇓eP	Pn	17 30 12.4	+1.5
CTBH	Cotabato--PC H	7.52	152	⇑iP	Pn	17 30 23.0	+1.5
TWG	Pinlang	8.87	2	Pn	Pn	17 30 38.7	-0.4
MYLDM	Lahad Datu	8.93	194	Pn	Pn	17 30 42.7	+2.7
KKM	Kota Kinabalu	8.96	210	Pn	Pn	17 30 41.7	+1.2
TPUB	Ta-pu	9.34	360		Pn	17 30 45.8	+0.5
YULB	Yu-li	9.45	3	Pn	Pn	17 30 45.0	-1.7
SSLB	Suanglung	9.83	2	Pn	Pn	17 30 52.3	+0.7
NACB	Ninganchiao	10.25	5	Pn	Pn	17 30 57.0	0.0
HKPS	Hong Kong Po S	10.38	324	Pn	Pn	17 30 60.0	+1.2
YHNB	Yeheng	10.73	3	Pn	Pn	17 31 02.7	-0.6
GTOI	Gorontalo	13.39	170	P	Pn	17 31 35.9	-1.2
	16nm,1.1s						
MRSI	Marisa	13.40	175	P	P	17 31 39.2	-0.9
	35nm,0.8s,429nm						
MPSI	Mapaga	13.51	183	P	P	17 31 40.5	-0.8
	23nm,0.9s						
SBUM	Sibu	14.12	217		P	17 31 49.9	+1.8
TNTI	Ternate	14.64	153	Pn	Pn	17 31 51.6	-1.0
TNTI	Ternate	14.64	153	P	Pn	17 31 52.3	-0.3
	22nm,0.8s						
JOW	Kunigami	14.69	28	P	P	17 31 53.9	-0.4
	20nm,1.0s,baz=218,slow=13,SNR=4.8						
JOW	Kunigami	14.69	28		Pn	17 31 53.5	+0.3
LUWI	Luwuk	15.00	172	P	P	17 31 59.2	+1.4
	60nm,1.0s,2µm						
LBMI	Labuha	15.96	154	P	P	17 32 08.5	+0.1
	35nm,1.0s						
KSM	Kuching	16.05	221	P	Pn	17 32 11.3	+1.4
KSM				IAmb	IAmb	17 32 15.0	
	comp=Z,15nm,1.1s						
SANI	Sanana	16.71	161	P	P	17 32 14.8	-1.9
	comp=Z,40nm,0.8s						
WHN	Wuhan	17.55	342	P	Pn	17 32 30.6	+3.1
SPSI	Sidrap Palu	17.78	183	P	Pn	17 32 30.7	+0.4
	comp=Z,14nm,0.8s						
SIJI	Sorong	18.05	144	P	P	17 32 32.4	+1.0
	comp=Z,17nm,0.6s,baz=335,slow=11,SNR=19						
NLAI	Namlea	18.19	159	P	Pn	17 32 34.6	-0.6
	comp=Z,20nm,0.7s						
BBKI	Banjar Baru	18.20	199	P	Pn	17 32 34.8	-0.5
	comp=Z,58nm,0.7s,comp=Z,3µm						
KAPI	Kappang	18.82	183	P	P	17 32 40.7	+1.0
	comp=Z,11nm,0.7s,baz=356,slow=9.4,SNR=8.2						
KAPI	Kappang	18.82	183	P	Pn	17 32 41.3	-1.3
KAPI				IAmb	IAmb	17 32 42.2	
	comp=Z,17nm,1.1s						
AAI	Ambon	19.01	156	P	P	17 32 43.0	+1.2
	comp=Z,30nm,0.9s						
BKSI	Bulukumba	19.11	182	P	P	17 32 42.5	-0.4
	comp=Z,17nm,0.8s						
ENH	Enshi	19.28	329	P	P	17 32 45.6	+1.0
ENH				IAmb	IAmb	17 32 55.6	
	comp=Z,8.8nm,1.0s						
BSSI	Bau Bau, Buton	19.92	181	P	P	17 32 51.9	+0.3
	comp=Z,24nm,1.0s						
PHRA	Phrae	20.15	286	P	P	17 32 55.8	+1.8
FAKI	Fak Fak	20.28	145	P	P	17 32 55.4	-0.1
FAKI				IAmb	IAmb	17 33 04.9	
	comp=Z,14nm,0.9s						
RKPI	Ransiki, Papua	20.34	138	P	P	17 32 57.4	+1.3
	comp=Z,38nm,0.8s						
CRAI	Chiangrai	20.39	291	P	P	17 32 58.7	+2.1
MYKOM	Kota Tinggi	20.53	236	P	P	17 32 58.6	+0.4
MYKOM				IAmb	IAmb	17 33 01.5	
	comp=Z,17nm,0.9s						
TPRI	Tanjung Pinang	20.54	232	P	P	17 32 59.0	+0.8
SRIT	Nakonsritamara	21.32	258	P	P	17 33 07.2	+0.7
CMAR	Chiang Mai Arr	21.35	285	P	P	17 33 08.5	+1.8
	comp=Z,12nm,0.8s,baz=96,slow=7.9,SNR=84						
	comp=Z,12nm,0.8s						
CMAR	Chiang Mai Arr	21.35	285	P	P	17 33 07.9	+1.2
CM31	Chiang Mai Arr	21.35	285	P	P	17 33 08.6	+1.9
CHTO	Chiang Mai	21.41	286	P	P	17 33 08.3	+1.0
DSRI	Dabo	21.41	229	P	P	17 33 08.1	+0.7
	comp=Z,33nm,0.9s,comp=Z,2µm						
KULM	Kulim	21.50	248	P	P	17 33 08.8	+0.5
KULM				IAmb	IAmb	17 33 11.0	
	comp=Z,21nm,1.4s						
PPBI	Pangkal Pinang	21.51	223	P	P	17 33 09.1	+0.7
IPM	Ipoh	21.52	246	P	P	17 33 08.2	-0.3
IPM				IAmb	IAmb	17 33 10.0	
	comp=Z,20nm,1.2s						
PZH	PanZhiHua	21.70	308	P	P	17 33 11.6	+1.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
LYN	LuoYang	21.85	342	⇑P	P	17 33 12.8	+1.1
LYN				pmax	pmax		
	comp=Z,14nm,0.8s						
MMRI	Maumere	22.45	176	P	P	17 33 19.4	+1.9
	comp=Z,21nm,0.6s						
PLAI	Plampang	22.77	187	P	P	17 33 20.9	+0.5
	comp=Z,22nm,0.8s						
TWSI	Taliwang, Sumb	22.81	190	P	P	17 33 21.8	+1.0
	comp=Z,12nm,0.5s						
TWSI				pP	pP	17 33 57.1	+1.4
	comp=Z,12nm,0.5s						
IGBI	Denpasar	23.24	194	P	P	17 33 25.9	+1.3
	comp=Z,35nm,0.9s						
TNCH	TengChong	23.60	301	P	P	17 33 29.1	+1.0
TNCH				S	S	17 37 25.3	-2.9
TNCH				SS	SnSn	17 38 30.6	-0.4
TNCH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TNCH				pmax	pmax		
	comp=Z,110nm,6.1s						
TNCH				LR	LR		
	comp=N,170nm,5.4s						
TNCH				LR	LR		
	comp=E,280nm,5.0s						
TNCH				LR	LR		
	comp=Z,91nm,5.7s						
BKNI	Bangkinang	23.66	237	P	P	17 33 30.3	+1.8
	comp=Z,102nm,0.5s,comp=Z,2µm						
SOEI	Soe	23.78	171	P	P	17 33 29.0	-0.7
SDSI	Sungai Dareh	24.10	234	P	P	17 33 33.3	+0.7
	comp=Z,11nm,0.9s						
SDSI				pP	pP	17 34 09.9	+0.7
	comp=Z,11nm,0.9s						
KPJI	Karang Pucung	24.11	210	P	P	17 33 35.4	+2.8
	comp=Z,24nm,0.8s						
RPSI	Rantau Prapat	24.20	245	P	P	17 33 33.8	+0.3
KSAR	Wonju Array Be	24.30	14	P	P	17 33 33.0	-1.2
KSRS	Korea Array	24.32	14	P	P	17 33 36.0	+1.7
	comp=Z,2.7nm,0.8s,baz=195,slow=10,SNR=7.7						
	comp=Z,2.7nm,0.8s						
KS19	Wonju Array Si	24.36	14	P	P	17 33 35.3	+0.7
KS19				IAmb	IAmb	17 33 40.4	
	comp=Z,12nm,0.9s						
PDSI	Padang	24.86	235	P	P	17 33 40.9	+1.5
	comp=Z,24nm,0.8s						
MASI	Maura Aman, Be	24.92	229	P	P	17 33 41.8	+1.8
	comp=Z,31nm,1.3s						
LWLI	Liwa	25.01	222	P	P	17 33 42.2	+1.3
	comp=Z,40nm,0.9s						
GSI	Gunungsitoli	26.05	243	P	P	17 33 49.2	-1.0
GSI	Gunungsitoli	26.05	243	P	P	17 33 49.7	-0.5
	comp=Z,36nm,0.9s,comp=Z,2µm						
LZH	Lanzhou	26.75	329	eP	P	17 33 57.4	+1.0
LZH				pP	pP	17 34 36.1	+0.7
LZH				sP	PP	17 35 00.0	-0.9
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
HHC	Hu-ho-hao-te	28.00	345	eP	P	17 34 09.3	+2.0
HHC				pmax	pmax		
	comp=Z,22nm,0.8s						
HHC				pmax	pmax		
	comp=Z,94nm,7.0s						
MTN	Manton Dam	28.53	158	P	P	17 34 11.7	-0.5
SHL	Shillong	29.41	298	P	P	17 34 20.2	+0.1
KNRA	Kununurra	30.46	164	P	P	17 34 28.6	-0.6
GTA	Gaotai	31.35	328	eP	P	17 34 38.6	+1.6
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
LSA	Lhasa	31.47	305	P	P	17 34 39.5	+0.9
LSA				IAmb	IAmb	17 34 41.8	
	comp=Z,4.9nm,0.6s						
FITZ	Fitzroy Crossi	32.18	171	P	P	17 34 43.0	-1.2
TAPN	Taplejung	33.50	299	eP	P	17 34 56.8	+0.7
ODAN	Odare	33.64	298	eP	P	17 34 58.0	+0.8
	comp=Z,38nm,0.7s						
RAMN	Ramite	34.34	298	eP	P	17 35 04.2	+0.9
MBWA	Marble Bar	34.86	182	P	P	17 35 06.5	-0.9
JIRN	Jiri	34.89	299	eP	P	17 35 09.0	+0.9
PMG	Port Moresby	35.03	130	P	P	17 35 07.6	-1.4
GUN	Gumba	35.22	299	ePg	P	17 35 11.7	+0.8
PSA00	Pilbara Seismi	35.27	181	P	P	17 35 08.9	-2.0
PSA00				IAmb	IAmb	17 35 40.3	
	comp=Z,10nm,1.4s						
PSA00	Pilbara Seismi	35.27	181	P	P	17 35 09.9	-0.9
PSA00				IAmb	IAmb	17 35 10.3	
	comp=Z,36nm,1.3s						
PKI	Pulchoki	35.53	298	eP	P	17 35 13.7	+0.2
	comp=Z,10nm,0.4s						
COEN	Coen	35.54	140	P	P	17 35 12.0	-1.3
COEN				IAmb	IAmb	17 35 24.0	
	comp=Z,20nm,1.4s						
PKIN	Phulchoki	35.54	298	eP	P	17 35 13.8	+0.2
	comp=Z,13nm,0.5s						
DMN	Daman	35.80	298	eP	P	17 35 16.1	+0.4
	comp=Z,9.4nm,0.4s						
SONM	Songino Array	35.85	344	P	P	17 35 16.2	+0.5
	comp=Z,0.4nm,0.5s,baz=168,slow=10,SNR=5.4						
	comp=Z,0.4nm,0.5s						
SONM	Songino Array	35.85	344	P	P	17 35 15.8	+0.1
WB0	Warramunga Arr	36.09	158	P	P	17 35 16.5	-1.3
WB0				IAmb	IAmb	17 35 19.8	
	comp=Z,5.7nm,1.0s						
WRAB	Tennant Creek	36.22	158	P	P	17 35 17.7	-1.3
WRAB				IAmb	IAmb	17 35 18.9	
	comp=Z,8.8nm,1.3s						
WRA	Warramunga Arr	36.23	158	P	P	17 35 17.9	-1.2
	comp=Z,1.4nm,0.3s,baz=330,slow=10.0,SNR=82						
WRA				S	S	17 40 37.0	-8.0
	comp=Z,1.6nm,1.0s,baz=333,slow=15,SNR=6.1						
	comp=Z,1.4nm,0.3s						
WRA	Warramunga Arr	36.23	158	P	P	17 35 17.4	-1.6
WB2	Warramunga Arr	36.23	158	P	P	17 35 17.5	-1.6
WB2				IAmb	IAmb	17 35 21.2	
	comp=Z,4.8nm,0.7s						
GKN	Gorkha	36.30	299	eP	P	17 35 20.1	+0.2
DANN	Dangsing	37.14	299	eP	P	17 35 27.3	+0.2
	comp=Z,16nm,0.6s						
PYUN	Piuthan	37.74	298	eP	P	17 35 32.5	+0.5
	comp=Z,26nm,0.8s						
AS31	Alice Springs	39.52	161	P	P	17 35 46.0	-0.6
AS31				IAmb	IAmb	17 35 46.7	
	comp=Z,3.6nm,0.4s						
ASAR	Alice Springs	39.52	161	P	P	17 35 46.0	-0.6
	comp=Z,4.7nm,0.4s,baz=335,slow=7.6,SNR=302						
ASAR				PcP	PcP	17 37 49.4	-0.9
	comp=Z,1.1nm,0.8s,baz=351,slow=4.1,SNR=5.5						
ASAR				S	S	17 41 30.3	-4.2
	comp=Z,1.1nm,0.8s,baz=350,slow=21,SNR=7.8						
	comp=Z,4.7nm,0.4s						
ASAR	Alice Springs	39.52	161	P	P	17 35 45.5	-1.2
WMQ	Urumqi	41.02	323	eP	P	17 36 01.3	+2.5
CTAO	Charters Tower	42.13	143	P	P	17 36 08.9	+0.9
FORT	Forrest	44.99	171	P	P	17 36 29.5	-1.1
MK31	Makanchi Array	45.85	324	P	P	17 36 38.2	+0.9
MKAR	Makanchi Array	45.85	324	P	P	17 36 38.2	+1.0
	comp=Z,2.2nm,0.6s,baz=126,slow=9.0,SNR=28						
MKAR				PcP	PcP	17 38 10.8	-0.4
	comp=Z,0.8nm,0.6s,baz=120,slow=3.5,SNR=5.4						
	comp=Z,2.2nm,0.6s						
MKAR	Makanchi Array	45.85	324	P	P	17 36 37.8	+0.5
MAKZ	Makanchi	46.04	323	P	P	17 36 39.5	+0.8
NWAO	Narrogin (SRO)	46.69	184	P	P	17 36 43.6	-0.2
NIL	Nilore	47.17	303	P	P	17 36 47.8	0.0
NIL				IAmb	IAmb	17 36 49.0	
	comp=Z,9.9nm,0.7s						
BBOO	Buckleboo	48.73	163	P	P	17 36 58.5	-1.1
BBOO				IAmb	IAmb	17 37 30.8	
	comp=Z,38nm,1.5s						
ZAA0	Zalesovo Array	48.86	333	P	P	17 37 00.6	+0.3
ZALV	Zalesovo Beam	48.86	333	P	P	17 37 00.4	+0.1
	comp=Z,1.9nm,0.4s,baz=117,slow=6.5,SNR=10						
ZALV				PcP	PcP	17 38 20.5	-1.2
	comp=Z,0.4nm,0.4s,baz=93,slow=2.9,SNR=1.8						
	comp=Z,1.9nm,0.4s						
ZALV	Zalesovo Beam	48.86	333	P	P	17 37 00.2	-0.1
AAK	Ala-Archa	48.90	315	P	P	17 37 01.9	+0.9
STKA	Stephens Creek	49.75	157	P	P	17 37 06.5	-0.8
	comp=Z,2.0nm,0.7s,baz=315,slow=6.3,SNR=4.9						
	comp=Z,2.0nm,0.7s						
STKA	Stephens Creek	49.75	157	P	P	17 37 06.9	-0.4
KURK	Kurchatov	50.00	326	P	P	17 37 09.5	+0.5
KURK				IAmb	IAmb	17 37 10.7	
	comp=Z,14nm,0.7s						
KBL	Kabul	50.77	303	P	P	17 37 16.0	+0.7
KBL				IAmb	IAmb	17 37 16.8	
	comp=Z,8.3nm,0.9s						
CHGR	Chuyangaron	51.56	309	P	P	17 37 21.5	+0.5
CHGR				IAmb	IAmb	17 37 23.1	
	comp=Z,5.9nm,0.7s						
KK31	Karatay Array	51.81	314	P	P	17 37 23.0	+0.3
KKAR	Karatay Array	51.81	314	P	P	17 37 23.3	+0.6
KKAR	Karatay Array	51.81	314	P	P	17 37 23.0	+0.3
BRVK	Borovoye	55.66	326	P	P	17 37 50.8	+0.5
BRVK				IAmb	IAmb	17 37 51.9	
	comp=Z,6.6nm,1.1s						
TIXI	Tiksi	57.93	3	P	P	17 38 04.8	-1.1
TIXI				IAmb	IAmb	17 38 06.2	
	comp=Z,3.4nm,0.7s						
NRIK	Noril'sk	59.21	347	P	P	17 38 15.1	+0.3
	comp=Z,2.7nm,0.6s,baz=146,slow=7.3,SNR=6.1						
	comp=Z,2.7nm,0.6s						
NRIK	Noril'sk	59.21	347	P	P	17 38 14.8	-0.1
NRIK				IAmb	IAmb	17 38 15.8	
	comp=Z,4.3nm,0.8s						
GEYT	Alibeck	59.99	306	P	P	17 38 21.2	+0.4
	comp=Z,4.4nm,0.8s,baz=131,slow=4.1,SNR=7.8						
	comp=Z,4.4nm,0.8s						
GEYT	Alibeck	59.99	306	P	P	17 38 21.5	+0.6
ABKAR	Akbulak array	60.56	319	P	P	17 38 24.2	-0.1
BILL	Bilibino	61.52	18	P	P	17 38 30.9	+0.4
ARU	Arti	63.20	327	P	P	17 38 41.2	-0.6
ARU				IAmb	IAmb	17 38 42.0	
	comp=Z,5.2nm,0.8s						
RAYN	Ar Rayn	71.16	290	P	P	17 39 32.7	+0.1
RAYN				IAmb	IAmb	17 39 33.8	
	comp=Z,8.2nm,0.9s						
KBZ	Khabaz	71.72	312	P	P	17 39 35.5	0.0
	comp=Z,1.9nm,1.0s,baz=172,slow=7.8,SNR=3.9						
	comp=Z,1.9nm,1.0s						
KVAR	Kislovodsk Arr	71.86	312	P	P	17 39 38.0	+1.5
	comp=Z,3.3nm,0.8s,baz=266,slow=20,SNR=3.4						
	comp=Z,3.3nm,0.8s						
GURO	Guroymak-BITLI	72.65	306	P	P	17 39 40.8	-0.5
GURO				IAmb	IAmb	17 39 43.5	
	comp=Z,4.0nm,0.6s						
IMAR	Indian Mountai	75.61	25	P	P	17 39 57.9	+0.2
H21K	Melozitna Rive	76.01	25	P	P	17 40 00.8	+0.8
CAST	Castle Rocks	76.45	28	P	P	17 40 03.2	+0.7
CAST				IAmb	IAmb	17 40 04.1	
	comp=Z,4.8nm,0.7s						
BPAW	Bear Paw Mtn.	76.88	27	P	P	17 40 05.7	+0.7
BPAW				IAmb	IAmb	17 40 06.3	
	comp=Z,3.8nm,0.6s						
MCK	McKinley	77.82	27	P	P	17 40 08.7	-1.5
MCK				IAmb	IAmb	17 40 11.0	
	comp=Z,4.1nm,0.7s						
ILAR	Eielson Array	78.58	26	P	P	17 40 12.7	-1.6
	comp=Z,0.4nm,0.7s,baz=284,slow=3.9,SNR=5.5						
	comp=Z,0.4nm,0.7s						
ARCES	ARCESS Array B	78.88	339	P	P	17 40 14.8	-1.0
	comp=Z,1.6nm,0.5s,baz=66,slow=5.9,SNR=10.0						
	comp=Z,1.6nm,0.5s						
BRTR	Keskin Array B	79.00	308	P	P	17 40 16.4	-0.9
	comp=Z,0.7nm,0.8s,baz=74,slow=4.4,SNR=4.4						
	comp=Z,0.7nm,0.8s						
BMAR	Burnt Mountain	79.09	23	P	P	17 40 18.3	+1.2
I26K	Coal Creek Min	80.04	25	P	P	17 40 22.3	+0.1
FINES	FINESS Array B	80.09	331	P	P	17 40 21.4	-1.0
	comp=Z,1.0nm,0.7s,baz=74,slow=6.8,SNR=5.9						
	comp=Z,1.0nm,0.7s						
AKASG	Malin Array Be	80.29	320	P	P	17 40 22.2	-1.5
	comp=Z,0.1nm,0.3s,baz=53,slow=3.4,SNR=5.3						
	comp=Z,0.1nm,0.3s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BURAR	Bucovina Array	83.49	317	P	P	17 40 40.0	-0.7
BUR08	Bucovina Ar. S	83.49	317	P	P	17 40 41.0	+0.3
BUR08				IAmb	IAmb	17 40 58.9	
	comp=Z,7.3nm,1.4s						
A36M	Sachs Harbour	84.05	17	P	P	17 40 42.6	-0.2
A36M				IAmb	IAmb	17 40 43.3	
	comp=Z,3.0nm,0.9s						
C36M	Paulatuk	85.62	19	P	P	17 40 50.5	-0.2
C36M				IAmb	IAmb	17 40 51.4	
	comp=Z,7.6nm,0.8s						
HFS	Hagfors	86.28	331	P	P	17 40 52.0	-2.2
	comp=Z,1.9nm,0.6s,baz=106,slow=4.8,SNR=6.9						
	comp=Z,1.9nm,0.6s						
NB2	NORSAR Subarra	87.06	333	P	P	17 40 56.6	-1.4
	comp=Z,10nm,1.0s,baz=67,slow=4.8						
NB2	NORSAR Subarra	87.06	333	P	P	17 40 56.6	-1.4
	baz=67,slow=4.8						
NOA	NORSAR Array B	87.06	333	P	P	17 40 56.6	-1.4
	comp=Z,1.3nm,0.7s,baz=66,slow=4.6,SNR=5.1						
	comp=Z,1.3nm,0.7s						
GERES	GERESS Array B	90.45	321	P	P	17 41 12.6	-1.7
	comp=Z,0.4nm,0.7s,baz=64,slow=6.7,SNR=2.1						
	comp=Z,0.4nm,0.7s						
YKA	Yellowknife Ar	92.59	22	P	P	17 41 23.7	0.0
	comp=Z,0.9nm,0.7s,baz=304,slow=4.3,SNR=16						
YKA				PKKP	PKKPdf	17 58 32.9	-1.2
	comp=Z,0.3nm,0.8s,baz=119,slow=2.5,SNR=4.1						
	comp=Z,0.9nm,0.7s						
TXAR	Lajitas Array	119.34	44	PKP	PKPdf	17 47 01.1	-0.3
	comp=Z,0.5nm,0.5s,baz=194,slow=1.3,SNR=8.7						
AY02	Valle Explorad	145.50	163	PKPdf	PKPdf	17 47 47.4	-2.1
COYC	Coyhaique	146.64	164	PKPbc	PKPbc	17 47 54.0	+0.6

IDC **16** *17:50:58.4±2.8, 35°.14S×179°.54W, h0^{km}, mb4.0/2, mbtmp4.0/3, ML3.9/1, MS3.1/1, Error ellipse: s-maj=70.1km s-min=42.8km az=133.0*

NEIC **16** *17:51:03.8±2.5, 35°.45S±0°.10×179°.7W±0°.1, h31^{km}±10^{km}, mb4.4/10, Error ellipse: s-maj=16.1km s-min=13.7km az=113.0*

WEL **16** *17:51:05.0±0.8, 36°S±5°×17°9W±°, h33^{km}, M4.1/17, ML4.2/20, MLv4.1/17, Error ellipse: s-maj=0.0km s-min=0.0km az=118.1, confirmed*

ISC 16 17:51:01.4±1.2**, 35°.44S**±0°.09×**179°.16W**±0°.08**, h35**^{km}**, n88, σ1^{s}57**/110**, mb4.2**/8**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.94	223	Pn	Pn	17 51 43.5	-2.1
MXZ	Matakaoa Point	2.94	223	P	Pn	17 51 46.2	+0.6
MXZ				S	Sn	17 52 19.6	-0.2
WMGZ	Waiomatatini S	3.07	219	P	Pn	17 51 49.4	+1.9
WMGZ				S	Sn	17 52 26.5	+3.5
PKGZ	Pakihiroa	3.30	222	P	Pn	17 51 51.6	+0.9
PKGZ				S	Sn	17 52 28.7	0.0
PUZ	Puketiti	3.35	218	P	Pn	17 51 52.3	+1.0
PUZ				S	Sn	17 52 31.1	+1.3
HAZ	Te Kaha	3.38	226	P	Pn	17 51 52.6	+1.0
HAZ				S	Sn	17 52 32.0	+1.6
TWGZ	Tauwhareparae	3.57	219	P	Pn	17 51 54.7	+0.4
TWGZ				S	Sn	17 52 36.4	+1.2
RUGZ	Raukumara Rang	3.58	224	P	Pn	17 51 55.6	+1.0
RUGZ				S	Sn	17 52 35.6	-0.1
WIZ	White Island	3.61	234	P	Pn	17 51 59.8	+5.1
CNGZ	Carnagh Statio	3.70	214	P	Pn	17 51 57.9	+1.9
TKGZ	Te Karaka	3.83	218	P	Pn	17 51 59.4	+1.4
TKGZ				S	Sn	17 52 42.2	+0.4
MWZ	Matawai	3.92	222	P	Pn	17 51 59.8	+0.6
MWZ				S	Sn	17 52 43.2	-0.8
WHRZ	Whale Island	3.94	231	P	Pn	17 52 04.5	+5.2
RIGZ	Rimuhau	4.08	216	P	Pn	17 52 02.2	+0.8
RIGZ				S	Sn	17 52 48.4	+0.4
RAGZ	Rawiri	4.10	221	P	Pn	17 52 02.0	+0.3
RAGZ				S	Sn	17 52 48.8	+0.4
URZ	Urewera	4.11	226	Pn	Pn	17 52 02.1	+0.5
	7.9nm,0.3s,baz=346,slow=4.0,SNR=63						
URZ				Sn	Sn	17 52 46.6	-1.9
	12nm,0.3s,baz=200,slow=20,SNR=8.3						
	20nm,0.4s						
URZ	Urewera	4.11	226	P	Pn	17 52 02.0	+0.4
URZ				S	Sn	17 52 47.7	-0.8
KUZ	Kuaotunu	4.35	251	P	Pn	17 52 04.7	-0.3
KNZ	Kokohu	4.38	214	P	Pn	17 52 04.8	-0.5
KNZ				S	Sn	17 52 54.0	-1.2
MHGZ	Mahia Peninsul	4.38	211	P	Pn	17 52 06.2	+0.8
MHGZ				S	Sn	17 52 54.2	-1.1
RTZ	Ruatahuna	4.43	223		Pn	17 52 06.3	+0.2
RTZ				Sn	Sn	17 52 53.3	-3.2
RTZ	Ruatahuna	4.43	223	P	Pn	17 52 06.6	+0.4
RTZ				S	Sn	17 52 56.8	+0.4
GRZ	Great Barrier	4.45	258	P	Pn	17 52 08.7	+2.3
MUGZ	Murupara	4.45	226	P	Pn	17 52 06.5	+0.1
MUGZ				S	Sn	17 52 55.6	-1.4
RAHZ	Arahi	4.59	220	P	Pn	17 52 10.3	+2.0
RAHZ				S	Sn	17 53 00.6	+0.2
KMRZ	Kaimai	4.61	237	P	Pn	17 52 10.9	+2.2
MTHZ	Maungataniwha	4.67	222	P	Pn	17 52 10.1	+0.7
MTHZ				S	Sn	17 53 02.1	-0.3
PRRZ	Plateau Road	4.69	228	P	Pn	17 52 11.5	+1.8
WIAZ	Waiheke Island	4.81	252	P	Pn	17 52 11.7	+0.3
NMHZ	Naumai	4.87	220	P	Pn	17 52 13.3	+1.1
NMHZ				S	Sn	17 53 07.5	+0.2
TOZ	Tahuroa Road	4.87	240	Pn	Pn	17 52 11.7	-0.4
TOZ	Tahuroa Road	4.87	240	P	Pn	17 52 12.5	+0.4
MRHZ	Matea Rd	4.89	225	P	Pn	17 52 12.7	+0.1
MRHZ				S	Sn	17 53 06.4	-1.7
MBAZ	Motutapu North	4.99	253	P	Pn	17 52 19.1	+5.2
ETAZ	East Tamaki Re	5.02	251	P	Pn	17 52 18.3	+4.1
BKZ	Black Stump Fm	5.08	222		Pn	17 52 15.3	+0.1
BKZ	Black Stump Fm	5.08	222	P	Pn	17 52 14.0	-1.1
BKZ				S	Sn	17 53 11.1	-1.5
TLZ	Tolley Road	5.14	234	P	Pn	17 52 20.7	+4.8
MCHZ	McNeill Hill	5.18	218	P	Pn	17 52 16.4	0.0
MCHZ				S	Sn	17 53 16.4	+1.4
RATZ	Rangitukua	5.30	228	P	Pn	17 52 18.8	+0.6
WCZ	Waipu Caves	5.31	263	P	Pn	17 52 18.6	+0.4
RITZ	Rihia Road	5.32	227	P	Pn	17 52 19.0	+0.7
KAHZ	Kahuranaki	5.37	215	P	Pn	17 52 18.3	-0.8
KAHZ				S	Sn	17 53 17.6	-1.9
TMVZ	Te Maari	5.50	227	P	Pn	17 52 21.2	+0.3
TMVZ				S	Sn	17 53 20.6	-2.4
NTVZ	North Tongarir	5.50	227	P	Pn	17 52 21.3	+0.3
ETVZ	East Tongariro	5.51	226	P	Pn	17 52 21.4	+0.3
BHHZ	Black Hill Sta	5.55	222	P	Pn	17 52 22.0	+0.5
OTVZ	Oturere	5.55	226	P	Pn	17 52 21.8	+0.1
NNVZ	North Ngauruho	5.56	227	P	Pn	17 52 22.5	+0.6
PXZ	Pawanui	5.56	213	S	Sn	17 53 22.7	-1.6
WTVZ	West Tongariro	5.57	227	P	Pn	17 52 23.5	+1.7
SNVZ	South Ngauruho	5.58	226	P	Pn	17 52 22.4	+0.3
NGZ	Ngauruhoe	5.60	227	P	Pn	17 52 24.0	+1.7
MOVZ	Moawhango	5.66	224	P	Pn	17 52 23.1	0.0
FWVZ	Far West T-bar	5.68	226	P	Pn	17 52 24.2	+0.7
HIZ	Hauiti	5.69	236	Pn	Pn	17 52 22.2	-1.2
HIZ	Hauiti	5.69	236	P	Pn	17 52 25.5	+2.1
WNVZ	Wahianoa	5.70	226	P	Pn	17 52 23.6	-0.1
TSZ	Takapari Road	6.02	219	P	Pn	17 52 28.8	+0.9
BFZ	Birch Farm	6.37	213	Pn	Pn	17 52 31.1	-1.6
BFZ	Birch Farm	6.37	213	P	Pn	17 52 31.6	-1.1
MRZ	Mangatainoka R	6.66	217	Pn	Pn	17 52 35.6	-1.2
TCW	Tory Channel	7.73	220	Pn	Pn	17 52 51.4	-0.1
NNZ	Nelson	8.22	223	Pn	Pn	17 52 55.8	-2.4
QRZ	Quartz Range	8.47	228	Pn	Pn	17 52 58.4	-3.2
CTZ	Chatham Island	8.51	167	Pn	Pn	17 53 05.8	+3.7
CTZ	Chatham Island	8.51	167	P	Pn	17 53 05.0	+2.9
CTZ				S	Sn	17 54 32.1	-4.7
MRNZ	Matariki Terra	8.69	224	Pn	Pn	17 53 03.5	-1.2
THZ	Tophouse	8.85	222	Pn	Pn	17 53 05.2	-1.7
KHZ	Kahutara	8.99	217	Pn	Pn	17 53 06.8	-1.8
LTZ	Lake Taylor	9.90	220	Pn	Pn	17 53 17.1	-4.1
MQZ	McQueen’s Vall	10.39	215	Pn	Pn	17 53 27.0	-0.9
OXZ	Oxford	10.41	218	Pn	Pn	17 53 27.1	-1.0
DZM	Mont Dzumac	18.32	313	LR	LR	18 00 01.2	
	comp=Z,66nm,19.7s,baz=204,slow=30						
AS31	Alice Springs	42.13	273	P	P	17 58 48.9	-1.6
ASAR	Alice Springs	42.13	273	P	P	17 58 49.9	-0.7
	0.9nm,0.5s,baz=115,slow=7.7,SNR=42						
	0.9nm,0.5s						
ASAR	Alice Springs	42.13	273	P	P	17 58 49.2	-1.4
VNDA	Vanda	42.99	186	P	P	17 59 00.5	+3.7
VNDA				IAmb	IAmb	17 59 19.3	
	comp=Z,8.3nm,1.4s						
WB2	Warramunga Arr	43.57	278	P	P	17 59 01.1	-1.0
WB2				IAmb	IAmb	17 59 09.1	
	comp=Z,8.1nm,1.2s						
WRAB	Tennant Creek	43.57	278	P	P	17 59 00.6	-1.6
WRAB				IAmb	IAmb	17 59 08.8	
	comp=Z,3.1nm,0.6s						
WRA	Warramunga Arr	43.58	278	P	P	17 59 01.4	-0.8
	comp=Z,1.6nm,0.5s,baz=119,slow=7.6,SNR=52						
	comp=Z,1.6nm,0.5s						
WRA	Warramunga Arr	43.58	278	P	P	17 59 01.1	-1.2
WB0	Warramunga Arr	43.62	278	P	P	17 59 01.6	-1.0
WB0				IAmb	IAmb	17 59 02.8	
	comp=Z,4.3nm,0.9s						
NWAO	Narrogin (SRO)	51.86	253	P	P	18 00 04.4	-2.0
NWAO	Narrogin (SRO)	51.86	253	P	P	18 00 03.9	-2.4
NWAO				IAmb	IAmb	18 00 33.4	
	comp=Z,18nm,1.2s						
MORW	Morawa	54.31	257	P	P	18 00 23.5	-0.9
QSPA	South Pole Qui	54.68	180		P	18 00 28.4	+1.6
QSPA				IAmb	IAmb	18 00 38.5	
	comp=Z,6.5nm,1.4s						
FINES	FINESS Array B	149.45	336	PKPbc	PKPbc	18 10 47.1	+1.1
	comp=Z,2.3nm,0.6s,baz=33,slow=4.3,SNR=15						

ROM 16 17:52:51.3±0.1**, 42°.686N**±0°.004×**13°.185E**±0°.004**, h12**^{km}**, ML0.9**/5**, 1D, Error ellipse: s-maj=0.3km s-min=0.3km az=197.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1218	Civita (PG)	0.05	253	P	Pg	17 52 54.1	+0.3
T1218				S	Sg	17 52 55.6	+0.1
T1218				AML	AML		
	comp=N,488μm,0.4s						
T1218				AML	AML		
	comp=E,282μm,0.2s						
T1218				AML	AML		
	comp=N,471μm,0.4s						
T1218				AML	AML		
	comp=E,298μm,0.2s						
T1218				AML	AML		
	comp=N,488μm,1.6s						
T1218				AML	AML		
	comp=N,471μm,1.6s						
T1214	Arquata del Tr	0.07	13	P	Pg	17 52 54.3	+0.3
T1214				S	Sg	17 52 56.2	+0.2
T1212	Cascia, Frazio	0.12	302	P	Pg	17 52 54.9	+0.4
T1212				S	Sg	17 52 57.1	+0.3
T1212				AML	AML		
	comp=N,69μm,0.4s						
T1212				AML	AML		
	comp=E,54μm,1.5s						
T1212				AML	AML		
	comp=N,69μm,0.4s						
SMA1	SAN MARTINO	0.12	117	P	Pb	17 52 55.2	-0.5
SMA1				AML	AML		
	comp=E,48μm,1.1s						
SMA1				AML	AML		
	comp=N,59μm,0.5s						
SMA1				AML	AML		
	comp=N,59μm,1.5s						
SMA1				AML	AML		
	comp=E,48μm,0.9s						
RM33	Pellescritta (	0.18	173	P	Pb	17 52 56.0	-0.6
RM33				S	Sg	17 52 58.9	+0.8
RM33				AML	AML		
	comp=E,26μm,1.0s						
RM33				AML	AML		
	comp=N,46μm,1.6s						
RM33				AML	AML		
	comp=N,46μm,1.6s						
RM33				AML	AML		
	comp=N,46μm,0.4s						
RM33				AML	AML		
	comp=E,26μm,1.0s						
T1217	Poggiodomo (PG	0.19	278	P	Pg	17 52 56.0	+0.5
T1217				S	Sg	17 52 59.2	+0.8
MMO1	Montemonaco	0.24	26	P	Pg	17 52 56.8	+0.5
MMO1				S	Sg	17 53 00.8	+1.0
T1216	Preci, Frazion	0.24	329	P	Pg	17 52 56.8	+0.5
T1216				AML	AML		
	comp=N,30μm,1.6s						
T1216				AML	AML		
	comp=N,30μm,0.4s						
T1216				AML	AML		
	comp=E,32μm,1.4s						
T1241	Roccafluvione,	0.25	47	⇓P	Pg	17 52 57.0	+0.5
T1211	Morro Reatino	0.29	238	P	Pg	17 52 57.6	+0.4
T1211				S	Sb	17 53 02.5	-0.8
TERO	Teramo	0.32	101	P	Pg	17 52 58.0	+0.2
TERO				S	Sg	17 53 02.6	+0.6

ROM 16 17:53:44.6±0.1**, 43°.024N**±0°.003×**13°.030E**±0°.005**, h6**^{km}**, ML0.9**/3**, 6C-1D, Error ellipse: s-maj=0.4km s-min=0.1km az=74.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	Muccia, Frazio	0.04	332	P	Pg	17 53 45.9	0.0
T1219				S	Sg	17 53 46.7	-0.2
FDMO	Fiordimonte	0.04	73	P	Pg	17 53 46.0	0.0
FDMO				S	Sg	17 53 47.0	0.0
CESI	CESI - Serrava	0.09	258	P	Pg	17 53 47.1	+0.4
CESI				S	Sg	17 53 49.1	+0.9
CESI				AML	AML		
	comp=E,109μm,0.8s						
CESI				AML	AML		
	comp=N,132μm,0.2s						
CESI				AML	AML		
	comp=E,109μm,1.2s						
T1220	Camerino, Fraz	0.10	27	⇑P	Pg	17 53 47.2	+0.4
T1220				S	Sg	17 53 49.2	+1.0
T1216	Preci, Frazion	0.13	184	⇑P	Pg	17 53 47.9	+0.5
T1216				S	Sg	17 53 50.3	+1.0
CSP1	Cessapalombo	0.14	62	⇑P	Pg	17 53 48.1	+0.5
CSP1				S	Sg	17 53 50.9	+1.2
T1256	Bolognola (MC)	0.14	97	⇑P	Pg	17 53 48.1	+0.4
T1256				S	Sg	17 53 50.8	+1.1
T1256				AML	AML		
	comp=E,51μm,1.3s						
T1256				AML	AML		
	comp=E,51μm,1.3s						
T1256				AML	AML		
	comp=N,72μm,1.2s						
T1256				AML	AML		
	comp=N,72μm,0.8s						
T1256				AML	AML		
	comp=E,51μm,0.7s						
MC2	Monte Cornacci	0.16	133	⇑P	Pg	17 53 48.4	+0.5
MC2				S	Sg	17 53 51.4	+1.2
T1245	Castelsantange	0.20	145	P	Pg	17 53 50.0	+1.3
T1245				S	Sg	17 53 52.8	+1.4
T1245				AML	AML		
	comp=E,74μm,0.2s						
T1245				AML	AML		
	comp=N,89μm,1.1s						
T1245				AML	AML		
	comp=E,74μm,0.2s						
SNTG	Esanatoglia	0.24	344	⇓P	Pg	17 53 50.1	+0.7
SNTG				S	Sg	17 53 54.0	+1.4
MMO1	Montemonaco	0.25	120	P	Pg	17 53 49.9	+0.3
MMO1				S	Sg	17 53 54.2	+1.4
T1212	Cascia, Frazio	0.27	178	⇑P	Pg	17 53 50.4	+0.4
T1212				S	Sg	17 53 54.9	+1.3
EL6	Elcito	0.31	10	P	Pg	17 53 51.3	+0.6
EL6				S	Sb	17 53 56.8	-1.2

SFS **16** *18:05:16.7, 37°.90N×3°.23W, h0^{km}, ML2.8/4, MLv2.3/4*

MDD **16** *18:05:16.4±0.6, 37°.88N×3°.23W, h10^{km}±1^{km}, mb_Lg1.7/6, Error ellipse: s-maj=5.3km s-min=4.2km az=80.0*

ISC 16 18:05:16.2±1.0**, 37°.88N**±0°.04×**3°.24W**±0°.03**, h8**^{km}±9^{km}**, n12, σ0^{s}78**/23**, 1C, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQES	Quesada	0.15	121	⇑Pg	Pg	18 05 19.5	-0.1
EQES				Sg	Sg	18 05 21.8	0.0
EQES				*i* Vmb_Lg		18 05 22.2	
EQUE	Quentar	0.69	194	Pg	Pg	18 05 29.8	+0.1
EQUE				Sg	Sg	18 05 38.5	-0.2
EQUE				*i* Vmb_Lg		18 05 41.6	
EGOR	Sierra Gorda,	1.04	222	S	Sb	18 05 51.0	+0.7
EGOR				P	Pg	18 05 35.5	-0.7
EGOR	Sierra Gorda,	1.04	222	Pg	Pg	18 05 35.5	-0.7
EGOR				Sg	Sg	18 05 49.1	-0.5
EGOR				*i* Vmb_Lg		18 05 54.8	
ELGU	Los Guajares,	1.06	197	S	Sb	18 05 51.3	+0.5
EADA	Adamuz	1.10	286	S	Sg	18 05 51.3	-0.3
EADA				P	Pg	18 05 36.8	-0.5
EADA	Adamuz	1.10	286	Pg	Pg	18 05 37.0	-0.4
EADA				Sg	Sg	18 05 51.7	+0.2
ETOB	Tobarra	1.53	60	S	Sn	18 06 04.1	0.0
ETOB				P	Pn	18 05 43.6	-0.3
ECAB	El Cabril	1.74	277	S	Sn	18 06 09.7	+0.7
ECAB	El Cabril	1.74	277	Pg	Pn	18 05 47.5	+0.8
ECAB				Sn	Sn	18 06 07.9	-1.1
ECAB				Sg	Sb	18 06 10.9	+0.5
ECAB				*i* Vmb_Lg		18 06 14.5	
PAB	San Pablo	1.88	333	Pg	Pb	18 05 50.8	0.0
PAB				Sn	Sn	18 06 10.5	-2.0
PAB				Sg	Sb	18 06 15.8	+1.4
PAB				*i* Vmb_Lg		18 06 22.3	
EBAD	Badajoz	3.10	288	Sg	Sg	18 06 56.5	+0.8
EBAD				*i* Vmb_Lg		18 06 57.9	

IDC **16** *18:15:46.1±1.2, 18°.17S×178°.33W, h580^{km}±12^{km}, mb3.2/6, mbtmp4.2/9, Error ellipse: s-maj=29.1km s-min=19.8km az=161.0*

ISC 16 18:15:45.7±0.8**, 17°.9S**±0°.2×**178°.3W**±0°.1**, h600**^{km}**, n9, σ2^{s}13**/11**, mb4.1**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.46	273	P	P	18 17 07.1	-0.7
	63nm,0.5s,baz=124,slow=9.8,SNR=88						
MSVF				S	S	18 18 13.2	-1.3
	3.3nm,0.9s,baz=295,slow=21,SNR=0.7						
AFI	Afiamalu	7.46	59	P	P	18 17 39.1	-1.0
	9.5nm,0.3s,baz=162,slow=12,SNR=4.1						
AFI				S	S	18 19 11.0	-2.7
	7.0nm,0.4s,baz=299,slow=20,SNR=1.4						
DZM	Mont Dzumac	14.90	251	P	P	18 18 51.9	-1.2
	4.1nm,0.7s,baz=72,slow=19,SNR=1.6						
URZ	Urewera	20.65	190	P	P	18 19 44.0	-1.1
	8.4nm,0.9s,baz=142,slow=16,SNR=1.8						
	8.4nm,0.9s						
RPZ	Rata Peaks	27.23	197	P	P	18 20 42.1	-1.2
	2.9nm,0.6s,baz=31,slow=5.9,SNR=1.7						
	2.9nm,0.6s						
STKA	Stephens Creek	38.69	241	P	P	18 22 20.8	+1.1
	3.1nm,0.5s,baz=76,slow=11,SNR=13						
	3.1nm,0.5s						
WRA	Warramunga Arr	44.71	260	P	P	18 23 07.2	0.0
	0.4nm,0.3s,baz=91,slow=7.9,SNR=8.3						
	0.4nm,0.3s						
ASAR	Alice Springs	44.86	254	P	P	18 23 09.4	+1.1
	5.4nm,0.5s,baz=88,slow=8.4,SNR=124						
	5.4nm,0.5s						
TXAR	Lajitas Array	85.94	58	P	P	18 27 28.2	+4.4
	0.2nm,0.7s,baz=219,slow=6.9,SNR=2.8						
	0.2nm,0.7s						

NEIC **16** *18:25:23.3±2.5, 8°.07S±0°.07×160°.82E±0°.07, h10^{km}±1^{km}, mb5.1/187, Error ellipse: s-maj=13.0km s-min=11.3km az=42.0*

GCMT **16** *18:25:24.3±0.1, 8°.04S±0°.01×161°.07E±0°.01, h12^{km}, MW5.2/130, Moment Tensor Solution. s85,c125; s130,c204; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M_{rr}7.39±.11; $M_{\theta\theta}$-3.76±.10; $M_{\phi\phi}$-3.64±.11; $M_{r\theta}$0.17±.28; $M_{\theta\phi}$3.42±.09; $M_{\phi r}$2.41±.32; Best double couple: $M_0$7.62800×10^{16} NP1:ϕ_s327.00000°, δ52.00000°, λ106.00000°. NP2:ϕ_s123.00000°, δ40.00000°, λ71.00000°. Principal axes: T 7.9630, Plg76.0000°, Azm289.0000°; N -0.6790, Plg12.0000°, Azm138.0000°; P -7.2940, Plg6.0000°, Azm46.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI **16** *18:25:25.1±0.0, 7°.81S×161°.34E, h43^{km}, mb4.7/63, mB5.3/40, Ms5.0/29, Ms7 4.8/29*

MOS **16** *18:25:26.1±1.1, 8°.07S×160°.71E, h47^{km}, mb5.3/42, MS4.6/4, Error ellipse: s-maj=8.0km s-min=6.5km az=75.1*

IDC **16** *18:25:27.2±2.4, 8°.07S×160°.84E, h51^{km}±21^{km}, mb4.4/22, mbtmp4.7/27, ML2.0/1, MS4.7/36, Error ellipse: s-maj=16.5km s-min=12.1km az=81.0*

ISC 16 18:25:26.3±0.3**, 8°.13S**±0°.04×**160°.90E**±0°.05**, h35**^{km}**, n624, σ1^{s}63**/621**, mb5.1**/192**, MS4.8**/51**, 5C-1D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.60	216	P	Pn	18 25 53.3	+1.3
	46μm,0.5s,baz=133,slow=1.6,SNR=151						
HNR				S	Sn	18 26 16.2	+4.8
	149μm,0.8s,baz=189,slow=15,SNR=8.3						
HNR				LR	LR	18 26 42.8	
	comp=Z,296μm,18.1s,baz=216,slow=47						
HNR	Honiara	1.60	216	Pn	Pn	18 25 52.5	+0.4
HNR	Honiara	1.60	216	P	Pn	18 25 53.6	+1.6
RABL	Rabaul	9.53	294	Pn	Pn	18 27 39.2	-1.8
RABL	Rabaul	9.53	294	P	Pn	18 27 42.2	+1.1
KRVT	Keravat (AS076	9.60	293	P	Pn	18 27 41.7	-0.4
	76nm,0.6s,baz=95,slow=12,SNR=2.2						
KRVT				S	Sn	18 29 23.3	-5.6
	139nm,0.9s,baz=109,slow=18,SNR=1.2						
KOUNC	Koumac, New Ca	12.77	165		Pn	18 28 27.6	+2.2
KOUNC	Koumac, New Ca	12.77	165	P	Pn	18 28 28.5	+3.1
PMG	Port Moresby	13.64	264	P	Pn	18 28 37.2	-0.1
	0.3nm,0.3s,baz=217,slow=16,SNR=1.4						
PMG				LR	LR	18 33 43.5	
	comp=Z,4μm,19.8s,baz=106,slow=36						
	10nm,0.9s						
NOUC	Port Laguerre	14.83	160	P	Pn	18 28 55.6	+2.1
DZM	Mont Dzumac	14.85	160	*e*Pn	Pn	18 28 51.0	-2.9
	103nm,1.2s						
DZM				*e*LR	LR	18 32 22.2	
	comp=Z,2μm,20.6s						
DZM	Mont Dzumac	14.85	160	P	Pn	18 28 55.1	+1.2
	7.0nm,0.4s,baz=32,slow=9.0,SNR=14						
DZM				LR	LR	18 34 33.7	
	comp=Z,3μm,19.2s,baz=335,slow=37						
DZM	Mont Dzumac	14.85	160	Pn	Pn	18 28 56.0	+2.2
DZM	Mont Dzumac	14.85	160	P	Pn	18 28 56.1	+2.2
ONTNC	Ouen Toro	15.07	160	Pn	Pn	18 28 59.0	+2.2
ONTNC				IAmb	IAmb	18 29 04.5	
	comp=Z,166nm,1.6s						
PATS	Pohnpei	15.09	350	Pn	Pn	18 28 50.7	-6.3
TARA	Tarawa	15.25	52		Pn	18 28 55.3	-3.8
TARA	Tarawa	15.25	52	P	P	18 29 04.3	+0.7
TV1H	Townsville Har	17.59	230	P	P	18 29 30.1	+0.5
RK1H	Rockhampton Ha	18.16	212	P	P	18 29 38.0	+2.2
	comp=Z,41nm,0.8s						
GD1S	Gladstone Soft	18.19	210	P	Pn	18 29 38.8	+2.7
	comp=Z,57nm,1.0s						
COEN	Coen	18.33	250	P	P	18 29 34.8	-2.9
COEN	Coen	18.33	250	P	Pn	18 29 39.7	+1.8
CTA	Charters Tower	18.50	228	P	Pn	18 29 40.9	+1.0
	comp=Z,14nm,0.7s,baz=32,slow=11,SNR=29						
CTA				LR	LR	18 36 13.6	
	comp=Z,3μm,19.5s,baz=47,slow=35						
CTA	Charters Tower	18.50	228	P	Pn	18 29 41.0	+1.0
CTAO	Charters Tower	18.50	228	P	Pn	18 29 40.7	+0.8
CTAO	Charters Tower	18.50	228	P	Pn	18 29 41.1	+1.2
CTAO	Charters Tower	18.50	228	P	Pn	18 29 40.7	+0.8
CTAO				pmax	pmax		
	comp=Z,72nm,1.0s						
MTSU	Mount Surprise	18.95	237	P	Pn	18 29 46.7	+1.3
MSVF	Nonsavu	19.23	121	P	Pn	18 29 49.3	+0.4
	comp=Z,20nm,1.1s,baz=306,slow=8.6,SNR=4.5						
MSVF				LR	LR	18 35 24.4	
	comp=Z,1μm,21.4s,baz=303,slow=31						
MSVF	Nonsavu	19.23	121		Pn	18 29 48.8	0.0
MSVF	Nonsavu	19.23	121	P	P	18 29 48.0	+0.3
MSVF				IAmb	IAmb	18 30 01.5	
	comp=Z,40nm,1.2s						
MSVF	Nonsavu	19.23	121	P	Pn	18 29 51.7	+2.8
MSVF	Nonsavu	19.23	121	*i* P	Pn	18 29 49.0	+0.1
MSVF				pmax	pmax		
	comp=Z,42nm,1.4s						
EIDS	Eidsvold	19.53	207	P	P	18 29 51.4	+0.6
EIDS				IAmb	IAmb	18 29 54.0	
	comp=Z,62nm,0.8s						
EIDS	Eidsvold	19.53	207	P	Pn	18 29 52.2	-0.1

AUWSH	**Wavell State H**	**20.56**	**200**	P	Pn	18 30 03.4	-1.0
TAVE	**Taveuni**	**20.58**	**116**	P	Pn	18 30 06.2	+1.5
	comp=Z,59nm,1.4s						
GC1S	**Gold Coast 1 S**	**21.11**	**198**	P	**P**	**18 30 08.7**	**+0.8**
GENI	**Genyem**	**21.35**	**284**	P	**P**	**18 30 14.7**	**+4.0**
GENI	**Genyem**	**21.35**	**284**	P	**P**	**18 30 10.5**	**-0.2**
	comp=Z,83nm,1.6s,comp=Z,2µm						
RMQ	**Roma**	**21.59**	**211**	P	**P**	**18 30 14.6**	**+1.4**
SMPI	**Sarmi**	**22.92**	**284**	P	**P**	**18 30 26.8**	**-0.6**
	comp=Z,100nm,1.6s,comp=Z,2µm						
ARMA	**Armidale**	**23.81**	**200**	P	**P**	**18 30 36.2**	**+0.1**
ARMA				IAmb	IAmb	18 30 53.0	
	comp=Z,116nm,1.4s						
ARMA	**Armidale**	**23.81**	**200**	P	**P**	**18 30 37.0**	**+0.9**
QIS	**Mount Isa**	**24.00**	**237**	P	**P**	**18 30 39.3**	**+1.3**
QLP	**Quilpie**	**24.23**	**219**	P	**P**	**18 30 40.3**	**+0.4**
AULRC	**Lightning Ridg**	**24.42**	**208**	P	**P**	**18 30 41.9**	**+0.3**
AUPHS	**Peel High Scho**	**24.69**	**201**	P	**P**	**18 30 45.4**	**+1.3**
	comp=Z,82nm,0.9s						
SRPI	**Serui, Papua**	**25.33**	**283**	P	**P**	**18 30 49.1**	**-1.0**
	comp=Z,21nm,0.6s						
AUDCS	**Dubbo College**	**26.55**	**204**	P	**P**	**18 31 03.6**	**+2.7**
GUMO	**Guam**	**26.82**	**323**	LR	LR	18 41 30.9	
	comp=Z,773nm,19.9s,baz=134,slow=36						
H11S2	**WAKE ISLAND Hy**	**27.07**	**12**	T	T	18 59 16.1	
	baz=193,slow=76,SNR=727						
H11S3	**WAKE ISLAND Hy**	**27.07**	**12**	T	T	18 59 19.6	
	baz=193,slow=76,SNR=840						
H11S1	**WAKE ISLAND Hy**	**27.08**	**12**	T	T	18 59 20.7	
	baz=193,slow=76,SNR=204						
CMSA	**Cobar Meteorol**	**27.26**	**209**	P	**P**	**18 31 06.8**	**-0.5**
INKA	**Innaminka**	**27.27**	**222**	P	**P**	**18 31 08.6**	**+1.2**
AFI	**Afiamalu**	**27.41**	**104**	LR	LR	18 39 35.7	
	comp=Z,872nm,21.2s,baz=291,slow=31						
RKPI	**Ransiki, Papua**	**27.41**	**282**	P	**P**	**18 31 08.5**	**-0.4**
	comp=Z,26nm,1.0s,comp=Z,848nm						
WB0	**Warramunga Arr**	**28.15**	**243**	P	**P**	**18 31 13.4**	**-2.1**
WRAB	**Tennant Creek**	**28.25**	**243**	P	**P**	**18 31 15.1**	**-1.3**
WRAB				IAmb	IAmb	18 31 22.1	
	comp=Z,25nm,0.8s						
WRAB	**Tennant Creek**	**28.25**	**243**	P	**P**	**18 31 15.2**	**-1.2**
WRAB	**Tennant Creek**	**28.25**	**243**	*i* P	**P**	**18 31 15.0**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,57nm,1.5s						
WB2	**Warramunga Arr**	**28.25**	**243**	P	**P**	**18 31 14.7**	**-1.7**
WB2				IAmb	IAmb	18 31 28.8	
	comp=Z,23nm,0.9s						
WB1	**Warramunga Ar.**	**28.26**	**243**	P	**P**	**18 31 19.1**	**+2.6**
	comp=Z,46nm,0.9s						
WRA	**Warramunga Arr**	**28.26**	**243**	P	**P**	**18 31 15.1**	**-1.4**
	comp=Z,18nm,0.7s,baz=68,slow=9.1,SNR=171						
WRA				LR	LR	18 42 05.6	
	comp=Z,3µm,19.8s,baz=90,slow=35						
	comp=Z,18nm,0.7s						
WRA	**Warramunga Arr**	**28.26**	**243**	P	**P**	**18 31 14.6**	**-1.9**
H11N1	**WAKE ISLAND Hy**	**28.29**	**12**	T	T	19 00 46.6	
	baz=192,slow=76,SNR=707						
H11N3	**WAKE ISLAND Hy**	**28.30**	**12**	T	T	19 00 56.5	
	baz=192,slow=76,SNR=715						
H11N2	**WAKE ISLAND Hy**	**28.31**	**12**	T	T	19 00 51.4	
	baz=192,slow=76,SNR=1450						
CAN	**Canberra**	**29.18**	**200**	P	**P**	**18 31 25.6**	**+1.2**
CAN	**Canberra**	**29.18**	**200**	P	**P**	**18 31 25.6**	**+1.2**
CAN				pmax	pmax		
	comp=Z,111nm,1.6s						
STKA	**Stephens Creek**	**29.68**	**215**	P	**P**	**18 31 27.6**	**-1.2**
	comp=Z,3.9nm,0.5s,baz=52,slow=14,SNR=18						
STKA				LR	LR	18 43 44.7	
	comp=Z,2µm,18.7s,baz=51,slow=37						
	comp=Z,3.9nm,0.5s						
STKA	**Stephens Creek**	**29.68**	**215**	P	**P**	**18 31 29.8**	**+0.9**
STKA	**Stephens Creek**	**29.68**	**215**	P	**P**	**18 31 29.5**	**+0.6**
STKA	**Stephens Creek**	**29.68**	**215**	*i* P	**P**	**18 31 27.5**	**-1.4**
AS01	**Alice Springs**	**30.08**	**236**	P	**P**	**18 31 32.0**	**-0.6**
	comp=Z,13nm,0.7s						
AS31	**Alice Springs**	**30.12**	**236**	P	**P**	**18 31 30.4**	**-2.6**
ASAR	**Alice Springs**	**30.12**	**236**	P	**P**	**18 31 30.9**	**-2.1**
	comp=Z,4.9nm,0.7s,baz=65,slow=9.5,SNR=79						
ASAR				PcP	**PcP**	**18 34 33.8**	**-0.3**
	comp=Z,2.2nm,0.7s,baz=70,slow=2.9,SNR=6.0						
ASAR				LR	LR	18 43 15.5	
	comp=Z,2µm,19.5s,baz=120,slow=36						
	comp=Z,4.9nm,0.7s						
ASAR	**Alice Springs**	**30.12**	**236**	P	**P**	**18 31 31.8**	**-1.2**
SIJI	**Sorong**	**30.39**	**282**	LR	LR	18 46 38.4	
	comp=Z,2µm,18.1s,baz=136,slow=42						
LCRK	**Leigh Creek**	**30.71**	**221**	P	**P**	**18 31 37.2**	**-0.8**
OOD	**Oodnadatta**	**30.82**	**227**	P	**P**	**18 31 41.0**	**+2.0**
KNRA	**Kununurra**	**32.29**	**254**	P	**P**	**18 31 51.0**	**-1.1**
KNRA				IAmb	IAmb	18 31 58.0	
	comp=Z,21nm,0.8s						
KNRA	**Kununurra**	**32.29**	**254**	P	**P**	**18 31 55.0**	**+2.9**
	comp=Z,33nm,0.8s						
ARPS	**Mount Arapiles**	**33.37**	**208**	P	**P**	**18 32 01.8**	**+0.5**
URZ	**Urewera**	**33.38**	**156**	LR	LR	18 43 08.2	
	comp=Z,678nm,21.9s,baz=52,slow=32						
MULG	**Mulgathing**	**33.42**	**225**	P	**P**	**18 32 02.8**	**+1.0**
	comp=Z,30nm,0.9s						
RTZ	**Ruatahuna**	**33.63**	**157**	P	**P**	**18 32 03.8**	**+0.2**
BBOO	**Buckleboo**	**33.65**	**220**	P	**P**	**18 32 02.5**	**-1.4**
BBOO	**Buckleboo**	**33.65**	**220**	P	**P**	**18 32 03.1**	**-0.7**
BKZ	**Black Stump Fm**	**33.93**	**158**	P	**P**	**18 32 05.9**	**-0.3**
BKZ				IAmb	IAmb	18 32 13.3	
	comp=Z,12nm,0.5s						
LBMI	**Labuha**	**34.10**	**281**	P	**P**	**18 32 07.3**	**-0.6**
	comp=Z,84nm,0.9s,comp=Z,1µm						
TKNZ	**Takaka Hill**	**34.48**	**164**	P	**P**	**18 32 11.6**	**+0.7**
MRNZ	**Matariki Terra**	**34.76**	**164**	P	**P**	**18 32 11.9**	**-1.4**
MRZ	**Mangatainoka R**	**34.93**	**160**	P	**P**	**18 32 14.0**	**-0.8**
MRZ				IAmb	IAmb	18 32 47.5	
	comp=Z,46nm,1.6s						
TCW	**Tory Channel**	**35.02**	**162**	P	**P**	**18 32 16.0**	**+0.5**
TUWZ	**Tuamarina**	**35.12**	**163**	P	**P**	**18 32 16.7**	**+0.3**
THZ	**Tophouse**	**35.14**	**164**	P	**P**	**18 32 15.7**	**-1.0**
SANI	**Sanana**	**35.28**	**278**	P	**P**	**18 32 19.8**	**+1.7**
	comp=Z,15nm,1.3s						
SANI	**Sanana**	**35.28**	**278**	P	**P**	**18 32 16.3**	**-1.8**
	comp=Z,16nm,1.2s,comp=Z,653nm						
WRKA	**Warakurna**	**35.34**	**238**	P	**P**	**18 32 17.0**	**-1.6**
LTZ	**Lake Taylor**	**35.93**	**166**	P	**P**	**18 32 23.4**	**0.0**
LTZ				IAmb	IAmb	18 33 01.1	
	comp=Z,27nm,1.2s						
FOZ	**Fox Glacier**	**36.12**	**169**	P	**P**	**18 32 25.0**	**+0.1**
FOZ				IAmb	IAmb	18 32 53.5	
	comp=Z,41nm,1.4s						
SOEI	**Soe**	**36.21**	**265**	P	**P**	**18 32 26.2**	**-0.1**
	comp=Z,18nm,1.0s						
OXZ	**Oxford**	**36.39**	**166**	P	**P**	**18 32 26.8**	**-0.5**
RPZ	**Rata Peaks**	**36.54**	**168**	P	**P**	**18 32 28.3**	**-0.2**
	comp=Z,8.3nm,0.8s,baz=317,slow=3.0,SNR=5.8						
RPZ				LR	LR	18 46 44.1	
	comp=Z,1µm,18.6s,baz=336,slow=35						
	comp=Z,8.3nm,0.8s						
RPZ	**Rata Peaks**	**36.54**	**168**	P	**P**	**18 32 26.2**	**-2.4**
FORT	**Forrest**	**38.05**	**229**	P	**P**	**18 32 39.9**	**-1.7**
FORT				IAmb	IAmb	18 32 56.9	
	comp=Z,42nm,0.9s						
MMRI	**Maumere**	**38.24**	**266**	P	**P**	**18 32 41.5**	**-1.9**
MMRI				IAmb	IAmb	18 33 08.4	
	comp=Z,49nm,1.3s						
MMRI	**Maumere**	**38.24**	**266**	P	**P**	**18 32 45.2**	**+1.8**
MMRI	**Maumere**	**38.24**	**266**	P	**P**	**18 32 40.6**	**-2.8**
LUWI	**Luwuk**	**38.62**	**279**	P	**P**	**18 32 49.7**	**+3.1**
	comp=Z,967nm,0.5s						
LUWI	**Luwuk**	**38.62**	**279**	P	**P**	**18 32 45.7**	**-0.9**
	comp=Z,1µm,0.5s,comp=Z,36µm						
GTOI	**Gorontalo**	**38.76**	**281**	P	**P**	**18 32 47.8**	**+0.1**
	comp=Z,177nm,0.6s,comp=Z,3µm						
MRSI	**Marisa**	**39.76**	**281**	P	**P**	**18 32 55.8**	**-0.3**
	comp=Z,167nm,0.5s,comp=Z,4µm						
RAR	**Rarotonga**	**40.08**	**113**	LR	LR	18 47 26.7	
	comp=Z,160nm,19.3s,baz=288,slow=33						
BSSI	**Bau Bau, Buton**	**40.13**	**270**	P	**P**	**18 32 59.0**	**-0.2**
	comp=Z,24nm,1.6s,comp=Z,755nm						
BKSI	**Bulukumba**	**40.58**	**271**	P	**P**	**18 33 02.6**	**-0.3**
	comp=Z,5.7nm,1.2s						
KAPI	**Kappang**	**40.98**	**272**	P	**P**	**18 33 05.7**	**-0.5**
	comp=Z,4.4nm,0.5s,baz=73,slow=11,SNR=6.3						
	comp=Z,4.4nm,0.5s						
KAPI	**Kappang**	**40.98**	**272**	P	**P**	**18 33 04.9**	**-1.3**
KAPI	**Kappang**	**40.98**	**272**	P	**P**	**18 33 08.3**	**+2.1**
	comp=Z,15nm,1.4s						
TOLI2	**Tolitoli**	**41.04**	**281**	P	**P**	**18 33 03.4**	**-3.3**
TOLI2				IAmb	IAmb	18 33 58.2	
	comp=Z,26nm,0.7s						
TOLI2	**Tolitoli**	**41.04**	**281**	P	**P**	**18 33 05.5**	**-1.2**
SPSI	**Sidrap Palu**	**41.09**	**273**	P	**P**	**18 33 07.0**	**-0.1**
	comp=Z,13nm,1.3s						
MPSI	**Mapaga**	**41.72**	**280**	P	**P**	**18 33 10.4**	**-1.9**
	comp=Z,11nm,1.7s,comp=Z,536nm						
PLAI	**Plampang**	**42.64**	**266**	P	**P**	**18 33 21.2**	**+1.4**
	comp=Z,24nm,1.2s						
PLAI	**Plampang**	**42.64**	**266**	P	**P**	**18 33 19.4**	**-0.4**
	comp=Z,30nm,1.0s						
KMBL	**Kambalda**	**43.05**	**232**	P	**P**	**18 33 24.3**	**+1.4**
TWSI	**Taliwang, Sumb**	**43.53**	**266**	P	**P**	**18 33 27.0**	**0.0**
	comp=Z,13nm,1.1s						
MEEK	**Meekatharra**	**44.09**	**240**	P	**P**	**18 33 32.7**	**+1.3**
MYLDM	**Lahad Datu**	**44.31**	**286**	P	**P**	**18 33 32.2**	**-1.0**
SRBI	**Singaraja**	**45.21**	**267**	P	**P**	**18 33 42.0**	**+1.6**
	comp=Z,11nm,0.9s						
IGBI	**Denpasar**	**45.24**	**266**	P	**P**	**18 33 41.1**	**+0.5**
	comp=Z,37nm,0.9s						
BBKI	**Banjar Baru**	**46.03**	**273**	P	**P**	**18 33 47.4**	**+0.4**
	comp=Z,31nm,1.1s						
JAGI	**Jajag, Banyuwa**	**46.24**	**266**	P	**P**	**18 33 45.6**	**-2.9**
JAGI	**Jajag, Banyuwa**	**46.24**	**266**	P	**P**	**18 33 48.3**	**-0.3**
	comp=Z,34nm,1.1s,comp=Z,803nm						
KKM	**Kota Kinabalu**	**46.73**	**286**	P	**P**	**18 33 49.5**	**-3.1**
MORW	**Morawa**	**46.98**	**238**	P	**P**	**18 33 55.1**	**+0.9**
NWAO	**Narrogin (SRO)**	**47.28**	**232**	P	**P**	**18 33 55.4**	**-1.1**
NWAO	**Narrogin (SRO)**	**47.28**	**232**	P	**P**	**18 33 55.4**	**-1.1**
NWAO				pmax	pmax		
	comp=Z,59nm,1.5s						
PWJI	**Pagerwojo**	**48.58**	**266**	P	**P**	**18 34 06.4**	**-0.4**
	comp=Z,23nm,2.4s						
JGF	**Kuroka**	**48.83**	**334**	P	**P**	**18 34 05.4**	**-3.0**
JMN	**Monobe**	**48.90**	**330**	P	**P**	**18 34 08.3**	**-0.6**
JMN	**Monobe**	**48.90**	**330**	P	**P**	**18 34 11.0**	**+2.1**
PPT	**Papeete**	**49.06**	**106**	LR	LR	18 49 17.8	
	comp=Z,279nm,21.7s,baz=274,slow=29						
MJAR	**Matsushiro Arr**	**49.28**	**336**	P	**P**	**18 34 09.3**	**-2.5**
	comp=Z,5.7nm,1.1s,baz=177,slow=8.4,SNR=5.6						
	comp=Z,5.7nm,1.1s						
SBUM	**Sibu**	**49.67**	**280**	P	**P**	**18 34 14.4**	**-0.7**
UGM	**Wanagama**	**49.86**	**267**	P	**P**	**18 34 17.0**	**+0.4**
	comp=Z,87nm,1.2s						
OPA	**Opana**	**50.03**	**53**	P	**P**	**18 34 18.4**	**+0.8**
OPA	**Opana**	**50.03**	**53**	P	**P**	**18 34 18.5**	**+0.8**
OPA				pmax	pmax		
	comp=Z,134nm,1.2s						
JHS	**Saijyo**	**50.29**	**330**	P	**P**	**18 34 22.6**	**+3.1**
	comp=Z,16nm,2.5s						
HMH	**Humu‘ula Sheep**	**51.03**	**57**	P	**P**	**18 34 25.7**	**0.0**
KSM	**Kuching**	**51.34**	**278**	P	**P**	**18 34 30.3**	**+2.6**
	comp=Z,45nm,1.4s						
KPJI	**Karang Pucung**	**51.47**	**267**	P	**P**	**18 34 28.9**	**+0.2**
	comp=Z,25nm,1.1s						
JKA	**Kamikawa-asahi**	**54.58**	**344**	P	**P**	**18 34 51.7**	**+0.6**
ASAJ	**Asahikawa**	**54.58**	**344**	P	**P**	**18 34 50.6**	**-0.5**
	comp=Z,24nm,1.0s,baz=217,slow=11,SNR=10						
ASAJ				LR	LR	18 55 30.0	
	comp=Z,1µm,21.2s,baz=178,slow=33						
	comp=Z,24nm,1.0s						
ASAJ	**Asahikawa**	**54.58**	**344**	P	**P**	**18 34 51.7**	**+0.6**
ASAJ				pmax	pmax		
	comp=Z,32nm,1.0s						
CGJI	**Cibinong**	**54.74**	**268**	P	**P**	**18 34 49.6**	**-3.2**
	comp=Z,58nm,0.7s,comp=Z,750nm						
KSRS	**Korea Array**	**54.84**	**328**	P	**P**	**18 34 51.5**	**-1.5**
	comp=Z,6.2nm,1.1s,baz=144,slow=7.3,SNR=14						
	comp=Z,6.2nm,1.1s						
KSAR	**Wonju Array Be**	**54.85**	**328**	P	**P**	**18 34 53.0**	**-0.2**
KSAR	**Wonju Array Be**	**54.85**	**328**	P	**P**	**18 34 53.0**	**-0.2**
INCN	**Inchon**	**55.55**	**327**	P	**P**	**18 35 00.8**	**+2.6**
MDSI	**Maura Dua**	**56.46**	**270**	P	**P**	**18 35 05.0**	**-0.2**
	comp=Z,13nm,1.3s						
LWLI	**Liwa**	**56.52**	**269**	P	**P**	**18 35 05.6**	**-0.1**
	comp=Z,62nm,1.1s,comp=Z,4µm						
NJ2	**Nanjing**	**56.62**	**317**	*e*P	**P**	**18 35 06.8**	**+0.8**
NJ2				sP	**sP**	**18 35 20.4**	**0.0**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2				LR	LR		
	comp=Z,600nm,21.6s						
NJ2				LR	LR		
	comp=Z,410nm,18.9s						
NJ2				LR	LR		
	comp=Z,1µm,24.0s						
YSS	**Yuzh-Sakhalins**	**57.17**	**345**	P	**P**	**18 35 09.3**	**-0.2**
YSS				IAmb	IAmb	18 36 07.5	
	comp=Z,19nm,1.2s						
YSS	**Yuzh-Sakhalins**	**57.17**	**345**	P	**P**	**18 35 12.1**	**+2.5**
	comp=Z,15nm,1.2s						
YSS	**Yuzh-Sakhalins**	**57.17**	**345**	*e*P	**P**	**18 35 10.2**	**+0.6**
YSS				*e*S	**S**	**18 43 01.9**	**-0.7**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YSS				MLR	MLR		
	comp=Z,800nm,16.0s						
TAOE	**Nuku Hiva Isla**	**58.26**	**95**	*e*LR	LR	18 52 29.4	
	comp=Z,1µm,26.3s						
TAOE	**Nuku Hiva Isla**	**58.26**	**95**	*e*T	T	19 38 24.2	
	comp=Z,29nm,0.2s						
USA0B	**Ussuriysk Arra**	**58.28**	**336**	P	**P**	**18 35 17.3**	**-0.2**
USA0B				IAmb	IAmb	18 35 22.0	
	comp=Z,18nm,1.0s						
USA0B	**Ussuriysk Arra**	**58.28**	**336**	*i* P	**P**	**18 35 18.0**	**+0.6**
USRK	**Ussuriysk Ar.**	**58.28**	**336**	P	**P**	**18 35 15.9**	**-1.5**
	comp=Z,8.0nm,0.8s,baz=140,slow=7.6,SNR=12						
	comp=Z,8.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**58.28**	**336**	P	**P**	**18 35 17.0**	**-0.4**
USRK	**Ussuriysk Ar.**	**58.28**	**336**	P	**P**	**18 35 17.0**	**-0.4**
DL2	**Dalian**	**59.33**	**325**	P	**P**	**18 35 25.9**	**+1.1**
DL2				pmax	pmax		
	comp=Z,14nm,1.0s						
MDJ	**Mudanjiang**	**59.62**	**335**	P	**P**	**18 35 27.4**	**+0.7**
MDJ				pP	pwP	18 35 38.6	-0.7
MDJ				sP	sP	18 35 42.1	+1.4
MDJ				PcS	**PcS**	**18 40 15.1**	**-0.6**
MDJ				S	**S**	**18 43 36.8**	**+2.2**
MDJ				sS	sS	18 43 56.5	+5.2
MDJ				SS	**SS**	**18 47 32.8**	**+2.0**
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,210nm,4.7s						
MDJ				LR	LR		
	comp=Z,370nm,17.9s						
MDJ				LR	LR		
	comp=Z,380nm,14.1s						
MDJ				LR	LR		
	comp=Z,560nm,16.2s						
SDSI	**Sungai Dareh**	**59.66**	**274**	P	**P**	**18 35 25.8**	**-1.8**
	comp=Z,34nm,0.8s,comp=Z,628nm						
BKNI	**Bangkinang**	**60.24**	**275**	P	**P**	**18 35 29.9**	**-1.8**
TYV	**Tymovskoe**	**60.84**	**347**	*e*P	**P**	**18 35 37.3**	**+2.3**
TYV				*e*S	**S**	**18 43 57.0**	**+6.9**
TYV				pmax	pmax		
	comp=Z,11nm,1.3s						
TYV				pmax	pmax		
	comp=Z,100nm,3.0s						
TYV				smax	smax		
	comp=N,400nm,7.3s						
TYV				smax	smax		
	comp=E,400nm,7.3s						
CN2	**Changchun**	**60.85**	**331**	*e*P	**P**	**18 35 35.8**	**+0.6**
CN2				*e*pP	sP	18 35 51.9	+2.8
CN2				*e*S	**S**	**18 43 48.0**	**-2.5**
CN2				pmax	pmax		
	comp=E,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=E,300nm,6.0s						
CN2				LR	LR		
	comp=E,400nm,17.0s						
CN2				LR	LR		
	comp=E,300nm,17.0s						
CN2				LR	LR		
	comp=E,500nm,18.0s						
PET	**Petropavlovsk**	**60.95**	**358**	*e*P	**P**	**18 35 37.5**	**+1.9**
PET				*e*S	**S**	**18 43 55.2**	**+3.9**
PET				pmax	pmax		
	comp=Z,51nm,1.2s						
PET				MLR	MLR		
	comp=Z,500nm,16.0s						
IPM	**Ipoh**	**61.02**	**280**	P	**P**	**18 35 36.5**	**-0.4**
IPM				IAmb	IAmb	18 35 43.0	
	comp=Z,12nm,0.9s						
IPM	**Ipoh**	**61.02**	**280**	P	**P**	**18 35 39.7**	**+2.8**
	comp=Z,15nm,1.1s						
PEA0B	**Petropavlovsk-**	**61.06**	**358**	P	**P**	**18 35 36.2**	**-0.2**
PEA0B	**Petropavlovsk-**	**61.06**	**358**	*i* P	**P**	**18 35 35.8**	**-0.6**
PETK	**Petropavlovsk-**	**61.06**	**358**	P	**P**	**18 35 35.3**	**-1.1**
	comp=Z,28nm,1.1s,baz=149,slow=6.9,SNR=13						
PETK				LR	LR	18 58 16.0	
	comp=Z,604nm,21.1s,baz=175,slow=32						
	comp=Z,28nm,1.1s						
PETK	**Petropavlovsk-**	**61.06**	**358**	P	**P**	**18 35 36.0**	**-0.4**
PETK	**Petropavlovsk-**	**61.06**	**358**	P	**P**	**18 35 36.0**	**-0.4**
BNX	**BinXian**	**61.45**	**334**	⇓P	**P**	**18 35 38.3**	**-0.9**
BNX				pmax	pmax		
	comp=Z,4.0nm,0.5s						
BNX				pmax	pmax		
	comp=Z,160nm,5.0s						
SHEM	**Shemya Is, Ala**	**61.66**	**9**	LR	LR	18 59 35.7	
	comp=Z,423nm,19.4s,baz=258,slow=33						
GRNR	**Gornyy**	**62.38**	**343**	⇑*i*P	**P**	**18 35 46.3**	**+0.9**
GRNR				pmax	pmax		
	comp=N,2.0nm,0.9s						
GRNR				pmax	pmax		
	comp=E,2.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,160nm,15.0s						
GRNR				MLR	MLR		
	comp=N,210nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,300nm,16.0s						
LYN	**LuoYang**	**62.43**	**316**	*e*P	**P**	**18 35 46.8**	**+0.8**
LYN				pP	sP	18 36 03.1	+2.6
LYN				S	**S**	**18 44 12.6**	**+1.8**
LYN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
LYN				pmax	pmax		
	comp=Z,200nm,5.4s						
HNS	**HongShan**	**62.56**	**320**	⇑P	**P**	**18 35 48.8**	**+2.0**
HNS				PP	**PP**	**18 38 09.3**	**+4.5**
HNS				S	**S**	**18 44 16.6**	**+4.3**
HNS				SS	**SS**	**18 48 20.1**	**+2.9**
HNS				pmax	pmax		
	comp=Z,12nm,0.9s						
HNS				LR	LR		
	comp=Z,750nm,18.2s						
HNS				LR	LR		
	comp=Z,690nm,19.1s						
KLR	**Kul'dur**	**62.57**	**339**	*i* P	**P**	**18 35 45.5**	**-1.1**
KLR				pmax	pmax		
	comp=Z,19nm,1.4s						
NONG	**Nongkai**	**62.66**	**295**	P	**P**	**18 35 51.3**	**+3.4**
RPSI	**Rantau Prapat**	**62.73**	**277**	P	**P**	**18 35 47.1**	**-1.3**
PSI	**Prapat**	**62.75**	**277**	P	**P**	**18 35 47.1**	**-1.6**
PSI				pmax	pmax		
	comp=Z,37nm,1.7s						
GYA	**Guiyang**	**62.84**	**305**	⇑P	**P**	**18 35 51.1**	**+2.0**
GYA				PP	**PP**	**18 38 08.0**	**+0.3**
GYA				S	**S**	**18 44 14.3**	**-2.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
GYA				pmax	pmax		
	comp=Z,170nm,5.6s						
GYA				LR	LR		
	comp=Z,390nm,23.3s						
GYA				LR	LR		
	comp=Z,700nm,24.0s						
GYA				LR	LR		
	comp=Z,830nm,26.3s						
GSI	**Gunungsitoli**	**63.82**	**275**	P	**P**	**18 35 53.9**	**-1.8**
GSI	**Gunungsitoli**	**63.82**	**275**	P	**P**	**18 35 55.2**	**-0.5**
GSI	**Gunungsitoli**	**63.82**	**275**	P	**P**	**18 35 54.2**	**-1.5**
	comp=Z,49nm,1.1s						
XAN	**Xi'an**	**64.65**	**314**	P	**P**	**18 35 59.3**	**-1.5**
XAN				pP	pP	18 36 09.8	-1.5
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
HEH	**HeiHe**	**65.02**	**337**	*e*P	**P**	**18 36 01.3**	**-1.5**
HEH				pmax	pmax		
	comp=Z,20nm,1.1s						
HEH				pmax	pmax		
	comp=Z,280nm,4.5s						
HEH				LR	LR		
	comp=Z,300nm,16.9s						
HEH				LR	LR		
	comp=Z,450nm,16.2s						
HEH				LR	LR		
	comp=Z,510nm,14.5s						
PHRA	**Phrae**	**65.42**	**295**	P	**P**	**18 36 05.7**	**-0.4**
KMI	**Kunming**	**65.53**	**302**	⇑P	**P**	**18 36 09.9**	**+3.0**
KMI				S	**S**	**18 44 56.6**	**+6.4**
KMI				pmax	pmax		
	comp=Z,23nm,1.2s						
KMI				LR	LR		
	comp=Z,1µm,19.1s						
KMI				LR	LR		
	comp=Z,2µm,20.0s						
KMI				LR	LR		
	comp=Z,860nm,25.4s						
XLT	**XiLinHaoTe**	**65.76**	**326**	*e*P	**P**	**18 36 07.6**	**-0.2**
XLT				sP	sP	18 36 26.5	+4.0
XLT				PcP	**PcP**	**18 36 33.3**	**-5.5**
XLT				S	**S**	**18 44 54.9**	**+3.0**
XLT				pmax	pmax		
	comp=Z,40nm,1.1s						
XLT				pmax	pmax		
	comp=Z,150nm,4.3s						
XLT				LR	LR		
	comp=Z,52nm,17.8s						
XLT				LR	LR		
	comp=Z,390nm,17.0s						
XLT				LR	LR		
	comp=Z,530nm,22.1s						
CRAI	**Chiangrai**	**65.85**	**296**	P	**P**	**18 36 07.5**	**-1.3**
CRAI				IAmb	IAmb	18 36 31.1	
	comp=Z,23nm,1.4s						
HHC	**Hu-ho-hao-te**	**66.56**	**321**	*e*P	**P**	**18 36 15.6**	**+2.6**
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC				pmax	pmax		
	comp=Z,220nm,6.1s						
HHC				LR	LR		
	comp=Z,540nm,13.5s						
HHC				LR	LR		
	comp=Z,630nm,13.4s						
HHC				LR	LR		
	comp=Z,800nm,18.6s						
CM31	**Chiang Mai Arr**	**66.57**	**294**	P	**P**	**18 36 12.8**	**-0.7**
CM31				IAmb	IAmb	18 36 38.0	
	comp=Z,10nm,1.0s						
CMAR	**Chiang Mai Arr**	**66.57**	**294**	P	**P**	**18 36 12.5**	**-0.9**
	comp=Z,5.1nm,1.0s,baz=122,slow=5.8,SNR=22						
	comp=Z,5.1nm,1.0s						
CMAR	**Chiang Mai Arr**	**66.57**	**294**	P	**P**	**18 36 13.3**	**-0.1**
CMAR	**Chiang Mai Arr**	**66.57**	**294**	P	**P**	**18 36 13.3**	**-0.1**
CHTO	**Chiang Mai**	**66.68**	**294**	P	**P**	**18 36 15.8**	**+1.7**
CHTO	**Chiang Mai**	**66.68**	**294**	P	**P**	**18 36 15.8**	**+1.7**
CHTO				pmax	pmax		
	comp=Z,1.0nm,1.4s						
PZH	**PanZhiHua**	**66.89**	**303**	P	**P**	**18 36 16.9**	**+1.4**
PZH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.2s						
CD2	**Chengdu**	**67.05**	**308**	P	**P**	**18 36 15.4**	**-0.9**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BTO	**Baotou**	**67.39**	**320**	*e*P	P	18 36 23.6	+5.3
BTO				SS	SS	18 49 30.4	-2.1
BTO				pmax	pmax		
	comp=Z,16nm,0.6s						
BTO				pmax	pmax		
	comp=Z,580nm,3.9s						
BTO				LR	LR		
	comp=Z,1µm,17.3s						
BTO				LR	LR		
	comp=Z,2µm,16.0s						
BTO				LR	LR		
	comp=Z,2µm,25.5s						
ZEA	**Zeya**	**67.88**	**339**	*e*P	**P**	**18 36 20.6**	**-0.4**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
ZEA				MLR	MLR		
	comp=E,200nm,14.0s						
MA2	**Magadan**	**67.97**	**354**	LR	LR	19 02 10.1	
	comp=E,370nm,21.7s,baz=172,slow=32						
TNCH	**TengChong**	**69.07**	**301**	P	**P**	**18 36 29.0**	**-0.3**
TNCH				pP	pP	18 36 40.8	+1.0

TNCH				sP	sP	18 36 43.8	0.0
TNCH				PcP	**PcP**	**18 36 53.4**	**+0.2**
TNCH				S	**S**	**18 45 27.8**	**-4.8**
TNCH				pmax	pmax		
	comp=E,9.0nm,1.4s						
TNCH				pmax	pmax		
	comp=E,190nm,6.2s						
TNCH				LR	LR		
	comp=E,430nm,13.8s						
TNCH				LR	LR		
	comp=E,730nm,16.3s						
TNCH				LR	LR		
	comp=E,380nm,19.7s						
SPIA	**Saint Paul Isl**	**69.24**	**16**	P	**P**	**18 36 30.2**	**+0.8**
	baz=211						
LZH	**Lanzhou**	**69.28**	**313**	*e*P	**P**	**18 36 34.4**	**+4.0**
LZH				pP	sP	18 36 43.3	-1.7
LZH				sP	PcP	18 36 49.4	-4.5
LZH				S	**S**	**18 45 39.0**	**+4.3**
LZH				pmax	pmax		
	comp=E,15nm,1.5s						
LZH				pmax	pmax		
	comp=E,310nm,4.9s						
VNDA	**Vanda**	**69.36**	**180**	P	**P**	**18 36 29.9**	**0.0**
	comp=E,4.7nm,0.8s,baz=4.4,slow=5.2,SNR=8.0						
	comp=E,4.7nm,0.8s						
VNDA	**Vanda**	**69.36**	**180**	P	**P**	**18 36 30.1**	**+0.2**
VNDA	**Vanda**	**69.36**	**180**	P	**P**	**18 36 30.1**	**+0.2**
VNDA				pmax	pmax		
	comp=Z,36nm,1.5s						
MND	**Mandalay**	**70.18**	**297**	P	**P**	**18 36 37.8**	**+1.9**
SEY	**Seymchan**	**71.16**	**356**	LR	LR	19 03 18.5	
	comp=Z,403nm,21.5s,baz=166,slow=32						
SEY	**Seymchan**	**71.16**	**356**	*i* P	**P**	**18 36 40.0**	**-1.0**
SEY				pmax	pmax		
	comp=Z,17nm,1.3s						
ULN	**Ulaanbaatar**	**73.18**	**325**	P	**P**	**18 36 53.0**	**-0.7**
ULN				IAmb	IAmb	18 37 27.1	
	comp=Z,19nm,1.1s						
ULN	**Ulaanbaatar**	**73.18**	**325**	P	**P**	**18 36 53.0**	**-0.7**
ULN				pmax	pmax		
	comp=Z,19nm,1.1s						
SONM	**Songino Array**	**73.53**	**325**	P	**P**	**18 36 55.1**	**-0.6**
	comp=Z,8.3nm,1.0s,baz=136,slow=5.8,SNR=22						
	comp=Z,8.3nm,1.0s						
SONM	**Songino Array**	**73.53**	**325**	P	**P**	**18 36 54.7**	**-1.0**
GTA	**Gaotai**	**73.62**	**315**	*e*P	**P**	**18 36 59.0**	**+2.6**
GTA				sP	PcP	18 37 12.9	+0.7
GTA				pmax	pmax		
	comp=Z,7.0nm,1.4s						
YAK	**Yakutsk**	**74.02**	**345**	P	**P**	**18 36 56.6**	**-1.5**
YAK	**Yakutsk**	**74.02**	**345**	*e*P	**P**	**18 36 56.8**	**-1.3**
YAK				*e*		18 37 11.1	
YAK				*e*S	**SKiKP**	**18 46 25.4**	**+1.6**
YAK				*e*		18 47 03.8	
YAK				pmax	pmax		
	comp=Z,31nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,177nm,6.2s						
YAK				pmax	pmax		
	comp=N,133nm,6.9s						
YAK				pmax	pmax		
	comp=E,105nm,5.4s						
YAK				smax	smax		
	comp=E,131nm,4.7s						
YAK				smax	smax		
	comp=N,67nm,4.7s						
P16K	**Nushagak River**	**74.61**	**21**	P	**P**	**18 37 01.0**	**-0.5**
	baz=222						
Q17K	**Contact Creek**	**74.81**	**22**	P	**P**	**18 37 02.4**	**-0.5**
	baz=225						
Q16K	**King Salmon**	**74.82**	**21**	P	**P**	**18 37 03.0**	**+0.3**
	baz=224						
SHL	**Shillong**	**74.94**	**299**	P	**P**	**18 37 04.1**	**-0.3**
SHL	**Shillong**	**74.94**	**299**	P	**P**	**18 37 04.1**	**-0.3**
SHL				pmax	pmax		
	comp=Z,80nm,1.8s						
Q18K	**Katmai Hardscr**	**75.41**	**22**	P	**P**	**18 37 05.5**	**-0.8**
	baz=225						
O17K	**Koliganek Bris**	**75.46**	**20**	P	**P**	**18 37 06.0**	**-0.5**
	baz=223						
KDAK	**Kodiak Island**	**75.74**	**24**	LR	LR	19 07 32.1	
	comp=Z,372nm,18.1s,baz=247,slow=33						
P18K	**Big Mountain,**	**75.85**	**21**	P	**P**	**18 37 08.5**	**-0.2**
	baz=225						
BOD	**Bodaibo**	**75.92**	**336**	*e*P	**P**	**18 37 08.3**	**-0.8**
BOD				pmax	pmax		
	comp=Z,11nm,1.4s						
GOMU	**GeErMu**	**76.00**	**310**	P	**P**	**18 37 13.1**	**+2.6**
GOMU				pP	sP	18 37 28.5	+3.2
GOMU				pmax	pmax		
	comp=Z,3.0nm,1.5s						
BILL	**Bilibino**	**76.08**	**2**	P	**P**	**18 37 07.9**	**-2.0**
BILL				IAmb	IAmb	18 37 12.5	
	comp=Z,25nm,1.1s						
BILL	**Bilibino**	**76.08**	**2**	*ce*P	**P**	**18 37 08.6**	**-1.3**
BILL				*i*		18 37 21.1	
BILL				*e*S	**S**	**18 46 56.9**	**+6.2**
BILL				PS	**PnS**	**18 47 45.0**	**+14**
BILL				*i* SS	**SS**	**18 51 50.5**	**+6.0**
BILL				pmax	pmax		
	comp=Z,26nm,1.1s						
BILL				MLR	MLR		
	comp=Z,189nm,17.0s						
ZAK	**Zakamensk**	**76.61**	**326**	*e*P	**P**	**18 37 12.4**	**-1.0**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ANM	**Nome**	**76.77**	**14**	P	**P**	**18 37 13.9**	**+0.1**
ANM				IAmb	IAmb	18 37 17.6	
	comp=Z,18nm,1.3s						
ANM	**Nome**	**76.77**	**14**	P	**P**	**18 37 13.9**	**+0.1**
ANM				pmax	pmax		
	comp=Z,18nm,1.3s						
ANM	**Nome**	**76.77**	**14**	P	**P**	**18 37 14.0**	**+0.1**
	baz=214,SNR=8.9						
SVW2	**Sparrevohn**	**76.94**	**20**	P	**P**	**18 37 16.5**	**+1.6**
TNA	**Tin City**	**77.02**	**13**	P	**P**	**18 37 15.5**	**+0.3**
TNA	**Tin City**	**77.02**	**13**	P	**P**	**18 37 14.7**	**-0.5**
	baz=212,SNR=6.2						
IRK	**Irkutsk**	**77.05**	**328**	*e*P	**P**	**18 37 16.5**	**+0.8**
IRK				pmax	pmax		
	comp=Z,36nm,4.1s						
HOM	**Homer**	**77.36**	**23**	P	**P**	**18 37 16.8**	**-0.4**
	baz=228						
BRSE	**Bradley Lake S**	**77.76**	**23**	P	**P**	**18 37 20.2**	**+0.7**
	baz=229						
M19K	**Big River Lodg**	**77.92**	**20**	P	**P**	**18 37 20.9**	**+0.5**
	baz=226						
L19K	**White Mountain**	**77.96**	**20**	P	**P**	**18 37 21.1**	**+0.5**
L19K				IAmb	IAmb	18 37 23.9	
	comp=Z,21nm,1.0s						
L19K	**White Mountain**	**77.96**	**20**	P	**P**	**18 37 21.8**	**+1.2**
	baz=225						
TTA	**Tatalina**	**78.12**	**19**	P	**P**	**18 37 21.9**	**+0.4**
TTA				IAmb	IAmb	18 37 34.1	
	comp=Z,29nm,1.5s						
TTA	**Tatalina**	**78.12**	**19**	P	**P**	**18 37 24.3**	**+2.8**
	comp=Z,8.4nm,1.1s						
TTA	**Tatalina**	**78.12**	**19**	P	**P**	**18 37 22.0**	**+0.4**
TTA				pmax	pmax		
	comp=Z,29nm,1.5s						
TTA	**Tatalina**	**78.12**	**19**	P	**P**	**18 37 21.8**	**+0.3**
	baz=224						
M20K	**Styx River**	**78.33**	**20**	P	**P**	**18 37 23.3**	**+0.5**
	baz=227						
L20K	**Farewell, AK**	**78.49**	**20**	P	**P**	**18 37 23.9**	**+0.4**
	baz=226						
SEW	**Seward**	**78.49**	**23**	P	**P**	**18 37 23.6**	**+0.1**
	baz=230						
O22K	**Cooper Landing**	**78.63**	**23**	P	**P**	**18 37 24.7**	**+0.4**
	baz=230						
SUA	**Susitna One**	**78.89**	**21**	P	**P**	**18 37 25.3**	**-0.5**
	baz=229						
SKT	**Skwentna**	**78.95**	**21**	P	**P**	**18 37 25.4**	**-0.7**
	baz=228						
RC01	**Rabbit Creek A**	**79.02**	**22**	P	**P**	**18 37 25.5**	**-0.9**
RC01	**Rabbit Creek A**	**79.02**	**22**	P	**P**	**18 37 26.6**	**+0.2**
	baz=230						
TAPN	**Taplejung**	**79.02**	**300**	*e*P	**P**	**18 37 29.3**	**+1.7**
	comp=Z,37nm,1.3s						
K20K	**Telida**	**79.05**	**19**	P	**P**	**18 37 25.4**	**-1.1**
K20K				IAmb	IAmb	18 37 33.4	
	comp=Z,23nm,1.4s						
K20K	**Telida**	**79.05**	**19**	P	**P**	**18 37 26.9**	**+0.4**
	baz=226						
ODAN	**Odare**	**79.17**	**299**	*e*P	**P**	**18 37 28.0**	**-0.3**
	comp=Z,50nm,1.2s						
PPLA	**Purkeypile**	**79.35**	**20**	P	**P**	**18 37 28.6**	**+0.2**
	baz=227						
PWL	**Port Wells**	**79.40**	**23**	P	**P**	**18 37 27.7**	**-0.9**
	baz=231						
PMR	**Palmer**	**79.57**	**22**	P	**P**	**18 37 29.5**	**+0.1**
PMR				IAmb	IAmb	18 37 31.7	
	comp=Z,19nm,1.0s						
PMR	**Palmer**	**79.57**	**22**	P	**P**	**18 37 31.4**	**+2.1**
	comp=Z,18nm,1.8s						
PMR	**Palmer**	**79.57**	**22**	P	**P**	**18 37 29.5**	**+0.1**
PMR				pmax	pmax		
	comp=Z,19nm,1.0s						
PMR	**Palmer**	**79.57**	**22**	P	**P**	**18 37 28.9**	**-0.5**
	baz=230						
CUT	**Chulitna**	**79.68**	**21**	P	**P**	**18 37 29.8**	**-0.2**
	baz=229						
KNK	**Knik Glacier**	**79.70**	**22**	P	**P**	**18 37 29.8**	**-0.4**
	baz=231						
CAST	**Castle Rocks**	**79.74**	**20**	P	**P**	**18 37 28.5**	**-1.8**
CAST	**Castle Rocks**	**79.74**	**20**	P	**P**	**18 37 29.6**	**-0.7**
	baz=228						
RAMN	**Ramite**	**79.87**	**299**	*e*P	**P**	**18 37 32.1**	**-0.1**
CHUM	**Lake Minchumin**	**79.98**	**19**	P	**P**	**18 37 31.6**	**+0.1**
	baz=227						
SML	**Sawmill**	**80.00**	**22**	P	**P**	**18 37 31.8**	**0.0**
	baz=231						
RDOG	**Red Dog Mine**	**80.20**	**13**	P	**P**	**18 37 33.7**	**+1.0**
RDOG				IAmb	IAmb	18 37 36.2	
	comp=Z,24nm,1.4s						
RDOG	**Red Dog Mine**	**80.20**	**13**	P	**P**	**18 37 33.1**	**+0.3**
	baz=216						
M23K	**Glacier View**	**80.21**	**22**	P	**P**	**18 37 32.0**	**-0.9**
	baz=232						
KTH	**Kantishna Hill**	**80.22**	**20**	P	**P**	**18 37 32.0**	**-1.0**
TRF	**Thorofare Moun**	**80.36**	**20**	P	**P**	**18 37 32.5**	**-1.4**
TRF	**Thorofare Moun**	**80.36**	**20**	P	**P**	**18 37 33.4**	**-0.5**
	baz=229						
SCM	**Sheep Creek Mo**	**80.39**	**22**	P	**P**	**18 37 34.7**	**+0.8**
	baz=232						
JIRN	**Jiri**	**80.40**	**300**	*e*P	**P**	**18 37 34.8**	**-0.4**
BPAW	**Bear Paw Mtn.**	**80.56**	**19**	P	**P**	**18 37 34.5**	**-0.2**
	baz=228						
GUN	**Gumba**	**80.73**	**300**	*e*P	**P**	**18 37 36.1**	**-0.8**
	comp=Z,34nm,1.0s						
I21K	**Tanana**	**80.97**	**18**	P	**P**	**18 37 36.7**	**-0.1**
I21K				IAmb	IAmb	18 37 40.6	
	comp=Z,23nm,1.6s						
I21K	**Tanana**	**80.97**	**18**	P	**P**	**18 37 36.9**	**+0.1**
	baz=227						
M24K	**Tolsona, Glenn**	**80.99**	**22**	P	**P**	**18 37 37.5**	**+0.3**
	baz=233						
IMAR	**Indian Mountai**	**80.99**	**17**	P	**P**	**18 37 36.4**	**-0.6**
MCK	**McKinley**	**81.01**	**20**	P	**P**	**18 37 36.5**	**-0.6**
MCK	**McKinley**	**81.01**	**20**	P	**P**	**18 37 36.5**	**-0.6**
MCK				pmax	pmax		
	comp=Z,35nm,1.0s						
MCK	**McKinley**	**81.01**	**20**	P	**P**	**18 37 36.2**	**-0.9**
	baz=230,SNR=12						
H21K	**Melozitna Rive**	**81.05**	**18**	P	**P**	**18 37 37.5**	**+0.2**
	baz=226						
PKI	**Pulchoki**	**81.05**	**300**	*e*P	**P**	**18 37 38.1**	**-0.5**
	comp=Z,31nm,1.1s						
PKIN	**Phulchoki**	**81.07**	**300**	*e*P	**P**	**18 37 38.0**	**-0.6**
BWN	**Browne**	**81.11**	**20**	P	**P**	**18 37 37.3**	**-0.3**
BWN				IAmb	IAmb	18 37 39.7	
	comp=Z,30nm,1.1s						
KKN	**Kakani**	**81.22**	**300**	*e*P	**P**	**18 37 38.5**	**-0.8**
MLY	**Manley**	**81.26**	**19**	P	**P**	**18 37 37.8**	**-0.7**
MLY	**Manley**	**81.26**	**19**	P	**P**	**18 37 37.6**	**-0.9**
	baz=228,SNR=6.8						
DMN	**Daman**	**81.32**	**300**	*e*P	**P**	**18 37 39.3**	**-0.6**
PALK	**Pallekele**	**81.40**	**279**	P	**P**	**18 37 39.0**	**-1.3**
PALK				IAmb	IAmb	18 37 44.1	
	comp=Z,26nm,1.4s						
PALK	**Pallekele**	**81.40**	**279**	P	**P**	**18 37 39.0**	**-1.3**
PALK				pmax	pmax		
	comp=Z,26nm,1.4s						
G21K	**Allakaket**	**81.44**	**17**	P	**P**	**18 37 39.3**	**-0.1**
	baz=226						
NEA2	**Nenana**	**81.51**	**20**	P	**P**	**18 37 38.5**	**-1.3**
NEA2				IAmb	IAmb	18 37 41.5	
	comp=Z,17nm,1.2s						
NEA2	**Nenana**	**81.51**	**20**	P	**P**	**18 37 39.2**	**-0.6**
	baz=230,SNR=8.3						
H22K	**Ishtalitna Cre**	**81.64**	**18**	P	**P**	**18 37 40.6**	**+0.1**
	baz=228						
WRH	**Wood River Hil**	**81.76**	**20**	P	**P**	**18 37 40.5**	**-0.6**
WRH				IAmb	IAmb	18 37 43.4	
	comp=Z,19nm,1.3s						
I23K	**Minto, Yukon-K**	**81.78**	**19**	P	**P**	**18 37 40.3**	**-0.8**
	baz=230						
MCARA	**McCarthy VSAT**	**81.79**	**24**	P	**P**	**18 37 40.3**	**-1.0**
	baz=236						
GKN	**Gorkha**	**81.82**	**300**	*e*P	**P**	**18 37 41.3**	**-1.1**
	comp=Z,54nm,0.9s						
QSPA	**South Pole Qui**	**81.85**	**180**	P	**P**	**18 37 41.4**	**-0.4**
	comp=Z,5.7nm,0.8s,baz=355,slow=1.6,SNR=17						
	comp=Z,5.7nm,0.8s						
F21K	**Alatna River**	**81.94**	**16**	P	**P**	**18 37 41.4**	**-0.6**
	baz=226						
CCB	**Clear Creek Bu**	**81.97**	**20**	P	**P**	**18 37 39.7**	**-2.4**
MDM	**Murphy Dome**	**82.03**	**19**	P	**P**	**18 37 41.4**	**-1.1**
MDM				IAmb	IAmb	18 37 44.2	
	comp=Z,21nm,1.1s						
TCOL	**CIGO, UAF Yank**	**82.09**	**20**	P	**P**	**18 37 41.8**	**-1.0**
TCOL				IAmb	IAmb	18 37 44.4	
	comp=Z,19nm,0.8s						
TCOL	**CIGO, UAF Yank**	**82.09**	**20**	P	**P**	**18 37 42.7**	**-0.1**
	baz=231						
COLA	**College**	**82.10**	**20**	P	**P**	**18 37 41.8**	**-1.0**
COLA				IAmb	IAmb	18 37 44.9	
	comp=Z,23nm,1.0s						
COLA	**College**	**82.10**	**20**	P	**P**	**18 37 43.6**	**+0.8**
COLA	**College**	**82.10**	**20**	*i* P	**P**	**18 37 42.3**	**-0.5**
COLA				pmax	pmax		
	comp=Z,24nm,1.0s						
COLA	**College**	**82.10**	**20**	P	**P**	**18 37 42.6**	**-0.2**
	baz=231						
HDA	**Harding Lake**	**82.11**	**20**	P	**P**	**18 37 42.1**	**-0.8**
HDA				IAmb	IAmb	18 37 45.6	
	comp=Z,22nm,1.1s						
HDA	**Harding Lake**	**82.11**	**20**	P	**P**	**18 37 42.9**	**0.0**
	baz=232,SNR=8.1						
K24K	**Donnelly Dome**	**82.15**	**21**	P	**P**	**18 37 44.0**	**+0.8**
	baz=233						
H23K	**Yukon River**	**82.16**	**18**	P	**P**	**18 37 43.6**	**+0.4**
	baz=230						
PINM	**Pinnacle**	**82.24**	**26**	P	**P**	**18 37 43.4**	**-0.4**
	baz=239						
CTG	**Chitna Glacier**	**82.24**	**25**	P	**P**	**18 37 43.0**	**-0.9**
	baz=238						
G22K	**Bettles**	**82.30**	**17**	P	**P**	**18 37 43.5**	**-0.3**
	baz=228						
IL31		**82.36**	**20**	P	**P**	**18 37 42.6**	**-1.5**
IL31				IAmb	IAmb	18 37 47.1	
	comp=Z,21nm,1.2s						
ILAR	**Eielson Array**	**82.36**	**20**	P	**P**	**18 37 42.0**	**-2.2**
	comp=Z,12nm,1.1s,baz=257,slow=5.0,SNR=41						
ILAR				LR	LR	19 13 32.2	
	comp=Z,245nm,18.1s,baz=224,slow=35						
	comp=Z,12nm,1.1s						
ILAR	**Eielson Array**	**82.36**	**20**	P	**P**	**18 37 43.6**	**-0.6**
ILAR	**Eielson Array**	**82.36**	**20**	P	**P**	**18 37 43.6**	**-0.6**
M26K	**Nabesna, AK**	**82.37**	**23**	P	**P**	**18 37 44.2**	**-0.2**
	baz=236						
TIXI	**Tiksi**	**82.38**	**350**	P	**P**	**18 37 42.0**	**-2.1**
TIXI	**Tiksi**	**82.38**	**350**	*i* P	**P**	**18 37 43.0**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,16nm,1.1s						
POKR	**Poker Plat Res**	**82.39**	**20**	P	**P**	**18 37 44.2**	**-0.2**
POKR	**Poker Plat Res**	**82.39**	**20**	P	**P**	**18 37 44.8**	**+0.4**
	baz=232						
PNL	**Peninsula**	**82.39**	**26**	P	**P**	**18 37 44.4**	**-0.2**
	baz=240						
RIDG	**Independent Ri**	**82.45**	**21**	P	**P**	**18 37 45.0**	**+0.2**
RIDG	**Independent Ri**	**82.45**	**21**	P	**P**	**18 37 45.0**	**+0.2**
	baz=234,SNR=7.2						
F22K	**John River**	**82.50**	**16**	P	**P**	**18 37 44.8**	**-0.1**
	baz=227						
L26K	**Log Cabin Wild**	**82.59**	**22**	P	**P**	**18 37 47.3**	**+1.8**
L26K	**Log Cabin Wild**	**82.59**	**22**	P	**P**	**18 37 46.4**	**+0.9**
	baz=236						
G23K	**Bananza Creek**	**82.59**	**18**	P	**P**	**18 37 46.7**	**+1.3**
	baz=229						
O28M	**Mount Upton**	**82.62**	**25**	P	**P**	**18 37 46.7**	**+0.7**
	baz=239						
DANN	**Dangsing**	**82.66**	**300**	*e*P	**P**	**18 37 45.6**	**-1.4**
KOLN	**Koldanda**	**82.66**	**299**	*e*P	**P**	**18 37 44.6**	**-2.3**
DOT	**Dot Lake**	**82.68**	**22**	P	**P**	**18 37 46.2**	**+0.2**
DOT				IAmb	IAmb	18 37 48.5	
	comp=Z,16nm,1.1s						
H24K	**Noodor Dome**	**82.69**	**19**	P	**P**	**18 37 47.4**	**+1.4**
H24K				IAmb	IAmb	18 38 27.7	
	comp=Z,30nm,1.9s						
H24K	**Noodor Dome**	**82.69**	**19**	P	**P**	**18 37 46.2**	**+0.2**
	baz=231						
M27K	**Edge Creek, AK**	**82.78**	**23**	P	**P**	**18 37 47.6**	**+1.0**
M27K	**Edge Creek, AK**	**82.78**	**23**	P	**P**	**18 37 48.0**	**+1.3**
	baz=237						
SCRK	**Sand Creek**	**82.90**	**21**	P	**P**	**18 37 46.4**	**-0.8**
SCRK				IAmb	IAmb	18 37 49.9	
	comp=Z,14nm,1.0s						
SCRK	**Sand Creek**	**82.90**	**21**	P	**P**	**18 37 47.4**	**+0.2**
	baz=235,SNR=9.8						
YUK3	**Moose Creek**	**83.03**	**24**	P	**P**	**18 37 48.3**	**+0.3**
	baz=238						
E22K	**Anaktuvuk Pass**	**83.03**	**16**	P	**P**	**18 37 48.6**	**+0.9**
	baz=227						
YUK8	**Steele Glacier**	**83.06**	**25**	P	**P**	**18 37 48.8**	**+0.5**
	baz=239						
O29M	**Mount Kennedy**	**83.07**	**26**	P	**P**	**18 37 48.2**	**0.0**
	baz=240						
L27K	**Beaver Creek,**	**83.19**	**23**	P	**P**	**18 37 50.1**	**+1.5**
	baz=237						
BCAR	**Beaver Creek A**	**83.20**	**23**	P	**P**	**18 37 49.2**	**+0.5**
BVCY	**Beaver Creek**	**83.21**	**23**	P	**P**	**18 37 49.3**	**+0.6**
	baz=238						
PYUN	**Piuthan**	**83.26**	**300**	*e*P	**P**	**18 37 48.6**	**-1.4**
	comp=Z,29nm,1.1s						
PRP	**Porcupine Dome**	**83.27**	**20**	P	**P**	**18 37 49.4**	**+0.2**
	baz=233						
G24K	**Hadweenzic Riv**	**83.36**	**18**	P	**P**	**18 37 50.8**	**+1.4**
	baz=232						
R31K	**City Hall, Gus**	**83.44**	**28**	P	**P**	**18 37 51.0**	**+1.1**
	baz=243						
CRAG	**Craig**	**83.45**	**32**	P	**P**	**18 37 50.3**	**+0.3**
	baz=246						
YUK4	**Talbot Arm**	**83.56**	**25**	P	**P**	**18 37 52.1**	**+1.4**
	baz=240,SNR=6.4						
E23K	**Chandalar**	**83.60**	**17**	P	**P**	**18 37 52.5**	**+1.8**
	baz=229						
K27K	**Chicken**	**83.62**	**22**	P	**P**	**18 37 52.4**	**+1.6**
	baz=237						
WMQ	**Urumqi**	**83.68**	**316**	*e*P	**P**	**18 37 53.1**	**+1.5**
WMQ				pP	pP	18 37 59.9	-2.1
WMQ				sP	sP	18 38 09.8	+4.0
WMQ				pmax	pmax		
	comp=Z,16nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,270nm,3.7s						
WMQ				LR	LR		
	comp=Z,470nm,20.1s						
WMQ				LR	LR		
	comp=Z,510nm,20.1s						
WMQ				LR	LR		
	comp=Z,620nm,24.1s						
P30M	**Million Dollar**	**83.69**	**26**	P	**P**	**18 37 53.0**	**+1.7**
	baz=242						
U33K	**Whale Pass**	**83.72**	**31**	P	**P**	**18 37 52.3**	**+0.9**
	baz=246						
F24K	**Squaw Lake**	**83.75**	**18**	P	**P**	**18 37 52.9**	**+1.5**
	baz=231						
HYT	**Haines Junctio**	**83.79**	**26**	P	**P**	**18 37 52.6**	**+0.8**
	baz=241						
G25K	**Bearman Lake**	**83.83**	**19**	P	**P**	**18 37 52.2**	**+0.4**
	baz=233						
D23K	**Nanushuk River**	**83.91**	**16**	P	**P**	**18 37 52.7**	**+0.6**
	baz=228						
E24K	**Your Creek**	**83.93**	**17**	P	**P**	**18 37 53.4**	**+1.0**
	baz=230						
I26K	**Coal Creek Min**	**83.95**	**20**	P	**P**	**18 37 53.3**	**+0.8**
I26K				IAmb	IAmb	18 37 56.0	
	comp=Z,23nm,1.3s						
I26K	**Coal Creek Min**	**83.95**	**20**	P	**P**	**18 37 53.8**	**+1.3**
	baz=236						
SKAG	**Skagway**	**84.11**	**27**	P	**P**	**18 37 54.6**	**+1.3**
	baz=243						
A21K	**Barrow**	**84.13**	**13**	P	**P**	**18 37 53.9**	**+0.7**
A21K	**Barrow**	**84.13**	**13**	P	**P**	**18 37 55.2**	**+2.0**
	baz=222						
EGAK	**Eagle**	**84.36**	**21**	P	**P**	**18 37 54.4**	**-0.1**
EGAK				IAmb	IAmb	18 37 58.1	
	comp=Z,13nm,0.9s						
EGAK	**Eagle**	**84.36**	**21**	P	**P**	**18 37 54.4**	**-0.1**
	baz=238,SNR=8.0						
O30N	**Mendenhall**	**84.37**	**26**	P	**P**	**18 37 54.5**	**-0.2**
	baz=242						
F25K	**Christian Rive**	**84.48**	**18**	P	**P**	**18 37 55.7**	**+0.5**
	baz=233						
DAWY	**Dawson**	**84.64**	**22**	P	**P**	**18 37 56.6**	**+0.5**
DAWY				IAmb	IAmb	18 41 10.8	
	comp=Z,30nm,1.9s						
DAWY	**Dawson**	**84.64**	**22**	P	**P**	**18 37 56.1**	**+0.1**
	baz=239						
L29M	**L29M**	**84.65**	**24**	P	**P**	**18 37 57.0**	**+1.0**
	baz=240						
I27K	**Kandik River**	**84.65**	**21**	P	**P**	**18 37 56.4**	**+0.4**
	baz=237						
G26K	**Porcupine Rive**	**84.68**	**19**	P	**P**	**18 37 56.9**	**+0.9**
	baz=235						
BMAR	**Burnt Mountain**	**84.71**	**18**	P	**P**	**18 37 57.1**	**+0.8**
E25K	**Arctic Village**	**84.82**	**18**	P	**P**	**18 37 57.9**	**+1.0**
	baz=233						
N31M	**Braeburn, Yuko**	**84.84**	**26**	P	**P**	**18 37 59.0**	**+1.9**
N31M	**Braeburn, Yuko**	**84.84**	**26**	P	**P**	**18 37 57.4**	**+0.4**
	baz=243,SNR=5.4						
P32M	**Atlin**	**84.91**	**28**	P	**P**	**18 37 58.0**	**+0.5**
	baz=245						
K02D	**Willamette Mer**	**84.92**	**46**	P	**P**	**18 37 58.9**	**+1.0**
C24K	**Franklin Bluff**	**84.93**	**16**	P	**P**	**18 37 57.6**	**+0.4**
	baz=230						
BBB	**Bella Bella**	**84.96**	**36**	LR	LR	19 09 07.2	
	comp=Z,349nm,19.8s,baz=263,slow=31						
F26K	**Sheenjek River**	**85.00**	**18**	P	**P**	**18 37 58.5**	**+0.8**
	baz=234						
H27K	**Steamboat Moun**	**85.03**	**20**	P	**P**	**18 37 58.9**	**+1.0**
	baz=237						
HYB	**Hyderabad**	**85.18**	**288**	*e*P	**P**	**18 37 58.5**	**-1.2**
K29M	**Barlow Dome**	**85.25**	**23**	P	**P**	**18 38 00.5**	**+1.4**
	baz=241						
G27K	**Doyon Strip**	**85.30**	**20**	P	**P**	**18 37 59.4**	**+0.1**
	baz=237						
D25K	**Kavik River**	**85.32**	**16**	P	**P**	**18 37 60.0**	**+0.7**
	baz=232						
YBH	**Yreka Blue Hor**	**85.34**	**47**	LR	LR	19 07 54.6	
	comp=Z,346nm,22.0s,baz=273,slow=30						
YBH	**Yreka Blue Hor**	**85.34**	**47**	P	**P**	**18 38 00.6**	**+0.5**
YBH				IAmb	IAmb	18 38 04.0	
	comp=Z,16nm,1.1s						
YBH	**Yreka Blue Hor**	**85.34**	**47**	P	**P**	**18 38 00.6**	**+0.5**
YBH				pmax	pmax		
	comp=Z,16nm,1.2s						
HUMO	**Hull Mountain**	**85.40**	**46**	P	**P**	**18 38 01.1**	**+0.8**
HUMO				IAmb	IAmb	18 38 04.2	
	comp=Z,20nm,1.1s						
S34M	**Telegraph Cree**	**85.45**	**30**	P	**P**	**18 38 00.1**	**0.0**
	baz=247						
T35M	**Bob Quinn**	**85.53**	**31**	P	**P**	**18 38 00.8**	**+0.2**
	baz=248						
P33M	**Teslin, Yukon**	**85.58**	**27**	P	**P**	**18 38 02.1**	**+1.3**
	baz=246						
MAW	**Mawson**	**85.59**	**202**	LR	LR	19 11 27.6	
	comp=Z,400nm,21.4s,baz=90,slow=32						
DGZ	**Jazzator, Alta**	**85.64**	**321**	*i* P	**P**	**18 37 59.4**	**-2.1**
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
I29M	**Ogilvie Camp,**	**85.70**	**22**	P	**P**	**18 38 01.9**	**+0.6**
I29M				IAmb	IAmb	18 38 04.9	
	comp=Z,18nm,1.2s						
I29M	**Ogilvie Camp,**	**85.70**	**22**	P	**P**	**18 38 01.9**	**+0.6**
	baz=240						
M31M	**Drury Creek, Y**	**85.75**	**25**	P	**P**	**18 38 01.4**	**-0.2**
M31M				IAmb	IAmb	18 38 04.4	
	comp=Z,15nm,1.1s						
M31M	**Drury Creek, Y**	**85.75**	**25**	P	**P**	**18 38 01.8**	**+0.2**
	baz=244,SNR=7.0						

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L04D   Klamath Falls     85.76  46    P        P        18 38 03.6 +1.4
N32M   Quiet Lake        85.86  26    P        P        18 38 03.0 +0.9
       baz=245
SMMC   Simmler           85.86  54    P        P        18 38 03.7 +0.9
       baz=257
SBC    Santa Barbara     85.90  55    P        P        18 38 03.9 +1.0
       baz=257
PKM    Mcpherson Peak    85.91  54    P        P        18 38 03.5 +0.3
       baz=257
E27K   Coleen River      86.08  18    P        P        18 38 04.3 +1.2
       baz=237
C26K   Camden Bay        86.09  16    P        P        18 38 04.6 +1.6
       baz=234
J04A   Umpqua Nationa    86.16  46    P        P        18 38 05.3 +1.0
DLBC   Dease Lake        86.19  29    LR       LR       19 12 08.8
       comp=Z,342nm,18.3s,baz=271,slow=32
DLBC   Dease Lake        86.19  29    P        P        18 38 04.4 +0.5
       baz=248
FARO   Faro, Yukon       86.20  25    P        P        18 38 05.3 +1.5
FARO                                  IAmb     IAmb     18 38 07.2
       comp=Z,18nm,1.2s
FARO   Faro, Yukon       86.20  25    P        P        18 38 04.2 +0.4
       baz=245,SNR=5.2
C27K   Jago River        86.26  17    P        P        18 38 04.7 +0.8
       baz=235
H04A   Detroit Lake      86.48  44    P        P        18 38 07.6 +2.0
H04A                                  IAmb     IAmb     18 38 08.7
       comp=Z,24nm,1.3s
EPYK   Eagle Plains      86.77  21    P        P        18 38 05.7  -0.8
EPYK                                  IAmb     IAmb     18 38 09.7
       comp=Z,17nm,1.0s
EPYK   Eagle Plains      86.77  21    P        P        18 38 07.3 +0.7
       baz=242,SNR=8.0
J05D   Fort Rock, OR     86.79  46    P        P        18 38 07.7 +0.4
K05A   Summer Lake       86.90  46    P        P        18 38 09.2 +1.3
I05D   Terrebonne, OR    86.98  45    P        P        18 38 10.0 +2.0
WAKR   Walker            87.00  51    P        P        18 38 10.7 +2.2
MDPB   Devils Postpil    87.09  52    P        P        18 38 09.3 +0.2
PINE   Pine Mountain     87.12  45    P        P        18 38 10.5 +1.5
MOD    Modoc Plateau     87.13  47    P        P        18 38 09.9 +0.9
MOD                                   IAmb     IAmb     18 38 13.0
       comp=Z,15nm,1.2s
OMMB   Old Mammoth Mi    87.15  52    P        P        18 38 09.8 +0.4
ISA    Isabella, Lake    87.15  54    P        P        18 38 09.3 +0.2
ISA                                   IAmb     IAmb     18 38 13.7
       comp=Z,13nm,1.4s
ISA    Isabella, Lake    87.15  54    P        P        18 38 09.3 +0.2
ISA                                   pmax     pmax
       comp=Z,13nm,1.4s
G30M   tAoh Zraii Nji    87.23  21    P        P        18 38 10.1 +1.3
       baz=242
MMPY   Sheldon Lake,     87.25  25    P        P        18 38 10.2 +1.2
       baz=247,SNR=6.4
PAHR   Pah Rah Range     87.31  49    P        P        18 38 11.2 +1.3
PAHR                                  IAmb     IAmb     18 38 14.7
       comp=Z,11nm,1.1s
EDW2   Edwards Air Fo    87.37  54    P        P        18 38 11.2 +1.0
       baz=258,SNR=9.4
BFSC   Mount Baldy Ra    87.52  55    P        P        18 38 12.2 +1.2
       baz=259
CWC    Cottonwood Cre    87.62  53    P        P        18 38 12.8 +1.3
       baz=258
LHV    Little Huntoon    87.67  51    P        P        18 38 12.7 +1.3
LRMC   Laurel Mtn Rad    87.74  54    P        P        18 38 13.6 +1.5
       baz=258,SNR=11
NVAR   Mina Array Bea    87.86  51    P        P        18 38 12.5  -0.2
       comp=Z,2.9nm,0.9s,baz=254,slow=5.9,SNR=14
NVAR                                  LR       LR       19 10 10.0
       comp=Z,477nm,20.4s,baz=263,slow=30
       comp=Z,2.9nm,0.9s
DSP    Deep Springs      87.90  52    P        P        18 38 13.8 +1.3
DSP                                   IAmb     IAmb     18 38 16.9
       comp=Z,13nm,1.2s
NV11   Mina Array Sit    87.97  51    P        P        18 38 13.5 +0.4
NV11                                  IAmb     IAmb     18 38 17.0
       comp=Z,11nm,1.2s
MPMC   Manual Prospec    88.01  53    P        P        18 38 14.8 +1.3
       baz=259,SNR=7.7
LCH    Last Change Ra    88.12  52    P        P        18 38 14.7 +0.8
KVN    Kaiserville       88.14  50    P        P        18 38 14.5 +0.5
KVN                                   IAmb     IAmb     18 39 26.3
       comp=Z,4.6nm,0.6s
KVN    Kaiserville       88.14  50    P        P        18 38 14.5 +0.5
KVN                                   pmax     pmax
       comp=Z,5.0nm,0.6s
MK31   Makanchi Array    88.15 318    P        P        18 38 11.8  -1.8
MK31                                  IAmb     IAmb     18 38 15.8
       comp=Z,12nm,1.4s
MK31   Makanchi Array    88.15 318  i P        P        18 38 12.0  -1.6
MKAR   Makanchi Array    88.15 318    P        P        18 38 12.3  -1.3
       comp=Z,5.2nm,0.7s,baz=97,slow=6.1,SNR=49
       comp=Z,5.2nm,0.7s
MKAR   Makanchi Array    88.15 318    P        P        18 38 11.8  -1.8
I07A   Izee              88.20  45    P        P        18 38 13.8  -0.2
I07A                                  IAmb     IAmb     18 38 18.2
       comp=Z,16nm,1.3s
MONP2  Monument Peak     88.27  57    P        P        18 38 16.4 +1.6
       baz=259
F31M   Tsiigehtchic      88.30  21    P        P        18 38 15.3 +1.5
       baz=244
MAKZ   Makanchi          88.36 318    P        P        18 38 12.8  -1.7
MAKZ                                  IAmb     IAmb     18 38 16.8
       comp=Z,12nm,1.1s
MAKZ   Makanchi          88.36 318    P        P        18 38 12.9  -1.7
MAKZ                                  pmax     pmax
       comp=Z,12nm,1.2s
PFO    Pinyon Flats O    88.37  56    LR       LR       19 09 53.5
       comp=Z,1µm,20.6s,baz=274,slow=30
PFO    Pinyon Flats O    88.37  56    P        P        18 38 16.1 +1.0
       baz=259
TPFO   Pinon Flats       88.38  56    P        P        18 38 15.5 +0.3
       baz=259
GSC    Goldstone, Bar    88.41  54    P        P        18 38 16.5 +1.3
       baz=259
MZP    Montezuma Peak    88.42  52    P        P        18 38 16.5 +1.1
ZALV   Zalesovo Beam     88.43 325    P        P        18 38 11.6  -3.1
       comp=Z,1.8nm,0.8s,baz=106,slow=4.7,SNR=7.0
       comp=Z,1.8nm,0.8s
ZALV   Zalesovo Beam     88.43 325    P        P        18 38 12.2  -2.4
ZALV   Zalesovo Beam     88.43 325  i P        P        18 38 13.0  -1.7
ZALV                                  pmax     pmax
       comp=Z,2.0nm,0.8s
WVOR   Wild Horse Val    88.46  47    P        P        18 38 17.1 +1.8
WVOR                                  IAmb     IAmb     18 38 19.5
       comp=Z,12nm,1.1s
WVOR   Wild Horse Val    88.46  47    P        P        18 38 17.1 +1.8
WVOR                                  pmax     pmax
       comp=Z,12nm,1.1s
QSM    Queen of Sheba    88.49  54    P        P        18 38 16.6 +1.2
TPH    Tonopah           88.62  51    P        P        18 38 17.5 +1.2
TPH    Tonopah           88.62  51    P        P        18 38 17.5 +1.2
TPH                                   pmax     pmax
       comp=Z,26nm,1.1s
INK    Inuvik            88.75  20    LR       LR       19 14 07.3
       comp=Z,373nm,20.1s,baz=244,slow=33
INK    Inuvik            88.75  20    P        P        18 38 17.1 +1.2
INK    Inuvik            88.75  20    P        P        18 38 17.1 +1.2
INK                                   pmax     pmax
       comp=Z,8.0nm,1.2s
INK    Inuvik            88.75  20    P        P        18 38 17.1 +1.2
       baz=244
J08A   Circle Bar Ran    88.77  46    P        P        18 38 17.9 +1.2
J08A                                  IAmb     IAmb     18 38 21.5
       comp=Z,13nm,1.1s
SWSC   Sam W. Stewart    88.79  57    P        P        18 38 18.6 +1.7
       baz=260
BELC   Belle Mtn. Jos    88.82  56    P        P        18 38 19.0 +1.7
       baz=260
BC3    Big Chuckawall    89.21  56    P        P        18 38 21.5 +2.5
       baz=260,SNR=7.5
GMRC   Granite Mounta    89.24  55    P        P        18 38 20.5 +1.3
       baz=260
SFX    San Felipe        89.25  59    P        P        18 38 19.1   0.0
IRM    Iron Mountain     89.55  56    P        P        18 38 22.8 +2.3
       baz=260,SNR=12
GLA    Glamis            89.62  57    P        P        18 38 22.0 +1.1
GLA                                   IAmb     IAmb     18 38 25.3
       comp=Z,12nm,0.9s
GLA    Glamis            89.62  57    P        P        18 38 22.0 +1.1
GLA                                   pmax     pmax
       comp=Z,12nm,1.0s
GLA    Glamis            89.62  57    P        P        18 38 23.4 +2.6
       baz=260,SNR=5.3
BMO    Blue Mountains    89.90  45    P        P        18 38 23.4 +1.4
BMO                                   IAmb     IAmb     18 38 26.4
       comp=Z,21nm,1.6s
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BMO    Blue Mountains    89.90  45    P        P        18 38 23.4 +1.4
BMO                                   pmax     pmax
       comp=Z,21nm,1.6s
SHPR   Sheep Range       89.94  53    P        P        18 38 24.6 +2.2
BLYC   Blythe            89.99  56    P        P        18 38 23.2 +0.7
BLYC                                  IAmb     IAmb     18 38 26.0
       comp=Z,14nm,1.2s
V12A   Nelson            90.06  54    P        P        18 38 22.6  -0.3
PRN    Pahroc Range      90.19  52    P        P        18 38 24.1 +0.6
PRN                                   IAmb     IAmb     18 38 28.1
       comp=Z,11nm,1.0s
PDMCI  Parker Dam,Lak    90.39  56    P        P        18 38 26.6 +2.2
       baz=261
113A   Mohawk Valley,    90.45  57    P        P        18 38 25.9 +1.2
113A                                  IAmb     IAmb     18 38 29.2
       comp=Z,19nm,1.6s
PIX    Pinacate          90.51  58    P        P        18 38 25.7 +0.7
ELK    Elko              90.63  49    LR       LR       19 13 03.1
       comp=Z,185nm,20.6s,baz=246,slow=32
ELK    Elko              90.63  49    P        P        18 38 25.4  -0.2
ELK                                   IAmb     IAmb     18 39 11.1
       comp=Z,4.6nm,0.6s
ELK    Elko              90.63  49    P        P        18 38 25.5  -0.2
ELK                                   pmax     pmax
       comp=Z,5.0nm,0.6s
Q12A   Willow Creek R    90.64  51    P        P        18 38 27.4 +1.7
NEW    Newport           90.70  41    LR       LR       19 10 46.9
       comp=Z,469nm,21.7s,baz=258,slow=30
W13A   Hualapai Mount    90.73  55    P        P        18 38 26.9 +0.7
PLID   Pearl Lake        90.86  45    P        P        18 38 26.7 +0.1
PLID                                  IAmb     IAmb     18 38 29.2
       comp=Z,9.3nm,1.0s
SPR3   Spring Creek 3    91.02  51    P        P        18 38 28.2 +0.6
SPR3                                  IAmb     IAmb     18 38 32.8
       comp=Z,10nm,1.0s
214A   Organ Pipe Nat    91.12  58    P        P        18 38 30.4 +2.5
214A                                  IAmb     IAmb     18 38 31.8
       comp=Z,13nm,1.4s
214A   Organ Pipe Nat    91.12  58    P        P        18 38 30.5 +2.7
       baz=261
KSH    Kashi             91.22 310    P        P        18 38 29.3 +1.0
KSH                                   sP       sP       18 38 46.9 +4.4
KSH                                   pmax     pmax
       comp=Z,2.0nm,0.9s
KSH                                   LR       LR
       comp=Z,300nm,18.6s
KSH                                   LR       LR
       comp=Z,550nm,20.6s
KSH                                   LR       LR
       comp=Z,450nm,19.4s
KURK   Kurchatov         91.37 321    P        P        18 38 28.8 +0.2
KURK                                  IAmb     IAmb     18 39 12.8
       comp=Z,19nm,1.8s
KURK   Kurchatov         91.37 321  i P        P        18 38 28.6 +0.1
KURK                                  pmax     pmax
       comp=Z,7.0nm,1.3s
CCUT   Cedar City        91.54  52    P        P        18 38 31.1 +1.2
CCUT                                  IAmb     IAmb     18 38 33.7
       comp=Z,13nm,1.1s
LCMT   Little Creek M    91.55  53    P        P        18 38 32.3 +2.4
LCMT                                  IAmb     IAmb     18 38 33.4
       comp=Z,12nm,1.1s
HLID   Hailey            91.71  46    P        P        18 38 32.1 +1.5
HLID                                  IAmb     IAmb     18 38 35.0
       comp=Z,8.6nm,1.0s
HLID   Hailey            91.71  46    P        P        18 38 32.7 +2.2
       baz=261,SNR=10
NRIK   Noril'sk          91.76 340    P        P        18 38 28.7  -1.2
       comp=Z,2.3nm,0.4s,baz=97,slow=7.4,SNR=4.2
NRIK                                  LR       LR       19 18 29.9
       comp=Z,479nm,21.5s,baz=134,slow=35
       comp=Z,2.3nm,0.4s
NRIK   Noril'sk          91.76 340    P        P        18 38 29.5  -0.4
NRIK                                  IAmb     IAmb     18 38 37.1
       comp=Z,10.0nm,1.2s
NRIK   Noril'sk          91.76 340  i P        P        18 38 29.3  -0.6
NRIK                                  pmax     pmax
       comp=Z,10.0nm,1.3s
SZCU   Shurtz Canyon     91.76  52    P        P        18 38 32.6 +1.6
SZCU                                  IAmb     IAmb     18 38 35.1
       comp=Z,11nm,1.1s
KNB    Kanab             91.88  53    P        P        18 38 33.2 +1.7
KNB    Kanab             91.88  53    P        P        18 38 33.2 +1.7
KNB                                   pmax     pmax
       comp=Z,21nm,1.2s
LPIG   La Paz            92.18  66    LR       LR       19 14 52.0
       comp=Z,417nm,18.5s,baz=228,slow=32
U15A   North Rim         92.22  54    P        P        18 38 34.2 +1.1
BGU    Big Grassy Mou    92.31  49    P        P        18 38 33.2  -0.1
BGU                                   IAmb     IAmb     18 38 37.0
       comp=Z,7.1nm,1.0s
C36M   Paulatuk          92.33  20    P        P        18 38 33.7 +1.2
C36M                                  IAmb     IAmb     18 41 16.3
       comp=Z,13nm,1.6s
C36M   Paulatuk          92.33  20    P        P        18 38 34.0 +1.4
       baz=253
PKCU   Pink Cliffs       92.35  53    P        P        18 38 35.8 +2.0
DUG    Dugway, Tooele    92.36  50    P        P        18 38 34.2 +0.6
DUG    Dugway, Tooele    92.36  50    P        P        18 38 34.2 +0.6
DUG                                   pmax     pmax
       comp=Z,6.0nm,1.2s
DUG    Dugway, Tooele    92.36  50    P        P        18 38 34.6 +1.0
       baz=262
MTPU   Mount Pierson     92.53  52    P        P        18 38 36.2 +1.5
MTPU                                  IAmb     IAmb     18 38 39.5
       comp=Z,12nm,1.0s
MVU    Marysvale         92.58  52    P        P        18 38 36.8 +2.1
MSU    Marysvale         92.61  52    P        P        18 38 37.4 +2.6
MSU    Marysvale         92.61  52    P        P        18 38 37.4 +2.6
X16A   Lo Mia Camp, P    92.62  56    P        P        18 38 35.9 +0.9
HVU    Hansel Valley     92.63  48    P        P        18 38 35.4 +0.6
HVU    Hansel Valley     92.63  48    P        P        18 38 35.4 +0.6
HVU                                   pmax     pmax
       comp=Z,22nm,1.0s
A36M   Sachs Harbour     92.75  17    P        P        18 38 34.2  -0.2
A36M   Sachs Harbour     92.75  17    P        P        18 38 35.8 +1.4
       baz=252
AAK    Ala-Archa         92.81 312    P        P        18 38 34.2  -1.4
AAK    Ala-Archa         92.81 312    P        P        18 38 34.2  -1.4
AAK                                   pmax     pmax
       comp=Z,4.0nm,1.2s
NLU    North Lily Min    92.89  50    P        P        18 38 37.8 +1.7
NLU                                   IAmb     IAmb     18 38 40.0
       comp=Z,11nm,1.1s
MCMT   McKenzie Canyo    93.02  45    P        P        18 38 38.4 +1.7
MPU    Maple Canyon      93.23  50    P        P        18 38 39.9 +2.2
MPU                                   IAmb     IAmb     18 38 43.0
       comp=Z,14nm,1.3s
CTU    Camp Tracy        93.24  50    P        P        18 38 38.7 +1.0
CTU                                   IAmb     IAmb     18 38 41.8
       comp=Z,12nm,1.2s
DLMT   Dillon            93.27  45    P        P        18 38 37.4  -0.3
LRM    Limekiln Ridge    93.44  44    P        P        18 38 39.6 +1.0
TMUT   Trail Mountain    93.46  51    P        P        18 38 40.4 +1.5
TMUT                                  IAmb     IAmb     18 38 42.5
       comp=Z,8.6nm,1.1s
HWUT   Hardware Ranch    93.50  49    P        P        18 38 38.5  -0.4
HWUT                                  IAmb     IAmb     18 38 41.0
       comp=Z,6.5nm,0.9s
BELA   Belgrano 2        93.69 177    P        P        18 38 37.5  -1.3
BSUT   Blindstream Ca    93.96  50    P        P        18 38 40.9  -0.4
BSUT                                  IAmb     IAmb     18 38 48.4
       comp=Z,13nm,1.3s
BOZ    Bozeman (W)       93.98  45    P        P        18 38 41.8 +0.9
BOZ    Bozeman (W)       93.98  45    P        P        18 38 41.8 +0.9
BOZ                                   pmax     pmax
       comp=Z,5.0nm,1.1s
BOZ    Bozeman (W)       93.98  45    P        P        18 38 43.1 +2.1
       baz=263
MOOW   Moose Ponds       94.37  47    P        P        18 38 43.6 +0.8
H17A   Grant Village     94.57  46    P        P        18 38 43.4  -0.4
H17A                                  IAmb     IAmb     18 41 30.6
       comp=Z,21nm,1.9s
H17A   Grant Village     94.57  46    P        P        18 38 45.1 +1.3
       baz=263
YKA    Yellowknife Ar    94.61  28    P        P        18 38 41.5  -1.7
       comp=Z,5.6nm,1.0s,baz=256,slow=4.5,SNR=36
YKA                                   PKKPbc   PKKPdf   18 55 40.7  -2.7
       comp=Z,0.3nm,0.7s,baz=76,slow=2.5,SNR=4.9
YKA                                   LR       LR       19 15 11.0
       comp=Z,421nm,20.1s,baz=269,slow=32
       comp=Z,5.6nm,1.0s
YKA    Yellowknife Ar    94.61  28    P        P        18 38 42.0  -1.2
YKA    Yellowknife Ar    94.61  28    P        P        18 38 42.0  -1.2
RDMU   Red Mountain      94.87  50    P        P        18 38 46.0 +0.7
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RDMU                                  IAmb     IAmb     18 38 48.9
       comp=Z,7.4nm,1.1s
PV23   Carpenter Ridg    95.06  52    P        P        18 38 47.6 +1.3
PV23                                  IAmb     IAmb     18 38 50.0
       comp=Z,9.2nm,1.0s
PV17   East Wray Mesa    95.08  52    P        P        18 38 45.1  -1.1
PV17                                  IAmb     IAmb     18 39 33.6
       comp=Z,12nm,1.4s
PV20   West Nyswonger    95.08  52    P        P        18 38 46.0  -0.2
PV20                                  IAmb     IAmb     18 38 49.4
       comp=Z,4.5nm,0.7s
PV21   Cone Mtn., Par    95.10  52    P        P        18 38 45.2  -1.2
PV21                                  IAmb     IAmb     18 40 09.9
       comp=Z,5.3nm,0.5s
BW06   Boulder Array     95.12  48    P        P        18 38 45.7  -0.7
BW06                                  IAmb     IAmb     18 38 48.1
       comp=Z,5.0nm,0.8s
BW06   Boulder Array     95.12  48    P        P        18 38 47.1 +0.7
       baz=264
PD31   Pinedale Array    95.12  48    P        P        18 38 44.8  -1.6
PDAR   Pinedale Array    95.12  48    P        P        18 38 44.9  -1.4
       comp=Z,4.7nm,0.9s,baz=221,slow=2.4,SNR=17
PDAR                                  LR       LR       19 16 29.3
       comp=Z,241nm,19.5s,baz=296,slow=32
       comp=Z,4.7nm,0.9s
PDAR   Pinedale Array    95.12  48    P        P        18 38 44.8  -1.6
KK31   Karatay Array     95.77 313    P        P        18 38 46.7  -2.3
KK31   Karatay Array     95.77 313    P        P        18 38 46.7  -2.3
KK31                                  pmax     pmax
       comp=Z,3.0nm,1.1s
KKAR   Karatay Array     95.77 313    P        P        18 38 47.6  -1.4
KKAR   Karatay Array     95.77 313    P        P        18 38 46.7  -2.3
KKAR   Karatay Array     95.77 313    P        P        18 38 46.7  -2.3
KKAR                                  pmax     pmax
       comp=Z,3.0nm,1.1s
ANMO   Albuquerque       96.76  56    LR       LR       19 16 38.2
       comp=Z,474nm,19.4s,baz=21,slow=32
ANMO   Albuquerque       96.76  56  i P        P        18 38 54.6 +0.7
ANMO                                  pmax     pmax
       comp=Z,2.0nm,1.1s
ANMO   Albuquerque       96.76  56    P        P        18 38 56.1 +2.1
       baz=265
BRVK   Borovoye          96.80 323  i P        P        18 38 53.1  -0.3
BRVK                                  pmax     pmax
       comp=Z,5.0nm,1.0s
TXAR   Lajitas Array     98.65  62    P        P        18 39 00.0  -2.4
       comp=Z,0.2nm,0.5s,baz=238,slow=5.1,SNR=2.2
TXAR                                  LR       LR       19 15 36.2
       comp=Z,337nm,21.2s,baz=263,slow=30
       comp=Z,0.2nm,0.5s
RSSD   Black Hills       99.23  47    P        Pdif     18 39 06.0 +1.1
       baz=268
KIV    Kislovodsk       115.80 315  e PKIKP    PKiKP    18 44 01.6  -3.9
KIV                                   pmax     pmax
       comp=Z,2.0nm,1.0s
AKASG  Malin Array Be   121.81 326    PKP      PKPdf    18 44 16.3  -0.4
       comp=Z,0.1nm,0.2s,baz=29,slow=1.5,SNR=1.6
BRTR   Keskin Array B   123.49 313    PKP      PKPdf    18 44 19.0  -1.5
       comp=Z,0.9nm,0.9s,baz=98,slow=2.9,SNR=4.8
BRTR   Keskin Array B   123.49 313    PKIKP    PKPdf    18 44 19.0  -1.5
BOSA   Boshof           123.74 228    PKP      PKPdf    18 44 20.4  -0.9
       comp=Z,1.8nm,0.6s,baz=102,slow=0.8,SNR=5.3
LPAZ   La Paz           125.75 117    PKP      PKPdf    18 44 24.1  -1.9
       comp=Z,1.1nm,0.7s,baz=198,slow=3.2,SNR=2.8
GERES  GERESS Array B   130.94 332    PKP      PKPdf    18 44 31.6  -2.8
       comp=Z,0.2nm,0.5s,baz=45,slow=0.4,SNR=2.0
BFO    Black Forest     133.72 335  i PKIKP    PKPdf    18 44 39.2  -0.3
PBRG   Braganca         144.73 344  e PKP      PKPab    18 44 57.9  -0.6
PGAV   Gavieira, Arco   144.97 346  e PKP      PKPbc    18 44 59.5   0.0
PCAB   Cabril           145.15 345  e PKP      PKPbc    18 44 59.5  -0.5
MVO    Moncorvo         145.40 344  e PKP      PKPbc    18 45 00.5  -0.4
POLO   Lamas de Olo     145.41 345  e PKP      PKPab    18 45 01.2 +0.1
PVRL   Vila Real        145.48 345  e PKP      PKPbc    18 45 00.2  -0.9
ESDC   Sonseca Array    145.79 339    PKPbc    PKPdf    18 45 01.5  -0.2
       comp=Z,9.1nm,1.1s,baz=16,slow=3.2,SNR=22
PVIS   Viseu            146.05 345  e PKP      PKPdf    18 45 02.1   0.0
PCBR   Castelo Branco   146.76 344  e PKP      PKPbc    18 45 04.7  -0.2
PMRV   Marv??o          147.12 343  e PKP      PKPbc    18 45 06.1 +0.1
PESTR  Estremoz         147.69 343  e PKP      PKiKP    18 45 08.9  -0.8
EVO    Evora            148.12 343  e PKP      PKPab    18 45 11.2  -0.4
TORD   Torodi Ar. Bea   158.97 285    PKP      PKPdf    18 45 19.3  -2.4
       comp=Z,2.3nm,1.0s,baz=80,slow=1.4,SNR=7.2
TORD                                  PKPab    PKPab    18 45 56.6  -1.4
       comp=Z,4.3nm,1.0s,baz=81,slow=3.6,SNR=11
```

NEIC ***16*** *18:28:30.7±2.6, 8°.03S±0°.06×160°.9E±0°.1, h10^{km}±1^{km}, mb4.8/40, Error ellipse: s-maj=17.8km s-min=9.1km az=254.0*

IDC ***16*** *18:28:35.4±2.8, 8°.13S×160°.96E, h50^{km}±26^{km}, mb4.1/19, mbtmp4.4/22, ML4.4/3, Error ellipse: s-maj=20.7km s-min=17.5km az=100.0*

ISC 16 18:28:33.9±0.4**, 8°.06S**±0°.06×**160°.94E**±0°.09**, h35^{km}, n100,** σ**1^{s}.33**/96**, mb4.7**/46**, 1C, Bougainville-Solomon Islands region**

```
Code   Station Name        Δ°   AZ°    Phase ID          Time      Res
                                      Op       ISC      h  m  s    ISC
HNR    Honiara            1.68 216    P        Pn       18 29 01.9 +1.1
       15µm,0.4s,baz=191,slow=1.6,SNR=1.6
HNR                                   S        Sn       18 29 25.8 +4.7
       70µm,0.6s,baz=40,slow=17,SNR=3.4
HNR    Honiara            1.68 216    Pn       Pn       18 29 00.5  -0.3
KOUNC  Koumac, New Ca    12.83 166             Pn       18 31 32.0  -1.9
DZM    Mont Dzumac       14.90 160    P        Pn       18 32 02.6 +0.4
       0.3nm,0.3s,baz=356,slow=18,SNR=1.3
       10nm,0.9s
COEN   Coen              18.39 250             P        18 32 45.5  -0.6
CTA    Charters Tower    18.58 228    P        Pn       18 32 49.2 +0.7
       0.5nm,0.3s,baz=33,slow=9.6,SNR=3.6
       15nm,0.9s
CTAO   Charters Tower    18.58 228             P        18 32 46.6  -1.5
MSVF   Nonsavu           19.23 122    P        Pn       18 32 56.6 +0.2
       0.3nm,0.3s,baz=352,slow=23,SNR=1.6
       3.3nm,0.7s
EIDS   Eidsvold          19.62 207    P        P        18 32 59.7 +0.3
EIDS                                  IAmb     IAmb     18 33 01.8
       comp=Z,54nm,0.8s
ARMA   Armidale          23.89 200    P        P        18 33 44.5  -0.1
H11S2  WAKE ISLAND Hy    26.99  12    T        T        19 02 24.2
       baz=194
H11S3  WAKE ISLAND Hy    26.99  12    T        T        19 02 24.2
       baz=194
H11S1  WAKE ISLAND Hy    27.00  12    T        T        19 02 27.2
       baz=194
H11N1  WAKE ISLAND Hy    28.21  12    T        T        19 03 58.7
       baz=191
H11N3  WAKE ISLAND Hy    28.22  12    T        T        19 03 59.2
       baz=191
WB0    Warramunga Arr    28.23 243    P        P        18 34 21.9  -1.9
H11N2  WAKE ISLAND Hy    28.23  12    T        T        19 03 52.7
       baz=191
WRAB   Tennant Creek     28.32 243    P        P        18 34 22.9  -1.7
WB2    Warramunga Arr    28.33 243    P        P        18 34 21.8  -2.8
WRA    Warramunga Arr    28.34 243    P        P        18 34 23.7  -1.0
       comp=Z,15nm,0.8s,baz=70,slow=9.0,SNR=11
WRA                                   PcP      PcP      18 37 37.7 +0.5
       comp=Z,1.6nm,0.8s,baz=77,slow=2.1,SNR=4.8
       comp=Z,15nm,0.8s
WRA    Warramunga Arr    28.34 243    P        P        18 34 22.2  -2.6
STKA   Stephens Creek    29.76 215    P        P        18 34 35.4  -1.8
       comp=Z,4.2nm,0.8s,baz=68,slow=14,SNR=3.1
       comp=Z,4.2nm,0.8s
ASAR   Alice Springs     30.20 236    P        P        18 34 39.8  -1.4
       comp=Z,3.9nm,0.8s,baz=65,slow=9.3,SNR=5.1
ASAR                                  PcP      PcP      18 37 42.4 +0.4
       comp=Z,1.4nm,0.7s,baz=87,slow=2.8,SNR=5.6
       comp=Z,3.9nm,0.8s
ASAR   Alice Springs     30.20 236    P        P        18 34 39.9  -1.3
BBOO   Buckleboo         33.74 220    P        P        18 35 11.5  -0.7
TOLI2  Tolitoli          41.07 281    P        P        18 36 12.6  -1.9
KSRS   Korea Array       54.80 328    P        P        18 38 01.1 +0.7
       comp=Z,1.8nm,1.1s,baz=160,slow=7.6,SNR=2.9
       comp=Z,1.8nm,1.1s
NJ2    Nanjing           56.60 317  e P        P        18 38 14.3 +0.9
NJ2                                   pmax     pmax
       comp=Z,13nm,0.5s
USRK   Ussuriysk Ar.     58.23 336    P        P        18 38 26.1 +1.4
       comp=Z,4.6nm,0.8s,baz=123,slow=7.1,SNR=4.6
       comp=Z,4.6nm,0.8s
MDJ    Mudanjiang        59.57 334    P        P        18 38 34.6 +0.6
MDJ                                   pP       pwP      18 38 45.9  -0.6
MDJ                                   sP       sP       18 38 49.5 +1.5
MDJ                                   PcP      PcP      18 39 33.0  +12
MDJ                                   PcS      PcS      18 43 35.3  +12
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MDJ				S	S	18 46 26.1	-15
MDJ				sS	pS	18 46 40.9	-13
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,230nm,5.3s						
MDJ				LR	LR		
	comp=Z,1µm,24.8s						
PETK	Petropavlovsk-	60.99	358	P	P	18 38 43.6	+0.1
	comp=Z,6.4nm,0.9s,baz=170,slow=9.8,SNR=4.6						
	comp=Z,6.4nm,0.9s						
PETK	Petropavlovsk-	60.99	358	P	P	18 38 42.2	-1.4
XAN	Xi'an	64.63	314	eP	P	18 39 09.3	+1.0
XAN				pP	pP	18 39 19.3	+1.0
XAN				pmax	pmax		
	comp=Z,6.0nm,1.7s						
HEH	HeiHe	64.97	337	eP	P	18 39 09.1	-0.9
HEH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HEH				pmax	pmax		
	comp=Z,130nm,6.6s						
XLT	XiLinHaoTe	65.72	326	⇑iP	P	18 39 16.3	+1.1
XLT	XiLinHaoTe	65.72	326	SS	SS	18 52 17.3	+3.1
XLT				pmax	pmax		
	comp=Z,210nm,3.9s						
XLT				pmax	pmax		
	comp=Z,18nm,0.8s						
CRAI	Chiangrai	65.86	296	P	P	18 39 17.6	+1.2
CRAI				IAmb	IAmb	18 39 19.3	
	comp=Z,8.0nm,1.2s						
HHC	Hu-ho-hao-te	66.53	321	eP	P	18 39 23.4	+3.0
HHC				pmax	pmax		
	comp=Z,16nm,0.5s						
HHC				pmax	pmax		
	comp=Z,350nm,5.8s						
CMAR	Chiang Mai Arr	66.58	294	P	P	18 39 22.4	+1.2
	comp=Z,3.1nm,1.0s,baz=110,slow=4.8,SNR=4.4						
	comp=Z,3.1nm,1.0s						
CMAR	Chiang Mai Arr	66.58	294	P	P	18 39 21.1	0.0
CHTO	Chiang Mai	66.69	294	P	P	18 39 21.8	0.0
PZH	PanZhiHua	66.89	303	P	P	18 39 24.6	+1.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
VNDA	Vanda	69.43	180	P	P	18 39 37.9	-0.1
	comp=Z,2.9nm,0.8s,baz=353,slow=7.5,SNR=4.6						
	comp=Z,2.9nm,0.8s						
VNDA	Vanda	69.43	180	P	P	18 39 38.6	+0.7
VNDA				IAmb	IAmb	18 39 39.2	
	comp=Z,6.8nm,1.0s						
ULN	Ulaanbaatar	73.14	325	P	P	18 40 02.2	+1.2
ULN				IAmb	IAmb	18 40 26.0	
	comp=Z,9.3nm,1.3s						
SONM	Songino Array	73.50	325	P	P	18 40 04.2	+1.0
	comp=Z,4.0nm,1.0s,baz=141,slow=5.8,SNR=4.5						
	comp=Z,4.0nm,1.0s						
SONM	Songino Array	73.50	325	P	P	18 40 03.4	+0.2
GTA	Gaotai	73.60	315	eP	P	18 40 08.8	+4.9
GTA				pP	sP	18 40 18.5	+0.6
GTA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
YAK	Yakutsk	73.96	345	P	P	18 40 05.3	-0.1
BILL	Bilibino	76.00	2	P	P	18 40 17.2	+0.2
BILL				IAmb	IAmb	18 40 18.2	
	comp=Z,6.5nm,0.9s						
JIRN	Jiri	80.41	300	eP	P	18 40 42.9	+0.1
GUN	Gumba	80.73	300	eP	P	18 40 45.0	+0.5
IMAR	Indian Mountai	80.91	17	P	P	18 40 45.1	+1.0
MCK	McKinley	80.92	20	P	P	18 40 44.2	-0.1
MCK				IAmb	IAmb	18 40 46.2	
	comp=Z,14nm,1.1s						
PKI	Pulchoki	81.06	300	eP	P	18 40 46.4	+0.2
PKIN	Phulchoki	81.07	300	eP	P	18 40 46.3	+0.1
DMN	Daman	81.33	299	eP	P	18 40 48.0	+0.5
	comp=Z,21nm,0.8s						
GKN	Gorkha	81.82	300	eP	P	18 40 50.1	+0.1
	comp=Z,20nm,0.8s						
CCB	Clear Creek Bu	81.88	20	P	P	18 40 49.0	-0.3
CCB				IAmb	IAmb	18 40 50.8	
	comp=Z,6.5nm,1.1s						
QSPA	South Pole Qui	81.92	180	P	P	18 40 49.7	-0.1
	comp=Z,6.0nm,1.0s,baz=43,slow=3.8,SNR=3.6						
	comp=Z,6.0nm,1.0s						
HDA	Harding Lake	82.03	20	P	P	18 40 50.3	+0.2
HDA				IAmb	IAmb	18 40 51.4	
	comp=Z,12nm,1.3s						
IL31		82.27	20	P	P	18 40 51.4	+0.1
IL31				IAmb	IAmb	18 40 53.8	
	comp=Z,8.2nm,1.1s						
ILAR	Eielson Array	82.27	20	P	P	18 40 50.6	-0.7
	comp=Z,3.1nm,1.0s,baz=260,slow=4.6,SNR=6.3						
	comp=Z,3.1nm,1.0s						
TIXI	Tiksi	82.32	350	P	P	18 40 52.0	+0.6
TIXI				IAmb	IAmb	18 40 54.4	
	comp=Z,4.6nm,0.8s						
DANN	Dangsing	82.66	300	eP	P	18 40 54.3	-0.3
	comp=Z,8.6nm,0.7s						
KOLN	Koldanda	82.66	299	eP	P	18 40 53.7	-0.8
PYUN	Piuthan	83.26	300	eP	P	18 40 57.2	-0.4
	comp=Z,20nm,1.1s						
WMQ	Urumqi	83.66	316	eP	P	18 40 56.3	-2.8
WMQ				pP	sP	18 41 12.8	-0.4
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
WMQ				LR	LR		
	comp=N,110nm,18.9s						
WMQ				LR	LR		
	comp=E,470nm,15.5s						
WMQ				LR	LR		
	comp=Z,510nm,25.9s						
EGAK	Eagle	84.28	21	P	P	18 41 03.3	+1.6
EGAK				IAmb	IAmb	18 41 05.8	
	comp=Z,8.2nm,1.2s						
BMAR	Burnt Mountain	84.63	18	P	P	18 41 03.4	-0.1
HUMO	Hull Mountain	85.31	46	P	P	18 41 09.8	+2.3
HUMO				IAmb	IAmb	18 41 16.7	
	comp=Z,5.2nm,1.1s						
J05D	Fort Rock, OR	86.71	46	P	P	18 41 14.7	+0.2
PINE	Pine Mountain	87.04	45	P	P	18 41 17.2	+1.0
PAHR	Pah Rah Range	87.23	49	P	P	18 41 17.8	+0.6
PAHR				IAmb	IAmb	18 41 18.3	
	comp=Z,7.4nm,1.3s						
NVAR	Mina Array Bea	87.78	51	P	P	18 41 18.2	-1.7
	comp=Z,0.7nm,0.8s,baz=262,slow=5.4,SNR=2.6						
	comp=Z,0.7nm,0.8s						
DSP	Deep Springs	87.82	52	P	P	18 41 22.7	+2.9
DSP				IAmb	IAmb	18 41 23.5	
	comp=Z,4.1nm,1.1s						
MK31	Makanchi Array	88.13	318	P	P	18 41 21.1	0.0
MK31				IAmb	IAmb	18 41 22.0	
	comp=Z,3.3nm,0.8s						
MKAR	Makanchi Array	88.13	318	P	P	18 41 21.3	+0.2
	comp=Z,4.9nm,0.9s,baz=95,slow=6.3,SNR=10						
	comp=Z,4.9nm,0.9s						
MKAR	Makanchi Array	88.13	318	P	P	18 41 21.1	0.0
MAKZ	Makanchi	88.34	318	P	P	18 41 22.0	-0.1
MAKZ				IAmb	IAmb	18 41 23.1	
	comp=Z,3.7nm,0.9s						
ZALV	Zalesovo Beam	88.39	325	P	P	18 41 21.2	-0.9
	comp=Z,1.1nm,0.8s,baz=103,slow=6.5,SNR=3.6						
	comp=Z,1.1nm,0.8s						
W13A	Hualapai Mount	90.65	55	P	P	18 41 34.7	+1.2
W13A				IAmb	IAmb	18 41 37.3	
	comp=Z,4.6nm,1.0s						
KURBB	Kurchatov Arra	91.38	321	P	P	18 41 35.2	-1.0
	comp=Z,0.3nm,0.7s,baz=91,slow=3.7,SNR=2.8						
	comp=Z,0.3nm,0.7s						
CCUT	Cedar City	91.46	52	P	P	18 41 39.5	+2.4
CCUT				IAmb	IAmb	18 41 42.0	
	comp=Z,5.6nm,1.1s						
HLID	Hailey	91.63	46	P	P	18 41 40.0	+2.2
MTPU	Mount Pierson	92.45	52	P	P	18 41 43.7	+1.8
MTPU				IAmb	IAmb	18 41 46.6	
	comp=Z,3.7nm,0.9s						
HVU	Hansel Valley	92.54	48	P	P	18 41 43.5	+1.5
AAK	Ala-Archa	92.79	312	P	P	18 41 42.9	-0.2
	comp=Z,1.3nm,0.9s,baz=199,slow=11,SNR=4.1						
	comp=Z,1.3nm,0.9s						
AAK	Ala-Archa	92.79	312	P	P	18 41 42.9	-0.2
NLU	North Lily Min	92.81	50	P	P	18 41 45.3	+1.9
NLU				IAmb	IAmb	18 41 45.6	
	comp=Z,5.2nm,1.1s						
BELA	Belgrano 2	93.76	177	P	P	18 41 46.1	-0.6
YKA	Yellowknife Ar	94.52	28	P	P	18 41 49.8	-0.6
	comp=Z,1.8nm,0.9s,baz=256,slow=4.7,SNR=7.0						
	comp=Z,1.8nm,0.9s						
PD31	Pinedale Array	95.04	48	P	P	18 41 52.9	-0.7
PDAR	Pinedale Array	95.04	48	P	P	18 41 53.1	-0.5
	comp=Z,1.6nm,0.9s,baz=203,slow=1.8,SNR=6.1						
	comp=Z,1.6nm,0.9s						
PDAR	Pinedale Array	95.04	48	P	P	18 41 52.0	-1.5
BVAR	Borovoye Array	96.71	323	P	P	18 41 59.8	-0.8
	comp=Z,2.1nm,0.9s,baz=83,slow=6.1,SNR=6.1						
	comp=Z,2.1nm,0.9s						
N23A	Red Feather La	97.56	50	P	P	18 42 01.8	-3.3
BOSA	Boshof	123.82	228	PKP	PKPdf	18 47 27.4	-1.6
	comp=Z,2.0nm,0.8s,baz=229,slow=2.4,SNR=3.6						
ESDC	Sonseca Array	145.74	339	PKPbc	PKPab	18 48 10.1	+0.1
	comp=Z,3.4nm,1.1s,baz=10,slow=3.8,SNR=6.5						
TORD	Torodi Ar. Bea	158.99	286	PKP	PKPdf	18 48 29.9	+0.7
	comp=Z,1.2nm,0.9s,baz=105,slow=0.5,SNR=3.4						
TORD				PKPab	PKPab	18 49 06.2	+0.4
	comp=Z,2.6nm,1.0s,baz=83,slow=4.1,SNR=5.1						

PRU 16 18:30:04.6±0.0, 50°.24N×18°.96E, h0^{km}, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.54	92	ePg	Pg	18 30 13.8	-1.1
OJC				eSg	Sg	18 30 21.6	-0.3
OKC	Ostrava-Krasne	0.66	233	ePG	Pg	18 30 16.9	-0.3
OKC				eSG	Sg	18 30 25.4	-0.4
MORC	Moravsky Berou	1.02	244	ePG	Pg	18 30 23.7	-0.5
MORC				eSG	Sg	18 30 37.9	+0.4
LANS	Liptovska Anna	1.14	163	ePG	Pg	18 30 26.2	-0.2
LANS				eSG	Sg	18 30 41.4	+0.2
LANS				eLG	Lg	18 30 43.4	
MAUC	Maruska	1.14	220	ePG	Pg	18 30 25.5	-1.0
MAUC				eSG	Sg	18 30 40.7	-0.6
KRLC	Kraliky	1.41	264	ePG	Pn	18 30 29.9	-1.7
KRLC				eSG	Sg	18 30 49.5	-0.4
	comp=Z,6.9nm,0.5s						
STHS	Stebnicka Huta	1.69	118	ePN	Pn	18 30 35.0	-0.4
STHS				eSN	Sn	18 30 56.6	-1.2
DPC	Dobruska-Polom	1.69	275	ePG	Pn	18 30 34.4	-1.1
DPC				eSG	Sg	18 30 59.3	+0.3
	comp=Z,4.7nm,0.6s						
VYHS	Vyhne	1.75	183	ePN	Pn	18 30 35.0	-1.2
VYHS				eSN	Sn	18 30 57.3	-1.9
OSTC	Ostas	1.79	281	ePG	Pn	18 30 37.3	+0.6
OSTC				eSG	Sg	18 31 02.6	+0.7
VRAC	Vranov	1.79	240	ePN	Pn	18 30 37.2	+0.4
VRAC				eSG	Sn	18 31 00.7	+0.4
KSP	Ksiaz	1.81	291	ePg	Pb	18 30 38.6	0.0
KSP				eSg	Sg	18 31 02.8	+0.2
CHVC	Chvalec	1.89	282	ePG	Pn	18 30 37.8	-0.4
CHVC				eSG	Sg	18 31 05.4	+0.1
CKRC	Cesky Krumlov	3.35	247	eSG	Sg	18 31 50.6	-1.4
KHC	Kasperske Hory	3.67	254	ePG	Pb	18 31 10.9	+0.6
KHC				eSG	Sg	18 32 01.3	-1.0

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*MOS **16** 18:39:23.8±1.1, 11°.45S×114°.61E, h10^{km}, mb5.6/60, MS4.6/13, Error ellipse: s-maj=8.0km s-min=4.6km az=112.5*

*IDC **16** 18:39:23.5±0.4, 11°.54S×114°.60E, h0^{km}, mb5.1/48, mbtmp5.1/50, ML4.9/2, MS4.4/42, Error ellipse: s-maj=12.1km s-min=10.7km az=60.0*

*KLM **16** 18:39:24, 11°.47S×115°.05E, h10^{km}, mb5.5*

*DJA **16** 18:39:24.4±0.1, 12°S±1°×11°4E±°, h10^{km}, M5.2/96, mb5.4/96, mB5.6/72, MLv5.9/22, Mw5.4, Mw(mB)5.2/72, MwMwp5.1/27, Mwp5.4/27*

*BJI **16** 18:39:24.0±0.0, 11°.70S×114°.60E, h10^{km}, mb5.2/84, mB5.3/57, Ms5.0/75, Ms7 4.8/68*

*NEIC **16** 18:39:25, 11°.61S×114°.57E, h30^{km}*

*NEIC **16** 18:39:25, 11°.91S×114°.47E, h30^{km}, Moment Tensor Solution. Duration: 3^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.35; $M_{\theta\theta}$2.40; $M_{\phi\phi}$-0.05; $M_{r\theta}$0.16; $M_{\theta\phi}$0.06; $M_{\phi r}$0.28; Fault plane solution: $M_0$2.40000×10^{17} NP1: ϕ_s261.92000°, δ47.45000°, λ-99.16000°. NP2: ϕ_s95.34000°, δ43.34000°, λ-80.16000°. Principal axes: T 2.4051, Plg2.0000°, Azm358.0000°; N -0.0163, Plg7.0000°, Azm268.0000°; P -2.3888, Plg83.0000°, Azm105.0000°;*

*NEIC **16** 18:39:26.3±2.9, 11°.54S±0°.08×114°.57E±0°.08, h10^{km}±1^{km}, mb5.5/126, Ms_20 4.8/51, Mww5.5/21 Error ellipse: s-maj=13.5km s-min=12.8km az=230.0*

*GCMT **16** 18:39:27.3±0.1, 11°.73S±0°.01×114°.62E±0°.01, h12^{km}, MW5.3/123, Moment Tensor Solution. s104,c172; s123,c248; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.03±.02; $M_{\theta\theta}$1.38±.01; $M_{\phi\phi}$-0.34±.02; $M_{r\theta}$0.53±.04; $M_{\theta\phi}$0.06±.01; $M_{\phi r}$-0.15±.05; Best double couple: $M_0$1.33200×10^{17} NP1: ϕ_s278.00000°, δ58.00000°, λ-77.00000°. NP2: ϕ_s75.00000°, δ35.00000°, λ-110.00000°. Principal axes: T 1.4920, Plg12.0000°, Azm359.0000°; N -0.3120, Plg11.0000°, Azm91.0000°; P -1.1730, Plg74.0000°, Azm223.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 18:39:26.3±0.3**, 11°.65S**±0°.03×**114°.59E**±0°.04**, h19^{km}**±1^{km}**, h19^{km}:pP-P, n1186, σ1^{s}42**/1257**, mb5.4**/172**, MS4.6**/104**, 29C-13D, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGBI	Denpasar	2.87	11	P	Pn	18 40 10.0	-1.0
DNP	Denpasar	3.02	12	P	Pn	18 40 12.6	-0.5
JAGI	Jajag, Banyuwa	3.19	352	Pn	Pn	18 40 14.0	-1.5
JAGI	Jajag, Banyuwa	3.19	352	P	Pn	18 40 14.3	-1.2
JAGI	Jajag, Banyuwa	3.19	352	P	Pn	18 40 14.0	-1.5
GMJI	Gumukmas	3.54	341	P	Pn	18 40 19.0	-1.3
SRBI	Singaraja	3.60	10	P	Pn	18 40 20.8	-0.2
TWSI	Taliwang, Sumb	3.67	38	P	Pn	18 40 21.2	-0.9
ABJI	Asem Bagus	3.85	355	P	Pn	18 40 24.7	+0.2
BLJI	Banyuglugur	4.00	346	P	Pn	18 40 27.3	+0.7
PLAI	Plampang	4.21	48	P	Pn	18 40 29.5	0.0
PLAI	Plampang	4.21	48	P	Pn	18 40 28.3	-1.2
PWJI	Pagerwojo	4.53	322	P	Pn	18 40 32.1	-1.8
GRJI	Gresik	5.15	336	P	Pn	18 40 42.2	-0.2
	696nm,0.9s,7µm15µm2.7nm						
NGJI	Ngawi	5.26	324	P	Pn	18 40 45.2	+1.3
	1µm,0.8s,17µm26µm17nm						
UGM	Wanagama	5.46	312	Pn	Pn	18 40 44.5	-2.3
UGM	Wanagama	5.46	312	P	Pn	18 40 46.2	-0.6
UGM	Wanagama	5.46	312	P	Pn	18 40 46.2	-0.6
	2µm,0.8s,17µm12µm17nm						
TBJI	Tambak Boyo	5.51	330	P	Pn	18 40 47.6	+0.2
	602nm,0.9s,8µm20µm7.4nm						
YOGI	Yogyakarta	5.69	312	P	Pn	18 40 49.2	-0.7
	1µm,0.7s,11µm8.3nm						
BASI	Baing, Sumba	6.05	77	P	Pn	18 40 56.2	+1.4
	483nm,0.6s,7µm7.4nm						
BWJI	Bawean	6.07	342	P	Pn	18 40 55.6	+0.5
	706nm,0.9s,11µm19µm5.8nm						
SMRI	Semarang	6.14	318	Pn	Pn	18 40 55.0	-1.0
SMRI	Semarang	6.14	318	P	Pn	18 40 57.4	+1.4
SMRI	Semarang	6.14	318	P	Pn	18 40 55.5	-0.5
	503nm,0.7s,8µm13µm4.7nm						
UWJI	Ujung Watu	6.32	325	P	Pn	18 40 57.9	-0.6
	231nm,0.6s,6µm2.0nm						
KPJI	Karang Pucung	7.04	307	P	Pn	18 41 07.9	-0.5
	548nm,1.1s,6µm4.9nm						
CMJI	Cimerak	7.17	302	P	Pn	18 41 08.2	-2.0
	574nm,0.9s,8µm5µm3.8nm						
BSSI	Bau Bau, Buton	8.00	47	P	Pn	18 41 21.6	+0.1
	388nm,0.9s,4µm						
BBJI	Bungbulang	8.01	301	P	Pn	18 41 19.7	-2.1
MMRI	Maumere	8.10	69	Pn	Pn	18 41 21.4	-1.6
MMRI	Maumere	8.10	69	P	Pn	18 41 23.6	+0.5
MMRI	Maumere	8.10	69	P	Pn	18 41 23.5	+0.5
	495nm,1.0s,6µm						
BBKI	Banjar Baru	8.14	2	P	Pn	18 41 24.6	+1.1
	226nm,1.2s,7µm						
BKSI	Bulukumba	8.34	41	P	Pn	18 41 26.1	-0.1
	312nm,0.6s,4µm8µm						
KAPI	Kappang	8.34	38	Pn	Pn	18 41 25.8	-0.4
	18nm,0.3s,baz=218,slow=10,SNR=30						
KAPI				Sn	Sn	18 42 56.0	-3.9
	24nm,0.3s,baz=211,slow=21,SNR=12						
KAPI				LR	LR	18 45 19.3	
	comp=Z,3µm,18.6s,baz=196,slow=43						
	78nm,0.4s						
KAPI	Kappang	8.34	38	Pn	Pn	18 41 26.1	-0.2
KAPI	Kappang	8.34	38	P	Pn	18 41 26.6	+0.3
KAPI	Kappang	8.34	38	P	Pn	18 41 15.9	-10
CNJI	Cibinong	8.53	300	P	Pn	18 41 26.5	-2.3
	255nm,0.9s,2µm						
XMI	Christmas Isla	8.82	277	P	Pn	18 41 28.9	-3.9
SKJI	Sukabumi	9.17	300	P	Pn	18 41 36.4	-1.3
	576nm,0.7s,6µm						
SPSI	Sidrap Palu	9.20	34	P	Pn	18 41 39.9	+1.9
	97nm,0.8s,1µm7µm						
PBKI	Pangkalan Bun	9.35	342	P	Pn	18 41 40.4	+0.3
	339nm,1.2s,6µm						
SOEI	Soe	9.70	80	Pn	Pn	18 41 44.4	-0.6
SOEI	Soe	9.70	80	P	Pn	18 41 45.3	+0.3
SOEI	Soe	9.70	80	P	Pn	18 41 45.5	+0.5
	447nm,0.9s,5µm						
SBJI	Serang	10.00	303	P	Pn	18 41 48.4	-0.6
	201nm,0.7s						
CGJI	Cibinong	10.11	299	P	Pn	18 41 47.8	-2.7
	485nm,0.6s,5µm						
BKB	Balikpapan	10.57	13	Pn	Pn	18 41 56.3	-0.6
MBWA	Marble Bar	10.66	153	Pn	Pn	18 41 53.4	-4.7
MBWA	Marble Bar	10.66	153	P	Pn	18 41 53.3	-4.8
MBWA	Marble Bar	10.66	153	P	Pn	18 41 53.4	-4.8
GIRL	Giralia	10.94	182	Pn	Pn	18 41 57.0	-4.8
GIRL	Giralia	10.94	182	P	Pn	18 41 57.7	-4.2
PSA00	Pilbara Seismi	11.08	154	Pn	Pn	18 41 59.5	-4.3
PSA00	Pilbara Seismi	11.08	154		Pn	18 41 59.1	-4.6
PSA00	Pilbara Seismi	11.08	154	P	Pn	18 41 59.7	-4.1
BLSI	Bandar Lampung	11.15	303	P	Pn	18 42 03.8	-1.0
	126nm,0.6s						
KASI	Kota Agung	11.69	301	P	Pn	18 42 09.5	-2.6
	143nm,0.6s,2µm						
KLI	Kotabumi	11.75	304	P	Pn	18 42 12.6	-0.5
	290nm,0.8s,3µm						
LWLI	Liwa	12.32	301	P	Pn	18 42 21.1	+0.1
	336nm,0.7s,5µm3µm						
FITZ	Fitzroy Crossi	12.45	122	Pn	Pn	18 42 18.1	-4.6
MDSI	Maura Dua	12.52	304	P	Pn	18 42 19.1	-4.5
	65nm,1.0s,1µm3µm						
PPBI	Pangkal Pinang	12.62	318	P	Pn	18 42 24.6	-0.3
	60nm,1.1s,4µm4µm						
MPSI	Mapaga	13.03	24	P	Pn	18 42 32.1	+1.6
	45nm,0.9s,1µm6µm						
PMBI	Palembang	13.03	311	Pn	Pn	18 42 29.4	-1.1
PMBI	Palembang	13.03	311	P	Pn	18 42 30.4	-0.1
	261nm,0.8s,3µm						
LUWI	Luwuk	13.31	38	Pn	Pn	18 42 35.0	+0.7
LUWI	Luwuk	13.31	38	P	Pn	18 42 38.9	+4.6
LUWI	Luwuk	13.31	38	P	Pn	18 42 36.5	+2.2
	124nm,1.2s,4µm						
MNAI	Manna	13.60	301		Pn	18 42 36.7	-1.7
MNAI	Manna	13.60	301	P	Pn	18 42 36.9	-1.5
MNAI	Manna	13.60	301	P	Pn	18 42 37.6	-0.8
	362nm,0.9s						
MRSI	Marisa	14.09	32	P	Pn	18 42 47.2	+2.2
	109nm,1.2s,1µm4µm						
TOLI2	Tolitoli	14.09	26	Pn	Pn	18 42 46.0	+0.9
TOLI2	Tolitoli	14.09	26	P	Pn	18 42 47.8	+2.7
SBUM	Sibu	14.21	350	P	Pn	18 42 46.8	+0.3
KSI	Kapahiang	14.29	303	P	Pn	18 42 47.2	-0.7
KNRA	Kununurra	14.34	108	P	Pn	18 42 45.5	-3.0
	baz=14,SNR=27						
KNRA	Kununurra	14.34	108		Pn	18 42 45.9	-2.6
SANI	Sanana	14.79	51	P	Pn	18 42 56.5	+1.9
	149nm,0.8s,2µm						
GTOI	Gorontalo	14.80	35	P	Pn	18 42 57.3	+2.6
	70nm,0.9s,1µm						
MASI	Maura Aman, Be	14.87	304	P	Pn	18 42 52.0	-3.7
	315nm,1.0s,3µm						
DSRI	Dabo	14.90	317	P	Pn	18 42 54.7	-1.4
	25nm,1.1s,725nm3µm						
NLAI	Namlea	14.95	57	P	Pn	18 42 59.0	+2.3
	81nm,1.3s						
MEEK	Meekatharra	15.38	166	P	Pn	18 42 57.7	-4.7
	baz=16,SNR=582						
MEEK	Meekatharra	15.38	166	P	Pn	18 42 59.1	-3.4
AAI	Ambon	15.62	61	P	Pn	18 43 07.1	+1.5
	241nm,1.4s,3µm						
TPRI	Tanjung Pinang	16.00	321	P	Pn	18 43 11.8	+1.4
	53nm,1.0s,1µm						
MTN	Manton Dam	16.21	96	P	Pn	18 43 11.6	-1.6
	baz=16,SNR=17						
MTN	Manton Dam	16.21	96	P	Pn	18 43 10.7	-2.5
MTN	Manton Dam	16.21	96	P	Pn	18 43 11.2	-2.0
MSAI	Masohi	16.43	61	P	P	18 43 17.9	-0.7
	17nm,0.7s,353nm						
BNDI	Bandanaira	16.73	66	P	P	18 43 23.8	+1.9
	824nm,1.3s,8µm						
LBMI	Labuha	16.85	50	P	P	18 43 23.5	+0.2
	239nm,1.3s,3µm						
SDSI	Sungai Dareh	16.85	308	P	Pn	18 43 17.2	-4.1
	105nm,0.8s,1µm2µm						
SAUI	Saumlaki	16.86	79	Pn	Pn	18 43 19.2	-2.3
SAUI	Saumlaki	16.86	79	P	P	18 43 23.8	+0.4
	1µm,1.0s,9µm						
PPSI	Pulau Pagai	16.93	300	P	Pn	18 43 21.6	-0.8
	516nm,0.8s,5µm						
MYKOM	Kota Tinggi	17.09	321	Pn	Pn	18 43 21.2	-3.2
MYKOM	Kota Tinggi	17.09	321	P	P	18 43 27.0	+1.0
MYLDM	Lahad Datu	17.17	13	P	P	18 43 28.4	+1.7
MORW	Morawa	17.38	176	P	Pn	18 43 21.8	-6.0
	baz=18,SNR=28						
MORW	Morawa	17.38	176	Pn	Pn	18 43 21.4	-6.5
MORW	Morawa	17.38	176	P	Pn	18 43 22.1	-5.8
KDU	Kakadu	17.51	95	P	Pn	18 43 29.5	-0.1
	baz=18,SNR=10.0						
KDU	Kakadu	17.51	95	P	Pn	18 43 29.4	-0.1
KKM	Kota Kinabalu	17.65	5	Pn	Pn	18 43 27.5	-3.9
KKM	Kota Kinabalu	17.65	5	P	Pn	18 43 31.3	-0.1
TNTI	Ternate	17.70	47	P	Pn	18 43 32.0	0.0
TNTI	Ternate	17.70	47	P	P	18 43 33.6	+0.8
TNTI	Ternate	17.70	47	P	P	18 43 33.2	+0.4
	155nm,1.7s,3µm						
BKNI	Bangkinang	17.96	311	P	Pn	18 43 33.7	-1.5
BKNI				IAmb	IAmb	18 43 38.4	
	comp=Z,309nm,0.9s						
BKNI	Bangkinang	17.96	311	P	P	18 43 35.6	0.0
	comp=Z,477nm,1.0s,comp=Z,5µmcomp=Z,3µm						
WRKA	Warakurna	18.59	138	P	P	18 43 39.8	-2.8
	baz=19,SNR=212						
WRKA	Warakurna	18.59	138	P	P	18 43 40.4	-2.1
SGSI	Sangihe	18.72	36	P	Pn	18 43 44.8	+0.4
	comp=Z,233nm,0.7s						
BLDU	Ballidu	18.97	174	P	P	18 43 43.4	-3.2
	baz=19,SNR=45						
BLDU	Ballidu	18.97	174	P	P	18 43 44.1	-2.5
FAKI	Fak Fak	19.53	65	P	P	18 43 51.3	-1.6
FAKI				IAmb	IAmb	18 43 55.9	
	comp=Z,367nm,1.6s						
FAKI	Fak Fak	19.53	65	P	P	18 43 52.2	-0.7
FAKI	Fak Fak	19.53	65	P	P	18 43 52.4	-0.5
	comp=Z,130nm,1.0s,comp=Z,2µm						
JRMM	Jerantut	19.58	321	P	Pn	18 43 55.0	+0.2
SIJI	Sorong	19.72	58	P	P	18 43 54.5	-0.3
	comp=Z,2.5nm,0.3s,baz=250,slow=6.1,SNR=37						
SIJI				S	S	18 47 30.4	-6.2
	comp=Z,9.5nm,0.9s,baz=110,slow=14,SNR=2.2						
	comp=Z,54nm,0.9s						
PBSI	Pulau Batu	19.88	304	P	P	18 43 56.9	+0.3
	comp=Z,282nm,1.1s,comp=Z,3µm						
KLBR	Kellerberrin	20.06	172	P	P	18 43 58.3	-0.1
	baz=20,SNR=69						
KLBR	Kellerberrin	20.06	172	P	P	18 43 58.4	-0.1
MUN	Mundaring	20.29	176	P	P	18 44 00.7	-0.2
	baz=20,SNR=64						
MUN	Mundaring	20.29	176	P	P	18 44 01.1	+0.1
GSPH	General Santos	20.41	31	⇑eP	P	18 43 59.5	-3.1
SKMP	Bagumbayan, Su	20.59	29	⇑eP	P	18 44 04.5	+0.1
WB0	Warramunga Arr	20.69	115	P	P	18 44 05.2	-0.2
WB0				IAmb	IAmb	18 44 13.0	
	comp=Z,360nm,1.6s						
WRA	Warramunga Arr	20.70	116	P	P	18 44 05.9	+0.3
	comp=Z,51nm,0.7s,baz=291,slow=11,SNR=134						
WRA				S	S	18 47 44.1	-12
	comp=Z,13nm,0.6s,baz=282,slow=21,SNR=3.7						
WRA				LR	LR	18 52 14.6	
	comp=Z,760nm,18.1s,baz=288,slow=37						
	comp=Z,51nm,0.7s						
WRA	Warramunga Arr	20.70	116	P	P	18 44 05.5	-0.1
WRAB	Tennant Creek	20.71	116	P	P	18 44 05.7	0.0
WRAB				IAmb	IAmb	18 44 22.5	
	comp=Z,131nm,0.7s						
WRAB	Tennant Creek	20.71	116	P	P	18 44 05.9	+0.3
WRAB	Tennant Creek	20.71	116	d iP	P	18 44 06.2	+0.6
WRAB				pmax	pmax		
	comp=Z,182nm,1.5s						
WB2	Warramunga Arr	20.71	116	P	P	18 44 05.6	-0.1

WB2				IAmb	IAmb	18 44 19.3	
	comp=Z,139nm,0.8s						
KMBL	**Kambalda**	**20.75**	**162**	P	**P**	**18 44 05.8**	**-0.1**
	baz=21,SNR=20						
KMBL	**Kambalda**	**20.75**	**162**	P	Pn	18 44 08.0	-0.4
IPM	**Ipoh**	**20.95**	**319**	P	**P**	**18 44 09.3**	**+1.0**
IPM				IAmb	IAmb	18 44 25.5	
	comp=Z,207nm,0.9s						
IPM	**Ipoh**	**20.95**	**319**	P	Pn	18 44 10.0	-0.9
IPM	**Ipoh**	**20.95**	**319**	P	Pn	18 44 10.0	-0.9
CTBH	**Cotabato--PC H**	**21.07**	**28**	⇑*e*P	**P**	**18 44 10.1**	**+0.6**
RPSI	**Rantau Prapat**	**21.11**	**312**	P	**P**	**18 44 07.8**	**-2.2**
PSI	**Prapat**	**21.18**	**312**	P	**P**	**18 44 07.8**	**-3.1**
PSI				pmax	pmax		
	comp=Z,66nm,1.2s						
PSI				MLR	MLR		
	comp=Z,2µm,20.0s						
GSI	**Gunungsitoli**	**21.25**	**306**	P	**P**	**18 44 09.8**	**-1.8**
GSI				IAmb	IAmb	18 44 29.9	
	comp=Z,106nm,0.7s						
GSI	**Gunungsitoli**	**21.25**	**306**	P	**P**	**18 44 10.4**	**-1.1**
GSI	**Gunungsitoli**	**21.25**	**306**	P	**P**	**18 44 09.4**	**-2.1**
	comp=Z,169nm,1.1s,comp=Z,1µm						
KCP	**Kidapawan**	**21.28**	**30**	⇑*i*P	**P**	**18 44 12.8**	**+0.9**
NWAO	**Narrogin (SRO)**	**21.32**	**174**	P	**P**	**18 44 12.8**	**+0.8**
	comp=Z,54nm,0.9s,baz=338,slow=11,SNR=32						
NWAO				S	S	18 47 54.1	-14
	comp=Z,74nm,0.5s,baz=241,slow=19,SNR=7.0						
	comp=Z,54nm,0.9s						
NWAO	**Narrogin (SRO)**	**21.32**	**174**	P	**P**	**18 44 12.8**	**+0.8**
	baz=21,SNR=19						
NWAO				P	**P**	**18 44 12.8**	**+0.8**
	baz=21,SNR=19						
NWAO	**Narrogin (SRO)**	**21.32**	**174**	P	**P**	**18 44 11.9**	**-0.2**
NWAO				IAmb	IAmb	18 44 25.6	
	comp=Z,563nm,1.9s						
NWAO	**Narrogin (SRO)**	**21.32**	**174**	P	**P**	**18 44 13.4**	**+1.3**
NWAO				IAmb	IAmb	18 44 25.1	
	comp=Z,2µm,2.0s						
NWAO	**Narrogin (SRO)**	**21.32**	**174**	IAMs_20	IAMs_20	18 52 33.1	
	comp=Z,3µm,20.0s						
NWAO	**Narrogin (SRO)**	**21.32**	**174**	P	**P**	**18 44 12.6**	**+0.5**
NWAO	**Narrogin (SRO)**	**21.32**	**174**	P	**P**	**18 44 13.4**	**+1.3**
NWAO				pmax	pmax		
	comp=Z,2µm,2.0s						
NWAO	**Narrogin (SRO)**	**21.32**	**174**	P	**P**	**18 44 12.6**	**+0.5**
DAV	**Davao City (W)**	**21.57**	**31**	P	**P**	**18 44 13.9**	**-1.1**
	comp=Z,76nm,0.4s,baz=121,slow=2.1,SNR=9.2						
DAV				S	Sn	18 48 19.0	-3.2
	comp=Z,208nm,0.4s,baz=273,slow=11,SNR=2.5						
DAV				LR	LR	18 54 21.0	
	comp=Z,1µm,18.4s,baz=172,slow=42						
	comp=Z,76nm,0.4s						
PPR	**Puerto Princes**	**21.68**	**11**	⇓*i*P	**P**	**18 44 16.1**	**0.0**
KULM	**Kulim**	**21.81**	**320**	P	**P**	**18 44 17.1**	**-0.3**
KULM				IAmb	IAmb	18 44 33.6	
	comp=Z,106nm,0.8s						
RKPI	**Ransiki, Papua**	**21.89**	**64**	P	**P**	**18 44 18.0**	**-0.4**
	comp=Z,172nm,0.7s						
ASAR	**Alice Springs**	**21.91**	**126**	P	**P**	**18 44 19.1**	**+0.5**
	comp=Z,15nm,0.5s,baz=301,slow=10,SNR=170						
ASAR				S	**S**	**18 48 13.8**	**-6.2**
	comp=Z,3.8nm,0.5s,baz=305,slow=22,SNR=6.0						
ASAR				LR	LR	18 54 20.8	
	comp=Z,676nm,18.4s,baz=299,slow=41						
	comp=Z,15nm,0.5s						
ASAR	**Alice Springs**	**21.91**	**126**	P	**P**	**18 44 18.9**	**+0.3**
AS31	**Alice Springs**	**21.91**	**126**	P	**P**	**18 44 18.9**	**+0.3**
TSI	**Tuntungan**	**21.92**	**312**	P	**P**	**18 44 18.8**	**+0.1**
	comp=Z,172nm,1.1s,comp=Z,3µm						
AS01	**Alice Springs**	**21.95**	**126**	P	**P**	**18 44 19.6**	**+0.6**
BUKP	**Musuan**	**22.02**	**29**	⇑*e*P	**P**	**18 44 19.8**	**0.0**
CGP	**Cagayan de Oro**	**22.36**	**27**	⇓*e*P	**P**	**18 44 25.1**	**+1.7**
KCSI	**Kotacane, Aceh**	**22.52**	**311**	P	**P**	**18 44 24.8**	**-0.3**
	comp=Z,86nm,0.9s,comp=Z,937nm						
SNPH	**Sibulan**	**22.56**	**23**	*e*P	**P**	**18 44 24.9**	**-0.7**
FORT	**Forrest**	**22.76**	**149**	P	**P**	**18 44 27.9**	**+0.4**
	baz=23,SNR=15						
FORT	**Forrest**	**22.76**	**149**	P	**P**	**18 44 27.4**	**-0.2**
FORT	**Forrest**	**22.76**	**149**	P	**P**	**18 44 28.3**	**+0.7**
CNOP	**Candoni, Negro**	**22.79**	**21**	⇑*e*P	**P**	**18 44 27.5**	**-0.5**
SNSI	**Sinabang, Aceh**	**22.91**	**306**	P	**P**	**18 44 28.5**	**-0.8**
	comp=Z,100nm,1.1s,comp=Z,1µmcomp=Z,2µm						
RKGY	**Rocky Gully**	**22.96**	**175**	P	**P**	**18 44 29.7**	**+0.1**
	baz=23,SNR=11						
SKLT	**Songkhla**	**23.30**	**323**	P	**P**	**18 44 35.4**	**+2.2**
GUIM	**Jordan**	**23.52**	**20**	⇑*e*P	**P**	**18 44 35.5**	**+0.2**
SRPI	**Serui, Papua**	**23.57**	**67**	P	**P**	**18 44 37.1**	**+1.2**
	comp=Z,101nm,1.0s,comp=Z,1µm						
TABP	**Talibon, Bohol**	**23.67**	**25**	⇓*e*P	**P**	**18 44 35.7**	**-1.1**
LLP	**Lapu-Lapu**	**23.73**	**23**	⇓*e*P	**P**	**18 44 36.7**	**-0.8**
LLP				*e*S	**S**	**18 48 48.1**	**-3.7**
MSLP	**Maasin**	**23.93**	**26**	⇑*e*P	**P**	**18 44 37.4**	**-1.9**
MLSI	**Meulaboh, Aceh**	**24.03**	**310**	P	**P**	**18 44 39.0**	**-1.3**
	comp=Z,126nm,0.8s						
BUSP	**Coron**	**24.15**	**14**	⇑*e*P	**P**	**18 44 43.6**	**+2.2**
LHMI	**Lhok Sumawe**	**24.27**	**313**	P	**P**	**18 44 41.7**	**-0.8**
LHMI	**Lhok Sumawe**	**24.27**	**313**	P	**P**	**18 44 42.7**	**+0.1**
	comp=Z,220nm,1.1s,comp=Z,3µm						
RCP	**Roxas**	**24.44**	**20**	⇑*e*P	**P**	**18 44 44.3**	**+0.2**
SRIT	**Nakonsritamara**	**25.03**	**323**	P	**P**	**18 44 49.2**	**-0.2**
SRIT				IAmb	IAmb	18 45 10.7	
	comp=Z,76nm,0.8s						
OOD	**Oodnadatta**	**25.47**	**132**	P	**P**	**18 44 53.5**	**+0.2**
QIS	**Mount Isa**	**25.58**	**113**	P	**P**	**18 44 55.2**	**+0.7**
	baz=26,SNR=18						
QIS	**Mount Isa**	**25.58**	**113**	P	**P**	**18 44 55.6**	**+1.1**
SMPI	**Sarmi**	**25.77**	**70**	P	**P**	**18 44 57.7**	**+1.5**
	comp=Z,64nm,0.9s						
MULG	**Mulgathing**	**25.89**	**139**	P	**P**	**18 44 57.9**	**+0.8**
MACP	**Maragondon, Ca**	**26.45**	**13**	⇑*e*P	**P**	**18 45 02.9**	**+0.6**
LQP	**Lukban**	**26.51**	**15**	⇑*e*P	P	18 44 49.4	-14
GENI	**Genyem**	**26.90**	**72**	P	**P**	**18 45 07.6**	**+1.2**
	comp=Z,111nm,1.3s,comp=Z,3µm						
COEN	**Coen**	**27.96**	**98**	P	**P**	**18 45 16.7**	**+0.7**
	baz=28,SNR=4.4						
COEN	**Coen**	**27.96**	**98**	P	**P**	**18 45 15.1**	**-0.8**
LCRK	**Leigh Creek**	**28.80**	**134**	P	**P**	**18 45 24.1**	**+0.8**
BBOO	**Buckleboo**	**28.84**	**140**	P	**P**	**18 45 23.8**	**+0.2**
	baz=29,SNR=4.7						
BBOO	**Buckleboo**	**28.84**	**140**	P	**P**	**18 45 26.0**	**+2.4**
INKA	**Innaminka**	**29.27**	**127**	P	**P**	**18 45 28.8**	**+1.3**
MTSU	**Mount Surprise**	**29.42**	**106**	P	**P**	**18 45 30.6**	**+1.7**
	baz=30,SNR=42						
MTSU	**Mount Surprise**	**29.42**	**106**	P	**P**	**18 45 30.1**	**+1.2**
QIZ	**Qiongzhong**	**30.84**	**351**	P	**P**	**18 45 43.0**	**+1.6**
QIZ				S	**S**	**18 50 47.6**	**+3.3**
QIZ				pmax	pmax		
	comp=Z,38nm,1.1s						
QIZ				LR	LR		
	comp=Z,910nm,14.1s						
QIZ				LR	LR		
	comp=Z,700nm,10.2s						
QIZ				LR	LR		
	comp=Z,1µm,15.3s						
HTT	**Hallett**	**31.07**	**138**	P	**P**	**18 45 43.7**	**+0.3**
	baz=31,SNR=3.1						
HTT	**Hallett**	**31.07**	**138**	P	**P**	**18 45 46.2**	**+2.8**
CTA	**Charters Tower**	**31.55**	**109**	P	**P**	**18 45 49.0**	**+1.3**
	comp=Z,12nm,0.9s,baz=276,slow=10,SNR=14						
CTA				LR	LR	18 58 17.0	
	comp=Z,779nm,20.9s,baz=280,slow=36						
	comp=Z,12nm,0.9s						
CTAO	**Charters Tower**	**31.55**	**109**	P	**P**	**18 45 48.6**	**+0.9**
CTAO	**Charters Tower**	**31.55**	**109**	IAMs_20	IAMs_20	18 58 03.6	
	comp=Z,2µm,18.0s						
CTAO	**Charters Tower**	**31.55**	**109**	P	**P**	**18 45 49.6**	**+1.9**
CTAO	**Charters Tower**	**31.55**	**109**	P	**P**	**18 45 48.6**	**+0.9**
CTAO				pmax	pmax		
	comp=Z,30nm,1.0s						
CTAO				MLR	MLR		
	comp=Z,2µm,18.0s						
QLP	**Quilpie**	**31.60**	**122**	P	**P**	**18 45 50.6**	**+2.5**
	baz=32,SNR=8.7						
QLP	**Quilpie**	**31.60**	**122**	P	**P**	**18 45 50.5**	**+2.5**
STKA	**Stephens Creek**	**32.00**	**133**	P	**P**	**18 45 52.6**	**+1.0**
	comp=Z,22nm,0.9s,baz=308,slow=9.4,SNR=34						
STKA				LR	LR	18 58 45.8	
	comp=Z,1µm,21.9s,baz=297,slow=36						
	comp=Z,22nm,0.9s						
STKA	**Stephens Creek**	**32.00**	**133**	P	**P**	**18 45 53.0**	**+1.5**
	baz=32,SNR=9.4						
STKA	**Stephens Creek**	**32.00**	**133**	P	**P**	**18 45 52.5**	**+1.0**
STKA	**Stephens Creek**	**32.00**	**133**	P	**P**	**18 45 53.4**	**+1.9**
PMG	**Port Moresby**	**32.09**	**89**	LR	LR	19 02 07.7	
	comp=Z,646nm,19.0s,baz=229,slow=42						
PHRA	**Phrae**	**33.14**	**334**	P	**P**	**18 46 00.6**	**-1.0**
CM31	**Chiang Mai Arr**	**33.66**	**332**	P	**P**	**18 46 06.3**	**+0.1**
CM31				IAmb	IAmb	18 46 31.8	
	comp=Z,52nm,0.9s						
CM31	**Chiang Mai Arr**	**33.66**	**332**	P	**P**	**18 46 07.5**	**+1.3**
	SNR=32						
CMAR	**Chiang Mai Arr**	**33.66**	**332**	P	**P**	**18 46 06.2**	**0.0**
	comp=Z,18nm,1.0s,baz=164,slow=7.1,SNR=53						
CMAR				S	**S**	**18 51 27.4**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=5.9,slow=30,SNR=1.4						
	comp=Z,18nm,1.0s						
CMAR	**Chiang Mai Arr**	**33.66**	**332**	P	**P**	**18 46 05.2**	**-1.0**
CMAR	**Chiang Mai Arr**	**33.66**	**332**	*i* P	**P**	**18 46 07.0**	**+0.8**
CMAR				pmax	pmax		
	comp=Z,16nm,0.8s						
CHTO	**Chiang Mai**	**33.98**	**333**	P	**P**	**18 46 08.6**	**-0.3**
CHTO	**Chiang Mai**	**33.98**	**333**	P	**P**	**18 46 08.6**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,3.0nm,1.6s						
CRAI	**Chiangrai**	**34.63**	**336**	P	**P**	**18 46 14.4**	**-0.2**
CRAI				IAmb	IAmb	18 46 34.2	
	comp=Z,57nm,1.1s						
CMSA	**Cobar Meteorol**	**34.85**	**129**	P	**P**	**18 46 18.8**	**+2.5**
	baz=35,SNR=12						
CMSA	**Cobar Meteorol**	**34.85**	**129**	P	**P**	**18 46 19.1**	**+2.7**
ARPS	**Mount Arapiles**	**35.02**	**140**	P	**P**	**18 46 19.1**	**+1.3**
RMQ	**Roma**	**35.37**	**120**	P	**P**	**18 46 21.9**	**+1.0**
	baz=35,SNR=4.3						
RMQ	**Roma**	**35.37**	**120**	P	**P**	**18 46 25.1**	**+4.2**
YULB	**Yu-li**	**35.44**	**11**	P	**P**	**18 46 20.5**	**-1.0**
YULB				IAmb	IAmb	18 46 32.4	
	comp=Z,158nm,1.9s						
SSLB	**Suanglung**	**35.77**	**10**	P	**P**	**18 46 24.1**	**-0.2**
SSLB				IAMs_20	IAMs_20	19 02 03.9	
	comp=Z,984nm,19.0s						
SSLB	**Suanglung**	**35.77**	**10**	P	**P**	**18 46 26.2**	**+1.9**
KNMB	**Chin-men Tao**	**36.09**	**6**	IAMs_20	IAMs_20	19 01 07.2	
	comp=Z,1µm,22.0s						
NACB	**Ninganchiao**	**36.26**	**11**	P	**P**	**18 46 26.8**	**-1.7**
NACB				IAmb	IAmb	18 46 41.3	
	comp=Z,47nm,1.0s						
YHNB	**Yeheng**	**36.70**	**10**	P	**P**	**18 46 34.3**	**+2.0**
YHNB				IAmb	IAmb	18 46 45.0	
	comp=Z,79nm,1.3s						
YHNB				IAMs_20	IAMs_20	19 01 51.7	
	comp=Z,2µm,21.0s						
YHNB	**Yeheng**	**36.70**	**10**	P	**P**	**18 46 31.9**	**-0.4**
KRVT	**Keravat (AS076**	**37.75**	**82**	LR	LR	19 05 44.7	
	comp=Z,309nm,18.1s,baz=37,slow=42						
TOO	**Toolangi**	**37.84**	**138**	P	**P**	**18 46 42.3**	**+0.4**
	baz=38,SNR=4.5						
TOO	**Toolangi**	**37.84**	**138**	P	**P**	**18 46 43.3**	**+1.4**
MND	**Mandalay**	**38.05**	**332**	P	**P**	**18 46 44.9**	**+1.2**
YNG	**Young**	**38.15**	**132**	P	**P**	**18 46 47.0**	**+2.5**
KMI	**Kunming**	**38.33**	**343**	⇑P	**P**	**18 46 48.9**	**+2.6**
KMI				S	**S**	**18 52 36.6**	**-3.6**
KMI				pmax	pmax		
	comp=Z,58nm,1.2s						
KMI				LR	LR		
	comp=Z,1µm,19.1s						
KMI				LR	LR		
	comp=Z,2µm,20.0s						
KMI				LR	LR		
	comp=Z,1µm,22.7s						
PALK	**Pallekele**	**38.59**	**298**	P	**P**	**18 46 47.6**	**-0.9**
	comp=Z,12nm,1.1s,baz=211,slow=6.3,SNR=4.7						
	comp=Z,12nm,1.1s						
PALK	**Pallekele**	**38.59**	**298**	P	**P**	**18 46 46.8**	**-1.8**
PALK				IAMs_20	IAMs_20	19 02 28.3	
	comp=Z,818nm,19.0s						
PALK	**Pallekele**	**38.59**	**298**	*i* P	**P**	**18 46 46.9**	**-1.6**
PALK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PALK	**Pallekele**	**38.59**	**298**	P	**P**	**18 46 48.5**	**-0.1**
GYA	**Guiyang**	**38.66**	**349**	⇓*i*P	**P**	**18 46 50.3**	**+1.4**
GYA				pP	sP	18 46 53.8	-1.6
GYA				PcP	**PcP**	**18 49 03.1**	**+2.1**
GYA				S	**S**	**18 52 43.8**	**-1.0**
GYA				pmax	pmax		
	comp=Z,33nm,0.8s						
GYA				pmax	pmax		
	comp=Z,200nm,3.5s						
GYA				LR	LR		
	comp=Z,440nm,22.9s						
GYA				LR	LR		
	comp=Z,440nm,17.0s						
GYA				LR	LR		
	comp=Z,480nm,21.0s						
ARMA	**Armidale**	**39.05**	**124**	P	**P**	**18 46 52.4**	**+0.1**
	baz=39,SNR=4.9						
ARMA	**Armidale**	**39.05**	**124**	P	**P**	**18 46 55.8**	**+3.5**
GUMO	**Guam**	**39.12**	**51**	P	**P**	**18 46 52.1**	**-0.8**
	comp=Z,170nm,1.0s,baz=175,slow=18,SNR=4.1						
GUMO				LR	LR	19 01 02.1	
	comp=Z,293nm,21.6s,baz=243,slow=33						
	comp=Z,170nm,1.0s						
CNSH	**ChangSha**	**39.63**	**358**	⇑P	**P**	**18 46 56.3**	**-0.6**
CNSH				S	**S**	**18 52 58.6**	**-0.5**
CNSH				pmax	pmax		
	comp=Z,83nm,0.9s						
CNSH				LR	LR		
	comp=Z,440nm,18.4s						
CNSH				LR	LR		
	comp=Z,810nm,14.7s						
CNSH				LR	LR		
	comp=Z,960nm,25.9s						
TNCH	**TengChong**	**39.68**	**337**	P	**P**	**18 46 58.3**	**+0.7**
TNCH				PP	**PnPn**	**18 48 32.3**	**+0.2**
TNCH				S	**S**	**18 52 57.3**	**-3.1**
TNCH				sS	sS	18 53 07.6	-0.3
TNCH				pmax	pmax		
	comp=Z,76nm,1.4s						
TNCH				LR	LR		
	comp=Z,860nm,13.4s						
TNCH				LR	LR		
	comp=Z,930nm,13.6s						
TNCH				LR	LR		
	comp=Z,1µm,13.7s						
MGCD	**Mangrove Creek**	**39.70**	**129**	P	**P**	**18 47 00.6**	**+3.1**
PZH	**PanZhiHua**	**39.93**	**342**	⇑P	**P**	**18 47 00.5**	**+0.9**
PZH				pP	**sP**	**18 47 04.9**	**-1.1**
PZH				sP	**pwP**	**18 47 06.1**	**-3.4**
PZH				S	**S**	**18 53 04.3**	**+0.4**
PZH				sS	**sS**	**18 53 17.6**	**+6.2**
PZH				pmax	pmax		
	comp=Z,30nm,1.3s						
PZH				pmax	pmax		
	comp=Z,310nm,6.2s						
PZH				LR	LR		
	comp=Z,2µm,20.4s						
PZH				LR	LR		
	comp=Z,3µm,21.4s						
PZH				LR	LR		
	comp=Z,2µm,20.7s						
JOW	**Kunigami**	**40.50**	**19**	P	**P**	**18 47 03.5**	**-0.6**
	comp=Z,19nm,0.8s,baz=226,slow=7.2,SNR=9.3						
	comp=Z,19nm,0.8s						
JOW	**Kunigami**	**40.50**	**19**	P	**P**	**18 47 03.5**	**-0.6**
H08S2	**Diego Garcia H**	**41.66**	**272**	T	T	19 32 12.7	
	baz=96,slow=75,SNR=170						
H08S3	**Diego Garcia H**	**41.67**	**272**	T	T	19 32 09.6	
	baz=96,slow=75,SNR=166						
H08S1	**Diego Carcia H**	**41.68**	**272**	T	T	19 32 11.7	
	baz=96,slow=75,SNR=140						
DGAR	**Diego Garcia**	**41.74**	**272**	IAMs_20	IAMs_20	19 02 20.8	
	comp=Z,1µm,19.0s						
DGAR	**Diego Garcia**	**41.74**	**272**	*i* P	**P**	**18 47 16.1**	**+1.5**
DGAR				pmax	pmax		
	comp=Z,30nm,0.8s						
WHN	**Wuhan**	**41.95**	**360**	P	**P**	**18 47 16.4**	**+0.4**
WHN				S	**S**	**18 53 35.4**	**+1.8**
WHN				pmax	pmax		
	comp=Z,59nm,0.7s						
WHN				pmax	pmax		
	comp=Z,900nm,4.3s						
WHN				LR	LR		
	comp=Z,630nm,11.4s						
WHN				LR	LR		
	comp=Z,1µm,12.1s						
WHN				LR	LR		
	comp=Z,4µm,20.1s						
ENH	**Enshi**	**41.97**	**353**	IAMs_20	IAMs_20	19 07 21.4	
	comp=Z,852nm,18.0s						
SSE	**Sheshan**	**42.97**	**8**	P	**P**	**18 47 25.8**	**+1.5**
SSE				S	**S**	**18 53 52.9**	**+4.3**
SSE				pmax	pmax		
	comp=Z,18nm,0.8s						
SSE				pmax	pmax		
	comp=Z,130nm,5.9s						
SSE				LR	LR		
	comp=Z,260nm,21.3s						
SSE				LR	LR		
	comp=Z,210nm,20.3s						
KAAM	**Kaadhehdhoo**	**43.04**	**283**	P	**P**	**18 47 26.7**	**+1.5**
KAAM				IAmb	IAmb	18 47 28.6	
	comp=Z,107nm,1.2s						
KAAM	**Kaadhehdhoo**	**43.04**	**283**	P	**P**	**18 47 26.8**	**+1.7**
SHL	**Shillong**	**43.10**	**329**	P	**P**	**18 47 25.3**	**-0.4**
SHL				IAmb	IAmb	18 47 46.5	
	comp=Z,74nm,0.9s						
SHL	**Shillong**	**43.10**	**329**	P	**P**	**18 47 25.3**	**-0.4**
SHL				pmax	pmax		
	comp=Z,74nm,0.9s						
SHL	**Shillong**	**43.10**	**329**	P	**P**	**18 47 25.8**	**+0.1**
CD2	**Chengdu**	**43.58**	**346**	P	**P**	**18 47 29.3**	**0.0**
CD2				S	**S**	**18 54 01.1**	**+3.4**
CD2				pmax	pmax		
	comp=Z,80nm,0.7s						
CD2				LR	LR		
	comp=Z,460nm,14.2s						
CD2				LR	LR		
	comp=Z,300nm,11.7s						
NJ2	**Nanjing**	**43.65**	**5**	⇓P	**P**	**18 47 30.8**	**+1.1**
NJ2				pP	**sP**	**18 47 34.3**	**-1.9**
NJ2				sP	**pwP**	**18 47 40.5**	**+1.0**
NJ2				PcP	**PcP**	**18 49 19.5**	**+2.6**
NJ2				S	**S**	**18 54 01.3**	**+2.8**
NJ2				pmax	pmax		
	comp=Z,19nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,270nm,4.5s						
NJ2				LR	LR		
	comp=Z,730nm,14.5s						
NJ2				LR	LR		
	comp=Z,410nm,16.7s						
NJ2				LR	LR		
	comp=Z,1µm,16.9s						
PCHI	**Peechi**	**43.93**	**299**	*e*P	**P**	**18 47 30.6**	**-1.7**
PCHI				*e*S	S	18 53 43.6	-20
HNR	**Honiara**	**44.61**	**92**	LR	LR	19 08 58.9	
	comp=Z,4µm,18.2s,baz=216,slow=40						
HNR	**Honiara**	**44.61**	**92**	P	**P**	**18 47 38.8**	**+1.0**
HNR	**Honiara**	**44.61**	**92**	P	**P**	**18 47 38.8**	**+1.0**
HNR				pmax	pmax		
	comp=Z,120nm,1.0s						
LHI	**Lord Howe Isla**	**45.46**	**123**	P	**P**	**18 47 41.5**	**-2.9**
	baz=46,SNR=3.5						
JSU	**Suzuyama**	**45.53**	**19**	P	**P**	**18 47 44.0**	**-0.8**
JSU				IAmb	IAmb	18 48 00.6	
	comp=Z,39nm,1.0s						
XAN	**Xi'an**	**45.76**	**353**	⇑*i*P	**P**	**18 47 46.3**	**-0.3**
XAN				pP	pP	18 47 50.8	-0.7
XAN				S	**S**	**18 54 28.4**	**-0.8**
XAN				pmax	pmax		
	comp=Z,47nm,0.9s						
XAN				pmax	pmax		
	comp=Z,380nm,11.5s						
XAN				LR	LR		
	comp=Z,880nm,14.9s						
XAN				LR	LR		
	comp=Z,390nm,18.0s						
XAN				LR	LR		
	comp=Z,940nm,18.4s						
HYB	**Hyderabad**	**45.84**	**308**	*e*P	**P**	**18 47 46.5**	**-1.1**
HYB				IVmB_BB		18 47 47.7	
	comp=Z,286nm,1.7s						
LYN	**LuoYang**	**45.99**	**358**	⇓*i*P	**P**	**18 47 48.0**	**-0.4**
LYN				S	**S**	**18 54 31.3**	**-1.2**
LYN				SS	**ScS**	**18 57 49.9**	**+6.5**
LYN				pmax	pmax		
	comp=Z,180nm,2.4s						
LYN				LR	LR		
	comp=Z,440nm,15.2s						
LYN				LR	LR		
	comp=Z,450nm,18.6s						
LYN				LR	LR		
	comp=Z,810nm,30.9s						
LSA	**Lhasa**	**46.91**	**332**	P	**P**	**18 47 57.1**	**+0.8**
LSA				pP	**pwP**	**18 48 07.6**	**+1.3**
LSA				PcP	**PcP**	**18 49 31.0**	**+2.1**
LSA				S	**S**	**18 54 38.4**	**-8.4**
LSA				pmax	pmax		
	comp=Z,87nm,1.1s						
LSA				LR	LR		
	comp=Z,580nm,24.2s						
LSA				LR	LR		
	comp=Z,530nm,24.2s						
LSA				LR	LR		
	comp=Z,1µm,34.2s						
JCJ	**Chichijima**	**46.91**	**34**	LR	LR	19 06 58.4	
	comp=Z,296nm,19.4s,baz=256,slow=35						
JNU	**Nakatsue**	**47.16**	**19**	P	**P**	**18 47 56.0**	**-1.7**
	comp=Z,49nm,1.1s,baz=184,slow=5.4,SNR=14						
JNU				LR	LR	19 10 35.9	
	comp=Z,214nm,19.9s,baz=196,slow=40						
	comp=Z,49nm,1.1s						
JNU	**Nakatsue**	**47.16**	**19**	P	**P**	**18 47 56.2**	**-1.4**
TIA	**Tai'an**	**47.66**	**3**	P	**P**	**18 48 00.3**	**-1.2**
TIA				pP	**sP**	**18 48 08.0**	**0.0**
TIA				sP	**pwP**	**18 48 11.3**	**+0.1**
TIA				PcP	**PcP**	**18 49 35.8**	**+5.0**
TIA				S	**S**	**18 54 51.3**	**-5.1**
TIA				pmax	pmax		
	comp=Z,30nm,0.9s						
TIA				pmax	pmax		
	comp=Z,310nm,8.4s						
TIA				LR	LR		
	comp=Z,540nm,20.8s						
TIA				LR	LR		
	comp=Z,360nm,14.0s						
TIA				LR	LR		
	comp=Z,1µm,21.0s						
KOUNC	**Koumac, New Ca**	**48.41**	**107**	IAMs_20	IAMs_20	19 10 40.2	
	comp=Z,832nm,20.0s						
LZH	**Lanzhou**	**48.55**	**348**	⇑P	**P**	**18 48 09.4**	**+0.9**
LZH				pP	sP	18 48 13.5	-1.6
LZH				sP	pwP	18 48 17.0	-1.6
LZH				PcP	**PcP**	**18 49 36.6**	**+2.4**
LZH				S	**S**	**18 55 04.3**	**-5.0**
LZH				pmax	pmax		
	comp=Z,65nm,1.0s						
LZH				pmax	pmax		
	comp=Z,370nm,4.6s						
LZH				LR	LR		
	comp=Z,630nm,17.1s						
LZH				LR	LR		
	comp=Z,840nm,14.6s						
LZH				LR	LR		
	comp=Z,830nm,17.8s						
JMN	**Monobe**	**48.72**	**21**	P	**P**	**18 48 08.8**	**-1.0**
JMN				IAmb	IAmb	18 48 26.6	
	comp=Z,60nm,1.0s						
HNS	**HongShan**	**48.79**	**0**	⇑P	**P**	**18 48 09.6**	**-0.5**
HNS				S	**S**	**18 55 16.9**	**+4.7**
HNS				pmax	pmax		
	comp=Z,31nm,1.1s						
HNS				LR	LR		
	comp=Z,550nm,17.0s						
HNS				LR	LR		
	comp=Z,790nm,16.5s						
TIY	**Taiyuan**	**49.14**	**358**	*e*P	**P**	**18 48 13.0**	**+0.1**
TIY				S	**S**	**18 55 12.6**	**-4.8**
TIY				SS	**SS**	**18 58 44.3**	**-4.8**
TIY				pmax	pmax		
	comp=Z,29nm,0.7s						
TIY				pmax	pmax		
	comp=Z,330nm,5.9s						
TIY				LR	LR		
	comp=Z,270nm,17.9s						
TIY				LR	LR		
	comp=Z,380nm,18.5s						
TIY				LR	LR		
	comp=Z,470nm,22.0s						
TJN	**Taejon**	**49.27**	**14**	P	**P**	**18 48 13.7**	**-0.1**
TJN	**Taejon**	**49.27**	**14**	*i* P	**P**	**18 48 13.2**	**-0.6**
JHS	**Saijyo**	**49.61**	**20**	P	**P**	**18 48 16.4**	**-0.1**
JHS				IAmb	IAmb	18 48 32.0	
	comp=Z,38nm,0.9s						
KSAR	**Wonju Array Be**	**50.40**	**14**	P	**P**	**18 48 22.4**	**0.0**
KSAR	**Wonju Array Be**	**50.40**	**14**	P	**P**	**18 48 22.4**	**0.0**
KSRS	**Korea Array**	**50.42**	**14**	P	**P**	**18 48 22.4**	**-0.2**
	comp=Z,28nm,1.0s,baz=193,slow=7.4,SNR=42						

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KSRS                                LR       LR       19 12 07.9
      comp=Z,205nm,20.0s,baz=200,slow=39
      comp=Z,28nm,1.0s
KS19  Wonju Array Si   50.46  14    P        P        18 48 21.8 -1.1
KS19                                IAmb     IAmb     18 48 39.7
      comp=Z,83nm,1.2s
DZM   Mont Dzumac      50.49 109    LR       LR       19 10 31.8
      comp=Z,459nm,18.5s,baz=274,slow=37
HJU   Haeju            50.52  11    P        P        18 48 23.3  0.0
HJU                                 S        S        18 55 28.7 -7.8
HJU                                 AmB
      comp=Z,297nm,1.4s
DL2   Dalian           50.72   7    P        P        18 48 23.9 -0.9
DL2                                 S        S        18 55 35.0 -4.2
DL2                                 pmax     pmax
      comp=Z,45nm,1.2s
DL2                                 pmax     pmax
      comp=Z,290nm,5.8s
DL2                                 LR       LR
      comp=Z,660nm,23.2s
DL2                                 LR       LR
      comp=Z,350nm,26.0s
DL2                                 LR       LR
      comp=Z,1μm,21.0s
GOMU  GeErMu           51.12 339    P        P        18 48 28.8 +0.5
GOMU                                PP       PP       18 50 28.8 +3.5
GOMU                                S        S        18 55 46.4 +0.8
GOMU                                pmax     pmax
      comp=Z,17nm,1.3s
GOMU                                pmax     pmax
      comp=Z,220nm,4.3s
GOMU                                LR       LR
      comp=Z,710nm,20.9s
GOMU                                LR       LR
      comp=Z,310nm,17.9s
GOMU                                LR       LR
      comp=Z,610nm,20.4s
INU   Inuyama          51.34  24    P        P        18 48 28.6 -1.0
INU                                 IAmb     IAmb     18 48 33.2
      comp=Z,53nm,1.0s
BJI   Beijing          51.45   2    P        P        18 48 29.8 -0.4
BJI                                 pP       pP       18 48 33.5 -1.7
BJI                                 sP       pwP      18 48 37.6 -2.4
BJI                                 S        S        18 55 43.8 -5.4
BJI                                 pmax     pmax
      comp=Z,24nm,1.2s
BJI                                 pmax     pmax
      comp=Z,270nm,6.0s
BJI                                 LR       LR
      comp=Z,310nm,19.5s
BJI                                 LR       LR
      comp=Z,220nm,18.0s
BJI                                 LR       LR
      comp=Z,470nm,23.8s
PYAG  Pyongyang        51.50  11    P        P        18 48 30.4 -0.2
PYAG                                pP       pwP      18 48 51.9  +11
PYAG                                S        S        18 55 42.4 -7.6
PYAG                                AmB
      comp=Z,174nm,1.4s
JGF   Kuroka           51.69  24    P        P        18 48 30.5 -1.8
JGF                                 IAmb     IAmb     18 48 49.5
      comp=Z,40nm,0.9s
BTO   Baotou           52.16 356   eP        P        18 48 36.3 +0.6
BTO                                 pP       sP       18 48 40.6 -1.7
BTO                                 PP       PP       18 50 36.6 +2.3
BTO                                 S        S        18 56 01.8 +2.5
BTO                                 sS       sS       18 56 07.8 +0.5
BTO                                 pmax     pmax
      comp=Z,140nm,0.9s
BTO                                 LR       LR
      comp=Z,3μm,15.6s
BTO                                 LR       LR
      comp=Z,2μm,14.1s
BTO                                 LR       LR
      comp=Z,3μm,16.8s
SUJ   Sinuiju          52.30  10    P        P        18 48 35.4 -1.2
SUJ                                 S        S        18 55 52.3 -8.7
SUJ                                 AmB
      comp=Z,200nm,2.0s
HHC   Hu-ho-hao-te     52.31 357   eP        P        18 48 37.6 +0.8
HHC                                 sP       sP       18 48 43.8 +0.4
HHC                                 S        S        18 55 59.4 -1.9
HHC                                 sS       sS       18 56 15.3 +6.0
HHC                                 pmax     pmax
      comp=Z,57nm,1.2s
HHC                                 pmax     pmax
      comp=Z,360nm,6.4s
HHC                                 LR       LR
      comp=Z,980nm,19.5s
HHC                                 LR       LR
      comp=Z,520nm,19.7s
HHC                                 LR       LR
      comp=Z,2μm,21.2s
GTA   Gaotai           52.63 346   ⇓P        P        18 48 39.9 +0.7
GTA                                 pP       sP       18 48 44.0 -1.8
GTA                                 S        S        18 56 05.8  0.0
GTA                                 pmax     pmax
      comp=Z,25nm,1.4s
GTA                                 pmax     pmax
      comp=Z,300nm,6.9s
GTA                                 LR       LR
      comp=Z,450nm,21.8s
GTA                                 LR       LR
      comp=Z,770nm,22.5s
GTA                                 LR       LR
      comp=Z,680nm,22.5s
HHU   Hamhung          52.70  13    P        P        18 48 39.5 -0.1
MAJO  Matsushiro       52.85  24    P        P        18 48 38.5 -2.3
MAJO                                IAmb     IAmb     18 48 48.1
      comp=Z,69nm,0.9s
MAJO  Matsushiro       52.85  24  i P        P        18 48 38.9 -1.9
MAJO                                pmax     pmax
      comp=Z,113nm,1.5s
MJAR  Matsushiro Arr   52.85  24    P        P        18 48 39.0 -1.8
      comp=Z,60nm,0.9s,baz=194,slow=7.4,SNR=52
MJAR                                LR       LR       19 12 41.1
      comp=Z,232nm,19.6s,baz=212,slow=38
      comp=Z,60nm,0.9s
MJAR  Matsushiro Arr   52.85  24    P        P        18 48 39.0 -1.8
MJB9  Matsu-Tunnel     52.85  24    P        P        18 48 39.2 -1.6
MJB9                                IAmb     IAmb     18 48 49.1
      comp=Z,67nm,0.9s
JSD   Sado             54.17  23    P        P        18 48 49.7 -0.7
JMM   Marumori         55.04  25    P        P        18 48 55.6 -1.1
XLT   XiLinHaoTe       55.30   1⇑iP        P        18 48 59.3 +0.7
XLT                                 pP       pP       18 49 02.6 -1.1
XLT                                 sP       pwP      18 49 07.3 -1.1
XLT                                 S        S        18 56 36.5 -5.2
XLT                                 pmax     pmax
      comp=Z,45nm,1.4s
XLT                                 pmax     pmax
      comp=Z,440nm,6.4s
XLT                                 LR       LR
      comp=Z,44nm,18.3s
XLT                                 LR       LR
      comp=Z,360nm,16.6s
XLT                                 LR       LR
      comp=Z,550nm,16.6s
XLT   XiLinHaoTe       55.30   1    ScS      P        18 48 59.5 +0.9
XLT   XiLinHaoTe       55.30   1    SS       P        18 48 59.8 +1.2
DCZ   Deep Cove        55.83 138    P        P        18 49 02.2 -0.2
DCZ                                 IAmb     IAmb     18 49 18.7
      comp=Z,101nm,1.7s
CN2   Changchun        56.06   9    P        P        18 49 03.0 -1.0
CN2                                eS        S        18 56 52.4 +0.7
CN2                                 pmax     pmax
      comp=Z,20nm,0.9s
CN2                                 pmax     pmax
      comp=Z,300nm,6.0s
CN2                                 LR       LR
      comp=Z,300nm,18.0s
CN2                                 LR       LR
      comp=Z,300nm,18.0s
CN2                                 LR       LR
      comp=Z,400nm,16.0s
VLA   Vladivostok      56.75  15  i P        P        18 49 08.2 -0.7
VLA                                 pmax     pmax
      comp=Z,48nm,1.2s
RER   Riviere de l’E   56.97 252    P        P        18 49 12.5 +1.4
MDJ   Mudanjiang       57.63  13    P        P        18 49 14.4 -0.7
MDJ                                 PP       PP       18 51 26.8 +3.6
MDJ                                 S        S        18 57 16.3 +3.9
MDJ                                 sS       sS       18 57 29.8 +9.0
MDJ                                 ScS      ScS      18 59 01.8 -1.8
MDJ                                 SS       SS       19 01 06.9 +3.8
MDJ                                 pmax     pmax
      comp=Z,26nm,0.9s
MDJ                                 pmax     pmax
      comp=Z,370nm,6.7s
MDJ                                 LR       LR
      comp=Z,360nm,24.4s
MDJ                                 LR       LR
      comp=Z,380nm,23.3s
MDJ                                 LR       LR
      comp=Z,1μm,24.7s
JTM   Tenmabayashi     57.64  24    P        P        18 49 14.3 -0.9
USA0B Ussuriysk Arra   57.79  15  i P        P        18 49 15.7 -0.5
USRK  Ussuriysk Ar.    57.79  15    P        P        18 49 15.2 -1.0
      comp=Z,36nm,0.7s,baz=205,slow=6.4,SNR=16
USRK                                LR       LR       19 19 12.8
      comp=Z,127nm,18.2s,baz=191,slow=41
      comp=Z,36nm,0.7s
RPZ   Rata Peaks       57.95 135    LR       LR       19 14 34.8
      comp=Z,935nm,18.1s,baz=284,slow=36
RPZ   Rata Peaks       57.95 135    P        P        18 49 19.4 +1.8
RPZ                                 IAmb     IAmb     18 49 25.8
      comp=Z,46nm,1.1s
DSZ   Denniston Nort   57.99 132    P        P        18 49 18.8 +0.9
DSZ                                 IAmb     IAmb     18 49 31.0
      comp=Z,33nm,1.0s
BNX   BinXian          58.28  11   ⇑P        P        18 49 19.4 -0.2
BNX                                 pmax     pmax
      comp=Z,18nm,0.8s
BNX                                 pmax     pmax
      comp=Z,320nm,6.0s
QRZ   Quartz Range     58.31 131    P        P        18 49 22.6 +2.5
QRZ                                 IAmb     IAmb     18 49 33.3
      comp=Z,41nm,1.0s
QRZ                                 IAMs_20  IAMs_20  19 12 00.8
      comp=Z,1μm,20.0s
LTZ   Lake Taylor      58.58 133    P        P        18 49 22.6 +0.6
MRNZ  Matariki Terra   58.61 132    P        P        18 49 22.9 +0.8
THZ   Tophouse         58.80 132    P        P        18 49 25.0 +1.4
THZ                                 IAmb     IAmb     18 49 39.2
      comp=Z,26nm,1.0s
MSEY  Mahe Island      58.83 272    IAMs_20  IAMs_20  19 09 12.9
      comp=Z,736nm,19.0s
MSEY  Mahe Island      58.83 272    P        P        18 49 23.3 -0.9
NNZ   Nelson           59.02 131    P        P        18 49 26.7 +1.6
NNZ                                 IAmb     IAmb     18 49 37.5
      comp=Z,83nm,1.6s
KHZ   Kahutara         59.40 133    P        P        18 49 27.6  0.0
KHZ                                 IAmb     IAmb     18 49 30.3
      comp=Z,74nm,1.6s
ERM   Erimo            59.51  24    P        P        18 49 27.8 -0.5
ERM                                 IAmb     IAmb     18 49 46.2
      comp=Z,42nm,0.9s
ERM   Erimo            59.51  24    P        P        18 49 27.8 -0.5
ERM                                 pmax     pmax
      comp=Z,42nm,0.9s
ULN   Ulaanbaatar      59.63 354    P        P        18 49 28.6 -0.6
ULN                                 IAmb     IAmb     18 49 41.0
      comp=Z,23nm,0.8s
ULN   Ulaanbaatar      59.63 354    P        P        18 49 28.6 -0.6
ULN                                 pmax     pmax
      comp=Z,23nm,0.9s
ULN   Ulaanbaatar      59.63 354    P        P        18 49 28.8 -0.3
ULN                                 P        P        18 49 28.8 -0.3
HIZ   Hauiti           59.63 128    P        P        18 49 29.1 -0.3
SONM  Songino Array    59.67 354    P        P        18 49 29.1 -0.4
      comp=Z,14nm,0.9s,baz=170,slow=5.6,SNR=63
      comp=Z,14nm,0.9s
SONM  Songino Array    59.67 354    P        P        18 49 29.0 -0.4
SONM                                IAmb     IAmb     18 49 34.5
      comp=Z,34nm,1.0s
NIL   Nilore           59.81 320    P        P        18 49 28.8 -1.8
NIL                                 IAmb     IAmb     18 50 02.1
      comp=Z,61nm,1.1s
NIL   Nilore           59.81 320    P        P        18 49 28.8 -1.8
NIL                                 pmax     pmax
      comp=Z,61nm,1.2s
NIL   Nilore           59.81 320    P        P        18 49 29.2 -1.4
NIL                                 P        P        18 49 29.2 -1.4
TEY   Ternei           59.84  18⇑eP        P        18 49 30.0 -0.4
TEY                                 pmax     pmax
      comp=Z,20nm,1.0s
WMQ   Urumqi           60.40 338   eP        P        18 49 34.3 -0.1
WMQ                                 sP       pwP      18 49 46.3 +1.1
WMQ                                 PcP      PcP      18 50 22.8 +3.5
WMQ                                 S        S        18 57 48.0 -0.5
WMQ                                 pmax     pmax
      comp=Z,61nm,1.5s
WMQ                                 LR       LR
      comp=Z,180nm,23.5s
WMQ                                 LR       LR
      comp=Z,640nm,16.7s
WMQ                                 LR       LR
      comp=Z,710nm,25.1s
MRZ   Mangatainoka R   60.55 130    IAMs_20  IAMs_20  19 13 25.2
      comp=Z,1μm,20.0s
BKZ   Black Stump Fm   60.99 128    P        P        18 49 39.9 +1.2
BKZ                                 IAmb     IAmb     18 49 50.9
      comp=Z,36nm,1.0s
ASAJ  Asahikawa        61.07  23    P        P        18 49 38.5 -0.3
      comp=Z,34nm,0.8s,baz=247,slow=12,SNR=12
ASAJ                                LR       LR       19 18 39.4
      comp=Z,192nm,19.3s,baz=226,slow=39
      comp=Z,34nm,0.8s
JKA   Kamikawa-asahi   61.07  23    P        P        18 49 38.3 -0.6
RTZ   Ruatahuna        61.29 128    P        P        18 49 41.9 +1.2
RTZ                                 IAmb     IAmb     18 49 53.2
      comp=Z,38nm,0.9s
RTZ                                 IAMs_20  IAMs_20  19 13 26.8
      comp=Z,1μm,22.0s
MSVF  Nonsavu          61.45 104    LR       LR       19 16 13.1
      comp=Z,250nm,18.3s,baz=249,slow=36
KSH   Kashi            62.29 327    P        P        18 49 46.5 -0.9
KSH                                 PP       PP       18 52 04.8  0.0
KSH                                 pmax     pmax
      comp=Z,12nm,0.9s
KSH                                 LR       LR
      comp=Z,300nm,19.4s
KSH                                 LR       LR
      comp=Z,550nm,20.4s
KSH                                 LR       LR
      comp=Z,450nm,19.4s
KLR   Kul'dur          62.48  13    P        P        18 49 46.7 -1.6
      comp=Z,5.2nm,1.0s,baz=218,slow=4.0,SNR=17
KLR                                 LR       LR       19 20 04.7
      comp=Z,127nm,18.5s,baz=208,slow=39
      comp=Z,5.2nm,1.0s
KLR   Kul'dur          62.48  13  i P        P        18 49 47.5 -0.8
KLR                                 pmax     pmax
      comp=Z,27nm,1.6s
ZAK   Zakamensk        62.56 352   eP        P        18 49 48.5 -0.4
ZAK                                 pmax     pmax
      comp=Z,22nm,1.4s
HEH   HeiHe            62.66   9   eP        P        18 49 48.4 -1.0
HEH                                 pP       pP       18 49 52.8 -1.4
HEH                                 S        S        18 58 18.3 +1.6
HEH                                 sS       sS       18 58 25.3 +0.1
HEH                                 pmax     pmax
      comp=Z,52nm,1.3s
HEH                                 pmax     pmax
      comp=Z,450nm,5.7s
HEH                                 LR       LR
      comp=Z,450nm,23.3s
HEH                                 LR       LR
      comp=Z,270nm,24.7s
HEH                                 LR       LR
      comp=Z,680nm,23.8s
KBL   Kabul            63.06 319    P        P        18 49 51.2 -1.5
KBL                                 IAmb     IAmb     18 50 03.6
      comp=Z,18nm,0.8s
KBL   Kabul            63.06 319    P        P        18 49 51.2 -1.5
KBL                                 pmax     pmax
      comp=Z,18nm,0.8s
KBL   Kabul            63.06 319    P        P        18 49 51.6 -1.2
      SNR=11
KBL                                 P        P        18 49 51.6 -1.2
      SNR=11
SHLS  Shalkode         63.28 332⇑iP        P        18 49 53.0 -0.9
      comp=Z,58nm,1.3s,baz=332
SHLS                               eS        S        18 58 24.3 -0.9
      baz=332
SHLS  Shalkode         63.28 332c iP        P        18 49 53.0 -0.9
SHLS                               eS        S        18 58 24.2 -0.9
SHLS                                pmax     pmax
      comp=Z,59nm,1.3s
CIT   Chita            63.41 359   eP        P        18 49 54.9 +0.4
CIT                                e                  18 50 33.8
CIT                                 pmax     pmax
      comp=Z,125nm,1.7s
UZB   Uzynbulak        63.48 332   eP        P        18 49 55.4 +0.1
      comp=Z,55nm,1.4s,baz=332
UZB   Uzynbulak        63.48 332   eP        P        18 49 55.3  0.0
UZB                                 pmax     pmax
      comp=Z,55nm,1.4s
YSS   Yuzh-Sakhalins   63.55  21    P        P        18 49 55.6 +0.2
YSS   Yuzh-Sakhalins   63.55  21   eP        P        18 49 55.8 +0.4
YSS                                 pmax     pmax
      comp=Z,300nm,3.1s
YSS                                 pmax     pmax
      comp=Z,60nm,1.2s
YSS                                 MLR      MLR
      comp=Z,300nm,15.0s
JLN   Jalan Bani Buh   63.68 302    P        P        18 49 56.7 -0.2
JLN                                 P        P        18 49 56.7 -0.2
NGCH  Negor - Chabah   63.75 306    P        P        18 49 56.7 -0.5
ZHN   Zhinishke        63.77 331   eP        P        18 49 57.5 +0.3
      comp=Z,32nm,1.5s,baz=331
ZHN   Zhinishke        63.77 331   eP        P        18 49 57.5 +0.3
ZHN                                 pmax     pmax
      comp=Z,32nm,1.5s
KPKS  Kokpek           63.88 332⇑iP        P        18 49 58.3 +0.4
      comp=Z,60nm,1.5s,baz=332
KPKS  Kokpek           63.88 332c iP        P        18 49 58.3 +0.4
KPKS                                pmax     pmax
      comp=Z,60nm,1.5s
MOY   Mondy            64.15 351   eP        P        18 49 59.9 +0.4
MOY                                 pmax     pmax
      comp=Z,61nm,1.6s
WBK   Wadi Bani Khal   64.25 302    P        P        18 50 00.3 -0.3
WBK                                 P        P        18 50 00.3 -0.3
IRK   Irkutsk          64.25 353   eP        P        18 50 00.2 +0.2
IRK                                 pmax     pmax
      comp=Z,69nm,1.6s
TNSS  Tian-Shan        64.39 330   eP        P        18 50 02.5 +0.9
      baz=330
TNSS  Tian-Shan        64.39 330   eP        P        18 50 02.5 +0.9
MHTO  MHTO             64.39 300    P        P        18 50 00.7 -0.8
MHTO                                P        P        18 50 00.7 -0.8
MDOK  Medeo            64.43 330   eP        P        18 50 03.0 +1.4
      baz=330
MDOK  Medeo            64.43 330   eP        P        18 50 02.9 +1.4
AAA   Alma-Ata         64.53 330   eP        P        18 50 02.5 +0.4
      comp=Z,41nm,1.1s,baz=330
AAA   Alma-Ata         64.53 330   eP        P        18 50 02.5 +0.4
AAA                                 pmax     pmax
      comp=Z,41nm,1.1s
ZSN   Zaisan           64.53 338   eP        P        18 50 02.6 +0.7
      comp=Z,58nm,1.7s,baz=338
ZSN   Zaisan           64.53 338   eP        P        18 50 02.6 +0.7
ZSN                                 pmax     pmax
      comp=Z,59nm,1.7s
WSAR  Wadi Sarin       64.80 303    P        P        18 50 04.2  0.0
      comp=Z,7.3nm,0.6s,baz=160,slow=4.9,SNR=7.4
WSAR                                LR       LR       19 16 43.2
      comp=Z,424nm,21.6s,baz=128,slow=35
      comp=Z,7.3nm,0.6s
WSAR  Wadi Sarin       64.80 303    P        P        18 50 04.5 +0.3
RAO   Raoul Island     64.83 117    LR       LR       19 19 45.8
      comp=Z,410nm,18.3s,baz=142,slow=37
JMDO  Jabal Madar      64.86 302    P        P        18 50 04.0 -0.6
MK31  Makanchi Array   64.97 336    P        P        18 50 04.3 -0.5
MK31                                IAmb     IAmb     18 50 17.3
      comp=Z,30nm,0.8s
MK31  Makanchi Array   64.97 336  i P        P        18 50 04.5 -0.3
MKAR  Makanchi Array   64.97 336    P        P        18 50 04.5 -0.4
      comp=Z,11nm,0.5s,baz=142,slow=6.0,SNR=45
MKAR                                PKP2ab   P"P"ab   19 18 59.4
      comp=Z,0.7nm,1.0s,baz=321,slow=1.7,SNR=4.3
      comp=Z,11nm,0.5s
MKAR  Makanchi Array   64.97 336    P        P        18 50 04.1 -0.7
TKM2  Tokmak 2         64.97 329    P        P        18 50 04.8 -0.3
      SNR=29
CHKK  Chushkaly        64.98 331   eP        P        18 50 04.6 -0.3
      baz=331
CHKK  Chushkaly        64.98 331   eP        P        18 50 04.6 -0.3
GRNR  Gornyy           65.01  15⇑iP        P        18 50 05.0  0.0
GRNR                               eS        S        18 58 50.6 +4.6
GRNR                                pmax     pmax
      comp=N,5.0nm,1.2s
GRNR                                pmax     pmax
      comp=Z,8.0nm,1.1s
GRNR                                smax     smax
      comp=N,2.0nm,0.7s
GRNR                                MLR      MLR
      comp=E,190nm,18.0s
GRNR                                MLR      MLR
      comp=N,160nm,15.0s
GRNR                                MLR      MLR
      comp=Z,220nm,15.0s
UCH   Uchtor           65.01 328    P        P        18 50 07.4 +1.6
      SNR=14
KBK   Karagaybulak     65.10 329    P        P        18 50 06.3 +0.4
      SNR=34
MAKZ  Makanchi         65.10 336    P        P        18 50 05.1 -0.6
MAKZ                                IAmb     IAmb     18 50 10.8
      comp=Z,46nm,1.4s
MAKZ                                IAMs_20  IAMs_20  19 22 17.5
      comp=Z,404nm,19.0s
MAKZ  Makanchi         65.10 336    P        P        18 50 05.1 -0.6
MAKZ                                pmax     pmax
      comp=Z,46nm,1.4s
MAKZ                                MLR      MLR
      comp=Z,400nm,19.0s
GAR   Garm             65.11 323    P        P        18 50 05.2 -0.9
UGL   Uglegorsk        65.14  20   eP        P        18 50 07.2 +1.4
UGL                                 pmax     pmax
      comp=Z,60nm,0.9s
TDK   Taldyqorghan     65.19 333   eP        P        18 50 06.8 +0.4
      baz=332
TDK   Taldyqorghan     65.19 333   eP        P        18 50 06.7 +0.4
SMDO  Samad            65.21 302    P        P        18 50 06.5 -0.4
SMDO                                P        P        18 50 06.5 -0.4
VOI   Vohitsoka        65.28 251    P        P        18 50 07.8 +0.3
VOI                                 IAmb     IAmb     18 50 20.2
      comp=Z,28nm,1.0s
VOI   Vohitsoka        65.28 251    P        P        18 50 09.5 +2.0
VOI   Vohitsoka        65.28 251    P        P        18 50 08.5 +1.0
AAK   Ala-Archa        65.32 328    P        P        18 50 08.1 +0.8
      SNR=22
AAK   Ala-Archa        65.32 328    P        P        18 50 07.6 +0.2
      comp=Z,16nm,1.0s,baz=149,slow=5.0,SNR=26
      comp=Z,16nm,1.0s
AAK   Ala-Archa        65.32 328    P        P        18 50 07.5 +0.2
AAK                                 IAmb     IAmb     18 50 25.1
      comp=Z,36nm,0.9s
AAK   Ala-Archa        65.32 328  i P        P        18 50 07.3 -0.1
AAK                                 pmax     pmax
      comp=Z,44nm,1.3s
AAK   Ala-Archa        65.32 328    P        P        18 50 07.9 +0.5
AAK                                 P        P        18 50 07.9 +0.5
KUU   Kurty            65.32 330   eP        P        18 50 07.7 +0.5
      baz=330
KUU   Kurty            65.32 330   eP        P        18 50 07.6 +0.5
BIDO  Bidbid           65.34 303    P        P        18 50 07.4 -0.3
AML   Almayashu        65.37 328    P        P        18 50 08.2 +0.2
      SNR=27
CHGR  Chuyangaron      65.58 322    P        P        18 50 06.9 -2.1
CHGR                                IAmb     IAmb     18 51 15.1
      comp=Z,42nm,1.0s
CHGR  Chuyangaron      65.58 322    P        P        18 50 06.9 -2.1
CHGR                                pmax     pmax
      comp=Z,42nm,1.0s
DGZ   Jazzator, Alta   65.58 341  i P        P        18 50 09.2 +0.3
DGZ                                 pmax     pmax
      comp=Z,114nm,1.3s
EKS2  Erkin-Say        65.70 328    P        P        18 50 10.7 +0.9
      SNR=32
USP   Ospenovka        65.77 329    P        P        18 50 10.3 +0.2
      SNR=14
BSY   Bisya            65.78 301    P        P        18 50 10.1 -0.4
SGDS  Sogindy          65.84 329   eP        P        18 50 11.3 +0.7
      baz=329
SGDS  Sogindy          65.84 329   eP        P        18 50 11.2 +0.7
ZEA   Zeya             66.02   8   eP        P        18 50 11.2 -0.2
ZEA                                 pmax     pmax
      comp=Z,300nm,6.5s
ZEA                                 pmax     pmax
      comp=E,20nm,0.7s
ZEA                                 pmax     pmax
      comp=N,30nm,1.2s
ZEA                                 pmax     pmax
      comp=Z,50nm,1.3s
ZEA                                 MLR      MLR
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      comp=Z,200nm,21.0s
HOQ   Hoqain           66.04 302  P       P        18 50 12.7 +0.4
HOQ                               P       P        18 50 12.7 +0.4
RBK   Rabkut           66.30 295  P       P        18 50 14.9 +0.9
WHFO  Wadi Hawf        66.83 295  P       P        18 50 16.2  -1.3
WHFO                              P       P        18 50 16.2  -1.3
TYV   Tymovskoe        66.88  19 eP       P        18 50 18.8 +1.8
TYV                              eS       S        18 59 15.9 +7.2
TYV                               pmax    pmax
      comp=Z,13nm,1.3s
TYV                               pmax    pmax
      comp=Z,200nm,3.1s
SOHO  SOHO             66.92 303  P       P        18 50 16.9  -0.9
ABTO  Aybut            67.05 295  P       P        18 50 18.4  -0.4
      SNR=7.9
ABTO                              P       P        18 50 18.4  -0.4
      SNR=7.9
DZA   Taraz            67.15 327 eP       P        18 50 19.0   0.0
      baz=327
DZA   Taraz            67.15 327 eP       P        18 50 18.9   0.0
TAS   Tashkent         67.23 325  P       P        18 50 18.1  -1.4
TAS   Tashkent         67.23 325  P       P        18 50 18.1  -1.4
TAS                               pmax    pmax
      comp=Z,72nm,0.8s
IUG   Iuzhnay          67.36 326 eP       P        18 50 20.5 +0.1
      baz=326
IUG                              eS       S        18 59 17.0 +1.8
      baz=326
IUG   Iuzhnay          67.36 326 eP       P        18 50 20.4 +0.1
IUG                              eS       S        18 59 16.9 +1.8
ALNE  Al Ain           67.54 302  P       P        18 50 21.2  -0.6
ALNE                              P       P        18 50 21.2  -0.6
UOSS  Minazif          67.54 303  P       P        18 50 21.2  -0.5
UOSS                              P       P        18 50 21.2  -0.5
ASHO  Ashiyiah         67.55 303  P       P        18 50 20.6  -1.2
ASHO                              P       P        18 50 20.6  -1.2
HATD  Hatta, Dubai     67.55 303  P       P        18 50 21.4  -0.4
HATD                              P       P        18 50 21.4  -0.4
CHM   Chimkent         67.71 325 eP       P        18 50 23.1 +0.5
      baz=325
CHM   Chimkent         67.71 325 eP       P        18 50 23.0 +0.5
KK31  Karatay Array    67.74 327  P       P        18 50 21.4  -1.2
KK31  Karatay Array    67.74 327  P       P        18 50 21.4  -1.2
KK31                              pmax    pmax
      comp=Z,11nm,1.0s
KKAR  Karatay Array    67.74 327  P       P        18 50 22.0  -0.6
KKAR  Karatay Array    67.74 327  P       P        18 50 21.8  -0.9
KKAR                              IAmb    IAmb     18 51 21.6
      comp=Z,11nm,0.9s
KKAR  Karatay Array    67.74 327  P       P        18 50 22.0  -0.6
MASF  Masafi           67.76 304  P       P        18 50 23.8 +0.6
FAQ   Al Faqa, Dubai   67.96 303  P       P        18 50 23.9  -0.5
FAQ                               P       P        18 50 23.9  -0.5
ASUD  Al Ashush, Dub   68.12 303  P       P        18 50 25.5   0.0
MZWR  Madinat Zayed    68.98 301  P       P        18 50 30.6  -0.2
KURBB Kurchatov Arra   69.53 336  P       P        18 50 33.0  -0.5
      comp=Z,4.8nm,0.8s,baz=151,slow=5.0,SNR=16
KURBB                             PP      PP       18 53 05.2  -2.4
      comp=Z,4.0nm,1.2s,baz=142,slow=7.8,SNR=2.6
      comp=Z,4.8nm,0.8s
KURK  Kurchatov        69.56 337  P       P        18 50 33.7  -0.1
KURK                              IAmb    IAmb     18 50 56.0
      comp=Z,20nm,0.7s
KURK                              IAMs_20 IAMs_20  19 25 06.5
      comp=Z,454nm,19.0s
KURK  Kurchatov        69.56 337 i P      P        18 50 32.9  -0.9
KURK                              pmax    pmax
      comp=Z,57nm,2.3s
KURK  Kurchatov        69.56 337  P       P        18 50 34.2 +0.4
KURK                              P       P        18 50 34.2 +0.4
GHWR  Ruwais           69.90 301  P       P        18 50 35.9  -0.5
ZAA0  Zalesovo Array   70.07 342  P       P        18 50 36.2  -0.7
ZALV  Zalesovo Beam    70.07 342  P       P        18 50 36.1  -0.8
      comp=Z,5.7nm,0.6s,baz=150,slow=5.0,SNR=17
ZALV                              PKPPKP  P'P'df   19 18 39.4 +1.9
      comp=Z,1.0nm,0.8s,baz=316,slow=6.0,SNR=7.7
ZALV                              LR      LR       19 21 47.9
      comp=Z,278nm,18.9s,baz=160,slow=36
      comp=Z,5.7nm,0.6s
ZALV  Zalesovo Beam    70.07 342  P       P        18 50 35.9  -1.0
VNDA  Vanda            70.09 170  P       P        18 50 37.8 +1.0
      comp=Z,7.5nm,0.8s,baz=323,slow=5.7,SNR=15
VNDA                              LR      LR       19 18 29.8
      comp=Z,604nm,21.6s,baz=334,slow=33
      comp=Z,7.5nm,0.8s
VNDA  Vanda            70.09 170  P       P        18 50 37.1 +0.3
SLWR  Sila             70.94 301  P       P        18 50 42.6  -0.2
SLWR                              P       P        18 50 42.6  -0.2
BRZS  Berezniki        71.49 333 eP       P        18 50 45.9 +0.2
      baz=333
BRZS  Berezniki        71.49 333 eP       P        18 50 45.8 +0.2
AFI   Afiamalu         71.58 101  LR      LR       19 21 05.1
      comp=Z,103nm,19.7s,baz=268,slow=35
GEYT  Alibeck          72.24 316  P       P        18 50 50.8 +0.4
      comp=Z,12nm,0.8s,baz=160,slow=4.7,SNR=27
GEYT                              LR      LR       19 26 19.1
      comp=Z,130nm,19.2s,baz=138,slow=39
      comp=Z,12nm,0.8s
GYA0B ALIBECK ARRAY    72.24 316  P       P        18 50 50.5 +0.1
PEA0B Petropavlovsk-   74.27  25  P       P        18 51 00.8  -1.2
PEA0B Petropavlovsk-   74.27  25 i P      P        18 51 01.8  -0.2
PETK  Petropavlovsk-   74.27  25  P       P        18 51 02.1 +0.1
      comp=Z,9.3nm,1.1s,baz=182,slow=1.8,SNR=6.4
PETK                              LR      LR       19 24 45.2
      comp=Z,156nm,20.7s,baz=228,slow=37
      comp=Z,9.3nm,1.1s
PETK  Petropavlovsk-   74.27  25  P       P        18 51 00.7  -1.4
YAK   Yakutsk          74.40   7  P       P        18 51 01.7  -0.9
      comp=Z,6.6nm,0.5s,baz=165,slow=1.8,SNR=19
YAK                               LR      LR       19 26 12.8
      comp=Z,399nm,19.5s,baz=194,slow=38
      comp=Z,6.6nm,0.5s
YAK   Yakutsk          74.40   7  P       P        18 51 01.2  -1.3
YAK   Yakutsk          74.40   7 eP       P        18 51 02.2  -0.3
YAK                              e*PP     sP       18 51 09.4 +0.2
YAK                              e                 18 51 18.9
YAK                              e                 18 53 43.2
YAK                              ePPP     PPP      18 55 33.5
YAK                              eS       S        19 00 35.0  -0.8
YAK                              e                 19 01 06.5
YAK                              eSS      SS       19 05 20.0  -2.6
YAK                              eSSS     SSS      19 08 41.2
YAK                               pmax    pmax
      comp=Z,48nm,1.1s
YAK                               pmax    pmax
      comp=N,33nm,1.4s
YAK                               pmax    pmax
      comp=E,16nm,1.2s
YAK                               pmax    pmax
      comp=Z,215nm,6.2s
YAK                               pmax    pmax
      comp=N,178nm,5.4s
YAK                               pmax    pmax
      comp=E,80nm,5.1s
YAK                               smax    smax
      comp=E,114nm,3.4s
YAK                               smax    smax
      comp=N,40nm,2.7s
PET   Petropavlovsk    74.61  26 eP       P        18 51 22.1  +18
PET                               pmax    pmax
      comp=Z,57nm,1.0s
PET                               pmax    pmax
      comp=Z,200nm,10.8s
PET                               MLR     MLR
      comp=Z,500nm,19.0s
BVAR  Borovoye Array   74.67 334  P       P        18 51 04.3  -0.1
      comp=Z,5.8nm,0.8s,baz=134,slow=8.5,SNR=20
      comp=Z,5.8nm,0.8s
BRVK  Borovoye         74.74 334  P       P        18 51 04.2  -0.5
BRVK                              IAMs_20 IAMs_20  19 26 42.2
      comp=Z,800nm,21.0s
BRVK  Borovoye         74.74 334 i P      P        18 51 03.9  -0.9
BRVK                              pmax    pmax
      comp=Z,21nm,1.5s
BRVK  Borovoye         74.74 334  P       P        18 51 04.4  -0.4
BRVK                              P       P        18 51 04.4  -0.4
ATD   Arta Tunnel      74.87 285  LR      LR       19 21 57.9
      comp=Z,7.4nm,18.1s,baz=84,slow=34
RAYN  Ar Rayn          76.03 298  P       P        18 51 12.3  -0.6
RAYN                              IAmb    IAmb     18 51 14.6
      comp=Z,53nm,1.2s
RAYN  Ar Rayn          76.03 298  IAMs_20 IAMs_20  19 25 21.2
      comp=Z,374nm,19.0s
RAYN  Ar Rayn          76.03 298  P       P        18 51 12.3  -0.6
RAYN                              pmax    pmax
      comp=Z,53nm,1.3s
RAYN                              MLR     MLR
      comp=Z,400nm,19.0s
RAYN  Ar Rayn          76.03 298  P       P        18 51 12.7  -0.2
KIBK  Kibwezi          76.35 270  P       P        18 51 15.7 +0.6
KIBK                              IAMs_20 IAMs_20  19 22 25.3
      comp=Z,483nm,19.0s
KIBK  Kibwezi          76.35 270  P       P        18 51 15.6 +0.6
MA2   Magadan          76.72  18  P       P        18 51 15.0  -1.0
      comp=Z,9.4nm,1.0s,baz=211,slow=9.2,SNR=3.6
      comp=Z,9.4nm,1.0s
MA2   Magadan          76.72  18  P       P        18 51 15.6  -0.4
MA2                               IAmb    IAmb     18 51 35.6
      comp=Z,25nm,0.9s
MA2   Magadan          76.72  18 i P      P        18 51 15.9   0.0
MA2                               pmax    pmax
      comp=Z,13nm,1.2s
ABKAR Akbulak array    77.30 327  P       P        18 51 19.2  -0.3
ABKAR Akbulak array    77.30 327  P       P        18 51 19.3  -0.1
ABKAR                             IAmb    IAmb     18 51 21.4
      comp=Z,91nm,1.6s
KMBO  Kilima Mbogo     77.37 271  P       P        18 51 20.6  -0.4
      comp=Z,0.1nm,0.5s,baz=343,slow=24,SNR=4.7
KMBO  Kilima Mbogo     77.37 271  P       P        18 51 21.0   0.0
KMBO  Kilima Mbogo     77.37 271  IAMs_20 IAMs_20  19 20 34.2
      comp=Z,556nm,20.0s
KMBO  Kilima Mbogo     77.37 271  P       P        18 51 21.0   0.0
KMBO                              pmax    pmax
      comp=Z,26nm,1.2s
KMBO                              MLR     MLR
      comp=Z,600nm,20.0s
KMBO  Kilima Mbogo     77.37 271  P       P        18 51 22.0 +1.0
KMBO                              P       P        18 51 22.0 +1.0
QSPA  South Pole Qui   78.36 180  LR      LR       19 25 10.9
      comp=Z,225nm,19.1s,baz=338,slow=35
AKTO  Aktyubinsk       79.00 327  P       P        18 51 28.8   0.0
      comp=Z,31nm,1.2s,baz=117,slow=4.2,SNR=20
AKTO                              LR      LR       19 30 52.6
      comp=Z,204nm,19.9s,baz=90,slow=39
      comp=Z,31nm,1.2s
SEY   Seymchan         79.88  17  P       P        18 51 33.4   0.0
      comp=Z,12nm,1.1s,baz=224,slow=4.8,SNR=15
      comp=Z,12nm,1.1s
SEY   Seymchan         79.88  17 i P      P        18 51 33.2  -0.1
SEY                               pmax    pmax
      comp=Z,26nm,1.3s
LODK  Lodwar           80.16 276  P       P        18 51 37.1 +1.0
LODK                              IAMs_20 IAMs_20  19 20 51.1
      comp=Z,303nm,19.0s
LODK  Lodwar           80.16 276  P       P        18 51 37.2 +1.1
      SNR=8.6
AKT   Akhty            80.97 316 eP       P        18 51 40.7 +0.8
AKT                              e                 18 51 47.0
AKT                               pmax    pmax
      comp=Z,35nm,1.2s
SVE   Sverdlovsk       81.41 333 eP       P        18 51 42.2 +0.5
SVE                               pmax    pmax
      comp=Z,45nm,1.5s
SHEM  Shemya Is, Ala   81.78  32  LR      LR       19 25 57.0
      comp=Z,84nm,20.1s,baz=85,slow=34
RAR   Rarotonga        81.85 110  LR      LR       19 25 60.0
      comp=Z,74nm,21.1s,baz=225,slow=34
ARU   Arti             82.11 332  P       P        18 51 44.8  -0.6
      comp=Z,12nm,0.8s,baz=143,slow=3.5,SNR=20
      comp=Z,12nm,0.8s
ARU   Arti             82.11 332  P       P        18 51 45.1  -0.2
ARU                               IAmb    IAmb     18 51 48.1
      comp=Z,54nm,1.3s
ARU   Arti             82.11 332d iP      P        18 51 44.5  -0.9
ARU                                                18 54 48.9
ARU                               S       S        19 02 00.5 +1.5
ARU                               SS      SS       19 07 18.4  -0.6
ARU                               pmax    pmax
      comp=Z,50nm,1.3s
GNI   Garni            82.54 313  P       P        18 51 48.8 +0.6
      comp=Z,16nm,1.0s,baz=187,slow=3.9,SNR=14
GNI                               PP      PP       18 54 56.9  -1.0
      comp=Z,15nm,1.1s,baz=98,slow=5.5,SNR=3.9
GNI                               LR      LR       19 31 32.4
      comp=Z,124nm,21.6s,baz=93,slow=38
      comp=Z,16nm,1.0s
GNI   Garni            82.54 313  P       P        18 51 48.4 +0.1
GNI                               IAmb    IAmb     18 51 51.9
      comp=Z,33nm,1.1s
GNI   Garni            82.54 313c iP      P        18 51 47.9  -0.4
GNI                               pmax    pmax
      comp=Z,12nm,0.8s
GROC  Groznyy          82.98 317 eP       P        18 51 50.2   0.0
GROC                             eS       S        19 02 09.9 +1.4
NRIK  Noril'sk         82.99 351  P       P        18 51 49.5  -0.2
      comp=Z,20nm,1.0s,baz=142,slow=4.0,SNR=22
      comp=Z,20nm,1.0s
NRIK  Noril'sk         82.99 351  P       P        18 51 49.5  -0.2
NRIK                              IAmb    IAmb     18 51 52.6
      comp=Z,25nm,0.9s
NRIK  Noril'sk         82.99 351  P       P        18 51 49.5  -0.2
NRIK                              pmax    pmax
      comp=Z,25nm,1.0s
NVL   N'lazarevskaya   83.25 199 eP       P        18 51 51.5 +0.3
NVL                               pmax    pmax
      comp=Z,19nm,1.1s
TIXI  Tiksi            83.66   5  P       P        18 51 52.4  -0.7
      comp=Z,7.0nm,0.8s,baz=90,slow=24,SNR=16
TIXI                              LR      LR       19 31 24.3
      comp=Z,210nm,21.9s,baz=359,slow=37
      comp=Z,7.0nm,0.8s
TIXI  Tiksi            83.66   5  P       P        18 51 52.5  -0.6
TIXI                              IAmb    IAmb     18 52 12.8
      comp=Z,34nm,0.9s
TIXI  Tiksi            83.66   5  P       P        18 51 52.5  -0.6
TIXI                              pmax    pmax
      comp=Z,34nm,0.9s
MBAR  Mbarara          83.86 271  P       P        18 51 55.9 +0.3
      comp=Z,16nm,0.9s,baz=113,slow=6.8,SNR=12
MBAR                              LR      LR       19 26 57.5
      comp=Z,280nm,18.8s,baz=92,slow=34
      comp=Z,16nm,0.9s
MBAR  Mbarara          83.86 271  P       P        18 51 54.2  -1.4
MBAR                              IAmb    IAmb     18 51 58.8
      comp=Z,42nm,1.3s
MBAR  Mbarara          83.86 271 i P      P        18 51 56.2 +0.5
MBAR                              pmax    pmax
      comp=Z,16nm,1.0s
MBAR  Mbarara          83.86 271  P       P        18 51 56.4 +0.7
KARS  Kars             83.90 313  P       P        18 51 56.7 +1.5
KARS  Kars             83.90 313  P       P        18 51 56.7 +1.5
GURO  Guroymak-BITLI   83.93 311  P       P        18 51 56.5 +1.1
BOSA  Boshof           83.94 242  P       P        18 51 56.0 +0.2
      comp=Z,11nm,0.9s,baz=100,slow=4.8,SNR=12
      comp=Z,11nm,0.9s
BOSA  Boshof           83.94 242  P       P        18 51 56.1 +0.4
BOSA                              IAmb    IAmb     18 51 57.9
      comp=Z,43nm,1.4s
BOSA  Boshof           83.94 242  P       P        18 51 56.2 +0.4
BOSA                              pmax    pmax
      comp=Z,43nm,1.4s
ZEI   Tsey             84.11 316 eP       P        18 51 56.6 +0.3
ZEI                               pmax    pmax
      comp=Z,45nm,1.3s
LBTB  Lobatse          84.26 246  P       P        18 51 57.5   0.0
LBTB                              IAmb    IAmb     18 51 59.7
      comp=Z,53nm,1.6s
LBTB  Lobatse          84.26 246  P       P        18 51 57.5   0.0
LBTB                              pmax    pmax
      comp=Z,53nm,1.7s
NCK   Nalchik          84.57 316ceP       P        18 52 00.1 +1.7
NEY   Neytrino         85.08 316 i P      P        18 52 02.5 +1.3
NEY                               pmax    pmax
      comp=Z,12nm,1.0s
KBZ   Khabaz           85.13 316  P       P        18 52 01.8 +0.6
      comp=Z,27nm,1.1s,baz=139,slow=2.4,SNR=27
      comp=Z,27nm,1.1s
SHA1  Shidzhatmaz      85.30 316 i P      P        18 52 02.1  -0.2
KVAR  Kislovodsk Arr   85.35 316  P       P        18 52 04.2 +1.7
      comp=Z,6.0nm,1.0s,baz=97,slow=21,SNR=4.3
KVAR                              LR      LR       19 35 49.7
      comp=Z,163nm,18.8s,baz=218,slow=40
      comp=Z,6.0nm,1.0s
KIV   Kislovodsk       85.35 316  P       P        18 52 03.3 +0.8
KIV                               IAmb    IAmb     18 52 05.2
      comp=Z,35nm,1.3s
KIV   Kislovodsk       85.35 316 eP       P        18 52 02.9 +0.4
KIV                               pmax    pmax
      comp=Z,20nm,1.0s
KIV                               MLR     MLR
      comp=Z,210nm,20.0s
KIV   Kislovodsk       85.35 316  P       P        18 52 03.9 +1.4
GOF   Gofitskoye       85.51 318⇑eP       P        18 52 04.9 +1.8
KOPT  Kop Dagi         85.54 312  P       P        18 52 05.8 +2.0
TROLL Troll, Antarti   85.62 197  P       P        18 52 05.1 +1.8
BELG  Belogornoye      85.62 326  P       P        18 52 03.8 +0.4
      comp=Z,62nm,1.0s,baz=131,slow=1.2,SNR=15
BELG                              LR      LR       19 37 27.8
      comp=Z,281nm,18.0s,baz=110,slow=41
      comp=Z,62nm,1.0s
BELG  Belogornoye      85.62 326 i P      P        18 52 02.5  -0.9
BELG                              pmax    pmax
      comp=Z,8.0nm,1.0s
ASF   Jabal al Asfar   85.94 304  P       P        18 52 06.5 +0.9
      comp=Z,33nm,1.2s,baz=126,slow=1.1,SNR=9.2
      comp=Z,33nm,1.2s
GHAJ  Ghor Haditha     86.79 303  IAMs_20 IAMs_20  19 32 15.9
      comp=Z,376nm,19.0s
EIL   Elat             86.87 301  P       P        18 52 11.1 +0.9
      comp=Z,29nm,1.1s,baz=118,slow=2.8,SNR=6.7
EIL                               LR      LR       19 32 05.8
      comp=Z,313nm,18.8s,baz=88,slow=36
      comp=Z,29nm,1.1s
GAZ   Gaziantep        87.12 309  P       P        18 52 11.9 +0.6
SOC   Sochi            87.25 315 eP       P        18 52 09.8  -1.9
SOC                              e                 18 55 32.1
SOC                              ePPP     PPP      18 57 26.7
SOC                              eS       SKSac    19 02 36.4  -1.9
SOC                              eSS      SS       19 08 32.9  -2.5
SOC                              eSSS     SSS      19 12 05.8
SOC                               pmax    pmax
      comp=Z,25nm,0.6s
SNAA  Sanae            87.27 196  P       P        18 52 12.6 +1.1
SNAA  Sanae            87.27 196  P       P        18 52 12.3 +0.9
SNAA  Sanae            87.27 196  P       P        18 52 12.3 +0.9
SNAA                              pmax    pmax
      comp=Z,51nm,0.8s
MMAI  Mount Meron Ar   87.39 304  P       P        18 52 14.1 +1.5
      comp=Z,69nm,1.2s,baz=102,slow=6.9,SNR=23
MMAI                              LR      LR       19 34 58.1
      comp=Z,440nm,18.2s,baz=162,slow=38
      comp=Z,69nm,1.2s
KIRV  Kirov            87.45 332  P       P        18 52 12.2   0.0
      comp=Z,13nm,0.6s,baz=197,slow=1.1,SNR=12
KIRV                              LR      LR       19 35 43.5
      comp=Z,394nm,18.9s,baz=110,slow=39
      comp=Z,13nm,0.6s
KIRV  Kirov            87.45 332 i P      P        18 52 12.4 +0.2
BILL  Bilibino         87.56  17⇓eP       P        18 52 14.5 +1.9
BILL                              *PP     pP       18 52 16.0  -1.6
BILL                                               18 55 38.0
BILL                             eS       SKSac    19 02 36.5  -2.6
BILL                              pmax    pmax
      comp=Z,12nm,1.9s
BILL                              MLR     MLR
      comp=Z,137nm,20.0s
VRH   Novokhopyorsk    88.53 323 eP       P        18 52 16.1  -1.5
VRH                               pmax    pmax
      comp=Z,110nm,1.5s
TOKA  Tokat            88.57 312  P       P        18 52 18.8 +0.7
BNN   Bunyan           88.63 310  P       P        18 52 19.1 +0.5
VNA2  Neumayer--Watz   88.92 196  P       P        18 52 21.0 +1.8
      baz=114,slow=5.0
BELA  Belgrano 2       88.96 186  P       P        18 52 19.6 +0.3
BELA                              IAmb    IAmb     18 52 31.4
      comp=Z,29nm,0.9s
VNA1  Neumayer--Stat   89.31 196  P       P        18 52 22.9 +1.9
VNA3  Neumayer Olymp   89.34 196  P       P        18 52 22.9 +1.7
CSS   Mathiatis        89.55 306  P       P        18 52 23.6 +0.7
CSS                               IAmb    IAmb     18 52 25.5
      comp=Z,40nm,1.3s
VSR   Storozhevoye     90.05 323 eP       P        18 52 22.7  -2.0
VSR                               pmax    pmax
      comp=Z,80nm,1.2s
VORR  Voronezh         90.17 323 eP       P        18 52 24.0  -1.3
VORR                              pmax    pmax
      comp=Z,50nm,0.5s
BR131 Keskin Array S   90.51 310  P       P        18 52 26.3  -1.0
BR131                             IAmb    IAmb     18 52 29.2
      comp=Z,45nm,1.5s
BR131 Keskin Array S   90.51 310  P       P        18 52 26.3  -1.0
BR131                             pmax    pmax
      comp=Z,45nm,1.5s
BR131 Keskin Array S   90.51 310  P       P        18 52 27.6 +0.2
      SNR=8.3
BRTR  Keskin Array B   90.51 310  P       P        18 52 27.4 +0.1
      comp=Z,6.1nm,0.9s,baz=138,slow=5.7,SNR=28
BRTR                              PP      PP       18 56 03.0 +0.6
      comp=Z,3.7nm,1.1s,baz=129,slow=7.1,SNR=5.1
BRTR                              LR      LR       19 37 33.4
      comp=Z,124nm,18.1s,baz=93,slow=39
      comp=Z,6.1nm,0.9s
BRTR  Keskin Array B   90.51 310  P       P        18 52 26.9  -0.4
BRTR  Keskin Array B   90.51 310  P       P        18 52 26.9  -0.4
LPSR  Galich'ya Gora   90.63 324 eP       P        18 52 26.4  -1.0
LPSR                              pmax    pmax
      comp=Z,40nm,1.8s
BZK   Bozkurt          90.81 313  P       P        18 52 25.9  -2.5
SIM   Simferopol'      91.50 316 eP       P        18 52 31.6   0.0
SIM                               pmax    pmax
      comp=Z,54nm,1.4s
MDUB  Mudurnu          92.50 311  P       P        18 52 35.6  -0.9
OBN   Obninsk          92.72 326  P       P        18 52 37.2 +0.2
      comp=Z,2.4nm,0.4s,baz=315,slow=16,SNR=4.3
OBN                               LR      LR       19 39 03.4
      comp=Z,65nm,20.7s,baz=82,slow=39
      comp=Z,2.4nm,0.4s
OBN   Obninsk          92.72 326  P       P        18 52 37.1 +0.2
OBN   Obninsk          92.72 326⇓eP       P        18 52 37.4 +0.4
OBN                              e                 18 56 20.5
OBN                              e                 19 05 28.0
OBN                               pmax    pmax
      comp=Z,40nm,1.4s
OBN                               MLR     MLR
      comp=Z,491nm,23.0s
BORA  Eskisehir        92.93 310  P       P        18 52 37.1  -1.3
KLMR  Klimovskoe       92.95 332 eP       P        18 52 35.6  -2.3
KLMR                              AMP              18 52 40.3
      comp=Z,51nm,1.3s
KLMR                             ePP      PP       18 56 19.4  -1.4
KLMR  Klimovskoe       92.95 332 eP       P        18 52 35.6  -2.3
KLMR                             e                 18 56 19.3
KLMR                              pmax    pmax
      comp=Z,51nm,1.3s
ADZR  Andozero         94.44 334 eP       P        18 52 43.2  -1.5
ADZR                              pmax    pmax
      comp=Z,20nm,1.1s
AKASG Malin Array Be   96.00 320  P       P        18 52 51.2  -1.0
      comp=Z,8.6nm,1.1s,baz=79,slow=3.5,SNR=16
AKASG                             PP      PP       18 56 45.8 +0.9
      comp=Z,6.5nm,1.1s,baz=86,slow=5.6,SNR=7.1
AKASG                             LR      LR       19 40 48.1
      comp=Z,271nm,21.3s,baz=62,slow=38
      comp=Z,8.6nm,1.1s
AKASG Malin Array Be   96.00 320  P       P        18 52 51.2  -1.0
AKASG Malin Array Be   96.00 320 i P      P        18 52 51.7  -0.5
AKASG                             pmax    pmax
      comp=Z,4.0nm,0.7s
AKBB  Malin Array Si   96.00 320  P       P        18 52 51.6  -0.5
AKBB                              IAmb    IAmb     18 52 52.4
      comp=Z,12nm,1.1s
AKBB  Malin Array Si   96.00 320  P       P        18 52 51.6  -0.5
AKBB                              pmax    pmax
      comp=Z,12nm,1.1s
MLR   Muntele Rosu     97.26 315  P       P        18 52 58.3   0.0
      comp=Z,3.9nm,0.7s,baz=86,slow=4.2,SNR=6.3
MLR                               PP      PP       18 56 55.5 +0.6
      comp=Z,12nm,1.1s,baz=15,slow=3.8,SNR=6.0
      comp=Z,3.9nm,0.7s
MLR   Muntele Rosu     97.26 315  P       P        18 52 58.2   0.0
MLR   Muntele Rosu     97.26 315  P       P        18 52 58.2   0.0
MLR                               pmax    pmax
      comp=Z,27nm,1.4s
APA   Apatity          97.33 338⇓iP       P        18 52 40.1  -18
APA                               pmax    pmax
      comp=Z,8.0nm,1.0s
APA                               MLR     MLR
      comp=Z,2µm,20.0s
BURAR Bucovina Array   98.08 317  P       Pdif     18 53 02.2 +0.3
BUR08 Bucovina Ar. S   98.09 317  P       P        18 53 01.0  -0.9
BUR08                             IAmb    IAmb     18 53 56.0
      comp=Z,23nm,1.9s
NACGM Naroch           98.17 324 eP       P        18 53 00.6  -1.3
      comp=Z,11nm,1.1s,baz=98
P16K  Nushagak River   98.56  31  P       P        18 53 02.3  -1.2
      baz=262
FINES FINESS Array B   99.42 331  P       Pdif     18 53 06.1  -1.2
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	comp=Z,4.3nm,1.0s,baz=64,slow=6.3,SNR=2.8						
FINES				PP	PP	18 57 12.2	+1.4
	comp=Z,3.0nm,1.0s,baz=134,slow=5.5,SNR=3.7						
	comp=Z,4.3nm,1.0s						
ARCES	ARCESS Array B	100.50	339	P	Pdif	18 53 10.7	-1.4
	comp=Z,7.9nm,1.0s,baz=35,slow=4.4,SNR=3.8						
STHS	Stebnicka Huta	100.91	318	*e*P	Pdif	18 53 16.2	+1.9
STHS	Stebnicka Huta	100.91	318	*e*PDIFF	Pdif	18 53 16.2	+1.9
LANS	Liptovska Anna	102.05	318	*e*P	Pdif	18 53 20.1	+0.7
LANS	Liptovska Anna	102.05	318	*e*PDIFF	Pdif	18 53 20.1	+0.7
SPITS	Spitsbergen Ar	103.02	348	P	Pdif	18 53 23.2	+0.1
	comp=Z,9.7nm,0.8s,baz=99,slow=7.4,SNR=1.9						
MORC	Moravsky Berou	103.34	319	*e*PP	PP	18 57 39.2	-1.6
VRAC	Vranov	103.94	318	*e*PP	PP	18 57 43.2	-2.0
KRUC	Moravsky	104.06	318	*e*PP	PKiKP	18 57 43.9	-1.6
ILAR	Eielson Array	104.09	26	PP	PP	18 57 50.1	+4.3
	comp=Z,0.3nm,0.5s,baz=282,slow=5.4,SNR=4.1						
ILAR				PKKPbc	PKKPbc	19 09 17.8	-1.6
	comp=Z,0.7nm,1.0s,baz=62,slow=1.0,SNR=4.6						
OBKA	Obir	105.25	315	*e*PKiKP	PKiKP	18 57 50.8	+2.9
	comp=Z,7.4nm,1.4s						
GERES	GERESS Array B	105.83	318	Pdiff	Pdif	18 53 36.5	+0.2
	comp=Z,0.2nm,0.4s,baz=66,slow=3.3,SNR=3.7						
GERES				PP	PP	18 57 58.4	-1.0
	comp=Z,1.0nm,0.8s,baz=124,slow=4.9,SNR=6.1						
CLL	Collm	106.24	320	*e*PP	PKiKP	18 57 58.0	+8.6
CLL				*e*SKSac	SKSac	19 04 16.0	-1.0
CLL				*e*Sdif	Sdif	19 05 39.0	+3.1
CLL				AMS	AMS	19 45 00.0	
	comp=N,200nm,19.7s						
CLL				AMS	AMS	19 45 00.0	
	comp=E,300nm,20.4s						
CLL				AMS	AMS	19 45 00.0	
	comp=Z,400nm,22.0s						
NOA	NORSAR Array B	106.59	330	PP	PP	18 58 04.1	-0.4
	comp=Z,2.4nm,0.9s,baz=111,slow=7.6,SNR=3.5						
ABTA	Abfaltersbach	106.66	315	*e*PKiKP	PKiKP	18 57 50.9	+0.4
	comp=Z,4.2nm,1.5s						
S34M	Telegraph Cree	112.62	32	P	PKiKP	18 58 01.6	+0.3
	baz=285						
TORD	Torodi Ar. Bea	114.62	279	PKP	PKPdf	18 58 06.1	-0.2
	comp=Z,1.4nm,0.6s,baz=63,slow=1.5,SNR=12						
YKA	Yellowknife Ar	118.36	24	PKP	PKiKP	18 58 12.5	+0.4
	comp=Z,3.4nm,0.7s,baz=310,slow=1.8,SNR=42						
YKA				PKKPbc	PKKPbc	19 08 31.0	-1.2
	comp=Z,0.4nm,1.0s,baz=108,slow=4.5,SNR=4.1						
YKA	Yellowknife Ar	118.36	24	PKPdf	PKPdf	18 58 12.3	+0.2
YKA	Yellowknife Ar	118.36	24	PKIKP	PKPdf	18 58 12.3	+0.2
ESDC	Sonseca Array	119.27	309	PKP	PKiKP	18 58 15.7	+0.9
	comp=Z,2.2nm,1.2s,baz=149,slow=3.0,SNR=4.4						
ESDC				PP	PP	18 59 37.5	+1.9
	comp=Z,1.8nm,1.0s,baz=69,slow=5.3,SNR=5.6						
HILA	High Level	119.33	28	PKPdf	PKiKP	18 58 14.9	+0.7
DBIC	Dimbokro	120.10	271	PKP	PKPdf	18 58 17.2	+0.3
	comp=Z,1.6nm,0.4s,baz=93,slow=2.8,SNR=5.2						
BRLDA	Berland Lookou	121.16	33		PKiKP	18 58 19.7	+1.6
HUMO	Hull Mountain	121.56	47	PKPdf	PKiKP	18 58 20.9	+1.8
J04A	Umpqua Nationa	122.01	46	PKPdf	PKiKP	18 58 21.6	+1.4
L04D	Klamath Falls	122.13	47	PKPdf	PKiKP	18 58 21.9	+1.5
B08A	Colville Reser	122.29	40	PKPdf	PKiKP	18 58 21.2	+0.8
J05D	Fort Rock, OR	122.61	46	PKPdf	PKiKP	18 58 22.9	+1.6
PINE	Pine Mountain	122.68	45	PKPdf	PKiKP	18 58 23.3	+1.8
K05A	Summer Lake	123.00	46	PKPdf	PKiKP	18 58 24.4	+2.2
G08A	Pilot Rock	123.57	43		PKPpre	18 58 12.9	
MOD	Modoc Plateau	123.65	47	PKPdf	PKiKP	18 58 24.5	+1.1
NEW	Newport	123.70	39	P	PKPdf	18 58 21.8	-1.1
	baz=293						
J08A	Circle Bar Ran	124.52	45	PKPdf	PKiKP	18 58 26.7	+1.7
CMB	Columbia Colle	124.55	52	PKPdf	PKiKP	18 58 25.9	+0.8
CMB	Columbia Colle	124.55	52	PKIKP	PKiKP	18 58 25.9	+0.8
WVOR	Wild Horse Val	124.69	46	PKPdf	PKiKP	18 58 27.0	+1.6
WVOR	Wild Horse Val	124.69	46	PKIKP	PKiKP	18 58 27.0	+1.6
PAHR	Pah Rah Range	124.90	50	PKPdf	PKiKP	18 58 26.6	+0.7
WAKR	Walker	125.16	51	PKPdf	PKiKP	18 58 27.5	+1.0
WALA	Waterton Lakes	125.32	37		PKiKP	18 58 27.5	+1.0
PLID	Pearl Lake	125.61	42	PKPdf	PKPdf	18 58 27.2	+0.3
LHV	Little Huntoon	125.94	51	PKPdf	PKiKP	18 58 29.9	+2.1
KVN	Kaiserville	126.03	50	PKPdf	PKiKP	18 58 29.8	+1.5
KVN	Kaiserville	126.03	50	PKIKP	PKiKP	18 58 29.8	+1.5
NVAR	Mina Array Bea	126.04	51	PKP	PKiKP	18 58 30.0	+1.7
	comp=Z,4.5nm,0.9s,baz=264,slow=2.0,SNR=19						
NVAR				PP	PP	19 00 21.1	-0.5
	comp=Z,0.4nm,0.5s,baz=264,slow=5.0,SNR=2.1						
NVAR	Mina Array Bea	126.04	51		PKiKP	18 58 29.5	+1.1
NV11	Mina Array Sit	126.16	51	PKPdf	PKiKP	18 58 29.9	+1.4
SNCC	San Nicolas Is	126.21	57	P	PKPdf	18 58 26.7	-1.4
	baz=280						
MSO	Missoula	126.25	40	PKPdf	PKiKP	18 58 28.6	+0.3
MSO	Missoula	126.25	40	P	PKPdf	18 58 28.3	+0.4
	baz=295,SNR=9.4						
MFID	Camas Ranch	126.32	44	PKPdf	PKiKP	18 58 29.6	+1.0
DSP	Deep Springs	126.57	52	PKPdf	PKiKP	18 58 30.2	+1.1
CWC	Cottonwood Cre	126.71	53	P	PKiKP	18 58 29.8	+0.2
	baz=284						
LCH	Last Change Ra	126.85	52	PKPdf	PKiKP	18 58 30.8	+0.9
MZP	Montezuma Peak	126.93	51	PKPdf	PKiKP	18 58 31.1	+0.9
TPH	Tonopah	126.96	51		PKiKP	18 58 31.8	+1.6
TPH	Tonopah	126.96	51	PKIKP	PKiKP	18 58 31.8	+1.6
DECC	Green Verdugo	126.99	56	P	PKiKP	18 58 30.6	+0.4
	baz=282						
CIS	Catalina Islan	127.09	57	P	PKiKP	18 58 30.9	+0.6
	baz=281						
GRAC	Grapevine Rang	127.13	52	PKPdf	PKiKP	18 58 32.7	+2.4
GRAC	Grapevine Rang	127.13	52	P	PKiKP	18 58 31.2	+0.9
	baz=285						
EDW2	Edwards Air Fo	127.13	55	P	PKiKP	18 58 31.3	+0.9
	baz=283						
HLID	Hailey	127.23	44	PKPdf	PKiKP	18 58 32.2	+1.7
HLID	Hailey	127.23	44	P	PKiKP	18 58 31.3	+0.8
	baz=292						
LRMC	Laurel Mtn Rad	127.24	54	P	PKiKP	18 58 31.4	+0.6
	baz=283						
MPMC	Manual Prospec	127.26	53	P	PKPdf	18 58 30.8	+0.5
	baz=284						
BFSC	Mount Baldy Ra	127.54	56	P	PKiKP	18 58 31.6	+0.3
	baz=282						
LRM	Limekiln Ridge	127.61	40		PKiKP	18 58 31.8	+0.5
ELK	Elko	127.63	47	PKPdf	PKiKP	18 58 31.8	+0.3
ELK	Elko	127.63	47	PKIKP	PKiKP	18 58 31.8	+0.3
DLMT	Dillon	127.71	41		PKiKP	18 58 32.8	+1.4
DLMT				IAMs_20	IAMs_20	20 06 07.4	
	comp=Z,264nm,20.0s						
WCT	Wildcat Mounta	127.75	52	PKPdf	PKiKP	18 58 32.6	+1.0
MCMT	McKenzie Canyo	127.77	42	PKPdf	PKiKP	18 58 33.1	+1.4
QSM	Queen of Sheba	127.77	53	PKPdf	PKiKP	18 58 32.5	+0.9
GWY	Greenwater Val	127.87	53		PKPpre	18 58 26.8	
GSC	Goldstone, Bar	127.98	54		PKPpre	18 58 24.7	
GSC	Goldstone, Bar	127.98	54	PKIKP	PKPdf	18 58 24.7	-6.9
TPNV	Topopah Spring	128.00	52	PKPdf	PKiKP	18 58 34.0	+1.7
TPNV	Topopah Spring	128.00	52	PKIKP	PKiKP	18 58 34.0	+1.7
TPNV	Topopah Spring	128.00	52	P	PKiKP	18 58 32.8	+0.5
	baz=286						
R11A	Troy Canyon, C	128.12	50	PKPdf	PKiKP	18 58 34.3	+1.9
R11A	Troy Canyon, C	128.12	50	P	PKiKP	18 58 32.7	+0.3
	baz=287						
S11A	Rachel	128.20	51	PKPdf	PKiKP	18 58 34.7	+2.1
BOZ	Bozeman (W)	128.23	40	PKPdf	PKiKP	18 58 33.9	+1.5
BOZ	Bozeman (W)	128.23	40	PKIKP	PKiKP	18 58 33.9	+1.5
BOZ	Bozeman (W)	128.23	40	P	PKiKP	18 58 33.6	+1.1
	baz=296,SNR=5.4						
FCC	Fort Churchill	128.26	19	PKPdf	PKiKP	18 58 32.1	+0.3
FCC	Fort Churchill	128.26	19	PKIKP	PKiKP	18 58 32.1	+0.3
FFC	Flin Flon	128.31	26		PKiKP	18 58 32.5	+0.4
FFC	Flin Flon	128.31	26	PKIKP	PKiKP	18 58 32.5	+0.4
PFO	Pinyon Flats O	128.65	56	PKPdf	PKiKP	18 58 35.8	+2.2
PFO	Pinyon Flats O	128.65	56	PKIKP	PKiKP	18 58 35.8	+2.2
PFO	Pinyon Flats O	128.65	56	P	PKiKP	18 58 35.0	+1.4
	baz=283						
TUQ	Turquoise Moun	128.65	54	P	PKiKP	18 58 35.0	+1.4
	baz=285						
TPFO	Pinon Flats	128.65	56	P	PKiKP	18 58 35.1	+1.5
	baz=283						
PRN	Pahroc Range	128.80	51	PKPdf	PKiKP	18 58 35.5	+1.7
MONP2	Monument Peak	128.83	57	P	PKiKP	18 58 35.3	+1.3
	baz=282						
BELC	Belle Mtn. Jos	128.93	56	P	PKiKP	18 58 36.0	+1.8
	baz=284						
SHPR	Sheep Range	128.97	52	PKPdf	PKiKP	18 58 36.4	+2.2
HVU	Hansel Valley	129.01	45		PKiKP	18 58 35.6	+1.5
HVU	Hansel Valley	129.01	45	PKIKP	PKiKP	18 58 35.6	+1.5
GMRC	Granite Mounta	129.02	55	P	PKiKP	18 58 35.7	+1.4
	baz=284						
IKP	In-Ko-Pah, Jac	129.14	57	P	PKiKP	18 58 35.8	+1.3
	baz=282						
SWSC	Sam W. Stewart	129.33	57	P	PKiKP	18 58 36.2	+1.4
	baz=283						
ESJX	Sierra Juarez	129.41	58	PKPdf	PKiKP	18 58 35.4	+0.2
V12A	Nelson	129.42	53	PKPdf	PKiKP	18 58 36.6	+1.6
H17A	Grant Village	129.42	41	P	PKiKP	18 58 36.5	+1.5
	baz=296						
BC3	Big Chuckawall	129.45	56	P	PKiKP	18 58 36.7	+1.6
	baz=284						
FXWY	Fox Creek	129.46	42	PKPdf	PKiKP	18 58 36.7	+1.6
FXWY				IAMs_20	IAMs_20	19 50 01.0	
	comp=Z,313nm,21.0s						
DUG	Dugway, Tooele	129.56	47	PKPdf	PKiKP	18 58 36.9	+1.7
DUG	Dugway, Tooele	129.56	47	PKIKP	PKiKP	18 58 36.9	+1.7
DUG	Dugway, Tooele	129.56	47	P	PKiKP	18 58 36.7	+1.4
	baz=291						
TPAW	Teton Pass	129.57	42	PKPdf	PKiKP	18 58 36.9	+1.6
IRM	Iron Mountain	129.58	55	P	PKiKP	18 58 36.9	+1.5
	baz=284						
REDW	Red Top Meadow	129.69	42	PKPdf	PKiKP	18 58 36.7	+1.2
SNOW	Snow King Moun	129.71	42	PKPdf	PKiKP	18 58 38.0	+2.4
HWUT	Hardware Ranch	129.91	45	PKPdf	PKiKP	18 58 37.1	+1.2
RLMT	Red Lodge	129.93	40	P	PKiKP	18 58 37.3	+1.4
	baz=298						
CCUT	Cedar City	130.03	50		PKiKP	18 58 38.8	+2.4
GLA	Glamis	130.10	57	P	PKiKP	18 58 37.7	+1.3
	baz=284						
NLU	North Lily Min	130.18	47	PKPdf	PKiKP	18 58 37.9	+1.3
TCUT	Toone Canyon	130.21	45	PKPdf	PKiKP	18 58 38.0	+1.3
LCMT	Little Creek M	130.29	51	PKPdf	PKiKP	18 58 38.7	+1.9
W13A	Hualapai Mount	130.35	54	PKPdf	PKiKP	18 58 39.2	+2.2
PDMCI	Parker Dam,Lak	130.35	55	P	PKiKP	18 58 38.2	+1.4
	baz=285						
MVU	Marysvale	130.58	49	PKPdf	PKiKP	18 58 39.4	+1.9
MSU	Marysvale	130.61	49	PKPdf	PKiKP	18 58 39.3	+1.8
MSU	Marysvale	130.61	49	PKIKP	PKiKP	18 58 39.3	+1.8
KNB	Kanab	130.61	51	PKPdf	PKiKP	18 58 40.6	+3.1
KNB	Kanab	130.61	51	PKIKP	PKiKP	18 58 40.6	+3.1
BW06	Boulder Array	130.80	43	PKPdf	PKiKP	18 58 38.7	+0.9
BW06	Boulder Array	130.80	43	P	PKiKP	18 58 39.1	+1.3
	baz=296						
PD31	Pinedale Array	130.80	43	PKPdf	PKiKP	18 58 38.5	+0.8
PDAR	Pinedale Array	130.80	43	PKP	PKiKP	18 58 38.7	+0.9
	comp=Z,1.6nm,0.9s,baz=207,slow=1.0,SNR=13						
BSUT	Blindstream Ca	130.89	46	PKPdf	PKiKP	18 58 39.8	+1.6
LAO	LASA Array	130.99	37	P	PKiKP	18 58 38.4	+0.5
	baz=302						
TMUT	Trail Mountain	131.04	48		PKiKP	18 58 38.8	+0.3
U15A	North Rim	131.20	51	PKPdf	PKiKP	18 58 40.5	+1.7
P17A	Butcher Ranch,	131.31	47		PKiKP	18 58 40.5	+1.7
PIX	Pinacate	131.57	58	PKPdf	PKiKP	18 58 40.3	+0.9
SRU	San Rafael Swe	131.60	47	PKPdf	PKiKP	18 58 39.4	0.0
SRU	San Rafael Swe	131.60	47	PKIKP	PKiKP	18 58 39.4	0.0
214A	Organ Pipe Nat	132.02	57	P	PKiKP	18 58 41.1	+0.8
	baz=284						
WUAZ	Wupatki	132.19	52	PKPdf	PKPdf	18 58 40.4	+0.7
WUAZ	Wupatki	132.19	52	P	PKiKP	18 58 41.9	+1.1
	baz=288						
O20A	White River Ci	132.81	45		PKiKP	18 58 42.2	+0.4
O20A	White River Ci	132.81	45	P	PKiKP	18 58 42.9	+1.0
	baz=295						
PV11	David Mesa, Pa	133.10	48		PKiKP	18 58 42.8	+0.3
PV13	Radium Mtn., P	133.19	48		PKiKP	18 58 43.8	+1.0
W18A	Petrified Fore	133.59	52	P	PKiKP	18 58 44.3	+0.8
	baz=289						
TUC	Tucson	133.59	56	P	PKiKP	18 58 43.9	+0.4
	baz=286						
RSSD	Black Hills	133.66	38	PKPdf	PKPdf	18 58 43.0	+0.7
RSSD	Black Hills	133.66	38	PKIKP	PKPdf	18 58 43.0	+0.7
RSSD	Black Hills	133.66	38	P	PKiKP	18 58 43.3	-0.2
	baz=302						
ULM	Lac du Bonnet	134.10	27	PKP	PKPdf	18 58 42.2	-0.4
	comp=Z,1.9nm,0.6s,baz=275,slow=6.2,SNR=3.6						
ISCO	Idaho Springs	134.78	44		PKiKP	18 58 46.4	+0.4
ISCO	Idaho Springs	134.78	44	PKIKP	PKiKP	18 58 46.4	+0.4
ISCO	Idaho Springs	134.78	44	P	PKiKP	18 58 46.4	+0.4
	baz=297						
S22A	4UR Ranch, Cre	134.80	48	PKPdf	PKPdf	18 58 44.9	+0.2
S22A	4UR Ranch, Cre	134.80	48	P	PKiKP	18 58 47.0	+0.9
	baz=294						
121A	Cookes Peak, D	135.95	55	PKPdf	PKiKP	18 58 48.9	+0.5
121A	Cookes Peak, D	135.95	55	P	PKiKP	18 58 49.2	+0.7
	baz=288						
ANMO	Albuquerque	136.17	51	P	PKiKP	18 58 49.7	+0.8
	baz=292						
T25A	Trinidad	136.81	47	P	PKPdf	18 58 49.5	+1.1
	baz=296						
EYMN	Ely	137.74	26	P	PKiKP	18 58 50.7	-0.7
	baz=320						
MNTX	Cornudas Mount	138.15	55	P	PKPdf	18 58 51.7	+1.0
	baz=290						
ECSD	EROS Data Cent	138.21	34	PKPdf	PKiKP	18 58 52.2	-0.2
ECSD	EROS Data Cent	138.21	34	P	PKPdf	18 58 51.4	+1.0
	baz=311						
F36A	Milaca	138.36	30	PKPdf	PKPdf	18 58 49.6	-1.0
BGNE	Belgrade	138.77	38	P	PKiKP	18 58 53.1	-0.6
	baz=307						
MSTX	Muleshoe	139.35	51	P	PKPdf	18 58 53.3	+0.4
	baz=294						
TX31	Lajitas Ar. Si	140.31	58		PKPpre	18 58 47.9	
TX32	Lajitas Array	140.31	58		PKPpre	18 58 48.0	
TXAR	Lajitas Array	140.31	58	PKhKP	PKPpre	18 58 48.7	
	comp=Z,2.0nm,0.8s,baz=254,slow=3.2,SNR=11						
TXAR	Lajitas Array	140.31	58	PKPpre	PKPpre	18 58 47.6	
TXAR	Lajitas Array	140.31	58	PKHKP	PKPpre	18 58 47.6	
G40A	Rib Lake	140.37	28	PKPdf	PKPdf	18 58 54.8	+0.5
CPUP	Villa Florida	141.44	192	PKhKP	PKPpre	18 58 52.5	
	comp=Z,1.2nm,0.7s,baz=127,slow=5.1,SNR=1.7						
AC02	Maricunga	141.57	175	PKPpre	PKPpre	18 58 52.6	
E46A	Sault Ste Mari	141.87	21		PKPpre	18 58 52.9	
WMOK	Wichita Mounta	141.96	47		PKPpre	18 58 53.1	
WMOK	Wichita Mounta	141.96	47	PKIKP	PKPdf	18 58 53.1	-4.4
WMOK	Wichita Mounta	141.96	47	P	PKPdf	18 58 56.7	-0.8
	baz=299						
JFWS	Jewell Farm	142.12	30	P	PKPdf	18 58 56.8	-0.8
	baz=318						
L40A	Anamosa	142.25	32		PKPpre	18 58 53.1	
ABTX	Abilene, Hawle	142.29	51		PKPpre	18 58 55.2	
ABTX	Abilene, Hawle	142.29	51	P	PKPdf	18 58 57.8	-0.4
	baz=296						
T35A	Sooner Cattle	142.40	43		PKPdf	18 58 56.4	-1.9
OK046	Pawnee Station	142.42	44		PKPdf	18 58 54.6	-3.7
P38A	Dawn	142.63	37		PKPpre	18 58 55.5	
P38A	Dawn	142.63	37	P	PKPdf	18 58 56.2	-2.3
	baz=311,SNR=6.9						
WTFS	Witchita Falls	142.66	49		PKPpre	18 58 54.6	
ZAIG	Zacatecas	142.93	68	PKPdf	PKPdf	18 58 58.2	-1.7
DEOK	Depew	143.00	44	PKPdf	PKPdf	18 58 58.4	-0.9
JCT	Junction City	143.05	54	PKPdf	PKPbc	18 58 58.1	+1.7
JCT	Junction City	143.05	54	PKIKP	PKPbc	18 58 58.1	+1.7
JCT	Junction City	143.05	54	P	PKPdf	18 58 58.6	-1.0
	baz=293						
L42A	Oliver, Polo	143.08	31		PKPpre	18 58 56.0	
W35A	Tecumseh	143.11	45		PKPbc	18 58 57.7	+1.4
FW03	Perrin-Whitt E	143.29	49	PKPdf	PKPbc	18 58 57.7	+0.7
TUL1	Leonard	143.44	44		PKPpre	18 58 55.7	
LOOK	Love County	143.48	47		PKPbc	18 58 58.4	+1.0
P40A	Paris	143.56	36		PKPpre	18 58 57.0	
FW07	Weatherford	143.66	50	PKPdf	PKPbc	18 58 59.0	+1.0
FW06	Azle	143.70	49		PKPdf	18 59 00.3	-0.3
Z35A	Perchaven, San	143.75	48		PKPbc	18 58 58.9	+0.6
Z35A	Perchaven, San	143.75	48	P	PKPdf	18 59 00.6	-0.1
	baz=299,SNR=7.9						
RLO	Rose Lookout	143.81	43		PKPpre	18 58 57.7	
LATQ	La Tuque	143.84	8	PKPdf	PKPbc	18 58 59.4	+1.4
LMQ	La Malbaie	143.98	6	PKPdf	PKPbc	18 58 59.8	+1.3
S39A	Bolivar	143.99	39	PKPdf	PKPab	18 58 58.7	+0.4
S39A	Bolivar	143.99	39	P	PKPbc	18 58 59.6	+0.7
	baz=309,SNR=9.6						
U38A	Gravette	144.07	42	PKPdf	PKPab	18 58 59.0	+0.4
U38A	Gravette	144.07	42	P	PKPbc	18 58 59.9	+0.8
	baz=306						
FW13	Cleburne	144.09	50	PKPdf	PKPab	18 58 59.3	+0.5
833A	Chaparral WMA,	144.18	57	PKPdf	PKPab	18 58 59.5	+0.2
833A	Chaparral WMA,	144.18	57	P	PKPdf	18 59 01.3	-0.3
	baz=291						
WHTX	Lake Whitney,	144.23	50	PKPdf	PKPdf	18 59 01.4	-0.2
WHTX	Lake Whitney,	144.23	50	P	PKPdf	18 59 01.3	-0.2
	baz=298						
WHTX	Lake Whitney,	144.23	50	P	PKPdf	18 59 01.7	+0.2
	baz=298,SNR=7.5						
FW14	Alvarado	144.24	50	PKPdf	PKPdf	18 59 01.7	+0.1
R40A	Maddies Statio	144.25	37		PKPab	18 58 59.6	+0.4
R40A	Maddies Statio	144.25	37	P	PKPbc	18 58 59.9	+0.3
	baz=311,SNR=16						
J47A	Sunmer	144.31	25	PKPdf	PKPbc	18 59 00.5	+0.9
J47A	Sunmer	144.31	25	P	PKPdf	18 59 01.1	-0.3
	baz=326						
J47A				P	PKPdf	18 59 01.1	-0.3
	baz=326						
HDIL	Hopedale	144.34	32		PKPbc	18 59 00.2	+0.4
HDIL	Hopedale	144.34	32	P	PKPbc	18 59 00.6	+0.8
	baz=317,SNR=14						
HDIL	Hopedale	144.34	32	P	PKPbc	18 59 00.5	+0.7
	baz=317,SNR=14						
M44A	Midewin, Midew	144.34	30	PKPdf	PKPbc	18 59 00.2	+0.4
M44A	Midewin, Midew	144.34	30	P	PKPbc	18 59 00.7	+0.9
	baz=320,SNR=15						
FW16	Waxahatchie	144.42	49	PKPdf	PKPdf	18 59 02.3	+0.4
X37A	Clayton	144.45	45	PKPdf	PKPdf	18 59 01.8	-0.1
X37A	Clayton	144.45	45	P	PKPdf	18 59 02.2	+0.3
	baz=303,SNR=8.4						
HHAR	Hobbs	144.46	42	PKPdf	PKPbc	18 59 00.8	+0.4
BATG	Bathurst New B	144.49	1	PKPdf	PKPdf	18 59 01.1	-0.5
D62A	Allapoint, All	144.55	4		PKPbc	18 59 01.2	+1.0
D62A	Allapoint, All	144.55	4	P	PKPdf	18 59 01.7	0.0
	baz=354,SNR=10						
D62A				P	PKPdf	18 59 01.7	0.0
	baz=354,SNR=10						
435B	Jarrell	144.67	52	PKPdf	PKPdf	18 59 02.7	+0.4
435B	Jarrell	144.67	52	P	PKPbc	18 59 02.0	+0.8
	baz=296						
435B	Jarrell	144.67	52	P	PKPdf	18 59 03.3	+0.9
	baz=296						
L46A	Eue Claire	144.68	27		PKPdf	18 59 01.7	-0.3
TRQ	Mont Tremblant	144.68	11	PKPdf	PKPbc	18 59 01.4	+0.7
PB10	IPOC Station P	144.69	172	PKPdf	PKPab	18 59 01.4	+0.1
P43A	Skaggs, Pawnee	144.88	33	PKPdf	PKPbc	18 59 02.2	+0.7
P43A	Skaggs, Pawnee	144.88	33	P	PKPdf	18 59 02.6	+0.2
	baz=316,SNR=8.5						
SADO	Sadowa	144.96	17	PKPdf	PKPbc	18 59 02.1	+0.4
E62A	Clayton Lake	144.97	5		PKPab	18 59 01.8	+0.2
E62A	Clayton Lake	144.97	5	P	PKPdf	18 59 02.6	+0.2
	baz=353,SNR=5.6						
E62A				P	PKPdf	18 59 02.6	+0.2
	baz=353,SNR=5.6						
CCM	Cathedral Cave	145.01	37	PKPdf	PKPab	18 59 02.3	+0.3
CCM	Cathedral Cave	145.01	37	PKIKP	PKPab	18 59 02.3	+0.3
CCM	Cathedral Cave	145.01	37	P	PKPdf	18 59 03.0	+0.3
	baz=312						
CCM	Cathedral Cave	145.01	37	P	PKPbc	18 59 02.5	+0.5
	baz=312,SNR=46						
PQI	Presque Isle	145.03	3	PKPdf	PKPdf	18 59 02.4	-0.1
O44A	Mansfield	145.06	32		PKPbc	18 59 02.2	0.0
O44A	Mansfield	145.06	32	P	PKPdf	18 59 03.1	+0.3
	baz=318,SNR=10.0						
PB15	IPOC Station P	145.13	173		PKPab	18 59 03.8	+0.7
SLM	Saint Louis	145.19	35		PKPbc	18 59 02.2	-0.4
SLM	Saint Louis	145.19	35	PKIKP	PKPbc	18 59 02.2	-0.4
SLM	Saint Louis	145.19	35	P	PKPdf	18 59 03.7	+0.7
	baz=314,SNR=8.5						
E63A	Oxbow	145.25	4	P	PKPdf	18 59 03.5	+0.6
	baz=355,SNR=17						
E63A				P	PKPdf	18 59 03.5	+0.6
	baz=355,SNR=17						
735A	Kenedy	145.28	56		PKPbc	18 59 03.5	+0.3
735A	Kenedy	145.28	56	P	PKPdf	18 59 05.6	+2.1
	baz=293						
Z38A	Mt. Pleasant	145.43	47	PKPbc	PKPab	18 59 05.1	+1.4
Z38A	Mt. Pleasant	145.43	47	P	PKPab	18 59 05.6	+1.9
	baz=302,SNR=9.9						
237A	Washetta, Mont	145.46	49	PKPbc	PKiKP	18 59 06.2	-1.5
237A	Washetta, Mont	145.46	49	P	PKiKP	18 59 06.3	-1.4
	baz=299,SNR=9.0						
FVM	French Village	145.53	36	PKPdf	PKPbc	18 59 04.1	+0.3
FVM	French Village	145.53	36	PKIKP	PKPbc	18 59 04.1	+0.3
FVM	French Village	145.53	36	P	PKPab	18 59 04.3	+0.3
	baz=313,SNR=21						
L48A	N Adams	145.54	25	PKPdf	PKPbc	18 59 03.9	+0.3
L48A	N Adams	145.54	25	P	PKPab	18 59 04.6	+0.7
	baz=326,SNR=42						
L48A				P	PKPab	18 59 04.6	+0.7
	baz=326,SNR=42						
AAM	Ann Arbor	145.57	24	PKPdf	PKPdf	18 59 03.3	-0.3
AAM	Ann Arbor	145.57	24	PKIKP	PKPdf	18 59 03.3	-0.3
AAM	Ann Arbor	145.57	24	P	PKPab	18 59 04.4	+0.4
	baz=327						
AAM	Ann Arbor	145.57	24	P	PKPab	18 59 05.5	+1.5
	baz=327,SNR=6.3						
K50A	Casco	145.57	23	PKPdf	PKPdf	18 59 02.7	-0.8
SFIN	Lafayette	145.58	30	PKPdf	PKPdf	18 59 03.1	-0.5
SFIN	Lafayette	145.58	30	P	PKPbc	18 59 04.1	+0.3
	baz=320,SNR=16						
SFIN	Lafayette	145.58	30	P	PKPab	18 59 04.9	+0.8
	baz=320,SNR=16						
DELO	Deloro Mine	145.61	16	PKPdf	PKPab	18 59 04.2	+0.2
PB06	IPOC Station P	145.61	173	PKPdf	PKPbc	18 59 05.0	+0.4
F62A	Pittston Farm,	145.65	6	PKPdf	PKPab	18 59 04.4	+0.2
F62A	Pittston Farm,	145.65	6	P	PKPab	18 59 05.1	+1.0
	baz=352,SNR=15						
F62A				P	PKPab	18 59 05.1	+1.0
	baz=352,SNR=15						
Q44A	Meyer Farm, Va	145.68	34	PKPdf	PKPbc	18 59 04.5	+0.3
Q44A	Meyer Farm, Va	145.68	34	P	PKPab	18 59 05.2	+0.7
	baz=316,SNR=11						
MIAR	Mount Ida	145.71	44	PKPdf	PKPab	18 59 05.3	+0.6
MIAR	Mount Ida	145.71	44	PKIKP	PKPab	18 59 05.4	+0.6
MIAR	Mount Ida	145.71	44	P	PKPab	18 59 05.2	+0.5
	baz=305						
MIAR	Mount Ida	145.71	44	P	PKPab	18 59 06.0	+1.3
	baz=305,SNR=66						
T42A	Van Buren	145.78	38	PKPdf	PKPdf	18 59 04.5	+0.4
T42A	Van Buren	145.78	38	P	PKPab	18 59 05.1	+0.2
	baz=311						
LVC	Limon Verde	145.78	174	PKPdf	PKPab	18 59 06.9	+1.1
LVC	Limon Verde	145.78	174	PKP2	PKPab	18 59 06.9	+1.1
F64A	Sherman	145.81	4	PKPdf	PKPbc	18 59 04.5	+0.2
F64A	Sherman	145.81	4	P	PKPab	18 59 05.3	+0.6
	baz=355,SNR=8.6						
F64A				P	PKPab	18 59 05.3	+0.6
	baz=355,SNR=8.6						
N47A	Urbana	145.85	28	PKPdf	PKPdf	18 59 04.3	+0.2
N47A	Urbana	145.85	28	P	PKPbc	18 59 05.1	+0.4
	baz=323,SNR=23						
N47A				P	PKPbc	18 59 05.1	+0.4
	baz=323,SNR=23						
FCAR	Ozark Folk Cen	145.86	41	PKPdf	PKPbc	18 59 05.2	+0.4
PB04	IPOC Station P	145.91	172	PKPdf	PKPab	18 59 06.4	+0.4
LMN	Caledonia Moun	145.91	359	PKPdf	PKPab	18 59 06.8	+1.6
BMNY	Brushton-Moira	146.02	12	P	PKPbc	18 59 05.3	+0.3
	baz=344,SNR=20						
P46A	Rosedale	146.10	31	PKPdf	PKPbc	18 59 05.9	+0.4
P46A	Rosedale	146.10	31	P	PKPab	18 59 06.3	+0.3
	baz=320,SNR=13						
WHAR	Wooly Hollow	146.12	42	PKPdf	PKPbc	18 59 05.8	+0.1
GBN	Guysborough	146.19	355	PKPdf	PKPbc	18 59 06.0	+0.5
FRNY	Flat Rock	146.19	10	PKPdf	PKPbc	18 59 06.0	+0.5
FRNY	Flat Rock	146.19	10	P	PKPab	18 59 06.5	+0.3
	baz=346						
LONY	Lake Ozonia	146.21	12	PKPdf	PKPbc	18 59 06.0	+0.4
LONY	Lake Ozonia	146.21	12	P	PKPab	18 59 06.6	+0.3
	baz=344						
PB03	IPOC Station P	146.24	173	PKPbc	PKPbc	18 59 07.2	+0.6
X40A	Basin Creek Fa	146.24	43	PKPdf	PKPdf	18 59 05.3	+0.3
OLIL	Olney	146.30	33	PKPdf	PKPbc	18 59 05.9	-0.1
OLIL	Olney	146.30	33	P	PKPab	18 59 07.0	+0.1
	baz=317,SNR=14						
PECO	Prince Edward	146.31	15	PKPbc	PKPab	18 59 07.6	+0.9
PKME	Peaks-Kenny Pk	146.34	5	P	PKPab	18 59 07.0	+0.3
	baz=353						
LCAR	Lake Charles	146.36	39	PKPbc	PKPbc	18 59 06.6	+0.2
HKT	Hockley	146.39	53	PKPbc	PKiKP	18 59 09.3	-0.3
HKT	Hockley	146.39	53	PKP2	PKiKP	18 59 09.3	-0.3
UALR	University of	146.40	42	PKPbc	PKPbc	18 59 06.9	+0.4
S44A	Carbondale	146.41	35	PKPbc	PKPbc	18 59 06.9	+0.5
S44A	Carbondale	146.41	35	P	PKPab	18 59 07.4	+0.1
	baz=315						
NATX	Nacogdoches	146.43	49	PKPbc	PKPbc	18 59 07.0	+0.3
NATX	Nacogdoches	146.43	49	P	PKPbc	18 59 07.0	+0.3
	baz=300						
CGM3	Cape Girardeau	146.45	36	PKPbc	PKPbc	18 59 06.8	+0.3
N49A	Columbus Grove	146.49	26	PKPbc	PKPbc	18 59 06.6	+0.1
N49A	Columbus Grove	146.49	26	P	PKPbc	18 59 07.0	+0.4
	baz=325,SNR=21						
N49A				P	PKPbc	18 59 07.0	+0.4
	baz=325,SNR=21						
WLAR	White Oak Lake	146.51	45	PKPbc	PKPab	18 59 08.0	+0.2
G65A	Princeton	146.52	3	PKPbc	PKPab	18 59 07.5	+0.1
PB07	IPOC Station P	146.54	172	PKPbc	PKPbc	18 59 08.1	+0.6
PB09	IPOC Station P	146.55	174	PKPbc	PKPbc	18 59 08.1	+0.6

M50A	Fremont	146.57	24	PKPbc	PKPbc	18 59 07.0	+0.3
M50A	Fremont	146.57	24	P	PKPbc	18 59 07.4	+0.7
	baz=328,SNR=8.5						
M50A				P	PKPbc	18 59 07.4	+0.7
	baz=328,SNR=8.5						
O48B	Farmland	146.59	28	P	PKPbc	18 59 07.2	+0.3
	baz=323,SNR=26						
O48B	Farmland	146.59	28	P	PKPbc	18 59 06.7	-0.2
	baz=323,SNR=26						
MEDO	Medina	146.62	17	PKPbc	PKPab	18 59 08.1	+0.2
AQDB	Aquidauana	146.68	197	PKPbc	PKPbc	18 59 08.0	+0.4
J55A	Hilton	146.71	17	PKPbc	PKPab	18 59 08.2	0.0
BLO	Bloomington	146.79	31	PKPbc	PKPab	18 59 08.5	-0.2
BLO	Bloomington	146.79	31	PKP2	PKPab	18 59 08.5	-0.2
H62A	Milan	146.82	8	PKPbc	PKPab	18 59 08.3	-0.4
H62A	Milan	146.82	8	P	PKPab	18 59 09.2	+0.6
	baz=350,SNR=5.7						
H62A				P	PKPab	18 59 09.2	+0.6
	baz=350,SNR=5.7						
PARMO	Parma	146.82	37	PKPbc	PKPbc	18 59 08.5	+0.8
VT1	Waterbury	146.83	10	PKPbc	PKPab	18 59 09.3	+0.6
NCB	Newcomb	146.91	12		PKPab	18 59 09.1	+0.1
NCB	Newcomb	146.91	12	P	PKPab	18 59 09.2	+0.2
	baz=344,SNR=13						
PB02	IPOC Station P	146.94	172	PKPbc	PKPbc	18 59 09.4	+0.8
Z41A	Richland Creek	146.97	45	PKPbc	PKPbc	18 59 08.9	+0.7
HBAR	Harrisburg	147.00	40	PKPbc	PKPab	18 59 09.5	-0.2
O49A	Covington	147.02	27	PKPbc	PKPbc	18 59 08.2	+0.1
O49A	Covington	147.02	27	P	PKPbc	18 59 08.9	+0.7
	baz=324,SNR=17						
O49A				P	PKPbc	18 59 08.9	+0.7
	baz=324,SNR=17						
J57A	Williamstown	147.05	14	PKPbc	PKPab	18 59 09.1	-0.5
J57A	Williamstown	147.05	14	P	PKPab	18 59 09.6	0.0
	baz=341,SNR=7.7						
J57A				P	PKPab	18 59 09.6	0.0
	baz=341,SNR=7.7						
ERPA	Erie	147.09	20	PKPbc	PKPab	18 59 09.7	0.0
ERPA	Erie	147.09	20	P	PKPbc	18 59 08.2	-0.1
	baz=333						
USIN	University of	147.09	33	PKPbc	PKPbc	18 59 07.9	-0.5
P48A	Milroy	147.10	29		PKPbc	18 59 07.7	-0.6
P48A	Milroy	147.10	29	P	PKPbc	18 59 08.0	-0.3
	baz=322,SNR=14						
P48A				P	PKPbc	18 59 08.0	-0.3
	baz=322,SNR=14						
M52A	Chesterland	147.11	22	PKPbc	PKPab	18 59 09.5	-0.3
PEBM	Pemiscott Bayo	147.12	38	PKPbc	PKPbc	18 59 09.3	+0.8
GNAR	Gosnell	147.13	38	PKPbc	PKPbc	18 59 08.5	0.0
MMNY	Mt. Morris Dam	147.18	17	PKPbc	PKPbc	18 59 09.4	+0.9
HICK	Hickman	147.22	37		PKPdf	18 59 06.4	-0.1
N51A	Ashland	147.25	24		PKPdf	18 59 06.0	-0.5
N51A	Ashland	147.25	24	P	PKPbc	18 59 09.3	+0.6
	baz=328,SNR=5.7						
N51A				P	PKPbc	18 59 09.3	+0.6
	baz=328,SNR=5.7						
PB01	IPOC Station P	147.26	173		PKPbc	18 59 08.9	-0.5
J58A	Remsen	147.27	13		PKPbc	18 59 08.0	-0.7
J58A	Remsen	147.27	13	P	PKPab	18 59 09.8	-0.6
	baz=342,SNR=9.0						
J58A				P	PKPab	18 59 09.8	-0.6
	baz=342,SNR=9.0						
WVNY	West Valley, N	147.27	18		PKPbc	18 59 08.6	-0.2
WVNY	West Valley, N	147.27	18	P	PKPbc	18 59 09.1	+0.3
	baz=336,SNR=7.7						
CCAR	Cane Creek	147.29	43	PKPbc	PKPbc	18 59 10.2	+1.1
J59A	Piesco	147.34	12		PKPbc	18 59 09.6	+0.7
J59A	Piesco	147.34	12	P	PKPab	18 59 10.4	-0.3
	baz=344,SNR=17						
J59A				P	PKPab	18 59 10.4	-0.3
	baz=344,SNR=17						
GLAT	Glass	147.37	37	PKPbc	PKPbc	18 59 09.6	+0.4
P49A	Miami Univ. Ec	147.38	28	PKPbc	PKPbc	18 59 08.9	-0.2
P49A	Miami Univ. Ec	147.38	28	P	PKPbc	18 59 08.6	-0.5
	baz=323,SNR=9.3						
P49A	Miami Univ. Ec	147.38	28	P	PKPbc	18 59 10.2	+1.0
	baz=323,SNR=9.3						
TLIG	Tlapa	147.41	76	PKPbc	PKPbc	18 59 11.0	+1.0
M53A	WI Miller and	147.44	22		PKPbc	18 59 09.7	+0.4
M53A	WI Miller and	147.44	22	P	PKPbc	18 59 09.3	0.0
	baz=332,SNR=13						
I62A	Tamworth	147.49	8	PKPbc	PKPbc	18 59 10.2	+0.9
K57A	Scipio Center	147.56	15	PKPbc	PKPbc	18 59 10.3	+0.7
K57A	Scipio Center	147.56	15	P	PKPbc	18 59 10.4	+0.9
	baz=340,SNR=8.5						
UTMT	University of	147.56	37	PKPbc	PKPbc	18 59 09.8	0.0
ACSO	Alum Creek Sta	147.57	26		PKPbc	18 59 10.2	+0.5
ACSO	Alum Creek Sta	147.57	26	P	PKPbc	18 59 09.8	+0.2
	baz=327,SNR=16						
ACSO	Alum Creek Sta	147.57	26	P	PKPbc	18 59 10.7	+1.0
	baz=327,SNR=16						
HALT	Halls	147.58	38	PKPbc	PKPbc	18 59 09.5	-0.3
ACCN	Adirondack Com	147.58	11	PKPbc	PKPbc	18 59 10.3	+0.7
WCI	Wyandotte Cave	147.62	32	PKPbc	PKPbc	18 59 09.2	-0.7
WCI	Wyandotte Cave	147.62	32	PKP2	PKPbc	18 59 09.2	-0.7
WCI	Wyandotte Cave	147.62	32	P	PKPbc	18 59 10.6	+0.7
	baz=320						
WCI	Wyandotte Cave	147.62	32	P	PKPbc	18 59 10.8	+1.0
	baz=320,SNR=13						
J61A	Chester	147.82	10		PKPbc	18 59 11.3	+1.1
L56A	Greenwood	147.83	17	PKPbc	PKPbc	18 59 10.9	+0.5
L56A	Greenwood	147.83	17	P	PKPbc	18 59 11.1	+0.7
	baz=337,SNR=9.9						
L56A				P	PKPbc	18 59 11.1	+0.7
	baz=337,SNR=9.9						
BDFB	Brasilia	147.88	213	PKPbc	PKPbc	18 59 10.3	-1.0
	comp=Z,20nm,0.9s,baz=96,slow=3.5,SNR=14						
BDFB	Brasilia	147.88	213	PKPbc	PKPbc	18 59 11.2	-0.1
BDFB	Brasilia	147.88	213	PKP2	PKPbc	18 59 11.2	-0.1
N53A	Lisbon	147.94	22		PKPbc	18 59 10.9	+0.3
N53A	Lisbon	147.94	22	P	PKPbc	18 59 11.5	+0.9
	baz=331,SNR=11						
N53A				P	PKPbc	18 59 11.5	+0.9
	baz=331,SNR=11						
M55A	Ridgway	148.07	19		PKPbc	18 59 11.7	+0.7
M55A	Ridgway	148.07	19	P	PKPbc	18 59 11.9	+0.9
	baz=335,SNR=9.6						
M55A				P	PKPbc	18 59 11.9	+0.9
	baz=335,SNR=9.6						
T47A	Sharon Grove	148.11	34		PKPbc	18 59 11.9	+0.7
T47A	Sharon Grove	148.11	34	P	PKiKP	18 59 12.4	-0.6
	baz=317,SNR=12						
R49A	Shelbyville	148.14	30		PKPbc	18 59 11.8	+0.6
R49A	Shelbyville	148.14	30	P	PKPbc	18 59 12.4	+1.2
	baz=321,SNR=16						
R49A				P	PKPbc	18 59 12.4	+1.2
	baz=321,SNR=16						
O52A	Adamsville	148.15	24		PKPbc	18 59 11.7	+0.5
O52A	Adamsville	148.15	24	P	PKPbc	18 59 11.7	+0.5
	baz=329,SNR=12						
O52A				P	PKPbc	18 59 11.7	+0.5
	baz=329,SNR=12						
P51A	Williamsport	148.16	26		PKPbc	18 59 11.3	0.0
P51A	Williamsport	148.16	26	P	PKPbc	18 59 11.6	+0.4
	baz=326,SNR=10						
P51A				P	PKPbc	18 59 11.6	+0.4
	baz=326,SNR=10						
W45A	Hickory Valley	148.17	39		PKPbc	18 59 10.2	-1.2
W45A	Hickory Valley	148.17	39	P	PKPbc	18 59 12.5	+1.1
	baz=312,SNR=10						
PB08	IPOC Station P	148.19	173		PKPbc	18 59 13.6	+1.2
BINY	Binghamton	148.20	15		PKPbc	18 59 11.9	+0.6
BINY	Binghamton	148.20	15	P	PKPbc	18 59 12.0	+0.7
	baz=340						
BINY	Binghamton	148.20	15	P	PKiKP	18 59 12.6	-0.5
	baz=340,SNR=11						
143A	Socs Landing,	148.25	45		PKPbc	18 59 12.5	+0.8
O53A	New Philadelph	148.28	23		PKPbc	18 59 12.6	+1.1
O53A	New Philadelph	148.28	23	P	PKPbc	18 59 12.2	+0.7
	baz=330,SNR=11						
WVT	Waverly	148.31	36	PKPdf	PKPdf	18 59 09.4	+1.0
WVT	Waverly	148.31	36	PKIKP	PKPdf	18 59 09.4	+1.0
WVT	Waverly	148.31	36	P	PKPbc	18 59 12.7	+0.9
	baz=315						
WVT	Waverly	148.31	36	P	PKPbc	18 59 12.4	+0.6
	baz=315,SNR=34						
342A	Flagon Creek P	148.33	48		PKPbc	18 59 11.6	-0.3
P52A	Corning	148.43	25		PKPbc	18 59 12.2	+0.2
P52A	Corning	148.43	25	P	PKPbc	18 59 12.4	+0.4
	baz=328,SNR=12						
L59A	Walton	148.43	14		PKiKP	18 59 13.1	-0.5
L59A	Walton	148.43	14	P	PKiKP	18 59 13.2	-0.3
	baz=342,SNR=6.7						
L59A				P	PKiKP	18 59 13.2	-0.3
	baz=342,SNR=6.7						
OXF	Oxford	148.45	40		PKPbc	18 59 12.8	+0.7
OXF	Oxford	148.45	40	PKP2	PKPbc	18 59 12.8	+0.7
OXF	Oxford	148.45	40	P	PKPbc	18 59 12.9	+0.7
	baz=311						
OXF	Oxford	148.45	40	P	PKiKP	18 59 13.5	-0.2
	baz=311,SNR=13						
PB11	IPOC Station P	148.51	172		PKPdf	18 59 10.5	+1.1
R50A	Paris	148.56	29		PKPdf	18 59 09.9	+1.2
R50A	Paris	148.56	29	P	PKPbc	18 59 13.0	+0.7
	baz=323,SNR=10						
R50A				P	PKPbc	18 59 13.0	+0.7
	baz=323,SNR=10						
PSGCX	Pisagua	148.60	171		PKPbc	18 59 13.8	+0.8
O54A	Avella	148.65	22		PKiKP	18 59 13.9	0.0
O54A	Avella	148.65	22	P	PKiKP	18 59 14.0	0.0
	baz=331,SNR=11						
O54A				P	PKiKP	18 59 14.0	0.0
	baz=331,SNR=11						
GO01	Chusmiza	148.66	173		PKiKP	18 59 14.9	-0.3
L61B	Northampton	148.67	10	P	PKPbc	18 59 13.5	+1.0
	baz=346						
M57A	Sunshine Farm,	148.69	17	PKPab	PKPbc	18 59 13.3	+0.7
M57A	Sunshine Farm,	148.69	17	P	PKiKP	18 59 13.8	-0.2
	baz=338,SNR=16						
M57A				P	PKiKP	18 59 13.8	-0.2
	baz=338,SNR=16						
Y45A	Yeager Farm, C	148.78	41	PKPab	PKiKP	18 59 14.4	0.0
Y45A	Yeager Farm, C	148.78	41	P	PKiKP	18 59 14.8	+0.3
	baz=310,SNR=10						
HRV	Adam Dziewonsk	148.80	9		PKiKP	18 59 14.0	-0.2
HRV	Adam Dziewonsk	148.80	9	PKP2	PKiKP	18 59 14.0	-0.2
HRV	Adam Dziewonsk	148.80	9	P	PKiKP	18 59 14.0	-0.2
	baz=348						
KSPA	Keystone Colle	148.85	15		PKiKP	18 59 14.3	-0.1
KSPA	Keystone Colle	148.85	15	P	PKiKP	18 59 14.1	-0.2
	baz=340,SNR=9.1						
P53A	Whipple	148.86	24		PKiKP	18 59 14.3	-0.2
P53A	Whipple	148.86	24	P	PKPbc	18 59 13.9	+0.9
	baz=329,SNR=14						
P53A				P	PKPbc	18 59 13.9	+0.9
	baz=329,SNR=14						
Q52A	Bidwell	148.94	26		PKPbc	18 59 13.7	+0.4
Q52A	Bidwell	148.94	26	P	PKPbc	18 59 14.1	+0.8
	baz=327,SNR=8.6						
Q52A				P	PKPbc	18 59 14.1	+0.8
	baz=327,SNR=8.6						
PLAL	Pickwick Lake	148.96	38		PKPbc	18 59 13.5	0.0
NPNY	Mohonk Preserv	149.05	13	P	PKiKP	18 59 14.8	+0.1
	baz=343,SNR=8.1						
SSPA	Standing Stone	149.10	19		PKPbc	18 59 14.4	+0.8
SSPA	Standing Stone	149.10	19	P	PKPbc	18 59 14.4	+0.8
	baz=336						
SSPA	Standing Stone	149.10	19	P	PKiKP	18 59 15.2	+0.2
	baz=336,SNR=10						
MNMC	Minye Minye	149.14	172		PKPdf	18 59 12.9	+2.3
VBMS	Vicksburg	149.14	45		PKiKP	18 59 15.9	+0.7
VBMS	Vicksburg	149.14	45	P	PKPbc	18 59 14.9	+0.9
	baz=306						
V48A	Smith Brothers	149.17	35		PKPbc	18 59 14.4	+0.4
V48A	Smith Brothers	149.17	35	P	PKPbc	18 59 14.6	+0.6
	baz=316,SNR=14						
U49A	Red Boiling Sp	149.18	33		PKPbc	18 59 14.8	+0.8
U49A	Red Boiling Sp	149.18	33	P	PKiKP	18 59 14.9	-0.3
	baz=319,SNR=21						
CLTN	Cedars of Leba	149.19	34		PKPbc	18 59 14.8	+0.8
KSCT	Kent School, K	149.22	12		PKPbc	18 59 14.6	+0.7
N58A	Sunbury	149.27	17		PKPbc	18 59 14.6	+0.6
N58A	Sunbury	149.27	17	P	PKPbc	18 59 14.8	+0.8
	baz=338,SNR=11						
N58A				P	PKPbc	18 59 14.8	+0.8
	baz=338,SNR=11						
T50A	Nancy	149.29	31		PKPdf	18 59 10.1	+0.1
T50A	Nancy	149.29	31	P	PKPbc	18 59 14.5	+0.3
	baz=321						
T50A				P	PKPbc	18 59 14.5	+0.3
	baz=321						
MCWV	Mont Chateau	149.31	22		PKiKP	18 59 15.6	+0.2
MCWV	Mont Chateau	149.31	22	P	PKiKP	18 59 15.6	+0.2
	baz=332,SNR=5.7						
MCWV	Mont Chateau	149.31	22	P	PKiKP	18 59 15.9	+0.5
	baz=332,SNR=5.7						
BRNY	Black Rk. Fore	149.41	13	P	PKiKP	18 59 15.3	-0.2
	baz=343,SNR=5.9						
S51A	Beattyville	149.42	29		PKPbc	18 59 15.0	+0.5
S51A	Beattyville	149.42	29	P	PKPbc	18 59 15.3	+0.8
	baz=323,SNR=12						
S51A				P	PKPbc	18 59 15.3	+0.8
	baz=323,SNR=12						
Q54A	Coxs Mills	149.51	24		PKPbc	18 59 15.5	+0.8
Q54A	Coxs Mills	149.51	24	P	PKiKP	18 59 15.6	-0.2
	baz=329,SNR=10						
Q54A				P	PKiKP	18 59 15.6	-0.2
	baz=329,SNR=10						
ODNJ	Ogdensburg	149.59	14		PKiKP	18 59 16.0	+0.1
ODNJ	Ogdensburg	149.59	14	P	PKiKP	18 59 16.0	+0.1
	baz=342,SNR=10						
R53A	Hurricane	149.60	26		PKPbc	18 59 15.6	+0.7
R53A	Hurricane	149.60	26	P	PKiKP	18 59 16.1	+0.1
	baz=327,SNR=8.3						
R53A				P	PKiKP	18 59 16.1	+0.1
	baz=327,SNR=8.3						
WSPT	Westport, CT	149.78	12		PKiKP	18 59 17.3	+1.0
PAL	Palisades	149.82	13		PKiKP	18 59 16.4	0.0
PAL	Palisades	149.82	13	PKP2	PKiKP	18 59 16.4	0.0
PAL	Palisades	149.82	13	P	PKiKP	18 59 16.4	0.0
	baz=343,SNR=5.9						
PAL	Palisades	149.82	13	P	PKiKP	18 59 16.8	+0.4
	baz=343,SNR=5.9						
PAGS	Pennsylvania G	149.83	17		PKPbc	18 59 16.1	+0.7
LUPA	Lehigh Univers	149.86	15		PKiKP	18 59 17.1	+0.7
146A	Union	149.87	42		PKiKP	18 59 17.1	+0.3
PB16	IPOC Station P	149.93	172		PKiKP	18 59 18.2	+0.2
X48A	Hartselle	149.94	37		PKPbc	18 59 15.8	-0.2
X48A	Hartselle	149.94	37	P	PKPbc	18 59 16.0	+0.1
	baz=314,SNR=11						
SWET	Sewanee	150.05	35		PKPbc	18 59 16.5	+0.3
Q56A	Snyder Ridge,	150.09	22		PKiKP	18 59 16.9	-0.1
Q56A	Snyder Ridge,	150.09	22	P	PKPbc	18 59 16.5	+0.3
	baz=332,SNR=9.7						
Q56A				P	PKPbc	18 59 16.5	+0.3
	baz=332,SNR=9.7						
P57A	Homestead Farm	150.11	20		PKPbc	18 59 16.8	+0.7
P57A	Homestead Farm	150.11	20	P	PKPbc	18 59 16.9	+0.7
	baz=335,SNR=8.7						
P57A				P	PKPbc	18 59 16.9	+0.7
	baz=335,SNR=8.7						
MVL	Millersville	150.15	17		PKiKP	18 59 17.3	+0.2
Z47A	Carrollton	150.15	40		PKiKP	18 59 17.4	+0.1
TZTN	Tazewell	150.31	30		PKiKP	18 59 17.9	+0.3
TZTN	Tazewell	150.31	30	P	PKiKP	18 59 18.4	+0.8
	baz=322						
TZTN	Tazewell	150.31	30	P	PKiKP	18 59 18.4	+0.8
	baz=322,SNR=14						
S54A	Dingess, Beckl	150.32	26		PKPbc	18 59 16.9	+0.1
S54A	Dingess, Beckl	150.32	26	P	PKiKP	18 59 17.7	+0.1
	baz=327,SNR=6.6						
S54A				P	PKiKP	18 59 17.7	+0.1
	baz=327,SNR=6.6						
R55A	Marlinton	150.40	24		PKPbc	18 59 17.4	+0.4
R55A	Marlinton	150.40	24	P	PKiKP	18 59 17.9	+0.2
	baz=330,SNR=12						
R55A				P	PKiKP	18 59 17.9	+0.2
	baz=330,SNR=12						
W50A	Signal Mountai	150.40	34		PKPbc	18 59 17.6	+0.5
W50A	Signal Mountai	150.40	34	P	PKiKP	18 59 18.1	+0.3
	baz=318,SNR=17						
WUPA	West Chester U	150.42	16		PKPbc	18 59 17.5	+0.6
V51A	Loudon	150.47	32	PKPdf	PKPdf	18 59 12.7	+0.9
V51A	Loudon	150.47	32	P	PKiKP	18 59 18.2	+0.3
	baz=320,SNR=12						
SDMD	Soldier's Deli	150.55	18		PKiKP	18 59 18.2	+0.3
CPCT	Cooper Cave	150.65	33		PKiKP	18 59 18.2	0.0
PB18	Visviri	150.67	172		PKPdf	18 59 13.5	+0.2
FPAL	Fort Paine	150.72	36		PKiKP	18 59 18.5	0.0
Y49A	Blount Mountai	150.73	38		PKPbc	18 59 18.1	+0.2
Y49A	Blount Mountai	150.73	38	P	PKiKP	18 59 18.6	+0.1
	baz=314,SNR=13						
V52A	Sevierville	150.83	31		PKPdf	18 59 13.4	+1.0
V52A	Sevierville	150.83	31	P	PKiKP	18 59 19.0	+0.3
	baz=321,SNR=17						
TKL	Tuckaleechee C	150.88	32	PKPdf	PKPdf	18 59 13.7	+1.2
TKL	Tuckaleechee C	150.88	32	PKIKP	PKPdf	18 59 13.7	+1.2
TKL	Tuckaleechee C	150.88	32	P	PKiKP	18 59 19.0	+0.2
	baz=321,SNR=17						
LRAL	Lakeview Retre	150.94	40		PKPbc	18 59 18.3	0.0
LRAL	Lakeview Retre	150.94	40	P	PKPbc	18 59 18.7	+0.4
	baz=312						
X51A	Calhoun	151.12	35		PKiKP	18 59 19.8	+0.6
X51A	Calhoun	151.12	35	P	PKiKP	18 59 19.4	+0.1
	baz=318,SNR=7.4						
X51A				P	PKiKP	18 59 19.4	+0.1
	baz=318,SNR=7.4						
U54A	Nelsons Funny	151.15	28		PKiKP	18 59 19.4	+0.1
BLA	Blacksburg	151.19	25		PKiKP	18 59 19.6	+0.3
BLA	Blacksburg	151.19	25	PKIKP	PKiKP	18 59 19.7	+0.3
BLA	Blacksburg	151.19	25	P	PKiKP	18 59 19.6	+0.3
	baz=328						
BLA	Blacksburg	151.19	25	P	PKiKP	18 59 21.8	+2.4
	baz=328,SNR=6.1						
W52A	Murphy	151.23	33		PKiKP	18 59 20.1	+0.6
W52A	Murphy	151.23	33	P	PKiKP	18 59 20.5	+0.9
	baz=320,SNR=8.5						
S57A	Dark Hollow, R	151.31	23		PKiKP	18 59 19.8	+0.3
S57A	Dark Hollow, R	151.31	23	P	PKiKP	18 59 20.4	+0.9
	baz=332,SNR=6.3						
S57A				P	PKiKP	18 59 20.4	+0.9
	baz=332,SNR=6.3						
V53A	Saluda	151.36	31		PKiKP	18 59 20.3	+0.5
V53A	Saluda	151.36	31	P	PKiKP	18 59 20.5	+0.7
	baz=323,SNR=11						
V53A				P	PKiKP	18 59 20.5	+0.7
	baz=323,SNR=11						
CBN	Corbin Frederi	151.48	20	P	PKiKP	18 59 20.3	+0.4
	baz=335						
R58B	Mineral	151.52	21		PKiKP	18 59 20.6	+0.6
R58B	Mineral	151.52	21	P	PKiKP	18 59 20.4	+0.4
	baz=334,SNR=5.6						
R58B				P	PKiKP	18 59 20.4	+0.4
	baz=334,SNR=5.6						
BG3	Lake Jocassee	151.83	32		PKiKP	18 59 22.0	+1.3
CASEE	Lake Jocassee	151.83	32	P	PKiKP	18 59 23.2	+2.4
	baz=322,SNR=6.5						
Z51A	Franklin	151.84	37		PKiKP	18 59 21.8	+1.0
T57A	Hurt	151.85	24		PKPbc	18 59 20.8	+0.4
T57A	Hurt	151.85	24	P	PKiKP	18 59 21.3	+0.6
	baz=330,SNR=5.9						
T57A				P	PKiKP	18 59 21.3	+0.6
	baz=330,SNR=5.9						
U56A	King	151.94	26		PKiKP	18 59 21.2	+0.2
V55A	Taylorsville	151.98	28		PKPbc	18 59 21.1	+0.4
Y52A	Lilburn	152.09	35		PKiKP	18 59 22.3	+1.0
Y52A	Lilburn	152.09	35	P	PKiKP	18 59 22.5	+1.3
	baz=318						
Y52A				P	PKiKP	18 59 22.5	+1.3
	baz=318						
250A	Grady	152.10	40	P	PKiKP	18 59 22.6	+1.2
	baz=312						
LPAZ	La Paz	152.11	174	PKPbc	PKPbc	18 59 21.5	-0.8
	comp=Z,3.7nm,0.4s,baz=57,slow=1.1,SNR=16						
LPAZ	La Paz	152.11	174		PKiKP	18 59 23.2	+0.7
PTLB	Pontes e Lacer	152.37	193		PKiKP	18 59 22.8	+0.4
KMSC	Kings Mountain	152.50	29	P	PKiKP	18 59 22.7	+0.5
	baz=325						
KMSC	Kings Mountain	152.50	29	P	PKiKP	18 59 22.8	+0.7
	baz=325						
T59A	Double "B" Far	152.52	21		PKiKP	18 59 22.6	+0.5
T59A	Double "B" Far	152.52	21	P	PKiKP	18 59 22.9	+0.9
	baz=334,SNR=8.3						
T59A				P	PKiKP	18 59 22.9	+0.9
	baz=334,SNR=8.3						
PAULI	Pauline	152.53	30		PKiKP	18 59 22.3	+0.2
152A	Waverly Hall	152.57	37		PKPdf	18 59 15.8	+0.7
152A	Waverly Hall	152.57	37	P	PKiKP	18 59 23.4	+1.1
	baz=316						
HODGE	Hodges	152.77	32		PKPdf	18 59 16.7	+1.4
BIRD	Birdtown, Kers	153.32	28		PKiKP	18 59 24.6	+0.8
VILB	Vilhena	155.02	192	PKPdf	PKPdf	18 59 17.4	-1.7
ETMB	Extrema	158.66	178	PKPdf	PKPdf	18 59 23.8	0.0
SAML	Samuel	159.42	186		PKPab	19 00 01.9	-0.1
SAML	Samuel	159.42	186	PKP2	PKPab	19 00 01.9	-0.1
SAML				MLR	MLR		
	comp=Z,400nm,19.0s						
RUSC	La Rusia	170.50	126		PKPdf	18 59 34.8	0.0

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*IDC **16** 18:41:55.3±3.0, 33°.98S×72°.03W, h0km, mb3.6/1, mbtmp3.6/3, ML3.3/2, MS3.4/3, Error ellipse: s-maj=144.3km s-min=36.9km az=91.0*

*SJA **16** 18:41:56.6±0.7, 34°.00S×72°.14W, h24km±2km, ML3.8, MW3.9, Hypocentre not reviewed by the ISC*

*GUC **16** 18:41:58.2±0.8, 34°.00S×72°.17W, h10km±3km, ML3.5*

ISC 16 18:41:56.4±1.5, **34°.00S**±0°.03×**72°.15W**±0°.05, **h9**km±9km, **n39**, σ0s.54/52, **4C-10D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BO03	Pichilemu	0.52	163	⇑*i*P	Pb	18 42 08.0	+0.3
BO03				*i* S	Sb	18 42 15.2	-0.2
BO03				IAML		18 42 16.1	
	comp=E,4µm,0.2s						
VA05	Santo Domingo	0.56	53	⇓*i*P	Pb	18 42 09.3	+1.0
VA05				*i* S	Sb	18 42 16.9	+0.4
VA05				IAML		18 42 20.4	
	comp=E,8µm,0.4s						
MT01	Popeta	0.76	80	⇓*i*P	Pb	18 42 12.1	+0.3
MT01				*i* S	Sb	18 42 22.4	+0.2
MT01				IAML		18 42 23.8	
	comp=E,2µm,0.5s						
MT01	Popeta	0.76	80	*e*P		18 42 12.1	
MT01				*e*S		18 42 22.7	
MT01				IAML		18 42 23.5	
	comp=Z,3µm,0.4s						
BO01	Tunca	0.97	114	⇓*i*P	Pg	18 42 14.8	-0.3
BO01				IAML		18 42 35.9	
	comp=N,872nm,0.3s						
BO01	Tunca	0.97	114	*e*P		18 42 14.9	
BO01				*e*S		18 42 28.6	
MT09	Talagante	0.99	78	⇓*i*P	Pb	18 42 15.6	-0.2
MT09				*i* S	Sb	18 42 29.6	+0.6
MT09				IAML		18 42 32.8	
	comp=N,2µm,0.3s						
GO05	Huala	1.03	170	*e*P	Pg	18 42 16.0	-0.1
GO05				*i* S	Sg	18 42 30.2	+0.7
GO05				IAML		18 42 32.0	
	comp=E,4µm,0.2s						
GO05	Huala	1.03	170	*e*P		18 42 16.3	
GO05				*e*S		18 42 31.3	
VA01	Torpederas	1.06	24	*e*P	Pb	18 42 17.1	+0.2
VA01				*i* S	Sb	18 42 31.3	+0.5
VA01				IAML		18 42 36.3	
	comp=E,835nm,0.6s						
VA01	Torpederas	1.06	24	*e*P		18 42 17.2	
VA01				*e*S		18 42 26.9	
MT02	Curacav	1.12	49	⇓*i*P	Pb	18 42 17.8	-0.1
MT02				*i* S	Sb	18 42 32.1	-0.5
MT02				IAML		18 42 38.4	
	comp=E,888nm,0.6s						
MT02	Curacav	1.12	49	*e*P		18 42 17.8	
MT02				*e*S		18 42 34.0	
MT05	Renca	1.32	63	*e*P	Pb	18 42 21.5	+0.1
MT05				IAML		18 42 47.0	
	comp=E,1µm,0.4s						
MT05	Renca	1.32	63	*e*P		18 42 21.7	
MT12	Pirque	1.36	79	⇓*i*P	Pn	18 42 21.6	0.0
MT12				*i* S	Sn	18 42 39.5	-0.2
MT12				IAML		18 42 47.1	
	comp=N,2µm,0.5s						
BO02	Sierra Bellavi	1.38	125	*e*P	Pn	18 42 21.6	-0.3
BO02				*i* S	Sn	18 42 40.6	+0.2
BO02				IAML		18 42 43.5	
	comp=N,3µm,0.3s						
BO02	Sierra Bellavi	1.38	125	*e*P		18 42 22.4	
BO02				*e*S		18 42 44.3	
BO02				IAML		18 42 46.2	
	comp=Z,2µm,0.2s						
ROC1	El Roble	1.39	43	*e*P		18 42 22.5	
ROC1				*e*S		18 42 48.0	
ROCH	El Roble	1.40	43	⇓*i*P	Pn	18 42 22.4	+0.2
ROCH				⇑*i*P	Pn	18 42 22.4	+0.2
ROCH				*i* S	Sb	18 42 40.9	+0.1
ROCH				*i* S	Sn	18 42 41.7	+0.8
ROCH				IAML		18 42 50.5	
	comp=N,2µm,0.3s						
ROCH				IAML		18 42 53.1	
	comp=N,1µm,0.5s						
MT03	Universidad Ad	1.46	70	⇓*i*P	Pn	18 42 23.1	+0.1
MT03				*i* S	Sn	18 42 42.6	+0.4
MT03				IAML		18 42 48.0	
	comp=N,2µm,0.3s						

MT03	Universidad Ad	1.46	70	*e*P		18 42 23.4	
MT03				*e*S		18 42 44.0	
MT03				IAML		18 42 54.9	
	comp=Z,758nm,0.3s						
PEL	Peldehue	1.49	56	⇓*i*P	Pb	18 42 24.0	-0.2
PEL				*i* S	Sg	18 42 44.7	+0.3
PEL				IAML		18 42 51.5	
	comp=E,1µm,0.5s						
PEL	Peldehue	1.49	56	*e*P		18 42 24.1	
PEL				*e*S		18 42 44.4	
MT10	Hacienda Santa	1.53	62	*e*P	Pb	18 42 24.8	-0.2
MT10				*i* S	Sg	18 42 45.8	+0.3
MT10				IAML		18 42 56.1	
	comp=N,2µm,0.5s						
MT13	San Alfonso	1.57	81	*e*P	Pn	18 42 25.1	+0.5
MT13				*i* S	Sg	18 42 46.5	-0.5
MT13				IAML		18 42 48.9	
	comp=N,1µm,0.2s						
VA06	Catapilco	1.60	27	*e*P	Pn	18 42 24.6	-0.2
VA06				*i* S	Sn	18 42 44.5	-1.0
VA06				IAML		18 42 55.3	
	comp=N,2µm,0.3s						
LMEL	Las Melosas	1.62	85	*e*P	Pn	18 42 26.0	+0.7
LMEL				*i* S	Sb	18 42 47.3	0.0
LMEL				IAML		18 42 56.3	
	comp=N,1µm,0.3s						
FCH	Farellones	1.69	67	⇓*i*P	Pn	18 42 26.9	+0.5
FCH				*i* S	Sg	18 42 49.5	-1.2
FCH				IAML		18 42 55.1	
	comp=E,745nm,0.2s						
MT04	Ro Olivares	1.78	71	*e*P	Pn	18 42 28.4	+0.9
MT04				*i* S	Sb	18 42 51.5	-0.2
MT04				IAML		18 42 56.1	
	comp=E,408nm,0.3s						
VA03	San Esteban	1.82	48	⇑*i*P	Pn	18 42 29.0	+1.1
VA03				*i* S	Sb	18 42 52.5	-0.2
VA03				IAML		18 42 57.9	
	comp=E,1µm,0.5s						
VA03	San Esteban	1.82	48	*e*P		18 42 29.0	
VA03				*e*S		18 42 52.1	
VA03				IAML		18 43 04.1	
	comp=Z,906nm,0.6s						
MT08	Bocatoma Ro	1.86	73	⇑*i*P	Pb	18 42 29.9	-0.8
MT08				IAML		18 43 00.8	
	comp=N,401nm,0.4s						
AAGR	Agrelo	2.92	73	*e*P		18 42 43.3	
ARCO	CERRO ARCO	2.93	68	*e*P		18 42 44.7	
CO02	Combarbal	2.95	20	*e*P	Pn	18 42 43.6	+0.1
CO02	Combarbal	2.95	20	*e*P		18 42 43.9	
CO02				*e*S		18 43 18.8	
CO02				IAML		18 43 33.3	
	comp=Z,286nm,1.1s						
ASAL	Salagasta	3.11	64	*e*P		18 42 45.8	
ASAL				*e*S		18 43 41.7	
RTLS	Leoncito	3.25	48	*e*P		18 42 45.7	
RTLS				*e*S		18 43 35.2	
RTLS				IAML		18 43 46.9	
	comp=Z,395nm,1.0s						
CO06	Fray Jorge	3.34	8	*e*P	Pn	18 42 47.8	-1.0
CO03	El Pedregal	3.38	22	*e*P	Pn	18 42 50.4	+1.0
CO03	El Pedregal	3.38	22	*e*P		18 42 50.4	
CO03				*e*S		18 43 43.4	
CO03				IAML		18 43 49.3	
	comp=Z,147nm,1.4s						
GO04	Tololo Observa	3.98	17	*e*P		18 42 58.0	
GO04				*e*S		18 43 59.4	
CFA	Coronel Fontan	4.07	55	LR	LR	18 44 48.5	
	comp=Z,147nm,20.1s,baz=252,slow=44						
CFA	Coronel Fontan	4.07	55	*e*P		18 43 00.8	
CFA				*e*S		18 43 58.5	
CO01	Juntas del Tor	4.37	24	*e*P		18 43 04.4	
CO01				*e*S		18 43 55.0	
CO01				IAML		18 44 25.6	
	comp=Z,60nm,0.7s						
AC05	El Transito	5.39	18	*e*P		18 43 17.6	
AC05				*e*S		18 44 18.8	
AC05				IAML		18 44 51.5	
	comp=Z,66nm,1.4s						
H03S1	Juan Fernandez	5.62	270	T	T	18 49 06.8	
	baz=92,slow=75,SNR=405						
H03S3	Juan Fernandez	5.62	270	T	T	18 49 06.7	
	baz=92,slow=75,SNR=334						
H03S2	Juan Fernandez	5.64	270	T	T	18 49 06.3	
	baz=92,slow=75,SNR=378						
H03N1	Juan Fernandez	5.66	274	T	T	18 49 21.3	
	baz=98,slow=74,SNR=16						
H03N3	Juan Fernandez	5.67	274	T	T	18 49 20.3	
	baz=98,slow=74,SNR=18						
H03N2	Juan Fernandez	5.68	274	T	T	18 49 20.5	
	baz=98,slow=74,SNR=17						
PLCA	Paso Flores	6.84	170	Pn	Pn	18 43 37.6	+0.6
	comp=Z,0.1nm,0.3s,baz=344,slow=6.6,SNR=2.9						
PLCA				Sn	Sn	18 44 54.5	-0.5
	comp=Z,0.1nm,0.3s,baz=74,slow=19,SNR=1.8						
	comp=Z,0.9nm,0.4s						
CPUP	Villa Florida	14.91	63	LR	LR	18 51 09.0	
	comp=Z,59nm,19.5s,baz=222,slow=37						
LPAZ	La Paz	18.00	13	P	Pn	18 46 08.0	+0.5
	comp=Z,0.1nm,0.3s,baz=184,slow=6.9,SNR=3.7						
	comp=Z,2.0nm,0.8s						
SADO	Sadowa	78.65	355	LR	LR	19 33 27.2	
	comp=Z,174nm,18.1s,baz=292,slow=39						
TORD	Torodi Ar. Bea	84.30	70	P	P	18 54 28.6	-0.4
	comp=Z,0.4nm,0.7s,baz=252,slow=4.9,SNR=2.5						
	comp=Z,0.4nm,0.7s						
BVAR	Borovoye Array	147.34	43	PKPbc	PKPbc	19 01 40.0	+0.1
	comp=Z,0.5nm,0.5s,baz=270,slow=2.9,SNR=2.5						
ZALV	Zalesovo Beam	154.27	32	PKPbc	PKPbc	19 01 55.8	-0.5
	comp=Z,0.5nm,0.5s,baz=276,slow=4.2,SNR=2.3						

*IDC **16** 18:42:53.7±1.1, 29°.57N×51°.55E, h0^{km}, mb3.9/17, mbtmp3.9/22, ML3.5/4, Error ellipse: s-maj=23.8km s-min=15.1km az=3.0*

*TEH **16** 18:42:54.8, 29°.64N×51°.50E, h14^{km}±11^{km}, ML4.0*

*ISN **16** 18:42:54.0±1.0, 29°.39N×51°.41E, h11^{km}±292^{km}, ML4.0*

ISC 16 18:42:56.2±0.8**, 29°.59N**±0°.04×**51°.58E**±0°.04**, h16**^{km}±5^{km}**, n121, σ1^{s}54**/128**, mb4.2**/29**, 3C-11D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAZ1	Kazerun	0.06	54	Pg	Pg	18 42 58.6	-0.7
KAZ1				Sg	Sg	18 43 01.5	+0.1
AHBU	AHRAM	0.77	199	Pg	Pg	18 43 10.6	-0.5
SHI	Shiraz	0.81	86	Pg	Pg	18 43 12.2	+0.2
DSBU	Dashti - Bushe	1.25	193	Pg	Pg	18 43 20.8	+0.4
KLNJ	Kolanjah	1.42	0	Pg	Pn	18 43 21.1	-0.6
ABEH	Behbahan	1.53	311	Pg	Pn	18 43 22.9	-0.1
ABEH				Sg	Sg	18 43 45.7	+0.1
QIR1	Qir	1.69	131	Pg	Pb	18 43 28.2	+1.1
GHIR	Ghir-Karzin	1.79	136	Pn	Pb	18 43 29.0	+0.2
JHRM	Jahrom	2.05	121	Pn	Pn	18 43 32.0	+1.8
IRAM	Ramesheh	2.32	17	Pn	Pn	18 43 35.3	+1.4
IBRJ	Brojen	2.33	353	Pn	Pn	18 43 34.8	+0.6
SHK1	Shahrekord	2.80	348	Pn	Pn	18 43 40.6	0.0
IGAR	Gharneh	2.83	8	Pn	Pn	18 43 42.5	+1.4
AMIS	Naft Sefid	2.86	317	Pn	Pn	18 43 41.4	+0.1
IPIR	Pirpir	3.14	349	Pn	Pn	18 43 45.6	+0.3
NASN	Na'in	3.37	18	Pn	Pn	18 43 49.4	+0.8
SAKB	Bahrain	3.71	195	Pn	Pn	18 43 55.3	+2.3
YZKH	Yazd	3.80	42	Pn	Pn	18 43 56.3	+2.0
ANAR	Anarak	4.03	27	Pn	Pn	18 43 58.5	+1.0
QAMS	Qamsar	4.14	358	Pn	Pn	18 44 01.0	+2.0
KHGB	Koh Gabri	4.32	78	Pn	Pn	18 44 03.9	+2.4
KHMZ	Khomeyn	4.36	342	Pn	Pn	18 44 02.8	+0.7
KRSH	Karshahi	4.39	6	Pn	Pn	18 44 02.9	+0.5
ZRDN	Zarand Kerman	4.50	71	Pn	Pn	18 44 06.5	+2.5
KRBR	Kerman	4.52	84	Pn	Pn	18 44 06.0	+1.7
BNDS	Bandar-Abbas	4.59	117	Pn	Pn	18 44 07.1	+2.0
ISFB	Sefidab	4.78	7	Pn	Pn	18 44 07.8	+0.1
GHVR	GHOM	4.88	357	Pn	Pn	18 44 10.2	+1.1
IKFM	Kafar-mosalman	5.05	322	Pn	Pn	18 44 11.9	+0.6
IDOB	Doab	5.09	326	Pn	Pn	18 44 13.0	+0.8
ASAO	Ashtian	5.12	345	Pn	Pn	18 44 13.1	+0.6
RAFI	Al-Rafai	5.17	296	*e*Pn	Pn	18 44 14.0	+1.0
RAFI				*e*Sn	Sn	18 45 13.0	+0.7
RAFI				AML	AML	18 45 56.7	
	comp=N,179nm,0.7s						
RAFI				AML	AML	18 46 11.6	
	comp=E,149nm,0.2s						
CHMN	Cheshme madani	5.19	86	Pn	Pn	18 44 16.0	+2.4
IQOM	Qom	5.26	355	Pn	Pn	18 44 14.2	-0.2
SHME	Shamm	5.36	130	Pn	Pn	18 44 16.8	+1.2
IVRN	Varamin	5.39	1	Pn	Pn	18 44 17.7	+1.6
BANOM	Banah	5.55	130	Pn	Pn	18 44 19.7	+1.5
TPRV	Parvadeh(Tabas	5.55	51	Pn	Pn	18 44 20.4	+2.1
HAGD	Aghdareh	5.61	339	Pn	Pn	18 44 19.7	+0.4
KHNJ	Kahnooj	5.62	105	Pn	Pn	18 44 21.4	+2.2
IKOM	Komasi	5.74	324	Pn	Pn	18 44 20.3	-0.6
MSFE	Esma-Masafi	5.85	135	Pn	Pn	18 44 24.0	+1.6
IRAZ	Razeghan	5.96	347	Pn	Pn	18 44 24.7	+0.6
IBDR	Badra	5.97	307	*e*Pn	Pn	18 44 26.0	+2.0
IBDR				*e*Sn	Sn	18 45 33.0	+0.9
IBDR				AML	AML	18 46 24.7	
	comp=E,89nm,0.5s						
IDMV	Damavand	5.98	4	Pn	Pn	18 44 25.4	+1.0
MDH	Madha	5.98	134	Pn	Pn	18 44 25.4	+1.2
KBAM	BAM	6.01	93	Pn	Pn	18 44 27.5	+2.9
DAMV	Damavand	6.03	3	Pn	Pn	18 44 25.7	+0.6
ILBA	Ilam Banvizeh	6.10	313	Pn	Pn	18 44 25.0	-0.8
TNSJ	Nastanj	6.11	43	Pn	Pn	18 44 27.7	+1.7
UOSS	Minazif	6.19	137	Pn	Pn	18 44 28.0	+1.0
TKDS	Koohdasht(Taba	6.20	48	Pn	Pn	18 44 28.8	+1.6
TABS	Tabas	6.22	48	Pn	Pn	18 44 28.9	+1.4
HATD	Hatta, Dubai	6.24	138	Pn	Pn	18 44 29.1	+1.4
ASHO	Ashiyiah	6.30	140	Pn	Pn	18 44 30.7	+2.0
CHTH	Charan	6.31	357	Pn	Pn	18 44 30.0	+1.0
SNGE	Sanandaj	6.55	328	Pn	Pn	18 44 31.3	-0.9
ALNE	Al Ain	6.65	145	Pn	Pn	18 44 34.9	+1.6
IPRN	Peran	6.67	5	Pn	Pn	18 44 35.1	+1.5
IDHR	Dehrash	6.74	320	Pn	Pn	18 44 34.7	0.0
BSRN	Basiran	6.91	68	Pn	Pn	18 44 38.7	+1.7
SOHO	SOHO	7.00	140	Pn	Pn	18 44 39.0	+0.9
BHD	Baghdad	7.17	303	*e*Pn	Pn	18 44 43.0	+2.6
BHD				*e*Sn	Sn	18 46 01.0	-0.5
SHRO	Shahrood	7.39	29	Pn	Pn	18 44 44.7	+1.1
AFRZ	Afriz	7.41	57	Pn	Pn	18 44 45.5	+1.7
ZNJK	Zanjan	7.47	342	Pn	Pn	18 44 44.2	-0.5
IKRK	Kirkuk	8.42	315	*e*Pn	Pn	18 45 00.0	+2.3
IKRK				*e*Sn	Sn	18 46 33.0	+0.5
IKRK				AML	AML	18 46 35.5	
	comp=E,69nm,0.5s						
IKRK				AML	AML	18 46 38.0	
	comp=N,46nm,0.5s						
SHRT	Shahrakht	8.45	59	Pn	Pn	18 45 01.0	+2.8
SBZV	Sabzevar	8.46	35	Pn	Pn	18 44 59.0	+0.7
WSAR	Wadi Sarin	8.94	133	Pn	Pn	18 45 04.8	0.0
	comp=N,0.9nm,0.3s,baz=332,slow=6.7,SNR=7.1						
WSAR				Sn	Sn	18 46 41.0	-4.1
	comp=N,0.6nm,0.3s,baz=319,slow=3.1,SNR=2.0						
	comp=N,2.7nm,0.4s						
GEYT	Alibeck	9.94	31	Pn	Pn	18 45 18.8	+0.4
	comp=N,0.8nm,0.3s,baz=232,slow=16,SNR=1.2						
ASF	Jabal al Asfar	12.88	285	Pn	Pn	18 45 56.3	-2.4
	comp=N,0.4nm,0.3s,baz=106,slow=10,SNR=2.5						
ASF				Sn	Sn	18 48 12.2	-10
	comp=N,0.2nm,0.3s,baz=76,slow=16,SNR=2.1						
	comp=N,1.1nm,0.3s						
MMAI	Mount Meron Ar	14.25	288	Pn	Pn	18 46 19.9	+2.4
	comp=N,0.3nm,0.3s,baz=99,slow=16,SNR=2.6						
KBZ	Khabaz	15.72	336	Pn	P	18 46 39.7	-1.2
	comp=N,0.1nm,0.3s,baz=133,slow=11,SNR=8.4						
	comp=N,6.3nm,1.1s						
BRTR	Keskin Array B	17.86	309	P	Pn	18 47 03.0	-1.3
	comp=N,0.1nm,0.3s,baz=126,slow=12,SNR=3.1						
	comp=N,1.0nm,0.7s						
AKTO	Aktyubinsk	21.38	11	P	P	18 47 42.4	-0.5
	comp=N,1.2nm,0.6s,baz=192,slow=9.3,SNR=2.4						
	comp=N,1.2nm,0.6s						
KSH	Kashi	22.34	57	P	P	18 47 50.1	-3.4
KSH				pP	pP	18 47 55.3	-3.0
KSH				sP	sP	18 48 02.5	+2.0
KSH				pmax	pmax		
	comp=Z,4.0nm,1.2s						
AAK	Ala-Archa	22.55	49	P	P	18 47 56.5	+0.8
	comp=Z,0.8nm,0.9s,baz=222,slow=14,SNR=1.7						
	comp=Z,0.8nm,0.9s						
BELG	Belogornoye	22.97	354	P	P	18 48 00.3	+0.5
	comp=Z,2.9nm,0.4s,baz=129,slow=13,SNR=4.3						
	comp=Z,2.9nm,0.4s						
IDI	Anoyia	23.20	291	P	P	18 48 03.2	+0.7
	comp=Z,2.7nm,0.7s,baz=113,slow=18,SNR=1.3						
	comp=Z,2.7nm,0.7s						
CFR	Carcaliu	24.15	317	⇑P	P	18 48 14.1	+2.6
PLOR	Plostina	25.39	317	⇓P	P	18 48 24.6	+1.7
COPA	Copaceanca	25.47	312	⇓P	P	18 48 27.5	+4.0
MLR	Muntele Rosu	25.64	315	⇓P	P	18 48 28.1	+2.9
MLR	Muntele Rosu	25.64	315	P	P	18 48 25.7	+0.5
	comp=Z,2.5nm,0.4s,baz=339,slow=13,SNR=5.3						
	comp=Z,2.5nm,0.4s						
COVR	Voineasa-Covas	25.66	316	⇓P	P	18 48 26.2	+0.9
SORM	Soroca	25.72	322	⇑P	P	18 48 24.0	-1.8
TESR	Tescani	25.74	318	⇓P	P	18 48 26.1	+0.1
OZUR		26.04	316	⇑P	P	18 48 31.7	+3.0
VOIR		26.16	314	⇓P	P	18 48 31.5	+1.6
DOPR	Dopca	26.21	316	⇓P	P	18 48 31.6	+1.3
ARR	Arges	26.39	314	⇓P	P	18 48 35.0	+3.0
AKASG	Malin Array Be	26.95	328	P	P	18 48 36.6	-0.2
	comp=Z,0.9nm,0.4s,baz=132,slow=9.6,SNR=11						
	comp=Z,0.9nm,0.4s						
BURAR	Bucovina Array	27.16	319	⇓P	P	18 48 41.1	+2.2
BVAR	Borovoye Array	27.18	25	P	P	18 48 39.1	+0.2
	comp=Z,0.5nm,0.4s,baz=207,slow=6.0,SNR=4.8						
	comp=Z,0.5nm,0.4s						
GZR	Gura Zlata	27.58	313	⇓P	P	18 48 44.6	+1.9
DRGR		28.23	315	⇓P	P	18 48 51.2	+2.7
KURBB	Kurchatov Arra	29.16	36	P	P	18 48 57.2	+0.6
	comp=Z,0.7nm,0.7s,baz=237,slow=9.3,SNR=7.2						
	comp=Z,0.7nm,0.7s						
MKAR	Makanchi Array	29.37	46	P	P	18 48 58.7	+0.1
	comp=Z,0.3nm,0.4s,baz=254,slow=5.4,SNR=1.3						
	comp=Z,0.3nm,0.4s						
CONA	Conrad Observa	32.95	314	pP	P	18 49 32.1	+2.0
	comp=Z,7.6nm,1.9s						
KRLC	Kraliky	33.23	318	*e*P	P	18 49 34.0	+1.5
DPC	Dobruska-Polom	33.61	318	*e*P	P	18 49 37.0	+1.2
ZALV	Zalesovo Beam	34.22	35	P	P	18 49 40.6	-0.3
	comp=Z,2.0nm,0.6s,baz=232,slow=7.3,SNR=8.2						
	comp=Z,2.0nm,0.6s						
BIOA	Bad Ischl, Aus	34.28	312	*e*pP	P	18 49 43.7	+2.0
	comp=Z,6.3nm,1.2s						
KBA	Koelnbreinsper	34.29	311	*e*pP	P	18 49 44.4	+2.4
	comp=Z,6.1nm,0.9s						
GERES	GERESS Array B	34.62	314	P	P	18 49 43.9	-0.8
	comp=Z,0.5nm,0.6s,baz=101,slow=6.9,SNR=4.6						
	comp=Z,0.5nm,0.6s						
ABTA	Abfaltersbach	34.75	310	*e*pP	P	18 49 47.8	+2.0
	comp=Z,4.0nm,0.9s						
KHC	Kasperske Hory	34.79	315	*e*P	P	18 49 46.9	+0.8
WTTA	Wattenberg	35.46	311	*e*pP	P	18 49 52.5	+0.5
	comp=Z,11nm,1.1s						
WATA	Walderalm	35.52	311	*e*pP	P	18 49 53.7	+1.2
	comp=Z,8.5nm,0.9s						
SQTA	Sankt Quirin	35.73	311	*e*pP	P	18 49 55.4	+1.1
	comp=Z,3.1nm,0.4s						
MOTA	Moosalm	35.83	311	*e*pP	P	18 49 55.7	+0.5
	comp=Z,8.1nm,1.0s						
CLL	Collm	35.92	318	*e*P	P	18 49 55.0	-0.7
	comp=Z,5.0nm,1.1s						
FETA	Feichten	36.00	310	*e*P	P	18 49 55.7	-1.0
	comp=Z,5.2nm,0.8s						
FINES	FINESS Array B	36.04	339	P	P	18 49 55.8	-0.8
	comp=Z,3.4nm,1.1s,baz=193,slow=15,SNR=3.3						
	comp=Z,3.4nm,1.1s						
DAVA	Damuels	36.62	311	*e*pP	P	18 50 02.3	+0.3
	comp=Z,12nm,0.8s						
NOA	NORSAR Array B	41.22	331	P	P	18 50 39.3	-0.8
	comp=Z,1.5nm,1.1s,baz=128,slow=8.8,SNR=1.7						
	comp=Z,1.5nm,1.1s						
ARCES	ARCESS Array B	42.69	347	P	P	18 50 52.8	+0.8
	comp=Z,3.5nm,0.9s,baz=134,slow=7.7,SNR=4.1						
	comp=Z,3.5nm,0.9s						
CMAR	Chiang Mai Arr	44.39	93	P	P	18 51 06.4	+0.1
	comp=Z,2.3nm,0.3s,baz=299,slow=10,SNR=3.0						
	comp=Z,2.3nm,0.3s						
TORD	Torodi Ar. Bea	48.88	261	P	P	18 51 41.3	-0.2
	comp=Z,0.9nm,0.5s,baz=67,slow=6.4,SNR=7.7						
	comp=Z,0.9nm,0.5s						
KSRS	Korea Array	62.54	61	P	P	18 53 18.3	-1.1
	comp=Z,0.7nm,0.6s,baz=279,slow=7.4,SNR=2.5						
	comp=Z,0.7nm,0.6s						

*SOME **16** 18:45:40.9, 46°.47N×85°.83E, h0^{km}*

*NNC **16** 18:45:42.4±2.5, 46°.31N×85°.79E, h4^{km}±11^{km}, mb2.9, mpv2.5, Error ellipse: s-maj=19.5km s-min=16.8km az=28.0*

ISC 16 18:45:39.8±6.1**, 46°.2N**±0°.1×**86°.0E**±0°.4**, h10**^{km}**, n7, σ1^{s}07**/6**, 5C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZSN	Zaisan	1.50	330	*e*P	Pg	18 46 07.8	-0.9
	4.3nm,0.3s						
ZSN				*e*S	Sg	18 46 28.2	-0.1
	19nm,0.2s						
MK31	Makanchi Array	2.63	285	Pn	Pn	18 46 23.2	+0.9
	baz=331,slow=45,SNR=46						
MK31				⇑Pg	Pb	18 46 26.9	-0.2
	1.0nm,0.3s,baz=104,slow=16,SNR=7.1						
MK31				⇑Lg	Lg	18 47 00.9	
	3.0nm,0.2s,baz=153,slow=6.0,SNR=15						
MAKZ	Makanchi	2.85	285	⇓Pg	Pb	18 46 31.6	+0.9
	0.8nm,0.3s						
MAKZ				⇑Lg	Lg	18 47 07.5	
	8.1nm,0.5s						
DJR	Jarkent	4.74	250	*e*Pg	Pg	18 47 09.6	-1.0
	0.3nm,0.4s						
DJR				*e*Lg	Lg	18 48 13.1	
	2.5nm,0.4s						
PDGK	Podgornoye	5.42	241	⇓Lg	Lg	18 48 32.8	
	3.6nm,0.9s						
KURBB	Kurchatov Arra	6.68	315	⇑Lg	Lg	18 49 06.8	
	8.6nm,0.7s						
KURK	Kurchatov	6.69	316	⇑Lg	Lg	18 49 06.9	
	3.1nm,0.6s						

*VAO **16** 18:50:33.2±1.5, 15°.09S×72°.19W, h126^{km}, mb4.2*

*NEIC **16** 18:50:38.0±1.8, 15°.25S±0°.04×71°.8W±0°.1, h125^{km}±11^{km}, mb4.2/8, ML4.1(GUC), Error ellipse: s-maj=19.1km s-min=5.1km az=78.0*

*GUC **16** 18:50:41.8±0.6, 15°.58S×71°.70W, h181^{km}±9^{km}, ML4.1*

*IDC **16** 18:50:44.1±4.0, 15°.26S×71°.09W, h173^{km}±33^{km}, mb3.2/3, mbtmp3.7/5, Error ellipse: s-maj=46.2km s-min=29.9km az=102.0*

ISC 16 18:50:39.4±0.8**, 15°.33S**±0°.06×**71°.58W**±0°.09**, h150**^{km}**, n62, σ1^{s}79**/73**, mb3.6**/5**, 1C-5D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB18	Visviri	3.02	138		Pn	18 51 29.6	+2.0
AP01	Chacalluta	3.25	159	Pn	Pn	18 51 30.5	+0.6
AP01				Sn	Sn	18 52 08.4	-0.8
AP01	Chacalluta	3.25	159	*e*P	Pn	18 51 30.9	+0.9
AP01				*i* S	Sn	18 52 08.2	-0.9
AP01				IAML		18 52 11.4	
	comp=E,917nm,0.2s						
LPAZ	La Paz	3.45	107	P	Pn	18 51 33.0	-0.1
	comp=E,18nm,0.3s,baz=300,slow=9.1,SNR=92						
LPAZ				S	Sn	18 52 12.4	-2.3
	comp=E,7.6nm,0.7s,baz=20,slow=24,SNR=1.4						
LPAZ	La Paz	3.45	107		Pn	18 51 33.2	0.0
LPAZ	La Paz	3.45	107	*e*P	Pn	18 51 33.0	-0.1
PB12	IPOC Station P	3.48	160		Pn	18 51 33.2	+0.3
PB12				Sn	Sn	18 52 13.1	-1.5
PB12	IPOC Station P	3.48	160	⇓*i*P	Pn	18 51 33.3	+0.3
PB12				*i* S	Sn	18 52 12.5	-2.1
PB16	IPOC Station P	3.59	147		Pn	18 51 36.2	+1.3
PB16	IPOC Station P	3.59	147	*e*P	Pn	18 51 36.5	+1.6
PB16				*i* S	Sn	18 52 18.7	+0.9
MNMC	Minye Minye	4.23	154		Pn	18 51 42.9	-0.1
MNMC	Minye Minye	4.23	154	⇓*i*P	Pn	18 51 43.4	+0.4
PSGC	Pisagua	4.46	162	⇓*i*P	Pn	18 51 45.4	-0.5
PSGC				*i* S	Sn	18 52 33.8	-3.9
PSGCX	Pisagua	4.46	162		Pn	18 51 45.3	-0.6
PSGCX				Sn	Sn	18 52 33.5	-4.2
PB11	IPOC Station P	4.77	158		Pn	18 51 49.6	-0.5
PB11	IPOC Station P	4.77	158	⇑*i*P	Pn	18 51 49.4	-0.6
PB11				*i* S	Sn	18 52 40.5	-4.6
GO01	Chusmiza	4.88	153		Pn	18 51 52.5	+0.8
GO01	Chusmiza	4.88	153	⇓*i*P	Pn	18 51 52.7	+1.0
GO01				*i* S	Sn	18 52 47.0	-1.0
TA02	Huaiquique	5.10	165		Pn	18 51 53.5	-0.8
TA02				Sn	Sn	18 52 48.6	-4.1
PB08	IPOC Station P	5.31	155		Pn	18 51 57.4	+0.1
PB08	IPOC Station P	5.31	155	⇓*i*P	Pn	18 51 57.5	+0.1
PB08				*i* S	Sn	18 52 54.6	-3.6
TA01	Diego Aracena	5.38	166	Pn	Pn	18 51 57.1	-0.7
PB01	IPOC Station P	6.02	161		Pn	18 52 05.3	-1.2
PB02	IPOC Station P	6.17	165		Pn	18 52 07.4	-1.1
PB07	IPOC Station P	6.56	166		Pn	18 52 12.8	-1.0
PB09	IPOC Station P	6.80	161		Pn	18 52 16.5	-0.6
PB03	IPOC Station P	6.90	166		Pn	18 52 17.2	-1.2
PB04	IPOC Station P	7.10	169	Pn	Pn	18 52 19.3	-1.7
ETMB	Extrema	7.58	44		Pn	18 52 24.7	-2.5
ETMB	Extrema	7.58	44	*e*P	Pn	18 52 24.6	-2.7
LVC	Limon Verde	7.67	161		Pn	18 52 28.3	-0.5
LVC	Limon Verde	7.67	161	*e*P	Pn	18 52 28.4	-0.4
PB10	IPOC Station P	8.20	173	Pn	Pn	18 52 30.9	-4.6
GO02	Mina Guanaco	9.96	170	Pn	Pn	18 52 58.5	-0.8
SAML	Samuel	10.37	53		Pn	18 52 59.9	-4.5
AC01	Pan de Azucar	10.80	175	Pn	Pn	18 53 08.8	-1.3
VILB	Vilhena	11.28	79	Pn	Pn	18 53 15.2	-1.3
VILB	Vilhena	11.28	79	*e*P	Pn	18 53 17.2	+0.7
AC02	Maricunga	11.67	169		Pn	18 53 21.7	-0.3
PANT	Pantanal (Braz	14.75	106	*e*P	P	18 54 02.7	-0.3
SALV	Santo Antonio	15.31	94	*e*P	P	18 54 10.3	+1.1
CPUP	Villa Florida	17.22	132	P	Pn	18 54 30.6	-0.4
	comp=E,1.8nm,0.6s,baz=331,slow=13,SNR=2.4						
CPUP	Villa Florida	17.22	132	*e*P	Pn	18 54 32.0	+1.0
MT09	Talagante	18.38	178		Pn	18 54 45.3	+0.5
MT09				IAmb	IAmb	18 55 10.5	
	comp=Z,25nm,1.4s						
MECA	Mercedes	18.60	141	*e*P	Pn	18 54 46.5	-0.9
MCR1	Marechal Candi	18.81	122	*e*P	Pn	18 54 49.2	-0.7
ITTB	Itaituba	19.01	57	*e*P	P	18 54 48.9	-1.1
AZCA	Azaras, Argent	19.23	134	*e*P	Pn	18 54 53.5	-1.2
BO02	Sierra Bellavi	19.39	178	Pn	Pn	18 54 58.0	+1.4
BO02				IAmb	IAmb	18 54 58.5	
	comp=Z,14nm,1.4s						
ITQB	Itaqui	19.83	139	*e*P	Pn	18 54 59.8	-1.9
SNDB	Serra Nova Dou	19.99	83	*e*P	P	18 54 60.0	-0.5
CRSM	Crissiumal (Br	20.29	129	*e*P	P	18 55 04.5	+0.9
BOAV	Boa Vista	20.73	33	P	Pn	18 55 09.4	-3.2
ITAB	Concordia	21.61	126	P	P	18 55 19.4	+1.7
BAUV	El Baul	24.37	8	P	P	18 55 43.8	0.0
PLCA	Paso Flores	25.33	178	P	P	18 55 55.3	+2.9
	comp=Z,1.5nm,0.8s,baz=348,slow=11,SNR=4.5						
	comp=Z,1.5nm,0.8s						
PLCA	Paso Flores	25.33	178	P	P	18 55 56.0	+3.6
BELA	Belgrano 2	65.18	172	P	P	19 01 05.3	+1.3
BELA				IAmb	IAmb	19 01 26.1	
	comp=Z,6.5nm,1.5s						
TORD	Torodi Ar. Bea	77.81	73	P	P	19 02 19.6	-1.2
	comp=Z,0.6nm,0.5s,baz=264,slow=4.0,SNR=4.7						
	comp=Z,0.6nm,0.5s						
VNDA	Vanda	82.45	190	P	P	19 02 46.2	+1.7
VNDA				IAmb	IAmb	19 03 22.8	
	comp=Z,5.6nm,1.4s						
YKA	Yellowknife Ar	84.56	341	P	P	19 02 56.8	+1.5
	comp=Z,0.2nm,0.5s,baz=132,slow=5.2,SNR=2.8						
	comp=Z,0.2nm,0.5s						
SONM	Songino Array	147.54	3	PKPbc	PKPab	19 10 09.0	+0.4
	comp=Z,0.6nm,0.5s,baz=310,slow=1.6,SNR=5.4						

IDC 16 19:00:38.6±1.8**, 7°.35S**×**127°.88E, h0**^{km}**, mb3.6**/1**, mbtmp3.9**/4**, ML3.9**/3**, Error ellipse: s-maj=61.4km s-min=29.7km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	7.27	28	Pn	Pn	19 02 26.5	+0.3
	0.9nm,0.3s,baz=26,slow=5.3,SNR=17						
SIJI				Sn	Sn	19 03 35.4	-14
	2.1nm,0.3s,baz=230,slow=23,SNR=11						
	2.4nm,0.4s						
WRA	Warramunga Arr	14.01	154	Pn	Pn	19 03 57.5	-1.0
	0.6nm,0.3s,baz=334,slow=14,SNR=31						
WRA				Sn	Sn	19 06 18.1	-17
	0.3nm,0.3s,baz=338,slow=22,SNR=2.4						
	0.9nm,0.3s						
ASAR	Alice Springs	17.23	161	P	P	19 04 41.8	-0.8
	0.8nm,0.3s,baz=347,slow=10,SNR=92						
ASAR				S	Sn	19 07 44.0	-9.3
	0.6nm,0.5s,baz=349,slow=26,SNR=4.7						
	4.2nm,0.7s						
MKAR	Makanchi Array	67.38	328	P	P	19 11 35.8	-0.1
	0.3nm,0.5s,baz=126,slow=7.0,SNR=5.9						
	0.3nm,0.5s						

*IDC **16** 19:10:23.2±2.8, 35.°17S×179.°67W, h0^{km}, mb4.1/2, mbtmp4.2/3, ML3.9/1, MS3.9/3, Error ellipse: s-maj=69.3km s-min=43.1km az=132.0*

*WEL **16** 19:10:27.9±1.2, 35°S±23°×17°9W±3°1, h33^{km}, M4.3/13, ML4.5/13, MLv4.3/13, Error ellipse: s-maj=0.0km s-min=0.0km az=126.0, confirmed*

ISC 16 19:10:27.1±2.1**, 35.°3S**±0.°1×**179.°4W**±0.°2**, h41^{km}, n42, σ0.^{s}94**/46**, MS3.7**/3**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	2.90	219	P	Pn	19 11 10.5	-0.3
WMGZ	Waiomatatini S	3.05	215	P	Pn	19 11 13.9	+1.1
PKGZ	Pakihiroa	3.27	218	P	Pn	19 11 16.1	+0.3
PKGZ				S	Sn	19 11 53.7	+0.2
HAZ	Te Kaha	3.33	222	P	Pn	19 11 17.4	+0.8
HAZ				S	Sn	19 11 56.3	+1.5
PUZ	Puketiti	3.33	214	P	Pn	19 11 16.7	+0.1
WIZ	White Island	3.53	231	P	Pn	19 11 23.4	+4.1
RUGZ	Raukumara Rang	3.54	221	P	Pn	19 11 19.8	+0.2
TWGZ	Tauwhareparae	3.54	216	P	Pn	19 11 20.6	+1.0
TWGZ				S	Sn	19 12 01.5	+1.2
CNGZ	Carnagh Statio	3.69	211	P	Pn	19 11 22.1	+0.5
TKGZ	Te Karaka	3.81	215	P	Pn	19 11 23.9	+0.6
TKGZ				S	Sn	19 12 06.2	-0.7
MWZ	Matawai	3.89	219	P	Pn	19 11 24.7	+0.4
MWZ				S	Sn	19 12 08.8	0.0
URZ	Urewera	4.06	223	Pn	Pn	19 11 26.1	-0.5
	7.4nm,0.3s,baz=351,slow=2.7,SNR=32						
URZ				Sn	Sn	19 12 11.4	-1.4
	10nm,0.3s,baz=246,slow=19,SNR=8.3						
	22nm,0.3s						
URZ	Urewera	4.06	223	P	Pn	19 11 26.2	-0.4
RAGZ	Rawiri	4.07	218	P	Pn	19 11 26.9	0.0
RAGZ				S	Sn	19 12 12.4	-0.9
RIGZ	Rimuhau	4.07	213	P	Pn	19 11 27.0	+0.2
RIGZ				S	Sn	19 12 13.1	-0.1
RTZ	Ruatahuna	4.38	221	P	Pn	19 11 30.7	-0.5
OMRZ	Omania	4.39	230	P	Pn	19 11 36.2	+4.9
MUGZ	Murupara	4.40	223	P	Pn	19 11 30.7	-0.6
RAHZ	Arahi	4.56	217	P	Pn	19 11 34.9	+1.4
MTHZ	Maungataniwha	4.63	220	P	Pn	19 11 34.3	-0.3
BKZ	Black Stump Fm	5.05	219	P	Pn	19 11 39.5	-0.8
MCHZ	McNeill Hill	5.16	216	P	Pn	19 11 41.7	-0.1
RATZ	Rangitukua	5.24	226	P	Pn	19 11 44.3	+1.4
RITZ	Rihia Road	5.26	225	P	Pn	19 11 45.6	+2.4
KWHZ	Kaweka Forest	5.28	218	P	Pn	19 11 43.6	+0.2
KAHZ	Kahuranaki	5.36	213	P	Pn	19 11 43.2	-1.3
TMVZ	Te Maari	5.44	225	P	Pn	19 11 45.2	-0.5
NTVZ	North Tongarir	5.45	225	P	Pn	19 11 45.3	-0.5
ETVZ	East Tongariro	5.45	224	P	Pn	19 11 43.3	-2.6
NNVZ	North Ngauruho	5.51	225	P	Pn	19 11 47.1	+0.4
WTVZ	West Tongariro	5.51	225	P	Pn	19 11 47.1	+0.4
BHHZ	Black Hill Sta	5.51	220	P	Pn	19 11 45.8	-0.9
SNVZ	South Ngauruho	5.53	224	P	Pn	19 11 46.9	-0.1
NGZ	Ngauruhoe	5.54	225	P	Pn	19 11 49.3	+2.1
FWVZ	Far West T-bar	5.62	224	P	Pn	19 11 48.2	-0.1
WNVZ	Wahianoa	5.65	224	P	Pn	19 11 47.8	-0.8
TRVZ	Turoa	5.66	224	P	Pn	19 11 49.0	+0.2
PMG	Port Moresby	39.95	302	LR	LR	19 31 44.7	
	comp=Z,86nm,18.2s,baz=26,slow=32						
ASAR	Alice Springs	41.94	273	P	P	19 18 13.8	-0.2
	2.3nm,0.8s,baz=117,slow=7.6,SNR=20						
ASAR				LR	LR	19 35 36.7	
	comp=Z,102nm,19.4s,baz=151,slow=36						
	2.3nm,0.8s						
WRA	Warramunga Arr	43.38	278	P	P	19 18 25.3	-0.3
	1.7nm,0.5s,baz=119,slow=7.7,SNR=28						
	1.7nm,0.5s						
LVC	Limon Verde	92.53	120	LR	LR	19 57 30.3	
	comp=Z,171nm,21.8s,baz=200,slow=30						
FINES	FINESS Array B	149.27	336	PKPbc	PKiKP	19 30 11.8	+0.3
	5.8nm,0.8s,baz=70,slow=4.6,SNR=13						

IDC 16 19:33:37.5±2.9**, 11.°59S**×**115.°37E, h0^{km}, mb3.0**/3**, mbtmp3.1**/3**, Error ellipse: s-maj=138.3km s-min=30.1km az=45.0, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	20.04	117	P	P	19 38 12.8	+0.5
	0.5nm,0.5s,baz=291,slow=11,SNR=7.9						
	0.5nm,0.5s						
ASAR	Alice Springs	21.33	127	P	P	19 38 26.0	-0.3
	0.2nm,0.5s,baz=305,slow=10,SNR=5.6						
	0.2nm,0.5s						
MKAR	Makanchi Array	65.22	336	P	P	19 44 20.8	0.0
	0.2nm,0.8s,baz=142,slow=7.3,SNR=1.6						
	0.2nm,0.8s						

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*WEL **16** 19:37:00, 35.°55S×179.°46W, h24^{km}, ML4.8, Mw4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16} Nm; M_{rr}-0.23; $M_{\theta\theta}$1.20; $M_{\phi\phi}$-0.97; $M_{r\theta}$-0.14; $M_{\theta\phi}$0.79; $M_{\phi r}$0.44; Fault plane solution: $M_0$1.43000×10^{16} NP1: ϕ_s209.00000°, δ75.00000°, λ-164.00000°. NP2: ϕ_s115.00000°, δ75.00000°, λ-16.00000°. Principal axes: T 1455.1700, Plg0.0000°, Azm342.0000°; N -1403.2300, Plg69.0000°, Azm252.0000°; P -51.9400, Plg21.0000°, Azm72.0000°;*

*WEL **16** 19:37:32.8±1.1, 36°S±10°×17°9W±1°2, h33^{km}, M4.8/26, mB5.1/3, ML5.0/25, MLv4.9/26, Mw(mB)4.4/3 Error ellipse: s-maj=0.0km s-min=0.0km az=122.5, confirmed*

*NEIC **16** 19:37:32.6±2.0, 35.°4S±0.°1×179.°6W±0.°1, h35^{km}±1^{km}, mb5.0/24, Error ellipse: s-maj=20.8km s-min=14.5km az=129.0*

*IDC **16** 19:37:34.9±1.5, 35.°43S×179.°75W, h58^{km}±11^{km}, mb4.2/11, mbtmp4.4/15, MS4.0/21, Error ellipse: s-maj=17.7km s-min=13.4km az=152.0*

ISC 16 19:37:30.5±0.6**, 35.°39S**±0.°06×**179.°53W**±0.°06**, h27^{km}**±3^{km}**, h28^{km}:pP-P, n195, σ1.^{s}70**/185**, mb4.9**/31**, MS4.0**/20**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	2.79	218		Pn	19 38 15.0	+1.7
MXZ	Matakaoa Point	2.79	218	P	Pn	19 38 14.7	+1.4
WMGZ	Waiomatatini S	2.94	214	P	Pn	19 38 18.1	+2.7
PKGZ	Pakihiroa	3.15	217	P	Pn	19 38 20.0	+1.5
PKGZ				S	Sn	19 38 58.0	+2.8
HAZ	Te Kaha	3.21	222	P	Pn	19 38 21.1	+2.0
PUZ	Puketiti	3.22	213	P	Pn	19 38 20.8	+1.5
WIZ	White Island	3.40	230	P	Pb	19 38 27.5	-2.6
RUGZ	Raukumara Rang	3.42	220	P	Pn	19 38 23.9	+1.7
TWGZ	Tauwhareparae	3.43	215	P	Pn	19 38 25.0	+2.7
CNGZ	Carnagh Statio	3.59	210	P	Pn	19 38 26.6	+2.3
MWZ	Matawai	3.77	218	P	Pn	19 38 28.7	+1.8
MYRZ	Mayor Island	3.91	240	P	Pn	19 38 31.6	+2.8
URZ	Urewera	3.94	222	P	Pn	19 38 30.2	+1.1
	51nm,0.7s,baz=352,slow=2.5,SNR=27						
URZ				S	Sn	19 39 14.9	+0.4
	291nm,0.8s,baz=53,slow=14,SNR=2.8						
URZ	Urewera	3.94	222	P	Pn	19 38 30.7	+1.5
RAGZ	Rawiri	3.96	217	P	Pn	19 38 31.3	+1.9
RAGZ				S	Sn	19 39 17.3	+2.3
RIGZ	Rimuhau	3.96	212	P	Pn	19 38 31.3	+1.7
RIGZ				S	Sn	19 39 18.1	+3.0
MKRZ	Makatiti	4.23	228	P	Pb	19 38 41.6	-2.7
KNZ	Kokohu	4.26	211	P	Pn	19 38 35.0	+1.4
RTZ	Ruatahuna	4.27	220	Pn	Pn	19 38 34.4	+0.7
RTZ	Ruatahuna	4.27	220	P	Pn	19 38 35.1	+1.3
RTZ				S	Sn	19 39 25.6	+2.9
OMRZ	Omania	4.27	229	P	Pn	19 38 35.3	+1.6
TARZ	Mount Tarawera	4.27	227	P	Pn	19 38 37.7	+3.9
MUGZ	Murupara	4.28	223	P	Pn	19 38 35.2	+1.4
MUGZ				S	Sn	19 39 24.3	+1.4
MHGZ	Mahia Peninsul	4.28	208	P	Pn	19 38 35.3	+1.4
KARZ	Kaharoa	4.30	231	P	Pn	19 38 38.2	+4.0
HLRZ	Highlands Stat	4.37	228	P	Pn	19 38 40.5	+5.3
KMRZ	Kaimai	4.40	235	P	Pn	19 38 37.5	+2.1
RAHZ	Arahi	4.44	217	P	Pn	19 38 38.7	+2.6
HSRZ	Hossack Road	4.48	228	P	Pn	19 38 42.7	+6.1
WHHZ	Waihua	4.50	214	P	Pn	19 38 37.1	+0.2
PRRZ	Plateau Road	4.51	225	P	Pn	19 38 39.0	+2.0
MTHZ	Maungataniwha	4.52	219	P	Pn	19 38 39.0	+1.8
TOZ	Tahuroa Road	4.64	238	Pn	Pn	19 38 40.0	+1.2
TOZ	Tahuroa Road	4.64	238	P	Pn	19 38 41.1	+2.3
NMHZ	Naumai	4.72	217	P	Pn	19 38 42.6	+2.6
MRHZ	Matea Rd	4.73	222	P	Pn	19 38 41.6	+1.5
ARHZ	Aropaoanui	4.76	215	P	Pn	19 38 42.2	+1.8
TLZ	Tolley Road	4.93	232	P	Pn	19 38 46.6	+3.7
BKZ	Black Stump Fm	4.93	219	Pn	Pn	19 38 43.4	+0.5
BKZ	Black Stump Fm	4.93	219	P	Pn	19 38 43.8	+1.0
AWAZ	Awhitu Peninsu	5.00	249	P	Pn	19 38 50.5	+6.8
WTAZ	Waiatarua	5.02	250	P	Pn	19 38 51.1	+7.1
MCHZ	McNeill Hill	5.04	215	P	Pn	19 38 45.9	+1.5
CKHZ	Cape Kidnapper	5.05	211	P	Pn	19 38 44.0	-0.4
RATZ	Rangitukua	5.12	226	P	Pn	19 38 47.0	+1.5
RITZ	Rihia Road	5.14	224	P	Pn	19 38 47.5	+1.8
KWHZ	Kaweka Forest	5.16	217	P	Pn	19 38 48.4	+2.3
KATZ	Kakaramea	5.23	225	P	Pn	19 38 49.5	+2.4
KAHZ	Kahuranaki	5.25	212	P	Pn	19 38 48.3	+1.1
TMVZ	Te Maari	5.32	224	P	Pn	19 38 49.4	+1.1
NTVZ	North Tongarir	5.33	225	P	Pn	19 38 49.5	+1.1
ETVZ	East Tongariro	5.33	224	P	Pn	19 38 49.7	+1.3
KRVZ	Karewarewa	5.34	225	P	Pn	19 38 50.4	+1.8
OTVZ	Oturere	5.38	224	P	Pn	19 38 50.2	+1.1
NNVZ	North Ngauruho	5.38	225	P	Pn	19 38 51.1	+1.9
WTVZ	West Tongariro	5.39	225	P	Pn	19 38 51.8	+2.5
BHHZ	Black Hill Sta	5.39	219	P	Pn	19 38 50.4	+1.2
SNVZ	South Ngauruho	5.41	224	P	Pn	19 38 50.8	+1.3
NGZ	Ngauruhoe	5.42	224	P	Pn	19 38 51.4	+1.7
TWVZ	Taurewa	5.45	226	P	Pn	19 38 53.2	+3.2
PXZ	Pawanui	5.45	211	P	Pn	19 38 55.8	+5.8
TUVZ	Tukino	5.46	223	P	Pn	19 38 51.6	+1.4
HIZ	Hauiti	5.48	234		Pn	19 38 51.7	+1.4
HIZ	Hauiti	5.48	234	P	Pn	19 38 52.5	+2.2
MOVZ	Moawhango	5.50	222	P	Pn	19 38 51.8	+1.1
FWVZ	Far West T-bar	5.50	224	P	Pn	19 38 52.4	+1.5
DRZ	Dome Shelter	5.51	224	P	Pn	19 38 55.3	+4.2
WNVZ	Wahianoa	5.53	223	P	Pn	19 38 52.0	+0.8
TRVZ	Turoa	5.54	224	P	Pn	19 38 54.0	+2.6
PKVZ	Pokaka	5.64	225	P	Pn	19 38 57.0	+4.3
PNHZ	Pukenui	5.65	216	P	Pn	19 38 53.3	+0.5
VRZ	Vera Road	5.89	229	P	Pn	19 39 01.4	+5.4
BFZ	Birch Farm	6.25	211		Pn	19 39 00.5	-0.5
BFZ	Birch Farm	6.25	211	P	Pn	19 38 59.6	-1.3
PKE	Pukeiti	6.42	232	P	Pn	19 39 09.8	+6.6
KHEZ	Kahui Hut	6.46	231	P	Pn	19 39 10.9	+7.1
MRZ	Mangatainoka R	6.53	215	Pn	Pn	19 39 04.2	-0.5
MRZ	Mangatainoka R	6.53	215	P	Pn	19 39 04.3	-0.5
PLWZ	Palliser	7.41	212	Pn	Pn	19 39 15.6	-1.3
DUWZ	D’Urville Isla	7.48	222	P	Pn	19 39 19.5	+1.7
TCW	Tory Channel	7.59	218	Pn	Pn	19 39 17.9	-1.4
NNZ	Nelson	8.06	222	Pn	Pn	19 39 25.2	-0.6
MRNZ	Matariki Terra	8.53	223	Pn	Pn	19 39 31.6	-0.6
MRNZ	Matariki Terra	8.53	223	P	Pn	19 39 31.9	-0.3
CTZ	Chatham Island	8.64	166	Pn	Pn	19 39 33.2	-0.4
CTZ	Chatham Island	8.64	166	P	Pn	19 39 34.8	+1.2
KHZ	Kahutara	8.86	216	Pn	Pn	19 39 34.8	-1.8
KHZ	Kahutara	8.86	216	P	Pn	19 39 35.3	-1.4
LTZ	Lake Taylor	9.75	218	Pn	Pn	19 39 49.2	+0.2
OXZ	Oxford	10.27	217	Pn	Pn	19 39 55.8	-0.3
RPZ	Rata Peaks	11.04	218	P	Pn	19 40 07.5	+0.9
	2.3nm,0.4s,baz=12,slow=17,SNR=1.9						
RPZ				S	Sn	19 41 57.4	-12
	11nm,0.6s,baz=222,slow=19,SNR=7.0						
RPZ	Rata Peaks	11.04	218	Pn	Pn	19 40 07.4	+0.8
PYZ	Puysegur Point	14.98	220	P	Pn	19 41 02.2	+1.9
MSVF	Nonsavu	17.71	352	P	P	19 41 36.3	+0.3
	6.1nm,0.9s,baz=202,slow=13,SNR=1.8						
MSVF				LR	LR	19 46 41.8	
	comp=Z,367nm,21.9s,baz=170,slow=31						
DZM	Mont Dzumac	18.07	314	*e*P	P	19 41 42.3	+2.4
	162nm,32.6s						
DZM				*e*LR	LR	19 45 54.7	
	comp=Z,1μm,23.6s						
DZM	Mont Dzumac	18.07	314	P	P	19 41 41.7	+1.8
	5.1nm,0.8s,baz=215,slow=16,SNR=1.8						
DZM				LR	LR	19 47 17.7	
	comp=Z,1μm,18.9s,baz=134,slow=32						
DZM	Mont Dzumac	18.07	314		P	19 41 41.9	+2.0
KOUNC	Koumac, New Ca	20.52	312	P	P	19 42 07.0	+0.3
KOUNC				IAmb	IAmb	19 42 23.9	
	comp=Z,35nm,1.1s						
RAR	Rarotonga	22.34	56	LR	LR	19 49 10.4	
	comp=Z,166nm,20.5s,baz=224,slow=31						
EIDS	Eidsvold	27.16	283	P	P	19 43 12.0	+0.3
HNR	Honiara	31.91	319	LR	LR	19 55 39.0	
	comp=Z,2μm,18.1s,baz=126,slow=34						
PPT2	Papeete2	31.96	64	*e*LR	LR	19 52 22.6	
	comp=Z,409nm,24.2s						
PPT	Papeete	31.97	64	LR	LR	19 53 41.1	
	comp=Z,168nm,21.8s,baz=202,slow=30						
STKA	Stephens Creek	32.42	265	P	P	19 43 59.0	+0.8
	comp=Z,6.0nm,0.9s,baz=95,slow=9.9,SNR=7.3						
STKA				LR	LR	19 56 22.4	
	comp=Z,291nm,19.2s,baz=73,slow=35						
	comp=Z,6.0nm,0.9s						
STKA	Stephens Creek	32.42	265	P	P	19 43 58.4	+0.2
CTA	Charters Tower	33.71	288	P	P	19 44 10.3	+0.8
	comp=Z,16nm,0.9s,baz=114,slow=9.1,SNR=23						
CTA				LR	LR	19 57 31.5	
	comp=Z,172nm,18.7s,baz=130,slow=36						
	comp=Z,16nm,0.9s						
CTAO	Charters Tower	33.71	288	P	P	19 44 10.1	+0.5
CTAO				IAmb	IAmb	19 44 11.9	
	comp=Z,23nm,0.9s						
CTAO	Charters Tower	33.71	288	P	P	19 44 10.7	+1.2
CTAO				pP	pP	19 44 16.6	0.0
CTAO				sP	sP	19 44 18.6	-0.7
BBOO	Buckleboo	36.64	261	P	P	19 44 34.6	-0.2
DRV	Dumont d’Urvil	39.07	204	P	P	19 44 57.4	+2.6
COEN	Coen	39.72	293	P	P	19 45 00.9	+0.1
COEN				IAmb	IAmb	19 45 02.4	
	comp=Z,17nm,0.8s						
PMG	Port Moresby	39.88	302	P	P	19 45 02.6	+0.5
	comp=Z,11nm,0.8s,baz=71,slow=21,SNR=2.5						
PMG				LR	LR	20 00 12.8	
	comp=Z,311nm,18.1s,baz=152,slow=34						
	comp=Z,11nm,0.8s						
AS31	Alice Springs	41.83	273	P	P	19 45 17.8	-0.4
ASAR	Alice Springs	41.83	273	P	P	19 45 17.8	-0.4
	comp=Z,9.5nm,0.7s,baz=118,slow=7.5,SNR=106						
ASAR				ScP	ScP	19 50 58.1	-4.2
	comp=Z,0.8nm,0.8s,baz=118,slow=4.2,SNR=5.2						
ASAR				S	S	19 51 31.1	-3.3
	comp=Z,0.8nm,0.9s,baz=119,slow=13,SNR=5.7						
ASAR				LR	LR	20 02 57.4	
	comp=Z,666nm,18.2s,baz=120,slow=37						
	comp=Z,9.5nm,0.7s						
ASAR	Alice Springs	41.83	273	P	P	19 45 16.8	-1.4
VNDA	Vanda	43.02	186	LR	LR	19 58 44.1	
	comp=Z,197nm,19.6s,baz=298,slow=30						
WB2	Warramunga Arr	43.26	278	P	P	19 45 28.8	-1.0
WB2				IAmb	IAmb	19 45 30.5	
	comp=Z,23nm,1.1s						
WRAB	Tennant Creek	43.27	278	P	P	19 45 28.9	-0.9
WRAB				IAmb	IAmb	19 45 30.4	
	comp=Z,27nm,1.2s						
WRAB	Tennant Creek	43.27	278	P	P	19 45 29.3	-0.6
WRAB				pP	pP	19 45 34.8	-2.2
WRAB				sP	sP	19 45 37.0	-2.8
WRA	Warramunga Arr	43.27	278	P	P	19 45 29.3	-0.6
	comp=Z,7.2nm,0.5s,baz=119,slow=7.6,SNR=99						
WRA				PcP	PcP	19 47 17.6	-1.1
	comp=Z,1.2nm,0.7s,baz=122,slow=3.5,SNR=3.3						
WRA				S	S	19 51 50.2	-5.4
	comp=Z,1.3nm,1.0s,baz=120,slow=13,SNR=6.7						
WRA				LR	LR	20 03 01.5	
	comp=Z,291nm,19.1s,baz=138,slow=35						
	comp=Z,7.2nm,0.5s						
WRA	Warramunga Arr	43.27	278	P	P	19 45 28.9	-1.0
WB0	Warramunga Arr	43.31	279	P	P	19 45 29.6	-0.7
WB0				IAmb	IAmb	19 45 30.8	
	comp=Z,26nm,1.2s						
CCD	Concordia, Ant	47.82	197	P	P	19 46 12.2	+6.5
CCD				sP	pwP	19 46 19.9	+1.4
GENI	Genyem	49.58	302	P	P	19 46 20.1	+0.7
	comp=Z,20nm,1.1s						
KNRA	Kununurra	50.02	279	P	P	19 46 22.3	-0.5
CASY	Casey	50.16	210	P	P	19 46 24.1	+0.9
CASY				IAmb	IAmb	19 46 26.2	
	comp=Z,16nm,0.9s						
CASY	Casey	50.16	210	P	P	19 46 25.3	+2.0
CASY				sP	pP	19 46 32.6	+2.2
FITZ	Fitzroy Crossi	51.27	275	P	P	19 46 32.0	-0.2
NWAO	Narrogin (SRO)	51.59	253	P	P	19 46 33.6	-0.8
MORW	Morawa	54.03	257	P	P	19 46 51.8	-0.8
PSA00	Pilbara Seismi	54.28	267	P	P	19 46 53.5	-1.0
MBWA	Marble Bar	54.58	268	P	P	19 46 55.3	-1.3
QSPA	South Pole Qui	54.74	180	P	P	19 46 56.7	-0.6
	comp=Z,1.1nm,0.8s,baz=332,slow=18,SNR=1.3						
QSPA				LR	LR	20 07 30.6	
	comp=Z,132nm,18.8s,baz=347,slow=33						
	comp=Z,1.1nm,0.8s						
FAKI	Fak Fak	55.05	295	P	P	19 46 57.9	-2.2
FAKI				IAmb	IAmb	19 48 22.3	
	comp=Z,18nm,1.0s						
SOEI	Soe	56.97	282	P	P	19 47 14.3	+0.3
SOEI				IAmb	IAmb	19 47 34.4	
	comp=Z,22nm,1.0s						
SIJI	Sorong	57.15	296	P	P	19 47 13.3	-1.8
	comp=Z,3.9nm,0.6s,baz=120,slow=2.6,SNR=7.3						
SIJI				LR	LR	20 11 32.7	
	comp=Z,180nm,19.0s,baz=110,slow=36						
	comp=Z,3.9nm,0.6s						
MMRI	Maumere	59.25	282	P	P	19 47 28.9	-0.9
MMRI				IAmb	IAmb	19 47 30.2	
	comp=Z,24nm,1.0s						
MMRI	Maumere	59.25	282	P	P	19 47 29.4	-0.4
	comp=Z,29nm,1.2s						
RPN	Rapa Nui	59.45	103	LR	LR	20 08 20.6	
	comp=Z,127nm,19.3s,baz=226,slow=31						
SANI	Sanana	60.34	291	P	P	19 47 36.4	-0.9
	comp=Z,18nm,1.2s						
PLAI	Plampang	62.72	279	P	P	19 47 53.0	-0.4
	comp=Z,14nm,0.9s						
KAPI	Kappang	63.38	284	LR	LR	20 16 29.6	
	comp=Z,142nm,19.0s,baz=122,slow=37						
SPSI	Sidrap Palu	63.99	285	P	P	19 48 01.3	-0.5
	comp=Z,10nm,1.0s						
DAV	Davao City (W)	66.68	298	LR	LR	20 18 51.1	
	comp=Z,61nm,18.1s,baz=13,slow=37						
MDSI	Maura Dua	76.24	274	P	P	19 49 14.8	-2.2
	comp=Z,10nm,1.7s						
H03N3	Juan Fernandez	79.01	123	T	T	21 18 06.6	
	baz=237,slow=72,SNR=7.3						
H03N2	Juan Fernandez	79.01	123	T	T	21 18 05.2	
	baz=237,slow=72						
H03N1	Juan Fernandez	79.03	123	T	T	21 18 07.8	
	baz=237,slow=72						
JOW	Kunigami	79.12	314	LR	LR	20 22 02.3	
	comp=Z,52nm,21.3s,baz=78,slow=34						
PLCA	Paso Flores	80.05	133	P	P	19 49 37.6	-0.2
PLCA				IAmb	IAmb	19 50 07.1	
	comp=Z,21nm,1.8s						
GSI	Gunungsitoli	84.95	275	P	P	19 50 02.1	-1.6
GSI				IAmb	IAmb	19 50 06.4	
	comp=Z,19nm,0.9s						
GSI	Gunungsitoli	84.95	275	P	P	19 50 02.3	-1.3
ASAJ	Asahikawa	86.29	334	LR	LR	20 21 45.0	
	comp=Z,85nm,21.6s,baz=134,slow=31						
KSRS	Korea Array	87.35	321	P	P	19 50 15.2	+0.4
	comp=Z,1.0nm,0.8s,baz=151,slow=6.4,SNR=5.2						
KSRS				LR	LR	20 28 44.1	
	comp=Z,14nm,18.1s,baz=45,slow=35						
	comp=Z,1.0nm,0.8s						
NJ2	Nanjing	88.55	312	*e*P	P	19 50 23.5	+2.9
NJ2				pP	sP	19 50 33.3	+2.7
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PETK	Petropavlovsk-	90.33	347	P	P	19 50 28.9	+0.5
	comp=Z,7.6nm,0.8s,baz=168,slow=7.4,SNR=12						
	comp=Z,7.6nm,0.8s						
NVAR	Mina Array Bea	92.75	44	P	P	19 50 42.4	+2.0
	comp=Z,0.3nm,0.7s,baz=224,slow=3.8,SNR=1.7						
	comp=Z,0.3nm,0.7s						
CN2	Changchun	93.35	324	*e*P	P	19 50 45.0	+2.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CMAR	Chiang Mai Arr	93.85	290	P	P	19 50 45.7	+0.1
	comp=Z,0.5nm,0.8s,baz=147,slow=2.2,SNR=4.3						
CMAR				LR	LR	20 35 27.9	
	comp=Z,32nm,20.2s,baz=175,slow=37						
	comp=Z,0.5nm,0.8s						
PZH	PanZhiHua	96.48	298	P	P	19 50 59.8	+2.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
CD2	Chengdu	97.66	302	*e*P	Pdif	19 51 03.8	+0.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TNCH	TengChong	97.98	295	*e*P	P	19 51 03.0	-1.5
TNCH				pmax	pmax		
	comp=Z,140nm,6.9s						
HHC	Hu-ho-hao-te	98.78	314	*e*P	Pdif	19 51 10.6	+3.0
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,5.5s						
JTS	Las Juntas de	99.58	84	LR	LR	20 28 26.9	
	comp=Z,96nm,19.7s,baz=26,slow=31						
WMQ	Urumqi	115.24	307	*e*P	PKiKP	19 56 10.0	+0.8
MKAR	Makanchi Array	119.92	308	PKP	PKPdf	19 56 17.4	-0.6
	comp=Z,0.8nm,0.9s,baz=77,slow=5.5,SNR=3.9						
MKAR				SKP		19 59 48.8	
	comp=Z,0.8nm,1.0s,baz=120,slow=2.3,SNR=4.2						
ZALV	Zalesovo Beam	120.84	317	PKP	PKPdf	19 56 17.5	-2.0
	comp=Z,0.3nm,0.3s,baz=184,slow=2.3,SNR=1.9						
KURK	Kurchatov	123.48	312		PKPdf	19 56 24.6	-0.1
KURBB	Kurchatov Arra	123.51	312	PKP	PKPdf	19 56 23.6	-1.1
	comp=Z,2.0nm,0.9s,baz=113,slow=2.0,SNR=15						
KURBB				SKP		19 59 55.4	
	comp=Z,0.9nm,1.0s,baz=134,slow=1.4,SNR=4.9						
CHGR	Chuyangaron	126.24	295		PKiKP	19 56 31.2	+0.2
BVAR	Borovoye Array	128.97	313	PKP	PKPdf	19 56 35.3	+0.2
	comp=Z,1.7nm,0.9s,baz=67,slow=3.9,SNR=6.3						
ARU	Arti	136.00	317	PKP	PKPdf	19 56 46.3	-1.9
	comp=Z,1.0nm,0.3s,baz=281,slow=22,SNR=2.0						
BELG	Belogornoye	142.76	312	PKhKP	PKPpre	19 56 56.4	
	comp=Z,4.2nm,0.6s,baz=315,slow=1.4,SNR=2.6						
ARCES	ARCESS Array B	143.13	346	PKP	PKPbc	19 56 58.6	+0.8
	comp=Z,7.3nm,0.9s,baz=349,slow=5.1,SNR=4.5						
KBZ	Khabaz	146.55	297	PKPbc	PKPab	19 57 09.8	-0.3
	comp=Z,1.1nm,0.7s,baz=126,slow=13,SNR=1.7						
KIV	Kislovodsk	146.70	298	PKPdf	PKPdf	19 57 08.3	+0.4
GURO	Guroymak-BITLI	146.85	288	PKPdf	PKPdf	19 57 08.0	-0.4
FIA1	FINESS Array S	149.28	336		PKiKP	19 57 16.3	-0.6
FINES	FINESS Array B	149.28	336	PKPbc	PKPbc	19 57 16.3	+0.5
	comp=Z,22nm,0.7s,baz=93,slow=4.2,SNR=49						
FINES	FINESS Array B	149.28	336		PKPbc	19 57 16.2	+0.4
MEF	Metsahovi	150.74	336	*e*P	PKPbc	19 57 19.6	+0.2
DBIC	Dimbokro	151.00	169	PKPbc	PKPbc	19 57 21.6	+0.1
	comp=Z,3.0nm,1.0s,baz=57,slow=4.8,SNR=1.8						
VSU	Vasula	151.12	331	*e*P	PKiKP	19 57 21.3	+0.5
BNN	Bunyan	151.69	288		PKPbc	19 57 22.3	-0.2
MTSE	Matsula	152.04	334	*e*P	PKiKP	19 57 23.2	+0.5
NACGM	Naroch	153.34	325	*e*PKP	PKiKP	19 57 26.9	+1.3
	comp=Z,25nm,1.2s,baz=55						
NB2	NORSAR Subarra	153.42	348	PKP	PKiKP	19 57 26.4	+0.8
	comp=Z,1.5nm,0.7s,baz=22,slow=3.5						
NOA	NORSAR Array B	153.42	348	PKPbc	PKiKP	19 57 25.8	+0.1
	comp=Z,1.0nm,0.7s,baz=8.1,slow=3.1,SNR=4.2						
BR131	Keskin Array S	153.44	289		PKPbc	19 57 25.7	-0.7
BRTR	Keskin Array B	153.44	289	PKPbc	PKPbc	19 57 26.2	-0.2
	comp=Z,1.7nm,0.8s,baz=154,slow=4.4,SNR=11						
PABE	Paberze	154.21	329	*e*P	PKiKP	19 57 27.3	0.0
AKASG	Malin Array Be	154.22	315	PKPbc	PKPbc	19 57 26.6	-0.9
	comp=Z,1.0nm,0.6s,baz=36,slow=2.2,SNR=6.3						
AKASG	Malin Array Be	154.22	315	PKPdf	PKPdf	19 57 19.6	+0.3
AKASG					PKPbc	19 57 27.1	-0.3
TORD	Torodi Ar. Bea	157.83	183	PKP	PKPdf	19 57 26.7	+1.6
	comp=Z,0.1nm,0.5s,baz=252,slow=0.5,SNR=2.7						
FDMO	Fiordimonte	167.60	312		PKPdf	19 57 32.2	-1.7

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*NEIC **16** 19:39:15.6±2.8, 4.°67N±0.°06×82.°62W±0.°04, h10^{km}±1^{km}, mb4.4/29, Error ellipse: s-maj=11.0km s-min=6.7km az=160.0*

*IDC **16** 19:39:17.6±3.0, 4.°96N×82.°78W, h0^{km}, mb3.6/5, mbtmp3.8/7, ML3.0/2, MS3.8/12, Error ellipse: s-maj=71.3km s-min=27.4km az=23.0*

*GCMT **16** 19:39:18.6±0.3, 4.°73N±0.°02×82.°69W±0.°03, h35^{km}±1^{km}, MW5.0/92, Moment Tensor Solution. s18,c22; s92,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.11±.26; $M_{\theta\theta}$-0.23±.19; $M_{\phi\phi}$0.12±.24; $M_{r\theta}$0.08±.16; $M_{\theta\phi}$3.91±.14; $M_{\phi r}$0.45±.18; Best double couple: $M_0$3.94100×10^{16} NP1: ϕ_s359.00000°, δ88.00000°, λ173.00000°. NP2: ϕ_s89.00000°, δ83.00000°, λ2.00000°. Principal axes: T 3.8960, Plg6.0000°, Azm314.0000°; N 0.0890, Plg83.0000°, Azm165.0000°; P -3.9850, Plg3.0000°, Azm44.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*UCR **16** 19:39:51.6±1.9, 7°.42N×83°.19W, h0^{km}±135^{km}, MW3.8, mb4.4(NEIC)*

ISC 16 19:39:14.5±0.7**, 4°.57N**±0°.06×**82°.60W**±0°.07**, h10^{km}, n125,** σ**1^{s}.92**/116**, mb4.3**/17**, MS3.8**/9**, 1C, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAPC	Malpelo	1.14	120	⇑iP	Pn	19 39 33.2	-3.3
MAPC				eS	Sb	19 39 47.1	-4.0
MAPC				i		19 39 50.0	
	comp=Z,1μm,0.5s						
AZU	Azuero	3.95	36	eP	Pn	19 40 15.7	+0.5
AZU				eS	Sn	19 40 58.3	-3.3
AZU				i		19 41 03.8	
	comp=Z,83nm,0.4s						
JIME	Puerto Jimenez	4.01	350	eP	Pn	19 40 13.8	-2.3
EDAD	Golfito	4.09	352	eP	Pn	19 40 14.1	-3.2
BRU2	Volcan	4.20	359	Pn	Pn	19 40 16.5	-2.3
BRU2				Sn	Sn	19 41 00.4	-7.6
BRU2	Volcan	4.20	359	eP	Pn	19 40 16.9	-1.9
BRU2				eS	Sn	19 41 04.8	-3.3
BRU2				i		19 41 13.1	
	comp=Z,133nm,0.4s						
BRU2	Volcan	4.20	359	eP	Pn	19 40 16.9	-1.9
EDPN	Palmar Norte	4.45	349	eP	Pn	19 40 19.9	-2.2
EDP2	Potrero Grande	4.46	353	eP	Pn	19 40 20.4	-1.8
EDBA	Buenos Aires	4.61	352	eP	Pn	19 40 23.3	-1.1
BURE	Buenos Aires	4.63	351	eP	Pn	19 40 23.4	-1.3
GR1C	Gorgona, Isla	4.69	109	eP	Pn	19 40 25.4	+0.1
GR1C				eS	Sn	19 41 15.8	-4.1
GR1C				i		19 41 18.3	
	comp=Z,310nm,0.3s						
TUMC	Tumaco	4.73	125	Pn	Pn	19 40 26.7	+0.7
EDDO	Dominical	4.82	345	eP	Pn	19 40 24.6	-2.6
RGM0	Gandoca	4.99	360	Pn	Pn	19 40 26.8	-2.7
RGM0				Sn	Sn	19 41 27.9	+0.7
BRIBI	Bribri	5.03	357	eP	Pn	19 40 30.8	+0.7
RAZU	San Marcos de	5.25	344	eP	Pn	19 40 32.4	-0.9
ABE2	San Pablo	5.30	344	eP	Pn	19 40 32.1	-2.0
BCIP	Isla Barro Col	5.32	31	Pn	Pn	19 40 33.9	-0.3
BCIP				Sn	Sn	19 41 33.6	-2.0
LCR2	La Lucha 2	5.33	345	eP	Pn	19 40 32.0	-2.3
REPA	Paraso	5.38	346	eP	Pn	19 40 33.5	-1.5
PCAYA	Pacayas	5.45	347	eP	Pn	19 40 34.9	-1.2
TRIO	Tres Rios	5.48	345	eP	Pn	19 40 35.0	-1.4
ICR3	Volcano Irazu	5.51	347	eP	Pn	19 40 36.3	-0.8
VTR0	Volcan Turrial	5.53	348	eP	Pn	19 40 36.7	-0.7
CVTR	Volcan Turrial	5.54	348	Pn	Pn	19 40 36.0	-1.4
CVTR				Sn	Sn	19 41 38.8	-2.6
CORON	Coronado	5.55	346	eP	Pn	19 40 36.2	-1.2
LCOCO	El Coco	5.56	350	eP	Pn	19 40 37.1	-0.3
RVLA	Villa Bonita	5.59	350	eP	Pn	19 40 37.1	-0.8
HDC	Heredia	5.60	344	Pn	Pn	19 40 36.0	-2.1
HDC				Sn	Sn	19 41 40.4	-2.2
HDC	Heredia	5.60	344	eP	Pn	19 40 36.1	-2.1
TCS1	Tacares	5.69	343	eP	Pn	19 40 38.4	-1.0
VPS6	Volcano Poas	5.81	344	eP	Pn	19 40 40.5	-0.7
BBAC	Balboa, Cauca	5.91	115	eP	Pn	19 40 43.4	+1.0
OTAV	Otavalo	5.97	136	Pn	Pn	19 40 42.5	-0.9
NYURE	Nandayure	6.00	334	eP	Pn	19 40 40.9	-2.6
JTS	Las Juntas de	6.15	338	Pn	Pn	19 40 43.1	-2.3
	comp=Z,33nm,0.3s,baz=135,slow=10.0,SNR=37						
JTS				Sn	Sn	19 41 52.8	-3.1
	comp=Z,16nm,0.3s,baz=329,slow=23,SNR=11						
JTS	Las Juntas de	6.15	338		Pn	19 40 42.6	-2.9
JTS	Las Juntas de	6.15	338	eP	Pn	19 40 43.3	-2.2
GCUF	Volcan Galeras	6.21	122	eP	Pn	19 40 49.6	+2.8
CEDE	Laguna Cedeo	6.24	341	eP	Pn	19 40 46.4	-0.4
POPC	Popayan, Colom	6.24	109	eP	Pn	19 40 49.3	+2.3
YOTC	Yotoco, Valle	6.26	95	eP	Pn	19 40 48.5	+1.4
TABAC	Tabacon	6.27	340	eP	Pn	19 40 46.6	-0.7
COVE	Coope Vega, Sa	6.37	344	Pn	Pn	19 40 46.9	-1.6
COTE	Lago Cote	6.39	339	eP	Pn	19 40 48.3	-0.6
ORTG	Ortega, Santa	6.42	334	Pn	Pn	19 40 47.9	-1.4
ACAL	Aguas Claras	6.49	338	eP	Pn	19 40 49.7	-0.6
MOTZ	Rio Naranjo	6.55	338	eP	Pn	19 40 50.0	-1.1
CUI	Cuipilapa	6.56	337	eP	Pn	19 40 52.1	+0.9
COLC	Colonia	6.58	337	eP	Pn	19 40 51.5	-0.1
GUAB	Guayabo de Bag	6.63	337	eP	Pn	19 40 51.9	-0.3
ALIBA	Liberia Airpor	6.66	334	eP	Pn	19 40 51.7	-0.9
CANAL	Canalete	6.68	339	eP	Pn	19 40 51.5	-1.3
CLARA	Aguas Claras	6.68	338	eP	Pn	19 40 53.6	+0.7
VMAR	Armenia, Volca	6.69	338	eP	Pn	19 40 52.3	-0.6
GPS2	Hotel Rincn d	6.72	336	eP	Pn	19 40 53.3	-0.2
VORI	VORI	6.78	336	eP	Pn	19 40 54.5	+0.1
BUEV	Buena Vista	6.79	336	eP	Pn	19 40 52.8	-1.6
GB1A	Borinquen Arri	6.80	336	eP	Pn	19 40 54.8	+0.3
DBBC	Dabeiba	6.80	69	eP	Pn	19 40 59.2	+4.6
ANIL	Santa Ana	7.17	90	eP	Pn	19 41 02.4	+2.6
GUY2C	Guyana, Caldas	7.23	85	eP	Pn	19 41 03.4	+2.6
ORTC	Ortega, Tolima	7.36	95	eP	Pn	19 41 02.7	+0.5
PRAC	Prado	7.74	96		Pn	19 41 07.6	+0.3
PRAC	Prado	7.74	96	eP	Pn	19 41 10.2	+2.9
NORC	Norcasia	7.76	82	eP	Pn	19 41 10.7	+3.1
ESPN	Las Esperanzas	7.76	348	Pn	Pn	19 41 05.4	-2.3
ACON	Acoyapa	7.78	341	Pn	Pn	19 41 04.9	-3.0
ROSC	El Rosal	8.25	88	Pn	Pn	19 41 21.7	+7.0
	comp=Z,4.4nm,0.3s,baz=290,slow=18,SNR=4.2						
	comp=Z,13nm,0.4s						
ROSC	El Rosal	8.25	88	Pn	Pn	19 41 17.1	+2.3
BOAB	BOACO BROADBAN	8.40	339	Pn	Pn	19 41 14.7	-1.7
CHIC	Chingaza	8.84	89	eP	Pn	19 41 27.1	+4.4
CNGN	Cerro Negro	8.86	333	Pn	Pn	19 41 22.4	-0.4
SJCC	San Jacinto, C	9.06	54	eP	Pn	19 41 30.5	+5.0
CRIN	San Cristobal	9.20	332	Pn	Pn	19 41 29.0	+1.5
ATAH	Atahualpa	12.36	160	LR	LR	19 46 42.1	
	comp=Z,1μm,20.1s,baz=341,slow=35						
SDV	Santo Domingo	12.63	70	Pn	Pn	19 42 19.9	+5.4
	comp=Z,0.8nm,0.3s,baz=181,slow=18,SNR=1.6						
SDV				LR	LR	19 47 09.6	
	comp=Z,276nm,20.6s,baz=248,slow=37						
	comp=Z,2.1nm,0.3s						
CMIG	Matias Romero	17.32	317	Pn	P	19 43 18.6	+0.6
	comp=Z,0.1nm,0.3s,baz=135,slow=13,SNR=2.7						
CMIG				LR	LR	19 48 41.7	
	comp=Z,362nm,22.0s,baz=153,slow=33						
SJG	San Juan	20.97	49	LR	LR	19 51 10.6	
	comp=Z,110nm,21.0s,baz=252,slow=34						
GCPR	Guaynabo City	21.14	48		P	19 44 02.2	+2.3
HUMP	Col San Antoni	21.22	49		P	19 44 02.6	+1.9
HUMP				IAmb	IAmb	19 44 06.3	
	comp=Z,56nm,1.4s						
ETMB	Extrema	21.69	131	P	P	19 44 06.7	+0.9
PB16	IPOC Station P	26.16	151	P	P	19 44 50.5	+0.6
SIV	San Ignacio	29.51	134	LR	LR	19 57 23.9	
	comp=Z,499nm,18.7s,baz=268,slow=36						
H06E1	SOCORRO T-PHAS	31.06	299	T	T	20 18 02.1	
	SNR=36						
TXAR	Lajitas Array	31.70	323	P	P	19 45 39.3	+0.6
	comp=Z,0.1nm,0.4s,baz=142,slow=10,SNR=2.3						
	comp=Z,0.1nm,0.4s						
LPIG	La Paz	33.01	309	LR	LR	19 56 15.0	
	comp=Z,147nm,19.1s,baz=218,slow=31						
S54A	Dingess, Beckl	33.09	2	P	P	19 45 51.3	+0.6
P48A	Milroy	34.83	356	P	P	19 46 04.2	-1.5
O54A	Avella	35.51	3	P	P	19 46 11.3	-0.3
N53A	Lisbon	36.11	2	P	P	19 46 16.1	-0.7
121A	Cookes Peak, D	36.45	323	P	P	19 46 20.2	+0.2
121A				IAmb	IAmb	19 46 24.2	
	comp=Z,17nm,1.4s						
ANMO	Albuquerque	37.44	327	P	P	19 46 30.1	+1.8
	comp=Z,1.9nm,0.8s,baz=121,slow=5.9,SNR=4.9						
	comp=Z,1.9nm,0.8s						
ANMO	Albuquerque	37.44	327	P	P	19 46 28.5	+0.1
ANMO				IAmb	IAmb	19 46 31.8	
	comp=Z,6.3nm,1.2s						
L44A	Lake County Fo	37.75	354	P	P	19 46 30.8	+0.2
H03N2	Juan Fernandez	37.96	175	T	T	20 26 58.8	
	baz=354,slow=76,SNR=5.6						
H03N1	Juan Fernandez	37.96	175	T	T	20 26 57.5	
	baz=354,slow=76,SNR=10						
H03N3	Juan Fernandez	37.98	175	T	T	20 26 56.7	
	baz=354,slow=76,SNR=7.3						
SDCO	Great Sand Dun	39.09	331	P	P	19 46 43.2	+0.9
214A	Organ Pipe Nat	39.29	318	P	P	19 46 43.6	-0.2
113A	Mohawk Valley,	40.43	318	P	P	19 46 52.5	-0.7
113A				IAmb	IAmb	19 47 18.2	
	comp=Z,2.6nm,0.3s						
FRNY	Flat Rock	40.88	10	P	P	19 46 58.1	+1.4
PV13	Radium Mtn., P	41.09	328	P	P	19 47 00.4	+1.5
PV13				IAmb	IAmb	19 47 02.1	
	comp=Z,6.7nm,1.2s						
U15A	North Rim	41.83	323	P	P	19 47 05.5	+0.4
U15A				IAmb	IAmb	19 47 15.6	
	comp=Z,6.8nm,1.2s						
SRU	San Rafael Swe	42.70	327	P	P	19 47 11.5	-0.5
SRU				IAmb	IAmb	19 47 14.9	
	comp=Z,7.1nm,1.2s						
PFO	Pinyon Flats O	42.74	317	LR	LR	20 02 47.7	
	comp=Z,128nm,18.4s,baz=164,slow=33						
RSSD	Black Hills	43.68	338	P	P	19 47 20.5	+0.6
RSSD				IAmb	IAmb	19 47 23.1	
	comp=Z,7.1nm,1.4s						
PD31	Pinedale Array	44.94	332	P	P	19 47 31.4	+1.3
PDAR	Pinedale Array	44.94	332	P	P	19 47 31.1	+1.1
	comp=Z,0.6nm,0.9s,baz=128,slow=10,SNR=4.0						
PDAR				LR	LR	20 08 28.6	
	comp=Z,113nm,18.4s,baz=342,slow=39						
	comp=Z,0.6nm,0.9s						
ELK	Elko	46.43	326	LR	LR	20 08 26.8	
	comp=Z,107nm,19.2s,baz=62,slow=38						
ELK	Elko	46.43	326	P	P	19 47 40.2	-1.7
NV11	Mina Array Sit	46.69	321	P	P	19 47 42.1	-1.8
NV11				IAmb	IAmb	19 47 48.8	
	comp=Z,5.7nm,1.4s						
OMMB	Old Mammoth Mi	46.75	320	P	P	19 47 45.3	+0.8
OMMB				IAmb	IAmb	19 47 47.5	
	comp=Z,3.6nm,1.0s						
NVAR	Mina Array Bea	46.79	321	P	P	19 47 46.0	+1.3
	comp=Z,1.3nm,0.8s,baz=137,slow=5.5,SNR=7.6						
NVAR				LR	LR	20 07 18.1	
	comp=Z,144nm,18.3s,baz=87,slow=36						
	comp=Z,1.3nm,0.8s						
NVAR	Mina Array Bea	46.79	321	P	P	19 47 45.9	+1.2
LHV	Little Huntoon	46.80	321	P	P	19 47 45.9	+1.4
LHV				IAmb	IAmb	19 47 49.8	
	comp=Z,9.5nm,1.3s						
WVOR	Wild Horse Val	49.46	325	P	P	19 48 06.5	+1.3
WVOR				IAmb	IAmb	19 48 08.1	
	comp=Z,11nm,1.3s						
YKA	Yellowknife Ar	62.45	344	P	P	19 49 38.8	+1.1
	comp=Z,0.4nm,0.9s,baz=135,slow=6.6,SNR=6.3						
	comp=Z,0.4nm,0.9s						
EGAK	Eagle	72.89	338	P	P	19 50 43.0	-0.5
EGAK				IAmb	IAmb	19 50 59.0	
	comp=Z,5.3nm,1.4s						
EKA	Eskdalemuir Ar	80.25	35	LR	LR	20 20 11.2	
	comp=Z,90nm,19.9s,baz=182,slow=31						
NOA	NORSAR Array B	87.89	29	LR	LR	20 27 26.5	
	comp=Z,18nm,21.9s,baz=185,slow=33						
H11N3	WAKE ISLAND Hy	107.59	292	T	T	21 53 46.5	
	baz=78,slow=75,SNR=31						
H11N2	WAKE ISLAND Hy	107.60	292	T	T	21 53 47.3	
	baz=78,slow=75,SNR=36						
H11N1	WAKE ISLAND Hy	107.61	292	T	T	21 53 47.7	
	baz=78,slow=75,SNR=32						

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*HVO **16** 19:43:34.6±1.6, 18°.72N±0°.05×155°.22W±0°.04, h16^{km}±3^{km}, ML2.4/10, ML2.6/39(NEIC), Error ellipse: s-maj=8.2km s-min=4.4km az=155.0*

NEIC 16 19:43:34.0±0.4**, 18°.89N**±0°.07×**155°.30W**±0°.03**, h52^{km}**±4^{km}**, Error ellipse: s-maj=9.8km s-min=3.8km az=165.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HPO	Honuapo	0.31	310		Pn	19 43 43.5	+0.1
HTC	Hot Caves	0.36	345		Pn	19 43 44.3	+0.4
HTC					Sn	19 43 52.3	+1.3
HLP	Hilina Pali	0.40	359		Pn	19 43 44.8	+0.4
HLP					Sn	19 43 52.7	+0.8
HLP	Hilina Pali	0.40	359	IAML		19 43 53.7	
	comp=N,303nm,0.7s						
HLP				IAML		19 43 59.6	
	comp=E,388nm,3.5s						
KHU	Kahuku	0.46	320		Sn	19 43 53.4	+0.1
KHU	Kahuku	0.46	320		Pn	19 43 45.2	0.0
KHU	Kahuku	0.46	320	IAML		19 43 52.7	
	comp=E,298nm,3.9s						
KHU	Kahuku	0.46	320	IAML		19 43 53.6	
	comp=N,170nm,1.7s						
PUH	Pauahi	0.49	10		Sn	19 43 53.1	-0.5
PUH	Pauahi	0.49	10		Pn	19 43 45.3	-0.1
PUH				IAML		19 44 08.4	
	comp=E,194nm,3.7s						
PUH	Pauahi	0.49	10	IAML		19 43 49.6	
	comp=N,409nm,3.8s						
SDHHI	Sand Hill	0.50	1		Pn	19 43 45.5	0.0
SDHHI					Sn	19 43 54.2	+0.5
SDHHI	Sand Hill	0.50	1	IAML		19 43 58.0	
	comp=N,384nm,1.0s						
AIN	Ainahou	0.50	343		Pn	19 43 46.0	+0.4
AIN					Sn	19 43 54.7	+0.8
AIN	Ainahou	0.50	343	IAML		19 43 55.0	
	comp=E,374nm,0.2s						
AIN				IAML		19 43 55.3	
	comp=N,561nm,0.3s						
KNHH	Kane Nui o Ham	0.50	14		Pn	19 43 45.5	-0.1
RIM	Rim	0.50	3		Pn	19 43 45.6	0.0
RIM					Sn	19 43 54.3	+0.4
RIM	Rim	0.50	3	IAML		19 44 01.5	
	comp=E,336nm,1.2s						
KKO	Keanakako`i	0.51	4		Pn	19 43 45.6	0.0
KKO					Sn	19 43 54.0	+0.1
KKO	Keanakako`i	0.51	4	IAML		19 44 06.6	
	comp=E,302nm,1.4s						
WRMHI	West Rim	0.51	0		Pn	19 43 45.8	+0.1
STCH	Steam Cracks	0.52	19		Pn	19 43 45.5	-0.2
STCH					Sn	19 43 53.4	-0.8
STCH	Steam Cracks	0.52	19	IAML		19 43 54.1	
	comp=E,430nm,0.1s						
STCH				IAML		19 43 57.2	
	comp=N,212nm,0.7s						
BYL	Byron's Ledge	0.52	4	IAML		19 43 54.8	
	comp=N,273nm,1.6s						
BYL				IAML		19 44 12.3	
	comp=E,232nm,1.7s						
BYL	Byron's Ledge	0.52	4		Pn	19 43 45.6	-0.1
BYL					Sn	19 43 54.0	-0.2
UWE	Uwekahuna	0.53	1		Pn	19 43 45.8	-0.1
UWE					Sn	19 43 55.0	+0.6
HATHI	Halema‘uma‘u T	0.53	4		Sn	19 43 54.3	-0.2
HATHI	Halema‘uma‘u T	0.53	4		Pn	19 43 45.8	-0.1
HATHI				IAML		19 44 05.4	
	comp=N,268nm,1.6s						
HATHI	Halema‘uma‘u T	0.53	4	IAML		19 43 50.4	
	comp=E,387nm,1.4s						
NPOC	North of Pu‘u	0.53	20	IAML		19 43 51.3	
	comp=E,312nm,1.0s						
NPOC	North of Pu‘u	0.53	20		Pn	19 43 45.7	-0.1
NPOC	North of Pu‘u	0.53	20		Sn	19 43 53.8	-0.6
UWB	Uwekahuna B	0.53	2		Pn	19 43 45.9	0.0
UWB	Uwekahuna B	0.53	2	IAML		19 44 08.2	
	comp=N,206nm,1.9s						
SBLHI	Steaming Bluff	0.53	3		Sn	19 43 54.5	-0.1
SBLHI	Steaming Bluff	0.53	3		Pn	19 43 45.8	-0.2
SBLHI	Steaming Bluff	0.53	3	IAML		19 43 50.2	
	comp=E,251nm,1.7s						
SBLHI	Steaming Bluff	0.53	3	IAML		19 44 01.0	
	comp=N,239nm,1.3s						
RSD	Rainshed	0.57	2		Pn	19 43 46.2	-0.2
RSD	Rainshed	0.57	2	IAML		19 44 01.9	
	comp=N,215nm,4.3s						
MLH	Mauna Loa	0.60	352		Pn	19 43 47.0	+0.1
MLH					Sn	19 43 56.7	+0.5
MLH	Mauna Loa	0.60	352	IAML		19 44 08.3	
	comp=N,226nm,3.8s						
JOKA	Jonika Flow	0.61	27		Pn	19 43 46.4	-0.4
JOKA					Sn	19 43 55.5	-0.4
MWH	Moku‘aweowe	0.65	335		Pn	19 43 57.5	+10
MWH	Moku‘aweowe	0.65	335		Pn	19 43 47.6	-0.2
MWH	Moku‘aweowe	0.65	335	IAML		19 43 53.3	
	comp=N,194nm,4.3s						
MWH	Moku‘aweowe	0.65	335	IAML		19 44 07.3	
	comp=E,226nm,4.0s						
MLOA	Mauna Loa Obse	0.69	338		Sn	19 43 58.3	-0.1
MLOA	Mauna Loa Obse	0.69	338	Pg	Pn	19 43 48.0	-0.2
MLOA	Mauna Loa Obse	0.69	338	IAML		19 44 01.3	
	comp=E,144nm,3.6s						
MLOA				IAML		19 44 08.2	
	comp=N,135nm,4.0s						
ALEP	Alea Permanent	0.72	333		Pn	19 43 48.2	-0.3
ALEP					Sn	19 43 58.9	-0.1
HMH	Humu‘ula Sheep	0.73	346		Pn	19 43 48.7	+0.2
HMH	Humu‘ula Sheep	0.73	346	IAML		19 43 58.5	
	comp=N,200nm,3.0s						
HMH				IAML		19 43 59.9	
	comp=E,198nm,0.2s						
KHLU	Kahalu`u	0.89	321		Pn	19 43 50.1	-0.3
KHLU					Pn	19 44 02.2	+12

IDC 16 19:52:06.2±2.5**, 5°.17N**×**123°.07E, h0^{km}, mb3.3**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=335.1km s-min=26.7km az=63.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.31	156	P	P	19 57 52.3	-0.6
	0.1nm,0.4s,baz=334,slow=10.0,SNR=1.6						
	0.1nm,0.4s						
ASAR	Alice Springs	30.55	160	P	P	19 58 22.1	+0.5
	0.2nm,0.3s,baz=338,slow=7.2,SNR=5.8						
	0.2nm,0.3s						
MKAR	Makanchi Array	54.32	326	P	P	20 01 34.5	-0.1
	0.2nm,0.4s,baz=126,slow=8.0,SNR=7.3						
	0.2nm,0.4s						

ROM 16 20:52:01.1±0.1**, 42°.670N**±0°.004×**13°.230E**±0°.006**, h13^{km}**±1^{km}**, ML1.1**/4**, 1C-3D, Error ellipse: s-maj=0.5km s-min=0.1km az=215.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1218	Civita (PG)	0.08	270	P	Pg	20 52 04.3	+0.3
T1218				S	Sg	20 52 06.2	+0.1
T1218				AML	AML		
	comp=E,203μm,0.3s						
T1218				AML	AML		
	comp=N,288μm,0.3s						
T1218				AML	AML		
	comp=E,213μm,0.4s						
T1218				AML	AML		
	comp=E,202μm,0.3s						
T1218				AML	AML		
	comp=N,288μm,0.3s						
T1218				AML	AML		
	comp=N,266μm,0.3s						
SMA1	SAN MARTINO	0.09	117	⇑P	Pg	20 52 04.5	+0.4
SMA1				S	Sg	20 52 06.6	+0.4
SMA1				AML	AML		
	comp=N,174μm,0.3s						
SMA1				AML	AML		
	comp=E,236μm,0.3s						
T1214	Arquata del Tr	0.09	350	P	Pg	20 52 04.5	+0.3
T1214				S	Sg	20 52 06.5	+0.2
T1212	Cascia, Frazio	0.16	301	P	Pg	20 52 05.4	+0.4
T1212				S	Sg	20 52 08.2	+0.5
RM33	Pellescritta (	0.16	184	P	Pg	20 52 05.5	+0.5
RM33				S	Sg	20 52 08.3	+0.6
RM33				AML	AML		
	comp=E,56μm,0.2s						
RM33				AML	AML		
	comp=N,53μm,0.3s						
RM33				AML	AML		
	comp=E,56μm,1.8s						
T1217	Poggiodomo (PG	0.22	281	⇓P	Pg	20 52 06.5	+0.5
MMO1	Montemonaco	0.24	17	P	Pg	20 52 06.8	+0.5
TERO	Teramo	0.28	100	P	Pg	20 52 07.2	+0.3
TERO				S	Sg	20 52 11.5	+0.6
TERO				AML	AML		
	comp=E,25μm,1.6s						
TERO				AML	AML		
	comp=N,40μm,0.1s						
TERO				AML	AML		
	comp=E,25μm,0.4s						
T1211	Morro Reatino	0.31	244	⇓P	Pg	20 52 07.9	+0.4
ARRO	Arrone	0.35	255	⇓P	Pb	20 52 08.7	-0.5
FDMO	Fiordimonte	0.38	344	S	Sg	20 52 14.3	+0.4

ROM 16 20:53:00.6±0.1**, 42°.624N**±0°.004×**13°.373E**±0°.004**, h9^{km}, ML0.9**/4**, 3C, Error ellipse: s-maj=0.4km s-min=0.1km az=37.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RM33	Pellescritta (	0.16	226	P	Pg	20 53 04.6	+0.5
RM33				AML	AML		
	comp=N,67μm,1.0s						
RM33				AML	AML		
	comp=E,71μm,0.2s						
TERO	Teramo	0.17	90	P	Pg	20 53 04.8	+0.6
TERO				S	Sg	20 53 08.0	+1.3
TERO				AML	AML		
	comp=E,292μm,0.1s						
TERO				AML	AML		
	comp=N,204μm,0.2s						
T1214	Arquata del Tr	0.18	318	⇑P	Pg	20 53 05.0	+0.6
T1214				S	Sg	20 53 08.4	+1.2
T1247	Pizzolo (AQ)	0.19	197	⇑P	Pg	20 53 05.4	+0.9
T1247				S	Sg	20 53 08.6	+1.3
T1247				AML	AML		
	comp=N,104μm,0.5s						
T1247				AML	AML		
	comp=E,102μm,0.2s						
T1247				AML	AML		
	comp=N,104μm,1.5s						
T1218	Civita (PG)	0.20	284	P	Pg	20 53 05.2	+0.5
T1218				S	Sg	20 53 08.6	+1.1
GIGS	Gran Sasso	0.23	140	P	Pg	20 53 05.7	+0.5
GIGS				S	Sg	20 53 09.3	+1.0
GIGS				AML	AML		
	comp=N,30μm,1.1s						
GIGS				AML	AML		
	comp=E,60μm,0.2s						
GIGS				AML	AML		
	comp=N,30μm,0.9s						
T1241	Roccafluvione,	0.24	10	P	Pg	20 53 06.0	+0.6
T1241				S	Sg	20 53 10.1	+1.4
T1241				AML	AML		
	comp=E,36μm,0.9s						
T1241				AML	AML		
	comp=N,30μm,1.4s						
T1241				AML	AML		
	comp=E,36μm,1.1s						
T1241				AML	AML		
	comp=N,30μm,0.6s						
T1212	Cascia, Frazio	0.27	298	P	Pb	20 53 07.5	-0.3
T1212				S	Sg	20 53 11.1	+1.3
MMO1	Montemonaco	0.28	353	⇑P	Pg	20 53 06.9	+0.7
MMO1				S	Sb	20 53 11.7	-1.0
T1216	Preci, Frazion	0.37	316	P	Pb	20 53 08.8	-0.7
T1216				S	Sb	20 53 14.5	-0.9
T1219	Muccia, Frazio	0.51	328	S	Sb	20 53 19.1	-0.3

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*IDC **16** 21:12:07.9±1.0, 8°.12S×161°.04E, h0^{km}, mb4.2/9, mbtmp4.1/11, ML3.8/2, MS3.4/12, Error ellipse: s-maj=36.0km s-min=17.2km az=123.0*

*NEIC **16** 21:12:10.1±0.6, 7°.92S±0°.04×160°.9E±0°.1, h10^{km}±1^{km}, mb4.4/18, Error ellipse: s-maj=20.3km s-min=4.7km az=74.0*

ISC 16 21:12:13.5±0.6**, 7°.99S**±0°.07×**161°.0E**±0°.1**, h35^{km}, n59,** σ**1^{s}.12**/46**, mb4.3**/19**, MS3.4**/10**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.77	216	Pn	Pn	21 12 40.8	-0.9
	2μm,0.3s,baz=112,slow=1.9,SNR=37						
HNR				LR	LR	21 12 60.0	
	comp=Z,4μm,18.8s,baz=110,slow=31						
HNR				Sn	Sn	21 13 06.0	+3.0
	2μm,0.3s,baz=192,slow=17,SNR=8.6						
HNR	Honiara	1.77	216	Pn	Pn	21 12 41.2	-0.5
PMG	Port Moresby	13.76	263	LR	LR	21 20 31.6	
	comp=Z,169nm,19.9s,baz=126,slow=37						
DZM	Mont Dzumac	14.94	160	Pn	Pn	21 15 37.3	-5.0
	0.2nm,0.3s,baz=328,slow=19,SNR=0.8						
	2.4nm,0.7s						
DZM	Mont Dzumac	14.94	160	Pn	Pn	21 15 42.4	+0.1
DZM				IAmb	IAmb	21 15 49.7	
	comp=Z,9.0nm,0.9s						
OUENC	Ouen Island, N	15.40	159	Pn	Pn	21 15 48.6	+0.3
OUENC				IAmb	IAmb	21 16 01.4	
	comp=Z,15nm,0.9s						
TV1H	Townsville Har	17.77	229	P	P	21 16 21.1	+2.4
COEN	Coen	18.48	250	P	Pn	21 16 27.1	+0.2
COEN	Coen	18.48	250	P	Pn	21 16 28.5	+1.6
CTA	Charters Tower	18.67	228	P	P	21 16 27.6	-1.2

	comp=Z,0.3nm,0.3s,baz=41,slow=10,SNR=8.9						
CTA				LR	LR	21 23 13.3	
	comp=Z,115nm,18.9s,baz=106,slow=36						
	comp=Z,3.5nm,0.7s						
CTAO	Charters Tower	18.67	228	P	Pn	21 16 29.8	+0.5
CTAO	Charters Tower	18.67	228	P	Pn	21 16 29.4	+0.1
MTSU	Mount Surprise	19.11	237	P	Pn	21 16 35.2	+0.6
EIDS	Eidsvold	19.70	208		Pn	21 16 40.9	-0.7
EIDS				IAmb	IAmb	21 16 41.8	
	comp=Z,23nm,0.8s						
EIDS	Eidsvold	19.70	208	P	Pn	21 16 40.8	-0.7
AUWSH	Wavell State H	20.73	200	P	P	21 16 51.9	+0.9
RMQ	Roma	21.77	211	P	P	21 17 02.8	+0.5
ARMA	Armidale	23.98	200	P	P	21 17 24.8	-0.1
ARMA				IAmb	IAmb	21 17 34.7	
	comp=Z,12nm,1.0s						
QLP	Quilpie	24.41	219	P	P	21 17 26.8	-2.0
H11S2	WAKE ISLAND Hy	26.91	12	T	T	21 46 12.9	
	baz=193,slow=75,SNR=24						
H11S3	WAKE ISLAND Hy	26.91	12	T	T	21 46 17.5	
	baz=193,slow=75,SNR=26						
H11S1	WAKE ISLAND Hy	26.93	12	T	T	21 46 11.4	
	baz=193,slow=75,SNR=21						
AFI	Afiamalu	27.34	105	LR	LR	21 26 11.7	
	comp=Z,42nm,22.0s,baz=43,slow=31						
H11N1	WAKE ISLAND Hy	28.14	12	T	T	21 47 30.2	
	baz=192,slow=76,SNR=54						
H11N3	WAKE ISLAND Hy	28.14	12	T	T	21 47 35.9	
	baz=192,slow=76,SNR=27						
H11N2	WAKE ISLAND Hy	28.15	12	T	T	21 47 31.9	
	baz=192,slow=76,SNR=54						
WB0	Warramunga Arr	28.32	243	P	P	21 18 03.0	-1.2
WRAB	Tennant Creek	28.41	243	P	P	21 18 03.7	-1.3
WRAB	Tennant Creek	28.41	243	P	P	21 18 02.9	-2.1
WB2	Warramunga Arr	28.41	243	P	P	21 18 03.8	-1.3
WB2				IAmb	IAmb	21 18 04.6	
	comp=Z,10nm,0.8s						
WRA	Warramunga Arr	28.42	243	P	P	21 18 04.2	-1.0
	comp=Z,6.0nm,0.6s,baz=68,slow=9.0,SNR=74						
WRA				PcP	PcP	21 21 16.9	-0.2
	comp=Z,0.6nm,0.9s,baz=62,slow=2.3,SNR=2.9						
WRA				LR	LR	21 28 20.9	
	comp=Z,88nm,20.5s,baz=134,slow=34						
	comp=Z,6.0nm,0.6s						
WRA	Warramunga Arr	28.42	243	P	P	21 18 03.8	-1.4
STKA	Stephens Creek	29.85	215	P	P	21 18 15.5	-2.2
	comp=Z,2.7nm,0.8s,baz=346,slow=8.3,SNR=3.6						
STKA				LR	LR	21 30 03.5	
	comp=Z,76nm,20.4s,baz=27,slow=36						
	comp=Z,2.7nm,0.8s						
ASAR	Alice Springs	30.29	236	P	P	21 18 19.6	-2.1
	comp=Z,1.5nm,0.7s,baz=63,slow=9.2,SNR=17						
ASAR				PcP	PcP	21 21 21.1	-0.6
	comp=Z,0.6nm,0.7s,baz=47,slow=3.7,SNR=4.5						
	comp=Z,1.5nm,0.7s						
KNRA	Kununurra	32.44	253	P	P	21 18 39.9	-0.7
BBOO	Buckleboo	33.83	220	P	P	21 18 51.2	-1.4
BKZ	Black Stump Fm	34.02	158	P	P	21 18 54.1	-0.1
BKZ				IAmb	IAmb	21 19 09.8	
	comp=Z,4.0nm,0.6s						
GTOI	Gorontalo	38.84	281	P	P	21 19 35.8	+0.2
	comp=Z,6.6nm,0.7s						
PETK	Petropavlovsk-	60.93	358	LR	LR	21 44 52.4	
	comp=Z,18nm,21.5s,baz=148,slow=32						
HEH	HeiHe	64.94	337	*e*P	P	21 22 49.3	-0.1
HEH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HEH				pmax	pmax		
	comp=Z,290nm,4.7s						
CMAR	Chiang Mai Arr	66.61	294	P	P	21 23 01.1	+0.1
	comp=Z,1.7nm,1.0s,baz=109,slow=5.5,SNR=6.9						
	comp=Z,1.7nm,1.0s						
MA2	Magadan	67.84	354	LR	LR	21 50 51.9	
	comp=Z,14nm,20.0s,baz=33,slow=34						
SONM	Songino Array	73.48	325	P	P	21 23 43.2	+0.6
	comp=Z,1.2nm,0.8s,baz=136,slow=5.2,SNR=9.0						
	comp=Z,1.2nm,0.8s						
SONM	Songino Array	73.48	325	P	P	21 23 42.7	+0.1
GTA	Gaotai	73.60	315	*e*P	P	21 23 49.5	+6.0
GTA				sP	PcP	21 24 00.5	+1.2
GTA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
BILL	Bilibino	75.94	2	P	P	21 23 56.6	+0.3
BILL				IAmb	IAmb	21 24 03.2	
	comp=Z,4.9nm,1.1s						
NEA2	Nenana	81.35	20	P	P	21 24 26.4	+0.2
NEA2				IAmb	IAmb	21 24 41.0	
	comp=Z,4.8nm,1.2s						
ILAR	Eielson Array	82.19	20	P	P	21 24 30.4	-0.1
	comp=Z,0.8nm,0.6s,baz=241,slow=4.5,SNR=7.7						
	comp=Z,0.8nm,0.6s						
MK31	Makanchi Array	88.12	318	P	P	21 24 60.0	-0.7
MK31				IAmb	IAmb	21 25 02.1	
	comp=Z,1.7nm,1.1s						
MKAR	Makanchi Array	88.12	318	P	P	21 25 00.9	+0.2
	comp=Z,1.2nm,0.7s,baz=98,slow=5.8,SNR=15						
	comp=Z,1.2nm,0.7s						
PFO	Pinyon Flats O	88.20	56	LR	LR	21 56 40.5	
	comp=Z,47nm,20.5s,baz=224,slow=30						
MAKZ	Makanchi	88.34	318	P	P	21 25 00.8	-0.9
MAKZ				IAmb	IAmb	21 25 08.4	
	comp=Z,1.9nm,0.9s						
NEW	Newport	90.53	41	LR	LR	21 56 59.4	
	comp=Z,24nm,21.2s,baz=46,slow=30						
LPIG	La Paz	92.02	66	LR	LR	22 01 21.5	
	comp=Z,23nm,18.1s,baz=192,slow=32						
YKA	Yellowknife Ar	94.44	28	P	P	21 25 30.2	+0.6
	comp=Z,0.8nm,0.9s,baz=254,slow=4.1,SNR=8.6						
	comp=Z,0.8nm,0.9s						
PDAR	Pinedale Array	94.95	48	P	P	21 25 33.7	+0.9
	comp=Z,0.3nm,0.4s,baz=258,slow=3.3,SNR=1.9						
PDAR				LR	LR	22 07 02.8	
	comp=Z,15nm,18.2s,baz=34,slow=35						
	comp=Z,0.3nm,0.4s						
ANMO	Albuquerque	96.59	56	LR	LR	22 01 36.5	
	comp=Z,27nm,20.4s,baz=334,slow=31						
ESDC	Sonseca Array	145.70	339	PKPbc	PKPab	21 31 50.0	+0.6
	comp=Z,1.0nm,0.9s,baz=15,slow=2.8,SNR=6.0						
TORD	Torodi Ar. Bea	159.04	286	PKPab	PKPab	21 32 45.9	+0.3
	comp=Z,1.0nm,1.0s,baz=72,slow=3.5,SNR=3.3						

ROM 16 21:19:27.5±0.2**, 42°.992N**±0°.004×**13°.031E**±0°.007**, h6^{km}**±1^{km}**, ML1.1**/3**, 1C-2D, Error ellipse: s-maj=0.6km s-min=0.2km az=79.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FEMA	Monte Fema	0.03	155	P	Pg	21 19 28.8	-0.1
FEMA				S	Sg	21 19 29.7	-0.2
FDMO	Fiordimonte	0.06	43	P	Pg	21 19 28.8	-0.3
FDMO				S	Sg	21 19 30.5	+0.3
T1219	Muccia, Frazio	0.07	345	P	Pg	21 19 28.9	-0.3
T1219				S	Sg	21 19 30.7	+0.2
CESI	CESI - Serrava	0.09	278	P	Pg	21 19 30.1	+0.5
CESI				S	Sg	21 19 31.9	+0.9
CESI				AML	AML		
	comp=E,162µm,0.5s						
CESI				AML	AML		
	comp=N,166µm,0.6s						
T1216	Preci, Frazion	0.10	185	P	Pg	21 19 30.0	+0.3
T1216				S	Sg	21 19 32.2	+1.0
T1216				AML	AML		
	comp=E,171µm,1.3s						
T1216				AML	AML		
	comp=N,138µm,0.3s						
T1216				AML	AML		
	comp=E,171µm,0.7s						
T1220	Camerino, Fraz	0.13	20	P	Pg	21 19 30.6	+0.5
T1220				S	Sg	21 19 33.5	+1.5
MC2	Monte Cornacci	0.14	124	P	Pg	21 19 30.4	0.0
MC2				S	Sg	21 19 34.2	+1.8
T1256	Bolognola (MC)	0.14	84	P	Pg	21 19 30.9	+0.5
CSP1	Cessapalombo	0.16	52	P	Pg	21 19 31.3	+0.5
MMO1	Montemonaco	0.24	113	P	Pg	21 19 32.6	+0.5
MMO1				S	Sg	21 19 36.7	+1.4
T1212	Cascia, Frazio	0.24	178	P	Pg	21 19 32.8	+0.6
T1212				S	Sg	21 19 36.9	+1.6
T1212				AML	AML		
	comp=E,63µm,1.6s						
T1212				AML	AML		
	comp=N,74µm,0.2s						
T1212				AML	AML		
	comp=E,63µm,1.6s						
T1212				AML	AML		
	comp=N,74µm,0.3s						
T1212				AML	AML		
	comp=E,63µm,0.4s						
SNTG	Esanatoglia	0.27	346	⇓P	Pg	21 19 33.5	+0.7
EL6	Elcito	0.34	9	⇓P	Pg	21 19 34.7	+0.5
TERO	Teramo	0.56	131	⇑P	Pg	21 19 38.7	+0.5

ROM 16 21:19:55.8±0.1**, 43°.025N**±0°.004×**13°.054E**±0°.004**, h10^{km}, ML1.0**/3**, 2C-5D, Error ellipse: s-maj=0.4km s-min=0.3km az=16.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDMO	Fiordimonte	0.03	64	P	Pg	21 19 57.9	+0.2
FDMO				S	Sg	21 19 59.0	0.0
FDMO				AML	AML		
	comp=E,88µm,0.1s						
FDMO				AML	AML		
	comp=N,80µm,0.4s						
FDMO				AML	AML		
	comp=E,88µm,0.1s						
T1219	Muccia, Frazio	0.05	312	⇓P	Pg	21 19 58.2	+0.3
T1219				S	Sg	21 19 59.5	+0.1
T1219				AML	AML		
	comp=N,280µm,0.3s						
T1219				AML	AML		
	comp=E,247µm,0.1s						
T1220	Camerino, Fraz	0.09	17	⇓P	Pg	21 19 58.9	+0.6
T1220				S	Sg	21 20 00.8	+0.6
T1220				AML	AML		
	comp=E,173µm,0.3s						
T1220				AML	AML		
	comp=N,164µm,1.1s						
T1220				AML	AML		
	comp=N,164µm,0.9s						
T1220				AML	AML		
	comp=E,173µm,1.7s						
CESI	CESI - Serrava	0.11	260	P	Pg	21 19 59.2	+0.6
CESI				S	Sg	21 20 01.4	+0.8
T1256	Bolognola (MC)	0.13	98	⇓P	Pg	21 19 59.5	+0.6
T1256				S	Sg	21 20 01.9	+0.7
T1216	Preci, Frazion	0.14	191	⇑P	Pg	21 19 59.5	+0.5
T1216				S	Sg	21 20 02.0	+0.8
MC2	Monte Cornacci	0.15	138	S	Sg	21 20 00.6	-1.2
MMO1	Montemonaco	0.24	122	⇓P	Pg	21 20 01.3	+0.7
MMO1				S	Sg	21 20 05.1	+1.2
SNTG	Esanatoglia	0.24	340	P	Pb	21 20 01.6	-0.7
SNTG				S	Sg	21 20 05.5	+1.3
ASSB	Assisi San Ben	0.29	274	⇑P	Pg	21 20 02.2	+0.6
ASSB				S	Sb	21 20 07.0	-1.1
T1241	Roccafluvione,	0.32	121	⇓P	Pg	21 20 02.9	+0.7
T1241				S	Sb	21 20 08.2	-0.7
ARRO	Arrone	0.49	206	S	Sb	21 20 14.6	+0.8
T1211	Morro Reatino	0.51	197	S	Sg	21 20 13.2	+0.6

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*IDC **16** 21:27:15.0±6.2, 38°.17N×73°.97E, h148^{km}±49^{km}, mb3.4/1, mbtmp3.6/5, Error ellipse: s-maj=72.8km s-min=29.5km az=145.0*

*SOME **16** 21:27:15.4, 39°.08N×73°.55E, h15^{km}*

*NNC **16** 21:27:18.9±6.3, 38°.43N×73°.89E, h170^{km}±184^{km}, mb2.2, mpv3.2, Error ellipse: s-maj=101.8km s-min=39.4km az=3.0*

ISC 16 21:27:13.7±0.8**, 38°.06N**±0°.07×**74°.09E**±0°.08**, h152^{km}, n34,** σ**1^{s}.80**/33**, 3C-2D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	4.08	356	P	Pn	21 28 16.9	+1.5
	SNR=61						
AML	Almayashu	4.08	356	⇓P	Pn	21 28 16.9	+1.5
	2.4nm,0.6s						
AML				⇑S	Sn	21 29 00.9	-2.6
	5.8nm,0.6s						
UCH	Uchtor	4.18	4	P	Pn	21 28 18.4	+1.6
	SNR=17						
ULHL	Ulahol	4.50	21	P	Pn	21 28 23.9	+3.1
	SNR=6.3						
AAK	Ala-Archa	4.59	4	P	Pn	21 28 23.4	+1.6
	SNR=7.5						
AAK	Ala-Archa	4.59	4	P	Pn	21 28 23.4	+1.6
	2.7nm,0.3s,baz=175,slow=8.2,SNR=21						
AAK				S	Sn	21 29 12.7	-2.3
	4.0nm,0.3s,baz=159,slow=23,SNR=3.6						
EKS2	Erkin-Say	4.61	357	P	Pn	21 28 24.5	+2.4
	SNR=12						
KBK	Karagaybulak	4.64	8	P	Pn	21 28 24.2	+1.6
	SNR=11						
MRKS	Merke	4.73	352	*e*Pg	Pn	21 28 24.8	+1.1
	9.3nm,0.7s						
MRKS				*e*Lg	Lg	21 29 14.5	
	119nm,0.4s						
CHMS	Chumysh	4.96	6	P	Pn	21 28 28.5	+1.8
	SNR=8.1						
TKM2	Tokmak 2	5.00	13	P	Pn	21 28 28.9	+1.6
	SNR=10						
TKM2	Tokmak 2	5.00	13	⇑P	Pn	21 28 28.6	+1.4
	4.5nm,0.5s						
TKM2				⇑S	Sn	21 29 24.2	-0.4
	13nm,0.7s						
IUG	Iuzhnay	5.14	324	*e*Pg	Pn	21 28 30.9	+1.9
	37nm,0.1s						
IUG				*e*Lg	Lg	21 29 24.9	
	144nm,0.9s						
KST	Kastek	5.18	15	*e*Pg	Pn	21 28 33.2	+3.5
	3.7nm,0.5s						
KST				*e*Lg	Lg	21 29 28.7	
	27nm,1.4s						
DZA	Taraz	5.27	337	*e*Pg	Pn	21 28 32.4	+1.7
	22nm,0.3s						
DZA				*e*Lg	Lg	21 29 27.5	
	116nm,0.4s						
MTBS	Maitube	5.37	19	*e*Pg	Pn	21 28 39.8	+7.7
	1.4nm,0.3s						
MTBS				*e*Lg	Lg	21 29 40.1	
	5.2nm,0.8s						
CHM	Chimkent	5.47	323	*e*Pg	Pn	21 28 35.3	+1.9
	78nm,0.2s						
CHM				*e*Lg	Lg	21 29 32.5	
	158nm,0.4s						
MDOK	Medeo	5.58	23	⇓P	Pn	21 28 34.7	-0.2
	3.4nm,1.2s						
KK31	Karatay Array	5.73	333	P	Pn	21 28 37.4	+0.6
	0.8nm,0.3s,baz=292,slow=35,SNR=46						
KK31				S	Sn	21 29 38.2	-3.6
	7.8nm,0.3s,baz=168,slow=23,SNR=18						
CHKK	Chushkaly	6.20	20	*e*Pg	Pn	21 28 55.9	+13
	1.1nm,0.2s						
CHKK				*e*Lg	Lg	21 30 07.5	
	4.7nm,0.5s						
KURS	Kuram	6.25	28	*e*Pg	Pn	21 28 59.9	+16
	2.4nm,0.6s						
KURS				*e*Lg	Lg	21 30 14.8	
	5.1nm,0.9s						
UZB	Uzynbulak	6.32	35	*e*Pg	Pn	21 29 03.4	+19
	4.8nm,0.3s						
UZB				*e*Lg	Lg	21 30 20.6	
	7.2nm,0.8s						
KPKS	Kokpek	6.43	31	*e*Pg	Pn	21 29 01.8	+16
	1.9nm,0.3s						
KPKS				*e*Lg	Lg	21 30 18.0	
	9.1nm,0.6s						
MKAR	Makanchi Array	10.62	32	P	Pn	21 29 41.9	+0.1
	0.2nm,0.7s,baz=215,slow=12,SNR=2.1						
PYUN	Piuthan	12.41	141	*e*P	Pn	21 30 05.6	+0.1
	12nm,0.4s						
GEYT	Alibeck	12.61	274	P	Pn	21 30 07.6	-0.2
	1.7nm,0.4s,baz=95,slow=12,SNR=6.9						
DANN	Dangsing	12.61	137	*e*P	Pn	21 30 08.0	-0.2
	8.5nm,0.4s						
GKN	Gorkha	13.36	136	*e*P	Pn	21 30 18.0	+0.4
PKI	Pulchoki	14.12	134	*e*P	P	21 30 28.2	-2.3
JIRN	Jiri	14.51	132	*e*P	P	21 30 33.1	-1.6
	8.0nm,0.4s						
RAMN	Ramite	15.28	133	*e*P	P	21 30 42.5	-0.7
	12nm,0.7s						
TAPN	Taplejung	15.65	129	*e*P	P	21 30 46.8	-0.5
ZALV	Zalesovo Beam	17.52	21	P	P	21 31 08.4	+1.1
	0.9nm,0.4s,baz=224,slow=10,SNR=5.5						
TORD	Torodi Ar. Bea	68.20	270	P	P	21 37 59.1	+1.1
	0.4nm,0.3s,baz=48,slow=5.2,SNR=6.8						
	0.4nm,0.3s						

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*IDC **16** 21:33:49.1±1.6, 7°.03S×128°.81E, h0^{km}, mb3.5/2, mbtmp3.9/5, ML4.1/3, MS3.5/1, Error ellipse: s-maj=50.8km s-min=24.8km az=68.0*

*NEIC **16** 21:34:00.7±1.6, 6°.81S±0°.03×129°.53E±0°.10, h127^{km}±18^{km}, mb4.2/9, Error ellipse: s-maj=14.4km s-min=3.6km az=83.0*

ISC 16 21:34:01.7±0.7**, 6°.85S**±0°.05×**129°.65E**±0°.07**, h150^{km}, n40,** σ**1^{s}.81**/42**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.99	125	Pn	Pn	21 34 36.0	-0.6
SAUI				Sn	Sn	21 35 02.5	-1.0
SAUI	Saumlaki	1.99	125	P	Pn	21 34 38.6	+2.0
FAKI	Fak Fak	4.69	34	Pn	Pn	21 35 10.6	-0.4
FAKI					Sn	21 36 04.0	-1.1
FAKI	Fak Fak	4.69	34	P	Pn	21 35 12.4	+1.4
SOEI	Soe	6.06	241	Pn	Pn	21 35 28.3	-1.0
SOEI	Soe	6.06	241	P	Pn	21 35 30.6	+1.3
MTN	Manton Dam	6.13	166		Pn	21 35 30.2	0.0
MTN	Manton Dam	6.13	166	P	Pn	21 35 29.9	-0.3
SIJI	Sorong	6.16	15	Pn	Pn	21 35 29.3	-1.3
	3.0nm,0.3s,baz=298,slow=22,SNR=21						
SIJI				Sn	Sn	21 36 37.6	-2.5
	5.5nm,0.3s,baz=239,slow=23,SNR=12						
	7.4nm,0.2s						
KDU	Kakadu	6.43	155	P	Pn	21 35 33.1	-1.1
KNRA	Kununurra	8.81	186		Pn	21 36 04.5	-1.5
KNRA	Kununurra	8.81	186	P	Pn	21 36 04.4	-1.5
FITZ	Fitzroy Crossi	11.84	199	Pn	Pn	21 36 45.2	-0.8
PLAI	Plampang	11.92	260	P	Pn	21 36 46.9	-0.2
WB0	Warramunga Arr	13.64	161		Pn	21 37 06.4	-2.7
WRA	Warramunga Arr	13.79	161	Pn	Pn	21 37 07.8	-3.2
	0.7nm,0.3s,baz=338,slow=13,SNR=22						
WRA				Sn	Sn	21 39 30.9	-13
	1.5nm,0.3s,baz=335,slow=22,SNR=10.0						
	2.4nm,0.8s						
WRA	Warramunga Arr	13.79	161	Pn	Pn	21 37 09.8	-1.2
WB2	Warramunga Arr	13.79	161	Pn	Pn	21 37 09.7	-1.4
COEN	Coen	15.05	119		P	21 37 30.5	+1.9
COEN				IAmb	IAmb	21 37 32.1	
	comp=Z,9.1nm,0.8s						
COEN	Coen	15.05	119	P	P	21 37 29.6	+1.0
JAGI	Jajag, Banyuwa	15.44	263	Pn	Pn	21 37 29.1	-2.6
JAGI				IAmb	IAmb	21 37 34.0	
	comp=Z,16nm,1.1s						
JAGI	Jajag, Banyuwa	15.44	263	P	Pn	21 37 32.5	+0.8
MYLDM	Lahad Datu	16.33	317	P	Pn	21 37 41.0	-1.6
MYLDM				IAmb	IAmb	21 37 46.7	
	comp=Z,9.2nm,1.1s						
QIS	Mount Isa	16.70	146	P	Pn	21 37 48.7	+1.7
MBWA	Marble Bar	17.16	213	P	P	21 37 50.9	-0.9
MBWA				IAmb	IAmb	21 37 51.2	
	comp=Z,19nm,1.1s						
AS31	Alice Springs	17.21	167	P	Pn	21 37 53.7	+0.5
ASAR	Alice Springs	17.21	167	P	Pn	21 37 53.0	-0.1
	comp=Z,1.0nm,0.3s,baz=347,slow=11,SNR=48						
ASAR				S	S	21 40 57.7	-6.6
	comp=Z,0.7nm,0.6s,baz=355,slow=26,SNR=4.7						
	comp=Z,3.3nm,0.5s						
ASAR	Alice Springs	17.21	167	P	Pn	21 37 54.0	+0.8
AS01	Alice Springs	17.22	167	P	Pn	21 37 54.3	+1.0
PSA00	Pilbara Seismi	17.43	212		Pn	21 37 56.0	+0.2
PSA00				IAmb	IAmb	21 37 56.8	
	comp=Z,11nm,0.6s						
PSA00	Pilbara Seismi	17.43	212	P	Pn	21 37 56.5	+0.7
WRKA	Warakurna	18.13	184	P	Pn	21 38 04.0	-0.1
CTA	Charters Tower	20.80	131	P	Pn	21 38 37.1	+1.5
	comp=Z,2.3nm,0.7s,baz=298,slow=12,SNR=3.6						
	comp=Z,2.3nm,0.7s						
MULG	Mulgathing	23.67	170	P	P	21 39 01.0	+1.4
FORT	Forrest	23.85	183	P	P	21 39 01.9	+0.7
FORT	Forrest	23.85	183	P	P	21 39 02.6	+1.4
MORW	Morawa	25.56	209	P	P	21 39 18.3	+1.5
BBOO	Buckleboo	26.51	168	P	P	21 39 26.2	+0.9
JCJ	Chichijima	35.87	19	LR	LR	21 53 47.4	
	comp=Z,72nm,18.2s,baz=12,slow=33						
MKAR	Makanchi Array	67.91	327	P	P	21 44 47.3	+3.1
	comp=Z,0.2nm,0.4s,baz=125,slow=7.4,SNR=5.8						
	comp=Z,0.2nm,0.4s						

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*HVO **16** 21:36:29.8±1.0, 19°.50N±0°.02×155°.667W±0°.009, h7^{km}±3^{km}, ML2.4/14, ML2.6/32(NEIC), Error ellipse: s-maj=3.5km s-min=0.9km az=195.0*

NEIC 16 21:36:30.3±1.1**, 19°.47N**±0°.02×**155°.672W**±0°.006**, h5^{km}**±4^{km}**, Error ellipse: s-maj=2.3km s-min=0.9km az=182.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MWH	Moku‘aweowe	0.07	77		Pg	21 36 32.1	-0.2
MWH				Sg	Sg	21 36 34.0	+0.3
MLOA	Mauna Loa Obse	0.11	54		Pg	21 36 32.7	-0.2
MLOA				Sg	Sg	21 36 34.7	+0.1
MLOA				IAML		21 36 35.0	
	comp=E,5µm,0.2s						
HMH	Humu‘ula Sheep	0.22	53		Pg	21 36 34.5	-0.3
HMH				Sg	Sg	21 36 38.0	+0.2
HMH				IAML		21 36 38.2	
	comp=E,865nm,0.4s						
HMH				IAML		21 36 38.2	
	comp=N,1µm,0.5s						
AIN	Ainahou	0.22	115		Pg	21 36 34.7	-0.1
AIN					Sg	21 36 38.7	+1.0
AIN				IAML		21 36 39.0	
	comp=N,1µm,0.4s						
AIN				IAML		21 36 39.3	
	comp=E,844nm,0.3s						
KHU	Kahuku	0.23	166		Pg	21 36 34.8	0.0
CPH	Captain Cook	0.23	275		Pg	21 36 34.6	-0.2
CPH					Sg	21 36 38.3	+0.3
KHLU	Kahalu`u	0.24	300		Pg	21 36 34.6	-0.5
KHLU				Sg	Sg	21 36 38.6	+0.4
HUH	Hualalai	0.26	324		Pg	21 36 35.5	-0.1
HUH				Sg	Sg	21 36 40.4	+1.4
HUH				IAML		21 36 41.1	
	comp=E,1µm,0.4s						
HUH				IAML		21 36 42.8	
	comp=N,2µm,0.2s						
MLH	Mauna Loa	0.27	85		Pg	21 36 35.1	-0.6
MLH				Sg	Sg	21 36 39.4	+0.2
MLH				IAML		21 36 40.0	
	comp=N,540nm,1.0s						
POHA	Pohakuloa	0.32	25		Pg	21 36 36.1	-0.5
POHA				Sg	Sg	21 36 41.8	+1.1
POHA				IAML		21 36 42.9	
	comp=N,453nm,0.2s						
HTC	Hot Caves	0.35	132		Pg	21 36 36.8	-0.2
HTC					Sg	21 36 43.1	+1.5
UWE	Uwekahuna	0.36	98		Sg	21 36 42.8	+0.7
UWE	Uwekahuna	0.36	98		Pg	21 36 36.6	-0.7
UWE				IAML		21 36 47.5	
	comp=E,1µm,0.8s						
UWE				IAML		21 36 48.6	
	comp=N,1µm,1.0s						
SDHHI	Sand Hill	0.36	102	Pg	Pg	21 36 35.6	-1.8
SDHHI					Sg	21 36 43.1	+0.8
OBL	Observatory Le	0.37	98		Pg	21 36 37.7	+0.2
RSD	Rainshed	0.37	91		Pg	21 36 36.9	-0.6
RSD					Sg	21 36 43.0	+0.5
RSD				IAML		21 36 43.5	
	comp=N,595nm,0.6s						
RSD				IAML		21 36 46.1	
	comp=E,502nm,1.3s						
HLP	Hilina Pali	0.38	117	Pg	Pg	21 36 37.2	-0.6
HLP					Sg	21 36 43.3	+0.4
HLP				IAML		21 36 48.2	
	comp=N,475nm,1.4s						
HLP				IAML		21 36 48.3	
	comp=E,607nm,1.5s						
PUH	Pauahi	0.44	102		Sg	21 36 44.4	-0.2
PUH				IAML		21 36 50.0	
	comp=N,523nm,1.7s						
PUH				IAML		21 36 50.3	
	comp=E,282nm,1.6s						
PUH	Pauahi	0.44	102		Pg	21 36 38.3	-0.6
HPAH	Hawaii Prepara	0.56	358		Pg	21 36 39.6	-1.5

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*JMA **16** 21:46:27.0±0.2, 25°N±3°×122°.3E±0°.7, h99^{km}±2^{km}, MV2.0/7, TAIWAN REGION*

*TAP **16** 21:46:27.3, 24°.77N×122°.25E, h94^{km}±1^{km}, ML2.7, D*

ISC 16 21:46:27.6±1.5**, 24°.76N**±0°.05×**122°.29E**±0°.03**, h91^{km}**±9^{km}**,**

n61,σ0ˢ64/108,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		**0.34**	**285**	*e*P	**Pn**	**21 46 41.2**	**-0.1**
	baz=285						
EOS2	**EOS2**	**0.34**	**189**	*e*P	**Pn**	**21 46 42.0**	**+0.8**
	baz=183						
TWB1	**Santiao Chiao**	**0.37**	**312**	*i* P	**Pn**	**21 46 41.8**	**+0.2**
	baz=315						
TWB1				*i* S	**Sn**	**21 46 52.1**	**+0.2**
	baz=315						
TWC	**Suao**	**0.43**	**250**	*i* P	**Pn**	**21 46 41.7**	**-0.2**
	baz=246						
TWC				S	**Sn**	**21 46 52.1**	**-0.4**
	baz=246						
TIPB	**Shuangxi**	**0.48**	**297**	*i* P	**Pn**	**21 46 42.4**	**+0.1**
	baz=297						
TIPB				*i* S	**Sn**	**21 46 53.3**	**0.0**
	baz=297						
SXI1	**Grass Mountain**	**0.51**	**312**	*i* P	**Pn**	**21 46 42.5**	**-0.1**
	baz=313						
SXI1				S	**Sn**	**21 46 54.0**	**+0.3**
	baz=313						
NDS	**Dongshan**	**0.54**	**257**	*i* P	**Pn**	**21 46 43.0**	**+0.2**
	baz=255						
NDS				*i* S	**Sn**	**21 46 54.1**	**+0.1**
	baz=255						
EWUT	**Wuta**	**0.56**	**237**	P	**Pn**	**21 46 43.2**	**+0.3**
	baz=233						
EWUT				S	**Sn**	**21 46 54.9**	**+0.5**
	baz=233						
TWE	**Neicheng**	**0.57**	**267**	*i* P	**Pn**	**21 46 43.1**	**+0.1**
	baz=264						
TWE				*i* S	**Sn**	**21 46 54.6**	**+0.2**
	baz=264						
ENA	**Nanau**	**0.60**	**237**	*i* P	**Pn**	**21 46 43.6**	**+0.3**
	baz=233						
ENA				*i* S	**Sn**	**21 46 55.7**	**+0.7**
	baz=233						
FUSB	**Fushanzhiwuyua**	**0.64**	**270**	*i* S	**Sn**	**21 46 55.0**	**-0.8**
	baz=269						
ENTT	**Nioudou**	**0.67**	**260**	*i* P	**Pn**	**21 46 44.4**	**+0.4**
	baz=258						
ENTT				S	**Sn**	**21 46 57.5**	**+1.4**
	baz=258						
TWA	**Mucha**	**0.68**	**289**	P	**Pn**	**21 46 43.0**	**-1.0**
	baz=289						
TWA				S	**Sn**	**21 46 55.7**	**-0.6**
	baz=289						
NWLT	**Wulai**	**0.72**	**272**	P	**Pn**	**21 46 44.4**	**-0.1**
	baz=271						
NWLT				S	**Sn**	**21 46 56.9**	**-0.1**
	baz=271						
NHDH	**Xindian Distri**	**0.73**	**287**	P	**Pn**	**21 46 44.2**	**-0.3**
	baz=286						
LATG	**Datong**	**0.73**	**253**	*i* P	**Pn**	**21 46 45.0**	**+0.4**
	baz=250						
LATG				S	**Sn**	**21 46 58.2**	**+0.8**
	baz=250						
YM01	**YM01**	**0.76**	**301**	*i* P	**Pn**	**21 46 44.6**	**-0.2**
	baz=301						
YM01				*i* S	**Sn**	**21 46 57.5**	**-0.3**
	baz=301						
ANP	**Anpu**	**0.82**	**302**	*e*P	**Pn**	**21 46 45.2**	**-0.4**
	baz=302						
ANP				*e*S	**Sn**	**21 46 58.5**	**-0.4**
	baz=302						
YHNB	**Yeheng**	**0.84**	**264**	*i* P	**Pn**	**21 46 45.6**	**0.0**
	baz=263						
YHNB				S	**Sn**	**21 46 59.6**	**+0.4**
	baz=263						
ETL	**Fush Village**	**0.85**	**226**	P	**Pn**	**21 46 45.5**	**-0.4**
	baz=223						
ETL				S	**Sn**	**21 46 59.3**	**-0.1**
	baz=223						
NSK	**Sanguang**	**0.85**	**265**	*i* P	**Pn**	**21 46 45.7**	**-0.1**
	baz=263						
NSK				*i* S	**Sn**	**21 46 59.3**	**-0.2**
	baz=263						
NACB	**Ninganchiao**	**0.86**	**228**	*i* P	**Pn**	**21 46 45.6**	**-0.3**
	baz=225						
NACB				*i* S	**Sn**	**21 46 58.9**	**-0.6**
	baz=225						
TWS1	**Kuangyinshan**	**0.87**	**293**	P	**Pn**	**21 46 45.9**	**0.0**
	baz=293						
TWS1				S	**Sn**	**21 46 59.2**	**-0.4**
	baz=293						
NNSB	**Datong**	**0.89**	**249**	*i* P	**Pn**	**21 46 46.4**	**0.0**
	baz=247						
NNSB				S	**Sn**	**21 46 59.4**	**-0.9**
	baz=247						
NNS	**Nan Shan**	**0.90**	**250**	*i* P	**Pn**	**21 46 46.6**	**+0.2**
	baz=247						
NNS				S	**Sn**	**21 46 59.3**	**-1.0**
	baz=247						
ETLH	**Xiulin Townshi**	**0.92**	**234**	P	**Pn**	**21 46 46.7**	**+0.1**
	baz=231						
ETLH				S	**Sn**	**21 47 00.7**	**-0.1**
	baz=231						
TWD	**Chiawan**	**0.93**	**223**	P	**Pn**	**21 46 46.1**	**-0.5**
	baz=220						
TWD				S	**Sn**	**21 47 00.5**	**-0.2**
	baz=220						
NFF	**Wufeng Townshi**	**1.08**	**264**	*e*P	**Pn**	**21 46 48.1**	**-0.2**
	baz=262						
NFF				*e*S	**Sn**	**21 47 03.5**	**-0.3**
	baz=262						
WHF	**Hehuan Shan**	**1.12**	**237**	*i* P	**Pn**	**21 46 48.7**	**-0.5**
	baz=235						
WHF				*i* S	**Sn**	**21 47 04.8**	**-0.6**
	baz=235						
TWT	**Tachien**	**1.14**	**244**	P	**Pn**	**21 46 50.1**	**+1.0**
	baz=242						
TWT				S	**Sn**	**21 47 05.9**	**+0.6**
	baz=242						
TDCB	**Techi**	**1.15**	**244**	*i* P	**Pn**	**21 46 49.9**	**+0.6**
	baz=242						
TDCB				S	**Sn**	**21 47 05.2**	**-0.3**
	baz=242						
LIOB	**Emei**	**1.17**	**265**	*i* P	**Pn**	**21 46 49.1**	**-0.2**
	baz=264						
LIOB				*i* S	**Sn**	**21 47 05.5**	**-0.2**
	baz=264						
NSTT	**Nanjuang**	**1.18**	**264**	*i* P	**Pn**	**21 46 48.9**	**-0.6**
	baz=263						
NSTT				*i* S	**Sn**	**21 47 06.0**	**0.0**
	baz=263						
ESL	**Shilin**	**1.22**	**220**	P	**Pn**	**21 46 49.6**	**-0.4**
	baz=217						
ESL				S	**Sn**	**21 47 05.4**	**-1.5**
	baz=217						
CHGB	**Renai**	**1.23**	**236**	P	**Pn**	**21 46 50.1**	**-0.3**
	baz=234						
CHGB				S	**Sn**	**21 47 07.3**	**-0.1**
	baz=234						
OWD	**Renai**	**1.29**	**232**	*e*P	**Pn**	**21 46 50.9**	**-0.1**
	baz=230						
OWD				*e*S	**Sn**	**21 47 08.2**	**-0.5**
	baz=230						
WUSB	**Renai**	**1.31**	**235**	*i* P	**Pn**	**21 46 51.5**	**+0.2**
	baz=233						
WUSB				*i* S	**Sn**	**21 47 08.5**	**-0.6**
	baz=233						
WHP	**Taichung City**	**1.32**	**249**	P	**Pn**	**21 46 51.9**	**+0.6**
	baz=247						
WHP				S	**Sn**	**21 47 09.6**	**+0.6**
	baz=247						
EGFH	**Guangfu**	**1.34**	**216**	*e*P	**Pn**	**21 46 50.6**	**-0.8**
	baz=214						
EGFH				*e*S	**Sn**	**21 47 07.9**	**-1.5**
	baz=214						
IRIF	**Iriomote-Funau**	**1.37**	**108**	*e*S	**Sn**	**21 47 10.5**	**+0.4**
NMLH	**Miaoli**	**1.38**	**261**	*e*P	**Pn**	**21 46 51.3**	**-0.7**
	baz=260						
WCS	**Beigang Elemen**	**1.44**	**241**	*e*P	**Pn**	**21 46 52.6**	**0.0**
	baz=240						
WCS				*e*S	**Sn**	**21 47 11.3**	**-0.3**
	baz=240						
TWQ1	**Liyutan**	**1.44**	**254**	P	**Pn**	**21 46 52.9**	**+0.2**
	baz=252						
TWQ1				S	**Sn**	**21 47 12.3**	**+0.6**
	baz=252						
VWDT	**VWDT**	**1.45**	**227**	P	**Pn**	**21 46 52.9**	**+0.1**
	baz=225						
VWDT				S	**Sn**	**21 47 11.3**	**-0.5**
	baz=225						
HGSD	**Ruisui**	**1.49**	**212**	*e*P	**Pn**	**21 46 51.8**	**-1.4**
	baz=210						
HGSD				S	**Sn**	**21 47 12.4**	**-0.3**
	baz=210						
EHY	**Hungye**	**1.53**	**216**	*e*P	**Pn**	**21 46 54.1**	**+0.3**
	baz=213						
SMLT	**Sun Moon Lake**	**1.54**	**236**	P	**Pn**	**21 46 55.2**	**+1.1**
	baz=234						
SMLT				S	**Sn**	**21 47 15.5**	**+1.5**
	baz=234						
SSLB	**Suanglung**	**1.56**	**232**	P	**Pn**	**21 46 54.9**	**+0.7**
	baz=230						
SSLB				S	**Sn**	**21 47 15.9**	**+1.6**
	baz=230						
TYC	**Yuchr**	**1.56**	**237**	P	**Pn**	**21 46 54.4**	**+0.2**
	baz=235						
TYC				*e*S	**Sn**	**21 47 13.4**	**-0.9**
	baz=235						
JKRS	**Kuro-shima**	**1.65**	**108**	*e*P	**Pn**	**21 46 55.5**	**+0.3**
JKRS				*e*S	**Sn**	**21 47 16.6**	**+0.3**
WHYT	**Xinyi Township**	**1.69**	**232**	*e*P	**Pn**	**21 46 56.9**	**+1.0**
	baz=230						
WHYT				S	**Sn**	**21 47 19.1**	**+1.9**
	baz=230						
JIJ	**Ishigaki jima**	**1.73**	**103**	P	**Pn**	**21 46 56.2**	**-0.1**
JIJ				S	**Sn**	**21 47 17.9**	**-0.3**
ALS	**Alishan**	**1.84**	**228**	P	**Pn**	**21 46 58.9**	**+0.8**
	baz=226						
JISG	**Ishigakijimahi**	**1.84**	**95**	P	**Pn**	**21 46 57.9**	**+0.1**
JISG				*e*S	**Sn**	**21 47 20.5**	**-0.3**
CHN5	**Tsauling**	**1.87**	**232**	*e*P	**Pn**	**21 46 59.1**	**+0.8**
	baz=231						
CHN5				*e*S	**Sn**	**21 47 21.2**	**-0.4**
	baz=231						
EHD	**Haiduan**	**1.89**	**212**	*e*P	**Pn**	**21 46 58.4**	**0.0**
	baz=210						
ELDTW	**Lidau**	**1.95**	**217**	*e*P	**Pn**	**21 46 59.8**	**+0.5**
	baz=215						
EDH	**Donghe**	**1.99**	**207**	*e*P	**Pn**	**21 46 58.6**	**-1.1**
	baz=205						
CHN4	**Tsaushan**	**2.09**	**228**	*e*P	**Pn**	**21 47 01.7**	**+0.6**
	baz=227						
TPUB	**Ta-pu**	**2.10**	**227**	*e*P	**Pn**	**21 47 02.6**	**+1.4**
	baz=225						
LDUT	**Ludao**	**2.21**	**200**	*e*P	**Pn**	**21 47 02.0**	**-0.6**
	baz=199						

ROM 16 21:50:21.1±0.0,**42°.937N**±0°.002×**13°.022E**±0°.004,
h11km,**ML1.3**/7,**1C-1D,Error ellipse: s-maj=0.3km**
s-min=0.2km az=288.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.05**	**182**	P	Pg	21 50 23.6	+0.3
T1216				S	Sg	21 50 25.1	+0.3
T1216				AML	AML		
	comp=E,449µm,0.3s						
T1216				AML	AML		
	comp=N,526µm,0.3s						
T1216				AML	AML		
	comp=N,526µm,0.3s						
T1216				AML	AML		
	comp=E,450µm,0.3s						
CESI	**CESI - Serrava**	**0.11**	**308**	P	Pg	21 50 24.5	+0.5
CESI				S	Sg	21 50 26.8	+0.6
CESI				AML	AML		
	comp=E,296µm,0.6s						
CESI				AML	AML		
	comp=N,500µm,0.2s						
CESI				AML	AML		
	comp=E,296µm,1.4s						
T1219	**Muccia, Frazio**	**0.12**	**355**	P	Pg	21 50 24.5	+0.4
T1219				S	Sg	21 50 26.8	+0.4
T1219				AML	AML		
	comp=E,103µm,0.2s						
T1219				AML	AML		
	comp=N,105µm,0.4s						
T1219				AML	AML		
	comp=N,105µm,1.6s						
T1219				AML	AML		
	comp=E,103µm,1.8s						
MC2	**Monte Cornacci**	**0.13**	**101**	P	Pg	21 50 24.7	+0.4
MC2				S	Sg	21 50 27.4	+0.7
T1245	**Castelsantange**	**0.15**	**123**	P	Pg	21 50 25.0	+0.4
T1245				S	Sg	21 50 27.8	+0.7
T1245				AML	AML		
	comp=E,194µm,0.3s						
T1245				AML	AML		
	comp=N,271µm,0.1s						
T1256	**Bolognola (MC)**	**0.17**	**65**	P	Pg	21 50 25.3	+0.4
T1256				S	Sg	21 50 28.5	+1.0
T1256				AML	AML		
	comp=N,131µm,0.1s						
T1256				AML	AML		
	comp=E,74µm,0.3s						
T1220	**Camerino, Fraz**	**0.18**	**16**	P	Pg	21 50 25.6	+0.5
T1220				S	Sg	21 50 28.9	+1.1
T1220				AML	AML		
	comp=E,320µm,0.3s						
T1220				AML	AML		
	comp=N,264µm,0.2s						
T1220				AML	AML		
	comp=E,321µm,0.3s						
T1220				AML	AML		
	comp=N,264µm,0.2s						
T1220				AML	AML		
	comp=N,264µm,1.8s						
T1212	**Cascia, Frazio**	**0.19**	**175**	P	Pg	21 50 25.6	+0.5
T1212				S	Sg	21 50 29.0	+1.0
T1214	**Arquata del Tr**	**0.22**	**142**	P	Pg	21 50 26.3	+0.4
T1214				S	Sg	21 50 29.8	+0.7
MMO1	**Montemonaco**	**0.23**	**99**	P	Pg	21 50 26.3	+0.4
MMO1				S	Sg	21 50 30.1	+0.9
T1217	**Poggiodomo (PG**	**0.23**	**197**	P	Pg	21 50 26.4	+0.4
T1217				S	Sg	21 50 30.4	+1.1
T1218	**Civita (PG)**	**0.28**	**165**	P	Pb	21 50 27.4	-0.6
T1218				S	Sg	21 50 31.6	+1.1
ASSB	**Assisi San Ben**	**0.29**	**292**	⇑P	Pg	21 50 27.3	+0.3
ASSB				AML	AML		
	comp=E,69µm,1.0s						
ASSB				AML	AML		
	comp=N,50µm,0.1s						
T1241	**Roccafluvione,**	**0.31**	**105**	P	Pg	21 50 27.7	+0.3
T1241				S	Sb	21 50 32.8	-0.9
SNTG	**Esanatoglia**	**0.32**	**349**	P	Pg	21 50 28.1	+0.5
MOMA	**Monte Martano**	**0.36**	**248**	P	Pg	21 50 28.5	+0.2
ATCC	**AVT- Casa Cast**	**0.37**	**312**	P	Pg	21 50 28.9	+0.4
EL6	**Elcito**	**0.40**	**8**	⇓P	Pg	21 50 29.4	+0.4
T1211	**Morro Reatino**	**0.42**	**197**	P	Pg	21 50 29.4	0.0
T1211				S	Sb	21 50 36.6	-0.4

ROM 16 21:50:41.5±0.1,**42°.932N**±0°.002×**13°.021E**±0°.004,
h10km,**ML1.4**/15,**2C-5D,Error ellipse: s-maj=0.3km**
s-min=0.2km az=276.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.04**	**182**	P	Pg	21 50 43.9	+0.5
T1216				S	Sg	21 50 45.4	+0.5
T1216				AML	AML		
	comp=E,990µm,0.4s						
T1216				AML	AML		
	comp=N,1176µm,0.3s						
T1216				AML	AML		
	comp=E,987µm,0.4s						
T1216				AML	AML		
	comp=N,1173µm,0.3s						
CESI	**CESI - Serrava**	**0.11**	**310**	P	Pg	21 50 44.8	+0.5
CESI				S	Sg	21 50 47.1	+0.7
CESI				AML	AML		
	comp=E,658µm,0.6s						
CESI				AML	AML		
	comp=N,1285µm,0.2s						
T1219	**Muccia, Frazio**	**0.12**	**355**	P	Pg	21 50 44.9	+0.4
T1219				S	Sg	21 50 47.1	+0.5
T1219				AML	AML		
	comp=N,210µm,0.4s						
T1219				AML	AML		
	comp=E,192µm,0.1s						
MC2	**Monte Cornacci**	**0.13**	**99**	P	Pg	21 50 45.1	+0.5
MC2				S	Sg	21 50 47.7	+0.9
T1245	**Castelsantange**	**0.14**	**122**	P	Pg	21 50 45.4	+0.5
T1245				S	Sg	21 50 48.2	+1.0
T1245				AML	AML		
	comp=E,376µm,0.2s						
T1245				AML	AML		
	comp=N,528µm,0.7s						
T1245				AML	AML		
	comp=E,376µm,0.2s						
T1256	**Bolognola (MC)**	**0.17**	**64**	P	Pg	21 50 45.7	+0.5
T1256				S	Sg	21 50 48.9	+1.1
T1256				AML	AML		
	comp=E,186µm,0.3s						
T1256				AML	AML		
	comp=N,344µm,0.1s						
T1212	**Cascia, Frazio**	**0.18**	**174**	P	Pg	21 50 46.0	+0.6
T1212				S	Sg	21 50 49.3	+1.3
T1220	**Camerino, Fraz**	**0.18**	**16**	P	Pg	21 50 45.9	+0.5
T1220				S	Sg	21 50 49.2	+1.1
T1220				AML	AML		
	comp=E,685µm,0.8s						
T1220				AML	AML		
	comp=N,628µm,0.2s						
T1214	**Arquata del Tr**	**0.22**	**141**	P	Pg	21 50 46.5	+0.4
T1214				S	Sg	21 50 50.2	+1.0
MMO1	**Montemonaco**	**0.23**	**98**	P	Pg	21 50 46.7	+0.5
MMO1				S	Sg	21 50 50.4	+1.0
T1217	**Poggiodomo (PG**	**0.23**	**197**	P	Pg	21 50 46.8	+0.6
T1217				S	Sg	21 50 50.8	+1.3
GUMA	**Gualdo di Mace**	**0.27**	**60**	P	Pg	21 50 47.6	+0.7
GUMA				S	Sb	21 50 52.3	-0.7
GUMA				AML	AML		
	comp=E,127µm,0.2s						
GUMA				AML	AML		
	comp=N,186µm,0.4s						
T1218	**Civita (PG)**	**0.27**	**165**	P	Pg	21 50 47.6	+0.6
T1218				S	Sb	21 50 52.2	-1.0
ASSB	**Assisi San Ben**	**0.29**	**293**	⇑P	Pg	21 50 47.6	+0.3
ASSB				AML	AML		
	comp=E,143µm,1.0s						
ASSB				AML	AML		
	comp=N,106µm,0.1s						
ASSB				AML	AML		
	comp=E,143µm,1.0s						
T1241	**Roccafluvione,**	**0.31**	**104**	P	Pg	21 50 48.0	+0.3
T1241				S	Sb	21 50 53.2	-1.1
T1241				AML	AML		
	comp=N,81µm,1.4s						
T1241				AML	AML		
	comp=E,51µm,0.1s						
T1241				AML	AML		
	comp=N,81µm,0.6s						
SNTG	**Esanatoglia**	**0.33**	**350**	P	Pg	21 50 48.3	+0.3
SNTG				AML	AML		
	comp=E,41µm,0.6s						
SNTG				AML	AML		
	comp=N,40µm,1.3s						
SNTG				AML	AML		
	comp=E,41µm,1.4s						
MOMA	**Monte Martano**	**0.35**	**249**	⇓P	Pg	21 50 49.0	+0.5
MOMA				AML	AML		
	comp=N,62µm,1.5s						
MOMA				AML	AML		
	comp=N,62µm,1.5s						
MOMA				AML	AML		
	comp=E,70µm,0.2s						
MOMA				AML	AML		
	comp=N,62µm,0.5s						
ATCC	**AVT- Casa Cast**	**0.38**	**312**	⇓P	Pg	21 50 49.3	+0.3
ATCC				AML	AML		
	comp=E,45µm,1.6s						
ATCC				AML	AML		
	comp=N,38µm,1.6s						
ATCC				AML	AML		
	comp=E,45µm,0.4s						
ATCC				AML	AML		
	comp=N,38µm,0.4s						
SMA1	**SAN MARTINO**	**0.38**	**142**	P	Pg	21 50 49.6	+0.6
SMA1				AML	AML		
	comp=E,28µm,0.8s						
SMA1				AML	AML		
	comp=N,28µm,1.1s						
SMA1				AML	AML		
	comp=N,28µm,0.9s						
ARRO	**Arrone**	**0.40**	**208**	⇓P	Pb	21 50 50.1	-0.5
EL6	**Elcito**	**0.40**	**8**	⇑P	Pg	21 50 49.7	+0.3
T1211	**Morro Reatino**	**0.42**	**197**	S	Sb	21 50 57.4	-0.1
MURB	**Monte Urbino**	**0.49**	**312**	⇓P	Pg	21 50 51.3	+0.3
MURB				S	Sb	21 50 59.8	+0.3
MURB				AML	AML		
	comp=E,70µm,1.0s						
MURB				AML	AML		
	comp=N,56µm,1.4s						
MURB				AML	AML		
	comp=N,56µm,0.6s						
TERO	**Teramo**	**0.53**	**126**	⇓P	Pg	21 50 51.7	0.0
PIEI	**Pieia**	**0.70**	**330**	S	Sb	21 51 06.6	+1.0
PIEI				AML	AML		
	comp=E,12µm,1.6s						
PIEI				AML	AML		
	comp=N,13µm,1.6s						
PIEI				AML	AML		
	comp=E,12µm,0.4s						

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*DJA **16** 21:51:04.6±0.2,4°S±2°×12°9E±°,h144km±2km,M4.5/26,*
mB5.0/4,mb4.4/26,MLv4.6/13,Mw(mB)4.4/4
*NEIC **16** 21:51:04.1±1.7,4°.13S±0°.05×129°.36E±0°.07,h132km±7km,*
mb4.6/53,Error ellipse: s-maj=10.6km s-min=7.1km
az=69.0
*IDC **16** 21:51:05.2±1.6,4°.17S×129°.47E,h147km±14km,mb3.7/12,*
mbtmp4.3/16,MS2.8/1,Error ellipse: s-maj=21.5km
s-min=10.8km az=75.0
ISC 16 21:51:05.0±0.3,**4°.18S**±0°.04×**129°.37E**±0°.04,**h150**km,**n161,**
σ1ˢ34/171,**mb4.5**/41,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.63**	**123**	P	**Pn**	**21 51 27.2**	**+0.2**
BNDI	**Bandanaira**	**0.63**	**123**	P	**Pn**	**21 51 27.3**	**+0.2**
BNDI				S	**Sn**	**21 51 44.1**	**+0.3**
MSAI	**Masohi**	**0.94**	**332**	P	**Pn**	**21 51 28.1**	**-1.2**
MSAI				S	**Sn**	**21 51 44.5**	**-3.3**
AAI	**Ambon**	**1.27**	**293**	P	**Pn**	**21 51 32.1**	**-0.1**
AAI				S	**Sn**	**21 51 51.2**	**-1.9**
NLAI	**Namlea**	**2.45**	**292**	P	**Pn**	**21 51 45.5**	**0.0**
FAKI	**Fak Fak**	**3.13**	**67**	Pn	**Pn**	**21 51 53.2**	**-0.8**
FAKI				Sn	**Sn**	**21 52 27.3**	**-4.7**
FAKI	**Fak Fak**	**3.13**	**67**	P	**Pn**	**21 51 53.3**	**-0.8**
FAKI	**Fak Fak**	**3.13**	**67**	P	**Pn**	**21 51 53.2**	**-0.8**
SIJI	**Sorong**	**3.79**	**30**	P	**Pn**	**21 52 00.8**	**-1.8**
	390nm,0.2s,baz=241,slow=21,SNR=484						
SIJI				S	**Sn**	**21 52 42.4**	**-5.0**
	624nm,0.2s,baz=245,slow=21,SNR=32						
LBMI	**Labuha**	**3.98**	**332**	P	**Pn**	**21 52 04.8**	**-0.3**
SANI	**Sanana**	**3.99**	**302**	P	**Pn**	**21 52 04.3**	**-0.8**
SANI	**Sanana**	**3.99**	**302**	P	**Pn**	**21 52 04.2**	**-0.8**
SAUI	**Saumlaki**	**4.24**	**153**	Pn	**Pn**	**21 52 08.2**	**-0.2**
SAUI				Sn	**Sn**	**21 52 56.7**	**-1.0**
SAUI	**Saumlaki**	**4.24**	**153**	P	**Pn**	**21 52 09.4**	**+1.1**
TNTI	**Ternate**	**5.31**	**338**	Pn	**Pn**	**21 52 20.8**	**-1.7**
TNTI	**Ternate**	**5.31**	**338**	P	**Pn**	**21 52 22.2**	**-0.4**
	37nm,0.6s,0.2nm						
RKPI	**Ransiki, Papua**	**5.48**	**61**	P	**Pn**	**21 52 24.1**	**-0.7**
	516nm,0.8s,14µm10nm						
SOEI	**Soe**	**7.51**	**222**	Pn	**Pn**	**21 52 52.9**	**+1.0**
SOEI	**Soe**	**7.51**	**222**	P	**Pn**	**21 52 53.5**	**+1.6**
	33nm,0.7s,0.1nm						
GTOI	**Gorontalo**	**7.96**	**307**	P	Pn	21 53 02.2	+4.4
	5.8nm,0.9s						
MRSI	**Marisa**	**8.75**	**302**	P	**Pn**	**21 53 09.1**	**+0.7**
	14nm,0.5s						
MTN	**Manton Dam**	**8.78**	**169**	Pn	**Pn**	**21 53 08.2**	**-0.7**
MTN	**Manton Dam**	**8.78**	**169**	P	**Pn**	**21 53 08.2**	**-0.7**
KDU	**Kakadu**	**8.99**	**160**	P	**Pn**	**21 53 09.9**	**-1.7**
BKSI	**Bulukumba**	**9.29**	**263**	P	**Pn**	**21 53 16.7**	**+1.1**
	8.5nm,0.8s,288nm						
SMPI	**Sarmi**	**9.57**	**77**	P	**Pn**	**21 53 19.2**	**-0.2**
	21nm,1.1s						
SPSI	**Sidrap Palu**	**9.58**	**271**	P	**Pn**	**21 53 21.5**	**+2.0**
	11nm,1.2s						
KAPI	**Kappang**	**9.63**	**265**	P	**Pn**	**21 53 22.3**	**+2.2**
	1.7nm,0.2s,baz=78,slow=24,SNR=1.7						
KAPI	**Kappang**	**9.63**	**265**	Pn	**Pn**	**21 53 19.1**	**-1.0**
TOLI2	**Tolitoli**	**10.07**	**301**	Pn	**Pn**	**21 53 25.3**	**-0.6**
BASI	**Baing, Sumba**	**10.59**	**235**	P	**Pn**	**21 53 34.5**	**+1.7**
KNRA	**Kununurra**	**11.44**	**183**	Pn	**Pn**	**21 53 42.9**	**-1.1**
KNRA	**Kununurra**	**11.44**	**183**	P	**Pn**	**21 53 42.5**	**-1.5**
PLAI	**Plampang**	**12.41**	**248**	P	**Pn**	**21 53 57.2**	**+0.5**
PLAI	**Plampang**	**12.41**	**248**	P	**Pn**	**21 53 57.1**	**+0.4**

	28nm,0.6s						
TWSI	Taliwang, Sumb	13.21	249	P	Pn	21 54 07.7	+0.8
	20nm,0.7s						
FITZ	Fitzroy Crossi	14.31	195	Pn	Pn	21 54 19.5	-1.3
SRBI	Singaraja	14.60	254	P	P	21 54 25.9	-1.0
	29nm,0.8s						
IGBI	Denpasar	14.86	251	P	P	21 54 28.9	-0.9
	37nm,0.9s						
JAGI	Jajag, Banyuwa	15.71	254	Pn	Pn	21 54 37.1	-1.2
JAGI				IAmb	IAmb	21 54 38.5	
	comp=Z,18nm,0.9s						
JAGI	Jajag, Banyuwa	15.71	254	P	Pn	21 54 37.9	-0.4
JAGI	Jajag, Banyuwa	15.71	254	P	P	21 54 38.5	-0.7
	comp=Z,16nm,0.6s						
WB0	Warramunga Arr	16.25	163	Pn	Pn	21 54 43.0	-1.8
WB0				IAmb	IAmb	21 54 47.2	
	comp=Z,40nm,1.1s						
GMJI	Gumukmas	16.34	255	P	P	21 54 47.0	+0.8
	comp=Z,16nm,0.9s						
WRAB	Tennant Creek	16.39	163	P	Pn	21 54 44.4	-2.2
WRAB				IAmb	IAmb	21 54 48.5	
	comp=Z,23nm,0.8s						
WRAB	Tennant Creek	16.39	163	P	Pn	21 54 45.0	-1.6
WRA	Warramunga Arr	16.40	163	P	Pn	21 54 45.3	-1.3
	comp=Z,17nm,0.5s,baz=340,slow=12,SNR=125						
WRA				S	S	21 57 37.4	-12
	comp=Z,2.4nm,0.4s,baz=353,slow=23,SNR=2.8						
WRA				ScP	ScP	22 02 50.7	-0.1
	comp=Z,0.3nm,0.6s,baz=327,slow=2.3,SNR=4.7						
WRA	Warramunga Arr	16.40	163		Pn	21 54 44.6	-2.1
WB2	Warramunga Arr	16.40	163	P	Pn	21 54 45.1	-1.6
WB2				IAmb	IAmb	21 54 49.0	
	comp=Z,32nm,1.0s						
KKM	Kota Kinabalu	16.61	308	Pn	P	21 54 46.6	-2.5
KKM				IAmb	IAmb	21 54 50.7	
	comp=Z,23nm,1.1s						
COEN	Coen	16.73	126	P	Pn	21 54 51.6	+1.0
PWJI	Pagerwojo	17.88	257	P	Pn	21 55 03.2	-1.3
	comp=Z,13nm,0.5s						
SBUM	Sibu	18.36	291	P	P	21 55 08.1	-0.3
QIS	Mount Isa	19.08	149	P	Pn	21 55 17.1	-1.5
MBWA	Marble Bar	19.30	208	P	P	21 55 17.8	-0.8
MBWA				IAmb	IAmb	21 55 22.8	
	comp=Z,42nm,1.1s						
MBWA	Marble Bar	19.30	208	P	P	21 55 17.7	-0.8
PSA00	Pilbara Seismi	19.61	207	P	P	21 55 21.3	-0.5
PSA00				IAmb	IAmb	21 55 26.3	
	comp=Z,21nm,0.8s						
PSA00	Pilbara Seismi	19.61	207	P	P	21 55 21.2	-0.5
AS31	Alice Springs	19.86	168	P	P	21 55 25.7	+1.1
AS31				IAmb	IAmb	21 55 30.2	
	comp=Z,24nm,0.7s						
ASAR	Alice Springs	19.86	168	P	P	21 55 25.2	+0.7
	comp=Z,47nm,0.5s,baz=350,slow=12,SNR=637						
ASAR				S	S	21 58 55.6	-4.5
	comp=Z,12nm,0.9s,baz=347,slow=20,SNR=19						
ASAR				ScP	ScP	22 02 58.0	-0.2
	comp=Z,1.2nm,0.5s,baz=352,slow=2.6,SNR=11						
ASAR	Alice Springs	19.86	168	P	P	21 55 25.5	+1.0
AS01	Alice Springs	19.87	168	P	P	21 55 25.6	+1.0
KPJI	Karang Pucung	20.58	260	P	P	21 55 30.9	-1.4
	comp=Z,23nm,0.9s						
WRKA	Warakurna	20.76	183	P	P	21 55 34.6	+0.4
CNJI	Cibinong	22.34	261	P	P	21 55 47.9	-2.9
	comp=Z,23nm,0.9s						
CTA	Charters Tower	22.81	135	P	P	21 55 55.9	+0.7
	comp=Z,2.3nm,0.5s,baz=314,slow=13,SNR=7.2						
	comp=Z,2.3nm,0.5s						
CTAO	Charters Tower	22.81	135	P	P	21 55 55.3	+0.1
GIRL	Giralia	23.49	217	P	P	21 56 01.5	+0.2
CGJI	Cibinong	23.70	263	P	P	21 55 59.4	-3.9
	comp=Z,21nm,0.5s						
MEEK	Meekatharra	24.59	204	P	P	21 56 09.5	-1.8
MYKOM	Kota Tinggi	26.19	283	P	P	21 56 25.7	-0.1
MYKOM				IAmb	IAmb	21 56 30.0	
	comp=Z,7.1nm,0.7s						
MULG	Mulgathing	26.34	171	P	P	21 56 27.5	+0.5
FORT	Forrest	26.49	183	P	P	21 56 27.7	-0.6
FORT				IAmb	IAmb	21 56 29.0	
	comp=Z,23nm,0.7s						
FORT	Forrest	26.49	183	P	P	21 56 28.0	-0.3
MORW	Morawa	27.80	206	P	P	21 56 38.1	-2.0
MORW				IAmb	IAmb	21 57 04.2	
	comp=Z,10nm,1.1s						
MORW	Morawa	27.80	206	P	P	21 56 39.1	-1.0
KMBL	Kambalda	27.95	194	P	P	21 56 41.1	-0.3
TPUB	Ta-pu	28.62	343	P	P	21 56 46.2	-1.2
TPUB				IAmb	IAmb	21 57 13.6	
	comp=Z,29nm,1.2s						
BLDU	Ballidu	28.88	203	P	P	21 56 48.8	-0.9
BBOO	Buckleboo	29.16	168	P	P	21 56 52.2	+0.1
BBOO				IAmb	IAmb	21 57 22.8	
	comp=Z,33nm,1.4s						
BBOO	Buckleboo	29.16	168	P	P	21 56 52.1	0.0
KLBR	Kellerberrin	29.37	201	P	P	21 56 53.3	-0.7
IPM	Ipoh	29.60	287	P	P	21 56 56.6	+0.4
IPM	Ipoh	29.60	287	P	P	21 56 56.8	+0.5
STKA	Stephens Creek	29.85	159	P	P	21 56 58.6	+0.5
	comp=Z,3.6nm,0.4s,baz=348,slow=11,SNR=10						
	comp=Z,3.6nm,0.4s						
STKA	Stephens Creek	29.85	159	P	P	21 56 58.7	+0.5
STKA	Stephens Creek	29.85	159	P	P	21 56 58.8	+0.6
KULM	Kulim	30.19	288	P	P	21 57 01.5	0.0
KULM				IAmb	IAmb	21 57 02.8	
	comp=Z,8.0nm,0.8s						
HTT	Hallett	30.43	164	P	P	21 57 05.1	+1.7
	comp=Z,14nm,1.8s						
NWAO	Narrogin (SRO)	30.77	200	P	P	21 57 05.6	-0.7
NWAO	Narrogin (SRO)	30.77	200	P	P	21 57 06.2	-0.1
PATS	Pohnpei	30.89	69	P	P	21 57 07.2	-0.5
PATS	Pohnpei	30.89	69	P	P	21 57 07.6	0.0
CMSA	Cobar Meteorol	31.24	152	P	P	21 57 11.6	+1.1
GSI	Gunungsitoli	32.24	279	P	P	21 57 18.1	-1.4
GSI				IAmb	IAmb	21 57 43.4	
	comp=Z,11nm,1.0s						
ARPS	Mount Arapiles	34.40	162	P	P	21 57 39.3	+1.4
CAN	Canberra	35.91	152	P	P	21 57 52.3	+1.4
TOO	Toolangi	36.36	158	P	P	21 57 55.2	+0.5
TOO				IAmb	IAmb	21 57 59.3	
	comp=Z,11nm,1.1s						
NJ2	Nanjing	37.40	345	*e*P	P	21 58 04.8	+1.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CMAR	Chiang Mai Arr	37.49	308	P	P	21 58 05.5	+1.1
	comp=Z,1.0nm,0.3s,baz=138,slow=7.0,SNR=8.0						
	comp=Z,1.0nm,0.3s						
JMN	Monobe	37.94	6	P	P	21 58 08.8	+0.7
JMN	Monobe	37.94	6	P	P	21 58 09.3	+1.2
JHS	Saijyo	39.13	5	P	P	21 58 18.7	+0.8
JHS				IAmb	IAmb	21 58 19.5	
	comp=Z,24nm,1.3s						
JHS	Saijyo	39.13	5	P	P	21 58 18.9	+1.0
PZH	PanZhiHua	40.56	320	P	P	21 58 32.0	+2.0
PZH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,4.3s						
MAJO	Matsushiro	41.34	11	P	P	21 58 35.5	-0.6
MAJO				IAmb	IAmb	21 58 36.9	
	comp=Z,16nm,1.2s						
MJAR	Matsushiro Arr	41.34	11	P	P	21 58 35.5	-0.6
	comp=Z,3.8nm,0.6s,baz=189,slow=9.9,SNR=9.9						
	comp=Z,3.8nm,0.6s						
MJB9	Matsu-Tunnel	41.35	11	P	P	21 58 36.1	-0.1
MJB9				IAmb	IAmb	21 58 37.8	
	comp=Z,15nm,1.2s						
KSRS	Korea Array	41.44	358	P	P	21 58 37.4	+0.6
	comp=Z,0.8nm,0.4s,baz=186,slow=8.9,SNR=4.0						
KSRS				LR	LR	22 17 24.6	
	comp=Z,12nm,18.9s,baz=270,slow=38						
	comp=Z,0.8nm,0.4s						
JMM	Marumori	43.16	13	P	P	21 58 50.8	0.0
JTM	Tenmabayashi	46.02	12	P	P	21 59 13.4	+0.1
HHC	Hu-ho-hao-te	47.69	342	*e*P	P	21 59 29.0	+2.5
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,6.0s						
BTO	Baotou	47.97	340	*e*P	P	21 59 32.8	+4.1
BTO				pP	pP	22 00 05.0	+3.0
BTO				sP	sP	22 00 21.3	+2.8
BTO				PP	PP	22 01 26.6	+4.4
BTO				S	S	22 06 24.8	+10
BTO				sS	sS	22 07 20.0	+8.3
BTO	Baotou	47.97	340	SS	SS	22 09 46.6	+0.4
BTO				pmax	pmax		
	comp=Z,20nm,0.5s						
BTO				pmax	pmax		
	comp=Z,360nm,4.3s						
USRK	Ussuriysk Ar.	48.22	3	P	P	21 59 31.0	+0.6
	comp=Z,3.1nm,0.5s,baz=184,slow=6.6,SNR=6.8						
	comp=Z,3.1nm,0.5s						
USRK	Ussuriysk Ar.	48.22	3	P	P	21 59 30.6	+0.2
MDJ	Mudanjiang	48.58	0	P	P	21 59 34.1	+1.0
MDJ				pP	pP	22 00 05.8	-1.6
MDJ				PcP	PcP	22 00 55.1	-1.4
MDJ				PP	PP	22 01 28.9	+1.4
MDJ				S	S	22 06 27.9	+4.6
MDJ				sS	sS	22 07 24.1	+4.2
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,370nm,5.0s						
MDJ				LR	LR		
	comp=N,110nm,6.5s						
MDJ				LR	LR		
	comp=E,190nm,5.4s						
MDJ				LR	LR		
	comp=Z,190nm,6.1s						
PALK	Pallekele	49.88	283	P	P	21 59 43.1	-0.6
PALK				IAmb	IAmb	21 59 57.7	
	comp=Z,6.5nm,1.1s						
TAPN	Taplejung	50.98	310	*e*P	P	21 59 51.8	-0.1
	comp=Z,8.2nm,0.4s						
GTA	Gaotai	51.22	331	*e*P	P	21 59 54.5	+1.1
GTA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
RAMN	Ramite	51.62	309	*e*P	P	21 59 56.9	+0.2
	comp=Z,12nm,0.5s						
JIRN	Jiri	52.29	310	*e*P	P	22 00 01.8	0.0
	comp=Z,7.7nm,0.5s						
GUN	Gumba	52.66	310	*e*P	P	22 00 04.0	-0.5
	comp=Z,9.6nm,0.5s						
QRZ	Quartz Range	53.18	140	P	P	22 00 09.3	+1.6
QRZ				IAmb	IAmb	22 00 31.5	
	comp=Z,18nm,1.4s						
GKN	Gorkha	53.66	309	*e*P	P	22 00 10.6	-0.9
LBZ	Lake Benmore	53.72	144	P	P	22 00 12.4	+0.8
LBZ				IAmb	IAmb	22 00 13.3	
	comp=Z,8.4nm,0.6s						
THZ	Tophouse	53.91	140	P	P	22 00 14.3	+1.3
THZ				IAmb	IAmb	22 00 25.8	
	comp=Z,9.8nm,1.1s						
HEH	HeiHe	54.24	358	*e*P	P	22 00 15.3	+0.1
HEH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HEH				pmax	pmax		
	comp=Z,150nm,7.4s						
TUWZ	Tuamarina	54.41	140	P	P	22 00 17.4	+0.9
DANN	Dangsing	54.50	309	*e*P	P	22 00 17.4	-0.4
	comp=Z,13nm,0.8s						
TCW	Tory Channel	54.51	139	P	P	22 00 18.0	+0.6
KHZ	Kahutara	54.66	141	P	P	22 00 19.2	+0.9
PYUN	Piuthan	54.98	309	*e*P	P	22 00 20.7	-0.5
	comp=Z,14nm,0.8s						
BHW	Baring Head	55.00	139	P	P	22 00 21.1	+0.3
BKZ	Black Stump Fm	55.03	136	P	P	22 00 22.2	+1.0
BKZ				IAmb	IAmb	22 00 23.2	
	comp=Z,7.9nm,1.0s						
MRZ	Mangatainoka R	55.10	138	P	P	22 00 21.5	-0.1
MRZ				IAmb	IAmb	22 00 23.9	
	comp=Z,16nm,1.2s						
RTZ	Ruatahuna	55.12	135		P	22 00 23.2	+1.3
RTZ				IAmb	IAmb	22 00 35.3	
	comp=Z,12nm,1.2s						
ULN	Ulaanbaatar	55.41	342	P	P	22 00 23.9	+0.1
SONM	Songino Array	55.59	341	P	P	22 00 26.2	+1.1
	comp=Z,0.9nm,0.7s,baz=163,slow=8.2,SNR=7.5						
	comp=Z,0.9nm,0.7s						
SONM	Songino Array	55.59	341	P	P	22 00 25.7	+0.7
MNCI	Minicoy	57.51	282	P	P	22 00 38.8	-0.3
WMQ	Urumqi	60.71	327	*e*P	P	22 01 03.0	+2.3
PEA0B	Petropavlovsk-	61.87	19	P	P	22 01 09.2	+1.0
PETK	Petropavlovsk-	61.87	19	P	P	22 01 09.5	+1.3
	comp=Z,3.0nm,0.6s,baz=182,slow=8.1,SNR=5.5						
	comp=Z,3.0nm,0.6s						
PETK	Petropavlovsk-	61.87	19	P	P	22 01 08.7	+0.5
CASY	Casey	63.38	188	P	P	22 01 18.2	+0.2
MK31	Makanchi Array	65.54	326	P	P	22 01 32.9	+0.5
MKAR	Makanchi Array	65.54	326	P	P	22 01 32.8	+0.4
	comp=Z,0.9nm,0.5s,baz=116,slow=8.1,SNR=19						
	comp=Z,0.9nm,0.5s						
MKAR	Makanchi Array	65.54	326	P	P	22 01 32.5	+0.1
MAKZ	Makanchi	65.72	326	P	P	22 01 33.6	0.0
ZALV	Zalesovo Beam	68.80	334	P	P	22 01 53.1	+0.4
	comp=Z,0.9nm,0.6s,baz=142,slow=5.5,SNR=4.6						
	comp=Z,0.9nm,0.6s						
GAR	Garm	69.25	314		P	22 01 55.8	-0.3
KURK	Kurchatov	69.80	328	P	P	22 01 58.3	-0.7
VNDA	Vanda	75.30	173	P	P	22 02 31.3	+0.2
	comp=Z,1.4nm,0.6s,baz=313,slow=7.9,SNR=7.0						
	comp=Z,1.4nm,0.6s						
VNDA	Vanda	75.30	173	P	P	22 02 31.4	+0.3
ABKAR	Akbulak array	79.93	321	P	P	22 02 57.5	+0.2
ABKAR	Akbulak array	79.93	321	P	P	22 02 57.0	-0.2
VOI	Vohitsoka	81.58	249	P	P	22 03 06.3	-0.5
VOI				IAmb	IAmb	22 03 34.9	
	comp=Z,9.4nm,1.0s						
ILAR	Eielson Array	91.08	25	P	P	22 03 51.9	-0.3
	comp=Z,0.2nm,0.4s,baz=254,slow=4.5,SNR=4.4						
	comp=Z,0.2nm,0.4s						
TORD	Torodi Ar. Bea	127.60	283	PKP	PKiKP	22 09 53.6	-0.4
	comp=Z,0.5nm,0.6s,baz=118,slow=2.8,SNR=5.0						
CPUP	Villa Florida	148.98	168	PKPbc	PKiKP	22 10 36.3	-1.0
	comp=Z,3.1nm,0.8s,baz=213,slow=1.4,SNR=5.7						

IDC 16 22:00:35.4±3.4**,7°.75S**×**160°.18E,h0**km**,mb3.8**/3**,**
mbtmp3.8/3**,MS3.0**/1**,Error ellipse: s-maj=76.1km**
s-min=27.1km az=86.0,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.69	188	Pn	Pn	22 01 05.7	-0.6
	732nm,0.3s,baz=172,slow=6.3,SNR=14						
HNR				Sn	Sg	22 01 30.2	+0.4
	776nm,0.3s,baz=209,slow=19,SNR=6.2						
HNR				LR	LR	22 01 32.8	
	comp=Z,1μm,18.2s,baz=74,slow=34						
MSVF	Nonsavu	20.04	121	LR	LR	22 11 02.1	
	comp=Z,44nm,19.3s,baz=148,slow=31						
H11S2	WAKE ISLAND Hy	26.86	14	T	T	22 34 31.4	
	baz=193,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	26.86	14	T	T	22 34 37.3	
	baz=193,slow=76,SNR=15						
H11S1	WAKE ISLAND Hy	26.87	14	T	T	22 34 52.7	
	baz=193,slow=76,SNR=9.4						
WRA	Warramunga Arr	27.81	242	P	P	22 06 27.2	+0.6
	1.1nm,0.5s,baz=68,slow=9.2,SNR=11						
	1.1nm,0.5s						
H11N1	WAKE ISLAND Hy	28.08	14	T	T	22 35 57.7	
	baz=192,slow=76,SNR=23						
H11N3	WAKE ISLAND Hy	28.09	14	T	T	22 36 25.9	
	baz=192,slow=76,SNR=20						
H11N2	WAKE ISLAND Hy	28.10	14	T	T	22 36 15.1	
	baz=192,slow=76,SNR=26						
ASAR	Alice Springs	29.75	235	P	P	22 06 43.2	-0.7
	0.3nm,0.5s,baz=64,slow=9.4,SNR=4.2						
	0.3nm,0.5s						
MKAR	Makanchi Array	87.39	318	P	P	22 13 24.9	+0.1
	0.4nm,0.8s,baz=92,slow=5.6,SNR=3.9						
	0.4nm,0.8s						

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*NEIC **16** 22:19:56.1±1.2, 6°.3S±0°.1×146°.4E±0°.2, h112km±9km, mb4.2/32, Error ellipse: s-maj=23.4km s-min=15.2km az=81.0*

*IDC **16** 22:19:57.9±1.5, 6°.57S×146°.52E, h148km±18km, mb3.7/7, mbtmp4.2/10, MS2.9/3, Error ellipse: s-maj=26.8km s-min=12.9km az=106.0*

ISC 16 22:19:55.0±0.7**,6°.36S**±0°.07×**146°.4E**±0°.1**,h110**km**,n55,**
σ**1.s16**/53**,mb4.1**/21**,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.12	165	P	Pn	22 20 44.5	+1.7
	47nm,0.3s,baz=19,slow=13,SNR=25						
PMG				S	Sn	22 21 19.9	+0.4
	217nm,0.3s,baz=133,slow=21,SNR=34						
PMG				LR	LR	22 21 37.5	
	comp=Z,121nm,18.6s,baz=340,slow=34						
COEN	Coen	8.17	202	Pn	Pn	22 21 53.2	+2.3
CTA	Charters Tower	13.64	180	P	P	22 23 07.0	-2.0
	8.6nm,0.4s,baz=356,slow=14,SNR=26						
CTA				LR	LR	22 29 11.0	
	comp=Z,43nm,18.6s,baz=256,slow=41						
CTAO	Charters Tower	13.64	180		P	22 23 09.9	+0.8
FAKI	Fak Fak	14.47	283	P	P	22 23 19.6	+1.3
SIJI	Sorong	16.02	289	P	P	22 23 35.9	+0.4
	18nm,0.6s,baz=107,slow=11,SNR=6.6						
WB0	Warramunga Arr	17.68	220	P	P	22 23 53.3	-0.6
WB2	Warramunga Arr	17.84	220	P	P	22 23 54.9	-0.7
WRA	Warramunga Arr	17.85	220	P	P	22 23 54.9	-0.8
	1.6nm,0.6s,baz=40,slow=11,SNR=23						
WRA	Warramunga Arr	17.85	220	P	P	22 23 54.2	-1.4
EIDS	Eidsvold	19.43	167	P	Pn	22 24 14.7	-0.5
EIDS				IAmb	IAmb	22 24 15.3	
	comp=Z,8.2nm,1.0s						
GUMO	Guam	19.88	356	LR	LR	22 31 13.5	
	comp=Z,74nm,21.4s,baz=88,slow=34						
AS31	Alice Springs	20.96	214	P	Pn	22 24 31.6	-1.5
ASAR	Alice Springs	20.96	214	P	P	22 24 29.6	+0.1
	comp=Z,2.7nm,0.7s,baz=53,slow=8.7,SNR=18						
ASAR				S	S	22 28 13.7	-3.4
	comp=Z,1.1nm,0.8s,baz=31,slow=22,SNR=5.9						
	comp=Z,2.7nm,0.7s						
ASAR	Alice Springs	20.96	214	P	Pn	22 24 31.7	-1.4
FITZ	Fitzroy Crossi	23.33	238	P	P	22 24 54.1	+0.4
ARMA	Armidale	24.44	169	P	P	22 25 04.9	+1.2
ARMA				IAmb	IAmb	22 25 18.6	
	comp=Z,9.6nm,1.2s						
STKA	Stephens Creek	25.77	189	P	P	22 25 12.3	-3.3
	comp=Z,1.2nm,0.5s,baz=2.4,slow=13,SNR=2.1						
	comp=Z,1.2nm,0.5s						
STKA	Stephens Creek	25.77	189	P	P	22 25 16.6	+0.9
USRK	Ussuriysk Ar.	51.97	347	P	P	22 28 52.8	-0.1
	comp=Z,1.1nm,0.6s,baz=181,slow=8.5,SNR=4.8						
	comp=Z,1.1nm,0.6s						
CMAR	Chiang Mai Arr	52.86	299	P	P	22 29 01.2	+1.3
	comp=Z,2.3nm,0.3s,baz=118,slow=5.8,SNR=13						
	comp=Z,2.3nm,0.3s						
LSA	Lhasa	63.95	307	P	P	22 30 18.9	+1.5
ULN	Ulaanbaatar	64.12	332	P	P	22 30 14.6	-3.2
ULN				IAmb	IAmb	22 30 14.9	
	comp=Z,1.9nm,0.5s						
MK31	Makanchi Array	77.37	321	P	P	22 31 38.3	+0.3
MKAR	Makanchi Array	77.37	321	P	P	22 31 38.0	0.0
	comp=Z,1.0nm,0.7s,baz=97,slow=8.6,SNR=13						
	comp=Z,1.0nm,0.7s						
MAKZ	Makanchi	77.57	321	P	P	22 31 39.3	+0.2
MAKZ				IAmb	IAmb	22 31 41.0	
	comp=Z,3.3nm,1.2s						
ZALV	Zalesovo Beam	78.98	328	P	P	22 31 45.5	-1.1
	comp=Z,0.9nm,0.7s,baz=104,slow=6.3,SNR=4.2						
	comp=Z,0.9nm,0.7s						
ZALV	Zalesovo Beam	78.98	328	P	P	22 31 45.7	-0.9
ANM	Nome	79.26	19	P	P	22 31 49.0	+1.1
KURK	Kurchatov	81.12	323	P	P	22 31 58.7	+0.5
KURK				IAmb	IAmb	22 31 59.0	
	comp=Z,1.7nm,0.8s						
AAK	Ala-Archa	81.14	315	P	P	22 31 59.3	+0.6
AAK				IAmb	IAmb	22 32 00.9	
	comp=Z,2.9nm,1.3s						
N19K	Bonanza Creek	81.15	25	P	P	22 31 58.7	+0.4
M19K	Big River Lodg	81.74	24	P	P	22 32 02.6	+1.4
BRLK	Bradley Lake	82.22	27	P	P	22 31 58.3	-5.5
M20K	Styx River	82.25	25	P	P	22 32 04.5	+0.5
M20K				IAmb	IAmb	22 32 05.1	
	comp=Z,12nm,1.4s						
K20K	Telida	82.61	23	P	P	22 32 06.3	+0.6
K20K				IAmb	IAmb	22 32 18.0	
	comp=Z,6.5nm,1.4s						
SUA	Susitna One	83.06	26	P	P	22 32 08.0	-0.2
RC01	Rabbit Creek A	83.33	26	P	P	22 32 09.6	+0.1
CAST	Castle Rocks	83.42	23	P	P	22 32 10.2	+0.2
CAST				IAmb	IAmb	22 32 15.9	
	comp=Z,4.6nm,1.3s						
CHGR	Chuyangaron	84.03	310	P	P	22 32 13.8	+0.1
IMAR	Indian Mountai	84.05	21	P	P	22 32 13.5	+0.4
KKAR	Karatay Array	84.09	314	P	P	22 32 13.7	-0.1
KKAR	Karatay Array	84.09	314	P	P	22 32 13.2	-0.6
KKAR				IAmb	IAmb	22 32 15.5	
	comp=Z,2.5nm,1.2s						
TRF	Thorofare Moun	84.15	24	P	P	22 32 13.6	-0.2
TRF				IAmb	IAmb	22 32 31.8	
	comp=Z,1.6nm,0.9s						
H21K	Melozitna Rive	84.23	21	P	P	22 32 14.3	+0.3
H21K				IAmb	IAmb	22 32 15.3	
	comp=Z,2.1nm,1.1s						
SML	Sawmill	84.25	26	P	P	22 32 14.6	+0.4
I21K	Tanana	84.30	22	P	P	22 32 14.9	+0.6
I21K				IAmb	IAmb	22 32 19.5	
	comp=Z,3.6nm,1.4s						
SCM	Sheep Creek Mo	84.69	26	P	P	22 32 16.6	+0.1
MLY	Manley	84.69	22	P	P	22 32 16.8	+0.4
MLY				IAmb	IAmb	22 32 17.6	
	comp=Z,3.7nm,0.9s						
BWN	Browne	84.80	23	P	P	22 32 16.6	-0.3
MCK	McKinley	84.82	24	P	P	22 32 16.8	-0.2
MCK				IAmb	IAmb	22 32 30.5	
	comp=Z,9.8nm,1.4s						
NEA2	Nenana	85.14	23	P	P	22 32 18.3	-0.2
NEA2				IAmb	IAmb	22 32 19.4	
	comp=Z,9.1nm,1.4s						
ILAR	Eielson Array	86.06	23	P	P	22 32 22.1	-1.1
	comp=Z,2.7nm,0.6s,baz=250,slow=5.0,SNR=40						
	comp=Z,2.7nm,0.6s						
GERES	GERESS Array B	121.84	325	PKP	PKPdf	22 38 35.9	-0.6
	comp=Z,0.5nm,0.6s,baz=64,slow=3.1,SNR=5.0						
TORD	Torodi Ar. Bea	144.56	284	PKP	PKPab	22 39 18.6	+0.2
	comp=Z,2.1nm,0.7s,baz=60,slow=3.7,SNR=13						

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*IDC **16** 22:28:55.9±6.2, 9°.22S×120°.62E, h111km±49km, mb3.5/4, mbtmp3.7/7, MS4.3/1, Error ellipse: s-maj=152.6km s-min=14.8km az=61.0*

*DJA **16** 22:28:56.4±0.3, 9°S±3°×12°1E±°, h107km±5km, M3.8/8, mb4.1/6, MLv3.7/8*

ISC 16 22:28:55.8±0.7**,9°.21S**±0°.05×**120°.70E**±0°.07**,h100**km**,n24,**
σ**1.s51**/24**,mb3.7**/4**,Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BASI	Baing, Sumba	1.01	187	P	Pn	22 29 16.4	0.0
BASI				S	Sn	22 29 31.9	+0.1
MMRI	Maumere	1.62	70	P	Pn	22 29 25.6	+2.0
MMRI	Maumere	1.62	70	P	Pn	22 29 25.4	+1.8
PLAI	Plampang	2.91	277	P	Pn	22 29 42.1	+1.7
PLAI	Plampang	2.91	277	P	Pn	22 29 41.7	+1.3
SOEI	Soe	3.56	99	P	Pn	22 29 50.9	+1.7
TWSI	Taliwang, Sumb	3.80	277	P	Pn	22 29 53.5	+1.2
BKSI	Bulukumba	3.90	352	P	Pn	22 29 55.4	+1.7
KAPI	Kappang	4.27	347	P	Pn	22 29 57.8	-0.9
	3.3nm,0.4s,baz=180,slow=14,SNR=2.7						
KAPI				S	Sn	22 30 48.6	+1.0
	3.9nm,0.3s,baz=35,slow=22,SNR=8.6						
JAGI	Jajag, Banyuwa	6.51	276	P	Pn	22 30 30.2	+1.1
	18nm,1.8s,0.1nm						
PWJI	Pagerwojo	8.87	277	P	Pn	22 31 01.8	+0.6
	14nm,2.6s						
MBWA	Marble Bar	11.92	184	P	Pn	22 31 40.8	-1.6
GIRL	Giralia	14.73	204	P	Pn	22 32 19.0	-0.1
WRA	Warramunga Arr	16.96	130	P	Pn	22 32 47.0	-0.1
	0.4nm,0.6s,baz=302,slow=14,SNR=7.4						
WRA				S	Sn	22 35 43.7	-12
	0.3nm,0.5s,baz=305,slow=20,SNR=2.2						
WRKA	Warakurna	17.32	156	P	Pn	22 32 52.1	+0.6
MEEK	Meekatharra	17.45	186	P	Pn	22 32 55.2	+2.3
ASAR	Alice Springs	19.14	140	P	P	22 33 11.4	+0.1
	1.4nm,0.4s,baz=321,slow=11,SNR=7.7						
AS01	Alice Springs	19.16	140	P	Pn	22 33 16.7	+3.2
MORW	Morawa	20.23	192	P	Pn	22 33 26.8	+0.9
STKA	Stephens Creek	29.74	142	P	P	22 34 52.4	-0.5
	1.1nm,0.3s,baz=315,slow=10.0,SNR=3.6						
	1.1nm,0.3s						
HNR	Honiara	38.72	94	LR	LR	22 54 41.3	
	comp=Z,426nm,18.2s,baz=120,slow=40						
SONM	Songino Array	58.19	349	P	P	22 38 38.3	-1.2
	0.2nm,0.5s,baz=152,slow=6.5,SNR=2.0						
	0.2nm,0.5s						
MKAR	Makanchi Array	65.42	332	P	P	22 39 27.1	-0.8
	0.3nm,0.4s,baz=144,slow=8.1,SNR=11						
	0.3nm,0.4s						
ZALV	Zalesovo Beam	69.84	338	P	P	22 39 53.4	-2.1
	0.5nm,0.3s,baz=143,slow=4.2,SNR=4.0						

0.5nm,0.3s

IDC 16 22:32:04.5±1.9, 4°.80S×124°.02E, h0^{km}, mb3.2/2, mbtmp3.4/4, ML3.2/2, MS3.0/1, Error ellipse: s-maj=47.1km s-min=25.2km az=41.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	4.26	267	Pn	Pn	22 33 10.5	-0.2
	1.2nm,0.3s,baz=40,slow=15,SNR=3.9						
KAPI				Sn	Sn	22 34 01.5	+0.3
	1.2nm,0.3s,baz=259,slow=23,SNR=6.8						
	2.4nm,0.3s						
WRA	Warramunga Arr	18.09	147	P	Pn	22 36 16.2	-1.3
	0.1nm,0.3s,baz=325,slow=12,SNR=7.6						
	0.8nm,0.6s						
ASAR	Alice Springs	21.04	154	P	P	22 36 50.5	+0.3
	0.9nm,0.8s,baz=338,slow=12,SNR=7.8						
	0.9nm,0.8s						
JNU	Nakatsue	38.27	9	LR	LR	22 56 59.6	
	comp=Z,21nm,19.0s,baz=192,slow=39						
MKAR	Makanchi Array	63.22	329	P	P	22 42 35.1	+0.4
	0.2nm,0.6s,baz=132,slow=6.4,SNR=2.2						
	0.2nm,0.6s						

MAN 16 22:50:21.2, 10°.32N×126°.11E, h36^{km}, mb3.9, ML2.6, MS2.2, 1C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.53	178⇑	*e*P	Pn	22 50 33.5	+1.2
GLSP				*e*S	Sn	22 50 42.2	+2.2
SCPH	Surigao	0.81	229⇓	*i*P	Pn	22 50 37.2	+1.1
SCPH				*e*S	Sn	22 50 48.4	+1.5
MSLP	Maasin	1.24	262⇓	*e*P	Pn	22 50 42.3	+0.3
MSLP				*e*S	Sn	22 50 58.3	+0.8

WEL 16 23:26:08.5±0.3, 43°S±2°×17°3E±°, h13^{km}±3^{km}, M2.9/15, ML3.1/15, MLv2.9/15, Error ellipse: s-maj=0.0km s-min=0.0km az=117.3, confirmed

NOU 16 23:26:08.1, 42°.85S×172°.96E, h15^{km}, MLv3.5/8, South Island, New Zealand

ISC 16 23:26:08.4±1.1, 42°.77S±0°.03×172°.83E±0°.03, h15^{km}±9^{km}, n45, σ0^s.76/57, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	Greta Valley S	0.25	143	P	Pb	23 26 15.5	+0.8
GVZ				S	Sb	23 26 21.1	+2.2
LTZ	Lake Taylor	0.41	267	P	Pg	23 26 16.6	-0.1
LTZ				S	Sg	23 26 22.5	+0.2
AMCZ	Amberley	0.43	197	P	Pn	23 26 19.0	-1.0
KHZ	Kahutara	0.63	57	P	Pg	23 26 20.7	-0.1
KHZ	Kahutara	0.63	57	P	Pg	23 26 20.8	0.0
OXZ	Oxford	0.81	226	P	Pn	23 26 24.7	-0.5
OXZ				S	Sn	23 26 36.7	-0.2
MQZ	McQueen’s Vall	0.95	188	P	Pn	23 26 26.7	-0.4
MQZ				S	Sn	23 26 40.1	-0.3
THZ	Tophouse	1.00	3	P	Pb	23 26 26.2	-1.3
RACZ	Rakaia	1.08	207	P	Pb	23 26 28.6	-0.2
RACZ				S	Sn	23 26 44.6	+0.9
AKCZ	Akaroa Harbour	1.11	177	P	Pg	23 26 29.2	-0.6
AKCZ				S	Sn	23 26 44.6	+0.2
MHCZ	Mount Hutt	1.20	230	P	Pn	23 26 30.0	-0.6
MHCZ				S	Sb	23 26 46.2	+0.1
DSZ	Denniston Nort	1.27	323	P	Pn	23 26 31.4	-0.2
DSZ				S	Sb	23 26 48.2	0.0
BSWZ	Blackbirch Sta	1.31	37	P	Pn	23 26 32.4	+0.3
BSWZ				S	Sg	23 26 51.1	+0.5
MRNZ	Matariki Terra	1.37	358	P	Pn	23 26 32.6	-0.3
WACZ	Wakanui South	1.38	211	P	Pn	23 26 32.6	-0.5
WVZ	Waitaha Valley	1.56	258	P	Pn	23 26 36.0	+0.4
WVZ				S	Sn	23 26 55.8	+0.2
NNZ	Nelson	1.60	15	P	Pn	23 26 36.2	+0.1
RPZ	Rata Peaks	1.61	233	P	Pn	23 26 36.1	-0.1
RPZ	Rata Peaks	1.61	233	P	Pn	23 26 35.8	-0.4
RPZ				S	Sn	23 26 55.8	-0.8
ARCZ	Arundel	1.69	225	P	Pn	23 26 36.8	-0.5
ARCZ				S	Sn	23 26 57.8	-0.8
TKNZ	Takaka Hill	1.73	3	P	Pn	23 26 38.8	+0.8
TCW	Tory Channel	1.89	35	P	Pn	23 26 38.3	-1.8
GCSZ	Gaunt Creek Bo	1.91	252	P	Pn	23 26 41.1	+0.7
QRZ	Quartz Range	1.95	353	P	Pn	23 26 41.2	+0.3
QRZ	Quartz Range	1.95	353	P	Pn	23 26 40.8	-0.1
TMZ	Timaru	2.09	219	P	Pn	23 26 42.4	-0.4
DUWZ	D’Urville Isla	2.13	23	P	Pn	23 26 43.8	+0.4
FOZ	Fox Glacier	2.33	250	P	Pn	23 26 47.3	+1.2
LBZ	Lake Benmore	2.51	229	P	Pn	23 26 48.9	+0.3
OGWZ	Otaki Gorge	2.62	43	P	Pn	23 26 49.1	-1.0
ODZ	Otahua Downs	2.77	214	P	Pn	23 26 51.5	-0.7
ODZ	Otahua Downs	2.77	214	P	Pn	23 26 51.5	-0.7
MRZ	Mangatainoka R	2.94	45	P	Pn	23 26 53.0	-1.6
JCZ	Jackson Bay	3.22	245	P	Pn	23 26 59.0	+0.5
JCZ	Jackson Bay	3.22	245	P	Pn	23 26 58.7	+0.2
KHEZ	Kahui Hut	3.58	15	P	Pn	23 27 05.1	+1.7
PKE	Pukeiti	3.67	14	P	Pn	23 27 06.1	+1.4
VRZ	Vera Road	3.92	23	P	Pn	23 27 06.9	-1.1
WNVZ	Wahianoa	4.02	32	P	Pn	23 27 09.6	0.0
TRVZ	Turoa	4.03	32	P	Pn	23 27 09.2	-0.5
NGZ	Ngauruhoe	4.16	31	P	Pn	23 27 11.3	-0.1
OTVZ	Oturere	4.19	32	P	Pn	23 27 11.6	-0.3
HIZ	Hauiti	4.52	21	P	Pn	23 27 16.3	+0.1
HIZ	Hauiti	4.52	21	P	Pn	23 27 16.5	+0.3
BKZ	Black Stump Fm	4.54	39	P	Pn	23 27 15.9	-0.7

IDC 16 23:31:02.3±2.8, 16°.31S×74°.36W, h64^{km}±25^{km}, mb3.2/2, mbtmp3.6/7, ML3.5/5, Error ellipse: s-maj=45.1km s-min=25.4km az=48.0

ISC 16 23:30:59.7±1.1, 16°.4S±0°.1×74°.5W±0°.2, h35^{km}, n8, σ2^s.04/8, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	4.97	332	P	Pn	23 32 14.2	+2.2
	2.1nm,0.3s,baz=119,slow=20,SNR=1.7						
	5.8nm,0.2s						
LPAZ	La Paz	6.11	90	P	Pn	23 32 29.8	+1.7
	1.2nm,0.3s,baz=270,slow=10.0,SNR=20						
	3.2nm,0.4s						
LVC	Limon Verde	8.09	140	P	Pn	23 32 57.1	+2.0
	0.5nm,0.3s,baz=319,slow=10,SNR=2.4						
	1.4nm,0.3s						
SIV	San Ignacio	12.90	90	P	Pn	23 34 00.3	-0.4
	baz=280,slow=16,SNR=2.9						
	1.5nm,0.9s						
CFA	Coronel Fontan	16.14	160	P	Pn	23 34 45.2	+1.1
	0.2nm,0.3s,baz=345,slow=12,SNR=1.1						
	0.5nm,0.3s						
TORD	Torodi Ar. Bea	80.81	73	P	P	23 43 08.9	-1.6
	0.6nm,0.7s,baz=268,slow=5.8,SNR=3.3						
	0.6nm,0.7s						
YKA	Yellowknife Ar	84.73	343	P	P	23 43 27.7	-2.1
	0.1nm,0.7s,baz=136,slow=5.5,SNR=2.8						
	0.1nm,0.7s						
WRA	Warramunga Arr	134.08	219	PKP	PKiKP	23 50 14.9	-0.9
	0.2nm,0.4s,baz=142,slow=1.5,SNR=2.1						

IDC 16 23:31:42.5±1.9, 16°.45S×74°.40W, h57^{km}±18^{km}, mb3.6/3, mbtmp4.0/9, ML3.8/6, MS3.5/11, Error ellipse: s-maj=34.5km s-min=12.6km az=55.0

ISC 16 23:31:40.6±0.8, 16°.53S±0°.09×74°.5W±0°.1, h35^{km}, n27, σ1^s.66/13, mb3.8/3, MS3.5/6, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	5.06	333	P	Pn	23 32 54.0	0.0
	8.1nm,0.3s,baz=101,slow=18,SNR=2.6						
NNA				S	Sn	23 33 54.0	+2.7
	126nm,0.3s,baz=235,slow=22,SNR=1.7						
	24nm,0.3s						
LPAZ	La Paz	6.12	89	P	Pn	23 33 11.3	+2.2
	5.0nm,0.3s,baz=292,slow=9.2,SNR=18						
LPAZ				LR	LR	23 35 54.2	
	comp=Z,618nm,20.5s,baz=268,slow=42						
	14nm,0.4s						
LVC	Limon Verde	8.02	140	P	Pn	23 33 37.7	+2.7
	1.9nm,0.3s,baz=3.1,slow=9.8,SNR=6.0						
LVC				S	Sn	23 35 04.5	-0.1
	7.0nm,0.3s,baz=213,slow=21,SNR=1.9						
LVC				LR	LR	23 36 34.1	
	comp=Z,218nm,21.2s,baz=328,slow=36						
	4.3nm,0.3s						
ATAH	Atahualpa	10.09	337	P	Pn	23 34 03.2	-0.2
	0.2nm,0.3s,baz=146,slow=15,SNR=1.1						
ATAH				LR	LR	23 37 23.6	
	comp=Z,85nm,21.9s,baz=209,slow=34						
	2.3nm,0.6s						
SIV	San Ignacio	12.90	89	P	Pn	23 34 40.7	-1.0
	0.1nm,0.3s,baz=228,slow=16,SNR=3.7						
SIV				LR	LR	23 40 15.4	
	comp=Z,264nm,19.7s,baz=282,slow=40						
	2.7nm,0.4s						
CFA	Coronel Fontan	16.05	160	P	P	23 35 26.0	-0.8
	0.2nm,0.3s,baz=333,slow=13,SNR=1.3						
	0.8nm,0.3s						
H03N1	Juan Fernandez	17.30	192	T	T	23 54 26.7	
	baz=15,slow=74,SNR=2302						
H03N2	Juan Fernandez	17.30	193	T	T	23 53 56.8	
	baz=15,slow=74,SNR=2287						
H03N3	Juan Fernandez	17.32	193	T	T	23 53 58.8	
	baz=15,slow=74,SNR=1932						
CPUP	Villa Florida	18.70	124	LR	LR	23 44 40.3	
	comp=Z,136nm,19.0s,baz=252,slow=42						
ROSC	El Rosal	21.24	0	LR	LR	23 46 40.2	
	comp=Z,271nm,20.7s,baz=219,slow=42						
PLCA	Paso Flores	24.36	173	P	P	23 36 56.0	+0.7
	2.1nm,1.1s,baz=0.0,slow=12,SNR=2.0						
	2.1nm,1.1s						
MDP	Montagnes des	30.48	47	LR	LR	23 50 31.0	
	comp=Z,225nm,19.1s,baz=174,slow=37						
CMIG	Matias Romero	38.99	328	LR	LR	23 53 21.4	
	comp=Z,58nm,19.7s,baz=188,slow=33						
TXAR	Lajitas Array	53.60	328	LR	LR	00 01 27.0	
	comp=Z,36nm,18.8s,baz=115,slow=33						
SADO	Sadowa	61.15	356	LR	LR	00 10 38.2	
	comp=Z,26nm,19.4s,baz=236,slow=38						
RAR	Rarotonga	79.89	251	LR	LR	00 11 01.3	
	comp=Z,42nm,21.7s,baz=286,slow=30						
TORD	Torodi Ar. Bea	80.85	73	P	P	23 43 50.5	-1.0
	2.5nm,0.9s,baz=258,slow=4.8,SNR=9.7						
	2.5nm,0.9s						
YKA	Yellowknife Ar	84.83	343	P	P	23 44 09.8	-1.3
	0.6nm,0.8s,baz=141,slow=5.6,SNR=10						
	0.6nm,0.8s						
H11N3	WAKE ISLAND Hy	121.82	283	T	T	02 04 03.8	
	baz=98,slow=74,SNR=3.9						
H11N2	WAKE ISLAND Hy	121.84	283	T	T	02 04 07.7	
	baz=98,slow=74,SNR=7.0						
H11N1	WAKE ISLAND Hy	121.84	283	T	T	02 04 02.3	
	baz=98,slow=74,SNR=3.7						
H11S2	WAKE ISLAND Hy	121.84	282	T	T	02 04 13.5	
	baz=98,slow=75,SNR=14						
H11S1	WAKE ISLAND Hy	121.85	282	T	T	02 04 14.0	
	baz=98,slow=75,SNR=12						
H11S3	WAKE ISLAND Hy	121.86	282	T	T	02 04 04.9	
	baz=98,slow=75,SNR=19						
WRA	Warramunga Arr	133.99	219	PKP	PKiKP	23 50 55.9	-0.6
	0.6nm,0.7s,baz=144,slow=1.9,SNR=1.5						
MKAR	Makanchi Array	144.21	28	PKP	PKPab	23 51 09.1	-1.6
	0.1nm,0.6s,baz=354,slow=1.4,SNR=1.4						

KOLA 16 23:40:31.0, 67°.65N×33°.80E, h0^{km}, ML2.0, Error ellipse: s-maj=4.4km s-min=1.4km az=140.0, Khibiny, mines Kirovsk, Yukspor,Khibiny, mines Rasvumchorr, Central

BER 16 23:40:38.2±1.2, 67°.99N×33°.45E, h0^{km}, ML2.0, Suspected explosion

HEL 16 23:40:30.2±0.6, 67°.67N×34°.01E, h0^{km}, ML1.8, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA	Apatity	0.25	247	P	Pg	23 40 34.5	-0.5
APA				S	Sg	23 40 37.1	-1.2
LVZ	Lovozero	0.33	46	S	Sb	23 40 43.4	-1.6
APA0	Apatity Array	0.40	261	P	Pg	23 40 37.0	-0.7
APA0				S	Sg	23 40 41.2	-1.7
TERR	Teriberka	1.59	14	P	Pg	23 41 00.6	-0.1
TERR				S	Sg	23 41 22.0	+0.8
VRF	Varrio	1.68	275	PG	Pn	23 41 00.1	-0.7
	baz=90						
VRF				MSG		23 41 20.5	
	comp=Z,8.9nm,0.2s						
VRF				SG	Sn	23 41 20.6	-2.5
OLKF	Oulanka, Finla	2.26	235	PG	Pb	23 41 10.4	-1.4
OLKF				MSG		23 41 37.1	
	comp=Z,4.1nm,0.2s						
OLKF				SG	Sb	23 41 39.4	-0.9
KU6	Riekki	2.32	227	PG	Pb	23 41 11.4	-1.5
	baz=46						
KU6				MSG		23 41 38.9	
	comp=Z,2.7nm,0.2s						
KU6				SG	Sb	23 41 41.0	-0.9
MSF	Maaselka	2.65	230	PG	Pb	23 41 16.6	-1.8
MSF				SG	Sb	23 41 51.6	+0.2
VADS	Vadso	2.98	328	P	Pn	23 41 17.1	-1.6
VADS				S	Sn	23 41 55.2	+0.1
VADS	Vadso	2.98	328	*e*P	Pn	23 41 19.4	+0.7
VADS				*e*S	Sn	23 41 49.9	-5.1
VADS				IAML		23 42 00.8	
	comp=Z,15nm,0.4s						
RNF	Rovaniemi	3.30	255	PN	Pn	23 41 23.2	+0.2
RNF				SN	Sn	23 42 02.2	-0.7
KEV	Kevo	3.31	313	*e*P	Pn	23 41 24.0	+1.0
KEV	Kevo	3.31	313	PN	Pn	23 41 24.0	+1.0
ARA0	ARCESS Array S	3.64	305	*e*P	Pn	23 41 28.9	+1.3
ARA0				*e*S	Sn	23 42 05.5	-5.8
RMF	Romuvaara	3.85	208	PN	Pn	23 41 30.8	+0.3
	baz=22						
KLF	Kolari	3.90	268	PG	Pb	23 41 39.2	-0.5
KLF				SG	Sb	23 42 27.9	+0.6
HEF	Hetta	3.96	286	*e*S	Sn	23 42 16.1	-3.0
HEF	Hetta	3.96	286	PN	Pn	23 41 32.6	+0.5
HEF				SN	Sn	23 42 17.6	-1.5
TOF	Tornio	4.14	252	PG	Pb	23 41 45.1	+1.2
TOF				SN	Sn	23 42 22.2	-1.4
OUL	Oulu	4.17	235	PB	Pb	23 41 41.2	-3.2
KTK1	Kautokeino	4.22	294	SG	Sb	23 42 38.6	+2.1
PAJU	Pajala	4.27	266	PB	Pn	23 41 40.6	+4.3
PAJU				SN	Sn	23 42 25.0	-1.7
LANU	Lannavaara	4.56	280	SG	Sb	23 42 49.0	+2.5
KALU	Kalix	4.59	252	PG	Pb	23 41 53.1	+1.6
KALU				SN	Sn	23 42 33.4	-1.3
HAMF	Hammerfest	4.74	314	*e*S	Sn	23 42 33.1	-5.3
ERTU	Ertsjaerv	4.75	262	PN	Pn	23 41 42.3	-0.7
ERTU				SN	Sn	23 42 36.1	-2.6
KIF	Kilpisjarvi	5.08	291	*e*S	Sn	23 42 42.4	-4.2
TRO	Tromso	5.85	297	*e*S	Sn	23 42 58.5	-7.0
SALU	Saltoluokta	5.95	274	*e*S	Sn	23 43 03.8	-4.5

WEL 16 23:45:57.1±0.6, 42°S±3°×17°4E±°, h5^{km}, M2.1/5, ML2.4/6, MLv2.1/5, Error ellipse: s-maj=0.0km s-min=0.0km az=116.7, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.21	215	P	Pg	23 46 01.6	+0.3
KHZ				S	Sg	23 46 05.6	+1.4
BSWZ	Blackbirch Sta	0.54	14	P	Pg	23 46 07.4	-0.1
BSWZ				S	Sg	23 46 15.6	+1.1
THZ	Tophouse	0.76	308	P	Pg	23 46 12.0	+0.3
THZ				S	Sb	23 46 22.7	-0.9
GVZ	Greta Valley S	0.88	214	P	Pb	23 46 14.4	-0.4
GVZ				S	Sb	23 46 28.0	+1.1
NNZ	Nelson	1.05	347	P	Pg	23 46 16.7	-0.5
MRNZ	Matariki Terra	1.10	320	P	Pb	23 46 18.5	0.0
TCW	Tory Channel	1.11	23	P	Pg	23 46 17.5	-0.9
LTZ	Lake Taylor	1.19	242	P	Pg	23 46 19.4	-0.5
DUWZ	D’Urville Isla	1.45	7	P	Pn	23 46 23.5	-0.4
DUWZ				S	Sb	23 46 42.9	-0.3
DSZ	Denniston Nort	1.50	289	P	Pb	23 46 25.4	0.0
MQZ	McQueen’s Vall	1.66	207	P	Pn	23 46 23.7	-3.1
QRZ	Quartz Range	1.67	328	P	Pb	23 46 27.6	-0.6
AKCZ	Akaroa Harbour	1.73	199	P	Pn	23 46 25.1	-2.8
RACZ	Rakaia	1.88	217	P	Pn	23 46 27.4	-2.5
WACZ	Wakanui South	2.18	218	P	Pn	23 46 31.6	-2.4
WVZ	Waitaha Valley	2.34	248	P	Pn	23 46 35.2	-1.0
RPZ	Rata Peaks	2.44	232	P	Pn	23 46 35.2	-2.4
ARCZ	Arundel	2.52	226	P	Pn	23 46 36.5	-2.2

ISN 17 00:02:54.3±1.3, 29°.38N×51°.51E, h9^{km}±387^{km}, ML4.3

IDC 17 00:02:54.5±0.7, 29°.54N×51°.50E, h0^{km}, mb4.0/25, mbtmp4.0/33, ML3.8/8, MS3.4/19, Error ellipse: s-maj=15.7km s-min=12.0km az=0.0

MOS 17 00:02:56.4±1.4, 29°.48N×51°.55E, h24^{km}, mb4.4/22, Error ellipse: s-maj=6.8km s-min=4.2km az=113.5

TEH 17 00:02:56.7, 29°.67N×51°.49E, h12^{km}±11^{km}, ML4.3

NEIC 17 00:02:59.9±2.4, 29°.51N±0°.08×51°.54E±0°.08, h29^{km}±6^{km}, mb4.3/62, Error ellipse: s-maj=12.2km s-min=9.8km az=166.0

DSN 17 00:02:59.2±0.7, 29°.46N×51°.53E, h15^{km}, mb5.0/1, ML4.1/14, Error ellipse: s-maj=10.7km s-min=6.1km az=32.0

GII 17 00:03:00.7±0.0, 29°.71N×51°.62E, h20^{km}

OMAN 17 00:03:01.8±0.3, 29°.48N×51°.72E, h25^{km}, mb5.5/25, ml4.3/3, Error ellipse: s-maj=6.0km s-min=3.9km az=5.0

BGR 17 00:03:12.8, 30°.64N×50°.70E, h33^{km}, mb4.4

ISC 17 00:02:57.7±0.8, 29°.59N±0°.03×51°.56E±0°.03, h17^{km}±5^{km}, n402, σ1^s.66/444, mb4.3/73, MS3.4/15, 44C, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAZ1	Kazerun	0.08	63	Pg	Pg	00 03 00.3	-0.7
KAZ1				Sg	Sg	00 03 03.2	-0.1
AHBU	AHRAM	0.76	198	Pg	Pb	00 03 12.2	-0.2
SHI	Shiraz	0.83	86	Pg	Pb	00 03 13.8	0.0
SHI				Sg	Sn	00 03 28.3	+1.5
DSBU	Dashti - Bushe	1.25	192	Pg	Pg	00 03 22.2	+0.4
DSBU				Sg	Sg	00 03 41.8	+3.6
KLNJ	Kolanjah	1.41	1	Pg	Pn	00 03 21.9	-1.1
ABEH	Behbahan	1.52	312	Pg	Pn	00 03 23.8	-0.3
QIR1	Qir	1.71	130	Pn	Pb	00 03 29.5	+0.8
GHIR	Ghir-Karzin	1.80	136	Pn	Pb	00 03 30.4	+0.1
JHRM	Jahrom	2.07	121	Pn	Pb	00 03 34.5	-0.4
IRAM	Ramesheh	2.32	18	Pn	Pn	00 03 37.1	+1.8
IBRJ	Brojen	2.33	354	Pn	Pn	00 03 36.0	+0.5
LMD1	Lamerd	2.65	147	Pn	Pb	00 03 42.4	-2.3
SHK1	Shahrekord	2.79	348	Pn	Pn	00 03 42.0	+0.2
AMIS	Naft Sefid	2.85	317	Pn	Pn	00 03 42.7	+0.3
AHWZ	Ahwaz	3.06	305	Pn	Pn	00 03 46.4	+1.1
LAR1	LAR	3.13	127	Pn	Pn	00 03 48.3	+2.0
IPIR	Pirpir	3.14	350	Pn	Pn	00 03 47.5	+0.8
NASN	Na'in	3.37	18	Pn	Pn	00 03 51.0	+1.1
SAKB	Bahrain	3.71	194	P	Pn	00 03 56.8	+2.6
SAKB				S	Sn	00 04 40.5	+2.9
SHMA	Al-Shehemyia	3.76	188	P	Pn	00 03 57.4	+2.5
SHMA				S	Sn	00 04 41.4	+2.7
YZKH	Yazd	3.82	42	Pn	Pn	00 03 58.1	+2.3
ANAR	Anarak	4.04	27	Pn	Pn	00 03 59.9	+1.0
QAMS	Qamsar	4.13	358	Pn	Pn	00 04 00.6	+0.2
KHGB	Koh Gabri	4.34	78	Pn	Pn	00 04 05.5	+2.4
KHMZ	Khomeyn	4.36	342	Pn	Pn	00 04 03.7	+0.3
KRSH	Karshahi	4.39	6	Pn	Pn	00 04 04.4	+0.6
NGRK	Negar Kerman	4.50	88	Pn	Pn	00 04 07.8	+2.3
ZRDN	Zarand Kerman	4.52	71	Pn	Pn	00 04 07.8	+2.2
KRBR	Kerman	4.54	84	Pn	Pn	00 04 08.3	+2.4
TVBK	TV Kerman	4.54	84	Pn	Pn	00 04 08.6	+2.7
BNDS	Bandar-Abbas	4.61	117	Pn	Pn	00 04 09.3	+2.6
ISFB	Sefidab	4.78	7	Pn	Pn	00 04 09.2	+0.1
IBND	Bandar-abas	4.87	115	Pn	Pn	00 04 11.7	+1.4
GHVR	GHOM	4.88	357	Pn	Pn	00 04 11.5	+1.1
IKFM	Kafar-mosalman	5.04	322	Pn	Pn	00 04 12.1	-0.4
IDOB	Doab	5.08	326	Pn	Pn	00 04 14.8	+1.5
ASAO	Ashtian	5.11	346	Pn	Pn	00 04 14.4	+0.7
RAFI	Al-Rafai	5.15	296	*e*Pn	Pn	00 04 16.0	+2.0
RAFI				*e*Sn	Sn	00 05 15.0	+1.9
RAFI				AML	AML	00 05 47.3	
	comp=N,226nm,0.5s						
RAFI				AML	AML	00 05 50.6	
	comp=E,261nm,0.8s						
CHMN	Cheshme madani	5.21	86	Pn	Pn	00 04 17.5	+2.3
IQOM	Qom	5.25	356	Pn	Pn	00 04 16.2	+0.5
SHME	Shamm	5.38	130	*i* P	Pn	00 04 17.8	+0.6
	SNR=7.9						
SHME				S	Sn	00 05 18.6	0.0
SHME	Shamm	5.38	130	P	Pn	00 04 18.4	+1.3
	SNR=8.5						
SHME				S	Sn	00 05 21.0	+2.3
IVRN	Varamin	5.39	1	Pn	Pn	00 04 17.9	+0.5
UMQ	Umm Al-Quwin	5.45	137	P	Pn	00 04 19.4	+1.3
UMQ				S	Sn	00 05 23.8	+3.4
BANOM	Banah	5.56	130	*i* P	Pn	00 04 21.3	+1.5
	SNR=48						
BANOM	Banah	5.56	130	P	Pn	00 04 21.3	+1.5
	SNR=48						
BANOM				S	Sn	00 05 24.6	+1.2
TPRV	Parvadeh(Tabas	5.56	51	Pn	Pn	00 04 21.7	+1.8
HAGD	Aghdareh	5.61	339	Pn	Pn	00 04 20.5	0.0
KHNJ	Kahnooj	5.64	105	Pn	Pn	00 04 22.3	+1.5
IKOM	Komasi	5.72	324	Pn	Pn	00 04 21.6	-0.5
GHWR	Ruwais	5.73	168	P	Pn	00 04 23.9	+1.9
GHWR				S	Sn	00 05 27.7	+0.3
IBZA	Bozab	5.79	328	Pn	Pn	00 04 22.0	-1.1
IHSB	Hasanabad	5.84	358	Pn	Pn	00 04 23.9	+0.4
NAZ	Nazwa, Dubai	5.86	141	P	Pn	00 04 24.8	+1.0
NAZ	Nazwa, Dubai	5.86	141	P	Pn	00 04 25.3	+1.5
NAZ				S	Sn	00 05 30.6	0.0
MASF	Masafi	5.86	135	P	Pn	00 04 25.2	+1.3
	SNR=7.6						
MASF				S	Sn	00 05 30.5	-0.2
AJN	Ajban	5.87	148	*i* P	Pn	00 04 24.7	+0.8
	SNR=7.4						
AJN	Ajban	5.87	148	P	Pn	00 04 25.7	+1.8
	SNR=8.2						
AJN				S	Sn	00 05 32.8	+2.1
MSFE	Esma-Masafi	5.87	135	P	Pn	00 04 24.6	+0.6
IBDR	Badra	5.96	307	*e*Pn	Pn	00 04 28.0	+2.9
IBDR				*e*Sn	Sn	00 05 34.5	+1.5
IBDR				AML	AML	00 06 27.0	
	comp=E,112nm,0.5s						
IBDR				AML	AML	00 06 30.3	
	comp=N,124nm,1.2s						
IRAZ	Razeghan	5.96	347	Pn	Pn	00 04 25.6	+0.2
ASUD	Al Ashush, Dub	5.98	145	P	Pn	00 04 26.9	+1.5
ASUD	Al Ashush, Dub	5.98	145	P	Pn	00 04 27.2	+1.8
ASUD				S	Sn	00 05 36.8	+3.3
IDMV	Damavand	5.98	4	Pn	Pn	00 04 26.3	+0.6
MDH	Madha	6.00	134	*i* P	Pn	00 04 28.0	+2.2
	SNR=9.2						
MDH	Madha	6.00	134	P	Pn	00 04 27.6	+1.9
	SNR=9.1						
MDH				S	Sn	00 05 36.7	+2.6
FAQ	Al Faqa, Dubai	6.01	142	P	Pn	00 04 26.5	+0.6
FAQ	Al Faqa, Dubai	6.01	142	P	Pn	00 04 27.0	+1.0
FAQ				S	Sn	00 05 34.5	0.0
KBAM	BAM	6.03	93	Pn	Pn	00 04 28.9	+2.6
DAMV	Damavand	6.03	3	Pn	Pn	00 04 27.1	+0.7
KCHF	Cheshme Sefid,	6.05	322	Pn	Pn	00 04 26.1	-0.4
KER	Kermanshah	6.08	323	Pn	Pn	00 04 26.2	-0.8
ILBA	Ilam Banvizeh	6.08	313	Pn	Pn	00 04 26.2	-0.8
IFIR	Firoozkooh	6.12	9	Pn	Pn	00 04 28.3	+0.7
TNSJ	Nastanj	6.12	43	Pn	Pn	00 04 29.3	+1.8
IMHD	Mahdasht	6.12	353	Pn	Pn	00 04 28.0	+0.5
MZWR	Madinat Zayed	6.17	160	P	Pn	00 04 30.4	+2.4
MZWR				S	Sn	00 05 38.7	+0.5
UOSS	Minazif	6.20	137	Pn	Pn	00 04 29.1	+0.6
UOSS				Sn	Sn	00 05 39.3	+0.2
UOSS	Minazif	6.20	137	P	Pn	00 04 29.0	+0.5
UOSS				S	Sn	00 05 38.6	-0.5
TKDS	Koohdasht(Taba	6.21	48	Pn	Pn	00 04 30.5	+1.7
TABS	Tabas	6.23	48	Pn	Pn	00 04 30.9	+1.9
HATD	Hatta, Dubai	6.25	138	P	Pn	00 04 30.0	+0.8
HATD	Hatta, Dubai	6.25	138	P	Pn	00 04 30.3	+1.1
HATD				S	Sn	00 05 39.7	-0.6
CHTH	Charan	6.31	357	Pn	Pn	00 04 31.1	+0.9
ASHO	Ashiyiah	6.32	140	P	Pn	00 04 31.2	+1.0
ASHO	Ashiyiah	6.32	140	P	Pn	00 04 31.4	+1.2
ASHO				S	Sn	00 05 40.6	-1.5
THKV	Tehran--Karaj	6.33	355	Pn	Pn	00 04 31.4	+0.9
IGHG	Ghaleghazi	6.35	319	Pn	Pn	00 04 30.3	-0.4
SNGE	Sanandaj	6.54	328	Pn	Pn	00 04 32.1	-1.3
ALNE	Al Ain	6.66	145	*i* P	Pn	00 04 35.6	+0.7
	SNR=20						
ALNE	Al Ain	6.66	145	P	Pn	00 04 36.1	+1.2
	SNR=20						
ALNE				S	Sn	00 05 50.5	+0.1
IPRN	Peran	6.67	5	Pn	Pn	00 04 36.0	+1.0
JASK	Jask - Hormozg	6.71	122	P	Pn	00 04 36.8	+1.3
	SNR=14						
JASK				S	Sn	00 05 52.1	+0.6
JASK	Jask - Hormozg	6.71	122	Pn	Pn	00 04 36.8	+1.3

IDHR	Dehrash	6.72	321	Pn	Pn	00 04 34.6	-1.2
MZR	Muzera	6.78	165	P	Pn	00 04 38.6	+2.0
MZR				S	Sn	00 05 54.9	+1.5
QALM	Alamut, Qazvin	6.87	354	Pn	Pn	00 04 38.2	+0.3
KLST	Kelardasht - M	6.92	357	Pn	Pn	00 04 39.1	+0.4
BSRN	Basiran	6.93	68	Pn	Pn	00 04 40.3	+1.7
SOHO	SOHO	7.02	140	*i* P	Pn	00 04 39.7	0.0
	SNR=19						
SOHO	SOHO	7.02	140	P	Pn	00 04 40.0	+0.3
SOHO				S	Sn	00 05 57.7	-1.5
BHD	Baghdad	7.15	303	*e*Pn	Pn	00 04 43.0	+1.5
BHD				*e*Sn	Sn	00 06 03.5	+1.2
BHD				AML	AML	00 07 14.8	
	comp=E,269nm,0.4s						
IGLO	Ghaloghah	7.15	15	Pn	Pn	00 04 43.9	+2.2
JIR1	Jirandeh	7.25	349	Pn	Pn	00 04 43.1	+0.1
SHRO	Shahrood	7.40	29	Pn	Pn	00 04 46.2	+1.2
AFRZ	Afriz	7.42	57	Pn	Pn	00 04 47.2	+1.8
GIDE	GILAN DEYLAMAN	7.44	350	Pn	Pn	00 04 46.4	+0.7
ZNJK	Zanjan	7.46	342	Pn	Pn	00 04 45.9	-0.1
NHDN	Nehbandan	7.54	74	Pn	Pn	00 04 49.4	+2.4
UMZA	Um Al Zommool	7.57	154	P	Pn	00 04 48.2	+0.8
UMZA				S	Sn	00 06 11.2	-1.7
ARQ	Araqi	7.65	143	P	Pn	00 04 50.1	+1.7
ARQ				S	Sn	00 06 15.8	+1.0
HOQ	Hoqain	7.89	138	P	Pn	00 04 52.7	+1.0
	SNR=7.5						
HOQ				S	Sn	00 06 19.0	-1.7
ZHDN	Zahedan	8.06	89	Pn	Pn	00 04 56.9	+2.7
RAYN	Ar Rayn	8.12	223	Pn	Pn	00 04 54.2	-0.6
RAYN				Sn	Sn	00 06 22.0	-4.3
RAYN	Ar Rayn	8.12	223	P	Pn	00 04 54.3	-0.6
RAYN						00 06 22.0	
RAYN	Ar Rayn	8.12	223	*i* P	Pn	00 04 53.6	-1.3
	SNR=26						
RAYN	Ar Rayn	8.12	223	P	Pn	00 04 54.2	-0.6
IKRK	Kirkuk	8.41	315	*e*Pn	Pn	00 05 01.0	+2.2
IKRK				*e*Sn	Sn	00 06 35.0	+1.6
IKRK				AML	AML	00 06 35.1	
	comp=E,181nm,0.5s						
IKRK				AML	AML	00 06 36.8	
	comp=N,168nm,0.4s						
BIDO	Bidbid	8.43	134	P	Pn	00 04 58.8	-0.3
BIDO				S	Sn	00 06 29.9	-4.0
SBZV	Sabzevar	8.47	35	Pn	Pn	00 05 01.1	+1.3
SHRT	Shahrakht	8.47	59	Pn	Pn	00 05 02.1	+2.4
BSY	Bisya	8.49	142	P	Pn	00 05 00.3	+0.3
	SNR=11						
BSY				S	Sn	00 06 32.5	-3.0
MAHB	Mahabad	8.68	327	Pn	Pn	00 05 01.6	-0.9
SMDO	Samad	8.73	137	P	Pn	00 05 03.2	-0.1
	SNR=10						
SMDO				S	Sn	00 06 39.1	-2.3
CHBR	Chabahar	8.86	115	Pn	Pn	00 05 05.1	+0.1
MRVT	Maraveh tapeh	8.89	24	Pn	Pn	00 05 06.6	+1.1
WSAR	Wadi Sarin	8.95	133	Pn	Pn	00 05 06.0	-0.3
	comp=N,3.4nm,0.3s,baz=314,slow=12,SNR=30						
WSAR				Sn	Sn	00 06 42.1	-4.7
	comp=N,1.5nm,0.3s,baz=6.5,slow=14,SNR=1.9						
WSAR				LR	LR	00 09 22.6	
	comp=N,183nm,21.2s,baz=356,slow=43						
	comp=N,7.6nm,0.3s						
WSAR	Wadi Sarin	8.95	133	P	Pn	00 05 06.1	-0.2
	SNR=33						
WSAR				S	Sn	00 06 44.0	-2.8
IMOG	Moghan	9.22	43	Pn	Pn	00 05 11.9	+1.7
JMDO	Jabal Madar	9.29	139	P	Pn	00 05 12.0	+1.1
JMDO				S	Sn	00 06 51.5	-3.6
NGCH	Negor - Chabah	9.49	114	P	Pn	00 05 13.9	+0.3
	SNR=15						
NGCH				S	Sn	00 06 57.3	-2.6
NGCH	Negor - Chabah	9.49	114	Pn	Pn	00 05 14.2	+0.6
WBK	Wadi Bani Khal	9.62	135	P	Pn	00 05 15.0	-0.5
	SNR=25						
WBK				S	Sn	00 07 00.8	-2.5
JRKH	Jarkhoshk	9.71	47	Pn	Pn	00 05 18.6	+1.8
TVRZ	Varzaqan	9.77	337	Pn	Pn	00 05 18.2	+0.6
IMYA	Miami	9.83	45	Pn	Pn	00 05 20.9	+2.4
GEYT	Alibeck	9.94	32	Pn	Pn	00 05 21.4	+1.5
	comp=N,0.9nm,0.3s,baz=209,slow=12,SNR=7.8						
	comp=N,2.6nm,0.5s						
GYA0B	ALIBECK ARRAY	9.94	32	Pn	Pn	00 05 21.5	+1.6
JLN	Jalan Bani Buh	10.24	135	P	Pn	00 05 22.9	-1.0
JLN				S	Sn	00 07 13.9	-4.4
MHTO	MHTO	10.34	144	P	Pn	00 05 26.0	+0.7
	SNR=22						
MHTO				S	Sn	00 07 17.8	-3.1
	SNR=6.2						
DQM	DQM	11.04	149	P	Pn	00 05 34.3	-0.6
DQM				S	Sn	00 07 34.4	-3.7
GEVA	Gevas	11.20	323	Pn	Pn	00 05 35.2	-1.9
MAKU	Maku	11.27	332	Pn	Pn	00 05 38.7	+0.6
WHFO	Wadi Hawf	11.79	170	P	Pn	00 05 44.3	-0.9
	SNR=40						
GURO	Guroymak-BITLI	11.92	321	Pn	Pn	00 05 44.8	-2.2
GNI	Garni	11.92	334	Pn	Pn	00 05 46.8	-0.3
	comp=N,0.2nm,0.3s,baz=196,slow=5.3,SNR=2.6						
GNI				LR	LR	00 10 13.8	
	comp=N,62nm,18.6s,baz=138,slow=37						
GNI	Garni	11.92	334		Pn	00 05 47.8	+0.7
GNI	Garni	11.92	334	*i* P	Pn	00 05 46.0	-1.1
SHAO	Shalim	12.10	161	P	Pn	00 05 48.0	-1.4
	SNR=12						
DMTO	DMTO	12.22	165	P	Pn	00 05 50.0	-1.1
	SNR=25						
RBK	Rabkut	12.27	168	P	Pn	00 05 50.7	-1.1
ABTO	Aybut	12.28	172	P	Pn	00 05 52.0	0.0
	SNR=13						
ASF	Jabal al Asfar	12.86	285	Pn	Pn	00 05 56.8	-3.0
	comp=N,0.7nm,0.3s,baz=90,slow=5.4,SNR=12						
ASF				Sn	Sn	00 08 04.3	-18
	comp=N,0.2nm,0.3s,baz=83,slow=11,SNR=1.8						
	comp=N,1.9nm,0.3s						
KARS	Kars	13.01	330	Pn	Pn	00 06 01.9	0.0
KARS	Kars	13.01	330	P	Pn	00 06 01.9	0.0
MAK	Makhachkala	13.74	347	*e*P	Pn	00 06 12.3	+0.7
MAK				*e*S	Sn	00 08 46.4	+2.6
MAK				pmax	pmax		
	comp=Z,40nm,0.7s						
KOPT	Kop Dagi	13.80	322	Pn	Pn	00 06 11.8	-1.0
GHAJ	Ghor Haditha	13.90	281	Pn	Pn	00 06 13.2	-0.8
GHAJ	Ghor Haditha	13.90	281	Pn	Pn	00 06 17.5	+3.5
MSBI	Mazada	14.08	281	Pn	Pn	00 06 17.1	+0.7
ZFRI	Zfri	14.22	278	Pn	Pn	00 06 22.0	+3.7
MMAI	Mount Meron Ar	14.23	288	Pn	Pn	00 06 15.8	-2.7
	comp=Z,0.5nm,0.3s,baz=319,slow=32,SNR=1.9						
MMAI				Sn	Sn	00 08 45.5	-11
	comp=Z,0.5nm,0.3s,baz=99,slow=31,SNR=1.8						
MMAI				LR	LR	00 12 40.0	
	comp=Z,67nm,18.1s,baz=172,slow=41						
	comp=Z,0.3nm,0.3s						
GROC	Groznyy	14.35	343	*e*P	Pn	00 06 19.7	-0.3
GROC				*e*S	Sn	00 08 57.3	-1.5
HRFI	Mount Harif	14.36	276	Pn	Pn	00 06 22.4	+2.2
PRNI	Paran	14.37	277	Pn	Pn	00 06 23.9	+3.4
SLTI	Sal'it	14.43	285	Pn	P	00 06 25.1	-2.8
EIL	Elat	14.45	274	Pn	Pn	00 06 18.7	-2.8
	comp=Z,0.1nm,0.3s,baz=1.6,slow=22,SNR=1.4						
EIL				Sn	Sn	00 08 47.1	-14
	comp=Z,0.3nm,0.3s,baz=69,slow=16,SNR=1.5						
	comp=Z,0.8nm,0.4s						
EIL	Elat	14.45	274	Pn	Pn	00 06 24.4	+2.9
ONI	Oni	14.52	335		Pn	00 06 24.0	+1.5
ONI	Oni	14.52	335	P	Pn	00 06 24.0	+1.5
ZEI	Tsey	14.54	337	*e*P	Pn	00 06 22.1	-0.8
ZEI				pmax	pmax		
	comp=Z,28nm,1.5s						
NCK	Nalchik	15.27	337	*i* P	P	00 06 35.3	-2.0
NEY	Neytrino	15.36	335	*i* P	P	00 06 36.3	-2.2
KBL	Kabul	15.62	67	Pn	Pn	00 06 37.6	+0.3
KBL	Kabul	15.62	67	P	Pn	00 06 37.6	+0.3
KBL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KBZ	Khabaz	15.71	336	Pn	P	00 06 40.3	-1.9
	comp=Z,0.3nm,0.3s,baz=138,slow=13,SNR=10.0						
	comp=Z,5.3nm,1.0s						
SHA1	Shidzhatmaz	15.81	336	*i* P	P	00 06 42.3	-1.2
BNN	Bunyan	15.93	310		Pn	00 06 40.6	-0.6
BNN				IAmb	IAmb	00 06 53.2	
	comp=Z,20nm,0.8s						
KVAR	Kislovodsk Arr	15.98	336	Pn	Pn	00 06 43.1	+1.3
	baz=265,slow=22						
	comp=Z,2.6nm,0.6s						
KIV	Kislovodsk	15.99	336		Pn	00 06 42.7	+0.9
KIV				IAmb	IAmb	00 06 51.7	
	comp=Z,27nm,1.1s						
KIV	Kislovodsk	15.99	336	*e*P	P	00 06 45.2	-0.1
KIV				pmax	pmax		
	comp=Z,36nm,1.0s						
KIV				MLR	MLR		
	comp=Z,18nm,14.0s						
KIV	Kislovodsk	15.99	336	*i* P	P	00 06 44.9	-0.4
	SNR=15						
CSS	Mathiatis	16.32	294		Pn	00 06 45.5	-0.5
TOKA	Tokat	16.33	315	Pn	Pn	00 06 46.4	+0.2
TOKA					P	00 06 46.9	-2.3
CHGR	Chuyangaron	17.13	53		Pn	00 06 56.8	+0.4
CHGR				IAmb	IAmb	00 07 03.1	
	comp=Z,12nm,0.7s						
CHGR	Chuyangaron	17.13	53	P	Pn	00 06 56.8	+0.4
CHGR				pmax	pmax		
	comp=Z,12nm,0.7s						
THW	Thamme Wali	17.56	74	P	P	00 07 02.9	+0.2
BRTR	Keskin Array B	17.85	309	P	Pn	00 07 05.2	-0.2
	comp=Z,0.4nm,0.3s,baz=132,slow=13,SNR=14						
BRTR				LR	LR	00 14 49.4	
	comp=Z,112nm,19.2s,baz=128,slow=40						
	comp=Z,1.7nm,0.5s						
BRTR	Keskin Array B	17.85	309	P	Pn	00 07 05.5	+0.2
BR131	Keskin Array S	17.85	309		Pn	00 07 04.7	-0.6
BR131	Keskin Array S	17.85	309	*i* P	Pn	00 07 03.8	-1.6
GAR	Garm	18.09	54		Pn	00 07 07.5	-0.8
ILGA	Ilgaz	18.48	313	P	P	00 07 11.6	-1.4
ILGA				IAmb	IAmb	00 07 23.6	
	comp=Z,22nm,0.9s						
ANTO	Ankara	18.49	309	P	P	00 07 12.8	-0.2
ANTO				IAmb	IAmb	00 07 17.3	
	comp=Z,8.3nm,0.8s						
ANTO	Ankara	18.49	309	P	P	00 07 12.8	-0.2
ANTO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ANN	Anapa	18.85	327	*e*P	P	00 07 14.2	-2.6
ANN				*e*S	Sn	00 10 46.5	-1.5
ANN				pmax	pmax		
	comp=Z,106nm,1.3s						
NIL	Nilore	18.90	72	P	Pn	00 07 18.7	+0.5
NIL				IAmb	IAmb	00 07 24.3	
	comp=Z,10.0nm,0.9s						
NIL	Nilore	18.90	72	P	Pn	00 07 18.7	+0.5
NIL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ELL	Elmali	19.46	297	P	Pn	00 07 24.6	-0.3
ELL	Elmali	19.46	297	P	Pn	00 07 24.6	-0.3
ELL				pmax	pmax		
	comp=Z,24nm,0.6s						
AKAS	Kas	19.57	295	P	Pn	00 07 26.2	-0.1
AKAS				IAmb	IAmb	00 07 37.1	
	comp=Z,13nm,1.0s						
ATD	Arta Tunnel	19.72	206	LR	LR	00 15 06.5	
	comp=Z,5.3nm,19.0s,baz=14,slow=37						
MDUB	Mudurnu	19.85	309	P	Pn	00 07 28.9	-0.6
BORA	Eskisehir	20.11	306		P	00 07 31.2	+0.4
BORA				IAmb	IAmb	00 07 36.8	
	comp=Z,7.7nm,1.0s						
KK31	Karatay Array	20.31	43	P	P	00 07 33.3	+0.5
KK31	Karatay Array	20.31	43	P	P	00 07 33.3	+0.5
KK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KKAR	Karatay Array	20.31	43		P	00 07 33.3	+0.5
KKAR	Karatay Array	20.31	43	P	P	00 07 33.6	+0.8
KKAR	Karatay Array	20.31	43	P	P	00 07 33.6	+0.8
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ABKAR	Akbulak array	20.65	16	P	P	00 07 37.1	+0.6
ABKAR	Akbulak array	20.65	16	P	P	00 07 37.5	+1.0
MANT	Manisa	20.99	301	P	P	00 07 40.9	+0.5
MANT				IAmb	IAmb	00 07 44.9	
	comp=Z,9.4nm,0.6s						
AKTO	Aktyubinsk	21.38	11	P	P	00 07 44.0	-0.3
	comp=Z,3.3nm,0.7s,baz=202,slow=7.1,SNR=5.7						
AKTO				LR	LR	00 18 18.3	
	comp=Z,96nm,18.8s,baz=170,slow=43						
	comp=Z,3.3nm,0.7s						
KSH	Kashi	22.35	57	P	P	00 07 51.8	-3.2
KSH				pP	sP	00 08 01.9	-0.4
KSH				sP	pP	00 08 03.9	+3.9
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AAK	Ala-Archa	22.56	49	P	P	00 07 56.4	-0.8
	comp=Z,0.9nm,0.4s,baz=231,slow=11,SNR=5.3						
AAK				LR	LR	00 18 23.5	
	comp=Z,84nm,18.8s,baz=234,slow=41						
	comp=Z,0.9nm,0.4s						
AAK	Ala-Archa	22.56	49	P	P	00 07 59.2	+2.0
AAK	Ala-Archa	22.56	49	*i* P	P	00 07 58.9	+1.7
AAK				pmax	pmax		
	comp=Z,27nm,4.1s						
BELG	Belogornoye	22.97	354	P	P	00 07 59.3	-1.9
	comp=Z,5.8nm,0.5s,baz=165,slow=1.2,SNR=4.6						
BELG				LR	LR	00 19 59.8	
	comp=Z,84nm,18.4s,baz=273,slow=45						
	comp=Z,5.8nm,0.5s						
BELG	Belogornoye	22.97	354	*i* P	P	00 08 03.0	+1.9
BELG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
IDI	Anoyia	23.18	291	P	P	00 08 03.9	+0.2
	comp=Z,3.1nm,0.5s,baz=92,slow=8.5,SNR=8.2						
IDI				LR	LR	00 21 09.5	
	comp=Z,51nm,19.0s,baz=104,slow=47						
	comp=Z,3.1nm,0.5s						
IDI	Anoyia	23.18	291	P	P	00 08 05.8	+2.2
IDI				IAmb	IAmb	00 08 22.2	
	comp=Z,7.1nm,0.8s						
MFTR	Murfatlar	23.44	315	⇑P	P	00 08 09.4	+3.3
JURR	Jurilovca	23.47	316	⇑P	P	00 08 08.4	+2.1
ALN	Alexandroupoli	23.61	305	P	P	00 08 08.7	+0.9
ALN				IAmb	IAmb	00 08 12.1	
	comp=Z,9.2nm,1.0s						
ALN	Alexandroupoli	23.61	305	P	P	00 08 08.7	+0.9
ALN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TPGR	Topolog	23.80	316	⇑P	P	00 08 11.9	+2.4
ICOR	Ion Corvin	23.80	314	⇑P	P	00 08 12.6	+3.1
TLBR	Topalu	23.86	315	⇑P	P	00 08 11.8	+1.6
HARR	Harsova	24.00	315	⇑P	P	00 08 14.9	+3.4
HARR	Harsova	24.00	315	⇑P	P	00 08 14.9	+3.4
RDO	Rodhopi	24.06	306	P	P	00 08 12.5	+0.5
RDO				IAmb	IAmb	00 08 18.1	
	comp=Z,5.0nm,0.8s						
CFR	Carcaliu	24.14	317	⇑P	P	00 08 09.9	-2.8
CFR	Carcaliu	24.14	317	⇑P	P	00 08 09.9	-2.8
GIUM	Giurgiulesti	24.26	317	⇑P	P	00 08 25.8	+12
TARG	Taragay, Kyrgy	24.42	53	P	P	00 08 16.1	+0.3
TARG				IAmb	IAmb	00 08 26.6	
	comp=Z,3.1nm,0.7s						
TARG	Taragay, Kyrgy	24.42	53	P	P	00 08 16.1	+0.3
TARG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MILM	Milestii Mici	24.73	321	*e*P	P	00 08 20.0	+1.9
LEOM	Leova	24.79	319	⇑P	P	00 08 19.5	+0.9
LEOM	Leova	24.79	319	⇑P	P	00 08 19.5	+0.9
VRI	Vrincioaia	25.34	317	⇑P	P	00 08 27.5	+3.9
VRI	Vrincioaia	25.34	317	⇑P	P	00 08 27.5	+3.9
NEHR	Nehoiu	25.38	315	⇑P	P	00 08 25.6	+1.6
PLOR	Plostina	25.38	317	⇑P	P	00 08 24.9	+0.8
PLOR	Plostina	25.38	317	⇑P	P	00 08 24.9	+0.8
PLVB	Pleven	25.53	310	⇑P	P	00 08 27.1	+1.7
MLR	Muntele Rosu	25.62	315	⇑P	P	00 08 28.1	+1.8
MLR	Muntele Rosu	25.62	315	P	P	00 08 27.2	+0.9
	comp=Z,6.4nm,0.5s,baz=273,slow=1.0,SNR=15						
MLR	Muntele Rosu	25.62	315	P	P	00 08 27.1	+0.7
MLR	Muntele Rosu	25.62	315	P	P	00 08 27.1	+0.7
MLR				pmax	pmax		
	comp=Z,17nm,0.8s						
COVR	Voineasa-Covas	25.64	316	⇑P	P	00 08 27.7	+1.3
SORM	Soroca	25.71	323	⇑P	P	00 08 25.6	-1.3
SORM	Soroca	25.71	323	⇑P	P	00 08 25.6	-1.3
TESR	Tescani	25.73	318	⇑P	P	00 08 27.3	+0.2
ITM	Ithomi	25.80	295	P	P	00 08 28.1	+0.2
AGG	Agios Georgios	25.82	299	P	P	00 08 28.9	+0.8
AGG	Agios Georgios	25.82	299	P	P	00 08 28.9	+0.8
AGG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LIT	Litokhoron	25.96	302	P	P	00 08 30.1	+0.7
LIT	Litokhoron	25.96	302	P	P	00 08 30.1	+0.7
OZUR		26.02	316	⇑P	P	00 08 31.8	+1.9
VOIR		26.15	315	⇑P	P	00 08 32.0	+0.9
VOIR		26.15	315	⇑P	P	00 08 32.0	+0.9
VTS	Vitosha	26.18	307	⇑P	P	00 08 38.7	+7.2
VTS	Vitosha	26.18	307	P	P	00 08 32.4	+0.9
VTS	Vitosha	26.18	307	P	P	00 08 32.4	+0.9
VTS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DOPR	Dopca	26.20	316	⇑P	P	00 08 31.8	+0.4
ARR	Arges	26.38	314	⇑P	P	00 08 32.5	-0.7
BAIL	Bailesti	26.63	310	⇑P	P	00 08 40.9	+5.5
MDB	Medias	26.90	315	⇑P	P	00 08 39.5	+1.7
MDB	Medias	26.90	315	⇑P	P	00 08 39.5	+1.7
AKASG	Malin Array Be	26.94	328	P	P	00 08 38.0	0.0
	comp=Z,2.9nm,0.5s,baz=138,slow=10.0,SNR=13						
	comp=Z,2.9nm,0.5s						
AKASG	Malin Array Be	26.94	328	P	P	00 08 38.1	0.0
AKASG	Malin Array Be	26.94	328	*ce*P	P	00 08 39.5	+1.5
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
AKBB	Malin Array Si	26.94	328	*ce*P	P	00 08 38.0	0.0
AKBB				pmax	pmax		
	comp=Z,80nm,4.4s						
BURAR	Bucovina Array	27.14	319	⇑P	P	00 08 40.4	+0.3
BURAR	Bucovina Array	27.14	319	P	P	00 08 40.9	+0.9
BURAR				IAmb	IAmb	00 08 55.4	
	comp=Z,4.3nm,0.6s						
BURAR	Bucovina Array	27.14	319	⇑P	P	00 08 40.4	+0.3
BUR08	Bucovina Ar. S	27.17	319	P	P	00 08 40.4	+0.1
BUR08				IAmb	IAmb	00 08 43.9	
	comp=Z,8.0nm,1.1s						
BRVK	Borovoye	27.18	25	P	P	00 08 40.2	+0.1
BRVK	Borovoye	27.18	25	*i* P	P	00 08 42.4	+2.2
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BVAR	Borovoye Array	27.19	25	P	P	00 08 41.1	+0.8
	comp=Z,2.2nm,0.5s,baz=224,slow=7.3,SNR=12						
BVAR				PcP	PcP	00 11 59.8	-0.4
	comp=Z,0.4nm,0.3s,baz=205,slow=1.9,SNR=5.2						
	comp=Z,2.2nm,0.5s						
ARU	Arti	27.28	8	LR	LR	00 22 09.5	
	comp=Z,87nm,18.6s,baz=220,slow=42						
KBN	Korca	27.35	302	P	P	00 08 41.1	-0.8
KBN	Korca	27.35	302	P	P	00 08 41.1	-0.8
KBN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
OBN	Obninsk	27.69	341	*e*P	P	00 08 45.5	+0.8
OBN				*e*		00 09 33.9	
OBN				*e*PPP	PPP	00 09 41.9	
OBN				*e*		00 11 55.9	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MARR	Marisel-Cluj	27.92	316	⇑P	P	00 08 47.0	-0.1
MDVR	Moldovita	28.01	311	⇑P	P	00 08 50.6	+2.8
KURBB	Kurchatov Arra	29.17	36	P	P	00 08 59.0	+1.0
	comp=Z,1.0nm,0.7s,baz=235,slow=9.0,SNR=12						
KURBB				PcP	PcP	00 12 05.5	+0.4
	comp=Z,0.1nm,0.4s,baz=238,slow=3.1,SNR=2.0						
	comp=Z,1.0nm,0.7s						
MAKZ	Makanchi	29.19	45	P	P	00 08 58.4	+0.2
MAKZ	Makanchi	29.19	45	⇑P	P	00 08 59.1	+0.8
KURK	Kurchatov	29.27	36	P	P	00 09 00.0	+1.2
KURK				IAmb	IAmb	00 09 05.5	
	comp=Z,4.5nm,1.1s						
KURK	Kurchatov	29.27	36	*ce*P	P	00 08 59.9	+1.1
KURK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MK31	Makanchi Array	29.38	46	P	P	00 09 00.6	+0.7
MK31	Makanchi Array	29.38	46	*i* P	P	00 08 59.4	-0.5
MKAR	Makanchi Array	29.38	46	P	P	00 09 00.2	+0.3
	comp=Z,0.5nm,0.5s,baz=247,slow=9.1,SNR=9.5						
MKAR				PcP	PcP	00 12 06.5	+0.6
	comp=Z,0.1nm,0.4s,baz=253,slow=4.0,SNR=1.5						
MKAR				LR	LR	00 22 34.7	
	comp=Z,71nm,20.9s,baz=225,slow=40						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	29.38	46	P	P	00 09 00.8	+0.8
MORH	Mrgy, Hungar	30.54	312	⇑P	P	00 09 10.3	+0.1
CUC	Castrocucco	30.95	299	P	P	00 09 16.2	+2.3
CUC				IAmb	IAmb	00 09 20.4	
	comp=Z,5.3nm,0.8s						
LANS	Liptovska Anna	31.23	318	*e*P	P	00 09 19.5	+3.2
LANS				pmax	pmax		
	comp=Z,4.0nm,1.2s						
LANS	Liptovska Anna	31.23	318	*e*P	P	00 09 19.5	+3.2
VYHS	Vyhne	31.32	316	*e*P	P	00 09 19.6	+2.5
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.2s						
VYHS	Vyhne	31.32	316	*e*P	P	00 09 19.5	+2.5
OJC	Ojcow	31.54	320	P	P	00 09 19.6	+0.6
OJC				IAmb	IAmb	00 09 21.7	
	comp=Z,3.8nm,0.7s						
OJC	Ojcow	31.54	320	P	P	00 09 19.6	+0.6
OJC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WMQ	Urumqi	31.99	54	*e*P	P	00 09 26.8	+3.8
JAVC	Velka Javorina	32.18	316	*e*P	P	00 09 26.7	+2.1
MODS	Modra-Piesok	32.22	315	*e*P	P	00 09 27.3	+2.3
MODS	Modra-Piesok	32.22	315	*e*P	P	00 09 27.3	+2.3
MAUC	Maruska	32.30	317	*e*P	P	00 09 28.2	+2.6
PABE	Paberze	32.52	331	P	P	00 09 29.0	+1.6
RONA	Rosalia, Austr	32.58	314	*i* P	P	00 09 27.2	-0.9
	comp=Z,4.7nm,0.9s						
MORC	Moravsky Berou	32.64	318	⇑P	P	00 09 30.9	+2.3
MORC	Moravsky Berou	32.64	318	P	P	00 09 28.8	+0.2
MORC	Moravsky Berou	32.64	318	*e*P	P	00 09 30.5	+1.9
MORC	Moravsky Berou	32.64	318	⇑P	P	00 09 30.9	+2.3
INTR	Introdacqua	32.70	303	P	P	00 09 30.1	+0.8
INTR				IAmb	IAmb	00 09 38.5	
	comp=Z,5.7nm,1.1s						
CONA	Conrad Observa	32.94	314	P	P	00 09 33.7	+2.3
	comp=Z,10nm,1.5s						
VRAC	Vranov	33.01	316	LR	LR	00 27 17.2	
	comp=Z,77nm,19.2s,baz=338,slow=44						
VRAC	Vranov	33.01	316	*e*P	P	00 09 34.0	+2.2
KRUC	Moravsky	33.03	316	*e*P	P	00 09 34.0	+2.0
KRLC	Kraliky	33.21	318	*e*P	P	00 09 31.9	-1.7
KRLC				*e*x	x	00 09 35.2	
KRLC	Kraliky	33.21	318	*e*P	P	00 09 31.9	-1.7
KRLC				*e*		00 09 35.2	
FDMO	Fiordimonte	33.48	304	P	P	00 09 36.4	+0.3
DPC	Dobruska-Polom	33.59	318	*e*P	P	00 09 38.7	+1.7
DPC	Dobruska-Polom	33.59	318	*e*P	P	00 09 38.7	+1.7
OSTC	Ostas	33.74	318	*e*P	P	00 09 40.1	+1.9
OSTC	Ostas	33.74	318	*e*P	P	00 09 40.1	+1.9
CESX	Cesi	33.77	303	P	P	00 09 37.5	-1.1
CESX				IAmb	IAmb	00 09 44.6	
	comp=Z,3.9nm,0.7s						
SABO	M.te Sabotino	33.80	310	P	P	00 09 39.3	+0.5
SABO				IAmb	IAmb	00 09 46.9	
	comp=Z,5.9nm,1.0s						
CHVC	Chvalec	33.85	318	*e*P	P	00 09 38.0	-1.2
CHVC	Chvalec	33.85	318	*e*P	P	00 09 38.0	-1.2
MOA	Molln	33.92	313	P	P	00 09 39.1	-0.7
	comp=Z,4.7nm,0.8s						
MURB	Monte Urbino	33.93	304	P	P	00 09 41.6	+1.6
CKRC	Cesky Krumlov	34.22	315	*e*P	P	00 09 41.2	-1.2
CKRC				*e*x	x	00 09 44.5	
CKRC	Cesky Krumlov	34.22	315	*e*P	P	00 09 41.2	-1.2
CKRC				*e*		00 09 44.5	
ZALV	Zalesovo Beam	34.23	35	P	P	00 09 42.4	+0.1
	comp=Z,2.2nm,0.4s,baz=250,slow=8.6,SNR=13						
	comp=Z,2.2nm,0.4s						
ZALV	Zalesovo Beam	34.23	35	*i* P	P	00 09 42.9	+0.5
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BIOA	Bad Ischl, Aus	34.27	312	*e*P	P	00 09 42.6	-0.2
	comp=Z,4.4nm,0.5s						
KBA	Koelnbreinsper	34.27	311	*e*P	P	00 09 42.7	-0.4
	comp=Z,14nm,1.2s						
CLUD	Cludinico	34.41	310	P	P	00 09 45.2	+1.1
CLUD				IAmb	IAmb	00 09 50.4	
	comp=Z,5.0nm,1.0s						
STAL	STALIGIAL	34.47	310	P	P	00 09 46.0	+1.3
STAL				IAmb	IAmb	00 09 47.9	
	comp=Z,6.5nm,1.1s						
PRU	Pruhonice	34.50	317	*e*P	P	00 09 48.9	+4.1
PRU	Pruhonice	34.50	317	*e*P	P	00 09 48.9	+4.1
GEC2	GERESS Array S	34.60	314	P	P	00 09 47.1	+1.2
GEC2				IAmb	IAmb	00 09 50.2	
	comp=Z,1.8nm,0.8s						
GERES	GERESS Array B	34.60	314	P	P	00 09 44.0	-1.8
	comp=Z,0.5nm,0.5s,baz=97,slow=8.0,SNR=9.1						
	comp=Z,0.5nm,0.5s						
GERES	GERESS Array B	34.60	314	P	P	00 09 47.2	+1.3
GERES	GERESS Array B	34.60	314	P	P	00 09 44.0	-1.8
CIMO	Cimolais	34.66	310	P	P	00 09 47.6	+1.3

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CIMO                                      IAmb      IAmb       00 09 51.7
            comp=Z,3.2nm,0.9s
ABTA   Abfaltersbach        34.73 311  eP       P          00 09 46.3  -0.6
            comp=Z,6.7nm,1.1s
KHC    Kasperske Hory       34.78 315  eP       P          00 09 46.1  -1.1
KHC                                    ex       x          00 09 49.2
KHC    Kasperske Hory       34.78 315  i P      P          00 09 45.3  -1.9
KHC                                      pmax     pmax
            comp=Z,17nm,1.0s
CTI    Castel Tesino        35.13 309    P      P          00 09 51.9 +1.5
CTI                                      IAmb     IAmb     00 09 53.2
            comp=Z,5.2nm,1.1s
CTI    Castel Tesino        35.13 309    P      P          00 09 51.9 +1.5
CTI                                      pmax     pmax
            comp=Z,5.0nm,1.1s
ZCCA   Zocca                35.23 306    P      P          00 09 53.7 +2.4
WTTA   Wattenberg           35.45 311  i P      P          00 09 51.7  -1.5
            comp=Z,7.7nm,0.6s,SNR=9.1
WATA   Walderalm            35.51 311  i P      P          00 09 52.1  -1.6
            comp=Z,9.6nm,0.6s,SNR=5.5
SQTA   Sankt Quirin         35.72 311  i P      P          00 09 54.1  -1.3
            comp=Z,10nm,0.5s,SNR=11
MOTA   Moosalm              35.82 311  eP       P          00 09 54.6  -1.8
            comp=Z,10nm,0.7s
KEST   Kesra                35.86 291    P      P          00 09 59.4 +2.7
CLL    Collm                35.91 318  i P      P          00 09 58.7 +1.8
            comp=Z,14nm,1.2s
CLL    Collm                35.91 318  i P      P          00 09 58.7 +1.8
CLL                                      pmax     pmax
            comp=Z,14nm,1.2s
FETA   Feichten             35.98 310  eP       P          00 09 56.4  -1.4
            comp=Z,10nm,1.0s
FIA1   FINESS Array S       36.03 339    P      P          00 09 58.0 +0.2
FIA1                                     IAmb     IAmb     00 10 09.0
            comp=Z,3.1nm,0.9s
FINES  FINESS Array B       36.03 339    P      P          00 09 56.2  -1.6
            comp=Z,1.1nm,0.6s,baz=124,slow=10,SNR=8.7
            comp=Z,1.1nm,0.6s
FINES  FINESS Array B       36.03 339    P      P          00 09 56.9  -0.8
FINES  FINESS Array B       36.03 339  i P      P          00 09 57.0  -0.8
FINES                                    pmax     pmax
            comp=Z,1.0nm,0.7s
RETA   Reutte               36.08 311  i P      P          00 09 57.2  -1.3
            comp=Z,5.5nm,0.6s,SNR=5.3
FUORN  Ofenpass-Fuorn       36.20 310    P      P          00 10 00.2 +0.5
MSSA   Maissana             36.26 306    P      P          00 10 01.2 +1.1
MSSA                                     IAmb     IAmb     00 10 08.7
            comp=Z,6.2nm,1.1s
GRF    Grafenberg Arr       36.41 315  eP       P          00 10 03.2 +1.9
            comp=Z,6.2nm,1.1s,baz=112,slow=9.4
DAVOX  Davos/Dischmat       36.49 310    LR     LR         00 30 20.6
            comp=Z,69nm,20.2s,baz=109,slow=45
DAVA   Damuels              36.61 311  i P      P          00 10 01.6  -1.5
            comp=Z,14nm,0.5s,SNR=11
SENIN  Lac Senin/Sane       38.15 309    P      P          00 10 16.8 +0.5
BNI    Bardonecchia         38.37 306    P      P          00 10 18.1   0.0
BNI                                      IAmb     IAmb     00 10 20.0
            comp=Z,3.8nm,0.7s
BNI    Bardonecchia         38.37 306    P      P          00 10 18.1   0.0
BNI                                      pmax     pmax
            comp=Z,4.0nm,0.7s
GTA    Gaotai               40.54  63  eP       P          00 10 42.5 +6.2
GTA                                      pP       sP       00 10 50.6 +6.6
GTA                                      pmax     pmax
            comp=Z,3.0nm,1.2s
NC405  NORSAR Array S       41.04 332    P      P          00 10 38.5  -1.5
NB2    NORSAR Subarra       41.21 331    P      P          00 10 39.5  -1.9
            comp=Z,3.0nm,1.0s,baz=120,slow=8.6
NOA    NORSAR Array B       41.21 331    P      P          00 10 39.5  -1.9
            comp=Z,0.9nm,0.5s,baz=121,slow=8.2,SNR=3.7
NOA                                      LR       LR       00 29 38.6
            comp=Z,45nm,18.5s,baz=250,slow=39
            comp=Z,0.9nm,0.5s
ARCES  ARCESS Array B       42.68 347    P      P          00 10 52.1  -1.2
            comp=Z,1.6nm,0.6s,baz=152,slow=8.1,SNR=11
            comp=Z,1.6nm,0.6s
LZH    Lanzhou              43.97  67  eP       P          00 11 12.0 +7.7
LZH                                      pP       sP       00 11 16.5 +4.5
LZH                                      sP       pP       00 11 20.8  +11
LZH                                      pmax     pmax
            comp=Z,23nm,1.0s
PZH    PanZhiHua            44.12  81    P      P          00 11 06.4 +0.8
PZH                                      pmax     pmax
            comp=Z,10.0nm,0.5s
PZH                                      pmax     pmax
            comp=Z,100nm,5.0s
CMAR   Chiang Mai Arr       44.41  93    P      P          00 11 07.3  -0.5
            comp=Z,0.7nm,0.4s,baz=293,slow=9.6,SNR=1.4
CMAR                                     LR       LR       00 34 09.5
            comp=Z,40nm,19.2s,baz=275,slow=42
            comp=Z,0.7nm,0.4s
SONM   Songino Array        45.49  51    P      P          00 11 16.9 +0.7
            comp=Z,0.6nm,0.8s,baz=267,slow=10.0,SNR=5.4
            comp=Z,0.6nm,0.8s
ULN    Ulaanbaatar          45.93  51  i P      P          00 11 19.1  -0.6
ULN                                      pmax     pmax
            comp=Z,12nm,3.3s
ESDC   Sonseca Array        46.14 298    P      P          00 11 21.1  -0.3
            comp=Z,0.2nm,0.5s,baz=79,slow=6.8,SNR=5.1
            comp=Z,0.2nm,0.5s
PAB    San Pablo            46.45 298    P      P          00 11 24.6 +0.8
PAB                                      IAmb     IAmb     00 11 27.7
            comp=Z,5.9nm,1.1s
PAB    San Pablo            46.45 298    P      P          00 11 24.6 +0.8
PAB                                      pmax     pmax
            comp=Z,6.0nm,1.2s
TORD   Torodi Ar. Bea       48.86 261    P      P          00 11 41.4  -1.3
            comp=Z,3.0nm,0.6s,baz=50,slow=9.2,SNR=8.1
TORD                                     LR       LR       00 32 26.5
            comp=Z,54nm,18.4s,baz=130,slow=36
            comp=Z,3.0nm,0.6s
TORD   Torodi Ar. Bea       48.86 261    P      P          00 11 44.5 +1.7
TORD                                     IAmb     IAmb     00 11 47.1
            comp=Z,3.5nm,1.1s
HHC    Hu-ho-hao-te         49.42  60  eP       P          00 11 48.6 +1.7
HHC                                      pmax     pmax
            comp=Z,120nm,6.2s
XLT    XiLinHaoTe           52.39  55⇑iP      P          00 12 10.1 +1.0
XLT                                      pmax     pmax
            comp=Z,150nm,5.4s
XLT                                      pmax     pmax
            comp=Z,3.0nm,0.5s
DBIC   Dimbokro             57.64 258    P      P          00 12 47.8 +0.4
            comp=Z,1.5nm,0.5s,baz=70,slow=8.7,SNR=2.0
DBIC                                     LR       LR       00 37 22.1
            comp=Z,49nm,19.0s,baz=34,slow=36
            comp=Z,1.5nm,0.5s
YAK    Yakutsk              58.81  33    LR     LR         00 41 44.6
            comp=Z,27nm,18.2s,baz=270,slow=40
KLR    Kul'dur              62.08  47    LR     LR         00 40 50.2
            comp=Z,34nm,19.9s,baz=277,slow=37
KSRS   Korea Array          62.55  61    P      P          00 13 19.3  -1.4
            comp=Z,1.1nm,0.5s,baz=268,slow=6.6,SNR=4.4
KSRS                                     LR       LR       00 43 55.1
            comp=Z,17nm,21.5s,baz=10.0,slow=39
            comp=Z,1.1nm,0.5s
BOSA   Boshof               63.10 206    P      P          00 13 23.0  -1.5
            comp=Z,2.3nm,0.8s,baz=109,slow=4.3,SNR=4.2
            comp=Z,2.3nm,0.8s
BILL   Bilibino             71.44  21  eP       P          00 14 18.2 +1.4
BILL                                   e                   00 14 35.3
BILL                                   e                   00 16 56.9
BILL                                   ePPP     PPP        00 18 40.0
BILL                                     pmax     pmax
            comp=Z,1.0nm,0.9s
SCHQ   Schefferville        80.73 329    P      P          00 15 09.1  -0.8
            comp=Z,1.6nm,0.5s,baz=56,slow=5.8,SNR=1.9
            comp=Z,1.6nm,0.5s
ILAR   Eielson Array        84.85   8    P      P          00 15 30.3  -0.8
            comp=Z,0.3nm,0.7s,baz=329,slow=3.4,SNR=3.0
            comp=Z,0.3nm,0.7s
YKA    Yellowknife Ar       87.57 354    P      P          00 15 44.7 +0.2
            comp=Z,0.4nm,0.8s,baz=14,slow=4.6,SNR=7.9
            comp=Z,0.4nm,0.8s
WRA    Warramunga Arr       93.64 111    P      P          00 16 11.5  -2.1
            comp=Z,0.3nm,0.8s,baz=313,slow=3.8,SNR=1.8
            comp=Z,0.3nm,0.8s
ASAR   Alice Springs        95.15 114    P      P          00 16 19.9  -0.5
            comp=Z,0.4nm,0.5s,baz=305,slow=4.8,SNR=4.4
            comp=Z,0.4nm,0.5s
```

IDC 17 00:04:56.6±3.6, 8°.92N×9°.46W, h0^{km}, mb3.6/1, mbtmp3.4/3, ML3.1/2, MS3.5/1, Error ellipse: s-maj=49.9km s-min=24.8km az=38.0, Guinea region

```
Code   Station Name          Δ°   AZ°    Phase ID               Time     Res
                                        Op        ISC          h  m  s   ISC
DBIC   Dimbokro              5.07 116   Pn        Pn           00 06 15.3 +1.3
            0.5nm,0.3s,baz=295,slow=14,SNR=16
DBIC                                    Sn        Sn           00 07 13.8 +0.5
            2.2nm,0.3s,baz=193,slow=10,SNR=8.7
DBIC                                    Lg        Lg           00 07 36.6
            1.6nm,0.3s,baz=18,slow=15,SNR=2.7
            0.9nm,0.3s
TORD   Torodi Ar. Bea       11.72  68   Pn        Pn           00 07 45.6 +0.3
            0.2nm,0.3s,baz=245,slow=13,SNR=16
TORD                                    Sn        Sn           00 09 57.1 +0.1
            0.1nm,0.3s,baz=247,slow=20,SNR=5.4
TORD                                    Lg        Lg           00 11 10.5
            0.2nm,0.3s,baz=242,slow=24,SNR=16
            0.7nm,0.5s
GERES  GERESS Array B       44.30  22   P         P            00 13 07.8  -0.4
            0.4nm,0.5s,baz=198,slow=9.1,SNR=5.6
            0.4nm,0.5s
AKASG  Malin Array Be       52.46  30   LR        LR           00 37 21.7
            comp=Z,45nm,19.2s,baz=196,slow=37
```

IDC 17 00:15:20.2±1.0, 29°.60N×51°.39E, h0^{km}, mb3.8/18, mbtmp3.8/26, ML3.5/8, MS2.7/2, Error ellipse: s-maj=22.0km s-min=14.7km az=169.0

ISN 17 00:15:21.4±0.8, 29°.37N×51°.49E, h13^{km}±234^{km}, ML4.0

TEH 17 00:15:22.5, 29°.68N×51°.52E, h11^{km}±15^{km}, ML4.0

DSN 17 00:15:23.6±1.4, 29°.53N×51°.53E, h15^{km}, ML3.8/14, Error ellipse: s-maj=19.5km s-min=6.8km az=3.0

NEIC 17 00:15:24.0±2.8, 29°.61N±0°.08×51°.50E±0°.04, h29^{km}±7^{km}, mb4.1/21, Error ellipse: s-maj=11.5km s-min=4.4km az=162.0

OMAN 17 00:15:27.1±1.2, 29°.41N×51°.64E, h25^{km}, mb5.4/16, Error ellipse: s-maj=12.2km s-min=6.8km az=11.0

ISC 17 00:15:23.2±0.4, **29°.60N**±0°.04×**51°.56E**±0°.03, **h20^{km}, n197, σ1^{s}81**/234, **mb4.2**/35, **10C-2D, Southern Iran**

```
Code   Station Name          Δ°   AZ°    Phase ID               Time     Res
                                        Op        ISC          h  m  s   ISC
KAZ1   Kazerun               0.07  67   Pg        Pb           00 15 25.8  -1.3
KAZ1                                    Sg        Sb           00 15 28.7  -1.0
AHBU   AHRAM                 0.77 198   Pg        Pn           00 15 37.7  -1.2
AHBU                                    Sg        Sn           00 15 50.8 +1.0
SHI    Shiraz                0.83  87   Pg        Pb           00 15 39.1   0.0
DSBU   Dashti - Bushe        1.26 192   Pg        Pb           00 15 47.9 +1.6
DSBU                                    Sg        Sn           00 16 08.0 +5.9
KLNJ   Kolanjah              1.41   1   Pg        Pn           00 15 47.4  -0.6
ABEH   Behbahan              1.51 312   Pg        Pb           00 15 49.6  -1.0
ABEH                                    Sg        Sb           00 16 12.6 +3.2
QIR1   Qir                   1.71 130   Pg        Pb           00 15 55.0 +1.0
GHIR   Ghir-Karzin           1.81 136   Pn        Pb           00 15 56.5 +0.8
JHRM   Jahrom                2.07 121   Pn        Pb           00 16 00.9 +0.7
IRAM   Ramesheh              2.31  18   Pn        Pn           00 16 02.3 +1.9
IBRJ   Brojen                2.32 354   Pn        Pn           00 16 01.6 +1.1
LMD1   Lamerd                2.65 148   Pn        Pb           00 16 08.8  -1.3
SHK1   Shahrekord            2.78 348   Pn        Pn           00 16 07.3 +0.4
AMIS   Naft Sefid            2.85 317   Pn        Pn           00 16 08.0 +0.5
LAR1   LAR                   3.13 127   Pn        Pn           00 16 14.8 +3.3
NASN   Na'in                 3.37  18   Pn        Pn           00 16 16.3 +1.3
SAKB   Bahrain               3.72 194   P         Pn           00 16 22.6 +3.1
SAKB                                    S         Sn           00 17 06.1 +3.3
SHMA   Al-Shehemyia          3.76 188   P         Pn           00 16 22.7 +2.6
SHMA                                    S         Sn           00 17 07.0 +3.2
YZKH   Yazd                  3.81  42   Pn        Pn           00 16 23.2 +2.4
ANAR   Anarak                4.03  27   Pn        Pn           00 16 26.1 +2.2
QAMS   Qamsar                4.13 358   Pn        Pn           00 16 26.8 +1.4
KHGB   Koh Gabri             4.33  78   Pn        Pn           00 16 31.0 +2.8
KHMZ   Khomeyn               4.35 342   Pn        Pn           00 16 29.0 +0.6
KRSH   Karshahi              4.39   6   Pn        Pn           00 16 30.3 +1.4
NGRK   Negar Kerman          4.50  88   Pn        Pn           00 16 34.1 +3.5
ZRDN   Zarand Kerman         4.51  71   Pn        Pn           00 16 33.2 +2.5
KRBR   Kerman                4.53  84   Pn        Pn           00 16 33.7 +2.7
TVBK   TV Kerman             4.53  84   Pn        Pn           00 16 33.8 +2.8
BNDS   Bandar-Abbas          4.61 117   Pn        Pn           00 16 34.5 +2.6
ISFB   Sefidab               4.78   7   Pn        Pn           00 16 35.4 +1.2
GHVR   GHOM                  4.87 357   Pn        Pn           00 16 36.4 +0.9
IBND   Bandar-abas           4.87 115   Pn        Pn           00 16 39.8 +4.4
IKFM   Kafar-mosalman        5.04 322   Pn        Pn           00 16 38.8 +1.1
ASAO   Ashtian               5.11 346   Pn        Pn           00 16 39.5 +0.6
RAFI   Al-Rafai              5.15 296  ePn        Pn           00 16 43.0 +3.8
RAFI                                   eSn        Sn           00 17 42.0 +4.0
RAFI                                    AML       AML          00 17 58.9
            comp=E,98nm,0.8s
RAFI                                    AML       AML          00 18 23.6
            comp=N,164nm,1.0s
CHMN   Cheshme madani        5.20  86   Pn        Pn           00 16 43.2 +2.9
HSAM   Samen                 5.24 332   Pn        Pn           00 16 41.7 +0.9
SHME   Shamm                 5.38 130   P         Pn           00 16 42.7 +0.4
IVRN   Varamin               5.38   1   Pn        Pn           00 16 42.7 +0.2
BANOM  Banah                 5.57 130  i P        Pn           00 16 46.2 +1.3
            SNR=26
BANOM                                   S         Sn           00 17 49.7 +1.2
BANOM  Banah                 5.57 130   P         Pn           00 16 47.0 +2.0
            SNR=26
BANOM                                   S         Sn           00 17 49.5 +1.1
HAGD   Aghdareh              5.60 339   Pn        Pn           00 16 46.1 +0.5
KHNJ   Kahnooj               5.64 105   Pn        Pn           00 16 49.9 +4.0
IKOM   Komasi                5.72 324   Pn        Pn           00 16 47.2 +0.1
GHWR   Ruwais                5.73 168   P         Pn           00 16 49.4 +2.2
GHWR                                    S         Sn           00 17 53.5 +1.1
NAZ    Nazwa, Dubai          5.86 141   P         Pn           00 16 49.2 +0.2
NAZ    Nazwa, Dubai          5.86 141   P         Pn           00 16 50.7 +1.7
NAZ                                     S         Sn           00 17 56.6 +1.0
MASF   Masafi                5.86 135   P         Pn           00 16 50.7 +1.6
MASF                                    S         Sn           00 17 56.4 +0.6
AJN    Ajban                 5.87 148  i P        Pn           00 16 51.5 +2.4
            SNR=5.8
AJN    Ajban                 5.87 148   P         Pn           00 16 51.1 +2.0
            SNR=5.9
AJN                                     S         Sn           00 17 56.4 +0.6
MSFE   Esma-Masafi           5.87 135   P         Pn           00 16 49.7 +0.6
IRAZ   Razeghan              5.95 347   Pn        Pn           00 16 51.0 +0.6
IBDR   Badra                 5.96 307  ePn        Pn           00 16 54.0 +3.8
IBDR                                   eSn        Sn           00 18 02.0 +4.1
IDMV   Damavand              5.98   4   Pn        Pn           00 16 52.1 +1.3
ASUD   Al Ashush, Dub        5.98 145   P         Pn           00 16 52.2 +1.6
ASUD   Al Ashush, Dub        5.98 145   P         Pn           00 16 52.7 +2.1
ASUD                                    S         Sn           00 18 00.6 +2.0
MDH    Madha                 6.00 134   P         Pn           00 16 51.4 +0.4
MDH    Madha                 6.00 134   P         Pn           00 16 52.3 +1.4
MDH                                     S         Sn           00 17 58.5  -0.5
FAQ    Al Faqa, Dubai        6.02 142   P         Pn           00 16 52.0 +0.9
FAQ    Al Faqa, Dubai        6.02 142   P         Pn           00 16 52.6 +1.4
FAQ                                     S         Sn           00 18 00.5 +1.0
DAMV   Damavand              6.03   3   Pn        Pn           00 16 52.4 +0.9
KBAM   BAM                   6.03  93   Pn        Pn           00 16 54.3 +2.9
KCHF   Cheshme Sefid,        6.04 322   Pn        Pn           00 16 51.7   0.0
ILBA   Ilam Banvizeh         6.08 313   Pn        Pn           00 16 51.8  -0.2
IFIR   Firoozkooh            6.11   9   Pn        Pn           00 16 54.3 +1.7
TNSJ   Nastanj               6.12  43   Pn        Pn           00 16 54.6 +2.1
MZWR   Madinat Zayed         6.17 160   P         Pn           00 16 56.0 +2.8
MZWR                                    S         Sn           00 18 03.8 +0.5
TKDS   Koohdasht(Taba        6.21  48   Pn        Pn           00 16 55.8 +2.0
UOSS   Minazif               6.21 137   Pn        Pn           00 16 53.8   0.0
UOSS                                    Sn        Sn           00 18 04.0  -0.1
UOSS   Minazif               6.21 137   P         Pn           00 16 53.7   0.0
UOSS   Minazif               6.21 137   P         Pn           00 16 55.6 +1.9
UOSS                                    S         Sn           00 18 03.7  -0.4
TABS   Tabas                 6.22  48   Pn        Pn           00 16 56.3 +2.2
HATD   Hatta, Dubai          6.25 138   P         Pn           00 16 55.5 +1.1
HATD   Hatta, Dubai          6.25 138   P         Pn           00 16 56.4 +2.0
HATD                                    S         Sn           00 18 06.1 +0.7
CHTH   Charan                6.30 357   Pn        Pn           00 16 56.4 +1.1
ASHO   Ashiyiah              6.32 140   P         Pn           00 16 56.1 +0.7
IGHG   Ghaleghazi            6.34 319   Pn        Pn           00 16 56.5 +0.7
SNGE   Sanandaj              6.54 328   Pn        Pn           00 16 58.3  -0.1
IPRN   Peran                 6.66   5   Pn        Pn           00 17 02.3 +2.3
ALNE   Al Ain                6.67 145  i P        Pn           00 17 00.4 +0.3
            SNR=12
ALNE   Al Ain                6.67 145   P         Pn           00 17 01.5 +1.4
            SNR=12
ALNE                                    S         Sn           00 18 15.3  -0.2
JASK   Jask - Hormozg        6.71 122   P         Pn           00 17 02.2 +1.5
            SNR=8.3
JASK                                    S         Sn           00 18 17.4 +0.9
IDHR   Dehrash               6.72 321   Pn        Pn           00 17 00.8  -0.1
MZR    Muzera                6.79 165   P         Pn           00 17 04.3 +2.5
MZR                                     S         Sn           00 18 21.4 +2.9
QALM   Alamut, Qazvin        6.86 354   Pn        Pn           00 17 03.3 +0.4
KLST   Kelardasht - M        6.92 357   Pn        Pn           00 17 04.1 +0.4
BSRN   Basiran               6.92  68   Pn        Pn           00 17 05.9 +2.2
SOHO   SOHO                  7.02 140   P         Pn           00 17 04.8  -0.1
SOHO   SOHO                  7.02 140   P         Pn           00 17 05.7 +0.8
SOHO                                    S         Sn           00 18 23.6  -0.6
BHD    Baghdad               7.15 303  ePn        Pn           00 17 10.0 +3.4
BHD                                    eSn        Sn           00 18 30.0 +2.8
BHD                                     AML       AML          00 18 31.9
            comp=E,120nm,0.5s
SHRO   Shahrood              7.39  29   Pn        Pn           00 17 12.0 +1.9
AFRZ   Afriz                 7.42  57   Pn        Pn           00 17 12.5 +2.0
ZNJK   Zanjan                7.45 342   Pn        Pn           00 17 11.8 +0.8
NHDN   Nehbandan             7.54  74   Pn        Pn           00 17 14.7 +2.6
UMZA   Um Al Zommool         7.58 154   P         Pn           00 17 13.7 +1.1
UMZA                                    S         Sn           00 18 36.7  -1.2
ARQ    Araqi                 7.66 143   P         Pn           00 17 15.7 +2.0
            SNR=8.1
ARQ                                     S         Sn           00 18 40.7 +0.9
HOQ    Hoqain                7.89 138   P         Pn           00 17 17.9 +0.9
HOQ                                     S         Sn           00 18 44.3  -1.4
ZHDN   Zahedan               8.06  89   Pn        Pn           00 17 21.8 +2.4
RAYN   Ar Rayn               8.12 223   Pn        Pn           00 17 19.8  -0.4
RAYN                                    Sn        Sn           00 18 48.3  -3.2
RAYN   Ar Rayn               8.12 223  i P        Pn           00 17 19.4  -0.7
            SNR=18
RAYN   Ar Rayn               8.12 223   P         Pn           00 17 19.9  -0.3
RAYN                                    S         Sn           00 18 48.8  -2.7
IKRK   Kirkuk                8.41 315  ePn        Pn           00 17 29.0 +5.1
IKRK                                    AML       AML          00 19 00.3
            comp=E,67nm,0.6s
IKRK                                   eSn        Sn           00 19 01.5 +3.3
IKRK                                    AML       AML          00 19 02.0
            comp=N,44nm,0.9s
BIDO   Bidbid                8.43 134   S         Sn           00 18 56.9  -2.0
SBZV   Sabzevar              8.46  35   Pn        Pn           00 17 27.0 +2.1
SHRT   Shahrakht             8.46  59   Pn        Pn           00 17 27.7 +2.9
BSY    Bisya                 8.49 142   P         Pn           00 17 25.7 +0.5
BSY                                     S         Sn           00 18 56.5  -4.0
SMDO   Samad                 8.73 137   P         Pn           00 17 29.3 +0.8
SMDO                                    S         Sn           00 19 05.0  -1.4
MRVT   Maraveh tapeh         8.88  24   Pn        Pn           00 17 32.3 +1.9
WSAR   Wadi Sarin            8.96 133   Pn        Pn           00 17 30.9  -0.6
            comp=N,1.2nm,0.3s,baz=32,slow=16,SNR=13
WSAR                                    Sn        Sn           00 19 06.5  -5.3
            comp=N,0.9nm,0.3s,baz=64,slow=7.1,SNR=1.4
WSAR                                    LR        LR           00 22 10.9
            comp=N,59nm,20.0s,baz=346,slow=45
            comp=N,3.3nm,0.3s
WSAR   Wadi Sarin            8.96 133   P         Pn           00 17 31.7 +0.3
WSAR                                    S         Sn           00 19 08.6  -3.2
JMDO   Jabal Madar           9.29 139   P         Pn           00 17 37.8 +1.7
NGCH   Negor - Chabah        9.49 114   P         Pn           00 17 39.3 +0.5
NGCH                                    S         Sn           00 19 21.9  -3.0
WBK    Wadi Bani Khal        9.63 135   P         Pn           00 17 40.1  -0.6
            SNR=14
WBK                                     S         Sn           00 19 23.6  -4.7
JRKH   Jarkhoshk             9.71  47   Pn        Pn           00 17 44.7 +2.8
SRVN   Saravan               9.78 100   Pn        Pn           00 17 46.2 +3.3
JLN    Jalan Bani Buh       10.24 135   P         Pn           00 17 48.5  -0.6
MHTO   MHTO                 10.35 145   P         Pn           00 17 50.8 +0.3
MHTO                                    S         Sn           00 19 42.9  -3.0
DQM    DQM                  11.05 149   P         Pn           00 17 59.8  -0.4
GEVA   Gevas                11.19 323   Pn        Pn           00 17 59.8  -2.4
WHFO   Wadi Hawf            11.80 170   P         Pn           00 18 10.0  -0.5
            SNR=27
GURO   Guroymak-BITLI       11.92 321             Pn           00 18 09.7  -2.4
GNI    Garni                11.92 334   Pn        Pn           00 18 13.1 +1.0
            comp=N,0.3nm,0.3s,baz=46,slow=23,SNR=2.5
GNI                                     LR        LR           00 23 07.0
            comp=N,28nm,18.3s,baz=89,slow=39
            comp=N,0.9nm,0.3s
SHAO   Shalim               12.11 161   P         Pn           00 18 14.0  -0.7
            SNR=10
DMTO   DMTO                 12.22 165   P         Pn           00 18 15.8  -0.5
RBK    Rabkut               12.28 168   P         Pn           00 18 15.8  -1.2
ABTO   Aybut                12.29 172   P         Pn           00 18 15.7  -1.5
ASF    Jabal al Asfar       12.86 285   Pn        Pn           00 18 21.7  -3.2
            comp=N,0.4nm,0.3s,baz=75,slow=6.0,SNR=7.0
ASF                                     Sn        Sn           00 20 29.9   -18
            comp=N,0.2nm,0.3s,baz=109,slow=18,SNR=1.7
            comp=N,0.9nm,0.3s
MMAI   Mount Meron Ar       14.23 288   Pn        Pn           00 18 41.9  -1.8
            comp=N,0.4nm,0.3s,baz=95,slow=18,SNR=1.9
            comp=N,0.2nm,0.3s
EIL    Elat                 14.45 274   Pn        Pn           00 18 44.9  -1.8
            comp=N,0.2nm,0.3s,baz=22,slow=18,SNR=1.9
EIL                                     Sn        Sn           00 21 10.1   -16
            comp=N,0.2nm,0.3s,baz=110,slow=17,SNR=1.2
            comp=N,1.5nm,0.6s
KBZ    Khabaz               15.71 336   Pn        Pn           00 19 05.3 +2.0
            comp=N,0.1nm,0.3s,baz=134,slow=13,SNR=7.0
            comp=N,2.0nm,0.9s
KVAR   Kislovodsk Arr       15.98 336   Pn        P            00 19 09.3  -1.0
            baz=251,slow=21
            comp=N,2.5nm,0.8s
KIV    Kislovodsk           15.98 336   P         P            00 19 09.2  -1.1
KIV                                     IAmb      IAmb         00 19 16.2
            comp=Z,19nm,1.3s
BRTR   Keskin Array B       17.84 309   P         Pn           00 19 28.7  -1.8
            comp=Z,0.1nm,0.3s,baz=132,slow=12,SNR=6.6
            comp=Z,0.6nm,0.6s
ELL    Elmali               19.46 297   P         P            00 19 45.8  -3.0
KKAR   Karatay Array        20.30  43   Pn        P            00 19 59.2 +1.4
ABKAR  Akbulak array        20.65  16   P         P            00 20 02.2 +0.7
ARG    Arkhangelos          20.73 295   Pn        Pn           00 20 04.6  -0.3
AKTO   Aktyubinsk           21.38  11   P         P            00 20 09.8 +0.5
            comp=Z,1.4nm,0.6s,baz=46,slow=7.3,SNR=3.2
            comp=Z,1.4nm,0.6s
KSH    Kashi                22.35  57   P         P            00 20 18.4  -1.6
KSH                                     pmax      pmax
            comp=Z,4.0nm,0.9s
AAK    Ala-Archa            22.55  49   P         P            00 20 23.9 +1.7
            comp=Z,0.5nm,0.5s,baz=247,slow=13,SNR=1.8
            comp=Z,0.5nm,0.5s
BELG   Belogornoye          22.96 354   P         P            00 20 24.6  -1.5
            comp=Z,1.8nm,0.3s,baz=222,slow=21,SNR=1.6
            comp=Z,1.8nm,0.3s
IDI    Anoyia               23.18 291   P         P            00 20 27.1  -1.6
            comp=Z,3.9nm,0.9s,baz=64,slow=23,SNR=1.7
            comp=Z,3.9nm,0.9s
IDI    Anoyia               23.18 291   P         P            00 20 29.3 +0.6
RDO    Rodhopi              24.06 306   P         P            00 20 35.4  -1.6
RDO                                     IAmb      IAmb         00 20 43.5
            comp=Z,4.0nm,0.9s
VRI    Vrincioaia           25.34 317 ⇓P          P            00 20 50.4 +1.7
NEHR   Nehoiu               25.38 315 ⇑P          P            00 20 50.5 +1.5
PLOR   Plostina             25.38 317 ⇑P          P            00 20 50.3 +1.3
PLVB   Pleven               25.53 310 ⇑P          P            00 20 52.4 +2.0
MLR    Muntele Rosu         25.62 315 ⇓P          P            00 20 52.4 +1.0
MLR    Muntele Rosu         25.62 315   P         P            00 20 51.4   0.0
            comp=Z,4.3nm,0.8s,baz=274,slow=4.5,SNR=6.3
            comp=Z,4.3nm,0.8s
MLR    Muntele Rosu         25.62 315   P         P            00 20 51.4   0.0
MLR                                     IAmb      IAmb         00 21 00.3
            comp=Z,7.5nm,1.0s
COVR   Voineasa-Covas       25.64 316 ⇑P          P            00 20 52.8 +1.4
SORM   Soroca               25.71 323 ⇑P          P            00 20 50.9  -1.1
TESR   Tescani              25.72 318 ⇑P          P            00 20 51.9  -0.2
ITM    Ithomi               25.80 295   P         P            00 20 52.6  -0.4
AGG    Agios Georgios       25.82 299   P         P            00 20 53.3 +0.2
VOIR                        26.15 314 ⇑P          P            00 20 57.2 +1.1
DOPR   Dopca                26.19 316 ⇑P          P            00 20 56.7 +0.3
ARR    Arges                26.37 314 ⇑P          P            00 20 58.9 +0.7
AKASG  Malin Array Be       26.94 328   P         P            00 21 02.0  -1.0
            comp=Z,0.6nm,0.3s,baz=134,slow=9.5,SNR=8.3
            comp=Z,0.6nm,0.3s
AKASG  Malin Array Be       26.94 328   P         P            00 21 02.3  -0.7
AKASG                                   IAmb      IAmb         00 21 05.6
            comp=Z,2.4nm,1.1s
AKBB   Malin Array Si       26.94 328   P         P            00 21 02.4  -0.6
AKBB                                    IAmb      IAmb         00 21 41.9
            comp=Z,8.0nm,1.3s
FNA    Florina              26.95 303   P         P            00 21 01.3  -2.1
BURAR  Bucovina Array       27.14 319 ⇑P          P            00 21 06.1 +1.0
BURAR  Bucovina Array       27.14 319   P         P            00 21 05.8 +0.7
BUR08  Bucovina Ar. S       27.16 319   P         P            00 21 05.2  -0.1
BUR08                                   IAmb      IAmb         00 21 14.9
            comp=Z,8.3nm,1.4s
BVAR   Borovoye Array       27.18  25   P         P            00 21 06.3 +1.1
            comp=Z,0.4nm,0.4s,baz=211,slow=6.1,SNR=7.2
            comp=Z,0.4nm,0.4s
KBN    Korca                27.34 302   P         P            00 21 06.5  -0.5
KBN                                     IAmb      IAmb         00 21 10.4
            comp=Z,6.0nm,0.9s
KURBB  Kurchatov Arra       29.16  36   P         P            00 21 24.0 +1.1
            comp=Z,0.6nm,0.8s,baz=236,slow=9.1,SNR=5.4
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	comp=Z,0.6nm,0.8s						
MKAR	Makanchi Array	29.38	46	P	P	00 21 26.0	+1.1
	comp=Z,0.4nm,0.8s,baz=238,slow=8.0,SNR=2.9						
MKAR				PcP	PcP	00 24 30.6	-0.2
	comp=Z,0.1nm,0.5s,baz=259,slow=2.8,SNR=1.3						
	comp=Z,0.4nm,0.8s						
MKAR	Makanchi Array	29.38	46	P	P	00 21 25.5	+0.6
VYHS	Vyhne	31.32	316	*e*P	P	00 21 44.0	+1.9
MOA	Molln	33.91	313	*e*pP	P	00 22 06.6	+1.8
	comp=Z,6.0nm,1.1s						
MURB	Monte Urbino	33.93	304	P	P	00 22 03.4	-1.6
PRED	Cave del Predi	33.95	310	P	P	00 22 02.4	-2.7
PRED				IAmb	IAmb	00 22 16.4	
	comp=Z,1.8nm,0.9s						
ZAA0	Zalesovo Array	34.22	35	P	P	00 22 07.4	+0.1
ZAA0				IAmb	IAmb	00 22 12.9	
	comp=Z,2.8nm,0.9s						
ZALV	Zalesovo Beam	34.22	35	P	P	00 22 08.1	+0.7
	comp=Z,1.0nm,0.5s,baz=249,slow=9.0,SNR=7.2						
	comp=Z,1.0nm,0.5s						
ZALV	Zalesovo Beam	34.22	35	P	P	00 22 07.1	-0.3
KHC	Kasperske Hory	34.77	315	P	P	00 22 11.4	-0.8
KHC				IAmb	IAmb	00 22 15.4	
	comp=Z,2.4nm,0.8s						
KHC	Kasperske Hory	34.77	315	*e*P	P	00 22 11.5	-0.8
WTTA	Wattenberg	35.44	311	*e*P	P	00 22 17.7	-0.5
	comp=Z,5.3nm,0.8s						
WATA	Walderalm	35.50	311	*e*pP	P	00 22 19.7	+1.0
	comp=Z,3.0nm,0.8s						
SQTA	Sankt Quirin	35.71	311	*e*P	P	00 22 19.7	-0.7
	comp=Z,4.3nm,0.4s						
MOTA	Moosalm	35.81	311	*e*P	P	00 22 20.5	-0.9
	comp=Z,4.2nm,0.8s						
FETA	Feichten	35.98	310	*e*P	P	00 22 22.6	-0.2
	comp=Z,3.5nm,0.6s						
FINES	FINESS Array B	36.03	339	P	P	00 22 21.1	-1.7
	comp=Z,2.8nm,0.9s,baz=124,slow=9.5,SNR=3.8						
	comp=Z,2.8nm,0.9s						
FINES	FINESS Array B	36.03	339	P	P	00 22 23.4	+0.6
RETA	Reutte	36.08	311	*e*P	P	00 22 22.5	-1.0
	comp=Z,7.6nm,1.4s						
DAVA	Damuels	36.61	311	*e*P	P	00 22 27.0	-1.1
	comp=Z,4.0nm,0.5s						
BNI	Bardonecchia	38.37	306	P	P	00 22 41.0	-2.1
BNI				IAmb	IAmb	00 22 48.7	
	comp=Z,3.1nm,0.8s						
NOA	NORSAR Array B	41.21	331	P	P	00 23 04.4	-1.9
	comp=Z,0.9nm,0.6s,baz=121,slow=8.1,SNR=2.3						
	comp=Z,0.9nm,0.6s						
ARCES	ARCESS Array B	42.68	347	P	P	00 23 17.4	-0.8
	comp=Z,4.2nm,0.9s,baz=140,slow=7.1,SNR=2.5						
	comp=Z,4.2nm,0.9s						
SONM	Songino Array	45.48	51	P	P	00 23 42.2	+1.1
	comp=Z,0.2nm,0.3s,baz=271,slow=7.1,SNR=2.0						
	comp=Z,0.2nm,0.3s						
TORD	Torodi Ar. Bea	48.86	261	P	P	00 24 07.0	-0.8
	comp=Z,0.6nm,0.3s,baz=60,slow=8.2,SNR=19						
	comp=Z,0.6nm,0.3s						
DBIC	Dimbokro	57.64	258	P	P	00 25 11.7	-0.7
	comp=Z,0.9nm,0.6s,baz=90,slow=13,SNR=1.6						
	comp=Z,0.9nm,0.6s						
SCHQ	Schefferville	80.73	329	P	P	00 27 34.8	-0.1
	comp=Z,3.6nm,1.0s,baz=18,slow=6.4,SNR=2.0						
	comp=Z,3.6nm,1.0s						
YKA	Yellowknife Ar	87.56	354	P	P	00 28 10.8	+1.3
	comp=Z,0.3nm,0.7s,baz=12,slow=5.2,SNR=7.3						
	comp=Z,0.3nm,0.7s						

IDC 17 00:33:55.2±1.9,**6°.38S**×**129°.10E,h0**^{km}**,mb3.4**/1,
mbtmp3.7/4**,ML3.7**/3**,Error ellipse: s-maj=70.9km**
s-min=28.9km az=81.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.89	22	Pn	Pn	00 35 23.6	-0.1
	4.7nm,0.3s,baz=115,slow=23,SNR=26						
SIJI				Sn	Sn	00 36 17.8	-14
	2.9nm,0.3s,baz=169,slow=23,SNR=10.0						
	13nm,0.2s						
WRA	Warramunga Arr	14.41	160	Pn	Pn	00 37 19.8	-0.8
	0.3nm,0.3s,baz=335,slow=13,SNR=7.2						
WRA				Sn	Sn	00 39 48.4	-13
	0.5nm,0.3s,baz=335,slow=22,SNR=7.3						
	0.5nm,0.5s						
ASAR	Alice Springs	17.80	165	P	P	00 38 05.0	-0.4
	0.3nm,0.3s,baz=348,slow=9.4,SNR=12						
ASAR				S	Sn	00 41 14.3	-9.3
	0.2nm,0.3s,baz=356,slow=25,SNR=1.4						
	1.3nm,0.6s						
MKAR	Makanchi Array	67.22	327	P	P	00 44 51.4	+0.1
	0.2nm,0.5s,baz=132,slow=7.1,SNR=3.7						
	0.2nm,0.5s						

IDC 17 00:35:55.4±1.0,29°.79N×51°.54E,h0^{km},mb3.6/16,
mbtmp3.7/22,ML3.5/6,MS3.5/2,Error ellipse:
s-maj=21.0km s-min=16.2km az=161.0
ISN 17 00:35:56.8±0.9,29°.42N×51°.52E,h10^{km}±271^{km},ML3.8
TEH 17 00:35:58.1,29°.68N×51°.49E,h12^{km}±11^{km},ML3.9
ISC 17 00:35:58.9±0.5**,29°.67N**±0°.04×**51°.55E**±0°.04**,h20**^{km}**,n98,**
σ**2^s.34**/102**,mb3.8**/21**,11C,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAZ1	Kazerun	0.09	119	Pg	Pb	00 36 01.6	-1.3
KAZ1				Sg	Sb	00 36 04.6	-1.0
AHBU	AHRAM	0.83	196	Pg	Pb	00 36 14.1	-0.5
SHI	Shiraz	0.84	92	Pg	Pb	00 36 15.2	+0.3
DSBU	Dashti - Bushe	1.33	191	Pg	Pb	00 36 24.2	+1.0
KLNJ	Kolanjah	1.34	2	Pg	Pn	00 36 23.2	+0.4
ABEH	Behbahan	1.46	310	Pg	Pb	00 36 25.6	+0.3
QIR1	Qir	1.77	132	Pn	Pn	00 36 31.2	+2.8
JHRM	Jahrom	2.12	123	Pn	Pn	00 36 36.1	+2.8
IBRJ	Brojen	2.25	354	Pn	Pn	00 36 36.9	+1.7
IRAM	Ramesheh	2.25	18	Pn	Pn	00 36 38.4	+3.2
SHK1	Shahrekord	2.71	348	Pn	Pn	00 36 43.3	+1.7
AMIS	Naft Sefid	2.79	316	Pn	Pn	00 36 44.2	+1.8
LAR1	LAR	3.18	128	Pn	Pn	00 36 51.6	+3.7
SAKB	Bahrain	3.78	194	Pn	Pn	00 36 58.6	+2.6
ANAR	Anarak	3.97	27	Pn	Pn	00 37 01.1	+2.3
QAMS	Qamsar	4.06	358	Pn	Pn	00 37 01.8	+1.7
KRSH	Karshahi	4.32	6	Pn	Pn	00 37 06.2	+2.6
KHGB	Koh Gabri	4.33	79	Pn	Pn	00 37 06.9	+3.1
ZRDN	Zarand Kerman	4.50	72	Pn	Pn	00 37 09.4	+3.2
NGRK	Negar Kerman	4.51	89	Pn	Pn	00 37 09.8	+3.4
ISFB	Sefidab	4.71	7	Pn	Pn	00 37 10.8	+2.0
IBND	Bandar-abas	4.92	116	Pn	Pn	00 37 15.0	+3.4
IKFM	Kafar-mosalman	4.97	322	Pn	Pn	00 37 14.6	+2.2
RAFI	Al-Rafai	5.11	295	*e*Pn	Pn	00 37 18.0	+3.7
RAFI				*e*Sn	Sn	00 38 18.0	+5.3
RAFI				AML	AML	00 38 29.1	
	comp=E,86nm,0.5s						
RAFI				AML	AML	00 38 38.8	
	comp=N,96nm,0.3s						
IQOM	Qom	5.17	356	Pn	Pn	00 37 16.5	+1.1
CHMN	Cheshme madani	5.21	86	Pn	Pn	00 37 19.3	+3.2
IVRN	Varamin	5.31	2	Pn	Pn	00 37 18.6	+1.4
SHME	Shamm	5.43	130	Pn	Pn	00 37 20.4	+1.7
HAGD	Aghdareh	5.53	339	Pn	Pn	00 37 22.0	+1.7
SLWR	Sila	5.58	179	Pn	Pn	00 37 23.0	+2.2
BANOM	Banah	5.62	130	Pn	Pn	00 37 23.3	+1.9
IKOM	Komasi	5.65	324	Pn	Pn	00 37 23.3	+1.4
KHNJ	Kahnooj	5.67	106	Pn	Pn	00 37 25.3	+3.3
GHWR	Ruwais	5.80	168	Pn	Pn	00 37 25.5	+1.6
IRAZ	Razeghan	5.88	347	Pn	Pn	00 37 27.4	+2.3
IBDR	Badra	5.90	307	*e*Pn	Pn	00 37 29.5	+4.3
IBDR				*e*Sn	Sn	00 38 37.0	+4.8
IBDR				AML	AML	00 38 52.6	
	comp=N,51nm,0.5s						
IBDR				AML	AML	00 39 28.2	
	comp=E,60nm,0.7s						
IDMV	Damavand	5.91	4	Pn	Pn	00 37 27.7	+2.1
NAZ	Nazwa, Dubai	5.92	141	Pn	Pn	00 37 28.4	+2.8
MSFE	Esma-Masafi	5.93	135	Pn	Pn	00 37 28.3	+2.7
KCHF	Cheshme Sefid,	5.98	321	Pn	Pn	00 37 27.3	+0.8
KER	Kermanshah	6.01	323	Pn	Pn	00 37 28.1	+1.3
ILBA	Ilam Banvizeh	6.02	312	Pn	Pn	00 37 28.2	+1.3
IFIR	Firoozkooh	6.04	9	Pn	Pn	00 37 29.5	+2.1
KBAM	BAM	6.05	93	Pn	Pn	00 37 29.9	+2.6
TNSJ	Nastanj	6.07	44	Pn	Pn	00 37 30.5	+2.9
TKDS	Koohdasht(Taba	6.17	49	Pn	Pn	00 37 31.5	+2.6
IDHR	Dehrash	6.66	320	Pn	Pn	00 37 37.4	+1.6
ALNE	Al Ain	6.73	145	Pn	Pn	00 37 37.5	+0.9
QALM	Alamut, Qazvin	6.79	354	Pn	Pn	00 37 40.4	+2.8
KLST	Kelardasht - M	6.84	357	Pn	Pn	00 37 40.6	+2.2
MZR	Muzera	6.86	165	Pn	Pn	00 37 40.4	+2.0
BSRN	Basiran	6.91	69	Pn	Pn	00 37 42.5	+3.3
BHD	Baghdad	7.10	302	*e*Pn	Pn	00 37 46.0	+4.4
BHD				*e*Sn	Sn	00 39 05.0	+3.3
BHD				AML	AML	00 39 07.6	
	comp=E,225nm,0.4s						
AFRZ	Afriz	7.39	58	Pn	Pn	00 37 48.4	+2.6
NHDN	Nehbandan	7.53	75	Pn	Pn	00 37 51.4	+3.7
UMZA	Um Al Zommool	7.65	154	Pn	Pn	00 37 49.8	+0.6
IKRK	Kirkuk	8.35	315	*e*Pn	Pn	00 38 04.0	+5.2
IKRK				*e*Sn	Sn	00 39 37.0	+4.6
WSAR	Wadi Sarin	9.01	134	Pn	Pn	00 38 07.4	-0.5
	comp=E,1.1nm,0.3s,baz=2.0,slow=14,SNR=9.8						
WSAR				Sn	Sn	00 39 42.4	-6.5
	comp=E,0.4nm,0.3s,baz=148,slow=17,SNR=1.4						
WSAR				LR	LR	00 42 23.5	
	comp=E,76nm,18.9s,baz=326,slow=43						
	comp=E,3.0nm,0.6s						
SRVN	Saravan	9.80	101	Pn	Pn	00 38 21.5	+2.6
ASF	Jabal al Asfar	12.83	285	Pn	Pn	00 38 57.9	-2.3
	comp=E,0.5nm,0.3s,baz=89,slow=4.9,SNR=8.6						
ASF				Sn	Sn	00 41 10.4	-12
	comp=E,0.3nm,0.3s,baz=301,slow=22,SNR=1.9						
	comp=E,1.0nm,0.3s						
MMAI	Mount Meron Ar	14.20	288	Pn	Pn	00 39 16.4	-2.5
	comp=E,0.3nm,0.3s,baz=112,slow=18,SNR=2.2						
MMAI				Sn	Sn	00 41 44.2	-12
	comp=E,0.2nm,0.3s,baz=276,slow=18,SNR=1.9						
	comp=E,0.7nm,0.6s						
EIL	Elat	14.43	274	Pn	Pn	00 39 21.4	-0.7
	comp=E,0.2nm,0.3s,baz=16,slow=14,SNR=2.4						
EIL				Sn	Sn	00 41 56.2	-5.3
	comp=E,0.1nm,0.3s,baz=275,slow=13,SNR=1.3						
	comp=E,3.2nm,0.8s						
KBZ	Khabaz	15.64	336	Pn	Pn	00 39 36.9	-1.1
	baz=238,slow=23,SNR=0.9						
	comp=E,0.2nm,0.3s						
BRTR	Keskin Array B	17.79	309	P	Pn	00 40 03.8	-1.6
	comp=E,0.1nm,0.3s,baz=130,slow=13,SNR=4.5						
	comp=E,0.3nm,0.4s						
AKTO	Aktyubinsk	21.31	11	P	P	00 40 43.0	-1.2
	comp=E,0.7nm,0.4s,baz=282,slow=5.8,SNR=2.4						
	comp=E,0.7nm,0.4s						
AAK	Ala-Archa	22.51	49	P	P	00 40 57.6	+0.1
	comp=E,0.4nm,0.5s,baz=213,slow=17,SNR=1.5						
	comp=E,0.4nm,0.5s						
BELG	Belogornoye	22.89	354	P	P	00 40 59.4	-1.7
	comp=E,4.4nm,0.7s,baz=120,slow=10.0,SNR=2.0						
	comp=E,4.4nm,0.7s						
IDI	Anoyia	23.14	291	P	P	00 41 04.2	+0.2
	comp=E,2.7nm,0.8s,baz=209,slow=19,SNR=2.4						
	comp=E,2.7nm,0.8s						
VRI	Vrincioaia	25.28	317	⇑P	P	00 41 24.8	+1.0
PLOR	Plostina	25.32	317	⇑P	P	00 41 25.9	+1.7
NEHR	Nehoiu	25.32	315	⇑P	P	00 41 26.5	+2.3
MLR	Muntele Rosu	25.56	315	⇑P	P	00 41 28.8	+2.2
MLR	Muntele Rosu	25.56	315	P	P	00 41 25.3	-1.2
	comp=E,1.6nm,0.6s,baz=221,slow=17,SNR=2.8						
	comp=E,1.6nm,0.6s						
COVR	Voineasa-Covas	25.58	316	⇑P	P	00 41 28.8	+2.3
SORM	Soroca	25.64	322	⇑P	P	00 41 26.9	-0.2
VOIR		26.09	314	⇑P	P	00 41 32.9	+1.6
DOPR	Dopca	26.14	316	⇑P	P	00 41 32.2	+0.6
ARR	Arges	26.32	314	⇑P	P	00 41 37.8	+4.5
AKASG	Malin Array Be	26.87	328	P	P	00 41 34.9	-3.2
	comp=E,1.1nm,0.5s,baz=130,slow=8.7,SNR=1.8						
	comp=E,1.1nm,0.5s						
BURAR	Bucovina Array	27.08	319	⇑P	P	00 41 41.4	+1.2
BVAR	Borovoye Array	27.12	25	P	P	00 41 39.4	-1.0
	comp=E,0.3nm,0.4s,baz=208,slow=7.3,SNR=1.6						
	comp=E,0.3nm,0.4s						
MARR	Marisel-Cluj	27.86	315	⇑P	P	00 41 46.1	-1.1
KURBB	Kurchatov Arra	29.11	36	P	P	00 41 56.5	-1.7
	comp=E,0.3nm,0.5s,baz=238,slow=8.9,SNR=2.0						
	comp=E,0.3nm,0.5s						
MKAR	Makanchi Array	29.33	46	P	P	00 41 58.3	-1.9
	comp=E,0.2nm,0.6s,baz=224,slow=6.0,SNR=1.9						
	comp=E,0.2nm,0.6s						
ZALV	Zalesovo Beam	34.17	35	P	P	00 42 41.4	-1.2
	comp=E,0.6nm,0.5s,baz=261,slow=9.3,SNR=3.2						
	comp=E,0.6nm,0.5s						
GERES	GERESS Array B	34.54	314	P	P	00 42 44.7	-1.3
	comp=E,0.3nm,0.6s,baz=89,slow=9.9,SNR=2.2						
	comp=E,0.3nm,0.6s						
KHC	Kasperske Hory	34.72	315	*e*P	P	00 42 46.0	-1.4
WTTA	Wattenberg	35.39	311	*e*P	P	00 42 53.7	+0.2
	comp=E,4.9nm,1.0s						
SQTA	Sankt Quirin	35.66	311	*e*P	P	00 42 55.2	-0.4
	comp=E,2.9nm,0.4s						
MOTA	Moosalm	35.76	311	*e*P	P	00 42 56.3	-0.3
	comp=E,1.6nm,0.3s						
FETA	Feichten	35.92	310	*e*P	P	00 42 58.4	+0.4
	comp=E,1.5nm,0.5s						
FINES	FINESS Array B	35.96	339	P	P	00 42 56.0	-1.9
	comp=E,1.6nm,0.8s,baz=147,slow=8.3,SNR=4.2						
	comp=E,1.6nm,0.8s						
DAVA	Damuels	36.55	311	*e*P	P	00 43 02.9	-0.4
	comp=E,3.8nm,0.3s						
HFS	Hagfors	39.62	331	LR	LR	01 01 49.3	
	comp=E,253nm,18.2s,baz=350,slow=39						
NOA	NORSAR Array B	41.14	331	P	P	00 43 40.5	-1.0
	comp=E,2.1nm,1.1s,baz=126,slow=7.1,SNR=1.6						
	comp=E,2.1nm,1.1s						
TORD	Torodi Ar. Bea	48.86	261	P	P	00 44 43.5	+0.1
	comp=E,0.6nm,0.5s,baz=56,slow=8.5,SNR=16						
	comp=E,0.6nm,0.5s						
BOSA	Boshof	63.17	206	P	P	00 46 25.5	-0.1
	comp=E,0.9nm,0.8s,baz=43,slow=8.9,SNR=1.1						
	comp=E,0.9nm,0.8s						
YKA	Yellowknife Ar	87.49	354	P	P	00 48 44.4	-0.4
	comp=E,0.2nm,0.6s,baz=8.9,slow=5.2,SNR=2.1						
	comp=E,0.2nm,0.6s						

HEL 17 00:44:18.0±0.3,67°.84N×20°.05E,h0^{km},ML1.7,Explosion
UPP 17 00:44:18.3±0.1,67°.83N×20°.21E,h0^{km},ML2.5,Suspected explosion
ISC 17 00:44:17.6±1.2**,67°.77N**±0°.03×**20°.19E**±0°.06**,h0**^{km}**,n20,**
σ**1^s.09**/33**,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.20	16	P	Pg	00 44 21.1	-0.2
KUA				S	Sg	00 44 23.0	-0.9
KOVU	Salmi	0.46	358	P	Pg	00 44 25.9	-0.5
DUNU	Dundret	0.66	167	P	Pb	00 44 31.9	-0.1
LANU	Lannavaara	0.74	67	PG	Pg	00 44 31.7	+0.1
LANU				SG	Sg	00 44 41.5	+0.3
KIF	Kilpisjarvi	1.26	10	*e*P	Pn	00 44 43.1	+0.7
KIF	Kilpisjarvi	1.26	10	PN	Pb	00 44 42.0	-0.2
KIF				MSG		00 44 55.6	
	comp=Z,15nm,0.2s						
KIF				SG	Sg	00 44 57.3	-0.8
PAJU	Pajala	1.35	122	PG	Pb	00 44 43.7	-0.1
	baz=305						
PAJU				SG	Sn	00 45 02.4	+0.1
ERTU	Ertsjaerv	1.45	146	PG	Pb	00 44 46.1	+0.8
ERTU				SN	Sn	00 45 06.6	+2.0
HEF	Hetta	1.45	62	*e*P	Pn	00 44 44.8	-0.3
HEF	Hetta	1.45	62	PG	Pn	00 44 44.6	-0.4
	baz=248						
HEF				MSG		00 45 02.1	
	comp=Z,6.6nm,0.2s						
HEF				SN	Sn	00 45 04.5	-0.3
KLF	Kolari	1.55	108	PG	Pg	00 44 47.4	+0.2
KLF				MSG		00 45 06.5	
	comp=Z,5.1nm,0.2s						
KLF				SN	Sn	00 45 09.0	+1.9
KTK1	Kautokeino	1.68	41	PG	Pn	00 44 48.4	+0.1
KTK1				SN	Sb	00 45 10.3	-0.8
KALU	Kalix	2.29	145	PB	Pb	00 44 59.1	-0.5
KALU				SB	Sg	00 45 30.2	-0.8
TOF	Tornio	2.35	134	PB	Pb	00 45 00.6	-0.1
TOF				MSG		00 45 30.0	
	comp=Z,3.1nm,0.2s						
TOF				SG	Sg	00 45 32.0	-0.9
RNF	Rovaniemi	2.55	114	PB	Pb	00 45 03.7	-0.4
RNF				SG	Sg	00 45 37.8	-1.5
ARA0	ARCESS Array S	2.63	45	PB	Pn	00 45 02.6	+1.3
ARA0				SB	Sn	00 45 35.2	+1.3
KEV	Kevo	3.18	48	SN	Sn	00 45 48.4	+1.0
OUL	Oulu	3.54	137	SG	Sg	00 46 08.5	-2.5
VRF	Varrio	3.58	86	SG	Sg	00 46 10.5	-2.0
KU6	Riekki	4.20	110	PG	Pb	00 45 34.1	+1.9
KU6				SG	Sg	00 46 31.1	-1.3

DDA 17 01:09:48.9±0.0,36°.77N×31°.62E,h76^{km},ML2.6
ISK 17 01:09:49.1,36°.84N×31°.62E,h87^{km},ML3.1/36
IDC 17 01:09:49.4±1.5,36°.86N×31°.69E,h72^{km}±20^{km},mb3.2/3,
mbtmp3.3/9,Error ellipse: s-maj=21.8km s-min=12.4km
az=107.0
NIC 17 01:09:51.4±0.0,36°.68N×31°.76E,h40^{km}±58^{km},Ml3.2/8
ISC 17 01:09:49.9±0.9**,36°.79N**±0°.02×**31°.72E**±0°.02**,h76**^{km}±6^{km}**,**
n86,σ**1^s.76**/130**,mb3.4**/3**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEPZ	Antalya-Kepez	0.14	320	P	Pn	01 10 01.1	+0.1
KEPZ				S	Sn	01 10 09.3	+0.1
KEPZ				*i* AML	AML	01 10 10.0	
	comp=N,519nm,0.7s						
KEPZ				*i* AML	AML	01 10 11.0	
	comp=E,402nm,0.6s						
SEYD	Seydisehir-KON	0.62	9	Pg	Pn	01 10 05.3	+0.8
SEYD				Sg	Sn	01 10 16.2	+0.9
HDMB	Hadim	0.64	74	Pg	Pn	01 10 06.2	+1.4
HDMB				Sg	Sn	01 10 17.8	+2.0
SEDI	Konya, Seydise	0.66	2	P	Pn	01 10 05.2	+0.3
SEDI				S	Sn	01 10 16.6	+0.6
SEDI				*i* AML	AML	01 10 18.0	
	comp=E,167nm,0.4s						
GAZI	Gazipasa	0.73	139	Pg	Pn	01 10 06.2	+0.6
GAZI	Gazipasa	0.73	139	P	Pn	01 10 06.2	+0.6
GAZI				S	Sn	01 10 18.2	+0.9
GAZI				*i* AML	AML	01 10 19.0	
	comp=N,415nm,0.3s						
GAZI				*i* AML	AML	01 10 19.0	
	comp=E,343nm,0.3s						
ANTB	Antalya	0.86	278	Pg	Pn	01 10 07.0	0.0
SUTC	Sutluce-Ispart	0.89	320	Pg	Pn	01 10 07.2	-0.3
KKBE	Karaman, Kazim	1.07	66	P	Pn	01 10 10.3	+0.8
KKBE				S	Sn	01 10 25.2	+0.9
KKBE				*i* AML	AML	01 10 27.0	
	comp=N,92nm,0.4s						
KKBE				*i* AML	AML	01 10 28.0	
	comp=E,81nm,1.0s						
BUCA	Burdur, Bucak-	1.07	300	P	Pn	01 10 08.9	-0.7
BUCA				S	Sn	01 10 23.5	-0.8
BUCA				*i* AML	AML	01 10 27.0	
	comp=E,112nm,0.3s						
BUCA				*i* AML	AML	01 10 28.0	
	comp=N,70nm,0.4s						
KMER	Konya-Meram	1.10	28	P	Pn	01 10 10.8	+0.7
KMER				S	Sn	01 10 26.0	+0.8
KMER				*i* AML	AML	01 10 27.0	
	comp=N,74nm,0.6s						
KMER				*i* AML	AML	01 10 30.0	
	comp=E,73nm,0.5s						
KORT	Korkueli	1.12	281	Pg	Pn	01 10 09.1	-1.1
KORT	Korkueli	1.12	281	P	Pn	01 10 08.8	-1.4
KORT				S	Sn	01 10 22.3	-3.2
KORT				*i* AML	AML	01 10 24.0	
	comp=N,67nm,0.3s						
KORT				*i* AML	AML	01 10 29.0	
	comp=E,99nm,0.3s						
BCK	Bucak	1.12	307	Pg	Pn	01 10 09.8	-0.5
AKUM	Antalya-Kumluc	1.20	248	P	Pn	01 10 13.0	+1.9
AKUM				S	Sn	01 10 32.2	+5.1
KONT	Konya--Tatoy	1.26	24	Pn	Pn	01 10 12.8	+0.8
KONT	Konya--Tatoy	1.26	24	P	Pn	01 10 12.2	+0.2
BERE	Bereket-Mersin	1.29	110	Pn	Pn	01 10 14.4	+2.0
KRMN	Karaman	1.29	72	Pn	Pn	01 10 13.4	+1.0
DOGA	KONYA_Doganhis	1.31	358	P	Pn	01 10 13.0	+0.3
DOGA				S	Sn	01 10 31.3	+1.4
DOGA				*i* AML	AML	01 10 35.0	
	comp=N,101nm,0.6s						
DOGA				*i* AML	AML	01 10 35.0	
	comp=E,119nm,0.7s						
ISP	Isparta	1.40	318	Pn	Pn	01 10 13.7	-0.2
BAGO	Egridir - ISPA	1.41	329	P	Pn	01 10 14.1	+0.2
BAGO				S	Sn	01 10 32.8	+0.8
TEVE	Tevekalti-Mers	1.43	104	Pn	Pn	01 10 16.1	+1.9
ELL	Elmali	1.46	269	Pn	Pn	01 10 14.7	+0.2
ELL	Elmali	1.46	269	P	Pn	01 10 15.0	+0.5
ELL				S	Sn	01 10 35.9	+2.8
LADK	Ladik-KONYA	1.50	20	Pn	Pn	01 10 15.4	+0.3
YVAC	Isparta, Yalva	1.53	346	P	Pn	01 10 15.9	+0.5
YVAC				S	Sn	01 10 34.8	0.0
GULN	MERSIN_Gulnar	1.59	112	P	Pn	01 10 17.1	+1.0
GULN				S	Sn	01 10 38.3	+2.3
GULN				*i* AML	AML	01 10 41.0	
	comp=N,36nm,0.7s						
BRDR	BURDUR-Merkez	1.60	305	P	Pn	01 10 16.5	+0.1
BRDR				S	Sn	01 10 36.0	-0.6
BRDR				*i* AML	AML	01 10 48.0	
	comp=E,19nm,0.4s						
BRDR				*i* AML	AML	01 10 58.0	
	comp=N,16nm,0.7s						
AKKU	Akkuyu-Mersin	1.60	113	Pn	Pn	01 10 18.7	+2.3
AKK2	Akkuyu-Mersin	1.61	113	Pn	Pn	01 10 18.9	+2.5
YESI	Yesilovacik-Me	1.66	110	Pn	Pn	01 10 19.2	+2.1
IKL	Isikli	1.68	109	Pn	Pn	01 10 19.6	+2.3
TISA	Tisan-Mersin	1.70	111	Pn	Pn	01 10 20.2	+2.6
KARG	Kargicak-Mersi	1.71	110	Pn	Pn	01 10 19.8	+2.1
BASM	Basmaki-Afyon	1.74	311	Pn	Pn	01 10 18.1	-0.2
KDHN	Kadinhani	1.76	10	P	Pn	01 10 18.5	0.0
KDHN				S	Sn	01 10 39.9	-0.3
ALIN	Konya, Altinte	1.76	31	P	Pn	01 10 19.3	+0.7
ALIN				S	Sn	01 10 40.6	+0.3
ALFC	Alefka	1.78	156	P	Pn	01 10 19.0	+0.2
ALFC				S	Sn	01 10 38.4	-2.3
ALFC				AML	AML	01 10 41.1	
	1.3nm,0.2s						
ALFC				AML	AML	01 10 41.1	
	1.3nm,0.2s						
ALFC				AML	AML	01 10 41.3	
	1.6nm,0.2s						
ALFC				AML	AML	01 10 41.3	
	1.6nm,0.2s						
GOLH	Golhisar	1.78	285	P	Pn	01 10 20.8	+2.0
GOLH				S	Sn	01 10 47.9	+7.1
AKAS	Kas	1.79	253	Pn	Pn	01 10 18.7	-0.3
AKAS	Kas	1.79	253	P	Pn	01 10 19.8	+0.8
AKAS				S	Sn	01 10 41.9	+0.9
AKAS				*i* AML	AML	01 10 43.0	
	comp=N,156nm,0.4s						
AKAS				*i* AML	AML	01 10 44.0	
	comp=E,157nm,0.5s						
SILI	Silifke-Mersin	1.82	103	Pn	Pn	01 10 22.1	+2.8
KSL	Kastellorizon	1.84	250	P	Pn	01 10 20.3	+0.9
KSL				S	Sn	01 10 42.4	+0.5
KSL				AML	AML	01 10 44.0	
	0.3nm,0.4s						
KSL				AML	AML	01 10 44.0	
	0.3nm,0.4s						
KSL				AML	AML	01 10 44.1	
	0.8nm,0.4s						
KSL				AML	AML	01 10 44.1	
	0.8nm,0.4s						
AKMS	Akamas	1.84	164	P	Pn	01 10 19.6	+0.1
AKMS				S	Sn	01 10 41.0	-1.0
AKMS				AML	AML	01 10 49.1	
	2.1nm,0.4s						
AKMS				AML	AML	01 10 49.1	
	2.1nm,0.4s						
AKMS				AML	AML	01 10 49.9	
	1.6nm,0.5s						
AKMS				AML	AML	01 10 49.9	
	1.6nm,0.5s						
YESY	Yesilyurt	1.89	58	Pn	Pn	01 10 21.5	+1.2
LEF	Lefka	1.92	150	P	Pn	01 10 21.6	+1.1
LEF				S	Sn	01 10 43.6	-0.3
KZIL	AFYON_Kizioren	1.93	320	P	Pn	01 10 19.9	-0.9
KZIL				S	Sn	01 10 43.2	-1.1
CAEL	Denizli, Camel	1.95	280	P	Pn	01 10 25.0	+3.9
KIZK	Mersin	1.97	98	Pn	Pn	01 10 23.3	+2.0
SHUT	Suhut-Afyon	1.99	333	Pn	Pn	01 10 21.4	-0.2
CHBY	Cihanbeyli	2.02	27	Pn	Pn	01 10 22.9	+1.0
IZZE	Mula-Seydike	2.04	261	P	Pn	01 10 23.4	+1.3
IZZE				S	Sn	01 10 47.0	+0.3
IZZE				*i* AML	AML	01 10 50.0	
	comp=N,88nm,0.3s						
IZZE				*i* AML	AML	01 10 55.0	
	comp=E,89nm,0.4s						
KURO	Afyon-Bolvadin	2.04	342	P	Pn	01 10 22.6	+0.4
KURO				S	Sn	01 10 46.1	-0.8
APMY	Acipayam-Deniz	2.05	290	Pn	Pn	01 10 21.6	-0.7
KIZT	Kizilcal	2.09	3	Pn	Pn	01 10 22.6	-0.3

NATA	Nata	2.12	161	P	Pn	01 10 27.1	+3.8
NATA				S	Sn	01 10 48.3	-0.5
FETY	Fethiye	2.12	267	P	Pn	01 10 25.7	+2.4
ATHAL	Athalassa	2.13	140	P	Pn	01 10 23.8	+0.4
ATHAL				S	Sn	01 10 48.6	-0.5
ATHAL				AML	AML	01 10 54.0	
	0.8nm,0.5s						
ATHAL				AML	AML	01 10 54.0	
	0.8nm,0.5s						
ATHAL				AML	AML	01 10 57.8	
	0.8nm,0.4s						
ATHAL				AML	AML	01 10 57.8	
	0.8nm,0.4s						
SZAC	Souni	2.24	155	P	Pn	01 10 27.1	+2.2
SZAC				S	Sn	01 10 51.0	-0.6
SZAC				AML	AML	01 11 01.5	
	0.4nm,0.4s						
SZAC				AML	AML	01 11 01.5	
	0.4nm,0.4s						
SZAC				AML	AML	01 11 01.9	
	0.5nm,0.3s						
SZAC				AML	AML	01 11 01.9	
	0.5nm,0.3s						
CSS	Mathiatis	2.25	144	P	Pn	01 10 24.2	-0.7
CSS				S	Sn	01 10 47.9	-3.8
CSS				AML	AML	01 10 54.1	
	0.1nm,0.4s						
CSS				AML	AML	01 10 54.1	
	0.1nm,0.4s						
CSS				AML	AML	01 11 00.7	
	0.1nm,0.5s						
CSS				AML	AML	01 11 00.7	
	0.1nm,0.5s						
DNIZ	Denizli-Tavas-	2.30	292	P	Pn	01 10 27.3	+1.6
DNIZ				S	Sn	01 10 56.6	+3.5
TAVA	DENIZLI_Tavas	2.34	288	P	Pn	01 10 28.2	+1.9
ASGA	Asgata	2.35	148	P	Pn	01 10 27.4	+1.0
ASGA				S	Sn	01 10 53.3	-1.1
ASGA				AML	AML	01 11 06.4	
	0.2nm,0.4s						
ASGA				AML	AML	01 11 06.4	
	0.2nm,0.4s						
ASGA				AML	AML	01 11 09.0	
	0.4nm,0.7s						
ASGA				AML	AML	01 11 09.0	
	0.4nm,0.7s						
MVOU	Mavrovouni	2.35	138	P	Pn	01 10 25.6	-0.8
MVOU				S	Sn	01 10 51.7	-2.7
MVOU				AML	AML	01 10 57.6	
	0.3nm,0.3s						
MVOU				AML	AML	01 10 57.6	
	0.3nm,0.3s						
PASA	Karahalli, USA	2.36	312	P	Pn	01 10 25.6	-0.9
PASA				S	Sn	01 10 52.7	-1.9
KULU	Kulu	2.47	24	Pn	Pn	01 10 27.7	-0.3
GULA	Gulagac	2.53	51	Pn	Pn	01 10 30.5	+1.6
SERE	Sereflikochisa	2.60	34	Pn	Pn	01 10 30.6	+0.8
CIFT	Cifteler, Eski	2.62	349	Pn	Pn	01 10 30.5	+0.5
SVRH	Sivrihisar-ESK	2.66	357	Pn	Pn	01 10 30.7	+0.2
YAYX	Yaylak	2.71	37	Pn	Pn	01 10 31.7	+0.4
TURN	Turunc	2.79	271	P	Pn	01 10 33.0	+0.8
TURN				S	Sn	01 11 05.0	+0.1
TURN				*i* AML	AML	01 11 15.0	
	comp=N,35nm,0.4s						
TURN				*i* AML	AML	01 11 17.0	
	comp=E,22nm,0.3s						
USAK	Uak-Merkez	2.88	313	P	Pn	01 10 32.6	-0.9
USAK				S	Sn	01 11 05.2	-1.9
USAK				*i* AML	AML	01 12 14.0	
	comp=N,63nm,3.7s						
USAK				*i* AML	AML	01 12 14.0	
	comp=E,74nm,4.4s						
MANT	Manisa	3.03	305	P	Pn	01 10 34.8	-1.0
MANT				S	Sn	01 11 08.8	-2.3
DEMI	Demirci	3.27	314	P	Pn	01 10 37.0	-1.8
BRTR	Keskin Array B	3.30	27	P	Pn	01 10 39.6	+0.3
	1.5nm,0.5s,baz=198,slow=16,SNR=16						
BRTR				S	Sn	01 11 15.9	-1.5
	1.8nm,0.6s,baz=215,slow=27,SNR=11						
DAT	Datca	3.33	270	P	Pn	01 10 41.6	+1.9
DAT				S	Sn	01 11 17.6	-0.5
MMAI	Mount Meron Ar	4.83	140	P	Pn	01 11 00.9	+0.8
	0.7nm,0.3s,baz=321,slow=13,SNR=16						
MMAI				S	Sn	01 11 52.2	-2.7
	1.1nm,0.3s,baz=332,slow=30,SNR=7.6						
IDI	Anoyia	5.73	257	P	Pn	01 11 12.1	-0.4
	2.1nm,0.5s,baz=76,slow=17,SNR=7.2						
IDI				S	Sn	01 12 11.0	-5.9
	2.9nm,0.6s,baz=219,slow=22,SNR=2.0						
ASF	Jabal al Asfar	6.28	136	P	Pn	01 11 21.1	+1.0
	2.4nm,0.8s,baz=233,slow=10,SNR=2.8						
ASF				S	Sn	01 12 29.3	-1.1
	1.5nm,0.8s,baz=22,slow=2.4,SNR=1.9						
EIL	Elat	7.60	158	P	Pn	01 11 37.4	-0.5
	2.1nm,0.7s,baz=15,slow=18,SNR=1.5						
EIL				S	Sn	01 12 57.7	-4.8
	1.4nm,0.4s,baz=52,slow=13,SNR=6.6						
MLR	Muntele Rosu	9.72	335	P	Pn	01 12 04.4	-2.5
	1.1nm,0.7s,baz=147,slow=17,SNR=1.8						
ARCES	ARCESS Array B	32.98	356	P	P	01 16 16.2	-0.8
	2.0nm,0.8s,baz=144,slow=6.7,SNR=4.5						
	2.0nm,0.8s						
TORD	Torodi Ar. Bea	35.73	237	P	P	01 16 41.1	-0.3
	0.4nm,0.8s,baz=42,slow=9.0,SNR=2.6						
	0.4nm,0.8s						
MKAR	Makanchi Array	38.41	59	P	P	01 17 03.9	0.0
	0.2nm,0.6s,baz=282,slow=7.2,SNR=2.3						
	0.2nm,0.6s						

ROM 17 01:15:36.8±0.1, 42°.629N±0°.003×13°.354E±0°.002, h6^{km}, ML1.1/5, 1C, Error ellipse: s-maj=0.3km s-min=0.1km az=161.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	SAN MARTINO	0.01	276	P	Pg	01 15 38.1	0.0
SMA1				S	Sg	01 15 38.8	-0.2
SMA1				AML	AML		
	comp=E,1530µm,0.4s						
SMA1				AML	AML		
	comp=N,776µm,0.7s						
SMA1				AML	AML		
	comp=E,1242µm,0.2s						
SMA1				AML	AML		
	comp=N,738µm,0.1s						
RM33	Pellescritta (	0.16	221	P	Pg	01 15 40.5	+0.5
RM33				S	Sg	01 15 43.2	+1.0
RM33				AML	AML		
	comp=E,55µm,0.2s						
RM33				AML	AML		
	comp=N,63µm,0.5s						
RM33				AML	AML		
	comp=E,55µm,0.2s						
RM33				AML	AML		
	comp=N,131µm,1.0s						
RM33				AML	AML		
	comp=N,63µm,0.5s						
RM33				AML	AML		
	comp=E,145µm,1.5s						
T1218	Civita (PG)	0.18	283	P	Pg	01 15 40.8	+0.4
T1218				S	Sg	01 15 44.0	+1.1
TERO	Teramo	0.18	92	P	Pg	01 15 41.0	+0.5
TERO				S	Sg	01 15 44.2	+1.2
TERO				AML	AML		
	comp=N,156µm,0.1s						
TERO				AML	AML		
	comp=E,138µm,0.2s						
TERO				AML	AML		
	comp=E,125µm,0.2s						
TERO				AML	AML		
	comp=N,140µm,0.1s						
TERO				AML	AML		
	comp=N,156µm,0.1s						
TERO				AML	AML		
	comp=E,138µm,0.2s						
T1241	Roccafluvione,	0.23	14	P	Pg	01 15 42.0	+0.5
T1241				S	Sg	01 15 46.1	+1.6
T1241				AML	AML		
	comp=N,147µm,1.2s						
T1241				AML	AML		
	comp=E,21µm,4.5s						
T1241				AML	AML		
	comp=N,20µm,2.2s						
T1241				AML	AML		
	comp=E,134µm,1.3s						
T1212	Cascia, Frazio	0.26	298	⇑P	Pg	01 15 42.8	+0.9
MMO1	Montemonaco	0.27	356	P	Pg	01 15 42.8	+0.7
LPEL	Lama dei Pelig	0.85	133	P	Pg	01 15 50.4	-2.7
LPEL				AML	AML		
	comp=E,116µm,0.7s						
LPEL				AML	AML		
	comp=N,67µm,0.7s						
SACS	San Casciano d	1.09	282	P	Pb	01 15 58.2	+0.1

ROM 17 01:16:00.3±0.1, 42°.849N±0°.002×13°.003E±0°.005, h11^{km}, ML0.7/1, Error ellipse: s-maj=0.4km s-min=0.2km az=104.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1216	Preci, Frazion	0.04	16	P	Pg	01 16 02.8	+0.3
T1216				S	Sg	01 16 04.2	+0.1
T1216				AML	AML		
	comp=E,86µm,0.3s						
T1216				AML	AML		
	comp=N,81µm,0.1s						
T1216				AML	AML		
	comp=N,81µm,0.1s						
T1216				AML	AML		
	comp=E,86µm,1.7s						
T1212	Cascia, Frazio	0.10	162	P	Pg	01 16 03.6	+0.5
T1212				S	Sg	01 16 05.6	+0.4
T1245	Castelsantange	0.14	87	P	Pg	01 16 04.2	+0.5
T1245				S	Sg	01 16 06.7	+0.6
T1217	Poggiodomo (PG	0.15	201	P	Pg	01 16 04.4	+0.6
T1217				S	Sg	01 16 07.0	+0.8
MC2	Monte Cornacci	0.15	65	P	Pg	01 16 04.6	+0.6
MC2				S	Sg	01 16 07.3	+0.8
T1218	Civita (PG)	0.20	155	P	Pg	01 16 05.2	+0.6
T1218				S	Sg	01 16 08.7	+1.1
FDMO	Fiordimonte	0.20	18	P	Pg	01 16 05.2	+0.6
FDMO				S	Sg	01 16 08.7	+1.1
T1219	Muccia, Frazio	0.21	1	P	Pg	01 16 05.4	+0.6
T1219				S	Sg	01 16 08.8	+1.0
MMO1	Montemonaco	0.24	78	P	Pg	01 16 05.9	+0.5
MMO1				S	Sg	01 16 09.9	+1.0

*SOME **17** 01:18:33.0, 37°.45N×72°.00E, h15^{km}*
*IDC **17** 01:18:36.6±3.5, 36°.31N×70°.23E, h188^{km}±34^{km}, mb3.3/6, mbtmp3.8/12, Error ellipse: s-maj=34.0km s-min=22.0km az=143.0*
*NNC **17** 01:18:42.0±5.2, 37°.02N×70°.31E, h0^{km}, mb4.4, mpv4.3, Error ellipse: s-maj=46.2km s-min=36.9km az=141.0*
ISC 17 01:18:38.2±1.1, 36°.5N±0°.1×70°.2E±0°.1, h200^{km}, n29, σ1^{s}.60/31, mb3.7/5, 4C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	5.65	359	Pg	Pn	01 20 02.8	+1.9
	82nm,0.2s						
IUG				Lg	Lg	01 21 06.3	
	75nm,0.6s						
IUG	Iuzhnay	5.65	359	*e*Pg	Pn	01 20 02.8	+1.9
	85nm,0.1s						
IUG				*e*Lg	Lg	01 21 06.3	
	75nm,0.6s						
AML	Almayashu	6.24	25	P	Pn	01 20 09.7	+0.8
	SNR=52						
AML	Almayashu	6.24	25	⇑P	Pn	01 20 09.5	+0.6
	2.6nm,0.5s						
AML				⇓S	Sn	01 21 17.1	-3.6
	8.9nm,0.6s						
DZA	Taraz	6.45	7	Pg	Pn	01 20 11.5	+0.3
	40nm,0.1s						
KK31	Karatay Array	6.60	2	P	Pn	01 20 14.1	+0.9
	1.4nm,0.2s,baz=198,slow=15,SNR=72						
KK31				⇑S	Sn	01 21 24.6	-4.0
	8.8nm,0.6s						
UCH	Uchtor	6.62	29	P	Pn	01 20 14.8	+0.9
	SNR=24						
MRKS	Merke	6.66	20	Pg	Pn	01 20 14.9	+0.8
	8.4nm,0.2s						
MRKS				Lg	Lg	01 21 27.3	
	18nm,0.5s						
MRKS	Merke	6.66	20	*e*Pg	Pn	01 20 14.8	+0.8
	8.5nm,0.1s						
MRKS				*e*Lg	Lg	01 21 27.2	
	18nm,0.2s						
EKS2	Erkin-Say	6.75	23	P	Pn	01 20 16.0	+0.9
	SNR=10						
AAK	Ala-Archa	6.97	27	P	Pn	01 20 19.1	+1.0
	SNR=12						
AAK	Ala-Archa	6.97	27	P	Pn	01 20 19.2	+1.1
	5.8nm,0.4s,baz=178,slow=4.2,SNR=29						
KBK	Karagaybulak	7.16	29	P	Pn	01 20 22.1	+1.6
	SNR=7.0						
ULHL	Ulahol	7.40	37	P	Pn	01 20 24.6	+0.8
	SNR=5.6						
USP	Ospenovka	7.52	25	P	Pn	01 20 25.2	0.0
	SNR=7.8						
TKM2	Tokmak 2	7.64	31	P	Pn	01 20 27.4	+0.5
	SNR=13						
TKM2	Tokmak 2	7.64	31	⇑P	Pn	01 20 26.9	0.0
	11nm,0.8s						
TKM2				⇑S	Sn	01 21 51.1	-2.3
	2.4nm,0.7s						
MKAR	Makanchi Array	13.68	37	P	Pn	01 21 44.2	+0.2
	0.5nm,0.5s,baz=224,slow=16,SNR=9.8						
AB31	Akbulak array	14.79	333	P	P	01 22 06.0	+7.5
	0.4nm,0.3s,baz=148,slow=10,SNR=13						
KURBB	Kurchatov Arra	15.34	20	P	Pn	01 22 03.4	-1.0
	0.5nm,0.3s,baz=210,slow=11,SNR=5.9						
AKTO	Aktyubinsk	16.47	332	P	Pn	01 22 18.9	+1.0
	1.8nm,0.5s,baz=146,slow=9.0,SNR=5.4						
BVAR	Borovoye Array	16.53	0	P	Pn	01 22 19.4	+0.7
	0.4nm,0.3s,baz=180,slow=10,SNR=7.4						
WSAR	Wadi Sarin	16.57	220	P	Pn	01 22 16.1	-3.4
	4.9nm,0.8s,baz=61,slow=22,SNR=2.2						
ZALV	Zalesovo Beam	20.19	26	P	P	01 22 57.5	+0.2
	1.1nm,0.3s,baz=217,slow=10,SNR=7.7						
	1.1nm,0.3s						
BELG	Belogornoye	22.50	322	P	P	01 23 22.0	+1.3
	3.3nm,0.6s,baz=233,slow=0.5,SNR=4.6						
	3.3nm,0.6s						
SONM	Songino Array	28.86	55	P	P	01 24 19.4	+1.3
	0.2nm,0.5s,baz=266,slow=10,SNR=1.9						
	0.2nm,0.5s						
NRIK	Noril'sk	34.25	11	P	P	01 25 05.5	+0.8
	1.9nm,0.4s,baz=218,slow=4.8,SNR=4.2						
	1.9nm,0.4s						
ARCES	ARCESS Array B	40.91	338	P	P	01 26 01.5	+1.0
	1.7nm,0.6s,baz=105,slow=6.8,SNR=9.2						
	1.7nm,0.6s						
TORD	Torodi Ar. Bea	65.08	268	P	P	01 28 57.1	-0.5
	0.3nm,0.7s,baz=52,slow=6.2,SNR=2.3						
	0.3nm,0.7s						

*IDC **17** 01:24:18.6±2.1, 17°.94S×178°.21W, h609^{km}±20^{km}, mb3.0/7, mbtmp3.9/8, Error ellipse: s-maj=58.5km s-min=18.4km az=152.0*
ISC 17 01:24:17.7±1.4, 18°.0S±0°.4×178°.1W±0°.2, h600^{km}, n10, σ0^{s}.75/11, mb3.4/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.65	273	P	P	01 25 42.2	+1.2
	32nm,0.7s,baz=97,slow=3.7,SNR=28						
WRA	Warramunga Arr	44.88	260	P	P	01 31 40.0	-0.5
	0.6nm,0.5s,baz=96,slow=7.0,SNR=10						
	0.6nm,0.5s						
ASAR	Alice Springs	45.03	254	P	P	01 31 41.4	-0.2
	1.4nm,0.6s,baz=80,slow=8.6,SNR=12						
ASAR				PcP	PcP	01 33 08.5	-0.9
	0.4nm,0.6s,baz=106,slow=3.4,SNR=1.9						
	1.4nm,0.6s						
MJAR	Matsushiro Arr	68.14	323	P	P	01 34 19.4	+0.2
	0.9nm,0.3s,baz=134,slow=7.1,SNR=1.5						
	0.9nm,0.3s						
NVAR	Mina Array Bea	79.30	44	P	P	01 35 22.6	0.0
	0.9nm,0.8s,baz=214,slow=9.6,SNR=6.3						
	0.9nm,0.8s						
TXAR	Lajitas Array	85.81	58	P	P	01 35 56.2	+1.0
	0.5nm,0.7s,baz=224,slow=5.2,SNR=7.7						
	0.5nm,0.7s						
ILAR	Eielson Array	85.91	13	P	P	01 35 54.0	-0.8
	0.5nm,0.4s,baz=221,slow=4.7,SNR=15						
	0.5nm,0.4s						
PDAR	Pinedale Array	87.23	43	P	P	01 36 01.6	-0.2
	0.3nm,0.6s,baz=224,slow=3.5,SNR=2.5						
	0.3nm,0.6s						
BRTR	Keskin Array B	145.04	315	PKP	PKPbc	01 42 49.0	-0.1
	0.6nm,0.7s,baz=161,slow=5.2,SNR=5.0						
GERES	GERESS Array B	147.76	345	PKPbc	PKPbc	01 42 55.6	-0.5
	0.9nm,0.7s,baz=20,slow=4.3,SNR=5.5						

IDC 17 01:30:21.1±354.0, 30°.23N×133°.32E, h0^{km}, Error ellipse: s-maj=199.9km s-min=117.4km az=90.0, Southeast of Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I30JP	ISUMI INFRASON	7.77	47	I	I	02 13 05.0	
	0.1nm,1.2s,baz=235,slow=315,SNR=3.9						
I39PW	PALAU INFRASON	22.61	177	I	I	03 47 40.0	
	baz=3.0,slow=304,SNR=0.3						
I44RU	PETROPAVLOVSK	28.97	31	I	I	04 30 00.0	
	0.1nm,0.8s,baz=227,slow=339,SNR=0.8						
I53US	FAIRBANKS INFR	58.36	29	I	I	07 32 03.3	
	0.1nm,1.1s,baz=274,slow=348,SNR=0.9						

ROM 17 01:33:33.8±0.3, 42°.599N±0°.004×13°.28E±0°.01, h7^{km}±1^{km}, ML0.9/4, Error ellipse: s-maj=0.8km s-min=0.5km az=85.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	SAN MARTINO	0.05	54	AML	AML		
	comp=N,162µm,0.2s						
SMA1				AML	AML		
	comp=E,213µm,0.2s						
RM33	Pellescritta (	0.10	207	P	Pg	01 33 36.3	+0.2
RM33				S	Sg	01 33 38.3	+0.6
RM33				AML	AML		
	comp=E,59µm,0.6s						
RM33				AML	AML		
	comp=N,67µm,0.3s						
RM33				AML	AML		
	comp=E,194µm,1.0s						
RM33				AML	AML		
	comp=E,58µm,0.2s						
RM33				AML	AML		
	comp=N,114µm,0.9s						
RM33				AML	AML		
	comp=N,67µm,0.3s						
T1218	Civita (PG)	0.14	301	P	Pg	01 33 37.3	+0.5
T1218				S	Sg	01 33 39.9	+1.1
T1218				AML	AML		
	comp=N,32µm,0.1s						
T1218				AML	AML		
	comp=N,123µm,0.9s						
T1218				AML	AML		
	comp=E,38µm,0.2s						
T1218				AML	AML		
	comp=E,78µm,1.1s						
T1212	Cascia, Frazio	0.23	312	P	Pg	01 33 39.1	+0.8
T1212				S	Sg	01 33 42.6	+1.2
T1212				AML	AML		
	comp=N,68µm,0.6s						
T1212				AML	AML		
	comp=E,142µm,0.7s						

*SFS **17** 01:37:00.2, 35°.41N×3°.54W, h0^{km}, ML2.8/7, ML2.8/7, MLv2.8/7*
*MDD **17** 01:37:01.8±0.6, 35°.63N×3°.76W, h1^{km}±4^{km}, mb_Lg2.2/7, Error ellipse: s-maj=5.5km s-min=3.5km az=50.0*
*CNRM **17** 01:37:03.3, 35°.51N×3°.67W, h58^{km}, ml2.1*
ISC 17 01:37:00.8±1.1, 35°.54N±0°.02×3°.68W±0°.03, h17^{km}±9^{km}, n22, σ1^{s}.14/41, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMEL	Melilla	0.63	112	Pg	Pn	01 37 16.0	+1.0
EMEL				Sg	Sn	01 37 24.6	-0.1
AKLM	AKL	1.04	189	P	Pn	01 37 21.0	+0.4
AKLM				S	Sg	01 37 34.6	+0.1
TAF	Taforalt	1.26	125	P	Pb	01 37 24.4	+0.3
TAF				S	Sg	01 37 41.0	-0.6
ELGU	Los Guajares,	1.33	2	S	Sg	01 37 45.0	+1.1
ELGU				P	Pb	01 37 25.1	-0.3
ELGU	Los Guajares,	1.33	2	Pg	Pb	01 37 25.0	-0.3
ELGU				Sg	Sb	01 37 41.7	-0.4
ELGU				*i* Vmb_Lg		01 37 46.2	
EMIJ	Mijas	1.36	319	P	Pg	01 37 26.2	-0.7
EMIJ	Mijas	1.36	319	Pg	Pn	01 37 25.2	+0.2
EMIJ				Sg	Sn	01 37 40.6	-1.9
EMIJ				*i* Vmb_Lg		01 37 49.0	
CHEFC	Chefchaouen	1.43	253	P	Pb	01 37 27.4	+0.4
CHEFC				S	Sn	01 37 44.1	-0.2
EBER	Berja	1.50	25	P	Pb	01 37 27.5	-0.7
EBER	Berja	1.50	25	Pg	Pb	01 37 28.0	-0.3
EBER				Sn	Sn	01 37 45.1	-1.2
EBER				*i* Vmb_Lg		01 37 54.5	
JBK	JBK	1.51	142	P	Pn	01 37 27.5	+0.3
JBK				S	Sn	01 37 46.0	-0.5
EGOR	Sierra Gorda,	1.61	348	P	Pg	01 37 30.8	-1.0
EGOR				S	Sg	01 37 53.7	+0.9
EGOR	Sierra Gorda,	1.61	348	Pg	Pg	01 37 31.2	-0.6
EGOR				Sg	Sb	01 37 49.9	-0.3
EGOR				*i* Vmb_Lg		01 38 03.5	
EQUE	Quentar	1.68	6	Pg	Pb	01 37 31.6	+0.4
EQUE				Sn	Sn	01 37 47.5	-3.0
EQUE				*i* Vmb_Lg		01 38 00.9	
ENIJ	Nijar	1.86	39	S	Sb	01 37 56.2	-1.1
LCRM	LCR	2.09	208	P	Pb	01 37 39.0	+0.7
LCRM				S	Sb	01 38 04.2	+0.2
EQES	Quesada	2.31	12	Pg	Pb	01 37 41.6	-0.5
EQES				Sn	Sn	01 38 06.0	-0.2
EQES				*i* Vmb_Lg		01 38 14.5	
IFR	Ifrane	2.34	211	S	Sn	01 38 05.6	-1.5
IFR				P	Pn	01 37 39.0	+0.3
EADA	Adamuz	2.72	345	P	Pn	01 37 46.1	+2.3
EADA	Adamuz	2.72	345	Pn	Pn	01 37 45.1	+1.4
EADA				Pg	Pb	01 37 48.2	-0.9
EADA				Sn	Sn	01 38 16.0	-0.3
EADA				Sg	Sb	01 38 23.8	+1.7
EADA				*i* Vmb_Lg		01 38 30.1	
MD31	MD31	2.81	199	P	Pn	01 37 45.7	+0.7
MD31				S	Sn	01 38 18.5	0.0
ETOB	Tobarra	3.54	28	Pn	Pn	01 37 58.2	+3.2

WEL 17 01:47:04.5±0.5, 43°S±3°×17°3E±°, h11^{km}±4^{km}, M2.8/9, ML2.8/7, MLv2.8/9, Error ellipse: s-maj=0.0km s-min=0.0km az=116.4, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	Greta Valley S	0.37	177	P	Pb	01 47 12.9	-0.3
GVZ				S	Sb	01 47 19.0	-0.1
KHZ	Kahutara	0.43	66	P	Pb	01 47 13.7	-0.4
KHZ				S	Sb	01 47 20.3	-0.3
LTZ	Lake Taylor	0.57	251	P	Pb	01 47 16.6	-0.1
LTZ				S	Sb	01 47 24.6	-0.2
AMCZ	Amberley	0.64	204	P	Pb	01 47 18.2	+0.5
AMCZ				S	Sb	01 47 27.8	+1.1
THZ	Tophouse	0.83	355	P	Pb	01 47 21.2	+0.1
THZ				S	Sb	01 47 32.6	+0.3
OXZ	Oxford	1.02	224	P	Pg	01 47 24.1	0.0
BSWZ	Blackbirch Sta	1.09	37	P	Pn	01 47 26.1	+0.3
MQZ	McQueen’s Vall	1.14	193	P	Pb	01 47 24.6	-1.6
MRNZ	Matariki Terra	1.21	351	P	Pg	01 47 27.8	+0.1
DSZ	Denniston Nort	1.23	313	P	Pg	01 47 28.6	+0.4
AKCZ	Akaroa Harbour	1.28	183	P	Pn	01 47 27.9	-0.5
RACZ	Rakaia	1.30	209	P	Pn	01 47 27.5	-1.1
TUWZ	Tuamarina	1.36	31	P	Pn	01 47 27.8	-1.6
NNZ	Nelson	1.40	12	P	Pb	01 47 31.0	+0.2
MHCZ	Mount Hutt	1.41	228	P	Pn	01 47 29.4	-0.8
TKNZ	Takaka Hill	1.56	359	P	Pb	01 47 33.8	+0.4
TCW	Tory Channel	1.68	35	P	Pn	01 47 34.1	+0.3
WVZ	Waitaha Valley	1.74	253	P	Pn	01 47 34.9	+0.3
WVZ				S	Sn	01 47 57.2	+0.4
QRZ	Quartz Range	1.80	348	P	Pb	01 47 37.1	-0.4
RPZ	Rata Peaks	1.82	231	P	Pn	01 47 35.0	-0.7
RPZ				S	Sn	01 47 57.4	-1.4
ARCZ	Arundel	1.90	224	P	Pn	01 47 36.1	-0.9
DUWZ	D’Urville Isla	1.92	21	P	Pb	01 47 38.6	-0.9
PLWZ	Palliser	1.96	59	P	Pn	01 47 36.6	-1.2
GCSZ	Gaunt Creek Bo	2.10	249	P	Pn	01 47 39.9	+0.3
CAW	Cannon Point	2.14	47	P	Pn	01 47 39.6	-0.5

KIW	Kapiti Island	2.24	40	P	Pn	01 47 41.6	0.0
TMZ	Timaru	2.31	218	P	Pn	01 47 42.2	-0.3
MRZ	Mangatainoka R	2.73	46	P	Pn	01 47 47.2	-1.1
PKE	Pukeiti	3.48	13	P	Pn	01 48 01.7	+3.1
WNVZ	Wahianoa	3.81	32	P	Pn	01 48 03.8	+0.5
OTVZ	Oturere	3.98	31	P	Pn	01 48 07.1	+1.6

SOME **17** *01:49:05.9, 41°.22N×82°.65E, h10km*

NNC 17 01:49:01.5±9.1, 39°.70N×80°.69E, h0km, mb3.2, mpv2.9, 4C, Error ellipse: s-maj=80.4km s-min=62.7km az=54.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	Uzynbulak	3.66	340	ePg	Pb	01 50 06.8	-0.4
	2.5nm,0.1s						
UZB				eLg	Lg	01 50 50.0	
	3.0nm,0.1s						
PDGK	Podgornoye	3.73	346	Pg	Pn	01 50 03.9	+3.4
	0.3nm,0.2s						
PDGK				Lg	Lg	01 50 44.8	
	2.2nm,0.2s						
PDGK	Podgornoye	3.73	346	⇑Pn	Pn	01 50 00.0	-0.5
	1.0nm,0.6s						
PDGK				⇑Sn	Sn	01 50 47.3	+2.0
	2.5nm,0.5s						
SATY	Saty	3.77	334	Pg	Pg	01 50 13.3	-0.4
	0.8nm,0.2s						
SATY				Lg	Lg	01 51 00.7	
	1.8nm,0.1s						
SATY	Saty	3.77	334	ePg	Pg	01 50 13.0	-0.7
	0.8nm,0.2s						
SATY				eLg	Lg	01 51 00.7	
	5.8nm,0.1s						
KPKS	Kokpek	4.05	339	Pg	Pb	01 50 13.0	-0.7
	2.9nm,0.2s						
KPKS				Lg	Lg	01 51 00.7	
	5.4nm,0.3s						
KPKS	Kokpek	4.05	339	ePg	Pb	01 50 13.0	-0.7
	2.0nm,0.1s						
KPKS				eLg	Lg	01 51 00.7	
	7.3nm,0.2s						
MDOK	Medeo	4.41	323	Pn	Pg	01 50 51.1	+25
MDOK				Sn	Sg	01 51 22.8	-0.3
DJR	Jarkent	4.67	352	ePg	Pn	01 50 16.1	+2.7
	0.4nm,0.1s						
DJR				eLg	Lg	01 51 06.0	
	1.9nm,0.1s						
MK31	Makanchi Array	7.18	9	⇑Pn	Pn	01 50 51.3	+3.6
	0.2nm,0.4s,baz=192,slow=14,SNR=4.0						
MK31				⇑Sn	Sn	01 52 10.5	+0.4
	0.3nm,0.4s,baz=188,slow=22						

NEIC **17** *01:51:33.6±1.5, 14°.9S±0°.1×177°.6W±0°.1, h353km±7km, mb4.3/19, Error ellipse: s-maj=16.2km s-min=13.1km az=146.0*

IDC **17** *01:51:35.7±1.5, 15°.05S×177°.67W, h374km±16km, mb3.4/13, mbtmp4.2/15, Error ellipse: s-maj=17.8km s-min=12.0km az=126.0*

NOU **17** *01:51:37.1, 15°.11S×177°.55W, h362km, mb4.5/20, Fiji Islands Region*

ISC 17 01:51:35.2±0.4, **14°.93S**±0°.08×**177°.61W**±0°.07, **h372**km, **n72**, σ1s.**52**/73, **mb4.1**/23, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUTU	Fugatoga	0.79	321	P	Pn	01 52 22.8	+0.2
TAVE	Taveuni	2.83	231	P	Pn	01 52 35.8	+1.0
LKBA	Tubou, Lakemba	3.49	199	P	Pn	01 52 42.1	+1.6
YSA	Yasawairara	4.96	249	P	Pn	01 52 54.6	-0.8
MSVF	Nonsavu	5.02	236	P	Pn	01 52 57.5	+1.4
	52nm,0.6s,baz=20,slow=19,SNR=42						
MSVF	Nonsavu	5.02	236		Pn	01 52 55.3	-0.8
MSVF	Nonsavu	5.02	236	P	Pn	01 52 57.5	+1.4
AFI	Afiamalu	5.74	81	P	Pn	01 53 04.9	+0.9
	102nm,0.7s,baz=216,slow=0.3,SNR=17						
AFI	Afiamalu	5.74	81	Pn	Pn	01 53 03.1	-0.9
FUNA	Funafuti	7.09	333	Pn	Pn	01 53 17.2	-2.0
NIUE	Niue	8.43	120	Pn	Pn	01 53 31.5	-3.2
NIUE	Niue	8.43	120	P	P	01 53 36.5	+0.3
DVP	Devils Point	13.92	257	P	Pn	01 54 41.8	+2.7
LIFNC	LIFOU	15.55	246	P	P	01 54 52.7	-2.0
LIFNC	LIFOU	15.55	246	P	P	01 54 55.4	+0.6
DZM	Mont Dzumac	16.70	242	P	Pn	01 55 10.2	-1.0
	6.4nm,0.5s,baz=59,slow=19,SNR=9.3						
DZM	Mont Dzumac	16.70	242	P	P	01 55 05.8	-1.6
DZM				IAmb	IAmb	01 55 17.9	
	comp=Z,20nm,1.2s						
DZM	Mont Dzumac	16.70	242	P	Pn	01 55 10.4	-0.8
KOUNC	Koumac, New Ca	18.12	249	P	P	01 55 19.2	-3.2
KOUNC				IAmb	IAmb	01 55 27.7	
	comp=Z,12nm,0.8s						
KOUNC	Koumac, New Ca	18.12	249	P	P	01 55 26.9	+4.5
TOZ	Tahuroa Road	23.52	194	P	P	01 56 14.7	+1.3
URZ	Urewera	23.71	190	P	P	01 56 12.4	-2.7
	comp=Z,18nm,0.5s,baz=147,slow=3.0,SNR=17						
	comp=Z,18nm,0.5s						
BKZ	Black Stump Fm	24.70	191	P	P	01 56 24.1	0.0
	comp=Z,9.9nm,1.4s						
BFZ	Birch Farm	26.21	191	P	P	01 56 37.3	-0.2
QRZ	Quartz Range	27.20	197	P	P	01 56 47.2	+1.0
LTZ	Lake Taylor	29.09	195	P	P	01 57 01.8	-1.1
LTZ				IAmb	IAmb	01 57 04.2	
	comp=Z,12nm,0.8s						
RPZ	Rata Peaks	30.28	196	P	P	01 57 12.1	-1.2
	comp=Z,3.3nm,0.4s,baz=19,slow=1.3,SNR=6.5						
	comp=Z,3.3nm,0.4s						
RPZ	Rata Peaks	30.28	196	P	P	01 57 16.2	+2.9
JCZ	Jackson Bay	31.28	199	P	P	01 57 21.3	-0.8
RMQ	Roma	33.40	244	P	P	01 57 43.7	+3.2
MGCD	Mangrove Creek	33.68	232	P	P	01 57 44.1	+1.3
STKA	Stephens Creek	40.79	238	P	P	01 58 41.5	-0.4
	comp=Z,2.0nm,0.5s,baz=60,slow=7.9,SNR=5.3						
	comp=Z,2.0nm,0.5s						
BBOO	Buckleboo	45.56	239	P	P	01 59 18.6	-1.1
BBOO				IAmb	IAmb	01 59 27.1	
	comp=Z,26nm,1.4s						
WB0	Warramunga Arr	45.95	257	P	P	01 59 22.1	-0.7
WRA	Warramunga Arr	46.00	257	P	P	01 59 22.1	-1.1
	comp=Z,1.6nm,0.5s,baz=93,slow=7.7,SNR=24						
	comp=Z,1.6nm,0.5s						
WRA	Warramunga Arr	46.00	257	P	P	01 59 20.8	-2.5
AS31	Alice Springs	46.40	251	P	P	01 59 25.2	-1.1
AS31				IAmb	IAmb	01 59 26.6	
	comp=Z,10nm,0.6s						
ASAR	Alice Springs	46.40	251	P	P	01 59 26.1	-0.3
	comp=Z,25nm,0.5s,baz=84,slow=8.4,SNR=497						
ASAR				S	S	02 05 41.7	-3.8
	comp=Z,0.9nm,0.7s,baz=83,slow=15,SNR=8.4						
ASAR	Alice Springs	46.40	251	P	P	01 59 25.9	-0.4
KNRA	Kununurra	51.62	262	P	P	02 00 04.6	-0.8
KNRA				IAmb	IAmb	02 00 23.6	
	comp=Z,20nm,1.4s						
FORT	Forrest	52.02	243	P	P	02 00 07.3	-0.9
VNDA	Vanda	63.46	185	P	P	02 01 27.6	+1.5
	comp=Z,2.0nm,0.7s,baz=5.8,slow=7.7,SNR=10						
	comp=Z,2.0nm,0.7s						
VNDA	Vanda	63.46	185	P	P	02 01 28.1	+2.0
VNDA				IAmb	IAmb	02 01 40.4	
	comp=Z,6.4nm,1.3s						
MJAR	Matsushiro Arr	66.01	322	P	P	02 01 43.1	0.0
	comp=Z,2.4nm,0.6s,baz=148,slow=7.1,SNR=5.4						
	comp=Z,2.4nm,0.6s						
PETK	Petropavlovsk-	71.02	345	P	P	02 02 14.6	+1.2
	comp=Z,6.5nm,0.9s,baz=130,slow=8.0,SNR=4.2						
	comp=Z,6.5nm,0.9s						
PETK	Petropavlovsk-	71.02	345	P	P	02 02 13.9	+0.6
KSRS	Korea Array	73.02	317	P	P	02 02 26.4	+0.9
	comp=Z,0.6nm,0.4s,baz=125,slow=6.4,SNR=2.0						
	comp=Z,0.6nm,0.4s						
QSPA	South Pole Qui	75.11	180	P	P	02 02 37.4	+0.2
QSPA				IAmb	IAmb	02 02 52.2	
	comp=Z,8.0nm,1.4s						
NVAR	Mina Array Bea	76.75	44	P	P	02 02 48.1	+1.2
	comp=Z,0.3nm,0.7s,baz=226,slow=6.1,SNR=2.2						
	comp=Z,0.3nm,0.7s						
TTA	Tatalina	79.42	10	P	P	02 03 01.4	+0.7
TNA	Tin City	80.58	4	P	P	02 03 07.8	+1.2
TNA				IAmb	IAmb	02 03 09.7	
	comp=Z,5.4nm,0.9s						
SPUT	South Promonto	82.09	44	P	P	02 03 13.9	-1.4
BJT	Baijiatuau	82.22	315	P	P	02 03 15.3	-0.4
CCB	Clear Creek Bu	82.52	12	P	P	02 03 16.1	-0.7
CCB				IAmb	IAmb	02 03 18.7	
	comp=Z,4.8nm,0.7s						
IMAR	Indian Mountai	82.63	10	P	P	02 03 17.9	+0.6
IL31		82.83	13	P	P	02 03 18.7	+0.4
IL31				IAmb	IAmb	02 03 20.5	
	comp=Z,2.7nm,0.8s						
ILAR	Eielson Array	82.83	13	P	P	02 03 19.1	+0.8
	comp=Z,2.6nm,0.9s,baz=220,slow=5.4,SNR=31						
	comp=Z,2.6nm,0.9s						
TXAR	Lajitas Array	83.76	58	P	P	02 03 25.0	+1.0
	comp=Z,0.3nm,0.7s,baz=213,slow=6.0,SNR=3.7						
	comp=Z,0.3nm,0.7s						
PDAR	Pinedale Array	84.67	43	P	P	02 03 30.5	+2.2
	comp=Z,0.4nm,0.8s,baz=237,slow=4.2,SNR=2.6						
	comp=Z,0.4nm,0.8s						
YKA	Yellowknife Ar	91.32	24	P	P	02 03 58.0	-1.0
	comp=Z,0.1nm,0.5s,baz=238,slow=4.3,SNR=2.2						
	comp=Z,0.1nm,0.5s						
ARCES	ARCESS Array B	123.53	350	PKP	PKPdf	02 09 48.2	-0.1
	comp=Z,2.3nm,0.8s,baz=56,slow=2.2,SNR=6.5						
BRTR	Keskin Array B	143.16	318	PKP	PKPdf	02 10 24.9	-1.1
	comp=Z,1.5nm,0.8s,baz=132,slow=1.8,SNR=8.3						
KHC	Kasperske Hory	144.68	347	ePKP	PKPab	02 10 28.5	+0.4
GERES	GERESS Array B	144.92	347	PKPbc	PKPab	02 10 29.8	+0.7
	comp=Z,1.1nm,0.7s,baz=20,slow=4.3,SNR=9.6						
GERES	GERESS Array B	144.92	347	PKPdf	PKPab	02 10 29.4	+0.3
CONA	Conrad Observa	145.25	344	ePKP	PKPab	02 10 31.6	+1.2
	comp=Z,1.4nm,0.6s						
MOA	Molln	145.73	346	ePKP	PKPab	02 10 32.8	+0.6
	comp=Z,0.9nm,0.4s						
KBA	Koelnbreinsper	146.67	346	ePKP	PKPbc	02 10 34.9	+0.9
	comp=Z,0.7nm,0.4s						
WTTA	Wattenberg	146.85	348	ePKP	PKiKP	02 10 36.0	-0.7
	comp=Z,2.1nm,0.3s						
ABTA	Abfaltersbach	147.17	347	ePKP	PKPbc	02 10 36.0	+0.8
	comp=Z,1.4nm,0.6s						
CIMO	Cimolais	147.60	347	PKPbc	PKPbc	02 10 35.5	-0.8
FUORN	Ofenpass-Fuorn	147.72	350	PKPbc	PKPbc	02 10 36.6	-0.4

MDD **17** *01:55:44.6±0.3, 36°.92N×5°.56W, h11km, mb_Lg2.6/12, Error ellipse: s-maj=3.1km s-min=1.4km az=3.0*

IGIL **17** *01:55:45.6, 36°.89N×5°.57W, h11km, ML2.2*

INMG **17** *01:55:45.7±1.9, 36°.89N×5°.55W, h18km±4km, ML2.3, Error ellipse: s-maj=3.1km s-min=2.4km az=14.0*

SFS **17** *01:55:46.1, 36°.82N×5°.64W, h21km, ML2.7/13, ML2.8/9, MLv2.7/13*

CNRM **17** *01:55:47.2, 36°.42N×6°.11W, h131km, ml2.7*

ISC 17 01:55:45.2±1.1, **36°.85N**±0°.02×**5°.55W**±0°.02, **h28**km±12km, **n59**, σ1s.**98**/121, **2C**, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMIJ	Mijas	0.69	114	P	Pn	01 55 59.5	+0.4
EMIJ				S	Sn	01 56 09.7	+0.9
EMIJ	Mijas	0.69	114	Pg	Pn	01 55 58.7	-0.3
EMIJ				Sg	Sb	01 56 06.7	-1.1
EMIJ				i Vmb_Lg		01 56 12.2	
EMAL	Malaga-Limoner	0.90	95	S	Sn	01 56 16.2	+2.1
EMAL				P	Pn	01 56 03.6	+1.6
ARNO	Arenosillo	0.98	285	P	Pn	01 56 02.6	-0.5
ARNO				S	Sb	01 56 14.5	-1.5
EGOR	Sierra Gorda,	1.18	77	P	Pb	01 56 07.7	+0.7
EGOR				Sg	Sn	01 56 24.8	+3.6
EGOR	Sierra Gorda,	1.18	77	Pg	Pb	01 56 06.7	-0.3
EGOR				Sg	Sn	01 56 21.1	-0.1
EGOR				i Vmb_Lg		01 56 27.4	
ECAB	El Cabril	1.23	5	S	Sn	01 56 22.6	+0.4
ECAB				P	Pb	01 56 07.5	-0.3
ECAB	El Cabril	1.23	5	Pg	Pb	01 56 06.0	-1.7
ECAB				Sg	Sb	01 56 20.8	-2.4
ECAB				i Vmb_Lg		01 56 24.2	
EMIN	Mina Concepcio	1.28	316	Sg	Sb	01 56 25.6	+0.9
EMIN				P	Pb	01 56 08.4	-0.3
EMIN	Mina Concepcio	1.28	316	Pg	Pb	01 56 06.8	-1.8
EMIN				Sg	Sb	01 56 23.0	-1.7
EMIN				i Vmb_Lg		01 56 26.1	
EADA	Adamuz	1.52	30	P	Pb	01 56 12.5	-0.3
EADA				S	Sb	01 56 31.4	-0.3
EADA	Adamuz	1.52	30	Pg	Pn	01 56 10.1	-0.5
EADA				Sg	Sb	01 56 30.5	-1.3
EADA				i Vmb_Lg		01 56 33.1	
ELGU	Los Guajares,	1.54	89	P	Pb	01 56 12.8	-0.2
ELGU	Los Guajares,	1.54	89	Pg	Pb	01 56 13.5	+0.4
ELGU				Sg	Sb	01 56 33.0	+0.8
ELGU				i Vmb_Lg		01 56 39.9	
EGRO	El Granado	1.69	294	P	Pn	01 56 12.7	0.0
EGRO				Sg	Sb	01 56 36.0	-0.4
EGRO	El Granado	1.69	294	Pn	Pn	01 56 12.8	0.0
EGRO				Sg	Sb	01 56 36.1	-0.3
EGRO				i Vmb_Lg		01 56 41.3	
EQUE	Quentar	1.72	78	Pn	Pn	01 56 12.2	-1.2
EQUE				Pg	Pb	01 56 14.5	-1.7
EQUE				Sn	Sn	01 56 35.0	+0.5
EQUE				Sg	Sb	01 56 38.5	+1.0
PBAR	Barrancos	1.78	319	P	Pn	01 56 13.6	-0.4
PBAR	Barrancos	1.78	319	ePn	Pn	01 56 13.6	-0.4
PBAR				eSg	Sb	01 56 40.0	+1.1
PBAR				A	A	01 56 43.4	
	16nm,0.2s						
PVAQ	Vaqueiros	1.82	288	P	Pn	01 56 14.0	-0.7
PVAQ				S	Sb	01 56 41.6	+1.5
PVAQ	Vaqueiros	1.82	288	P	Pn	01 56 14.4	-0.3
PVAQ	Vaqueiros	1.82	288	⇑ePn	Pn	01 56 14.5	-0.1
PVAQ				eSn	Sn	01 56 34.8	-2.0
PVAQ				eSg	Sb	01 56 44.1	+3.9
PVAQ				A	A	01 56 44.8	
	22nm,0.1s						
PBDV	Barranco-do-Ve	1.95	282	ePn	Pn	01 56 16.6	+0.2
PBDV				eSn	Sn	01 56 40.4	+0.5
PBDV				A	A	01 56 52.5	
	14nm,0.3s						
PCVE	Castro Verde	2.14	292	P	Pn	01 56 18.9	-0.1
PCVE	Castro Verde	2.14	292	⇑ePn	Pn	01 56 18.9	-0.1
PCVE				eSg	Sb	01 56 51.3	+2.1
PCVE				A	A	01 56 57.2	
	9.3nm,0.3s						
PBEJ	Beja	2.19	303	ePn	Pn	01 56 19.6	-0.1
PBEJ				eSn	Sn	01 56 43.3	-2.5
PBEJ				eSg	Sb	01 56 52.4	+1.7
PBEJ				A	A	01 56 57.4	
	8.6nm,0.1s						
EQES	Quesada	2.19	64	Pn	Pn	01 56 19.3	-0.5
EQES				Pg	Pb	01 56 22.7	-1.4
EQES				Sn	Sn	01 56 46.3	+0.2
EQES				Sg	Sb	01 56 51.6	+0.7
EQES				i Vmb_Lg		01 56 59.9	
EBAD	Badajoz	2.23	329	P	Pn	01 56 19.3	-0.9
EBAD				Sg	Sb	01 56 54.7	+2.8
EBAD	Badajoz	2.23	329	Pn	Pn	01 56 19.6	-0.6
EBAD				Pg	Pb	01 56 22.8	-2.0
EBAD				Sn	Sn	01 56 44.6	-2.3
EBAD				Sg	Sb	01 56 50.9	-1.0
EBAD				i Vmb_Lg		01 56 56.4	
MESJ	Messejana	2.35	296	ePn	Pn	01 56 21.9	0.0
MESJ				eSg	Sb	01 56 58.0	+2.7
MESJ				A	A	01 57 05.0	
	10.0nm,0.2s						
MESJ	Messejana	2.35	296	eP	Pn	01 56 21.8	0.0
MESJ				eSg	Sb	01 56 57.6	+2.3
MESJ				IAML		01 57 02.4	
	comp=N,13nm,0.1s						
MORF	Marmelete	2.52	281	ePn	Pn	01 56 24.4	+0.1
MORF				eSn	Sn	01 56 54.9	+0.7
MORF				eSg	Sb	01 57 06.6	+6.2
MORF				A	A	01 57 09.8	
	comp=N,10.0nm,0.2s						
EVO	Evora	2.58	311	ePn	Pn	01 56 25.4	+0.4
EVO				eSn	Sn	01 56 55.2	-0.3
EVO				eSg	Sb	01 57 04.0	+2.1
EVO				A	A	01 57 09.3	
	comp=N,18nm,0.1s						
PESTR	Estremoz	2.58	322	P	Pb	01 56 30.5	-0.3
PESTR				S	Sb	01 57 02.5	+0.4
PESTR	Estremoz	2.58	322	ePn	Pn	01 56 25.9	+0.8
PESTR				eSg	Sb	01 57 03.8	+1.7
PESTR				A	A	01 57 17.7	
	comp=N,7.3nm,0.6s						
PTEO	Sao Teotonio	2.63	286	ePn	Pn	01 56 26.0	+0.3
PTEO				eSn	Sn	01 56 55.5	-1.2
PTEO				eSg	Sb	01 57 09.7	+6.3
PTEO				A	A	01 57 14.8	
	comp=N,10nm,0.5s						
PFVI	Vila Bisbo	2.64	277	eSn	Sn	01 56 56.0	-1.0
PNCL	Nicolau / Gran	2.69	299	P	Pn	01 56 26.4	-0.2
PNCL	Nicolau / Gran	2.69	299	ePn	Pn	01 56 26.6	+0.1
PNCL				eSn	Sn	01 56 57.2	-0.9
PNCL				eSg	Sb	01 57 08.2	+3.2
PNCL				A	A	01 57 15.1	
	comp=N,9.1nm,0.6s						
AKLM	AKL	2.71	149	P	Pn	01 56 27.9	+0.9
AKLM				S	Sn	01 56 59.9	+1.1
PAB	San Pablo	2.85	19	Pn	Pn	01 56 28.2	-0.7
PAB				Sn	Sn	01 57 01.3	-1.1
PAB				Sg	Sb	01 57 10.3	+0.4
PAB				i Vmb_Lg		01 57 16.1	
PMRV	Marv??o	2.96	331	ePn	Pn	01 56 31.0	+0.7
PMRV				eSn	Sn	01 57 03.1	-1.7
PMRV				eSg	Sb	01 57 15.5	+2.7
PMRV				A	A	01 57 19.7	
	comp=N,5.6nm,0.2s						
PMTG	Montargil	3.06	317	ePn	Pn	01 56 33.5	+1.8
PMTG				eSn	Sn	01 57 05.9	-1.5
PMTG				eSg	Sb	01 57 18.4	+2.5
PMTG				A	A	01 57 25.9	
	comp=N,6.3nm,0.5s						
LCRM	LCR	3.21	170	P	Pn	01 56 36.1	+2.2
LCRM				S	Sn	01 57 07.8	-3.4
EPLA	Plasencia	3.24	353	Pg	Pb	01 56 41.5	-0.4
EPLA				Sg	Sb	01 57 23.9	+3.0
IFR	Ifrane	3.34	174	P	Pn	01 56 36.2	+0.4
PCBR	Castelo Branco	3.35	334	ePn	Pn	01 56 36.3	+0.7
PCBR				eSn	Sn	01 57 13.2	-1.3
PCBR				eSg	Sb	01 57 28.9	+4.8
PCBR				A	A	01 57 37.5	
	comp=N,3.8nm,0.8s						
ZHG	ZHG	3.51	195	P	Pn	01 56 36.6	-1.4
ZHG				S	Sn	01 57 16.5	-2.1
PMAFR	Mafra	3.62	307	ePn	Pn	01 56 41.3	+1.8
ETOB	Tobarra	3.64	59	Pn	Pn	01 56 38.9	-0.8
ETOB				Sn	Sn	01 57 19.2	-2.6
ETOB				Sg	Sb	01 57 37.9	+5.4
ETOB				i Vmb_Lg		01 57 45.4	
PSBE	So Bento	3.69	317	eSn	Sn	01 57 21.6	-1.4
PSBE				eSg	Sb	01 57 37.3	+3.3
MTE	Manteigas	3.87	337	ePn	Pn	01 56 43.3	+0.4
MTE				eSn	Sn	01 57 25.5	-2.0
MTE				eSg	Sb	01 57 46.6	+7.3
MTE				A	A	01 57 50.3	
	comp=N,6.0nm,0.5s						
GUD	Guadarrama	3.94	16	Pn	Pn	01 56 43.5	-0.4
GUD				Sg	Sb	01 57 42.2	+1.0
GUD				i Vmb_Lg		01 57 48.8	
PCAS	Casmilo, Conde	3.95	325	eSg	Sb	01 57 47.9	+6.6
MD31	MD31	4.03	171	P	Pn	01 56 45.3	+0.3
MD31				S	Sn	01 57 27.4	-4.0
MDT	Midelt	4.10	169	P	Pn	01 56 45.8	-0.3
MDT				S	Sn	01 57 27.9	-5.3
PVIS	Viseu	4.27	335	eSn	Sn	01 57 34.6	-2.8
PVIS				eSg	Sb	01 57 59.2	+8.5
PVIS				A	A	01 58 05.0	
	comp=N,3.3nm,0.6s						
MVO	Moncorvo	4.46	345	A	A	01 58 16.0	
	comp=N,5.2nm,0.5s						
TTIG	Tnine Tigouga,	6.73	202	P	Pn	01 57 17.0	-5.3
TTIG				S	Sn	01 58 24.3	-14

TAP **17** *01:58:11.7, 24°.01N×122°.69E, h37km, ML2.6, D*

JMA **17** *01:58:12.4±0.2, 24°.1N±0°.8×12°3E±°, h38km, MV2.1/8, NW OFF ISHIGAKIJIMA IS*

ISC 17 01:58:10.3±1.1, **23°.95N**±0°.04×**122°.65E**±0°.02, **h17**km±9km, **n43**, σ0s.**55**/65, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	EOS4	0.35	299	eP	Pn	01 58 20.2	+0.1
	baz=285						
JYNG	Yonagunijimaku	0.56	28	P	Pn	01 58 22.4	-1.0
JYNG				S	Sb	01 58 29.6	+0.2
EOS2	EOS2	0.60	321	eP	Pn	01 58 24.3	+0.5
	baz=309						
YOJ	Yonaguni jima	0.60	33	P	Pn	01 58 23.1	-0.9
	baz=32						
YOJ				S	Sb	01 58 30.5	-0.1
	baz=32						
EWUT	Wuta	0.94	302	eP	Pn	01 58 28.8	+0.3
	baz=298						
EWUT				eS	Sn	01 58 41.5	-0.1
	baz=298						
ENA	Nanau	0.96	300	eP	Pn	01 58 29.4	+0.6
	baz=296						
ENA				eS	Sn	01 58 42.3	+0.2
	baz=296						
ETL	Fush Village	0.96	283	eP	Pg	01 58 29.4	+0.4
	baz=279						
TWD	Chiawan	0.97	278	eP	Pb	01 58 28.1	-0.5
	baz=275						
TWC	Suao	0.98	312	i P	Pn	01 58 29.6	+0.4
	baz=308						
TWC				S	Sg	01 58 41.9	-0.3
	baz=308						
NACB	Ninganchiao	0.99	283	eP	Pb	01 58 29.1	+0.2
	baz=267						
IRIF	Iriomote-Funau	1.06	69	P	Pg	01 58 31.2	+0.5
IRIF				eS	Sn	01 58 45.3	+0.7
ETM	Tongmen	1.06	271	eP	Pb	01 58 28.2	-1.9
	baz=260						
HATJ	Hateruma jima	1.06	84	eP	Pg	01 58 31.1	+0.2
NDS	Dongshan	1.09	309	eP	Pg	01 58 31.7	+0.3
	baz=297						
ETLH	Xiulin Townshi	1.10	284	P	Pb	01 58 30.9	0.0
	baz=269						
ETLH				eS	Sb	01 58 45.4	+0.5
	baz=269						
LATG	Datong	1.18	300	eP	Pb	01 58 32.4	+0.2
	baz=297						
TWE	Neicheng	1.18	311	eP	Pg	01 58 33.0	0.0
	baz=308						
ENTT	Nioudou	1.20	305	eP	Pg	01 58 33.5	-0.1
	baz=302						
ENTT				eS	Sg	01 58 49.9	+0.6
	baz=302						
TWB1	Santiao Chiao	1.21	330	eP	Pb	01 58 32.6	-0.1
	baz=328						
HGSD	Ruisui	1.21	248	eS	Sb	01 58 48.0	-0.1
	baz=246						
NNSB	Datong	1.25	293	eP	Pn	01 58 32.1	-0.9
	baz=290						
FUSB	Fushanzhiwuyua	1.26	310	P	Pg	01 58 34.5	-0.1
	baz=298						
FUSB				S	Sg	01 58 51.1	0.0
	baz=298						
TIPB	Shuangxi	1.26	324	eP	Pg	01 58 34.0	-0.7
	baz=334						
TIPB				eS	Sg	01 58 50.7	-0.5
	baz=334						
JKRS	Kuro-shima	1.27	77	eP	Pg	01 58 34.6	-0.3
JKRS				eS	Sg	01 58 51.2	-0.3
WHF	Hehuan Shan	1.28	279	P	Pn	01 58 34.0	+0.3
	baz=277						
EHY	Hungye	1.30	250	P	Pn	01 58 33.8	+0.2
	baz=248						
EHY				S	Sn	01 58 50.5	0.0
	baz=248						
NWLT	Wulai	1.33	308	eP	Pg	01 58 35.9	-0.1
	baz=306						
NWLT				eS	Sg	01 58 53.7	+0.4
	baz=306						
SXI1	Grass Mountain	1.34	328	P	Pb	01 58 34.7	-0.3
	baz=338						
SXI1				eS	Sn	01 58 51.3	-0.3
	baz=338						
CHGB	Renai	1.35	275	P	Pn	01 58 35.1	+0.6
	baz=272						
CHGB				eS	Sn	01 58 51.7	-0.5
	baz=272						
YULB	Yu-li	1.36	246	P	Pn	01 58 33.6	-0.8
	baz=235						
YULB				S	Sn	01 58 51.1	-0.9
	baz=235						
YHNB	Yeheng	1.36	302	P	Pb	01 58 35.6	+0.2
	baz=287						
WFSB	Wu-fen Shan	1.37	325	eS	Sb	01 58 52.6	0.0
	baz=323						
TWF1	Yuli	1.38	245	eS	Sn	01 58 52.2	-0.3
	baz=233						

NSK	Sanguang baz=300	1.38	302	*e*P	Pb	01 58 35.5	-0.2
NSK	baz=300			*e*S	Sb	01 58 53.5	+0.5
TDCB	Techi baz=280	1.40	283	*e*P	Pn	01 58 35.7	+0.6
VWDT	VWDT baz=260	1.40	262	P	Pn	01 58 35.6	+0.7
VWDT	baz=260			S	Sn	01 58 52.1	-0.8
WUSB	Renai baz=270	1.40	272	*e*P	Pn	01 58 36.0	+0.8
WUSB	baz=270			*e*S	Sn	01 58 53.1	-0.2
JIJ	Ishigaki jima	1.42	73	P	Pn	01 58 35.9	+0.6
JIJ				*e*S	Sn	01 58 53.8	+0.2
SSLB	Suanglung baz=263	1.56	264	*e*P	Pn	01 58 37.9	+0.7
WCS	Beigang Elemen baz=272	1.59	274	*e*P	Pb	01 58 39.2	0.0
SMLT	Sun Moon Lake baz=266	1.60	268	*e*P	Pn	01 58 38.6	+0.8
SMLT	baz=266			*e*S	Sn	01 58 57.5	-0.7
JISG	Ishigakijimahi	1.64	67	*e*P	Pn	01 58 38.9	+0.6
JISG				*e*S	Sn	01 58 59.0	0.0
TYC	Yuchr baz=267	1.64	269	*e*S	Sn	01 58 59.6	+0.7

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*NOU **17** 02:02:52.1, 36°.70S×177°.54E, h332^{km}, MLv3.5/8, Off E. Coast of N. Island, N.Z.*

*WEL **17** 02:02:58.3±0.8, 37°S±8°×17°7E±°, h272^{km}±9^{km}, M3.2/35, MLv3.2/35, Error ellipse: s-maj=0.0km s-min=0.0km az=38.0, confirmed*

ISC 17 02:02:51.8±1.9**, 36°.7S**±0°.1×**177°.35E**±0°.09**, h316**^{km}±10^{km}**, n123, σ2^{s}.14**/139**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAZ	Te Kaha	1.10	162	P	Pn	02 03 35.6	+1.4
MXZ	Matakaoa Point	1.15	138	P	Pn	02 03 36.3	+1.7
MXZ	Matakaoa Point	1.15	138	P	Pn	02 03 36.2	+1.7
WHRZ	Whale Island	1.18	194	P	Pn	02 03 37.5	+2.8
RUGZ	Raukumara Rang	1.28	168	P	Pn	02 03 36.4	+1.0
RUGZ				S	S	02 04 05.9	-4.3
KUZ	Kuaotunu	1.31	268	P	Pn	02 03 38.2	+2.8
KUZ	Kuaotunu	1.31	268	P	Pn	02 03 36.6	+1.2
PKGZ	Pakihiroa	1.31	154	P	Pn	02 03 37.6	+2.1
PKGZ				S	S	02 04 08.1	-2.2
MARZ	Manawahe	1.38	203	P	Pn	02 03 38.0	+2.2
WMGZ	Waiomatatini S	1.40	143	P	Pn	02 03 38.2	+2.3
EDRZ	Edgecumbe	1.48	199	P	Pn	02 03 38.3	+1.8
PUZ	Puketiti	1.54	152	P	Pn	02 03 38.9	+2.1
PUZ				S	S	02 04 10.4	-2.3
TWGZ	Tauwhareparae	1.55	161	P	Pn	02 03 39.4	+2.6
TWGZ				S	S	02 04 11.7	-1.2
URZ	Urewera	1.56	187	P	Pn	02 03 38.3	+1.4
URZ	Urewera	1.56	187	P	Pn	02 03 38.2	+1.4
MKRZ	Makatiti	1.59	206	P	Pn	02 03 40.0	+2.8
KMRZ	Kaimai	1.60	224	P	Pn	02 03 39.1	+1.9
OMRZ	Omania	1.60	209	P	Pn	02 03 39.8	+2.6
MWZ	Matawai	1.63	175	P	Pn	02 03 39.3	+1.9
MWZ				S	S	02 04 12.1	-1.6
TARZ	Mount Tarawera	1.67	203	P	Pn	02 03 40.0	+2.3
HLRZ	Highlands Stat	1.73	207	P	Pn	02 03 40.5	+2.4
RRRZ	Republican Roa	1.76	202	P	Pn	02 03 40.5	+2.3
TKGZ	Te Karaka	1.77	167	P	Pn	02 03 40.5	+2.3
TKGZ				S	S	02 04 13.7	-1.7
WIAZ	Waiheke Island	1.78	267	P	Pn	02 03 40.1	+1.7
RAGZ	Rawiri	1.79	178	P	Pn	02 03 40.7	+2.3
RAGZ				S	S	02 04 15.5	-0.2
TOZ	Tahuroa Road	1.79	235	P	Pn	02 03 40.9	+2.5
MUGZ	Murupara	1.82	194	P	Pn	02 03 40.3	+1.6
HSRZ	Hossack Road	1.83	208	P	Pn	02 03 41.7	+3.0
HRRZ	Handcock Road	1.88	206	P	Pn	02 03 41.6	+2.5
CNGZ	Carnagh Statio	1.90	159	P	Pn	02 03 42.1	+2.9
RTZ	Ruatahuna	1.93	189	P	Pn	02 03 41.0	+1.5
RTZ				S	S	02 04 15.6	-2.0
PRRZ	Plateau Road	1.94	203	P	Pn	02 03 41.6	+2.1
MBAZ	Motutapu North	1.97	267	P	Pn	02 03 41.8	+2.0
ALRZ	Allen Road	2.02	203	P	Pn	02 03 42.1	+2.0
RIGZ	Rimuhau	2.02	171	P	Pn	02 03 42.8	+2.6
RIGZ				S	S	02 04 18.7	-0.1
SNGZ	Shannon Statio	2.07	180	P	Pn	02 03 42.9	+2.4
SNGZ				S	S	02 04 18.1	-1.4
KUTZ	Kaahu Road	2.15	214	P	Pn	02 03 42.1	+0.9
TLZ	Tolley Road	2.17	221	P	Pn	02 03 44.1	+2.8
MTHZ	Maungataniwha	2.18	190	P	Pn	02 03 43.1	+1.7
MTHZ				S	S	02 04 19.7	-1.3
RAHZ	Arahi	2.21	185	P	Pn	02 03 44.0	+2.4
RAHZ				S	S	02 04 21.0	-0.5
MRHZ	Matea Rd	2.25	199	P	Pn	02 03 43.5	+1.5
KNZ	Kokohu	2.32	174	P	Pn	02 03 44.9	+2.4
KNZ				S	S	02 04 22.0	-1.0
WHHZ	Waihua	2.37	182	P	Pn	02 03 45.4	+2.5
WHHZ				S	S	02 04 23.0	-0.8
WATZ	Wairara	2.37	212	P	Pn	02 03 45.0	+2.0
NMHZ	Naumai	2.42	190	P	Pn	02 03 46.1	+2.7
NMHZ				S	S	02 04 24.1	-0.7
MHGZ	Mahia Peninsul	2.48	170	P	Pn	02 03 46.8	+2.9
RATZ	Rangitukua	2.49	210	P	Pn	02 03 46.2	+2.2
BKZ	Black Stump Fm	2.55	195	P	Pn	02 03 46.1	+1.6
BKZ	Black Stump Fm	2.55	195	P	Pn	02 03 46.0	+1.6
BKZ				S	S	02 04 24.3	-2.3
RITZ	Rihia Road	2.56	207	P	Pn	02 03 47.0	+2.5
ARHZ	Aropaoanui	2.57	186	P	Pn	02 03 47.1	+2.5
KATZ	Kakaramea	2.62	210	P	Pn	02 03 47.7	+2.5
HIZ	Hauiti	2.68	227	P	Pn	02 03 49.2	+3.6
HIZ	Hauiti	2.68	227	P	Pn	02 03 49.0	+3.4
NTVZ	North Tongarir	2.73	208	P	Pn	02 03 48.7	+2.5
TMVZ	Te Maari	2.73	208	P	Pn	02 03 48.2	+2.0
KRVZ	Karewarewa	2.74	209	P	Pn	02 03 48.7	+2.4
ETVZ	East Tongariro	2.75	208	P	Pn	02 03 48.4	+2.0
WTVZ	West Tongariro	2.78	210	P	Pn	02 03 48.7	+2.0
MCHZ	McNeill Hill	2.78	190	P	Pn	02 03 49.0	+2.5
NNVZ	North Ngauruho	2.78	209	P	Pn	02 03 49.0	+2.3
OTVZ	Oturere	2.79	208	P	Pn	02 03 48.9	+2.1
TWVZ	Taurewa	2.80	212	P	Pn	02 03 49.2	+2.3
KWHZ	Kaweka Forest	2.81	195	P	Pn	02 03 48.9	+2.1
SNVZ	South Ngauruho	2.82	208	P	Pn	02 03 49.2	+2.2
NGZ	Ngauruhoe	2.83	209	P	Pn	02 03 49.5	+2.4
TUVZ	Tukino	2.88	207	P	Pn	02 03 49.6	+1.9
FWVZ	Far West T-bar	2.91	209	P	Pn	02 03 50.1	+2.1
WHVZ	Whangaehu Hut	2.92	208	P	Pn	02 03 50.3	+2.2
DRZ	Dome Shelter	2.93	208	P	Pn	02 03 50.9	+2.7
TRVZ	Turoa	2.95	208	P	Pn	02 03 50.3	+1.9
CKHZ	Cape Kidnapper	2.95	184	P	Pn	02 03 50.6	+2.5
BHHZ	Black Hill Sta	2.96	200	P	Pn	02 03 50.0	+1.7
WNVZ	Wahianoa	2.96	207	P	Pn	02 03 50.2	+1.8
MOVZ	Moawhango	2.98	205	P	Pn	02 03 50.1	+1.6
PKVZ	Pokaka	3.02	211	P	Pn	02 03 51.0	+2.1
MTVZ	Mangateitei	3.06	208	P	Pn	02 03 51.3	+2.0
KAHZ	Kahuranaki	3.10	187	P	Pn	02 03 52.1	+2.5
VRZ	Vera Road	3.17	220	P	Pn	02 03 53.3	+3.1
PNHZ	Pukenui	3.33	195	P	Pn	02 03 53.4	+1.6
PXZ	Pawanui	3.34	186	P	Pn	02 03 54.1	+2.2
WPHZ	Waipukurau	3.43	192	P	Pn	02 03 55.1	+2.3
PRHZ	Porangahau	3.60	189	P	Pn	02 03 57.0	+2.4
NEZ	North Egmont	3.63	224	P	Pn	02 03 59.1	+4.2
PKE	Pukeiti	3.64	226	P	Pn	02 03 59.0	+4.0
DVHZ	Dannevirke	3.70	194	P	Pn	02 03 57.7	+2.0
POWZ	Post Office Ro	3.88	198	P	Pn	02 03 59.9	+2.4
PRWZ	Pori Road	3.99	195	P	Pn	02 04 01.2	+2.5
BFZ	Birch Farm	4.06	192	P	Pn	02 04 01.4	+2.0
BFZ	Birch Farm	4.06	192	P	Pn	02 04 01.5	+2.0
MRZ	Mangatainoka R	4.18	199	P	Pn	02 04 02.4	+1.7
TIWZ	Tintock	4.22	195	P	Pn	02 04 03.7	+2.5
CPWZ	Castlepoint	4.29	192	P	Pn	02 04 05.0	+3.1
HOWZ	Holdsworth Sta	4.42	198	P	Pn	02 04 05.1	+1.8
OGWZ	Otaki Gorge	4.44	202	P	Pn	02 04 05.2	+1.6
TMWZ	Te Maipa	4.54	194	P	Pn	02 04 07.0	+2.4
KIW	Kapiti Island	4.56	204	P	Pn	02 04 06.4	+1.4
MTW	Mount Morrison	4.67	197	P	Pn	02 04 08.3	+2.1
CAW	Cannon Point	4.74	201	P	Pn	02 04 08.2	+1.3
TRWZ	Traveller	4.86	195	P	Pn	02 04 10.6	+2.4
DUWZ	D’Urville Isla	4.89	212	P	Pn	02 04 09.7	+1.1
PAWZ	Paruwai Farm	4.90	197	P	Pn	02 04 10.9	+2.1
TCW	Tory Channel	5.09	207	P	Pn	02 04 12.3	+1.4
PLWZ	Palliser	5.12	198	P	Pn	02 04 12.9	+1.7
TUWZ	Tuamarina	5.41	208	P	Pn	02 04 16.0	+1.5
NNZ	Nelson	5.46	213	P	Pn	02 04 16.3	+1.2
TKNZ	Takaka Hill	5.51	217	P	Pn	02 04 16.4	+0.6
QRZ	Quartz Range	5.58	221	P	Pn	02 04 17.7	+1.2
QRZ	Quartz Range	5.58	221	P	Pn	02 04 16.9	+0.4
BSWZ	Blackbirch Sta	5.68	207	P	Pn	02 04 19.5	+1.8
MRNZ	Matariki Terra	5.89	216	P	Pn	02 04 20.8	+0.7
THZ	Tophouse	6.11	213	P	Pn	02 04 24.0	+1.2
KHZ	Kahutara	6.42	206	P	Pn	02 04 28.3	+2.0
KHZ	Kahutara	6.42	206	P	Pn	02 04 28.1	+1.8
DSZ	Denniston Nort	6.62	219	P	Pn	02 04 29.6	+0.7
GVZ	Greta Valley S	7.08	207	P	Pn	02 04 36.3	+2.0
LTZ	Lake Taylor	7.22	211	P	Pn	02 04 37.3	+1.3
MQZ	McQueen’s Vall	7.86	206	P	Pn	02 04 44.9	+1.3
AKCZ	Akaroa Harbour	7.92	204	P	Pn	02 04 47.1	+2.7
ARCZ	Arundel	8.63	211	P	Pn	02 04 54.2	+1.2
TMZ	Timaru	9.06	210	P	P	02 05 00.4	-1.7
ODZ	Otahua Downs	9.75	209	P	P	02 05 09.6	-0.1
JCZ	Jackson Bay	9.83	219	P	P	02 05 09.7	-1.2

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*SOME **17** 02:02:58.5, 41°.58N×75°.55E, h10^{km}*

*KNET **17** 02:03:00.2±0.5, 41°.72N×75°.53E, h1^{km}±5^{km}, ml1.6, Error ellipse: s-maj=3.3km s-min=2.1km az=171.0*

*NNC **17** 02:03:03.1±0.4, 44°.27N×76°.48E, h170^{km}±9^{km}, mpv2.4, Error ellipse: s-maj=18.0km s-min=4.2km az=12.0*

KRNET 17 02:02:58.6±0.1**, 41°.61N×75°.55E, h14**^{km}**, mb2.1, 20C-20D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRN	Naryn baz=21	0.38	118	⇑*i*P	Pg	02 03 05.8	-0.6
NRN	baz=21			⇑*i*S	Sg	02 03 10.9	-0.8
ULHL	Ulahol 1.6nm,0.1s,SNR=8.0	0.82	39	⇑P	Pg	02 03 14.4	-0.1
ULHL	3.3nm,0.1s			⇑S	Sg	02 03 25.4	+0.1
ULHL	Ulahol baz=39	0.82	39	⇓*i*P	Pg	02 03 14.2	-0.3
ULHL	baz=39			⇓*i*S	Sg	02 03 25.4	+0.1
ARLS	Aral baz=85	0.95	286	⇑*i*P	Pb	02 03 16.5	-0.5
ARLS	baz=85			⇑*i*S	Sg	02 03 29.7	+0.2
UCH	Uchtor 1.0nm,0.1s,SNR=9.1	0.99	309	⇑P	Pb	02 03 18.0	+0.3
UCH	2.5nm,0.1s			⇓S	Sb	02 03 31.6	+0.7
UCH	Uchtor baz=9.0	0.99	309	⇓*i*P	Pg	02 03 17.3	-0.5
UCH	baz=9.0			⇓*i*S	Sb	02 03 31.1	+0.2
KBK	Karagaybulak 2.8nm,0.1s,SNR=13	1.14	337	⇓P	Pg	02 03 21.0	+0.5
KBK	38nm,0.2s			⇑S	Sg	02 03 35.2	-0.1
KBK	Karagaybulak baz=37	1.14	337	⇓*i*P	Pb	02 03 20.2	+0.1
KBK	baz=37			⇓*i*S	Sn	02 03 35.7	-0.1
AAK	Ala-Archa 2.4nm,0.1s,SNR=10	1.29	323	⇑P	Pg	02 03 23.7	+0.2
AAK	2.0nm,0.2s			⇑S	Sg	02 03 41.0	+0.6
AAK	Ala-Archa baz=23	1.29	323	⇑*i*P	Pb	02 03 22.9	+0.1
AAK	baz=23			⇑*i*S	Sg	02 03 40.5	+0.2
TKM2	Tokmak 2 1.3nm,0.1s,SNR=9.9	1.31	1	⇑P	Pg	02 03 24.0	+0.2
TKM2	5.8nm,0.1s			⇓S	Sg	02 03 41.5	+0.7
TKM2	Tokmak 2 baz=1.0	1.31	1	⇑*i*P	Pb	02 03 23.1	0.0
TKM2	baz=1.0			⇑*i*S	Sg	02 03 41.1	+0.2
KDJ	Kajisay baz=67	1.32	66	⇓*i*P	Pb	02 03 23.4	+0.1
KDJ	baz=67			⇓*i*S	Sg	02 03 41.8	+0.5
KST	Kastek 0.7nm,0.1s	1.46	12	P	Pg	02 03 32.2	+5.5
KST	5.2nm,0.3s			S	Sg	02 03 54.8	+9.1
KST	Kastek 0.8nm,0.6s	1.46	12	*e*P	Pg	02 03 26.3	-0.4
KST	2.5nm,0.1s			*e*S	Sg	02 03 46.6	+0.9
AML	Almayashu 2.8nm,0.3s,SNR=5.5	1.48	291	⇓P	Pb	02 03 26.6	+0.5
AML	Almayashu baz=91	1.48	291	⇓*e*P	Pb	02 03 26.2	+0.1
AML	baz=91			⇓*i*S	Sg	02 03 46.2	-0.2
CHMS	Chumysh baz=37	1.51	337	⇓*i*P	Pb	02 03 26.6	+0.2
CHMS	baz=37			⇓*i*S	Sg	02 03 47.1	-0.1
DGS	Degeres 0.9nm,0.2s	1.64	6	P	Pg	02 03 31.0	+0.9
DGS	2.1nm,0.2s			S	Sg	02 03 52.8	+1.5
DGS	Degeres 0.7nm,0.1s	1.64	6	*e*P	Pg	02 03 30.3	+0.2
DGS	2.1nm,0.2s			*e*S	Sg	02 03 52.8	+1.5
EKS2	Erkin-Say baz=9.0	1.69	309	⇑*i*P	Pb	02 03 29.9	+0.4
EKS2	baz=9.0			⇑*i*S	Sg	02 03 52.7	-0.2
TARG	Taragay, Kyrgy baz=85	1.69	85	⇓*i*P	Pb	02 03 29.9	+0.2
TARG	baz=85			⇓*i*S	Sg	02 03 52.7	-0.4
TNSS	Tian-Shan 0.1nm,0.0s	1.76	36	P	Pg	02 03 32.5	+0.1
TNSS	0.8nm,0.3s			S	Sg	02 03 55.3	0.0
TNSS	Tian-Shan 0.5nm,0.1s	1.76	36	*e*P	Pg	02 03 34.4	+2.0
TNSS	1.2nm,0.5s			*e*S	Sg	02 04 00.1	+4.7
USP	Ospenovka 1.8nm,0.2s,SNR=10	1.83	335	⇑P	Pg	02 03 32.8	-0.8
USP	Ospenovka baz=35	1.83	335	⇓*e*P	Pb	02 03 32.3	+0.5
USP	baz=35			⇓*i*S	Sg	02 03 57.0	-0.4
MRKS	Merke 0.8nm,0.1s	2.07	304	*e*Pg	Pg	02 03 38.2	0.0
MRKS	1.5nm,0.1s			*e*Lg	Lg	02 04 06.8	
KRBS	Karabastau 0.8nm,0.1s	2.08	2	*e*Pg	Pg	02 03 37.7	-0.9
KRBS	2.0nm,0.1s			*e*Lg	Lg	02 04 05.6	
KTBS	Karatobe 0.5nm,0.1s	2.26	21	*e*Pg	Pg	02 03 41.2	-0.7
KTBS	5.4nm,0.2s			*e*Lg	Lg	02 04 11.8	
MNAS	Manas baz=92	2.43	292	⇑*i*P	Pb	02 03 41.0	-1.2
MNAS	baz=92			⇑*i*S	Sb	02 04 11.9	-0.2

GUC 17 02:20:28.1±0.5**, 38°.50S×74°.88W, h42**^{km}±5^{km}**, ML4.0, 7C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BI04	Isla Mocha	0.78	84	⇑*i*P	Pn	02 20 42.9	+0.2
BI04				*e*S	Sn	02 20 54.2	+1.0
BI04	comp=N,5μm,0.3s			IAML		02 20 55.6	
LC02	Puerto Saavedr	1.20	105	*i* P	Pn	02 20 49.4	+0.9
LC02				*e*S	Sn	02 21 05.7	+2.2
LR04	Corral	1.78	141	⇑*i*P	Pn	02 20 56.7	+0.3
LR04				*e*S	Sn	02 21 16.5	-1.3
LR04	comp=E,4μm,0.3s			IAML		02 21 17.6	
LR02	Universidad Au	1.82	136	⇓*i*P	Pn	02 20 57.6	+0.8
LR02				*e*S	Sn	02 21 17.9	-0.8
LR02	comp=E,4μm,0.3s			IAML		02 21 19.5	
BI05	Punta Hualpn	2.20	38	*e*P	Pn	02 21 01.1	-1.0
BI05				*e*S	Sn	02 21 26.6	-1.5
LR03	Panguipulli	2.27	121	⇑*i*P	Pn	02 21 05.1	+2.0
LR03				*e*S	Sn	02 21 31.6	+1.7
LR03	comp=N,507nm,0.2s			IAML		02 21 35.8	
GO06	Curarrehue	2.86	113	⇑*i*P	Pn	02 21 13.4	+2.0
LL04	Puerto Octay	3.07	142	*i* P	Pn	02 21 15.0	+0.9
LL04				*e*S	Sn	02 21 48.4	-1.2
LL04	comp=N,649nm,0.2s			IAML		02 21 51.4	
LL03	Petrohue	3.25	145	⇑*i*P	Pn	02 21 18.0	+1.4
LL03				*e*S	Sn	02 21 53.8	-0.2
LL03	comp=N,307nm,0.1s			IAML		02 22 06.2	
LL06	Loncomilla	3.83	166	⇑*i*P	Pn	02 21 25.0	+0.5
LL06				*e*S	Sn	02 22 06.1	-2.2
LL06	comp=N,174nm,0.6s			IAML		02 22 09.6	
MT01	Popeta	5.47	33	⇑*i*P	Pn	02 21 46.4	-0.8
MT09	Talagante	5.66	35	*e*P	Pn	02 21 49.4	-0.5
MT09				*e*S	Sn	02 22 53.2	-0.5
LMEL	Las Melosas	5.98	41	*e*P	Pn	02 21 55.3	+1.0
LMEL				*e*S	Sn	02 23 02.3	+0.7

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*WEL **17** 02:24:32.6±0.4, 40°S±2°×17°5E±°, h21^{km}±5^{km}, M3.7/32, ML4.0/32, MLv3.7/32, Error ellipse: s-maj=0.0km s-min=0.0km az=72.6, confirmed*

*NOU **17** 02:24:33.7, 40°.11S×174°.95E, h62^{km}, MLv3.7/11, Cook Strait, New Zealand*

ISC 17 02:24:33.1±1.2**, 40°.11S**±0°.02×**174°.95E**±0°.02**, h34**^{km}±3^{km}**, n127, σ0^{s}.91**/147**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WAZ	Wanganui	0.35	4	P	Pb	02 24 40.9	-0.8
WAZ				S	Sb	02 24 47.3	-0.2
POWZ	Post Office Ro	0.69	115	P	Pn	02 24 46.1	-0.3
POWZ				S	Sn	02 24 55.8	-0.1
OGWZ	Otaki Gorge	0.73	167	P	Pn	02 24 46.5	-0.5
OGWZ				S	Sn	02 24 56.2	-0.8
MRZ	Mangatainoka R	0.73	139	P	Pn	02 24 46.9	-0.1
MRZ				S	Sn	02 24 57.0	-0.1
KIW	Kapiti Island	0.75	182	P	Pn	02 24 46.5	-0.9
KIW				S	Sn	02 24 56.1	-1.6
LREZ	Lake Rotokare	0.77	327	P	Pb	02 24 48.0	-0.2
LREZ				S	Sb	02 25 00.4	+1.9
TSZ	Takapari Road	0.78	87	P	Pn	02 24 47.3	-0.4
TSZ				S	Sn	02 24 57.8	-0.4
MTVZ	Mangateitei	0.82	29	P	Pn	02 24 47.7	-0.7
MTVZ				S	Sn	02 24 59.6	+0.1
PKVZ	Pokaka	0.87	21	P	Pn	02 24 48.1	-0.9
PKVZ				S	Sn	02 24 59.8	-0.7
HOWZ	Holdsworth Sta	0.90	152	P	Pn	02 24 49.4	0.0
HOWZ				S	Sn	02 25 01.8	+0.6
PRWZ	Pori Road	0.90	120	P	Pn	02 24 50.1	+0.7
PRWZ				S	Sb	02 25 02.7	+0.7
WNVZ	Wahianoa	0.93	33	P	Pn	02 24 49.2	-0.7
WNVZ				S	Sn	02 25 01.6	-0.5
TRVZ	Turoa	0.93	30	P	Pn	02 24 49.2	-0.8
TRVZ				S	Sn	02 25 01.7	-0.6
MOVZ	Moawhango	0.93	42	P	Pn	02 24 49.0	-1.0
MOVZ				S	Sn	02 25 01.5	-0.6
DVHZ	Dannevirke	0.95	102	P	Pn	02 24 50.6	+0.5
DVHZ				S	Sb	02 25 03.9	+0.5
DRZ	Dome Shelter	0.95	30	P	Pn	02 24 49.7	-0.7
DRZ				S	Sn	02 25 02.9	-0.1
WHVZ	Whangaehu Hut	0.96	31	P	Pn	02 24 49.7	-0.7
WHVZ				S	Sn	02 25 02.3	-0.7
FWVZ	Far West T-bar	0.97	29	P	Pn	02 24 49.7	-0.8
FWVZ				S	Sn	02 25 02.6	-0.7
TIWZ	Tintock	0.98	133	P	Pn	02 24 51.2	+0.7
PNHZ	Pukenui	0.98	79	P	Pn	02 24 50.2	-0.3
PNHZ				S	Sn	02 25 03.0	-0.2
PREZ	Palmer Road	0.98	321	P	Pb	02 24 51.3	-0.4
VRZ	Vera Road	0.99	351	P	Pn	02 24 50.9	+0.2
TUVZ	Tukino	1.00	33	P	Pn	02 24 50.4	-0.5
TUVZ				S	Sn	02 25 04.0	+0.1
CAW	Cannon Point	1.00	175	P	Pn	02 24 50.8	-0.1
DUWZ	D’Urville Isla	1.05	228	P	Pn	02 24 50.9	-0.6
BHHZ	Black Hill Sta	1.05	55	P	Pn	02 24 50.6	-1.0
NGZ	Ngauruhoe	1.06	28	P	Pn	02 24 51.0	-0.7
SNVZ	South Ngauruho	1.06	30	P	Pn	02 24 51.2	-0.6
NEZ	North Egmont	1.07	321	P	Pn	02 24 52.4	+0.7
NMEZ	Namu Road	1.08	310	P	Pb	02 24 52.8	-0.5
DREZ	Durham Road	1.08	327	P	Pb	02 24 53.0	-0.5
KHEZ	Kahui Hut	1.09	318	P	Pb	02 24 53.2	-0.3
KHEZ	Kahui Hut	1.09	318	P	Pb	02 24 53.0	-0.5
OTVZ	Oturere	1.09	30	P	Pn	02 24 51.7	-0.5
NNVZ	North Ngauruho	1.10	28	P	Pn	02 24 51.6	-0.7
TWVZ	Taurewa	1.10	20	P	Pn	02 24 51.3	-1.0
WTVZ	West Tongariro	1.11	27	P	Pn	02 24 51.5	-0.8
MTW	Mount Morrison	1.13	158	P	Pn	02 24 53.2	+0.6
ETVZ	East Tongariro	1.13	31	P	Pn	02 24 52.2	-0.5
MHEZ	Mangahewa	1.14	335	P	Pb	02 24 54.6	+0.3
WPHZ	Waipukurau	1.14	88	P	Pn	02 24 54.0	+1.2
BFZ	Birch Farm	1.14	121	P	Pn	02 24 53.5	+0.8
BFZ	Birch Farm	1.14	121	P	Pn	02 24 53.0	+0.3
KRVZ	Karewarewa	1.14	28	P	Pn	02 24 52.1	-0.8
TMVZ	Te Maari	1.15	31	P	Pn	02 24 52.6	-0.3
NTVZ	North Tongarir	1.15	29	P	Pn	02 24 52.5	-0.5
PKE	Pukeiti	1.18	320	P	Pb	02 24 54.7	-0.3
WEL	Wellington	1.18	187	P	Pn	02 24 53.7	+0.4
NBEZ	Newall Road No	1.19	315	P	Pb	02 24 54.5	-0.6
SNZO	South Karori	1.22	189	P	Pn	02 24 54.5	+0.8
TCW	Tory Channel	1.22	205	P	Pn	02 24 53.4	-0.4
TMWZ	Te Maipa	1.23	145	P	Pn	02 24 54.3	+0.3
CPWZ	Castlepoint	1.25	130	P	Pb	02 24 55.9	-0.2
KATZ	Kakaramea	1.27	27	P	Pn	02 24 54.3	-0.3
PRHZ	Porangahau	1.30	98	P	Pn	02 24 56.0	+1.1
KWHZ	Kaweka Forest	1.32	59	P	Pn	02 24 55.4	+0.1
PAWZ	Paruwai Farm	1.32	164	P	Pn	02 24 56.3	+1.0
RITZ	Rihia Road	1.33	32	P	Pn	02 24 55.8	+0.5
RATZ	Rangitukua	1.39	27	P	Pn	02 24 56.2	0.0
TRWZ	Traveller	1.41	157	P	Pb	02 24 57.7	-1.1
PXZ	Pawanui	1.47	88	P	Pn	02 24 57.7	+0.5
PLWZ	Palliser	1.48	171	P	Pn	02 24 57.7	+0.2
MCHZ	McNeill Hill	1.50	64	P	Pn	02 24 59.5	+1.8
KAHZ	Kahuranaki	1.51	79	P	Pn	02 24 58.8	+0.9
BKZ	Black Stump Fm	1.52	52	P	Pn	02 24 59.2	+1.3
BKZ	Black Stump Fm	1.52	52	P	Pn	02 24 58.7	+0.8
WATZ	Wairara	1.52	24	P	Pn	02 24 58.2	+0.2
TUWZ	Tuamarina	1.53	210	P	Pb	02 24 59.2	-1.6
HIZ	Hauiti	1.59	357	P	Pn	02 24 59.2	+0.3
HIZ	Hauiti	1.59	357	P	Pn	02 24 59.0	0.0
NNZ	Nelson	1.63	227	P	Pn	02 25 00.4	+1.0
WHTZ	Whakaora	1.64	29	P	Pb	02 25 03.0	+0.2
CKHZ	Cape Kidnapper	1.70	75	P	Pb	02 25 03.9	+0.2
MRHZ	Matea Rd	1.70	42	P	Pn	02 25 01.2	+0.7
CMWZ	Cape Campbell	1.73	199	P	Pb	02 25 06.0	+1.6
KUTZ	Kaahu Road	1.75	23	P	Pn	02 25 02.0	+0.8
NMHZ	Naumai	1.75	55	P	Pn	02 25 03.2	+2.0
TKNZ	Takaka Hill	1.78	238	P	Pn	02 25 02.2	+0.7
ARHZ	Aropaoanui	1.79	63	P	Pb	02 25 05.1	-0.2
BSWZ	Blackbirch Sta	1.80	207	P	Pn	02 25 03.0	+1.2
TLZ	Tolley Road	1.83	15	P	Pn	02 25 02.0	-0.3
WPRZ	Whakapapatarin	1.84	31	P	Pn	02 25 03.3	+0.9
ALRZ	Allen Road	1.88	35	P	Pn	02 25 03.3	+0.4
MTHZ	Maungataniwha	1.93	50	P	Pn	02 25 04.3	+0.7
PRRZ	Plateau Road	1.96	35	P	Pn	02 25 04.3	+0.4
QRZ	Quartz Range	1.98	248	P	Pn	02 25 04.7	+0.4
HRRZ	Handcock Road	2.00	32	P	Pn	02 25 05.7	+1.1
RAHZ	Arahi	2.03	55	P	Pn	02 25 06.1	+1.1
WHHZ	Waihua	2.04	60	P	Pb	02 25 09.6	+0.1
HSRZ	Hossack Road	2.06	30	P	Pn	02 25 07.2	+1.9
MRNZ	Matariki Terra	2.11	232	P	Pn	02 25 07.0	+1.0
MUGZ	Murupara	2.15	41	P	Pn	02 25 07.0	+0.4
RTZ	Ruatahuna	2.17	47	P	Pn	02 25 07.3	+0.4
TARZ	Mount Tarawera	2.23	33	P	Pn	02 25 08.8	+1.0
THZ	Tophouse	2.27	223	P	Pn	02 25 09.2	+1.0
MKRZ	Makatiti	2.29	31	P	Pb	02 25 12.5	-1.4
TOZ	Tahuroa Road	2.41	10	P	Pn	02 25 09.8	-0.4
MHGZ	Mahia Peninsul	2.47	68	P	Pn	02 25 11.3	+0.3
URZ	Urewera	2.49	43	P	Pn	02 25 11.4	+0.1
URZ	Urewera	2.49	43	P	Pn	02 25 11.2	-0.1
RAGZ	Rawiri	2.50	51	P	Pb	02 25 15.2	-2.2
KHZ	Kahutara	2.54	204	P	Pn	02 25 12.3	+0.4

KHZ	**Kahutara**	**2.54**	**204**	P	**Pn**	**02 25 12.2**	**+0.2**
TGRZ	**Tauranga**	**2.58**	**24**	P	**Pn**	**02 25 15.8**	**+3.2**
RIGZ	**Rimuhau**	**2.59**	**58**	P	**Pn**	**02 25 13.1**	**+0.4**
MWZ	**Matawai**	**2.67**	**49**	P	**Pn**	**02 25 14.0**	**+0.2**
TKGZ	**Te Karaka**	**2.80**	**54**	P	**Pn**	**02 25 15.6**	**+0.1**
DSZ	**Denniston Nort**	**2.89**	**235**	P	**Pn**	**02 25 18.7**	**+1.8**
MYRZ	**Mayor Island**	**3.00**	**20**	P	**Pn**	**02 25 21.6**	**+3.4**
RUGZ	**Raukumara Rang**	**3.01**	**46**	P	**Pn**	**02 25 18.5**	**-0.1**
TWGZ	**Tauwhareparae**	**3.04**	**52**	P	**Pn**	**02 25 19.8**	**+0.9**
AWAZ	**Awhitu Peninsu**	**3.05**	**355**	P	**Pn**	**02 25 20.0**	**+1.0**
HAZ	**Te Kaha**	**3.22**	**44**	P	**Pn**	**02 25 22.2**	**+0.9**
PKGZ	**Pakihiroa**	**3.29**	**49**	P	**Pn**	**02 25 22.4**	**+0.1**
WIAZ	**Waiheke Island**	**3.31**	**3**	P	**Pn**	**02 25 22.7**	**+0.1**
MBAZ	**Motutapu North**	**3.33**	**359**	P	**Pb**	**02 25 29.6**	**-1.9**
LTZ	**Lake Taylor**	**3.35**	**216**	P	**Pn**	**02 25 23.0**	**-0.1**
WMGZ	**Waiomatatini S**	**3.54**	**51**	P	**Pn**	**02 25 25.2**	**-0.4**
MXZ	**Matakaoa Point**	**3.65**	**47**	P	**Pn**	**02 25 27.8**	**+0.6**
MXZ	**Matakaoa Point**	**3.65**	**47**	P	**Pn**	**02 25 28.1**	**+0.9**
OXZ	**Oxford**	**3.89**	**213**	P	**Pb**	**02 25 38.4**	**-2.5**
WVZ	**Waitaha Valley**	**4.33**	**225**	P	**Pn**	**02 25 37.7**	**+1.2**
RPZ	**Rata Peaks**	**4.63**	**218**	P	**Pn**	**02 25 41.2**	**+0.5**
GCSZ	**Gaunt Creek Bo**	**4.72**	**226**	P	**Pn**	**02 25 43.8**	**+1.9**
TMZ	**Timaru**	**5.18**	**213**	P	**Pn**	**02 25 47.5**	**-0.7**
JCZ	**Jackson Bay**	**6.06**	**227**	P	**Pn**	**02 26 00.8**	**+0.4**
JCZ	**Jackson Bay**	**6.06**	**227**	P	**Pn**	**02 26 00.8**	**+0.4**

IDC 17 02:25:28.2±3.7**, 7°.68S**×**160°.31E, h0^{km}, mb3.6**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=86.1km s-min=28.4km az=90.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.78**	**191**	Pn	Pn	02 26 00.2	0.0
	368nm,0.3s,baz=156,slow=10.0,SNR=6.0						
HNR				Sn	Sn	02 26 23.1	-0.4
	782nm,0.3s,baz=81,slow=23,SNR=8.5						
HNR				LR	LR	02 26 49.8	
	comp=Z,1µm,21.8s,baz=263,slow=46						
H11S2	**WAKE ISLAND Hy**	**26.76**	**14**	T	T	02 59 30.5	
	baz=193,slow=76,SNR=23						
H11S3	**WAKE ISLAND Hy**	**26.76**	**14**	T	T	02 59 32.4	
	baz=193,slow=76,SNR=11						
H11S1	**WAKE ISLAND Hy**	**26.78**	**14**	T	T	02 59 31.9	
	baz=193,slow=76,SNR=10.0						
WRA	**Warramunga Arr**	**27.95**	**241**	P	P	02 31 21.7	+1.0
	0.7nm,0.5s,baz=68,slow=9.2,SNR=8.3 0.7nm,0.5s						
H11N1	**WAKE ISLAND Hy**	**27.98**	**13**	T	T	03 00 53.5	
	baz=193,slow=76,SNR=39						
H11N3	**WAKE ISLAND Hy**	**27.99**	**13**	T	T	03 00 54.2	
	baz=193,slow=76,SNR=17						
H11N2	**WAKE ISLAND Hy**	**28.00**	**13**	T	T	03 00 55.0	
	baz=193,slow=76,SNR=29						
ASAR	**Alice Springs**	**29.89**	**235**	P	P	02 31 37.1	-0.9
	0.2nm,0.3s,baz=60,slow=9.6,SNR=1.7 0.2nm,0.3s						
MKAR	**Makanchi Array**	**87.42**	**318**	P	P	02 38 17.5	-0.2
	0.2nm,0.6s,baz=95,slow=7.2,SNR=3.6 0.2nm,0.6s						

WEL 17 02:30:16.5±0.9**, 42°S**±3°×**17°4E**±°**, h5^{km}**±7^{km}**, M2.3**/7**, ML2.4**/6**, MLv2.3**/7**, Error ellipse: s-maj=0.0km s-min=0.0km az=106.9, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSWZ	**Blackbirch Sta**	**0.26**	**16**	P	Pg	02 30 22.2	+0.5
BSWZ				S	Sg	02 30 26.5	+1.4
CMWZ	**Cape Campbell**	**0.39**	**56**	P	Pg	02 30 25.0	+0.9
KHZ	**Kahutara**	**0.48**	**201**	P	Pg	02 30 25.8	0.0
TUWZ	**Tuamarina**	**0.55**	**13**	P	Pg	02 30 27.5	+0.3
THZ	**Tophouse**	**0.68**	**287**	P	Pg	02 30 29.9	+0.2
THZ				S	Sg	02 30 39.2	+0.7
NNZ	**Nelson**	**0.81**	**338**	P	Pb	02 30 32.7	-0.3
NNZ				S	Sg	02 30 43.3	+0.8
TCW	**Tory Channel**	**0.84**	**27**	P	Pg	02 30 32.3	-0.4
MRNZ	**Matariki Terra**	**0.95**	**306**	P	Pg	02 30 35.0	+0.2
MRNZ				S	Sb	02 30 48.6	+0.2
WEL	**Wellington**	**1.01**	**48**	P	Pg	02 30 29.8	-6.1
GVZ	**Greta Valley S**	**1.14**	**209**	P	Pg	02 30 37.6	-0.8
DUWZ	**D'Urville Isla**	**1.17**	**5**	P	Pg	02 30 38.1	-0.8
PLWZ	**Palliser**	**1.18**	**71**	P	Pg	02 30 37.5	-1.5
CAW	**Cannon Point**	**1.29**	**49**	P	Pn	02 30 39.6	-1.6
LTZ	**Lake Taylor**	**1.38**	**233**	P	Pn	02 30 41.5	-1.0
KIW	**Kapiti Island**	**1.40**	**38**	P	Pn	02 30 41.7	-1.0
QRZ	**Quartz Range**	**1.48**	**320**	P	Pn	02 30 43.9	+0.1
DSZ	**Denniston Nort**	**1.49**	**278**	P	Pb	02 30 44.7	-0.1
MTW	**Mount Morrison**	**1.53**	**59**	P	Pn	02 30 42.4	-2.1
MRZ	**Mangatainoka R**	**1.88**	**47**	P	Pn	02 30 47.6	-1.7
MQZ	**McQueen's Vall**	**1.92**	**205**	P	Pn	02 30 46.5	-3.4
AKCZ	**Akaroa Harbour**	**2.01**	**198**	P	Pn	02 30 48.6	-2.5
WNVZ	**Wahianoa**	**2.98**	**28**	P	Pb	02 31 08.9	-1.3
TRVZ	**Turoa**	**2.99**	**27**	P	Pb	02 31 10.0	-0.4
BHHZ	**Black Hill Sta**	**3.02**	**36**	P	Pb	02 31 10.4	-0.5
OTVZ	**Oturere**	**3.15**	**28**	P	Pb	02 31 11.3	-1.8
WKZ	**Wanaka**	**4.49**	**229**	P	Pn	02 31 27.6	+2.3
MLZ	**Mavora Lakes**	**5.33**	**228**	P	Pn	02 31 36.6	-0.1

ROM 17 02:40:59.2±0.1**, 42°.847N**±0°.006×**13°.085E**±0°.007**, h11^{km}, ML0.9**/2**, 1C-2D, Error ellipse: s-maj=0.8km s-min=0.4km az=323.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.07**	**312**	P	Pg	02 41 01.9	+0.2
T1216				S	Sg	02 41 03.6	+0.3
T1216				AML	AML		
	comp=E,111µm,0.1s						
T1216				AML	AML		
	comp=N,132µm,0.3s						
T1216				AML	AML		
	comp=N,132µm,0.3s						
T1245	**Castelsantange**	**0.08**	**82**	⇓P	Pg	02 41 02.1	+0.3
T1245				AML	AML		
	comp=E,80µm,0.2s						
T1245				AML	AML		
	comp=N,101µm,0.2s						
T1212	**Cascia, Frazio**	**0.10**	**197**	⇑P	Pg	02 41 02.5	+0.4
T1212				S	Sg	02 41 04.5	+0.5
MC2	**Monte Cornacci**	**0.10**	**50**	⇓P	Pg	02 41 02.6	+0.4
MC2				S	Sg	02 41 04.8	+0.5
T1217	**Poggiodomo (PG**	**0.18**	**220**	P	Pg	02 41 03.7	+0.5
MMO1	**Montemonaco**	**0.19**	**73**	P	Pg	02 41 03.8	+0.4
MMO1				S	Sg	02 41 06.9	+0.7

ROM 17 02:41:41.1±0.1**, 42°.759N**±0°.003×**13°.147E**±0°.005**, h10^{km}, ML1.3**/6**, 2C, Error ellipse: s-maj=0.4km s-min=0.3km az=292.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.08**	**265**	⇑P	Pg	02 41 43.9	+0.3
T1212				S	Sg	02 41 45.4	+0.1
T1212				AML	AML		
	comp=E,176µm,0.1s						
T1212				AML	AML		
	comp=N,308µm,0.2s						
T1218	**Civita (PG)**	**0.09**	**195**	P	Pg	02 41 44.1	+0.3
T1218				S	Sg	02 41 46.0	+0.3
T1218				AML	AML		
	comp=E,355µm,0.3s						
T1218				AML	AML		
	comp=N,363µm,0.4s						
T1218				AML	AML		
	comp=N,329µm,0.2s						
T1218				AML	AML		
	comp=E,355µm,0.3s						
T1218				AML	AML		
	comp=N,364µm,0.4s						
T1218				AML	AML		
	comp=E,366µm,0.3s						
T1218				AML	AML		
	comp=E,355µm,1.7s						
T1218				AML	AML		
	comp=E,366µm,1.7s						
T1245	**Castelsantange**	**0.10**	**17**	AML	AML		
	comp=E,240µm,0.7s						
T1245				AML	AML		
	comp=N,381µm,0.2s						
T1216	**Preci, Frazion**	**0.16**	**325**	P	Pg	02 41 45.4	+0.6
T1216				S	Sg	02 41 48.5	+1.2
T1217	**Poggiodomo (PG**	**0.17**	**254**	P	Pg	02 41 45.4	+0.6
T1217				S	Sg	02 41 48.6	+1.1
MMO1	**Montemonaco**	**0.19**	**43**	⇑P	Pg	02 41 45.9	+0.5
MMO1				S	Sg	02 41 49.2	+1.1
T1241	**Roccafluvione,**	**0.23**	**65**	P	Pg	02 41 46.5	+0.6
T1241				S	Sg	02 41 50.6	+1.4
RM33	**Pellescritta (**	**0.26**	**169**	P	Pg	02 41 46.9	+0.5
RM33				S	Sb	02 41 51.2	-1.2
GUMA	**Gualdo di Mace**	**0.33**	**24**	AML	AML		
	comp=E,80µm,0.2s						
GUMA				AML	AML		
	comp=N,68µm,1.5s						
GUMA				AML	AML		
	comp=E,80µm,1.8s						
TERO	**Teramo**	**0.36**	**112**	AML	AML		
	comp=N,49µm,1.5s						
TERO				AML	AML		
	comp=E,28µm,1.3s						
TERO				AML	AML		
	comp=E,28µm,0.7s						
TERO				AML	AML		
	comp=N,49µm,0.5s						
MOMA	**Monte Martano**	**0.43**	**276**	AML	AML		
	comp=N,26µm,1.5s						
MOMA				AML	AML		
	comp=E,38µm,1.5s						
MOMA				AML	AML		
	comp=N,26µm,0.5s						

ROM 17 02:41:58.3±0.1**, 42°.875N**±0°.003×**13°.233E**±0°.004**, h10^{km}, ML1.1**/9**, 2D, Error ellipse: s-maj=0.3km s-min=0.1km az=226.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.04**	**242**	P	Pg	02 42 00.6	+0.2
T1245				S	Sg	02 42 01.9	0.0
T1245				AML	AML		
	comp=E,790µm,0.2s						
T1245				AML	AML		
	comp=N,602µm,1.0s						
T1245				AML	AML		
	comp=E,880µm,0.2s						
T1245				AML	AML		
	comp=N,668µm,0.3s						
T1245				AML	AML		
	comp=N,590µm,0.3s						
T1245				AML	AML		
	comp=E,789µm,0.2s						
MC2	**Monte Cornacci**	**0.05**	**321**	P	Pg	02 42 00.8	+0.2
MC2				S	Sg	02 42 02.3	+0.1
MMO1	**Montemonaco**	**0.07**	**70**	P	Pg	02 42 01.0	+0.3
MMO1				S	Sg	02 42 02.5	+0.1
T1214	**Arquata del Tr**	**0.12**	**189**	P	Pg	02 42 01.8	+0.5
T1214				S	Sg	02 42 04.0	+0.6
T1214				AML	AML		
	comp=E,98µm,13.0s						
T1214				AML	AML		
	comp=N,86µm,0.3s						
T1214				AML	AML		
	comp=N,98µm,0.3s						
T1214				AML	AML		
	comp=E,162µm,2.2s						
T1256	**Bolognola (MC)**	**0.13**	**358**	P	Pg	02 42 02.0	+0.5
T1256				S	Sg	02 42 04.5	+0.7
T1256				AML	AML		
	comp=E,124µm,1.1s						
T1256				AML	AML		
	comp=N,39µm,0.4s						
T1256				AML	AML		
	comp=E,33µm,0.4s						
T1256				AML	AML		
	comp=N,180µm,2.8s						
T1241	**Roccafluvione,**	**0.15**	**97**	P	Pg	02 42 02.2	+0.6
T1241				S	Sg	02 42 04.9	+0.9
T1241				AML	AML		
	comp=E,89µm,0.3s						
T1241				AML	AML		
	comp=N,60µm,0.2s						
T1241				AML	AML		
	comp=E,89µm,0.3s						
T1241				AML	AML		
	comp=E,89µm,0.3s						
T1241				AML	AML		
	comp=N,139µm,0.9s						
T1241				AML	AML		
	comp=N,60µm,0.2s						
T1216	**Preci, Frazion**	**0.16**	**276**	P	Pg	02 42 02.4	+0.6
T1216				S	Sg	02 42 05.1	+0.9
T1216				AML	AML		
	comp=N,69µm,0.1s						
T1212	**Cascia, Frazio**	**0.18**	**229**	⇓P	Pg	02 42 02.9	+0.6
T1212				AML	AML		
	comp=E,61µm,6.9s						
T1212				AML	AML		
	comp=N,73µm,0.2s						
T1212				AML	AML		
	comp=E,123µm,2.4s						
FDMO	**Fiordimonte**	**0.19**	**327**	P	Pg	02 42 03.0	+0.6
FDMO				S	Sg	02 42 06.5	+1.2
FDMO				AML	AML		
	comp=N,37µm,0.4s						
FDMO				AML	AML		
	comp=E,39µm,0.2s						
T1218	**Civita (PG)**	**0.22**	**203**	⇓P	Pg	02 42 03.6	+0.7
T1218				AML	AML		
	comp=E,119µm,0.8s						
T1218				AML	AML		
	comp=N,68µm,0.1s						
T1220	**Camerino, Fraz**	**0.26**	**336**	P	Pg	02 42 04.2	+0.6
T1220				AML	AML		
	comp=E,100µm,0.3s						
T1220				AML	AML		
	comp=N,174µm,8.9s						
T1220				AML	AML		
	comp=N,1772µm,3.2s						
T1220				AML	AML		
	comp=E,10955µm,12.6s						
TERO	**Teramo**	**0.37**	**133**	P	Pg	02 42 05.9	+0.3
T1211	**Morro Reatino**	**0.44**	**219**	S	Sb	02 42 14.5	-0.3
RICI	**Ricice**	**2.92**	**76**	Sg	Sb	02 43 25.2	-0.9

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*IDC **17** 02:44:26.0±5.8, 25°.30N×122°.14E, h270^{km}±35^{km}, mb3.2/6, mbtmp3.9/7, Error ellipse: s-maj=114.1km s-min=28.6km az=13.0*

*JMA **17** 02:44:30.2±0.3, 25°N±3°×12°2E±°, h254^{km}±3^{km}, MV3.9/14, TAIWAN REGION*

ISC 17 02:44:27.4±1.0**, 25°.8N**±0°.3×**122°.2E**±0°.1**, h254^{km}**±26^{km}**, n17, σ1^{s}50**/26**, mb3.5**/6**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**1.55**	**151**	*e*P	**Pn**	**02 45 07.2**	**+0.7**
IRIF	**Iriomote-Funau**	**2.04**	**136**	P	**Pn**	**02 45 11.5**	**+0.9**
IRIF				S	**S**	**02 45 43.0**	**-1.6**
JISG	**Ishigakijimahi**	**2.28**	**122**	*e*P	**Pn**	**02 45 14.2**	**+1.3**
JISG				S	**S**	**02 45 47.6**	**-1.2**
JKRS	**Kuro-shima**	**2.29**	**133**	P	**Pn**	**02 45 14.1**	**+1.2**
JKRS				S	**S**	**02 45 47.5**	**-1.3**
HATJ	**Hateruma jima**	**2.29**	**140**	P	**Pn**	**02 45 13.9**	**+1.0**
HATJ				S	**S**	**02 45 47.1**	**-1.8**
JIJ	**Ishigaki jima**	**2.29**	**129**	P	**Pn**	**02 45 13.8**	**+0.8**
JIJ				S	**S**	**02 45 47.0**	**-2.0**
JTJ	**Tarama**	**2.56**	**117**	P	**Pn**	**02 45 17.4**	**+1.8**
JTJ				S	**S**	**02 45 53.2**	**-0.5**
JIKM	**Ikemajima**	**2.91**	**107**	*e*P	**Pn**	**02 45 21.4**	**+2.2**
JIKM				S	**S**	**02 46 00.6**	**+0.4**
JMJ2	**Miyako jima3**	**3.04**	**110**	*e*P	**Pn**	**02 45 22.8**	**+2.2**
JMJ2				*e*S	**S**	**02 46 02.4**	**-0.3**
JOGS	**Gusukube**	**3.10**	**109**	*e*S	**S**	**02 46 03.9**	**0.0**
JOW	**Kunigami**	**5.56**	**78**	P	**Pn**	**02 45 51.0**	**+0.9**
	7.5nm,0.5s,baz=38,slow=27,SNR=2.4						
JOW				S	**S**	**02 46 52.7**	**-3.5**
	5.5nm,0.4s,baz=135,slow=26,SNR=2.2						
SONM	**Songino Array**	**25.25**	**335**	P	**P**	**02 49 32.0**	**+1.5**
	2.1nm,0.8s,baz=153,slow=10,SNR=8.9 2.1nm,0.8s						
MKAR	**Makanchi Array**	**37.83**	**314**	P	**P**	**02 51 20.0**	**+0.3**
	0.6nm,0.5s,baz=102,slow=10,SNR=12 0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**39.39**	**326**	P	**P**	**02 51 32.3**	**-0.1**
	0.9nm,0.5s,baz=138,slow=9.0,SNR=4.2 0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**41.47**	**318**	P	**P**	**02 51 49.8**	**+0.3**
	0.4nm,0.3s,baz=113,slow=9.4,SNR=6.6 0.4nm,0.3s						
FINES	**FINESS Array B**	**70.50**	**330**	P	**P**	**02 55 12.8**	**-1.5**
	3.4nm,1.0s,baz=61,slow=6.5,SNR=2.5 3.4nm,1.0s						
YKA	**Yellowknife Ar**	**81.11**	**23**	P	**P**	**02 56 14.1**	**-0.1**
	0.3nm,0.6s,baz=310,slow=5.2,SNR=7.6 0.3nm,0.6s						

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*HLW **17** 02:48:30.6, 30°.30N×31°.94E, h0^{km}±15^{km}, Md2.1*

*GII **17** 02:48:31.1±0.0, 30°.45N×31°.89E, h8^{km}, Mm2.8/4*

ISC 17 02:48:29.5±1.6**, 30°.43N**±0°.07×**31°.84E**±0°.09**, h10^{km}, n16, σ1^{s}15**/25**, Egypt**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOT	**Kottamia**	**0.50**	**181**	P	**Pg**	**02 48 39.0**	**-0.2**
	baz=195						
HHAG	**Hagoal**	**0.52**	**155**	P	**Pg**	**02 48 38.6**	**-1.1**
	baz=158						
GLL	**Jalalah**	**0.86**	**188**	P	**Pg**	**02 48 45.4**	**-0.6**
	baz=196						
SUZ	**Suez**	**1.04**	**124**	P	**Pg**	**02 48 48.4**	**-1.1**
	baz=120						
KZIT	**Kziot**	**2.25**	**77**	Pn	**Pb**	**02 49 08.3**	**-2.0**
KRMI	**Paran Flat**	**2.51**	**96**	Pn	**Pn**	**02 49 11.4**	**+1.0**
KRMI				Sn	**Sn**	**02 49 42.2**	**+1.1**
PRNI	**Paran**	**2.73**	**91**	Pn	**Pn**	**02 49 14.4**	**+0.9**
PRNI				Sn	**Sn**	**02 49 47.8**	**+1.2**
MBRI	**Mt Berech**	**2.73**	**103**	Pn	**Pn**	**02 49 14.8**	**+1.3**
MBRI				Sn	**Sn**	**02 49 48.5**	**+1.8**
HRFI	**Mount Harif**	**2.79**	**97**	Pn	**Pn**	**02 49 15.8**	**+1.5**
HRFI				Sn	**Sn**	**02 49 48.9**	**+0.9**
EIL	**Elat**	**2.80**	**105**	Pn	**Pn**	**02 49 15.1**	**+0.8**
EIL				Sn	**Sn**	**02 49 48.7**	**+0.5**
ZFRI	**Zfri**	**2.88**	**87**	Pn	**Pn**	**02 49 16.3**	**+0.9**
ZFRI				Sn	**Sn**	**02 49 50.8**	**+0.6**
YTIR	**Yattir**	**2.96**	**71**	Pn	**Pn**	**02 49 18.3**	**+1.6**
YTIR				Sn	**Sn**	**02 49 52.7**	**+0.3**
SLTI	**Sal'it**	**3.28**	**56**	Pn	**Pn**	**02 49 21.1**	**+0.2**
SLTI				Sn	**Sn**	**02 50 01.0**	**+1.0**
HMDT	**Nahal Hemdat**	**3.64**	**59**	Pn	**Pn**	**02 49 27.0**	**+1.1**
HMDT				Sn	**Sn**	**02 50 10.3**	**+1.4**
MMLI	**Mount Malkishu**	**3.66**	**56**	Sn	**Sn**	**02 50 10.3**	**+0.9**
NATI	**Neve Ativ**	**4.35**	**49**	Sn	**Sn**	**02 50 26.8**	**+0.3**

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*WEL **17** 02:55:03.3±0.4, 40°S±2°×17°5E±°, h19^{km}±6^{km}, M3.4/19, ML3.6/19, MLv3.4/19, Error ellipse: s-maj=0.0km s-min=0.0km az=78.4, confirmed*

*NOU **17** 02:55:04.8, 40°.11S×174°.92E, h61^{km}, MLv3.2/8, Cook Strait, New Zealand*

ISC 17 02:55:03.4±1.0**, 40°.10S**±0°.02×**174°.96E**±0°.02**, h17^{km}**±10^{km}**, n102, σ0^{s}87**/113**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAZ	**Wanganui**	**0.35**	**4**	P	**Pg**	**02 55 12.0**	**+1.3**
WAZ				S	**Sb**	**02 55 18.6**	**+2.2**
POWZ	**Post Office Ro**	**0.69**	**115**	P	**Pg**	**02 55 17.3**	**+0.4**
POWZ				S	**Sg**	**02 55 26.9**	**+0.9**
OGWZ	**Otaki Gorge**	**0.73**	**167**	P	**Pg**	**02 55 17.7**	**-0.1**
OGWZ				S	**Sg**	**02 55 27.5**	**+0.1**
MRZ	**Mangatainoka R**	**0.73**	**140**	P	**Pg**	**02 55 18.1**	**+0.3**
MRZ				S	**Sg**	**02 55 28.2**	**+0.7**
KIW	**Kapiti Island**	**0.76**	**183**	P	**Pg**	**02 55 17.7**	**-0.5**
KIW				S	**Sg**	**02 55 27.4**	**-0.9**
LREZ	**Lake Rotokare**	**0.77**	**326**	P	**Pg**	**02 55 19.1**	**+0.7**
LREZ				S	**Sb**	**02 55 31.4**	**+2.9**
TSZ	**Takapari Road**	**0.77**	**87**	P	**Pg**	**02 55 18.4**	**-0.1**
TSZ				S	**Sg**	**02 55 29.0**	**+0.2**
MTVZ	**Mangateitei**	**0.82**	**29**	P	**Pg**	**02 55 18.8**	**-0.6**
MTVZ				S	**Sg**	**02 55 31.0**	**+0.7**
PKVZ	**Pokaka**	**0.87**	**20**	P	**Pg**	**02 55 19.3**	**-1.0**
PKVZ				S	**Sg**	**02 55 31.7**	**-0.1**
PRWZ	**Pori Road**	**0.90**	**120**	P	**Pb**	**02 55 21.1**	**+0.6**
PRWZ				S	**Sb**	**02 55 33.9**	**+1.8**
HOWZ	**Holdsworth Sta**	**0.90**	**152**	P	**Pb**	**02 55 20.7**	**+0.1**
WNVZ	**Wahianoa**	**0.92**	**33**	P	**Pb**	**02 55 20.3**	**-0.7**
WNVZ				S	**Sb**	**02 55 33.0**	**0.0**
TRVZ	**Turoa**	**0.93**	**30**	P	**Pb**	**02 55 20.3**	**-0.8**
MOVZ	**Moawhango**	**0.93**	**42**	P	**Pb**	**02 55 20.0**	**-1.0**
DVHZ	**Dannevirke**	**0.95**	**102**	P	**Pb**	**02 55 21.9**	**+0.5**
DRZ	**Dome Shelter**	**0.95**	**30**	P	**Pb**	**02 55 20.9**	**-0.7**
WHVZ	**Whangaehu Hut**	**0.95**	**31**	P	**Pb**	**02 55 20.9**	**-0.8**
FWVZ	**Far West T-bar**	**0.96**	**29**	P	**Pb**	**02 55 20.8**	**-1.0**
PNHZ	**Pukenui**	**0.97**	**79**	P	**Pb**	**02 55 21.4**	**-0.5**
TIWZ	**Tintock**	**0.98**	**134**	P	**Pb**	**02 55 22.3**	**+0.4**
PREZ	**Palmer Road**	**0.98**	**321**	P	**Pb**	**02 55 22.4**	**+0.5**
VRZ	**Vera Road**	**0.99**	**351**	P	**Pb**	**02 55 22.0**	**-0.1**
TUVZ	**Tukino**	**0.99**	**33**	P	**Pb**	**02 55 21.5**	**-0.7**
CAW	**Cannon Point**	**1.01**	**175**	P	**Pb**	**02 55 21.9**	**-0.4**
BHHZ	**Black Hill Sta**	**1.05**	**55**	P	**Pb**	**02 55 21.7**	**-1.4**
DUWZ	**D'Urville Isla**	**1.05**	**228**	P	**Pb**	**02 55 22.0**	**-1.2**
NGZ	**Ngauruhoe**	**1.05**	**28**	P	**Pb**	**02 55 22.1**	**-1.2**
SNVZ	**South Ngauruho**	**1.06**	**30**	P	**Pb**	**02 55 22.5**	**-0.9**
NEZ	**North Egmont**	**1.06**	**321**	P	**Pb**	**02 55 23.6**	**+0.2**
NMEZ	**Namu Road**	**1.08**	**309**	P	**Pb**	**02 55 23.9**	**+0.3**
DREZ	**Durham Road**	**1.08**	**327**	P	**Pb**	**02 55 24.2**	**+0.5**
KHEZ	**Kahui Hut**	**1.09**	**318**	P	**Pb**	**02 55 23.9**	**+0.1**
KHEZ	**Kahui Hut**	**1.09**	**318**	P	**Pb**	**02 55 24.2**	**+0.4**
OTVZ	**Oturere**	**1.09**	**30**	P	**Pb**	**02 55 22.8**	**-1.0**
NNVZ	**North Ngauruho**	**1.10**	**28**	P	**Pb**	**02 55 22.7**	**-1.3**
TWVZ	**Taurewa**	**1.10**	**20**	P	**Pb**	**02 55 22.4**	**-1.5**
WTVZ	**West Tongariro**	**1.10**	**27**	P	**Pb**	**02 55 22.7**	**-1.4**
ETVZ	**East Tongariro**	**1.13**	**31**	P	**Pb**	**02 55 23.4**	**-1.1**
MTW	**Mount Morrison**	**1.13**	**159**	P	**Pb**	**02 55 24.1**	**-0.4**
MHEZ	**Mangahewa**	**1.14**	**334**	P	**Pb**	**02 55 25.6**	**+1.0**
KRVZ	**Karewarewa**	**1.14**	**28**	P	**Pb**	**02 55 23.3**	**-1.4**
WPHZ	**Waipukurau**	**1.14**	**88**	P	**Pb**	**02 55 25.1**	**+0.4**
BFZ	**Birch Farm**	**1.14**	**121**	P	**Pb**	**02 55 24.7**	**0.0**
BFZ	**Birch Farm**	**1.14**	**121**	P	**Pb**	**02 55 24.6**	**-0.1**
TMVZ	**Te Maari**	**1.14**	**31**	P	**Pb**	**02 55 23.7**	**-1.1**
NTVZ	**North Tongarir**	**1.15**	**29**	P	**Pb**	**02 55 23.6**	**-1.2**
PKE	**Pukeiti**	**1.18**	**320**	P	**Pn**	**02 55 25.9**	**+0.8**
NBEZ	**Newall Road No**	**1.18**	**315**	P	**Pn**	**02 55 25.6**	**+0.4**
SNZO	**South Karori**	**1.22**	**189**	P	**Pn**	**02 55 25.6**	**0.0**
TCW	**Tory Channel**	**1.22**	**205**	P	**Pn**	**02 55 24.6**	**-1.1**
TMWZ	**Te Maipa**	**1.23**	**145**	P	**Pn**	**02 55 25.4**	**-0.4**
CPWZ	**Castlepoint**	**1.25**	**131**	P	**Pn**	**02 55 27.7**	**+1.7**
KATZ	**Kakaramea**	**1.27**	**27**	P	**Pn**	**02 55 25.4**	**-1.0**
PRHZ	**Porangahau**	**1.30**	**98**	P	**Pn**	**02 55 26.8**	**0.0**
KWHZ	**Kaweka Forest**	**1.32**	**59**	P	**Pn**	**02 55 26.6**	**-0.5**
RITZ	**Rihia Road**	**1.32**	**32**	P	**Pn**	**02 55 27.0**	**-0.1**
PAWZ	**Paruwai Farm**	**1.33**	**164**	P	**Pn**	**02 55 27.4**	**+0.3**
RATZ	**Rangitukua**	**1.39**	**27**	P	**Pn**	**02 55 27.9**	**-0.2**
TRWZ	**Traveller**	**1.41**	**157**	P	**Pn**	**02 55 28.9**	**+0.7**
PXZ	**Pawanui**	**1.47**	**88**	P	**Pn**	**02 55 29.7**	**+0.7**
PLWZ	**Palliser**	**1.48**	**171**	P	**Pn**	**02 55 29.4**	**+0.1**
MCHZ	**McNeill Hill**	**1.50**	**64**	P	**Pn**	**02 55 30.6**	**+1.1**
KAHZ	**Kahuranaki**	**1.51**	**79**	P	**Pn**	**02 55 30.2**	**+0.5**
BKZ	**Black Stump Fm**	**1.51**	**52**	P	**Pn**	**02 55 30.4**	**+0.7**
BKZ	**Black Stump Fm**	**1.51**	**52**	P	**Pn**	**02 55 29.8**	**+0.1**
WATZ	**Wairara**	**1.52**	**24**	P	**Pn**	**02 55 30.0**	**+0.2**
TUWZ	**Tuamarina**	**1.53**	**210**	P	**Pn**	**02 55 30.3**	**+0.4**
HIZ	**Hauiti**	**1.59**	**357**	P	**Pn**	**02 55 30.4**	**-0.4**
HIZ	**Hauiti**	**1.59**	**357**	P	**Pn**	**02 55 30.3**	**-0.4**
NNZ	**Nelson**	**1.64**	**227**	P	**Pn**	**02 55 31.7**	**+0.3**
MRHZ	**Matea Rd**	**1.70**	**42**	P	**Pn**	**02 55 32.4**	**+0.1**
KUTZ	**Kaahu Road**	**1.75**	**23**	P	**Pn**	**02 55 33.9**	**+1.0**
NMHZ	**Naumai**	**1.75**	**55**	P	**Pn**	**02 55 34.2**	**+1.2**
TKNZ	**Takaka Hill**	**1.78**	**238**	P	**Pn**	**02 55 33.4**	**0.0**
ARHZ	**Aropaoanui**	**1.79**	**63**	P	**Pn**	**02 55 36.3**	**+2.9**
BSWZ	**Blackbirch Sta**	**1.81**	**207**	P	**Pn**	**02 55 34.4**	**+0.6**
TLZ	**Tolley Road**	**1.83**	**15**	P	**Pn**	**02 55 33.1**	**-1.0**
ALRZ	**Allen Road**	**1.88**	**35**	P	**Pn**	**02 55 34.4**	**-0.3**
MTHZ	**Maungataniwha**	**1.92**	**50**	P	**Pn**	**02 55 35.4**	**0.0**
QRZ	**Quartz Range**	**1.99**	**248**	P	**Pn**	**02 55 35.6**	**-0.6**
QRZ	**Quartz Range**	**1.99**	**248**	P	**Pn**	**02 55 35.8**	**-0.4**
RAHZ	**Arahi**	**2.03**	**55**	P	**Pn**	**02 55 37.2**	**+0.4**
MRNZ	**Matariki Terra**	**2.11**	**232**	P	**Pn**	**02 55 38.4**	**+0.5**
MUGZ	**Murupara**	**2.15**	**42**	P	**Pn**	**02 55 38.2**	**-0.3**
RTZ	**Ruatahuna**	**2.16**	**47**	P	**Pn**	**02 55 38.4**	**-0.3**
TARZ	**Mount Tarawera**	**2.22**	**33**	P	**Pn**	**02 55 40.1**	**+0.6**
THZ	**Tophouse**	**2.27**	**222**	P	**Pn**	**02 55 40.5**	**+0.3**
TOZ	**Tahuroa Road**	**2.41**	**10**	P	**Pn**	**02 55 41.1**	**-0.9**
URZ	**Urewera**	**2.49**	**43**	P	**Pn**	**02 55 43.1**	**0.0**
URZ	**Urewera**	**2.49**	**43**	P	**Pn**	**02 55 42.4**	**-0.7**

KHZ	Kahutara	2.54	204	P	Pn	02 55 43.5	-0.3
KHZ	Kahutara	2.54	204	P	Pn	02 55 43.4	-0.5
RIGZ	Rimuhau	2.58	58	P	Pn	02 55 44.1	-0.3
MWZ	Matawai	2.67	49	P	Pn	02 55 45.0	-0.6
DSZ	Denniston Nort	2.90	235	P	Pn	02 55 48.9	+0.1
RUGZ	Raukumara Rang	3.01	46	P	Pn	02 55 50.3	0.0
TWGZ	Tauwhareparae	3.04	52	P	Pn	02 55 51.0	+0.3
GVZ	Greta Valley S	3.20	206	P	Pn	02 55 51.7	-1.2
PKGZ	Pakihiroa	3.29	49	P	Pn	02 55 53.6	-0.5
LTZ	Lake Taylor	3.35	216	P	Pn	02 55 54.1	-0.9
WMGZ	Waiomatatini S	3.53	51	P	Pn	02 55 56.3	-1.1
AKCZ	Akaroa Harbour	4.06	201	P	Pn	02 56 02.8	-1.9

ROM 17 02:57:26.1±0.1, 43°.020N±0°.004×13°.080E±0°.005, h2^{km}±1^{km}, ML0.9/4, Error ellipse: s-maj=0.5km s-min=0.2km az=246.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDMO	Fiordimonte	0.02	18	P	Pg	02 57 26.6	-0.2
FDMO				AML	AML		
	comp=E,154µm,0.1s						
FDMO				AML	AML		
	comp=N,176µm,0.2s						
T1219	Muccia, Frazio	0.06	304	P	Pg	02 57 27.6	+0.1
T1219				S	Sg	02 57 28.9	+0.5
T1219				AML	AML		
	comp=N,224µm,0.3s						
T1219				AML	AML		
	comp=N,225µm,0.3s						
T1219				AML	AML		
	comp=E,113µm,0.9s						
T1219				AML	AML		
	comp=N,225µm,1.7s						
T1220	Camerino, Fraz	0.09	4	P	Pg	02 57 28.1	+0.2
T1220				S	Sg	02 57 30.0	+0.8
T1220				AML	AML		
	comp=E,739µm,1.2s						
T1220				AML	AML		
	comp=N,602µm,0.6s						
T1220				AML	AML		
	comp=E,739µm,0.8s						
T1220				AML	AML		
	comp=N,602µm,1.4s						
T1256	Bolognola (MC)	0.11	97	P	Pg	02 57 28.5	+0.2
T1256				S	Sg	02 57 30.6	+0.8
T1256				AML	AML		
	comp=E,71µm,0.5s						
T1256				AML	AML		
	comp=N,55µm,0.4s						
T1256				AML	AML		
	comp=E,70µm,0.5s						
T1256				AML	AML		
	comp=N,55µm,0.4s						
MC2	Monte Cornacci	0.13	143	P	Pg	02 57 29.1	+0.3
T1216	Preci, Frazion	0.14	199	P	Pg	02 57 29.0	+0.3
T1216				S	Sg	02 57 31.8	+1.3
T1216				AML	AML		
	comp=N,73µm,1.0s						
T1216				AML	AML		
	comp=N,73µm,1.0s						
T1216				AML	AML		
	comp=E,60µm,1.0s						
GUMA	Gualdo di Mace	0.19	77	AML	AML		
	comp=N,83µm,0.5s						
GUMA				AML	AML		
	comp=E,108µm,0.6s						

ROM 17 02:57:41.4±0.1, 41°.469N±0°.004×14°.971E±0°.006, h15^{km}±1^{km}, ML1.6/5, 1C-1D, Error ellipse: s-maj=0.6km s-min=0.3km az=157.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GATE	Gambatesa	0.06	314	P	Pg	02 57 44.8	+0.4
GATE				S	Sg	02 57 46.5	+0.2
GATE				AML	AML		
	comp=E,504µm,0.5s						
GATE				AML	AML		
	comp=N,398µm,0.4s						
GATE				AML	AML		
	comp=E,504µm,0.5s						
GATE				AML	AML		
	comp=N,398µm,0.4s						
GATE				AML	AML		
	comp=E,235µm,0.3s						
GATE				AML	AML		
	comp=N,454µm,0.4s						
MOCO	Biccari - m.te	0.17	125	⇓P	Pb	02 57 46.0	-0.3
MOCO				S	Sb	02 57 49.4	-0.2
CIGN	Sant’Elia a Pi	0.19	345	P	Pg	02 57 46.0	+0.1
CIGN				S	Sg	02 57 49.4	+0.4
SACR	S. Croce Del S	0.21	250	P	Pg	02 57 46.6	+0.3
SACR				S	Sb	02 57 50.6	-0.2
SACR				AML	AML		
	comp=N,94µm,0.9s						
SACR				AML	AML		
	comp=E,129µm,0.8s						
SACR				AML	AML		
	comp=N,94µm,1.1s						
MELA	Melanico ??? S	0.26	26	P	Pb	02 57 47.6	-0.3
MELA				S	Sg	02 57 51.0	0.0
MELA				AML	AML		
	comp=E,228µm,1.1s						
MELA				AML	AML		
	comp=N,441µm,0.4s						
PSB1	Pescosannita	0.27	206	⇑P	Pg	02 57 47.6	+0.4
PSB1				S	Sb	02 57 52.0	-0.5
BSSO	Busso	0.29	285	P	Pg	02 57 47.7	+0.1
BSSO				S	Sb	02 57 52.8	-0.3
MRB1	Monte Rocchett	0.34	180	P	Pb	02 57 48.9	-0.4
MRB1				S	Sb	02 57 54.6	+0.2
VITU	Vitulano (BN)	0.38	222	P	Pg	02 57 49.3	+0.1
VITU				AML	AML		
	comp=N,66µm,0.2s						
VITU				AML	AML		
	comp=E,64µm,1.4s						
SGTA	Sant Agata di	0.45	138	P	Pg	02 57 50.1	-0.3
SGG	Gregorio Mates	0.45	260	AML	AML		
	comp=N,37µm,0.4s						
SGG				AML	AML		
	comp=E,46µm,0.4s						
CAFE	Carife	0.48	155	P	Pg	02 57 50.8	-0.2
MSAG	Monte S. Angel	0.74	71	P	Pg	02 57 55.9	-0.1
MSAG				S	Sb	02 58 06.2	0.0
MSAG				AML	AML		
	comp=N,224µm,0.6s						
MSAG				AML	AML		
	comp=E,130µm,0.5s						

ROM 17 02:58:23.1±0.1, 42°.814N±0°.003×13°.171E±0°.003, h10^{km}, ML1.0/2, Error ellipse: s-maj=0.3km s-min=0.1km az=141.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1245	Castelsantange	0.04	17	P	Pg	02 58 25.4	+0.2
T1245				S	Sg	02 58 26.8	0.0
T1245				AML	AML		
	comp=N,204µm,0.2s						
T1245				AML	AML		
	comp=E,229µm,0.1s						
MC2	Monte Cornacci	0.10	8	P	Pg	02 58 26.3	+0.4
MC2				S	Sg	02 58 28.4	+0.5
T1212	Cascia, Frazio	0.11	236	P	Pg	02 58 26.4	+0.5
T1212				S	Sg	02 58 28.5	+0.6
T1212				AML	AML		
	comp=E,110µm,0.2s						
T1212				AML	AML		
	comp=N,98µm,0.1s						
T1212				AML	AML		
	comp=N,98µm,0.1s						
T1212				AML	AML		
	comp=E,109µm,0.2s						
T1216	Preci, Frazion	0.14	305	P	Pg	02 58 26.7	+0.4
T1216				S	Sg	02 58 29.2	+0.7
MMO1	Montemonaco	0.14	53	P	Pg	02 58 26.9	+0.4
MMO1				S	Sg	02 58 29.4	+0.7
T1218	Civita (PG)	0.15	196	P	Pg	02 58 27.1	+0.6
T1218				S	Sg	02 58 29.9	+1.0
T1241	Roccafluvione,	0.20	77	P	Pg	02 58 27.8	+0.5
T1241				S	Sg	02 58 31.4	+1.3
T1217	Poggiodomo (PG	0.20	240	P	Pg	02 58 28.0	+0.5
T1217				S	Sg	02 58 31.6	+1.3

ROM 17 02:59:10.8±0.0, 42°.792N±0°.002×13°.187E±0°.004, h11^{km}, ML1.0/1, Error ellipse: s-maj=0.3km s-min=0.2km az=293.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1245	Castelsantange	0.06	1	P	Pg	02 59 13.5	+0.2
T1245				S	Sg	02 59 15.3	+0.2
T1245				AML	AML		
	comp=E,105µm,1.4s						
T1245				AML	AML		
	comp=N,152µm,0.2s						
T1245				AML	AML		
	comp=E,105µm,0.6s						
T1212	Cascia, Frazio	0.11	249	P	Pb	02 59 15.3	+0.3
MC2	Monte Cornacci	0.12	1	P	Pg	02 59 14.3	+0.3
T1218	Civita (PG)	0.13	203	P	Pg	02 59 14.4	+0.4
T1218				S	Sg	02 59 17.0	+0.6
MMO1	Montemonaco	0.15	44	P	Pg	02 59 14.7	+0.4
MMO1				S	Sg	02 59 17.5	+0.7
T1217	Poggiodomo (PG	0.20	247	P	Pg	02 59 15.7	+0.5
T1217				S	Sg	02 59 19.3	+1.1

SOME 17 03:04:14.3, 37°.60N×71°.08E, h0^{km}
NNC 17 03:04:19.9±3.9, 37°.07N×70°.36E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=33.6km s-min=27.2km az=143.0
ISC 17 03:04:17.5±3.9, 36°.8N±0°.2×70°.4E±0°.1, h10^{km}, n6, σ1^{s}.87/9, 4C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	Iuzhnay	5.34	357	*e*Pg	Pn	03 05 39.9	+2.5
	14nm,0.2s						
IUG				*e*Lg	Lg	03 06 41.6	
	117nm,0.2s						
AML	Almayashu	5.91	25	⇑P	Pn	03 05 47.0	+1.5
	0.7nm,0.5s						
AML				⇑S	Sn	03 06 54.0	+0.6
	8.5nm,0.7s						
KK31	Karatay Array	6.29	1	⇓P	Pn	03 05 51.0	+0.7
	0.8nm,0.5s,baz=188,slow=14,SNR=3.6						
KK31				⇑S	Sn	03 07 01.5	-0.7
	1.7nm,0.4s,baz=191,slow=26,SNR=7.1						
MRKS	Merke	6.33	20	*e*Pg	Pn	03 05 53.2	+2.3
	2.1nm,0.2s						
MRKS				*e*Lg	Lg	03 07 04.0	
	17nm,0.4s						
TKM2	Tokmak 2	7.32	32	⇑P	Pn	03 06 04.6	+0.1
	1.4nm,0.5s						
TKM2				⇓S	Sn	03 07 26.0	-1.7
	3.5nm,0.8s						
AB31	Akbulak array	14.56	332	P	Pn	03 07 41.9	-1.6
	0.8nm,0.7s,baz=142,slow=11,SNR=3.9						

IDC 17 03:13:44.9±1.0, 12°.96N×143°.64E, h141^{km}±9^{km}, mb3.7/12, mbtmp4.1/13, Error ellipse: s-maj=23.1km s-min=12.3km az=110.0
ISC 17 03:13:45.5±0.6, 12°.9N±0°.1×143°.7E±0°.1, h150^{km}, n19, σ0^{s}.82/19, mb4.0/12, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.30	60	P	Pn	03 14 13.0	-0.1
	438nm,0.3s,baz=221,slow=2.4,SNR=35						
GUMO				S	Sn	03 14 32.9	-1.2
	1µm,0.3s,baz=119,slow=23,SNR=52						
GUMO				LR	LR	03 14 50.5	
	comp=Z,314nm,18.2s,baz=40,slow=49						
SIJI	Sorong	18.45	223	P	Pn	03 17 50.9	-0.9
	8.0nm,0.8s,baz=57,slow=9.2,SNR=2.4						
H11N1	WAKE ISLAND Hy	23.23	70	T	T	03 42 11.2	
	baz=260,slow=75						
H11N2	WAKE ISLAND Hy	23.24	70	T	T	03 42 08.9	
	baz=260						
H11N3	WAKE ISLAND Hy	23.25	70	T	T	03 42 12.5	
	baz=260,slow=75						
WRA	Warramunga Arr	33.95	196	P	P	03 20 14.3	-0.4
	5.5nm,0.6s,baz=18,slow=9.7,SNR=106						
WRA				PcP	PcP	03 22 50.3	+0.6
	0.6nm,0.6s,baz=13,slow=3.1,SNR=4.7						
	5.5nm,0.6s						
ASAR	Alice Springs	37.62	195	P	P	03 20 46.0	0.0
	2.8nm,0.6s,baz=18,slow=13,SNR=66						
ASAR				PcP	PcP	03 23 01.6	+1.0
	1.1nm,0.7s,baz=22,slow=2.7,SNR=6.5						
	2.8nm,0.6s						
CMAR	Chiang Mai Arr	43.36	283	P	P	03 21 33.4	+0.1
	0.8nm,0.3s,baz=82,slow=6.7,SNR=4.1						
	0.8nm,0.3s						
STKA	Stephens Creek	44.60	183	P	P	03 21 42.4	-0.5
	5.1nm,0.7s,baz=348,slow=8.6,SNR=7.7						
	5.1nm,0.7s						
MKAR	Makanchi Array	61.18	316	P	P	03 23 44.6	+0.3
	0.3nm,0.5s,baz=89,slow=8.5,SNR=5.3						
	0.3nm,0.5s						
ILAR	Eielson Array	69.64	25	P	P	03 24 38.1	-0.3
	0.4nm,0.6s,baz=251,slow=5.8,SNR=7.1						
	0.4nm,0.6s						
INK	Inuvik	75.40	22	P	P	03 25 13.4	+1.1
	0.8nm,0.8s,baz=208,slow=4.8,SNR=7.9						
	0.8nm,0.8s						
YKA	Yellowknife Ar	83.96	27	P	P	03 25 59.1	+0.6
	0.3nm,0.6s,baz=285,slow=5.1,SNR=4.5						
	0.3nm,0.6s						
ARCES	ARCESS Array B	87.35	342	P	P	03 26 14.6	-0.7
	4.7nm,1.0s,baz=68,slow=7.9,SNR=1.6						
	4.7nm,1.0s						
NVAR	Mina Array Bea	88.21	51	P	P	03 26 20.8	+0.5
	0.9nm,0.6s,baz=257,slow=6.2,SNR=10						
	0.9nm,0.6s						
VNDA	Vanda	90.89	176	P	P	03 26 32.4	+0.9
	1.3nm,0.7s,baz=337,slow=5.3,SNR=2.7						
	1.3nm,0.7s						
FINES	FINESS Array B	91.27	335	P	P	03 26 31.9	-1.8
	0.9nm,0.5s,baz=49,slow=5.1,SNR=9.0						
	0.9nm,0.5s						
TORD	Torodi Ar. Bea	134.29	303	PKP	PKPdf	03 32 46.8	+0.2
	0.5nm,0.8s,baz=67,slow=3.1,SNR=4.1						
LPAZ	La Paz	149.03	100	PKPbc	PKiKP	03 33 18.9	+0.1
	2.1nm,0.5s,baz=286,slow=2.1,SNR=8.8						

SNET 17 03:19:36.8±1.2, 14°.02N×89°.98W, h5^{km}, ML3.1
GCG 17 03:19:40.2±0.5, 14°.13N×89°.88W, h16^{km}±3^{km}, MD3.4
ISC 17 03:19:38.2±0.9, 14°.05N±0°.07×89°.93W±0°.04, h13^{km}±7^{km}, n18, σ0^{s}.65/27, 3C, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLOZ	Alcaldia de Sa	0.14	100	⇑*e*P	Pg	03 19 41.9	0.0
SLOZ				*e*S	Sg	03 19 44.6	+0.3
LOAL	Lomas de Alarc	0.15	110	⇑*e*P	Pg	03 19 41.9	-0.1
LOAL				*e*S	Sg	03 19 44.8	+0.2
NUBE	Las Nubes	0.20	136	⇑*e*P	Pg	03 19 42.1	-0.8
NUBE				*e*S	Sg	03 19 45.1	-1.0
RTR	El Retiro	0.31	119	*e*P	Pg	03 19 44.7	0.0
RTR				*e*S	Sg	03 19 50.0	+0.9
SBLS	San Blas	0.36	125	*e*P	Pg	03 19 45.4	-0.3
UNIC	Universidad Ca	0.37	100	*e*P	Pg	03 19 45.5	-0.3
UNIC				*e*S	Sg	03 19 51.4	+0.5
CEDA	San Andres	0.57	115	*e*P	Pg	03 19 49.4	0.0
JAYA	Jayaque - finc	0.61	130	*e*P	Pg	03 19 49.4	-0.8
MTO3	Montecristo	0.65	58	*e*P	Pb	03 19 51.4	-0.2
NBG	Las Nubes	0.67	323	*e*P	Pn	03 19 53.0	-0.6
NBG				*e*S	Sn	03 20 03.4	-0.8
PMON	Piamonte	0.68	119	*e*P	Pg	03 19 51.2	-0.3
UEES	Universidad Ev	0.74	116	*e*P	Pg	03 19 52.6	-0.1
ESQI	Esquipulas	0.76	48	*e*P	Pb	03 19 53.6	+0.2
LLGN	La Laguna	0.96	83	*e*P	Pg	03 19 56.1	-0.7
LLGN				*e*S	Sb	03 20 10.1	+0.7
FUG	Fuego 3	0.97	294	*e*P	Pn	03 19 58.3	+0.6
FUG				*e*S	Sn	03 20 12.7	+1.2
SJTE	Alcalda de S	0.99	116	*e*P	Pg	03 19 56.5	-0.9
PAVA	Las Pavas	1.02	109	*e*P	Pg	03 19 57.1	-0.8
STG3	Santiaguito 3,	1.72	293	*e*P	Pb	03 20 10.3	+0.5
STG3				*e*S	Sg	03 20 33.2	-0.6

IDC 17 03:33:27.8±0.7, 12°.72N×143°.66E, h0^{km}, mb3.9/8, mbtmp3.9/8, MS3.2/9, Error ellipse: s-maj=37.2km s-min=17.7km az=118.0
ISC 17 03:33:31.9±0.8, 12°.7N±0°.2×143°.8E±0°.2, h27^{km}, n25, σ0^{s}.85/13, mb3.9/8, MS3.2/8, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.39	50	Pn	Pn	03 33 55.6	+0.1
	323nm,0.3s,baz=1.9,slow=0.3,SNR=46						
GUMO				Sn	Sn	03 34 12.3	-0.6
	269nm,0.3s,baz=19,slow=21,SNR=16						
SIJI	Sorong	18.32	224	LR	LR	03 43 52.2	
	comp=Z,76nm,19.2s,baz=82,slow=34						
H11S3	WAKE ISLAND Hy	22.80	72	T	T	04 02 24.9	
	baz=258,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	22.81	72	T	T	04 02 23.7	
	baz=258,slow=75,SNR=11						
H11S2	WAKE ISLAND Hy	22.82	72	T	T	04 02 24.9	
	baz=258,slow=75,SNR=14						
H11N1	WAKE ISLAND Hy	23.25	70	T	T	04 02 52.5	
	baz=255,slow=75,SNR=25						
H11N2	WAKE ISLAND Hy	23.26	70	T	T	04 02 54.0	
	baz=255,slow=75,SNR=26						
H11N3	WAKE ISLAND Hy	23.27	70	T	T	04 02 55.1	
	baz=255,slow=75,SNR=22						
MJAR	Matsushiro Arr	24.26	349	LR	LR	03 46 43.8	
	comp=Z,60nm,18.1s,baz=172,slow=33						
ASAJ	Asahikawa	31.32	358	LR	LR	03 55 21.9	
	comp=Z,13nm,18.2s,baz=130,slow=42						
WRA	Warramunga Arr	33.74	196	P	P	03 40 10.0	-1.4
	1.6nm,0.6s,baz=22,slow=9.8,SNR=19						
WRA				PcP	PcP	03 42 51.5	+0.8
	0.2nm,0.4s,baz=12,slow=3.2,SNR=2.0						
	1.6nm,0.6s						
ASAR	Alice Springs	37.41	195	P	P	03 40 42.9	0.0
	0.4nm,0.4s,baz=17,slow=10,SNR=9.3						
ASAR				PcP	PcP	03 43 02.2	+0.7
	0.2nm,0.3s,baz=40,slow=2.7,SNR=4.2						
	0.4nm,0.4s						
KLR	Kul'dur	37.76	347	LR	LR	03 56 03.7	
	comp=Z,23nm,20.2s,baz=292,slow=36						
CMAR	Chiang Mai Arr	43.48	283	LR	LR	03 59 19.7	
	comp=Z,27nm,20.1s,baz=110,slow=36						
MKAR	Makanchi Array	61.39	317	P	P	03 43 46.0	+0.3
	0.2nm,0.6s,baz=90,slow=7.9,SNR=2.6						
	0.2nm,0.6s						
KDAK	Kodiak Island	65.38	32	LR	LR	04 10 51.6	
	comp=Z,20nm,19.7s,baz=223,slow=34						
ILAR	Eielson Array	69.82	25	P	P	03 44 39.2	-0.6
	0.3nm,0.5s,baz=247,slow=5.6,SNR=5.6						
	0.3nm,0.5s						
YKA	Yellowknife Ar	84.14	27	P	P	03 46 00.6	+0.3
	0.4nm,0.6s,baz=284,slow=4.8,SNR=8.9						
	0.4nm,0.6s						
YBH	Yreka Blue Hor	84.26	49	LR	LR	04 15 31.9	
	comp=Z,25nm,20.4s,baz=318,slow=30						
NEW	Newport	86.60	41	LR	LR	04 18 16.7	
	comp=Z,22nm,21.8s,baz=324,slow=31						
NVAR	Mina Array Bea	88.31	51	P	P	03 46 23.1	+1.4
	1.6nm,0.7s,baz=263,slow=5.6,SNR=14						
	1.6nm,0.7s						
FINES	FINESS Array B	91.51	335	P	P	03 46 34.8	-1.1
	4.1nm,1.0s,baz=46,slow=5.5,SNR=6.0						
	4.1nm,1.0s						
PDAR	Pinedale Array	93.34	45	P	P	03 46 45.3	+0.2
	0.2nm,0.4s,baz=294,slow=2.9,SNR=2.6						
	0.2nm,0.4s						
LPIG	La Paz	98.97	63	LR	LR	04 22 35.5	
	comp=Z,13nm,19.7s,baz=181,slow=30						
TORD	Torodi Ar. Bea	134.47	303	PKP	PKPdf	03 52 49.2	+0.5
	0.7nm,1.1s,baz=48,slow=2.1,SNR=2.9						

IDC 17 04:01:52.0±4.0, 13°.55S×170°.10E, h599^{km}±76^{km}, mb3.4/4, mbtmp4.3/6, Error ellipse: s-maj=86.6km s-min=52.8km az=166.0
ISC 17 04:01:52.1±2.5, 13°.6S±0°.4×170°.1E±0°.1, h600^{km}, n6, σ0^{s}.27/6, mb4.2/4, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	8.70	119	P	P	04 03 58.2	0.0
	5.8nm,0.7s,baz=220,slow=15,SNR=2.5						
DZM	Mont Dzumac	9.14	202	P	P	04 04 02.4	0.0
	3.8nm,0.6s,baz=308,slow=16,SNR=1.7						
CTA	Charters Tower	23.71	251	P	P	04 06 19.4	+0.3
	2.4nm,0.5s,baz=88,slow=8.6,SNR=7.0						
	2.4nm,0.5s						
STKA	Stephens Creek	31.83	230	P	P	04 07 29.5	+0.1
	1.8nm,0.4s,baz=72,slow=12,SNR=7.0						
	1.8nm,0.4s						
WRA	Warramunga Arr	34.77	255	P	P	04 07 54.2	-0.1
	3.1nm,0.3s,baz=81,slow=6.5,SNR=74						
	3.1nm,0.3s						
ASAR	Alice Springs	35.65	248	P	P	04 08 01.2	-0.3
	7.0nm,0.5s,baz=75,slow=9.3,SNR=91						
	7.0nm,0.5s						

TIF 17 04:08:02.4, 40°.22N×45°.95E, h33^{km}±1^{km}
TEH 17 04:08:03.3, 40°.21N×45°.91E, h7^{km}±4^{km}, ML2.8
DRS 17 04:08:06.0±0.0, 40°.06N×45°.77E, h24^{km}
ISC 17 04:08:01.3±1.3, 40°.23N±0°.03×46°.05E±0°.04, h9^{km}±14^{km}, n32, σ1^{s}.00/45, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDFL	Dedoflistskaro	1.21	2	P	Pg	04 08 26.7	+2.1
DGRG	David-gareji	1.32	337	P	Pb	04 08 26.3	0.0
DGRG				S	Sb	04 08 43.9	+0.5
MAKU	Maku	1.37	231	Pg	Pg	04 08 27.3	-0.4
MAKU				Sg	Sb	04 08 45.1	+0.2
LGD	Lagodekhi	1.61	5	P	Pb	04 08 31.6	+0.5
LGD				S	Sb	04 08 52.6	+1.1
AKT	Akhty	1.78	45	*e*Pg	Pg	04 08 35.5	0.0
	64nm,0.3s						
AKT				*e*Sg	Sg	04 08 59.5	+0.9
	193nm,0.3s						
DMNI	Dmanisi	1.79	308	P	Pn	04 08 32.6	+0.2
DMNI				S	Sn	04 08 55.4	0.0
TVRZ	Varzaqan	1.79	164	Pn	Pg	04 08 36.4	+0.8
SEAG	Tbilisi Sea	1.80	329	P	Pn	04 08 33.1	+0.5
SEAG				S	Sn	04 08 56.1	+0.6
TRLG	Trialeti	1.97	312	P	Pn	04 08 35.6	+0.5
TRLG				S	Sn	04 08 59.9	-0.1
ISHB	Shabestar	1.98	190	Pn	Pg	04 08 38.8	-0.4
KMKR	Kumukh	2.06	22	*e*Pn	Pg	04 08 39.7	-1.0
	4.0nm,0.1s						
IHRS	Heris	2.06	158	Pn	Pg	04 08 40.8	0.0
KSMR	Kasumkent	2.08	48	*e*Pn	Pg	04 08 40.5	-0.8
	2.0nm,0.4s						
BGD	Bogdanovka	2.13	300	P	Pb	04 08 39.9	-0.3
BGD				S	Sb	04 09 07.5	+0.7
BRNG	Burnasheti	2.18	310	P	Pb	04 08 41.0	-0.1
GNBR	Gunib	2.26	17	*e*Pn	Pb	04 08 42.8	+0.4
	20nm,0.4s						
URKR	Urkarakh	2.27	31	*e*Pn	Pg	04 08 43.6	-1.2
	57nm,0.2s						
AKH	Akhalkalaki	2.27	302	P	Pb	04 08 41.6	-1.0
AKH				S	Sb	04 09 10.5	-0.4
XNZR	Khunzakh	2.36	12	*e*Pn	Pb	04 08 44.0	-0.1
	14nm,0.3s						
ARKR	Arakani	2.47	16	*e*Pn	Pb	04 08 46.0	0.0
	1.0nm,0.4s						
DRN	Derbent	2.49	43	*e*Pn	Pb	04 08 45.3	-0.9
	39nm,0.1s						
SHTL	Shatili	2.52	345	P	Pb	04 08 44.8	-2.0
SHTL				S	Sb	04 09 17.2	-0.6
SGKR	Sergokala	2.53	28	*e*Pn	Pb	04 08 46.6	-0.3
	2.0nm,0.3s						
UNCR	Uncukul	2.54	12	*e*Pn	Pb	04 08 46.6	-0.5
	12nm,0.4s						
PNSH	Pansheti	2.63	336	P	Pb	04 08 46.6	-2.1
PNSH				S	Sb	04 09 19.4	-1.9
KRNR	Karanay	2.67	14	*e*Pn	Pb	04 08 48.3	-1.0
	6.0nm,0.3s						
BUJR	Buynaksk	2.71	17	*e*Pn	Pb	04 08 49.3	-0.6
	27nm,0.3s						
DBC	Dubki	2.85	12	*e*Pn	Pb	04 08 50.6	-1.7
	6.0nm,0.3s						
DLMR	Dylym	2.87	8	*e*Pn	Pb	04 08 51.4	-1.3
	28nm,0.2s						
ABS	Abastumani	2.88	303	P	Pb	04 08 52.6	-0.4
ABS				S	Sb	04 09 29.4	+0.9
GROC	Groznyy	2.97	356	*e*Pn	Pb	04 08 53.5	-1.0
	4.0nm,0.8s						
ONI	Oni	3.06	321	P	Pb	04 08 54.0	-2.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ONI				S	Sb	04 09 34.9	+1.4

IDC ***17*** *04:11:39.4±2.6, 54°.81N×160°.55W, h0^{km}, mb3.9/10, mbtmp3.8/13, ML3.5/3, MS3.1/2, Error ellipse: s-maj=65.4km s-min=19.6km az=159.0*
NEIC ***17*** *04:11:45.7±2.4, 54°.82N±0°.07×160°.22W±0°.10, h29^{km}±7^{km}, mb3.8/6, ML3.9/8, ML3.5(AEIC), Error ellipse: s-maj=11.6km s-min=5.9km az=145.0*
AEIC ***17*** *04:11:46.3±2.7, 54°.87N±0°.04×160°.31W±0°.08, h6^{km}±5^{km}, Error ellipse: s-maj=7.5km s-min=5.7km az=131.0*
ISC 17 04:11:44.2±1.8**, 54°.75N**±0°.09×**160°.19W**±0°.05**, h31**^{km}±10^{km}**, n114, σ1^{s}65**/115**, mb3.9**/14**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDPT	Sand Point	0.62	345		Pb	04 11 56.6	0.0
SDPT				Sg	Sb	04 12 04.3	-0.8
SDPT				IAML		04 12 04.6	
	comp=N,9µm,0.4s						
SDPT	Sand Point	0.62	345	P	Pb	04 11 56.6	0.0
	baz=169						
SDPT				S	Sb	04 12 03.9	-1.3
	baz=169						
S12K	Black Hills	1.43	312	P	Pn	04 12 08.4	+0.4
	baz=129						
S12K				S	Sn	04 12 26.7	+0.9
	baz=129						
CHGN	Chignik	1.85	32		Pn	04 12 15.9	+2.2
CHGN				Sn	Sn	04 12 38.5	+2.5
CHGN				IAML		04 12 40.1	
	comp=E,1µm,0.3s						
CHGN				IAML		04 12 41.8	
	comp=N,1µm,0.5s						
CHGN	Chignik	1.85	32	P	Pn	04 12 16.1	+2.3
	baz=218						
CHGN				S	Sb	04 12 39.5	-0.7
	baz=218						
FALS	False Pass	1.87	275		Pn	04 12 15.6	+1.7
FALS	False Pass	1.87	275		Sn	04 12 39.6	+3.1
FALS	False Pass	1.87	275	P	Pn	04 12 15.9	+2.0
	baz=88						
FALS				S	Sb	04 12 39.9	-0.7
	baz=88						
R16K	Pilot Point	3.18	26	P	Pn	04 12 34.0	+2.1
	baz=211						
R16K				S	Sn	04 13 12.5	+3.7
	baz=211						
AKUT	Akutan	3.31	262	Pn	Pn	04 12 37.0	+3.2
R17K	Ugashik Creek	3.59	35	P	Pn	04 12 40.1	+2.5
	baz=220						
UNV	Unalaska Valle	3.81	259	Pn	Pn	04 12 42.8	+2.2
UNV	Unalaska Valle	3.81	259	P	Pn	04 12 42.9	+2.4
	baz=71						
Q17K	Contact Creek	4.25	32	P	Pn	04 12 49.2	+2.4
	baz=218						
Q17K				S	Sn	04 13 37.8	+2.4
	baz=218						
Q16K	King Salmon	4.39	25	P	Pn	04 12 50.7	+2.2
	baz=209						
Q16K				S	Sn	04 13 40.6	+2.0
	baz=209						
P16K	Nushagak River	4.46	15	P	Pn	04 12 51.0	+1.5
	baz=198						
OHAK	Old Harbor	4.60	55	Pn	Pn	04 12 53.8	+2.4
OHAK	Old Harbor	4.60	55	P	Pn	04 12 54.1	+2.7
	baz=242						
Q18K	Katmai Hardscr	4.84	34	P	Pn	04 12 56.8	+2.0
	baz=220						
O16K	Kokwok River B	4.99	12	P	Pn	04 12 57.9	+1.1
	baz=195						
KDAK	Kodiak Island	5.22	51	Pn	Pn	04 13 00.7	+0.7
	comp=N,1.3nm,0.3s,baz=193,slow=3.3,SNR=30						
KDAK				Sn	Sn	04 13 57.2	-1.7
	comp=N,2.3nm,0.3s,baz=322,slow=22,SNR=7.0						
	comp=N,4.7nm,0.4s						
KDAK	Kodiak Island	5.22	51	IAML		04 14 57.7	
	comp=N,76nm,3.2s						
KDAK	Kodiak Island	5.22	51	Pn	Pn	04 13 01.1	+1.1
KDAK	Kodiak Island	5.22	51	P	Pn	04 13 01.7	+1.8
	baz=239						
O17K	Koliganek Bris	5.31	17	P	Pn	04 13 02.4	+1.2
	baz=201						
P18K	Big Mountain,	5.38	28	Pn	Pn	04 13 04.4	+2.1
P18K	Big Mountain,	5.38	28	P	Pn	04 13 04.6	+2.3
	baz=214						
NIKH	Nikolski High	5.43	254	Pn	Pn	04 13 04.8	+2.0
O18K	Koktuh Hills	5.78	26		Pn	04 13 08.1	+0.4
N16K	Nishlik Lake	5.79	7	P	Pn	04 13 08.9	+1.0
	baz=189						
SPIA	Saint Paul Isl	6.15	297	Pn	Pn	04 13 14.1	+1.4
SPIA	Saint Paul Isl	6.15	297	P	Pn	04 13 13.5	+0.9
	baz=108						
O19K	Port Alsworth	6.31	28		Pn	04 13 15.9	+1.0
O19K	Port Alsworth	6.31	28	P	Pn	04 13 17.2	+2.3
	baz=214						
ILSW	Iliamna Southw	6.48	33	Pn	Pn	04 13 18.7	+1.2
N19K	Bonanza Creek	6.80	24		Pn	04 13 24.3	+2.5
N19K	Bonanza Creek	6.80	24	P	Pn	04 13 24.3	+2.5
	baz=210						
CNPM	China Poot	6.83	42	Pn	Pn	04 13 23.9	+1.8
BRLK	Bradley Lake	7.12	41	Pn	Pn	04 13 27.4	+1.4
M19K	Big River Lodg	7.79	21		Pn	04 13 37.0	+1.7
M19K	Big River Lodg	7.79	21	P	Pn	04 13 37.3	+2.0
	baz=206						
SLKM	Skilak Lake	7.86	39		Pn	04 13 38.8	+2.5
L19K	White Mountain	7.96	18	P	Pn	04 13 38.8	+1.3
	baz=204						
M20K	Styx River	8.05	25		Pn	04 13 41.7	+2.7
M20K	Styx River	8.05	25	P	Pn	04 13 41.5	+2.5
	baz=211						
SUA	Susitna One	8.38	33	Pn	Pn	04 13 45.0	+1.6
SUA	Susitna One	8.38	33	P	Pn	04 13 44.8	+1.4
	baz=222						
L20K	Farewell, AK	8.42	20	P	Pn	04 13 45.6	+1.8
	baz=207						
RC01	Rabbit Creek A	8.44	37	Pn	Pn	04 13 46.7	+2.6
TTA	Tatalina	8.48	13	Pn	Pn	04 13 46.0	+1.2
SKT	Skwentna	8.55	29	Pn	Pn	04 13 47.6	+1.9
PWL	Port Wells	8.80	41	Pn	Pn	04 13 50.3	+1.2
PWL	Port Wells	8.80	41	P	Pn	04 13 50.8	+1.7
	baz=232						
KNK	Knik Glacier	9.11	38	Pn	Pn	04 13 54.5	+1.2
KNK	Knik Glacier	9.11	38	P	Pn	04 13 55.2	+1.8
	baz=229						
K20K	Telida	9.18	18	Pn	Pn	04 13 55.8	+1.4
GHO	Glory Hole Cre	9.20	36		Pn	04 13 56.1	+1.5
CAST	Castle Rocks	9.63	22	Pn	Pn	04 14 02.9	+2.4
SCM	Sheep Creek Mo	9.80	38	Pn	Pn	04 14 03.1	+0.3
SCM	Sheep Creek Mo	9.80	38	P	Pn	04 14 04.0	+1.2
	baz=230						
TRF	Thorofare Moun	10.09	26	Pn	Pn	04 14 08.5	+1.7
KLU	Klutina	10.11	42	Pn	Pn	04 14 08.0	+0.9
ANM	Nome	10.18	347	Pn	Pn	04 14 07.9	-0.1
M24K	Tolsona, Glenn	10.39	39	Pn	Pn	04 14 11.8	+0.9
N25K	Chitina, Valde	10.70	44	Pn	Pn	04 14 16.1	+0.9
GLB	Gilahina Butte	10.94	46	Pn	Pn	04 14 19.5	+1.1
WRH	Wood River Hil	11.49	27	Pn	Pn	04 14 25.6	-0.2
TNA	Tin City	11.49	344	Pn	Pn	04 14 26.4	+0.6
IMAR	Indian Mountai	11.70	13	Pn	Pn	04 14 29.3	+0.6
HDA	Harding Lake	11.75	29	Pn	Pn	04 14 28.6	-0.9
M26K	Nabesna, AK	11.77	42	Pn	Pn	04 14 30.1	+0.4
MDM	Murphy Dome	11.84	25	Pn	Pn	04 14 32.0	+1.3
RIDG	Independent Ri	11.92	35	Pn	Pn	04 14 33.6	+1.8
L26K	Log Cabin Wild	11.99	40	Pn	Pn	04 14 34.5	+1.8
IL31		12.05	28	Pn	Pn	04 14 31.7	-1.7
ILAR	Eielson Array	12.05	28	Pn	Pn	04 14 29.5	-4.0
	comp=N,0.1nm,0.3s,baz=219,slow=13,SNR=1.8						
	comp=N,0.4nm,1.0s						
DOT	Dot Lake	12.12	36	Pn	Pn	04 14 35.6	+1.1
SCRK	Sand Creek	12.36	35	Pn	Pn	04 14 38.0	+0.2
EGAK	Eagle	13.82	36	Pn	Pn	04 14 57.5	-0.1
DAWY	Dawson	14.04	40	Pn	Pn	04 15 01.1	+0.4
M30M	Minto, Yukon	14.41	48	Pn	Pn	04 15 07.9	+2.3
JIS	Juneau Island	14.64	66	Pn	Pn	04 15 08.8	0.0
BMAR	Burnt Mountain	14.72	24	Pn	Pn	04 15 10.8	+0.9
M31M	Drury Creek, Y	15.33	51	Pn	Pn	04 15 16.4	-1.6
M31M				IAmb	IAmb	04 15 35.9	
	comp=Z,4.1nm,1.1s						
P33M	Teslin, Yukon	15.63	58	Pn	Pn	04 15 22.3	+0.3
EPYK	Eagle Plains	16.25	35	Pn	Pn	04 15 29.8	-0.1
EPYK				IAmb	IAmb	04 15 38.7	
	comp=Z,14nm,1.3s						
INK	Inuvik	18.37	32	P	P	04 15 55.0	-0.9
	comp=Z,0.4nm,0.3s,baz=217,slow=13,SNR=9.3						
	comp=Z,0.8nm,0.4s						
INK	Inuvik	18.37	32	P	P	04 15 55.1	-0.9
A36M	Sachs Harbour	22.75	27	P	P	04 16 41.9	-1.3
A36M				IAmb	IAmb	04 17 00.9	
	comp=Z,3.4nm,0.9s						
YKA	Yellowknife Ar	24.49	53	P	P	04 17 00.8	+0.7
	comp=Z,0.3nm,0.7s,baz=268,slow=7.5,SNR=7.8						
	comp=Z,0.3nm,0.7s						
PETK	Petropavlovsk-	24.58	284	P	P	04 16 59.6	-1.4
	comp=Z,1.9nm,0.5s,baz=86,slow=13,SNR=13						
	comp=Z,1.9nm,0.5s						
YBH	Yreka Blue Hor	27.79	102	LR	LR	04 26 31.6	
	comp=Z,23nm,19.0s,baz=324,slow=32						
H11N2	WAKE ISLAND Hy	42.95	229	T	T	05 06 02.2	
	baz=26						
H11N3	WAKE ISLAND Hy	42.96	229	T	T	05 06 05.1	
	baz=26						
H11N1	WAKE ISLAND Hy	42.97	229	T	T	05 05 54.2	
	baz=26						
H11S1	WAKE ISLAND Hy	44.12	228	T	T	05 07 26.4	
	baz=26						
H11S2	WAKE ISLAND Hy	44.13	228	T	T	05 07 33.4	
	baz=26						
H11S3	WAKE ISLAND Hy	44.14	228	T	T	05 07 26.8	
	baz=26						
SONM	Songino Array	54.63	304	P	P	04 21 08.5	-1.1
	comp=Z,0.7nm,0.7s,baz=51,slow=6.2,SNR=5.1						
SONM				PcP	PcP	04 22 12.2	-0.1
	comp=Z,0.4nm,0.6s,baz=46,slow=4.2,SNR=2.3						
	comp=Z,0.7nm,0.7s						
ARCES	ARCESS Array B	55.95	358	P	P	04 21 16.7	-2.0
	comp=Z,4.9nm,1.1s,baz=338,slow=5.6,SNR=5.0						
	comp=Z,4.9nm,1.1s						
HHC	Hu-ho-hao-te	57.02	295	*e*P	P	04 21 26.6	-0.2
HHC				pmax	pmax		
	comp=Z,16nm,0.5s						
HHC				pmax	pmax		
	comp=Z,140nm,6.1s						
ZALV	Zalesovo Beam	59.17	321	LR	LR	04 49 40.6	
	comp=Z,26nm,20.2s,baz=168,slow=39						
FINES	FINESS Array B	64.04	357	P	P	04 22 13.1	-1.1
	comp=Z,1.1nm,0.4s,baz=32,slow=7.6,SNR=16						
	comp=Z,1.1nm,0.4s						
BVAR	Borovoye Array	64.72	329	P	P	04 22 18.1	-0.8
	comp=Z,1.5nm,0.6s,baz=34,slow=6.8,SNR=7.7						
	comp=Z,1.5nm,0.6s						
HFS	Hagfors	65.36	3	P	P	04 22 22.2	-0.7
	comp=Z,4.8nm,0.9s,baz=46,slow=4.5,SNR=5.4						
	comp=Z,4.8nm,0.9s						
MK31	Makanchi Array	65.92	318	P	P	04 22 24.6	-2.1
MK31				IAmb	IAmb	04 22 29.6	
	comp=Z,0.7nm,1.1s						
MKAR	Makanchi Array	65.92	318	P	P	04 22 26.1	-0.6
	comp=Z,0.1nm,0.5s,baz=55,slow=7.1,SNR=2.7						
	comp=Z,0.1nm,0.5s						
MKAR	Makanchi Array	65.92	318	P	P	04 22 26.0	-0.7
WMQ	Urumqi	66.15	313	*e*P	P	04 22 31.0	+2.7
ABKAR	Akbulak array	71.02	333	P	P	04 22 58.1	-0.4
PZH	PanZhiHua	73.21	292	P	P	04 23 13.0	+0.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,5.0s						
KKAR	Karatay Array	73.39	324	P	P	04 23 12.0	-0.8
AKASG	Malin Array Be	74.62	354	P	P	04 23 18.6	-1.2
	comp=Z,0.3nm,0.3s,baz=14,slow=5.5,SNR=4.7						
	comp=Z,0.3nm,0.3s						
ESDC	Sonseca Array	83.76	18	P	P	04 24 10.6	+0.6
	comp=Z,0.5nm,0.6s,baz=353,slow=4.1,SNR=5.2						
	comp=Z,0.5nm,0.6s						

ROM 17 04:42:24.7±0.1**, 42°.535N**±0°.004×**13°.295E**±0°.006**, h14**^{km}**, ML1.9**/30**, 11C-11D, Error ellipse: s-maj=0.4km s-min=0.3km az=74.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RM33	Pellescritta (	0.07	247	P	Pg	04 42 27.8	+0.2
RM33				S	Sg	04 42 29.7	+0.2
RM33				AML	AML		
	comp=E,2120µm,0.3s						
RM33				AML	AML		
	comp=N,3540µm,0.9s						
RM33				AML	AML		
	comp=N,3500µm,0.9s						
RM33				AML	AML		
	comp=N,3540µm,0.9s						
RM33				AML	AML		
	comp=N,3500µm,1.1s						
RM33				AML	AML		
	comp=N,3540µm,1.1s						
RM33				AML	AML		
	comp=E,2185µm,0.3s						
T1247	Pizzolo (AQ)	0.09	179	⇓P	Pg	04 42 28.1	+0.2
T1247				S	Sg	04 42 30.3	+0.3
T1247				AML	AML		
	comp=E,2865µm,0.3s						
T1247				AML	AML		
	comp=N,3635µm,0.4s						
SMA1	SAN MARTINO	0.10	17	⇑P	Pg	04 42 28.1	+0.2
SMA1				S	Sb	04 42 30.7	-0.4
SMA1				AML	AML		
	comp=E,1645µm,0.3s						
SMA1				AML	AML		
	comp=N,1126µm,0.3s						
SMA1				AML	AML		
	comp=N,1126µm,1.7s						
AQU	L'Aquila	0.20	156	⇓P	Pg	04 42 29.5	+0.2
AQU				S	Sg	04 42 32.9	+0.6
AQU				AML	AML		
	comp=E,291µm,1.2s						
AQU				AML	AML		
	comp=N,363µm,0.4s						
AQU				AML	AML		
	comp=N,363µm,1.6s						
AQU				AML	AML		
	comp=E,292µm,1.2s						
GIGS	Gran Sasso	0.22	113	P	Pg	04 42 29.5	-0.1
GIGS				S	Sg	04 42 33.0	0.0
GIGS				AML	AML		
	comp=E,89µm,0.2s						
GIGS				AML	AML		
	comp=N,83µm,0.1s						
T1222	Castel Sant'An	0.23	235	P	Pg	04 42 30.2	+0.4
T1222				S	Sb	04 42 34.1	-0.7
T1222				AML	AML		
	comp=N,663µm,0.3s						
T1222				AML	AML		
	comp=N,602µm,0.4s						
T1222				AML	AML		
	comp=E,850µm,0.3s						
T1222				AML	AML		
	comp=N,663µm,0.4s						
T1222				AML	AML		
	comp=N,602µm,0.4s						
T1222				AML	AML		
	comp=E,809µm,0.3s						
T1214	Arquata del Tr	0.23	344	P	Pg	04 42 30.2	+0.3
T1214				S	Sb	04 42 34.3	-0.7
T1214				AML	AML		
	comp=E,385µm,1.4s						
T1214				AML	AML		
	comp=N,267µm,0.8s						
T1214				AML	AML		
	comp=E,384µm,1.4s						
T1214				AML	AML		
	comp=N,267µm,0.8s						
T1214				AML	AML		
	comp=E,384µm,1.4s						
T1214				AML	AML		
	comp=E,384µm,0.6s						
T1212	Cascia, Frazio	0.28	320	⇑P	Pg	04 42 31.0	+0.3
T1212				S	Sb	04 42 35.6	-0.8
T1212				AML	AML		
	comp=E,288µm,0.6s						
T1212				AML	AML		
	comp=N,298µm,0.3s						
T1212				AML	AML		
	comp=E,256µm,0.6s						
T1212				AML	AML		
	comp=E,256µm,0.6s						
T1212				AML	AML		
	comp=E,288µm,0.6s						
T1212				AML	AML		
	comp=N,312µm,0.3s						
FIAM	Fiamignano	0.30	206	P	Pg	04 42 31.3	+0.4
FIAM				S	Sb	04 42 36.0	-0.8
FIAM				AML	AML		
	comp=E,256µm,0.2s						
FIAM				AML	AML		
	comp=N,421µm,0.4s						
T1217	Poggiodomo (PG	0.32	304	⇑P	Pg	04 42 31.7	+0.3
T1217				S	Sb	04 42 36.9	-0.6
T1211	Morro Reatino	0.33	270	⇑P	Pg	04 42 31.7	+0.3
T1211				S	Sb	04 42 36.9	-0.7
T1211				AML	AML		
	comp=N,230µm,0.1s						
T1211				AML	AML		
	comp=E,166µm,0.8s						
T1245	Castelsantange	0.33	346	P	Pg	04 42 31.8	+0.2
T1245				S	Sb	04 42 37.2	-0.6
T1245				AML	AML		
	comp=E,409µm,1.0s						
T1245				AML	AML		
	comp=N,621µm,1.1s						
T1245				AML	AML		
	comp=N,622µm,1.1s						
T1245				AML	AML		
	comp=N,398µm,1.0s						
T1245				AML	AML		
	comp=N,622µm,0.9s						
T1245				AML	AML		
	comp=E,356µm,1.0s						
MMO1	Montemonaco	0.36	4	⇑P	Pg	04 42 32.2	+0.1
MMO1				S	Sb	04 42 38.0	-0.7
MC2	Monte Cornacci	0.39	348	P	Pg	04 42 32.7	+0.1
ARRO	Arrone	0.39	277	⇑P	Pg	04 42 33.0	+0.3
T1216	Preci, Frazion	0.41	330	P	Pg	04 42 33.1	+0.2
T1216				S	Sg	04 42 38.5	0.0
T1216				AML	AML		
	comp=E,174µm,1.1s						
T1216				AML	AML		
	comp=N,200µm,0.3s						
T1216				AML	AML		
	comp=E,174µm,1.0s						
T1216				AML	AML		
	comp=N,200µm,0.3s						
VCEL	Villa Celiera	0.43	109	P	Pb	04 42 34.0	-0.2
VCEL				S	Sb	04 42 40.6	+0.1
VCEL				AML	AML		
	comp=E,118µm,1.1s						
VCEL				AML	AML		
	comp=N,127µm,0.1s						
T0110	Collepietro	0.47	130	P	Pg	04 42 34.0	-0.1
T0110				S	Sb	04 42 41.8	0.0
T0110				AML	AML		
	comp=N,133µm,0.5s						
T0110				AML	AML		
	comp=E,106µm,0.3s						
T1256	Bolognola (MC)	0.47	354	⇑P	Pg	04 42 34.1	0.0
T1256				AML	AML		
	comp=N,148µm,0.8s						
T1256				AML	AML		
	comp=E,154µm,0.4s						
T1256				AML	AML		
	comp=N,148µm,1.2s						
OFFI	Offida	0.49	36	P	Pb	04 42 35.2	0.0
OFFI				S	Sn	04 42 44.4	-1.4
OFFI				AML	AML		
	comp=E,202µm,0.5s						
OFFI				AML	AML		
	comp=N,264µm,0.5s						
FDMO	Fiordimonte	0.53	343	P	Pg	04 42 32.7	-2.3
GUMA	Gualdo di Mace	0.53	3	P	Pg	04 42 35.5	+0.3
GUMA				AML	AML		
	comp=N,342µm,0.5s						
GUMA				AML	AML		
	comp=E,438µm,0.3s						
CESI	CESI - Serrava	0.55	329	⇓P	Pg	04 42 35.0	-0.6
CESI				AML	AML		
	comp=E,106µm,0.4s						
CESI				AML	AML		
	comp=N,120µm,0.4s						
CSP1	Cessapalombo	0.56	353	⇑P	Pg	04 42 35.6	-0.2
CSP1				AML	AML		
	comp=N,170µm,0.4s						
CSP1				AML	AML		
	comp=E,136µm,0.3s						
T1219	Muccia, Frazio	0.56	338	⇓P	Pg	04 42 33.4	-2.4
T1220	Camerino, Fraz	0.59	345	⇑P	Pg	04 42 34.7	-1.7
MOMA	Monte Martano	0.60	297	⇓P	Pb	04 42 37.1	+0.1
MOMA				AML	AML		
	comp=E,74µm,0.2s						
MOMA				AML	AML		
	comp=N,102µm,0.2s						
CERT	Cerreto	0.63	202	⇓P	Pb	04 42 37.3	-0.2
CERT				AML	AML		
	comp=E,63µm,0.5s						
CERT				AML	AML		
	comp=N,42µm,0.3s						
SRES	S.Oreste - Sor	0.65	243	S	Sb	04 42 47.4	+0.5
SRES				AML	AML		
	comp=E,29µm,0.4s						
SRES				AML	AML		
	comp=N,26µm,1.6s						
SRES				AML	AML		
	comp=N,26µm,0.4s						
SRES				AML	AML		
	comp=E,29µm,1.6s						
ASSB	Assisi San Ben	0.69	318	⇑P	Pg	04 42 38.1	-0.1
ASSB				AML	AML		
	comp=E,59µm,0.5s						
ASSB				AML	AML		
	comp=E,59µm,0.5s						
ASSB				AML	AML		
	comp=N,88µm,0.5s						
ASSB				AML	AML		
	comp=E,59µm,1.5s						
INTR	Introdacqua	0.69	139	⇓P	Pg	04 42 37.5	-0.7
SNTG	Esanatoglia	0.77	340	⇓P	Pg	04 42 37.5	-2.1
EL6	Elcito	0.81	350	⇓P	Pg	04 42 38.8	-1.7
EL6				AML	AML		
	comp=N,95µm,0.2s						
EL6				AML	AML		
	comp=E,85µm,1.4s						
EL6				AML	AML		
	comp=N,95µm,0.2s						
ATCC	AVT- Casa Cast	0.81	324	⇓P	Pg	04 42 39.4	-1.0
ATCC				AML	AML		
	comp=E,53µm,0.7s						
ATCC				AML	AML		
	comp=E,53µm,0.7s						
ATCC				AML	AML		
	comp=N,63µm,0.7s						
CING	Cingoli	0.84	355	⇑P	Pg	04 42 39.8	-1.3
CING				AML	AML		
	comp=E,60µm,0.3s						
CING				AML	AML		
	comp=N,58µm,0.4s						
SAMA	S.Maria delle	0.92	215	S	Sb	04 42 55.1	+0.7
SAMA				AML	AML		
	comp=E,424µm,0.1s						
SAMA				AML	AML		
	comp=N,466µm,0.1s						
MURB	Monte Urbino	0.92	322	⇓P	Pb	04 42 41.3	-1.3
MURB				AML	AML		
	comp=E,91µm,1.6s						
MURB				AML	AML		
	comp=N,80µm,0.3s						
MURB				AML	AML		
	comp=E,91µm,0.4s						
MURB				AML	AML		
	comp=N,80µm,1.7s						
FRON	Frontone	1.07	337	P	Pb	04 42 42.9	-2.2
FRON				AML	AML		
	comp=E,20µm,1.6s						
FRON				AML	AML		
	comp=N,30µm,0.7s						
FRON				AML	AML		
	comp=E,20µm,0.4s						

ROM 17 04:43:03.9±0.1**, 42°.534N**±0°.003×**13°.305E**±0°.004**, h15**^{km}**, ML1.5**/4**, 2C-2D, Error ellipse: s-maj=0.3km s-min=0.1km az=90.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RM33	Pellescritta (	0.07	249	P	Pg	04 43 07.2	+0.1
RM33				S	Sg	04 43 09.1	+0.1
RM33				AML	AML		

	comp=N,596µm,0.9s						
RM33				AML	AML		
	comp=N,590µm,0.9s						
RM33				AML	AML		
	comp=N,596µm,0.9s						
RM33				AML	AML		
	comp=E,360µm,0.3s						
RM33				AML	AML		
	comp=N,589µm,0.9s						
RM33				AML	AML		
	comp=E,346µm,0.7s						
T1247	Pizzolo (AQ)	0.09	183	⇓P	Pg	04 43 07.4	+0.2
T1247				S	Sg	04 43 09.7	+0.4
T1247				AML	AML		
	comp=N,514µm,0.4s						
T1247				AML	AML		
	comp=E,489µm,0.3s						
SMA1	SAN MARTINO	0.10	13	P	Pg	04 43 07.4	+0.1
SMA1				S	Sg	04 43 10.0	+0.5
SMA1				AML	AML		
	comp=N,136µm,0.3s						
SMA1				AML	AML		
	comp=E,322µm,0.2s						
T1218	Civita (PG)	0.20	314	P	Pg	04 43 08.8	+0.2
T1218				S	Sg	04 43 12.3	+0.6
T1218				AML	AML		
	comp=E,86µm,0.4s						
T1218				AML	AML		
	comp=N,174µm,0.2s						
GIGS	Gran Sasso	0.21	113	⇓P	Pg	04 43 08.9	+0.1
T1214	Arquata del Tr	0.24	343	P	Pg	04 43 09.6	+0.3
T1214				S	Sb	04 43 13.6	-0.6
T1222	Castel Sant'An	0.24	236	⇑P	Pb	04 43 09.7	-0.3
T1222				AML	AML		
	comp=E,132µm,0.2s						
T1222				AML	AML		
	comp=N,99µm,0.4s						
T1222				AML	AML		
	comp=E,132µm,0.2s						
T1222				AML	AML		
	comp=N,99µm,0.4s						
T1222				AML	AML		
	comp=E,132µm,1.8s						
T1212	Cascia, Frazio	0.29	319	⇑P	Pg	04 43 10.3	+0.2
T1212				S	Sg	04 43 14.9	+0.6
T1217	Poggiodomo (PG	0.33	303	P	Pg	04 43 11.1	+0.3
T1217				S	Sb	04 43 16.2	-0.5
T1241	Roccafluvione,	0.34	16	P	Pg	04 43 10.9	+0.1
T1241				S	Sb	04 43 16.3	-0.6

ROM 17 04:43:43.9±0.1, 42°.925N±0°.002×13°.160E±0°.003, h7km, ML0.9/4, 1C-1D, Error ellipse: s-maj=0.2km s-min=0.1km az=260.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MC2	Monte Cornacci	0.03	120	⇑P	Pg	04 43 45.2	-0.3
T1245	Castelsantange	0.07	163	P	Pg	04 43 46.0	+0.1
T1245				S	Sg	04 43 47.6	+0.3
T1245				AML	AML		
	comp=E,256µm,1.1s						
T1245				AML	AML		
	comp=N,300µm,0.4s						
T1245				AML	AML		
	comp=E,256µm,0.9s						
T1256	Bolognola (MC)	0.09	31	P	Pg	04 43 46.5	+0.2
T1256				S	Sg	04 43 48.5	+0.6
T1256				AML	AML		
	comp=E,58µm,0.2s						
T1256				AML	AML		
	comp=N,65µm,0.2s						
T1216	Preci, Frazion	0.11	252	P	Pg	04 43 46.8	+0.4
T1216				S	Sg	04 43 48.8	+0.8
T1216				AML	AML		
	comp=E,130µm,0.3s						
T1216				AML	AML		
	comp=N,123µm,0.3s						
FDMO	Fiordimonte	0.12	334	P	Pg	04 43 47.1	+0.5
FDMO				AML	AML		
	comp=N,59µm,0.4s						
FDMO				AML	AML		
	comp=E,46µm,0.6s						
MMO1	Montemonaco	0.12	102	P	Pg	04 43 47.0	+0.4
MMO1				S	Sg	04 43 49.4	+0.8
T1214	Arquata del Tr	0.17	168	P	Pg	04 43 47.9	+0.4
T1214				S	Sg	04 43 51.1	+1.3
T1219	Muccia, Frazio	0.17	319	P	Pg	04 43 47.9	+0.5
T1219				S	Sg	04 43 51.0	+1.1
T1220	Camerino, Fraz	0.19	344	⇓P	Pg	04 43 48.4	+0.6
T1220				AML	AML		
	comp=E,24550µm,1.6s						
T1220				AML	AML		
	comp=N,6325µm,1.6s						
T1220				AML	AML		
	comp=N,6325µm,0.4s						
T1220				AML	AML		
	comp=E,24550µm,0.4s						
T1212	Cascia, Frazio	0.19	206	P	Pg	04 43 48.4	+0.6
T1212				S	Sg	04 43 51.8	+1.4
RMP	Rome, Mte Porz	1.16	197	S	Sb	04 44 22.0	+0.3
RMP				AML	AML		
	comp=N,186µm,0.1s						
RMP				AML	AML		
	comp=E,191µm,0.1s						

IDC 17 05:06:41.7±4.0, 7°.69S×160°.61E, h0km, mb3.8/3, mbtmp3.8/4, ML4.0/1, Error ellipse: s-maj=99.7km s-min=28.4km az=100.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.85	201	Pn	Pn	05 07 14.1	-0.7
	1µm,0.3s,baz=80,slow=13,SNR=8.5						
HNR				LR	LR	05 07 32.6	
	comp=Z,753nm,18.7s,baz=22,slow=27						
HNR				Sn	Sb	05 07 40.1	-0.1
	2µm,0.3s,baz=37,slow=18,SNR=7.3						
CTA	Charters Tower	18.59	227	P	Pn	05 11 02.4	+1.7
	0.3nm,0.3s,baz=55,slow=12,SNR=2.5						
	0.9nm,0.2s						
WRA	Warramunga Arr	28.21	242	P	P	05 12 36.7	+0.1
	1.1nm,0.6s,baz=68,slow=9.1,SNR=10						
	1.1nm,0.6s						
ASAR	Alice Springs	30.13	235	P	P	05 12 52.8	-0.8
	0.2nm,0.3s,baz=60,slow=10,SNR=4.5						
	0.2nm,0.3s						
MKAR	Makanchi Array	87.63	318	P	P	05 19 32.3	+0.2
	0.3nm,0.5s,baz=104,slow=5.6,SNR=4.4						
	0.3nm,0.5s						

SOME 17 05:22:29.8, 42°.28N×80°.97E, h10km, 2C, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye	1.51	314	⇑S	Sg	05 23 21.8	+3.4
	2.1nm,0.5s						
PDGK	Podgornoye	1.51	314	⇑P	Pg	05 22 58.9	+0.1
	1.5nm,0.6s						
UZB	Uzynbulak	1.67	302	*e*P	Pn	05 22 59.9	+0.6
	3.6nm,0.1s						
UZB				*e*S	Sb	05 23 22.0	0.0
	1.7nm,0.5s						
SATY	Saty	2.04	293	*e*Pg	Pb	05 23 07.7	+0.6
	0.7nm,0.1s						
SATY				*e*Lg	Lg	05 23 35.4	
	6.0nm,0.1s						
KPKS	Kokpek	2.05	306	*e*Pg	Pb	05 23 06.7	-0.6
	2.2nm,0.1s						
KPKS				*e*Lg	Lg	05 23 33.9	
	5.6nm,0.2s						
DJR	Jarkent	2.22	338	*e*Pg	Pb	05 23 10.7	+0.6
	0.6nm,0.1s						

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*SOME **17** 05:23:17.2, 45°.57N×79°.73E, h5km*

*NNC **17** 05:23:18.3±1.4, 45°.51N×79°.96E, h0km, mb2.5, mpv2.4, Error ellipse: s-maj=20.1km s-min=8.9km az=94.0*

ISC 17 05:23:09.5±1.8, 45°.6N±0°.2×81°.5E±0°.2, h10km, n9, σ3ˢ40/12, 2C-1D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKZ	Makanchi	1.27	15	⇑P	Pn	05 23 32.3	-1.0
	0.2nm,0.2s						
MAKZ				⇑S	Sb	05 23 50.6	+0.7
	3.9nm,0.6s						
MK31	Makanchi Array	1.33	24	Pn	Pn	05 23 34.4	+0.2
	baz=232,slow=13						
MK31				⇓Sn	Sb	05 23 55.3	+3.6
	0.7nm,0.2s,baz=234,slow=26,SNR=4.1						
DJR	Jarkent	1.74	224	P	Pn	05 23 40.5	+0.6
	0.8nm,0.1s						
DJR				S	Sn	05 23 57.0	-5.2
	6.6nm,0.2s						
DJR	Jarkent	1.74	224	*e*P	Pn	05 23 40.5	+0.6
	1.1nm,0.1s						
DJR				*e*S	Sn	05 23 57.0	-5.2
	6.8nm,0.2s						
PDGK	Podgornoye	2.67	213	Pg	Pn	05 23 58.9	+6.1
	0.5nm,0.4s						
PDGK				Lg	Lg	05 24 29.0	
	0.9nm,0.3s						
KPKS	Kokpek	2.92	224	Pg	Pn	05 23 59.6	+3.5
	0.6nm,0.1s						
KPKS				Lg	Lg	05 24 30.0	
	1.4nm,0.1s						
KPKS	Kokpek	2.92	224	*e*Pg	Pn	05 23 59.6	+3.5
	0.6nm,0.1s						
KPKS				*e*Lg	Lg	05 24 30.0	
	2.6nm,0.2s						
KTBS	Karatobe	3.91	243	*e*Pg	Pn	05 24 10.8	+1.1
	0.7nm,0.2s						
KTBS				*e*Lg	Lg	05 24 49.9	
	2.7nm,0.3s						
KRBS	Karabastau	4.56	248	*e*Pg	Pn	05 24 21.7	+3.0
	0.4nm,0.2s						
KRBS				*e*Lg	Lg	05 25 07.8	
	0.6nm,0.1s						

IDC 17 05:24:53.0±3.4, 54°.55N×86°.17E, h0km, mbtmp2.5/2, ML2.2/1, Error ellipse: s-maj=25.3km s-min=15.4km az=44.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.00	233	I	I	05 30 57.6	
	baz=53,slow=330,SNR=9.7						
ZALV	Zalesovo Beam	1.00	233	Pg	Pg	05 25 11.2	-0.8
	0.4nm,0.3s,baz=53,slow=17,SNR=5.5						
ZALV				Lg	Lg	05 25 26.3	
	1.4nm,0.3s,baz=51,slow=26,SNR=14						
KURBB	Kurchatov Arra	6.09	233	Pn	Pn	05 26 24.6	+0.4
	0.2nm,0.3s,baz=50,slow=14,SNR=3.0						
MKAR	Makanchi Array	8.15	199	Pn	Pn	05 26 53.6	+1.1
	baz=23,slow=12,SNR=1.9						
	0.2nm,0.9s						

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*NOU **17** 05:39:48.7, 17°.93S×178°.45W, h556km, mb4.9/68, Fiji Islands Region*

*IDC **17** 05:39:49.2±0.8, 17°.96S×178°.58W, h557km±8km, mb4.0/18, mbtmp4.8/20, Error ellipse: s-maj=12.7km s-min=10.3km az=110.0*

*NEIC **17** 05:39:49.1±2.3, 17°.9S±0°.1×178°.6W±0°.1, h551km±7km, mb4.7/90, Error ellipse: s-maj=16.4km s-min=12.4km az=136.0*

ISC 17 05:39:48.5±0.3, 17°.90S±0°.05×178°.59W±0°.05, h550km, n649, σ1ˢ12/661, mb4.8/110, 40C-25D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	0.39	214	P	P	05 40 55.6	+1.8
TAVE	Taveuni	1.73	313	P	P	05 40 59.3	+2.1
MSVF	Nonsavu	3.21	273	P	P	05 41 07.7	+2.6
	93nm,0.5s,baz=103,slow=3.1,SNR=131						
MSVF				S	S	05 42 09.7	+2.5
	105nm,1.1s,baz=136,slow=24,SNR=12						
MSVF	Nonsavu	3.21	273	P	P	05 41 07.3	+2.3
MSVF	Nonsavu	3.21	273	P	P	05 41 08.2	+3.2
FUTU	Fugatoga	3.60	7	P	P	05 41 08.6	+0.9
YSA	Yasawairara	3.86	288	P	P	05 41 11.3	+1.9
AFI	Afiamalu	7.66	60	P	P	05 41 41.1	-2.0
	177nm,0.7s,baz=315,slow=1.4,SNR=32						
AFI				S	S	05 43 10.2	-6.7
	26nm,0.6s,baz=252,slow=20,SNR=1.7						
AFI	Afiamalu	7.66	60	P	P	05 41 40.7	-2.4
NIUE	Niue	8.30	99	P	P	05 41 50.4	+1.2
NIUE	Niue	8.30	99	P	P	05 41 50.5	+1.2
FUNA	Funafuti	9.57	347	P	P	05 42 01.4	-0.8
GLKZ	Green Lake	11.32	177	P	P	05 42 17.8	-2.1
GLKZ				S	S	05 44 22.5	-2.0
LIFNC	LIFOU	13.68	256	P	P	05 42 42.6	-1.9
OUENC	Ouen Island, N	14.40	249	P	P	05 42 51.1	-0.7
OUENC	Ouen Island, N	14.40	249	P	P	05 42 51.4	-0.5
DZM	Mont Dzumac	14.67	251	*e*Pn	P	05 42 52.0	-2.8
	71nm,0.8s						
DZM				*e*S	S	05 45 23.0	-5.2
	190nm,25.4s						
DZM	Mont Dzumac	14.67	251	P	P	05 42 53.8	-0.9
	32nm,0.6s,baz=72,slow=22,SNR=28						
DZM	Mont Dzumac	14.67	251	P	P	05 42 54.0	-0.7
DZM	Mont Dzumac	14.67	251	P	P	05 42 54.3	-0.5
ONTNC	Ouen Toro	14.72	250	P	P	05 42 55.0	-0.2
NOUC	Port Laguerre	14.80	251	P	P	05 42 55.3	-0.7
KOUNC	Koumac, New Ca	16.39	258	P	P	05 43 11.4	-0.4
KOUNC	Koumac, New Ca	16.39	258	P	P	05 43 12.1	+0.3
KUZ	Kuaotunu	19.43	194	P	P	05 43 40.9	+1.6
WIAZ	Waiheke Island	19.62	195	P	P	05 43 43.2	+2.2
MXZ	Matakaoa Point	19.77	187	P	P	05 43 43.0	+0.6
ETAZ	East Tamaki Re	19.82	195	P	P	05 43 45.1	+2.3
WMGZ	Waiomatatini S	20.02	187	P	P	05 43 42.2	-2.4
HAZ	Te Kaha	20.03	188	P	P	05 43 43.9	-0.9
HAZ				S	S	05 47 00.1	+3.9
PKGZ	Pakihiroa	20.12	188	P	P	05 43 45.7	0.0
RUGZ	Raukumara Rang	20.25	189	P	P	05 43 45.9	-1.0
RUGZ				S	S	05 47 05.3	+5.3
TGRZ	Tauranga	20.26	192	P	P	05 43 45.3	-1.6
TWGZ	Tauwhareparae	20.42	188	P	P	05 43 48.7	+0.4
TOZ	Tahuroa Road	20.42	194	P	P	05 43 49.8	+1.5
TOZ	Tahuroa Road	20.42	194	P	P	05 43 50.3	+2.1
KMRZ	Kaimai	20.44	192	P	P	05 43 50.3	+1.8
URZ	Urewera	20.63	190	P	P	05 43 47.9	-2.1
	43nm,0.6s,baz=342,slow=0.4,SNR=32						
URZ				S	S	05 47 01.3	-4.3
	8.6nm,0.9s,baz=46,slow=19,SNR=3.1						
	43nm,0.6s						
URZ	Urewera	20.63	190	P	P	05 43 48.0	-2.1
URZ	Urewera	20.63	190	P	P	05 43 48.2	-1.9
CNGZ	Carnagh Statio	20.70	187	P	P	05 43 50.7	-0.1
RIGZ	Rimuhau	20.97	188	P	P	05 43 52.7	-0.5
RIGZ				S	S	05 47 18.1	+7.0
RTZ	Ruatahuna	21.00	190	P	P	05 43 52.2	-1.4
RTZ				IAmb	IAmb	05 44 00.5	
	comp=Z,15nm,0.7s						
BKZ	Black Stump Fm	21.61	190	P	P	05 43 56.7	-2.4
BKZ				IAmb	IAmb	05 44 11.7	
	comp=Z,18nm,0.8s						
BKZ	Black Stump Fm	21.61	190	P	P	05 43 57.7	-1.4
QRZ	Quartz Range	24.09	197	P	P	05 44 21.5	+0.4
THZ	Tophouse	24.87	195	P	P	05 44 27.6	-0.5
THZ				IAmb	IAmb	05 44 29.7	
	comp=Z,19nm,0.8s						
DSZ	Denniston Nort	25.15	197	P	P	05 44 30.0	-0.5
KHZ	Kahutara	25.34	194	P	P	05 44 30.6	-1.5
KHZ				IAmb	IAmb	05 44 32.8	
	comp=Z,25nm,0.8s						
INZ	Inchbonnie	26.15	197	P	P	05 44 38.7	-0.5
RPZ	Rata Peaks	27.18	197	P	P	05 44 46.7	-1.6
	comp=Z,10nm,0.6s,baz=4.2,slow=5.6,SNR=7.1						
	comp=Z,10nm,0.6s						
RPZ	Rata Peaks	27.18	197	P	P	05 44 48.1	-0.1
RPZ				IAmb	IAmb	05 44 51.7	
	comp=Z,26nm,1.3s						
PPT2	Papeete2	27.62	94	*e*sS	sS	05 51 47.2	+3.7
	comp=Z,54nm,25.2s						
PPT	Papeete	27.62	94	P	P	05 44 52.6	+0.1
	comp=Z,30nm,1.0s,baz=230,slow=16,SNR=1.6						
	comp=Z,30nm,1.0s						
JCZ	Jackson Bay	28.18	199	P	P	05 44 57.0	-0.1
EIDS	Eidsvold	29.11	250	P	P	05 45 05.7	+0.3
EIDS				IAmb	IAmb	05 45 06.4	
	comp=Z,13nm,0.7s						
EIDS	Eidsvold	29.11	250	P	P	05 45 05.6	+0.2
	comp=Z,22nm,1.3s						
MLZ	Mavora Lakes	29.55	199	P	P	05 45 09.4	+0.5
RMQ	Roma	31.35	248	P	P	05 45 25.7	+1.0
CTA	Charters Tower	33.28	261	P	P	05 45 41.2	+0.1
CTAO	Charters Tower	33.28	261	P	P	05 45 40.5	-0.6
CTAO				IAmb	IAmb	05 45 41.7	
	comp=Z,11nm,0.8s						
CTAO	Charters Tower	33.28	261	P	P	05 45 41.3	+0.1
CAN	Canberra	33.57	232	P	P	05 45 44.6	+1.2
CAN				IAmb	IAmb	05 45 45.2	
	comp=Z,36nm,1.0s						
CMSA	Cobar Meteorol	35.01	240	P	P	05 45 56.4	+1.0
MTSU	Mount Surprise	35.24	264	P	P	05 45 57.6	0.0
QLP	Quilpie	35.38	249	P	P	05 45 59.0	+0.4
COEN	Coen	36.94	270	P	P	05 46 11.7	+0.1
COEN				IAmb	IAmb	05 46 12.8	
	comp=Z,18nm,0.7s						
COEN	Coen	36.94	270	P	P	05 46 12.3	+0.7
TOO	Toolangi	37.04	231	P	P	05 46 13.3	+1.1
TOO	Toolangi	37.04	231	P	P	05 46 13.1	+0.9
BRAT	Ballarat	38.19	231	P	P	05 46 23.2	+1.7
STKA	Stephens Creek	38.48	241	P	P	05 46 25.1	+1.1
	comp=Z,9.6nm,0.6s,baz=92,slow=10,SNR=23						
STKA				PcP	PcP	05 48 22.4	-0.4
	comp=Z,2.3nm,0.5s,baz=146,slow=7.3,SNR=3.5						
	comp=Z,9.6nm,0.6s						
STKA	Stephens Creek	38.48	241	P	P	05 46 24.7	+0.7
STKA	Stephens Creek	38.48	241	P	P	05 46 25.1	+1.1
INKA	Innaminka	38.59	248	P	P	05 46 26.2	+1.3
HTT	Hallett	41.00	239	P	P	05 46 45.1	+0.9
WHYH	Whyalla	42.04	240	P	P	05 46 53.6	+1.3
OOD	Oodnadatta	43.06	248	P	P	05 47 01.0	+0.5
GENI	Genyem	43.20	286	P	P	05 47 03.3	+1.6
	comp=Z,88nm,0.6s						
GENI	Genyem	43.20	286	P	P	05 46 58.1	-3.6
	comp=Z,90nm,0.6s,comp=Z,3µm						
BBOO	Buckleboo	43.26	241	P	P	05 47 02.5	+0.6
BBOO	Buckleboo	43.26	241	P	P	05 47 02.5	+0.6
WB2	Warramunga Arr	44.46	260	P	P	05 47 10.4	-1.0
WB2				IAmb	IAmb	05 47 11.4	
	comp=Z,14nm,0.5s						
WRAB	Tennant Creek	44.46	260	P	P	05 47 10.6	-0.8
WB1	Warramunga Ar.	44.46	260	P	P	05 47 10.7	-0.7
WRA	Warramunga Arr	44.47	260	P	P	05 47 10.7	-0.8
	comp=Z,9.9nm,0.5s,baz=97,slow=6.9,SNR=286						
WRA				PcP	PcP	05 48 43.0	-0.1
	comp=Z,5.5nm,0.6s,baz=92,slow=3.6,SNR=12						
WRA				ScP	ScP	05 51 43.1	+0.1
	comp=Z,1.1nm,1.0s,baz=88,slow=5.1,SNR=3.7						
WRA				S	S	05 53 01.2	-5.8
	comp=Z,2.7nm,0.8s,baz=95,slow=13,SNR=7.5						
WRA				PKiKP	PKiKP	05 55 39.3	-1.7
	comp=Z,0.2nm,0.7s,baz=69,slow=0.8,SNR=4.7						
	comp=Z,9.9nm,0.5s						
WRA	Warramunga Arr	44.47	260	P	P	05 47 10.3	-1.2
AS01	Alice Springs	44.59	254	P	P	05 47 12.3	-0.1
AS31	Alice Springs	44.63	254	P	P	05 47 12.6	-0.1
ASAR	Alice Springs	44.63	254	P	P	05 47 12.8	0.0
	comp=Z,107nm,0.4s,baz=89,slow=8.1,SNR=1400						
ASAR				PcP	PcP	05 48 43.2	-0.4
	comp=Z,7.5nm,0.5s,baz=96,slow=4.0,SNR=12						
ASAR				ScP	ScP	05 51 44.5	+0.8
	comp=Z,0.8nm,0.8s,baz=108,slow=2.8,SNR=4.1						
ASAR				S	S	05 53 05.6	-3.7
	comp=Z,6.0nm,0.9s,baz=87,slow=15,SNR=28						
ASAR	Alice Springs	44.63	254	P	P	05 47 12.6	-0.1
MULG	Mulgathing	44.66	245	P	P	05 47 13.0	+0.2
SMPI	Sarmi	44.78	286	P	P	05 47 14.2	+0.3
	comp=Z,48nm,0.8s						
KDU	Kakadu	47.39	269	P	P	05 47 33.3	-0.4
MTN	Manton Dam	48.63	268	P	P	05 47 42.0	-1.0
MTN				IAmb	IAmb	05 47 42.9	
	comp=Z,13nm,0.8s						
WRKA	Warakurna	49.69	252	P	P	05 47 50.7	0.0
FORT	Forrest	49.86	245	P	P	05 47 51.3	-0.5
FORT	Forrest	49.86	245	P	P	05 47 51.4	-0.4
KNRA	Kununurra	50.32	264	P	P	05 47 54.6	-0.8
KNRA	Kununurra	50.32	264	P	P	05 47 55.1	-0.3
FAKI	Fak Fak	50.41	281	P	P	05 47 55.5	-0.6
FAKI				IAmb	IAmb	05 48 36.1	
	comp=Z,25nm,0.9s						
FAKI	Fak Fak	50.41	281	P	P	05 47 55.7	-0.4
	comp=Z,28nm,1.2s						
FITZ	Fitzroy Crossi	52.86	261	P	P	05 48 13.5	-0.2
NLAI	Namlea	55.13	279	P	P	05 48 29.8	+0.1
	comp=Z,35nm,0.6s						
SOEI	Soe	55.90	270	P	P	05 48 35.7	+0.4
SOEI	Soe	55.90	270	P	P	05 48 36.6	+1.3
SOEI	Soe	55.90	270	P	P	05 48 36.3	+1.0
	comp=Z,77nm,0.8s						
SANI	Sanana	56.58	280	P	P	05 48 39.5	-0.2
	comp=Z,43nm,0.8s						
SANI	Sanana	56.58	280	P	P	05 48 39.2	-0.5
	comp=Z,43nm,0.8s						
PSA00	Pilbara Seismi	57.75	255	P	P	05 48 46.7	-0.9
PSA00				IAmb	IAmb	05 48 48.0	
	comp=Z,24nm,0.6s						
PSA00	Pilbara Seismi	57.75	255	P	P	05 48 47.3	-0.4
MBWA	Marble Bar	57.91	256	P	P	05 48 48.0	-0.8
MBWA				IAmb	IAmb	05 49 22.9	
	comp=Z,52nm,1.5s						
MEEK	Meekatharra	58.28	249	P	P	05 48 50.6	-0.6
KLBR	Kellerberrin	58.68	244	P	P	05 48 53.3	-0.5
NWAO	Narrogin (SRO)	59.06	242	P	P	05 48 56.2	-0.2
NWAO				IAmb	IAmb	05 49 09.8	
	comp=Z,51nm,1.5s						
BASI	Baing, Sumba	59.30	269	P	P	05 48 57.7	-0.5
	comp=Z,179nm,0.5s						
MORW	Morawa	60.33	246	P	P	05 49 04.3	-0.6
VNDA	Vanda	60.44	185	P	P	05 49 05.8	+1.2
	comp=Z,0.7nm,0.5s,baz=3.7,slow=4.1,SNR=5.8						
	comp=Z,0.7nm,0.5s						
VNDA	Vanda	60.44	185	P	P	05 49 06.1	+1.4
BKSI	Bulukumba	61.08	274	P	P	05 49 09.0	-1.0
	comp=Z,12nm,0.6s						
MRSI	Marisa	61.24	281	P	P	05 49 10.2	-0.9
	comp=Z,31nm,0.9s						
SPSI	Sidrap Palu	61.83	275	P	P	05 49 13.5	-1.4
	comp=Z,18nm,0.8s						
PLAI	Plampang	62.33	269	P	P	05 49 17.2	-0.9
	comp=Z,40nm,0.8s						
TOLI2	Tolitoli	62.55	281	P	P	05 49 18.6	-1.0
TOLI2	Tolitoli	62.55	281	P	P	05 49 19.8	+0.2
GIRL	Giralia	62.73	253	P	P	05 49 21.1	+0.5
MPSI	Mapaga	63.11	280	P	P	05 49 22.3	-0.8
	comp=Z,36nm,0.8s						
TWSI	Taliwang, Sumb	63.20	269	P	P	05 49 23.1	-0.6
	comp=Z,50nm,0.7s						
JAGI	Jajag, Banyuwa	65.87	269	P	P	05 49 39.6	-1.0
JAGI	Jajag, Banyuwa	65.87	269	P	P	05 49 39.2	-1.4
	comp=Z,59nm,0.7s						
CASY	Casey	66.07	205	P	P	05 49 41.1	+0.2
CASY				IAmb	IAmb	05 49 43.7	
	comp=Z,34nm,1.4s						
MYLDM	Lahad Datu	66.15	284	P	P	05 49 43.5	+1.2
MYLDM				IAmb	IAmb	05 49 44.5	
	comp=Z,24nm,1.2s						
BLJI	Banyuglugur	66.60	269	P	P	05 49 44.5	-0.6
	comp=Z,56nm,0.7s,comp=Z,3µm						
JGF	Kuroka	67.63	322	P	P	05 49 50.2	-0.8
JGF				IAmb	IAmb	05 49 51.6	
	comp=Z,13nm,0.6s						
MJAR	Matsushiro Arr	67.80	323	P	P	05 49 51.5	-0.6
	comp=Z,17nm,0.6s,baz=159,slow=6.1,SNR=38						
	comp=Z,17nm,0.6s						
MAJO	Matsushiro	67.81	323	P	P	05 49 51.7	-0.3
MAJO				IAmb	IAmb	05 49 52.5	
	comp=Z,22nm,0.8s						
MAJO	Matsushiro	67.81	323	P	P	05 49 51.9	-0.2
MJB9	Matsu-Tunnel	67.81	323	P	P	05 49 52.6	+0.5
MJB9				IAmb	IAmb	05 49 53.5	
	comp=Z,22nm,0.8s						
PWJI	Pagerwojo	68.23	268	P	P	05 49 54.6	-0.5
	comp=Z,39nm,0.7s,comp=Z,2µm						
JMN	Monobe	68.48	319	P	P	05 49 56.9	+0.7
JMN				IAmb	IAmb	05 50 12.9	
	comp=Z,42nm,1.1s						
TBJI	Tambak Boyo	68.52	270	P	P	05 49 57.1	+0.2
	comp=Z,87nm,0.9s						
UGM	Wanagama	69.48	268	P	P	05 50 02.5	-0.2
	comp=Z,158nm,1.6s						
ADK	Adak	69.51	1	P	P	05 50 01.2	-0.7
JHS	Saijyo	69.78	319	P	P	05 50 04.2	+0.2
JHS	Saijyo	69.78	319	P	P	05 50 04.7	+0.7
YOJ	Yonaguni jima	70.81	305	P	P	05 50 10.2	-0.1

NIKH	Nikolski High	71.08	6	P	P	05 50 09.9	-1.3
	baz=190						
KPJI	Karang Pucung	71.16	268	P	P	05 50 12.3	-0.3
	comp=Z,42nm,0.5s						
CMJI	Cimerak	71.49	268	P	P	05 50 13.2	-1.3
	comp=Z,82nm,1.3s						
SSLB	Suanglung	72.09	303	P	P	05 50 16.7	-1.2
TPUB	Ta-pu	72.11	303	P	P	05 50 17.1	-0.9
TPUB	Ta-pu	72.11	303	P	P	05 50 17.0	-0.9
UNV	Unalaska Valle	72.21	7	P	P	05 50 16.4	-1.3
UNV				IAmb	IAmb	05 50 17.3	
	comp=Z,15nm,0.7s						
UNV	Unalaska Valle	72.21	7	P	P	05 50 16.3	-1.3
	baz=192						
BBJI	Bungbulang	72.34	268	P	P	05 50 18.3	-1.2
KSM	Kuching	72.52	277	P	P	05 50 21.2	+0.7
	comp=Z,63nm,1.0s						
CNJI	Cibinong	72.88	268	P	P	05 50 21.6	-0.9
	comp=Z,26nm,1.5s						
SKJI	Sukabumi	73.51	268	P	P	05 50 25.4	-0.8
	comp=Z,111nm,0.6s						
PEA0B	Petropavlovsk-	73.63	345	P	P	05 50 25.4	-0.5
PEA0B				IAmb	IAmb	05 50 26.3	
	comp=Z,28nm,0.8s						
PETK	Petropavlovsk-	73.63	345	P	P	05 50 25.6	-0.4
	comp=Z,19nm,0.7s,baz=128,slow=7.3,SNR=21						
	comp=Z,19nm,0.7s						
PETK	Petropavlovsk-	73.63	345	P	P	05 50 25.1	-0.8
CGJI	Cibinong	74.44	268	P	P	05 50 30.2	-1.2
	comp=Z,134nm,0.5s,comp=Z,2µm						
KSRS	Korea Array	74.59	318	P	P	05 50 32.5	+0.8
	comp=Z,3.9nm,0.7s,baz=128,slow=5.9,SNR=18						
	comp=Z,3.9nm,0.7s						
KASI	Kota Agung	75.89	269	P	P	05 50 38.8	-0.7
	comp=Z,68nm,1.0s						
MDSI	Maura Dua	76.50	270	P	P	05 50 41.8	-1.1
USA0B	Ussuriysk Arra	76.52	326	P	P	05 50 42.9	+0.6
USRK	Ussuriysk Ar.	76.52	326	P	P	05 50 43.1	+0.9
	comp=Z,5.3nm,0.7s,baz=85,slow=4.8,SNR=10						
	comp=Z,5.3nm,0.7s						
SAO	San Andreas Ge	76.54	44	P	P	05 50 43.6	+1.0
SAO				IAmb	IAmb	05 50 44.6	
	comp=Z,20nm,0.9s						
PKM	Mcpherson Peak	76.59	46	P	P	05 50 44.3	+1.2
	baz=237						
PMPB	Monarch Peak	76.66	45	P	P	05 50 44.3	+0.9
PMPB				IAmb	IAmb	05 51 10.3	
	comp=Z,28nm,1.2s						
KMRM	Mail Ridge	77.12	40	P	P	05 50 47.1	+1.3
KMRM				IAmb	IAmb	05 50 48.1	
	comp=Z,28nm,0.9s						
R16K	Pilot Point	77.20	11	P	P	05 50 45.1	-0.6
	baz=200						
R17K	Ugashik Creek	77.50	12	P	P	05 50 46.9	-0.4
	baz=202						
VES	Vestal, Richgr	77.61	46	P	P	05 50 49.1	+0.6
	baz=237,SNR=6.3						
MURC	Murrieta	77.75	49	P	P	05 50 49.8	+0.6
	baz=239						
BFSC	Mount Baldy Ra	77.75	48	P	P	05 50 49.9	+0.5
	baz=238						
OHAK	Old Harbor	77.77	14	P	P	05 50 48.8	+0.1
	baz=205						
NJ2	Nanjing	77.81	310	*e*P	P	05 50 49.9	+0.4
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
ESJX	Sierra Juarez	77.84	51	P	P	05 50 51.0	+1.1
EDW2	Edwards Air Fo	77.85	47	P	P	05 50 50.7	+0.8
	baz=238,SNR=13						
ISA	Isabella, Lake	77.94	46	P	P	05 50 51.2	+0.9
	baz=238						
MONP2	Monument Peak	77.94	50	P	P	05 50 51.4	+0.9
	baz=239,SNR=10						
IKP	In-Ko-Pah, Jac	78.05	50	P	P	05 50 52.1	+1.2
	baz=240,SNR=5.5						
MDJ	Mudanjiang	78.09	325	ScS	ScS	06 00 18.3	-1.7
MDJ	Mudanjiang	78.09	325	P	P	05 50 51.4	+0.6
MDJ				IAmb	IAmb	05 50 52.7	
	comp=Z,32nm,0.9s						
MDJ	Mudanjiang	78.09	325	P	P	05 50 51.9	+1.1
	comp=Z,40nm,1.1s						
MDJ	Mudanjiang	78.09	325	pmax	pmax		
	comp=Z,44nm,1.3s						
MDJ	Mudanjiang	78.09	325	pmax	pmax		
	comp=Z,83nm,6.3s						
MDJ	Mudanjiang	78.09	325	P	P	05 50 51.8	+1.0
MDJ	Mudanjiang	78.09	325	PcP	PcP	05 50 58.8	+0.9
MDJ	Mudanjiang	78.09	325	pP	pP	05 53 00.3	+14
MDJ	Mudanjiang	78.09	325	PP	PP	05 54 05.6	+8.0
Q17K	Contact Creek	78.17	12	P	P	05 50 50.2	-0.9
	baz=202						
YUH	Yuha Desert	78.18	50	P	P	05 50 52.4	+0.9
PFO	Pinyon Flats O	78.28	49	P	P	05 50 52.1	-0.1
	baz=239						
TPFO	Pinon Flats	78.28	49	P	P	05 50 52.4	+0.1
	baz=239						
LRMC	Laurel Mtn Rad	78.38	47	P	P	05 50 53.6	+0.8
	baz=238						
SWSC	Sam W. Stewart	78.42	50	P	P	05 50 53.6	+0.8
	baz=240						
KDAK	Kodiak Island	78.44	14	P	P	05 50 52.3	0.0
KDAK				IAmb	IAmb	05 50 54.4	
	comp=Z,68nm,1.2s						
KDAK	Kodiak Island	78.44	14	P	P	05 50 52.6	+0.3
	baz=205						
P16K	Nushagak River	78.50	11	P	P	05 50 51.8	-0.8
	baz=200,SNR=5.4						
MDPB	Devils Postpil	78.59	44	P	P	05 50 54.4	+0.4
CWC	Cottonwood Cre	78.62	46	P	P	05 50 54.2	+0.1
	baz=238						
YBH	Yreka Blue Hor	78.63	39	P	P	05 50 54.8	+0.9
OMMB	Old Mammoth Mi	78.63	44	P	P	05 50 55.3	+1.0
SLBS	Sierra La Lagu	78.70	61	P	P	05 50 56.4	+1.7
Q18K	Katmai Hardscr	78.71	12	P	P	05 50 53.1	-0.8
	baz=203						
BELC	Belle Mtn. Jos	78.81	49	P	P	05 50 55.8	+0.8
	baz=239,SNR=7.5						
MPMC	Manual Prospec	78.82	46	P	P	05 50 55.9	+0.8
	baz=238,SNR=9.8						
WAKR	Walker	78.83	43	P	P	05 50 56.4	+1.2
TIN	Tinemaha, Big	78.85	45	P	P	05 50 55.9	+0.7
	baz=237						
MPK	Martis Peak	78.89	42	P	P	05 50 56.5	+0.9
MPK				IAmb	IAmb	05 50 57.1	
	comp=Z,20nm,0.6s						
GSC	Goldstone, Bar	78.90	47	P	P	05 50 56.0	+0.5
	baz=239						
HEC	Hector,Ludlow	78.99	48	P	P	05 50 56.0	+0.1
	baz=239,SNR=6.4						
HUMO	Hull Mountain	79.00	38	P	P	05 50 56.8	+1.0
O16K	Kokwok River B	79.01	10	P	P	05 50 53.8	-1.5
	baz=200,SNR=6.2						
BC3	Big Chuckawall	79.02	49	P	P	05 50 57.1	+0.9
	baz=240						
GLA	Glamis	79.18	50	P	P	05 50 58.5	+1.5
	baz=240						
DSP	Deep Springs	79.19	45	P	P	05 50 57.6	+0.8
P18K	Big Mountain,	79.35	12	P	P	05 50 56.1	-1.1
P18K				IAmb	IAmb	05 50 57.3	
	comp=Z,39nm,0.8s						
P18K	Big Mountain,	79.35	12	P	P	05 50 56.4	-0.8
	baz=203						
O17K	Koliganek Bris	79.36	11	P	P	05 50 56.6	-0.5
	baz=201						
GRAC	Grapevine Rang	79.40	46	P	P	05 50 58.8	+0.7
	baz=238,SNR=11						
GMRC	Granite Mounta	79.44	48	P	P	05 50 59.2	+0.8
	baz=240						
FURC	Furnace Creek,	79.47	46	P	P	05 50 59.2	+0.9
	baz=238						
IRM	Iron Mountain	79.50	49	P	P	05 50 59.6	+1.0
	baz=240,SNR=7.0						
NVAR	Mina Array Bea	79.54	44	P	P	05 50 59.8	+0.8
	comp=Z,8.6nm,0.8s,baz=225,slow=8.9,SNR=68						
	comp=Z,8.6nm,0.8s						
NVAR	Mina Array Bea	79.54	44	P	P	05 50 58.9	0.0
SHOC	Shoshone, Teco	79.58	47	P	P	05 50 59.8	+0.8
	baz=239						
TUQ	Turquoise Moun	79.59	48	P	P	05 50 60.0	+0.8
	baz=239,SNR=6.1						
N16K	Nishlik Lake	79.73	10	P	P	05 50 59.5	+0.3
	baz=199						
O18K	Koktuh Hills	79.78	12	P	P	05 50 58.6	-0.9
O18K	Koktuh Hills	79.78	12	P	P	05 50 59.0	-0.5
	baz=203,SNR=7.6						
CN2	Changchun	79.92	322	*e*P	P	05 50 59.9	-0.6
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
KVN	Kaiserville	80.01	43	P	P	05 51 01.4	+0.1
TPNV	Topopah Spring	80.14	46	P	P	05 51 02.6	+0.5
	baz=239						
214A	Organ Pipe Nat	80.14	52	P	P	05 51 03.5	+1.4
	baz=242,SNR=7.1						
NEE2	Needles Airpor	80.18	49	P	P	05 51 03.0	+0.9
	baz=240						
SDSI	Sungai Dareh	80.18	272	P	P	05 51 02.2	-0.4
O19K	Port Alsworth	80.27	12	P	P	05 51 01.2	-0.8
	baz=203						
PDMCI	Parker Dam,Lak	80.29	49	P	P	05 51 03.6	+0.9
	baz=241						
ILSW	Iliamna Southw	80.32	13	P	P	05 51 01.6	-0.7
ILSW				IAmb	IAmb	05 51 02.4	
	comp=Z,34nm,0.7s						
J05D	Fort Rock, OR	80.42	39	P	P	05 51 04.0	+0.7
BRSE	Bradley Lake S	80.62	14	P	P	05 51 03.3	-0.5
	baz=207						
N19K	Bonanza Creek	80.81	12	P	P	05 51 03.7	-1.2
	baz=203						
PINE	Pine Mountain	80.89	38	P	P	05 51 06.8	+1.0
PINE				IAmb	IAmb	05 51 08.0	
	comp=Z,20nm,0.9s						
TIA	Tai'an	81.12	312	*e*P	P	05 51 07.0	0.0
TIA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PRN	Pahroc Range	81.19	46	P	P	05 51 08.5	+1.0
PRN				IAmb	IAmb	05 51 09.8	
	comp=Z,18nm,0.9s						
WVOR	Wild Horse Val	81.51	40	P	P	05 51 09.5	+0.5
WVOR				IAmb	IAmb	05 51 10.9	
	comp=Z,22nm,1.1s						
O22K	Cooper Landing	81.52	14	P	P	05 51 07.8	-0.6
	baz=208						
SPCR	Spurr Chakacha	81.62	13	P	P	05 51 07.9	-1.1
	baz=205						
TUC	Tucson	81.83	52	P	P	05 51 12.3	+1.6
	baz=243						
M19K	Big River Lodg	81.83	11	P	P	05 51 09.4	-0.7
	baz=203						
I07A	Izee	81.91	39	P	P	05 51 11.7	+0.8
I07A				IAmb	IAmb	05 51 12.8	
	comp=Z,14nm,0.8s						
L19K	White Mountain	82.01	11	P	P	05 51 10.9	0.0
	baz=203						
M20K	Styx River	82.06	12	P	P	05 51 10.9	-0.3
	baz=204						
RC01	Rabbit Creek A	82.06	14	P	P	05 51 10.6	-0.5
	baz=208						
SUA	Susitna One	82.17	13	P	P	05 51 11.0	-0.8
	baz=207,SNR=9.1						
PWL	Port Wells	82.18	14	P	P	05 51 10.6	-1.1
PWL				IAmb	IAmb	05 51 11.5	
	comp=Z,23nm,0.7s						
PWL	Port Wells	82.18	14	P	P	05 51 10.7	-1.1
	baz=209						
IPM	Ipoh	82.25	277	P	P	05 51 13.8	+0.5
	comp=Z,34nm,0.8s						
L20K	Farewell, AK	82.46	11	P	P	05 51 12.4	-0.8
	baz=204						
SKT	Skwentna	82.47	13	P	P	05 51 11.7	-1.5
	baz=206						
TTA	Tatalina	82.50	10	P	P	05 51 13.7	+0.3
	comp=Z,23nm,1.0s						
TTA	Tatalina	82.50	10	P	P	05 51 13.4	-0.1
	baz=202,SNR=5.8						
KNK	Knik Glacier	82.63	14	P	P	05 51 13.2	-0.8
KNK				IAmb	IAmb	05 51 14.4	
	comp=Z,16nm,0.7s						
KNK	Knik Glacier	82.63	14	P	P	05 51 13.4	-0.7
	baz=209						
PMR	Palmer	82.64	14	P	P	05 51 13.5	-0.5
PMR				IAmb	IAmb	05 51 14.1	
	comp=Z,9.4nm,0.6s						
PMR	Palmer	82.64	14	P	P	05 51 13.2	-0.8
	baz=208						
U15A	North Rim	82.64	48	P	P	05 51 16.1	+1.1
U15A				IAmb	IAmb	05 51 17.4	
	comp=Z,21nm,0.8s						
HEH	HeiHe	82.82	328	*e*P	P	05 51 15.3	+0.1
HEH				pmax	pmax		
	comp=Z,11nm,0.5s						
HEH				pmax	pmax		
	comp=Z,150nm,3.9s						
ANM	Nome	82.83	6	P	P	05 51 14.7	-0.3
	baz=193						
WUAZ	Wupatki	82.87	49	P	P	05 51 17.2	+1.2
	baz=242,SNR=7.9						
CUT	Chulitna	83.11	13	P	P	05 51 15.5	-0.9
	baz=207,SNR=8.0						
M23K	Glacier View	83.14	14	P	P	05 51 15.6	-0.9
	baz=210						
PPLA	Purkeypile	83.16	12	P	P	05 51 14.9	-2.0
	baz=205						
K20K	Telida	83.23	11	P	P	05 51 16.7	-0.4
K20K				IAmb	IAmb	05 51 17.7	
	comp=Z,22nm,0.8s						
K20K	Telida	83.23	11	P	P	05 51 16.7	-0.4
	baz=203,SNR=20						
SCM	Sheep Creek Mo	83.27	14	P	P	05 51 16.7	-0.6
SCM	Sheep Creek Mo	83.27	14	P	P	05 51 16.6	-0.6
	baz=210,SNR=7.2						
KLU	Klutina	83.31	15	P	P	05 51 17.3	-0.2
	baz=211						
SKLT	Songkhla	83.50	280	P	P	05 51 20.9	+1.5
	comp=Z,28nm,0.8s						
S32K	Killisnoo	83.52	22	P	P	05 51 19.0	+0.5
	baz=222						
TNA	Tin City	83.60	4	P	P	05 51 18.7	-0.1
	baz=190,SNR=13						
PNL	Peninsula	83.61	19	P	P	05 51 18.3	-0.7
	baz=217						
CAST	Castle Rocks	83.66	12	P	P	05 51 17.4	-1.7
	baz=205,SNR=23						
BJI	Beijing	83.66	315	P	P	05 51 20.1	+0.4
BJI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LYN	LuoYang	83.69	309	⇑*i*P	P	05 51 21.0	+1.0
LYN				pmax	pmax		
	comp=Z,32nm,0.8s						
MSU	Marysvale	83.72	46	P	P	05 51 21.8	+1.5
PSI	Prapat	83.72	275	P	P	05 51 20.1	-0.6
	comp=Z,24nm,0.9s						
VRDI	Verde Repeater	83.72	16	P	P	05 51 19.1	-0.6
VRDI				IAmb	IAmb	05 51 20.3	
	comp=Z,43nm,1.4s						
N25K	Chitina, Valde	83.74	16	P	P	05 51 19.1	-0.6
N25K	Chitina, Valde	83.74	16	P	P	05 51 19.0	-0.7
	baz=212,SNR=11						
M24K	Tolsona, Glenn	83.78	15	P	P	05 51 20.0	+0.2
	baz=211,SNR=5.9						
MCARA	McCarthy VSAT	83.97	16	P	P	05 51 20.6	-0.1
	baz=214						
CHUM	Lake Minchumin	84.04	11	P	P	05 51 19.6	-1.3
	baz=205,SNR=9.0						
TRF	Thorofare Moun	84.04	12	P	P	05 51 19.7	-1.5
TRF	Thorofare Moun	84.04	12	P	P	05 51 19.9	-1.4
	baz=207,SNR=17						
CTG	Chitna Glacier	84.08	17	P	P	05 51 21.2	-0.2
	baz=215,SNR=5.3						
DUG	Dugway, Tooele	84.09	45	P	P	05 51 22.4	+0.4
	baz=241						
ENH	Enshi	84.13	304	P	P	05 51 23.2	+0.9
	comp=Z,62nm,1.0s						
121A	Cookes Peak, D	84.20	53	P	P	05 51 23.3	+0.6
	baz=245						
O28M	Mount Upton	84.26	18	P	P	05 51 22.2	-0.3
	baz=216						
HARP	HAARP	84.28	15	P	P	05 51 22.4	+0.2
	baz=212,SNR=5.4						
PLBC	Pleasant Camp	84.41	20	P	P	05 51 23.3	+0.5
	baz=220,SNR=5.0						
BPAW	Bear Paw Mtn.	84.49	12	P	P	05 51 21.3	-1.9
	baz=206						
GSI	Gunungsitoli	84.53	273	P	P	05 51 25.8	+1.2
	comp=Z,58nm,0.9s						
MCK	McKinley	84.57	13	P	P	05 51 22.9	-0.8
	baz=208,SNR=8.7						
PAX	Paxson	84.69	15	P	P	05 51 23.4	-0.9
	baz=212						
P30M	Million Dollar	84.73	20	P	P	05 51 25.0	+0.5
	baz=219						
HLID	Hailey	84.74	41	P	P	05 51 26.0	+0.9
	baz=239,SNR=16						
SKAG	Skagway	84.75	21	P	P	05 51 25.3	+0.7
	baz=221						
YUK8	Steele Glacier	84.80	18	P	P	05 51 25.1	0.0
	baz=217,SNR=5.5						
M26K	Nabesna, AK	84.82	16	P	P	05 51 24.6	-0.4
	baz=214						
GYA	Guiyang	84.89	300	⇓P	P	05 51 26.9	+0.7
GYA				pmax	pmax		
	comp=Z,14nm,1.2s						
SRIT	Nakonsritamara	84.91	281	P	P	05 51 28.0	+1.6
	comp=Z,38nm,0.8s						
YUK3	Moose Creek	84.99	17	P	P	05 51 25.9	0.0
	baz=216,SNR=10						
SURA	Surathani	85.07	281	P	P	05 51 29.2	+2.1
	comp=Z,18nm,0.8s						
M27K	Edge Creek, AK	85.08	16	P	P	05 51 26.1	-0.2
	baz=215						
HYT	Haines Junctio	85.11	19	P	P	05 51 26.7	+0.3
	baz=219						
S34M	Telegraph Cree	85.11	23	P	P	05 51 26.9	+0.6
	baz=225						
YUK4	Talbot Arm	85.17	18	P	P	05 51 26.8	0.0
	baz=218						
L26K	Log Cabin Wild	85.25	15	P	P	05 51 26.6	-0.4
	baz=214,SNR=5.7						
I21K	Tanana	85.28	11	P	P	05 51 26.1	-0.8
	baz=205						
NEA2	Nenana	85.31	12	P	P	05 51 26.2	-1.0
	baz=208						
K24K	Donnelly Dome	85.33	14	P	P	05 51 26.9	-0.5
	baz=211,SNR=12						
MLY	Manley	85.37	11	P	P	05 51 26.0	-1.5
	baz=206,SNR=6.1						
P32M	Atlin	85.40	21	P	P	05 51 28.3	+0.6
	baz=222						
BVCY	Beaver Creek	85.40	17	P	P	05 51 27.9	+0.2
	baz=216,SNR=7.7						
WRH	Wood River Hil	85.40	13	P	P	05 51 26.5	-1.1
WRH				IAmb	IAmb	05 51 27.7	
	comp=Z,38nm,1.4s						
Q32M	Nakina River	85.44	22	P	P	05 51 28.5	+0.3
	baz=224						
RIDG	Independent Ri	85.49	14	P	P	05 51 27.5	-0.6
	baz=212,SNR=5.8						
O30N	Mendenhall	85.50	19	P	P	05 51 28.3	0.0
	baz=220						
H21K	Melozitna Rive	85.56	10	P	P	05 51 28.5	+0.1
	baz=205						
HDA	Harding Lake	85.59	13	P	P	05 51 27.2	-1.3
HDA				IAmb	IAmb	05 51 28.2	
	comp=Z,9.7nm,0.8s						
HDA	Harding Lake	85.59	13	P	P	05 51 27.8	-0.8
	baz=210,SNR=8.2						
DOT	Dot Lake	85.60	15	P	P	05 51 27.7	-0.9
DOT				IAmb	IAmb	05 51 29.2	
	comp=Z,13nm,0.8s						
NEW	Newport	85.61	36	P	P	05 51 29.1	0.0
	baz=237						
XLT	XiLinHaoTe	85.64	319	⇑*i*P	P	05 51 29.6	+0.3
XLT				pmax	pmax		
	comp=Z,110nm,5.2s						
XLT				pmax	pmax		
	comp=Z,14nm,0.9s						
BSUT	Blindstream Ca	85.64	45	P	P	05 51 30.3	+0.5
L27K	Beaver Creek,	85.67	16	P	P	05 51 28.8	-0.2
	baz=215						
MNTX	Cornudas Mount	85.71	55	P	P	05 51 30.7	+0.8
	baz=246						
N30M	Aishikik Lake	85.73	19	P	P	05 51 29.0	-0.4
	baz=219						
I23K	Minto, Yukon-K	85.74	12	P	P	05 51 28.1	-1.1
	baz=208						
TCOL	CIGO, UAF Yank	85.80	13	P	P	05 51 27.7	-1.8
	baz=209						
COLA	College	85.81	13	P	P	05 51 28.6	-0.9
	comp=Z,27nm,1.1s						
COLA	College	85.81	13	P	P	05 51 28.2	-1.3
	baz=209						
DLBC	Dease Lake	85.89	23	P	P	05 51 30.7	+0.5
DLBC				IAmb	IAmb	05 51 31.2	
	comp=Z,8.8nm,0.9s						
DLBC	Dease Lake	85.89	23	P	P	05 51 30.1	-0.1
	baz=226						
SCRK	Sand Creek	85.90	15	P	P	05 51 29.7	-0.5
SCRK	Sand Creek	85.90	15	P	P	05 51 29.4	-0.7
	baz=213,SNR=6.7						
ILAR	Eielson Array	85.92	13	P	P	05 51 28.9	-1.2
	comp=Z,4.4nm,0.4s,baz=222,slow=5.1,SNR=148						
	comp=Z,4.4nm,0.4s						
H22K	Ishtalitna Cre	86.03	11	P	P	05 51 29.9	-0.7
	baz=206,SNR=9.3						
M29M	Somme Creek	86.09	17	P	P	05 51 30.8	-0.3
	baz=218						
POKR	Poker Plat Res	86.11	13	P	P	05 51 29.7	-1.3
	baz=210						
XAN	Xi'an	86.12	307	P	P	05 51 32.8	+1.0
XAN				pP	pP	05 53 33.1	+1.6
XAN				pmax	pmax		
	comp=Z,35nm,1.0s						
TX32	Lajitas Array	86.13	58	P	P	05 51 33.4	+1.3
TX32				IAmb	IAmb	05 51 35.0	
	comp=Z,15nm,0.9s						
TXAR	Lajitas Array	86.14	58	P	P	05 51 33.9	+1.8
	comp=Z,9.9nm,0.8s,baz=218,slow=5.9,SNR=100						
	comp=Z,9.9nm,0.8s						
TXAR	Lajitas Array	86.14	58	P	P	05 51 33.1	+1.1
N31M	Braeburn, Yuko	86.15	19	P	P	05 51 31.3	0.0
	baz=220						
P33M	Teslin, Yukon	86.16	21	P	P	05 51 31.2	-0.2
	baz=223						
ANMO	Albuquerque	86.23	52	P	P	05 51 32.4	-0.1
	baz=245						
G21K	Allakaket	86.23	10	P	P	05 51 31.1	-0.5
	baz=204						
H23K	Yukon River	86.31	12	P	P	05 51 31.1	-0.8
	baz=208						
K27K	Chicken	86.41	15	P	P	05 51 32.7	+0.3
	baz=215						
M30M	Minto, Yukon	86.68	18	P	P	05 51 33.5	-0.3
	baz=220,SNR=8.2						
L29M	L29M	86.72	17	P	P	05 51 34.3	+0.3
	baz=218						
N32M	Quiet Lake	86.76	20	P	P	05 51 34.4	+0.2
	baz=223						
PRP	Porcupine Dome	86.86	13	P	P	05 51 34.3	-0.4
	baz=211						
F21K	Alatna River	86.89	10	P	P	05 51 34.4	-0.3
	baz=204,SNR=6.3						
G23K	Bananza Creek	87.01	11	P	P	05 51 35.2	-0.1
	baz=207						
M31M	Drury Creek, Y	87.12	19	P	P	05 51 35.6	-0.2
	baz=222						
DAWY	Dawson	87.13	16	P	P	05 51 36.2	+0.4
	baz=217,SNR=6.2						
S22A	4UR Ranch, Cre	87.13	49	P	P	05 51 37.6	+0.8
	baz=245,SNR=7.0						
HHC	Hu-ho-hao-te	87.15	315	*e*P	P	05 51 38.6	+2.0
HHC				pmax	pmax		
	comp=Z,32nm,0.5s						
HHC				pmax	pmax		
	comp=Z,250nm,6.8s						
O20A	White River Ci	87.17	46	P	P	05 51 37.5	+0.6
	baz=244						
I26K	Coal Creek Min	87.21	14	P	P	05 51 35.6	-0.6
	baz=214						
EGAK	Eagle	87.25	15	P	P	05 51 35.8	-0.6
EGAK	Eagle	87.25	15	P	P	05 51 36.0	-0.4
	baz=215,SNR=5.2						
F22K	John River	87.36	10	P	P	05 51 36.6	-0.3
	baz=205						
COLD	Coldfoot	87.44	11	P	P	05 51 37.2	0.0
	baz=207						
K29M	Barlow Dome	87.46	17	P	P	05 51 37.5	0.0
	baz=219						
BW06	Boulder Array	87.46	43	P	P	05 51 38.3	+0.1
	baz=243,SNR=9.5						
PDAR	Pinedale Array	87.46	43	P	P	05 51 38.4	+0.2
	comp=Z,5.2nm,0.5s,baz=215,slow=3.3,SNR=68						
	comp=Z,5.2nm,0.5s						
BOZ	Bozeman (W)	87.47	40	P	P	05 51 38.2	+0.2
	baz=241,SNR=6.8						
FARO	Faro, Yukon	87.47	19	P	P	05 51 36.9	-0.6
	baz=223						
G24K	Hadweenzic Riv	87.48	12	P	P	05 51 36.9	-0.5
	baz=210						
H17A	Grant Village	87.56	42	P	P	05 51 40.6	+1.9
	baz=242,SNR=12						
KMI	Kunming	87.68	297	⇑P	P	05 51 40.8	+1.2
KMI				pP	pP	05 53 39.8	+0.5
KMI				pmax	pmax		

	comp=Z,18nm,0.9s						
MAYO	Mayo, Yukon	87.73	18	P	P	05 51 38.8	+0.1
	baz=220,SNR=9.9						
G25K	Bearman Lake	87.81	12	P	P	05 51 38.6	-0.3
	baz=211						
I27K	Kandik River	87.82	14	P	P	05 51 38.5	-0.6
	baz=215						
E22K	Anaktuvuk Pass	87.99	10	P	P	05 51 39.5	-0.3
	baz=205						
LIRD	Liard River Hi	88.05	24	P	P	05 51 40.6	+0.4
	baz=229						
SDCO	Great Sand Dun	88.09	49	P	P	05 51 40.7	-0.6
	baz=246						
BTO	Baotou	88.10	314	*e*P	P	05 51 43.6	+2.6
BTO				pP	pP	05 53 22.6	-19
BTO				sP	sP	05 54 22.9	-14
BTO				PP	PP	05 55 24.6	+6.2
BTO				S	S	06 01 36.4	-2.8
BTO	Baotou	88.10	314	sS	sS	06 05 16.1	+4.0
BTO	Baotou	88.10	314	SS	SS	06 07 56.3	+11
BTO				pmax	pmax		
	comp=Z,33nm,0.6s						
BTO				pmax	pmax		
	comp=Z,560nm,10.0s						
BTO				LR	LR		
	comp=N,680nm,5.8s						
BTO				LR	LR		
	comp=E,570nm,6.6s						
BTO				LR	LR		
	comp=Z,520nm,7.0s						
F24K	Squaw Lake	88.12	11	P	P	05 51 40.3	-0.1
	baz=209						
E23K	Chandalar	88.28	10	P	P	05 51 41.1	-0.2
	baz=208						
H27K	Steamboat Moun	88.36	14	P	P	05 51 41.9	+0.3
	baz=215,SNR=6.7						
I29M	Ogilvie Camp,	88.45	16	P	P	05 51 41.6	-0.3
	baz=218						
G26K	Porcupine Rive	88.45	13	P	P	05 51 41.8	-0.1
	baz=213						
E24K	Your Creek	88.50	11	P	P	05 51 41.6	-0.6
	baz=209,SNR=7.7						
F25K	Christian Rive	88.62	12	P	P	05 51 42.9	+0.1
	baz=211						
MSTX	Muleshoe	88.62	54	P	P	05 51 43.8	+0.2
	baz=247						
T25A	Trinidad	88.64	50	P	P	05 51 43.8	0.0
	baz=246						
BMAR	Burnt Mountain	88.69	12	P	P	05 51 43.2	+0.1
RLMT	Red Lodge	88.72	41	P	P	05 51 45.1	+1.1
	baz=243,SNR=7.5						
CMAR	Chiang Mai Arr	88.72	290	P	P	05 51 45.4	+1.0
	comp=Z,6.1nm,0.8s,baz=107,slow=2.8,SNR=36						
	comp=Z,6.1nm,0.8s						
G27K	Doyon Strip	88.80	14	P	P	05 51 43.2	-0.5
	baz=215						
Q24A	Divide	88.84	48	P	P	05 51 44.6	-0.2
	baz=246						
ISCO	Idaho Springs	88.85	47	P	P	05 51 44.8	0.0
	baz=246						
D23K	Nanushuk River	88.92	10	P	P	05 51 44.0	-0.1
	baz=206						
F26K	Sheenjek River	89.01	12	P	P	05 51 44.5	0.0
	baz=213,SNR=6.2						
PZH	PanZhiHua	89.01	298	P	P	05 51 46.3	+0.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,80nm,6.5s						
N23A	Red Feather La	89.08	46	P	P	05 51 46.7	+0.9
	baz=245,SNR=7.3						
E25K	Arctic Village	89.08	12	P	P	05 51 44.9	0.0
	baz=211,SNR=5.6						
833A	Chaparral WMA,	89.24	60	P	P	05 51 47.3	+0.8
	baz=249						
KOTAN	Kotaneelee Air	89.31	24	P	P	05 51 45.6	-0.4
	baz=231						
K22A	Casper	89.42	45	P	P	05 51 47.7	+0.5
	baz=245						
EPYK	Eagle Plains	89.64	16	P	P	05 51 47.2	-0.3
	baz=220,SNR=7.2						
JCT	Junction City	89.67	58	P	P	05 51 48.8	+0.2
	baz=249						
AMTX	Amarillo	89.81	53	P	P	05 51 49.1	0.0
	baz=248						
C24K	Franklin Bluff	89.92	10	P	P	05 51 48.4	-0.3
	baz=208						
E27K	Coleen River	89.95	13	P	P	05 51 48.8	-0.1
	baz=215						
D25K	Kavik River	89.97	11	P	P	05 51 48.3	-0.7
	baz=210						
G30M	tAoh Zraii Nji	90.24	15	P	P	05 51 49.7	-0.6
	baz=220						
TROLL	Troll, Antarti	90.31	180	P	P	05 51 50.9	+0.1
ABTX	Abilene, Hawle	90.56	56	P	P	05 51 52.5	0.0
	baz=249						
SNAA	Sanae	90.61	179	P	P	05 51 52.0	-0.1
C27K	Jago River	90.72	12	P	P	05 51 52.0	-0.4
	baz=213						
C26K	Camden Bay	90.75	11	P	P	05 51 52.9	+0.4
	baz=212						
VNA3	Neumayer Olymp	90.75	176	P	P	05 51 53.0	+0.2
LZH	Lanzhou	90.75	308	*e*P	P	05 51 54.9	+1.3
LZH				pP	pP	05 53 59.9	+5.5
LZH				pmax	pmax		
	comp=Z,26nm,1.1s						
VNA2	Neumayer--Watz	91.19	177	P	P	05 51 54.8	+0.1
	baz=248,slow=2.0						
F31M	Tsiigehtchic	91.23	16	P	P	05 51 54.4	-0.3
	baz=222,SNR=19						
LAO	LASA Array	91.32	41	P	P	05 51 56.5	+0.8
	baz=245						
PLCA	Paso Flores	91.45	134	P	P	05 51 57.0	+0.3
	comp=Z,1.5nm,0.7s,baz=251,slow=7.3,SNR=5.6						
	comp=Z,1.5nm,0.7s						
RSSD	Black Hills	91.68	44	P	P	05 51 57.9	+0.2
	baz=247						
INK	Inuvik	91.92	15	P	P	05 51 57.2	-0.7
	baz=222,SNR=10						
CBKS	Cedar Bluff	92.69	50	P	P	05 52 02.4	+0.2
	baz=249						
DGMT	Dagmar	93.30	40	P	P	05 52 05.4	+0.7
	baz=247						
SONM	Songino Array	93.44	319	P	P	05 52 04.8	-0.7
	comp=Z,1.0nm,0.5s,baz=129,slow=4.3,SNR=10						
	comp=Z,1.0nm,0.5s						
YKA	Yellowknife Ar	94.40	25	P	P	05 52 08.8	-0.5
	comp=Z,3.5nm,0.9s,baz=243,slow=4.5,SNR=54						
	comp=Z,3.5nm,0.9s						
GTA	Gaotai	94.90	310	*e*P	P	05 52 13.0	+0.6
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KSU1	Kansas State U	95.08	51	P	P	05 52 13.7	+0.7
	baz=251						
C36M	Paulatuk	95.14	17	P	P	05 52 11.7	-0.8
	baz=231						
A36M	Sachs Harbour	96.52	15	P	P	05 52 18.0	-0.7
	baz=230						
ECSD	EROS Data Cent	96.55	46	P	P	05 52 18.7	-0.9
	baz=252						
ZALV	Zalesovo Beam	108.13	322	PKiKP	PKiKP	05 57 12.5	-1.4
	comp=Z,2.4nm,0.5s,baz=44,slow=0.6,SNR=15						
MKAR	Makanchi Array	109.01	314	Pdiff	Pdif	05 53 16.2	+1.2
	comp=Z,0.2nm,0.6s,baz=94,slow=3.5,SNR=2.8						
MKAR				PKiKP	PKiKP	05 57 14.6	-1.3
	comp=Z,2.6nm,0.5s,baz=155,slow=0.6,SNR=33						
ARCES	ARCESS Array B	126.28	350	PKP	PKPdf	05 57 47.6	-0.7
	comp=Z,5.8nm,0.7s,baz=68,slow=0.6,SNR=28						
GEYT	Alibeck	126.90	304	PKP	PKPdf	05 57 49.9	-0.5
	comp=Z,3.8nm,0.7s,baz=229,slow=5.7,SNR=6.7						
BOSA	Boshof	128.33	207	PKP	PKPdf	05 57 53.9	+0.2
	comp=Z,3.5nm,0.8s,baz=195,slow=4.5,SNR=5.4						
FINES	FINESS Array B	133.14	344	PKhKP	PKPpre	05 57 53.8	
	comp=Z,3.1nm,0.9s,baz=172,slow=28,SNR=3.5						
FINES				PKP	PKPdf	05 58 00.5	-1.0
	comp=Z,5.1nm,0.6s,baz=118,slow=4.5,SNR=12						
NOA	NORSAR Array B	136.35	353	PKP	PKPdf	05 58 07.3	-0.3
	comp=Z,1.5nm,0.6s,baz=13,slow=4.0,SNR=5.6						
KBZ	Khabaz	136.68	316	PKP	PKPdf	05 58 07.8	-0.7
	comp=Z,2.0nm,0.9s,baz=205,slow=1.1,SNR=4.8						
AKASG	Malin Array Be	140.48	332	PKhKP	PKPpre	05 58 08.2	
	comp=Z,1.2nm,0.3s,baz=36,slow=4.0,SNR=18						
AKASG				PKP	PKPdf	05 58 14.4	-0.9
	comp=Z,3.2nm,0.3s,baz=34,slow=2.7,SNR=13						
DIKM	Dikmen	142.65	317	⇓P	PKPdf	05 58 17.8	-1.7
SORM	Soroca	142.70	330	⇑P	PKPdf	05 58 15.9	-3.4
BZK	Bozkurt	143.31	318	⇓P	PKPab	05 58 15.7	-3.1
MILM	Milestii Mici	143.32	328	*e*PKP	PKPdf	05 58 22.0	+1.5
MILM	Milestii Mici	143.32	328	PM		05 58 22.5	
	comp=Z,20nm,0.5s						
BSEG	Bad Segeberg	143.38	351	*e*PKPbc	PKPab	05 58 18.6	-0.1
	baz=18,slow=2.8						
LEOM	Leova	143.91	328	⇓P	PKPab	05 58 21.2	+0.4
HPK	Haverah Park	143.94	3	*e*P	PKPbc	05 58 20.1	-0.5
VASR	Vaslui	144.02	329	⇑P	PKPbc	05 58 21.6	+0.5
RUE	Ruedersdorf	144.15	347	*e*PKPbc	PKPbc	05 58 21.1	-0.2
	baz=18,slow=2.8						
WME	Myndd Eilian	144.30	6	*e*P	PKPbc	05 58 20.6	-1.2
WLF1	Llynfaes	144.40	6	*e*P	PKPbc	05 58 21.7	-0.3
YRC	Rhoscolyn	144.42	6	*e*P	PKPbc	05 58 21.4	-0.7
VLDR	Vladesti	144.42	327	⇑P	PKPab	05 58 23.2	+0.4
TLCR		144.47	326	⇑P	PKPbc	05 58 22.8	+0.3
LBWR	Ladybower, Pea	144.49	3	*e*P	PKPdf	05 58 19.9	-2.4
BURAR	Bucovina Array	144.53	332	⇑P	PKPab	05 58 23.9	+0.5
OJC	Ojcow	144.55	340	*e*PKP	PKPdf	05 58 22.7	+0.1
YLL	Llanberis	144.57	6	*e*P	PKPdf	05 58 20.6	-1.9
GHRR		144.61	328	⇑P	PKPab	05 58 24.2	+0.7
BRTR	Keskin Array B	144.66	315	PKP	PKPdf	05 58 23.2	-0.1
	comp=Z,12nm,0.5s,baz=120,slow=1.7,SNR=86						
TESR	Tescani	144.67	329	⇑P	PKPdf	05 58 23.4	+0.5
RETH	Rethem/Aller,	144.68	352	*e*PKPbc	PKPdf	05 58 22.8	+0.2
	baz=18,slow=2.8						
JURR	Jurilovca	144.72	325	⇓P	PKPbc	05 58 23.8	+0.4
STHS	Stebnicka Huta	144.72	337	*e*PKP	PKPdf	05 58 22.9	0.0
SLCR	Slobozia Conac	144.75	327	⇑P	PKPdf	05 58 23.1	+0.1
IZVR	Izvoarele	144.78	327	⇓P	PKPab	05 58 24.9	+0.7
FLTG	Flechtingen	144.79	350	*e*PKPbc	PKPdf	05 58 22.8	0.0
	baz=18,slow=2.8						
NRDL	Niedersach Rie	144.81	351	*e*PKPbc	PKPdf	05 58 23.2	+0.4
	baz=18,slow=2.8						
CFR	Carcaliu	144.84	326	⇑P	PKPbc	05 58 24.0	+0.3
FOEL	Foel Wylfa	144.90	5	*e*P	PKPdf	05 58 23.5	+0.4
TPGR	Topolog	144.90	326	⇓P	PKPbc	05 58 24.6	+0.7
ODBI	Odobesti	145.00	328	⇑P	PKPab	05 58 25.3	+0.2
KSP	Ksiaz	145.06	343	*e*PKP	PKPbc	05 58 24.6	+0.4
NIE	Niedzica	145.06	338	*e*PKP	PKPab	05 58 25.5	+0.3
ASSE	Asse, Remlinge	145.07	350	*e*PKPbc	PKPdf	05 58 24.0	+0.8
	baz=18,slow=2.8						
VRI	Vrincioaia	145.09	329	⇑P	PKPbc	05 58 24.5	+0.1
PLOR	Plostina	145.14	329	⇑P	PKPdf	05 58 24.5	+0.7
ANTO	Ankara	145.16	315	⇓P	PKPdf	05 58 24.1	+0.1
TIRR	Tirgusor	145.17	325	⇑P	PKPbc	05 58 24.9	+0.2
CWF	Charnwood Fore	145.17	3	*e*P	PKPdf	05 58 23.3	-0.2
BMR	Baia Mare	145.24	334	⇓P	PKPbc	05 58 25.4	+0.6
TRPA	Tarpa	145.27	335	⇑P	PKPbc	05 58 25.2	+0.3
KDZE	Karadeniz Ereo	145.28	319	⇑P	PKPbc	05 58 25.4	+0.2
EFOR	EFORIE	145.29	325	⇓P	PKiKP	05 58 27.9	-0.2
HLM1	Long Mynd	145.29	5	*e*P	PKPdf	05 58 24.4	+0.7
IBBN	Ibbenburen	145.31	353	*e*PKPbc	PKPbc	05 58 24.8	0.0
	baz=18,slow=2.8						
ARCR	ARCALIA	145.32	332	⇓P	PKPbc	05 58 26.0	+0.9
OSTC	Ostas	145.34	343	*e*PKP	PKPdf	05 58 24.6	+0.7
CHVC	Chvalec	145.35	344	*e*PKP	PKPbc	05 58 25.3	+0.2
COVR	Voineasa-Covas	145.36	329	⇓P	PKPbc	05 58 25.3	0.0
OZUR		145.38	330	⇑P	PKPbc	05 58 26.0	+0.7
CLZ	Clausthal	145.40	350	*e*PKPbc	PKPbc	05 58 25.2	-0.1
	baz=18,slow=2.8						
OKC	Ostrava-Krasne	145.41	341	*e*PKP	PKPbc	05 58 25.3	0.0
CLL	Collm	145.42	347	⇑*i*PKPbc	PKPbc	05 58 25.2	0.0
	comp=Z,67nm,1.0s						
CLL	Collm	145.42	347	*e*PKPbc	PKPdf	05 58 25.0	+1.0
	baz=18,slow=2.8						
UPC	Upice	145.44	344	*e*PKP	PKPbc	05 58 25.6	+0.3
MANR	Mangalia	145.49	324	⇑P	PKPbc	05 58 26.1	+0.5
DPC	Dobruska-Polom	145.50	343	*e*PKP	PKPbc	05 58 26.1	+0.5
LANS	Liptovska Anna	145.57	339	*e*PKP	PKPab	05 58 27.0	-0.3
LPW	Lampeter	145.59	6	*e*P	PKPdf	05 58 25.1	+0.8
BRG	Berggiesshubel	145.62	346	*i* PKP	PKPbc	05 58 26.0	+0.2
BRG				Amp		05 58 27.6	
	comp=Z,24nm,0.8s						
BRG	Berggiesshubel	145.62	346	P	PKiKP	05 58 33.5	+4.9
BRG				Amp		05 58 34.2	
	comp=Z,6.8nm,0.7s						
BRG	Berggiesshubel	145.62	346	*e*PKPbc	PKPbc	05 58 25.8	0.0
	baz=18,slow=2.8						
MORC	Moravsky Berou	145.65	341	⇑P	PKPbc	05 58 26.2	+0.2
MORC	Moravsky Berou	145.65	341	*e*PKP	PKPbc	05 58 26.2	+0.2
DOPR	Dopca	145.67	330	⇑P	PKPbc	05 58 27.1	+0.9
RSBS	Rosebush, Pemb	145.68	7	*e*P	PKPdf	05 58 24.6	+0.2
ISR	Istrita	145.70	328	⇓P	PKPbc	05 58 26.8	+0.5
FBE	Freiberg	145.71	347	*e*PKPbc	PKPbc	05 58 26.4	+0.3
	baz=18,slow=2.8						
MLR	Muntele Rosu	145.74	329	⇑P	PKPbc	05 58 26.9	+0.4
GTTG	Gottingen	145.75	351	*e*PKPbc	PKPbc	05 58 26.2	0.0
	baz=18,slow=2.8						
NEUB	Neuenburg	145.76	348	*e*PKPbc	PKPbc	05 58 26.1	-0.1
	baz=18,slow=2.8						
PVCC	Panska Ves	145.79	345	*e*PKP	PKPbc	05 58 26.7	+0.4
CBBR	Cluj-Babes-Bol	145.91	332	⇓P	PKPbc	05 58 27.4	+0.6
MAUC	Maruska	145.93	341	*e*PKP	PKPbc	05 58 26.8	0.0
CJR	Cluj-Napoca	145.94	332	⇑P	PKPbc	05 58 27.5	+0.6
MONM	Monmouth	145.97	5	*e*P	PKPdf	05 58 26.2	+1.4
STRD	Stroud	146.08	4	*e*P	PKPdf	05 58 26.2	+1.2
MARR	Marisel-Cluj	146.17	333	⇑P	PKPbc	05 58 27.8	+0.1
BUG	Bochum--Univer	146.22	353	*e*PKPbc	PKPbc	05 58 27.4	-0.1
	baz=18,slow=2.8						
DRGR		146.26	333	⇓P	PKPbc	05 58 28.1	+0.2
PRU	Pruhonice	146.30	345	*e*PKP	PKPbc	05 58 27.6	-0.2
PRU				*e*x	x	05 58 30.3	
KASTN	Kahler Asten	146.31	352	*e*PKPbc	PKPbc	05 58 27.3	-0.5
	baz=18,slow=2.8						
MOX	Moxa	146.33	348	*e*PKPbc	PKPbc	05 58 27.7	-0.2
	baz=18,slow=2.8						
VRAC	Vranov	146.35	342	⇑P	PKPbc	05 58 28.8	+0.8
VRAC	Vranov	146.35	342	*e*PKP	PKPbc	05 58 28.1	+0.1
VYHS	Vyhne	146.35	339	*e*PKP	PKPbc	05 58 28.4	+0.4
PLN	Plauen	146.38	348	*e*PKPbc	PKPbc	05 58 28.1	+0.1
	baz=18,slow=2.8						
TANN	Tannenbergstha	146.38	347	*e*PKPbc	PKPbc	05 58 28.0	-0.1
	baz=18,slow=2.8						
WERD	Werda	146.38	347	*e*PKPbc	PKPbc	05 58 27.9	-0.1
	baz=18,slow=2.8						
JAVC	Velka Javorina	146.42	340	*e*PKP	PKPbc	05 58 29.3	+1.1
GUNZ	Gunzen	146.46	347	*e*PKPbc	PKPbc	05 58 28.3	0.0
	baz=18,slow=2.8						
PSZ	Piszkesteto	146.47	337	⇑P	PKPbc	05 58 28.5	+0.1
WERN	Wernitzgruen	146.52	347	*e*PKPbc	PKPbc	05 58 28.6	+0.2
	baz=18,slow=2.8						
NKC	Novy Kostel	146.55	347	*e*PKP	PKPbc	05 58 28.3	-0.2
WOL	Wolverton	146.60	3	*e*P	PKPbc	05 58 27.9	-0.7
KRUC	Moravsky	146.63	342	*e*PKP	PKPbc	05 58 28.7	0.0
TREC	Trest	146.68	343	*e*PKP	PKPbc	05 58 28.9	0.0
MANZ	Manzenberg	146.86	347	*e*PKPbc	PKPbc	05 58 29.4	0.0
	baz=18,slow=2.8						
MODS	Modra-Piesok	146.97	340	*e*PKP	PKPbc	05 58 30.4	+0.7
ROTZ	Rotzenmuhle	147.05	347	*e*PKPbc	PKPbc	05 58 29.9	+0.1
	baz=18,slow=2.8						
SBD	Saint Breward	147.05	7	*e*P	PKPdf	05 58 28.6	+1.9
SIRR	Siria	147.12	334	⇑P	PKPdf	05 58 28.7	+1.6
MEM	Membach	147.16	355	*d*PKP	PKPbc	05 58 29.6	-0.4
BTNL	Ternell	147.18	354	*d*PKP	PKPbc	05 58 30.2	+0.1
BSTI	Sart Tilman	147.23	355	*d*PKP	PKPbc	05 58 30.1	-0.1
TNS	Taunus Mts	147.27	352	*e*PKPbc	PKPbc	05 58 30.3	-0.1
	baz=18,slow=2.8						
GRF	Grafenberg Arr	147.32	348	*e*PKPbc	PKPbc	05 58 30.7	+0.2
	baz=18,slow=2.8						
KHC	Kasperske Hory	147.33	345	*e*PKP	PKPdf	05 58 27.0	-0.3
KHC				*e*x	x	05 58 30.8	
KHC				*e*x	x	05 58 34.2	
SNF	Seneffe	147.39	357	*d*PKP	PKPab	05 58 33.8	-0.7
BHOU	Houvegnez	147.42	355	*d*PKP	PKPbc	05 58 31.0	+0.2
	comp=Z,17nm,1.1s						
CKRC	Cesky Krumlov	147.43	344	*e*PKP	PKPbc	05 58 31.1	+0.2
BGES	Gesves	147.46	356	*d*PKP	PKPbc	05 58 30.5	-0.4
GEC2	GERESS Array S	147.56	345	*e*PKPbc	PKPbc	05 58 31.1	-0.2
	baz=18,slow=2.8						
GERES	GERESS Array B	147.56	345	PKP	PKPdf	05 58 27.5	-0.3
	comp=Z,21nm,0.6s,baz=351,slow=1.8,SNR=15						
GERES				PKPbc	PKPbc	05 58 31.2	-0.1
	comp=Z,21nm,0.6s,baz=29,slow=3.3,SNR=81						
BMRD	Maredsous	147.57	356	*d*PKP	PKPbc	05 58 31.0	-0.1
RCHB	Rochefort	147.68	355	*d*PKP	PKPbc	05 58 30.9	-0.5
DOU	Dourbes	147.78	356	*d*PKP	PKPbc	05 58 31.0	-0.7
CONA	Conrad Observa	147.81	342	*i* PKiKP	PKPbc	05 58 32.4	+0.5
	comp=Z,23nm,0.6s,SNR=15						
RONA	Rosalia, Austr	147.88	341	*i* PKP	PKPbc	05 58 32.5	+0.4
	comp=Z,26nm,0.6s,SNR=13						
WLF	Walferdange	148.09	354	*d*PKP	PKPbc	05 58 32.9	+0.5
WLF	Walferdange	148.09	354	*e*PKPbc	PKPbc	05 58 33.0	+0.5
	baz=18,slow=2.8						
MOA	Molln	148.33	343	*e*PKP	PKPbc	05 58 33.2	0.0
	comp=Z,5.8nm,0.5s						
ARSA	Arzberg	148.52	341	*e*PKP	PKPdf	05 58 30.0	+0.7
	comp=Z,3.0nm,0.8s						
ARSA				*e*PKP	PKPbc	05 58 33.6	-0.1
	comp=Z,14nm,1.3s						
STU	Stuttgart	148.57	350	*e*PKPbc	PKPbc	05 58 33.6	-0.1
	baz=18,slow=2.8						
BIOA	Bad Ischl, Aus	148.65	344	*e*PKP	PKPbc	05 58 33.6	-0.4
	comp=Z,12nm,0.5s						
JSA	Saint Aubin	148.66	5	*e*P	PKPbc	05 58 33.4	-0.4
FUR	Furstenfeldbru	148.76	347	*e*PKPbc	PKPbc	05 58 34.1	-0.1
	baz=18,slow=2.8						
RJOB	Jochberg	148.82	345	*e*PKPbc	PKPbc	05 58 34.0	-0.5
	baz=18,slow=2.8						
RDO	Rodhopi	148.94	323	P	PKPbc	05 58 34.2	-0.6
BFO	Black Forest	149.13	351	*e*PKPbc	PKPbc	05 58 34.9	-0.2
	baz=18,slow=2.8						
VTS	Vitosha	149.16	328	⇑P	PKiKP	05 58 39.7	+3.2
SOKA	Soboth	149.18	342	*e*PKP	PKPdf	05 58 30.1	-0.3
	comp=Z,2.2nm,1.0s						
SOKA				*i* PKP	PKPbc	05 58 34.9	-0.5
	comp=Z,22nm,1.1s,SNR=11						
PERS	Pernice	149.19	341	*i* PKPbc	PKPbc	05 58 34.8	-0.6
KBA	Koelnbreinsper	149.29	344	*e*PKP	PKPdf	05 58 29.8	-0.9
	comp=Z,3.7nm,1.6s						
KBA				*i* PKP	PKPbc	05 58 35.0	-0.8
	comp=Z,15nm,0.5s,SNR=15						
SMTH	Samothraki Isl	149.38	322	P	PKPbc	05 58 35.1	-0.8
UBR	Ueberruh	149.46	348	*e*PKPbc	PKPbc	05 58 35.7	-0.3
	baz=18,slow=2.8						
OBKA	Obir	149.47	342	*e*PKP	PKPdf	05 58 30.1	-0.8
	comp=Z,2.3nm,0.8s						
OBKA				*e*PKP	PKPbc	05 58 35.2	-0.9
	comp=Z,7.5nm,1.1s						
OBKA	Obir	149.47	342	⇑*i*P	PKPbc	05 58 34.5	-1.6
WATA	Walderalm	149.48	346	*i* PKP	PKPbc	05 58 35.9	-0.3
	comp=Z,12nm,0.5s,SNR=7.8						
RETA	Reutte	149.51	347	*i* PKP	PKPbc	05 58 36.0	-0.1
	comp=Z,8.8nm,0.5s,SNR=5.8						
RETA				*e*PKP	PKPab	05 58 43.3	0.0
	comp=Z,7.4nm,0.6s						
WTTA	Wattenberg	149.53	346	*e*PKP	PKPdf	05 58 30.4	-0.7
	comp=Z,10nm,1.7s						
WTTA				*i* PKP	PKPbc	05 58 36.2	-0.1
	comp=Z,26nm,0.5s,SNR=14						
MOTA	Moosalm	149.58	347	*e*PKP	PKPdf	05 58 31.2	+0.1
	comp=Z,4.7nm,0.9s						
MOTA				*i* PKP	PKPbc	05 58 36.1	-0.2
	comp=Z,28nm,0.9s,SNR=7.9						
MOTA				*e*PKP	PKPab	05 58 43.4	-0.4
	comp=Z,19nm,0.9s						
KAVA	Kavala	149.61	324	P	PKPbc	05 58 35.9	-0.6
MYKA	Terra Mystica	149.62	343	*i* PKP	PKPbc	05 58 35.6	-0.8
	comp=Z,19nm,0.5s,SNR=11						
SQTA	Sankt Quirin	149.67	347	*e*PKP	PKPdf	05 58 31.1	-0.2
	comp=Z,6.7nm,0.9s						
SQTA				*i* PKP	PKPbc	05 58 36.4	-0.1
	comp=Z,18nm,0.5s,SNR=12						
NVR	Nevrokopi	149.73	325	P	PKPbc	05 58 37.2	+0.4
ABTA	Abfaltersbach	149.81	345	*e*PKP	PKPdf	05 58 31.1	-0.3
	comp=Z,7.0nm,0.9s						
ABTA				*i* PKP	PKPbc	05 58 36.2	-0.7
	comp=Z,16nm,0.6s,SNR=13						
DAVA	Damuels	149.88	348	*i* PKiKP	PKPbc	05 58 37.6	+0.5
	comp=Z,33nm,1.2s,SNR=10						
LJU	Ljubljana	149.90	342	*e*PKPbc	PKPbc	05 58 36.7	-0.3
LIA	Limnos Island	149.95	322	P	PKPbc	05 58 36.5	-0.8
FETA	Feichten	149.96	347	*e*PKP	PKPdf	05 58 31.5	-0.2
	comp=Z,6.2nm,0.8s						
FETA				*i* PKP	PKPbc	05 58 37.3	0.0
	comp=Z,20nm,0.7s,SNR=7.2						
CEY	Cerknica	150.21	341	*i* PKPdf	PKPdf	05 58 32.0	0.0
CEY	Cerknica	150.21	341	⇑*i*P	PKPbc	05 58 37.3	-0.5
SJES	Sjenica	150.24	332	⇑*i*P	PKPbc	05 58 37.9	-0.1
SMG	Samos	150.25	317	P	PKPbc	05 58 37.3	-0.8
OUR	Ouranopolis	150.36	324	P	PKPbc	05 58 37.1	-1.1
STIP	Stip	150.37	328	*i* P	PKPbc	05 58 37.1	-1.1
VAY	Valandovo	150.44	327	*i* P	PKPbc	05 58 37.3	-1.1
SKDS	Skadanscina	150.50	342	⇑*i*P	PKPbc	05 58 37.7	-0.7
SKO	Skopje	150.54	329	*i* P	PKPbc	05 58 38.3	-0.3
UPM	Unac-Piva	150.75	333	⇑*i*P	PKPbc	05 58 38.3	-1.0
BRY	Bratogost	151.15	333	⇑*i*P	PKPbc	05 58 39.3	-0.9
PDG	Podgorica	151.22	332	⇑P	PKPbc	05 58 38.6	-1.5
PHP	Peshkopia	151.25	329	P	PKPbc	05 58 39.7	-0.6
TREB	Trebinje	151.38	333	*e*P	PKPbc	05 58 39.1	-1.4
DRME	Dracevica, Mon	151.44	332	⇑*i*P	PKPbc	05 58 40.1	-0.6
FNA	Florina	151.45	327	P	PKPbc	05 58 40.0	-0.8
OHR	Ohrid	151.50	328	*i* P	PKPbc	05 58 40.8	-0.1
STON	Ston	151.53	334	⇑*i*P	PKPbc	05 58 39.6	-1.2
HCY	Herceg Novi	151.54	333	⇑*i*P	PKPbc	05 58 39.5	-1.4
ATAL	Atalanti	152.01	322	P	PKPbc	05 58 40.8	-1.2
VLY	Voula,Athens	152.09	320	P	PKPbc	05 58 40.6	-1.6
MAKR	Makrakomi, Fth	152.30	324	P	PKPbc	05 58 42.0	-0.7
LOUT	Loutraki	152.50	321	P	PKPbc	05 58 41.5	-1.6
ANX	Ano Chora	152.71	323	P	PKPbc	05 58 43.6	-0.1
EFP	Efpalio	152.83	323	P	PKPbc	05 58 44.0	+0.2
GUR	Goura	152.91	322	P	PKPbc	05 58 43.2	-1.0
KLV	Kalavryta, Ach	152.95	322	P	PKPbc	05 58 43.5	-0.7
POLO	Lamas de Olo	155.31	17	*e*PKPab	PKPab	05 59 08.5	+0.3
PVRL	Vila Real	155.42	17	*e*PKPab	PKPab	05 59 08.9	+0.3
MVO	Moncorvo	155.71	16	*e*PKPab	PKPab	05 59 09.9	0.0
PVIS	Viseu	155.89	18	*e*PKPab	PKPab	05 59 10.6	0.0
COI	Coimbra	156.21	19	*e*PKPab	PKPab	05 59 13.3	+1.4
ESDC	Sonseca Array	157.81	11	PKP	PKPdf	05 58 43.0	+0.2
	comp=Z,1.0nm,1.1s,baz=8.4,slow=1.8,SNR=5.2						
ESDC				PKPab	PKPab	05 59 18.6	-0.3
	comp=Z,2.7nm,0.8s,baz=342,slow=4.1,SNR=10						
EVO	Evora	157.86	20	*e*PKPab	PKPab	05 59 19.1	-0.1
KEST	Kesra	160.90	340	PKPab	PKPab	05 59 32.4	-0.2
	comp=Z,3.0nm,0.7s,baz=45,slow=1.4,SNR=4.1						
DBIC	Dimbokro	167.27	151	PKP	PKPdf	05 58 51.1	-1.4
	comp=Z,3.1nm,0.7s,baz=177,slow=7.3,SNR=3.8						
TORD	Torodi Ar. Bea	175.26	183	PKP	PKPdf	05 58 55.2	-1.2
	comp=Z,2.8nm,0.9s,baz=309,slow=1.5,SNR=14						
TORD				PKPab	PKPab	06 00 36.2	-0.2
	comp=Z,1.4nm,0.8s,baz=173,slow=4.0,SNR=5.4						

MOS ***17*** *05:45:52.8±0.0, 43°.20N×45°.13E, h11*^{km}*, MPVA3.2*
NORS ***17*** *05:45:53.4±0.0, 43°.09N×45°.15E, h15*^{km}*, MPVA3.5*
TIF ***17*** *05:45:53.5, 43°.23N×45°.10E, h18*^{km}*±1*^{km}
DRS ***17*** *05:45:56.0±0.0, 43°.03N×45°.43E, h9*^{km}
ISC 17 05:45:53.8±1.0, **43°.20N**±0°.03×**45°.16E**±0°.02, **h14**^{km}±9^{km},
n38, σ**0**^{s}**.93**/64, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMGR	Komgaron	0.26	235	*e*Pg	Pg	05 45 59.2	-0.2
KMGR				*e*Sg	Sb	05 46 04.0	-0.6
VLKR	Vladikavkaz	0.38	246	*e*Pg	Pb	05 46 02.3	-0.1
VLKR				*e*Sg	Sb	05 46 08.4	+0.2
GROC	Groznyy	0.47	90	*e*Pg	Pb	05 46 03.5	-0.3
SHTL	Shatili	0.55	180	*e*Pg	Pb	05 46 05.4	+0.1
SHTL	Shatili	0.55	180	P	Pb	05 46 05.4	+0.1
ARNR	Ardon	0.64	268	*e*Pg	Pg	05 46 05.5	-0.8
ARNR				*e*Sg	Sn	05 46 17.9	-0.4
LACR	Lac	0.73	239	*e*Pg	Pb	05 46 08.2	-0.2
LACR				*e*Sg	Sn	05 46 19.7	-1.1
STDR	Stavd-Durt	0.81	282	*e*Pg	Pn	05 46 10.7	-0.1
STDR				*e*Sg	Sn	05 46 22.5	-0.2
GUDG	Gudauri	0.89	214	*e*Pg	Pg	05 46 10.8	-0.4
GUDG				*e*Sg	Sb	05 46 23.7	+0.7
GUDG	Gudauri	0.89	214	P	Pg	05 46 10.8	-0.4
GUDG				S	Sb	05 46 23.7	+0.7
LSNR	Lesken	0.97	275	*e*Pg	Pn	05 46 13.7	+0.6
LSNR				*e*Sg	Sn	05 46 29.2	+2.5
ZEI	Tsey	1.01	246	*e*Pg	Pb	05 46 13.0	-0.2
ZEI				*e*Sg	Sn	05 46 27.6	-0.2
DLMR	Dylym	1.09	97	*e*Pg	Pb	05 46 13.7	-0.7
DLMR				*e*Sg	Sn	05 46 30.2	+0.7
DIGR	Digorskoe uzhe	1.19	256	*e*Pg	Pn	05 46 15.7	-0.6
DIGR				*e*Sg	Sb	05 46 32.0	+0.3
DBC	Dubki	1.24	98	*e*Pg	Pg	05 46 18.0	+0.3
	28nm,0.2s						
DBC				*e*Sg	Sg	05 46 34.8	+1.0
	56nm,0.4s						
UNCR	Uncukul	1.30	112	*e*Pg	Pg	05 46 19.4	+0.5
	18nm,0.3s						
XNZR	Khunzakh	1.32	120	*e*Pg	Pg	05 46 19.7	+0.5
	12nm,0.3s						
KRNR	Karanay	1.34	106	*e*Pg	Pg	05 46 19.7	+0.1
	13nm,0.5s						
ONI	Oni	1.39	244	*e*Pg	Pb	05 46 19.5	-0.1
ONI				*e*Sg	Sg	05 46 37.9	-0.8

ONI	Oni	1.39	244	P	Pb	05 46 19.5	-0.1
ONI				S	Sg	05 46 37.9	-0.8
KBTC	Kuba-Taba	1.41	296	*e*Pg	Pb	05 46 20.4	+0.5
KBTC				*e*Sg	Sg	05 46 40.0	+0.7
ARKR	Arakani	1.48	113	*e*Pg	Pg	05 46 22.9	+0.6
	1.0nm,0.4s						
ARKR				*e*Sg	Sg	05 46 43.9	+2.5
	45nm,0.1s						
GNBR	Gunib	1.56	121	*e*Pg	Pg	05 46 23.3	-0.5
GNBR				*e*Sg	Sg	05 46 44.8	+0.7
LGD	Lagodekhi	1.59	149	*e*Pg	Pg	05 46 23.6	-0.7
LGD	Lagodekhi	1.59	149	P	Pg	05 46 23.6	-0.7
KBZ	Khabaz	1.73	288	*e*Pg	Pn	05 46 23.6	+0.3
KBZ				*e*Sg	Sb	05 46 47.3	+0.5
DGRG	David-gareji	1.76	175	*e*Pg	Pg	05 46 27.5	-0.1
DGRG	David-gareji	1.76	175	P	Pg	05 46 27.5	-0.1
NEY	Neytrino	1.78	272	*e*Pg	Pn	05 46 24.7	+0.4
NEY				*e*Sg	Sb	05 46 48.2	-0.3
KMKR	Kumukh	1.79	126	*e*Pg	Pb	05 46 26.1	-0.4
KMKR				*e*Sg	Sg	05 46 51.7	+0.2
TRLG	Trialeti	1.84	205	*e*Pg	Pb	05 46 26.9	-0.4
TRLG				*e*Sg	Sg	05 46 53.6	+0.6
TRLG	Trialeti	1.84	205	P	Pb	05 46 26.9	-0.4
TRLG				S	Sg	05 46 53.6	+0.6
BEYR	Belyy Ugol+	1.88	296	*e*Pg	Pn	05 46 23.8	-1.8
BEYR				*e*Sg	Sn	05 46 49.7	+0.7
SHA1	Shidzhatmaz	1.90	287	*e*Pg	Pb	05 46 28.1	-0.2
SHA1				*e*Sg	Sb	05 46 52.5	+0.6
DDFL	Dedoflistskaro	1.90	158	*e*Pn	Pg	05 46 32.3	+2.0
DDFL	Dedoflistskaro	1.90	158	P	Pg	05 46 32.3	+2.0
KIV	Kislovodsk	1.94	294	*e*Pg	Pn	05 46 26.4	-0.1
KIV				*e*Sg	Sb	05 46 52.9	-0.3
DRN	Derbent	2.62	116	*e*Pn	Pb	05 46 38.0	-2.5
DRN				*e*Sn	Sb	05 47 09.8	-2.7

JMA 17 05:48:30.7±0.1**, 35°.4N**±0°.5×**133°.8E**±0°.5**, h12**^{km}±1^{km}**,**
MV0.3/10**, EASTERN TOTTORI PREF, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKR	Kurayoshi	0.04	183	P	Pg	05 48 32.8	-0.1
JKR				*e*S	Sg	05 48 34.2	-0.3
JAD	Aida	0.55	149	*e*S	Sg	05 48 49.2	+0.3

WEL 17 06:08:35.1±0.7**, 42°S**±3°×**17°4E**±°**, h5**^{km}±3^{km}**, M2.1**/4**,**
ML2.1/3**, MLv2.1**/4**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=135.2, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSWZ	Blackbirch Sta	0.33	20	P	Pg	06 08 41.9	+0.4
BSWZ				S	Sg	06 08 47.3	+1.3
KHZ	Kahutara	0.41	199	P	Pg	06 08 43.3	+0.3
KHZ				S	Sg	06 08 49.4	+1.0
CMWZ	Cape Campbell	0.46	53	P	Pb	06 08 44.9	-0.8
TUWZ	Tuamarina	0.62	16	P	Pg	06 08 47.3	+0.3
THZ	Tophouse	0.66	293	P	Pg	06 08 47.0	-0.9
THZ				S	Sg	06 08 57.3	+0.9
TCW	Tory Channel	0.92	27	P	Pg	06 08 52.2	-0.5
MRNZ	Matariki Terra	0.96	311	P	Pg	06 08 53.7	+0.2
GVZ	Greta Valley S	1.07	208	P	Pg	06 08 55.4	-0.1
LTZ	Lake Taylor	1.31	234	P	Pn	06 08 59.2	-0.8
DSZ	Denniston Nort	1.46	281	P	Pg	06 09 03.0	0.0
QRZ	Quartz Range	1.50	323	P	Pb	06 09 03.0	-0.4
MQZ	McQueen’s Vall	1.85	205	P	Pn	06 09 04.6	-2.8
MTHZ	Maungataniwha	3.97	38	P	Pn	06 09 36.9	+0.3

SJA ***17*** *06:10:54.8±1.6, 22°.24S×67°.67W, h150^{km}, ML4.7, MW4.5,*
Hypocentre not reviewed by the ISC
NEIC ***17*** *06:10:55.5±1.7, 22°.28S±0°.06×67°.51W±0°.09, h157^{km}±6^{km},*
mb4.7/47, Mwr4.8(GUC), Error ellipse: s-maj=11.8km
s-min=8.5km az=80.0
IDC ***17*** *06:10:55.4±0.7, 22°.25S×67°.47W, h157^{km}±6^{km}, mb4.3/14,*
mbtmp4.8/21, MS3.5/2, Error ellipse: s-maj=13.5km
s-min=10.7km az=33.0
SCB ***17*** *06:10:56.6±1.3, 22°.28S×67°.67W, h156^{km}±12^{km}, ML5.1/5,*
MW4.5, Error ellipse: s-maj=4.4km s-min=3.4km az=0.0
VAO ***17*** *06:10:56.4±0.2, 22°.15S×67°.56W, h160^{km}, mb4.9*
GUC ***17*** *06:10:57.3±0.8, 22°.32S×67°.76W, h175^{km}±7^{km}, ML5.1*
ISC 17 06:10:55.6±0.5**, 22°.25S**±0°.04×**67°.62W**±0°.04**, h164**^{km}±4^{km}**,**
n265, σ**1^{s}.55**/297**, mb4.7**/41**, 9C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.25	253	P	Pn	06 11 25.2	+0.9
	2µm,0.5s,baz=68,slow=4.7,SNR=2908						
LVC				S	Sn	06 11 46.9	+0.7
	2µm,0.5s,baz=300,slow=20,SNR=111						
LVC				LR	LR	06 12 03.9	
	comp=Z,900nm,18.2s,baz=32,slow=50						
LVC	Limon Verde	1.25	253	Pn	Pn	06 11 24.9	+0.7
LVC	Limon Verde	1.25	253	*e*P	Pn	06 11 25.2	+0.9
LVC				*e*S	Sn	06 11 46.9	+0.7
LVC	Limon Verde	1.25	253	Pg	Pn	06 11 25.4	+1.2
LVC	Limon Verde	1.25	253	*e*P	Pn	06 11 25.2	+0.9
LVC	Limon Verde	1.25	253	*i* P		06 11 24.0	
LVC				IAML		06 11 49.4	
	comp=Z,1µm,0.5s						
PB09	IPOC Station P	1.57	286		Pn	06 11 28.4	+1.3
PB09	IPOC Station P	1.57	286	⇑*i*P	Pn	06 11 28.6	+1.5
PB09				*e*S	Sn	06 11 52.4	+0.9
PB09				IAML		06 11 55.4	
	comp=N,5µm,0.3s						
PB09	IPOC Station P	1.57	286	Pg	Pn	06 11 28.7	+1.5
PB09	IPOC Station P	1.57	286	*i* P		06 11 27.0	
PB09				IAML		06 11 53.4	
	comp=Z,3µm,0.7s						
PB06	IPOC Station P	1.86	255		Pn	06 11 31.1	+0.8
PB06	IPOC Station P	1.86	255	Pg	Pn	06 11 31.1	+0.8
YJA	Yavi	1.95	88	Pg	Pn	06 11 33.0	+1.5
YJA	Yavi	1.95	88	*i* P		06 11 32.0	
YJA				IAML		06 12 04.2	
	comp=Z,1µm,0.6s						
PB15	IPOC Station P	1.96	240		Pn	06 11 31.8	+0.5
PB03	IPOC Station P	1.99	275		Pn	06 11 31.9	+0.2
MOCB	Mochara	2.09	62	Pg	Pn	06 11 34.9	+1.8
MOCB				Sg	Sn	06 12 03.5	+1.5
MOCB				IAML		06 12 12.7	
	comp=Z,4µm,0.5s						
PB01	IPOC Station P	2.11	304		Pn	06 11 33.5	+0.5
PB01	IPOC Station P	2.11	304	⇑*i*P	Pn	06 11 33.7	+0.7
PB01				*e*S	Sn	06 12 02.0	+0.1
PB01				IAML		06 12 03.5	
	comp=N,28µm,0.3s						
PB01	IPOC Station P	2.11	304	Pg	Pn	06 11 33.8	+0.8
PB01				Sg	Sn	06 12 02.6	+0.8
PB01				IAML		06 12 04.3	
	comp=N,10µm,0.2s						
PB01	IPOC Station P	2.11	304	*i* P		06 11 32.0	
PB01				IAML		06 12 03.3	
	comp=Z,8µm,0.2s						
PB07	IPOC Station P	2.17	283		Pn	06 11 34.4	+0.6
PB07	IPOC Station P	2.17	283	⇑*i*P	Pn	06 11 34.3	+0.6
PB07				*e*S	Sn	06 12 02.5	-0.6
PB07				IAML		06 12 03.3	
	comp=N,13µm,0.4s						
PB07	IPOC Station P	2.17	283	Pg	Pn	06 11 34.4	+0.6
PB07				Sg	Sn	06 12 02.5	-0.6
PB07				IAML		06 12 03.3	
	comp=N,10µm,0.4s						
PB07	IPOC Station P	2.17	283	*i* P		06 11 33.0	
PB07				IAML		06 12 04.6	
	comp=Z,5µm,0.4s						
HJA	Humahuaca	2.25	116	*i* P		06 11 35.0	
HJA				IAML		06 12 11.0	
	comp=Z,471nm,0.7s						
PB02	IPOC Station P	2.31	293		Pn	06 11 35.6	+0.3
PB02	IPOC Station P	2.31	293	Pg	Pn	06 11 35.6	+0.3
PB02				Sg	Sn	06 12 04.9	-1.0
PB02				IAML		06 12 06.1	
	comp=Z,11µm,0.4s						
PB04	IPOC Station P	2.35	267	Pg	Pn	06 11 36.0	+0.2
PB04				Sg	Sn	06 12 06.2	-0.6
PB04				IAML		06 12 08.3	
	comp=Z,9µm,0.2s						
PB08	IPOC Station P	2.54	325	Pg	Pn	06 11 40.2	+1.9
TA01	Diego Aracena	2.92	305	Pn	Pn	06 11 41.8	-0.7
TA01	Diego Aracena	2.92	305	⇑*i*P	Pn	06 11 42.0	-0.5
TA01				*e*S	Sn	06 12 16.9	-1.9
TA01				IAML		06 12 18.4	
	comp=E,8µm,0.3s						
TA01	Diego Aracena	2.92	305	*i* P		06 11 41.0	
TA01				IAML		06 12 23.5	
	comp=Z,3µm,0.3s						
GO01	Chusmiza	2.96	330		Pn	06 11 44.1	+0.5
GO01	Chusmiza	2.96	330	Pg	Pn	06 11 44.7	+1.1
PB10	IPOC Station P	2.99	244	Pn	Pn	06 11 42.4	-1.0
PB10	IPOC Station P	2.99	244	⇑*i*P	Pn	06 11 43.0	-0.3
PB10				*e*S	Sn	06 12 17.7	-2.7
PB10				IAML		06 12 18.7	
	comp=N,2µm,0.3s						
PB10	IPOC Station P	2.99	244	*i* P		06 11 42.0	
PB10				IAML		06 12 23.2	
	comp=Z,2µm,0.6s						
TA02	Huaiquique	3.06	310		Pn	06 11 43.1	-1.2
TA02	Huaiquique	3.06	310	⇑*i*P	Pn	06 11 43.6	-0.7
TA02				*e*S	Sn	06 12 19.9	-2.1
TA02				IAML		06 12 26.4	
	comp=E,7µm,0.5s						
TA02	Huaiquique	3.06	310	*i* P		06 11 43.0	
TA02				IAML		06 12 23.9	
	comp=Z,3µm,0.7s						
SLA	San Lorenzo	3.13	142	Pg	Pn	06 11 47.1	+1.7
SLA	San Lorenzo	3.13	142	*i* P		06 11 46.0	
GO02	Mina Guanaco	3.42	212	Pn	Pn	06 11 49.0	-0.1
GO02	Mina Guanaco	3.42	212	⇓*i*P	Pn	06 11 49.2	+0.2
GO02				*e*S	Sn	06 12 28.9	-1.8
GO02	Mina Guanaco	3.42	212	Pg	Pn	06 11 49.4	+0.3
GO02	Mina Guanaco	3.42	212	*i* P		06 11 48.0	
PB14	IPOC Station P	3.48	227	Pn	Pn	06 11 50.3	+0.4
PB14	IPOC Station P	3.48	227	*e*P	Pn	06 11 50.1	+0.2
PB14				*e*S	Sn	06 12 29.2	-3.0
PB14				IAML		06 12 32.9	
	comp=E,925nm,0.5s						
PB14	IPOC Station P	3.48	227	*i* P		06 11 49.0	
PB14				IAML		06 12 34.7	
	comp=Z,1µm,0.5s						
MNMC	Minye Minye	3.61	329		Pn	06 11 51.8	+0.2
MNMCX	Minye Minye	3.61	329	*i* P		06 11 51.0	
MNMCX				IAML		06 12 38.6	
	comp=Z,5µm,0.6s						
PB16	IPOC Station P	4.28	335	Pn	Pn	06 12 01.1	+0.6
PB16	IPOC Station P	4.28	335	*i* P		06 12 00.0	
PB16				IAML		06 12 53.1	
	comp=Z,837nm,1.1s						
PB12	IPOC Station P	4.42	324	Pn	Pn	06 12 01.9	+0.1
PB12	IPOC Station P	4.42	324	*i* P		06 12 00.0	
PB12				IAML		06 12 54.9	
	comp=Z,1µm,0.8s						
SOET	ToroToro	4.45	23	Pg	Pn	06 12 03.9	+1.5
AP01	Chacalluta	4.63	326		Pn	06 12 04.3	-0.1
AP01	Chacalluta	4.63	326	*i* P		06 12 03.0	
AP01				IAML		06 13 07.6	
	comp=Z,1µm,0.2s						
AC01	Pan de Azucar	4.74	214		Pn	06 12 04.5	-1.3
AC01	Pan de Azucar	4.74	214	*i* P		06 12 04.2	
AC01				IAML		06 13 00.8	
	comp=Z,466nm,0.8s						
AC02	Maricunga	4.77	196		Pn	06 12 06.3	-0.4
PB18	Visviri	4.96	339		Pn	06 12 10.6	+1.4
BBOE	La Paz, Chanca	5.42	356	Pg	Pn	06 12 17.0	+1.6
BBOD	La Paz, Gloria	5.66	350	Pg	Pn	06 12 19.8	+1.3
CO01	Juntas del Tor	8.01	196		Pn	06 12 47.9	-1.5
VACA	Villa Angela C	8.26	132	*e*P	Pn	06 12 52.7	+0.4
BBSD	Serra de San D	8.30	54	*e*P	Pn	06 12 51.0	-2.0
SIV	San Ignacio	8.77	46	P	Pn	06 12 56.7	-2.7
	comp=Z,215nm,0.6s,baz=235,slow=9.5,SNR=658						
SIV				S	Sn	06 14 29.2	-8.0
	comp=Z,283nm,0.6s,baz=310,slow=23,SNR=12						
ESFA	Espinillo Form	8.80	110	*e*P	Pn	06 12 59.2	-0.3
MURT	Porto Murtinho	9.31	88	*e*P	Pn	06 13 04.1	-2.2
CFA	Coronel Fontan	9.34	183	P	Pn	06 13 04.8	-1.9
	comp=Z,11nm,0.3s,baz=25,slow=18,SNR=64						
CFA				S	Sn	06 14 41.8	-8.6
	comp=Z,16nm,0.3s,baz=128,slow=21,SNR=9.6						
CFA				LR	LR	06 16 23.2	
	comp=Z,91nm,21.6s,baz=354,slow=35						
CPUP	Villa Florida	10.23	115	P	Pn	06 13 17.1	-1.3
	comp=Z,20nm,0.8s,baz=297,slow=13,SNR=23						
CPUP	Villa Florida	10.23	115		Pn	06 13 16.8	-1.5
CPUP	Villa Florida	10.23	115	*e*P	Pn	06 13 17.6	-0.7
PTLB	Pontes e Lacer	10.49	51	*e*P	Pn	06 13 19.5	-2.5
PANT	Pantanal (Braz	10.80	75	*e*P	Pn	06 13 24.0	-2.0
MECA	Mercedes	11.03	131	*e*P	Pn	06 13 29.1	+0.2
ROC1	El Roble	11.10	195		Pn	06 13 27.8	-2.2
PEL	Peldehue	11.19	193	Pn	Pn	06 13 31.2	+0.2
AQDB	Aquidauana	11.24	83	*e*P	Pn	06 13 30.0	-1.8
VA01	Torpederas	11.31	198	Pn	Pn	06 13 31.7	-0.7
MT08	Bocatoma Ro	11.35	190	Pn	Pn	06 13 34.4	+1.1
VILB	Vilhena	11.63	39		Pn	06 13 35.7	-1.2
VILB	Vilhena	11.63	39	*e*P	Pn	06 13 36.1	-0.8
AMBA	Amambai (Brazi	11.69	96	*e*P	Pn	06 13 36.8	-0.7
AZCA	Azaras, Argent	12.03	121	*e*P	Pn	06 13 41.6	-0.3
ITQB	Itaqui	12.34	129	*e*P	Pn	06 13 46.5	+0.7
ETMB	Extrema	12.44	6	*e*P	Pn	06 13 45.2	-1.9
MCR1	Marechal Candi	12.67	103	*e*P	Pn	06 13 50.9	+0.8
PP1B	Ponte de Pedra	12.84	71	*e*P	Pn	06 13 52.0	-0.4
SALV	Santo Antonio	12.92	63	*e*P	Pn	06 13 50.7	-2.6
CRSM	Crissiumal (Br	13.38	116	*e*P	Pn	06 14 00.2	+1.0
NNA	Nana	13.48	318	P	P	06 14 02.9	-1.3
	comp=Z,34nm,0.7s,baz=172,slow=11,SNR=14						
NNA				S	Sn	06 16 23.3	-6.9
	comp=Z,4.1nm,0.3s,baz=186,slow=13,SNR=2.2						
RODS	Rosario do Sul	13.74	129	*e*P	Pn	06 14 03.9	+0.1
FRBT	Francisco Belt	13.80	108	*e*P	Pn	06 14 05.1	+0.6
SAML	Samuel	13.89	19	*e*P	Pn	06 14 04.0	-1.7
C2SB	Chapadao do Su	14.27	79	*e*P	Pn	06 14 10.1	-0.3
PTGB	Pitanga	14.48	103	*e*P	P	06 14 14.1	-1.1
ALGR	Alto Alegre (B	14.69	119	*e*P	Pn	06 14 15.8	+0.1
PDRB	Porto dos Gac	14.84	46	*e*P	Pn	06 14 16.1	-1.4
ITAB	Concordia	14.92	113	P	P	06 14 18.8	-1.1
ITAB	Concordia	14.92	113	*e*P	Pn	06 14 18.4	0.0
CPSB	Cacapava Do Su	15.08	126	*e*P	Pn	06 14 19.8	-0.5
PCMB	Pacaembu	15.19	91	*e*P	Pn	06 14 21.2	-0.6
CZSB	Cruzeiro do Su	15.24	340	*e*P	Pn	06 14 22.9	+0.4
PLTB	Pedras Altas	15.66	130	P	Pn	06 14 26.0	-1.6
PLTB	Pedras Altas	15.66	130	*e*P	P	06 14 27.6	-0.6
CLDB	Colider	16.00	47	*e*P	P	06 14 32.3	+0.3
ARAG	Araguaiana, MT	16.30	69	*e*P	P	06 14 35.8	+0.5
ITRB	Iturama	16.32	84	*e*P	P	06 14 35.6	+0.1
CNLB	Canela	16.65	118	*e*P	Pn	06 14 40.0	+0.4
FRTB	Fartura	16.69	97	*e*P	Pn	06 14 39.9	-0.1
TIJ01	Guaruva-PR	17.31	104	*e*P	Pn	06 14 46.9	-0.7
GO06	Curarrehue	17.59	190	P	P	06 14 50.1	+0.6
BB19B	Bebedouro	17.79	90	*e*P	Pn	06 14 52.0	-1.2
TBTG	Tabatinga, AM	18.09	353	*e*P	Pn	06 14 56.0	-0.8
ATAH	Atahualpa	18.27	324	P	Pn	06 14 59.9	+0.6
	comp=Z,10.0nm,0.8s,baz=162,slow=9.6,SNR=9.6						
RCLB	Rio Claro- Sao	18.59	94	*e*P	P	06 15 00.4	0.0
PLCA	Paso Flores	18.59	187	P	P	06 15 00.6	+0.2
	comp=Z,18nm,0.9s,baz=10,slow=13,SNR=41						
PLCA				PcP	PcP	06 19 23.2	+1.0
	comp=Z,2.4nm,0.7s,baz=350,slow=1.4,SNR=6.8						
PLCA	Paso Flores	18.59	187	P	P	06 14 60.0	-0.4
PLCA	Paso Flores	18.59	187	*e*P	P	06 15 01.0	+0.6
SNDB	Serra Nova Dou	18.63	59	*e*P	P	06 15 00.4	-0.5
SPB	Sao Paulo	18.64	98	P	P	06 15 00.1	-0.9
SPB	Sao Paulo	18.64	98	*e*P	P	06 15 00.7	-0.2
IPMB	Ipameri, GO	18.71	80	*e*P	P	06 15 01.6	-0.2
PET01	Itanhaem-SP	18.80	100	*e*P	P	06 15 02.6	0.0
TEFE	Tefe	18.85	9	*e*P	P	06 15 02.8	-0.5
LL04	Puerto Octay	19.04	191	P	P	06 15 05.2	+0.1
VAO	Valinhos	19.08	96	*e*P	P	06 15 05.4	-0.4
NPGB	Novo Progresso	19.19	40	*e*P	P	06 15 05.0	-2.0
BDFB	Brasilia	19.66	74	P	P	06 15 11.9	-0.3
	comp=Z,38nm,0.6s,baz=258,slow=12,SNR=102						
BDFB	Brasilia	19.66	74	P	P	06 15 11.1	-1.0
BDFB	Brasilia	19.66	74	*e*P	P	06 15 11.7	-0.4
LL05	Los Muermos	19.73	193	P	P	06 15 12.3	-0.2
MACA	Manacapuru-AM	20.13	21	P	P	06 15 15.1	-2.0
MACA	Manacapuru-AM	20.13	21	*e*P	P	06 15 16.1	-1.0
PMNB	Patos De Minas	20.19	83	*e*P	P	06 15 17.1	-0.7
PARB	Paraibuna	20.31	97	*e*P	P	06 15 18.5	-0.5
LL06	Loncomilla	20.54	193	P	P	06 15 20.6	-0.6
ITTB	Itaituba	21.18	35	*e*P	P	06 15 26.7	-1.5
BSCB	Bom Sucesso	21.27	91	*e*P	P	06 15 28.6	-0.7
GO07	Milladeo Hill,	21.41	192	P	P	06 15 29.5	-1.0
MCRA	Macar, Loja	21.42	324	*e*P	P	06 15 31.4	+0.5
SGCB	S£o Gabriel d	22.00	2	*e*P	P	06 15 36.2	-0.7
VAS01	Vassouras-RJ	22.37	95	*e*P	P	06 15 39.7	-0.8
AY01	Puyuhuapi	22.50	189	P	P	06 15 40.2	-1.1
AY01				IAmb	IAmb	06 15 41.7	
	comp=Z,30nm,1.1s						
JANB	Januaria	23.19	76	*e*P	P	06 15 46.7	-1.4
DUB01	Friburgo-RJ	23.37	94	*e*P	P	06 15 49.1	-0.6
SMTB	Santa Maria do	23.40	58	*e*P	P	06 15 49.5	-0.4
PRPB	Parauapebas	23.48	50	*e*P	P	06 15 49.5	-1.1
PIAT	Ana Tenorio	23.53	332	*e*P	P	06 15 54.5	+3.0
COYC	Coyhaique	23.55	188	P	P	06 15 50.1	-0.9
COYC				IAmb	IAmb	06 15 57.7	
	comp=Z,17nm,0.9s						
SDBA	SAO DESIDERIO	23.76	69	*e*P	P	06 15 51.8	-1.5
MALB	Monte Alegre	24.07	34	*e*P	P	06 15 55.0	-1.0
OTAV	Otavalo	24.72	333	*e*P	P	06 16 04.1	+1.7
OTAV	Otavalo	24.72	333	*e*P	P	06 16 03.9	+1.5
FLOC	Florencia	24.95	341	*e*P	P	06 16 04.9	+0.9
SJMB	Sao Joao De Ma	25.00	87	*e*P	P	06 16 04.0	-0.4
ALF01	Guarapari-ES	25.08	91	*e*P	P	06 16 04.3	-0.8
GUVC	San Jose del G	25.12	348	*e*P	P	06 16 04.1	-1.4
GCUF	Volcan Galeras	25.19	337	*e*P	P	06 16 11.8	+5.1
BOAV	Boa Vista	25.45	17	*e*P	P	06 16 09.9	+1.4
BOAV	Boa Vista	25.45	17	*e*P	P	06 16 09.0	+0.5
GARC	Garzon, Huila	25.48	341	*e*P	P	06 16 09.9	+0.9
BBAC	Balboa, Cauca	25.89	337	*e*P	P	06 16 17.7	+5.0
BETC	Betania	25.93	342	*e*P	P	06 16 12.8	-0.1
POPC	Popayan, Colom	26.18	339	⇑*e*P	P	06 16 18.6	+3.3
MCPB	Macapa, AP	26.52	37	*e*P	P	06 16 17.3	-0.8
GUA01	Guaratinga, BA	26.81	83	*e*P	P	06 16 20.5	-0.2
JAMC	Jamundi, Valle	26.81	340	*e*P	P	06 16 21.5	+0.5
ORTC	Ortega, Tolima	27.05	343	*e*P	P	06 16 25.3	+2.5
CHIC	Chingaza	27.37	347	*e*P	P	06 16 25.3	-0.9
YOTC	Yotoco, Valle	27.43	341	*e*P	P	06 16 27.3	+0.9
GUY2C	Guyana, Caldas	28.34	344	*e*P	P	06 16 40.8	+5.9
RUSC	La Rusia	28.48	349	P	P	06 16 36.3	+0.2
RUSC	La Rusia	28.48	349	*e*P	P	06 16 35.9	-0.1
CBOC	Ciudad Bolivar	29.12	343	*e*P	P	06 16 42.7	+1.2
HELC	Santa Helena	29.31	344	*e*P	P	06 16 43.6	+0.4
PTBC	PUERTO BERRIO,	29.38	346	*e*P	P	06 16 40.8	-2.8
PAMC	Pamplona, Colo	29.82	350	*e*P	P	06 16 47.5	-0.5
ZARC	Zaragoza, Cauc	30.40	346	*e*P	P	06 16 50.9	-1.6
BAUV	El Baul	31.00	359	P	P	06 16 57.1	-0.7
SDV	Santo Domingo	31.08	354	*e*P	P	06 16 58.0	-0.7
NBCL	Cascavel-CE	33.58	62	*e*P	P	06 17 20.4	0.0
TOSP	Speyside	34.05	12	P	P	06 17 25.4	+1.0
RCBR	Riachuelo	34.71	67	*e*P	P	06 17 29.7	-0.5
RCBR	Riachuelo	34.71	67	P	P	06 17 29.9	-0.3
FDF	Fort de France	37.30	10	P	P	06 17 51.1	-0.9
MLPR	Magueyes Islan	39.98	1	P	P	06 18 13.7	-0.5
MLPR				IAmb	IAmb	06 18 14.8	
	comp=Z,32nm,1.1s						
CELP	Cerrillos	40.09	2	P	P	06 18 13.4	-1.8
SJG	San Juan	40.14	2	P	P	06 18 13.9	-1.7
SJG				IAmb	IAmb	06 18 14.3	
	comp=Z,18nm,0.6s						
SJG	San Juan	40.14	2	P	P	06 18 13.9	-1.7
AOPR	Arecibo Observ	40.35	1	P	P	06 18 15.4	-2.0
AOPR				IAmb	IAmb	06 18 22.5	
	comp=Z,21nm,0.9s						
SDDR	Presa de Saban	41.13	355	P	P	06 18 25.6	+1.7
DWPF	Disney Wildern	51.81	344	P	P	06 19 47.5	+0.7
BELA	Belgrano 2	57.84	172	P	P	06 20 30.0	+0.5
BELA				IAmb	IAmb	06 20 32.4	
	comp=Z,19nm,1.5s						
W57A	Gilead	58.28	348	P	P	06 20 33.3	+0.3
W57A				IAmb	IAmb	06 20 34.3	
	comp=Z,12nm,0.8s						
KMSC	Kings Mountain	58.54	347	P	P	06 20 35.1	+0.3
KMSC				IAmb	IAmb	06 20 36.3	
	comp=Z,12nm,0.8s						
V58A	Windy Hill, Pi	58.74	349	P	P	06 20 36.4	+0.1
VNA3	Neumayer Olymp	58.99	161	P	P	06 20 38.5	+0.9
VNA1	Neumayer--Stat	59.18	160	P	P	06 20 40.2	+1.4
V55A	Taylorsville	59.20	347	P	P	06 20 39.8	+0.4
V53A	Saluda	59.37	346	P	P	06 20 40.7	+0.1
V53A				IAmb	IAmb	06 20 41.8	
	comp=Z,7.3nm,0.8s						
VNA2	Neumayer--Watz	59.55	161	P	P	06 20 42.3	+0.9
	baz=299,slow=9.0						
WVT	Waverly	61.13	341	P	P	06 20 51.9	-0.6
WVT				pP	PcP	06 21 33.4	-0.4
SNAA	Sanae	61.18	161	P	P	06 20 53.3	+0.7
SNAA	Sanae	61.18	161	P	P	06 20 52.8	+0.2
SNAA				IAmb	IAmb	06 20 54.4	
	comp=Z,14nm,1.0s						
TXAR	Lajitas Array	61.93	324	P	P	06 20 58.4	+0.3
	comp=Z,0.6nm,0.7s,baz=152,slow=8.4,SNR=6.8						
X37A	Clayton	62.38	334	P	P	06 21 02.1	+1.2
WCI	Wyandotte Cave	62.66	344	P	P	06 21 02.1	-0.6
TROLL	Troll, Antarti	62.90	161	P	P	06 21 05.1	+1.0
CCM	Cathedral Cave	63.96	339	P	P	06 21 11.1	-0.2
CCM				IAmb	IAmb	06 21 11.9	
	comp=Z,11nm,0.7s						
CCM	Cathedral Cave	63.96	339	P	P	06 21 10.9	-0.3
CCM				pP	pP	06 21 53.5	+2.0
LIC	Lamto	67.45	73	⇑*i*P	P	06 21 33.7	-0.4
	comp=Z,11nm,0.4s						
TIC	Toumodi	67.65	72	⇑*e*P	P	06 21 34.5	-0.9
	comp=Z,16nm,0.7s						
KIC	Kosan Boka	67.77	73	*e*P	P	06 21 35.4	-0.7
	comp=Z,23nm,0.4s						
ANMO	Albuquerque	67.78	326	P	P	06 21 37.4	+1.4
ANMO				pP	pP	06 22 20.6	+4.0
DBIC	Dimbokro	67.81	73	P	P	06 21 36.1	-0.2
	comp=Z,14nm,0.4s,baz=243,slow=7.0,SNR=35						
	comp=Z,14nm,0.4s						
DBIC	Dimbokro	67.81	73	P	P	06 21 36.0	-0.4
DBIC				IAmb	IAmb	06 21 36.7	
	comp=Z,20nm,0.8s						
DBIC	Dimbokro	67.81	73	P	P	06 21 36.1	-0.3
QSPA	South Pole Qui	67.95	180	P	P	06 21 37.5	+0.9
QSPA	South Pole Qui	67.95	180	P	P	06 21 38.0	+1.4
QSPA				pP	pP	06 22 22.1	+4.8
TUC	Tucson	68.17	321	P	P	06 21 40.1	+1.8
ECSD	EROS Data Cent	70.85	338	P	P	06 21 54.6	+0.2
ECSD				IAmb	IAmb	06 21 55.6	
	comp=Z,19nm,1.5s						
ISCO	Idaho Springs	71.19	330	P	P	06 21 57.9	+0.9
F36A	Milaca	71.76	341	P	P	06 21 59.6	-0.2
F36A				IAmb	IAmb	06 22 00.5	
	comp=Z,9.7nm,0.7s						
U15A	North Rim	72.02	323	P	P	06 22 04.1	+2.2
N23A	Red Feather La	72.21	330	P	P	06 22 04.4	+1.4
SRU	San Rafael Swe	73.06	326	P	P	06 22 09.4	+1.5
SRU				IAmb	IAmb	06 22 10.3	
	comp=Z,12nm,0.7s						
Q16A	Castle Valley	73.25	326	P	P	06 22 10.0	+0.9
CCUT	Cedar City	73.42	324	P	P	06 22 12.2	+2.1
CCUT				IAmb	IAmb	06 22 13.7	
	comp=Z,8.9nm,0.8s						
P17A	Butcher Ranch,	73.44	326	P	P	06 22 11.4	+1.3
P17A				IAmb	IAmb	06 22 12.7	
	comp=Z,9.9nm,0.8s						
RSSD	Black Hills	73.99	334	P	P	06 22 15.2	+1.9
RSSD				IAmb	IAmb	06 22 15.5	
	comp=Z,8.4nm,0.9s						
BSUT	Blindstream Ca	74.25	327	P	P	06 22 16.5	+1.4
BSUT				IAmb	IAmb	06 22 17.9	
	comp=Z,9.1nm,0.7s						
MPU	Maple Canyon	74.30	326	P	P	06 22 16.7	+1.6
PDAR	Pinedale Array	75.36	329	P	P	06 22 22.1	+0.9
	comp=Z,1.8nm,0.6s,baz=128,slow=7.7,SNR=21						
	comp=Z,1.8nm,0.6s						
PDAR	Pinedale Array	75.36	329	P	P	06 22 22.4	+1.1
VNDA	Vanda	76.32	190	P	P	06 22 26.4	+0.5
	comp=Z,3.2nm,0.8s,baz=164,slow=3.0,SNR=9.6						
	comp=Z,3.2nm,0.8s						
ULM	Lac du Bonnet	76.39	342	P	P	06 22 26.9	+0.3
	comp=Z,16nm,0.6s,baz=149,slow=5.9,SNR=26						
	comp=Z,16nm,0.6s						
ULM	Lac du Bonnet	76.39	342	P	P	06 22 26.7	+0.1
ULM				IAmb	IAmb	06 22 27.5	
	comp=Z,16nm,0.6s						
TORD	Torodi Ar. Bea	76.48	70	P	P	06 22 27.6	-0.3
	comp=Z,26nm,0.4s,baz=255,slow=5.4,SNR=456						
TORD				S	S	06 31 56.4	-4.1
	comp=Z,2.7nm,0.9s,baz=252,slow=10,SNR=10.0						
	comp=Z,26nm,0.4s						
TORD	Torodi Ar. Bea	76.48	70	P	P	06 22 27.2	-0.6
MOOW	Moose Ponds	76.67	329	P	P	06 22 29.8	+1.2
ELK	Elko	76.72	325	P	P	06 22 29.9	+1.0
	comp=Z,2.3nm,0.7s,baz=145,slow=5.7,SNR=8.3						
	comp=Z,2.3nm,0.7s						

SCHQ	Schefferville	76.77	0	P	P	06 22 28.6	0.0
	comp=Z,3.0nm,0.6s,baz=205,slow=5.5,SNR=8.3						
	comp=Z,3.0nm,0.6s						
NVAR	Mina Array Bea	76.82	321	P	P	06 22 31.4	+1.8
	comp=Z,1.9nm,0.8s,baz=158,slow=6.7,SNR=17						
	comp=Z,1.9nm,0.8s						
RLMT	Red Lodge	77.04	331	P	P	06 22 31.9	+1.2
RLMT				IAmb	IAmb	06 22 32.7	
	comp=Z,7.4nm,0.7s						
YERR	Yerington	77.74	321	P	P	06 22 36.5	+1.9
YERR				IAmb	IAmb	06 22 37.5	
	comp=Z,25nm,1.6s						
PAHR	Pah Rah Range	78.30	322	P	P	06 22 39.5	+1.8
PAHR				IAmb	IAmb	06 22 40.7	
	comp=Z,18nm,0.8s						
K05A	Summer Lake	81.16	323	P	P	06 22 55.1	+2.0
K05A				IAmb	IAmb	06 22 56.0	
	comp=Z,17nm,0.9s						
YBH	Yreka Blue Hor	81.54	322	P	P	06 22 54.6	-0.3
	comp=Z,1.9nm,0.8s,baz=62,slow=7.6,SNR=5.1						
	comp=Z,1.9nm,0.8s						
BOSA	Boshof	82.04	118	P	P	06 22 58.1	+0.1
	comp=Z,5.4nm,0.4s,baz=251,slow=3.2,SNR=26						
	comp=Z,5.4nm,0.4s						
FFC	Flin Flon	82.13	341	P	P	06 22 57.9	+0.3
MAW	Mawson	83.27	163	P	P	06 23 04.7	+1.3
	comp=Z,51nm,1.0s,baz=263,slow=16,SNR=1.8						
	comp=Z,51nm,1.0s						
LBTB	Lobatse	83.62	114	P	P	06 23 05.9	-0.3
LBTB				IAmb	IAmb	06 23 07.4	
	comp=Z,9.6nm,0.8s						
LTY	Liberty	84.05	327	P	P	06 23 08.2	+0.5
ESDC	Sonseca Array	85.53	44	P	P	06 23 15.0	-0.2
	comp=Z,2.1nm,0.9s,baz=241,slow=4.8,SNR=8.3						
	comp=Z,2.1nm,0.9s						
YKA	Yellowknife Ar	92.29	340	P	P	06 23 47.2	+0.6
	comp=Z,6.7nm,0.7s,baz=133,slow=4.7,SNR=182						
	comp=Z,6.7nm,0.7s						
YKA	Yellowknife Ar	92.29	340	P	P	06 23 46.9	+0.4
EKA	Eskdalemuir Ar	94.63	31	LR	LR	07 03 47.2	
	comp=Z,57nm,18.2s,baz=2.5,slow=34						
DLBC	Dease Lake	95.42	332	P	P	06 24 01.3	+0.2
	comp=Z,2.3nm,1.0s,baz=105,slow=16,SNR=2.0						
	comp=Z,2.3nm,1.0s						
MNK	Minsk	110.95	38	*i* P	Pdif	06 25 11.0	+0.6
MNK				*i* P	Pdif	06 25 11.0	+0.6
MNK				*i* P	Pdif	06 25 11.0	+0.6
	comp=Z,6.0nm,0.9s,baz=261						
MNK				*i* pP	pPdif	06 25 46.8	-6.4
MNK				*i* PP	PP	06 29 50.6	+0.6
MNK				*i* PPP	PPP	06 32 12.8	
MNK				*i* SKP		06 32 30.7	
MNK				*i* PKS	PKSdf	06 32 45.7	+0.4
MNK				*i* SKS	SKSdf	06 36 07.5	+2.1
MNK				*i* SS	SS	06 45 12.9	+4.5
MNK				*i* SSS	SSS	06 49 25.7	
MNK				*i* LRM	MLR	07 17 13.0	
	comp=N,451nm,16.4s						
MNK				*i* LRM	MLR	07 17 33.3	
	comp=E,62nm,13.1s						
MNK				*i* LRM	MLR	07 17 40.5	
	comp=Z,152nm,13.8s						
KBZ	Khabaz	119.65	51	PKP	PKPdf	06 29 26.0	0.0
	comp=Z,0.9nm,0.7s,baz=275,slow=18,SNR=2.0						
TIXI	Tiksi	129.68	353	PKP	PKPdf	06 29 43.7	-0.7
	comp=Z,1.2nm,0.3s,baz=270,slow=23,SNR=5.9						
ASAR	Alice Springs	129.79	206	PKP	PKPdf	06 29 46.3	+0.1
	comp=Z,2.4nm,0.5s,baz=150,slow=2.2,SNR=33						
SEY	Seymchan	131.25	337	PKP	PKiKP	06 29 48.4	-0.2
	comp=Z,2.7nm,0.5s,baz=79,slow=4.2,SNR=11						
WRA	Warramunga Arr	132.90	209	PKP	PKPdf	06 29 52.6	+0.5
	comp=Z,3.4nm,0.5s,baz=161,slow=1.7,SNR=58						
ZALV	Zalesovo Beam	142.10	26	PKhKP	PKPpre	06 30 04.3	
	comp=Z,2.5nm,0.5s,baz=327,slow=3.7,SNR=12						
KSH	Kashi	144.62	52	PKP	PKPab	06 30 11.4	-0.7
MKAR	Makanchi Array	145.51	37	PKPbc	PKPab	06 30 15.2	+0.1
	comp=Z,12nm,0.7s,baz=316,slow=3.7,SNR=116						
ASAJ	Asahikawa	146.91	318	PKPbc	PKPbc	06 30 19.3	+0.6
	comp=Z,11nm,0.8s,baz=100,slow=7.8,SNR=6.2						
HEH	HeiHe	149.66	341	*e*P	PKPbc	06 30 25.9	+0.3
HEH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HEH				pmax	pmax		
	comp=Z,230nm,6.9s						
WMQ	Urumqi	150.35	38	*e*P	PKPdf	06 30 22.6	+0.4
WMQ				LR	LR		
	comp=Z,230nm,18.7s						
USRK	Ussuriysk Ar.	152.78	328	PKPbc	PKiKP	06 30 34.0	+0.8
	comp=Z,2.3nm,0.6s,baz=33,slow=2.9,SNR=2.4						
MJAR	Matsushiro Arr	153.47	308	PKPbc	PKiKP	06 30 36.5	+1.5
	comp=Z,2.2nm,0.5s,baz=78,slow=1.8,SNR=4.7						
SONM	Songino Array	154.02	9	PKP	PKPdf	06 30 29.0	+1.3
	comp=Z,1.7nm,0.8s,baz=313,slow=0.4,SNR=11						
SONM				PKPbc	PKiKP	06 30 36.4	+0.5
	comp=Z,2.2nm,0.7s,baz=282,slow=1.3,SNR=11						
SONM				PKPab	PKPab	06 30 50.9	+1.1
	comp=Z,2.1nm,0.7s,baz=318,slow=3.4,SNR=8.3						
KSRS	Korea Array	159.76	322	PKP	PKPdf	06 30 35.8	+0.8
	comp=Z,0.8nm,0.4s,baz=64,slow=2.2,SNR=7.3						
KSRS				PKPab	PKPab	06 31 16.2	+1.5
	comp=Z,0.8nm,0.5s,baz=76,slow=4.6,SNR=2.6						
HHC	Hu-ho-hao-te	161.44	2	*e*P	PKPdf	06 30 36.0	-1.0
CMAR	Chiang Mai Arr	166.84	104	PKP	PKPdf	06 30 43.0	+0.7
	comp=Z,1.0nm,0.3s,baz=257,slow=1.2,SNR=4.1						
CMAR				PKPab	PKPab	06 31 46.9	+0.3
	comp=Z,1.4nm,0.3s,baz=227,slow=4.8,SNR=1.9						
NJ2	Nanjing	168.67	331	*e*P	PKPdf	06 30 42.8	-0.4
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PZH	PanZhiHua	169.42	64	PKP	PKPdf	06 30 42.8	-1.2

HVO ***17*** *06:18:50.6±1.5, 19°.382N±0°.008×155°.281W±0°.006, h2^{km}±2^{km}, ML2.7/30, ML2.0/40(NEIC), Error ellipse: s-maj=1.3km s-min=0.8km az=189.0*

NEIC 17 06:18:51.6±1.6**, 19°.411N**±0°.009×**155°.292W**±0°.007**, h5**^{km}±1^{km}**, Error ellipse: s-maj=2.8km s-min=1.5km az=110.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
WRMHI	West Rim	0.01	242		Pg	06 18 53.1	+0.4
NPH	North Pit	0.01	82	IAML		06 18 52.3	
	comp=N,2µm,0.4s						
NPH	North Pit	0.01	82	IAML		06 18 52.5	
	comp=E,2µm,0.3s						
NPH	North Pit	0.01	82		Pg	06 18 52.3	-0.3
OBL	Observatory Le	0.01	47	IAML		06 18 52.5	
	comp=N,2µm,0.6s						
OBL	Observatory Le	0.01	47		Pg	06 18 53.2	+0.5
UWE	Uwekahuna	0.01	354	IAML		06 18 52.8	
	comp=N,2µm,0.6s						
UWE	Uwekahuna	0.01	354		Pg	06 18 53.4	+0.7
UWB	Uwekahuna B	0.02	43		Pg	06 18 53.1	+0.4
SDHHI	Sand Hill	0.02	185	IAML		06 18 51.9	
	comp=N,3µm,0.1s						
SDHHI	Sand Hill	0.02	185		Pg	06 18 52.1	-0.6
RIM	Rim	0.02	132		Pg	06 18 51.6	-1.1
RIM	Rim	0.02	132	IAML		06 18 51.8	
	comp=E,3µm,1.1s						
RIM				IAML		06 18 52.0	
	comp=N,2µm,0.1s						
KKO	Keanakako`i	0.03	117		Pg	06 18 51.6	-1.1
SBLHI	Steaming Bluff	0.03	54	IAML		06 18 52.9	
	comp=N,2µm,0.5s						
SBLHI				IAML		06 18 53.2	
	comp=E,2µm,0.4s						
SBLHI	Steaming Bluff	0.03	54		Pg	06 18 53.5	+0.7
BYL	Byron's Ledge	0.03	87		Pg	06 18 53.2	+0.4
HATHI	Halema‘uma‘u T	0.03	67	IAML		06 18 53.2	
	comp=N,2µm,0.1s						
HATHI	Halema‘uma‘u T	0.03	67		Pg	06 18 53.4	+0.6
RSD	Rainshed	0.05	14		Pg	06 18 54.8	+1.7
RSD	Rainshed	0.05	14	IAML		06 18 54.8	
	comp=N,1µm,0.4s						
PUH	Pauahi	0.08	117		Pg	06 18 54.2	+0.8
KNHH	Kane Nui o Ham	0.12	105		Pg	06 18 53.5	-0.6
MLH	Mauna Loa	0.12	313		Pg	06 18 54.5	+0.3
MLH					Sg	06 18 57.4	+1.4
MLH	Mauna Loa	0.12	313	IAML		06 18 58.1	
	comp=N,1µm,0.3s						
MLH				IAML		06 18 58.5	
	comp=E,803nm,0.6s						
STCH	Steam Cracks	0.16	99		Pg	06 18 54.2	-0.6
STCH	Steam Cracks	0.16	99	IAML		06 18 57.3	
	comp=N,561nm,0.4s						
STCH				IAML		06 18 58.0	
	comp=E,483nm,0.5s						
AIN	Ainahou	0.16	256		Pg	06 18 54.9	0.0
AIN					Sg	06 18 58.3	+1.2
AIN	Ainahou	0.16	256	IAML		06 18 58.5	
	comp=N,2µm,0.4s						
AIN				IAML		06 18 59.1	
	comp=E,546nm,0.5s						
NPOC	North of Pu‘u	0.17	96		Pg	06 18 56.0	+0.9
NPOC	North of Pu‘u	0.17	96	IAML		06 18 58.3	
	comp=N,682nm,0.6s						
NPOC				IAML		06 18 59.3	
	comp=E,517nm,0.6s						
JCUZ	Jacuzzi	0.18	98		Pg	06 18 54.9	-0.3
JCUZ	Jacuzzi	0.18	98	IAML		06 18 58.0	
	comp=E,471nm,0.7s						
JCUZ				IAML		06 18 59.5	
	comp=N,447nm,0.9s						
HTC	Hot Caves	0.20	210		Pg	06 18 54.9	-0.6
HTC					Sg	06 18 58.6	+0.4
HMH	Humu‘ula Sheep	0.26	317		Pg	06 18 56.9	+0.1
HMH					Sg	06 19 00.4	+0.1
HMH	Humu‘ula Sheep	0.26	317	IAML		06 19 05.5	
	comp=N,209nm,0.6s						
HMH				IAML		06 19 05.7	
	comp=E,192nm,0.6s						
JOKA	Jonika Flow	0.27	85		Pg	06 18 56.1	-0.8
JOKA					Sg	06 19 00.6	+0.1
MLOA	Mauna Loa Obse	0.30	295		Pg	06 18 57.0	-0.5
MWH	Moku‘aweowe	0.30	284		Pg	06 18 57.3	-0.2
MWH	Moku‘aweowe	0.30	284	IAML		06 19 04.8	
	comp=N,626nm,0.4s						
MWH				IAML		06 19 07.8	
	comp=E,686nm,1.0s						
KHU	Kahuku	0.35	242		Pg	06 18 57.5	-0.9
KHU	Kahuku	0.35	242		Sg	06 19 04.3	+1.4
KHU	Kahuku	0.35	242	IAML		06 19 04.5	
	comp=E,262nm,1.1s						
KHU	Kahuku	0.35	242	IAML		06 19 04.0	
	comp=N,185nm,1.6s						
ALEP	Alea Permanent	0.36	291		Pg	06 18 58.2	-0.4
ALEP					Sg	06 19 04.0	+0.6
POHA	Pohakuloa	0.41	327		Pg	06 18 59.5	-0.2
POHA					Sg	06 19 06.4	+1.3
HUH	Hualalai	0.58	298		Pg	06 19 03.0	+0.2
KHLU	Kahalu`u	0.59	288		Pg	06 19 02.1	-0.9
KHLU					Sg	06 19 10.9	+0.1

WEL 17 06:34:38.1±0.5**, 42°S**±3°×**17°3E**±°**, h5**^{km}**, M1.9**/2**, ML2.3**/4**, MLv1.9**/2**, Error ellipse: s-maj=0.0km s-min=0.0km az=75.5, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
KHZ	Kahutara	0.36	118	P	Pg	06 34 45.3	+0.2
KHZ				S	Sg	06 34 50.9	+1.0
THZ	Tophouse	0.51	343	P	Pg	06 34 48.0	+0.1
THZ				S	Sg	06 34 54.9	+0.5
GVZ	Greta Valley S	0.72	184	P	Pg	06 34 52.1	+0.2
GVZ				S	Sb	06 35 02.8	-0.6
LTZ	Lake Taylor	0.81	229	P	Pg	06 34 52.6	-1.1
LTZ				S	Sg	06 35 03.0	-1.3
MRNZ	Matariki Terra	0.89	343	P	Pb	06 34 55.7	-0.2
DSZ	Denniston Nort	1.09	297	P	Pg	06 34 58.9	-0.1
DSZ				S	Sb	06 35 14.2	+0.1
INZ	Inchbonnie	1.32	248	P	Pn	06 35 01.9	-1.3
INZ				S	Sg	06 35 19.8	-0.6
QRZ	Quartz Range	1.49	343	P	Pn	06 35 05.7	+0.3
QRZ				S	Sn	06 35 25.0	-0.3
MQZ	McQueen's Vall	1.49	193	P	Pn	06 35 02.9	-2.6
MQZ				S	Sn	06 35 21.6	-3.8
AKCZ	Akaroa Harbour	1.63	185	P	Pn	06 35 05.1	-2.4
WACZ	Wakanui South	1.93	208	P	Pn	06 35 09.3	-2.3

JMA ***17*** *06:38:58.4±0.1, 28°N±1°×12°9E±°, h52^{km}±1^{km}, MV3.4/20, NEAR AMAMI-OSHIMA ISLAND*

IDC ***17*** *06:38:58.8±1.1, 27°.77N×128°.70E, h60^{km}±12^{km}, mb3.4/4, mbtmp3.7/6, Error ellipse: s-maj=49.3km s-min=11.6km az=107.0*

ISC 17 06:38:58.1±0.9**, 27°.69N**±0°.04×**129°.01E**±0°.05**, h54**^{km}±7^{km}**, n25, σ0^s.85**/32**, mb3.7**/4**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
JTK	Tokunoshima	0.10	332	P	Pn	06 39 06.3	-0.1
JTK				S	Sn	06 39 12.4	+0.1
JOKE	Okinoerabujima	0.51	229	P	Pn	06 39 10.1	+0.4
JOKE				*e*S	Sn	06 39 18.5	+0.5
JAMN	Amaminishikomi	0.57	15	P	Pn	06 39 10.0	-0.3
JAMN				*e*S	Sn	06 39 18.8	-0.4
JYRO	Yoronjima	0.83	217	P	Pn	06 39 14.2	+0.5
JYRO				S	Sn	06 39 26.0	+1.0
JAM	Amami Oshima	0.89	36	P	Pn	06 39 15.1	+0.7
JZK	Kikaishima	1.06	54	P	Pn	06 39 18.6	+1.9
JOW	Kunigami	1.08	217	P	Pn	06 39 17.7	+0.8
	242nm,0.3s,baz=76,slow=16,SNR=98						
JOW				S	Sn	06 39 30.5	-0.4
	353nm,0.3s,baz=72,slow=20,SNR=8.8						
JOW	Kunigami	1.08	217	P	Pn	06 39 17.4	+0.5
JIH	Iheya	1.13	235	P	Pn	06 39 17.6	0.0
JIH				S	Sn	06 39 31.9	-0.2
JTAJ	Takarajima	1.47	7	P	Pn	06 39 21.4	-0.7
JTAJ				S	Sn	06 39 39.0	-1.2
JAGN	Aguni-jima	1.92	235	P	Pn	06 39 28.6	+0.3
JNN	Nakanoshima	2.27	19	P	Pn	06 39 33.2	0.0
JKE	Kume jima 2	2.40	236	P	Pn	06 39 35.1	+0.2
JKDJ	Kitadaitoujima	2.69	130	P	Pn	06 39 39.3	+0.5
JKDJ				S	Sn	06 40 08.5	-1.6
JMZ	Minamidaito 2	2.72	133	*i* P	Pn	06 39 39.5	+0.2
JMZ				S	Sn	06 40 09.5	-1.5
JYAK	Yakushimahirau	2.86	27	*e*P	Pn	06 39 42.1	+1.0
JNU	Nakatsue	5.65	16	P	Pn	06 40 20.9	+1.4
	3.6nm,0.4s,baz=351,slow=4.6,SNR=7.1						
JNU				S	Sn	06 41 23.5	+0.5
	5.8nm,0.9s,baz=142,slow=17,SNR=1.9						
KSRS	Korea Array	9.78	355	P	Pn	06 41 15.9	0.0
	0.6nm,0.5s,baz=177,slow=14,SNR=6.2						
H11N2	WAKE ISLAND Hy	35.48	95	T	T	07 23 29.4	
	baz=288						
H11N1	WAKE ISLAND Hy	35.48	95	T	T	07 23 30.0	
	baz=288						
H11N3	WAKE ISLAND Hy	35.49	95	T	T	07 23 29.7	
	baz=288						
WRA	Warramunga Arr	47.63	173	P	P	06 47 29.6	+0.7
	0.5nm,0.8s,baz=353,slow=8.4,SNR=3.2						
	0.5nm,0.8s						
FINES	FINESS Array B	71.93	330	P	P	06 50 14.2	-1.3
	1.3nm,0.4s,baz=81,slow=5.0,SNR=12						
	1.3nm,0.4s						
RES	Resolute Bay	73.98	11	P	P	06 50 27.0	-0.3
	1.0nm,0.6s,baz=306,slow=6.0,SNR=8.1						
	1.0nm,0.6s						
YKA	Yellowknife Ar	76.91	25	P	P	06 50 45.1	+0.8
	0.1nm,0.6s,baz=303,slow=6.1,SNR=2.7						
	0.1nm,0.6s						

ROM 17 06:51:24.9±0.1**, 42°.728N**±0°.003×**13°.112E**±0°.006**, h12**^{km}**, ML0.9**/1**, 1C-2D, Error ellipse: s-maj=0.4km s-min=0.3km az=76.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
T1212	Cascia, Frazio	0.06	296	P	Pg	06 51 27.6	+0.3
T1212				S	Sg	06 51 29.3	+0.2
T1214	Arquata del Tr	0.08	66	P	Pg	06 51 27.8	+0.2
T1214				S	Sg	06 51 29.8	+0.2
T1217	Poggiodomo (PG	0.13	263	P	Pg	06 51 28.8	+0.5
T1217				S	Sg	06 51 31.3	+0.7
T1245	Castelsantange	0.14	23	⇑P	Pg	06 51 27.3	-1.1
T1245				AML	AML		
	comp=N,79µm,0.2s						
T1245				AML	AML		
	comp=E,48µm,1.2s						
T1245				AML	AML		
	comp=E,48µm,0.8s						
MC2	Monte Cornacci	0.19	17	P	Pg	06 51 29.7	+0.4
MC2				S	Sg	06 51 33.3	+1.0
RM33	Pellescritta (	0.23	161	P	Pg	06 51 30.2	+0.4
RM33				S	Sg	06 51 34.2	+1.0
FDMO	Fiordimonte	0.31	357	P	Pg	06 51 31.5	+0.3
FDMO				S	Sg	06 51 36.3	+0.8
PP3	Marolino	0.74	29	⇓P	Pn	06 51 41.2	0.0
VIVA	Pratoni del Vi	1.01	195	⇓P	Pn	06 51 45.1	+0.2
VIVA				AML	AML		
	comp=E,373µm,0.3s						
VIVA				AML	AML		
	comp=N,438µm,0.4s						

ROM 17 06:51:51.6±0.0**, 42°.910N**±0°.002×**13°.033E**±0°.003**, h11**^{km}**, ML1.2**/9**, 4C, Error ellipse: s-maj=0.2km s-min=0.2km az=72.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
T1216	Preci, Frazion	0.02	209	P	Pg	06 51 54.0	+0.3
T1216				S	Sg	06 51 55.3	+0.3
T1216				AML	AML		
	comp=E,616µm,0.8s						
T1216				AML	AML		
	comp=N,987µm,0.3s						
T1216				AML	AML		
	comp=E,616µm,0.8s						
T1216				AML	AML		
	comp=N,987µm,0.3s						
FEMA	Monte Fema	0.05	13	P	Pg	06 51 54.3	+0.3
FEMA				S	Sg	06 51 56.2	+0.5
MC2	Monte Cornacci	0.12	88	⇑P	Pg	06 51 55.2	+0.4
MC2				S	Sg	06 51 57.5	+0.5
T1245	Castelsantange	0.13	115	P	Pg	06 51 55.3	+0.5
T1245				S	Sg	06 51 57.8	+0.6
FDMO	Fiordimonte	0.13	17	P	Pg	06 51 55.3	+0.5
FDMO				S	Sg	06 51 57.9	+0.7
FDMO				AML	AML		
	comp=E,242µm,0.3s						
FDMO				AML	AML		
	comp=N,228µm,0.2s						
FDMO				AML	AML		
	comp=N,228µm,1.8s						
CESI	CESI - Serrava	0.13	315	P	Pg	06 51 55.4	+0.5
CESI				S	Sg	06 51 57.7	+0.5
CESI				AML	AML		
	comp=E,240µm,0.2s						
CESI				AML	AML		
	comp=N,392µm,0.4s						
T1219	Muccia, Frazio	0.15	353	P	Pg	06 51 55.5	+0.5
T1219				S	Sg	06 51 58.1	+0.6
T1219				AML	AML		
	comp=E,121µm,0.1s						
T1219				AML	AML		
	comp=N,120µm,1.4s						
T1219				AML	AML		
	comp=E,121µm,0.1s						
T1219				AML	AML		
	comp=N,120µm,0.6s						
T1212	Cascia, Frazio	0.16	177	P	Pg	06 51 55.7	+0.5
T1212				S	Sg	06 51 58.6	+0.8
T1212				AML	AML		
	comp=E,79µm,1.4s						
T1212				AML	AML		
	comp=N,82µm,0.5s						
T1212				AML	AML		
	comp=E,79µm,1.5s						
T1212				AML	AML		
	comp=N,81µm,0.5s						
T1212				AML	AML		
	comp=N,81µm,1.5s						
T1212				AML	AML		
	comp=E,79µm,0.5s						
T1256	Bolognola (MC)	0.17	56	⇑P	Pg	06 51 56.0	+0.5
T1256				S	Sg	06 51 59.1	+0.9
T1256				AML	AML		
	comp=N,176µm,0.3s						
T1256				AML	AML		
	comp=E,168µm,0.1s						
T1214	Arquata del Tr	0.20	139	P	Pg	06 51 56.4	+0.4
T1214				S	Sg	06 51 59.7	+0.8
T1220	Camerino, Fraz	0.20	11	P	Pg	06 51 56.6	+0.6
T1220				S	Sg	06 52 00.2	+1.2
T1217	Poggiodomo (PG	0.21	201	P	Pg	06 51 56.6	+0.5
T1217				S	Sg	06 52 00.2	+1.0
MMO1	Montemonaco	0.22	93	⇑P	Pg	06 51 56.7	+0.5
MMO1				S	Sg	06 52 00.3	+1.0
T1218	Civita (PG)	0.25	166	P	Pg	06 51 57.3	+0.5
T1218				S	Sg	06 52 01.4	+1.2
T1241	Roccafluvione,	0.30	100	⇑P	Pg	06 51 58.1	+0.5
T1241				S	Sb	06 52 03.0	-0.9
T1241				AML	AML		
	comp=N,45µm,0.3s						
T1241				AML	AML		
	comp=E,59µm,0.3s						
ASSB	Assisi San Ben	0.30	296	P	Pg	06 51 58.1	+0.3
ASSB				S	Sg	06 52 03.0	+1.1
ASSB				AML	AML		
	comp=E,62µm,1.0s						
ASSB				AML	AML		
	comp=N,46µm,0.4s						
SNTG	Esanatoglia	0.35	349	P	Pg	06 51 59.1	+0.4
SNTG				S	Sb	06 52 04.7	-0.9
MOMA	Monte Martano	0.36	253	P	Pg	06 51 59.2	+0.4
MOMA				S	Sb	06 52 05.0	-0.7
MOMA				AML	AML		
	comp=N,27µm,1.5s						
MOMA				AML	AML		
	comp=E,35µm,0.9s						
MOMA				AML	AML		
	comp=N,27µm,0.5s						
T1211	Morro Reatino	0.40	199	P	Pb	06 52 00.2	-0.6
T1211				S	Sb	06 52 06.1	-0.8

IDC 17 06:55:03.6±2.3**, 54°.12N**×**86°.39E, h0**^{km}**, mbtmp3.1**/2**, ML2.7**/2**, Error ellipse: s-maj=18.8km s-min=11.3km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.94	260	I	I	07 00 36.3	
	0.1nm,0.7s,baz=80,slow=334,SNR=15						
ZALV	Zalesovo Beam	0.94	260	Pg	Pg	06 55 20.9	-0.7
	1.3nm,0.3s,baz=78,slow=17,SNR=14						
ZALV				Lg	Lg	06 55 35.1	
	2.0nm,0.3s,baz=76,slow=28,SNR=16						
KURBB	Kurchatov Arra	5.95	237	Pn	Pn	06 56 33.8	+0.9
	0.1nm,0.3s,baz=54,slow=14,SNR=11						
KURBB				Lg	Lg	06 58 12.0	
	baz=49,slow=30,SNR=2.3						
	1.4nm,0.5s						
MKAR	Makanchi Array	7.78	201	Pn	Pn	06 56 59.2	+1.2
	0.1nm,0.3s,baz=23,slow=10,SNR=14						
MKAR				Sn	Sn	06 58 25.1	-1.7
	baz=24,slow=27,SNR=2.6						
MKAR				Lg	Lg	06 59 10.6	
	baz=21,slow=29,SNR=2.4						
	0.3nm,0.2s						

BGR ***17*** *06:57:07.5, 31°.34N×132°.23E, h33^{km}, mb5.6*

MOS ***17*** *06:57:09.1±0.9, 30°.37N×130°.61E, h59^{km}, mb5.3/49, Error ellipse: s-maj=6.8km s-min=3.9km az=113.6*

NIED ***17*** *06:57:10.5, 30°.40N×130°.57E, h60^{km}, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.52; $M_{\theta\theta}$1.06; $M_{\phi\phi}$-0.54; $M_{r\theta}$-0.33; $M_{\theta\phi}$2.38; $M_{\phi r}$2.00; Fault plane solution: $M_0$3.24000×10^{16} NP1: ϕ_s192.00000°, δ80.00000°, λ-143.00000°. NP2: ϕ_s94.00000°, δ54.00000°, λ-13.00000°.*

JMA ***17*** *06:57:10.5±0.1, 30°.4N±0°.3×130°.6E±0°.3, h60^{km}, MD4.9/34, MW5.0/34, NEAR TANEGASHIMA ISLAND*

JMA Felt II J1 at NEAR TANEGASHIMA ISLAND .

GCMT ***17*** *06:57:11.8±0.2, 30°.44N±0°.02×130°.70E±0°.02, h62^{km}±2^{km}, MW5.1/98, Moment Tensor Solution. s54,c70; s98,c139; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.14±.17; $M_{\theta\theta}$2.24±.17; $M_{\phi\phi}$-2.38±.18; $M_{r\theta}$0.21±.11; $M_{\theta\phi}$3.33±.12; $M_{\phi r}$3.05±.10; Best double couple: $M_0$5.03800×10^{16} NP1: ϕ_s197.00000°, δ88.00000°, λ-144.00000°. NP2: ϕ_s105.00000°, δ54.00000°, λ-3.00000°. Principal axes: T 4.6660, Plg23.0000°, Azm325.0000°; N 0.7380, Plg54.0000°, Azm200.0000°; P -5.4090, Plg26.0000°, Azm67.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***17*** *06:57:11.6, 30°.44N×130°.63E, h61^{km}*

*IDC **17** 06:57:11.4±1.2, 30°.43N×130°.53E, h67^{km}±9^{km}, mb4.7/42, mbtmp4.9/48, MS3.9/58, Error ellipse: s-maj=11.5km s-min=7.8km az=113.0*

*BJI **17** 06:57:11.2±0.0, 30°.38N×130°.61E, h83^{km}, mb5.0/78, mB5.0/55, Ms4.3/70, Ms7 4.1/67*

*NEIC **17** 06:57:11.8±2.0, 30°.44N±0°.05×130°.66E±0°.09, h64^{km}±6^{km}, mb5.2/75, Mwr4.9/11, Error ellipse: s-maj=10.9km s-min=7.5km az=95.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-1.40; $M_{\theta\theta}$0.34; $M_{\phi\phi}$1.07; $M_{r\theta}$-0.38; $M_{\theta\phi}$2.51; $M_{\phi r}$1.26; Fault plane solution: $M_0$3.10000×10^{16} NP1:ϕ_s184.26000°, δ69.56000°, λ-142.70000°. NP2:ϕ_s79.36000°, δ55.40000°, λ-25.10000°. Principal axes: T 3.3484, Plg9.0000°, Azm309.0000°; N -0.5643, Plg48.0000°, Azm209.0000°; P -2.7841, Plg40.0000°, Azm47.0000°;*

ISC 17 06:57:11.5±0.3**, 30°.42N**±0°.03×**130°.59E**±0°.03**, h67^{km}**±2^{km}**, h66^{km}:pP-P, n914, σ1^{s}32**/944**, mb5.2**/213**, 38C-59D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYAK	Yakushimahirau	0.20	201	⇓P	Pn	06 57 19.8	-1.9
JYAK				⇓S	Sn	06 57 26.3	-2.8
JYAK	Yakushimahirau	0.20	201	A	A	06 57 19.8	
	comp=E,583nm,0.6s,comp=E,255nm,0.5s						
JMTN	Minamitane	0.27	96	P	Pn	06 57 20.4	-1.7
JMTN				S	Sn	06 57 28.0	-1.8
JMTN	Minamitane	0.27	96	A	A	06 57 20.4	
	comp=E,392nm,1.7s,comp=E,487nm,2.2s						
JKC	Kuchinoerabu	0.34	276	⇓P	Pn	06 57 20.8	-1.8
JKC				⇓S	Sn	06 57 28.7	-2.0
JKC	Kuchinoerabu	0.34	276	A	A	06 57 20.8	
	comp=E,64nm,1.2s,comp=E,136nm,4.3s						
JTN	Tanegashima 3	0.41	56	⇓P	Pn	06 57 21.8	-1.4
JTN				⇓S	Sn	06 57 30.2	-1.5
JTN	Tanegashima 3	0.41	56	A	A	06 57 21.8	
	comp=E,97nm,1.9s,comp=E,135nm,2.5s						
JTSR	Tashiro 2	0.79	21	*i* P	Pn	06 57 26.2	-1.1
JTSR				S	Sn	06 57 37.7	-1.2
JTSR	Tashiro 2	0.79	21	A	A	06 57 26.2	
	comp=E,89nm,1.0s,comp=E,70nm,2.0s						
JNN	Nakanoshima	0.85	227	⇓*i*P	Pn	06 57 26.6	-1.4
JNN	Nakanoshima	0.85	227	A	A	06 57 26.6	
	comp=E,91nm,0.5s,comp=E,120nm,0.4s						
JSU	Suzuyama	1.08	354		Pn	06 57 30.1	-0.9
JSU				Sn	Sn	06 57 44.5	-1.0
JSU	Suzuyama	1.08	354	P	Pn	06 57 30.6	-0.3
JSU	Suzuyama	1.08	354	*i* P	Pn	06 57 30.0	-0.9
JSU				S	Sn	06 57 44.7	-0.7
JSU	Suzuyama	1.08	354	A	A	06 57 30.0	
	comp=E,43nm,0.4s,comp=E,26nm,0.2s						
JNAR	Kushima--Naru	1.25	28	*i* P	Pn	06 57 32.8	-0.2
JNAR				S	Sn	06 57 49.1	+0.1
JNAR	Kushima--Naru	1.25	28	A	A	06 57 32.8	
	comp=E,50nm,3.4s,comp=E,45nm,2.1s						
JNKG	Nichinankitago	1.41	28	P	Pn	06 57 35.6	+0.5
JNKG	Nichinankitago	1.41	28	A	A	06 57 35.6	
	comp=E,61nm,2.1s,comp=E,37nm,1.3s						
JSJ	Shimokoshiki	1.46	329	*i* P	Pn	06 57 34.4	-1.4
JSJ				S	Sn	06 57 52.4	-1.7
JSJ	Shimokoshiki	1.46	329	A	A	06 57 34.4	
	comp=E,13nm,0.6s,comp=E,20nm,1.5s						
JTZ	Takazaki	1.53	16	*i* P	Pn	06 57 36.6	-0.2
JTZ	Takazaki	1.53	16	A	A	06 57 36.6	
	comp=E,30nm,1.4s,comp=E,25nm,2.0s						
JZO	Okuchi	1.71	0	A	A	06 57 39.0	
	comp=E,21nm,0.8s,comp=E,14nm,1.6s						
JTAJ	Takarajima	1.75	224	A	A	06 57 38.8	
	comp=E,9.0nm,1.7s,comp=E,12nm,3.4s						
JTSN	Tsuno	1.98	23	A	A	06 57 42.7	
	comp=E,21nm,3.3s,comp=E,11nm,2.7s						
JHD	Hondo	2.07	349	A	A	06 57 44.0	
	comp=E,12nm,2.4s,comp=E,7.0nm,1.2s						
JIU3	Izumi3	2.13	5	A	A	06 57 44.8	
	comp=E,10.0nm,4.0s,comp=E,10.0nm,1.8s						
JZK	Kikaishima	2.17	195	A	A	06 57 44.7	
	comp=E,100nm,3.4s,comp=E,83nm,1.3s						
JAM	Amami Oshima	2.18	203	A	A	06 57 44.8	
	comp=E,11nm,1.3s,comp=E,18nm,1.6s						
JHHC	Hyugahichiya	2.20	24	A	A	06 57 45.9	
	comp=E,21nm,3.0s,comp=E,16nm,3.3s						
NGSJ	Nagasakinomoza	2.30	343	A	A	06 57 47.2	
	comp=E,6.0nm,2.6s,comp=E,6.0nm,4.3s						
JKIT	Kitakata	2.31	18	A	A	06 57 47.5	
	comp=E,16nm,1.5s,comp=E,14nm,4.1s						
JAMN	Amaminishikomi	2.50	210	A	A	06 57 49.3	
	comp=E,15nm,0.3s,comp=E,12nm,1.2s						
JTA	Tamana	2.53	359	A	A	06 57 50.5	
	comp=E,9.0nm,4.8s,comp=E,6.0nm,3.4s						
JSKE	Saikikamae	2.62	25	A	A	06 57 51.7	
	comp=E,14nm,2.5s,comp=E,12nm,2.6s						
JNU	Nakatsue	2.70	5	P	Pn	06 57 53.5	+0.9
	3µm,0.8s,baz=182,slow=5.8,SNR=1096						
JNU				S	Sn	06 58 24.2	0.0
	4µm,0.9s,baz=68,slow=20,SNR=9.7						
JNU	Nakatsue	2.70	5	Pn	Pn	06 57 53.3	+0.7
JNU				Sn	Sn	06 58 23.3	-0.9
JNU	Nakatsue	2.70	5	P	Pn	06 57 54.3	+1.7
JNU	Nakatsue	2.70	5	A	A	06 57 52.9	
	comp=E,9.0nm,1.8s,comp=E,11nm,2.1s						
JUS	Usuki	2.81	20	A	A	06 57 54.5	
	comp=E,34nm,1.5s,comp=E,26nm,1.1s						
JBEP	Beppuamama	2.99	13	A	A	06 57 56.9	
	comp=E,21nm,1.3s,comp=E,25nm,1.6s						
JTK	Tokunoshima	3.00	209	A	A	06 57 56.3	
	comp=E,15nm,0.7s,comp=E,11nm,1.3s						
JTO	Tosashimizu	3.08	37	A	A	06 57 58.2	
	comp=E,7.0nm,5.8s,comp=E,4.0nm,1.4s						
UWA2	Uwa jima 2	3.28	31	A	A	06 58 01.0	
	comp=E,5.0nm,4.1s,comp=E,8.0nm,2.5s						
JKI	Kunimi	3.31	14	A	A	06 58 01.4	
	comp=E,10.0nm,1.8s,comp=E,10.0nm,1.3s						
JNA	Nagahama	3.51	27	A	A	06 58 04.3	
	comp=E,5.0nm,3.1s,comp=E,5.0nm,2.5s						
JOKE	Okinoerabujima	3.53	211	A	A	06 58 03.8	
	comp=E,8.0nm,2.3s,comp=E,12nm,1.9s						
JKU	Kubokawa	3.56	36	A	A	06 58 05.1	
	comp=E,7.0nm,1.4s,comp=E,7.0nm,3.3s						
JTY	Toyota	3.85	6	A	A	06 58 09.0	
	comp=E,3.0nm,6.6s,comp=E,3.0nm,2.8s						
JYRO	Yoronjima	3.87	210	A	A	06 58 08.6	
	comp=E,7.0nm,3.0s,comp=E,11nm,2.6s						
JET	Tanbara	3.94	31	A	A	06 58 10.4	
	comp=N,7.0nm,1.4s						
JHM	Kurahashi	4.05	23	A	A	06 58 11.9	
	comp=E,12nm,2.1s,comp=E,5.0nm,2.9s						
JIH	Iheya	4.09	215	A	A	06 58 11.6	
	comp=E,7.0nm,1.9s,comp=E,8.0nm,6.1s						
JOW	Kunigami	4.12	210	P	Pn	06 58 11.9	-0.1
	257nm,0.3s,baz=124,slow=25,SNR=41						
JOW				S	Sn	06 58 58.0	-0.8
	693nm,0.7s,baz=166,slow=19,SNR=1.8						
JOW	Kunigami	4.12	210	P	Pn	06 58 14.3	+2.4
JOW	Kunigami	4.12	210	A	A	06 58 12.0	
	comp=E,8.0nm,1.3s,comp=E,5.0nm,2.8s						
JTU	Tsushima	4.21	346	Pn	Pn	06 58 13.1	-0.1
JTU	Tsushima	4.21	346	P	Pn	06 58 14.2	+1.0
JMN	Monobe	4.32	39	Pn	Pn	06 58 14.0	-0.6
JMN	Monobe	4.32	39	P	Pn	06 58 14.9	+0.2
JMN	Monobe	4.32	39	A	A	06 58 15.6	
	comp=E,7.0nm,2.5s,comp=E,11nm,2.1s						
JHT	Toyohira	4.50	20	A	A	06 58 18.2	
	comp=E,8.0nm,2.0s,comp=E,4.0nm,2.5s						
JMZ	Minamidaito 2	4.62	173	Pn	Pn	06 58 17.7	-1.1
JMAF	Mimaanabuki	4.70	39	A	A	06 58 21.0	
	comp=N,10.0nm,2.6s						
JJG	Jouge	4.73	27	A	A	06 58 21.4	
	comp=E,5.0nm,1.9s,comp=E,6.0nm,2.1s						
JAGN	Aguni-jima	4.83	218	A	A	06 58 21.9	
	comp=E,7.0nm,3.0s,comp=E,9.0nm,2.2s						
JJS	Sakaide	4.85	35	A	A	06 58 23.0	
	comp=E,5.0nm,1.9s,comp=E,7.0nm,2.8s						
JJT3	Tamagusuku3	4.93	211	A	A	06 58 23.4	
	comp=E,16nm,2.1s,comp=E,17nm,3.2s						
JHS	Saijyo	5.03	24	Pn	Pn	06 58 23.7	-0.8
JHS	Saijyo	5.03	24	P	Pn	06 58 24.8	+0.3
JISK	Izumosakaura	5.41	20	A	A	06 58 30.8	
	comp=E,4.0nm,1.6s,comp=E,5.0nm,1.4s						
JKR	Kurayoshi	5.64	28	A	A	06 58 34.1	
	comp=E,4.0nm,2.0s,comp=E,3.0nm,1.9s						
TJN	Taejon	6.52	336	Pn	Pn	06 58 46.1	+1.4
TJN	Taejon	6.52	336	P	Pn	06 58 46.7	+2.0
TJN	Taejon	6.52	336	*d i*P	Pn	06 58 46.4	+1.7
INU	Inuyama	7.30	46	Pn	Pn	06 58 55.7	+0.3
INU	Inuyama	7.30	46	P	Pn	06 58 56.8	+1.4
KSAR	Wonju Array Be	7.35	343		Pn	06 58 57.0	+0.9
KSAR	Wonju Array Be	7.35	343	P	Pn	06 58 57.0	+0.9
KSRS	Korea Array	7.35	343	P	Pn	06 58 57.6	+1.5
	25nm,0.6s,baz=161,slow=14,SNR=83						
KSRS				LR	LR	07 01 54.2	
	comp=Z,744nm,21.1s,baz=155,slow=39						
KS19	Wonju Array Si	7.41	343		Pn	06 58 57.7	+0.8
JGF	Kuroka	7.68	46		Pn	06 59 00.1	-0.5
JGF	Kuroka	7.68	46	P	Pn	06 59 01.3	+0.7
JSG	Sagara	7.69	55		Pn	06 59 00.4	-0.2
JSG	Sagara	7.69	55	P	Pn	06 59 02.0	+1.3
INCN	Inchon	7.77	336	Pn	Pn	06 59 04.2	+2.3
INCN	Inchon	7.77	336	P	Pn	06 59 04.5	+2.6
INCN	Inchon	7.77	336	P	Pn	06 59 04.2	+2.3
JHJ2	Mitsune	8.30	69		Pn	06 59 09.5	+0.5
JHJ2	Mitsune	8.30	69	P	Pn	06 59 10.3	+1.2
MAJO	Matsushiro	8.81	44	Pn	Pn	06 59 16.4	+0.3
MAJO	Matsushiro	8.81	44	P	Pn	06 59 17.1	+1.0
MAJO	Matsushiro	8.81	44	*d i*P	Pn	06 59 16.6	+0.5
MJB9	Matsu-Tunnel	8.81	44		Pn	06 59 17.4	+1.3
MJAR	Matsushiro Arr	8.81	44	P	Pn	06 59 17.0	+0.9
	46nm,0.9s,baz=240,slow=14,SNR=100						
MJAR	Matsushiro Arr	8.81	44	P	Pn	06 59 17.0	+0.9
YOJ	Yonaguni jima	8.98	230	Pn	Pn	06 59 18.3	-0.1
YOJ	Yonaguni jima	8.98	230	P	Pn	06 59 23.2	+4.8
YOJ	Yonaguni jima	8.98	230	P	Pn	06 59 18.3	-0.1
JSD	Sado	9.89	38		Pn	06 59 30.7	-0.2
JSD	Sado	9.89	38	P	Pn	06 59 31.6	+0.7
YHNB	Yeheng	9.98	237		Pn	06 59 33.6	+1.4
YHNB	Yeheng	9.98	237	P	Pn	06 59 35.5	+3.3
NACB	Ninganchiao	10.13	234	P	Pn	06 59 37.8	+3.6
NJ2	Nanjing	10.18	282	⇑P	Pn	06 59 35.8	+1.0
NJ2				sP		06 59 55.6	
NJ2				S	Sn	07 01 34.3	+7.0
NJ2				pmax	pmax		
	comp=Z,110nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,170nm,3.5s						
NJ2				LR	LR		
	comp=N,1µm,16.6s						
NJ2				LR	LR		
	comp=E,960nm,14.7s						
NJ2				LR	LR		
	comp=Z,1µm,22.7s						
JCJ	Chichijima	10.70	105	LR	LR	07 03 28.1	
	comp=Z,563nm,19.9s,baz=288,slow=35						
SSLB	Suanglung	10.83	235	P	Pn	06 59 49.5	+5.7
YULB	Yu-li	10.85	232	P	Pn	06 59 49.0	+5.0
DL2	Dalian	11.22	321	P	Pn	06 59 48.0	-0.9
DL2				S	Sn	07 01 50.1	-2.5
DL2				pmax	pmax		
	comp=Z,48nm,1.0s						
DL2				pmax	pmax		
	comp=Z,230nm,6.7s						
DL2				LR	LR		
	comp=N,640nm,13.2s						
DL2				LR	LR		
	comp=E,720nm,12.1s						
DL2				LR	LR		
	comp=Z,970nm,18.8s						
JMM	Marumori	11.24	46		Pn	06 59 49.4	+0.1
JMM	Marumori	11.24	46	P	Pn	06 59 51.3	+2.0
TPUB	Ta-pu	11.37	234		Pn	06 59 52.8	+1.7
TPUB	Ta-pu	11.37	234	P	Pn	06 59 55.6	+4.5
TWGBT	Beinan	11.39	231	P	Pn	06 59 54.9	+3.6
TWG	Pinlang	11.39	231		Pn	06 59 53.5	+2.2
TIA	Tai'an	12.65	301	P	Pn	07 00 09.8	+1.3
TIA				pP	P	07 00 19.4	+1.9
TIA				S	Sn	07 02 23.8	-3.8
TIA				pmax	pmax		
	comp=Z,100nm,0.9s						
TIA				pmax	pmax		
	comp=Z,500nm,4.1s						
TIA				LR	LR		
	comp=N,480nm,16.5s						
TIA				LR	LR		
	comp=E,590nm,16.5s						
TIA				LR	LR		
	comp=Z,720nm,17.3s						
SNY	Shenyang	12.71	335	⇓P	Pn	07 00 12.3	+3.1
SNY				S	Sn	07 02 35.3	+6.5
SNY				pmax	pmax		
	comp=Z,36nm,0.9s						
SNY				pmax	pmax		
	comp=Z,610nm,4.9s						
SNY				LR	LR		
	comp=N,950nm,8.2s						
SNY				LR	LR		
	comp=E,790nm,9.6s						
SNY				LR	LR		
	comp=Z,1µm,16.9s						
JTM	Tenmabayashi	13.39	37	P	Pn	07 00 20.7	+2.3
USA0B	Ussuriysk Arra	13.80	4		Pn	07 00 24.2	+0.4
USA0B	Ussuriysk Arra	13.80	4	⇑*e*P	Pn	07 00 24.3	+0.4
USRK	Ussuriysk Ar.	13.80	4	P	P	07 00 30.9	+0.8
	12nm,0.6s,baz=181,slow=9.7,SNR=24						
USRK	Ussuriysk Ar.	13.80	4		Pn	07 00 24.8	+1.0
USRK	Ussuriysk Ar.	13.80	4	P	Pn	07 00 24.8	+1.0
CN2	Changchun	13.96	344	*e*P	Pn	07 00 28.8	+2.7
CN2				*e*pP	P	07 00 40.0	+8.0
CN2				*e*sP		07 00 51.4	
CN2				*e*S	Sn	07 03 00.8	+1.4
CN2				*e*sS	S	07 03 17.8	+0.5
CN2				pmax	pmax		
	comp=Z,170nm,0.7s						
CN2				LR	LR		
	comp=N,750nm,13.0s						
CN2				LR	LR		
	comp=E,660nm,13.0s						
CN2				LR	LR		
	comp=Z,640nm,14.0s						
WHN	Wuhan	14.01	275	P	Pn	07 00 27.3	+0.6
WHN				pP	P	07 00 37.6	+5.0
WHN				sP		07 00 50.1	
WHN				S	Sn	07 03 01.8	+1.2
WHN				LR	LR		
	comp=Z,4µm,30.6s						
MDJ	Mudanjiang	14.19	357	P	Pn	07 00 29.4	+0.4
MDJ				S	Sn	07 03 09.8	+4.9
MDJ				SS	S	07 03 23.8	+1.9
MDJ				PcS	PcS	07 09 11.4	-6.3
MDJ				ScS	ScS	07 12 41.8	-6.3
MDJ				pmax	pmax		
	comp=Z,16nm,1.8s						
MDJ				pmax	pmax		
	comp=Z,230nm,8.4s						
MDJ				LR	LR		
	comp=N,380nm,12.8s						
MDJ				LR	LR		
	comp=E,330nm,6.3s						
MDJ				LR	LR		
	comp=Z,430nm,9.6s						
MDJ	Mudanjiang	14.19	357	P	P	07 00 32.5	-2.0
	26nm,1.3s						
HNS	HongShan	14.90	302	⇑P	Pn	07 00 39.4	+1.1
HNS				S	Sn	07 03 23.4	+1.2
HNS				pmax	pmax		
	comp=Z,150nm,1.3s						
HNS				LR	LR		
	comp=N,550nm,13.5s						
HNS				LR	LR		
	comp=E,650nm,14.3s						
HNS				LR	LR		
	comp=Z,700nm,19.2s						
BJT	Baijiatuau	15.17	313	P	P	07 00 45.8	+0.4
BJI	Beijing	15.18	313	P	Pn	07 00 42.9	+1.1
BJI				pP	pP	07 00 53.8	-5.3
BJI				sP	sP	07 01 02.3	-5.2
BJI				pmax	pmax		
	comp=Z,200nm,1.1s						
BJI				pmax	pmax		
	comp=Z,280nm,4.5s						
BJI				LR	LR		
	comp=N,450nm,13.5s						
BJI				LR	LR		
	comp=E,330nm,13.4s						
BJI				LR	LR		
	comp=Z,600nm,15.2s						
TEY	Ternei	15.34	16	⇑*e*P	P	07 00 47.2	0.0
TEY				pmax	pmax		
	comp=N,30nm,1.2s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.2s						
TEY				pmax	pmax		
	comp=Z,30nm,1.2s						
ERM	Erimo	15.36	38	*c i*P	Pn	07 00 44.9	+0.7
ERM				pmax	pmax		
	comp=Z,95nm,2.5s						
BNX	BinXian	15.49	352	⇑P	P	07 00 47.9	-1.1
BNX				pP	pP	07 01 00.0	-2.6
BNX				PP	PnPn	07 01 02.1	+6.5
BNX				sP	sP	07 01 10.5	-0.6
BNX				S	Sn	07 03 39.3	+2.8
BNX				sS	S	07 03 54.5	+5.9
BNX				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BNX				pmax	pmax		
	comp=Z,240nm,7.3s						
BNX				LR	LR		
	comp=Z,380nm,18.8s						
BNX				LR	LR		
	comp=Z,480nm,10.0s						
BNX				LR	LR		
	comp=Z,400nm,15.7s						
CNSH	ChangSha	15.57	266	⇑P	Pn	07 00 48.4	+1.5
CNSH				S	Sn	07 03 36.3	-2.3
CNSH				LR	LR		
	comp=Z,640nm,7.7s						
CNSH				LR	LR		
	comp=Z,340nm,14.6s						
LYN	LuoYang	15.84	290	⇑P	Pn	07 00 50.8	+0.5
LYN				pP	pP	07 01 02.8	-3.7
LYN				pmax	pmax		
	comp=Z,230nm,10.6s						
LYN				LR	LR		
	comp=Z,400nm,8.4s						
LYN				LR	LR		
	comp=Z,520nm,20.0s						
LYN				LR	LR		
	comp=Z,800nm,17.5s						
ASAJ	Asahikawa	16.65	32	P	Pn	07 00 59.0	-1.4
	comp=Z,59nm,0.8s,baz=232,slow=15,SNR=32						
ASAJ	Asahikawa	16.65	32	P	Pn	07 00 59.0	-1.4
JKA	Kamikawa-asahi	16.65	32	P	Pn	07 00 59.0	-1.4
TIY	Taiyuan	16.70	301	*e*P	P	07 01 03.0	+0.6
TIY				S	Sn	07 04 07.9	+2.1
TIY				pmax	pmax		
	comp=Z,38nm,1.0s						
TIY				LR	LR		
	comp=Z,470nm,15.5s						
TIY				LR	LR		
	comp=Z,440nm,16.1s						
TIY				LR	LR		
	comp=Z,600nm,16.1s						
XLT	XiLinHaoTe	17.70	323	*e*P	P	07 01 14.9	+1.4
XLT				pP	pP	07 01 29.3	+2.1
XLT				sP	sP	07 01 36.3	+0.6
XLT				sS	sS	07 04 51.6	-4.6
XLT				pmax	pmax		
	comp=Z,170nm,0.9s						
XLT				pmax	pmax		
	comp=Z,440nm,3.5s						
XLT				LR	LR		
	comp=Z,57nm,19.6s						
XLT				LR	LR		
	comp=Z,460nm,18.8s						
XLT				LR	LR		
	comp=Z,590nm,15.3s						
ENH	Enshi	18.22	275	P	Pn	07 01 21.7	+1.9
HHC	Hu-ho-hao-te	18.60	309	*e*P	Pn	07 01 25.6	+1.2
HHC				PP	sP	07 01 43.3	-2.4
HHC				S	S	07 04 47.6	-4.1
HHC				pmax	pmax		
	comp=Z,110nm,1.2s						
HHC				pmax	pmax		
	comp=Z,830nm,7.1s						
HHC				LR	LR		
	comp=Z,820nm,16.5s						
HHC				LR	LR		
	comp=Z,1µm,15.1s						
HHC				LR	LR		
	comp=Z,1µm,15.3s						
XAN	Xi'an	18.68	287	⇓P	P	07 01 24.8	+0.5
XAN				pP	pP	07 01 36.4	-1.6
XAN				PP	sP	07 01 44.9	-1.5
XAN				S	Sn	07 04 55.1	+1.4
XAN				SS	SnSn	07 05 13.8	+5.3
XAN				pmax	pmax		
	comp=Z,94nm,1.1s						
XAN				pmax	pmax		
	comp=Z,250nm,3.5s						
XAN				LR	LR		
	comp=Z,380nm,17.5s						
XAN				LR	LR		
	comp=Z,450nm,15.9s						
XAN				LR	LR		
	comp=Z,490nm,22.7s						
KLR	Kul'dur	18.80	2	P	P	07 01 25.4	0.0
	comp=Z,14nm,0.8s,baz=186,slow=7.4,SNR=45						
KLR	Kul'dur	18.80	2	*d i*P	P	07 01 25.1	-0.4
KLR				pmax	pmax		
	comp=Z,40nm,1.3s						
YSS	Yuzh-Sakhalins	19.00	26	P	P	07 01 26.8	-0.8
YSS				IAmb	IAmb	07 01 30.2	
	comp=Z,90nm,0.9s						
YSS	Yuzh-Sakhalins	19.00	26	P	Pn	07 01 29.4	+0.4
YSS	Yuzh-Sakhalins	19.00	26	*e*P	P	07 01 28.3	+0.7
YSS				*e*S	S	07 04 54.3	-5.4
YSS				pmax	pmax		
	comp=Z,90nm,1.0s						
YSS				pmax	pmax		
	comp=Z,100nm,4.9s						
YSS				MLR	MLR		
	comp=Z,400nm,14.0s						
BTO	Baotou	19.54	307	*e*P	Pn	07 01 36.8	+1.2
BTO				pP	pP	07 01 49.1	+1.5
BTO				sP	sP	07 02 01.3	+5.3
BTO				S	Sn	07 05 14.8	+0.3
BTO				sS	sS	07 05 29.4	-4.2
BTO				PcP	PcP	07 05 53.8	+2.2
BTO				pmax	pmax		
	comp=Z,160nm,1.2s						
BTO				LR	LR		
	comp=Z,2µm,18.6s						
BTO				LR	LR		
	comp=Z,1µm,17.4s						
BTO				LR	LR		
	comp=Z,3µm,18.0s						
HEH	HeiHe	19.95	354	*e*P	P	07 01 38.8	+0.8
HEH				pP	pP	07 01 51.3	-0.6
HEH				S	S	07 05 16.3	-2.4
HEH				SS	SnSn	07 05 47.3	+7.7
HEH				pmax	pmax		
	comp=Z,32nm,0.9s						
HEH				pmax	pmax		
	comp=Z,260nm,6.5s						
HIA	Hailar	20.54	339	P	Pn	07 01 47.5	+0.3
GRNR	Gornyy	20.79	10	⇓*i*P	P	07 01 44.4	-2.6
GRNR				*e*S	S	07 05 31.9	-3.3
GRNR				pmax	pmax		
	comp=N,5.0nm,0.7s						
GRNR				pmax	pmax		
	comp=E,1.0nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GRNR				smax	smax		
	comp=N,3.0nm,0.5s						
GRNR				MLR	MLR		
	comp=E,270nm,15.0s						
GRNR				MLR	MLR		
	comp=N,240nm,17.0s						
GRNR				MLR	MLR		
	comp=Z,290nm,16.0s						
GUMO	Guam	21.31	139	LR	LR	07 08 41.6	
	comp=Z,204nm,21.5s,baz=308,slow=32						
GYA	Guiyang	21.40	265	⇓P	P	07 01 56.9	+3.0
GYA				pP	pP	07 02 10.3	+2.4
GYA				S	S	07 05 48.8	+0.9
GYA				pmax	pmax		
	comp=Z,77nm,1.0s						
GYA				pmax	pmax		
	comp=Z,150nm,3.5s						
GYA				LR	LR		
	comp=Z,360nm,8.3s						
GYA				LR	LR		
	comp=Z,510nm,17.6s						
GYA				LR	LR		
	comp=Z,460nm,20.5s						
QIZ	Qiongzhong	21.96	244	P	P	07 02 00.8	+1.0

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QIZ                                S        S        07 06 00.1 +1.5
QIZ                                LR       LR
      comp=Z,290nm,12.2s
QIZ                                LR       LR
      comp=Z,260nm,10.6s
QIZ                                LR       LR
      comp=Z,250nm,14.2s
TYV   Tymovskoe         22.32  20 eP        P        07 02 03.8 +0.4
TYV                               eS        S        07 06 06.9 +2.5
TYV                                pmax     pmax
      comp=Z,100nm,1.7s
TYV                                pmax     pmax
      comp=Z,43nm,1.5s
TYV                                smax     smax
      comp=N,1µm,5.5s
TYV                                smax     smax
      comp=E,300nm,5.5s
LZH   Lanzhou           23.03 291 ⇓P        P        07 02 11.1 -0.1
LZH                                S        S        07 06 19.3 +2.4
LZH                                sS       sS       07 06 44.4 +1.4
LZH                                pmax     pmax
      comp=E,250nm,1.3s
LZH                                pmax     pmax
      comp=E,500nm,4.0s
LZH                                LR       LR
      comp=E,980nm,17.1s
LZH                                LR       LR
      comp=E,730nm,16.8s
LZH                                LR       LR
      comp=E,950nm,18.1s
CD2   Chengdu           23.07 278  P        P        07 02 10.8 -0.7
CD2                                pP       pP       07 02 23.8 -2.1
CD2                                S        S        07 06 17.1 -0.3
CD2                                sS       sS       07 06 42.4 -1.2
CD2                                pmax     pmax
      comp=E,70nm,0.9s
CD2                                pmax     pmax
      comp=E,120nm,4.4s
CD2                                LR       LR
      comp=E,1µm,22.9s
CD2                                LR       LR
      comp=E,560nm,21.8s
CD2                                LR       LR
      comp=E,310nm,21.3s
ZEA   Zeya              23.42 355 eP        P        07 02 16.9 +2.4
ZEA                               eS        S        07 06 20.5 -2.0
ZEA                                pmax     pmax
      comp=Z,30nm,1.0s
ZEA                                smax     smax
      comp=N,200nm,8.1s
ZEA                                smax     smax
      comp=E,200nm,7.9s
ULN   Ulaanbaatar       25.07 321  P        P        07 02 29.9  0.0
ULN                                IAmb     IAmb     07 02 31.8
      comp=Z,161nm,1.1s
ULN   Ulaanbaatar       25.07 321  P        P        07 02 30.1 +0.3
SONM  Songino Array     25.42 320  P        P        07 02 33.3 +0.4
      comp=Z,100nm,0.8s,baz=136,slow=9.4,SNR=330
SONM                               LR       LR       07 13 42.6
      comp=Z,567nm,18.3s,baz=128,slow=39
      comp=Z,100nm,0.8s
SONM  Songino Array     25.42 320  P        P        07 02 32.4 -0.5
SONM                               IAmb     IAmb     07 02 34.7
      comp=Z,159nm,1.1s
PZH   PanZhiHua         25.63 268  P        P        07 02 35.9 +0.9
PZH                                S        S        07 06 57.4 -1.2
PZH                                pmax     pmax
      comp=Z,10.0nm,1.0s
PZH                                pmax     pmax
      comp=Z,230nm,4.5s
PZH                                LR       LR
      comp=Z,1µm,25.9s
PZH                                LR       LR
      comp=Z,1µm,27.0s
PZH                                LR       LR
      comp=Z,2µm,26.5s
GTA   Gaotai            26.68 298 ⇓P        P        07 02 44.6 +0.2
GTA                                PcP      PcP      07 06 08.1 +1.6
GTA                                ScP      ScP      07 09 40.4 -0.4
GTA                                pmax     pmax
      comp=Z,32nm,1.0s
GTA                                LR       LR
      comp=Z,330nm,13.1s
GTA                                LR       LR
      comp=Z,320nm,14.9s
GTA                                LR       LR
      comp=Z,430nm,14.9s
ZAK   Zakamensk         28.55 322 eP        P        07 03 00.5 -0.4
ZAK                                pmax     pmax
      comp=Z,38nm,1.2s
CRAI  Chiangrai         29.06 257  P        P        07 03 08.4 +2.7
PETK  Petropavlovsk-    30.05  33  P        P        07 03 14.9 +0.8
      comp=Z,11nm,0.8s,baz=215,slow=12,SNR=7.5
PETK                               LR       LR       07 16 52.1
      comp=Z,169nm,18.4s,baz=220,slow=39
      comp=Z,11nm,0.8s
PETK  Petropavlovsk-    30.05  33  P        P        07 03 14.4 +0.3
GOMU  GeErMu            30.33 291  P        P        07 03 18.4 +1.2
GOMU                               pP       sP       07 03 40.8 -0.1
GOMU                               PcP      PcP      07 06 17.8 +1.8
GOMU                               S        S        07 08 12.5 -0.5
GOMU                               pmax     pmax
      comp=Z,21nm,1.0s
GOMU                               LR       LR
      comp=Z,100nm,17.5s
GOMU                               LR       LR
      comp=Z,250nm,15.9s
GOMU                               LR       LR
      comp=Z,340nm,17.6s
MOY   Mondy             30.46 323 eP        P        07 03 17.9 +0.1
MOY                                pmax     pmax
      comp=Z,37nm,1.5s
PET   Petropavlovsk     30.46  34 eP        P        07 03 18.9 +1.3
PET                               eS        S        07 08 14.6 +0.8
PET                                MLR      MLR
      comp=Z,200nm,19.0s
MRSI  Marisa            30.90 197  P        P        07 03 25.1 +3.3
      comp=Z,57nm,0.9s
CMAR  Chiang Mai Arr    31.07 255  P        P        07 03 23.2 -0.2
      comp=Z,1.2nm,0.3s,baz=64,slow=6.2,SNR=1.8
CMAR                               PcP      PcP      07 06 18.7 +0.9
      comp=Z,1.6nm,0.4s,baz=43,slow=1.8,SNR=10.0
CMAR                               ScP      ScP      07 09 54.8  0.0
      comp=Z,0.7nm,0.3s,baz=35,slow=3.3,SNR=4.5
      comp=Z,1.2nm,0.3s
CMAR  Chiang Mai Arr    31.07 255  P        P        07 03 25.3 +1.9
YAK   Yakutsk           31.62 359  P        P        07 03 27.5 -0.3
      comp=Z,15nm,0.5s,baz=160,slow=18,SNR=4.6
      comp=Z,15nm,0.5s
YAK   Yakutsk           31.62 359 eP        P        07 03 27.6 -0.1
YAK                               e*PP      pP       07 03 44.5 +0.7
YAK                               e                  07 06 18.8
YAK                               eS        S        07 08 31.0 -0.8
YAK                               e*SS      sS       07 09 01.1 +1.8
YAK                               e                  07 13 55.5
YAK                                pmax     pmax
      comp=Z,28nm,0.9s
YAK                                pmax     pmax
      comp=N,6.0nm,1.0s
YAK                                pmax     pmax
      comp=E,3.0nm,1.3s
YAK                                smax     smax
      comp=E,42nm,1.8s
YAK                                smax     smax
      comp=N,38nm,1.7s
RKPI  Ransiki, Papua    31.94 173  P        P        07 03 32.9 +1.9
      comp=N,46nm,0.4s
MA2   Magadan           32.18  19  P        P        07 03 32.4 -0.4
      comp=N,14nm,0.8s,baz=201,slow=7.7,SNR=8.0
MA2                                LR       LR       07 17 54.1
      comp=N,83nm,18.6s,baz=195,slow=39
      comp=N,14nm,0.8s
MA2   Magadan           32.18  19ceP        P        07 03 32.9 +0.2
MA2                                pmax     pmax
      comp=Z,43nm,1.7s
FAKI  Fak Fak           33.19 177  P        P        07 03 42.0  0.0
FAKI                               IAmb     IAmb     07 03 57.9
      comp=Z,74nm,1.1s
FAKI  Fak Fak           33.19 177  P        P        07 03 43.0 +1.0
      comp=Z,60nm,0.8s
AAI   Ambon             34.00 184  P        P        07 03 49.8 +0.8
      comp=Z,66nm,0.6s
BKB   Balikpapan        34.10 205  P        P        07 03 52.3 +2.4
SHL   Shillong          34.40 272  P        P        07 03 53.2 +0.5
SHL                                IAmb     IAmb     07 04 08.8
      comp=Z,27nm,1.1s
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SHL   Shillong          34.40 272  P        P        07 03 53.2 +0.5
SHL                                pmax     pmax
      comp=Z,27nm,1.1s
H11S3 WAKE ISLAND Hy    34.79 102  T        T        07 40 52.1
      baz=290,slow=74,SNR=10
H11S1 WAKE ISLAND Hy    34.80 101  T        T        07 40 49.2
      baz=290,slow=74,SNR=11
H11S2 WAKE ISLAND Hy    34.81 102  T        T        07 40 55.5
      baz=290,slow=74,SNR=6.8
SEY   Seymchan          35.42  17  P        P        07 04 00.8 +0.1
      comp=Z,15nm,0.6s,baz=214,slow=6.4,SNR=37
      comp=Z,15nm,0.6s
SEY   Seymchan          35.42  17deP        P        07 04 01.3 +0.6
BRDH  Bariadhala        35.55 267  LR       LR       07 20 06.5
      comp=Z,240nm,19.5s,baz=90,slow=39
SPSI  Sidrap Palu       35.73 199  P        P        07 04 07.2 +3.3
      comp=Z,17nm,1.6s
WMQ   Urumqi            36.32 304 eP        P        07 04 09.3 +0.4
WMQ                                pP       pP       07 04 24.3 -0.7
WMQ                                PP       PnPn     07 05 34.6 +2.0
WMQ                                PcP      PcP      07 06 33.3 +1.0
WMQ                                pmax     pmax
      comp=Z,39nm,1.3s
WMQ                                LR       LR
      comp=Z,360nm,22.9s
KAPI  Kappang           36.73 198  LR       LR       07 18 57.0
      comp=Z,50nm,20.4s,baz=24,slow=36
TAPN  Taplejung         37.51 276 eP        P        07 04 18.5 -0.9
      comp=Z,33nm,1.0s
DGZ   Jazzator, Alta    37.60 313⇓iP        P        07 04 19.8 +0.1
DGZ                                pmax     pmax
      comp=Z,5.0nm,0.7s
KULM  Kulim             37.67 234  P        P        07 04 20.9 +0.4
IPM   Ipoh              37.99 233  P        P        07 04 23.9 +0.8
IPM                                IAmb     IAmb     07 04 25.8
      comp=Z,22nm,0.7s
RAMN  Ramite            38.57 276 eP        P        07 04 27.2 -1.1
JIRN  Jiri              38.73 277 eP        P        07 04 29.8  0.0
ZSN   Zaisan            38.80 309 eP        P        07 04 29.8 +0.1
      baz=309
ZSN                               i S       S        07 10 22.4 -0.1
      baz=309
ZSN   Zaisan            38.80 309 eP        P        07 04 29.7 +0.1
GUN   Gumba             38.93 278 eP        P        07 04 30.7 -0.7
      comp=Z,176nm,0.9s
PKI   Pulchoki          39.42 277 eP        P        07 04 34.6 -0.9
      comp=Z,47nm,0.9s
PKIN  Phulchoki         39.43 277 eP        P        07 04 35.1 -0.4
KKN   Kakani            39.48 278 eP        P        07 04 35.6 -0.2
      comp=Z,133nm,1.1s
PPBI  Pangkal Pinang    39.93 220  P        P        07 04 39.5 +0.2
KRVT  Keravat (AS076    40.16 146  LR       LR       07 17 51.0
      comp=Z,127nm,21.9s,baz=83,slow=31
ZAA0  Zalesovo Array    40.31 319  P        P        07 04 41.6 -0.5
ZALV  Zalesovo Beam     40.31 319  P        P        07 04 41.9 -0.2
      comp=Z,10nm,0.9s,baz=105,slow=7.8,SNR=29
ZALV                               PcP      PcP      07 06 43.2 -1.2
      comp=Z,3.6nm,0.7s,baz=116,slow=3.4,SNR=5.8
ZALV                               LR       LR       07 22 27.0
      comp=Z,260nm,19.0s,baz=110,slow=38
      comp=Z,10nm,0.9s
MK31  Makanchi Array    40.46 308  P        P        07 04 43.1 -0.4
MK31                               IAmb     IAmb     07 04 44.7
      comp=Z,24nm,1.0s
MK31  Makanchi Array    40.46 308d iP       P        07 04 43.0 -0.4
MKAR  Makanchi Array    40.46 308  P        P        07 04 43.3 -0.2
      comp=Z,24nm,0.9s,baz=96,slow=9.5,SNR=130
MKAR                               PcP      PcP      07 06 43.5 -1.6
      comp=Z,4.8nm,0.7s,baz=73,slow=3.6,SNR=12
MKAR                               LR       LR       07 24 17.5
      comp=Z,177nm,19.0s,baz=140,slow=40
      comp=Z,24nm,0.9s
MKAR  Makanchi Array    40.46 308  P        P        07 04 42.8 -0.7
DANN  Dangsing          40.63 279 eP        P        07 04 45.1 -0.4
MAKZ  Makanchi          40.67 308  P        P        07 04 44.8 -0.4
MAKZ                               IAmb     IAmb     07 04 46.6
      comp=Z,39nm,1.2s
MAKZ  Makanchi          40.67 308  P        P        07 04 44.9 -0.4
MAKZ  Makanchi          40.67 308  P        P        07 04 45.0 -0.2
MAKZ                               sP       sP       07 05 07.3 -2.0
MAKZ                               PcP      PcP      07 06 46.0 +0.2
KOLN  Koldanda          40.92 278 eP        P        07 04 47.5 -0.2
PLAI  Plampang          40.92 200  P        P        07 04 49.7 +2.2
      comp=Z,39nm,1.1s
TIXI  Tiksi             41.29 359  P        P        07 04 48.6 -1.2
      comp=Z,16nm,0.7s,baz=270,slow=23,SNR=44
      comp=Z,16nm,0.7s
TIXI  Tiksi             41.29 359  P        P        07 04 48.7 -1.2
TIXI  Tiksi             41.29 359c iP       P        07 04 48.5 -1.4
TIXI                               pmax     pmax
      comp=Z,19nm,0.8s
TIXI  Tiksi             41.29 359  P        P        07 04 48.6 -1.2
TIXI                               pP       pP       07 05 03.8 -2.6
PYUN  Piuthan           41.35 279 eP        P        07 04 50.9 -0.4
      comp=Z,69nm,0.9s
IGBI  Denpasar          41.74 203  P        P        07 04 56.8 +2.6
      comp=Z,35nm,0.7s
NGJI  Ngawi             41.82 209  P        P        07 04 57.5 +2.7
      comp=Z,46nm,2.8s
SHLS  Shalkode          42.26 302 eP        P        07 04 56.1 -2.3
      baz=302
SHLS  Shalkode          42.26 302 eP        P        07 04 56.1 -2.3
PWJI  Pagerwojo         42.27 208  P        P        07 04 58.8 +0.3
      comp=Z,30nm,1.1s
UZB   Uzynbulak         42.58 302 eP        P        07 05 01.6 +0.5
      baz=302
UZB   Uzynbulak         42.58 302 eP        P        07 05 01.5 +0.5
PMG   Port Moresby      42.68 155  LR       LR       07 20 36.3
      comp=Z,148nm,18.6s,baz=308,slow=33
KPKS  Kokpek            42.83 303 eP        P        07 05 03.6 +0.6
      baz=302
KPKS  Kokpek            42.83 303 eP        P        07 05 03.5 +0.6
MASI  Maura Aman, Be    42.98 224  P        P        07 05 06.3 +2.0
      comp=Z,41nm,0.8s
SATY  Saty              43.03 302 eP        P        07 05 04.8 +0.1
      baz=302
SATY  Saty              43.03 302 eP        P        07 05 04.7 +0.1
TDK   Taldyqorghan      43.04 305 eP        P        07 05 04.7  0.0
      comp=Z,26nm,0.9s,baz=305
TDK   Taldyqorghan      43.04 305 eP        P        07 05 04.6  0.0
TDK                                pmax     pmax
      comp=Z,26nm,0.9s
BILL  Bilibino          43.05  19  P        P        07 05 04.4 +0.2
BILL  Bilibino          43.05  19ceP        P        07 05 04.2 -0.1
BILL                              e*PP      pP       07 05 21.8 +0.9
BILL                              e*SP      sP       07 05 30.5 +1.9
BILL                              e                  07 06 46.6
BILL                              e                  07 06 52.2
BILL                              ePPP      PPP      07 07 17.2
BILL                               pmax     pmax
      comp=Z,20nm,1.0s
BILL                               MLR      MLR
      comp=Z,80nm,18.0s
BILL  Bilibino          43.05  19  P        P        07 05 04.8 +0.5
KURK  Kurchatov         43.34 313  P        P        07 05 06.5 -0.4
KURK                               IAmb     IAmb     07 05 08.0
      comp=Z,36nm,0.8s
KURK  Kurchatov         43.34 313ceP        P        07 05 06.2 -0.7
KURK                               pmax     pmax
      comp=Z,48nm,1.0s
KURK  Kurchatov         43.34 313  P        P        07 05 06.9  0.0
KURK                               pP       pP       07 05 23.2 -0.3
KURBB Kurchatov Arra    43.39 313  P        P        07 05 07.0 -0.2
      comp=Z,26nm,0.9s,baz=98,slow=8.8,SNR=89
KURBB                              PcP      PcP      07 06 52.8 -1.8
      comp=Z,5.5nm,1.0s,baz=100,slow=3.9,SNR=4.9
KURBB                              LR       LR       07 24 46.1
      comp=Z,510nm,18.4s,baz=149,slow=38
      comp=Z,26nm,0.9s
MDOK  Medeo             44.03 302 eP        P        07 05 13.1 +0.3
      baz=302
MDOK  Medeo             44.03 302 eP        P        07 05 13.0 +0.3
CHKK  Chushkaly         44.06 303 eP        P        07 05 13.0 +0.2
      baz=303
CHKK  Chushkaly         44.06 303 eP        P        07 05 12.9 +0.2
TNSS  Tian-Shan         44.10 302 eP        P        07 05 14.2 +0.5
      baz=302
TNSS  Tian-Shan         44.10 302 eP        P        07 05 14.1 +0.5
KUU   Kurty             44.52 303 eP        P        07 05 16.6 +0.1
      comp=Z,32nm,1.0s,baz=303
KUU   Kurty             44.52 303 eP        P        07 05 16.6 +0.1
KUU                                pmax     pmax
      comp=Z,32nm,1.0s
KSH   Kashi             45.07 297  P        P        07 05 24.4 +3.4
KSH                                pmax     pmax
      comp=Z,4.0nm,0.7s
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TKM2  Tokmak 2          45.10 302  P        P        07 05 22.0 +0.7
      SNR=36
KBK   Karagaybulak      45.59 302  P        P        07 05 25.8 +0.6
      SNR=9.9
CHMS  Chumysh           45.72 302  P        P        07 05 26.4 +0.4
      SNR=10.0
SGDS  Sogindy           45.78 303 eP        P        07 05 26.4 -0.2
      baz=302
SGDS  Sogindy           45.78 303 eP        P        07 05 26.3 -0.2
KNRA  Kununurra         45.87 182  P        P        07 05 27.4 +0.2
KNRA                               IAmb     IAmb     07 05 45.6
      comp=Z,61nm,1.1s
USP   Ospenovka         45.88 302  P        P        07 05 27.6 +0.3
      SNR=16
AAK   Ala-Archa         45.93 302  P        P        07 05 28.2 +0.4
      SNR=7.5
AAK   Ala-Archa         45.93 302  P        P        07 05 27.8  0.0
      comp=Z,4.9nm,0.6s,baz=140,slow=6.4,SNR=18
AAK                                LR       LR       07 27 34.6
      comp=Z,218nm,19.5s,baz=106,slow=40
      comp=Z,4.9nm,0.6s
AAK   Ala-Archa         45.93 302  P        P        07 05 27.6 -0.2
AAK   Ala-Archa         45.93 302⇓iP        P        07 05 27.9 +0.1
AAK                                pmax     pmax
      comp=Z,15nm,1.4s
AAK   Ala-Archa         45.93 302  P        P        07 05 27.9 +0.1
AAK                                pP       pP       07 05 43.3 -1.2
AAK                                PcP      PcP      07 07 05.3 +1.5
UCH   Uchtor            45.94 301  P        P        07 05 29.4 +1.1
      SNR=39
NRIK  Noril'sk          45.96 340  P        P        07 05 26.5 -1.0
      comp=Z,20nm,0.7s,baz=119,slow=9.5,SNR=42
NRIK                               LR       LR       07 27 21.2
      comp=Z,228nm,18.6s,baz=138,slow=39
      comp=Z,20nm,0.7s
NRIK  Noril'sk          45.96 340  P        P        07 05 26.2 -1.2
NRIK                               IAmb     IAmb     07 05 29.2
      comp=Z,20nm,0.7s
NRIK  Noril'sk          45.96 340c iP       P        07 05 26.4 -1.0
NRIK                               pmax     pmax
      comp=Z,22nm,0.8s
BTLS  Baital            46.14 305⇓iP        P        07 05 29.2  0.0
      comp=Z,15nm,0.8s,baz=305
BTLS  Baital            46.14 305d iP       P        07 05 29.2  0.0
BTLS                               pmax     pmax
      comp=Z,15nm,0.8s
EKS2  Erkin-Say         46.45 302  P        P        07 05 32.1 +0.3
      SNR=8.8
AML   Almayashu         46.55 301  P        P        07 05 33.9 +0.9
      SNR=17
BRZS  Berezniki         47.08 312⇓iP        P        07 05 36.9 +0.4
      baz=312
BRZS  Berezniki         47.08 312d iP       P        07 05 36.9 +0.4
NIL   Nilore            48.18 290  P        P        07 05 46.5 +1.1
NIL   Nilore            48.18 290  P        P        07 05 46.5 +1.1
NIL                                pmax     pmax
      comp=Z,10.0nm,0.8s
BVAR  Borovoye Array    48.64 316  P        P        07 05 48.8 +0.3
      comp=Z,31nm,0.7s,baz=93,slow=9.3,SNR=111
BVAR                               PcP      PcP      07 07 12.5 -0.5
      comp=Z,4.3nm,0.5s,baz=84,slow=4.6,SNR=4.8
BVAR                               LR       LR       07 28 16.4
      comp=Z,326nm,19.2s,baz=96,slow=38
      comp=Z,31nm,0.7s
BRVK  Borovoye          48.70 316  P        P        07 05 48.3 -0.6
BRVK  Borovoye          48.70 316deP        P        07 05 49.2 +0.2
BRVK                               pmax     pmax
      comp=Z,55nm,1.0s
BRVK  Borovoye          48.70 316  P        P        07 05 49.1 +0.2
KK31  Karatay Array     48.80 302  P        P        07 05 49.8 -0.1
KK31                               IAmb     IAmb     07 05 52.0
      comp=Z,42nm,1.0s
KK31  Karatay Array     48.80 302  P        P        07 05 49.8 -0.1
KK31                               pmax     pmax
      comp=Z,42nm,1.0s
KKAR  Karatay Array     48.80 302  P        P        07 05 50.2 +0.3
KKAR  Karatay Array     48.80 302  P        P        07 05 49.8 -0.1
KKAR                               IAmb     IAmb     07 05 52.0
      comp=Z,42nm,1.0s
KKAR  Karatay Array     48.80 302  P        P        07 05 50.3 +0.3
IUG   Iuzhnay           49.26 301 i P       P        07 05 54.0 +0.4
      baz=301
IUG   Iuzhnay           49.26 301 i P       P        07 05 54.0 +0.4
GAR   Garm              49.49 297  P        P        07 05 55.3 -0.1
GAR                                IAmb     IAmb     07 05 56.5
      comp=Z,24nm,1.0s
CHM   Chimkent          49.56 302 eP        P        07 05 55.9 +0.2
      baz=302
CHM   Chimkent          49.56 302 eP        P        07 05 55.9 +0.2
WRA   Warramunga Arr    50.20 175  P        P        07 06 00.1 -0.6
      comp=Z,3.2nm,0.8s,baz=348,slow=8.4,SNR=1.2
      comp=Z,3.2nm,0.8s
CHGR  Chuyangaron       50.44 297  P        P        07 06 02.2 -0.4
CHGR                               IAmb     IAmb     07 06 09.4
      comp=Z,31nm,1.0s
CHGR  Chuyangaron       50.44 297  P        P        07 06 02.2 -0.4
CHGR                               pmax     pmax
      comp=Z,31nm,1.0s
TNA   Tin City          50.97  28  P        P        07 06 06.8 +0.9
TNA                                IAmb     IAmb     07 06 08.1
      comp=Z,38nm,1.0s
TNA   Tin City          50.97  28  P        P        07 06 06.9 +0.9
      baz=258
KBL   Kabul             51.38 292  P        P        07 06 11.0 +1.2
KBL   Kabul             51.38 292  P        P        07 06 11.0 +1.2
KBL                                pmax     pmax
      comp=Z,9.0nm,0.7s
ANM   Nome              51.85  30  P        P        07 06 13.4 +0.9
ANM                                IAmb     IAmb     07 06 14.9
      comp=Z,26nm,0.8s
ANM   Nome              51.85  30  P        P        07 06 13.4 +0.9
ANM                                pmax     pmax
      comp=Z,26nm,0.8s
ANM   Nome              51.85  30  P        P        07 06 13.4 +0.9
      baz=261,SNR=28
CTA   Charters Tower    52.43 161  P        P        07 06 17.9 +0.6
      comp=Z,1.6nm,0.4s,baz=303,slow=7.6,SNR=5.1
CTA                                LR       LR       07 27 19.4
      comp=Z,98nm,20.4s,baz=295,slow=34
      comp=Z,1.6nm,0.4s
CTA   Charters Tower    52.43 161  P        P        07 06 18.0 +0.6
CTAO  Charters Tower    52.43 161  P        P        07 06 17.7 +0.3
CTAO                               pP       pP       07 06 33.8 -0.6
CTAO                               sP       sP       07 06 42.2 +0.2
RDOG  Red Dog Mine      53.39  25  P        P        07 06 24.0 +0.1
RDOG                               IAmb     IAmb     07 06 26.3
      comp=Z,15nm,1.0s
RDOG  Red Dog Mine      53.39  25  P        P        07 06 24.6 +0.7
      baz=261
SVE   Sverdlovsk        54.29 321 eP        P        07 06 31.5 +0.9
N16K  Nishlik Lake      54.58  35  P        P        07 06 33.7 +1.0
      baz=270
O16K  Kokwok River B    54.93  36  P        P        07 06 36.0 +0.8
      baz=271
P16K  Nushagak River    55.00  37  P        P        07 06 36.7 +1.0
      baz=272
ABKAR Akbulak array     55.38 311  P        P        07 06 38.2 -0.3
ABKAR                              IAmb     IAmb     07 06 42.8
      comp=Z,16nm,0.9s
ABKAR Akbulak array     55.38 311  P        P        07 06 38.4 -0.2
O17K  Koliganek Bris    55.43  36  P        P        07 06 39.5 +0.7
      baz=272
ARU   Arti              55.46 320  P        P        07 06 38.4 -0.7
      comp=Z,34nm,0.8s,baz=80,slow=4.6,SNR=29
ARU                                LR       LR       07 32 54.4
      comp=Z,536nm,18.6s,baz=80,slow=39
      comp=Z,34nm,0.8s
ARU   Arti              55.46 320  P        P        07 06 38.8 -0.3
ARU                                IAmb     IAmb     07 06 41.5
      comp=Z,43nm,1.0s
ARU   Arti              55.46 320c iP       P        07 06 40.0 +0.9
ARU                                *PP      pP       07 06 57.6 +1.4
ARU                                                  07 08 43.6
ARU                                S        S        07 14 21.7 +2.9
ARU                                SS       SS       07 18 01.9 -2.0
ARU                                pmax     pmax
      comp=Z,42nm,0.9s
ARU                                MLR      MLR
      comp=Z,647nm,18.0s
ARU   Arti              55.46 320  P        P        07 06 40.0 +0.9
GCSA  Galena City Sc    55.50  30  P        P        07 06 39.7 +0.5
      baz=269,SNR=5.0
Q16K  King Salmon       55.71  37  P        P        07 06 41.2 +0.4
      baz=273
TTA   Tatalina          55.88  32  P        P        07 06 42.6 +0.5
TTA                                IAmb     IAmb     07 07 33.9
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      comp=Z,32nm,1.6s
TTA   Tatalina          55.88  32  P      P      07 06 42.6 +0.5
TTA                                pmax   pmax
      comp=Z,32nm,1.6s
TTA   Tatalina          55.88  32  P      P      07 06 43.3 +1.2
      baz=271,SNR=5.3
R17K  Ugashik Creek     55.91  38  P      P      07 06 42.8 +0.5
      baz=274
A21K  Barrow            55.99  22  P      P      07 06 42.7 +0.1
A21K                               IAmb   IAmb   07 06 46.0
      comp=Z,22nm,0.9s
A21K  Barrow            55.99  22  P      P      07 06 42.8 +0.1
      baz=264,SNR=9.8
Q17K  Contact Creek     56.14  38  P      P      07 06 44.5 +0.5
      baz=274
O18K  Koktuh Hills      56.38  36  P      P      07 06 45.2 -0.4
      baz=274
P18K  Big Mountain,     56.40  36  P      P      07 06 45.8  0.0
      baz=274
L19K  White Mountain    56.43  33  P      P      07 06 46.5 +0.5
      baz=272
AKTO  Aktyubinsk        56.44 313  P      P      07 06 45.9 -0.3
      comp=Z,6.8nm,0.8s,baz=72,slow=8.7,SNR=16
AKTO                               PcP    PcP    07 07 40.6 -1.8
      comp=Z,9.3nm,1.0s,baz=56,slow=3.6,SNR=4.1
AKTO                               LR     LR     07 32 59.8
      comp=Z,578nm,18.3s,baz=104,slow=38
      comp=Z,6.8nm,0.8s
Q18K  Katmai Hardscr    56.57  37  P      P      07 06 46.6 -0.4
      baz=274
M19K  Big River Lodg    56.66  33  P      P      07 06 48.5 +0.9
      baz=273
N19K  Bonanza Creek     56.68  34  P      P      07 06 48.8 +1.0
      baz=274
K20K  Telida            56.75  31  P      P      07 06 49.1 +0.9
      baz=272,SNR=18
O19K  Port Alsworth     56.80  35  P      P      07 06 49.1 +0.6
      baz=274
IMAR  Indian Mountai    56.82  28  P      P      07 06 48.6 -0.1
L20K  Farewell, AK      56.88  32  P      P      07 06 50.1 +0.9
      baz=273
G21K  Allakaket         56.91  28  P      P      07 06 50.1 +0.8
      baz=271
F21K  Alatna River      56.91  27  P      P      07 06 49.3  0.0
      baz=270
H21K  Melozitna Rive    57.22  29  P      P      07 06 52.6 +1.1
      baz=272
M20K  Styx River        57.26  33  P      P      07 06 53.1 +1.2
      baz=274
CHUM  Lake Minchumin    57.51  31  P      P      07 06 54.7 +1.3
      baz=273,SNR=23
E22K  Anaktuvuk Pass    57.54  26  P      P      07 06 54.2 +0.4
      baz=271
I21K  Tanana            57.58  29  P      P      07 06 55.0 +1.1
      baz=273,SNR=18
PPLA  Purkeypile        57.63  32  P      P      07 06 55.1 +0.6
PPLA  Purkeypile        57.63  32  P      P      07 06 55.5 +0.9
      baz=274,SNR=8.9
CAST  Castle Rocks      57.64  31  P      P      07 06 55.6 +1.2
CAST                               IAmb   IAmb   07 06 56.6
      comp=Z,25nm,0.8s
CAST  Castle Rocks      57.64  31  P      P      07 06 55.7 +1.2
      baz=274,SNR=16
SPCR  Spurr Chakacha    57.76  34  P      P      07 06 56.5 +1.1
      baz=275,SNR=7.0
H22K  Ishtalitna Cre    57.79  28  P      P      07 06 56.8 +1.2
      baz=273
SPU   Mount Spurr       57.83  34  P      P      07 06 56.1 +0.2
KDAK  Kodiak Island     57.93  38  P      P      07 06 55.9 -0.7
      comp=Z,13nm,0.8s,baz=299,slow=6.9,SNR=7.1
KDAK                               LR     LR     07 31 56.7
      comp=Z,50nm,21.8s,baz=249,slow=36
      comp=Z,13nm,0.8s
D23K  Nanushuk River    57.94  25  P      P      07 06 57.5 +1.1
      baz=272
SKT   Skwentna          58.01  33  P      P      07 06 57.3 +0.3
      baz=275
BPAW  Bear Paw Mtn.     58.08  30  P      P      07 06 58.0 +0.5
BPAW                               IAmb   IAmb   07 06 59.5
      comp=Z,19nm,0.9s
BPAW  Bear Paw Mtn.     58.08  30  P      P      07 06 58.0 +0.5
      baz=274,SNR=11
MLY   Manley            58.11  29  P      P      07 06 58.8 +1.0
      baz=274,SNR=22
COLD  Coldfoot          58.19  27  P      P      07 06 58.9 +0.7
      baz=273
HOM   Homer             58.20  36  P      P      07 06 58.2 -0.2
      baz=277
G23K  Bananza Creek     58.29  27  P      P      07 06 59.9 +0.9
      baz=274
E23K  Chandalar         58.37  26  P      P      07 07 00.4 +0.8
      baz=273
SUA   Susitna One       58.43  34  P      P      07 07 00.0 -0.1
SUA   Susitna One       58.43  34  P      P      07 07 00.2  0.0
      baz=276,SNR=18
TRF   Thorofare Moun    58.44  31  P      P      07 07 00.8 +0.6
      baz=275
H23K  Yukon River       58.55  28  P      P      07 07 02.1 +1.3
      baz=275
CUT   Chulitna          58.55  32  P      P      07 07 00.5 -0.3
      baz=276,SNR=5.8
C24K  Franklin Bluff    58.61  24  P      P      07 07 01.6 +0.6
      baz=273
BRSE  Bradley Lake S    58.64  36  P      P      07 07 02.4 +0.9
      baz=277
I23K  Minto, Yukon-K    58.69  29  P      P      07 07 03.0 +1.3
I23K                               IAmb   IAmb   07 07 03.8
      comp=Z,35nm,1.5s
I23K  Minto, Yukon-K    58.69  29  P      P      07 07 02.2 +0.5
      baz=275,SNR=7.3
BWN   Browne            58.73  30  P      P      07 07 03.5 +1.4
E24K  Your Creek        58.79  26  P      P      07 07 02.9 +0.4
      baz=274
NEA2  Nenana            58.86  30  P      P      07 07 03.3 +0.3
NEA2  Nenana            58.86  30  P      P      07 07 03.3 +0.3
      baz=276,SNR=31
RC01  Rabbit Creek A    58.96  34  P      P      07 07 04.2 +0.5
      baz=277
MCK   McKinley          59.01  31  P      P      07 07 04.3 +0.3
      baz=276,SNR=10
O22K  Cooper Landing    59.05  35  P      P      07 07 03.9 -0.4
      baz=278
GEYT  Alibeck           59.06 298  P      P      07 07 04.4 -0.4
      comp=Z,4.7nm,0.7s,baz=118,slow=2.2,SNR=6.3
GEYT                               LR     LR     07 36 55.5
      comp=Z,98nm,19.2s,baz=108,slow=40
      comp=Z,4.7nm,0.7s
F24K  Squaw Lake        59.06  26  P      P      07 07 05.0 +0.6
      baz=275,SNR=19
PMR   Palmer            59.19  33  P      P      07 07 04.8 -0.4
      baz=278,SNR=6.1
H24K  Noodor Dome       59.23  28  P      P      07 07 06.5 +1.0
      baz=276,SNR=13
SEW   Seward            59.23  35  P      P      07 07 05.5  0.0
      baz=278,SNR=5.1
G24K  Hadweenzic Riv    59.30  27  P      P      07 07 07.2 +1.2
      baz=276
TCOL  CIGO, UAF Yank    59.35  29  P      P      07 07 06.5 +0.2
      baz=277
COLA  College           59.35  29⇓eP      P      07 07 05.7 -0.6
COLA                               pmax   pmax
      comp=Z,37nm,2.0s
COLA  College           59.35  29  P      P      07 07 06.1 -0.2
      baz=277
COLA  College           59.35  29  P      P      07 07 07.4 +1.2
COLA                               PcP    PcP    07 07 58.2 +4.6
D25K  Kavik River       59.45  24  P      P      07 07 07.5 +0.4
      baz=275,SNR=12
POKR  Poker Plat Res    59.50  29  P      P      07 07 08.1 +0.8
      baz=277,SNR=15
KNK   Knik Glacier      59.53  33  P      P      07 07 07.5 -0.1
      baz=278,SNR=7.4
SML   Sawmill           59.53  33  P      P      07 07 08.0 +0.3
      baz=278
PWL   Port Wells        59.67  34  P      P      07 07 08.6  0.0
      baz=279
ILAR  Eielson Array     59.77  29  P      P      07 07 08.9 -0.3
      comp=Z,5.7nm,0.7s,baz=269,slow=5.8,SNR=49
      comp=Z,5.7nm,0.7s
HDA   Harding Lake      59.80  30  P      P      07 07 08.9 -0.5
      baz=278,SNR=21
M23K  Glacier View      59.82  33  P      P      07 07 09.9 +0.2
      baz=279
G25K  Bearman Lake      59.84  27  P      P      07 07 10.9 +1.3
      baz=277,SNR=8.9
E25K  Arctic Village    59.88  26  P      P      07 07 10.9 +1.0
      baz=277,SNR=8.7
C26K  Camden Bay        59.90  23  P      P      07 07 10.9 +0.9
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      baz=276
F25K  Christian Rive    59.91  26  P      P      07 07 11.3 +1.1
      baz=277
SCM   Sheep Creek Mo    60.00  33  P      P      07 07 10.8 -0.2
      baz=279,SNR=6.1
KIRV  Kirov             60.09 323  P      P      07 07 11.3 -0.1
      comp=Z,34nm,0.7s,baz=124,slow=2.0,SNR=9.3
KIRV                               LR     LR     07 35 49.2
      comp=Z,215nm,19.3s,baz=100,slow=39
      comp=Z,34nm,0.7s
KIRV  Kirov             60.09 323deP      P      07 07 11.5 +0.1
PRP   Porcupine Dome    60.24  29  P      P      07 07 12.9 +0.3
      baz=278,SNR=11
P23K  Montague Islan    60.27  35  P      P      07 07 13.0 +0.4
      baz=280
C27K  Jago River        60.35  24  P      P      07 07 14.1 +0.9
      baz=278
K24K  Donnelly Dome     60.39  30  P      P      07 07 13.4 -0.1
      baz=279,SNR=6.5
F26K  Sheenjek River    60.47  26  P      P      07 07 15.3 +1.3
      baz=278
M24K  Tolsona, Glenn    60.49  32  P      P      07 07 15.1 +0.8
M24K  Tolsona, Glenn    60.49  32  P      P      07 07 15.4 +1.1
      baz=280
PAX   Paxson            60.67  31  P      P      07 07 15.9 +0.4
      baz=280,SNR=6.9
G26K  Porcupine Rive    60.72  27  P      P      07 07 16.8 +1.2
      baz=279
KLU   Klutina           60.72  33  P      P      07 07 16.3 +0.5
      baz=280
RIDG  Independent Ri    60.81  30  P      P      07 07 17.3 +0.9
      baz=280
HARP  HAARP             60.91  32  P      P      07 07 18.1 +1.0
      baz=280
EYAK  Cordova Ski Ar    60.98  34  P      P      07 07 17.6 +0.2
      baz=281
SCRK  Sand Creek        61.15  30  P      P      07 07 18.7  0.0
      baz=280,SNR=20
DOT   Dot Lake          61.17  31  P      P      07 07 18.1 -0.7
DOT                                IAmb   IAmb   07 07 19.7
      comp=Z,22nm,0.8s
I26K  Coal Creek Min    61.25  29  P      P      07 07 19.0 -0.2
      baz=280,SNR=6.9
N25K  Chitina, Valde    61.32  33  P      P      07 07 20.5 +0.6
      baz=281,SNR=5.4
E27K  Coleen River      61.34  25  P      P      07 07 21.0 +1.1
      baz=280
G27K  Doyon Strip       61.57  27  P      P      07 07 22.2 +0.7
      baz=281,SNR=8.8
L26K  Log Cabin Wild    61.61  31  P      P      07 07 22.4 +0.6
      baz=282,SNR=15
H27K  Steamboat Moun    61.73  27  P      P      07 07 24.0 +1.4
      baz=281
I27K  Kandik River      61.83  28  P      P      07 07 24.0 +0.8
      baz=282
M26K  Nabesna, AK       61.90  32  P      P      07 07 24.2 +0.4
      baz=282
K27K  Chicken           61.96  30  P      P      07 07 24.3 +0.2
      baz=282
MCARA McCarthy VSAT     62.10  33  P      P      07 07 25.8 +0.7
      baz=283
EGAK  Eagle             62.19  29  P      P      07 07 25.7 +0.1
      baz=282,SNR=7.3
L27K  Beaver Creek,     62.28  31  P      P      07 07 27.1 +0.8
      baz=283
BCAR  Beaver Creek A    62.30  31  P      P      07 07 26.6 +0.2
M27K  Edge Creek, AK    62.41  32  P      P      07 07 27.8 +0.4
      baz=283
BELG  Belogornoye       62.42 317  P      P      07 07 26.1 -1.1
      comp=Z,27nm,0.7s,baz=182,slow=1.1,SNR=16
BELG                               LR     LR     07 36 32.0
      comp=Z,178nm,19.9s,baz=145,slow=38
      comp=Z,27nm,0.7s
BELG  Belogornoye       62.42 317⇓iP      P      07 07 27.0 -0.3
BELG                               pmax   pmax
      comp=Z,7.0nm,1.0s
DZM   Mont Dzumac       62.54 142 eLR     LR     07 26 09.6
      comp=Z,212nm,26.7s
BARN  Barnard Glacie    62.82  33  P      P      07 07 30.8 +0.7
BARN                               IAmb   IAmb   07 07 32.0
      comp=Z,12nm,0.7s
STKA  Stephens Creek    62.83 169  P      P      07 07 28.8 -1.4
      comp=Z,2.5nm,0.5s,baz=345,slow=13,SNR=1.5
      comp=Z,2.5nm,0.5s
BVCY  Beaver Creek      62.86  32  P      P      07 07 31.1 +0.9
      baz=284,SNR=5.2
CTG   Chitna Glacier    63.00  33  P      P      07 07 31.7 +0.5
      baz=284
DAWY  Dawson            63.10  30  P      P      07 07 31.7  0.0
      baz=284,SNR=9.0
YUK3  Moose Creek       63.20  32  P      P      07 07 32.8 +0.1
      baz=285,SNR=7.5
I29M  Ogilvie Camp,     63.23  28  P      P      07 07 33.0 +0.5
      baz=285
J29M  Klondike Camp     63.50  29  P      P      07 07 35.3 +0.9
      baz=285
O28M  Mount Upton       63.59  33  P      P      07 07 36.1 +0.8
      baz=285
EPYK  Eagle Plains      63.59  27  P      P      07 07 35.4 +0.5
      baz=286,SNR=24
G30M  tAoh Zraii Nji    63.62  26  P      P      07 07 35.1  0.0
      baz=286
YUK8  Steele Glacier    63.65  33  P      P      07 07 36.3 +0.6
      baz=285
WSAR  Wadi Sarin        63.66 283  LR     LR     07 38 05.2
      comp=Z,80nm,19.1s,baz=86,slow=39
PINM  Pinnacle          63.74  34  P      P      07 07 36.9 +0.8
      baz=286
L29M  L29M              63.90  30  P      P      07 07 38.2 +1.2
      baz=286
M29M  Somme Creek       63.93  31  P      P      07 07 38.6 +1.3
      baz=286,SNR=8.9
K29M  Barlow Dome       63.96  30  P      P      07 07 38.6 +1.1
      baz=286
YUK4  Talbot Arm        64.16  32  P      P      07 07 39.6 +0.7
      baz=286,SNR=5.9
INK   Inuvik            64.23  24  P      P      07 07 39.3 +0.4
      comp=Z,6.0nm,0.6s,baz=295,slow=6.0,SNR=41
INK                                LR     LR     07 38 17.1
      comp=Z,39nm,18.0s,baz=276,slow=38
      comp=Z,6.0nm,0.6s
INK   Inuvik            64.23  24  P      P      07 07 39.0  0.0
      baz=287,SNR=8.6
PNL   Peninsula         64.28  34  P      P      07 07 40.4 +0.9
      baz=286
LVZ   Lovozero          64.37 335⇓iP      P      07 07 40.3 +0.3
LVZ                                pmax   pmax
      comp=Z,129nm,2.2s
LVZ   Lovozero          64.37 335  P      P      07 07 39.8 -0.3
YUK6  Outpost Mounta    64.40  33  P      P      07 07 41.0 +0.4
      baz=287
F31M  Tsiigehtchic      64.41  25  P      P      07 07 40.5 +0.3
      baz=288,SNR=8.0
KLMR  Klimovskoe        64.44 327 eP      P      07 07 38.0 -2.5
KLMR                               AMP           07 07 41.7
      comp=Z,43nm,1.2s
KLMR                              epP     pP     07 07 58.1  0.0
KLMR                              ePP     PP     07 10 00.7 -1.8
KLMR  Klimovskoe        64.44 327 eP      P      07 07 38.0 -2.5
KLMR                              e*PP    pP     07 07 58.0  0.0
KLMR                              e              07 10 00.6
KLMR                               pmax   pmax
      comp=Z,43nm,1.2s
O29M  Mount Kennedy     64.49  33  P      P      07 07 42.1 +1.1
      baz=287
M30M  Minto, Yukon      64.64  31  P      P      07 07 43.0 +1.1
      baz=287,SNR=6.2
MAYO  Mayo, Yukon       64.72  30  P      P      07 07 43.7 +1.4
      baz=288
HYT   Haines Junctio    64.84  33  P      P      07 07 44.7 +1.4
      baz=288,SNR=6.2
N30M  Aishihik Lake     64.84  32  P      P      07 07 44.4 +1.2
      baz=288
APA   Apatity           64.92 335⇓iP      P      07 07 41.7 -1.8
APA                                pmax   pmax
      comp=Z,38nm,0.9s
APA                                MLR    MLR
      comp=Z,2µm,21.0s
SPA0  Spitsbergen Ar    65.17 348 eP      P      07 07 45.2 +0.2
SPA0                               IAmb   IAmb   07 07 46.3
      comp=Z,49nm,0.8s
SPITS Spitsbergen Ar    65.17 348  LR     LR     07 39 05.4
      comp=Z,94nm,18.2s,baz=14,slow=39
P30M  Million Dollar    65.31  33  P      P      07 07 47.5 +1.2
      baz=288
VADS  Vadso             65.42 338 eP      P      07 07 47.1 +0.4
N31M  Braeburn, Yuko    65.43  32  P      P      07 07 48.1 +1.1
      baz=289,SNR=5.6
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O30N  Mendenhall        65.52  33  P      P      07 07 48.4 +0.8
      baz=289
AKT   Akhty             65.60 305 eP      P      07 07 48.4 -0.1
AKT                               e*PP    pP     07 08 05.9 -0.2
AKT                               e*SP    sP     07 08 13.6 +0.1
AKT                               e              07 08 18.6
AKT                                pmax   pmax
      comp=Z,16nm,1.0s
A36M  Sachs Harbour     65.60  19  P      P      07 07 47.7 -0.1
A36M                               IAmb   IAmb   07 07 51.2
      comp=Z,34nm,0.7s
A36M  Sachs Harbour     65.60  19  P      P      07 07 48.1 +0.3
      baz=293,SNR=49
PLBC  Pleasant Camp     65.81  34  P      P      07 07 50.4 +1.0
      baz=289
M31M  Drury Creek, Y    65.82  31  P      P      07 07 50.3 +0.8
      baz=289,SNR=5.6
FARO  Faro, Yukon       66.27  31  P      P      07 07 53.4 +1.0
      baz=290,SNR=13
VRH   Novokhopyorsk     66.27 317 eP      P      07 07 52.8 +0.3
VRH                                pmax   pmax
      comp=Z,20nm,1.2s
SKAG  Skagway           66.31  34  P      P      07 07 53.9 +1.3
      baz=290
KEV   Kevo              66.31 338  P      P      07 07 52.3 -0.2
N32M  Quiet Lake        66.77  32  P      P      07 07 56.2 +0.6
      baz=291
ARA0  ARCESS Array S    66.88 338 eP      P      07 07 56.5 +0.3
ARCES ARCESS Array B    66.88 338  P      P      07 07 54.7 -1.4
      comp=Z,14nm,0.7s,baz=64,slow=8.1,SNR=36
ARCES                              LR     LR     07 42 08.2
      comp=Z,235nm,18.0s,baz=52,slow=40
      comp=Z,14nm,0.7s
NOR   Nord              66.95 355 i P     P      07 07 55.9 -0.5
NOR                                IAmb   IAmb   07 07 57.3
      comp=Z,8.5nm,0.8s
MOS   Moscow            67.03 322 eP      P      07 07 56.2 -1.0
MOS                                pmax   pmax
      comp=Z,58nm,0.7s
C36M  Paulatuk          67.04  22  P      P      07 07 57.2 +0.2
C36M  Paulatuk          67.04  22  P      P      07 07 57.1  0.0
      baz=295,SNR=73
P33M  Teslin, Yukon     67.23  33  P      P      07 07 59.5 +0.9
      baz=292,SNR=5.3
S32K  Killisnoo         67.38  36  P      P      07 08 00.2 +0.8
      baz=291
LPSR  Galich'ya Gora    67.42 319 eP      P      07 07 59.5 -0.3
LPSR                               pmax   pmax
      comp=Z,10.0nm,0.7s
VORR  Voronezh          67.59 318 eP      P      07 08 01.3 +0.4
VORR                               pmax   pmax
      comp=Z,38nm,1.3s
VSR   Storozhevoye      67.78 317 eP      P      07 08 02.2 +0.1
VSR                                pmax   pmax
      comp=Z,30nm,1.0s
ZEI   Tsey              67.81 307 eP      P      07 08 01.2 -1.5
ZEI                                pmax   pmax
      comp=Z,13nm,1.0s
OBN   Obninsk           67.81 322 eP      P      07 08 03.4 +1.2
OBN                               e*PP    pP     07 08 22.9 +3.0
OBN                               e              07 08 28.4
OBN                               e              07 10 32.5
OBN                               ePPP    PPP    07 12 10.9
OBN                                pmax   pmax
      comp=Z,47nm,1.4s
OBN                                MLR    MLR
      comp=Z,222nm,16.0s
KTK1  Kautokeino        67.84 338 eP      P      07 08 02.2  0.0
KTK1                               IAmb   IAmb   07 08 03.0
      comp=Z,40nm,0.8s
Q32M  Nakina River      67.96  34  P      P      07 08 04.3 +1.0
      baz=292
KBZ   Khabaz            68.14 309  P      P      07 08 04.7 +0.2
      comp=Z,20nm,0.9s,baz=165,slow=1.6,SNR=34
KBZ                                LR     LR     07 39 51.4
      comp=Z,167nm,19.1s,baz=65,slow=38
      comp=Z,20nm,0.9s
KBZ   Khabaz            68.14 309ceP      P      07 08 05.2 +0.7
KBZ                                pmax   pmax
      comp=Z,27nm,0.9s
GNI   Garni             68.19 305  P      P      07 08 05.4 +0.3
      comp=Z,5.8nm,0.5s,baz=176,slow=4.7,SNR=5.1
GNI                                LR     LR     07 42 03.3
      comp=Z,38nm,18.8s,baz=78,slow=40
      comp=Z,5.8nm,0.5s
GNI   Garni             68.19 305deP      P      07 08 07.3 +2.2
GNI                                pmax   pmax
      comp=Z,19nm,1.4s
KIV   Kislovodsk        68.20 309 ⇑P      P      07 08 05.9 +1.0
KIV   Kislovodsk        68.20 309 eP      P      07 08 06.0 +1.0
KIV                                pmax   pmax
      comp=Z,35nm,1.1s
KIV                                MLR    MLR
      comp=Z,71nm,17.0s
KIV   Kislovodsk        68.20 309  P      P      07 08 06.0 +1.0
NEY   Neytrino          68.44 308⇑eP      P      07 08 08.3 +1.7
JETT  Jettan, Norway    68.47 339 eP      P      07 08 06.1  0.0
JETT                               IAmb   IAmb   07 08 07.2
      comp=Z,62nm,1.1s
U33K  Whale Pass        68.63  37  P      P      07 08 08.2 +0.9
      baz=293
S34M  Telegraph Cree    68.92  34  P      P      07 08 10.3 +1.2
      baz=294
WTLY  Watson Lake, Y    69.12  32  P      P      07 08 10.9 +0.6
      baz=295
DLBC  Dease Lake        69.24  34  LR     LR     07 39 55.6
      comp=Z,21nm,20.1s,baz=282,slow=37
DLBC  Dease Lake        69.24  34  P      P      07 08 12.1 +0.9
      baz=294
T35M  Bob Quinn         69.73  35  P      P      07 08 14.3 +0.1
      baz=295
WRGLY Wrigley           70.02  28  P      P      07 08 16.3 +0.6
      baz=298
FINES FINESS Array B    70.25 330  P      P      07 08 16.1 -1.1
      comp=Z,30nm,0.5s,baz=70,slow=5.7,SNR=107
FINES                              LR     LR     07 44 59.5
      comp=Z,173nm,18.4s,baz=24,slow=41
      comp=Z,30nm,0.5s
LIRD  Liard River Hi    70.65  32  P      P      07 08 20.4 +0.6
      baz=297
STEI  Steigen           70.93 339 eP      P      07 08 20.5 -0.7
STEI                               IAmb   IAmb   07 08 21.8
      comp=Z,63nm,1.2s
RES   Resolute Bay      71.05  12  P      P      07 08 21.6 -0.2
      comp=Z,12nm,0.6s,baz=304,slow=6.7,SNR=99
RES                                LR     LR     07 41 20.6
      comp=Z,66nm,21.5s,baz=346,slow=37
      comp=Z,12nm,0.6s
FAUS  Fauske            71.22 338 eP      P      07 08 23.0  0.0
FAUS                               IAmb   IAmb   07 08 24.7
      comp=Z,62nm,1.1s
LOF   Lofoten           71.34 339 eP      P      07 08 23.9 +0.3
ANN   Anapa             71.34 311 eP      P      07 08 19.7 -4.4
ANN                               e*PP    pP     07 08 37.5 -4.4
ANN                               e              07 08 41.5
ANN                               e              07 10 58.5
ANN                               eS      S      07 17 30.0 -6.8
ANN                               eSS     SS     07 22 11.4 -0.2
ANN                                pmax   pmax
      comp=Z,44nm,1.1s
VSU   Vasula            71.34 327deP      P      07 08 24.3 +0.4
VSU                                pmax   pmax
      comp=Z,222nm,1.0s
VSU   Vasula            71.34 327 eP      P      07 08 24.3 +0.4
DAG   Danmarks Havn     71.38 353 i P     P      07 08 22.8 -1.0
DAG                                IAmb   IAmb   07 08 25.1
      comp=Z,45nm,1.0s
MEF   Metsahovi         71.56 330 eP      P      07 08 25.8 +0.6
RAF   Rauma             72.28 331 eP      P      07 08 29.4  0.0
NEEM  North Greenlan    72.38   0 i P     P      07 08 30.1 -0.1
NEEM                               IAmb   IAmb   07 08 32.6
      comp=Z,49nm,0.9s
MTSE  Matsula           72.56 328 eP      P      07 08 31.6 +0.5
TULEG Thule             72.60   5 i P     P      07 08 30.4 -0.8
TULEG                              IAmb   IAmb   07 08 32.8
      comp=Z,36nm,0.9s
MNK   Minsk             72.64 323 i P     P      07 08 31.6 -0.1
MNK                               i P     P      07 08 31.6 -0.1
      comp=N,22nm,0.9s
MNK                               i P     P      07 08 31.6 -0.1
      comp=Z,47nm,1.0s,baz=62
MNK                               i pP    pP     07 08 50.3 +0.6
MNK                               i sP    sP     07 08 58.3 +1.3
MNK                               i PP    PP     07 11 07.2 -6.3
MNK                               i PPP   PPP    07 12 59.6
MNK                               i S     S      07 17 48.8 -2.6
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MNK				i sS	sS	07 18 21.4	-0.3
MNK				i SS	SS	07 22 27.6	-3.3
MNK				i SSS	SSS	07 25 49.2	
MNK				i LQ	LQ	07 34 46.5	
MNK				i LR	LR	07 41 17.6	
MNK				i LRM	MLR	07 46 50.5	
	comp=N,2µm,19.7s						
MNK				i LRM	MLR	07 46 53.3	
	comp=E,13nm,13.8s						
MNK				i LRM	MLR	07 47 02.8	
	comp=Z,170nm,14.1s						
MNK	Minsk	72.64	323	i P	P	07 08 31.5	-0.1
MNK				i *PP	pP	07 08 50.2	+0.6
MNK				i *SP	sP	07 08 58.2	+1.3
MNK				i PPP	PPP	07 12 59.6	
MNK				i S	S	07 17 48.7	-2.6
MNK				i *SS	sS	07 18 21.3	-0.3
MNK				i SS	SS	07 22 27.6	-3.3
MNK				i SSS	SSS	07 25 49.2	
MNK				pmax	pmax		
	comp=N,22nm,0.9s						
MNK				pmax	pmax		
	comp=Z,47nm,1.0s						
NACGM	Naroch	73.01	324	eP	P	07 08 34.9	+1.0
	comp=E,2µm,1.1s						
ISAL	Salakas	73.01	325	eP	P	07 08 35.0	+1.1
SIM	Simferopol'	73.41	313	eP	P	07 08 37.7	+1.3
SIM				e		07 08 54.3	
SIM				pmax	pmax		
	comp=Z,45nm,1.0s						
AKASG	Malin Array Be	73.70	319	P	P	07 08 36.6	-1.4
	comp=Z,3.0nm,0.5s,baz=48,slow=6.1,SNR=41						
AKASG				LR	LR	07 43 54.4	
	comp=Z,252nm,19.9s,baz=58,slow=38						
	comp=Z,3.0nm,0.5s						
AKASG	Malin Array Be	73.70	319	i P	P	07 08 37.7	-0.4
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AKBB	Malin Array Si	73.70	319	⇓iP	P	07 08 37.6	-0.5
AKBB				pmax	pmax		
	comp=Z,25nm,0.9s						
DBG	Daneborg	73.76	352	i P	P	07 08 37.6	-0.4
DBG				IAmb	IAmb	07 08 39.3	
	comp=Z,28nm,1.0s						
YKA	Yellowknife Ar	73.86	26	P	P	07 08 38.9	+0.1
	comp=Z,4.2nm,0.7s,baz=305,slow=5.5,SNR=70						
YKA				LR	LR	07 42 49.2	
	comp=Z,23nm,20.5s,baz=296,slow=37						
	comp=Z,4.2nm,0.7s						
NSS	Namsos	74.01	337	eP	P	07 08 38.9	-0.7
NSS				IAmb	IAmb	07 08 39.7	
	comp=Z,34nm,0.8s						
PABE	Paberze	74.11	325	eP	P	07 08 41.3	+1.0
RAYN	Ar Rayn	74.46	288	P	P	07 08 43.8	+0.7
UPP	Uppsala	74.64	331	eP	P	07 08 43.0	-0.3
PBUR	Paburge	74.82	327	eP	P	07 08 44.7	+0.2
BNN	Bunyan	74.99	306	P	P	07 08 45.7	-0.3
SORM	Soroca	75.44	317	⇓P	P	07 08 47.7	-0.4
SORM	Soroca	75.44	317	P	P	07 08 47.7	-0.4
VIKU	Vikbolandet	75.81	330	eP	P	07 08 49.8	-0.3
HFS	Hagfors	76.08	333	LR	LR	07 47 37.8	
	comp=Z,182nm,18.9s,baz=46,slow=40						
BR131	Keskin Array S	76.11	308	P	P	07 08 51.6	-0.8
BR131				IAmb	IAmb	07 08 54.6	
	comp=Z,38nm,0.9s						
BR131	Keskin Array S	76.11	308	ceP	P	07 08 52.3	0.0
BRTR	Keskin Array B	76.11	308	P	P	07 08 51.7	-0.7
	comp=Z,25nm,1.0s,baz=102,slow=2.9,SNR=63						
BRTR				LR	LR	07 46 52.5	
	comp=Z,76nm,18.1s,baz=77,slow=39						
	comp=Z,25nm,1.0s						
BRTR	Keskin Array B	76.11	308	P	P	07 08 51.6	-0.8
NB2	NORSAR Subarra	76.47	334	P	P	07 08 53.1	-0.7
	comp=Z,26nm,0.8s,baz=47,slow=5.6						
NB2	NORSAR Subarra	76.47	334	P	P	07 08 53.1	-0.7
	slow=5.6						
NOA	NORSAR Array B	76.47	334	P	P	07 08 53.2	-0.7
	comp=Z,37nm,0.7s,baz=49,slow=5.6,SNR=86						
NOA				LR	LR	07 43 47.5	
	comp=Z,87nm,18.4s,baz=30,slow=37						
	comp=Z,37nm,0.7s						
NC602	NORSAR Array S	76.54	334	P	P	07 08 53.5	-0.7
NC602	NORSAR Array S	76.54	334	eP	P	07 08 53.8	-0.4
DOMB	Dombas	76.61	336	eP	P	07 08 54.4	-0.2
DOMB				IAmb	IAmb	07 08 55.4	
	comp=Z,66nm,0.9s						
ANTO	Ankara	76.61	308	⇓P	P	07 08 56.1	+1.0
ANTO	Ankara	76.61	308	P	P	07 08 55.4	+0.3
ANTO				IAmb	IAmb	07 08 57.1	
	comp=Z,31nm,1.1s						
ANTO	Ankara	76.61	308	P	P	07 08 56.1	+1.0
NBO00	NORSAR Array S	76.64	334	P	P	07 08 54.6	-0.2
MOL	Molde	76.79	336	eP	P	07 08 56.0	+0.4
UPNV	Upernavik	76.97	2	eP	P	07 08 57.6	+1.2
UPNV				IAmb	IAmb	07 08 58.2	
	comp=Z,45nm,0.6s						
SUMG	Summit	77.00	357	i P	P	07 08 57.7	+0.7
SUMG				IAmb	IAmb	07 08 59.7	
	comp=Z,80nm,0.8s						
TPGR	Topolog	77.02	314	⇑P	P	07 08 58.0	+0.7
CFR	Carcaliu	77.03	315	⇓P	P	07 08 57.1	-0.1
CFR	Carcaliu	77.03	315	P	P	07 08 57.1	-0.1
LVV	L'vov	77.03	320	eP	P	07 08 57.8	+0.6
TIRR	Tirgusor	77.22	314	⇑P	P	07 08 58.9	+0.6
TIRR	Tirgusor	77.22	314	P	P	07 08 58.9	+0.6
AKN	Aaknes	77.25	336	eP	P	07 08 58.5	+0.4
TESR	Tescani	77.25	317	⇑P	P	07 08 59.2	+0.7
ASF	Jabal al Asfar	77.30	300	P	P	07 08 58.5	-0.7
	comp=Z,10.0nm,1.0s,baz=127,slow=3.5,SNR=7.8						
	comp=Z,10.0nm,1.0s						
OSL	Oslo	77.36	333	eP	P	07 08 58.9	+0.1
SCO	Scoresbysund	77.47	351	i P	P	07 09 00.4	+1.1
SCO				IAmb	IAmb	07 09 02.7	
	comp=Z,43nm,1.3s						
BURAR	Bucovina Array	77.52	318	⇑P	P	07 09 01.1	+1.0
BURAR	Bucovina Array	77.52	318	P	P	07 09 00.5	+0.4
BURAR				IAmb	IAmb	07 09 02.1	
	comp=Z,25nm,0.8s						
BURAR	Bucovina Array	77.52	318	P	P	07 09 01.1	+1.0
VRI	Vrincioaia	77.54	316	⇑P	P	07 09 00.8	+0.6
VRI	Vrincioaia	77.54	316	P	P	07 09 01.0	+0.9
PLOR	Plostina	77.59	316	⇓P	P	07 09 01.1	+0.6
PLOR	Plostina	77.59	316	P	P	07 09 01.0	+0.6
BEL	Belsk	77.67	323	eP	P	07 09 02.0	+1.3
ICOR	Ion Corvin	77.77	314	⇑P	P	07 09 03.0	+1.6
SKAR	Skarslia	77.79	335	eP	P	07 09 01.4	+0.1
SKAR				IAmb	IAmb	07 09 02.6	
	comp=Z,36nm,0.9s						
COVR	Voineasa-Covas	77.86	316	⇑P	P	07 09 02.8	+0.9
OZUR		77.98	317	⇓P	P	07 09 02.9	+0.3
KONO	Kongsberg	77.98	334	eP	P	07 09 02.8	+0.5
MLR	Muntele Rosu	78.20	316	⇑P	P	07 09 03.7	-0.2
MLR	Muntele Rosu	78.20	316	P	P	07 09 03.7	-0.2
	comp=Z,12nm,0.9s,baz=112,slow=8.9,SNR=8.4						
MLR				LR	LR	07 45 13.5	
	comp=Z,167nm,18.7s,baz=75,slow=37						
	comp=Z,12nm,0.9s						
HYA	Hoyanger	78.22	336	eP	P	07 09 03.9	+0.3
DEL	Delary	78.25	330	eP	P	07 09 03.4	-0.4
DOPR	Dopca	78.28	317	⇑P	P	07 09 04.1	-0.2
ARCR	ARCALIA	78.30	318	⇑P	P	07 09 04.3	0.0
BSD	Bornholm Skovb	78.62	328	eP	P	07 09 06.0	+0.2
BSD	Bornholm Skovb	78.62	328	i P	P	07 09 05.9	+0.1
BSD				IAmb	IAmb	07 09 06.7	
	comp=Z,111nm,0.8s						
TRPA	Tarpa	78.77	320	⇓P	P	07 09 08.0	+1.1
STHS	Stebnicka Huta	78.77	321	eP	P	07 09 07.3	+0.4
STHS				pmax	pmax		
	comp=Z,19nm,1.2s						
STHS	Stebnicka Huta	78.77	321	eP	P	07 09 07.3	+0.4
ODD1	Odda	78.92	335	eP	P	07 09 07.8	+0.2
ARR	Arges	79.05	316	⇑P	P	07 09 08.6	0.0
OJC	Ojcow	79.09	322	eP	P	07 09 09.7	+1.1
MARR	Marisel-Cluj	79.23	318	⇑P	P	07 09 09.8	+0.3
NIE	Niedzica	79.28	321	eP	P	07 09 11.8	+2.1
BLS5	Blasjo	79.32	334	eP	P	07 09 10.0	+0.3
COPA	Copaceanca	79.35	315	⇓P	P	07 09 10.9	+0.8
DRGR		79.40	318	⇑P	P	07 09 11.8	+1.3
DRGR		79.40	318	P	P	07 09 11.7	+1.3
LLD	Lille Linde	79.69	329	eP	P	07 09 13.3	+1.6
B08A	Colville Reser	79.77	40	P	P	07 09 12.4	0.0
SNART	Snartemo	79.78	333	eP	P	07 09 12.4	+0.3
SNART				IAmb	IAmb	07 09 13.2	
	comp=Z,163nm,1.0s						
GOET	G??ttrup	79.86	332	IAmb	IAmb	07 09 13.4	
	comp=Z,185nm,0.9s						
GOET				eP	P	07 09 13.4	+0.9
LANS	Liptovska Anna	79.88	322	eP	P	07 09 14.9	+1.9
LANS	Liptovska Anna	79.88	322	eP	P	07 09 14.9	+1.9
EIL	Elat	79.96	298	LR	LR	07 50 14.4	
	comp=Z,86nm,18.9s,baz=63,slow=40						
GZR	Gura Zlata	80.14	317	⇑P	P	07 09 14.3	-0.1
GZR	Gura Zlata	80.14	317	P	P	07 09 14.9	+0.5
OKC	Ostrava-Krasne	80.19	323	eP	P	07 09 15.3	+0.8
OKC	Ostrava-Krasne	80.19	323	eP	P	07 09 15.3	+0.8
MUD	Monsted U'grnd	80.26	331	eP	P	07 09 15.1	+0.3
MUD				IAmb	IAmb	07 09 15.4	
	comp=Z,47nm,0.7s						
SIRR	Siria	80.30	318	⇑P	P	07 09 16.3	+1.0
SURR	Surduc	80.32	318	⇑P	P	07 09 16.3	+1.0
ICESG	Greenland Ices	80.52	356	eP	P	07 09 16.2	-0.2
ICESG				IAmb	IAmb	07 09 19.7	
	comp=Z,30nm,0.8s						
MORC	Moravsky Berou	80.54	323	⇓P	P	07 09 17.5	+1.0
MORC	Moravsky Berou	80.54	323	P	P	07 09 17.2	+0.7
MORC				IAmb	IAmb	07 09 18.7	
	comp=Z,39nm,1.1s						
MORC	Moravsky Berou	80.54	323	eP	P	07 09 17.1	+0.6
MORC	Moravsky Berou	80.54	323	P	P	07 09 17.5	+1.0
KSP	Ksiaz	80.54	324	eP	P	07 09 17.5	+1.1
VYHS	Vyhne	80.60	321	eP	P	07 09 18.1	+1.3
VYHS				pmax	pmax		
	comp=Z,34nm,1.0s						
VYHS	Vyhne	80.60	321	eP	P	07 09 18.1	+1.3
HERR	Herculane	80.63	317	⇓P	P	07 09 17.5	+0.5
MAUC	Maruska	80.63	322	eP	P	07 09 18.1	+1.1
ILULI	Ilulissat	80.65	1	eP	P	07 09 17.7	+1.1
ILULI				IAmb	IAmb	07 09 18.5	
	comp=Z,25nm,1.0s						
DJES	Djerdap	80.69	317	⇑P	P	07 09 17.9	+0.6
BZS	Buzias	80.69	318	⇑P	P	07 09 16.8	-0.5
BZS	Buzias	80.69	318	P	P	07 09 16.8	-0.5
OSTC	Ostas	80.75	324	eP	P	07 09 18.8	+1.2
OSTC	Ostas	80.75	324	eP	P	07 09 18.8	+1.2
RUE	Ruedersdorf	80.77	326	eP	P	07 09 18.3	+0.7
	comp=Z,79nm,0.9s,baz=48,slow=5.1						
CHVC	Chvalec	80.82	324	eP	P	07 09 19.0	+1.1
CHVC	Chvalec	80.82	324	eP	P	07 09 19.0	+1.1
DPC	Dobruska-Polom	80.83	324	eP	P	07 09 19.1	+1.1
DPC	Dobruska-Polom	80.83	324	eP	P	07 09 19.1	+1.1
UPC	Upice	80.89	324	eP	P	07 09 19.5	+1.2
UPC	Upice	80.89	324	eP	P	07 09 19.5	+1.2
JAVC	Velka Javorina	81.01	322	eP	P	07 09 20.6	+1.5
NEW	Newport	81.03	39	LR	LR	07 46 48.2	
	comp=Z,20nm,19.7s,baz=338,slow=37						
NEW	Newport	81.03	39	P	P	07 09 19.8	+0.7
	baz=306						
YER	Yerkesik	81.04	308	P	P	07 09 19.7	+0.3
MDVR	Moldovita	81.10	317	⇓P	P	07 09 19.9	+0.3
BLCB	Balcova	81.22	309	P	P	07 09 20.2	-0.1
VRAC	Vranov	81.31	323	⇓P	P	07 09 22.0	+1.5
VRAC	Vranov	81.31	323	LR	LR	07 48 51.6	
	comp=Z,206nm,18.4s,baz=50,slow=38						
VRAC	Vranov	81.31	323	eP	P	07 09 21.4	+0.8
VRAC	Vranov	81.31	323	P	P	07 09 21.9	+1.3
SMOL	Smolenice	81.35	322	eP	P	07 09 22.7	+1.9
SMOL				pmax	pmax		
	comp=Z,26nm,1.1s						
BSEG	Bad Segeberg	81.44	329	eP	P	07 09 21.4	+0.3
	comp=Z,56nm,0.8s,baz=48,slow=5.1						
YBH	Yreka Blue Hor	81.47	46	LR	LR	07 38 42.4	
	comp=Z,47nm,21.7s,baz=312,slow=31						
MODS	Modra-Piesok	81.51	322	eP	P	07 09 23.2	+1.5
MODS				pmax	pmax		
	comp=Z,89nm,1.2s						
MODS	Modra-Piesok	81.51	322	eP	P	07 09 23.2	+1.5
KRUC	Moravsky	81.57	323	eP	P	07 09 22.7	+0.8
BRG	Berggiesshubel	81.70	325	i P	P	07 09 23.2	+0.6
BRG				Amp		07 09 24.1	
	comp=Z,17nm,0.9s						
BRG				pP	pP	07 09 39.0	-1.7
BRG				Amp		07 09 39.9	
	comp=Z,12nm,0.9s						
BRG	Berggiesshubel	81.70	325	i P	P	07 09 23.1	+0.6
BRG						07 09 39.0	
BRG				pmax	pmax		
	comp=Z,17nm,0.9s						
BRG				pmax	pmax		
	comp=Z,12nm,1.0s						
BRG	Berggiesshubel	81.70	325	eP	P	07 09 22.9	+0.4
	comp=Z,17nm,0.9s,baz=48,slow=5.1						
CLL	Collm	81.89	326	i P	P	07 09 24.1	+0.6
	comp=Z,71nm,0.8s						
CLL				ePcP	PcP	07 09 30.0	+1.0
CLL				epP	pP	07 09 43.0	+1.3
CLL	Collm	81.89	326	i P	P	07 09 24.1	+0.6
CLL				pmax	pmax		
	comp=Z,71nm,0.8s						
CLL	Collm	81.89	326	eP	P	07 09 23.7	+0.1
	comp=Z,70nm,0.8s,baz=48,slow=5.1						
TREC	Trest	81.90	323	eP	P	07 09 24.9	+1.2
TREC	Trest	81.90	323	eP	P	07 09 24.9	+1.2
PRU	Pruhonice	81.95	324	eP	P	07 09 24.9	+1.0
PRU	Pruhonice	81.95	324	eP	P	07 09 24.9	+1.0
FBE	Freiberg	81.96	325	eP	P	07 09 24.6	+0.7
	comp=Z,45nm,1.0s,baz=48,slow=5.1						
FRGS	Fruska Gora	82.00	318	⇑P	P	07 09 24.8	+0.5
MORH	Mrgy, Hungar	82.04	319	⇓P	P	07 09 25.2	+0.7
FLTG	Flechtingen	82.07	327	eP	P	07 09 24.4	-0.1
	comp=Z,69nm,0.8s,baz=48,slow=5.1						
HLG	Helgoland	82.34	330	eP	P	07 09 26.0	+0.2
	comp=Z,150nm,0.9s,baz=48,slow=5.1						
RONA	Rosalia, Austr	82.44	322	eP	P	07 09 27.4	+0.8
	comp=Z,16nm,1.4s						
ASSE	Asse, Remlinge	82.46	327	eP	P	07 09 26.9	+0.4
	comp=Z,19nm,0.9s,baz=48,slow=5.1						
NRDL	Niedersach Rie	82.48	328	eP	P	07 09 27.1	+0.5
	comp=Z,31nm,0.9s,baz=48,slow=5.1						
DIVS	Divibare	82.50	317	P	P	07 09 27.0	-0.1
DIVS				IAmb	IAmb	07 09 28.5	
	comp=Z,25nm,0.9s						
VAY	Valandovo	82.52	314	i P	P	07 09 26.7	-0.3
CONA	Conrad Observa	82.54	322	i P	P	07 09 28.3	+1.2
	comp=Z,31nm,0.8s,SNR=11						
NEUB	Neuenburg	82.54	326	eP	P	07 09 27.4	+0.5
	comp=Z,84nm,0.8s,baz=48,slow=5.1						
STIP	Stip	82.55	314	⇓iP	P	07 09 26.5	-0.7
BORG	Borgarnes	82.63	348	LR	LR	07 50 12.8	
	comp=Z,55nm,18.2s,baz=39,slow=38						
RETH	Rethem/Aller,	82.66	328	eP	P	07 09 27.8	+0.3
	comp=Z,60nm,1.1s,baz=48,slow=5.1						
TANN	Tannenbergstha	82.72	325	eP	P	07 09 28.7	+0.7
	comp=Z,14nm,1.0s,baz=48,slow=5.1						
WERD	Werda	82.78	325	eP	P	07 09 28.8	+0.6
	comp=Z,22nm,0.9s,baz=48,slow=5.1						
CLZ	Clausthal	82.79	327	eP	P	07 09 29.1	+0.8
	comp=Z,73nm,0.9s,baz=48,slow=5.1						
CKRC	Cesky Krumlov	82.80	323	eP	P	07 09 29.3	+0.9
CKRC	Cesky Krumlov	82.80	323	eP	P	07 09 29.3	+0.9
GUNZ	Gunzen	82.82	325	eP	P	07 09 29.2	+0.8
	comp=Z,23nm,0.8s,baz=48,slow=5.1						
PLN	Plauen	82.82	326	eP	P	07 09 29.1	+0.6
	comp=Z,21nm,1.0s,baz=48,slow=5.1						
NKC	Novy Kostel	82.84	325	eP	P	07 09 29.8	+1.2
NKC	Novy Kostel	82.84	325	eP	P	07 09 29.8	+1.2
WERN	Wernitzgruen	82.84	325	eP	P	07 09 29.7	+1.1
	comp=Z,34nm,1.1s,baz=48,slow=5.1						
SKO	Skopje	82.85	315	i P	P	07 09 29.2	+0.4
SFJD	Kangerlussuaq	82.88	0	LR	LR	07 46 34.0	
	comp=Z,54nm,20.8s,baz=352,slow=36						
SFJD	Kangerlussuaq	82.88	0	eP	P	07 09 29.9	+1.5
SFJD				IAmb	IAmb	07 09 30.3	
	comp=Z,24nm,0.8s						
KHC	Kasperske Hory	82.98	324	eP	P	07 09 30.2	+0.9
KHC	Kasperske Hory	82.98	324	eP	P	07 09 30.2	+0.9
MOX	Moxa	82.98	326	eP	P	07 09 29.8	+0.5
	comp=Z,32nm,1.2s,baz=48,slow=5.1						
GEC2	GERESS Array S	83.10	324	P	P	07 09 30.2	+0.2
GEC2				IAmb	IAmb	07 09 31.3	
	comp=Z,18nm,0.9s						
GEC2	GERESS Array S	83.10	324	eP	P	07 09 30.3	+0.2
	comp=Z,20nm,1.0s,baz=48,slow=5.1						
GERES	GERESS Array B	83.10	324	P	P	07 09 30.1	0.0
	comp=Z,9.2nm,0.8s,baz=46,slow=5.8,SNR=33						
GERES				LR	LR	07 49 59.7	
	comp=Z,228nm,18.8s,baz=58,slow=38						
	comp=Z,9.2nm,0.8s						
GERES	GERESS Array B	83.10	324	P	P	07 09 29.6	-0.5
ARSA	Arzberg	83.14	322	i P	P	07 09 31.0	+0.9
	comp=Z,18nm,0.9s,SNR=7.3						
MANZ	Manzenberg	83.17	325	eP	P	07 09 30.9	+0.6
	comp=Z,4.9nm,0.9s,baz=48,slow=5.1						
GTTG	Gottingen	83.18	327	eP	P	07 09 30.9	+0.6
	comp=Z,64nm,0.9s,baz=48,slow=5.1						
ROTZ	Rotzenmuhle	83.26	325	eP	P	07 09 31.6	+0.8
	comp=Z,12nm,1.1s,baz=48,slow=5.1						
SANT	Santorini	83.37	308	P	P	07 09 30.4	-1.2
DY2G	Dye2	83.38	359	eP	P	07 09 32.2	+0.9
DY2G				IAmb	IAmb	07 09 33.4	
	comp=Z,49nm,1.0s						
MOA	Molln	83.43	323	eP	P	07 09 32.8	+1.1
	comp=Z,27nm,0.9s						
MSO	Missoula	83.61	39	P	P	07 09 33.0	+0.2
	baz=308						
PHP	Peshkopia	83.63	315	P	P	07 09 32.8	0.0
IBBN	Ibbenburen	83.68	329	eP	P	07 09 32.9	+0.1
	comp=Z,107nm,0.8s,baz=48,slow=5.1						
FCC	Fort Churchill	83.69	22	P	P	07 09 32.5	-0.2
FCC	Fort Churchill	83.69	22	P	P	07 09 32.5	-0.2
FCC				pmax	pmax		
	comp=Z,12nm,1.0s						
ATAL	Atalanti	83.70	311	P	P	07 09 31.7	-1.5
PERS	Pernice	83.73	321	i P	P	07 09 33.8	+0.5
OHR	Ohrid	83.74	314	i P	P	07 09 32.9	-0.5
SOKA	Soboth	83.75	321	i P	P	07 09 33.6	+0.2
	comp=Z,64nm,0.9s,SNR=47						
GRA1	Grafenberg Arr	83.80	325	P	P	07 09 34.3	+0.8
GRF	Grafenberg Arr	83.80	325	P	P	07 09 34.3	+0.8
GRF				pmax	pmax		
	comp=Z,93nm,0.9s						
GRF	Grafenberg Arr	83.80	325	eP	P	07 09 34.4	+0.8
	comp=Z,110nm,1.1s,baz=48,slow=5.1						
ANGG	Ammassalik, Gr	83.84	355	eP	P	07 09 33.9	+0.6
ANGG				IAmb	IAmb	07 09 34.9	
	comp=Z,19nm,0.9s						
BIOA	Bad Ischl, Aus	83.86	323	eP	P	07 09 34.5	+0.7
	comp=Z,55nm,1.3s,SNR=12						
PDG	Podgorica	83.91	316	⇓P	P	07 09 34.7	+0.5
AGG	Agios Georgios	83.97	312	P	P	07 09 32.7	-1.9
AGG	Agios Georgios	83.97	312	P	P	07 09 33.5	-1.1
AGG	Agios Georgios	83.97	312	P	P	07 09 33.5	-1.1
AGG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ISOG	Isortoq, Green	84.00	356	eP	P	07 09 35.1	+1.0
ISOG				IAmb	IAmb	07 09 35.4	
	comp=Z,18nm,0.8s						
OBKA	Obir	84.12	321	i P	P	07 09 35.8	+0.5
	comp=Z,37nm,0.8s,SNR=16						
KASTN	Kahler Asten	84.13	328	eP	P	07 09 35.6	+0.4
	comp=Z,51nm,1.1s,baz=48,slow=5.1						
RJOB	Jochberg	84.27	323	eP	P	07 09 37.6	+1.6
	comp=Z,51nm,0.9s,baz=48,slow=5.1						
IDI	Anoyia	84.34	308	⇑P	P	07 09 36.4	-0.3
IDI	Anoyia	84.34	308	LR	LR	07 52 55.3	
	comp=Z,73nm,19.4s,baz=86,slow=40						
BOJS	Bojanci	84.36	320	i P	P	07 09 37.0	+0.5
KBA	Koelnbreinsper	84.40	322	i P	P	07 09 36.7	-0.2
	comp=Z,24nm,0.8s,SNR=15						
LJU	Ljubljana	84.42	321	i P	P	07 09 37.0	+0.3
ANX	Ano Chora	84.47	312	P	P	07 09 36.6	-0.6
SERG	Sergoula	84.49	312	P	P	07 09 36.0	-1.2
BUG	Bochum--Univer	84.49	328	eP	P	07 09 37.0	+0.1
	comp=Z,70nm,1.0s,baz=48,slow=5.1						
MYKA	Terra Mystica	84.53	322	i P	P	07 09 37.8	+0.5
	comp=Z,26nm,0.7s,SNR=13						
GUR	Goura	84.57	311	P	P	07 09 36.5	-1.3
KLV	Kalavryta, Ach	84.64	311	P	P	07 09 36.8	-1.2
LAKA	Lakka	84.64	311	P	P	07 09 36.9	-1.1
PAHR	Pah Rah Range	84.70	47	P	P	07 09 38.8	+0.3
FUR	Furstenfeldbru	84.77	324	eP	P	07 09 39.2	+0.7
	comp=Z,83nm,0.9s,baz=48,slow=5.1						
TNS	Taunus Mts	84.78	327	eP	P	07 09 38.9	+0.4
	comp=Z,55nm,0.8s,baz=48,slow=5.1						
HRY	Holter Researc	84.81	38	P	P	07 09 39.0	+0.2
LEWI	Lewis, Hebride	84.86	339	eP	P	07 09 38.6	0.0
LEWI				IAmb	IAmb	07 09 39.8	
	comp=Z,102nm,1.1s						
FRB	Frobisher Bay	84.93	8	LR	LR	07 49 48.3	
	comp=Z,56nm,20.2s,baz=12,slow=37						
IGT	Igoumenitsa	84.94	313	P	P	07 09 39.0	-0.5
EGMT	Eagleton	85.03	36	P	P	07 09 40.1	+0.3
	baz=311						
KTHA	Kythira Island	85.04	309	P	P	07 09 39.0	-1.0
CLUD	Cludinico	85.04	322	P	P	07 09 39.5	-0.4
ABTA	Abfaltersbach	85.05	322	i P	P	07 09 39.8	-0.1
	comp=Z,49nm,1.2s,SNR=18						
KPL	Plockton	85.12	338	eP	P	07 09 39.8	-0.2
KPL				IAmb	IAmb	07 09 41.1	
	comp=Z,95nm,0.8s						
WATA	Walderalm	85.16	323	ePcP	P	07 09 41.3	+0.7
	comp=Z,18nm,1.1s						
LKD2	Lefkada island	85.17	312	P	P	07 09 40.1	-0.5
WTTA	Wattenberg	85.17	323	i P	P	07 09 41.3	+0.6
	comp=Z,24nm,1.1s,SNR=6.0						
AHRW	Bad Neuenahr-A	85.20	328	eP	P	07 09 40.9	+0.4
	comp=Z,61nm,1.0s,baz=48,slow=5.1						
STAL	STALIGIAL	85.26	322	P	P	07 09 40.7	-0.3
ITM	Ithomi	85.27	311	P	P	07 09 40.5	-0.7
INVG	Invergeldie, C	85.31	337	eP	P	07 09 40.1	-0.9
INVG				IAmb	IAmb	07 09 41.6	
	comp=Z,39nm,0.9s						
HLID	Hailey	85.37	41	P	P	07 09 43.1	+1.3
	baz=308						
MOTA	Moosalm	85.39	324	i P	P	07 09 41.8	0.0
	comp=Z,11nm,0.7s,SNR=6.4						
STU	Stuttgart	85.40	325	eP	P	07 09 41.8	+0.2
	comp=Z,145nm,0.9s,baz=48,slow=5.1						
SQTA	Sankt Quirin	85.42	323	eP	P	07 09 42.3	+0.4
	comp=Z,11nm,0.7s						
RETA	Reutte	85.48	324	eP	P	07 09 42.5	+0.4
	comp=Z,16nm,1.1s						
PYL	PYLOS	85.56	310	P	P	07 09 41.4	-1.2
VLS	Valsamata	85.57	312	P	P	07 09 42.1	-0.5
BTNL	Ternell	85.60	328	dP	P	07 09 42.7	+0.1
	comp=Z,20nm,0.9s						
BOZ	Bozeman (W)	85.63	39	P	P	07 09 43.9	+0.9
	baz=310						
MEM	Membach	85.64	328	dP	P	07 09 43.1	+0.3
BEBN	Eben Emael	85.66	329	dP	P	07 09 42.6	-0.2
UBR	Ueberruh	85.68	324	eP	P	07 09 43.8	+0.7
	comp=Z,18nm,1.1s,baz=48,slow=5.1						
FETA	Feichten	85.80	323	i P	P	07 09 44.1	+0.3
	comp=Z,12nm,1.1s,SNR=5.5						
BHOU	Houvegnez	85.82	328	dP	P	07 09 44.6	+1.0
BSTI	Sart Tilman	85.86	328	dP	P	07 09 42.9	-0.9
ESK	Eskdalemuir	85.89	336	eP	P	07 09 43.7	-0.1
ESK				IAmb	IAmb	07 09 44.7	
	comp=Z,60nm,0.9s						
PGBU	Glenifferbraes	85.95	336	eP	P	07 09 44.5	+0.4
PGBU				IAmb	IAmb	07 09 46.2	
	comp=Z,83nm,0.9s						
CTI	Castel Tesino	85.96	322	P	P	07 09 44.9	+0.4
CTI				IAmb	IAmb	07 09 45.6	
	comp=Z,22nm,1.0s						
CTI	Castel Tesino	85.96	322	P	P	07 09 44.9	+0.4
CTI				pmax	pmax		
	comp=Z,22nm,1.0s						
DAVA	Damuels	86.06	324	i PcP	P	07 09 45.7	+0.6
	comp=Z,23nm,1.1s,SNR=5.7						
BCLA	Clavier	86.10	328	dP	P	07 09 45.3	+0.3
NVAR	Mina Array Bea	86.12	47	P	P	07 09 46.5	+0.9
	comp=Z,4.9nm,0.6s,baz=299,slow=5.3,SNR=49						
NVAR				LR	LR	07 42 37.5	
	comp=Z,47nm,21.7s,baz=227,slow=32						
	comp=Z,4.9nm,0.6s						
BFO	Black Forest	86.12	326	eP	P	07 09 45.3	+0.1
	comp=Z,20nm,1.1s,baz=48,slow=5.1						
BGES	Gesves	86.22	329	dP	P	07 09 45.7	+0.2
WLF	Walferdange	86.24	328	dP	P	07 09 46.6	+0.9
	comp=Z,37nm,1.1s						
WLF	Walferdange	86.24	328	eP	P	07 09 46.3	+0.6
	comp=Z,58nm,1.0s,baz=48,slow=5.1						
RCHB	Rochefort	86.32	328	dP	P	07 09 46.3	+0.3
	comp=Z,29nm,0.9s						
HPK	Haverah Park	86.36	334	eP	P	07 09 45.9	-0.3
HPK				IAmb	IAmb	07 09 47.2	
	comp=Z,76nm,1.0s						
DAVOX	Davos/Dischmat	86.40	324	LR	LR	07 51 51.6	
	comp=Z,166nm,19.6s,baz=60,slow=38						
BMRD	Maredsous	86.42	329	dP	P	07 09 46.6	0.0
SNF	Seneffe	86.49	329	dP	P	07 09 47.5	+0.6
	comp=Z,23nm,0.8s						
ELK	Elko	86.62	44	LR	LR	07 41 58.4	
	comp=Z,24nm,21.7s,baz=313,slow=31						

DOU	Dourbes	86.65	329	dP	P	07 09 47.8	+0.1
LBWR	Ladybower, Pea	86.83	334	eP	P	07 09 48.4	-0.1
LBWR				IAmb	IAmb	07 09 49.4	
	comp=Z,122nm,1.0s						
GUMA	Gualdo di Mace	86.97	319	P	P	07 09 50.0	+0.5
GUMA				IAmb	IAmb	07 09 52.1	
	comp=Z,62nm,1.0s						
H17A	Grant Village	86.98	39	P	P	07 09 51.6	+1.9
	baz=311						
IMW	Indian Meadow	87.11	40	P	P	07 09 50.8	+0.4
RLMT	Red Lodge	87.20	38	P	P	07 09 51.3	+0.5
	baz=312						
PKM	Mcpherson Peak	87.21	51	P	P	07 09 51.6	+0.6
	baz=306						
MURB	Monte Urbino	87.29	320	P	P	07 09 52.3	+1.2
CWC	Cottonwood Cre	87.44	49	P	P	07 09 52.7	+0.6
	baz=306						
DGMT	Dagmar	87.44	33	P	P	07 09 52.4	+0.8
	baz=315						
GRAC	Grapevine Rang	87.57	48	P	P	07 09 53.3	+0.8
	baz=307						
LAO	LASA Array	87.71	35	P	P	07 09 53.6	+0.6
	baz=314						
MPMC	Manual Prospec	88.05	49	P	P	07 09 56.1	+1.1
	baz=307						
FURC	Furnace Creek,	88.21	48	P	P	07 09 55.9	+0.5
	baz=307						
HWUT	Hardware Ranch	88.24	42	P	P	07 09 56.7	+1.0
HWUT				IAmb	IAmb	07 09 58.2	
	comp=Z,16nm,1.1s						
TPNV	Topopah Spring	88.31	47	P	P	07 09 56.4	+0.2
	baz=308						
DUG	Dugway, Tooele	88.41	43	P	P	07 09 57.8	+1.2
	baz=310						
EDW2	Edwards Air Fo	88.42	50	P	P	07 09 57.0	+0.4
	baz=306						
GWY	Greenwater Val	88.51	48	P	P	07 09 57.4	+0.3
BW06	Boulder Array	88.61	40	P	P	07 09 58.2	+0.6
	baz=312						
PDAR	Pinedale Array	88.61	40	P	P	07 09 58.0	+0.5
	comp=Z,1.8nm,0.7s,baz=323,slow=0.9,SNR=24						
PDAR				PKKPbc	PKKPbc	07 27 38.0	0.0
	comp=Z,0.2nm,0.4s,baz=109,slow=4.7,SNR=4.4						
PDAR				LR	LR	07 48 33.1	
	comp=Z,13nm,21.6s,baz=336,slow=35						
	comp=Z,1.8nm,0.7s						
IVI	Ivigtut	88.69	359	eP	P	07 09 58.1	+0.9
GSC	Goldstone, Bar	88.95	49	P	P	07 09 59.0	-0.1
	baz=307						
ULM	Lac du Bonnet	89.75	28	P	P	07 10 02.2	-0.2
	comp=Z,38nm,0.8s,baz=322,slow=5.1,SNR=28						
ULM				LR	LR	07 53 19.3	
	comp=Z,51nm,18.5s,baz=90,slow=38						
	comp=Z,38nm,0.8s						
VAE	Valguarnera	89.88	314	LR	LR	07 54 32.0	
	comp=Z,102nm,18.7s,baz=346,slow=38						
GMRC	Granite Mounta	90.01	49	P	P	07 10 04.2	+0.1
	baz=308						
PFO	Pinyon Flats O	90.20	50	LR	LR	07 43 00.5	
	comp=Z,50nm,20.2s,baz=236,slow=30						
PFO	Pinyon Flats O	90.20	50	P	P	07 10 04.9	-0.1
	baz=307						
TPFO	Pinon Flats	90.20	50	P	P	07 10 05.0	0.0
	baz=307						
BELC	Belle Mtn. Jos	90.27	50	P	P	07 10 05.7	+0.3
	baz=308						
PPT	Papeete	90.33	110	LR	LR	07 45 23.1	
	comp=Z,43nm,20.3s,baz=308,slow=32						
K22A	Casper	90.34	38	P	P	07 10 05.9	+0.3
	baz=314						
PPT2	Papeete2	90.34	110	eLR	LR	07 39 02.0	
	comp=Z,150nm,28.2s						
PMOR	Pomariorio Ree	90.37	107	eT	T	08 50 05.2	
	comp=Z,2.7nm,0.2s						
RSSD	Black Hills	90.61	36	P	P	07 10 07.1	+0.3
RSSD				IAmb	IAmb	07 10 09.3	
	comp=Z,7.5nm,0.8s						
RSSD	Black Hills	90.61	36	P	P	07 10 07.1	+0.3
RSSD				pmax	pmax		
	comp=Z,8.0nm,0.8s						
RSSD	Black Hills	90.61	36	P	P	07 10 07.3	+0.5
	baz=315						
IRM	Iron Mountain	90.73	49	P	P	07 10 08.4	+1.0
	baz=308						
O20A	White River Ci	91.10	41	P	P	07 10 10.0	+0.9
	baz=312						
AGMN	Agassiz Nation	91.28	29	P	P	07 10 11.0	+1.4
	baz=321						
PDMCI	Parker Dam,Lak	91.29	48	P	P	07 10 10.9	+1.0
	baz=309						
PV23	Carpenter Ridg	91.78	43	P	P	07 10 13.2	+0.7
N23A	Red Feather La	91.86	39	P	P	07 10 13.8	+1.0
	baz=314						
PV13	Radium Mtn., P	92.09	43	P	P	07 10 14.6	+0.7
PV13				IAmb	IAmb	07 10 16.0	
	comp=Z,9.9nm,1.0s						
WUAZ	Wupatki	92.28	46	P	P	07 10 15.9	+1.2
	baz=310						
ISCO	Idaho Springs	92.80	40	P	P	07 10 18.2	+1.0
	baz=314						
SUSD	Miller	92.86	33	P	P	07 10 17.8	+0.8
	baz=319						
MVCO	Mesa Verde	92.92	43	P	P	07 10 17.8	+0.1
	baz=312						
EYMN	Ely	93.32	27	P	P	07 10 19.6	+0.6
	baz=325						
S22A	4UR Ranch, Cre	93.53	42	P	P	07 10 21.3	+0.7
	baz=313						
214A	Organ Pipe Nat	93.63	50	P	P	07 10 21.6	+0.7
	baz=309						
SCHQ	Schefferville	93.78	10	P	P	07 10 20.4	-0.6
	comp=Z,7.2nm,0.9s,baz=63,slow=3.7,SNR=5.8						
SCHQ				LR	LR	07 57 11.8	
	comp=Z,44nm,18.6s,baz=14,slow=38						
	comp=Z,7.2nm,0.9s						
OGNE	Ogallala	93.92	37	P	P	07 10 21.3	-0.7
	baz=317						
KEST	Kesra	94.11	316	P	P	07 10 23.3	+0.3
	comp=Z,12nm,1.0s,baz=297,slow=5.8,SNR=6.2						
	comp=Z,12nm,1.0s						
SDCO	Great Sand Dun	94.29	41	P	P	07 10 24.2	+0.1
	baz=314						
ECSD	EROS Data Cent	94.49	32	P	P	07 10 24.6	+0.1
	baz=321						
TUC	Tucson	94.73	48	P	P	07 10 26.2	+0.3
	baz=311						
ANMO	Albuquerque	95.66	44	LR	LR	07 51 02.6	
	comp=Z,11nm,21.5s,baz=55,slow=34						
ESDC	Sonseca Array	98.47	326	P	P	07 10 42.0	-0.6
	comp=Z,3.4nm,0.9s,baz=18,slow=4.1,SNR=13						
ESDC				LR	LR	08 00 39.9	
	comp=Z,97nm,19.2s,baz=6.0,slow=39						
	comp=Z,3.4nm,0.9s						
TXAR	Lajitas Array	101.25	46	P	Pdif	07 10 56.7	+1.4
	comp=Z,0.7nm,0.7s,baz=303,slow=3.7,SNR=9.8						
TXAR				PKKPbc	PKKPbc	07 27 04.9	+0.7
	comp=Z,0.2nm,0.5s,baz=146,slow=6.4,SNR=8.4						
TORD	Torodi Ar. Bea	114.48	304	PKP	PKPdf	07 15 43.1	-1.4
	comp=Z,0.4nm,0.4s,baz=34,slow=1.6,SNR=7.7						
DBIC	Dimbokro	123.59	303	PKP	PKPdf	07 16 00.8	-1.3
	comp=Z,3.4nm,0.5s,baz=29,slow=1.0,SNR=5.4						
OTAV	Otavalo	138.86	48	eP	PKPdf	07 16 30.4	-1.1
PMSA	Palmer Station	144.43	169	eP	PKPdf	07 16 39.0	-0.2
SGCB	S£o Gabriel d	145.52	32	eP	PKPdf	07 16 41.8	-1.0
BOAV	Boa Vista	145.68	20	eP	PKPdf	07 16 42.1	-1.0
TBTG	Tabatinga, AM	147.51	41	eP	PKPdf	07 16 45.5	-0.7
CZSB	Cruzeiro do Su	148.60	49	eP	PKPdf	07 16 47.1	-0.8
TEFE	Tefe	149.60	31	eP	PKPdf	07 16 48.5	-1.0
MCPB	Macapa, AP	150.00	5	eP	PKPdf	07 16 48.8	-1.4
MACA	Manacapuru-AM	150.86	24	eP	PKPdf	07 16 50.2	-1.3
MALB	Monte Alegre	151.21	10	eP	PKPdf	07 16 51.3	-0.7
ROSB	Rosrio	152.17	349	eP	PKPdf	07 16 52.1	-1.3
RCBR	Riachuelo	152.43	330	eP	PKPdf	07 16 52.7	-1.2
ITTB	Itaituba	153.40	14	eP	PKPdf	07 16 54.4	-0.9
SAML	Samuel	155.06	34	eP	PKPdf	07 16 56.0	-1.5
NPGB	Novo Progresso	156.08	15	eP	PKPdf	07 16 58.3	-0.7
SMTB	Santa Maria do	158.48	355	eP	PKPdf	07 17 01.6	-0.4
CLDB	Colider	159.66	18	eP	PKPdf	07 17 01.9	-1.5
VILB	Vilhena	159.95	32	eP	PKPdf	07 17 03.3	-0.4
LVC	Limon Verde	160.91	71	eP	PKPdf	07 17 03.3	-1.7
PTLB	Pontes e Lacer	162.63	33	eP	PKPdf	07 17 05.8	-0.6
BBSD	Serra de San D	163.32	40	eP	PKPdf	07 17 06.4	-0.7
GUA01	Guaratinga, BA	163.66	325	eP	PKPdf	07 17 06.9	-0.5
CFA	Coronel Fontan	163.81	99	PKPab	PKPab	07 18 00.2	+0.2
	comp=Z,1.9nm,0.8s,baz=273,slow=6.5,SNR=3.5						
JANB	Januaria	164.00	342	eP	PKPdf	07 17 06.6	-1.2
SALV	Santo Antonio	164.44	23	eP	PKPdf	07 17 07.5	-0.6
ARAG	Araguaiana, MT	165.19	9	eP	PKPdf	07 17 07.8	-1.0
BDFB	Brasilia	165.23	355	PKPab	PKPab	07 18 06.6	+0.3
	comp=Z,3.5nm,0.6s,baz=86,slow=2.4,SNR=6.5						
SJMB	Sao Joao De Ma	166.15	326	eP	PKPdf	07 17 08.9	-0.6
PP1B	Ponte de Pedra	166.29	23	eP	PKPdf	07 17 08.9	-0.8
IPMB	Ipameri, GO	167.57	355	eP	PKPdf	07 17 10.3	-0.4
C2SB	Chapadao do Su	167.99	16	eP	PKPdf	07 17 10.3	-0.6
MURT	Porto Murtinho	168.58	42	eP	PKPdf	07 17 10.8	-0.3
AQDB	Aquidauana	168.58	31	eP	PKPdf	07 17 10.3	-0.9
DUB01	Friburgo-RJ	169.57	321	eP	PKPdf	07 17 11.1	-0.7
BSCB	Bom Sucesso	169.73	335	eP	PKPdf	07 17 11.1	-0.9
ESFA	Espinillo Form	170.29	58	eP	PKPdf	07 17 11.7	-0.4
AMBA	Amambai (Brazi	171.02	35	eP	PKPdf	07 17 12.5	-0.1
PCMB	Pacaembu	171.06	11	eP	PKPdf	07 17 12.5	-0.1
CPUP	Villa Florida	171.92	62	eP	PKPdf	07 17 12.2	-0.7
PARB	Paraibuna	172.18	334	eP	PKPdf	07 17 12.8	-0.4
VAO	Valinhos	172.29	343	eP	PKPdf	07 17 13.1	-0.2
MECA	Mercedes	172.31	84	eP	PKPdf	07 17 11.9	-1.0
MCR1	Marechal Candi	172.78	36	eP	PKPdf	07 17 13.3	0.0
FRTB	Fartura	172.95	1	eP	PKPdf	07 17 12.8	-0.7
SPB	Sao Paulo	172.97	345	eP	PKPdf	07 17 13.3	-0.1
PTGB	Pitanga	173.85	23	eP	PKPdf	07 17 12.8	-1.1

JMA 17 06:57:21.2±0.0,**32°.8N**±0°.1×**130°.7E**±0°.2,**h11**km,**MV0.4**/24,
NW KUMAMOTO PREF,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIU3	Izumi3	0.23	165	eS	Sg	06 57 29.4	+0.4
JTA	Tamana	0.26	318	P	Pg	06 57 26.8	+0.2
JTA				eS	Sg	06 57 30.7	+0.5

IDC ***17*** *06:59:39.9±0.5, 0°.94N×126°.04E, h0km, mb4.8/33, mbtmp4.8/33, MS3.3/4, Error ellipse: s-maj=20.7km s-min=10.9km az=74.0*

BJI ***17*** *06:59:43.9±0.0, 0°.60N×126°.41E, h68km, mb4.9/50, mB5.3/23, Ms4.6/5, Ms7 4.3/4*

MOS ***17*** *06:59:45.2±0.9, 0°.99N×126°.14E, h49km, mb5.0/27, Error ellipse: s-maj=12.5km s-min=6.2km az=101.9*

DJA ***17*** *06:59:48.6±0.2, 1°N±3°×12°6E±°, h47km±8km, M4.6/13, mB5.3/5, mb4.8/13, MLv4.5/12, Mw(mB)4.7/5*

NEIC ***17*** *06:59:48.2±2.0, 1°.01N±0°.07×126°.23E±0°.06, h56km±3km, mb5.1/49, Error ellipse: s-maj=10.5km s-min=8.6km az=196.0*

ISC 17 06:59:48.3±0.5,**1°.00N**±0°.04×**126°.23E**±0°.04,**h61**km±4km,
h62km**:pP-P,n293,**σ**1s.43**/320,**mb5.0**/88,**12C-18D,**
Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.16	101		Pn	07 00 08.7	+0.3
TNTI	Ternate	1.16	101	P	Pn	07 00 09.8	+1.4
TNTI	Ternate	1.16	101	P	Pn	07 00 08.4	0.0
TNTI				S	Sn	07 00 23.6	+0.2
LBMI	Labuha	2.06	142	P	Pn	07 00 21.2	+0.6
LBMI				S	Sn	07 00 46.4	+1.1
SGSI	Sangihe	2.76	345	P	Pn	07 00 30.2	0.0
SANI	Sanana	3.04	185	P	Pn	07 00 32.0	-2.0
GTOI	Gorontalo	3.24	264	P	Pn	07 00 36.7	0.0
GTOI				S	Sn	07 01 16.7	+2.6
LUWI	Luwuk	4.01	240	Pn	Pn	07 00 47.9	+0.6
LUWI	Luwuk	4.01	240	P	Pn	07 00 50.2	+3.0
LUWI	Luwuk	4.01	240	P	Pn	07 00 48.3	+1.1
NLAI	Namlea	4.30	168	P	Pn	07 00 50.6	-0.6
MRSI	Marisa	4.32	263	P	Pn	07 00 51.5	0.0
GSPH	General Santos	5.21	346⇑	eP	Pn	07 01 02.9	-1.0
TOLI2	Tolitoli	5.45	271	Pn	Pn	07 01 05.3	-1.7
TOLI2	Tolitoli	5.45	271	P	Pn	07 01 10.2	+3.2
SKMP	Bagumbayan, Su	5.74	343⇑	eP	Pn	07 01 10.4	-0.5
MPSI	Mapaga	6.37	264	P	Pn	07 01 20.6	+1.0
	45nm,0.8s,1µm0.3nm						
BIPH	Bislig	7.14	1⇓	eP	Pn	07 01 28.8	-1.4
FAKI	Fak Fak	7.17	123	Pn	Pn	07 01 31.2	+0.7
FAKI	Fak Fak	7.17	123	P	Pn	07 01 31.3	+0.7
	64nm,1.0s,0.2nm						
PAGZ	Pagadian	7.37	337⇑	eP	Pn	07 01 32.5	-0.9
SPSI	Sidrap Palu	8.12	233	P	Pn	07 01 44.1	+0.5
	72nm,0.8s						
BKSI	Bulukumba	8.75	224	P	Pn	07 01 52.2	-0.1
	29nm,0.7s						
MYLDM	Lahad Datu	8.77	298	Pn	Pn	07 01 52.9	+0.5
KAPI	Kappang	8.81	227	Pn	Pn	07 01 50.6	-2.4
	2.8nm,0.3s,baz=37,slow=5.9,SNR=9.5						
KAPI				LR	LR	07 05 29.1	
	comp=Z,193nm,21.1s,baz=54,slow=40						
KAPI	Kappang	8.81	227		Pn	07 01 52.7	-0.3
KAPI	Kappang	8.81	227	P	Pn	07 01 55.1	+2.1
KAPI	Kappang	8.81	227	P	Pn	07 01 52.7	-0.3
BSSI	Bau Bau, Buton	9.12	219	P	Pn	07 01 56.4	-0.9
	47nm,0.9s						
SOEI	Soe	10.86	190	Pn	Pn	07 02 24.1	+2.9
SOEI	Soe	10.86	190	P	Pn	07 02 23.2	+2.0
SOEI	Soe	10.86	190	P	Pn	07 02 22.2	+1.0
	110nm,1.0s						
KKM	Kota Kinabalu	11.18	297	Pn	Pn	07 02 25.6	+0.1
SMPI	Sarmi	12.82	103	P	Pn	07 02 48.8	+0.9
	30nm,1.4s,2µm						
KDU	Kakadu	14.94	156	P	Pn	07 03 15.7	-0.4
KSM	Kuching	15.93	272	P	P	07 03 30.9	-0.4
KSM	Kuching	15.93	272	P	P	07 03 31.9	+0.6
KNRA	Kununurra	16.76	172	P	Pn	07 03 38.3	-0.8
KNRA	Kununurra	16.76	172	P	Pn	07 03 38.3	-0.8
	103nm,0.8s						
PWJI	Pagerwojo	16.95	238	P	P	07 03 42.9	+0.3
	48nm,0.7s						
FITZ	Fitzroy Crossi	18.98	182	P	P	07 04 03.8	-1.2
WB0	Warramunga Arr	22.14	159	P	P	07 04 37.6	-1.5
WB0				IAmb	IAmb	07 04 44.8	
	comp=Z,96nm,0.9s						
TWGBT	Beinan	22.26	347	P	P	07 04 40.3	-0.1
TWG	Pinlang	22.26	347	P	P	07 04 39.2	-1.3
TWG				IAmb	IAmb	07 04 41.7	
	comp=Z,50nm,0.6s						
WRAB	Tennant Creek	22.27	159	P	P	07 04 39.4	-1.2
WRAB				IAmb	IAmb	07 04 44.6	
	comp=Z,75nm,0.8s						
WRAB	Tennant Creek	22.27	159	P	P	07 04 39.4	-1.2
WRAB	Tennant Creek	22.27	159	ceP	P	07 04 39.3	-1.2
WRAB				pmax	pmax		
	comp=Z,82nm,0.8s						
WRA	Warramunga Arr	22.28	160	P	P	07 04 38.2	-2.4
	comp=Z,13nm,0.5s,baz=334,slow=11,SNR=172						
WRA				S	S	07 08 39.9	-2.2
	comp=Z,9.2nm,1.0s,baz=332,slow=20,SNR=6.9						
	comp=Z,13nm,0.5s						
WRA	Warramunga Arr	22.28	160	P	P	07 04 39.8	-0.8
WB2	Warramunga Arr	22.28	159	P	P	07 04 39.1	-1.5
WB2				IAmb	IAmb	07 04 45.1	
	comp=Z,82nm,0.8s						
WB1	Warramunga Ar.	22.30	160	P	P	07 04 39.8	-1.0
COEN	Coen	22.42	132	P	P	07 04 42.1	-0.1
COEN	Coen	22.42	132	P	P	07 04 41.9	-0.3
YULB	Yu-li	22.77	348	P	P	07 04 44.3	-1.5
TPUB	Ta-pu	22.83	347	P	P	07 04 47.2	+0.8
SSLB	Suanglung	23.23	348	P	P	07 04 50.2	-0.1
SSLB	Suanglung	23.23	348	P	P	07 04 51.3	+0.9
PMG	Port Moresby	23.27	117	P	P	07 04 51.0	+0.2
	comp=Z,6.4nm,0.4s,baz=328,slow=7.2,SNR=3.8						
	comp=Z,6.4nm,0.4s						
PMG	Port Moresby	23.27	117	deP	P	07 04 51.6	+0.8
PMG				pmax	pmax		
	comp=Z,30nm,1.7s						
QIZ	Qiongzhong	24.07	319	P	P	07 04 58.8	+0.6
QIZ				S	S	07 09 13.5	+1.9
QIZ				pmax	pmax		
	comp=Z,31nm,1.1s						
QIZ				LR	LR		
	comp=Z,260nm,3.3s						
QIZ				LR	LR		
	comp=Z,140nm,3.9s						
QIS	Mount Isa	25.11	149	P	P	07 05 07.6	-0.1
AS31	Alice Springs	25.63	164	P	P	07 05 11.5	-0.8
ASAR	Alice Springs	25.63	164	P	P	07 05 11.9	-0.5
	comp=Z,14nm,0.7s,baz=346,slow=12,SNR=68						
ASAR				PcP	PcP	07 08 42.6	+0.6
	comp=Z,0.8nm,0.4s,baz=352,slow=2.1,SNR=2.2						
	comp=Z,14nm,0.7s						
ASAR	Alice Springs	25.63	164	P	P	07 05 11.4	-0.9
ASAR	Alice Springs	25.63	164	P	P	07 05 11.4	-0.9
AS01	Alice Springs	25.64	163	P	P	07 05 11.9	-0.6
JOW	Kunigami	25.76	4	P	P	07 05 13.2	-0.3
	comp=Z,78nm,0.8s,baz=209,slow=7.7,SNR=14						
	comp=Z,78nm,0.8s						
JOW	Kunigami	25.76	4	P	P	07 05 13.6	+0.1
JOW				IAmb	IAmb	07 05 18.0	
	comp=Z,78nm,0.8s						
JOW	Kunigami	25.76	4	P	P	07 05 15.0	+1.5
WRKA	Warakurna	25.96	176	P	P	07 05 15.4	+0.1
MTSU	Mount Surprise	26.04	138	P	P	07 05 17.3	+1.1
FORT	Forrest	31.65	177	P	P	07 06 05.4	-0.4
FORT				IAmb	IAmb	07 06 06.4	
	comp=Z,32nm,0.8s						
FORT	Forrest	31.65	177	P	P	07 06 05.4	-0.4
NJ2	Nanjing	31.66	348	eP	P	07 06 07.1	+1.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CMAR	Chiang Mai Arr	31.91	305	P	P	07 06 07.9	-0.4
	comp=Z,0.6nm,0.3s,baz=126,slow=10,SNR=5.4						
CMAR				PcP	PcP	07 08 59.5	+1.7
	comp=Z,4.8nm,0.2s,baz=174,slow=3.6,SNR=5.2						
	comp=Z,0.6nm,0.3s						
JNU	Nakatsue	32.25	7	P	P	07 06 11.2	+0.1
	comp=Z,30nm,0.8s,baz=166,slow=0.9,SNR=15						
	comp=Z,30nm,0.8s						
JNU	Nakatsue	32.25	7	P	P	07 06 10.8	-0.3
JNU				IAmb	IAmb	07 06 12.7	
	comp=Z,42nm,1.0s						
KMBL	Kambalda	32.45	187	P	P	07 06 13.1	+0.2
ENH	Enshi	33.18	333	P	P	07 06 18.5	-0.8
LCRK	Leigh Creek	33.29	161	P	P	07 06 20.3	+0.1
JHS	Saijyo	34.43	10	P	P	07 06 30.4	+0.3
JHS				IAmb	IAmb	07 06 42.6	
	comp=Z,20nm,0.8s						
PZH	PanZhiHua	34.61	319	P	P	07 06 33.8	+1.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,120nm,4.9s						
NWAO	Narrogin (SRO)	34.80	193	LR	LR	07 24 09.7	
	comp=Z,62nm,18.3s,baz=316,slow=42						
WHYH	Whyalla	35.50	163	P	P	07 06 40.9	+1.6
INU	Inuyama	35.62	15	P	P	07 06 41.0	+0.6
STKA	Stephens Creek	35.79	157	P	P	07 06 41.7	-0.1
	comp=Z,15nm,0.9s,baz=330,slow=8.7,SNR=16						
	comp=Z,15nm,0.9s						
STKA	Stephens Creek	35.79	157	P	P	07 06 41.6	-0.3
STKA	Stephens Creek	35.79	157	P	P	07 06 41.7	-0.1
JGF	Kuroka	35.95	16	P	P	07 06 43.5	+0.4
JGF				IAmb	IAmb	07 06 45.2	
	comp=Z,13nm,0.7s						
KSRS	Korea Array	36.31	2	P	P	07 06 47.1	+1.0
	comp=Z,7.1nm,0.7s,baz=180,slow=10.0,SNR=30						
KSRS				PcP	PcP	07 09 10.8	+0.9
	comp=Z,1.0nm,0.5s,baz=176,slow=2.2,SNR=4.1						
	comp=Z,7.1nm,0.7s						
CD2	Chengdu	36.59	327	eP	P	07 06 48.8	+0.1
XAN	Xi'an	36.65	336	P	P	07 06 48.0	-1.2
XAN				pP	pP	07 07 03.0	-0.8
XAN				pmax	pmax		
	comp=Z,14nm,0.6s						
XAN	Xi'an	36.65	336	P	P	07 06 47.8	-1.4
MJAR	Matsushiro Arr	37.07	16	P	P	07 06 52.3	-0.4
	comp=Z,17nm,0.8s,baz=185,slow=9.4,SNR=29						
MJAR				LR	LR	07 25 12.1	
	comp=Z,17nm,18.1s,baz=188,slow=41						
	comp=Z,17nm,0.8s						
MAJO	Matsushiro	37.07	16	P	P	07 06 52.9	+0.2
MAJO	Matsushiro	37.07	16	d iP	P	07 06 52.1	-0.6
MAJO				pmax	pmax		
	comp=Z,20nm,0.7s						
MAJO	Matsushiro	37.07	16	P	P	07 06 52.1	-0.6
MJB9	Matsu-Tunnel	37.07	16	P	P	07 06 51.9	-0.8
MJB9				IAmb	IAmb	07 06 54.0	
	comp=Z,21nm,0.7s						
HNS	HongShan	37.75	345	⇑P	P	07 06 56.6	-1.8
HNS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
DL2	Dalian	37.96	354	⇑P	P	07 07 01.1	+1.0
DL2				pmax	pmax		
	comp=Z,69nm,0.7s						
JMM	Marumori	39.06	18	P	P	07 07 10.2	+0.9
JMM	Marumori	39.06	18	P	P	07 07 10.4	+1.0
BJT	Baijiatuau	39.90	348	P	P	07 07 17.5	+1.1
BJI	Beijing	39.92	348	P	P	07 07 17.4	+0.9
BJI				pmax	pmax		
	comp=Z,12nm,0.7s						
ARPS	Mount Arapiles	40.28	160	P	P	07 07 20.4	+0.9
HHC	Hu-ho-hao-te	41.84	343	eP	P	07 07 34.9	+2.5
HHC				pmax	pmax		
	comp=Z,19nm,0.5s						
HHC				pmax	pmax		
	comp=Z,390nm,5.7s						
CAN	Canberra	41.93	152	P	P	07 07 34.5	+1.3
CAN				pP	pwP	07 07 49.7	-1.5
BTO	Baotou	42.08	342	eP	P	07 07 34.8	+0.4
BTO				pmax	pmax		
	comp=Z,24nm,0.8s						
BTO				pmax	pmax		
	comp=Z,1µm,7.6s						
CN2	Changchun	42.62	359	eP	P	07 07 38.6	0.0
CN2				ePP	PP	07 09 21.3	+2.8
CN2				eS	S	07 13 57.9	+0.6
CN2				esS	sS	07 14 24.3	+1.6
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
USA0B	Ussuriysk Arra	43.32	6	P	P	07 07 44.9	+0.7
USA0B				IAmb	IAmb	07 07 46.2	
	comp=Z,26nm,0.8s						
USA0B	Ussuriysk Arra	43.32	6⇓	eP	P	07 07 44.1	-0.2
USRK	Ussuriysk Ar.	43.32	6	P	P	07 07 45.4	+1.1
	comp=Z,26nm,0.7s,baz=194,slow=6.7,SNR=27						
	comp=Z,26nm,0.7s						
USRK	Ussuriysk Ar.	43.32	6	P	P	07 07 44.5	+0.2
USRK	Ussuriysk Ar.	43.32	6	P	P	07 07 44.5	+0.2
MDJ	Mudanjiang	43.53	3	P	P	07 07 47.4	+1.4
MDJ				pP	pwP	07 08 04.8	+1.2
MDJ				sP	sP	07 08 11.9	+4.3
MDJ				PP	PcP	07 09 33.5	+0.6
MDJ				ScP	ScP	07 13 16.5	-2.9
MDJ				PcS	PcS	07 13 24.1	-1.4
MDJ				S	S	07 14 15.8	+5.2
MDJ				SS	SS	07 17 18.0	-9.2
MDJ				pmax	pmax		
	comp=Z,72nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,430nm,12.0s						
MDJ				LR	LR		
	comp=Z,36nm,9.7s						
MDJ				LR	LR		
	comp=Z,270nm,5.6s						
MDJ				LR	LR		
	comp=Z,210nm,7.3s						
MDJ	Mudanjiang	43.53	3	P	P	07 07 47.3	+1.3
MDJ	Mudanjiang	43.53	3	P	P	07 07 47.0	+1.0
XLT	XiLinHaoTe	43.66	349	eP	P	07 07 46.5	-0.7
XLT				pmax	pmax		
	comp=Z,16nm,0.8s						
XLT				pmax	pmax		
	comp=Z,390nm,6.2s						
BNX	BinXian	44.57	1	⇑P	P	07 07 54.5	+0.3
BNX				pmax	pmax		
	comp=Z,13nm,0.8s						
BNX				pmax	pmax		
	comp=Z,340nm,9.8s						
GTA	Gaotai	45.20	331	eP	P	07 07 58.8	-0.8
GTA				sP	sP	07 08 23.0	+1.8
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ASAJ	Asahikawa	45.33	17	P	P	07 08 01.3	+0.9
	comp=Z,5.1nm,0.3s,baz=254,slow=15,SNR=3.4						
ASAJ				LR	LR	07 25 23.6	
	comp=Z,50nm,20.6s,baz=348,slow=34						
	comp=Z,5.1nm,0.3s						
YSS	Yuzh-Sakhalins	47.99	15	eP	P	07 08 21.7	+0.6
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KLR	Kul'dur	48.28	5	P	P	07 08 23.9	+0.6
	comp=Z,14nm,0.9s,baz=208,slow=4.6,SNR=27						
	comp=Z,14nm,0.9s						
KLR	Kul'dur	48.28	5	d iP	P	07 08 23.5	+0.2
KLR				pmax	pmax		
	comp=Z,18nm,1.0s						
HIA	Hailar	48.41	354	P	P	07 08 25.8	+1.5
HIA	Hailar	48.41	354	P	P	07 08 25.6	+1.3
HEH	HeiHe	49.08	1	eP	P	07 08 29.3	-0.1

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HEH                                  pmax    pmax
      comp=Z,40nm,0.9s
HEH                                  pmax    pmax
      comp=Z,300nm,6.3s
ULN   Ulaanbaatar       49.56 343    P       P        07 08 34.1 +0.8
ULN                                  IAmb    IAmb     07 08 35.0
      comp=Z,9.7nm,0.7s
ULN   Ulaanbaatar       49.56 343d iP        P        07 08 33.5 +0.2
ULN                                  pmax    pmax
      comp=Z,11nm,0.8s
ULN   Ulaanbaatar       49.56 343    P       P        07 08 34.2 +0.9
HYB   Hyderabad         49.62 292  eP        P        07 08 34.3 +0.2
HYB                                epP       pP       07 08 47.6 -1.7
SONM  Songino Array     49.72 343    P       P        07 08 34.5 -0.1
      comp=Z,8.4nm,0.8s,baz=156,slow=8.6,SNR=14
SONM                                 PcP     PcP      07 09 55.7 +0.8
      comp=Z,2.8nm,0.8s,baz=167,slow=5.2,SNR=4.7
      comp=Z,8.4nm,0.8s
SONM  Songino Array     49.72 343    P       P        07 08 34.2 -0.3
SONM  Songino Array     49.72 343    P       P        07 08 34.2 -0.3
SONM                                 pmax    pmax
      comp=Z,7.0nm,1.0s
GRNR  Gornyy            50.34   8⇓iP         P        07 08 40.0 +1.0
GRNR                                 pmax    pmax
      comp=Z,10.0nm,1.0s
ZEA   Zeya              52.57   1  eP        P        07 08 56.0 +0.4
ZEA                                  pmax    pmax
      comp=Z,10.0nm,0.9s
WMQ   Urumqi            54.69 326 ⇓P         P        07 09 11.6 +0.2
WMQ                                  pmax    pmax
      comp=Z,21nm,0.9s
MOY   Mondy             54.77 341  eP        P        07 09 12.7 +0.8
MOY                                  pmax    pmax
      comp=Z,12nm,1.5s
BOD   Bodaibo           57.48 352  eP        P        07 09 30.9  0.0
BOD                                  pmax    pmax
      comp=Z,25nm,0.7s
PETK  Petropavlovsk-    58.13  22    P       P        07 09 36.5 +0.8
      comp=Z,13nm,0.6s,baz=182,slow=4.5,SNR=15
      comp=Z,13nm,0.6s
PETK  Petropavlovsk-    58.13  22    P       P        07 09 36.6 +1.0
DGZ   Jazzator, Alta    58.73 332⇑iP         P        07 09 39.8 -0.2
DGZ                                  pmax    pmax
      comp=Z,7.0nm,0.8s
MK31  Makanchi Array    59.52 326    P       P        07 09 44.9 -0.6
MK31  Makanchi Array    59.52 326c iP        P        07 09 44.7 -0.7
MKAR  Makanchi Array    59.52 326    P       P        07 09 44.7 -0.7
      comp=Z,7.4nm,0.5s,baz=121,slow=8.2,SNR=56
      comp=Z,7.4nm,0.5s
MKAR  Makanchi Array    59.52 326    P       P        07 09 45.0 -0.4
KSH   Kashi             59.64 316    P       P        07 09 48.8 +2.3
KSH                                  pmax    pmax
      comp=Z,7.0nm,0.7s
MAKZ  Makanchi          59.70 326    P       P        07 09 46.0 -0.7
MAKZ                                 IAmb    IAmb     07 09 47.8
      comp=Z,8.8nm,0.8s
MAKZ  Makanchi          59.70 326    P       P        07 09 46.0 -0.7
MAKZ                                 pmax    pmax
      comp=Z,9.0nm,0.8s
MAKZ  Makanchi          59.70 326    P       P        07 09 45.6 -1.0
MAKZ                                 pP      pP       07 10 02.0 -0.3
YAK   Yakutsk           60.94   2    P       P        07 09 54.8 +0.1
      comp=Z,28nm,0.9s,baz=87,slow=1.1,SNR=6.0
      comp=Z,28nm,0.9s
YAK   Yakutsk           60.94   2  eP        P        07 09 55.3 +0.6
YAK                                e*PP      pwP      07 10 13.7 +0.7
YAK                                e                  07 10 37.2
YAK                                e                  07 12 07.4
YAK                                eS        S        07 18 08.9 +0.8
YAK                                e*SS      sS       07 18 42.9 +8.3
YAK                                e                  07 19 39.7
YAK                                eSS       SS       07 22 10.2 +1.8
YAK                                  pmax    pmax
      comp=Z,50nm,1.0s
YAK                                  pmax    pmax
      comp=N,10.0nm,0.9s
YAK                                  pmax    pmax
      comp=E,5.0nm,0.9s
YAK                                  pmax    pmax
      comp=Z,122nm,4.3s
YAK                                  pmax    pmax
      comp=N,93nm,4.5s
YAK                                  pmax    pmax
      comp=E,73nm,4.3s
YAK                                  smax    smax
      comp=E,168nm,5.7s
YAK                                  smax    smax
      comp=N,126nm,5.8s
MA2   Magadan           61.46  14⇓eP         P        07 09 58.0 -0.3
MA2                                  pmax    pmax
      comp=Z,31nm,1.3s
MA2   Magadan           61.46  14    P       P        07 09 59.8 +1.5
AAK   Ala-Archa         62.06 319⇓eP         P        07 10 00.8 -2.1
ZAA0  Zalesovo Array    62.79 334    P       P        07 10 06.2 -1.1
ZALV  Zalesovo Beam     62.79 334    P       P        07 10 06.2 -1.2
      comp=Z,4.4nm,0.7s,baz=138,slow=6.0,SNR=10
      comp=Z,4.4nm,0.7s
ZALV  Zalesovo Beam     62.79 334    P       P        07 10 06.4 -1.0
ZALV  Zalesovo Beam     62.79 334  i P       P        07 10 06.1 -1.3
ZALV                                 pmax    pmax
      comp=Z,5.0nm,0.7s
KURBB Kurchatov Arra    63.77 328    P       P        07 10 13.2 -0.7
      comp=Z,13nm,0.6s,baz=126,slow=6.2,SNR=93
      comp=Z,13nm,0.6s
KURK  Kurchatov         63.78 328    P       P        07 10 13.2 -0.7
KURK  Kurchatov         63.78 328d iP        P        07 10 12.6 -1.3
KURK                                 pmax    pmax
      comp=Z,35nm,0.8s
KURK  Kurchatov         63.78 328    P       P        07 10 13.0 -0.9
CHGR  Chuyangaron       64.13 313    P       P        07 10 16.5 -0.2
CHGR                                 IAmb    IAmb     07 10 19.3
      comp=Z,10nm,0.6s
CHGR  Chuyangaron       64.13 313    P       P        07 10 16.5 -0.2
CHGR                                 pmax    pmax
      comp=Z,10.0nm,0.6s
SEY   Seymchan          64.79  13⇓eP         P        07 10 21.9 +1.6
SEY                                  pmax    pmax
      comp=Z,9.0nm,1.3s
KKAR  Karatay Array     64.90 318    P       P        07 10 20.4 -1.1
KKAR  Karatay Array     64.90 318    P       P        07 10 20.4 -1.1
DRV   Dumont d'Urvil    68.22 174    P       P        07 10 41.9 -0.2
KIWB  Kanaga Island     69.22  34    P       P        07 10 47.5 -1.1
BVAR  Borovoye Array    69.33 328    P       P        07 10 48.9 -0.5
      comp=Z,12nm,0.8s,baz=126,slow=7.5,SNR=18
      comp=Z,12nm,0.8s
BRVK  Borovoye          69.41 328    P       P        07 10 49.0 -0.8
BRVK                                 IAmb    IAmb     07 10 52.2
      comp=Z,13nm,0.8s
BRVK  Borovoye          69.41 328deP         P        07 10 49.8  0.0
BRVK                                 pmax    pmax
      comp=Z,17nm,1.0s
BRVK  Borovoye          69.41 328    P       P        07 10 49.1 -0.8
BRVK                                 pP      pP       07 11 06.1 +0.3
TIXI  Tiksi             70.56   1    P       P        07 10 56.0 -0.5
      comp=Z,7.2nm,0.6s,baz=90,slow=23,SNR=16
      comp=Z,7.2nm,0.6s
TIXI  Tiksi             70.56   1    P       P        07 10 56.5  0.0
TIXI                                 IAmb    IAmb     07 10 57.7
      comp=Z,17nm,1.1s
TIXI  Tiksi             70.56   1⇑eP         P        07 10 56.3 -0.2
TIXI                                 pmax    pmax
      comp=Z,15nm,1.0s
TIXI  Tiksi             70.56   1    P       P        07 10 56.6 +0.1
BILL  Bilibino          72.30  15  eP        P        07 11 07.3 +0.2
BILL                               e                  07 11 24.6
BILL                               e                  07 13 49.5
BILL                               ePPP      PPP      07 15 31.4
BILL                                 pmax    pmax
      comp=Z,2.0nm,1.2s
NRIK  Noril'sk          72.95 347    P       P        07 11 10.3 -0.6
      comp=Z,14nm,0.7s,baz=129,slow=5.9,SNR=15
      comp=Z,14nm,0.7s
NRIK  Noril'sk          72.95 347    P       P        07 11 10.8 -0.1
NRIK                                 IAmb    IAmb     07 11 12.1
      comp=Z,15nm,0.8s
NRIK  Noril'sk          72.95 347c iP        P        07 11 11.4 +0.5
NRIK                                 pmax    pmax
      comp=Z,17nm,0.8s
ABKAR Akbulak array     73.95 321    P       P        07 11 16.1 -1.1
AKTO  Aktyubinsk        75.49 322    P       P        07 11 25.8 -0.2
      comp=Z,4.4nm,0.5s,baz=101,slow=7.6,SNR=12
      comp=Z,4.4nm,0.5s
SVE   Sverdlovsk        76.02 329⇓eP         P        07 11 29.0  0.0
SVE                                  pmax    pmax
      comp=Z,39nm,0.7s
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ARU   Arti              76.97 328    P       P        07 11 33.8 -0.6
      comp=Z,27nm,0.6s,baz=83,slow=1.7,SNR=38
      comp=Z,27nm,0.6s
ARU   Arti              76.97 328    P       P        07 11 33.5 -0.9
ARU   Arti              76.97 328c iP        P        07 11 33.6 -0.7
ARU                                                   07 14 23.2
ARU                                  S       S        07 21 17.0 -0.9
ARU                                  SS      SS       07 26 11.0 -4.7
ARU                                  pmax    pmax
      comp=Z,28nm,0.7s
TNA   Tin City          79.28  23    P       P        07 11 47.8 +0.9
TNA   Tin City          79.28  23    P       P        07 11 48.8 +1.8
      baz=248
ANM   Nome              79.94  24    P       P        07 11 51.7 +1.1
ANM   Nome              79.94  24    P       P        07 11 51.7 +1.1
ANM                                  pmax    pmax
      comp=Z,3.0nm,0.7s
ANM   Nome              79.94  24    P       P        07 11 52.7 +2.1
      baz=251
VNDA  Vanda             80.80 173    P       P        07 11 55.1 +0.2
      comp=Z,2.2nm,0.8s,baz=331,slow=8.6,SNR=4.5
      comp=Z,2.2nm,0.8s
VNDA  Vanda             80.80 173    P       P        07 11 55.3 +0.3
VNDA                                 IAmb    IAmb     07 13 11.0
      comp=Z,38nm,1.9s
MAW   Mawson            81.04 200    P       P        07 11 54.6 -1.7
MAW   Mawson            81.04 200    P       P        07 11 54.6 -1.7
MAW                                  pmax    pmax
      comp=Z,75nm,1.5s
N16K  Nishlik Lake      81.77  29    P       P        07 12 03.1 +2.7
      baz=257
P16K  Nushagak River    81.85  30    P       P        07 12 03.8 +3.0
      baz=258
O16K  Kokwok River B    81.91  30    P       P        07 12 03.2 +2.1
      baz=258
BELG  Belogornoye       82.26 323    P       P        07 12 02.5 -0.6
      comp=Z,51nm,0.8s,baz=155,slow=3.9,SNR=21
      comp=Z,51nm,0.8s
BELG  Belogornoye       82.26 323deP         P        07 12 02.4 -0.6
BELG                                 pmax    pmax
      comp=Z,9.0nm,0.8s
KIRV  Kirov             82.29 329    P       P        07 12 02.6 -0.5
      comp=Z,16nm,0.5s,baz=94,slow=1.7,SNR=4.6
      comp=Z,16nm,0.5s
KIRV  Kirov             82.29 329⇓iP         P        07 12 03.5 +0.4
O17K  Koliganek Bris    82.44  30    P       P        07 12 06.4 +2.5
      baz=259
Q17K  Contact Creek     82.78  31    P       P        07 12 06.7 +0.8
      baz=260
GCSA  Galena City Sc    83.52  25    P       P        07 12 11.4 +2.0
      baz=258
TTA   Tatalina          83.55  27    P       P        07 12 11.8 +2.1
      baz=260
ZEI   Tsey              83.69 313  eP        P        07 12 09.3 -1.7
ZEI                                  pmax    pmax
      comp=Z,14nm,0.9s
N19K  Bonanza Creek     83.90  29    P       P        07 12 13.6 +2.0
      baz=261
L19K  White Mountain    83.95  28    P       P        07 12 13.9 +2.2
      baz=261
GEVA  Gevas             84.02 308    P       P        07 12 13.2 +0.4
M19K  Big River Lodg    84.12  28    P       P        07 12 15.1 +2.6
      baz=261
KBZ   Khabaz            84.49 314    P       P        07 12 14.7  0.0
      comp=Z,4.6nm,0.8s,baz=154,slow=4.5,SNR=7.0
      comp=Z,4.6nm,0.8s
K20K  Telida            84.49  26    P       P        07 12 16.5 +2.1
      baz=261
NEY   Neytrino          84.58 313⇓eP         P        07 12 16.4 +0.9
NEY                                  pmax    pmax
      comp=Z,3.0nm,0.8s
KIV   Kislovodsk        84.66 314  eP        P        07 12 17.0 +1.2
KIV                                  pmax    pmax
      comp=Z,9.0nm,1.0s
A21K  Barrow            84.95  18    P       P        07 12 18.7 +2.2
      baz=258
H21K  Melozitna Rive    85.36  24    P       P        07 12 20.5 +1.7
      baz=262
BRLK  Bradley Lake      85.55  30    P       P        07 12 20.3 +0.5
I21K  Tanana            85.64  25    P       P        07 12 21.2 +1.1
I21K                                 IAmb    IAmb     07 12 58.5
      comp=Z,31nm,2.0s
I21K  Tanana            85.64  25    P       P        07 12 21.7 +1.7
      baz=263
SUA   Susitna One       85.78  29    P       P        07 12 21.4 +0.3
SUA   Susitna One       85.78  29    P       P        07 12 21.5 +0.5
      baz=264
F22K  John River        85.86  22    P       P        07 12 23.0 +1.9
      baz=263
H22K  Ishtalitna Cre    85.98  24    P       P        07 12 23.3 +1.6
      baz=264
E22K  Anaktuvuk Pass    86.08  22    P       P        07 12 23.9 +1.6
      baz=263
MLY   Manley            86.15  25    P       P        07 12 23.9 +1.2
      baz=264
D23K  Nanushuk River    86.58  21    P       P        07 12 27.0 +2.3
      baz=264
COLD  Coldfoot          86.59  23    P       P        07 12 26.3 +1.6
      baz=264
G23K  Bananza Creek     86.61  23    P       P        07 12 26.7 +1.8
      baz=265
H23K  Yukon River       86.72  24    P       P        07 12 27.1 +1.7
      baz=265
I23K  Minto, Yukon-K    86.74  25    P       P        07 12 26.7 +1.2
      baz=265
E23K  Chandalar         86.89  22    P       P        07 12 28.1 +1.8
      baz=265
SML   Sawmill           86.96  28    P       P        07 12 27.0 +0.3
C24K  Franklin Bluff    87.35  20    P       P        07 12 29.7 +1.4
      baz=266
CCB   Clear Creek Bu    87.37  25    P       P        07 12 28.3 -0.2
CCB                                  IAmb    IAmb     07 15 38.8
      comp=Z,35nm,2.0s
H24K  Noodor Dome       87.41  24    P       P        07 12 30.3 +1.5
      baz=267
F24K  Squaw Lake        87.50  23    P       P        07 12 30.9 +1.7
      baz=267
G24K  Hadweenzic Riv    87.62  23    P       P        07 12 31.4 +1.7
      baz=267
ILAR  Eielson Array     87.77  25    P       P        07 12 29.6 -0.9
      comp=Z,1.1nm,0.6s,baz=241,slow=5.1,SNR=17
      comp=Z,1.1nm,0.6s
F25K  Christian Rive    88.37  23    P       P        07 12 35.0 +1.7
      baz=269
E25K  Arctic Village    88.41  22    P       P        07 12 35.1 +1.6
      baz=269
ANN   Anapa             88.45 315  eP        P        07 12 29.7 -4.4
ANN                                e*PP      pP       07 12 48.1 -2.6
ANN                                eS        SKSac    07 22 51.2 -6.9
ANN                                  pmax    pmax
      comp=Z,53nm,1.0s
RIDG  Independent Ri    88.63  26    P       P        07 12 34.6 -0.1
RIDG                                 IAmb    IAmb     07 12 36.2
      comp=Z,9.7nm,1.0s
RIDG  Independent Ri    88.63  26    P       P        07 12 35.3 +0.7
      baz=270
ASF   Jabal al Asfar    88.91 302    P       P        07 12 36.9 +0.2
      comp=Z,3.9nm,0.7s,baz=28,slow=9.5,SNR=3.9
      comp=Z,3.9nm,0.7s
OBN   Obninsk           88.99 325  eP        P        07 12 35.3 -1.1
OBN                                  pmax    pmax
      comp=Z,13nm,0.4s
G26K  Porcupine Rive    89.08  23    P       P        07 12 38.3 +1.7
      baz=270
C27K  Jago River        89.09  21    P       P        07 12 38.4 +1.8
      baz=270
L26K  Log Cabin Wild    89.31  27    P       P        07 12 39.3 +1.5
      baz=271
K27K  Chicken           89.86  26    P       P        07 12 42.5 +2.1
      baz=272
E27K  Coleen River      89.89  22    P       P        07 12 41.8 +1.3
      baz=272
I27K  Kandik River      89.99  25    P       P        07 12 42.4 +1.4
      baz=272
L27K  Beaver Creek,     90.00  27    P       P        07 12 42.0 +0.9
L27K                                 IAmb    IAmb     07 12 43.2
      comp=Z,5.9nm,0.8s
L27K  Beaver Creek,     90.00  27    P       P        07 12 42.6 +1.5
      baz=272
BCAR  Beaver Creek A    90.02  27            P        07 12 42.4 +1.2
BARN  Barnard Glacie    90.16  29    P       P        07 12 40.8 -1.3
QSPA  South Pole Qui    90.92 180    P       P        07 12 45.2 -0.2
QSPA                                 IAmb    IAmb     07 13 17.0
      comp=Z,23nm,1.8s
DAWY  Dawson            91.03  26    P       P        07 12 46.4 +0.5
DAWY                                 IAmb    IAmb     07 13 20.9
      comp=Z,18nm,1.7s
```

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DAWY  Dawson            91.03  26    P       P        07 12 47.1 +1.2
      baz=274
BR131 Keskin Array S    91.37 310⇓eP         P        07 12 46.9 -1.2
BRTR  Keskin Array B    91.37 310    P       P        07 12 47.4 -0.7
      comp=Z,1.7nm,0.8s,baz=133,slow=5.8,SNR=4.5
      comp=Z,1.7nm,0.8s
BRTR  Keskin Array B    91.37 310  i P       P        07 12 49.2 +1.1
BRTR                                 pmax    pmax
      comp=Z,2.0nm,0.8s
M29M  Somme Creek       91.59  28    P       P        07 12 50.3 +1.7
      baz=275
L29M  L29M              91.68  27    P       P        07 12 50.5 +1.6
      baz=276
K29M  Barlow Dome       91.88  26    P       P        07 12 51.1 +1.2
      baz=276
EPYK  Eagle Plains      91.93  24    P       P        07 12 51.1 +1.2
      baz=277
G30M  tAoh Zraii Nji    92.05  23    P       P        07 12 50.8 +0.2
      baz=277
HYT   Haines Junctio    92.20  29    P       P        07 12 53.2 +1.7
      baz=276
N30M  Aishikik Lake     92.33  29    P       P        07 12 53.8 +1.9
      baz=276
M30M  Minto, Yukon      92.34  27    P       P        07 12 52.7 +0.8
M30M  Minto, Yukon      92.34  27    P       P        07 12 53.9 +1.9
      baz=277
ARCES ARCESS Array B    92.82 340    P       P        07 12 53.0 -1.0
      comp=Z,3.2nm,0.7s,baz=13,slow=1.6,SNR=7.2
      comp=Z,3.2nm,0.7s
INK   Inuvik            92.87  21    P       P        07 12 54.7 +0.5
      baz=280
F31M  Tsiigehtchic      92.94  22    P       P        07 12 54.8 +0.3
      baz=280
AKASG Malin Array Be    93.68 321    P       P        07 12 57.0 -1.4
      comp=Z,0.3nm,0.3s,baz=58,slow=4.5,SNR=6.3
      comp=Z,0.3nm,0.3s
AKASG Malin Array Be    93.68 321  i P       P        07 12 59.0 +0.7
FARO  Faro, Yukon       93.98  28    P       P        07 13 00.9 +1.3
      baz=280
FINES FINESS Array B    93.99 332    P       P        07 12 59.2 -0.2
      comp=Z,1.3nm,0.7s,baz=98,slow=2.8,SNR=0.9
      comp=Z,1.3nm,0.7s
N32M  Quiet Lake        94.29  29    P       P        07 13 02.7 +1.7
      baz=280
P33M  Teslin, Yukon     94.58  29    P       P        07 13 02.9 +0.5
P33M  Teslin, Yukon     94.58  29    P       P        07 13 03.6 +1.2
      baz=280
C36M  Paulatuk          95.93  20    P       P        07 13 08.1 -0.1
C36M                                 IAmb    IAmb     07 13 09.2
      comp=Z,6.0nm,0.7s
C36M  Paulatuk          95.93  20    P       P        07 13 08.5 +0.3
      baz=289
WTLY  Watson Lake, Y    96.57  29    P       P        07 13 13.1 +1.7
      baz=284
YKA   Yellowknife Ar   102.17  25    P       Pdif     07 13 35.5 -0.8
      comp=Z,0.5nm,0.6s,baz=296,slow=4.4,SNR=5.4
YKA   Yellowknife Ar   102.17  25  i P       Pdif     07 13 36.0 -0.3
YKA                                  pmax    pmax
      comp=Z,1.0nm,0.6s
PMSA  Palmer Station   115.93 175    PKP     PKiKP    07 18 23.7 -0.2
      comp=Z,26nm,0.6s,baz=258,slow=20,SNR=5.5
TORD  Torodi Ar. Bea   123.25 286    PKP     PKPdf    07 18 39.1 -0.3
      comp=Z,2.2nm,0.8s,baz=56,slow=2.2,SNR=11
TORD                                 PKKPbc  PKKPab   07 28 30.6 +0.9
      comp=Z,0.4nm,0.7s,baz=273,slow=3.7,SNR=4.1
SCHQ  Schefferville    123.33   9    PKP     PKiKP    07 18 38.8  0.0
      comp=Z,1.4nm,0.6s,baz=281,slow=4.9,SNR=5.4
TXAR  Lajitas Array    123.64  53    PKP     PKiKP    07 18 40.9 +0.6
      comp=Z,0.8nm,0.7s,baz=232,slow=1.0,SNR=10
CFA   Coronel Fontan   146.62 157    PKPbc   PKPbc    07 19 23.5 -0.4
      comp=Z,2.7nm,0.6s,baz=242,slow=4.4,SNR=7.3
```

IDC 17 07:14:50.1±3.4**, 54°.17N×87°.29E, h0^{km}, mbtmp2.8**/2**, ML2.5**/2**, Error ellipse: s-maj=31.4km s-min=19.3km az=54.0, Southwestern Siberia**

```
Code  Station Name        Δ°   AZ°    Phase ID             Time     Res
                                     Op      ISC         h  m  s    ISC
I46RU ZALESOVO INFRA     1.47 262    I       I        07 22 32.1
      baz=80,slow=334,SNR=5.0
ZALV  Zalesovo Beam      1.47 262    Pg      Pn       07 15 16.3 -1.7
      2.3nm,0.3s,baz=81,slow=17,SNR=22
ZALV                                 Lg      Lg       07 15 37.0
      0.9nm,0.3s,baz=80,slow=25,SNR=4.5
KURBB Kurchatov Arra     6.43 240    Pn      Pn       07 16 27.2 +1.2
      0.1nm,0.3s,baz=54,slow=13,SNR=6.5
      0.6nm,0.4s
MKAR  Makanchi Array     8.04 205    Pn      Pn       07 16 48.9 +0.7
      0.1nm,0.3s,baz=28,slow=14,SNR=4.4
      0.1nm,0.4s
```

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*IDC **17** 07:15:26.3±0.8, 59°.51S×25°.13W, h0^{km}, mb4.3/5, mbtmp4.3/6, ML4.2/1, Error ellipse: s-maj=27.6km s-min=24.7km az=29.0*

*NEIC **17** 07:15:28.8±1.6, 59°.5S±0°.1×25°.0W±0°.2, h10^{km}±1^{km}, mb4.5/16, Error ellipse: s-maj=25.2km s-min=8.1km az=219.0*

ISC 17 07:15:28.1±0.6**, 59°.5S**±0°.1×**24°.9W**±0°.1**, h10^{km}, n38, σ1^{s}07**/38**, mb4.5**/10**, South Sandwich Islands region**

```
Code  Station Name        Δ°   AZ°    Phase ID             Time     Res
                                     Op      ISC         h  m  s    ISC
HOPE  Hope Point         8.21 304    Pn      Pn       07 17 26.5 -0.7
VNA1  Neumayer--Stat    13.14 155    P       Pn       07 18 33.7 -0.8
VNA3  Neumayer Olymp    13.33 158    P       Pn       07 18 36.3 -0.9
VNA2  Neumayer--Watz    13.54 155    P       Pn       07 18 39.1 -0.9
      baz=310,slow=15
SNAA  Sanae             15.10 153    P       Pn       07 19 00.8 -0.5
SNAA  Sanae             15.10 153    Pn      Pn       07 19 00.1 -1.2
      1.1nm,0.3s,baz=316,slow=16,SNR=31
SNAA                                 Sn      Sn       07 21 33.9  -14
      0.1nm,0.3s,baz=350,slow=19,SNR=1.7
      5.6nm,0.5s
SNAA  Sanae             15.10 153            Pn       07 18 59.9 -1.3
TROLL Troll, Antarti    16.63 150    P       Pn       07 19 20.6 -0.4
BELA  Belgrano 2        18.75 186            P        07 19 47.4 +0.6
PMSA  Palmer Station    18.81 237    P       Pn       07 19 48.4 +0.5
QSPA  South Pole Qui    30.75 180    P       P        07 21 43.3  0.0
      1.8nm,0.6s,baz=198,slow=3.0,SNR=13
      1.8nm,0.6s
QSPA  South Pole Qui    30.75 180    P       P        07 21 45.1 +1.8
QSPA                                 IAmb    IAmb     07 21 46.0
      comp=Z,9.8nm,1.5s
PLCA  Paso Flores       33.90 283    P       P        07 22 08.9 -2.1
      comp=Z,1.1nm,0.7s,baz=157,slow=3.1,SNR=4.5
      comp=Z,1.1nm,0.7s
BO02  Sierra Bellavi    38.66 289    P       P        07 22 49.9 -1.8
BO02                                 IAmb    IAmb     07 22 51.2
      comp=Z,13nm,1.5s
MT01  Popeta            39.64 289    P       P        07 22 58.2 -1.6
MT01                                 IAmb    IAmb     07 23 22.9
      comp=Z,21nm,1.4s
CFA   Coronel Fontan    40.08 295    P       P        07 23 01.2 -2.3
      comp=Z,2.7nm,0.7s,baz=147,slow=9.3,SNR=8.3
      comp=Z,2.7nm,0.7s
VA03  San Esteban       40.21 291    P       P        07 23 06.2 +1.5
VA06  Catapilco         40.73 290    P       P        07 23 10.1 +1.3
VA06                                 IAmb    IAmb     07 23 49.6
      comp=Z,22nm,1.4s
CO02  Combarbal         41.71 292    P       P        07 23 17.9 +0.8
CO02                                 IAmb    IAmb     07 24 02.2
      comp=Z,8.9nm,0.9s
CO01  Juntas del Tor    42.31 294    P       P        07 23 23.1 +1.0
CO06  Fray Jorge        42.45 292    P       P        07 23 23.4 +0.4
AC05  El Transito       43.35 295    P       P        07 23 29.9 -0.6
AC05                                 IAmb    IAmb     07 23 30.7
      comp=Z,8.0nm,0.9s
AC04  Llanos de Chal    44.26 294    P       P        07 23 37.6  0.0
BOSA  Boshof            45.80  70    P       P        07 23 48.6 -1.4
      comp=Z,8.8nm,1.3s,baz=187,slow=8.1,SNR=2.8
      comp=Z,8.8nm,1.3s
BOSA  Boshof            45.80  70    P       P        07 23 50.1 +0.1
TORD  Torodi Ar. Bea    75.52  27    P       P        07 27 13.7 +1.3
      comp=Z,3.6nm,0.7s,baz=197,slow=6.5,SNR=18
      comp=Z,3.6nm,0.7s
TORD  Torodi Ar. Bea    75.52  27    P       P        07 27 13.8 +1.4
TORD                                 IAmb    IAmb     07 27 14.3
      comp=Z,3.2nm,0.9s
NVAR  Mina Array Bea   123.79 289    PKP     PKPdf    07 34 26.2 +0.6
      comp=Z,0.3nm,0.6s,baz=148,slow=3.9,SNR=3.8
YKA   Yellowknife Ar   139.51 314    PKP     PKPdf    07 34 54.1 -0.1
      comp=Z,0.7nm,0.9s,baz=128,slow=2.6,SNR=8.9
P33M  Teslin, Yukon    145.44 303    PKPbc   PKPbc    07 35 04.7 -0.2
M31M  Drury Creek, Y   147.09 306    PKPbc   PKPbc    07 35 09.5 -0.2
A36M  Sachs Harbour    147.77 325            PKPbc    07 35 11.6 +0.3
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INK	Inuvik	149.20	317		PKPbc	07 35 14.9	-0.1
SONM	Songino Array	149.58	91	PKPbc	PKPbc	07 35 15.6	-1.2
	comp=Z,1.1nm,0.6s,baz=247,slow=1.7,SNR=5.2						
EPYK	Eagle Plains	149.72	312	PKPbc	PKPbc	07 35 16.7	+0.2
L27K	Beaver Creek,	150.56	304		PKPbc	07 35 19.1	+0.5
K27K	Chicken	151.02	306		PKiKP	07 35 20.6	+0.4
ILAR	Eielson Array	153.24	306	PKPbc	PKPbc	07 35 24.8	+0.2
	comp=Z,2.3nm,0.9s,baz=121,slow=1.0,SNR=18						

*NNC **17** 07:17:13.5±1.7, 50°.17N×77°.84E, h0^{km}, mb3.7, mpv2.8, Error ellipse: s-maj=19.0km s-min=6.6km az=113.0, Suspected Mining explosion.*

*IDC **17** 07:17:15.1±1.0, 50°.06N×78°.71E, h0^{km}, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=11.0km s-min=6.6km az=65.0*

ISC 17 07:17:10.1±2.7**, 50°.17N**±0°.07×**77°.6E**±0°.2**, h0^{km}, n17, σ1^{s}.65**/27**, 14C-9D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.74	56	⇓P	Pg	07 17 25.6	+1.3
KUR07				⇑S	Sb	07 17 34.5	-2.0
KUR17	Kurchatov Arra	0.74	51	⇑P	Pb	07 17 26.5	+0.6
KUR17				⇓S	Sb	07 17 35.7	-0.9
KUR06	Kurchatov Arra	0.76	55	⇑P	Pg	07 17 26.0	+1.4
KUR06				⇑S	Sb	07 17 34.9	-2.0
KUR16	Kurchatov Arra	0.76	52	⇑P	Pb	07 17 26.5	+0.4
KUR16				⇑S	Sb	07 17 35.7	-1.3
KURBB	Kurchatov Arra	0.77	54	Pg	Pg	07 17 26.1	+1.3
	1.2nm,0.3s,baz=167,slow=17,SNR=90						
KURBB				Lg	Lg	07 17 34.8	
	4.3nm,0.3s,baz=170,slow=32,SNR=38						
KURBB	Kurchatov Arra	0.77	54	⇑P	Pg	07 17 26.3	+1.5
	8.7nm,0.3s						
KURBB				⇓S	Sg	07 17 35.0	+0.2
	58nm,0.5s						
KUR15	Kurchatov Arra	0.78	55	⇓P	Pg	07 17 26.1	+1.0
KUR15				⇑S	Sg	07 17 35.6	+0.3
KUR05	Kurchatov Arra	0.79	53	⇓P	Pg	07 17 26.7	+1.5
KUR05				⇓S	Sg	07 17 34.9	-0.4
KUR14	Kurchatov Arra	0.80	56	⇓P	Pg	07 17 26.0	+0.6
KUR14				⇑S	Sg	07 17 35.1	-0.6
KUR04	Kurchatov Arra	0.80	52	⇑P	Pg	07 17 27.0	+1.6
KUR04				⇑S	Sg	07 17 35.1	-0.7
KURK	Kurchatov	0.87	51	⇑P	Pg	07 17 27.6	+0.8
	2.4nm,0.3s						
KURK				⇑S	Sg	07 17 36.6	-1.5
	47nm,1.1s						
MAKZ	Makanchi	4.47	137	⇑P	Pn	07 18 17.4	-1.6
	16nm,2.9s						
MAKZ				⇓S	Sn	07 19 13.8	+2.1
	2.5nm,0.5s						
MK31	Makanchi Array	4.62	135	P	Pn	07 18 18.4	-2.8
	baz=325,slow=11,SNR=23						
MK31				⇓S	Sn	07 19 19.2	+3.7
	3.6nm,0.4s,baz=324,slow=26,SNR=11						
MKAR	Makanchi Array	4.62	135	Pn	Pn	07 18 18.4	-2.7
	0.2nm,0.3s,baz=322,slow=10,SNR=29						
MKAR				Pg	Pb	07 18 26.2	-5.7
	0.4nm,0.3s,baz=329,slow=16,SNR=10						
MKAR				Lg	Lg	07 19 18.6	
	0.9nm,0.3s,baz=343,slow=30,SNR=8.7						
	0.3nm,0.4s						
BVAR	Borovoye Array	5.30	305	Pn	Pn	07 18 20.9	-10
	baz=154,slow=18,SNR=9.1						
I46RU	ZALESOVO INFRA	5.86	47	I	I	07 51 30.0	
	baz=224,slow=330,SNR=1.6						
ZALV	Zalesovo Beam	5.86	47	Pn	Pn	07 18 37.7	-0.4
	0.5nm,0.3s,baz=231,slow=15,SNR=4.0						
ZALV				Lg	Lg	07 20 04.2	
	0.1nm,0.3s,baz=225,slow=24,SNR=2.1						
	1.0nm,0.3s						

*IDC **17** 07:32:48.5±1.6, 20°.92S×172°.42E, h0^{km}, mb3.8/6, mbtmp3.8/8, ML4.6/2, MS3.6/7, Error ellipse: s-maj=108.4km s-min=19.7km az=157.0*

ISC 17 07:32:53.5±1.3**, 20°.8S**±0°.6×**172°.4E**±0°.3**, h35^{km}, n12, σ1^{s}.84**/9**, mb3.8**/6**, MS3.3**/3**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.73	256	Pn	Pn	07 34 16.4	+0.2
	1.9nm,0.3s,baz=141,slow=11,SNR=19						
DZM				LR	LR	07 36 15.4	
	comp=Z,201nm,18.2s,baz=30,slow=36						
	12nm,0.6s						
MSVF	Nonsavu	6.11	61	Pn	Pn	07 34 19.2	-2.2
	1.8nm,0.3s,baz=288,slow=14,SNR=10.0						
MSVF				LR	LR	07 36 18.0	
	comp=Z,372nm,19.3s,baz=192,slow=34						
	11nm,0.7s						
HNR	Honiara	16.51	311	LR	LR	07 42 22.9	
	comp=Z,863nm,19.1s,baz=144,slow=35						
URZ	Urewera	17.87	168	LR	LR	07 42 07.7	
	comp=Z,193nm,19.2s,baz=69,slow=32						
CTA	Charters Tower	24.54	267	P	P	07 38 11.3	+1.2
	1.9nm,0.7s,baz=93,slow=11,SNR=4.8						
CTA				LR	LR	07 46 27.4	
	comp=Z,68nm,19.9s,baz=84,slow=33						
	1.9nm,0.7s						
STKA	Stephens Creek	29.67	242	P	P	07 38 55.6	-0.3
	3.2nm,0.7s,baz=40,slow=9.1,SNR=7.0						
STKA				LR	LR	07 50 29.5	
	comp=Z,69nm,18.1s,baz=37,slow=36						
	3.2nm,0.7s						
WRA	Warramunga Arr	35.68	264	P	P	07 39 46.8	-1.9
	0.4nm,0.6s,baz=104,slow=7.3,SNR=3.4						
	0.4nm,0.6s						
ASAR	Alice Springs	35.72	258	P	P	07 39 47.4	-1.6
	1.4nm,0.9s,baz=85,slow=9.3,SNR=12						
	1.4nm,0.9s						
GUMO	Guam	43.61	319	LR	LR	07 58 08.9	
	comp=Z,100nm,19.3s,baz=34,slow=35						
NVAR	Mina Array Bea	87.60	47	P	P	07 45 40.9	+2.4
	0.2nm,0.8s,baz=254,slow=5.5,SNR=1.6						
	0.2nm,0.8s						
TXAR	Lajitas Array	94.88	61	P	P	07 46 13.6	+1.3
	0.4nm,0.9s,baz=216,slow=5.6,SNR=3.0						
	0.4nm,0.9s						
GERES	GERESS Array B	147.25	334	PKPbc	PKPbc	07 52 33.5	+0.3
	1.2nm,0.7s,baz=46,slow=4.2,SNR=7.9						

*JMA **17** 07:33:10.2±0.1, 39°.1N±0°.2×141°.8E±0°.4, h62^{km}, MV3.1/36, SOUTHERN IWATE PREF*

JMA Felt I J1 at SOUTHERN IWATE PREF .

*IDC **17** 07:33:11.7±2.3, 39°.51N×141°.50E, h52^{km}±21^{km}, mb3.4/4, mbtmp3.6/6, ML3.1/2, Error ellipse: s-maj=35.8km s-min=12.0km az=120.0*

ISC 17 07:33:09.6±1.1**, 39°.16N**±0°.05×**141°.91E**±0°.09**, h63^{km}**±7^{km}**, n23, σ1^{s}.64**/27**, mb3.7**/4**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.20	246	*i* P	Pn	07 33 19.5	+0.1
OFUJ				S	Sn	07 33 26.1	-0.4
MIYJ	Miyakonagasawa	0.42	351	*i* P	Pn	07 33 21.8	+0.8
MIYJ				S	Sn	07 33 30.0	+0.7
JKMT	Kesennumamotoy	0.49	224	*i* P	Pn	07 33 21.3	-0.4
JKMT				S	Sn	07 33 29.3	-1.1
JOM	Ohasama	0.57	303	*i* P	Pn	07 33 22.5	0.0
JOM				S	Sn	07 33 31.6	-0.4
JMK	Ichinoseki	0.57	249	*i* P	Pn	07 33 22.0	-0.6
JMK				S	Sn	07 33 30.6	-1.4
JIO	Ouri	0.83	212	*i* P	Pn	07 33 25.0	-0.6
JIO				S	Sn	07 33 36.0	-1.3
JRG	Rokugo	1.01	284	*i* P	Pn	07 33 27.2	-0.7
JYK	Kaneyama	1.23	259	*i* P	Pn	07 33 30.1	-0.6
JYK				S	Sn	07 33 45.1	-1.4
JANG	Nango	1.25	346	*i* P	Pn	07 33 31.2	+0.2
JOU	Okura	1.26	231	*i* P	Pn	07 33 30.2	-0.8
JOU				S	Sn	07 33 45.6	-1.5
MJAR	Matsushiro Arr	3.92	229	P	Pn	07 34 07.8	+0.4
	0.2nm,0.3s,baz=36,slow=11,SNR=12						
MJAR				S	Sn	07 34 55.5	+3.3
	2.9nm,0.5s,baz=33,slow=34,SNR=2.5						
	5.7nm,0.6s						
ASAJ	Asahikawa	4.98	6	P	Pn	07 34 20.7	-1.0
	1.5nm,0.3s,baz=217,slow=12,SNR=6.8						
ASAJ				S	Sn	07 35 13.3	-4.6
	3.9nm,0.5s,baz=178,slow=30,SNR=1.6						
	3.5nm,0.3s						
USRK	Ussuriysk Ar.	8.96	307	P	Pn	07 35 19.6	+3.4
	5.1nm,0.9s,baz=121,slow=13,SNR=7.3						
H11N2	WAKE ISLAND Hy	28.97	125	T	T	08 09 31.1	
	baz=318,slow=75,SNR=36						
H11N1	WAKE ISLAND Hy	28.98	125	T	T	08 09 33.0	
	baz=318,slow=75,SNR=53						
H11N3	WAKE ISLAND Hy	28.99	125	T	T	08 09 33.3	
	baz=318,slow=75,SNR=45						
H11S1	WAKE ISLAND Hy	29.75	127	T	T	08 10 30.5	
	baz=319,slow=76,SNR=29						
H11S3	WAKE ISLAND Hy	29.76	127	T	T	08 10 30.6	
	baz=319,slow=76,SNR=36						
H11S2	WAKE ISLAND Hy	29.77	127	T	T	08 10 30.5	
	baz=319,slow=76,SNR=33						
ZALV	Zalesovo Beam	40.80	311	P	P	07 40 44.1	-0.4
	0.7nm,0.5s,baz=97,slow=12,SNR=2.7						
	0.7nm,0.5s						
MKAR	Makanchi Array	43.35	300	P	P	07 41 04.9	-0.5
	0.9nm,0.7s,baz=85,slow=9.6,SNR=12						
	0.9nm,0.7s						
KURBB	Kurchatov Arra	45.03	306	P	P	07 41 18.2	-0.5
	0.7nm,0.5s,baz=82,slow=8.0,SNR=7.4						
	0.7nm,0.5s						
ILAR	Eielson Array	47.50	33	P	P	07 41 39.7	+1.8
	0.4nm,0.8s,baz=258,slow=5.6,SNR=6.0						
	0.4nm,0.8s						

*IDC **17** 07:41:42.8±2.9, 10°.61S×161°.40E, h53^{km}±22^{km}, mb3.8/8, mbtmp4.1/10, ML4.0/2, MS3.3/3, Error ellipse: s-maj=26.2km s-min=17.3km az=71.0*

ISC 17 07:41:43.1±0.9**, 10°.6S**±0°.1×**161°.5E**±0°.1**, h61^{km}, n13, σ1^{s}.25**/12**, mb4.2**/7**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.89	308	P	Pn	07 42 13.7	+0.6
	6µm,0.3s,baz=169,slow=8.4,SNR=27						
HNR				S	Sn	07 42 34.2	-1.7
	7µm,0.3s,baz=158,slow=5.4,SNR=3.0						
KRVT	Keravat (AS076	11.25	303	LR	LR	07 47 52.2	
	comp=Z,161nm,21.8s,baz=242,slow=33						
DZM	Mont Dzumac	12.36	158	P	Pn	07 44 35.6	-0.7
	1.3nm,0.3s,baz=73,slow=10.0,SNR=56						
DZM				S	Sn	07 46 42.8	-10
	7.1nm,0.7s,baz=23,slow=14,SNR=2.2						
DZM				LR	LR	07 48 15.8	
	comp=Z,98nm,19.9s,baz=42,slow=32						
	2.8nm,0.3s						
PMG	Port Moresby	14.12	274	LR	LR	07 49 51.2	
	comp=Z,180nm,20.2s,baz=49,slow=35						
CTA	Charters Tower	17.40	235	P	P	07 45 43.4	+1.0
	0.3nm,0.3s,baz=60,slow=12,SNR=13						
	6.5nm,0.7s						
WRA	Warramunga Arr	27.71	247	P	P	07 47 26.1	+0.2
	1.3nm,0.5s,baz=77,slow=9.3,SNR=16						
	1.3nm,0.5s						
ASAR	Alice Springs	29.27	240	P	P	07 47 38.6	-1.2
	0.4nm,0.5s,baz=61,slow=9.9,SNR=10						
	0.4nm,0.5s						
MJAR	Matsushiro Arr	51.76	336	P	P	07 50 43.1	-1.5
	1.0nm,0.4s,baz=165,slow=10,SNR=1.6						
	1.0nm,0.4s						
CMAR	Chiang Mai Arr	68.08	295	P	P	07 52 37.8	+0.8
	1.2nm,0.3s,baz=118,slow=5.3,SNR=1.9						
	1.2nm,0.3s						
SONM	Songino Array	75.87	325	P	P	07 53 24.8	+1.7
	1.8nm,0.6s,baz=147,slow=5.6,SNR=9.1						
	1.8nm,0.6s						
ILAR	Eielson Array	84.50	20	P	P	07 54 08.4	-0.6
	0.2nm,0.8s,baz=250,slow=5.4,SNR=1.2						
	0.2nm,0.8s						
MKAR	Makanchi Array	90.34	318	P	P	07 54 38.1	+0.5
	0.8nm,0.5s,baz=103,slow=5.5,SNR=9.5						
	0.8nm,0.5s						
TXAR	Lajitas Array	99.34	62	P	Pdif	07 55 20.6	+1.3
	0.4nm,0.9s,baz=254,slow=3.3,SNR=3.7						
	0.4nm,0.9s						

IDC 17 07:41:55.2±3.2**, 30°.31N**×**140°.86E, h0^{km}, mb3.7**/2**, mbtmp3.6**/4**, ML2.7**/1**, MS3.1**/5**, Error ellipse: s-maj=122.2km s-min=29.3km az=72.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	6.60	341	Pn	Pn	07 43 32.8	-0.7
	0.2nm,0.3s,baz=165,slow=11,SNR=1.6						
	1.2nm,0.3s						
JNU	Nakatsue	8.95	291	LR	LR	07 46 56.0	
	comp=Z,113nm,19.6s,baz=135,slow=34						
JOW	Kunigami	11.59	256	LR	LR	07 48 12.8	
	comp=Z,132nm,21.7s,baz=90,slow=33						
KSRS	Korea Array	12.89	307	Pn	Pn	07 45 00.5	+0.8
	1.7nm,0.9s,baz=120,slow=12,SNR=2.3						
KSRS				LR	LR	07 49 30.9	
	comp=Z,32nm,18.2s,baz=115,slow=35						
ASAJ	Asahikawa	13.85	5	LR	LR	07 51 22.1	
	comp=Z,66nm,19.1s,baz=172,slow=41						
H11N2	WAKE ISLAND Hy	25.78	108	T	T	08 13 58.1	
	baz=302						
H11N1	WAKE ISLAND Hy	25.79	108	T	T	08 13 58.8	
	baz=302						
H11N3	WAKE ISLAND Hy	25.80	108	T	T	08 13 59.2	
	baz=302						
H11S3	WAKE ISLAND Hy	26.23	111	T	T	08 14 32.1	
	baz=302						
H11S1	WAKE ISLAND Hy	26.24	111	T	T	08 14 32.5	
	baz=302						
H11S2	WAKE ISLAND Hy	26.25	111	T	T	08 14 33.0	
	baz=302						
WRA	Warramunga Arr	50.36	188	P	P	07 50 53.6	-0.5
	1.0nm,0.7s,baz=5.2,slow=7.8,SNR=7.9						
	1.0nm,0.7s						
ASAR	Alice Springs	54.08	188	P	P	07 51 22.2	+0.3
	0.5nm,0.7s,baz=16,slow=6.5,SNR=6.0						
	0.5nm,0.7s						
MMAI	Mount Meron Ar	85.49	306	LR	LR	08 35 12.9	
	comp=Z,32nm,19.5s,baz=52,slow=37						
H03N2	Juan Fernandez	146.21	106	T	T	10 45 30.5	
	baz=281,slow=75,SNR=5.8						
H03N3	Juan Fernandez	146.21	106	T	T	10 45 33.3	
	baz=281,slow=75,SNR=11						
H03N1	Juan Fernandez	146.22	106	T	T	10 45 33.1	
	baz=281,slow=75,SNR=8.3						

*IDC **17** 07:47:30.3±0.7, 62°.06N×149°.16W, h0^{km}, mb3.8/12, mbtmp3.8/16, ML3.4/4, MS3.3/2, Error ellipse: s-maj=12.3km s-min=10.4km az=111.0*

*ANF **17** 07:47:31.2±0.1, 61°.93N×149°.27W, h0^{km}, ML4.2/85, ML4.2/84, Error ellipse: s-maj=1.5km s-min=1.4km az=19.0*

*AEIC **17** 07:47:31.2±1.9, 61°.94N±0°.03×149°.24W±0°.03, h3^{km}±4^{km}, ML3.7, ML3.9/112(NEIC), Mwr3.6/72(NEIC), Error ellipse: s-maj=4.9km s-min=1.8km az=192.0*

*NEIC **17** 07:47:31.8±1.9, 61°.94N±0°.01×149°.25W±0°.03, h8^{km}±3^{km}, Error ellipse: s-maj=2.3km s-min=1.9km az=113.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}2.06; $M_{\theta\theta}$1.56; $M_{\phi\phi}$-3.62; $M_{r\theta}$1.31; $M_{\theta\phi}$-1.18; $M_{\phi r}$0.37; Fault plane solution: $M_0$3.62000×10^{14} NP1:ϕ_s44.98000°, δ63.21000°, λ137.13000°. NP2:ϕ_s157.68000°, δ52.60000°, λ34.56000°. Principal axes: T 3.1768, Plg48.0000°, Azm6.0000°; N 0.7701, Plg41.0000°, Azm199.0000°; P -3.9469, Plg6.0000°, Azm104.0000°;*

*NEIC **17** 07:47:31.8, 61°.90N×149°.22W, h4^{km}*

ISC 17 07:47:31.4±0.9**, 61°.93N**±0°.02×**149°.25W**±0°.02**, h10^{km}**±6^{km}**, n258, σ1^{s}.33**/280**, mb3.9**/12**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GHO	Glory Hole Cre	0.22	136		Pg	07 47 36.0	0.0
GHO				Sg	Sg	07 47 39.0	-0.1
GHO				IAML		07 47 39.9	
	comp=E,21µm,0.4s						
GHO				IAML		07 47 40.0	
	comp=N,33µm,0.7s						
PMR	Palmer	0.35	171		Pg	07 47 38.1	-0.1
PMR				Sg	Sg	07 47 43.0	+0.2
PMR				IAML		07 47 43.3	
	comp=E,18µm,0.4s						
PMR				IAML		07 47 43.5	
	comp=N,12µm,0.3s						
PMR	Palmer	0.35	171	P	Pg	07 47 38.5	+0.3
	baz=352,SNR=1000						
PMR				S	Sg	07 47 43.0	+0.2
	baz=352						
SML	Sawmill	0.45	106		Pg	07 47 40.4	+0.2
SML				Sg	Sg	07 47 46.4	+0.3
SML				IAML		07 47 47.3	
	comp=N,8µm,0.8s						
SML				IAML		07 47 48.5	
	comp=E,6µm,0.5s						
SML	Sawmill	0.45	106	P	Pg	07 47 40.4	+0.2
	baz=289,SNR=767						
SML				S	Sg	07 47 46.4	+0.3
	baz=289						
KNK	Knik Glacier	0.64	144		Pg	07 47 43.7	-0.1
KNK				Sg	Sg	07 47 51.9	-0.3
KNK				IAML		07 47 52.6	
	comp=N,7µm,0.5s						
KNK	Knik Glacier	0.64	144	P	Pg	07 47 43.7	-0.1
	baz=326,SNR=1000						
KNK				S	Sg	07 47 51.9	-0.3
	baz=326						
CUT	Chulitna	0.67	315		Pg	07 47 44.3	-0.1
CUT				Sg	Sg	07 47 53.7	+0.5
CUT	Chulitna	0.67	315	P	Pg	07 47 44.5	+0.1
	baz=133,SNR=916						
CUT				S	Sg	07 47 53.9	+0.7
	baz=133						
M23K	Glacier View	0.73	100	P	Pg	07 47 45.0	-0.5
	baz=283,SNR=807						
M23K				S	Sg	07 47 54.8	-0.3
	baz=283						
SUA	Susitna One	0.86	237		Pg	07 47 47.3	-0.6
SUA				Sg	Sg	07 47 58.6	-0.4
SUA				IAML		07 47 59.8	
	comp=E,5µm,0.6s						
SUA				IAML		07 48 00.8	
	comp=N,5µm,0.6s						
SUA	Susitna One	0.86	237	P	Pg	07 47 47.5	-0.4
	baz=55,SNR=522						
SUA				S	Sg	07 47 58.8	-0.2
	baz=55						
RC01	Rabbit Creek A	0.88	196		Pg	07 47 47.3	-1.0
RC01	Rabbit Creek A	0.88	196	P	Pg	07 47 47.1	-1.1
	baz=15,SNR=363						
SCM	Sheep Creek Mo	0.92	95		Pg	07 47 48.1	-0.8
SCM				IAML		07 48 01.3	
	comp=E,5µm,0.7s						
SCM				IAML		07 48 01.5	
	comp=N,3µm,0.5s						
SCM	Sheep Creek Mo	0.92	95		Sg	07 48 00.0	-0.8
SCM	Sheep Creek Mo	0.92	95	P	Pg	07 47 48.2	-0.8
	baz=278,SNR=473						
SCM				S	Sg	07 48 00.5	-0.3
	baz=278						
FIS	Fire Island	0.92	211		Pg	07 47 48.9	-0.1
FIS				IAML		07 48 04.8	
	comp=E,5µm,0.5s						
SKT	Skwentna	1.08	273	Pg	Pg	07 47 51.2	-0.9
SKT	Skwentna	1.08	273		Sg	07 48 05.6	-0.5
SKT	Skwentna	1.08	273	IAML		07 48 06.6	
	comp=E,3µm,0.5s						
SKT				IAML		07 48 06.9	
	comp=N,5µm,0.6s						
SKT	Skwentna	1.08	273	P	Pg	07 47 51.2	-0.9
	baz=91,SNR=624						
SKT				S	Sg	07 48 06.0	-0.1
	baz=91						
PWL	Port Wells	1.16	157		Pg	07 47 53.2	-0.5
PWL				IAML		07 48 08.9	
	comp=N,4µm,0.5s						
PWL	Port Wells	1.16	157	P	Pg	07 47 52.2	-1.5
	baz=339,SNR=83						
PWL				S	Sg	07 48 07.5	-1.3
	baz=339						
M24K	Tolsona, Glenn	1.46	82		Pn	07 47 57.3	-0.5
M24K				IAML		07 48 18.1	
	comp=N,2µm,1.1s						
M24K				IAML		07 48 24.5	
	comp=E,3µm,0.8s						
M24K	Tolsona, Glenn	1.46	82	P	Pn	07 47 57.9	0.0
	baz=265,SNR=265						
M24K				S	Sb	07 48 17.2	-0.1
	baz=265						
O22K	Cooper Landing	1.48	189		Pn	07 47 58.2	+0.2
O22K	Cooper Landing	1.48	189	P	Pn	07 47 58.0	0.0
	baz=8.9,SNR=227						
O22K				S	Sb	07 48 17.3	-0.4
	baz=8.9						
CAPN	Captain Cook N	1.49	219		Pb	07 47 59.4	+0.4
CAPN	Captain Cook N	1.49	219	P	Pn	07 47 58.9	+0.8
	baz=37,SNR=36						
RND	Reindeer	1.49	7		Pn	07 47 58.1	-0.1
SLKM	Skilak Lake	1.51	199		Pn	07 47 57.8	-0.7
SLKM					Sn	07 48 18.7	+0.5
SPU	Mount Spurr	1.54	242		Pn	07 47 58.9	-0.1
TRF	Thorofare Moun	1.60	343		Pn	07 48 00.4	+0.5
TRF				IAML		07 48 24.1	
	comp=E,2µm,0.6s						
TRF	Thorofare Moun	1.60	343	P	Pn	07 47 59.8	0.0
	baz=162,SNR=425						
TRF				S	Sg	07 48 22.2	-0.5
	baz=162						
SPCR	Spurr Chakacha	1.60	244	P	Pn	07 47 59.9	+0.2
	baz=61,SNR=173						
SPCR				S	Sn	07 48 21.6	+1.1
	baz=61						
KLU	Klutina	1.64	104		Pn	07 47 60.0	-0.5
KLU	Klutina	1.64	104	P	Pn	07 47 59.7	-0.7
	baz=288,SNR=142						
KLU				S	Sn	07 48 22.6	+0.9
	baz=288						
PPLA	Purkeypile	1.68	307		Pn	07 48 01.7	+0.8
PPLA	Purkeypile	1.68	307	P	Pn	07 48 01.4	+0.4
	baz=123,SNR=218						
PPLA				S	Sb	07 48 24.0	+0.4
	baz=123						
KTH	Kantishna Hill	1.80	335		Pn	07 48 02.9	+0.4
KTH				IAML		07 48 31.9	
	comp=E,1µm,0.9s						
MCK	McKinley	1.81	4		Pn	07 48 03.2	+0.5
MCK	McKinley	1.81	4	P	Pn	07 48 03.1	+0.5
	baz=184,SNR=390						
SEW	Seward	1.84	183	Pn	Pn	07 48 03.9	+0.9
SEW	Seward	1.84	183	P	Pn	07 48 03.8	+0.9
	baz=3.2,SNR=29						
M20K	Styx River	1.84	270		Pn	07 48 03.2	+0.1
M20K				IAML		07 48 29.8	
	comp=N,1µm,0.5s						
M20K				IAML		07 48 30.3	
	comp=E,1µm,0.5s						
M20K	Styx River	1.84	270	P	Pn	07 48 04.2	+1.1
	baz=86						
DIV	Divide	1.85	114	Pn	Pn	07 48 02.2	-1.0
HARP	HAARP	1.98	75	P	Pn	07 48 06.2	+1.2
	baz=258,SNR=220						
CAST	Castle Rocks	1.98	320	Pn	Pn	07 48 05.3	+0.3
CAST	Castle Rocks	1.98	320	P	Pn	07 48 05.9	+0.9
	baz=137,SNR=170						
PAX	Paxson	2.04	58		Pn	07 48 06.5	+0.6
PAX	Paxson	2.04	58	P	Pn	07 48 06.6	+0.7
	baz=241,SNR=87						
PAX				S	Sn	07 48 32.2	+0.8
	baz=241						
P23K	Montague Islan	2.14	154	P	Pn	07 48 08.1	+1.0
	baz=336						
RDJH	Redoubt Jeurge	2.18	233		Pn	07 48 08.6	+0.7
EYAK	Cordova Ski Ar	2.19	128		Pn	07 48 09.5	+1.7
EYAK	Cordova Ski Ar	2.19	128	P	Pn	07 48 09.4	+1.7
	baz=311,SNR=30						
N25K	Chitina, Valde	2.23	96		Pn	07 48 08.7	+0.2
N25K				IAML		07 48 42.9	
	comp=N,784nm,0.5s						
N25K	Chitina, Valde	2.23	96	P	Pn	07 48 09.2	+0.7
	baz=281,SNR=177						
L20K	Farewell, AK	2.24	286	P	Pn	07 48 09.0	+0.5
	baz=102						
BWN	Browne	2.25	358		Pn	07 48 09.3	+0.7
BWN				IAML		07 48 53.1	
	comp=N,1µm,0.9s						
RSO	Redoubt South	2.25	231		Pn	07 48 10.0	+1.1
BPAW	Bear Paw Mtn.	2.31	341	Pn	Pn	07 48 10.1	+0.5
BPAW				IAML		07 48 46.1	
	comp=N,663nm,0.4s						
BPAW				IAML		07 48 48.1	
	comp=E,537nm,0.5s						
BPAW	Bear Paw Mtn.	2.31	341	P	Pn	07 48 09.8	+0.2
	baz=159,SNR=239						
BRSE	Bradley Lake S	2.32	199		Pn	07 48 10.5	+0.9

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BRSE  Bradley Lake S    2.32 199  P      Pn      07 48 10.6 +0.9
      baz=18,SNR=21
BRLK  Bradley Lake      2.32 201  Pn     Pn      07 48 11.0 +1.3
BRLK                              IAML           07 48 45.9
      comp=E,412nm,0.6s
CHUM  Lake Minchumin    2.41 326         Pn      07 48 11.5 +0.7
CHUM  Lake Minchumin    2.41 326  P      Pn      07 48 11.6 +0.7
      baz=143,SNR=90
M19K  Big River Lodg    2.43 272  P      Pn      07 48 11.7 +0.5
      baz=87
K24K  Donnelly Dome     2.46  39  P      Pn      07 48 13.5 +2.0
      baz=222,SNR=162
O20K  Slope Mountain    2.48 223  P      Pn      07 48 13.9 +2.0
      baz=40,SNR=9.3
HOM   Homer             2.57 208         Pn      07 48 14.8 +1.8
HOM   Homer             2.57 208  P      Pn      07 48 14.6 +1.6
      baz=26
WRH   Wood River Hil    2.60  11  Pn     Pn      07 48 13.8 +0.3
WRH                               IAML           07 48 55.2
      comp=N,317nm,0.5s
WRH                               IAML           07 49 02.4
      comp=E,393nm,0.7s
CNPM  China Poot        2.61 203         Pn      07 48 14.2 +0.6
GLB   Gilahina Butte    2.64  98         Pn      07 48 15.0 +0.9
K20K  Telida            2.65 305  P      Pn      07 48 14.5 +0.4
      baz=120
L19K  White Mountain    2.65 278  P      Pn      07 48 14.8 +0.6
      baz=93,SNR=55
NEA2  Nenana            2.67   2         Pn      07 48 14.4  -0.1
NEA2  Nenana            2.67   2  P      Pn      07 48 14.4  -0.1
      baz=182,SNR=56
HDA   Harding Lake      2.69  22         Pn      07 48 15.0 +0.2
HDA                               IAML           07 48 59.3
      comp=N,599nm,0.6s
HDA                               IAML           07 48 59.7
      comp=E,412nm,0.9s
HDA   Harding Lake      2.69  22  P      Pn      07 48 15.0 +0.2
      baz=204,SNR=164
RIDG  Independent Ri    2.71  46         Pn      07 48 17.3 +2.2
RIDG                              IAML           07 49 01.1
      comp=N,656nm,0.8s
RIDG  Independent Ri    2.71  46  P      Pn      07 48 17.7 +2.6
      baz=230,SNR=105
ILSW  Iliamna Southw    2.73 226         Pn      07 48 17.0 +1.7
N19K  Bonanza Creek     2.76 248  P      Pn      07 48 17.5 +1.7
      baz=63
CCB   Clear Creek Bu    2.80  13         Pn      07 48 16.1  -0.1
VRDI  Verde Repeater    2.86 102  Pn     Pn      07 48 18.7 +1.5
DOT   Dot Lake          2.94  52         Pn      07 48 20.5 +2.3
L26K  Log Cabin Wild    2.95  66         Pn      07 48 20.6 +2.2
L26K                              IAML           07 49 05.9
      comp=E,577nm,1.0s
L26K                              IAML           07 49 08.4
      comp=N,589nm,0.5s
L26K  Log Cabin Wild    2.95  66  P      Pn      07 48 21.3 +3.0
      baz=251,SNR=84
M26K  Nabesna, AK       2.97  78  P      Pn      07 48 20.8 +2.2
      baz=264
P19K  Oil Pt            3.01 222  P      Pn      07 48 21.7 +2.6
      baz=39
TCOL  CIGO, UAF Yank    3.02  11         Pn      07 48 19.0  -0.2
TCOL  CIGO, UAF Yank    3.02  11  P      Pn      07 48 19.6 +0.4
      baz=192,SNR=150
COLA  College           3.02  11  P      Pn      07 48 19.6 +0.4
      baz=192
MCARA McCarthy VSAT     3.02  98         Pn      07 48 20.9 +1.7
MCARA                             IAML           07 49 04.8
      comp=E,425nm,0.6s
MCARA                             IAML           07 49 09.0
      comp=N,403nm,0.5s
MCARA McCarthy VSAT     3.02  98  P      Pn      07 48 21.3 +2.1
      baz=284,SNR=114
O19K  Port Alsworth     3.02 237  P      Pn      07 48 21.3 +2.1
      baz=52
IL31                    3.04  19         Pn      07 48 19.3  -0.2
ILAR  Eielson Array     3.04  19  Pn     Pn      07 48 19.4  -0.1
      comp=N,14nm,0.3s,baz=202,slow=14,SNR=137
ILAR                              Pg     Pb      07 48 22.8  -2.8
      comp=N,23nm,0.3s,baz=196,slow=13,SNR=155
ILAR                              Lg     Lg      07 49 00.9
      comp=N,16nm,0.3s,baz=200,slow=22,SNR=12
MDM   Murphy Dome       3.07   8  Pn     Pn      07 48 20.2 +0.3
SVW2  Sparrevohn        3.15 257         Pn      07 48 22.1 +1.1
SVW2                              IAML           07 49 14.9
      comp=N,273nm,0.9s
SVW2                              IAML           07 49 18.0
      comp=E,225nm,1.0s
SCRK  Sand Creek        3.16  47         Pn      07 48 23.2 +1.9
SCRK                              IAML           07 49 10.9
      comp=E,349nm,0.8s
SCRK                              IAML           07 49 12.7
      comp=N,364nm,0.7s
SCRK  Sand Creek        3.16  47  P      Pn      07 48 23.1 +1.9
      baz=232,SNR=46
MLY   Manley            3.18 349         Pn      07 48 21.7 +0.2
MLY                               IAML           07 49 16.2
      comp=E,247nm,0.7s
MLY   Manley            3.18 349  P      Pn      07 48 21.9 +0.4
      baz=167,SNR=65
I23K  Minto, Yukon-K    3.23 359         Pn      07 48 21.9  -0.1
I23K                              IAML           07 49 17.2
      comp=N,243nm,1.1s
I23K                              IAML           07 49 18.9
      comp=E,233nm,0.8s
I23K  Minto, Yukon-K    3.23 359  P      Pn      07 48 22.6 +0.6
      baz=179,SNR=93
POKR  Poker Plat Res    3.30  13         Pn      07 48 23.4 +0.3
POKR                              IAML           07 49 22.4
      comp=N,201nm,0.7s
POKR                              IAML           07 49 26.7
      comp=E,182nm,0.8s
POKR  Poker Plat Res    3.30  13  P      Pn      07 48 23.3 +0.3
      baz=195,SNR=20
TTA   Tatalina          3.30 291         Pn      07 48 23.8 +0.6
TTA                               IAML           07 49 17.1
      comp=E,202nm,0.7s
TTA                               IAML           07 49 21.5
      comp=N,212nm,0.6s
TTA   Tatalina          3.30 291  P      Pn      07 48 23.7 +0.6
      baz=104,SNR=9.1
PTPK  Patty Peak        3.33 100         Pn      07 48 25.5 +1.8
BALM  Baldy             3.43 102         Pn      07 48 26.4 +1.4
KIAG  Kiagna River      3.46 104         Pn      07 48 26.6 +1.1
I21K  Tanana            3.48 341         Pn      07 48 25.6 +0.1
I21K                              IAML           07 49 27.2
      comp=E,240nm,1.6s
I21K                              IAML           07 49 27.8
      comp=N,178nm,0.7s
I21K  Tanana            3.48 341  P      Pn      07 48 26.1 +0.6
      baz=158
M27K  Edge Creek, AK    3.49  80  P      Pn      07 48 28.6 +2.9
      baz=266
O18K  Koktuh Hills      3.58 237         Pn      07 48 28.5 +1.6
O18K                              IAML           07 49 23.0
      comp=E,161nm,0.7s
O18K                              IAML           07 49 24.1
      comp=N,237nm,0.9s
O18K  Koktuh Hills      3.58 237  P      Pn      07 48 28.6 +1.6
      baz=52,SNR=16
L27K  Beaver Creek,     3.62  69  P      Pn      07 48 29.9 +2.3
      baz=255
BCAR  Beaver Creek A    3.64  69         Pn      07 48 30.4 +2.5
Q20K  Shuyak Island     3.68 207  P      Pn      07 48 29.9 +1.6
      baz=24
Q19K  Cape Douglas,     3.72 218         Pn      07 48 31.5 +2.6
Q19K  Cape Douglas,     3.72 218  P      Pn      07 48 30.7 +1.8
      baz=34,SNR=5.6
BARN  Barnard Glacie    3.74 100         Pn      07 48 31.2 +1.9
BARN                              IAML           07 49 29.8
      comp=E,121nm,0.5s
K27K  Chicken           3.89  54  P      Pn      07 48 33.3 +2.2
      baz=241
P18K  Big Mountain,     3.89 232  P      Pn      07 48 33.0 +1.7
      baz=46,SNR=6.3
H23K  Yukon River       3.91 358         Pn      07 48 31.9 +0.5
H23K  Yukon River       3.91 358  P      Pn      07 48 32.0 +0.5
      baz=178,SNR=34
CTG   Chitna Glacier    3.92 101  P      Pn      07 48 33.2 +1.5
      baz=288,SNR=35
CTGM  Chitina Glacie    3.92 101         Pn      07 48 33.8 +2.1
PRP   Porcupine Dome    3.96  23  Pn     Pn      07 48 32.8 +0.5
PRP                               IAML           07 49 40.9
      comp=E,125nm,1.1s
PRP                               IAML           07 49 45.7
      comp=N,141nm,0.8s
PRP   Porcupine Dome    3.96  23  P      Pn      07 48 32.6 +0.3
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      baz=206,SNR=48
BVCY  Beaver Creek      3.96  79  P      Pn      07 48 34.0 +1.8
      baz=267,SNR=6.9
H24K  Noodor Dome       3.97   8  P      Pn      07 48 32.7 +0.4
      baz=189
H21K  Melozitna Rive    4.06 339         Pn      07 48 33.6 +0.1
H21K                              IAML           07 49 39.9
      comp=N,183nm,0.7s
H21K                              IAML           07 49 46.2
      comp=E,137nm,0.7s
H21K  Melozitna Rive    4.06 339  P      Pn      07 48 34.1 +0.6
      baz=155,SNR=105
H22K  Ishtalitna Cre    4.09 348  P      Pn      07 48 34.4 +0.5
      baz=166,SNR=39
LOGN  Logan Glacier     4.12 102         Pn      07 48 36.1 +1.6
YUK3  Moose Creek       4.17  88  P      Pn      07 48 37.0 +1.8
      baz=276,SNR=15
I26K  Coal Creek Min    4.34  36  P      Pn      07 48 38.7 +1.3
      baz=222
O17K  Koliganek Bris    4.41 244  P      Pn      07 48 39.8 +1.5
      baz=57
GCSA  Galena City Sc    4.45 313         Pn      07 48 40.0 +1.2
GCSA  Galena City Sc    4.45 313  P      Pn      07 48 39.8 +1.0
      baz=126,SNR=11
KDAK  Kodiak Island     4.49 203  Pn     Pn      07 48 39.0  -0.4
      comp=E,1.0nm,0.3s,baz=49,slow=6.6,SNR=16
KDAK                              Lg     Lg      07 49 46.1
      comp=E,1.3nm,0.3s,baz=123,slow=16,SNR=1.4
      comp=E,13nm,0.8s
KDAK  Kodiak Island     4.49 203  P      Pn      07 48 40.9 +1.5
      baz=20
SAMH  Samovar Hills     4.50 110         Pn      07 48 41.2 +1.6
O28M  Mount Upton       4.51 101  P      Pn      07 48 42.0 +2.0
      baz=289,SNR=19
IMAR  Indian Mountai    4.52 336         Pn      07 48 40.0 +0.2
YUK8  Steele Glacier    4.58  94  P      Pn      07 48 42.2 +1.4
      baz=282,SNR=11
EGAK  Eagle             4.63  48         Pn      07 48 43.3 +2.0
EGAK  Eagle             4.63  48  P      Pn      07 48 43.4 +2.0
      baz=236,SNR=28
PCA   Pinnacle          4.75 109         Pn      07 48 45.1 +2.1
PINM  Pinnacle          4.75 109  P      Pn      07 48 44.4 +1.3
      baz=297,SNR=12
G23K  Bananza Creek     4.81 356  P      Pn      07 48 44.5 +0.7
      baz=176,SNR=54
N16K  Nishlik Lake      4.83 257  P      Pn      07 48 44.8 +0.6
      baz=68
G24K  Hadweenzic Riv    4.85   8  P      Pn      07 48 45.0 +0.6
      baz=190
O16K  Kokwok River B    4.93 246  P      Pn      07 48 47.0 +1.6
      baz=58,SNR=5.6
Q17K  Contact Creek     4.96 225  P      Pn      07 48 47.7 +1.8
      baz=39
G21K  Allakaket         4.96 340  P      Pn      07 48 46.4 +0.6
      baz=156
FYU   Fort Yukon        4.97  19         Pn      07 48 46.6 +0.6
DAWY  Dawson            4.97  60         Pn      07 48 48.4 +2.3
DAWY                              IAML           07 50 13.7
      comp=N,103nm,1.2s
DAWY                              IAML           07 50 17.1
      comp=E,119nm,0.9s
DAWY  Dawson            4.97  60  P      Pn      07 48 48.5 +2.4
      baz=249,SNR=24
I27K  Kandik River      5.00  39  P      Pn      07 48 48.3 +1.8
      baz=226
G25K  Bearman Lake      5.04  14  P      Pn      07 48 47.6 +0.6
      baz=197
M29M  Somme Creek       5.08  79  P      Pn      07 48 50.1 +2.5
      baz=269
YUK4  Talbot Arm        5.09  92  P      Pn      07 48 50.1 +2.2
      baz=280
P16K  Nushagak River    5.21 240  P      Pn      07 48 51.9 +2.6
      baz=52
L29M  L29M              5.28  72  P      Pn      07 48 53.4 +3.0
      baz=262
YUK6  Outpost Mounta    5.32  96  P      Pn      07 48 53.7 +2.7
      baz=286,SNR=5.0
PNL   Peninsula         5.33 111         Pn      07 48 53.1 +2.1
PNL   Peninsula         5.33 111  P      Pn      07 48 53.3 +2.3
      baz=300
COLD  Coldfoot          5.33 356         Pn      07 48 51.7 +0.8
COLD  Coldfoot          5.33 356  P      Pn      07 48 51.7 +0.8
      baz=175
O29M  Mount Kennedy     5.43 103  P      Pn      07 48 54.5 +2.1
      baz=292
H27K  Steamboat Moun    5.48  35  P      Pn      07 48 54.9 +1.8
      baz=222,SNR=15
G26K  Porcupine Rive    5.56  23  P      Pn      07 48 54.4 +0.3
      baz=208
F21K  Alatna River      5.61 343  P      Pn      07 48 56.0 +1.1
      baz=159,SNR=39
F24K  Squaw Lake        5.64   5  P      Pn      07 48 56.3 +1.1
      baz=186
K29M  Barlow Dome       5.70  65  P      Pn      07 48 57.9 +1.8
      baz=256
HYT   Haines Junctio    5.75  96         Pn      07 48 57.9 +1.0
HYT   Haines Junctio    5.75  96  P      Pn      07 48 58.2 +1.3
      baz=286,SNR=14
N30M  Aishikik Lake     5.81  89  P      Pn      07 48 58.5 +1.0
      baz=280
BMAR  Burnt Mountain    5.87  18         Pn      07 48 58.7 +0.3
F25K  Christian Rive    5.89  14  P      Pn      07 48 58.8 +0.1
      baz=197,SNR=31
G27K  Doyon Strip       5.90  31  P      Pn      07 48 59.8 +1.0
      baz=218,SNR=22
I29M  Ogilvie Camp,     5.96  50         Pn      07 49 01.4 +1.8
I29M  Ogilvie Camp,     5.96  50  P      Pn      07 49 01.2 +1.6
      baz=240,SNR=47
E23K  Chandalar         6.15 359  P      Pn      07 49 03.1 +0.8
      baz=178
E24K  Your Creek        6.18   3  P      Pn      07 49 03.9 +1.3
      baz=183,SNR=19
F26K  Sheenjek River    6.18  18  P      Pn      07 49 03.3 +0.7
      baz=203,SNR=48
P30M  Million Dollar    6.24 101  P      Pn      07 49 05.2 +1.7
      baz=292
E22K  Anaktuvuk Pass    6.32 351  P      Pn      07 49 05.7 +1.1
      baz=169
MAYO  Mayo, Yukon       6.35  69  Pn     Pn      07 49 07.1 +2.1
MAYO  Mayo, Yukon       6.35  69  P      Pn      07 49 06.0 +1.0
      baz=261
E25K  Arctic Village    6.40  12  P      Pn      07 49 06.5 +0.8
      baz=196,SNR=22
O30N  Mendenhall        6.43  95  P      Pn      07 49 07.5 +1.4
      baz=286
PLBC  Pleasant Camp     6.79 106  P      Pn      07 49 12.1 +1.1
      baz=297
EPYK  Eagle Plains      7.05  45         Pn      07 49 15.4 +0.8
EPYK  Eagle Plains      7.05  45  P      Pn      07 49 15.2 +0.6
      baz=237,SNR=6.4
E27K  Coleen River      7.06  24  P      Pn      07 49 14.9 +0.2
      baz=211
D23K  Nanushuk River    7.09 356  P      Pn      07 49 18.2 +3.1
      baz=174,SNR=27
SKAG  Skagway           7.27 104         Pn      07 49 19.0 +1.5
SKAG  Skagway           7.27 104  P      Pn      07 49 19.9 +2.4
      baz=296,SNR=5.2
FARO  Faro, Yukon       7.47  81         Pn      07 49 23.5 +3.2
FARO  Faro, Yukon       7.47  81  P      Pn      07 49 22.8 +2.4
      baz=275
D25K  Kavik River       7.51   8  P      Pn      07 49 23.0 +2.1
      baz=190
G30M  tAoh Zraii Nji    7.56  42  P      Pn      07 49 22.2 +0.6
      baz=234
ANM   Nome              7.74 297         Pn      07 49 24.8 +0.9
ANM   Nome              7.74 297  P      Pn      07 49 24.5 +0.6
      baz=102
N32M  Quiet Lake        7.76  89  P      Pn      07 49 26.1 +1.8
      baz=283
C24K  Franklin Bluff    7.82   1  P      Pn      07 49 27.1 +2.1
      baz=182,SNR=14
P32M  Atlin             7.96 100  P      Pn      07 49 28.5 +1.4
      baz=294
C27K  Jago River        8.05  14  P      Pn      07 49 30.2 +2.0
      baz=199,SNR=16
P33M  Teslin, Yukon     8.15  95  P      Pn      07 49 30.9 +1.2
      baz=290
C26K  Camden Bay        8.21  11  P      Pn      07 49 32.2 +1.9
      baz=194,SNR=10
R32K  Eaglecrest        8.22 110  P      Pn      07 49 32.5 +2.0
      baz=303
JIS   Juneau Island     8.28 110  Pn     Pn      07 49 33.4 +2.1
RDOG  Red Dog Mine      8.42 323  P      Pn      07 49 36.7 +3.4
      baz=130
SIT   Sitka             8.60 118  Pn     Pn      07 49 37.0 +1.3
F31M  Tsiigehtchic      8.62  43  P      Pn      07 49 36.9 +0.9
      baz=238,SNR=9.0
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Q32M  Nakina River      8.90 102  P      Pn      07 49 41.0 +0.9
      baz=297
TNA   Tin City          9.03 302  P      Pn      07 49 42.7 +1.2
      baz=105
INK   Inuvik            9.18  39  Pn     Pn      07 49 44.1 +0.5
      comp=E,1.0nm,0.3s,baz=230,slow=16,SNR=42
INK                               Sn     Sn      07 51 22.8  -4.1
      comp=E,0.2nm,0.3s,baz=221,slow=19,SNR=1.9
INK                               Lg     Lg      07 52 15.9
      comp=E,0.3nm,0.3s,baz=320,slow=27,SNR=5.6
      comp=E,8.3nm,0.7s
INK   Inuvik            9.18  39  P      Pn      07 49 45.7 +2.0
      baz=233,SNR=11
A21K  Barrow            9.86 346         Pn      07 49 54.4 +1.4
A21K  Barrow            9.86 346  P      Pn      07 49 54.3 +1.4
      baz=159
S34M  Telegraph Cree    9.93 106  P      Pn      07 49 55.6 +1.6
      baz=302
DLBC  Dease Lake       10.18 102  Pn     Pn      07 49 57.6 +0.1
      comp=E,0.4nm,0.3s,baz=328,slow=13,SNR=9.0
DLBC                              Lg     Lg      07 52 52.2
      comp=E,0.2nm,0.3s,baz=37,slow=11,SNR=1.5
      comp=E,1.7nm,0.4s
DLBC  Dease Lake       10.18 102  Pn     Pn      07 49 58.5 +1.0
DLBC  Dease Lake       10.18 102  P      Pn      07 49 58.3 +0.9
      baz=298
SPIA  Saint Paul Isl   11.64 255  P      Pn      07 50 15.1  -2.3
      baz=57
KOTAN Kotaneelee Air   12.32  87  P      Pn      07 50 29.3 +2.7
      baz=289
C36M  Paulatuk         12.68  43         Pn      07 50 31.0  -0.4
C36M  Paulatuk         12.68  43  P      Pn      07 50 30.7  -0.7
      baz=246
A36M  Sachs Harbour    13.64  32         Pn      07 50 44.6   0.0
A36M  Sachs Harbour    13.64  32  P      Pn      07 50 43.6  -1.0
      baz=235
NIKH  Nikolski High    13.80 238  P      Pn      07 50 45.9  -0.9
      baz=42
YKA   Yellowknife Ar   16.05  73  Pn     Pn      07 51 16.6  -0.3
      baz=284,slow=11,SNR=4.6
      comp=E,0.3nm,0.7s
RES   Resolute Bay     22.68  34  P      P       07 52 33.1 +0.6
      comp=E,0.5nm,0.5s,baz=253,slow=17,SNR=2.7
      comp=E,0.5nm,0.5s
NVAR  Mina Array Bea   30.23 127  P      P       07 53 44.3 +2.0
      comp=E,0.1nm,0.4s,baz=319,slow=9.5,SNR=2.1
      comp=E,0.1nm,0.4s
DAG   Danmarks Havn    38.14  16 iP      P       07 54 50.0   0.0
SFJD  Kangerlussuaq    38.53  39  LR     LR      08 11 24.7
      comp=E,52nm,18.9s,baz=8.5,slow=37
KLR   Kul'dur          43.57 291  LR     LR      08 15 03.1
      comp=E,27nm,19.2s,baz=126,slow=38
TXAR  Lajitas Array    44.07 116  P      P       07 55 39.3  -0.1
      comp=E,0.2nm,0.8s,baz=317,slow=4.9,SNR=2.1
      comp=E,0.2nm,0.8s
KSRS  Korea Array      54.51 284  P      P       07 57 00.5 +1.5
      comp=E,0.5nm,0.4s,baz=39,slow=6.1,SNR=4.7
      comp=E,0.5nm,0.4s
SONM  Songino Array    55.10 307  P      P       07 57 03.8 +0.4
      comp=E,0.6nm,0.7s,baz=54,slow=5.9,SNR=2.9
      comp=E,0.6nm,0.7s
ZALV  Zalesovo Beam    56.87 325  P      P       07 57 14.7  -0.9
      comp=E,0.5nm,0.4s,baz=20,slow=11,SNR=2.6
      comp=E,0.5nm,0.4s
ARU   Arti             59.99 343  P      P       07 57 37.1  -0.4
      comp=E,3.8nm,0.5s,baz=309,slow=5.1,SNR=4.6
      comp=E,3.8nm,0.5s
BVAR  Borovoye Array   61.17 334  P      P       07 57 44.9  -0.7
      comp=E,0.8nm,0.7s,baz=51,slow=5.7,SNR=3.3
      comp=E,0.8nm,0.7s
KURBB Kurchatov Arra   61.52 328  P      P       07 57 47.5  -0.5
      comp=E,1.3nm,0.2s,baz=29,slow=7.1,SNR=1.2
      comp=E,1.3nm,0.2s
MKAR  Makanchi Array   64.02 323  P      P       07 58 03.5  -1.2
      comp=E,0.3nm,0.5s,baz=36,slow=6.4,SNR=5.2
      comp=E,0.3nm,0.5s
BELG  Belogornoye      65.23 349  P      P       07 58 11.5  -1.0
      comp=E,4.8nm,0.5s,baz=79,slow=1.2,SNR=5.2
      comp=E,4.8nm,0.5s
AKASG Malin Array Be   67.71   1  P      P       07 58 27.7  -0.6
      comp=E,0.3nm,0.3s,baz=357,slow=5.4,SNR=2.3
      comp=E,0.3nm,0.3s
QSPA  South Pole Qui  151.74 180  PKPbc  PKPbc   08 07 25.1 +0.6
      comp=E,1.9nm,1.1s,baz=145,slow=5.2,SNR=2.3
```

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*IDC **17** 07:56:36.3±1.0, 52°.15N×62°.21E, h0^{km}, mb3.8/2, mbtmp3.9/5, ML3.0/4, Error ellipse: s-maj=25.3km s-min=10.4km az=168.0*

*NNC **17** 07:56:39.0±2.2, 51°.61N×62°.87E, h0^{km}, mb3.3, mpv3.0, Error ellipse: s-maj=38.5km s-min=15.9km az=150.0, Suspected Mining explosion.*

ISC 17 07:56:35.5±0.9**, 51°.9N**±0°.1×**62°.43E**±0°.07**, h0^{km}, n12, σ2^{s}.18**/15**, 5C-3D, Western Kazakhstan**

```
Code  Station Name      Δ°   AZ°    Phase ID         Time      Res
                                  Op     ISC       h  m  s     ISC
AB31  Akbulak array     3.09 212 ⇓Pn     Pn      07 57 28.0 +2.4
      1.1nm,0.2s,baz=33,slow=15,SNR=14
AB31                             ⇑Pg     Pb      07 57 31.6 +0.3
      2.1nm,0.3s,baz=20,slow=14,SNR=4.6
AB31                             ⇑Sn     Sb      07 58 06.7  -2.9
      1.6nm,0.3s,baz=19,slow=25,SNR=6.3
AB31                             ⇓Lg     Lg      07 58 11.7
      4.6nm,0.3s
AKTO  Aktyubinsk        3.14 244  Pn     Pn      07 57 29.0 +2.7
      0.5nm,0.3s,baz=80,slow=11,SNR=3.4
AKTO                              Lg     Lg      07 58 14.1
      3.4nm,0.3s,baz=353,slow=20,SNR=11
AKTO  Aktyubinsk        3.14 244 ⇑Pn     Pn      07 57 29.1 +2.7
      1.0nm,0.7s
AKTO                             ⇑Pg     Pg      07 57 36.9 +1.2
      2.9nm,0.9s
AKTO                             ⇑Sn     Sg      07 58 14.8  -1.7
      3.0nm,0.4s
BRVK  Borovoye          4.94  73 ⇓P      Pn      07 57 53.0 +2.1
      1.5nm,0.4s
BVA0  Borovoye Array    4.99  74  P      Pn      07 57 53.8 +2.0
      4.1nm,0.4s,baz=268,slow=13,SNR=72
BVAR  Borovoye Array    4.99  74  Pn     Pn      07 57 53.7 +2.0
      0.7nm,0.3s,baz=265,slow=13,SNR=84
BVAR                              Sn     Sn      07 58 48.2  -1.9
      0.1nm,0.3s,baz=266,slow=30,SNR=2.5
BVAR                              Lg     Lg      07 59 13.2
      0.2nm,0.3s,baz=241,slow=26,SNR=2.7
      9.6nm,0.3s
ARU   Arti              5.07 335  Lg     Lg      07 59 04.5
      baz=53,slow=20,SNR=1.6
KURBB Kurchatov Arra   10.18  91  Pn     Pn      07 59 03.5 +0.8
      0.1nm,0.3s,baz=280,slow=13,SNR=3.6
      3.4nm,0.2s
I46RU ZALESOVO INFRA13.65  73  I      I       09 20 10.0
      baz=273,slow=323,SNR=1.1
MKAR  Makanchi Array   13.91 104  Pn     Pn      07 59 53.6  -0.1
      0.2nm,0.3s,baz=293,slow=11,SNR=9.8
      0.2nm,0.3s
FINES FINESS Array B   21.85 310  P      P       08 01 27.4  -1.8
      1.6nm,0.4s,baz=106,slow=12,SNR=18
      1.6nm,0.4s
ARCES ARCESS Array B   24.63 330  P      P       08 01 55.3  -1.9
      4.3nm,1.1s,baz=117,slow=12,SNR=1.6
      4.3nm,1.1s
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*IDC **17** 08:01:37.2±2.0, 10°.71S×161°.69E, h0^{km}, mb3.7/5, mbtmp3.8/7, ML4.4/2, MS3.9/2, Error ellipse: s-maj=50.3km s-min=29.2km az=127.0*

ISC 17 08:01:46.6±1.4**, 10°.6S**±0°.1×**161°.4E**±0°.2**, h61^{km}, n7, σ0^{s}.54**/8**, mb3.6**/5**, Bougainville-Solomon Islands region**

```
Code  Station Name      Δ°   AZ°    Phase ID         Time      Res
                                  Op     ISC       h  m  s     ISC
HNR   Honiara           1.81 310  Pn     Pn      08 02 15.0  -0.5
      688nm,0.3s,baz=134,slow=15,SNR=7.5
HNR                               Sn     Sn      08 02 37.8 +0.4
      1µm,0.3s,baz=202,slow=22,SNR=10
HNR                               LR     LR      08 03 15.8
      comp=Z,2µm,18.5s,baz=154,slow=46
      2µm,0.4s
CTA   Charters Tower   17.33 235  P      P       08 05 45.4 +0.3
      0.2nm,0.3s,baz=48,slow=12,SNR=2.3
      1.2nm,0.5s
WRA   Warramunga Arr   27.62 247  P      P       08 07 29.4 +0.7
      0.8nm,0.8s,baz=77,slow=9.1,SNR=6.7
      0.8nm,0.8s
ASAR  Alice Springs    29.20 240  P      P       08 07 42.1  -0.5
      0.2nm,0.5s,baz=68,slow=9.9,SNR=4.1
      0.2nm,0.5s
```

SONM	**Songino Array**	**75.80**	**325**	P	**P**	**08 13 26.3**	**0.0**
	0.5nm,0.6s,baz=126,slow=7.3,SNR=2.9						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**84.52**	**20**	P	**P**	**08 14 12.9**	**+0.3**
	0.6nm,1.0s,baz=214,slow=6.3,SNR=3.1						
	0.6nm,1.0s						
MKAR	**Makanchi Array**	**90.27**	**318**	P	**P**	**08 14 40.6**	**-0.1**
	0.2nm,0.4s,baz=108,slow=4.5,SNR=4.5						
MKAR				LR	LR	08 55 29.9	
	comp=Z,56nm,20.7s,baz=126,slow=36						
	0.2nm,0.4s						

IDC ***17*** *08:02:52.5±0.4, 32°.35S×71°.56W, h0^{km}, mb4.8/17, mbtmp4.7/21, ML4.4/4, MS4.1/30, Error ellipse: s-maj=18.2km s-min=12.0km az=85.0*

NEIC ***17*** *08:02:56.6±1.3, 32°.45S±0°.04×71°.73W±0°.06, h27^{km}±4^{km}, mb5.2/64, Mwr4.8/74, Mwr4.8(GUC), Error ellipse: s-maj=7.4km s-min=5.2km az=76.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.65; M$_{\theta\theta}$-0.26; M$_{\phi\phi}$-1.39; M$_{r\theta}$0.26; M$_{\theta\phi}$0.44; M$_{\phi r}$-1.00; Fault plane solution: M$_0$1.90000×10^{16} NP1:ϕ_s163.43000°, δ61.43000°, λ92.03000°. NP2:ϕ_s339.18000°, δ28.64000°, λ86.27000°. Principal axes: T 1.9548, Plg73.0000°, Azm78.0000°; N -0.1082, Plg2.0000°, Azm342.0000°; P -1.8466, Plg16.0000°, Azm252.0000°;*

MOS ***17*** *08:02:56.9±1.3, 32°.33S×71°.40W, h33^{km}, mb5.1/13 Error ellipse: s-maj=14.4km s-min=7.5km az=96.8*

NEIC ***17*** *08:02:56.4, 32°.45S×71°.76W, h26^{km}*

GUC ***17*** *08:02:57.0±0.9, 32°.46S×71°.67W, h34^{km}±2^{km}, ML5.0*

VAO ***17*** *08:02:57.3±0.6, 32°.42S×71°.69W, h31^{km}, mb5.0*

ISC 17 08:02:56.5±0.8**, 32°.40S**±0°.02×**71°.68W**±0°.03**, h27**^{km}±5^{km}**, n459, σ0^{s}.96**/465**, mb5.2**/56**, MS4.1**/30**, 14C-13D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	**Catapilco**	**0.36**	**117**	Pg	**Pb**	**08 03 04.8**	**+0.2**
VA06				Sg	**Sb**	**08 03 11.0**	**+0.9**
VA06	**Catapilco**	**0.36**	**117**	⇓*i*P	**Pb**	**08 03 05.2**	**+0.6**
VA06				*e*S	**Sb**	**08 03 11.0**	**+0.9**
VA06				IAML		08 03 12.5	
	comp=E,396μm,0.5s						
VA01	**Torpederas**	**0.63**	**177**		**Pb**	**08 03 07.8**	**-1.1**
VA01				Sn	**Sb**	**08 03 16.8**	**-0.5**
VA01	**Torpederas**	**0.63**	**177**	⇑*i*P	**Pb**	**08 03 08.4**	**-0.5**
VA01				*e*S	**Sb**	**08 03 17.0**	**-0.3**
ROC1	**El Roble**	**0.81**	**136**		**Pb**	**08 03 11.4**	**-0.6**
ROC1				Sn	**Sb**	**08 03 22.4**	**-0.3**
ROCH	**El Roble**	**0.81**	**136**	*e*S	**Sb**	**08 03 22.6**	**-0.1**
ROCH				IAML		08 03 25.5	
	comp=N,81μm,0.3s						
MT02	**Curacav**	**0.98**	**152**		**Pn**	**08 03 13.8**	**-0.6**
MT02	**Curacav**	**0.98**	**152**	⇓*i*P	**Pn**	**08 03 13.9**	**-0.6**
MT02				*e*S	**Sb**	**08 03 26.3**	**-0.9**
VA03	**San Esteban**	**1.02**	**111**		**Pn**	**08 03 15.0**	**-0.2**
VA03	**San Esteban**	**1.02**	**111**	⇓*i*P	**Pn**	**08 03 14.9**	**-0.2**
VA03				*e*S	**Sn**	**08 03 28.8**	**0.0**
VA03				IAML		08 03 31.4	
	comp=N,42μm,0.4s						
PEL	**Peldehue**	**1.12**	**132**		**Pn**	**08 03 16.7**	**+0.2**
PEL	**Peldehue**	**1.12**	**132**	*e*P	**Pn**	**08 03 16.4**	**-0.2**
PEL				*e*S	**Sb**	**08 03 31.3**	**-0.2**
PEL				IAML		08 03 33.3	
	comp=E,63μm,0.3s						
PEL	**Peldehue**	**1.12**	**132**	P	**Pn**	**08 03 16.7**	**+0.2**
VA05	**Santo Domingo**	**1.26**	**177**		**Pn**	**08 03 17.5**	**-0.8**
VA05	**Santo Domingo**	**1.26**	**177**	*e*P	**Pn**	**08 03 18.1**	**-0.3**
VA05				*e*S	**Sn**	**08 03 33.6**	**-0.9**
VA05				IAML		08 03 38.7	
	comp=E,51μm,0.4s						
MT05	**Renca**	**1.27**	**142**		**Pn**	**08 03 18.3**	**-0.3**
MT05	**Renca**	**1.27**	**142**	*i* P	**Pn**	**08 03 18.6**	**0.0**
MT05				*e*S	**Sb**	**08 03 35.7**	**-0.2**
MT05				IAML		08 03 38.0	
	comp=E,56μm,0.3s						
MT10	**Hacienda Santa**	**1.30**	**133**	⇓*i*P	**Pn**	**08 03 19.4**	**+0.3**
MT10				*e*S	**Sb**	**08 03 36.4**	**-0.4**
MT10				IAML		08 03 39.1	
	comp=E,57μm,0.5s						
CO02	**Combarbal**	**1.32**	**26**		**Pn**	**08 03 19.7**	**+0.4**
CO02	**Combarbal**	**1.32**	**26**	⇓*i*P	**Pb**	**08 03 20.1**	**-0.6**
CO02				*e*S	**Sb**	**08 03 38.6**	**+1.4**
MT03	**Universidad Ad**	**1.47**	**138**		**Pn**	**08 03 21.6**	**+0.2**
MT03	**Universidad Ad**	**1.47**	**138**	*i* P	**Pn**	**08 03 21.8**	**+0.3**
MT03				*e*S	**Sb**	**08 03 40.8**	**-0.9**
FCH	**Farellones**	**1.50**	**129**	*e*P	**Pn**	**08 03 22.2**	**+0.3**
FCH				*e*S	**Sb**	**08 03 42.4**	**-0.1**
MT09	**Talagante**	**1.50**	**157**		**Pn**	**08 03 22.2**	**+0.5**
MT09	**Talagante**	**1.50**	**157**	⇓*i*P	**Pn**	**08 03 22.3**	**+0.6**
MT09				*e*S	**Sn**	**08 03 41.0**	**+0.6**
MT01	**Popeta**	**1.51**	**166**	Pn	**Pn**	**08 03 22.4**	**+0.6**
MT01	**Popeta**	**1.51**	**166**	*e*P	**Pn**	**08 03 22.1**	**+0.3**
MT01				*e*S	**Sn**	**08 03 40.3**	**-0.4**
MT12	**Pirque**	**1.64**	**145**	*e*P	**Pn**	**08 03 24.2**	**+0.6**
MT12				*e*S	**Sb**	**08 03 45.6**	**-0.8**
MT04	**Ro Olivares**	**1.65**	**128**	*i* P	**Pn**	**08 03 24.4**	**+0.6**
MT04				*e*S	**Sb**	**08 03 45.9**	**-0.8**
CO06	**Fray Jorge**	**1.72**	**1**	Pn	**Pn**	**08 03 25.1**	**+0.4**
CO06	**Fray Jorge**	**1.72**	**1**	⇑*i*P	**Pn**	**08 03 24.7**	**+0.1**
CO06				*e*S	**Sn**	**08 03 45.9**	**+0.2**
MT08	**Bocatoma Ro**	**1.75**	**127**		**Pn**	**08 03 25.9**	**+0.6**
MT08	**Bocatoma Ro**	**1.75**	**127**	*i* P	**Pn**	**08 03 26.4**	**+1.1**
MT08				*e*S	**Sn**	**08 03 47.4**	**+0.6**
CO03	**El Pedregal**	**1.77**	**29**	Pn	**Pn**	**08 03 26.6**	**+1.2**
CO03	**El Pedregal**	**1.77**	**29**	*i* P	**Pb**	**08 03 27.0**	**-1.3**
CO03				*e*S	**Sb**	**08 03 50.1**	**+0.1**
MT13	**San Alfonso**	**1.79**	**139**		**Pn**	**08 03 26.4**	**+0.7**
MT13	**San Alfonso**	**1.79**	**139**	*e*P	**Pn**	**08 03 26.6**	**+0.9**
MT13				*e*S	**Sn**	**08 03 48.9**	**+1.3**
LMEL	**Las Melosas**	**1.91**	**140**		**Pn**	**08 03 28.9**	**+1.4**
LMEL	**Las Melosas**	**1.91**	**140**	*e*P	**Pn**	**08 03 28.4**	**+1.0**
LMEL				*e*S	**Sb**	**08 03 52.8**	**-1.4**
BO01	**Tunca**	**2.05**	**166**	Pn	**Pn**	**08 03 29.6**	**+0.3**
BO01	**Tunca**	**2.05**	**166**	*e*P	**Pn**	**08 03 27.8**	**-1.5**
BO03	**Pichilemu**	**2.11**	**186**	*e*P	**Pn**	**08 03 29.1**	**-0.9**
GO04	**Tololo Observa**	**2.34**	**19**		**Pn**	**08 03 34.5**	**+1.1**
GO04	**Tololo Observa**	**2.34**	**19**	*e*P	**Pn**	**08 03 34.4**	**+1.0**
CO05	**La Serena**	**2.50**	**9**		**Pn**	**08 03 35.6**	**+0.2**
CO05	**La Serena**	**2.50**	**9**	*e*P	**Pn**	**08 03 35.9**	**+0.5**
BO02	**Sierra Bellavi**	**2.51**	**163**	*e*P	**Pn**	**08 03 33.2**	**-2.4**
GO05	**Huala**	**2.62**	**184**		**Pn**	**08 03 35.9**	**-1.1**
GO05	**Huala**	**2.62**	**184**	*e*P	**Pn**	**08 03 36.1**	**-1.0**
ZON	**Zonda**	**2.69**	**72**		**Pb**	**08 03 41.7**	**-2.3**
ZON	**Zonda**	**2.69**	**72**	P	**Pb**	**08 03 41.7**	**-2.3**
CO01	**Juntas del Tor**	**2.77**	**30**	*i* P	**Pn**	**08 03 41.6**	**+2.2**
CFA	**Coronel Fontan**	**3.03**	**76**	Pn	**Pn**	**08 03 45.5**	**+2.7**
	comp=E,134nm,0.3s,baz=250,slow=12,SNR=476						
CFA				Sn	**Sb**	**08 04 24.1**	**-2.3**
	comp=E,142nm,0.3s,baz=256,slow=8.6,SNR=2.1						
CFA				LR	LR	08 05 12.5	
	comp=E,5μm,19.1s,baz=306,slow=48						
LCO	**Las Campanas**	**3.48**	**14**	Pn	**Pn**	**08 03 49.3**	**+0.2**
LCO	**Las Campanas**	**3.48**	**14**	*e*P	**Pn**	**08 03 49.8**	**+0.7**
LCO	**Las Campanas**	**3.48**	**14**	P	**Pn**	**08 03 49.3**	**+0.2**
AC05	**El Transito**	**3.75**	**19**	Pn	**Pn**	**08 03 53.6**	**+0.9**
AC05	**El Transito**	**3.75**	**19**	*i* P	**Pn**	**08 03 54.2**	**+1.5**
AC04	**Llanos de Chal**	**4.21**	**7**	Pn	**Pn**	**08 03 58.5**	**-0.4**
AC04	**Llanos de Chal**	**4.21**	**7**	*e*P	**Pn**	**08 03 58.5**	**-0.4**
BI05	**Punta Hualpn**	**4.52**	**196**	Pn	**Pn**	**08 04 01.5**	**-1.7**
BI05	**Punta Hualpn**	**4.52**	**196**	*e*P	**Pn**	**08 04 01.4**	**-1.7**
GO03	**Copiap**	**4.95**	**15**		**Pn**	**08 04 09.1**	**0.0**
GO03	**Copiap**	**4.95**	**15**	*i* P	**Pn**	**08 04 09.3**	**+0.2**
VA04	**Juan Fernndez**	**6.13**	**256**	Pn	**Pn**	**08 04 24.1**	**-1.3**
H03N1	**Juan Fernandez**	**6.17**	**258**	Pn	**Pn**	**08 04 25.8**	**+0.2**
	baz=122,slow=20						
H03N1				T	T	08 10 58.6	
	baz=87,slow=73						
H03N3	**Juan Fernandez**	**6.18**	**258**	Pn	**Pn**	**08 04 26.0**	**+0.2**
	baz=122,slow=20						
H03N3				T	T	08 10 59.4	
	baz=87,slow=73,SNR=3789						
H03N2	**Juan Fernandez**	**6.18**	**258**	Pn	**Pn**	**08 04 26.0**	**+0.2**
	baz=122,slow=20						
H03N2				T	T	08 11 00.9	
	baz=87,slow=73,SNR=3311						
H03S3	**Juan Fernandez**	**6.23**	**255**	Pn	**Pn**	**08 04 26.2**	**-0.2**
	baz=83,slow=70						
H03S3				T	T	08 11 00.3	
	baz=83,slow=75,SNR=146						
H03S1	**Juan Fernandez**	**6.23**	**255**	Pn	**Pn**	**08 04 25.7**	**-0.7**
	baz=83,slow=70						
H03S1				T	T	08 11 00.1	
	baz=83,slow=75,SNR=219						
H03S2	**Juan Fernandez**	**6.25**	**255**	Pn	**Pn**	**08 04 25.8**	**-0.8**
	baz=83,slow=70						
H03S2				T	T	08 10 51.7	
	baz=83,slow=75,SNR=475						
AC01	**Pan de Azucar**	**6.30**	**9**		**Pn**	**08 04 25.5**	**-2.2**
GO06	**Curarrehue**	**7.18**	**179**		**Pn**	**08 04 38.9**	**-0.9**
LR03	**Panguipulli**	**7.24**	**184**		**Pn**	**08 04 39.4**	**-1.1**
LR04	**Corral**	**7.60**	**190**		**Pn**	**08 04 43.4**	**-2.0**
PLCA	**Paso Flores**	**8.37**	**174**	Pn	**Pn**	**08 04 56.8**	**+0.7**
	comp=E,1.5nm,0.3s,baz=333,slow=11,SNR=86						
PLCA				Sn	**Sn**	**08 06 34.8**	**+5.0**
	comp=E,0.6nm,0.3s,baz=313,slow=18,SNR=1.0						
PLCA				Lg	Lg	08 07 08.4	
	baz=287,slow=14						
	comp=E,5.0nm,0.4s						
PLCA	**Paso Flores**	**8.37**	**174**		**Pn**	**08 04 56.3**	**+0.2**
PLCA	**Paso Flores**	**8.37**	**174**	P	**Pn**	**08 04 56.3**	**+0.2**
TRQA	**Tornquist**	**9.74**	**128**		**Pn**	**08 05 15.5**	**+0.7**
TRQA	**Tornquist**	**9.74**	**128**	P	**Pn**	**08 05 15.5**	**+0.7**
LVC	**Limon Verde**	**10.05**	**15**	Pn	**Pn**	**08 05 18.0**	**-1.4**
	comp=E,1.3nm,0.3s,baz=166,slow=6.6,SNR=7.4						
LVC				Sn	**Sn**	**08 07 12.1**	**+0.5**
	comp=E,1.9nm,0.3s,baz=193,slow=12,SNR=3.8						
LVC				LR	LR	08 09 37.4	
	comp=E,1μm,18.6s,baz=214,slow=41						
	comp=E,3.0nm,0.3s						
VACA	**Villa Angela C**	**10.63**	**66**	*e*P	**Pn**	**08 05 27.5**	**+0.5**
PB02	**IPOC Station P**	**11.14**	**9**		**Pn**	**08 05 33.9**	**-0.3**
PB01	**IPOC Station P**	**11.47**	**10**		**Pn**	**08 05 39.8**	**+1.0**
MECA	**Mercedes**	**12.01**	**79**	*e*P	**Pn**	**08 05 46.1**	**+0.2**
ITQB	**Itaqui**	**13.20**	**82**	Pn	**Pn**	**08 06 02.1**	**0.0**
ITQB	**Itaqui**	**13.20**	**82**	*e*P	**Pn**	**08 06 01.8**	**-0.3**
MNMC	**Minye Minye**	**13.34**	**9**	Pn	**Pn**	**08 06 03.4**	**-1.0**
PB12	**IPOC Station P**	**13.78**	**5**		**Pn**	**08 06 10.7**	**+0.5**
CPUP	**Villa Florida**	**13.89**	**68**	Pn	**Pn**	**08 06 08.2**	**-3.5**
	comp=E,0.6nm,0.3s,baz=237,slow=11,SNR=8.7						
CPUP				Sn	**Sn**	**08 08 45.5**	**+0.4**
	comp=E,0.2nm,0.3s,baz=88,slow=20,SNR=2.1						
CPUP				LR	LR	08 11 49.8	
	comp=E,782nm,20.6s,baz=254,slow=39						
	comp=E,3.4nm,0.5s						
PB16	**IPOC Station P**	**14.14**	**8**	Pn	**Pn**	**08 06 16.4**	**+0.9**
RODS	**Rosario do Sul**	**14.23**	**86**	*e*P	**Pn**	**08 06 15.4**	**-0.9**
AZCA	**Azaras, Argent**	**14.23**	**76**	*e*P	**Pn**	**08 06 15.2**	**-1.1**
CRSM	**Crissiumal (Br**	**16.05**	**77**	*e*P	**Pn**	**08 06 40.8**	**+0.4**
ALGR	**Alto Alegre (B**	**16.46**	**82**	*e*P	**Pn**	**08 06 46.3**	**+0.6**
MURT	**Porto Murtinho**	**16.46**	**53**	*e*P	**Pn**	**08 06 45.3**	**-0.3**
AMBA	**Amambai (Brazi**	**17.52**	**62**	*e*P	**P**	**08 07 00.5**	**+0.6**
ITAB	**Concordia**	**17.72**	**78**	*e*P	**P**	**08 07 01.9**	**-0.2**
BBSD	**Serra de San D**	**18.15**	**36**	*e*P	**Pn**	**08 07 05.3**	**-1.4**
AQDB	**Aquidauana**	**18.57**	**54**	P	**P**	**08 07 10.8**	**-0.6**
AQDB	**Aquidauana**	**18.57**	**54**	*e*P	**Pn**	**08 07 11.9**	**+0.2**
PTGB	**Pitanga**	**18.84**	**71**	*e*P	**Pn**	**08 07 14.8**	**-0.3**
SIV	**San Ignacio**	**18.96**	**33**	P	**P**	**08 07 14.5**	**-1.3**
	comp=E,0.1nm,0.3s,baz=217,slow=10,SNR=42						
SIV				LR	LR	08 15 54.3	
	comp=E,957nm,19.3s,baz=244,slow=41						
	comp=E,13nm,0.8s						
PANT	**Pantanal (Braz**	**19.01**	**49**	*e*P	**P**	**08 07 16.1**	**-0.2**
PTLB	**Pontes e Lacer**	**20.37**	**37**	P	**P**	**08 07 30.8**	**-0.3**
PTLB	**Pontes e Lacer**	**20.37**	**37**	*e*P	**P**	**08 07 31.1**	**0.0**
NNA	**Nana**	**20.86**	**346**	P	**P**	**08 07 36.1**	**-0.3**
	comp=E,10nm,0.7s,baz=194,slow=15,SNR=5.4						
NNA				LR	LR	08 13 51.0	
	comp=E,265nm,21.4s,baz=172,slow=32						
	comp=E,10nm,0.7s						
NNA	**Nana**	**20.86**	**346**	⇑*e*P	Pn	08 07 38.7	-0.4
NNA				pmax	pmax		
	comp=Z,42nm,1.3s						
PP1B	**Ponte de Pedra**	**21.14**	**50**	*e*P	**P**	**08 07 39.6**	**0.0**
FRTB	**Fartura**	**21.50**	**71**	*e*P	**P**	**08 07 43.1**	**-0.3**
C2SB	**Chapadao do Su**	**21.70**	**56**	*e*P	**P**	**08 07 45.5**	**+0.1**
SALV	**Santo Antonio**	**21.92**	**45**	*e*P	**P**	**08 07 46.8**	**-1.0**
VILB	**Vilhena**	**22.03**	**31**	P	**P**	**08 07 48.2**	**-0.9**
VILB	**Vilhena**	**22.03**	**31**	*e*P	**P**	**08 07 48.6**	**-0.4**
ITRB	**Iturama**	**22.90**	**62**	*e*P	**P**	**08 07 56.9**	**-1.4**
PET01	**Itanhaem-SP**	**22.91**	**76**	*e*P	**P**	**08 07 58.1**	**-0.3**
ETMB	**Extrema**	**23.03**	**14**	P	**P**	**08 07 59.3**	**-0.3**
ETMB				IAmb	IAmb	08 08 02.7	
	comp=Z,82nm,0.8s						
ETMB	**Extrema**	**23.03**	**14**	*e*P	**P**	**08 08 00.4**	**+0.8**
SPB	**Sao Paulo**	**23.10**	**74**	*e*P	**P**	**08 08 01.0**	**+0.7**
BB19B	**Bebedouro**	**23.50**	**67**	*e*P	**P**	**08 08 03.5**	**-0.9**
RCLB	**Rio Claro- Sao**	**23.58**	**71**	*e*P	**P**	**08 08 04.3**	**-0.9**
VAO	**Valinhos**	**23.75**	**73**	*e*P	**P**	**08 08 06.0**	**-0.9**
ARAG	**Araguaiana, MT**	**24.53**	**52**	*e*P	**P**	**08 08 13.0**	**-1.0**
CZSB	**Cruzeiro do Su**	**24.56**	**358**	P	**P**	**08 08 14.3**	**+0.1**
CZSB				IAmb	IAmb	08 08 17.8	
	comp=Z,97nm,1.1s						
CZSB	**Cruzeiro do Su**	**24.56**	**358**	*e*P	**P**	**08 08 15.2**	**+1.0**
SAML	**Samuel**	**24.62**	**21**	P	**P**	**08 08 14.2**	**-0.6**
SAML	**Samuel**	**24.62**	**21**	P	**P**	**08 08 14.2**	**-0.6**
SAML				pmax	pmax		
	comp=Z,28nm,0.8s						
SAML	**Samuel**	**24.62**	**21**	*e*P	**P**	**08 08 15.0**	**+0.2**
PDRB	**Porto dos Gac**	**24.84**	**37**	*e*P	**P**	**08 08 16.6**	**-0.2**
IPMB	**Ipameri, GO**	**25.55**	**61**	*e*P	**P**	**08 08 21.7**	**-1.6**
ATAH	**Atahualpa**	**25.90**	**345**	P	**P**	**08 08 26.4**	**-0.4**
	comp=Z,2.5nm,0.9s,baz=108,slow=13,SNR=2.0						
ATAH				LR	LR	08 17 23.9	
	comp=Z,230nm,18.2s,baz=164,slow=34						
	comp=Z,2.5nm,0.9s						
BSCB	**Bom Sucesso**	**26.51**	**71**	*e*P	**P**	**08 08 31.2**	**-0.8**
VAS01	**Vassouras-RJ**	**26.96**	**75**	*e*P	**P**	**08 08 35.5**	**-0.5**
BDFB	**Brasilia**	**27.21**	**58**	P	**P**	**08 08 37.0**	**-1.3**
	comp=Z,47nm,0.9s,baz=231,slow=7.8,SNR=46						
BDFB				LR	LR	08 20 59.8	
	comp=Z,806nm,20.4s,baz=218,slow=40						
	comp=Z,47nm,0.9s						
BDFB	**Brasilia**	**27.21**	**58**	P	**P**	**08 08 37.2**	**-1.1**
BDFB				IAmb	IAmb	08 08 38.9	
	comp=Z,49nm,1.0s						
BDFB	**Brasilia**	**27.21**	**58**	*e*P	**P**	**08 08 37.6**	**-0.7**
SNDB	**Serra Nova Dou**	**27.64**	**47**	*e*P	**P**	**08 08 41.7**	**-0.4**
TBTG	**Tabatinga, AM**	**28.11**	**4**	P	**P**	**08 08 46.5**	**+0.2**
TBTG	**Tabatinga, AM**	**28.11**	**4**	*e*P	**P**	**08 08 47.2**	**+1.0**
NPGB	**Novo Progresso**	**29.45**	**35**	*e*P	**P**	**08 08 56.8**	**-1.4**
TEFE	**Tefe**	**29.49**	**14**	*e*P	**P**	**08 08 57.9**	**-0.5**
ALF01	**Guarapari-ES**	**29.98**	**75**	*e*P	**P**	**08 09 02.7**	**-0.1**
JANB	**Januaria**	**30.29**	**62**	*e*P	**P**	**08 09 04.7**	**-1.0**
SJMB	**Sao Joao De Ma**	**30.58**	**71**	*e*P	**P**	**08 09 07.2**	**-1.0**
MACA	**Manacapuru-AM**	**30.86**	**22**	P	**P**	**08 09 09.5**	**-1.1**
MACA	**Manacapuru-AM**	**30.86**	**22**	*e*P	**P**	**08 09 10.5**	**-0.1**
SDBA	**SAO DESIDERIO**	**31.60**	**57**	*e*P	**P**	**08 09 16.5**	**-0.8**
ITTB	**Itaituba**	**31.63**	**31**	*e*P	**P**	**08 09 16.3**	**-1.2**
SMTB	**Santa Maria do**	**32.35**	**49**	*e*P	**P**	**08 09 23.4**	**-0.4**
PMSA	**Palmer Station**	**32.75**	**174**	LR	LR	08 22 17.6	
	comp=Z,382nm,19.4s,baz=307,slow=36						
GUA01	**Guaratinga, BA**	**32.84**	**69**	*e*P	**P**	**08 09 27.2**	**-0.9**
RPN	**Rapa Nui**	**32.99**	**269**	LR	LR	08 19 21.1	
	comp=Z,340nm,18.1s,baz=102,slow=30						
OTAV	**Otavalo**	**33.08**	**348**	*e*P	**P**	**08 09 31.2**	**+0.6**
PRPB	**Parauapebas**	**33.11**	**43**	*e*P	**P**	**08 09 29.7**	**-0.8**
MACC	**Macarena, Meta**	**34.41**	**356**	*e*P	**P**	**08 09 42.9**	**+1.2**
MALB	**Monte Alegre**	**34.52**	**32**	*e*P	**P**	**08 09 42.3**	**-0.4**
BBAC	**Balboa, Cauca**	**34.63**	**350**	*e*P	**P**	**08 09 47.0**	**+3.2**
BOAV	**Boa Vista**	**36.18**	**19**	P	**P**	**08 09 56.1**	**-0.9**
BOAV				IAmb	IAmb	08 09 57.7	
	comp=Z,24nm,0.7s						
BOAV	**Boa Vista**	**36.18**	**19**	*e*P	**P**	**08 09 56.9**	**0.0**
ORTC	**Ortega, Tolima**	**36.26**	**354**	*e*P	**P**	**08 09 59.3**	**+1.6**
VILC	**Villavicencio,**	**36.36**	**357**	*e*P	**P**	**08 09 58.3**	**-0.2**
PTGC	**Puerto Gaitan,**	**36.39**	**359**	*e*P	**P**	**08 09 58.3**	**-0.4**
MCPB	**Macapa, AP**	**36.85**	**34**	*e*P	**P**	**08 10 02.3**	**-0.4**
CHIC	**Chingaza**	**36.87**	**357**	*e*P	**P**	**08 10 04.5**	**+1.2**
ROSC	**El Rosal**	**37.11**	**356**	P	**P**	**08 10 06.2**	**+0.8**
	comp=Z,11nm,0.7s,baz=135,slow=5.7,SNR=7.2						
	comp=Z,11nm,0.7s						
GUY2C	**Guyana, Caldas**	**37.57**	**354**	*e*P	**P**	**08 10 11.8**	**+2.5**
RUSC	**La Rusia**	**38.10**	**358**	P	**P**	**08 10 14.3**	**+0.5**
RUSC	**La Rusia**	**38.10**	**358**	*e*P	**P**	**08 10 13.8**	**0.0**
CBOC	**Ciudad Bolivar**	**38.27**	**353**	*e*P	**P**	**08 10 16.3**	**+1.4**
PTBC	**PUERTO BERRIO,**	**38.81**	**356**	*e*P	**P**	**08 10 17.6**	**-1.6**
PAMC	**Pamplona, Colo**	**39.52**	**358**	*e*P	**P**	**08 10 25.3**	**-0.4**
SDV	**Santo Domingo**	**41.06**	**2**	P	**P**	**08 10 37.8**	**-0.2**
	comp=Z,13nm,1.0s,baz=176,slow=6.7,SNR=6.5						
	comp=Z,13nm,1.0s						
SDV	**Santo Domingo**	**41.06**	**2**	P	**P**	**08 10 36.0**	**-2.1**
SDV	**Santo Domingo**	**41.06**	**2**	*e*P	**P**	**08 10 38.0**	**-0.1**
BAUV	**El Baul**	**41.25**	**5**	P	**P**	**08 10 38.9**	**-0.6**
BAUV				IAmb	IAmb	08 10 40.2	
	comp=Z,25nm,0.7s						
MDP	**Montagnes des**	**41.45**	**29**	P	**P**	**08 10 40.2**	**-0.9**
	comp=Z,15nm,0.6s,baz=198,slow=8.0,SNR=8.6						
MDP				LR	LR	08 29 52.8	
	comp=Z,344nm,19.0s,baz=194,slow=39						
	comp=Z,15nm,0.6s						
NBCL	**Cascavel-CE**	**41.97**	**55**	*e*P	**P**	**08 10 45.4**	**0.0**
BIRV	**Birongo**	**42.94**	**8**	P	**P**	**08 10 52.8**	**-0.4**
BIRV				IAmb	IAmb	08 11 13.4	
	comp=Z,50nm,1.4s						
BELA	**Belgrano 2**	**48.41**	**170**	P	**P**	**08 11 36.5**	**+0.7**
MLPR	**Magueyes Islan**	**50.27**	**6**	P	**P**	**08 11 50.5**	**-0.1**
MLPR				IAmb	IAmb	08 11 52.1	
	comp=Z,37nm,0.9s						
VNA3	**Neumayer Olymp**	**50.73**	**158**	P	**P**	**08 11 54.6**	**+1.0**
VNA2	**Neumayer--Watz**	**51.38**	**158**	P	**P**	**08 11 59.3**	**+0.9**
	baz=280,slow=8.0						
SNAA	**Sanae**	**52.96**	**158**	P	**P**	**08 12 10.9**	**+0.7**
SNAA	**Sanae**	**52.96**	**158**	P	**P**	**08 12 10.7**	**+0.5**
	comp=Z,6.9nm,0.6s,baz=288,slow=7.0,SNR=27						
	comp=Z,6.9nm,0.6s						
SNAA	**Sanae**	**52.96**	**158**	*ce*P	**P**	**08 12 10.6**	**+0.4**
SNAA				pmax	pmax		
	comp=Z,24nm,2.5s						
CMIG	**Matias Romero**	**53.99**	**332**	LR	LR	08 30 56.6	
	comp=Z,73nm,18.2s,baz=146,slow=31						
TROLL	**Troll, Antarti**	**54.67**	**158**	P	**P**	**08 12 23.5**	**+0.7**
NVL	**N'lazarevskaya**	**57.67**	**157**	*e*P	**P**	**08 12 43.0**	**-1.1**
NVL				pmax	pmax		
	comp=Z,13nm,1.0s						
QSPA	**South Pole Qui**	**57.84**	**180**	P	**P**	**08 12 46.3**	**+0.8**
	comp=Z,17nm,0.9s,baz=151,slow=6.1,SNR=42						
	comp=Z,17nm,0.9s						
TIGA	**Tifton**	**64.48**	**349**	P	**P**	**08 13 31.0**	**+0.3**
	baz=169						
BRAL	**Brewton**	**64.87**	**345**	P	**P**	**08 13 34.2**	**+1.1**
	baz=166						
NHSC	**New Hope**	**65.64**	**352**	P	**P**	**08 13 39.2**	**+1.1**
	baz=172						
VNDA	**Vanda**	**65.73**	**191**	P	**P**	**08 13 39.7**	**+1.4**
	comp=Z,2.0nm,0.8s,baz=63,slow=3.3,SNR=2.7						
VNDA				LR	LR	08 40 16.5	
	comp=Z,72nm,18.9s,baz=216,slow=34						
	comp=Z,2.0nm,0.8s						
833A	**Chaparral WMA,**	**65.88**	**333**	P	**P**	**08 13 40.7**	**+0.9**
	baz=155						
LRAL	**Lakeview Retre**	**66.66**	**346**	P	**P**	**08 13 45.8**	**+1.1**
	baz=166						
VBMS	**Vicksburg**	**66.68**	**343**	P	**P**	**08 13 46.1**	**+1.2**
	baz=163						
X58A	**Rowland**	**66.98**	**353**	P	**P**	**08 13 47.1**	**+0.4**
TAOE	**Nuku Hiva Isla**	**67.14**	**274**	*e*LR	LR	08 34 01.7	
	comp=Z,185nm,23.9s						
143A	**Socs Landing,**	**67.37**	**342**	P	**P**	**08 13 50.7**	**+1.5**
NATX	**Nacogdoches**	**67.41**	**339**	P	**P**	**08 13 50.6**	**+1.1**
	baz=159						
CNNC	**Cliffs of the**	**67.53**	**355**	P	**P**	**08 13 51.1**	**+0.9**
	baz=174						
X51A	**Calhoun**	**67.75**	**348**	P	**P**	**08 13 51.5**	**-0.1**
X51A				IAmb	IAmb	08 13 53.3	
	comp=Z,22nm,0.8s						
KMSC	**Kings Mountain**	**67.79**	**351**	P	**P**	**08 13 52.7**	**+0.9**
	baz=171						
FPAL	**Fort Paine**	**67.86**	**348**	P	**P**	**08 13 52.4**	**+0.1**
JCT	**Junction City**	**67.97**	**334**	P	**P**	**08 13 53.3**	**+0.2**
JCT	**Junction City**	**67.97**	**334**	P	**P**	**08 13 53.3**	**+0.2**
JCT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
JCT	**Junction City**	**67.97**	**334**	P	**P**	**08 13 53.9**	**+0.7**
	baz=155						
W50A	**Signal Mountai**	**68.45**	**348**	P	**P**	**08 13 55.5**	**-0.5**
W50A				IAmb	IAmb	08 13 57.7	
	comp=Z,24nm,0.8s						
TXAR	**Lajitas Array**	**68.49**	**330**	P	**P**	**08 13 57.5**	**+1.0**
	comp=Z,2.0nm,0.7s,baz=153,slow=7.9,SNR=32						
TXAR				LR	LR	08 39 41.0	
	comp=Z,108nm,18.5s,baz=140,slow=32						
	comp=Z,2.0nm,0.7s						
OXF	**Oxford**	**68.61**	**344**	P	**P**	**08 13 57.2**	**+0.3**
OXF	**Oxford**	**68.61**	**344**	P	**P**	**08 13 57.2**	**+0.3**
OXF				pmax	pmax		
	comp=Z,57nm,1.0s						
OXF	**Oxford**	**68.61**	**344**	P	**P**	**08 13 57.3**	**+0.4**
	baz=164						
V52A	**Sevierville**	**68.79**	**350**	P	**P**	**08 13 57.9**	**-0.2**
V52A				IAmb	IAmb	08 13 58.9	
	comp=Z,15nm,0.8s						
U56A	**King**	**68.87**	**352**	P	**P**	**08 13 58.5**	**-0.1**
U56A				IAmb	IAmb	08 14 00.0	
	comp=Z,24nm,1.1s						
MEH	**Mehetia**	**69.37**	**261**	*e*T	T	09 29 53.9	
	comp=Z,16nm,0.3s						
TZTN	**Tazewell**	**69.47**	**350**	P	**P**	**08 14 02.8**	**+0.5**
	baz=169						
CLTN	**Cedars of Leba**	**69.50**	**347**	P	**P**	**08 14 02.7**	**+0.2**
CLTN				IAmb	IAmb	08 14 03.6	
	comp=Z,17nm,0.8s						
MIAR	**Mount Ida**	**69.70**	**341**	P	**P**	**08 14 04.2**	**+0.5**
	baz=160						
BLA	**Blacksburg**	**69.73**	**353**	P	**P**	**08 14 03.9**	**0.0**
	baz=172						
WVT	**Waverly**	**69.83**	**346**	P	**P**	**08 14 04.8**	**+0.3**
WVT	**Waverly**	**69.83**	**346**	P	**P**	**08 14 04.8**	**+0.3**
WVT				pmax	pmax		
	comp=Z,47nm,0.9s						
WVT	**Waverly**	**69.83**	**346**	P	**P**	**08 14 04.8**	**+0.3**
	baz=166						
ABTX	**Abilene, Hawle**	**69.85**	**335**	P	**P**	**08 14 05.1**	**+0.4**
	baz=155						
S57A	**Dark Hollow, R**	**70.12**	**354**	P	**P**	**08 14 06.3**	**0.0**
S57A				IAmb	IAmb	08 14 07.8	
	comp=Z,18nm,0.8s						
CBN	**Corbin Frederi**	**70.44**	**355**	P	**P**	**08 14 08.8**	**+0.6**
	baz=175						
ODSA	**Odessa**	**70.48**	**332**	P	**P**	**08 14 08.6**	**-0.1**
ODSA				IAmb	IAmb	08 14 10.2	
	comp=Z,15nm,0.7s						
BBTS	**Babate**	**70.50**	**57**	LR	LR	08 43 35.0	
	comp=Z,220nm,20.0s,baz=222,slow=35						
LCAR	**Lake Charles**	**70.51**	**343**	P	**P**	**08 14 08.6**	**-0.1**
LCAR				IAmb	IAmb	08 14 10.1	
	comp=Z,21nm,0.8s						
PPT2	**Papeete2**	**70.77**	**261**	*e*LR	LR	08 35 42.5	
	comp=Z,145nm,25.5s						
MNTX	**Cornudas Mount**	**71.27**	**330**	P	**P**	**08 14 13.6**	**+0.2**
	baz=150,SNR=11						
HHAR	**Hobbs**	**71.43**	**341**	P	**P**	**08 14 14.1**	**-0.1**
HHAR				IAmb	IAmb	08 14 15.4	
	comp=Z,15nm,0.9s						
WMOK	**Wichita Mounta**	**71.47**	**337**	P	**P**	**08 14 14.9**	**+0.3**
	baz=156						
WCI	**Wyandotte Cave**	**71.57**	**348**	P	**P**	**08 14 15.0**	**-0.1**
	baz=167						
TUL1	**Leonard**	**71.61**	**340**	P	**P**	**08 14 15.6**	**+0.2**
	baz=159						
MCWV	**Mont Chateau**	**72.09**	**353**	P	**P**	**08 14 19.2**	**+1.0**
	baz=173						
MSTX	**Muleshoe**	**72.21**	**333**	P	**P**	**08 14 19.8**	**+0.7**
	baz=153						
P52A	**Corning**	**72.32**	**352**	P	**P**	**08 14 19.1**	**-0.4**
P52A				IAmb	IAmb	08 14 20.4	
	comp=Z,22nm,0.8s						
P52A	**Corning**	**72.32**	**352**	P	**P**	**08 14 19.8**	**+0.2**
	baz=171,SNR=7.5						
CCM	**Cathedral Cave**	**72.42**	**344**	P	**P**	**08 14 20.3**	**+0.1**
CCM				IAmb	IAmb	08 14 21.9	
	comp=Z,32nm,0.9s						
CCM	**Cathedral Cave**	**72.42**	**344**	P	**P**	**08 14 20.3**	**+0.1**
CCM				pmax	pmax		
	comp=Z,32nm,0.9s						
CCM	**Cathedral Cave**	**72.42**	**344**	P	**P**	**08 14 20.2**	**+0.1**
	baz=163						
P49A	**Miami Univ. Ec**	**72.58**	**349**	P	**P**	**08 14 20.9**	**-0.2**
	baz=169,SNR=5.3						
S39A	**Bolivar**	**72.59**	**342**	P	**P**	**08 14 21.7**	**+0.5**
AMTX	**Amarillo**	**72.62**	**334**	P	**P**	**08 14 21.7**	**+0.2**
	baz=154						
P48A	**Milroy**	**72.62**	**349**	P	**P**	**08 14 20.8**	**-0.6**
P48A				IAmb	IAmb	08 14 22.8	
	comp=Z,41nm,1.2s						
O53A	**New Philadelph**	**72.82**	**352**	P	**P**	**08 14 22.7**	**+0.2**
	baz=172						
R40A	**Maddies Statio**	**72.89**	**343**	P	**P**	**08 14 23.0**	**+0.1**
R40A				IAmb	IAmb	08 14 24.1	
	comp=Z,29nm,0.8s						
SSPA	**Standing Stone**	**72.89**	**355**	P	**P**	**08 14 23.4**	**+0.5**

SSPA	Standing Stone	72.89	355	P	P	08 14 23.7	+0.8
	baz=175						
ACSO	Alum Creek Sta	73.02	351	P	P	08 14 23.7	0.0
ACSO	Alum Creek Sta	73.02	351	P	P	08 14 23.6	0.0
	baz=170,SNR=13						
121A	Cookes Peak, D	73.02	329	P	P	08 14 24.7	+0.6
	baz=149,SNR=8.6						
O48B	Farmland	73.36	349	P	P	08 14 25.7	+0.1
	baz=168						
M55A	Ridgway	73.79	354	P	P	08 14 28.7	+0.5
M55A				IAmb	IAmb	08 14 30.1	
	comp=Z,28nm,0.9s						
N49A	Columbus Grove	73.86	350	P	P	08 14 28.2	-0.4
M53A	WI Miller and	73.94	353	P	P	08 14 29.3	+0.2
	baz=172						
LIC	Lamto	73.99	72⇑	*i*P	P	08 14 29.7	-0.3
	comp=Z,86nm,0.7s						
P40A	Paris	74.02	344	P	P	08 14 29.5	0.0
N47A	Urbana	74.05	349	P	P	08 14 28.9	-0.8
N47A				IAmb	IAmb	08 14 29.9	
	comp=Z,33nm,0.8s						
TUC	Tucson	74.20	326	P	P	08 14 31.1	+0.2
	baz=146						
TIC	Toumodi	74.24	71⇓	*i*P	P	08 14 31.5	0.0
	comp=Z,33nm,0.6s						
KIC	Kosan Boka	74.30	72⇑	*i*P	P	08 14 31.6	-0.2
	comp=Z,32nm,0.6s						
BINY	Binghamton	74.33	357	P	P	08 14 32.5	+1.2
	baz=176						
L56A	Greenwood	74.36	355	P	P	08 14 31.5	-0.1
L56A				IAmb	IAmb	08 14 33.7	
	comp=Z,40nm,1.0s						
DBIC	Dimbokro	74.39	71	P	P	08 14 32.2	-0.1
	comp=Z,37nm,0.7s,baz=233,slow=6.0,SNR=38						
DBIC				LR	LR	08 47 13.8	
	comp=Z,100nm,18.0s,baz=188,slow=36						
	comp=Z,37nm,0.7s						
DBIC	Dimbokro	74.39	71	P	P	08 14 31.7	-0.6
DBIC	Dimbokro	74.39	71	P	P	08 14 31.7	-0.6
DBIC				pmax	pmax		
	comp=Z,36nm,0.8s						
HDIL	Hopedale	74.39	346	P	P	08 14 32.2	+0.5
	baz=165						
L61B	Northampton	74.48	359	P	P	08 14 32.9	+0.7
L61B	Northampton	74.48	359	P	P	08 14 33.4	+1.2
	baz=179						
ANMO	Albuquerque	74.52	331⇑	*e*P	P	08 14 34.2	+1.3
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ANMO	Albuquerque	74.52	331	P	P	08 14 33.9	+1.0
	baz=150						
HRV	Adam Dziewonsk	74.54	0	P	P	08 14 34.1	+1.6
	baz=180						
ERPA	Erie	74.54	354	P	P	08 14 33.0	+0.5
	baz=173						
KSU1	Kansas State U	74.81	340	P	P	08 14 34.6	+0.4
	baz=158						
214A	Organ Pipe Nat	74.88	325	P	P	08 14 35.9	+1.1
	baz=145						
SUR	Sutherland	75.34	119	LR	LR	08 47 00.1	
	comp=Z,73nm,18.8s,baz=180,slow=35						
SUR	Sutherland	75.34	119	P	P	08 14 38.0	+0.1
SUR				IAmb	IAmb	08 14 40.9	
	comp=Z,23nm,1.0s						
CBKS	Cedar Bluff	75.50	338	P	P	08 14 39.0	+0.8
	baz=156						
T25A	Trinidad	75.63	334	P	P	08 14 40.6	+1.3
	baz=152,SNR=10						
W18A	Petrified Fore	76.07	329	P	P	08 14 43.2	+1.4
	baz=148						
SCIA	State Center	76.55	344	P	P	08 14 45.1	+1.1
	baz=162						
SDCO	Great Sand Dun	76.58	333	P	P	08 14 46.1	+1.4
	baz=151,SNR=12						
KSCO	Kaye Shedlock'	76.64	336	P	P	08 14 46.5	+1.6
	baz=154						
JFWS	Jewell Farm	76.85	346	P	P	08 14 46.1	+0.3
	baz=164,SNR=7.7						
IKP	In-Ko-Pah, Jac	77.09	323	P	P	08 14 48.6	+1.2
	baz=143						
S22A	4UR Ranch, Cre	77.09	332	P	P	08 14 48.0	+0.3
S22A	4UR Ranch, Cre	77.09	332	P	P	08 14 49.5	+1.9
	baz=150,SNR=6.4						
WUAZ	Wupatki	77.13	328	P	P	08 14 49.5	+1.7
	baz=146,SNR=8.1						
SWSC	Sam W. Stewart	77.17	323	P	P	08 14 49.1	+1.3
	baz=143						
MVCO	Mesa Verde	77.31	331	P	P	08 14 50.0	+1.3
	baz=149,SNR=6.8						
PKME	Peaks-Kenny Pk	77.32	2	P	P	08 14 49.3	+1.0
	baz=182						
BGNE	Belgrade	77.39	340	P	P	08 14 49.7	+0.9
	baz=157						
RAR	Rarotonga	77.40	253	LR	LR	08 40 40.9	
	comp=Z,82nm,18.2s,baz=307,slow=29						
MONP2	Monument Peak	77.44	323	P	P	08 14 51.3	+1.7
	baz=143						
Q24A	Divide	77.51	334	P	P	08 14 51.0	+1.0
	baz=152,SNR=15						
BC3	Big Chuckawall	77.56	324	P	P	08 14 51.3	+1.2
	baz=143,SNR=8.2						
GLMI	Grayling	77.75	351	P	P	08 14 51.6	+0.9
	baz=169						
IRM	Iron Mountain	77.81	324	P	P	08 14 53.1	+1.7
	baz=144,SNR=5.5						
TPFO	Pinon Flats	78.02	323	P	P	08 14 54.3	+1.6
	baz=143						
PFO	Pinyon Flats O	78.03	323⇑	*e*P	P	08 14 54.5	+1.7
PFO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PFO	Pinyon Flats O	78.03	323	P	P	08 14 54.5	+1.7
	baz=143						
BELC	Belle Mtn. Jos	78.11	324	P	P	08 14 54.9	+1.7
	baz=143						
OGNE	Ogallala	78.17	337	P	P	08 14 55.8	+2.5
	baz=154						
TRQ	Mont Tremblant	78.29	358	P	P	08 14 54.0	+0.2
TRQ				IAmb	IAmb	08 14 55.6	
	comp=Z,24nm,1.0s						
MURC	Murrieta	78.40	323	P	P	08 14 56.6	+1.9
	baz=142						
ISCO	Idaho Springs	78.42	334	P	P	08 14 56.3	+1.4
	baz=151,SNR=9.5						
GMRC	Granite Mounta	78.56	324	P	P	08 14 57.8	+2.1
	baz=143,SNR=7.0						
E62A	Clayton Lake	78.67	2	P	P	08 14 56.9	+1.1
E62A				IAmb	IAmb	08 14 58.4	
	comp=Z,26nm,1.0s						
HEC	Hector,Ludlow	78.93	324	P	P	08 14 59.7	+2.0
	baz=143,SNR=5.8						
ECSD	EROS Data Cent	79.12	342	P	P	08 14 58.2	-0.1
ECSD				IAmb	IAmb	08 14 59.6	
	comp=Z,31nm,0.8s						
ECSD	EROS Data Cent	79.12	342	P	P	08 14 59.1	+0.8
	baz=159,SNR=40						
BFSC	Mount Baldy Ra	79.14	323	P	P	08 15 00.2	+1.3
	baz=142						
TUQ	Turquoise Moun	79.21	325	P	P	08 15 00.3	+1.1
	baz=143,SNR=5.8						
TSUM	Tsumeb	79.36	106	LR	LR	08 44 52.7	
	comp=Z,128nm,20.3s,baz=156,slow=32						
N23A	Red Feather La	79.49	334	P	P	08 15 02.4	+1.6
	baz=151						
GSC	Goldstone, Bar	79.54	324	P	P	08 15 02.3	+1.3
	baz=143						
SPMN	Marine on St.	79.60	345	P	P	08 15 00.8	-0.2
	baz=162,SNR=7.6						
O20A	White River Ci	79.71	332	P	P	08 15 02.7	+0.8
	baz=149,SNR=5.0						
SHOC	Shoshone, Teco	79.75	325	P	P	08 15 03.2	+1.2
	baz=143						
EDW2	Edwards Air Fo	79.81	323	P	P	08 15 04.0	+1.6
	baz=142,SNR=5.1						
LRMC	Laurel Mtn Rad	80.12	323	P	P	08 15 05.4	+1.2
	baz=142						
F36A	Milaca	80.37	345	P	P	08 15 05.0	0.0
F36A				IAmb	IAmb	08 15 06.1	
	comp=Z,22nm,0.8s						
SUSD	Miller	80.41	341	P	P	08 15 05.8	+0.4
	baz=157						
MPMC	Manual Prospec	80.48	324	P	P	08 15 07.0	+0.8
	baz=142						
FURC	Furnace Creek,	80.49	325	P	P	08 15 07.8	+1.9
	baz=143,SNR=6.0						
D41A	Chassel	80.54	348	P	P	08 15 06.3	+0.4
BOSA	Boshof	80.55	118	P	P	08 15 06.8	-0.1
	comp=Z,13nm,0.8s,baz=252,slow=3.0,SNR=19						
BOSA				LR	LR	08 47 18.0	
	comp=Z,164nm,18.2s,baz=196,slow=33						
	comp=Z,13nm,0.8s						
BOSA	Boshof	80.55	118	P	P	08 15 06.4	-0.5
BOSA	Boshof	80.55	118	P	P	08 15 06.4	-0.5
BOSA				pmax	pmax		
	comp=Z,15nm,0.9s						
TPNV	Topopah Spring	80.58	325	P	P	08 15 08.8	+2.2
	baz=143,SNR=7.1						
ISA	Isabella, Lake	80.67	323	P	P	08 15 09.1	+2.1
	baz=142						
PKM	Mcpherson Peak	80.76	322	P	P	08 15 09.0	+1.3
	baz=140						
CWC	Cottonwood Cre	81.07	324	P	P	08 15 11.3	+2.0
	baz=142						
VES	Vestal, Richgr	81.12	323	P	P	08 15 11.6	+2.3
	baz=141						
SMMC	Simmler	81.18	322	P	P	08 15 11.2	+1.5
	baz=140						
K22A	Casper	81.24	335	P	P	08 15 11.3	+1.3
	baz=151						
TIN	Tinemaha, Big	81.63	324	P	P	08 15 13.7	+1.5
	baz=142						
DUG	Dugway, Tooele	81.64	329	P	P	08 15 13.3	+1.1
	baz=146						
RSSD	Black Hills	81.67	337	P	P	08 15 13.3	+1.0
	baz=153						
DSP	Deep Springs	81.75	324	P	P	08 15 13.7	+1.1
EYMN	Ely	81.93	347	P	P	08 15 12.8	-0.5
EYMN	Ely	81.93	347	P	P	08 15 13.7	+0.4
	baz=163						
BW06	Boulder Array	82.47	333	P	P	08 15 17.4	+0.8
	baz=149						
PDAR	Pinedale Array	82.47	333	P	P	08 15 16.4	-0.1
	comp=Z,1.3nm,0.8s,baz=140,slow=6.9,SNR=9.5						
	comp=Z,1.3nm,0.8s						
LBTB	Lobatse	82.71	115	LR	LR	08 50 09.5	
	comp=Z,82nm,21.3s,baz=182,slow=34						
LBTB	Lobatse	82.71	115	P	P	08 15 17.6	-0.7
LBTB	Lobatse	82.71	115	P	P	08 15 17.6	-0.7
LBTB				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NVAR	Mina Array Bea	82.74	325	P	P	08 15 18.9	+0.8
	comp=Z,4.3nm,0.8s,baz=157,slow=6.2,SNR=35						
	comp=Z,4.3nm,0.8s						
B35A	Bob, Littlefor	82.78	345	P	P	08 15 17.2	-0.5
B35A				IAmb	IAmb	08 15 18.5	
	comp=Z,22nm,0.7s						
KVN	Kaiserville	83.13	325	P	P	08 15 20.8	+0.7
KVN	Kaiserville	83.13	325	P	P	08 15 20.8	+0.7
KVN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AGMN	Agassiz Nation	83.20	344	P	P	08 15 20.1	+0.2
	baz=160,SNR=8.9						
TORD	Torodi Ar. Bea	83.38	70	P	P	08 15 21.6	-0.1
	comp=Z,27nm,0.8s,baz=254,slow=4.7,SNR=129						
TORD				LR	LR	08 49 07.8	
	comp=Z,123nm,21.8s,baz=222,slow=33						
	comp=Z,27nm,0.8s						
TORD	Torodi Ar. Bea	83.38	70	P	P	08 15 21.5	-0.1
MDND	Maddock	83.72	342	P	P	08 15 23.1	+0.5
	baz=157,SNR=5.0						
RLMT	Red Lodge	84.37	334	P	P	08 15 26.7	+0.4
	baz=149,SNR=5.5						
LAO	LASA Array	84.66	337	P	P	08 15 28.5	+1.0
	baz=151						
URZ	Urewera	84.96	227	LR	LR	08 44 03.2	
	comp=Z,83nm,20.6s,baz=254,slow=29						
ULM	Lac du Bonnet	85.03	345	P	P	08 15 28.7	-0.5
	comp=Z,16nm,0.8s,baz=162,slow=3.3,SNR=24						
	comp=Z,16nm,0.8s						
RPZ	Rata Peaks	85.06	220	LR	LR	08 46 06.1	
	comp=Z,101nm,19.9s,baz=190,slow=30						
HLID	Hailey	85.09	330	P	P	08 15 30.4	+0.5
	baz=145,SNR=5.4						
MCMT	McKenzie Canyo	85.49	332	P	P	08 15 33.1	+1.1
DGMT	Dagmar	85.59	339	P	P	08 15 32.5	+0.4
	baz=153,SNR=6.0						
BOZ	Bozeman (W)	85.66	333	P	P	08 15 33.5	+0.8
	baz=147,SNR=5.1						
SCHQ	Schefferville	86.97	3	P	P	08 15 38.3	-0.3
	comp=Z,15nm,1.1s,baz=185,slow=5.7,SNR=9.2						
SCHQ				LR	LR	08 57 26.4	
	comp=Z,33nm,19.2s,baz=178,slow=38						
	comp=Z,15nm,1.1s						
SCHQ	Schefferville	86.97	3	P	P	08 15 38.4	-0.3
SCHQ				IAmb	IAmb	08 15 40.2	
	comp=Z,26nm,1.4s						
MSO	Missoula	87.58	332	P	P	08 15 42.8	+0.8
	baz=145						
PINE	Pine Mountain	88.16	327	P	P	08 15 45.7	+0.8
PINE				IAmb	IAmb	08 15 47.8	
	comp=Z,8.5nm,0.9s						
NEW	Newport	90.00	332	LR	LR	08 53 45.4	
	comp=Z,72nm,18.4s,baz=149,slow=34						
LSZ	Lusaka	90.02	108	LR	LR	08 53 01.8	
	comp=Z,219nm,18.7s,baz=155,slow=34						
MDT	Midelt	90.58	51	LR	LR	08 54 54.5	
	comp=Z,69nm,21.5s,baz=157,slow=34						
AFI	Afiamalu	90.95	253	LR	LR	08 48 22.9	
	comp=Z,105nm,18.5s,baz=134,slow=30						
ESDC	Sonseca Array	95.25	46	LR	LR	08 56 12.3	
	comp=Z,66nm,21.2s,baz=274,slow=34						
FRB	Frobisher Bay	95.85	1	LR	LR	09 03 58.1	
	comp=Z,45nm,18.6s,baz=318,slow=38						
YKA	Yellowknife Ar	100.64	341	P	Pdif	08 16 40.7	-0.6
	comp=Z,0.9nm,0.8s,baz=142,slow=4.5,SNR=17						
KOTAN	Kotaneelee Air	101.71	336	P	Pdif	08 16 47.4	+1.2
	baz=137						
WRAK	Wrangell Islan	102.30	330	P	Pdif	08 16 50.6	+1.7
	baz=131						
U33K	Whale Pass	102.42	330	P	Pdif	08 16 50.9	+1.5
	baz=131						
DZM	Mont Dzumac	102.43	234	*e*LR	LR	08 50 22.2	
	comp=Z,153nm,26.9s						
S34M	Telegraph Cree	102.79	332	P	Pdif	08 16 52.8	+1.8
	baz=132						
P30M	Million Dollar	106.52	332	P	PKiKP	08 21 19.4	+1.1
	baz=127						
M31M	Drury Creek, Y	106.81	334	P	PKiKP	08 21 20.0	+1.3
	baz=128						
A36M	Sachs Harbour	110.51	344	P	PKiKP	08 21 26.5	+1.2
	baz=134						
M24K	Tolsona, Glenn	111.36	331	P	PKiKP	08 21 27.8	+0.5
	baz=119						
I27K	Kandik River	111.37	335	P	PKiKP	08 21 27.5	+0.3
	baz=122						
SCRK	Sand Creek	111.41	333	P	PKiKP	08 21 27.7	+0.3
	baz=120						
ILAR	Eielson Array	112.90	333	PKiKP	PKiKP	08 21 29.5	-0.6
	comp=Z,0.5nm,0.8s,baz=171,slow=1.5,SNR=5.4						
P19K	Oil Pt	113.34	327	P	PKiKP	08 21 31.8	+0.7
	baz=114						
G25K	Bearman Lake	113.53	335	P	PKiKP	08 21 32.3	+1.1
	baz=117						
SKT	Skwentna	113.55	330	P	PKiKP	08 21 32.5	+1.0
	baz=115						
C27K	Jago River	114.08	339	P	PKiKP	08 21 33.0	+0.8
	baz=118						
P18K	Big Mountain,	114.17	326	P	PKiKP	08 21 33.0	+0.3
	baz=113						
M20K	Styx River	114.20	329	P	PKiKP	08 21 33.0	+0.2
	baz=114						
BPAW	Bear Paw Mtn.	114.21	332	P	PKiKP	08 21 33.1	+0.5
	baz=114						
PPLA	Purkeypile	114.21	330	P	PKPdf	08 21 32.6	-0.3
	baz=114						
O18K	Koktuh Hills	114.34	327	P	PKiKP	08 21 33.0	0.0
	baz=113						
CAST	Castle Rocks	114.38	331	P	PKiKP	08 21 33.3	+0.4
	baz=114						
G23K	Bananza Creek	114.91	335	P	PKiKP	08 21 34.4	+0.4
	baz=114						
E24K	Your Creek	114.94	336	P	PKiKP	08 21 34.7	+0.7
	baz=115						
COLD	Coldfoot	115.19	335	P	PKPdf	08 21 34.8	+0.4
	baz=114						
H21K	Melozitna Rive	115.54	333	P	PKiKP	08 21 35.2	+0.1
	baz=112						
E22K	Anaktuvuk Pass	116.11	336	P	PKiKP	08 21 36.4	+0.2
	baz=112						
G21K	Allakaket	116.12	334	P	PKiKP	08 21 36.8	+0.6
	baz=111						
F21K	Alatna River	116.37	335	P	PKiKP	08 21 37.2	+0.4
	baz=111						
ASAR	Alice Springs	119.13	207	PKP	PKPdf	08 21 42.4	-1.1
	comp=Z,1.4nm,0.8s,baz=142,slow=2.1,SNR=15						
ASAR				PKKPbc	PKKPbc	08 31 55.8	-0.7
	comp=Z,0.3nm,0.6s,baz=339,slow=3.5,SNR=5.0						
RDOG	Red Dog Mine	120.06	334	P	PKiKP	08 21 44.2	+0.3
	baz=102						
ANM	Nome	120.29	330	P	PKiKP	08 21 44.6	+0.2
	baz=102						
BR131	Keskin Array S	120.78	60*d*	*i*PKIKP	PKPdf	08 21 45.7	-0.5
BRTR	Keskin Array B	120.78	60	PKP	PKPdf	08 21 45.5	-0.8
	comp=Z,2.0nm,0.8s,baz=181,slow=2.3,SNR=11						
AKASG	Malin Array Be	120.88	47	PKP	PKPdf	08 21 44.4	-1.4
	comp=Z,1.1nm,0.6s,baz=266,slow=2.7,SNR=8.4						
AKBB	Malin Array Si	120.88	47⇑	*i*PKIKP	PKPdf	08 21 45.2	-0.6
FINES	FINESS Array B	121.50	34	PKP	PKPdf	08 21 46.4	-0.3
	comp=Z,2.4nm,0.8s,baz=264,slow=1.4,SNR=1.5						
TNA	Tin City	121.54	331	P	PKiKP	08 21 47.1	+0.3
	baz=99						
WRA	Warramunga Arr	122.31	209	PKP	PKPdf	08 21 48.3	-1.4
	comp=Z,3.7nm,0.7s,baz=162,slow=1.6,SNR=38						
WRAB	Tennant Creek	122.31	209⇓	*i*PKIKP	PKPdf	08 21 49.2	-0.5
WRAB				pmax	pmax		
	comp=Z,16nm,2.5s						
ARCES	ARCESS Array B	122.44	24	PKP	PKPdf	08 21 47.5	-0.8
	comp=Z,3.0nm,0.9s,baz=257,slow=3.5,SNR=3.8						
PUL	Pulkovo	123.29	36⇑	*i*PKIKP	PKiKP	08 21 51.7	+1.3
OBN	Obninsk	126.06	42	*e*PKIKP	PKPdf	08 21 53.7	-1.9
OBN				*e*		08 23 51.6	
OBN				*e*PPP	PPP	08 26 29.9	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
H11S2	WAKE ISLAND Hy	126.08	270	T	T	10 40 55.3	
	baz=118,slow=75,SNR=411						
H11S1	WAKE ISLAND Hy	126.09	270	T	T	10 40 54.9	
	baz=118,slow=75,SNR=414						
H11S3	WAKE ISLAND Hy	126.10	270	T	T	10 40 55.9	
	baz=118,slow=75,SNR=440						
H11N3	WAKE ISLAND Hy	126.45	272	T	T	10 41 23.6	
	baz=117,slow=76,SNR=5.9						
H11N1	WAKE ISLAND Hy	126.47	272	T	T	10 41 27.4	
	baz=117,slow=76,SNR=36						
H11N2	WAKE ISLAND Hy	126.47	272	T	T	10 41 26.0	
	baz=117,slow=76,SNR=115						
KIV	Kislovodsk	128.38	57	*i* PKIKP	PKiKP	08 22 01.6	+0.4
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,84nm,23.0s						
KBZ	Khabaz	128.49	57	PKP	PKiKP	08 22 01.0	-0.2
	comp=Z,3.2nm,0.9s,baz=214,slow=2.7,SNR=6.7						
GNI	Garni	129.12	62⇓	*i*PKIKP	PKiKP	08 22 03.9	+1.0
BILL	Bilibino	131.52	335	*e*PKIKP	PKPdf	08 22 05.8	+0.1
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARU	Arti	138.33	40	PKP	PKPdf	08 22 19.1	+0.4
	comp=Z,1.6nm,0.3s,baz=315,slow=17,SNR=4.3						
ARU	Arti	138.33	40	*i* PKIKP	PKiKP	08 22 20.0	-0.8
ARU						08 25 08.0	
ARU				SS	SS	08 43 18.1	-1.5
SEY	Seymchan	138.78	331	PKP	PKPdf	08 22 20.2	+0.8
	comp=Z,6.8nm,0.8s,baz=96,slow=2.9,SNR=20						
SEY	Seymchan	138.78	331⇓	*e*PKIKP	PKiKP	08 22 20.6	-0.9
GEYT	Alibeck	138.99	68	PKP	PKPdf	08 22 20.9	+0.3
	comp=Z,2.7nm,0.8s,baz=266,slow=4.2,SNR=4.6						
AKTO	Aktyubinsk	139.07	49	PKP	PKPdf	08 22 19.3	-1.0
	comp=Z,1.0nm,0.4s,baz=253,slow=3.9,SNR=4.0						
TIXI	Tiksi	139.17	350	PKP	PKPdf	08 22 19.3	-0.5
	comp=Z,1.2nm,0.3s,baz=270,slow=23,SNR=4.2						
TIXI	Tiksi	139.17	350⇓	*e*PKIKP	PKPdf	08 22 19.6	-0.2
BRVK	Borovoye	145.82	41*c*	*i*PKP2	PKPab	08 22 33.3	+0.1
YAK	Yakutsk	147.31	341	PKPbc	PKPbc	08 22 36.7	-0.1
	comp=Z,42nm,0.6s,baz=214,slow=0.6,SNR=17						
HYB	Hyderabad	149.29	112	*e*PKiKP	PKPbc	08 22 43.4	+0.1
YSS	Yuzh-Sakhalins	150.04	309	*e*PKIKP	PKPbc	08 22 44.2	-0.1
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
AAK	Ala-Archa	151.46	59	PKP	PKPdf	08 22 42.5	+0.6
	comp=Z,25nm,0.7s,baz=193,slow=1.5,SNR=4.4						
AAK				PKPbc	PKiKP	08 22 48.7	+0.2
	comp=Z,25nm,0.7s,baz=219,slow=3.1,SNR=64						
AAK	Ala-Archa	151.46	59⇑	*e*PKIKP	PKPdf	08 22 42.3	+0.4
KURK	Kurchatov	151.49	41⇑	*e*PKIKP	PKPdf	08 22 41.9	+0.5
ZALV	Zalesovo Beam	152.71	31	PKP	PKPdf	08 22 42.8	-0.4
	comp=Z,0.5nm,0.3s,baz=302,slow=2.7,SNR=5.0						
ZALV				PKPbc	PKPbc	08 22 50.3	+0.1
	comp=Z,26nm,0.6s,baz=300,slow=3.2,SNR=92						
KSH	Kashi	152.97	66	PKPbc	PKPbc	08 22 51.0	-0.5
KSH				pPKP	PKPab	08 23 02.6	-0.3
MJAR	Matsushiro Arr	155.06	288	PKPbc	PKPbc	08 22 55.9	
	comp=Z,1.3nm,0.7s,baz=112,slow=3.2,SNR=2.7						
MK31	Makanchi Array	155.47	47⇑	*e*PKIKP	PKPdf	08 22 47.3	0.0
MKAR	Makanchi Array	155.47	47	PKP	PKPdf	08 22 47.2	-0.1
	comp=Z,1.3nm,0.9s,baz=316,slow=4.0,SNR=8.1						
MKAR				PKPbc	pPKPdf	08 22 56.0	+0.1
	comp=Z,3.0nm,0.9s,baz=308,slow=2.7,SNR=14						
MKAR				PKPab	PKPab	08 23 12.4	-0.6
	comp=Z,4.5nm,0.6s,baz=281,slow=3.3,SNR=22						
MKAR				PP	PP	08 26 47.3	-2.6
	comp=Z,1.4nm,1.0s,baz=298,slow=3.1,SNR=3.7						
KLR	Kul'dur	155.71	321	PKP	PKPdf	08 22 47.0	-0.5
	comp=Z,0.3nm,0.3s,baz=84,slow=13,SNR=1.9						
KLR				PKPab	PKPab	08 23 14.0	0.0
	comp=Z,1.5nm,0.9s,baz=86,slow=10,SNR=4.1						
DGZ	Jazzator, Alta	156.74	36⇓	*e*PKIKP	PKPdf	08 22 48.2	-0.9
WMQ	Urumqi	160.22	49	*e*P	PKPdf	08 22 53.1	-0.2
ZAK	Zakamensk	161.64	10	*e*PKP2	PKPab	08 23 39.6	-0.1
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KSRS	Korea Array	163.16	293	PKP	PKPdf	08 22 56.2	-0.2
	comp=Z,0.8nm,0.6s,baz=27,slow=1.4,SNR=6.1						
KSRS				PKPab	PKPab	08 23 48.3	+1.6
	comp=Z,1.6nm,0.7s,baz=88,slow=4.3,SNR=7.1						
CMAR	Chiang Mai Arr	163.76	146	PKP	PKPdf	08 22 57.4	-0.3
	comp=Z,1.3nm,0.3s,baz=246,slow=1.6,SNR=6.6						
SONM	Songino Array	164.51	5	PKPab	PKPab	08 23 52.6	+0.3
	comp=Z,1.5nm,0.7s,baz=339,slow=3.4,SNR=7.0						
NJ2	Nanjing	171.07	271	*e*P	PKPdf	08 23 01.6	-0.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC	Hu-ho-hao-te	171.17	344	*e*P	PKPdf	08 23 01.5	-0.9
PZH	PanZhiHua	171.80	134	PKP	PKPdf	08 23 02.3	-0.9

IDC 17 08:06:58.4±3.2**, 3°.14S**×**126°.55E, h0**^{km}**, mb3.4**/2**,**
mbtmp3.6/3**, ML3.4**/1**, MS2.8**/1**, Error ellipse:**
s-maj=148.2km s-min=33.2km az=82.0, Buru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	10.18	355	LR	LR	08 14 11.5	
	comp=Z,55nm,19.4s,baz=14,slow=42						
WRA	Warramunga Arr	18.35	156	P	P	08 11 14.7	0.0
	0.1nm,0.3s,baz=335,slow=12,SNR=11						
	1.7nm,0.7s						
ASAR	Alice Springs	21.61	161	P	P	08 11 49.6	-0.6
	0.3nm,0.3s,baz=346,slow=12,SNR=7.0						
	0.3nm,0.3s						
ILAR	Eielson Array	91.34	25	P	P	08 20 06.1	+0.2
	0.2nm,0.5s,baz=255,slow=5.6,SNR=6.0						
	0.2nm,0.5s						

IDC ***17*** *08:25:30.1±1.8, 10°.03S×161°.02E, h0*^{km}*, mb3.4/4,*
mbtmp3.5/5, ML3.6/1, Error ellipse: s-maj=30.5km
s-min=29.1km az=28.0

ISC 17 08:25:39.2±1.5**, 10°.0S**±0°.2×**160°.8E**±0°.2**, h67**^{km}**, n6,**
σ**2**^{s}**.21**/7**, mb3.2**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	0.96	304	Pn	Pn	08 25 54.1	-2.9
	2µm,0.3s,baz=118,slow=4.5,SNR=62						
HNR				LR	LR	08 26 12.0	
	comp=Z,803nm,18.3s,baz=194,slow=35						
HNR				Sn	Sn	08 26 12.7	+2.4
	5µm,0.3s,baz=356,slow=23,SNR=9.9						
CTA	Charters Tower	17.23	233	P	Pn	08 29 35.0	-0.6
	0.1nm,0.3s,baz=53,slow=12,SNR=5.3						
	2.1nm,0.8s						
WRA	Warramunga Arr	27.34	246	P	P	08 31 17.6	-0.6
	0.2nm,0.5s,baz=76,slow=8.9,SNR=2.4						
	0.2nm,0.5s						
ASAR	Alice Springs	29.01	239	P	P	08 31 34.4	+1.3
	0.4nm,0.8s,baz=64,slow=9.7,SNR=4.4						
	0.4nm,0.8s						
SONM	Songino Array	74.95	325	P	P	08 37 15.0	+1.6
	0.2nm,0.4s,baz=118,slow=7.3,SNR=2.0						
	0.2nm,0.4s						
ILAR	Eielson Array	84.12	20	P	P	08 38 02.3	-0.3
	0.2nm,0.6s,baz=231,slow=5.6,SNR=1.9						

0.2nm,0.6s

*IDC **17** 08:26:22.2±0.6,30°.36N×140°.20E,h0^{km},mb3.9/14, mbtmp3.9/17,ML3.5/3,MS3.6/32,Error ellipse: s-maj=21.4km s-min=13.9km az=88.0*
*JMA **17** 08:26:25.3±0.1,30°.7N±0°.8×14°1E±°,h27^{km},MV4.0/24, NEAR TORISHIMA IS*
ISC 17 08:26:26.2±0.6,**30°.62N**±0°.05×**140°.8E**±0°.1,**h35^{km},n56, σ2^{s}01**/27,**mb4.0**/14,**MS3.7**/25,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.71**	**160**	P	**Pn**	**08 27 24.2**	**+3.1**
CBIJ				*e*S	**Sn**	**08 28 07.2**	**+3.5**
JCJ	**Chichijima**	**3.71**	**160**	Pn	**Pn**	**08 27 21.6**	**+0.5**
	20nm,0.3s,baz=281,slow=18,SNR=2.5						
JCJ				Sn	**Sn**	**08 28 01.6**	**-2.1**
	16nm,0.3s,baz=293,slow=20,SNR=1.6						
	75nm,0.7s						
BSO1	**Boso 1**	**4.03**	**2**	P	**Pn**	**08 27 25.4**	**+0.5**
BSO3	**Boso 3**	**4.18**	**357**	*e*P	**Pn**	**08 27 27.5**	**+0.3**
BSO3				S	**Sn**	**08 28 14.0**	**-0.7**
BSO4	**Boso 4**	**4.38**	**355**	*e*S	**Sn**	**08 28 19.5**	**-0.3**
JHU	**Hanno**	**5.37**	**347**	*e*S	**Sn**	**08 28 44.5**	**0.0**
JTNC	**Tanabenakahech**	**5.43**	**307**	*e*P	**Pn**	**08 27 47.9**	**+3.2**
JRY	**Ryogami san**	**5.61**	**344**	*e*P	**Pn**	**08 27 48.9**	**+1.7**
MJAR	**Matsushiro Arr**	**6.29**	**341**	Pn	**Pn**	**08 27 58.9**	**+2.4**
	0.3nm,0.3s,baz=181,slow=12,SNR=12						
MJAR				Sn	Sn	08 29 13.7	+6.5
	0.1nm,0.3s,baz=169,slow=13,SNR=1.5						
MJAR				LR	LR	08 30 26.1	
	comp=Z,634nm,20.5s,baz=142,slow=38						
	4.8nm,0.8s						
JNU	**Nakatsue**	**8.79**	**289**	LR	LR	08 31 31.9	
	comp=Z,629nm,18.4s,baz=107,slow=37						
JOW	**Kunigami**	**11.61**	**254**	LR	LR	08 33 10.6	
	comp=Z,615nm,18.8s,baz=86,slow=37						
KSRS	**Korea Array**	**12.66**	**306**	Pn	Pn	08 29 27.4	+3.7
	0.3nm,0.3s,baz=116,slow=13,SNR=20						
KSRS				LR	LR	08 34 32.2	
	comp=Z,119nm,18.2s,baz=130,slow=39						
USRK	**Ussuriysk Ar.**	**15.24**	**335**	LR	LR	08 35 34.4	
	comp=Z,62nm,18.1s,baz=132,slow=36						
GUMO	**Guam**	**17.36**	**167**	LR	LR	08 36 36.3	
	comp=Z,207nm,19.7s,baz=84,slow=36						
KLR	**Kul'dur**	**19.82**	**342**	P	**Pn**	**08 30 55.4**	**+0.1**
	0.1nm,0.3s,baz=129,slow=8.5,SNR=2.5						
KLR				LR	LR	08 38 20.9	
	comp=Z,121nm,19.6s,baz=149,slow=36						
	0.6nm,0.4s						
PETK	**Petropavlovsk-**	**25.63**	**24**	LR	LR	08 44 55.5	
	comp=Z,137nm,18.4s,baz=235,slow=43						
H11N2	**WAKE ISLAND Hy**	**25.93**	**109**	T	T	08 59 26.9	
	baz=300,slow=75,SNR=186						
H11N1	**WAKE ISLAND Hy**	**25.94**	**109**	T	T	08 59 22.2	
	baz=300,slow=75,SNR=108						
H11N3	**WAKE ISLAND Hy**	**25.95**	**109**	T	T	08 59 22.9	
	baz=300,slow=75,SNR=131						
H11S3	**WAKE ISLAND Hy**	**26.39**	**111**	T	T	08 59 57.8	
	baz=302,slow=75,SNR=45						
H11S1	**WAKE ISLAND Hy**	**26.40**	**111**	T	T	08 59 58.1	
	baz=302,slow=75,SNR=39						
H11S2	**WAKE ISLAND Hy**	**26.41**	**111**	T	T	08 59 59.7	
	baz=302,slow=75,SNR=29						
DAV	**Davao City (W)**	**27.43**	**214**	LR	LR	08 41 34.8	
	comp=Z,117nm,20.9s,baz=3.5,slow=34						
SONM	**Songino Array**	**31.38**	**313**	P	**P**	**08 32 41.6**	**-2.1**
	0.2nm,0.3s,baz=130,slow=5.8,SNR=1.8						
	0.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**39.73**	**262**	P	**P**	**08 33 53.1**	**-2.5**
	1.4nm,0.3s,baz=54,slow=7.7,SNR=10						
CMAR				LR	LR	08 50 36.5	
	comp=Z,113nm,19.5s,baz=75,slow=37						
	1.4nm,0.3s						
KAPI	**Kappang**	**40.75**	**213**	LR	LR	08 50 17.1	
	comp=Z,47nm,19.2s,baz=16,slow=36						
BRDH	**Bariadhala**	**44.35**	**272**	LR	LR	08 56 05.4	
	comp=Z,111nm,18.0s,baz=26,slow=41						
ZALV	**Zalesovo Beam**	**46.06**	**317**	PcP	**PcP**	**08 36 23.5**	**+1.2**
	1.3nm,0.8s,baz=119,slow=5.1,SNR=2.2						
ZALV				LR	LR	08 53 42.9	
	comp=Z,56nm,18.2s,baz=132,slow=36						
MKAR	**Makanchi Array**	**47.34**	**307**	P	**P**	**08 34 54.8**	**-1.7**
	0.3nm,0.7s,baz=93,slow=10,SNR=2.3						
MKAR				PcP	**PcP**	**08 36 29.8**	**+2.7**
	0.7nm,0.9s,baz=73,slow=4.4,SNR=3.1						
	0.3nm,0.7s						
NRIK	**Noril'sk**	**48.94**	**338**	P	**P**	**08 35 10.4**	**+1.8**
	2.7nm,0.7s,baz=116,slow=7.5,SNR=1.8						
	2.7nm,0.7s						
WRA	**Warramunga Arr**	**50.65**	**188**	P	**P**	**08 35 20.8**	**-1.2**
	2.9nm,0.8s,baz=1.3,slow=7.6,SNR=20						
WRA				PcP	**PcP**	**08 36 40.1**	**+0.9**
	0.4nm,0.5s,baz=358,slow=4.1,SNR=5.0						
	2.9nm,0.8s						
KDAK	**Kodiak Island**	**52.33**	**38**	LR	LR	08 57 26.4	
	comp=Z,49nm,20.5s,baz=268,slow=35						
ASAR	**Alice Springs**	**54.38**	**188**	P	**P**	**08 35 48.3**	**-1.4**
	1.7nm,0.8s,baz=0.4,slow=4.8,SNR=16						
ASAR				PcP	**PcP**	**08 36 52.7**	**-0.5**
	0.5nm,0.9s,baz=14,slow=4.1,SNR=1.9						
	1.7nm,0.8s						
BVAR	**Borovoye Array**	**54.65**	**316**	LR	LR	08 58 34.3	
	comp=Z,59nm,19.6s,baz=59,slow=36						
ILAR	**Eielson Array**	**55.25**	**30**	P	P	08 35 59.0	+3.5
	3.0nm,1.0s,baz=261,slow=5.9,SNR=14						
ILAR				LR	LR	09 08 40.2	
	comp=Z,14nm,18.0s,baz=152,slow=46						
	3.0nm,1.0s						
INK	**Inuvik**	**60.36**	**25**	P	P	08 36 34.8	+3.5
	2.0nm,0.8s,baz=315,slow=14,SNR=4.6						
	2.0nm,0.8s						
PALK	**Pallekele**	**60.65**	**261**	LR	LR	09 05 49.2	
	comp=Z,54nm,18.3s,baz=153,slow=39						
STKA	**Stephens Creek**	**62.16**	**179**	P	**P**	**08 36 41.6**	**-2.3**
	1.4nm,0.7s,baz=0.0,slow=9.1,SNR=1.9						
	1.4nm,0.7s						
RES	**Resolute Bay**	**68.94**	**14**	LR	LR	09 08 53.8	
	comp=Z,49nm,21.8s,baz=220,slow=37						
YKA	**Yellowknife Ar**	**69.64**	**29**	P	P	08 37 35.4	+3.7
	0.9nm,1.0s,baz=293,slow=6.3,SNR=8.1						
	0.9nm,1.0s						
ARCES	**ARCESS Array B**	**69.83**	**340**	LR	LR	09 10 13.7	
	comp=Z,52nm,21.5s,baz=256,slow=38						
FINES	**FINESS Array B**	**74.26**	**333**	P	**P**	**08 38 01.8**	**+2.4**
	1.3nm,0.8s,baz=64,slow=9.4,SNR=3.8						
FINES				LR	LR	09 12 13.7	
	comp=Z,80nm,18.9s,baz=242,slow=37						
	1.3nm,0.8s						
YBH	**Yreka Blue Hor**	**74.75**	**50**	LR	LR	09 04 06.8	
	comp=Z,96nm,20.8s,baz=298,slow=30						
NEW	**Newport**	**75.14**	**43**	LR	LR	09 10 42.8	
	comp=Z,17nm,19.6s,baz=314,slow=35						
NVAR	**Mina Array Bea**	**79.31**	**52**	P	P	08 38 35.0	+6.4
	1.0nm,0.9s,baz=290,slow=4.2,SNR=7.5						
NVAR				LR	LR	09 05 52.8	
	comp=Z,74nm,21.4s,baz=286,slow=30						
	1.0nm,0.9s						
HFS	**Hagfors**	**79.72**	**336**	LR	LR	09 16 47.6	
	comp=Z,90nm,19.1s,baz=34,slow=38						
NOA	**NORSAR Array B**	**79.90**	**338**	LR	LR	09 16 02.7	
	comp=Z,60nm,18.2s,baz=0.0,slow=37						
ELK	**Elko**	**80.13**	**48**	LR	LR	09 07 49.2	
	comp=Z,64nm,21.1s,baz=284,slow=31						
PPT	**Papeete**	**82.29**	**116**	LR	LR	09 05 16.4	
	comp=Z,17nm,21.8s,baz=166,slow=28						
PDAR	**Pinedale Array**	**82.57**	**44**	LR	LR	09 09 29.2	
	comp=Z,23nm,21.9s,baz=4.0,slow=31						
BRTR	**Keskin Array B**	**82.73**	**312**	P	**P**	**08 38 45.4**	**-1.4**
	0.4nm,0.7s,baz=32,slow=5.6,SNR=2.9						
	0.4nm,0.7s						
PFO	**Pinyon Flats O**	**83.08**	**55**	LR	LR	09 08 54.6	
	comp=Z,32nm,20.0s,baz=254,slow=30						
ANMO	**Albuquerque**	**89.14**	**49**	LR	LR	09 12 53.1	
	comp=Z,88nm,19.8s,baz=40,slow=31						
LPIG	**La Paz**	**92.83**	**60**	LR	LR	09 13 12.1	
	comp=Z,41nm,21.3s,baz=206,slow=30						
TXAR	**Lajitas Array**	**94.45**	**52**	P	P	08 39 47.3	+4.2
	0.4nm,0.7s,baz=280,slow=1.2,SNR=7.0						
TXAR				LR	LR	09 23 16.3	
	comp=Z,29nm,18.5s,baz=318,slow=36						
	0.4nm,0.7s						
PLCA	**Paso Flores**	**152.74**	**120**	PKPbc	**PKiKP**	**08 46 22.2**	**+2.7**
	1.0nm,0.7s,baz=239,slow=5.9,SNR=2.9						

ROM 17 08:32:58.5±0.0,**42°.781N**±0°.003×**13°.175E**±0°.004, **h10^{km},ML1.1**/3,**1C-2D,Error ellipse: s-maj=0.3km s-min=0.2km az=312.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.03**	**131**	P	Pg	08 33 00.8	+0.2
T1214				S	Sg	08 33 02.1	0.0
T1214				AML	AML		
	comp=E,180µm,0.2s						
T1214				AML	AML		
	comp=N,232µm,1.3s						
T1214				AML	AML		
	comp=N,231µm,1.3s						
T1214				AML	AML		
	comp=E,180µm,0.2s						
T1245	**Castelsantange**	**0.08**	**7**	P	Pg	08 33 01.3	+0.2
T1245				S	Sg	08 33 03.0	+0.1
T1245				AML	AML		
	comp=E,143µm,1.0s						
T1245				AML	AML		
	comp=N,251µm,0.3s						
T1212	**Cascia, Frazio**	**0.10**	**253**	P	Pg	08 33 01.6	+0.4
T1212				S	Sg	08 33 03.5	+0.4
T1218	**Civita (PG)**	**0.12**	**202**	P	Pg	08 33 02.0	+0.5
T1218				S	Sg	08 33 04.5	+0.8
T1218				AML	AML		
	comp=E,113µm,1.1s						
T1218				AML	AML		
	comp=E,113µm,0.9s						
T1218				AML	AML		
	comp=N,119µm,0.9s						
MC2	**Monte Cornacci**	**0.13**	**5**	P	Pg	08 33 02.3	+0.5
MC2				S	Sg	08 33 05.3	+1.2
T1216	**Preci, Frazion**	**0.16**	**314**	P	Pg	08 33 02.7	+0.6
T1216				S	Sg	08 33 05.3	+0.7
MMO1	**Montemonaco**	**0.16**	**43**	P	Pg	08 33 02.8	+0.6
MMO1				S	Sg	08 33 05.6	+0.9
T1217	**Poggiodomo (PG**	**0.19**	**249**	P	Pg	08 33 03.3	+0.6
T1217				S	Sg	08 33 06.6	+1.1
T1241	**Roccafluvione,**	**0.20**	**68**	⇑P	Pg	08 33 03.5	+0.6
T1241				S	Sg	08 33 06.9	+1.2
FDMO	**Fiordimonte**	**0.26**	**346**	⇓P	Pg	08 33 04.7	+0.7
FDMO				S	Sb	08 33 09.0	-1.0
RM33	**Pellescritta (**	**0.27**	**174**	P	Pg	08 33 04.8	+0.7
RM33				S	Sb	08 33 09.3	-1.0
TERO	**Teramo**	**0.35**	**116**	P	Pg	08 33 06.0	+0.4
TERO				S	Sb	08 33 11.5	-1.1
LPEL	**Lama dei Pelig**	**1.05**	**134**	⇓P	Pg	08 33 18.2	-0.4

ROM 17 08:33:33.7±0.1,**42°.912N**±0°.002×**13°.164E**±0°.004, **h8^{km},ML1.5**/6,**1C,Error ellipse: s-maj=0.3km s-min=0.0km az=250.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**163**	P	Pg	08 33 35.5	-0.2
T1245				S	Sg	08 33 37.3	+0.2
T1245				AML	AML		
	comp=E,950µm,0.2s						
T1245				AML	AML		
	comp=N,781µm,1.1s						
T1245				AML	AML		
	comp=N,761µm,0.2s						
T1245				AML	AML		
	comp=N,781µm,1.1s						
T1245				AML	AML		
	comp=E,914µm,0.2s						
T1245				AML	AML		
	comp=E,950µm,0.2s						
T1245				AML	AML		
	comp=N,781µm,0.9s						
T1256	**Bolognola (MC)**	**0.10**	**26**	P	Pg	08 33 36.5	+0.2
T1256				S	Sg	08 33 38.5	+0.3
T1256				AML	AML		
	comp=E,125µm,0.3s						
T1256				AML	AML		
	comp=N,112µm,1.0s						
T1256				AML	AML		
	comp=N,112µm,1.0s						
MMO1	**Montemonaco**	**0.12**	**96**	P	Pg	08 33 36.8	+0.3
MMO1				S	Sg	08 33 39.3	+0.9
FDMO	**Fiordimonte**	**0.14**	**336**	P	Pg	08 33 37.0	+0.3
FDMO				S	Sg	08 33 39.6	+0.8
FDMO				AML	AML		
	comp=E,135µm,0.8s						
FDMO				AML	AML		
	comp=N,220µm,0.6s						
FDMO				AML	AML		
	comp=N,220µm,1.4s						
T1214	**Arquata del Tr**	**0.16**	**168**	P	Pg	08 33 37.6	+0.6
T1214				S	Sg	08 33 40.4	+1.0
T1214				AML	AML		
	comp=E,156µm,0.3s						
T1214				AML	AML		
	comp=N,142µm,1.6s						
T1214				AML	AML		
	comp=E,156µm,1.7s						
T1214				AML	AML		
	comp=N,142µm,0.4s						
T1212	**Cascia, Frazio**	**0.18**	**209**	P	Pg	08 33 38.1	+0.7
T1212				S	Sg	08 33 41.5	+1.4
T1219	**Muccia, Frazio**	**0.18**	**321**	P	Pg	08 33 37.9	+0.4
T1219				S	Sg	08 33 41.2	+1.1
T1241	**Roccafluvione,**	**0.20**	**106**	⇑P	Pg	08 33 38.6	+0.8
T1241				S	Sg	08 33 42.1	+1.4
T1220	**Camerino, Fraz**	**0.20**	**344**	P	Pg	08 33 38.5	+0.6
T1220				S	Sg	08 33 42.5	+1.8
T1220				AML	AML		
	comp=E,300µm,0.3s						
T1220				AML	AML		
	comp=N,286µm,0.6s						
T1217	**Poggiodomo (PG**	**0.26**	**221**	P	Pg	08 33 39.5	+0.5
T1217				S	Sb	08 33 44.4	-1.0
SNTG	**Esanatoglia**	**0.38**	**335**	P	Pg	08 33 41.9	+0.8
SNTG				S	Sb	08 33 48.3	-0.4
TERO	**Teramo**	**0.43**	**132**	P	Pg	08 33 42.8	+0.7
TERO				S	Sb	08 33 49.4	-0.8
SRES	**S.Oreste - Sor**	**0.83**	**216**	P	Pg	08 33 39.9	-10
APEC	**Apecchio**	**0.84**	**320**	S	Sg	08 33 57.0	-3.9
BRSN	**Barisano**	**1.58**	**330**	S	Sn	08 34 20.2	-2.3
BRSN				AML	AML		
	comp=E,755µm,0.4s						
BRSN				AML	AML		
	comp=N,790µm,0.4s						
BRSN				AML	AML		
	comp=E,755µm,1.6s						
CARD	**Cardoso**	**2.25**	**301**	S	Sn	08 34 38.9	-0.2

ROM 17 08:49:29.9±0.1,**42°.905N**±0°.003×**13°.149E**±0°.006, **h16^{km},ML0.8**/1,**2C-1D,Error ellipse: s-maj=0.5km s-min=0.2km az=255.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.03**	**75**	P	Pg	08 49 33.1	+0.1
MC2				S	Sg	08 49 35.2	+0.1
T1245	**Castelsantange**	**0.06**	**149**	⇓P	Pg	08 49 33.2	+0.1
T1245				S	Sg	08 49 35.3	+0.1
T1245				AML	AML		
	comp=N,214µm,0.6s						
T1245				AML	AML		
	comp=E,232µm,0.1s						
T1216	**Preci, Frazion**	**0.10**	**262**	P	Pg	08 49 33.4	0.0
T1216				S	Sg	08 49 35.9	+0.4
MMO1	**Montemonaco**	**0.13**	**92**	P	Pg	08 49 33.9	+0.1
MMO1				S	Sg	08 49 36.5	+0.3
FDMO	**Fiordimonte**	**0.14**	**341**	P	Pb	08 49 34.2	-0.1
FDMO				S	Sg	08 49 36.8	+0.4
FDMO				AML	AML		
	comp=E,42µm,0.2s						
FDMO				AML	AML		
	comp=N,44µm,0.2s						
T1214	**Arquata del Tr**	**0.15**	**163**	⇑P	Pg	08 49 34.3	+0.2
T1214				S	Sb	08 49 37.4	-0.2
T1212	**Cascia, Frazio**	**0.17**	**207**	⇑P	Pg	08 49 34.6	+0.3
T1212				S	Sb	08 49 37.8	-0.3
T1219	**Muccia, Frazio**	**0.18**	**325**	P	Pg	08 49 34.7	+0.3
T1219				S	Sb	08 49 38.2	-0.3
T1220	**Camerino, Fraz**	**0.21**	**348**	P	Pb	08 49 35.2	-0.3
T1241	**Roccafluvione,**	**0.21**	**103**	P	Pg	08 49 35.0	+0.1
T1218	**Civita (PG)**	**0.24**	**186**	P	Pg	08 49 35.0	-0.3
T1218				S	Sb	08 49 40.0	0.0

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*IPEC **17** 08:50:17.5±0.2,51°.60N×16°.18E,h0^{km},ML3.5/5,Error ellipse: s-maj=2.0km s-min=1.1km az=33.0*
*DNK **17** 08:50:18.2±1.5,51°.39N×16°.19E,h23^{km}±48^{km},ML3.5*
*MCSM **17** 08:50:19.5±1.1,51°N±5°×1°6E±°,h4^{km}±2^{km},ML4.0*
*MOS **17** 08:50:19.8±1.3,51°.44N×16°.11E,h11^{km},mb4.4/11,Error ellipse: s-maj=8.6km s-min=5.2km az=81.2*
*IDC **17** 08:50:19.3±0.5,51°.51N×16°.05E,h0^{km},mb3.8/10, mbtmp3.8/18,ML3.3/8,Error ellipse: s-maj=9.6km s-min=5.9km az=111.0*
*LDG **17** 08:50:21.0±0.3,51°.45N×16°.13E,h1^{km},Ml4.4/29,Error ellipse: s-maj=6.6km s-min=2.8km az=8.0,Suspected Mining induced.*
*BGR **17** 08:50:21.3±0.9,51°.34N×16°.06E,h1^{km},ML3.8/4,Error ellipse: s-maj=14.5km s-min=4.4km az=13.0*
ISC 17 08:50:18.3±0.4,**51°.50N**±0°.03×**16°.01E**±0°.02,**h0^{km},n206, σ2^{s}14**/283,**mb4.0**/16,**22C-11D,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.68**	**164**	*i* Pg	**Pg**	**08 50 32.2**	**+0.9**
KSP				*e*Sg	**Sg**	**08 50 41.0**	**+1.0**
KSP	**Ksiaz**	**0.68**	**164**	*e*Pg	**Pg**	**08 50 31.9**	**+0.7**
KSP	**Ksiaz**	**0.68**	**164**	Pg	**Pg**	**08 50 32.1**	**+0.9**
KSP				Sg	**Sg**	**08 50 40.7**	**+0.7**
CHVC	**Chvalec**	**0.91**	**178**	*e*PG	**Pb**	**08 50 36.9**	**-0.1**
CHVC				*e*SG	**Sb**	**08 50 49.2**	**-0.4**
CHVC	**Chvalec**	**0.91**	**178**	Pg	**Pb**	**08 50 36.9**	**-0.1**
CHVC	**Chvalec**	**0.91**	**178**	*e*P	**Pb**	**08 50 36.9**	**-0.1**
CHVC				*e*		08 50 49.2	
OSTC	**Ostas**	**0.95**	**172**	*e*PG	**Pb**	**08 50 37.6**	**-0.1**
OSTC				*e*SG	**Sg**	**08 50 50.1**	**+1.4**
OSTC	**Ostas**	**0.95**	**172**	Pg	**Pb**	**08 50 37.5**	**-0.1**
OSTC	**Ostas**	**0.95**	**172**	*e*P	**Pb**	**08 50 37.6**	**-0.1**
OSTC				*e*		08 50 50.1	
UPC	**Upice**	**0.99**	**180**	*e*PG	**Pb**	**08 50 38.5**	**+0.2**
UPC				*e*SG	**Sn**	**08 50 53.6**	**-0.5**
	comp=Z,551nm,0.5s						
UPC	**Upice**	**0.99**	**180**	Pg	**Pg**	**08 50 38.1**	**+0.9**
UPC	**Upice**	**0.99**	**180**	*e*P	**Pb**	**08 50 38.5**	**+0.2**
UPC				*e*		08 50 53.6	
UPC				smax	smax		
	comp=N,551nm,0.5s						
DPC	**Dobruska-Polom**	**1.16**	**170**	*e*PG	**Pg**	**08 50 41.0**	**+0.4**
DPC				*e*SG	**Sg**	**08 50 56.4**	**+0.8**
DPC	**Dobruska-Polom**	**1.16**	**170**	*e*Pn	**Pg**	**08 50 41.1**	**+0.4**
DPC	**Dobruska-Polom**	**1.16**	**170**	Pg	**Pg**	**08 50 40.9**	**+0.4**
DPC				Sg	**Sb**	**08 50 56.9**	**-0.1**
DPC	**Dobruska-Polom**	**1.16**	**170**	*e*P	**Pg**	**08 50 41.0**	**+0.4**
DPC				*e*		08 50 56.4	
PVCC	**Panska Ves**	**1.33**	**224**	*e*PG	**Pb**	**08 50 45.8**	**+1.7**
PVCC				*e*SG	**Sn**	**08 51 04.7**	**+2.2**
	comp=N,884nm,0.5s						
PVCC	**Panska Ves**	**1.33**	**224**	*e*P	**Pb**	**08 50 45.8**	**+1.7**
PVCC				*e*		08 51 04.7	
PVCC				smax	smax		
	comp=N,884nm,0.5s						
BRG	**Berggiesshubel**	**1.44**	**245**	Pn	**Pb**	**08 50 46.5**	**+0.5**
BRG				Pg	**Pb**	**08 50 48.0**	**+2.0**
BRG				Sg	**Sn**	**08 51 07.9**	**+2.7**
BRG				Amp		08 51 09.6	
	comp=Z,232nm,0.5s						
BRG	**Berggiesshubel**	**1.44**	**245**	*e*Pn	**Pn**	**08 50 46.1**	**+0.5**
BRG				*e*Sg	**Sn**	**08 51 06.8**	**+1.6**
BRG	**Berggiesshubel**	**1.44**	**245**	P	**Pb**	**08 50 47.9**	**+2.0**
BRG						08 51 07.9	
BRG				smax	smax		
	comp=Z,232nm,0.5s						
PRU	**Pruhonice**	**1.77**	**212**	*e*PN	**Pn**	**08 50 51.0**	**+0.8**
PRU				*e*PG	**Pg**	**08 50 53.4**	**+1.1**
PRU				*e*SG	**Sg**	**08 51 17.4**	**+2.2**
	comp=Z,313nm,0.5s						
PRU	**Pruhonice**	**1.77**	**212**	*e*P	**Pn**	**08 50 51.0**	**+0.8**
PRU				*e*		08 51 17.4	
PRU				smax	smax		
	comp=N,313nm,0.5s						
CLL	**Collm**	**1.89**	**265**	*e*Pn	**Pn**	**08 50 53.0**	**+1.2**
CLL				*e*Pg	**Pg**	**08 50 56.0**	**+1.5**
CLL				*e*x	x	08 50 59.0	
CLL				*e*Sg	**Sg**	**08 51 22.0**	**+3.0**
	comp=Z,221nm,0.8s						
CLL				AMS	AMS	09 07 00.0	
	comp=Z,200nm,19.4s						
CLL	**Collm**	**1.89**	**265**	*e*P	**Pn**	**08 50 53.0**	**+1.2**
CLL				*e*		08 51 22.0	
MORC	**Moravsky Berou**	**1.98**	**150**	⇑P	**Pn**	**08 50 51.6**	**-1.5**
MORC				⇓S	**Sb**	**08 51 21.4**	**+1.0**
MORC	**Moravsky Berou**	**1.98**	**150**	*e*Pn	**Pn**	**08 50 52.7**	**-0.4**
MORC				*e*Sg	**Sn**	**08 51 19.2**	**+0.6**
MORC	**Moravsky Berou**	**1.98**	**150**	*e*Pn	**Pn**	**08 50 52.7**	**-0.4**
	baz=335						
MORC				*e*Sg	**Sb**	**08 51 20.7**	**+0.3**
	comp=Z,332nm,1.1s,baz=335						
MORC	**Moravsky Berou**	**1.98**	**150**	P	**Pn**	**08 50 51.6**	**-1.5**
RAC	**Raciborz**	**1.98**	**135**	*e*PG	**Pg**	**08 50 55.9**	**-0.4**
RAC				*e*SG	**Sg**	**08 51 22.3**	**+0.4**
RAC	**Raciborz**	**1.98**	**135**	*e*P	**Pg**	**08 50 55.9**	**-0.4**
RAC				*e*		08 51 22.3	
OKC	**Ostrava-Krasne**	**2.15**	**140**	*e*PG	**Pg**	**08 50 59.8**	**+0.4**
OKC				*e*SG	**Sb**	**08 51 24.9**	**-0.3**
	comp=Z,662nm,1.1s						
OKC	**Ostrava-Krasne**	**2.15**	**140**	*e*P	**Pg**	**08 50 59.8**	**+0.4**
OKC				*e*		08 51 24.9	
OKC				smax	smax		
	comp=N,662nm,1.1s						
VRAC	**Vranov**	**2.22**	**170**	⇓P	**Pn**	**08 50 57.4**	**+1.0**
VRAC	**Vranov**	**2.22**	**170**	Pn	**Pn**	**08 50 56.6**	**+0.2**
	comp=N,6.1nm,0.3s,baz=347,slow=16,SNR=18						
VRAC				Lg	Lg	08 51 28.7	
	comp=N,19nm,0.3s,baz=269,slow=21,SNR=11						
	comp=N,21nm,0.3s						
VRAC	**Vranov**	**2.22**	**170**	*e*Pn	**Pn**	**08 50 56.8**	**+0.4**
	baz=354						
VRAC				*e*Sg	**Sg**	**08 51 29.5**	**-0.1**
	comp=N,306nm,0.9s,baz=354						
VRAC	**Vranov**	**2.22**	**170**	P	**Pn**	**08 50 57.4**	**+1.0**
TREC	**Trest**	**2.23**	**189**	*e*SG	**Sg**	**08 51 30.1**	**+0.3**
MAUC	**Maruska**	**2.43**	**151**	*e*PN	**Pn**	**08 50 59.8**	**+0.5**
MAUC				*e*PG	**Pb**	**08 51 03.8**	**+0.9**
KRUC	**Moravsky**	**2.45**	**174**	*e*PN	**Pn**	**08 51 00.0**	**+0.4**
KRUC				*e*SG	**Sg**	**08 51 37.3**	**+0.3**
KRUC	**Moravsky**	**2.45**	**174**	*e*Pn	**Pn**	**08 50 59.9**	**+0.4**
	baz=357						
KRUC				*e*Sg	**Sg**	**08 51 37.2**	**+0.3**
	comp=N,376nm,1.4s,baz=357						
TANN	**Tannenbergstha**	**2.49**	**246**	*e*Sg	**Sg**	**08 51 39.3**	**+1.1**
NKC	**Novy Kostel**	**2.58**	**242**	*e*PN	**Pn**	**08 51 03.6**	**+2.2**
NKC				*e*PG	**Pg**	**08 51 09.8**	**+2.0**
NKC				*e*SG	**Sg**	**08 51 45.6**	**+4.3**
	comp=N,258nm,0.4s						
NKC	**Novy Kostel**	**2.58**	**242**	*e*P	**Pn**	**08 51 03.6**	**+2.2**
OJC	**Ojcow**	**2.72**	**117**	*e*Pn	**Pn**	**08 51 01.5**	**-1.8**
OJC				*e*Pg	**Pg**	**08 51 09.7**	**-0.7**
OJC				*e*Sg	**Sg**	**08 51 43.8**	**-1.9**
KHC	**Kasperske Hory**	**2.83**	**214**	*e*PN	**Pn**	**08 51 06.0**	**+1.2**
KHC				*e*PG	**Pg**	**08 51 12.4**	**-0.2**
KHC				*e*SN	**Sn**	**08 51 38.0**	**-1.7**
KHC				*e*SG	**Sg**	**08 51 49.7**	**+0.4**
	comp=N,174nm,0.7s						
KHC	**Kasperske Hory**	**2.83**	**214**	*e*P	**Pn**	**08 51 06.0**	**+1.2**
KHC				*e*		08 51 38.0	
KHC				smax	smax		
	comp=N,174nm,0.7s						
JAVC	**Velka Javorina**	**2.85**	**157**	*e*Pn	**Pn**	**08 51 05.0**	**0.0**
	baz=341						
CKRC	**Cesky Krumlov**	**2.89**	**203**	*e*PN	**Pn**	**08 51 07.3**	**+1.7**
CKRC				*e*PG	**Pg**	**08 51 14.2**	**+0.5**
CKRC				*e*SG	**Sg**	**08 51 51.6**	**+0.4**
	comp=N,245nm,0.9s						
CKRC	**Cesky Krumlov**	**2.89**	**203**	*e*P	**Pn**	**08 51 07.3**	**+1.7**
MANZ	**Manzenberg**	**2.90**	**240**	*e*Pn	**Pn**	**08 51 07.6**	**+1.8**
MANZ				*e*Sg	**Sg**	**08 51 51.0**	**-0.4**
ROTZ	**Rotzenmuhle**	**2.97**	**236**	*e*Pn	**Pn**	**08 51 08.2**	**+1.5**
GERES	**GERESS Array B**	**3.04**	**210**	Pn	**Pn**	**08 51 08.1**	**+0.3**
	comp=N,4.1nm,0.3s,baz=32,slow=12,SNR=64						
GERES				Pg	**Pg**	**08 51 16.7**	**+0.2**
	comp=N,16nm,0.3s,baz=31,slow=16,SNR=30						
GERES				Lg	Lg	08 51 55.5	
	comp=N,18nm,0.3s,baz=33,slow=27,SNR=7.7						
	comp=N,11nm,0.5s						
SMOL	**Smolenice**	**3.12**	**162**	*e*P	**Pg**	**08 51 19.1**	**+1.0**
LANS	**Liptovska Anna**	**3.23**	**135**	*e*P	**Pn**	**08 51 10.5**	**+0.2**

LANS	Liptovska Anna	3.23	135	*e*PN	Pn	08 51 10.5	+0.2
LANS				*e*PG	Pg	08 51 20.6	+0.4
LANS				*e*SG	Sg	08 52 02.9	+0.9
MODS	Modra-Piesok	3.23	165	*e*P	Pn	08 51 11.5	+1.2
MODS	Modra-Piesok	3.23	165	*e*PN	Pn	08 51 11.5	+1.2
MODS				*e*PG	Pg	08 51 21.0	+0.8
MODS				*e*SG	Sg	08 52 02.3	+0.3
NIE	Niedzica	3.44	125	*e*P	Pg	08 51 24.0	-0.2
NIE				*e*Sg	Sg	08 52 08.9	+0.1
VYHS	Vyhne	3.52	148	*e*P	Pn	08 51 14.0	-0.2
VYHS	Vyhne	3.52	148	*e*PN	Pn	08 51 14.0	-0.2
VYHS				*e*PG	Pg	08 51 26.7	+1.1
VYHS				*e*SG	Sg	08 52 12.0	+0.8
CONA	Conrad Observa	3.57	182	*i* Pn	Pn	08 51 16.7	+1.7
	comp=N,5.3nm,0.3s,SNR=10						
CONA				*e*Sg	Sg	08 52 13.0	0.0
	comp=N,69nm,0.3s						
BSD	Bornholm Skovb	3.68	350	*i* P	Pn	08 51 16.4	-0.1
BSD				*e*S	Sn	08 51 57.0	-3.5
BSD				IAML		08 52 39.1	
	comp=Z,60nm,1.5s						
RONA	Rosalia, Austr	3.80	177	*e*Pn	Pn	08 51 20.1	+1.9
	comp=Z,2.5nm,0.3s						
RONA				*e*Sg	Sg	08 52 20.1	-0.3
	comp=Z,34nm,0.4s						
MOA	Molln	3.82	198	*i* Pn	Pn	08 51 19.7	+1.3
	comp=Z,15nm,0.4s						
MOA				*e*Sg	Sg	08 52 23.1	+2.1
	comp=Z,103nm,0.5s						
STHS	Stebnicka Huta	3.94	120	*e*P	Pn	08 51 19.1	-0.9
STHS	Stebnicka Huta	3.94	120	*e*PN	Pn	08 51 19.1	-0.9
STHS				*e*PG	Pg	08 51 35.0	+1.2
STHS				*e*SG	Sg	08 52 28.4	+3.6
BIOA	Bad Ischl, Aus	4.11	203	*i* Pn	Pn	08 51 24.7	+2.4
	comp=Z,9.2nm,0.3s,SNR=7.6						
BIOA				*e*Sg	Sg	08 52 33.9	+3.7
	comp=Z,107nm,0.5s						
KECS	Kecovo	4.18	134	*e*SG	Sg	08 52 30.9	-1.5
KECS	Kecovo	4.18	134	*e*PG	Pg	08 51 39.8	+1.5
ARSA	Arzberg	4.26	184	*i* Pn	Pn	08 51 27.7	+3.2
	comp=Z,4.0nm,0.3s						
ARSA				*e*Pg	Pg	08 51 41.6	+1.7
	comp=Z,17nm,0.6s						
ARSA				*i* Sg	Sg	08 52 37.6	+2.5
	comp=Z,115nm,0.8s						
PSZ	Piszkesteto	4.38	143	⇑P	Pn	08 51 22.4	-3.7
PSZ	Piszkesteto	4.38	143	P	Pn	08 51 22.4	-3.7
LUNU	Lund	4.42	341	*e*P	Pn	08 51 26.3	-0.2
LUNU				*e*S	Sn	08 52 17.1	-1.4
KBA	Koelnbreinsper	4.75	203	*i* Pn	Pn	08 51 33.0	+1.7
	comp=Z,11nm,0.5s,SNR=22						
KBA				*e*Sg	Sg	08 52 54.0	+3.1
	comp=Z,76nm,1.0s						
BLEU	Blekinge	4.82	359	*e*P	Pn	08 51 32.3	+0.2
BLEU				*e*S	Sn	08 52 25.2	-3.3
BJUU	Bjuv	4.92	340	*e*P	Pn	08 51 32.8	-0.6
BJUU				*e*S	Sn	08 52 27.8	-3.0
WATA	Walderalm	5.07	216	*i* Pn	Pn	08 51 38.2	+2.6
	comp=Z,17nm,0.5s,SNR=6.1						
OBKA	Obir	5.08	191	*e*Pn	Pn	08 51 38.5	+2.8
	comp=Z,2.3nm,0.3s						
OBKA				*e*Sg	Sg	08 53 04.9	+3.5
	comp=Z,127nm,1.0s						
WTTA	Wattenberg	5.11	216	*e*Pn	Pn	08 51 39.0	+2.8
	comp=Z,9.3nm,0.4s,SNR=6.6						
WTTA				*e*Sg	Sg	08 53 06.1	+3.8
	comp=Z,32nm,0.5s						
MYKA	Terra Mystica	5.11	199	*e*Pn	Pb	08 51 49.5	+1.0
	comp=Z,4.2nm,0.4s						
MYKA				*e*Sg	Sg	08 53 04.9	+2.5
	comp=Z,56nm,0.9s						
DEL	Delary	5.14	347	*i* P	Pn	08 51 35.7	-0.8
DEL				*e*S	Sn	08 52 33.1	-3.4
MOTA	Moosalm	5.24	220	*i* Pn	Pn	08 51 40.1	+2.0
	comp=Z,6.5nm,0.4s,SNR=6.6						
MOTA				*i* Sn	Sn	08 52 40.8	+1.5
	comp=Z,6.0nm,0.3s						
RETA	Reutte	5.27	222	*i* Pn	Pn	08 51 39.5	+1.2
	comp=Z,3.7nm,0.3s,SNR=5.9						
RETA				*e*Sg	Sg	08 53 12.7	+5.2
	comp=Z,32nm,0.6s						
ABTA	Abfaltersbach	5.28	207	*e*Pn	Pn	08 51 41.0	+2.6
	comp=Z,2.0nm,0.2s,SNR=9.7						
ABTA				*e*Sg	Sg	08 53 09.2	+1.5
	comp=Z,37nm,0.6s						
SQTA	Sankt Quirin	5.30	218	*e*Pn	Pn	08 51 41.7	+2.9
	comp=Z,9.0nm,0.3s,SNR=5.4						
SQTA				*e*Sg	Sg	08 53 11.7	+3.1
	comp=Z,63nm,0.7s						
LVV	L'vov	5.37	105	*e*P	Pn	08 51 42.3	+2.6
LVV				*e*S	Sn	08 52 41.3	-0.9
LVV				MLR	MLR		
	comp=E,2µm,6.0s						
LVV				MLR	MLR		
	comp=N,1µm,5.6s						
LVV				MLR	MLR		
	comp=Z,1µm,5.3s						
TRPA	Tarpa	5.41	126	⇑P	Pn	08 51 34.6	-5.5
MORH	Mrgy, Hungar	5.56	161	⇑P	Pn	08 51 42.3	0.0
FETA	Feichten	5.65	220	*i* Pn	Pn	08 51 46.0	+2.3
	comp=Z,684nm,0.0s,SNR=5.6						
FETA				*e*Sg	Sg	08 53 22.0	+2.1
	comp=Z,37nm,0.8s						
DAVA	Damuels	5.81	226	*i* Pn	Pn	08 51 47.9	+2.1
	comp=Z,2.6nm,0.2s						
DAVOX	Davos/Dischmat	6.20	223	Pn	Pn	08 51 51.2	0.0
	comp=Z,1.0nm,0.3s,baz=45,slow=14,SNR=9.8						
DAVOX				Lg	Lg	08 53 35.0	
	comp=Z,0.9nm,0.3s,baz=6.3,slow=9.7,SNR=6.5						
	comp=Z,3.7nm,0.4s						
CDF	Champ du Feu	6.42	245	*e*Pn	Pn	08 51 54.4	+0.2
CDF	Champ du Feu	6.42	245	*e*Pg	Pg	08 52 20.3	-1.0
CDF				*e*Sn	Sn	08 53 05.6	-2.6
CDF				*e*Sg	Sg	08 53 44.1	-0.4
	comp=Z,3.5nm,0.3s						
SIRR	Siria	6.42	142	⇑P	Pn	08 51 49.9	-4.2
DRGR		6.44	134	⇑P	Pn	08 51 49.9	-4.5
DRGR		6.44	134	P	Pn	08 51 49.9	-4.5
MARR	Marisel-Cluj	6.71	133	⇑P	Pn	08 51 53.6	-4.6
BZS	Buzias	6.96	146	⇓P	Pn	08 51 58.3	-3.2
BZS	Buzias	6.96	146	P	Pn	08 51 58.2	-3.2
HINF	Hinteralfeld	6.99	242	*e*Pn	Pn	08 52 01.9	0.0
HINF	Hinteralfeld	6.99	242	*e*Pg	Pg	08 52 30.9	-1.2
HINF				*e*Sn	Sn	08 53 18.6	-3.5
HINF				*e*Sg	Sg	08 54 02.0	-0.6
	comp=Z,240nm,1.6s						
BURAR	Bucovina Array	7.14	119	⇑P	Pn	08 51 56.4	-7.6
BURAR	Bucovina Array	7.14	119	P	Pn	08 51 56.4	-7.6
HAU	Haudompre	7.17	245	*e*Pn	Pn	08 52 04.4	+0.1
HAU	Haudompre	7.17	245	*e*Pg	Pg	08 52 33.9	-1.6
HAU				*e*Sn	Sn	08 53 22.9	-3.5
HAU				*e*Sg	Sg	08 54 07.4	-0.9
	comp=Z,192nm,1.3s						
GIVF	Givet	7.22	263	*e*Pn	Pn	08 52 04.9	-0.2
GIVF				*e*Sg	Sg	08 54 08.5	-1.7
	comp=Z,244nm,1.6s						
PAGF	Fort de Pagny	7.25	250	*e*Pn	Pn	08 52 07.0	+1.6
	baz=72						
PAGF				*e*Sn	Sn	08 53 25.3	-3.0
PAGF				*e*Sg	Sg	08 54 09.8	-1.1
	comp=Z,638nm,1.7s						
NACGM	Naroch	7.32	58	*e*P	Pn	08 52 08.7	+2.3
MI28	Mi28,Pidlybu	7.35	90	Pn	Pn	08 52 05.6	-1.2
SAVF	Savonnieres en	7.58	252	*e*Pn	Pn	08 52 12.1	+2.2
	baz=71						
SAVF	Savonnieres en	7.58	252	*e*Pg	Pg	08 52 42.5	-0.8
	baz=70						
SAVF				*e*Sn	Sn	08 53 33.3	-3.1
	comp=Z,4.6nm,0.3s						
SAVF				*e*Sg	Sg	08 54 19.9	-1.5
	comp=Z,246nm,1.5s						
GZR	Gura Zlata	7.58	141	⇑P	Pn	08 52 05.7	-4.4
GZR	Gura Zlata	7.58	141	P	Pn	08 52 05.6	-4.4
BAIF	Baives	7.62	264	*e*Pn	Pn	08 52 10.0	-0.5
BAIF	Baives	7.62	264	*e*Pg	Pg	08 52 42.2	-2.0
BAIF				*e*Sn	Sn	08 53 33.9	-3.5
BAIF				*e*Sg	Sg	08 54 21.0	-1.8
	comp=Z,92nm,0.9s						
LUBAR	Lubar, Ukraine	7.63	97	Pn	Pn	08 52 09.5	-1.1
MEZF	Maizieres J'vi	7.67	251	*e*Pn	Pn	08 52 11.3	+0.1
MEZF				*e*Sg	Sg	08 54 22.6	-1.8
	comp=Z,28nm,0.9s						
MDVR	Moldovita	7.72	148	⇑P	Pn	08 52 08.7	-3.3
MNK	Minsk	7.77	63	*i* P	Pn	08 52 14.4	+1.8
	comp=E,3.0nm,1.5s						
MNK				*i* P	Pn	08 52 14.4	+1.8
	comp=N,32nm,1.1s						
MNK				*i* P	Pn	08 52 14.4	+1.8
	comp=Z,8.0nm,1.1s,baz=250						
MNK				*i* PP	PnPn	08 52 22.3	+2.5
MNK				*i* S	Sn	08 53 43.7	+2.4
MNK				*i* SS	SnSn	08 53 57.1	+4.9
MNK				*i* LQ	LQ	08 54 27.9	
MNK				*i* LR	LR	08 55 00.5	
MNK				*i* LRM	MLR	08 55 44.2	
	comp=N,505nm,17.5s						
MNK				*i* LRM	MLR	08 55 46.3	
	comp=Z,58nm,8.7s						
MNK				*i* LRM	MLR	08 55 47.9	
	comp=E,60nm,17.9s						
MNK	Minsk	7.77	63	*i* P	Pn	08 52 14.4	+1.8
MNK				*i* S	Sn	08 53 43.6	+2.4
MNK				pmax	pmax		
	comp=E,3.0nm,1.5s						
MNK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MNK				pmax	pmax		
	comp=N,32nm,1.1s						
MNK				MLR	MLR		
	comp=N,505nm,18.0s						
MNK				MLR	MLR		
	comp=Z,58nm,9.0s						
MNK				MLR	MLR		
	comp=E,60nm,18.0s						
SFTF	Sexfontaines	7.82	249	*e*Pn	Pn	08 52 15.3	+2.1
SFTF				*e*Sn	Sn	08 53 38.6	-3.8
SFTF				*e*Sg	Sg	08 54 25.7	-3.4
	comp=E,66nm,1.3s						
HERR	Herculane	7.88	145	⇑P	Pn	08 52 10.7	-3.4
LOT	Lotru	7.95	137	⇑P	Pn	08 52 10.7	-4.4
CABF	La Chapelle	8.14	237	*e*Pn	Pn	08 52 17.6	-0.2
CABF	La Chapelle	8.14	237	*e*Pg	Pg	08 52 51.9	-2.3
CABF				*e*Sg	Sg	08 54 37.9	-1.7
	comp=E,291nm,1.5s						
AK13	Malin Array Si	8.28	91	Pn	Pn	08 52 18.1	-1.4
AK14	Malin Array Si	8.30	91	Pn	Pn	08 52 18.4	-1.4
AK11	Malin Array Si	8.33	90	Pn	Pn	08 52 19.2	-1.0
AK03	Malin Array Si	8.36	90	Pn	Pn	08 52 19.6	-1.0
AK01	Malin Array Si	8.36	90	Pn	Pn	08 52 19.4	-1.2
AK02	Malin Array Si	8.36	91	Pn	Pn	08 52 19.4	-1.2
AK02				pP	Pn	08 52 20.7	+0.1
AK02				sP	Pn	08 52 21.4	+0.8
AKASG	Malin Array Be	8.36	90	Pn	Pn	08 52 18.5	-2.1
	comp=E,2.6nm,0.3s,baz=278,slow=12,SNR=24						
AKASG				Sn	Sn	08 53 48.8	-6.8
	comp=E,1.3nm,0.3s,baz=277,slow=23,SNR=4.9						
	comp=E,4.4nm,0.5s						
AKBB	Malin Array Si	8.36	90	Pn	Pn	08 52 19.5	-1.2
AKBB	Malin Array Si	8.36	90	⇑*e*P	Pn	08 52 19.4	-1.2
AK05	Malin Array Si	8.36	91	Pn	Pn	08 52 19.9	-0.8
AK06	Malin Array Si	8.37	91	Pn	Pn	08 52 19.7	-1.0
AK07	Malin Array Si	8.38	91	Pn	Pn	08 52 19.8	-1.1
AK10	Malin Array Si	8.40	91	Pn	Pn	08 52 20.3	-0.8
AK10				pP	Pn	08 52 21.1	0.0
AK10				sP	Pn	08 52 22.0	+0.9
VOIR		8.53	132	⇑P	Pn	08 52 17.5	-5.6
VOIR		8.53	132	P	Pn	08 52 17.4	-5.7
LPL	La Plagne	8.58	229	*e*Pn	Pn	08 52 24.2	+0.3
LPL	La Plagne	8.58	229	*e*Pg	Pg	08 53 00.1	-2.5
LPL				*e*Sg	Sg	08 54 51.8	-1.9
	comp=E,163nm,1.5s						
SORM	Soroca	8.66	108	⇓P	Pn	08 52 15.6	-9.2
SORM	Soroca	8.66	108	P	Pn	08 52 15.5	-9.3
HFS	Hagfors	8.76	352	Pn	Pn	08 52 24.4	-1.7
	comp=E,0.3nm,0.3s,baz=162,slow=15,SNR=6.8						
HFS				Sn	Sn	08 54 00.5	-4.8
	comp=E,0.5nm,0.3s,baz=173,slow=26,SNR=2.1						
	comp=E,6.3nm,1.0s						
MLR	Muntele Rosu	8.92	128	⇓P	Pn	08 52 23.2	-5.2
MLR	Muntele Rosu	8.92	128	P	Pn	08 52 23.2	-5.3
LOR	Lormes	8.98	247	*e*Pn	Pn	08 52 29.1	-0.1
	baz=70						
LOR				*e*Sn	Sn	08 54 06.3	-4.7
LOR				*e*Sg	Sg	08 55 03.6	-2.8
	comp=E,149nm,1.5s						
PLOR	Plostina	9.02	125	⇓P	Pn	08 52 23.2	-6.6
PLOR	Plostina	9.02	125	P	Pn	08 52 23.1	-6.7
MBDF	Montbardon	9.16	226	*e*Pn	Pn	08 52 31.8	0.0
MBDF				*e*Sg	Sn	08 55 09.7	+54
	comp=E,92nm,1.6s						
SSF	Saint Saulge	9.29	246	*e*Pn	Pn	08 52 35.4	+1.9
SSF				*e*Sn	Sn	08 54 13.6	-5.1
SSF				*e*Sg		08 55 12.9	
	comp=E,178nm,1.7s						
SMF	Signal de Mont	9.34	243	*e*Pn	Pn	08 52 33.8	-0.3
SMF				*e*Sg	Sn	08 55 15.2	+55
	comp=E,37nm,0.9s						
ORIF	Oris-en-Rattie	9.43	230	*e*Pn	Pn	08 52 35.2	-0.2
ORIF				*e*Sn	Sn	08 54 17.2	-4.9
ORIF				*e*Sg		08 55 18.1	
	comp=E,190nm,1.8s						
AVF	Avril sur Loir	9.53	245	*e*Pn	Pn	08 52 36.6	-0.1
AVF	Avril sur Loir	9.53	245	*e*Pg	Pn	08 53 17.6	+41
AVF				*e*Sg	Sn	08 55 21.1	+57
	comp=E,118nm,1.5s						
SBF	Sospel	9.57	220	*e*Pn	Pn	08 52 37.0	-0.3
SBF				*e*Sg	Sn	08 55 22.0	+56
	comp=E,15nm,0.7s						
NOA	NORSAR Array B	9.93	346	Pn	Pn	08 52 39.9	-2.2
	baz=164,slow=12,SNR=2.8						
	comp=E,0.7nm,0.8s						
BGF	Bois d'Agland	9.95	245	*e*Pn	Pn	08 52 42.6	+0.1
BGF	Bois d'Agland	9.95	245	*e*Pg	Pn	08 53 26.7	+44
BGF				*e*Sg	Sn	08 55 32.5	+58
	comp=E,120nm,1.3s						
VIVF	Saint-Julien-l	10.06	233	*e*Pn	Pn	08 52 44.2	+0.2
VIVF	Saint-Julien-l	10.06	233	*e*Pg	Pn	08 53 27.3	+43
VIVF				*e*Sg	Sn	08 55 37.5	+60
	comp=E,91nm,1.5s						
CFR	Carcaliu	10.25	123	⇑P	Pn	08 52 39.4	-7.1
CFR	Carcaliu	10.25	123	P	Pn	08 52 39.3	-7.2
SMRF	Simiane la Rot	10.29	227	*e*Sg	Sn	08 55 40.0	+57
	comp=E,160nm,2.0s						
TCF	Toulx Ste Croi	10.47	246	*e*Pn	Pn	08 52 49.4	-0.2
TCF	Toulx Ste Croi	10.47	246	*e*Pg	Pn	08 53 34.6	+45
TCF				*e*Sn	Sn	08 54 41.6	-5.9
TCF				*e*Sg		08 55 50.3	
	comp=E,108nm,1.7s						
FLN	La Foliniere	10.93	262	*e*Sg		08 56 04.2	
	comp=E,137nm,1.6s						
LASF	Ste Croix	11.03	232	*e*Sg		08 56 04.4	
	comp=E,66nm,1.6s						
CAF	Calviac	11.38	240	*e*Sg		08 56 17.2	
	comp=E,145nm,2.1s						
FINES	FINESS Array B	11.40	25	Pn	Pn	08 52 58.3	-4.0
	comp=E,0.3nm,0.3s,baz=204,slow=9.8,SNR=7.6						
FINES				Sn	Sn	08 54 58.7	-11
	comp=E,0.2nm,0.3s,baz=203,slow=21,SNR=1.9						
	comp=E,2.6nm,0.6s						
RJF	Les Rejaudoux	11.44	243	*e*Sg		08 56 19.7	
	comp=E,85nm,1.5s						
EKA	Eskdalemuir Ar	12.05	296	Pn	Pn	08 53 10.6	-0.6
	baz=110,slow=14						
	comp=E,0.5nm,0.3s						
MTLF	Montolieu	12.38	234	*e*Sg		08 56 46.8	
	comp=E,111nm,2.1s						
OBN	Obninsk	12.81	66	*e*P	Pn	08 53 23.0	+1.6
OBN				pmax	pmax		
	comp=Z,104nm,3.8s						
OBN				MLR	MLR		
	comp=Z,148nm,6.0s						
LPSR	Galich'ya Gora	14.14	77	*e*P	P	08 53 44.6	-2.9
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VORR	Voronezh	14.42	80	*e*P	Pn	08 53 38.5	-4.9
VORR				pmax	pmax		
	comp=Z,30nm,1.7s						
VSR	Storozhevoye	14.46	82	*e*P	Pn	08 53 36.8	-7.3
VSR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ANN	Anapa	15.76	107	*e*P	Pn	08 53 56.8	-4.6
ANN				*e*S	Sn	08 56 49.6	-7.0
ANN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
VRH	Novokhopyorsk	16.05	81	*e*P	Pn	08 53 58.5	-6.6
VRH				pmax	pmax		
	comp=Z,40nm,1.6s						
ARCES	ARCESS Array B	18.65	10	P	P	08 54 33.9	-3.4
	comp=Z,1.9nm,0.7s,baz=198,slow=11,SNR=12						
BELG	Belogornoye	19.44	75	⇓*e*P	Pn	08 54 47.1	0.0
BELG				pmax	pmax		
	comp=Z,29nm,5.6s						
NCK	Nalchik	20.19	102	⇑*e*P	P	08 54 53.7	-0.7
NCK				pmax	pmax		
	comp=Z,16nm,0.3s						
GNI	Garni	22.86	108	⇓*e*P	P	08 55 24.5	+1.2
GNI				pmax	pmax		
	comp=Z,22nm,1.7s						
ARU	Arti	25.20	62	P	P	08 55 44.7	-0.6
	comp=Z,4.7nm,0.2s,baz=264,slow=10,SNR=4.7						
	comp=Z,4.7nm,0.2s						
ARU	Arti	25.20	62	*c* *i*P	P	08 55 46.7	+1.4
ARU				S	S	09 00 14.4	+3.1
ARU				SS	SnSn	09 01 06.7	+6.2
ARU				pmax	pmax		
	comp=Z,11nm,1.1s						
AKTO	Aktyubinsk	26.22	76	P	P	08 55 53.9	-0.7
	comp=Z,1.7nm,0.6s,baz=281,slow=9.7,SNR=3.7						
	comp=Z,1.7nm,0.6s						
BRVK	Borovoye	32.58	65	⇓*e*P	P	08 56 52.9	+1.9
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KURK	Kurchatov	38.25	66	⇓*e*P	P	08 57 40.6	+0.8
AAK	Ala-Archa	39.84	79	⇑*e*P	P	08 57 54.2	+0.8
AAK				pmax	pmax		
	comp=Z,8.0nm,1.7s						
TORD	Torodi Ar. Bea	39.96	202	P	P	08 57 55.5	+1.1
	comp=Z,1.2nm,0.8s,baz=16,slow=8.1,SNR=6.9						
	comp=Z,1.2nm,0.8s						
ZALV	Zalesovo Beam	40.26	59	P	P	08 57 56.8	+0.3
	comp=Z,0.5nm,0.4s,baz=291,slow=8.9,SNR=4.3						
	comp=Z,0.5nm,0.4s						
ZALV	Zalesovo Beam	40.26	59	*i* P	P	08 57 58.0	+1.5
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	42.28	69	P	P	08 58 13.8	+0.5
	comp=Z,0.5nm,0.8s,baz=328,slow=5.1,SNR=4.7						
	comp=Z,0.5nm,0.8s						
MKAR	Makanchi Array	42.28	69	*c**e*P	P	08 58 14.1	+0.8
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
DGZ	Jazzator, Alta	43.71	63	⇑*i*P	P	08 58 27.6	+2.7
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.6s						
SONM	Songino Array	54.98	55	P	P	08 59 53.2	+2.1
	comp=Z,0.8nm,0.9s,baz=290,slow=5.8,SNR=6.6						
	comp=Z,0.8nm,0.9s						
ULN	Ulaanbaatar	55.29	55	⇓*e*P	P	08 59 55.8	+2.4
ULN				pmax	pmax		
	comp=Z,4.0nm,1.7s						
BILL	Bilibino	58.73	13	*e*P	P	09 00 18.8	+1.5
BILL				*e*		09 01 11.0	
BILL				*e*		09 02 29.7	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.5s						
BILL				MLR	MLR		
	comp=Z,36nm,16.0s						
YKA	Yellowknife Ar	59.84	336	P	P	09 00 26.3	+1.3
	comp=Z,0.8nm,0.7s,baz=31,slow=6.5,SNR=13						
	comp=Z,0.8nm,0.7s						
KLR	Kul'dur	65.71	40	⇑*e*P	P	09 01 04.9	+0.6
KLR				pmax	pmax		
	comp=Z,5.0nm,1.4s						
CMAR	Chiang Mai Arr	71.42	84	P	P	09 01 41.9	+1.5
	comp=Z,0.7nm,0.4s,baz=318,slow=6.6,SNR=1.2						
	comp=Z,0.7nm,0.4s						
PDAR	Pinedale Array	74.91	322	P	P	09 02 02.0	+0.9
	comp=Z,0.4nm,0.6s,baz=67,slow=4.5,SNR=5.1						
	comp=Z,0.4nm,0.6s						
ANMO	Albuquerque	80.25	315	⇑*e*P	P	09 02 34.3	+3.4
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.6s						
TXAR	Lajitas Array	83.67	310	P	P	09 02 51.2	+2.2
	comp=Z,0.2nm,0.7s,baz=49,slow=2.7,SNR=2.5						
	comp=Z,0.2nm,0.7s						

IDC 17 08:51:07.9±60.0, 23°.52S×175°.40W, h0^{km}, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=1115.0km s-min=179.2km az=88.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.77	248	P	P	08 58 32.7	-1.6
	0.9nm,0.6s,baz=107,slow=11,SNR=3.7						
	0.9nm,0.6s						
ASAR	Alice Springs	46.25	259	P	P	08 59 35.5	+0.1
	0.9nm,0.6s,baz=97,slow=7.7,SNR=20						
	0.9nm,0.6s						
WRA	Warramunga Arr	46.64	264	P	P	08 59 39.0	+0.6
	0.7nm,0.3s,baz=100,slow=7.1,SNR=27						
	0.7nm,0.3s						

ROM 17 09:11:40.0±0.0, 42°.824N±0°.002×13°.167E±0°.003, h13^{km}, ML1.6/14, Error ellipse: s-maj=0.3km s-min=0.0km az=245.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	Castelsantange	0.04	25	P	Pg	09 11 42.7	+0.2
T1245				S	Sg	09 11 44.4	0.0
T1245				AML	AML		
	comp=N,1091µm,1.1s						
T1245				AML	AML		
	comp=E,780µm,0.1s						
T1245				AML	AML		
	comp=N,1000µm,0.2s						
T1245				AML	AML		
	comp=N,1092µm,1.1s						
T1245				AML	AML		
	comp=E,722µm,0.2s						
T1245				AML	AML		
	comp=N,1092µm,0.9s						
T1214	Arquata del Tr	0.07	154	P	Pg	09 11 43.0	+0.2
T1214				S	Sg	09 11 45.2	+0.4
T1214				AML	AML		
	comp=E,898µm,1.1s						
T1214				AML	AML		
	comp=N,814µm,0.5s						
MC2	Monte Cornacci	0.09	11	P	Pg	09 11 43.2	+0.2
MC2				S	Sg	09 11 45.7	+0.4
T1212	Cascia, Frazio	0.12	231	P	Pg	09 11 43.6	+0.4
T1212				S	Sg	09 11 45.9	+0.4
T1212				AML	AML		
	comp=E,247µm,0.2s						
T1212				AML	AML		
	comp=N,225µm,1.0s						
T1212				AML	AML		
	comp=N,226µm,1.0s						
T1212				AML	AML		
	comp=E,246µm,0.2s						
T1216	Preci, Frazion	0.13	302	P	Pg	09 11 43.6	+0.3
T1216				S	Sg	09 11 46.0	+0.3
T1216				AML	AML		
	comp=E,481µm,0.6s						
T1216				AML	AML		
	comp=N,500µm,0.2s						
MMO1	Montemonaco	0.14	57	P	Pg	09 11 43.9	+0.3
MMO1				S	Sg	09 11 46.5	+0.4
T1218	Civita (PG)	0.16	194	P	Pg	09 11 44.3	+0.4
T1218				S	Sg	09 11 47.2	+0.7
T1218				AML	AML		
	comp=E,574µm,0.2s						
T1218				AML	AML		
	comp=N,600µm,0.4s						
T1218				AML	AML		
	comp=N,580µm,0.4s						
T1218				AML	AML		
	comp=E,575µm,0.2s						
T1218				AML	AML		
	comp=E,626µm,0.2s						
T1218				AML	AML		
	comp=N,600µm,0.4s						
T1256	Bolognola (MC)	0.19	13	P	Pg	09 11 44.6	+0.2
T1256				S	Sg	09 11 47.9	+0.5
T1241	Roccafluvione,	0.20	80	P	Pg	09 11 44.9	+0.5
T1241				S	Sg	09 11 48.3	+0.8
T1241				AML	AML		
	comp=N,231µm,0.5s						
T1241				AML	AML		
	comp=E,179µm,0.2s						
T1217	Poggiodomo (PG	0.21	237	P	Pg	09 11 44.9	+0.3
T1217				S	Sb	09 11 48.7	-0.9
T1217				AML	AML		
	comp=N,125µm,1.5s						
T1217				AML	AML		

	comp=E,114µm,0.7s						
T1217				AML	AML		
	comp=N,125µm,0.5s						
FDMO	**Fiordimonte**	0.22	345	P	Pg	09 11 45.0	+0.2
FDMO				S	Sg	09 11 48.8	+0.7
FDMO				AML	AML		
	comp=E,125µm,0.6s						
FDMO				AML	AML		
	comp=N,194µm,1.1s						
FDMO				AML	AML		
	comp=E,125µm,1.4s						
SMA1	**SAN MARTINO**	0.23	147	P	Pg	09 11 45.1	+0.1
SMA1				S	Sg	09 11 49.2	+0.8
SMA1				AML	AML		
	comp=N,186µm,0.2s						
SMA1				AML	AML		
	comp=E,156µm,0.9s						
SMA1				AML	AML		
	comp=N,186µm,1.8s						
CESI	**CESI - Serrava**	0.26	313	P	Pg	09 11 45.9	+0.3
CESI				S	Sg	09 11 50.3	+0.9
CESI				AML	AML		
	comp=E,112µm,1.1s						
CESI				AML	AML		
	comp=N,182µm,0.3s						
CESI				AML	AML		
	comp=E,112µm,0.9s						
T1220	**Camerino, Fraz**	0.29	349	P	Pg	09 11 46.4	+0.3
T1220				S	Sb	09 11 51.3	-0.7
T1220				AML	AML		
	comp=E,430µm,0.6s						
T1220				AML	AML		
	comp=N,505µm,0.3s						
RM33	**Pellescritta (**	0.32	174	P	Pg	09 11 46.9	+0.4
RM33				S	Sb	09 11 52.0	-0.8
RM33				AML	AML		
	comp=E,130µm,0.2s						
RM33				AML	AML		
	comp=N,116µm,0.4s						
RM33				AML	AML		
	comp=E,130µm,1.8s						
T1211	**Morro Reatino**	0.37	218	P	Pg	09 11 47.4	-0.1
T1211				S	Sb	09 11 53.9	-0.3
TERO	**Teramo**	0.38	122	P	Pg	09 11 47.7	0.0
TERO				S	Sb	09 11 53.9	-0.6
TERO				AML	AML		
	comp=N,92µm,0.1s						
TERO				AML	AML		
	comp=E,71µm,0.6s						
OFFI	**Offida**	0.40	74	AML	AML		
	comp=E,122µm,1.4s						
OFFI				AML	AML		
	comp=E,122µm,0.6s						
OFFI				AML	AML		
	comp=N,198µm,0.6s						
ASSB	**Assisi San Ben**	0.43	301	P	Pg	09 11 48.9	+0.2
ASSB				S	Sb	09 11 55.5	-0.5
GIGS	**Gran Sasso**	0.48	141	P	Pg	09 11 49.5	+0.1
GIGS				S	Sg	09 11 56.5	+0.7
EL6	**Elcito**	0.51	355	P	Pg	09 11 50.4	+0.4
EL6				S	Sb	09 11 58.1	-0.2

ROM 17 09:12:25.4±0.1, 42°.882N±0°.002×13°.022E±0°.004, h10^{km}, ML1.2/2, Error ellipse: s-maj=0.3km s-min=0.2km az=78.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	0.01	344	P	Pg	09 12 27.6	+0.4
T1216				S	Sg	09 12 28.8	+0.2
T1216				AML	AML		
	comp=E,514µm,0.3s						
T1216				AML	AML		
	comp=N,372µm,1.1s						
MC2	**Monte Cornacci**	0.13	76	P	Pg	09 12 29.1	+0.5
MC2				S	Sg	09 12 31.8	+0.9
T1212	**Cascia, Frazio**	0.13	173	P	Pg	09 12 29.2	+0.6
T1212				S	Sg	09 12 31.4	+0.6
T1212				AML	AML		
	comp=E,104µm,0.2s						
T1212				AML	AML		
	comp=N,102µm,1.0s						
T1212				AML	AML		
	comp=E,104µm,0.2s						
T1212				AML	AML		
	comp=N,103µm,1.0s						
CESI	**CESI - Serrava**	0.15	325	P	Pg	09 12 29.4	+0.6
CESI				S	Sg	09 12 32.2	+1.0
CESI				AML	AML		
	comp=N,81µm,0.3s						
CESI				AML	AML		
	comp=E,48µm,0.4s						
FDMO	**Fiordimonte**	0.16	17	P	Pg	09 12 29.6	+0.6
FDMO				S	Sg	09 12 32.4	+0.9
FDMO				AML	AML		
	comp=E,120µm,0.4s						
FDMO				AML	AML		
	comp=N,56µm,0.3s						
FDMO				AML	AML		
	comp=E,120µm,0.4s						
FDMO				AML	AML		
	comp=N,56µm,0.3s						
T1219	**Muccia, Frazio**	0.17	356	P	Pg	09 12 29.7	+0.5
T1219				S	Sg	09 12 32.7	+0.8
T1217	**Poggiodomo (PG**	0.18	202	P	Pg	09 12 29.9	+0.6
T1217				S	Sg	09 12 33.1	+1.0
T1214	**Arquata del Tr**	0.18	132	P	Pg	09 12 29.9	+0.5
T1214				S	Sg	09 12 33.0	+0.8
T1256	**Bolognola (MC)**	0.19	50	P	Pg	09 12 30.1	+0.5
T1256				S	Sg	09 12 33.7	+1.2
T1256				AML	AML		
	comp=E,134µm,0.6s						
T1256				AML	AML		
	comp=N,89µm,1.0s						
T1256				AML	AML		
	comp=N,89µm,1.0s						
T1256				AML	AML		
	comp=E,134µm,1.4s						
T1218	**Civita (PG)**	0.22	162	P	Pg	09 12 30.4	+0.4
T1218				S	Sg	09 12 34.6	+1.4
MMO1	**Montemonaco**	0.22	86	P	Pg	09 12 30.6	+0.5
MMO1				S	Sg	09 12 34.4	+1.1
T1241	**Roccafluvione,**	0.30	95	P	Pn	09 12 34.4	-1.4
ASSB	**Assisi San Ben**	0.31	301	P	Pg	09 12 32.2	+0.5
ASSB				S	Sg	09 12 36.9	+1.1
T1211	**Morro Reatino**	0.37	200	P	Pb	09 12 33.7	-0.3
T1211				S	Sb	09 12 39.0	-0.8

ROM 17 09:13:10.2±0.1, 42°.695N±0°.003×13°.26E±0°.01, h10^{km}, ML0.5/4, 1C, Error ellipse: s-maj=0.9km s-min=0.3km az=280.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	0.07	331	P	Pg	09 13 12.9	+0.3
T1214				S	Sg	09 13 14.9	+0.5
T1214				AML	AML		
	comp=E,48µm,0.2s						
T1214				AML	AML		
	comp=N,20µm,0.2s						
T1218	**Civita (PG)**	0.11	257	P	Pg	09 13 13.2	+0.3
T1218				S	Sg	09 13 15.3	+0.4
T1218				AML	AML		
	comp=N,60µm,0.2s						
T1218				AML	AML		
	comp=E,39µm,0.2s						
T1218				AML	AML		
	comp=N,59µm,0.1s						
RM33	**Pellescritta (**	0.19	190	P	Pg	09 13 14.8	+0.6
RM33				S	Sg	09 13 18.2	+1.2
RM33				AML	AML		
	comp=N,34µm,1.0s						
RM33				AML	AML		
	comp=E,33µm,0.6s						
RM33				AML	AML		
	comp=N,28µm,0.3s						
RM33				AML	AML		
	comp=E,15µm,0.2s						
MMO1	**Montemonaco**	0.21	14	P	Pg	09 13 15.1	+0.5
MMO1				S	Sg	09 13 18.8	+1.2
MC2	**Monte Cornacci**	0.22	347	P	Pg	09 13 15.8	+0.8
MC2				S	Sg	09 13 19.3	+1.2
TERO	**Teramo**	0.27	106	P	Pb	09 13 16.4	-0.7
TERO				S	Sb	09 13 20.6	-1.1
TERO				AML	AML		
	comp=E,7µm,0.4s						
TERO				AML	AML		
	comp=N,17µm,0.2s						
PP3	**Marolino**	0.73	21	⇑P	Pg	09 13 21.6	-2.6
PP3				AML	AML		
	comp=E,390µm,0.5s						
PP3				AML	AML		
	comp=N,562µm,0.7s						
PP3				AML	AML		
	comp=E,304µm,0.5s						
PP3				AML	AML		
	comp=N,324µm,0.1s						

WEL 17 09:13:27.6±0.3, 43°S±2°×17°3E±°, h13^{km}±3^{km}, M3.4/18, ML3.6/18, MLv3.4/18, Error ellipse: s-maj=0.0km s-min=0.0km az=118.0, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	**Greta Valley S**	0.33	181	P	Pb	09 13 35.7	+0.4
GVZ				S	Sb	09 13 42.0	+1.4
KHZ	**Kahutara**	0.43	60	P	Pb	09 13 36.6	-0.4
KHZ				S	Sb	09 13 43.2	-0.1
LTZ	**Lake Taylor**	0.58	255	P	Pg	09 13 39.3	+0.3
LTZ				S	Sb	09 13 47.7	-0.2
AMCZ	**Amberley**	0.61	208	P	Pb	09 13 41.0	+0.9
AMCZ				S	Sn	09 13 50.6	-1.0
THZ	**Tophouse**	0.88	353	P	Pg	09 13 44.0	-0.6
THZ				S	Sg	09 13 55.3	-0.7
OXZ	**Oxford**	1.01	226	P	Pb	09 13 46.7	-0.2
OXZ				S	Sn	09 14 00.9	-0.5
MQZ	**McQueen’s Vall**	1.11	195	P	Pb	09 13 47.3	-1.2
MQZ				S	Sb	09 14 02.5	-0.3
BSWZ	**Blackbirch Sta**	1.11	34	P	Pn	09 13 48.7	-0.1
INZ	**Inchbonnie**	1.18	265	P	Pn	09 13 49.5	-0.2
AKCZ	**Akaroa Harbour**	1.24	184	P	Pn	09 13 49.6	-0.9
CMWZ	**Cape Campbell**	1.24	45	P	Pg	09 13 51.2	-0.2
MRNZ	**Matariki Terra**	1.25	350	P	Pn	09 13 50.5	-0.3
RACZ	**Rakaia**	1.27	211	P	Pn	09 13 50.2	-0.8
RACZ				S	Sb	09 14 07.1	-0.6
DSZ	**Denniston Nort**	1.28	314	P	Pn	09 13 51.2	0.0
DSZ				S	Sg	09 14 08.7	0.0
TUWZ	**Tuamarina**	1.38	29	P	Pn	09 13 52.8	+0.3
MHCZ	**Mount Hutt**	1.40	230	P	Pn	09 13 52.1	-0.7
NNZ	**Nelson**	1.44	10	P	Pn	09 13 53.6	+0.3
WACZ	**Wakanui South**	1.57	213	P	Pn	09 13 54.3	-0.8
TKNZ	**Takaka Hill**	1.60	358	P	Pn	09 13 56.0	+0.5
TCW	**Tory Channel**	1.70	33	P	Pn	09 13 56.7	-0.2
WVZ	**Waitaha Valley**	1.75	255	P	Pn	09 13 57.7	+0.2
RPZ	**Rata Peaks**	1.81	233	P	Pn	09 13 57.8	-0.6
QRZ	**Quartz Range**	1.85	348	P	Pn	09 13 59.4	+0.5
WEL	**Wellington**	1.87	44	P	Pn	09 13 58.8	-0.3
ARCZ	**Arundel**	1.89	225	P	Pn	09 13 58.8	-0.7
DUWZ	**D’Urville Isla**	1.95	20	P	Pn	09 14 01.0	+0.7
PLWZ	**Palliser**	1.96	58	P	Pn	09 13 59.3	-1.2
GCSZ	**Gaunt Creek Bo**	2.10	250	P	Pn	09 14 02.7	+0.3
CAW	**Cannon Point**	2.15	45	P	Pn	09 14 02.3	-0.7
PAWZ	**Paruwai Farm**	2.18	56	P	Pn	09 14 02.1	-1.3
KIW	**Kapiti Island**	2.26	39	P	Pn	09 14 04.3	-0.3
TMZ	**Timaru**	2.29	220	P	Pn	09 14 04.1	-0.9
TRWZ	**Traveller**	2.33	59	P	Pn	09 14 04.3	-1.2
MTW	**Mount Morrison**	2.36	52	P	Pn	09 14 04.5	-1.5
OGWZ	**Otaki Gorge**	2.42	42	P	Pn	09 14 06.0	-0.7
FOZ	**Fox Glacier**	2.53	248	P	Pn	09 14 08.5	+0.3
HOWZ	**Holdsworth Sta**	2.54	48	P	Pn	09 14 07.1	-1.4
TMWZ	**Te Maipa**	2.62	55	P	Pn	09 14 07.8	-1.7
LBZ	**Lake Benmore**	2.72	229	P	Pn	09 14 10.6	-0.3
MRZ	**Mangatainoka R**	2.74	45	P	Pn	09 14 09.9	-1.3
ODZ	**Otahua Downs**	2.97	215	P	Pn	09 14 13.2	-1.1
PRWZ	**Pori Road**	3.02	48	P	Pn	09 14 14.1	-1.0
POWZ	**Post Office Ro**	3.04	43	P	Pn	09 14 14.0	-1.2
BFZ	**Birch Farm**	3.10	52	P	Pn	09 14 14.0	-2.0
WAZ	**Wanganui**	3.23	28	P	Pn	09 14 19.5	+1.5
NMEZ	**Namu Road**	3.28	11	P	Pn	09 14 21.1	+2.6
DVHZ	**Dannevirke**	3.31	46	P	Pn	09 14 16.9	-2.1
LREZ	**Lake Rotokare**	3.33	18	P	Pn	09 14 21.5	+2.1
TSZ	**Takapari Road**	3.39	41	P	Pn	09 14 18.4	-1.7
PREZ	**Palmer Road**	3.40	15	P	Pn	09 14 23.1	+2.9
KHEZ	**Kahui Hut**	3.42	13	P	Pn	09 14 23.4	+2.9
JCZ	**Jackson Bay**	3.42	244	P	Pn	09 14 20.2	-0.4
NBEZ	**Newall Road No**	3.42	11	P	Pn	09 14 22.4	+1.9
NEZ	**North Egmont**	3.46	14	P	Pn	09 14 23.5	+2.4
PKE	**Pukeiti**	3.51	12	P	Pn	09 14 24.4	+2.6
DREZ	**Durham Road**	3.55	15	P	Pn	09 14 24.3	+2.0
PNHZ	**Pukenui**	3.62	42	P	Pn	09 14 21.3	-1.9
WKZ	**Wanaka**	3.65	232	P	Pn	09 14 22.4	-1.3
MHEZ	**Mangahewa**	3.69	16	P	Pn	09 14 28.2	+4.0
HHSZ	**Highcliff Hill**	3.69	208	P	Pn	09 14 23.2	-1.1
EAZ	**Earnscleugh**	3.74	225	P	Pn	09 14 23.9	-1.0
VRZ	**Vera Road**	3.74	21	P	Pn	09 14 26.4	+1.5
PKVZ	**Pokaka**	3.77	28	P	Pn	09 14 26.1	+0.7
MOVZ	**Moawhango**	3.82	33	P	Pn	09 14 26.0	-0.1
WNVZ	**Wahianoa**	3.83	31	P	Pn	09 14 26.5	+0.2
TRVZ	**Turoa**	3.84	31	P	Pn	09 14 26.6	+0.2
FWVZ	**Far West T-bar**	3.88	30	P	Pn	09 14 27.1	+0.1
BHHZ	**Black Hill Sta**	3.89	37	P	Pn	09 14 26.1	-0.9
TUVZ	**Tukino**	3.90	31	P	Pn	09 14 27.8	+0.5
NGZ	**Ngauruhoe**	3.96	30	P	Pn	09 14 28.5	+0.3
SNVZ	**South Ngauruho**	3.97	31	P	Pn	09 14 28.4	+0.2
OTVZ	**Oturere**	4.00	31	P	Pn	09 14 28.7	0.0
TWVZ	**Taurewa**	4.00	28	P	Pn	09 14 28.8	+0.3
NNVZ	**North Ngauruho**	4.01	30	P	Pn	09 14 28.8	+0.1
WTVZ	**West Tongariro**	4.01	30	P	Pn	09 14 28.8	0.0
ETVZ	**East Tongariro**	4.04	31	P	Pn	09 14 29.2	+0.1
KRVZ	**Karewarewa**	4.05	30	P	Pn	09 14 29.5	+0.2
KAHZ	**Kahuranaki**	4.05	47	P	Pn	09 14 27.3	-2.0
TMVZ	**Te Maari**	4.05	31	P	Pn	09 14 29.3	0.0
NTVZ	**North Tongarir**	4.06	30	P	Pn	09 14 29.5	+0.1
KWHZ	**Kaweka Forest**	4.10	40	P	Pn	09 14 28.4	-1.6
KATZ	**Kakaramea**	4.17	30	P	Pn	09 14 31.7	+0.6
RITZ	**Rihia Road**	4.23	31	P	Pn	09 14 34.8	+3.1
BKZ	**Black Stump Fm**	4.34	38	P	Pn	09 14 31.5	-1.8
HIZ	**Hauiti**	4.34	19	P	Pn	09 14 34.1	+0.9
MLZ	**Mavora Lakes**	4.48	231	P	Pn	09 14 34.4	-0.7
TLZ	**Tolley Road**	4.70	25	P	Pn	09 14 39.4	+1.2
SYZ	**Scrubby Hill**	4.79	214	P	Pn	09 14 39.0	-0.4
RTZ	**Ruatahuna**	5.01	38	P	Pn	09 14 42.4	-0.1
TOZ	**Tahuroa Road**	5.25	22	P	Pn	09 14 45.6	0.0
URZ	**Urewera**	5.36	37	P	Pn	09 14 45.3	-1.9
APZ	**The Paps**	5.53	219	P	Pn	09 14 48.5	-1.0
AWAZ	**Awhitu Peninsu**	5.70	13	P	Pn	09 14 53.4	+1.5
TWGZ	**Tauwhareparae**	5.83	42	P	Pn	09 14 51.1	-2.6
ETAZ	**East Tamaki Re**	5.86	15	P	Pn	09 14 55.5	+1.5
RUGZ	**Raukumara Rang**	5.86	39	P	Pn	09 14 52.1	-2.0
MBAZ	**Motutapu North**	6.03	14	P	Pn	09 14 58.2	+1.8
WIAZ	**Waiheke Island**	6.05	16	P	Pn	09 14 57.7	+1.0

ROM 17 09:13:56.5±0.0, 42°.742N±0°.003×13°.189E±0°.004, h11^{km}, ML1.1/5, 1C, Error ellipse: s-maj=0.3km s-min=0.2km az=293.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	0.02	39	P	Pg	09 13 58.8	+0.1
T1214				S	Sg	09 14 00.0	-0.3
T1214				AML	AML		
	comp=E,539µm,0.3s						
T1214				AML	AML		
	comp=N,330µm,0.9s						
T1214				AML	AML		
	comp=E,538µm,0.3s						
T1214				AML	AML		
	comp=N,329µm,0.9s						
T1218	**Civita (PG)**	0.09	217	⇑P	Pg	09 13 59.6	+0.4
T1218				S	Sg	09 14 01.6	+0.5
T1218				AML	AML		
	comp=E,640µm,0.2s						
T1218				AML	AML		
	comp=E,593µm,0.2s						
T1218				AML	AML		
	comp=N,1272µm,0.2s						
T1218				AML	AML		
	comp=E,640µm,0.2s						
T1218				AML	AML		
	comp=N,1259µm,0.2s						
T1212	**Cascia, Frazio**	0.11	275	P	Pg	09 13 59.8	+0.4
T1212				S	Sg	09 14 01.8	+0.3
T1212				AML	AML		
	comp=E,208µm,0.4s						
T1212				AML	AML		
	comp=N,186µm,0.6s						
T1212				AML	AML		
	comp=E,208µm,0.4s						
T1212				AML	AML		
	comp=N,186µm,1.4s						
T1212				AML	AML		
	comp=E,208µm,1.6s						
T1245	**Castelsantange**	0.12	360	P	Pg	09 13 60.0	+0.3
T1245				S	Sg	09 14 02.3	+0.5
T1245				AML	AML		
	comp=E,139µm,0.7s						
T1245				AML	AML		
	comp=N,230µm,0.4s						
MC2	**Monte Cornacci**	0.17	0	P	Pg	09 14 01.0	+0.5
MC2				S	Sg	09 14 04.1	+0.9
MMO1	**Montemonaco**	0.19	33	P	Pg	09 14 01.2	+0.5
MMO1				S	Sg	09 14 04.5	+1.0
T1217	**Poggiodomo (PG**	0.19	261	P	Pg	09 14 01.4	+0.6
T1217				S	Sg	09 14 04.4	+0.8
T1241	**Roccafluvione,**	0.21	57	P	Pg	09 14 01.6	+0.5
T1241				S	Sg	09 14 05.2	+1.1
T1241				AML	AML		
	comp=E,39µm,0.2s						
T1241				AML	AML		
	comp=N,35µm,1.4s						
T1241				AML	AML		
	comp=E,39µm,0.2s						
T1241				AML	AML		
	comp=N,35µm,0.6s						
RM33	**Pellescritta (**	0.23	175	P	Pg	09 14 01.9	+0.5
RM33				S	Sg	09 14 05.8	+1.1
RM33				AML	AML		
	comp=E,39µm,0.2s						
RM33				AML	AML		
	comp=N,34µm,1.4s						
RM33				AML	AML		
	comp=E,39µm,0.2s						
FDMO	**Fiordimonte**	0.30	346	P	Pb	09 14 03.8	-0.2
FDMO				S	Sb	09 14 08.1	-1.0
T1211	**Morro Reatino**	0.32	230	P	Pg	09 14 03.5	+0.5
T1211				S	Sb	09 14 08.7	-0.9
TERO	**Teramo**	0.33	111	P	Pg	09 14 03.5	+0.4
TERO				S	Sg	09 14 08.6	+1.0

*NEIC **17** 09:24:58.7±1.6, 52°.1N±0°.1×170°.56W±0°.10, h17^{km}±7^{km}, mb4.0/18, ML3.8/6, ML3.3(AEIC), Error ellipse: s-maj=19.3km s-min=6.7km az=161.0*

*AEIC **17** 09:24:59.4±1.8, 52°.0N±0°.1×170°.6W±0°.1, h30^{km}±5^{km}, Error ellipse: s-maj=21.1km s-min=7.4km az=151.0*

*IDC **17** 09:25:09.8±8.8, 51°.91N×167°.54W, h0^{km}, mb3.3/3, mbtmp3.4/5, ML3.0/1, Error ellipse: s-maj=159.9km s-min=46.3km az=89.0*

ISC 17 09:25:00.4±0.9, 52°.1N±0°.1×170°.53W±0°.08, h31^{km}, n46, σ0^{s}.94/40, mb3.3/3, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLES	**Cleveland East**	0.86	26	Pg	Pn	09 25 15.9	-0.4
CLES				IAML		09 25 31.2	
	comp=E,9µm,0.2s						
CLES				IAML		09 25 31.3	
	comp=N,8µm,0.4s						
NIKH	**Nikolski High**	1.37	47		Pn	09 25 22.6	-0.8
NIKH	**Nikolski High**	1.37	47		Sn	09 25 39.4	-1.0
UNV	**Unalaska Valle**	3.02	52		Pn	09 25 46.4	+0.4
UNV	**Unalaska Valle**	3.02	52		Sn	09 26 22.8	+1.7
GSTR	**Great Sitkin T**	3.42	273	Pn	Pn	09 25 50.9	-0.6
AKUT	**Akutan**	3.54	52	Pn	Pn	09 25 52.1	-1.0
AKUT				IAML		09 26 48.9	
	comp=E,45nm,0.8s						
ADK	**Adak**	3.81	270		Pn	09 25 56.1	-0.9
ADK				IAML		09 26 52.4	
	comp=E,163nm,0.9s						
ADK				IAML		09 26 53.7	
	comp=E,186nm,1.3s						
KIWB	**Kanaga Island**	4.10	270	Pn	Pn	09 26 00.8	-0.1
KDAK	**Kodiak Island**	11.79	54	Pn	Pn	09 27 44.0	-2.2
	comp=E,0.1nm,0.3s,baz=95,slow=23,SNR=1.6						
	comp=E,12nm,1.0s						
M19K	**Big River Lodg**	13.17	35	Pn	Pn	09 28 05.1	0.0
M20K	**Styx River**	13.62	37	Pn	Pn	09 28 09.8	-1.5
SEW	**Seward**	14.21	47	Pn	Pn	09 28 18.2	-0.9
SUA	**Susitna One**	14.30	41	Pn	Pn	09 28 19.1	-1.6
RC01	**Rabbit Creek A**	14.53	43	Pn	Pn	09 28 23.1	-0.5
PWL	**Port Wells**	15.03	45	Pn	Pn	09 28 30.6	+0.3
GHO	**Glory Hole Cre**	15.21	42	Pn	Pn	09 28 32.8	+0.1
GHO				IAmb	IAmb	09 28 36.8	
	comp=Z,16nm,1.4s						
DIV	**Divide**	16.28	46		P	09 28 50.2	+0.9
DIV				IAmb	IAmb	09 28 59.9	
	comp=Z,13nm,0.4s						
KLU	**Klutina**	16.36	45		Pn	09 28 48.6	+1.1
M24K	**Tolsona, Glenn**	16.52	43	Pn	Pn	09 28 48.0	-1.6
M24K				IAmb	IAmb	09 29 05.7	
	comp=Z,37nm,1.4s						
N25K	**Chitina, Valde**	16.99	46		P	09 28 57.5	+0.4
N25K				IAmb	IAmb	09 29 12.7	
	comp=Z,5.7nm,0.8s						
ILAR	**Eielson Array**	17.61	35	Pn	P	09 29 05.6	+1.7
	comp=Z,0.4nm,1.0s,baz=237,slow=12,SNR=1.5						
MENT	**Mentasta**	17.90	42		Pn	09 29 06.5	-0.2
MENT				IAmb	IAmb	09 29 26.5	
	comp=Z,5.7nm,1.2s						
M26K	**Nabesna, AK**	17.99	44		P	09 29 08.2	+0.1
L26K	**Log Cabin Wild**	18.09	42		P	09 29 09.6	+0.3
CTGM	**Chitina Glacie**	18.26	49		P	09 29 10.2	-1.1
CTGM				IAmb	IAmb	09 29 15.4	
	comp=Z,12nm,1.3s						
SCRK	**Sand Creek**	18.27	39		P	09 29 10.5	-0.8
LOGN	**Logan Glacier**	18.38	50	P	Pn	09 29 12.5	-0.2
LOGN				IAmb	IAmb	09 29 31.5	
	comp=Z,19nm,1.4s						
I26K	**Coal Creek Min**	19.23	36	P	P	09 29 21.3	-0.4
I26K				IAmb	IAmb	09 29 32.0	
	comp=Z,7.6nm,1.4s						
EGAK	**Eagle**	19.73	39	P	Pn	09 29 27.9	-0.7
EGAK				IAmb	IAmb	09 29 46.8	
	comp=Z,7.3nm,1.4s						
BMAR	**Burnt Mountain**	19.95	30	P	P	09 29 29.6	0.0
HYT	**Haines Junctio**	20.05	51	P	P	09 29 31.1	+0.3
HYT				IAmb	IAmb	09 29 34.8	
	comp=Z,19nm,1.5s						
DAWY	**Dawson**	20.13	41	P	P	09 29 32.0	+0.4
B04A	**Port Angeles**	30.03	79	P	P	09 31 07.0	+0.8
YKA	**Yellowknife Ar**	30.98	48	P	P	09 31 15.9	+1.5
	comp=Z,0.1nm,0.5s,baz=271,slow=7.9,SNR=2.3						
	comp=Z,0.1nm,0.5s						
H11N2	**WAKE ISLAND Hy**	36.77	217	T	T	10 11 14.0	
	baz=22,slow=75,SNR=8.6						
H11N3	**WAKE ISLAND Hy**	36.78	217	T	T	10 11 14.9	
	baz=22,slow=75,SNR=7.8						
H11N1	**WAKE ISLAND Hy**	36.79	217	T	T	10 11 18.3	
	baz=22,slow=75,SNR=4.4						
H11S1	**WAKE ISLAND Hy**	37.96	217	T	T	10 12 50.2	
	baz=22,slow=76,SNR=12						
H11S2	**WAKE ISLAND Hy**	37.98	217	T	T	10 12 54.0	
	baz=22,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy**	37.98	217	T	T	10 12 49.7	
	baz=22,slow=76,SNR=15						
MCMT	**McKenzie Canyo**	38.04	77	P	P	09 32 15.0	-0.9
PDAR	**Pinedale Array**	41.16	78	P	P	09 32 42.2	+0.3
	comp=Z,0.4nm,0.5s,baz=322,slow=2.6,SNR=6.1						
	comp=Z,0.4nm,0.5s						
TXAR	**Lajitas Array**	53.47	88	P	P	09 34 17.2	-0.4
	comp=Z,0.3nm,0.8s,baz=284,slow=4.3,SNR=4.5						
	comp=Z,0.3nm,0.8s						
TXAR	**Lajitas Array**	53.47	88	P	P	09 34 17.6	-0.1
ABKAR	**Akbulak array**	70.32	328	P	P	09 36 10.8	+0.3

ROM 17 09:26:59.5±0.1, 42°.793N±0°.004×13°.147E±0°.005, h8^{km}, ML1.1/6, 1C-1D, Error ellipse: s-maj=0.4km s-min=0.2km az=39.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	0.06	127	P	Pg	09 27 01.5	0.0
T1214				S	Sg	09 27 02.8	-0.2
T1214				AML	AML		
	comp=E,344µm,0.5s						
T1214				AML	AML		

	comp=N,394µm,0.6s						
T1214				AML	AML		
	comp=E,344µm,0.5s						
T1214				AML	AML		
	comp=N,395µm,0.6s						
T1245	**Castelsantange**	**0.07**	**25**	P	Pg	09 27 01.8	+0.1
T1245				S	Sg	09 27 03.1	-0.2
T1245				AML	AML		
	comp=N,2875µm,0.6s						
T1245				AML	AML		
	comp=E,1265µm,1.2s						
T1245				AML	AML		
	comp=N,2875µm,0.6s						
T1245				AML	AML		
	comp=N,2540µm,0.6s						
T1245				AML	AML		
	comp=E,1575µm,0.3s						
T1212	**Cascia, Frazio**	**0.09**	**241**	⇑P	Pg	09 27 02.3	+0.5
T1212				S	Sg	09 27 04.1	+0.7
T1212				AML	AML		
	comp=E,194µm,0.5s						
T1212				AML	AML		
	comp=N,175µm,1.6s						
MC2	**Monte Cornacci**	**0.12**	**15**	P	Pg	09 27 02.9	+0.5
MC2				S	Sg	09 27 05.5	+1.0
T1216	**Preci, Frazion**	**0.14**	**316**	P	Pg	09 27 02.8	+0.2
T1216				S	Sg	09 27 05.3	+0.7
T1216				AML	AML		
	comp=E,174µm,1.5s						
T1216				AML	AML		
	comp=N,173µm,0.5s						
T1216				AML	AML		
	comp=E,174µm,0.5s						
T1216				AML	AML		
	comp=N,173µm,0.5s						
MMO1	**Montemonaco**	**0.17**	**51**	P	Pg	09 27 03.6	+0.5
MMO1				S	Sg	09 27 06.7	+1.1
T1241	**Roccafluvione,**	**0.22**	**73**	P	Pg	09 27 04.7	+0.8
T1241				S	Sg	09 27 08.7	+1.7
T1241				AML	AML		
	comp=E,130µm,0.3s						
T1241				AML	AML		
	comp=N,47µm,1.4s						
T1241				AML	AML		
	comp=N,47µm,1.4s						
T1241				AML	AML		
	comp=N,47µm,0.6s						
FDMO	**Fiordimonte**	**0.25**	**350**	⇓P	Pg	09 27 05.0	+0.6
FDMO				S	Sg	09 27 09.4	+1.5
FDMO				AML	AML		
	comp=E,38µm,0.3s						
FDMO				AML	AML		
	comp=N,39µm,1.1s						
T1219	**Muccia, Frazio**	**0.28**	**339**	P	Pg	09 27 06.0	+0.9
T1219				S	Sb	09 27 10.6	-1.2
TERO	**Teramo**	**0.38**	**117**	P	Pg	09 27 07.6	+0.7
TERO				S	Sb	09 27 13.7	-0.8
TERO				AML	AML		
	comp=E,23µm,1.5s						
TERO				AML	AML		
	comp=N,19µm,1.6s						
TERO				AML	AML		
	comp=E,23µm,0.5s						
TERO				AML	AML		
	comp=N,19µm,0.4s						

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*SEA **17** 09:27:40.7±0.8, 44°.1N±0°.1×125°.8W±0°.1, h5^{km}±2^{km}, Error ellipse: s-maj=23.8km s-min=14.3km az=177.0*

NEIC 17 09:27:33.5±1.6**, 43°.99N**±0°.06×**125°.78W**±0°.09**, h10**^{km}±2^{km}**, ML2.6**/30**, Md3.3**/2(SEA)**, Error ellipse: s-maj=11.6km s-min=10.1km az=294.0, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I02E	**Swisshome, OR**	**1.40**	**84**	Pn	Pn	09 27 58.9	-0.2
I02E				Sn	Sb	09 28 17.6	0.0
J01E	**Myrtle Point**	**1.58**	**121**	Pn	Pn	09 28 01.2	-0.3
J01E					Pb	09 28 01.4	-1.4
J01E				IAML		09 28 19.2	
	comp=E,38nm,3.9s						
I03D	**Drain, OR**	**1.79**	**99**	Pn	Pn	09 28 04.4	0.0
COR	**Corvallis**	**1.88**	**71**	Pn	Pn	09 28 05.0	-0.6
COR				IAML		09 28 24.0	
	comp=E,31nm,2.6s						
COR				IAML		09 29 05.2	
	comp=E,34nm,3.2s						
K02D	**Willamette Mer**	**2.01**	**129**	Pn	Pn	09 28 07.3	-0.3
BUCK	**Buck Mountain**	**2.02**	**83**	Pn	Pn	09 28 07.7	-0.1
BUCK				IAML		09 28 28.4	
	comp=E,41nm,4.9s						
BUCK				IAML		09 29 15.3	
	comp=N,34nm,3.3s						
H04D	**Lebanon**	**2.25**	**75**	Pn	Pn	09 28 09.5	-1.3
I04A	**Tendick Farm,**	**2.44**	**93**	Pn	Pn	09 28 13.4	-0.1
H04A	**Detroit Lake**	**2.67**	**74**		Pn	09 28 16.6	-0.1
H04A				IAML		09 28 34.3	
	comp=E,14nm,4.8s						
H04A				IAML		09 29 05.6	
	comp=N,13nm,4.7s						
F04A	**Amboy**	**3.08**	**50**	Pn	Pn	09 28 22.0	-0.1
F04A				IAML		09 28 41.7	
	comp=N,21nm,4.2s						
F04A				IAML		09 29 39.8	
	comp=E,19nm,3.7s						
TDH	**Tom, Dick, Har**	**3.13**	**64**		Pn	09 28 24.0	+0.9
I05D	**Terrebonne, OR**	**3.22**	**82**	Pn	Pn	09 28 21.8	-2.3
FL2	**Flat Top 2**	**3.28**	**47**		Pn	09 28 25.3	+0.2
SHW	**Mount Saint He**	**3.34**	**47**		Pn	09 28 26.8	+0.9
BOLM	**Sugar Bowl**	**3.39**	**48**		Pn	09 28 27.1	+0.5
JCC	**Jacoby Creek,**	**3.42**	**157**	Pn	Pn	09 28 26.7	-0.2
G05A	**Wamic**	**3.43**	**67**	Pn	Pn	09 28 27.4	+0.4
PINE	**Pine Mountain**	**3.50**	**92**	Pn	Pn	09 28 30.3	+2.1
PINE				IAML		09 29 10.4	
	comp=E,19nm,4.9s						
PINE				IAML		09 30 29.3	
	comp=N,20nm,4.7s						
G06A	**Carlson Farm,**	**3.88**	**69**	Pn	Pn	09 28 34.0	+0.8
G06A				IAML		09 29 56.2	
	comp=N,13nm,3.8s						
G06A				IAML		09 30 23.0	
	comp=E,15nm,4.3s						
G08A	**Pilot Rock**	**5.04**	**73**	Pn	Pn	09 28 50.2	+0.9
G08A				IAML		09 29 37.1	
	comp=E,6.5nm,3.6s						

ROM 17 09:27:57.6±0.0**, 42°.923N**±0°.002×**13°.146E**±0°.003**, h11**^{km}**, ML1.5**/12**, 6C-3D, Error ellipse: s-maj=0.3km s-min=0.2km az=40.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.03**	**107**	P	Pg	09 28 00.1	+0.2
MC2				S	Sg	09 28 01.7	+0.1
T1245	**Castelsantange**	**0.07**	**155**	P	Pg	09 28 00.5	+0.3
T1245				S	Sg	09 28 02.2	+0.1
T1245				AML	AML		
	comp=E,1320µm,1.2s						
T1245				AML	AML		
	comp=N,1520µm,0.4s						
T1245				AML	AML		
	comp=E,1155µm,0.7s						
T1245				AML	AML		
	comp=N,1430µm,0.4s						
T1245				AML	AML		
	comp=E,1325µm,1.2s						
T1245				AML	AML		
	comp=N,1525µm,0.4s						
T1245				AML	AML		
	comp=N,1425µm,0.4s						
T1245				AML	AML		
	comp=E,1325µm,0.8s						
FEMA	**Monte Fema**	**0.08**	**299**	P	Pg	09 28 00.7	+0.4
FEMA				S	Sg	09 28 02.5	+0.3
T1216	**Preci, Frazion**	**0.10**	**251**	P	Pg	09 28 00.8	+0.5
T1216				S	Sg	09 28 02.9	+0.5
T1216				AML	AML		
	comp=N,472µm,1.1s						
T1216				AML	AML		
	comp=N,472µm,1.1s						
T1216				AML	AML		
	comp=E,690µm,0.4s						
T1256	**Bolognola (MC)**	**0.10**	**35**	P	Pg	09 28 00.6	+0.1
T1256				S	Sg	09 28 03.1	+0.5
T1256				AML	AML		
	comp=N,230µm,0.9s						
T1256				AML	AML		
	comp=E,297µm,0.1s						
FDMO	**Fiordimonte**	**0.12**	**339**	⇑P	Pg	09 28 01.2	+0.5
FDMO				S	Sg	09 28 03.4	+0.5
FDMO				AML	AML		
	comp=N,348µm,0.7s						
FDMO				AML	AML		
	comp=E,244µm,0.2s						
FDMO				AML	AML		
	comp=N,348µm,1.3s						
MMO1	**Montemonaco**	**0.14**	**100**	P	Pg	09 28 01.4	+0.5
MMO1				S	Sg	09 28 03.9	+0.6
T1219	**Muccia, Frazio**	**0.17**	**323**	⇑P	Pg	09 28 02.0	+0.6
T1219				S	Sg	09 28 04.8	+0.8
T1219				AML	AML		
	comp=E,323µm,0.2s						
T1219				AML	AML		
	comp=E,359µm,0.6s						
T1219				AML	AML		
	comp=N,344µm,0.1s						
T1219				AML	AML		
	comp=N,356µm,0.1s						
T1219				AML	AML		
	comp=N,344µm,0.1s						
T1219				AML	AML		
	comp=E,322µm,0.2s						
T1219				AML	AML		
	comp=E,358µm,0.6s						
T1214	**Arquata del Tr**	**0.17**	**164**	AML	AML		
	comp=N,263µm,0.7s						
T1214				AML	AML		
	comp=E,206µm,0.5s						
T1214				AML	AML		
	comp=E,206µm,0.5s						
T1214				AML	AML		
	comp=N,264µm,0.7s						
T1214				AML	AML		
	comp=E,206µm,1.5s						
T1212	**Cascia, Frazio**	**0.19**	**204**	P	Pg	09 28 02.4	+0.6
T1212				S	Sg	09 28 05.5	+1.0
T1212				AML	AML		
	comp=N,179µm,0.2s						
T1212				AML	AML		
	comp=E,217µm,0.2s						
T1220	**Camerino, Fraz**	**0.19**	**347**	⇓P	Pg	09 28 02.4	+0.6
CESI	**CESI - Serrava**	**0.20**	**295**	⇑P	Pg	09 28 02.5	+0.7
CESI				S	Sg	09 28 06.0	+1.2
CESI				AML	AML		
	comp=E,202µm,0.2s						
CESI				AML	AML		
	comp=N,307µm,0.2s						
T1241	**Roccafluvione,**	**0.22**	**107**	⇑P	Pg	09 28 02.9	+0.6
T1241				S	Sg	09 28 06.7	+1.3
T1241				AML	AML		
	comp=E,295µm,0.1s						
T1241				AML	AML		
	comp=N,157µm,0.1s						
T1218	**Civita (PG)**	**0.25**	**185**	P	Pg	09 28 03.5	+0.6
T1218				S	Sg	09 28 07.3	+0.9
T1217	**Poggiodomo (PG**	**0.26**	**217**	P	Pg	09 28 03.6	+0.6
T1217				S	Sb	09 28 07.9	-1.1
T1217				AML	AML		
	comp=E,72µm,0.6s						
T1217				AML	AML		
	comp=N,87µm,0.7s						
ASSB	**Assisi San Ben**	**0.38**	**289**	⇑P	Pg	09 28 05.6	+0.4
ASSB				AML	AML		
	comp=E,101µm,0.7s						
ASSB				AML	AML		
	comp=E,101µm,1.3s						
ASSB				AML	AML		
	comp=N,190µm,0.2s						
EL6	**Elcito**	**0.41**	**355**	⇓P	Pb	09 28 07.4	+0.5
RM33	**Pellescritta (**	**0.42**	**173**	P	Pb	09 28 06.5	-0.6
MOMA	**Monte Martano**	**0.44**	**255**	⇓P	Pb	09 28 07.1	-0.3
MOMA				AML	AML		
	comp=E,86µm,0.2s						
MOMA				AML	AML		
	comp=N,40µm,0.2s						
T1211	**Morro Reatino**	**0.44**	**209**	S	Sb	09 28 14.5	+0.3
TERO	**Teramo**	**0.45**	**131**	⇑P	Pg	09 28 06.6	+0.1
TERO				AML	AML		
	comp=E,132µm,0.1s						
TERO				AML	AML		
	comp=N,88µm,0.5s						
MURB	**Monte Urbino**	**0.57**	**307**	P	Pg	09 28 09.2	+0.5
MURB				AML	AML		
	comp=N,62µm,1.5s						
MURB				AML	AML		
	comp=E,86µm,0.8s						
MURB				AML	AML		
	comp=N,62µm,0.5s						
PIEI	**Pieia**	**0.76**	**324**	S	Sn	09 28 24.6	-1.2
VIVA	**Pratoni del Vi**	**1.20**	**193**	S	Sb	09 28 34.1	-2.0

IDC 17 09:40:47.5±2.5**, 54°.19N**×**85°.86E, h0**^{km}**, mbtmp2.9**/2**, ML2.5**/2**, Error ellipse: s-maj=18.0km s-min=10.5km az=55.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.66**	**249**	I	I	09 45 10.0	
	baz=66,slow=330,SNR=8.6						
ZALV	**Zalesovo Beam**	**0.66**	**249**	Pg	Pg	09 41 00.1	0.0
	0.8nm,0.3s,baz=69,slow=17,SNR=9.1						
ZALV				Lg	Lg	09 41 09.3	
	2.6nm,0.3s,baz=72,slow=17,SNR=8.8						
KURBB	**Kurchatov Arra**	**5.74**	**234**	Pn	Pn	09 42 14.9	+1.1
	0.1nm,0.3s,baz=52,slow=13,SNR=2.4 0.5nm,0.4s						
MKAR	**Makanchi Array**	**7.75**	**199**	Pn	Pn	09 42 42.1	+0.6
	0.2nm,0.3s,baz=19,slow=14,SNR=8.9 0.4nm,0.3s						

IDC 17 09:42:36.7±2.5**, 54°.27N**×**86°.92E, h0**^{km}**, mbtmp3.5**/3**, ML3.0**/3**, Error ellipse: s-maj=21.3km s-min=13.0km az=62.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.28**	**256**	I	I	09 49 10.0	
	baz=74,slow=331,SNR=10						
ZALV	**Zalesovo Beam**	**1.28**	**256**	Pg	Pg	09 42 59.5	-1.6
	5.6nm,0.3s,baz=74,slow=18,SNR=15						
ZALV				Lg	Lg	09 43 19.3	
	5.6nm,0.3s,baz=76,slow=30,SNR=8.0						
KURBB	**Kurchatov Arra**	**6.29**	**238**	Pn	Pn	09 44 11.4	+0.7
	0.3nm,0.3s,baz=56,slow=14,SNR=14						
KURBB				Sn	Sn	09 45 23.1	-0.1
	0.1nm,0.3s,baz=113,slow=27,SNR=1.7						
KURBB				Lg	Lg	09 45 56.6	
	0.1nm,0.3s,baz=56,slow=31,SNR=11 4.4nm,0.6s						
MKAR	**Makanchi Array**	**8.04**	**203**	Pn	Pn	09 44 36.4	+1.6
	0.4nm,0.3s,baz=28,slow=14,SNR=6.0						
MKAR				Sn	Sn	09 46 04.8	-1.5
	0.1nm,0.3s,baz=29,slow=19,SNR=1.5						
MKAR				Lg	Lg	09 46 52.3	
	baz=26,slow=27,SNR=7.0 0.7nm,0.4s						
BVAR	**Borovoye Array**	**9.89**	**269**	Pn	Pn	09 44 59.1	-1.0
	0.1nm,0.3s,baz=74,slow=16,SNR=3.4						
BVAR				Sn	Sn	09 46 45.9	-5.8
	0.1nm,0.3s,baz=76,slow=25,SNR=5.2 0.7nm,0.3s						

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*IDC **17** 09:52:49.8±3.3, 10°.40S×161°.73E, h69^{km}±23^{km}, mb3.3/4, mbtmp3.8/6, MS3.2/3, Error ellipse: s-maj=36.5km s-min=19.4km az=57.0*

*NEIC **17** 09:52:49.6±1.0, 10°.46S±0°.04×161°.7E±0°.1, h82^{km}±9^{km}, mb4.3/18, Error ellipse: s-maj=15.2km s-min=4.5km az=77.0*

ISC 17 09:52:47.5±0.7**, 10°.51S**±0°.08×**161°.71E**±0°.08**, h61**^{km}**, n34,** σ**2ˢ.05**/36**, mb4.0**/10**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.04**	**302**	P	**Pn**	**09 53 20.6**	**+1.1**
	6µm,0.3s,baz=167,slow=5.5,SNR=34						
HNR				LR	LR	09 53 45.2	
	comp=Z,813nm,21.0s,baz=118,slow=28						
HNR				S	**Sn**	**09 53 46.3**	**+2.4**
	16µm,0.4s,baz=340,slow=23,SNR=17						
HNR	**Honiara**	**2.04**	**302**	Pn	**Pn**	**09 53 21.0**	**+1.5**
KOUNC	**Koumac, New Ca**	**10.28**	**166**	Pn	**Pn**	**09 55 14.9**	**+2.6**
LIFNC	**LIFOU**	**11.51**	**153**	Pn	**Pn**	**09 55 30.6**	**+1.6**
DZM	**Mont Dzumac**	**12.36**	**159**	P	**Pn**	**09 55 44.6**	**+3.9**
	2.6nm,0.5s,baz=346,slow=20,SNR=13						
DZM				S	**Sn**	**09 57 53.2**	**-3.7**
	6.8nm,0.9s,baz=45,slow=22,SNR=1.7						
DZM				LR	LR	09 59 48.5	
	comp=Z,62nm,19.3s,baz=28,slow=34						
OUENC	**Ouen Island, N**	**12.82**	**158**	Pn	**Pn**	**09 55 49.2**	**+2.2**
PINNC	**Pines Island,**	**13.23**	**156**	Pn	**Pn**	**09 55 54.1**	**+1.7**
PMG	**Port Moresby**	**14.37**	**273**	Pn	**Pn**	**09 56 07.7**	**-0.2**
FUNA	**Funafuti**	**17.36**	**85**		**Pn**	**09 56 46.8**	**+1.0**
FUNA				IAmb	IAmb	09 56 59.6	
	comp=Z,40nm,1.0s						
CTA	**Charters Tower**	**17.67**	**236**	P	**P**	**09 56 54.0**	**+4.2**
	comp=Z,2.4nm,0.5s,baz=56,slow=14,SNR=8.7						
CTAO	**Charters Tower**	**17.67**	**236**	P	**Pn**	**09 56 49.7**	**+0.1**
CTAO				IAmb	IAmb	09 57 08.7	
	comp=Z,5.2nm,1.0s						
EIDS	**Eidsvold**	**17.89**	**213**	P	**P**	**09 56 52.4**	**+0.4**
EIDS				IAmb	IAmb	09 57 11.6	
	comp=Z,12nm,1.2s						
COEN	**Coen**	**18.43**	**257**	P	**P**	**09 56 56.3**	**-1.8**
COEN				IAmb	IAmb	09 57 16.9	
	comp=Z,6.6nm,1.1s						
WB0	**Warramunga Arr**	**27.89**	**248**	P	**P**	**09 58 29.1**	**-2.8**
WRAB	**Tennant Creek**	**27.97**	**247**	P	**P**	**09 58 29.2**	**-3.4**
WRAB				IAmb	IAmb	09 58 57.7	
	comp=Z,6.1nm,1.4s						
WB2	**Warramunga Arr**	**27.97**	**247**	P	**P**	**09 58 30.5**	**-2.2**
WB2				IAmb	IAmb	09 58 45.6	
	comp=Z,8.4nm,1.5s						
WRA	**Warramunga Arr**	**27.98**	**247**	P	**P**	**09 58 34.9**	**+2.2**
	comp=Z,0.4nm,0.6s,baz=76,slow=9.0,SNR=7.1 comp=Z,0.4nm,0.6s						
WRA	**Warramunga Arr**	**27.98**	**247**	P	**P**	**09 58 29.6**	**-3.1**
STKA	**Stephens Creek**	**28.25**	**218**	P	**P**	**09 58 34.3**	**-0.6**
AS31	**Alice Springs**	**29.55**	**240**	P	**P**	**09 58 44.0**	**-2.6**
ASAR	**Alice Springs**	**29.55**	**240**	P	**P**	**09 58 47.6**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=64,slow=9.0,SNR=1.6						
ASAR				LR	LR	10 11 04.4	
	comp=Z,62nm,18.4s,baz=222,slow=37 comp=Z,0.2nm,0.6s						
ASAR	**Alice Springs**	**29.55**	**240**	P	**P**	**09 58 47.0**	**+0.4**
KNRA	**Kununurra**	**32.47**	**257**	P	**P**	**09 59 11.4**	**-1.0**
BSWZ	**Blackbirch Sta**	**32.87**	**163**	P	**P**	**09 59 15.8**	**+0.3**
FITZ	**Fitzroy Crossi**	**35.70**	**254**	P	**P**	**09 59 40.8**	**+0.4**
KKM	**Kota Kinabalu**	**48.19**	**288**	P	**P**	**10 01 20.9**	**-1.5**
MAJO	**Matsushiro**	**51.77**	**336**	P	**P**	**10 01 47.2**	**-1.8**
MJB9	**Matsu-Tunnel**	**51.77**	**336**	P	**P**	**10 01 48.2**	**-0.9**
MJB9				IAmb	IAmb	10 01 48.7	
	comp=Z,18nm,1.5s						
YULB	**Yu-li**	**51.95**	**311**	P	**P**	**10 01 49.1**	**-1.5**
JNU	**Nakatsue**	**52.41**	**327**	P	**P**	**10 01 52.5**	**-1.4**
JNU				IAmb	IAmb	10 02 06.1	
	comp=Z,14nm,1.3s						
SONM	**Songino Array**	**75.93**	**325**	P	**P**	**10 04 29.4**	**+1.6**
	comp=Z,0.8nm,0.6s,baz=141,slow=5.8,SNR=5.8 comp=Z,0.8nm,0.6s						
QSPA	**South Pole Qui**	**79.49**	**180**	P	**P**	**10 04 47.8**	**+0.4**
QSPA				IAmb	IAmb	10 05 08.9	
	comp=Z,1.6nm,1.0s						
RC01	**Rabbit Creek A**	**80.92**	**22**	P	**P**	**10 04 54.0**	**-0.9**
RC01				IAmb	IAmb	10 05 08.6	
	comp=Z,19nm,1.4s						
MKAR	**Makanchi Array**	**90.44**	**318**	P	**P**	**10 05 43.0**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=108,slow=3.8,SNR=2.5 comp=Z,0.3nm,0.6s						

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*JMA **17** 10:15:26.4±0.1, 37°.4N±0°.4×141°.7E±0°.8, h42^{km}±2^{km}, MV3.4/39, E OFF FUKUSHIMA PREF*

*IDC **17** 10:15:28.6±2.6, 38°.20N×140°.80E, h0^{km}, mb3.2/2, mbtmp3.1/3, ML2.2/1, Error ellipse: s-maj=47.3km s-min=38.7km az=94.0*

ISC 17 10:15:24.2±2.3**, 37°.35N**±0°.05×**141°.8E**±0°.1**, h24**^{km}±13^{km}**, n22,** σ**1ˢ.04**/27**, 16D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.75**	**271**	⇓*i*P	**Pb**	**10 15 39.3**	**+0.7**
JFK				⇓*e*S	**Sb**	**10 15 47.9**	**-0.6**
JMST	**Minamisoumatoc**	**0.83**	**297**	⇓*i*P	**Pb**	**10 15 40.1**	**+0.3**
JMST				⇓S	**Sb**	**10 15 49.7**	**-1.0**
ONAJ	**Iwakimizuishiy**	**0.85**	**253**	⇓*i*P	**Pb**	**10 15 40.9**	**+0.5**
ONAJ				⇓S	**Sb**	**10 15 50.7**	**-0.7**
JMM	**Marumori**	**0.96**	**302**	⇓*i*P	**Pn**	**10 15 42.2**	**0.0**
JMM				⇓*e*S	**Sb**	**10 15 53.3**	**-1.1**
JIKH	**Ishinomakikobu**	**0.99**	**344**	⇓*i*P	**Pn**	**10 15 43.2**	**+0.6**
JIKH				⇓*e*S	**Sb**	**10 15 55.0**	**-0.4**
JFFD	**Fukushimafurud**	**1.04**	**256**	⇓*i*P	**Pn**	**10 15 43.4**	**+0.2**
JFFD				⇓S	**Sb**	**10 15 55.3**	**-1.4**
JIO	**Ouri**	**1.16**	**341**	⇓*i*P	**Pn**	**10 15 45.6**	**+0.7**
JIO				⇓S	**Sn**	**10 15 58.9**	**-1.0**
JOTO	**OTAMA OYAMA**	**1.20**	**280**	*i*P	**Pn**	**10 15 46.2**	**+0.8**
JOTO				*e*S	**Sn**	**10 16 00.5**	**-0.5**
JHO	**Hitachi**	**1.25**	**234**	*i*P	**Pn**	**10 15 46.3**	**+0.2**
JHO				S	**Sn**	**10 16 01.0**	**-1.1**
JOU	**Okura**	**1.36**	**318**	⇓*e*P	**Pn**	**10 15 48.3**	**+0.6**
JOU				⇓S	**Sn**	**10 16 04.7**	**-0.3**
JYS	**Shirataka**	**1.64**	**302**	*e*P	**Pn**	**10 15 53.4**	**+2.0**
JYS				S	**Sn**	**10 16 12.3**	**+0.5**
JMK	**Ichinoseki**	**1.66**	**344**	*e*P	**Pn**	**10 15 53.2**	**+1.4**
JFY	**Yanaizu**	**1.69**	**272**	P	**Pn**	**10 15 53.1**	**+0.9**
MJAR	**Matsushiro Arr**	**3.00**	**255**	Pn	**Pn**	**10 16 11.9**	**+1.7**
	0.4nm,0.3s,baz=81,slow=15,SNR=16						
MJAR				Sn	**Sn**	**10 16 47.5**	**+2.0**
	0.4nm,0.3s,baz=76,slow=11,SNR=5.4 1.6nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**28.04**	**122**	T	T	10 50 48.5	
	baz=314,slow=75,SNR=6.7						
H11N1	**WAKE ISLAND Hy**	**28.05**	**122**	T	T	10 50 52.6	
	baz=314,slow=75,SNR=6.7						
H11N3	**WAKE ISLAND Hy**	**28.05**	**122**	T	T	10 50 51.1	
	baz=314,slow=75,SNR=5.8						
H11S1	**WAKE ISLAND Hy**	**28.77**	**124**	T	T	10 51 47.3	
	baz=316						
H11S3	**WAKE ISLAND Hy**	**28.77**	**124**	T	T	10 51 56.7	
	baz=316						
H11S2	**WAKE ISLAND Hy**	**28.78**	**124**	T	T	10 51 47.3	
	baz=316						
MKAR	**Makanchi Array**	**44.22**	**302**	P	**P**	**10 23 30.3**	**-1.0**
	0.2nm,0.6s,baz=93,slow=7.9,SNR=1.9 0.2nm,0.6s						
WRA	**Warramunga Arr**	**57.42**	**188**	P	P	10 25 24.1	+13
	0.3nm,0.8s,baz=1.9,slow=7.5,SNR=5.1 0.3nm,0.8s						

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*MOS **17** 10:18:38.5±0.9, 23°.45S×177°.06W, h108^{km}, mb5.5/28, Error ellipse: s-maj=8.6km s-min=7.3km az=82.7*

*IDC **17** 10:18:39.4±1.7, 23°.48S×176°.99W, h107^{km}±14^{km}, mb5.1/30, mbtmp5.5/31, MS4.1/41, Error ellipse: s-maj=10.5km s-min=9.7km az=104.0*

*NEIC **17** 10:18:39.1, 23°.59S×176°.77W, h104^{km}*

*BJI **17** 10:18:39.0±0.0, 23°.00S×176°.24W, h121^{km}, mb5.3/59, mB5.4/34*

*NEIC **17** 10:18:40.3, 23°.78S×176°.34W, h130^{km}, Moment Tensor Solution. Duration: 2ˢ.5 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.25; M$_{\theta\theta}$0.19; M$_{\phi\phi}$1.06; M$_{r\theta}$-0.25; M$_{\theta\phi}$0.14; M$_{\phi r}$-1.19; Fault plane solution: M$_0$1.69000×10^{17} NP1:ϕ_s10.99000°, δ68.08000°, λ-88.50000°. NP2:ϕ_s186.98000°, δ21.97000°, λ-93.72000°. Principal axes: T 1.6000, Plg23.0000°, Azm100.0000°; N 0.1707, Plg1.0000°, Azm190.0000°; P -1.7707, Plg67.0000°, Azm284.0000°;*

*NEIC **17** 10:18:40.3±2.5, 23°.58S±0°.07×176°.77W±0°.09, h115^{km}±1^{km}, mb5.5/441, Mwb5.5/31, Mww5.4/25 Error ellipse: s-maj=13.4km s-min=11.6km az=106.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.23; M$_{\theta\theta}$-0.20; M$_{\phi\phi}$1.43; M$_{r\theta}$-0.51; M$_{\theta\phi}$0.11; M$_{\phi r}$-1.24; Fault plane solution: M$_0$1.90000×10^{17} NP1:ϕ_s17.58000°, δ68.13000°, λ-77.92000°. NP2:ϕ_s167.69000°, δ24.84000°, λ-117.54000°. Principal axes: T 1.9623, Plg22.0000°, Azm98.0000°; N -0.1204, Plg11.0000°, Azm193.0000°; P -1.8419, Plg65.0000°, Azm308.0000°;*

*NEIC **17** 10:18:40.3, 23°.58S×176°.77W, h130^{km}*

GCMT ***17*** *10:18:43.3±0.1, 23°.60S±0°.01×176°.62W±0°.01, h124^{km}, MW5.4/153, Moment Tensor Solution. s138,c236; s153,c293; Duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.91±.02; $M_{\theta\theta}$-0.03±.02; $M_{\phi\phi}$0.94±.02; $M_{r\theta}$-0.53±.02; $M_{\theta\phi}$-0.22±.02; $M_{\phi r}$-1.38±.02; Best double couple: $M_0$1.75400×10^{17} NP1:ϕ_s14.00000°, δ75.00000°, λ-75.00000°. NP2:ϕ_s148.00000°, δ21.00000°, λ-134.00000°. Principal axes: T 1.6810, Plg28.0000°, Azm92.0000°; N 0.1470, Plg15.0000°, Azm190.0000°; P -1.8280, Plg57.0000°, Azm304.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NOU ***17*** *10:18:43.2, 23°.71S×176°.63W, h160^{km}, ML5.4/119, South of Fiji Islands*

ISC 17 10:18:40.9±0.3**, 23°.59S**±0°.04×**176°.85W**±0°.04**, h126**^{km}±2^{km}**, h127**^{km}**:pP-P, n1553,** σ**1**^{s}**39**/1567**, mb5.5**/386**, 89C-73D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	5.63	341	P	Pn	10 20 03.8	+1.3
	18nm,0.7s						
RAO	Raoul Island	5.72	189	P	Pn	10 20 03.9	+0.3
	326nm,0.2s,baz=324,slow=19,SNR=7.3						
RAO				S	Sn	10 21 08.2	0.0
	2µm,0.3s,baz=265,slow=23,SNR=9.2						
RAO				LR	LR	10 21 48.4	
	comp=Z,2µm,21.9s,baz=180,slow=32						
RAO	Raoul Island	5.72	189	Pn	Pn	10 20 02.0	-1.6
TAVE	Taveuni	7.42	337	P	Pn	10 20 29.5	+2.9
	632nm,1.0s						
MSVF	Nonsavu	7.53	320	P	Pn	10 20 29.8	+1.6
	861nm,0.8s,baz=143,slow=10,SNR=307						
MSVF				S	Sn	10 21 53.4	+1.3
	454nm,0.9s,baz=106,slow=15,SNR=4.5						
MSVF				LR	LR	10 22 17.6	
	comp=Z,1µm,18.9s,baz=135,slow=30						
MSVF	Nonsavu	7.53	320	Pn	Pn	10 20 31.2	+3.1
MSVF	Nonsavu	7.53	320	P	Pn	10 20 31.4	+3.2
	1µm,0.9s						
MSVF	Nonsavu	7.53	320	*d i*P	Pn	10 20 31.4	+3.2
NIUE	Niue	7.86	56	P	Pn	10 20 20.9	-12
	baz=7.5,SNR=157						
NIUE	Niue	7.86	56	Pn	Pn	10 20 27.3	-5.2
YSA	Yasawairara	8.62	322	P	Pn	10 20 45.4	+2.6
	338nm,0.9s						
AFI	Afiamalu	10.75	27	P	Pn	10 21 02.8	-8.8
	60nm,0.4s,baz=210,slow=8.1,SNR=24						
AFI				S	Sn	10 22 52.5	-18
	75nm,0.3s,baz=251,slow=24,SNR=2.3						
PINNC	Pines Island,	14.49	271		P	10 22 01.9	-1.2
PINNC	Pines Island,	14.49	271	P	P	10 22 07.3	+4.2
	923nm,0.6s						
MXZ	Matakaoa Point	14.54	196	Pn	Pn	10 21 59.9	-0.6
NFK	Norfolk Island	14.68	245	P	P	10 22 07.9	+2.7
	baz=15,SNR=3.9						
RTV	Rentapao	14.94	290	P	P	10 22 13.8	+5.7
	2µm,1.0s						
LIFNC	LIFOU	15.00	278	Pn	Pn	10 22 06.6	+0.1
LIFNC	LIFOU	15.00	278	P	P	10 22 12.1	+3.2
	830nm,1.3s						
OUENC	Ouen Island, N	15.07	271	Pn	Pn	10 22 07.8	+0.5
OUENC					P	10 22 09.0	-0.5
OUENC	Ouen Island, N	15.07	271	P	P	10 22 14.6	+5.0
	413nm,0.8s						
YATNC	Mamie plateau,	15.07	273	P	P	10 22 14.1	+4.5
	397nm,0.7s						
DVP	Devils Point	15.17	290	P	P	10 22 13.4	+2.7
	6µm,0.9s						
ONTNC	Ouen Toro	15.44	271	Pn	Pn	10 22 12.6	+0.6
FUNA	Funafuti	15.45	345	Pn	Pn	10 22 11.3	-0.8
FUNA					P	10 22 11.8	-2.0
DZM	Mont Dzumac	15.48	272	*e*Pn	P	10 22 16.5	+2.2
	973nm,0.9s						
DZM				*e*S	Sn	10 25 02.5	-1.8
	3µm,26.9s						
DZM	Mont Dzumac	15.48	272	P	P	10 22 15.0	+0.7
	349nm,0.7s,baz=92,slow=16,SNR=68						
DZM				S	Sn	10 25 05.4	+1.1
	9.3nm,0.9s,baz=67,slow=19,SNR=1.0						
DZM	Mont Dzumac	15.48	272	Pn	Pn	10 22 12.3	-0.3
URZ	Urewera	15.51	198	P	Pn	10 22 05.6	-7.1
	6.2nm,0.9s,baz=36,slow=2.8,SNR=1.8						
URZ				S	Sn	10 24 50.7	-14
	38nm,0.5s,baz=101,slow=23,SNR=2.4						
URZ				LR	LR	10 26 37.2	
	comp=Z,464nm,21.6s,baz=104,slow=31						
TOZ	Tahuroa Road	15.55	203	Pn	Pn	10 22 12.7	-0.5
RTZ	Ruatahuna	15.88	198		Pn	10 22 15.6	-1.7
RAR	Rarotonga	15.97	85	P	Pn	10 22 15.6	-2.8
	413nm,1.0s,baz=236,slow=4.8,SNR=39						
RAR				S	Sn	10 24 59.0	-17
	178nm,0.6s,baz=51,slow=20,SNR=9.8						
RAR				LR	LR	10 28 15.4	
	comp=Z,605nm,18.8s,baz=258,slow=36						
RAR	Rarotonga	15.97	85		Pn	10 22 15.3	-3.2
RAR	Rarotonga	15.97	85	P	Pn	10 22 15.3	-3.2
HIZ	Hauiti	16.48	204	P	Pn	10 22 23.7	-0.9
BKZ	Black Stump Fm	16.53	198		Pn	10 22 24.2	-1.1
TMVZ	Te Maari	16.73	201	P	Pn	10 22 26.3	-1.5
ETVZ	East Tongariro	16.74	200	P	Pn	10 22 25.4	-2.6
NNVZ	North Ngauruho	16.77	201	P	Pn	10 22 27.5	-0.9
TWVZ	Taurewa	16.77	201	P	Pn	10 22 27.4	-0.9
SNVZ	South Ngauruho	16.81	201	P	Pn	10 22 26.2	-2.6
TUVZ	Tukino	16.88	200	P	P	10 22 27.8	-1.8
TRVZ	Turoa	16.94	201	P	P	10 22 26.9	-3.5
WNVZ	Wahianoa	16.95	200	P	P	10 22 26.7	-3.7
PKVZ	Pokaka	17.00	201	P	P	10 22 29.2	-1.7
MTVZ	Mangateitei	17.05	201	P	P	10 22 30.0	-1.3
NEZ	North Egmont	17.43	204	P	Pn	10 22 36.9	+0.6
TSZ	Takapari Road	17.51	199	P	P	10 22 32.1	-4.3
KOUNC	Koumac, New Ca	17.75	276	P	Pn	10 22 40.0	-0.2
BFZ	Birch Farm	18.01	197	P	P	10 22 40.8	-1.1
MRZ	Mangatainoka R	18.18	199	P	P	10 22 41.8	-2.0
MRZ	Mangatainoka R	18.18	199	P	P	10 22 39.4	-4.3
HOWZ	Holdsworth Sta	18.42	199	P	P	10 22 43.0	-3.4
OGWZ	Otaki Gorge	18.45	199	P	P	10 22 42.3	-4.3
TMWZ	Te Maipa	18.50	198	P	P	10 22 44.8	-2.5
KIW	Kapiti Island	18.57	200	P	P	10 22 44.7	-3.3
MTW	Mount Morrison	18.66	198	P	P	10 22 46.4	-2.6
CAW	Cannon Point	18.74	199	P	P	10 22 46.6	-3.2
DUWZ	D'Urville Isla	18.84	202	P	P	10 22 48.2	-2.7
PAWZ	Paruwai Farm	18.89	198	P	P	10 22 50.3	-1.3
BHW	Baring Head	19.08	199	P	P	10 22 53.4	-0.1
TCW	Tory Channel	19.09	201	P	P	10 22 51.1	-2.5
TCW	Tory Channel	19.09	201	P	P	10 22 50.3	-3.3
PLWZ	Palliser	19.11	198	P	P	10 22 53.4	-0.6
PLWZ	Palliser	19.11	198	P	P	10 22 52.4	-1.6
QRZ	Quartz Range	19.37	205	P	P	10 22 56.3	-0.4
QRZ	Quartz Range	19.37	205	P	P	10 22 54.4	-2.3
TKNZ	Takaka Hill	19.39	204	P	P	10 22 56.4	-0.5
TKNZ	Takaka Hill	19.39	204	P	P	10 22 58.1	+1.2
TUWZ	Tuamarina	19.39	201	P	P	10 22 52.6	-4.3
NNZ	Nelson	19.40	203	P	P	10 22 53.3	-3.7
CMWZ	Cape Campbell	19.59	200	P	P	10 22 57.1	-2.0
BSWZ	Blackbirch Sta	19.67	201	P	P	10 22 58.5	-1.5
MRNZ	Matariki Terra	19.78	204	P	P	10 22 58.3	-2.9
THZ	Tophouse	20.05	203	P	P	10 23 01.6	-2.4
THZ	Tophouse	20.05	203	P	P	10 23 02.8	-1.2
KHZ	Kahutara	20.41	201	P	P	10 23 04.0	-3.8
RPZ	Rata Peaks	22.41	203	P	P	10 23 25.3	-3.8
	50nm,0.5s,baz=14,slow=1.8,SNR=27						
RPZ				S	S	10 27 19.4	-6.7
	24nm,0.6s,baz=351,slow=19,SNR=6.5						
FOZ	Fox Glacier	22.73	206	P	P	10 23 30.5	-1.6
LHI	Lord Howe Isla	22.74	244	P	P	10 23 34.4	+2.0
	baz=23,SNR=8.3						
LHI	Lord Howe Isla	22.74	244	P	P	10 23 31.9	-0.5
JCZ	Jackson Bay	23.60	207	P	P	10 23 38.4	-1.9
	103nm,0.6s						
ODZ	Otahua Downs	23.71	202	P	P	10 23 40.4	-0.8
WKZ	Wanaka	24.13	205	P	P	10 23 44.0	-1.0
MLZ	Mavora Lakes	24.93	206	P	P	10 23 51.3	-1.0
DCZ	Deep Cove	25.41	207	P	P	10 23 55.1	-1.4
DCZ				IAmb	IAmb	10 24 05.0	
	comp=Z,153nm,1.7s						
WHZ	Wether Hill Ro	25.43	205	P	P	10 23 55.5	-1.4
WHZ				IAmb	IAmb	10 23 57.3	
	comp=Z,68nm,0.6s						
PAE	Paea	26.17	82	*e*T	T	10 49 44.3	
	comp=Z,20nm,0.2s						
PPT2	Papeete2	26.19	82	*e*P	P	10 23 58.2	-5.8
	comp=Z,96nm,22.5s						
PPT2				*e*S	S	10 28 26.0	-0.9
	comp=Z,569nm,30.8s						
PPT2				*e*LR	LR	10 30 45.3	
	comp=Z,3µm,29.2s						
PPT2				*e*LR	LR	10 30 45.3	
	comp=Z,2µm,26.2s						
PPT2	Papeete2	26.19	82	*e*T	T	10 49 48.3	
	comp=Z,14nm,0.3s						
PPT	Papeete	26.20	82	P	P	10 24 05.3	+1.3
	comp=Z,64nm,0.9s,baz=229,slow=20,SNR=3.4						
PPT				LR	LR	10 31 42.4	
	comp=Z,972nm,20.4s,baz=244,slow=30						
	comp=Z,64nm,0.9s						
AUWSH	Wavell State H	27.41	256	P	P	10 24 16.4	+1.6
	comp=Z,88nm,0.9s						
MEH	Mehetia	27.48	84	*e*T	T	10 51 53.5	
	comp=Z,81nm,0.3s						
PMOR	Pomariorio Ree	28.58	78	*e*T	T	10 54 07.2	
	comp=Z,2.7nm,0.2s						
ARMA	Armidale	28.84	249	P	P	10 24 28.9	+1.4
	baz=29,SNR=14						
ARMA	Armidale	28.84	249	P	P	10 24 28.4	+0.8
ARMA				IAmb	IAmb	10 25 04.5	
	comp=Z,87nm,1.2s						
EIDS	Eidsvold	29.21	260	P	P	10 24 31.3	+0.5
	baz=30,SNR=35						
EIDS	Eidsvold	29.21	260	P	P	10 24 31.3	+0.5
EIDS				IAmb	IAmb	10 24 32.6	
	comp=Z,72nm,0.7s						
EIDS	Eidsvold	29.21	260	P	P	10 24 31.7	+0.9
	comp=Z,118nm,1.1s						
GD1S	Gladstone Soft	29.25	263	P	P	10 24 33.2	+2.0
MGCD	Mangrove Creek	29.68	244	P	P	10 24 36.1	+1.3
	baz=30,SNR=46						
RIV	Riverview	29.75	243	P	P	10 24 37.2	+1.7
	baz=30,SNR=3.5						
RMQ	Roma	31.24	257	P	P	10 24 50.1	+1.4
	baz=32,SNR=73						
RMQ	Roma	31.24	257	P	P	10 24 50.0	+1.3
	comp=Z,138nm,1.1s						
CAN	Canberra	31.80	241	P	P	10 24 54.4	+0.8
CAN	Canberra	31.80	241	P	P	10 24 54.3	+0.8
	comp=Z,217nm,1.5s						
CAN	Canberra	31.80	241	P	P	10 24 54.4	+0.8
CAN				pmax	pmax		
	comp=Z,282nm,1.6s						
CAN	Canberra	31.80	241	P	P	10 24 54.0	+0.4
AULRC	Lightning Ridg	31.93	252	P	P	10 24 55.2	+0.5
	comp=Z,237nm,1.6s						
MILA	Mila	32.09	237	P	P	10 24 56.5	+0.4
	baz=32,SNR=33						
CMSA	Cobar Meteorol	34.02	248	P	P	10 25 12.4	-0.4
	baz=34,SNR=65						
CMSA	Cobar Meteorol	34.02	248	P	P	10 25 12.6	-0.2
	comp=Z,41nm,0.7s						
TV1H	Townsville Har	34.06	270	P	P	10 25 14.3	+1.0
	comp=Z,141nm,0.9s						
CTA	Charters Tower	34.37	269	P	P	10 25 15.9	-0.1
	comp=Z,301nm,0.5s,baz=96,slow=9.8,SNR=882						
CTA				PcP	PcP	10 27 50.3	+1.1
	comp=Z,12nm,0.7s,baz=102,slow=0.9,SNR=2.9						
CTA				LR	LR	10 36 41.7	
	comp=Z,516nm,22.0s,baz=88,slow=32						
	comp=Z,301nm,0.5s						
CTAO	Charters Tower	34.37	269	P	P	10 25 15.8	-0.2
CTAO	Charters Tower	34.37	269	P	P	10 25 16.9	+0.9
	comp=Z,417nm,0.6s						
CTAO	Charters Tower	34.37	269	P	P	10 25 15.8	-0.2
CTAO				pmax	pmax		
	comp=Z,297nm,0.6s						
CTAO	Charters Tower	34.37	269	P	P	10 25 16.7	+0.7
CTAO				pP	pwP	10 25 44.6	-1.1
TOO	Toolangi	35.05	238	P	P	10 25 21.5	-0.2
	baz=35,SNR=57						
TOO	Toolangi	35.05	238	P	P	10 25 21.8	+0.1
TOO				IAmb	IAmb	10 25 24.1	
	comp=Z,93nm,0.8s						
TOO	Toolangi	35.05	238	P	P	10 25 21.7	0.0
	comp=Z,133nm,0.9s						
TOO	Toolangi	35.05	238	P	P	10 25 21.8	+0.1
TOO				pmax	pmax		
	comp=Z,93nm,0.8s						
MOO	Moorlands	35.20	229	P	P	10 25 22.8	0.0
	baz=36,SNR=7.6						
QLP	Quilpie	35.29	257	P	P	10 25 23.7	-0.1
	baz=36,SNR=59						
QLP	Quilpie	35.29	257	P	P	10 25 23.5	-0.3
	comp=Z,210nm,1.0s						
RABL	Rabaul	35.58	298	P	P	10 25 25.6	-0.9
RABL	Rabaul	35.58	298	P	P	10 25 27.1	+0.6
	comp=Z,136nm,0.6s						
KRVT	Keravat (AS076	35.63	298	P	P	10 25 25.4	-1.4
	comp=Z,152nm,0.6s,baz=116,slow=4.7,SNR=11						
KRVT				LR	LR	10 40 32.4	
	comp=Z,246nm,18.7s,baz=272,slow=37						
	comp=Z,152nm,0.6s						
GEXS	Deakin Univers	36.11	237	P	P	10 25 32.0	+1.3
	comp=Z,392nm,0.7s						
BRAT	Ballarat	36.26	238	P	P	10 25 32.3	+0.3
	comp=Z,133nm,0.8s						
MTSU	Mount Surprise	36.62	271	P	P	10 25 35.5	+0.2
	baz=37,SNR=229						
MTSU	Mount Surprise	36.62	271	P	P	10 25 35.8	+0.5
	comp=Z,125nm,1.0s						
PMG	Port Moresby	37.15	286	P	P	10 25 39.9	+0.1
	comp=Z,219nm,0.6s,baz=118,slow=4.3,SNR=92						
PMG				PcP	PcP	10 27 58.5	+1.0
	comp=Z,52nm,0.8s,baz=108,slow=3.2,SNR=4.4						
PMG				LR	LR	10 37 49.1	
	comp=Z,600nm,18.1s,baz=126,slow=31						
	comp=Z,219nm,0.6s						
PMG	Port Moresby	37.15	286	P	P	10 25 39.6	-0.2
PMG	Port Moresby	37.15	286	P	P	10 25 40.0	+0.2
	comp=Z,420nm,0.9s						
PMG	Port Moresby	37.15	286	*ce*P	P	10 25 39.3	-0.5
PMG				pmax	pmax		
	comp=Z,436nm,1.0s						
PMG	Port Moresby	37.15	286	P	P	10 25 39.4	-0.4
PMG				pP	pP	10 26 07.7	+0.7
PMG				PcP	PcP	10 27 57.8	+0.3
STKA	Stephens Creek	37.52	248	P	P	10 25 42.4	-0.3
	comp=Z,22nm,0.5s,baz=94,slow=10,SNR=99						
STKA				PcP	PcP	10 27 59.8	+1.4
	comp=Z,21nm,0.6s,baz=100,slow=3.9,SNR=5.8						
	comp=Z,22nm,0.5s						
STKA	Stephens Creek	37.52	248	P	P	10 25 42.5	-0.3
	baz=38,SNR=102						
STKA	Stephens Creek	37.52	248	P	P	10 25 42.3	-0.3
STKA	Stephens Creek	37.52	248	P	P	10 25 42.9	+0.2
	comp=Z,11nm,1.4s						
ARPS	Mount Arapiles	37.77	240	P	P	10 25 44.3	-0.5
	baz=38,SNR=39						
ARPS	Mount Arapiles	37.77	240	P	P	10 25 44.5	-0.3
	comp=Z,225nm,0.8s						
TAOE	Nuku Hiva Isla	38.02	73	*e*S	S	10 31 29.9	-0.6
	comp=Z,253nm,28.7s						
TAOE				*e*LR	LR	10 36 14.6	
	comp=Z,387nm,21.1s						
INKA	Innaminka	38.31	255	P	P	10 25 50.0	+0.6
	comp=Z,142nm,0.8s						
PATS	Pohnpei	38.77	318	P	P	10 25 53.9	+0.6
	baz=39,SNR=5.9						
PATS	Pohnpei	38.77	318	P	P	10 25 52.6	-0.7
PATS	Pohnpei	38.77	318	P	P	10 25 53.6	+0.3
	comp=Z,253nm,1.4s						
COEN	Coen	38.93	277	P	P	10 25 55.0	+0.3
	baz=39,SNR=34						
COEN	Coen	38.93	277	P	P	10 25 54.8	+0.1
COEN	Coen	38.93	277	P	P	10 25 55.2	+0.4
	comp=Z,131nm,1.5s						
HTT	Hallett	39.84	246	P	P	10 26 01.3	-0.8
	baz=40,SNR=62						
HTT	Hallett	39.84	246	P	P	10 26 01.3	-0.8
	comp=Z,129nm,0.8s						
GHSS	Government Hou	40.19	243	P	P	10 26 06.9	+2.0
	comp=Z,243nm,0.6s						
QIS	Mount Isa	40.36	266	P	P	10 26 05.9	-0.6
	baz=41,SNR=37						
QIS	Mount Isa	40.36	266	P	P	10 26 06.7	+0.2
	comp=Z,66nm,1.4s						
LCRK	Leigh Creek	40.41	250	P	P	10 26 06.5	-0.3
	comp=Z,170nm,0.6s						
PTPS	Port Pirie	40.60	246	P	P	10 26 10.8	+2.5
	comp=Z,189nm,0.6s						
WHYH	Whyalla	40.95	246	P	P	10 26 10.9	-0.3
	comp=Z,70nm,0.7s						
BBOO	Buckleboo	42.22	247	P	P	10 26 20.2	-1.4
	baz=43,SNR=54						
BBOO	Buckleboo	42.22	247	P	P	10 26 20.2	-1.4
BBOO				IAmb	IAmb	10 26 27.4	
	comp=Z,37nm,0.8s						
BBOO	Buckleboo	42.22	247	P	P	10 26 20.2	-1.4
	comp=Z,53nm,0.7s						
OOD	Oodnadatta	42.78	254	P	P	10 26 26.2	+0.1
	comp=Z,149nm,0.8s						
MULG	Mulgathing	44.01	250	P	P	10 26 34.8	-1.2
	comp=Z,160nm,0.5s						
AS01	Alice Springs	44.89	260	P	P	10 26 42.5	-0.7
	comp=Z,139nm,0.9s						
AS31	Alice Springs	44.93	260	P	P	10 26 42.4	-1.1
AS31				IAmb	IAmb	10 26 45.4	
	comp=Z,63nm,1.3s						
AS31				PcP	PcP	10 28 23.8	+0.9
ASAR	Alice Springs	44.94	260	P	P	10 26 42.3	-1.2
	comp=Z,100nm,0.9s,baz=98,slow=6.7,SNR=320						
ASAR				PcP	PcP	10 28 23.4	+0.6
	comp=Z,30nm,0.7s,baz=110,slow=3.5,SNR=13						
ASAR				ScP	ScP	10 32 06.9	+3.3
	comp=Z,4.1nm,0.9s,baz=99,slow=5.7,SNR=5.3						
ASAR				S	S	10 33 09.0	-3.4
	comp=Z,0.9nm,0.7s,baz=15,slow=22,SNR=1.4						
ASAR				ScS	ScS	10 36 26.6	-1.6
	comp=Z,3.2nm,0.9s,baz=79,slow=3.6,SNR=4.6						
ASAR				P4KPbc		11 04 32.8	
	comp=Z,0.6nm,0.6s,baz=111,slow=4.2,SNR=11						
	comp=Z,100nm,0.9s						
ASAR	Alice Springs	44.94	260	P	P	10 26 42.7	-0.8
ASAR	Alice Springs	44.94	260	P	P	10 26 42.7	-0.8
WB2	Warramunga Arr	45.30	265	P	P	10 26 45.0	-1.4
WB2				PcP	PcP	10 28 24.8	+0.6
WB1	Warramunga Ar.	45.30	265	P	P	10 26 45.1	-1.3
WRAB	Tennant Creek	45.30	265	P	P	10 26 44.9	-1.5
WRAB				PcP	PcP	10 28 24.7	+0.6
WRAB	Tennant Creek	45.30	265	P	P	10 26 45.2	-1.2
	comp=Z,221nm,0.8s						
WRAB	Tennant Creek	45.30	265	*d i*P	P	10 26 44.6	-1.8
WRAB				pmax	pmax		
	comp=Z,139nm,0.7s						
WRAB	Tennant Creek	45.30	265	P	P	10 26 44.9	-1.5
WRAB				PcP	PcP	10 28 23.8	-0.4
WB0	Warramunga Arr	45.30	265	P	P	10 26 45.1	-1.4
WB0				PcP	PcP	10 28 24.9	+0.8
WRA	Warramunga Arr	45.31	265	P	P	10 26 44.9	-1.5
	comp=Z,142nm,0.6s,baz=102,slow=8.2,SNR=442						
WRA				PcP	PcP	10 28 24.4	+0.3
	comp=Z,49nm,0.8s,baz=99,slow=3.5,SNR=13						
WRA				ScP	ScP	10 32 08.2	+3.0
	comp=Z,4.0nm,0.8s,baz=99,slow=4.2,SNR=4.6						
WRA				S	S	10 33 11.8	-6.0
	comp=Z,3.9nm,0.9s,baz=126,slow=16,SNR=6.7						
WRA				PKiKP	PKiKP	10 35 20.4	-1.4
	comp=Z,1.5nm,0.6s,baz=113,slow=0.2,SNR=6.1						
WRA				LR	LR	10 44 00.5	
	comp=Z,522nm,21.7s,baz=95,slow=34						
	comp=Z,142nm,0.6s						
WRA	Warramunga Arr	45.31	265	P	P	10 26 45.0	-1.5
WRA				PcP	PcP	10 28 25.4	+1.2
WRA	Warramunga Arr	45.31	265	P	P	10 26 45.0	-1.5
WRA						10 28 25.4	
WRA				pmax	pmax		
	comp=Z,18nm,0.7s						
GENI	Genyem	46.50	290	P	P	10 26 55.9	+0.1
	comp=Z,191nm,1.1s						
GENI	Genyem	46.50	290	P	P	10 26 54.9	-0.9
	comp=Z,191nm,1.3s						
KHLU	Kahalu`u	47.53	27	P	P	10 27 03.7	-0.1
KHLU				IAmb	IAmb	10 27 05.6	
	comp=Z,137nm,0.9s						
HUH	Hualalai	47.64	27	P	P	10 27 05.6	+0.8
HUH				IAmb	IAmb	10 27 06.3	
	comp=Z,118nm,1.0s						
HMH	Humu'ula Sheep	47.72	28	P	P	10 27 02.9	-2.6
POHA	Pohakuloa	47.83	28	P	P	10 27 05.2	-1.0
POHA				IAmb	IAmb	10 27 08.1	
	comp=Z,77nm,0.9s						
POHA	Pohakuloa	47.83	28	P	P	10 27 06.6	+0.3
POHA				pP	pwP	10 27 36.3	-0.9
HPAH	Hawaii Prepara	48.01	27	P	P	10 27 07.7	+0.3
HPAH				IAmb	IAmb	10 27 09.2	
	comp=Z,140nm,1.0s						
MHA	Mahukona	48.06	27	P	P	10 27 08.4	+0.7
MHA	Mahukona	48.06	27	P	P	10 27 08.4	+0.7
SMPI	Sarmi	48.06	290	P	P	10 27 07.0	-0.9
	comp=Z,120nm,1.3s,comp=Z,3µm						
KIP	Kipapa	48.35	24	P	P	10 27 08.9	-1.0
KIP				IAmb	IAmb	10 27 11.4	
	comp=Z,96nm,0.9s						
KIP	Kipapa	48.35	24	*ce*P	P	10 27 10.6	+0.7
KIP				pmax	pmax		
	comp=Z,98nm,0.8s						
KIP	Kipapa	48.35	24	P	P	10 27 10.5	+0.6
FORT	Forrest	49.12	249	P	P	10 27 14.6	-1.3
	baz=50,SNR=89						
FORT	Forrest	49.12	249	P	P	10 27 14.2	-1.6
FORT	Forrest	49.12	249	P	P	10 27 14.3	-1.6
	comp=Z,332nm,0.6s						
KDU	Kakadu	49.15	273	P	P	10 27 15.1	-1.1
	baz=50,SNR=44						
KDU	Kakadu	49.15	273	P	P	10 27 15.2	-1.0
	comp=Z,234nm,0.7s						
WRKA	Warakurna	49.72	256	P	P	10 27 18.9	-1.6
	baz=50,SNR=466						
WRKA	Warakurna	49.72	256	P	P	10 27 19.2	-1.4
	comp=Z,127nm,0.6s						
SRPI	Serui, Papua	50.26	288	P	P	10 27 24.2	-0.5
	comp=Z,221nm,0.8s						
MTN	Manton Dam	50.32	273	P	P	10 27 23.8	-1.3
	baz=51,SNR=25						
MTN	Manton Dam	50.32	273	P	P	10 27 23.9	-1.2
MTN	Manton Dam	50.32	273	P	P	10 27 23.9	-1.2
	comp=Z,129nm,0.6s						
DRV	Dumont d'Urvil	50.83	201	P	P	10 27 28.7	+0.5
KNRA	Kununurra	51.58	268	P	P	10 27 33.5	-1.0
	baz=52,SNR=56						
KNRA	Kununurra	51.58	268	P	P	10 27 33.9	-0.7
KNRA	Kununurra	51.58	268	P	P	10 27 33.7	-0.8
	comp=Z,233nm,1.0s						
SAUI	Saumlaki	51.97	279	P	P	10 27 37.6	+0.2
SAUI	Saumlaki	51.97	279	P	P	10 27 38.4	+1.0
	comp=Z,788nm,1.0s						
SAUI	Saumlaki	51.97	279	P	P	10 27 37.8	+0.4
	comp=Z,785nm,1.3s,comp=Z,8µm						
RKPI	Ransiki, Papua	52.24	287	P	P	10 27 38.6	-0.8
	comp=Z,131nm,0.9s,comp=Z,10µm						
GUMO	Guam	52.60	311	P	P	10 27 42.4	+0.4
	comp=Z,150nm,0.7s,baz=182,slow=12,SNR=2.7						
GUMO				LR	LR	10 50 04.2	
	comp=Z,132nm,18.1s,baz=112,slow=36						
	comp=Z,150nm,0.7s						
FAKI	Fak Fak	53.28	285	P	P	10 27 46.2	-0.9
FAKI	Fak Fak	53.28	285	P	P	10 27 46.2	-0.9
	comp=Z,165nm,1.1s						
FAKI	Fak Fak	53.28	285	P	P	10 27 46.2	-0.9
	comp=Z,165nm,1.3s,comp=Z,2µm						
FITZ	Fitzroy Crossi	53.73	264	P	P	10 27 49.7	-0.7
KMBL	Kambalda	54.32	247	P	P	10 27 52.0	-2.5
	baz=55,SNR=12						
KMBL	Kambalda	54.32	247	P	P	10 27 53.6	-0.9
	comp=Z,40nm,1.2s						
BNDI	Bandanaira	54.66	282	P	P	10 27 57.1	0.0
	comp=Z,751nm,0.7s						
SBA	Scott Base	54.88	184	P	P	10 28 01.5	+3.7
SBA				pP	pP	10 28 31.3	+4.2
SBA				PcP	PcP	10 29 00.7	+2.5
VNDA	Vanda	54.95	186	P	P	10 28 00.2	+2.0
	comp=Z,7.2nm,0.8s,baz=21,slow=6.5,SNR=15						
VNDA				PcP	PcP	10 28 59.4	+0.9
	comp=Z,14nm,0.8s,baz=311,slow=5.9,SNR=6.1						
VNDA				LR	LR	10 48 45.3	
	comp=Z,46nm,20.2s,baz=14,slow=33						
	comp=Z,7.2nm,0.8s						
VNDA	Vanda	54.95	186	P	P	10 28 00.3	+2.0
VNDA	Vanda	54.95	186	P	P	10 28 00.3	+2.0
VNDA				pmax	pmax		
	comp=Z,27nm,1.1s						
VNDA	Vanda	54.95	186	P	P	10 28 01.0	+2.7
VNDA				pP	pP	10 28 31.6	+3.9
VNDA				sP	sP	10 28 45.5	+4.0
VNDA				PcP	PcP	10 29 00.1	+1.5
MSAI	Masohi	56.05	282	P	P	10 28 06.3	-0.8
	comp=Z,56nm,0.6s						
AAI	Ambon	56.56	282	P	P	10 28 09.9	-0.8
	comp=Z,374nm,0.8s,comp=Z,3µm						

AUALB	**St Joseph's Co**	**57.15**	**243**	P	**P**	**10 28 11.7**	**-2.9**
	comp=Z,120nm,0.7s						
SOEI	**Soe**	**57.70**	**273**	P	**P**	**10 28 19.4**	**+0.5**
SOEI	**Soe**	**57.70**	**273**	P	**P**	**10 28 19.5**	**+0.5**
	comp=Z,846nm,1.0s						
SOEI	**Soe**	**57.70**	**273**	P	**P**	**10 28 18.1**	**-0.8**
	comp=Z,838nm,1.0s,comp=Z,6µm						
NLAI	**Namlea**	**57.73**	**282**	P	**P**	**10 28 17.2**	**-1.8**
KLBR	**Kellerberrin**	**57.77**	**247**	P	**P**	**10 28 17.5**	**-1.5**
	baz=58,SNR=32						
KLBR	**Kellerberrin**	**57.77**	**247**	P	**P**	**10 28 17.6**	**-1.5**
	comp=Z,330nm,0.7s						
RKGY	**Rocky Gully**	**57.95**	**243**	P	**P**	**10 28 19.3**	**-1.0**
	baz=58,SNR=9.2						
RKGY	**Rocky Gully**	**57.95**	**243**	P	**P**	**10 28 19.3**	**-1.0**
	comp=Z,125nm,0.8s						
MEEK	**Meekatharra**	**57.97**	**252**	P	**P**	**10 28 18.5**	**-2.0**
	baz=58,SNR=29						
MEEK	**Meekatharra**	**57.97**	**252**	P	**P**	**10 28 18.6**	**-2.0**
	comp=Z,24nm,0.5s						
NWAO	**Narrogin (SRO)**	**57.99**	**245**	P	**P**	**10 28 19.2**	**-1.3**
	comp=Z,19nm,0.5s,baz=103,slow=6.4,SNR=18						
NWAO				LR	LR	10 52 21.2	
	comp=Z,182nm,18.0s,baz=32,slow=35						
	comp=Z,19nm,0.5s						
NWAO	**Narrogin (SRO)**	**57.99**	**245**	P	**P**	**10 28 19.3**	**-1.3**
	baz=58,SNR=12						
NWAO				P	**P**	**10 28 19.3**	**-1.3**
	baz=58,SNR=12						
NWAO	**Narrogin (SRO)**	**57.99**	**245**	P	**P**	**10 28 18.9**	**-1.7**
NWAO				IAmb	IAmb	10 28 22.7	
	comp=Z,164nm,1.8s						
NWAO	**Narrogin (SRO)**	**57.99**	**245**	P	**P**	**10 28 19.4**	**-1.2**
	comp=Z,43nm,0.9s						
NWAO	**Narrogin (SRO)**	**57.99**	**245**	P	**P**	**10 28 19.3**	**-1.3**
	comp=Z,43nm,0.9s						
NWAO	**Narrogin (SRO)**	**57.99**	**245**	P	**P**	**10 28 19.1**	**-1.3**
PSA00	**Pilbara Seismi**	**58.06**	**259**	P	**P**	**10 28 20.1**	**-1.2**
PSA00				IAmb	IAmb	10 29 12.7	
	comp=Z,20nm,0.7s						
PSA00	**Pilbara Seismi**	**58.06**	**259**	P	**P**	**10 28 20.0**	**-1.2**
	comp=Z,36nm,0.8s						
MBWA	**Marble Bar**	**58.27**	**259**	P	**P**	**10 28 21.8**	**-0.8**
MBWA	**Marble Bar**	**58.27**	**259**	P	**P**	**10 28 21.6**	**-1.1**
	comp=Z,63nm,0.7s						
MBWA	**Marble Bar**	**58.27**	**259**	P	**P**	**10 28 21.3**	**-1.4**
LBMI	**Labuha**	**58.53**	**285**	P	**P**	**10 28 23.8**	**-0.8**
	comp=Z,356nm,0.9s,comp=Z,4µm						
BLDU	**Ballidu**	**58.82**	**247**	P	**P**	**10 28 24.7**	**-1.7**
	baz=59,SNR=79						
BLDU	**Ballidu**	**58.82**	**247**	P	**P**	**10 28 24.8**	**-1.6**
MUN	**Mundaring**	**59.00**	**246**	P	**P**	**10 28 26.3**	**-1.2**
	baz=59,SNR=29						
MUN	**Mundaring**	**59.00**	**246**	P	**P**	**10 28 26.5**	**-1.1**
	comp=Z,64nm,0.7s						
SANI	**Sanana**	**59.25**	**282**	P	**P**	**10 28 28.4**	**-1.1**
	comp=Z,258nm,0.8s						
SANI	**Sanana**	**59.25**	**282**	P	**P**	**10 28 28.1**	**-1.4**
	comp=Z,255nm,0.8s,comp=Z,2µm						
TNTI	**Ternate**	**59.30**	**286**	P	**P**	**10 28 29.3**	**-0.6**
TNTI	**Ternate**	**59.30**	**286**	P	**P**	**10 28 29.4**	**-0.5**
	comp=Z,262nm,1.0s						
TNTI	**Ternate**	**59.30**	**286**	P	**P**	**10 28 29.1**	**-0.8**
	comp=Z,261nm,1.0s,comp=Z,3µm						
MORW	**Morawa**	**59.69**	**249**	P	**P**	**10 28 30.9**	**-1.4**
	baz=60,SNR=57						
MORW	**Morawa**	**59.69**	**249**	P	**P**	**10 28 31.0**	**-1.4**
MORW				IAmb	IAmb	10 28 32.0	
	comp=Z,47nm,0.6s						
MORW	**Morawa**	**59.69**	**249**	P	**P**	**10 28 30.9**	**-1.4**
	comp=Z,63nm,0.7s						
CCD	**Concordia, Ant**	**59.77**	**195**	P	**P**	**10 28 34.0**	**+1.4**
CCD				pP	**pP**	**10 29 02.7**	**+0.4**
MMRI	**Maumere**	**59.98**	**274**	P	**P**	**10 28 33.4**	**-1.1**
MMRI	**Maumere**	**59.98**	**274**	P	**P**	**10 28 33.4**	**-1.1**
	comp=Z,352nm,0.7s						
MMRI	**Maumere**	**59.98**	**274**	P	**P**	**10 28 33.9**	**-0.6**
	comp=Z,350nm,0.7s,comp=Z,3µm						
RPN	**Rapa Nui**	**60.45**	**109**	LR	LR	10 49 47.7	
	comp=Z,133nm,20.4s,baz=283,slow=31						
BASI	**Baing, Sumba**	**60.92**	**271**	P	**P**	**10 28 39.6**	**-1.3**
	comp=Z,533nm,0.9s,comp=Z,5µm						
CASY	**Casey**	**61.66**	**206**	P	**P**	**10 28 45.7**	**+0.7**
CASY	**Casey**	**61.66**	**206**	P	**P**	**10 28 45.4**	**+0.4**
CASY				pP	**pP**	**10 29 14.1**	**-0.7**
BSSI	**Bau Bau, Buton**	**62.53**	**275**	P	**P**	**10 28 51.1**	**-0.6**
LUWI	**Luwuk**	**62.58**	**282**	P	**P**	**10 28 51.1**	**-0.9**
LUWI	**Luwuk**	**62.58**	**282**	P	**P**	**10 28 51.8**	**-0.2**
	comp=Z,250nm,1.1s						
LUWI	**Luwuk**	**62.58**	**282**	P	**P**	**10 28 51.3**	**-0.7**
	comp=Z,252nm,1.1s,comp=Z,3µm						
GIRL	**Giralia**	**62.80**	**256**	P	**P**	**10 28 53.5**	**+0.2**
	baz=63,SNR=9.8						
GIRL	**Giralia**	**62.80**	**256**	P	**P**	**10 28 53.4**	**0.0**
	comp=Z,185nm,1.1s						
GTOI	**Gorontalo**	**63.11**	**283**	P	**P**	**10 28 55.5**	**0.0**
	comp=Z,91nm,0.7s,comp=Z,890nm						
BKSI	**Bulukumba**	**63.20**	**276**	P	**P**	**10 28 54.9**	**-1.2**
	comp=Z,210nm,1.0s,comp=Z,2µm						
KAPI	**Kappang**	**63.66**	**276**	PP	**PP**	**10 31 19.4**	**-1.3**
	comp=Z,8.1nm,0.3s,baz=175,slow=12,SNR=3.8						
KAPI				LR	LR	10 58 16.1	
	comp=Z,140nm,18.6s,baz=106,slow=37						
KAPI	**Kappang**	**63.66**	**276**	P	**P**	**10 28 58.4**	**-0.7**
KAPI	**Kappang**	**63.66**	**276**	P	**P**	**10 28 58.6**	**-0.5**
	comp=Z,76nm,1.1s						
KAPI	**Kappang**	**63.66**	**276**	*d i*P	**P**	**10 28 58.3**	**-0.9**
KAPI				pmax	pmax		
	comp=Z,137nm,1.7s						
KAPI	**Kappang**	**63.66**	**276**	P	**P**	**10 28 58.2**	**-0.9**
MRSI	**Marisa**	**63.99**	**283**	P	**P**	**10 29 00.6**	**-0.7**
	comp=Z,77nm,0.6s,comp=Z,993nm						
PLAI	**Plampang**	**64.00**	**272**	P	**P**	**10 29 00.5**	**-0.9**
	comp=Z,324nm,1.1s						
PLAI	**Plampang**	**64.00**	**272**	P	**P**	**10 29 00.8**	**-0.6**
	comp=Z,327nm,1.1s,comp=Z,3µm						
SPSI	**Sidrap Palu**	**64.06**	**277**	P	**P**	**10 28 59.9**	**-1.9**
	comp=Z,81nm,0.8s,comp=Z,1µm						
JCJ	**Chichijima**	**64.07**	**319**	LR	LR	10 53 09.2	
	comp=Z,247nm,21.7s,baz=122,slow=32						
TWSI	**Taliwang, Sumb**	**64.85**	**271**	P	**P**	**10 29 06.3**	**-0.6**
	comp=Z,218nm,1.2s,comp=Z,2µm						
TOLI2	**Tolitoli**	**65.31**	**283**	P	**P**	**10 29 08.8**	**-1.1**
TOLI2	**Tolitoli**	**65.31**	**283**	P	**P**	**10 29 08.6**	**-1.3**
	comp=Z,112nm,0.6s						
MPSI	**Mapaga**	**65.76**	**282**	P	**P**	**10 29 11.2**	**-1.6**
	comp=Z,182nm,1.0s,comp=Z,2µm						
IGBI	**Denpasar**	**66.41**	**270**	P	**P**	**10 29 16.7**	**-0.3**
	comp=Z,387nm,0.9s						
QSPA	**South Pole Qui**	**66.50**	**180**	P	**P**	**10 29 18.8**	**+2.0**
	comp=Z,66nm,0.7s,baz=30,slow=1.2,SNR=383						
QSPA				PcP	**pP**	**10 29 46.7**	**-0.5**
	comp=Z,62nm,1.0s,baz=344,slow=2.5,SNR=6.9						
QSPA				LR	LR	10 56 08.2	
	comp=Z,59nm,19.8s,baz=8.5,slow=34						
QSPA				PKPPKP	**P'P'df**	**10 57 41.5**	**-7.3**
	comp=Z,5.5nm,0.9s,baz=236,slow=3.5,SNR=7.3						
	comp=Z,66nm,0.7s						
QSPA	**South Pole Qui**	**66.50**	**180**	P	**P**	**10 29 18.8**	**+2.0**
QSPA				IAmb	IAmb	10 29 19.9	
	comp=Z,73nm,0.7s						
QSPA	**South Pole Qui**	**66.50**	**180**	P	**P**	**10 29 18.6**	**+1.8**
QSPA				pP	**pP**	**10 29 48.9**	**+1.7**
SRBI	**Singaraja**	**66.62**	**271**	P	**P**	**10 29 17.7**	**-0.6**
	comp=Z,170nm,1.1s,comp=Z,2µm						
JAGI	**Jajag, Banyuwa**	**67.45**	**270**	P	**P**	**10 29 21.0**	**-2.6**
JAGI	**Jajag, Banyuwa**	**67.45**	**270**	P	**P**	**10 29 20.7**	**-2.9**
	comp=Z,138nm,1.1s						
JAGI	**Jajag, Banyuwa**	**67.45**	**270**	P	**P**	**10 29 21.5**	**-2.1**
	comp=Z,138nm,1.1s						
ABJI	**Asem Bagus**	**67.63**	**271**	P	**P**	**10 29 24.1**	**-0.6**
	comp=Z,123nm,0.9s						
GMJI	**Gumukmas**	**68.18**	**270**	P	**P**	**10 29 27.3**	**-0.8**
	comp=Z,108nm,0.8s						
BLJI	**Banyuglugur**	**68.24**	**271**	P	**P**	**10 29 27.4**	**-1.1**
	comp=Z,144nm,0.8s						
BBKI	**Banjar Baru**	**68.76**	**276**	P	**P**	**10 29 31.1**	**-0.6**
	comp=Z,115nm,1.1s,comp=Z,8µmcomp=Z,9µm						
MYLDM	**Lahad Datu**	**69.18**	**286**	P	**P**	**10 29 32.4**	**-1.9**
MYLDM				IAmb	IAmb	10 30 14.6	
	comp=Z,61nm,1.3s						
GRJI	**Gresik**	**69.57**	**271**	P	**P**	**10 29 36.2**	**-0.5**
	comp=Z,636nm,0.9s,comp=Z,4µm						
PWJI	**Pagerwojo**	**69.78**	**270**	P	**P**	**10 29 36.9**	**-1.1**
NGJI	**Ngawi**	**70.33**	**270**	P	**P**	**10 29 41.9**	**+0.5**
	comp=Z,123nm,0.9s						
UGM	**Wanagama**	**70.99**	**270**	P	**P**	**10 29 44.5**	**-0.9**
UGM	**Wanagama**	**70.99**	**270**	P	**P**	**10 29 44.7**	**-0.7**
	comp=Z,243nm,0.7s						
UGM	**Wanagama**	**70.99**	**270**	P	**P**	**10 29 44.5**	**-0.9**
	comp=Z,240nm,0.6s						
UWJI	**Ujung Watu**	**71.17**	**271**	P	**P**	**10 29 45.9**	**-0.6**
	comp=Z,234nm,1.0s,comp=Z,4µm						
KKM	**Kota Kinabalu**	**71.59**	**285**	P	**P**	**10 29 47.9**	**-1.2**
PBKI	**Pangkalan Bun**	**71.96**	**275**	P	**P**	**10 29 51.5**	**+0.3**
KPJI	**Karang Pucung**	**72.67**	**269**	P	**P**	**10 29 54.7**	**-0.7**
	comp=Z,173nm,0.7s						
CMJI	**Cimerak**	**72.94**	**269**	P	**P**	**10 29 56.5**	**-0.5**
	comp=Z,158nm,1.2s						
JMM	**Marumori**	**72.94**	**326**	P	**P**	**10 29 55.5**	**-1.0**
JMM				IAmb	IAmb	10 31 16.5	
	comp=Z,61nm,1.4s						
JOW	**Kunigami**	**72.96**	**310**	LR	LR	11 00 44.5	
	comp=Z,121nm,19.3s,baz=90,slow=35						
JOW	**Kunigami**	**72.96**	**310**	P	**P**	**10 29 55.5**	**-1.3**
JGF	**Kuroka**	**73.10**	**322**	IAmb	IAmb	10 29 57.4	
	comp=Z,121nm,1.9s						
JGF	**Kuroka**	**73.10**	**322**	P	**P**	**10 29 56.3**	**-1.2**
	comp=Z,28nm,1.3s						
MJAR	**Matsushiro Arr**	**73.32**	**324**	P	**P**	**10 29 57.3**	**-1.5**
	comp=Z,9.6nm,0.6s,baz=158,slow=6.3,SNR=38						
	comp=Z,9.6nm,0.6s						
MAJO	**Matsushiro**	**73.32**	**324**	P	**P**	**10 29 57.9**	**-0.8**
MAJO	**Matsushiro**	**73.32**	**324**	P	**P**	**10 29 57.7**	**-1.0**
	comp=Z,26nm,0.8s						
MAJO	**Matsushiro**	**73.32**	**324**	*d i*P	**P**	**10 29 57.6**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,21nm,0.8s						
MJB9	**Matsu-Tunnel**	**73.32**	**324**	P	**P**	**10 29 58.6**	**-0.1**
SBUM	**Sibu**	**73.59**	**280**	P	**P**	**10 30 00.4**	**-0.5**
JCJI	**Jatiwangi**	**73.60**	**270**	P	**P**	**10 29 59.8**	**-1.1**
	comp=Z,308nm,1.0s						
BBJI	**Bungbulang**	**73.80**	**269**	P	**P**	**10 30 00.6**	**-1.5**
	comp=Z,202nm,0.8s						
JMN	**Monobe**	**73.80**	**319**	P	**P**	**10 30 02.0**	**+0.4**
CNJI	**Cibinong**	**74.33**	**269**	P	**P**	**10 30 05.6**	**+0.5**
	comp=Z,136nm,1.0s						
JSU	**Suzuyama**	**74.46**	**315**	P	**P**	**10 30 05.4**	**-0.1**
	comp=Z,34nm,0.8s						
XMI	**Christmas Isla**	**74.48**	**265**	P	**P**	**10 30 05.8**	**-0.2**
	comp=Z,212nm,0.9s						
KSM	**Kuching**	**74.91**	**278**	P	**P**	**10 30 07.8**	**-0.7**
KSM				IAmb	IAmb	10 30 10.6	
	comp=Z,90nm,0.8s						
KSM	**Kuching**	**74.91**	**278**	P	**P**	**10 30 07.5**	**-1.0**
	comp=Z,118nm,1.1s						
CBJI	**Citeko**	**74.93**	**270**	P	**P**	**10 30 06.9**	**-1.7**
SKJI	**Sukabumi**	**74.97**	**269**	P	**P**	**10 30 08.3**	**-0.6**
	comp=Z,207nm,0.7s						
JTM	**Tenmabayashi**	**75.04**	**328**	P	**P**	**10 30 09.3**	**+0.7**
JTM				IAmb	IAmb	10 30 11.8	
	comp=Z,51nm,0.8s						
JHS	**Saijyo**	**75.13**	**319**	P	**P**	**10 30 08.4**	**-0.9**
JHS				IAmb	IAmb	10 30 12.3	
	comp=Z,62nm,0.9s						
JHS	**Saijyo**	**75.13**	**319**	P	**P**	**10 30 09.1**	**-0.2**
	comp=Z,76nm,1.5s						
ADK	**Adak**	**75.14**	**0**	P	**P**	**10 30 08.6**	**-0.3**
ADK	**Adak**	**75.14**	**0**	P	**P**	**10 30 08.6**	**-0.3**
	comp=Z,335nm,0.8s						
ADK	**Adak**	**75.14**	**0**	P	**P**	**10 30 08.6**	**-0.3**
ADK				pmax	pmax		
	comp=Z,229nm,0.8s						
JNU	**Nakatsue**	**75.25**	**317**	LR	LR	10 59 52.3	
	comp=Z,130nm,21.7s,baz=122,slow=33						
JNU	**Nakatsue**	**75.25**	**317**	P	**P**	**10 30 09.0**	**-1.0**
JNU	**Nakatsue**	**75.25**	**317**	P	**P**	**10 30 09.5**	**-0.5**
	comp=Z,34nm,1.2s						
CGJI	**Cibinong**	**75.91**	**269**	P	**P**	**10 30 12.5**	**-1.7**
	comp=Z,241nm,0.7s						
YULB	**Yu-li**	**76.08**	**303**	P	**P**	**10 30 13.8**	**-1.2**
	comp=Z,38nm,1.0s						
YULB	**Yu-li**	**76.08**	**303**	*e*S	**P**	**10 30 13.9**	**-1.0**
	baz=282						
YULB	**Yu-li**	**76.08**	**303**	P	**P**	**10 30 14.1**	**-0.8**
NACB	**Ninganchiao**	**76.29**	**304**	P	**P**	**10 30 15.1**	**-0.9**
NACB	**Ninganchiao**	**76.29**	**304**	P	**P**	**10 30 15.3**	**-0.8**
	comp=Z,99nm,1.1s						
NACB	**Ninganchiao**	**76.29**	**304**	IAmb	IAmb	10 30 17.3	
	comp=Z,130nm,1.2s						
CLES	**Cleveland East**	**76.33**	**4**	P	**P**	**10 30 15.1**	**-0.5**
CLES				IAmb	IAmb	10 30 17.0	
	comp=Z,565nm,0.9s						
BELA	**Belgrano 2**	**76.37**	**172**	P	**P**	**10 30 16.1**	**+0.4**
BELA				IAmb	IAmb	10 30 17.6	
	comp=Z,110nm,0.8s						
SHEM	**Shemya Is, Ala**	**76.40**	**354**	P	**P**	**10 30 15.1**	**-0.9**
	comp=Z,191nm,0.8s,baz=284,slow=8.8,SNR=5.6						
SHEM				LR	LR	10 58 23.1	
	comp=Z,243nm,20.5s,baz=114,slow=31						
	comp=Z,191nm,0.8s						
TPUB	**Ta-pu**	**76.55**	**303**	P	**P**	**10 30 16.2**	**-1.4**
TPUB				IAmb	IAmb	10 30 18.2	
	comp=Z,132nm,0.9s						
TPUB	**Ta-pu**	**76.55**	**303**	P	**P**	**10 30 15.9**	**-1.7**
	comp=Z,180nm,0.9s						
NIKH	**Nikolski High**	**76.55**	**5**	P	**P**	**10 30 16.8**	**-0.1**
NIKH	**Nikolski High**	**76.55**	**5**	P	**P**	**10 30 17.0**	**+0.1**
	comp=Z,846nm,0.9s						
NIKH	**Nikolski High**	**76.55**	**5**	P	**P**	**10 30 16.9**	**+0.1**
	baz=187,SNR=30						
SSLB	**Suanglung**	**76.56**	**304**	P	**P**	**10 30 16.0**	**-1.6**
SSLB				IAmb	IAmb	10 30 18.3	
	comp=Z,76nm,0.8s						
SSLB	**Suanglung**	**76.56**	**304**	P	**P**	**10 30 16.1**	**-1.6**
	comp=Z,113nm,0.8s						
YHNB	**Yeheng**	**76.73**	**305**	P	**P**	**10 30 18.3**	**-0.4**
YHNB				IAmb	IAmb	10 30 20.3	
	comp=Z,48nm,0.9s						
YHNB	**Yeheng**	**76.73**	**305**	P	**P**	**10 30 18.9**	**+0.2**
	comp=Z,66nm,0.8s						
JKA	**Kamikawa-asahi**	**76.93**	**331**	P	**P**	**10 30 19.9**	**+0.6**
ASAJ	**Asahikawa**	**76.94**	**331**	P	**P**	**10 30 19.9**	**+0.6**
ASAJ				pmax	pmax		
	comp=Z,35nm,1.0s						
PPBI	**Pangkal Pinang**	**77.24**	**273**	P	**P**	**10 30 21.3**	**-0.4**
KASI	**Kota Agung**	**77.43**	**269**	P	**P**	**10 30 22.2**	**-0.6**
	comp=Z,151nm,0.7s						
UNV	**Unalaska Valle**	**77.63**	**6**	P	**P**	**10 30 22.2**	**-0.6**
UNV	**Unalaska Valle**	**77.63**	**6**	P	**P**	**10 30 22.4**	**-0.4**
	baz=190,SNR=33						
AKUT	**Akutan**	**77.99**	**7**	IAmb	IAmb	10 30 27.0	
	comp=Z,84nm,0.7s						
AKUT	**Akutan**	**77.99**	**7**	P	**P**	**10 30 24.7**	**-0.1**
	comp=Z,118nm,0.7s						
LWLI	**Liwa**	**78.03**	**270**	P	**P**	**10 30 25.5**	**-0.7**
	comp=Z,237nm,0.7s						
PMSA	**Palmer Station**	**78.04**	**156**	LR	LR	11 01 39.9	
	comp=Z,200nm,18.8s,baz=126,slow=33						
PMSA	**Palmer Station**	**78.04**	**156**	*e*P	**P**	**10 30 28.3**	**+3.1**
MDSI	**Maura Dua**	**78.12**	**270**	P	**P**	**10 30 25.0**	**-1.6**
	comp=Z,57nm,0.8s,comp=Z,1µm						
FALS	**False Pass**	**78.97**	**8**	IAmb	IAmb	10 30 33.7	
	comp=Z,75nm,0.7s						
FALS	**False Pass**	**78.97**	**8**	P	**P**	**10 30 29.8**	**-0.3**
	baz=192						
SCZ2	**Santa Cruz Isl**	**78.97**	**45**	P	**P**	**10 30 32.8**	**+2.0**
	baz=232						
MAW	**Mawson**	**79.03**	**200**	P	**P**	**10 30 32.4**	**+1.8**
	comp=Z,90nm,0.8s,baz=123,slow=8.3,SNR=7.6						
MAW				LR	LR	11 05 45.6	
	comp=Z,106nm,18.1s,baz=106,slow=36						
	comp=Z,90nm,0.8s						
YSS	**Yuzh-Sakhalins**	**79.12**	**333**	P	**P**	**10 30 31.4**	**+0.2**
YSS				IAmb	IAmb	10 30 32.8	
	comp=Z,96nm,1.4s						
YSS	**Yuzh-Sakhalins**	**79.12**	**333**	*e*P	**P**	**10 30 31.4**	**+0.2**
YSS				*e*S	**S**	**10 40 19.4**	**-0.8**
YSS				pmax	pmax		
	comp=Z,40nm,1.3s						
YSS				pmax	pmax		
	comp=Z,200nm,3.8s						
SBC	**Santa Barbara**	**79.19**	**45**	P	**P**	**10 30 33.6**	**+1.7**
	baz=232						
PET	**Petropavlovsk**	**79.21**	**345**	*d i*P	**P**	**10 30 30.8**	**-0.8**
PET				pmax	pmax		
	comp=Z,69nm,1.5s						
PKM	**Mcpherson Peak**	**79.41**	**45**	P	**P**	**10 30 35.2**	**+1.9**
	baz=231,SNR=11						
CIS	**Catalina Islan**	**79.41**	**46**	P	**P**	**10 30 34.6**	**+1.3**
	baz=232						
PEA0B	**Petropavlovsk-**	**79.52**	**345**	IAmb	IAmb	10 30 34.0	
	comp=Z,58nm,0.7s						
PEA0B	**Petropavlovsk-**	**79.52**	**345**	*d i*P	**P**	**10 30 32.8**	**-0.5**
PETK	**Petropavlovsk-**	**79.52**	**345**	P	**P**	**10 30 32.2**	**-1.1**
	comp=Z,40nm,0.6s,baz=158,slow=5.8,SNR=60						
PETK				LR	LR	10 58 57.7	
	comp=Z,152nm,20.7s,baz=158,slow=30						
	comp=Z,40nm,0.6s						
PETK	**Petropavlovsk-**	**79.52**	**345**	P	**P**	**10 30 32.0**	**-1.3**
SMMC	**Simmler**	**79.55**	**44**	P	**P**	**10 30 36.0**	**+2.0**
	baz=231,SNR=11						
TJN	**Taejon**	**79.55**	**317**	P	**P**	**10 30 33.4**	**-0.5**
TJN				IAmb	IAmb	10 30 38.6	
	comp=Z,47nm,0.8s						
TJN	**Taejon**	**79.55**	**317**	⇓*e*P	**P**	**10 30 34.8**	**+0.9**
SAO	**San Andreas Ge**	**79.56**	**42**	P	**P**	**10 30 34.0**	**+0.2**
SAO				IAmb	IAmb	10 30 36.9	
	comp=Z,46nm,0.9s						
SAO	**San Andreas Ge**	**79.56**	**42**	P	**P**	**10 30 34.1**	**+0.2**
SAO				pmax	pmax		
	comp=Z,46nm,1.0s						
PMPB	**Monarch Peak**	**79.61**	**43**	IAmb	IAmb	10 30 37.5	
	comp=Z,54nm,1.0s						
BBGB	**Big Mountain B**	**79.69**	**43**	IAmb	IAmb	10 30 38.4	
	comp=Z,56nm,1.1s						
BCW	**Bitter Crk WRg**	**79.70**	**45**	IAmb	IAmb	10 30 38.1	
	comp=Z,73nm,0.9s						
SDPT	**Sand Point**	**79.85**	**9**	P	**P**	**10 30 35.1**	**+0.2**
SDPT	**Sand Point**	**79.85**	**9**	P	**P**	**10 30 33.8**	**-1.2**
	comp=Z,202nm,0.7s						
SDPT	**Sand Point**	**79.85**	**9**	P	**P**	**10 30 34.9**	**-0.1**
	baz=195,SNR=6.2						
KSRS	**Korea Array**	**79.90**	**318**	P	**P**	**10 30 36.2**	**+0.5**
	comp=Z,11nm,1.0s,baz=134,slow=5.6,SNR=30						
KSRS				LR	LR	11 01 55.0	
	comp=Z,162nm,21.7s,baz=135,slow=32						
	comp=Z,11nm,1.0s						
KSI	**Kapahiang**	**79.90**	**270**	P	**P**	**10 30 35.1**	**-1.3**
	comp=Z,215nm,0.7s						
OSI	**Osito Audit: C**	**79.94**	**45**	P	**P**	**10 30 37.8**	**+1.7**
	baz=232						
S12K	**Black Hills**	**79.97**	**8**	P	**P**	**10 30 35.6**	**-0.1**
	baz=194,SNR=9.5						
DECC	**Green Verdugo**	**79.98**	**46**	P	**P**	**10 30 37.3**	**+1.0**
	baz=232						
109C	**Camp Elliot, M**	**79.98**	**48**	P	**P**	**10 30 37.4**	**+1.1**
	baz=233						
HOPS	**Hopland Field**	**80.03**	**40**	P	**P**	**10 30 34.5**	**-1.9**
HOPS				IAmb	IAmb	10 30 39.3	
	comp=Z,54nm,1.1s						
GDXM	**Geysers**	**80.07**	**40**	P	**P**	**10 30 35.5**	**-1.2**
TKX	**Tecate**	**80.13**	**48**	P	**P**	**10 30 37.2**	**0.0**
ARVC	**Arvin**	**80.19**	**45**	P	**P**	**10 30 39.0**	**+1.7**
	baz=232,SNR=13						
SRIG	**Santa Rosalia**	**80.30**	**55**	P	**P**	**10 30 36.8**	**-1.4**
MURC	**Murrieta**	**80.34**	**47**	P	**P**	**10 30 39.7**	**+1.4**
	baz=233,SNR=15						
KMPM	**Mount Pierce**	**80.37**	**38**	IAmb	IAmb	10 30 42.1	
	comp=Z,122nm,1.0s						
BFSC	**Mount Baldy Ra**	**80.42**	**46**	P	**P**	**10 30 40.0**	**+1.2**
	baz=233,SNR=15						
MASI	**Maura Aman, Be**	**80.43**	**271**	P	**P**	**10 30 38.1**	**-1.1**
	comp=Z,109nm,0.9s						
MONP2	**Monument Peak**	**80.45**	**48**	P	**P**	**10 30 40.7**	**+1.6**
	baz=234,SNR=13						
VES	**Vestal, Richgr**	**80.46**	**44**	P	**P**	**10 30 40.1**	**+1.3**
	baz=232,SNR=42						
SFX	**San Felipe**	**80.47**	**50**	P	**P**	**10 30 39.4**	**+0.5**
KMRM	**Mail Ridge**	**80.47**	**38**	IAmb	IAmb	10 30 42.6	
	comp=Z,130nm,0.9s						
IKP	**In-Ko-Pah, Jac**	**80.52**	**48**	P	**P**	**10 30 41.0**	**+1.7**
	baz=234,SNR=9.7						
VOG	**Valley Oaks Go**	**80.57**	**44**	P	**P**	**10 30 40.3**	**+0.9**
	baz=231						
EDW2	**Edwards Air Fo**	**80.58**	**45**	P	**P**	**10 30 41.1**	**+1.6**
	baz=233,SNR=52						
SPIA	**Saint Paul Isl**	**80.64**	**4**	P	**P**	**10 30 39.9**	**+0.8**
SPIA	**Saint Paul Isl**	**80.64**	**4**	P	**P**	**10 30 39.5**	**+0.4**
	baz=186,SNR=8.5						
JCC	**Jacoby Creek,**	**80.69**	**38**	P	**P**	**10 30 41.3**	**+1.5**
JCC				IAmb	IAmb	10 30 43.5	
	comp=Z,52nm,1.1s						
INCN	**Inchon**	**80.71**	**318**	P	**P**	**10 30 40.5**	**+0.4**
INCN	**Inchon**	**80.71**	**318**	P	**P**	**10 30 40.5**	**+0.4**
INCN				pmax	pmax		
	comp=Z,18nm,0.7s						
CCAC	**Calif City Air**	**80.73**	**45**	IAmb	IAmb	10 30 44.7	
	comp=Z,39nm,0.9s						
ISA	**Isabella, Lake**	**80.75**	**45**	IAmb	IAmb	10 30 43.4	
	comp=Z,58nm,0.9s						
ISA	**Isabella, Lake**	**80.75**	**45**	P	**P**	**10 30 42.1**	**+1.7**
	baz=232,SNR=17						
BTDF	**Bukit Timah Da**	**80.81**	**276**	P	**P**	**10 30 40.6**	**-0.6**
	comp=Z,26nm,0.7s						
PFO	**Pinyon Flats O**	**80.84**	**47**	P	**P**	**10 30 42.1**	**+1.0**
	comp=Z,17nm,1.0s,baz=238,slow=3.7,SNR=25						
	comp=Z,17nm,1.0s						
PFO	**Pinyon Flats O**	**80.84**	**47**	P	**P**	**10 30 42.4**	**+1.3**
PFO	**Pinyon Flats O**	**80.84**	**47**	*d i*P	**P**	**10 30 42.6**	**+1.6**
PFO				pmax	pmax		
	comp=Z,45nm,1.1s						
PFO	**Pinyon Flats O**	**80.84**	**47**	P	**P**	**10 30 42.5**	**+1.4**
	baz=234,SNR=16						
TPFO	**Pinon Flats**	**80.84**	**47**	P	**P**	**10 30 42.5**	**+1.4**
	baz=234,SNR=15						
KHMM	**Horse Mountain**	**80.90**	**38**	P	**P**	**10 30 40.5**	**-0.6**
SWSC	**Sam W. Stewart**	**80.90**	**48**	P	**P**	**10 30 42.7**	**+1.5**
	baz=234,SNR=8.6						
MYKOM	**Kota Tinggi**	**80.92**	**276**	P	**P**	**10 30 41.5**	**-0.2**
MYKOM				IAmb	IAmb	10 30 42.4	
	comp=Z,41nm,0.7s						
BBRC	**Big Bear Solar**	**80.92**	**47**	P	**P**	**10 30 43.1**	**+1.5**
	baz=233						
PMD	**Palm Desert**	**80.92**	**47**	P	**P**	**10 30 42.6**	**+1.3**
KRPM	**Rodgers**	**80.92**	**38**	IAmb	IAmb	10 30 44.6	
	comp=Z,54nm,1.0s						
CMB	**Columbia Colle**	**81.02**	**42**	P	**P**	**10 30 42.2**	**+0.5**
CMB	**Columbia Colle**	**81.02**	**42**	P	**P**	**10 30 42.2**	**+0.5**
CMB				pmax	pmax		
	comp=Z,20nm,1.0s						
DLV	**T Lat**	**81.05**	**287**	P	**P**	**10 30 43.9**	**+1.3**
	comp=Z,27nm,0.7s						
CHGN	**Chignik**	**81.09**	**10**	IAmb	IAmb	10 31 53.0	
	comp=Z,193nm,1.2s						
LRMC	**Laurel Mtn Rad**	**81.15**	**45**	P	**P**	**10 30 44.2**	**+1.6**
	baz=233,SNR=6.8						
RRX	**Edison Barstow**	**81.23**	**46**	P	**P**	**10 30 44.2**	**+1.3**
	baz=233						
BELC	**Belle Mtn. Jos**	**81.38**	**47**	P	**P**	**10 30 45.8**	**+1.9**
	baz=234,SNR=30						
CWC	**Cottonwood Cre**	**81.47**	**44**	P	**P**	**10 30 45.8**	**+1.5**
	baz=232						
BC3	**Big Chuckawall**	**81.55**	**48**	P	**P**	**10 30 46.7**	**+1.9**
	baz=234,SNR=24						
MDPB	**Devils Postpil**	**81.57**	**43**	IAmb	IAmb	10 30 48.2	
	comp=Z,41nm,1.0s						
GSC	**Goldstone, Bar**	**81.61**	**46**	P	**P**	**10 30 46.6**	**+1.5**
	baz=233,SNR=30						
MPMC	**Manual Prospec**	**81.62**	**45**	P	**P**	**10 30 46.9**	**+1.7**
	baz=233,SNR=44						
GLA	**Glamis**	**81.63**	**49**	IAmb	IAmb	10 30 48.5	
	comp=Z,51nm,1.2s						
GLA	**Glamis**	**81.63**	**49**	P	**P**	**10 30 47.2**	**+2.1**
	baz=235,SNR=9.6						
HEC	**Hector,Ludlow**	**81.64**	**46**	P	**P**	**10 30 46.7**	**+1.5**
	baz=234,SNR=39						
TIN	**Tinemaha, Big**	**81.75**	**44**	P	**P**	**10 30 47.5**	**+1.8**
	baz=232,SNR=10.0						
WAKR	**Walker**	**81.89**	**42**	P	**P**	**10 30 48.2**	**+1.7**
WAKR				IAmb	IAmb	10 30 49.6	
	comp=Z,47nm,1.0s						
QSM	**Queen of Sheba**	**81.97**	**45**	IAmb	IAmb	10 30 49.5	
	comp=Z,42nm,1.0s						
MPK	**Martis Peak**	**82.03**	**41**	IAmb	IAmb	10 30 50.2	
	comp=Z,71nm,1.0s						
YBH	**Yreka Blue Hor**	**82.04**	**38**	P	**P**	**10 30 49.2**	**+2.0**
	comp=Z,24nm,0.9s,baz=249,slow=8.6,SNR=55						
	comp=Z,24nm,0.9s						
YBH	**Yreka Blue Hor**	**82.04**	**38**	P	**P**	**10 30 48.9**	**+1.8**
SDSI	**Sungai Dareh**	**82.04**	**272**	P	**P**	**10 30 45.8**	**-1.9**
	comp=Z,31nm,1.0s,comp=Z,3µm						
IRM	**Iron Mountain**	**82.05**	**47**	P	**P**	**10 30 49.4**	**+2.1**
	baz=234,SNR=40						
GMRC	**Granite Mounta**	**82.07**	**47**	P	**P**	**10 30 49.3**	**+1.8**
	baz=234,SNR=19						
USA0B	**Ussuriysk Arra**	**82.11**	**326**	P	**P**	**10 30 48.2**	**+1.0**
USA0B				IAmb	IAmb	10 30 51.3	
	comp=Z,44nm,1.0s						
USA0B	**Ussuriysk Arra**	**82.11**	**326**	*d i*P	**P**	**10 30 47.7**	**+0.5**
USRK	**Ussuriysk Ar.**	**82.11**	**326**	P	**P**	**10 30 48.1**	**+0.9**

	comp=Z,27nm,0.8s,baz=123,slow=2.6,SNR=75						
USRK				LR	LR	11 06 06.8	
	comp=Z,66nm,18.8s,baz=128,slow=35						
	comp=Z,27nm,0.8s						
USRK	**Ussuriysk Ar.**	**82.11**	**326**	P	**P**	**10 30 47.9**	**+0.6**
DSP	**Deep Springs**	**82.11**	**44**	P	**P**	**10 30 49.3**	**+1.9**
GWY	**Greenwater Val**	**82.23**	**45**	P	**P**	**10 30 49.8**	**+1.5**
GRAC	**Grapevine Rang**	**82.26**	**44**	P	**P**	**10 30 50.2**	**+1.9**
	baz=233						
FURC	**Furnace Creek,**	**82.27**	**45**	P	**P**	**10 30 50.1**	**+1.8**
	baz=233,SNR=24						
TUQ	**Turquoise Moun**	**82.27**	**46**	P	**P**	**10 30 50.0**	**+1.5**
	baz=234,SNR=23						
TYV	**Tymovskoe**	**82.28**	**335**	*e*P	**P**	**10 30 48.4**	**+0.4**
TYV				pmax	pmax		
	comp=Z,61nm,0.9s						
TYV				pmax	pmax		
	comp=Z,200nm,2.7s						
LHV	**Little Huntoon**	**82.31**	**43**	P	**P**	**10 30 49.4**	**+1.0**
LHV				IAmb	IAmb	10 30 51.6	
	comp=Z,46nm,1.1s						
YERR	**Yerington**	**82.31**	**42**	IAmb	IAmb	10 30 51.3	
	comp=Z,41nm,1.0s						
SHOC	**Shoshone, Teco**	**82.31**	**46**	P	**P**	**10 30 50.2**	**+1.6**
	baz=234,SNR=30						
J01E	**Myrtle Point**	**82.32**	**36**	IAmb	IAmb	10 30 51.4	
	comp=Z,37nm,0.9s						
214A	**Organ Pipe Nat**	**82.42**	**50**	P	**P**	**10 30 50.9**	**+1.7**
	baz=236,SNR=10						
R16K	**Pilot Point**	**82.44**	**10**	P	**P**	**10 30 49.5**	**+0.8**
	baz=198						
HUMO	**Hull Mountain**	**82.48**	**37**	P	**P**	**10 30 50.5**	**+1.2**
HUMO				IAmb	IAmb	10 30 52.7	
	comp=Z,69nm,1.3s						
NVAR	**Mina Array Bea**	**82.55**	**43**	P	**P**	**10 30 51.5**	**+1.5**
	comp=Z,20nm,0.9s,baz=224,slow=8.4,SNR=126						
NVAR				PKKPbc	**PKKPbc**	**10 49 15.4**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=70,slow=2.5,SNR=4.8						
NVAR				PKPPKP	**P'P'df**	**10 57 26.8**	**+7.6**
	comp=Z,0.9nm,0.9s,baz=80,slow=2.2,SNR=5.4						
NVAR				LR	LR	10 59 59.7	
	comp=Z,135nm,19.1s,baz=177,slow=30						
	comp=Z,20nm,0.9s						
NVAR	**Mina Array Bea**	**82.55**	**43**	P	**P**	**10 30 50.9**	**+0.9**
WCT	**Wildcat Mounta**	**82.62**	**45**	P	**P**	**10 30 51.3**	**+1.1**
NV11	**Mina Array Sit**	**82.64**	**43**	P	**P**	**10 30 50.7**	**+0.4**
NV11				IAmb	IAmb	10 30 53.0	
	comp=Z,42nm,1.1s						
NJ2	**Nanjing**	**82.66**	**310**	⇑P	**P**	**10 30 51.4**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,32nm,0.7s						
PAHR	**Pah Rah Range**	**82.67**	**41**	IAmb	IAmb	10 30 53.2	
	comp=Z,44nm,1.0s						
R17K	**Ugashik Creek**	**82.71**	**11**	P	**P**	**10 30 50.9**	**+0.8**
	baz=199,SNR=7.6						
NEE2	**Needles Airpor**	**82.76**	**47**	P	**P**	**10 30 52.8**	**+1.9**
	baz=235						
PDMCI	**Parker Dam,Lak**	**82.81**	**48**	P	**P**	**10 30 53.1**	**+2.0**
	baz=235,SNR=14						
OHAK	**Old Harbor**	**82.90**	**13**	P	**P**	**10 30 51.7**	**+0.7**
	baz=202						
PDSI	**Padang**	**82.94**	**272**	P	**P**	**10 30 49.8**	**-2.6**
	comp=Z,57nm,0.8s,comp=Z,2µm						
TPNV	**Topopah Spring**	**82.95**	**45**	P	**P**	**10 30 53.0**	**+1.0**
TPNV	**Topopah Spring**	**82.95**	**45**	P	**P**	**10 30 53.0**	**+1.0**
TPNV				pmax	pmax		
	comp=Z,32nm,1.0s						
TPNV	**Topopah Spring**	**82.95**	**45**	P	**P**	**10 30 53.8**	**+1.8**
	baz=234,SNR=29						
I03D	**Drain, OR**	**83.00**	**36**	IAmb	IAmb	10 30 54.9	
	comp=Z,82nm,1.4s						
TPH	**Tonopah**	**83.00**	**43**	P	**P**	**10 30 53.0**	**+0.7**
TPH	**Tonopah**	**83.00**	**43**	P	**P**	**10 30 53.0**	**+0.7**
TPH				pmax	pmax		
	comp=Z,229nm,1.1s						
KVN	**Kaiserville**	**83.05**	**42**	IAmb	IAmb	10 30 55.0	
	comp=Z,40nm,1.0s						
K04D	**Chiloquin, OR**	**83.16**	**38**	P	**P**	**10 30 54.8**	**+1.8**
COYC	**Coyhaique**	**83.17**	**137**	P	**P**	**10 30 51.7**	**-1.2**
COYC				IAmb	IAmb	10 31 30.0	
	comp=Z,53nm,1.1s						
PLTX	**Planet X, Gerl**	**83.25**	**40**	IAmb	IAmb	10 30 56.0	
	comp=Z,57nm,0.9s						
J04A	**Umpqua Nationa**	**83.37**	**37**	IAmb	IAmb	10 30 57.0	
	comp=Z,110nm,1.0s						
H03S2	**Juan Fernandez**	**83.38**	**124**	T	T	12 02 59.0	
	baz=245,slow=74,SNR=64						
Y14A	**Wickenburg**	**83.39**	**49**	P	**P**	**10 30 54.1**	**-0.1**
Y14A					**pP**	**10 31 24.1**	**-1.7**
Q17K	**Contact Creek**	**83.39**	**11**	P	**P**	**10 30 54.0**	**+0.3**
	baz=199,SNR=24						
H03S1	**Juan Fernandez**	**83.39**	**124**	T	T	12 02 55.2	
	baz=245,slow=74,SNR=73						
H03S3	**Juan Fernandez**	**83.40**	**124**	T	T	12 02 52.9	
	baz=245,slow=74,SNR=61						
SHPR	**Sheep Range**	**83.40**	**46**	P	**P**	**10 30 53.0**	**-1.4**
W13A	**Hualapai Mount**	**83.44**	**47**	P	**P**	**10 30 53.7**	**-0.9**
Q09A	**Carvers**	**83.49**	**43**	IAmb	IAmb	10 30 57.3	
	comp=Z,93nm,0.8s						
MOD	**Modoc Plateau**	**83.52**	**39**	IAmb	IAmb	10 30 57.4	
	comp=Z,47nm,0.8s						
BUCK	**Buck Mountain**	**83.53**	**36**	IAmb	IAmb	10 30 57.8	
	comp=Z,104nm,1.2s						
H03N2	**Juan Fernandez**	**83.53**	**124**	T	T	12 02 57.1	
	baz=250,slow=72,SNR=7.7						
H03N3	**Juan Fernandez**	**83.53**	**124**	T	T	12 03 00.3	
	baz=250,slow=72,SNR=114						
H03N1	**Juan Fernandez**	**83.55**	**124**	T	T	12 02 58.6	
	baz=250,slow=72,SNR=63						
KDAK	**Kodiak Island**	**83.56**	**13**	P	**P**	**10 30 55.0**	**+0.6**
KDAK	**Kodiak Island**	**83.56**	**13**	P	**P**	**10 30 55.0**	**+0.6**
KDAK				pmax	pmax		
	comp=Z,346nm,1.9s						
KDAK	**Kodiak Island**	**83.56**	**13**	P	**P**	**10 30 55.5**	**+1.1**
	baz=202						
I04A	**Tendick Farm,**	**83.57**	**36**	P	**P**	**10 30 54.3**	**-0.6**
MDJ	**Mudanjiang**	**83.65**	**325**	P	**P**	**10 30 55.9**	**+0.7**
MDJ				pP	pP	10 31 22.9	-3.5
MDJ				S	**S**	**10 40 59.1**	**-7.9**
MDJ				pmax	pmax		
	comp=Z,30nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,320nm,6.1s						
MDJ	**Mudanjiang**	**83.65**	**325**	IAmb	IAmb	10 30 59.1	
	comp=Z,57nm,1.1s						
MDJ	**Mudanjiang**	**83.65**	**325**	P	**P**	**10 30 55.9**	**+0.7**
	comp=Z,54nm,1.0s						
Q16K	**King Salmon**	**83.65**	**10**	P	**P**	**10 30 55.5**	**+0.7**
	baz=198,SNR=23						
S11A	**Rachel**	**83.69**	**44**	P	**P**	**10 30 53.9**	**-1.9**
S11A				IAmb	IAmb	10 30 58.4	
	comp=Z,42nm,0.9s						
K05A	**Summer Lake**	**83.71**	**38**	IAmb	IAmb	10 30 58.8	
	comp=Z,83nm,0.9s						
P16K	**Nushagak River**	**83.78**	**10**	P	**P**	**10 30 56.1**	**+0.6**
	baz=197,SNR=26						
H04D	**Lebanon**	**83.88**	**36**	P	**P**	**10 30 55.5**	**-0.9**
Q18K	**Katmai Hardscr**	**83.91**	**11**	P	**P**	**10 30 56.9**	**+0.5**
	baz=200,SNR=30						
PRN	**Pahroc Range**	**84.00**	**45**	IAmb	IAmb	10 31 00.6	
	comp=Z,58nm,1.0s						
G03D	**McMinnville, O**	**84.06**	**35**	IAmb	IAmb	10 31 00.2	
	comp=Z,112nm,1.3s						
TUC	**Tucson**	**84.06**	**51**	P	**P**	**10 30 57.8**	**+0.1**
TUC				IAmb	IAmb	10 31 01.2	
	comp=Z,48nm,0.9s						
TUC	**Tucson**	**84.06**	**51**	P	**P**	**10 30 57.8**	**+0.1**
TUC				pmax	pmax		
	comp=Z,49nm,1.0s						
TUC	**Tucson**	**84.06**	**51**	P	**P**	**10 31 00.1**	**+2.4**
	baz=237						
H04A	**Detroit Lake**	**84.28**	**36**	IAmb	IAmb	10 31 00.7	
	comp=Z,53nm,1.2s						
O16K	**Kokwok River B**	**84.30**	**9**	P	**P**	**10 30 58.2**	**+0.1**
	baz=197						
Q20K	**Shuyak Island**	**84.37**	**13**	P	**P**	**10 30 59.5**	**+1.0**
	baz=202						
PINE	**Pine Mountain**	**84.37**	**37**	P	**P**	**10 30 59.9**	**+0.7**
PINE				IAmb	IAmb	10 31 02.2	
	comp=Z,61nm,0.9s						
LL02	**Futaleuf**	**84.39**	**135**	IAmb	IAmb	10 31 35.9	
	comp=Z,91nm,1.1s						
Q19K	**Cape Douglas,**	**84.42**	**12**	P	**P**	**10 30 59.2**	**+0.3**
Q19K	**Cape Douglas,**	**84.42**	**12**	P	**P**	**10 30 59.3**	**+0.5**
	baz=201,SNR=6.3						
BMN	**Battle Mountai**	**84.43**	**41**	IAmb	IAmb	10 31 02.0	
	comp=Z,53nm,1.0s						
I05D	**Terrebonne, OR**	**84.51**	**36**	P	**P**	**10 30 58.8**	**-0.8**
I05D				IAmb	IAmb	10 31 02.3	
	comp=Z,40nm,0.9s						
P18K	**Big Mountain,**	**84.57**	**11**	IAmb	IAmb	10 31 00.7	
	comp=Z,68nm,0.8s						
P18K	**Big Mountain,**	**84.57**	**11**	P	**P**	**10 30 59.9**	**+0.3**
	baz=200						
IPM	**Ipoh**	**84.58**	**277**	P	**P**	**10 31 00.3**	**-0.5**
IPM				IAmb	IAmb	10 31 03.5	
	comp=Z,91nm,0.8s						
IPM	**Ipoh**	**84.58**	**277**	P	**P**	**10 31 00.6**	**-0.1**
	comp=Z,100nm,0.7s						
O17K	**Koliganek Bris**	**84.62**	**10**	P	**P**	**10 30 59.8**	**0.0**
	baz=198,SNR=10						
319A	**Douglas**	**84.64**	**53**	IAmb	IAmb	10 31 04.2	
	comp=Z,46nm,1.0s						
TROLL	**Troll, Antarti**	**84.66**	**180**	P	**P**	**10 31 01.2**	**+1.0**
DL2	**Dalian**	**84.70**	**316**	P	**P**	**10 31 02.1**	**+1.5**
DL2				pP	**pP**	**10 31 32.8**	**+0.9**
DL2				S	**S**	**10 41 18.4**	**+0.7**
DL2				sS	**sS**	**10 42 06.8**	**-5.0**
DL2				pmax	pmax		
	comp=Z,22nm,0.7s						
DL2				pmax	pmax		
	comp=Z,210nm,5.9s						
GRNR	**Gornyy**	**84.72**	**332**	⇑*i*P	**P**	**10 31 01.0**	**+0.5**
GRNR				pmax	pmax		
	comp=Z,20nm,1.2s						
X16A	**Lo Mia Camp, P**	**84.73**	**49**	IAmb	IAmb	10 31 04.7	
	comp=Z,50nm,1.0s						
F04D	**Rainier, OR**	**84.77**	**34**	IAmb	IAmb	10 31 04.2	
	comp=Z,137nm,1.2s						
E03A	**Lebam**	**84.80**	**34**	IAmb	IAmb	10 31 04.0	
	comp=Z,80nm,0.9s						
WVOR	**Wild Horse Val**	**84.82**	**39**	P	**P**	**10 31 02.4**	**+1.0**
WVOR				IAmb	IAmb	10 31 03.9	
	comp=Z,55nm,1.0s						
WVOR	**Wild Horse Val**	**84.82**	**39**	P	**P**	**10 31 02.4**	**+1.0**
WVOR				pmax	pmax		
	comp=Z,55nm,1.0s						
SNAA	**Sanae**	**84.91**	**178**	P	**P**	**10 31 02.0**	**+0.7**
SNAA	**Sanae**	**84.91**	**178**	P	**P**	**10 31 01.1**	**-0.2**
	comp=Z,52nm,0.8s,baz=190,slow=5.3,SNR=72						
SNAA				LR	LR	11 05 45.8	
	comp=Z,101nm,20.2s,baz=48,slow=33						
	comp=Z,52nm,0.8s						
SNAA	**Sanae**	**84.91**	**178**	P	**P**	**10 31 00.8**	**-0.6**
SNAA				IAmb	IAmb	10 31 03.2	
	comp=Z,56nm,0.8s						
SNAA	**Sanae**	**84.91**	**178**	*d i*P	**P**	**10 31 01.9**	**+0.5**
SNAA				pmax	pmax		
	comp=Z,78nm,1.0s						
LCMT	**Little Creek M**	**84.95**	**46**	P	**P**	**10 31 02.9**	**+0.7**
LCMT				IAmb	IAmb	10 31 05.2	
	comp=Z,36nm,1.0s						
F04A	**Amboy**	**84.98**	**35**	IAmb	IAmb	10 31 04.3	
	comp=Z,114nm,1.3s						
VNA3	**Neumayer Olymp**	**85.00**	**176**	P	**P**	**10 31 02.5**	**+0.7**
O18K	**Koktuh Hills**	**85.01**	**11**	P	**P**	**10 31 02.2**	**+0.4**
	baz=200,SNR=31						
N16K	**Nishlik Lake**	**85.05**	**9**	P	**P**	**10 31 03.3**	**+1.4**
	baz=196						
LL04	**Puerto Octay**	**85.06**	**133**	P	**P**	**10 31 02.4**	**-0.2**
Q12A	**Willow Creek R**	**85.09**	**44**	P	**P**	**10 31 03.0**	**+0.2**
Q12A				IAmb	IAmb	10 31 05.4	
	comp=Z,38nm,1.0s						
G05A	**Wamic**	**85.11**	**36**	IAmb	IAmb	10 31 05.2	
	comp=Z,48nm,1.2s						
WHN	**Wuhan**	**85.12**	**306**	⇑P	**P**	**10 31 03.5**	**+0.5**
WHN				pmax	pmax		
	comp=Z,150nm,1.5s						
HPIG		**85.13**	**58**	P	**P**	**10 31 02.6**	**-0.7**
CCUT	**Cedar City**	**85.18**	**46**	P	**P**	**10 31 04.1**	**+0.7**
CCUT				IAmb	IAmb	10 31 06.7	
	comp=Z,38nm,1.0s						
P19K	**Oil Pt**	**85.18**	**12**	P	**P**	**10 31 03.0**	**+0.4**
P19K	**Oil Pt**	**85.18**	**12**	P	**P**	**10 31 03.0**	**+0.4**
	baz=202						
KNB	**Kanab**	**85.23**	**46**	IAmb	IAmb	10 31 06.9	
	comp=Z,51nm,1.2s						
KULM	**Kulim**	**85.25**	**278**	P	**P**	**10 31 03.8**	**-0.3**
KULM				IAmb	IAmb	10 31 07.1	
	comp=Z,42nm,1.0s						
U15A	**North Rim**	**85.26**	**47**	IAmb	IAmb	10 31 07.2	
	comp=Z,44nm,0.9s						
I07A	**Izee**	**85.36**	**37**	P	**P**	**10 31 05.1**	**+1.2**
WUAZ	**Wupatki**	**85.38**	**48**	P	**P**	**10 31 06.3**	**+1.9**
	baz=237,SNR=15						
SZCU	**Shurtz Canyon**	**85.38**	**46**	P	**P**	**10 31 06.6**	**+2.2**
SZCU				IAmb	IAmb	10 31 07.6	
	comp=Z,40nm,1.1s						
CN2	**Changchun**	**85.38**	**322**	*e*P	**P**	**10 31 03.5**	**-0.5**
CN2				*e*sP	sP	10 31 49.1	+0.7
CN2				*e*PP	**PP**	**10 34 25.3**	**+1.1**
CN2				SKS	**SKSac**	**10 41 13.8**	**-3.4**
CN2				*e*sS	sS	10 42 19.3	+0.9
CN2				pmax	pmax		
	comp=Z,40nm,1.5s						
CN2				LR	LR		
	comp=Z,170nm,15.0s						
CN2				LR	LR		
	comp=Z,60nm,15.0s						
CN2				LR	LR		
	comp=Z,160nm,16.0s						
CNPM	**China Poot**	**85.45**	**13**	P	**P**	**10 31 04.6**	**+0.7**
CNPM				IAmb	IAmb	10 31 05.8	
	comp=Z,96nm,0.8s						
VNA2	**Neumayer--Watz**	**85.46**	**177**	P	**P**	**10 31 05.0**	**+1.0**
	baz=178,slow=4.0						
G06A	**Carlson Farm,**	**85.47**	**36**	P	**P**	**10 31 04.0**	**-0.4**
G06A				IAmb	IAmb	10 31 06.9	
	comp=Z,31nm,1.0s						
J08A	**Circle Bar Ran**	**85.48**	**39**	IAmb	IAmb	10 31 07.7	
	comp=Z,33nm,1.0s						
O19K	**Port Alsworth**	**85.49**	**11**	P	**P**	**10 31 04.4**	**+0.4**
	baz=200,SNR=61						
HOM	**Homer**	**85.49**	**13**	P	**P**	**10 31 05.1**	**+1.0**
HOM	**Homer**	**85.49**	**13**	P	**P**	**10 31 05.3**	**+1.2**
	baz=203						
BNX	**BinXian**	**85.55**	**325**	⇓P	**P**	**10 31 04.4**	**-0.3**
BNX				pmax	pmax		
	comp=Z,21nm,0.7s						
BNX				pmax	pmax		
	comp=Z,270nm,5.6s						
LR03	**Panguipulli**	**85.68**	**131**	P	**P**	**10 31 06.2**	**+0.5**
LR03				IAmb	IAmb	10 31 10.9	
	comp=Z,44nm,1.0s						
VNA1	**Neumayer--Stat**	**85.68**	**176**	P	**P**	**10 31 06.1**	**+1.0**
O20K	**Slope Mountain**	**85.69**	**12**	P	**P**	**10 31 05.5**	**+0.3**
	baz=202,SNR=7.3						
NVL	**N'lazarevskaya**	**85.71**	**183**	*e*P	**P**	**10 31 04.5**	**-0.7**
NVL				pmax	pmax		
	comp=Z,17nm,0.8s						
KLR	**Kul'dur**	**85.72**	**329**	LR	LR	11 07 04.6	
	comp=Z,129nm,18.9s,baz=125,slow=34						
KLR	**Kul'dur**	**85.72**	**329**	*d i*P	**P**	**10 31 05.7**	**+0.2**
KLR				pmax	pmax		
	comp=Z,28nm,1.7s						
BRLK	**Bradley Lake**	**85.74**	**13**	P	**P**	**10 31 05.6**	**+0.3**
BRSE	**Bradley Lake S**	**85.75**	**13**	P	**P**	**10 31 06.1**	**+0.7**
	baz=204,SNR=15						
RPSI	**Rantau Prapat**	**85.78**	**275**	P	**P**	**10 31 05.8**	**-0.9**
RPSI				IAmb	IAmb	10 31 09.3	
	comp=Z,29nm,0.9s						
PKCU	**Pink Cliffs**	**85.81**	**46**	IAmb	IAmb	10 31 10.5	
	comp=Z,72nm,1.1s						
PSI	**Prapat**	**85.82**	**275**	P	**P**	**10 31 06.2**	**-0.8**
	comp=Z,42nm,1.0s						
PSI	**Prapat**	**85.82**	**275**	P	**P**	**10 31 05.8**	**-1.2**
PSI				pmax	pmax		
	comp=Z,29nm,0.9s						
ELK	**Elko**	**85.83**	**42**	LR	LR	11 02 00.6	
	comp=Z,115nm,20.2s,baz=178,slow=30						
X18A	**Snowflake**	**85.83**	**50**	P	**P**	**10 31 08.1**	**+1.5**
X18A				IAmb	IAmb	10 31 09.9	
	comp=Z,26nm,0.9s						
LON	**Longmire**	**85.83**	**34**	P	**P**	**10 31 06.3**	**+0.1**
LON	**Longmire**	**85.83**	**34**	P	**P**	**10 31 06.3**	**+0.1**
LON				pmax	pmax		
	comp=Z,10.0nm,0.9s						
D05A	**Enumclaw**	**86.03**	**34**	IAmb	IAmb	10 31 11.0	
	comp=Z,143nm,1.4s						
N19K	**Bonanza Creek**	**86.04**	**11**	P	**P**	**10 31 06.7**	**-0.2**
N19K				IAmb	IAmb	10 31 08.0	
	comp=Z,78nm,0.9s						
N19K	**Bonanza Creek**	**86.04**	**11**	P	**P**	**10 31 06.7**	**-0.2**
	baz=200						
SKLT	**Songkhla**	**86.05**	**280**	P	**P**	**10 31 09.1**	**+1.2**
	comp=Z,38nm,1.0s						
SVW2	**Sparrevohn**	**86.12**	**10**	P	**P**	**10 31 07.4**	**+0.2**
SVW2				IAmb	IAmb	10 31 08.6	
	comp=Z,32nm,0.9s						
SVW2	**Sparrevohn**	**86.12**	**10**	P	**P**	**10 31 07.5**	**+0.2**
	comp=Z,41nm,1.0s						
TIA	**Tai'an**	**86.14**	**312**	⇑P	**P**	**10 31 08.5**	**+0.6**
TIA				pmax	pmax		
	comp=Z,43nm,0.6s						
PGC	**Sidney**	**86.27**	**32**	P	**P**	**10 31 10.0**	**+1.8**
PGC				IAmb	IAmb	10 31 11.1	
	comp=Z,118nm,1.6s						
W18A	**Petrified Fore**	**86.29**	**49**	P	**P**	**10 31 10.7**	**+1.8**
	baz=238						
GO06	**Curarrehue**	**86.30**	**132**	P	**P**	**10 31 08.2**	**-0.8**
CBB	**Campbell River**	**86.31**	**30**	IAmb	IAmb	10 31 11.3	
	comp=Z,104nm,1.2s						
121A	**Cookes Peak, D**	**86.33**	**52**	IAmb	IAmb	10 31 12.7	
	comp=Z,29nm,1.0s						
121A	**Cookes Peak, D**	**86.33**	**52**	P	**P**	**10 31 11.4**	**+2.2**
	baz=239						
121A	**Cookes Peak, D**	**86.33**	**52**	P	**P**	**10 31 11.8**	**+2.7**
	baz=239						
SEW	**Seward**	**86.35**	**13**	P	**P**	**10 31 09.1**	**+0.8**
SEW				IAmb	IAmb	10 31 11.9	
	comp=Z,78nm,1.0s						
SEW	**Seward**	**86.35**	**13**	P	**P**	**10 31 08.9**	**+0.6**
	baz=205						
TCRU	**Three Creeks R**	**86.37**	**45**	P	**P**	**10 31 10.1**	**+0.8**
PLCA	**Paso Flores**	**86.39**	**133**	P	**P**	**10 31 11.2**	**+1.8**
	comp=Z,7.8nm,0.9s,baz=248,slow=6.7,SNR=14						
PLCA				PKKPbc	**PKKPbc**	**10 49 06.4**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=95,slow=2.5,SNR=7.2						
	comp=Z,7.8nm,0.9s						
PLCA	**Paso Flores**	**86.39**	**133**	P	**P**	**10 31 11.0**	**+1.7**
PLCA				IAmb	IAmb	10 31 46.1	
	comp=Z,52nm,1.3s						
PLCA	**Paso Flores**	**86.39**	**133**	*e*P	**P**	**10 31 11.0**	**+1.7**
G08A	**Pilot Rock**	**86.42**	**37**	P	**P**	**10 31 09.6**	**+0.3**
G08A				IAmb	IAmb	10 31 11.7	
	comp=Z,37nm,1.0s						
GSI	**Gunungsitoli**	**86.46**	**273**	P	**P**	**10 31 09.7**	**-0.3**
GSI				IAmb	IAmb	10 31 15.1	
	comp=Z,54nm,0.7s						
GSI	**Gunungsitoli**	**86.46**	**273**	P	**P**	**10 31 10.6**	**+0.6**
	comp=Z,90nm,0.7s						
GSI	**Gunungsitoli**	**86.46**	**273**	P	**P**	**10 31 10.0**	**0.0**
	comp=Z,90nm,0.7s,comp=Z,5µm						
MVU	**Marysvale**	**86.46**	**45**	P	**P**	**10 31 11.2**	**+1.5**
MVU				IAmb	IAmb	10 31 12.9	
	comp=Z,102nm,1.1s						
MSU	**Marysvale**	**86.49**	**45**	P	**P**	**10 31 11.2**	**+1.3**
MSU	**Marysvale**	**86.49**	**45**	P	**P**	**10 31 11.2**	**+1.3**
CAPN	**Captain Cook N**	**86.61**	**12**	P	**P**	**10 31 10.3**	**+0.8**
CAPN	**Captain Cook N**	**86.61**	**12**	P	**P**	**10 31 10.7**	**+1.2**
	baz=203						
O22K	**Cooper Landing**	**86.63**	**13**	P	**P**	**10 31 10.4**	**+0.8**
	baz=205,SNR=6.6						
P23K	**Montague Islan**	**86.70**	**14**	P	**P**	**10 31 11.4**	**+1.4**
	baz=207						
LTY	**Liberty**	**86.76**	**35**	P	**P**	**10 31 10.1**	**-0.6**
HAWA	**Hanford**	**86.80**	**36**	IAmb	IAmb	10 31 13.5	
	comp=Z,36nm,1.1s						
SPCR	**Spurr Chakacha**	**86.81**	**12**	P	**P**	**10 31 10.1**	**-0.5**
	baz=202,SNR=20						
SPU	**Mount Spurr**	**86.82**	**12**	P	**P**	**10 31 10.5**	**-0.2**
DUG	**Dugway, Tooele**	**87.02**	**44**	P	**P**	**10 31 13.3**	**+1.0**
	baz=236,SNR=5.1						
MA2	**Magadan**	**87.03**	**344**	LR	LR	11 03 22.3	
	comp=Z,92nm,21.2s,baz=148,slow=31						
MA2	**Magadan**	**87.03**	**344**	P	**P**	**10 31 11.0**	**-0.7**
MA2	**Magadan**	**87.03**	**344**	P	**P**	**10 31 11.4**	**-0.2**
	comp=Z,70nm,1.4s						
MA2	**Magadan**	**87.03**	**344**	*d i*P	**P**	**10 31 10.8**	**-0.8**
MA2				pmax	pmax		
	comp=Z,103nm,1.7s						
MFID	**Camas Ranch**	**87.05**	**40**	P	**P**	**10 31 12.6**	**+0.3**
GRNB	**Grenville Isla**	**87.08**	**26**	IAmb	IAmb	10 31 15.1	
	comp=Z,72nm,0.9s						
M19K	**Big River Lodg**	**87.08**	**10**	P	**P**	**10 31 12.1**	**+0.2**
M19K				IAmb	IAmb	10 31 13.2	
	comp=Z,40nm,0.8s						
M19K	**Big River Lodg**	**87.08**	**10**	P	**P**	**10 31 12.2**	**+0.4**
	baz=200						
CRAG	**Craig**	**87.11**	**23**	P	**P**	**10 31 13.6**	**+1.5**
	baz=219						
KCSI	**Kotacane, Aceh**	**87.17**	**275**	P	**P**	**10 31 12.4**	**-1.0**
	comp=Z,30nm,0.8s,comp=Z,936nm						
RC01	**Rabbit Creek A**	**87.19**	**13**	P	**P**	**10 31 12.9**	**+0.6**
	baz=205,SNR=16						
L19K	**White Mountain**	**87.27**	**10**	P	**P**	**10 31 13.5**	**+0.8**
	baz=200						
PWL	**Port Wells**	**87.27**	**14**	P	**P**	**10 31 13.7**	**+0.9**
PWL	**Port Wells**	**87.27**	**14**	P	**P**	**10 31 13.2**	**+0.4**
	baz=206,SNR=8.4						
M20K	**Styx River**	**87.28**	**11**	P	**P**	**10 31 13.1**	**+0.2**
M20K				IAmb	IAmb	10 31 14.0	
	comp=Z,27nm,0.9s						
SUA	**Susitna One**	**87.33**	**12**	P	**P**	**10 31 13.4**	**+0.2**
SUA	**Susitna One**	**87.33**	**12**	P	**P**	**10 31 13.5**	**+0.4**
	baz=204,SNR=44						
NLU	**North Lily Min**	**87.36**	**44**	P	**P**	**10 31 14.2**	**+0.2**
SRIT	**Nakonsritamara**	**87.55**	**280**	IAmb	IAmb	10 31 19.7	
	comp=Z,47nm,0.9s						
D08A	**Wollman Farm,**	**87.55**	**35**	P	**P**	**10 31 16.3**	**+1.8**
D08A				IAmb	IAmb	10 31 17.1	
	comp=Z,52nm,0.9s						
V35K	**Ketchikan**	**87.55**	**24**	P	**P**	**10 31 15.8**	**+1.6**
	baz=221						
TMUT	**Trail Mountain**	**87.55**	**45**	IAmb	IAmb	10 31 18.0	
	comp=Z,62nm,0.8s						
EYAK	**Cordova Ski Ar**	**87.57**	**15**	P	**P**	**10 31 13.7**	**-0.5**
EYAK				IAmb	IAmb	10 31 16.2	
	comp=Z,43nm,0.9s						
EYAK	**Cordova Ski Ar**	**87.57**	**15**	P	**P**	**10 31 14.9**	**+0.7**
	comp=Z,49nm,1.1s						
EYAK	**Cordova Ski Ar**	**87.57**	**15**	P	**P**	**10 31 15.6**	**+1.5**
	baz=208						
SIT	**Sitka**	**87.59**	**21**	P	**P**	**10 31 15.6**	**+1.3**
	baz=217						
U33K	**Whale Pass**	**87.61**	**23**	P	**P**	**10 31 16.3**	**+1.8**
	baz=219						
Y22A	**Socorro**	**87.64**	**51**	P	**P**	**10 31 17.9**	**+2.4**
	baz=239						
SKT	**Skwentna**	**87.65**	**12**	P	**P**	**10 31 14.4**	**-0.2**
SKT				IAmb	IAmb	10 31 15.2	
	comp=Z,42nm,0.9s						
SKT	**Skwentna**	**87.65**	**12**	P	**P**	**10 31 14.0**	**-0.6**
	baz=203,SNR=14						
MNTX	**Cornudas Mount**	**87.67**	**54**	P	**P**	**10 31 17.4**	**+1.9**
	baz=240						
L20K	**Farewell, AK**	**87.70**	**10**	P	**P**	**10 31 15.2**	**+0.3**
	baz=201,SNR=24						
Y22D	**IRIS PASSCAL I**	**87.74**	**51**	IAmb	IAmb	10 31 19.3	
	comp=Z,48nm,1.1s						
Y22D	**IRIS PASSCAL I**	**87.74**	**51**	P	**P**	**10 31 17.9**	**+2.0**
	baz=239						
Y22D	**IRIS PASSCAL I**	**87.74**	**51**	P	**P**	**10 31 18.3**	**+2.5**
	baz=239						
Y22F	**Passcal Instru**	**87.74**	**51**	P	**P**	**10 31 17.9**	**+2.0**
	baz=239						
KNK	**Knik Glacier**	**87.74**	**13**	P	**P**	**10 31 15.5**	**+0.5**
	baz=206,SNR=18						
SURA	**Surathani**	**87.75**	**281**	P	**P**	**10 31 17.7**	**+1.5**
	comp=Z,54nm,1.0s						
PMR	**Palmer**	**87.77**	**13**	P	**P**	**10 31 15.8**	**+0.7**
PMR				IAmb	IAmb	10 31 16.8	
	comp=Z,61nm,0.9s						
PMR	**Palmer**	**87.77**	**13**	P	**P**	**10 31 15.4**	**+0.3**
	comp=Z,88nm,1.0s						
PMR	**Palmer**	**87.77**	**13**	P	**P**	**10 31 15.8**	**+0.7**
PMR				pmax	pmax		
	comp=Z,61nm,0.9s						
PMR	**Palmer**	**87.77**	**13**	P	**P**	**10 31 15.8**	**+0.7**
	baz=205,SNR=18						
TTA	**Tatalina**	**87.79**	**9**	P	**P**	**10 31 16.3**	**+0.9**
TTA				IAmb	IAmb	10 31 17.6	
	comp=Z,72nm,1.1s						
TTA	**Tatalina**	**87.79**	**9**	P	**P**	**10 31 16.2**	**+0.9**
	comp=Z,67nm,1.5s						
TTA	**Tatalina**	**87.79**	**9**	P	**P**	**10 31 16.3**	**+0.9**
TTA				pmax	pmax		
	comp=Z,72nm,1.1s						
TTA	**Tatalina**	**87.79**	**9**	P	**P**	**10 31 16.3**	**+0.9**
	baz=199,SNR=34						

TX31	Lajitas Ar. Si	87.83	57	P	P	10 31 16.7	+0.3
TX31				IAmb	IAmb	10 31 19.4	
	comp=Z,79nm,0.9s						
TX31	Lajitas Ar. Si	87.83	57	P	P	10 31 18.4	+2.1
	baz=241						
TX32	Lajitas Array	87.83	57	P	P	10 31 16.6	+0.3
TX32				IAmb	IAmb	10 31 19.4	
	comp=Z,27nm,0.9s						
TXAR	Lajitas Array	87.83	57	P	P	10 31 18.0	+1.7
	comp=Z,18nm,0.8s,baz=214,slow=7.1,SNR=190						
TXAR				S	SKSac	10 41 23.4	-10
	comp=Z,0.4nm,0.8s,baz=284,slow=36,SNR=1.2						
TXAR				PKKPbc	PKKPbc	10 49 02.9	-0.1
	comp=Z,1.4nm,0.8s,baz=73,slow=4.3,SNR=12						
TXAR				PKPPKP	P'P'df	10 57 13.4	+3.0
	comp=Z,0.7nm,0.9s,baz=111,slow=1.7,SNR=5.6						
TXAR				LR	LR	11 04 20.7	
	comp=Z,67nm,18.8s,baz=208,slow=31						
	comp=Z,18nm,0.8s						
TXAR	Lajitas Array	87.83	57	P	P	10 31 17.3	+1.0
SRU	San Rafael Swe	87.90	45	IAmb	IAmb	10 31 19.4	
	comp=Z,59nm,0.9s						
PLID	Pearl Lake	87.95	38	P	P	10 31 16.3	-0.4
P17A	Butcher Ranch,	87.95	45	IAmb	IAmb	10 31 20.5	
	comp=Z,30nm,0.9s						
HLID	Hailey	87.97	40	P	P	10 31 18.0	+1.2
	baz=234,SNR=23						
S31K	Pelican	88.02	20	P	P	10 31 18.1	+1.7
	baz=217,SNR=6.5						
WRAK	Wrangell Islan	88.12	23	P	P	10 31 17.6	+0.8
WRAK				IAmb	IAmb	10 31 19.9	
	comp=Z,52nm,0.8s						
WRAK	Wrangell Islan	88.12	23	P	P	10 31 18.8	+1.9
	baz=220						
SML	Sawmill	88.13	13	P	P	10 31 17.7	+0.8
SML				IAmb	IAmb	10 31 28.5	
	comp=Z,39nm,0.9s						
SML	Sawmill	88.13	13	P	P	10 31 17.4	+0.5
	baz=206,SNR=9.4						
B08A	Colville Reser	88.16	34	IAmb	IAmb	10 31 19.1	
	comp=Z,29nm,0.8s						
S32K	Killisnoo	88.16	21	P	P	10 31 18.2	+1.2
	baz=218						
T33K	Petersburg	88.21	22	P	P	10 31 18.4	+1.1
	baz=219						
M23K	Glacier View	88.24	13	P	P	10 31 17.8	+0.4
	baz=206,SNR=13						
MVCO	Mesa Verde	88.24	48	P	P	10 31 19.2	+0.9
	baz=238						
CUT	Chulitna	88.28	12	P	P	10 31 17.9	+0.4
	baz=204,SNR=31						
ANM	Nome	88.31	5	P	P	10 31 18.1	+0.5
ANM				IAmb	IAmb	10 31 21.4	
	comp=Z,67nm,1.9s						
ANM	Nome	88.31	5	P	P	10 31 18.1	+0.5
ANM				pmax	pmax		
	comp=Z,67nm,1.9s						
ANM	Nome	88.31	5	P	P	10 31 18.2	+0.6
	baz=190,SNR=11						
LLLB	Lillooet	88.34	31	IAmb	IAmb	10 31 20.7	
	comp=Z,46nm,1.1s						
NONG	Nongkai	88.35	290	P	P	10 31 19.8	+0.9
	comp=Z,118nm,1.1s						
C09A	Chrisman Ranch	88.36	35	IAmb	IAmb	10 31 20.6	
	comp=Z,43nm,0.8s						
SCM	Sheep Creek Mo	88.36	14	P	P	10 31 18.5	+0.5
SCM	Sheep Creek Mo	88.36	14	P	P	10 31 18.5	+0.5
SCM				pmax	pmax		
	comp=Z,138nm,0.8s						
SCM	Sheep Creek Mo	88.36	14	P	P	10 31 19.2	+1.1
	baz=207,SNR=32						
KLU	Klutina	88.37	14	IAmb	IAmb	10 31 20.1	
	comp=Z,45nm,0.9s						
KLU	Klutina	88.37	14	P	P	10 31 19.0	+0.9
	baz=208,SNR=12						
PPLA	Purkeypile	88.38	11	P	P	10 31 17.7	-0.5
PPLA				IAmb	IAmb	10 31 21.1	
	comp=Z,30nm,0.7s						
PPLA	Purkeypile	88.38	11	P	P	10 31 17.3	-0.9
	baz=202,SNR=12						
HNS	HongShan	88.41	312	⇓P	P	10 31 19.3	+0.6
HNS				pmax	pmax		
	comp=Z,16nm,1.1s						
TCUT	Toone Canyon	88.42	43	IAmb	IAmb	10 31 21.6	
	comp=Z,45nm,0.9s						
PNL	Peninsula	88.46	18	P	P	10 31 19.7	+1.2
	comp=Z,196nm,1.0s						
PNL	Peninsula	88.46	18	P	P	10 31 20.1	+1.6
	baz=214,SNR=10.0						
HEH	HeiHe	88.48	328	eP	P	10 31 18.8	0.0
HEH				pmax	pmax		
	comp=Z,40nm,1.4s						
HEH				pmax	pmax		
	comp=Z,250nm,5.2s						
K20K	Telida	88.50	10	P	P	10 31 19.2	+0.6
K20K	Telida	88.50	10	P	P	10 31 19.3	+0.7
	baz=201,SNR=54						
ANMO	Albuquerque	88.50	51	LR	LR	11 10 37.0	
	comp=Z,70nm,18.1s,baz=308,slow=35						
ANMO	Albuquerque	88.50	51	P	P	10 31 20.4	+0.9
ANMO				IAmb	IAmb	10 31 22.4	
	comp=Z,27nm,1.0s						
ANMO	Albuquerque	88.50	51	d iP	P	10 31 21.1	+1.6
ANMO				pmax	pmax		
	comp=Z,38nm,1.3s						
ANMO	Albuquerque	88.50	51	P	P	10 31 20.9	+1.4
	baz=240						
BSUT	Blindstream Ca	88.52	44	IAmb	IAmb	10 31 22.1	
	comp=Z,37nm,0.9s						
LYN	LuoYang	88.52	309	⇓iP	P	10 31 20.3	+1.0
LYN				pmax	pmax		
	comp=Z,39nm,0.7s						
PV13	Radium Mtn., P	88.52	47	P	P	10 31 20.1	+0.5
PCA	Pinnacle	88.58	17	P	P	10 31 20.1	+1.0
PCA				IAmb	IAmb	10 31 21.4	
	comp=Z,79nm,1.0s						
PINM	Pinnacle	88.58	17	P	P	10 31 20.2	+1.0
	baz=213,SNR=8.3						
HWUT	Hardware Ranch	88.60	43	P	P	10 31 19.8	0.0
VRDI	Verde Repeater	88.72	15	P	P	10 31 21.0	+1.1
N25K	Chitina, Valde	88.77	15	P	P	10 31 20.4	+0.5
N25K	Chitina, Valde	88.77	15	P	P	10 31 21.1	+1.1
	baz=209,SNR=36						
PV07	Paradox Valley	88.78	47	P	P	10 31 20.0	-0.8
GLB	Gilahina Butte	88.82	15	P	P	10 31 19.4	-0.8
R32K	Eaglecrest	88.82	21	P	P	10 31 21.6	+1.5
	baz=218						
BJI	Beijing	88.83	315	P	P	10 31 20.3	-0.3
BJI				pmax	pmax		
	comp=Z,12nm,1.7s						
M24K	Tolsona, Glenn	88.86	14	P	P	10 31 20.8	+0.5
M24K	Tolsona, Glenn	88.86	14	P	P	10 31 21.3	+1.0
	baz=208,SNR=12						
CAST	Castle Rocks	88.89	11	P	P	10 31 19.7	-0.7
CAST	Castle Rocks	88.89	11	P	P	10 31 19.9	-0.5
	baz=202,SNR=92						
MCARA	McCarthy VSAT	88.96	16	P	P	10 31 22.1	+1.4
MCARA	McCarthy VSAT	88.96	16	P	P	10 31 22.0	+1.2
	baz=211,SNR=19						
LOGN	Logan Glacier	88.99	17	P	P	10 31 22.1	+1.0
CTG	Chitna Glacier	89.02	16	P	P	10 31 22.5	+1.2
	baz=212,SNR=38						
CTGM	Chitina Glacie	89.03	16	P	P	10 31 22.4	+1.1
GYA	Guiyang	89.09	299	⇓P	P	10 31 24.3	+1.9
GYA				pmax	pmax		
	comp=Z,23nm,1.4s						
MT01	Popeta	89.11	127	IAmb	IAmb	10 31 55.9	
	comp=Z,22nm,1.1s						
TNA	Tin City	89.12	4	P	P	10 31 22.1	+0.7
	baz=188						
O28M	Mount Upton	89.17	17	P	P	10 31 23.3	+1.2
	baz=213						
PLBC	Pleasant Camp	89.18	19	P	P	10 31 23.6	+1.7
	baz=216,SNR=13						
KTH	Kantishna Hill	89.22	11	P	P	10 31 21.5	-0.5
O29M	Mount Kennedy	89.22	18	P	P	10 31 23.7	+1.5
	baz=214						
TRF	Thorofare Moun	89.23	12	P	P	10 31 22.2	0.0
TRF	Thorofare Moun	89.23	12	P	P	10 31 22.5	+0.2
	baz=204,SNR=142						
NEW	Newport	89.25	35	LR	LR	11 03 04.7	
	comp=Z,132nm,21.3s,baz=188,slow=30						
NEW	Newport	89.25	35	P	P	10 31 23.1	+0.6
	baz=232,SNR=11						
CHUM	Lake Minchumin	89.28	11	P	P	10 31 22.2	0.0
	baz=202,SNR=41						
RDMU	Red Mountain	89.30	45	P	P	10 31 23.6	+0.5
T35M	Bob Quinn	89.30	23	P	P	10 31 24.2	+1.7
	baz=222						
HARP	HAARP	89.34	14	P	P	10 31 23.8	+1.3
	baz=209,SNR=15						
GCSA	Galena City Sc	89.40	8	P	P	10 31 23.9	+1.2
	baz=198,SNR=40						
SKAG	Skagway	89.50	20	IAmb	IAmb	10 31 26.7	
	comp=Z,83nm,1.1s						
SKAG	Skagway	89.50	20	P	P	10 31 25.4	+2.1
	baz=217,SNR=14						
AHID	Auburn Hatcher	89.52	42	IAmb	IAmb	10 31 26.6	
	comp=Z,41nm,1.4s						
P30M	Million Dollar	89.54	19	P	P	10 31 25.6	+2.0
	baz=216						
SEY	Seymchan	89.61	346	d iP	P	10 31 24.2	+0.5
SEY				pmax	pmax		
	comp=Z,153nm,0.9s						
MCMT	McKenzie Canyo	89.62	40	P	P	10 31 26.0	+1.4
CMIG	Matias Romero	89.63	71	P	P	10 31 25.1	+0.2
	comp=Z,6.4nm,1.0s,baz=238,slow=6.2,SNR=4.9						
CMIG				LR	LR	11 01 40.6	
	comp=Z,99nm,21.5s,baz=251,slow=29						
	comp=Z,6.4nm,1.0s						
S22A	4UR Ranch, Cre	89.66	48	P	P	10 31 26.5	+1.5
	baz=239						
S34M	Telegraph Cree	89.69	22	P	P	10 31 26.2	+2.0
	baz=221,SNR=24						
BPAW	Bear Paw Mtn.	89.71	11	P	P	10 31 24.0	-0.2
BPAW				IAmb	IAmb	10 31 24.8	
	comp=Z,24nm,1.1s						
BPAW	Bear Paw Mtn.	89.71	11	P	P	10 31 23.5	-0.7
	baz=204,SNR=11						
YUK8	Steele Glacier	89.71	17	P	P	10 31 26.0	+1.4
	baz=214,SNR=35						
MCK	McKinley	89.75	12	P	P	10 31 24.8	+0.4
	baz=205,SNR=68						
PAX	Paxson	89.77	14	IAmb	IAmb	10 31 26.2	
	comp=Z,46nm,1.0s						
PAX	Paxson	89.77	14	P	P	10 31 24.8	+0.2
	baz=208,SNR=29						
YUK6	Outpost Mounta	89.81	18	P	P	10 31 26.4	+1.4
	baz=215,SNR=7.6						
M26K	Nabesna, AK	89.84	15	P	P	10 31 25.9	+0.9
	baz=211						
O20A	White River Ci	89.94	46	P	P	10 31 27.3	+1.2
	baz=238,SNR=6.4						
YUK3	Moose Creek	89.94	16	P	P	10 31 27.1	+1.5
	baz=213,SNR=88						
HYT	Haines Junctio	89.95	18	P	P	10 31 26.8	+1.2
HYT				IAmb	IAmb	10 31 28.2	
	comp=Z,49nm,1.0s						
HYT	Haines Junctio	89.95	18	P	P	10 31 27.0	+1.4
	baz=215,SNR=17						
ODSA	Odessa	89.99	55	IAmb	IAmb	10 31 28.7	
	comp=Z,41nm,1.2s						
REDW	Red Top Meadow	90.00	42	IAmb	IAmb	10 31 28.9	
	comp=Z,36nm,1.1s						
YUK4	Talbot Arm	90.06	17	P	P	10 31 27.7	+1.5
	baz=214,SNR=12						
DLMT	Dillon	90.07	39	IAmb	IAmb	10 31 29.1	
	comp=Z,40nm,0.9s						
M27K	Edge Creek, AK	90.08	16	P	P	10 31 27.3	+1.1
M27K	Edge Creek, AK	90.08	16	P	P	10 31 27.8	+1.6
	baz=212,SNR=74						
Q32M	Nakina River	90.09	21	P	P	10 31 28.3	+1.9
	baz=220						
P32M	Atlin	90.11	20	P	P	10 31 27.7	+1.4
	baz=219,SNR=16						
SNOW	Snow King Moun	90.11	42	IAmb	IAmb	10 31 29.5	
	comp=Z,39nm,1.1s						
TIY	Taiyuan	90.12	312	eP	P	10 31 29.0	+2.1
TIY				pmax	pmax		
	comp=Z,36nm,0.7s						
MSO	Missoula	90.14	38	P	P	10 31 27.1	+0.3
	baz=235,SNR=9.5						
MENT	Mentasta	90.14	14	P	P	10 31 27.4	+1.1
IMW	Indian Meadow	90.24	41	IAmb	IAmb	10 31 30.7	
	comp=Z,35nm,1.0s						
L26K	Log Cabin Wild	90.30	15	P	P	10 31 28.1	+1.1
L26K				IAmb	IAmb	10 31 29.4	
	comp=Z,80nm,1.2s						
L26K	Log Cabin Wild	90.30	15	P	P	10 31 28.1	+1.1
	baz=210,SNR=40						
O30N	Mendenhall	90.32	19	P	P	10 31 28.7	+1.6
	baz=217,SNR=21						
BVCY	Beaver Creek	90.38	16	P	P	10 31 28.9	+1.5
	baz=212,SNR=59						
LRM	Limekiln Ridge	90.41	39	P	P	10 31 28.6	+0.3
K24K	Donnelly Dome	90.44	13	P	P	10 31 28.5	+0.8
	baz=208,SNR=49						
DLBC	Dease Lake	90.47	23	P	P	10 31 29.2	+1.3
DLBC				IAmb	IAmb	10 31 30.9	
	comp=Z,53nm,0.9s						
DLBC	Dease Lake	90.47	23	P	P	10 31 29.5	+1.5
	baz=222,SNR=20						
BW06	Boulder Array	90.48	43	IAmb	IAmb	10 31 30.4	
	comp=Z,24nm,0.9s						
BW06	Boulder Array	90.48	43	P	P	10 31 29.3	+0.7
	baz=238,SNR=29						
PD31	Pinedale Array	90.48	43	IAmb	IAmb	10 31 30.4	
	comp=Z,22nm,0.9s						
PDAR	Pinedale Array	90.48	43	P	P	10 31 29.3	+0.7
	comp=Z,18nm,0.9s,baz=214,slow=2.7,SNR=116						
PDAR				PKKP	PKKPdf	10 48 53.4	-0.5
	comp=Z,1.1nm,0.7s,baz=86,slow=4.2,SNR=7.9						
	comp=Z,18nm,0.9s						
PDAR	Pinedale Array	90.48	43	P	P	10 31 28.5	-0.1
FLWY	Flagg Ranch	90.48	41	P	P	10 31 30.4	+1.8
FLWY				IAmb	IAmb	10 31 32.0	
	comp=Z,49nm,0.9s						
NEA2	Nenana	90.50	12	P	P	10 31 27.8	-0.1
NEA2				IAmb	IAmb	10 31 30.0	
	comp=Z,23nm,0.8s						
NEA2	Nenana	90.50	12	P	P	10 31 27.6	-0.3
	baz=205,SNR=23						
I21K	Tanana	90.53	10	P	P	10 31 28.6	+0.6
I21K	Tanana	90.53	10	P	P	10 31 28.5	+0.6
	baz=203,SNR=51						
SDCO	Great Sand Dun	90.57	49	P	P	10 31 30.2	+0.9
	baz=240						
WRH	Wood River Hil	90.58	12	P	P	10 31 28.2	0.0
RIDG	Independent Ri	90.59	14	P	P	10 31 29.1	+0.7
RIDG	Independent Ri	90.59	14	P	P	10 31 29.1	+0.7
	baz=209,SNR=35						
N30M	Aishikik Lake	90.59	18	P	P	10 31 29.5	+1.0
	baz=216						
MLY	Manley	90.61	11	P	P	10 31 28.3	-0.1
MLY				IAmb	IAmb	10 31 29.3	
	comp=Z,38nm,1.0s						
MLY	Manley	90.61	11	P	P	10 31 28.1	-0.3
	baz=204,SNR=35						
YMR	Madison River	90.64	41	IAmb	IAmb	10 31 32.5	
	comp=Z,36nm,0.9s						
DOT	Dot Lake	90.68	14	P	P	10 31 29.8	+1.0
L27K	Beaver Creek,	90.69	15	IAmb	IAmb	10 31 31.1	
	comp=Z,45nm,0.8s						
L27K	Beaver Creek,	90.69	15	P	P	10 31 30.0	+1.1
	baz=212						
MSTX	Muleshoe	90.69	53	IAmb	IAmb	10 31 31.9	
	comp=Z,40nm,0.9s						
MSTX	Muleshoe	90.69	53	P	P	10 31 30.6	+0.9
	baz=242						
MSTX	Muleshoe	90.69	53	P	P	10 31 30.3	+0.7
	baz=242						
833A	Chaparral WMA,	90.69	59	IAmb	IAmb	10 31 31.9	
	comp=Z,29nm,0.9s						
833A	Chaparral WMA,	90.69	59	P	P	10 31 30.9	+1.2
	baz=243						
833A	Chaparral WMA,	90.69	59	P	P	10 31 31.1	+1.4
	baz=243,SNR=11						
BCAR	Beaver Creek A	90.70	15	P	P	10 31 29.6	+0.7
H17A	Grant Village	90.73	41	IAmb	IAmb	10 31 33.4	
	comp=Z,24nm,0.9s						
H17A	Grant Village	90.73	41	P	P	10 31 32.2	+2.4
	baz=237,SNR=20						
HDA	Harding Lake	90.74	13	P	P	10 31 29.4	+0.3
	baz=207,SNR=62						
BOZ	Bozeman (W)	90.76	40	IAmb	IAmb	10 31 32.4	
	comp=Z,52nm,0.8s						
BOZ	Bozeman (W)	90.76	40	P	P	10 31 31.1	+1.4
	baz=236,SNR=77						
ZEA	Zeya	90.83	331	eP	P	10 31 30.1	+0.4
ZEA				pmax	pmax		
	comp=N,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XAN	Xi'an	90.84	307	⇓iP	P	10 31 31.0	+0.7
XAN				pP	pP	10 32 00.8	-1.2
XAN				pmax	pmax		
	comp=Z,26nm,0.7s						
H21K	Melozitna Rive	90.85	10	P	P	10 31 30.3	+0.8
H21K				IAmb	IAmb	10 31 31.5	
	comp=Z,28nm,0.8s						
H21K	Melozitna Rive	90.85	10	P	P	10 31 30.4	+0.9
	baz=202						
P33M	Teslin, Yukon	90.88	20	P	P	10 31 30.6	+0.7
P33M				IAmb	IAmb	10 31 33.1	
	comp=Z,46nm,0.8s						
P33M	Teslin, Yukon	90.88	20	P	P	10 31 31.2	+1.4
	baz=220,SNR=32						
LKWY	Lake	90.93	41	P	P	10 31 33.2	+2.5
LKWY				IAmb	IAmb	10 31 34.5	
	comp=Z,32nm,0.9s						
LKWY	Lake	90.93	41	P	P	10 31 33.2	+2.5
LKWY				pmax	pmax		
	comp=Z,32nm,0.9s						
XLT	XiLinHaoTe	90.95	318	eP	P	10 31 30.4	-0.2
XLT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,160nm,6.8s						
I23K	Minto, Yukon-K	90.95	11	P	P	10 31 30.2	+0.3
I23K				IAmb	IAmb	10 31 32.9	
	comp=Z,21nm,0.9s						
I23K	Minto, Yukon-K	90.95	11	P	P	10 31 29.7	-0.2
	baz=205,SNR=20						
SCRK	Sand Creek	90.98	14	P	P	10 31 31.3	+1.0
SCRK				IAmb	IAmb	10 31 32.4	
	comp=Z,42nm,1.0s						
SCRK	Sand Creek	90.98	14	P	P	10 31 31.2	+1.0
	baz=210,SNR=27						
TCOL	CIGO, UAF Yank	90.98	12	P	P	10 31 30.1	0.0
TCOL	CIGO, UAF Yank	90.98	12	P	P	10 31 29.8	-0.3
	baz=206,SNR=38						
N31M	Braeburn, Yuko	90.98	18	P	P	10 31 29.8	-0.4
N31M	Braeburn, Yuko	90.98	18	P	P	10 31 31.7	+1.5
	baz=217,SNR=19						
COLA	College	90.98	12	P	P	10 31 30.1	+0.1
COLA	College	90.98	12	P	P	10 31 30.5	+0.4
	comp=Z,136nm,1.0s						
COLA	College	90.98	12	d iP	P	10 31 29.5	-0.6
COLA				pmax	pmax		
	comp=Z,113nm,0.9s						
COLA	College	90.98	12	P	P	10 31 30.0	-0.1
	baz=206						
MDM	Murphy Dome	90.99	12	P	P	10 31 29.9	-0.3
IMAR	Indian Mountai	91.01	9	P	P	10 31 30.8	+0.6
M29M	Somme Creek	91.02	17	P	P	10 31 31.7	+1.2
	baz=215						
T25A	Trinidad	91.03	50	P	P	10 31 31.4	+0.1
T25A	Trinidad	91.03	50	P	P	10 31 32.1	+0.8
	baz=241						
PHRA	Phrae	91.05	290	P	P	10 31 32.7	+1.2
IL31		91.08	12	P	P	10 31 30.8	+0.3
IL31				IAmb	IAmb	10 31 31.9	
	comp=Z,52nm,1.0s						
ILAR	Eielson Array	91.08	12	P	P	10 31 30.8	+0.2
	comp=Z,37nm,1.0s,baz=220,slow=5.2,SNR=84						
ILAR				PP	PP	10 35 11.4	+2.2
	comp=Z,5.4nm,0.9s,baz=225,slow=7.4,SNR=7.1						
ILAR				PKiKP	PKiKP	10 36 22.6	-0.2
	comp=Z,0.9nm,0.9s,baz=267,slow=2.8,SNR=1.7						
ILAR				PKKPbc	PKKPdf	10 48 54.9	+1.6
	comp=Z,0.2nm,0.6s,baz=324,slow=32,SNR=4.9						
	comp=Z,37nm,1.0s						
ILAR	Eielson Array	91.08	12	P	P	10 31 30.0	-0.6
POST	Post	91.21	54	IAmb	IAmb	10 31 33.9	
	comp=Z,30nm,0.8s						
POKR	Poker Plat Res	91.28	12	IAmb	IAmb	10 31 33.3	
	comp=Z,42nm,0.9s						
POKR	Poker Plat Res	91.28	12	P	P	10 31 31.4	-0.1
	baz=207,SNR=19						
H22K	Ishtalitna Cre	91.29	10	P	P	10 31 32.4	+0.8
	baz=203						
JCT	Junction City	91.33	57	IAmb	IAmb	10 31 37.6	
	comp=Z,24nm,0.8s						
JCT	Junction City	91.33	57	P	P	10 31 33.4	+0.8
	baz=243						
JCT	Junction City	91.33	57	P	P	10 31 33.9	+1.2
	baz=243,SNR=16						
RWWY	Rawlins	91.41	45	P	P	10 31 32.7	-0.2
RWWY				IAmb	IAmb	10 31 35.0	
	comp=Z,29nm,1.1s						
Q24A	Divide	91.41	48	IAmb	IAmb	10 31 35.7	
	comp=Z,54nm,1.8s						
Q24A	Divide	91.41	48	P	P	10 31 34.1	+1.0
	baz=240						
WALA	Waterton Lakes	91.44	36	P	P	10 31 33.0	+0.2
WALA				IAmb	IAmb	10 31 34.9	
	comp=Z,27nm,1.1s						
K27K	Chicken	91.46	15	P	P	10 31 32.7	+0.3
K27K	Chicken	91.46	15	P	P	10 31 33.9	+1.6
	baz=211						
ISCO	Idaho Springs	91.51	47	P	P	10 31 34.6	+1.0
	baz=240,SNR=6.8						
H23K	Yukon River	91.54	11	P	P	10 31 33.0	+0.3
H23K	Yukon River	91.54	11	P	P	10 31 33.6	+0.9
	baz=205						
G21K	Allakaket	91.54	9	P	P	10 31 33.5	+0.8
	baz=201,SNR=49						
M30M	Minto, Yukon	91.58	17	P	P	10 31 34.0	+1.0
	baz=216,SNR=36						
CRAI	Chiangrai	91.63	291	IAmb	IAmb	10 31 38.8	
	comp=Z,27nm,1.0s						
L29M	L29M	91.65	17	P	P	10 31 34.8	+1.5
	baz=215						
KMI	Kunming	91.69	297	⇓P	P	10 31 36.0	+1.4
KMI				pmax	pmax		
	comp=Z,27nm,1.4s						
KMI				pmax	pmax		
	comp=Z,150nm,3.0s						
HIA	Hailar	91.81	324	P	P	10 31 33.5	-0.9
HIA	Hailar	91.81	324	P	P	10 31 34.7	+0.3
	comp=Z,13nm,0.9s						
HIA	Hailar	91.81	324	P	P	10 31 33.5	-0.9
HIA				pmax	pmax		
	comp=Z,15nm,1.1s						
N23A	Red Feather La	91.83	46	IAmb	IAmb	10 31 37.6	
	comp=Z,47nm,2.0s						
N23A	Red Feather La	91.83	46	P	P	10 31 35.8	+0.8
	baz=240						
H24K	Noodor Dome	91.85	12	P	P	10 31 33.6	-0.5
RLMT	Red Lodge	91.91	41	IAmb	IAmb	10 31 37.8	
	comp=Z,27nm,1.0s						
RLMT	Red Lodge	91.91	41	P	P	10 31 36.6	+1.4
	baz=238,SNR=28						
AMTX	Amarillo	91.92	53	IAmb	IAmb	10 31 37.4	
	comp=Z,19nm,0.9s						
AMTX	Amarillo	91.92	53	P	P	10 31 36.3	+1.0
	baz=242						
AMTX	Amarillo	91.92	53	P	P	10 31 36.8	+1.5
	baz=242,SNR=6.8						
RDOG	Red Dog Mine	91.95	5	IAmb	IAmb	10 31 36.5	
	comp=Z,30nm,0.8s						
RDOG	Red Dog Mine	91.95	5	P	P	10 31 35.4	+0.8
	baz=193						
M31M	Drury Creek, Y	91.95	18	P	P	10 31 34.1	-0.6
M31M				IAmb	IAmb	10 31 36.5	
	comp=Z,23nm,1.0s						
M31M	Drury Creek, Y	91.95	18	P	P	10 31 35.3	+0.5
	baz=218,SNR=9.2						
PRP	Porcupine Dome	92.01	13	P	P	10 31 35.3	+0.3
	baz=208,SNR=33						
DAWY	Dawson	92.13	16	P	P	10 31 36.5	+1.0
	baz=214,SNR=50						
WTLY	Watson Lake, Y	92.13	22	P	P	10 31 36.7	+1.1
WTLY				IAmb	IAmb	10 31 38.3	
	comp=Z,37nm,1.0s						
WTLY	Watson Lake, Y	92.13	22	P	P	10 31 37.1	+1.5
	baz=223,SNR=16						
CM31	Chiang Mai Arr	92.14	289	P	P	10 31 37.7	+1.1
CMAR	Chiang Mai Arr	92.14	289	P	P	10 31 38.1	+1.6
	comp=Z,32nm,1.0s,baz=135,slow=3.5,SNR=62						
CMAR				PP	PP	10 35 20.3	+1.7
	comp=Z,4.1nm,0.8s,baz=119,slow=5.0,SNR=6.0						
CMAR				PKKP	PKKPbc	10 48 53.3	+1.7
	comp=Z,1.3nm,0.7s,baz=297,slow=4.6,SNR=5.8						
CMAR				LR	LR	11 12 36.0	
	comp=Z,24nm,21.1s,baz=115,slow=35						
	comp=Z,32nm,1.0s						
CMAR	Chiang Mai Arr	92.14	289	P	P	10 31 37.4	+0.8
CMAR	Chiang Mai Arr	92.14	289	P	P	10 31 37.4	+0.8
735A	Kenedy	92.18	60	P	P	10 31 38.6	+2.1
	baz=244,SNR=5.3						

BILL	Bilibino	92.20	354	P	P	10 31 35.8	+0.1
BILL	Bilibino	92.20	354c	iP	P	10 31 35.7	0.0
BILL				e*PP	pP	10 32 07.3	0.0
BILL				e		10 35 18.5	
BILL				eS	SKSac	10 41 53.6	-3.0
BILL				eSS	SS	10 48 44.1	+3.3
BILL				eSSS	SSS	10 52 20.7	
BILL				pmax	pmax		
	comp=Z,123nm,0.8s						
BILL				MLR	MLR		
	comp=Z,53nm,16.0s						
F21K	Alatna River	92.21	9	P	P	10 31 36.3	+0.5
	baz=201						
AC05	El Transito	92.22	123	P	P	10 31 36.6	-0.4
AC05				IAmb	IAmb	10 32 18.4	
	comp=Z,25nm,1.1s						
HHC	Hu-ho-hao-te	92.26	314	eP	P	10 31 39.3	+2.5
HHC				pmax	pmax		
	comp=Z,28nm,0.6s						
HHC				pmax	pmax		
	comp=Z,200nm,7.4s						
G23K	Bananza Creek	92.27	10	P	P	10 31 37.0	+1.0
	baz=204						
FARO	Faro, Yukon	92.28	19	P	P	10 31 36.7	+0.5
FARO				IAmb	IAmb	10 31 38.2	
	comp=Z,13nm,0.9s						
FARO	Faro, Yukon	92.28	19	P	P	10 31 37.1	+0.9
	baz=219,SNR=9.6						
CHTO	Chiang Mai	92.28	289	P	P	10 31 38.3	+1.1
CHTO	Chiang Mai	92.28	289	P	P	10 31 38.3	+1.1
CHTO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
EGAK	Eagle	92.31	14	P	P	10 31 37.1	+0.9
EGAK	Eagle	92.31	14	P	P	10 31 37.2	+1.0
	baz=212,SNR=37						
I26K	Coal Creek Min	92.31	13	IAmb	IAmb	10 31 38.5	
	comp=Z,55nm,1.1s						
I26K	Coal Creek Min	92.31	13	P	P	10 31 37.4	+1.1
	baz=210						
K22A	Casper	92.33	44	P	P	10 31 37.6	+0.4
K22A				IAmb	IAmb	10 31 39.2	
	comp=Z,27nm,1.1s						
K22A	Casper	92.33	44	P	P	10 31 38.1	+1.0
	baz=240,SNR=14						
K22A	Casper	92.33	44	P	P	10 31 38.0	+0.8
	baz=240						
ABTX	Abilene, Hawle	92.41	55	IAmb	IAmb	10 31 40.3	
	comp=Z,46nm,1.0s						
ABTX	Abilene, Hawle	92.41	55	P	P	10 31 38.6	+1.1
	baz=243						
ABTX	Abilene, Hawle	92.41	55	P	P	10 31 38.9	+1.4
	baz=243,SNR=11						
K29M	Barlow Dome	92.41	16	P	P	10 31 38.2	+1.3
	baz=216,SNR=36						
CFA	Coronel Fontan	92.42	126	LR	LR	11 08 10.3	
	comp=Z,81nm,18.1s,baz=246,slow=32						
WAPA	Wapiti River	92.52	29	IAmb	IAmb	10 31 39.6	
	comp=Z,36nm,1.0s						
LIRD	Liard River Hi	92.58	23	P	P	10 31 38.9	+1.2
	baz=225,SNR=19						
MAYO	Mayo, Yukon	92.64	17	P	P	10 31 38.8	+1.0
MAYO	Mayo, Yukon	92.64	17	P	P	10 31 39.3	+1.4
	baz=217,SNR=18						
F22K	John River	92.66	9	P	P	10 31 39.1	+1.3
	baz=202						
BRLDA	Berland Lookou	92.68	31	P	P	10 31 38.7	+0.4
G24K	Hadweenzic Riv	92.69	11	P	P	10 31 38.0	-0.1
	baz=207						
COLD	Coldfoot	92.71	10	IAmb	IAmb	10 31 42.1	
	comp=Z,27nm,1.0s						
COLD	Coldfoot	92.71	10	P	P	10 31 39.0	+0.9
	baz=204						
J29M	Klondike Camp	92.74	16	P	P	10 31 40.3	+2.0
	baz=215,SNR=5.3						
I27K	Kandik River	92.90	14	P	P	10 31 39.9	+0.8
	baz=212,SNR=16						
FYU	Fort Yukon	92.99	12	IAmb	IAmb	10 31 42.3	
	comp=Z,29nm,1.2s						
G25K	Bearman Lake	93.00	12	P	P	10 31 41.2	+1.9
	baz=208						
PZH	PanZhiHua	93.08	297	P	P	10 31 41.4	+0.5
PZH				pmax	pmax		
	comp=Z,20nm,0.7s						
PZH				pmax	pmax		
	comp=Z,70nm,4.3s						
KSCO	Kaye Shedlock'	93.16	49	P	P	10 31 42.1	+1.2
KSCO				IAmb	IAmb	10 31 43.3	
	comp=Z,38nm,1.3s						
KSCO	Kaye Shedlock'	93.16	49	P	P	10 31 41.9	+1.0
	baz=242						
KSCO	Kaye Shedlock'	93.16	49	P	P	10 31 42.5	+1.5
	baz=242						
EGMT	Eagleton	93.16	38	P	P	10 31 41.7	+1.0
EGMT				IAmb	IAmb	10 31 42.9	
	comp=Z,13nm,1.1s						
EGMT	Eagleton	93.16	38	P	P	10 31 41.6	+0.8
	baz=238						
BTO	Baotou	93.17	313	eP	P	10 31 42.6	+1.6
BTO				S	S	10 42 38.3	+1.1
BTO				pmax	pmax		
	comp=Z,60nm,1.1s						
BTO				pmax	pmax		
	comp=Z,840nm,7.4s						
BTO				LR	LR		
	comp=Z,540nm,7.5s						
BTO				LR	LR		
	comp=Z,510nm,6.7s						
BTO				LR	LR		
	comp=Z,770nm,5.2s						
435B	Jarrell	93.18	58	IAmb	IAmb	10 31 43.2	
	comp=Z,29nm,0.7s						
435B	Jarrell	93.18	58	P	P	10 31 42.2	+1.1
	baz=244						
435B	Jarrell	93.18	58	P	P	10 31 42.5	+1.4
	baz=244						
E22K	Anaktuvuk Pass	93.30	9	P	P	10 31 41.5	+0.7
	baz=203,SNR=28						
CD2	Chengdu	93.34	302	P	P	10 31 43.0	+1.1
F24K	Squaw Lake	93.36	11	P	P	10 31 42.1	+1.0
	baz=206,SNR=11						
H27K	Steamboat Moun	93.46	14	P	P	10 31 42.7	+1.1
	baz=212						
TRQA	Tornquist	93.46	134	eP	P	10 31 45.2	+2.8
I29M	Ogilvie Camp,	93.46	15	IAmb	IAmb	10 31 43.5	
	comp=Z,32nm,1.1s						
I29M	Ogilvie Camp,	93.46	15	P	P	10 31 42.3	+0.7
	baz=215,SNR=20						
E23K	Chandalar	93.56	10	P	P	10 31 43.1	+1.0
	baz=205						
G26K	Porcupine Rive	93.61	12	P	P	10 31 43.5	+1.3
	baz=210						
E24K	Your Creek	93.76	10	P	P	10 31 43.9	+0.9
	baz=206						
FW03	Perrin-Whitt E	93.78	56	IAmb	IAmb	10 31 46.0	
	comp=Z,51nm,0.8s						
WHTX	Lake Whitney,	93.80	57	P	P	10 31 41.5	-2.4
WHTX				IAmb	IAmb	10 31 45.8	
	comp=Z,24nm,0.8s						
WHTX	Lake Whitney,	93.80	57	P	P	10 31 44.7	+0.8
	baz=244						
WHTX	Lake Whitney,	93.80	57	P	P	10 31 45.1	+1.2
	baz=244,SNR=5.0						
F25K	Christian Rive	93.82	11	P	P	10 31 44.7	+1.4
	baz=208						
KOTAN	Kotaneelee Air	93.83	24	P	P	10 31 44.7	+1.3
	baz=227,SNR=9.7						
BMAR	Burnt Mountain	93.87	12	P	P	10 31 44.7	+1.2
G27K	Doyon Strip	93.92	13	P	P	10 31 44.7	+1.0
	baz=212						
FW13	Cleburne	93.97	57	IAmb	IAmb	10 31 47.1	
	comp=Z,52nm,1.1s						
WMOK	Wichita Mounta	93.98	54	P	P	10 31 45.3	+0.5
WMOK	Wichita Mounta	93.98	54	P	P	10 31 45.3	+0.5
WMOK				pmax	pmax		
	comp=Z,19nm,1.8s						
WMOK	Wichita Mounta	93.98	54	P	P	10 31 45.0	+0.2
	baz=244						
ELIS	Ellis County	94.09	52	IAmb	IAmb	10 31 47.6	
	comp=Z,20nm,1.0s						
FW14	Alvarado	94.17	57	IAmb	IAmb	10 31 47.5	
	comp=Z,35nm,0.6s						
F26K	Sheenjek River	94.19	12	P	P	10 31 46.3	+1.4
	baz=210						
HKT	Hockley	94.20	59⇓	eP	P	10 31 45.8	+0.1
HKT				pmax	pmax		
	comp=Z,41nm,3.9s						
D23K	Nanushuk River	94.23	9	P	P	10 31 46.3	+1.2
	baz=204						
E25K	Arctic Village	94.30	11	P	P	10 31 46.5	+1.1
	baz=208,SNR=10.0						
OGNE	Ogallala	94.45	47	P	P	10 31 46.8	-0.1
OGNE				IAmb	IAmb	10 31 48.8	
	comp=Z,22nm,1.0s						
OGNE	Ogallala	94.45	47	P	P	10 31 47.5	+0.7
	baz=242						
OGNE	Ogallala	94.45	47	P	P	10 31 48.1	+1.3
	baz=242,SNR=8.3						
Z35A	Perchaven, San	94.52	56	IAmb	IAmb	10 31 49.1	
	comp=Z,34nm,0.9s						
Z35A	Perchaven, San	94.52	56	P	P	10 31 48.5	+1.3
	baz=245						
LAO	LASA Array	94.53	41	IAmb	IAmb	10 31 49.9	
	comp=Z,24nm,0.9s						
LAO	LASA Array	94.53	41	P	P	10 31 48.7	+1.6
	baz=240,SNR=5.5						
LAO	LASA Array	94.53	41	P	P	10 31 49.0	+2.0
	baz=240,SNR=5.5						
U32A	Winter Ranch,	94.53	52	P	P	10 31 47.7	+0.5
U32A				IAmb	IAmb	10 31 49.4	
	comp=Z,30nm,1.0s						
U32A	Winter Ranch,	94.53	52	P	P	10 31 48.6	+1.4
	baz=244,SNR=8.2						
X34A	Smith Ranch, M	94.63	54	IAmb	IAmb	10 31 50.9	
	comp=Z,34nm,1.0s						
RSSD	Black Hills	94.63	44	P	P	10 31 48.4	+0.7
RSSD	Black Hills	94.63	44	P	P	10 31 48.4	+0.7
RSSD				pmax	pmax		
	comp=Z,47nm,0.9s						
RSSD	Black Hills	94.63	44	P	P	10 31 48.6	+0.9
	baz=241						
RSSD	Black Hills	94.63	44	P	P	10 31 48.7	+0.9
	baz=241,SNR=47						
EPYK	Eagle Plains	94.67	15	P	P	10 31 47.7	+0.6
EPYK	Eagle Plains	94.67	15	P	P	10 31 47.9	+0.8
	baz=216,SNR=9.9						
OK038	West end E0370	94.77	52	P	P	10 31 48.0	-0.3
OK038				IAmb	IAmb	10 31 50.8	
	comp=Z,38nm,1.3s						
ATAH	Atahualpa	94.86	100	LR	LR	11 05 10.4	
	comp=Z,439nm,21.5s,baz=255,slow=29						
OK035	E0210 Rd and N	94.89	52	P	P	10 31 49.5	+0.7
OK035				IAmb	IAmb	10 31 50.8	
	comp=Z,29nm,1.2s						
E27K	Coleen River	95.11	13	P	P	10 31 50.4	+1.3
	baz=212						
C24K	Franklin Bluff	95.21	10	P	P	10 31 50.3	+0.8
	baz=206						
FNO	Franklin	95.23	54	P	P	10 31 50.0	-0.4
FNO				IAmb	IAmb	10 31 52.8	
	comp=Z,24nm,0.9s						
G30M	tAoh Zraii Nji	95.28	15	P	P	10 31 50.7	+0.8
	baz=217						
OK032	Salt Plains WL	95.29	52	P	P	10 31 51.9	+1.3
OK032				IAmb	IAmb	10 31 52.6	
	comp=Z,22nm,1.1s						
YAK	Yakutsk	95.36	338	P	P	10 31 49.9	-0.4
YAK	Yakutsk	95.36	338	eP	P	10 31 49.5	-0.8
YAK				e		10 35 41.1	
YAK				eS	SKSac	10 42 15.7	+1.8
YAK				e		10 42 54.6	
YAK				eSS	SS	10 49 30.3	+4.4
YAK				pmax	pmax		
	comp=Z,43nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,313nm,5.9s						
YAK				pmax	pmax		
	comp=E,153nm,5.3s						
YAK				smax	smax		
	comp=E,88nm,4.7s						
YAK				smax	smax		
	comp=N,80nm,3.8s						
LZH	Lanzhou	95.48	307	eP	P	10 31 52.8	+1.1
LZH				sP	sP	10 32 38.3	+1.7
LZH				pmax	pmax		
	comp=N,27nm,1.1s						
W35A	Tecumseh	95.57	54	P	P	10 31 53.3	+1.4
W35A				IAmb	IAmb	10 31 54.3	
	comp=Z,25nm,1.2s						
R32A	Long Quarter,	95.63	51	P	P	10 31 51.2	-1.0
R32A				IAmb	IAmb	10 31 54.6	
	comp=Z,14nm,0.8s						
A21K	Barrow	95.70	6	P	P	10 31 52.5	+0.9
A21K				IAmb	IAmb	10 31 53.3	
	comp=Z,17nm,0.9s						
A21K	Barrow	95.70	6	P	P	10 31 52.0	+0.4
	baz=198						
KAN17	Caldwell West	95.72	52	IAmb	IAmb	10 31 54.6	
	comp=Z,19nm,1.1s						
JTS	Las Juntas de	95.77	81	LR	LR	11 05 38.1	
	comp=Z,122nm,19.3s,baz=5.5,slow=29						
KAN09	Caldwell North	95.86	52	IAmb	IAmb	10 31 55.4	
	comp=Z,21nm,1.1s						
C27K	Jago River	95.95	11	P	P	10 31 53.6	+0.7
	baz=210						
KS20	Mayfield South	95.95	52	IAmb	IAmb	10 31 56.4	
	comp=Z,23nm,1.3s						
C26K	Camden Bay	96.00	11	P	P	10 31 54.4	+1.4
	baz=209						
WRGLY	Wrigley	96.14	21	P	P	10 31 54.9	+1.1
	baz=228						
F31M	Tsiigehtchic	96.24	15	P	P	10 31 54.7	+0.6
	baz=219,SNR=36						
LVC	Limon Verde	96.26	118	LR	LR	11 07 33.6	
	comp=Z,162nm,19.0s,baz=252,slow=30						
LVC	Limon Verde	96.26	118	eP	P	10 31 57.4	+1.5
HDC	Heredia	96.42	82	eP	P	10 31 57.9	+1.4
DGMT	Dagmar	96.60	40	P	P	10 31 55.5	-0.9
DGMT	Dagmar	96.60	40	P	P	10 31 57.3	+1.0
	baz=242,SNR=11						
DGMT	Dagmar	96.60	40	P	P	10 31 58.0	+1.7
	baz=242,SNR=11						
TUL1	Leonard	96.69	54	P	P	10 31 57.7	+0.6
	baz=246						
INK	Inuvik	96.96	15	P	P	10 31 57.7	+0.3
	comp=Z,7.9nm,0.8s,baz=200,slow=4.3,SNR=25						
INK				PP	PP	10 35 54.5	-0.4
	comp=Z,5.4nm,1.0s,baz=242,slow=8.2,SNR=5.3						
INK				PKKPbc	PKKPbc	10 48 41.2	+0.3
	comp=Z,1.0nm,0.5s,baz=59,slow=16,SNR=5.6						
	comp=Z,7.9nm,0.8s						
INK	Inuvik	96.96	15	P	P	10 31 57.7	+0.3
INK				IAmb	IAmb	10 31 58.8	
	comp=Z,11nm,0.9s						
INK	Inuvik	96.96	15	P	P	10 31 57.9	+0.4
	baz=219,SNR=11						
BGNE	Belgrade	97.29	48	P	Pdif	10 32 01.2	+1.5
	baz=245						
K31A	O'Neill	97.39	47	P	Pdif	10 32 01.9	+1.8
K31A	O'Neill	97.39	47	P	Pdif	10 32 01.9	+1.7
	baz=245,SNR=8.3						
KSU1	Kansas State U	97.40	51	P	Pdif	10 32 00.3	+0.1
	baz=246						
OTAV	Otavalo	97.79	93	eP	Pdif	10 32 04.7	+1.5
E28A	Huff	97.85	43	P	Pdif	10 32 03.6	+1.5
E28A				IAmb	IAmb	10 32 04.5	
	comp=Z,23nm,0.9s						
ULN	Ulaanbaatar	98.38	319	P	P	10 32 02.9	-1.6
ULN	Ulaanbaatar	98.38	319⇑	iP	P	10 32 04.3	-0.2
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SONM	Songino Array	98.77	318	P	P	10 32 05.9	-0.3
	comp=Z,1.6nm,0.9s,baz=102,slow=3.3,SNR=5.3						
SONM				PP	PP	10 36 06.8	-2.6
	comp=Z,2.1nm,0.8s,baz=139,slow=6.8,SNR=5.1						
SONM				PKKPbc	PKKPbc	10 48 34.0	-1.3
	comp=Z,0.9nm,0.7s,baz=238,slow=3.5,SNR=4.9						
SONM				LR	LR	11 11 48.5	
	comp=Z,39nm,19.6s,baz=58,slow=32						
	comp=Z,1.6nm,0.9s						
YKA	Yellowknife Ar	98.86	25	P	Pdif	10 32 06.8	+0.7
	comp=Z,6.7nm,0.9s,baz=236,slow=4.3,SNR=89						
YKA				PP	PP	10 36 06.7	-2.9
	comp=Z,1.2nm,1.0s,baz=230,slow=7.2,SNR=6.6						
YKA				PKiKP	PKiKP	10 36 36.2	-0.1
	comp=Z,0.8nm,0.7s,baz=245,slow=1.6,SNR=8.9						
YKA				PKKPbc	PKKPbc	10 48 28.5	-6.9
	comp=Z,0.5nm,0.7s,baz=36,slow=2.2,SNR=4.6						
YKA				LR	LR	11 09 46.8	
	comp=Z,108nm,21.6s,baz=315,slow=31						
	comp=Z,6.7nm,0.9s						
MDND	Maddock	99.07	42	P	Pdif	10 32 06.5	-1.0
MDND	Maddock	99.07	42	P	Pdif	10 32 08.4	+1.0
	baz=245						
ECSD	EROS Data Cent	99.28	46	P	Pdif	10 32 08.3	-0.2
ECSD				IAmb	IAmb	10 32 10.5	
	comp=Z,17nm,1.2s						
ECSD	EROS Data Cent	99.28	46	P	Pdif	10 32 08.8	+0.3
	baz=246						
CZSB	Cruzeiro do Su	99.73	103	eP	Pdif	10 32 13.0	+1.8
GTA	Gaotai	99.74	309	eP	Pdif	10 32 12.1	+1.3
GTA				PP	PP	10 36 20.6	+3.5
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
LPAZ	La Paz	99.89	113	P	Pdif	10 32 16.4	+3.7
	comp=Z,1.6nm,0.8s,baz=254,slow=7.6,SNR=3.5						
LPAZ				PP	PP	10 36 19.9	+1.1
	comp=Z,1.8nm,1.0s,baz=230,slow=5.9,SNR=5.0						
LPAZ				PKKPbc	PKKPbc	10 48 32.0	+0.8
	comp=Z,6.0nm,0.8s,baz=59,slow=1.5,SNR=19						
LPAZ	La Paz	99.89	113	eP	Pdif	10 32 13.8	+1.2
C36M	Paulatuk	100.08	17	P	Pdif	10 32 11.7	+0.4
	baz=228,SNR=7.6						
OXF	Oxford	100.98	57	P	Pdif	10 32 15.0	-1.2
	baz=249						
AGMN	Agassiz Nation	101.55	42	P	Pdif	10 32 18.8	+0.4
	baz=248						
A36M	Sachs Harbour	101.58	14	P	Pdif	10 32 19.3	+1.3
	baz=227						
TIXI	Tiksi	101.99	345⇓	eP	Pdif	10 32 19.3	-0.5
TIXI				pmax	pmax		
	comp=Z,13nm,1.7s						
ULM	Lac du Bonnet	102.28	40	P	Pdif	10 32 22.4	+0.8
	comp=Z,2.9nm,0.7s,baz=259,slow=4.9,SNR=4.8						
CPUP	Villa Florida	103.30	127	PKKPbc	PKKPbc	10 48 20.6	-0.2
	comp=Z,1.6nm,0.8s,baz=58,slow=0.5,SNR=4.1						
TKL	Tuckaleechee C	105.72	58	PKKPab	PKKPab	10 48 31.0	+1.6
	comp=Z,4.6nm,0.8s,baz=115,slow=4.3,SNR=5.4						
WMQ	Urumqi	109.74	310	ePdif	Pdif	10 32 57.4	+2.3
WMQ				PP	PP	10 37 37.0	+6.1
WMQ				AMB	AMB		
	comp=Z,190nm,6.1s						
WMQ				LR	LR		
	comp=Z,120nm,23.3s						
RES	Resolute Bay	110.45	16	PKKPab	PKKPab	10 48 09.3	+2.4
	comp=Z,3.2nm,0.9s,baz=24,slow=5.8,SNR=9.3						
DGZ	Jazzator, Alta	111.22	316⇑	iPKIKP	PKiKP	10 37 00.1	+0.4
ZSN	Zaisan	112.45	313	ePKiKP	PKiKP	10 37 01.2	-0.8
	baz=313						
ZSN	Zaisan	112.45	313	i PKIKP	PKiKP	10 37 01.2	-0.8
BINY	Binghamton	113.25	53	P	PKiKP	10 37 02.7	-1.0
	baz=259						
ZALV	Zalesovo Beam	113.55	320	PKiKP	PKiKP	10 37 02.5	-1.2
	comp=Z,7.1nm,0.6s,baz=154,slow=1.0,SNR=24						
NRIK	Noril'sk	113.81	337	PKiKP	PKiKP	10 37 03.7	-0.1
	comp=Z,3.2nm,0.4s,baz=98,slow=3.7,SNR=6.6						
NRIK	Noril'sk	113.81	337c	iPKIKP	PKiKP	10 37 03.9	0.0
MK31	Makanchi Array	114.07	312d	iPKIKP	PKPdf	10 37 04.5	-0.6
MKAR	Makanchi Array	114.07	312	Pdiff	Pdif	10 33 17.2	+3.0
	comp=Z,0.8nm,0.6s,baz=92,slow=6.5,SNR=10						
MKAR				PKiKP	PKPdf	10 37 04.5	-0.6
	comp=Z,8.0nm,0.8s,baz=77,slow=1.7,SNR=41						
MKAR				PKKPbc	PKKPbc	10 47 47.2	-0.3
	comp=Z,1.5nm,0.8s,baz=282,slow=4.1,SNR=11						
MAKZ	Makanchi	114.29	312	⇑PKIKP	PKPdf	10 37 04.7	-0.8
PAL	Palisades	114.55	54	P	PKPdf	10 37 05.0	-1.1
	baz=259						
L61B	Northampton	115.70	53	P	PKPdf	10 37 07.1	-1.3
	baz=261						
UZB	Uzynbulak	115.79	308	ePKP	PKPdf	10 37 08.2	-0.5
	baz=308						
UZB	Uzynbulak	115.79	308	ePKIKP	PKPdf	10 37 08.2	-0.5
KPKS	Kokpek	116.08	308	ePKP	PKPdf	10 37 08.4	-0.8
	baz=308						
KPKS				ePP	PP	10 38 14.8	-1.3
	baz=308						
KPKS	Kokpek	116.08	308	ePKIKP	PKPdf	10 37 08.4	-0.8
KPKS				e		10 38 14.7	
ZHN	Zhinishke	116.22	308	ePKP	PKPdf	10 37 08.8	-0.7
	baz=308						
ZHN	Zhinishke	116.22	308	ePKIKP	PKPdf	10 37 08.7	-0.7
SATY	Saty	116.22	308	ePKP	PKPdf	10 37 08.4	-1.1
	baz=308						
SATY	Saty	116.22	308	ePKIKP	PKPdf	10 37 08.4	-1.1
TARG	Taragay, Kyrgy	116.46	306		PKPdf	10 37 08.8	-1.6
TARG	Taragay, Kyrgy	116.46	306	PKIKP	PKPdf	10 37 08.8	-1.6
BDFB	Brasilia	116.59	123	PKP	PKPdf	10 37 10.4	-0.6
	comp=Z,2.6nm,0.6s,baz=251,slow=2.8,SNR=4.6						
BDFB				PKKPbc	PKKPbc	10 47 39.3	+1.1
	comp=Z,9.2nm,0.7s,baz=108,slow=4.9,SNR=11						
WES	Weston	116.69	53	PKPdf	PKPdf	10 37 07.3	-2.9
WES	Weston	116.69	53	PKIKP	PKPdf	10 37 07.3	-2.9
TULEG	Thule	116.96	14	PKPdf	PKPdf	10 37 09.4	-0.4
TULEG	Thule	116.96	14	eP	PKPdf	10 37 08.5	-1.3
KURK	Kurchatov	116.97	316	PKPdf	PKPdf	10 37 09.7	-0.8
KURK	Kurchatov	116.97	316	PKIKP	PKPdf	10 37 09.7	-0.8
KURBB	Kurchatov Arra	117.02	316	PKP	PKPdf	10 37 09.3	-1.3
	comp=Z,9.2nm,0.7s,baz=99,slow=1.9,SNR=40						
KURBB				PP	PP	10 38 21.3	-0.9
	comp=Z,1.7nm,0.8s,baz=94,slow=6.1,SNR=4.5						
KURBB				PKKPbc	PKKPbc	10 47 37.5	+0.2
	comp=Z,2.4nm,0.2s,baz=273,slow=4.4,SNR=4.7						
KSH	Kashi	117.50	304	PKP	PKiKP	10 37 13.5	+1.4
KUU	Kurty	117.82	309	ePKP	PKPdf	10 37 11.1	-1.3
	baz=308						
KUU	Kurty	117.82	309	ePKIKP	PKPdf	10 37 11.1	-1.3
TKM2	Tokmak 2	118.25	307	P	PKPdf	10 37 13.0	-0.5
	SNR=9.0						
PKME	Peaks-Kenny Pk	118.50	50	P	PKPdf	10 37 12.4	-1.2
	baz=264						
KBK	Karagaybulak	118.69	307	P	PKPdf	10 37 14.2	-0.1
	SNR=5.1						
UCH	Uchtor	118.96	306	P	PKiKP	10 37 15.8	+0.5
	SNR=9.4						
SGDS	Sogindy	119.01	308	ePKP	PKPdf	10 37 14.0	-0.8
	baz=308						
SGDS	Sogindy	119.01	308	ePKIKP	PKPdf	10 37 14.0	-0.8
AAK	Ala-Archa	119.02	307	P	PKPdf	10 37 01.0	-14
	SNR=9.9						
AAK	Ala-Archa	119.02	307	PKKPbc	PKKPbc	10 47 30.3	+0.2
	comp=Z,2.9nm,0.7s,baz=218,slow=3.8,SNR=7.3						
AAK	Ala-Archa	119.02	307⇑	iPKIKP	PKPdf	10 37 14.3	-0.6
USP	Ospenovka	119.08	308	P	PKPdf	10 37 14.8	-0.1
	SNR=12						
EKS2	Erkin-Say	119.55	307	P	PKiKP	10 37 16.2	+0.2
	SNR=7.9						
AML	Almayashu	119.56	306	P	PKPdf	10 37 16.1	-0.1
	SNR=23						
BTLS	Baital	119.57	310	ePKP	PKPdf	10 37 15.2	-0.5
	baz=310						
BTLS	Baital	119.57	310	ePKIKP	PKPdf	10 37 15.2	-0.5
OPO	Ambohidratompo	119.98	230	PKP	PKiKP	10 37 17.9	+0.2
	comp=Z,11nm,0.8s,baz=169,slow=1.9,SNR=8.9						
KULLO	Kullorsuaq	120.31	16	i P	PKPdf	10 37 16.0	-0.3
NEEM	North Greenlan	120.37	12	i P	PKPdf	10 37 16.5	-0.2
SCHQ	Schefferville	120.41	39	PKP	PKPdf	10 37 16.4	-0.6
	comp=Z,9.0nm,1.0s,baz=280,slow=2.8,SNR=11						
SCHQ				PKKPbc	PKKPbc	10 47 24.7	-0.5
	comp=Z,3.4nm,0.7s,baz=64,slow=6.7,SNR=6.5						
BRZS	Berezniki	120.73	315	ePKP	PKPdf	10 37 16.5	-1.3
	baz=315						
BRZS	Berezniki	120.73	315	ePKIKP	PKPdf	10 37 16.5	-1.3
SMTB	Santa Maria do	120.85	117	eP	PKiKP	10 37 19.5	+0.2
SDBA	SAO DESIDERIO	120.94	122	eP	PKiKP	10 37 19.7	+0.2
NAN01	Guarapari, ES	121.00	130	eP	PKiKP	10 37 19.6	+0.2
UPNV	Upernavik	121.29	17	i P	PKPdf	10 37 18.1	0.0
NOR	Nord	121.36	3	i P	PKPdf	10 37 18.0	-0.2
DZA	Taraz	121.36	307	ePKP	PKPdf	10 37 18.6	-0.6
	baz=307						
DZA	Taraz	121.36	307	ePKIKP	PKPdf	10 37 18.6	-0.6
MCPB	Macapa, AP	121.40	106	eP	PKiKP	10 37 20.4	+0.1
LMN	Caledonia Moun	121.68	50		PKPdf	10 37 19.3	-0.4
GAR	Garm	121.79	302		PKPdf	10 37 20.3	0.0
SUR	Sutherland	121.85	198	PKP	PKiKP	10 37 21.7	+0.6
	comp=Z,22nm,0.7s,baz=126,slow=1.7,SNR=21						
SUR	Sutherland	121.85	198	PKPdf	PKiKP	10 37 21.2	+0.2
KK31	Karatay Array	121.98	307	PKPdf	PKPdf	10 37 20.1	-0.3
KK31	Karatay Array	121.98	307	PKIKP	PKPdf	10 37 20.1	-0.3
KKAR	Karatay Array	121.98	307	PKPdf	PKPdf	10 37 20.1	-0.3
KKAR	Karatay Array	121.98	307	PKIKP	PKPdf	10 37 20.1	-0.3
BVAR	Borovoye Array	122.11	319	PKP	PKPdf	10 37 20.0	-0.3
	comp=Z,20nm,0.7s,baz=112,slow=1.8,SNR=56						
BVAR	Borovoye Array	122.11	319	PKIKP	PKPdf	10 37 20.0	-0.3
BRVK	Borovoye	122.17	319	PKPdf	PKPdf	10 37 19.4	-1.1
BRVK	Borovoye	122.17	319d	iPKIKP	PKPdf	10 37 20.2	-0.2
IUG	Iuzhnay	122.27	306	ePKP	PKPdf	10 37 20.6	-0.5

	baz=306						
IUG	Iuzhnay	122.27	306	ePKIKP	PKPdf	10 37 20.6	-0.5
KBL	Kabul	122.27	297	PKPdf	PKiKP	10 37 21.8	+0.1
KBL	Kabul	122.27	297	PKIKP	PKiKP	10 37 21.8	+0.1
CHM	Chimkent	122.60	306	ePKP	PKPdf	10 37 21.2	-0.5
	baz=306						
CHM	Chimkent	122.60	306	ePKIKP	PKPdf	10 37 21.1	-0.5
NUUG	Nuugaatsiaq	122.62	18	i P	PKPdf	10 37 20.6	-0.1
CMC01	Camacan, BA	123.09	129	eP	PKiKP	10 37 23.5	-0.1
BOSA	Boshof	123.90	203	PKP	PKiKP	10 37 26.0	+0.9
	comp=Z,4.9nm,0.6s,baz=169,slow=2.7,SNR=15						
GDU01	Guandu, BA	124.14	127	eP	PKPdf	10 37 25.2	-0.2
ILULI	Ilulissat	124.26	21	PKPdf	PKPdf	10 37 23.8	-0.1
ILULI	Ilulissat	124.26	21	PKIKP	PKPdf	10 37 23.8	-0.1
ILULI	Ilulissat	124.26	21	i P	PKPdf	10 37 23.8	-0.1
SPA0	Spitsbergen Ar	124.99	357	ePKPdf	PKiKP	10 37 25.5	-0.1
SPITS	Spitsbergen Ar	124.99	357	PKP	PKiKP	10 37 25.4	-0.2
	comp=Z,54nm,0.8s,baz=108,slow=9.3,SNR=18						
SPB2	Spitsbergen Ar	125.00	357		PKiKP	10 37 25.8	+0.2
SFJD	Kangerlussuaq	125.38	23		PKPdf	10 37 26.1	0.0
SFJD	Kangerlussuaq	125.38	23	PKIKP	PKPdf	10 37 26.2	0.0
SFJD	Kangerlussuaq	125.38	23	i P	PKPdf	10 37 26.2	0.0
DAG	Danmarks Havn	125.69	6	i P	PKPdf	10 37 24.4	-2.1
SUMG	Summit	125.88	14	i P	PKPdf	10 37 26.4	-1.1
NUUK	Nuuk	126.07	26	eP	PKiKP	10 37 28.2	+0.2
LBTB	Lobatse	127.02	206	PKP	PKiKP	10 37 31.7	+0.3
	comp=Z,5.3nm,0.9s,baz=179,slow=10,SNR=4.5						
SVE	Sverdlovsk	127.12	324	ePKIKP	PKiKP	10 37 30.2	-0.1
SVE				pmax	pmax		
	comp=Z,47nm,1.3s						
DY2G	Dye2	127.16	22	i P	PKPdf	10 37 30.0	+0.1
DBG	Daneborg	127.74	8	i P	PKiKP	10 37 30.8	-0.2
ICESG	Greenland Ices	127.81	18	eP	PKPdf	10 37 31.4	+0.2
ARU	Arti	128.33	324	PKP	PKPdf	10 37 32.0	-0.1
	comp=Z,23nm,0.6s,baz=107,slow=0.7,SNR=26						
ARU	Arti	128.33	324	i PKIKP	PKPdf	10 37 32.2	+0.1
ARU						10 39 35.1	
ARU						10 44 31.8	
ARU				SS	SS	10 56 42.7	-0.8
IVI	Ivigtut	128.73	29		PKPdf	10 37 31.6	-1.1
IVI	Ivigtut	128.73	29	i P	PKPdf	10 37 32.2	-0.5
WSAR	Wadi Sarin	129.37	281	PKP	PKiKP	10 37 36.1	+0.2
	comp=Z,14nm,1.1s,baz=150,slow=3.1,SNR=4.5						
AKTO	Aktyubinsk	130.06	317	PKP	PKPdf	10 37 34.8	-0.8
	comp=Z,3.7nm,0.7s,baz=85,slow=2.8,SNR=4.7						
ISOG	Isortoq, Green	130.16	21	eP	PKPdf	10 37 34.8	-0.5
ANGG	Ammassalik, Gr	130.57	21	eP	PKPdf	10 37 36.3	+0.3
SCO	Scoresbysund	130.84	11	PKPdf	PKiKP	10 37 37.0	-0.3
SCO	Scoresbysund	130.84	11	PKIKP	PKiKP	10 37 37.0	-0.3
SCO	Scoresbysund	130.84	11	eP	PKiKP	10 37 37.2	-0.2
GEYT	Alibeck	131.30	300	PKhKP	PKPpre	10 37 27.0	
	comp=Z,4.6nm,0.6s,baz=251,slow=4.5,SNR=5.8						
GEYT				PKP	PKPdf	10 37 38.6	+0.2
	comp=Z,18nm,0.7s,baz=5.7,slow=2.9,SNR=16						
GEYT				PP	PP	10 39 56.2	-2.1
	comp=Z,2.1nm,0.5s,baz=62,slow=3.4,SNR=3.6						
GEYT				SKPbc	SKPab	10 40 52.7	+0.3
	comp=Z,23nm,1.1s,baz=112,slow=1.6,SNR=13						
HAMF	Hammerfest	131.42	351	ePKPdf	PKPdf	10 37 37.2	-0.3
LVZ	Lovozero	131.63	345	⇑PKIKP	PKiKP	10 37 39.0	-0.1
UOSS	Minazif	131.88	283	PKPdf	PKPdf	10 37 39.7	-0.1
ARA0	ARCESS Array S	132.13	350	ePKPdf	PKPdf	10 37 38.5	-0.4
ARCES	ARCESS Array B	132.13	350	PKhKP	PKPpre	10 37 30.2	
	comp=Z,3.0nm,0.8s,baz=98,slow=1.0,SNR=7.7						
ARCES				PKP	PKPdf	10 37 38.5	-0.5
	comp=Z,27nm,0.7s,baz=17,slow=1.3,SNR=28						
ARCES				SKPbc	SKPab	10 40 59.4	+4.5
	comp=Z,12nm,1.0s,baz=15,slow=5.0,SNR=4.8						
ARCES	ARCESS Array B	132.13	350	PKPdf	PKPdf	10 37 39.0	0.0
ARCES	ARCESS Array B	132.13	350	PKIKP	PKPdf	10 37 39.0	0.0
KIRV	Kirov	132.16	329	PKP	PKPdf	10 37 39.4	+0.1
	comp=Z,42nm,0.6s,baz=59,slow=19,SNR=8.2						
KIRV	Kirov	132.16	329	⇓iPKIKP	PKPdf	10 37 39.3	0.0
KTK1	Kautokeino	132.97	350	ePKPdf	PKPdf	10 37 40.5	-0.1
TRO	Tromso	132.98	353	ePKPdf	PKPdf	10 37 40.6	+0.1
KLMR	Klimovskoe	135.12	336	ePKPdf	PKPpre	10 37 38.2	
KLMR				AMP		10 37 47.2	
	comp=Z,44nm,1.4s						
KLMR				eSKPab	SKPab	10 41 09.0	+0.9
KLMR	Klimovskoe	135.12	336	ePKIKP	PKPpre	10 37 38.1	
KLMR				pmax	pmax		
	comp=Z,44nm,1.4s						
TSUM	Tsumeb	135.20	200	PKP	PKPdf	10 37 46.3	-0.2
	comp=Z,1.9nm,0.4s,baz=66,slow=21,SNR=4.0						
FAUS	Fauske	135.55	353	ePKPdf	PKiKP	10 37 46.4	-0.6
BELG	Belogornoye	135.69	322	PKhKP	PKPpre	10 37 30.9	
	comp=Z,19nm,0.7s,baz=150,slow=0.5,SNR=6.7						
BELG				PKP	PKPdf	10 37 45.9	-0.2
	comp=Z,49nm,0.9s,baz=80,slow=1.2,SNR=7.8						
BELG	Belogornoye	135.69	322	⇑ePKIKP	PKPdf	10 37 46.1	0.0
AKT	Akhty	138.90	307	ePKHKP	PKPpre	10 37 43.8	
AKT				e		10 37 50.5	
AKT				e		10 38 23.5	
AKT				pmax	pmax		
	comp=Z,35nm,0.9s						
FINES	FINESS Array B	139.02	343	PKhKP	PKPpre	10 37 43.3	
	comp=Z,6.1nm,0.7s,baz=60,slow=2.3,SNR=12						
FINES				PKP	PKiKP	10 37 54.1	-0.1
	comp=Z,19nm,0.7s,baz=64,slow=3.2,SNR=16						
FINES				SKPbc	SKiKP	10 41 21.8	+3.1
	comp=Z,5.8nm,0.9s,baz=26,slow=3.5,SNR=4.2						
FINES	FINESS Array B	139.02	343	PKPdf	PKPdf	10 37 52.6	+0.6
FINES	FINESS Array B	139.02	343	PKIKP	PKPdf	10 37 52.6	+0.6
MOS	Moscow	139.10	331	ePKHKP	PKPpre	10 37 46.7	
PUL	Pulkovo	139.13	339	⇓ePKIKP	PKiKP	10 37 53.5	-1.0
VRH	Novokhopyorsk	139.51	323	ePKHKP	PKPpre	10 37 45.4	
VRH				pmax	pmax		
	comp=Z,21nm,0.8s						
GROC	Groznyy	139.90	310	ePKIKP	PKPdf	10 37 52.9	-1.3
OBN	Obninsk	139.96	331	PKhKP	PKPpre	10 37 45.2	
	comp=Z,5.4nm,0.3s,baz=256,slow=21,SNR=4.0						
OBN				PKP	PKPdf	10 37 54.0	+0.1
	comp=Z,13nm,0.6s,baz=3.4,slow=1.9,SNR=7.5						
OBN	Obninsk	139.96	331	dePKIKP	PKPdf	10 37 54.0	+0.1
OBN				e		10 38 23.5	
OBN				e		10 40 52.8	
OBN				ePPP	PPP	10 43 54.8	
OBN				e		10 44 55.2	
OBN				eSSS	SSS	11 04 14.6	
OBN				pmax	pmax		
	comp=Z,38nm,0.6s						
OBN				MLR	MLR		
	comp=Z,855nm,5.0s						
LPSR	Galich'ya Gora	140.29	326	ePKHKP	PKPpre	10 37 48.8	
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
ATD	Arta Tunnel	140.44	259	PKP	PKPdf	10 37 56.4	+0.4
	comp=Z,0.3nm,0.3s,baz=180,slow=17,SNR=1.8						
VORR	Voronezh	140.64	325	ePKIKP	PKPdf	10 37 50.6	-4.6
VORR				pmax	pmax		
	comp=Z,27nm,0.6s						
VSR	Storozhevoye	140.90	324	ePKHKP	PKPpre	10 37 49.0	
VSR				pmax	pmax		
	comp=Z,30nm,0.6s						
VSU	Vasula	141.30	340	⇑iPKIKP	PKPdf	10 37 56.6	+0.4
VSU	Vasula	141.30	340	eP	PKPpre	10 37 50.6	
ZEI	Tsey	141.35	310	i PKHKP	PKPpre	10 37 48.6	
ZEI				pmax	pmax		
	comp=Z,13nm,0.9s						
NCK	Nalchik	141.35	311	⇑ePKIKP	PKPdf	10 37 52.8	-4.0
GNI	Garni	141.40	305	PKhKP	PKPpre	10 37 51.7	
	comp=Z,13nm,0.6s,baz=130,slow=1.6,SNR=7.9						
GNI	Garni	141.40	305	dePKIKP	PKPdf	10 37 56.0	-1.2
KBZ	Khabaz	141.76	312	PKhKP	PKPpre	10 37 51.9	
	comp=Z,20nm,0.9s,baz=150,slow=2.6,SNR=24						
KBZ	Khabaz	141.76	312	dePKIKP	PKPdf	10 37 55.8	-1.7
KVAR	Kislovodsk Arr	141.83	312	PKP	PKPdf	10 37 56.4	-1.4
	comp=Z,5.7nm,0.3s,baz=90,slow=20,SNR=2.3						
KIV	Kislovodsk	141.83	312	i PKIKP	PKPdf	10 37 56.2	-1.6
KIV				pmax	pmax		
	comp=Z,37nm,1.1s						
KIV				MLR	MLR		
	comp=Z,98nm,24.0s						
NEY	Neytrino	142.03	311	⇓ePKIKP	PKPdf	10 37 56.7	-1.6
NB2	NORSAR Subarra	142.16	354	PKP	PKPpre	10 37 52.6	
	comp=Z,3.4nm,0.6s,baz=18,slow=4.0						
NOA	NORSAR Array B	142.16	354	PKhKP	PKPpre	10 37 53.4	
	comp=Z,1.6nm,0.5s,baz=33,slow=1.6,SNR=16						
NC602	NORSAR Array S	142.42	353	e	PKPpre	10 37 53.0	
KARS	Kars	142.52	307	PKPdf	PKPdf	10 37 56.7	-2.5
KARS	Kars	142.52	307	PKIKP	PKPdf	10 37 56.7	-2.5
HFS	Hagfors	142.74	351	PKhKP	PKPpre	10 37 54.4	
	comp=Z,20nm,0.6s,baz=66,slow=3.7,SNR=42						
LODK	Lodwar	142.99	242		PKPdf	10 37 58.1	-2.7
ODD1	Odda	143.62	357	ePKPdf	PKPbc	10 37 58.1	0.0
KONO	Kongsberg	143.68	354	PKPdf	PKPbc	10 37 57.9	-0.3
KONO	Kongsberg	143.68	354	⇑PKIKP	PKPab	10 37 57.3	-0.1
KONO	Kongsberg	143.68	354	ePKPdf	PKPab	10 37 57.7	+0.3
VIKU	Vikbolandet	143.79	348	eP	PKPbc	10 37 58.8	+0.2
GURO	Guroymak-BITLI	143.80	304	PKPdf	PKPdf	10 38 00.7	-0.8
ISAL	Salakas	143.83	338	eP	PKPdf	10 38 00.4	-0.4
SOC	Sochi	143.98	313	i PKIKP	PKPab	10 37 58.6	-0.5
SOC				e		10 41 11.8	
SOC				ePPP	PPP	10 44 51.8	
SOC				pmax	pmax		
	comp=Z,34nm,0.6s						
MBAR	Mbarara	143.99	232	PKP	PKPdf	10 38 01.9	-0.6
	comp=Z,54nm,0.7s,baz=99,slow=3.6,SNR=93						
MBAR	Mbarara	143.99	232		PKPdf	10 38 02.0	-0.6
MBAR	Mbarara	143.99	232	PKIKP	PKPdf	10 38 02.0	-0.6
MNK	Minsk	144.02	335	i PKP	PKPbc	10 38 00.2	+0.8
	comp=N,61nm,0.8s,baz=41						
MNK				i PKP	PKPbc	10 38 00.2	+0.8
	comp=E,8.0nm,1.1s						
MNK				i PKP	PKPbc	10 38 00.2	+0.8
	comp=Z,213nm,0.8s						
MNK				i pPKP	pPKPdf	10 38 27.5	-6.8
MNK				i PP	PP	10 41 15.7	-0.3
MNK				i SKP		10 41 22.4	
MNK				i PKS	PKSdf	10 41 35.0	-1.5
MNK				i PPP	PPP	10 44 26.3	
MNK				i SKS	SKSdf	10 44 58.7	0.0
MNK				i SKKS	SKKSdf	10 54 11.3	-2.3
MNK				i SS	SS	10 59 51.1	+1.5
MNK				i SSS	SSS	11 05 17.7	
MNK				i LRM	MLR	11 40 46.6	
	comp=Z,270nm,17.7s						
MNK				i LRM	MLR	11 41 24.0	
	comp=E,18nm,7.2s						
MNK				i LRM	MLR	11 41 46.2	
	comp=N,477nm,16.4s						
MNK	Minsk	144.02	335	i PKIKP	PKPbc	10 38 00.1	+0.7
MNK				i		10 38 27.5	
MNK				i		10 41 15.7	
MNK				i PPP	PPP	10 44 26.2	
MNK				i		10 44 58.7	
MNK				i SS	SS	10 59 51.1	+1.4
MNK				i SSS	SSS	11 05 17.6	
MNK				pmax	pmax		
	comp=N,61nm,0.8s						
MNK				pmax	pmax		
	comp=E,8.0nm,1.1s						
MNK				pmax	pmax		
	comp=Z,213nm,0.8s						
MNK				MLR	MLR		
	comp=Z,270nm,18.0s						
MNK				MLR	MLR		
	comp=E,18nm,7.0s						
MNK				MLR	MLR		
	comp=N,477nm,16.0s						
BLS5	Blasjo	144.12	357	ePKPdf	PKPab	10 37 59.2	+0.1
NACGM	Naroch	144.12	337	⇓ePKP	PKPbc	10 38 00.1	+0.4
VSVD	Vaisvydziai	144.21	340	eP	PKPbc	10 38 00.4	+0.5
KOPT	Kop Dagi	144.59	306	PKPdf	PKPdf	10 38 02.9	-0.1
PABE	Paberze	144.60	340	PKPdf	PKPbc	10 38 01.5	+0.4
PABE	Paberze	144.60	340	eP	PKPbc	10 38 01.4	+0.3
LEWI	Lewis, Hebride	144.73	9	eP	PKPbc	10 38 01.5	0.0
PBUR	Paburge	144.78	342	eP	PKPdf	10 38 02.0	-0.4
KTUT	Trabzon	144.83	308	⇑P	PKPdf	10 38 02.7	-0.3
LINV	Loch Inver, As	144.95	8	eP	PKPbc	10 38 02.1	-0.1
ANN	Anapa	145.00	316	i PKIKP	PKPbc	10 38 02.7	0.0
ANN				e		10 41 18.9	
ANN				eSSS	SSS	11 05 28.6	
ANN				pmax	pmax		
	comp=Z,712nm,0.7s						
HOMB	Homborsund	145.13	355	ePKPbc	PKPbc	10 38 02.5	-0.2
SNART	Snartemo	145.16	356	ePKPbc	PKPbc	10 38 02.7	-0.1
KPL	Plockton	145.68	8	eP	PKPdf	10 38 04.1	+0.2
MCD	Coleburn Disti	145.72	6	eP	PKPdf	10 38 03.6	-0.4
MDO	Dochfour	145.74	7	eP	PKPab	10 38 05.1	-0.2
OVD	Ostervraa, Den	145.92	353	eP	PKPab	10 38 05.9	0.0
AKASG	Malin Array Be	146.21	330	PKPbc	PKPdf	10 38 04.9	-0.1
	comp=Z,226nm,0.6s,baz=36,slow=4.1,SNR=854						
AKBB	Malin Array Si	146.21	330	PKPdf	PKPdf	10 38 05.3	+0.2
AKBB	Malin Array Si	146.21	330	cePKIKP	PKPdf	10 38 05.1	+0.1
DEL	Delary	146.23	349	eP	PKPbc	10 38 06.1	-0.1
GOET	G??ttrup	146.29	354	eP	PKPab	10 38 07.5	+0.2
DRUM	Mains of Drumt	146.46	6	eP	PKPdf	10 38 05.8	+0.6
LAWE	Loch Awe, Argy	146.76	9	eP	PKPdf	10 38 05.6	-0.2
INVG	Invergeldie, C	146.77	7	eP	PKPdf	10 38 05.4	-0.4
MUD	Monsted U'grnd	146.87	354	eP	PKPab	10 38 08.9	-0.7
SIM	Simferopol'	147.01	318	c iPKP2	PKPbc	10 38 09.5	+0.7
BSD	Bornholm Skovb	147.32	347	eP	PKPbc	10 38 09.6	+0.3
BSD	Bornholm Skovb	147.32	347	eP	PKiKP	10 38 12.3	+0.8
PGBU	Glenifferbraes	147.32	8	eP	PKPbc	10 38 08.8	-0.5
TOKA	Tokat	147.41	309	PKPbc	PKPbc	10 38 10.7	+0.5
DIKM	Dikmen	147.76	312	⇑P	PKPbc	10 38 11.1	+0.1
CLGH	Cloghs, Cushen	147.80	10	eP	PKPbc	10 38 09.3	-1.3
EKA	Eskdalemuir Ar	147.95	7	PKPbc	PKPbc	10 38 10.3	-0.7
	comp=Z,81nm,0.8s,baz=342,slow=2.4,SNR=94						
ESK	Eskdalemuir	147.96	7	eP	PKPdf	10 38 07.3	-0.5
ESK	Eskdalemuir	147.96	7		PKPbc	10 38 11.2	+0.2
ESK	Eskdalemuir	147.96	7	PKP2	PKPbc	10 38 11.2	+0.2
NEWG	New Galloway	148.03	8	eP	PKPbc	10 38 10.2	-1.0
GAL1	Galloway	148.21	9	eP	PKPbc	10 38 11.3	-0.4
BNN	Bunyan	148.37	306	PKPbc	PKPbc	10 38 13.2	+0.4
SORM	Soroca	148.38	327	⇑P	PKPbc	10 38 12.4	+0.1
SORM	Soroca	148.38	327	⇑PKP2	PKPbc	10 38 12.4	+0.1
BZK	Bozkurt	148.48	313	⇑P	PKPdf	10 38 10.7	+1.6
GKP	Gorka Klasztor	148.50	344	ePKP	PKiKP	10 38 13.2	-0.7
GKP	Gorka Klasztor	148.50	344	eP	PKiKP	10 38 13.4	-0.5
EDMD	Edmundbyers	148.56	6	eP	PKPdf	10 38 09.7	+0.9
BEL	Belsk	148.71	339	ePKP	PKiKP	10 38 14.2	-0.2
IOMK	Kirk Michael	148.82	9	eP	PKPdf	10 38 10.3	+1.0
WIM	Isle of Man	148.92	9	eP	PKPdf	10 38 11.3	+1.9
MILM	Milestii Mici	148.93	325	⇓iP	PKPbc	10 38 13.0	-0.8
	comp=Z,250nm,1.3s						
MILM	Milestii Mici	148.93	325	d iPKP2	PKPbc	10 38 13.0	-0.8
MILM				pmax	pmax		
	comp=Z,250nm,1.3s						
GDLE	Glaisdale, N Y	149.06	5	eP	PKPbc	10 38 13.5	-0.4
ILGA	Ilgaz	149.07	312	PKPbc	PKiKP	10 38 15.4	-0.4
ASF	Jabal al Asfar	149.07	294	PKPbc	PKiKP	10 38 15.7	-0.2
	comp=Z,91nm,0.8s,baz=37,slow=0.3,SNR=56						
LVV	L'vov	149.13	333	i PKP2	PKPbc	10 38 14.4	+0.2
LVV				e		10 45 16.0	
BEIL	Beino	149.26	298	eP	PKiKP	10 38 15.9	-0.3
HWQ	Hawqa	149.51	298	eP	PKiKP	10 38 16.3	-0.5
DSB	Dublin	149.51	11	PKPdf	PKPdf	10 38 09.3	-1.1
DSB				PKPbc	PKiKP	10 38 15.7	-0.3
DSB				PKPab	PKPab	10 38 19.8	-0.5
LEOM	Leova	149.52	325	⇓P	PKiKP	10 38 16.0	-0.3
LEOM	Leova	149.52	325	⇓PKP2	PKiKP	10 38 16.0	-0.3
VASR	Vaslui	149.65	325	⇓P	PKPbc	10 38 15.4	-0.2
BR131	Keskin Array S	149.66	309	PKPdf	PKPdf	10 38 10.9	-0.3
BR131				PKPbc	PKiKP	10 38 16.5	-0.5
BR131				PKPab	PKPab	10 38 22.4	+0.8
BR131	Keskin Array S	149.66	309	⇑iPKHKP	PKPpre	10 38 11.2	
BRTR	Keskin Array B	149.66	309	PKP	PKPdf	10 38 11.0	-0.3
	comp=Z,6.1nm,1.1s,baz=12,slow=7.4,SNR=17						
BRTR				PKPbc	PKPbc	10 38 15.8	-0.3
	comp=Z,34nm,0.6s,baz=94,slow=1.9,SNR=61						
BRTR	Keskin Array B	149.66	309	PKPdf	PKPdf	10 38 10.6	-0.7
BRTR				PKPbc	PKPbc	10 38 16.2	+0.1
BRTR				PKPab	PKPab	10 38 21.5	-0.1
WME	Myndd Eilian	149.70	9	eP	PKPdf	10 38 08.0	-2.7
WLF1	Llynfaes	149.79	9	eP	PKPdf	10 38 11.9	+1.1
BHL	Bhannes	149.82	297	eP	PKPbc	10 38 16.9	+0.3
QRWL	Qaraoun	149.86	297	eP	PKiKP	10 38 17.6	0.0
LBWR	Ladybower, Pea	150.00	6	eP	PKPdf	10 38 09.9	-1.3
VLDR	Vladesti	150.01	324	⇓P	PKiKP	10 38 18.2	+0.9
TLCR		150.01	322	⇑P	PKiKP	10 38 17.4	+0.1
TLCR		150.01	322	⇑PKP2	PKiKP	10 38 17.4	+0.1
RUE	Ruedersdorf	150.03	347	eP	PKiKP	10 38 17.5	+0.4
MMAI	Mount Meron Ar	150.19	296	PKPbc	PKiKP	10 38 18.3	+0.1
	comp=Z,119nm,0.6s,baz=69,slow=4.8,SNR=146						
ANTO	Ankara	150.20	310	⇑P	PKiKP	10 38 18.1	+0.1
ANTO	Ankara	150.20	310	PKPdf	PKPdf	10 38 11.2	-0.8
ANTO				PKPbc	PKiKP	10 38 17.9	-0.1
ANTO				PKPab	PKPab	10 38 23.7	-0.1
ANTO	Ankara	150.20	310	PKIKP	PKPdf	10 38 11.3	-0.8
ANTO						10 38 23.7	
GHRR		150.23	325	⇑P	PKiKP	10 38 18.9	+1.2
BUR08	Bucovina Ar. S	150.24	329	PKPdf	PKPdf	10 38 11.9	0.0
BUR08				PKPbc	PKPbc	10 38 17.1	-0.1
BUR08				PKPab	PKPab	10 38 23.0	-0.7
BURAR	Bucovina Array	150.26	329	⇑P	PKPdf	10 38 13.1	+1.2
BURAR	Bucovina Array	150.26	329	⇑PKIKP	PKPdf	10 38 13.1	+1.2
LLW	Llanuwychllyn	150.32	8	eP	PKPbc	10 38 16.7	-0.3
TESR	Tescani	150.32	326	⇑P	PKiKP	10 38 17.6	-0.4
FOEL	Foel Wylfa	150.34	8	eP	PKPdf	10 38 11.9	+0.1
CFR	Carcaliu	150.40	323	⇓P	PKPbc	10 38 17.7	+0.3
CFR	Carcaliu	150.40	323	⇓PKIKP	PKPbc	10 38 17.7	+0.3
OJC	Ojcow	150.41	338	ePKP	PKiKP	10 38 18.2	+0.2
KDZE	Karadeniz Ereo	150.49	314	⇑P	PKPbc	10 38 17.7	-0.1
STHS	Stebnicka Huta	150.56	336	ePKIKP	PKPdf	10 38 12.2	0.0
STHS	Stebnicka Huta	150.56	336	ePKP	PKPdf	10 38 12.2	0.0
STHS				e		10 38 18.0	
STHS				e		10 38 26.1	
TIRR	Tirgusor	150.68	321	⇑P	PKiKP	10 38 19.1	+0.4
TIRR	Tirgusor	150.68	321	⇑PKIKP	PKiKP	10 38 19.1	+0.4
CWF	Charnwood Fore	150.69	6	eP	PKPbc	10 38 17.3	-0.5
VRI	Vrincioaia	150.71	325	⇑P	PKiKP	10 38 18.8	0.0
VRI	Vrincioaia	150.71	325	⇑PKIKP	PKiKP	10 38 18.8	0.0
PLOR	Plostina	150.76	325	⇑P	PKPbc	10 38 17.8	-0.5
PLOR	Plostina	150.76	325	⇑PKIKP	PKPbc	10 38 17.8	-0.5
EFOR	EFORIE	150.78	321	⇑P	PKiKP	10 38 19.2	+0.3
HARR	Harsova	150.81	322	⇑P	PKiKP	10 38 19.1	+0.1
HARR	Harsova	150.81	322	⇑PKIKP	PKiKP	10 38 19.1	+0.1
NIE	Niedzica	150.91	337	ePKP	PKiKP	10 38 20.6	+1.4
KSP	Ksiaz	150.94	343	ePKP	PKiKP	10 38 19.7	+0.6
MANR	Mangalia	150.96	320	⇑P	PKiKP	10 38 19.7	+0.3
LPW	Lampeter	150.98	9	eP	PKPbc	10 38 18.3	-0.3
EIL	Elat	151.00	289	PKPbc	PKiKP	10 38 20.1	+0.2
	comp=Z,104nm,0.8s,baz=60,slow=2.4,SNR=55						
BMR	Baia Mare	151.00	331	⇓P	PKiKP	10 38 19.5	+0.2
BMR	Baia Mare	151.00	331	⇓PKIKP	PKiKP	10 38 19.5	+0.2
COVR	Voineasa-Covas	151.00	326	⇑P	PKPbc	10 38 18.9	0.0
RSBS	Rosebush, Pemb	151.03	10	eP	PKPbc	10 38 18.1	-0.6
ARCR	ARCALIA	151.04	329	⇑P	PKiKP	10 38 20.3	+0.8
OZUR		151.04	326	⇑P	PKiKP	10 38 19.8	+0.3
TRPA	Tarpa	151.06	333	⇑P	PKPbc	10 38 18.7	-0.2
OSTC	Ostas	151.22	343	ePKPDF	PKPdf	10 38 14.5	+1.3
OSTC				⇑ePKP	PKiKP	10 38 20.5	+0.8
OSTC	Ostas	151.22	343	ePKIKP	PKPdf	10 38 14.5	+1.3
ICOR	Ion Corvin	151.24	321	⇑P	PKiKP	10 38 20.1	+0.2
CHVC	Chvalec	151.24	343	ePKPDF	PKPdf	10 38 14.4	+1.2
CHVC				⇑ePKP	PKiKP	10 38 19.9	+0.1
CHVC	Chvalec	151.24	343	ePKIKP	PKPdf	10 38 14.4	+1.2
OKC	Ostrava-Krasne	151.28	340	⇑ePKP	PKiKP	10 38 20.1	+0.3
OKC				ePKPAB	PKPab	10 38 27.6	-0.2
OKC	Ostrava-Krasne	151.28	340	ePKIKP	PKiKP	10 38 20.1	+0.3
OKC				e		10 38 27.6	
CLL	Collm	151.30	347	ePKPdf	PKPdf	10 38 14.0	+0.8
CLL				i PKPbc	PKiKP	10 38 20.0	+0.2
	comp=Z,216nm,0.9s						
CLL				i PKPab	PKPab	10 38 28.2	+0.5
	comp=Z,194nm,0.9s						
CLL				epPKPbc	pPKPbc	10 38 53.0	+0.7
CLL				epPKPab	pPKPab	10 39 00.0	+0.4
CLL	Collm	151.30	347	i PKIKP	PKiKP	10 38 20.0	+0.2
CLL				i		10 38 28.2	
CLL				e		10 38 53.0	
CLL				pmax	pmax		
	comp=Z,216nm,0.9s						
CLL				pmax	pmax		
	comp=Z,194nm,0.9s						
KALB	Balgarevo	151.30	320	⇑P	PKiKP	10 38 20.3	+0.2
ISR	Istrita	151.30	324	⇑P	PKiKP	10 38 20.7	+0.6
ISR	Istrita	151.30	324	⇑PKIKP	PKiKP	10 38 20.7	+0.6
UPC	Upice	151.32	343	⇑ePKP	PKiKP	10 38 20.2	+0.3
UPC				ePKPAB	PKPab	10 38 28.7	+0.8
UPC	Upice	151.32	343	ePKIKP	PKiKP	10 38 20.2	+0.3
DOPR	Dopca	151.33	327	⇓P	PKiKP	10 38 20.5	+0.4
MLR	Muntele Rosu	151.37	325	⇑P	PKPbc	10 38 19.2	-0.7
MLR	Muntele Rosu	151.37	325	PKPbc	PKPbc	10 38 19.9	+0.1
	comp=Z,43nm,1.0s,baz=41,slow=20,SNR=19						
MLR	Muntele Rosu	151.37	325	⇑PKIKP	PKPbc	10 38 19.2	-0.7
DPC	Dobruska-Polom	151.38	342	ePKPDF	PKPdf	10 38 14.8	+1.3
DPC				⇑ePKP	PKiKP	10 38 20.6	+0.5
DPC	Dobruska-Polom	151.38	342	ePKIKP	PKPdf	10 38 14.8	+1.3
MONM	Monmouth	151.42	8	eP	PKPbc	10 38 18.8	-0.8
LANS	Liptovska Anna	151.43	337	ePKIKP	PKiKP	10 38 21.7	+1.5
LANS	Liptovska Anna	151.43	337	ePKP	PKiKP	10 38 21.7	+1.5
LANS				e		10 38 30.4	
BRG	Berggiesshubel	151.50	346	⇓iPKPf		10 38 14.5	
BRG				Amp		10 38 15.4	
	comp=Z,30nm,1.2s						
BRG				⇑PKP	PKiKP	10 38 20.9	+0.7
BRG				Amp		10 38 21.9	
	comp=Z,149nm,0.9s						
BRG	Berggiesshubel	151.50	346	P	PKPab	10 38 27.5	-1.1
BRG				Amp		10 38 28.1	
	comp=Z,63nm,0.9s						
BRG	Berggiesshubel	151.50	346	P	PKPab	10 38 29.4	+0.8
BRG				Amp		10 38 30.1	
	comp=Z,94nm,0.8s						
BRG	Berggiesshubel	151.50	346	P	PKPab	10 38 37.6	+9.0
BRG				Amp		10 38 38.4	
	comp=Z,35nm,1.0s						
BRG	Berggiesshubel	151.50	346	i PKIKP	PKPdf	10 38 14.4	+0.8
BRG				pmax	pmax		
	comp=Z,31nm,1.2s						
MORC	Moravsky Berou	151.53	340	⇓P	PKiKP	10 38 20.7	+0.3
MORC	Moravsky Berou	151.53	340	PKPdf	PKPdf	10 38 13.2	-0.5
MORC				PKPbc	PKiKP	10 38 20.9	+0.4
MORC				PKPab	PKPab	10 38 27.6	-1.3
MORC	Moravsky Berou	151.53	340	ePKP	PKPdf	10 38 14.6	+0.9
MORC				e		10 38 20.6	
MORC	Moravsky Berou	151.53	340	PKIKP	PKPdf	10 38 13.2	-0.5
MORC						10 38 27.6	
STRD	Stroud	151.56	7	eP	PKPbc	10 38 17.2	-2.7
SECR		151.61	325	⇑P	PKiKP	10 38 21.2	+0.5
CJR	Cluj-Napoca	151.67	330	⇑P	PKiKP	10 38 21.2	+0.4
CJR	Cluj-Napoca	151.67	330	⇑PKIKP	PKiKP	10 38 21.2	+0.4
PVCC	Panska Ves	151.67	345	⇑ePKP	PKiKP	10 38 21.1	+0.5
PVCC	Panska Ves	151.67	345	ePKIKP	PKiKP	10 38 21.1	+0.5
MAUC	Maruska	151.80	339	ePKPDF	PKPdf	10 38 16.0	+1.9
MAUC				⇑ePKP	PKiKP	10 38 21.7	+0.7
VOIR		151.87	326	⇑P	PKiKP	10 38 21.7	+0.4
VOIR		151.87	326	⇑PKIKP	PKiKP	10 38 21.7	+0.4
MARR	Marisel-Cluj	151.92	330	⇓P	PKPdf	10 38 14.2	-0.3
DRGR		152.02	331	⇑P	PKPdf	10 38 15.1	+0.5
DRGR		152.02	331	⇑PKIKP	PKPdf	10 38 15.1	+0.5
WOL	Wolverton	152.11	6	eP	PKPbc	10 38 21.0	-0.2
ARR	Arges	152.13	326	⇑P	PKiKP	10 38 23.4	+1.5
PRU	Pruhonice	152.18	344	ePKPDF	PKPdf	10 38 15.3	+0.7
PRU				⇑ePKP	PKiKP	10 38 21.9	+0.2
PRU				ePKPAB	PKPab	10 38 32.1	+0.6
PRU	Pruhonice	152.18	344	ePKIKP	PKPdf	10 38 15.3	+0.7
VYHS	Vyhne	152.21	337	ePKIKP	PKPdf	10 38 15.3	+0.6
VYHS	Vyhne	152.21	337	ePKP	PKPdf	10 38 15.3	+0.6
VYHS				e		10 38 22.5	
VYHS				e		10 38 32.8	
VRAC	Vranov	152.23	341	PKPbc	PKiKP	10 38 22.1	+0.3
	comp=Z,22nm,1.1s,baz=14,slow=8.7,SNR=10						
VRAC	Vranov	152.23	341	ePKP	PKPdf	10 38 15.6	+0.9
VRAC				e		10 38 22.4	
VRAC				e		10 38 33.0	
JAVC	Velka Javorina	152.29	339	ePKP	PKPdf	10 38 16.3	+1.4
PSZ	Piszkesteto	152.30	335	⇑P	PKPdf	10 38 17.7	+2.7
PSZ	Piszkesteto	152.30	335	PKPdf	PKPdf	10 38 15.3	+0.3
PSZ					PKiKP	10 38 22.1	0.0
PSZ				PKPab	PKPab	10 38 32.9	+0.7
PSZ	Piszkesteto	152.30	335	⇑PKIKP	PKPdf	10 38 17.7	+2.7
NKC	Novy Kostel	152.43	347	⇑ePKP	PKiKP	10 38 23.0	+0.8
NKC				ePKPAB	PKPab	10 38 32.7	+0.1
NKC	Novy Kostel	152.43	347	ePKIKP	PKiKP	10 38 23.0	+0.8
NKC				e		10 38 32.7	
LOT	Lotru	152.51	328	⇑P	PKiKP	10 38 22.7	0.0
KRUC	Moravsky	152.51	341	ePKP	PKPdf	10 38 15.7	+0.6
KRUC				e		10 38 22.6	
KRUC				e		10 38 33.3	
ISP	Isparta	152.64	308	PKPdf	PKPdf	10 38 14.4	-1.4
ISP					PKPbc	10 38 22.1	-0.9
ISP				PKPab	PKPab	10 38 31.6	-2.5
ISP	Isparta	152.64	308	PKIKP	PKPbc	10 38 22.1	-0.9
ISP						10 38 31.6	
SMOL	Smolenice	152.67	339	ePKIKP	PKiKP	10 38 23.9	+1.1
BEBN	Eben Emael	152.77	356	dPKP	PKiKP	10 38 23.3	+0.4
BEBN				dPKPab	PKPab	10 38 34.4	+0.5
MODS	Modra-Piesok	152.84	339	ePKIKP	PKPdf	10 38 16.7	+1.0
MODS	Modra-Piesok	152.84	339	ePKP	PKPdf	10 38 16.7	+1.0
MODS				e		10 38 24.1	
MODS				e		10 38 36.1	
SIRR	Siria	152.89	331	⇑P	PKiKP	10 38 23.3	0.0
MEM	Membach	152.93	356	dPKPdf	PKPdf	10 38 17.4	+1.7

MEM				dPKP	PKiKP	10 38 23.5	+0.3
MEM				dPKPab	PKPab	10 38 35.6	+0.9
BTNL	Ternell	152.95	356	dPKP	PKiKP	10 38 23.5	+0.2
SRO	Srobarova	152.97	337	ePKP2	PKPab	10 38 36.4	+1.5
BSTI	Sart Tilman	152.99	357	dPKP	PKiKP	10 38 24.0	+0.7
GZR	Gura Zlata	153.03	329	⇑P	PKPdf	10 38 16.4	+0.3
GZR	Gura Zlata	153.03	329	⇑PKIKP	PKPdf	10 38 16.4	+0.3
SURR	Surduc	153.07	330	⇑P	PKPbc	10 38 23.3	-0.2
SNF	Seneffe	153.11	358	dPKP	PKiKP	10 38 24.1	+0.6
SNF				dPKPab	PKPab	10 38 35.6	+0.2
BCLA	Clavier	153.16	357	dPKP	PKiKP	10 38 24.2	+0.6
BCLA				dPKPab	PKPab	10 38 36.0	+0.5
GRFO	Grafenberg	153.19	348	PKPdf	PKPdf	10 38 15.5	-0.6
GRFO				PKPbc	PKiKP	10 38 24.2	+0.5
GRFO				PKPab	PKPab	10 38 36.8	+1.1
GRFO	Grafenberg	153.19	348	PKP2	PKPab	10 38 36.8	+1.1
GRFO						11 38 15.5	
BHOU	Houvegnez	153.19	356	dPKP	PKiKP	10 38 24.7	+0.9
BHOU				dPKPab	PKPab	10 38 36.9	+1.2
BGES	Gesves	153.21	357	dPKP	PKiKP	10 38 24.1	+0.4
BGES				dPKPab	PKPab	10 38 35.9	+0.1
KHC	Kasperske Hory	153.21	345	PKPdf	PKPdf	10 38 17.1	+0.8
KHC				PKPbc	PKiKP	10 38 24.8	+0.9
KHC				PKPab	PKPab	10 38 37.0	+1.0
KHC	Kasperske Hory	153.21	345	ePKPDF	PKPdf	10 38 16.4	+0.2
KHC				⇑ePKP	PKiKP	10 38 24.4	+0.5
KHC				ePKPAB	PKPab	10 38 36.9	+1.0
KHC	Kasperske Hory	153.21	345	ePKIKP	PKPdf	10 38 16.4	+0.2
BMRD	Maredsous	153.30	358	dPKPdf	PKPdf	10 38 17.5	+1.3
BMRD				dPKP	PKiKP	10 38 24.1	+0.2
BMRD				dPKPab	PKPab	10 38 36.5	+0.4
CKRC	Cesky Krumlov	153.31	343	ePKPDF	PKPdf	10 38 16.9	+0.5
CKRC				⇑ePKP	PKiKP	10 38 24.8	+0.7
CKRC	Cesky Krumlov	153.31	343	ePKIKP	PKPdf	10 38 16.9	+0.5
BZS	Buzias	153.40	330	⇑P	PKPdf	10 38 17.0	+0.5
BZS	Buzias	153.40	330	⇑PKIKP	PKPdf	10 38 17.0	+0.5
RCHB	Rochefort	153.43	357	dPKP	PKiKP	10 38 24.5	+0.3
RCHB				dPKPab	PKPab	10 38 36.2	-0.5
GEC2	GERESS Array S	153.45	344	PKPdf	PKPdf	10 38 14.5	-2.1
GEC2				PKPbc	PKiKP	10 38 24.9	+0.4
GEC2				PKPab	PKPab	10 38 37.0	0.0
GERES	GERESS Array B	153.45	344	PKP	PKPdf	10 38 17.1	+0.5
	comp=Z,5.7nm,0.8s,baz=42,slow=2.2,SNR=19						
GERES				PKPbc	PKiKP	10 38 24.6	+0.1
	comp=Z,12nm,0.8s,baz=35,slow=3.6,SNR=24						
GERES				PKPab	PKPab	10 38 37.2	+0.2
	comp=Z,18nm,0.7s,baz=35,slow=3.6,SNR=14						
PLVB	Pleven	153.48	323	⇓P	PKiKP	10 38 25.0	+0.4
DOU	Dourbes	153.51	358	dPKP	PKiKP	10 38 25.3	+0.9
DOU				dPKPab	PKPab	10 38 37.5	+0.4
HERR	Herculane	153.58	328	⇓P	PKPbc	10 38 24.6	0.0
CONA	Conrad Observa	153.68	341	i PKP	PKPdf	10 38 17.6	+0.6
	comp=Z,25nm,1.6s,SNR=6.0						
CONA				i PKiKP	PKiKP	10 38 25.3	+0.3
	comp=Z,56nm,1.5s						
CONA				ePKP	PKPab	10 38 39.6	+1.6
	comp=Z,78nm,0.9s						
RONA	Rosalia, Austr	153.75	340	i PKP	PKPdf	10 38 17.6	+0.5
	comp=Z,19nm,1.6s,SNR=7.3						
RONA				i PKP	PKiKP	10 38 25.4	+0.3
	comp=Z,24nm,0.8s						
RONA				ePKP	PKPab	10 38 40.2	+1.9
	comp=Z,82nm,0.9s						
WLF	Walferdange	153.86	356	dPKP	PKiKP	10 38 26.4	+1.3
WLF				dPKPab	PKPab	10 38 39.6	+1.0
MDVR	Moldovita	153.99	329	⇑P	PKPbc	10 38 25.1	-0.5
KDZ	Kurdzhali	154.12	319	⇑PKIKP	PKPdf	10 38 17.7	0.0
MORH	Mrgy, Hungar	154.19	335	⇑P	PKPdf	10 38 18.0	+0.4
MOA	Molln	154.22	343	i PKP	PKPdf	10 38 17.8	+0.1
	comp=Z,8.9nm,0.9s						
MOA				ePKP	PKPab	10 38 41.3	+1.1
	comp=Z,130nm,1.7s						
ARSA	Arzberg	154.39	340	i PKP	PKPdf	10 38 18.3	+0.4
	comp=Z,6.7nm,0.9s						
ARSA				i PKP	PKPab	10 38 42.1	+1.1
	comp=Z,44nm,1.2s,SNR=5.5						
BIOA	Bad Ischl, Aus	154.53	343	ePKP	PKPdf	10 38 18.0	-0.1
	comp=Z,12nm,1.0s						
BIOA				i PKP	PKPab	10 38 42.9	+1.3
	comp=Z,141nm,0.9s,SNR=16						
FRGS	Fruska Gora	154.56	332	⇑P	PKiKP	10 38 27.4	+0.6
BFO	Black Forest	154.97	352		PKiKP	10 38 28.1	+0.5
BFO	Black Forest	154.97	352	PKIKP	PKiKP	10 38 28.1	+0.5
SOKA	Soboth	155.05	340	i PKP	PKPdf	10 38 19.0	+0.1
	comp=Z,12nm,1.1s,SNR=7.2						
SOKA				ePKP	PKPab	10 38 27.4	-16
	comp=Z,15nm,1.0s						
SOKA				i PKP	pPKPdf	10 38 44.9	-7.4
	comp=Z,69nm,1.0s,SNR=7.1						
PERS	Pernice	155.06	340	i PKPdf	PKPdf	10 38 18.9	-0.1
PERS				i		10 38 35.0	
PERS				i PKPab	PKPab	10 38 44.2	+0.3
KBA	Koelnbreinsper	155.17	343	i PKP	PKPdf	10 38 18.9	-0.3
	comp=Z,17nm,1.1s,SNR=8.8						
KBA				ePKP	PKPab	10 38 28.2	-16
	comp=Z,17nm,1.0s						
KBA				ePKP	pPKPdf	10 38 45.5	-7.0
	comp=Z,88nm,0.7s						
OBKA	Obir	155.35	341	ePKP	PKPdf	10 38 19.0	-0.4
	comp=Z,6.9nm,0.9s						
OBKA				i PKP	PKPab	10 38 46.0	+0.8
	comp=Z,41nm,0.8s,SNR=6.0						
WATA	Walderalm	155.36	346	ePKP	PKPdf	10 38 19.7	+0.2
	comp=Z,20nm,1.2s						
WATA				i PKP	PKPab	10 38 46.2	+0.9
	comp=Z,112nm,1.1s,SNR=8.5						
RETA	Reutte	155.38	348	ePKP	PKPdf	10 38 19.6	+0.3
	comp=Z,9.3nm,1.1s						
RETA				i PKP	PKPab	10 38 46.1	+0.8
	comp=Z,84nm,0.9s,SNR=11						
WTTA	Wattenberg	155.41	346	i PKP	PKPdf	10 38 19.9	+0.4
	comp=Z,25nm,1.2s,SNR=5.9						
WTTA				i PKP	PKPab	10 38 46.6	+1.1
	comp=Z,137nm,0.7s,SNR=6.9						
MOTA	Moosalm	155.45	347	i PKP	PKPdf	10 38 19.6	0.0
	comp=Z,27nm,1.1s,SNR=8.1						
MOTA				i PKP	PKPab	10 38 46.2	+0.5
	comp=Z,123nm,0.8s,SNR=11						
MYKA	Terra Mystica	155.50	342	ePKP	PKPdf	10 38 19.4	-0.1
	comp=Z,4.0nm,0.5s						
MYKA				i PKP	PKPab	10 38 46.1	+0.3
	comp=Z,52nm,0.7s,SNR=5.6						
SQTA	Sankt Quirin	155.55	347	i PKP	PKPdf	10 38 20.0	+0.4
	comp=Z,25nm,1.1s,SNR=7.1						
SQTA				i PKP	PKPab	10 38 47.0	+0.9
	comp=Z,65nm,0.9s,SNR=5.5						
CLF	Chambon-Foret	155.60	1		PKPab	10 38 47.1	+1.1
ABTA	Abfaltersbach	155.69	344	i PKP	PKPdf	10 38 19.7	-0.1
	comp=Z,36nm,1.0s,SNR=13						
ABTA				i PKP	PKPab	10 38 47.0	+0.4
	comp=Z,75nm,0.7s,SNR=5.5						
DAVA	Damuels	155.74	349	i PKP	PKPdf	10 38 20.5	+0.6
	comp=Z,15nm,1.5s						
DAVA				i PKP	PKPab	10 38 47.6	+0.7
	comp=Z,66nm,0.8s,SNR=5.7						
CRNS	Crni Vrh	155.82	341	ePKPdf	PKPdf	10 38 19.7	-0.3
CRNS				i		10 38 28.6	
CRNS				i		10 38 35.6	
CRNS				i PKPab	PKPab	10 38 47.0	-0.2
FETA	Feichten	155.84	347	i PKP	PKPdf	10 38 20.5	+0.4
	comp=Z,37nm,1.1s,SNR=20						
FETA				ePKP	PKPab	10 38 48.1	+0.8
	comp=Z,57nm,0.9s						
STIP	Stip	155.95	323	eP	PKPab	10 38 47.4	-0.5
VAY	Valandovo	155.99	322	eP	PKPab	10 38 48.1	+0.2
BOJS	Bojanci	156.03	339	i PKPdf	PKPdf	10 38 20.3	+0.1
BOJS				e		10 38 28.6	
BOJS				i		10 38 36.8	
BOJS				i PKPab	PKPab	10 38 48.2	+0.3
SKO	Skopje	156.16	325	eP	PKPab	10 38 49.3	+0.6
DAVOX	Davos/Dischmat	156.23	348	PKP	PKPdf	10 38 20.7	+0.1
	comp=Z,7.4nm,0.8s,baz=39,slow=13,SNR=12						
DAVOX				PKPab	PKPab	10 38 49.3	+0.2
	comp=Z,61nm,0.8s,baz=11,slow=3.3,SNR=19						
TRI	Trieste	156.31	341		PKPab	10 38 49.0	-0.2
OHR	Ohrid	157.11	324	eP	PKPab	10 38 52.1	-0.8
IDI	Anoyia	157.82	307	⇑P	PKPdf	10 38 23.4	+0.5
IDI	Anoyia	157.82	307	PKP	PKPdf	10 38 22.5	-0.4
	comp=Z,8.6nm,0.8s,baz=76,slow=4.2,SNR=5.0						
IDI	Anoyia	157.82	307		PKPdf	10 38 22.4	-0.5
IDI				PKPab	pPKPdf	10 38 54.9	-1.2
PRMA	PARMA	158.08	346	PKPdf	PKPdf	10 38 20.1	-2.6
PRMA				PKPab	PKPab	10 38 57.9	+1.1
SSB	Saint Sauveur	158.33	357	PKPdf	PKPdf	10 38 20.3	-2.9
SSB					PKPab	10 38 57.9	0.0
SSB	Saint Sauveur	158.33	357	PKIKP	PKPdf	10 38 20.3	-2.9
SSB						10 38 57.9	
OSSC	Osservatorio P	159.02	343		PKPdf	10 38 20.8	-3.2
OSSC					PKPab	10 39 00.4	-0.6
SGRT	San Giovanni R	159.05	333	PKPdf	PKPdf	10 38 22.1	-2.0
SGRT				PKPab	PKPab	10 39 00.8	-0.6
CAMP	Campotosto	159.27	338		PKPdf	10 38 23.3	-1.1
CAMP					PKPab	10 39 02.5	+0.2
PGAV	Gavieira, Arco	159.34	25	ePKPdf	PKPdf	10 38 25.9	+1.4
PGAV	Gavieira, Arco	159.34	25	ePKPab	PKPab	10 39 02.9	+0.3
AQU	L'Aquila	159.43	338	PKPdf	PKPdf	10 38 22.1	-2.4
AQU				PKPab	PKPab	10 39 02.8	-0.1
AQU	L'Aquila	159.43	338	PKIKP	PKPdf	10 38 22.2	-2.4
AQU						10 39 02.8	
CESX	Cesi	159.48	340	PKPdf	PKPdf	10 38 21.5	-3.0
CESX					PKPab	10 39 02.2	-0.8
INTR	Introdacqua	159.56	337	PKPdf	PKPdf	10 38 23.1	-1.6
INTR				PKPab	PKPab	10 39 01.9	-1.6
LATE	Laterza	159.71	341	PKPdf	PKPdf	10 38 22.9	-2.0
LATE				PKPab	PKPab	10 39 02.6	-1.5
POLO	Lamas de Olo	160.03	25	ePKPdf	PKPdf	10 38 26.7	+1.4
POLO	Lamas de Olo	160.03	25	ePKPab	PKPab	10 39 06.3	+0.7
PBRG	Braganca	160.04	22	ePKPdf	PKPdf	10 38 26.2	+0.9
PBRG	Braganca	160.04	22	ePKPab	PKPab	10 39 06.1	+0.6
MVO	Moncorvo	160.50	24	ePKPdf	PKPdf	10 38 27.3	+1.5
PVIS	Viseu	160.56	26	ePKPdf	PKPdf	10 38 27.1	+1.2
PVIS	Viseu	160.56	26	ePKPab	PKPab	10 39 08.5	+0.7
TIP	Timpagrande	160.63	327	PKPdf	PKPdf	10 38 22.7	-3.3
TIP				PKPab	PKPab	10 39 08.4	+0.1
PCAS	Casmilo, Conde	160.86	28	ePKPdf	PKPdf	10 38 27.7	+1.5
MTE	Manteigas	160.97	26	ePKPdf	PKPdf	10 38 27.5	+1.2
MTE	Manteigas	160.97	26	ePKPab	PKPab	10 39 10.1	+0.5
LIC	Lamto	161.03	154	⇑ePKP1	PKPdf	10 38 26.8	-0.3
	comp=Z,47nm,0.8s						
KIC	Kosan Boka	161.26	155	⇑iPKP1	PKPdf	10 38 27.8	+0.4
	comp=Z,23nm,0.7s						
TIC	Toumodi	161.41	154	⇓iPKP1	PKPdf	10 38 27.5	0.0
	comp=Z,29nm,0.8s						
PCBR	Castelo Branco	161.47	27	ePKPdf	PKPdf	10 38 28.2	+1.4
PCBR				epPKPdf	pPKPdf	10 39 00.8	+0.4
DBIC	Dimbokro	161.50	154	PKP	PKPdf	10 38 27.8	+0.2
	comp=Z,7.9nm,0.8s,baz=240,slow=5.0,SNR=7.4						
DBIC				PKPab	sPKPdf	10 39 13.9	0.0
	comp=Z,16nm,0.8s,baz=224,slow=5.3,SNR=8.5						
PMTG	Montargil	161.78	29	ePKPab	PKPab	10 39 13.6	+0.4
PMRV	Marv??o	161.85	27	ePKPdf	PKPdf	10 38 28.6	+1.4
PMRV	Marv??o	161.85	27	ePKPab	PKPab	10 39 14.0	+0.5
PESTR	Estremoz	162.23	28	PKPdf	PKPdf	10 38 25.9	-1.7
PESTR				PKPab	sPKPdf	10 39 14.3	+0.4
PESTR	Estremoz	162.23	28	ePKPab	PKPab	10 39 15.0	-0.2
EVO	Evora	162.32	30	ePKPdf	PKPdf	10 38 29.2	+1.5
PNCL	Nicolau / Gran	162.41	32	ePKPdf	PKPdf	10 38 29.4	+1.6
MESJ	Messejana	162.77	32	ePKPdf	PKPdf	10 38 29.8	+1.6
MESJ	Messejana	162.77	32	ePKPdf	PKPdf	10 38 29.9	+1.6
PBEJ	Beja	162.79	31	ePKPdf	PKPdf	10 38 30.1	+1.9
ESDC	Sonseca Array	162.87	19	PKP	PKPdf	10 38 29.1	+0.9
	comp=Z,5.0nm,1.0s,baz=342,slow=2.4,SNR=18						
ESDC				PKPab	PKPab	10 39 18.4	+0.5
	comp=Z,22nm,0.9s,baz=328,slow=4.0,SNR=40						
ESDC				PP	PP	10 43 05.5	+3.4
	comp=Z,3.6nm,1.0s,baz=345,slow=5.0,SNR=6.7						
ESDC	Sonseca Array	162.87	19	PKPdf	PKPdf	10 38 27.6	-0.7
ESDC				PKPab	PKPab	10 39 18.9	+1.0
PAB	San Pablo	162.87	20	PKPdf	PKPdf	10 38 25.8	-2.5
PAB				PKPab	PKPab	10 39 19.2	+1.2
PAB	San Pablo	162.87	20	P	PKPdf	10 38 29.8	+1.4
PAB	San Pablo	162.87	20	PKIKP	PKPdf	10 38 25.8	-2.5
PAB						10 39 19.2	
MORF	Marmelete	162.98	34	ePKPdf	PKPdf	10 38 30.5	+2.1
MORF	Marmelete	162.98	34	ePKPdf	PKPdf	10 38 30.2	+1.8
PBAR	Barrancos	163.05	29	ePKPdf	PKPdf	10 38 30.1	+1.7
MAHO	Mahon	163.71	357	PKPdf	PKPdf	10 38 27.4	-1.6
MAHO				PKPab	PKPab	10 39 22.4	+0.9
KEST	Kesra	166.76	337	PKP	PKPdf	10 38 33.0	+1.1
	comp=Z,4.5nm,0.8s,baz=100,slow=6.1,SNR=5.1						
KEST				PKPab	PKPab	10 39 35.7	+0.5
	comp=Z,20nm,0.8s,baz=58,slow=1.4,SNR=6.4						
OUK	Oukaimeden	167.62	50	P	PKPdf	10 38 35.0	+2.1
JBK	JBK	168.18	24	P	PKPdf	10 38 35.1	+2.1
MDT	Midelt	168.54	35	P	PKPdf	10 38 35.1	+1.9
TZRR	Tazzarine	169.44	45	P	PKPdf	10 38 36.0	+2.2
TOA0	Torodi Ar. Sit	169.53	172	PKPdf	PKPdf	10 38 33.7	-0.5
TOA0				PKPab	PKPab	10 39 48.5	+0.7
TORD	Torodi Ar. Bea	169.53	172	PKP	PKPdf	10 38 33.9	-0.2
	comp=Z,21nm,0.9s,baz=57,slow=5.2,SNR=78						
TORD				PKPab	PKPab	10 39 49.0	+1.3
	comp=Z,25nm,0.8s,baz=199,slow=3.8,SNR=32						
TORD				PP	PP	10 43 36.4	+0.3
	comp=Z,2.3nm,0.8s,baz=178,slow=5.0,SNR=4.1						
TORD	Torodi Ar. Bea	169.53	172	PKPdf	PKPdf	10 38 34.2	+0.1
TORD				PKPab	PKPab	10 39 48.6	+0.9
ARF	Arif	169.81	38	P	PKPdf	10 38 36.0	+2.0
ZGR	Zagora	169.82	48	P	PKPdf	10 38 36.0	+2.0
FIGM	Figuig	170.63	24	P	PKPdf	10 38 37.0	+2.5
TAM	Tamanrasset	177.68	251	PKPdf	PKPdf	10 38 36.7	-0.4
TAM				PKPab	PKPab	10 40 24.0	-0.4
TAM	Tamanrasset	177.68	251	PKIKP	PKPdf	10 38 36.7	-0.4
TAM						10 40 24.0	

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*UPA **17** 10:19:19.2±2.1, 8°.93N×82°.84W, h2km, MW4.2*
*UCR **17** 10:19:19.6±1.4, 8°.92N×82°.86W, h16km±5km, MW4.2*
ISC 17 10:19:19.2±0.9**, 8°.93N**±0°.02×**82°.85W**±0°.02**, h19**km±2km**,**
n67, σ**1ˢ01**/105**, 6C-17D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTCR	Cotoan	0.09	108	eP	Pg	10 19 22.5	-0.6
CTCR				eS	Sg	10 19 25.2	-0.6
MLIR3	Monte Lirio, C	0.13	170	⇑iP	Pg	10 19 23.7	+0.2
MLIR3				eS	Sg	10 19 26.9	+0.6
EDSV	San Vito	0.16	230	⇑eP	Pg	10 19 23.8	0.0
EDSV				eS	Sg	10 19 28.1	+1.1
BRU2	Volcan	0.20	130	⇑iP	Pg	10 19 24.3	-0.1
BRU2				i S	Sg	10 19 28.4	+0.5
BRU2	Volcan	0.20	130	eP	Pg	10 19 24.3	-0.1
BRU2				eS	Sg	10 19 28.3	+0.4
BC3P	Paso Ancho	0.26	115	⇓iP	Pb	10 19 25.0	-0.3
BC3P				i S	Sb	10 19 29.0	-0.2
POTG	Potrero Grande	0.30	295	eP	Pg	10 19 25.0	-0.8
EDP2	Potrero Grande	0.34	286	eP	Pg	10 19 26.2	-0.3
EDP2				eS	Sg	10 19 31.6	+0.1
CDITO	Canoas	0.35	184	eP	Pb	10 19 27.0	0.0
BCO2	Palmira	0.38	123	⇑eP	Pg	10 19 27.3	+0.1
BCO2				i S	Sb	10 19 33.3	+0.3
EDAD	Golfito	0.42	229	eP	Pg	10 19 27.4	-0.5
EDAD				eS	Sb	10 19 34.3	+0.2
PTAR3	Potrerillos Ar	0.42	124	i P	Pb	10 19 28.1	0.0
PTAR3				i S	Sb	10 19 34.6	+0.4
LNBQ3	Los Naranjos,	0.42	108	⇓iP	Pg	10 19 27.5	-0.5
LNBQ3				i S	Sg	10 19 34.1	+0.2
FITO	Golfito	0.42	226	eP	Pg	10 19 27.4	-0.6
EDBA	Buenos Aires	0.48	299	eP	Pg	10 19 29.1	+0.1
EDBA				eS	Sb	10 19 36.2	+0.2
LESP3	La Esperanza,	0.52	174	⇓iP	Pb	10 19 29.6	0.0
LESP3				i S	Sn	10 19 38.5	-1.4
CCOL	Caracol de Cor	0.53	194	eP	Pg	10 19 29.9	0.0
BURE	Buenos Aires	0.54	297	eP	Pb	10 19 29.5	-0.6
PSOM3	Paja de Sombre	0.57	115	⇓iP	Pb	10 19 30.6	0.0
PSOM3				i S	Sg	10 19 38.9	+0.5
SRBA	San Rafael, Bu	0.59	301	eP	Pb	10 19 29.8	-1.1
EDPN	Palmar Norte	0.60	274	eP	Pb	10 19 30.8	-0.3
JIME	Puerto Jimenez	0.61	231	eP	Pb	10 19 30.7	-0.5
CNI2	El Empalme, Bo	0.62	37	⇓iP	Pb	10 19 30.3	-1.1
CNI2				i S	Sb	10 19 39.3	-0.3
DVD	David	0.62	141	⇓eP	Pg	10 19 31.7	+0.1
DVD				eS	Sn	10 19 42.2	-0.3
LOCO3	Loma Colorada,	0.66	140	⇓eP	Pg	10 19 32.7	+0.4
LOCO3				eS	Sg	10 19 41.9	+0.6
BRIBI	Bribri	0.69	360	eP	Pb	10 19 32.7	0.0
RGM0	Gandoca	0.70	20	eP	Pg	10 19 33.5	+0.5
PTPM	Petroterminale	0.72	183	⇓iP	Pg	10 19 33.1	-0.2
PTPM				i S	Sn	10 19 44.9	0.0
PLAN	Los Planes de	0.86	253	eP	Pb	10 19 34.7	-0.9
PEZE	Perez Zeledon,	0.94	299	eP	Pb	10 19 36.1	-0.8
EDDO	Dominical	1.06	288	eP	Pb	10 19 38.1	-0.8
MRVA	Moravia de Chi	1.07	327	eP	Pb	10 19 37.9	-1.3
CDM	Cerro de Muert	1.10	305	eP	Pb	10 19 38.9	-1.0
REME3	Remedios, Chir	1.22	125	⇑iP	Pn	10 19 41.2	-0.1
TAAN	Batan	1.25	337	eP	Pn	10 19 41.6	-0.2
BATAN	Batan	1.28	336	⇓iP	Pn	10 19 42.1	0.0
BATAN				i S	Sb	10 20 00.1	+1.3
BATAN	Batan	1.28	336	eP	Pn	10 19 42.0	0.0
BATAN				eS	Sg	10 20 00.3	-0.4
RIMA	Rio Macho	1.31	310	eP	Pn	10 19 42.3	-0.4
RVSTA	Santa Teresita	1.31	323	eP	Pn	10 19 42.7	+0.1
RVSTA				eS	Sb	10 20 00.9	+1.1
LCOCO	El Coco	1.35	329	eP	Pn	10 19 43.6	+0.6
LCOCO				eS	Sg	10 20 02.9	0.0
REPA	Paraso	1.35	312	eP	Pn	10 19 43.7	+0.4
LLNJ	Naranjito	1.35	294	eP	Pn	10 19 42.9	-0.2
LLNJ				eS	Sb	10 20 01.1	+0.2
RVLA	Villa Bonita	1.39	328	eP	Pn	10 19 44.2	+0.6
RVLA				eS	Sb	10 20 03.4	+1.6
LCR2	La Lucha 2	1.40	305	eP	Pn	10 19 43.7	-0.3
CVTQ	Turrialba Volc	1.41	320	eP	Pb	10 19 45.1	0.0
ABE2	San Pablo	1.42	303	eP	Pn	10 19 44.0	-0.3
ABE2				eS	Sb	10 20 03.6	+0.5
ICR3	Volcano Irazu	1.43	317	eP	Pb	10 19 45.5	0.0
ACOS	Acosta	1.56	304	eP	Pn	10 19 46.9	+0.8
HDC	Heredia	1.65	311	i P	Pb	10 19 48.5	-0.6
HDC				i S	Sb	10 20 10.9	+1.4
HDC				i S	Sb	10 20 11.0	+1.4
BELE	Belen	1.69	308	eP	Pn	10 19 48.2	+0.5
SAFE3	Santa Fe, Vera	1.79	103	⇓iP	Pb	10 19 50.7	-0.8
SAFE3				eS	Sb	10 20 14.5	+0.8
TRT1	Tortuguero	1.86	333	eP	Pn	10 19 50.4	+0.2
GMAL	Guarumal, Vera	1.97	126	⇓iP	Pn	10 19 52.6	+1.0
GMAL				i S	Sn	10 20 16.1	+0.3
SFRA3	San Francisco,	1.97	110	⇓eP	Pb	10 19 53.6	-0.9
SFRA3				i S	Sb	10 20 20.1	+1.3
STIA3	Santiago, Vera	2.03	114	⇑iP	Pb	10 19 54.8	-0.7
STIA3				i S	Sb	10 20 20.2	-0.1
CALO3	Calobre, Verag	2.07	107	⇓eP	Pb	10 19 55.0	-1.2
CALO3				eS	Sb	10 20 22.6	+1.0
MARI3	Mariato, Verag	2.23	124	eP	Pn	10 19 52.1	-3.1
PESE3	Pese, Herrera	2.43	114	eP	Pb	10 20 00.5	-1.9
JTS	Las Juntas de	2.48	303	i P	Pn	10 20 00.6	+1.9
JTS				i S	Sb	10 20 32.0	-1.4
JTS				i S	Sb	10 20 34.1	+0.6
PNME	Penonome	2.53	100	eP	Pb	10 20 02.2	-1.8
PNME				eS	Sb	10 20 33.8	-1.0
CHIT3	Chitre	2.59	112	⇓eP	Pn	10 20 02.5	+2.3
CHIT3				i S	Sb	10 20 37.0	+0.5
VTON	El Valle, Cocl	2.72	96	⇓eP	Pn	10 20 04.5	+2.5
VTON				eS	Sb	10 20 38.8	-1.5
AZU	Azuero	2.78	114	⇓eP	Pn	10 20 04.9	+2.1
AZU				eS	Sb	10 20 39.1	-3.0
SPIL	Cristobal, Col	2.90	83	eP	Pn	10 20 03.3	-1.1
BCIP	Isla Barro Col	2.98	85	⇓eP	Pn	10 20 08.0	+2.5
GAMB1	Gamboa	3.10	86	eP	Pn	10 20 08.2	+1.0
UPD2	Meteti	4.79	94	eP	Pn	10 20 33.0	+2.6

TAP 17 10:29:58.2, 23°.32N×121°.66E, h40km, ML2.0, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECBN	Changbin	0.19	269	eP	Pn	10 30 05.6	+0.2
	baz=268						
HGSD	Ruisui	0.27	309	eP	Pn	10 30 06.8	+0.6
	baz=308						
TWF1	Yuli	0.33	276	eP	Pn	10 30 07.2	+0.4
	baz=275						
CHKT	Chengkung	0.34	231	eP	Pn	10 30 07.3	+0.3
	baz=229						
CHKT				eS	Sn	10 30 13.6	+0.5
	baz=229						
EHY	Hungye	0.36	301	eS	Sn	10 30 14.2	+0.8
	baz=301						
EGFH	Guangfu	0.41	329	eS	Sn	10 30 15.4	+1.0
	baz=328						
ESL	Shilin	0.53	338	eP	Pn	10 30 09.9	+0.5
	baz=338						
ELDTW	Lidau	0.60	258	eS	Sn	10 30 19.6	+0.5
	baz=257						
VWDT	VWDT	0.64	313	eP	Pn	10 30 11.5	+0.7
	baz=312						
TWGBT	Beinan	0.73	227	P	Pn	10 30 12.5	+0.5
	56nm,1.0s						
TWGBT	Beinan	0.73	227	eP	Pn	10 30 12.4	+0.3
	baz=226						
TTN	Taitung	0.73	220	eP	Pn	10 30 12.8	+0.8
	baz=219						
TTN				eS	Sn	10 30 23.5	+1.4
	baz=219						
TWG	Pinlang	0.73	227	eP	Pn	10 30 12.5	+0.5
	baz=226						
STYT	Tauyuan	0.84	259	eP	Pn	10 30 14.6	+0.9
	baz=259						
CHGB	Renai	0.86	329	eP	Pn	10 30 14.6	+0.5
	baz=329						
CHN5	Tsauling	0.94	287	eP	Pn	10 30 16.2	+1.2
	baz=287						
CHN4	Tsaushan	0.98	272	i P	Pn	10 30 16.2	+0.7
	baz=271						
LATG	Datong	1.22	354	eP	Pn	10 30 19.5	+0.7
	baz=354						

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*UPA **17** 10:31:54.1±15.0, 11°.29N×87°.08W, h0km±524km, MW4.9*
*IDC **17** 10:32:07.2±0.5, 10°.83N×85°.69W, h0km, mb4.4/17, mbtmp4.4/19, ML3.8/2, MS4.0/18, Error ellipse: s-maj=28.3km s-min=12.0km az=60.0*
*UCR **17** 10:32:09.4±1.6, 10°.30N×86°.27W, h16km±5km, MW5.2, mb4.8(NEIC)*
*INET **17** 10:32:09.3±1.0, 10°.28N×86°.27W, h10km±6km, MW4.8*
*NEIC **17** 10:32:12.8±1.9, 10°.47N±0°.06×86°.07W±0°.05, h41km±7km, mb4.8/397, Error ellipse: s-maj=9.6km s-min=5.9km az=216.0*
*SNET **17** 10:32:14.7±0.8, 10°.55N×86°.41W, h35km±559km, ML4.2*
*GCMT **17** 10:32:17.5±0.5, 10°.35N±0°.03×86°.43W±0°.04, h29km±1km, MW4.9/64, Moment Tensor Solution. s26,c29; s64,c76; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.04±.24; $M_{\theta\theta}$-1.84±.15; $M_{\phi\phi}$-0.19±.14; $M_{r\theta}$0.82±.18; $M_{\theta\phi}$1.52±.10; $M_{\phi r}$-1.42±.20; Best double couple: $M_0$2.94300×10^{16} NP1:ϕ_s140.00000°,δ64.00000°,λ112.00000°. NP2: ϕ_s278.00000°,δ34.00000°,λ54.00000°. Principal axes: T 2.7310, Plg65.0000°, Azm87.0000°; N 0.4280, Plg19.0000°, Azm310.0000°; P -3.1550, Plg16.0000°, Azm214.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 17 10:32:09.2±0.4**, 10°.42N**±0°.03×**86°.25W**±0°.03**, h18**km±1km**,**
n782, σ**1ˢ38**/743**, mb4.9**/194**, MS4.0**/19**, 17C-1D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATIL	Hatillo	0.55	102	eP	Pg	10 32 20.3	+0.1
HATIL				eS	Sb	10 32 28.4	+0.6
SACU	Santa Cruz	0.67	103	eP	Pb	10 32 22.1	-0.2
SACU				eS	Sg	10 32 31.7	+0.3
DELF	Filadelfia	0.68	87	eP	Pn	10 32 24.0	0.0
HZTE	Horizontes, Gu	0.70	65		Pn	10 32 24.3	0.0
HZTE	Horizontes, Gu	0.70	65	eP	Pn	10 32 24.3	0.0
HZTE				eS	Sn	10 32 36.2	+1.5
HZTE	Horizontes, Gu	0.70	65	eP	Pn	10 32 24.3	0.0
ALIBA	Liberia Airpor	0.71	76	eP	Pn	10 32 24.3	-0.1
ALIBA				eS	Sn	10 32 36.7	+1.9
ELI1	Hacienda Flor	0.72	71	eP	Pn	10 32 24.6	+0.2
JUD3	Juan Diaz 3	0.74	110	eP	Pb	10 32 23.1	-0.5
ORTG	Ortega, Santa	0.78	94		Pb	10 32 24.2	-0.1
ORTG				Sn	Sg	10 32 35.0	+0.3
ORTG	Ortega, Santa	0.78	94	eP	Pb	10 32 24.1	-0.1
ORTG	Ortega, Santa	0.78	94	eP	Pb	10 32 24.1	-0.1
ORTG				eS	Sg	10 32 34.9	+0.1
DUNO	Dulce Nombre,	0.81	114		Pb	10 32 24.1	-0.8
DUNO				Sn	Sb	10 32 34.7	-0.7
DUNO	Dulce Nombre,	0.81	114	eP	Pb	10 32 24.0	-0.8
DUNO	Dulce Nombre,	0.81	114	eP	Pb	10 32 24.0	-0.8
ERIA	Liberia	0.82	75	eP	Pn	10 32 25.8	-0.1
NICO	Nicoya	0.83	110	eP	Pb	10 32 24.4	-0.8
LCRUZ	La Cruz	0.89	42	eP	Pn	10 32 27.3	+0.4
LCRUZ				eS	Sn	10 32 42.4	+3.0
CMARA	Lajas Hojancha	0.90	116	eP	Pb	10 32 25.2	-1.1
BUEV	Buena Vista	0.91	65	⇑iP	Pg	10 32 26.9	-0.1
BUEV				eS	Sn	10 32 41.0	+1.1
GB1A	Borinquen Arri	0.92	64	⇑iP	Pg	10 32 27.1	-0.1

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GB1A                                 eS     Sn    10 32 41.6 +1.4
GPS2  Hotel Rincn d       0.94  69⇑iP     Pg    10 32 27.4 -0.1
GPS2                                 eS     Sn    10 32 41.9 +1.3
VRLE  La Escondida,       0.94  67 eP     Pb    10 32 27.2 +0.2
VORI  VORI                0.97  66⇑iP     Pn    10 32 27.9 -0.2
VORI                                 eS     Sn    10 32 44.8 +3.2
BAGA  Bagaces             0.97  83 eP     Pg    10 32 28.8 +0.6
BAGA                                 eS     Sn    10 32 44.6 +3.2
GUAB  Guayabo de Bag      1.04  74⇑iP     Pb    10 32 28.7  0.0
GUAB                                 eS     Sg    10 32 44.6 +1.5
COLC  Colonia             1.05  76⇑eP     Pb    10 32 29.0  0.0
COLC                                 eS     Sg    10 32 45.2 +1.6
NYURE Nandayure           1.06 113 eP     Pb    10 32 27.5 -1.6
MICM  Guayabo             1.07  75 eP     Pn    10 32 29.3 -0.1
MICM                                 eS     Sg    10 32 45.6 +1.6
CAMAV Centro de Prod      1.07  75⇑eP     Pb    10 32 29.3  0.0
CAMAV                                eS     Sg    10 32 45.3 +1.2
CUI   Cuipilapa           1.09  77⇑iP     Pb    10 32 29.4 -0.2
CUI                                  eS     Sn    10 32 44.6 +0.3
CLARA Aguas Claras        1.11  71⇑eP     Pb    10 32 30.1 +0.1
CLARA                                eS     Sg    10 32 47.3 +1.9
CNAS  Canas               1.13  89 eP     Pn    10 32 30.0 -0.2
VMAR  Armenia, Volca      1.18  70 eP     Pb    10 32 31.1  0.0
VMAR                            ⇑iP     Pb    10 32 31.2  0.0
VMAR                                 eS     Sg    10 32 48.2 +0.6
CANAL Canalete            1.24  70⇓eP     Pb    10 32 32.1 -0.1
CANAL                                eS     Sg    10 32 51.2 +1.7
JTS   Las Juntas de       1.28  95  Pg    Pn    10 32 31.5 -0.7
      237nm,0.3s,baz=301,slow=12,SNR=481
JTS                                  Lg     Lg    10 32 52.9
      696nm,0.3s,baz=356,slow=23,SNR=5.0
JTS                                  LR     LR    10 32 59.1
      comp=Z,2µm,19.2s,baz=62,slow=58
JTS   Las Juntas de       1.28  95⇑iP     Pn    10 32 31.6 -0.6
JTS                                  eS     Sb    10 32 49.3 +0.4
JTS   Las Juntas de       1.28  95 eP     Pn    10 32 31.5 -0.7
JTS   Las Juntas de       1.28  95 eP     Pn    10 32 31.6 -0.7
CONN  Concepcion          1.29  28 eP     Pb    10 32 33.4 +0.4
CONN                                 eS     Sg    10 33 01.9  +11
VERA  Finca Concepci      1.42  72⇑eP     Pb    10 32 34.7 -0.5
VERA                                 eS     Sg    10 32 55.6 +0.4
LAFE  Finca La Fe, P      1.45 115 eP     Pn    10 32 32.7 -1.8
TABAC Tabacon             1.46  87⇑eP     Pn    10 32 35.1 +0.4
SGBR  La Fortuna          1.46  88⇑iP     Pn    10 32 35.2 +0.4
CASO  Castillo            1.49  89⇑eP     Pn    10 32 35.6 +0.5
CASO                                 eS     Sg    10 32 58.1 +0.8
ARE1  Arenal 1            1.50  88 eP     Pb    10 32 36.0 -0.6
ARE1  Arenal 1            1.50  88 eP     Pb    10 32 36.0 -0.6
CEDE  Laguna Cedeo        1.52  87⇑eP     Pb    10 32 36.4 -0.5
VACR  Volcan Arenal       1.54  88 eP     Pn    10 32 36.4 +0.6
FORC  Fortuna             1.55  88⇑eP     Pn    10 32 36.6 +0.7
ARZA  Esparza             1.61 105 eP     Pn    10 32 36.9 +0.2
LCHIL Los Chiles          1.62  68 eP     Pb    10 32 38.2 -0.5
TISN  Laguna Tiscapa      1.72 359 eP     Pb    10 32 39.6 -0.7
MGAN  Managua             1.72 360 eP     Pb    10 32 39.6 -0.7
MGAN                                 eP     Pb    10 32 39.7 -0.7
JACO  JACO, Garabito      1.73 115        Pn    10 32 37.5 -1.0
JACO                                  Sn    Sn    10 32 57.4 -2.7
JACO  JACO, Garabito      1.73 115 eP     Pb    10 32 40.9 +0.4
WILN  Americas 2          1.73   2 eP     Pb    10 32 39.7 -0.8
COPN  Copaltepe           1.79 349 eP     Pn    10 32 39.8 +0.7
COVE  Coope Vega, Sa      1.84  80        Pn    10 32 39.7 -0.2
COVE  Coope Vega, Sa      1.84  80 eP     Pn    10 32 39.5 -0.4
ACON  Acoyapa             1.87  34        Pn    10 32 41.2 +0.8
ACON  Acoyapa             1.87  34 eP     Pn    10 32 41.1 +0.8
ACON                                 eS     Sn    10 33 04.3 +0.8
ACON  Acoyapa             1.87  34 eP     Pn    10 32 41.1 +0.8
HUEN                      1.91   2 eP     Pn    10 32 42.1 +1.2
POA5  Crater Von Fra      1.99  96 eP     Pn    10 32 42.8 +0.5
MOMN  Momotombo           2.00 352 eP     Pn    10 32 43.2 +1.0
VPTE  Poasito             2.03  97 eP     Pn    10 32 43.1 +0.4
BELE  Belen               2.07 102 eP     Pn    10 32 43.7 +0.5
BOAB  BOACO BROADBAN2.10  16  Pn    Pn    10 32 44.7 +1.2
BOAB  BOACO BROADBAN2.10  16 eP     Pn    10 32 44.7 +1.2
CNGN  Cerro Negro         2.12 348        Pn    10 32 44.8 +1.0
HDC   Heredia             2.14 101        Pn    10 32 44.7 +0.5
HDC   Heredia             2.14 101 eP     Pn    10 32 44.7 +0.5
HDC                                  eS     Sg    10 33 18.5 +0.4
HDC   Heredia             2.14 101 eP     Pn    10 32 44.9 +0.8
ACOS  Acosta              2.14 107 eP     Pn    10 32 45.0 +0.8
HDC3  Heredia 3           2.14 101 eP     Pn    10 32 44.6 +0.5
ABE2  San Pablo           2.27 108 eP     Pn    10 32 46.3 +0.2
BRAN  Las Pilas           2.29 357 eP     Pn    10 32 40.0 -6.1
LCR2  La Lucha 2          2.31 107 eP     Pn    10 32 46.2 -0.3
CRIN  San Cristobal       2.40 341        Pn    10 32 49.5 +1.8
RIMA  Rio Macho           2.43 105        Pn    10 32 48.6 +0.3
RIMA  Rio Macho           2.43 105 eP     Pn    10 32 48.5 +0.3
CVTR  Volcan Turrial      2.48  99        Pn    10 32 49.8 +0.7
VTCE  Turrialba Volc      2.48  99 eP     Pn    10 32 49.5 +0.4
MATN  Matagalpa           2.52   7        Pn    10 32 50.8 +1.4
MATN  Matagalpa           2.52   7 eP     Pn    10 32 50.7 +1.4
RVSTA Santa Teresita      2.59  99 eP     Pn    10 32 51.5 +1.1
ESPN  Las Esperanzas      2.60  47        Pn    10 32 50.4  0.0
ESPN  Las Esperanzas      2.60  47 eP     Pn    10 32 50.9 +0.5
EDDO  Dominical           2.62 116 eP     Pn    10 32 51.8 +1.2
RVLA  Villa Bonita        2.63  96 eP     Pn    10 32 52.0 +1.2
LCOCO El Coco             2.67  97 eP     Pn    10 32 52.5 +1.2
PEZE  Perez Zeledon,      2.73 112        Pn    10 32 52.6 +0.3
PEZE  Perez Zeledon,      2.73 112 eP     Pn    10 32 52.4 +0.2
BATAN Batan               2.84  96        Pn    10 32 54.0 +0.3
SRBA  San Rafael, Bu      3.08 112        Pn    10 32 57.1 +0.1
EDBA  Buenos Aires        3.18 113 eP     Pn    10 33 01.4 +3.0
LCND  La Caada            3.29 331 eP     Pn    10 33 01.6 +1.6
LCND                                 eS     Sn    10 33 37.7 -1.0
LCND                                  IAML        10 33 46.7
      comp=Z,674nm,0.5s
EDP2  Potrero Grande      3.33 114 eP     Pn    10 33 03.1 +2.6
EDAD  Golfito             3.51 120 eP     Pn    10 33 03.8 +0.8
EDAD                                 eS     Sn    10 33 41.6 -2.4
PACA  Pacayal             3.65 326 eP     Pn    10 33 07.4 +2.4
ALJI  Alcalda de J        3.68 322 eP     Pn    10 33 06.4 +1.1
FAGO  Alcalda de S        3.73 331 eP     Pn    10 33 07.6 +1.6
FAGO                                 eS     Sn    10 33 49.1 -0.4
MLIR3 Monte Lirio, C      3.74 115 eP     Pb    10 33 15.1 +0.3
TGUH  Tegucigalpa,Un      3.75 345  Pn    Pn    10 33 08.7 +2.3
COEB  Comit de Eme        3.79 324 eP     Pn    10 33 09.1 +2.2
CDITO Canoas              3.80 119        Pn    10 33 07.7 +0.9
CNI2  El Empalme, Bo      3.85 105 eP     Pn    10 33 09.8 +2.3
CNI2                                 eS     Sn    10 33 56.5 +4.2
BRU2  Volcan              3.86 114        Pn    10 33 08.4 +0.6
BRU2  Volcan              3.86 114 eP     Pb    10 33 15.0 -1.9
BRU2                                 eS     Sg    10 34 09.0 -4.3
BRU2  Volcan              3.86 114 eP     Pn    10 33 10.0 +2.2
PQSS  Presa 15 de Se      3.91 325 eP     Pn    10 33 10.3 +1.9
BC3P  Paso Ancho          3.92 114 eP     Pn    10 33 10.3 +1.5
TECO  Alcaldia de Te      3.97 322 eP     Pn    10 33 11.1 +1.8
PTPM  Petroterminale      3.98 123 eP     Pn    10 33 10.6 +1.2
PTPM                                 eS     Sn    10 33 55.5 -0.2
BCO2  Palmira             4.04 114 eP     Pn    10 33 11.6 +1.3
SCLA  Alcaldia de Sa      4.07 324 eP     Pn    10 33 12.6 +1.9
SCLA                                 eS     Sn    10 33 58.0 +0.1
COEG  Centro de Oper      4.10 321 eP     Pn    10 33 12.9 +1.8
COEG                                  IAML        10 34 10.3
      comp=Z,368nm,0.4s
SJTE  Alcalda de S        4.17 320 eP     Pn    10 33 13.8 +1.7
DVD   David               4.23 117 eP     Pn    10 33 15.1 +2.3
DVD                                  eS     Sn    10 34 04.0 +2.2
PSOM3 Paja de Sombre      4.23 114 eP     Pn    10 33 15.3 +2.3
SNET  Serv Nac Est T      4.37 318        Pn    10 33 18.4 +3.6
UEES  Universidad Ev      4.40 319 eP     Pn    10 33 16.0 +0.8
JAYA  Jayaque - finc      4.49 316 eP     Pn    10 33 17.6 +1.0
JAYA                                 eS     Sn    10 34 07.3 -1.2
NUBE  Las Nubes           4.89 315 eP     Pn    10 33 24.0 +1.9
MTO3  Montecristo         4.99 323  Pn    Pn    10 33 26.2 +2.7
ESQI  Esquipulas          5.11 324        Pn    10 33 28.2 +3.2
GMAL  Guarumal, Vera      5.61 118 eP     Pn    10 33 32.2 +0.5
PRVC  Isla de Provid      5.61  58  Pn    Pn    10 33 30.3 -1.5
PRVC  Isla de Provid      5.61  58 eP     Pn    10 33 34.5 +2.7
CHIT3 Chitre              6.25 113 eS     Sb    10 35 11.3 -0.8
BCIP  Isla Barro Col      6.44 101        Pn    10 33 44.5 +1.4
BCIP  Isla Barro Col      6.44 101 eP     Pn    10 33 43.7 +0.5
AZU   Azuero              6.45 113 eS     Sb    10 35 23.9 +6.2
AZU   Azuero              6.45 113 eP     Pn    10 33 50.1 +6.8
HUEH  Huehuetenango       7.07 314        Pn    10 33 53.3 +1.2
PETF  Flores              7.36 332        Pn    10 33 56.9 +1.1
CCIG  Comitan             8.18 316        Pn    10 34 09.3 +2.1
TEIG  Tepich              9.95 349  Pn    Pn    10 34 31.6 +0.3
CMIG  Matias Romero      10.70 309  Pn    Pn    10 34 44.6 +3.0
      comp=Z,0.7nm,0.3s,baz=116,slow=10.0,SNR=12
      comp=Z,10nm,0.8s
UREC  San Jos de Ur      10.90 103 eP     Pn    10 34 45.4 +0.8
SJCC  San Jacinto, C     10.91  92 eP     Pn    10 34 46.0 +1.4
HELC  Santa Helena       11.40 111  Pn    Pn    10 34 49.5 -2.1
PAYG  Puerto Ayora       11.73 200  Pn    Pn    10 34 58.8 +3.0
GUY2C Guyana, Caldas     11.95 115 eP     Pn    10 35 03.0 +3.8
SOR   Soroa              12.69  14  Pn    Pn    10 35 10.1 +1.2
ROSC  El Rosal           13.05 114  Pn    P     10 35 22.3 -2.3
      comp=Z,1.7nm,0.3s,baz=347,slow=19,SNR=1.4
PRAC  Prado              13.09 120  Pn    Pn    10 35 13.9 -0.5
SLOR  San Lorenzo -      13.49 145  Pn    Pn    10 35 17.4 -3.0
PAMC  Pamplona, Colo     13.73 102 eP     P     10 35 29.5 -2.6
RUSC  La Rusia           13.78 108  Pn    Pn    10 35 23.5 -0.8
TLIG  Tlapa              13.90 302  Pn    P     10 35 30.9 -2.8
URIC  Uribia, Colomb     14.05  83  Pn    Pn    10 35 26.6 -0.8
MACC  Macarena, Meta     14.80 123 eP     Pn    10 35 36.3 -1.5
PTGC  Puerto Gaitan,     15.29 113 eP     P     10 35 51.3 +2.2
SDV   Santo Domingo      15.47  94  Pn    Pn    10 35 48.4 +1.6
      comp=Z,0.4nm,0.3s,baz=260,slow=11,SNR=6.3
SDV                                  LR     LR    10 43 01.0
      comp=Z,385nm,18.9s,baz=262,slow=44
SDV   Santo Domingo      15.47  94  Pn    Pn    10 35 44.0 -2.8
SDV   Santo Domingo      15.47  94 eP     Pn    10 35 48.1 +1.3
SDDR  Presa de Saban     16.78  58  Pn    Pn    10 36 01.5 -1.9
MOIG  Morelia            17.11 304  Pn    P     10 36 09.3 -0.2
SDD   Santo Domingo      17.71  61  P     Pn    10 36 13.8 -1.2
SDD                                  IAmb   IAmb  10 36 14.9
      comp=Z,67nm,0.8s
BAUV  El Baul            18.00  93  P     Pn    10 36 17.9 -0.8
GRTK  Grand Turk         18.22  51  P     Pn    10 36 21.3 -0.1
ATAH  Atahualpa          19.11 156  P     Pn    10 36 34.2 +1.7
      comp=Z,0.3nm,0.3s,baz=323,slow=7.2,SNR=2.3
ATAH                                 LR     LR    10 42 55.7
      comp=Z,882nm,19.8s,baz=338,slow=34
      comp=Z,4.6nm,0.8s
656A  Willston           19.17  10  P     P     10 36 30.9 -1.0
656A                                 IAmb   IAmb  10 36 40.4
      comp=Z,86nm,1.0s
BIRV  Birongo            19.65  88  P     P     10 36 35.2 -2.0
BIRV                                 IAmb   IAmb  10 36 36.0
      comp=Z,79nm,1.7s
553A  Crawfordville      19.75   5  P     P     10 36 38.5 +0.4
553A                                 IAmb   IAmb  10 36 46.7
      comp=Z,65nm,0.8s
ZAIG  Zacatecas          19.86 310  P     Pn    10 36 41.1 -0.4
CRPR  Cabo Rojo, PR      20.01  66  P     P     10 36 39.6 -1.6
CRPR                                 IAmb   IAmb  10 36 48.5
      comp=Z,54nm,0.8s
PRSN  Puerto Rico Se     20.05  65  P     P     10 36 39.5 -2.1
PRSN                                 IAmb   IAmb  10 36 53.7
      comp=Z,84nm,1.4s
MLPR  Magueyes Islan     20.06  66  P     P     10 36 40.0 -1.7
MLPR                                 IAmb   IAmb  10 36 51.2
      comp=Z,33nm,0.8s
451A  Vernon             20.11   1  P     P     10 36 40.8 -1.3
UUPR  Utuado, UPR, P     20.44  65  P     P     10 36 43.2 -2.7
AOPR  Arecibo Observ     20.45  65  P     P     10 36 43.6 -2.3
AOPR                                 IAmb   IAmb  10 36 53.2
      comp=Z,52nm,0.8s
OBIP  Obispado Ponce     20.48  66  P     P     10 36 44.9 -1.3
OBIP                                 IAmb   IAmb  10 36 46.7
      comp=Z,36nm,0.8s
CELP  Cerrillos          20.51  66  P     P     10 36 44.8 -1.9
CELP                                 IAmb   IAmb  10 36 56.1
      comp=Z,34nm,0.9s
456A  Hilliard           20.59  10  P     P     10 36 46.2 -1.0
456A                                 IAmb   IAmb  10 37 00.5
      comp=Z,69nm,1.0s
BRAL  Brewton            20.66 358  P     P     10 36 47.0 -1.1
BRAL  Brewton            20.66 358  P     Pn    10 36 49.5 -1.0
      baz=177
SJG   San Juan           20.91  66  P     P     10 36 51.2 +0.3
      comp=Z,12nm,0.4s,baz=229,slow=20,SNR=1.8
SJG   San Juan           20.91  66  P     P     10 36 48.5 -2.4
SJG                                  IAmb   IAmb  10 37 04.3
      comp=Z,33nm,1.0s
352A  Blakely            21.00   3        P     10 36 50.5 -1.2
352A                                 IAmb   IAmb  10 37 03.5
      comp=Z,44nm,0.7s
GCPR  Guaynabo City      21.03  66  P     P     10 36 48.5 -3.8
TIGA  Tifton             21.06   6  P     P     10 36 52.2 -0.2
TIGA  Tifton             21.06   6  P     P     10 36 53.5 +1.1
      baz=187,SNR=7.9
346A  Big Creek Wild     21.08 352  IAmb  IAmb  10 36 55.2
      comp=Z,112nm,1.5s
HUMP  Col San Antoni     21.19  66  P     P     10 36 52.1 -1.8
441A  DeRidder           21.24 343  P     P     10 36 55.6 +1.3
735A  Kenedy             21.30 331  P     P     10 36 56.8 +1.7
344A  Westbrook Farm     21.34 349  P     P     10 36 55.6 +0.2
HKT   Hockley            21.39 337        P     10 36 56.0  0.0
HKT                                  IAmb   IAmb  10 37 05.7
      comp=Z,112nm,1.6s
250A  Grady              21.46 360  P     P     10 36 56.0 -0.7
342A  Flagon Creek P     21.61 346  P     P     10 36 59.5 +1.2
342A                                 IAmb   IAmb  10 37 11.8
      comp=Z,33nm,0.8s
833A  Chaparral WMA,     21.67 327  P     P     10 37 00.7 +1.7
833A                                 IAmb   IAmb  10 37 04.0
      comp=Z,51nm,0.7s
833A  Chaparral WMA,     21.67 327  P     P     10 37 00.3 +1.3
      baz=142,SNR=15
SGCB  S£o Gabriel d      21.79 118 eP     P     10 37 00.7 +0.2
TBTG  Tabatinga, AM      21.80 131 eP     P     10 37 01.7 +1.2
VBMS  Vicksburg          22.05 350  P     P     10 37 03.5 +0.4
VBMS                                 IAmb   IAmb  10 37 06.9
      comp=Z,52nm,0.9s
VBMS  Vicksburg          22.05 350  P     P     10 37 04.0 +1.0
      baz=168,SNR=6.9
154A  Montrose           22.28   7  P     P     10 37 05.6 +0.1
CZSB  Cruzeiro do Su     22.51 143  P     P     10 37 07.7 -0.4
CZSB                                 IAmb   IAmb  10 37 19.6
      comp=Z,30nm,1.0s
CZSB  Cruzeiro do Su     22.51 143 eP     P     10 37 10.3 +2.1
LRAL  Lakeview Retre     22.52 358  P     P     10 37 07.4 -0.7
LRAL                                 IAmb   IAmb  10 37 11.6
      comp=Z,42nm,0.8s
LRAL  Lakeview Retre     22.52 358  P     P     10 37 08.3 +0.2
      baz=178,SNR=19
NATX  Nacogdoches        22.62 341  P     P     10 37 10.2 +1.0
NATX  Nacogdoches        22.62 341  P     P     10 37 10.5 +1.3
      baz=158,SNR=10
143A  Socs Landing,      22.68 349  P     P     10 37 10.2 +0.4
143A                                 IAmb   IAmb  10 37 19.4
      comp=Z,31nm,0.8s
Z47A  Carrollton         22.74 356  P     P     10 37 10.8 +0.4
Z47A                                 IAmb   IAmb  10 37 12.8
      comp=Z,47nm,0.7s
Z51A  Franklin           22.81   2  IAmb  IAmb  10 37 13.6
      comp=Z,43nm,0.8s
435B  Jarrell            22.84 334  P     P     10 37 12.1 +0.5
435B  Jarrell            22.84 334  P     P     10 37 12.2 +0.7
      baz=150
237A  Washetta, Mont     23.23 339  P     P     10 37 16.6 +1.1
Y49A  Blount Mountai     23.33 360  P     P     10 37 17.0 +0.5
Y52A  Lilburn            23.42   5  P     P     10 37 17.8 +0.4
Y52A                                 IAmb   IAmb  10 37 25.9
      comp=Z,37nm,0.8s
Z41A  Richland Creek     23.52 346  P     P     10 37 18.9 +0.5
Y45A  Yeager Farm, C     23.54 353  P     P     10 37 18.8 +0.3
JCT   Junction City      23.62 330  P     P     10 37 19.4  0.0
JCT   Junction City      23.62 330  P     P     10 37 20.6 +1.2
      baz=145,SNR=8.1
WHTX  Lake Whitney,      23.84 336  P     P     10 37 21.6 +0.1
WHTX                                 IAmb   IAmb  10 37 34.6
      comp=Z,31nm,0.9s
WHTX  Lake Whitney,      23.84 336  P     P     10 37 21.2 -0.3
      baz=152
X48A  Hartselle          23.93 358  P     P     10 37 21.9 -0.4
X48A                                 IAmb   IAmb  10 37 31.9
      comp=Z,20nm,0.7s
HODGE Hodges             23.98   8  P     P     10 37 23.2 +0.5
HODGE                                IAmb   IAmb  10 37 24.0
      comp=Z,42nm,0.8s
WLAR  White Oak Lake     24.00 346  P     P     10 37 22.9 -0.1
WLAR                                 IAmb   IAmb  10 37 24.8
      comp=Z,56nm,1.0s
FPAL  Fort Paine         24.02   1  P     P     10 37 22.8 -0.4
FPAL                                 IAmb   IAmb  10 37 24.8
      comp=Z,22nm,0.7s
FW16  Waxahatchie        24.06 337  IAmb  IAmb  10 37 26.4
      comp=Z,133nm,0.8s
X51A  Calhoun            24.07   3  P     P     10 37 23.7 +0.1
FW14  Alvarado           24.10 337  IAmb  IAmb  10 37 26.7
      comp=Z,85nm,0.7s
Z38A  Mt. Pleasant       24.11 342  P     P     10 37 24.7 +0.7
Z38A                                 IAmb   IAmb  10 37 26.5
      comp=Z,44nm,0.9s
NNA   Nana               24.14 157  LR    LR    11 05 00.0
      comp=Z,320nm,20.0s,baz=241,slow=30
NNA   Nana               24.14 157  S     S     10 41 49.7 +8.0
      comp=Z,3.4nm,0.4s,baz=219,slow=5.2,SNR=1.4
FW13  Cleburne           24.15 336  P     P     10 37 24.7 +0.3
FW13                                 IAmb   IAmb  10 37 27.2
      comp=Z,29nm,0.9s
OXF   Oxford             24.16 354  P     P     10 37 23.5 -0.9
OXF   Oxford             24.16 354  P     P     10 37 23.4 -1.0
      baz=172,SNR=26
JSC   Jenkinsville       24.19  10  P     P     10 37 24.9 +0.2
PLAL  Pickwick Lake      24.51 356  P     P     10 37 26.9 -0.7
FW07  Weatherford        24.60 336  IAmb  IAmb  10 37 31.2
      comp=Z,28nm,0.8s
HPIG                     24.61 315  P     P     10 37 31.3 +2.5
PAULI Pauline            24.63   9  P     P     10 37 28.6  0.0
PAULI                                IAmb   IAmb  10 37 30.1
      comp=Z,41nm,0.8s
BG3   Lake Jocassee      24.65   7  P     P     10 37 29.2 +0.3
W52A  Murphy             24.66   5  P     P     10 37 28.9 -0.1
W50A  Signal Mountai     24.69   2  IAmb  IAmb  10 37 30.0
      comp=Z,34nm,0.8s
BIRD  Birdtown, Kers     24.69  11  P     P     10 37 29.5 +0.3
BIRD                                 IAmb   IAmb  10 37 30.3
      comp=Z,19nm,0.8s
SWET  Sewanee            24.69   1  P     P     10 37 29.0 -0.3
X40A  Basin Creek Fa     24.71 347  P     P     10 37 28.5 -0.9
FW06  Azle               24.75 337  IAmb  IAmb  10 37 32.9
      comp=Z,48nm,0.8s
W45A  Hickory Valley     24.77 354  P     P     10 37 28.9 -1.1
X58A  Rowland            24.84  14  IAmb  IAmb  10 37 32.3
      comp=Z,23nm,0.8s
UALR  University of      24.88 348  P     P     10 37 30.2 -0.7
TXAR  Lajitas Array      24.89 322  P     P     10 37 32.4 +1.1
      comp=Z,11nm,0.6s,baz=135,slow=10,SNR=81
TXAR                                 PcP    PcP   10 41 10.0 +3.0
      comp=Z,3.8nm,0.8s,baz=140,slow=4.8,SNR=13
TXAR                                 ScP    ScP   10 44 52.2 +6.8
      comp=Z,0.4nm,0.8s,baz=161,slow=5.7,SNR=3.9
      comp=Z,11nm,0.6s
TXAR  Lajitas Array      24.89 322  P     P     10 37 32.5 +1.3
TX31  Lajitas Ar. Si     24.89 322  P     P     10 37 32.8 +1.6
TX32  Lajitas Array      24.89 322  P     P     10 37 32.8 +1.6
MIAR  Mount Ida          24.94 346  P     P     10 37 30.5 -1.0
MIAR  Mount Ida          24.94 346  P     P     10 37 31.1 -0.4
      baz=162,SNR=28
Z35A  Perchaven, San     24.95 338  P     P     10 37 32.0 +0.4
CPCT  Cooper Cave        24.97   3  P     P     10 37 32.5 +0.7
CPCT                                 IAmb   IAmb  10 37 34.8
      comp=Z,35nm,1.0s
FW03  Perrin-Whitt E     25.01 336  P     P     10 37 32.8 +0.6
FW03                                 IAmb   IAmb  10 37 33.8
      comp=Z,29nm,0.7s
KMSC  Kings Mountain     25.02  10  P     P     10 37 32.6 +0.4
KMSC                                 IAmb   IAmb  10 37 33.5
      comp=Z,43nm,0.9s
KMSC  Kings Mountain     25.02  10  P     P     10 37 31.9 -0.3
      baz=191,SNR=13
V48A  Smith Brothers     25.21 359  P     P     10 37 32.7 -1.3
V48A                                 IAmb   IAmb  10 37 34.6
      comp=Z,26nm,0.8s
TKL   Tuckaleechee C     25.23   5  P     P     10 37 34.1  0.0
      comp=Z,16nm,0.9s,baz=179,slow=12,SNR=14
TKL                                  LR     LR    10 47 20.9
      comp=Z,283nm,21.6s,baz=232,slow=37
TKL   Tuckaleechee C     25.23   5  P     P     10 37 34.2 +0.1
TKL                                  IAmb   IAmb  10 37 45.9
      comp=Z,28nm,0.9s
H06E1 SOCORRO T-PHAS25.26 292  T     T     11 03 59.9
      SNR=99
W57A  Gilead             25.27  12  IAmb  IAmb  10 37 35.3
      comp=Z,83nm,1.8s
H06S1 SOCORRO T          25.28 292  T     T     11 04 06.6
      SNR=9.5
ABTX  Abilene, Hawle     25.32 333  P     P     10 37 34.7 -0.4
ABTX  Abilene, Hawle     25.32 333  P     P     10 37 35.0 -0.1
      baz=148,SNR=12
V53A  Saluda             25.33   7  IAmb  IAmb  10 37 38.9
      comp=Z,31nm,0.9s
H06N1 SOCORRO T-PHAS25.34 292  T     T     11 04 15.1
      SNR=5.9
HBAR  Harrisburg         25.34 352  P     P     10 37 35.1 -0.1
WHAR  Wooly Hollow       25.37 348  P     P     10 37 34.8 -0.6
WHAR                                 IAmb   IAmb  10 37 36.1
      comp=Z,35nm,0.9s
V52A  Sevierville        25.43   5  P     P     10 37 35.8 -0.2
V52A                                 IAmb   IAmb  10 37 36.9
      comp=Z,21nm,0.9s
X37A  Clayton            25.47 342  P     P     10 37 36.0 -0.3
X37A                                 IAmb   IAmb  10 37 38.2
      comp=Z,18nm,0.7s
CLTN  Cedars of Leba     25.56 360  IAmb  IAmb  10 37 37.8
      comp=Z,25nm,0.9s
TEFE  Tefe               25.58 122 eP     P     10 37 38.2 +0.7
WVT   Waverly            25.64 357  P     P     10 37 36.1 -1.7
WVT   Waverly            25.64 357  P     P     10 37 36.4 -1.4
      baz=176
V55A  Taylorsville       25.73   9  P     P     10 37 38.7  0.0
WTFS  Witchita Falls     25.80 336  IAmb  IAmb  10 37 42.9
      comp=Z,53nm,0.8s
FCAR  Ozark Folk Cen     25.91 349  P     P     10 37 39.0 -1.3
FCAR                                 IAmb   IAmb  10 37 48.5
      comp=Z,20nm,0.8s
LCAR  Lake Charles       25.92 351  P     P     10 37 38.9 -1.5
LCAR                                 IAmb   IAmb  10 37 40.3
      comp=Z,22nm,0.9s
U49A  Red Boiling Sp     25.98   1  P     P     10 37 40.6 -0.4
U49A                                 IAmb   IAmb  10 37 41.6
      comp=Z,28nm,0.8s
V58A  Windy Hill, Pi     26.08  13  P     P     10 37 41.7 -0.1
TZTN  Tazewell           26.13   5  IAmb  IAmb  10 37 46.6
      comp=Z,21nm,1.0s
TZTN  Tazewell           26.13   5  P     P     10 37 41.2 -1.1
      baz=186
SLBS  Sierra La Lagu     26.16 303  P     P     10 37 46.1 +3.2
U54A  Nelsons Funny      26.30   8  IAmb  IAmb  10 37 55.5
      comp=Z,36nm,0.8s
X34A  Smith Ranch, M     26.30 338  IAmb  IAmb  10 37 48.5
      comp=Z,31nm,1.0s
ODSA  Odessa             26.34 328  IAmb  IAmb  10 37 46.4
      comp=Z,32nm,0.8s
U56A  King               26.36  11  IAmb  IAmb  10 37 45.7
      comp=Z,16nm,0.8s
W35A  Tecumseh           26.46 340        P     10 37 45.2 -0.1
T47A  Sharon Grove       26.47 358  P     P     10 37 44.5 -0.9
T47A                                 IAmb   IAmb  10 37 45.5
      comp=Z,36nm,0.8s
T50A  Nancy              26.52   3  P     P     10 37 44.7 -1.1
T50A                                        PcP   10 41 10.3 -0.1
POST  Post               26.56 330  IAmb  IAmb  10 38 06.1
      comp=Z,21nm,0.9s
T45A  Paducah            26.57 356  P     P     10 37 45.5 -0.8
HHAR  Hobbs              26.68 346  P     P     10 37 47.2 -0.1
FNO   Franklin           26.73 339        P     10 37 47.3 -0.5
FNO                                  IAmb   IAmb  10 37 52.1
      comp=Z,36nm,0.8s
BOAV  Boa Vista          26.75 106  P     P     10 37 48.3 +0.1
WMOK  Wichita Mounta     26.78 337        P     10 37 48.2  0.0
WMOK  Wichita Mounta     26.78 337  P     P     10 37 50.3 +2.0
      baz=152,SNR=28
TUL1  Leonard            26.82 343  P     P     10 37 48.2 -0.4
TUL1                                 IAmb   IAmb  10 37 55.4
      comp=Z,24nm,0.8s
TUL1  Leonard            26.82 343  P     P     10 37 47.7 -0.8
      baz=158,SNR=9.3
T42A  Van Buren          26.86 351  IAmb  IAmb  10 37 49.0
      comp=Z,20nm,0.8s
U59A  Littleton          26.93  15  P     P     10 37 48.2 -1.4
U38A  Gravette           26.94 345  IAmb  IAmb  10 37 55.8
      comp=Z,21nm,0.9s
CGM3  Cape Girardeau     26.94 354  P     P     10 37 48.7 -0.9
CGM3                                 IAmb   IAmb  10 37 49.7
      comp=Z,36nm,1.3s
BLA   Blacksburg         27.19  10  P     P     10 37 52.8 +0.8
BLA                                  IAmb   IAmb  10 38 04.1
      comp=Z,54nm,1.6s
BLA   Blacksburg         27.19  10  P     P     10 37 51.7 -0.2
      baz=192
OK052 Battle Ridge R     27.21 341  P     P     10 37 51.8 -0.2
OK052                                IAmb   IAmb  10 37 52.2
      comp=Z,32nm,1.0s
S44A  Carbondale         27.29 355  IAmb  IAmb  10 37 53.0
      comp=Z,37nm,0.9s
OK033 Mehan              27.30 341        P     10 37 52.0 -0.9
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OK033				IAmb	IAmb	10 37 53.5	
	comp=Z,16nm,0.8s						
QUOK	Quay	27.34	341	IAmb	IAmb	10 37 53.9	
	comp=Z,26nm,0.7s						
USIN	University of	27.46	358	IAmb	IAmb	10 37 54.3	
	comp=Z,24nm,0.9s						
MNTX	Cornudas Mount	27.61	323	P	P	10 37 56.8	+1.1
	baz=136						
OK046	Pawnee Station	27.61	341	IAmb	IAmb	10 37 58.9	
	comp=Z,12nm,0.7s						
OK050	Pawnee Station	27.63	341	P	P	10 37 55.6	-0.3
OK050				IAmb	IAmb	10 38 07.6	
	comp=Z,63nm,1.7s						
OK048	Pawnee Station	27.64	341	P	P	10 37 55.6	-0.3
WCI	Wyandotte Cave	27.69	360	P	P	10 37 55.6	-0.8
WCI	Wyandotte Cave	27.69	360	P	P	10 37 55.2	-1.1
	baz=180						
R49A	Shelbyville	27.77	2	IAmb	IAmb	10 37 57.2	
	comp=Z,23nm,0.8s						
R50A	Paris	27.80	3	IAmb	IAmb	10 37 57.8	
	comp=Z,25nm,0.8s						
CCM	Cathedral Cave	27.89	352	P	P	10 37 56.6	-1.4
CCM				IAmb	IAmb	10 37 58.4	
	comp=Z,20nm,0.9s						
CCM				PcP	PcP	10 41 14.4	+0.7
CCM	Cathedral Cave	27.89	352	P	P	10 37 57.0	-1.0
	baz=169						
S39A	Bolivar	27.89	348	P	P	10 37 56.9	-1.3
MSTX	Muleshoe	27.91	330	P	P	10 37 58.7	+0.2
MSTX				IAmb	IAmb	10 38 01.1	
	comp=Z,26nm,0.8s						
MSTX	Muleshoe	27.91	330	P	P	10 37 58.4	-0.1
	baz=143,SNR=16						
T35A	Sooner Cattle	27.97	342	IAmb	IAmb	10 37 59.4	
	comp=Z,20nm,1.2s						
R53A	Hurricane	28.06	7	P	P	10 37 58.6	-1.0
R53A				IAmb	IAmb	10 38 00.2	
	comp=Z,25nm,0.8s						
AMTX	Amarillo	28.14	332	P	P	10 38 00.5	0.0
AMTX				IAmb	IAmb	10 38 10.9	
	comp=Z,12nm,0.8s						
AMTX	Amarillo	28.14	332	P	P	10 38 00.3	-0.2
	baz=146						
ELIS	Ellis County	28.19	337	P	P	10 38 01.7	+0.8
ELIS				IAmb	IAmb	10 38 06.5	
	comp=Z,29nm,0.8s						
OLIL	Olney	28.25	357	P	P	10 38 00.9	-0.4
OLIL				IAmb	IAmb	10 38 01.5	
	comp=Z,31nm,0.9s						
R55A	Marlinton	28.29	10	IAmb	IAmb	10 38 02.5	
	comp=Z,29nm,1.1s						
ETMB	Extrema	28.30	135	P	P	10 38 02.4	+0.4
ETMB				IAmb	IAmb	10 38 12.3	
	comp=Z,17nm,0.9s						
ETMB	Extrema	28.30	135	*e*P	P	10 38 02.3	+0.3
OK038	West end E0370	28.31	338	IAmb	IAmb	10 38 09.2	
	comp=Z,16nm,0.6s						
U32A	Winter Ranch,	28.31	338	IAmb	IAmb	10 38 07.1	
	comp=Z,18nm,0.9s						
Q44A	Meyer Farm, Va	28.48	355	P	P	10 38 02.3	-1.1
NOKA	Waynoka	28.52	338	IAmb	IAmb	10 38 18.0	
	comp=Z,28nm,0.7s						
BLO	Bloomington	28.64	360	IAmb	IAmb	10 38 04.7	
	comp=Z,22nm,0.8s						
CBN	Corbin Frederi	28.79	15	P	P	10 38 06.5	+0.3
CBN				IAmb	IAmb	10 38 06.8	
	comp=Z,18nm,0.8s						
MACA	Manacapuru-AM	28.80	117	P	P	10 38 06.7	+0.2
MACA	Manacapuru-AM	28.80	117	*e*P	P	10 38 07.0	+0.4
Q54A	Coxs Mills	28.86	9	IAmb	IAmb	10 38 07.4	
	comp=Z,22nm,0.7s						
P48A	Milroy	28.93	1	IAmb	IAmb	10 38 07.0	
	comp=Z,34nm,0.9s						
P49A	Miami Univ. Ec	29.03	2	IAmb	IAmb	10 38 07.8	
	comp=Z,30nm,0.9s						
P51A	Williamsport	29.08	5	P	P	10 38 08.2	-0.6
P51A				IAmb	IAmb	10 38 09.0	
	comp=Z,26nm,0.8s						
P46A	Rosedale	29.09	358	IAmb	IAmb	10 38 08.6	
	comp=Z,30nm,0.8s						
Q56A	Snyder Ridge,	29.19	11	IAmb	IAmb	10 38 11.4	
	comp=Z,19nm,0.8s						
P43A	Skaggs, Pawnee	29.25	355	P	P	10 38 09.7	-0.5
P43A				IAmb	IAmb	10 38 16.5	
	comp=Z,18nm,1.0s						
P53A	Whipple	29.27	8	P	P	10 38 10.4	0.0
P52A	Corning	29.33	6	P	P	10 38 10.4	-0.4
P52A	Corning	29.33	6	P	P	10 38 10.1	-0.8
	baz=188,SNR=18						
121A	Cookes Peak, D	29.65	321	P	P	10 38 13.8	-0.3
	baz=133						
MCWV	Mont Chateau	29.67	10	P	P	10 38 13.6	-0.4
	baz=192						
O49A	Covington	29.70	3	P	P	10 38 13.1	-1.1
O49A				IAmb	IAmb	10 38 13.6	
	comp=Z,21nm,1.0s						
O48B	Farmland	29.73	2	P	P	10 38 13.0	-1.5
	baz=182,SNR=5.0						
P38A	Dawn	29.80	349	P	P	10 38 13.8	-1.3
P38A				IAmb	IAmb	10 38 20.8	
	comp=Z,14nm,0.7s						
ACSO	Alum Creek Sta	29.84	5	P	P	10 38 14.5	-0.9
ACSO	Alum Creek Sta	29.84	5	P	P	10 38 14.2	-1.2
	baz=186,SNR=8.4						
SFIN	Lafayette	29.85	359	P	P	10 38 13.8	-1.7
	baz=178,SNR=8.5						
P57A	Homestead Farm	29.86	13	IAmb	IAmb	10 38 17.1	
	comp=Z,17nm,0.7s						
SAML	Samuel	29.95	129	P	P	10 38 16.1	-0.5
SAML	Samuel	29.95	129	*e*P	P	10 38 16.9	+0.2
KSU1	Kansas State U	30.03	344	IAmb	IAmb	10 38 25.8	
	comp=Z,15nm,0.8s						
KSU1	Kansas State U	30.03	344	P	P	10 38 15.8	-1.3
	baz=159						
O53A	New Philadelph	30.05	8	P	P	10 38 16.8	-0.5
O53A	New Philadelph	30.05	8	P	P	10 38 16.2	-1.1
	baz=190,SNR=12						
HDIL	Hopedale	30.14	355	P	P	10 38 16.7	-1.3
	baz=174,SNR=11						
Y22D	IRIS PASSCAL I	30.22	324	P	P	10 38 19.6	+0.5
	baz=136						
Y22F	Passcal Instru	30.22	324	P	P	10 38 19.2	+0.2
	baz=136						
N49A	Columbus Grove	30.44	3	P	P	10 38 19.6	-1.1
N41A	Harden Midland	30.44	353	P	P	10 38 19.3	-1.4
N41A				IAmb	IAmb	10 38 20.1	
	comp=Z,14nm,0.7s						
DUN6	Lazy B Ranch	30.48	320	IAmb	IAmb	10 38 25.9	
	comp=Z,20nm,1.1s						
ANMO	Albuquerque	30.59	326	P	P	10 38 23.9	+1.4
ANMO	Albuquerque	30.59	326	P	P	10 38 24.5	+2.1
	baz=138						
ANMO	Albuquerque	30.59	326	P	P	10 38 23.8	+1.4
ANMO				pP	sP	10 38 30.1	+0.1
N53A	Lisbon	30.64	8	IAmb	IAmb	10 38 22.7	
	comp=Z,23nm,0.8s						
MVL	Millersville	30.75	15	IAmb	IAmb	10 38 24.8	
	comp=Z,21nm,1.1s						
PAGS	Pennsylvania G	30.87	14	P	P	10 38 24.4	-0.1
M50A	Fremont	30.99	5	P	P	10 38 25.0	-0.6
M50A				IAmb	IAmb	10 38 25.4	
	comp=Z,25nm,0.8s						
SSPA	Standing Stone	30.99	12	P	P	10 38 25.2	-0.5
SSPA				IAmb	IAmb	10 38 26.4	
	comp=Z,20nm,0.8s						
SSPA	Standing Stone	30.99	12	P	P	10 38 24.8	-0.8
	baz=196						
SSPA	Standing Stone	30.99	12	P	P	10 38 25.5	-0.1
SSPA				pP	sP	10 38 32.4	-0.3
T25A	Trinidad	31.25	331	P	P	10 38 29.4	+1.3
T25A	Trinidad	31.25	331	P	P	10 38 27.9	-0.3
	baz=144,SNR=5.1						
M53A	WI Miller and	31.29	8	P	P	10 38 27.1	-1.1
	baz=190,SNR=9.3						
TUC	Tucson	31.43	318	P	P	10 38 30.1	+0.4
TUC	Tucson	31.43	318	P	P	10 38 29.8	+0.1
	baz=128						
TUC	Tucson	31.43	318	P	P	10 38 31.8	+2.1
TUC				pP	sP	10 38 37.6	+0.5
L48A	N Adams	31.45	3	P	P	10 38 28.2	-1.3
N58A	Sunbury	31.45	14	P	P	10 38 29.1	-0.6
N58A				IAmb	IAmb	10 38 30.4	
	comp=Z,19nm,0.8s						
L42A	Oliver, Polo	31.61	355	P	P	10 38 29.3	-1.7
KSCO	Kaye Shedlock'	32.02	336	P	P	10 38 34.5	-0.3
KSCO				IAmb	IAmb	10 38 36.4	
	comp=Z,14nm,1.0s						
KSCO	Kaye Shedlock'	32.02	336	P	P	10 38 34.9	+0.1
	baz=148						
LPAZ	La Paz	32.02	146	P	P	10 38 37.5	+1.9
	comp=Z,1.9nm,0.9s,baz=327,slow=14,SNR=3.2						
LPAZ				LR	LR	10 52 13.7	
	comp=Z,302nm,19.0s,baz=324,slow=38						
	comp=Z,1.9nm,0.9s						
LPAZ	La Paz	32.02	146	*e*P	P	10 38 37.1	+1.5
LPAZ	La Paz	32.02	146	P	P	10 38 36.5	+0.9
LPAZ				pP	sP	10 38 43.3	+0.4
ERPA	Erie	32.05	9	P	P	10 38 33.3	-1.6
ERPA	Erie	32.05	9	P	P	10 38 33.6	-1.4
	baz=191						
SDCO	Great Sand Dun	32.25	331	IAmb	IAmb	10 38 39.9	
	comp=Z,9.1nm,0.8s						
SDCO	Great Sand Dun	32.25	331	P	P	10 38 38.0	+0.9
	baz=142,SNR=23						
JFWS	Jewell Farm	32.56	355	P	P	10 38 37.5	-1.9
JFWS	Jewell Farm	32.56	355	P	P	10 38 38.1	-1.3
	baz=172,SNR=9.0						
214A	Organ Pipe Nat	32.59	315	IAmb	IAmb	10 38 44.2	
	comp=Z,16nm,1.4s						
214A	Organ Pipe Nat	32.59	315	P	P	10 38 42.8	+3.0
	baz=125,SNR=6.0						
K38A	Parkersburg	32.61	351	P	P	10 38 38.3	-1.5
PIX	Pinacate	32.82	314	P	P	10 38 43.6	+1.8
S22A	4UR Ranch, Cre	32.91	329	P	P	10 38 44.7	+1.8
	baz=140						
BINY	Binghamton	32.91	14	P	P	10 38 42.1	-0.4
	baz=198,SNR=6.8						
MMNY	Mt. Morris Dam	33.01	11	P	P	10 38 42.2	-1.0
MVCO	Mesa Verde	33.38	327	P	P	10 38 47.8	+0.9
MVCO				IAmb	IAmb	10 38 57.6	
	comp=Z,7.0nm,0.7s						
MVCO	Mesa Verde	33.38	327	P	P	10 38 47.1	+0.2
	baz=137,SNR=6.4						
OGNE	Ogallala	33.45	338	P	P	10 38 47.9	+0.5
OGNE				IAmb	IAmb	10 38 49.8	
	comp=Z,18nm,0.9s						
OGNE	Ogallala	33.45	338	P	P	10 38 47.8	+0.4
	baz=151,SNR=5.7						
MDP	Montagnes des	33.70	96	LR	LR	10 53 56.7	
	comp=Z,147nm,18.6s,baz=284,slow=39						
ITTB	Itaituba	33.75	114	*e*P	P	10 38 50.8	+0.7
WUAZ	Wupatki	33.85	322	P	P	10 38 52.2	+1.2
	baz=131						
MALB	Monte Alegre	34.08	109	*e*P	P	10 38 55.7	+2.7
SMCO	Snowmass	34.09	331	P	P	10 38 54.3	+1.0
PV01	Paradox Valley	34.10	328	P	P	10 38 54.5	+1.3
PV15	Paradox Valley	34.21	328	IAmb	IAmb	10 39 07.2	
	comp=Z,8.0nm,0.9s						
PV13	Radium Mtn., P	34.25	327	IAmb	IAmb	10 38 57.3	
	comp=Z,7.7nm,0.9s						
PV11	David Mesa, Pa	34.38	328	P	P	10 38 56.6	+1.0
PV11				IAmb	IAmb	10 38 58.2	
	comp=Z,12nm,0.7s						
ECSD	EROS Data Cent	34.39	347	P	P	10 38 53.3	-2.1
ECSD				PcP	PcP	10 41 31.2	+0.3
ECSD	EROS Data Cent	34.39	347	P	P	10 38 53.4	-2.0
	baz=162,SNR=5.6						
PV10	Paradox Valley	34.53	328	IAmb	IAmb	10 39 05.7	
	comp=Z,15nm,0.9s						
PV23	Carpenter Ridg	34.57	328	IAmb	IAmb	10 39 09.8	
	comp=Z,7.9nm,0.8s						
VILB	Vilhena	34.75	131	*e*P	P	10 38 58.7	-0.1
SADO	Sadowa	34.77	9	LR	LR	10 53 37.3	
	comp=Z,326nm,18.6s,baz=189,slow=38						
SADO	Sadowa	34.77	9	P	P	10 38 57.1	-1.5
SADO				IAmb	IAmb	10 38 58.3	
	comp=Z,14nm,0.8s						
PDMCI	Parker Dam,Lak	34.87	317	P	P	10 39 02.1	+2.5
	baz=126						
G40A	Rib Lake	34.89	355	P	P	10 38 57.8	-1.9
G40A				IAmb	IAmb	10 38 58.9	
	comp=Z,13nm,0.8s						
N23A	Red Feather La	34.99	334	P	P	10 39 02.1	+1.2
	baz=144						
U15A	North Rim	35.01	322	IAmb	IAmb	10 39 06.7	
	comp=Z,17nm,1.8s						
SPMN	Marine on St.	35.14	352	P	P	10 38 59.5	-2.3
SPMN	Marine on St.	35.14	352	P	P	10 38 59.4	-2.3
	baz=168,SNR=8.8						
W13A	Hualapai Mount	35.17	319	IAmb	IAmb	10 39 07.0	
	comp=Z,9.4nm,0.9s						
SWSC	Sam W. Stewart	35.24	314	P	P	10 39 04.9	+2.1
	baz=123						
IKP	In-Ko-Pah, Jac	35.30	313	P	P	10 39 05.7	+2.2
	baz=122						
NPGB	Novo Progresso	35.31	118	*e*P	P	10 39 03.2	-0.4
BC3	Big Chuckawall	35.38	315	P	P	10 39 06.5	+2.3
	baz=124,SNR=9.8						
O20A	White River Ci	35.45	330	P	P	10 39 04.8	0.0
O20A				IAmb	IAmb	10 39 08.3	
	comp=Z,8.4nm,0.8s						
O20A					PcP	10 41 35.6	+1.3
O20A	White River Ci	35.45	330	P	P	10 39 05.9	+1.2
	baz=140,SNR=8.5						
IRM	Iron Mountain	35.46	316	P	P	10 39 06.1	+1.4
	baz=125						
SUSD	Miller	35.64	344	P	P	10 39 04.9	-1.2
COWI	Conover	35.65	357	P	P	10 39 04.0	-2.2
MONP2	Monument Peak	35.65	313	P	P	10 39 09.1	+2.5
	baz=122						
PKCU	Pink Cliffs	35.70	323	IAmb	IAmb	10 39 18.1	
	comp=Z,15nm,1.0s						
E43A	Lone Tree Farm	35.84	359	IAmb	IAmb	10 39 08.2	
	comp=Z,13nm,0.8s						
SRU	San Rafael Swe	35.85	327	P	P	10 39 09.0	+0.8
SRU				IAmb	IAmb	10 39 10.9	
	comp=Z,10nm,0.9s						
F36A	Milaca	35.87	351	P	P	10 39 05.9	-2.1
BELC	Belle Mtn. Jos	35.95	315	P	P	10 39 12.0	+2.8
	baz=124,SNR=6.5						
TPFO	Pinon Flats	36.05	314	P	P	10 39 12.9	+3.0
	baz=123						
PFO	Pinyon Flats O	36.06	314	P	P	10 39 13.2	+3.2
PFO	Pinyon Flats O	36.06	314	P	P	10 39 13.3	+3.3
	baz=123						
PFO	Pinyon Flats O	36.06	314	P	P	10 39 12.2	+2.1
PFO				pP	sP	10 39 19.4	+1.9
109C	Camp Elliot, M	36.14	313	P	P	10 39 13.5	+3.0
	baz=121						
GMRC	Granite Mounta	36.16	317	P	P	10 39 13.0	+2.1
	baz=125						
V12A	Nelson	36.18	319	IAmb	IAmb	10 39 15.2	
	comp=Z,28nm,1.5s						
RWWY	Rawlins	36.19	333	P	P	10 39 11.7	+0.5
RWWY				IAmb	IAmb	10 39 13.7	
	comp=Z,9.8nm,0.8s						
RWWY					PcP	10 41 37.9	+1.4
P17A	Butcher Ranch,	36.23	327	P	P	10 39 12.4	+1.0
P17A				IAmb	IAmb	10 39 14.2	
	comp=Z,12nm,0.9s						
E38A	The Farm, Brul	36.35	354	IAmb	IAmb	10 39 11.8	
	comp=Z,15nm,0.9s						
TMUT	Trail Mountain	36.36	326	P	P	10 39 14.7	+2.0
TMUT				IAmb	IAmb	10 39 16.4	
	comp=Z,15nm,1.6s						
MVU	Marysvale	36.36	325	P	P	10 39 13.2	+0.5
RDMU	Red Mountain	36.44	329	P	P	10 39 13.9	+0.6
RDMU				IAmb	IAmb	10 39 15.8	
	comp=Z,16nm,1.6s						
TCRU	Three Creeks R	36.57	325	IAmb	IAmb	10 39 18.4	
	comp=Z,9.0nm,0.9s						
MURC	Murrieta	36.57	314	P	P	10 39 17.0	+2.7
	baz=122,SNR=5.7						
PDRB	Porto dos Gac	36.60	126	*e*P	P	10 39 14.0	-0.6
HEC	Hector,Ludlow	36.65	316	P	P	10 39 17.7	+2.8
	baz=124						
K22A	Casper	36.67	335	P	P	10 39 17.0	+1.9
	baz=145						
TUQ	Turquoise Moun	36.72	317	P	P	10 39 17.9	+2.3
	baz=125						
BBRC	Big Bear Solar	36.74	315	P	P	10 39 19.5	+3.6
	baz=123,SNR=7.2						
ELS	Elsinore Mount	36.76	314	P	P	10 39 16.6	+0.6
SHPR	Sheep Range	36.85	319	P	P	10 39 17.2	+0.4
RSSD	Black Hills	36.94	339	P	P	10 39 17.7	+0.2
RSSD	Black Hills	36.94	339	P	P	10 39 18.3	+0.8
	baz=150						
RSSD	Black Hills	36.94	339	P	P	10 39 17.7	+0.2
RSSD				pP	sP	10 39 24.8	-0.3
LVC	Limon Verde	36.96	153	P	P	10 39 19.0	+1.0
	comp=Z,3.2nm,0.9s,baz=297,slow=4.5,SNR=2.4						
	comp=Z,3.2nm,0.9s						
LVC	Limon Verde	36.96	153	*e*P	P	10 39 18.1	+0.1
BSUT	Blindstream Ca	37.02	328	P	P	10 39 19.4	+1.0
PTLB	Pontes e Lacer	37.17	133	P	P	10 39 19.4	0.0
PTLB	Pontes e Lacer	37.17	133	*e*P	P	10 39 20.0	+0.6
SHOC	Shoshone, Teco	37.22	318	P	P	10 39 22.2	+2.5
	baz=125						
GSC	Goldstone, Bar	37.23	317	P	P	10 39 22.7	+2.8
	baz=124						
BFSC	Mount Baldy Ra	37.24	314	P	P	10 39 22.2	+2.1
	baz=122						
PRN	Pahroc Range	37.34	321	P	P	10 39 21.1	+0.2
BBSD	Serra de San D	37.34	137	*e*P	P	10 39 21.5	+0.6
CIS	Catalina Islan	37.34	313	P	P	10 39 22.4	+1.6
	baz=120						
PASC	Pasadena Art C	37.57	314	P	P	10 39 24.0	+1.2
GWY	Greenwater Val	37.64	318	IAmb	IAmb	10 39 27.6	
	comp=Z,28nm,1.8s						
CTU	Camp Tracy	37.65	328	P	P	10 39 23.4	-0.1
QSM	Queen of Sheba	37.65	317	IAmb	IAmb	10 39 27.6	
	comp=Z,25nm,1.6s						
PKME	Peaks-Kenny Pk	37.65	20	P	P	10 39 22.8	-0.4
	baz=208						
TCUT	Toone Canyon	37.78	328	P	P	10 39 24.8	+0.1
EDW2	Edwards Air Fo	37.81	315	P	P	10 39 27.9	+3.1
	baz=122,SNR=5.6						
TPNV	Topopah Spring	37.82	319	IAmb	IAmb	10 39 29.8	
	comp=Z,18nm,1.1s						
TPNV	Topopah Spring	37.82	319	P	P	10 39 28.3	+3.4
	baz=126,SNR=15						
DUG	Dugway, Tooele	37.87	326	P	P	10 39 27.4	+2.1
	baz=134						
S11A	Rachel	37.92	320	IAmb	IAmb	10 39 30.7	
	comp=Z,17nm,0.9s						
SPR3	Spring Creek 3	37.92	323	P	P	10 39 27.2	+1.2
LRMC	Laurel Mtn Rad	37.92	316	P	P	10 39 28.0	+2.1
	baz=123						
FURC	Furnace Creek,	37.93	318	P	P	10 39 29.0	+3.3
	baz=125,SNR=8.9						
WCT	Wildcat Mounta	37.97	319	P	P	10 39 28.9	+2.8
WCT				IAmb	IAmb	10 39 30.9	
	comp=Z,14nm,1.3s						
E28A	Huff	38.08	344	IAmb	IAmb	10 39 27.3	
	comp=Z,18nm,0.9s						
PD31	Pinedale Array	38.11	332	P	P	10 39 27.2	-0.3
PDAR	Pinedale Array	38.11	332	P	P	10 39 27.4	0.0
	comp=Z,3.1nm,0.7s,baz=129,slow=9.8,SNR=25						
PDAR				PcP	PcP	10 41 43.4	+1.0
	comp=Z,1.6nm,0.7s,baz=138,slow=5.3,SNR=7.1						
	comp=Z,3.1nm,0.7s						
PDAR	Pinedale Array	38.11	332	P	P	10 39 27.1	-0.3
BW06	Boulder Array	38.11	332	P	P	10 39 27.4	-0.1
BW06	Boulder Array	38.11	332	P	P	10 39 27.4	-0.1
	baz=141,SNR=6.7						
MPMC	Manual Prospec	38.12	317	P	P	10 39 30.6	+3.1
	baz=124,SNR=9.8						
HWUT	Hardware Ranch	38.22	329	P	P	10 39 28.8	+0.5
HWUT				IAmb	IAmb	10 39 30.5	
	comp=Z,13nm,0.7s						
HWUT					PcP	10 41 43.8	+1.2
Q12A	Willow Creek R	38.24	323	P	P	10 39 27.8	-0.7
B35A	Bob, Littlefor	38.34	352	P	P	10 39 27.5	-1.5
B35A				IAmb	IAmb	10 39 34.9	
	comp=Z,6.8nm,0.7s						
ARVC	Arvin	38.53	315	P	P	10 39 33.4	+2.6
	baz=122						
LATQ	La Tuque	38.56	15	P	P	10 39 29.6	-1.3
GRAC	Grapevine Rang	38.57	318	P	P	10 39 34.6	+3.5
	baz=125						
AGMN	Agassiz Nation	38.61	350	P	P	10 39 29.3	-2.0
AGMN				IAmb	IAmb	10 39 31.5	
	comp=Z,13nm,0.8s						
AGMN	Agassiz Nation	38.61	350	P	P	10 39 29.4	-2.0
	baz=164,SNR=13						
CWC	Cottonwood Cre	38.72	317	P	P	10 39 35.1	+2.5
	baz=124						
AHID	Auburn Hatcher	38.84	330	P	P	10 39 34.7	+1.1
LCH	Last Change Ra	38.89	319	IAmb	IAmb	10 39 38.2	
	comp=Z,24nm,1.6s						
MDND	Maddock	38.97	346	P	P	10 39 32.8	-1.6
	baz=159,SNR=5.1						
MZP	Montezuma Peak	38.99	319	P	P	10 39 37.9	+2.9
VES	Vestal, Richgr	39.08	316	P	P	10 39 38.6	+3.2
	baz=122,SNR=6.9						
PKM	Mcpherson Peak	39.09	314	P	P	10 39 37.8	+2.0
	baz=120						
REDW	Red Top Meadow	39.18	331	P	P	10 39 36.9	+0.5
REDW				IAmb	IAmb	10 39 38.3	
	comp=Z,12nm,0.8s						
SNOW	Snow King Moun	39.21	331	P	P	10 39 36.6	-0.1
SNOW				IAmb	IAmb	10 39 47.9	
	comp=Z,9.8nm,0.6s						
D62A	Allapoint, All	39.34	19	IAmb	IAmb	10 39 38.0	
	comp=Z,19nm,0.8s						
LMQ	La Malbaie	39.38	17	P	P	10 39 37.1	-0.6
LMQ				IAmb	IAmb	10 39 37.3	
	comp=Z,14nm,0.7s						
MOOW	Moose Ponds	39.42	332	P	P	10 39 38.5	+0.1
SMMC	Simmler	39.44	314	P	P	10 39 40.9	+2.4
	baz=120						
FXWY	Fox Creek	39.47	331	P	P	10 39 39.7	+0.8
ELK	Elko	39.60	325	P	P	10 39 40.4	+0.4
IMW	Indian Meadow	39.62	332	P	P	10 39 39.6	-0.6
IMW				IAmb	IAmb	10 39 42.1	
	comp=Z,22nm,1.8s						
LMN	Caledonia Moun	39.78	24	P	P	10 39 40.5	-0.6
LMN				IAmb	IAmb	10 39 41.2	
	comp=Z,22nm,0.9s						
RLMT	Red Lodge	39.84	334	P	P	10 39 42.0	+0.1
	baz=143,SNR=7.5						
PRPB	Parauapebas	39.84	113	*e*P	P	10 39 41.9	-0.1
LKWY	Lake	39.89	333	P	P	10 39 42.4	0.0
NV11	Mina Array Sit	39.91	320	P	P	10 39 43.7	+1.2
NV11				IAmb	IAmb	10 39 47.1	
	comp=Z,23nm,0.9s						
LAO	LASA Array	39.94	339	P	P	10 39 42.0	-0.5
LAO				IAmb	IAmb	10 39 43.1	
	comp=Z,26nm,1.4s						
LAO	LASA Array	39.94	339	P	P	10 39 41.8	-0.7
	baz=148						
SALV	Santo Antonio	39.98	130	*e*P	P	10 39 43.2	+0.1
OMMB	Old Mammoth Mi	39.99	318	P	P	10 39 46.2	+2.9
OMMB				IAmb	IAmb	10 39 47.6	
	comp=Z,39nm,1.8s						
NVAR	Mina Array Bea	40.01	320	P	P	10 39 45.6	+2.2
	comp=Z,15nm,0.8s,baz=134,slow=7.6,SNR=106						
NVAR				PcP	PcP	10 41 50.4	+2.0
	comp=Z,5.3nm,0.7s,baz=136,slow=4.6,SNR=16						
	comp=Z,15nm,0.8s						
NVAR	Mina Array Bea	40.01	320	P	P	10 39 46.3	+2.9
LHV	Little Huntoon	40.03	319	IAmb	IAmb	10 39 48.2	
	comp=Z,23nm,0.9s						
MDPB	Devils Postpil	40.05	318	IAmb	IAmb	10 39 48.1	
	comp=Z,17nm,1.0s						
KVN	Kaiserville	40.24	320	P	P	10 39 47.8	+2.5
KVN				IAmb	IAmb	10 39 49.2	
	comp=Z,14nm,0.8s						
ULM	Lac du Bonnet	40.50	350	P	P	10 39 43.9	-3.2
	comp=Z,11nm,0.9s,baz=169,slow=10,SNR=11						
ULM				PcP	PcP	10 41 49.3	-0.1
	comp=Z,6.3nm,0.7s,baz=160,slow=3.5,SNR=6.5						
	comp=Z,11nm,0.9s						
ULM	Lac du Bonnet	40.50	350	P	P	10 39 44.7	-2.3
ULM				IAmb	IAmb	10 39 46.7	
	comp=Z,12nm,0.9s						
BATG	Bathurst New B	40.51	21	P	P	10 39 46.8	-0.4
BATG				IAmb	IAmb	10 39 47.0	
	comp=Z,23nm,1.1s						
BMN	Battle Mountai	40.55	323	IAmb	IAmb	10 39 51.5	
	comp=Z,17nm,1.2s						
WAKR	Walker	40.78	319	IAmb	IAmb	10 39 54.3	
	comp=Z,19nm,1.0s						
DGMT	Dagmar	40.81	342	IAmb	IAmb	10 39 59.0	
	comp=Z,27nm,0.9s						
DGMT	Dagmar	40.81	342	P	P	10 39 49.1	-0.6
	baz=152,SNR=7.5						
YERR	Yerington	40.92	320	P	P	10 39 53.0	+2.1
YERR				IAmb	IAmb	10 39 55.0	
	comp=Z,14nm,0.9s						
HLID	Hailey	41.08	329	P	P	10 39 53.0	+0.8
HLID	Hailey	41.08	329	P	P	10 39 52.7	+0.6
	baz=135,SNR=8.8						
CMB	Columbia Colle	41.14	318	P	P	10 39 52.7	+0.2
MCMT	McKenzie Canyo	41.23	331	P	P	10 39 54.6	+1.2
SNDB	Serra Nova Dou	41.24	122	*e*P	P	10 39 54.2	+0.6
BOZ	Bozeman (W)	41.24	333	P	P	10 39 53.9	+0.4
BOZ	Bozeman (W)	41.24	333	P	P	10 39 54.0	+0.6

	baz=140,SNR=12						
PANT	**Pantanal (Braz**	**41.32**	**135**	*e*P	**P**	**10 39 55.1**	**+0.9**
PAHR	**Pah Rah Range**	**41.43**	**320**	IAmb	IAmb	10 39 58.9	
	comp=Z,32nm,1.7s						
EMB	**Emerald Bay**	**41.47**	**319**	P	**P**	**10 39 58.5**	**+3.0**
EMB				IAmb	IAmb	10 39 59.9	
	comp=Z,27nm,1.3s						
DLMT	**Dillon**	**41.51**	**332**	IAmb	IAmb	10 40 13.1	
	comp=Z,14nm,0.4s						
MPK	**Martis Peak**	**41.60**	**319**	P	**P**	**10 39 58.5**	**+1.9**
MPK				IAmb	IAmb	10 40 01.6	
	comp=Z,32nm,1.1s						
MURT	**Porto Murtinho**	**42.50**	**139**	*e*P	**P**	**10 40 06.0**	**+2.2**
RVDE	**Rio Verde (Bra**	**42.53**	**133**	*e*P	**P**	**10 40 04.5**	**+0.4**
WVOR	**Wild Horse Val**	**42.63**	**324**	P	**P**	**10 40 05.6**	**+0.8**
WVOR				IAmb	IAmb	10 40 08.0	
	comp=Z,11nm,0.7s						
ORV	**Oroville**	**42.70**	**319**	P	**P**	**10 40 08.1**	**+2.9**
ORV				IAmb	IAmb	10 40 10.1	
	comp=Z,24nm,1.2s						
ARAG	**Araguaiana, MT**	**42.85**	**127**	*e*P	**P**	**10 40 06.4**	**-0.2**
AQDB	**Aquidauana**	**42.96**	**136**	P	**P**	**10 40 08.0**	**+0.6**
AQDB	**Aquidauana**	**42.96**	**136**	*e*P	**P**	**10 40 07.7**	**+0.2**
SMTB	**Santa Maria do**	**42.97**	**115**	*e*P	**P**	**10 40 07.8**	**+0.1**
MSO	**Missoula**	**43.23**	**332**	P	**P**	**10 40 09.1**	**-0.4**
MSO	**Missoula**	**43.23**	**332**	P	**P**	**10 40 09.6**	**+0.1**
	baz=138						
MOD	**Modoc Plateau**	**43.29**	**322**	P	**P**	**10 40 10.4**	**+0.3**
BMO	**Blue Mountains**	**43.48**	**328**	P	**P**	**10 40 10.8**	**-0.7**
CO03	**El Pedregal**	**43.66**	**160**	P	**P**	**10 40 14.1**	**+1.0**
CO03				IAmb	IAmb	10 40 21.9	
	comp=Z,11nm,0.8s						
CO02	**Combarbal**	**43.89**	**161**	P	**P**	**10 40 16.1**	**+1.1**
H03N2	**Juan Fernandez**	**44.16**	**171**	T	T	11 27 23.3	
	baz=351,slow=76,SNR=18						
H03N1	**Juan Fernandez**	**44.17**	**171**	T	T	11 27 24.6	
	baz=351,slow=76,SNR=14						
H03N3	**Juan Fernandez**	**44.18**	**171**	T	T	11 27 23.4	
	baz=351,slow=76,SNR=17						
K04D	**Chiloquin, OR**	**44.58**	**322**	P	**P**	**10 40 22.1**	**+1.6**
YBH	**Yreka Blue Hor**	**44.66**	**321**	LR	LR	11 01 44.0	
	comp=Z,163nm,19.8s,baz=174,slow=40						
YBH	**Yreka Blue Hor**	**44.66**	**321**	P	**P**	**10 40 21.7**	**+0.6**
L04D	**Klamath Falls**	**44.68**	**322**	P	**P**	**10 40 20.9**	**-0.4**
PINE	**Pine Mountain**	**44.80**	**324**	P	**P**	**10 40 22.8**	**+0.5**
PINE				IAmb	IAmb	10 40 25.4	
	comp=Z,14nm,0.8s						
WALA	**Waterton Lakes**	**44.90**	**334**	P	**P**	**10 40 23.5**	**+0.6**
WALA				IAmb	IAmb	10 42 06.7	
	comp=Z,22nm,1.6s						
AMBA	**Amambai (Brazi**	**45.11**	**138**	*e*P	**P**	**10 40 25.0**	**+0.2**
I05D	**Terrebonne, OR**	**45.36**	**325**	P	**P**	**10 40 26.6**	**+0.1**
I05D				IAmb	IAmb	10 42 09.9	
	comp=Z,7.3nm,0.7s						
VA01	**Torpederas**	**45.38**	**163**	P	**P**	**10 40 25.8**	**-0.9**
VA03	**San Esteban**	**45.48**	**161**	P	**P**	**10 40 28.2**	**+0.6**
ROC1	**El Roble**	**45.53**	**162**	P	**P**	**10 40 28.1**	**-0.1**
I04A	**Tendick Farm,**	**45.66**	**323**	P	**P**	**10 40 30.1**	**+1.2**
NEW	**Newport**	**45.75**	**331**	P	**P**	**10 40 29.5**	**0.0**
	baz=135						
MT02	**Curacav**	**45.76**	**162**	P	**P**	**10 40 30.0**	**+0.3**
DBO	**Dodson Butte**	**45.76**	**322**	P	**P**	**10 40 31.3**	**+1.5**
DBO				IAmb	IAmb	10 40 32.5	
	comp=Z,9.3nm,0.8s						
BDFB	**Brasilia**	**45.86**	**124**	P	**P**	**10 40 31.6**	**+0.7**
	comp=Z,4.7nm,0.6s,baz=306,slow=12,SNR=6.8						
	comp=Z,4.7nm,0.6s						
BDFB	**Brasilia**	**45.86**	**124**	P	**P**	**10 40 28.5**	**-2.5**
BDFB				IAmb	IAmb	10 40 39.6	
	comp=Z,24nm,1.3s						
BDFB	**Brasilia**	**45.86**	**124**	*e*P	**P**	**10 40 31.6**	**+0.7**
G05A	**Wamic**	**45.90**	**326**	P	**P**	**10 40 32.9**	**+2.1**
FFC	**Flin Flon**	**45.93**	**347**	P	**P**	**10 40 29.4**	**-1.4**
FFC	**Flin Flon**	**45.93**	**347**	P	**P**	**10 40 29.1**	**-1.7**
FFC				pP	**pP**	**10 40 36.0**	**-0.1**
H04A	**Detroit Lake**	**46.05**	**324**	P	**P**	**10 40 33.3**	**+1.3**
H04A				IAmb	IAmb	10 40 41.3	
	comp=Z,13nm,0.6s						
CPUP	**Villa Florida**	**46.09**	**143**	P	**P**	**10 40 32.8**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=286,slow=19,SNR=1.5						
	comp=Z,1.7nm,0.8s						
CPUP	**Villa Florida**	**46.09**	**143**	*e*P	**P**	**10 40 32.3**	**-0.2**
HOOD	**Mount Hood Mea**	**46.13**	**325**	P	**P**	**10 40 34.3**	**+1.6**
I03D	**Drain, OR**	**46.15**	**323**	P	**P**	**10 40 34.0**	**+1.2**
I03D				IAmb	IAmb	10 40 36.3	
	comp=Z,15nm,0.9s						
J01E	**Myrtle Point**	**46.20**	**322**	P	**P**	**10 40 35.0**	**+1.8**
BUCK	**Buck Mountain**	**46.23**	**323**	P	**P**	**10 40 34.4**	**+1.0**
COR	**Corvallis**	**46.64**	**324**	P	**P**	**10 40 38.1**	**+1.6**
COR				pP	**sP**	**10 40 45.0**	**+0.9**
SCHQ	**Schefferville**	**46.90**	**15**	P	**P**	**10 40 35.5**	**-2.9**
	comp=Z,15nm,0.8s,baz=217,slow=7.6,SNR=16						
SCHQ				LR	LR	11 00 40.6	
	comp=Z,152nm,19.7s,baz=216,slow=37						
	comp=Z,15nm,0.8s						
SCHQ	**Schefferville**	**46.90**	**15**	P	**P**	**10 40 35.9**	**-2.6**
SDBA	**SAO DESIDERIO**	**46.91**	**118**	*e*P	**P**	**10 40 38.9**	**-0.2**
IPMB	**Ipameri, GO**	**46.97**	**127**	*e*P	**P**	**10 40 41.1**	**+1.5**
G03D	**McMinnville, O**	**46.98**	**324**	P	**P**	**10 40 40.2**	**+1.0**
LON	**Longmire**	**47.10**	**327**	P	**P**	**10 40 40.5**	**+0.3**
MECA	**Mercedes**	**47.88**	**146**	*e*P	**P**	**10 40 47.5**	**+1.2**
AZCA	**Azaras, Argent**	**48.19**	**143**	*e*P	**P**	**10 40 49.8**	**+0.9**
FCC	**Fort Churchill**	**48.61**	**355**	P	**P**	**10 40 49.5**	**-2.1**
JANB	**Januaria**	**48.65**	**121**	*e*P	**P**	**10 40 52.8**	**+0.2**
CRSM	**Crissiumal (Br**	**48.93**	**141**	*e*P	**P**	**10 40 54.8**	**+0.2**
LLLB	**Lillooet**	**49.62**	**331**	P	**P**	**10 40 59.5**	**-0.1**
ITAB	**Concordia**	**49.95**	**139**	*e*P	**P**	**10 41 02.7**	**+0.4**
BRLDA	**Berland Lookou**	**50.13**	**337**	P	**P**	**10 41 03.0**	**-0.5**
BRLDA				IAmb	IAmb	10 41 13.4	
	comp=Z,11nm,1.1s						
RODS	**Rosario do Sul**	**50.34**	**145**	*e*P	**P**	**10 41 06.2**	**+1.0**
ALGR	**Alto Alegre (B**	**50.49**	**141**	*e*P	**P**	**10 41 05.7**	**-0.7**
CPSB	**Cacapava Do Su**	**51.40**	**143**	*e*P	**P**	**10 41 13.5**	**+0.3**
CNLB	**Canela**	**52.20**	**140**	*e*P	**P**	**10 41 19.7**	**+0.4**
PLTB	**Pedras Altas**	**52.30**	**145**	*e*P	**P**	**10 41 21.9**	**+1.9**
PLCA	**Paso Flores**	**52.92**	**165**	P	**P**	**10 41 25.4**	**+1.0**
	comp=Z,3.9nm,1.0s,baz=8.1,slow=7.1,SNR=6.0						
	comp=Z,3.9nm,1.0s						
PLCA	**Paso Flores**	**52.92**	**165**	P	**P**	**10 41 24.6**	**+0.2**
PLCA				IAmb	IAmb	10 41 33.4	
	comp=Z,10.0nm,0.9s						
PLCA	**Paso Flores**	**52.92**	**165**	P	**P**	**10 41 22.6**	**-1.9**
PLCA				pP	**pP**	**10 41 29.3**	**-0.7**
PLCA				sP	**sP**	**10 41 32.4**	**+0.5**
SJMB	**Sao Joao De Ma**	**53.03**	**123**	*e*P	**P**	**10 41 25.9**	**+0.4**
GUA01	**Guaratinga, BA**	**53.19**	**120**	*e*P	**P**	**10 41 26.6**	**-0.2**
FRB	**Frobisher Bay**	**54.71**	**10**	LR	LR	11 05 38.9	
	comp=Z,334nm,18.3s,baz=194,slow=37						
ABR01	**Abrolhos, BA**	**54.76**	**121**	*e*P	**P**	**10 41 38.9**	**+0.6**
YKA	**Yellowknife Ar**	**55.87**	**345**	P	**P**	**10 41 43.9**	**-1.6**
	comp=Z,3.1nm,0.8s,baz=138,slow=7.4,SNR=36						
YKA				PcP	**PcP**	**10 42 44.3**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=144,slow=4.5,SNR=9.1						
	comp=Z,3.1nm,0.8s						
TAOE	**Nuku Hiva Isla**	**56.96**	**252**	*e*LR	LR	10 58 39.8	
	comp=Z,108nm,22.2s						
DLBC	**Dease Lake**	**58.24**	**335**	LR	LR	11 11 23.8	
	comp=Z,191nm,19.1s,baz=104,slow=41						
DLBC	**Dease Lake**	**58.24**	**335**	P	**P**	**10 42 02.8**	**+0.3**
	baz=127						
U33K	**Whale Pass**	**58.30**	**331**	P	**P**	**10 42 03.7**	**+0.9**
	baz=122						
S34M	**Telegraph Cree**	**58.40**	**334**	P	**P**	**10 42 04.2**	**+0.6**
	baz=125						
WTLY	**Watson Lake, Y**	**58.77**	**337**	P	**P**	**10 42 05.6**	**-0.5**
WTLY				IAmb	IAmb	10 42 14.7	
	comp=Z,16nm,1.3s						
WTLY	**Watson Lake, Y**	**58.77**	**337**	P	**P**	**10 42 06.3**	**+0.1**
	baz=129						
SKAG	**Skagway**	**61.09**	**334**	P	**P**	**10 42 21.1**	**-0.9**
	baz=122						
SFJD	**Kangerlussuaq**	**61.35**	**15**	LR	LR	11 09 20.0	
	comp=Z,212nm,18.9s,baz=226,slow=37						
O30N	**Mendenhall**	**62.10**	**335**	P	**P**	**10 42 29.1**	**+0.2**
	baz=122						
M31M	**Drury Creek, Y**	**62.20**	**337**	P	**P**	**10 42 29.3**	**-0.2**
	baz=124						
N31M	**Braeburn, Yuko**	**62.36**	**336**	P	**P**	**10 42 30.3**	**-0.3**
	baz=122						
M30M	**Minto, Yukon**	**63.34**	**336**	P	**P**	**10 42 37.4**	**+0.2**
	baz=122						
YUK4	**Talbot Arm**	**63.47**	**335**	P	**P**	**10 42 37.7**	**-0.4**
	baz=119						
MAYO	**Mayo, Yukon**	**63.55**	**338**	P	**P**	**10 42 38.9**	**+0.6**
MAYO	**Mayo, Yukon**	**63.55**	**338**	P	**P**	**10 42 39.0**	**+0.6**
	baz=123						
YUK8	**Steele Glacier**	**63.91**	**334**	P	**P**	**10 42 41.9**	**+0.7**
	baz=118						
M29M	**Somme Creek**	**63.94**	**336**	P	**P**	**10 42 41.0**	**-0.1**
	baz=120						
L29M	**L29M**	**64.14**	**337**	P	**P**	**10 42 42.6**	**+0.2**
	baz=120						
K29M	**Barlow Dome**	**64.29**	**337**	P	**P**	**10 42 43.2**	**-0.2**
	baz=122						
RES	**Resolute Bay**	**64.43**	**357**	P	**P**	**10 42 41.8**	**-2.2**
	comp=Z,3.7nm,0.6s,baz=181,slow=9.6,SNR=14						
	comp=Z,3.7nm,0.6s						
RES	**Resolute Bay**	**64.43**	**357**	IAmb	IAmb	10 42 42.5	
	comp=Z,4.6nm,0.7s						
YUK3	**Moose Creek**	**64.44**	**335**	P	**P**	**10 42 44.8**	**+0.2**
	baz=118						
F31M	**Tsiigehtchic**	**65.03**	**342**	P	**P**	**10 42 47.5**	**-0.5**
	baz=127						
DAWY	**Dawson**	**65.12**	**337**	P	**P**	**10 42 48.5**	**-0.3**
	baz=120						
M27K	**Edge Creek, AK**	**65.30**	**335**	P	**P**	**10 42 49.9**	**-0.2**
	baz=116						
EPYK	**Eagle Plains**	**65.37**	**340**	P	**P**	**10 42 49.9**	**-0.4**
	baz=123						
I29M	**Ogilvie Camp,**	**65.38**	**339**	P	**P**	**10 42 49.9**	**-0.5**
	baz=121						
INK	**Inuvik**	**65.49**	**343**	P	**P**	**10 42 49.7**	**-1.3**
	comp=Z,5.4nm,1.0s,baz=119,slow=6.3,SNR=6.1						
INK				PcP	**PcP**	**10 43 22.6**	**-0.1**
	comp=Z,2.9nm,0.8s,baz=165,slow=3.7,SNR=4.6						
	comp=Z,5.4nm,1.0s						
INK	**Inuvik**	**65.49**	**343**	P	**P**	**10 42 50.1**	**-0.9**
INK				IAmb	IAmb	10 42 51.4	
	comp=Z,9.1nm,1.1s						
INK	**Inuvik**	**65.49**	**343**	P	**P**	**10 42 50.3**	**-0.7**
	baz=127,SNR=6.5						
G30M	**tAoh Zraii Nji**	**65.55**	**341**	P	**P**	**10 42 50.7**	**-0.7**
	baz=124						
BCAR	**Beaver Creek A**	**65.58**	**336**	P	**P**	**10 42 51.5**	**-0.3**
L27K	**Beaver Creek,**	**65.60**	**336**	IAmb	IAmb	10 43 01.4	
	comp=Z,7.9nm,1.1s						
L27K	**Beaver Creek,**	**65.60**	**336**	P	**P**	**10 42 51.9**	**0.0**
	baz=117						
A36M	**Sachs Harbour**	**65.89**	**348**	P	**P**	**10 42 51.2**	**-2.3**
	baz=137						
PMOR	**Pomariorio Ree**	**66.09**	**248**	*e*T	T	11 54 55.6	
	comp=Z,2.3nm,0.2s						
EGAK	**Eagle**	**66.13**	**337**	P	**P**	**10 42 54.2**	**-1.0**
	baz=118						
K27K	**Chicken**	**66.14**	**337**	P	**P**	**10 42 54.6**	**-0.7**
	baz=117						
N25K	**Chitina, Valde**	**66.14**	**334**	P	**P**	**10 42 55.9**	**+0.4**
	baz=114						
KLU	**Klutina**	**66.68**	**333**	P	**P**	**10 42 59.1**	**+0.2**
	baz=112						
I27K	**Kandik River**	**66.70**	**338**	P	**P**	**10 42 58.8**	**-0.1**
	baz=118						
SCRK	**Sand Creek**	**66.87**	**336**	P	**P**	**10 43 00.7**	**+0.6**
	baz=115						
H27K	**Steamboat Moun**	**66.96**	**339**	P	**P**	**10 43 00.6**	**0.0**
	baz=118						
M24K	**Tolsona, Glenn**	**67.03**	**334**	P	**P**	**10 43 01.4**	**+0.3**
	baz=112						
RIDG	**Independent Ri**	**67.12**	**336**	P	**P**	**10 43 01.9**	**+0.3**
RIDG				IAmb	IAmb	10 43 11.3	
	comp=Z,13nm,1.1s						
RIDG	**Independent Ri**	**67.12**	**336**	P	**P**	**10 43 01.1**	**-0.5**
	baz=114						
I26K	**Coal Creek Min**	**67.13**	**338**	P	**P**	**10 43 01.4**	**-0.2**
I26K				IAmb	IAmb	10 43 10.3	
	comp=Z,7.4nm,0.8s						
I26K	**Coal Creek Min**	**67.13**	**338**	P	**P**	**10 43 01.4**	**-0.2**
	baz=116						
G27K	**Doyon Strip**	**67.29**	**339**	P	**P**	**10 43 02.0**	**-0.6**
	baz=118						
G26K	**Porcupine Rive**	**68.10**	**339**	P	**P**	**10 43 07.3**	**-0.4**
	baz=116						
HDA	**Harding Lake**	**68.23**	**336**	IAmb	IAmb	10 43 09.2	
	comp=Z,18nm,1.2s						
HDA	**Harding Lake**	**68.23**	**336**	P	**P**	**10 43 08.6**	**0.0**
	baz=112,SNR=6.2						
RC01	**Rabbit Creek A**	**68.26**	**332**	P	**P**	**10 43 09.0**	**+0.2**
	baz=108						
IL31		**68.35**	**336**	P	**P**	**10 43 08.6**	**-0.6**
IL31				IAmb	IAmb	10 43 10.5	
	comp=Z,20nm,1.6s						
ILAR	**Eielson Array**	**68.35**	**336**	P	**P**	**10 43 08.7**	**-0.6**
	comp=Z,3.1nm,0.9s,baz=108,slow=5.0,SNR=20						
	comp=Z,3.1nm,0.9s						
PPT	**Papeete**	**68.45**	**246**	LR	LR	11 04 29.1	
	comp=Z,105nm,18.2s,baz=54,slow=28						
PPT2	**Papeete2**	**68.46**	**246**	*e*LR	LR	11 03 59.0	
	comp=Z,138nm,25.5s						
F26K	**Sheenjek River**	**68.56**	**340**	P	**P**	**10 43 10.7**	**+0.1**
	baz=116						
BMAR	**Burnt Mountain**	**68.59**	**339**	P	**P**	**10 43 09.2**	**-1.6**
RND	**Reindeer**	**68.65**	**335**	P	**P**	**10 43 10.2**	**-1.1**
RND				IAmb	IAmb	10 43 12.5	
	comp=Z,18nm,1.0s						
MCK	**McKinley**	**68.80**	**335**	P	**P**	**10 43 12.0**	**-0.2**
MCK				IAmb	IAmb	10 43 13.5	
	comp=Z,15nm,1.1s						
MCK	**McKinley**	**68.80**	**335**	P	**P**	**10 43 12.3**	**+0.2**
	baz=110						
G25K	**Bearman Lake**	**68.85**	**338**	P	**P**	**10 43 12.4**	**+0.1**
	baz=114						
F25K	**Christian Rive**	**69.03**	**339**	P	**P**	**10 43 13.8**	**+0.3**
	baz=115						
H24K	**Noodor Dome**	**69.14**	**337**	P	**P**	**10 43 13.8**	**-0.4**
	baz=112						
NEA2	**Nenana**	**69.15**	**336**	P	**P**	**10 43 13.9**	**-0.4**
NEA2				IAmb	IAmb	10 43 15.2	
	comp=Z,8.1nm,1.0s						
NEA2	**Nenana**	**69.15**	**336**	P	**P**	**10 43 13.9**	**-0.4**
	baz=110						
E25K	**Arctic Village**	**69.23**	**340**	P	**P**	**10 43 14.7**	**0.0**
	baz=115						
TRF	**Thorofare Moun**	**69.27**	**334**	P	**P**	**10 43 15.2**	**-0.1**
TRF				IAmb	IAmb	10 43 27.1	
	comp=Z,10nm,0.9s						
TRF	**Thorofare Moun**	**69.27**	**334**	P	**P**	**10 43 15.1**	**-0.1**
	baz=109						
C27K	**Jago River**	**69.30**	**342**	P	**P**	**10 43 15.2**	**+0.1**
	baz=117						
G24K	**Hadweenzic Riv**	**69.32**	**338**	P	**P**	**10 43 15.3**	**0.0**
	baz=113						
SKT	**Skwentna**	**69.36**	**333**	P	**P**	**10 43 15.6**	**0.0**
	baz=107						
SPU	**Mount Spurr**	**69.36**	**332**	P	**P**	**10 43 14.4**	**-1.3**
I23K	**Minto, Yukon-K**	**69.46**	**336**	P	**P**	**10 43 16.1**	**-0.1**
I23K	**Minto, Yukon-K**	**69.46**	**336**	P	**P**	**10 43 16.0**	**-0.2**
	baz=110						
KTH	**Kantishna Hill**	**69.57**	**334**	IAmb	IAmb	10 43 25.4	
	comp=Z,8.6nm,0.8s						
BPAW	**Bear Paw Mtn.**	**69.77**	**335**	IAmb	IAmb	10 43 18.7	
	comp=Z,9.6nm,0.9s						
BPAW	**Bear Paw Mtn.**	**69.77**	**335**	P	**P**	**10 43 17.7**	**-0.4**
	baz=108,SNR=6.8						
H23K	**Yukon River**	**69.77**	**337**	P	**P**	**10 43 17.9**	**-0.3**
	baz=110						
F24K	**Squaw Lake**	**69.79**	**339**	P	**P**	**10 43 18.4**	**+0.2**
	baz=112						
C26K	**Camden Bay**	**69.80**	**342**	P	**P**	**10 43 18.0**	**-0.2**
	baz=116						
PPLA	**Purkeypile**	**69.92**	**334**	P	**P**	**10 43 18.5**	**-0.8**
	baz=107						
MLY	**Manley**	**69.97**	**336**	P	**P**	**10 43 19.0**	**-0.4**
MLY				IAmb	IAmb	10 43 28.0	
	comp=Z,8.5nm,0.8s						
MLY	**Manley**	**69.97**	**336**	P	**P**	**10 43 18.9**	**-0.5**
	baz=109,SNR=9.4						
CAST	**Castle Rocks**	**70.03**	**334**	P	**P**	**10 43 19.6**	**-0.2**
CAST				IAmb	IAmb	10 43 43.0	
	comp=Z,21nm,1.7s						
CAST	**Castle Rocks**	**70.03**	**334**	P	**P**	**10 43 18.9**	**-0.9**
	baz=107						
O19K	**Port Alsworth**	**70.18**	**330**	P	**P**	**10 43 19.8**	**-0.8**
	baz=104						
CHUM	**Lake Minchumin**	**70.26**	**335**	P	**P**	**10 43 20.2**	**-0.9**
	baz=107						
G23K	**Bananza Creek**	**70.27**	**338**	P	**P**	**10 43 21.0**	**-0.2**
	baz=110						
H22K	**Ishtalitna Cre**	**70.51**	**337**	P	**P**	**10 43 22.1**	**-0.5**
	baz=109						
COLD	**Coldfoot**	**70.51**	**338**	P	**P**	**10 43 23.6**	**+1.0**
COLD				IAmb	IAmb	10 43 24.4	
	comp=Z,7.8nm,1.0s						
COLD	**Coldfoot**	**70.51**	**338**	P	**P**	**10 43 22.8**	**+0.2**
	baz=110						
I21K	**Tanana**	**70.52**	**336**	P	**P**	**10 43 22.5**	**-0.2**
I21K				IAmb	IAmb	10 43 23.3	
	comp=Z,10nm,1.2s						
I21K	**Tanana**	**70.52**	**336**	P	**P**	**10 43 22.1**	**-0.6**
	baz=108						
L20K	**Farewell, AK**	**70.55**	**333**	P	**P**	**10 43 22.3**	**-0.7**
	baz=105						
E23K	**Chandalar**	**70.60**	**339**	P	**P**	**10 43 23.3**	**+0.1**
	baz=111						
K20K	**Telida**	**70.87**	**334**	P	**P**	**10 43 24.2**	**-0.6**
K20K				IAmb	IAmb	10 43 38.9	
	comp=Z,12nm,1.3s						
K20K	**Telida**	**70.87**	**334**	P	**P**	**10 43 23.9**	**-1.0**
	baz=105						
C24K	**Franklin Bluff**	**70.92**	**341**	P	**P**	**10 43 24.4**	**-0.6**
	baz=112						
L19K	**White Mountain**	**70.92**	**332**	P	**P**	**10 43 24.3**	**-0.9**
	baz=104						
H21K	**Melozitna Rive**	**70.99**	**336**	P	**P**	**10 43 24.6**	**-0.9**
H21K				IAmb	IAmb	10 44 29.5	
	comp=Z,19nm,1.8s						
H21K	**Melozitna Rive**	**70.99**	**336**	P	**P**	**10 43 24.7**	**-0.9**
	baz=107						
D23K	**Nanushuk River**	**71.29**	**340**	P	**P**	**10 43 27.7**	**+0.4**
	baz=110						
E22K	**Anaktuvuk Pass**	**71.40**	**339**	P	**P**	**10 43 27.9**	**-0.1**
	baz=109,SNR=5.4						
O17K	**Koliganek Bris**	**71.44**	**330**	P	**P**	**10 43 27.7**	**-0.6**
	baz=101						
G21K	**Allakaket**	**71.52**	**337**	P	**P**	**10 43 28.8**	**0.0**
	baz=107						
TTA	**Tatalina**	**71.62**	**333**	P	**P**	**10 43 28.6**	**-0.9**
	baz=103						
F21K	**Alatna River**	**71.72**	**338**	P	**P**	**10 43 30.1**	**+0.1**
	baz=107						
UNV	**Unalaska Valle**	**75.92**	**323**	P	**P**	**10 43 54.5**	**-0.3**
UNV	**Unalaska Valle**	**75.92**	**323**	P	**P**	**10 43 55.4**	**+0.7**
	baz=92						
ANM	**Nome**	**75.99**	**334**	P	**P**	**10 43 55.6**	**+0.6**
	baz=95						
JMIC	**Jan Mayen**	**76.22**	**19**	LR	LR	11 17 35.9	
	comp=Z,45nm,21.9s,baz=342,slow=36						
PMSA	**Palmer Station**	**76.82**	**170**	*e*P	**P**	**10 44 01.9**	**+2.4**
TNA	**Tin City**	**77.14**	**335**	P	**P**	**10 44 02.0**	**+0.6**
	baz=93						
MDT	**Midelt**	**77.45**	**59**	LR	LR	11 15 15.4	
	comp=Z,164nm,18.8s,baz=340,slow=34						
ESDC	**Sonseca Array**	**77.52**	**52**	P	**P**	**10 44 02.1**	**-2.0**
	comp=Z,2.6nm,0.8s,baz=282,slow=5.7,SNR=9.8						
	comp=Z,2.6nm,0.8s						
EKA	**Eskdalemuir Ar**	**77.58**	**36**	P	**P**	**10 44 00.5**	**-3.6**
	comp=Z,2.2nm,0.8s,baz=251,slow=4.4,SNR=2.0						
	comp=Z,2.2nm,0.8s						
RAR	**Rarotonga**	**78.72**	**246**	LR	LR	11 09 36.7	
	comp=Z,76nm,21.3s,baz=136,slow=28						
SPITS	**Spitsbergen Ar**	**82.44**	**12**	LR	LR	11 21 14.2	
	comp=Z,136nm,18.3s,baz=274,slow=36						
TORD	**Torodi Ar. Bea**	**85.70**	**77**	P	**P**	**10 44 44.8**	**-3.0**
	comp=Z,0.8nm,0.9s,baz=288,slow=5.8,SNR=1.0						
	comp=Z,0.8nm,0.9s						
BILL	**Bilibino**	**86.83**	**339**	P	**P**	**10 44 52.3**	**-0.1**
BILL				IAmb	IAmb	10 44 54.2	
	comp=Z,10nm,1.3s						
CLL	**Collm**	**87.67**	**38**	*e*P	**P**	**10 44 59.0**	**+2.2**
AFI	**Afiamalu**	**88.19**	**256**	LR	LR	11 13 53.9	
	comp=Z,58nm,20.3s,baz=130,slow=28						
TIXI	**Tiksi**	**94.85**	**349**	P	**P**	**10 45 28.5**	**-1.2**
TIXI				IAmb	IAmb	10 45 29.3	
	comp=Z,3.6nm,0.5s						
FNA	**Florina**	**96.27**	**47**	P	**P**	**10 45 33.5**	**-3.5**
MSVF	**Nonsavu**	**98.49**	**254**	LR	LR	11 22 43.2	
	comp=Z,52nm,18.1s,baz=202,slow=31						
KURBB	**Kurchatov Arra**	**117.78**	**11**	PKP	**PKPdf**	**10 50 54.2**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=341,slow=2.1,SNR=12						
SONM	**Songino Array**	**120.93**	**350**	PKP	**PKPdf**	**10 51 00.2**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=349,slow=1.5,SNR=4.4						
GEYT	**Alibeck**	**121.48**	**33**	PKP	**PKiKP**	**10 51 02.2**	**-0.1**
	comp=Z,3.6nm,0.6s,baz=289,slow=4.4,SNR=5.1						
MKAR	**Makanchi Array**	**122.13**	**9**	PKP	**PKPdf**	**10 51 02.2**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=16,slow=2.5,SNR=6.4						
KSRS	**Korea Array**	**122.61**	**328**	PKP	**PKiKP**	**10 51 04.9**	**+0.5**
	comp=Z,4.3nm,0.6s,baz=4.9,slow=1.5,SNR=29						
WMQ	**Urumqi**	**125.74**	**5**	*e*P	**PKiKP**	**10 51 10.5**	**-0.1**
HHC	**Hu-ho-hao-te**	**126.40**	**343**	*e*P	**PKPdf**	**10 51 11.3**	**-0.3**
NJ2	**Nanjing**	**131.42**	**331**	*e*P	**PKPdf**	**10 51 21.1**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ASAR	**Alice Springs**	**139.56**	**246**	PKhKP	PKPpre	10 51 28.9	
	comp=Z,0.3nm,0.7s,baz=107,slow=3.9,SNR=6.6						
ASAR				PKP	**PKPdf**	**10 51 36.0**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=102,slow=1.9,SNR=18						
WRA	**Warramunga Arr**	**139.80**	**251**	PKhKP	PKPpre	10 51 28.4	
	comp=Z,0.3nm,0.7s,baz=102,slow=3.3,SNR=5.5						
WRA				PKP	**PKPdf**	**10 51 36.5**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=95,slow=2.7,SNR=22						
PZH	**PanZhiHua**	**142.49**	**348**	PKPbc	**PKPdf**	**10 51 40.3**	**-1.7**
CMAR	**Chiang Mai Arr**	**150.86**	**350**	PKPbc	**PKPbc**	**10 52 01.2**	**-0.5**
	comp=Z,3.8nm,0.8s,baz=310,slow=2.7,SNR=10						

IDC 17 10:33:58.1±1.6,**1°.04N**×**126°.14E,h0^{km},mb3.6**/4,
mbtmp3.6/4,**Error ellipse: s-maj=173.6km**
s-min=21.9km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.35**	**159**	P	P	10 38 57.7	-0.2
	1.0nm,0.5s,baz=338,slow=10,SNR=35						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**25.69**	**163**	P	P	10 39 30.1	0.0
	0.4nm,0.3s,baz=347,slow=7.6,SNR=9.4						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**59.44**	**326**	P	P	10 44 02.4	-0.4
	0.2nm,0.4s,baz=121,slow=7.5,SNR=6.0						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**62.72**	**334**	P	P	10 44 25.3	+0.5
	0.6nm,0.5s,baz=150,slow=6.0,SNR=1.9						
	0.6nm,0.5s						

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*ISK **17** 10:47:20.3, 38°.47N×31°.82E, h2^{km}, ML2.7*
*DDA **17** 10:47:20.8±0.0, 38°.47N×31°.79E, h5^{km}±2^{km}, MW3.6*
*IDC **17** 10:47:20.3±1.2, 38°.58N×31°.70E, h0^{km}, mb3.6/5,*
mbtmp3.5/6, ML3.6/1, MS3.4/2, Error ellipse: s-maj=40.2km
s-min=15.8km az=142.0
ISC 17 10:47:21.2±1.0,**38°.47N**±0°.02×**31°.80E**±0°.02,**h5^{km}**±8^{km},
n104,σ$0^s.67$/125,**mb3.5**/5,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDHN	**Kadinhani**	**0.25**	**78**	SPECP		10 47 26.0	
KDHN				P	**Pg**	**10 47 26.4**	**+0.2**
KDHN				S	**Sg**	**10 47 29.8**	**+0.2**
KDHN				*i* AML	AML	10 47 30.0	
	comp=N,8μm,0.6s						
KDHN				*i* AML	AML	10 47 32.0	
	comp=E,6μm,0.4s						
DOGA	**KONYA_Doganhis**	**0.38**	**196**	SPECP		10 47 28.0	
DOGA				P	**Pg**	**10 47 28.8**	**+0.2**
DOGA				S	**Sg**	**10 47 34.1**	**+0.5**
DOGA				*i* AML	AML	10 47 36.0	
	comp=E,3μm,0.5s						
DOGA				*i* AML	AML	10 47 37.0	
	comp=N,4μm,0.4s						
KIZT	**Kizilcal**	**0.41**	**9**	Pg	**Pg**	**10 47 29.3**	**0.0**
KIZT				Sg	**Sg**	**10 47 35.7**	**+0.9**
YVAC	**Isparta, Yalva**	**0.48**	**246**	SPECP		10 47 30.0	
YVAC				P	**Pg**	**10 47 30.7**	**+0.1**
LADK	**Ladik-KONYA**	**0.52**	**121**	Pg	**Pg**	**10 47 31.0**	**-0.3**
LADK				Sg	**Sg**	**10 47 38.6**	**+0.6**
KONT	**Konya--Tatoy**	**0.69**	**140**	Pg	**Pg**	**10 47 33.9**	**-0.5**
KONT	**Konya--Tatoy**	**0.69**	**140**	SPECP		10 47 34.0	
KONT				P	**Pg**	**10 47 34.7**	**+0.3**
KONT				*i* AML	AML	10 47 46.0	
	comp=E,1μm,0.1s						
KONT				*i* AML	AML	10 47 48.0	
	comp=N,1μm,0.6s						
KURO	**Afyon-Bolvadin**	**0.73**	**292**	SPECP		10 47 35.0	
KURO				P	**Pg**	**10 47 35.2**	**-0.1**
KURO				S	**Sg**	**10 47 45.1**	**+0.4**
KURO				*i* AML	AML	10 47 47.0	
	comp=N,702nm,0.2s						
KMER	**Konya-Meram**	**0.83**	**147**	SPECP		10 47 37.0	
KMER				P	**Pg**	**10 47 37.5**	**+0.3**
KMER				*i* AML	AML	10 47 56.0	

	comp=N,1µm,0.7s						
KMER				*i* AML	AML	10 47 56.0	
	comp=E,1µm,0.3s						
CHBY	Cihanbeyli	0.86	82	Pg	Pg	10 47 37.2	-0.6
CHBY				Sg	Sg	10 47 49.4	+0.4
ALIN	Konya, Altinte	0.86	101	SPECP		10 47 37.0	
ALIN				P	Pg	10 47 37.5	-0.3
ALIN				S	Sg	10 47 48.0	-1.1
ALIN				*i* AML	AML	10 47 50.0	
	comp=N,502nm,0.3s						
ALIN				*i* AML	AML	10 47 51.0	
	comp=E,490nm,0.7s						
BAGO	Egridir - ISPA	0.93	239	SPECP		10 47 38.0	
BAGO				P	Pg	10 47 39.0	-0.1
SHUT	Suhut-Afyon	0.98	275	Pg	Pg	10 47 39.9	-0.2
SVRH	Sivrihisar-ESK	1.00	348	Pg	Pg	10 47 39.9	-0.5
SEDI	Konya, Seydise	1.02	182	SPECP		10 47 40.0	
SEDI				P	Pg	10 47 40.2	-0.6
SEDI				S	Sg	10 47 53.2	-0.7
SEDI				*i* AML	AML	10 47 57.0	
	comp=E,739nm,0.8s						
SEDI				*i* AML	AML	10 47 59.0	
	comp=N,620nm,0.7s						
CIFT	Cifteler, Eski	1.06	327	Pg	Pg	10 47 41.3	-0.3
SEYD	Seydisehir-KON	1.06	178	Pg	Pg	10 47 41.5	-0.1
KULU	Kulu	1.10	58	Pn	Pg	10 47 42.1	-0.3
KULU				Sn	Sb	10 47 57.7	+0.1
KKUL	Konya-Kulu	1.12	51	SPECP		10 47 43.0	
KKUL				P	Pb	10 47 43.4	+0.2
KKUL				S	Sb	10 47 58.1	0.0
KKUL				*i* AML	AML	10 48 02.0	
	comp=N,385nm,0.6s						
KKUL				*i* AML	AML	10 48 06.0	
	comp=E,417nm,1.1s						
SUTC	Sutluce-Ispart	1.18	213	Pn	Pg	10 47 43.8	0.0
ISP	Isparta	1.20	238	Pn	Pg	10 47 44.3	+0.1
AFYO	Afyonkarahisar	1.22	286	P	Pg	10 47 44.2	-0.4
AFYO				S	Sn	10 48 02.1	+0.2
AFYO				*i* AML	AML	10 48 08.0	
	comp=N,924nm,0.7s						
AFYO				*i* AML	AML	10 48 11.0	
	comp=E,818nm,0.8s						
AUKIR	Kırka- Seyitga	1.28	310	P	Pg	10 47 45.2	-0.6
SGAZ	Eskisehir, Sey	1.30	325	P	Pn	10 47 45.1	-1.0
SGAZ				*i* AML	AML	10 48 06.0	
	comp=E,889nm,0.2s						
SGAZ				*i* AML	AML	10 48 06.0	
	comp=N,804nm,0.2s						
KZIL	AFYON_Kizioren	1.32	261	SPECP		10 47 45.0	
KZIL				P	Pn	10 47 45.6	-0.9
KZIL				*i* AML	AML	10 48 07.0	
	comp=E,592nm,0.6s						
KZIL				*i* AML	AML	10 48 07.0	
	comp=N,404nm,0.4s						
BCK	Bucak	1.39	224	Pn	Pn	10 47 47.4	0.0
AFSR	Afar-Bala (An	1.39	45	Pn	Pn	10 47 47.5	+0.1
AUMIH	MIHALICIK	1.42	350	P	Pg	10 47 49.1	+0.7
AUMIH				S	Sn	10 48 08.2	+1.2
AUMIH				*i* AML	AML	10 48 11.0	
	comp=E,490nm,0.7s						
AUMIH				*i* AML	AML	10 48 13.0	
	comp=N,579nm,0.4s						
SERE	Sereflikochisa	1.46	70	Pn	Pb	10 47 48.8	-0.2
BASM	Basmaki-Afyon	1.48	249	Pn	Pb	10 47 49.2	-0.2
BUCA	Burdur, Bucak-	1.50	221	SPECP		10 47 50.0	
BUCA				P	Pg	10 47 50.4	+0.3
KKBE	Karaman, Kazim	1.54	144	P	Pb	10 47 50.5	+0.1
KKBE				S	Sg	10 48 11.3	+0.5
KKBE				*i* AML	AML	10 48 15.0	
	comp=E,283nm,0.7s						
KKBE				*i* AML	AML	10 48 18.0	
	comp=N,253nm,1.9s						
BRDR	BURDUR-Merkez	1.57	241	SPECP		10 47 51.0	
BRDR				P	Pb	10 47 51.1	+0.2
BRDR				*i* AML	AML	10 48 15.0	
	comp=E,312nm,0.6s						
BRDR				*i* AML	AML	10 48 21.0	
	comp=N,297nm,0.7s						
ANTO	Ankara	1.60	29	Pn	Pn	10 47 50.5	+0.3
HDMB	Hadim	1.60	160	Pn	Pn	10 47 50.5	+0.1
YAYX	Yaylak	1.64	73	Pn	Pn	10 47 51.4	+0.5
KRMN	Karaman	1.74	138	Pn	Pn	10 47 52.4	+0.2
KAMT	Kaman	1.74	58	Pn	Pn	10 47 52.3	0.0
BORA	Eskisehir	1.75	324	SPECP		10 47 52.0	
BORA				P	Pn	10 47 52.5	0.0
BORA				S	Sb	10 48 16.4	0.0
BORA				*i* AML	AML	10 48 21.0	
	comp=N,173nm,0.3s						
BORA				*i* AML	AML	10 48 23.0	
	comp=E,349nm,0.9s						
KIRS	Kirsehir-Merke	1.78	68	SPECP		10 47 53.0	
KIRS				P	Pb	10 47 53.6	-0.8
KIRS				S	Sg	10 48 18.2	-0.3
KIRS				*i* AML	AML	10 48 20.0	
	comp=N,190nm,0.8s						
KIRS				*i* AML	AML	10 48 24.0	
	comp=E,145nm,0.9s						
ANDZ	Kutahya, Merke	1.81	306	P	Pn	10 47 53.4	+0.2
ANTB	Antalya	1.81	210	Pn	Pn	10 47 53.7	+0.6
SRCK	Saricakaya, Es	1.81	330	Pn	Pn	10 47 53.6	+0.4
PASA	Karahalli, USA	1.82	267	SPECP		10 47 54.0	
PASA				P	Pn	10 47 54.1	+0.8
KORT	Korkueli	1.86	219	Pn	Pn	10 47 54.6	+0.7
KORT	Korkueli	1.86	219	P	Pb	10 47 55.4	-0.4
BR131	Keskin Array S	1.90	48	Pn	Pn	10 47 55.1	+0.6
BRTR	Keskin Array B	1.90	48	Pn	Pn	10 47 55.0	+0.6
	5.8nm,0.3s,baz=219,slow=15,SNR=90						
BRTR				Sn	Sb	10 48 21.1	+0.4
	11nm,0.3s,baz=218,slow=25,SNR=20						
GDZ	Gediz	1.91	290	SPECP		10 47 54.0	
GDZ				P	Pn	10 47 54.6	-0.1
GDZ	Gediz	1.91	290	P	Pn	10 47 54.9	+0.2
GULA	Gulagac	1.92	93	Pn	Pn	10 47 55.0	+0.3
YUVA	Yuva-Kibriscik	1.92	357	Pn	Pn	10 47 54.8	+0.1
KIBS	BOLU	1.95	1	P	Pb	10 47 56.3	-1.0
GEDZ	Gediz	1.95	288	Pn	Pn	10 47 55.4	+0.3
AKPI	Kirsehir/Akpin	2.00	58	SPECP		10 47 56.0	
AKPI				P	Pn	10 47 56.5	+0.7
AKPI				*i* AML	AML	10 48 28.0	
	comp=E,156nm,0.6s						
AKPI				*i* AML	AML	10 48 30.0	
	comp=N,169nm,1.0s						
SUSU	Bolu-G¶ynk-	2.01	339	SPECP		10 47 56.0	
SUSU				P	Pn	10 47 56.8	+0.9
MDUB	Mudurnu	2.05	347	Pn	Pn	10 47 56.9	+0.4
TVSB	Tavsanli	2.07	299	Pn	Pn	10 47 57.0	+0.2
KERG	Konya-Eregli	2.12	119	SPECP		10 47 58.0	
KERG				P	Pn	10 47 58.1	+0.7
BTAS	Taskesti	2.19	344	P	Pn	10 47 59.5	+1.1
GULT	Gulveren	2.20	334	Pn	Pn	10 47 59.1	+0.6
APMY	Acipayam-Deniz	2.21	244	Pn	Pn	10 47 59.1	+0.4
MCUR	KIREHR	2.24	71	SPECP		10 48 00.0	
MCUR				P	Pn	10 48 00.4	+1.3
MCUR				*i* AML	AML	10 48 34.0	
	comp=N,113nm,0.8s						
MCUR				*i* AML	AML	10 48 36.0	
	comp=E,68nm,0.8s						
DELI	KIRIKKALE	2.25	47	SPECP		10 47 59.0	
DELI				P	Pn	10 47 59.5	+0.3
DELI				S	Sn	10 48 28.3	+0.9
DELI				*i* AML	AML	10 48 34.0	
	comp=E,77nm,0.6s						
DELI				*i* AML	AML	10 48 47.0	
	comp=N,76nm,1.0s						
BILE	Bilecik/Merkez	2.25	319	SPECP		10 47 59.0	
BILE				P	Pn	10 47 59.9	+0.6
BILE	Bilecik/Merkez	2.25	319	P	Pn	10 47 59.6	+0.3
GAZI	Gazipasa	2.27	169	Pn	Pn	10 48 00.5	+1.1
GAZI	Gazipasa	2.27	169	SPECP		10 48 00.0	
GAZI				P	Pn	10 48 00.8	+1.4
ELL	Elmali	2.28	222	Pn	Pn	10 48 00.4	+0.7
SIMA	Simav-Kutahya	2.29	286	Pn	Pn	10 48 00.2	+0.5
CDAG	Cicekdag	2.31	59	SPECP		10 48 00.0	
CDAG				P	Pn	10 48 00.9	+0.8
CDAG				S	Sn	10 48 29.4	+0.4
CDAG				*i* AML	AML	10 48 43.0	
	comp=N,144nm,0.9s						
CDAG				*i* AML	AML	10 48 44.0	
	comp=E,195nm,0.8s						
GEYV	SAKARYA_Geyve	2.32	330	SPECP		10 48 00.0	
GEYV				P	Pn	10 48 00.4	+0.3
BCAM	Yenicaga	2.35	5	SPECP		10 48 00.0	
BCAM				P	Pn	10 48 00.8	+0.1
NIDE	Nigde/Merkez-G	2.39	100	SPECP		10 48 03.0	
NIDE				P	Pb	10 48 03.5	-1.4
BERE	Bereket-Mersin	2.40	151	Pn	Pn	10 48 01.6	+0.2
AKUM	Antalya-Kumluc	2.44	209	P	Pb	10 48 05.3	-0.3
AKUM				S	Sg	10 48 39.0	-0.5
AKUM				*i* AML	AML	10 48 58.0	
	comp=N,67nm,1.9s						
AKUM				*i* AML	AML	10 49 01.0	
	comp=E,82nm,1.1s						
HISA	Bilecik-Osmane	2.47	325	P	Pn	10 48 02.6	+0.4
DEMI	Demirci	2.48	284	SPECP		10 48 02.0	
DEMI				P	Pn	10 48 02.6	+0.2
CAME	Cameli-Denizli	2.50	233	Pn	Pn	10 48 03.7	+1.0
YIGI	Dzce	2.50	354	P	Pn	10 48 03.2	+0.6
KOZK	Kozakli-Nevseh	2.51	72	Pn	Pn	10 48 03.4	+0.6
ULDT	Uludag	2.66	310	P	Pn	10 48 05.2	+0.2
ULDT				S	Pg	10 48 11.0	-1.2
ULDT				*i* AML	AML	10 48 12.0	
	comp=E,95nm,0.4s						
ULDT				*i* AML	AML	10 48 13.0	
	comp=N,99nm,0.6s						
GULN	MERSIN_Gulnar	2.67	148	P	Pn	10 48 05.9	+1.0
GULN				S	Sg	10 48 45.1	-2.0
GULN				*i* AML	AML	10 48 50.0	
	comp=N,99nm,0.7s						
GULN				*i* AML	AML	10 48 52.0	
	comp=E,128nm,0.9s						
IKL	Isikli	2.69	145	Pn	Pn	10 48 06.1	+1.0
AKKU	Akkuyu-Mersin	2.70	148	Pn	Pn	10 48 05.9	+0.6
KIZK	Mersin	2.72	136	Pn	Pn	10 48 06.4	+0.8
KAYN	Sakarya, Kayna	2.73	336	P	Pn	10 48 06.4	+0.6
KAYN				S	Pg	10 48 15.1	+1.4
KAYN				*i* AML	AML	10 48 17.0	
	comp=N,23nm,0.6s						
KAYN				*i* AML	AML	10 48 20.0	
	comp=E,24nm,0.7s						
SIRC	Yozgat	2.75	71	SPECP		10 48 07.0	
SIRC				P	Pn	10 48 07.4	+1.3
YLV	Yalova	2.81	319	Pn	Pn	10 48 07.9	+1.0
GEMT	Gemlik	2.82	315	Pn	Pn	10 48 07.5	+0.6
DURS	Dursunbey	2.83	295	SPECP		10 48 07.0	
DURS				P	Pn	10 48 07.6	+0.5
AKAS	Kas	2.84	219	Pn	Pn	10 48 08.2	+0.9
SEMS	Kocaeli-K¶rfe	2.88	327	P	Pn	10 48 07.4	-0.4
SEMS				S	Pg	10 48 16.5	+0.1
SEMS				*i* AML	AML	10 48 17.0	
	comp=N,44nm,0.9s						
SEMS				*i* AML	AML	10 48 19.0	
	comp=E,22nm,0.7s						
BKES	Balkesir-Mer	3.26	294	P	Pn	10 48 14.0	+0.9
BALY	Balya	3.49	293	P	Pn	10 48 17.2	+1.0
BUHA	Balikesir, Bur	3.82	287	P	Pn	10 48 21.8	+1.0
MMAI	Mount Meron Ar	6.18	151	Pn	Pn	10 48 55.3	+2.1
	1.3nm,0.3s,baz=334,slow=12,SNR=2.8						
	0.4nm,0.2s						
KURBB	Kurchatov Arra	34.88	54	P	P	10 54 13.7	+0.3
	1.5nm,0.8s,baz=277,slow=8.7,SNR=9.9						
	1.5nm,0.8s						
TORD	Torodi Ar. Bea	36.72	235	P	P	10 54 28.9	-0.6
	0.6nm,0.7s,baz=30,slow=8.9,SNR=4.0						
	0.6nm,0.7s						
MKAR	Makanchi Array	37.51	61	P	P	10 54 35.6	-0.4
	0.3nm,0.4s,baz=293,slow=7.4,SNR=4.1						
	0.3nm,0.4s						
ZALV	Zalesovo Beam	38.85	49	P	P	10 54 46.7	-0.4
	0.4nm,0.3s,baz=270,slow=5.8,SNR=1.8						
	0.4nm,0.3s						
DBIC	Dimbokro	45.81	236	LR	LR	11 19 01.3	
	comp=Z,51nm,19.3s,baz=294,slow=42						
MA2	Magadan	70.14	28	LR	LR	11 34 20.0	
	comp=Z,26nm,20.4s,baz=72,slow=40						
YKA	Yellowknife Ar	75.81	345	P	P	10 59 07.5	-0.4
	0.3nm,0.9s,baz=30,slow=5.3,SNR=2.6						
	0.3nm,0.9s						

IDC 17 11:28:47.7±6.5**, 21°.99N×143°.56E, h0^{km}, mb3.7**/5**, mbtmp3.7**/5**, Error ellipse: s-maj=264.1km s-min=23.2km az=76.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	42.64	193	P	P	11 36 45.2	-0.9
	0.3nm,0.3s,baz=13,slow=8.6,SNR=14						
	0.3nm,0.3s						
ASAR	Alice Springs	46.34	192	P	P	11 37 16.7	+0.9
	0.4nm,0.8s,baz=12,slow=6.8,SNR=4.3						
	0.4nm,0.8s						
MKAR	Makanchi Array	54.76	312	P	P	11 38 20.0	+0.8
	0.5nm,0.6s,baz=94,slow=8.8,SNR=5.1						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	57.55	317	P	P	11 38 38.6	-0.4
	0.8nm,0.5s,baz=93,slow=7.2,SNR=6.8						
	0.8nm,0.5s						
BVAR	Borovoye Array	62.67	319	P	P	11 39 13.8	-0.4
	1.1nm,0.3s,baz=90,slow=7.0,SNR=5.3						
	1.1nm,0.3s						

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*NEIC **17** 11:29:59.0±2.2, 52°.9S±0°.1×28°.6E±0°.1, h10^{km}±1^{km}, mb4.7/27, Error ellipse: s-maj=22.7km s-min=6.0km az=33.0*

*IDC **17** 11:30:01.6±1.2, 52°.92S×28°.43E, h0^{km}, mb3.8/6, mbtmp3.8/6, MS3.5/1, Error ellipse: s-maj=48.7km s-min=23.3km az=83.0*

ISC 17 11:29:59.2±0.7**, 52°.9S**±0°.1×**28°.6E**±0°.1**, h10^{km}, n34, σ2^{s}01**/32**, mb4.7**/16**, South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRHM	Grahamstown, E	19.65	354	P	P	11 34 27.4	-0.7
GRHM				IAmb	IAmb	11 34 34.8	
	comp=Z,77nm,1.5s						
SOE	Somerset East	20.27	353	P	P	11 34 30.8	-4.0
SOE				IAmb	IAmb	11 34 35.2	
	comp=Z,25nm,1.4s						
SUR	Sutherland	21.25	342	P	P	11 34 50.3	+4.8
	comp=Z,6.6nm,1.0s,baz=174,slow=15,SNR=2.0						
	comp=Z,6.6nm,1.0s						
SUR	Sutherland	21.25	342	P	P	11 34 45.9	+0.3
SUR				IAmb	IAmb	11 35 11.0	
	comp=Z,33nm,1.4s						
MAW	Mawson	22.08	145	LR	LR	11 41 16.6	
	comp=Z,138nm,21.6s,baz=40,slow=30						
SNAA	Sanae	23.35	205	P	P	11 35 09.5	+2.1
	comp=Z,3.5nm,0.8s,baz=68,slow=5.4,SNR=4.3						
	comp=Z,3.5nm,0.8s						
SNAA	Sanae	23.35	205	P	P	11 35 06.3	-1.1
BOSA	Boshof	24.36	353	P	P	11 35 21.2	+3.8
	comp=Z,1.2nm,0.7s,baz=158,slow=9.6,SNR=3.5						
	comp=Z,1.2nm,0.7s						
BOSA	Boshof	24.36	353	P	P	11 35 17.1	-0.3
BELA	Belgrano 2	33.38	200	P	P	11 36 37.7	+0.5
QSPA	South Pole Qui	37.34	180	P	P	11 37 10.2	-1.3
VNDA	Vanda	46.69	167	P	P	11 38 32.0	+4.6
	comp=Z,3.0nm,0.8s,baz=235,slow=6.7,SNR=7.0						
	comp=Z,3.0nm,0.8s						
VNDA	Vanda	46.69	167	P	P	11 38 28.4	+1.1
VNDA				IAmb	IAmb	11 38 38.5	
	comp=Z,8.6nm,1.2s						
MG05	Puerto Natales	56.66	227	P	P	11 39 42.3	+0.1
TRQA	Tornquist	61.10	244	P	P	11 40 13.9	+0.6
TRQA				IAmb	IAmb	11 40 18.7	
	comp=Z,7.4nm,1.1s						
NWAO	Narrogin (SRO)	63.73	110	P	P	11 40 31.6	+0.6
LL04	Puerto Octay	64.47	236	P	P	11 40 34.5	-1.2
LL04				IAmb	IAmb	11 40 52.7	
	comp=Z,8.8nm,1.5s						
BO02	Sierra Bellavi	68.27	241	P	P	11 40 59.2	-0.9
MT09	Talagante	69.15	241	P	P	11 41 05.3	-0.5
MT09				IAmb	IAmb	11 41 06.2	
	comp=Z,13nm,1.4s						
MT01	Popeta	69.23	241	P	P	11 41 06.3	+0.2
MT01				IAmb	IAmb	11 41 14.3	
	comp=Z,13nm,1.5s						
CO01	Juntas del Tor	71.59	245	P	P	11 41 18.9	-2.0
CO01				IAmb	IAmb	11 41 28.1	
	comp=Z,7.4nm,1.4s						
GO04	Tololo Observa	71.83	244	P	P	11 41 21.1	-1.2
AC02	Maricunga	73.50	247	P	P	11 41 31.0	-1.6
GO03	Copiap	73.52	246	P	P	11 41 30.9	-1.3
GO03				IAmb	IAmb	11 41 59.9	
	comp=Z,13nm,1.4s						
PSA00	Pilbara Seismi	73.82	104	P	P	11 41 32.4	-1.5
PSA00				IAmb	IAmb	11 41 56.3	
	comp=Z,8.5nm,1.2s						
BBOO	Buckleboo	73.98	123	P	P	11 41 34.7	0.0
MBWA	Marble Bar	74.07	104	P	P	11 41 33.9	-1.5
MBWA				IAmb	IAmb	11 41 49.3	
	comp=Z,18nm,1.4s						
PB06	IPOC Station P	76.97	250	P	P	11 41 51.4	-0.8
ASAR	Alice Springs	80.16	116	P	P	11 42 13.9	+4.3
	comp=Z,0.2nm,0.6s,baz=220,slow=4.8,SNR=1.8						
	comp=Z,0.2nm,0.6s						
ASAR	Alice Springs	80.16	116	P	P	11 42 08.5	-1.1
AS31	Alice Springs	80.16	116	P	P	11 42 09.5	-0.2
WRA	Warramunga Arr	83.39	114	P	P	11 42 30.7	+4.0
	comp=Z,0.7nm,1.1s,baz=211,slow=3.6,SNR=2.1						
	comp=Z,0.7nm,1.1s						
WB2	Warramunga Arr	83.39	114	P	P	11 42 26.1	-0.7
WB2				IAmb	IAmb	11 42 37.7	
	comp=Z,11nm,1.5s						
WB0	Warramunga Arr	83.56	114	P	P	11 42 27.8	+0.2
WB0				IAmb	IAmb	11 42 57.0	
	comp=Z,7.0nm,1.3s						

NNC 17 11:31:38.9±4.3**, 56°.54N×61°.86E, h0^{km}, mb3.6, mpv3.3, 4C-3D, Error ellipse: s-maj=40.8km s-min=14.0km az=164.0, Suspected Mining explosion., Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRVK	Borovoye	5.99	122	⇑Pn	Pn	11 33 08.9	+0.2
	4.1nm,1.5s						
BRVK				⇓Sn	Sn	11 34 19.5	+1.6
	1.6nm,0.7s						
BVA0	Borovoye Array	6.06	122	Pn	Pn	11 33 09.9	+0.2
	1.2nm,0.7s,baz=0.0,slow=0.1,SNR=8.1						
BVA0				⇑Sn	Sn	11 34 20.5	+0.8
	1.4nm,0.5s						
AKTO	Aktyubinsk	6.53	202	⇑Pn	Pn	11 33 15.3	-0.8
	20nm,3.5s						
AKTO				⇑Sn	Sn	11 34 33.1	+1.8
	7.7nm,1.2s						
AB31	Akbulak array	7.39	190	⇓Pn	Pn	11 33 28.4	+0.5
	0.8nm,0.8s,baz=16,slow=13,SNR=11						
AB31				⇓Sn	Sn	11 34 52.2	-0.1
	2.5nm,0.4s,baz=23,slow=29,SNR=4.3						

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*BJI **17** 11:36:18.6±0.0, 38°.55N×73°.18E, h107^{km}, mb4.4/19, mB4.7/9*

*SOME **17** 11:36:19.4, 39°.42N×72°.87E, h0^{km}*

*MOS **17** 11:36:19.5±1.2, 38°.61N×73°.23E, h96^{km}, mb4.1/15, Error ellipse: s-maj=7.1km s-min=4.4km az=91.7*

*IDC **17** 11:36:19.9±2.9, 38°.52N×73°.27E, h94^{km}±23^{km}, mb3.7/16, mbtmp4.1/23, Error ellipse: s-maj=24.2km s-min=14.3km az=163.0*

*NEIC **17** 11:36:20.4±2.9, 38°.63N±0°.05×73°.15E±0°.07, h119^{km}±7^{km}, mb4.3/16, Error ellipse: s-maj=8.1km s-min=7.2km az=121.0*

*NNC **17** 11:36:20.2±3.9, 38°.89N×72°.97E, h0^{km}, mb4.6, mpv4.2, Error ellipse: s-maj=30.2km s-min=23.6km az=175.0*

ISC 17 11:36:20.0±0.4**, 38°.51N**±0°.04×**73°.24E**±0°.04**, h103^{km}, n181, σ1^{s}70**/168**, mb4.1**/34**, 18C-13D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.48	311	Pn	Pn	11 36 42.1	-4.5
DRK				Sn	Sn	11 37 02.7	-4.0
OHH	Osh	2.04	350	PN	Pn	11 36 53.3	-0.1
GAR	Garm	2.34	283		Pn	11 36 56.9	-0.4
KSH	Kashi	2.35	64	P	Pn	11 36 53.4	-4.0
KSH				S	Sn	11 37 22.3	-3.8
KSH				smax	smax		
	comp=N,12µm,0.8s						
KSH				smax	smax		
	comp=E,8µm,0.6s						
BTK	Batken	2.44	310	Pn	Pn	11 36 58.9	+0.4
BTK	Batken	2.44	310	PN	Pn	11 36 58.9	+0.4
CHGR	Chuyangaron	3.20	274		Pn	11 37 07.9	-0.7
CHGR	Chuyangaron	3.20	274	PN	Pn	11 37 07.9	-0.7
TRKS	Terek-Say	3.42	333	PN	Pn	11 37 10.2	-1.5
ARK	Arkit	3.43	344	PN	Pn	11 37 11.0	-0.7
AML	Almayashu	3.64	5	P	Pn	11 37 14.7	0.0
	SNR=107						
AML	Almayashu	3.64	5	⇓P	Pn	11 37 14.7	0.0
	1.7nm,0.3s						
AML				⇑S	Sn	11 37 54.5	-2.4
	89nm,0.7s						
AML	Almayashu	3.64	5	PN	Pn	11 37 14.7	0.0
AML				S	Sn	11 37 54.5	-2.4
UCH	Uchtor	3.84	14	P	Pn	11 37 18.2	+0.7
	SNR=57						
TAS	Tashkent	4.14	314	Pn	Pn	11 37 20.8	-0.3
TAS	Tashkent	4.14	314	PN	Pn	11 37 20.8	-0.3
EKS2	Erkin-Say	4.17	5	P	Pn	11 37 22.2	+0.6
	SNR=28						
MRKS	Merke	4.23	360	*e*Pg	Pn	11 37 22.9	+0.4
	34nm,0.1s						
MRKS				*e*Lg	Lg	11 38 08.6	
	357nm,0.5s						
AAK	Ala-Archa	4.24	13	P	Pn	11 37 23.6	+1.0
	SNR=26						
AAK	Ala-Archa	4.24	13	P	Pn	11 37 23.1	+0.6
	37nm,0.4s,baz=186,slow=8.4,SNR=59						
AAK				S	Sn	11 38 11.3	+0.2
	90nm,0.5s,baz=348,slow=17,SNR=21						
AAK	Ala-Archa	4.24	13	Pn	Pn	11 37 23.2	+0.7
AAK	Ala-Archa	4.24	13	PN	Pn	11 37 23.3	+0.7
KBK	Karagaybulak	4.34	17	P	Pn	11 37 25.7	+1.6
	SNR=17						
ULHL	Ulahol	4.38	31	P	Pn	11 37 25.2	+0.6
	SNR=58						
IUG	Iuzhnay	4.39	327	Pg	Pn	11 37 24.3	-0.2
	157nm,0.5s						
IUG	Iuzhnay	4.39	327	*e*Pg	Pn	11 37 24.3	-0.2
	112nm,0.2s						
IUG				*e*Lg	Lg	11 38 11.4	
	207nm,0.3s						
DZA	Taraz	4.62	342	Pg	Pn	11 37 28.0	+0.4
	413nm,0.3s						
DZA				Lg	Lg	11 38 17.2	
	295nm,0.2s						
DZA	Taraz	4.62	342	*e*Pg	Pn	11 37 27.9	+0.4
	413nm,0.1s						
DZA				*e*Lg	Lg	11 38 17.1	
	284nm,0.1s						
CHMS	Chumysh	4.63	14	P	Pn	11 37 28.6	+0.8
	SNR=11						
KDJ	Kajisay	4.71	39	Pn	Pn	11 37 29.4	+0.4
KDJ	Kajisay	4.71	39	PN	Pn	11 37 29.4	+0.4
TKM2	Tokmak 2	4.76	21	P	Pn	11 37 30.7	+1.0
	SNR=20						
TKM2	Tokmak 2	4.76	21	⇓P	Pn	11 37 30.6	+1.0
	5.6nm,0.5s						
TKM2				⇓S	Sn	11 38 23.5	-0.3
	84nm,0.8s						
TKM2	Tokmak 2	4.76	21	PN	Pn	11 37 30.6	+1.0
TKM2				S	Sn	11 38 23.5	-0.3
CEP	Cherat	4.80	193	P	Pn	11 37 32.8	+2.6
CEP				S	Sn	11 38 25.0	+0.3
NIL	Nilore	4.85	180		Pn	11 37 33.1	+2.3
NIL	Nilore	4.85	180	PN	Pn	11 37 33.1	+2.3
USP	Ospenovka	4.85	11	P	Pn	11 37 31.1	+0.4
	SNR=7.6						
KST	Kastek	4.98	24	*e*Pg	Pn	11 37 40.4	+7.8
	13nm,0.2s						
KST				*e*Lg	Lg	11 38 38.6	
	74nm,0.3s						
KK31	Karatay Array	5.04	337		Pn	11 37 32.9	-0.4
KK31	Karatay Array	5.04	337	⇑P	Pn	11 37 32.8	-0.5
	17nm,0.3s,baz=146,slow=11						
KK31				⇑S	Sn	11 38 26.5	-3.7
	66nm,0.6s,baz=154,slow=22						
KK31	Karatay Array	5.04	337	PN	Pn	11 37 32.9	-0.4
KKAR	Karatay Array	5.04	337		Pn	11 37 32.8	-0.5
KKAR	Karatay Array	5.04	337	PN	Pn	11 37 32.8	-0.5
DGS	Degeres	5.10	21	Pg	Pn	11 37 36.4	+2.1
	7.8nm,0.3s						
DGS				Lg	Lg	11 38 31.5	
	69nm,0.5s						
DGS	Degeres	5.10	21	*e*Pg	Pn	11 37 40.2	+6.0
	9.6nm,0.2s						
DGS				*e*Lg	Lg	11 38 38.0	
	47nm,0.4s						

IZV	**Izvestkoviy**	**5.20**	**28**	Pg	**Pn**	**11 37 36.7**	**+1.1**
	10.0nm,0.8s						
IZV				Lg	Lg	11 38 31.8	
	48nm,0.5s						
IZV	**Izvestkoviy**	**5.20**	**28**	*e*Pg	Pn	11 37 43.5	+7.9
	6.9nm,0.2s						
IZV				*e*Lg	Lg	11 38 44.2	
	32nm,0.6s						
KBL	**Kabul**	**5.21**	**222**		**Pn**	**11 37 36.4**	**+0.6**
KBL	**Kabul**	**5.21**	**222**	PN	**Pn**	**11 37 36.4**	**+0.6**
ANVS	**Anan'yevo**	**5.44**	**37**	PN	**Pn**	**11 37 39.2**	**+0.4**
MDOK	**Medeo**	**5.47**	**31**	P	**Pn**	**11 37 40.1**	**+0.8**
	18nm,0.6s						
MDOK	**Medeo**	**5.47**	**31**	*e*Pg	Pn	11 37 50.1	+11
	7.5nm,0.2s						
MDOK				*e*Lg	Lg	11 38 55.4	
	24nm,0.3s						
MDOK	**Medeo**	**5.47**	**31**	PN	**Pn**	**11 37 40.6**	**+1.3**
KOTS	**Kotyrbulak**	**5.56**	**31**	Pg	**Pn**	**11 37 41.6**	**+1.2**
	25nm,0.7s						
KOTS	**Kotyrbulak**	**5.56**	**31**	*e*Pg	Pn	11 37 51.4	+11
	7.7nm,0.2s						
KOTS				*e*Lg	Lg	11 38 57.8	
	91nm,0.3s						
THW	**Thamme Wali**	**5.83**	**193**	P	**Pn**	**11 37 45.2**	**+1.1**
KUU	**Kurty**	**5.87**	**22**	*e*Pg	Pn	11 37 55.1	+11
	2.7nm,0.2s						
KUU				*e*Lg	Lg	11 39 04.0	
	19nm,0.3s						
JMU	**Jammu**	**5.93**	**166**	*e*P	**Pn**	**11 37 46.2**	**+0.8**
JMU				*e*S	Sn	11 38 47.6	-4.4
THN	**Thein Dam**	**6.39**	**161**	*e*P	**Pn**	**11 37 52.7**	**+1.1**
THN				*e*S	**Sn**	**11 38 59.0**	**-4.1**
THN				IAML		11 39 04.8	
	comp=N,268nm,0.3s						
KPKS	**Kokpek**	**6.44**	**38**	*e*Pg	Pn	11 38 08.7	+16
	comp=N,11nm,0.1s						
KPKS				*e*Lg	Lg	11 39 27.0	
	comp=N,44nm,0.3s						
BTLS	**Baital**	**6.56**	**5**	*e*Pg	Pn	11 38 04.0	+10
	comp=N,3.8nm,0.1s						
BTLS				*e*Lg	Lg	11 39 19.7	
	comp=N,22nm,0.3s						
SARP	**Sargodha**	**6.59**	**184**	P	**Pn**	**11 37 54.6**	**+0.3**
PDGK	**Podgornoye**	**6.75**	**43**	⇓P	**Pn**	**11 37 56.2**	**-0.4**
	comp=N,29nm,0.8s						
PDGK	**Podgornoye**	**6.75**	**43**	PN	**Pn**	**11 37 56.2**	**-0.4**
BHK	**Bhakra**	**7.54**	**159**	*e*P	**Pn**	**11 38 07.2**	**0.0**
BHK				*e*S	Sn	11 39 26.0	-5.1
SMLA	**Simla**	**8.04**	**155**	*e*P	**Pn**	**11 38 13.9**	**-0.1**
SMLA				*e*S	Sn	11 39 34.6	-8.6
SMLA				IAML		11 39 37.7	
	comp=E,272nm,0.5s						
SMLA				IAML		11 39 42.3	
	comp=N,218nm,0.4s						
DDI	**Dehra Dun**	**9.08**	**153**	*e*S	Sn	11 40 00.3	-8.4
NDI	**New Delhi**	**10.34**	**160**	*e*S	Sn	11 40 32.0	-7.3
MAKZ	**Makanchi**	**10.49**	**35**		**Pn**	**11 38 44.9**	**-2.4**
MAKZ	**Makanchi**	**10.49**	**35**	P	**Pn**	**11 38 44.9**	**-2.4**
MK31	**Makanchi Array**	**10.62**	**36**		**Pn**	**11 38 48.3**	**-0.8**
MK31	**Makanchi Array**	**10.62**	**36**	*d i*P	**Pn**	**11 38 49.2**	**+0.1**
MKAR	**Makanchi Array**	**10.62**	**36**	P	**Pn**	**11 38 48.9**	**-0.2**
	comp=N,1.2nm,0.7s,baz=216,slow=15,SNR=9.0						
MKAR	**Makanchi Array**	**10.62**	**36**	Pn	**Pn**	**11 38 48.4**	**-0.7**
MKAR	**Makanchi Array**	**10.62**	**36**	P	**Pn**	**11 38 48.4**	**-0.7**
KUDL	**Kundal**	**10.69**	**164**	*e*P	Pn	11 38 47.7	-2.3
KUDL				*e*S	Sn	11 40 33.8	-14
GEYT	**Alibeck**	**11.91**	**272**	P	**Pn**	**11 39 06.5**	**0.0**
	comp=N,1.4nm,0.3s,baz=91,slow=7.6,SNR=6.4						
GEYT				S	Sn	11 41 09.2	-8.3
	comp=N,16nm,0.8s,baz=106,slow=16,SNR=10						
GEYT	**Alibeck**	**11.91**	**272**	Pn	**Pn**	**11 39 03.9**	**-2.6**
GYA0B	**ALIBECK ARRAY**	**11.91**	**272**	Pn	**Pn**	**11 39 03.2**	**-3.3**
AJM	**Ajmer**	**12.05**	**174**	*e*S	Sn	11 41 08.9	-12
WMQ	**Urumqi**	**12.11**	**59**	*e*P	**Pn**	**11 39 11.6**	**+2.5**
WMQ				sP	P	11 39 40.9	+23
WMQ				pmax	pmax		
	comp=N,18nm,0.7s						
KURBB	**Kurchatov Arra**	**12.68**	**16**	P	**Pn**	**11 39 14.7**	**-1.7**
	comp=N,2.4nm,0.7s,baz=206,slow=12,SNR=8.9						
KURK	**Kurchatov**	**12.79**	**16**	Pn	**Pn**	**11 39 15.3**	**-2.6**
KURK	**Kurchatov**	**12.79**	**16**	⇑*e*P	**Pn**	**11 39 14.9**	**-3.0**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
DANN	**Dangsing**	**13.40**	**136**	*e*P	Pn	11 39 20.9	-5.4
JHNI	**Jhansi**	**13.75**	**159**	*e*P	Pn	11 39 27.1	-3.6
JHNI				*e*S	Sn	11 41 47.7	-14
GKN	**Gorkha**	**14.15**	**134**	*e*P	Pn	11 39 30.7	-5.2
AB31	**Akbulak array**	**14.38**	**323**	P	**Pn**	**11 39 36.6**	**-1.9**
	comp=Z,6.1nm,0.5s,baz=138,slow=12,SNR=101						
AB31	**Akbulak array**	**14.38**	**323**	P	**Pn**	**11 39 36.6**	**-1.9**
ABKAR	**Akbulak array**	**14.38**	**323**	Pn	**Pn**	**11 39 34.9**	**-3.7**
BVAR	**Borovoye Array**	**14.65**	**353**	P	**Pn**	**11 39 40.4**	**-1.7**
	comp=Z,5.1nm,0.6s,baz=163,slow=12,SNR=23						
KKN	**Kakani**	**14.68**	**133**	*e*P	Pn	11 39 37.3	-5.5
	comp=Z,40nm,0.5s						
BRVK	**Borovoye**	**14.70**	**353**	Pn	**Pn**	**11 39 40.4**	**-2.2**
BRVK	**Borovoye**	**14.70**	**353**	*ce*P	**Pn**	**11 39 41.0**	**-1.6**
BRVK				pmax	pmax		
	comp=Z,21nm,1.3s						
PKI	**Pulchoki**	**14.92**	**133**	*e*P	Pn	11 39 40.6	-5.3
GUN	**Gumba**	**14.94**	**131**	*e*P	Pn	11 39 41.3	-4.9
DGZ	**Jazzator, Alta**	**15.11**	**38**	⇑*e*P	**Pn**	**11 39 46.9**	**-1.1**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
JIRN	**Jiri**	**15.30**	**131**	*e*P	Pn	11 39 46.5	-4.3
	comp=Z,29nm,0.4s						
BHPL	**Bhopal**	**15.63**	**166**	*e*P	**Pn**	**11 39 55.9**	**+1.3**
BHPL				*e*S	Sn	11 42 32.4	-15
RAMN	**Ramite**	**16.08**	**132**	*e*P	Pn	11 39 55.0	-5.4
	comp=Z,49nm,0.6s						
AKTO	**Aktyubinsk**	**16.09**	**323**	P	**Pn**	**11 39 58.9**	**-1.3**
	comp=Z,16nm,0.6s,baz=127,slow=10,SNR=30						
AKTO	**Aktyubinsk**	**16.09**	**323**	⇑P	**P**	**11 40 01.4**	**-0.1**
	comp=Z,24nm,1.1s						
TAPN	**Taplejung**	**16.45**	**128**	*e*P	Pn	11 40 00.5	-4.5
ODAN	**Odare**	**16.61**	**130**	*e*P	Pn	11 40 02.6	-4.3
	comp=Z,32nm,0.6s						
GOMU	**GeErMu**	**17.30**	**91**	P	**P**	**11 40 17.0**	**+1.6**
GOMU				pP	pP	11 40 33.4	-2.2
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ZAA0	**Zalesovo Array**	**17.36**	**23**		**P**	**11 40 11.8**	**-3.7**
ZALV	**Zalesovo Beam**	**17.36**	**23**	P	**P**	**11 40 14.5**	**-0.9**
	comp=Z,8.4nm,0.6s,baz=219,slow=10,SNR=31						
ZALV	**Zalesovo Beam**	**17.36**	**23**		**P**	**11 40 14.6**	**-0.8**
ZALV	**Zalesovo Beam**	**17.36**	**23**	*i* P	**P**	**11 40 14.8**	**-0.6**
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.5s						
AKT	**Akhty**	**19.75**	**287**	*e*P	**P**	**11 40 44.0**	**+2.2**
AKT				*e*S	**S**	**11 44 18.1**	**-0.7**
AKT				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AKT				smax	smax		
	comp=N,9.0nm,0.6s						
AKT				smax	smax		
	comp=E,12nm,0.2s						
SHL	**Shillong**	**20.35**	**124**		**P**	**11 40 47.6**	**-0.9**
SHL				IAmb	IAmb	11 40 52.7	
	comp=Z,11nm,1.0s						
SHL	**Shillong**	**20.35**	**124**	P	**P**	**11 40 47.6**	**-0.9**
SHL				pmax	pmax		
	comp=Z,11nm,1.0s						
ARU	**Arti**	**20.41**	**336**	P	**P**	**11 40 48.8**	**+0.2**
	comp=Z,9.8nm,0.6s,baz=149,slow=7.9,SNR=13						
	comp=Z,9.8nm,0.6s						
ARU	**Arti**	**20.41**	**336**	P	**P**	**11 40 44.8**	**-3.8**
ARU				IAmb	IAmb	11 40 53.0	
	comp=Z,14nm,0.7s						
ARU	**Arti**	**20.41**	**336**	*c i*P	Pn	11 40 52.3	+0.6
ARU						11 41 18.7	
ARU				pmax	pmax		
	comp=Z,17nm,0.8s						
GTA	**Gaotai**	**20.66**	**79**	*e*P	**P**	**11 40 53.3**	**+1.6**
GTA				pP	pP	11 41 13.0	+0.5
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GNI	**Garni**	**22.07**	**283**	P	**P**	**11 41 07.5**	**+0.8**
	comp=Z,3.4nm,0.3s,baz=162,slow=8.3,SNR=3.1						
	comp=Z,3.4nm,0.3s						
GNI	**Garni**	**22.07**	**283**	⇓*i*P	**P**	**11 41 09.5**	**+2.8**
GNI				pmax	pmax		
	comp=Z,11nm,0.8s						
BELG	**Belogornoye**	**22.55**	**316**	P	**P**	**11 41 11.7**	**+0.3**
	comp=Z,15nm,0.9s,baz=41,slow=19,SNR=4.0						
	comp=Z,15nm,0.9s						
BELG	**Belogornoye**	**22.55**	**316**	⇓*e*P	**P**	**11 41 11.9**	**+0.5**
BELG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KBZ	**Khabaz**	**23.37**	**293**	⇓*e*P	**P**	**11 41 19.5**	**+0.1**
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.4s						
NEY	**Neytrino**	**23.48**	**291**	⇑*i*P	**P**	**11 41 23.0**	**+2.4**
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KIV	**Kislovodsk**	**23.54**	**293**	*e*P	**P**	**11 41 24.7**	**+3.7**
KIV				*e*S	**S**	**11 45 29.4**	**+2.3**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TNCH	**TengChong**	**25.25**	**115**	P	**P**	**11 41 32.9**	**-3.9**
SONM	**Songino Array**	**25.75**	**58**	P	**P**	**11 41 43.0**	**+2.0**
	comp=Z,0.7nm,0.8s,baz=249,slow=11,SNR=4.2						
	comp=Z,0.7nm,0.8s						
ULN	**Ulaanbaatar**	**26.19**	**58**	⇓*e*P	**P**	**11 41 45.7**	**+0.7**
ULN				pmax	pmax		
	comp=Z,10.0nm,3.4s						
PZH	**PanZhiHua**	**26.74**	**108**	P	**P**	**11 41 51.8**	**+1.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,110nm,5.5s						
ANN	**Anapa**	**27.33**	**295**	*e*P	**P**	**11 41 55.1**	**+0.1**
ANN				*e**PP	**pP**	**11 42 21.5**	**+2.3**
ANN				*e*S	**S**	**11 46 25.5**	**-1.6**
ANN				pmax	pmax		
	comp=Z,20nm,1.0s						
KMI	**Kunming**	**28.26**	**109**	⇑P	**P**	**11 42 02.3**	**-1.5**
KMI				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC	**Hu-ho-hao-te**	**29.43**	**73**	*e*P	**P**	**11 42 14.6**	**+0.6**
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,250nm,6.3s						
BR131	**Keskin Array S**	**30.58**	**285**	P	**P**	**11 42 21.6**	**-2.6**
BR131				IAmb	IAmb	11 42 27.3	
	comp=Z,8.2nm,1.4s						
BR131	**Keskin Array S**	**30.58**	**285**	⇓*e*P	**P**	**11 42 26.7**	**+2.5**
BRTR	**Keskin Array B**	**30.58**	**285**	P	**P**	**11 42 26.0**	**+1.8**
	comp=Z,1.5nm,0.9s,baz=79,slow=6.4,SNR=6.1						
	comp=Z,1.5nm,0.9s						
BRTR	**Keskin Array B**	**30.58**	**285**	P	**P**	**11 42 21.0**	**-3.2**
BRTR	**Keskin Array B**	**30.58**	**285**	*ce*P	**P**	**11 42 26.3**	**+2.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NRIK	**Noril'sk**	**31.84**	**10**	⇓*e*P	**P**	**11 42 36.4**	**+1.7**
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
AKASG	**Malin Array Be**	**33.14**	**306**	P	**P**	**11 42 46.8**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=69,slow=5.9,SNR=5.0						
	comp=Z,0.4nm,0.3s						
AKASG	**Malin Array Be**	**33.14**	**306**	*ce*P	**P**	**11 42 47.2**	**+1.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKBB	**Malin Array Si**	**33.14**	**306**	⇑*i*P	**P**	**11 42 47.2**	**+1.0**
AKBB				pmax	pmax		
	comp=Z,60nm,5.2s						
MLR	**Muntele Rosu**	**35.41**	**297**	P	**P**	**11 43 08.5**	**+2.4**
	comp=Z,4.3nm,1.0s,baz=77,slow=3.3,SNR=3.6						
	comp=Z,4.3nm,1.0s						
VSU	**Vasula**	**35.77**	**319**	⇑*e*P	**P**	**11 43 10.2**	**+1.4**
VSU				pmax	pmax		
	comp=Z,118nm,1.2s						
FINES	**FINESS Array B**	**36.86**	**324**	P	**P**	**11 43 19.1**	**+1.1**
	comp=Z,1.3nm,0.3s,baz=113,slow=9.0,SNR=14						
	comp=Z,1.3nm,0.3s						
FINES	**FINESS Array B**	**36.86**	**324**	*i* P	**P**	**11 43 19.2**	**+1.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NJ2	**Nanjing**	**37.49**	**86**	*e*P	**P**	**11 43 21.8**	**-1.9**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
VYHS	**Vyhne**	**39.94**	**303**	*e*P	**P**	**11 43 46.1**	**+2.1**
VYHS	**Vyhne**	**39.94**	**303**	*e*P	**P**	**11 43 46.1**	**+2.1**
ARCES	**ARCESS Array B**	**40.00**	**336**	P	**P**	**11 43 45.2**	**+0.9**
	comp=Z,3.6nm,0.7s,baz=123,slow=4.5,SNR=12						
	comp=Z,3.6nm,0.7s						
ARCES	**ARCESS Array B**	**40.00**	**336**	P	**P**	**11 43 42.9**	**-1.3**
YAK	**Yakutsk**	**41.30**	**37**	⇑*e*P	**P**	**11 43 54.3**	**-0.6**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KLR	**Kul'dur**	**42.53**	**56**	⇑*e*P	**P**	**11 44 06.8**	**+1.6**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.7s						
NACB	**Ninganchiao**	**43.22**	**95**	P	**P**	**11 44 08.5**	**-2.5**
TIXI	**Tiksi**	**43.24**	**22**	P	**P**	**11 44 08.5**	**-2.1**
TIXI	**Tiksi**	**43.24**	**22**	⇑*i*P	**P**	**11 44 11.4**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.8s						
GERES	**GERESS Array B**	**43.26**	**304**	P	**P**	**11 44 12.8**	**+1.6**
	comp=Z,0.8nm,0.6s,baz=69,slow=8.7,SNR=3.8						
	comp=Z,0.8nm,0.6s						
GERES	**GERESS Array B**	**43.26**	**304**	P	P	11 44 07.4	-3.9
KHC	**Kasperske Hory**	**43.30**	**304**	⇓*e*P	**P**	**11 44 13.0**	**+1.6**
KHC				pmax	pmax		
	comp=Z,51nm,4.2s						
NC405	**NORSAR Array S**	**43.64**	**322**		**P**	**11 44 11.2**	**-2.8**
NB2	**NORSAR Subarra**	**43.88**	**322**	P	**P**	**11 44 16.2**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**43.88**	**322**	P	**P**	**11 44 16.5**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=91,slow=7.8,SNR=4.5						
	comp=Z,1.3nm,0.6s						
NC204	**NORSAR Array S**	**44.11**	**322**	P	**P**	**11 44 15.1**	**-2.7**
JTU	**Tsushima**	**44.72**	**77**	P	**P**	**11 44 21.1**	**-1.8**
SEY	**Seymchan**	**51.76**	**35**	⇓*e*P	**P**	**11 45 19.8**	**+3.2**
SEY				pmax	pmax		
	comp=Z,11nm,2.0s						
BILL	**Bilibino**	**56.02**	**27**	*e*P	**P**	**11 45 47.5**	**0.0**
BILL				*e**PP	**pP**	**11 46 18.5**	**+4.7**
BILL				*e*		11 46 46.0	
BILL				*e*		11 47 57.2	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ESDC	**Sonseca Array**	**58.10**	**298**	P	**P**	**11 46 03.6**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=55,slow=7.6,SNR=5.7						
	comp=Z,1.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**67.54**	**269**	P	**P**	**11 47 05.5**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=49,slow=5.8,SNR=8.4						
	comp=Z,1.1nm,0.6s						
A36M	**Sachs Harbour**	**69.04**	**6**	P	**P**	**11 47 15.2**	**+1.2**
A36M				IAmb	IAmb	11 47 16.8	
	comp=Z,3.5nm,0.8s						
COLD	**Coldfoot**	**69.55**	**17**	P	P	11 47 13.4	-3.9
IMAR	**Indian Mountai**	**69.71**	**19**	P	**P**	**11 47 17.5**	**-0.8**
H21K	**Melozitna Rive**	**70.21**	**18**	P	**P**	**11 47 20.4**	**-0.9**
H21K				IAmb	IAmb	11 47 30.2	
	comp=Z,5.1nm,1.3s						
BMAR	**Burnt Mountain**	**70.56**	**15**	P	**P**	**11 47 21.9**	**-1.6**
H23K	**Yukon River**	**70.86**	**17**	P	**P**	**11 47 23.7**	**-1.6**
C36M	**Paulatuk**	**71.70**	**6**	P	**P**	**11 47 30.5**	**+0.3**
C36M				IAmb	IAmb	11 47 31.6	
	comp=Z,3.7nm,0.6s						
ILAR	**Eielson Array**	**72.36**	**17**	P	**P**	**11 47 34.0**	**-0.2**
	comp=Z,0.5nm,0.9s,baz=314,slow=6.1,SNR=6.2						
	comp=Z,0.5nm,0.9s						
SUA	**Susitna One**	**74.17**	**20**	P	**P**	**11 47 42.8**	**-2.3**
BCAR	**Beaver Creek A**	**74.96**	**16**	P	**P**	**11 47 49.7**	**+0.1**
N25K	**Chitina, Valde**	**75.61**	**18**	P	**P**	**11 47 50.5**	**-2.9**
N25K				IAmb	IAmb	11 48 06.9	
	comp=Z,12nm,1.4s						
YKA	**Yellowknife Ar**	**79.15**	**4**	P	**P**	**11 48 13.9**	**+1.0**
	comp=Z,1.7nm,0.6s,baz=350,slow=5.4,SNR=45						
	comp=Z,1.7nm,0.6s						
YKA	**Yellowknife Ar**	**79.15**	**4**	*ce*P	**P**	**11 48 13.8**	**+0.9**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WRA	**Warramunga Arr**	**81.58**	**124**	P	**P**	**11 48 27.4**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=323,slow=5.2,SNR=2.2						
	comp=Z,0.2nm,0.6s						
WRA	**Warramunga Arr**	**81.58**	**124**	*i* P	P	11 48 31.7	+5.2

DDA ***17*** *12:01:16.9±0.0, 37°.62N×38°.48E, h8^{km}±2^{km}, ML2.7*
ISK ***17*** *12:01:16.9, 37°.52N×38°.48E, h15^{km}, ML2.8/4*
ISC 17 12:01:17.0±1.0**, 37°.60N**±0°.03×**38°.48E**±0°.03**, h11**^{km}±9^{km}**,**
n17, σ**0^{s}.46**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AZEY	**Adyaman-Merk**	**0.28**	**320**	P	**Pg**	**12 01 22.8**	**0.0**
AZEY				S	**Sg**	**12 01 26.6**	**0.0**
AZEY				*i* AML	AML	12 01 27.0	
	comp=E,923nm,0.2s						
URFA	**Urfa**	**0.32**	**119**	Pg	**Pg**	**12 01 23.4**	**0.0**
URFA				Sg	**Sg**	**12 01 28.2**	**+0.5**
HANM	**anlurfa/Hi**	**0.32**	**93**	P	**Pg**	**12 01 23.4**	**-0.1**
HANM				S	**Sg**	**12 01 28.0**	**+0.1**
HANM				*i* AML	AML	12 01 28.0	
	comp=N,864nm,0.3s						
NARI	**Adyaman-Kaht**	**0.37**	**38**	P	**Pg**	**12 01 24.2**	**-0.2**
NARI				S	**Sg**	**12 01 29.4**	**+0.2**
MAYA	**Malatya/Merkez**	**0.73**	**357**	P	**Pg**	**12 01 30.8**	**-0.4**
MAYA				S	**Sg**	**12 01 40.2**	**-0.5**
GZT	**Gaziantep**	**0.76**	**252**	P	**Pb**	**12 01 32.0**	**-0.4**
GZT				S	**Sn**	**12 01 45.2**	**-0.3**
GZT				*i* AML	AML	12 01 46.0	
	comp=N,698nm,0.3s						
GZT				*i* AML	AML	12 01 46.0	
	comp=E,402nm,0.2s						
AKCD	**Akcadag**	**0.82**	**328**	P	**Pg**	**12 01 33.0**	**0.0**
AKCD				S	**Sg**	**12 01 43.7**	**0.0**
AKCD				*i* AML	AML	12 01 50.0	
	comp=N,209nm,0.4s						
NZIP	**Nizip/Gaziante**	**0.84**	**229**	P	**Pb**	**12 01 33.7**	**-0.1**
NZIP				S	**Sn**	**12 01 47.6**	**+0.2**
NZIP				*i* AML	AML	12 01 49.0	
	comp=N,273nm,0.5s						
NZIP				*i* AML	AML	12 01 50.0	
	comp=E,215nm,0.3s						
ELZG	**Elazig**	**0.98**	**24**	P	**Pg**	**12 01 35.6**	**-0.4**
ELZG				S	**Sb**	**12 01 50.2**	**+0.8**
ELZG				*i* AML	AML	12 01 57.0	
	comp=N,164nm,0.4s						
GAZ	**Gaziantep**	**1.09**	**248**	Pg	**Pn**	**12 01 37.9**	**-0.5**
GAZ				Sg	**Sn**	**12 01 53.4**	**-0.1**
KAHM	**Kahramanmaras,**	**1.19**	**267**	P	**Pg**	**12 01 40.1**	**+0.3**
KAHM				S	**Sn**	**12 01 55.5**	**-0.3**
DARE	**Darende-Malaty**	**1.25**	**321**	Pn	**Pg**	**12 01 41.3**	**+0.3**
KMRS	**Kahramanmaras**	**1.25**	**266**	Pn	**Pb**	**12 01 40.6**	**-0.2**
KMRS				Sn	**Sn**	**12 01 57.2**	**-0.3**
DYBB	**Diyarbakir**	**1.37**	**74**	Pn	**Pb**	**12 01 42.6**	**-0.1**
ARPR	**Arapgir-MALATY**	**1.50**	**356**	Pn	**Pb**	**12 01 45.4**	**+0.4**
KEMA	**Kemaliye**	**1.67**	**0**	P	**Pb**	**12 01 47.5**	**-0.4**
KEMA				S	**Sb**	**12 02 09.6**	**+0.6**
CUKAN	**kangal_SIVAS**	**1.89**	**336**	P	**Pb**	**12 01 51.3**	**-0.4**
CUKAN				S	**Sb**	**12 02 16.9**	**+1.6**

ROM 17 12:10:31.0±0.0**, 42°.782N**±0°.002×**13°.063E**±0°.003**,**
h11^{km}**, ML1.6**/12**, 5C-3D, Error ellipse: s-maj=0.2km**
s-min=0.2km az=283.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.03**	**204**	P	Pg	12 10 33.4	+0.3
T1212				S	Sg	12 10 34.9	+0.3
T1214	**Arquata del Tr**	**0.11**	**102**	P	Pg	12 10 34.4	+0.4
T1214				S	Sg	12 10 36.6	+0.5
T1216	**Preci, Frazion**	**0.11**	**344**	P	Pg	12 10 34.5	+0.5
T1216				S	Sg	12 10 36.6	+0.5
T1216				AML	AML		
	comp=E,655µm,0.6s						
T1216				AML	AML		
	comp=N,891µm,1.6s						
T1216				AML	AML		
	comp=N,891µm,0.4s						
T1218	**Civita (PG)**	**0.12**	**161**	P	Pg	12 10 34.4	+0.4
T1218				S	Sg	12 10 36.9	+0.7
T1218				AML	AML		
	comp=N,1156µm,0.3s						
T1218				AML	AML		
	comp=E,696µm,0.8s						
T1218				AML	AML		
	comp=N,1116µm,0.3s						
T1218				AML	AML		
	comp=E,754µm,0.8s						
T1217	**Poggiodomo (PG**	**0.12**	**234**	P	Pg	12 10 34.6	+0.5
T1217				S	Sg	12 10 36.9	+0.7
T1217				AML	AML		
	comp=E,524µm,0.3s						
T1217				AML	AML		
	comp=N,286µm,0.2s						
T1217				AML	AML		
	comp=N,286µm,1.8s						
T1245	**Castelsantange**	**0.12**	**51**	P	Pg	12 10 34.5	+0.4
T1245				S	Sg	12 10 36.9	+0.5
T1245				AML	AML		
	comp=E,1550µm,0.3s						
T1245				AML	AML		
	comp=E,1555µm,0.3s						
T1245				AML	AML		
	comp=N,1305µm,0.7s						
T1245				AML	AML		
	comp=N,1195µm,0.7s						
T1245				AML	AML		
	comp=E,1390µm,1.2s						
MC2	**Monte Cornacci**	**0.16**	**36**	P	Pg	12 10 35.3	+0.5
MC2				S	Sg	12 10 38.2	+0.8
FEMA	**Monte Fema**	**0.18**	**357**	P	Pg	12 10 35.6	+0.5
FEMA				S	Sg	12 10 38.9	+1.0
MMO1	**Montemonaco**	**0.23**	**59**	P	Pg	12 10 36.2	+0.4
MMO1				S	Sg	12 10 40.1	+1.0
SMA1	**SAN MARTINO**	**0.25**	**127**	P	Pb	12 10 37.1	-0.6
SMA1				S	Sb	12 10 41.1	-1.0
SMA1				AML	AML		
	comp=E,259µm,1.3s						
SMA1				AML	AML		
	comp=N,199µm,0.3s						
CESI	**CESI - Serrava**	**0.25**	**333**	⇑P	Pg	12 10 36.9	+0.7
CESI				AML	AML		
	comp=N,336µm,0.4s						
CESI				AML	AML		
	comp=E,143µm,0.2s						
FDMO	**Fiordimonte**	**0.26**	**4**	⇑P	Pg	12 10 36.9	+0.6
T1219	**Muccia, Frazio**	**0.28**	**352**	P	Pg	12 10 37.1	+0.4
T1241	**Roccafluvione,**	**0.28**	**74**	P	Pg	12 10 37.1	+0.4
T1241				S	Sb	12 10 41.9	-1.0
T1241				AML	AML		
	comp=N,114µm,0.4s						
T1241				AML	AML		
	comp=E,164µm,0.9s						
T1211	**Morro Reatino**	**0.29**	**212**	P	Pg	12 10 37.4	+0.4
T1211				S	Sb	12 10 42.1	-1.1
T1211				AML	AML		
	comp=N,210µm,0.6s						
T1211				AML	AML		
	comp=E,194µm,0.5s						
RM33	**Pellescritta (**	**0.29**	**158**	P	Pg	12 10 37.3	+0.3
RM33				S	Sb	12 10 42.3	-1.0
RM33				AML	AML		
	comp=N,101µm,1.2s						
RM33				AML	AML		
	comp=E,99µm,0.4s						
RM33				AML	AML		
	comp=N,101µm,0.8s						
ARRO	**Arrone**	**0.30**	**227**	AML	AML		
	comp=E,79µm,0.3s						
ARRO				AML	AML		
	comp=N,86µm,0.7s						
CAMP	**Campotosto**	**0.35**	**134**	P	Pg	12 10 38.3	+0.2
CAMP				S	Sg	12 10 43.8	+0.9
CAMP				AML	AML		
	comp=N,33µm,0.5s						
CAMP				AML	AML		
	comp=E,44µm,0.8s						
MOMA	**Monte Martano**	**0.36**	**274**	⇑P	Pg	12 10 38.8	+0.5
MOMA				AML	AML		
	comp=N,242µm,0.2s						
MOMA				AML	AML		
	comp=E,172µm,0.2s						
T1222	**Castel Sant'An**	**0.38**	**183**	⇓P	Pg	12 10 39.1	+0.6
ASSB	**Assisi San Ben**	**0.40**	**311**	P	Pg	12 10 39.3	+0.4
ASSB				AML	AML		
	comp=E,104µm,1.1s						
ASSB				AML	AML		
	comp=N,97µm,1.3s						
ASSB				AML	AML		
	comp=E,104µm,0.9s						
CESX	**Cesi**	**0.40**	**244**	⇑P	Pg	12 10 39.4	+0.6
CESX				AML	AML		
	comp=N,54µm,1.6s						
CESX				AML	AML		
	comp=E,56µm,0.6s						
CESX				AML	AML		
	comp=N,54µm,0.4s						
TERO	**Teramo**	**0.43**	**112**	⇑P	Pg	12 10 38.5	-1.0

TERO				AML	AML		
	comp=E,90μm,1.3s						
TERO				AML	AML		
	comp=N,114μm,1.0s						
TERO				AML	AML		
	comp=E,90μm,0.7s						
TERO				AML	AML		
	comp=N,114μm,1.0s						
OFFI	**Offida**	**0.48**	**71**	⇓P	Pb	12 10 41.6	+0.1
GIGS	**Gran Sasso**	**0.50**	**131**	P	Pg	12 10 40.9	+0.1
ATCC	**AVT- Casa Cast**	**0.51**	**323**	⇓P	Pb	12 10 41.8	-0.2
ATCC				AML	AML		
	comp=N,53μm,1.3s						
ATCC				AML	AML		
	comp=N,53μm,0.7s						
ATCC				AML	AML		
	comp=E,82μm,0.3s						
EL6	**Elcito**	**0.55**	**3**	P	Pg	12 10 42.0	+0.3

ROM 17 12:11:09.9±0.1,42°.647N±0°.007×13°.357E±0°.007, h9^{km}±1^{km},ML0.8/2,Error ellipse: s-maj=0.7km s-min=0.6km az=190.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.12**	**161**	P	Pg	12 11 13.2	+0.5
CAMP				S	Sg	12 11 15.3	+0.6
T1246	**Crognaleto (TE**	**0.12**	**122**	P	Pg	12 11 13.3	+0.5
T1246				S	Sg	12 11 15.5	+0.7
T1214	**Arquata del Tr**	**0.16**	**316**	P	Pg	12 11 14.1	+0.7
T1214				S	Sg	12 11 17.0	+1.2
T1214				AML	AML		
	comp=N,32μm,0.4s						
RM33	**Pellescritta (**	**0.17**	**217**	P	Pg	12 11 14.8	+1.2
RM33				S	Sg	12 11 17.1	+1.0
T1218	**Civita (PG)**	**0.18**	**278**	P	Pg	12 11 14.0	+0.3
T1218				S	Sg	12 11 16.8	+0.5
T1218				AML	AML		
	comp=N,69μm,1.4s						
T1218				AML	AML		
	comp=E,38μm,0.4s						
T1218				AML	AML		
	comp=E,60μm,0.9s						
T1218				AML	AML		
	comp=N,57μm,0.4s						
TERO	**Teramo**	**0.18**	**97**	P	Pg	12 11 14.3	+0.5
TERO				S	Sg	12 11 17.3	+0.8
T1212	**Cascia, Frazio**	**0.25**	**295**	S	Sb	12 11 30.6	+9.3
MC2	**Monte Cornacci**	**0.29**	**335**	P	Pg	12 11 16.4	+0.5
MC2				S	Sb	12 11 21.6	-1.0

ROM 17 12:18:40.8±0.1,42°.558N±0°.004×13°.344E±0°.005, h10^{km},ML1.7/6,2C-1D,Error ellipse: s-maj=0.3km s-min=0.3km az=154.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMA1	**SAN MARTINO**	**0.07**	**355**	⇑P	Pg	12 18 43.6	+0.4
SMA1				S	Sg	12 18 45.3	+0.3
SMA1				AML	AML		
	comp=E,3535μm,0.2s						
SMA1				AML	AML		
	comp=N,2265μm,0.3s						
RM33	**Pellescritta (**	**0.11**	**243**	⇑P	Pg	12 18 44.1	+0.5
RM33				S	Sg	12 18 46.1	+0.4
RM33				AML	AML		
	comp=E,632μm,0.3s						
RM33				AML	AML		
	comp=N,714μm,0.4s						
RM33				AML	AML		
	comp=E,630μm,1.5s						
RM33				AML	AML		
	comp=N,714μm,0.4s						
RM33				AML	AML		
	comp=E,630μm,1.5s						
RM33				AML	AML		
	comp=N,734μm,0.4s						
RM33				AML	AML		
	comp=N,714μm,1.6s						
RM33				AML	AML		
	comp=N,734μm,1.6s						
RM33				AML	AML		
	comp=E,632μm,0.3s						
T1247	**Pizzolo (AQ)**	**0.12**	**196**	P	Pg	12 18 44.4	+0.6
T1247				S	Sg	12 18 46.6	+0.7
T1247				AML	AML		
	comp=E,1037μm,1.0s						
T1247				AML	AML		
	comp=N,1098μm,0.2s						
T1247				AML	AML		
	comp=E,1037μm,1.0s						
GIGS	**Gran Sasso**	**0.20**	**123**	P	Pg	12 18 45.7	+0.6
GIGS				S	Sg	12 18 48.9	+0.9
GIGS				AML	AML		
	comp=E,55μm,0.6s						
GIGS				AML	AML		
	comp=N,39μm,0.5s						
GIGS				AML	AML		
	comp=E,55μm,0.6s						
GIGS				AML	AML		
	comp=N,39μm,0.5s						
GIGS				AML	AML		
	comp=N,39μm,1.5s						
TERO	**Teramo**	**0.20**	**71**	P	Pg	12 18 45.8	+0.6
TERO				S	Sg	12 18 49.1	+1.1
TERO				AML	AML		
	comp=N,750μm,0.3s						
TERO				AML	AML		
	comp=E,732μm,0.4s						
TERO				AML	AML		
	comp=E,663μm,0.3s						
TERO				AML	AML		
	comp=N,843μm,0.3s						
T1214	**Arquata del Tr**	**0.22**	**334**	P	Pb	12 18 46.4	-0.8
T1222	**Castel Sant'An**	**0.28**	**235**	P	Pg	12 18 47.0	+0.6
T1222				S	Sb	12 18 51.6	-1.0
T1212	**Cascia, Frazio**	**0.29**	**311**	P	Pg	12 18 47.3	+0.5
T1212				S	Sg	12 18 51.7	+1.0
FAGN	**Fagnano**	**0.34**	**149**	P	Pg	12 18 48.3	+0.7
FAGN				AML	AML		
	comp=E,212μm,0.4s						
FAGN				AML	AML		
	comp=N,235μm,0.4s						
T1211	**Morro Reatino**	**0.36**	**266**	P	Pg	12 18 48.2	+0.2
T0110	**Collepietro**	**0.46**	**136**	P	Pb	12 18 50.6	-0.5
T0110				AML	AML		
	comp=N,69μm,0.4s						
T0110				AML	AML		
	comp=E,57μm,0.4s						
FDMO	**Fiordimonte**	**0.51**	**339**	P	Pb	12 18 51.5	-0.5
FOSV	**Fossato di Vic**	**0.85**	**330**	P	Pn	12 18 59.3	+0.3
FOSV				S	Sb	12 19 09.1	-0.1
ARVD	**Arcevia**	**0.98**	**343**	S	Sg	12 19 10.1	-2.5
ARVD				AML	AML		
	comp=E,35μm,1.5s						
ARVD				AML	AML		
	comp=N,24μm,0.1s						
ARVD				AML	AML		
	comp=E,35μm,0.5s						
FSSB	**Fossombrone**	**1.21**	**340**	⇓P	Pb	12 19 00.5	-3.3
SGG	**Gregorio Mates**	**1.40**	**146**	S	Sg	12 19 27.3	+1.3

ROM 17 12:19:32.8±0.1,42°.849N±0°.003×13°.013E±0°.005, h10^{km},ML0.9/4,1C,Error ellipse: s-maj=0.4km s-min=0.1km az=90.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1216	**Preci, Frazion**	**0.04**	**6**	P	Pg	12 19 35.2	+0.4
T1216				S	Sg	12 19 36.6	+0.4
T1216				AML	AML		
	comp=E,120μm,1.2s						
T1216				AML	AML		
	comp=N,114μm,0.3s						
T1216				AML	AML		
	comp=N,114μm,0.3s						
T1216				AML	AML		
	comp=E,120μm,0.8s						
T1212	**Cascia, Frazio**	**0.10**	**166**	⇑P	Pg	12 19 35.9	+0.5
T1212				S	Sg	12 19 37.9	+0.6
T1212				AML	AML		
	comp=E,97μm,0.7s						
T1212				AML	AML		
	comp=N,85μm,0.4s						
T1212				AML	AML		
	comp=N,85μm,0.4s						
T1212				AML	AML		
	comp=E,97μm,0.7s						
MC2	**Monte Cornacci**	**0.14**	**64**	P	Pg	12 19 36.9	+0.7
MC2				S	Sg	12 19 39.7	+1.1
T1217	**Poggiodomo (PG**	**0.15**	**204**	P	Pg	12 19 36.7	+0.5
T1217				S	Sg	12 19 39.4	+0.8
T1214	**Arquata del Tr**	**0.17**	**122**	P	Pg	12 19 37.1	+0.6
T1214				S	Sg	12 19 39.9	+0.7
CESI	**CESI - Serrava**	**0.17**	**333**	P	Pg	12 19 37.2	+0.6
CESI				S	Sg	12 19 40.2	+1.0
CESI				AML	AML		
	comp=N,68μm,0.4s						
CESI				AML	AML		
	comp=E,34μm,0.1s						
FDMO	**Fiordimonte**	**0.20**	**16**	P	Pg	12 19 37.6	+0.7
FDMO				S	Sg	12 19 40.9	+1.1
FDMO				AML	AML		
	comp=N,33μm,1.4s						
FDMO				AML	AML		
	comp=E,71μm,1.0s						
FDMO				AML	AML		
	comp=N,33μm,0.6s						
T1219	**Muccia, Frazio**	**0.21**	**359**	P	Pg	12 19 37.7	+0.5
T1219				S	Sg	12 19 41.1	+1.0
MMO1	**Montemonaco**	**0.24**	**78**	P	Pg	12 19 38.3	+0.6
MMO1				S	Sg	12 19 42.2	+1.2
ARVD	**Arcevia**	**0.65**	**355**	P	Pg	12 19 45.0	-0.4

ROM 17 12:20:04.3±0.2,43°.003N±0°.004×13°.021E±0°.006, h6^{km}±1^{km},ML0.8/1,1C,Error ellipse: s-maj=0.5km s-min=0.2km az=117.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FEMA	**Monte Fema**	**0.05**	**152**	P	Pg	12 20 05.7	-0.1
FEMA				S	Sg	12 20 07.2	+0.3
T1219	**Muccia, Frazio**	**0.05**	**349**	P	Pg	12 20 05.8	-0.1
T1219				S	Sg	12 20 06.8	-0.2
T1219				AML	AML		
	comp=E,411μm,0.2s						
T1219				AML	AML		
	comp=N,265μm,0.3s						
FDMO	**Fiordimonte**	**0.06**	**55**	⇑P	Pg	12 20 06.0	+0.1
FDMO				S	Sg	12 20 07.3	+0.2
FDMO				AML	AML		
	comp=E,96μm,0.2s						
FDMO				AML	AML		
	comp=N,76μm,0.2s						
CESI	**CESI - Serrava**	**0.09**	**271**	P	Pg	12 20 06.7	+0.4
CESI				S	Sg	12 20 08.5	+0.8
CESI				AML	AML		
	comp=E,192μm,0.7s						
CESI				AML	AML		
	comp=N,230μm,0.9s						
CESI				AML	AML		
	comp=E,66μm,1.2s						
CESI				AML	AML		
	comp=N,185μm,0.4s						
CESI				AML	AML		
	comp=E,66μm,0.8s						
T1216	**Preci, Frazion**	**0.11**	**181**	P	Pg	12 20 06.4	-0.3
T1216				S	Sg	12 20 09.3	+1.0
T1220	**Camerino, Fraz**	**0.12**	**25**	P	Pg	12 20 07.3	+0.5
T1220				S	Sg	12 20 09.6	+1.1
CSP1	**Cessapalombo**	**0.16**	**57**	P	Pg	12 20 08.0	+0.4
CSP1				S	Sg	12 20 11.2	+1.4
MMO1	**Montemonaco**	**0.25**	**115**	P	Pg	12 20 09.6	+0.5
MMO1				S	Sg	12 20 14.1	+1.6

WEL 17 12:21:24.0±0.6,44°S±4°×16°8E±°,h5^{km},M2.3/3,ML2.7/6, MLv2.3/3,Error ellipse: s-maj=0.0km s-min=0.0km az=134.9,confirmed,South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSZ	**Milford Sound**	**0.42**	**231**	P	Pg	12 21 32.7	+0.6
MSZ				S	Sg	12 21 38.3	+0.7
JCZ	**Jackson Bay**	**0.45**	**41**	P	Pg	12 21 33.1	+0.5
JCZ				S	Sg	12 21 38.7	+0.2
WKZ	**Wanaka**	**0.62**	**133**	P	Pg	12 21 36.4	+0.5
WKZ				S	Sg	12 21 44.5	+0.6
MLZ	**Mavora Lakes**	**0.97**	**191**	P	Pg	12 21 42.4	-0.3
EAZ	**Earnscleugh**	**1.05**	**142**	P	Pg	12 21 44.5	+0.2
LBZ	**Lake Benmore**	**1.29**	**90**	P	Pb	12 21 49.3	+0.5
FOZ	**Fox Glacier**	**1.36**	**50**	P	Pb	12 21 49.9	0.0
DCZ	**Deep Cove**	**1.37**	**219**	P	Pn	12 21 48.8	-0.9
WHZ	**Wether Hill Ro**	**1.51**	**192**	P	Pn	12 21 51.8	0.0
ODZ	**Otahua Downs**	**1.73**	**112**	P	Pb	12 21 56.2	-0.1
TUZ	**Tuapeka**	**1.78**	**151**	P	Pb	12 21 57.4	+0.3
GCSZ	**Gaunt Creek Bo**	**1.78**	**53**	P	Pg	12 21 57.9	-0.2
TMZ	**Timaru**	**1.88**	**90**	P	Pb	12 21 58.2	-0.7
WVZ	**Waitaha Valley**	**2.17**	**53**	P	Pg	12 22 05.7	+0.1
SYZ	**Scrubby Hill**	**2.19**	**166**	P	Pn	12 22 02.3	+1.2
APZ	**The Paps**	**2.44**	**186**	P	Pn	12 22 05.5	+0.9

BUC 17 12:23:57.2±0.1,46°.35N×23°.15E,h5^{km},ml1.9/7,17C-8D, Error ellipse: s-maj=1.3km s-min=1.1km az=99.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARR	**Marisel-Cluj**	**0.33**	**356**	⇑P	Pg	12 24 03.8	+0.1
MARR				⇓S	Sg	12 24 08.5	+0.6
DRGR		**0.54**	**326**	⇑P	Pg	12 24 07.5	0.0
DRGR				⇑S	Sg	12 24 15.5	+0.9
DRGR		**0.54**	**326**	⇑P	Pg	12 24 07.2	-0.4
DRGR				⇑S	Sg	12 24 15.5	+0.9
GZR	**Gura Zlata**	**0.99**	**195**	⇓P	Pg	12 24 16.0	-0.2
GZR				⇑S	Sb	12 24 30.1	-0.2
GZR	**Gura Zlata**	**0.99**	**195**	⇑P	Pg	12 24 16.0	-0.1
GZR				⇑S	Sb	12 24 30.1	-0.2
SIRR	**Siria**	**1.04**	**266**	⇑P	Pg	12 24 16.7	-0.3
SIRR				⇑S	Sb	12 24 31.3	-0.2
BZS	**Buzias**	**1.30**	**236**	⇓P	Pn	12 24 21.3	-0.6
BZS				⇑S	Sb	12 24 39.2	+0.3
ARR	**Arges**	**1.43**	**133**	⇑S	Sg	12 24 43.9	+0.8
HERR	**Herculane**	**1.56**	**200**	⇑P	Pn	12 24 25.4	-0.1
HERR				⇑S	Sg	12 24 47.7	+0.6
VOIR		**1.61**	**124**	⇑P	Pn	12 24 26.6	+0.2
VOIR				⇓S	Sb	12 24 48.0	-0.1
MDVR	**Moldovita**	**1.86**	**213**	⇑P	Pn	12 24 30.6	+0.7
MDVR				⇓S	Sb	12 24 55.2	-0.2
MDVR	**Moldovita**	**1.86**	**213**	⇑P	Pn	12 24 30.6	+0.7
MDVR				⇓S	Sb	12 24 55.1	-0.3
BURAR	**Bucovina Array**	**1.90**	**47**	⇓P	Pn	12 24 30.9	+0.5
BURAR				⇓S	Sb	12 24 55.7	-0.8

ROM 17 12:42:29.2±0.1,42°.517N±0°.004×13°.397E±0°.005, h9^{km},ML1.1/11,4C,Error ellipse: s-maj=0.5km s-min=0.4km az=35.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.02**	**26**	⇑P	Pg	12 42 31.2	+0.2
CAMP				S	Sg	12 42 32.3	0.0
CAMP				AML	AML		
	comp=E,354μm,0.2s						
CAMP				AML	AML		
	comp=N,626μm,0.4s						
CAMP				AML	AML		
	comp=N,625μm,0.4s						
CAMP				AML	AML		
	comp=E,353μm,0.2s						
T1246	**Crognaleto (TE**	**0.10**	**47**	⇑P	Pg	12 42 32.2	+0.5
T1246				S	Sg	12 42 34.2	+0.6
T1247	**Pizzolo (AQ)**	**0.10**	**224**	P	Pg	12 42 32.1	+0.3
T1247				S	Sg	12 42 34.5	+0.9
T1247				AML	AML		
	comp=E,488μm,0.1s						
T1247				AML	AML		
	comp=E,488μm,0.1s						
T1247				AML	AML		
	comp=N,472μm,1.3s						
T1247				AML	AML		
	comp=E,488μm,0.1s						
T1247				AML	AML		
	comp=N,430μm,0.1s						
SMA1	**SAN MARTINO**	**0.12**	**338**	P	Pg	12 42 32.6	+0.5
SMA1				S	Sg	12 42 34.7	+0.5
SMA1				AML	AML		
	comp=E,116μm,0.6s						
SMA1				AML	AML		
	comp=N,98μm,1.4s						
SMA1				AML	AML		
	comp=N,83μm,0.2s						
SMA1				AML	AML		
	comp=E,88μm,0.2s						
RM33	**Pellescritta (**	**0.14**	**267**	⇑P	Pg	12 42 32.6	+0.4
RM33				S	Sg	12 42 35.0	+0.5
RM33				AML	AML		
	comp=E,182μm,0.7s						
RM33				AML	AML		
	comp=N,251μm,0.3s						
RM33				AML	AML		
	comp=E,183μm,0.7s						
RM33				AML	AML		
	comp=N,252μm,0.3s						
RM33				AML	AML		
	comp=N,249μm,0.2s						
RM33				AML	AML		
	comp=N,264μm,0.2s						
RM33				AML	AML		
	comp=E,183μm,0.1s						
RM33				AML	AML		
	comp=E,201μm,0.1s						
GIGS	**Gran Sasso**	**0.14**	**118**	P	Pg	12 42 32.7	+0.3
GIGS				S	Sg	12 42 35.0	+0.4
GIGS				AML	AML		
	comp=E,117μm,0.1s						
GIGS				AML	AML		
	comp=N,134μm,0.2s						
GIGS				AML	AML		
	comp=E,117μm,0.1s						
GIGS				AML	AML		
	comp=N,135μm,0.2s						
GIGS				AML	AML		
	comp=E,117μm,0.1s						
TERO	**Teramo**	**0.19**	**55**	P	Pg	12 42 33.6	+0.5
TERO				S	Sg	12 42 36.7	+0.9
TERO				AML	AML		
	comp=E,106μm,1.0s						
TERO				AML	AML		
	comp=N,110μm,0.3s						
TERO				AML	AML		
	comp=N,110μm,0.3s						
TERO				AML	AML		
	comp=E,105μm,0.2s						
TERO				AML	AML		
	comp=N,71μm,0.1s						
TERO				AML	AML		
	comp=E,89μm,0.1s						
TERO				AML	AML		
	comp=N,56μm,0.1s						
T1214	**Arquata del Tr**	**0.28**	**330**	P	Pg	12 42 35.5	+0.7
T1214				S	Sb	12 42 40.3	-1.1
T1214				AML	AML		
	comp=N,30μm,0.5s						
T1214				AML	AML		
	comp=E,63μm,1.9s						
FAGN	**Fagnano**	**0.29**	**151**	P	Pb	12 42 36.1	-0.4
FAGN				S	Sg	12 42 40.1	+1.3
T1212	**Cascia, Frazio**	**0.35**	**312**	P	Pb	12 42 37.4	-0.2
T1212				S	Sg	12 42 41.8	+1.0
T1212				AML	AML		
	comp=N,45μm,0.1s						
T1212				AML	AML		
	comp=E,35μm,0.4s						
T1245	**Castelsantange**	**0.37**	**336**	P	Pg	12 42 37.0	+0.5
T1245				S	Sb	12 42 43.0	-1.0
T1245				AML	AML		
	comp=N,78μm,1.4s						
T1245				AML	AML		
	comp=E,66μm,1.2s						
T1245				AML	AML		
	comp=N,78μm,1.4s						
T1245				AML	AML		
	comp=E,72μm,0.3s						
T1245				AML	AML		
	comp=E,59μm,0.2s						
T1245				AML	AML		
	comp=N,72μm,0.3s						
T1211	**Morro Reatino**	**0.40**	**272**	P	Pg	12 42 37.6	+0.6
T1211				S	Sg	12 42 43.2	+0.8
T1211				AML	AML		
	comp=N,40μm,0.2s						
T1211				AML	AML		
	comp=E,49μm,0.1s						
T1211				AML	AML		
	comp=E,63μm,0.1s						
T1211				AML	AML		
	comp=N,48μm,0.3s						
T0110	**Collepietro**	**0.41**	**136**	P	Pb	12 42 38.1	-0.4
T0110				S	Sb	12 42 44.8	-0.1
FDMO	**Fiordimonte**	**0.57**	**336**	P	Pg	12 42 40.6	+0.4
FDMO				S	Sb	12 42 49.5	0.0
FDMO				AML	AML		
	comp=N,22μm,0.2s						
FDMO				AML	AML		
	comp=E,18μm,0.2s						
T1219	**Muccia, Frazio**	**0.61**	**332**	S	Sb	12 42 50.6	-0.2
MOMA	**Monte Martano**	**0.67**	**295**	P	Pg	12 42 42.6	+0.4
MOMA				S	Sb	12 42 52.9	+0.2
MOMA				AML	AML		
	comp=E,24μm,1.1s						
MOMA				AML	AML		
	comp=N,20μm,0.2s						
MOMA				AML	AML		
	comp=E,17μm,0.2s						
MOMA				AML	AML		
	comp=N,20μm,0.1s						
VIVA	**Pratoni del Vi**	**0.90**	**212**	⇑P	Pg	12 42 46.5	0.0
GIUL	**Giuliano Di Ro**	**0.96**	**186**	S	Sg	12 43 00.4	+0.2
GIUL				AML	AML		
	comp=E,57μm,0.3s						
GIUL				AML	AML		
	comp=N,49μm,0.3s						

ROM 17 12:43:19.2±0.1,43°.003N±0°.003×13°.027E±0°.005, h8^{km},ML1.5/11,2C-1D,Error ellipse: s-maj=0.4km s-min=0.2km az=242.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CESI	**CESI - Serrava**	**0.09**	**271**	⇑P	Pg	12 43 22.0	+0.5
CESI				S	Sg	12 43 23.7	+0.5
CESI				AML	AML		
	comp=E,510μm,0.5s						
CESI				AML	AML		
	comp=N,648μm,0.2s						
T1216	**Preci, Frazion**	**0.11**	**183**	P	Pg	12 43 22.1	+0.3
T1216				S	Sg	12 43 24.6	+0.9
T1216				AML	AML		
	comp=E,500μm,1.3s						
T1216				AML	AML		
	comp=N,552μm,0.8s						
T1216				AML	AML		
	comp=N,552μm,1.2s						
T1216				AML	AML		
	comp=E,500μm,0.7s						
T1220	**Camerino, Fraz**	**0.12**	**23**	P	Pg	12 43 22.4	+0.5
T1220				S	Sg	12 43 24.8	+1.0
MC2	**Monte Cornacci**	**0.15**	**127**	P	Pg	12 43 22.9	+0.4
MC2				S	Sg	12 43 26.2	+1.4
T1245	**Castelsantange**	**0.19**	**141**	P	Pg	12 43 23.8	+0.7
T1245				AML	AML		
	comp=E,317μm,0.9s						
T1245				AML	AML		
	comp=N,254μm,0.3s						
T1245				AML	AML		
	comp=E,318μm,0.9s						
T1245				AML	AML		
	comp=N,382μm,1.1s						
T1245				AML	AML		
	comp=N,382μm,0.9s						
T1245				AML	AML		
	comp=E,237μm,0.1s						
T1245				AML	AML		
	comp=E,318μm,1.1s						
MMO1	**Montemonaco**	**0.24**	**115**	⇓P	Pg	12 43 24.6	+0.5
MMO1				S	Sg	12 43 28.8	+1.4
T1212	**Cascia, Frazio**	**0.25**	**177**	P	Pg	12 43 24.8	+0.6
T1212				S	Sb	12 43 29.4	-1.2

T1212				AML	AML		
	comp=N,262µm,0.2s						
T1212				AML	AML		
	comp=E,190µm,0.8s						
T1212				AML	AML		
	comp=E,190µm,1.2s						
SNTG	**Esanatoglia**	**0.26**	**346**	P	Pg	12 43 25.1	+0.7
SNTG				S	Sb	12 43 29.5	-1.2
SNTG				AML	AML		
	comp=N,111µm,0.7s						
SNTG				AML	AML		
	comp=E,62µm,0.1s						
ASSB	**Assisi San Ben**	**0.27**	**278**	⇑P	Pg	12 43 25.3	+0.7
ASSB				S	Sb	12 43 30.1	-1.0
ASSB				AML	AML		
	comp=E,105µm,0.2s						
ASSB				AML	AML		
	comp=N,172µm,0.2s						
T1214	**Arquata del Tr**	**0.28**	**151**	P	Pg	12 43 25.2	+0.4
T1214				S	Sb	12 43 30.3	-1.1
EL6	**Elcito**	**0.33**	**10**	P	Pg	12 43 26.2	+0.4
EL6				S	Sb	12 43 32.2	-0.7
T1241	**Roccafluvione,**	**0.33**	**116**	P	Pg	12 43 26.2	+0.5
T1241				S	Sb	12 43 31.9	-0.9
MOMA	**Monte Martano**	**0.39**	**239**	S	Sb	12 43 34.5	-0.1
MOMA				AML	AML		
	comp=E,62µm,0.3s						
MOMA				AML	AML		
	comp=N,44µm,0.1s						
CING	**Cingoli**	**0.39**	**18**	P	Pg	12 43 27.4	+0.5
CING				S	Sb	12 43 34.0	-0.7
CING				AML	AML		
	comp=E,100µm,0.5s						
CING				AML	AML		
	comp=N,110µm,0.1s						
MURB	**Monte Urbino**	**0.45**	**305**	P	Pg	12 43 28.6	+0.6
MURB				AML	AML		
	comp=E,94µm,0.4s						
MURB				AML	AML		
	comp=N,82µm,0.2s						
T1211	**Morro Reatino**	**0.49**	**195**	P	Pg	12 43 28.9	+0.3
T1211				S	Sb	12 43 37.0	-0.3
ARVD	**Arcevia**	**0.50**	**353**	P	Pg	12 43 29.2	+0.3
ARVD				S	Sb	12 43 37.7	+0.1
ARVD				AML	AML		
	comp=E,53µm,0.2s						
ARVD				AML	AML		
	comp=N,42µm,0.2s						
TERO	**Teramo**	**0.57**	**132**	P	Pg	12 43 30.4	+0.2
TERO				S	Sb	12 43 39.3	-0.4
TERO				AML	AML		
	comp=E,35µm,0.9s						
TERO				AML	AML		
	comp=N,40µm,0.6s						
PIEI	**Pieia**	**0.64**	**326**	P	Pb	12 43 32.3	-0.4
CAFI	**Castiglion Fio**	**0.84**	**293**	P	Pn	12 43 37.8	+0.4
CERA	**Filignano**	**1.58**	**152**	S	Sn	12 44 08.3	0.0

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*TAP **17** 12:50:32.0, 24°.16N×122°.40E, h44^{km}, ML2.8, C*
*JMA **17** 12:50:32.3±0.1, 24°N±1°×122°.4E±0°.3, h32^{km}±2^{km},*
MV2.1/10, NW OFF ISHIGAKIJIMA IS
ISC 17 12:50:33.2±1.2**, 24°.17N**±0°.03×**122°.41E**±0°.02**, h41**^{km}±6^{km}**,**
n80, σ0^{s}.86/146**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	**EOS4**	**0.10**	**237**	P	**Pn**	**12 50 39.5**	**+0.1**
	baz=240						
EOS4				S	**Sn**	**12 50 44.9**	**+1.1**
	baz=240						
EOS3	**EOS3**	**0.14**	**324**	P	**Pn**	**12 50 39.8**	**-0.3**
	baz=328						
EOS3				S	**Sn**	**12 50 45.3**	**+0.5**
	baz=328						
EOS2	**EOS2**	**0.29**	**327**	P	**Pn**	**12 50 41.2**	**-0.2**
	baz=328						
EOS2				*e*S	**Sn**	**12 50 46.4**	**-0.6**
	baz=328						
JYNG	**Yonagunijimaku**	**0.56**	**60**	P	**Pn**	**12 50 44.3**	**-0.6**
JYNG				S	**Sn**	**12 50 52.5**	**-0.6**
YOJ	**Yonaguni jima**	**0.62**	**62**	P	**Pn**	**12 50 45.1**	**-0.5**
YOJ	**Yonaguni jima**	**0.62**	**62**	P	**Pn**	**12 50 45.1**	**-0.5**
YOJ				*e*S	**Sn**	**12 50 54.3**	**-0.1**
YOJ	**Yonaguni jima**	**0.62**	**62**	P	**Pn**	**12 50 45.1**	**-0.5**
	baz=61						
YOJ				S	**Sn**	**12 50 54.8**	**+0.3**
	baz=61						
EWUT	**Wuta**	**0.63**	**295**	*e*P	**Pn**	**12 50 44.3**	**-1.5**
	baz=296						
EWUT				*e*S	**Sn**	**12 50 53.7**	**-1.0**
	baz=296						
ENA	**Nanau**	**0.66**	**293**	P	**Pn**	**12 50 45.1**	**-1.0**
	baz=293						
ENA				*e*S	**Sn**	**12 50 54.1**	**-1.2**
	baz=293						
TWC	**Suao**	**0.67**	**311**	P	**Pn**	**12 50 45.6**	**-0.6**
	baz=311						
TWC				*e*S	**Sn**	**12 50 54.0**	**-1.6**
	baz=311						
ETL	**Fush Village**	**0.72**	**269**	*i* P	**Pn**	**12 50 46.5**	**-0.4**
	baz=269						
ETL				*i* S	**Sn**	**12 50 57.0**	**+0.2**
	baz=269						
NACB	**Ninganchiao**	**0.74**	**270**	P	**Pn**	**12 50 46.6**	**-0.7**
NACB	**Ninganchiao**	**0.74**	**270**	P	**Pn**	**12 50 46.5**	**-0.7**
	baz=270						
NACB				S	**Sn**	**12 50 56.9**	**-0.5**
	baz=270						
TWD	**Chiawan**	**0.75**	**263**	P	**Pn**	**12 50 46.6**	**-0.7**
	baz=263						
TWD				S	**Sn**	**12 50 57.2**	**-0.2**
	baz=263						
NDS	**Dongshan**	**0.78**	**306**	*e*P	**Pn**	**12 50 49.3**	**+1.5**
	baz=306						
NDS				S	**Sn**	**12 50 58.7**	**+0.4**
	baz=306						
EGS		**0.80**	**327**	P	**Pn**	**12 50 47.9**	**-0.1**
	baz=328						
EGS				S	**Sn**	**12 50 58.7**	**0.0**
	baz=328						
ETLH	**Xiulin Townshi**	**0.84**	**272**	P	**Pn**	**12 50 48.1**	**-0.7**
	baz=272						
ETLH				S	**Sn**	**12 50 59.6**	**-0.4**
	baz=272						
ETM	**Tongmen**	**0.86**	**256**	*i* P	**Pn**	**12 50 48.4**	**-0.5**
	baz=256						
ETM				S	**Sn**	**12 51 00.5**	**+0.2**
	baz=256						
TWE	**Neicheng**	**0.87**	**309**	P	**Pn**	**12 50 48.9**	**-0.1**
	baz=310						
TWE				*e*S	**Sn**	**12 50 59.5**	**-0.9**
	baz=310						
LATG	**Datong**	**0.88**	**294**	P	**Pn**	**12 50 48.3**	**-0.9**
	baz=294						
LATG				S	**Sn**	**12 51 01.1**	**+0.2**
	baz=294						
ENTT	**Nioudou**	**0.90**	**301**	P	**Pn**	**12 50 49.5**	**+0.1**
	baz=302						
ENTT				S	**Sn**	**12 51 01.7**	**+0.5**
	baz=302						
TWB1	**Santiao Chiao**	**0.92**	**335**	P	**Pn**	**12 50 48.9**	**-0.8**
	baz=336						
TWB1				*e*S	**Sn**	**12 51 00.5**	**-1.1**
	baz=336						
FUSB	**Fushanzhiwuyua**	**0.95**	**308**	P	**Pn**	**12 50 50.4**	**+0.3**
	baz=308						
FUSB				*i* S	**Sn**	**12 51 02.7**	**+0.2**
	baz=308						
TIPB	**Shuangxi**	**0.95**	**326**	*i* P	**Pn**	**12 50 49.9**	**-0.4**
	baz=326						
TIPB				S	**Sn**	**12 51 02.7**	**0.0**
	baz=326						
ESL	**Shilin**	**0.96**	**248**	P	**Pn**	**12 50 49.4**	**-0.9**
	baz=248						
ESL				S	**Sn**	**12 51 02.4**	**-0.3**
	baz=248						
NNSB	**Datong**	**0.97**	**285**	*i* P	**Pn**	**12 50 50.1**	**-0.4**
	baz=285						
NNSB				*i* S	**Sn**	**12 51 03.0**	**-0.1**
	baz=285						
NNSH	**Datong**	**0.97**	**285**	P	**Pn**	**12 50 50.4**	**0.0**
	baz=285						
NNSH				*i* S	**Sn**	**12 51 03.1**	**0.0**
	baz=285						
NNS	**Nan Shan**	**0.98**	**286**	*i* P	**Pn**	**12 50 50.2**	**-0.5**
	baz=286						
NNS				S	**Sn**	**12 51 03.4**	**0.0**
	baz=286						
NWLT	**Wulai**	**1.02**	**306**	P	**Pn**	**12 50 51.5**	**+0.4**
	baz=306						
NWLT				*i* S	**Sn**	**12 51 04.4**	**+0.1**
	baz=306						
EGFH	**Guangfu**	**1.03**	**241**	P	**Pn**	**12 50 50.4**	**-0.7**
	baz=241						
EGFH				S	**Sn**	**12 51 04.0**	**-0.4**
	baz=241						
SXI1	**Grass Mountain**	**1.04**	**332**	P	**Pn**	**12 50 50.8**	**-0.6**
	baz=332						
SXI1				S	**Sn**	**12 51 05.4**	**+0.7**
	baz=332						
WHF	**Hehuan Shan**	**1.04**	**269**	P	**Pn**	**12 50 51.5**	**-0.3**
	baz=268						
WHF				S	**Sn**	**12 51 05.3**	**-0.1**
	baz=268						
WFSB	**Wu-fen Shan**	**1.06**	**328**	P	**Pn**	**12 50 51.3**	**-0.3**
	baz=328						
WFSB				*i* S	**Sn**	**12 51 05.6**	**+0.4**
	baz=328						
YHNB	**Yeheng**	**1.06**	**298**	P	**Pn**	**12 50 52.5**	**+0.8**
YHNB	**Yeheng**	**1.06**	**298**	P	**Pn**	**12 50 52.0**	**+0.2**
	baz=298						
YHNB				*e*S	**Sn**	**12 51 04.5**	**-0.9**
	baz=298						
NSK	**Sanguang**	**1.08**	**298**	P	**Pn**	**12 50 52.0**	**0.0**
	baz=298						
NSK				*i* S	**Sn**	**12 51 05.7**	**0.0**
	baz=298						
HGSD	**Ruisui**	**1.13**	**233**	P	**Pn**	**12 50 52.1**	**-0.4**
	baz=233						
HGSD				S	**Sn**	**12 51 07.0**	**+0.2**
	baz=233						
CHGB	**Renai**	**1.13**	**265**	P	**Pn**	**12 50 52.6**	**-0.2**
	baz=264						
CHGB				S	**Sn**	**12 51 07.3**	**0.0**
	baz=264						
OWD	**Renai**	**1.15**	**259**	*i* P	**Pn**	**12 50 52.6**	**-0.3**
	baz=259						
OWD				S	**Sn**	**12 51 06.8**	**-0.7**
	baz=259						
TATO	**Taipei**	**1.16**	**314**	P	**Pn**	**12 50 52.8**	**-0.1**
	baz=314						
TATO				*e*S	**Sn**	**12 51 08.8**	**+1.3**
	baz=314						
WUSB	**Renai**	**1.19**	**262**	P	**Pn**	**12 50 53.7**	**+0.1**
	baz=261						
WUSB				S	**Sn**	**12 51 08.8**	**+0.2**
	baz=261						
EHY	**Hungye**	**1.20**	**236**	P	**Pn**	**12 50 52.7**	**-0.8**
	baz=236						
EHY				S	**Sn**	**12 51 07.9**	**-0.6**
	baz=236						
IRIF	**Iriomote-Funau**	**1.22**	**82**	P	**Pn**	**12 50 53.8**	**0.0**
IRIF				*e*S	**Sn**	**12 51 09.5**	**+0.5**
ECBN	**Changbin**	**1.22**	**226**	*i* P	**Pn**	**12 50 53.5**	**-0.3**
	baz=225						
ECBN				*e*S	**Sn**	**12 51 08.4**	**-0.7**
	baz=225						
NFF	**Wufeng Townshi**	**1.26**	**292**	*e*P	**Pn**	**12 50 55.3**	**+0.9**
	baz=291						
NFF				S	**Sn**	**12 51 10.1**	**-0.1**
	baz=291						
YULB	**Yu-li**	**1.28**	**233**	P	**Pn**	**12 50 54.3**	**-0.3**
YULB	**Yu-li**	**1.28**	**233**	P	**Pn**	**12 50 53.7**	**-0.9**
	baz=232						
YULB				*e*S	**Sn**	**12 51 09.3**	**-1.3**
	baz=232						
EYUL	**Yuli**	**1.29**	**231**	P	**Pn**	**12 50 54.7**	**-0.1**
	baz=230						
EYUL				S	**Sn**	**12 51 11.2**	**+0.3**
	baz=230						
TWF1	**Yuli**	**1.30**	**231**	P	**Pn**	**12 50 54.5**	**-0.5**
	baz=231						
TWF1				S	**Sn**	**12 51 11.3**	**+0.1**
	baz=231						
WCS	**Beigang Elemen**	**1.37**	**265**	*e*P	**Pn**	**12 50 56.4**	**+0.6**
	baz=265						
WCS				*e*S	**Sn**	**12 51 13.7**	**+0.9**
	baz=265						
SSLB	**Suanglung**	**1.38**	**254**	P	**Pn**	**12 50 57.7**	**+1.6**
SSLB	**Suanglung**	**1.38**	**254**	P	**Pn**	**12 50 56.3**	**+0.2**
	baz=254						
SSLB				S	**Sn**	**12 51 13.4**	**+0.2**
	baz=254						
FULB	**Fuli**	**1.41**	**227**	P	**Pn**	**12 50 55.9**	**-0.5**
	baz=226						
FULB				*e*S	**Sn**	**12 51 12.9**	**-0.9**
	baz=226						
SMLT	**Sun Moon Lake**	**1.41**	**258**	*e*P	**Pn**	**12 50 57.1**	**+0.6**
	baz=258						
SMLT				*e*S	**Sn**	**12 51 15.0**	**+1.1**
	baz=258						
TYC	**Yuchr**	**1.44**	**260**	*e*P	**Pn**	**12 50 57.3**	**+0.5**
	baz=259						
JKRS	**Kuro-shima**	**1.47**	**87**	P	**Pn**	**12 50 57.9**	**+0.8**
JKRS				*e*S	**Sn**	**12 51 15.9**	**+0.8**
WHYT	**Xinyi Township**	**1.50**	**252**	*e*P	**Pn**	**12 50 58.5**	**+0.9**
	baz=251						
WHYT				*e*S	**Sn**	**12 51 17.8**	**+1.7**
	baz=251						
EHD	**Haiduan**	**1.50**	**227**	P	**Pn**	**12 50 57.0**	**-0.7**
	baz=227						
EHD				S	**Sn**	**12 51 15.7**	**-0.4**
	baz=227						
EDH	**Donghe**	**1.57**	**220**	P	**Pn**	**12 50 57.8**	**-0.8**
	baz=220						
EDH				*e*S	**Sn**	**12 51 15.8**	**-1.8**
	baz=220						
WJS	**Zhushan**	**1.57**	**258**	*e*P	**Pn**	**12 51 00.4**	**+1.8**
	baz=257						
JIJ	**Ishigaki jima**	**1.60**	**83**	P	**Pn**	**12 50 59.3**	**+0.4**
JIJ				*e*S	**Sn**	**12 51 18.9**	**+0.5**
ELDTW	**Lidau**	**1.61**	**233**	*i* P	**Pn**	**12 50 58.9**	**-0.3**
	baz=232						
ELDTW				S	**Sn**	**12 51 18.1**	**-0.7**
	baz=232						
ALS	**Alishan**	**1.61**	**246**	*e*P	**Pn**	**12 51 00.4**	**+1.0**
	baz=245						
ALS				*e*S	**Sn**	**12 51 19.9**	**+0.8**
	baz=245						
CHN5	**Tsauling**	**1.68**	**250**	*e*P	**Pn**	**12 51 01.6**	**+1.4**
	baz=250						
CHN5				*e*S	**Sn**	**12 51 22.7**	**+2.1**
	baz=250						
LONT	**Longtian**	**1.72**	**223**	*i* P	**Pn**	**12 51 00.5**	**-0.2**
	baz=222						
LONT				*i* S	**Sn**	**12 51 21.2**	**-0.3**
	baz=222						
LDUT	**Ludao**	**1.72**	**210**	*e*P	**Pn**	**12 50 60.0**	**-0.7**
	baz=209						
LDUT				*e*S	**Sn**	**12 51 19.9**	**-1.5**
	baz=209						
JISG	**Ishigakijimahi**	**1.78**	**76**	P	**Pn**	**12 51 01.2**	**-0.3**
JISG				S	**Sn**	**12 51 22.8**	**-0.2**
STYH	**Taoyuan**	**1.80**	**237**	*e*P	**Pn**	**12 51 02.5**	**+0.8**
	baz=236						
STYH				*e*S	**Sn**	**12 51 25.5**	**+2.2**
	baz=236						
TWGBT	**Beinan**	**1.82**	**222**	P	**Pn**	**12 51 02.7**	**+0.7**
TWGBT	**Beinan**	**1.82**	**222**	P	**Pn**	**12 51 01.6**	**-0.4**
	baz=222						
TWGBT				S	**Sn**	**12 51 23.1**	**-0.7**
	baz=222						
TPUB	**Ta-pu**	**1.85**	**242**	P	**Pn**	**12 51 04.1**	**+1.7**
TPUB	**Ta-pu**	**1.85**	**242**	*e*P	**Pn**	**12 51 04.3**	**+1.9**
	baz=242						
TPUB				*e*S	**Sn**	**12 51 27.0**	**+2.4**
	baz=242						
CHN4	**Tsaushan**	**1.85**	**244**	*e*P	**Pn**	**12 51 04.5**	**+2.0**
	baz=243						
WTP	**Ta-pu**	**1.89**	**241**	*e*P	**Pn**	**12 51 04.7**	**+1.7**
	baz=240						
CHN1	**Nanshi**	**1.98**	**241**	*e*P	**Pn**	**12 51 06.1**	**+1.8**
	baz=240						
SGST	**Jiashian**	**1.99**	**237**	*e*P	**Pn**	**12 51 05.6**	**+1.2**
	baz=236						
JTJ	**Tarama**	**2.14**	**77**	*e*S	**Sn**	**12 51 32.0**	**+0.1**
SMST	**Manzhou Townsh**	**2.58**	**214**	P	**Pn**	**12 51 11.7**	**-0.8**
	baz=214						
SMST				S	**Sn**	**12 51 41.7**	**-1.0**
	baz=214						
PHUB	**P'eng-hu**	**2.68**	**256**	P	**Pn**	**12 51 14.3**	**+0.5**
	baz=255						
PHUB				*e*S	**Sn**	**12 51 45.7**	**+0.7**
	baz=255						
VWUC	**VWUC**	**2.81**	**287**	P	**Pn**	**12 51 15.4**	**-0.2**
	baz=287						
VWUC				*e*S	**Sn**	**12 51 46.0**	**-2.4**
	baz=287						

ROM 17 12:53:44.2±0.0**, 43°.003N**±0°.002×**13°.028E**±0°.004**,**
h9^{km}**, ML1.6**/21**, 1C-3D, Error ellipse: s-maj=0.2km**
s-min=0.2km az=70.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CESI	**CESI - Serrava**	**0.09**	**272**	⇑P	Pg	12 53 47.0	+0.5
CESI				S	Sg	12 53 48.9	+0.6
CESI				AML	AML		
	comp=E,1040µm,0.5s						
CESI				AML	AML		
	comp=N,1560µm,0.3s						
CESI				AML	AML		
	comp=N,1560µm,0.3s						
CESI				AML	AML		
	comp=E,729µm,0.2s						
T1216	**Preci, Frazion**	**0.11**	**183**	P	Pg	12 53 47.3	+0.4
T1216				S	Sg	12 53 49.4	+0.7
T1216				AML	AML		
	comp=E,1165µm,0.4s						
T1216				AML	AML		
	comp=N,1185µm,0.2s						
T1216				AML	AML		
	comp=E,1165µm,0.3s						
T1216				AML	AML		
	comp=N,1185µm,0.2s						
T1216				AML	AML		
	comp=E,953µm,0.5s						
T1216				AML	AML		
	comp=N,1185µm,0.2s						
T1220	**Camerino, Fraz**	**0.12**	**23**	P	Pg	12 53 47.4	+0.5
T1220				S	Sg	12 53 49.4	+0.6
T1220				AML	AML		
	comp=E,4560µm,0.3s						
T1220				AML	AML		
	comp=N,3260µm,0.2s						
T1220				AML	AML		
	comp=N,3265µm,0.2s						
T1220				AML	AML		
	comp=E,4556µm,0.3s						
T1220				AML	AML		
	comp=N,3845µm,0.2s						
T1220				AML	AML		
	comp=N,3261µm,0.2s						
T1256	**Bolognola (MC)**	**0.14**	**88**	P	Pg	12 53 48.0	+0.6
T1256				S	Sg	12 53 50.6	+0.9
T1256				AML	AML		
	comp=E,476µm,0.8s						
T1256				AML	AML		
	comp=N,676µm,1.2s						
T1256				AML	AML		
	comp=E,489µm,0.8s						
T1256				AML	AML		
	comp=N,614µm,0.3s						
T1256				AML	AML		
	comp=N,676µm,1.2s						
T1256				AML	AML		
	comp=E,429µm,0.5s						
T1256				AML	AML		
	comp=N,656µm,0.2s						
T1256				AML	AML		
	comp=E,427µm,0.5s						
T1256				AML	AML		
	comp=N,615µm,0.3s						
MC2	**Monte Cornacci**	**0.15**	**127**	⇓P	Pg	12 53 48.0	+0.5
MC2				S	Sg	12 53 51.4	+1.6
CSP1	**Cessapalombo**	**0.16**	**55**	P	Pg	12 53 48.3	+0.6
CSP1				S	Sg	12 53 51.1	+1.1
CSP1				AML	AML		
	comp=E,414µm,0.2s						
CSP1				AML	AML		
	comp=N,390µm,0.8s						
CSP1				AML	AML		
	comp=E,414µm,0.2s						
CSP1				AML	AML		
	comp=N,320µm,0.3s						
T1245	**Castelsantange**	**0.19**	**141**	P	Pg	12 53 48.6	+0.5
T1245				S	Sg	12 53 52.0	+1.1
T1245				AML	AML		
	comp=E,676µm,0.7s						
T1245				AML	AML		
	comp=N,568µm,0.8s						
T1245				AML	AML		
	comp=E,608µm,0.3s						
T1245				AML	AML		
	comp=N,569µm,0.6s						
T1245				AML	AML		
	comp=N,451µm,0.3s						
T1245				AML	AML		
	comp=N,404µm,0.2s						
T1245				AML	AML		
	comp=E,608µm,0.3s						
T1245				AML	AML		
	comp=E,637µm,0.3s						
MMO1	**Montemonaco**	**0.24**	**115**	⇓P	Pg	12 53 49.6	+0.5
MMO1				S	Sg	12 53 53.9	+1.5
T1212	**Cascia, Frazio**	**0.25**	**177**	⇓P	Pg	12 53 49.9	+0.6
T1212				S	Sb	12 53 54.2	-1.3
T1212				AML	AML		
	comp=E,492µm,0.8s						
T1212				AML	AML		
	comp=N,738µm,0.2s						
T1212				AML	AML		
	comp=E,492µm,0.8s						
T1212				AML	AML		
	comp=N,722µm,0.2s						
T1212				AML	AML		
	comp=E,474µm,0.8s						
T1212				AML	AML		
	comp=N,738µm,0.2s						
T1212				AML	AML		
	comp=E,455µm,0.2s						
T1212				AML	AML		
	comp=E,413µm,0.2s						
T1212				AML	AML		
	comp=N,722µm,0.2s						
T1212				AML	AML		
	comp=N,738µm,0.2s						
SNTG	**Esanatoglia**	**0.26**	**346**	P	Pg	12 53 50.0	+0.6
SNTG				S	Sb	12 53 54.8	-1.0
SNTG				AML	AML		
	comp=E,88µm,0.5s						
SNTG				AML	AML		
	comp=N,172µm,0.2s						
SNTG				AML	AML		
	comp=N,173µm,0.2s						
SNTG				AML	AML		
	comp=E,87µm,0.4s						
SNTG				AML	AML		
	comp=N,173µm,0.2s						
ASSB	**Assisi San Ben**	**0.27**	**279**	P	Pg	12 53 50.3	+0.6
ASSB				S	Sb	12 53 55.1	-1.1
ASSB				AML	AML		
	comp=E,176µm,0.2s						
ASSB				AML	AML		
	comp=N,366µm,0.3s						
ASSB				AML	AML		
	comp=E,176µm,0.2s						
ASSB				AML	AML		
	comp=N,366µm,0.3s						
T1214	**Arquata del Tr**	**0.28**	**151**	P	Pg	12 53 50.2	+0.5
T1214				S	Sb	12 53 55.2	-1.1
T1214				AML	AML		
	comp=E,162µm,0.4s						
T1214				AML	AML		
	comp=N,128µm,0.2s						
T1214				AML	AML		
	comp=N,148µm,0.2s						
T1214				AML	AML		
	comp=E,178µm,0.4s						
T1217	**Poggiodomo (PG**	**0.30**	**194**	P	Pg	12 53 50.9	+0.7
T1217				S	Sb	12 53 55.8	-1.1
T1217				AML	AML		
	comp=E,196µm,0.8s						
T1217				AML	AML		
	comp=N,224µm,0.4s						
T1217				AML	AML		
	comp=E,177µm,0.3s						
T1217				AML	AML		
	comp=N,213µm,0.2s						

T1217				AML	AML		
	comp=E,149µm,0.7s						
T1241	**Roccafluvione,**	**0.33**	**116**	P	Pg	12 53 51.3	+0.5
T1241				S	Sb	12 53 56.5	-1.3
T1241				AML	AML		
	comp=E,240µm,0.3s						
T1241				AML	AML		
	comp=N,146µm,0.2s						
T1241				AML	AML		
	comp=N,146µm,0.2s						
T1241				AML	AML		
	comp=E,227µm,0.3s						
T1241				AML	AML		
	comp=E,240µm,0.3s						
T1241				AML	AML		
	comp=N,171µm,0.2s						
EL6	**Elcito**	**0.33**	**9**	P	Pg	12 53 51.4	+0.6
EL6				S	Sb	12 53 57.0	-0.8
EL6				AML	AML		
	comp=E,374µm,0.3s						
EL6				AML	AML		
	comp=N,352µm,0.3s						
EL6				AML	AML		
	comp=E,375µm,0.3s						
EL6				AML	AML		
	comp=N,351µm,0.3s						
ATCC	**AVT- Casa Cast**	**0.34**	**303**	P	Pb	12 53 51.8	-0.7
ATCC				S	Sb	12 53 57.5	-0.5
ATCC				AML	AML		
	comp=E,182µm,0.5s						
ATCC				AML	AML		
	comp=N,146µm,0.6s						
ATCC				AML	AML		
	comp=N,139µm,0.4s						
ATCC				AML	AML		
	comp=E,129µm,0.3s						
FOSV	**Fossato di Vic**	**0.35**	**326**	P	Pg	12 53 51.8	+0.6
FOSV				S	Sb	12 53 57.6	-0.8
FOSV				AML	AML		
	comp=E,75µm,0.8s						
FOSV				AML	AML		
	comp=N,101µm,1.2s						
FOSV				AML	AML		
	comp=N,98µm,0.3s						
FOSV				AML	AML		
	comp=E,70µm,0.2s						
MOMA	**Monte Martano**	**0.39**	**240**	P	Pg	12 53 52.6	+0.7
MOMA				S	Sb	12 53 59.0	-0.6
MOMA				AML	AML		
	comp=E,98µm,1.3s						
MOMA				AML	AML		
	comp=N,90µm,0.2s						
MOMA				AML	AML		
	comp=E,89µm,0.2s						
MOMA				AML	AML		
	comp=E,144µm,0.2s						
MOMA				AML	AML		
	comp=N,90µm,0.2s						
CING	**Cingoli**	**0.39**	**18**	P	Pg	12 53 52.5	+0.6
CING				S	Sb	12 53 59.2	-0.4
CING				AML	AML		
	comp=E,162µm,0.2s						
CING				AML	AML		
	comp=N,86µm,1.2s						
CING				AML	AML		
	comp=E,162µm,0.2s						
CING				AML	AML		
	comp=N,81µm,0.2s						
MURB	**Monte Urbino**	**0.45**	**305**	P	Pb	12 53 53.9	-0.5
MURB				S	Sb	12 54 00.4	-0.9
MURB				AML	AML		
	comp=E,210µm,1.0s						
MURB				AML	AML		
	comp=N,190µm,0.3s						
MURB				AML	AML		
	comp=E,199µm,0.3s						
MURB				AML	AML		
	comp=E,182µm,0.2s						
MURB				AML	AML		
	comp=N,190µm,0.3s						
MURB				AML	AML		
	comp=N,211µm,0.6s						
ARRO	**Arrone**	**0.47**	**205**	P	Pg	12 53 53.8	+0.6
ARRO				S	Sb	12 54 01.3	-0.3
ARRO				AML	AML		
	comp=E,98µm,1.3s						
ARRO				AML	AML		
	comp=N,104µm,0.2s						
ARRO				AML	AML		
	comp=N,104µm,0.2s						
ARRO				AML	AML		
	comp=E,91µm,0.3s						
T1211	**Morro Reatino**	**0.49**	**195**	P	Pg	12 53 54.1	+0.5
T1211				S	Sb	12 54 02.0	-0.3
T1211				AML	AML		
	comp=E,85µm,0.3s						
T1211				AML	AML		
	comp=N,115µm,0.2s						
T1211				AML	AML		
	comp=N,151µm,0.5s						
T1211				AML	AML		
	comp=E,93µm,0.3s						
RM33	**Pellescritta (**	**0.51**	**164**	P	Pg	12 53 54.4	+0.3
RM33				S	Sb	12 54 02.8	-0.3
RM33				AML	AML		
	comp=E,53µm,1.1s						
RM33				AML	AML		
	comp=N,64µm,1.1s						
RM33				AML	AML		
	comp=N,57µm,0.3s						
RM33				AML	AML		
	comp=E,46µm,0.4s						
TERO	**Teramo**	**0.57**	**132**	P	Pg	12 53 55.4	+0.1
TERO				S	Sb	12 54 04.5	-0.1
TERO				AML	AML		
	comp=E,60µm,0.5s						
TERO				AML	AML		
	comp=N,82µm,0.6s						
TERO				AML	AML		
	comp=N,65µm,0.3s						
TERO				AML	AML		
	comp=N,74µm,0.3s						
TERO				AML	AML		
	comp=E,58µm,0.3s						
TERO				AML	AML		
	comp=E,57µm,0.2s						

ROM 17 12:54:17.6±0.2**,43°.006N**±0°.004×**13°.053E**±0°.007**, h2**^{km}±3^{km}**,ML1.2**/7**,Error ellipse: s-maj=0.6km s-min=0.4km az=268.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDMO	**Fiordimonte**	**0.04**	**39**	P	Pg	12 54 19.0	+0.5
FDMO				S	Sg	12 54 19.0	0.0
FDMO				AML	AML		
	comp=E,215µm,0.1s						
FDMO				AML	AML		
	comp=N,227µm,0.6s						
FDMO				AML	AML		
	comp=N,203µm,0.2s						
FDMO				AML	AML		
	comp=E,215µm,0.1s						
T1219	**Muccia, Frazio**	**0.06**	**326**	P	Pg	12 54 19.0	+0.2
T1219				S	Sg	12 54 20.1	+0.4
T1219				AML	AML		
	comp=N,269µm,0.1s						
T1219				AML	AML		
	comp=E,168µm,0.1s						
T1219				AML	AML		
	comp=E,158µm,0.1s						
T1219				AML	AML		
	comp=N,267µm,0.1s						
T1220	**Camerino, Fraz**	**0.11**	**14**	P	Pg	12 54 20.3	+0.6
T1220				AML	AML		
	comp=E,538µm,0.2s						
T1220				AML	AML		
	comp=N,294µm,0.3s						
CESI	**CESI - Serrava**	**0.11**	**270**	P	Pg	12 54 20.0	+0.2
CESI				S	Sg	12 54 21.8	+0.6
CESI				AML	AML		
	comp=N,158µm,0.2s						
CESI				AML	AML		
	comp=E,86µm,0.2s						
T1216	**Preci, Frazion**	**0.12**	**192**	P	Pg	12 54 20.3	+0.4
T1216				S	Sg	12 54 22.6	+1.1
T1216				AML	AML		
	comp=N,135µm,0.1s						
T1216				AML	AML		
	comp=E,109µm,0.1s						
MC2	**Monte Cornacci**	**0.14**	**133**	P	Pg	12 54 21.0	+0.6
T1212	**Cascia, Frazio**	**0.25**	**181**	P	Pg	12 54 22.9	+0.4
T1212				S	Sg	12 54 27.2	+1.4
T1212				AML	AML		
	comp=N,64µm,0.2s						
T1212				AML	AML		
	comp=E,46µm,0.3s						
OFFI	**Offida**	**0.47**	**98**	P	Pb	12 54 29.8	+1.2
RM33	**Pellescritta (**	**0.51**	**166**	AML	AML		
	comp=E,261µm,0.2s						
RM33				AML	AML		
	comp=E,265µm,0.7s						
RM33				AML	AML		
	comp=N,95µm,0.2s						
RM33				AML	AML		
	comp=E,282µm,0.2s						
RM33				AML	AML		
	comp=N,86µm,0.1s						
TERO	**Teramo**	**0.56**	**133**	S	Sb	12 54 40.1	+1.5
MA9	**Marino**	**1.27**	**193**	P	Pg	12 54 41.3	-0.6

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*MOS **17** 13:00:23.0±1.1, 35°.97N×140°.65E, h54^{km}, mb4.6/27, Error ellipse: s-maj=8.9km s-min=5.7km az=110.6*

*BJI **17** 13:00:24.0±0.0, 35°.90N×140°.50E, h69^{km}, mb4.5/20, mB4.7/7*

*NIED **17** 13:00:26.4, 36°.02N×140°.38E, h55^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.73; M$_{\theta\theta}$0.18; M$_{\phi\phi}$-1.92; M$_{r\theta}$-0.14; M$_{\theta\phi}$-0.59; M$_{\phi r}$1.64; Fault plane solution: M$_0$2.52000×10^{15} NP1:φ$_s$1.00000°, δ66.00000°, λ77.00000°. NP2:φ$_s$211.00000°, δ27.00000°, λ117.00000°.*

*JMA **17** 13:00:26.4±0.1, 36°.0N±0°.3×140°.4E±0°.5, h55^{km}±1^{km}, MV3.6/35, SOUTHERN IBARAKI PREF*

JMA Felt II J1 at SOUTHERN IBARAKI PREF .

*NEIC **17** 13:00:26.2±1.5, 35°.97N±0°.03×140°.48E±0°.08, h56^{km}±6^{km}, mb4.5/31, Error ellipse: s-maj=10.0km s-min=4.1km az=81.0*

*IDC **17** 13:00:28.5±1.9, 35°.93N×140°.29E, h81^{km}±15^{km}, mb3.8/22, mbtmp4.1/25, MS3.2/7, Error ellipse: s-maj=15.6km s-min=11.9km az=108.0*

ISC 17 13:00:25.1±0.6**, 35°.92N**±0°.04×**140°.58E**±0°.05**, h56**^{km}±5^{km}**, n160,** σ1^{s}.**66**/167**, mb4.3**/54**, MS3.2**/4**, 6C-19D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIHU	**Itakohorinouch**	**0.06**	**316**	*i* P	**Pn**	**13 00 35.3**	**+1.7**
JSMT	**Sammumatsuo**	**0.30**	**200**	*i* P	**Pn**	**13 00 37.3**	**+2.4**
JHYU	**Hitachinakayam**	**0.42**	**1**	*i* P	**Pn**	**13 00 36.3**	**+0.4**
JHYU				S	**Sn**	**13 00 43.9**	**+0.2**
JYT	**Yasato**	**0.43**	**314**	⇓*i*P	**Pn**	**13 00 35.7**	**-0.4**
JYT				⇓S	**Sn**	**13 00 42.6**	**-1.4**
JHO	**Hitachi**	**0.69**	**360**	*i* P	**Pn**	**13 00 39.1**	**+0.1**
JAG	**Ashikaga**	**1.04**	**299**	⇓*i*P	**Pn**	**13 00 42.6**	**-0.9**
JAG				⇓S	**Sn**	**13 00 54.6**	**-2.5**
JMM	**Marumori**	**1.95**	**5**		**Pn**	**13 00 56.9**	**+1.1**
JMM	**Marumori**	**1.95**	**5**	P	**Pn**	**13 00 57.4**	**+1.6**
MJA0	**Matsu Arr-Jizo**	**1.98**	**289**	*e*P	**Pn**	**13 00 56.3**	**0.0**
MJA0				pmax	pmax		
	comp=Z,515nm,0.5s						
MJAR	**Matsushiro Arr**	**2.01**	**289**	P	**Pn**	**13 00 56.4**	**-0.3**
	comp=Z,515nm,0.5s,baz=89,slow=8.9,SNR=1218						
MJAR				S	**Sn**	**13 01 19.1**	**-1.7**
	comp=Z,261nm,1.0s,baz=138,slow=11,SNR=10						
MJAR				LR	LR	13 01 51.0	
	comp=Z,547nm,19.0s,baz=156,slow=46						
MAJO	**Matsushiro**	**2.01**	**289**		**Pn**	**13 00 56.5**	**-0.3**
MAJO	**Matsushiro**	**2.01**	**289**	P	**Pn**	**13 00 57.4**	**+0.7**
MAJO	**Matsushiro**	**2.01**	**289**	*d i*P	**Pn**	**13 00 56.9**	**+0.2**
MJB9	**Matsu-Tunnel**	**2.02**	**289**		**Pn**	**13 00 58.1**	**+1.3**
JSG	**Sagara**	**2.32**	**238**		**Pn**	**13 01 03.0**	**+2.1**
JSG	**Sagara**	**2.32**	**238**	P	**Pn**	**13 01 02.7**	**+1.8**
JGF	**Kuroka**	**2.64**	**264**		**Pn**	**13 01 06.6**	**+1.3**
JGF	**Kuroka**	**2.64**	**264**	P	**Pn**	**13 01 07.1**	**+1.8**
JSD	**Sado**	**2.81**	**319**		**Pn**	**13 01 07.6**	**+0.1**
JSD	**Sado**	**2.81**	**319**	P	**Pn**	**13 01 08.5**	**+0.9**
JHJ2	**Mitsune**	**2.88**	**193**	Pn	**Pn**	**13 01 09.8**	**+1.3**
JHJ2	**Mitsune**	**2.88**	**193**	P	**Pn**	**13 01 10.4**	**+1.9**
INU	**Inuyama**	**2.96**	**260**		**Pn**	**13 01 10.1**	**+0.5**
INU	**Inuyama**	**2.96**	**260**	P	**Pn**	**13 01 10.4**	**+0.8**
JTM	**Tenmabayashi**	**4.87**	**4**	Pn	**Pn**	**13 01 37.2**	**+1.4**
JTM	**Tenmabayashi**	**4.87**	**4**	P	**Pn**	**13 01 37.2**	**+1.4**
JMN	**Monobe**	**5.93**	**250**	Pn	**Pn**	**13 01 49.9**	**-0.5**
JMN	**Monobe**	**5.93**	**250**	P	**Pn**	**13 01 51.3**	**+0.9**
	comp=Z,31nm,1.1s						
JHS	**Saijyo**	**6.16**	**264**		**Pn**	**13 01 55.1**	**+1.6**
ERM	**Erimo**	**6.41**	**18**		**Pn**	**13 01 56.5**	**-0.3**
ERM	**Erimo**	**6.41**	**18**	P	**Pn**	**13 01 58.1**	**+1.3**
	comp=Z,61nm,0.9s						
ERM	**Erimo**	**6.41**	**18**	⇓*e*P	**Pn**	**13 01 56.2**	**-0.6**
JEM	**Erimo**	**6.41**	**18**	P	**Pn**	**13 01 58.2**	**+1.4**
	comp=Z,26nm,0.9s						
ASAJ	**Asahikawa**	**8.33**	**10**	P	**Pn**	**13 02 21.9**	**-1.2**
	comp=Z,3.5nm,0.5s,baz=225,slow=8.9,SNR=16						
ASAJ				S	**Sn**	**13 03 53.1**	**-2.6**
	comp=Z,5.2nm,0.7s,baz=341,slow=26,SNR=2.0						
ASAJ	**Asahikawa**	**8.33**	**10**	P	**Pn**	**13 02 22.0**	**-1.2**
JKA	**Kamikawa-asahi**	**8.33**	**10**	Pn	**Pn**	**13 02 22.0**	**-1.1**
NMR	**Nemuro--Hokkai**	**8.43**	**27**	*e*P	**Pn**	**13 02 22.4**	**-2.1**
NMR				*e*S	**Sn**	**13 03 50.0**	**-8.1**
JNU	**Nakatsue**	**8.48**	**254**	P	**Pn**	**13 02 26.0**	**+0.7**
	comp=Z,13nm,0.8s,baz=44,slow=6.1,SNR=9.9						
JNU				S	**Sn**	**13 03 56.9**	**-2.6**
	comp=Z,2.6nm,0.7s,baz=240,slow=22,SNR=0.8						
JNU				LR	LR	13 05 48.7	
	comp=Z,203nm,19.0s,baz=76,slow=39						
JCJ	**Chichijima**	**8.91**	**171**	P	**Pn**	**13 02 30.1**	**-1.1**
	comp=Z,37nm,0.3s,baz=264,slow=21,SNR=4.8						
JCJ				S	**Sn**	**13 04 04.3**	**-5.8**
	comp=Z,48nm,0.5s,baz=272,slow=21,SNR=1.5						
RUSJ	**Misakicho**	**8.92**	**22**	*e*P	**Pn**	**13 02 31.3**	**+0.1**
RUSJ				*e*S	**Sn**	**13 04 06.1**	**-4.1**
YUK	**Yuzh-Kuril'sk**	**9.06**	**25**	*e*P	**Pn**	**13 02 31.5**	**-1.6**
YUK				*e*S	**Sn**	**13 04 06.6**	**-6.9**
YUK				pmax	pmax		
	comp=Z,54nm,0.3s						
SHO	**Shikotan**	**9.27**	**29**	*e*P	**Pn**	**13 02 32.1**	**-4.0**
SHO				pmax	pmax		
	comp=Z,6.0nm,0.4s						
KSRS	**Korea Array**	**10.28**	**282**	P	**Pn**	**13 02 51.9**	**+2.0**
	comp=Z,2.2nm,0.7s,baz=98,slow=14,SNR=15						
KSRS				LR	LR	13 06 25.0	
	comp=Z,124nm,21.8s,baz=100,slow=35						
KSRS	**Korea Array**	**10.28**	**282**	*e*P	**Pn**	**13 02 53.3**	**+3.5**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
USA0B	**Ussuriysk Arra**	**10.56**	**324**	⇓*e*P	**Pn**	**13 02 57.2**	**+3.5**
USRK	**Ussuriysk Ar.**	**10.56**	**324**	P	**Pn**	**13 02 55.3**	**+1.6**
	comp=Z,2.9nm,0.6s,baz=146,slow=13,SNR=5.9						
YSS	**Yuzh-Sakhalins**	**11.14**	**8**	*e*P	**Pn**	**13 03 00.4**	**-1.2**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
JOW	**Kunigami**	**13.87**	**233**	LR	LR	13 08 33.5	
	comp=Z,92nm,18.6s,baz=126,slow=35						
KLR	**Kul'dur**	**14.79**	**337**	P	**Pn**	**13 03 49.3**	**-1.5**
	comp=Z,1.1nm,0.7s,baz=134,slow=9.0,SNR=3.6						
KLR	**Kul'dur**	**14.79**	**337**	⇓*e*P	**Pn**	**13 03 51.7**	**+0.9**
KLR				pmax	pmax		
	comp=Z,6.0nm,1.9s						
ZEA	**Zeya**	**20.10**	**337**	*e*P	**P**	**13 04 54.8**	**+0.8**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WHN	**Wuhan**	**22.55**	**264**	P	**P**	**13 05 19.6**	**-0.9**
MA2	**Magadan**	**24.58**	**13**	P	**P**	**13 05 41.2**	**+1.6**
	comp=Z,4.8nm,0.7s,baz=200,slow=7.6,SNR=4.9						
	comp=Z,4.8nm,0.7s						
MA2	**Magadan**	**24.58**	**13**	⇑*e*P	**P**	**13 05 42.5**	**+2.9**
MA2				pmax	pmax		
	comp=Z,18nm,1.3s						
XAN	**Xi'an**	**25.95**	**275**	P	**P**	**13 05 49.8**	**-2.6**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ENH	**Enshi**	**26.58**	**267**	P	**P**	**13 05 55.7**	**-2.4**
ENH				IAmb	IAmb	13 05 57.1	
	comp=Z,19nm,0.7s						
YAK	**Yakutsk**	**27.01**	**349**	LR	LR	13 16 28.5	
	comp=Z,33nm,19.8s,baz=250,slow=36						
YAK	**Yakutsk**	**27.01**	**349**	⇓*e*P	**P**	**13 06 04.5**	**+3.0**
YAK				pmax	pmax		
	comp=Z,11nm,0.7s						
ULN	**Ulaanbaatar**	**27.44**	**306**	⇑*e*P	**P**	**13 06 06.2**	**+0.4**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.7s						
SONM	**Songino Array**	**27.87**	**306**	P	**P**	**13 06 08.2**	**-1.4**
	comp=Z,2.2nm,0.5s,baz=101,slow=8.6,SNR=18						
	comp=Z,2.2nm,0.5s						
SONM	**Songino Array**	**27.87**	**306**	P	**P**	**13 06 08.8**	**-0.8**
SEY	**Seymchan**	**28.01**	**11**	P	**P**	**13 06 11.9**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=176,slow=19,SNR=5.7						
	comp=Z,0.7nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.19**	**118**	T	T	13 35 55.8	
	baz=310,slow=75,SNR=18						
H11N1	**WAKE ISLAND Hy**	**28.20**	**118**	T	T	13 35 39.5	
	baz=310,slow=75,SNR=14						
H11N3	**WAKE ISLAND Hy**	**28.21**	**118**	T	T	13 35 41.2	
	baz=310,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy**	**28.86**	**120**	T	T	13 36 40.6	
	baz=313,slow=75,SNR=28						
H11S3	**WAKE ISLAND Hy**	**28.86**	**120**	T	T	13 36 27.5	
	baz=313,slow=75,SNR=17						
H11S2	**WAKE ISLAND Hy**	**28.87**	**120**	T	T	13 36 29.2	
	baz=313,slow=75,SNR=20						
GTA	**Gaotai**	**32.26**	**289**	*e*P	**P**	**13 06 48.5**	**0.0**
GTA				pP	pP	13 06 59.5	-3.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BILL	**Bilibino**	**35.28**	**16**	*e*P	**P**	**13 07 14.9**	**+0.7**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TIXI	**Tiksi**	**36.31**	**354**	P	**P**	**13 07 22.6**	**-0.4**
	comp=Z,2.5nm,0.4s,baz=270,slow=23,SNR=4.7						
	comp=Z,2.5nm,0.4s						
TIXI	**Tiksi**	**36.31**	**354**	⇓*e*P	**P**	**13 07 25.9**	**+3.0**
TIXI				pmax	pmax		
	comp=Z,8.0nm,2.3s						
FAKI	**Fak Fak**	**39.42**	**193**	P	**P**	**13 07 50.4**	**+0.7**
FAKI				IAmb	IAmb	13 08 10.1	
	comp=Z,12nm,1.1s						
DGZ	**Jazzator, Alta**	**40.51**	**307**	⇓*e*P	**P**	**13 07 59.1**	**+0.5**
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**40.57**	**256**	P	**P**	**13 07 59.1**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=46,slow=6.2,SNR=6.6						
CMAR				LR	LR	13 24 38.7	
	comp=Z,17nm,20.1s,baz=80,slow=36						
	comp=Z,0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**40.57**	**256**	*e*P	**P**	**13 08 00.1**	**+0.8**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAA0	**Zalesovo Array**	**42.17**	**313**	P	**P**	**13 08 11.4**	**-0.6**
ZALV	**Zalesovo Beam**	**42.17**	**313**	P	**P**	**13 08 11.4**	**-0.6**
	comp=Z,2.0nm,0.5s,baz=96,slow=7.9,SNR=13						
ZALV				PcP	**PcP**	**13 10 04.9**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=114,slow=2.8,SNR=5.9						
	comp=Z,2.0nm,0.5s						
ZALV	**Zalesovo Beam**	**42.17**	**313**	P	**P**	**13 08 10.9**	**-1.1**
MK31	**Makanchi Array**	**44.15**	**303**	P	**P**	**13 08 27.8**	**-0.4**
MK31				IAmb	IAmb	13 08 28.4	
	comp=Z,6.9nm,1.4s						
MK31	**Makanchi Array**	**44.15**	**303**	*d i*P	**P**	**13 08 27.7**	**-0.4**
MKAR	**Makanchi Array**	**44.15**	**303**	P	**P**	**13 08 27.5**	**-0.6**
	comp=Z,1.8nm,0.5s,baz=88,slow=9.6,SNR=27						
MKAR				LR	LR	13 28 30.4	
	comp=Z,47nm,18.3s,baz=72,slow=38						
	comp=Z,1.8nm,0.5s						
MKAR	**Makanchi Array**	**44.15**	**303**	P	**P**	**13 08 27.7**	**-0.4**
MKAR	**Makanchi Array**	**44.15**	**303**	P	**P**	**13 08 27.7**	**-0.4**
MAKZ	**Makanchi**	**44.36**	**303**	P	**P**	**13 08 29.3**	**-0.5**
MAKZ	**Makanchi**	**44.36**	**303**	P	**P**	**13 08 29.3**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KURK	**Kurchatov**	**46.09**	**309**	P	**P**	**13 08 42.9**	**-0.6**
KURK	**Kurchatov**	**46.09**	**309**	*d i*P	**P**	**13 08 42.7**	**-0.7**
KURK				pmax	pmax		
	comp=Z,11nm,0.8s						
PRZ	**Przheval'sk**	**47.68**	**298**	P	**P**	**13 08 56.3**	**+0.1**
MTN	**Manton Dam**	**49.32**	**192**	P	**P**	**13 09 09.4**	**+0.7**
H23K	**Yukon River**	**49.66**	**30**	P	**P**	**13 09 14.0**	**+3.1**
H23K				IAmb	IAmb	13 09 14.6	
	comp=Z,2.3nm,0.8s						
MDM	**Murphy Dome**	**50.21**	**32**	P	**P**	**13 09 17.8**	**+2.7**
MDM				IAmb	IAmb	13 09 18.4	
	comp=Z,4.6nm,0.7s						
KSH	**Kashi**	**50.25**	**295**	P	**P**	**13 09 17.0**	**+1.2**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AAK	**Ala-Archa**	**50.43**	**299**	⇓*e*P	**P**	**13 09 17.7**	**+0.5**
AAK				pmax	pmax		
	comp=Z,16nm,4.9s						
ARLS	**Aral**	**50.77**	**298**	P	**P**	**13 09 19.4**	**-0.3**
IL31		**50.79**	**32**	P	**P**	**13 09 20.4**	**+1.1**
IL31				IAmb	IAmb	13 09 22.0	
	comp=Z,1.9nm,0.7s						
ILAR	**Eielson Array**	**50.79**	**32**	P	**P**	**13 09 20.9**	**+1.6**
	comp=Z,1.9nm,0.7s,baz=271,slow=5.9,SNR=23						
	comp=Z,1.9nm,0.7s						
ILAR	**Eielson Array**	**50.79**	**32**	P	**P**	**13 09 20.6**	**+1.2**
BRVK	**Borovoye**	**50.88**	**313**	⇓*e*P	**P**	**13 09 18.9**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,15nm,3.9s						
BMAR	**Burnt Mountain**	**51.63**	**28**	P	**P**	**13 09 28.1**	**+2.5**
DOT	**Dot Lake**	**52.10**	**33**	P	**P**	**13 09 31.5**	**+2.3**
DOT				IAmb	IAmb	13 09 31.9	
	comp=Z,2.0nm,0.7s						
SCRK	**Sand Creek**	**52.10**	**33**	P	**P**	**13 09 30.8**	**+1.5**
SCRK				IAmb	IAmb	13 09 31.7	
	comp=Z,2.7nm,0.8s						
ARK	**Arkit**	**52.47**	**299**	P	**P**	**13 09 32.1**	**-0.3**
KNRA	**Kununurra**	**52.52**	**194**	P	**P**	**13 09 33.8**	**+1.1**
KK31	**Karatay Array**	**53.10**	**301**	P	**P**	**13 09 36.7**	**-0.2**
KK31				IAmb	IAmb	13 09 39.6	
	comp=Z,4.9nm,1.1s						
KK31	**Karatay Array**	**53.10**	**301**	P	**P**	**13 09 36.7**	**-0.2**
KK31				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KKAR	**Karatay Array**	**53.10**	**301**	P	**P**	**13 09 36.7**	**-0.2**
KKAR				IAmb	IAmb	13 09 39.6	
	comp=Z,4.9nm,1.1s						
KKAR	**Karatay Array**	**53.10**	**301**	P	**P**	**13 09 36.7**	**-0.2**
KKAR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TRKS	**Terek-Say**	**53.14**	**299**	P	**P**	**13 09 35.6**	**-1.8**
CHGR	**Chuyangaron**	**55.54**	**296**	P	**P**	**13 09 53.7**	**-1.1**
CHGR	**Chuyangaron**	**55.54**	**296**	P	**P**	**13 09 53.7**	**-1.1**
CHGR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
FITZ	**Fitzroy Crossi**	**55.56**	**197**	P	**P**	**13 09 55.9**	**+1.0**
INK	**Inuvik**	**55.68**	**27**	P	**P**	**13 09 56.6**	**+1.5**
	comp=Z,1.5nm,0.6s,baz=302,slow=6.5,SNR=8.7						
	comp=Z,1.5nm,0.6s						
INK	**Inuvik**	**55.68**	**27**	P	**P**	**13 09 56.6**	**+1.5**
INK				IAmb	IAmb	13 10 33.8	
	comp=Z,4.3nm,1.4s						
INK	**Inuvik**	**55.68**	**27**	P	**P**	**13 09 56.7**	**+1.6**
INK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
WB0	**Warramunga Arr**	**55.70**	**187**	P	**P**	**13 09 56.3**	**+0.5**
WB0				IAmb	IAmb	13 09 56.6	
	comp=Z,4.8nm,0.6s						
WRAB	**Tennant Creek**	**55.86**	**187**	⇑*e*P	**P**	**13 09 57.1**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,19nm,2.1s						
WB2	**Warramunga Arr**	**55.87**	**187**	P	**P**	**13 09 57.0**	**-0.1**
WB2				IAmb	IAmb	13 10 22.9	
	comp=Z,8.2nm,1.2s						
WRA	**Warramunga Arr**	**55.87**	**187**	P	**P**	**13 09 56.9**	**-0.2**
	comp=Z,2.6nm,0.5s,baz=1.3,slow=7.6,SNR=91						
	comp=Z,2.6nm,0.5s						
WRA	**Warramunga Arr**	**55.87**	**187**	P	**P**	**13 09 57.3**	**+0.2**
WRA	**Warramunga Arr**	**55.87**	**187**	*e*P	**P**	**13 09 57.4**	**+0.3**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ARU	**Arti**	**56.75**	**319**	P	**P**	**13 10 02.5**	**-0.5**
ARU	**Arti**	**56.75**	**319**	*c i*P	**P**	**13 10 02.5**	**-0.5**
ARU				S	**S**	**13 17 51.1**	**-0.3**
ARU				pmax	pmax		
	comp=Z,10.0nm,0.6s						
A36M	**Sachs Harbour**	**57.54**	**22**	P	**P**	**13 10 10.6**	**+2.3**
A36M				IAmb	IAmb	13 10 11.6	
	comp=Z,4.5nm,0.8s						
ABKAR	**Akbulak array**	**58.14**	**310**	P	**P**	**13 10 12.5**	**-0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABKAR	Akbulak array	58.14	310	P	P	13 10 12.6	-0.3
ABKAR				IAmb	IAmb	13 10 13.1	
	comp=Z,5.1nm,0.8s						
AS31	Alice Springs	59.60	187	P	P	13 10 24.3	+1.1
ASAR	Alice Springs	59.60	187	P	P	13 10 23.7	+0.5
	comp=Z,1.0nm,0.7s,baz=17,slow=12,SNR=27						
	comp=Z,1.0nm,0.7s						
ASAR	Alice Springs	59.60	187	P	P	13 10 24.4	+1.2
ASAR	Alice Springs	59.60	187	P	P	13 10 24.4	+1.2
MBWA	Marble Bar	60.11	203	P	P	13 10 27.0	+0.3
KIRV	Kirov	60.73	323	ceP	P	13 10 30.3	-0.2
RES	Resolute Bay	63.84	14	P	P	13 10 51.4	+0.3
RES				IAmb	IAmb	13 11 23.9	
	comp=Z,4.8nm,1.4s						
RES	Resolute Bay	63.84	14	P	P	13 10 51.4	+0.3
RES				pmax	pmax		
	comp=Z,5.0nm,1.5s						
BELG	Belogornoye	64.15	317	⇓iP	P	13 10 53.2	-0.3
BELG				pmax	pmax		
	comp=Z,11nm,2.9s						
ARCES	ARCESS Array B	64.80	339	P	P	13 10 56.0	-1.5
	comp=Z,1.0nm,0.6s,baz=54,slow=6.3,SNR=5.5						
	comp=Z,1.0nm,0.6s						
ARCES	ARCESS Array B	64.80	339	eP	P	13 10 58.3	+0.8
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YKA	Yellowknife Ar	65.10	30	P	P	13 11 00.3	+0.8
	comp=Z,0.4nm,0.8s,baz=298,slow=6.5,SNR=6.9						
	comp=Z,0.4nm,0.8s						
STKA	Stephens Creek	67.45	179	P	P	13 11 15.1	+0.3
	comp=Z,1.2nm,0.5s,baz=344,slow=15,SNR=3.0						
	comp=Z,1.2nm,0.5s						
STKA	Stephens Creek	67.45	179	eP	P	13 11 15.5	+0.7
STKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
OBN	Obninsk	68.58	323	eP	P	13 11 20.4	-1.3
OBN				e		13 11 46.5	
OBN				e		13 13 50.0	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FINES	FINESS Array B	69.48	332	P	P	13 11 26.6	-0.6
	comp=Z,2.4nm,0.7s,baz=73,slow=6.4,SNR=5.3						
	comp=Z,2.4nm,0.7s						
FINES	FINESS Array B	69.48	332	eP	P	13 11 27.2	0.0
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KBZ	Khabaz	71.11	311	P	P	13 11 37.8	+0.3
	comp=Z,4.0nm,0.8s,baz=40,slow=3.2,SNR=12						
	comp=Z,4.0nm,0.8s						
KIV	Kislovodsk	71.12	311	eP	P	13 11 37.7	0.0
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
GNI	Garni	71.83	307	LR	LR	13 47 51.2	
	comp=Z,34nm,18.4s,baz=70,slow=40						
ANN	Anapa	73.81	314	eP	P	13 11 50.5	-3.1
ANN				e		13 12 01.3	
ANN				e*PP	pP	13 12 09.3	+0.1
ANN				eS	SKiKP	13 21 16.3	-1.2
ANN				eSS	SS	13 26 03.7	-0.8
ANN				pmax	pmax		
	comp=Z,40nm,1.3s						
AKASG	Malin Array Be	74.76	322	P	P	13 11 58.4	-0.6
	comp=Z,3.6nm,0.6s,baz=45,slow=6.0,SNR=21						
	comp=Z,3.6nm,0.6s						
AKASG	Malin Array Be	74.76	322	P	P	13 11 58.9	-0.1
AKASG	Malin Array Be	74.76	322	P	P	13 11 58.9	-0.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKBB	Malin Array Si	74.76	322	P	P	13 11 58.8	-0.2
AKBB				IAmb	IAmb	13 11 59.1	
	comp=Z,6.6nm,0.8s						
AKBB	Malin Array Si	74.76	322	⇓eP	P	13 11 58.6	-0.4
AKBB				pmax	pmax		
	comp=Z,23nm,2.3s						
NB2	NORSAR Subarra	74.94	337	P	P	13 11 59.7	-0.2
	comp=Z,6.8nm,0.8s,baz=41,slow=6.2						
NOA	NORSAR Array B	74.94	337	P	P	13 12 00.0	+0.1
	comp=Z,2.6nm,0.8s,baz=38,slow=5.8,SNR=6.9						
	comp=Z,2.6nm,0.8s						
NVAR	Mina Array Bea	76.19	53	P	P	13 12 10.1	+2.4
	comp=Z,0.5nm,0.8s,baz=285,slow=1.8,SNR=3.7						
	comp=Z,0.5nm,0.8s						
PDAR	Pinedale Array	78.93	45	P	P	13 12 24.3	+1.4
	comp=Z,0.6nm,0.8s,baz=204,slow=0.3,SNR=5.8						
	comp=Z,0.6nm,0.8s						
BR131	Keskin Array S	79.08	311	⇑eP	P	13 12 24.3	+0.6
BRTR	Keskin Array B	79.08	311	P	P	13 12 23.1	-0.6
	comp=Z,1.2nm,0.7s,baz=52,slow=2.4,SNR=6.5						
	comp=Z,1.2nm,0.7s						
BMRD	Maredsous	85.70	333	dP	P	13 12 57.7	-0.1
BMRD				dpP	pP	13 13 13.4	-0.4
TXAR	Lajitas Array	91.33	52	P	P	13 13 27.2	+2.0
	comp=Z,0.4nm,0.6s,baz=296,slow=3.2,SNR=7.7						
	comp=Z,0.4nm,0.6s						

JMA 17 13:00:31.1±0.1**, 36°.8N**±0°.2×**137°.9E**±0°.3**, h9^{km}, MV-0.2**/7**,**
NORTHERN NAGANO PREF, Eastern Honshu

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*MDD **17** 13:25:39.0±1.1, 32°.22N×7°.88W, h5^{km}±5^{km}, Mb4.2/5, M_mb3.6/5, Error ellipse: s-maj=8.6km s-min=5.2km az=127.0*

*INMG **17** 13:25:40.7±0.9, 32°.29N×7°.84W, h12^{km}±8^{km}, Error ellipse: s-maj=6.5km s-min=4.9km az=19.0*

ISC 17 13:25:35.8±2.4**, 32°.2N**±0°.1×**7°.8W**±0°.2**, h10^{km}, n12, σ2^{s}.29**/19**, 5C, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORF	Marmelete	5.17	352	eP	Pn	13 26 56.0	+2.7
PVAQ	Vaqueiros	5.23	1	eP	Pn	13 26 56.0	+2.0
PVAQ				eS	Sn	13 27 52.6	-1.7
EGRO	El Granado	5.36	3	Pn	Pn	13 26 57.8	+1.9
EGRO				⇑iVmb_V		13 27 01.4	
	234nm,SNR=1.7						
EGRO				Sn	Sn	13 27 55.4	-2.3
PCVE	Castro Verde	5.46	358	eP	Pn	13 26 59.3	+2.1
PCVE				eS	Sn	13 27 58.6	-1.4
EMIN	Mina Concepcio	5.67	9	Pn	Pn	13 27 01.8	+1.8
EMIN				⇑iVmb_V		13 27 03.5	
	79nm,SNR=0.9						
EMIN				Sn	Sn	13 28 03.2	-2.0
EFAM	Famara	5.79	240	⇑iVmb_V		13 27 04.7	
	834nm,SNR=1.7						
EFAM				Sn	Sn	13 28 06.3	-1.9
PNCL	Nicolau / Gran	5.96	354	eP	Pn	13 27 06.3	+2.2
PBAR	Barrancos	6.03	6	eP	Pn	13 27 07.8	+2.8
PBAR				eS	Sn	13 28 13.0	-1.1
ECAB	El Cabril	6.21	18	Pn	Pn	13 27 09.4	+1.9
ECAB				⇑iVmb_V		13 27 10.1	
	39nm,SNR=0.5						
ECAB				Sn	Sn	13 28 16.6	-2.1
EADA	Adamuz	6.54	23	Pn	Pn	13 27 13.8	+1.6
EADA				⇑iVmb_V		13 27 14.8	
	86nm,SNR=1.0						
EADA				Sn	Sn	13 28 23.8	-3.1
PMTG	Montargil	6.90	357	eP	Pn	13 27 19.1	+2.2
PMRV	Marv??o	7.26	3	eP	Pn	13 27 24.2	+2.3

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*JMA **17** 13:28:58.1±0.8, 21°N±3°×12°1E±°, h44^{km}, MV3.8/12, TAIWAN REGION*

*MAN **17** 13:29:01.7, 20°.62N×121°.50E, h10^{km}, mb4.0, ML2.8, MS2.4*

ISC 17 13:28:57.8±1.6**, 21°.05N**±0°.05×**121°.5E**±0°.1**, h35^{km}, n13, σ1^{s}.35**/21**, 4D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	Basco	0.74	145	⇓eP	Pn	13 29 11.4	-0.3
BBP				i S	Sn	13 29 23.8	+2.1
CICP	Calayan Island	1.78	181	⇓eP	Pn	13 29 24.3	-1.7
CICP				i S	Sn	13 29 45.1	-2.2
ABRA	Dolores	3.47	193	⇓eP	Pn	13 29 50.3	+1.0
HATJ	Hateruma jima	3.67	35	eP	Pn	13 29 52.9	+0.8
HATJ				eS	Sn	13 30 32.9	-1.2
YOJ	Yonaguni jima	3.67	22	eP	Pn	13 29 53.0	+1.0
IRIF	Iriomote-Funau	3.86	32	P	Pn	13 29 55.8	+1.1
IRIF				S	Sn	13 30 38.2	-0.5
JKRS	Kuro-shima	3.92	36	P	Pn	13 29 56.2	+0.6
JKRS				S	Sn	13 30 40.7	+0.4
SAMP	Sagada Mountai	3.99	188	⇓eP	Pn	13 29 58.8	+2.2
JIJ	Ishigaki jima	4.09	36	P	Pn	13 29 58.2	+0.3
JIJ				S	Sn	13 30 42.5	-2.1
JISG	Ishigakijimahi	4.37	36	P	Pn	13 30 01.7	0.0
JISG				S	Sn	13 30 49.7	-1.6
JTJ	Tarama	4.63	39	eP	Pn	13 30 06.0	+0.8
JTJ				eS	Sn	13 30 57.0	-0.7
JIRB	Irabujima	5.05	41	eS	Sn	13 31 07.2	-1.0
JMJ2	Miyako jima3	5.08	43	eS	Sn	13 31 09.1	+0.1

IDC 17 13:56:29.2±3.0**, 32°.36S**×**178°.34W, h0^{km}, mb4.0**/2**, mbtmp4.1**/3**, ML4.0**/1**, MS3.0**/1**, Error ellipse: s-maj=68.7km s-min=35.9km az=113.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.96	211	Pn	Pn	13 58 12.0	-0.5
	2.7nm,0.3s,baz=354,slow=1.9,SNR=18						
URZ				Sn	Sn	13 59 31.5	-0.8
	4.3nm,0.3s,baz=308,slow=5.8,SNR=16						
	5.0nm,0.3s						
RAR	Rarotonga	19.92	61	LR	LR	14 07 30.1	
	comp=Z,48nm,21.7s,baz=208,slow=33						
ASAR	Alice Springs	42.76	269	P	P	14 04 28.9	+0.3
	0.9nm,0.6s,baz=108,slow=7.7,SNR=15						
	0.9nm,0.6s						
WRA	Warramunga Arr	43.92	274	P	P	14 04 37.8	-0.2
	1.4nm,0.3s,baz=113,slow=7.9,SNR=39						
	1.4nm,0.3s						
FINES	FINESS Array B	146.87	339	PKPbc	PKPdf	14 16 11.8	+0.9
	2.5nm,0.8s,baz=42,slow=2.7,SNR=5.9						

IDC 17 13:57:14.6±3.3**, 32°.34S**×**178°.24W, h0^{km}, mb4.2**/2**, mbtmp4.2**/3**, ML3.9**/1**, MS3.5**/1**, Error ellipse: s-maj=74.3km s-min=37.7km az=113.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.02	211	Pn	Pn	13 58 58.8	+0.1
	1.9nm,0.3s,baz=267,slow=3.7,SNR=4.2						
URZ				Sn	Sn	14 00 17.5	-1.8
	baz=52,slow=21						
	13nm,0.6s						
DZM	Mont Dzumac	17.02	303	LR	LR	14 06 04.9	
	comp=Z,156nm,18.7s,baz=201,slow=31						
ASAR	Alice Springs	42.84	269	P	P	14 05 14.8	+0.2
	1.6nm,0.6s,baz=105,slow=7.6,SNR=6.2						
	1.6nm,0.6s						
WRA	Warramunga Arr	44.00	274	P	P	14 05 24.0	-0.1
	1.7nm,0.4s,baz=114,slow=7.9,SNR=12						
	1.7nm,0.4s						
FINES	FINESS Array B	146.88	339	PKPbc	PKPdf	14 16 57.1	+0.8
	1.8nm,0.6s,baz=56,slow=4.8,SNR=3.7						

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*NEIC **17** 14:01:43.1±2.6, 11°.17N±0°.08×92°.88E±0°.09, h46^{km}±6^{km}, mb4.8/26, Error ellipse: s-maj=14.8km s-min=9.1km az=57.0*

*DJA **17** 14:01:43.4±0.3, 11°N±3°×9°3E±°, h50^{km}±4^{km}, M4.8/30, mB5.2/9, mb4.9/30, MLv5.2/1, Mw(mB)4.6/9*

*NDI **17** 14:01:43.4±2.6, 11°.17N×92°.71E, h15^{km}, mb4.9, ML4.5, mb4.8(NEIC)*

*IDC **17** 14:01:43.7±1.6, 11°.17N×92°.93E, h60^{km}±12^{km}, mb4.2/30, mbtmp4.4/32, MS3.7/47, Error ellipse: s-maj=13.3km s-min=10.6km az=36.0*

ISC 17 14:01:43.2±0.4**, 11°.26N**±0°.04×**92°.91E**±0°.04**, h52^{km}**±2^{km}**, h52^{km}:pP-P, n240, σ1^{s}.63**/251**, mb4.6**/73**, MS3.8**/49**, 5C-5D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	Port Blair	0.42	338	Pn	Pn	14 01 54.4	+0.7
PBA	Port Blair	0.42	338	eP	Pn	14 01 54.8	+1.0
DGPR	DIGLIPUR	1.90	1	eP	Pn	14 02 18.2	+4.9
DGPR				eS	Sn	14 02 40.8	+4.6
DGPR				IAML		14 02 52.5	
	comp=E,5µm,0.4s						
SRIT	Nakonsritamara	7.11	111	Pn	Pn	14 03 24.1	-0.6
LHMI	Lhok Sumawe	7.21	146	P	Pn	14 03 28.4	+2.4
	comp=E,137nm,0.8s,comp=E,0.5nm						
MLSI	Meulaboh, Aceh	7.77	153	P	Pn	14 03 33.9	+0.2
MLSI				S	Sn	14 05 04.9	+4.5
KCSI	Kotacane, Aceh	9.08	148	P	Pn	14 03 54.5	+2.8
	comp=E,57nm,0.9s,comp=E,1µm						
CM31	Chiang Mai Arr	9.23	38		Pn	14 03 54.5	+0.7
CMAR	Chiang Mai Arr	9.23	38	P	Pn	14 03 56.0	+2.2
	comp=E,17nm,0.8s,baz=233,slow=14,SNR=121						
CMAR				S	Sn	14 05 37.9	+1.7
	comp=E,29nm,1.1s,baz=234,slow=27,SNR=7.4						
CMAR				LR	LR	14 07 46.4	
	comp=E,446nm,21.1s,baz=220,slow=39						
CMAR	Chiang Mai Arr	9.23	38	Pn	Pn	14 03 56.9	+3.1
SNSI	Sinabang, Aceh	9.43	159	P	Pn	14 03 59.4	+2.9
	comp=E,45nm,0.8s						
CHTO	Chiang Mai	9.50	37	Pn	Pn	14 03 58.1	+0.6
TSI	Tuntungan	9.54	144	P	Pn	14 04 00.8	+2.8
	comp=E,66nm,0.6s						
KULM	Kulim	9.69	127	Pn	Pn	14 03 59.9	-0.2
IPM	Ipoh	10.49	129	Pn	Pn	14 04 11.8	+0.7
GSI	Gunungsitoli	10.93	155	P	Pn	14 04 19.7	+2.7
	comp=E,17nm,1.0s						
MND	Mandalay	11.12	16	Pn	Pn	14 04 18.6	-1.1
SAIH	SAIHA	11.16	0	eP	Pn	14 04 22.4	+2.0
VIS	Vishakhapatnam	11.28	306	eP	Pn	14 04 21.6	-0.1
VIS				eS	Sn	14 06 15.8	-11
BRDH	Bariadhala	11.41	354	LR	LR	14 10 21.6	
	comp=E,234nm,18.7s,baz=90,slow=45						
CRAI	Chiangrai	11.45	38	Pn	Pn	14 04 24.0	-0.2
PBSI	Pulau Batu	12.45	154	P	Pn	14 04 40.0	+2.2
	comp=E,94nm,1.1s						
MDRS	Chennai	12.51	280	eP	Pn	14 04 39.7	+1.1
MDRS				IAmb	IAmb	14 04 51.1	
	comp=Z,119nm,0.9s						
MDRS				eS	Sn	14 06 44.7	-12
PALK	Pallekele	12.68	253	P	Pn	14 04 40.7	-0.3
	comp=Z,2.6nm,0.3s,baz=164,slow=15,SNR=5.3						
PALK				S	Sn	14 06 47.9	-13
	comp=Z,94nm,0.4s,baz=257,slow=23,SNR=11						
PALK				LR	LR	14 09 08.4	
	comp=Z,566nm,22.0s,baz=160,slow=35						
IMP	Imphal	13.53	4	eP	Pn	14 04 54.1	+1.5
BKNI	Bangkinang	13.54	143	P	Pn	14 04 55.4	+2.7
	comp=Z,51nm,0.9s						
BOK	Bokaro	14.14	333	eP	Pn	14 05 02.7	+1.9
BOK				eS	Sn	14 07 26.2	-10
PDSI	Padang	14.24	148	P	Pn	14 05 03.4	+1.2
	comp=Z,16nm,0.7s						
SHL	Shillong	14.26	356	eP	P	14 05 06.4	-2.1
SHL				IAmb	IAmb	14 05 21.5	
	comp=Z,24nm,0.8s						
SHL				eS	Sn	14 07 33.3	-6.2
MYKOM	Kota Tinggi	14.37	130		Pn	14 05 04.6	+0.7
SALM	Salem	14.42	273	eP	Pn	14 05 04.4	-0.2
SALM				eS	Sn	14 07 29.7	-14
KOHI	KOHIMA	14.43	4	eP	Pn	14 05 05.6	+0.8
KOHI				IAmb	IAmb	14 05 09.6	
	comp=Z,75nm,0.7s						
TNCH	TengChong	14.69	20	P	Pn	14 05 09.1	+0.9
TNCH				S	Sn	14 07 54.3	+4.4
TNCH				pmax	pmax		
	comp=Z,22nm,0.9s						
TNCH				pmax	pmax		
	comp=Z,73nm,3.3s						
TNCH				LR	LR		
	comp=Z,210nm,3.9s						
TNCH				LR	LR		
	comp=Z,130nm,4.1s						
TNCH				LR	LR		
	comp=Z,300nm,12.5s						
SDSI	Sungai Dareh	14.78	145	P	Pn	14 05 11.4	+2.1
	comp=Z,8.6nm,0.8s						
MOKO	MOKOCHONG	15.05	6	eP	P	14 05 16.9	-0.5
HYB	Hyderabad	15.19	295	eP	Pn	14 05 14.5	-0.2
HYB				IAmb	IAmb	14 05 26.0	
	comp=Z,21nm,0.8s						
HYB				eS	Sn	14 07 49.9	-12
HYB	Hyderabad	15.19	295	ePn	Pn	14 05 14.2	-0.5
HYB				e		14 07 49.8	
HYB				eS	Sn	14 08 02.5	+0.6
TEZP	TEZPUR	15.27	360	eP	Pn	14 05 16.5	+0.9
TPRI	Tanjung Pinang	15.45	131	P	Pn	14 05 18.7	+0.7
	comp=Z,53nm,0.7s						
PPSI	Pulau Pagai	15.62	153	P	P	14 05 22.3	-1.2
	comp=Z,128nm,1.0s						
ITAN	ITANAGAR	15.82	3	eP	P	14 05 25.1	-0.5
ZIRO	ZIRO	16.20	3	eP	Pn	14 05 28.7	+1.0
ZIRO				eS	Sn	14 08 18.9	-7.7
PCHI	Peechi	16.28	269	eS	Sn	14 08 12.9	-15
ODAN	Odare	16.36	342	eP	P	14 05 31.3	-0.6
DSRI	Dabo	16.45	134	P	P	14 05 32.2	-0.5
KMI	Kunming	16.64	33	⇑P	Pn	14 05 33.8	+0.6
KMI				pmax	pmax		
	comp=Z,23nm,0.9s						
RAMN	Ramite	16.70	340	eP	P	14 05 36.5	+0.9
TAPN	Taplejung	16.73	344	eP	P	14 05 36.2	+0.1
MASI	Maura Aman, Be	17.06	146	P	P	14 05 40.7	+1.2
	comp=Z,28nm,0.9s						
JBP	Jabalpur	17.09	316	eP	P	14 05 40.0	+0.3
JBP				IAmb	IAmb	14 05 47.5	
	comp=Z,37nm,0.6s						
PZH	PanZhiHua	17.30	28	P	P	14 05 42.9	+0.7
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,140nm,5.8s						
JIRN	Jiri	17.49	340	eP	P	14 05 45.6	+1.1
PKI	Pulchoki	17.69	338	eP	P	14 05 48.5	+1.8
PKIN	Phulchoki	17.70	338	eP	P	14 05 48.5	+1.8
GUN	Gumba	17.83	339	eP	P	14 05 50.3	+2.1
DMN	Daman	17.84	337	eP	P	14 05 50.8	+2.6
QIZ	Qiongzhong	18.07	63	P	Pn	14 05 51.6	+0.9
QIZ				S	S	14 09 14.0	-1.1
QIZ				pmax	pmax		
	comp=Z,18nm,0.9s						
QIZ				LR	LR		
	comp=Z,320nm,10.1s						
QIZ				LR	LR		
	comp=Z,210nm,12.6s						
QIZ				LR	LR		
	comp=Z,370nm,21.4s						
GKN	Gorkha	18.37	336	eP	Pn	14 05 56.4	+1.9
LSA	Lhasa	18.42	355	P	Pn	14 05 57.4	+2.1
LSA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LSA	Lhasa	18.42	355	P	Pn	14 05 55.7	+0.3
BHPL	Bhopal	18.96	311	eP	Pn	14 06 06.8	+5.3
BHPL				eS	S	14 09 17.3	-16
DANN	Dangsing	19.04	335	eP	Pn	14 06 03.2	+0.6
MDSI	Maura Dua	19.25	144	P	Pn	14 06 05.8	+0.8
	comp=Z,6.8nm,1.0s,comp=Z,1µm						
GYA	Guiyang	19.92	39	⇑P	Pn	14 06 14.9	+2.0
GYA				sP	sP	14 06 31.6	+2.9
GYA				S	S	14 09 49.8	-2.7
GYA				pmax	pmax		
	comp=Z,18nm,1.3s						
GYA				pmax	pmax		
	comp=Z,110nm,7.7s						
GYA				LR	LR		
	comp=Z,290nm,15.5s						
GYA				LR	LR		
	comp=Z,130nm,12.7s						
GYA				LR	LR		
	comp=Z,320nm,21.8s						
CD2	Chengdu	21.99	26	P	P	14 06 33.4	+0.3
CD2				pP	pP	14 06 45.8	+1.2
CD2				sP	sP	14 06 52.0	+1.0
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
GOMU	GeErMu	24.89	4	P	P	14 07 04.4	+2.7
GOMU				pmax	pmax		
	comp=Z,14nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,190nm,3.7s						
UWJI	Ujung Watu	25.12	134	P	P	14 07 04.0	+0.5
	comp=Z,33nm,1.0s,comp=Z,2µm						
MYLDM	Lahad Datu	26.03	101	P	P	14 07 12.1	+0.2
MYLDM				IAmb	IAmb	14 07 24.4	
	comp=Z,22nm,0.8s						
LZH	Lanzhou	26.62	20	eP	P	14 07 21.8	+4.6
LZH				pP	pP	14 07 32.5	+2.5
LZH				sP	sP	14 07 38.9	+2.9
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
XAN	Xi'an	26.99	30	P	P	14 07 21.4	+1.1
XAN				pP	pP	14 07 33.3	0.0
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
XAN				LR	LR		
	comp=Z,220nm,18.6s						
XAN				LR	LR		
	comp=Z,170nm,14.8s						
XAN				LR	LR		
	comp=Z,320nm,21.6s						
H08S3	Diego Garcia H	27.66	228	T	T	14 36 14.8	
	baz=46,slow=76,SNR=282						
H08S2	Diego Garcia H	27.67	228	T	T	14 36 15.3	
	baz=46,slow=76,SNR=735						
H08S1	Diego Carcia H	27.68	228	T	T	14 36 16.3	
	baz=46,slow=76,SNR=174						
GTA	Gaotai	28.70	11	eP	P	14 07 38.3	+2.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LYN	LuoYang	29.25	34	eP	P	14 07 38.6	-1.8
LYN				LR	LR		
	comp=Z,280nm,20.2s						
LYN				LR	LR		
	comp=Z,210nm,17.7s						
LYN				LR	LR		
	comp=Z,330nm,18.9s						
KAPI	Kappang	31.23	120	LR	LR	14 20 27.0	
	comp=Z,134nm,20.8s,baz=295,slow=36						
NJ2	Nanjing	31.62	45	eP	P	14 08 01.9	+0.5
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BKSI	Bulukumba	31.70	120	P	P	14 08 01.2	-1.1
	comp=Z,12nm,0.9s						
KBL	Kabul	31.78	321	P	P	14 08 00.7	-2.3
KBL				IAmb	IAmb	14 08 05.0	
	comp=Z,7.7nm,0.8s						
PLAI	Plampang	31.79	128	P	P	14 08 06.1	+3.1
KSH	Kashi	31.91	335	P	P	14 08 03.6	-0.4
KSH				pP	pP	14 08 15.3	-1.8
KSH				sP	sP	14 08 24.3	+1.1
KSH				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HNS	HongShan	32.57	33	⇑P	P	14 08 10.3	+0.7
HNS				S	S	14 13 25.9	+4.3
HNS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HNS				LR	LR		
	comp=Z,270nm,18.0s						
HNS				LR	LR		
	comp=Z,310nm,20.8s						
WMQ	Urumqi	32.75	353	eP	P	14 08 13.8	+2.5
BTO	Baotou	32.90	24	eP	P	14 08 12.3	-0.3
BTO				pmax	pmax		
	comp=Z,21nm,0.5s						
BTO				pmax	pmax		
	comp=Z,470nm,4.7s						
HHC	Hu-ho-hao-te	33.74	26	eP	P	14 08 23.5	+3.5
HHC				pmax	pmax		
	comp=Z,25nm,0.6s						
HHC				pmax	pmax		
	comp=Z,200nm,6.2s						
SHLS	Shalkode	33.86	342	eP	P	14 08 21.4	+0.4
	comp=Z,4.4nm,0.5s,baz=343						
SATY	Saty	34.09	341	eP	P	14 08 24.4	+1.3
	baz=341						
GAR	Garm	34.17	328	P	P	14 08 23.5	-0.3
KPKS	Kokpek	34.37	342	eP	P	14 08 26.8	+1.3
	baz=342						
CHGR	Chuyangaron	34.54	326	P	P	14 08 26.1	-0.9
TNSS	Tian-Shan	34.56	339	eP	P	14 08 28.8	+1.4
	baz=339						
MDOK	Medeo	34.64	339	eP	P	14 08 29.0	+1.2
	baz=340						
AAA	Alma-Ata	34.73	339	eP	P	14 08 29.5	+1.0
	baz=339						
WSAR	Wadi Sarin	34.74	295	LR	LR	14 22 05.1	
	comp=Z,78nm,21.8s,baz=118,slow=35						
AAK	Ala-Archa	35.13	336	ScP	ScP	14 14 43.5	-0.7
	comp=Z,1.4nm,0.9s,baz=79,slow=2.1,SNR=5.2						
AAK				LR	LR	14 24 20.6	
	comp=Z,123nm,21.9s,baz=154,slow=38						
AAK	Ala-Archa	35.13	336	P	P	14 08 33.8	+1.7
AAK				pP	pP	14 08 44.5	-0.8
AAK				ScP	ScP	14 14 43.8	-0.4

KUU	Kurty	35.53	339	eP	P	14 08 35.5	+0.3
	baz=339						
MK31	Makanchi Array	36.54	348	P	P	14 08 44.6	+0.7
MKAR	Makanchi Array	36.54	348	P	P	14 08 44.4	+0.5
	comp=Z,4.9nm,0.7s,baz=168,slow=8.2,SNR=61						
MKAR				ScP	ScP	14 14 48.1	-0.9
	comp=Z,1.5nm,1.0s,baz=142,slow=6.1,SNR=5.9						
MKAR				LR	LR	14 27 04.1	
	comp=Z,48nm,18.6s,baz=196,slow=42						
	comp=Z,4.9nm,0.7s						
MAKZ	Makanchi	36.62	347	P	P	14 08 44.5	-0.1
MAKZ				IAmb	IAmb	14 09 05.2	
	comp=Z,5.3nm,0.7s						
MAKZ	Makanchi	36.62	347	P	P	14 08 44.9	+0.3
MAKZ				pP	pP	14 08 58.2	+0.4
MAKZ				sP	sP	14 09 02.7	-1.1
MAKZ				PcP	PcP	14 11 07.0	+0.2
MAKZ				ScP	ScP	14 14 48.2	-1.1
JOW	Kunigami	36.69	60	LR	LR	14 24 58.4	
	comp=Z,153nm,20.4s,baz=140,slow=38						
IUG	Iuzhnay	36.69	331	eP	P	14 08 46.8	+1.4
	baz=331						
ZSN	Zaisan	36.70	351	eP	P	14 08 46.2	+0.9
	baz=351						
BTLS	Baital	37.34	338	eP	P	14 08 51.8	+1.0
	baz=338						
SONM	Songino Array	38.18	15	P	P	14 08 58.7	+0.9
	comp=Z,1.0nm,0.4s,baz=198,slow=9.9,SNR=9.8						
SONM				ScP	ScP	14 14 53.5	-1.8
	comp=Z,0.4nm,0.5s,baz=179,slow=2.9,SNR=4.7						
SONM				LR	LR	14 26 44.6	
	comp=Z,146nm,21.5s,baz=224,slow=39						
	comp=Z,1.0nm,0.4s						
SONM	Songino Array	38.18	15	P	P	14 08 59.9	+2.0
KSRS	Korea Array	40.81	44	P	P	14 09 18.9	-0.9
	comp=Z,2.3nm,0.9s,baz=249,slow=8.6,SNR=9.1						
KSRS				ScP	ScP	14 15 03.5	-2.0
	comp=Z,0.3nm,0.5s,baz=259,slow=3.0,SNR=4.3						
KSRS				LR	LR	14 27 05.1	
	comp=Z,130nm,21.2s,baz=230,slow=37						
	comp=Z,2.3nm,0.9s						
GEYT	Alibeck	40.90	316	P	P	14 09 22.6	+2.1
	comp=Z,16nm,0.8s,baz=141,slow=9.6,SNR=26						
GEYT				LR	LR	14 27 28.0	
	comp=Z,102nm,20.7s,baz=147,slow=38						
	comp=Z,16nm,0.8s						
KURBB	Kurchatov Arra	40.98	346	ScP	ScP	14 15 05.0	-0.9
	comp=Z,3.4nm,0.9s,baz=158,slow=3.2,SNR=14						
JNU	Nakatsue	41.02	52	LR	LR	14 27 17.1	
	comp=Z,88nm,18.1s,baz=284,slow=37						
KURK	Kurchatov	41.05	346	P	P	14 09 20.2	-1.3
KURK	Kurchatov	41.05	346	P	P	14 09 21.8	+0.3
KURK				sP	sP	14 09 39.3	-1.6
KURK				ScP	ScP	14 15 05.4	-0.8
MBWA	Marble Bar	41.63	141	P	P	14 09 24.4	-2.2
PSA00	Pilbara Seismi	42.01	141	P	P	14 09 26.5	-3.3
PSA00				IAmb	IAmb	14 09 29.1	
	comp=Z,15nm,0.8s						
BRZS	Berezniki	42.06	341	eP	P	14 09 30.8	+0.9
	baz=341						
CN2	Changchun	42.89	35	eP	P	14 09 31.6	-5.1
ZALV	Zalesovo Beam	43.06	353	P	P	14 09 37.3	-0.6
	comp=Z,1.2nm,0.3s,baz=172,slow=11,SNR=6.8						
ZALV				ScP	ScP	14 15 12.1	-2.1
	comp=Z,0.6nm,0.5s,baz=204,slow=3.3,SNR=4.1						
ZALV				LR	LR	14 31 52.0	
	comp=Z,53nm,18.1s,baz=211,slow=42						
	comp=Z,1.2nm,0.3s						
FITZ	Fitzroy Crossi	43.53	132	P	P	14 09 39.7	-2.5
JMN	Monobe	43.57	52	P	P	14 09 42.3	-0.1
JMN				IAmb	IAmb	14 09 43.7	
	comp=Z,17nm,1.0s						
BVAR	Borovoye Array	45.41	341	ScP	ScP	14 15 22.9	-0.9
	comp=Z,1.9nm,1.1s,baz=132,slow=2.2,SNR=4.0						
BRVK	Borovoye	45.47	341	P	P	14 09 55.4	-1.8
BRVK				IAmb	IAmb	14 10 15.9	
	comp=Z,6.3nm,0.7s						
BRVK	Borovoye	45.47	341	P	P	14 09 57.4	+0.2
BRVK				pP	pP	14 10 09.9	-1.0
BRVK				sP	sP	14 10 15.2	-1.8
BRVK				ScP	ScP	14 15 23.5	-0.6
MDJ	Mudanjiang	45.76	37	P	P	14 10 01.1	+1.5
MDJ				pmax	pmax		
	comp=Z,4.0nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,200nm,6.1s						
ABKAR	Akbulak array	46.70	331	P	P	14 10 05.2	-1.7
ABKAR				IAmb	IAmb	14 10 26.9	
	comp=Z,20nm,1.3s						
USRK	Ussuriysk Ar.	46.96	38	P	P	14 10 09.2	+0.2
	comp=Z,2.6nm,0.6s,baz=180,slow=7.2,SNR=4.1						
USRK				LR	LR	14 31 32.2	
	comp=Z,81nm,20.7s,baz=226,slow=38						
	comp=Z,2.6nm,0.6s						
MJAR	Matsushiro Arr	47.88	51	P	P	14 10 17.3	+1.0
	comp=Z,1.0nm,0.7s,baz=229,slow=5.9,SNR=2.0						
MJAR				LR	LR	14 30 38.0	
	comp=Z,41nm,18.4s,baz=244,slow=36						
	comp=Z,1.0nm,0.7s						
HEH	HeiHe	48.11	29	eP	P	14 10 18.0	+0.2
KLR	Kul'dur	49.65	33	LR	LR	14 32 58.3	
	comp=Z,84nm,18.7s,baz=226,slow=38						
GUMO	Guam	50.72	82	LR	LR	14 32 02.4	
	comp=Z,129nm,18.6s,baz=100,slow=36						
GNI	Garni	51.23	313	LR	LR	14 34 54.6	
	comp=Z,69nm,21.0s,baz=129,slow=39						
GNI	Garni	51.23	313	P	P	14 10 43.9	+1.8
WRA	Warramunga Arr	51.23	127	P	P	14 10 40.5	-1.6
	comp=Z,2.3nm,0.8s,baz=300,slow=10.0,SNR=18						
WRA				ScP	ScP	14 15 45.5	-3.7
	comp=Z,0.6nm,0.8s,baz=320,slow=3.7,SNR=5.2						
WRA				LR	LR	14 33 22.1	
	comp=Z,75nm,19.9s,baz=272,slow=37						
	comp=Z,2.3nm,0.8s						
WRAB	Tennant Creek	51.24	127	P	P	14 10 40.2	-1.9
WRAB				pP	pP	14 10 52.4	-3.0
ARU	Arti	52.31	337	LR	LR	14 34 52.5	
	comp=Z,145nm,19.0s,baz=140,slow=38						
ARU	Arti	52.31	337	P	P	14 10 48.4	-1.1
ARU	Arti	52.31	337	P	P	14 10 49.9	+0.3
ARU				sP	sP	14 11 08.0	-1.4
ONI	Oni	53.00	315	P	P	14 10 55.6	+0.6
ONI				IAmb	IAmb	14 11 08.6	
	comp=Z,9.6nm,1.1s						
ASAR	Alice Springs	53.03	131	P	P	14 10 53.6	-1.8
	comp=Z,2.5nm,0.8s,baz=301,slow=6.9,SNR=26						
ASAR				ScP	ScP	14 15 53.0	-3.9
	comp=Z,1.1nm,0.9s,baz=296,slow=4.2,SNR=4.9						
ASAR				S	S	14 18 21.0	-0.8
	comp=Z,0.7nm,0.8s,baz=303,slow=14,SNR=7.7						
ASAR				LR	LR	14 35 22.0	
	comp=Z,82nm,18.4s,baz=284,slow=38						
	comp=Z,2.5nm,0.8s						
ASAJ	Asahikawa	53.72	43	LR	LR	14 33 39.1	
	comp=Z,67nm,20.8s,baz=238,slow=36						
FORT	Forrest	53.74	142	P	P	14 11 00.4	0.0
KBZ	Khabaz	53.79	317	P	P	14 11 00.5	-0.2
	comp=Z,6.9nm,0.8s,baz=112,slow=6.8,SNR=16						
	comp=Z,6.9nm,0.8s						
KIV	Kislovodsk	54.02	317	P	P	14 11 03.8	+1.3
KIV				sP	sP	14 11 22.9	+0.4
ABPO	Ambohimpanom	54.16	237	P	P	14 11 05.3	+1.5
EIL	Elat	56.73	298	LR	LR	14 36 58.7	
	comp=Z,32nm,21.9s,baz=105,slow=37						
MMAI	Mount Meron Ar	56.77	302	LR	LR	14 38 50.8	
	comp=Z,84nm,20.8s,baz=170,slow=39						
YAK	Yakutsk	57.21	20	LR	LR	14 39 13.1	
	comp=Z,88nm,18.8s,baz=258,slow=39						
KIRV	Kirov	57.45	335	LR	LR	14 37 10.8	
	comp=Z,28nm,20.5s,baz=127,slow=37						
BRTR	Keskin Array B	59.33	310	P	P	14 11 39.3	-1.0
	comp=Z,3.8nm,0.8s,baz=119,slow=7.3,SNR=23						
BRTR				LR	LR	14 40 46.6	
	comp=Z,49nm,18.2s,baz=130,slow=39						
	comp=Z,3.8nm,0.8s						
MBAR	Mbarara	62.88	263	LR	LR	14 36 46.9	
	comp=Z,89nm,20.4s,baz=84,slow=33						
KLMR	Klimovskoe	62.90	334	eP	P	14 12 02.0	-1.9
KLMR				AMP		14 12 03.7	
	comp=Z,33nm,1.6s						
STKA	Stephens Creek	63.32	134	P	P	14 12 05.3	-1.8
	comp=Z,2.6nm,0.9s,baz=321,slow=8.0,SNR=5.1						
	comp=Z,2.6nm,0.9s						
TIXI	Tiksi	64.18	12	LR	LR	14 43 27.0	
	comp=Z,40nm,18.2s,baz=180,slow=39						
TIXI	Tiksi	64.18	12	P	P	14 12 11.7	-0.5
TIXI				IAmb	IAmb	14 12 28.1	
	comp=Z,15nm,0.9s						
TIXI	Tiksi	64.18	12	P	P	14 12 11.8	-0.4
TIXI				pP	pP	14 12 24.2	-2.1
MA2	Magadan	64.36	29	P	P	14 12 13.5	0.0
	comp=Z,8.4nm,0.7s,baz=177,slow=19,SNR=1.3						
MA2				LR	LR	14 41 30.9	
	comp=Z,67nm,18.9s,baz=234,slow=37						
	comp=Z,8.4nm,0.7s						
MA2	Magadan	64.36	29	P	P	14 12 17.7	+4.1
MA2				pP	sP	14 12 31.0	-2.3
AKASG	Malin Array Be	64.77	321	P	P	14 12 15.5	-0.8
	comp=Z,0.5nm,0.2s,baz=80,slow=4.4,SNR=22						
	comp=Z,0.5nm,0.2s						
VRI	Vrincioaia	65.44	315	⇓P	P	14 12 21.5	+0.6
PLOR	Plostina	65.49	315	⇓P	P	14 12 22.1	+0.9
TESR	Tescani	65.60	316	⇓P	P	14 12 21.9	+0.1
IDI	Anoyia	65.67	304	LR	LR	14 45 43.8	
	comp=Z,35nm,19.8s,baz=92,slow=40						
MLR	Muntele Rosu	65.92	315	⇑P	P	14 12 24.9	+0.8
MLR	Muntele Rosu	65.92	315	P	P	14 12 24.3	+0.1
	comp=Z,16nm,1.1s,baz=167,slow=1.3,SNR=7.9						
MLR				LR	LR	14 45 22.2	
	comp=Z,36nm,19.6s,baz=266,slow=40						
	comp=Z,16nm,1.1s						
PETK	Petropavlovsk-	66.00	37	LR	LR	14 45 20.7	
	comp=Z,73nm,19.4s,baz=245,slow=40						
SEY	Seymchan	66.39	25	P	P	14 12 26.2	-0.4
	comp=Z,1.1nm,0.8s,baz=101,slow=22,SNR=2.8						
SEY				LR	LR	14 44 20.4	
	comp=Z,121nm,18.9s,baz=280,slow=38						
	comp=Z,1.1nm,0.8s						
MNK	Minsk	66.47	325	i P	P	14 12 27.1	-0.2
	comp=E,3.0nm,0.8s						
MNK				i P	P	14 12 27.1	-0.2
	comp=N,37nm,1.0s						
MNK				i P	P	14 12 27.1	-0.2
	comp=Z,31nm,1.0s,baz=104						
MNK				i pP	pP	14 12 41.9	+0.4
MNK				i PP	PP	14 14 52.1	-1.9
MNK				i PPP	PPP	14 16 27.3	
MNK				i S	S	14 21 14.1	+0.2
MNK				i sS	sS	14 21 39.9	+1.7
MNK				i SS	SS	14 25 29.8	-1.5
MNK				i SSS	SSS	14 28 43.1	
MNK				i LQ	LQ	14 37 05.5	
MNK				i LR	LR	14 41 59.2	
MNK				i LRM	MLR	14 44 22.1	
	comp=E,94nm,17.2s						
MNK				i LRM	MLR	14 44 43.8	
	comp=Z,82nm,9.9s						
MNK				i LRM	MLR	14 45 21.5	
	comp=N,611nm,17.2s						
VOIR		66.54	315	⇓P	P	14 12 28.0	-0.1
BURAR	Bucovina Array	66.74	317	⇑P	P	14 12 29.4	+0.1
NACGM	Naroch	67.19	325	eP	P	14 12 32.2	+0.4
	comp=Z,22nm,0.8s,baz=104						
DRGR		68.32	316	⇓P	P	14 12 39.0	-0.3
FINES	FINESS Array B	69.17	332	P	P	14 12 43.9	-0.2
	comp=Z,4.5nm,0.7s,baz=97,slow=6.7,SNR=10						
	comp=Z,4.5nm,0.7s						
LSZ	Lusaka	69.30	249	LR	LR	14 38 49.9	
	comp=Z,61nm,21.4s,baz=126,slow=32						
HNR	Honiara	69.76	104	LR	LR	14 47 39.7	
	comp=Z,1μm,18.8s,baz=192,slow=40						
VYHS	Vyhne	71.10	317	eP	P	14 12 56.2	0.0
ARCES	ARCESS Array B	71.69	340	P	P	14 12 59.3	-0.1
	comp=Z,1.2nm,0.5s,baz=102,slow=6.3,SNR=7.7						
ARCES				LR	LR	14 46 38.6	
	comp=Z,119nm,21.6s,baz=126,slow=38						
	comp=Z,1.2nm,0.5s						
MAUC	Maruska	71.82	318	eP	P	14 13 01.1	+0.5
JAVC	Velka Javorina	71.89	318	eP	P	14 13 02.0	+0.9
MORC	Moravsky Berou	72.03	319	eP	P	14 13 02.3	+0.4
MODS	Modra-Piesok	72.12	317	eP	P	14 13 02.4	0.0
KRLC	Kraliky	72.54	319	eP	P	14 13 05.4	+0.5
VRAC	Vranov	72.62	318	eP	P	14 13 05.5	+0.1
KRUC	Moravsky	72.74	318	eP	P	14 13 06.1	0.0
RONA	Rosalia, Austr	72.75	317	i P	P	14 13 06.0	-0.2
	comp=Z,5.8nm,1.0s						
DPC	Dobruska-Polom	72.85	319	eP	P	14 13 07.6	+0.8
CHVC	Chvalec	73.04	320	eP	P	14 13 07.8	0.0
CONA	Conrad Observa	73.05	317	eP	P	14 13 07.2	-0.8
	comp=Z,3.9nm,0.9s						
SOKA	Soboth	73.58	315	i P	P	14 13 11.3	+0.1
	comp=Z,7.6nm,1.0s						
OBKA	Obir	73.92	315	i P	P	14 13 12.9	-0.3
	comp=Z,5.4nm,0.7s						
PRU	Pruhonice	73.98	319	eP	P	14 13 13.8	+0.5
CKRC	Cesky Krumlov	74.11	318	eP	P	14 13 14.3	+0.2
MOA	Molln	74.12	317	eP	P	14 13 13.7	-0.5
	comp=Z,9.0nm,1.3s						
BRG	Berggiesshubel	74.39	320	eP	P	14 13 16.4	+0.7
BRG				Amp		14 13 17.1	
	comp=Z,10nm,1.2s						
BRG				pP	sP	14 13 33.7	-2.2
BRG				Amp		14 13 35.9	
	comp=Z,9.9nm,1.1s						
GERES	GERESS Array B	74.51	318	P	P	14 13 16.7	+0.1
	comp=Z,5.1nm,0.6s,baz=91,slow=5.3,SNR=30						
	comp=Z,5.1nm,0.6s						
MYKA	Terra Mystica	74.54	315	i P	P	14 13 16.5	-0.3
	comp=Z,2.4nm,0.5s						
KHC	Kasperske Hory	74.59	318	eP	P	14 13 16.7	-0.3
KHC				epP	pP	14 13 33.5	+2.0
KBA	Koelnbreinsper	74.75	316	i P	P	14 13 17.2	-0.9
	comp=Z,3.7nm,0.8s						
LBTB	Lobatse	74.83	240	LR	LR	14 42 29.4	
	comp=Z,61nm,19.8s,baz=112,slow=33						
HFS	Hagfors	74.94	329	P	P	14 13 18.6	-0.1
	comp=Z,3.0nm,0.4s,baz=96,slow=4.6,SNR=20						
HFS				LR	LR	14 48 16.7	
	comp=Z,101nm,19.7s,baz=34,slow=37						
	comp=Z,3.0nm,0.4s						
CLL	Collm	74.99	320	eP	P	14 13 19.0	-0.1
CLL				e(pP)	pP	14 13 36.0	+2.3
CLL				ex	x	14 13 43.0	
STAL	STALIGIAL	75.19	315	P	P	14 13 19.7	-0.8
STAL				IAmb	IAmb	14 13 20.9	
	comp=Z,29nm,1.2s						
CIMO	Cimolais	75.38	315	P	P	14 13 21.0	-0.5
CIMO				IAmb	IAmb	14 13 22.1	
	comp=Z,20nm,0.7s						
WTTA	Wattenberg	75.91	316	i P	P	14 13 24.0	-0.8
	comp=Z,9.8nm,0.6s						
WATA	Walderalm	75.95	316	i P	P	14 13 24.0	-1.0
	comp=Z,10nm,0.9s						
SQTA	Sankt Quirin	76.20	316	i P	P	14 13 25.6	-0.8
	comp=Z,8.5nm,0.5s						
NB2	NORSAR Subarra	76.20	330	P	P	14 13 25.3	-0.7
	comp=Z,2.2nm,0.7s,baz=91,slow=5.9						
NOA	NORSAR Array B	76.20	330	P	P	14 13 25.4	-0.5
	comp=Z,1.5nm,0.6s,baz=92,slow=5.7,SNR=5.6						
NOA				LR	LR	14 49 21.9	
	comp=Z,33nm,19.4s,baz=105,slow=38						
	comp=Z,1.5nm,0.6s						
MOTA	Moosalm	76.27	316	i P	P	14 13 25.9	-0.9
	comp=Z,6.9nm,0.7s						
SPITS	Spitsbergen Ar	76.29	348	LR	LR	14 53 22.8	
	comp=Z,35nm,18.4s,baz=77,slow=41						
BOSA	Boshof	76.38	237	P	P	14 13 27.7	+0.1
	comp=Z,8.8nm,0.9s,baz=65,slow=7.7,SNR=9.3						
BOSA				LR	LR	14 42 13.3	
	comp=Z,86nm,20.1s,baz=164,slow=32						
	comp=Z,8.8nm,0.9s						
RETA	Reutte	76.50	316	i P	P	14 13 27.4	-0.6
	comp=Z,9.8nm,0.8s						
FETA	Feichten	76.53	316	i P	P	14 13 28.0	-0.3
	comp=Z,7.3nm,0.9s						
DAVA	Damuels	77.10	316	i P	P	14 13 31.3	-0.2
	comp=Z,14nm,0.7s						
DAVOX	Davos/Dischmat	77.13	316	P	P	14 13 31.8	+0.1
	comp=Z,6.5nm,0.8s,baz=122,slow=5.6,SNR=10						
	comp=Z,6.5nm,0.8s						
KEST	Kesra	78.33	304	P	P	14 13 38.6	+0.2
	comp=Z,6.7nm,0.7s,baz=289,slow=0.8,SNR=6.9						
	comp=Z,6.7nm,0.7s						
SENIN	Lac Senin/Sane	78.93	315	P	P	14 13 40.8	-0.9
BNI	Bardonecchia	79.48	314	P	P	14 13 44.1	-0.5
BNI				IAmb	IAmb	14 14 07.4	
	comp=Z,16nm,0.8s						
TSUM	Tsumeb	80.13	248	LR	LR	14 44 39.6	
	comp=Z,66nm,19.0s,baz=155,slow=32						
SUR	Sutherland	81.27	235	LR	LR	14 43 51.2	
	comp=Z,106nm,19.3s,baz=144,slow=31						
ESDC	Sonseca Array	88.12	310	P	P	14 14 28.8	0.0
	comp=Z,2.1nm,0.8s,baz=50,slow=3.6,SNR=9.8						
	comp=Z,2.1nm,0.8s						
TORD	Torodi Ar. Bea	88.65	283	P	P	14 14 31.6	0.0
	comp=Z,2.3nm,0.8s,baz=76,slow=4.6,SNR=12						
TORD				LR	LR	14 53 01.8	
	comp=Z,52nm,20.1s,baz=78,slow=35						
	comp=Z,2.3nm,0.8s						
RPZ	Rata Peaks	89.28	135	LR	LR	14 55 32.5	
	comp=Z,72nm,19.2s,baz=272,slow=36						
BORG	Borgarnes	89.85	337	LR	LR	14 59 19.8	
	comp=Z,31nm,18.3s,baz=71,slow=38						
K20K	Telida	89.99	25	P	P	14 14 38.2	+1.2
K20K				IAmb	IAmb	14 14 44.8	
	comp=Z,10nm,0.9s						
MDT	Midelt	90.19	303	P	P	14 14 38.2	-0.5
	comp=Z,2.9nm,0.5s,baz=280,slow=9.5,SNR=3.8						
	comp=Z,2.9nm,0.5s						
CAST	Castle Rocks	90.76	24	P	P	14 14 42.0	+1.4
BPAW	Bear Paw Mtn.	90.87	23	P	P	14 14 42.2	+1.1
ILAR	Eielson Array	92.07	22	P	P	14 14 46.5	-0.2
	comp=Z,0.7nm,0.7s,baz=293,slow=4.2,SNR=14						
	comp=Z,0.7nm,0.7s						
URZ	Urewera	92.39	128	LR	LR	14 57 04.7	
	comp=Z,49nm,20.6s,baz=343,slow=36						
INK	Inuvik	94.08	16	P	P	14 14 56.1	+0.4
	comp=Z,1.1nm,0.5s,baz=318,slow=5.5,SNR=4.0						
	comp=Z,1.1nm,0.5s						
DBIC	Dimbokro	96.27	278	P	P	14 15 07.0	+0.1
	comp=Z,3.7nm,0.9s,baz=230,slow=3.1,SNR=3.1						
	comp=Z,3.7nm,0.9s						
PDAR	Pinedale Array	122.43	19	PKP	PKiKP	14 20 34.8	+1.1
	comp=Z,0.7nm,0.6s,baz=164,slow=1.1,SNR=7.2						
NVAR	Mina Array Bea	122.60	29	PKP	PKiKP	14 20 35.1	+1.0
	comp=Z,0.9nm,0.6s,baz=296,slow=1.8,SNR=8.9						
TXAR	Lajitas Array	136.59	21	PKP	PKiKP	14 21 02.1	-0.1
	comp=Z,0.6nm,0.5s,baz=120,slow=0.7,SNR=7.3						
TRQA	Tornquist	145.12	216	PKPdf	PKPbc	14 21 14.4	-0.5
LL02	Futaleuf	145.54	200	PKPdf	PKPbc	14 21 16.1	-0.1
PLCA	Paso Flores	147.22	204	PKPbc	PKPbc	14 21 20.2	-1.1
	comp=Z,6.2nm,0.8s,baz=149,slow=3.0,SNR=16						
CPUP	Villa Florida	148.19	238	PKPbc	PKPbc	14 21 23.0	-1.2
	comp=Z,4.9nm,0.9s,baz=84,slow=4.3,SNR=5.0						
CMIG	Matias Romero	150.79	15	PKPbc	PKiKP	14 21 31.9	+0.4
	comp=Z,2.9nm,0.5s,baz=117,slow=4.9,SNR=4.8						
LPAZ	La Paz	160.92	253	PKP	PKPdf	14 21 38.9	-0.6
	comp=Z,0.9nm,0.7s,baz=270,slow=1.0,SNR=4.2						
LPAZ				PKPab	PKPab	14 22 20.6	-1.7
	comp=Z,1.1nm,0.8s,baz=121,slow=4.5,SNR=3.6						

IDC ***17*** *14:22:13.2±6.6, 15°.45N×95°.37W, h68km±45km, mb3.2/4, mbtmp3.4/5, ML3.4/1, Error ellipse: s-maj=89.0km s-min=49.2km az=114.0*

MEX ***17*** *14:22:16.5±0.7, 15°.97N×96°.16W, h49km±9km, MD4.3*

ISC 17 14:22:16.0±0.9**, 15°.94N**±0°.04×**96°.13W**±0°.03**, h43**km±8km**, n44, σ2s.39**/63**, mb3.5**/4**, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.17	172	eP	Pn	14 22 23.1	-0.2
HUIG				eS	Sn	14 22 28.7	+0.2
PANG	Puerto Angel	0.42	231	eP	Pn	14 22 25.3	-0.6
PANG				i S	Sn	14 22 32.5	-0.3
PEIG	Puerto Escondi	0.98	274	eP	Pn	14 22 31.6	-1.8
PEIG				i S	Sn	14 22 43.8	-2.2
VHO	Vista Hermosa	1.27	333	eP	Pn	14 22 36.0	-1.5
VHO				eS	Sn	14 22 51.2	-2.2
NILT	Santiago Nilte	1.58	66	eP	Pn	14 22 41.1	-0.5
NILT				i S	Sn	14 23 00.5	-0.3
YOIG	Yosondua	1.64	304	eP	Pn	14 22 42.4	-0.2
YOIG				eS	Sn	14 23 01.3	-1.3
CMIG	Matias Romero	1.66	46	P	Pn	14 22 40.4	-2.2
	90nm,0.3s,baz=226,slow=13,SNR=134						
CMIG				S	Sn	14 23 01.7	-1.0
	276nm,0.3s,baz=241,slow=19,SNR=9.1						
CMIG				LR	LR	14 23 29.9	
	comp=Z,206nm,19.3s,baz=198,slow=45						
CMIG	Matias Romero	1.66	46	eP	Pn	14 22 40.6	-2.0
CMIG				eS	Sn	14 23 00.3	-2.5
NEUV	Arroyo Zacate	1.80	10	eP	Pn	14 22 42.8	-1.7
NEUV				i S	Sn	14 23 03.0	-3.0
PNIG	Pinotepa	1.97	284	eP	Pn	14 22 45.3	-1.6
PNIG				eS	Sn	14 23 06.7	-3.7
TXIG	Tlaxiaco	2.04	310	eP	Pn	14 22 48.6	+0.4
TXIG				eS	Sn	14 23 11.4	-1.2
TOIG	Toxpalan	2.33	338	eP	Pn	14 22 52.0	+0.1
TOIG				eS	Sn	14 23 17.4	-1.9
HLIG	Huajuapan de L	2.47	320	eP	Pn	14 22 55.5	+1.5
HLIG				i S	Sn	14 23 22.6	-0.5
MGIG	Malinaltepec	2.73	299	i P	Pn	14 23 01.1	+3.7
MGIG				i S	Sn	14 23 29.3	0.0
TPIG	Tehuac#an	2.74	335	eP	Pn	14 23 00.7	+3.1
TPIG				eS	Sn	14 23 29.8	+0.2
FTIG	Fresnillo de T	2.74	316	eP	Pn	14 22 58.3	+0.7
FTIG				eS	Sn	14 23 27.3	-2.3
PMUV	Sontecomapan	2.77	20	i P	Pn	14 22 55.3	-2.6
PMUV				i S	Sn	14 23 27.2	-3.0
PCIG		2.81	94	eP	Pn	14 22 58.2	-0.3
PCIG				eS	Sn	14 23 28.0	-3.1
TLIG	Tlapa	2.84	305	eP	Pn	14 23 04.2	+5.2
TLIG				i S	Sn	14 23 31.7	-0.3
TGIG		3.01	73	eP	Pn	14 22 59.2	-2.0
TGIG				eS	Sn	14 23 35.9	-0.2
OZST	Orizaba	3.05	343	e	Sn	14 23 45.3	+8.1
JAUV	Jalcomulco	3.47	349	i P	Pn	14 23 05.4	-2.2
JAUV				i S	Sn	14 23 43.3	-4.2
DAIG	Los Arroyos	3.54	288	i P	Pn	14 23 07.3	-1.3
LVIG	Laguna Verde	3.78	356	e	Pn	14 23 20.6	+8.8
LVIG				i		14 24 07.6	
PATR	El Naranjo	3.84	102	eP	Pn	14 23 13.5	+0.7
PATR				eS	Sn	14 23 55.5	-1.4
CCIG	Comitan	3.85	84	eP	Pn	14 23 14.3	+1.3
CCIG				eS	Sn	14 23 57.9	+0.7
MEIG	Mezcala	3.88	301	e	Pn	14 23 19.8	+6.6
MEIG				e		14 24 08.9	
PAVE	Pavencul	3.88	100	i P	Pn	14 23 14.9	+1.5
PAVE				eS	Sn	14 23 55.9	-2.0
CHUJ	Union Juarez	3.97	102	eP	Pn	14 23 15.6	+1.0
CHUJ				eS	Sn	14 23 57.1	-2.9
YAIG	Yautepec	4.04	317	eP	Pn	14 23 16.7	+1.2
YAIG				eS	Sn	14 23 57.6	-4.1
PLIG	Platanillo	4.04	308	i	Pn	14 23 24.4	+8.9
PLIG				e		14 24 12.7	
CAIG	El Cayaco	4.12	286	i P	Pn	14 23 15.8	-0.7
CAIG				eS	Sn	14 23 56.4	-7.0
MAVM	Malinalco, Edo	4.40	314	e		14 24 36.1	
CXUV	Coxquihui	4.44	342	e	Pn	14 23 21.1	+0.3
CXUV				i		14 24 24.4	
AOVM	Tlapan	4.50	318	e	Pn	14 23 43.1	+21
AOVM				e		14 24 29.3	
INVM	La Marquesa	4.55	318	e		14 24 25.2	
ARIG	Puente Sto Nin	4.66	301	i P	Pn	14 23 24.1	+0.2
ARIG				i		14 24 30.1	
DEIG	Demacu	5.15	328	e		14 24 51.7	
CTUV	Llano Grande	5.90	339	i	Pn	14 23 45.6	+4.8
CTUV				i		14 25 00.8	
TXAR	Lajitas Array	15.03	334	P	P	14 25 51.9	+1.6
	baz=150,slow=14,SNR=2.5						
	0.5nm,0.9s						
PDAR	Pinedale Array	29.11	339	P	P	14 28 13.3	+0.4
	0.3nm,0.7s,baz=147,slow=8.6,SNR=2.7						
	0.3nm,0.7s						
NVAR	Mina Array Bea	29.70	323	P	P	14 28 20.3	+2.1
	0.5nm,0.7s,baz=140,slow=9.2,SNR=4.9						
	0.5nm,0.7s						
YKA	Yellowknife Ar	48.29	349	P	P	14 30 51.6	-1.1
	0.4nm,0.7s,baz=154,slow=7.2,SNR=5.9						
	0.4nm,0.7s						
ILAR	Eielson Array	59.51	337	P	P	14 32 14.9	+0.3
	0.5nm,0.9s,baz=117,slow=5.2,SNR=4.7						
	0.5nm,0.9s						

JMA ***17*** *14:23:23.7±0.2, 35°.7N±0°.6×140°.8E±0°.8, h49km±1km, MV2.7/34, NEAR CHOSHI CITY*

IDC ***17*** *14:23:27.4±6.6, 35°.81N×140°.72E, h74km±49km, mb3.0/2, mbtmp3.2/3, ML2.1/1, Error ellipse: s-maj=75.6km s-min=35.0km az=58.0*

ISC 17 14:23:24.2±1.2**, 35°.68N**±0°.06×**140°.83E**±0°.08**, h45**km±7km**, n16, σ0s.88**/16**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.03	42	i P	Pn	14 23 31.3	0.0
CHOJ				S	Sn	14 23 36.8	+0.5

JSMT	**Sammumatsuo**	**0.31**	**264**	*i* P	**Pn**	**14 23 32.5**	**-0.6**
JSMT				S	**Sn**	**14 23 39.6**	**+0.3**
JIHU	**Itakohorinouch**	**0.38**	**319**	*i* P	**Pn**	**14 23 33.8**	**0.0**
JIHU				S	**Sn**	**14 23 41.1**	**+0.6**
JCN	**Nagara**	**0.57**	**243**	P	**Pn**	**14 23 35.5**	**-0.6**
JCN				S	**Sn**	**14 23 44.6**	**-0.1**
JYT	**Yasato**	**0.75**	**317**	*i* P	**Pn**	**14 23 37.4**	**-1.1**
JYT				S	**Sn**	**14 23 47.4**	**-1.5**
BSO3	**Boso 3**	**0.91**	**197**	P	**Pn**	**14 23 40.2**	**-0.2**
BSO1	**Boso 1**	**1.03**	**173**	P	**Pn**	**14 23 41.5**	**-0.2**
MJAR	**Matsushiro Arr**	**2.29**	**293**	P	**Pn**	**14 24 01.5**	**+1.9**
	0.5nm,0.3s,baz=95,slow=13,SNR=20						
MJAR				S	**Sn**	**14 24 26.7**	**+0.1**
	4.4nm,0.4s,baz=331,slow=18,SNR=3.2						
	3.1nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**27.90**	**118**	T	T	14 58 19.4	
	baz=310						
H11N1	**WAKE ISLAND Hy**	**27.90**	**118**	T	T	14 58 15.4	
	baz=310						
H11N3	**WAKE ISLAND Hy**	**27.91**	**118**	T	T	14 58 13.0	
	baz=310						
H11S3	**WAKE ISLAND Hy**	**28.55**	**120**	T	T	14 59 21.0	
	baz=306,slow=70,SNR=10						
H11S1	**WAKE ISLAND Hy**	**28.55**	**120**	T	T	14 59 23.6	
	baz=306,slow=70,SNR=9.6						
H11S2	**WAKE ISLAND Hy**	**28.57**	**120**	T	T	14 59 28.9	
	baz=306,slow=70,SNR=13						
MKAR	**Makanchi Array**	**44.45**	**303**	P	**P**	**14 31 30.3**	**-0.5**
	0.4nm,0.8s,baz=91,slow=8.9,SNR=2.8						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**55.66**	**187**	P	**P**	**14 32 56.2**	**+0.5**
	0.2nm,0.6s,baz=1.6,slow=7.7,SNR=5.6						
	0.2nm,0.6s						

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*IDC **17** 14:28:13.3±0.7, 59°.48S×25°.16W, h0^{km}, mb4.3/10, mbtmp4.3/11, ML4.6/1, MS3.7/11, Error ellipse: s-maj=23.0km s-min=18.5km az=17.0*

*NEIC **17** 14:28:14.3±1.2, 59°.55S±0°.04×25°.0W±0°.2, h10^{km}±1^{km}, mb4.9/27, Error ellipse: s-maj=20.1km s-min=6.5km az=91.0*

ISC 17 14:28:16.9±0.5**, 59°.63S**±0°.08×**25°.02W**±0°.10**, h27**^{km}**, n53,** σ1ˢ.**20**/49**, mb4.7**/21**, MS3.7**/10**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.04**	**155**	P	**Pn**	**14 31 20.6**	**+0.5**
VNA3	**Neumayer Olymp**	**13.22**	**158**	P	**Pn**	**14 31 22.4**	**-0.2**
VNA2	**Neumayer--Watz**	**13.44**	**155**	P	**Pn**	**14 31 25.5**	**0.0**
	baz=310,slow=15						
SNAA	**Sanae**	**15.01**	**153**	P	**Pn**	**14 31 46.3**	**-0.5**
SNAA	**Sanae**	**15.01**	**153**	Pn	**Pn**	**14 31 46.5**	**-0.3**
	2.6nm,0.3s,baz=317,slow=14,SNR=63						
SNAA				Sn	**Sn**	**14 34 26.6**	**-5.3**
	0.2nm,0.3s,baz=266,slow=16,SNR=2.0						
SNAA				LR	LR	14 36 51.8	
	comp=Z,177nm,18.1s,baz=280,slow=34						
	18nm,0.7s						
SNAA	**Sanae**	**15.01**	**153**		**Pn**	**14 31 46.1**	**-0.8**
TROLL	**Troll, Antarti**	**16.54**	**150**	P	**Pn**	**14 32 07.1**	**+0.4**
BELA	**Belgrano 2**	**18.61**	**186**	P	**Pn**	**14 32 32.6**	**+0.5**
PMSA	**Palmer Station**	**18.67**	**237**	P	**P**	**14 32 31.2**	**-1.3**
EFI	**East Falkland**	**20.09**	**279**	P	**P**	**14 32 48.3**	**+0.2**
EFI				IAmb	IAmb	14 32 59.2	
	comp=Z,157nm,1.8s						
QSPA	**South Pole Qui**	**30.61**	**180**	P	**P**	**14 34 30.6**	**+2.3**
	comp=Z,2.3nm,0.5s,baz=228,slow=1.3,SNR=42						
	comp=Z,2.3nm,0.5s						
QSPA	**South Pole Qui**	**30.61**	**180**	P	**P**	**14 34 28.2**	**-0.2**
QSPA				IAmb	IAmb	14 34 43.7	
	comp=Z,46nm,1.9s						
TRQA	**Tornquist**	**31.87**	**296**	P	**P**	**14 34 38.5**	**-1.0**
TRQA				IAmb	IAmb	14 34 51.6	
	comp=Z,27nm,1.6s						
PLCA	**Paso Flores**	**33.87**	**283**	P	**P**	**14 34 55.9**	**-1.1**
	comp=Z,1.4nm,0.6s,baz=136,slow=8.6,SNR=10.0						
PLCA				LR	LR	14 46 55.0	
	comp=Z,124nm,19.5s,baz=179,slow=33						
	comp=Z,1.4nm,0.6s						
PLCA	**Paso Flores**	**33.87**	**283**	P	**P**	**14 34 56.1**	**-0.9**
PLCA				IAmb	IAmb	14 35 02.8	
	comp=Z,15nm,1.6s						
GO06	**Curarrehue**	**35.20**	**284**	P	**P**	**14 35 08.3**	**-0.2**
GO06				IAmb	IAmb	14 35 11.2	
	comp=Z,33nm,1.9s						
MAW	**Mawson**	**36.61**	**140**	P	**P**	**14 35 20.4**	**+0.2**
BO02	**Sierra Bellavi**	**38.65**	**289**	P	**P**	**14 35 38.2**	**+0.3**
MT09	**Talagante**	**39.58**	**290**	P	**P**	**14 35 45.1**	**-0.6**
MT09				IAmb	IAmb	14 35 46.6	
	comp=Z,14nm,0.9s						
MT01	**Popeta**	**39.63**	**290**	P	**P**	**14 35 45.1**	**-0.9**
MT01				IAmb	IAmb	14 36 01.5	
	comp=Z,46nm,1.8s						
PEL	**Peldehue**	**39.95**	**291**	P	**P**	**14 35 48.5**	**-0.2**
PEL				IAmb	IAmb	14 35 50.6	
	comp=Z,19nm,0.7s						
CPUP	**Villa Florida**	**40.06**	**312**	LR	LR	14 52 18.9	
	comp=Z,81nm,19.9s,baz=192,slow=36						
MT02	**Curacav**	**40.07**	**290**	P	**P**	**14 35 48.9**	**-0.8**
CFA	**Coronel Fontan**	**40.08**	**295**	P	**P**	**14 35 48.6**	**-1.2**
	comp=Z,8.0nm,0.8s,baz=151,slow=8.4,SNR=17						
CFA				LR	LR	14 52 33.5	
	comp=Z,153nm,20.0s,baz=100,slow=36						
	comp=Z,8.0nm,0.8s						
ROC1	**El Roble**	**40.24**	**291**	P	**P**	**14 35 52.8**	**+1.4**
ROC1				IAmb	IAmb	14 36 11.3	
	comp=Z,12nm,0.5s						
SUR	**Sutherland**	**40.66**	**69**	P	**P**	**14 35 54.2**	**-0.5**
	comp=Z,11nm,1.1s,baz=90,slow=6.9,SNR=2.2						
	comp=Z,11nm,1.1s						
SUR	**Sutherland**	**40.66**	**69**	P	**P**	**14 35 53.9**	**-0.9**
VA06	**Catapilco**	**40.72**	**291**	P	**P**	**14 35 54.9**	**-0.1**
VA06				IAmb	IAmb	14 35 57.3	
	comp=Z,15nm,0.7s						
CO06	**Fray Jorge**	**42.44**	**292**	P	**P**	**14 36 09.3**	**+0.1**
VNDA	**Vanda**	**43.04**	**182**	P	**P**	**14 36 15.7**	**+2.3**
VNDA				IAmb	IAmb	14 36 53.9	
	comp=Z,54nm,2.0s						
BOSA	**Boshof**	**45.91**	**70**	P	**P**	**14 36 36.9**	**-0.2**
	comp=Z,1.7nm,0.5s,baz=219,slow=6.4,SNR=4.1						
BOSA				LR	LR	14 52 19.9	
	comp=Z,79nm,18.5s,baz=190,slow=32						
	comp=Z,1.7nm,0.5s						
BOSA	**Boshof**	**45.91**	**70**		**P**	**14 36 36.4**	**-0.7**
BOSA				IAmb	IAmb	14 38 20.1	
	comp=Z,30nm,1.8s						
GO02	**Mina Guanaco**	**46.19**	**298**	P	**P**	**14 36 39.0**	**-0.6**
GO02				IAmb	IAmb	14 36 54.5	
	comp=Z,8.4nm,0.9s						
LVC	**Limon Verde**	**48.12**	**301**	P	**P**	**14 36 54.2**	**-0.4**
	comp=Z,2.9nm,0.6s,baz=164,slow=9.1,SNR=2.7						
LVC				LR	LR	14 59 34.1	
	comp=Z,80nm,19.0s,baz=191,slow=39						
	comp=Z,2.9nm,0.6s						
SIV	**San Ignacio**	**50.88**	**313**	LR	LR	15 00 07.8	
	comp=Z,65nm,18.8s,baz=187,slow=38						
MNMC	**Minye Minye**	**51.48**	**302**	P	**P**	**14 37 19.3**	**-0.8**
LPAZ	**La Paz**	**53.39**	**305**	P	**P**	**14 37 33.8**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=136,slow=9.0,SNR=3.9						
	comp=Z,1.1nm,0.5s						
LPAZ	**La Paz**	**53.39**	**305**	P	**P**	**14 37 33.9**	**-0.8**
LSZ	**Lusaka**	**58.72**	**65**	LR	LR	15 01 22.1	
	comp=Z,57nm,18.1s,baz=164,slow=34						
NNA	**Nana**	**60.98**	**298**	LR	LR	15 03 28.0	
	comp=Z,35nm,20.4s,baz=162,slow=35						
BOAV	**Boa Vista**	**67.82**	**321**	P	**P**	**14 39 11.0**	**-1.3**
BOAV				IAmb	IAmb	14 39 31.3	
	comp=Z,24nm,1.9s						
DBIC	**Dimbokro**	**68.01**	**22**	P	**P**	**14 39 13.7**	**+0.2**
	comp=Z,2.4nm,0.6s,baz=215,slow=4.3,SNR=3.7						
	comp=Z,2.4nm,0.6s						
DBIC	**Dimbokro**	**68.01**	**22**	P	**P**	**14 39 12.7**	**-0.8**
MCRA	**Macar, Loja**	**69.13**	**299**	P	**P**	**14 39 19.6**	**-1.0**
MCRA				IAmb	IAmb	14 39 20.1	
	comp=Z,5.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**75.67**	**27**	P	**P**	**14 40 00.3**	**+0.9**
	comp=Z,5.3nm,0.7s,baz=195,slow=6.2,SNR=25						
	comp=Z,5.3nm,0.7s						
MDT	**Midelt**	**93.64**	**17**	LR	LR	15 19 39.3	
	comp=Z,58nm,19.4s,baz=14,slow=33						
ASAR	**Alice Springs**	**95.22**	**161**	P	**P**	**14 41 38.8**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=191,slow=3.9,SNR=5.6						
	comp=Z,0.2nm,0.6s						
WRA	**Warramunga Arr**	**98.94**	**160**	LR	LR	15 23 01.2	
	comp=Z,60nm,21.7s,baz=162,slow=33						
NVAR	**Mina Array Bea**	**123.78**	**289**	PKP	**PKiKP**	**14 47 13.7**	**+1.8**
	comp=Z,0.8nm,0.6s,baz=121,slow=3.5,SNR=7.1						
ARCES	**ARCESS Array B**	**133.84**	**22**	PKP	**PKPdf**	**14 47 29.6**	**+0.1**
	comp=Z,2.4nm,1.0s,baz=117,slow=0.3,SNR=4.1						
MKAR	**Makanchi Array**	**136.86**	**74**	PKP	**PKPdf**	**14 47 36.7**	**+0.9**
	comp=Z,0.5nm,0.9s,baz=216,slow=3.3,SNR=3.1						
YKA	**Yellowknife Ar**	**139.56**	**314**	PKP	**PKPdf**	**14 47 41.1**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=130,slow=2.7,SNR=16						
YKA				SKPbc	**SKPbc**	**14 51 14.6**	**+1.1**
	comp=Z,0.3nm,0.7s,baz=128,slow=2.8,SNR=5.5						
SONM	**Songino Array**	**149.65**	**91**	PKPbc	**PKiKP**	**14 48 03.8**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=216,slow=4.0,SNR=12						

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*IDC **17** 14:31:21.5±1.9, 12°.54N×144°.44E, h57^{km}±20^{km}, mb3.1/5, mbtmp3.4/5, Error ellipse: s-maj=56.7km s-min=18.2km az=106.0*

ISC 17 14:31:18.7±1.1**, 12°.5N**±0°.2×**144°.3E**±0°.3**, h30**^{km}**, n9,** σ1ˢ.**10**/7**, mb3.4**/5**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.17**	**27**	P	**Pn**	**14 31 39.2**	**+0.1**
	563nm,0.3s,baz=155,slow=18,SNR=39						
GUMO				S	**Sb**	**14 31 56.0**	**+0.8**
	664nm,0.4s,baz=60,slow=22,SNR=25						
H11N1	**WAKE ISLAND Hy**	**22.81**	**69**	T	T	14 59 54.3	
	baz=255,slow=75,SNR=26						
H11N2	**WAKE ISLAND Hy**	**22.82**	**69**	T	T	14 59 56.5	
	baz=255,slow=75,SNR=25						
H11N3	**WAKE ISLAND Hy**	**22.83**	**69**	T	T	14 59 57.1	
	baz=255,slow=75,SNR=22						
WRA	**Warramunga Arr**	**33.74**	**197**	P	**P**	**14 37 57.6**	**-0.2**
	0.4nm,0.6s,baz=20,slow=9.8,SNR=5.7						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**37.40**	**196**	P	**P**	**14 38 30.4**	**+1.2**
	0.4nm,0.7s,baz=19,slow=10,SNR=7.7						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**61.87**	**317**	P	**P**	**14 41 35.5**	**+0.3**
	0.3nm,0.6s,baz=98,slow=7.4,SNR=3.5						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**69.74**	**25**	P	**P**	**14 42 24.0**	**-1.6**
	0.1nm,0.4s,baz=250,slow=5.8,SNR=5.7						
	0.1nm,0.4s						
YKA	**Yellowknife Ar**	**84.03**	**27**	P	**P**	**14 43 46.3**	**+0.1**
	0.1nm,0.5s,baz=277,slow=5.1,SNR=3.0						
	0.1nm,0.5s						

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*UCR **17** 14:39:58.4±2.0, 10°.39N×86°.24W, h0^{km}±9^{km}, MW4.8, mb4.5(NEIC)*

*INET **17** 14:40:01.3±1.9, 10°.37N×86°.20W, h19^{km}±29^{km}, MW4.2*

*NEIC **17** 14:40:03.1±2.8, 10°.56N±0°.08×86°.18W±0°.08, h31^{km}±10^{km}, mb4.5/23, Error ellipse: s-maj=14.8km s-min=6.6km az=49.0*

*IDC **17** 14:40:04.8±1.6, 11°.05N×85°.43W, h50^{km}±18^{km}, mb3.8/10, mbtmp4.1/11, ML3.6/1, MS3.5/9, Error ellipse: s-maj=37.5km s-min=19.7km az=54.0*

ISC 17 14:39:59.1±1.6**, 10°.38N**±0°.04×**86°.30W**±0°.05**, h24**^{km}±11^{km}**, n117,** σ1ˢ.**35**/130**, mb4.4**/23**, MS3.5**/7**, 6C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SACU	**Santa Cruz**	**0.71**	**99**	*e*P	**Pb**	**14 40 12.2**	**-0.7**
DELF	**Filadelfia**	**0.74**	**84**	*e*P	**Pb**	**14 40 13.7**	**+0.3**
HZTE	**Horizontes, Gu**	**0.77**	**64**	Pn	**Pb**	**14 40 13.7**	**-0.2**
HZTE	**Horizontes, Gu**	**0.77**	**64**	*e*P	**Pb**	**14 40 13.8**	**0.0**
HZTE				*e*S	**Sn**	**14 40 25.2**	**-0.3**
ALIBA	**Liberia Airpor**	**0.77**	**74**	*e*P	**Pb**	**14 40 13.9**	**0.0**
ELI1	**Hacienda Flor**	**0.78**	**70**	*e*P	**Pb**	**14 40 14.3**	**+0.2**
ORTG	**Ortega, Santa**	**0.83**	**91**	Pn	**Pb**	**14 40 13.9**	**-1.1**
DUNO	**Dulce Nombre,**	**0.85**	**110**	Pn	**Pb**	**14 40 13.9**	**-1.3**
NICO	**Nicoya**	**0.87**	**106**	*e*P	**Pb**	**14 40 14.0**	**-1.7**
LCRUZ	**La Cruz**	**0.96**	**43**	*e*P	**Pb**	**14 40 17.0**	**-0.2**
LCRUZ				*e*S	**Sn**	**14 40 31.6**	**+1.5**
BUEV	**Buena Vista**	**0.97**	**64**	⇑*i*P	**Pb**	**14 40 16.4**	**-1.0**
BUEV				*e*S	**Sb**	**14 40 29.9**	**+0.1**
GB1A	**Borinquen Arri**	**0.99**	**64**	*e*P	**Pb**	**14 40 16.8**	**-0.9**
GB1A				*e*S	**Sn**	**14 40 30.6**	**-0.4**
GPS2	**Hotel Rincn d**	**1.00**	**68**	⇑*e*P	**Pb**	**14 40 16.9**	**-1.0**
GPS2				*e*S	**Sn**	**14 40 31.4**	**+0.1**
BAGA	**Bagaces**	**1.03**	**82**	*e*P	**Pb**	**14 40 18.4**	**0.0**
VORI	**VORI**	**1.03**	**65**	*e*P	**Pn**	**14 40 17.4**	**-1.0**
VORI				*e*S	**Sn**	**14 40 32.3**	**0.0**
GUAB	**Guayabo de Bag**	**1.10**	**73**	*e*P	**Pn**	**14 40 18.3**	**-1.0**
GUAB				*e*S	**Sn**	**14 40 33.8**	**0.0**
COLC	**Colonia**	**1.12**	**75**	*e*P	**Pn**	**14 40 18.5**	**-0.9**
COLC				*e*S	**Sn**	**14 40 34.5**	**+0.4**
CAMAV	**Centro de Prod**	**1.13**	**73**	*e*P	**Pn**	**14 40 18.9**	**-0.8**
CAMAV				*e*S	**Sn**	**14 40 34.8**	**+0.2**
CUI	**Cuipilapa**	**1.15**	**76**	*e*P	**Pn**	**14 40 19.1**	**-0.7**
CUI				*e*S	**Sn**	**14 40 35.3**	**+0.4**
CLARA	**Aguas Claras**	**1.18**	**70**	⇑*e*P	**Pn**	**14 40 19.6**	**-0.6**
CNAS	**Canas**	**1.19**	**87**	*e*P	**Pn**	**14 40 19.8**	**-0.6**
VMAR	**Armenia, Volca**	**1.24**	**70**	⇑*e*P	**Pn**	**14 40 20.8**	**-0.4**
VMAR				*e*S	**Sb**	**14 40 38.8**	**+1.2**
CANAL	**Canalete**	**1.31**	**70**	⇑*e*P	**Pn**	**14 40 21.4**	**-0.6**
CANAL				*e*S	**Sb**	**14 40 40.2**	**+0.8**
JUNT	**Juntas**	**1.32**	**94**	*e*P	**Pn**	**14 40 21.1**	**-1.1**
JTS	**Las Juntas de**	**1.33**	**94**	P	**Pn**	**14 40 21.1**	**-1.2**
	382nm,0.3s,baz=109,slow=23,SNR=93						
JTS				S	**Sn**	**14 40 37.6**	**-1.7**
	536nm,0.4s,baz=298,slow=22,SNR=44						
JTS	**Las Juntas de**	**1.33**	**94**	Pn	**Pn**	**14 40 20.9**	**-1.4**
JTS	**Las Juntas de**	**1.33**	**94**	*e*P	**Pn**	**14 40 20.9**	**-1.4**
JTS	**Las Juntas de**	**1.33**	**94**	*e*P	**Pn**	**14 40 21.1**	**-1.2**
CONN	**Concepcion**	**1.35**	**29**	*e*P	**Pn**	**14 40 22.9**	**+0.3**
VERA	**Finca Concepci**	**1.48**	**71**	*e*P	**Pn**	**14 40 24.3**	**-0.1**
VERA				*e*S	**Sb**	**14 40 45.9**	**+1.4**
TABAC	**Tabacon**	**1.51**	**85**	*e*P	**Pn**	**14 40 25.1**	**+0.2**
SGBR	**La Fortuna**	**1.52**	**86**	*e*P	**Pn**	**14 40 25.5**	**+0.6**
CASO	**Castillo**	**1.54**	**88**	*e*P	**Pn**	**14 40 24.9**	**-0.3**
CASO				*e*S	**Sb**	**14 40 47.2**	**+1.0**
CEDE	**Laguna Cedeo**	**1.57**	**86**	⇑*e*P	**Pn**	**14 40 25.8**	**+0.1**
CEDE				*e*S	**Sb**	**14 40 48.1**	**+1.0**
FORC	**Fortuna**	**1.61**	**87**	*e*P	**Pn**	**14 40 26.5**	**+0.4**
FORC				*e*S	**Sb**	**14 40 49.3**	**+1.2**
MASN	**Masaya**	**1.61**	**5**	*e*P	**Pb**	**14 40 29.3**	**+1.1**
SOCE	**Pocosol**	**1.66**	**90**	*e*P	**Pn**	**14 40 27.0**	**+0.2**
LCHIL	**Los Chiles**	**1.69**	**67**	*e*P	**Pn**	**14 40 27.9**	**+0.6**
TISN	**Laguna Tiscapa**	**1.75**	**1**	*e*P	**Pn**	**14 40 29.3**	**+1.1**
MGAN	**Managua**	**1.76**	**2**	*e*P	**Pb**	**14 40 29.5**	**-1.3**
JACO	**JACO, Garabito**	**1.77**	**114**	Pn	**Pb**	**14 40 30.2**	**-0.7**
WILN	**Americas 2**	**1.78**	**4**	*e*P	**Pn**	**14 40 29.3**	**+0.9**
COPN	**Copaltepe**	**1.81**	**351**	*e*P	**Pn**	**14 40 29.1**	**+0.1**
COVE	**Coope Vega, Sa**	**1.90**	**79**	Pn	**Pn**	**14 40 30.4**	**+0.3**
ACON	**Acoyapa**	**1.93**	**35**		**Pn**	**14 40 30.7**	**+0.2**
ACON	**Acoyapa**	**1.93**	**35**	*e*P	**Pn**	**14 40 30.7**	**+0.2**
ACON				*e*S	**Sn**	**14 40 53.4**	**-0.7**
ACON	**Acoyapa**	**1.93**	**35**	*e*P	**Pn**	**14 40 30.8**	**+0.2**
HUEN		**1.95**	**4**	*e*P	**Pn**	**14 40 31.5**	**+0.7**
MOMN	**Momotombo**	**2.03**	**353**	*e*P	**Pn**	**14 40 33.1**	**+1.1**
CNGN	**Cerro Negro**	**2.15**	**350**		**Pb**	**14 40 35.8**	**-1.6**
BOAB	**BOACO BROADBAN**	**2.15**	**17**	Pn	**Pn**	**14 40 34.2**	**+0.6**
BOAB	**BOACO BROADBAN**	**2.15**	**17**	*e*P	**Pn**	**14 40 34.1**	**+0.5**
HDC	**Heredia**	**2.18**	**100**		**Pb**	**14 40 37.0**	**-1.0**
TELN	**Telica**	**2.27**	**347**	*e*P	**Pb**	**14 40 37.8**	**-1.8**
ABE2	**San Pablo**	**2.31**	**107**	*e*P	**Pb**	**14 40 40.1**	**-0.2**
LLNJ	**Naranjito**	**2.34**	**112**	*e*P	**Pb**	**14 40 40.7**	**-0.1**
LCR2	**La Lucha 2**	**2.35**	**105**	*e*P	**Pn**	**14 40 37.5**	**+1.0**
CRIN	**San Cristobal**	**2.42**	**342**		**Pb**	**14 40 39.7**	**-2.4**
RIMA	**Rio Macho**	**2.48**	**104**	Pn	**Pb**	**14 40 42.6**	**-0.4**
MATN	**Matagalpa**	**2.56**	**8**		**Pn**	**14 40 40.6**	**+1.2**
MATN	**Matagalpa**	**2.56**	**8**	*e*P	**Pn**	**14 40 40.1**	**+0.7**
RVSTA	**Santa Teresita**	**2.64**	**98**	*e*P	**Pn**	**14 40 42.0**	**+1.6**
EDDO	**Dominical**	**2.65**	**115**	*e*P	**Pb**	**14 40 46.0**	**+0.1**
ESPN	**Las Esperanzas**	**2.67**	**47**	Pn	**Pn**	**14 40 40.8**	**+0.1**
ESPN	**Las Esperanzas**	**2.67**	**47**	*e*P	**Pn**	**14 40 40.8**	**+0.1**
RVLA	**Villa Bonita**	**2.68**	**95**	*e*P	**Pn**	**14 40 43.4**	**+2.5**
LCOCO	**El Coco**	**2.71**	**96**	*e*P	**Pb**	**14 40 45.4**	**-1.7**
PEZE	**Perez Zeledon,**	**2.77**	**111**		**Pb**	**14 40 47.5**	**-0.4**
SOMN	**Somoto**	**3.04**	**354**	*e*P	**Pb**	**14 40 50.0**	**-2.7**
SRBA	**San Rafael, Bu**	**3.11**	**111**		**Pb**	**14 40 52.8**	**-1.1**
EDAD	**Golfito**	**3.54**	**119**	*e*P	**Pn**	**14 40 53.6**	**+0.9**
BRU2	**Volcan**	**3.89**	**114**		**Pb**	**14 41 04.8**	**-2.4**
CMIG	**Matias Romero**	**10.68**	**310**	P	Pn	14 42 40.3	+10
	0.4nm,0.3s,baz=153,slow=11,SNR=4.5						
	6.0nm,0.9s						
ROSC	**El Rosal**	**13.08**	**114**	LR	LR	14 48 15.0	
	comp=Z,100nm,18.0s,baz=262,slow=39						
ATAH	**Atahualpa**	**19.09**	**155**	LR	LR	14 50 45.4	
	comp=Z,135nm,20.2s,baz=320,slow=33						
152A	**Waverly Hall**	**22.23**	**4**	P	**P**	**14 44 55.3**	**+1.0**
152A				IAmb	IAmb	14 44 57.3	
	comp=Z,20nm,0.8s						
LRAL	**Lakeview Retre**	**22.56**	**358**	P	**P**	**14 44 58.3**	**+0.5**
LRAL				IAmb	IAmb	14 44 59.7	
	comp=Z,8.4nm,0.7s						
Z51A	**Franklin**	**22.86**	**2**	P	**P**	**14 45 01.1**	**+0.2**
Z51A				IAmb	IAmb	14 45 03.1	
	comp=Z,10nm,0.7s						
435B	**Jarrell**	**22.86**	**334**	P	**P**	**14 45 03.8**	**+2.9**
X51A	**Calhoun**	**24.11**	**3**	P	**P**	**14 45 13.5**	**+0.3**
X51A				IAmb	IAmb	14 45 15.1	
	comp=Z,12nm,0.8s						
OXF	**Oxford**	**24.19**	**354**		**P**	**14 45 13.7**	**-0.2**
PLAL	**Pickwick Lake**	**24.55**	**356**	P	**P**	**14 45 17.0**	**-0.1**
PLAL				IAmb	IAmb	14 45 18.6	
	comp=Z,10nm,0.8s						
W52A	**Murphy**	**24.70**	**5**	P	**P**	**14 45 18.8**	**+0.2**
W52A				IAmb	IAmb	14 45 19.8	
	comp=Z,13nm,0.9s						
W50A	**Signal Mountai**	**24.73**	**2**	P	**P**	**14 45 18.9**	**+0.1**
W50A				IAmb	IAmb	14 45 19.5	
	comp=Z,8.0nm,0.8s						
SWET	**Sewanee**	**24.73**	**1**	P	**P**	**14 45 18.8**	**0.0**
SWET				IAmb	IAmb	14 45 19.2	
	comp=Z,11nm,0.7s						
TX32	**Lajitas Array**	**24.89**	**322**	P	**P**	**14 45 22.9**	**+2.5**
TXAR	**Lajitas Array**	**24.89**	**322**	P	**P**	**14 45 22.6**	**+2.2**
	comp=Z,3.4nm,0.6s,baz=141,slow=9.0,SNR=30						
TXAR				PcP	**PcP**	**14 48 59.1**	**+3.0**
	comp=Z,0.9nm,0.8s,baz=139,slow=4.6,SNR=7.3						
	comp=Z,3.4nm,0.6s						
TX31	**Lajitas Ar. Si**	**24.89**	**322**	P	**P**	**14 45 23.2**	**+2.7**
UALR	**University of**	**24.91**	**348**	P	**P**	**14 45 20.7**	**+0.3**
UALR				IAmb	IAmb	14 45 22.0	
	comp=Z,18nm,0.9s						
MIAR	**Mount Ida**	**24.96**	**346**	P	**P**	**14 45 21.1**	**+0.3**
MIAR				IAmb	IAmb	14 45 28.7	
	comp=Z,13nm,0.8s						
CPCT	**Cooper Cave**	**25.01**	**3**	P	**P**	**14 45 22.3**	**+1.0**
TKL	**Tuckaleechee C**	**25.27**	**5**	P	**P**	**14 45 21.5**	**-2.2**
	comp=Z,4.8nm,0.9s,baz=166,slow=11,SNR=5.1						
TKL				LR	LR	14 55 20.8	
	comp=Z,51nm,19.5s,baz=248,slow=37						
	comp=Z,4.8nm,0.9s						
ABTX	**Abilene, Hawle**	**25.33**	**333**	P	**P**	**14 45 26.7**	**+2.4**
V53A	**Saluda**	**25.38**	**7**	P	**P**	**14 45 25.5**	**+0.8**
V53A				IAmb	IAmb	14 45 28.7	
	comp=Z,8.3nm,0.8s						
WMOK	**Wichita Mounta**	**26.80**	**337**	P	**P**	**14 45 40.5**	**+3.0**
WMOK				IAmb	IAmb	14 45 41.9	
	comp=Z,11nm,0.8s						
U38A	**Gravette**	**26.96**	**346**	P	**P**	**14 45 38.5**	**-0.6**
P52A	**Corning**	**29.37**	**7**	P	**P**	**14 45 59.6**	**-0.9**
P52A				IAmb	IAmb	14 46 00.8	
	comp=Z,12nm,0.8s						
ANMO	**Albuquerque**	**30.60**	**326**	P	**P**	**14 46 14.6**	**+3.0**
L42A	**Oliver, Polo**	**31.64**	**355**	P	**P**	**14 46 19.6**	**-0.9**
SDCO	**Great Sand Dun**	**32.26**	**331**	P	**P**	**14 46 27.8**	**+1.5**
SADO	**Sadowa**	**34.82**	**9**	LR	LR	15 01 16.1	
	comp=Z,74nm,19.0s,baz=155,slow=37						
PFO	**Pinyon Flats O**	**36.05**	**315**	LR	LR	15 02 33.4	
	comp=Z,73nm,18.5s,baz=182,slow=37						
PDAR	**Pinedale Array**	**38.12**	**332**	P	**P**	**14 47 17.6**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=127,slow=10.0,SNR=8.6						
PDAR				PcP	**PcP**	**14 49 30.7**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=110,slow=6.8,SNR=1.6						
	comp=Z,0.8nm,0.6s						
ELK	**Elko**	**39.60**	**325**	P	**P**	**14 47 31.2**	**+2.1**
	comp=Z,2.2nm,0.8s,baz=157,slow=6.1,SNR=9.8						
	comp=Z,2.2nm,0.8s						
NVAR	**Mina Array Bea**	**40.00**	**320**	P	**P**	**14 47 35.8**	**+3.3**
	comp=Z,4.6nm,0.8s,baz=134,slow=7.5,SNR=29						
NVAR				PcP	**PcP**	**14 49 41.4**	**+4.0**
	comp=Z,1.5nm,0.7s,baz=130,slow=3.6,SNR=9.1						
	comp=Z,4.6nm,0.8s						
ULM	**Lac du Bonnet**	**40.53**	**351**	P	**P**	**14 47 34.0**	**-2.4**
	comp=Z,3.0nm,0.6s,baz=204,slow=7.7,SNR=4.4						
	comp=Z,3.0nm,0.6s						
MCMT	**McKenzie Canyo**	**41.23**	**331**	P	**P**	**14 47 44.6**	**+2.0**
NEW	**Newport**	**45.76**	**331**	LR	LR	15 10 22.0	
	comp=Z,39nm,18.1s,baz=332,slow=40						
SCHQ	**Schefferville**	**46.95**	**15**	P	**P**	**14 48 24.6**	**-3.3**
	comp=Z,3.3nm,0.8s,baz=224,slow=8.9,SNR=4.3						
SCHQ				LR	LR	15 08 46.9	
	comp=Z,114nm,19.7s,baz=57,slow=37						
	comp=Z,3.3nm,0.8s						
FRB	**Frobisher Bay**	**54.76**	**10**	LR	LR	15 12 26.0	
	comp=Z,86nm,19.7s,baz=350,slow=36						
YKA	**Yellowknife Ar**	**55.90**	**345**	P	**P**	**14 49 33.0**	**-1.9**
	comp=Z,0.8nm,0.8s,baz=139,slow=7.3,SNR=11						
	comp=Z,0.8nm,0.8s						
RES	**Resolute Bay**	**64.47**	**357**	P	**P**	**14 50 31.0**	**-2.3**
	comp=Z,1.0nm,0.6s,baz=182,slow=9.2,SNR=8.9						
	comp=Z,1.0nm,0.6s						
ILAR	**Eielson Array**	**68.36**	**336**	P	**P**	**14 50 58.1**	**-0.4**
	comp=Z,0.7nm,0.9s,baz=99,slow=5.7,SNR=2.7						
	comp=Z,0.7nm,0.9s						
RAR	**Rarotonga**	**78.65**	**246**	LR	LR	15 16 51.6	
	comp=Z,33nm,21.3s,baz=248,slow=28						
MKAR	**Makanchi Array**	**122.18**	**9**	PKP	**PKPdf**	**14 58 50.4**	**-1.9**
	comp=Z,0.1nm,0.4s,baz=22,slow=5.4,SNR=1.4						
KSRS	**Korea Array**	**122.62**	**328**	PKP	**PKiKP**	**14 58 55.5**	**+2.0**
	comp=Z,1.0nm,0.7s,baz=3.6,slow=2.4,SNR=7.3						
CMAR	**Chiang Mai Arr**	**150.89**	**350**	PKPbc	**PKiKP**	**14 59 51.5**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=322,slow=2.8,SNR=2.0						

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*AEIC **17** 14:45:52.6±3.0, 60°.56N±0°.03×143°.09W±0°.04, h3^{km}±6^{km}, ML3.2, ML3.4/103(NEIC), Error ellipse: s-maj=5.2km s-min=2.5km az=200.0*

*ANF **17** 14:45:54.6±0.3, 60°.61N×143°.00W, h0^{km}, ML3.6/55, ML3.6/56, Error ellipse: s-maj=4.1km s-min=2.3km az=12.0*

*NEIC **17** 14:45:55.6±3.8, 60°.64N±0°.03×143°.01W±0°.03, h10^{km}±2^{km}, Error ellipse: s-maj=6.0km s-min=3.0km az=24.0*

ISC 17 14:45:54.4±0.8**, 60°.59N**±0°.02×**143°.05W**±0°.02**, h10**^{km}**, n202,** σ1ˢ.**87**/213**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIAG	**Kiagna River**	**0.48**	**45**		**Pg**	**14 46 03.1**	**-0.7**
KIAG					**Sg**	**14 46 09.2**	**-1.0**
BALM	**Baldy**	**0.57**	**37**		**Pg**	**14 46 04.7**	**-0.8**
BALM					**Sg**	**14 46 11.9**	**-1.0**
CYK	**Cape Yakataga**	**0.58**	**151**		**Pn**	**14 46 07.3**	**-1.3**
PTPK	**Patty Peak**	**0.67**	**25**		**Pg**	**14 46 06.8**	**-0.6**
PTPK					**Sg**	**14 46 15.2**	**-0.9**
VRDI	**Verde Repeater**	**0.68**	**343**		**Pg**	**14 46 06.5**	**-1.0**
VRDI					**Sg**	**14 46 14.9**	**-1.4**
MCARA	**McCarthy VSAT**	**0.80**	**1**		**Pg**	**14 46 08.6**	**-1.3**
MCARA				IAML		14 46 23.6	
	comp=N,1µm,0.4s						
MCARA				IAML		14 46 23.0	
	comp=E,2µm,0.6s						
MCARA	**McCarthy VSAT**	**0.80**	**1**	P	**Pg**	**14 46 08.5**	**-1.3**
	baz=182,SNR=83						
MCARA				S	**Sg**	**14 46 18.8**	**-1.5**
	baz=182						
BARN	**Barnard Glacie**	**0.83**	**54**		**Pg**	**14 46 08.9**	**-1.5**
BARN					**Sg**	**14 46 19.8**	**-1.4**
CTG	**Chitna Glacier**	**0.92**	**65**	P	**Pg**	**14 46 10.3**	**-1.8**
	baz=245,SNR=58						
CTG				S	**Sg**	**14 46 22.8**	**-1.2**
	baz=245						
CTGM	**Chitina Glacie**	**0.92**	**65**		**Pg**	**14 46 10.4**	**-1.8**
GLB	**Gilahina Butte**	**0.94**	**337**	Pg	**Pg**	**14 46 10.8**	**-1.6**
GLB	**Gilahina Butte**	**0.94**	**337**		**Sg**	**14 46 22.9**	**-1.6**
LOGN	**Logan Glacier**	**1.03**	**76**		**Pg**	**14 46 12.3**	**-2.0**
LOGN					**Sg**	**14 46 25.8**	**-1.9**
LOGN	**Logan Glacier**	**1.03**	**76**	IAML		14 46 30.9	
	comp=E,812nm,0.6s						
LOGN				IAML		14 46 32.6	
	comp=N,689nm,0.4s						
SAMH	**Samovar Hills**	**1.22**	**111**		**Pg**	**14 46 17.8**	**+0.1**
N25K	**Chitina, Valde**	**1.27**	**324**		**Pn**	**14 46 16.2**	**-2.0**
N25K	**Chitina, Valde**	**1.27**	**324**	P	**Pn**	**14 46 16.4**	**-1.9**
	baz=145,SNR=104						
N25K				S	**Sb**	**14 46 34.1**	**-0.8**
	baz=145						
EYAK	**Cordova Ski Ar**	**1.33**	**270**		**Pg**	**14 46 19.8**	**-0.2**
EYAK	**Cordova Ski Ar**	**1.33**	**270**		**Sg**	**14 46 40.9**	**+3.6**
EYAK	**Cordova Ski Ar**	**1.33**	**270**	P	**Pg**	**14 46 20.4**	**+0.4**
EYAK	**Cordova Ski Ar**	**1.33**	**270**	P	**Pg**	**14 46 20.0**	**0.0**

	baz=89,SNR=46						
O28M	Mount Upton	1.42	81	P	Pn	14 46 19.0	-1.4
	baz=262						
O28M				S	Sg	14 46 40.2	+0.2
	baz=262						
DIV	Divide	1.44	293		Pn	14 46 19.1	-1.4
PCA	Pinnacle	1.47	108		Pb	14 46 21.8	-0.1
PINM	Pinnacle	1.47	108	P	Pb	14 46 21.7	-0.1
	baz=289,SNR=69						
PINM				S	Sg	14 46 42.4	+0.7
	baz=289						
KLU	Klutina	1.67	304		Pn	14 46 23.4	-0.4
KLU	Klutina	1.67	304	P	Pn	14 46 23.2	-0.5
	baz=123,SNR=38						
YUK3	Moose Creek	1.73	45	P	Pn	14 46 24.6	-0.1
	baz=227,SNR=247						
YUK8	Steele Glacier	1.75	65	P	Pn	14 46 25.0	0.0
	baz=247,SNR=240						
BCPM	Bancas Point	1.81	109		Pb	14 46 26.6	-1.0
M26K	Nabesna, AK	1.82	1		Pb	14 46 26.5	-1.3
M26K				IAML		14 46 54.0	
	comp=E,285nm,0.7s						
M26K				IAML		14 47 00.1	
	comp=N,232nm,0.7s						
M26K	Nabesna, AK	1.82	1	P	Pn	14 46 26.1	+0.3
	baz=182						
M27K	Edge Creek, AK	1.87	17		Pb	14 46 27.3	-1.3
M27K				IAML		14 46 57.9	
	comp=N,272nm,0.8s						
M27K				IAML		14 46 59.2	
	comp=E,269nm,0.8s						
M27K	Edge Creek, AK	1.87	17	P	Pb	14 46 27.1	-1.5
	baz=198						
M27K				S	Sb	14 46 51.1	-0.9
	baz=198						
YKU2	Yakutat	2.01	121	P	Pb	14 46 30.4	-0.5
MID	Middleton Isla	2.02	236	Pn	Pn	14 46 27.1	-1.3
MID				IAML		14 46 44.2	
	comp=E,365nm,3.2s						
MID				IAML		14 47 05.5	
	comp=N,225nm,2.4s						
MID	Middleton Isla	2.02	236	P	Pb	14 46 29.6	-1.5
Q23K	Middleton Isla	2.02	237	Pn	Pn	14 46 27.4	-1.1
Q23K				IAML		14 46 44.2	
	comp=E,359nm,3.2s						
Q23K				IAML		14 47 26.4	
	comp=N,277nm,2.5s						
Q23K	Middleton Isla	2.02	237	P	Pb	14 46 29.4	-1.8
	baz=54						
PNL	Peninsula	2.04	115		Pn	14 46 29.0	+0.2
PNL	Peninsula	2.04	115	P	Pn	14 46 29.7	+0.9
PNL	Peninsula	2.04	115	P	Pn	14 46 29.1	+0.2
	baz=297,SNR=9.3						
PNL				S	Sb	14 46 56.7	-0.3
	baz=297						
HARP	HAARP	2.08	332	P	Pn	14 46 29.9	+0.5
	baz=151,SNR=33						
BVCY	Beaver Creek	2.11	29	Pb	Pb	14 46 32.6	-0.2
	baz=211						
BVCY				Sb	Sb	14 47 00.2	+1.1
	baz=211						
M24K	Tolsona, Glenn	2.15	317		Pn	14 46 31.0	+0.8
M24K				IAML		14 47 12.5	
	comp=N,296nm,1.1s						
M24K	Tolsona, Glenn	2.15	317	P	Pn	14 46 30.8	+0.5
	baz=135,SNR=39						
O29M	Mount Kennedy	2.23	95	P	Pn	14 46 32.4	+0.9
	baz=278						
O29M				Sb	Sg	14 47 04.2	-1.9
	baz=278						
P23K	Montague Islan	2.25	257	P	Pn	14 46 32.2	+0.6
	baz=74						
P23K				S	Sb	14 47 01.7	-1.1
	baz=74						
YUK4	Talbot Arm	2.28	69	Pb	Pb	14 46 36.0	+0.3
	baz=250						
YUK6	Outpost Mounta	2.33	79	P	Pb	14 46 34.7	-1.8
	baz=262						
SCM	Sheep Creek Mo	2.42	303		Pn	14 46 35.0	+0.9
SCM	Sheep Creek Mo	2.42	303	P	Pb	14 46 35.7	-2.3
	baz=120						
SCM				Sb	Sb	14 47 09.1	+1.1
	baz=120						
L26K	Log Cabin Wild	2.45	357		Pn	14 46 35.6	+1.1
L26K				IAML		14 47 10.0	
	comp=E,209nm,0.4s						
L26K				IAML		14 47 11.1	
	comp=N,150nm,0.6s						
L26K	Log Cabin Wild	2.45	357	Pb	Pb	14 46 37.5	-1.1
	baz=177						
L26K				Sb	Sb	14 47 09.1	+0.2
	baz=177						
L27K	Beaver Creek,	2.55	13		Pn	14 46 37.5	+1.7
L27K	Beaver Creek,	2.55	13	P	Pn	14 46 37.5	+1.7
	baz=194						
L27K				S	Sn	14 47 08.1	+1.2
	baz=194						
M23K	Glacier View	2.57	300	P	Pn	14 46 37.6	+1.6
	baz=117						
M23K				Sb	Sb	14 47 13.1	+0.9
	baz=117						
PWL	Port Wells	2.61	278		Pn	14 46 37.6	+1.0
PWL	Port Wells	2.61	278	IAML		14 47 15.1	
	comp=N,145nm,0.9s						
PWL				IAML		14 47 17.8	
	comp=E,118nm,0.6s						
PWL	Port Wells	2.61	278	P	Pn	14 46 37.7	+1.0
	baz=95,SNR=7.0						
PAX	Paxson	2.66	335		Pn	14 46 39.0	+1.6
PAX	Paxson	2.66	335	P	Pn	14 46 38.9	+1.6
	baz=154						
PAX				Sb	Sb	14 47 14.6	-0.1
	baz=154						
HYT	Haines Junctio	2.74	83	Pn	Pn	14 46 40.4	+1.9
HYT				IAML		14 47 21.2	
	comp=N,144nm,0.8s						
HYT				IAML		14 47 22.4	
	comp=E,168nm,0.8s						
HYT	Haines Junctio	2.74	83	P	Pn	14 46 40.1	+1.7
	baz=267,SNR=21						
HYT				Sb	Sg	14 47 19.4	-2.8
	baz=267						
KNK	Knik Glacier	2.76	290		Pn	14 46 40.4	+1.7
KNK	Knik Glacier	2.76	290	P	Pn	14 46 40.4	+1.7
	baz=106						
SML	Sawmill	2.84	298		Pn	14 46 41.6	+1.9
SML	Sawmill	2.84	298	IAML		14 47 27.7	
	comp=N,166nm,0.9s						
SML				IAML		14 47 27.7	
	comp=E,166nm,0.6s						
SML	Sawmill	2.84	298	P	Pn	14 46 41.7	+1.9
	baz=114						
M29M	Somme Creek	2.88	48	P	Pn	14 46 42.6	+2.1
	baz=231						
N30M	Aishikik Lake	3.03	71	P	Pn	14 46 44.0	+1.5
	baz=255						
P30M	Million Dollar	3.06	96	P	Pn	14 46 44.3	+1.5
	baz=281						
GHO	Glory Hole Cre	3.09	295		Pn	14 46 44.8	+1.6
GHO	Glory Hole Cre	3.09	295	IAML		14 47 34.2	
	comp=N,110nm,0.7s						
GHO				IAML		14 47 35.0	
	comp=E,124nm,0.7s						
DOT	Dot Lake	3.11	352		Pn	14 46 45.8	+2.2
PMR	Palmer	3.12	292		Pn	14 46 45.6	+2.0
PMR				IAML		14 47 34.4	
	comp=N,97nm,0.8s						
PMR				IAML		14 47 36.1	
	comp=E,83nm,0.7s						
PMR	Palmer	3.12	292	P	Pb	14 46 47.0	-2.9
PMR	Palmer	3.12	292	P	Pn	14 46 45.6	+2.0
	baz=107,SNR=22						
SEW	Seward	3.22	264	Pn	Pn	14 46 45.2	+0.3
RIDG	Independent Ri	3.28	346		Pn	14 46 48.3	+2.5
RIDG	Independent Ri	3.28	346	IAML		14 47 47.7	
	comp=E,76nm,1.0s						
RIDG	Independent Ri	3.28	346	P	Pn	14 46 48.0	+2.2
	baz=165						
O22K	Cooper Landing	3.30	271	P	Pn	14 46 46.5	+0.5
	baz=86						
RC01	Rabbit Creek A	3.31	282		Pn	14 46 47.7	+1.5
RC01	Rabbit Creek A	3.31	282	IAML		14 47 43.6	
	comp=E,74nm,0.6s						
RC01	Rabbit Creek A	3.31	282	P	Pn	14 46 47.7	+1.5
	baz=96						
O30N	Mendenhall	3.43	84	P	Pn	14 46 49.0	+1.1
	baz=269,SNR=6.2						
O30N				S	Sn	14 47 30.7	+2.2
	baz=269						
SCRK	Sand Creek	3.43	353		Pn	14 46 49.4	+1.4
SCRK	Sand Creek	3.43	353	P	Pn	14 46 49.7	+1.7
	baz=173						
L29M	L29M	3.44	40	P	Pn	14 46 50.2	+2.2
	baz=225						
K24K	Donnelly Dome	3.48	340	P	Pn	14 46 51.3	+2.8
	baz=158						
K27K	Chicken	3.49	7		Pn	14 46 50.7	+2.1
K27K	Chicken	3.49	7	P	Pn	14 46 50.4	+1.8
	baz=188						
PLBC	Pleasant Camp	3.54	106	P	Pn	14 46 50.7	+1.3
	baz=291						
SLKM	Skilak Lake	3.54	272		Pn	14 46 49.8	+0.4
M30M	Minto, Yukon	3.60	54		Pn	14 46 52.7	+2.5
M30M	Minto, Yukon	3.60	54	P	Pn	14 46 52.0	+1.9
	baz=239						
N31M	Braeburn, Yuko	3.65	72	Pn	Pn	14 46 53.0	+2.1
N31M				IAML		14 47 56.9	
	comp=N,68nm,1.0s						
N31M	Braeburn, Yuko	3.65	72	P	Pn	14 46 52.7	+1.9
	baz=258,SNR=7.2						
SUA	Susitna One	3.85	287		Pn	14 46 55.1	+1.4
SUA				IAML		14 48 01.6	
	comp=N,66nm,0.7s						
SUA				IAML		14 49 28.0	
	comp=E,58nm,3.5s						
SUA	Susitna One	3.85	287	P	Pn	14 46 55.4	+1.7
	baz=100						
DAWY	Dawson	3.89	24	Pn	Pn	14 46 56.3	+2.2
DAWY				IAML		14 48 02.9	
	comp=N,34nm,0.7s						
DAWY				IAML		14 48 03.3	
	comp=E,39nm,1.0s						
DAWY	Dawson	3.89	24	P	Pn	14 46 56.1	+1.9
	baz=208						
CUT	Chulitna	3.91	301		Pn	14 46 57.1	+2.7
BRSE	Bradley Lake S	3.94	261		Pn	14 46 55.0	+0.2
RND	Reindeer	3.94	318	Pn	Pn	14 46 57.7	+2.8
RND				IAML		14 47 54.9	
	comp=N,46nm,0.7s						
RND				IAML		14 48 01.4	
	comp=E,53nm,0.7s						
BRLK	Bradley Lake	4.00	262		Pn	14 46 56.1	+0.4
BRLK	Bradley Lake	4.00	262	IAML		14 48 02.1	
	comp=N,54nm,2.9s						
SKAG	Skagway	4.03	103		Pn	14 46 56.4	+0.3
SKAG				IAML		14 47 57.9	
	comp=N,38nm,0.8s						
SKAG				IAML		14 48 04.1	
	comp=E,42nm,0.9s						
SKAG	Skagway	4.03	103	P	Pn	14 46 58.3	+2.2
K29M	Barlow Dome	4.17	36	P	Pn	14 47 00.8	+2.7
	baz=221,SNR=87						
MCK	McKinley	4.20	321	Pn	Pn	14 46 59.0	+0.7
MCK	McKinley	4.20	321	P	Pn	14 47 00.8	+2.4
	baz=137,SNR=8.6						
CNPM	China Poot	4.24	259	Pn	Pn	14 47 00.3	+1.4
HDA	Harding Lake	4.24	336		Pn	14 47 01.8	+2.8
HDA				IAML		14 48 15.7	
	comp=E,29nm,1.4s						
HDA	Harding Lake	4.24	336	P	Pn	14 47 01.5	+2.5
	baz=154,SNR=9.3						
EGAK	Eagle	4.30	11		Pn	14 47 02.4	+2.6
EGAK				IAML		14 48 11.0	
	comp=E,39nm,1.2s						
EGAK				IAML		14 48 19.6	
	comp=E,36nm,1.2s						
EGAK	Eagle	4.30	11	P	Pn	14 47 02.0	+2.2
	baz=193,SNR=13						
SKT	Skwentna	4.33	293		Pn	14 47 01.4	+1.2
SKT	Skwentna	4.33	293	IAML		14 48 20.5	
	comp=E,44nm,3.0s						
SKT	Skwentna	4.33	293	P	Pn	14 47 01.8	+1.6
	baz=106						
S31K	Pelican	4.38	124	P	Pn	14 47 02.4	+1.6
	baz=309						
SPU	Mount Spurr	4.44	282		Pn	14 47 01.9	+0.2
TRF	Thorofare Moun	4.46	313		Pn	14 47 04.0	+1.9
TRF	Thorofare Moun	4.46	313	IAML		14 48 22.2	
	comp=N,41nm,0.7s						
TRF	Thorofare Moun	4.46	313	P	Pn	14 47 04.6	+2.5
	baz=127,SNR=14						
M31M	Drury Creek, Y	4.47	65		Pn	14 47 03.8	+1.7
M31M				IAML		14 48 24.9	
	comp=E,26nm,0.8s						
M31M				IAML		14 48 26.0	
	comp=N,28nm,1.1s						
M31M	Drury Creek, Y	4.47	65	P	Pn	14 47 03.9	+1.8
	baz=252,SNR=12						
MAYO	Mayo, Yukon	4.52	45		Pn	14 47 05.6	+2.8
MAYO	Mayo, Yukon	4.52	45	P	Pn	14 47 05.0	+2.2
	baz=231,SNR=18						
WRH	Wood River Hil	4.55	331		Pn	14 47 05.4	+2.2
WRH	Wood River Hil	4.55	331	IAML		14 48 20.7	
	comp=N,24nm,2.0s						
WRH				IAML		14 48 21.0	
	comp=E,27nm,0.9s						
IL31		4.56	339	Pn	Pn	14 47 05.7	+2.4
BESE	Bessie Mountai	4.62	112	Pn	Pn	14 47 03.3	-1.0
CCB	Clear Creek Bu	4.63	334		Pn	14 47 06.3	+2.0
I26K	Coal Creek Min	4.74	359		Pn	14 47 08.5	+2.7
I26K				IAML		14 48 36.0	
	comp=N,28nm,1.0s						
KTH	Kantishna Hill	4.75	312		Pn	14 47 08.5	+2.5
RSO	Redoubt South	4.80	273		Pn	14 47 06.8	0.0
COLA	College	4.84	335	P	Pn	14 47 11.6	+4.5
COLA	College	4.84	335	P	Pn	14 47 08.3	+1.2
	baz=151						
TCOL	CIGO, UAF Yank	4.84	335	P	Pn	14 47 08.0	+0.8
	baz=151						
NEA2	Nenana	4.89	328		Pn	14 47 09.9	+2.0
NEA2	Nenana	4.89	328	P	Pn	14 47 09.1	+1.3
	baz=143,SNR=12						
PPLA	Purkeypile	4.92	302		Pn	14 47 11.1	+2.6
FARO	Faro, Yukon	4.94	66		Pn	14 47 10.8	+2.2
FARO				IAML		14 48 36.0	
	comp=N,20nm,0.8s						
FARO	Faro, Yukon	4.94	66	P	Pn	14 47 10.5	+1.9
	baz=254,SNR=22						
MDM	Murphy Dome	4.99	334		Pn	14 47 10.4	+1.1
MDM	Murphy Dome	4.99	334	IAML		14 48 45.5	
	comp=E,18nm,2.8s						
M20K	Styx River	5.04	289	P	Pn	14 47 13.0	+2.9
	baz=101						
ILSW	Iliamna Southw	5.06	268	Pn	Pn	14 47 09.5	-0.8
PRP	Porcupine Dome	5.08	348	P	Pn	14 47 12.6	+2.0
	baz=166						
I27K	Kandik River	5.08	7	P	Pn	14 47 12.8	+2.3
	baz=188,SNR=11						
P33M	Teslin, Yukon	5.09	90		Pn	14 47 11.3	+0.7
P33M				IAML		14 48 36.4	
	comp=N,26nm,0.9s						
P33M				IAML		14 49 20.1	
	comp=E,17nm,4.0s						
P33M	Teslin, Yukon	5.09	90	P	Pn	14 47 11.0	+0.4
	baz=278						
BPAW	Bear Paw Mtn.	5.11	317	Pn	Pn	14 47 12.5	+1.6
BPAW				IAML		14 48 39.9	
	comp=N,26nm,1.0s						
BPAW				IAML		14 48 44.5	
	comp=E,20nm,2.1s						
BPAW	Bear Paw Mtn.	5.11	317	P	Pn	14 47 12.1	+1.2
	baz=130						
CAST	Castle Rocks	5.12	308	P	Pn	14 47 13.5	+2.4
	baz=120						
I29M	Ogilvie Camp,	5.26	22	P	Pn	14 47 15.3	+2.4
	baz=206						
SIT	Sitka	5.35	128	P	Pn	14 47 15.2	+1.1
I23K	Minto, Yukon-K	5.41	330		Pn	14 47 16.5	+1.5
I23K	Minto, Yukon-K	5.41	330	P	Pn	14 47 16.7	+1.7
	baz=145,SNR=5.3						
CHUM	Lake Minchumin	5.45	311	P	Pn	14 47 17.6	+2.1
	baz=124						
L20K	Farewell, AK	5.52	295	P	Pn	14 47 18.5	+2.0
	baz=106						
M19K	Big River Lodg	5.63	288		Pn	14 47 20.5	+2.4
M19K	Big River Lodg	5.63	288	P	Pn	14 47 20.5	+2.4
	baz=99						
MLY	Manley	5.69	325		Pn	14 47 20.2	+1.4
MLY	Manley	5.69	325	P	Pn	14 47 20.0	+1.2
	baz=139,SNR=7.0						
H24K	Noodor Dome	5.71	340	P	Pn	14 47 22.8	+3.7
	baz=156						
H27K	Steamboat Moun	5.71	6	P	Pn	14 47 21.9	+2.8
	baz=188						
K20K	Telida	5.89	303	Pn	Pn	14 47 25.0	+3.4
K20K	Telida	5.89	303	P	Pn	14 47 24.6	+2.9
	baz=114						
L19K	White Mountain	5.90	291		Pn	14 47 24.8	+3.1
L19K	White Mountain	5.90	291	P	Pn	14 47 24.2	+2.5
	baz=101						
H23K	Yukon River	6.02	334		Pn	14 47 26.9	+3.5
H23K	Yukon River	6.02	334	P	Pn	14 47 25.9	+2.5
	baz=148						
FYU	Fort Yukon	6.08	352	Pn	Pn	14 47 28.0	+3.8
SVW2	Sparrevohn	6.15	280	Pn	Pn	14 47 25.4	+0.3
SVW2	Sparrevohn	6.15	280	P	Pn	14 47 26.9	+1.7
I21K	Tanana	6.16	322	P	Pn	14 47 27.2	+2.0
	baz=135,SNR=5.3						
G27K	Doyon Strip	6.28	5	P	Pn	14 47 29.2	+2.3
	baz=186						
G25K	Bearman Lake	6.35	349	P	Pn	14 47 30.2	+2.4
	baz=166						
G26K	Porcupine Rive	6.40	357	P	Pn	14 47 31.0	+2.5
	baz=177						
G24K	Hadweenzic Riv	6.45	344	P	Pn	14 47 31.6	+2.3
	baz=160						
H21K	Melozitna Rive	6.74	323		Pn	14 47 36.1	+2.9
H21K	Melozitna Rive	6.74	323	P	Pn	14 47 35.9	+2.6
	baz=135						
G23K	Bananza Creek	6.88	336	P	Pn	14 47 37.4	+2.1
	baz=150						
DLBC	Dease Lake	6.97	102	Pn	Pn	14 47 35.1	-1.3
G30M	tAoh Zraii Nji	7.09	22	P	Pn	14 47 39.4	+1.3
	baz=208						
F25K	Christian Rive	7.13	352	P	Pn	14 47 41.6	+3.0
	baz=170						
F26K	Sheenjek River	7.16	357	P	Pn	14 47 42.2	+3.2
	baz=176						
F24K	Squaw Lake	7.28	345	P	Pn	14 47 43.7	+3.0
	baz=161,SNR=11						
COLD	Coldfoot	7.37	338	P	Pn	14 47 45.1	+3.2
	baz=152						
E25K	Arctic Village	7.64	353	P	Pn	14 47 48.8	+3.1
	baz=171						
E27K	Coleen River	7.66	4	P	Pn	14 47 48.9	+3.1
	baz=186						
E24K	Your Creek	7.88	345	P	Pn	14 47 51.7	+2.8
	baz=160						
F21K	Alatna River	8.08	330	P	Pn	14 47 54.6	+2.9
	baz=141						
INK	Inuvik	8.76	24	PKPbc	Pn	14 48 01.6	+0.7
	comp=E,9.6nm,0.7s,baz=75,slow=2.3,SNR=38						
INK	Inuvik	8.76	24	Pn	Pn	14 48 01.3	+0.4
INK	Inuvik	8.76	24	P	Pn	14 48 01.4	+0.5
	baz=212,SNR=11						
D25K	Kavik River	8.88	352	P	Pn	14 48 06.5	+3.9
	baz=170						
C27K	Jago River	9.09	359	P	Pn	14 48 09.6	+4.3
	baz=178						
KOTAN	Kotaneelee Air	9.42	84	P	Pn	14 48 12.5	+2.5
	baz=281						

IDC ***17*** *14:46:16.8±1.1, 22°.12N×143°.26E, h0^{km}, mb3.4/7, mbtmp3.4/7, Error ellipse: s-maj=40.2km s-min=23.4km az=86.0*

ISC 17 14:46:22.1±1.1**, 22°.1N**±0°.2×**143°.2E**±0°.2**, h35^{km}, n10, σ0ˢ.69**/7**, mb3.4**/6**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	20.23	323	P	P	14 50 55.0	+0.9
	0.4nm,0.5s,baz=130,slow=13,SNR=1.9 0.4nm,0.5s						
H11S3	WAKE ISLAND Hy	22.29	95	T	T	15 14 49.1	
	baz=284,slow=75,SNR=7.9						
H11S1	WAKE ISLAND Hy	22.30	95	T	T	15 14 38.8	
	baz=284,slow=75,SNR=8.7						
H11S2	WAKE ISLAND Hy	22.31	95	T	T	15 14 38.3	
	baz=284,slow=75,SNR=7.2						
WRA	Warramunga Arr	42.66	192	P	P	14 54 15.9	+0.3
	0.3nm,0.5s,baz=12,slow=8.1,SNR=6.1 0.3nm,0.5s						
ASAR	Alice Springs	46.37	192	P	P	14 54 45.1	-0.1
	0.3nm,0.7s,baz=19,slow=8.8,SNR=4.7 0.3nm,0.7s						
ZALV	Zalesovo Beam	53.93	321	P	P	14 55 41.3	-0.8
	0.4nm,0.3s,baz=106,slow=11,SNR=1.8 0.4nm,0.3s						
MKAR	Makanchi Array	54.46	312	P	P	14 55 45.7	-0.5
	0.1nm,0.5s,baz=95,slow=7.9,SNR=2.0 0.1nm,0.5s						
YKA	Yellowknife Ar	76.10	28	P	P	14 58 06.3	+0.3
	0.2nm,0.5s,baz=289,slow=5.7,SNR=2.7 0.2nm,0.5s						
NVAR	Mina Array Bea	82.88	52	P	P	14 58 43.5	-0.2
	0.4nm,0.7s,baz=272,slow=6.5,SNR=4.0 0.4nm,0.7s						

BJI ***17*** *14:52:54.4±0.0, 6°.80S×129°.82E, h199^{km}, mb4.4/42, mB4.6/19*

MOS ***17*** *14:52:55.5±1.1, 6°.78S×129°.59E, h193^{km}, mb4.6/18, Error ellipse: s-maj=18.2km s-min=6.7km az=119.0*

NEIC ***17*** *14:52:55.7±2.4, 6°.52S±0°.07×129°.76E±0°.08, h181^{km}±6^{km}, mb5.1/27, Error ellipse: s-maj=11.2km s-min=10.0km az=73.0*

DJA ***17*** *14:52:56.4±0.1, 7°S±2°×13°0E±°, h193^{km}±2^{km}, M4.8/57, mB5.3/37, mb5.0/57, MLv5.3/15, Mw(mB)4.7/37, MwMwp4.7/2, Mwp5.0/2*

IDC ***17*** *14:52:57.8±1.6, 6°.66S×129°.74E, h198^{km}±14^{km}, mb4.2/14, mbtmp4.7/16, MS3.3/6, Error ellipse: s-maj=16.1km s-min=9.0km az=68.0*

ISC 17 14:52:56.4±0.4**, 6°.70S**±0°.03×**129°.74E**±0°.04**, h190^{km}**±3^{km}**, h191^{km}:pP-P, n318, σ1ˢ.68**/353**, mb4.8**/63**, 8C-8D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.01	130		Pn	14 53 34.7	+0.4
SAUI	Saumlaki	2.01	130	P	Pn	14 53 35.9	+1.6
SAUI	Saumlaki	2.01	130	P	Pn	14 53 35.5	+1.2
SAUI				S	Sn	14 54 02.3	-1.5
BNDI	Bandanaira	2.17	4	P	Pn	14 53 36.7	+0.7
BNDI	Bandanaira	2.17	4	P	Pn	14 53 36.6	+0.6
BNDI				S	Sn	14 54 07.3	+0.4
AAI	Ambon	3.36	333	P	Pn	14 53 51.3	+1.4
AAI	Ambon	3.36	333	P	Pn	14 53 51.0	+1.1
MSAI	Masohi	3.42	346	P	Pn	14 53 51.7	+1.0
NLAI	Namlea	4.32	322	P	Pn	14 54 03.6	+1.6
FAKI	Fak Fak	4.51	34	Pn	Pn	14 54 02.0	-2.3
FAKI	Fak Fak	4.51	34	P	Pn	14 54 03.2	-1.2
FAKI	Fak Fak	4.51	34	P	Pn	14 54 02.0	-2.3
SANI	Sanana	5.94	321	P	Pn	14 54 25.0	+2.2
SANI	Sanana	5.94	321	P	Pn	14 54 23.7	+0.9
	186nm,1.0s,2µm0.7nm						
SOEI	Soe	6.21	240	Pn	Pn	14 54 27.0	+0.6
SOEI	Soe	6.21	240	P	Pn	14 54 28.2	+1.8
SOEI	Soe	6.21	240	P	Pn	14 54 27.0	+0.6
	4µm,0.8s,29µm11nm						
MTN	Manton Dam	6.26	167	P	Pn	14 54 26.9	-0.1
	baz=6.2,SNR=1000						
MTN				S	Sn	14 55 35.2	-3.5
	baz=6.2						
MTN	Manton Dam	6.26	167	Pn	Pn	14 54 26.9	-0.1
MTN	Manton Dam	6.26	167	P	Pn	14 54 27.9	+0.9
LBMI	Labuha	6.42	340	P	Pn	14 54 29.1	+0.1
	210nm,1.5s,3µm0.8nm						
KDU	Kakadu	6.54	156	P	Pn	14 54 30.3	-0.2
	baz=6.5,SNR=1000						
KDU				S	Sn	14 55 40.8	-4.2
	baz=6.5						
KDU	Kakadu	6.54	156	P	Pn	14 54 30.8	+0.3
RKPI	Ransiki, Papua	6.79	41	P	Pn	14 54 33.5	-0.4
	6µm,1.0s,52µm2µm20nm						
MMRI	Maumere	7.68	255	Pn	Pn	14 54 46.3	+0.8
MMRI	Maumere	7.68	255	P	Pn	14 54 47.6	+2.1
MMRI	Maumere	7.68	255	P	Pn	14 54 46.8	+1.3
	402nm,0.8s,4µm1.4nm						
SRPI	Serui, Papua	8.06	54	P	Pn	14 54 49.1	-1.5
	277nm,1.0s,4µm						
LUWI	Luwuk	8.93	309	P	Pn	14 55 04.4	+2.5
LUWI	Luwuk	8.93	309	P	Pn	14 55 02.8	+0.9
	109nm,1.1s,8µm						
KNRA	Kununurra	8.98	186	P	Pn	14 55 01.8	-0.6
	baz=9.0,SNR=273						
KNRA	Kununurra	8.98	186	Pn	Pn	14 55 01.9	-0.6

KNRA	Kununurra	8.98	186	P	Pn	14 55 02.3	-0.2
BSSI	Bau Bau, Buton	9.20	273	P	Pn	14 55 07.2	+1.7
	103nm,0.8s,2µm						
BKSI	Bulukumba	9.66	278	P	Pn	14 55 12.7	+1.3
	52nm,0.8s,656nm						
BASI	Baing, Sumba	9.71	248	P	Pn	14 55 11.6	-0.5
	576nm,0.6s,7µm						
GTOI	Gorontalo	9.90	317	P	Pn	14 55 18.4	+3.8
	25nm,0.9s,246nm						
KAPI	Kappang	10.07	279	P	Pn	14 55 18.3	+1.5
	9.2nm,0.5s,baz=53,slow=4.2,SNR=11						
KAPI				S	S	14 57 10.0	+0.2
	5.7nm,0.3s,baz=178,slow=22,SNR=1.4						
KAPI	Kappang	10.07	279	P	Pn	14 55 19.8	+3.0
	44nm,0.8s						
KAPI	Kappang	10.07	279	⇓eP	Pn	14 55 08.6	-8.2
SMPI	Sarmi	10.09	63	P	Pn	14 55 15.0	-2.1
	151nm,1.2s,2µm						
SPSI	Sidrap Palu	10.29	285	P	Pn	14 55 20.8	+1.2
	98nm,0.7s,815nm						
MRSI	Marisa	10.55	312	P	Pn	14 55 24.6	+1.6
	126nm,1.0s,1µm						
GENI	Genyem	11.17	69	P	Pn	14 55 32.9	+1.9
GENI	Genyem	11.17	69	P	Pn	14 55 31.4	+0.4
FITZ	Fitzroy Crossi	12.02	199	Pn	Pn	14 55 41.0	-0.8
PLAI	Plampang	12.04	259	P	Pn	14 55 40.4	-1.7
PLAI	Plampang	12.04	259	P	Pn	14 55 39.8	-2.3
	410nm,0.8s,4µm						
MPSI	Mapaga	12.05	305	P	Pn	14 55 42.8	+0.5
	20nm,1.0s						
TWSI	Taliwang, Sumb	12.90	260	P	Pn	14 55 49.7	-3.3
	96nm,0.6s,2µm						
WRAB	Tennant Creek	13.90	162	Pn	Pn	14 56 03.3	-2.3
WRAB	Tennant Creek	13.90	162	P	Pn	14 56 04.3	-1.3
WRAB	Tennant Creek	13.90	162	d iP	Pn	14 56 03.0	-2.6
WRAB				pmax	pmax		
	comp=Z,301nm,1.3s						
WRA	Warramunga Arr	13.91	162	P	Pn	14 56 03.8	-1.8
	comp=Z,23nm,0.5s,baz=345,slow=12,SNR=106						
WRA				S	Sn	14 58 33.6	-7.2
	comp=Z,39nm,0.7s,baz=328,slow=24,SNR=9.6						
WRA				LR	LR	15 02 33.0	
	comp=Z,192nm,19.4s,baz=321,slow=41						
WRA	Warramunga Arr	13.91	162	i P	Pn	14 56 03.0	-2.6
WRA				pmax	pmax		
	comp=Z,23nm,0.5s						
SRBI	Singaraja	14.47	264	P	Pn	14 56 11.4	-1.2
	comp=Z,69nm,1.0s						
IGBI	Denpasar	14.61	261	P	Pn	14 56 14.0	-0.4
	comp=Z,112nm,0.5s						
COEN	Coen	15.06	120	P	Pn	14 56 19.5	-0.4
	baz=15,SNR=84						
COEN	Coen	15.06	120		Pn	14 56 19.8	0.0
COEN	Coen	15.06	120	P	P	14 56 20.3	-0.3
BBKI	Banjar Baru	15.18	281	P	P	14 56 24.0	+2.0
	comp=Z,392nm,0.9s,comp=Z,3µm						
ABJI	Asem Bagus	15.42	265	P	Pn	14 56 23.8	-0.4
	comp=Z,103nm,0.8s						
JAGI	Jajag, Banyuwa	15.55	263	Pn	Pn	14 56 22.6	-3.3
JAGI	Jajag, Banyuwa	15.55	263	P	P	14 56 26.7	+0.6
JAGI	Jajag, Banyuwa	15.55	263	P	Pn	14 56 22.2	-3.7
	comp=Z,69nm,0.6s,comp=Z,2µm						
BLJI	Banyuglugur	16.05	265	P	P	14 56 31.3	-0.3
	comp=Z,572nm,0.7s,comp=Z,4µm						
GMJI	Gumukmas	16.23	263	P	P	14 56 32.1	-1.5
	comp=Z,66nm,1.0s						
QIS	Mount Isa	16.78	146	P	Pn	14 56 40.8	+0.2
	baz=17,SNR=288						
QIS	Mount Isa	16.78	146	P	Pn	14 56 40.8	+0.2
BWJI	Bawean	17.00	272	P	Pn	14 56 43.8	+0.5
	comp=Z,474nm,0.9s,comp=Z,5µm						
GRJI	Gresik	17.14	268	P	Pn	14 56 44.3	-0.6
	comp=Z,212nm,0.8s,comp=Z,2µm						
MBWA	Marble Bar	17.34	213	P	Pn	14 56 46.6	-0.6
MBWA	Marble Bar	17.34	213	P	Pn	14 56 47.0	-0.2
ASAR	Alice Springs	17.34	167	P	Pn	14 56 47.4	+0.1
	comp=Z,140nm,0.5s,baz=344,slow=9.9,SNR=1081						
ASAR				S	S	14 59 55.4	-1.1
	comp=Z,35nm,0.8s,baz=349,slow=21,SNR=13						
ASAR				LR	LR	15 04 17.5	
	comp=Z,117nm,20.7s,baz=350,slow=39						
ASAR				ScP	ScP	15 04 34.4	-0.8
	comp=Z,8.2nm,0.7s,baz=349,slow=3.2,SNR=5.3						
AS01	Alice Springs	17.35	167	P	Pn	14 56 47.7	+0.3
PMG	Port Moresby	17.46	100	P	Pn	14 56 48.5	-0.2
	comp=Z,115nm,1.0s,baz=278,slow=6.9,SNR=29						
PMG				LR	LR	15 04 07.3	
	comp=Z,134nm,21.0s,baz=282,slow=38						
PMG	Port Moresby	17.46	100		P	14 56 46.9	-0.3
PMG	Port Moresby	17.46	100	P	Pn	14 56 50.8	+2.0
PMG	Port Moresby	17.46	100	d iP	Pn	14 56 50.7	+2.0
PMG				pmax	pmax		
	comp=Z,130nm,1.0s						
PSA00	Pilbara Seismi	17.61	212	P	Pn	14 56 50.1	-0.4
PSA00	Pilbara Seismi	17.61	212	P	P	14 56 49.3	+0.6
PSA00	Pilbara Seismi	17.61	212	P	Pn	14 56 50.3	-0.2
TBJI	Tambak Boyo	17.77	269	P	Pn	14 56 52.5	+0.2
	comp=Z,229nm,1.2s						
PWJI	Pagerwojo	17.83	265	P	P	14 56 49.2	-2.0
	comp=Z,96nm,0.6s						
NGJI	Ngawi	18.15	267	P	Pn	14 56 55.7	-1.1
MTSU	Mount Surprise	18.20	130	P	P	14 56 55.9	+0.7
	baz=18,SNR=169						
MTSU	Mount Surprise	18.20	130	P	Pn	14 56 56.8	-0.7
WRKA	Warakurna	18.29	184	P	Pn	14 56 57.8	-0.7
	baz=18,SNR=198						
WRKA	Warakurna	18.29	184	P	Pn	14 56 57.9	-0.5
PBKI	Pangkalan Bun	18.43	282	P	Pn	14 56 59.8	-0.4
	comp=Z,291nm,0.8s,comp=Z,7µm						
UWJI	Ujung Watu	18.67	270	P	Pn	14 57 02.0	-0.9
	comp=Z,105nm,0.8s						
SBUM	Sibu	19.70	297	P	P	14 57 09.1	-2.4
KPJI	Karang Pucung	20.66	267	P	P	14 57 20.7	-1.0
	comp=Z,80nm,0.9s						
TV1H	Townsville Har	20.77	129	P	P	14 57 24.4	+1.7
CTA	Charters Tower	20.84	131	P	P	14 57 24.7	+1.2
	comp=Z,57nm,0.6s,baz=300,slow=11,SNR=70						
	comp=Z,57nm,0.6s						
CTA	Charters Tower	20.84	131	P	P	14 57 25.2	+1.7
CTAO	Charters Tower	20.84	131	P	P	14 57 24.5	+1.0
CTAO	Charters Tower	20.84	131	P	P	14 57 25.2	+1.7
CTAO	Charters Tower	20.84	131	P	P	14 57 24.5	+1.0
KSM	Kuching	21.02	292	P	P	14 57 24.4	-1.1
KSM	Kuching	21.02	292	P	P	14 57 26.3	+0.8
	comp=Z,33nm,0.9s						
CMJI	Cimerak	21.14	266	P	P	14 57 25.0	-1.8
	comp=Z,144nm,0.8s						
OOD	Oodnadatta	21.73	166	P	P	14 57 33.2	+0.4
GIRL	Giralia	21.79	222	P	P	14 57 34.8	+1.4
	baz=22,SNR=13						
GIRL	Giralia	21.79	222	P	P	14 57 33.7	+0.4
BBJI	Bungbulang	21.93	267	P	P	14 57 34.6	-0.4
CNJI	Cibinong	22.45	267	P	P	14 57 36.7	-3.1
	comp=Z,216nm,1.0s,comp=Z,1µm						
MEEK	Meekatharra	22.48	207	P	P	14 57 41.0	+1.0
	baz=23,SNR=16						
MEEK	Meekatharra	22.48	207	P	P	14 57 41.1	+1.0
CBJI	Citeko	22.74	269	P	P	14 57 40.4	-2.0
	comp=Z,207nm,1.0s						
INKA	Innaminka	23.39	155	P	P	14 57 49.7	+1.5
MULG	Mulgathing	23.81	171	P	P	14 57 53.1	+1.1
CGJI	Cibinong	23.88	269	P	P	14 57 50.3	-2.5
	comp=Z,103nm,1.1s						
PPBI	Pangkal Pinang	23.95	280	P	P	14 57 54.2	+0.7
	comp=Z,60nm,1.3s,comp=Z,5µm						
FORT	Forrest	24.01	184	P	P	14 57 54.9	+1.1
	baz=24,SNR=44						
FORT	Forrest	24.01	184	P	P	14 57 55.0	+1.2
FORT	Forrest	24.01	184	P	P	14 57 55.0	+1.2
QLP	Quilpie	24.12	147	P	P	14 57 56.0	+1.2
	baz=24,SNR=42						
QLP	Quilpie	24.12	147	P	P	14 57 56.0	+1.2
LCRK	Leigh Creek	24.93	162	P	P	14 58 03.4	+1.2
MDSI	Maura Dua	25.53	274	P	P	14 58 07.4	-0.3
	comp=Z,26nm,1.1s						
KMBL	Kambalda	25.62	196	P	P	14 58 10.0	+1.6
	baz=26,SNR=12						
MORW	Morawa	25.74	209	P	P	14 58 12.6	+3.1
	baz=26,SNR=4.0						
MORW	Morawa	25.74	209	P	P	14 58 10.1	+0.7
MORW				IAmb	IAmb	14 58 46.1	
	comp=Z,133nm,1.9s						
TPRI	Tanjung Pinang	26.27	286	P	P	14 58 15.3	+0.9
	comp=Z,54nm,0.9s						
BBOO	Buckleboo	26.64	168	P	P	14 58 18.0	+0.5
	baz=27,SNR=47						
BBOO	Buckleboo	26.64	168	P	P	14 58 17.4	-0.1
BBOO				IAmb	IAmb	14 58 18.9	
	comp=Z,48nm,0.7s						
BBOO	Buckleboo	26.64	168	P	P	14 58 18.4	+0.9
GD1S	Gladstone Soft	26.73	132	P	P	14 58 19.8	+1.4
	comp=Z,59nm,0.8s						
RMQ	Roma	26.75	140	P	P	14 58 19.9	+1.3
	baz=27,SNR=10						
RMQ	Roma	26.75	140	P	P	14 58 20.0	+1.4
BLDU	Ballidu	26.75	206	P	P	14 58 19.8	+1.3
	baz=27,SNR=9.0						
BTDF	Bukit Timah Da	27.12	286	P	P	14 58 25.1	+3.1
KLBR	Kellerberrin	27.18	203	P	P	14 58 23.6	+1.2
	baz=27,SNR=20						
WHYH	Whyalla	27.20	165	P	P	14 58 23.4	+1.0
STKA	Stephens Creek	27.39	158	P	P	14 58 25.1	+0.9
	comp=Z,33nm,0.7s,baz=336,slow=8.6,SNR=63						
STKA				ScP	ScP	15 04 59.5	-1.4
	comp=Z,9.6nm,0.8s,baz=300,slow=4.3,SNR=4.5						
	comp=Z,33nm,0.7s						
STKA	Stephens Creek	27.39	158	P	P	14 58 24.9	+0.6
	baz=28,SNR=62						
STKA	Stephens Creek	27.39	158	P	P	14 58 24.8	+0.6
STKA	Stephens Creek	27.39	158	d iP	P	14 58 24.9	+0.6
EIDS	Eidsvold	27.59	135	P	P	14 58 24.9	-1.1
EIDS				IAmb	IAmb	14 59 21.6	
	comp=Z,77nm,2.0s						
HTT	Hallett	27.93	163	P	P	14 58 30.1	+1.1
	baz=28,SNR=21						
HTT	Hallett	27.93	163	P	P	14 58 30.2	+1.1
AULRC	Lightning Ridg	28.41	145	P	P	14 58 33.9	+0.6
NWAO	Narrogin (SRO)	28.57	202	P	P	14 58 35.7	+1.0
	comp=Z,5.9nm,0.5s,baz=44,slow=7.5,SNR=12						
	comp=Z,5.9nm,0.5s						
NWAO	Narrogin (SRO)	28.57	202	P	P	14 58 36.1	+1.4
	baz=29,SNR=9.2						
NWAO				P	P	14 58 36.1	+1.4
	baz=29,SNR=9.2						
NWAO	Narrogin (SRO)	28.57	202	P	P	14 58 35.7	+1.0
NWAO				IAmb	IAmb	14 59 04.0	
	comp=Z,76nm,1.6s						
NWAO	Narrogin (SRO)	28.57	202	P	P	14 58 35.7	+1.0
NWAO				pmax	pmax		
	comp=Z,77nm,1.6s						
SDSI	Sungai Dareh	28.81	280	P	P	14 58 37.1	+0.1
	comp=Z,29nm,1.0s						
CMSA	Cobar Meteorol	28.87	151	P	P	14 58 38.4	+1.1
	baz=29,SNR=51						
CMSA	Cobar Meteorol	28.87	151	P	P	14 58 38.8	+1.5
BKNI	Bangkinang	29.47	283	P	P	14 58 44.1	+1.2
	comp=Z,79nm,0.5s,comp=Z,3µm						
HNR	Honiara	30.03	97	P	P	14 58 45.1	-2.7
HNR	Honiara	30.03	97	P	P	14 58 48.0	+0.2
HNR	Honiara	30.03	97	P	P	14 58 45.1	-2.7
HNR				pmax	pmax		
	comp=Z,115nm,0.9s						
HNR	Honiara	30.03	97	P	P	14 58 47.8	0.0
IPM	Ipoh	30.73	290	P	P	14 58 55.6	+1.6
AUDCS	Dubbo College	30.91	148	P	P	14 58 56.8	+1.5
ARMA	Armidale	31.30	142	P	P	14 59 00.9	+2.0
	baz=31,SNR=9.9						
AUPHS	Peel High Scho	31.34	143	P	P	14 59 00.7	+1.6
ARPS	Mount Arapiles	31.91	161	P	P	14 59 05.8	+1.8
	baz=32,SNR=113						
ARPS	Mount Arapiles	31.91	161	P	P	14 59 05.8	+1.8
PSI	Prapat	32.17	286	P	P	14 59 08.2	+1.5
YNG	Young	32.43	150	P	P	14 59 10.7	+2.1
MGCD	Mangrove Creek	33.01	146	P	P	14 59 16.2	+2.5
	baz=33,SNR=6.0						
GSI	Gunungsitoli	33.07	283	P	P	14 59 16.0	+1.6
GSI	Gunungsitoli	33.07	283	P	P	14 59 12.4	-2.0
	comp=Z,35nm,1.1s,comp=Z,925nm						
BRAT	Ballarat	33.32	159	P	P	14 59 18.5	+2.3
CAN	Canberra	33.55	151	P	P	14 59 20.0	+1.7
CAN	Canberra	33.55	151	P	P	14 59 20.6	+2.3
CAN	Canberra	33.55	151	P	P	14 59 20.0	+1.7
CAN				pmax	pmax		
	comp=Z,81nm,0.8s						
CAN	Canberra	33.55	151	P	P	14 59 20.4	+2.1
TOO	Toolangi	33.91	157	P	P	14 59 24.0	+2.6
	baz=34,SNR=16						
TOO	Toolangi	33.91	157	P	P	14 59 23.4	+2.0
TOO				IAmb	IAmb	14 59 25.1	
	comp=Z,53nm,1.2s						
TOO	Toolangi	33.91	157	P	P	14 59 24.2	+2.8
TOO	Toolangi	33.91	157	P	P	14 59 23.4	+2.0
TOO				pmax	pmax		
	comp=Z,53nm,1.2s						
GEXS	Deakin Univers	34.03	159	P	P	14 59 25.9	+3.6
MLSI	Meulaboh, Aceh	35.01	287	P	P	14 59 30.5	-0.6
	comp=Z,69nm,0.9s						
MILA	Mila	35.02	152	P	P	14 59 33.4	+2.4
	baz=35,SNR=4.9						
KOUNC	Koumac, New Ca	36.19	116	P	P	14 59 41.7	+0.6
KOUNC				IAmb	IAmb	14 59 43.3	
	comp=Z,28nm,1.0s						
NOUC	Port Laguerre	38.45	117	P	P	15 00 00.8	+0.7
DZM	Mont Dzumac	38.56	117	P	P	15 00 01.5	+0.3
DZM				IAmb	IAmb	15 00 03.2	
	comp=Z,31nm,0.8s						
DZM	Mont Dzumac	38.56	117	P	P	15 00 01.7	+0.5
ONTNC	Ouen Toro	38.65	118	P	P	15 00 01.9	+0.2
ONTNC				IAmb	IAmb	15 00 04.9	
	comp=Z,38nm,0.7s						
MOO	Moorlands	38.81	159	P	P	15 00 05.3	+2.6
	baz=39,SNR=6.5						
OUENC	Ouen Island, N	39.02	118	P	P	15 00 04.0	-0.8
CMAR	Chiang Mai Arr	39.34	310	P	P	15 00 07.7	+0.3
	comp=Z,9.5nm,1.1s,baz=140,slow=7.5,SNR=29						
CMAR				ScP	ScP	15 05 42.7	-0.1
	comp=Z,2.2nm,1.0s,baz=161,slow=3.1,SNR=11						
CMAR				LR	LR	15 18 44.4	
	comp=Z,23nm,18.1s,baz=145,slow=39						
	comp=Z,9.5nm,1.1s						
CMAR	Chiang Mai Arr	39.34	310	i P	P	15 00 07.5	+0.1
CMAR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GYA	Guiyang	39.84	327	⇑P	P	15 00 12.0	+0.4
GYA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NJ2	Nanjing	39.90	346	eP	P	15 00 10.6	-1.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
JMN	Monobe	40.39	5	P	P	15 00 11.2	-4.8
JMN				IAmb	IAmb	15 00 31.5	
	comp=Z,49nm,1.4s						
PZH	PanZhiHua	42.73	322	P	P	15 00 34.5	-0.7
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,110nm,3.5s						
MJAR	Matsushiro Arr	43.74	10	P	P	15 00 42.1	-0.9
	comp=Z,2.0nm,0.9s,baz=186,slow=10,SNR=2.9						
	comp=Z,2.0nm,0.9s						
TNCH	TengChong	43.79	317	eP	P	15 00 43.6	-0.1
TNCH				pmax	pmax		
	comp=Z,100nm,5.2s						
KSRS	Korea Array	43.95	358	P	P	15 00 45.1	+0.6
	comp=Z,0.6nm,0.5s,baz=175,slow=9.6,SNR=4.7						
KSRS				LR	LR	15 18 07.5	
	comp=Z,21nm,21.7s,baz=160,slow=34						
XAN	Xi'an	45.05	335	P	P	15 00 52.5	-0.9
XAN				pP	pP	15 01 33.8	+0.3
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MSVF	Nonsavu	48.35	108	P	P	15 01 18.5	-0.9
MSVF	Nonsavu	48.35	108	⇑eP	P	15 01 20.5	+1.2
MSVF				pmax	pmax		
	comp=Z,92nm,2.8s						
MSVF	Nonsavu	48.35	108	P	P	15 01 21.1	+1.7
LZH	Lanzhou	49.01	332	eP	P	15 01 24.5	+0.3
LZH				pP	pwP	15 02 12.0	+1.2
LZH				sP	sP	15 02 29.6	+4.0
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC	Hu-ho-hao-te	50.17	342	eP	P	15 01 33.3	+0.5
HHC				pmax	pmax		
	comp=Z,230nm,6.5s						
FOZ	Fox Glacier	50.78	143	P	P	15 01 37.8	+0.6
FOZ				IAmb	IAmb	15 03 22.8	
	comp=Z,132nm,1.7s						
PALK	Pallekele	50.84	285	LR	LR	15 25 01.0	
	comp=Z,33nm,18.7s,baz=236,slow=38						
MDJ	Mudanjiang	51.08	360	P	P	15 01 38.8	-0.5
MDJ				pP	pwP	15 02 25.5	-0.8
MDJ				sP	sP	15 02 45.8	+4.9
MDJ				ScP	ScP	15 06 23.9	-6.8
MDJ				PcS	PcS	15 06 44.6	-5.5
MDJ				S	S	15 08 49.0	+7.0
MDJ				ScS	ScS	15 11 06.8	-3.2
MDJ				pmax	pmax		
	comp=Z,4.0nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,240nm,8.2s						
WHZ	Wether Hill Ro	51.10	146	P	P	15 01 40.1	+0.5
WHZ				IAmb	IAmb	15 01 41.1	
	comp=Z,25nm,0.7s						
TUWZ	Tuamarina	52.28	138	P	P	15 01 48.0	-0.4
NNVZ	North Ngauruho	52.37	135	P	P	15 01 52.1	+2.9
OTVZ	Oturere	52.41	135	P	P	15 01 52.7	+3.0
ETVZ	East Tongariro	52.44	135	P	P	15 01 52.3	+2.6
BHHZ	Black Hill Sta	52.83	135	P	P	15 01 53.5	+0.9
ODAN	Odare	52.86	311	eP	P	15 01 52.1	-1.0
TAPN	Taplejung	52.89	312	eP	P	15 01 53.0	-0.4
	comp=Z,14nm,0.4s						
BKZ	Black Stump Fm	53.00	135	P	P	15 01 54.5	+0.8
URZ	Urewera	53.06	134	P	P	15 01 54.8	+0.7
MTHZ	Maungataniwha	53.11	134	P	P	15 01 55.6	+1.0
RTZ	Ruatahuna	53.11	134	P	P	15 01 55.8	+1.2
NMHZ	Naumai	53.19	135	P	P	15 01 56.8	+1.6
MCHZ	McNeill Hill	53.26	135	P	P	15 01 57.1	+1.5
ARHZ	Aropaoanui	53.39	135	P	P	15 01 58.0	+1.5
SNGZ	Shannon Statio	53.44	134	P	P	15 01 58.0	+1.1
RAMN	Ramite	53.50	311	eP	P	15 01 57.6	-0.2
	comp=Z,34nm,0.6s						
GTA	Gaotai	53.58	331	eP	P	15 01 58.4	+0.4
GTA				pP	pP	15 02 39.3	-0.2
GTA				sP	PcP	15 03 04.6	+2.5
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
JIRN	Jiri	54.19	311	eP	P	15 02 02.6	-0.4
GUN	Gumba	54.56	311	eP	P	15 02 05.2	-0.4
	comp=Z,25nm,0.6s						
PKI	Pulchoki	54.73	311	eP	P	15 02 06.1	-0.7
PKIN	Phulchoki	54.74	311	eP	P	15 02 06.2	-0.6
GKN	Gorkha	55.54	311	eP	P	15 02 12.0	-0.4
	comp=Z,15nm,0.3s						
HYB	Hyderabad	55.95	296	eP	P	15 02 14.3	-1.0
HYB				epP	pP	15 02 56.2	-0.8
HYB				ePcP	PcP	15 03 10.4	-1.2
DANN	Dangsing	56.38	310	eP	P	15 02 18.1	-0.4
HEH	HeiHe	56.75	358	eP	P	15 02 19.8	-0.5
ULN	Ulaanbaatar	57.90	342	⇓iP	P	15 02 28.8	+0.2
ULN				pmax	pmax		
	comp=Z,22nm,4.1s						
ULN	Ulaanbaatar	57.90	342	P	P	15 02 29.6	+1.0
ULN				pP	pP	15 03 11.1	+0.5
SONM	Songino Array	58.07	342	P	P	15 02 30.5	+0.8
	comp=Z,1.0nm,0.6s,baz=158,slow=7.7,SNR=8.0						
	comp=Z,1.0nm,0.6s						
ZEA	Zeya	60.24	358	eP	P	15 02 45.8	+1.4
DRV	Dumont d'Urvil	60.29	175	P	P	15 02 45.5	+1.0
DRV				pP	PcP	15 03 27.9	+0.2
WMQ	Urumqi	63.00	327	eP	P	15 03 04.0	+0.9
WMQ				pmax	pmax		
	comp=Z,20nm,1.1s						
MOY	Mondy	63.14	340	eP	P	15 03 07.2	+3.3
PETK	Petropavlovsk-	64.12	18	P	P	15 03 10.9	+0.8
	comp=Z,5.1nm,0.9s,baz=116,slow=3.4,SNR=2.6						
	comp=Z,5.1nm,0.9s						
ZSN	Zaisan	66.88	329	eP	P	15 03 29.3	+1.3
	baz=329						
ZSN	Zaisan	66.88	329	eP	P	15 03 29.3	+1.3
DGZ	Jazzator, Alta	67.11	332	ceP	P	15 03 30.4	+0.8
DGZ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SHLS	Shalkode	67.32	322	eP	P	15 03 30.2	-0.9
	baz=323						
SHLS	Shalkode	67.32	322	eP	P	15 03 30.1	-0.9
KSH	Kashi	67.62	318	P	P	15 03 33.4	+0.4
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MK31	Makanchi Array	67.83	327	c iP	P	15 03 34.5	+0.5
MKAR	Makanchi Array	67.83	327	P	P	15 03 34.6	+0.6
	comp=Z,14nm,0.5s,baz=115,slow=8.5,SNR=255						
	comp=Z,14nm,0.5s						
MKAR	Makanchi Array	67.83	327	i P	P	15 03 34.5	+0.5
MKAR				pmax	pmax		
	comp=Z,15nm,0.5s						
SATY	Saty	67.91	322	eP	P	15 03 35.4	+0.7
	baz=322						
SATY	Saty	67.91	322	eP	P	15 03 35.4	+0.7
ZHN	Zhinishke	67.95	322	eP	P	15 03 35.5	+0.5
	baz=322						
ZHN	Zhinishke	67.95	322	eP	P	15 03 35.4	+0.5
KPKS	Kokpek	67.96	322	eP	P	15 03 35.9	+0.9
	baz=322						
KPKS	Kokpek	67.96	322	eP	P	15 03 35.8	+0.9
MAKZ	Makanchi	68.01	327	P	P	15 03 35.0	-0.1
MAKZ				IAmb	IAmb	15 03 36.5	
	comp=Z,13nm,0.6s						
MAKZ	Makanchi	68.01	327	P	P	15 03 35.0	-0.1
MAKZ				pmax	pmax		
	comp=Z,13nm,0.6s						
MAKZ	Makanchi	68.01	327	P	P	15 03 35.6	+0.5
MAKZ				pP	pP	15 04 17.6	-1.0
MAKZ				pwP	pwP	15 04 25.4	+1.1
CCD	Concordia, Ant	68.46	182	P	P	15 03 39.3	+1.4
CCD				PcP	PcP	15 04 03.0	+1.2
CCD				pP	pP	15 04 24.4	+2.0
YAK	Yakutsk	68.52	360	eP	P	15 03 36.8	-1.1
YAK				e		15 03 58.7	
YAK				e		15 06 13.1	
YAK				eS	S	15 12 28.5	+4.3
YAK				e		15 13 22.4	
YAK				eSS	SS	15 16 54.3	+1.9
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,157nm,5.7s						
YAK				pmax	pmax		
	comp=E,81nm,5.4s						
YAK				pmax	pmax		
	comp=N,87nm,4.9s						
YAK				smax	smax		
	comp=N,116nm,5.6s						
YAK				smax	smax		
	comp=E,77nm,7.1s						
TNSS	Tian-Shan	68.80	321	eP	P	15 03 41.5	+0.9
	baz=321						
TNSS	Tian-Shan	68.80	321	eP	P	15 03 41.5	+0.9
MDOK	Medeo	68.80	321	eP	P	15 03 41.6	+1.2
	baz=322						
MDOK	Medeo	68.80	321	eP	P	15 03 41.5	+1.2
TKM2	Tokmak 2	69.58	321	P	P	15 03 45.7	+0.6
	SNR=9.1						
KUU	Kurty	69.62	322	eP	P	15 03 45.8	+0.6
	comp=E,15nm,0.8s,baz=322						
KUU	Kurty	69.62	322	eP	P	15 03 45.8	+0.6
KUU				pmax	pmax		
	comp=Z,15nm,0.8s						
UCH	Uchtor	69.93	319	P	P	15 03 49.2	+1.6
	SNR=9.0						
AAK	Ala-Archa	70.14	320	P	P	15 03 50.0	+1.5
	SNR=8.4						
AAK	Ala-Archa	70.14	320	P	P	15 03 49.6	+1.1
AAK	Ala-Archa	70.14	320	P	P	15 03 49.6	+1.1
AAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AAK	Ala-Archa	70.14	320	P	P	15 03 49.7	+1.1
AML	Almayashu	70.41	319	P	P	15 03 51.7	+1.3
	SNR=13						
USP	Ospenovka	70.45	320	P	P	15 03 51.1	+0.9
	SNR=16						
SGDS	Sogindy	70.46	321	eP	P	15 03 50.8	+0.5
	baz=321						
SGDS	Sogindy	70.46	321	eP	P	15 03 50.8	+0.5
EKS2	Erkin-Say	70.61	320	P	P	15 03 52.7	+1.4
	SNR=10						
ZALV	Zalesovo Beam	71.20	334	P	P	15 03 54.5	+0.1
	comp=Z,1.4nm,0.4s,baz=142,slow=5.7,SNR=3.6						
	comp=Z,1.4nm,0.4s						
ZALV	Zalesovo Beam	71.20	334	i P	P	15 03 58.5	+4.1
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GAR	Garm	71.27	315	P	P	15 03 55.7	+0.3
GAR				IAmb	IAmb	15 03 57.1	
	comp=Z,39nm,1.2s						

SEY	Seymchan	71.56	11	P	P	15 03 56.6	+0.3
	comp=Z,3.4nm,0.7s,baz=186,slow=3.5,SNR=18						
	comp=Z,3.4nm,0.7s						
SEY	Seymchan	71.56	11	⇓eP	P	15 03 57.2	+0.8
SEY				pmax	pmax		
	comp=Z,11nm,1.4s						
BTLS	Baital	71.62	322	eP	P	15 03 57.7	+0.5
	baz=322						
BTLS	Baital	71.62	322	eP	P	15 03 57.6	+0.5
CHGR	Chuyangaron	71.94	314	P	P	15 03 58.6	-0.8
CHGR				IAmb	IAmb	15 04 00.6	
	comp=Z,24nm,0.8s						
CHGR	Chuyangaron	71.94	314	P	P	15 03 58.6	-0.8
CHGR				pmax	pmax		
	comp=Z,24nm,0.8s						
KURK	Kurchatov	72.12	329	P	P	15 03 59.2	-0.8
KURK	Kurchatov	72.12	329	ceP	P	15 04 00.2	+0.2
KURK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
VNDA	Vanda	72.78	173	P	P	15 04 04.4	+0.9
	comp=Z,13nm,0.6s,baz=319,slow=6.9,SNR=58						
	comp=Z,13nm,0.6s						
VNDA	Vanda	72.78	173	P	P	15 04 04.0	+0.5
VNDA				IAmb	IAmb	15 04 05.2	
	comp=Z,14nm,0.7s						
VNDA	Vanda	72.78	173	P	P	15 04 04.0	+0.5
VNDA				pmax	pmax		
	comp=Z,14nm,0.7s						
IUG	Iuzhnay	72.83	318	eP	P	15 04 05.6	+1.1
	baz=318						
IUG	Iuzhnay	72.83	318	eP	P	15 04 05.6	+1.1
SBA	Scott Base	73.67	172	P	P	15 04 10.0	+1.4
SBA	Scott Base	73.67	172	P	P	15 04 10.0	+1.4
SBA				pmax	pmax		
	comp=Z,336nm,2.0s						
BRVK	Borovoye	77.74	328	⇓iP	P	15 04 32.2	+0.1
BRVK				pmax	pmax		
	comp=Z,16nm,2.5s						
MWH	Moku‘aweowe	77.91	69	P	P	15 04 30.6	-3.9
TIXI	Tiksi	78.19	360	⇑eP	P	15 04 34.2	0.0
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.5s						
BILL	Bilibino	78.88	13	eP	P	15 04 40.2	+2.1
BILL				e		15 04 45.3	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GEYT	Alibeck	79.82	310	P	P	15 04 44.5	+0.7
	comp=Z,3.7nm,0.8s,baz=194,slow=5.4,SNR=5.6						
	comp=Z,3.7nm,0.8s						
NRIK	Noril'sk	81.20	346	P	P	15 04 50.8	+0.3
	comp=Z,1.3nm,0.4s,baz=136,slow=10,SNR=2.4						
	comp=Z,1.3nm,0.4s						
NRIK	Noril'sk	81.20	346	⇑eP	P	15 04 51.5	+1.0
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ABKAR	Akbulak array	82.11	322	P	P	15 04 55.3	-0.4
QSPA	South Pole Qui	83.28	180	P	P	15 05 01.9	+0.3
	comp=Z,11nm,0.6s,baz=242,slow=0.4,SNR=106						
	comp=Z,11nm,0.6s						
QSPA	South Pole Qui	83.28	180	P	P	15 05 01.9	+0.3
ARU	Arti	85.31	328	c iP	P	15 05 13.1	+1.4
ARU				S	S	15 15 22.3	-3.7
ARU				SS	SS	15 20 59.9	-5.4
ARU				pmax	pmax		
	comp=Z,16nm,2.8s						
RAYN	Ar Rayn	87.38	294	P	P	15 05 22.9	+0.2
RAYN	Ar Rayn	87.38	294	P	P	15 05 22.9	+0.2
RAYN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GNI	Garni	90.46	310	⇓eP	P	15 05 34.7	-2.2
GNI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
MNK	Minsk	102.30	324	i P	Pdif	15 06 28.6	-1.3
	comp=E,3.0nm,1.1s						
MNK				i P	Pdif	15 06 28.6	-1.3
	comp=N,25nm,1.1s						
MNK				i P	Pdif	15 06 28.6	-1.3
	comp=Z,6.0nm,0.8s,baz=84						
MNK				i pP	pPdif	15 07 09.4	-6.7
MNK				i PP	PP	15 10 44.2	-0.4
MNK				i PPP	PPP	15 12 50.8	
MNK				i S	SKSac	15 16 52.6	+1.5
MNK				i SS	SS	15 25 07.8	+1.0
MNK				i SSS	SSS	15 29 01.7	
MNK				i LRM	MLR	15 51 11.8	
	comp=Z,174nm,12.9s						
MNK				i LRM	MLR	15 51 16.3	
	comp=E,81nm,23.2s						
MNK				i LRM	MLR	15 51 58.2	
	comp=N,275nm,12.9s						
MNK	Minsk	102.30	324	i P	Pdif	15 06 28.6	-1.3
MNK				i		15 10 44.2	
MNK				i S	SKSac	15 16 52.6	+1.5
MNK				i SS	SS	15 25 07.8	+1.0
MNK				i SSS	SSS	15 29 01.7	
MNK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,25nm,1.1s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.1s						
MNK				MLR	MLR		
	comp=Z,174nm,13.0s						
MNK				MLR	MLR		
	comp=E,81nm,23.0s						
MNK				MLR	MLR		
	comp=N,275nm,13.0s						
PDAR	Pinedale Array	116.86	45	PKP	PKPdf	15 11 18.4	-0.5
	comp=N,1.1nm,0.7s,baz=247,slow=1.9,SNR=12						
ULM	Lac du Bonnet	122.33	33	PKP	PKPdf	15 11 28.2	-0.6
	comp=N,1.5nm,0.7s,baz=274,slow=1.9,SNR=4.1						
TXAR	Lajitas Array	125.00	59	PKP	PKPdf	15 11 34.6	-0.1
	comp=N,1.4nm,0.8s,baz=312,slow=1.9,SNR=13						
TORD	Torodi Ar. Bea	128.49	281	PKP	PKPdf	15 11 41.8	+0.2
	comp=N,0.8nm,0.7s,baz=83,slow=2.0,SNR=4.3						
PLCA	Paso Flores	129.25	160	PKP	PKPdf	15 11 42.4	-0.2
	comp=N,3.0nm,0.8s,baz=240,slow=5.1,SNR=7.2						
GO02	Mina Guanaco	143.17	150		PKPbc	15 12 07.2	+0.7
CPUP	Villa Florida	146.46	168	PKPbc	PKPbc	15 12 15.9	0.0
	comp=N,25nm,0.8s,baz=198,slow=2.0,SNR=34						
PB08	IPOC Station P	147.50	146	PKPdf	PKPdf	15 12 13.8	-2.8
PB08					PKiKP	15 12 21.3	-0.1
PB18	Visviri	149.30	142		PKPdf	15 12 17.8	-2.0
PB18				PKPab	PKiKP	15 12 27.2	+1.9
LPAZ	La Paz	151.12	142	PKP	PKPdf	15 12 24.2	+1.5
	comp=N,2.0nm,0.8s,baz=290,slow=2.1,SNR=5.7						
LPAZ				PKPbc	PKiKP	15 12 30.0	+0.8
	comp=N,6.3nm,0.4s,baz=15,slow=3.9,SNR=27						

AEIC ***17*** *15:02:03.1±1.8, 67°.90N±0°.07×166°.6W±0°.2, h11^{km}±5^{km}, ML3.7, ML4.0/8(NEIC), Error ellipse: s-maj=11.9km s-min=7.3km az=136.0*

IDC ***17*** *15:02:04.2±1.4, 68°.38N×166°.30W, h0^{km}, mb3.4/5, mbtmp3.4/6, ML3.3/1, MS3.2/4, Error ellipse: s-maj=83.3km s-min=19.9km az=17.0*

NEIC ***17*** *15:02:05.3±1.7, 67°.87N±0°.05×166°.4W±0°.1, h24^{km}±8^{km}, Error ellipse: s-maj=8.1km s-min=7.2km az=209.0*

ISC 17 15:02:05.0±0.9**, 67°.88N**±0°.06×**166°.21W**±0°.06**, h10**^{km}**, n88,** σ**1^{s}.06**/88**, mb3.4**/5**, MS3.4**/3**, Bering Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	1.26	80		Sb	15 02 46.4	+1.4
RDOG	Red Dog Mine	1.26	80		Pn	15 02 27.5	-1.1
RDOG	Red Dog Mine	1.26	80	IAML		15 02 47.3	
	comp=N,3µm,0.7s						
RDOG				IAML		15 02 47.7	
	comp=E,3µm,0.8s						
RDOG	Red Dog Mine	1.26	80	P	Pn	15 02 27.7	-0.9
	baz=266						
RDOG				S	Sb	15 02 46.4	+1.4
	baz=266						
TNA	Tin City	2.43	197		Pn	15 02 42.5	-2.2
TNA	Tin City	2.43	197		Sn	15 03 15.1	+0.8
TNA	Tin City	2.43	197	P	Pn	15 02 42.4	-2.3
	baz=12						
TNA				S	Sn	15 03 15.1	+0.8
	baz=12						
ANM	Nome	3.35	174		Pn	15 02 55.8	-1.5
ANM					Sn	15 03 33.9	-3.1
ANM	Nome	3.35	174	P	Pn	15 02 55.8	-1.5
	baz=352						
A21K	Barrow	4.81	40		Pn	15 03 17.4	0.0
A21K				IAML		15 04 14.1	
	comp=E,98nm,0.5s						
A21K				IAML		15 04 59.8	
	comp=N,100nm,1.2s						
A21K	Barrow	4.81	40	S	Sn	15 04 13.3	+0.1
	baz=230						
GCSA	Galena City Sc	4.90	126		Pn	15 03 18.6	-0.1
GCSA					Sn	15 04 16.2	+0.9
GCSA	Galena City Sc	4.90	126	P	Pn	15 03 18.6	-0.1
	baz=314						
F21K	Alatna River	4.92	92	P	Pn	15 03 19.3	+0.3
	baz=284						
G21K	Allakaket	5.13	100	P	Pn	15 03 20.8	-1.0
	baz=292						
F22K	John River	5.36	87	P	Pn	15 03 25.2	+0.3
	baz=281						
E22K	Anaktuvuk Pass	5.42	81	P	Pn	15 03 25.5	-0.3
	baz=275						
H21K	Melozitna Rive	5.75	107		Pn	15 03 29.3	-1.1
H21K	Melozitna Rive	5.75	107	P	Pn	15 03 29.1	-1.2
	baz=299						
D23K	Nanushuk River	5.83	72	P	Pn	15 03 31.5	+0.1
	baz=267						
COLD	Coldfoot	6.16	89		Pn	15 03 35.9	-0.1
COLD	Coldfoot	6.16	89	P	Pn	15 03 35.6	-0.4
	baz=284						
E23K	Chandalar	6.24	81	P	Pn	15 03 37.4	+0.2
	baz=277						
I21K	Tanana	6.29	109		Pn	15 03 37.6	-0.1
I21K	Tanana	6.29	109	P	Pn	15 03 37.4	-0.3
	baz=302						
TTA	Tatalina	6.53	135		Pn	15 03 41.2	0.0
TTA	Tatalina	6.53	135	P	Pn	15 03 41.5	+0.4
	baz=323						
C24K	Franklin Bluff	6.61	66	P	Pn	15 03 41.7	-0.3
	baz=263						
E24K	Your Creek	6.66	80	P	Pn	15 03 42.6	-0.3
	baz=277						
K20K	Telida	6.76	126	Pn	Pn	15 03 44.2	0.0
K20K	Telida	6.76	126	P	Pn	15 03 43.4	-0.8
	baz=317						
MLY	Manley	6.82	107		Pn	15 03 45.2	+0.2
H23K	Yukon River	6.88	100		Pn	15 03 45.3	-0.5
F24K	Squaw Lake	6.98	84	P	Pn	15 03 47.0	-0.2
	baz=282						
I23K	Minto, Yukon-K	7.26	104	Pn	Pn	15 03 51.4	+0.4
BPAW	Bear Paw Mtn.	7.26	114		Pn	15 03 50.6	-0.5
BPAW	Bear Paw Mtn.	7.26	114	P	Pn	15 03 51.0	-0.1
	baz=308						
G24K	Hadweenzic Riv	7.34	91	P	Pn	15 03 51.4	-0.7
	baz=288						
CAST	Castle Rocks	7.34	121	Pn	Pn	15 03 51.9	-0.3
CAST	Castle Rocks	7.34	121	P	Pn	15 03 52.8	+0.6
	baz=314						
D25K	Kavik River	7.39	70	P	Pn	15 03 51.3	-1.4
	baz=269						
L19K	White Mountain	7.46	135	Pn	Pn	15 03 53.7	-0.1
L20K	Farewell, AK	7.49	130	P	Pn	15 03 54.4	+0.2
	baz=321						
H24K	Noodor Dome	7.50	97		Pn	15 03 52.7	-1.6
KTH	Kantishna Hill	7.64	117	Pn	Pn	15 03 56.2	-0.1
NEA2	Nenana	7.66	107		Pn	15 03 56.2	-0.2
NEA2	Nenana	7.66	107	P	Pn	15 03 56.4	-0.1
	baz=303						
PPLA	Purkeypile	7.68	124	Pn	Pn	15 03 56.7	-0.2
E25K	Arctic Village	7.74	79	P	Pn	15 03 56.8	-0.9
	baz=278						
MDM	Murphy Dome	7.77	104		Pn	15 03 56.5	-1.5
F25K	Christian Rive	7.80	83	P	Pn	15 03 57.2	-1.3
	baz=282						
M19K	Big River Lodg	7.81	134	Pn	Pn	15 03 59.0	+0.5
G25K	Bearman Lake	7.84	89	P	Pn	15 03 58.7	-0.2
	baz=288						
TRF	Thorofare Moun	7.92	117	Pn	Pn	15 03 59.4	-0.8
POKR	Poker Plat Res	7.99	101	Pn	Pn	15 04 00.8	-0.2
WRH	Wood River Hil	8.08	106		Pn	15 04 01.9	-0.3
CCB	Clear Creek Bu	8.09	105		Pn	15 04 01.6	-0.7
M20K	Styx River	8.18	131		Pn	15 04 04.2	+0.5
SVW2	Sparrevohn	8.19	141	Pn	Pn	15 04 04.2	+0.3
MCK	McKinley	8.21	112	Pn	Pn	15 04 03.6	-0.4
FYU	Fort Yukon	8.23	89		Pn	15 04 03.7	-0.6
C27K	Jago River	8.34	68	P	Pn	15 04 04.8	-1.0
	baz=269						
IL31		8.36	103	Pn	Pn	15 04 05.1	-1.0
ILAR	Eielson Array	8.36	103	Pn	Pn	15 04 05.0	-1.0
	comp=N,0.4nm,0.3s,baz=304,slow=14,SNR=35						
ILAR				Sn	Sn	15 05 36.6	-3.7
	baz=306,slow=28						
	comp=N,1.1nm,0.5s						
HDA	Harding Lake	8.53	105	Pn	Pn	15 04 07.5	-0.9
SKT	Skwentna	8.57	127		Pn	15 04 09.9	+0.8
SKT	Skwentna	8.57	127	P	Pn	15 04 09.9	+0.8
	baz=320						
N19K	Bonanza Creek	8.71	139	Pn	Pn	15 04 10.9	-0.1
N19K	Bonanza Creek	8.71	139	P	Pn	15 04 11.3	+0.3
	baz=329						
SUA	Susitna One	9.21	127	Pn	Pn	15 04 19.8	+1.9
O18K	Koktuh Hills	9.38	144	Pn	Pn	15 04 20.7	+0.5
I26K	Coal Creek Min	9.50	95		Pn	15 04 20.1	-1.7
I26K	Coal Creek Min	9.50	95	P	Pn	15 04 21.1	-0.6
	baz=296						
ILSW	Iliamna Southw	9.76	138	Pn	Pn	15 04 18.9	-6.6
P18K	Big Mountain,	9.80	145	Pn	Pn	15 04 25.9	+0.1
EGAK	Eagle	10.50	95	Pn	Pn	15 04 34.9	-0.4
K27K	Chicken	10.53	100	Pn	Pn	15 04 35.9	+0.1
L27K	Beaver Creek,	11.17	104	Pn	Pn	15 04 42.5	-2.1
INK	Inuvik	12.13	73	LR	LR	15 10 31.8	
	comp=N,96nm,18.1s,baz=302,slow=42						
INK	Inuvik	12.13	73	Pn	Pn	15 04 56.5	-1.1
A36M	Sachs Harbour	14.41	55	Pn	Pn	15 05 26.5	-2.1
MA2	Magadan	20.35	267	LR	LR	15 14 42.9	
	comp=N,30nm,18.8s,baz=100,slow=37						
YKA	Yellowknife Ar	21.73	79	P	P	15 06 55.8	-0.2
	comp=N,1.0nm,0.6s,baz=309,slow=11,SNR=24						
	comp=N,1.0nm,0.6s						
NVAR	Mina Array Bea	39.44	113	P	P	15 09 37.2	+2.1
	comp=N,0.2nm,0.6s,baz=342,slow=5.7,SNR=2.0						
	comp=N,0.2nm,0.6s						
TXAR	Lajitas Array	52.87	104	P	P	15 11 21.6	+0.9
	comp=N,0.3nm,0.6s,baz=331,slow=7.2,SNR=3.5						
	comp=N,0.3nm,0.6s						
MKAR	Makanchi Array	54.76	308	P	P	15 11 32.8	-1.5
	comp=N,0.1nm,0.6s,baz=28,slow=6.4,SNR=1.6						
	comp=N,0.1nm,0.6s						
AAK	Ala-Archa	60.80	313	LR	LR	15 43 13.5	
	comp=N,49nm,18.9s,baz=24,slow=41						
CMAR	Chiang Mai Arr	74.88	282	P	P	15 13 46.0	+0.3
	comp=N,0.9nm,0.7s,baz=9.9,slow=7.3,SNR=1.9						
CMAR				LR	LR	15 50 08.4	
	comp=N,18nm,18.7s,baz=130,slow=39						
	comp=N,0.9nm,0.7s						

NEIC ***17*** *15:10:07.1±1.6, 16°.21S±0°.09×174°.2W±0°.1, h127^{km}±6^{km}, mb4.7/99, Error ellipse: s-maj=16.8km s-min=13.4km az=102.0*

NOU ***17*** *15:10:10.0, 16°.28S×173°.87W, h164^{km}, mb4.8/29, Tonga Islands*

IDC ***17*** *15:10:10.7±0.8, 16°.27S×174°.30W, h161^{km}±7^{km}, mb4.1/16, mbtmp4.5/17, MS2.6/1, Error ellipse: s-maj=18.6km s-min=10.8km az=139.0*

ISC 17 15:10:05.6±0.3**, 16°.22S**±0°.06×**174°.16W**±0°.05**, h115**^{km}**, n391,** σ**0^{s}.91**/393**, mb4.7**/69**, 3D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.25	45	P	Pn	15 10 58.0	+2.9
	350nm,0.3s,baz=194,slow=3.1,SNR=376						
AFI				S	Sn	15 11 31.8	-1.5
	1µm,0.6s,baz=327,slow=13,SNR=3.5						
AFI				LR	LR	15 11 41.6	
	comp=Z,85nm,18.3s,baz=332,slow=27						
AFI	Afiamalu	3.25	45	Pn	Pn	15 10 57.5	+2.4
FUTU	Fugatoga	4.27	296	P	Pn	15 11 17.9	+9.3
NIUE	Niue	4.94	126		Pn	15 11 19.9	+2.3
NIUE	Niue	4.94	126	P	Pn	15 11 20.8	+3.2
TAVE	Taveuni	5.54	264	P	Pn	15 11 35.5	+10
MSVF	Nonsavu	7.61	257	P	Pn	15 12 02.6	+8.8
	22nm,0.8s,baz=105,slow=14,SNR=13						
MSVF	Nonsavu	7.61	257	Pn	Pn	15 12 01.2	+7.4
MSVF	Nonsavu	7.61	257	P	Pn	15 12 04.0	+10
RAR	Rarotonga	14.50	112	P	Pn	15 13 25.9	+0.5
	26nm,1.0s,baz=275,slow=12,SNR=2.3						
RAR				S	Sn	15 16 03.1	-2.5
	20nm,1.0s,baz=114,slow=20,SNR=1.9						
PINNC	Pines Island,	18.47	247	P	Pn	15 14 15.0	+1.0
OUENC	Ouen Island, N	18.95	248	P	P	15 14 18.1	+0.3
OUENC				IAmb	IAmb	15 14 41.2	
	comp=Z,29nm,0.9s						
DZM	Mont Dzumac	19.22	249	P	P	15 14 19.8	-1.0
	comp=Z,20nm,1.1s,baz=90,slow=18,SNR=3.2						
DZM	Mont Dzumac	19.22	249	P	P	15 14 21.4	+0.6
DZM				IAmb	IAmb	15 14 29.5	
	comp=Z,19nm,0.8s						
KOUNC	Koumac, New Ca	20.90	255	P	P	15 14 39.7	+0.8
KOUNC				IAmb	IAmb	15 14 59.4	
	comp=Z,23nm,1.1s						
KUZ	Kuaotunu	22.33	202	P	P	15 14 56.0	+2.1
WMGZ	Waiomatatini S	22.49	196	P	P	15 14 58.1	+2.7
HAZ	Te Kaha	22.60	197	P	P	15 14 57.8	+1.2
PKGZ	Pakihiroa	22.65	196	P	P	15 14 59.5	+2.4
PUZ	Puketiti	22.77	196	P	P	15 15 00.9	+2.7
RUGZ	Raukumara Rang	22.83	197	P	P	15 15 00.4	+1.4
WHRZ	Whale Island	22.93	198	P	P	15 14 56.4	-3.4
TWGZ	Tauwhareparae	22.94	196	P	P	15 15 02.9	+2.9
TKGZ	Te Karaka	23.23	196	P	P	15 15 05.3	+2.8
URZ	Urewera	23.26	198	P	P	15 15 02.3	-0.5
	comp=Z,7.0nm,0.3s,baz=16,slow=1.7,SNR=16						
	comp=Z,7.0nm,0.3s						
URZ	Urewera	23.26	198	P	P	15 15 03.2	+0.3
URZ	Urewera	23.26	198	P	P	15 15 03.1	+0.2
TOZ	Tahuroa Road	23.29	201	P	P	15 15 04.3	+1.2
TOZ	Tahuroa Road	23.29	201	P	P	15 15 04.7	+1.5
RTZ	Ruatahuna	23.63	198	P	P	15 15 07.1	+0.7
SNGZ	Shannon Statio	23.68	197	P	P	15 15 02.0	-4.7
HIZ	Hauiti	24.22	201	P	P	15 15 12.9	+1.4
HIZ				IAmb	IAmb	15 15 15.5	
	comp=Z,19nm,0.7s						
BKZ	Black Stump Fm	24.28	198		P	15 15 12.1	-0.1
TCW	Tory Channel	26.84	200	P	P	15 15 36.2	+1.1
QRZ	Quartz Range	27.10	203	P	P	15 15 36.9	-0.7
QRZ				IAmb	IAmb	15 16 08.6	
	comp=Z,45nm,1.3s						
TKNZ	Takaka Hill	27.12	202	P	P	15 15 37.8	0.0
NNZ	Nelson	27.14	201	P	P	15 15 38.0	+0.1
NNZ				IAmb	IAmb	15 16 06.9	
	comp=Z,54nm,1.4s						
MRNZ	Matariki Terra	27.52	202	P	P	15 15 41.1	-0.2
THZ	Tophouse	27.79	201	P	P	15 15 44.4	+0.6
THZ				IAmb	IAmb	15 16 22.8	
	comp=Z,36nm,1.4s						
DSZ	Denniston Nort	28.17	203	P	P	15 15 46.9	-0.2
DSZ				IAmb	IAmb	15 16 22.7	
	comp=Z,37nm,1.3s						
GVZ	Greta Valley S	28.82	200	P	P	15 15 52.6	-0.3
LTZ	Lake Taylor	28.91	201	P	P	15 15 52.9	-0.8
LTZ				IAmb	IAmb	15 16 29.1	
	comp=Z,42nm,1.3s						
INZ	Inchbonnie	29.15	202	P	P	15 15 55.2	-0.6
INZ				IAmb	IAmb	15 15 57.2	
	comp=Z,40nm,1.2s						
OXZ	Oxford	29.47	201	P	P	15 15 57.8	-0.8
OXZ				IAmb	IAmb	15 16 29.8	
	comp=Z,32nm,1.4s						
EIDS	Eidsvold	33.66	249	P	P	15 16 34.2	-1.4
EIDS				IAmb	IAmb	15 17 10.9	
	comp=Z,15nm,1.4s						
ARMA	Armidale	34.30	240	P	P	15 16 40.2	-1.0
RMQ	Roma	35.90	247	P	P	15 16 54.9	0.0
CTAO	Charters Tower	37.75	258	P	P	15 17 09.5	-1.2
CTAO				IAmb	IAmb	15 17 12.1	
	comp=Z,15nm,1.5s						
PMG	Port Moresby	38.27	275	P	P	15 17 13.7	-1.3
	comp=Z,12nm,0.9s,baz=101,slow=5.1,SNR=7.4						
	comp=Z,12nm,0.9s						
PMG	Port Moresby	38.27	275	P	P	15 17 15.2	+0.2
PMG				IAmb	IAmb	15 17 20.3	
	comp=Z,20nm,1.2s						
PMG	Port Moresby	38.27	275	P	P	15 17 18.5	+3.5
CMSA	Cobar Meteorol	39.51	240	P	P	15 17 25.0	-0.2
QLP	Quilpie	39.93	248	P	P	15 17 28.2	-0.5
COEN	Coen	41.20	267	P	P	15 17 38.5	-0.8
COEN				IAmb	IAmb	15 17 42.3	
	comp=Z,11nm,0.7s						
COEN	Coen	41.20	267	P	P	15 17 40.7	+1.4
BRAT	Ballarat	42.55	232	P	P	15 17 51.3	+1.3
STKA	Stephens Creek	43.00	241	P	P	15 17 53.1	-0.6
	comp=Z,14nm,0.8s,baz=84,slow=8.5,SNR=23						
	comp=Z,14nm,0.8s						
STKA	Stephens Creek	43.00	241	P	P	15 17 53.7	0.0
INKA	Innaminka	43.14	247	P	P	15 17 55.1	+0.2
HTT	Hallett	45.50	239	P	P	15 18 13.9	+0.2
LCRK	Leigh Creek	45.64	243	P	P	15 18 14.6	-0.2
OOD	Oodnadatta	47.62	247	P	P	15 18 30.1	-0.1
WRAB	Tennant Creek	48.94	258	P	P	15 18 39.6	-1.0
WRA	Warramunga Arr	48.95	258	P	P	15 18 39.1	-1.5
	comp=Z,4.1nm,0.4s,baz=96,slow=6.4,SNR=143						
WRA				PcP	PcP	15 20 02.9	-0.3
	comp=Z,1.9nm,0.6s,baz=90,slow=3.5,SNR=7.7						
	comp=Z,4.1nm,0.4s						
ASAR	Alice Springs	49.17	253	P	P	15 18 41.5	-0.7
	comp=Z,20nm,0.5s,baz=89,slow=7.9,SNR=764						
ASAR				PcP	PcP	15 20 03.5	-0.5
	comp=Z,1.2nm,0.5s,baz=100,slow=4.1,SNR=5.6						
	comp=Z,20nm,0.5s						
MTN	Manton Dam	52.94	266	P	P	15 19 10.5	0.0
FORT	Forrest	54.40	244	P	P	15 19 18.2	-2.7
KNRA	Kununurra	54.73	262	P	P	15 19 23.6	+0.2
SOEI	Soe	60.16	268	P	P	15 20 03.2	+1.3
SOEI	Soe	60.16	268	P	P	15 20 03.6	+1.7
SOEI	Soe	60.16	268	P	P	15 20 03.8	+1.9
PSA00	Pilbara Seismi	62.27	254	P	P	15 20 15.6	-0.3
MMRI	Maumere	62.37	269	P	P	15 20 16.4	-0.2
MBWA	Marble Bar	62.43	254	P	P	15 20 15.5	-1.5
VNDA	Vanda	62.49	186	P	P	15 20 16.8	+0.4
	comp=Z,3.1nm,0.9s,baz=17,slow=6.1,SNR=7.4						
	comp=Z,3.1nm,0.9s						
MJAR	Matsushiro Arr	69.09	320	P	P	15 20 59.1	-0.2
	comp=Z,1.4nm,0.8s,baz=118,slow=6.3,SNR=2.8						
	comp=Z,1.4nm,0.8s						
JAGI	Jajag, Banyuwa	70.17	267	P	P	15 21 04.7	-1.7
JAGI	Jajag, Banyuwa	70.17	267	P	P	15 21 05.7	-0.7
PETK	Petropavlovsk-	73.19	343	P	P	15 21 22.5	-1.1
	comp=Z,4.8nm,1.0s,baz=107,slow=9.5,SNR=4.4						
	comp=Z,4.8nm,1.0s						
MURC	Murrieta	73.49	47	P	P	15 21 26.9	+1.0
	baz=237						
EDW2	Edwards Air Fo	73.64	45	P	P	15 21 27.1	+0.4
	baz=236						
MONP2	Monument Peak	73.65	48	P	P	15 21 27.3	+0.2
	baz=238						
ISA	Isabella, Lake	73.75	44	P	P	15 21 28.3	+0.9
	baz=236						
IKP	In-Ko-Pah, Jac	73.75	48	P	P	15 21 28.3	+0.8
	baz=238						
UGM	Wanagama	73.79	266	P	P	15 21 28.4	+0.4
QSPA	South Pole Qui	73.83	180	P	P	15 21 27.6	+0.1
QSPA				IAmb	IAmb	15 21 28.7	
	comp=Z,7.3nm,0.8s						
PFO	Pinyon Flats O	74.01	47	P	P	15 21 29.2	+0.2
	baz=238						
TPFO	Pinon Flats	74.01	47	P	P	15 21 29.4	+0.3
	baz=238						
SWSC	Sam W. Stewart	74.13	48	P	P	15 21 30.1	+0.6
	baz=238						
LRMC	Laurel Mtn Rad	74.18	45	P	P	15 21 30.8	+0.8
	baz=236						
CWC	Cottonwood Cre	74.44	44	P	P	15 21 32.5	+0.9
	baz=236						
MDPB	Devils Postpil	74.46	43	P	P	15 21 31.6	-0.2
BELC	Belle Mtn. Jos	74.54	47	P	P	15 21 32.7	+0.6
	baz=238						
MPMC	Manual Prospec	74.63	45	P	P	15 21 33.5	+0.9
	baz=236,SNR=7.3						
GSC	Goldstone, Bar	74.68	46	P	P	15 21 32.9	0.0
GSC	Goldstone, Bar	74.68	46	P	P	15 21 33.8	+0.9
	baz=237						
YBH	Yreka Blue Hor	74.69	37	P	P	15 21 33.3	+0.6
YBH				IAmb	IAmb	15 21 34.7	
	comp=Z,6.9nm,0.8s						
WAKR	Walker	74.74	42	P	P	15 21 33.9	+0.6
BC3	Big Chuckawall	74.74	48	P	P	15 21 34.1	+0.8
	baz=238						
HEC	Hector,Ludlow	74.75	46	P	P	15 21 34.1	+0.9
	baz=237						
GLA	Glamis	74.88	48	P	P	15 21 34.8	+0.8
	baz=239						
YERR	Yerington	75.14	41	P	P	15 21 35.0	-0.6
GMRC	Granite Mounta	75.19	47	P	P	15 21 36.8	+0.9
	baz=238						
IRM	Iron Mountain	75.23	47	P	P	15 21 36.6	+0.7

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       baz=238
GRAC   Grapevine Rang    75.23  44  P      P      15 21 37.0 +1.1
       baz=236
TUQ    Turquoise Moun    75.36  46  P      P      15 21 37.6 +0.8
       baz=237
NVAR   Mina Array Bea    75.42  42  P      P      15 21 37.6 +0.4
       comp=Z,3.4nm,0.7s,baz=226,slow=9.2,SNR=28
NVAR                                pP     sP     15 22 17.0 -1.1
       comp=Z,1.3nm,0.8s,baz=227,slow=9.1,SNR=3.6
       comp=Z,3.4nm,0.7s
Q17K   Contact Creek     75.73  10  P      P      15 21 38.6 +0.3
       baz=198
214A   Organ Pipe Nat    75.80  50  P      P      15 21 40.0 +0.7
       baz=240
TPH    Tonopah           75.93  43  P      P      15 21 40.1  0.0
TPNV   Topopah Spring    75.95  44  P      P      15 21 41.0 +0.8
       baz=237
Q16K   King Salmon       76.00   9  P      P      15 21 40.5 +0.8
       baz=197
PDMCI  Parker Dam,Lak    76.01  48  P      P      15 21 41.3 +0.9
       baz=239
P16K   Nushagak River    76.14   9  P      P      15 21 41.1 +0.7
       baz=196,SNR=6.3
KSRS   Korea Array       76.23 316  P      P      15 21 41.6 +0.2
       comp=Z,0.7nm,0.6s,baz=134,slow=5.4,SNR=5.0
       comp=Z,0.7nm,0.6s
Q18K   Katmai Hardscr    76.24  10  P      P      15 21 41.1 -0.1
       baz=199
K05A   Summer Lake       76.36  37  P      P      15 21 43.5 +1.1
K05A                                IAmb   IAmb   15 21 44.0
       comp=Z,6.5nm,0.7s
SHPR   Sheep Range       76.45  45  P      P      15 21 42.0 -1.0
KSM    Kuching           76.54 276  P      P      15 21 45.0 +1.2
       comp=Z,20nm,1.1s
O16K   Kokwok River B    76.67   8  P      P      15 21 43.0 -0.4
       baz=196
P18K   Big Mountain,     76.91  10  P      P      15 21 43.8 -1.1
P18K   Big Mountain,     76.91  10  P      P      15 21 44.9  0.0
       baz=199,SNR=8.8
O17K   Koliganek Bris    76.98   9  P      P      15 21 45.8 +0.5
       baz=197
O18K   Koktuh Hills      77.35  10  P      P      15 21 47.2 -0.1
O18K   Koktuh Hills      77.35  10  P      P      15 21 48.0 +0.7
       baz=199,SNR=5.9
N16K   Nishlik Lake      77.43   8  P      P      15 21 48.4 +0.6
       baz=195
TUC    Tucson            77.47  51  P      P      15 21 49.3 +0.6
       baz=241
P19K   Oil Pt            77.50  11  P      P      15 21 48.6 +0.4
       baz=200
WVOR   Wild Horse Val    77.53  39  P      P      15 21 49.4 +0.6
CNPM   China Poot        77.75  12  P      P      15 21 50.1 +0.5
CNPM                                IAmb   IAmb   15 21 50.9
       comp=Z,21nm,0.9s
O19K   Port Alsworth     77.82  10  P      P      15 21 50.2 +0.4
       baz=199
ILSW   Iliamna Southw    77.82  11  P      P      15 21 49.9 -0.1
O20K   Slope Mountain    78.01  11  P      P      15 21 51.4 +0.4
       baz=201
BRSE   Bradley Lake S    78.05  12  P      P      15 21 51.9 +0.7
       baz=203
KNB    Kanab             78.32  46  P      P      15 21 53.8 +0.3
KNB                                 IAmb   IAmb   15 21 55.4
       comp=Z,7.1nm,0.8s
RSO    Redoubt South     78.34  11  P      P      15 21 53.0 -0.1
N19K   Bonanza Creek     78.38  10  P      P      15 21 53.2 +0.1
       baz=199
U15A   North Rim         78.39  47  P      P      15 21 55.2 +1.2
U15A                                IAmb   IAmb   15 21 56.2
       comp=Z,11nm,0.9s
WUAZ   Wupatki           78.59  48  P      P      15 21 54.6 -0.3
WUAZ   Wupatki           78.59  48  P      P      15 21 55.7 +0.7
       baz=240
SEW    Seward            78.64  12  P      P      15 21 54.2 -0.2
       baz=204
ELK    Elko              78.68  42  P      P      15 21 54.5 -0.9
SPCR   Spurr Chakacha    79.13  11  P      P      15 21 57.0 -0.2
       baz=201
M19K   Big River Lodg    79.42   9  P      P      15 21 58.6  0.0
M19K                                IAmb   IAmb   15 21 59.1
       comp=Z,6.3nm,0.7s
M19K   Big River Lodg    79.42   9  P      P      15 21 58.3 -0.4
       baz=199
RC01   Rabbit Creek A    79.49  12  P      P      15 21 59.4 +0.3
       baz=204
PWL    Port Wells        79.56  13  P      P      15 21 59.6 +0.2
       baz=205
M20K   Styx River        79.61  10  P      P      15 21 59.9 +0.2
       baz=200
L19K   White Mountain    79.62   9  P      P      15 21 60.0 +0.2
       baz=199
SUA    Susitna One       79.64  11  P      P      15 21 59.3 -0.6
SUA    Susitna One       79.64  11  P      P      15 22 00.2 +0.3
       baz=203,SNR=9.2
121A   Cookes Peak, D    79.82  52  P      P      15 22 02.9 +1.2
       baz=243
SKT    Skwentna          79.97  11  P      P      15 22 01.4 -0.2
       baz=202
KNK    Knik Glacier      80.04  12  P      P      15 22 02.4 +0.4
KNK                                 IAmb   IAmb   15 22 03.0
       comp=Z,16nm,0.7s
KNK    Knik Glacier      80.04  12  P      P      15 22 01.9 -0.1
       baz=205
L20K   Farewell, AK      80.05   9  P      P      15 22 01.6 -0.5
       baz=200
PMR    Palmer            80.07  12  P      P      15 22 02.3 +0.2
PMR    Palmer            80.07  12  P      P      15 22 02.2 +0.1
       baz=204,SNR=5.2
NJ2    Nanjing           80.08 307 eP      P      15 22 05.3 +2.5
NJ2                                 pP     PcP    15 22 08.4 -1.5
NJ2                                 pmax   pmax
       comp=Z,15nm,0.5s
TTA    Tatalina          80.16   8  P      P      15 22 03.8 +1.0
TTA    Tatalina          80.16   8  P      P      15 22 03.7 +1.0
TTA    Tatalina          80.16   8  P      P      15 22 03.5 +0.7
       baz=198
GHO    Glory Hole Cre    80.27  12  P      P      15 22 03.4 +0.1
SML    Sawmill           80.42  12  P      P      15 22 04.1  0.0
       baz=205
M23K   Glacier View      80.53  12  P      P      15 22 04.6 -0.1
       baz=206
KLU    Klutina           80.65  13  P      P      15 22 05.9 +0.5
       baz=207
SCM    Sheep Creek Mo    80.65  13  P      P      15 22 05.6 +0.2
SCM    Sheep Creek Mo    80.65  13  P      P      15 22 05.7 +0.4
       baz=206,SNR=6.1
PPLA   Purkeypile        80.72  10  P      P      15 22 06.5 +0.7
       baz=201
HLID   Hailey            80.72  40  P      P      15 22 06.6 +0.3
HLID   Hailey            80.72  40  P      P      15 22 06.9 +0.6
       baz=237,SNR=7.4
ANM    Nome              80.81   4  P      P      15 22 06.9 +0.8
       baz=188
PINM   Pinnacle          80.83  16  P      P      15 22 05.8 -0.5
       baz=213
K20K   Telida            80.85   9  P      P      15 22 06.8 +0.5
K20K                                IAmb   IAmb   15 22 08.2
       comp=Z,16nm,1.2s
K20K   Telida            80.85   9  P      P      15 22 07.0 +0.7
       baz=199
N25K   Chitina, Valde    81.05  14  P      P      15 22 07.0 -0.5
N25K                                IAmb   IAmb   15 22 08.7
       comp=Z,17nm,0.9s
N25K   Chitina, Valde    81.05  14  P      P      15 22 07.9 +0.4
       baz=209,SNR=6.6
GLB    Gilahina Butte    81.09  14  P      P      15 22 06.9 -0.8
GLB                                 IAmb   IAmb   15 22 08.7
       comp=Z,26nm,1.3s
M24K   Tolsona, Glenn    81.14  13  P      P      15 22 08.1 +0.1
M24K                                IAmb   IAmb   15 22 09.8
       comp=Z,21nm,0.8s
M24K   Tolsona, Glenn    81.14  13  P      P      15 22 08.9 +1.0
       baz=207
CAST   Castle Rocks      81.22  10  P      P      15 22 06.2 -2.0
CAST   Castle Rocks      81.22  10  P      P      15 22 07.2 -1.1
       baz=201
MCARA  McCarthy VSAT     81.22  15  P      P      15 22 08.7 +0.4
       baz=210
MNTX   Cornudas Mount    81.30  53  P      P      15 22 09.9 +0.5
       baz=245
O28M   Mount Upton       81.42  16  P      P      15 22 09.4 -0.4
       baz=213
PLBC   Pleasant Camp     81.43  18  P      P      15 22 09.7 +0.3
       baz=216
TRF    Thorofare Moun    81.56  11  P      P      15 22 08.9 -1.4
TRF                                 IAmb   IAmb   15 22 12.0
       comp=Z,16nm,0.9s
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TRF    Thorofare Moun    81.56  11  P      P      15 22 10.0 -0.3
       baz=203,SNR=10
CHUM   Lake Minchumin    81.62  10  P      P      15 22 09.8 -0.5
       baz=201,SNR=6.8
HARP   HAARP             81.62  13  P      P      15 22 10.8 +0.3
       baz=208
TNA    Tin City          81.67   3  P      P      15 22 10.6 +0.1
TNA                                 IAmb   IAmb   15 22 12.4
       comp=Z,8.6nm,0.8s
TNA    Tin City          81.67   3  P      P      15 22 11.2 +0.7
       baz=186
TXAR   Lajitas Array     81.67  56  P      P      15 22 12.2 +0.6
       comp=Z,1.5nm,0.7s,baz=220,slow=7.9,SNR=17
       comp=Z,1.5nm,0.7s
RND    Reindeer          81.78  11  P      P      15 22 10.1 -1.2
RND                                 IAmb   IAmb   15 22 12.9
       comp=Z,12nm,0.8s
GCSA   Galena City Sc    81.79   7  P      P      15 22 12.0 +0.9
       baz=197
ANMO   Albuquerque       81.88  50  P      P      15 22 13.2 +0.5
ANMO                                IAmb   IAmb   15 22 15.3
       comp=Z,15nm,1.4s
ANMO   Albuquerque       81.88  50  P      P      15 22 13.3 +0.6
       baz=244
YUK8   Steele Glacier    81.96  16  P      P      15 22 12.9 +0.3
       baz=213
BPAW   Bear Paw Mtn.     82.04  10  P      P      15 22 11.4 -1.1
BPAW   Bear Paw Mtn.     82.04  10  P      P      15 22 11.7 -0.8
       baz=202
MCK    McKinley          82.06  11  P      P      15 22 12.5 -0.2
MCK    McKinley          82.06  11  P      P      15 22 12.8 +0.1
       baz=204,SNR=21
PAX    Paxson            82.06  13  P      P      15 22 12.4 -0.4
       baz=208
M26K   Nabesna, AK       82.11  14  P      P      15 22 11.7 -1.4
M26K                                IAmb   IAmb   15 22 14.4
       comp=Z,21nm,1.1s
YUK3   Moose Creek       82.20  15  P      P      15 22 14.1 +0.4
       baz=212
HYT    Haines Junctio    82.20  17  P      P      15 22 14.2 +0.6
       baz=215
YUK4   Talbot Arm        82.31  16  P      P      15 22 14.6 +0.3
       baz=214
M27K   Edge Creek, AK    82.34  15  P      P      15 22 14.3 -0.1
M27K                                IAmb   IAmb   15 22 16.1
       comp=Z,13nm,1.0s
M27K   Edge Creek, AK    82.34  15  P      P      15 22 15.2 +0.9
       baz=211
Q32M   Nakina River      82.35  20  P      P      15 22 14.8 +0.3
       baz=220
MCMT   McKenzie Canyo    82.35  39  P      P      15 22 14.1 -0.8
O30N   Mendenhall        82.57  18  P      P      15 22 15.6 +0.2
       baz=217
L26K   Log Cabin Wild    82.58  14  P      P      15 22 16.1 +0.7
       baz=210,SNR=5.2
BVCY   Beaver Creek      82.64  15  P      P      15 22 16.4 +0.6
       baz=212
DLBC   Dease Lake        82.73  22  P      P      15 22 17.6 +1.2
       baz=222
K24K   Donnelly Dome     82.74  12  P      P      15 22 16.5 +0.3
       baz=207,SNR=6.3
MSO    Missoula          82.77  37  P      P      15 22 16.8 -0.1
       baz=237
DLMT   Dillon            82.78  39  P      P      15 22 16.9 -0.2
DLMT                                IAmb   IAmb   15 22 18.0
       comp=Z,5.7nm,0.8s
NEA2   Nenana            82.82  11  P      P      15 22 16.2 -0.5
NEA2                                IAmb   IAmb   15 22 18.4
       comp=Z,6.6nm,0.8s
NEA2   Nenana            82.82  11  P      P      15 22 16.4 -0.3
       baz=204,SNR=7.2
FXWY   Fox Creek         82.86  41  P      P      15 22 16.9 -0.7
S22A   4UR Ranch, Cre    82.86  47  P      P      15 22 18.6 +0.8
S22A                                IAmb   IAmb   15 22 19.8
       comp=Z,15nm,1.1s
S22A   4UR Ranch, Cre    82.86  47  P      P      15 22 18.8 +1.0
       baz=243
RIDG   Independent Ri    82.88  13  P      P      15 22 17.0  0.0
RIDG                                IAmb   IAmb   15 22 18.0
       comp=Z,12nm,1.0s
RIDG   Independent Ri    82.88  13  P      P      15 22 17.2 +0.3
       baz=208,SNR=5.6
I21K   Tanana            82.88   9  P      P      15 22 16.8 -0.1
       baz=201
WRH    Wood River Hil    82.89  11  P      P      15 22 16.8 -0.1
MLY    Manley            82.94  10  P      P      15 22 16.9 -0.4
MLY                                 IAmb   IAmb   15 22 18.3
       comp=Z,7.9nm,1.0s
MLY    Manley            82.94  10  P      P      15 22 17.1 -0.1
       baz=202,SNR=8.3
L27K   Beaver Creek,     82.96  14  P      P      15 22 17.2 -0.2
L27K   Beaver Creek,     82.96  14  P      P      15 22 17.3 -0.1
       baz=211
DOT    Dot Lake          82.96  13  P      P      15 22 17.3  0.0
DOT                                 IAmb   IAmb   15 22 18.5
       comp=Z,14nm,0.8s
O20A   White River Ci    82.97  45  P      P      15 22 18.8 +0.6
       baz=242
IMW    Indian Meadow     83.04  41  P      P      15 22 19.2 +0.6
IMW                                 IAmb   IAmb   15 22 20.1
       comp=Z,10nm,0.8s
HDA    Harding Lake      83.05  12  P      P      15 22 17.8  0.0
HDA    Harding Lake      83.05  12  P      P      15 22 17.8  0.0
       baz=206,SNR=23
CCB    Clear Creek Bu    83.10  11  P      P      15 22 17.8 -0.2
LRM    Limekiln Ridge    83.11  38  P      P      15 22 18.3 -0.5
P33M   Teslin, Yukon     83.13  19  P      P      15 22 18.8 +0.4
       baz=220
H21K   Melozitna Rive    83.21   9  P      P      15 22 18.7 +0.1
H21K   Melozitna Rive    83.21   9  P      P      15 22 19.4 +0.8
       baz=200,SNR=6.2
SCRK   Sand Creek        83.27  13  P      P      15 22 19.1  0.0
SCRK                                IAmb   IAmb   15 22 20.2
       comp=Z,14nm,1.1s
SCRK   Sand Creek        83.27  13  P      P      15 22 19.4 +0.3
       baz=209,SNR=13
M29M   Somme Creek       83.27  16  P      P      15 22 19.6 +0.5
       baz=214
I23K   Minto, Yukon-K    83.28  10  P      P      15 22 18.6 -0.3
I23K                                IAmb   IAmb   15 22 19.9
       comp=Z,7.7nm,0.8s
I23K   Minto, Yukon-K    83.28  10  P      P      15 22 19.0 +0.1
       baz=204,SNR=6.8
FLWY   Flagg Ranch       83.28  40  P      P      15 22 18.3 -1.5
FLWY                                IAmb   IAmb   15 22 21.5
       comp=Z,11nm,0.8s
TCOL   CIGO, UAF Yank    83.30  11  P      P      15 22 18.7 -0.3
       baz=205,SNR=9.4
COLA   College           83.30  11  P      P      15 22 19.6 +0.6
COLA   College           83.30  11  P      P      15 22 18.7 -0.3
       baz=205
MDM    Murphy Dome       83.31  11  P      P      15 22 17.7 -1.4
MDM                                 IAmb   IAmb   15 22 20.5
       comp=Z,24nm,1.2s
BW06   Boulder Array     83.36  42  P      P      15 22 19.1 -1.1
BW06                                IAmb   IAmb   15 22 20.9
       comp=Z,8.2nm,0.8s
BW06   Boulder Array     83.36  42  P      P      15 22 20.1 -0.1
       baz=241,SNR=15
PDAR   Pinedale Array    83.36  42  P      P      15 22 19.9 -0.2
       comp=Z,8.2nm,0.8s,baz=211,slow=3.1,SNR=70
PDAR                                pP     sP     15 23 00.6 -1.0
       comp=Z,0.2nm,0.5s,baz=59,slow=40,SNR=1.1
       comp=Z,8.2nm,0.8s
ILAR   Eielson Array     83.39  11  P      P      15 22 19.1 -0.4
       comp=Z,4.7nm,0.6s,baz=208,slow=5.5,SNR=112
ILAR                                pP     sP     15 23 01.1 +0.6
       comp=Z,0.6nm,0.6s,baz=233,slow=6.3,SNR=1.9
       comp=Z,4.7nm,0.6s
BOZ    Bozeman (W)       83.48  39  P      P      15 22 20.3 -0.4
BOZ    Bozeman (W)       83.48  39  P      P      15 22 20.9 +0.3
       baz=239,SNR=8.4
H17A   Grant Village     83.52  40  P      P      15 22 22.2 +1.3
       baz=240,SNR=11
POKR   Poker Plat Res    83.60  11  P      P      15 22 19.7 -0.9
POKR   Poker Plat Res    83.60  11  P      P      15 22 20.5 -0.1
       baz=206,SNR=14
H22K   Ishtalitna Cre    83.64   9  P      P      15 22 21.4 +0.6
       baz=202
K27K   Chicken           83.73  14  P      P      15 22 21.5 +0.2
K27K                                IAmb   IAmb   15 22 23.2
       comp=Z,11nm,1.2s
K27K   Chicken           83.73  14  P      P      15 22 22.2 +0.9
       baz=211
SDCO   Great Sand Dun    83.80  48  P      P      15 22 22.6  0.0
       baz=244
M30M   Minto, Yukon      83.83  16  P      P      15 22 21.9  0.0
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       baz=216
H23K   Yukon River       83.87  10  P      P      15 22 21.3 -0.7
H23K   Yukon River       83.87  10  P      P      15 22 21.8 -0.2
       baz=204
L29M   L29M              83.91  16  P      P      15 22 22.8 +0.5
       baz=214
G21K   Allakaket         83.92   8  P      P      15 22 22.9 +0.7
       baz=200,SNR=13
HRY    Holter Researc    83.94  38  P      P      15 22 23.4 +0.5
H24K   Noodor Dome       84.17  11  P      P      15 22 23.7 +0.2
       baz=205
MSTX   Muleshoe          84.23  52  P      P      15 22 24.9 +0.2
       baz=246
PRP    Porcupine Dome    84.31  12  P      P      15 22 24.5 +0.1
       baz=208,SNR=11
T25A   Trinidad          84.33  49  P      P      15 22 25.4 +0.2
       baz=245
DAWY   Dawson            84.39  15  P      P      15 22 25.1 +0.4
DAWY                                IAmb   IAmb   15 22 26.1
       comp=Z,9.9nm,0.8s
DAWY   Dawson            84.39  15  P      P      15 22 25.1 +0.4
       baz=213,SNR=14
RDOG   Red Dog Mine      84.44   4  P      P      15 22 25.8 +1.0
       baz=191
EGAK   Eagle             84.58  14  P      P      15 22 25.7 +0.2
EGAK                                IAmb   IAmb   15 22 26.9
       comp=Z,11nm,0.8s
EGAK   Eagle             84.58  14  P      P      15 22 25.7 +0.2
       baz=212,SNR=7.2
F21K   Alatna River      84.59   8  P      P      15 22 25.7 +0.1
       baz=200,SNR=6.1
I26K   Coal Creek Min    84.61  13  P      P      15 22 25.9 +0.2
I26K                                IAmb   IAmb   15 22 27.3
       comp=Z,10nm,0.9s
I26K   Coal Creek Min    84.61  13  P      P      15 22 26.2 +0.5
       baz=210
G23K   Bananza Creek     84.61   9  P      P      15 22 26.0 +0.2
       baz=203,SNR=12
ISCO   Idaho Springs     84.62  46  P      P      15 22 26.6 -0.1
       baz=244
K29M   Barlow Dome       84.67  15  P      P      15 22 26.9 +0.7
       baz=215
RLMT   Red Lodge         84.69  40  P      P      15 22 27.1 +0.3
       baz=241,SNR=7.5
N23A   Red Feather La    84.88  45  P      P      15 22 27.7 -0.3
       baz=243
F22K   John River        85.03   8  P      P      15 22 28.5 +0.7
       baz=201
COLD   Coldfoot          85.06   9  P      P      15 22 29.0 +1.0
       baz=203
I27K   Kandik River      85.19  13  P      P      15 22 29.1 +0.4
       baz=211
BILL   Bilibino          85.22 353  P      P      15 22 28.9 +0.2
BJI    Beijing           85.50 314  P      P      15 22 31.8 +1.1
BJI                                 pmax   pmax
       comp=Z,5.0nm,1.3s
E22K   Anaktuvuk Pass    85.67   8  P      P      15 22 31.5 +0.5
       baz=201,SNR=8.0
F24K   Squaw Lake        85.69  10  P      P      15 22 31.7 +0.5
       baz=205
I29M   Ogilvie Camp,     85.73  14  P      P      15 22 31.5 +0.2
I29M                                IAmb   IAmb   15 22 32.2
       comp=Z,7.0nm,0.8s
I29M   Ogilvie Camp,     85.73  14  P      P      15 22 31.5 +0.2
       baz=214
H27K   Steamboat Moun    85.75  13  P      P      15 22 32.3 +0.9
       baz=211
EGMT   Eagleton          85.82  37  P      P      15 22 32.5 +0.2
       baz=240
G26K   Porcupine Rive    85.92  12  P      P      15 22 33.3 +1.2
       baz=209,SNR=13
E23K   Chandalar         85.92   9  P      P      15 22 32.8 +0.5
       baz=204
KOTAN  Kotaneelee Air    86.09  23  P      P      15 22 33.9 +0.7
       baz=228
E24K   Your Creek        86.11   9  P      P      15 22 33.6 +0.5
       baz=205
ABTX   Abilene, Hawle    86.13  55  P      P      15 22 33.8 -0.3
       baz=248
F25K   Christian Rive    86.14  11  P      P      15 22 34.8 +1.4
       baz=207,SNR=5.6
G27K   Doyon Strip       86.22  12  P      P      15 22 34.7 +1.0
       baz=211
F26K   Sheenjek River    86.50  11  P      P      15 22 35.8 +0.7
       baz=209
D23K   Nanushuk River    86.60   8  P      P      15 22 36.1 +0.6
       baz=202
E25K   Arctic Village    86.63  10  P      P      15 22 36.5 +0.8
       baz=207,SNR=5.1
EPYK   Eagle Plains      86.94  14  P      P      15 22 37.5 +0.3
       baz=216
E27K   Coleen River      87.41  12  P      P      15 22 40.3 +0.8
       baz=211
G30M   tAoh Zraii Nji    87.55  14  P      P      15 22 40.5 +0.4
       baz=216,SNR=5.4
RSSD   Black Hills       87.55  43  P      P      15 22 40.5 -0.4
       baz=245
D25K   Kavik River       87.57  10  P      P      15 22 40.5 +0.2
       baz=207
C24K   Franklin Bluff    87.58   9  P      P      15 22 40.4 +0.3
       baz=204
C27K   Jago River        88.28  10  P      P      15 22 43.9 +0.4
       baz=209
WRGLY  Wrigley           88.39  21  P      P      15 22 44.7 +0.6
       baz=228
F31M   Tsiigehtchic      88.50  14  P      P      15 22 45.2 +0.7
       baz=218
XAN    Xi'an             88.52 306  P      P      15 22 46.4 +0.9
XAN                                eP P    sP     15 23 22.0 -4.6
XAN                                 pmax   pmax
       comp=Z,7.0nm,1.3s
HHC    Hu-ho-hao-te      89.05 313 eP      P      15 22 50.8 +2.9
HHC                                 pmax   pmax
       comp=Z,17nm,0.6s
HHC                                 pmax   pmax
       comp=Z,170nm,6.1s
INK    Inuvik            89.23  14  P      P      15 22 48.3 +0.3
       baz=219
DGMT   Dagmar            89.32  39  P      P      15 22 48.8 -0.1
       baz=244
KMI    Kunming           90.72 296 ⇓P      P      15 22 58.5 +2.3
KMI                                 pmax   pmax
       comp=Z,12nm,0.6s
YKA    Yellowknife Ar    91.14  24  P      P      15 22 56.7 -0.2
       comp=Z,2.5nm,1.0s,baz=238,slow=4.5,SNR=20
       comp=Z,2.5nm,1.0s
PZH    PanZhiHua         91.99 297  P      P      15 23 02.8 +0.8
PZH                                 pmax   pmax
       comp=Z,10.0nm,0.5s
PZH                                 pmax   pmax
       comp=Z,60nm,5.1s
CMAR   Chiang Mai Arr    92.18 288  P      P      15 23 02.9 +0.1
       comp=Z,0.8nm,0.5s,baz=107,slow=2.5,SNR=9.7
       comp=Z,0.8nm,0.5s
ECSD   EROS Data Cent    92.35  45  P      P      15 23 02.3 -0.8
       baz=250
A36M   Sachs Harbour     93.86  14  P      P      15 23 09.5 +0.2
A36M   Sachs Harbour     93.86  14  P      P      15 23 10.0 +0.6
       baz=226
AGMN   Agassiz Nation    94.39  41  P      P      15 23 12.2 -0.1
       baz=250
CCM    Cathedral Cave    94.41  52  P      P      15 23 12.4 -0.3
       baz=253
SONM   Songino Array     94.97 318  P      P      15 23 14.1 -1.1
       comp=Z,0.3nm,0.5s,baz=105,slow=5.1,SNR=2.5
       comp=Z,0.3nm,0.5s
SPMN   Marine on St.     95.41  45  P      P      15 23 18.0 +0.9
       baz=252
MKAR   Makanchi Array   110.88 314  PKiKP  PKiKP  15 28 23.6 -1.7
       comp=Z,0.7nm,0.7s,baz=102,slow=0.8,SNR=8.3
KURBB  Kurchatov Arra   113.33 319  PKiKP  PKiKP  15 28 28.2 -1.5
       comp=Z,1.1nm,0.9s,baz=98,slow=2.0,SNR=7.1
BVAR   Borovoye Array   118.07 322  PKP    PKPdf  15 28 38.0 -0.8
       comp=Z,1.6nm,0.6s,baz=147,slow=2.0,SNR=9.9
ARU    Arti             123.65 328  PKP    PKPdf  15 28 48.5 -0.9
       comp=Z,2.2nm,0.5s,baz=101,slow=4.9,SNR=5.1
ARCES  ARCESS Array B   125.31 352  PKP    PKPdf  15 28 50.9 -1.3
       comp=Z,2.6nm,0.5s,baz=22,slow=1.3,SNR=18
BOSA   Boshof           131.64 203  PKP    PKPdf  15 29 04.9 -0.8
       comp=Z,3.5nm,0.5s,baz=303,slow=22,SNR=10.0
FINES  FINESS Array B   132.57 347  PKP    PKPdf  15 29 05.9 -0.3
       comp=Z,1.1nm,0.5s,baz=12,slow=3.0,SNR=10
HFS    Hagfors          135.78 354  PKP    PKPdf  15 29 11.5 -0.7
       comp=Z,4.2nm,0.8s,baz=86,slow=4.8,SNR=6.5
AKASG  Malin Array Be   140.80 336  PKhKP  PKPpre 15 29 16.4
       comp=Z,0.5nm,0.4s,baz=31,slow=3.9,SNR=2.1
KMBO   Kilima Mbogo     144.52 244  PKPdf  PKPdf  15 29 29.4 -0.4
CLL    Collm            144.53 352 i PKPdf PKPab  15 29 26.6 -0.4
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	comp=Z,7.0nm,0.8s						
STHS	Stebnicka Huta	144.59	343	*e*PKP	PKPdf	15 29 28.2	-0.4
CHVC	Chvalec	144.74	349	*e*PKP	PKPdf	15 29 28.2	-0.6
OSTC	Ostas	144.74	349	*e*PKP	PKPdf	15 29 28.7	-0.1
BRG	Berggiesshubel	144.82	351	*e*PKP	PKPbc	15 29 28.1	0.0
BRG				Amp		15 29 28.8	
	comp=Z,4.1nm,0.8s						
BUR08	Bucovina Ar. S	144.82	337	PKPdf	PKPdf	15 29 29.1	-0.1
UPC	Upice	144.83	349	*e*PKP	PKPdf	15 29 28.5	-0.4
DPC	Dobruska-Polom	144.92	348	*e*PKP	PKPdf	15 29 28.7	-0.4
OKC	Ostrava-Krasne	145.01	346	*e*PKP	PKPab	15 29 28.8	-0.1
KRLC	Kraliky	145.09	348	*e*PKP	PKPdf	15 29 29.3	-0.1
MORC	Moravsky Berou	145.21	347	*e*PKP	PKPdf	15 29 29.4	-0.3
MAUC	Maruska	145.53	346	*e*PKP	PKPab	15 29 31.0	+0.1
PRU	Pruhonice	145.59	350	*e*PKP	PKPbc	15 29 30.5	-0.1
VRAC	Vranov	145.85	347	PKPbc	PKPbc	15 29 31.0	-0.5
	comp=Z,3.3nm,0.6s,baz=18,slow=4.8,SNR=5.2						
VRAC	Vranov	145.85	347	*e*PKP	PKPbc	15 29 31.4	-0.1
BCLA	Clavier	145.88	1	*d*PKP	PKPbc	15 29 30.9	-0.6
VYHS	Vyhne	146.09	344	*e*PKP	PKPbc	15 29 32.1	-0.1
KRUC	Moravsky	146.13	348	*e*PKP	PKPbc	15 29 32.0	-0.3
MLR	Muntele Rosu	146.29	334	PKPbc	PKPbc	15 29 33.0	-0.1
	comp=Z,1.4nm,0.4s,baz=162,slow=20,SNR=3.5						
BRTR	Keskin Array B	146.32	320	PKPbc	PKPbc	15 29 33.2	-0.1
	comp=Z,6.5nm,0.9s,baz=109,slow=2.1,SNR=29						
GRF	Grafenberg Arr	146.33	354	*e*PKP	PKPab	15 29 33.8	-0.1
	baz=9.2,slow=2.4						
KHC	Kasperske Hory	146.57	351	*e*PKP	PKPbc	15 29 33.8	+0.1
MODS	Modra-Piesok	146.59	346	*e*PKP	PKPab	15 29 34.5	-0.4
WLF	Walferdange	146.64	360	*d*PKP	PKPab	15 29 34.3	-0.7
CKRC	Cesky Krumlov	146.76	350	*e*PKP	PKPdf	15 29 32.9	+0.6
GERES	GERESS Array B	146.83	350	PKPbc	PKPbc	15 29 34.2	-0.2
	comp=Z,2.3nm,0.8s,baz=8.5,slow=2.7,SNR=9.5						
CONA	Conrad Observa	147.32	347	*i* PKP	PKPbc	15 29 36.0	+0.2
	comp=Z,5.7nm,0.8s						
RONA	Rosalia, Austr	147.44	347	*i* PKP	PKPdf	15 29 32.5	-1.0
	comp=Z,7.5nm,0.9s						
MOA	Molln	147.70	349	*i* PKP	PKPbc	15 29 36.7	-0.1
	comp=Z,5.3nm,0.9s						
BIOA	Bad Ischl, Aus	147.96	350	*i* PKP	PKPbc	15 29 37.2	-0.3
	comp=Z,2.9nm,0.7s						
ARSA	Arzberg	148.03	348	*i* PKP	PKPbc	15 29 38.1	+0.4
	comp=Z,4.6nm,1.1s						
RETA	Reutte	148.56	354	*i* PKP	PKPbc	15 29 39.0	-0.2
	comp=Z,3.0nm,0.7s						
KBA	Koelnbreinsper	148.60	350	*i* PKP	PKPbc	15 29 38.5	-0.9
	comp=Z,3.1nm,1.0s						
WATA	Walderalm	148.61	353	*i* PKP	PKPbc	15 29 39.1	-0.2
	comp=Z,5.7nm,1.1s						
MOTA	Moosalm	148.66	353	*i* PKP	PKPbc	15 29 39.4	-0.1
	comp=Z,5.5nm,0.8s						
WTTA	Wattenberg	148.67	352	*i* PKP	PKPbc	15 29 39.4	-0.2
	comp=Z,8.2nm,0.6s						
SOKA	Soboth	148.68	348	*i* PKP	PKPbc	15 29 38.7	-0.8
	comp=Z,5.1nm,0.9s						
SQTA	Sankt Quirin	148.77	353	*i* PKP	PKPbc	15 29 39.8	+0.1
	comp=Z,7.3nm,0.9s						
DAVA	Damuels	148.84	355	*i* PKP	PKPbc	15 29 40.0	0.0
	comp=Z,7.0nm,0.7s						
OBKA	Obir	148.94	348	*i* PKP	PKPbc	15 29 40.0	-0.1
	comp=Z,2.6nm,0.5s						
MYKA	Terra Mystica	148.99	350	*i* PKP	PKPbc	15 29 39.2	-1.0
	comp=Z,5.1nm,1.0s						
FETA	Feichten	149.02	353	*i* PKP	PKPbc	15 29 40.4	0.0
	comp=Z,12nm,1.2s,SNR=5.2						
ABTA	Abfaltersbach	149.06	351	*i* PKP	PKPbc	15 29 39.8	-0.6
	comp=Z,11nm,1.0s,SNR=6.5						
DAVOX	Davos/Dischmat	149.34	355	PKPbc	PKPbc	15 29 41.0	-0.3
	comp=Z,9.6nm,0.7s,baz=156,slow=0.8,SNR=13						
FUORN	Ofenpass-Fuorn	149.46	354	PKPbc	PKiKP	15 29 42.0	-0.7
SSB	Saint Sauveur	151.01	2	PKPbc	PKiKP	15 29 45.9	+0.2
FNA	Florina	152.06	334	PKPbc	PKPbc	15 29 47.1	-0.6
ESDC	Sonseca Array	155.11	18	PKPab	PKPab	15 30 10.9	+0.5
	comp=Z,3.6nm,0.9s,baz=329,slow=3.8,SNR=13						
TORD	Torodi Ar. Bea	174.96	127	PKP	PKPdf	15 30 00.9	-1.9
	comp=Z,0.6nm,0.9s,baz=182,slow=1.0,SNR=4.8						
TORD				PKPab	PKPab	15 31 37.2	-1.0
	comp=Z,0.4nm,0.6s,baz=225,slow=1.0,SNR=2.3						

IDC 17 15:37:17.0±8.5, 31°.79S×179°.60W, h325km±93km, mb2.4/2, mbtmp3.2/3, Error ellipse: s-maj=100.7km s-min=44.1km az=1.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.99	202	P	Pn	15 38 59.8	+1.2
	1.5nm,0.3s,baz=348,slow=5.6,SNR=22						
URZ				S	S	15 40 19.8	-1.3
	5.2nm,0.4s,baz=327,slow=23,SNR=21						
ASAR	Alice Springs	41.69	269	P	P	15 44 35.6	+0.5
	0.2nm,0.8s,baz=108,slow=7.8,SNR=2.2						
	0.2nm,0.8s						
WRA	Warramunga Arr	42.81	275	P	P	15 44 43.6	-0.4
	0.3nm,0.8s,baz=114,slow=8.0,SNR=5.3						
	0.3nm,0.8s						
FINES	FINESS Array B	145.95	338	PKPbc	PKPdf	15 56 17.0	+0.4
	2.2nm,0.6s,baz=67,slow=4.7,SNR=16						

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*IDC **17** 15:44:36.9±3.9, 7°.45S×128°.53E, h122km±37km, mb4.0/16, mbtmp4.5/19, Error ellipse: s-maj=22.4km s-min=11.1km az=68.0*

*NEIC **17** 15:44:39.7±2.1, 7°.39S±0°.08×128°.64E±0°.08, h152km±8km, mb4.5/29, Error ellipse: s-maj=11.4km s-min=10.7km az=171.0*

*DJA **17** 15:44:40.5±0.2, 8°S±2°×12°9E±°, h150km±5km, M4.4/23, mB5.0/6, mb4.3/23, MLv4.5/12, Mw(mB)4.3/6*

ISC 17 15:44:39.7±0.3, 7°.44S±0°.05×128°.61E±0°.05, h151km, n131, σ1s.46/135, mb4.4/34, 1C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.71	102		Pn	15 45 24.6	+1.0
SAUI	Saumlaki	2.71	102	P	Pn	15 45 24.7	+1.2
SAUI	Saumlaki	2.71	102	P	Pn	15 45 24.8	+1.2
SAUI				S	Sn	15 45 58.7	+1.3
AAI	Ambon	3.75	354	P	Pn	15 45 38.9	+2.1
MSAI	Masohi	4.08	4	P	Pn	15 45 43.8	+2.7
NLAI	Namlea	4.44	340	P	Pn	15 45 48.8	+3.0
SOEI	Soe	4.88	242	Pn	Pn	15 45 51.9	+0.3
SOEI	Soe	4.88	242	P	Pn	15 45 52.5	+0.9
SOEI	Soe	4.88	242	P	Pn	15 45 52.0	+0.4
FAKI	Fak Fak	5.77	39	Pn	Pn	15 46 02.1	-1.3
FAKI	Fak Fak	5.77	39	P	Pn	15 46 02.3	-1.1
FAKI	Fak Fak	5.77	39	P	Pn	15 46 02.9	-0.5
	36nm,0.6s,1μm0.3nm						
MTN	Manton Dam	5.91	155	Pn	Pn	15 46 04.5	-0.8
MTN	Manton Dam	5.91	155	P	Pn	15 46 04.5	-0.8
SANI	Sanana	5.96	334	P	Pn	15 46 09.1	+3.2
	20nm,0.8s,0.1nm						
MMRI	Maumere	6.42	259	Pn	Pn	15 46 11.1	-1.0
MMRI	Maumere	6.42	259	P	Pn	15 46 13.0	+0.9
MMRI	Maumere	6.42	259	P	Pn	15 46 12.5	+0.4
	61nm,0.8s,0.4nm						
KDU	Kakadu	6.45	144	P	Pn	15 46 11.5	-0.9
LBMI	Labuha	6.85	351	P	Pn	15 46 20.6	+2.8
	30nm,1.1s,1μm0.1nm						
RKPI	Ransiki, Papua	8.09	44	P	Pn	15 46 36.8	+2.4
	208nm,0.5s,4μm						
BSSI	Bau Bau, Buton	8.17	279	P	Pn	15 46 37.3	+1.9
	29nm,1.2s						
KNRA	Kununurra	8.19	179	Pn	Pn	15 46 34.1	-1.5
KNRA	Kununurra	8.19	179	P	Pn	15 46 34.3	-1.3
BASI	Baing, Sumba	8.41	250	P	Pn	15 46 38.7	+0.1
	176nm,0.7s						
BKSI	Bulukumba	8.70	284	P	Pn	15 46 44.5	+2.0
	11nm,1.0s						
PLAI	Plampang	10.82	262	P	Pn	15 47 10.7	+0.1
PLAI	Plampang	10.82	262	P	Pn	15 47 10.5	-0.1
	21nm,0.5s						
FITZ	Fitzroy Crossi	10.98	195	Pn	Pn	15 47 09.9	-2.8
FITZ	Fitzroy Crossi	10.98	195	P	Pn	15 47 09.9	-2.8
SMPI	Sarmi	11.42	62	P	Pn	15 47 19.0	+0.5
	19nm,1.1s						
TOLI2	Tolitoli	11.54	317	P	P	15 47 24.6	-2.9
WB0	Warramunga Arr	13.47	156	Pn	Pn	15 47 42.2	-2.8
WRAB	Tennant Creek	13.61	156		Pn	15 47 43.8	-2.9
WRAB	Tennant Creek	13.61	156	P	Pn	15 47 43.8	-2.9
WRA	Warramunga Arr	13.61	156	P	Pn	15 47 43.4	-3.3
	20nm,0.8s,baz=331,slow=13,SNR=142						
WRA				S	Sn	15 50 05.2	-12
	19nm,0.6s,baz=334,slow=21,SNR=9.3						
WB2	Warramunga Arr	13.62	156	Pn	Pn	15 47 43.8	-3.0
COEN	Coen	15.70	116		Pn	15 48 11.6	-1.2
COEN				IAmb	IAmb	15 48 16.2	
	comp=Z,62nm,1.4s						
COEN	Coen	15.70	116	P	Pn	15 48 12.7	-0.1
MBWA	Marble Bar	16.11	211	P	P	15 48 19.2	+1.0
MBWA				IAmb	IAmb	15 48 21.5	
	comp=Z,28nm,1.5s						
MBWA	Marble Bar	16.11	211	P	P	15 48 18.6	+0.4
PSA00	Pilbara Seismi	16.40	210	P	P	15 48 22.0	+0.6
PSA00				IAmb	IAmb	15 48 56.7	
	comp=Z,28nm,1.5s						
PSA00	Pilbara Seismi	16.40	210	P	P	15 48 22.2	+0.8
PWJI	Pagerwojo	16.67	267	P	P	15 48 24.5	+0.1
	comp=Z,17nm,1.1s						
QIS	Mount Isa	16.83	142	P	Pn	15 48 26.4	-0.2
AS31	Alice Springs	16.91	163	P	P	15 48 26.4	-0.6
ASAR	Alice Springs	16.91	163	P	P	15 48 25.6	-1.5
	comp=Z,29nm,0.6s,baz=337,slow=9.5,SNR=569						
ASAR				S	S	15 51 21.1	-15
	comp=Z,1.9nm,0.4s,baz=343,slow=24,SNR=3.2						
AS01	Alice Springs	16.93	163	P	P	15 48 27.4	+0.2
WRKA	Warakurna	17.50	181	P	Pn	15 48 35.2	+0.6
KKM	Kota Kinabalu	18.23	317	P	Pn	15 48 45.3	+1.9
PMG	Port Moresby	18.45	97	P	P	15 48 44.0	+0.1
	comp=Z,39nm,0.8s,baz=320,slow=7.9,SNR=2.8						
PMG				S	S	15 52 01.3	-5.5
	comp=Z,5.4nm,0.4s,baz=283,slow=14,SNR=1.2						
PMG	Port Moresby	18.45	97		P	15 48 42.5	-1.4
MTSU	Mount Surprise	18.62	126	P	Pn	15 48 47.5	-0.4
SBUM	Sibu	19.08	300	P	P	15 48 50.4	-0.4
SBUM				IAmb	IAmb	15 48 55.5	
	comp=Z,36nm,1.1s						
KPJI	Karang Pucung	19.52	269	P	P	15 48 54.7	-0.9
KSM	Kuching	20.30	295	P	P	15 49 02.7	-1.2
GIRL	Giralia	20.50	221	P	P	15 49 07.7	+1.8
CTA	Charters Tower	21.22	128	P	P	15 49 14.3	+0.5
	comp=Z,2.0nm,0.5s,baz=300,slow=12,SNR=8.9						
CTA				S	S	15 53 00.9	0.0
	comp=Z,5.4nm,1.2s,baz=223,slow=19,SNR=2.3						
	comp=Z,2.0nm,0.5s						
CTAO	Charters Tower	21.22	128	P	P	15 49 14.0	+0.2
CTAO	Charters Tower	21.22	128	P	P	15 49 15.3	+1.5
OOD	Oodnadatta	21.32	163	P	P	15 49 15.0	+0.2
MEEK	Meekatharra	21.33	205	P	P	15 49 15.5	+0.6
FORT	Forrest	23.22	181	P	P	15 49 33.2	-0.2
FORT				IAmb	IAmb	15 49 49.8	
	comp=Z,22nm,1.0s						
FORT	Forrest	23.22	181	P	P	15 49 34.5	+1.1
INKA	Innaminka	23.23	152	P	P	15 49 35.1	+1.6
MULG	Mulgathing	23.29	168	P	P	15 49 35.1	+1.1
QLP	Quilpie	24.14	144	P	P	15 49 43.2	+1.3
MORW	Morawa	24.56	207	P	P	15 49 46.0	+0.4
MORW				IAmb	IAmb	15 49 48.2	
	comp=Z,17nm,0.6s						
MORW	Morawa	24.56	207	P	P	15 49 47.5	+1.9
LCRK	Leigh Creek	24.59	160	P	P	15 49 46.9	+1.0
BLDU	Ballidu	25.61	204	P	P	15 49 55.5	+0.4
MNAI	Manna	25.70	275	P	P	15 49 54.0	-2.2
BBOO	Buckleboo	26.17	166	P	P	15 49 59.7	-0.4
BBOO				IAmb	IAmb	15 50 32.1	
	comp=Z,21nm,1.4s						
BBOO	Buckleboo	26.17	166	P	P	15 50 01.2	+1.1
STKA	Stephens Creek	27.16	155	P	P	15 50 09.2	+0.2
	comp=Z,4.4nm,0.4s,baz=333,slow=9.3,SNR=16						
	comp=Z,4.4nm,0.4s						
STKA	Stephens Creek	27.16	155	P	P	15 50 09.9	+0.9
STKA	Stephens Creek	27.16	155	P	P	15 50 09.9	+0.9
NWAO	Narrogin (SRO)	27.47	201	P	P	15 50 11.5	-0.3
	comp=Z,10.0nm,1.0s,baz=42,slow=6.3,SNR=8.4						
	comp=Z,10.0nm,1.0s						
NWAO	Narrogin (SRO)	27.47	201	P	P	15 50 12.2	+0.4
NWAO	Narrogin (SRO)	27.47	201	P	P	15 50 12.6	+0.8
HTT	Hallett	27.57	161	P	P	15 50 14.2	+1.5
CMSA	Cobar Meteorol	28.79	149	P	P	15 50 24.7	+1.2
KULM	Kulim	30.64	294	P	P	15 50 39.5	-0.5
ARPS	Mount Arapiles	31.59	159	P	P	15 50 50.0	+2.0
GSI	Gunungsitoli	32.16	284	P	P	15 50 53.0	-0.3
GSI				IAmb	IAmb	15 50 57.1	
	comp=Z,5.6nm,0.7s						
CAN	Canberra	33.47	149	P	P	15 51 02.3	-2.2
CAN	Canberra	33.47	149	P	P	15 51 06.8	+2.3
TOO	Toolangi	33.68	155	P	P	15 51 04.8	-1.5
TOO				IAmb	IAmb	15 51 24.6	
	comp=Z,13nm,1.1s						
TOO	Toolangi	33.68	155	P	P	15 51 09.1	+2.8
JCJ	Chichijima	36.77	20	P	P	15 51 31.1	-1.7
CMAR	Chiang Mai Arr	38.98	312	P	P	15 51 51.9	+0.4
	comp=Z,2.2nm,0.8s,baz=140,slow=6.8,SNR=17						
CMAR				PcP	PcP	15 53 59.9	+0.9
	comp=Z,1.2nm,0.5s,baz=173,slow=1.9,SNR=8.3						
	comp=Z,2.2nm,0.8s						
CHTO	Chiang Mai	39.20	312	P	P	15 51 50.5	-2.8
DZM	Mont Dzumac	39.23	116	P	P	15 51 55.3	+1.6
	comp=Z,3.1nm,0.7s,baz=306,slow=19,SNR=1.4						
	comp=Z,3.1nm,0.7s						
NJ2	Nanjing	40.36	347	*e*P	P	15 52 03.5	+0.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
PZH	PanZhiHua	42.64	323	P	P	15 52 21.8	+0.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
KSRS	Korea Array	44.67	359	P	P	15 52 37.9	+0.6
	comp=Z,0.4nm,0.4s,baz=178,slow=9.6,SNR=2.7						
	comp=Z,0.4nm,0.4s						
XAN	Xi'an	45.28	337	P	P	15 52 41.3	-1.1
XAN				*e*pP	pP	15 53 12.4	-2.3
XAN				pmax	pmax		
	comp=Z,17nm,0.6s						
LZH	Lanzhou	49.16	333	*e*P	P	15 53 13.4	+0.9
LZH				pP	pP	15 53 45.0	-0.3
LZH				sP	pwP	15 53 52.9	+1.1
LZH				pmax	pmax		
	comp=Z,35nm,1.1s						
HHC	Hu-ho-hao-te	50.55	343	*e*P	P	15 53 27.0	+4.1
HHC				pmax	pmax		
	comp=Z,16nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,6.2s						
WHZ	Wether Hill Ro	51.11	145	P	P	15 53 28.0	+1.0
USRK	Ussuriysk Ar.	51.49	3	P	P	15 53 29.4	-0.2
	comp=Z,1.4nm,0.5s,baz=190,slow=5.8,SNR=2.9						
	comp=Z,1.4nm,0.5s						
TAPN	Taplejung	52.56	313	*e*P	P	15 53 38.2	-0.1
	comp=Z,12nm,0.4s						
RAMN	Ramite	53.15	312	*e*P	P	15 53 42.4	-0.2
	comp=Z,25nm,0.5s						
GTA	Gaotai	53.71	332	⇑P	P	15 53 46.9	+0.6
GTA				pmax	pmax		
	comp=Z,13nm,0.9s						
JIRN	Jiri	53.85	312	*e*P	P	15 53 47.3	-0.5
	comp=Z,7.4nm,0.4s						
GUN	Gumba	54.22	312	*e*P	P	15 53 50.1	-0.3
	comp=Z,21nm,0.5s						
PKI	Pulchoki	54.38	312	*e*P	P	15 53 50.9	-0.7
PKIN	Phulchoki	54.39	312	*e*P	P	15 53 50.7	-0.9
	comp=Z,10nm,0.4s						
GKN	Gorkha	55.19	312	*e*P	P	15 53 56.8	-0.4
	comp=Z,26nm,0.3s						
DANN	Dangsing	56.02	311	*e*P	P	15 54 02.8	-0.5
ULN	Ulaanbaatar	58.27	343	P	P	15 54 17.8	-0.8
ULN				IAmb	IAmb	15 54 21.1	
	comp=Z,4.4nm,0.9s						
SONM	Songino Array	58.44	343	P	P	15 54 20.3	+0.7
	comp=Z,2.9nm,0.7s,baz=164,slow=6.7,SNR=21						
	comp=Z,2.9nm,0.7s						
WMQ	Urumqi	63.02	328	*e*P	P	15 54 51.3	+0.6
WMQ				pmax	pmax		
	comp=Z,15nm,1.3s						
PETK	Petropavlovsk-	65.18	19	P	P	15 55 05.1	+0.6
	comp=Z,1.8nm,0.6s,baz=219,slow=3.8,SNR=4.5						
	comp=Z,1.8nm,0.6s						
KSH	Kashi	67.42	318	P	P	15 55 20.3	+1.0
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR	Makanchi Array	67.85	328	P	P	15 55 22.1	+0.4
	comp=Z,3.3nm,0.4s,baz=115,slow=8.5,SNR=96						
	comp=Z,3.3nm,0.4s						
MAKZ	Makanchi	68.03	327	P	P	15 55 23.1	+0.3
MAKZ				IAmb	IAmb	15 55 24.9	
	comp=Z,15nm,1.4s						
AAK	Ala-Archa	70.00	320	P	P	15 55 35.2	+0.1
	comp=Z,2.0nm,0.6s,baz=146,slow=6.5,SNR=7.6						
	comp=Z,2.0nm,0.6s						
GAR	Garm	71.01	315	P	P	15 55 41.2	-0.2
GAR				IAmb	IAmb	15 55 42.2	
	comp=Z,7.6nm,1.1s						
ZALV	Zalesovo Beam	71.38	334	P	P	15 55 42.2	-0.8
	comp=Z,3.4nm,0.3s,baz=137,slow=5.5,SNR=22						
	comp=Z,3.4nm,0.3s						
KURBB	Kurchatov Arra	72.17	329	P	P	15 55 47.9	0.0
	comp=Z,4.5nm,0.6s,baz=125,slow=4.8,SNR=50						
	comp=Z,4.5nm,0.6s						
VNDA	Vanda	72.18	173	P	P	15 55 48.2	+0.7
	comp=Z,2.2nm,0.9s,baz=312,slow=9.5,SNR=7.3						
	comp=Z,2.2nm,0.9s						
VNDA	Vanda	72.18	173	P	P	15 55 48.4	+0.9
VNDA				IAmb	IAmb	15 55 58.1	
	comp=Z,12nm,1.4s						
KURK	Kurchatov	72.18	329	P	P	15 55 48.1	+0.2
KURK				IAmb	IAmb	15 55 49.8	
	comp=Z,5.3nm,0.7s						
BVAR	Borovoye Array	77.71	328	P	P	15 56 19.5	-0.1
	comp=Z,2.6nm,0.4s,baz=126,slow=10,SNR=28						
	comp=Z,2.6nm,0.4s						
BRVK	Borovoye	77.78	328	P	P	15 56 19.8	-0.2
ABKAR	Akbulak array	82.00	322	P	P	15 56 42.4	-0.4
ABKAR				IAmb	IAmb	15 56 43.5	
	comp=Z,3.8nm,0.5s						
QSPA	South Pole Qui	82.54	180	P	P	15 56 45.8	+0.3
	comp=Z,1.4nm,0.5s,baz=206,slow=0.9,SNR=18						
	comp=Z,1.4nm,0.5s						
QSPA	South Pole Qui	82.54	180	P	P	15 56 45.2	-0.3
TXAR	Lajitas Array	126.33	59	PKP	PKPdf	16 03 24.8	-0.6
	comp=Z,0.2nm,0.4s,baz=188,slow=2.9,SNR=4.8						
LPAZ	La Paz	151.18	145	PKPbc	PKiKP	16 04 17.8	+0.4
	comp=Z,1.3nm,0.4s,baz=346,slow=1.5,SNR=6.8						

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*IDC **17** 15:44:58.9±2.1, 17°.29S×179°.02W, h561km±18km, mb3.1/5, mbtmp3.9/6, Error ellipse: s-maj=113.5km s-min=26.4km az=154.0*

ISC 17 15:44:58.9±1.7, 16°.8S±0°.7×179°.2W±0°.4, h550km, n10, σ1s.10/9, mb3.2/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.78	250	P	P	15 46 14.2	+1.4
	40nm,0.7s,baz=88,slow=3.6,SNR=42						
ASAR	Alice Springs	44.37	253	P	P	15 52 19.9	-1.2
	11nm,0.6s,baz=90,slow=8.4,SNR=4.0						
	11nm,0.6s						
NVAR	Mina Array Bea	79.17	44	P	P	15 56 07.5	+0.1
	0.5nm,0.7s,baz=215,slow=8.8,SNR=3.8						
	0.5nm,0.7s						
ILAR	Eielson Array	85.00	13	P	P	15 56 36.2	+0.1
	0.5nm,1.0s,baz=222,slow=4.9,SNR=4.5						
	0.5nm,1.0s						
TXAR	Lajitas Array	86.05	58	P	P	15 56 42.1	+0.1
	0.5nm,0.7s,baz=218,slow=5.7,SNR=5.9						
	0.5nm,0.7s						
PDAR	Pinedale Array	87.08	44	P	P	15 56 46.2	-0.6
	0.3nm,0.6s,baz=230,slow=2.2,SNR=3.5						
	0.3nm,0.6s						
BVAR	Borovoye Array	115.53	321	PKP	PKPdf	16 02 36.9	-1.5
	0.4nm,0.3s,baz=115,slow=1.1,SNR=4.8						
BRTR	Keskin Array B	143.48	315	PKP	PKPab	16 03 30.5	+0.4
	0.8nm,0.8s,baz=110,slow=3.4,SNR=4.1						
MMAI	Mount Meron Ar	144.92	304	PKPbc	PKPbc	16 03 35.7	+0.9
	1.4nm,0.5s,baz=74,slow=5.1,SNR=2.6						
GERES	GERESS Array B	146.37	345	PKPbc	PKPbc	16 03 39.0	+0.4
	0.7nm,0.6s,baz=14,slow=4.4,SNR=4.6						

IDC 17 15:46:45.9±20.0, 57°.76N×33°.25W, h0km, mb3.3/3, mbtmp3.3/3, MS3.5/30, Error ellipse: s-maj=385.2km s-min=97.5km az=126.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	Borgarnes	9.05	34	LR	LR	15 51 33.3	
	comp=Z,310nm,20.2s,baz=206,slow=32						
SFJD	Kangerlussuaq	12.23	326	LR	LR	15 53 40.7	
	comp=Z,184nm,18.2s,baz=130,slow=34						
EKA	Eskdalemuir Ar	16.70	85	LR	LR	15 55 14.2	
	comp=Z,216nm,18.1s,baz=39,slow=30						
FRB	Frobisher Bay	18.07	304	LR	LR	15 57 06.8	
	comp=Z,179nm,18.5s,baz=38,slow=34						
SCHQ	Schefferville	18.75	275	LR	LR	15 57 13.3	
	comp=Z,206nm,18.6s,baz=59,slow=34						
NOA	NORSAR Array B	22.54	63	LR	LR	15 58 44.1	
	comp=Z,68nm,21.1s,baz=305,slow=32						
ESDC	Sonseca Array	26.15	121	LR	LR	15 59 52.0	
	comp=Z,61nm,20.7s,baz=322,slow=30						
DAVOX	Davos/Dischmat	28.11	94	LR	LR	16 02 01.0	
	comp=Z,110nm,18.2s,baz=266,slow=33						
GERES	GERESS Array B	28.90	87	LR	LR	16 02 57.0	
	comp=Z,83nm,18.7s,baz=288,slow=34						
VRAC	Vranov	30.18	84	LR	LR	16 04 42.2	
	comp=Z,88nm,20.9s,baz=328,slow=36						
KEST	Kesra	35.72	109	LR	LR	16 06 42.2	
	comp=Z,94nm,21.9s,baz=244,slow=34						
ULM	Lac du Bonnet	36.34	286	LR	LR	16 07 12.5	
	comp=Z,91nm,18.9s,baz=291,slow=34						
MLR	Muntele Rosu	37.52	83	LR	LR	16 10 50.1	
	comp=Z,65nm,19.1s,baz=346,slow=38						
YKA	Yellowknife Ar	38.27	312	P	P	15 54 07.3	-0.1
	0.2nm,0.7s,baz=61,slow=9.3,SNR=5.2						
YKA				LR	LR	16 09 20.9	
	comp=Z,108nm,19.2s,baz=319,slow=35						
	0.2nm,0.7s						
TKL	Tuckaleechee C	39.87	259	LR	LR	16 10 01.7	
	comp=Z,128nm,19.3s,baz=20,slow=35						
KIRV	Kirov	40.98	52	LR	LR	16 09 36.2	
	comp=Z,33nm,18.8s,baz=300,slow=34						
IDI	Anoyia	44.20	95	LR	LR	16 14 13.2	
	comp=Z,26nm,18.2s,baz=280,slow=37						
BRTR	Keskin Array B	45.60	83	LR	LR	16 15 01.2	
	comp=Z,46nm,18.9s,baz=320,slow=37						
DLBC	Dease Lake	46.79	314	LR	LR	16 12 40.2	
	comp=Z,82nm,18.4s,baz=109,slow=33						
ILAR	Eielson Array	47.89	328	P	P	15 55 24.9	-0.2
	0.4nm,0.9s,baz=25,slow=7.0,SNR=4.3						
ILAR				LR	LR	16 14 50.0	
	comp=Z,31nm,18.6s,baz=290,slow=35						
	0.4nm,0.9s						
NEW	Newport	48.22	297	LR	LR	16 14 15.2	
	comp=Z,73nm,19.3s,baz=37,slow=34						
PDAR	Pinedale Array	48.35	287	P	P	15 55 29.1	-0.2
	0.4nm,0.8s,baz=57,slow=6.6,SNR=2.8						
PDAR				LR	LR	16 14 18.1	
	comp=Z,63nm,20.5s,baz=25,slow=34						
	0.4nm,0.8s						
ANMO	Albuquerque	52.51	278	LR	LR	16 17 38.9	
	comp=Z,86nm,18.4s,baz=120,slow=35						
ELK	Elko	52.73	289	LR	LR	16 17 50.7	
	comp=Z,67nm,18.0s,baz=17,slow=35						
KDAK	Kodiak Island	55.10	325	LR	LR	16 21 44.8	
	comp=Z,48nm,18.6s,baz=262,slow=38						
TXAR	Lajitas Array	55.36	271	LR	LR	16 17 52.2	
	comp=Z,45nm,18.3s,baz=202,slow=34						
YBH	Yreka Blue Hor	55.69	295	LR	LR	16 19 08.4	
	comp=Z,50nm,20.4s,baz=40,slow=35						
NVAR	Mina Array Bea	56.02	289	LR	LR	16 20 23.7	
	comp=Z,56nm,18.0s,baz=330,slow=36						
PFO	Pinyon Flats O	58.80	284	LR	LR	16 20 47.2	
	comp=Z,47nm,18.7s,baz=64,slow=35						
CMIG	Matias Romero	60.65	255	LR	LR	16 22 37.3	
	comp=Z,34nm,20.4s,baz=20,slow=36						

WEL 17 16:24:52.8±0.6, 42°S±3°×17°4E±°, h5km±3km, M2.0/6, ML2.4/9, MLv2.0/6, Error ellipse: s-maj=0.0km s-min=0.0km az=129.0, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSWZ	Blackbirch Sta	0.35	20	P	Pg	16 24 60.0	+0.5
BSWZ				P	Pn	16 25 05.2	+0.7
KHZ	Kahutara	0.40	200	P	Pg	16 25 00.8	+0.4
KHZ				S	Sg	16 25 06.6	+1.0
CMWZ	Cape Campbell	0.47	52	P	Pb	16 25 02.8	-0.8
CMWZ				S	Sb	16 25 10.7	-0.3
TUWZ	Tuamarina	0.64	15	P	Pg	16 25 05.4	+0.4
TUWZ				S	Sg	16 25 14.3	+1.1
THZ	Tophouse	0.67	295	P	Pg	16 25 06.0	+0.4
THZ				S	Sg	16 25 15.0	+0.7
NNZ	Nelson	0.86	343	P	Pg	16 25 09.7	+0.4
TCW	Tory Channel	0.93	27	P	Pg	16 25 10.1	-0.5
MRNZ	Matariki Terra	0.97	312	P	Pb	16 25 11.7	-0.3
GVZ	Greta Valley S	1.05	208	P	Pg	16 25 12.9	-0.1
WEL	Wellington	1.09	46	P	Pg	16 25 13.3	-0.4

TKNZ	Takaka Hill	1.16	330	P	Pg	16 25 14.1	-0.9
PLWZ	Palliser	1.24	68	P	Pg	16 25 14.4	-2.2
DUWZ	D'Urville Isla	1.25	7	P	Pg	16 25 16.1	-0.6
LTZ	Lake Taylor	1.30	235	P	Pn	16 25 16.7	-1.0
CAW	Cannon Point	1.38	48	P	Pn	16 25 16.9	-1.8
DSZ	Denniston Nort	1.46	281	P	Pb	16 25 20.4	-0.1
QRZ	Quartz Range	1.51	323	P	Pn	16 25 20.7	+0.2
MTW	Mount Morrison	1.60	57	P	Pn	16 25 19.1	-2.7
OGWZ	Otaki Gorge	1.64	42	P	Pn	16 25 20.6	-1.7
INZ	Inchbonnie	1.82	247	P	Pn	16 25 24.3	-0.4
MQZ	McQueen's Vall	1.84	205	P	Pn	16 25 22.2	-2.8
MRZ	Mangatainoka R	1.97	46	P	Pn	16 25 24.5	-2.3

MOS ***17*** *16:25:37.8±1.1, 43°.98N×147°.50E, h72^{km}, mb4.3/1, Error ellipse: s-maj=13.5km s-min=12.2km az=131.5*
SKHL ***17*** *16:25:38.3±0.1, 43°.90N×147°.60E, h79^{km}±4^{km}, mb4.8/3*
JMA ***17*** *16:25:39.8±0.2, 43°.8N±0°.8×14°7E±°, h29^{km}, MV4.0/40, E OFF HOKKAIDO*
NIED ***17*** *16:25:39.8, 43°.82N×147°.38E, h29^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.23; $M_{\theta\theta}$-2.62; $M_{\phi\phi}$1.38; $M_{r\theta}$-0.43; $M_{\theta\phi}$-0.38; $M_{\phi r}$-4.59; Fault plane solution: $M_0$4.75000×10^{14} NP1: ϕ_s201.00000°, δ87.00000°, λ69.00000°. NP2: ϕ_s102.00000°, δ21.00000°, λ171.00000°.*
IDC ***17*** *16:25:42.5±3.6, 44°.08N×147°.38E, h92^{km}±30^{km}, mb3.4/15, mbtmp3.7/16, MS2.9/1 Error ellipse: s-maj=24.8km s-min=19.4km az=120.0*
ISC 17 16:25:37.4±1.3, **43°.85N**±0°.06×**147°.65E**±0°.07, **h55**^{km}±9^{km}, **n55,** σ1^s**62**/69, **mb3.7**/15, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.59	272	*e*PN	Pn	16 25 50.6	+0.6
SHO				*i* S	Sn	16 25 58.8	-0.4
SHO				pmax	pmax		
	comp=E,863nm,0.3s						
SHO				pmax	pmax		
	comp=Z,1µm,0.3s						
SHO				pmax	pmax		
	comp=N,6µm,0.5s						
SHO				smax	smax		
	comp=N,6µm,0.5s						
SHO				smax	smax		
	comp=E,4µm,0.5s						
SHO	Shikotan	0.59	272	*i* P	Pn	16 25 50.8	+0.8
SHO				AMB	AMB	16 25 52.3	
	comp=E,1µm,0.4s						
SHO				*i* S	Sn	16 25 59.0	-0.2
SHO				A	A	16 26 02.8	
	comp=E,2µm,0.3s						
SHO				A	A	16 26 02.8	
	comp=E,2µm,0.3s						
YUK	Yuzh-Kuril'sk	1.30	279	*e*PN	Pn	16 25 59.2	0.0
YUK				*e*S	Sn	16 26 13.4	-2.2
YUK				pmax	pmax		
	comp=Z,956nm,0.2s						
YUK				pmax	pmax		
	comp=E,353nm,0.3s						
YUK				pmax	pmax		
	comp=N,355nm,0.2s						
YUK				smax	smax		
	comp=N,2µm,0.4s						
YUK				smax	smax		
	comp=E,3µm,0.4s						
YUK	Yuzh-Kuril'sk	1.30	279	*e*P	Pn	16 25 59.3	0.0
YUK				AMB	AMB	16 26 00.9	
	comp=E,560nm,0.5s						
YUK				*e*S	Sn	16 26 14.5	-1.1
YUK				A	A	16 26 16.9	
	comp=E,2µm,0.5s						
YUK				A	A	16 26 16.9	
	comp=E,3µm,0.5s						
KUR	Kuril'sk	1.39	6	*e*PN	Pn	16 26 01.5	+1.1
KUR				*e*S	Sn	16 26 17.2	-0.6
KUR				pmax	pmax		
	comp=Z,81nm,0.3s						
KUR				smax	smax		
	comp=E,577nm,0.3s						
KUR				smax	smax		
	comp=N,161nm,0.2s						
KUR	Kuril'sk	1.39	6	*i* P	Pn	16 26 01.6	+1.1
KUR				AMB	AMB	16 26 06.5	
	comp=N,80nm,0.2s						
KUR				*e*S	Sn	16 26 18.0	+0.2
KUR				A	A	16 26 22.2	
	comp=N,410nm,0.3s						
KUR				A	A	16 26 22.2	
	comp=N,580nm,0.3s						
NEM2	Nemuro 2	1.47	251	*i* P	Pn	16 26 02.1	+0.7
NEM2				*e*S	Sn	16 26 18.3	-1.3
NMR	Nemuro--Hokkai	1.48	252	*e*PN	Pn	16 26 02.1	+0.5
NMR				*e*S	Sn	16 26 18.6	-1.2
NMR	Nemuro--Hokkai	1.48	252	*i* P	Pn	16 26 02.2	+0.6
NMR				*e*S	Sn	16 26 19.0	-0.8
RUSJ	Misakicho	1.75	279	*e*PN	Pn	16 26 06.4	+1.1
RUSJ				*e*S	Sn	16 26 26.1	-0.4
JRA	Rausu	1.83	274	*e*P	Pn	16 26 07.4	+1.0
JRA				*e*S	Sn	16 26 27.8	-0.6
JNSB	Nemuroshibetsu	1.92	269	P	Pn	16 26 08.7	+1.1
JNSB				*e*S	Sn	16 26 30.3	-0.2
JKHN	Kushirohamanak	1.97	248	P	Pn	16 26 09.4	+1.1
JKHN				*e*S	Sn	16 26 31.2	-0.5
JNK	Nakash	2.14	264	*e*P	Pn	16 26 11.6	+0.9
JNK				*e*S	Sn	16 26 35.1	-1.0
AKK	Akkeshi	2.21	249	*e*P	Pn	16 26 12.5	+1.0
JAK	Akkeshi	2.31	249	*e*P	Pn	16 26 13.9	+1.0
JAK				*e*S	Sn	16 26 38.9	-1.4
JTKR	Abashiri--Toko	2.71	274	*e*P	Pn	16 26 19.7	+1.4
JAR	Ashorobuto	2.87	260	*e*P	Pn	16 26 22.4	+1.8
JAR				*e*S	Sn	16 26 53.1	-0.9
JOB	Onbets	2.94	253	*e*P	Pn	16 26 23.2	+1.7
JOB				*e*S	Sn	16 26 54.6	-0.9
JMP	Maruseppu	3.10	274	*e*P	Pn	16 26 25.4	+1.6
JCH	Churui	3.37	250	*e*P	Pn	16 26 28.7	+1.3
JCH				*e*S	Sn	16 27 05.3	-0.9
JKK2	Kamakawa 2	3.54	272	*e*P	Pn	16 26 32.1	+2.2
JKA	Kamikawa-asahi	3.65	276	*e*P	Pn	16 26 33.8	+2.4
ASAJ	Asahikawa	3.66	276	P	Pn	16 26 33.8	+2.4
	comp=N,20nm,0.5s,baz=66,slow=12,SNR=54						
ASAJ				S	Sn	16 27 21.4	+8.1
	comp=N,16nm,0.5s,baz=209,slow=19,SNR=2.2						
ASAJ	Asahikawa	3.66	276	*e*P	Pn	16 26 33.8	+2.4
JFR	Furan	3.74	261	*e*P	Pn	16 26 35.1	+2.5
JFR				*e*S	Sn	16 27 16.2	+0.8
JEM	Erimo	3.77	242	*e*S	Sn	16 27 16.8	+0.7
JSE	Soyaes	3.79	289	*e*P	Pn	16 26 34.7	+1.5
JNBK	Urakawa-nobuka	3.92	248	*e*P	Pn	16 26 36.2	+1.2
JNBK				*e*S	Sn	16 27 18.3	-1.3
YSS	Yuzh-Sakhalins	4.64	314	*e*PN	Pn	16 26 45.5	+0.7
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS	Yuzh-Sakhalins	4.64	314	*e*P	Pn	16 26 45.8	+1.0
YSS				AMB	AMB	16 26 46.4	
	comp=Z,30nm,0.3s						
KLR	Kul'dur	12.19	302	LR	LR	16 32 36.0	
	comp=Z,49nm,18.7s,baz=94,slow=35						
SONM	Songino Array	28.77	293	P	P	16 31 29.4	-0.4
	comp=Z,0.5nm,0.6s,baz=83,slow=5.3,SNR=4.6						
	comp=Z,0.5nm,0.6s						
H11N2	WAKE ISLAND Hy	28.94	140	T	T	17 02 21.1	
	baz=331,slow=76,SNR=67						
H11N1	WAKE ISLAND Hy	28.95	140	T	T	17 02 20.0	
	baz=331,slow=76,SNR=66						
H11N3	WAKE ISLAND Hy	28.96	140	T	T	17 02 25.4	
	baz=331,slow=76,SNR=78						
H11S1	WAKE ISLAND Hy	29.92	142	T	T	17 03 31.2	
	baz=332,slow=76,SNR=164						
H11S3	WAKE ISLAND Hy	29.92	142	T	T	17 03 31.6	
	baz=332,slow=76,SNR=78						
H11S2	WAKE ISLAND Hy	29.94	142	T	T	17 03 32.5	
	baz=332,slow=76,SNR=102						
ILAR	Eielson Array	41.19	36	P	P	16 33 16.5	+0.4
	comp=Z,0.4nm,0.9s,baz=272,slow=9.9,SNR=4.3						
	comp=Z,0.4nm,0.9s						
ZALV	Zalesovo Beam	41.23	307	PcP	PcP	16 35 14.1	-0.3
	comp=Z,0.6nm,0.4s,baz=69,slow=3.1,SNR=3.0						
MKAR	Makanchi Array	44.86	298	P	P	16 33 45.3	-0.7
	comp=Z,0.4nm,0.5s,baz=79,slow=9.2,SNR=10.0						
	comp=Z,0.4nm,0.5s						
CMAR	Chiang Mai Arr	47.90	254	P	P	16 34 11.2	+1.1
	comp=Z,0.7nm,0.8s,baz=46,slow=7.0,SNR=6.5						
	comp=Z,0.7nm,0.8s						
YKA	Yellowknife Ar	55.52	34	P	P	16 35 08.1	+1.8
	comp=Z,0.4nm,0.8s,baz=298,slow=7.0,SNR=5.3						
	comp=Z,0.4nm,0.8s						
ARCES	ARCESS Array B	59.28	340	P	P	16 35 32.5	-0.2
	comp=Z,1.7nm,0.8s,baz=46,slow=6.4,SNR=1.4						
	comp=Z,1.7nm,0.8s						
WRA	Warramunga Arr	64.64	194	P	P	16 36 10.7	+1.4
	comp=Z,0.4nm,0.9s,baz=9.2,slow=6.6,SNR=2.7						
	comp=Z,0.4nm,0.9s						
GEYT	Alibeck	64.71	299	P	P	16 36 08.7	-1.0
	comp=Z,0.8nm,0.4s,baz=38,slow=7.3,SNR=2.2						
	comp=Z,0.8nm,0.4s						
FINES	FINESS Array B	64.95	333	P	P	16 36 08.9	-1.8
	comp=Z,1.2nm,0.8s,baz=64,slow=6.6,SNR=7.1						
	comp=Z,1.2nm,0.8s						
FINES	FINESS Array B	64.95	333	P	P	16 36 09.0	-1.8
ASAR	Alice Springs	68.36	194	P	P	16 36 35.3	+2.4
	comp=Z,0.5nm,1.1s,baz=9.7,slow=6.6,SNR=2.5						
	comp=Z,0.5nm,1.1s						
NOA	NORSAR Array B	69.64	339	P	P	16 36 39.5	-1.0
	comp=Z,0.4nm,0.5s,baz=30,slow=6.6,SNR=5.8						
	comp=Z,0.4nm,0.5s						
KBZ	Khabaz	70.00	312	P	P	16 36 43.2	+0.3
	comp=Z,2.9nm,0.8s,baz=70,slow=4.7,SNR=9.5						
	comp=Z,2.9nm,0.8s						
AKASG	Malin Array Be	71.71	324	P	P	16 36 52.2	-1.0
	comp=Z,0.8nm,0.5s,baz=41,slow=6.0,SNR=6.0						
	comp=Z,0.8nm,0.5s						
BRTR	Keskin Array B	77.74	314	P	P	16 37 26.9	-1.6
	comp=Z,0.6nm,0.7s,baz=30,slow=2.9,SNR=3.1						
	comp=Z,0.6nm,0.7s						
GERES	GERESS Array B	79.25	331	P	P	16 37 35.2	-1.4
	comp=Z,0.5nm,0.5s,baz=52,slow=6.4,SNR=2.6						
	comp=Z,0.5nm,0.5s						

IDC ***17*** *16:29:16.9±2.1, 26°.27N×126°.36E, h126^{km}±22^{km}, mb3.1/5, mbtmp3.5/7, MS3.4/1, Error ellipse: s-maj=37.9km s-min=26.4km az=163.0*
JMA ***17*** *16:29:17.0±0.2, 26°N±2°×12°6E±°, h121^{km}±2^{km}, MV3.7/24, NW OFF OKINAWAJIMA IS*
ISC 17 16:29:17.3±0.8, **26°.40N**±0°.09×**126°.24E**±0°.07, **h124**^{km}±9^{km}, **n39,** σ1^s**22**/58, **mb3.3**/5, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKE	Kume jima 2	0.50	98	P	Pn	16 29 35.6	0.0
JKE				*e*S	Sn	16 29 48.8	-0.8
JAGN	Aguni-jima	0.92	78	P	Pn	16 29 38.9	0.0
JAGN				S	Sn	16 29 54.6	-0.7
JJT3	Tamagusuku3	1.41	100	P	Pn	16 29 44.8	+0.8
JJT3				S	Sn	16 30 05.0	+0.7
JNTH	Nagotoyohara	1.61	85	P	Pn	16 29 46.5	+0.3
JNTH				S	Sn	16 30 07.2	-1.1
JIH	Iheya	1.68	67	P	Pn	16 29 47.4	+0.4
JIH				*e*S	Sn	16 30 09.0	-0.7
JIKM	Ikemajima	1.71	212	P	Pn	16 29 47.4	-0.1
JIKM				*e*S	Sn	16 30 10.1	-0.5
JMJ	Miyako jima 2	1.79	209	P	Pn	16 29 49.0	+0.6
JOGS	Gusukube	1.79	205	P	Pn	16 29 48.7	+0.2
JOGS				*e*S	Sn	16 30 12.0	-0.2
JIRB	Irabujima	1.83	212	P	Pn	16 29 48.6	-0.3
JIRB				*e*S	Sn	16 30 12.5	-0.5
JMJ2	Miyako jima3	1.84	207	*i* P	Pn	16 29 49.3	+0.2
JMJ2				*e*S	Sn	16 30 13.3	+0.1
JOW	Kunigami	1.88	76	P	Pn	16 29 49.5	+0.1
	100nm,0.2s,baz=142,slow=21,SNR=191						
JOW				S	Sn	16 30 12.2	-1.8
	680nm,0.3s,baz=126,slow=19,SNR=28						
JOW	Kunigami	1.88	76	P	Pn	16 29 49.5	+0.1
JOW	Kunigami	1.88	76	P	Pn	16 29 49.5	+0.1
JOW				S	Sn	16 30 12.4	-1.6
JYRO	Yoronjima	2.08	72	*i* P	Pn	16 29 51.8	-0.1
JYRO				*e*S	Sn	16 30 16.5	-1.9
JTJ	Tarama	2.23	219	P	Pn	16 29 53.5	-0.3
JTJ				*e*S	Sn	16 30 21.0	-0.8
JOKE	Okinoerabujima	2.30	65	*e*P	Pn	16 29 54.3	-0.4
JOKE				*e*S	Sn	16 30 21.8	-1.6
JISG	Ishigakijimahi	2.50	224	P	Pn	16 29 56.8	-0.5
JISG				*e*S	Sn	16 30 26.9	-1.1
JIJ	Ishigaki jima	2.77	224	P	Pn	16 29 59.8	-1.0
JIJ				S	Sn	16 30 31.2	-3.0
JTK	Tokunoshima	2.79	60	P	Pn	16 30 00.4	-0.5
JTK				S	Sn	16 30 32.7	-1.9
JKRS	Kuro-shima	2.94	224	P	Pn	16 30 02.2	-0.8
JKRS				*e*S	Sn	16 30 36.5	-1.7
IRIF	Iriomote-Funau	3.06	228	P	Pn	16 30 03.6	-0.9
IRIF				S	Sn	16 30 38.9	-1.9
JAMN	Amaminishikomi	3.20	54	P	Pn	16 30 05.4	-0.9
JAMN				*e*S	Sn	16 30 42.0	-2.1
HATJ	Hateruma jima	3.20	224	P	Pn	16 30 05.3	-1.0
YOJ	Yonaguni jima	3.49	237	P	Pn	16 30 10.5	+0.3
TATO	Taipei	4.51	253	P	Pn	16 30 24.4	+0.7
JMZ	Minamidaito 2	4.52	96	P	Pn	16 30 23.2	-0.6
YHNB	Yeheng	4.71	250	P	Pn	16 30 28.2	+1.6
NACB	Ninganchiao	4.75	243	P	Pn	16 30 26.0	-0.9
YULB	Yu-li	5.39	237	P	Pn	16 30 33.0	-2.6
	26nm,1.5s						
SSLB	Suanglung	5.45	243	P	Pn	16 30 35.3	-1.1
	30nm,0.7s						
TWGBT	Beinan	5.89	234	P	Pn	16 30 39.5	-2.8
	36nm,2.0s						
JNU	Nakatsue	7.82	30	P	Pn	16 31 09.1	+0.8
	5.4nm,0.5s,baz=224,slow=9.4,SNR=11						
KSRS	Korea Array	11.12	7	P	Pn	16 31 54.6	+2.0
	1.2nm,0.8s,baz=181,slow=13,SNR=5.1						
GUMO	Guam	21.62	123	LR	LR	16 41 50.4	
	comp=Z,87nm,18.1s,baz=328,slow=35						
CMAR	Chiang Mai Arr	26.40	258	P	P	16 34 43.4	+1.0
	0.2nm,0.4s,baz=70,slow=8.8,SNR=1.9						
	0.2nm,0.4s						
SONM	Songino Array	26.47	329	P	P	16 34 45.0	+2.2
	0.1nm,0.3s,baz=143,slow=12,SNR=2.1						
	0.1nm,0.3s						
MKAR	Makanchi Array	40.09	312	P	P	16 36 39.5	-1.2
	0.2nm,0.4s,baz=102,slow=9.5,SNR=5.1						
	0.2nm,0.4s						
BRTR	Keskin Array B	75.51	307	P	P	16 40 47.7	-0.7
	0.6nm,0.7s,baz=62,slow=9.9,SNR=3.4						
	0.6nm,0.7s						
YKA	Yellowknife Ar	79.12	24	P	P	16 41 08.1	+0.3
	0.4nm,0.7s,baz=301,slow=5.1,SNR=7.9						
	0.4nm,0.7s						

NEIC ***17*** *16:29:47.2±2.2, 18°.3N±0°.1×146°.0E±0°.1, h119^{km}±6^{km}, mb4.3/25, Error ellipse: s-maj=17.3km s-min=15.8km az=94.0*
IDC ***17*** *16:29:47.8±0.7, 18°.44N×145°.86E, h127^{km}±7^{km}, mb3.4/9, mbtmp3.8/10, MS3.1/1, Error ellipse: s-maj=26.6km s-min=11.5km az=108.0*
ISC 17 16:29:48.9±0.6, **18°.38N**±0°.08×**145°.9E**±0°.1, **h145**^{km}, **n47,** σ1^s**46**/44, **mb4.1**/21, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.87	192	P	Pn	16 31 00.2	-0.5
	48nm,0.3s,baz=0.0,slow=20,SNR=2.1						
GUMO				S	Sn	16 31 57.7	+1.2
	71nm,0.4s,baz=347,slow=19,SNR=1.9						
JOW	Kunigami	18.34	300	LR	LR	16 40 01.8	
	comp=Z,59nm,20.4s,baz=102,slow=34						
JOW	Kunigami	18.34	300	Pn	Pn	16 33 54.6	+0.6
JOW				IAmb	IAmb	16 34 04.2	
	comp=Z,24nm,1.0s						
H11S3	WAKE ISLAND Hy	19.68	86	T	T	16 54 54.0	
	baz=267,slow=74						
H11S1	WAKE ISLAND Hy	19.69	86	T	T	16 54 52.6	
	baz=267,slow=74						
H11S2	WAKE ISLAND Hy	19.70	86	T	T	16 55 01.5	
	baz=267						
H11N1	WAKE ISLAND Hy	19.85	83	T	T	16 55 26.5	
	baz=267,slow=74						
H11N2	WAKE ISLAND Hy	19.85	83	T	T	16 55 12.8	
	baz=267,slow=74						
H11N3	WAKE ISLAND Hy	19.87	83	T	T	16 55 25.7	
	baz=267,slow=74						
SSLB	Suanglung	23.91	287	P	P	16 34 48.7	-0.9
SSLB				IAmb	IAmb	16 34 50.8	
	comp=Z,16nm,1.1s						
WB0	Warramunga Arr	39.57	197	P	P	16 37 04.5	-1.6
WB0				IAmb	IAmb	16 37 08.5	
	comp=Z,3.6nm,1.1s						
WRAB	Tennant Creek	39.74	197	P	P	16 37 06.9	-0.6
WRAB				IAmb	IAmb	16 37 10.1	
	comp=Z,5.1nm,1.0s						
WB2	Warramunga Arr	39.75	197	P	P	16 37 05.9	-1.7
WB2				IAmb	IAmb	16 37 11.7	
	comp=Z,4.3nm,1.0s						
WRA	Warramunga Arr	39.75	197	P	P	16 37 08.2	+0.6
	comp=Z,0.6nm,0.7s,baz=27,slow=8.6,SNR=8.0						
	comp=Z,0.6nm,0.7s						
FITZ	Fitzroy Crossi	41.38	210	P	P	16 37 21.6	+0.6
AS31	Alice Springs	43.41	196	P	P	16 37 38.1	+0.7
ASAR	Alice Springs	43.41	196	P	P	16 37 36.9	-0.6
	comp=Z,0.3nm,0.5s,baz=13,slow=5.3,SNR=9.7						
	comp=Z,0.3nm,0.5s						
CMAR	Chiang Mai Arr	44.49	278	P	P	16 37 47.0	+0.8
	comp=Z,0.7nm,0.9s,baz=55,slow=6.3,SNR=5.4						
	comp=Z,0.7nm,0.9s						
ANM	Nome	56.40	23	P	P	16 39 14.9	0.0
ANM				IAmb	IAmb	16 39 23.2	
	comp=Z,3.0nm,1.1s						
MKAR	Makanchi Array	58.85	314	P	P	16 39 32.5	+0.1
	comp=Z,0.3nm,0.6s,baz=90,slow=6.2,SNR=5.2						
	comp=Z,0.3nm,0.6s						
MAKZ	Makanchi	59.06	314	P	P	16 39 33.5	-0.4
ILSW	Iliamna Southw	59.80	31	P	P	16 39 37.9	-0.9
M20K	Styx River	60.36	28	P	P	16 39 41.7	-0.8
M20K				IAmb	IAmb	16 39 56.0	
	comp=Z,1.8nm,0.9s						
SKT	Skwentna	61.11	29	P	P	16 39 48.8	+1.3
SKT				IAmb	IAmb	16 40 05.8	
	comp=Z,3.3nm,1.1s						
CAST	Castle Rocks	61.27	27	P	P	16 39 50.0	+1.4
CAST				IAmb	IAmb	16 39 52.2	
	comp=Z,3.4nm,0.7s						
H21K	Melozitna Rive	61.67	24	P	P	16 39 52.3	+1.0
KTH	Kantishna Hill	61.81	27	P	P	16 39 54.4	+2.1
KTH				IAmb	IAmb	16 39 58.5	
	comp=Z,6.1nm,1.2s						
I21K	Tanana	61.85	25	P	P	16 39 53.0	+0.6
I21K				IAmb	IAmb	16 39 56.4	
	comp=Z,4.3nm,0.9s						
BPAW	Bear Paw Mtn.	61.94	26	P	P	16 39 54.9	+1.9
GHO	Glory Hole Cre	62.25	29	P	P	16 39 56.9	+1.6
MLY	Manley	62.30	25	P	P	16 39 56.8	+1.3
KNK	Knik Glacier	62.39	30	P	P	16 39 56.7	+0.6
SML	Sawmill	62.53	29	P	P	16 39 58.0	+0.9
I23K	Minto, Yukon-K	62.90	25	P	P	16 40 02.1	+2.8
MDM	Murphy Dome	63.31	26	P	P	16 40 04.3	+2.1
H24K	Noodor Dome	63.67	25	P	P	16 40 06.2	+1.7
IL31		63.83	26	P	P	16 40 05.5	+0.1
ILAR	Eielson Array	63.83	26	P	P	16 40 06.2	+0.7
	comp=Z,1.2nm,0.8s,baz=254,slow=5.3,SNR=11						
ILAR				pP	pP	16 40 37.0	-1.9
	comp=Z,0.2nm,0.6s,baz=241,slow=5.0,SNR=2.4						
	comp=Z,1.2nm,0.8s						
N25K	Chitina, Valde	64.24	30	P	P	16 40 10.6	+2.2
VRDI	Verde Repeater	64.73	30	P	P	16 40 12.7	+1.0
DOT	Dot Lake	64.82	28	P	P	16 40 13.5	+1.5
DOT				IAmb	IAmb	16 40 15.6	
	comp=Z,3.4nm,0.9s						
BMAR	Burnt Mountain	65.31	23	P	P	16 40 17.8	+2.7
L27K	Beaver Creek,	65.73	28	P	P	16 40 19.7	+1.8
L27K				IAmb	IAmb	16 40 21.3	
	comp=Z,2.2nm,0.8s						
YKA	Yellowknife Ar	78.16	28	P	P	16 41 33.2	+1.3
	comp=Z,0.9nm,0.6s,baz=289,slow=5.4,SNR=15						
YKA				pP	pP	16 42 04.2	-2.4
	comp=Z,1.4nm,0.7s,baz=288,slow=5.5,SNR=12						
	comp=Z,0.9nm,0.6s						
NVAR	Mina Array Bea	83.15	52	P	P	16 42 01.7	+2.4
	comp=Z,0.8nm,0.6s,baz=266,slow=6.2,SNR=6.2						
NVAR				pP	pP	16 42 32.4	-2.0
	comp=Z,1.4nm,0.9s,baz=258,slow=4.7,SNR=3.9						
	comp=Z,0.8nm,0.6s						
FINES	FINESS Array B	87.27	335	P	P	16 42 18.1	-0.9
	comp=Z,2.6nm,0.9s,baz=116,slow=4.4,SNR=4.6						
	comp=Z,2.6nm,0.9s						
PDAR	Pinedale Array	87.88	46	P	P	16 42 22.9	+0.3
	comp=Z,0.2nm,0.4s,baz=243,slow=1.6,SNR=2.7						
	comp=Z,0.2nm,0.4s						

IDC ***17*** *16:55:20.9±0.7, 54°.83N×167°.96E, h0^{km}, mb3.6/13, mbtmp3.7/15, ML3.4/2, Error ellipse: s-maj=24.9km s-min=13.8km az=167.0*
KRSC ***17*** *16:55:22.7±0.3, 54°.66N×167°.82E, h27^{km}±4^{km}, Ml4.1*
ISC 17 16:55:22.1±0.6, **54°.74N**±0°.09×**168°.04E**±0°.05, **h10**^{km}, **n34,** σ1^s**36**/36, **mb3.6**/13, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	1.28	292	*e*P	Pn	16 55 44.2	-1.7
BKI				*e*S	Sb	16 56 00.0	-2.7
KBTR	Krutoberegovo	3.32	298	*e*P	Pn	16 56 14.7	+0.8
SHEM	Shemya Is, Ala	4.12	117	Pn	Pn	16 56 24.6	-0.4
	12nm,0.3s,baz=27,slow=2.3,SNR=2.2						
SHEM				Sn	Sn	16 57 11.3	-1.9
	baz=307,slow=20						
	80nm,0.6s						
SMKR	Semkarok	4.16	299	*e*P	Pn	16 56 27.6	+2.1
SMKR				*e*S	Sn	16 57 15.3	+1.1
TUMD	Tumrok D	4.43	279	*e*P	Pn	16 56 31.0	+1.8
KLY	Klyuchi	4.48	294	*e*S	Sn	16 57 20.5	-1.6
TUMR	Tumrok	4.58	280	*e*P	Pn	16 56 33.2	+1.8
KMNR	Kamenistaya	4.58	286	*e*P	Pn	16 56 33.1	+1.7
KMNR				*e*S	Sn	16 57 24.9	+0.3
SMAR	Somma	5.65	259	*e*P	Pn	16 56 47.5	+1.4
SMAR				*e*S	Sn	16 57 49.8	-1.2
KRER	Koryakskii	5.66	259	*e*P	Pn	16 56 47.8	+1.5
KRER				*e*S	Sn	16 57 50.1	-1.4
KRX	Arik	5.70	260	*e*P	Pn	16 56 48.3	+1.5
KOK	Koryaka	5.73	259	*e*P	Pn	16 56 48.4	+1.3
KRMR	Karymshinskiy	6.18	256	*e*P	Pn	16 56 55.0	+1.8
KRMR				*e*S	Sn	16 58 03.3	-0.5
GRL	Gorelyy	6.32	254	*e*P	Pn	16 56 56.9	+1.6
PETK	Petropavlovsk-	6.32	259	Pn	Pn	16 56 55.8	+0.5
	0.8nm,0.3s,baz=81,slow=17,SNR=16						
PETK				Sn	Sn	16 58 07.8	+0.4
	0.9nm,0.3s,baz=207,slow=29,SNR=7.3						
	1.5nm,0.3s						
KLR	Kul'dur	22.83	271	P	P	17 00 24.8	-0.2
	1.0nm,0.6s,baz=66,slow=10.0,SNR=5.5						
	1.0nm,0.6s						
TIXI	Tiksi	23.77	330	P	P	17 00 33.6	-0.6
	0.4nm,0.2s,baz=90,slow=20,SNR=1.6						
	0.4nm,0.2s						
ILAR	Eielson Array	24.27	48	P	P	17 00 38.5	-0.6
	1.9nm,0.9s,baz=252,slow=9.2,SNR=18						
	1.9nm,0.9s						
H11N2	WAKE ISLAND Hy	34.96	182	T	T	17 39 02.8	
	baz=1.2,slow=76						
H11N3	WAKE ISLAND Hy	34.97	182	T	T	17 39 01.7	
	baz=1.2,slow=76						
H11N1	WAKE ISLAND Hy	34.98	182	T	T	17 38 59.5	
	baz=1.2,slow=76						
H11S1	WAKE ISLAND Hy	36.18	182	T	T	17 40 35.2	
	baz=1.4,slow=76						
H11S3	WAKE ISLAND Hy	36.19	182	T	T	17 40 38.3	
	baz=1.4,slow=76						
H11S2	WAKE ISLAND Hy	36.20	182	T	T	17 40 36.9	
	baz=1.4,slow=76						
SONM	Songino Array	38.04	286	P	P	17 02 40.4	0.0
	0.2nm,0.4s,baz=78,slow=9.7,SNR=2.2						
	0.2nm,0.4s						
YKA	Yellowknife Ar	38.70	46	P	P	17 02 46.0	+0.5
	1.0nm,0.8s,baz=293,slow=7.9,SNR=9.5						
	1.0nm,0.8s						
NVAR	Mina Array Bea	50.77	77	P	P	17 04 23.6	+1.2
	0.4nm,0.7s,baz=292,slow=7.3,SNR=2.7						
	0.4nm,0.7s						
MKAR	Makanchi Array	51.58	299	P	P	17 04 26.0	-2.0
	0.2nm,0.6s,baz=49,slow=4.4,SNR=1.5						
	0.2nm,0.6s						
PDAR	Pinedale Array	52.58	67	P	P	17 04 36.2	+0.3
	0.6nm,0.8s,baz=343,slow=3.4,SNR=5.2						
	0.6nm,0.8s						
CMAR	Chiang Mai Arr	63.08	264	P	P	17 05 51.2	+1.7
	0.4nm,0.6s,baz=21,slow=6.4,SNR=2.6						
	0.4nm,0.6s						
TXAR	Lajitas Array	65.66	73	P	P	17 06 07.3	+0.9
	1.0nm,0.5s,baz=305,slow=5.1,SNR=18						
	1.0nm,0.5s						
AKASG	Malin Array Be	69.44	333	P	P	17 06 29.4	-0.5
	0.3nm,0.3s,baz=19,slow=6.3,SNR=2.7						
	0.3nm,0.3s						
WRA	Warramunga Arr	79.77	212	P	P	17 07 30.3	+0.2
	1.1nm,0.9s,baz=24,slow=6.2,SNR=7.1						
	1.1nm,0.9s						
ASAR	Alice Springs	83.40	211	P	P	17 07 50.0	+0.8

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             0.7nm,0.7s,baz=15,slow=5.9,SNR=12
             0.7nm,0.7s
```

JMA ***17*** *16:59:55.3±0.3, 36°.3N±0°.6×14°2E±°, h19km, MV3.1/34, FAR E OFF IBARAKI PREF*
IDC ***17*** *16:59:56.3±1.7, 36°.63N×141°.78E, h0km, mb3.3/3, mbtmp3.3/5, ML2.6/2, Error ellipse: s-maj=37.1km s-min=27.2km az=60.0*
ISC 17 16:59:55.4±2.0**, 36°.31N**±0°.09×**141°.9E**±0°.1**, h19km, n16,** σ1ˢ.**18**/17**, mb3.3**/3**, Near east coast of eastern Honshu**

```
Code  Station Name        Δ°   AZ°     Phase ID          Time      Res
                                    Op      ISC       h  m  s    ISC
CHOJ  Chosi              1.06 235   P       Pn       17 00 14.9  -0.4
CHOJ                                S       Sg       17 00 29.8  -0.2
JHYU  Hitachinakayam     1.09 272 i P       Pn       17 00 14.6  -1.0
JHYU                               eS       Sb       17 00 29.3  -0.1
JHO   Hitachi            1.14 285   P       Pn       17 00 15.6  -0.7
ONAJ  Iwakimizuishiy     1.20 311   P       Pn       17 00 17.1  -0.2
JFK   Kawauchi           1.35 321   P       Pb       17 00 19.6  -0.5
JOTO  OTAMA OYAMA        1.79 315   P       Pb       17 00 26.5  -1.1
JMM   Marumori           1.80 330   P       Pb       17 00 26.9  -0.8
JAG   Ashikaga           2.00 274   P       Pn       17 00 28.4  +0.1
JFY   Yanaizu            2.09 302   P       Pb       17 00 31.3  -1.5
JKT   Katashina          2.21 283  eS       Sn       17 00 57.3  -0.6
JRY   Ryogami san        2.47 264   P       Pn       17 00 34.7   0.0
MJAR  Matsushiro Arr     3.01 275   Pn      Pn       17 00 43.5  +1.4
      0.5nm,0.3s,baz=158,slow=3.7,SNR=13
MJAR                                Sn      Sn       17 01 21.0  +3.3
      0.2nm,0.3s,baz=311,slow=26,SNR=1.5
      2.1nm,0.3s
ASAJ  Asahikawa          7.81   4   Pn      Pn       17 01 48.2  +0.2
      0.1nm,0.3s,baz=234,slow=19,SNR=1.5
      3.3nm,0.9s
MKAR  Makanchi Array    44.86 303   P       P        17 08 08.9  +0.5
      0.5nm,0.8s,baz=84,slow=9.1,SNR=3.0
      0.5nm,0.8s
WRA   Warramunga Arr    56.41 189   P       P        17 09 41.4  +5.7
      0.1nm,0.3s,baz=2.4,slow=7.7,SNR=8.2
      0.1nm,0.3s
ASAR  Alice Springs     60.14 188   P       P        17 10 07.9  +6.2
      0.2nm,0.8s,baz=21,slow=5.4,SNR=1.4
      0.2nm,0.8s
```

ROM 17 17:05:49.2±0.1**, 42°.863N**±0°.003×**13°.333E**±0°.005**, h24km, ML2.3**/33**, 20C-16D, Error ellipse: s-maj=0.4km s-min=0.1km az=240.0, Central Italy**

```
Code  Station Name        Δ°   AZ°     Phase ID          Time      Res
                                    Op      ISC       h  m  s    ISC
MMO1  Montemonaco        0.04 353  ⇓P       Pb       17 05 53.4  -0.2
MMO1                                S       Sb       17 05 56.4  -0.1
T1241 Roccafluvione,     0.07  95  ⇓P       Pb       17 05 53.5  -0.1
T1241                               S       Sb       17 05 56.7  +0.1
T1241                               AML     AML
      comp=E,1250µm,0.3s
T1241                               AML     AML
      comp=N,2130µm,0.8s
T1241                               AML     AML
      comp=E,1295µm,0.3s
T1241                               AML     AML
      comp=N,2190µm,0.2s
T1241                               AML     AML
      comp=E,1297µm,0.3s
T1241                               AML     AML
      comp=E,1253µm,0.3s
T1241                               AML     AML
      comp=N,2191µm,0.2s
T1241                               AML     AML
      comp=N,2119µm,0.2s
T1245 Castelsantange     0.11 266  ⇑P       Pb       17 05 53.9  -0.1
T1245                               S       Sb       17 05 57.5  +0.2
T1245                               AML     AML
      comp=E,7445µm,0.7s
T1245                               AML     AML
      comp=N,5185µm,0.5s
T1245                               AML     AML
      comp=N,5290µm,0.8s
T1245                               AML     AML
      comp=E,7910µm,0.7s
T1245                               AML     AML
      comp=E,6648µm,0.2s
T1245                               AML     AML
      comp=E,7057µm,0.2s
T1245                               AML     AML
      comp=N,4960µm,0.1s
T1245                               AML     AML
      comp=N,4646µm,0.1s
MC2   Monte Cornacci     0.12 295  ⇑P       Pb       17 05 54.1  -0.1
MC2                                 S       Sb       17 05 57.7  +0.2
T1214 Arquata del Tr     0.14 221  ⇑P       Pb       17 05 54.3   0.0
T1214                               S       Sb       17 05 58.1  +0.4
T1214                               AML     AML
      comp=E,3230µm,0.2s
T1214                               AML     AML
      comp=N,1510µm,0.3s
T1214                               AML     AML
      comp=E,3295µm,0.2s
T1214                               AML     AML
      comp=N,1500µm,0.3s
T1214                               AML     AML
      comp=N,1505µm,0.3s
T1214                               AML     AML
      comp=E,3295µm,0.2s
T1214                               AML     AML
      comp=N,1500µm,0.3s
T1214                               AML     AML
      comp=N,1505µm,0.3s
T1214                               AML     AML
      comp=N,1500µm,0.3s
T1214                               AML     AML
      comp=E,3294µm,0.2s
T1214                               AML     AML
      comp=E,3230µm,0.2s
T1214                               AML     AML
      comp=N,1509µm,0.3s
T1256 Bolognola (MC)     0.16 331  ⇓P       Pb       17 05 54.4  -0.2
T1256                               S       Sb       17 05 58.3  +0.1
T1256                               AML     AML
      comp=E,2715µm,1.0s
T1256                               AML     AML
      comp=N,2190µm,1.1s
T1256                               AML     AML
      comp=E,2720µm,1.0s
T1256                               AML     AML
      comp=E,2486µm,0.3s
T1256                               AML     AML
      comp=E,2401µm,0.3s
T1256                               AML     AML
      comp=N,2121µm,0.3s
T1256                               AML     AML
      comp=N,1932µm,0.2s
GUMA  Gualdo di Mace     0.20   0  ⇓P       Pb       17 05 55.1  +0.2
GUMA                                S       Sb       17 05 59.6  +0.9
GUMA                                AML     AML
      comp=E,2805µm,1.6s
GUMA                                AML     AML
      comp=N,4245µm,0.7s
GUMA                                AML     AML
      comp=N,4180µm,0.3s
GUMA                                AML     AML
      comp=E,2805µm,1.6s
GUMA                                AML     AML
      comp=E,4050µm,0.6s
FEMA  Monte Fema         0.23 296   P       Pb       17 05 55.4  +0.1
FEMA                                S       Sb       17 05 60.0  +0.5
FEMA                                AML     AML
      comp=E,1840µm,0.3s
SMA1  SAN MARTINO        0.23 180  ⇑P       Pb       17 05 55.3   0.0
SMA1                                S       Sb       17 05 59.9  +0.4
SMA1                                AML     AML
      comp=N,924µm,0.2s
SMA1                                AML     AML
      comp=E,641µm,0.6s
SMA1                                AML     AML
      comp=N,924µm,0.2s
SMA1                                AML     AML
      comp=E,626µm,0.2s
T1212 Cascia, Frazio     0.24 242  ⇑P       Pb       17 05 55.5  +0.1
T1212                               S       Sb       17 06 00.1  +0.5
T1212                               AML     AML
      comp=E,1073µm,0.4s
T1212                               AML     AML
      comp=E,1117µm,0.4s
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T1212                               AML     AML
      comp=E,1074µm,0.4s
T1212                               AML     AML
      comp=N,2190µm,0.2s
T1212                               AML     AML
      comp=N,2165µm,0.2s
T1212                               AML     AML
      comp=N,2192µm,0.2s
T1212                               AML     AML
      comp=E,975µm,0.1s
T1212                               AML     AML
      comp=N,2165µm,0.2s
T1212                               AML     AML
      comp=E,1030µm,0.2s
FDMO  Fiordimonte        0.25 314  ⇑P       Pb       17 05 55.4  -0.1
FDMO                                S       Sb       17 06 00.1  +0.3
FDMO                                AML     AML
      comp=E,1255µm,0.2s
FDMO                                AML     AML
      comp=N,1755µm,1.1s
FDMO                                AML     AML
      comp=E,1255µm,0.2s
FDMO                                AML     AML
      comp=N,1747µm,0.2s
T1218 Civita (PG)        0.25 220  ⇑P       Pb       17 05 55.6   0.0
T1218                               S       Sb       17 06 00.5  +0.6
T1218                               AML     AML
      comp=E,1765µm,0.4s
T1218                               AML     AML
      comp=E,1600µm,0.4s
T1218                               AML     AML
      comp=N,2565µm,0.2s
T1218                               AML     AML
      comp=E,1765µm,0.3s
T1218                               AML     AML
      comp=N,2545µm,0.2s
T1218                               AML     AML
      comp=E,1600µm,0.3s
T1218                               AML     AML
      comp=N,2565µm,0.2s
T1218                               AML     AML
      comp=N,2548µm,0.2s
T1218                               AML     AML
      comp=E,1471µm,0.2s
T1218                               AML     AML
      comp=N,2568µm,0.2s
T1218                               AML     AML
      comp=E,1652µm,0.2s
OFFI  Offida             0.27  74   P       Pb       17 05 56.4  +0.7
OFFI                                AML     AML
      comp=E,986µm,0.4s
OFFI                                AML     AML
      comp=N,1440µm,0.5s
T1220 Camerino, Fraz     0.30 324  ⇑P       Pb       17 05 56.2  -0.1
T1220                               S       Sb       17 06 01.8  +0.6
T1220                               AML     AML
      comp=E,4950µm,1.3s
T1220                               AML     AML
      comp=N,7390µm,0.7s
T1220                               AML     AML
      comp=N,6254µm,0.2s
T1220                               AML     AML
      comp=E,4505µm,0.2s
T1220                               AML     AML
      comp=N,6358µm,0.2s
T1219 Muccia, Frazio     0.31 309  ⇑P       Pb       17 05 56.2  -0.2
T1219                               S       Sb       17 06 01.6  +0.4
T1219                               AML     AML
      comp=E,734µm,0.9s
T1219                               AML     AML
      comp=N,748µm,0.8s
T1219                               AML     AML
      comp=E,750µm,0.9s
T1219                               AML     AML
      comp=N,748µm,0.8s
T1219                               AML     AML
      comp=N,748µm,0.8s
T1219                               AML     AML
      comp=N,598µm,0.2s
T1219                               AML     AML
      comp=E,558µm,0.1s
T1219                               AML     AML
      comp=N,617µm,0.2s
T1219                               AML     AML
      comp=E,557µm,0.1s
TERO  Teramo             0.31 140  ⇑P       Pb       17 05 56.3  -0.1
TERO                                S       Sb       17 06 01.8  +0.5
TERO                                AML     AML
      comp=N,977µm,0.4s
TERO                                AML     AML
      comp=E,980µm,0.6s
TERO                                AML     AML
      comp=N,1042µm,0.4s
TERO                                AML     AML
      comp=E,938µm,0.6s
TERO                                AML     AML
      comp=N,979µm,0.3s
TERO                                AML     AML
      comp=E,932µm,0.3s
TERO                                AML     AML
      comp=N,1025µm,0.3s
TERO                                AML     AML
      comp=E,972µm,0.3s
CAMP  Campotosto         0.33 170  ⇑P       Pb       17 05 56.6  -0.1
CAMP                                AML     AML
      comp=E,432µm,0.7s
CAMP                                AML     AML
      comp=N,253µm,1.0s
CAMP                                AML     AML
      comp=E,361µm,0.1s
CAMP                                AML     AML
      comp=N,251µm,0.3s
T1217 Poggiodomo (PG     0.33 243   P       Pb       17 05 56.9  +0.1
T1217                               S       Sb       17 06 02.7  +0.9
T1217                               AML     AML
      comp=N,662µm,0.4s
T1217                               AML     AML
      comp=E,414µm,1.3s
T1217                               AML     AML
      comp=N,704µm,0.4s
T1217                               AML     AML
      comp=N,662µm,0.4s
T1217                               AML     AML
      comp=E,432µm,0.3s
T1217                               AML     AML
      comp=E,394µm,0.3s
CESI  CESI - Serrava     0.34 294  ⇑P       Pb       17 05 56.9   0.0
CESI                                S       Sb       17 06 03.0  +0.8
CESI                                AML     AML
      comp=E,672µm,1.1s
CESI                                AML     AML
      comp=N,1052µm,0.9s
CESI                                AML     AML
      comp=N,874µm,0.1s
CESI                                AML     AML
      comp=E,606µm,0.2s
RM33  Pellescritta (     0.36 194   P       Pb       17 05 57.3   0.0
RM33                                AML     AML
      comp=E,440µm,0.2s
RM33                                AML     AML
      comp=E,446µm,1.0s
RM33                                AML     AML
      comp=N,396µm,1.2s
RM33                                AML     AML
      comp=N,382µm,0.3s
RM33                                AML     AML
      comp=E,440µm,0.1s
RM33                                AML     AML
      comp=N,357µm,0.1s
RM33                                AML     AML
      comp=E,440µm,0.1s
RM33                                AML     AML
      comp=N,357µm,0.1s
T1247 Pizzolo (AQ)       0.42 183  ⇓P       Pb       17 05 58.2  +0.1
T1247                               AML     AML
      comp=E,694µm,1.5s
T1247                               AML     AML
      comp=N,905µm,0.6s
T1247                               AML     AML
      comp=N,793µm,0.1s
T1247                               AML     AML
      comp=E,657µm,0.1s
GIGS  Gran Sasso         0.45 157  ⇓P       Pb       17 05 58.3  -0.3
GIGS                                AML     AML
      comp=N,169µm,1.0s
GIGS                                AML     AML
      comp=E,169µm,0.3s
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GIGS                                AML     AML
      comp=E,169µm,0.3s
GIGS                                AML     AML
      comp=N,156µm,0.1s
T1211 Morro Reatino      0.48 227  ⇑P       Pb       17 05 59.2   0.0
T1211                               AML     AML
      comp=E,492µm,0.4s
T1211                               AML     AML
      comp=N,734µm,0.4s
T1211                               AML     AML
      comp=E,482µm,0.3s
T1211                               AML     AML
      comp=N,694µm,0.4s
T1211                               AML     AML
      comp=E,482µm,0.3s
T1211                               AML     AML
      comp=N,694µm,0.4s
T1211                               AML     AML
      comp=N,680µm,0.3s
T1211                               AML     AML
      comp=E,349µm,0.2s
T1211                               AML     AML
      comp=N,664µm,0.2s
T1211                               AML     AML
      comp=E,353µm,0.2s
SNTG  Esanatoglia        0.49 324  ⇑P       Pb       17 05 59.1  -0.2
SNTG                                AML     AML
      comp=E,190µm,0.6s
SNTG                                AML     AML
      comp=N,143µm,0.2s
SNTG                                AML     AML
      comp=E,169µm,0.1s
SNTG                                AML     AML
      comp=N,143µm,0.2s
SNTG                                AML     AML
      comp=E,236µm,0.6s
EL6   Elcito             0.50 340  ⇑P       Pb       17 05 59.5  +0.1
EL6                                 AML     AML
      comp=E,450µm,0.2s
EL6                                 AML     AML
      comp=N,427µm,0.4s
EL6                                 AML     AML
      comp=N,383µm,0.2s
EL6                                 AML     AML
      comp=E,450µm,0.2s
ARRO  Arrone             0.51 236   P       Pb       17 05 59.6  +0.1
ARRO                                S       Sb       17 06 06.3  -0.2
ARRO                                AML     AML
      comp=E,272µm,1.0s
ARRO                                AML     AML
      comp=N,302µm,0.4s
ARRO                                AML     AML
      comp=N,255µm,0.2s
ARRO                                AML     AML
      comp=E,244µm,0.4s
T1222 Castel Sant'An     0.51 205  ⇑P       Pb       17 05 59.6  -0.1
T1222                               S       Sb       17 06 07.7  +1.1
T1222                               AML     AML
      comp=E,280µm,0.4s
T1222                               AML     AML
      comp=N,192µm,0.2s
T1222                               AML     AML
      comp=N,191µm,0.2s
T1222                               AML     AML
      comp=E,277µm,0.3s
T1222                               AML     AML
      comp=N,191µm,0.2s
CING  Cingoli            0.52 349   P       Pb       17 05 59.8   0.0
CING                                AML     AML
      comp=E,226µm,0.5s
CING                                AML     AML
      comp=N,172µm,0.4s
CING                                AML     AML
      comp=N,155µm,0.2s
CING                                AML     AML
      comp=E,157µm,0.3s
ASSB  Assisi San Ben     0.53 290   P       Pb       17 05 59.7  -0.2
ASSB                                S       Sb       17 06 08.1  +1.0
ASSB                                AML     AML
      comp=E,210µm,1.1s
ASSB                                AML     AML
      comp=N,243µm,0.2s
ASSB                                AML     AML
      comp=E,207µm,0.4s
ASSB                                AML     AML
      comp=E,210µm,0.9s
ASSB                                AML     AML
      comp=N,285µm,0.5s
MOMA  Monte Martano      0.56 264  ⇓P       Pb       17 06 00.8  +0.2
MOMA                                S       Sn       17 06 10.2  -0.3
MOMA                                AML     AML
      comp=E,384µm,0.3s
MOMA                                AML     AML
      comp=N,339µm,0.5s
MOMA                                AML     AML
      comp=N,339µm,0.5s
MOMA                                AML     AML
      comp=E,388µm,0.3s
MOMA                                AML     AML
      comp=E,383µm,0.3s
VCEL  Villa Celiera      0.60 141  ⇑P       Pb       17 06 01.3  +0.1
VCEL                                S       Sn       17 06 11.3  -0.1
VCEL                                AML     AML
      comp=E,415µm,0.5s
VCEL                                AML     AML
      comp=N,331µm,0.3s
VCEL                                AML     AML
      comp=E,415µm,0.5s
VCEL                                AML     AML
      comp=N,331µm,0.3s
FOSV  Fossato di Vic     0.60 316  ⇑P       Pb       17 06 01.0  -0.1
FOSV                                AML     AML
      comp=E,221µm,0.6s
FOSV                                AML     AML
      comp=N,266µm,0.2s
FOSV                                AML     AML
      comp=E,221µm,0.6s
FOSV                                AML     AML
      comp=N,266µm,0.2s
ATCC  AVT- Casa Cast     0.60 303  ⇑P       Pb       17 06 01.1  -0.1
ATCC                                AML     AML
      comp=N,170µm,0.3s
ATCC                                AML     AML
      comp=E,231µm,0.6s
ATCC                                AML     AML
      comp=N,169µm,0.3s
ATCC                                AML     AML
      comp=E,212µm,0.6s
FAGN  Fagnano            0.62 163  ⇓P       Pb       17 06 01.4  -0.2
FAGN                                S       Sn       17 06 12.4  +0.5
FAGN                                AML     AML
      comp=E,418µm,0.2s
FAGN                                AML     AML
      comp=N,396µm,0.3s
FAGN                                AML     AML
      comp=N,396µm,0.3s
FAGN                                AML     AML
      comp=E,418µm,0.2s
ARVD  Arcevia            0.70 336  ⇓P       Pb       17 06 02.9  +0.2
ARVD                                S       Sn       17 06 13.9  +0.2
ARVD                                AML     AML
      comp=E,109µm,0.7s
ARVD                                AML     AML
      comp=N,76µm,1.1s
ARVD                                AML     AML
      comp=N,74µm,0.2s
ARVD                                AML     AML
      comp=E,89µm,0.2s
MURB  Monte Urbino       0.71 304   P       Pb       17 06 02.8  -0.3
MURB                                AML     AML
      comp=E,392µm,0.3s
MURB                                AML     AML
      comp=N,323µm,0.2s
MURB                                AML     AML
      comp=N,326µm,0.3s
MURB                                AML     AML
      comp=N,323µm,0.2s
MURB                                AML     AML
      comp=E,392µm,0.3s
MURB                                AML     AML
      comp=E,345µm,0.3s
T0110 Collepietro        0.72 152  ⇓P       Pb       17 06 02.9  -0.2
T0110                               AML     AML
      comp=E,394µm,0.7s
T0110                               AML     AML
      comp=N,348µm,0.3s
ATFO  Monte Foce - G     0.75 312  ⇓P       Pb       17 06 03.6  -0.1
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ATFO				AML	AML		
	comp=E,97µm,0.3s						
ATFO				AML	AML		
	comp=N,98µm,0.4s						
PIEI	**Pieia**	**0.89**	**319**	⇓P	Pb	17 06 05.8	-0.3
PIEI				AML	AML		
	comp=E,89µm,0.4s						
PIEI				AML	AML		
	comp=N,71µm,0.3s						
PIEI				AML	AML		
	comp=N,71µm,0.3s						
PIEI				AML	AML		
	comp=E,81µm,0.2s						
MGAB	**Montegabbione**	**0.90**	**274**	⇓P	Pn	17 06 08.2	+1.8
ATMI	**Monte Miggiano**	**0.91**	**301**	⇓P	Pn	17 06 08.6	+2.0
CERT	**Cerreto**	**0.95**	**196**	⇑P	Pn	17 06 09.2	+2.0
SACS	**San Casciano d**	**1.05**	**270**	⇓P	Pb	17 06 10.8	+2.1
GIUL	**Giuliano Di Ro**	**1.30**	**183**	⇓P	Pb	17 06 13.0	-0.1

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h24km,ML2.6/41,15C-12D,Error ellipse: s-maj=0.3km
s-min=0.2km az=242.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMO1	**Montemonaco**	**0.04**	**347**	P	Pb	17 06 51.5	-0.1
MMO1				S	Sb	17 06 54.5	-0.1
T1241	**Roccafluvione,**	**0.07**	**97**	P	Pb	17 06 51.7	0.0
T1241				S	Sb	17 06 55.0	+0.2
T1241				AML	AML		
	comp=E,3945µm,0.4s						
T1241				AML	AML		
	comp=E,3940µm,0.4s						
T1241				AML	AML		
	comp=N,1975µm,1.1s						
T1241				AML	AML		
	comp=E,4005µm,0.3s						
T1241				AML	AML		
	comp=N,2025µm,1.1s						
T1245	**Castelsantange**	**0.11**	**266**	P	Pb	17 06 52.1	0.0
T1245				S	Sb	17 06 55.6	+0.2
T1245				AML	AML		
	comp=E,12600µm,0.7s						
T1245				AML	AML		
	comp=N,8465µm,0.8s						
T1245				AML	AML		
	comp=N,8465µm,0.8s						
T1245				AML	AML		
	comp=E,12100µm,0.7s						
T1245				AML	AML		
	comp=N,7825µm,0.9s						
T1245				AML	AML		
	comp=E,12100µm,1.3s						
T1245				AML	AML		
	comp=E,12600µm,1.3s						
MC2	**Monte Cornacci**	**0.12**	**294**	P	Pb	17 06 52.2	-0.1
MC2				S	Sb	17 06 55.9	+0.2
T1214	**Arquata del Tr**	**0.14**	**222**	P	Pb	17 06 52.5	0.0
T1214				S	Sb	17 06 56.2	+0.3
T1256	**Bolognola (MC)**	**0.16**	**330**	P	Pb	17 06 52.6	-0.1
T1256				S	Sb	17 06 56.3	0.0
T1256				AML	AML		
	comp=E,3510µm,1.0s						
T1256				AML	AML		
	comp=N,3180µm,0.5s						
T1256				AML	AML		
	comp=E,3510µm,1.0s						
GUMA	**Gualdo di Mace**	**0.20**	**359**	P	Pb	17 06 53.2	+0.3
GUMA				S	Sb	17 06 57.7	+1.0
GUMA				AML	AML		
	comp=E,3645µm,0.4s						
GUMA				AML	AML		
	comp=N,4770µm,0.6s						
GUMA				AML	AML		
	comp=E,5460µm,0.3s						
GUMA				AML	AML		
	comp=E,3640µm,0.4s						
GUMA				AML	AML		
	comp=N,4770µm,0.5s						
GUMA				AML	AML		
	comp=E,5460µm,1.7s						
GUMA				AML	AML		
	comp=N,3725µm,0.3s						
GUMA				AML	AML		
	comp=N,4770µm,1.5s						
GUMA				AML	AML		
	comp=E,3640µm,1.6s						
SMA1	**SAN MARTINO**	**0.23**	**180**	P	Pb	17 06 53.5	0.0
SMA1				S	Sb	17 06 57.8	+0.2
SMA1				AML	AML		
	comp=E,806µm,0.7s						
SMA1				AML	AML		
	comp=E,806µm,1.3s						
SMA1				AML	AML		
	comp=N,1915µm,0.2s						
T1216	**Preci, Frazion**	**0.24**	**277**	P	Pb	17 06 53.4	0.0
T1216				S	Sb	17 06 58.0	+0.4
T1216				AML	AML		
	comp=E,3760µm,0.4s						
T1216				AML	AML		
	comp=N,3560µm,0.3s						
T1216				AML	AML		
	comp=E,3760µm,0.4s						
T1216				AML	AML		
	comp=N,3560µm,0.3s						
T1212	**Cascia, Frazio**	**0.24**	**243**	P	Pb	17 06 53.6	+0.1
T1212				S	Sb	17 06 58.1	+0.4
T1212				AML	AML		
	comp=N,4725µm,1.1s						
T1212				AML	AML		
	comp=N,4805µm,1.1s						
T1212				AML	AML		
	comp=E,2890µm,0.4s						
T1212				AML	AML		
	comp=N,4725µm,0.9s						
T1212				AML	AML		
	comp=N,4805µm,0.9s						
T1212				AML	AML		
	comp=E,2930µm,0.4s						
FDMO	**Fiordimonte**	**0.25**	**313**	P	Pb	17 06 53.6	0.0
FDMO				S	Sb	17 06 58.2	+0.3
FDMO				AML	AML		
	comp=E,1650µm,0.8s						
FDMO				AML	AML		
	comp=N,3145µm,0.2s						
T1218	**Civita (PG)**	**0.25**	**220**	P	Pb	17 06 53.8	+0.1
T1218				S	Sb	17 06 58.6	+0.5
T1218				AML	AML		
	comp=N,4540µm,0.2s						
T1218				AML	AML		
	comp=E,3600µm,0.2s						
T1218				AML	AML		
	comp=E,3320µm,0.2s						
T1218				AML	AML		
	comp=N,4480µm,0.2s						
OFFI	**Offida**	**0.27**	**74**	P	Pb	17 06 54.5	+0.7
OFFI				AML	AML		
	comp=N,1515µm,0.5s						
OFFI				AML	AML		
	comp=E,1265µm,0.6s						
T1220	**Camerino, Fraz**	**0.31**	**323**	P	Pb	17 06 54.4	0.0
T1220				S	Sb	17 06 59.8	+0.6
T1220				AML	AML		
	comp=N,10700µm,0.7s						
T1220				AML	AML		
	comp=E,5715µm,1.3s						
T1219	**Muccia, Frazio**	**0.31**	**308**	P	Pb	17 06 54.4	-0.1
T1219				S	Sb	17 06 59.8	+0.4
T1219				AML	AML		
	comp=E,1245µm,1.1s						
T1219				AML	AML		
	comp=N,1510µm,0.3s						
T1219				AML	AML		
	comp=E,1178µm,1.1s						
T1219				AML	AML		
	comp=N,1540µm,0.3s						
T1219				AML	AML		
	comp=E,1245µm,1.1s						
T1219				AML	AML		
	comp=E,1178µm,1.1s						
T1219				AML	AML		
	comp=N,1540µm,0.3s						
T1219				AML	AML		
	comp=N,1510µm,0.3s						
T1219				AML	AML		
	comp=E,1245µm,0.9s						
T1219				AML	AML		
	comp=E,1178µm,0.9s						
TERO	**Teramo**	**0.31**	**141**	P	Pb	17 06 54.5	0.0
TERO				S	Sb	17 06 60.0	+0.6
TERO				AML	AML		
	comp=N,1310µm,0.4s						
TERO				AML	AML		
	comp=N,1270µm,0.4s						
TERO				AML	AML		
	comp=E,1780µm,0.3s						
TERO				AML	AML		
	comp=E,1715µm,0.3s						
CAMP	**Campotosto**	**0.33**	**171**	⇓P	Pb	17 06 54.9	0.0
CAMP				AML	AML		
	comp=E,497µm,0.4s						
CAMP				AML	AML		
	comp=N,486µm,0.2s						
CAMP				AML	AML		
	comp=E,497µm,1.6s						
T1217	**Poggiodomo (PG**	**0.34**	**243**	P	Pb	17 06 54.9	0.0
T1217				S	Sb	17 07 00.8	+0.8
T1217				AML	AML		
	comp=E,950µm,1.0s						
T1217				AML	AML		
	comp=N,1174µm,1.4s						
T1217				AML	AML		
	comp=E,950µm,1.0s						
T1217				AML	AML		
	comp=N,1174µm,1.4s						
T1217				AML	AML		
	comp=N,1174µm,0.6s						
CESI	**CESI - Serrava**	**0.35**	**294**	⇑P	Pb	17 06 55.1	+0.1
CESI				AML	AML		
	comp=E,1110µm,1.1s						
CESI				AML	AML		
	comp=N,1930µm,0.9s						
CESI				AML	AML		
	comp=E,1110µm,0.9s						
RM33	**Pellescritta (**	**0.37**	**194**	⇓P	Pb	17 06 55.5	+0.2
RM33				AML	AML		
	comp=E,1206µm,1.2s						
RM33				AML	AML		
	comp=N,943µm,1.0s						
RM33				AML	AML		
	comp=E,1206µm,1.3s						
RM33				AML	AML		
	comp=N,920µm,1.0s						
RM33				AML	AML		
	comp=E,1175µm,1.3s						
RM33				AML	AML		
	comp=E,1206µm,0.7s						
RM33				AML	AML		
	comp=E,1175µm,0.7s						
T1247	**Pizzolo (AQ)**	**0.42**	**184**	⇑P	Pb	17 06 56.5	+0.2
T1247				AML	AML		
	comp=N,1915µm,0.4s						
T1247				AML	AML		
	comp=E,945µm,0.2s						
GIGS	**Gran Sasso**	**0.45**	**158**	⇓P	Pb	17 06 56.6	-0.1
GIGS				AML	AML		
	comp=E,232µm,0.5s						
GIGS				AML	AML		
	comp=N,209µm,1.3s						
T1211	**Morro Reatino**	**0.49**	**227**	⇑P	Pb	17 06 57.3	0.0
T1211				S	Sn	17 07 05.3	-1.2
T1211				AML	AML		
	comp=E,738µm,0.8s						
T1211				AML	AML		
	comp=N,1455µm,0.4s						
T1211				AML	AML		
	comp=E,734µm,0.8s						
T1211				AML	AML		
	comp=N,1460µm,0.4s						
T1211				AML	AML		
	comp=E,738µm,0.8s						
T1211				AML	AML		
	comp=N,1455µm,0.5s						
T1211				AML	AML		
	comp=N,1460µm,0.4s						
T1211				AML	AML		
	comp=N,1455µm,1.5s						
T1211				AML	AML		
	comp=N,1460µm,1.6s						
T1211				AML	AML		
	comp=E,734µm,1.2s						
T1211				AML	AML		
	comp=E,738µm,1.2s						
SNTG	**Esanatoglia**	**0.49**	**323**	⇑P	Pb	17 06 57.3	0.0
SNTG				AML	AML		
	comp=N,220µm,0.1s						
SNTG				AML	AML		
	comp=E,286µm,0.2s						
EL6	**Elcito**	**0.50**	**340**	P	Pb	17 06 57.6	+0.1
EL6				S	Sn	17 07 06.2	-0.7
EL6				AML	AML		
	comp=N,526µm,1.2s						
EL6				AML	AML		
	comp=E,692µm,1.0s						
EL6				AML	AML		
	comp=E,692µm,1.0s						
EL6				AML	AML		
	comp=N,526µm,0.8s						
ARRO	**Arrone**	**0.51**	**236**	⇓P	Pb	17 06 57.9	+0.3
ARRO				AML	AML		
	comp=E,388µm,0.6s						
ARRO				AML	AML		
	comp=N,456µm,1.0s						
ARRO				AML	AML		
	comp=E,388µm,1.4s						
T1222	**Castel Sant'An**	**0.51**	**206**	⇓P	Pb	17 06 57.8	+0.1
T1222				AML	AML		
	comp=E,659µm,0.8s						
T1222				AML	AML		
	comp=N,436µm,0.8s						
T1222				AML	AML		
	comp=E,603µm,0.4s						
T1222				AML	AML		
	comp=N,390µm,0.2s						
T1222				AML	AML		
	comp=N,436µm,0.8s						
T1222				AML	AML		
	comp=E,602µm,0.4s						
T1222				AML	AML		
	comp=E,659µm,1.2s						
T1222				AML	AML		
	comp=N,436µm,1.2s						
CING	**Cingoli**	**0.52**	**349**	P	Pb	17 06 58.1	+0.2
CING				AML	AML		
	comp=E,338µm,1.3s						
CING				AML	AML		
	comp=N,290µm,1.1s						
ASSB	**Assisi San Ben**	**0.53**	**290**	⇑P	Pb	17 06 57.9	-0.1
ASSB				AML	AML		
	comp=E,368µm,0.5s						
ASSB				AML	AML		
	comp=N,399µm,0.2s						
ASSB				AML	AML		
	comp=E,368µm,1.5s						
MOMA	**Monte Martano**	**0.57**	**264**	P	Pb	17 06 58.8	+0.1
MOMA				AML	AML		
	comp=N,398µm,0.8s						
MOMA				AML	AML		
	comp=E,448µm,1.0s						
MOMA				AML	AML		
	comp=N,398µm,1.2s						
VCEL	**Villa Celiera**	**0.60**	**141**	⇑P	Pb	17 06 59.5	+0.3
VCEL				AML	AML		
	comp=E,441µm,0.4s						
VCEL				AML	AML		
	comp=N,498µm,0.4s						
FOSV	**Fossato di Vic**	**0.60**	**316**	⇑P	Pb	17 06 59.3	0.0
FOSV				AML	AML		
	comp=N,448µm,0.2s						
FOSV				AML	AML		
	comp=E,328µm,0.6s						
ATCC	**AVT- Casa Cast**	**0.60**	**302**	⇑P	Pb	17 06 59.3	0.0
ATCC				AML	AML		
	comp=E,292µm,0.6s						
ATCC				AML	AML		
	comp=N,248µm,0.3s						
ATCC				AML	AML		
	comp=E,292µm,1.4s						
CESX	**Cesi**	**0.61**	**246**	⇑P	Pb	17 06 58.1	-1.3
FIAM	**Fiamignano**	**0.62**	**195**	⇑P	Pb	17 06 60.0	+0.4
FIAM				S	Sn	17 07 09.4	-0.4
FIAM				AML	AML		
	comp=E,148µm,0.5s						
FIAM				AML	AML		
	comp=N,292µm,0.6s						
FIAM				AML	AML		
	comp=N,292µm,1.4s						
FAGN	**Fagnano**	**0.62**	**163**	⇑P	Pb	17 07 00.1	+0.4
FAGN				AML	AML		
	comp=E,428µm,1.1s						
FAGN				AML	AML		
	comp=N,481µm,0.3s						
ARVD	**Arcevia**	**0.70**	**336**	⇑P	Pb	17 07 01.1	+0.3
ARVD				AML	AML		
	comp=E,147µm,0.5s						
ARVD				AML	AML		
	comp=N,104µm,0.2s						
SSFR	**Montelago di S**	**0.70**	**325**	⇓P	Pb	17 07 01.2	+0.3
SSFR				AML	AML		
	comp=E,580µm,0.6s						
SSFR				AML	AML		
	comp=N,660µm,0.2s						
SSFR				AML	AML		
	comp=E,614µm,0.2s						
SSFR				AML	AML		
	comp=N,648µm,0.2s						
T0110	**Collepietro**	**0.72**	**153**	P	Pb	17 07 01.0	-0.1
T0110				AML	AML		
	comp=N,500µm,0.3s						
T0110				AML	AML		
	comp=E,434µm,0.7s						
T0110				AML	AML		
	comp=E,434µm,1.3s						
MURB	**Monte Urbino**	**0.72**	**304**	P	Pb	17 07 01.2	+0.1
MURB				AML	AML		
	comp=N,546µm,1.0s						
MURB				AML	AML		
	comp=E,624µm,0.3s						
MURB				AML	AML		
	comp=N,496µm,0.4s						
MURB				AML	AML		
	comp=E,618µm,0.3s						
ATFO	**Monte Foce - G**	**0.75**	**312**	⇑P	Pb	17 07 01.8	0.0
ATFO				AML	AML		
	comp=N,132µm,0.3s						
ATFO				AML	AML		
	comp=E,154µm,0.6s						
ATTE	**AVT- Monte Tez**	**0.80**	**295**	⇑P	Pn	17 07 04.6	+1.6
COR1	**Corinaldo**	**0.81**	**342**	⇓P	Pn	17 07 04.8	+1.7
ATVO	**AVT- Monte Val**	**0.86**	**308**	⇓P	Pn	17 07 03.7	-0.1
ATVO				AML	AML		
	comp=E,81µm,1.3s						
ATVO				AML	AML		
	comp=N,72µm,0.7s						
ATVO				AML	AML		
	comp=N,72µm,1.3s						
ATVO				AML	AML		
	comp=E,81µm,0.7s						
MPAG	**Monte Paganucc**	**0.87**	**331**	⇓P	Pn	17 07 04.3	+0.1
MPAG				AML	AML		
	comp=E,101µm,0.4s						
MPAG				AML	AML		
	comp=E,101µm,1.6s						
MPAG				AML	AML		
	comp=N,108µm,1.0s						
PIEI	**Pieia**	**0.89**	**319**	⇓P	Pb	17 07 04.0	-0.1
PIEI				AML	AML		
	comp=N,105µm,0.3s						
PIEI				AML	AML		
	comp=E,132µm,0.2s						
PIEI				AML	AML		
	comp=N,105µm,1.7s						
MGAB	**Montegabbione**	**0.90**	**273**	⇑P	Pn	17 07 05.2	+0.8
FSSB	**Fossombrone**	**0.92**	**334**	P	Pn	17 07 05.6	+0.8
FSSB				AML	AML		
	comp=E,296µm,1.5s						
FSSB				AML	AML		
	comp=N,372µm,0.3s						
FSSB				AML	AML		
	comp=E,296µm,0.5s						
CERT	**Cerreto**	**0.95**	**196**	P	Pn	17 07 07.0	+1.8
SACS	**San Casciano d**	**1.05**	**270**	⇓P	Pb	17 07 07.5	+0.6
CAFI	**Castiglion Fio**	**1.11**	**295**	⇓P	Pb	17 07 09.7	+1.9
CRTO	**Cratere Ovest,**	**2.20**	**158**	S	Sb	17 07 51.0	-2.1

ROM 17 17:28:47.8±0.1,42°.904N±0°.003×13°.203E±0°.004,
h8km,ML1.4/19,5C-4D,Error ellipse: s-maj=0.3km
s-min=0.2km az=262.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MC2	**Monte Cornacci**	**0.01**	**312**	⇑P	Pg	17 28 49.3	-0.2
MC2				S	Sg	17 28 50.1	-0.7
T1245	**Castelsantange**	**0.05**	**193**	P	Pg	17 28 49.9	+0.1
T1245				S	Sg	17 28 51.0	0.0
T1245				AML	AML		
	comp=E,6015µm,0.2s						
T1245				AML	AML		
	comp=N,9160µm,0.1s						
T1245				AML	AML		
	comp=E,5950µm,0.6s						
T1245				AML	AML		
	comp=N,8550µm,1.6s						
T1245				AML	AML		
	comp=E,5728µm,0.1s						
T1245				AML	AML		
	comp=N,8488µm,0.1s						
T1245				AML	AML		
	comp=N,9146µm,0.1s						
T1245				AML	AML		
	comp=E,5770µm,0.1s						
MMO1	**Montemonaco**	**0.09**	**93**	P	Pg	17 28 50.5	+0.4
MMO1				S	Sg	17 28 52.3	+0.5
T1256	**Bolognola (MC)**	**0.10**	**9**	P	Pg	17 28 50.8	+0.3
T1256				S	Sg	17 28 52.6	+0.4
T1256				AML	AML		
	comp=E,690µm,0.7s						
T1256				AML	AML		
	comp=N,623µm,1.1s						
T1256				AML	AML		
	comp=E,469µm,0.1s						
T1256				AML	AML		
	comp=N,522µm,0.2s						
T1216	**Preci, Frazion**	**0.14**	**264**	P	Pg	17 28 51.4	+0.6
T1216				S	Sg	17 28 53.8	+1.0
T1216				AML	AML		
	comp=E,1003µm,0.2s						
T1216				AML	AML		
	comp=N,672µm,1.1s						
T1216				AML	AML		
	comp=E,1005µm,0.2s						
T1216				AML	AML		
	comp=N,526µm,0.1s						
T1214	**Arquata del Tr**	**0.14**	**178**	P	Pg	17 28 51.6	+0.6
T1214				S	Sg	17 28 54.3	+1.1
FDMO	**Fiordimonte**	**0.16**	**327**	⇓P	Pg	17 28 51.6	+0.4
FDMO				S	Sg	17 28 54.5	+1.0
FDMO				AML	AML		
	comp=N,363µm,0.2s						
FDMO				AML	AML		
	comp=E,347µm,0.3s						
FDMO				AML	AML		
	comp=N,364µm,0.2s						
FDMO				AML	AML		
	comp=E,347µm,0.3s						
FDMO				AML	AML		
	comp=N,352µm,0.2s						
T1241	**Roccafluvione,**	**0.17**	**106**	P	Pg	17 28 52.1	+0.7
T1241				S	Sg	17 28 55.2	+1.3
T1241				AML	AML		
	comp=E,348µm,0.1s						
T1241				AML	AML		
	comp=E,347µm,0.1s						
T1241				AML	AML		
	comp=N,312µm,0.2s						
T1241				AML	AML		
	comp=E,338µm,0.1s						
T1241				AML	AML		
	comp=N,312µm,0.2s						
T1241				AML	AML		
	comp=N,310µm,0.2s						
T1241				AML	AML		
	comp=E,347µm,0.1s						
GUMA	**Gualdo di Mace**	**0.19**	**31**	P	Pg	17 28 52.6	+1.0
GUMA				S	Sg	17 28 56.1	+1.8
GUMA				AML	AML		
	comp=E,723µm,0.8s						

GUMA				AML	AML		
	comp=N,1112µm,0.3s						
GUMA				AML	AML		
	comp=E,874µm,0.2s						
GUMA				AML	AML		
	comp=N,1205µm,1.6s						
GUMA				AML	AML		
	comp=E,572µm,0.3s						
GUMA				AML	AML		
	comp=N,1175µm,0.2s						
GUMA				AML	AML		
	comp=E,874µm,0.2s						
GUMA				AML	AML		
	comp=N,1110µm,0.3s						
T1212	**Cascia, Frazio**	**0.19**	**217**	⇓P	Pg	17 28 52.5	+0.7
T1212				S	Sg	17 28 55.8	+1.3
T1212				AML	AML		
	comp=E,208µm,0.9s						
T1212				AML	AML		
	comp=N,354µm,1.6s						
T1212				AML	AML		
	comp=E,166µm,0.1s						
T1212				AML	AML		
	comp=E,188µm,0.1s						
T1212				AML	AML		
	comp=N,289µm,0.1s						
T1212				AML	AML		
	comp=N,284µm,0.1s						
T1220	**Camerino, Fraz**	**0.22**	**338**	P	Pg	17 28 52.9	+0.6
T1220				S	Sg	17 28 56.9	+1.5
T1220				AML	AML		
	comp=E,1175µm,1.1s						
T1220				AML	AML		
	comp=N,1222µm,0.2s						
T1220				AML	AML		
	comp=E,1061µm,0.3s						
T1220				AML	AML		
	comp=N,1221µm,0.2s						
CESI	**CESI - Serrava**	**0.24**	**295**	P	Pg	17 28 53.4	+0.7
CESI				S	Sg	17 28 57.6	+1.6
CESI				AML	AML		
	comp=E,112µm,0.5s						
CESI				AML	AML		
	comp=N,249µm,0.2s						
CESI				AML	AML		
	comp=E,94µm,0.2s						
CESI				AML	AML		
	comp=N,249µm,0.2s						
T1218	**Civita (PG)**	**0.24**	**196**	P	Pg	17 28 53.4	+0.6
T1218				S	Sg	17 28 58.0	+2.0
T1218				AML	AML		
	comp=E,212µm,0.9s						
T1218				AML	AML		
	comp=N,214µm,1.4s						
T1218				AML	AML		
	comp=E,182µm,1.5s						
T1218				AML	AML		
	comp=N,217µm,1.5s						
T1218				AML	AML		
	comp=E,150µm,0.1s						
T1218				AML	AML		
	comp=N,198µm,0.2s						
T1218				AML	AML		
	comp=E,152µm,0.1s						
T1218				AML	AML		
	comp=N,181µm,0.2s						
T1217	**Poggiodomo (PG**	**0.28**	**226**	P	Pg	17 28 54.0	+0.6
T1217				S	Sb	17 28 58.9	-1.1
T1217				AML	AML		
	comp=E,62µm,0.1s						
T1217				AML	AML		
	comp=E,60µm,0.1s						
T1217				AML	AML		
	comp=N,80µm,0.2s						
SMA1	**SAN MARTINO**	**0.29**	**160**	P	Pg	17 28 54.1	+0.5
SMA1				S	Sb	17 28 59.4	-0.9
SMA1				AML	AML		
	comp=E,132µm,1.1s						
SMA1				AML	AML		
	comp=N,141µm,0.8s						
SMA1				AML	AML		
	comp=E,99µm,0.3s						
SMA1				AML	AML		
	comp=N,56µm,0.2s						
RM33	**Pellescritta (**	**0.40**	**179**	P	Pg	17 28 56.0	+0.4
RM33				S	Sb	17 29 03.0	-0.4
RM33				AML	AML		
	comp=E,57µm,1.5s						
RM33				AML	AML		
	comp=N,53µm,1.3s						
RM33				AML	AML		
	comp=E,54µm,0.1s						
RM33				AML	AML		
	comp=N,49µm,0.4s						
CAMP	**Campotosto**	**0.40**	**158**	⇑P	Pg	17 28 56.0	+0.4
CAMP				S	Sb	17 29 02.5	-0.9
CAMP				AML	AML		
	comp=E,44µm,0.5s						
CAMP				AML	AML		
	comp=N,43µm,0.7s						
SNTG	**Esanatoglia**	**0.40**	**331**	⇑P	Pg	17 28 56.1	+0.4
SNTG				AML	AML		
	comp=E,70µm,0.7s						
SNTG				AML	AML		
	comp=N,86µm,0.5s						
SNTG				AML	AML		
	comp=E,69µm,0.1s						
SNTG				AML	AML		
	comp=N,81µm,0.3s						
TERO	**Teramo**	**0.41**	**133**	P	Pg	17 28 56.1	+0.3
TERO				S	Sb	17 29 02.9	-0.8
TERO				AML	AML		
	comp=E,176µm,0.2s						
TERO				AML	AML		
	comp=N,197µm,0.4s						
TERO				AML	AML		
	comp=N,165µm,0.2s						
TERO				AML	AML		
	comp=E,165µm,0.2s						
TERO				AML	AML		
	comp=N,165µm,0.2s						
TERO				AML	AML		
	comp=E,175µm,0.2s						
ASSB	**Assisi San Ben**	**0.42**	**289**	⇓P	Pg	17 28 56.6	+0.5
ASSB				AML	AML		
	comp=E,45µm,1.5s						
ASSB				AML	AML		
	comp=N,55µm,0.2s						
ASSB				AML	AML		
	comp=N,55µm,0.2s						
ASSB				AML	AML		
	comp=E,40µm,0.1s						
T1211	**Morro Reatino**	**0.45**	**215**	P	Pg	17 28 57.1	+0.5
T1211				S	Sb	17 29 04.5	-0.5
T1211				AML	AML		
	comp=E,63µm,0.3s						
T1211				AML	AML		
	comp=N,97µm,1.1s						
T1211				AML	AML		
	comp=E,55µm,0.1s						
T1211				AML	AML		
	comp=N,62µm,0.2s						
T1211				AML	AML		
	comp=N,84µm,0.2s						
T1211				AML	AML		
	comp=E,61µm,0.1s						
CING	**Cingoli**	**0.47**	**359**	⇑P	Pg	17 28 57.6	+0.6
CING				AML	AML		
	comp=E,93µm,0.3s						
CING				AML	AML		
	comp=N,78µm,0.3s						
CING				AML	AML		
	comp=E,79µm,0.2s						
CING				AML	AML		
	comp=N,77µm,0.2s						
MOMA	**Monte Martano**	**0.48**	**258**	⇑P	Pb	17 28 58.1	-0.4
MOMA				AML	AML		
	comp=E,50µm,1.3s						
MOMA				AML	AML		
	comp=N,41µm,1.2s						
MOMA				AML	AML		
	comp=N,33µm,0.2s						
MOMA				AML	AML		
	comp=E,50µm,0.1s						
ATCC	**AVT- Casa Cast**	**0.50**	**304**	P	Pg	17 28 58.1	+0.6
ATCC				AML	AML		
	comp=E,53µm,0.2s						
ATCC				AML	AML		
	comp=N,42µm,0.4s						
T1222	**Castel Sant'An**	**0.52**	**194**	P	Pg	17 28 58.4	+0.5
T1222				S	Sb	17 29 07.0	+0.2
T1222				AML	AML		
	comp=N,22µm,0.3s						
T1222				AML	AML		
	comp=E,29µm,0.3s						
MURB	**Monte Urbino**	**0.61**	**306**	⇓P	Pg	17 29 00.2	+0.6
MURB				AML	AML		
	comp=E,69µm,0.3s						
MURB				AML	AML		
	comp=N,61µm,0.3s						
MURB				AML	AML		
	comp=N,61µm,0.3s						
MURB				AML	AML		
	comp=E,69µm,0.3s						

ROM 17 17:29:30.8±0.1**,42°.906N**±0°.003×**13°.196E**±0°.003**,**
h6^{km},ML0.9/2**,1D,Error ellipse: s-maj=0.3km**
s-min=0.0km az=39.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.01**	**326**	P	Pg	17 29 32.1	-0.1
MC2				S	Sg	17 29 32.7	-0.4
T1245	**Castelsantange**	**0.05**	**187**	P	Pg	17 29 32.6	+0.2
T1245				S	Sg	17 29 33.7	+0.2
T1245				AML	AML		
	comp=E,820µm,0.2s						
T1245				AML	AML		
	comp=N,1074µm,0.1s						
T1245				AML	AML		
	comp=E,803µm,0.2s						
T1245				AML	AML		
	comp=N,1050µm,1.6s						
T1245				AML	AML		
	comp=N,947µm,0.6s						
T1245				AML	AML		
	comp=E,818µm,0.3s						
T1245				AML	AML		
	comp=N,930µm,0.6s						
MMO1	**Montemonaco**	**0.10**	**94**	P	Pg	17 29 33.2	+0.3
MMO1				S	Sg	17 29 35.0	+0.5
T1216	**Preci, Frazion**	**0.13**	**263**	AML	AML		
	comp=E,250µm,0.1s						
T1216				AML	AML		
	comp=N,361µm,0.1s						
T1214	**Arquata del Tr**	**0.15**	**176**	P	Pg	17 29 34.4	+0.6
FDMO	**Fiordimonte**	**0.15**	**328**	P	Pg	17 29 34.3	+0.4
FDMO				S	Sg	17 29 37.2	+1.2
FDMO				AML	AML		
	comp=E,47µm,0.3s						
FDMO				AML	AML		
	comp=N,52µm,0.2s						
T1241	**Roccafluvione,**	**0.18**	**106**	P	Pg	17 29 34.8	+0.4
T1241				S	Sg	17 29 37.9	+1.1
CSP1	**Cessapalombo**	**0.19**	**2**	P	Pg	17 29 31.9	-2.6
T1219	**Muccia, Frazio**	**0.20**	**317**	P	Pg	17 29 35.4	+0.5
T1219				S	Sg	17 29 38.9	+1.3
T1220	**Camerino, Fraz**	**0.22**	**339**	S	Sg	17 29 35.7	-2.3
T1218	**Civita (PG)**	**0.24**	**194**	⇓P	Pg	17 29 36.2	+0.6
T1217	**Poggiodomo (PG**	**0.28**	**225**	P	Pg	17 29 36.7	+0.5
T1217				S	Sb	17 29 41.5	-1.6
TERO	**Teramo**	**0.41**	**133**	P	Pg	17 29 39.0	+0.3

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*IDC **17** 17:41:05.9±2.4,22°.84N×11°.95W,h0^{km},mb3.9/5,*
mbtmp3.9/7,ML3.9/2,Error ellipse: s-maj=74.3km
s-min=29.3km az=85.0

ISC 17 17:41:06.2±2.1**,22°.7N**±0°.2×**12°.1W**±0°.4**,h10**^{km}**,n9,**σ**0**^{s}**60**/9**,**
mb3.8/5**,Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**16.18**	**124**	Pn	**Pn**	**17 44 53.4**	**-0.5**
	0.4nm,0.3s,baz=312,slow=13,SNR=12						
	1.0nm,0.4s						
DBIC	**Dimbokro**	**17.41**	**155**	Pn	**Pn**	**17 45 09.4**	**0.0**
	0.4nm,0.3s,baz=336,slow=11,SNR=3.7						
	3.7nm,0.7s						
GERES	**GERESS Array B**	**33.10**	**32**	P	**P**	**17 47 41.9**	**-0.6**
	0.7nm,0.7s,baz=216,slow=6.6,SNR=5.4						
	0.7nm,0.7s						
BRTR	**Keskin Array B**	**42.11**	**55**	P	**P**	**17 48 59.6**	**+0.8**
	0.7nm,0.8s,baz=240,slow=9.4,SNR=3.9						
	0.7nm,0.8s						
FINES	**FINESS Array B**	**46.70**	**24**	P	**P**	**17 49 34.6**	**-0.4**
	3.4nm,0.9s,baz=251,slow=7.2,SNR=5.8						
	3.4nm,0.9s						
ARCES	**ARCESS Array B**	**51.90**	**16**	P	**P**	**17 50 14.3**	**-0.4**
	4.5nm,1.0s,baz=224,slow=7.5,SNR=2.4						
	4.5nm,1.0s						
MKAR	**Makanchi Array**	**76.65**	**45**	P	**P**	**17 52 57.9**	**+0.5**
	0.4nm,0.5s,baz=278,slow=5.5,SNR=11						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**148.62**	**91**	PKPbc	**PKPbc**	**18 00 55.0**	**+0.6**
	0.8nm,0.8s,baz=287,slow=2.6,SNR=7.9						
ASAR	**Alice Springs**	**148.75**	**98**	PKPbc	**PKiKP**	**18 00 55.9**	**-0.2**
	0.7nm,0.7s,baz=295,slow=1.7,SNR=14						

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*IDC **17** 17:58:10.5±2.4,36°.30N×70°.83E,h146^{km}±23^{km},mb3.4/16,*
mbtmp4.0/23,Error ellipse: s-maj=16.2km s-min=12.9km
az=18.0

*MOS **17** 17:58:10.8±0.8,36°.35N×70°.81E,h162^{km},mb4.1/9,Error*
ellipse: s-maj=9.5km s-min=4.9km az=82.3

*NNC **17** 17:58:11.4±3.7,36°.91N×70°.43E,h0^{km},mb4.3,mpv4.0,*
Error ellipse: s-maj=38.9km s-min=17.2km az=149.0

*NEIC **17** 17:58:14.0±2.8,36°.56N±0°.05×70°.74E±0°.07,h178^{km}±5^{km},*
mb4.2/20,Error ellipse: s-maj=8.7km s-min=7.1km
az=93.0

ISC 17 17:58:14.1±0.4**,36°.51N**±0°.04×**70°.77E**±0°.04**,h188**^{km}**,n159,**
σ**2**^{s}**23**/193**,mb3.9**/26**,30C-14D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.42**	**216**	Pn	**Pn**	**17 58 55.7**	**-0.9**
KBL				Sn	**Sn**	**17 59 26.2**	**-3.4**
CHGR	**Chuyangaron**	**2.49**	**330**	Pn	**Pn**	**17 58 56.3**	**-0.9**
CHGR				Sn	**Sn**	**17 59 27.0**	**-4.0**
GAR	**Garm**	**2.51**	**352**		**Pn**	**17 58 56.8**	**-0.6**
GAR				Sn	**Sn**	**17 59 27.8**	**-3.6**
CEP	**Cherat**	**2.84**	**160**	P	**Pn**	**17 59 02.1**	**+0.7**
CEP				S	**Sn**	**17 59 37.0**	**-1.3**
DRK	**Karamyk**	**3.07**	**15**	Pn	Pn	17 58 59.3	-5.0
DRK				Sn	**Sn**	**17 59 36.7**	**-6.9**
CHCP	**Chirah Chowk**	**3.51**	**144**	P	**Pn**	**17 59 09.1**	**-0.3**
NIL	**Nilore**	**3.51**	**144**	Pn	**Pn**	**17 59 09.2**	**-0.1**
NIL				Sn	**Sn**	**17 59 50.2**	**-2.4**
BTK	**Batken**	**3.54**	**1**	Pn	**Pn**	**17 59 09.8**	**0.0**
BTK				Sn	**Sn**	**17 59 51.2**	**-2.3**
BTK	**Batken**	**3.54**	**1**	PN	**Pn**	**17 59 09.8**	**0.0**
BTK						17 59 51.2	
THW	**Thamme Wali**	**3.79**	**167**	P	**Pn**	**17 59 12.3**	**-0.7**
TAS	**Tashkent**	**4.94**	**347**	Pn	**Pn**	**17 59 26.0**	**-1.4**
TAS				Sn	**Sn**	**18 00 20.6**	**-4.6**
TAS	**Tashkent**	**4.94**	**347**	PN	**Pn**	**17 59 26.0**	**-1.4**
KSH	**Kashi**	**5.09**	**52**	P	Pn	17 59 24.3	-5.1
KSH				S	Sn	18 00 17.4	-11
KSH				smax	smax		
	comp=N,510nm,0.5s						
KSH				smax	smax		
	comp=E,300nm,0.6s						
KSH				LR	LR		
	comp=N,240nm,6.5s						
KSH				LR	LR		
	comp=E,330nm,6.5s						
KSH				LR	LR		
	comp=Z,350nm,6.4s						
JMU	**Jammu**	**5.09**	**137**	*e*P	**Pn**	**17 59 27.7**	**-1.7**
JMU				*e*S	**Sn**	**18 00 24.2**	**-4.4**
THN	**Thein Dam**	**5.77**	**133**	*e*P	**Pn**	**17 59 37.0**	**-1.1**
THN				*e*S	**Sn**	**18 00 40.0**	**-4.5**
THN				IAML		18 00 42.5	
	comp=N,212nm,0.5s						
THN				IAML		18 00 42.7	
	comp=E,230nm,0.4s						
AML	**Almayashu**	**6.05**	**21**	P	**Pn**	**17 59 41.5**	**-0.7**
	SNR=123						
AML	**Almayashu**	**6.05**	**21**	⇑P	**Pn**	**17 59 41.3**	**-0.9**
	comp=E,4.6nm,0.5s						
AML				⇓S	**Sn**	**18 00 47.4**	**-4.3**
	comp=E,25nm,0.7s						
AML	**Almayashu**	**6.05**	**21**	PN	**Pn**	**17 59 41.3**	**-0.9**
UCH	**Uchtor**	**6.40**	**26**	P	**Pn**	**17 59 46.2**	**-0.6**
	SNR=29						
EKS2	**Erkin-Say**	**6.57**	**20**	P	**Pn**	**17 59 47.6**	**-1.0**
	SNR=9.4						
KK31	**Karatay Array**	**6.59**	**358**	Pn	**Pn**	**17 59 48.1**	**-0.7**
KK31				Sn	**Sn**	**18 00 57.7**	**-6.0**
KK31	**Karatay Array**	**6.59**	**358**	Pn	**Pn**	**17 59 47.7**	**-1.1**
	comp=E,2.8nm,0.2s,baz=186,slow=16,SNR=150						
KK31				⇑Sn	**Sn**	**18 00 57.7**	**-6.0**
	comp=E,15nm,0.3s,baz=357,slow=34,SNR=5.1						
KK31	**Karatay Array**	**6.59**	**358**	PN	**Pn**	**17 59 48.1**	**-0.7**
KKAR	**Karatay Array**	**6.59**	**358**	Pn	**Pn**	**17 59 48.1**	**-0.6**
KKAR				Sn	**Sn**	**18 00 57.2**	**-6.4**
KKAR	**Karatay Array**	**6.59**	**358**	Pn	**Pn**	**17 59 48.2**	**-0.6**
KKAR	**Karatay Array**	**6.59**	**358**	PN	**Pn**	**17 59 48.2**	**-0.6**
AAK	**Ala-Archa**	**6.76**	**24**	P	**Pn**	**17 59 50.8**	**-0.4**
	SNR=26						
AAK	**Ala-Archa**	**6.76**	**24**	P	**Pn**	**17 59 50.5**	**-0.7**
	comp=E,14nm,0.3s,baz=188,slow=5.7,SNR=124						
AAK				S	**Sn**	**18 01 04.5**	**-3.5**
	comp=E,20nm,0.4s,baz=138,slow=23,SNR=21						
AAK	**Ala-Archa**	**6.76**	**24**	Pn	**Pn**	**17 59 50.3**	**-0.9**
AAK				Sn	**Sn**	**18 01 04.7**	**-3.3**
AAK	**Ala-Archa**	**6.76**	**24**	*d i*PN	**Pn**	**17 59 50.9**	**-0.3**
AAK				pmax	pmax		
	comp=Z,14nm,0.8s						
BHK	**Bhakra**	**6.92**	**136**	*e*P	**Pn**	**17 59 50.8**	**-2.5**
BHK				*e*S	**Sn**	**18 01 05.8**	**-5.8**
KBK	**Karagaybulak**	**6.93**	**26**	P	**Pn**	**17 59 53.4**	**-0.1**
	SNR=10						
ULHL	**Ulahol**	**7.12**	**35**	P	**Pn**	**17 59 55.4**	**-0.6**
	SNR=7.8						
CHMS	**Chumysh**	**7.17**	**24**	P	**Pn**	**17 59 55.8**	**-0.6**
	SNR=7.1						
USP	**Ospenovka**	**7.33**	**22**	P	**Pn**	**17 59 57.2**	**-1.3**
	SNR=9.0						
TKM2	**Tokmak 2**	**7.40**	**29**	P	**Pn**	**17 59 59.0**	**-0.7**
	SNR=18						
TKM2	**Tokmak 2**	**7.40**	**29**	⇑P	**Pn**	**17 59 59.1**	**-0.6**
	comp=Z,17nm,0.8s						
TKM2				⇓S	**Sn**	**18 01 18.9**	**-4.4**
	comp=Z,21nm,1.1s						
TKM2	**Tokmak 2**	**7.40**	**29**	PN	**Pn**	**17 59 59.7**	**0.0**
KDJ	**Kajisay**	**7.49**	**40**	Pn	**Pn**	**17 59 58.7**	**-2.1**
KDJ	**Kajisay**	**7.49**	**40**	PN	**Pn**	**17 59 58.7**	**-2.1**
TARG	**Taragay, Kyrgy**	**7.55**	**44**		**Pn**	**18 00 00.0**	**-1.8**
TARG	**Taragay, Kyrgy**	**7.55**	**44**	PN	**Pn**	**18 00 00.0**	**-1.8**
SMLA	**Simla**	**7.56**	**133**	*e*P	**Pn**	**17 59 59.9**	**-1.8**
SMLA				*e*S	**Sn**	**18 01 20.9**	**-5.9**
SMLA				*e*S	**Sn**	**18 01 21.0**	**-5.9**
SMLA				IAML		18 01 24.0	
	comp=E,99nm,0.2s						
SMLA				IAML		18 01 24.6	
	comp=N,114nm,0.4s						
PRZ	**Przheval'sk**	**8.39**	**42**	Pn	**Pn**	**18 00 11.8**	**-0.7**
PRZ	**Przheval'sk**	**8.39**	**42**	PN	**Pn**	**18 00 11.8**	**-0.7**
KUDL	**Kundal**	**9.64**	**148**	*e*P	**Pn**	**18 00 26.4**	**-2.5**
KUDL				*e*S	Sn	18 02 06.1	-10
SONA	**Sohna**	**9.81**	**145**	*e*S	Sn	18 02 09.9	-11
GEYT	**Alibeck**	**10.19**	**282**	P	**Pn**	**18 00 33.3**	**-2.7**
	comp=N,7.6nm,0.7s,baz=112,slow=10,SNR=19						
GEYT				S	**Sn**	**18 02 24.2**	**-5.2**
	comp=N,1.7nm,0.4s,baz=99,slow=19,SNR=2.0						
GEYT	**Alibeck**	**10.19**	**282**		**Pn**	**18 00 33.9**	**-2.1**
GEYT	**Alibeck**	**10.19**	**282**	P	**Pn**	**18 00 33.9**	**-2.1**
GYA0	**ALIBECK ARRAY**	**10.19**	**282**	P	**Pn**	**18 00 34.0**	**-2.0**
GYA0B	**ALIBECK ARRAY**	**10.19**	**282**		**Pn**	**18 00 34.0**	**-1.9**
GYA0B	**ALIBECK ARRAY**	**10.19**	**282**	⇑P	**Pn**	**18 00 34.2**	**-1.8**
GYA0B				⇓S	**Sn**	**18 02 26.1**	**-3.4**
PTH	**Pithoragarh**	**10.54**	**129**	*e*P	**Pn**	**18 00 37.2**	**-3.4**
PTH				*e*S	Sn	18 02 26.6	-12
LGTI	**Lohaghat**	**10.62**	**129**	*e*P	**Pn**	**18 00 38.3**	**-3.3**
LGTI				*e*S	Sn	18 02 28.8	-11
LGTI				IAML		18 02 33.6	
	comp=N,21nm,0.4s						
JHNI	**Jhansi**	**12.86**	**147**	*e*P	**Pn**	**18 01 08.4**	**-1.9**
MAKZ	**Makanchi**	**13.25**	**36**	Pn	**Pn**	**18 01 14.3**	**-0.7**
MAKZ	**Makanchi**	**13.25**	**36**	⇑P	**Pn**	**18 01 14.3**	**-0.7**
	comp=N,1.5nm,0.7s						
MAKZ				⇓S	**P**	**18 01 19.3**	**+1.0**
	comp=N,6.4nm,0.5s						
MAKZ	**Makanchi**	**13.25**	**36**	P	**Pn**	**18 01 14.3**	**-0.7**
MK08	**Makanchi Array**	**13.36**	**36**	⇓P	**Pn**	**18 01 16.6**	**+0.2**
MK08				⇑S	**P**	**18 01 20.4**	**+0.9**
MK09	**Makanchi Array**	**13.37**	**36**	⇓P	**Pn**	**18 01 16.9**	**+0.3**
MK09				⇑S	**P**	**18 01 20.5**	**+0.9**
MK07	**Makanchi Array**	**13.38**	**37**	⇓P	**Pn**	**18 01 16.7**	**+0.1**
MK07				⇑S	**P**	**18 01 20.6**	**+1.0**
MK03	**Makanchi Array**	**13.38**	**36**	⇓P	**Pn**	**18 01 16.7**	**+0.1**
MK03				⇑S	**P**	**18 01 20.6**	**+0.9**
MK04	**Makanchi Array**	**13.38**	**36**	⇓P	**Pn**	**18 01 16.7**	**+0.1**
MK04				⇑S	**P**	**18 01 20.6**	**+0.9**
MK01	**Makanchi Array**	**13.38**	**36**	⇑P	**Pn**	**18 01 16.6**	**-0.1**
MK01				⇑S	**P**	**18 01 20.7**	**+1.0**
MK02	**Makanchi Array**	**13.38**	**36**	⇑P	**Pn**	**18 01 16.6**	**-0.1**
MK02				⇓S	**P**	**18 01 20.7**	**+1.0**
MK06	**Makanchi Array**	**13.39**	**36**	⇑P	**Pn**	**18 01 16.6**	**-0.2**
MK06				⇑S	**P**	**18 01 20.7**	**+0.9**
MK05	**Makanchi Array**	**13.39**	**36**	⇑P	**Pn**	**18 01 16.7**	**-0.1**
MK05				⇑S	**P**	**18 01 20.9**	**+1.1**
MK31	**Makanchi Array**	**13.39**	**36**		**Pn**	**18 01 15.2**	**-1.6**
MK31	**Makanchi Array**	**13.39**	**36**	P	**Pn**	**18 01 16.9**	**+0.1**
	comp=N,1.1nm,0.7s,baz=217,slow=13,SNR=61						
MK31				⇑S	**P**	**18 01 20.8**	**+1.0**
	comp=N,2.8nm,0.7s						
MK31	**Makanchi Array**	**13.39**	**36**	*ce*P	**Pn**	**18 01 16.7**	**-0.1**
MKAR	**Makanchi Array**	**13.39**	**36**	P	**Pn**	**18 01 15.7**	**-1.1**
	comp=N,1.1nm,0.6s,baz=222,slow=15,SNR=28						
MKAR	**Makanchi Array**	**13.39**	**36**	Pn	**Pn**	**18 01 14.6**	**-2.2**
MKAR	**Makanchi Array**	**13.39**	**36**	*e*P	**Pn**	**18 01 16.6**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
DANN	**Dangsing**	**13.65**	**123**	*e*P	**Pn**	**18 01 18.0**	**-2.5**
	comp=Z,24nm,0.2s						
BHPL	**Bhopal**	**14.42**	**155**	*e*S	Sn	18 03 59.2	-12
GKN	**Gorkha**	**14.47**	**122**	*e*P	**Pn**	**18 01 28.3**	**-2.2**
	comp=Z,31nm,0.3s						
WMQ	**Urumqi**	**14.84**	**55**	*e*P	**Pn**	**18 01 35.3**	**+0.4**
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
AB31	**Akbulak array**	**14.98**	**332**	P	**Pn**	**18 01 36.1**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=144,slow=12,SNR=34						
AB31				S	**Sn**	**18 04 20.3**	**-3.4**
	comp=Z,0.5nm,0.2s,baz=38,slow=30,SNR=7.7						
AB31	**Akbulak array**	**14.98**	**332**	P	**Pn**	**18 01 36.1**	**-0.3**
AB31				S	**Sn**	**18 04 20.3**	**-3.4**
ABKAR	**Akbulak array**	**14.98**	**332**		**Pn**	**18 01 35.9**	**-0.5**
ABKAR	**Akbulak array**	**14.98**	**332**	Pn	**Pn**	**18 01 35.2**	**-1.2**
DMN	**Daman**	**15.04**	**122**	*e*P	**Pn**	**18 01 35.8**	**-1.8**
	comp=Z,26nm,0.3s						
KKN	**Kakani**	**15.04**	**121**	*e*P	**Pn**	**18 01 35.4**	**-2.2**
	comp=Z,68nm,0.6s						
KURBB	**Kurchatov Arra**	**15.17**	**19**	P	**Pn**	**18 01 37.5**	**-1.2**
	comp=Z,3.5nm,0.8s,baz=209,slow=11,SNR=27						
KURBB	**Kurchatov Arra**	**15.17**	**19**	⇑P	**P**	**18 01 40.7**	**+1.3**
	comp=Z,6.3nm,0.7s						
KURBB	**Kurchatov Arra**	**15.17**	**19**	P	**P**	**18 01 40.7**	**+1.3**
PKIN	**Phulchoki**	**15.26**	**122**	*e*P	**Pn**	**18 01 38.2**	**-2.1**
	comp=Z,32nm,0.4s						
PKI	**Pulchoki**	**15.27**	**122**	*e*P	**Pn**	**18 01 38.7**	**-1.8**
	comp=Z,51nm,0.5s						
KURK	**Kurchatov**	**15.28**	**19**	P	**Pn**	**18 01 39.1**	**-0.9**
KURK	**Kurchatov**	**15.28**	**19**	⇑P	**P**	**18 01 41.8**	**+1.1**
	comp=Z,6.8nm,1.2s						
KURK	**Kurchatov**	**15.28**	**19**	*d i*P	**P**	**18 01 41.7**	**+1.1**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GUN	**Gumba**	**15.38**	**120**	*e*P	**Pn**	**18 01 41.0**	**-0.9**
	comp=Z,26nm,0.4s						
JIRN	**Jiri**	**15.76**	**120**	*e*P	**Pn**	**18 01 44.9**	**-1.5**
	comp=Z,47nm,0.4s						
RAMN	**Ramite**	**16.48**	**121**	*e*P	**P**	**18 01 52.7**	**-1.7**
	comp=Z,43nm,0.5s						
BVA0	**Borovoye Array**	**16.51**	**359**	⇑P	**Pn**	**18 01 56.0**	**+1.0**
	comp=Z,1.4nm,0.4s,baz=154,slow=14,SNR=37						
BVA0	**Borovoye Array**	**16.51**	**359**	P	**Pn**	**18 01 56.0**	**+1.0**
BVAR	**Borovoye Array**	**16.51**	**359**	P	**Pn**	**18 01 54.7**	**-0.3**
	comp=Z,2.6nm,0.4s,baz=157,slow=12,SNR=35						
BVAR				S	**S**	**18 04 52.1**	**-4.8**
	comp=Z,0.7nm,0.6s,baz=168,slow=21,SNR=2.7						
BRVK	**Borovoye**	**16.55**	**359**		**P**	**18 01 54.1**	**-0.5**
BRVK				IAmb	IAmb	18 01 57.0	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,4.2nm,0.6s						
BRVK	Borovoye	16.55	359	⇑P	Pn	18 01 56.1	+0.7
	comp=Z,3.9nm,0.7s						
BRVK	Borovoye	16.55	359	⇑eP	Pn	18 01 55.9	+0.5
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AKTO	Aktyubinsk	16.68	331	P	Pn	18 01 57.5	+0.6
	comp=Z,2.0nm,0.3s,baz=134,slow=8.7,SNR=12						
AKTO				S	S	18 04 51.1	-9.2
	comp=Z,0.5nm,0.3s,baz=304,slow=18,SNR=1.6						
AKTO	Aktyubinsk	16.68	331	⇑P	Pn	18 01 58.2	+1.3
	comp=Z,21nm,3.0s						
WSAR	Wadi Sarin	16.88	222	P	P	18 01 57.5	-1.1
	comp=Z,4.9nm,0.8s,baz=109,slow=5.5,SNR=4.6						
UOSS	Minazif	17.00	231		P	18 01 59.1	-0.7
UOSS				IAmb	IAmb	18 02 42.5	
	comp=Z,27nm,1.4s						
TAPN	Taplejung	17.02	118	eP	P	18 02 01.0	+0.7
	comp=Z,19nm,0.3s						
DGZ	Jazzator, Alta	17.88	37	⇑eP	Pn	18 02 11.3	-0.1
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ZAA0	Zalesovo Array	19.98	25	P	P	18 02 33.0	+1.1
ZALV	Zalesovo Beam	19.98	25	P	P	18 02 32.8	+0.9
	comp=Z,19nm,0.4s,baz=222,slow=11,SNR=104						
	comp=Z,19nm,0.4s						
ZALV	Zalesovo Beam	19.98	25	eP	P	18 02 32.7	+0.9
ZALV				pmax	pmax		
	comp=Z,18nm,0.4s						
GNI	Garni	20.71	288	P	P	18 02 41.4	+1.4
	comp=Z,6.7nm,0.8s,baz=360,slow=10,SNR=5.2						
	comp=Z,6.7nm,0.8s						
GNI	Garni	20.71	288	P	P	18 02 39.2	-0.8
GNI				IAmb	IAmb	18 02 45.0	
	comp=Z,6.8nm,0.8s						
GNI	Garni	20.71	288	⇓eP	P	18 02 42.4	+2.4
GNI				pmax	pmax		
	comp=Z,13nm,1.7s						
ARU	Arti	21.56	341	P	P	18 02 50.0	+1.4
	comp=Z,2.0nm,0.5s,baz=136,slow=8.5,SNR=4.2						
	comp=Z,2.0nm,0.5s						
ARU	Arti	21.56	341	d iP	P	18 02 50.3	+1.7
ARU						18 03 38.8	
ARU				S	S	18 06 39.2	+4.3
ARU				pmax	pmax		
	comp=Z,44nm,4.4s						
KBZ	Khabaz	22.43	297	P	P	18 02 58.1	+1.0
	comp=Z,1.1nm,0.8s,baz=56,slow=3.6,SNR=2.9						
	comp=Z,1.1nm,0.8s						
RAYN	Ar Rayn	25.33	246		P	18 03 24.2	+0.5
RAYN				IAmb	IAmb	18 03 25.9	
	comp=Z,5.4nm,1.4s						
RAYN	Ar Rayn	25.33	246	P	P	18 03 24.2	+0.5
RAYN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
PZH	PanZhiHua	28.12	102	P	P	18 03 48.8	0.0
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SONM	Songino Array	28.48	55	P	P	18 03 53.2	+1.5
	comp=Z,0.3nm,0.6s,baz=238,slow=8.3,SNR=2.8						
	comp=Z,0.3nm,0.6s						
OBN	Obninsk	29.81	319	eP	P	18 04 05.8	+2.7
OBN				e		18 05 12.0	
OBN				e		18 07 03.9	
OBN				pmax	pmax		
	comp=Z,13nm,1.8s						
CMAR	Chiang Mai Arr	30.62	118	P	P	18 04 10.6	-0.1
	comp=Z,0.2nm,0.3s,baz=291,slow=10,SNR=5.0						
	comp=Z,0.2nm,0.3s						
HHC	Hu-ho-hao-te	31.93	70	eP	P	18 04 21.6	-0.5
HHC				pmax	pmax		
	comp=Z,27nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,6.4s						
AKASG	Malin Array Be	32.79	309	P	P	18 04 31.4	+2.0
	comp=Z,0.3nm,0.3s,baz=78,slow=6.7,SNR=4.5						
	comp=Z,0.3nm,0.3s						
AKASG	Malin Array Be	32.79	309	ceP	P	18 04 32.0	+2.7
NRIK	Noril'sk	34.15	11	P	P	18 04 43.1	+2.3
	comp=Z,2.4nm,0.5s,baz=181,slow=6.8,SNR=6.3						
	comp=Z,2.4nm,0.5s						
NRIK	Noril'sk	34.15	11	P	P	18 04 41.2	+0.4
NRIK				IAmb	IAmb	18 04 44.4	
	comp=Z,5.2nm,1.0s						
NRIK	Noril'sk	34.15	11	ceP	P	18 04 43.3	+2.5
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
FINES	FINESS Array B	37.37	326	P	P	18 05 10.5	+2.2
	comp=Z,2.8nm,1.0s,baz=124,slow=12,SNR=4.8						
	comp=Z,2.8nm,1.0s						
FINES	FINESS Array B	37.37	326	P	P	18 05 09.4	+1.1
FINES	FINESS Array B	37.37	326	eP	P	18 05 11.1	+2.8
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KEV	Kevo	40.72	338	P	P	18 05 37.9	+2.0
KEV	Kevo	40.72	338	P	P	18 05 37.9	+2.0
KEV				pmax	pmax		
	comp=Z,40nm,1.3s						
ARCES	ARCESS Array B	41.06	338	P	P	18 05 41.4	+2.7
	comp=Z,0.6nm,0.3s,baz=113,slow=8.4,SNR=18						
	comp=Z,0.6nm,0.3s						
HEH	HeiHe	42.39	53	eP	P	18 05 51.6	+1.9
NC303	NORSAR Array S	44.20	323	P	P	18 06 04.9	+0.8
NC303				IAmb	IAmb	18 06 18.3	
	comp=Z,14nm,1.1s						
NOA	NORSAR Array B	44.26	323	P	P	18 06 06.2	+1.6
	comp=Z,0.6nm,0.6s,baz=97,slow=7.7,SNR=3.4						
	comp=Z,0.6nm,0.6s						
NC204	NORSAR Array S	44.50	323	P	P	18 06 08.5	+2.0
TIXI	Tiksi	45.83	22	P	P	18 06 18.4	+1.7
TIXI				IAmb	IAmb	18 06 18.9	
	comp=Z,5.9nm,0.4s						
TIXI	Tiksi	45.83	22	⇑eP	P	18 06 18.7	+1.9
TIXI				pmax	pmax		
	comp=Z,13nm,2.5s						
SPITS	Spitsbergen Ar	47.44	347	P	P	18 06 32.0	+2.8
SPITS				pmax	pmax		
	comp=Z,68nm,1.5s						
SEY	Seymchan	54.51	34	ceP	P	18 07 22.8	+0.8
SEY				pmax	pmax		
	comp=Z,8.0nm,1.7s						
ERM	Erimo	54.78	60	P	P	18 07 26.1	+1.8
ERM	Erimo	54.78	60	P	P	18 07 26.1	+1.8
ERM				pmax	pmax		
	comp=Z,37nm,1.1s						
BILL	Bilibino	58.68	26	eP	P	18 07 53.1	+1.8
BILL				e		18 08 37.9	
BILL				e		18 10 02.0	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TORD	Torodi Ar. Bea	65.53	268	P	P	18 08 38.5	+0.8
	comp=Z,0.5nm,0.5s,baz=46,slow=7.1,SNR=5.9						
	comp=Z,0.5nm,0.5s						
INK	Inuvik	73.92	9	P	P	18 09 30.4	+2.4
INK	Inuvik	73.92	9	P	P	18 09 30.4	+2.4
INK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CAST	Castle Rocks	74.73	18	P	P	18 09 34.6	+1.7
ILAR	Eielson Array	74.82	16	P	P	18 09 34.9	+1.6
	comp=Z,0.3nm,0.8s,baz=303,slow=4.2,SNR=2.8						
	comp=Z,0.3nm,0.8s						
KTH	Kantishna Hill	74.91	18	P	P	18 09 36.0	+2.0
KTH				IAmb	IAmb	18 10 05.2	
	comp=Z,11nm,1.5s						
YKA	Yellowknife Ar	81.24	3	P	P	18 10 10.9	+2.3
	comp=Z,0.6nm,0.6s,baz=350,slow=5.2,SNR=15						
	comp=Z,0.6nm,0.6s						
WRA	Warramunga Arr	82.16	122	P	P	18 10 14.1	0.0
	comp=Z,0.6nm,0.5s,baz=324,slow=4.9,SNR=19						
	comp=Z,0.6nm,0.5s						
WRA	Warramunga Arr	82.16	122	P	P	18 10 13.8	-0.2
WB2	Warramunga Arr	82.16	122	P	P	18 10 14.2	+0.1
WB2				IAmb	IAmb	18 10 51.6	
	comp=Z,6.5nm,1.2s						
AS31	Alice Springs	84.42	125	P	P	18 10 25.7	+0.2
ASAR	Alice Springs	84.42	125	P	P	18 10 25.4	-0.2
	comp=Z,0.6nm,0.6s,baz=310,slow=5.0,SNR=16						
	comp=Z,0.6nm,0.6s						
ASAR	Alice Springs	84.42	125	P	P	18 10 25.9	+0.3
ASAR	Alice Springs	84.42	125	P	P	18 10 25.9	+0.3

IDC 17 17:59:53.8±55.0**, 17°.34S**×**179°.52W, h446**^{km}±77^{km}**,**
mb3.0/3**, mbtmp3.7**/4**, Error ellipse: s-maj=1051.0km**
s-min=130.8km az=79.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.35	260	P	P	18 00 56.1	0.0
	4.0nm,0.8s,baz=270,slow=20,SNR=1.7						
STKA	Stephens Creek	37.98	240	P	P	18 06 32.2	+0.2
	1.3nm,0.7s,baz=90,slow=14,SNR=1.8						
	1.3nm,0.7s						
WRA	Warramunga Arr	43.69	259	P	P	18 07 17.7	-0.4
	0.3nm,0.7s,baz=96,slow=7.4,SNR=10						
	0.3nm,0.7s						
ASAR	Alice Springs	43.92	254	P	P	18 07 19.8	-0.1
	1.9nm,0.4s,baz=89,slow=7.8,SNR=80						
	1.9nm,0.4s						

GCG ***17*** *18:03:07.7±0.6, 13°.51N×89°.46W, h175^{km}±17^{km}, MD3.9*
SNET ***17*** *18:03:10.5±1.1, 13°.20N×89°.35W, h52^{km}, ML4.0*
INET ***17*** *18:03:11.8±1.0, 13°.27N×89°.24W, h65^{km}±21^{km}, ML4.0*
ISC 17 18:03:09.8±1.7**, 13°.08N**±0°.09×**89°.34W**±0°.04**, h30**^{km}±13^{km}**,**
n26, σ0^s.78/41**, 2C-3D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.58	349	eP	Pb	18 03 21.8	+0.1
JAYA				eS	Sb	18 03 30.3	+0.5
LFRS	El Faro	0.60	27	eP	Pb	18 03 22.2	+0.2
PMON	Piamonte	0.62	2	⇓eP	Pb	18 03 22.4	0.0
PMON				eS	Sb	18 03 31.9	+0.9
BOQS	Boqueron	0.65	5	eP	Pb	18 03 22.9	+0.1
COEG	Centro de Oper	0.69	40	eP	Pb	18 03 23.2	-0.3
LFU	La Fuente	0.70	18	⇓eP	Pb	18 03 23.6	0.0
LBRS	Las Brisas	0.71	24	eP	Pb	18 03 23.9	+0.1
CEDA	San Andres	0.72	356	eP	Pb	18 03 23.4	-0.5
CEDA				eS	Sb	18 03 33.9	+0.4
PAVA	Las Pavas	0.74	32	eP	Pb	18 03 24.1	-0.2
PAVA				eS	Sb	18 03 34.7	+0.6
CEVE	Cerro Verde	0.79	340	⇑eP	Pb	18 03 24.7	-0.6
CEVE				eS	Sb	18 03 35.5	-0.2
COEB	Comit de Eme	0.89	62	eP	Pb	18 03 26.0	-0.8
COEB				eS	Sb	18 03 38.3	-0.1
NUBE	Las Nubes	0.92	332	⇑eP	Pb	18 03 26.0	-1.3
NUBE				eS	Sb	18 03 38.2	-1.1
P5NO	Presa 5 de nov	1.06	32	⇓eP	Pn	18 03 27.8	-0.9
P5NO				eS	Sb	18 03 41.2	-1.9
PACA	Pacayal	1.06	69	eP	Pn	18 03 29.6	+0.9
PACA				eS	Sn	18 03 44.0	+1.5
PACA	Pacayal	1.06	69	eP	Pn	18 03 29.5	+0.8
LCND	La Caada	1.43	81	eP	Pn	18 03 34.0	+0.4
NBG	Las Nubes	1.79	327	eP	Pn	18 03 39.4	+0.6
NBG				eS	Sb	18 04 04.1	-0.1
PCG	Pacaya	1.79	317	eP	Pn	18 03 39.4	+0.5
PCG				eS	Sb	18 04 04.8	+0.5
FUG	Fuego 3	1.99	313	eP	Pn	18 03 41.9	+0.3
FUG				eS	Sn	18 04 06.0	+0.4
CRIN	San Cristobal	2.27	99	eP	Pn	18 03 46.3	+1.1
CNGN	Cerro Negro	2.64	102	eP	Pn	18 03 51.6	+1.2
CNGN				eS	Sn	18 04 20.6	-0.9
CNGN				IAML		18 04 29.0	
	comp=E,699nm,0.7s						
CNGN				IAML		18 04 30.0	
	comp=N,486nm,0.3s						
STG3	Santiaguito 3,	2.70	307	eP	Pn	18 03 52.1	+0.7
STG3				eS	Sn	18 04 22.8	-0.4
MOMN	Momotombo	2.81	104	eP	Pn	18 03 53.9	+1.2
COPN	Copaltepe	2.83	108	eP	Pn	18 03 53.3	+0.4
MATN	Matagalpa	3.33	92	eP	Pn	18 04 00.3	+0.3
BOAB	BOACO BROADBAN	3.64	100	eP	Pn	18 04 04.0	-0.1
BOAB				eS	Sn	18 04 44.7	-1.3

NEIC ***17*** *18:05:50.2±1.2, 8°.00S±0°.07×161°.02E±0°.08, h10^{km}±1^{km}, mb5.1/90, Error ellipse: s-maj=14.1km s-min=11.1km az=108.0*
GCMT ***17*** *18:05:51.2±0.3, 8°.06S±0°.03×161°.07E±0°.03, h14^{km}±1^{km}, MW4.8/87, Moment Tensor Solution. s12,c14; s87,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.80±.14; M$_{\theta\theta}$-1.02±.08; M$_{\phi\phi}$-0.78±.09; M$_{r\theta}$0.12±.19; M$_{\theta\phi}$0.57±.04; M$_{\phi r}$0.70±.23; Best double couple: M$_0$1.76000×10^{16} NP1:φ$_s$325.00000°, δ53.00000°, λ108.00000°. NP2: φ$_s$117.00000°, δ40.00000°, λ67.00000°. Principal axes: T 2.0000, Plg74.0000°, Azm289.0000°; N -0.4830, Plg14.0000°, Azm134.0000°; P -1.5210, Plg7.0000°, Azm43.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
MOS ***17*** *18:05:52.1±0.9, 8°.11S×160°.94E, h36^{km}, mb5.1/30 Error ellipse: s-maj=11.0km s-min=9.4km az=96.7*
BJI ***17*** *18:05:53.6±0.0, 7°.71S×161°.09E, h37^{km}, mb4.6/54, mB5.2/24, Ms4.6/2, Ms7 4.4/3*
IDC ***17*** *18:05:56.1±2.4, 8°.08S×160°.90E, h49^{km}±23^{km}, mb4.1/21, mbtmp4.3/25, ML4.2/3, MS3.9/33, Error ellipse: s-maj=21.1km s-min=17.4km az=113.0*
ISC 17 18:05:53.7±0.3**, 8°.00S**±0°.04×**161°.02E**±0°.06**, h35**^{km}**, n279,**
σ1^s.62/269**, mb4.9**/88**, MS4.1**/37**, 3C-16D,**
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.77	217	P	Pn	18 06 22.7	+0.8
	15µm,0.8s,baz=166,slow=2.3,SNR=98						
HNR				S	Sn	18 06 48.9	+5.6
	29µm,0.5s,baz=52,slow=17,SNR=3.7						
HNR	Honiara	1.77	217	Pn	Pn	18 06 22.7	+0.8
HNR				Sn	Sn	18 06 43.3	0.0
HNR	Honiara	1.77	217	P	Pn	18 06 23.2	+1.2
HNR	Honiara	1.77	217	P	Pn	18 06 22.7	+0.8
HNR						18 06 43.3	
RABL	Rabaul	9.58	293	Pn	Pn	18 08 10.3	+0.9
KRVT	Keravat (AS076	9.66	292	P	Pn	18 08 11.0	+0.6
	4.3nm,0.3s,baz=230,slow=3.7,SNR=6.8						
	26nm,0.5s						
KOUNC	Koumac, New Ca	12.87	166	Pn	Pn	18 08 56.3	+2.0
KOUNC	Koumac, New Ca	12.87	166	P	Pn	18 08 58.4	+4.1
PMG	Port Moresby	13.77	263	P	Pn	18 09 08.2	+1.5
	15nm,1.2s,baz=71,slow=23,SNR=5.4						
PMG	Port Moresby	13.77	263	Pn	Pn	18 09 07.0	+0.4
PMG	Port Moresby	13.77	263	⇑eP	P	18 09 10.0	-4.7
DZM	Mont Dzumac	14.93	160	eLR	LR	18 12 49.7	
	comp=Z,551nm,21.0s						
DZM	Mont Dzumac	14.93	160	P	P	18 09 25.4	-2.3
	0.4nm,0.3s,baz=131,slow=21,SNR=2.1						
	7.2nm,0.8s						
DZM	Mont Dzumac	14.93	160	Pn	Pn	18 09 22.1	-0.4
PATS	Pohnpei	14.98	350	Pn	Pn	18 09 20.6	-2.5
COEN	Coen	18.49	250	P	P	18 10 05.9	-1.0
CTA	Charters Tower	18.68	228	P	Pn	18 10 10.7	+1.1
	0.6nm,0.3s,baz=47,slow=11,SNR=11						
	14nm,1.1s						
CTA	Charters Tower	18.68	228	P	Pn	18 10 10.9	+1.4
CTAO	Charters Tower	18.68	228	P	P	18 10 08.1	-0.9
CTAO	Charters Tower	18.68	228	P	Pn	18 10 11.0	+1.4
CTAO	Charters Tower	18.68	228	P	P	18 10 08.1	-0.9
CTAO				pmax	pmax		
	comp=Z,44nm,1.4s						
MTSU	Mount Surprise	19.12	237	P	Pn	18 10 16.4	+1.4
MSVF	Nonsavu	19.20	122	P	Pn	18 10 16.6	+0.6
MSVF	Nonsavu	19.20	122	P	Pn	18 10 16.6	+0.6
MSVF				pmax	pmax		
	comp=Z,19nm,1.3s						
EIDS	Eidsvold	19.70	208	P	P	18 10 19.7	-0.5
EIDS	Eidsvold	19.70	208	P	Pn	18 10 22.4	+0.6
GENI	Genyem	21.44	283	P	P	18 10 41.4	+2.3
	comp=Z,85nm,1.3s						
RMQ	Roma	21.77	211	P	P	18 10 44.5	+2.0
SMPI	Sarmi	23.00	284	P	P	18 10 57.2	+1.4
	comp=Z,66nm,1.7s,comp=Z,1µm						
ARMA	Armidale	23.98	200	P	P	18 11 06.3	+1.1
H11S2	WAKE ISLAND Hy	26.91	12	T	T	18 39 49.4	
	baz=193,slow=76,SNR=172						
H11S3	WAKE ISLAND Hy	26.91	12	T	T	18 39 45.5	
	baz=193,slow=76,SNR=112						
H11S1	WAKE ISLAND Hy	26.93	12	T	T	18 39 38.9	
	baz=193,slow=76,SNR=83						
AFI	Afiamalu	27.33	105	LR	LR	18 20 03.7	
	comp=Z,202nm,20.5s,baz=303,slow=31						
INKA	Innaminka	27.45	222	P	P	18 11 37.3	+0.8
WAKE	Wake Island	27.67	12	P	P	18 11 37.4	-1.2
H11N1	WAKE ISLAND Hy	28.14	12	T	T	18 41 10.2	
	baz=192,slow=76,SNR=326						
H11N3	WAKE ISLAND Hy	28.15	12	T	T	18 41 14.0	
	baz=192,slow=76,SNR=173						
H11N2	WAKE ISLAND Hy	28.16	12	T	T	18 41 11.6	
	baz=192,slow=76,SNR=407						
WB0	Warramunga Arr	28.32	243	P	P	18 11 42.9	-1.6
WB0				IAmb	IAmb	18 11 45.5	
	comp=Z,77nm,1.6s						
WRAB	Tennant Creek	28.42	243	P	P	18 11 44.4	-1.0
WRAB				IAmb	IAmb	18 11 46.4	
	comp=Z,70nm,1.6s						
WRAB	Tennant Creek	28.42	243	P	P	18 11 44.9	-0.4
WRAB	Tennant Creek	28.42	243	d iP	P	18 11 44.7	-0.6
WRAB				pmax	pmax		
	comp=Z,44nm,1.7s						
WB2	Warramunga Arr	28.42	243	P	P	18 11 44.0	-1.4
WB2				IAmb	IAmb	18 11 46.5	
	comp=Z,72nm,1.6s						
WRA	Warramunga Arr	28.43	243	P	P	18 11 44.8	-0.6
	comp=Z,5.6nm,0.5s,baz=68,slow=9.1,SNR=55						
WRA				LR	LR	18 22 33.8	
	comp=Z,505nm,19.8s,baz=93,slow=35						
	comp=Z,5.6nm,0.5s						
WRA	Warramunga Arr	28.43	243	P	P	18 11 43.9	-1.6
WRA	Warramunga Arr	28.43	243	i P	P	18 11 44.7	-0.8
WRA				pmax	pmax		
	comp=Z,5.0nm,0.4s						
STKA	Stephens Creek	29.86	215	P	P	18 11 56.4	-1.6
	comp=Z,1.4nm,0.5s,baz=62,slow=13,SNR=6.3						
STKA				LR	LR	18 24 13.5	
	comp=Z,457nm,18.4s,baz=34,slow=37						
	comp=Z,1.4nm,0.5s						
STKA	Stephens Creek	29.86	215	P	P	18 11 57.6	-0.3
STKA	Stephens Creek	29.86	215	P	P	18 11 57.7	-0.3
STKA				pmax	pmax		
	comp=Z,5.0nm,1.6s						
AS01	Alice Springs	30.25	236	P	P	18 12 00.2	-1.4
	comp=Z,6.3nm,1.0s						
AS31	Alice Springs	30.29	236	P	P	18 12 00.4	-1.5
ASAR	Alice Springs	30.29	236	P	P	18 12 00.5	-1.5
	comp=Z,2.9nm,0.8s,baz=62,slow=10,SNR=34						
ASAR				PcP	PcP	18 15 03.1	+1.1
	comp=Z,0.5nm,0.7s,baz=74,slow=2.8,SNR=2.2						
ASAR				LR	LR	18 23 44.2	
	comp=Z,460nm,19.5s,baz=70,slow=35						
	comp=Z,2.9nm,0.8s						
ASAR	Alice Springs	30.29	236	P	P	18 11 59.8	-2.2
ASAR	Alice Springs	30.29	236	P	P	18 11 59.8	-2.2
LCRK	Leigh Creek	30.89	221	P	P	18 12 06.6	-0.5
KNRA	Kununurra	32.45	253	P	P	18 12 19.8	-1.1
TOO	Toolangi	32.63	203	P	P	18 12 21.2	-1.2
TOO				IAmb	IAmb	18 12 40.6	
	comp=Z,35nm,1.5s						
TOO	Toolangi	32.63	203	P	P	18 12 21.2	-1.2
TOO				pmax	pmax		
	comp=Z,35nm,1.5s						
HIZ	Hauiti	32.84	160	P	P	18 12 23.2	-1.0
BBOO	Buckleboo	33.83	220	P	P	18 12 31.7	-1.2
BBOO				IAmb	IAmb	18 13 01.0	
	comp=Z,54nm,1.7s						
BBOO	Buckleboo	33.83	220	P	P	18 12 32.3	-0.6
BKZ	Black Stump Fm	34.01	158	P	P	18 12 33.8	-0.5
BKZ				IAmb	IAmb	18 13 29.2	
	comp=Z,70nm,2.0s						
BKZ	Black Stump Fm	34.01	158	P	P	18 12 35.6	+1.3
FITZ	Fitzroy Crossi	35.83	250	P	P	18 12 49.4	-0.9
FOZ	Fox Glacier	36.22	169	P	P	18 12 52.4	-0.9
RPZ	Rata Peaks	36.64	168	LR	LR	18 27 31.2	
	comp=Z,144nm,18.4s,baz=329,slow=35						
DAV	Davao City (W)	38.38	292	LR	LR	18 29 20.3	
	comp=Z,96nm,18.1s,baz=317,slow=37						
MYLDM	Lahad Datu	44.39	286	P	P	18 14 01.5	+0.1
MORW	Morawa	47.15	238	P	P	18 14 21.9	-1.1
NWAO	Narrogin (SRO)	47.46	232	LR	LR	18 35 22.9	
	comp=Z,223nm,18.3s,baz=70,slow=37						
INU	Inuyama	48.70	334	P	P	18 14 33.9	-0.9
PPT2	Papeete2	48.98	106	eS	S	18 21 38.6	-1.2
	comp=Z,87nm,25.2s						
PPT2				eLR	LR	18 28 38.6	
	comp=Z,223nm,26.5s						
PPT2				eLR	LR	18 28 38.6	
	comp=Z,121nm,26.8s						
SBUM	Sibu	49.77	280	P	P	18 14 43.0	-0.4
SBUM				IAmb	IAmb	18 14 45.3	
	comp=Z,23nm,1.4s						
JNU	Nakatsue	49.94	327	P	P	18 14 45.2	+0.8
	comp=Z,7.2nm,1.0s,baz=139,slow=8.4,SNR=3.2						
JNU				LR	LR	18 36 30.1	
	comp=Z,28nm,18.2s,baz=152,slow=37						
	comp=Z,7.2nm,1.0s						
JNU	Nakatsue	49.94	327	P	P	18 14 44.1	-0.2
KSM	Kuching	51.44	278	P	P	18 14 55.1	-0.9
KSM				IAmb	IAmb	18 14 57.5	
	comp=Z,37nm,1.3s						
TJN	Taejon	54.29	327	P	P	18 15 16.4	-0.2
TJN	Taejon	54.29	327	ceP	P	18 15 18.9	+2.3
JKA	Kamikawa-asahi	54.49	344	P	P	18 15 18.3	+0.4
ASAJ	Asahikawa	54.49	344	LR	LR	18 36 07.5	
	comp=Z,227nm,21.0s,baz=176,slow=33						
ASAJ	Asahikawa	54.49	344	P	P	18 15 18.3	+0.4
ASAJ				pmax	pmax		
	comp=Z,48nm,1.4s						
KSRS	Korea Array	54.79	328	P	P	18 15 20.8	+0.6
	comp=Z,2.1nm,0.9s,baz=144,slow=7.8,SNR=13						
KSRS				LR	LR	18 37 29.2	
	comp=Z,48nm,18.8s,baz=135,slow=34						
	comp=Z,2.1nm,0.9s						
INCN	Inchon	55.50	327	P	P	18 15 25.5	+0.1
INCN				IAmb	IAmb	18 15 27.5	
	comp=Z,40nm,1.6s						
INCN	Inchon	55.50	327	P	P	18 15 25.5	+0.1
INCN				pmax	pmax		
	comp=Z,41nm,1.6s						
NJ2	Nanjing	56.61	317	eP	P	18 15 33.4	0.0
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
YSS	Yuzh-Sakhalins	57.07	345	eP	P	18 15 40.4	+4.0
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS				MLR	MLR		
	comp=Z,300nm,20.0s						
TAOE	Nuku Hiva Isla	58.15	95	eLR	LR	18 32 53.2	
	comp=Z,162nm,25.1s						
USRK	Ussuriysk Ar.	58.21	336	P	P	18 15 45.0	+0.6
	comp=Z,3.7nm,0.9s,baz=150,slow=8.1,SNR=9.4						
	comp=Z,3.7nm,0.9s						
USRK	Ussuriysk Ar.	58.21	336	P	P	18 15 44.3	-0.1
USRK	Ussuriysk Ar.	58.21	336	P	P	18 15 44.3	-0.1
USA0B	Ussuriysk Arra	58.21	336	P	P	18 15 43.6	-0.9
USA0B	Ussuriysk Arra	58.21	336	⇓eP	P	18 15 46.2	+1.8
MDJ	Mudanjiang	59.55	334	P	P	18 15 55.1	+1.4
MDJ				pmax	pmax		
	comp=Z,11nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,160nm,8.2s						
MDJ	Mudanjiang	59.55	334	P	P	18 15 52.8	-1.0
MDJ				IAmb	IAmb	18 15 56.0	
	comp=Z,15nm,1.3s						
BKNI	Bangkinang	60.35	275	P	P	18 15 58.0	-1.9
CN2	Changchun	60.80	331	eP	P	18 16 02.3	0.0
CN2				ePP	PP	18 18 19.0	+2.3
CN2				eS	S	18 24 15.8	-1.4
CN2				pmax	pmax		
	comp=Z,10.0nm,1.5s						
PETK	Petropavlovsk-	60.94	358	LR	LR	18 37 39.2	
	comp=Z,134nm,21.7s,baz=172,slow=31						
IPM	Ipoh	61.12	280	P	P	18 16 03.3	-1.8
IPM				IAmb	IAmb	18 16 06.2	
	comp=Z,20nm,1.3s						
BNX	BinXian	61.38	334	⇓P	P	18 16 07.0	+0.7
BNX				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BNX				pmax	pmax		
	comp=Z,180nm,4.8s						
KLR	Kul'dur	62.49	339	P	P	18 16 14.3	+0.8
	comp=Z,4.3nm,1.0s,baz=155,slow=5.4,SNR=8.9						
KLR				LR	LR	18 42 40.6	
	comp=Z,76nm,19.5s,baz=137,slow=35						
	comp=Z,4.3nm,1.0s						
KLR	Kul'dur	62.49	339	⇓iP	P	18 16 14.4	+0.8
KLR				pmax	pmax		
	comp=Z,13nm,1.7s						
HNS	HongShan	62.54	320	⇓P	P	18 16 15.3	+1.2
HNS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
RPSI	Rantau Prapat	62.84	277	P	P	18 16 15.2	-1.4
RPSI				IAmb	IAmb	18 18 06.8	
	comp=Z,7.4nm,0.5s						
PSI	Prapat	62.86	277	P	P	18 16 15.2	-1.7

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PSI                                   pmax     pmax
      comp=Z,7.0nm,0.5s
GYA   Guiyang           62.86 305 ⇓P       P         18 16 19.3 +2.6
GYA                                   pmax     pmax
      comp=Z,8.0nm,1.6s
GSI   Gunungsitoli      63.93 275  P       P         18 16 22.4 -1.4
XAN   Xi'an             64.65 314  P       P         18 16 28.8 +0.5
XAN                                pP      sP        18 16 43.3 +1.6
XAN                                   pmax     pmax
      comp=Z,6.0nm,1.5s
HEH   HeiHe             64.94 337 eP       P         18 16 30.6 +0.8
HEH                                   pmax     pmax
      comp=Z,8.0nm,1.0s
PHRA  Phrae             65.48 294  P       P         18 16 33.5 -0.4
KMI   Kunming           65.57 302 ⇓P       P         18 16 36.8 +2.2
KMI                                pP      sP        18 16 48.8 +0.6
KMI                                   pmax     pmax
      comp=Z,14nm,1.1s
XLT   XiLinHaoTe        65.72 326⇓iP       P         18 16 36.8 +1.8
XLT                                   pmax     pmax
      comp=Z,22nm,1.4s
XLT                                   pmax     pmax
      comp=Z,71nm,6.4s
CRAI  Chiangrai         65.90 296  P       P         18 16 36.2 -0.4
HHC   Hu-ho-hao-te      66.53 321 eP       P         18 16 41.1 +0.8
HHC                                   pmax     pmax
      comp=Z,190nm,6.0s
CM31  Chiang Mai Arr    66.63 294  P       P         18 16 41.2  0.0
CM31                               IAmb    IAmb      18 16 44.5
      comp=Z,12nm,1.2s
CMAR  Chiang Mai Arr    66.63 294  P       P         18 16 42.6 +1.3
      comp=Z,4.0nm,1.1s,baz=111,slow=4.3,SNR=22
      comp=Z,4.0nm,1.1s
CMAR  Chiang Mai Arr    66.63 294  P       P         18 16 39.6 -1.7
CMAR  Chiang Mai Arr    66.63 294 i P      P         18 16 43.0 +1.7
CMAR                                  pmax     pmax
      comp=Z,4.0nm,1.0s
CHTO  Chiang Mai        66.73 294  P       P         18 16 40.9 -1.1
CHTO  Chiang Mai        66.73 294  P       P         18 16 40.9 -1.1
PZH   PanZhiHua         66.92 303  P       P         18 16 44.3 +1.1
PZH                                   pmax     pmax
      comp=Z,10.0nm,0.9s
PZH                                   pmax     pmax
      comp=Z,100nm,3.8s
CD2   Chengdu           67.07 308  P       P         18 16 44.0 +0.1
BTO   Baotou            67.36 320 eP       P         18 16 49.3 +3.7
BTO                                pP      sP        18 16 59.8 +0.6
BTO                                SS      SS        18 29 59.3 -0.4
BTO                                   pmax     pmax
      comp=Z,15nm,0.5s
BTO                                   pmax     pmax
      comp=Z,130nm,3.9s
BTO                                LR      LR
      comp=Z,440nm,5.3s
UNV   Unalaska Valle    67.44  20  P       P         18 16 47.0 +1.3
ZEA   Zeya              67.80 339 eP       P         18 16 49.8 +1.8
ZEA                                   pmax     pmax
      comp=N,10.0nm,1.3s
ZEA                                   pmax     pmax
      comp=Z,10.0nm,1.3s
MA2   Magadan           67.85 354  LR      LR        18 42 25.9
      comp=Z,77nm,21.6s,baz=171,slow=32
VNDA  Vanda             69.49 180  LR      LR        18 43 03.9
      comp=Z,102nm,19.6s,baz=332,slow=32
ULN   Ulaanbaatar       73.14 325  P       P         18 17 20.4 -0.5
ULN                                IAmb    IAmb      18 17 23.8
      comp=Z,13nm,1.2s
ULN   Ulaanbaatar       73.14 325ceP       P         18 17 22.4 +1.5
ULN                                   pmax     pmax
      comp=Z,19nm,1.7s
SONM  Songino Array     73.49 325  P       P         18 17 24.4 +1.4
      comp=Z,3.3nm,1.0s,baz=136,slow=5.5,SNR=19
SONM                               LR      LR        18 48 20.7
      comp=Z,38nm,20.9s,baz=111,slow=35
      comp=Z,3.3nm,1.0s
SONM  Songino Array     73.49 325  P       P         18 17 23.5 +0.5
SONM  Songino Array     73.49 325  P       P         18 17 23.5 +0.5
SONM                                  pmax     pmax
      comp=Z,10.0nm,1.2s
GTA   Gaotai            73.61 315 eP       P         18 17 25.8 +1.9
GTA                                   pmax     pmax
      comp=Z,7.0nm,1.6s
YAK   Yakutsk           73.93 345  P       P         18 17 25.8 +0.8
      comp=Z,2.0nm,0.3s,baz=74,slow=1.3,SNR=10
YAK                                LR      LR        18 46 43.3
      comp=Z,110nm,22.0s,baz=92,slow=33
      comp=Z,2.0nm,0.3s
YAK   Yakutsk           73.93 345  P       P         18 17 25.0  0.0
YAK                                IAmb    IAmb      18 17 27.4
      comp=Z,20nm,1.0s
YAK   Yakutsk           73.93 345 eP       P         18 17 26.0 +1.0
YAK                               e*PP     pwP       18 17 37.9 -0.9
YAK                               e                  18 17 40.4
YAK                               e                  18 20 12.3
YAK                               eS       S         18 26 56.1 +1.8
YAK                               e                  18 27 27.8
YAK                               eSS      SS        18 31 36.4 -3.0
YAK                                   pmax     pmax
      comp=Z,19nm,1.0s
YAK                                   pmax     pmax
      comp=N,3.0nm,1.0s
YAK                                   pmax     pmax
      comp=E,3.0nm,1.3s
YAK                                   pmax     pmax
      comp=Z,73nm,3.8s
YAK                                   smax     smax
      comp=N,151nm,5.7s
YAK                                   smax     smax
      comp=E,91nm,5.1s
OHAK  Old Harbor        74.91  24  P       P         18 17 31.2 +0.3
SHL   Shillong          74.98 299  P       P         18 17 31.2 -1.0
SHL                                IAmb    IAmb      18 17 34.2
      comp=Z,28nm,1.3s
SHL   Shillong          74.98 299  P       P         18 17 31.2 -1.0
SHL                                   pmax     pmax
      comp=Z,28nm,1.3s
KDAK  Kodiak Island     75.57  24  LR      LR        18 47 39.5
      comp=Z,93nm,18.1s,baz=228,slow=33
BILL  Bilibino          75.94   2  P       P         18 17 36.4 -0.2
BILL                               IAmb    IAmb      18 17 38.9
      comp=Z,15nm,1.2s
BILL  Bilibino          75.94   2deP       P         18 17 37.1 +0.5
BILL                              e                  18 17 49.3
BILL                              e                  18 20 28.2
BILL                                  pmax     pmax
      comp=Z,17nm,1.7s
ZAK   Zakamensk         76.57 326 eP       P         18 17 41.4 +0.7
ZAK                                   pmax     pmax
      comp=Z,6.0nm,1.6s
ANM   Nome              76.61  14  P       P         18 17 40.7 +0.2
ANM   Nome              76.61  14  P       P         18 17 40.7 +0.2
ANM                                   pmax     pmax
      comp=Z,11nm,1.4s
ANM   Nome              76.61  14  P       P         18 17 43.1 +2.6
      baz=214
SVW2  Sparrevohn        76.78  20  P       P         18 17 41.5 +0.1
M19K  Big River Lodg    77.75  20  P       P         18 17 47.2 +0.3
M19K  Big River Lodg    77.75  20  P       P         18 17 50.0 +3.0
      baz=225
L19K  White Mountain    77.79  20  P       P         18 17 50.6 +3.4
      baz=225
L20K  Farewell, AK      78.33  20  P       P         18 17 52.9 +2.7
      baz=226
CAST  Castle Rocks      79.57  20  P       P         18 17 58.5 +1.6
      baz=227
BPAW  Bear Paw Mtn.     80.39  19  P       P         18 18 02.2 +0.8
I21K  Tanana            80.81  18  P       P         18 18 03.6 +0.2
MCK   McKinley          80.84  20  P       P         18 18 03.9 +0.1
MCK                                IAmb    IAmb      18 18 11.1
      comp=Z,26nm,1.2s
MCK   McKinley          80.84  20  P       P         18 18 03.9 +0.1
MCK                                   pmax     pmax
      comp=Z,26nm,1.2s
MCK   McKinley          80.84  20  P       P         18 18 05.1 +1.3
      baz=230
H21K  Melozitna Rive    80.88  18  P       P         18 18 04.5 +0.6
H21K  Melozitna Rive    80.88  18  P       P         18 18 06.5 +2.5
      baz=226
MLY   Manley            81.09  19  P       P         18 18 04.9 -0.2
MLY                                IAmb    IAmb      18 18 12.9
      comp=Z,22nm,1.6s
MLY   Manley            81.09  19  P       P         18 18 06.9 +1.8
      baz=228
NEA2  Nenana            81.35  20  P       P         18 18 06.4  0.0
NEA2                               IAmb    IAmb      18 18 13.5
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      comp=Z,20nm,1.4s
NEA2  Nenana            81.35  20  P       P         18 18 07.3 +0.9
      baz=230
H22K  Ishtalitna Cre    81.48  18  P       P         18 18 09.4 +2.3
      baz=228
PALK  Pallekele         81.50 279  LR      LR        18 57 13.0
      comp=Z,33nm,18.9s,baz=241,slow=38
F21K  Alatna River      81.78  16  P       P         18 18 10.7 +2.0
      baz=226
MDM   Murphy Dome       81.86  19  P       P         18 18 08.5 -0.6
MDM                                IAmb    IAmb      18 18 16.9
      comp=Z,18nm,1.3s
COLA  College           81.93  20d iP      P         18 18 09.9 +0.5
COLA                                  pmax     pmax
      comp=Z,17nm,1.4s
HDA   Harding Lake      81.95  20  P       P         18 18 08.9 -0.7
HDA                                IAmb    IAmb      18 18 17.8
      comp=Z,27nm,1.5s
HDA   Harding Lake      81.95  20  P       P         18 18 10.9 +1.4
      baz=232
QSPA  South Pole Qui    81.98 180  LR      LR        18 52 04.2
      comp=Z,108nm,19.2s,baz=356,slow=34
H23K  Yukon River       82.00  18  P       P         18 18 10.3 +0.4
IL31                    82.19  20  P       P         18 18 10.0 -0.8
IL31                               IAmb    IAmb      18 18 12.4
      comp=Z,16nm,1.5s
ILAR  Eielson Array     82.19  20  P       P         18 18 11.3 +0.5
      comp=Z,1.3nm,0.6s,baz=241,slow=5.1,SNR=19
ILAR                               LR      LR        18 48 47.4
      comp=Z,74nm,21.7s,baz=218,slow=31
      comp=Z,1.3nm,0.6s
ILAR  Eielson Array     82.19  20  P       P         18 18 09.8 -1.1
ILAR  Eielson Array     82.19  20  P       P         18 18 09.8 -1.1
POKR  Poker Plat Res    82.22  20  P       P         18 18 11.8 +0.7
      baz=232
TIXI  Tiksi             82.27 350  LR      LR        18 56 18.0
      comp=Z,66nm,18.7s,baz=170,slow=37
TIXI  Tiksi             82.27 350  P       P         18 18 11.0 -0.1
TIXI  Tiksi             82.27 350⇓eP       P         18 18 12.1 +1.0
TIXI                                  pmax     pmax
      comp=Z,13nm,2.5s
RIDG  Independent Ri    82.28  21  P       P         18 18 12.2 +0.8
RIDG                               IAmb    IAmb      18 18 20.2
      comp=Z,23nm,1.4s
RIDG  Independent Ri    82.28  21  P       P         18 18 13.6 +2.2
      baz=234
F22K  John River        82.34  16  P       P         18 18 14.0 +2.4
      baz=227
G23K  Bananza Creek     82.43  18  P       P         18 18 14.6 +2.5
      baz=229
DOT   Dot Lake          82.51  22  P       P         18 18 12.9 +0.3
DOT                                IAmb    IAmb      18 18 14.3
      comp=Z,37nm,2.0s
H24K  Noodor Dome       82.53  19  P       P         18 18 14.9 +2.3
      baz=231
M27K  Edge Creek, AK    82.61  23  P       P         18 18 15.9 +2.7
      baz=237
COLD  Coldfoot          82.72  17  P       P         18 18 12.8 -0.7
COLD                               IAmb    IAmb      18 18 22.3
      comp=Z,18nm,1.5s
SCRK  Sand Creek        82.73  21  P       P         18 18 14.1 +0.3
SCRK                               IAmb    IAmb      18 18 22.0
      comp=Z,18nm,1.4s
L27K  Beaver Creek,     83.02  23  P       P         18 18 17.9 +2.7
      baz=237
G24K  Hadweenzic Riv    83.20  18  P       P         18 18 18.4 +2.3
      baz=231
E23K  Chandalar         83.44  17  P       P         18 18 19.8 +2.5
      baz=229
K27K  Chicken           83.45  22  P       P         18 18 18.3 +0.9
K27K                               IAmb    IAmb      18 18 30.9
      comp=Z,14nm,1.4s
K27K  Chicken           83.45  22  P       P         18 18 20.1 +2.7
      baz=237
F24K  Squaw Lake        83.59  18  P       P         18 18 21.2 +3.1
      baz=231
WMQ   Urumqi            83.67 316 eP       P         18 18 20.5 +1.4
WMQ                                sP      sP        18 18 38.8 +5.8
WMQ                                   pmax     pmax
      comp=Z,9.0nm,1.1s
G25K  Bearman Lake      83.67  19  P       P         18 18 21.0 +2.5
      baz=233
D23K  Nanushuk River    83.75  16  P       P         18 18 21.7 +2.9
      baz=228
E24K  Your Creek        83.77  17  P       P         18 18 21.3 +2.3
      baz=230
I26K  Coal Creek Min    83.79  20  P       P         18 18 19.2 +0.1
I26K                               IAmb    IAmb      18 19 37.4
      comp=Z,26nm,1.7s
A21K  Barrow            83.98  13  P       P         18 18 19.8 -0.1
EGAK  Eagle             84.20  21  P       P         18 18 22.0 +0.8
EGAK                               IAmb    IAmb      18 18 24.1
      comp=Z,21nm,1.4s
EGAK  Eagle             84.20  21  P       P         18 18 23.7 +2.6
      baz=237
F25K  Christian Rive    84.32  18  P       P         18 18 24.6 +2.8
      baz=233
I27K  Kandik River      84.49  21  P       P         18 18 25.1 +2.4
      baz=237
G26K  Porcupine Rive    84.52  19  P       P         18 18 25.6 +2.9
      baz=235
BMAR  Burnt Mountain    84.55  18  P       P         18 18 23.6 +0.6
C24K  Franklin Bluff    84.77  16  P       P         18 18 26.5 +2.5
      baz=230
H27K  Steamboat Moun    84.86  20  P       P         18 18 27.3 +2.7
      baz=237
YBH   Yreka Blue Hor    85.17  47  P       P         18 18 29.3 +2.6
      comp=Z,4.0nm,1.1s,baz=186,slow=8.8,SNR=3.7
      comp=Z,4.0nm,1.1s
YBH   Yreka Blue Hor    85.17  47  P       P         18 18 26.9 +0.2
YBH                                IAmb    IAmb      18 18 30.6
      comp=Z,18nm,1.6s
YBH   Yreka Blue Hor    85.17  47  P       P         18 18 26.9 +0.2
YBH                                   pmax     pmax
      comp=Z,18nm,1.6s
I29M  Ogilvie Camp,     85.53  22  P       P         18 18 30.3 +2.4
      baz=240
M31M  Drury Creek, Y    85.58  25  P       P         18 18 28.3 +0.1
M31M                               IAmb    IAmb      18 18 36.5
      comp=Z,16nm,1.4s
DGZ   Jazzator, Alta    85.61 321⇓iP       P         18 18 29.6 +0.8
DGZ                                   pmax     pmax
      comp=Z,8.0nm,1.6s
MAW   Mawson            85.76 202  LR      LR        18 52 39.1
      comp=Z,69nm,21.8s,baz=95,slow=33
E27K  Coleen River      85.91  18  P       P         18 18 32.6 +2.8
      baz=237
C26K  Camden Bay        85.93  16  P       P         18 18 32.7 +2.9
      baz=234
DLBC  Dease Lake        86.01  29  LR      LR        18 52 07.5
      comp=Z,67nm,18.6s,baz=214,slow=32
FARO  Faro, Yukon       86.03  25  P       P         18 18 31.1 +0.6
FARO                               IAmb    IAmb      18 18 33.9
      comp=Z,19nm,1.4s
FARO  Faro, Yukon       86.03  25  P       P         18 18 32.9 +2.5
      baz=245
C27K  Jago River        86.09  17  P       P         18 18 33.4 +2.8
      baz=235
EPYK  Eagle Plains      86.60  21  P       P         18 18 33.7 +0.5
EPYK                               IAmb    IAmb      18 18 41.8
      comp=Z,26nm,1.4s
G30M  tAoh Zraii Nji    87.07  20  P       P         18 18 37.6 +2.2
      baz=242
MMPY  Sheldon Lake,     87.07  25  P       P         18 18 38.2 +2.6
      baz=247
NVAR  Mina Array Bea    87.68  51  P       P         18 18 40.8 +1.4
      comp=Z,0.1nm,0.3s,baz=253,slow=7.6,SNR=4.7
      comp=Z,0.1nm,0.3s
MK31  Makanchi Array    88.14 318  P       P         18 18 40.8 -0.2
MK31  Makanchi Array    88.14 318d iP      P         18 18 41.9 +0.9
MKAR  Makanchi Array    88.14 318  P       P         18 18 41.8 +0.7
      comp=Z,2.5nm,0.8s,baz=98,slow=5.4,SNR=20
MKAR                               LR      LR        18 59 37.6
      comp=Z,27nm,19.5s,baz=76,slow=37
      comp=Z,2.5nm,0.8s
MKAR  Makanchi Array    88.14 318  P       P         18 18 40.9 -0.1
PFO   Pinyon Flats O    88.20  56  LR      LR        18 50 31.1
      comp=Z,261nm,20.3s,baz=252,slow=30
WVOR  Wild Horse Val    88.28  47  P       P         18 18 40.5 -1.5
WVOR                               IAmb    IAmb      18 18 51.9
      comp=Z,12nm,1.4s
WVOR  Wild Horse Val    88.28  47  P       P         18 18 40.5 -1.5
WVOR                                  pmax     pmax
      comp=Z,12nm,1.4s
MAKZ  Makanchi          88.35 318  P       P         18 18 41.2 -0.8
MAKZ  Makanchi          88.35 318  P       P         18 18 41.2 -0.8
MAKZ                                  pmax     pmax
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      comp=Z,8.0nm,1.2s
ZALV  Zalesovo Beam     88.39 325  P       P         18 18 42.7 +0.7
      comp=Z,0.4nm,0.6s,baz=104,slow=6.1,SNR=1.8
ZALV                               LR      LR        19 00 30.1
      comp=Z,18nm,18.1s,baz=85,slow=37
      comp=Z,0.4nm,0.6s
INK   Inuvik            88.59  20  P       P         18 18 43.5 +0.9
      comp=Z,0.9nm,0.6s,baz=219,slow=8.3,SNR=2.9
INK                                LR      LR        18 54 34.5
      comp=Z,95nm,19.8s,baz=196,slow=33
      comp=Z,0.9nm,0.6s
INK   Inuvik            88.59  20  P       P         18 18 43.2 +0.6
INK                                IAmb    IAmb      18 18 49.8
      comp=Z,22nm,2.0s
INK   Inuvik            88.59  20  P       P         18 18 43.2 +0.6
INK                                   pmax     pmax
      comp=Z,22nm,2.0s
BELC  Belle Mtn. Jos    88.65  56  P       P         18 18 47.2 +3.3
      baz=259
BC3   Big Chuckawall    89.03  56  P       P         18 18 49.0 +3.3
      baz=260
GMRC  Granite Mounta    89.06  55  P       P         18 18 48.5 +2.6
      baz=260
IRM   Iron Mountain     89.37  56  P       P         18 18 50.5 +3.3
      baz=260
PRN   Pahroc Range      90.01  52  P       P         18 18 48.3 -1.9
PRN                                IAmb    IAmb      18 18 59.7
      comp=Z,16nm,1.5s
PIX   Pinacate          90.34  58  P       P         18 18 50.9 -0.8
ELK   Elko              90.45  49  P       P         18 18 53.5 +1.2
      comp=Z,0.8nm,0.7s,baz=284,slow=6.4,SNR=3.3
      comp=Z,0.8nm,0.7s
ELK   Elko              90.45  49  P       P         18 18 52.0 -0.3
ELK                                IAmb    IAmb      18 19 00.7
      comp=Z,14nm,1.9s
ELK   Elko              90.45  49  P       P         18 18 52.0 -0.3
ELK                                   pmax     pmax
      comp=Z,14nm,1.9s
NEW   Newport           90.52  41  LR      LR        18 51 14.5
      comp=Z,101nm,21.6s,baz=277,slow=30
SPR3  Spring Creek 3    90.84  51  P       P         18 18 53.8 -0.5
KURK  Kurchatov         91.34 321⇓eP       P         18 18 56.2 +0.3
KURK                                  pmax     pmax
      comp=Z,10.0nm,1.8s
CCUT  Cedar City        91.36  52  P       P         18 18 57.2 +0.5
CCUT                               IAmb    IAmb      18 19 07.9
      comp=Z,11nm,1.5s
LCMT  Little Creek M    91.37  53  P       P         18 18 56.7 +0.1
LCMT                               IAmb    IAmb      18 19 06.9
      comp=Z,15nm,1.6s
HLID  Hailey            91.53  46  P       P         18 18 56.7 -0.5
HLID                               IAmb    IAmb      18 19 06.6
      comp=Z,7.9nm,1.3s
HLID  Hailey            91.53  46  P       P         18 19 00.8 +3.6
      baz=260
NRIK  Noril'sk          91.67 340  P       P         18 18 57.2 +0.2
      comp=Z,2.7nm,0.8s,baz=81,slow=1.9,SNR=3.7
NRIK                               LR      LR        18 58 46.0
      comp=Z,90nm,21.6s,baz=117,slow=35
      comp=Z,2.7nm,0.8s
NRIK  Noril'sk          91.67 340⇓eP       P         18 18 56.9 -0.1
NRIK                                  pmax     pmax
      comp=Z,10.0nm,1.7s
KNB   Kanab             91.70  53  P       P         18 18 57.7 -0.5
KNB   Kanab             91.70  53  P       P         18 18 57.7 -0.5
KNB                                   pmax     pmax
      comp=Z,23nm,1.5s
BGU   Big Grassy Mou    92.13  49  P       P         18 18 59.7 -0.3
HVU   Hansel Valley     92.45  48  P       P         18 19 01.9 +0.5
HVU                                IAmb    IAmb      18 19 10.9
      comp=Z,15nm,1.3s
HVU   Hansel Valley     92.45  48  P       P         18 19 02.0 +0.5
HVU                                   pmax     pmax
      comp=Z,15nm,1.3s
A36M  Sachs Harbour     92.58  17  P       P         18 19 01.3 +0.1
A36M                               IAmb    IAmb      18 19 03.7
      comp=Z,9.9nm,1.2s
NLU   North Lily Min    92.71  50  P       P         18 19 02.1 -0.7
NLU                                IAmb    IAmb      18 19 12.3
      comp=Z,9.5nm,1.4s
BSUT  Blindstream Ca    93.79  50  P       P         18 19 07.1 -0.8
BELA  Belgrano 2        93.81 177  P       P         18 19 06.4 -0.4
YKA   Yellowknife Ar    94.44  28  P       P         18 19 10.0 +0.1
      comp=Z,1.7nm,1.0s,baz=256,slow=4.3,SNR=14
YKA                                LR      LR        18 56 08.7
      comp=Z,89nm,19.5s,baz=271,slow=32
      comp=Z,1.7nm,1.0s
BW06  Boulder Array     94.94  48  P       P         18 19 15.1 +2.1
      baz=264
PDAR  Pinedale Array    94.94  48  P       P         18 19 14.4 +1.4
      comp=Z,1.7nm,1.0s,baz=225,slow=1.9,SNR=8.4
      comp=Z,1.7nm,1.0s
BVAR  Borovoye Array    96.71 323  P       P         18 19 20.4 -0.1
      comp=Z,1.3nm,0.8s,baz=104,slow=6.3,SNR=6.8
BVAR                               LR      LR        19 06 40.7
      comp=Z,41nm,18.1s,baz=71,slow=38
      comp=Z,1.3nm,0.8s
BRVK  Borovoye          96.77 323⇓eP       P         18 19 20.6 -0.2
BRVK                                  pmax     pmax
      comp=Z,18nm,5.4s
TXAR  Lajitas Array     98.48  62  LR      LR        18 56 44.9
      comp=Z,78nm,20.4s,baz=211,slow=31
SNAA  Sanae             99.78 185  LR      LR        19 01 23.8
      comp=Z,127nm,20.2s,baz=94,slow=33
OBN   Obninsk          115.79 328 ePKIKP   PKiKP     18 24 32.7 +0.3
OBN                               e                  18 25 37.0
OBN                               ePPP     PPP       18 28 00.7
OBN                                   pmax     pmax
      comp=Z,3.0nm,0.9s
KIV   Kislovodsk       115.79 315 i PKIKP  PKiKP     18 24 32.2 -0.8
KIV                                   pmax     pmax
      comp=Z,4.0nm,1.0s
MNK   Minsk            120.48 330 i PKP    PKPdf     18 24 39.7 -1.8
      comp=E,2.0nm,0.8s
MNK                               i PKP    PKPdf     18 24 39.7 -1.8
      comp=N,42nm,1.2s
MNK                               i PKP    PKPdf     18 24 39.7 -1.8
      comp=Z,5.0nm,1.2s,baz=57
MNK                               i pPKP   sPKPdf    18 24 54.9 -0.5
MNK                               i PP     PP        18 26 07.0 -1.2
MNK                               i SKP              18 28 10.4
MNK                               i PPP    PPP       18 28 39.3
MNK                               i SKS    SKSdf     18 31 47.4 -3.5
MNK                               i SKKS   SKKSdf    18 42 26.0 -6.6
MNK                               i SS     SS        18 42 33.8 -0.7
MNK                               i SSS    SSS       18 46 52.7
MNK                               i LQ     LQ        19 09 14.5
MNK                               i LR     LR        19 13 31.9
MNK                               i LRM    MLR       19 16 22.5
      comp=Z,82nm,10.2s
MNK                               i LRM    MLR       19 17 06.0
      comp=N,589nm,19.8s
MNK                               i LRM    MLR       19 17 13.0
      comp=E,60nm,14.1s
MNK   Minsk            120.48 330 i PKIKP  PKPdf     18 24 39.7 -1.8
MNK                               i                  18 24 54.8
MNK                               i                  18 26 06.9
MNK                               i PPP    PPP       18 28 39.3
MNK                               i                  18 31 47.3
MNK                               i SS     SS        18 42 33.8 -0.7
MNK                                   pmax     pmax
      comp=N,42nm,1.2s
MNK                                   pmax     pmax
      comp=Z,5.0nm,1.2s
MNK                                   pmax     pmax
      comp=E,2.0nm,0.8s
MNK                                   pmax     pmax
      comp=Z,82nm,10.0s
MNK                                   pmax     pmax
      comp=N,589nm,20.0s
MNK                                   pmax     pmax
      comp=E,60nm,14.0s
ESDC  Sonseca Array    145.71 339  PKPbc   PKPab     18 25 31.0 +1.2
      comp=E,4.3nm,1.1s,baz=12,slow=3.4,SNR=12
TORD  Torodi Ar. Bea   159.05 286  PKPab   PKPab     18 26 25.6 -0.3
      comp=E,0.6nm,0.6s,baz=65,slow=2.9,SNR=5.2
```

IDC 17 18:09:51.0±3.2, 7°.67S×160°.38E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=87.6km s-min=24.6km az=96.0, Bougainville-Solomon Islands region

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Code  Station Name        Δ°   AZ°    Phase ID            Time      Res
                                   Op      ISC        h  m  s    ISC
HNR   Honiara            1.80 194  Pn      Pn        18 10 22.5 -0.9
      275nm,0.3s,baz=96,slow=19,SNR=1.0
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HNR				Sn	Sg	18 10 49.0	+0.1
	647nm,0.3s,baz=81,slow=21,SNR=2.4						
H11S2	WAKE ISLAND Hy	26.73	13	T	T	18 43 52.2	
	baz=194						
H11S3	WAKE ISLAND Hy	26.73	13	T	T	18 43 40.2	
	baz=194						
H11S1	WAKE ISLAND Hy	26.75	13	T	T	18 43 53.5	
	baz=194						
H11N1	WAKE ISLAND Hy	27.96	13	T	T	18 45 13.0	
	baz=195						
H11N3	WAKE ISLAND Hy	27.97	13	T	T	18 45 16.9	
	baz=195						
H11N2	WAKE ISLAND Hy	27.98	13	T	T	18 45 13.8	
	baz=195						
WRA	Warramunga Arr	28.03	242	P	P	18 15 45.1	+1.0
	1.1nm,0.6s,baz=68,slow=9.0,SNR=5.6						
	1.1nm,0.6s						
ASAR	Alice Springs	29.96	235	P	P	18 16 00.3	-1.1
	0.4nm,0.7s,baz=62,slow=10,SNR=4.4						
	0.4nm,0.7s						
SONM	Songino Array	72.87	325	P	P	18 21 22.0	0.0
	0.3nm,0.6s,baz=132,slow=6.4,SNR=1.9						
	0.3nm,0.6s						
MKAR	Makanchi Array	87.47	318	P	P	18 22 41.0	+0.3
	0.3nm,0.7s,baz=97,slow=5.7,SNR=2.6						
	0.3nm,0.7s						

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*IDC **17** 18:14:04.7±0.8, 8°.07S×161°.16E, h0^{km}, mb4.1/14, mbtmp4.1/18, ML4.1/3, MS3.7/7, Error ellipse: s-maj=26.8km s-min=15.7km az=126.0*

*NEIC **17** 18:14:08.0±1.8, 7°.92S±0°.06×160°.95E±0°.08, h10^{km}±1^{km}, mb4.7/51, Error ellipse: s-maj=15.8km s-min=5.8km az=125.0*

ISC 17 18:14:07.7±0.5**, 7°.92S**±0°.06×**160°.99E**±0°.07**, h10^{km}, n109, σ1^s.15**/84**, mb4.6**/37**, MS3.6**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.82	214	Pn	Pn	18 14 38.7	-0.4
	4µm,0.3s,baz=127,slow=3.7,SNR=83						
HNR				Sn	Sn	18 15 04.8	+2.5
	7µm,0.3s,baz=213,slow=13,SNR=9.3						
HNR	Honiara	1.82	214	Pn	Pn	18 14 38.9	-0.2
RABL	Rabaul	9.52	292	P	Pn	18 16 38.8	+14
KRVT	Keravat (AS076	9.60	291	Pn	Pn	18 16 27.9	+1.9
	3.2nm,0.3s,baz=60,slow=22,SNR=2.1						
KRVT				Sn	Sn	18 18 11.0	-3.1
	baz=320,slow=21						
	23nm,0.5s						
KOUNC	Koumac, New Ca	12.96	166	Pn	Pn	18 17 11.9	-0.1
PMG	Port Moresby	13.75	263	Pn	Pn	18 17 24.3	+1.4
	2.4nm,0.5s,baz=149,slow=21,SNR=1.9						
PATS	Pohnpei	14.90	350	Pn	Pn	18 17 37.3	-1.2
DZM	Mont Dzumac	15.02	160	Pn	Pn	18 17 37.9	-2.4
	0.2nm,0.3s,baz=14,slow=14,SNR=2.8						
	17nm,1.2s						
DZM	Mont Dzumac	15.02	160	P	P	18 17 46.7	+1.0
COEN	Coen	18.48	250		P	18 18 23.3	-0.7
CTA	Charters Tower	18.71	228	P	P	18 18 27.1	+0.6
	0.7nm,0.3s,baz=51,slow=11,SNR=13						
	6.0nm,0.7s						
CTA	Charters Tower	18.71	228	P	P	18 18 27.6	+1.1
	18nm,1.3s						
CTAO	Charters Tower	18.71	228		P	18 18 25.5	-0.9
CTAO	Charters Tower	18.71	228	P	P	18 18 27.8	+1.3
MTSU	Mount Surprise	19.14	236	P	P	18 18 33.3	+2.1
MSVF	Nonsavu	19.27	122	LR	LR	18 24 36.2	
	comp=Z,384nm,18.1s,baz=318,slow=33						
EIDS	Eidsvold	19.76	207	P	P	18 18 38.2	+0.3
EIDS				IAmb	IAmb	18 18 44.7	
	comp=Z,31nm,0.9s						
EIDS	Eidsvold	19.76	207	P	P	18 18 38.6	+0.6
GENI	Genyem	21.39	283	P	P	18 18 58.1	+2.4
	comp=Z,36nm,0.8s						
RMQ	Roma	21.82	211	P	P	18 19 02.1	+1.9
SMPI	Sarmi	22.95	284	P	P	18 19 15.2	+2.8
	comp=Z,41nm,1.6s						
ARMA	Armidale	24.04	200	P	P	18 19 22.3	-0.9
ARMA				IAmb	IAmb	18 19 49.7	
	comp=Z,32nm,1.3s						
ARMA	Armidale	24.04	200	P	P	18 19 22.0	-1.2
QLP	Quilpie	24.45	219	P	P	18 19 25.9	-1.0
GUMO	Guam	26.69	323	LR	LR	18 29 44.1	
	comp=Z,138nm,21.3s,baz=160,slow=35						
H11S2	WAKE ISLAND Hy	26.84	12	T	T	18 48 08.1	
	baz=193,slow=76,SNR=60						
H11S3	WAKE ISLAND Hy	26.84	12	T	T	18 48 03.4	
	baz=193,slow=76,SNR=41						
H11S1	WAKE ISLAND Hy	26.86	12	T	T	18 48 05.1	
	baz=193,slow=76,SNR=47						
AFI	Afiamalu	27.39	105	LR	LR	18 28 31.0	
	comp=Z,86nm,18.8s,baz=296,slow=32						
INKA	Innaminka	27.48	222	P	P	18 19 53.7	-0.6
CMSA	Cobar Meteorol	27.49	209	P	P	18 19 52.7	-1.6
H11N1	WAKE ISLAND Hy	28.07	12	T	T	18 49 32.2	
	baz=193,slow=76,SNR=44						
H11N3	WAKE ISLAND Hy	28.07	12	T	T	18 49 36.3	
	baz=193,slow=76,SNR=42						
H11N2	WAKE ISLAND Hy	28.08	12	T	T	18 49 33.4	
	baz=193,slow=76,SNR=42						
WB0	Warramunga Arr	28.33	243	P	P	18 20 00.2	-1.8
WB0				IAmb	IAmb	18 20 01.1	
	comp=Z,12nm,1.1s						
WRAB	Tennant Creek	28.43	242	P	P	18 20 01.2	-1.6
WRAB				IAmb	IAmb	18 20 08.9	
	comp=Z,12nm,0.9s						
WRAB	Tennant Creek	28.43	242	P	P	18 20 01.5	-1.3
WB2	Warramunga Arr	28.43	242	P	P	18 20 01.2	-1.6
WB2				IAmb	IAmb	18 20 02.1	
	comp=Z,8.7nm,0.6s						
WRA	Warramunga Arr	28.44	242	P	P	18 20 00.9	-2.1
	comp=Z,6.0nm,0.5s,baz=67,slow=9.3,SNR=63						
WRA				LR	LR	18 30 59.7	
	comp=Z,217nm,19.4s,baz=57,slow=36						
	comp=Z,6.0nm,0.5s						
WRA	Warramunga Arr	28.44	242	P	P	18 20 00.2	-2.7
CAN	Canberra	29.41	200	P	P	18 20 10.8	-0.6
STKA	Stephens Creek	29.90	215	P	P	18 20 13.8	-2.0
	comp=Z,1.7nm,0.4s,baz=50,slow=15,SNR=8.6						
	comp=Z,1.7nm,0.4s						
STKA	Stephens Creek	29.90	215	P	P	18 20 14.1	-1.7
AS31	Alice Springs	30.31	236	P	P	18 20 16.9	-2.7
ASAR	Alice Springs	30.31	236	P	P	18 20 16.8	-2.8
	comp=Z,1.1nm,0.3s,baz=62,slow=10,SNR=67						
ASAR				PcP	PcP	18 23 19.5	-0.5
	comp=Z,1.1nm,1.1s,baz=79,slow=2.9,SNR=4.2						
ASAR				LR	LR	18 32 09.4	
	comp=Z,277nm,18.2s,baz=66,slow=36						
	comp=Z,1.1nm,0.3s						
LCRK	Leigh Creek	30.93	221	P	P	18 20 22.8	-2.1
KNRA	Kununurra	32.44	253	P	P	18 20 36.0	-2.3
HTT	Hallett	32.57	216	P	P	18 20 37.6	-1.7
TOO	Toolangi	32.69	203	P	P	18 20 39.2	-1.2
URZ	Urewera	33.54	157	LR	LR	18 33 14.7	
	comp=Z,132nm,18.4s,baz=52,slow=34						
RTZ	Ruatahuna	33.80	157	P	P	18 20 49.3	-0.7
RTZ				IAmb	IAmb	18 21 21.7	
	comp=Z,6.2nm,1.0s						
BBOO	Buckleboo	33.87	220	P	P	18 20 48.2	-2.5
BKZ	Black Stump Fm	34.09	158	P	P	18 20 51.8	-0.8
BKZ				IAmb	IAmb	18 21 21.3	
	comp=Z,16nm,1.2s						
BKZ	Black Stump Fm	34.09	158	P	P	18 20 52.9	+0.3
MRZ	Mangatainoka R	35.11	161	P	P	18 21 00.9	-0.3
TCW	Tory Channel	35.20	162	P	P	18 21 00.7	-1.3
FITZ	Fitzroy Crossi	35.83	250	P	P	18 21 06.3	-1.4
KAPI	Kappang	41.06	271	P	P	18 21 51.4	-0.4
	comp=Z,5.3nm,0.3s,baz=151,slow=8.8,SNR=3.6						
	comp=Z,5.3nm,0.3s						
TOLI2	Tolitoli	41.08	281	P	P	18 21 51.0	-1.0
TOLI2				IAmb	IAmb	18 21 52.3	
	comp=Z,10nm,0.9s						
KKM	Kota Kinabalu	46.76	286	P	P	18 22 38.2	+0.4
NWAO	Narrogin (SRO)	47.48	232	P	P	18 22 42.7	-0.4
NWAO	Narrogin (SRO)	47.48	232	P	P	18 22 43.0	0.0
NWAO				IAmb	IAmb	18 22 49.6	
	comp=Z,44nm,1.4s						
JMN	Monobe	48.76	330	P	P	18 22 55.3	+2.4
PPT	Papeete	49.04	106	LR	LR	18 38 24.1	
	comp=Z,45nm,20.1s,baz=300,slow=30						
KSRS	Korea Array	54.70	328	P	P	18 23 37.6	+0.4
	comp=Z,0.6nm,0.4s,baz=144,slow=8.7,SNR=7.9						
	comp=Z,0.6nm,0.4s						
USA0B	Ussuriysk Arra	58.12	336	P	P	18 23 59.3	-2.2
USA0B				IAmb	IAmb	18 24 10.7	
	comp=Z,8.0nm,0.7s						
USRK	Ussuriysk Ar.	58.12	336	P	P	18 23 59.3	-2.2
PEA0B	Petropavlovsk-	60.85	358	P	P	18 24 20.8	+0.6
PETK	Petropavlovsk-	60.85	358	P	P	18 24 20.8	+0.6
GSI	Gunungsitoli	63.88	275	P	P	18 24 39.8	-1.5
CMAR	Chiang Mai Arr	66.56	294	P	P	18 24 59.6	+1.1
	comp=Z,1.5nm,1.1s,baz=125,slow=4.6,SNR=7.5						
	comp=Z,1.5nm,1.1s						
CMAR	Chiang Mai Arr	66.56	294	P	P	18 24 58.0	-0.6
CHTO	Chiang Mai	66.67	294	P	P	18 24 59.1	-0.1
ULN	Ulaanbaatar	73.05	325	P	P	18 25 38.4	+0.3
ULN				IAmb	IAmb	18 25 41.8	
	comp=Z,6.1nm,1.4s						
SONM	Songino Array	73.41	325	P	P	18 25 40.4	+0.2
	comp=Z,1.0nm,0.8s,baz=147,slow=6.7,SNR=7.2						
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	73.41	325	P	P	18 25 40.1	-0.1
SHL	Shillong	74.91	299	P	P	18 25 49.3	-0.2
BILL	Bilibino	75.86	2	P	P	18 25 54.1	+0.3
BILL				IAmb	IAmb	18 25 57.5	
	comp=Z,6.4nm,1.2s						
Q19K	Cape Douglas,	75.88	22	P	P	18 25 54.8	+0.6
SVW2	Sparrevohn	76.71	20	P	P	18 25 59.3	+0.5
M19K	Big River Lodg	77.69	20	P	P	18 26 05.8	+1.4
M19K				IAmb	IAmb	18 26 35.3	
	comp=Z,12nm,1.5s						
CAPN	Captain Cook N	78.05	22	P	P	18 26 05.9	-0.4
CAST	Castle Rocks	79.51	20	P	P	18 26 13.9	-0.4
GHO	Glory Hole Cre	79.53	22	P	P	18 26 14.0	-0.5
GHO				IAmb	IAmb	18 26 25.4	
	comp=Z,13nm,1.3s						
TRF	Thorofare Moun	80.13	20	P	P	18 26 17.4	-0.5
TRF				IAmb	IAmb	18 26 48.1	
	comp=Z,10nm,1.4s						
SCM	Sheep Creek Mo	80.16	22	P	P	18 26 18.7	+0.7
KLU	Klutina	80.48	23	P	P	18 26 20.3	+0.6
KLU				IAmb	IAmb	18 26 39.3	
	comp=Z,15nm,1.4s						
IMAR	Indian Mountai	80.76	17	P	P	18 26 21.8	+0.8
MCK	McKinley	80.78	20	P	P	18 26 23.2	+2.0
MCK				IAmb	IAmb	18 26 49.9	
	comp=Z,9.1nm,1.3s						
WRH	Wood River Hil	81.53	20	P	P	18 26 24.4	-0.8
WRH				IAmb	IAmb	18 26 54.5	
	comp=Z,8.5nm,1.4s						
CCB	Clear Creek Bu	81.74	20	P	P	18 26 26.1	-0.2
MDM	Murphy Dome	81.79	19	P	P	18 26 26.8	+0.2
MDM				IAmb	IAmb	18 26 53.8	
	comp=Z,5.4nm,1.4s						
CTGM	Chitina Glacie	82.02	25	P	P	18 26 29.4	+1.4
CTGM				IAmb	IAmb	18 26 32.3	
	comp=Z,15nm,1.5s						
QSPA	South Pole Qui	82.07	180	P	P	18 26 28.2	0.0
QSPA				IAmb	IAmb	18 26 43.5	
	comp=Z,9.2nm,1.3s						
ILAR	Eielson Array	82.12	20	P	P	18 26 26.8	-1.5
	comp=Z,0.4nm,0.4s,baz=242,slow=5.0,SNR=11						
	comp=Z,0.4nm,0.4s						
ILAR	Eielson Array	82.12	20	P	P	18 26 28.2	-0.1
TIXI	Tiksi	82.19	350	P	P	18 26 29.1	+0.7
RIDG	Independent Ri	82.22	21	P	P	18 26 29.2	+0.3
RIDG				IAmb	IAmb	18 27 03.7	
	comp=Z,11nm,1.4s						
DOT	Dot Lake	82.45	22	P	P	18 26 30.4	+0.3
DOT				IAmb	IAmb	18 27 05.9	
	comp=Z,5.0nm,1.3s						
EGAK	Eagle	84.13	21	P	P	18 26 40.2	+1.6
BMAR	Burnt Mountain	84.48	18	P	P	18 26 41.1	+0.7
NVAR	Mina Array Bea	87.66	51	P	P	18 26 55.4	-1.6
	comp=Z,0.3nm,0.6s,baz=269,slow=4.2,SNR=2.0						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	88.05	318	P	P	18 26 58.4	0.0
	comp=Z,1.1nm,0.7s,baz=96,slow=5.7,SNR=12						
	comp=Z,1.1nm,0.7s						
KURBB	Kurchatov Arra	91.30	321	P	P	18 27 12.8	-0.7
	comp=Z,0.2nm,0.6s,baz=111,slow=4.2,SNR=2.1						
	comp=Z,0.2nm,0.6s						
YKA	Yellowknife Ar	94.38	28	P	P	18 27 26.1	-1.4
	comp=Z,0.2nm,0.7s,baz=259,slow=4.7,SNR=3.8						
	comp=Z,0.2nm,0.7s						
PDAR	Pinedale Array	94.91	48	P	P	18 27 29.0	-1.7
	comp=Z,0.3nm,0.7s,baz=264,slow=3.2,SNR=2.6						
	comp=Z,0.3nm,0.7s						
BVAR	Borovoye Array	96.62	323	P	P	18 27 36.8	-1.1
	comp=Z,0.6nm,0.7s,baz=88,slow=3.7,SNR=3.9						
	comp=Z,0.6nm,0.7s						
ESDC	Sonseca Array	145.62	339	PKPbc	PKPdf	18 33 46.8	-0.1
	comp=Z,0.4nm,0.7s,baz=240,slow=28,SNR=5.4						
TORD	Torodi Ar. Bea	158.99	286	PKPab	PKPab	18 34 42.4	-1.0
	comp=Z,0.4nm,0.7s,baz=47,slow=6.3,SNR=2.3						

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*JMA **17** 18:15:00.0±0.2, 34°N±3°×13°7E±°, h384^{km}, MV3.0/21, SE OFF KII PENINSULA*

*IDC **17** 18:15:04.1±1.1, 33°.86N×137°.17E, h338^{km}±13^{km}, mb2.7/5, mbtmp3.4/9, Error ellipse: s-maj=23.9km s-min=17.2km az=63.0*

ISC 17 18:15:04.0±0.9**, 33°.86N**±0°.08×**137°.29E**±0°.07**, h347^{km}, n23, σ0^s.75**/25**, mb2.9**/5**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTO1	TONANKAI O.B.S	0.49	241	P	Pn	18 15 48.4	+0.9
JIE	Ise	0.72	317	P	Pn	18 15 48.8	+0.5
JTNC	Tanabenakahech	1.40	269	P	Pn	18 15 51.3	0.0
JWY	Kouya	1.46	285	P	Pn	18 15 51.7	+0.1
JYN	Shimob	1.93	32	P	Pn	18 15 55.9	+1.4
JOD2	Odawara 2	2.04	46	P	Pn	18 15 56.0	+0.8
JWT	Wachi	2.11	313	P	Pn	18 15 55.6	-0.1
JAI	Aioi	2.37	269	P	Pn	18 15 57.5	-0.2
JAOM	Aogashimamukai	2.50	123	*e*S	S	18 16 41.0	-1.9
JRY	Ryogami san	2.52	31	P	Pn	18 15 59.8	+0.9
JRY				S	S	18 16 43.2	0.0
JKG	Kaga	2.53	342	P	Pn	18 15 58.8	-0.2
MJAR	Matsushiro Arr	2.78	15	P	Pn	18 16 00.8	-0.2
	1.1nm,0.5s,baz=201,slow=11,SNR=1.9						
MJAR				S	S	18 16 46.2	-0.8
	0.6nm,0.3s,baz=210,slow=30,SNR=1.7						
JAG	Ashikaga	3.11	34	P	Pn	18 16 03.1	-0.9
BSO1	Boso 1	3.15	74	P	Pn	18 16 03.2	-0.7
BSO1				S	S	18 16 51.6	-0.5
JNU	Nakatsue	5.41	264	P	Pn	18 16 27.8	-0.3
	2.3nm,0.5s,baz=88,slow=5.3,SNR=4.2						
JCJ	Chichijima	7.96	147	S	S	18 18 22.2	-8.1
	54nm,0.6s,baz=276,slow=20,SNR=1.4						
KSRS	Korea Array	8.42	298	P	Pn	18 17 03.0	-0.1
	1.1nm,0.4s,baz=109,slow=12,SNR=6.9						
ASAJ	Asahikawa	11.04	20	P	P	18 17 34.0	-0.8
	1.5nm,0.4s,baz=222,slow=12,SNR=7.1						
MKAR	Makanchi Array	43.04	304	P	P	18 22 31.1	+0.5
	0.4nm,0.4s,baz=78,slow=9.0,SNR=7.9						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	45.38	310	P	P	18 22 49.2	+0.4
	0.1nm,0.3s,baz=89,slow=6.6,SNR=2.0						
	0.1nm,0.3s						
BVAR	Borovoye Array	50.27	314	P	P	18 23 26.3	+0.4
	0.3nm,0.5s,baz=94,slow=9.1,SNR=2.0						
	0.3nm,0.5s						
WRA	Warramunga Arr	53.58	183	P	P	18 23 50.8	+0.4
	0.3nm,0.3s,baz=360,slow=7.6,SNR=8.7						
	0.3nm,0.3s						
ASAR	Alice Springs	57.30	184	P	P	18 24 17.3	+0.6
	0.3nm,0.8s,baz=5.1,slow=5.5,SNR=1.4						
	0.3nm,0.8s						

ROM 17 18:17:03.0±0.1**, 42°.769N**±0°.004×**13°.255E**±0°.005**, h10^{km}, ML1.5**/11**, 1C-3D, Error ellipse: s-maj=0.4km s-min=0.3km az=319.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	Arquata del Tr	0.04	255	P	Pg	18 17 05.1	0.0
T1214				S	Sg	18 17 06.2	-0.4
T1214				AML	AML		
	comp=E,5795µm,0.3s						
T1214				AML	AML		
	comp=E,5800µm,0.3s						
T1214				AML	AML		
	comp=N,7970µm,0.2s						
T1214				AML	AML		
	comp=E,5240µm,0.3s						
T1214				AML	AML		
	comp=N,7650µm,0.2s						
T1214				AML	AML		
	comp=E,4266µm,0.2s						
T1214				AML	AML		
	comp=N,7970µm,0.2s						
T1214				AML	AML		
	comp=N,7649µm,0.2s						
T1214				AML	AML		
	comp=E,4268µm,0.1s						
T1245	Castelsantange	0.10	331	AML	AML		
	comp=E,648µm,1.1s						
T1245				AML	AML		
	comp=N,1064µm,1.4s						
T1245				AML	AML		
	comp=E,648µm,0.9s						
T1245				AML	AML		
	comp=N,1064µm,0.6s						
MMO1	Montemonaco	0.14	22	P	Pg	18 17 06.8	+0.5
MMO1				S	Sg	18 17 09.4	+0.8
T1218	Civita (PG)	0.14	226	P	Pg	18 17 06.9	+0.6
T1218				S	Sg	18 17 09.6	+1.0
T1218				AML	AML		
	comp=E,464µm,0.3s						
T1218				AML	AML		
	comp=N,558µm,0.2s						
T1218				AML	AML		
	comp=E,460µm,1.3s						
T1218				AML	AML		
	comp=N,556µm,0.2s						
T1218				AML	AML		
	comp=E,463µm,0.3s						
T1218				AML	AML		
	comp=E,461µm,1.3s						
T1218				AML	AML		
	comp=N,559µm,0.2s						
T1218				AML	AML		
	comp=E,450µm,0.1s						
T1218				AML	AML		
	comp=E,457µm,0.1s						
T1218				AML	AML		
	comp=N,556µm,0.2s						
SMA1	SAN MARTINO	0.15	157	P	Pg	18 17 06.9	+0.5
SMA1				S	Sg	18 17 09.6	+0.8
MC2	Monte Cornacci	0.15	342	⇓P	Pg	18 16 59.3	-7.3
MC2				S	Sg	18 17 07.5	-1.5
T1212	Cascia, Frazio	0.16	264	⇑P	Pg	18 17 07.1	+0.5
T1212				AML	AML		
	comp=E,224µm,0.1s						
T1212				AML	AML		
	comp=N,238µm,0.2s						
T1212				AML	AML		
	comp=E,225µm,0.1s						
T1212				AML	AML		
	comp=N,222µm,0.2s						
T1212				AML	AML		
	comp=E,248µm,0.2s						
T1212				AML	AML		
	comp=N,238µm,0.2s						
T1241	Roccafluvione,	0.16	56	P	Pg	18 17 07.2	+0.7
T1241				S	Sg	18 17 10.1	+1.2
T1241				AML	AML		
	comp=E,714µm,0.3s						
T1241				AML	AML		
	comp=N,496µm,0.4s						
T1241				AML	AML		
	comp=N,536µm,0.2s						
T1241				AML	AML		
	comp=N,496µm,0.4s						
T1241				AML	AML		
	comp=E,698µm,0.4s						
T1241				AML	AML		
	comp=N,537µm,0.2s						
T1241				AML	AML		
	comp=E,496µm,0.4s						
T1241				AML	AML		
	comp=N,487µm,0.2s						
T1241				AML	AML		
	comp=N,537µm,0.2s						
T1241				AML	AML		
	comp=E,715µm,0.3s						
T1216	Preci, Frazion	0.21	305	S	Sg	18 17 11.9	+1.4
T1217	Poggiodomo (PG	0.24	257	P	Pg	18 17 08.7	+0.7
T1217				S	Sg	18 17 12.9	+1.5
T1217				AML	AML		
	comp=E,103µm,0.3s						
T1217				AML	AML		
	comp=N,91µm,1.4s						
T1217				AML	AML		
	comp=E,103µm,0.3s						
T1217				AML	AML		
	comp=N,90µm,1.4s						
T1217				AML	AML		
	comp=E,83µm,0.1s						
T1217				AML	AML		
	comp=N,85µm,0.2s						
T1217				AML	AML		
	comp=E,76µm,0.6s						
T1217				AML	AML		
	comp=N,169µm,0.7s						
CAMP	Campotosto	0.26	154	⇓P	Pg	18 17 08.9	+0.5
CAMP				AML	AML		
	comp=E,37µm,0.3s						
CAMP				AML	AML		
	comp=N,70µm,0.3s						
RM33	Pellescritta (	0.26	187	⇓P	Pb	18 17 09.2	-0.7
RM33				S	Sb	18 17 13.6	-0.9
RM33				AML	AML		
	comp=N,140µm,0.3s						
RM33				AML	AML		
	comp=E,118µm,0.3s						
RM33				AML	AML		
	comp=N,166µm,0.3s						
RM33				AML	AML		
	comp=E,131µm,0.3s						
TERO	Teramo	0.30	119	P	Pg	18 17 09.4	+0.4
TERO				S	Sg	18 17 14.2	+1.2
TERO				AML	AML		
	comp=E,158µm,0.9s						
TERO				AML	AML		
	comp=N,166µm,0.4s						
TERO				AML	AML		
	comp=E,162µm,1.0s						
TERO				AML	AML		
	comp=N,200µm,1.1s						
TERO				AML	AML		
	comp=N,148µm,0.1s						
TERO				AML	AML		
	comp=N,140µm,0.1s						
TERO				AML	AML		
	comp=E,132µm,0.1s						
TERO				AML	AML		
	comp=E,143µm,0.1s						
T1211	Morro Reatino	0.38	232	P	Pg	18 17 10.9	+0.4
T1211				S	Sb	18 17 17.2	-0.6
T1211				AML	AML		
	comp=E,82µm,0.3s						
T1211				AML	AML		
	comp=N,134µm,0.3s						
T1211				AML	AML		
	comp=N,164µm,0.3s						
T1211				AML	AML		
	comp=N,134µm,0.3s						
T1211				AML	AML		
	comp=E,61µm,0.1s						

ROM 17 18:17:34.0±0.1**, 42°.865N**±0°.003×**13°.338E**±0°.005**, h24^{km}, ML2.0**/34**, 9C-5D, Error ellipse: s-maj=0.4km s-min=0.2km az=71.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMO1	Montemonaco	0.04	346	P	Pb	18 17 38.1	-0.2
MMO1				S	Sb	18 17 41.1	-0.1
T1241	Roccafluvione,	0.07	97	P	Pb	18 17 38.3	-0.1
T1241				S	Sb	18 17 41.5	+0.1
T1241				AML	AML		
	comp=E,630µm,0.7s						
T1241				AML	AML		
	comp=E,645µm,0.1s						
T1241				AML	AML		
	comp=N,1230µm,0.1s						
T1241				AML	AML		
	comp=N,1245µm,0.1s						
T1241				AML	AML		
	comp=E,645µm,0.1s						
T1241				AML	AML		
	comp=E,630µm,1.3s						
T1245	Castelsantange	0.11	265	P	Pb	18 17 38.7	-0.1

T1245				S	Sb	18 17 42.2	+0.1
T1245				AML	AML		
	comp=N,1670µm,0.7s						
T1245				AML	AML		
	comp=E,2530µm,0.7s						
MC2	**Monte Cornacci**	0.12	294	P	Pb	18 17 38.9	-0.1
MC2				S	Sb	18 17 42.5	+0.2
T1214	**Arquata del Tr**	0.14	222	P	Pb	18 17 39.1	-0.1
T1214				S	Sb	18 17 42.9	+0.3
T1214				AML	AML		
	comp=E,997µm,0.2s						
T1214				AML	AML		
	comp=N,497µm,0.3s						
T1214				AML	AML		
	comp=E,998µm,0.2s						
T1214				AML	AML		
	comp=N,496µm,0.2s						
T1214				AML	AML		
	comp=E,998µm,0.2s						
T1256	**Bolognola (MC)**	0.16	330	⇓P	Pb	18 17 39.3	-0.1
T1256				AML	AML		
	comp=E,1025µm,0.3s						
T1256				AML	AML		
	comp=N,994µm,0.3s						
T1256				AML	AML		
	comp=E,1030µm,0.3s						
T1256				AML	AML		
	comp=N,994µm,0.3s						
GUMA	**Gualdo di Mace**	0.20	359	P	Pb	18 17 39.9	+0.2
GUMA				S	Sb	18 17 44.3	+0.9
GUMA				AML	AML		
	comp=E,1275µm,0.4s						
GUMA				AML	AML		
	comp=N,1670µm,0.7s						
GUMA				AML	AML		
	comp=E,1430µm,0.6s						
GUMA				AML	AML		
	comp=N,1555µm,1.5s						
GUMA				AML	AML		
	comp=N,1670µm,1.3s						
GUMA				AML	AML		
	comp=E,1275µm,1.6s						
SMA1	**SAN MARTINO**	0.23	180	P	Pb	18 17 40.0	-0.1
SMA1				S	Sb	18 17 44.4	+0.1
SMA1				AML	AML		
	comp=E,308µm,0.1s						
SMA1				AML	AML		
	comp=N,352µm,0.3s						
T1216	**Preci, Frazion**	0.24	276	⇑P	Pb	18 17 40.1	-0.1
T1216				AML	AML		
	comp=N,559µm,0.9s						
T1216				AML	AML		
	comp=N,559µm,1.1s						
T1216				AML	AML		
	comp=E,632µm,0.4s						
T1212	**Cascia, Frazio**	0.24	242	P	Pb	18 17 40.3	0.0
T1212				S	Sb	18 17 44.9	+0.4
T1212				AML	AML		
	comp=E,755µm,0.1s						
T1212				AML	AML		
	comp=E,774µm,0.1s						
T1212				AML	AML		
	comp=N,808µm,0.2s						
T1212				AML	AML		
	comp=E,755µm,0.2s						
T1212				AML	AML		
	comp=N,818µm,0.2s						
T1212				AML	AML		
	comp=E,774µm,0.2s						
T1212				AML	AML		
	comp=N,808µm,0.2s						
CSP1	**Cessapalombo**	0.25	337	P	Pb	18 17 40.3	0.0
CSP1				S	Sb	18 17 45.1	+0.4
CSP1				AML	AML		
	comp=E,1830µm,0.2s						
CSP1				AML	AML		
	comp=N,1355µm,0.4s						
FDMO	**Fiordimonte**	0.25	313	P	Pb	18 17 40.2	-0.1
FDMO				S	Sb	18 17 44.9	+0.3
FDMO				AML	AML		
	comp=N,1066µm,0.1s						
FDMO				AML	AML		
	comp=E,538µm,0.2s						
T1218	**Civita (PG)**	0.26	220	P	Pb	18 17 40.4	0.0
T1218				S	Sb	18 17 45.3	+0.5
T1218				AML	AML		
	comp=E,472µm,0.4s						
T1218				AML	AML		
	comp=E,445µm,0.2s						
T1218				AML	AML		
	comp=N,719µm,0.2s						
T1218				AML	AML		
	comp=N,718µm,0.2s						
T1218				AML	AML		
	comp=N,696µm,0.2s						
OFFI	**Offida**	0.27	75	P	Pb	18 17 41.1	+0.7
OFFI				AML	AML		
	comp=E,286µm,0.9s						
OFFI				AML	AML		
	comp=N,456µm,0.5s						
OFFI				AML	AML		
	comp=E,286µm,1.1s						
OFFI				AML	AML		
	comp=N,456µm,1.5s						
T1220	**Camerino, Fraz**	0.30	323	P	Pb	18 17 41.1	0.0
T1220				S	Sb	18 17 46.6	+0.7
T1220				AML	AML		
	comp=E,2115µm,0.2s						
T1220				AML	AML		
	comp=N,3510µm,0.7s						
T1220				AML	AML		
	comp=N,3515µm,0.7s						
T1220				AML	AML		
	comp=N,3515µm,1.3s						
T1219	**Muccia, Frazio**	0.31	308	⇑P	Pb	18 17 41.1	-0.1
T1219				AML	AML		
	comp=E,371µm,0.2s						
T1219				AML	AML		
	comp=N,472µm,0.3s						
T1219				AML	AML		
	comp=N,457µm,0.3s						
T1219				AML	AML		
	comp=E,406µm,0.2s						
TERO	**Teramo**	0.31	141	P	Pb	18 17 41.1	-0.1
TERO				S	Sb	18 17 46.7	+0.7
TERO				AML	AML		
	comp=E,383µm,1.0s						
TERO				AML	AML		
	comp=N,478µm,0.4s						
TERO				AML	AML		
	comp=N,420µm,0.4s						
TERO				AML	AML		
	comp=E,443µm,1.0s						
TERO				AML	AML		
	comp=N,420µm,1.6s						
TERO				AML	AML		
	comp=N,478µm,1.6s						
CAMP	**Campotosto**	0.33	171	P	Pb	18 17 41.5	-0.1
CAMP				S	Sb	18 17 47.3	+0.5
CAMP				AML	AML		
	comp=E,158µm,0.2s						
CAMP				AML	AML		
	comp=N,107µm,1.3s						
T1217	**Poggiodomo (PG**	0.34	243	P	Pb	18 17 41.7	+0.1
T1217				AML	AML		
	comp=E,230µm,0.4s						
T1217				AML	AML		
	comp=E,230µm,0.4s						
T1217				AML	AML		
	comp=N,242µm,0.6s						
T1217				AML	AML		
	comp=N,242µm,1.4s						
CESI	**CESI - Serrava**	0.35	294	⇑P	Pb	18 17 41.8	0.0
CESI				AML	AML		
	comp=E,192µm,1.1s						
CESI				AML	AML		
	comp=N,324µm,0.3s						
RM33	**Pellescritta (**	0.37	194	P	Pb	18 17 42.2	+0.1
RM33				S	Sb	18 17 48.6	+1.0
RM33				AML	AML		
	comp=E,196µm,0.8s						
RM33				AML	AML		
	comp=N,207µm,1.2s						
GIGS	**Gran Sasso**	0.45	158	P	Pb	18 17 43.3	-0.1
GIGS				AML	AML		
	comp=E,56µm,1.0s						
GIGS				AML	AML		
	comp=N,62µm,0.3s						
GIGS				AML	AML		
	comp=N,62µm,1.7s						
SNTG	**Esanatoglia**	0.49	323	⇓P	Pb	18 17 44.0	0.0
SNTG				AML	AML		
	comp=E,78µm,0.6s						
SNTG				AML	AML		
	comp=N,73µm,0.1s						
T1211	**Morro Reatino**	0.49	227	P	Pb	18 17 44.1	+0.1
T1211				S	Sn	18 17 52.4	-1.0
T1211				AML	AML		
	comp=E,182µm,0.9s						
T1211				AML	AML		
	comp=N,230µm,0.4s						
T1211				AML	AML		
	comp=E,182µm,0.9s						
EL6	**Elcito**	0.49	340	⇑P	Pb	18 17 44.5	+0.2
EL6				AML	AML		
	comp=N,218µm,0.2s						
EL6				AML	AML		
	comp=E,251µm,1.3s						
EL6				AML	AML		
	comp=N,218µm,0.2s						
EL6				AML	AML		
	comp=E,251µm,0.7s						
EL6				AML	AML		
	comp=N,218µm,1.8s						
T1222	**Castel Sant'An**	0.51	206	⇓P	Pb	18 17 44.5	0.0
CING	**Cingoli**	0.52	348	⇑P	Pb	18 17 44.9	+0.3
CING				AML	AML		
	comp=E,95µm,0.4s						
CING				AML	AML		
	comp=N,78µm,0.6s						
CING				AML	AML		
	comp=N,78µm,1.4s						
ASSB	**Assisi San Ben**	0.53	290	⇑P	Pb	18 17 44.6	-0.1
ASSB				AML	AML		
	comp=E,76µm,1.2s						
ASSB				AML	AML		
	comp=N,97µm,1.2s						
ASSB				AML	AML		
	comp=E,76µm,0.8s						
ASSB				AML	AML		
	comp=N,97µm,0.8s						
MOMA	**Monte Martano**	0.57	264	P	Pb	18 17 45.4	0.0
MOMA				AML	AML		
	comp=E,114µm,0.3s						
MOMA				AML	AML		
	comp=N,113µm,0.2s						
VCEL	**Villa Celiera**	0.60	142	P	Pb	18 17 46.0	0.0
VCEL				AML	AML		
	comp=N,111µm,1.6s						
VCEL				AML	AML		
	comp=N,111µm,1.6s						
VCEL				AML	AML		
	comp=N,111µm,0.4s						
VCEL				AML	AML		
	comp=E,111µm,0.5s						
FOSV	**Fossato di Vic**	0.60	316	⇑P	Pb	18 17 45.9	-0.1
FOSV				AML	AML		
	comp=E,94µm,0.6s						
FOSV				AML	AML		
	comp=N,104µm,0.8s						
FOSV				AML	AML		
	comp=E,94µm,1.4s						
ATCC	**AVT- Casa Cast**	0.60	302	⇓P	Pb	18 17 46.0	0.0
ATCC				AML	AML		
	comp=E,77µm,1.4s						
ATCC				AML	AML		
	comp=N,58µm,0.2s						
ATCC				AML	AML		
	comp=E,77µm,0.6s						
FAGN	**Fagnano**	0.63	163	P	Pb	18 17 46.7	+0.3
FAGN				AML	AML		
	comp=E,154µm,0.3s						
FAGN				AML	AML		
	comp=N,122µm,0.3s						
FAGN				AML	AML		
	comp=E,154µm,1.7s						
FAGN				AML	AML		
	comp=N,122µm,1.7s						
ARVD	**Arcevia**	0.70	336	⇑P	Pn	18 17 48.0	-0.4
ARVD				AML	AML		
	comp=E,44µm,0.7s						
ARVD				AML	AML		
	comp=N,29µm,1.2s						
T0110	**Collepietro**	0.72	153	⇓P	Pb	18 17 47.8	-0.1
T0110				AML	AML		
	comp=N,120µm,0.4s						
T0110				AML	AML		
	comp=E,122µm,0.7s						
T0110				AML	AML		
	comp=N,120µm,1.6s						
ATFO	**Monte Foce - G**	0.75	312	P	Pb	18 17 48.5	-0.1
PIEI	**Pieia**	0.89	319	⇑P	Pb	18 17 50.8	-0.1
PE3	**Peglio**	1.03	324	S	Sb	18 18 05.7	-0.7
PE3				AML	AML		
	comp=N,8µm,0.1s						
PE3				AML	AML		
	comp=E,89µm,1.2s						

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*NEIC **17** 18:23:24.4±2.5, 8°.54S±0°.04×121°.15E±0°.05, h196^{km}±6^{km}, mb4.5/34, Error ellipse: s-maj=8.0km s-min=3.7km az=123.0*

*DJA **17** 18:23:25.0±0.2, 9°S±3°×12°1E±°, h193^{km}±3^{km}, M4.6/18, mB5.2/7, mb4.5/18, MLv4.7/17, Mw(mB)4.6/7*

*IDC **17** 18:23:26.5±0.7, 8°.13S×121°.50E, h225^{km}±6^{km}, mb3.8/8, mbtmp4.4/11, Error ellipse: s-maj=32.5km s-min=8.9km az=61.0*

ISC 17 18:23:24.2±0.3, **8°.49S**±0°.04×**121°.22E**±0°.05, **h200**^{km}**, n127,** σ1^{s}**60**/143, **mb4.5**/20, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	1.01	98	Pn	Pn	18 23 54.2	+0.1
MMRI				Sn	Sn	18 24 16.8	-0.3
MMRI	**Maumere**	1.01	98	P	Pn	18 23 54.4	+0.4
MMRI	**Maumere**	1.01	98	P	Pn	18 23 54.7	+0.7
MMRI				S	Sn	18 24 16.8	-0.3
BASI	**Baing, Sumba**	1.83	200	P	Pn	18 24 01.3	+0.3
BASI				S	Sn	18 24 30.2	+0.4
BSSI	**Bau Bau, Buton**	2.44	343	P	Pn	18 24 07.5	0.0
SOEI	**Soe**	3.26	113	Pn	Pn	18 24 17.4	+0.3
SOEI				Sn	Sn	18 24 56.9	-1.4
SOEI	**Soe**	3.26	113	P	Pn	18 24 18.0	+1.0
SOEI	**Soe**	3.26	113	P	Pn	18 24 17.8	+0.8
BKSI	**Bulukumba**	3.33	341	P	Pn	18 24 18.0	+0.2
PLAI	**Plampang**	3.42	264	P	Pn	18 24 20.9	+2.0
PLAI	**Plampang**	3.42	264	P	Pn	18 24 20.1	+1.2
KAPI	**Kappang**	3.75	337	P	Pn	18 24 24.0	+1.1
	70nm,0.7s,baz=166,slow=9.2,SNR=34						
KAPI				S	Sn	18 25 09.8	+0.8
	15nm,0.6s,baz=16,slow=20,SNR=6.3						
KAPI	**Kappang**	3.75	337		Pn	18 24 23.8	+0.9
KAPI				Sn	Sn	18 25 09.6	+0.6
KAPI	**Kappang**	3.75	337	P	Pn	18 24 24.9	+2.0
TWSI	**Taliwang, Sumb**	4.30	266	P	Pn	18 24 30.6	+0.9
SPSI	**Sidrap Palu**	4.72	342	P	Pn	18 24 36.5	+1.4
SRBI	**Singaraja**	5.96	273	P	Pn	18 24 52.2	+1.2
	65nm,0.7s,0.3nm						
IGBI	**Denpasar**	6.02	266	P	Pn	18 24 52.2	+0.5
ABJI	**Asem Bagus**	6.95	275	P	Pn	18 25 05.8	+1.9
	42nm,0.5s,0.3nm						
JAGI	**Jajag, Banyuwa**	7.00	270		Pn	18 25 01.8	-2.6
JAGI				Sn	Sn	18 26 20.5	-3.4
JAGI	**Jajag, Banyuwa**	7.00	270	P	Pn	18 25 03.2	-1.2
	46nm,0.4s,0.8nm						
LUWI	**Luwuk**	7.56	12	Pn	Pn	18 25 12.4	+0.7
BLJI	**Banyuglugur**	7.59	275	P	Pn	18 25 14.6	+2.5
	46nm,0.8s,0.3nm						
GMJI	**Gumukmas**	7.70	271	P	Pn	18 25 12.3	-1.3
	25nm,1.0s,0.3nm						
BBKI	**Banjar Baru**	8.07	308	P	Pn	18 25 19.7	+1.2
GRJI	**Gresik**	8.80	280	P	Pn	18 25 30.1	+2.1
	32nm,0.6s						
BWJI	**Bawean**	8.89	287	P	Pn	18 25 31.1	+2.0
	60nm,1.1s,3µm						
PWJI	**Pagerwojo**	9.33	272	P	Pn	18 25 35.7	+0.8
	35nm,0.6s						
SAUI	**Saumlaki**	9.99	88	Pn	Pn	18 25 42.3	-1.1
KNRA	**Kununurra**	10.26	135		Pn	18 25 45.5	-1.4
KNRA	**Kununurra**	10.26	135	P	Pn	18 25 45.6	-1.3
FITZ	**Fitzroy Crossi**	10.47	156	Pn	Pn	18 25 49.6	0.0
UGM	**Wanagama**	10.61	272	Pn	Pn	18 25 50.2	-1.2
UGM	**Wanagama**	10.61	272	P	Pn	18 25 51.7	+0.3
UGM	**Wanagama**	10.61	272	P	Pn	18 25 52.2	+0.8
	65nm,1.9s						
MTN	**Manton Dam**	10.66	115		Pn	18 25 51.0	-0.9
MTN	**Manton Dam**	10.66	115	P	Pn	18 25 51.1	-0.9
SMRI	**Semarang**	10.78	277	Pn	Pn	18 25 54.8	+1.2
SMRI	**Semarang**	10.78	277	P	Pn	18 25 56.0	+2.4
	116nm,0.8s						
KDU	**Kakadu**	11.82	112	P	Pn	18 26 05.7	-1.1
KPJI	**Karang Pucung**	12.23	275	P	Pn	18 26 13.3	+1.2
	28nm,0.4s						
FAKI	**Fak Fak**	12.28	64	Pn	Pn	18 26 10.5	-2.3
FAKI	**Fak Fak**	12.28	64	P	Pn	18 26 12.7	-0.1
MBWA	**Marble Bar**	12.68	186	P	P	18 26 21.1	-0.2
MBWA	**Marble Bar**	12.68	186	P	P	18 26 21.3	-0.1
PSA00	**Pilbara Seismi**	13.08	186		Pn	18 26 23.3	+0.6
PSA00	**Pilbara Seismi**	13.08	186	P	P	18 26 25.5	-0.3
PSA00	**Pilbara Seismi**	13.08	186	P	P	18 26 26.5	+0.7
BBJI	**Bungbulang**	13.48	273	P	Pn	18 26 27.8	-0.1
CNJI	**Cibinong**	14.01	274	P	P	18 26 36.2	0.0
	28nm,1.1s						
SBUM	**Sibu**	14.10	320		P	18 26 38.2	+1.0
KKM	**Kota Kinabalu**	15.28	341	P	P	18 26 50.2	-0.1
KKM	**Kota Kinabalu**	15.28	341	P	P	18 26 51.9	+1.6
PPBI	**Pangkal Pinang**	16.28	292	P	Pn	18 27 03.2	+1.2
WB0	**Warramunga Arr**	16.98	133	P	Pn	18 27 09.9	-0.5
WB0				IAmb	IAmb	18 27 11.5	
	comp=Z,19nm,0.8s						
WRA	**Warramunga Arr**	17.05	133	P	Pn	18 27 10.6	-0.6
	comp=Z,3.8nm,0.3s,baz=308,slow=12,SNR=100						
WRA				S	S	18 30 13.0	-4.3
	comp=Z,8.2nm,0.9s,baz=317,slow=23,SNR=9.2						
WRA	**Warramunga Arr**	17.05	133	P	P	18 27 10.2	+0.4
WRA					S	18 30 16.7	-0.6
WRAB	**Tennant Creek**	17.05	133	P	Pn	18 27 10.8	-0.5
WRAB				IAmb	IAmb	18 27 11.9	
	comp=Z,12nm,0.9s						
WRAB	**Tennant Creek**	17.05	133	P	Pn	18 27 10.9	-0.3
WB2	**Warramunga Arr**	17.06	133	P	Pn	18 27 10.8	-0.5
WB2				IAmb	IAmb	18 27 22.8	
	comp=Z,23nm,1.2s						
WRKA	**Warakurna**	17.79	159	P	Pn	18 27 20.2	+0.4
MEEK	**Meekatharra**	18.22	187	P	Pn	18 27 25.5	+0.6
DSRI	**Dabo**	18.39	295	P	Pn	18 27 26.7	-0.3
	comp=Z,17nm,0.6s						
MNAI	**Manna**	18.61	282	P	P	18 27 26.2	-0.6
AS31	**Alice Springs**	19.37	143	P	P	18 27 35.7	+0.7
AS31				IAmb	IAmb	18 27 41.6	
	comp=Z,8.5nm,1.0s						
ASAR	**Alice Springs**	19.37	143	P	Pn	18 27 36.6	-1.9
	comp=Z,13nm,0.8s,baz=333,slow=16,SNR=148						
ASAR				S	S	18 31 02.6	-0.8
	comp=Z,6.2nm,1.0s,baz=325,slow=21,SNR=11						
ASAR				PcP	PcP	18 31 47.4	-0.7
	comp=Z,1.1nm,0.3s,baz=324,slow=1.1,SNR=6.2						
ASAR				ScP	ScP	18 35 03.9	-1.4
	comp=Z,0.9nm,0.6s,baz=336,slow=2.4,SNR=4.1						
ASAR	**Alice Springs**	19.37	143	P	P	18 27 36.0	+1.0
AS01	**Alice Springs**	19.40	143	P	Pn	18 27 37.0	-1.8
MORW	**Morawa**	21.05	193	P	P	18 27 53.1	+0.4
MORW				IAmb	IAmb	18 28 37.3	
	comp=Z,30nm,1.5s						
MORW	**Morawa**	21.05	193	P	P	18 27 54.9	+2.2
QIS	**Mount Isa**	21.43	126	P	P	18 27 58.0	+1.1
COEN	**Coen**	22.20	106	P	P	18 28 04.5	0.0
COEN				IAmb	IAmb	18 28 05.8	
	comp=Z,13nm,0.9s						
COEN	**Coen**	22.20	106	P	P	18 28 05.1	+0.6
BLDU	**Ballidu**	22.41	190	P	P	18 28 08.4	+2.1
KMBL	**Kambalda**	22.77	179	P	P	18 28 11.5	+2.0
FORT	**Forrest**	23.08	165	P	P	18 28 12.6	+0.4
FORT	**Forrest**	23.08	165	P	P	18 28 14.4	+2.2
OOD	**Oodnadatta**	23.57	146	P	P	18 28 18.8	+2.1
NWAO	**Narrogin (SRO)**	24.60	188	P	P	18 28 29.6	+3.6
	comp=Z,6.0nm,0.7s,baz=140,slow=15,SNR=1.4						
	comp=Z,6.0nm,0.7s						
NWAO	**Narrogin (SRO)**	24.60	188	P	P	18 28 26.4	+0.4
NWAO	**Narrogin (SRO)**	24.60	188	P	P	18 28 26.7	+0.6
NWAO				IAmb	IAmb	18 28 27.6	
	comp=Z,27nm,1.1s						
MULG	**Mulgathing**	24.79	153	P	P	18 28 29.6	+1.8
GSI	**Gunungsitoli**	25.50	291	P	P	18 28 33.0	-1.5
GSI				IAmb	IAmb	18 29 05.7	
	comp=Z,17nm,1.3s						
INKA	**Innaminka**	26.59	139	P	P	18 28 45.9	+1.9
CTAO	**Charters Tower**	26.81	118	P	P	18 28 46.1	0.0
CTAO				IAmb	IAmb	18 29 27.1	
	comp=Z,8.8nm,1.1s						
BBOO	**Buckleboo**	27.83	152	P	P	18 28 55.1	0.0
BBOO				IAmb	IAmb	18 28 59.7	
	comp=Z,16nm,1.1s						
BBOO	**Buckleboo**	27.83	152	P	P	18 28 56.8	+1.8
HTT	**Hallett**	29.72	149	P	P	18 29 14.6	+2.8
STKA	**Stephens Creek**	30.00	144	P	P	18 29 16.1	+1.8
	comp=Z,17nm,0.4s,baz=323,slow=9.0,SNR=77						
	comp=Z,17nm,0.4s						
STKA	**Stephens Creek**	30.00	144	P	P	18 29 15.6	+1.3
STKA				IAmb	IAmb	18 29 16.8	
	comp=Z,4.2nm,0.4s						
STKA	**Stephens Creek**	30.00	144	P	P	18 29 16.4	+2.1
TPUB	**Ta-pu**	31.60	359	P	P	18 29 27.1	-1.2
RMQ	**Roma**	31.66	128	P	P	18 29 31.7	+2.8
CMSA	**Cobar Meteorol**	32.32	139	P	P	18 29 37.1	+2.5
ARPS	**Mount Arapiles**	33.82	149	P	P	18 29 50.0	+2.5
CM31	**Chiang Mai Arr**	34.65	321	P	P	18 29 53.7	-1.1
CMAR	**Chiang Mai Arr**	34.65	321	P	P	18 29 53.8	-1.0
	comp=Z,0.3nm,0.4s,baz=140,slow=7.1,SNR=2.9						
CMAR				pP	pwP	18 30 40.5	+0.7
	comp=Z,0.2nm,0.3s,baz=133,slow=6.3,SNR=1.6						
CMAR				PcP	PcP	18 32 24.5	0.0
	comp=Z,0.8nm,0.7s,baz=181,slow=3.5,SNR=5.1						
	comp=Z,0.3nm,0.4s						
JMZ	**Minamidaito 2**	35.46	16	P	P	18 30 03.3	+1.7
ARMA	**Armidale**	35.82	132	P	P	18 30 07.3	+2.4
TOO	**Toolangi**	36.34	147	P	P	18 30 09.3	+0.2
TOO				IAmb	IAmb	18 30 13.7	
	comp=Z,19nm,1.1s						
TOO	**Toolangi**	36.34	147	P	P	18 30 12.2	+3.2
CAN	**Canberra**	36.86	141	P	P	18 30 15.3	+1.8
CAN	**Canberra**	36.86	141	P	P	18 30 16.9	+3.4
MGCD	**Mangrove Creek**	36.97	136	P	P	18 30 18.3	+3.9
PZH	**PanZhiHua**	39.59	332	P	P	18 30 39.3	+2.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,110nm,4.7s						
NJ2	**Nanjing**	40.38	357	*e*P	P	18 30 45.3	+2.7
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC	**Hu-ho-hao-te**	49.89	350	*e*P	P	18 32 02.3	+4.8
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,210nm,6.9s						
THZ	**Tophouse**	56.21	135	P	P	18 32 44.8	+1.1
FUNA	**Funafuti**	57.28	95	P	P	18 32 53.1	+1.6
ULN	**Ulaanbaatar**	57.49	349	P	P	18 32 50.4	-2.1
SONM	**Songino Array**	57.59	348	P	P	18 32 51.2	-2.1
	comp=Z,0.9nm,0.4s,baz=166,slow=8.3,SNR=8.5						
SONM				pP	PcP	18 33 42.8	-1.4
	comp=Z,0.6nm,0.8s,baz=163,slow=5.4,SNR=3.0						
	comp=Z,0.9nm,0.4s						
SONM	**Songino Array**	57.59	348	P	P	18 32 51.3	-1.9
BKZ	**Black Stump Fm**	57.97	131	P	P	18 32 55.9	-0.1
BKZ				IAmb	IAmb	18 33 31.4	
	comp=Z,26nm,1.5s						
HEH	**HeiHe**	58.74	5	*e*P	P	18 32 58.3	-2.7
WMQ	**Urumqi**	60.28	333	*e*P	P	18 33 13.3	+1.6
WMQ				pP	pP	18 33 58.1	+1.9
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MK31	**Makanchi Array**	65.03	332	P	P	18 33 41.0	-2.0
MKAR	**Makanchi Array**	65.03	332	P	P	18 33 41.4	-1.6
	comp=Z,1.5nm,0.8s,baz=139,slow=7.8,SNR=15						
MKAR				pP	pwP	18 34 31.8	-2.0
	comp=Z,0.6nm,0.9s,baz=135,slow=5.7,SNR=2.0						
	comp=Z,1.5nm,0.8s						
MKAR	**Makanchi Array**	65.03	332	P	P	18 33 41.5	-1.5
ZAA0	**Zalesovo Array**	69.37	338	P	P	18 34 07.5	-2.6
ZALV	**Zalesovo Beam**	69.37	338	P	P	18 34 07.4	-2.7
	comp=Z,2.0nm,0.4s,baz=141,slow=5.8,SNR=14						
ZALV				pP	pwP	18 35 00.3	-0.8
	comp=Z,2.1nm,0.8s,baz=123,slow=5.5,SNR=3.6						
	comp=Z,2.0nm,0.4s						

ZALV	Zalesovo Beam	69.37	338	P	P	18 34 07.0	-3.1
VNDA	Vanda	72.16	171	P	P	18 34 28.2	+1.6
	comp=Z,1.2nm,0.4s,baz=302,slow=7.6,SNR=13						
	comp=Z,1.2nm,0.4s						
VNDA	Vanda	72.16	171	P	P	18 34 28.0	+1.4
VNDA				IAmb	IAmb	18 35 10.7	
	comp=Z,9.2nm,1.4s						
VOI	Vohitsoka	72.48	250	P	P	18 34 28.5	-1.2
VOI				IAmb	IAmb	18 34 41.2	
	comp=Z,18nm,1.2s						
JOHN	Johnston Islan	72.91	70	P	P	18 34 31.8	-0.3
BOSA	Boshof	91.18	241	P	P	18 36 08.5	+1.4
	comp=Z,1.1nm,0.4s,baz=130,slow=3.1,SNR=11						
	comp=Z,1.1nm,0.4s						
TORD	Torodi Ar. Bea	120.53	280	PKP	PKPdf	18 41 51.6	-1.4
	comp=Z,0.4nm,0.5s,baz=94,slow=1.6,SNR=3.8						

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*GUC **17** 18:26:17.5±0.6, 21°.22S×68°.74W, h105^{km}±3^{km}, ML3.6*

*IDC **17** 18:26:27.5±8.8, 20°.43S×68°.10W, h176^{km}±75^{km}, mb3.3/1, mbtmp3.8/2, Error ellipse: s-maj=123.9km s-min=90.3km az=96.0*

ISC 17 18:26:16.6±1.0, **21°.20S**±0°.03×**68°.78W**±0°.09, **h114**^{km}±10^{km}, **n18**, σ1^{s}**09**/33, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.68	283	*e*P	Pn	18 26 35.0	-0.3
PB01				*i* S	Sn	18 26 48.4	-0.9
PB01				IAML		18 26 49.5	
	comp=N,2µm,0.2s						
PB09	IPOC Station P	0.73	216	*e*P	Pn	18 26 35.8	0.0
PB09				*i* S	Sn	18 26 50.1	-0.2
PB09				IAML		18 26 51.8	
	comp=N,1µm,0.6s						
PB02	IPOC Station P	1.05	263	*e*P	Pn	18 26 38.7	0.0
PB02				*i* S	Sn	18 26 55.2	-0.2
PB02				IAML		18 26 57.0	
	comp=E,4µm,0.4s						
PB08	IPOC Station P	1.11	342	*e*P	Pn	18 26 40.2	+0.5
PB08				*i* S	Sn	18 26 57.6	+0.5
PB08				IAML		18 26 59.0	
	comp=E,1µm,0.2s						
PB07	IPOC Station P	1.15	243	*e*P	Pn	18 26 39.8	-0.1
PB07				*i* S	Sn	18 26 57.3	-0.3
PB07				IAML		18 26 59.8	
	comp=N,1µm,0.3s						
PB03	IPOC Station P	1.23	227	*e*P	Pn	18 26 40.7	-0.1
PB03				*i* S	Sn	18 26 58.8	-0.3
PB03				IAML		18 26 59.4	
	comp=E,1µm,0.2s						
LVC	Limon Verde	1.41	185	*e*P	Pn	18 26 43.0	0.0
LVC				*i* S	Sn	18 27 03.2	+0.3
TA01	Diego Aracena	1.45	296	*e*P	Pn	18 26 43.4	+0.3
TA01				*i* S	Sn	18 27 03.1	-0.1
TA01				IAML		18 27 05.0	
	comp=N,1µm,0.2s						
TA02	Huaiquique	1.57	306	*e*P	Pn	18 26 44.6	+0.2
TA02				*i* S	Sn	18 27 05.5	-0.1
GO01	Chusmiza	1.57	346	*e*P	Pn	18 26 45.4	+0.4
GO01				*i* S	Sn	18 27 07.4	+0.8
PB11	IPOC Station P	1.65	330	*e*P	Pn	18 26 45.7	+0.1
PB11				*i* S	Sn	18 27 07.8	0.0
PB11				IAML		18 27 09.6	
	comp=E,798nm,0.3s						
PB06	IPOC Station P	1.67	206	*e*P	Pn	18 26 45.9	+0.1
PB06				*i* S	Sn	18 27 08.3	+0.2
PB06				IAML		18 27 08.8	
	comp=E,821nm,0.3s						
PB04	IPOC Station P	1.70	228	*e*P	Pn	18 26 45.7	-0.5
PB15	IPOC Station P	2.10	198	*e*P	Pn	18 26 51.1	-0.1
PB15				*i* S	Sn	18 27 18.7	+1.1
MNMC	Minye Minye	2.20	340	*e*P	Pn	18 26 53.2	+0.6
MNMC				*i* S	Sn	18 27 21.1	+1.0
LPAZ	La Paz	4.93	7	P	Pn	18 27 30.7	+1.6
	comp=E,10nm,0.3s,baz=189,slow=7.7,SNR=57						
LPAZ				S	Sn	18 28 20.4	-4.9
	comp=E,2.6nm,0.6s,baz=223,slow=17,SNR=1.0						
TORD	Torodi Ar. Bea	77.14	70	P	P	18 37 57.4	-0.7
	comp=E,0.5nm,0.6s,baz=253,slow=5.7,SNR=3.3						
	comp=E,0.5nm,0.6s						
MKAR	Makanchi Array	145.32	36	PKP	PKPbc	18 45 42.1	+1.2
	comp=E,0.5nm,0.7s,baz=330,slow=2.5,SNR=6.0						

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*IDC **17** 18:35:08.2±0.4, 10°.79N×68°.92W, h0^{km}, mb4.4/26, mbtmp4.5/29, ML4.4/3, MS3.9/31, Error ellipse: s-maj=14.1km s-min=10.4km az=87.0*

*FUNV **17** 18:35:11.4, 10°.83N×68°.91W, h6^{km}, MW4.6*

*NEIC **17** 18:35:11.5±1.9, 10°.88N±0°.03×68°.92W±0°.05, h26^{km}±5^{km}, mb4.8/219, Error ellipse: s-maj=8.0km s-min=1.8km az=65.0*

*VAO **17** 18:35:14.2±0.7, 10°.47N×68°.80W, h10^{km}, mb5.0*

ISC 17 18:35:09.6±0.7, **10°.82N**±0°.02×**68°.96W**±0°.03, **h11**^{km}±4^{km}, **n552**, σ1^{s}**45**/490, **mb4.8**/139, **MS3.9**/27, **2C-2D**, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACV	Jacura	0.30	26⇑	*e*P	Pb	18 35 17.5	+0.5
JACV				*e*S	Sb	18 35 21.7	-0.2
SIQV	Siquisique	0.85	259	*e*P	Pn	18 35 27.2	-0.4
SIQV				*e*S	Sn	18 35 41.5	+1.4
MAPV	Macapo	1.10	153	*e*P	Pn	18 35 31.6	+0.5
MAPV				*e*S	Sn	18 35 46.5	+0.3
TURV	Turiamo	1.16	108	*e*P	Pb	18 35 31.8	0.0
TURV				*e*S	Sb	18 35 47.0	+0.2
CURV	Curarigua	1.27	231	*e*P	Pg	18 35 34.5	+0.4
CURV				*e*S	Sn	18 35 52.6	+2.1
HATO	Hato, Curacao	1.35	0		Pn	18 35 33.7	-0.7
HATO				Sn	Sb	18 35 51.2	-1.1
BENV	Beln	1.59	122	*e*P	Pb	18 35 39.7	+0.7
BENV				*e*S	Sb	18 35 59.9	+0.6
AUA1	Aruba	1.96	329		Pn	18 35 43.3	+0.4
AUA1				Sn	Sn	18 36 07.5	-0.1
AUA1	Aruba	1.96	329	*e*P	Pn	18 35 43.8	+0.9
TACV	Tcata	2.02	109	*e*P	Pn	18 35 44.7	+1.0
CARV	Caracas	2.02	99	*e*P	Pn	18 35 43.5	-0.3
CARV				*e*S	Sn	18 36 09.9	+0.7
BAUV	El Baul	2.07	154	Pn	Pn	18 35 45.6	+1.2
BAUV				Pg	Pg	18 35 50.1	+0.6
BAUV				Sg	Sb	18 36 14.8	+1.7
BAUV	El Baul	2.07	154	*e*P	Pb	18 35 46.2	-1.1
BAUV				*e*S	Sn	18 36 11.8	+1.5
BAUV	El Baul	2.07	154	*e*P	Pn	18 35 45.9	+1.5
BAUV				*e*S	Sb	18 36 14.8	+1.7
FUNV	FUNVISIS	2.14	99	*e*P	Pn	18 35 45.2	-0.2
FUNV				*e*S	Sn	18 36 11.9	-0.3
SDV	Santo Domingo	2.53	221	Pn	Pn	18 35 52.9	+2.0
	144nm,0.3s,baz=51,slow=9.8,SNR=290						
SDV				Sn	Sb	18 36 27.1	+0.6
	358nm,0.3s,baz=327,slow=23,SNR=9.2						
SDV				LR	LR	18 37 18.4	
	comp=Z,3µm,19.0s,baz=332,slow=51						
	422nm,0.4s						
SDV	Santo Domingo	2.53	221	Pn	Pb	18 35 53.4	-1.8
SDV	Santo Domingo	2.53	221	*e*P	Pb	18 35 54.3	-0.9
BIRV	Birongo	2.67	97	Pn	Pn	18 35 52.0	-0.6
BIRV	Birongo	2.67	97	*e*P	Pn	18 35 52.5	-0.1
BIRV				*e*S	Sn	18 36 24.3	-0.6
URIC	Uribia, Colomb	3.10	287		Pn	18 35 58.0	-0.5
URIC	Uribia, Colomb	3.10	287	*e*P	Pn	18 35 59.4	+0.9
SOCV	Socops	3.14	217	*e*P	Pn	18 36 01.2	+2.2
SOCV				*e*S	Sn	18 36 38.1	+1.6
MCQV	Machiques	3.60	258	*e*P	Pn	18 36 07.0	+1.7
MCQV				*e*S	Sn	18 36 49.4	+1.5
CRJC	Cerrejon, Guaj	3.85	273	*e*P	Pn	18 36 09.7	+0.7
CACV	CAICARA DEL OR	4.02	143	*e*P	Pb	18 36 17.2	-3.3
CACV				*e*S	Sb	18 37 06.0	-3.2
CAPV	Capacho	4.42	229	*e*P	Pn	18 36 19.1	+2.2
CAPV				*e*S	Sn	18 37 10.1	+1.5
LL1C	La Loma 1 Cana	4.70	255	*e*P	Pn	18 36 22.0	+1.5
PRGV	PARIAGUAN	4.72	115	*e*P	Pn	18 36 21.2	+0.4
PRGV				*e*S	Sn	18 37 12.8	-2.8
LL5C	La Loma 5 El P	4.80	258	*e*P	Pn	18 36 20.9	-1.1
PAMC	Pamplona, Colo	5.06	227	*e*P	Pn	18 36 28.1	+2.2
SMRC	Santa Marta, M	5.18	274	*e*P	Pn	18 36 28.5	+1.4
ARGC	Ariguani, Magd	5.29	260	*e*P	Pn	18 36 29.4	+0.8
CRUV	Carupano	5.63	91	*e*P	Pn	18 36 34.0	+0.7
CRUV				*e*S	Sn	18 37 35.0	-3.0
BARC	Barichara	5.92	225	*e*P	Pn	18 36 39.5	+1.9
BRRC	Barranca, Sant	5.97	232	*e*P	Pn	18 36 40.5	+2.6
SJCC	San Jacinto, C	6.19	262	*e*P	Pn	18 36 42.6	+1.5
RUSC	La Rusia	6.37	220	Pn	Pn	18 36 45.5	+1.6
RUSC	La Rusia	6.37	220	*e*P	Pn	18 36 45.9	+1.9
ZARC	Zaragoza, Cauc	6.69	241	*e*P	Pn	18 36 48.6	+0.6
PTBC	PUERTO BERRIO,	6.90	232	*e*P	Pn	18 36 51.7	+0.9
UREC	San Jos de Ur	7.17	245	*e*P	Pn	18 36 56.2	+1.8
SPBC	San Pablo de B	7.21	225	*e*P	Pn	18 36 57.3	+2.2
GRGR	Grenville	7.28	79		Pn	18 36 54.0	-2.1
GRGR	Grenville	7.28	79	*e*P	Pn	18 36 54.2	-1.9
PTGC	Puerto Gaitan,	7.29	206	*e*P	Pn	18 36 57.4	+1.3
GRHS	Sauteurs	7.31	78	*e*P	Pn	18 36 54.0	-2.4
MLPR	Magueyes Islan	7.35	14	Pn	Pn	18 36 55.9	-1.0
CRPR	Cabo Rojo, PR	7.37	14		Pn	18 36 56.2	-1.0
TRN	Trinidad (W)	7.43	91	*e*P	Pn	18 36 59.1	+1.1
OBIP	Obispado Ponce	7.53	17	Pn	Pn	18 36 57.5	-2.0
LCBC	Los crdobas,	7.55	256	*e*P	Pn	18 37 00.2	+0.4
PRSN	Puerto Rico Se	7.56	13		Pn	18 36 59.0	-0.9
GCMP	Grenada, Carri	7.57	77	*e*P	Pn	18 36 57.6	-2.3
CELP	Cerrillos	7.57	17	Pn	Pn	18 36 58.9	-1.1
SDD	Santo Domingo	7.65	353	Pn	Pn	18 37 00.1	-1.0
PCDR	Punta Cana, DR	7.67	4	Pn	Pn	18 37 01.7	+0.4
UUPR	Utuado, UPR, P	7.70	16		Pn	18 37 01.5	-0.3
SJG	San Juan	7.74	20	Pn	Pn	18 37 01.8	-0.6
	43nm,0.3s,baz=199,slow=16,SNR=22						
SJG				Sn	Sn	18 38 19.6	-10
	30nm,0.3s,baz=335,slow=15,SNR=4.0						
SJG				LR	LR	18 39 55.1	
	comp=Z,512nm,21.7s,baz=230,slow=37						
	95nm,0.3s						
SJG	San Juan	7.74	20		Pn	18 37 00.6	-1.8
CHIC	Chingaza	7.75	218	*e*P	Pn	18 37 04.4	+1.5
AOPR	Arecibo Observ	7.78	16		Pn	18 37 03.1	+0.1
AGPR	Aguadilla, PR	7.81	13	Pn	Pn	18 37 02.2	-1.1
NORC	Norcasia	7.84	229	*e*P	Pn	18 37 05.2	+1.5
HUMP	Col San Antoni	7.88	22		Pn	18 37 03.7	-0.5
SVB	Belmont	7.93	71		Pn	18 37 02.5	-2.4
SVB	Belmont	7.93	71	*e*P	Pn	18 37 02.8	-2.1
DR12	Loma Pena Alta	7.93	357		Pn	18 36 56.1	-8.9
GCPR	Guaynabo City	7.95	20		Pn	18 37 05.0	-0.2
MTP	Monte Pirata	7.95	24	Pn	Pn	18 37 03.5	-1.7
ROSC	El Rosal	7.97	222	Pn	Pn	18 37 08.9	+3.2
	31nm,0.3s,baz=78,slow=12,SNR=36						
ROSC				Sn	Sn	18 38 37.9	+1.7
	baz=51,slow=21						
ROSC				LR	LR	18 40 59.2	
	comp=Z,2µm,18.3s,baz=20,slow=44						
ROSC	El Rosal	7.97	222		Pn	18 37 06.8	+1.0
ROSC	El Rosal	7.97	222	*e*P	Pn	18 37 09.4	+3.6
EMPR	Esperanza - Ma	7.97	17		Pn	18 37 04.7	-0.7
CBYP	Canovanas	8.00	22		Pn	18 37 05.0	-0.9
CDVI	St. Croix	8.00	30	Pn	Pn	18 37 04.9	-1.0
APAC	Apartado, Choc	8.06	250	*e*P	Pn	18 37 10.2	+3.5
DBBC	Dabeiba	8.10	243	*e*P	Pn	18 37 11.4	+4.1
VILC	Villavicencio,	8.15	215	*e*P	Pn	18 37 10.1	+2.0
CUPR	Culebra, Puert	8.25	25	Pn	Pn	18 37 07.5	-1.8
TOSP	Speyside	8.29	86	Pn	Pn	18 37 09.4	-0.4
TOSP	Speyside	8.29	86	*e*P	Pn	18 37 09.0	-0.8
SLB	Belfond	8.30	68	*e*P	Pn	18 37 08.6	-1.5
PAPH	Port-au-Prince	8.31	338	Pn	Pn	18 37 08.1	-2.1
PAPH					Sn	18 38 38.8	-5.3
MCLT	Moule a Chique	8.35	69	Pn	Pn	18 37 12.6	+1.9
MCLT	Moule a Chique	8.35	69	*e*P	Pn	18 37 08.7	-2.0
SDDR	Presa de Saban	8.42	345	Pn	Pn	18 37 11.6	-0.1
SLBI	Saint Lucia, B	8.43	67	*e*P	Pn	18 37 09.7	-2.0
GUY2C	Guyana, Caldas	8.43	229	*e*P	Pn	18 37 15.4	+3.2
BIM	Bigot	8.53	64	Pn	Pn	18 37 10.6	-2.7
BIM	Bigot	8.53	64	*e*P	Pn	18 37 10.9	-2.4
CBOC	Ciudad Bolivar	8.54	235	*e*P	Pn	18 37 15.4	+2.0
FDF	Fort de France	8.55	62		Pn	18 37 10.5	-3.0
FDF	Fort de France	8.55	62	*e*P	Pn	18 37 10.7	-2.9
SVN	Savane Anatole	8.59	61		Pn	18 37 11.2	-2.8
MPOM	Morne Pois Mar	8.69	65	Pn	Pn	18 37 12.5	-2.9
MPOM	Morne Pois Mar	8.69	65	*e*P	Pn	18 37 13.0	-2.3
SC01	Santiago de lo	8.73	349	Pn	Pn	18 37 14.9	-1.0
SABA	Saba	8.74	39	Pn	Pn	18 37 14.8	-1.3
ILAM	Ilet Lapin Mar	8.81	63	Pn	Pn	18 37 14.8	-2.3
CBE	Ff, Capester	8.85	53	Pn	Pn	18 37 16.2	-1.5
ANIL	Santa Ana	8.96	226	*e*P	Pn	18 37 21.1	+1.7
GUVC	San Jose del G	8.99	204	*e*P	Pn	18 37 20.7	+1.2
PRAC	Prado	9.18	220	Pn	Pn	18 37 22.6	+0.4
PRAC	Prado	9.18	220	*e*P	Pn	18 37 22.9	+0.7
ORTC	Ortega, Tolima	9.27	223	*e*P	Pn	18 37 24.4	+1.1
MACC	Macarena, Meta	9.89	210	*e*P	Pn	18 37 31.8	0.0
YOTC	Yotoco, Valle	9.98	228	*e*P	Pn	18 37 32.7	-0.5
GARC	Garzon, Huila	10.75	218	*e*P	Pn	18 37 44.2	+0.4
GTBY	Guantanamo Bay	10.82	328	Pn	Pn	18 37 43.8	-0.7
BCIP	Isla Barro Col	10.84	262		Pn	18 37 45.1	+0.3
BCIP	Isla Barro Col	10.84	262	*e*P	Pn	18 37 45.1	+0.3
SGCB	S£o Gabriel d	11.04	170	*e*P	Pn	18 37 46.3	-1.3
MTDJ	Mount Denham	11.09	313	Pn	Pn	18 37 47.8	-0.6
POPC	Popayan, Colom	11.24	223	*e*P	Pn	18 37 51.3	+0.7
BOAV	Boa Vista	11.84	134	Pn	Pn	18 37 56.1	-2.5
BOAV	Boa Vista	11.84	134	*e*P	Pn	18 37 57.0	-1.6
BBAC	Balboa, Cauca	12.00	224	*e*P	Pn	18 38 01.7	+0.8
TULM	Tulcn-Chalpat	13.33	222		Pn	18 38 18.7	-0.6
BRU2	Volcan	13.68	263		Pn	18 38 23.2	-0.7
CDITO	Canoas	13.89	262		Pn	18 38 26.2	-0.4
IMBA	Imbabura, San	13.93	222	Pn	Pn	18 38 29.3	+1.7
OTAV	Otavalo	14.12	222	Pn	Pn	18 38 29.4	-0.9
OTAV	Otavalo	14.12	222	*e*P	Pn	18 38 32.2	+2.0
BATAN	Batan	14.19	268	Pn	Pn	18 38 30.2	-0.6
SRBA	San Rafael, Bu	14.27	265		Pn	18 38 30.6	-1.3
PULU	Pululahua	14.32	222	Pn	Pn	18 38 33.0	+0.2
FSCY	Frank Sound, G	14.50	307	Pn	Pn	18 38 37.6	+2.6
PEZE	Perez Zeledon,	14.56	266		Pn	18 38 35.5	-0.3
RIMA	Rio Macho	14.70	267		Pn	18 38 38.4	+0.5
SLOR	San Lorenzo -	14.88	220		Pn	18 38 41.3	+0.7
TBTG	Tabatinga, AM	14.94	184	Pn	Pn	18 38 39.1	-1.8
ESPN	Las Esperanzas	15.09	277	P	Pn	18 38 41.9	-1.1
ESPN				IAmb	IAmb	18 38 50.3	
	comp=Z,30nm,0.7s						
JACO	JACO, Garabito	15.49	267	P	Pn	18 38 48.0	-0.3
PORT	Chimborazo Vol	15.62	219	P	Pn	18 38 50.5	-0.1
PORT				IAmb	IAmb	18 38 58.5	
	comp=Z,47nm,0.6s						
CHSH	Refugio Sur-Vo	15.71	219	P	Pn	18 38 51.5	-0.1
CHSH				IAmb	IAmb	18 38 59.3	
	comp=Z,45nm,0.6s						
JTS	Las Juntas de	15.73	270	Pn	Pn	18 38 51.3	0.0
	comp=Z,0.7nm,0.3s,baz=209,slow=21,SNR=2.0						
JTS				LR	LR	18 46 15.4	
	comp=Z,341nm,20.9s,baz=88,slow=42						
	comp=Z,11nm,0.8s						
JTS	Las Juntas de	15.73	270		Pn	18 38 49.2	-2.2
JTS				IAmb	IAmb	18 38 58.9	
	comp=Z,130nm,1.9s						
ACON	Acoyapa	15.94	276	P	Pn	18 38 53.2	-0.8
MACA	Manacapuru-AM	16.15	149	P	Pn	18 38 56.1	-0.7
ORTG	Ortega, Santa	16.22	270	P	Pn	18 38 53.4	-4.4
ORTG				IAmb	IAmb	18 39 03.0	
	comp=Z,117nm,1.8s						
DUNO	Dulce Nombre,	16.28	269	P	Pn	18 38 52.5	-5.9
HZTE	Horizontes, Gu	16.34	271	P	Pn	18 38 56.2	-3.0
HZTE				IAmb	IAmb	18 39 04.5	
	comp=Z,123nm,1.1s						
BOAB	BOACO BROADBAN	16.44	277		Pn	18 38 56.8	-3.7
MATN	Matagalpa	16.73	279	P	Pn	18 39 01.1	-3.2
MDP	Montagnes des	17.13	108	P	Pn	18 39 05.4	-3.8
	comp=Z,16nm,1.1s,baz=107,slow=1.6,SNR=1.8						
MDP				LR	LR	18 46 31.0	
	comp=Z,280nm,20.2s,baz=293,slow=40						
SALI	Salinas	17.61	223	P	P	18 39 16.3	+0.1
SALI				IAmb	IAmb	18 39 22.8	
	comp=Z,152nm,1.4s						
MCRA	Macar, Loja	18.64	217	P	P	18 39 25.4	-2.2
CZSB	Cruzeiro do Su	18.80	192		P	18 39 29.7	+0.4
CZSB	Cruzeiro do Su	18.80	192	*e*P	Pn	18 39 31.5	+1.7
MALB	Monte Alegre	19.30	130	*e*P	Pn	18 39 35.8	0.0
ITTB	Itaituba	20.03	138	*e*P	Pn	18 39 44.5	0.0
ATAH	Atahualpa	20.16	208	P	P	18 39 44.8	+0.2
	comp=Z,15nm,0.8s,baz=13,slow=7.7,SNR=7.2						
	comp=Z,15nm,0.8s						
ESQI	Esquipulas	20.22	283	P	P	18 39 44.6	-0.4
SAML	Samuel	20.46	163		P	18 39 47.3	-0.2
SAML	Samuel	20.46	163	*e*P	P	18 39 48.7	+1.2
ETMB	Extrema	20.68	172		P	18 39 49.7	-0.2
TEIG	Tepich	20.81	299	P	P	18 39 51.3	+0.1
TEIG				IAmb	IAmb	18 40 02.1	
	comp=Z,83nm,1.4s						
PETF	Flores	21.17	289	P	P	18 39 56.3	+1.1
PETF				IAmb	IAmb	18 40 07.0	
	comp=Z,65nm,1.7s						
CCIG	Comitan	23.16	286	P	P	18 40 16.8	+0.2
NNA	Nana	23.97	199	P	P	18 40 24.4	0.0
	comp=Z,12nm,0.4s,baz=5.1,slow=12,SNR=8.3						
	comp=Z,12nm,0.4s						
NNA	Nana	23.97	199	P	P	18 40 24.0	-0.4
NNA				IAmb	IAmb	18 40 52.7	
	comp=Z,30nm,0.9s						
PAYG	Puerto Ayora	24.08	243	P	P	18 40 26.5	+1.1
VILB	Vilhena	25.17	160	P	P	18 40 35.8	+0.5
154A	Montrose	25.30	331	P	P	18 40 38.9	+2.6
CMIG	Matias Romero	25.90	287	P	P	18 40 39.2	-2.7
	comp=Z,4.7nm,0.7s,baz=132,slow=6.5,SNR=4.7						
CMIG				LR	LR	18 51 59.5	
	comp=Z,175nm,19.9s,baz=94,slow=39						
JSC	Jenkinsville	25.92	336	P	P	18 40 41.2	-0.6
JSC				IAmb	IAmb	18 40 46.0	
	comp=Z,40nm,1.8s						
152A	Waverly Hall	26.14	329	P	P	18 40 44.2	+0.3
152A				IAmb	IAmb	18 40 55.2	
	comp=Z,19nm,0.9s						
HODGE	Hodges	26.29	335	P	P	18 40 45.6	+0.4
KMSC	Kings Mountain	26.70	337	P	P	18 40 48.9	-0.1
Y52A	Lilburn	26.79	331	P	P	18 40 49.4	-0.4
Y52A				IAmb	IAmb	18 40 57.8	
	comp=Z,20nm,0.9s						
Z51A	Franklin	26.89	329	P	P	18 40 50.1	-0.6
LPAZ	La Paz	26.95	178	P	P	18 40 52.0	+0.1
	comp=Z,5.7nm,0.7s,baz=0.7,slow=6.1,SNR=6.2						
	comp=Z,5.7nm,0.7s						
LPAZ	La Paz	26.95	178	P	P	18 40 50.9	-1.1
LPAZ	La Paz	26.95	178	*e*P	P	18 40 53.4	+1.4
BG3	Lake Jocassee	27.22	334	P	P	18 40 53.7	0.0
V55A	Taylorsville	27.29	338	P	P	18 40 54.0	-0.2
LRAL	Lakeview Retre	27.64	326	P	P	18 40 57.4	0.0
LRAL	Lakeview Retre	27.64	326	P	P	18 40 58.4	+1.1
	baz=139						
W52A	Murphy	27.74	333	P	P	18 40 57.5	-0.8
W52A				IAmb	IAmb	18 41 11.8	
	comp=Z,23nm,1.4s						
V53A	Saluda	27.75	335	P	P	18 40 59.8	+1.4
SIV	San Ignacio	27.76	164	P	P	18 40 58.9	+0.2
	comp=Z,2.9nm,0.6s,baz=356,slow=9.2,SNR=12						
SIV				LR	LR	18 52 14.2	
	comp=Z,358nm,19.9s,baz=337,slow=37						
	comp=Z,2.9nm,0.6s						
PTLB	Pontes e Lacer	27.85	159	P	P	18 40 57.8	-1.6
FPAL	Fort Paine	28.08	330	P	P	18 40 59.3	-2.1
FPAL				IAmb	IAmb	18 41 03.5	
	comp=Z,55nm,2.0s						
TKL	Tuckaleechee C	28.15	334	P	P	18 41 03.4	+1.5
	comp=Z,1.1nm,0.5s,baz=327,slow=20,SNR=2.1						
TKL				LR	LR	18 52 12.1	
	comp=Z,319nm,21.5s,baz=134,slow=36						
	comp=Z,1.1nm,0.5s						
R58B	Mineral	28.19	345	P	P	18 41 01.1	-1.1
R58B				IAmb	IAmb	18 41 10.5	
	comp=Z,42nm,1.9s						
PB18	Visviri	28.23	181	P	P	18 41 02.6	-0.8
PB18				IAmb	IAmb	18 41 32.1	
	comp=Z,17nm,0.8s						
W50A	Signal Mountai	28.47	331	P	P	18 41 04.4	-0.5
W50A				IAmb	IAmb	18 41 22.5	
	comp=Z,22nm,1.4s						
V51A	Loudon	28.52	333	P	P	18 41 03.9	-1.4
X48A	Hartselle	28.74	328	P	P	18 41 05.8	-1.5
SWET	Sewanee	28.78	330	P	P	18 41 06.7	-0.9
SWET				IAmb	IAmb	18 41 17.0	
	comp=Z,32nm,1.7s						
PB16	IPOC Station P	28.97	181	P	P	18 41 08.9	-1.1
PB16				IAmb	IAmb	18 41 11.2	
	comp=Z,13nm,0.7s						
CLTN	Cedars of Leba	29.68	331	P	P	18 41 13.6	-1.9
CLTN				IAmb	IAmb	18 41 24.0	
	comp=Z,17nm,1.3s						
T50A	Nancy	29.76	334	P	P	18 41 15.1	-1.1
U49A	Red Boiling Sp	29.76	332	P	P	18 41 15.6	-0.7
U49A				IAmb	IAmb	18 41 31.8	
	comp=Z,23nm,1.6s						
MNMC	Minye Minye	29.77	181	P	P	18 41 14.8	-2.0
Q54A	Coxs Mills	29.98	341	P	P	18 41 16.2	-2.0
Q54A				IAmb	IAmb	18 41 29.2	
	comp=Z,14nm,1.1s						
OXF	Oxford	30.08	325	P	P	18 41 17.2	-1.9
LUPA	Lehigh Univers	30.20	350	P	P	18 41 18.7	-1.4
GO01	Chusmiza	30.30	180	P	P	18 41 20.4	-1.3
PB11	IPOC Station P	30.39	181	P	P	18 41 20.2	-2.0
WVT	Waverly	30.45	329	P	P	18 41 19.5	-2.9
WVT				IAmb	IAmb	18 41 24.3	
	comp=Z,6.0nm,0.5s						
WVT	Waverly	30.45	329	P	P	18 41 23.6	+1.3
	baz=141						
TRNY	Table Rock, Ra	30.56	352	P	P	18 41 22.9	-0.3
YLE	Yale	30.58	354	P	P	18 41 22.0	-1.4
R50A	Paris	30.61	336	P	P	18 41 23.1	-0.7
R50A				IAmb	IAmb	18 41 31.6	
	comp=Z,16nm,1.2s						
SSPA	Standing Stone	30.73	347	P	P	18 41 26.3	+1.5
	baz=163						
PB08	IPOC Station P	30.77	180	IAmb	IAmb	18 41 29.6	
	comp=Z,12nm,0.9s						
P52A	Corning	30.99	340	P	P	18 41 28.2	+1.1
	baz=154						
WCI	Wyandotte Cave	31.40	333	P	P	18 41 28.9	-1.8
WCI				IAmb	IAmb	18 41 33.2	
	comp=Z,11nm,0.7s						
WCI	Wyandotte Cave	31.40	333	P	P	18 41 32.3	+1.6
	baz=146						
PB01	IPOC Station P	31.67	181	P	P	18 41 32.0	-1.3
PB01				IAmb	IAmb	18 41 42.0	
	comp=Z,17nm,1.2s						
L61B	Northampton	31.68	355	P	P	18 41 34.1	+1.0
	baz=173						
P49A	Miami Univ. Ec	31.85	337	P	P	18 41 35.6	+0.9
	baz=150						
BINY	Binghamton	31.86	350	P	P	18 41 35.8	+1.0
	baz=167						
PB02	IPOC Station P	31.95	182	P	P	18 41 35.3	-0.5
PB02				IAmb	IAmb	18 41 43.4	
	comp=Z,17nm,1.0s						
WHAR	Wooly Hollow	32.30	323	P	P	18 41 37.1	-1.6
WHAR				IAmb	IAmb	18 42 00.1	
	comp=Z,9.9nm,0.8s						
PB09	IPOC Station P	32.41	180	IAmb	IAmb	18 41 45.3	
	comp=Z,23nm,1.2s						
MIAR	Mount Ida	32.59	320	P	P	18 41 39.9	-1.3
MIAR				IAmb	IAmb	18 41 47.4	
	comp=Z,12nm,1.2s						
MIAR	Mount Ida	32.59	320	P	P	18 41 42.6	+1.4
	baz=131						
FCAR	Ozark Folk Cen	32.62	324	IAmb	IAmb	18 41 47.9	
	comp=Z,9.7nm,0.9s						
O48B	Farmland	32.64	337	P	P	18 41 42.7	+1.1
	baz=150						
PB03	IPOC Station P	32.67	181	P	P	18 41 40.0	-2.2
PB03				IAmb	IAmb	18 41 42.4	
	comp=Z,13nm,1.0s						
T42A	Van Buren	32.85	326	IAmb	IAmb	18 42 05.9	
	comp=Z,12nm,1.0s						
FVM	French Village	33.20	328	IAmb	IAmb	18 41 50.3	
	comp=Z,8.7nm,0.7s						
LVC	Limon Verde	33.22	180	P	P	18 41 46.9	-0.4
LVC	Limon Verde	33.22	180	*e*P	P	18 41 47.5	+0.3
833A	Chaparral WMA,	33.40	306	P	P	18 41 49.4	+1.0
	baz=115,SNR=5.5						
BDFB	Brasilia	33.49	141	P	P	18 41 48.9	-0.5
	comp=Z,1.7nm,0.5s,baz=120,slow=12,SNR=1.6						
BDFB				LR	LR	18 57 18.4	
	comp=Z,220nm,21.3s,baz=318,slow=40						
	comp=Z,1.7nm,0.5s						
CCM	Cathedral Cave	33.68	327	P	P	18 41 50.1	-0.6
CCM				IAmb	IAmb	18 41 56.9	
	comp=Z,9.2nm,0.7s						
CCM	Cathedral Cave	33.68	327	P	P	18 41 51.7	+1.0
	baz=138						
AQDB	Aquidauana	33.73	157	P	P	18 41 51.3	0.0
MURT	Porto Murtinho	34.15	161	*e*P	P	18 41 55.5	+0.7
R40A	Maddies Statio	34.40	327	IAmb	IAmb	18 42 03.8	
	comp=Z,15nm,0.9s						
S39A	Bolivar	34.56	325	IAmb	IAmb	18 42 05.5	
	comp=Z,16nm,1.4s						
HDIL	Hopedale	34.64	332	P	P	18 41 59.7	+0.7
	baz=143						
JCT	Junction City	34.68	309	P	P	18 41 59.8	+0.2
	baz=118						
TUL1	Leonard	34.85	320	P	P	18 42 01.4	+0.5
	baz=129						

SADO	Sadowa	34.95	347	LR	LR	18 56 07.3	
	comp=Z,149nm,20.5s,baz=131,slow=36						
P40A	Paris	35.20	328	P	P	18 42 02.1	-1.8
P40A				IAmb	IAmb	18 42 10.9	
	comp=Z,12nm,0.7s						
L44A	Lake County Fo	35.37	335	P	P	18 42 05.3	0.0
	baz=147						
ABTX	Abilene, Hawle	35.60	312	IAmb	IAmb	18 42 09.4	
	comp=Z,11nm,0.9s						
ABTX	Abilene, Hawle	35.60	312	P	P	18 42 07.4	0.0
	baz=121						
GO02	Mina Guanaco	35.77	181	P	P	18 42 07.7	-1.5
T35A	Sooner Cattle	35.94	321	IAmb	IAmb	18 42 16.0	
	comp=Z,9.0nm,0.9s						
P38A	Dawn	36.05	327	IAmb	IAmb	18 42 33.2	
	comp=Z,14nm,1.1s						
WMOK	Wichita Mounta	36.12	316	P	P	18 42 11.8	-0.1
	baz=124,SNR=8.9						
AMBA	Amambai (Brazi	36.22	158	*e*P	P	18 42 13.9	+1.1
BLOK	Blackwell	36.28	320	IAmb	IAmb	18 42 21.7	
	comp=Z,13nm,0.6s						
L40A	Anamosa	36.72	332	IAmb	IAmb	18 42 28.8	
	comp=Z,14nm,0.8s						
JFWS	Jewell Farm	36.96	334	P	P	18 42 17.7	-1.2
JFWS	Jewell Farm	36.96	334	P	P	18 42 19.4	+0.5
	baz=144,SNR=8.0						
POST	Post	37.18	312	IAmb	IAmb	18 42 30.1	
	comp=Z,28nm,0.8s						
TX31	Lajitas Ar. Si	37.24	305	P	P	18 42 19.9	-1.7
TX31				IAmb	IAmb	18 42 30.8	
	comp=Z,10nm,0.7s						
TXAR	Lajitas Array	37.24	305	P	P	18 42 22.3	+0.7
	comp=Z,2.8nm,0.7s,baz=132,slow=9.1,SNR=32						
TXAR				PcP	PcP	18 44 42.4	+1.0
	comp=Z,1.8nm,0.7s,baz=132,slow=6.4,SNR=6.9						
	comp=Z,2.8nm,0.7s						
KSU1	Kansas State U	37.41	324	P	P	18 42 23.6	+0.8
	baz=131						
AC02	Maricunga	37.43	180	IAmb	IAmb	18 42 29.1	
	comp=Z,12nm,0.9s						
SCIA	State Center	37.56	330	P	P	18 42 24.8	+0.8
	baz=139						
AMTX	Amarillo	38.21	314	IAmb	IAmb	18 42 37.0	
	comp=Z,11nm,0.9s						
AMTX	Amarillo	38.21	314	P	P	18 42 30.1	+0.3
	baz=121						
MSTX	Muleshoe	38.54	312	P	P	18 42 33.0	+0.4
	baz=119						
CPUP	Villa Florida	38.62	163	P	P	18 42 32.3	-0.7
	comp=Z,16nm,0.8s,baz=340,slow=8.3,SNR=27						
CPUP				LR	LR	19 00 05.6	
	comp=Z,221nm,18.6s,baz=352,slow=39						
	comp=Z,16nm,0.8s						
CPUP	Villa Florida	38.62	163	IAmb	IAmb	18 42 33.7	
	comp=Z,16nm,0.8s						
CBKS	Cedar Bluff	39.12	321	P	P	18 42 38.0	+0.8
	baz=127						
I37A	Lemond, Waseca	39.24	332	IAmb	IAmb	18 42 41.1	
	comp=Z,14nm,0.8s						
MNTX	Cornudas Mount	39.52	307	P	P	18 42 41.4	+0.7
	baz=114,SNR=16						
LCO	Las Campanas	39.63	182	P	P	18 42 39.8	-2.0
SPMN	Marine on St.	39.91	334	IAmb	IAmb	18 42 59.3	
	comp=Z,12nm,0.6s						
SPMN	Marine on St.	39.91	334	P	P	18 42 44.6	+0.9
	baz=142						
ECSD	EROS Data Cent	40.60	329	P	P	18 42 50.2	+0.7
	baz=136						
F36A	Milaca	40.73	334	IAmb	IAmb	18 42 57.4	
	comp=Z,33nm,1.8s						
SLBS	Sierra La Lagu	41.02	294	P	P	18 42 52.1	-1.2
SLBS				IAmb	IAmb	18 42 56.5	
	comp=Z,20nm,0.9s						
T25A	Trinidad	41.26	315	P	P	18 42 55.1	-0.2
	baz=120						
CO03	El Pedregal	41.45	182	IAmb	IAmb	18 43 10.2	
	comp=Z,58nm,1.9s						
ANMO	Albuquerque	41.70	311	LR	LR	19 01 54.3	
	comp=Z,186nm,20.3s,baz=296,slow=38						
ANMO	Albuquerque	41.70	311	P	P	18 42 57.4	-1.5
ANMO	Albuquerque	41.70	311	P	P	18 42 59.2	+0.3
	baz=116						
121A	Cookes Peak, D	41.72	307	P	P	18 43 00.1	+1.1
	baz=112,SNR=9.7						
OGNE	Ogallala	41.81	322	P	P	18 43 00.5	+1.0
	baz=126						
ZON	Zonda	42.12	180	IAmb	IAmb	18 43 07.1	
	comp=Z,13nm,0.9s						
CFA	Coronel Fontan	42.19	179	P	P	18 43 02.1	-0.5
	comp=Z,3.2nm,0.8s,baz=332,slow=10,SNR=1.8						
	comp=Z,3.2nm,0.8s						
SDCO	Great Sand Dun	42.32	315	P	P	18 43 04.1	+0.1
	baz=120,SNR=5.4						
319A	Douglas	42.50	305	P	P	18 43 03.7	-1.6
319A				IAmb	IAmb	18 43 08.3	
	comp=Z,13nm,0.8s						
B35A	Bob, Littlefor	42.78	336	IAmb	IAmb	18 43 12.1	
	comp=Z,18nm,1.2s						
S22A	4UR Ranch, Cre	43.24	315	P	P	18 43 11.3	-0.2
	baz=118						
ISCO	Idaho Springs	43.44	318	P	P	18 43 13.7	+0.7
	baz=122						
ROC1	El Roble	43.59	183	IAmb	IAmb	18 43 20.7	
	comp=Z,12nm,0.5s						
AGMN	Agassiz Nation	43.62	334	IAmb	IAmb	18 43 26.6	
	comp=Z,12nm,0.8s						
AGMN	Agassiz Nation	43.62	334	P	P	18 43 14.9	+0.9
	baz=140,SNR=6.2						
SCHQ	Schefferville	43.93	2	P	P	18 43 17.4	+1.0
	comp=Z,11nm,1.0s,baz=188,slow=6.6,SNR=9.3						
	comp=Z,11nm,1.0s						
TUC	Tucson	44.01	306	P	P	18 43 14.7	-2.8
TUC	Tucson	44.01	306	P	P	18 43 18.1	+0.6
	baz=110						
X18A	Snowflake	44.15	309	IAmb	IAmb	18 43 22.0	
	comp=Z,13nm,0.8s						
MVCO	Mesa Verde	44.17	313	P	P	18 43 19.4	+0.4
	baz=116						
W18A	Petrified Fore	44.22	310	IAmb	IAmb	18 43 22.1	
	comp=Z,11nm,1.1s						
W18A	Petrified Fore	44.22	310	P	P	18 43 19.8	+0.5
	baz=113						
N23A	Red Feather La	44.23	319	P	P	18 43 20.3	+0.9
	baz=122						
MT13	San Alfonso	44.33	182	P	P	18 43 19.6	-0.4
MT13				IAmb	IAmb	18 43 25.8	
	comp=Z,11nm,0.7s						
MT09	Talagante	44.39	182	P	P	18 43 19.6	-0.9
MT09				IAmb	IAmb	18 43 31.9	
	comp=Z,10.0nm,0.6s						
MDND	Maddock	44.99	331	P	P	18 43 26.4	+1.4
	baz=135						
PV23	Carpenter Ridg	45.09	314	IAmb	IAmb	18 43 43.3	
	comp=Z,18nm,1.1s						
ULM	Lac du Bonnet	45.14	336	P	P	18 43 26.0	-0.2
	comp=Z,4.9nm,0.5s,baz=148,slow=7.5,SNR=9.7						
	comp=Z,4.9nm,0.5s						
214A	Organ Pipe Nat	45.53	304	IAmb	IAmb	18 43 32.0	
	comp=Z,18nm,1.6s						
214A	Organ Pipe Nat	45.53	304	P	P	18 43 30.7	+1.1
	baz=108						
K22A	Casper	45.54	321	P	P	18 43 27.1	-2.6
K22A				IAmb	IAmb	18 43 36.3	
	comp=Z,10nm,0.9s						
K22A	Casper	45.54	321	P	P	18 43 30.4	+0.7
	baz=123						
WUAZ	Wupatki	45.60	310	IAmb	IAmb	18 43 33.3	
	comp=Z,8.4nm,0.8s						
WUAZ	Wupatki	45.60	310	P	P	18 43 31.4	+1.1
	baz=112,SNR=6.1						
SRU	San Rafael Swe	46.44	315	IAmb	IAmb	18 43 52.8	
	comp=Z,7.7nm,0.7s						
TMUT	Trail Mountain	47.00	314	IAmb	IAmb	18 43 57.6	
	comp=Z,6.1nm,0.8s						
MTPU	Mount Pierson	47.18	313	P	P	18 43 41.1	-1.8
KNB	Kanab	47.25	311	IAmb	IAmb	18 43 46.3	
	comp=Z,12nm,1.0s						
PDMCI	Parker Dam,Lak	47.32	307	P	P	18 43 44.8	+1.2
	baz=109,SNR=5.1						
GLA	Glamis	47.48	305	P	P	18 43 45.8	+0.9
	baz=107						
BW06	Boulder Array	47.51	319	P	P	18 43 43.0	-2.2
BW06				IAmb	IAmb	18 43 47.0	
	comp=Z,12nm,1.5s						
BW06	Boulder Array	47.51	319	P	P	18 43 45.9	+0.7
	baz=120,SNR=7.0						
PD31	Pinedale Array	47.51	319	IAmb	IAmb	18 44 10.3	
	comp=Z,18nm,1.8s						
PDAR	Pinedale Array	47.51	319	P	P	18 43 45.9	+0.7
	comp=Z,3.7nm,0.8s,baz=118,slow=11,SNR=18						
PDAR				PcP	PcP	18 45 15.6	+0.3
	comp=Z,2.2nm,0.6s,baz=113,slow=6.2,SNR=6.5						
	comp=Z,3.7nm,0.8s						
MPU	Maple Canyon	47.61	315	IAmb	IAmb	18 43 55.3	
	comp=Z,12nm,1.0s						
LAO	LASA Array	47.66	326	P	P	18 43 47.5	+1.4
	baz=126						
NLU	North Lily Min	47.89	315	IAmb	IAmb	18 43 50.5	
	comp=Z,7.0nm,0.9s						
IRM	Iron Mountain	48.06	306	P	P	18 43 51.0	+1.6
	baz=108,SNR=12						
BC3	Big Chuckawall	48.16	306	P	P	18 43 51.4	+1.2
	baz=107,SNR=9.6						
SWSC	Sam W. Stewart	48.24	305	P	P	18 43 51.9	+1.2
	baz=106						
IKP	In-Ko-Pah, Jac	48.41	304	P	P	18 43 53.8	+1.6
	baz=106						
DUG	Dugway, Tooele	48.50	315	IAmb	IAmb	18 44 02.4	
	comp=Z,12nm,1.2s						
DUG	Dugway, Tooele	48.50	315	P	P	18 43 54.0	+1.2
	baz=115						
RLMT	Red Lodge	48.54	322	IAmb	IAmb	18 43 59.2	
	comp=Z,8.7nm,0.6s						
RLMT	Red Lodge	48.54	322	P	P	18 43 53.9	+0.8
	baz=122,SNR=6.0						
GMRC	Granite Mounta	48.66	307	P	P	18 43 55.2	+1.1
	baz=108						
BELC	Belle Mtn. Jos	48.69	306	P	P	18 43 55.4	+1.0
	baz=107,SNR=5.4						
MONP2	Monument Peak	48.73	304	P	P	18 43 55.8	+1.0
	baz=106						
FXWY	Fox Creek	48.87	320	IAmb	IAmb	18 44 02.5	
	comp=Z,9.1nm,1.1s						
TPFO	Pinon Flats	48.95	305	P	P	18 43 57.4	+1.0
	baz=106						
PFO	Pinyon Flats O	48.95	305	P	P	18 43 55.2	-1.1
PFO	Pinyon Flats O	48.95	305	P	P	18 43 57.2	+0.8
	baz=106						
BGU	Big Grassy Mou	48.96	316	IAmb	IAmb	18 44 08.2	
	comp=Z,12nm,1.2s						
H17A	Grant Village	48.96	321	P	P	18 43 57.9	+1.5
	baz=120						
TUQ	Turquoise Moun	49.07	308	P	P	18 43 58.4	+1.2
	baz=108						
SPR3	Spring Creek 3	49.10	313	IAmb	IAmb	18 44 00.6	
	comp=Z,7.1nm,0.9s						
HVU	Hansel Valley	49.15	317	IAmb	IAmb	18 44 10.1	
	comp=Z,7.6nm,0.8s						
HEC	Hector,Ludlow	49.20	307	P	P	18 43 59.8	+1.5
	baz=107,SNR=5.3						
Q12A	Willow Creek R	49.48	313	IAmb	IAmb	18 44 17.1	
	comp=Z,11nm,0.8s						
MURC	Murrieta	49.54	305	P	P	18 44 02.5	+1.7
	baz=106						
GSC	Goldstone, Bar	49.71	307	P	P	18 44 03.1	+1.0
	baz=107						
TPNV	Topopah Spring	49.80	310	IAmb	IAmb	18 44 19.2	
	comp=Z,8.5nm,1.1s						
TPNV	Topopah Spring	49.80	310	P	P	18 44 03.9	+1.0
	baz=109						
BFSC	Mount Baldy Ra	50.08	306	P	P	18 44 05.8	+0.8
	baz=106						
FURC	Furnace Creek,	50.11	309	P	P	18 44 06.1	+1.2
	baz=108						
GO06	Curarrehue	50.20	183	P	P	18 44 04.4	-1.2
BOZ	Bozeman (W)	50.21	322	P	P	18 44 07.2	+1.4
	baz=120						
EGMT	Eagleton	50.39	325	IAmb	IAmb	18 44 13.8	
	comp=Z,11nm,1.0s						
EGMT	Eagleton	50.39	325	P	P	18 44 08.5	+1.5
	baz=124						
ELK	Elko	50.42	315	LR	LR	19 06 44.7	
	comp=Z,99nm,21.9s,baz=118,slow=38						
LRMC	Laurel Mtn Rad	50.45	307	P	P	18 44 09.3	+1.5
	baz=107,SNR=5.3						
FMP	Fort Macarthur	50.45	305	P	P	18 44 08.8	+1.2
	baz=105						
MPMC	Manual Prospec	50.47	308	P	P	18 44 08.6	+0.6
	baz=107						
CIS	Catalina Islan	50.47	305	P	P	18 44 08.5	+0.7
	baz=104						
EDW2	Edwards Air Fo	50.52	306	P	P	18 44 09.6	+1.4
	baz=106						
DLMT	Dillon	50.69	321	IAmb	IAmb	18 44 21.2	
	comp=Z,7.0nm,0.8s						
FFC	Flin Flon	50.97	336	P	P	18 44 09.4	-1.7
FFC				IAmb	IAmb	18 44 16.1	
	comp=Z,12nm,1.2s						
HLID	Hailey	51.02	318	P	P	18 44 13.1	+1.1
	baz=116						
CWC	Cottonwood Cre	51.04	308	P	P	18 44 13.4	+1.1
	baz=107						
DSP	Deep Springs	51.23	310	IAmb	IAmb	18 45 33.4	
	comp=Z,21nm,2.0s						
PLCA	Paso Flores	51.31	182	P	P	18 44 13.6	-0.4
	comp=Z,11nm,0.7s,baz=356,slow=9.2,SNR=24						
	comp=Z,11nm,0.7s						
PLCA	Paso Flores	51.31	182	P	P	18 44 13.0	-1.0
PLCA				IAmb	IAmb	18 44 19.3	
	comp=Z,16nm,0.8s						
PLCA	Paso Flores	51.31	182	*e*P	P	18 44 14.1	+0.1
SNCC	San Nicolas Is	51.34	304	P	P	18 44 15.8	+1.5
	baz=104						
FCC	Fort Churchill	51.48	344	IAmb	IAmb	18 44 27.8	
	comp=Z,32nm,1.7s						
SCZ2	Santa Cruz Isl	51.60	305	P	P	18 44 16.5	+0.1
	baz=104						
VES	Vestal, Richgr	51.65	307	P	P	18 44 18.4	+1.8
	baz=106						
NVAR	Mina Array Bea	51.82	311	P	P	18 44 18.9	+0.8
	comp=Z,3.0nm,0.7s,baz=124,slow=7.1,SNR=24						
NVAR				PcP	PcP	18 45 32.4	+1.3
	comp=Z,1.6nm,0.8s,baz=111,slow=4.9,SNR=2.1						
NVAR				LR	LR	19 09 34.0	
	comp=Z,125nm,18.5s,baz=178,slow=40						
	comp=Z,3.0nm,0.7s						
KVN	Kaiserville	51.87	312	P	P	18 44 16.4	-2.0
KVN				IAmb	IAmb	18 44 20.8	
	comp=Z,8.1nm,0.9s						
MFID	Camas Ranch	51.89	317	IAmb	IAmb	18 44 25.9	
	comp=Z,9.0nm,0.8s						
PKM	Mcpherson Peak	51.97	306	P	P	18 44 20.4	+1.2
	baz=105						
WAKR	Walker	52.69	310	IAmb	IAmb	18 44 50.0	
	comp=Z,17nm,1.7s						
PLID	Pearl Lake	52.70	319	P	P	18 44 22.5	-2.1
FRB	Frobisher Bay	52.85	0	LR	LR	19 06 08.4	
	comp=Z,75nm,20.8s,baz=298,slow=35						
WVOR	Wild Horse Val	53.41	315	IAmb	IAmb	18 44 38.0	
	comp=Z,7.5nm,0.8s						
LL02	Futaleuf	53.81	183	IAmb	IAmb	18 44 37.8	
	comp=Z,13nm,1.1s						
MOD	Modoc Plateau	54.39	314	IAmb	IAmb	18 44 44.7	
	comp=Z,5.7nm,0.7s						
I07A	Izee	54.60	317	P	P	18 44 36.7	-1.7
I07A				IAmb	IAmb	18 44 47.5	
	comp=Z,8.7nm,0.7s						
NEW	Newport	54.78	322	LR	LR	19 09 32.7	
	comp=Z,119nm,18.2s,baz=125,slow=38						
NEW	Newport	54.78	322	P	P	18 44 40.2	+0.6
	baz=116						
PINE	Pine Mountain	55.47	316	IAmb	IAmb	18 44 54.3	
	comp=Z,13nm,0.9s						
YBH	Yreka Blue Hor	56.05	313	LR	LR	19 13 14.3	
	comp=Z,82nm,18.0s,baz=135,slow=41						
H04A	Detroit Lake	56.61	317	P	P	18 44 52.8	+0.1
H04A				IAmb	IAmb	18 45 00.6	
	comp=Z,10nm,0.7s						
SFJD	Kangerlussuaq	57.45	8	LR	LR	19 09 11.1	
	comp=Z,22nm,20.5s,baz=318,slow=36						
YKA	Yellowknife Ar	61.05	338	P	P	18 45 23.0	-0.2
	comp=Z,7.0nm,0.7s,baz=121,slow=6.9,SNR=54						
YKA				LR	LR	19 13 16.3	
	comp=Z,88nm,20.2s,baz=259,slow=38						
	comp=Z,7.0nm,0.7s						
YKA	Yellowknife Ar	61.05	338	P	P	18 45 22.4	-0.8
PGAV	Gavieira, Arco	61.12	48	*e*P	P	18 45 25.5	+1.2
PVIS	Viseu	61.15	49	*e*P	P	18 45 27.3	+2.9
POLO	Lamas de Olo	61.35	49	*e*P	P	18 45 27.3	+1.5
MVO	Moncorvo	61.88	49	*e*P	P	18 45 34.6	+5.2
TIC	Toumodi	63.25	88	⇑*e*P	P	18 45 39.2	+0.3
	comp=Z,35nm,0.9s						
LIC	Lamto	63.30	88	⇓*e*P	P	18 45 39.5	+0.3
	comp=Z,95nm,0.9s						
DBIC	Dimbokro	63.40	88	P	P	18 45 40.2	+0.4
	comp=Z,21nm,0.6s,baz=284,slow=6.1,SNR=24						
	comp=Z,21nm,0.6s						
DBIC	Dimbokro	63.40	88	P	P	18 45 39.6	-0.3
KIC	Kosan Boka	63.56	88	⇓*e*P	P	18 45 41.5	+0.6
	comp=Z,109nm,0.7s						
KOTAN	Kotaneelee Air	63.71	333	P	P	18 45 41.4	+0.3
	baz=116						
ESDC	Sonseca Array	63.96	51	P	P	18 45 43.8	+0.6
	comp=Z,2.3nm,1.1s,baz=259,slow=5.5,SNR=4.7						
	comp=Z,2.3nm,1.1s						
WRGLY	Wrigley	64.87	336	P	P	18 45 49.0	+0.4
	baz=118						
T35M	Bob Quinn	65.51	328	P	P	18 45 53.7	+0.7
	baz=109						
DLBC	Dease Lake	65.88	330	LR	LR	19 15 22.1	
	comp=Z,87nm,19.4s,baz=102,slow=37						
S34M	Telegraph Cree	66.26	329	P	P	18 45 58.5	+0.8
	baz=108						
P32M	Atlin	68.05	330	P	P	18 46 08.8	-0.3
	baz=107						
TORD	Torodi Ar. Bea	68.95	80	P	P	18 46 15.8	+0.3
	comp=Z,7.9nm,0.7s,baz=290,slow=7.0,SNR=31						
	comp=Z,7.9nm,0.7s						
M31M	Drury Creek, Y	69.13	333	P	P	18 46 16.5	+0.8
	baz=107						
PLBC	Pleasant Camp	69.32	330	P	P	18 46 17.3	+0.3
	baz=104						
O30N	Mendenhall	69.52	331	P	P	18 46 19.1	+0.8
	baz=105						
N31M	Braeburn, Yuko	69.56	332	P	P	18 46 18.9	+0.4
	baz=105						
A36M	Sachs Harbour	69.70	344	P	P	18 46 17.8	-1.3
A36M	Sachs Harbour	69.70	344	P	P	18 46 19.0	0.0
	baz=119						
N30M	Aishikik Lake	70.16	332	P	P	18 46 21.6	-0.6
	baz=104						
HYT	Haines Junctio	70.20	331	P	P	18 46 23.1	+0.6
	baz=104						
M30M	Minto, Yukon	70.31	333	IAmb	IAmb	18 46 36.5	
	comp=Z,9.9nm,1.1s						
M30M	Minto, Yukon	70.31	333	P	P	18 46 23.9	+0.8
	baz=105						
JMIC	Jan Mayen	70.43	18	LR	LR	19 11 12.8	
	comp=Z,87nm,21.4s,baz=342,slow=31						
YUK6	Outpost Mounta	70.64	331	P	P	18 46 25.4	+0.1
	baz=103						
INK	Inuvik	70.73	339	LR	LR	19 19 16.0	
	comp=Z,98nm,19.1s,baz=196,slow=37						
INK	Inuvik	70.73	339	P	P	18 46 25.9	+0.4
	baz=110						
YUK4	Talbot Arm	70.86	331	P	P	18 46 27.2	+0.5
	baz=103						
K29M	Barlow Dome	70.95	334	P	P	18 46 27.9	+0.8
	baz=105						
M29M	Somme Creek	71.03	333	P	P	18 46 28.0	+0.5
	baz=103						
L29M	L29M	71.03	333	P	P	18 46 27.5	0.0
	baz=104						
G30M	tAoh Zraii Nji	71.29	337	P	P	18 46 29.5	+0.5
	baz=107						
EPYK	Eagle Plains	71.30	337	P	P	18 46 29.7	+0.6
	baz=106						
YUK8	Steele Glacier	71.38	331	P	P	18 46 30.5	+0.6
	baz=102						
YUK3	Moose Creek	71.80	332	P	P	18 46 33.1	+0.8
	baz=101						
DAWY	Dawson	71.81	334	P	P	18 46 32.4	+0.3
	baz=103						
BVCY	Beaver Creek	72.11	332	P	P	18 46 32.9	-1.1
	baz=101						
M27K	Edge Creek, AK	72.57	332	P	P	18 46 36.7	-0.2
	baz=100						
L27K	Beaver Creek,	72.67	333	P	P	18 46 35.4	-1.9
	baz=100						
EGAK	Eagle	72.71	335	IAmb	IAmb	18 46 46.6	
	comp=Z,8.0nm,1.0s						
EGAK	Eagle	72.71	335	P	P	18 46 38.3	+0.8
	baz=102						
I27K	Kandik River	73.06	336	P	P	18 46 39.8	+0.2
	baz=101						
H27K	Steamboat Moun	73.15	336	P	P	18 46 39.7	-0.4
	baz=102						
G27K	Doyon Strip	73.32	337	P	P	18 46 40.3	-0.8
	baz=102						
L26K	Log Cabin Wild	73.35	333	P	P	18 46 41.9	+0.5
	baz=99						
E27K	Coleen River	73.58	338	P	P	18 46 42.9	+0.3
	baz=102						
I26K	Coal Creek Min	73.64	335	P	P	18 46 43.3	+0.4
	baz=100						
N25K	Chitina, Valde	73.72	331	P	P	18 46 43.6	0.0
	baz=97						
SCRK	Sand Creek	73.78	334	IAmb	IAmb	18 48 46.2	
	comp=Z,24nm,1.9s						
SCRK	Sand Creek	73.78	334	P	P	18 46 44.4	+0.4
	baz=99						
RIDG	Independent Ri	74.12	333	P	P	18 46 46.0	+0.2
	baz=98						
EYAK	Cordova Ski Ar	74.15	330	P	P	18 46 46.4	+0.5
	baz=96						
KEST	Kesra	74.31	56	P	P	18 46 48.4	+0.8
	comp=Z,2.7nm,0.6s,baz=289,slow=2.7,SNR=4.4						
	comp=Z,2.7nm,0.6s						
KLU	Klutina	74.34	331	P	P	18 46 47.2	0.0
	baz=96						
F26K	Sheenjek River	74.44	337	P	P	18 46 47.7	+0.1
	baz=100						
K24K	Donnelly Dome	74.54	333	P	P	18 46 48.3	+0.1
	baz=97						
DAVA	Damuels	74.57	44	*e*pP	pP	18 46 54.1	+1.3
	comp=Z,12nm,1.2s						
C27K	Jago River	74.62	339	P	P	18 46 48.9	+0.3
	baz=100						
PRP	Porcupine Dome	74.65	335	P	P	18 46 49.2	+0.2
	baz=98						
F25K	Christian Rive	74.99	337	P	P	18 46 50.8	0.0
	baz=98						
E25K	Arctic Village	75.04	338	P	P	18 46 51.2	+0.1
	baz=98						
G25K	Bearman Lake	75.05	336	P	P	18 46 51.6	+0.5
	baz=98						
C26K	Camden Bay	75.08	340	P	P	18 46 51.8	+0.5
	baz=100						
HDA	Harding Lake	75.12	334	P	P	18 46 51.8	+0.2
	baz=96						
ILAR	Eielson Array	75.13	334	P	P	18 46 51.6	0.0
	comp=Z,1.0nm,0.8s,baz=93,slow=4.1,SNR=13						
ILAR				LR	LR	19 21 06.2	
	comp=Z,86nm,20.5s,baz=98,slow=37						
	comp=Z,1.0nm,0.8s						
FETA	Feichten	75.15	44	*e*pP	pP	18 46 57.6	+1.5
	comp=Z,18nm,1.2s,SNR=6.4						
RETA	Reutte	75.17	44	*i* pP	pP	18 46 57.3	+1.2
	comp=Z,10nm,1.4s						
MOTA	Moosalm	75.40	44	*i* pP	pP	18 46 58.5	+0.9
	comp=Z,11nm,1.4s						
SQTA	Sankt Quirin	75.48	44	*i* pP	pP	18 46 59.1	+1.1
	comp=Z,14nm,1.2s						
D25K	Kavik River	75.50	339	P	P	18 46 54.0	+0.2
	baz=98						
G24K	Hadweenzic Riv	75.58	336	P	P	18 46 54.6	+0.3
	baz=96						
H24K	Noodor Dome	75.66	335	P	P	18 46 54.5	-0.2
	baz=96						
WTTA	Wattenberg	75.77	44	*i* pP	pP	18 47 00.7	+1.1
	comp=Z,11nm,1.4s						
CTI	Castel Tesino	75.79	45	IAmb	IAmb	18 47 01.1	
	comp=Z,12nm,1.1s						
F24K	Squaw Lake	75.83	337	P	P	18 46 56.3	+0.6
	baz=96						
NB2	NORSAR Subarra	75.85	30	P	P	18 46 57.1	+1.2
	comp=Z,5.2nm,1.1s,baz=266,slow=6.2						
NOA	NORSAR Array B	75.85	30	P	P	18 46 55.9	0.0
	comp=Z,0.9nm,0.6s,baz=264,slow=5.8,SNR=5.5						
NOA				LR	LR	19 17 00.8	
	comp=Z,22nm,20.9s,baz=10.0,slow=33						
	comp=Z,0.9nm,0.6s						
PMR	Palmer	75.88	331	P	P	18 46 56.0	+0.1
	baz=93						
MCK	McKinley	75.93	333	P	P	18 46 56.4	+0.2
	baz=94						
NEA2	Nenana	76.05	334	P	P	18 46 55.7	-1.2
NEA2	Nenana	76.05	334	P	P	18 46 57.2	+0.3
	baz=94						
E24K	Your Creek	76.12	338	P	P	18 46 57.9	+0.6
	baz=96						
RC01	Rabbit Creek A	76.14	330	P	P	18 46 58.2	+0.7
	baz=93						
I23K	Minto, Yukon-K	76.22	335	IAmb	IAmb	18 47 10.2	
	comp=Z,22nm,1.8s						

I23K	Minto, Yukon-K	76.22	335	P	P	18 46 58.2	+0.4
	baz=94						
H23K	Yukon River	76.34	335	P	P	18 46 57.6	-0.9
	baz=94						
C24K	Franklin Bluff	76.36	339	P	P	18 46 58.5	0.0
	baz=96						
ABTA	Abfaltersbach	76.38	44	*e*pP	pP	18 47 02.1	-0.9
	comp=Z,15nm,1.4s,SNR=5.1						
TRF	Thorofare Moun	76.52	333	P	P	18 47 00.1	+0.3
	baz=93						
E23K	Chandalar	76.54	338	P	P	18 47 00.3	+0.6
	baz=94						
G23K	Bananza Creek	76.60	336	P	P	18 47 00.4	+0.4
	baz=94						
CLL	Collm	76.62	40	*e*P	P	18 47 00.0	-0.4
CLL				*i* Pmax		18 47 05.4	
	comp=Z,12nm,1.3s						
CLL				*i* pP	sP	18 47 08.0	+2.5
SUA	Susitna One	76.64	331	P	P	18 47 01.1	+0.6
	baz=92						
MLY	Manley	76.79	334	P	P	18 47 01.6	+0.4
	baz=93						
BPAW	Bear Paw Mtn.	76.86	333	IAmb	IAmb	18 48 26.5	
	comp=Z,28nm,2.0s						
BPAW	Bear Paw Mtn.	76.86	333	P	P	18 47 02.1	+0.6
	baz=92						
KBA	Koelnbreinsper	76.94	44	*e*pP	pP	18 47 07.2	+0.9
	comp=Z,17nm,1.3s,SNR=5.2						
D23K	Nanushuk River	77.00	338	P	P	18 47 02.2	0.0
	baz=94						
KHC	Kasperske Hory	77.03	42	*e*P	P	18 47 04.8	+2.0
KHC				*e*pP	sP	18 47 07.6	-0.4
SKT	Skwentna	77.03	331	P	P	18 47 02.9	+0.3
	baz=91						
PRED	Cave del Predi	77.11	45	P	P	18 47 02.0	-1.3
PRED				IAmb	IAmb	18 47 12.4	
	comp=Z,9.7nm,0.8s						
BIOA	Bad Ischl, Aus	77.11	43	*i* pP	pP	18 47 07.9	+0.8
	comp=Z,9.9nm,1.5s						
GERES	GERESS Array B	77.12	42	P	P	18 47 03.8	+0.4
	comp=Z,4.0nm,0.8s,baz=267,slow=4.9,SNR=13						
	comp=Z,4.0nm,0.8s						
MYKA	Terra Mystica	77.16	45	*e*pP	pP	18 47 08.3	+0.9
	comp=Z,5.3nm,0.5s						
BRG	Berggiesshubel	77.22	40	*e*P	P	18 47 08.9	+5.1
BRG				Amp		18 47 11.1	
	comp=Z,6.9nm,0.9s						
CAST	Castle Rocks	77.32	333	P	P	18 47 03.2	-0.9
	baz=91						
SPCR	Spurr Chakacha	77.34	330	P	P	18 47 03.3	-1.0
	baz=91						
E22K	Anaktuvuk Pass	77.37	338	P	P	18 47 03.9	-0.5
	baz=92						
CHUM	Lake Minchumin	77.43	333	P	P	18 47 05.1	+0.4
	baz=91						
CKRC	Cesky Krumlov	77.52	42	*e*P	P	18 47 07.3	+1.7
CKRC				*e*x	x	18 47 11.1	
KDAK	Kodiak Island	77.53	327	LR	LR	19 22 43.4	
	comp=Z,150nm,18.9s,baz=115,slow=37						
O20K	Slope Mountain	77.54	329	P	P	18 47 05.7	+0.2
	baz=90						
PRU	Pruhonice	77.63	41	*e*P	P	18 47 08.1	+2.0
H21K	Melozitna Rive	77.68	335	P	P	18 47 05.8	-0.3
	baz=91						
OBKA	Obir	77.79	45	*i* P	P	18 47 09.2	+2.0
	comp=Z,5.3nm,1.1s						
M20K	Styx River	77.79	331	IAmb	IAmb	18 47 21.1	
	comp=Z,7.0nm,0.7s						
M20K	Styx River	77.79	331	P	P	18 47 07.5	+0.7
	baz=90						
G21K	Allakaket	77.98	336	P	P	18 47 07.6	-0.1
	baz=91						
SOKA	Soboth	78.11	44	*e*pP	pP	18 47 11.6	-1.2
	comp=Z,5.5nm,1.5s						
L20K	Farewell, AK	78.14	332	P	P	18 47 09.0	+0.3
	baz=89						
K20K	Telida	78.22	333	P	P	18 47 08.8	-0.3
	baz=89						
M19K	Big River Lodg	78.38	331	IAmb	IAmb	18 47 15.6	
	comp=Z,12nm,1.1s						
M19K	Big River Lodg	78.38	331	P	P	18 47 10.8	+0.7
	baz=89						
N19K	Bonanza Creek	78.45	330	P	P	18 47 09.5	-1.1
	baz=88						
CONA	Conrad Observa	78.60	43	*i* P	P	18 47 13.6	+1.9
	comp=Z,7.4nm,1.2s						
OSTC	Ostas	78.68	40	*e*P	P	18 47 16.8	+4.8
DPC	Dobruska-Polom	78.76	41	*e*P	P	18 47 14.2	+1.8
O18K	Koktuh Hills	78.84	329	P	P	18 47 12.8	+0.2
	baz=88						
KRLC	Kraliky	79.07	41	*e*P	P	18 47 19.5	+5.4
MORC	Moravsky Berou	79.58	41	*e*P	P	18 47 22.4	+5.5
O17K	Koliganek Bris	79.80	329	P	P	18 47 18.1	+0.3
	baz=86						
ARCES	ARCESS Array B	81.51	21	P	P	18 47 27.2	+0.4
	comp=Z,2.2nm,0.7s,baz=276,slow=4.5,SNR=6.7						
	comp=Z,2.2nm,0.7s						
FINES	FINESS Array B	82.99	29	P	P	18 47 35.8	+1.1
	comp=Z,3.2nm,0.6s,baz=250,slow=3.4,SNR=28						
	comp=Z,3.2nm,0.6s						
TNA	Tin City	83.92	336	P	P	18 47 39.5	+0.1
	baz=77						
PPT	Papeete	84.44	251	LR	LR	19 18 49.9	
	comp=Z,53nm,22.0s,baz=359,slow=31						
NACGM	Naroch	84.52	35	*e*P	P	18 47 48.1	+5.4
	comp=Z,23nm,1.1s,baz=281						
MNK	Minsk	85.23	36	*i* P	P	18 47 51.5	+5.3
	comp=E,2.0nm,1.2s						
MNK				*i* P	P	18 47 51.5	+5.3
	comp=Z,19nm,0.9s,baz=282						
MNK				*i* P	sP	18 47 52.2	+0.9
	comp=N,33nm,0.9s						
MNK				*i* PP	PP	18 51 07.9	+4.4
MNK				*i* PPP	PPP	18 53 01.5	
MNK				*i* S	S	18 58 15.6	-0.8
MNK				*i* SS	SS	19 03 57.9	+7.9
MNK				*i* SSS	SSS	19 07 29.9	
MNK				*i* LQ	LQ	19 20 12.8	
MNK				*i* LR	LR	19 24 30.0	
MNK				*i* LRM	MLR	19 26 39.0	
	comp=N,1µm,21.1s						
MNK				*i* LRM	MLR	19 27 07.2	
	comp=Z,93nm,12.8s						
MNK				*i* LRM	MLR	19 27 22.6	
	comp=E,52nm,19.8s						
UNV	Unalaska Valle	85.77	324	P	P	18 47 49.4	+0.4
	baz=78						
AKASG	Malin Array Be	86.85	39	P	P	18 47 54.5	+0.1
	comp=E,0.2nm,0.4s,baz=289,slow=3.4,SNR=2.1						
	comp=E,0.2nm,0.4s						
BILL	Bilibino	92.17	342	P	P	18 48 18.1	-1.0
BILL				IAmb	IAmb	18 48 24.7	
	comp=Z,5.3nm,1.1s						
BRTR	Keskin Array B	92.67	49	P	P	18 48 22.4	+0.3
	comp=Z,1.0nm,0.9s,baz=254,slow=3.4,SNR=3.5						
BRTR				LR	LR	19 23 26.8	
	comp=Z,42nm,21.8s,baz=300,slow=31						
	comp=Z,1.0nm,0.9s						
SNAA	Sanae	92.93	163	LR	LR	19 33 15.7	
	comp=Z,64nm,18.0s,baz=286,slow=38						
TIXI	Tiksi	96.85	354	LR	LR	19 37 42.0	
	comp=Z,28nm,18.0s,baz=100,slow=39						
NRIK	Noril'sk	98.36	8	LR	LR	19 30 36.0	
	comp=Z,42nm,22.0s,baz=308,slow=34						
BOSA	Boshof	98.77	117	LR	LR	19 33 39.0	
	comp=Z,75nm,18.1s,baz=182,slow=36						
MKAR	Makanchi Array	117.15	22	PKP	PKPdf	18 53 54.7	-0.5
	comp=Z,0.2nm,0.6s,baz=326,slow=1.5,SNR=1.8						
SONM	Songino Array	121.46	4	PKP	PKPdf	18 54 02.1	-1.5
	comp=Z,0.2nm,0.6s,baz=345,slow=0.7,SNR=1.9						
WMQ	Urumqi	121.62	20	*e*P	PKPdf	18 54 02.9	-1.0
MDJ	Mudanjiang	122.32	344	PKP	PKPdf	18 54 01.0	-4.1
MDJ				PP	PP	18 55 39.3	-0.3
MDJ				AMB	AMB		
	comp=Z,61nm,10.8s						
HHC	Hu-ho-hao-te	128.59	359	*e*P	PKPdf	18 54 12.3	-5.1
GTA	Gaotai	128.95	11	*e*PKPbc	PKiKP	18 54 22.8	+4.0
KSRS	Korea Array	129.44	343	PKP	PKPdf	18 54 19.3	+0.4
	comp=Z,3.1nm,0.9s,baz=30,slow=2.0,SNR=6.1						
NJ2	Nanjing	136.72	350	*e*P	PKPdf	18 54 31.1	-1.7
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PZH	PanZhiHua	141.82	14	PKP	PKPdf	18 54 40.0	-2.4
STKA	Stephens Creek	144.86	229	PKP	PKPbc	18 54 46.7	+0.2
	comp=Z,3.2nm,0.5s,baz=119,slow=7.7,SNR=10.0						
CMAR	Chiang Mai Arr	148.56	22	PKPbc	PKPbc	18 54 57.7	+0.1
	comp=Z,7.3nm,1.0s,baz=315,slow=3.2,SNR=18						
ASAR	Alice Springs	154.75	237	PKP	PKPdf	18 55 03.5	+0.3
	comp=Z,1.8nm,0.6s,baz=101,slow=1.4,SNR=39						
ASAR				PKPbc	PKiKP	18 55 12.3	+0.4
	comp=Z,2.7nm,0.6s,baz=114,slow=2.7,SNR=17						
ASAR				PKPab	PKPab	18 55 26.0	-0.8
	comp=Z,2.4nm,0.6s,baz=116,slow=3.3,SNR=8.1						
WRA	Warramunga Arr	155.80	245	PKP	PKPdf	18 55 04.9	+0.1
	comp=Z,3.0nm,0.7s,baz=96,slow=1.0,SNR=28						
WRA				PKPbc	pPKPbc	18 55 14.0	-4.0
	comp=Z,2.7nm,0.5s,baz=106,slow=2.9,SNR=26						
WRA				PKPab	PKPab	18 55 31.6	+0.3
	comp=Z,11nm,0.8s,baz=105,slow=4.4,SNR=6.8						

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*IDC **17** 18:46:51.3±5.0, 13.°67S×111.°52W, h0^{km}, mb3.2/4, mbtmp3.2/4, MS3.8/7, Error ellipse: s-maj=273.4km s-min=50.9km az=112.0*

ISC 17 18:46:51.5±3.9**, 13.°9S**±0.°6×**11°1W**±°**, h10^{km}, n19, σ1.ˢ37**/6**, mb3.4**/4**, MS3.8**/7**, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	33.09	82	LR	LR	19 03 56.9	
	comp=Z,201nm,18.8s,baz=259,slow=31						
CMIG	Matias Romero	34.82	28	LR	LR	19 04 39.2	
	comp=Z,138nm,21.4s,baz=204,slow=31						
JTS	Las Juntas de	35.55	49	LR	LR	19 04 08.2	
	comp=Z,128nm,20.1s,baz=118,slow=29						
ROSC	El Rosal	41.21	66	LR	LR	19 06 52.8	
	comp=Z,112nm,18.4s,baz=1.0,slow=29						
CFA	Coronel Fontan	43.20	122	LR	LR	19 08 04.9	
	comp=Z,236nm,20.4s,baz=292,slow=29						
TXAR	Lajitas Array	43.60	10	P	P	18 54 56.5	+0.4
	0.2nm,0.8s,baz=194,slow=7.2,SNR=2.0						
	0.2nm,0.8s						
RAR	Rarotonga	46.57	254	LR	LR	19 10 49.9	
	comp=Z,74nm,18.7s,baz=84,slow=31						
ANMO	Albuquerque	48.78	5	LR	LR	19 12 25.7	
	comp=Z,97nm,19.1s,baz=273,slow=32						
NVAR	Mina Array Bea	52.43	353	P	P	18 56 04.2	-0.3
	0.4nm,0.7s,baz=162,slow=9.0,SNR=2.2						
	0.4nm,0.7s						
PDAR	Pinedale Array	56.39	2	P	P	18 56 31.9	-1.3
	0.3nm,0.8s,baz=171,slow=6.4,SNR=2.9						
	0.3nm,0.8s						
YKA	Yellowknife Ar	76.16	358	P	P	18 58 40.6	+1.3
	0.1nm,0.3s,baz=173,slow=6.2,SNR=2.7						
	0.1nm,0.3s						
H11S2	WAKE ISLAND Hy	86.87	290	T	T	20 35 04.6	
	baz=106,slow=75,SNR=39						
H11S1	WAKE ISLAND Hy	86.88	290	T	T	20 35 13.5	
	baz=106,slow=75,SNR=25						
H11S3	WAKE ISLAND Hy	86.89	290	T	T	20 35 03.7	
	baz=106,slow=75,SNR=23						
H11N3	WAKE ISLAND Hy	87.02	291	T	T	20 35 21.5	
	baz=106,slow=75,SNR=4.9						
H11N2	WAKE ISLAND Hy	87.03	291	T	T	20 35 20.1	
	baz=106,slow=75,SNR=9.0						
H11N1	WAKE ISLAND Hy	87.03	291	T	T	20 35 22.8	
	baz=106,slow=75,SNR=3.7						
MKAR	Makanchi Array	145.24	343	PKPbc	PKPbc	19 06 27.9	-1.3
	0.3nm,0.8s,baz=25,slow=3.4,SNR=2.3						
CMAR	Chiang Mai Arr	150.54	283	PKPbc	PKiKP	19 06 45.7	+0.4
	0.5nm,0.7s,baz=75,slow=1.3,SNR=6.6						

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*IDC **17** 18:51:00.0±0.9, 10.°94N×68.°90W, h0^{km}, mb3.6/6, mbtmp3.7/8, ML2.4/2, Error ellipse: s-maj=28.5km s-min=15.2km az=121.0*

*FUNV **17** 18:51:03.2, 10.°82N×68.°97W, h5^{km}, MW3.7*

ISC 17 18:51:02.9±1.5**, 10.°81N**±0.°04×**68.°93W**±0.°03**, h18**^{km}±5^{km}**, n40, σ1.ˢ45**/58**, mb3.7**/6**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JACV	Jacura	0.29	19	*e*P	Pb	18 51 09.2	-0.4
JACV				*e*S	Sb	18 51 14.6	+0.5
SIQV	Siquisique	0.88	260	*e*P	Pb	18 51 19.1	-0.5
SIQV				*e*S	Sb	18 51 30.5	-0.5
MAPV	Macapo	1.08	154	*e*P	Pn	18 51 23.1	0.0
MAPV				*e*S	Sn	18 51 39.2	+1.7
TURV	Turiamo	1.13	108	*e*P	Pn	18 51 23.7	-0.1
TURV				*e*S	Sg	18 51 40.5	+1.0
CURV	Curarigua	1.29	232	*e*P	Pn	18 51 26.4	+0.3
CURV				*e*S	Sn	18 51 43.6	+0.7
BENV	Beln	1.56	123	*e*P	Pb	18 51 31.9	+0.7
BENV				*e*S	Sb	18 51 53.0	+2.5
TACV	Tcata	1.99	109	*e*P	Pn	18 51 36.5	+0.9
TACV				*e*S	Sb	18 52 03.5	+0.5
CARV	Caracas	1.99	99	*e*P	Pb	18 51 37.8	-0.9
CARV				*e*S	Sb	18 52 02.9	-0.2
BAUV	El Baul	2.05	155	*e*P	Pn	18 51 37.8	+1.4
BAUV				*e*S	Sn	18 52 04.3	+2.7
FUNV	FUNVISIS	2.11	99	*e*P	Pb	18 51 40.3	-0.3
FUNV				*e*S	Sb	18 52 06.8	+0.2
SDV	Santo Domingo	2.54	221	Pn	Pn	18 51 45.9	+2.4
	21nm,0.3s,baz=67,slow=11,SNR=11						
SDV				Sn	Sn	18 52 18.2	+4.2
	24nm,0.3s,baz=336,slow=17,SNR=7.7						
SDV				Lg	Lg	18 52 24.8	
	38nm,0.3s,baz=332,slow=23,SNR=7.8						
	31nm,0.4s						
BIRV	Birongo	2.63	97	*e*P	Pn	18 51 44.3	-0.2
BIRV				*e*S	Sn	18 52 16.4	+0.4
SOCV	Socops	3.15	217	*e*P	Pn	18 51 52.8	+1.3
SOCV				*e*S	Sn	18 52 28.6	-0.1
MCQV	Machiques	3.63	258	*e*P	Pn	18 51 58.9	+0.8
MCQV				*e*S	Sn	18 52 39.5	-1.1
CRJC	Cerrejon, Guaj	3.89	273	*e*P	Pn	18 52 05.1	+3.2
CACV	CAICARA DEL OR	3.99	144	*e*P	Pb	18 52 09.3	-3.4
CACV				*e*S	Sb	18 52 58.8	-1.9
CAPV	Capacho	4.44	229	*e*P	Pn	18 52 09.9	+0.3
CAPV				*e*S	Sn	18 52 59.1	-1.8
PRGV	PARIAGUAN	4.69	115	*e*P	Pn	18 52 14.3	+1.5
PRGV				*e*S	Sn	18 53 06.4	-0.3
PAMC	Pamplona, Colo	5.07	228	*e*P	Pn	18 52 19.2	+0.8
SMRC	Santa Marta, M	5.21	274	*e*P	Pn	18 52 22.0	+2.0
ARGC	Ariguani, Magd	5.32	260	*e*P	Pn	18 52 22.3	+0.9
BARC	Barichara	5.94	225	*e*P	Pn	18 52 32.2	+2.1
SJCC	San Jacinto, C	6.22	262	*e*P	Pn	18 52 34.5	+0.6
RUSC	La Rusia	6.38	220	*e*P	Pn	18 52 38.5	+2.0
ZARC	Zaragoza, Cauc	6.72	241	*e*P	Pn	18 52 41.0	+0.3
UREC	San Jos de Ur	7.19	246	*e*P	Pn	18 52 48.6	+1.4
CHIC	Chingaza	7.77	218	*e*P	Pn	18 52 56.9	+1.4
NORC	Norcasia	7.86	229	*e*P	Pn	18 52 57.5	+1.2
ROSC	El Rosal	7.98	222	Pn	Pn	18 52 59.6	+1.3
	0.5nm,0.3s,baz=74,slow=18,SNR=1.1						
	6.7nm,0.3s						
GUY2C	Guyana, Caldas	8.45	229	*e*P	Pn	18 53 07.4	+2.5
PRAC	Prado	9.20	220	*e*P	Pn	18 53 15.7	+0.9
GARC	Garzon, Huila	10.76	218	*e*P	Pn	18 53 37.0	+0.6
TXAR	Lajitas Array	37.27	305	P	P	18 58 13.3	-0.7
	0.3nm,0.7s,baz=123,slow=9.1,SNR=3.9						
	0.3nm,0.7s						
PDAR	Pinedale Array	47.53	319	P	P	18 59 36.4	-1.1
	0.3nm,0.8s,baz=105,slow=7.0,SNR=2.8						
	0.3nm,0.8s						
PLCA	Paso Flores	51.30	182	P	P	19 00 06.3	+0.3
	1.3nm,0.7s,baz=342,slow=1.2,SNR=4.6						
	1.3nm,0.7s						
YKA	Yellowknife Ar	61.07	338	P	P	19 01 14.8	-0.6
	0.3nm,0.5s,baz=123,slow=7.0,SNR=7.0						
	0.3nm,0.5s						
TORD	Torodi Ar. Bea	68.92	80	P	P	19 02 07.4	0.0
	0.6nm,0.8s,baz=270,slow=5.7,SNR=2.9						
	0.6nm,0.8s						
FINES	FINESS Array B	82.98	29	P	P	19 03 26.7	0.0
	1.2nm,0.8s,baz=277,slow=2.2,SNR=3.5						
	1.2nm,0.8s						
ASAR	Alice Springs	154.77	237	PKP	PKPdf	19 10 54.7	-0.6
	0.2nm,0.7s,baz=108,slow=3.0,SNR=1.2						
ASAR				PKPbc	PKPbc	19 11 04.0	+0.1
	1.2nm,1.2s,baz=94,slow=2.8,SNR=4.1						
WRA	Warramunga Arr	155.82	245	PKPbc	PKPdf	19 11 05.6	+8.8
	0.3nm,0.7s,baz=106,slow=2.7,SNR=2.0						
WRA				PKPab	PKPab	19 11 23.7	+0.2
	0.5nm,0.8s,baz=99,slow=3.8,SNR=2.9						

ROM 17 18:59:04.7±0.1**, 42.°829N**±0.°003×**13.°095E**±0.°004**, h11^{km}, ML1.1**/9**, 2C-2D, Error ellipse: s-maj=0.3km s-min=0.2km az=243.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1245	Castelsantange	0.07	68	P	Pg	18 59 07.5	+0.3
T1245				S	Sg	18 59 09.3	+0.3
T1245				AML	AML		
	comp=E,179µm,0.7s						
T1245				AML	AML		
	comp=N,298µm,0.2s						
T1245				AML	AML		
	comp=E,179µm,1.3s						
T1216	Preci, Frazion	0.08	318	P	Pg	18 59 07.7	+0.4
T1216				S	Sg	18 59 09.6	+0.5
T1216				AML	AML		
	comp=E,212µm,0.4s						
T1216				AML	AML		
	comp=N,198µm,0.2s						
T1216				AML	AML		
	comp=N,198µm,0.2s						
T1216				AML	AML		
	comp=E,213µm,0.4s						
T1212	Cascia, Frazio	0.09	206	P	Pg	18 59 07.8	+0.5
T1212				S	Sg	18 59 09.7	+0.6
T1212				AML	AML		
	comp=E,270µm,0.6s						
T1212				AML	AML		
	comp=N,302µm,0.2s						
T1212				AML	AML		
	comp=N,302µm,1.8s						
T1212				AML	AML		
	comp=E,270µm,0.6s						
MC2	Monte Cornacci	0.11	40	P	Pg	18 59 08.1	+0.4
MC2				S	Sg	18 59 10.5	+0.6
T1214	Arquata del Tr	0.11	130	P	Pg	18 59 08.0	+0.4
T1214				S	Sg	18 59 10.2	+0.4
T1214				AML	AML		
	comp=E,219µm,0.2s						
T1214				AML	AML		
	comp=N,97µm,1.6s						
T1214				AML	AML		
	comp=N,98µm,1.6s						
T1214				AML	AML		
	comp=E,219µm,0.2s						
T1214				AML	AML		
	comp=N,98µm,0.4s						
T1218	Civita (PG)	0.16	175	P	Pg	18 59 08.8	+0.5
T1218				S	Sg	18 59 11.8	+0.9
T1217	Poggiodomo (PG	0.17	226	P	Pg	18 59 09.1	+0.7
T1217				S	Sg	18 59 12.1	+1.0
MMO1	Montemonaco	0.18	68	P	Pb	18 59 09.5	-0.7
FDMO	Fiordimonte	0.21	358	P	Pg	18 59 09.6	+0.4
FDMO				S	Sg	18 59 13.0	+0.8
FDMO				AML	AML		
	comp=N,62µm,0.3s						
FDMO				AML	AML		
	comp=E,44µm,1.3s						
T1219	Muccia, Frazio	0.24	344	⇓P	Pg	18 59 10.1	+0.4
T1219				AML	AML		
	comp=N,76µm,1.4s						
T1219				AML	AML		
	comp=E,60µm,1.1s						
T1219				AML	AML		
	comp=N,76µm,0.6s						
T1241	Roccafluvione,	0.25	84	⇑P	Pg	18 59 10.2	+0.4
T1241				AML	AML		
	comp=E,36µm,0.5s						
T1241				AML	AML		
	comp=N,60µm,0.2s						
T1241				AML	AML		
	comp=E,36µm,0.5s						
SMA1	SAN MARTINO	0.27	138	⇑P	Pg	18 59 10.6	+0.4
RM33	Pellescritta (	0.33	165	P	Pg	18 59 11.6	+0.2
RM33				S	Sb	18 59 17.0	-1.1
RM33				AML	AML		
	comp=E,25µm,0.7s						
RM33				AML	AML		
	comp=N,31µm,1.4s						
RM33				AML	AML		
	comp=N,31µm,0.6s						
T1211	Morro Reatino	0.34	211	S	Sb	18 59 18.1	-0.4
TERO	Teramo	0.43	119	P	Pg	18 59 12.7	-0.4
PP3	Marolino	0.67	34	⇓P	Pg	18 59 15.2	-2.4
SRES	S.Oreste - Sor	0.73	216	S	Sb	18 59 29.1	-0.5
SRES				AML	AML		
	comp=N,124µm,0.4s						
SRES				AML	AML		
	comp=E,56µm,1.1s						

ROM 17 18:59:25.6±0.0**, 42.°830N**±0.°002×**13.°103E**±0.°003**, h12^{km}, ML1.5**/5**, 1D, Error ellipse: s-maj=0.2km s-min=0.0km az=255.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1245	Castelsantange	0.07	67	P	Pg	18 59 28.6	+0.2
T1245				S	Sg	18 59 30.4	0.0
T1245				AML	AML		
	comp=E,342µm,0.1s						
T1245				AML	AML		
	comp=N,554µm,0.2s						
T1212	Cascia, Frazio	0.09	209	P	Pg	18 59 28.8	+0.3
T1212				S	Sg	18 59 30.8	+0.2
T1212				AML	AML		
	comp=E,561µm,0.1s						
T1212				AML	AML		
	comp=E,530µm,0.6s						
T1212				AML	AML		
	comp=N,578µm,0.2s						
T1212				AML	AML		
	comp=E,562µm,0.1s						
T1212				AML	AML		
	comp=N,562µm,0.2s						
MC2	Monte Cornacci	0.10	38	P	Pg	18 59 29.1	+0.3
MC2				S	Sg	18 59 31.6	+0.4
T1214	Arquata del Tr	0.10	132	P	Pg	18 59 29.0	+0.3
T1214				S	Sg	18 59 31.3	+0.2
T1218	Civita (PG)	0.16	177	P	Pg	18 59 29.8	+0.4
T1218				S	Sg	18 59 32.9	+0.7
T1217	Poggiodomo (PG	0.17	227	P	Pg	18 59 30.1	+0.5
T1217				S	Sg	18 59 33.2	+0.7
MMO1	Montemonaco	0.18	67	P	Pg	18 59 30.1	+0.4
MMO1				S	Sg	18 59 33.2	+0.6
FDMO	Fiordimonte	0.21	357	P	Pg	18 59 30.6	+0.5
FDMO				S	Sg	18 59 34.1	+0.7
FDMO				AML	AML		
	comp=E,71µm,1.3s						
FDMO				AML	AML		
	comp=N,98µm,0.3s						
FDMO				AML	AML		
	comp=E,71µm,0.7s						
CESI	CESI - Serrava	0.23	320	P	Pg	18 59 31.0	+0.5
CESI				S	Sg	18 59 34.9	+0.9
CESI				AML	AML		
	comp=E,108µm,0.4s						
CESI				AML	AML		
	comp=N,144µm,1.0s						
T1219	Muccia, Frazio	0.24	343	⇓P	Pg	18 59 31.1	+0.4
T1241	Roccafluvione,	0.24	84	P	Pg	18 59 31.2	+0.4
T1241				S	Sg	18 59 35.3	+1.0
SMA1	SAN MARTINO	0.26	139	P	Pg	18 59 31.6	+0.4
SMA1				S	Sg	18 59 35.8	+0.9
RM33	Pellescritta (	0.33	166	P	Pg	18 59 32.6	+0.2
RM33				S	Sb	18 59 38.1	-0.6
TERO	Teramo	0.42	119	P	Pg	18 59 34.1	0.0
TERO				S	Sg	18 59 40.5	+0.7
T1222	Castel Sant'An	0.43	187	S	Sb	18 59 40.9	-0.7
EL6	Elcito	0.50	360	P	Pb	18 59 35.9	-0.4
EL6				AML	AML		
	comp=E,171µm,0.5s						
EL6				AML	AML		
	comp=N,102µm,0.5s						
EL6				AML	AML		
	comp=N,102µm,1.5s						
EL6				AML	AML		
	comp=E,171µm,1.5s						
RMP	Rome, Mte Porz	1.06	196	S	Sn	19 00 01.3	+0.4

IDC 17 19:27:18.9±1.8**, 52.°85N**×**173.°66E, h0^{km}, mb3.4**/3**, mbtmp3.5**/4**, ML2.4**/1**, MS3.2**/1**, Error ellipse: s-maj=33.0km s-min=15.1km az=41.0, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHEM	Shemya Is, Ala	0.29	115	Pn	Pn	19 27 30.7	+0.3
	130nm,0.3s,baz=292,slow=6.3,SNR=34						
SHEM				Sn	Sb	19 27 37.7	+5.4
	208nm,0.3s,baz=297,slow=3.9,SNR=7.4						

PETK	Petropavlovsk-	9.64	278	Pn	Pn	19 29 37.9	-0.8
	0.2nm,0.3s,baz=88,slow=22,SNR=1.3						
	4.1nm,1.0s						
ILAR	Eielson Array	23.21	44	P	P	19 32 26.2	-0.9
	0.8nm,0.7s,baz=254,slow=8.7,SNR=9.1						
	0.8nm,0.7s						
USRK	Ussuriysk Ar.	28.57	269	LR	LR	19 45 16.7	
	comp=Z,48nm,20.9s,baz=20,slow=38						
H11N2	WAKE ISLAND Hy	33.47	192	T	T	20 09 26.4	
	baz=6.0,slow=76,SNR=25						
H11N3	WAKE ISLAND Hy	33.48	192	T	T	20 09 27.4	
	baz=6.0,slow=76,SNR=26						
H11N1	WAKE ISLAND Hy	33.49	192	T	T	20 09 27.9	
	baz=6.0,slow=76,SNR=24						
H11S1	WAKE ISLAND Hy	34.70	192	T	T	20 11 05.0	
	baz=5.9,slow=76,SNR=24						
H11S3	WAKE ISLAND Hy	34.72	192	T	T	20 11 06.3	
	baz=5.9,slow=76,SNR=20						
H11S2	WAKE ISLAND Hy	34.72	192	T	T	20 10 58.3	
	baz=5.9,slow=76,SNR=13						
YKA	Yellowknife Ar	37.58	46	P	P	19 34 34.9	+0.3
	0.2nm,0.4s,baz=289,slow=7.8,SNR=4.1						
	0.2nm,0.4s						
TXAR	Lajitas Array	62.93	77	P	P	19 37 47.2	+0.2
	0.3nm,0.7s,baz=318,slow=4.9,SNR=3.0						
	0.3nm,0.7s						

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*JMA **17** 19:35:24.8±0.1, 43°.0N±0°.5×145°.4E±0°.6, h48^{km}, MV2.6/39, OFF NEMURO PENINSULA*

*SKHL **17** 19:35:25.5±0.2, 43°.00N×145°.40E, h45^{km}±2^{km}, mb3.9/4*

ISC 17 19:35:24.0±1.8**, 42°.92N**±0°.09×**145°.47E**±0°.06**, h49**^{km}±11^{km}**, n14, σ0^s.41**/26**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKHN	Kushirohamanak	0.28	306	*i* P	Pn	19 35 33.2	+0.4
JKHN				*e*S	Sn	19 35 38.6	-0.5
AKK	Akkeshi	0.47	282	*i* P	Pn	19 35 35.0	+0.2
AKK				AMB	AMB	19 35 35.2	
	130nm,0.5s						
AKK				*i* S	Sn	19 35 42.1	-0.4
AKK				A	A	19 35 42.6	
	260nm,0.2s						
AKK				A	A	19 35 42.6	
	200nm,0.2s						
NEM2	Nemuro 2	0.49	24	P	Pn	19 35 35.4	+0.4
NEM2				*e*S	Sn	19 35 42.6	-0.3
NMR	Nemuro--Hokkai	0.49	23	*i* P	Pn	19 35 35.6	+0.6
NMR				AMB	AMB	19 35 35.8	
	30nm,0.2s						
NMR				*i* S	Sn	19 35 42.9	0.0
NMR				A	A	19 35 43.3	
	270nm,0.2s						
NMR				A	A	19 35 43.3	
	450nm,0.2s						
JAK	Akkeshi	0.57	278	*i* P	Pn	19 35 36.2	+0.1
JAK				*e*S	Sn	19 35 44.6	-0.1
JNK	Nakash	0.86	321	*e*P	Pn	19 35 39.7	-0.1
JNSB	Nemuroshibetsu	0.92	339	*e*P	Pn	19 35 40.8	+0.2
JNSB				*e*S	Sn	19 35 52.3	-0.6
JRA	Rausu	1.05	346	*e*P	Pn	19 35 42.7	+0.4
JRA				*e*S	Sn	19 35 55.7	-0.2
YUK	Yuzh-Kuril'sk	1.15	14	*e*P	Pn	19 35 44.0	+0.3
YUK				AMB	AMB	19 35 47.1	
	70nm,0.3s						
YUK				*e*S	Sn	19 35 57.9	-0.5
YUK				A	A	19 35 58.5	
	150nm,0.2s						
YUK				A	A	19 35 58.5	
	190nm,0.2s						
JOB	Onbets	1.20	270	*e*P	Pn	19 35 44.7	+0.3
JOB				*e*S	Sn	19 35 59.2	-0.3
JAR	Ashorobuto	1.30	288	P	Pn	19 35 46.1	+0.4
JAR				*e*S	Sn	19 36 01.7	-0.3
SHO	Shikotan	1.38	46	*e*P	Pn	19 35 46.9	+0.2
SHO				AMB	AMB	19 35 47.7	
	30nm,0.3s						
SHO				*e*S	Sn	19 36 03.1	-0.7
SHO				A	A	19 36 04.5	
	80nm,0.2s						
SHO				A	A	19 36 04.5	
	60nm,0.2s						
JTKR	Abashiri--Toko	1.55	313	*e*P	Pn	19 35 49.9	+0.8
JCH	Churui	1.58	260	*e*P	Pn	19 35 49.7	+0.2
JCH				*e*S	Sn	19 36 08.5	-0.3

NEIC 17 19:37:03.7±0.4**, 40°.45N**±0°.01×**104°.66W**±0°.02**, h8**^{km}±1^{km}**, ML1.8**/20**, Error ellipse: s-maj=1.9km s-min=1.6km az=116.0, Colorado**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRIGG	Briggsdale	0.29	63	Pg	Pg	19 37 09.8	+0.4
BRIGG				Sg	Sg	19 37 14.3	+0.9
ISCO	Idaho Springs	0.98	229	Pg	Pg	19 37 22.0	-0.5
ISCO				Sg	Sg	19 37 34.5	-0.7
ISCO				IAML		19 37 35.1	
	29nm,0.2s						
PHWY	Pilot Hill	1.04	325	Pg	Pg	19 37 23.3	-0.5
PHWY					Sg	19 37 36.5	-0.9
PHWY				IAML		19 37 37.2	
	24nm,0.4s						
N23A	Red Feather La	1.07	295		Pg	19 37 24.0	-0.3
N23A				IAML		19 37 39.8	
	comp=N,30nm,0.2s						
Q24A	Divide	1.53	194		Pn	19 37 31.6	0.0
OGNE	Ogallala	2.06	75	Pn	Pb	19 37 40.0	-1.3
KSCO	Kaye Shedlock'	2.12	132	Pn	Pn	19 37 39.2	-0.4
SMCO	Snowmass	2.19	235	Pn	Pn	19 37 38.6	-2.2
RWWY	Rawlins	2.29	304	Pn	Pn	19 37 40.9	-1.2
O20A	White River Ci	2.76	265	Pn	Pn	19 37 47.1	-1.2
SDCO	Great Sand Dun	2.78	194	Pn	Pn	19 37 45.4	-3.3
T25A	Trinidad	3.31	177	Pn	Pn	19 37 54.5	-1.5

JMA 17 19:49:44.8±0.2**, 25°N**±2°×**123°.5E**±0°.5**, h95**^{km}±3^{km}**, NW OFF ISHIGAKIJIMA IS, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.75	162	P	Pn	19 50 02.3	+0.1
IRIF				S	Sn	19 50 15.5	+0.3
JYNG	Yonagunijimaku	0.77	219	P	Pn	19 50 02.5	+0.1
JYNG				S	Sn	19 50 15.6	+0.1
JISG	Ishigakijimahi	0.89	121	P	Pn	19 50 03.7	+0.1
JISG				S	Sn	19 50 17.8	+0.1
JIJ	Ishigaki jima	0.92	138	P	Pn	19 50 04.0	+0.1
JIJ				S	Sn	19 50 18.5	+0.3
JKRS	Kuro-shima	0.95	149	P	Pn	19 50 04.1	-0.1
JKRS				*e*S	Sn	19 50 19.1	+0.4

TAP 17 19:50:15.0, 24°.42N×121°.71E, h5^{km}±1^{km}**, ML1.1, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.03	68	P	Pg	19 50 16.3	+0.1
	baz=74						
ENA				*i* S	Sg	19 50 17.0	+0.1
	baz=74						
EWUT	Wuta	0.07	65	*i* P	Pg	19 50 16.7	+0.1
	baz=65						
EWUT				S	Sg	19 50 17.7	-0.1
	baz=65						
LATG	Datong	0.20	305	*i* P	Pg	19 50 19.2	+0.1
	baz=304						
LATG				*i* S	Sg	19 50 21.9	+0.1
	baz=304						
ENTT	Nioudou	0.26	329	*e*P	Pg	19 50 20.3	+0.2
	baz=330						
ENTT				*e*S	Sg	19 50 24.5	+1.0
	baz=330						
NACB	Ninganchiao	0.26	204	P	Pg	19 50 20.1	-0.1
	baz=203						
NACB				*i* S	Sg	19 50 23.9	+0.2
	baz=203						
ETLH	Xiulin Townshi	0.30	225	P	Pg	19 50 20.6	-0.3
	baz=225						
ETLH				S	Sg	19 50 26.2	+1.4
	baz=225						
NNSB	Datong	0.30	272	P	Pg	19 50 20.5	-0.4
	baz=272						
NNSB				*e*S	Sg	19 50 24.5	-0.3
	baz=272						
TWE	Neicheng	0.30	352	*e*P	Pg	19 50 21.5	+0.5
	baz=355						
TWE				*i* S	Sg	19 50 25.5	+0.5
	baz=355						
NNS	Nan Shan	0.31	274	P	Pg	19 50 20.4	-0.7
	baz=273						
NNS				*e*S	Sg	19 50 24.8	-0.4
	baz=273						
FUSB	Fushanzhiwuyua	0.36	342	P	Pg	19 50 21.4	-0.6
	baz=341						
FUSB				*i* S	Sg	19 50 27.1	+0.3
	baz=341						
YHNB	Yeheng	0.40	310	*e*P	Pg	19 50 23.1	+0.4
	baz=309						
YHNB				*i* S	Sg	19 50 28.4	+0.5
	baz=309						
NWLT	Wulai	0.41	332	*e*P	Pg	19 50 23.4	+0.5
	baz=332						
NWLT				S	Sg	19 50 28.4	+0.2
	baz=332						
WHF	Hehuan Shan	0.49	236	P	Pg	19 50 24.8	+0.3
	baz=235						
TIPB	Shuangxi	0.56	11	*i* P	Pg	19 50 25.5	-0.4
	baz=10.0						
TIPB				*e*S	Sg	19 50 33.6	+0.4
	baz=10.0						
NSTT	Nanjuang	0.68	288	*i* P	Pg	19 50 27.6	-0.6
	baz=288						
NSTT				*i* S	Sg	19 50 37.5	+0.5
	baz=288						
WUSB	Renai	0.69	232	P	Pg	19 50 28.3	0.0
	baz=232						
WUSB				S	Sb	19 50 38.6	-0.8
	baz=232						

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*IDC **17** 19:56:13.7±1.9, 41°.80S×173°.90E, h0^{km}, mb3.1/2, mbtmp3.2/4, ML2.9/2, Error ellipse: s-maj=50.1km s-min=23.4km az=133.0*

*WEL **17** 19:56:16.1±0.4, 42°S±3°×17°4E±°, h8^{km}±4^{km}, M3.3/13, ML3.6/13, MLv3.3/13, Error ellipse: s-maj=0.0km s-min=0.0km az=154.9, confirmed*

*NOU **17** 19:56:16.0, 41°.86S×174°.26E, h11^{km}, MLv3.8/8, Cook Strait, New Zealand*

ISC 17 19:56:15.3±1.0**, 41°.83S**±0°.03×**174°.17E**±0°.03**, h14**^{km}±6^{km}**, n88, σ1^s.47**/94**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.08	22	P	Pg	19 56 19.2	+0.9
BSWZ	Blackbirch Sta	0.25	296	P	Pg	19 56 20.5	-0.2
BSWZ				S	Sg	19 56 24.2	-0.1
TUWZ	Tuamarina	0.43	336	P	Pg	19 56 22.7	-1.3
TUWZ				S	Sg	19 56 28.0	-1.8
TCW	Tory Channel	0.62	7	P	Pg	19 56 25.9	-1.6
SNZO	South Karori	0.65	38	P	Pg	19 56 27.9	-0.2
WEL	Wellington	0.70	40	P	Pg	19 56 28.7	-0.3
KHZ	Kahutara	0.76	218	P	Pn	19 56 32.5	+1.0
KHZ	Kahutara	0.76	218	P	Pn	19 56 32.4	+0.9
KHZ				S	Sn	19 56 45.7	+3.0
PLWZ	Palliser	0.85	73	P	Pg	19 56 32.6	+0.8
NNZ	Nelson	0.85	315	P	Pg	19 56 30.2	-1.6
THZ	Tophouse	0.95	273	P	Pg	19 56 33.4	-0.3
CAW	Cannon Point	0.98	43	P	Pg	19 56 33.6	-0.7
DUWZ	D'Urville Isla	1.04	349	P	Pg	19 56 33.1	-2.3
PAWZ	Paruwai Farm	1.04	65	P	Pg	19 56 35.1	-0.4
KIW	Kapiti Island	1.11	30	P	Pg	19 56 35.2	-1.6
MRNZ	Matariki Terra	1.14	291	P	Pg	19 56 36.5	-0.9
MRNZ				S	Sb	19 56 51.9	+0.4
MTW	Mount Morrison	1.20	57	P	Pb	19 56 36.9	-0.9
TKNZ	Takaka Hill	1.21	311	P	Pg	19 56 36.8	-1.8
TRWZ	Traveller	1.21	70	P	Pb	19 56 37.2	-0.9
OGWZ	Otaki Gorge	1.26	37	P	Pn	19 56 38.0	-0.4
HOWZ	Holdsworth Sta	1.37	48	P	Pn	19 56 39.3	-0.8
GVZ	Greta Valley S	1.42	216	P	Pn	19 56 41.6	+0.9
TMWZ	Te Maipa	1.48	61	P	Pn	19 56 40.7	-0.8
MRZ	Mangatainoka R	1.57	43	P	Pn	19 56 42.1	-0.7
QRZ	Quartz Range	1.59	308	P	Pn	19 56 43.4	+0.4
QRZ	Quartz Range	1.59	308	P	Pn	19 56 43.2	+0.2
TIWZ	Tintock	1.66	51	P	Pn	19 56 43.3	-0.7
LTZ	Lake Taylor	1.70	235	P	Pn	19 56 45.5	+0.8
AMCZ	Amberley	1.76	219	P	Pn	19 56 45.9	+0.6
DSZ	Denniston Nort	1.77	272	P	Pn	19 56 46.9	+1.3
CPWZ	Castlepoint	1.78	60	P	Pb	19 56 48.7	+1.0
PRWZ	Pori Road	1.86	48	P	Pn	19 56 45.8	-0.9
POWZ	Post Office Ro	1.87	41	P	Pn	19 56 46.5	-0.4
BFZ	Birch Farm	1.94	55	P	Pn	19 56 47.3	-0.5
BFZ	Birch Farm	1.94	55	P	Pn	19 56 46.2	-1.6
DVHZ	Dannevirke	2.15	45	P	Pn	19 56 49.2	-1.5
WAZ	Wanganui	2.16	17	P	Pb	19 56 54.1	-0.1
OXZ	Oxford	2.17	226	P	Pn	19 56 50.8	-0.2
MQZ	McQueen's Vall	2.19	210	P	Pn	19 56 50.6	-0.6
INZ	Inchbonnie	2.21	245	P	Pb	19 56 54.9	-0.2
TSZ	Takapari Road	2.23	38	P	Pn	19 56 53.7	+1.9
RACZ	Rakaia	2.42	218	P	Pn	19 56 54.5	+0.1
WPHZ	Waipukurau	2.46	45	P	Pg	19 57 01.8	-0.7
PREZ	Palmer Road	2.48	360	P	Pn	19 56 57.6	+2.3
KHEZ	Kahui Hut	2.53	357	P	Pn	19 56 58.6	+2.6
KHEZ	Kahui Hut	2.53	357	P	Pn	19 56 58.7	+2.6
NEZ	North Egmont	2.55	359	P	Pb	19 56 59.6	-1.3
MHCZ	Mount Hutt	2.57	228	P	Pn	19 56 56.3	-0.2
MTVZ	Mangateitei	2.63	22	P	Pb	19 57 01.9	-0.4
PKE	Pukeiti	2.63	357	P	Pb	19 57 02.5	+0.3
PKVZ	Pokaka	2.69	20	P	Pn	19 56 59.7	+1.6
MOVZ	Moawhango	2.70	27	P	Pb	19 57 02.1	-1.3
WNVZ	Wahianoa	2.72	24	P	Pn	19 56 59.7	+0.9
WACZ	Wakanui South	2.72	218	P	Pn	19 56 58.8	+0.2
TRVZ	Turoa	2.73	23	P	Pn	19 56 59.4	+0.5
VRZ	Vera Road	2.73	10	P	Pb	19 57 04.9	+0.9
BHHZ	Black Hill Sta	2.74	32	P	Pn	19 56 58.4	-0.5
WHVZ	Whangaehu Hut	2.76	23	P	Pb	19 57 04.0	-0.6
FWVZ	Far West T-bar	2.77	23	P	Pb	19 57 03.8	-1.0
TUVZ	Tukino	2.79	24	P	Pb	19 57 03.6	-1.5
WVZ	Waitaha Valley	2.83	243	P	Pn	19 57 01.6	+1.5
NGZ	Ngauruhoe	2.86	23	P	Pb	19 57 05.3	-1.0
SNVZ	South Ngauruho	2.86	23	P	Pn	19 57 01.4	+0.7
OTVZ	Oturere	2.89	24	P	Pn	19 57 01.3	+0.2
NNVZ	North Ngauruho	2.91	23	P	Pb	19 57 06.0	-1.0
WTVZ	West Tongariro	2.92	22	P	Pb	19 57 06.1	-1.1
ETVZ	East Tongariro	2.93	24	P	Pn	19 57 04.4	+2.8
TMVZ	Te Maari	2.95	24	P	Pn	19 57 02.2	+0.4
KRVZ	Karewarewa	2.95	23	P	Pb	19 57 06.9	-0.8
NTVZ	North Tongarir	2.96	23	P	Pn	19 57 02.2	+0.3
RPZ	Rata Peaks	2.97	230	Pn	Pn	19 57 01.3	-0.7
	2.7nm,0.3s,baz=121,slow=1.4,SNR=16						
RPZ				Sn	Sn	19 57 36.2	-1.3
	7.3nm,0.3s,baz=331,slow=23,SNR=23						
	7.0nm,0.3s						
RPZ	Rata Peaks	2.97	230	P	Pn	19 57 02.2	+0.2
RPZ	Rata Peaks	2.97	230	P	Pn	19 57 02.2	+0.2
ARCZ	Arundel	3.06	225	P	Pn	19 57 03.6	+0.4
RITZ	Rihia Road	3.12	25	P	Pb	19 57 10.5	-0.1
BKZ	Black Stump Fm	3.19	34	P	Pn	19 57 06.7	+1.6
BKZ	Black Stump Fm	3.19	34	P	Pb	19 57 11.7	-0.2
GCSZ	Gaunt Creek Bo	3.21	241	P	Pn	19 57 06.5	+1.2
HIZ	Hauiti	3.35	9	P	Pn	19 57 10.1	+2.9
HIZ	Hauiti	3.35	9	P	Pn	19 57 09.8	+2.6
TMZ	Timaru	3.45	221	P	Pn	19 57 09.0	+0.3
FOZ	Fox Glacier	3.64	241	P	Pn	19 57 12.3	+1.2
ODZ	Otahua Downs	4.12	217	P	Pn	19 57 17.3	-0.5
URZ	Urewera	4.22	33	Pn	Pn	19 57 20.9	+1.8
	0.5nm,0.3s,baz=141,slow=5.4,SNR=2.4						
URZ				Sn	Sn	19 58 14.7	+6.6
	0.3nm,0.3s,baz=194,slow=18,SNR=1.3						
	3.7nm,0.7s						
JCZ	Jackson Bay	4.55	239	P	Pn	19 57 28.3	+4.5
ASAR	Alice Springs	37.99	286	P	P	20 03 32.0	-1.0
	0.2nm,0.9s,baz=120,slow=6.7,SNR=4.5						
	0.2nm,0.9s						
WRA	Warramunga Arr	40.08	291	P	P	20 03 48.4	-1.9
	0.4nm,1.0s,baz=126,slow=8.5,SNR=1.6						
	0.4nm,1.0s						
TORD	Torodi Ar. Bea	150.69	195	PKPbc	PKPbc	20 16 07.1	-0.3
	0.2nm,0.4s,baz=191,slow=1.5,SNR=1.6						

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*NEIC **17** 20:00:00.4±2.4, 31°.33N±0°.03×115°.65W±0°.03, h3^{km}±6^{km}, ML3.8/64, Md4.3/24(MEX), ML4.1/234(PAS), Error ellipse: s-maj=5.3km s-min=2.9km az=218.0*

*ECX **17** 20:00:00.7±0.6, 31°.26N×115°.67W, h11^{km}±3^{km}, MD3.7, ML4.0, Fault plane solution: NP1:φ$_s$15.00000°, δ48.00000°, λ-43.00000°.*

*PAS **17** 20:00:00.4±2.6, 31°.25N±0°.04×115°.69W±0°.03, h12^{km}±5^{km}, Error ellipse: s-maj=6.5km s-min=3.2km az=189.0*

*MEX **17** 20:00:01.7±0.7, 31°.09N×115°.73W, h14^{km}±3^{km}, MD4.3*

*ANF **17** 20:00:01.5±1.0, 31°.34N×115°.56W, h20^{km}±6^{km}, ML4.0/19, Error ellipse: s-maj=4.8km s-min=2.7km az=21.0*

*IDC **17** 20:00:04.9±2.9, 31°.45N×115°.30W, h0^{km}, mbtmp3.4/5, ML3.6/5, Error ellipse: s-maj=47.4km s-min=12.8km az=38.0*

ISC 17 19:59:59.9±0.8**, 31°.22N**±0°.02×**115°.67W**±0°.02**, h16**^{km}±5^{km}**, n184, σ1^s.30**/228**, 15C-13D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTX	Valle De La Tr	0.20	330	IAML		20 00 07.1	
	comp=N,24µm,0.1s						
VTX				IAML		20 00 07.4	
	comp=E,38µm,0.2s						
VTX	Valle De La Tr	0.20	330		Pg	20 00 04.3	-0.4
VTX					Sg	20 00 07.0	-0.9
VTX	Valle De La Tr	0.20	330	⇓*i*P	Pg	20 00 04.3	-0.4
VTX				*e*S	Sg	20 00 07.1	-0.8
VTX				⇓*e*		20 00 07.2	
VTX				IAML		20 00 07.2	
	comp=N,33µm,0.1s						
SPIG	San Pedro Mart	0.25	135	*i* P	Pg	20 00 06.1	+0.4
SPIG				*e*S	Sg	20 00 10.1	+0.5
SPIG				IAML		20 00 10.5	
	comp=E,17µm,0.3s						
SPIG				⇑*e*		20 00 10.5	
SPIG				⇓*e*		20 00 10.7	
SPIG				IAML		20 00 10.7	
	comp=N,16µm,0.5s						
SPIG	San Pedro Mart	0.25	135	*e*P	Pg	20 00 06.1	+0.4
SPIG				*e*S	Sg	20 00 10.0	+0.4
SVX	San Vicente	0.51	282	⇑*e*P	Pg	20 00 09.6	-0.4
SVX				*e*S	Sg	20 00 16.6	-0.3
ECBX	El Chinero	0.58	65	⇑*i*P	Pg	20 00 11.2	-0.3
ECBX				*e*S	Sg	20 00 18.6	-0.7
ECBX				IAML		20 00 18.9	
	comp=E,6µm,0.3s						
ECBX				⇑*e*		20 00 18.9	
ECBX				IAML		20 00 20.9	
	comp=N,12µm,0.3s						
ECBX				⇑*e*		20 00 20.9	
SJX	San Joaquin	0.59	335	⇓*i*P	Pn	20 00 14.8	+1.1
SJX				*e*S	Sn	20 00 24.8	+1.8
SJX				IAML		20 00 25.6	
	comp=N,9µm,0.1s						
SQX	San Quintin	0.67	195	⇓*e*P	Pg	20 00 13.2	+0.1
SQX				*e*S	Sb	20 00 22.6	+0.4
SFX	San Felipe	0.73	104		Pg	20 00 14.1	0.0
SFX					Sg	20 00 23.8	0.0
SFX	San Felipe	0.73	104	IAML		20 00 25.3	
	comp=N,16µm,0.5s						
SFX				IAML		20 00 25.7	
	comp=E,6µm,0.3s						
SFX	San Felipe	0.73	104	⇑*e*P	Pg	20 00 14.1	0.0
SFX				*e*S	Sg	20 00 23.8	0.0
SFX				⇓*e*		20 00 25.8	
SFX				IAML		20 00 25.8	
	comp=E,8µm,0.1s						
SFX	San Felipe	0.73	104	*i* P	Pg	20 00 14.1	0.0
SFX				*e*S	Sg	20 00 23.3	-0.4
ESJX	Sierra Juarez	0.82	343		Pg	20 00 14.8	-1.1
ESJX					Sg	20 00 24.8	-1.9
ESJX	Sierra Juarez	0.82	343	IAML		20 00 25.6	
	comp=N,6µm,0.1s						
RHX	Rio Hardy	0.97	20	⇑*e*P	Pb	20 00 17.1	-1.2
RHX				*e*S	Sb	20 00 29.9	-1.0
CNAEN	Presa Emilio L	1.04	310	⇓*e*P	Pb	20 00 18.5	-1.1
CNAEN				*e*S	Sb	20 00 31.4	-1.5
CCX	Cicese	1.07	307		Pb	20 00 19.1	-0.9
CCX	Cicese	1.07	307		Sb	20 00 32.2	-1.4
CCX				IAML		20 00 34.3	
	comp=N,4µm,0.3s						
CCX				IAML		20 00 36.2	
	comp=E,4µm,0.4s						
CCX	Cicese	1.07	307	⇑*e*P	Pb	20 00 19.1	-0.9
CCX				*e*S	Sb	20 00 32.7	-1.0
CCX				*e*		20 00 34.0	
CCX				IAML		20 00 34.0	
	comp=E,6µm,0.3s						
EDOMX	El Doctor, EDO	1.08	47	⇑*e*P	Pg	20 00 20.8	0.0
RITX	Riito Sonora	1.12	33	⇑*e*P	Pg	20 00 21.5	0.0
GUVIX	Guadalupe Vict	1.19	25		Pg	20 00 22.5	-0.4
GUVIX					Sg	20 00 38.9	+0.4
CPBX	Cerro Prieto	1.23	14		Pn	20 00 22.3	-0.2
CPBX					Sg	20 00 39.4	-0.4
MBIG	Mexicali	1.25	19	*e*P	Pb	20 00 23.2	+0.1
MBIG				*e*P	Pg	20 00 23.9	-0.1
MBIG				*e*P	Pg	20 00 23.9	-0.1
MBIG				*i* S	Sn	20 00 39.4	+0.3
MBIG				*i* S	Sg	20 00 39.5	-0.8
MBIG				*e*S	Sb	20 00 40.3	+1.4
CBX	Cerro Bola	1.38	322		Pn	20 00 24.1	-0.6
CBX					Sn	20 00 42.3	-0.2
CBX	Cerro Bola	1.38	322	⇓*e*P	Pn	20 00 24.0	-0.6
CBX				*e*S	Sn	20 00 42.4	-0.2
CBX				IAML		20 00 45.9	
	comp=N,3µm,0.6s						
CBX				IAML		20 00 47.8	
	comp=E,2µm,0.6s						
CBX	Cerro Bola	1.38	322	*i* P	Pn	20 00 24.1	-0.6
CBX				*i* S	Sn	20 00 41.0	-1.6
RMX	La Rumorosa	1.42	346		Pn	20 00 24.4	-0.8
RMX					Sn	20 00 40.9	-2.8
RMX	La Rumorosa	1.42	346	⇓*e*P	Pn	20 00 24.3	-0.8
RMX				*e*S	Sn	20 00 41.1	-2.5
RMX				IAML		20 00 42.5	
	comp=N,1µm,0.2s						
RMX				⇑*e*		20 00 42.5	
RMX				IAML		20 00 43.7	
	comp=E,2µm,0.2s						
RMX				*e*		20 00 43.7	
UABX	UABC, Campus M	1.42	8		Pn	20 00 24.6	-0.5
UABX					Sg	20 00 45.7	-0.1
SGL	Mount Signal	1.42	358		Pb	20 00 25.9	-0.2
SGL					Sb	20 00 44.2	+0.2
YUH	Yuha Desert	1.44	351	Pn	Pn	20 00 24.6	-0.7
YUH				IAML		20 00 45.4	
	comp=E,2µm,0.7s						
YUH				IAML		20 00 46.5	
	comp=N,1µm,0.3s						
YUH	Yuha Desert	1.44	351		Sn	20 00 43.4	-0.5
YUH2	Yuha Desert	1.44	351	*e*P	Pn	20 00 25.4	+0.1
IKP	In-Ko-Pah, Jac	1.47	345		Pn	20 00 25.9	0.0
IKP					Sn	20 00 44.2	-0.6
IKP	In-Ko-Pah, Jac	1.47	345	⇓*e*P	Pn	20 00 26.3	+0.4
IKP				*e*S	Sn	20 00 44.0	-0.8
IKP	In-Ko-Pah, Jac	1.47	345	P	Pn	20 00 25.5	-0.3
	baz=166,SNR=397						
IKP				S	Sn	20 00 44.3	-0.5
	baz=166						
TJIG	Tijuana	1.48	325	⇓*e*P	Pn	20 00 25.7	-0.2
TJIG				*e*S	Sn	20 00 44.2	-0.8
TJIG	Tijuana	1.48	325	*e*P	Pn	20 00 25.9	0.0
TJIG				*e*S	Sn	20 00 44.1	-0.8
WESC	Westside Schoo	1.53	358		Pb	20 00 27.8	-0.2
WESC					Sg	20 00 48.6	-0.8
TKX	Tecate	1.56	330		Pn	20 00 27.4	+0.4
TKX					Sn	20 00 46.6	-0.3
TKX	Tecate	1.56	330	⇓*e*P	Pn	20 00 27.4	+0.4
TKX				*e*S	Sn	20 00 46.7	-0.3
DREC	Desert Rsrch C	1.59	7		Sg	20 00 50.9	-0.3
EMSC	East Mesa	1.62	21		Pn	20 00 27.0	-0.8
COK2	Cook Ranch 2	1.62	358		Pb	20 00 29.8	+0.3
COK2					Sg	20 00 51.4	-0.9
DUZA	Dulzura	1.67	326		Pn	20 00 28.5	0.0
CRR	Carrizo Plain	1.68	351		Pb	20 00 29.7	-0.7
BAR	Barrett	1.69	330		Pn	20 00 28.8	0.0
BAR	Barrett	1.69	330	Sn	Sn	20 00 50.1	+0.1
BAR				IAML		20 00 51.7	
	comp=E,2µm,0.2s						
BAR				IAML		20 00 53.9	
	comp=N,2µm,0.3s						
BAR	Barrett	1.69	330	Pn	Pn	20 00 28.7	0.0
BAR	Barrett	1.69	330	*e*P	Pn	20 00 28.8	0.0
BAR				*e*S	Sn	20 00 50.4	+0.4
BAR				⇑*e*		20 00 51.0	
BAR				IAML		20 00 51.0	

	comp=N,2µm,0.2s						
BAR				⇓e		20 00 51.7	
BAR				IAML		20 00 51.7	
	comp=E,2µm,0.2s						
SWSC	Sam W. Stewart	1.72	356		Pn	20 00 29.7	+0.5
SWSC	Sam W. Stewart	1.72	356	P	Pn	20 00 28.6	-0.6
	baz=177,SNR=346						
SWSC				Sb	Sb	20 00 52.7	+0.2
	baz=177						
TJX	Tijuana	1.74	318		Pn	20 00 30.5	+1.0
TJX				Sn	Sb	20 00 52.7	-0.5
TJX	Tijuana	1.74	318	eP	Pn	20 00 30.5	+1.0
TJX				eS	Sb	20 00 52.7	-0.5
PPXB	Puerto Peasco	1.75	86	⇑eP	Pn	20 00 27.6	-1.9
OLP	Otay Lakes Par	1.75	323		Pn	20 00 29.9	+0.4
SLGB	San Luis Gonza	1.77	141	eP	Pn	20 00 30.0	+0.2
MONP2	Monument Peak	1.78	339		Pn	20 00 30.8	+0.6
MONP2	Monument Peak	1.78	339	P	Pn	20 00 30.2	-0.1
	baz=159,SNR=440						
MONP2				S	Sn	20 00 53.3	+0.6
	baz=159						
SDRC	San Diego Road	1.86	325		Pn	20 00 31.9	+0.9
PIX	Pinacate	1.92	79	Pn	Pn	20 00 30.4	-1.5
PIX	Pinacate	1.92	79	⇑eP	Pn	20 00 30.6	-1.3
GLA	Glamis	1.96	21		Pn	20 00 31.5	-1.0
GLA				IAML		20 01 01.8	
	comp=E,806nm,0.6s						
GLA				IAML		20 01 10.6	
	comp=N,598nm,0.5s						
GLA	Glamis	1.96	21	P	Pn	20 00 31.6	-1.0
	baz=202,SNR=25						
GLA				Sb	Sb	20 00 58.7	-0.7
	baz=202						
JUEM	Julian Eagle M	2.01	337		Pn	20 00 34.4	+1.0
109C	Camp Elliot, M	2.06	324		Pn	20 00 35.3	+1.4
109C	Camp Elliot, M	2.06	324	P	Pn	20 00 35.2	+1.4
	baz=144,SNR=24						
109C				S	Sb	20 01 01.1	-1.2
	baz=144						
CPE	Camp Elliot	2.06	324		Pb	20 00 35.5	-1.5
DPP	Dos Picos Cty	2.07	329		Pn	20 00 35.4	+1.3
MATG	Mataguay Scout	2.14	337		Pb	20 00 37.6	-0.8
113A	Mohawk Valley,	2.23	46		Pn	20 00 35.4	-0.8
GORC	Green Oak Ranc	2.34	326		Pb	20 00 39.9	-1.7
PLM	Palomar	2.35	335		Pb	20 00 40.5	-1.5
FRD	Ford Ranch, An	2.40	341		Pb	20 00 42.6	-0.2
FRD	Ford Ranch, An	2.40	341		Pb	20 00 41.6	-1.1
BZNA	Buzz No.'s Pla	2.42	340		Pb	20 00 43.6	+0.5
BC3	Big Chuckawall	2.43	4	P	Pn	20 00 38.8	-0.3
	baz=185,SNR=16						
SNDA	J Saunders Pla	2.46	341		Pn	20 00 40.1	+0.6
XPFO	Pion Flat	2.47	345		Pb	20 00 44.9	+0.8
PFO	Pinyon Flats O	2.47	345	Pn	Pb	20 00 44.3	+0.2
	comp=N,24nm,0.3s,baz=158,slow=10,SNR=89						
PFO				Lg	Lg	20 01 14.5	
	comp=N,74nm,0.3s,baz=83,slow=23,SNR=18						
	comp=N,68nm,0.3s						
PFO	Pinyon Flats O	2.47	345		Pb	20 00 44.8	+0.8
PFO	Pinyon Flats O	2.47	345		Pn	20 00 39.5	-0.3
PFO				IAML		20 01 18.6	
	comp=N,388nm,0.5s						
PFO				IAML		20 01 21.3	
	comp=N,257nm,1.5s						
PFO	Pinyon Flats O	2.47	345	P	Pn	20 00 39.4	-0.3
	baz=164,SNR=109						
PFO				Sb	Sb	20 01 15.1	+0.8
	baz=164						
PMD	Palm Desert	2.49	346		Pn	20 00 39.6	-0.2
PMD				IAML		20 01 17.2	
	comp=E,531nm,0.5s						
CRY	Cary Ranch	2.50	339		Pb	20 00 44.1	-0.5
214A	Organ Pipe Nat	2.55	73	Pn	Pn	20 00 39.9	-0.7
214A	Organ Pipe Nat	2.55	73	⇑eP	Pn	20 00 39.8	-0.7
214A	Organ Pipe Nat	2.55	73	eP	Pn	20 00 39.7	-0.9
214A				iS	Sn	20 01 09.0	-2.3
214A	Organ Pipe Nat	2.55	73	P	Pn	20 00 39.7	-0.9
	baz=255,SNR=48						
214A				S	Sn	20 01 10.0	-1.3
	baz=255						
BACC	Bachelor Mtn.	2.65	334		Pb	20 00 45.1	-2.0
DGR	Domenigoni Val	2.67	335		Pb	20 00 45.8	-1.7
POB	Polly Butte	2.68	337		Pb	20 00 46.2	-1.3
MURC	Murrieta	2.70	332		Pb	20 00 46.2	-1.7
MURC	Murrieta	2.70	332	P	Pn	20 00 43.4	+0.7
	baz=151						
BLYC	Blythe	2.70	21		Pn	20 00 42.5	-0.2
EW2	E Wide Canyon	2.78	347		Pb	20 00 50.3	+1.0
BELC	Belle Mtn. Jos	2.78	354	P	Pn	20 00 44.2	+0.2
	baz=175,SNR=47						
ELS	Elsinore Mount	2.84	329		Pn	20 00 45.2	+0.5
ELS				IAML		20 01 31.5	
	comp=E,439nm,1.1s						
ELS				IAML		20 01 32.0	
	comp=N,422nm,0.8s						
BLAC	Blackrock camp	2.90	348		Pb	20 00 52.7	+1.3
BAHB	Baha de los	2.91	141	i	Pg	20 00 54.5	-1.3
BAHB				i		20 01 33.2	
LAPR	La Primavera	2.97	103	iP	Pn	20 00 48.6	+2.3
LAPR				eS	Sn	20 01 24.5	+2.9
BBRC	Big Bear Solar	3.21	341	Sb	Sb	20 01 36.9	+1.3
	baz=161						
FMP	Fort Macarthur	3.33	319	Sb	Sb	20 01 40.2	+1.4
	baz=138						
SSK	Sunset Peak	3.43	331		Pb	20 00 58.8	-1.7
BFSC	Mount Baldy Ra	3.44	331	Sb	Sb	20 01 42.6	+0.4
	baz=150						
PEM	Pine Mountain	3.47	328		Pb	20 00 59.8	-1.3
Y14A	Wickenburg	3.52	39		Pn	20 00 54.0	+0.1
PASC	Pasadena Art C	3.63	325	Pn	Pn	20 00 57.3	+1.9
PASC				IAML		20 01 50.7	
	comp=N,116nm,0.7s						
PASC				IAML		20 01 53.2	
	comp=E,115nm,0.6s						
DECC	Green Verdugo	3.77	324	Sb	Sb	20 01 54.3	+2.9
	baz=143						
SNCC	San Nicolas Is	3.84	303	Pn	Pn	20 01 00.0	+1.7
SNCC	San Nicolas Is	3.84	303	S	Sn	20 01 44.1	+0.9
	baz=121						
EDW2	Edwards Air Fo	4.14	332	Sb	Sb	20 02 04.4	+2.3
	baz=151						
W13A	Hualapai Mount	4.14	21		Pn	20 01 03.3	+0.6
GSC	Goldstone, Bar	4.18	347		Pn	20 01 02.9	-0.2
GSC				IAML		20 02 20.6	
	comp=E,212nm,1.1s						
GSC				IAML		20 02 24.8	
	comp=N,125nm,0.9s						
OSI	Osito Audit: C	4.25	324	P	Pn	20 01 04.9	+1.0
	baz=142						
TUC	Tucson	4.30	74		Pn	20 01 04.2	-0.5
TUC	Tucson	4.30	74	iP	Pn	20 01 04.6	-0.1
TUC				iS	Sn	20 01 53.4	-1.2
TUC	Tucson	4.30	74	P	Pn	20 01 04.2	-0.5
	baz=257						
TUC				S	Sn	20 01 52.9	-1.7
	baz=257						
CCAC	Calif City Air	4.39	334		Pn	20 01 05.8	-0.1
V12A	Nelson	4.54	8		Pn	20 01 09.0	+0.9
LRMC	Laurel Mtn Rad	4.57	339	P	Pn	20 01 08.7	+0.2
	baz=158						
LRMC				Sb	Sb	20 02 16.8	+2.2
	baz=158						
X16A	Lo Mia Camp, P	4.78	47		Pn	20 01 11.3	-0.1
QSM	Queen of Sheba	4.83	348		Pn	20 01 14.2	+2.2
BCW	Bitter Crk WRg	4.86	321		Pn	20 01 12.7	+0.3
BCW				IAML		20 02 45.3	
	comp=N,83nm,0.9s						
BCW				IAML		20 02 49.9	
	comp=E,115nm,1.1s						
SRIG	Santa Rosalia	4.91	142	Pn	Pn	20 01 15.9	+2.9
SRIG				IAML		20 02 39.6	
	comp=N,39nm,0.9s						
SRIG				IAML		20 02 48.0	
	comp=E,39nm,1.1s						
SRIG	Santa Rosalia	4.91	142	e	Sg	20 02 31.2	-6.3
ISA	Isabella, Lake	5.01	333		Pn	20 01 14.6	+0.1
ISA				IAML		20 02 43.7	
	comp=E,55nm,1.3s						
GWY	Greenwater Val	5.02	351		Pn	20 01 15.6	+0.8
SHPR	Sheep Range	5.29	4	Pn	Pn	20 01 18.1	-0.3
319A	Douglas	5.47	87		Pn	20 01 20.7	-0.1
WUAZ	Wupatki	5.59	39	Pn	Pn	20 01 21.7	-0.8
WUAZ	Wupatki	5.59	39	P	Pn	20 01 23.5	+1.0
	baz=221						
WCT	Wildcat Mounta	5.61	352	Pn	Pn	20 01 21.6	-1.2
TPNV	Topopah Spring	5.73	355	Pn	Pn	20 01 22.3	-2.2
TPNV	Topopah Spring	5.73	355	P	Pn	20 01 22.6	-1.9
	baz=175						
DUN6	Lazy B Ranch	5.75	75		Pn	20 01 24.7	0.0
X18A	Snowflake	5.83	54		Pn	20 01 26.6	+0.8
U15A	North Rim	5.90	28		Pn	20 01 28.3	+1.3
LCMT	Little Creek M	6.12	19		Pn	20 01 31.3	+1.6
PRN	Pahroc Range	6.19	5		Pn	20 01 32.4	+1.6
LCH	Last Change Ra	6.21	345		Pn	20 01 33.1	+2.0
KNB	Kanab	6.24	21		Pn	20 01 32.2	+0.7
W18A	Petrified Fore	6.31	50		Pn	20 01 33.0	+0.5
W18A	Petrified Fore	6.31	50	P	Pn	20 01 32.5	0.0
	baz=234						
S11A	Rachel	6.41	359		Pn	20 01 34.2	+0.5
DSP	Deep Springs	6.42	343		Pn	20 01 36.4	+2.7
CCUT	Cedar City	6.59	16		Pn	20 01 37.4	+1.0
CGIG		6.67	95		Sb	20 03 12.6	-2.7
CGIG		6.67	95	e		20 03 12.6	
PKCU	Pink Cliffs	6.80	23	Pn	Pn	20 01 37.8	-1.5
121A	Cookes Peak, D	6.83	77	Pn	Pn	20 01 40.1	+0.5
121A	Cookes Peak, D	6.83	77	P	Pn	20 01 39.9	+0.2
	baz=261						
OMMB	Old Mammoth Mi	6.94	338	Pn	Pn	20 01 42.2	+0.9
MTPU	Mount Pierson	7.38	22	Pn	Pn	20 01 42.7	-4.6
LHV	Little Huntoon	7.39	342	Pn	Pn	20 01 45.7	-1.3
NV11	Mina Array Sit	7.48	345	Pn	Pn	20 01 46.0	-2.4
NVAR	Mina Array Bea	7.51	344	Pn	Pn	20 01 55.2	+6.3
	comp=E,0.1nm,0.3s,baz=165,slow=7.5,SNR=1.6						
NVAR				Pg	Pb	20 02 16.3	+6.4
	comp=E,0.4nm,0.3s,baz=156,slow=17,SNR=11						
NVAR				Lg	Lg	20 03 57.1	
	comp=E,0.1nm,0.3s,baz=155,slow=29,SNR=2.8						
	comp=E,0.1nm,0.3s						
MVU	Marysvale	7.80	20	Pn	Pn	20 01 46.0	-7.0
MSU	Marysvale	7.82	21	Pn	Pn	20 01 47.4	-5.8
BNM	Barren Site	8.16	67	Pn	Pn	20 01 57.8	-0.1
YERR	Yerington	8.28	340	Pn	Pn	20 01 59.8	+0.4
MVCO	Mesa Verde	8.42	43	Pn	Pn	20 02 03.0	+1.5
PV05	Paradox Valley	8.72	37	Pn	Pn	20 02 08.4	+2.8
TMUT	Trail Mountain	8.84	23	Pn	Pn	20 02 07.5	+0.2
PV13	Radium Mtn., P	8.92	37	Pn	Pn	20 02 06.7	-1.6
SRU	San Rafael Swe	8.92	27	Pn	Pn	20 02 06.9	-1.4
PV17	East Wray Mesa	8.94	36	Pn	Pn	20 02 10.2	+1.5
PV18	Skein Mesa, Pa	8.94	37	Pn	Pn	20 02 09.9	+1.3
PV19	Morning Glory	8.96	36	Pn	Pn	20 02 09.5	+0.7
PV03	Paradox Valley	8.98	37	Pn	Pn	20 02 09.2	0.0
PV14	Lion Creek, Pa	8.98	36	Pn	Pn	20 02 10.9	+1.7
PV20	West Nyswonger	8.99	36	Pn	Pn	20 02 07.5	-1.7
PV23	Carpenter Ridg	9.05	35	Pn	Pn	20 02 11.0	+0.9
SLBS	Sierra La Lagu	9.06	145	Pn	Pn	20 02 13.2	+3.1
PV21	Cone Mtn., Par	9.15	35	Pn	Pn	20 02 13.8	+2.3
PV07	Paradox Valley	9.22	37	Pn	Pn	20 02 12.1	-0.4
PV22	Blue Mesa, Par	9.23	36	Pn	Pn	20 02 13.2	+0.7
TX32	Lajitas Array	10.55	97	Pn	Pn	20 02 32.7	+2.2
TXAR	Lajitas Array	10.55	97	Pn	Pn	20 02 35.0	+4.5
	comp=E,0.1nm,0.3s,baz=283,slow=15,SNR=6.3						
TXAR				Lg	Lg	20 05 28.7	
	baz=279,slow=29						
	comp=E,0.5nm,0.6s						
TXAR	Lajitas Array	10.55	97	Pn	Pn	20 02 31.4	+0.9
PDAR	Pinedale Array	12.51	21	Pn	P	20 03 04.0	-5.1
	baz=197,slow=12,SNR=3.5						
	comp=E,0.8nm,1.0s						
NEW	Newport	17.06	357	Pn	P	20 04 03.3	+3.9
	comp=E,0.2nm,0.3s,baz=160,slow=12,SNR=5.0						
	comp=E,3.9nm,0.8s						

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*GCMT **17** 20:01:03.0±0.3, 62°.27S±0°.02×154°.94E±0°.05, h19^{km}±2^{km}, MW4.9/77, Moment Tensor Solution. s14,c15; s77,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.47±.20; M$_{\theta\theta}$2.72±.15; M$_{\phi\phi}$-2.25±.13; M$_{r\theta}$-0.91±.28; M$_{\theta\phi}$-1.42±.11; M$_{\phi r}$0.77±.32; Best double couple: M$_0$3.07500×10^{16} NP1:ϕ_s330.00000°,δ89.00000°,λ21.00000°. NP2: ϕ_s239.00000°,δ69.00000°,λ178.00000°. Principal axes: T 3.4010, Plg16.0000°, Azm196.0000°; N -0.6500, Plg69.0000°, Azm333.0000°; P -2.7500, Plg14.0000°, Azm102.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

IDC 17 20:00:52.4±6.3**, 62°.22S×157°.75E, h0^{km}, mb3.6**/2**, mbtmp3.7**/3**, ML4.0**/1**, MS3.9**/21 **Error ellipse: s-maj=330.4km s-min=42.1km az=76.0, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	Vanda	15.43	177	Pn	Pn	20 04 31.0	+0.1
	0.5nm,0.3s,baz=351,slow=13,SNR=14						
VNDA				LR	LR	20 09 56.1	
	comp=Z,1µm,18.6s,baz=359,slow=35						
	1.5nm,0.5s						
RPZ	Rata Peaks	20.12	29	LR	LR	20 12 24.9	
	comp=Z,525nm,18.0s,baz=190,slow=34						
URZ	Urewera	26.78	35	LR	LR	20 16 41.4	
	comp=Z,280nm,18.7s,baz=288,slow=35						
QSPA	South Pole Qui	27.86	180	LR	LR	20 17 59.3	
	comp=Z,247nm,19.2s,baz=16,slow=37						
STKA	Stephens Creek	32.10	334	LR	LR	20 17 03.3	
	comp=Z,168nm,21.0s,baz=177,slow=30						
MAW	Mawson	36.80	220	LR	LR	20 23 04.0	
	comp=Z,337nm,19.5s,baz=122,slow=36						
H01W1	Cape Leeuwin H	38.56	295	T	T	20 48 09.0	
	baz=148,slow=75,SNR=33						
H01W2	Cape Leeuwin H	38.56	295	T	T	20 48 09.2	
	baz=148,slow=75,SNR=30						
H01W3	Cape Leeuwin H	38.57	295	T	T	20 48 10.2	
	baz=148,slow=75,SNR=30						
DZM	Mont Dzumac	40.57	12	eLR	LR	20 19 54.2	
	comp=Z,412nm,25.8s						
DZM	Mont Dzumac	40.57	12	LR	LR	20 22 17.8	
	comp=Z,222nm,18.5s,baz=208,slow=32						
ASAR	Alice Springs	41.80	326	P	P	20 08 43.9	+0.4
	0.6nm,0.8s,baz=161,slow=8.6,SNR=6.4						
	0.6nm,0.8s						
CTA	Charters Tower	42.85	344	LR	LR	20 23 57.8	
	comp=Z,114nm,21.2s,baz=176,slow=32						
WRA	Warramunga Arr	45.25	328	P	P	20 09 10.6	-0.7
	1.2nm,1.1s,baz=163,slow=7.1,SNR=4.6						
WRA				LR	LR	20 25 13.8	
	comp=Z,170nm,21.4s,baz=152,slow=32						
	1.2nm,1.1s						
MSVF	Nonsavu	46.67	27	LR	LR	20 24 30.6	
	comp=Z,225nm,21.6s,baz=187,slow=30						
AFI	Afiamalu	52.91	38	LR	LR	20 33 24.3	
	comp=Z,33nm,18.1s,baz=144,slow=37						
PMG	Port Moresby	53.29	347	LR	LR	20 30 02.7	
	comp=Z,158nm,18.5s,baz=153,slow=33						
PPT2	Papeete2	57.57	64	eLR	LR	20 27 31.8	
	comp=Z,154nm,27.2s						
PPT	Papeete	57.59	64	LR	LR	20 30 16.8	
	comp=Z,40nm,18.9s,baz=184,slow=31						
VAH	Vaihoa	60.49	65	eT	T	21 17 30.0	
	78nm,0.3s						
KAPI	Kappang	63.61	317	LR	LR	20 36 14.8	
	comp=Z,81nm,21.0s,baz=165,slow=33						
PLCA	Paso Flores	70.28	143	LR	LR	20 39 09.6	
	comp=Z,43nm,18.0s,baz=206,slow=33						
H03S2	Juan Fernandez	74.01	134	T	T	21 35 22.4	
	baz=201,slow=74,SNR=10						
H03S1	Juan Fernandez	74.01	134	T	T	21 35 21.5	
	baz=201,slow=74,SNR=9.0						
H03S3	Juan Fernandez	74.03	134	T	T	21 35 24.4	
	baz=201,slow=74,SNR=10						
SUR	Sutherland	79.56	216	LR	LR	20 45 39.3	
	comp=Z,98nm,19.8s,baz=165,slow=34						
H08S2	Diego Garcia H	81.08	271	T	T	21 41 20.3	
	baz=150						
H08S1	Diego Carcia H	81.08	271	T	T	21 41 23.5	
	baz=150						
H08S3	Diego Garcia H	81.09	271	T	T	21 41 22.4	
	baz=150						
BOSA	Boshof	81.80	221	LR	LR	20 45 30.4	
	comp=Z,88nm,20.2s,baz=168,slow=33						
LBTB	Lobatse	85.05	222	LR	LR	20 47 54.2	
	comp=Z,39nm,20.8s,baz=180,slow=33						
CPUP	Villa Florida	87.38	149	LR	LR	20 49 49.5	
	comp=Z,41nm,18.1s,baz=214,slow=34						
PALK	Pallekele	90.40	285	LR	LR	20 47 27.1	
	comp=Z,49nm,18.2s,baz=261,slow=31						
CMAR	Chiang Mai Arr	92.74	306	LR	LR	20 55 36.9	
	comp=Z,18nm,18.1s,baz=175,slow=35						
H06E1	SOCORRO T-PHAS	107.03	82	T	T	22 16 09.9	
	SNR=6.1						

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*IDC **17** 20:21:53.0±1.4, 39°.02S×177°.85E, h0^{km}, mb4.2/3, mbtmp4.1/4, ML3.8/1, Error ellipse: s-maj=34.2km s-min=29.3km az=44.0*

*NEIC **17** 20:21:57.6±2.0, 39°.01S±0°.05×177°.6E±0°.1, h19^{km}±7^{km}, mb4.2/8, Error ellipse: s-maj=12.2km s-min=7.4km az=73.0*

*NOU **17** 20:21:59.7, 38°.97S×177°.62E, h34^{km}, MLv4.2/13, North Island, New Zealand*

*WEL **17** 20:22:02.0±0.4, 39°S±3°×17°7E±°, h32^{km}±4^{km}, M4.2/20, ML4.6/20, MLv4.2/20, Error ellipse: s-maj=0.0km s-min=0.0km az=140.1, confirmed*

ISC 17 20:22:01.4±0.7**, 38°.89S**±0°.03×**177°.47E**±0°.04**, h56^{km}**±5^{km}**, n185, σ1^{s}56**/207**, mb4.3**/7**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNGZ	Shannon Statio	0.15	317	P	Pn	20 22 08.4	-1.8
SNGZ				S	Sn	20 22 13.5	-3.0
KNZ	Kokohu	0.20	129	P	Pn	20 22 10.6	+0.2
KNZ				S	Sn	20 22 18.0	+1.1
WHHZ	Waihua	0.26	225	P	Pn	20 22 10.8	0.0
WHHZ				S	Sn	20 22 18.6	+1.0
RIGZ	Rimuhau	0.29	51	P	Pn	20 22 10.9	-0.2
RIGZ				S	Sn	20 22 18.4	+0.3
RAHZ	Arahi	0.30	265	P	Pn	20 22 10.1	-1.0
RAHZ				S	Sn	20 22 17.0	-1.2
RAGZ	Rawiri	0.40	354	P	Pn	20 22 10.5	-1.6
RAGZ				S	Sn	20 22 17.4	-2.4
MHGZ	Mahia Peninsul	0.43	128	P	Pn	20 22 13.6	+1.3
RTZ	Ruatahuna	0.47	306		Pn	20 22 11.2	-1.7
RTZ					Sn	20 22 18.5	-2.7
RTZ	Ruatahuna	0.47	306	P	Pn	20 22 11.2	-1.7
RTZ				S	Sn	20 22 18.5	-2.7
MTHZ	Maungataniwha	0.49	274	P	Pn	20 22 12.1	-0.9
MTHZ				S	Sn	20 22 20.0	-1.4
ARHZ	Aropaoanui	0.52	225	P	Pn	20 22 14.4	+1.1
ARHZ				S	Sn	20 22 24.6	+2.7
TKGZ	Te Karaka	0.54	33	P	Pn	20 22 13.2	-0.3
TKGZ				S	Sn	20 22 22.8	+0.5
NMHZ	Naumai	0.56	248	P	Pn	20 22 14.2	+0.3
NMHZ				S	Sn	20 22 24.3	+1.5
MWZ	Matawai	0.56	5	P	Pn	20 22 12.7	-1.1
MWZ				S	Sn	20 22 21.3	-1.4
MUGZ	Murupara	0.69	307	P	Pn	20 22 14.1	-1.2
URZ	Urewera	0.69	336	Pn	Pn	20 22 13.8	-1.5
	935nm,0.3s,baz=299,slow=6.2,SNR=5774						
URZ				Sn	Sn	20 22 23.1	-2.4
	2µm,0.3s,baz=9.4,slow=22,SNR=23						
URZ	Urewera	0.69	336	P	Pn	20 22 14.0	-1.3
URZ	Urewera	0.69	336	P	Pn	20 22 14.0	-1.3
URZ				S	Sn	20 22 23.9	-1.6
CNGZ	Carnagh Statio	0.71	55	P	Pn	20 22 16.0	+0.5
BKZ	Black Stump Fm	0.81	250		Pn	20 22 17.5	+0.6
BKZ				Sn	Sn	20 22 29.4	+1.2
BKZ	Black Stump Fm	0.81	250	P	Pn	20 22 17.7	+0.8
BKZ	Black Stump Fm	0.81	250	P	Pn	20 22 17.5	+0.6
BKZ				S	Sn	20 22 29.6	+1.4
MCHZ	McNeill Hill	0.82	227	P	Pn	20 22 18.3	+1.4
TWGZ	Tauwhareparae	0.82	29	P	Pn	20 22 17.0	0.0
CKHZ	Cape Kidnapper	0.82	202	P	Pn	20 22 18.2	+1.1
MRHZ	Matea Rd	0.82	274	P	Pn	20 22 17.1	0.0
MRHZ				S	Sn	20 22 28.4	-0.1
PRRZ	Plateau Road	0.93	295	P	Pn	20 22 17.8	-0.6
RRRZ	Republican Roa	0.93	306	P	Pn	20 22 17.7	-0.8
RUGZ	Raukumara Rang	0.94	10	P	Pn	20 22 18.1	-0.6
ALRZ	Allen Road	0.94	290	P	Pn	20 22 18.1	-0.5
EDRZ	Edgecumbe	0.97	324	P	Pn	20 22 18.1	-0.9
KWHZ	Kaweka Forest	0.97	237	P	Pn	20 22 19.8	+0.8
TARZ	Mount Tarawera	1.00	311	P	Pn	20 22 18.8	-0.6
KAHZ	Kahuranaki	1.01	207	P	Pn	20 22 20.7	+1.1
PUZ	Puketiti	1.03	37	P	Pn	20 22 19.5	-0.2
HRRZ	Handcock Road	1.06	298	P	Pn	20 22 19.4	-0.7
HLRZ	Highlands Stat	1.09	306	P	Pn	20 22 20.0	-0.5
MKRZ	Makatiti	1.09	313	P	Pn	20 22 20.4	-0.2
WPRZ	Whakapapatarin	1.09	290	P	Pn	20 22 20.1	-0.5
MARZ	Manawahe	1.10	325	P	Pn	20 22 20.0	-0.7
WHRZ	Whale Island	1.11	339	P	Pn	20 22 20.1	-0.7
PKGZ	Pakihiroa	1.11	26	P	Pn	20 22 20.7	-0.1
HSRZ	Hossack Road	1.12	301	P	Pn	20 22 20.4	-0.6
HAZ	Te Kaha	1.16	12	P	Pn	20 22 21.4	0.0
OMRZ	Omania	1.17	312	P	Pn	20 22 20.6	-1.0
GRRZ	Galatos Road	1.20	297	P	Pn	20 22 21.8	-0.2
WHTZ	Whakaora	1.21	280	P	Pn	20 22 22.2	+0.1
PXZ	Pawanui	1.23	202	P	Pn	20 22 22.7	+0.3
UTU	Utuhina	1.23	305	P	Pn	20 22 22.1	-0.3
LIRZ	Lichensteins R	1.23	316	P	Pn	20 22 21.6	-0.8
BHHZ	Black Hill Sta	1.25	241	P	Pn	20 22 23.4	+0.7
RITZ	Rihia Road	1.26	266	P	Pn	20 22 23.3	+0.4
NGRZ	Ngongotaha	1.28	308	P	Pn	20 22 22.9	-0.3
KARZ	Kaharoa	1.30	312	P	Pn	20 22 22.3	-1.0
WMGZ	Waiomatatini S	1.30	35	P	Pn	20 22 23.1	-0.2
RATZ	Rangitukua	1.33	271	P	Pn	20 22 24.1	+0.3
KUTZ	Kaahu Road	1.35	287	P	Pn	20 22 23.8	-0.3
WATZ	Wairara	1.37	277	P	Pn	20 22 24.2	-0.1
WIZ	White Island	1.38	351	P	Pn	20 22 23.5	-0.9
KATZ	Kakaramea	1.39	266	P	Pn	20 22 25.8	+1.1
WSRZ	White Island S	1.39	350	P	Pn	20 22 25.6	+1.0
ETVZ	East Tongariro	1.39	259	P	Pn	20 22 25.3	+0.7
TMVZ	Te Maari	1.40	260	P	Pn	20 22 25.0	+0.2
NTVZ	North Tongarir	1.41	261	P	Pn	20 22 25.2	+0.2
WPHZ	Waipukurau	1.42	214	P	Pn	20 22 25.4	+0.5
PNHZ	Pukenui	1.42	224	P	Pn	20 22 25.2	+0.3
MOVZ	Moawhango	1.43	248	P	Pn	20 22 25.8	+0.6
OTVZ	Oturere	1.43	259	P	Pn	20 22 25.6	+0.3
KRVZ	Karewarewa	1.44	261	P	Pn	20 22 25.5	+0.2
SNVZ	South Ngauruho	1.46	258	P	Pn	20 22 25.9	+0.4
TUVZ	Tukino	1.46	255	P	Pn	20 22 27.7	+2.1
NNVZ	North Ngauruho	1.47	260	P	Pn	20 22 26.2	+0.5
MXZ	Matakaoa Point	1.48	27		Pn	20 22 25.7	-0.1
MXZ	Matakaoa Point	1.48	27	P	Pn	20 22 25.6	-0.2
MXZ	Matakaoa Point	1.48	27	P	Pn	20 22 25.7	-0.1
WTVZ	West Tongariro	1.48	261	P	Pn	20 22 26.5	+0.6
NGZ	Ngauruhoe	1.48	258	P	Pn	20 22 26.3	+0.4
TGRZ	Tauranga	1.50	320	P	Pn	20 22 24.7	-1.3
PRHZ	Porangahau	1.52	205	P	Pn	20 22 26.5	+0.2
WHVZ	Whangaehu Hut	1.52	255	P	Pn	20 22 26.9	+0.5
WNVZ	Wahianoa	1.52	253	P	Pn	20 22 27.0	+0.6
DRZ	Dome Shelter	1.53	255	P	Pn	20 22 28.7	+1.9
FWVZ	Far West T-bar	1.54	256	P	Pn	20 22 27.2	+0.5
TRVZ	Turoa	1.55	254	P	Pn	20 22 27.3	+0.4
KMRZ	Kaimai	1.59	311	P	Pn	20 22 26.2	-1.2
TWVZ	Taurewa	1.59	263	P	Pn	20 22 27.8	+0.4
TLZ	Tolley Road	1.62	290	P	Pn	20 22 27.0	-0.6
MTVZ	Mangateitei	1.63	252	P	Pn	20 22 28.5	+0.6
TSZ	Takapari Road	1.65	225	P	Pn	20 22 28.2	+0.1
PKVZ	Pokaka	1.70	256	P	Pn	20 22 30.0	+1.2
DVHZ	Dannevirke	1.73	215	P	Pn	20 22 28.9	-0.3
MYRZ	Mayor Island	1.88	329	P	Pn	20 22 29.9	-1.3
TOZ	Tahuroa Road	1.94	306		Pn	20 22 30.9	-1.0
TOZ	Tahuroa Road	1.94	306	P	Pn	20 22 30.9	-1.0
POWZ	Post Office Ro	1.99	221	P	Pn	20 22 32.6	-0.1
BFZ	Birch Farm	2.02	207		Pn	20 22 32.5	-0.6
BFZ				Sn	Sn	20 22 58.0	+0.7
BFZ	Birch Farm	2.02	207	P	Pn	20 22 32.7	-0.4
BFZ	Birch Farm	2.02	207	P	Pn	20 22 32.7	-0.4
PRWZ	Pori Road	2.02	214	P	Pn	20 22 33.0	-0.1
HIZ	Hauiti	2.08	280		Pn	20 22 34.2	+0.2
HIZ	Hauiti	2.08	280	P	Pn	20 22 34.4	+0.4
HIZ	Hauiti	2.08	280	P	Pn	20 22 34.3	+0.4
WAZ	Wanganui	2.11	245	P	Pn	20 22 35.7	+1.3
VRZ	Vera Road	2.13	263	P	Pn	20 22 35.2	+0.7
CPWZ	Castlepoint	2.24	205	P	Pn	20 22 35.9	-0.2
TIWZ	Tintock	2.24	212	P	Pn	20 22 35.7	-0.5
MRZ	Mangatainoka R	2.29	219		Pn	20 22 35.6	-1.2
MRZ				Sn	Sn	20 23 01.5	-2.4
MRZ	Mangatainoka R	2.29	219	P	Pn	20 22 36.0	-0.8
HOWZ	Holdsworth Sta	2.50	216	P	Pn	20 22 38.6	-1.1
TMWZ	Te Maipa	2.52	208	P	Pn	20 22 39.0	-1.0
KUZ	Kuaotunu	2.55	327	P	Pn	20 22 39.1	-1.2
KUZ	Kuaotunu	2.55	327	P	Pn	20 22 39.2	-1.2
OGWZ	Otaki Gorge	2.61	222	P	Pn	20 22 40.1	-1.1
PREZ	Palmer Road	2.62	259	P	Pn	20 22 44.2	+3.0
NEZ	North Egmont	2.65	261	P	Pn	20 22 44.8	+2.9
KHEZ	Kahui Hut	2.72	260	P	Pn	20 22 44.5	+1.8
KHEZ	Kahui Hut	2.72	260	P	Pn	20 22 45.3	+2.6
MTW	Mount Morrison	2.72	213	P	Pn	20 22 41.1	-1.6
PKE	Pukeiti	2.73	263	P	Pn	20 22 45.5	+2.7
KIW	Kapiti Island	2.78	224	P	Pn	20 22 42.5	-1.0

ETAZ	East Tamaki Re	2.79	313	P	Pn	20 22 43.4	-0.3
WIAZ	Waiheke Island	2.80	318	P	Pn	20 22 42.9	-0.8
NBEZ	Newall Road No	2.83	261	P	Pn	20 22 46.7	+2.6
NMEZ	Namu Road	2.84	258	P	Pn	20 22 47.3	+3.0
TRWZ	Traveller	2.85	208	P	Pn	20 22 42.9	-1.6
CAW	Cannon Point	2.88	219	P	Pn	20 22 43.2	-1.7
AWAZ	Awhitu Peninsu	2.89	308	P	Pn	20 22 44.6	-0.3
PAWZ	Paruwai Farm	2.94	212	P	Pn	20 22 43.9	-1.8
MBAZ	Motutapu North	2.94	315	P	Pn	20 22 46.2	+0.5
WTAZ	Waiatarua	3.01	310	P	Pn	20 22 46.6	-0.1
MSWZ	Moikau Station	3.04	213	Pn	Pn	20 22 44.9	-2.2
MSWZ				Sn	Sn	20 23 19.5	-2.8
ABAZ	Army Bay	3.10	317	P	Pn	20 22 47.8	-0.1
WEL	Wellington	3.16	220	P	Pn	20 22 47.0	-1.7
PLWZ	Palliser	3.17	212		Pn	20 22 46.2	-2.6
PLWZ				Sn	Sn	20 23 22.3	-3.0
BHW	Baring Head	3.21	218	Pn	Pn	20 22 46.6	-2.7
BHW				Sn	Sn	20 23 23.2	-3.0
SNZO	South Karori	3.21	220	Pn	Pn	20 22 46.9	-2.5
SNZO				Sn	Sn	20 23 23.4	-3.0
SNZO	South Karori	3.21	220	P	Pn	20 22 47.1	-2.3
DUWZ	D'Urville Isla	3.33	234	P	Pn	20 22 50.1	-1.0
TCW	Tory Channel	3.37	226		Pn	20 22 49.7	-1.9
TCW				Sn	Sn	20 23 29.2	-1.1
TCW	Tory Channel	3.37	226	P	Pn	20 22 49.7	-1.9
TUWZ	Tuamarina	3.71	226	Pn	Pn	20 22 53.7	-2.4
TUWZ				Sn	Sn	20 23 35.8	-2.7
TUWZ	Tuamarina	3.71	226	P	Pn	20 22 54.2	-1.9
CMWZ	Cape Campbell	3.79	220	Pn	Pn	20 22 54.2	-3.1
WCZ	Waipu Caves	3.86	319	P	Pn	20 22 57.9	-0.3
NNZ	Nelson	3.91	232		Pn	20 22 57.6	-1.3
NNZ	Nelson	3.91	232	P	Pn	20 22 57.4	-1.4
BSWZ	Blackbirch Sta	3.94	223	Pn	Pn	20 22 56.5	-2.8
TKNZ	Takaka Hill	4.07	237		Pn	20 22 60.0	-1.2
TKNZ	Takaka Hill	4.07	237	P	Pn	20 23 00.4	-0.8
QRZ	Quartz Range	4.26	242	Pn	Pn	20 23 02.1	-1.7
QRZ	Quartz Range	4.26	242	P	Pn	20 23 03.0	-0.8
QRZ	Quartz Range	4.26	242	P	Pn	20 23 02.1	-1.7
MRNZ	Matariki Terra	4.39	234		Pn	20 23 04.1	-1.5
MRNZ	Matariki Terra	4.39	234	P	Pn	20 23 04.0	-1.5
KHZ	Kahutara	4.62	219		Pn	20 23 05.3	-3.3
DSZ	Denniston Nort	5.18	235	Pn	Pn	20 23 14.0	-2.5
MQZ	McQueen's Vall	6.02	215	Pn	Pn	20 23 24.6	-3.3
OXZ	Oxford	6.04	221	Pn	Pn	20 23 25.3	-2.7
WVZ	Waitaha Valley	6.59	229	P	Pn	20 23 35.2	-0.4
RPZ	Rata Peaks	6.82	223	Pn	Pn	20 23 35.7	-3.2
	1.8nm,0.3s,baz=251,slow=2.8,SNR=12						
RPZ				Sn	Sn	20 24 47.4	-7.7
	11nm,0.3s,baz=17,slow=19,SNR=28						
	5.1nm,0.4s						
RPZ	Rata Peaks	6.82	223		Pn	20 23 36.4	-2.5
RPZ	Rata Peaks	6.82	223	P	Pn	20 23 37.2	-1.6
GCSZ	Gaunt Creek Bo	6.97	228	P	Pn	20 23 39.1	-1.8
LBZ	Lake Benmore	7.74	222	Pn	Pn	20 23 48.0	-3.4
ODZ	Otahua Downs	7.97	217	P	Pn	20 23 51.8	-2.8
JCZ	Jackson Bay	8.32	229	P	Pn	20 23 58.2	-1.2
WKZ	Wanaka	8.65	224	Pn	Pn	20 24 00.8	-3.1
SYZ	Scrubby Hill	9.79	216	P	Pn	20 24 18.0	-1.4
CTA	Charters Tower	32.78	296	P	P	20 28 31.4	+2.1
	1.1nm,0.5s,baz=111,slow=9.3,SNR=2.2						
	1.1nm,0.5s						
VNDA	Vanda	39.30	185	P	P	20 29 25.1	+0.7
VNDA				IAmb	IAmb	20 29 30.8	
	comp=Z,6.0nm,1.3s						
AS31	Alice Springs	39.82	279	P	P	20 29 30.4	+1.0
AS31				IAmb	IAmb	20 29 31.0	
	comp=Z,2.9nm,0.7s						
ASAR	Alice Springs	39.82	279	P	P	20 29 30.4	+0.9
	comp=Z,9.1nm,0.8s,baz=121,slow=7.6,SNR=106						
	comp=Z,9.1nm,0.8s						
ASAR	Alice Springs	39.82	279	P	P	20 29 29.2	-0.2
WRA	Warramunga Arr	41.60	284	P	P	20 29 44.6	+0.5
	comp=Z,0.9nm,0.5s,baz=124,slow=7.2,SNR=38						
	comp=Z,0.9nm,0.5s						
WRA	Warramunga Arr	41.60	284	P	P	20 29 44.5	+0.5
WB0	Warramunga Arr	41.66	285	P	P	20 29 44.7	+0.1
WB0				IAmb	IAmb	20 30 07.9	
	comp=Z,13nm,1.5s						
MTN	Manton Dam	48.43	289	P	P	20 30 37.9	-0.4
FITZ	Fitzroy Crossi	49.33	280	P	P	20 30 46.0	+0.9
MORW	Morawa	51.03	261	P	P	20 30 58.2	+0.2
QSPA	South Pole Qui	51.23	180	P	P	20 31 04.6	+5.5
QSPA				IAmb	IAmb	20 31 10.2	
	comp=Z,2.0nm,1.1s						
MKAR	Makanchi Array	120.18	308	PKP	PKPdf	20 40 46.3	+0.7
	comp=Z,0.8nm,0.8s,baz=108,slow=4.7,SNR=3.9						
KURBB	Kurchatov Arra	124.01	311	PKP	PKiKP	20 40 54.4	+1.4
	comp=Z,0.3nm,0.7s,baz=90,slow=1.9,SNR=1.9						
RES	Resolute Bay	126.46	19	PKP	PKPdf	20 40 55.0	-1.8
	comp=Z,0.7nm,0.7s,baz=314,slow=6.1,SNR=5.5						
ARCES	ARCESS Array B	145.85	343	PKPbc	PKPdf	20 41 33.8	+1.1
	comp=Z,1.2nm,0.6s,baz=7.6,slow=3.7,SNR=3.7						
FINES	FINESS Array B	151.35	331	PKPbc	PKPbc	20 41 48.2	+0.3
	comp=Z,1.5nm,0.7s,baz=35,slow=5.8,SNR=4.5						

IDC 17 20:26:45.0±5.7, 7°.71S×156°.23E, h125km±66km, mb3.6/5, mbtmp4.1/6, Error ellipse: s-maj=58.1km s-min=25.1km az=138.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.05	115	P	Pn	20 27 45.3	-0.1
	784nm,0.4s,baz=290,slow=4.9,SNR=5.2						
HNR				S	Sn	20 28 32.8	+0.6
	560nm,0.3s,baz=315,slow=23,SNR=1.6						
WRA	Warramunga Arr	24.45	238	P	P	20 31 53.1	+0.6
	0.7nm,0.5s,baz=62,slow=9.9,SNR=9.8						
	0.7nm,0.5s						
ASAR	Alice Springs	26.65	231	P	P	20 32 11.3	-1.0
	0.3nm,0.8s,baz=60,slow=9.8,SNR=2.2						
	0.3nm,0.8s						
H11S3	WAKE ISLAND Hy	28.01	22	T	T	21 00 45.6	
	baz=202,slow=76,SNR=9.6						
H11S2	WAKE ISLAND Hy	28.01	22	T	T	21 00 41.9	
	baz=202,slow=76,SNR=7.8						
H11S1	WAKE ISLAND Hy	28.02	22	T	T	21 00 45.8	
	baz=202,slow=76,SNR=6.5						
SONM	Songino Array	70.60	327	P	P	20 37 46.9	0.0
	1.0nm,0.7s,baz=139,slow=7.1,SNR=6.9						
	1.0nm,0.7s						
MKAR	Makanchi Array	84.75	318	P	P	20 39 05.3	0.0
	2.8nm,0.8s,baz=104,slow=5.8,SNR=24						
	2.8nm,0.8s						
ZALV	Zalesovo Beam	85.45	326	P	P	20 39 08.5	-0.1
	3.1nm,0.6s,baz=111,slow=6.3,SNR=9.0						
	3.1nm,0.6s						
TORD	Torodi Ar. Bea	154.39	284	PKPbc	PKiKP	20 46 32.0	+0.2
	0.3nm,0.8s,baz=90,slow=1.4,SNR=1.3						

IDC 17 20:28:46.3±4.1, 6°.93S×155°.18E, h0km, mb3.7/4, mbtmp3.7/4, MS3.4/3, Error ellipse: s-maj=125.1km s-min=41.3km az=122.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.01	235	P	P	20 34 03.7	+0.7
	0.2nm,0.5s,baz=62,slow=9.8,SNR=1.6						
	0.2nm,0.5s						
USRK	Ussuriysk Ar.	55.03	340	LR	LR	20 59 20.5	
	comp=Z,38nm,21.4s,baz=108,slow=33						
KLR	Kul'dur	59.56	342	LR	LR	21 10 04.8	
	comp=Z,16nm,18.0s,baz=156,slow=42						
TIXI	Tiksi	80.31	352	LR	LR	21 14 28.4	
	comp=Z,30nm,21.7s,baz=176,slow=34						
MKAR	Makanchi Array	83.48	319	P	P	20 41 16.6	+0.5
	1.2nm,0.8s,baz=103,slow=5.2,SNR=5.1						
	1.2nm,0.8s						
ZALV	Zalesovo Beam	84.23	326	P	P	20 41 18.9	-0.8
	0.9nm,0.5s,baz=95,slow=3.3,SNR=3.8						
	0.9nm,0.5s						
KURBB	Kurchatov Arra	86.93	322	P	P	20 41 32.9	-0.3
	0.2nm,0.5s,baz=95,slow=5.7,SNR=2.2						
	0.2nm,0.5s						

IDC 17 20:30:41.5±0.8, 39°.87N×145°.12E, h0km, mb3.6/13, mbtmp3.7/17, ML3.3/4, MS3.3/6, Error ellipse: s-maj=19.9km s-min=17.6km az=95.0

JMA 17 20:30:45.7±0.3, 40°.1N±0°.9×14°5E±°, h45km, MV3.9/31, FAR E OFF NORTH HONSHU

ISC 17 20:30:45.6±2.9, 40°.03N±0°.03×144°.96E±0°.05, h27km±22km, n41, σ$1^{s}50$/42, mb3.7/13, MS3.7/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	2.38	269	P	Pn	20 31 21.7	-1.2
JTH				*e*S	Sn	20 31 48.7	-2.5
JEM	Erimo	2.41	326	P	Pn	20 31 23.2	0.0
JEM				*e*S	Sn	20 31 51.3	-0.5
MIYJ	Miyakonagasawa	2.46	260	*i* P	Pn	20 31 23.3	-0.7
MIYJ				*e*S	Sn	20 31 50.6	-2.6
JKEN	Kujiedanarisaw	2.50	275	P	Pn	20 31 23.4	-1.1
JKEN				*e*S	Sn	20 31 51.0	-3.1
JANG	Nango	2.66	278	P	Pn	20 31 26.0	-0.7
JNBK	Urakawa-nobuka	2.80	324	P	Pn	20 31 29.0	+0.4
JNBK				*e*S	Sn	20 32 01.5	+0.1
JCH	Churui	2.85	335	P	Pn	20 31 28.9	-0.4
JCH				*e*S	Sn	20 32 01.5	-1.1
JOM	Ohasama	2.88	260	*i* P	Pn	20 31 29.7	0.0
JAK	Akkeshi	2.97	356	P	Pn	20 31 30.1	-0.8
JAK				S	Sn	20 32 05.0	-0.7
JMK	Ichinoseki	3.09	251	P	Pn	20 31 32.1	-0.5
JMK				*e*S	Sn	20 32 06.1	-2.5
JOT	Ohata	3.27	296	P	Pn	20 31 35.2	+0.2
NEM2	Nemuro 2	3.38	10	P	Pn	20 31 35.0	-1.6
NEM2				S	Sn	20 32 12.1	-3.7
JAR	Ashorobuto	3.38	345	P	Pn	20 31 35.9	-0.7
JAR				S	Sn	20 32 14.8	-1.0
JYK	Kaneyama	3.73	254	P	Pn	20 31 41.3	-0.1
JEW	Eniwo	3.85	318	P	Pn	20 31 44.1	+1.0
JRA	Rausu	3.90	2	*e*P	Pn	20 31 42.5	-1.3
JRA				*e*S	Sn	20 32 25.5	-3.2
JTKR	Abashiri--Toko	4.01	349	P	Pn	20 31 45.5	+0.2
JTKR				*e*S	Sn	20 32 30.4	-1.0
JHR	Hokuryu	4.42	328	P	Pn	20 31 53.3	+2.3
JHR				*e*S	Sn	20 32 43.0	+1.4
ASAJ	Asahikawa	4.44	337	Pn	Pn	20 31 51.4	+0.1
	2.2nm,0.3s,baz=201,slow=17,SNR=21						
ASAJ				Sn	Sn	20 32 40.9	-1.2
	1.4nm,0.3s,baz=24,slow=29,SNR=1.6						
	6.0nm,0.3s						
JOSM	Okushiri--Mats	4.63	298	P	Pn	20 31 53.8	+0.1
MJAR	Matsushiro Arr	6.35	239	Pn	Pn	20 32 16.8	-0.7
	0.2nm,0.3s,baz=58,slow=11,SNR=11						
MJAR				Sn	Sn	20 33 30.3	+1.2
	baz=79,slow=25,SNR=1.7						
	4.7nm,0.7s						
USRK	Ussuriysk Ar.	10.50	298	Pn	Pn	20 33 16.2	+2.0
	0.3nm,0.3s,baz=101,slow=14,SNR=8.6						
	6.4nm,0.8s						
KLR	Kul'dur	13.14	319	Pn	Pn	20 33 50.6	+0.3
	0.1nm,0.3s,baz=122,slow=13,SNR=5.5						
KLR				LR	LR	20 39 46.9	
	comp=Z,40nm,18.1s,baz=162,slow=41						
	1.0nm,0.7s						
KSRS	Korea Array	13.55	264	LR	LR	20 38 18.7	
	comp=Z,26nm,19.7s,baz=60,slow=33						
SEY	Seymchan	23.36	9	P	P	20 35 52.5	+0.9
	1.8nm,0.6s,baz=175,slow=22,SNR=2.8						
	1.8nm,0.6s						
YAK	Yakutsk	23.91	342	P	P	20 35 58.0	+1.1
	1.4nm,0.4s,baz=18,slow=2.2,SNR=4.3						
	1.4nm,0.4s						
SONM	Songino Array	28.61	299	P	P	20 36 41.0	+1.3
	0.5nm,0.7s,baz=83,slow=8.1,SNR=2.2						
	0.5nm,0.7s						
ZALV	Zalesovo Beam	42.04	310	P	P	20 38 36.5	+1.9
	0.3nm,0.4s,baz=80,slow=8.7,SNR=1.7						
	0.3nm,0.4s						
MKAR	Makanchi Array	44.95	300	P	P	20 38 59.6	+1.4
	0.2nm,0.5s,baz=96,slow=6.1,SNR=2.5						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	46.41	306	P	P	20 39 11.2	+1.6
	0.7nm,0.8s,baz=75,slow=8.9,SNR=4.3						
	0.7nm,0.8s						
BVAR	Borovoye Array	50.66	311	P	P	20 39 44.1	+1.9
	0.5nm,0.5s,baz=69,slow=5.4,SNR=3.6						
	0.5nm,0.5s						
AAK	Ala-Archa	51.55	297	LR	LR	21 02 40.6	
	comp=Z,53nm,18.4s,baz=166,slow=37						
YKA	Yellowknife Ar	59.81	32	P	P	20 40 48.1	+0.1
	0.1nm,0.6s,baz=313,slow=7.6,SNR=2.1						
	0.1nm,0.6s						
WRA	Warramunga Arr	60.48	191	P	P	20 40 51.8	-1.4
	0.7nm,0.6s,baz=9.5,slow=7.0,SNR=9.7						
	0.7nm,0.6s						
ASAR	Alice Springs	64.20	191	P	P	20 41 17.2	-0.8
	0.5nm,0.7s,baz=7.8,slow=6.7,SNR=4.2						
	0.5nm,0.7s						
NEW	Newport	66.05	46	LR	LR	21 09 43.9	
	comp=Z,27nm,19.5s,baz=220,slow=36						
FINES	FINESS Array B	67.44	333	P	P	20 41 40.0	+1.6
	3.7nm,1.0s,baz=9.5,slow=5.8,SNR=4.2						
	3.7nm,1.0s						
KBZ	Khabaz	71.03	311	LR	LR	21 19 00.9	
	comp=Z,42nm,18.7s,baz=166,slow=41						
PDAR	Pinedale Array	73.59	48	P	P	20 42 17.0	+0.4
	0.5nm,0.5s,baz=288,slow=0.9,SNR=11						
	0.5nm,0.5s						
URZ	Urewera	83.30	155	LR	LR	21 18 44.2	
	comp=Z,43nm,18.3s,baz=340,slow=35						
TXAR	Lajitas Array	86.10	55	P	P	20 43 25.4	+1.0
	0.3nm,0.5s,baz=316,slow=2.5,SNR=3.4						
	0.3nm,0.5s						

IDC 17 20:34:27.4±4.7, 7°.00S×155°.21E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=137.1km s-min=38.2km az=119.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.00	236	P	P	20 39 44.6	+0.5
	0.3nm,0.6s,baz=62,slow=9.8,SNR=5.5						
	0.3nm,0.6s						
SONM	Songino Array	69.45	327	P	P	20 45 38.9	+1.1
	0.4nm,0.7s,baz=130,slow=5.9,SNR=3.6						
	0.4nm,0.7s						
MKAR	Makanchi Array	83.55	319	P	P	20 46 57.2	-0.4
	1.0nm,0.8s,baz=101,slow=6.3,SNR=9.3						
	1.0nm,0.8s						
ZALV	Zalesovo Beam	84.30	326	P	P	20 47 00.1	-1.0
	0.7nm,0.4s,baz=104,slow=6.1,SNR=4.1						
	0.7nm,0.4s						

NEIC 17 20:40:05.2±1.7, 7°.70S±0°.10×156°.36E±0°.05, h28km±6km, mb4.5/16, Error ellipse: s-maj=15.7km s-min=4.7km az=204.0

IDC 17 20:40:13.3±1.8, 7°.63S×156°.16E, h100km±19km, mb3.7/8, mbtmp4.0/12, Error ellipse: s-maj=22.3km s-min=13.4km az=1.0

ISC 17 20:40:02.9±0.5, 7°.70S±0°.07×156°.40E±0°.05, h10km, n39, σ$2^{s}46$/38, mb4.3/14, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.91	116	P	Pb	20 41 14.9	+2.9
	636nm,0.4s,baz=190,slow=13,SNR=3.1						
HNR				S	Sb	20 42 03.1	+3.7
	2µm,0.6s,baz=186,slow=9.2,SNR=1.9						
HNR	Honiara	3.91	116		Pn	20 41 03.8	+0.7
HNR				Sn	Sn	20 41 48.3	-0.8
RABL	Rabaul	5.47	309	Pn	Pn	20 41 23.8	-0.7
KRVT	Keravat (AS076	5.50	307	P	Pn	20 41 29.1	+4.1
	15nm,0.5s,baz=353,slow=15,SNR=1.3						
KRVT				S	Sn	20 42 36.9	+8.5
	46nm,0.5s,baz=133,slow=23,SNR=1.5						
PMG	Port Moresby	9.30	259	P	Pn	20 42 20.3	+3.1
	5.4nm,0.6s,baz=3.2,slow=4.9,SNR=4.2						
PMG				S	Sn	20 44 06.0	+4.1
	2.4nm,0.4s,baz=248,slow=16,SNR=1.4						
PMG	Port Moresby	9.30	259	Pn	Pn	20 42 16.3	-0.9
PATS	Pohnpei	14.56	8	Pn	Pn	20 43 29.6	+0.3
CTA	Charters Tower	15.76	218	P	Pn	20 43 48.0	+2.8
	1.4nm,0.8s,baz=46,slow=11,SNR=1.7						
OUENC	Ouen Island, N	17.76	147	P	Pn	20 44 07.8	-2.6
OUENC				IAmb	IAmb	20 44 30.3	
	comp=Z,33nm,1.1s						
WB0	Warramunga Arr	24.48	238	P	P	20 45 21.2	-1.3
WB0				IAmb	IAmb	20 45 30.1	
	comp=Z,12nm,1.3s						
FAKI	Fak Fak	24.50	280	P	P	20 45 20.5	-2.3
FAKI				IAmb	IAmb	20 45 50.6	
	comp=Z,20nm,0.9s						
WB2	Warramunga Arr	24.59	238	P	P	20 45 22.4	-1.1
WRA	Warramunga Arr	24.60	238	P	P	20 45 23.1	-0.5
	comp=Z,1.8nm,0.6s,baz=64,slow=9.2,SNR=22						
	comp=Z,1.8nm,0.6s						
WRA	Warramunga Arr	24.60	238	P	P	20 45 22.2	-1.4
ASAR	Alice Springs	26.79	231	P	P	20 45 42.2	-1.2
	comp=Z,0.5nm,0.7s,baz=64,slow=9.1,SNR=9.2						
	comp=Z,0.5nm,0.7s						
H11S3	WAKE ISLAND Hy	27.93	21	T	T	21 14 15.6	
	baz=202,slow=76,SNR=53						
H11S2	WAKE ISLAND Hy	27.94	21	T	T	21 14 15.8	
	baz=202,slow=76,SNR=34						
H11S1	WAKE ISLAND Hy	27.95	21	T	T	21 14 16.9	
	baz=202,slow=76,SNR=23						
KNRA	Kununurra	28.18	251	P	P	20 45 54.4	-1.5
FITZ	Fitzroy Crossi	31.66	248	P	P	20 46 25.7	-1.0
SOEI	Soe	31.82	264	P	P	20 46 26.5	-1.8
PEA0B	Petropavlovsk-	60.58	1	P	P	20 50 14.3	+0.7
PETK	Petropavlovsk-	60.58	1	P	P	20 50 14.3	+0.7
CMAR	Chiang Mai Arr	62.34	295	P	P	20 50 23.7	-2.5
	comp=Z,0.2nm,0.3s,baz=131,slow=5.2,SNR=2.4						
	comp=Z,0.2nm,0.3s						
ULN	Ulaanbaatar	70.34	327	P	P	20 51 16.2	-0.9
ULN				IAmb	IAmb	20 51 16.9	
	comp=Z,1.7nm,0.9s						
SONM	Songino Array	70.68	327	P	P	20 51 17.8	-1.3
	comp=Z,1.9nm,0.8s,baz=137,slow=7.5,SNR=16						
	comp=Z,1.9nm,0.8s						
SONM	Songino Array	70.68	327	P	P	20 51 17.9	-1.2
SONM				IAmb	IAmb	20 51 18.8	
	comp=Z,2.4nm,0.9s						
QSPA	South Pole Qui	82.28	180	P	P	20 52 25.4	+0.8
QSPA				IAmb	IAmb	20 52 28.7	
	comp=Z,6.4nm,1.4s						
M24K	Tolsona, Glenn	82.33	24	P	P	20 52 24.8	0.0
ILAR	Eielson Array	83.52	21	P	P	20 52 29.2	-1.5
	comp=Z,0.3nm,0.7s,baz=248,slow=5.2,SNR=2.1						
	comp=Z,0.3nm,0.7s						
MK31	Makanchi Array	84.85	318	P	P	20 52 36.0	-2.0
MK31				IAmb	IAmb	20 52 37.3	
	comp=Z,4.3nm,0.9s						
MKAR	Makanchi Array	84.85	318	P	P	20 52 36.3	-1.7
	comp=Z,4.7nm,0.8s,baz=104,slow=5.7,SNR=44						
	comp=Z,4.7nm,0.8s						
MKAR	Makanchi Array	84.85	318	P	P	20 52 35.8	-2.2
MAKZ	Makanchi	85.06	318	P	P	20 52 37.4	-1.7
ZAA0	Zalesovo Array	85.54	326	P	P	20 52 38.5	-2.7
ZAA0				IAmb	IAmb	20 52 39.4	
	comp=Z,3.7nm,0.8s						
ZALV	Zalesovo Beam	85.54	326	P	P	20 52 38.7	-2.5
	comp=Z,4.0nm,0.7s,baz=107,slow=5.4,SNR=17						
	comp=Z,4.0nm,0.7s						
ZALV	Zalesovo Beam	85.54	326	P	P	20 52 38.3	-2.9
YKA	Yellowknife Ar	96.30	28	P	P	20 53 30.8	-0.7
	comp=Z,0.2nm,0.6s,baz=272,slow=4.8,SNR=4.2						
	comp=Z,0.2nm,0.6s						
TORD	Torodi Ar. Bea	154.55	284	PKPbc	PKPbc	21 00 03.3	-1.8
	comp=Z,0.3nm,0.5s,baz=90,slow=0.4,SNR=2.3						

ROM 17 20:43:56.0±0.1, 42°.870N±0°.004×13°.344E±0°.005, h25km, ML0.7/4, 2D, Error ellipse: s-maj=0.4km s-min=0.3km az=40.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1241	Roccafluvione,	0.07	102	P	Pb	20 44 00.5	0.0
T1241				S	Sb	20 44 03.6	+0.2
T1241				AML	AML		
	comp=E,13µm,0.2s						
T1241				AML	AML		
	comp=E,91µm,0.5s						
T1241				AML	AML		
	comp=N,19µm,0.1s						
T1241				AML	AML		
	comp=N,161µm,0.7s						
T1245	Castelsantange	0.12	263	P	Pb	20 44 00.9	0.0
T1245				S	Sb	20 44 04.3	+0.1
T1245				AML	AML		
	comp=N,45µm,0.1s						
T1245				AML	AML		
	comp=E,58µm,0.2s						
MC2	Monte Cornacci	0.12	291	P	Pb	20 44 01.0	0.0
MC2				S	Sb	20 44 04.6	+0.2
T1214	Arquata del Tr	0.15	222	P	Pb	20 44 01.3	+0.1
T1214				S	Sb	20 44 04.8	+0.1
T1216	Preci, Frazion	0.24	275	⇓P	Pb	20 44 02.3	+0.1
T1212	Cascia, Frazio	0.25	242	P	Pb	20 44 02.4	+0.1
T1212				S	Sb	20 44 07.0	+0.3
FDMO	Fiordimonte	0.25	312	P	Pb	20 44 02.3	0.0
FDMO				S	Sb	20 44 07.0	+0.4
FDMO				AML	AML		
	comp=N,21µm,0.1s						
FDMO				AML	AML		
	comp=E,12µm,0.1s						
TERO	Teramo	0.31	142	⇓P	Pb	20 44 03.3	+0.2
TERO				AML	AML		
	comp=N,9µm,0.1s						
TERO				AML	AML		
	comp=E,11µm,0.1s						

ROM 17 20:44:22.6±0.0, 42°.779N±0°.002×13°.098E±0°.004, h10km, ML1.6/23, 8C-8D, Error ellipse: s-maj=0.3km s-min=0.2km az=102.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	Cascia, Frazio	0.05	235	P	Pg	20 44 25.0	+0.3
T1212				S	Sg	20 44 26.3	0.0
T1212				AML	AML		
	comp=N,2845µm,0.2s						
T1212				AML	AML		
	comp=N,2920µm,0.2s						
T1212				AML	AML		
	comp=E,1780µm,0.3s						
T1212				AML	AML		
	comp=N,2845µm,0.2s						
T1212				AML	AML		
	comp=E,1760µm,0.3s						
T1212				AML	AML		
	comp=N,2846µm,0.2s						
T1212				AML	AML		
	comp=E,1426µm,0.2s						
T1212				AML	AML		
	comp=E,1584µm,0.2s						
T1212				AML	AML		
	comp=N,2918µm,0.1s						
T1214	Arquata del Tr	0.08	103	⇓P	Pg	20 44 25.6	+0.4
T1214				S	Sg	20 44 27.2	+0.2
T1214				AML	AML		
	comp=E,2360µm,0.2s						
T1214				AML	AML		
	comp=E,2305µm,0.2s						
T1214				AML	AML		
	comp=E,2355µm,0.2s						
T1214				AML	AML		
	comp=N,2775µm,0.2s						
T1214				AML	AML		
	comp=N,2695µm,0.2s						
T1214				AML	AML		
	comp=N,2775µm,0.2s						
T1214				AML	AML		
	comp=N,2695µm,0.2s						
T1214				AML	AML		
	comp=N,2772µm,0.2s						
T1214				AML	AML		
	comp=E,2302µm,0.2s						
T1214				AML	AML		
	comp=E,2356µm,0.2s						
T1214				AML	AML		
	comp=N,2695µm,0.2s						
T1245	Castelsantange	0.10	40	⇓P	Pg	20 44 25.8	+0.4
T1245				S	Sg	20 44 27.9	+0.4
T1245				AML	AML		
	comp=E,1495µm,0.8s						
T1245				AML	AML		
	comp=N,1620µm,0.3s						
T1245				AML	AML		
	comp=E,1495µm,0.7s						
T1245				AML	AML		
	comp=N,1620µm,0.3s						
T1245				AML	AML		
	comp=E,1455µm,0.7s						
T1245				AML	AML		
	comp=N,1585µm,0.3s						
T1245				AML	AML		

	comp=E,1151µm,0.2s						
T1245				AML	AML		
	comp=N,1617µm,0.3s						
T1245				AML	AML		
	comp=N,1582µm,0.3s						
T1245				AML	AML		
	comp=E,1244µm,0.2s						
T1218	**Civita (PG)**	0.11	173	⇑P	Pg	20 44 25.9	+0.4
T1218				S	Sg	20 44 28.0	+0.4
T1218				AML	AML		
	comp=E,970µm,0.2s						
T1218				AML	AML		
	comp=E,934µm,0.2s						
T1218				AML	AML		
	comp=E,970µm,0.2s						
T1218				AML	AML		
	comp=N,2170µm,1.6s						
T1218				AML	AML		
	comp=E,934µm,0.2s						
T1218				AML	AML		
	comp=N,2240µm,1.6s						
T1218				AML	AML		
	comp=N,2037µm,0.2s						
T1218				AML	AML		
	comp=E,970µm,0.2s						
T1218				AML	AML		
	comp=E,934µm,0.2s						
T1218				AML	AML		
	comp=N,2043µm,0.2s						
T1217	**Poggiodomo (PG**	0.14	241	P	Pg	20 44 26.4	+0.5
T1217				S	Sg	20 44 29.0	+0.8
T1217				AML	AML		
	comp=E,250µm,0.7s						
T1217				AML	AML		
	comp=N,432µm,0.5s						
T1217				AML	AML		
	comp=E,250µm,0.7s						
T1217				AML	AML		
	comp=N,431µm,0.5s						
T1217				AML	AML		
	comp=N,275µm,0.1s						
T1217				AML	AML		
	comp=E,235µm,0.1s						
T1217				AML	AML		
	comp=N,281µm,0.2s						
T1217				AML	AML		
	comp=E,245µm,0.1s						
MC2	**Monte Cornacci**	0.15	27	⇓P	Pg	20 44 26.7	+0.6
MC2				S	Sg	20 44 29.6	+0.9
MMO1	**Montemonaco**	0.21	54	P	Pg	20 44 27.5	+0.5
MMO1				S	Sg	20 44 31.1	+1.1
SMA1	**SAN MARTINO**	0.23	130	P	Pg	20 44 27.9	+0.5
SMA1				S	Sg	20 44 32.6	+2.0
SMA1				AML	AML		
	comp=N,333µm,0.3s						
SMA1				AML	AML		
	comp=E,437µm,0.5s						
SMA1				AML	AML		
	comp=N,333µm,0.3s						
SMA1				AML	AML		
	comp=E,437µm,0.5s						
T1256	**Bolognola (MC)**	0.25	22	P	Pb	20 44 28.6	-0.7
T1256				S	Sg	20 44 32.5	+1.3
T1256				AML	AML		
	comp=N,249µm,0.4s						
T1256				AML	AML		
	comp=N,177µm,0.4s						
T1256				AML	AML		
	comp=E,156µm,0.3s						
T1256				AML	AML		
	comp=E,182µm,0.4s						
FDMO	**Fiordimonte**	0.26	358	P	Pg	20 44 28.5	+0.6
FDMO				S	Sb	20 44 32.7	-1.2
FDMO				AML	AML		
	comp=E,196µm,0.2s						
FDMO				AML	AML		
	comp=N,210µm,0.2s						
FDMO				AML	AML		
	comp=E,196µm,0.2s						
FDMO				AML	AML		
	comp=N,209µm,0.2s						
T1241	**Roccafluvione,**	0.26	72	⇑P	Pg	20 44 28.4	+0.5
T1241				S	Sb	20 44 32.7	-1.2
T1241				AML	AML		
	comp=E,349µm,0.9s						
T1241				AML	AML		
	comp=N,56500µm,1.6s						
T1241				AML	AML		
	comp=E,303µm,1.0s						
T1241				AML	AML		
	comp=N,566µm,0.3s						
T1241				AML	AML		
	comp=E,349µm,1.0s						
T1241				AML	AML		
	comp=N,56500µm,1.6s						
T1241				AML	AML		
	comp=N,565µm,0.3s						
T1241				AML	AML		
	comp=N,565µm,0.3s						
T1241				AML	AML		
	comp=E,296µm,0.2s						
T1241				AML	AML		
	comp=E,310µm,0.2s						
CESI	**CESI - Serrava**	0.27	328	⇑P	Pg	20 44 28.7	+0.6
CESI				S	Sb	20 44 33.1	-1.1
CESI				AML	AML		
	comp=N,650µm,0.3s						
CESI				AML	AML		
	comp=E,284µm,0.3s						
CESI				AML	AML		
	comp=E,267µm,0.3s						
CESI				AML	AML		
	comp=N,650µm,0.3s						
RM33	**Pellescritta (**	0.28	162	⇑P	Pg	20 44 28.7	+0.3
RM33				S	Sg	20 44 33.4	+1.1
RM33				AML	AML		
	comp=E,168µm,0.5s						
RM33				AML	AML		
	comp=N,236µm,0.2s						
RM33				AML	AML		
	comp=E,170µm,0.3s						
RM33				AML	AML		
	comp=N,224µm,0.2s						
RM33				AML	AML		
	comp=E,146µm,0.3s						
RM33				AML	AML		
	comp=N,236µm,0.2s						
T1219	**Muccia, Frazio**	0.28	346	P	Pg	20 44 28.9	+0.5
T1219				S	Sb	20 44 33.5	-1.2
T1219				AML	AML		
	comp=N,223µm,1.5s						
T1219				AML	AML		
	comp=E,249µm,0.3s						
T1219				AML	AML		
	comp=N,179µm,0.4s						
T1219				AML	AML		
	comp=E,251µm,0.3s						
T1219				AML	AML		
	comp=E,249µm,0.3s						
T1219				AML	AML		
	comp=N,179µm,0.4s						
T1219				AML	AML		
	comp=E,208µm,0.2s						
T1219				AML	AML		
	comp=N,163µm,0.2s						
T1219				AML	AML		
	comp=N,169µm,0.2s						
T1219				AML	AML		
	comp=E,200µm,0.1s						
T1211	**Morro Reatino**	0.30	216	P	Pg	20 44 29.3	+0.5
T1211				S	Sb	20 44 34.2	-1.0
T1211				AML	AML		
	comp=E,186µm,0.1s						
T1211				AML	AML		
	comp=N,196µm,1.1s						
T1211				AML	AML		
	comp=E,183µm,0.1s						
T1211				AML	AML		
	comp=E,187µm,0.1s						
T1211				AML	AML		
	comp=N,185µm,0.2s						
T1211				AML	AML		
	comp=N,175µm,0.2s						
ARRO	**Arrone**	0.32	231	P	Pg	20 44 29.6	+0.6
ARRO				S	Sb	20 44 35.1	-0.3
ARRO				AML	AML		
	comp=N,78µm,1.3s						
ARRO				AML	AML		
	comp=E,61µm,1.6s						
ARRO				AML	AML		
	comp=N,65µm,0.1s						
ARRO				AML	AML		
	comp=E,60µm,0.4s						
T1220	**Camerino, Fraz**	0.33	359	P	Pb	20 44 30.1	-0.5
T1220				S	Sb	20 44 35.2	-0.8
T1220				AML	AML		
	comp=E,834µm,0.3s						
T1220				AML	AML		
	comp=N,580µm,0.6s						
T1220				AML	AML		
	comp=E,834µm,0.4s						
T1220				AML	AML		
	comp=N,580µm,0.6s						
T1220				AML	AML		
	comp=N,552µm,0.3s						
T1220				AML	AML		
	comp=E,834µm,0.3s						
CAMP	**Campotosto**	0.33	137	P	Pg	20 44 29.7	+0.4
CAMP				AML	AML		
	comp=E,64µm,0.5s						
CAMP				AML	AML		
	comp=N,52µm,0.4s						
CAMP				AML	AML		
	comp=N,52µm,0.4s						
CAMP				AML	AML		
	comp=E,64µm,0.5s						
T1247	**Pizzolo (AQ)**	0.37	156	P	Pg	20 44 30.2	+0.3
T1247				S	Sb	20 44 36.2	-0.9
T1247				AML	AML		
	comp=E,184µm,1.2s						
T1247				AML	AML		
	comp=N,166µm,1.1s						
T1247				AML	AML		
	comp=E,170µm,0.3s						
T1247				AML	AML		
	comp=N,159µm,0.2s						
T1222	**Castel Sant'An**	0.38	187	P	Pg	20 44 30.7	+0.5
T1222				AML	AML		
	comp=E,78µm,1.5s						
T1222				AML	AML		
	comp=N,84µm,0.6s						
T1222				AML	AML		
	comp=E,74µm,0.3s						
T1222				AML	AML		
	comp=N,79µm,0.3s						
MOMA	**Monte Martano**	0.39	274	⇑P	Pg	20 44 30.9	+0.5
MOMA				AML	AML		
	comp=N,170µm,0.2s						
MOMA				AML	AML		
	comp=E,160µm,0.3s						
MOMA				AML	AML		
	comp=N,169µm,0.2s						
MOMA				AML	AML		
	comp=E,160µm,0.3s						
MOMA				AML	AML		
	comp=E,195µm,0.3s						
TERO	**Teramo**	0.40	113	⇑P	Pg	20 44 30.7	+0.1
TERO				AML	AML		
	comp=N,117µm,0.5s						
TERO				AML	AML		
	comp=E,93µm,0.2s						
TERO				AML	AML		
	comp=N,103µm,0.1s						
TERO				AML	AML		
	comp=N,95µm,0.1s						
TERO				AML	AML		
	comp=E,93µm,0.2s						
TERO				AML	AML		
	comp=E,87µm,0.2s						
ASSB	**Assisi San Ben**	0.42	309	⇓P	Pg	20 44 31.2	+0.4
ASSB				AML	AML		
	comp=E,144µm,0.1s						
ASSB				AML	AML		
	comp=N,168µm,0.4s						
ASSB				AML	AML		
	comp=E,144µm,0.1s						
ASSB				AML	AML		
	comp=N,168µm,0.4s						
CESX	**Cesi**	0.42	246	P	Pg	20 44 29.1	-1.7
OFFI	**Offida**	0.46	70	⇓P	Pb	20 44 32.9	+0.2
OFFI				AML	AML		
	comp=E,138µm,0.8s						
OFFI				AML	AML		
	comp=N,149µm,0.7s						
OFFI				AML	AML		
	comp=N,117µm,0.5s						
OFFI				AML	AML		
	comp=E,133µm,0.3s						
GIGS	**Gran Sasso**	0.48	133	⇑P	Pg	20 44 32.1	+0.1
GIGS				AML	AML		
	comp=N,13µm,0.2s						
GIGS				AML	AML		
	comp=E,22µm,0.3s						
SNTG	**Esanatoglia**	0.49	346	⇓P	Pb	20 44 33.0	-0.3
SNTG				AML	AML		
	comp=N,66µm,0.1s						
SNTG				AML	AML		
	comp=E,54µm,0.5s						
SNTG				AML	AML		
	comp=E,46µm,0.2s						
SNTG				AML	AML		
	comp=N,66µm,0.1s						
ATCC	**AVT- Casa Cast**	0.53	321	⇓P	Pg	20 44 33.3	+0.4
ATCC				AML	AML		
	comp=E,90µm,0.2s						
ATCC				AML	AML		
	comp=N,97µm,0.2s						
ATCC				AML	AML		
	comp=E,90µm,0.2s						
ATCC				AML	AML		
	comp=N,97µm,0.2s						
ARVD	**Arcevia**	0.73	351	⇑P	Pb	20 44 37.6	+0.3
ARVD				S	Sb	20 44 48.6	+1.2
ARVD				AML	AML		
	comp=E,25µm,1.0s						
ARVD				AML	AML		
	comp=N,19µm,0.5s						
ARVD				AML	AML		
	comp=E,19µm,0.3s						
ARVD				AML	AML		
	comp=N,14µm,0.3s						
VIVA	**Pratoni del Vi**	1.06	193	⇓P	Pn	20 44 44.7	+1.2

IDC ***17*** *20:53:43.2±0.8, 1°.67N×126°.69E, h0^{km}, mb4.1/7, mbtmp4.2/8, ML3.9/1, Error ellipse: s-maj=47.2km s-min=15.7km az=73.0*

DJA ***17*** *20:53:49.2±0.3, 1˚N±3˚×12˚7E±˚, h10^{km}, M4.1/12, mb4.3/9, MLv4.0/12*

NEIC ***17*** *20:53:49.5±1.5, 1°.59N±0°.08×126°.58E±0°.06, h48^{km}±7^{km}, mb4.3/40, Error ellipse: s-maj=11.6km s-min=7.1km az=204.0*

ISC 17 20:53:49.2±0.4**, 1°.59N**±0°.05×**126°.56E**±0°.05**, h47^{km}, n86,** σ1^{s}.49/94**, mb4.4**/24**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	1.15	135		Pn	20 54 08.8	-0.1
TNTI				Sn	Sn	20 54 23.2	-0.2
TNTI	**Ternate**	1.15	135	P	Pn	20 54 09.1	+0.2
TNTI	**Ternate**	1.15	135	P	Pn	20 54 09.2	+0.3
TNTI				S	Sn	20 54 23.4	-0.1
SGSI	**Sangihe**	2.32	334	P	Pn	20 54 31.0	+6.0
LBMI	**Labuha**	2.41	157	P	Pn	20 54 26.7	+0.5
SANI	**Sanana**	3.66	189	P	Pn	20 54 43.3	-0.2
SANI	**Sanana**	3.66	189	P	Pn	20 54 43.2	-0.2
GTOI	**Gorontalo**	3.67	255	P	Pn	20 54 46.0	+2.4
LUWI	**Luwuk**	4.61	235	Pn	Pn	20 54 56.7	+0.4
LUWI				Sn	Sn	20 55 48.3	-0.3
LUWI	**Luwuk**	4.61	235	P	Pn	20 54 58.0	+1.7
LUWI	**Luwuk**	4.61	235	P	Pn	20 54 57.4	+1.1
MRSI	**Marisa**	4.75	257	P	Pn	20 55 01.0	+2.7
NLAI	**Namlea**	4.83	174	P	Pn	20 55 00.0	+0.6
TOLI2	**Tolitoli**	5.80	265	Pn	Pn	20 55 11.2	-1.5
MPSI	**Mapaga**	6.78	259	P	Pn	20 55 28.7	+2.5
	13nm,0.8s,0.1nm						
FAKI	**Fak Fak**	7.24	128	Pn	Pn	20 55 31.3	-1.3
SPSI	**Sidrap Palu**	8.75	231	P	Pn	20 55 54.1	+0.9
	24nm,0.4s						
MYLDM	**Lahad Datu**	8.80	294	Pn	Pn	20 55 54.8	+0.9
BKSI	**Bulukumba**	9.41	223	P	Pn	20 56 03.8	+1.5
	17nm,0.6s						
KAPI	**Kappang**	9.45	226	Pn	Pn	20 56 04.5	+1.7
	1.2nm,0.3s,baz=42,slow=5.1,SNR=7.0						
	6.6nm,0.5s						
KAPI	**Kappang**	9.45	226		Pn	20 56 03.9	+1.0
BSSI	**Bau Bau, Buton**	9.79	218	P	Pn	20 56 07.4	-0.1
	27nm,1.0s						
KKM	**Kota Kinabalu**	11.23	293	Pn	Pn	20 56 26.2	-1.0
SOEI	**Soe**	11.50	191	Pn	Pn	20 56 31.0	-0.1
MTN	**Manton Dam**	15.04	163	Pn	Pn	20 57 18.6	-0.3
MTN				IAmb	IAmb	20 57 50.9	
	comp=Z,22nm,1.4s						
JAGI	**Jajag, Banyuwa**	15.90	231		Pn	20 57 31.6	+1.6
JAGI				IAmb	IAmb	20 57 52.5	
	comp=Z,24nm,1.1s						
KSM	**Kuching**	16.25	270		P	20 57 35.8	-1.0
KNRA	**Kununurra**	17.30	173		Pn	20 57 47.0	-0.4
KNRA				IAmb	IAmb	20 58 18.9	
	comp=Z,29nm,1.2s						
KNRA	**Kununurra**	17.30	173	P	P	20 57 47.9	-0.5
UGM	**Wanagama**	18.57	239	P	P	20 58 02.3	-0.2
FITZ	**Fitzroy Crossi**	19.59	183	P	P	20 58 11.8	-1.7
GUMO	**Guam**	21.68	56	P	P	20 58 36.0	-0.2
YULB	**Yu-li**	22.26	347	P	P	20 58 42.3	-0.1
YULB				IAmb	IAmb	20 58 58.9	
	comp=Z,9.9nm,0.9s						
TPUB	**Ta-pu**	22.33	346	P	P	20 58 44.4	+1.2
WB0	**Warramunga Arr**	22.58	160	P	P	20 58 44.7	-1.1
WB0				IAmb	IAmb	20 58 47.4	
	comp=Z,10nm,0.6s						
WRAB	**Tennant Creek**	22.72	161	P	P	20 58 46.1	-1.1
WRAB				IAmb	IAmb	20 58 49.3	
	comp=Z,11nm,0.8s						
WRAB	**Tennant Creek**	22.72	161	P	P	20 58 47.1	-0.2
SSLB	**Suanglung**	22.72	347	P	P	20 58 47.2	-0.2
SSLB				IAmb	IAmb	20 59 02.7	
	comp=Z,20nm,1.1s						
WRA	**Warramunga Arr**	22.72	161	P	P	20 58 46.9	-0.5
	comp=Z,8.5nm,0.6s,baz=334,slow=11,SNR=77						
WRA				PcP	PcP	21 02 38.9	+0.5
	comp=Z,0.4nm,0.7s,baz=334,slow=2.0,SNR=2.3						
WRA				S	S	21 02 50.6	-2.1
	comp=Z,0.5nm,0.9s,baz=327,slow=17,SNR=2.8						
	comp=Z,8.5nm,0.6s						
WRA	**Warramunga Arr**	22.72	161	P	P	20 58 45.5	-1.9
WB2	**Warramunga Arr**	22.73	161	P	P	20 58 45.2	-2.2
WB2				IAmb	IAmb	20 58 49.3	
	comp=Z,12nm,0.8s						
MBWA	**Marble Bar**	23.58	196	P	P	20 58 53.9	-1.9
MBWA				IAmb	IAmb	20 59 36.9	
	comp=Z,17nm,1.1s						
MBWA	**Marble Bar**	23.58	196	P	P	20 58 54.6	-1.2
PSA00	**Pilbara Seismi**	23.94	196	P	P	20 58 57.4	-1.8
PSA00				IAmb	IAmb	20 59 29.0	
	comp=Z,26nm,1.5s						
QIS	**Mount Isa**	25.45	151	P	P	20 59 15.4	+2.4
AS31	**Alice Springs**	26.10	165	P	P	20 59 18.5	-0.4
ASAR	**Alice Springs**	26.10	165	P	P	20 59 19.6	+0.7
	comp=Z,2.8nm,0.5s,baz=347,slow=8.7,SNR=55						
ASAR				PcP	PcP	21 02 46.8	+1.1
	comp=Z,0.6nm,0.7s,baz=337,slow=2.0,SNR=3.1						
ASAR				S	S	21 03 56.0	+8.8
	comp=Z,0.7nm,0.8s,baz=349,slow=21,SNR=4.4						
	comp=Z,2.8nm,0.5s						
ASAR	**Alice Springs**	26.10	165	P	P	20 59 18.3	-0.5
AS01	**Alice Springs**	26.11	164	P	P	20 59 19.8	+0.8
WRKA	**Warakurna**	26.53	176	P	P	20 59 24.0	+1.3
GSI	**Gunungsitoli**	28.98	270	P	P	20 59 42.4	-2.4
GSI				IAmb	IAmb	21 00 00.2	
	comp=Z,6.5nm,0.9s						
MEEK	**Meekatharra**	29.09	195	P	P	20 59 45.9	+0.3
PHRA	**Phrae**	30.81	305	P	P	21 00 00.9	0.0
JNU	**Nakatsue**	31.62	7	P	P	21 00 08.6	+0.7
	comp=Z,5.2nm,0.9s,baz=171,slow=10,SNR=2.9						
	comp=Z,5.2nm,0.9s						
CHTO	**Chiang Mai**	32.02	304	P	P	21 00 10.0	-1.5
FORT	**Forrest**	32.22	178	P	P	21 00 11.9	-1.2
PZH	**PanZhiHua**	34.38	318	P	P	21 00 35.0	+2.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
BBOO	**Buckleboo**	35.38	166	P	P	21 00 40.5	-0.1
NWAO	**Narrogin (SRO)**	35.45	194	P	P	21 00 41.0	-0.1
STKA	**Stephens Creek**	36.21	158	P	P	21 00 48.1	+0.4
	comp=Z,2.1nm,0.5s,baz=334,slow=9.2,SNR=8.1						
	comp=Z,2.1nm,0.5s						
STKA	**Stephens Creek**	36.21	158	P	P	21 00 48.0	+0.3
HHC	**Hu-ho-hao-te**	41.37	343	*e*P	P	21 01 34.3	+3.4
HHC				pmax	pmax		
	comp=Z,160nm,5.8s						
CAN	**Canberra**	42.30	152	P	P	21 01 37.9	-0.6
USA0B	**Ussuriysk Arra**	42.70	6	P	P	21 01 40.8	-0.7
USA0B				IAmb	IAmb	21 02 02.1	
	comp=Z,3.7nm,0.7s						
SONM	**Songino Array**	49.26	342	P	P	21 02 34.1	+0.7
	comp=Z,0.5nm,0.7s,baz=156,slow=9.2,SNR=4.5						
SONM				PcP	PcP	21 03 56.4	+0.7
	comp=Z,0.4nm,0.7s,baz=149,slow=2.3,SNR=2.5						
	comp=Z,0.5nm,0.7s						
SONM	**Songino Array**	49.26	342	P	P	21 02 34.3	+0.9
WMQ	**Urumqi**	54.38	326	*e*P	P	21 03 12.5	+1.0
WMQ				pP	pP	21 03 23.6	-0.6
WMQ				sP	sP	21 03 31.6	+2.2
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
MK31	**Makanchi Array**	59.21	326	P	P	21 03 45.5	-0.2
MK31				IAmb	IAmb	21 03 50.3	
	comp=Z,1.8nm,0.8s						
MKAR	**Makanchi Array**	59.21	326	P	P	21 03 45.7	0.0
	comp=Z,2.2nm,0.6s,baz=119,slow=8.3,SNR=26						
MKAR				PcP	PcP	21 04 34.3	+0.6
	comp=Z,0.9nm,0.8s,baz=114,slow=5.4,SNR=4.4						
	comp=Z,2.2nm,0.6s						
MKAR	**Makanchi Array**	59.21	326	P	P	21 03 45.3	-0.4
MAKZ	**Makanchi**	59.40	326	P	P	21 03 46.2	-0.7
MAKZ				IAmb	IAmb	21 03 51.5	
	comp=Z,2.0nm,0.8s						
KDJ	**Kajisay**	59.83	319	P	P	21 03 50.1	-0.2
ZALV	**Zalesovo Beam**	62.41	334	P	P	21 04 07.2	-0.1
	comp=Z,0.4nm,0.4s,baz=142,slow=7.3,SNR=2.4						
	comp=Z,0.4nm,0.4s						
KBL	**Kabul**	62.69	308	P	P	21 04 09.0	-0.8
GAR	**Garm**	63.25	313	P	P	21 04 12.1	-1.2
GAR				IAmb	IAmb	21 04 16.4	
	comp=Z,2.5nm,0.6s						
KURK	**Kurchatov**	63.45	328	P	P	21 04 13.2	-1.0
KK31	**Karatay Array**	64.68	318	P	P	21 04 22.0	-0.5
KKAR	**Karatay Array**	64.68	318	P	P	21 04 22.1	-0.4
KIWB	**Kanaga Island**	68.55	34	P	P	21 04 45.1	-1.9
ABKAR	**Akbulak array**	73.69	321	P	P	21 05 17.6	-0.5
ABKAR	**Akbulak array**	73.69	321	P	P	21 05 17.9	-0.3
ABKAR				IAmb	IAmb	21 05 21.1	
	comp=Z,4.0nm,1.4s						
ARU	**Arti**	76.64	328	P	P	21 05 34.5	-0.5
ARU				IAmb	IAmb	21 05 39.4	
	comp=Z,5.5nm,1.3s						
RAYN	**Ar Rayn**	81.17	293	P	P	21 06 00.2	-0.4
RAYN				IAmb	IAmb	21 06 02.5	
	comp=Z,3.7nm,0.9s						
VNDA	**Vanda**	81.34	173	P	P	21 06 01.2	+0.9
VNDA				IAmb	IAmb	21 06 18.3	
	comp=Z,6.2nm,1.3s						
GEVA	**Gevas**	83.91	308	P	P	21 06 15.7	+1.0
M20K	**Styx River**	84.03	28	P	P	21 06 14.6	-0.1

NOU ***17*** *20:54:09.6, 41°.88S×174°.42E, h8^{km}, MLv3.8/9, Cook Strait, New Zealand*

WEL ***17*** *20:54:10.2±0.5, 42˚S±4˚×17˚4E±˚, h9^{km}±4^{km}, M3.3/15, ML3.6/15, MLv3.3/15, Error ellipse: s-maj=0.0km s-min=0.0km az=168.7, confirmed*

ISC 17 20:54:09.1±1.3**, 41°.84S**±0°.04×**174°.37E**±0°.03**, h4^{km}**±11^{km}**, n81,** σ1^{s}.08/88**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	0.14	309	P	Pg	20 54 11.6	-0.3
CMWZ				S	Sg	20 54 13.9	0.0
BSWZ	**Blackbirch Sta**	0.39	289	P	Pg	20 54 16.7	+0.2
BSWZ				S	Sg	20 54 22.8	+1.3
TUWZ	**Tuamarina**	0.52	322	P	Pg	20 54 18.5	-0.5
SNZO	**South Karori**	0.59	26	P	Pg	20 54 20.7	+0.4
TCW	**Tory Channel**	0.63	354	P	Pg	20 54 20.4	-0.8
WEL	**Wellington**	0.63	29	P	Pg	20 54 21.5	+0.3

PLWZ	Palliser	0.72	68	P	Pb	20 54 24.9	+0.7
PLWZ				S	Sn	20 54 37.9	+0.3
KHZ	Kahutara	0.84	227	P	Pn	20 54 27.6	-0.1
KHZ	Kahutara	0.84	227	P	Pn	20 54 27.8	0.0
CAW	Cannon Point	0.90	36	P	Pg	20 54 26.2	-0.2
CAW				S	Sn	20 54 42.0	0.0
PAWZ	Paruwai Farm	0.92	60	P	Pg	20 54 27.8	+1.1
PAWZ				S	Sn	20 54 42.9	+0.5
NNZ	Nelson	0.97	310	P	Pg	20 54 26.6	-1.0
KIW	Kapiti Island	1.06	23	P	Pg	20 54 28.6	-0.8
KIW				S	Sg	20 54 43.5	+0.3
TRWZ	Traveller	1.09	66	P	Pg	20 54 30.0	+0.1
DUWZ	D'Urville Isla	1.09	342	P	Pg	20 54 28.5	-1.5
DUWZ				S	Sb	20 54 44.6	-0.5
MTW	Mount Morrison	1.09	52	P	Pg	20 54 30.1	+0.1
THZ	Tophouse	1.09	274	P	Pg	20 54 30.3	+0.2
OGWZ	Otaki Gorge	1.19	31	P	Pb	20 54 31.0	-1.2
HOWZ	Holdsworth Sta	1.28	43	P	Pn	20 54 32.7	-1.0
MRNZ	Matariki Terra	1.28	290	P	Pn	20 54 33.3	-0.5
TKNZ	Takaka Hill	1.33	307	P	Pn	20 54 33.5	-0.9
TMWZ	Te Maipa	1.36	58	P	Pn	20 54 33.6	-1.3
MRZ	Mangatainoka R	1.49	38	P	Pn	20 54 35.7	-0.9
GVZ	Greta Valley S	1.50	221	P	Pn	20 54 36.7	0.0
TIWZ	Tintock	1.56	48	P	Pn	20 54 36.6	-1.0
CPWZ	Castlepoint	1.67	57	P	Pn	20 54 38.4	-0.6
QRZ	Quartz Range	1.71	306	P	Pn	20 54 39.8	+0.1
QRZ	Quartz Range	1.71	306	P	Pn	20 54 39.9	+0.1
PRWZ	Pori Road	1.77	44	P	Pn	20 54 41.0	+0.6
POWZ	Post Office Ro	1.79	37	P	Pn	20 54 40.2	-0.6
LTZ	Lake Taylor	1.82	238	P	Pn	20 54 41.0	-0.1
BFZ	Birch Farm	1.83	51	P	Pn	20 54 41.1	-0.2
BFZ	Birch Farm	1.83	51	P	Pn	20 54 40.3	-1.0
AMCZ	Amberley	1.84	223	P	Pn	20 54 41.0	-0.5
DSZ	Denniston Nort	1.92	272	P	Pn	20 54 42.9	+0.3
DVHZ	Dannevirke	2.06	42	P	Pn	20 54 43.0	-1.4
WAZ	Wanganui	2.13	13	P	Pb	20 54 47.7	-0.6
TSZ	Takapari Road	2.15	35	P	Pn	20 54 44.6	-1.2
MQZ	McQueen's Vall	2.25	213	P	Pn	20 54 45.6	-1.5
OXZ	Oxford	2.27	228	P	Pn	20 54 46.4	-1.0
WPHZ	Waipukurau	2.37	42	P	Pg	20 54 55.5	+1.1
PNHZ	Pukenui	2.38	36	P	Pn	20 54 47.3	-1.5
LREZ	Lake Rotokare	2.38	1	P	Pb	20 54 52.2	-0.3
KHEZ	Kahui Hut	2.56	354	P	Pn	20 54 52.8	+1.4
KHEZ	Kahui Hut	2.56	354	P	Pn	20 54 53.5	+2.1
NEZ	North Egmont	2.58	355	P	Pn	20 54 53.6	+1.9
MTVZ	Mangateitei	2.59	19	P	Pn	20 54 53.2	+1.3
MOVZ	Moawhango	2.65	24	P	Pb	20 54 55.9	-1.2
PKVZ	Pokaka	2.66	17	P	Pb	20 54 55.5	-1.7
PKE	Pukeiti	2.66	354	P	Pn	20 54 54.8	+2.1
BHHZ	Black Hill Sta	2.68	29	P	Pn	20 54 52.4	-0.6
WNVZ	Wahianoa	2.68	21	P	Pn	20 54 53.1	0.0
TRVZ	Turoa	2.69	20	P	Pn	20 54 54.6	+1.2
WHVZ	Whangaehu Hut	2.72	20	P	Pb	20 54 57.6	-0.8
FWVZ	Far West T-bar	2.74	20	P	Pn	20 54 56.3	+2.3
TUVZ	Tukino	2.75	21	P	Pb	20 54 56.7	-2.2
NGZ	Ngauruhoe	2.82	20	P	Pn	20 54 55.8	+0.7
SNVZ	South Ngauruho	2.82	21	P	Pb	20 54 59.2	-0.9
OTVZ	Oturere	2.85	21	P	Pn	20 54 55.4	-0.1
NNVZ	North Ngauruho	2.87	20	P	Pn	20 54 56.0	+0.3
KWHZ	Kaweka Forest	2.88	34	P	Pb	20 55 01.4	+0.4
WTVZ	West Tongariro	2.88	19	P	Pn	20 54 58.2	+2.4
TWVZ	Taurewa	2.88	17	P	Pn	20 54 58.3	+2.4
TMVZ	Te Maari	2.91	21	P	Pn	20 54 56.3	+0.1
KRVZ	Karewarewa	2.91	20	P	Pb	20 55 00.9	-0.7
NTVZ	North Tongarir	2.92	20	P	Pn	20 54 56.6	+0.3
WVZ	Waitaha Valley	2.95	244	P	Pn	20 54 57.0	+0.3
KATZ	Kakaramea	3.04	20	P	Pb	20 55 03.5	-0.3
RPZ	Rata Peaks	3.07	231	P	Pn	20 54 57.6	-0.8
RPZ	Rata Peaks	3.07	231	P	Pn	20 54 57.8	-0.7
BKZ	Black Stump Fm	3.12	32	P	Pn	20 54 59.9	+0.7
BKZ	Black Stump Fm	3.12	32	P	Pb	20 55 04.6	-0.6
ARCZ	Arundel	3.15	227	P	Pn	20 54 58.4	-1.1
GCSZ	Gaunt Creek Bo	3.33	242	P	Pn	20 55 03.1	+1.2
HIZ	Hauiti	3.34	7	P	Pn	20 55 03.0	+0.9
HIZ	Hauiti	3.34	7	P	Pn	20 55 03.3	+1.2
TMZ	Timaru	3.54	223	P	Pn	20 55 03.8	-1.0
FOZ	Fox Glacier	3.76	242	P	Pn	20 55 08.9	+1.2
LBZ	Lake Benmore	3.98	229	P	Pn	20 55 11.5	+0.6
ODZ	Otahua Downs	4.20	219	P	Pn	20 55 13.2	-0.6
JCZ	Jackson Bay	4.66	240	P	Pn	20 55 23.6	+3.3

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*INMG **17** 21:04:40.0, 7°.53S×156°.22E, h10^{km}, mb4.6*
*NEIC **17** 21:04:40.5±2.1, 7°.53S±0°.07×156°.22E±0°.04, h10^{km}±1^{km}, mb4.6/11, Error ellipse: s-maj=13.2km s-min=4.9km az=335.0*
*IDC **17** 21:04:48.5±2.4, 7°.55S×156°.14E, h79^{km}±21^{km}, mb4.0/14, mbtmp4.3/18, MS3.5/3, Error ellipse: s-maj=21.4km s-min=19.5km az=136.0*
ISC 17 21:04:39.9±0.5**, 7°.67S**±0°.07×**156°.27E**±0°.05**, h10^{km}, n44, σ1^{s}.70**/45**, mb4.4**/20**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.04	116	P	Pb	21 05 51.2	0.0
	647nm,0.3s,baz=222,slow=15,SNR=2.9						
HNR				S	Sb	21 06 43.5	+3.4
	1µm,0.3s,baz=317,slow=19,SNR=3.6						
HNR	Honiara	4.04	116	Pn	Pn	21 05 47.9	+6.1
HNR				Sn	Sn	21 06 30.3	+1.1
RABL	Rabaul	5.35	310	Pn	Pn	21 06 03.9	+4.0
KRVT	Keravat (AS076	5.38	308	P	Pn	21 06 04.0	+3.7
	25nm,0.4s,baz=194,slow=18,SNR=1.4						
KRVT				S	Sn	21 07 06.9	+4.5
	63nm,0.6s,baz=172,slow=19,SNR=1.7						
PMG	Port Moresby	9.17	259	P	Pn	21 06 55.8	+3.4
	3.3nm,0.3s,baz=24,slow=20,SNR=3.2						
PMG				S	Sn	21 08 33.8	-1.9
	2.1nm,0.3s,baz=32,slow=19,SNR=1.3						
PMG				LR	LR	21 10 19.8	
	comp=Z,193nm,18.9s,baz=82,slow=36						
PMG	Port Moresby	9.17	259	Pn	Pn	21 06 56.2	+3.9
PATS	Pohnpei	14.55	8	Pn	Pn	21 08 08.0	+1.9
CTA	Charters Tower	15.70	217	P	P	21 08 25.4	0.0
	1.8nm,0.9s,baz=38,slow=20,SNR=1.7						
MSVF	Nonsavu	23.46	117	P	P	21 09 50.7	+0.8
MSVF				IAmb	IAmb	21 09 54.3	
	comp=Z,18nm,1.5s						
WB0	Warramunga Arr	24.38	238	P	P	21 09 58.5	0.0
WB0				IAmb	IAmb	21 10 00.3	
	comp=Z,13nm,1.4s						
WRAB	Tennant Creek	24.49	238	P	P	21 09 58.3	-1.2
WRAB				IAmb	IAmb	21 10 36.8	
	comp=Z,7.8nm,0.8s						
WB2	Warramunga Arr	24.49	238	P	P	21 09 60.0	+0.4
WRA	Warramunga Arr	24.50	238	P	P	21 10 00.3	+0.6
	comp=Z,3.0nm,0.7s,baz=62,slow=9.6,SNR=20						
WRA				PcP	PcP	21 13 37.6	-0.7
	comp=Z,0.9nm,0.9s,baz=52,slow=2.2,SNR=5.5						
WRA				LR	LR	21 19 25.7	
	comp=Z,114nm,18.9s,baz=150,slow=36						
	comp=Z,3.0nm,0.7s						
WRA	Warramunga Arr	24.50	238	P	P	21 09 59.6	0.0
MTN	Manton Dam	25.25	256	P	P	21 10 05.4	-1.0
MTN				IAmb	IAmb	21 10 07.8	
	comp=Z,20nm,1.2s						
ASAR	Alice Springs	26.70	231	P	P	21 10 19.6	+0.1
	comp=Z,0.7nm,0.8s,baz=65,slow=8.4,SNR=8.7						
ASAR				PcP	PcP	21 13 42.4	-0.9
	comp=Z,0.5nm,0.8s,baz=54,slow=4.7,SNR=3.2						
	comp=Z,0.7nm,0.8s						
FORT	Forrest	34.99	225	P	P	21 11 32.5	-0.1
FORT				IAmb	IAmb	21 11 44.8	
	comp=Z,17nm,0.9s						
KSRS	Korea Array	52.13	331	P	P	21 13 49.5	-1.0
	comp=Z,1.4nm,0.7s,baz=148,slow=7.4,SNR=7.3						
	comp=Z,1.4nm,0.7s						
CMAR	Chiang Mai Arr	62.21	295	P	P	21 15 01.9	-0.4
	comp=Z,1.2nm,0.8s,baz=125,slow=5.7,SNR=9.0						
	comp=Z,1.2nm,0.8s						
UNV	Unalaska Valle	68.85	23	P	P	21 15 42.6	-1.9
AKUT	Akutan	69.35	23	P	P	21 15 47.1	-0.4
SONM	Songino Array	70.58	327	P	P	21 15 55.3	-0.2
	comp=Z,3.5nm,0.8s,baz=141,slow=7.0,SNR=28						
	comp=Z,3.5nm,0.8s						
SONM	Songino Array	70.58	327	P	P	21 15 55.0	-0.5
SONM				IAmb	IAmb	21 15 56.3	
	comp=Z,4.1nm,0.9s						
QSPA	South Pole Qui	82.31	180	P	P	21 17 02.3	+0.6
QSPA				IAmb	IAmb	21 17 07.0	
	comp=Z,8.0nm,1.2s						
ILAR	Eielson Array	83.54	21	P	P	21 17 06.4	-1.5
	comp=Z,0.4nm,0.7s,baz=238,slow=5.0,SNR=2.8						
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	84.74	318	P	P	21 17 13.7	-0.7
	comp=Z,10nm,0.8s,baz=105,slow=5.7,SNR=89						
	comp=Z,10nm,0.8s						
ZALV	Zalesovo Beam	85.44	326	P	P	21 17 16.1	-1.6
	comp=Z,9.2nm,0.7s,baz=110,slow=6.0,SNR=34						
	comp=Z,9.2nm,0.7s						
BBB	Bella Bella	87.30	37	LR	LR	21 50 52.2	
	comp=Z,31nm,18.7s,baz=298,slow=32						
KURBB	Kurchatov Arra	88.17	321	P	P	21 17 29.8	-1.3
	comp=Z,2.5nm,0.2s,baz=97,slow=3.7,SNR=7.3						
	comp=Z,2.5nm,0.2s						
AAK	Ala-Archa	89.13	313	P	P	21 17 34.8	-1.3
	comp=Z,1.3nm,0.8s,baz=147,slow=6.0,SNR=7.6						
	comp=Z,1.3nm,0.8s						
NRIK	Noril'sk	89.79	341	P	P	21 17 36.4	-1.9
	comp=Z,3.3nm,0.6s,baz=103,slow=5.0,SNR=4.9						
	comp=Z,3.3nm,0.6s						
NVAR	Mina Array Bea	91.15	52	P	P	21 17 44.9	-0.8
	comp=Z,0.1nm,0.4s,baz=244,slow=3.9,SNR=2.5						
	comp=Z,0.1nm,0.4s						
BVAR	Borovoye Array	93.59	323	P	P	21 17 54.7	-1.6
	comp=Z,1.3nm,0.6s,baz=93,slow=4.6,SNR=10						
	comp=Z,1.3nm,0.6s						
YKA	Yellowknife Ar	96.34	28	P	P	21 18 07.3	-1.3
	comp=Z,0.4nm,0.7s,baz=260,slow=4.2,SNR=7.2						
	comp=Z,0.4nm,0.7s						
LPAZ	La Paz	130.03	119	PKP	PKPdf	21 23 52.0	+0.1
	comp=Z,1.1nm,0.3s,baz=273,slow=4.6,SNR=3.8						
ESDC	Sonseca Array	143.53	334	PKP	PKPab	21 24 11.3	-0.5
	comp=Z,1.2nm,1.1s,baz=23,slow=4.2,SNR=4.7						
PVIS	Viseu	144.19	339	*e*PKPdf	PKPbc	21 24 14.8	+0.2
PMRV	Marv??o	145.14	338	*e*PKP	PKPab	21 24 17.2	-0.5
PSBE	So Bento	145.57	339	*e*PKP	PKPbc	21 24 16.9	-2.2
PESTR	Estremoz	145.70	337	*e*PKP	PKPdf	21 24 19.4	+0.2
PMTG	Montargil	145.76	338	*e*PKP	PKPdf	21 24 18.5	-0.7
PBAR	Barrancos	146.09	336	*e*PKP	PKPbc	21 24 20.8	+0.2
EVO	Evora	146.16	338	*e*PKP	PKPbc	21 24 21.2	+0.3
TORD	Torodi Ar. Bea	154.42	284	PKPbc	PKPdf	21 24 36.3	+2.9
	comp=Z,0.7nm,0.8s,baz=84,slow=1.3,SNR=2.7						

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*REN **17** 21:10:42.0±1.4, 38°.86N±0°.02×115°.24W±0°.03, h1^{km}±6^{km}, ML2.8/3, ML2.4/88(NEIC), Error ellipse: s-maj=4.1km s-min=2.7km az=127.0*
NEIC 17 21:10:42.6±1.3**, 38°.86N**±0°.02×**115°.22W**±0°.03**, h5^{km}**±2^{km}**, Error ellipse: s-maj=5.3km s-min=3.0km az=316.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Q12A	Willow Creek R	0.35	59		Pg	21 10 49.4	-0.1
Q12A				Sg	Sg	21 10 53.9	-0.3
Q12A				IAML		21 10 56.3	
	comp=E,349nm,0.5s						
Q12A				IAML		21 10 56.9	
	comp=N,296nm,0.3s						
SPR3	Spring Creek 3	0.71	78	Pg	Pg	21 10 55.8	-0.4
SPR3				Sg	Sg	21 11 04.9	-0.5
SPR3				IAML		21 11 11.8	
	comp=E,116nm,0.1s						
S11A	Rachel	1.28	199		Pg	21 11 06.3	-0.9
S11A					Sg	21 11 23.0	-0.9
S11A				IAML		21 11 28.9	
	comp=N,77nm,0.4s						
PRN	Pahroc Range	1.46	175		Pn	21 11 09.2	-0.5
PRN					Sb	21 11 28.8	-0.4
Q09A	Carvers	1.53	270		Pn	21 11 10.0	-0.8
TPH	Tonopah	1.76	244		Pn	21 11 12.9	-1.0
ARUT	Antelope Range	1.76	127		Pn	21 11 14.1	+0.2
ELK	Elko	1.88	360	Pn	Pn	21 11 15.9	+0.2
CCUT	Cedar City	1.96	131		Pn	21 11 16.1	-0.6
CCUT				IAML		21 11 46.3	
	comp=E,37nm,0.5s						
ICU	Indian Springs	1.99	149		Pb	21 11 19.5	+0.1
CPY	CP-1	2.04	199		Pg	21 11 21.0	-0.6
MZP	Montezuma Peak	2.06	236	Pn	Pn	21 11 17.1	-1.0
MZP				IAML		21 11 48.3	
	comp=N,22nm,0.6s						
TPNV	Topopah Spring	2.08	203		Pn	21 11 18.4	+0.1
SZCU	Shurtz Canyon	2.10	126		Pn	21 11 18.2	-0.4
SZCU				IAML		21 11 53.6	
	comp=N,39nm,0.2s						
TCRU	Three Creeks R	2.18	96	Pn	Pn	21 11 19.5	-0.3
TCRU				IAML		21 11 55.0	
	comp=N,17nm,0.7s						
BMN	Battle Mountai	2.20	316		Pn	21 11 20.5	+0.5
BMN				IAML		21 11 52.4	
	comp=E,26nm,0.3s						
BMN				IAML		21 11 53.1	
	comp=N,37nm,0.5s						
KVN	Kaiserville	2.25	276		Pn	21 11 20.0	-0.8
DUG	Dugway, Tooele	2.29	54	Pn	Pn	21 11 19.9	-1.3
DUG				IAML		21 11 56.9	
	comp=N,23nm,1.1s						
DUG				IAML		21 11 57.4	
	comp=N,23nm,0.7s						
NV11	Mina Array Sit	2.34	260		Pn	21 11 21.4	-0.5
NV11				IAML		21 11 56.8	
	comp=N,16nm,0.3s						
WCT	Wildcat Mounta	2.35	209		Pn	21 11 22.2	+0.4
MVU	Marysvale	2.38	98		Pn	21 11 22.5	0.0
MSU	Marysvale	2.41	97		Pn	21 11 22.8	-0.1
LCMT	Little Creek M	2.42	139		Pn	21 11 23.1	+0.1
LCMT				IAML		21 12 02.6	
	comp=N,18nm,0.2s						
LCMT				IAML		21 12 03.5	
	comp=E,29nm,0.2s						
NVAR	Mina Array Bea	2.45	261		Pn	21 11 23.4	-0.1
LCH	Last Change Ra	2.51	230		Pn	21 11 23.6	-0.6
LCH				IAML		21 12 12.1	
	comp=E,12nm,0.4s						
MTPU	Mount Pierson	2.52	108		Pn	21 11 24.0	-0.5
DSP	Deep Springs	2.63	236		Pb	21 11 30.1	-0.1
DSP				IAML		21 12 07.2	
	comp=N,11nm,0.8s						
KNB	Kanab	2.64	133	Pg	Pb	21 11 31.2	+0.7
KNB				IAML		21 12 07.2	
	comp=N,19nm,0.5s						
KNB				IAML		21 12 07.6	
	comp=E,13nm,0.6s						
LHV	Little Huntoon	2.65	258		Pb	21 11 29.9	-0.6
BGU	Big Grassy Mou	2.66	39	Pn	Pn	21 11 26.6	+0.3
NLU	North Lily Min	2.67	65	Pn	Pn	21 11 25.3	-1.1
PKCU	Pink Cliffs	2.69	121	Pg	Pg	21 11 34.1	-0.1
PKCU				IAML		21 13 09.2	
	comp=N,22nm,4.5s						
GWY	Greenwater Val	2.91	204		Pg	21 11 36.7	-1.6
YERR	Yerington	3.14	274		Pb	21 11 37.9	-1.1
TMUT	Trail Mountain	3.15	81	Pn	Pb	21 11 36.9	-2.4
TMUT				IAML		21 13 34.2	
	comp=E,10.0nm,3.9s						
QSM	Queen of Sheba	3.17	205	Pg	Pg	21 11 42.0	-1.5
SPUT	South Promonto	3.24	40		Pn	21 11 33.4	-0.9
SPUT				IAML		21 12 27.5	
	comp=N,8.8nm,0.5s						
SPUT				IAML		21 12 31.4	
	comp=E,7.3nm,1.5s						
MDPB	Devils Postpil	3.28	249		Pb	21 11 42.9	+1.5
MDPB				IAML		21 12 27.3	
	comp=E,14nm,2.6s						
MDPB				IAML		21 12 29.4	
	comp=N,7.4nm,2.6s						
WAKR	Walker	3.32	265		Pn	21 11 34.5	-0.9
WAKR				IAML		21 12 35.3	
	comp=E,11nm,2.0s						
PAHR	Pah Rah Range	3.34	286	Pn	Pn	21 11 34.0	-1.6
PAHR				IAML		21 12 34.7	
	comp=N,6.8nm,1.1s						
PAHR				IAML		21 12 55.3	
	comp=E,10.0nm,3.7s						
U15A	North Rim	3.36	135		Pg	21 11 45.7	-1.3
U15A				IAML		21 12 30.2	
	comp=N,10nm,0.4s						
U15A				IAML		21 12 33.7	
	comp=E,12nm,0.7s						
HVU	Hansel Valley	3.46	32	Pn	Pn	21 11 39.4	+2.1
HVU				IAML		21 12 35.1	
	comp=E,7.5nm,1.6s						
HVU				IAML		21 12 37.9	
	comp=N,8.5nm,0.7s						
SRU	San Rafael Swe	3.67	85		Pn	21 11 42.8	+2.6
SRU				IAML		21 12 39.3	
	comp=N,6.5nm,0.8s						
SRU				IAML		21 12 41.6	
	comp=E,8.5nm,0.6s						
GSC	Goldstone, Bar	3.77	200	Pg	Pg	21 11 53.8	-1.1
GSC				IAML		21 12 21.1	
	comp=E,8.1nm,0.5s						
GSC				IAML		21 12 21.3	
	comp=N,5.8nm,0.1s						

WEL 17 21:14:44.5±0.4**, 42°S**±3°×**17°4E**±°**, h5^{km}, M2.3**/2**, ML2.5**/6**, MLv2.3**/2**, Error ellipse: s-maj=0.0km s-min=0.0km az=133.2, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.37	199	P	Pg	21 14 51.9	+0.3
KHZ				S	Sg	21 14 57.5	+1.0
BSWZ	Blackbirch Sta	0.38	21	P	Pg	21 14 52.1	+0.4
BSWZ				S	Sg	21 14 58.2	+1.5
TUWZ	Tuamarina	0.66	16	P	Pg	21 14 57.5	+0.3
THZ	Tophouse	0.66	297	P	Pg	21 14 57.4	+0.2
THZ				S	Sg	21 15 06.9	+1.1
TCW	Tory Channel	0.96	27	P	Pg	21 15 02.5	-0.3
MRNZ	Matariki Terra	0.97	313	P	Pg	21 15 03.2	+0.2
GVZ	Greta Valley S	1.03	208	P	Pb	21 15 04.5	-0.2
DUWZ	D'Urville Isla	1.27	8	P	Pg	21 15 08.2	-0.7
LTZ	Lake Taylor	1.28	235	P	Pg	21 15 08.1	-0.8
CAW	Cannon Point	1.40	47	P	Pn	21 15 09.7	-1.0
DSZ	Denniston Nort	1.45	282	P	Pg	21 15 12.3	+0.1
KIW	Kapiti Island	1.51	38	P	Pn	21 15 12.2	+0.1
QRZ	Quartz Range	1.52	324	P	Pb	21 15 12.8	-0.3
QRZ				S	Sg	21 15 34.0	+0.7
MTW	Mount Morrison	1.63	57	P	Pn	21 15 12.2	-1.6
MQZ	McQueen's Vall	1.81	205	P	Pn	21 15 13.6	-2.7
TSZ	Takapari Road	2.64	41	P	Pn	21 15 29.6	+1.9
WNVZ	Wahianoa	3.09	28	P	Pb	21 15 39.6	-0.4

IDC 17 21:49:22.6±4.1**, 7°.00S**×**155°.18E, h0^{km}, mb3.5**/4**, mbtmp3.5**/4**, Error ellipse: s-maj=118.2km s-min=37.0km az=119.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.97	235	P	P	21 54 39.3	+0.3
	0.2nm,0.5s,baz=61,slow=9.7,SNR=6.8						
	0.2nm,0.5s						
SONM	Songino Array	69.44	327	P	P	22 00 34.1	+1.3
	0.2nm,0.5s,baz=134,slow=6.2,SNR=1.9						
	0.2nm,0.5s						
MKAR	Makanchi Array	83.53	319	P	P	22 01 52.4	-0.3
	0.9nm,0.8s,baz=101,slow=6.3,SNR=8.3						
	0.9nm,0.8s						
ZALV	Zalesovo Beam	84.29	326	P	P	22 01 54.9	-1.3
	0.3nm,0.3s,baz=123,slow=5.3,SNR=2.5						
	0.3nm,0.3s						

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*ANF **17** 21:54:25.0±0.2, 33°.16N×115°.65W, h8^{km}±2^{km}, ML2.9/15, Error ellipse: s-maj=1.8km s-min=1.2km az=120.0*
*PAS **17** 21:54:25.6±1.6, 33°.16N±0°.01×115°.63W±0°.01, h8^{km}±3^{km}, ML3.2/21, ML3.0/54(NEIC), Error ellipse: s-maj=1.6km s-min=1.2km az=156.0*
*NEIC **17** 21:54:25.4±1.4, 33°.179N±0°.010×115°.660W±0°.010, h10^{km}±1^{km}, Error ellipse: s-maj=2.5km s-min=1.9km az=217.0*
ISC 17 21:54:25.6±0.8**, 33°.16N**±0°.02×**115°.65W**±0°.02**, h12^{km}**±5^{km}**, n71, σ0^{s}.71**/93**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLI2	Calipatria 2	0.07	121		Pg	21 54 27.1	-1.0
WEMD	Westmorland, C	0.13	154		Pg	21 54 28.7	-0.1
WEMD					Sg	21 54 32.0	+0.8
ERRC	Elmore Ranch	0.15	255		Pg	21 54 29.7	+0.6
BOMB	Bombay Beach	0.22	342		Pg	21 54 30.7	+0.4
SWSC	Sam W. Stewart	0.25	211		Pg	21 54 30.7	-0.1
SWSC	Sam W. Stewart	0.25	211	P	Pg	21 54 30.7	-0.1
	baz=33,SNR=1000						
SWSC				S	Sg	21 54 33.0	-1.2
	baz=33						
IMPE	Imperial	0.27	163		Pg	21 54 31.4	+0.3
IMPE					Sb	21 54 36.4	-0.4
SNR	Schaffner Ranc	0.34	149		Pg	21 54 32.6	+0.1
CRR	Carrizo Plain	0.38	225		Pg	21 54 33.2	0.0
DREC	Desert Rsrch C	0.39	154		Pb	21 54 33.8	-0.5
WESC	Westside Schoo	0.40	190		Pg	21 54 33.8	+0.2
WESC					Sb	21 54 40.6	0.0
SGL	Mount Signal	0.51	187		Pg	21 54 35.2	-0.4
SGL					Sg	21 54 42.6	+0.2
BC3	Big Chuckawall	0.52	18		Pg	21 54 35.6	-0.3
BC3	Big Chuckawall	0.52	18	P	Pg	21 54 35.5	-0.4
	baz=197,SNR=190						
BC3				S	Sg	21 54 42.8	-0.1
	baz=197						
COA	Coachella	0.53	123		Pg	21 54 35.6	-0.3
HAY	Hayfield	0.55	357		Pg	21 54 36.4	0.0
CTW	Cottonwood Mou	0.55	340		Pg	21 54 36.2	-0.2
UABX	UABC, Campus M	0.55	161	Pg	Pg	21 54 36.0	-0.4
UABX				Sg	Sb	21 54 45.2	+0.2
YUH	Yuha Desert	0.56	204		Pg	21 54 36.0	-0.4
YUH				IAML		21 54 44.7	
	comp=E,653nm,0.2s						
RUN	Ruthven	0.59	108		Pg	21 54 36.5	-0.7
IKP	In-Ko-Pah, Jac	0.64	218		Pg	21 54 37.6	-0.4
IKP	In-Ko-Pah, Jac	0.64	218	P	Pg	21 54 37.6	-0.4
	baz=38,SNR=57						
IKP				S	Sg	21 54 46.4	0.0
	baz=38						
RMX	La Rumorosa	0.66	213		Pg	21 54 38.4	0.0
RMX					Sg	21 54 47.6	+0.4
RMX				IAML		21 54 48.4	
	comp=E,1µm,0.2s						
RMX				IAML		21 54 48.6	
	comp=N,542nm,0.3s						
GLA	Glamis	0.70	98		Pg	21 54 38.3	-0.9
GLA					Sg	21 54 47.6	-0.8
GLA				IAML		21 54 49.0	
	comp=N,659nm,0.3s						
GLA	Glamis	0.70	98	P	Pg	21 54 38.2	-0.9
	baz=279,SNR=44						
GLA				S	Sg	21 54 47.3	-1.1
	baz=279						
MONP2	Monument Peak	0.70	248		Pg	21 54 39.3	+0.1
MONP2	Monument Peak	0.70	248	P	Pg	21 54 39.0	-0.2
	baz=68,SNR=52						
MONP2				S	Sg	21 54 48.6	+0.1
	baz=68						
PMD	Palm Desert	0.78	309		Pg	21 54 39.8	-0.9
PMD				Sg	Sg	21 54 50.5	-0.5
PMD				IAML		21 54 51.6	
	comp=N,373nm,0.5s						
PMD				IAML		21 54 52.1	
	comp=E,430nm,0.6s						
CPBX	Cerro Prieto	0.79	158		Pg	21 54 40.8	-0.1
CPBX				Sg	Sg	21 54 50.9	-0.3
CPBX				IAML		21 55 06.2	
	comp=N,996nm,0.5s						
PFO	Pinyon Flats O	0.81	304		Pg	21 54 40.6	-0.8
PFO				Sg	Sg	21 54 52.3	+0.2
PFO	Pinyon Flats O	0.81	304	P	Pg	21 54 40.7	-0.7
	baz=123,SNR=192						
PFO				S	Sg	21 54 52.3	+0.2
	baz=123						
MATG	Mataguay Scout	0.84	273		Pg	21 54 41.1	-0.7
BELC	Belle Mtn. Jos	0.89	341	P	Pg	21 54 41.9	-1.0
	baz=160,SNR=42						
BELC				S	Sb	21 54 54.6	-0.3
	baz=160						
GUVIX	Guadalupe Vict	0.98	150	Pg	Pg	21 54 44.2	-0.3
GUVIX				IAML		21 55 18.5	
	comp=E,638nm,0.4s						
BAR	Barrett	0.98	241		Pg	21 54 44.1	-0.5
BAR				IAML		21 54 57.9	
	comp=N,692nm,0.2s						
TKX	Tecate	1.00	234		Pg	21 54 44.3	-0.5
TKX					Sg	21 54 57.1	-0.7
PLM	Palomar	1.03	281		Pg	21 54 44.2	-1.3
IRM	Iron Mountain	1.08	23		Pg	21 54 45.5	-1.0
IRM	Iron Mountain	1.08	23	P	Pg	21 54 45.4	-1.0
	baz=202,SNR=246						
IRM				S	Sb	21 55 01.0	+0.6

	baz=202						
BLYC	Blythe	1.11	58		Pg	21 54 46.3	-0.7
BLYC				IAML		21 55 03.2	
	comp=N,513nm,0.6s						
SDRC	San Diego Road	1.17	249		Sg	21 55 02.2	-0.9
ESJX	Sierra Juarez	1.18	192		Pg	21 54 46.9	-1.3
ESJX					Sg	21 55 02.4	-1.2
ESJX				IAML		21 55 02.8	
	comp=E,249nm,0.3s						
CBX	Cerro Bola	1.20	226	IAML		21 55 05.2	
	comp=E,377nm,0.3s						
CBX				IAML		21 55 07.2	
	comp=N,199nm,0.5s						
OLP	Otay Lakes Par	1.21	243		Pb	21 54 48.1	-0.2
OLP					Sg	21 55 03.9	-0.7
109C	Camp Elliot, M	1.25	258	Pn	Pn	21 54 48.4	-0.4
109C				IAML		21 55 05.5	
	comp=E,470nm,0.3s						
109C	Camp Elliot, M	1.25	258	P	Pn	21 54 47.6	-1.2
	baz=77						
SDMC	San Diego Miss	1.30	254		Sb	21 55 06.5	-0.1
TJX	Tijuana	1.35	242		Pn	21 54 50.0	-0.2
MURC	Murrieta	1.37	289	P	Pn	21 54 50.5	0.0
	baz=108						
MURC				S	Sn	21 55 09.1	+0.6
	baz=108						
CCX	Cicese	1.54	214		Pn	21 54 52.8	-0.1
ELS	Elsinore Mount	1.56	289		Pn	21 54 53.2	0.0
GMRC	Granite Mounta	1.62	360	Pb	Pg	21 54 56.1	-0.7
	baz=179						
GMRC				Sb	Sg	21 55 17.7	-0.2
	baz=179						
113A	Mohawk Valley,	1.63	103		Pn	21 54 54.4	+0.3
PDMCI	Parker Dam,Lak	1.70	47	S	Sn	21 55 17.6	+0.9
	baz=228						
HEC	Hector,Ludlow	1.76	341	Pg	Pg	21 54 59.3	-0.1
	baz=161,SNR=32						
HEC				Sg	Sg	21 55 23.3	+1.0
	baz=161						
VTX	Valle De La Tr	1.76	184	Pn	Pn	21 54 56.9	+0.9
NEE2	Needles Airpor	1.82	28	Sb	Sg	21 55 23.1	-1.1
	baz=208						
SFX	San Felipe	2.22	162		Pn	21 55 03.6	+1.5
Y14A	Wickenburg	2.34	70		Pn	21 55 03.5	-0.4
GSC	Goldstone, Bar	2.34	336		Pg	21 55 10.9	+0.3
GSC				IAML		21 55 50.4	
	comp=E,55nm,0.9s						
PASC	Pasadena Art C	2.34	296		Pn	21 55 04.0	+0.1
W13A	Hualapai Mount	2.43	37		Pb	21 55 10.3	+1.0
PIX	Pinacate	2.44	130		Pn	21 55 04.9	-0.4
EDW2	Edwards Air Fo	2.60	312	Pb	Pb	21 55 12.6	+0.5
	baz=131						
EDW2				Sb	Sg	21 55 46.7	-2.3
	baz=131						
V12A	Nelson	2.65	14		Pg	21 55 15.5	-0.9
214A	Organ Pipe Nat	2.68	116		Pg	21 55 18.1	+1.1
214A				IAML		21 55 56.2	
	comp=N,37nm,0.8s						
214A				IAML		21 56 03.1	
	comp=E,43nm,0.8s						
CCAC	Calif City Air	2.79	316		Pn	21 55 09.9	-0.3
CCAC				Pg	Pg	21 55 20.6	+1.4
CCAC				IAML		21 56 13.6	
	comp=N,45nm,1.1s						
CCAC				IAML		21 56 17.3	
	comp=E,38nm,1.2s						
QSM	Queen of Sheba	2.98	341		Pg	21 55 23.5	+0.9
BCW	Bitter Crk WRg	3.59	301	IAML		21 56 28.8	
	comp=E,39nm,0.9s						
BCW				IAML		21 56 37.2	
	comp=N,36nm,1.1s						
TPNV	Topopah Spring	3.81	353	IAML		21 56 34.9	
	comp=N,14nm,0.9s						
WUAZ	Wupatki	4.25	55	IAML		21 56 50.4	
	comp=N,22nm,1.4s						
WUAZ				IAML		21 57 08.9	
	comp=N,14nm,1.4s						

ISK ***17*** *21:59:45.4, 39.°52N×26.°14E, h8^{km}, ML2.7/21*
DDA ***17*** *21:59:45.9±0.0, 39.°53N×26.°17E, h8^{km}±1^{km}, ML2.6*
THE ***17*** *21:59:46.1, 39.°53N×26.°12E, h3^{km}±1^{km}, ML2.5/5, Error ellipse: s-maj=1.3km s-min=0.4km az=173.0*
ATH ***17*** *21:59:46.4, 39.°52N×26.°15E, h7^{km}±3^{km}, ML2.5/6, Error ellipse: s-maj=3.4km s-min=0.9km az=227.0*
ISC 17 21:59:46.0±0.8**, 39.°52N**±0.°02×**26.°15E**±0.°02**, h10**^{km}±5^{km}**,**
n61, σ0^{s}46/96**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.02	205	P	Pg	21 59 47.7	0.0
KOCA				S	Sg	21 59 49.0	0.0
GPNR	Gulpinar-Canak	0.07	191	Pg	Pg	21 59 47.8	-0.2
GPNR				Sg	Sg	21 59 49.4	-0.1
PRK	Paraskevi	0.29	161	P	Pg	21 59 51.9	+0.2
PRK				S	Sg	21 59 56.4	+0.7
	4μm,0.4s						
PRK	Paraskevi	0.29	161	P	Pg	21 59 52.0	+0.2
PRK				S	Sg	21 59 56.0	+0.3
PRK				AML	AML	21 59 57.7	
	comp=E,7257μm,0.4s						
PRK				AML	AML	21 59 58.1	
	comp=N,3154μm,0.3s						
BOZC	Bozcaada	0.33	347	Pg	Pg	21 59 52.7	+0.2
BOZC				Sg	Sg	21 59 57.0	+0.1
BOZC	Bozcaada	0.33	347	P	Pg	21 59 52.8	+0.2
BOZC				S	Sg	21 59 57.0	+0.1
BOZC				S	Pn	21 59 57.1	+0.3
BOZC				P	Pn	21 59 57.2	+0.3
EZN	Ezine	0.33	24	P	Pg	21 59 52.8	+0.2
EZN				S	Sg	21 59 57.6	+0.6
	comp=N,1μm,0.2s						
EZN	Ezine	0.33	24	Pg	Pg	21 59 52.9	+0.3
EZN				Sg	Sg	21 59 57.7	+0.7
BAYC	CANAKKALE_Bayr	0.38	54	P	Pg	21 59 53.3	-0.1
BAYC				S	Sg	21 59 58.5	+0.1
SIGR	SIGRI	0.38	217	P	Pg	21 59 53.4	-0.2
SIGR				S	Sg	21 59 58.9	+0.3
	comp=N,890nm,0.2s						
SIGR	SIGRI	0.38	217	Pg	Pg	21 59 53.3	-0.2
SIGR	SIGRI	0.38	217	P	Pg	21 59 53.4	-0.2
SIGR				S	Sg	21 59 58.8	+0.2
SIGR				AML	AML	21 59 59.6	
	comp=E,1663μm,0.2s						
SIGR				AML	AML	22 00 00.3	
	comp=N,1881μm,0.3s						
AYVA	Ayvalik	0.47	117	P	Pg	21 59 55.1	0.0
AYVA				S	Sg	22 00 01.4	+0.2
AYVA				*i* AML	AML	22 00 10.0	
	comp=N,465nm,0.4s						
ECEA	Canakkale, Ece	0.52	2	P	Pg	21 59 56.5	+0.3
ECEA				*i* AML	AML	22 00 04.0	
	comp=N,440nm,0.3s						
ECEA				S	Sb	22 00 04.2	-0.8
ECEA				*i* AML	AML	22 00 10.0	
	comp=N,292nm,0.3s						
COMU	Canakkale	0.63	23	Pg	Pg	21 59 58.2	+0.1
COMU				Sg	Sb	22 00 07.6	-0.4
GOKA	anakkale-Gk	0.69	345	P	Pg	21 59 59.4	0.0
GOKA				S	Sg	22 00 09.0	+0.6
GOKA				*i* AML	AML	22 00 14.0	
	comp=N,254nm,0.2s						
GOKA				*i* AML	AML	22 00 14.0	
	comp=N,168nm,0.1s						
GADA	Gvkgeada	0.70	344	Pg	Pg	21 59 59.4	0.0
BUHA	Balikesir, Bur	0.72	91	P	Pg	21 59 59.6	-0.2
BUHA				S	Sg	22 00 09.3	+0.2
BUHA				*i* AML	AML	22 00 13.0	
	comp=N,446nm,0.3s						
BUHA				*i* AML	AML	22 00 14.0	
	comp=N,222nm,0.3s						
DKL	Dikili	0.74	127	Pg	Pg	22 00 00.8	+0.6
LIA	Limnos Island	0.83	297	P	Pg	22 00 02.1	0.0
LIA				S	Sg	22 00 13.2	+0.3
	comp=N,548nm,0.3s						
LIA	Limnos Island	0.83	297	P	Pg	22 00 02.1	0.0
LIA				S	Sg	22 00 13.0	+0.1
LIA				AML	AML	22 00 16.4	
	comp=N,722μm,0.3s						
LIA				AML	AML	22 00 16.6	
	comp=E,724μm,0.3s						
CANM	Can-anakkale	0.85	55	Pg	Pg	22 00 02.1	-0.3
KARB	zmir-Karabur	0.88	167	P	Pb	22 00 03.5	+0.1
KARB				S	Sg	22 00 14.9	+0.6
KARB				*i* AML	AML	22 00 17.0	
	comp=E,464nm,0.2s						
KARB				*i* AML	AML	22 00 17.0	
	comp=E,448nm,0.3s						
ZEDA	zmir-Bergama	0.91	127	P	Pg	22 00 03.5	+0.1
ZEDA				S	Sb	22 00 17.3	+1.3
ZEDA				*i* AML	AML	22 00 18.0	
	comp=E,118nm,0.4s						
ZEDA				*i* AML	AML	22 00 18.0	
	comp=E,169nm,0.3s						
GELI	Tayfur-Gelibol	0.91	16	Pg	Pg	22 00 03.0	-0.5
LPK	Lapseki	0.97	29	Pg	Pg	22 00 04.3	-0.3
SMTH	Samothraki Isl	1.06	334	P	Pg	22 00 06.0	-0.4
SMTH	Samothraki Isl	1.06	334	P	Pg	22 00 06.4	0.0
SMTH				AML	AML	22 00 22.9	
	comp=E,156μm,0.1s						
SMTH				AML	AML	22 00 23.2	
	comp=N,189μm,0.1s						
PSRA	Psara	1.08	205	P	Pb	22 00 07.3	+0.5
PSRA				S	Sb	22 00 22.0	+1.1
BALY	Balya	1.16	79	P	Pg	22 00 07.9	-0.2
BALY				S	Sg	22 00 22.9	-0.3
BALY				*i* AML	AML	22 00 26.0	
	comp=N,197nm,0.4s						
BALY				*i* AML	AML	22 00 26.0	
	comp=N,164nm,0.3s						
ERIK	Erikli-Kesan	1.18	14	Pn	Pg	22 00 07.8	-0.9
URLA	Izmir	1.21	163	Pn	Pb	22 00 08.1	-0.9
URLA	Izmir	1.21	163	P	Pb	22 00 07.8	-1.2
URLA				S	Sg	22 00 24.1	-0.8
URLA				*i* AML	AML	22 00 26.0	
	comp=N,153nm,1.0s						
URLA				*i* AML	AML	22 00 27.0	
	comp=N,176nm,0.3s						
ENEZ	Enez	1.21	0	P	Pb	22 00 09.0	0.0
ENEZ				S	Sn	22 00 25.8	+0.2
ENEZ	Enez	1.21	0	Pn	Pb	22 00 09.1	0.0
STEP	BALIKESIR_Sava	1.22	96	P	Pb	22 00 09.1	-0.1
STEP				S	Sn	22 00 26.8	+0.9
STEP				*i* AML	AML	22 00 27.0	
	comp=N,114nm,0.2s						
STEP				*i* AML	AML	22 00 29.0	
	comp=N,148nm,0.6s						
KRBG	Karabiga-Canak	1.24	45	Pn	Pn	22 00 08.9	-0.5
GONE	Gonen-Balikesi	1.29	66	Pn	Pn	22 00 10.3	+0.2
KNL	Balıkesir	1.30	54	P	Pn	22 00 09.8	-0.3
KNL				S	Sn	22 00 28.4	+0.8
KNL				*i* AML	AML	22 00 29.0	
	comp=N,126nm,0.5s						
KNL				*i* AML	AML	22 00 31.0	
	comp=N,83nm,0.4s						
ZEYE	Izmir, Urla-Ze	1.31	168	P	Pn	22 00 09.8	-0.5
BLCB	Balcova	1.33	148	P	Pn	22 00 11.1	+0.5
BLCB	Balcova	1.33	148	Pn	Pn	22 00 10.6	0.0
BALB	Balikesir	1.34	84	Pn	Pn	22 00 11.3	+0.5
ALN	Alexandroupoli	1.38	357	P	Pn	22 00 11.1	-0.1
ALN				S	Sg	22 00 30.3	0.0
	comp=N,145nm,0.4s						
ALN	Alexandroupoli	1.38	357	Pn	Pn	22 00 11.6	+0.3
ALN	Alexandroupoli	1.38	357	P	Pn	22 00 11.2	-0.1
ALN				S	Sb	22 00 29.1	-0.4
ALN				AML	AML	22 00 30.7	
	comp=E,365μm,0.5s						
ALN				AML	AML	22 00 31.3	
	comp=N,206μm,0.4s						
BKES	Balkesir-Mer	1.39	81	P	Pb	22 00 12.2	+0.2
BKES				S	Sb	22 00 29.8	-0.1
BKES				*i* AML	AML	22 00 32.0	
	comp=N,117nm,0.2s						
RKY	Sarkoy-Tekirda	1.41	34	Pn	Pn	22 00 11.6	-0.2
AKHS	Akhisar	1.44	116	P	Pn	22 00 11.9	-0.3
AKHS				S	Sn	22 00 30.6	-0.6
AKHS				*i* AML	AML	22 00 36.0	
	comp=N,67nm,0.4s						
THAS	Thassos island	1.54	315	P	Pn	22 00 12.9	-0.6
THAS	Thassos island	1.54	315	P	Pn	22 00 13.2	-0.3
EDC	Edincik	1.55	57	Pn	Pn	22 00 13.2	-0.5
UKOP	Uzunkopru-Edir	1.65	13	Pn	Pn	22 00 15.5	+0.5
RDO	Rodhopi	1.69	344	P	Pn	22 00 15.1	-0.5
RDO				S	Sn	22 00 37.6	+0.3
RDO	Rodhopi	1.69	344	Pn	Pn	22 00 15.4	-0.2
RDO	Rodhopi	1.69	344	P	Pn	22 00 15.4	-0.2
RDO				S	Sn	22 00 37.4	+0.1
BAND	Balkesir-Ban	1.71	60	P	Pn	22 00 16.1	+0.1
BAND				S	Sn	22 00 37.5	-0.4
BAND				*i* AML	AML	22 00 43.0	
	comp=N,52nm,0.3s						
BAND				*i* AML	AML	22 00 44.0	
	comp=N,57nm,0.2s						
OUR	Ouranopolis	1.85	297	P	Pn	22 00 18.1	+0.3
SMG	Samos	1.89	163	P	Pn	22 00 16.9	-1.4
SMG				AML	AML	22 00 48.8	
	comp=E,351μm,0.6s						
SMG				AML	AML	22 00 49.8	
	comp=N,465μm,0.5s						
KOKK	Kokkinochori,	2.10	309	P	Pn	22 00 20.5	-0.6
ANX	Ano Chora	3.42	256	P	Pn	22 00 39.3	-0.2

WEL 17 22:20:04.8±0.5**, 42°S**±2°×**17°4E**±°**, h5**^{km}**, M2.0**/4**, ML2.6**/7**,**
MLv2.0/4**, Error ellipse: s-maj=0.0km s-min=0.0km**
az=97.9, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.33	202	P	Pg	22 20 11.2	0.0
KHZ				S	Sg	22 20 16.3	+0.7
BSWZ	Blackbirch Sta	0.41	18	P	Pg	22 20 13.1	+0.3
BSWZ				S	Sg	22 20 19.2	+1.0
THZ	Tophouse	0.69	300	P	Pg	22 20 17.9	-0.1
THZ				S	Sg	22 20 27.5	+0.5
NNZ	Nelson	0.93	345	P	Pg	22 20 21.6	-0.9
GVZ	Greta Valley S	0.99	210	P	Pg	22 20 23.5	-0.3
GVZ				S	Sb	22 20 37.6	-0.2
TCW	Tory Channel	1.00	26	S	Sb	22 20 37.6	-0.3
MRNZ	Matariki Terra	1.00	315	P	Pg	22 20 23.9	-0.1
MRNZ				S	Sb	22 20 38.4	+0.3
TKNZ	Takaka Hill	1.21	332	P	Pg	22 20 27.2	-0.8
TKNZ				S	Sg	22 20 42.9	-0.8
LTZ	Lake Taylor	1.26	237	P	Pg	22 20 27.5	-1.4
LTZ				S	Sg	22 20 44.8	-0.4
DSZ	Denniston Nort	1.46	284	P	Pn	22 20 31.9	0.0
DSZ				S	Sg	22 20 51.7	-0.1
QRZ	Quartz Range	1.56	325	P	Pn	22 20 32.9	-0.3
QRZ				S	Sb	22 20 54.2	+0.1

IDC ***17*** *22:22:59.5±2.4, 5.°85S×103.°06E, h0^{km}, mb4.1/8, mbtmp4.1/8, MS3.6/1, Error ellipse: s-maj=72.9km s-min=25.1km az=52.0*
NEIC ***17*** *22:23:00.6±1.9, 5.°98S±0.°05×102.°94E±0.°09, h10^{km}±1^{km}, mb4.5/9, Error ellipse: s-maj=15.3km s-min=6.9km az=251.0*
DJA ***17*** *22:23:02.9±1.2, 6°S±4°×10°3E±°, h17^{km}±13^{km}, M4.2/15, mb4.1/5, mB4.7/1, MLv4.2/15, Mw(mB)4.0/1*
ISC 17 22:23:02.4±1.8**, 5.°96S**±0.°06×**102.°94E**±0.°06**, h25**^{km}±13^{km}**,**
n49, σ1^{s}16/48**, mb4.3**/10**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LWLI	Liwa	1.46	50	P	Pn	22 23 27.6	+0.3
LWLI				S	Sn	22 23 45.7	+0.1
MNAI	Manna	1.59	1		Pb	22 23 30.4	-0.7
MNAI				Sn	Sb	22 23 50.8	-0.1
MNAI	Manna	1.59	1	P	Pb	22 23 30.2	-1.0
KASI	Kota Agung	1.61	74	P	Pn	22 23 29.3	+0.1
KASI				S	Sn	22 23 48.0	-1.2
MDSI	Maura Dua	1.92	40	P	Pn	22 23 34.5	+1.0
MDSI				S	Sn	22 23 58.6	+1.8
KLI	Kotabumi	2.20	60	P	Pn	22 23 38.6	+1.2
KSI	Kapahiang	2.32	351	P	Pn	22 23 40.2	+1.1
BLSI	Bandar Lampung	2.37	76	P	Pn	22 23 41.3	+1.6
BLSI				S	Sn	22 24 09.6	+1.6
CGJI	Cibinong	2.81	103	P	Pn	22 23 46.5	+0.7
MASI	Maura Aman, Be	2.89	346	P	Pn	22 23 48.2	+1.3
CBJI	Citeko	3.91	97	P	Pn	22 24 03.9	+2.9
JMBI	JAMBI	4.36	9	P	Pn	22 24 09.0	+1.9
PPBI	Pangkal Pinang	4.94	40	P	Pn	22 24 16.5	+1.4
SDSI	Sungai Dareh	5.22	343	P	Pn	22 24 20.7	+1.7
	8.7nm,0.7s,0.1nm						
PDSI	Padang	5.59	334	P	Pn	22 24 25.0	+0.9
	17nm,0.5s,717nm0.2nm						
CMJI	Cimerak	5.76	109	P	Pn	22 24 27.2	+0.8
	98nm,0.7s,0.3nm						
KPJI	Karang Pucung	6.10	103	P	Pn	22 24 32.5	+1.4
	23nm,3.0s,0.2nm						
UGM	Wanagama	7.77	105	Pn	Pn	22 24 55.3	+1.2
COCO	West Island	8.64	224	Pn	Pn	22 25 07.5	+1.6
GSI	Gunungsitoli	8.99	323	Pn	Pn	22 25 10.3	-0.4
GSI	Gunungsitoli	8.99	323	P	Pn	22 25 10.7	-0.1
KKM	Kota Kinabalu	17.83	48		Pn	22 27 08.7	-0.4
KKM				IAmb	IAmb	22 27 23.8	
	comp=Z,38nm,1.4s						
TOLI2	Tolitoli	19.15	69	P	P	22 27 23.5	-0.6
CMAR	Chiang Mai Arr	24.58	351	P	P	22 28 20.4	-0.3
	comp=Z,2.1nm,0.3s,baz=182,slow=8.8,SNR=11						
	comp=Z,2.1nm,0.3s						
NWAO	Narrogin (SRO)	29.95	155	P	P	22 29 06.5	-2.3
H08S2	Diego Garcia H	30.28	265	T	T	23 00 47.9	
	baz=89,slow=75,SNR=14						
H08S3	Diego Garcia H	30.29	265	T	T	23 00 55.1	
	baz=89,slow=75,SNR=12						
H08S1	Diego Carcia H	30.30	265	T	T	23 00 50.8	
	baz=89,slow=75,SNR=11						
H01W3	Cape Leeuwin H	30.58	162	T	T	23 01 29.2	
	baz=339						
H01W2	Cape Leeuwin H	30.59	162	T	T	23 01 18.0	
	baz=339						
H01W1	Cape Leeuwin H	30.59	162	T	T	23 01 24.4	
	baz=339						
WB0	Warramunga Arr	33.51	117	P	P	22 29 39.6	-0.6
WB0				IAmb	IAmb	22 29 47.2	
	comp=Z,9.3nm,1.4s						
WRA	Warramunga Arr	33.52	117	P	P	22 29 40.2	-0.1
	comp=Z,0.4nm,0.6s,baz=286,slow=12,SNR=10.0						
	comp=Z,0.4nm,0.6s						
WRA	Warramunga Arr	33.52	117	P	P	22 29 37.9	-2.5
WB2	Warramunga Arr	33.53	117	P	P	22 29 40.6	+0.2
KSRS	Korea Array	49.08	26	P	P	22 31 48.2	+0.5
	comp=Z,0.6nm,0.4s,baz=230,slow=6.3,SNR=2.1						
	comp=Z,0.6nm,0.4s						
JHS	Saijyo	49.68	33	P	P	22 31 52.1	-0.3
JHS				IAmb	IAmb	22 31 53.6	
	comp=Z,12nm,1.3s						
SONM	Songino Array	53.65	3	P	P	22 32 22.8	+0.8
	comp=Z,2.6nm,0.6s,baz=181,slow=9.5,SNR=31						
SONM				LR	LR	22 55 23.3	
	comp=Z,60nm,19.6s,baz=158,slow=36						
	comp=Z,2.6nm,0.6s						
SONM	Songino Array	53.65	3	P	P	22 32 23.0	+1.0
SONM				IAmb	IAmb	22 32 23.6	
	comp=Z,2.1nm,0.7s						
MK31	Makanchi Array	55.63	343	P	P	22 32 36.8	+0.5
MKAR	Makanchi Array	55.63	343	P	P	22 32 36.6	+0.4
	comp=Z,1.2nm,0.5s,baz=148,slow=8.4,SNR=37						
	comp=Z,1.2nm,0.5s						
MKAR	Makanchi Array	55.63	343	P	P	22 32 36.1	-0.2
USRK	Ussuriysk Ar.	56.38	25	P	P	22 32 40.9	-0.7
	comp=Z,1.7nm,0.6s,baz=220,slow=6.3,SNR=7.0						
	comp=Z,1.7nm,0.6s						
KLR	Kul'dur	60.44	21	P	P	22 33 09.3	-0.6
	comp=Z,1.6nm,0.7s,baz=249,slow=8.6,SNR=7.8						
	comp=Z,1.6nm,0.7s						
ZALV	Zalesovo Beam	61.60	348	P	P	22 33 17.7	0.0
	comp=Z,2.9nm,0.4s,baz=158,slow=5.3,SNR=20						
	comp=Z,2.9nm,0.4s						
ABKAR	Akbulak array	66.50	331	P	P	22 33 50.0	0.0
BRTR	Keskin Array B	78.14	313	P	P	22 35 00.3	+0.4
IDI	Anoyia	83.73	306	P	P	22 35 29.0	-0.8
TXAR	Lajitas Array	145.77	44	PKPbc	PKPab	22 42 41.1	+0.5
	comp=Z,0.9nm,0.7s,baz=314,slow=1.9,SNR=10						

IDC ***17*** *22:28:01.6±1.8, 2.°97N×128.°13E, h152^{km}±16^{km}, mb4.2/23, mbtmp4.6/24, MS3.7/4, Error ellipse: s-maj=18.7km s-min=8.1km az=76.0*
NEIC ***17*** *22:28:02.1±1.4, 2.°93N±0.°08×128.°09E±0.°08, h154^{km}±6^{km}, mb4.7/96, Error ellipse: s-maj=12.3km s-min=11.1km az=56.0*
DJA ***17*** *22:28:02.9±0.4, 3°N±4°×12°8E±°, h145^{km}±3^{km}, M4.5/29, mB5.0/11, mb4.6/29, MLv4.8/12, Mw(mB)4.3/11*
ISC 17 22:28:01.8±0.5**, 2.°94N**±0.°04×**128.°03E**±0.°05**, h156**^{km}±4^{km}**,**
n331, σ1^{s}14/348**, mb4.7**/82**, 1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.26	197	Pn	Pn	22 28 40.9	+0.5
TNTI				Sn	Sn	22 29 11.4	+1.3
TNTI	Ternate	2.26	197	P	Pn	22 28 43.4	+3.0
TNTI	Ternate	2.26	197	P	Pn	22 28 40.6	+0.2
TNTI				S	Sn	22 29 10.8	+0.7
SGSI	Sangihe	2.61	286	P	Pn	22 28 43.8	-0.8
SGSI				S	Sn	22 29 16.0	-1.6
LBMI	Labuha	3.60	189	P	Pn	22 28 58.4	+1.3
SWI	Sorong	4.97	139	P	Pn	22 29 15.6	+0.6
	84nm,0.9s,1μm						
SANI	Sanana	5.37	202	P	Pn	22 29 18.6	-1.6
	127nm,0.8s,3μm0.8nm						
GTOI	Gorontalo	5.52	246	P	Pn	22 29 22.9	+0.6
	105nm,0.7s,815nm0.3nm						
NLAI	Namlea	6.21	189	P	Pn	22 29 32.1	+0.6
	38nm,0.5s,1.2nm						
MRSI	Marisa	6.56	248	P	Pn	22 29 37.1	+0.9
	288nm,1.1s,3μm1.0nm						
LUWI	Luwuk	6.58	233	Pn	Pn	22 29 38.0	+1.6
LUWI				Sn	Sn	22 30 51.3	+0.7
LUWI	Luwuk	6.58	233	P	Pn	22 29 38.5	+2.1
	109nm,0.7s						
LUWI	Luwuk	6.58	233	P	Pn	22 29 36.8	+0.4
	108nm,0.7s,2μm1.6nm						
FAKI	Fak Fak	7.19	144	Pn	Pn	22 29 43.9	-0.6
FAKI	Fak Fak	7.19	144	P	Pn	22 29 46.5	+2.0
	120nm,1.1s						
FAKI	Fak Fak	7.19	144	P	Pn	22 29 46.1	+1.6
	120nm,1.1s,1μm0.3nm						
TOLI2	Tolitoli	7.47	256	Pn	Pn	22 29 47.8	-0.5
TOLI2				Sn	Sn	22 31 07.0	-4.9
RKPI	Ransiki, Papua	7.57	126	P	Pn	22 29 53.0	+3.4
	105nm,0.8s,8μm0.4nm						
MPSI	Mapaga	8.53	252	P	Pn	22 30 02.2	-0.2
	20nm,1.0s						
MYLDM	Lahad Datu	9.77	283		Pn	22 30 19.9	+1.2
SPSI	Sidrap Palu	10.74	230	P	Pn	22 30 31.9	+0.3
	34nm,1.4s						
BKSI	Bulukumba	11.40	224	P	Pn	22 30 41.8	+1.6
	26nm,0.8s						
KAPI	Kappang	11.44	226	P	Pn	22 30 41.3	+0.5
	7.0nm,0.3s,baz=33,slow=5.2,SNR=8.3						
KAPI				S	Sn	22 32 43.7	-3.9
	11nm,0.6s,baz=141,slow=19,SNR=10						
KAPI	Kappang	11.44	226	Pn	Pn	22 30 41.2	+0.3
KAPI	Kappang	11.44	226	P	Pn	22 30 43.1	+2.3
	25nm,1.0s						
BSSI	Bau Bau, Buton	11.76	220	P	Pn	22 30 46.9	+2.0
	56nm,0.6s						
GENI	Genyem	13.32	114	P	P	22 31 09.3	+0.2
	723nm,0.9s,6μm						
BBKI	Banjar Baru	14.64	244	P	Pn	22 31 22.3	+0.6
PLAI	Plampang	15.53	221	P	P	22 31 35.5	+1.8
	74nm,1.0s						
PLAI	Plampang	15.53	221	P	P	22 31 34.1	+0.4
	73nm,1.0s						
SBUM	Sibu	15.80	269	P	P	22 31 37.4	+0.7
SBUM				IAmb	IAmb	22 31 41.4	
	comp=Z,100nm,1.5s						
MTN	Manton Dam	15.98	169		Pn	22 31 37.2	-1.0
MTN				IAmb	IAmb	22 31 54.3	
	comp=Z,28nm,1.1s						
TWSI	Taliwang, Sumb	16.07	224	P	Pn	22 31 39.3	0.0
	comp=Z,28nm,1.0s						
KDU	Kakadu	16.14	164	P	P	22 31 40.7	+0.3
	comp=Z,18nm,0.9s						
SRBI	Singaraja	16.84	229	P	Pn	22 31 50.1	+1.5
	comp=Z,30nm,1.1s						
KSM	Kuching	17.77	266	P	Pn	22 32 00.0	+0.2
KSM	Kuching	17.77	266	P	Pn	22 32 00.9	+1.1
	comp=Z,91nm,1.2s						
JAGI	Jajag, Banyuwa	17.89	231		Pn	22 32 00.7	-0.5
JAGI				IAmb	IAmb	22 32 04.2	
	comp=Z,95nm,1.5s						
JAGI	Jajag, Banyuwa	17.89	231	P	Pn	22 32 03.3	+2.1
	comp=Z,52nm,1.2s						
JAGI	Jajag, Banyuwa	17.89	231	P	Pn	22 32 01.9	+0.7
	comp=Z,52nm,1.2s						
GMJI	Gumukmas	18.33	232	P	Pn	22 32 06.6	+0.3
	comp=Z,64nm,1.1s						
KNRA	Kununurra	18.52	178	P	Pn	22 32 08.1	-0.4
	comp=Z,31nm,1.2s						

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NGJI   Ngawi             19.45 238   P      P      22 32 16.5 -0.1
       comp=Z,88nm,1.0s
PWJI   Pagerwojo         19.51 236   P      P      22 32 18.8 +1.5
       comp=Z,52nm,1.2s
DLV    T  Lat            21.33 296   P      P      22 32 39.1 +2.1
       comp=Z,36nm,1.2s
KPJI   Karang Pucung     21.62 242   P      P      22 32 40.5 +0.6
       comp=Z,63nm,0.9s
COEN   Coen              22.53 139   P      P      22 32 47.2 -1.7
WB0    Warramunga Arr    23.42 165   P      P      22 32 55.9 -1.1
WRAB   Tennant Creek     23.57 165   P      P      22 32 57.4 -0.9
WRAB   Tennant Creek     23.57 165   P      P      22 32 57.7 -0.7
       comp=Z,57nm,0.7s
WRA    Warramunga Arr    23.57 165   P      P      22 32 57.6 -0.8
       comp=Z,33nm,0.7s,baz=344,slow=10,SNR=155
WRA                                  PcP    PcP    22 36 39.2 -0.2
       comp=Z,0.8nm,0.7s,baz=354,slow=2.2,SNR=3.1
WRA                                  S      S      22 36 57.8 -3.4
       comp=Z,2.2nm,1.0s,baz=343,slow=15,SNR=5.8
WRA                                  ScP    ScP    22 40 03.0 -0.2
       comp=Z,0.4nm,0.6s,baz=331,slow=2.8,SNR=2.6
       comp=Z,33nm,0.7s
WRA    Warramunga Arr    23.57 165   P      P      22 32 56.5 -1.9
WB2    Warramunga Arr    23.57 165   P      P      22 32 57.5 -0.9
QIZ    Qiongzhong        23.92 313   P      P      22 33 03.3 +1.7
QIZ                                  pP     pP     22 33 32.0  0.0
QIZ                                  sP     sP     22 33 51.1 -0.2
QIZ                                  S      S      22 37 10.0 +3.1
MYKOM  Kota Tinggi       24.19 268   P      P      22 33 05.4 +1.3
MYKOM                                IAmb   IAmb   22 33 07.5
       comp=Z,41nm,1.0s
BTDF   Bukit Timah Da    24.29 267   P      P      22 33 08.1 +3.0
       comp=Z,19nm,1.0s
QIS    Mount Isa         25.97 155   P      P      22 33 20.4 +0.2
       comp=Z,21nm,0.8s
MTSU   Mount Surprise    26.38 143   P      P      22 33 23.6 -0.3
       comp=Z,5.4nm,0.6s
AS31   Alice Springs     27.06 168   P      P      22 33 30.0 +0.1
ASAR   Alice Springs     27.06 168   P      P      22 33 29.6 -0.4
       comp=Z,2.0nm,0.9s,baz=355,slow=8.2,SNR=18
ASAR                                 PcP    PcP    22 36 47.6 +0.4
       comp=Z,4.0nm,0.5s,baz=354,slow=2.3,SNR=23
ASAR                                 ScP    ScP    22 40 12.8 -0.3
       comp=Z,0.4nm,0.7s,baz=351,slow=3.1,SNR=2.7
       comp=Z,2.0nm,0.9s
ASAR   Alice Springs     27.06 168   P      P      22 33 28.6 -1.4
AS01   Alice Springs     27.07 168   P      P      22 33 31.3 +1.3
       comp=Z,4.4nm,0.6s
CTA    Charters Tower    29.05 143   P      P      22 33 47.6  0.0
       comp=Z,2.9nm,0.6s,baz=330,slow=8.9,SNR=2.9
CTA                                  LR     LR     22 45 11.7
       comp=Z,70nm,18.6s,baz=258,slow=36
       comp=Z,2.9nm,0.6s
RPSI   Rantau Prapat     29.08 270   P      P      22 33 47.9  0.0
JNU    Nakatsue          30.14   5   P      P      22 33 56.4 -0.7
       comp=Z,13nm,0.9s,baz=156,slow=8.5,SNR=10
       comp=Z,13nm,0.9s
JNU    Nakatsue          30.14   5   P      P      22 33 56.3 -0.9
JNU                                  IAmb   IAmb   22 33 57.7
       comp=Z,15nm,0.9s
JNU    Nakatsue          30.14   5   P      P      22 33 56.4 -0.7
       comp=Z,18nm,1.0s
GSI    Gunungsitoli      30.48 268   P      P      22 33 59.8 -0.6
GSI                                  IAmb   IAmb   22 34 31.4
       comp=Z,8.2nm,0.9s
PHRA   Phrae             31.31 302   P      P      22 34 08.3 +0.7
JHS    Saijyo            32.24   8   P      P      22 34 15.8 +0.3
JHS                                  IAmb   IAmb   22 34 17.8
       comp=Z,11nm,0.9s
CMAR   Chiang Mai Arr    32.39 301   P      P      22 34 18.4 +1.3
       comp=Z,2.6nm,0.4s,baz=114,slow=7.8,SNR=11
       comp=Z,2.6nm,0.4s
CMAR   Chiang Mai Arr    32.39 301   P      P      22 34 18.0 +1.0
CHTO   Chiang Mai        32.54 301   P      P      22 34 19.2 +0.8
JWT    Wachi             32.90  11   P      P      22 34 20.4 -0.8
FORT   Forrest           33.53 180   P      P      22 34 25.5 -1.3
FORT                                 IAmb   IAmb   22 34 27.1
       comp=Z,16nm,0.8s
KSAR   Wonju Array Be    34.33 360   P      P      22 34 33.0 -0.6
KSRS   Korea Array       34.34 360   P      P      22 34 33.9 +0.2
       comp=Z,3.2nm,0.8s,baz=178,slow=10,SNR=16
KSRS                                 PcP    PcP    22 37 05.4 -0.8
       comp=Z,1.0nm,0.6s,baz=176,slow=4.2,SNR=4.2
       comp=Z,3.2nm,0.8s
KS19   Wonju Array Si    34.39 360   P      P      22 34 33.6 -0.5
PZH    PanZhiHua         34.41 315   P      P      22 34 37.5 +2.9
PZH                                  pmax   pmax
       comp=Z,10.0nm,0.7s
PZH                                  pmax   pmax
       comp=Z,90nm,5.8s
LCRK   Leigh Creek       34.60 164   P      P      22 34 35.9 -0.1
       comp=Z,52nm,0.9s
MAJO   Matsushiro        34.73  14   P      P      22 34 36.6 -0.5
MAJO                                 IAmb   IAmb   22 34 37.6
       comp=Z,11nm,0.8s
MJAR   Matsushiro Arr    34.73  14   P      P      22 34 35.5 -1.6
       comp=Z,6.8nm,0.7s,baz=186,slow=9.4,SNR=22
MJAR                                 PcP    PcP    22 37 07.4  0.0
       comp=Z,1.6nm,0.7s,baz=178,slow=3.5,SNR=3.5
       comp=Z,6.8nm,0.7s
MJB9   Matsu-Tunnel      34.73  14   P      P      22 34 36.7 -0.4
MJB9                                 IAmb   IAmb   22 34 38.6
       comp=Z,11nm,0.8s
XAN    Xi'an             35.71 332 ⇓P      P      22 34 46.3 +0.8
XAN                                  pP     pwP    22 35 21.9 +0.6
XAN                                  pmax   pmax
       comp=Z,13nm,1.0s
BBOO   Buckleboo         36.36 169   P      P      22 34 50.7 -0.4
BBOO                                 IAmb   IAmb   22 35 29.2
       comp=Z,33nm,1.4s
JMM    Marumori          36.67  17   P      P      22 34 53.1 -0.5
JMM    Marumori          36.67  17   P      P      22 34 53.1 -0.5
       comp=Z,42nm,1.0s
STKA   Stephens Creek    36.95 161   P      P      22 34 55.7 -0.3
       comp=Z,25nm,0.7s,baz=334,slow=8.9,SNR=52
STKA                                 PcP    PcP    22 37 14.1  0.0
       comp=Z,4.8nm,0.8s,baz=315,slow=2.9,SNR=3.4
       comp=Z,25nm,0.7s
STKA   Stephens Creek    36.95 161   P      P      22 34 55.5 -0.6
STKA   Stephens Creek    36.95 161   P      P      22 34 56.1 +0.1
       comp=Z,6.3nm,2.6s
BJT    Baijiatuau        38.44 345   P      P      22 35 09.1 +0.7
       comp=Z,12nm,0.8s
BJI    Beijing           38.46 345   P      P      22 35 08.8 +0.2
BJI                                  sP     sP     22 35 57.8 -1.9
BJI                                  pmax   pmax
       comp=Z,7.0nm,0.7s
LZH    Lanzhou           39.84 329  eP      P      22 35 22.6 +2.3
LZH                                  pP     pwP    22 35 58.0 +0.7
LZH                                  sP     sP     22 36 14.3 +3.2
LZH                                  pmax   pmax
       comp=Z,15nm,1.1s
HHC    Hu-ho-hao-te      40.56 341  eP      P      22 35 28.9 +2.8
HHC                                  pmax   pmax
       comp=Z,12nm,0.5s
HHC                                  pmax   pmax
       comp=Z,140nm,5.5s
H11S3  WAKE ISLAND Hy    40.87  65   T      T      23 19 18.0
       baz=253,slow=75,SNR=7.8
H11S2  WAKE ISLAND Hy    40.88  65   T      T      23 19 19.6
       baz=253,slow=75,SNR=7.7
H11S1  WAKE ISLAND Hy    40.88  65   T      T      23 19 17.8
       baz=253,slow=75,SNR=4.1
USA0B  Ussuriysk Arra    41.23   4   P      P      22 35 31.2 -0.2
USA0B                                IAmb   IAmb   22 35 32.7
       comp=Z,11nm,0.9s
USRK   Ussuriysk Ar.     41.23   4   P      P      22 35 31.5 +0.1
       comp=Z,7.6nm,0.8s,baz=190,slow=7.7,SNR=21
       comp=Z,7.6nm,0.8s
USRK   Ussuriysk Ar.     41.23   4   P      P      22 35 30.9 -0.5
SHL    Shillong          41.39 306   P      P      22 35 33.4 +0.2
H11N1  WAKE ISLAND Hy    41.43  63   T      T      23 19 57.7
       baz=261,slow=75,SNR=3.1
H11N3  WAKE ISLAND Hy    41.45  63   T      T      23 19 59.3
       baz=252,slow=75,SNR=3.7
MDJ    Mudanjiang        41.52   2   P      P      22 35 34.6 +0.8
MDJ                                  pP     pP     22 36 08.6 +1.0
MDJ                                  sP     sP     22 36 24.6 -0.4
MDJ                                  ScP    ScP    22 41 07.8 +3.9
MDJ                                  ScS    ScS    22 45 13.4 -7.2
MDJ                                  pmax   pmax
       comp=Z,14nm,1.3s
MDJ                                  pmax   pmax
       comp=Z,120nm,9.7s
MDJ    Mudanjiang        41.52   2   P      P      22 35 35.1 +1.3
       comp=Z,7.3nm,1.2s
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ARPS   Mount Arapiles    41.55 163   P      P      22 35 35.2 +1.1
       comp=Z,32nm,1.3s
LSA    Lhasa             43.93 311   P      P      22 35 54.9 +0.8
GTA    Gaotai            44.44 328  eP      P      22 35 59.0 +1.5
GTA                                  pP     pwP    22 36 35.1 +0.6
GTA                                  PcP    PcP    22 37 39.8 +1.4
GTA                                  ScP    ScP    22 41 17.6 +1.5
GTA                                  pmax   pmax
       comp=Z,4.0nm,1.2s
DZM    Mont Dzumac       45.02 125   P      P      22 36 02.2 -0.1
       comp=Z,3.4nm,0.5s,baz=278,slow=15,SNR=6.3
       comp=Z,3.4nm,0.5s
TAPN   Taplejung         45.53 306  eP      P      22 36 07.7 +1.2
       comp=Z,32nm,0.9s
ODAN   Odare             45.58 305  eP      P      22 36 07.9 +1.0
       comp=Z,51nm,0.8s
RAMN   Ramite            46.26 305  eP      P      22 36 13.5 +1.3
       comp=Z,40nm,0.7s
JIRN   Jiri              46.88 306  eP      P      22 36 18.1 +0.9
HEH    HeiHe             47.14 359  eP      P      22 36 17.8 -0.5
HEH                                  pmax   pmax
       comp=Z,10.0nm,0.9s
GUN    Gumba             47.24 306  eP      P      22 36 20.9 +1.0
       comp=Z,45nm,0.7s
PKI    Pulchoki          47.48 305  eP      P      22 36 22.2 +0.4
PKIN   Phulchoki         47.49 305  eP      P      22 36 22.3 +0.5
KKN    Kakani            47.67 306  eP      P      22 36 23.3 +0.2
DMN    Daman             47.74 305  eP      P      22 36 24.6 +0.9
ULN    Ulaanbaatar       48.27 341   P      P      22 36 27.8 +0.5
GKN    Gorkha            48.28 306  eP      P      22 36 28.4 +0.7
       comp=Z,14nm,0.6s
SONM   Songino Array     48.46 341   P      P      22 36 29.2 +0.5
       comp=Z,2.8nm,0.7s,baz=153,slow=8.7,SNR=19
SONM                                 PcP    PcP    22 37 52.5 +0.1
       comp=Z,1.8nm,0.6s,baz=155,slow=4.0,SNR=9.4
       comp=Z,2.8nm,0.7s
SONM   Songino Array     48.46 341   P      P      22 36 28.4 -0.3
DANN   Dangsing          49.13 306  eP      P      22 36 35.3 +1.0
       comp=Z,76nm,0.7s
WMQ    Urumqi            54.11 325  eP      P      22 37 12.8 +2.0
KAAM   Kaadhehdhoo       55.06 269   P      P      22 37 18.4 +0.4
KAAM                                 IAmb   IAmb   22 37 19.7
       comp=Z,21nm,1.0s
PETK   Petropavlovsk-    55.67  21   P      P      22 37 22.6 +0.8
       comp=Z,16nm,0.8s,baz=200,slow=7.5,SNR=8.4
       comp=Z,16nm,0.8s
MK31   Makanchi Array    58.94 325   P      P      22 37 44.3 -0.5
MKAR   Makanchi Array    58.94 325   P      P      22 37 45.5 +0.7
       comp=Z,2.9nm,0.6s,baz=114,slow=8.0,SNR=28
MKAR                                 ScP    ScP    22 42 17.5 -0.8
       comp=Z,0.4nm,0.8s,baz=137,slow=4.9,SNR=3.9
       comp=Z,2.9nm,0.6s
MKAR   Makanchi Array    58.94 325   P      P      22 37 44.7 -0.1
YAK    Yakutsk           58.96   1   P      P      22 37 43.9 -0.7
MAKZ   Makanchi          59.13 325   P      P      22 37 46.3 +0.3
MAKZ                                 IAmb   IAmb   22 37 47.5
       comp=Z,3.9nm,0.7s
MA2    Magadan           59.16  13   P      P      22 37 46.2 +0.2
DCZ    Deep Cove         59.40 149   P      P      22 37 48.2 +0.3
QRZ    Quartz Range      59.51 142   P      P      22 37 48.0 -0.7
RPZ    Rata Peaks        60.38 145   P      P      22 37 54.9 +0.3
       comp=Z,16nm,0.8s,baz=6.2,slow=13,SNR=1.9
       comp=Z,16nm,0.8s
URZ    Urewera           61.08 137   P      P      22 37 59.3 -0.1
       comp=Z,4.0nm,0.7s,baz=350,slow=6.1,SNR=2.5
       comp=Z,4.0nm,0.7s
RTZ    Ruatahuna         61.17 138   P      P      22 37 59.8 -0.4
RTZ                                  IAmb   IAmb   22 38 00.7
       comp=Z,13nm,0.7s
ZALV   Zalesovo Beam     61.88 333   P      P      22 38 03.9 -0.6
       comp=Z,2.4nm,0.8s,baz=132,slow=7.5,SNR=7.3
       comp=Z,2.4nm,0.8s
ZALV   Zalesovo Beam     61.88 333   P      P      22 38 03.2 -1.3
KURK   Kurchatov         63.10 327   P      P      22 38 12.6 -0.1
KURK                                 IAmb   IAmb   22 38 13.7
       comp=Z,6.8nm,0.7s
KK31   Karatay Array     64.69 317   P      P      22 38 23.9 +0.6
KKAR   Karatay Array     64.69 317   P      P      22 38 23.3  0.0
KKAR   Karatay Array     64.69 317   P      P      22 38 22.6 -0.8
KKAR                                 IAmb   IAmb   22 39 05.4
       comp=Z,6.2nm,1.3s
TIXI   Tiksi             68.61   0   LR     LR     23 11 02.0
       comp=Z,28nm,18.9s,baz=2.5,slow=38
TIXI   Tiksi             68.61   0   P      P      22 38 46.6 -1.0
TIXI                                 IAmb   IAmb   22 38 47.9
       comp=Z,5.5nm,0.6s
BRVK   Borovoye          68.76 327   P      P      22 38 48.2 -0.7
BRVK                                 IAmb   IAmb   22 38 49.7
       comp=Z,5.4nm,0.8s
CASY   Casey             70.20 187   P      P      22 38 57.6 +0.2
CASY                                 IAmb   IAmb   22 38 59.2
       comp=Z,13nm,0.8s
NRIK   Noril'sk          71.50 346   P      P      22 39 05.4 +0.2
       comp=Z,5.2nm,0.6s,baz=130,slow=7.2,SNR=8.6
       comp=Z,5.2nm,0.6s
NRIK   Noril'sk          71.50 346   P      P      22 39 05.2  0.0
NRIK                                 IAmb   IAmb   22 39 06.0
       comp=Z,6.2nm,0.7s
XMAS   Kiritimati        74.44  89   P      P      22 39 20.2 -3.4
TNA    Tin City          76.81  23   P      P      22 39 36.2 +0.3
       baz=247
SDPT   Sand Point        77.12  34   P      P      22 39 38.0  0.0
       baz=256
ANM    Nome              77.45  24   P      P      22 39 40.2 +0.6
ANM    Nome              77.45  24   P      P      22 39 40.5 +0.8
       baz=250
N16K   Nishlik Lake      79.20  29   P      P      22 39 50.7 +1.3
       baz=257
P16K   Nushagak River    79.27  30   P      P      22 39 50.7 +1.0
       baz=258
O16K   Kokwok River B    79.34  30   P      P      22 39 51.1 +1.0
       baz=257
RDOG   Red Dog Mine      79.55  21   P      P      22 39 51.0 -0.1
RDOG                                 IAmb   IAmb   22 39 53.2
       comp=Z,10nm,1.0s
RDOG   Red Dog Mine      79.55  21   P      P      22 39 52.3 +1.2
       baz=251
O17K   Koliganek Bris    79.87  30   P      P      22 39 53.9 +1.0
       baz=258
Q16K   King Salmon       79.88  31   P      P      22 39 53.6 +0.6
       baz=259
Q17K   Contact Creek     80.19  31   P      P      22 39 55.0 +0.1
       baz=260
P18K   Big Mountain,     80.73  30   P      P      22 39 58.3 +0.6
       baz=260
O18K   Koktuh Hills      80.82  30   P      P      22 39 58.9 +0.8
       baz=260
GCSA   Galena City Sc    81.01  25   P      P      22 39 59.8 +0.9
       baz=258
TTA    Tatalina          81.01  27   P      P      22 39 59.6 +0.5
TTA    Tatalina          81.01  27   P      P      22 40 00.0 +0.9
       baz=259
N19K   Bonanza Creek     81.34  29   P      P      22 40 01.6 +0.7
N19K                                 IAmb   IAmb   22 40 04.3
       comp=Z,12nm,0.8s
N19K   Bonanza Creek     81.34  29   P      P      22 40 02.1 +1.1
       baz=260
L19K   White Mountain    81.40  28   P      P      22 40 02.4 +1.3
L19K                                 IAmb   IAmb   22 40 03.4
       comp=Z,7.7nm,0.9s
L19K   White Mountain    81.40  28   P      P      22 40 02.5 +1.3
       baz=260
OHAK   Old Harbor        81.41  33   P      P      22 40 00.7 -0.4
OHAK   Old Harbor        81.41  33   P      P      22 40 02.0 +0.9
       baz=262
Q19K   Cape Douglas,     81.46  31   P      P      22 40 02.0 +0.5
M19K   Big River Lodg    81.57  28   P      P      22 40 03.2 +1.2
M19K   Big River Lodg    81.57  28   P      P      22 40 03.1 +1.2
       baz=260
P19K   Oil Pt            81.78  30   P      P      22 40 04.0 +0.8
KDAK   Kodiak Island     81.86  32   P      P      22 40 04.3 +0.8
KDAK                                 IAmb   IAmb   22 40 05.2
       comp=Z,16nm,0.8s
KDAK   Kodiak Island     81.86  32   P      P      22 40 04.6 +1.1
       baz=262
ILSW   Iliamna Southw    81.87  30   P      P      22 40 03.8 +0.1
ILSW                                 IAmb   IAmb   22 40 09.4
       comp=Z,31nm,1.4s
L20K   Farewell, AK      81.90  27   P      P      22 40 05.1 +1.4
       baz=261
K20K   Telida            81.95  26   P      P      22 40 05.3 +1.3
K20K                                 IAmb   IAmb   22 40 06.6
       comp=Z,15nm,1.2s
K20K   Telida            81.95  26   P      P      22 40 05.0 +1.1
       baz=260
RSO    Redoubt South     82.13  29   P      P      22 40 05.3 +0.1
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O20K   Slope Mountain    82.14  30   P      P      22 40 06.2 +1.1
       baz=262
M20K   Styx River        82.15  28   P      P      22 40 06.5 +1.4
M20K                                 IAmb   IAmb   22 40 08.3
       comp=Z,13nm,0.8s
M20K   Styx River        82.15  28   P      P      22 40 06.2 +1.0
       baz=261
VNDA   Vanda             82.49 173   P      P      22 40 07.2 +0.7
       comp=Z,3.7nm,0.5s,baz=313,slow=7.3,SNR=21
       comp=Z,3.7nm,0.5s
VNDA   Vanda             82.49 173   P      P      22 40 06.7 +0.2
IMAR   Indian Mountai    82.53  24   P      P      22 40 07.9 +1.0
G21K   Allakaket         82.72  23   P      P      22 40 08.9 +1.0
       baz=260
PPLA   Purkeypile        82.73  27   P      P      22 40 08.9 +0.7
PPLA                                 IAmb   IAmb   22 40 35.4
       comp=Z,16nm,1.2s
PPLA   Purkeypile        82.73  27   P      P      22 40 08.8 +0.7
       baz=262
CNPM   China Poot        82.77  30   P      P      22 40 08.5 +0.2
CHUM   Lake Minchumin    82.81  26   P      P      22 40 09.8 +1.5
       baz=262,SNR=9.2
F21K   Alatna River      82.84  23   P      P      22 40 09.6 +1.1
       baz=260
CAST   Castle Rocks      82.85  27   P      P      22 40 09.6 +1.0
CAST                                 IAmb   IAmb   22 40 11.1
       comp=Z,13nm,0.7s
CAST   Castle Rocks      82.85  27   P      P      22 40 09.8 +1.2
       baz=262,SNR=14
H21K   Melozitna Rive    82.86  24   P      P      22 40 10.0 +1.4
H21K                                 IAmb   IAmb   22 40 11.1
       comp=Z,17nm,0.9s
H21K   Melozitna Rive    82.86  24   P      P      22 40 09.6 +1.0
       baz=261
SKT    Skwentna          82.92  28   P      P      22 40 08.8 -0.2
SKT                                  IAmb   IAmb   22 40 10.2
       comp=Z,15nm,0.9s
SKT    Skwentna          82.92  28   P      P      22 40 09.3 +0.3
       baz=263,SNR=7.1
BRLK   Bradley Lake      82.97  30   P      P      22 40 09.6 +0.3
BRLK                                 IAmb   IAmb   22 40 28.5
       comp=Z,22nm,1.2s
VOI    Vohitsoka         82.97 248   P      P      22 40 09.6 -0.7
VOI                                  IAmb   IAmb   22 40 21.5
       comp=Z,31nm,1.4s
I21K   Tanana            83.13  25   P      P      22 40 11.4 +1.4
I21K                                 IAmb   IAmb   22 40 12.5
       comp=Z,17nm,1.0s
I21K   Tanana            83.13  25   P      P      22 40 11.6 +1.6
       baz=262
SUA    Susitna One       83.23  29   P      P      22 40 10.7 -0.1
SUA    Susitna One       83.23  29   P      P      22 40 11.1 +0.4
       baz=264,SNR=8.1
KTH    Kantishna Hill    83.38  26   P      P      22 40 11.9 +0.5
KTH                                  IAmb   IAmb   22 40 13.4
       comp=Z,16nm,1.2s
F22K   John River        83.38  22   P      P      22 40 12.5 +1.2
       baz=262
BPAW   Bear Paw Mtn.     83.42  26   P      P      22 40 12.4 +0.8
BPAW   Bear Paw Mtn.     83.42  26   P      P      22 40 12.1 +0.6
       baz=263
H22K   Ishtalitna Cre    83.48  24   P      P      22 40 13.6 +1.7
       baz=262
E22K   Anaktuvuk Pass    83.61  22   P      P      22 40 13.7 +1.2
       baz=262,SNR=19
MLY    Manley            83.64  25   P      P      22 40 13.4 +0.7
MLY                                  IAmb   IAmb   22 40 14.5
       comp=Z,9.7nm,0.8s
MLY    Manley            83.64  25   P      P      22 40 13.0 +0.3
       baz=263,SNR=9.3
TRF    Thorofare Moun    83.65  27   P      P      22 40 12.7 -0.2
TRF                                  IAmb   IAmb   22 40 14.1
       comp=Z,12nm,1.0s
TRF    Thorofare Moun    83.65  27   P      P      22 40 12.9  0.0
       baz=264
RC01   Rabbit Creek A    83.67  29   P      P      22 40 12.8 -0.1
RC01                                 IAmb   IAmb   22 40 13.8
       comp=Z,16nm,0.8s
RC01   Rabbit Creek A    83.67  29   P      P      22 40 12.9  0.0
       baz=265,SNR=6.0
SEW    Seward            83.72  30   P      P      22 40 13.6 +0.5
       baz=265
PMR    Palmer            84.01  28   P      P      22 40 14.2 -0.3
PMR                                  IAmb   IAmb   22 40 15.6
       comp=Z,17nm,0.8s
PMR    Palmer            84.01  28   P      P      22 40 14.3 -0.3
       baz=265,SNR=5.4
COLD   Coldfoot          84.11  23   P      P      22 40 16.3 +1.4
COLD                                 IAmb   IAmb   22 40 17.4
       comp=Z,15nm,0.8s
COLD   Coldfoot          84.11  23   P      P      22 40 16.6 +1.7
       baz=264
G23K   Bananza Creek     84.12  23   P      P      22 40 16.7 +1.6
       baz=264
D23K   Nanushuk River    84.13  21   P      P      22 40 16.7 +1.6
       baz=263
H23K   Yukon River       84.22  24   P      P      22 40 16.6 +1.1
H23K                                 IAmb   IAmb   22 40 18.4
       comp=Z,11nm,0.9s
H23K   Yukon River       84.22  24   P      P      22 40 17.7 +2.2
       baz=264
I23K   Minto, Yukon-K    84.23  25   P      P      22 40 16.8 +1.3
I23K                                 IAmb   IAmb   22 40 17.6
       comp=Z,9.1nm,0.8s
I23K   Minto, Yukon-K    84.23  25   P      P      22 40 16.4 +0.9
       baz=264,SNR=8.8
MCK    McKinley          84.28  26   P      P      22 40 15.8 -0.2
MCK                                  IAmb   IAmb   22 40 17.0
       comp=Z,12nm,0.9s
MCK    McKinley          84.28  26   P      P      22 40 16.4 +0.4
       baz=265,SNR=5.3
RND    Reindeer          84.29  27   P      P      22 40 15.9 -0.1
RND                                  IAmb   IAmb   22 40 16.8
       comp=Z,10nm,0.9s
NEA2   Nenana            84.30  25   P      P      22 40 16.6 +0.6
NEA2                                 IAmb   IAmb   22 40 18.9
       comp=Z,7.8nm,1.0s
NEA2   Nenana            84.30  25   P      P      22 40 17.3 +1.4
       baz=265
KNK    Knik Glacier      84.32  29   P      P      22 40 16.6 +0.4
KNK    Knik Glacier      84.32  29   P      P      22 40 17.1 +1.0
       baz=266,SNR=5.4
PWL    Port Wells        84.33  29   P      P      22 40 16.8 +0.6
PWL    Port Wells        84.33  29   P      P      22 40 16.7 +0.5
       baz=266
SML    Sawmill           84.41  28   P      P      22 40 17.0 +0.4
SML    Sawmill           84.41  28   P      P      22 40 16.7 +0.1
       baz=266,SNR=8.9
E23K   Chandalar         84.42  22   P      P      22 40 17.3 +0.7
       baz=264,SNR=8.7
MDM    Murphy Dome       84.69  25   P      P      22 40 18.4 +0.5
M23K   Glacier View      84.69  28   P      P      22 40 18.7 +0.7
       baz=266,SNR=8.0
WRH    Wood River Hil    84.71  26   P      P      22 40 17.8 -0.3
P23K   Montague Islan    84.74  30   P      P      22 40 19.1 +0.8
       baz=267
E24K   Your Creek        84.84  22   P      P      22 40 20.2 +1.5
       baz=265
CCB    Clear Creek Bu    84.85  25   P      P      22 40 18.4 -0.3
SCM    Sheep Creek Mo    84.88  28   P      P      22 40 19.9 +0.9
SCM    Sheep Creek Mo    84.88  28   P      P      22 40 19.7 +0.6
       baz=267
H24K   Noodor Dome       84.90  24   P      P      22 40 20.0 +1.0
       baz=266
C24K   Franklin Bluff    84.91  20   P      P      22 40 19.9 +0.9
       baz=265
F24K   Squaw Lake        85.03  23   P      P      22 40 21.0 +1.4
       baz=266
G24K   Hadweenzic Riv    85.13  23   P      P      22 40 21.2 +1.1
       baz=266
HDA    Harding Lake      85.20  26   P      P      22 40 21.6 +1.1
       baz=267
ILAR   Eielson Array     85.25  25   P      P      22 40 19.5 -1.2
       comp=Z,0.7nm,0.6s,baz=244,slow=6.0,SNR=10.0
       comp=Z,0.7nm,0.6s
M24K   Tolsona, Glenn    85.44  28   P      P      22 40 21.8  0.0
M24K   Tolsona, Glenn    85.44  28   P      P      22 40 22.6 +0.8
       baz=268
KLU    Klutina           85.54  29   P      P      22 40 23.2 +0.9
       baz=268
DIV    Divide            85.60  29   P      P      22 40 23.3 +0.7
G25K   Bearman Lake      85.68  23   P      P      22 40 24.2 +1.4
       baz=267
D25K   Kavik River       85.70  21   P      P      22 40 23.6 +0.7
       baz=267
PAX    Paxson            85.80  27   P      P      22 40 24.7 +1.2
       baz=268
```

F25K	Christian Rive	85.89	23	P	P	22 40 25.0	+1.1
	baz=268						
HARP	HAARP	85.93	28	P	P	22 40 25.5	+1.3
	baz=268						
E25K	Arctic Village	85.94	22	P	P	22 40 24.8	+0.7
	baz=268,SNR=6.2						
RIDG	Independent Ri	86.10	26	P	P	22 40 24.9	-0.2
	baz=269						
N25K	Chitina, Valde	86.17	29	P	P	22 40 26.0	+0.5
	baz=269						
C26K	Camden Bay	86.24	20	P	P	22 40 27.3	+1.8
	baz=268						
BMAR	Burnt Mountain	86.29	23	P	P	22 40 27.1	+1.2
F26K	Sheenjek River	86.47	22	P	P	22 40 27.6	+0.9
	baz=269						
SCRK	Sand Creek	86.48	26	P	P	22 40 28.1	+1.1
	baz=269						
G26K	Porcupine Rive	86.60	23	P	P	22 40 28.4	+1.2
	baz=269						
C27K	Jago River	86.65	21	P	P	22 40 27.9	+0.4
	baz=269						
L26K	Log Cabin Wild	86.77	27	P	P	22 40 28.5	+0.3
	baz=270						
I26K	Coal Creek Min	86.85	25	P	P	22 40 28.5	-0.1
	baz=270						
K27K	Chicken	87.33	26	P	P	22 40 31.6	+0.7
	baz=271						
E27K	Coleen River	87.43	22	P	P	22 40 31.6	+0.3
	baz=271						
G27K	Doyon Strip	87.44	23	P	P	22 40 31.4	0.0
	baz=271						
M27K	Edge Creek, AK	87.45	28	P	P	22 40 31.4	-0.4
	baz=271						
L27K	Beaver Creek,	87.46	27	P	P	22 40 32.4	+0.8
	baz=271						
I27K	Kandik River	87.49	25	P	P	22 40 32.2	+0.5
	baz=272						
H27K	Steamboat Moun	87.50	24	P	P	22 40 32.3	+0.5
	baz=272						
EGAK	Eagle	87.70	25	P	P	22 40 32.9	+0.2
	baz=272						
CTG	Chitna Glacier	87.75	29	P	P	22 40 32.8	-0.4
	baz=272						
YUK4	Talbot Arm	89.04	29	P	P	22 40 40.0	+0.7
	baz=274						
M29M	Somme Creek	89.04	28	P	P	22 40 40.0	+0.9
	baz=274						
L29M	L29M	89.14	27	P	P	22 40 40.1	+0.6
	baz=275						
K29M	Barlow Dome	89.35	26	P	P	22 40 41.1	+0.6
	baz=275						
EPYK	Eagle Plains	89.43	24	P	P	22 40 41.0	+0.2
	baz=276						
G30M	tAoh Zraii Nji	89.56	23	P	P	22 40 41.1	-0.3
	baz=276						
N30M	Aishikik Lake	89.77	29	P	P	22 40 42.5	0.0
	baz=276						
M30M	Minto, Yukon	89.80	27	P	P	22 40 42.4	-0.2
	baz=276						
INK	Inuvik	90.41	22	P	P	22 40 44.6	-0.6
	comp=Z,2.4nm,0.9s,baz=268,slow=7.5,SNR=6.1						
	comp=Z,2.4nm,0.9s						
INK	Inuvik	90.41	22	P	P	22 40 45.3	0.0
	baz=279						
F31M	Tsiigehtchic	90.46	22	P	P	22 40 45.3	-0.2
	baz=279						
M31M	Drury Creek, Y	90.95	28	P	P	22 40 48.1	+0.1
	baz=278						
FARO	Faro, Yukon	91.43	28	P	P	22 40 50.5	+0.3
FARO				IAmb	IAmb	22 40 51.7	
	comp=Z,9.7nm,1.0s						
FARO	Faro, Yukon	91.43	28	P	P	22 40 49.4	-0.8
	baz=279						
ARCES	ARCESS Array B	91.63	340	P	P	22 40 49.6	-1.3
	comp=Z,3.6nm,0.8s,baz=64,slow=8.1,SNR=6.2						
ARCES				LR	LR	23 27 11.2	
	comp=Z,49nm,18.9s,baz=250,slow=39						
	comp=Z,3.6nm,0.8s						
MMPY	Sheldon Lake,	92.32	27	P	P	22 40 53.5	-0.9
	baz=281						
A36M	Sachs Harbour	92.34	17	P	P	22 40 54.0	-0.1
	baz=287						
U33K	Whale Pass	92.51	34	P	P	22 40 54.6	-0.5
	baz=279						
QSPA	South Pole Qui	92.86	180	LR	LR	23 24 40.4	
	comp=Z,85nm,18.4s,baz=280,slow=37						
QSPA	South Pole Qui	92.86	180	P	P	22 40 57.7	+1.0
S34M	Telegraph Cree	93.27	32	P	P	22 40 58.7	0.0
	baz=281						
RES	Resolute Bay	98.34	11	P	P	22 41 21.1	-0.3
	comp=Z,2.5nm,0.7s,baz=306,slow=6.2,SNR=9.6						
	comp=Z,2.5nm,0.7s						
RES	Resolute Bay	98.34	11	P	P	22 41 21.4	0.0
RES				IAmb	IAmb	22 41 22.3	
	comp=Z,2.3nm,0.8s						
YKA	Yellowknife Ar	99.67	25	P	Pdif	22 41 27.5	0.0
	comp=Z,1.1nm,0.9s,baz=296,slow=4.7,SNR=10						
	comp=Z,1.1nm,0.9s						
T25A	Trinidad	117.11	45	P	PKPdf	22 46 28.6	-0.6
	baz=297						
ECSD	EROS Data Cent	118.68	35	P	PKPdf	22 46 31.7	-0.1
	baz=307						
MNTX	Cornudas Mount	118.73	51	P	PKPdf	22 46 31.8	-0.4
	baz=294						
TXAR	Lajitas Array	121.04	53	PKP	PKPdf	22 46 36.8	0.0
	comp=Z,0.5nm,0.7s,baz=276,slow=2.5,SNR=6.6						
SCHQ	Schefferville	121.12	10	PKP	PKPdf	22 46 35.7	-0.4
	comp=Z,1.9nm,0.8s,baz=281,slow=5.2,SNR=5.1						
WMOK	Wichita Mounta	122.27	45	P	PKPdf	22 46 38.3	-0.6
	baz=301						
JFWS	Jewell Farm	122.77	33	P	PKPdf	22 46 39.3	-0.3
	baz=313						
JCT	Junction City	123.57	50	P	PKPdf	22 46 41.6	+0.1
	baz=297						
TORD	Torodi Ar. Bea	124.40	288	PKP	PKPdf	22 46 43.3	-0.1
	comp=Z,2.2nm,0.8s,baz=55,slow=2.1,SNR=11						
CCM	Cathedral Cave	125.38	38	P	PKPdf	22 46 44.3	-0.4
	baz=309						
MIAR	Mount Ida	125.98	43	P	PKPdf	22 46 44.7	-1.3
	baz=305						
WVT	Waverly	128.70	37	P	PKPdf	22 46 50.2	-1.0
	baz=312						
P52A	Corning	129.37	30	P	PKPdf	22 46 52.4	+0.1
	baz=320						
LBNH	Lisbon	129.74	19	P	PKPdf	22 46 52.6	-0.3
	baz=334						
L61B	Northampton	131.08	20	P	PKiKP	22 46 56.3	-0.1
	baz=332						
LRAL	Lakeview Retre	131.24	40	P	PKPdf	22 46 56.4	+0.4
	baz=310						
TKL	Tuckaleechee C	131.42	35	PKP	PKPdf	22 46 56.3	0.0
	comp=Z,1.7nm,0.5s,baz=0.0,slow=0.0,SNR=4.6						
KMSC	Kings Mountain	133.16	33	P	PKPdf	22 46 59.3	-0.3
	baz=318						
PLCA	Paso Flores	138.81	158	PKP	PKiKP	22 47 11.4	-0.9
	comp=Z,2.1nm,0.8s,baz=225,slow=1.4,SNR=4.5						
CFA	Coronel Fontan	147.63	153	PKPbc	PKPbc	22 47 28.5	-0.2
	comp=Z,14nm,0.6s,baz=222,slow=2.7,SNR=26						

WEL 17 22:28:18.9±0.3, 42°S±2°×17°4E±°, h12km±2km, M2.6/12, ML2.9/18, MLv2.6/12, Error ellipse: s-maj=0.0km s-min=0.0km az=122.3, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.30	216	P	Pb	22 28 27.1	+0.8
KHZ				S	Sb	22 28 32.0	+0.7
BSWZ	Blackbirch Sta	0.46	9	P	Pg	22 28 28.4	+0.4
BSWZ				S	Sg	22 28 34.6	+0.5
CMWZ	Cape Campbell	0.53	38	P	Pb	22 28 31.1	+0.9
TUWZ	Tuamarina	0.75	10	P	Pb	22 28 33.9	0.0
TUWZ				S	Sb	22 28 43.8	-0.1
THZ	Tophouse	0.77	302	P	Pg	22 28 33.4	-0.5
THZ				S	Sg	22 28 42.8	-1.1
GVZ	Greta Valley S	0.97	214	P	Pn	22 28 38.9	+0.6
GVZ				S	Sn	22 28 53.2	+1.2
NNZ	Nelson	1.00	342	P	Pb	22 28 37.4	-0.7
TCW	Tory Channel	1.03	21	P	Pb	22 28 38.7	+0.1
TCW				S	Sg	22 28 52.2	+0.1
MRNZ	Matariki Terra	1.08	315	P	Pb	22 28 39.3	-0.3
MRNZ				S	Sg	22 28 54.1	+0.2
PLWZ	Palliser	1.25	62	P	Pn	22 28 42.4	+0.1
LTZ	Lake Taylor	1.27	241	P	Pb	22 28 42.8	0.0
LTZ				S	Sg	22 28 59.9	-0.1
TKNZ	Takaka Hill	1.29	331	P	Pn	22 28 42.6	-0.1
AMCZ	Amberley	1.31	219	P	Pb	22 28 43.2	-0.2
DUWZ	D'Urville Isla	1.37	5	P	Pn	22 28 43.6	-0.2
DUWZ				S	Sg	22 29 02.9	-0.2
CAW	Cannon Point	1.43	43	P	Pn	22 28 44.9	+0.2
DSZ	Denniston Nort	1.53	285	P	Pb	22 28 47.3	0.0
DSZ				S	Sg	22 29 07.8	-0.5
KIW	Kapiti Island	1.56	33	P	Pn	22 28 46.8	+0.4
QRZ	Quartz Range	1.64	325	P	Pb	22 28 48.4	-0.6
QRZ				S	Sb	22 29 09.6	+0.1
MTW	Mount Morrison	1.64	53	P	Pn	22 28 47.1	-0.4
OGWZ	Otaki Gorge	1.71	38	P	Pn	22 28 48.6	+0.2
OGWZ				S	Sn	22 29 09.7	-0.5
OXZ	Oxford	1.73	227	P	Pn	22 28 48.1	-0.6
OXZ				S	Sn	22 29 09.6	-1.1
MQZ	McQueen's Vall	1.75	208	P	Pn	22 28 48.1	-0.9
MQZ				S	Sn	22 29 09.4	-1.7
HOWZ	Holdsworth Sta	1.82	46	P	Pn	22 28 49.5	-0.5
RACZ	Rakaia	1.97	217	P	Pn	22 28 51.3	-0.8
MRZ	Mangatainoka R	2.02	43	P	Pn	22 28 52.5	-0.3
MHCZ	Mount Hutt	2.12	229	P	Pn	22 28 53.4	-0.8
WACZ	Wakanui South	2.27	218	P	Pn	22 28 55.8	-0.4
WVZ	Waitaha Valley	2.42	247	P	Pn	22 28 58.8	+0.6
RPZ	Rata Peaks	2.53	231	P	Pn	22 28 59.1	-0.7
ARCZ	Arundel	2.61	226	P	Pn	22 29 00.1	-0.7
GCSZ	Gaunt Creek Bo	2.79	245	P	Pn	22 29 03.7	+0.3
TMZ	Timaru	3.00	222	P	Pn	22 29 05.4	-0.8
WNVZ	Wahianoa	3.16	27	P	Pb	22 29 14.4	-0.6
ODZ	Otahua Downs	3.67	217	P	Pn	22 29 14.4	-1.0

IDC 17 22:28:48.2±8.1, 13°.94N×120°.06E, h0km, mb3.8/4, mbtmp3.8/4, MS3.2/3, Error ellipse: s-maj=189.9km s-min=142.3km az=97.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NJ2	Nanjing	18.06	357	*e*P	Pn	22 32 59.3	-1.3
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MJAR	Matsushiro Arr	27.76	33	LR	LR	22 46 35.8	
	comp=Z,29nm,18.7s,baz=186,slow=38						
SONM	Songino Array	35.65	344	P	P	22 35 47.8	-0.3
	comp=Z,0.7nm,0.9s,baz=148,slow=8.5,SNR=4.6						
	comp=Z,0.7nm,0.9s						
ASAJ	Asahikawa	35.71	28	LR	LR	22 52 18.2	
	comp=Z,57nm,18.0s,baz=175,slow=40						
MKAR	Makanchi Array	45.47	324	P	P	22 37 08.8	-0.3
	comp=Z,0.7nm,0.7s,baz=128,slow=8.2,SNR=9.4						
	comp=Z,0.7nm,0.7s						
ZALV	Zalesovo Beam	48.56	333	P	P	22 37 33.6	+0.4
	comp=Z,0.8nm,0.8s,baz=119,slow=8.9,SNR=3.8						
	comp=Z,0.8nm,0.8s						
OBN	Obninsk	74.97	324	LR	LR	23 14 31.9	
	comp=Z,14nm,19.1s,baz=360,slow=37						
FINES	FINESS Array B	79.77	331	P	P	22 40 58.0	0.0
	comp=Z,1.9nm,0.9s,baz=86,slow=5.7,SNR=4.1						
	comp=Z,1.9nm,0.9s						

JMA 17 22:34:17.0±0.1, 35°.9N±0°.4×140°.9E±0°.6, h15km±1km, MV0.9/7, NEAR CHOSHI CITY, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.15	181	P	Pg	22 34 20.9	0.0
CHOJ				S	Sg	22 34 23.8	+0.3

IDC 17 22:42:19.5±1.5, 8°.17S×126°.32E, h0km, mb3.6/3, mbtmp3.7/5, ML3.9/2, Error ellipse: s-maj=162.7km s-min=29.2km az=63.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.05	147	Pn	Pn	22 45 38.4	-1.6
	0.6nm,0.3s,baz=321,slow=14,SNR=30						
WRA				Sn	Sn	22 48 11.8	-4.9
	0.4nm,0.3s,baz=331,slow=23,SNR=10						
	2.3nm,0.5s						
ASAR	Alice Springs	17.04	156	P	P	22 46 21.0	-0.4
	0.4nm,0.3s,baz=336,slow=13,SNR=23						
ASAR				S	Sn	22 49 25.8	-3.9
	0.4nm,0.6s,baz=345,slow=24,SNR=2.5						
	0.8nm,0.4s						
SONM	Songino Array	58.48	344	P	P	22 52 18.6	+1.0
	0.2nm,0.7s,baz=152,slow=6.5,SNR=2.1						
	0.2nm,0.7s						
MKAR	Makanchi Array	67.26	329	P	P	22 53 16.3	+0.3
	0.7nm,0.8s,baz=129,slow=7.9,SNR=6.6						
	0.7nm,0.8s						
ZALV	Zalesovo Beam	71.07	336	P	P	22 53 38.1	-1.2
	0.8nm,0.6s,baz=142,slow=7.5,SNR=4.5						
	0.8nm,0.6s						

IDC 17 22:44:32.8±0.6, 30°.31N×41°.86W, h0km, mb4.1/27, mbtmp4.1/27, MS3.7/54, Error ellipse: s-maj=16.0km s-min=13.1km az=4.0

NEIC 17 22:44:35.9±1.3, 30°.3N±0°.1×41°.9W±0°.1, h10km±1km, mb4.7/232, Error ellipse: s-maj=19.0km s-min=14.6km az=146.0

ISC 17 22:44:35.8±0.4, 30°.32N±0°.07×41°.84W±0°.06, h15km, n322, σ0s.82/288, mb4.7/145, MS3.8/55, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSA	Rosais	13.99	50	Pn	Pn	22 47 52.1	-1.3
BBSR	BB Station	19.62	282	P	Pn	22 49 03.9	-1.2
GDHS	Morne Mazeau,	22.98	237	P	P	22 49 40.1	+0.2
ILAM	Ilet Lapin Mar	23.36	233	P	P	22 49 42.0	-1.8
GGN	Saint George	24.55	314	P	P	22 49 53.9	-0.9
GGN				IAmb	IAmb	22 49 56.7	
	comp=Z,25nm,1.2s						
SVB	Belmont	24.68	231	P	P	22 49 55.8	-0.5
MTP	Monte Pirata	24.75	246	P	P	22 49 57.1	+0.2
HUMP	Col San Antoni	24.96	246	P	P	22 49 58.4	-0.4
HUMP				IAmb	IAmb	22 50 34.0	
	comp=Z,31nm,1.4s						
GCPR	Guaynabo City	25.06	247	P	P	22 49 59.5	-0.1
GCPR				IAmb	IAmb	22 50 31.6	
	comp=Z,35nm,1.4s						
SJG	San Juan	25.22	247	LR	LR	22 57 59.8	
	comp=Z,60nm,20.9s,baz=74,slow=32						
AGPR	Aguadilla, PR	25.80	249	P	P	22 50 06.2	-0.2
M63A	Gales Ferry	26.73	303	P	P	22 50 14.0	-0.6
M63A				IAmb	IAmb	22 50 35.4	
	comp=Z,24nm,1.1s						
G62A	West of Eustis	26.94	312	P	P	22 50 15.8	-0.7
G62A				IAmb	IAmb	22 50 28.9	
	comp=Z,14nm,1.2s						
MDP	Montagnes des	27.07	204	LR	LR	22 59 55.8	
	comp=Z,28nm,18.1s,baz=315,slow=34						
WSPT	Westport, CT	27.61	302	P	P	22 50 22.4	-0.2
WSPT				IAmb	IAmb	22 50 40.5	
	comp=Z,22nm,1.2s						
LMQ	La Malbaie	27.83	316	P	P	22 50 24.2	-0.2
LMQ				IAmb	IAmb	22 50 36.5	
	comp=Z,17nm,1.3s						
KSCT	Kent School, K	27.86	303	P	P	22 50 25.1	+0.4
KSCT				IAmb	IAmb	22 51 03.2	
	comp=Z,18nm,1.2s						
BBTS	Babate	28.01	118	LR	LR	22 58 45.8	
	comp=Z,276nm,20.1s,baz=278,slow=30						
TRNY	Table Rock, Ra	28.27	301	P	P	22 50 28.5	+0.1
TRNY				IAmb	IAmb	22 50 47.0	
	comp=Z,20nm,1.4s						
ODNJ	Ogdensburg	28.54	301	P	P	22 50 31.5	+0.7
ODNJ				IAmb	IAmb	22 50 36.2	
	comp=Z,18nm,1.4s						
LUPA	Lehigh Univers	29.02	300	P	P	22 50 35.0	-0.1
LUPA				IAmb	IAmb	22 51 11.9	
	comp=Z,22nm,1.4s						
WUPA	West Chester U	29.09	298	P	P	22 50 32.7	-3.0
WUPA				IAmb	IAmb	22 50 38.6	
	comp=Z,12nm,1.4s						
LATQ	La Tuque	29.25	314	P	P	22 50 36.9	-0.2
AVE	Averroes	29.33	75	P	P	22 50 38.3	+0.3
SDMD	Soldier's Deli	29.96	297	P	P	22 50 43.4	-0.1
SCHQ	Schefferville	30.33	331	P	P	22 50 45.6	-0.9
	comp=Z,8.1nm,1.1s,baz=168,slow=12,SNR=5.9						
SCHQ				LR	LR	23 02 48.1	
	comp=Z,112nm,18.4s,baz=192,slow=36						
	comp=Z,8.1nm,1.1s						
SCHQ	Schefferville	30.33	331	P	P	22 50 46.8	+0.2
SCHQ				IAmb	IAmb	22 50 48.3	
	comp=Z,12nm,1.1s						
M57A	Sunshine Farm,	30.45	301	P	P	22 50 47.0	-0.8
M57A				IAmb	IAmb	22 51 17.1	
	comp=Z,17nm,1.3s						
U59A	Littleton	30.51	291	P	P	22 50 49.5	+1.1
R58B	Mineral	30.64	294	P	P	22 50 48.6	-0.8
R58B				IAmb	IAmb	22 50 59.7	
	comp=Z,14nm,1.2s						
MMNY	Mt. Morris Dam	31.28	303	P	P	22 50 55.8	+0.7
MMNY				IAmb	IAmb	22 51 03.0	
	comp=Z,19nm,1.3s						
M55A	Ridgway	31.69	301	P	P	22 50 58.2	-0.6
M55A				IAmb	IAmb	22 50 59.8	
	comp=Z,19nm,1.4s						
T57A	Hurt	31.69	292	P	P	22 50 59.9	+1.1
T57A				IAmb	IAmb	22 51 12.1	
	comp=Z,17nm,1.5s						
MDT	Midelt	31.72	76	LR	LR	23 00 51.4	
	comp=Z,150nm,20.7s,baz=312,slow=31						
ESDC	Sonseca Array	32.20	63	P	P	22 51 02.9	-0.5
	comp=Z,1.4nm,1.0s,baz=264,slow=10,SNR=5.0						
ESDC				LR	LR	23 00 51.2	
	comp=Z,158nm,20.6s,baz=258,slow=30						
	comp=Z,1.4nm,1.0s						
ESBB	Sonseca Array	32.21	63	P	P	22 51 03.8	+0.4
ESBB				IAmb	IAmb	22 51 06.3	
	comp=Z,10nm,1.4s						
BAUV	El Baul	32.42	234	P	P	22 51 05.2	-0.1
R55A	Marlinton	32.42	295	P	P	22 51 05.9	+0.6
R55A				IAmb	IAmb	22 51 16.2	
	comp=Z,15nm,1.2s						
SADO	Sadowa	32.59	307	LR	LR	23 01 59.5	
	comp=Z,129nm,21.8s,baz=127,slow=32						
O54A	Avella	32.75	298	P	P	22 51 08.5	+0.4
O54A				IAmb	IAmb	22 51 43.5	
	comp=Z,20nm,1.4s						
V55A	Taylorsville	33.28	290	P	P	22 51 11.1	-1.7
V55A				IAmb	IAmb	22 51 31.6	
	comp=Z,8.9nm,1.2s						
O53A	New Philadelph	33.39	298	P	P	22 51 13.4	-0.3
O53A				IAmb	IAmb	22 51 46.5	
	comp=Z,12nm,1.4s						
JSC	Jenkinsville	33.41	287	P	P	22 51 12.5	-1.4
P53A	Whipple	33.47	297	P	P	22 51 13.4	-1.0
P53A				IAmb	IAmb	22 51 31.9	
	comp=Z,15nm,1.4s						
Q52A	Bidwell	34.13	296	P	P	22 51 21.0	+0.9
Q52A				IAmb	IAmb	22 51 46.1	
	comp=Z,18nm,1.4s						
SDV	Santo Domingo	34.32	238	LR	LR	23 03 14.7	
	comp=Z,91nm,21.8s,baz=78,slow=33						
SDV	Santo Domingo	34.32	238	P	P	22 51 22.8	+0.7
SDV				IAmb	IAmb	22 51 25.6	
	comp=Z,9.0nm,0.8s						
ACSO	Alum Creek Sta	34.74	298	P	P	22 51 25.6	+0.2
ACSO				IAmb	IAmb	22 51 32.0	
	comp=Z,18nm,1.4s						
TKL	Tuckaleechee C	35.37	290	LR	LR	23 02 46.4	
	comp=Z,158nm,21.4s,baz=106,slow=31						
R50A	Paris	35.73	294	P	P	22 51 33.8	-0.2
R50A				IAmb	IAmb	22 51 36.6	
	comp=Z,9.1nm,1.2s						
Y52A	Lilburn	35.76	287	P	P	22 51 34.4	+0.2
T50A	Nancy	36.16	292	P	P	22 51 37.3	-0.3
R49A	Shelbyville	36.40	294	P	P	22 51 39.3	-0.3
R49A				IAmb	IAmb	22 52 04.6	
	comp=Z,17nm,1.5s						
N47A	Urbana	36.84	299	P	P	22 51 44.1	+0.8
N47A				IAmb	IAmb	22 51 50.4	
	comp=Z,23nm,1.4s						
U49A	Red Boiling Sp	36.94	292	P	P	22 51 44.0	-0.3
ESK	Eskdalemuir	37.04	36	P	P	22 51 46.1	+1.3
EKA	Eskdalemuir Ar	37.07	36	LR	LR	23 04 47.0	
	comp=Z,128nm,18.0s,baz=181,slow=33						
SFJD	Kangerlussuaq	37.08	354	P	P	22 51 45.3	+0.3
SFJD				IAmb	IAmb	22 51 56.6	
	comp=Z,9.3nm,1.1s						
L46A	Eue Claire	37.35	301	P	P	22 51 47.8	+0.1
CLTN	Cedars of Leba	37.42	291	P	P	22 51 47.8	-0.5
CLTN				IAmb	IAmb	22 51 50.9	
	comp=Z,12nm,1.3s						
FRB	Frobisher Bay	37.49	341	P	P	22 51 47.8	-0.8
	comp=Z,4.2nm,1.0s,baz=118,slow=6.3,SNR=4.9						
FRB				LR	LR	23 05 03.8	
	comp=Z,48nm,19.4s,baz=160,slow=33						
	comp=Z,4.2nm,1.0s						
250A	Grady	37.86	284	P	P	22 51 52.0	-0.1
250A				IAmb	IAmb	22 52 03.9	
	comp=Z,6.6nm,0.8s						
LRAL	Lakeview Retre	38.30	286	P	P	22 51 55.1	-0.7
WVT	Waverly	38.62	291	P	P	22 51 58.3	-0.2
OLIL	Olney	38.68	295	P	P	22 51 58.2	-0.7
OLIL				IAmb	IAmb	22 52 01.3	
	comp=Z,12nm,1.1s						
PLAL	Pickwick Lake	38.94	289	P	P	22 52 00.8	-0.4
Z47A	Carrollton	39.17	287	P	P	22 52 01.9	-1.1
I42A	Draeger Farm,	39.39	303	P	P	22 52 05.1	+0.3
I42A				IAmb	IAmb	22 52 11.3	
	comp=Z,17nm,1.1s						
HICK	Hickman	39.71	292	P	P	22 52 07.6	0.0
ROSC	El Rosal	39.74	237	LR	LR	23 07 37.3	
	comp=Z,81nm,21.4s,baz=64,slow=35						
P43A	Skaggs, Pawnee	39.76	297	P	P	22 52 07.4	-0.6
W45A	Hickory Valley	39.82	290	P	P	22 52 08.3	-0.2
OXF	Oxford	40.08	289	P	P	22 52 11.5	+0.8
JFWS	Jewell Farm	40.31	302	P	P	22 52 13.1	+0.5
JFWS				IAmb	IAmb	22 52 36.2	
	comp=Z,12nm,1.1s						
L40A	Anamosa	41.02	301	P	P	22 52 18.6	+0.2
L40A				IAmb	IAmb	22 52 22.9	
	comp=Z,13nm,1.2s						
T42A	Van Buren	41.16	293	P	P	22 52 19.4	-0.2
CCM	Cathedral Cave	41.19	294	P	P	22 52 18.5	-1.3
LCAR	Lake Charles	41.31	291	P	P	22 52 19.6	-1.2
P40A	Paris	41.72	297	P	P	22 52 23.4	-0.7
DBIC	Dimbokro	41.92	117	P	P	22 52 24.4	-1.7
	comp=Z,4.7nm,0.8s,baz=303,slow=9.0,SNR=5.6						
DBIC				LR	LR	23 07 13.8	
	comp=Z,161nm,20.7s,baz=336,slow=32						
	comp=Z,4.7nm,0.8s						
R40A	Maddies Statio	41.97	295	P	P	22 52 25.5	-0.7
FCAR	Ozark Folk Cen	42.11	291	P	P	22 52 26.4	-0.9
SPMN	Marine on St.	42.24	305	P	P	22 52 27.9	-0.4
WHAR	Wooly Hollow	42.32	290	P	P	22 52 28.9	-0.2
WHAR				IAmb	IAmb	22 52 30.7	
	comp=Z,10nm,1.1s						
SUMG	Summit	42.35	2	*i* P	P	22 52 30.0	+0.7
UALR	University of	42.44	290	P	P	22 52 29.7	-0.4
UALR				IAmb	IAmb	22 52 32.4	
	comp=Z,16nm,1.1s						
F36A	Milaca	42.78	306	P	P	22 52 32.4	-0.3
TAM	Tamanrasset	42.78	88	P	P	22 52 34.7	+1.5
P38A	Dawn	42.85	297	P	P	22 52 33.3	-0.1
S39A	Bolivar	42.86	294	P	P	22 52 33.1	-0.3
DAVOX	Davos/Dischmat	42.86	52	P	P	22 52 32.5	-1.0
	comp=Z,1.5nm,0.8s,baz=238,slow=9.5,SNR=2.0						
DAVOX				LR	LR	23 07 13.7	
	comp=Z,110nm,18.6s,baz=303,slow=32						
	comp=Z,1.5nm,0.8s						
KEST	Kesra	42.86	69	P	P	22 52 32.3	-1.3
	comp=Z,3.7nm,0.8s,baz=217,slow=5.1,SNR=3.6						
KEST				LR	LR	23 08 32.3	
	comp=Z,82nm,18.7s,baz=276,slow=34						
	comp=Z,3.7nm,0.8s						
KEST	Kesra	42.86	69	P	P	22 52 33.9	+0.2
KEST				IAmb	IAmb	22 52 35.8	
	comp=Z,12nm,1.2s						
X40A	Basin Creek Fa	42.88	289	P	P	22 52 33.0	-0.7
Z41A	Richland Creek	43.07	288	P	P	22 52 35.2	0.0
FUORN	Ofenpass-Fuorn	43.12	53	P	P	22 52 35.1	-0.6
WLAR	White Oak Lake	43.25	288	P	P	22 52 36.8	+0.2
WLAR				IAmb	IAmb	22 52 39.1	
	comp=Z,16nm,1.1s						
FETA	Feichten	43.46	52	*e*P	P	22 52 38.4	0.0
	comp=Z,5.4nm,1.1s						
MIAR	Mount Ida	43.48	290	P	P	22 52 38.4	-0.1
RETA	Reutte	43.51	52	*i* P	P	22 52 38.9	+0.2
	comp=Z,5.3nm,1.1s						
TORD	Torodi Ar. Bea	43.60	103	P	P	22 52 38.8	-0.9
	comp=Z,3.0nm,0.9s,baz=302,slow=7.9,SNR=13						
TORD				LR	LR	23 09 23.6	
	comp=Z,100nm,19.6s,baz=292,slow=34						
	comp=Z,3.0nm,0.9s						
BRU2	Volcan	43.71	249	P	P	22 52 41.8	+1.1

MOTA	Moosalm	43.73	52	*e*P	P	22 52 40.3	-0.3
	comp=Z,5.5nm,1.3s						
OSSC	Osservatorio P	43.74	57	P	P	22 52 40.8	+0.2
OSSC				IAmb	IAmb	22 52 41.9	
	comp=Z,12nm,1.0s						
SQTA	Sankt Quirin	43.80	52	*e*P	P	22 52 41.0	-0.1
	comp=Z,9.5nm,1.6s						
U38A	Gravette	43.85	292	P	P	22 52 40.9	-0.7
CTI	Castel Tesino	44.05	54	P	P	22 52 43.5	+0.5
CTI				IAmb	IAmb	22 52 51.8	
	comp=Z,10nm,1.3s						
WATA	Walderalm	44.05	52	*i* P	P	22 52 43.0	-0.2
	comp=Z,4.8nm,1.0s						
SAML	Samuel	44.10	211	P	P	22 52 43.3	-0.3
LATE	Laterza	44.17	59	P	P	22 52 44.7	+0.6
LATE				IAmb	IAmb	22 52 51.2	
	comp=Z,23nm,1.4s						
RLO	Rose Lookout	44.40	292	P	P	22 52 45.0	-0.9
RLO				IAmb	IAmb	22 52 52.2	
	comp=Z,22nm,1.5s						
ABTA	Abfaltersbach	44.67	53	*i* P	P	22 52 47.6	-0.4
	comp=Z,10nm,1.1s						
ULM	Lac du Bonnet	44.67	312	P	P	22 52 46.4	-1.4
	comp=Z,2.6nm,0.7s,baz=69,slow=8.1,SNR=4.0						
ULM				LR	LR	23 10 10.1	
	comp=Z,66nm,20.8s,baz=290,slow=34						
	comp=Z,2.6nm,0.7s						
JTS	Las Juntas de	44.73	253	LR	LR	23 08 36.1	
	comp=Z,64nm,20.1s,baz=10,slow=32						
CLUD	Cludinico	44.91	53	P	P	22 52 50.1	+0.2
CLUD				IAmb	IAmb	22 52 54.6	
	comp=Z,12nm,0.9s						
X37A	Clayton	44.93	290	P	P	22 52 50.1	-0.1
X37A				IAmb	IAmb	22 52 51.0	
	comp=Z,20nm,1.4s						
TUL1	Leonard	45.05	292	P	P	22 52 49.9	-1.2
TUL1				IAmb	IAmb	22 52 52.8	
	comp=Z,9.8nm,0.9s						
TULM	Tulcn-Chalpat	45.07	236	P	P	22 52 52.4	+0.4
TULM				IAmb	IAmb	22 53 00.3	
	comp=Z,19nm,1.3s						
FDMO	Fiordimonte	45.10	58	P	P	22 52 52.1	+0.7
FDMO				IAmb	IAmb	22 52 53.0	
	comp=Z,7.5nm,0.9s						
FCC	Fort Churchill	45.20	325	P	P	22 52 52.0	+0.1
CAMP	Campotosto	45.36	59	P	P	22 52 54.0	+0.4
CAMP				IAmb	IAmb	22 52 55.0	
	comp=Z,7.3nm,1.1s						
AQU	L'Aquila	45.37	59	P	P	22 52 53.5	-0.1
AQU				IAmb	IAmb	22 52 55.8	
	comp=Z,8.8nm,0.9s						
PRED	Cave del Predi	45.39	53	P	P	22 52 53.5	-0.2
SABO	M.te Sabotino	45.41	54	P	P	22 52 54.4	+0.6
SABO				IAmb	IAmb	22 52 58.6	
	comp=Z,6.2nm,1.1s						
BIOA	Bad Ischl, Aus	45.46	51	*i* P	P	22 52 54.5	+0.2
	comp=Z,7.6nm,1.3s						
T35A	Sooner Cattle	45.48	294	P	P	22 52 53.8	-0.7
T35A				IAmb	IAmb	22 53 02.3	
	comp=Z,16nm,1.4s						
TRI	Trieste	45.52	54	P	P	22 52 55.9	+1.2
TRI				IAmb	IAmb	22 52 56.6	
	comp=Z,8.0nm,1.1s						
GEC2	GERESS Array S	45.55	50	P	P	22 52 55.5	+0.5
GERES	GERESS Array B	45.55	50	P	P	22 52 54.4	-0.7
	comp=Z,0.9nm,0.9s,baz=286,slow=7.0,SNR=3.8						
GERES				LR	LR	23 09 16.6	
	comp=Z,72nm,18.5s,baz=279,slow=33						
	comp=Z,0.9nm,0.9s						
GERES	GERESS Array B	45.55	50	P	P	22 52 54.8	-0.3
OTAV	Otavalo	45.88	236	P	P	22 52 58.7	+0.3
OTAV				IAmb	IAmb	22 53 06.5	
	comp=Z,12nm,1.5s						
MOA	Molln	45.89	51	*i* P	P	22 52 57.8	+0.2
	comp=Z,8.3nm,1.7s						
OK048	Pawnee Station	45.90	293	P	P	22 52 57.0	-0.8
BLOK	Blackwell	46.06	293	P	P	22 52 59.1	+0.1
OBKA	Obir	46.07	53	*e*P	P	22 52 59.5	+0.4
	comp=Z,11nm,0.8s						
BDFB	Brasilia	46.08	188	P	P	22 53 00.1	+0.7
	comp=Z,2.6nm,0.6s,baz=51,slow=6.5,SNR=3.7						
	comp=Z,2.6nm,0.6s						
H10N2	ASCENSION HYDR	46.14	141	T	T	23 42 16.0	
	baz=326,slow=75,SNR=300						
H10N3	ASCENSION HYDR	46.14	141	T	T	23 42 16.2	
	baz=326,slow=75,SNR=250						
H10N1	ASCENSION HYDR	46.16	141	T	T	23 42 14.5	
	baz=326,slow=75,SNR=224						
KAN13	South Haven SW	46.23	294	P	P	22 52 59.8	-0.6
NOA	NORSAR Array B	46.23	33	P	P	22 53 00.3	+0.2
	comp=Z,2.7nm,1.0s,baz=254,slow=7.9,SNR=3.9						
NOA				LR	LR	23 09 05.0	
	comp=Z,17nm,20.2s,baz=285,slow=32						
	comp=Z,2.7nm,1.0s						
ETMB	Extrema	46.28	214	P	P	22 53 00.6	-0.3
ETMB				IAmb	IAmb	22 53 07.6	
	comp=Z,6.2nm,1.1s						
KAN09	Caldwell North	46.32	294	P	P	22 52 58.7	-2.4
PAOL	Paolisi	46.34	61	P	P	22 53 01.6	+0.3
PAOL				IAmb	IAmb	22 53 03.0	
	comp=Z,8.5nm,1.0s						
SOKA	Soboth	46.40	53	*e*P	P	22 53 01.4	-0.3
	comp=Z,4.7nm,0.9s						
KAN01	Argonia South	46.43	294	P	P	22 53 01.3	-0.6
KAN01				IAmb	IAmb	22 53 01.7	
	comp=Z,7.3nm,1.0s						
KAN17	Caldwell West	46.45	294	P	P	22 53 02.4	+0.2
KAN14	Manchester OK	46.62	294	P	P	22 53 01.7	-1.8
VAE	Valguarnera	46.65	65	LR	LR	23 09 51.3	
	comp=Z,142nm,21.1s,baz=156,slow=33						
CROK	Carrier	46.71	293	P	P	22 53 04.6	+0.4
Z35A	Perchaven, San	46.71	289	P	P	22 53 04.4	+0.2
ARSA	Arzberg	46.73	52	*i* P	P	22 53 04.1	-0.2
	comp=Z,6.5nm,1.1s						
OK032	Salt Plains WL	46.84	294	P	P	22 53 05.3	+0.1
H10S3	ASCENSION HYDR	46.98	142	T	T	23 43 19.6	
	baz=254,slow=74,SNR=235						
R32A	Long Quarter,	46.99	296	P	P	22 53 06.9	+0.5
H10S2	ASCENSION HYDR	46.99	142	T	T	23 43 12.3	
	baz=326,slow=74,SNR=74						
WHTX	Lake Whitney,	47.17	287	P	P	22 53 08.0	+0.1
RONA	Rosalia, Austr	47.26	51	*i* P	P	22 53 08.5	+0.2
	comp=Z,5.8nm,1.2s						
CUC	Castrocucco	47.40	62	P	P	22 53 09.4	-0.2
CUC				IAmb	IAmb	22 53 11.8	
	comp=Z,6.9nm,0.9s						
FW03	Perrin-Whitt E	47.44	289	P	P	22 53 09.8	-0.1
FW03				IAmb	IAmb	22 53 53.1	
	comp=Z,18nm,0.6s						
WMOK	Wichita Mounta	47.67	291	P	P	22 53 11.0	-0.7
WMOK				IAmb	IAmb	22 53 13.9	
	comp=Z,4.0nm,0.9s						
TULEG	Thule	48.02	352	P	P	22 53 15.2	+1.4
TULEG				IAmb	IAmb	22 53 21.7	
	comp=Z,10nm,1.1s						
ABTX	Abilene, Hawle	48.83	288	P	P	22 53 20.9	+0.3
VYHS	Vyhne	48.95	50	*e*P	P	22 53 22.5	+1.1
JCT	Junction City	49.49	286	P	P	22 53 25.2	-0.7
JCT				IAmb	IAmb	22 53 27.4	
	comp=Z,9.3nm,1.0s						
SIV	San Ignacio	49.63	205	P	P	22 53 26.5	-0.4
	comp=Z,1.9nm,1.0s,baz=27,slow=9.0,SNR=6.3						
SIV				LR	LR	23 12 09.7	
	comp=Z,67nm,20.4s,baz=104,slow=33						
	comp=Z,1.9nm,1.0s						
CMIG	Matias Romero	49.91	267	LR	LR	23 12 11.7	
	comp=Z,38nm,21.8s,baz=54,slow=33						
AMTX	Amarillo	49.97	292	P	P	22 53 29.7	+0.2
AMTX				IAmb	IAmb	22 53 38.2	
	comp=Z,11nm,1.1s						
DIVS	Divibare	50.03	56	P	P	22 53 29.3	-0.5
MCRA	Macar, Loja	50.18	233	P	P	22 53 29.4	-1.8
POST	Post	50.24	289	P	P	22 53 31.3	-0.2
POST				IAmb	IAmb	22 53 32.9	
	comp=Z,10nm,1.2s						
MSTX	Muleshoe	51.06	291	P	P	22 53 37.3	-0.4
MSTX				IAmb	IAmb	22 53 40.1	
	comp=Z,13nm,1.2s						
ATAH	Atahualpa	51.15	229	LR	LR	23 14 41.6	
	comp=Z,103nm,21.8s,baz=7.1,slow=35						
FNA	Florina	51.49	60	P	P	22 53 41.8	+1.0
RES	Resolute Bay	51.51	344	P	P	22 53 41.7	+1.3
N23A	Red Feather La	52.13	300	P	P	22 53 46.3	+0.4
GDL2	Guadalupe Moun	52.80	289	P	P	22 53 50.7	0.0
LPAZ	La Paz	52.80	212	P	P	22 53 49.4	-2.0
	comp=Z,0.9nm,0.3s,baz=34,slow=8.3,SNR=3.6						
LPAZ				LR	LR	23 14 03.4	
	comp=Z,71nm,21.6s,baz=19,slow=34						
	comp=Z,0.9nm,0.3s						
LPAZ	La Paz	52.80	212	P	P	22 53 50.9	-0.5
TXAR	Lajitas Array	53.03	286	P	P	22 53 52.0	-0.5
	comp=Z,1.6nm,0.9s,baz=95,slow=7.7,SNR=9.9						
TXAR				LR	LR	23 15 13.2	
	comp=Z,30nm,19.9s,baz=75,slow=35						
	comp=Z,1.6nm,0.9s						
TX31	Lajitas Ar. Si	53.03	286	P	P	22 53 51.6	-0.9
TX31				IAmb	IAmb	22 53 54.1	
	comp=Z,9.9nm,1.1s						
TX32	Lajitas Array	53.03	286	P	P	22 53 50.7	-1.8
SMCO	Snowmass	53.22	298	P	P	22 53 54.2	+0.1
BUR08	Bucovina Ar. S	53.27	51	P	P	22 53 55.1	+1.1
BURAR	Bucovina Array	53.28	51	P	P	22 53 54.9	+0.8
FINES	FINESS Array B	53.37	34	P	P	22 53 54.6	+0.3
	comp=Z,7.0nm,1.0s,baz=282,slow=6.7,SNR=6.2						
	comp=Z,7.0nm,1.0s						
FINES	FINESS Array B	53.37	34	P	P	22 53 54.4	+0.1
S22A	4UR Ranch, Cre	53.41	297	P	P	22 53 56.0	+0.6
ANMO	Albuquerque	53.77	293	LR	LR	23 14 19.1	
	comp=Z,112nm,22.0s,baz=177,slow=33						
ARCES	ARCESS Array B	54.03	24	P	P	22 53 57.8	-1.3
	comp=Z,7.5nm,1.0s,baz=268,slow=8.1,SNR=3.8						
	comp=Z,7.5nm,1.0s						
MLR	Muntele Rosu	54.06	54	LR	LR	23 14 34.8	
	comp=Z,46nm,20.5s,baz=281,slow=33						
MLR	Muntele Rosu	54.06	54	P	P	22 53 59.9	0.0
MLR				IAmb	IAmb	22 54 02.1	
	comp=Z,9.4nm,1.0s						
BNM	Barren Site	54.11	292	P	P	22 54 00.9	+0.3
MNK	Minsk	54.35	42	*i* P	P	22 54 00.6	-1.0
	comp=E,4.0nm,1.4s						
MNK				*i* P	P	22 54 00.6	-1.0
	comp=N,29nm,0.8s						
MNK				*i* P	P	22 54 00.6	-1.0
	comp=Z,20nm,1.1s,baz=274						
MNK				*i* PP	PP	22 56 02.4	-1.1
MNK				*i* PPP	PPP	22 57 10.0	
MNK				*i* S	S	23 01 37.5	-1.5
MNK				*i* SS	SS	23 05 18.7	-2.1
MNK				*i* SSS	SSS	23 07 15.1	
MNK				*i* LQ	LQ	23 13 14.7	
MNK				*i* LR	LR	23 17 21.8	
MNK				*i* LRM	MLR	23 20 26.6	
	comp=Z,169nm,16.6s						
MNK				*i* LRM	MLR	23 21 05.0	
	comp=N,372nm,14.7s						
MNK				*i* LRM	MLR	23 21 55.4	
	comp=E,46nm,14.1s						
BW06	Boulder Array	54.46	303	P	P	22 54 01.8	-1.1
BW06				IAmb	IAmb	22 54 05.2	
	comp=Z,13nm,1.3s						
PD31	Pinedale Array	54.46	303	P	P	22 54 01.8	-1.1
PD31				IAmb	IAmb	22 54 05.2	
	comp=Z,12nm,1.3s						
PDAR	Pinedale Array	54.46	303	P	P	22 54 01.8	-1.1
	comp=Z,3.4nm,0.9s,baz=78,slow=8.0,SNR=19						
PDAR				LR	LR	23 16 10.1	
	comp=Z,205nm,19.0s,baz=110,slow=35						
	comp=Z,3.4nm,0.9s						
PDAR	Pinedale Array	54.46	303	P	P	22 54 01.6	-1.3
RDO	Rodhopi	54.52	59	P	P	22 54 04.1	+1.1
RDO				IAmb	IAmb	22 54 05.0	
	comp=Z,7.7nm,1.0s						
PB18	Visviri	54.56	213	P	P	22 54 04.0	-0.1
RDMU	Red Mountain	54.89	300	P	P	22 54 06.1	0.0
RDMU				IAmb	IAmb	22 54 08.2	
	comp=Z,8.4nm,1.2s						
FLWY	Flagg Ranch	55.04	305	P	P	22 54 07.8	+0.7
FLWY				IAmb	IAmb	22 54 15.0	
	comp=Z,14nm,1.4s						
YMR	Madison River	55.12	306	P	P	22 54 08.3	+0.6
SNOW	Snow King Moun	55.19	304	P	P	22 54 07.9	-0.4
SNOW				IAmb	IAmb	22 54 11.0	
	comp=Z,6.1nm,1.1s						
PB16	IPOC Station P	55.22	212	P	P	22 54 09.4	+0.4
IMW	Indian Meadow	55.24	305	P	P	22 54 08.7	+0.1
IMW				IAmb	IAmb	22 54 15.1	
	comp=Z,6.9nm,1.1s						
REDW	Red Top Meadow	55.28	304	P	P	22 54 09.1	+0.2
REDW				IAmb	IAmb	22 54 10.9	
	comp=Z,11nm,1.3s						
TPAW	Teton Pass	55.33	304	P	P	22 54 10.2	+1.0
TPAW				IAmb	IAmb	22 54 11.4	
	comp=Z,13nm,1.4s						
FXWY	Fox Creek	55.35	304	P	P	22 54 09.8	+0.4
IDI	Anoyia	55.37	66	LR	LR	23 15 51.2	
	comp=Z,25nm,21.2s,baz=272,slow=34						
HPIG		55.47	283	P	P	22 54 10.8	+0.4
HPIG				IAmb	IAmb	22 54 12.9	
	comp=Z,16nm,1.4s						
121A	Cookes Peak, D	55.48	291	P	P	22 54 11.2	+0.8
AKASG	Malin Array Be	55.52	47	P	P	22 54 09.6	-0.6
	comp=Z,0.9nm,0.5s,baz=275,slow=6.4,SNR=8.5						
	comp=Z,0.9nm,0.5s						
AHID	Auburn Hatcher	55.57	303	P	P	22 54 11.5	+0.6
AHID				IAmb	IAmb	22 54 19.1	
	comp=Z,6.4nm,1.1s						
YKA	Yellowknife Ar	55.68	328	P	P	22 54 10.7	-0.4
	comp=Z,0.2nm,0.3s,baz=89,slow=7.4,SNR=7.6						
YKA				LR	LR	23 18 01.0	
	comp=Z,90nm,18.3s,baz=315,slow=36						
	comp=Z,0.2nm,0.3s						
YKA	Yellowknife Ar	55.68	328	P	P	22 54 11.5	+0.4
PB12	IPOC Station P	55.85	213	P	P	22 54 14.3	+1.4
SRU	San Rafael Swe	55.93	299	P	P	22 54 13.6	+0.1
SRU				IAmb	IAmb	22 54 15.7	
	comp=Z,6.5nm,1.1s						
HWUT	Hardware Ranch	56.15	302	P	P	22 54 14.2	-0.9
GO01	Chusmiza	56.24	211	P	P	22 54 15.4	-0.7
TMUT	Trail Mountain	56.41	299	P	P	22 54 17.1	+0.1
TMUT				IAmb	IAmb	22 54 23.6	
	comp=Z,9.1nm,1.5s						
PB11	IPOC Station P	56.53	212	P	P	22 54 18.0	+0.2
DUN6	Lazy B Ranch	56.53	291	P	P	22 54 17.6	-0.3
DUN6				IAmb	IAmb	22 54 27.1	
	comp=Z,9.1nm,1.0s						
MPU	Maple Canyon	56.55	300	P	P	22 54 18.6	+0.6
MSO	Missoula	56.79	309	P	P	22 54 19.9	+0.5
SPUT	South Promonto	56.86	302	P	P	22 54 20.0	-0.2
NLU	North Lily Min	56.90	300	P	P	22 54 20.5	0.0
NLU				IAmb	IAmb	22 54 23.5	
	comp=Z,7.3nm,1.3s						
MSU	Marysvale	57.33	299	P	P	22 54 24.0	+0.4
MVU	Marysvale	57.36	299	P	P	22 54 23.6	-0.2
BGU	Big Grassy Mou	57.38	302	P	P	22 54 23.6	-0.2
BGU				IAmb	IAmb	22 54 31.3	
	comp=Z,6.4nm,1.3s						
MANT	Manisa	57.39	61	P	P	22 54 23.8	-0.2
DUG	Dugway, Tooele	57.39	301	P	P	22 54 22.8	-1.1
DUG				IAmb	IAmb	22 54 32.5	
	comp=Z,6.5nm,1.1s						
WUAZ	Wupatki	57.51	295	P	P	22 54 24.9	+0.1
WUAZ				IAmb	IAmb	22 54 34.0	
	comp=Z,5.2nm,1.1s						
CPUP	Villa Florida	58.25	196	LR	LR	23 20 26.7	
	comp=Z,34nm,18.4s,baz=124,slow=37						
CCUT	Cedar City	58.49	298	P	P	22 54 31.5	-0.2
CCUT				IAmb	IAmb	22 54 34.3	
	comp=Z,7.3nm,1.4s						
PLID	Pearl Lake	58.55	307	P	P	22 54 32.9	+0.9
NEW	Newport	58.63	311	P	P	22 54 32.0	-0.3
	comp=Z,3.2nm,0.9s,baz=90,slow=7.5,SNR=3.7						
NEW				LR	LR	23 19 41.6	
	comp=Z,28nm,18.1s,baz=88,slow=36						
	comp=Z,3.2nm,0.9s						
NEW	Newport	58.63	311	P	P	22 54 32.9	+0.6
NEW				IAmb	IAmb	22 54 34.1	
	comp=Z,9.8nm,1.3s						
LVC	Limon Verde	58.70	209	LR	LR	23 19 33.6	
	comp=Z,79nm,18.2s,baz=336,slow=36						
MFID	Camas Ranch	58.81	305	P	P	22 54 33.7	-0.1
MFID				IAmb	IAmb	22 54 42.1	
	comp=Z,8.7nm,1.2s						
SPR3	Spring Creek 3	58.83	300	P	P	22 54 35.1	+0.9
SPR3				IAmb	IAmb	22 54 37.3	
	comp=Z,10nm,1.5s						
ELK	Elko	59.05	302	LR	LR	23 18 10.9	
	comp=Z,138nm,21.3s,baz=78,slow=34						
Y14A	Wickenburg	59.25	294	P	P	22 54 35.9	-0.9
KLMR	Klimovskoe	59.90	34	*e*P	P	22 54 39.5	-1.2
KLMR				AMP		22 54 43.6	
	comp=Z,32nm,1.8s						
LPIG	La Paz	60.39	282	LR	LR	23 21 59.1	
	comp=Z,20nm,18.2s,baz=96,slow=37						
J08A	Circle Bar Ran	60.69	306	P	P	22 54 47.8	+1.1
J08A				IAmb	IAmb	22 54 49.8	
	comp=Z,8.2nm,1.2s						
BR131	Keskin Array S	60.86	59	P	P	22 54 47.8	-0.1
BR131				IAmb	IAmb	22 54 49.3	
	comp=Z,8.6nm,1.1s						
BRTR	Keskin Array B	60.86	59	P	P	22 54 48.4	+0.5
	comp=Z,2.7nm,0.9s,baz=275,slow=6.4,SNR=12						
	comp=Z,2.7nm,0.9s						
BRTR	Keskin Array B	60.86	59	P	P	22 54 48.2	+0.3
TPNV	Topopah Spring	60.87	298	P	P	22 54 48.6	+0.6
TPNV				IAmb	IAmb	22 55 07.7	
	comp=Z,6.6nm,1.4s						
LLLB	Lillooet	61.15	314	P	P	22 54 49.4	-0.2
LTY	Liberty	61.19	310	P	P	22 54 50.6	+0.7
WCT	Wildcat Mounta	61.20	298	P	P	22 54 50.8	+0.6
GO02	Mina Guanaco	61.24	209	P	P	22 54 50.5	-0.2
KVN	Kaiserville	61.63	301	P	P	22 54 52.6	-0.7
KVN				IAmb	IAmb	22 55 02.7	
	comp=Z,6.1nm,1.3s						
QSM	Queen of Sheba	61.64	297	P	P	22 54 53.0	-0.1
NV11	Mina Array Sit	61.86	300	P	P	22 54 54.9	+0.2
NV11				IAmb	IAmb	22 55 00.9	
	comp=Z,7.8nm,1.4s						
NVAR	Mina Array Bea	61.97	300	P	P	22 54 54.7	-0.9
	comp=Z,0.2nm,0.3s,baz=81,slow=5.6,SNR=4.1						
NVAR				LR	LR	23 20 36.8	
	comp=Z,138nm,19.8s,baz=58,slow=35						
	comp=Z,0.2nm,0.3s						
PFO	Pinyon Flats O	62.08	294	LR	LR	23 19 37.4	
	comp=Z,100nm,21.1s,baz=54,slow=34						
PAHR	Pah Rah Range	62.38	302	P	P	22 54 57.0	-1.2
PAHR				IAmb	IAmb	22 55 06.3	
	comp=Z,5.8nm,1.1s						
K05A	Summer Lake	62.57	305		P	22 54 59.8	+0.3
K05A				IAmb	IAmb	22 55 01.4	
	comp=Z,9.4nm,1.2s						
BNN	Bunyan	62.76	59	P	P	22 55 01.3	+0.6
INK	Inuvik	62.81	335	P	P	22 54 59.9	-0.4
	comp=Z,4.9nm,0.9s,baz=64,slow=7.2,SNR=2.9						
INK				LR	LR	23 22 06.1	
	comp=Z,87nm,18.5s,baz=304,slow=36						
	comp=Z,4.9nm,0.9s						
INK	Inuvik	62.81	335	P	P	22 55 01.4	+1.0
INK				IAmb	IAmb	22 55 08.0	
	comp=Z,7.1nm,0.9s						
CMB	Columbia Colle	63.65	300	P	P	22 55 06.7	+0.2
CMB				IAmb	IAmb	22 55 08.5	
	comp=Z,6.2nm,1.5s						
YBH	Yreka Blue Hor	64.16	305	LR	LR	23 22 19.0	
	comp=Z,60nm,19.7s,baz=90,slow=35						
BBB	Bella Bella	64.50	317	LR	LR	23 22 53.0	
	comp=Z,82nm,18.7s,baz=54,slow=36						
GHAJ	Ghor Haditha	65.10	67	P	P	22 55 17.6	+1.6
KIRV	Kirov	65.30	35	LR	LR	23 22 24.4	
	comp=Z,70nm,18.2s,baz=292,slow=35						
N31M	Braeburn, Yuko	65.65	328	P	P	22 55 18.9	-0.3
SKAG	Skagway	66.11	326	P	P	22 55 19.7	-2.3
BELG	Belogornoye	66.31	42	LR	LR	23 21 55.3	
	comp=Z,90nm,20.6s,baz=7.4,slow=34						
BMAR	Burnt Mountain	67.06	336	P	P	22 55 28.9	+0.8
CO02	Combarbal	67.17	207	P	P	22 55 29.6	+0.4
PRP	Porcupine Dome	68.20	334	P	P	22 55 36.4	+1.0
CTGM	Chitina Glacie	68.35	329	P	P	22 55 37.2	+0.8
VA03	San Esteban	68.38	206	P	P	22 55 37.3	+0.5
L26K	Log Cabin Wild	68.38	331	P	P	22 55 36.4	-0.1
L26K				IAmb	IAmb	22 56 16.9	
	comp=Z,7.8nm,1.3s						
GNI	Garni	68.77	55	P	P	22 55 40.0	+0.5
H24K	Noodor Dome	68.93	335	P	P	22 55 42.0	+2.1
H24K				IAmb	IAmb	22 55 48.6	
	comp=Z,10nm,1.4s						
IL03	Eielson Array	69.03	334	P	P	22 55 42.0	+1.6
IL31		69.04	334	P	P	22 55 41.8	+1.3
IL31				IAmb	IAmb	22 55 43.5	
	comp=Z,9.1nm,1.2s						
ILAR	Eielson Array	69.04	334	P	P	22 55 40.6	+0.1
	comp=Z,2.4nm,1.0s,baz=60,slow=4.8,SNR=16						
ILAR				LR	LR	23 25 58.3	
	comp=Z,69nm,19.3s,baz=56,slow=36						
	comp=Z,2.4nm,1.0s						
ILAR	Eielson Array	69.04	334		P	22 55 42.0	+1.4
MT09	Talagante	69.45	206	P	P	22 55 43.9	+0.4
CCB	Clear Creek Bu	69.45	334	P	P	22 55 44.4	+1.3
MDM	Murphy Dome	69.47	334	P	P	22 55 44.6	+1.4
H23K	Yukon River	69.54	335	P	P	22 55 45.2	+1.6
H23K				IAmb	IAmb	22 55 52.5	
	comp=Z,7.5nm,1.1s						
WRH	Wood River Hil	69.64	334	P	P	22 55 45.5	+1.3
I23K	Minto, Yukon-K	69.80	335	P	P	22 55 46.2	+1.0
NEA2	Nenana	69.96	334	P	P	22 55 47.5	+1.3
BO01	Tunca	70.03	205	P	P	22 55 47.8	+0.9
BO01				IAmb	IAmb	22 56 07.5	
	comp=Z,10nm,1.4s						
BWN	Browne	70.31	334	P	P	22 55 51.0	+2.6
MLY	Manley	70.37	335	P	P	22 55 49.9	+1.1
MLY				IAmb	IAmb	22 55 56.3	
	comp=Z,10nm,1.5s						
ARU	Arti	70.68	35	P	P	22 55 51.7	+1.0
ARU				IAmb	IAmb	22 55 58.5	
	comp=Z,9.1nm,1.3s						
I21K	Tanana	70.75	335	P	P	22 55 52.3	+1.3
H21K	Melozitna Rive	70.80	336	P	P	22 55 51.4	+0.1
H21K				IAmb	IAmb	22 55 54.5	
	comp=Z,9.0nm,1.4s						
KTH	Kantishna Hill	71.18	333	P	P	22 55 54.6	+0.9
KTH				IAmb	IAmb	22 56 01.7	
	comp=Z,11nm,1.2s						
AKTO	Aktyubinsk	73.05	41	LR	LR	23 25 34.3	
	comp=Z,48nm,19.4s,baz=206,slow=34						
NRIK	Noril'sk	74.05	17	P	P	22 56 10.3	-0.3
	comp=Z,3.2nm,0.9s,baz=12,slow=3.4,SNR=4.7						
	comp=Z,3.2nm,0.9s						
NRIK	Noril'sk	74.05	17	P	P	22 56 12.1	+1.5
NRIK				IAmb	IAmb	22 56 19.0	
	comp=Z,12nm,1.4s						
KDAK	Kodiak Island	74.92	329	LR	LR	23 29 07.4	
	comp=Z,88nm,19.7s,baz=114,slow=36						
MBAR	Mbarara	75.31	99	LR	LR	23 28 56.6	
	comp=Z,63nm,18.2s,baz=273,slow=35						
TSUM	Tsumeb	75.44	123	LR	LR	23 26 50.6	
	comp=Z,43nm,18.2s,baz=160,slow=34						
LODK	Lodwar	77.24	94	P	P	22 56 29.9	0.0
TIXI	Tiksi	78.10	3	P	P	22 56 34.6	+0.9
TIXI				IAmb	IAmb	22 56 42.2	
	comp=Z,5.9nm,0.9s						
BVAR	Borovoye Array	78.31	35	LR	LR	23 29 40.3	
	comp=Z,51nm,18.5s,baz=309,slow=35						
KURK	Kurchatov	83.74	33	P	P	22 57 04.6	+0.5
KURK				IAmb	IAmb	22 57 05.5	
	comp=Z,5.5nm,1.1s						
KK31	Karatay Array	84.19	43	P	P	22 57 07.1	+0.4
KKAR	Karatay Array	84.19	43	P	P	22 57 07.2	+0.6
UOSS	Minazif	84.22	65	P	P	22 57 07.5	+0.4
ZAA0	Zalesovo Array	84.26	28	P	P	22 57 07.0	+0.3
ZAA0				IAmb	IAmb	22 57 08.6	
	comp=Z,3.8nm,1.0s						
ZALV	Zalesovo Beam	84.26	28	P	P	22 57 06.7	0.0
	comp=Z,3.3nm,1.0s,baz=316,slow=4.1,SNR=9.1						
	comp=Z,3.3nm,1.0s						
ZALV	Zalesovo Beam	84.26	28	P	P	22 57 06.8	+0.1
LBTB	Lobatse	84.85	123	LR	LR	23 30 11.1	
	comp=Z,15nm,20.1s,baz=186,slow=32						
CHGR	Chuyangaron	85.99	47	P	P	22 57 16.7	+0.9
BOSA	Boshof	86.76	126	LR	LR	23 33 24.9	
	comp=Z,65nm,18.7s,baz=191,slow=34						
AAK	Ala-Archa	86.79	41	LR	LR	23 35 22.9	
	comp=Z,50nm,18.8s,baz=345,slow=35						
WSAR	Wadi Sarin	86.99	65	LR	LR	23 38 41.4	
	comp=Z,31nm,18.2s,baz=234,slow=37						
MK31	Makanchi Array	88.19	35	P	P	22 57 26.1	-0.1
MKAR	Makanchi Array	88.19	35	P	P	22 57 25.8	-0.5
	comp=Z,1.0nm,1.0s,baz=323,slow=2.2,SNR=5.8						
MKAR				LR	LR	23 35 52.7	
	comp=Z,73nm,18.4s,baz=341,slow=35						
	comp=Z,1.0nm,1.0s						
ASAR	Alice Springs	172.36	31	PKPab	PKPab	23 06 07.8	-1.0
	comp=Z,0.6nm,0.9s,baz=328,slow=4.8,SNR=4.1						

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*IDC **17** 22:50:52.9±1.6, 71.°73N×128.°29W, h0km, mb4.3/1, mbtmp3.4/5, ML3.0/4, Error ellipse: s-maj=24.3km s-min=13.1km az=123.0*

ANF **17** *22:50:54.8±0.8, 71°.53N×128°.55W, h0^{km}, ML3.2/6, Error ellipse: s-maj=12.4km s-min=6.4km az=165.0*
PGC **17** *22:50:57.4±0.1, 71°.57N×128°.02W, h15^{km}, ML2.9/1, 107km west of Sachs Harbour, Nt Beaufort Sea*
ISC 17 22:50:53.4±0.8**, 71°.60N**±0°.05×**128°.39W**±0°.04**, h10**^{km}**, n55, σ2^{s}.29**/84**, Beaufort Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
A36M	Sachs Harbour	1.06	67	P	Pn	22 51 15.2	+0.9
A36M				Sn	Sg	22 51 27.5	-0.1
A36M	Sachs Harbour	1.06	67	P	Pn	22 51 15.4	+1.1
	baz=245						
A36M				S	Sb	22 51 28.2	+0.5
	baz=245						
C36M	Paulatuk	2.69	145	Pn	Pn	22 51 38.2	+1.5
C36M				Sn	Sn	22 52 08.3	-0.9
C36M				Sg	Sb	22 52 17.1	+2.5
C36M	Paulatuk	2.69	145	P	Pn	22 51 38.1	+1.5
	baz=331						
C36M				S	Sn	22 52 08.3	-0.9
	baz=331						
INK	Inuvik	3.75	211	Pn	Pn	22 51 53.8	+2.5
	0.4nm,0.3s,baz=23,slow=16,SNR=11						
INK				Pg	Pg	22 52 04.5	-0.7
	0.7nm,0.3s,baz=24,slow=16,SNR=4.9						
INK				Sn	Sn	22 52 36.2	+0.9
	2.2nm,0.3s,baz=108,slow=20,SNR=6.7						
INK				Lg	Lg	22 52 53.4	
	3.2nm,0.3s,baz=114,slow=20,SNR=5.8						
	0.8nm,0.3s						
INK	Inuvik	3.75	211	Pn	Pn	22 51 53.7	+2.5
INK				Sn	Sn	22 52 36.3	+0.9
INK	Inuvik	3.75	211	P	Pn	22 51 53.6	+2.3
	baz=28						
INK				S	Sn	22 52 36.2	+0.9
	baz=28						
F31M	Tsiigehtchic	4.58	207	P	Pn	22 52 04.5	+1.8
	baz=23						
F31M				S	Sn	22 52 55.0	-0.9
	baz=23						
G30M	tAoh Zraii Nji	5.41	215	P	Pn	22 52 16.2	+2.1
	baz=29						
G30M				S	Sn	22 53 14.7	-1.5
	baz=29						
C27K	Jago River	5.47	256	P	Pn	22 52 18.2	+3.4
	baz=62						
C27K				S	Sn	22 53 16.1	-1.6
	baz=62						
E27K	Coleen River	5.69	239	P	Pn	22 52 19.9	+2.0
	baz=48						
E27K				S	Sn	22 53 20.6	-2.7
	baz=48						
C26K	Camden Bay	5.71	261	P	Pn	22 52 21.9	+3.7
	baz=66						
C26K				S	Sn	22 53 23.1	-0.5
	baz=66						
KUKN	Kugluktuk,NWT	5.97	123	Pn	Pn	22 52 24.1	+2.4
KUKN				Sn	Sn	22 53 25.5	-4.6
EPYK	Eagle Plains	6.04	214	Pn	Pn	22 52 25.3	+2.5
EPYK				Sn	Sn	22 53 30.7	-1.2
EPYK	Eagle Plains	6.04	214	P	Pn	22 52 25.0	+2.2
	baz=27						
EPYK				S	Sn	22 53 30.7	-1.2
	baz=27						
NOWN	Norman Wells,	6.37	174	Pn	Pn	22 52 29.1	+2.0
NOWN				Sn	Sn	22 53 36.6	-3.1
D25K	Kavik River	6.44	258	P	Pn	22 52 31.2	+3.1
	baz=61						
D25K				S	Sn	22 53 38.9	-2.8
	baz=61						
G27K	Doyon Strip	6.73	231	Pn	Pn	22 52 34.0	+1.9
G27K				Sn	Sn	22 53 46.0	-2.7
G27K	Doyon Strip	6.73	231	P	Pn	22 52 33.6	+1.5
	baz=39						
G27K				S	Sn	22 53 46.4	-2.3
	baz=39						
F26K	Sheenjek River	6.74	242	P	Pn	22 52 33.8	+1.6
	baz=48						
F26K				S	Sn	22 53 45.1	-3.8
	baz=48						
E25K	Arctic Village	6.87	248	S	Sn	22 53 50.0	-2.1
	baz=52						
C24K	Franklin Bluff	6.99	264	S	Sn	22 53 52.0	-3.0
	baz=65						
H27K	Steamboat Moun	7.16	228	Pn	Pn	22 52 40.6	+2.5
H27K				Sn	Sn	22 53 56.3	-3.1
H27K	Steamboat Moun	7.16	228	S	Sn	22 53 57.7	-1.8
	baz=36						
G26K	Porcupine Rive	7.17	237	P	Pn	22 52 39.5	+1.5
	baz=43						
I27K	Kandik River	7.70	225	Pn	Pn	22 52 47.7	+2.2
F24K	Squaw Lake	7.93	248	P	Pn	22 52 51.3	+2.7
	baz=51						
F24K				S	Sn	22 54 16.0	-2.3
	baz=51						
G25K	Bearman Lake	7.93	241	P	Pn	22 52 51.1	+2.5
	baz=45						
EGAK	Eagle	8.32	221	P	Pn	22 52 55.5	+1.6
	baz=30,SNR=11						
K29M	Barlow Dome	8.52	208	Pn	Pn	22 52 59.8	+3.1
K29M				Sn	Sn	22 54 30.7	-2.1
K29M	Barlow Dome	8.52	208	P	Pn	22 52 59.4	+2.6
	baz=21						
DAWY	Dawson	8.62	214	Pn	Pn	22 52 60.0	+1.9
DAWY				Sn	Sn	22 54 32.3	-2.8
DAWY	Dawson	8.62	214	P	Pn	22 52 59.8	+1.8
	baz=25,SNR=14						
MMPY	Sheldon Lake,	9.09	188	Pn	Pn	22 53 07.0	+2.4
MMPY				Sn	Sn	22 54 42.7	-4.1
MMPY	Sheldon Lake,	9.09	188	P	Pn	22 53 06.9	+2.4
	baz=6.5						
K27K	Chicken	9.17	221	Pn	Pn	22 53 07.6	+2.1
K27K				Sn	Sn	22 54 45.2	-3.4
L29M	L29M	9.30	208	Pn	Pn	22 53 09.5	+2.1
L29M	L29M	9.30	208	P	Pn	22 53 09.3	+1.9
	baz=20,SNR=7.7						
M30M	Minto, Yukon	9.62	204	Pn	Pn	22 53 14.4	+2.5
M30M	Minto, Yukon	9.62	204	P	Pn	22 53 13.9	+2.1
	baz=17,SNR=17						
ILAR	Eielson Array	9.67	234	Pn	Pn	22 53 10.9	-1.4
	baz=39,slow=13,SNR=2.0						
ILAR				Sn	Sn	22 54 58.0	-2.8
	0.1nm,0.3s,baz=30,slow=23,SNR=1.4						
	0.1nm,0.7s						
M31M	Drury Creek, Y	9.72	197	Pn	Pn	22 53 16.4	+3.2
F21K	Alatna River	9.81	256	P	Pn	22 53 16.9	+2.6
	baz=53						
M29M	Somme Creek	9.98	208	Pn	Pn	22 53 18.9	+2.1
L27K	Beaver Creek,	9.99	218	Pn	Pn	22 53 18.4	+1.6
L27K	Beaver Creek,	9.99	218	P	Pn	22 53 18.4	+1.6
	baz=26,SNR=8.2						
RES	Resolute Bay	10.09	57	Pn	Pn	22 53 16.6	-1.5
	0.1nm,0.3s,baz=253,slow=17,SNR=11						
RES				Sn	Sn	22 55 02.2	-8.9
	0.1nm,0.3s,baz=156,slow=20,SNR=4.2						
	0.3nm,0.3s						
RES	Resolute Bay	10.09	57	Pn	Pn	22 53 17.6	-0.4
N31M	Braeburn, Yuko	10.56	200	Pn	Pn	22 53 27.7	+3.0
YKA	Yellowknife Ar	10.57	143	Pn	Pn	22 53 25.2	+0.5
	0.6nm,0.3s,baz=332,slow=11,SNR=20						
YKA				Sn	Sn	22 55 12.4	-11
	0.6nm,0.3s,baz=331,slow=22,SNR=13						
YKA				Lg	Lg	22 56 20.8	
	baz=341,slow=27						
	0.7nm,0.4s						
M27K	Edge Creek, AK	10.64	216	Pn	Pn	22 53 26.8	+1.0
N30M	Aishikik Lake	10.74	203	Pn	Pn	22 53 29.9	+2.7
YUK4	Talbot Arm	11.06	207	Pn	Pn	22 53 32.8	+1.1
YUK5	Granite Creek	11.16	204	Pn	Pn	22 53 36.7	+3.8
FINES	FINESS Array B	46.06	17	P	P	22 59 17.1	+0.5
	5.2nm,1.0s,baz=352,slow=8.4,SNR=4.1						
	5.2nm,1.0s						

INET **17** *23:25:01.2±2.0, 9°.73N×86°.40W, h15^{km}±36^{km}, ML3.5*
UCR **17** *23:25:06.9±3.0, 10°.40N×86°.35W, h5^{km}, MW4.1*
ISC 17 23:25:07.0±2.1**, 10°.22N**±0°.06×**86°.28W**±0°.07**, h18**^{km}±6^{km}**, n43, σ0^{s}.73**/60**, 4C-1D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATIL	Hatillo	0.58	82	eP	Pn	23 25 19.4	-1.0
HATIL				eS	Sn	23 25 28.3	-1.1
SAJU	San Juanillo,	0.58	105	eP	Pn	23 25 20.1	-0.3
SAJU				eS	Sn	23 25 30.5	+1.0
JUD3	Juan Diaz 3	0.73	94	eP	Pn	23 25 22.2	-0.4
DELF	Filadelfia	0.75	72	eP	Pn	23 25 23.1	+0.3
DUNO	Dulce Nombre,	0.79	100	eP	Pn	23 25 22.9	-0.3
ALIBA	Liberia Airpor	0.81	63	eP	Pn	23 25 23.3	-0.3
ALIBA				eS	Sn	23 25 36.4	+1.3
ORTG	Ortega, Santa	0.82	80	eP	Pn	23 25 23.2	-0.6
ELI1	Hacienda Flor	0.83	59	eP	Pn	23 25 23.7	-0.1
HZTE	Horizontes, Gu	0.83	54	eP	Pg	23 25 23.3	0.0
HZTE				eS	Sg	23 25 35.2	+0.9
INDI	Punta indio, G	0.84	115	eP	Pn	23 25 24.2	+0.2
BUEV	Buena Vista	1.03	56	eP	Pb	23 25 25.9	-0.6
BUEV				eS	Sb	23 25 40.5	+0.8
BAGA	Bagaces	1.05	73	eP	Pg	23 25 27.4	0.0
GPS2	Hotel Rincn d	1.05	60	⇑iP	Pb	23 25 26.4	-0.4
GPS2				eS	Sg	23 25 41.5	+0.1
LCRUZ	La Cruz	1.06	37	eP	Pb	23 25 26.4	-0.6
VORI	VORI	1.09	57	eP	Pb	23 25 26.9	-0.7
VORI				eS	Sn	23 25 42.6	+0.2
GUAB	Guayabo de Bag	1.14	65	⇑iP	Pn	23 25 27.7	-0.5
GUAB				eS	Sg	23 25 44.2	0.0
COLC	Colonia	1.15	67	eP	Pn	23 25 27.9	-0.3
COLC				eS	Sg	23 25 44.2	-0.1
CAMAV	Centro de Prod	1.17	66	eP	Pg	23 25 29.3	-0.4
CAMAV				eS	Sg	23 25 45.4	+0.3
CUI	Cuipilapa	1.18	68	eP	Pn	23 25 28.5	-0.2
CUI				eS	Sg	23 25 45.5	+0.1
CLARA	Aguas Claras	1.22	63	eP	Pn	23 25 29.1	-0.1
MOTZ	Rio Naranjo	1.27	69	eP	Pb	23 25 30.2	-0.3
VMAR	Armenia, Volca	1.29	63	⇑eP	Pn	23 25 30.1	-0.1
VMAR				eS	Sg	23 25 48.4	-0.4
ACAL	Aguas Claras	1.29	71	⇑eP	Pb	23 25 30.4	-0.4
ACAL				eS	Sg	23 25 49.2	+0.3
JTS	Las Juntas de	1.31	87	eP	Pb	23 25 30.4	-0.7
CANAL	Canalete	1.35	63	eP	Pn	23 25 30.9	-0.1
CONN	Concepcion	1.48	26	eP	Pn	23 25 32.3	-0.5
CONN				eS	Sg	23 25 57.4	+2.5
TABAC	Tabacon	1.51	79	eP	Pb	23 25 34.9	+0.2
VERA	Finca Concepci	1.52	66	eP	Pn	23 25 33.9	+0.5
VERA				eS	Sg	23 25 56.9	+0.6
CASO	Castillo	1.54	82	eP	Pb	23 25 34.7	-0.3
CASO				eS	Sg	23 25 57.6	+0.9
ARE1	Arenal 1	1.56	81	eP	Pb	23 25 35.0	-0.3
CEDE	Laguna Cedeo	1.57	80	eP	Pb	23 25 35.7	0.0
FORC	Fortuna	1.60	81	⇓eP	Pb	23 25 35.9	-0.2
COPN	Copaltepe	1.97	351	eP	Pn	23 25 38.3	-1.2
ACON	Acoyapa	2.05	32	eP	Pn	23 25 40.1	-0.6
ACON	Acoyapa	2.05	32	eP	Pn	23 25 40.0	-0.6
MOMN	Momotombo	2.19	353	eP	Pn	23 25 42.2	-0.4
ABE2	San Pablo	2.25	103	eP	Pb	23 25 46.3	-1.1
BOAB	BOACO BROADBAN	2.29	15	eP	Pn	23 25 43.4	-0.6
CNGN	Cerro Negro	2.30	350	eP	Pn	23 25 46.0	+1.9
CNGN				IAML		23 26 17.6	
	comp=N,108nm,0.5s						
CRIN	San Cristobal	2.58	343	eP	Pn	23 25 47.7	-0.2
CRIN				IAML		23 26 20.0	
	comp=E,316nm,0.2s						
RVLA	Villa Bonita	2.65	92	eP	Pn	23 25 49.7	+0.7
MATN	Matagalpa	2.71	7	eP	Pn	23 25 49.5	-0.3
ESPN	Las Esperanzas	2.76	45	eP	Pn	23 25 50.3	-0.1
ESPN				eS	Sg	23 26 33.8	-2.0
ESPN				IAML		23 26 47.2	
	comp=E,92nm,0.7s						

BGR **17** *23:24:53.8, 19°.55S×178°.54W, h33^{km}*
BJI **17** *23:25:58.4±0.0, 17°.78S×178°.27W, h585^{km}, mb4.6/34, mB4.8/15*
NOU **17** *23:25:59.5, 18°.02S×178°.33W, h593^{km}, mb5.2/103, Fiji Islands Region*
NEIC **17** *23:26:00.2±1.5, 18°.13S±0°.10×178°.3W±0°.1, h595^{km}±7^{km}, mb4.9/323, Error ellipse: s-maj=15.9km s-min=13.0km az=133.0*
IDC **17** *23:26:00.2±1.2, 17°.98S×178°.48W, h592^{km}±12^{km}, mb4.2/14, mbtmp5.1/16, Error ellipse: s-maj=18.6km s-min=10.2km az=145.0*
ISC 17 23:25:58.4±0.3**, 18°.05S**±0°.05×**178°.35W**±0°.05**, h579**^{km}**, n822, σ0^{s}.94**/738**, mb4.9**/245**, 26C-16D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.44	275	P	P	23 27 22.2	+3.6
	1μm,0.8s,baz=149,slow=3.8,SNR=852						
MSVF	Nonsavu	3.44	275	P	P	23 27 22.2	+3.6
FUTU	Fugatoga	3.73	3	P	P	23 27 23.8	+3.2
AFI	Afiamalu	7.55	58	P	P	23 27 52.9	+0.1
	102nm,0.4s,baz=190,slow=3.0,SNR=25						
AFI				S	S	23 29 22.1	-4.4
	46nm,0.4s,baz=24,slow=19,SNR=1.3						
NIUE	Niue	8.06	99	P	P	23 27 58.5	+0.9
	baz=8.0,SNR=12						
NIUE	Niue	8.06	99	P	P	23 27 59.1	+1.5
NIUE	Niue	8.06	99	P	P	23 27 59.1	+1.5
FUNA	Funafuti	9.76	346	P	P	23 28 16.6	+2.0
RAO	Raoul Island	11.16	178	S	S	23 30 30.2	-1.4
	130nm,0.4s,baz=77,slow=23,SNR=1.8						
RAO	Raoul Island	11.16	178	P	P	23 28 28.0	-0.4
DVP	Devils Point	12.82	269	P	P	23 28 47.3	+1.8
LIFNC	LIFOU	13.86	256	P	P	23 28 55.2	-1.0
PINNC	Pines Island,	14.07	249	P	P	23 28 59.1	+0.9
OUENC	Ouen Island, N	14.56	250	P	P	23 29 03.2	+0.2
OUENC	Ouen Island, N	14.56	250	P	P	23 29 03.5	+0.5
DZM	Mont Dzumac	14.83	252	ePn	P	23 29 04.8	-1.0
	203nm,1.4s						
DZM				eS	S	23 31 36.4	-2.9
	568nm,24.2s						
DZM	Mont Dzumac	14.83	252	P	P	23 29 06.1	+0.3
	41nm,0.5s,baz=112,slow=20,SNR=41						
DZM	Mont Dzumac	14.83	252	P	P	23 29 05.2	-0.6
DZM	Mont Dzumac	14.83	252	P	P	23 29 06.1	+0.3
ONTNC	Ouen Toro	14.88	251	P	P	23 29 05.9	-0.1
ONTNC	Ouen Toro	14.88	251	P	P	23 29 06.7	+0.6
NOUC	Port Laguerre	14.97	252	P	P	23 29 07.8	+0.9
KOUNC	Koumac, New Ca	16.58	259	P	P	23 29 22.6	+0.5
KOUNC	Koumac, New Ca	16.58	259	P	P	23 29 23.4	+1.3
KUZ	Kuaotunu	19.34	195	P	P	23 29 48.4	+1.4
WMGZ	Waiomatatini S	19.90	188	P	P	23 29 51.2	-0.8
HAZ	Te Kaha	19.92	189	P	P	23 29 52.0	-0.2
PKGZ	Pakihiroa	20.01	188	P	P	23 29 54.1	+1.0
PUZ	Puketiti	20.17	188	P	P	23 29 54.4	-0.1
TWGZ	Tauwhareparae	20.31	188	P	P	23 29 56.2	+0.4
TOZ	Tahuroa Road	20.33	194	P	P	23 29 57.2	+1.3
URZ	Urewera	20.52	190	P	P	23 29 55.7	-1.9
	21nm,0.7s,baz=142,slow=2.9,SNR=14						
URZ	Urewera	20.52	190	P	P	23 29 55.7	-1.9
RIGZ	Rimuhau	20.86	189	P	P	23 29 59.7	-1.0
RTZ	Ruatahuna	20.89	190	P	P	23 30 00.1	-1.0
MTHZ	Maungataniwha	21.14	190	P	P	23 30 03.6	+0.3
HIZ	Hauiti	21.23	195	P	P	23 30 05.0	+1.0
BKZ	Black Stump Fm	21.51	191	P	P	23 30 05.1	-1.5
OTVZ	Oturere	21.67	193	P	P	23 30 07.0	-1.1
BHHZ	Black Hill Sta	21.91	192	P	P	23 30 08.0	-2.1
HNR	Honiara	22.73	289	P	P	23 30 17.6	-0.1
	2μm,0.5s,baz=187,slow=2.8,SNR=6.9						
BFZ	Birch Farm	23.03	191	P	P	23 30 19.3	-0.8
MRZ	Mangatainoka R	23.13	192	P	P	23 30 19.8	-1.1
BHW	Baring Head	23.99	193	P	P	23 30 27.0	-1.5
QRZ	Quartz Range	24.02	197	P	P	23 30 29.1	+0.3
QRZ	Quartz Range	24.02	197	P	P	23 30 30.8	+2.0
BSWZ	Blackbirch Sta	24.51	194	P	P	23 30 30.8	-2.4
DSZ	Denniston Nort	25.07	198	P	P	23 30 38.7	+0.5
LTZ	Lake Taylor	25.91	196	P	P	23 30 45.5	0.0
OXZ	Oxford	26.48	196	P	P	23 30 50.0	-0.5
FOZ	Fox Glacier	27.30	199	P	P	23 30 57.0	-0.7
PPT2	Papeete2	27.39	94	eS	S	23 35 01.2	+1.7
	50nm,14.8s						
AUWSH	Wavell State H	27.92	245	P	P	23 31 04.5	+1.2
XMAS	Kiritimati	28.68	48	P	P	23 31 10.0	-0.1
GD1S	Gladstone Soft	29.01	253	P	P	23 31 13.2	+0.4
EIDS	Eidsvold	29.27	250	P	P	23 31 14.7	-0.3
	baz=29,SNR=30						
EIDS	Eidsvold	29.27	250	P	P	23 31 14.7	-0.3
EIDS	Eidsvold	29.27	250	P	P	23 31 14.8	-0.3
MLZ	Mavora Lakes	29.48	200	P	P	23 31 17.3	+0.7
ARMA	Armidale	29.91	240	P	P	23 31 21.7	+1.0
	baz=30,SNR=34						
ARMA	Armidale	29.91	240	P	P	23 31 21.7	+1.0
ARMA	Armidale	29.91	240	P	P	23 31 21.6	+1.0
WHZ	Wether Hill Ro	30.00	199	P	P	23 31 21.8	+0.7
WHZ				IAmb	IAmb	23 32 29.4	
	comp=Z,80nm,1.6s						
AUPHS	Peel High Scho	30.73	239	P	P	23 31 28.1	+0.5
MGCD	Mangrove Creek	31.26	235	P	P	23 31 32.8	+0.8
	baz=31,SNR=14						
RMQ	Roma	31.50	249	P	P	23 31 34.9	+0.7
	baz=32,SNR=8.1						
RMQ	Roma	31.50	249	P	P	23 31 34.9	+0.7
AULRC	Lightning Ridg	32.72	243	P	P	23 31 44.7	+0.2
	comp=Z,140nm,1.5s						
AUDCS	Dubbo College	32.91	238	P	P	23 31 47.5	+1.5
TV1H	Townsville Har	33.01	262	P	P	23 31 46.9	-0.1
CNB	Canberra Magne	33.38	233	P	P	23 31 51.0	+0.9
CTA	Charters Tower	33.48	261	P	P	23 31 51.1	+0.1
	comp=Z,80nm,0.7s,baz=94,slow=11,SNR=102						
	comp=Z,80nm,0.7s						
CTA	Charters Tower	33.48	261	P	P	23 31 50.9	-0.1
CTAO	Charters Tower	33.48	261	P	P	23 31 50.8	-0.1
CTAO	Charters Tower	33.48	261	P	P	23 31 50.9	-0.1
CTAO	Charters Tower	33.48	261	P	P	23 31 50.8	-0.1
CAN	Canberra	33.66	233	P	P	23 31 53.3	+0.9
CAN	Canberra	33.66	233	P	P	23 31 53.0	+0.6
CAN	Canberra	33.66	233	P	P	23 31 52.9	+0.6
PATS	Pohnpei	33.80	315	P	P	23 31 54.0	+0.3
MILA	Mila	34.23	230	P	P	23 31 57.5	+0.4
	baz=34,SNR=4.2						
PMG	Port Moresby	34.53	280	P	P	23 32 00.8	+0.9
PMG	Port Moresby	34.53	280	P	P	23 32 00.8	+0.9
PMG	Port Moresby	34.53	280	P	P	23 32 00.7	+0.9
CMSA	Cobar Meteorol	35.13	241	P	P	23 32 04.9	+0.3
	baz=35,SNR=98						
CMSA	Cobar Meteorol	35.13	241	P	P	23 32 05.0	+0.4
MTSU	Mount Surprise	35.45	264	P	P	23 32 07.2	-0.3
	baz=36,SNR=115						
MTSU	Mount Surprise	35.45	264	P	P	23 32 07.2	-0.3
QLP	Quilpie	35.53	249	P	P	23 32 07.9	-0.1
	baz=36,SNR=74						
QLP	Quilpie	35.53	249	P	P	23 32 07.9	-0.1
JOHN	Johnston Islan	35.64	15	P	P	23 32 09.1	+0.2
GLAD	Gladstone	36.79	224	P	P	23 32 18.5	+0.4
TOO	Toolangi	37.12	231	P	P	23 32 21.7	+0.7
	baz=37,SNR=26						
TOO	Toolangi	37.12	231	P	P	23 32 21.6	+0.7
TOO	Toolangi	37.12	231	P	P	23 32 21.7	+0.7
COEN	Coen	37.16	271	P	P	23 32 22.0	+0.5
	baz=37,SNR=88						
COEN	Coen	37.16	271	P	P	23 32 22.0	+0.5
COEN	Coen	37.16	271	P	P	23 32 22.1	+0.5
CORO	Coronation Par	37.58	224	P	P	23 32 25.9	+1.4
	comp=Z,67nm,0.9s						
MOO	Moorlands	38.02	223	P	P	23 32 28.8	+0.6
	baz=38,SNR=4.3						
TAU	Tasmania Unive	38.17	222	P	P	23 32 29.5	+0.1
TAU				IAmb	IAmb	23 32 30.9	
	comp=Z,65nm,1.4s						
BRAT	Ballarat	38.27	232	P	P	23 32 31.5	+1.3
STKA	Stephens Creek	38.61	241	P	P	23 32 33.7	+0.6
	comp=Z,84nm,0.8s,baz=92,slow=10,SNR=124						
	comp=Z,84nm,0.8s						
STKA	Stephens Creek	38.61	241	P	P	23 32 33.6	+0.5
	baz=39,SNR=91						
STKA	Stephens Creek	38.61	241	P	P	23 32 33.7	+0.6
INKA	Innaminka	38.74	248	P	P	23 32 35.4	+1.2
ARPS	Mount Arapiles	39.61	234	P	P	23 32 41.2	+0.1
	baz=40,SNR=13						
ARPS	Mount Arapiles	39.61	234	P	P	23 32 41.1	+0.1
QIS	Mount Isa	39.68	259	P	P	23 32 41.3	-0.6
	baz=40,SNR=9.0						
QIS	Mount Isa	39.68	259	P	P	23 32 41.2	-0.7
HTT	Hallett	41.12	240	P	P	23 32 53.2	+0.1
	baz=41,SNR=42						
HTT	Hallett	41.12	240	P	P	23 32 53.7	+0.5
LCRK	Leigh Creek	41.24	244	P	P	23 32 54.5	+0.4
WHYH	Whyalla	42.16	241	P	P	23 33 01.8	+0.5
OOD	Oodnadatta	43.22	248	P	P	23 33 10.2	+0.6
KHU	Kahuku	43.27	32	P	P	23 33 10.8	+0.4
BBOO	Buckleboo	43.38	241	P	P	23 33 10.8	-0.1
	baz=43,SNR=110						
BBOO	Buckleboo	43.38	241	P	P	23 33 11.0	+0.2
BBOO	Buckleboo	43.38	241	P	P	23 33 10.9	+0.1
KHLU	Kahalu`u	43.42	32	P	P	23 33 12.1	+0.7
GENI	Genyem	43.46	286	P	P	23 33 12.9	+1.3
GENI	Genyem	43.46	286	P	P	23 33 12.9	+1.3
	comp=Z,286nm,0.8s,comp=Z,3μm						
MWH	Moku'aweowe	43.48	32	P	P	23 33 13.2	+0.9
MLOA	Mauna Loa Obse	43.54	32	P	P	23 33 13.6	+1.0
MLH	Mauna Loa	43.60	32	P	P	23 33 13.9	+1.0
POHA	Pohakuloa	43.74	32	P	P	23 33 14.9	+0.9
POHA	Pohakuloa	43.74	32	P	P	23 33 14.7	+0.7
POHA	Pohakuloa	43.74	32	P	P	23 33 14.6	+0.6
KEKH	Kekaha	43.77	25	P	P	23 33 14.6	+0.7
HPAH	Hawaii Prepara	43.89	31	P	P	23 33 15.5	+0.6
KIP	Kipapa	44.00	28	P	P	23 33 16.4	+0.8
HLK	Haleakala	44.24	30	P	P	23 33 18.3	+0.4
WC3	Warramunga Arr	44.63	260	P	P	23 33 19.6	-1.0
	baz=45						
WRAB	Tennant Creek	44.65	260	P	P	23 33 20.0	-0.8
WRAB	Tennant Creek	44.65	260	P	P	23 33 19.8	-1.0
WRAB	Tennant Creek	44.65	260	P	P	23 33 19.8	-1.0
WRA	Warramunga Arr	44.66	260	P	P	23 33 20.1	-0.7
	comp=Z,61nm,0.7s,baz=96,slow=7.1,SNR=632						
WRA				PcP	PcP	23 34 50.7	-0.1
	comp=Z,7.0nm,0.8s,baz=90,slow=3.4,SNR=4.5						
WRA				ScP	ScP	23 37 48.3	-0.1
	comp=Z,3.4nm,1.0s,baz=92,slow=4.4,SNR=5.8						
WRA				S	S	23 39 10.8	-5.2
	comp=Z,1.1nm,0.8s,baz=97,slow=14,SNR=3.5						
	comp=Z,61nm,0.7s						
AS01	Alice Springs	44.76	254	P	P	23 33 21.4	-0.2
MULG	Mulgathing	44.80	245	P	P	23 33 21.7	-0.1
ASAR	Alice Springs	44.80	254	P	P	23 33 21.9	0.0
	comp=Z,282nm,0.7s,baz=86,slow=8.6,SNR=1761						
ASAR				PcP	PcP	23 34 51.0	-0.3
	comp=Z,7.6nm,0.5s,baz=99,slow=4.0,SNR=5.3						
ASAR				ScP	ScP	23 37 49.3	+0.3
	comp=Z,2.6nm,0.8s,baz=109,slow=4.0,SNR=5.8						
ASAR				S	S	23 39 15.2	-2.9
	comp=Z,2.0nm,0.7s,baz=86,slow=16,SNR=7.2						
SMPI	Sarmi	45.03	286	P	P	23 33 23.4	-0.4
	comp=Z,150nm,0.8s,comp=Z,2μm						
KDU	Kakadu	47.61	269	P	P	23 33 42.5	-0.7
	baz=48,SNR=77						
KDU	Kakadu	47.61	269	P	P	23 33 42.7	-0.5
MTN	Manton Dam	48.85	269	P	P	23 33 51.6	-0.8
	baz=49,SNR=5.1						
MTN	Manton Dam	48.85	269	P	P	23 33 51.8	-0.7
MTN	Manton Dam	48.85	269	P	P	23 33 51.7	-0.7
WRKA	Warakurna	49.85	252	P	P	23 33 59.2	-0.5
	baz=50,SNR=461						
WRKA	Warakurna	49.85	252	P	P	23 33 59.5	-0.2
SAUI	Saumlaki	49.92	275	P	P	23 34 00.9	+0.6
	comp=Z,228nm,1.2s						
FORT	Forrest	49.99	245	P	P	23 33 59.8	-0.8
	baz=50,SNR=12						
FORT	Forrest	49.99	245	P	P	23 33 59.8	-0.8
FORT	Forrest	49.99	245	P	P	23 34 00.0	-0.6
KNRA	Kununurra	50.53	264	P	P	23 34 04.1	-0.6
	baz=51,SNR=38						
KNRA	Kununurra	50.53	264	P	P	23 34 04.2	-0.4
KNRA	Kununurra	50.53	264	P	P	23 34 04.3	-0.4
FAKI	Fak Fak	50.66	281	P	P	23 34 05.5	-0.2
FAKI	Fak Fak	50.66	281	P	P	23 34 04.5	-1.2
	comp=Z,59nm,1.6s						
SWI	Sorong	52.33	283	P	P	23 34 17.8	+0.1
	comp=Z,437nm,0.8s,comp=Z,3μm						
MSAI	Masohi	53.62	279	P	P	23 34 26.0	-0.9
	comp=Z,21nm,0.6s						
AAI	Ambon	54.19	279	P	P	23 34 30.1	-0.8
	comp=Z,177nm,0.5s,comp=Z,2μm						
KMBL	Kambalda	55.30	244	P	P	23 34 37.4	-0.9
	baz=55,SNR=9.1						
NLAI	Namlea	55.37	279	P	P	23 34 39.1	0.0
	comp=Z,113nm,0.8s,comp=Z,7μm						
DRV	Dumont d'Urvil	55.55	199	P	P	23 34 39.6	+0.2
LBMI	Labuha	55.90	282	P	P	23 34 42.9	+0.1
	comp=Z,154nm,0.9s,comp=Z,1μm						
SOEI	Soe	56.12	270	P	P	23 34 45.5	+1.1
SOEI	Soe	56.12	270	P	P	23 34 45.7	+1.2
SOEI	Soe	56.12	270	P	P	23 34 45.4	+0.9
	comp=Z,277nm,0.9s,comp=Z,3μm						
TNTI	Ternate	56.55	283	P	P	23 34 47.8	+0.6
	comp=Z,135nm,0.9s						
TNTI	Ternate	56.55	283	P	P	23 34 46.7	-0.5
	comp=Z,133nm,0.9s						
SANI	Sanana	56.82	280	P	P	23 34 48.5	-0.6
SANI	Sanana	56.82	280	P	P	23 34 48.4	-0.6
	comp=Z,145nm,1.1s,comp=Z,1μm						

PSA00	Pilbara Seismi	57.92	255	P	P	23 34 55.8	-0.7
PSA00				IAmb	IAmb	23 34 56.6	
	comp=Z,70nm,0.8s						
PSA00	Pilbara Seismi	57.92	255	P	P	23 34 55.9	-0.6
MBWA	Marble Bar	58.09	256	P	P	23 34 56.8	-0.9
MBWA				IAmb	IAmb	23 34 57.3	
	comp=Z,42nm,0.6s						
MBWA	Marble Bar	58.09	256	P	P	23 34 56.8	-0.9
MBWA	Marble Bar	58.09	256	P	P	23 34 56.8	-0.9
MMRI	Maumere	58.35	271	IAmb	IAmb	23 34 59.5	
	comp=Z,71nm,0.7s						
MMRI	Maumere	58.35	271	P	P	23 34 59.0	-0.5
MMRI	Maumere	58.35	271	P	P	23 34 58.1	-1.4
	comp=Z,132nm,0.9s						
MEEK	Meekatharra	58.43	249	P	P	23 34 58.7	-1.2
	baz=58,SNR=24						
MEEK	Meekatharra	58.43	249	P	P	23 34 58.8	-1.2
KLBR	Kellerberrin	58.81	244	P	P	23 35 01.6	-0.8
	baz=59,SNR=7.3						
KLBR	Kellerberrin	58.81	244	P	P	23 35 01.5	-0.8
NWAO	Narrogin (SRO)	59.19	242	P	P	23 35 04.3	-0.5
	baz=59,SNR=5.3						
NWAO				P	P	23 35 04.3	-0.5
	baz=59,SNR=5.3						
NWAO	Narrogin (SRO)	59.19	242	P	P	23 35 04.2	-0.7
NWAO				IAmb	IAmb	23 36 16.4	
	comp=Z,119nm,1.8s						
NWAO	Narrogin (SRO)	59.19	242	P	P	23 35 04.0	-0.9
BLDU	Ballidu	59.77	245	P	P	23 35 07.9	-0.8
	baz=60,SNR=13						
BLDU	Ballidu	59.77	245	P	P	23 35 07.9	-0.8
MUN	Mundaring	60.11	243	P	P	23 35 10.5	-0.4
	baz=60,SNR=7.3						
MUN	Mundaring	60.11	243	P	P	23 35 10.7	-0.2
LUWI	Luwuk	60.18	279	P	P	23 35 12.1	+0.4
LUWI	Luwuk	60.18	279	P	P	23 35 12.0	+0.4
	comp=Z,136nm,1.2s,comp=Z,3µm						
VNDA	Vanda	60.31	185	P	P	23 35 12.5	+1.1
	comp=Z,2.6nm,0.9s,baz=24,slow=6.5,SNR=5.6						
	comp=Z,2.6nm,0.9s						
VNDA	Vanda	60.31	185	P	P	23 35 11.7	+0.3
MORW	Morawa	60.47	246	P	P	23 35 12.6	-0.9
	baz=60,SNR=17						
MORW	Morawa	60.47	246	P	P	23 35 12.8	-0.6
MORW	Morawa	60.47	246	P	P	23 35 12.5	-0.9
BSSI	Bau Bau, Buton	60.72	273	P	P	23 35 14.1	-1.1
	comp=Z,72nm,0.9s						
BKSI	Bulukumba	61.31	274	P	P	23 35 18.2	-0.9
	comp=Z,31nm,0.8s						
MRSI	Marisa	61.49	281	P	P	23 35 18.7	-1.6
	comp=Z,76nm,0.9s						
KAPI	Kappang	61.76	274	P	P	23 35 21.6	-0.4
KAPI	Kappang	61.76	274	P	P	23 35 21.7	-0.3
	comp=Z,37nm,1.2s						
KAPI	Kappang	61.76	274	P	P	23 35 21.6	-0.4
SPSI	Sidrap Palu	62.06	275	P	P	23 35 22.8	-1.2
	comp=Z,55nm,0.8s						
PLAI	Plampang	62.55	269	P	P	23 35 26.5	-0.6
PLAI	Plampang	62.55	269	P	P	23 35 26.0	-1.1
	comp=Z,170nm,0.9s						
TOLI2	Tolitoli	62.80	281	IAmb	IAmb	23 35 29.1	
	comp=Z,30nm,0.9s						
TOLI2	Tolitoli	62.80	281	P	P	23 35 28.8	+0.1
GIRL	Giralia	62.91	253	P	P	23 35 30.0	+0.7
	baz=63,SNR=12						
GIRL	Giralia	62.91	253	P	P	23 35 30.0	+0.7
MPSI	Mapaga	63.35	280	P	P	23 35 31.5	-0.8
	comp=Z,77nm,0.8s						
TWSI	Taliwang, Sumb	63.42	269	P	P	23 35 32.3	-0.4
	comp=Z,173nm,1.0s						
CCD	Concordia, Ant	64.74	194	P	P	23 35 40.8	+0.2
CCD				pP	pwP	23 37 39.0	+1.2
IGBI	Denpasar	65.05	269	P	P	23 35 42.5	-0.5
	comp=Z,160nm,0.8s						
SRBI	Singaraja	65.19	269	P	P	23 35 42.5	-1.4
	comp=Z,75nm,0.8s						
CASY	Casey	66.03	205	P	P	23 35 48.1	-0.1
JAGI	Jajag, Banyuwa	66.09	269	P	P	23 35 47.8	-1.7
JAGI	Jajag, Banyuwa	66.09	269	P	P	23 35 48.1	-1.4
JAGI	Jajag, Banyuwa	66.09	269	P	P	23 35 47.1	-2.4
	comp=Z,174nm,0.8s						
ABJI	Asem Bagus	66.20	269	P	P	23 35 49.2	-1.0
	comp=Z,84nm,1.1s						
MYLDM	Lahad Datu	66.40	284	P	P	23 35 54.1	+2.7
MYLDM				IAmb	IAmb	23 35 54.9	
	comp=Z,63nm,1.3s						
GMJI	Gumukmas	66.82	269	P	P	23 35 52.9	-1.1
BLJI	Banyuglugur	66.82	269	P	P	23 35 53.4	-0.6
	comp=Z,155nm,0.8s						
BBKI	Banjar Baru	66.89	274	P	P	23 35 54.8	+0.3
	comp=Z,84nm,0.8s						
MJAR	Matsushiro Arr	68.05	323	P	P	23 36 00.8	-0.3
	comp=Z,5.8nm,0.6s,baz=158,slow=6.0,SNR=18						
	comp=Z,5.8nm,0.6s						
MAJO	Matsushiro	68.05	323	P	P	23 36 00.3	-0.8
GRJI	Gresik	68.11	270	P	P	23 36 02.7	+0.8
	comp=Z,69nm,0.9s						
PWJI	Pagerwojo	68.45	268	P	P	23 36 03.0	-0.9
	comp=Z,84nm,0.7s						
TBJI	Tambak Boyo	68.74	270	P	P	23 36 05.8	+0.1
	comp=Z,206nm,1.1s						
KKM	Kota Kinabalu	68.83	284	P	P	23 36 06.1	-0.2
KKM				IAmb	IAmb	23 36 07.0	
	comp=Z,39nm,0.8s						
ADK	Adak	69.65	1	⇓P	P	23 36 09.5	-0.7
UGM	Wanagama	69.69	268	P	P	23 36 11.1	-0.4
UGM	Wanagama	69.69	268	P	P	23 36 10.8	-0.7
	comp=Z,262nm,0.7s						
SMRI	Semarang	70.02	269	P	P	23 36 13.8	+0.4
	comp=Z,129nm,0.8s						
SMRI	Semarang	70.02	269	P	P	23 36 12.9	-0.5
	comp=Z,127nm,0.8s						
JHS	Saijyo	70.04	319	P	P	23 36 13.6	+0.6
JHS				IAmb	IAmb	23 36 14.4	
	comp=Z,29nm,0.8s						
JHS	Saijyo	70.04	319	P	P	23 36 13.7	+0.7
PBKI	Pangkalan Bun	70.13	274	P	P	23 36 13.1	-0.9
	comp=Z,161nm,0.9s						
NIKH	Nikolski High	71.20	6	P	P	23 36 18.6	-0.8
	baz=190						
SBUM	Sibu	71.28	279	P	P	23 36 21.2	+0.5
KPJI	Karang Pucung	71.37	268	P	P	23 36 20.8	-0.5
	comp=Z,89nm,0.7s						
QSPA	South Pole Qui	72.00	180	P	P	23 36 24.7	+0.6
QSPA				pP	pP	23 38 25.8	+3.3
NACB	Ninganchiao	72.04	304	P	P	23 36 24.2	-0.7
UNV	Unalaska Valle	72.32	7	P	P	23 36 24.8	-1.1
UNV				IAmb	IAmb	23 36 25.0	
	comp=Z,25nm,0.8s						
UNV	Unalaska Valle	72.32	7	P	P	23 36 23.9	-2.0
	baz=192						
SSLB	Suanglung	72.36	303	P	P	23 36 25.8	-1.0
TPUB	Ta-pu	72.38	302	P	P	23 36 25.9	-1.0
BBJI	Bungbulang	72.55	268	P	P	23 36 27.3	-0.9
	comp=Z,120nm,0.8s						
AKUT	Akutan	72.70	8	P	P	23 36 26.8	-1.2
AKUT				IAmb	IAmb	23 36 30.4	
	comp=Z,30nm,0.9s						
KSM	Kuching	72.76	277	P	P	23 36 29.6	+0.3
CBJI	Citeko	73.61	268	P	P	23 36 33.0	-1.2
	comp=Z,154nm,0.9s,comp=Z,8µm						
SKJI	Sukabumi	73.72	268	P	P	23 36 33.8	-1.0
	comp=Z,169nm,0.7s						
PETK	Petropavlovsk-	73.83	345	P	P	23 36 34.5	0.0
	comp=Z,7.5nm,0.6s,baz=117,slow=7.8,SNR=17						
	comp=Z,7.5nm,0.6s						
CGJI	Cibinong	74.66	268	P	P	23 36 38.8	-1.3
	comp=Z,189nm,0.7s,comp=Z,2µm						
SDPT	Sand Point	74.67	10	P	P	23 36 37.8	-1.4
	baz=198						
S12K	Black Hills	74.75	9	P	P	23 36 37.8	-1.8
	baz=196						
KSRS	Korea Array	74.84	318	P	P	23 36 41.2	+0.7
	comp=Z,2.4nm,0.7s,baz=130,slow=6.4,SNR=11						
CHGN	Chignik	75.95	11	P	P	23 36 44.0	-2.2
	baz=200						
KASI	Kota Agung	76.11	269	P	P	23 36 46.9	-1.2
	comp=Z,107nm,0.8s						
SCZ2	Santa Cruz Isl	76.17	47	P	P	23 36 48.3	+0.3
	baz=237						
SAO	San Andreas Ge	76.49	44	P	P	23 36 50.9	+1.1
SAO				IAmb	IAmb	23 36 51.9	
	comp=Z,40nm,0.8s						
PKM	Mcpherson Peak	76.54	46	P	P	23 36 51.2	+1.0
	baz=236,SNR=7.9						
PMPB	Monarch Peak	76.61	45	IAmb	IAmb	23 36 52.3	
	comp=Z,29nm,0.7s						
BBGB	Big Mountain B	76.65	44	IAmb	IAmb	23 36 53.5	
	comp=Z,42nm,1.0s						
CIS	Catalina Islan	76.71	48	P	P	23 36 51.5	+0.5
	baz=238						
MDSI	Maura Dua	76.72	270	P	P	23 36 50.0	-1.5
	comp=Z,41nm,1.1s						
HOPS	Hopland Field	76.75	41	P	P	23 36 51.9	+0.9
HOPS				IAmb	IAmb	23 36 53.2	
	comp=Z,32nm,1.1s						
USRK	Ussuriysk Ar.	76.76	326	P	P	23 36 51.9	+0.9
	comp=Z,3.1nm,0.7s,baz=61,slow=9.0,SNR=4.8						
	comp=Z,3.1nm,0.7s						
BCW	Bitter Crk WRg	76.84	46	IAmb	IAmb	23 36 54.2	
	comp=Z,36nm,0.8s						
KCPM	Cahto Peak	76.84	40	IAmb	IAmb	23 36 54.0	
	comp=Z,54nm,1.3s						
KMPM	Mount Pierce	76.96	39	IAmb	IAmb	23 36 54.7	
	comp=Z,35nm,0.9s						
DECC	Green Verdugo	77.22	47	P	P	23 36 54.3	+0.5
	baz=238						
PASC	Pasadena Art C	77.28	48	IAmb	IAmb	23 36 55.6	
	comp=Z,29nm,0.8s						
ARVC	Arvin	77.34	46	P	P	23 36 54.9	+0.6
	baz=237						
109C	Camp Elliot, M	77.37	49	P	P	23 36 55.3	+0.7
	baz=239						
KHMM	Horse Mountain	77.47	39	IAmb	IAmb	23 36 58.2	
	comp=Z,34nm,1.0s						
VES	Vestal, Richgr	77.56	46	P	P	23 36 56.0	+0.6
	baz=237						
DSRI	Dabo	77.56	274	P	P	23 36 55.8	-0.2
	comp=Z,31nm,1.0s						
VTX	Valle De La Tr	77.57	51	IAmb	IAmb	23 39 42.2	
	comp=Z,45nm,1.1s						
R17K	Ugashik Creek	77.59	12	P	P	23 36 54.9	-0.3
	baz=201						
MURC	Murrieta	77.68	48	P	P	23 36 57.1	+0.8
	baz=238						
BFSC	Mount Baldy Ra	77.68	48	P	P	23 36 57.1	+0.7
	baz=238,SNR=14						
EDW2	Edwards Air Fo	77.79	47	P	P	23 36 57.8	+0.9
	baz=238,SNR=43						
OHAK	Old Harbor	77.86	14	P	P	23 36 55.8	-0.8
OHAK				IAmb	IAmb	23 37 37.2	
	comp=Z,96nm,1.5s						
OHAK	Old Harbor	77.86	14	P	P	23 36 56.6	0.0
	baz=204						
MONP2	Monument Peak	77.87	49	P	P	23 36 58.6	+1.1
	baz=239,SNR=40						
ISA	Isabella, Lake	77.88	46	IAmb	IAmb	23 36 59.4	
	comp=Z,38nm,0.9s						
ISA	Isabella, Lake	77.88	46	P	P	23 36 58.2	+0.9
	baz=237,SNR=12						
CMB	Columbia Colle	77.91	43	IAmb	IAmb	23 36 59.2	
	comp=Z,30nm,0.9s						
MNAI	Manna	77.92	269	P	P	23 36 58.0	0.0
RMX	La Rumorosa	77.97	50	P	P	23 36 58.7	+0.7
RMX				IAmb	IAmb	23 37 00.2	
	comp=Z,31nm,0.8s						
IKP	In-Ko-Pah, Jac	77.97	50	P	P	23 36 59.1	+1.1
	baz=239,SNR=19						
NJ2	Nanjing	78.07	309	*e*P	P	23 36 59.1	+0.8
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
SFX	San Felipe	78.09	52	P	P	23 36 58.5	+0.1
YUH	Yuha Desert	78.10	50	P	P	23 36 59.1	+0.5
PFO	Pinyon Flats O	78.21	49	P	P	23 37 00.5	+1.2
PFO	Pinyon Flats O	78.21	49	P	P	23 36 60.0	+0.8
	baz=239,SNR=7.3						
TPFO	Pinon Flats	78.21	49	P	P	23 37 00.1	+0.9
	baz=239,SNR=7.5						
Q17K	Contact Creek	78.27	12	P	P	23 36 58.2	-0.7
	baz=202,SNR=7.0						
PMD	Palm Desert	78.29	49	P	P	23 36 59.9	+0.4
L02F	Cave Junction	78.32	38	P	P	23 37 00.2	+0.7
LRMC	Laurel Mtn Rad	78.32	47	P	P	23 37 00.5	+0.7
	baz=238,SNR=7.7						
MDJ	Mudanjiang	78.33	325	P	P	23 37 00.6	+1.1
MDJ				S	S	23 46 11.3	+3.1
MDJ				pmax	pmax		
	comp=Z,12nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,200nm,11.4s						
SRIG	Santa Rosalia	78.34	56	IAmb	IAmb	23 37 02.1	
	comp=Z,29nm,1.0s						
SWSC	Sam W. Stewart	78.34	50	P	P	23 37 00.8	+1.0
	baz=239,SNR=11						
Q16K	King Salmon	78.51	11	P	P	23 36 59.6	-0.4
	baz=201						
KDAK	Kodiak Island	78.53	14	P	P	23 37 00.4	+0.2
KDAK				IAmb	IAmb	23 37 02.4	
	comp=Z,50nm,1.1s						
KDAK	Kodiak Island	78.53	14	P	P	23 37 00.1	0.0
	baz=205						
MDPB	Devils Postpil	78.54	44	P	P	23 37 02.0	+0.9
MDPB				IAmb	IAmb	23 37 03.0	
	comp=Z,36nm,0.8s						
CWC	Cottonwood Cre	78.56	46	P	P	23 37 01.6	+0.5
	baz=237						
OMMB	Old Mammoth Mi	78.58	44	P	P	23 37 01.8	+0.4
SLBS	Sierra La Lagu	78.58	60	P	P	23 37 02.2	+0.8
YBH	Yreka Blue Hor	78.60	39	P	P	23 37 02.3	+1.2
YBH				IAmb	IAmb	23 37 03.3	
	comp=Z,27nm,0.8s						
P16K	Nushagak River	78.60	11	P	P	23 36 59.9	-0.6
	baz=200,SNR=12						
K02D	Willamette Mer	78.62	38	P	P	23 37 01.6	+0.5
EMB	Emerald Bay	78.62	43	P	P	23 37 01.8	+0.3
BELC	Belle Mtn. Jos	78.74	49	P	P	23 37 02.9	+0.8
	baz=239,SNR=22						
MPMC	Manual Prospec	78.76	46	P	P	23 37 02.9	+0.7
	baz=238,SNR=29						
WAKR	Walker	78.79	43	P	P	23 37 03.4	+1.0
WAKR				IAmb	IAmb	23 37 04.6	
	comp=Z,40nm,0.9s						
TIN	Tinemaha, Big	78.79	45	P	P	23 37 03.0	+0.7
	baz=237						
Q18K	Katmai Hardscr	78.80	12	P	P	23 37 01.1	-0.7
	baz=202,SNR=8.0						
GSC	Goldstone, Bar	78.84	47	P	P	23 37 03.1	+0.6
GSC	Goldstone, Bar	78.84	47	P	P	23 37 03.1	+0.6
	baz=238,SNR=9.5						
MPK	Martis Peak	78.85	42	P	P	23 37 03.4	+0.7
MPK				IAmb	IAmb	23 37 04.7	
	comp=Z,50nm,0.8s						
BTDF	Bukit Timah Da	78.90	275	P	P	23 37 03.6	+0.4
	comp=Z,30nm,0.8s						
HEC	Hector,Ludlow	78.92	48	P	P	23 37 03.6	+0.7
	baz=239,SNR=9.3						
BC3	Big Chuckawall	78.95	49	P	P	23 37 04.3	+1.2
	baz=240,SNR=12						
MYKOM	Kota Tinggi	78.96	276	P	P	23 37 03.5	-0.1
HUMO	Hull Mountain	78.98	38	P	P	23 37 03.5	+0.5
HUMO				IAmb	IAmb	23 37 05.3	
	comp=Z,36nm,1.1s						
P17K	Kvichak River	79.04	11	P	P	23 37 02.2	-0.7
	baz=201						
GLA	Glamis	79.10	50	P	P	23 37 05.1	+1.2
GLA				IAmb	IAmb	23 37 06.5	
	comp=Z,31nm,0.9s						
GLA	Glamis	79.10	50	P	P	23 37 05.3	+1.4
	baz=240,SNR=8.3						
O16K	Kokwok River B	79.12	10	P	P	23 37 02.0	-1.3
	baz=200						
DSP	Deep Springs	79.14	45	P	P	23 37 05.1	+1.2
DSP				IAmb	IAmb	23 37 06.2	
	comp=Z,30nm,1.0s						
YERR	Yerington	79.18	43	IAmb	IAmb	23 37 06.2	
	comp=Z,47nm,1.0s						
LHV	Little Huntoon	79.26	44	IAmb	IAmb	23 37 07.0	
	comp=Z,41nm,1.0s						
Q19K	Cape Douglas,	79.34	13	P	P	23 37 04.0	-0.5
	baz=204						
GRAC	Grapevine Rang	79.34	45	P	P	23 37 06.1	+1.0
	baz=238						
GMRC	Granite Mounta	79.38	48	P	P	23 37 06.1	+0.7
	baz=239,SNR=9.2						
FURC	Furnace Creek,	79.41	46	P	P	23 37 06.1	+0.8
	baz=238,SNR=8.6						
IRM	Iron Mountain	79.43	49	P	P	23 37 06.6	+1.1
	baz=240,SNR=14						
P18K	Big Mountain,	79.45	12	IAmb	IAmb	23 37 05.2	
	comp=Z,52nm,0.8s						
P18K	Big Mountain,	79.45	12	P	P	23 37 04.4	-0.7
	baz=202,SNR=14						
O17K	Koliganek Bris	79.46	11	P	P	23 37 04.3	-0.8
	baz=200,SNR=6.7						
NVAR	Mina Array Bea	79.49	44	P	P	23 37 06.9	+0.8
	comp=Z,16nm,0.7s,baz=225,slow=8.8,SNR=126						
NVAR				PP	PP	23 40 17.1	-0.5
	comp=Z,0.2nm,0.3s,baz=234,slow=9.9,SNR=3.7						
	comp=Z,16nm,0.7s						
PAHR	Pah Rah Range	79.49	42	IAmb	IAmb	23 37 07.9	
	comp=Z,43nm,1.2s						
SHOC	Shoshone, Teco	79.52	47	P	P	23 37 06.7	+0.7
	baz=239,SNR=8.8						
TUQ	Turquoise Moun	79.52	47	P	P	23 37 07.1	+0.9
	baz=239,SNR=5.5						
N16K	Nishlik Lake	79.84	10	P	P	23 37 07.3	+0.2
	baz=199,SNR=9.8						
O18K	Koktuh Hills	79.88	12	P	P	23 37 07.0	-0.4
	baz=202,SNR=14						
BUCK	Buck Mountain	79.92	37	P	P	23 37 07.6	-0.4
KVN	Kaiserville	79.96	43	P	P	23 37 09.1	+0.6
KVN				IAmb	IAmb	23 37 10.2	
	comp=Z,28nm,0.9s						
PLTX	Planet X, Gerl	80.00	41	P	P	23 37 09.2	+0.6
PLTX				IAmb	IAmb	23 37 10.4	
	comp=Z,66nm,1.3s						
214A	Organ Pipe Nat	80.06	52	P	P	23 37 10.2	+1.3
	baz=241,SNR=15						
TPNV	Topopah Spring	80.08	46	P	P	23 37 10.1	+1.0
	baz=238,SNR=17						
P19K	Oil Pt	80.09	13	P	P	23 37 07.8	-0.6
	baz=204						
NEE2	Needles Airpor	80.11	49	P	P	23 37 10.0	+1.0
	baz=240						
HSIG		80.12	55	P	P	23 37 09.9	+0.6
MOD	Modoc Plateau	80.16	40	IAmb	IAmb	23 37 11.2	
	comp=Z,39nm,0.8s						
CN2	Changchun	80.17	322	*e*P	P	23 37 08.9	-0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PDMCI	Parker Dam,Lak	80.22	49	P	P	23 37 10.9	+1.2
	baz=240,SNR=11						
BNX	BinXian	80.24	325	⇑P	P	23 37 09.8	+0.3
BNX				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BNX				pmax	pmax		
	comp=Z,67nm,5.0s						
H04D	Lebanon	80.26	37	P	P	23 37 09.8	+0.2
K05A	Summer Lake	80.28	39	P	P	23 37 11.3	+1.3
O19K	Port Alsworth	80.37	12	P	P	23 37 09.3	-0.5
O19K	Port Alsworth	80.37	12	P	P	23 37 09.2	-0.6
	baz=203,SNR=22						
G03D	McMinnville, O	80.39	36	IAmb	IAmb	23 37 12.1	
	comp=Z,60nm,1.1s						
SDSI	Sungai Dareh	80.41	272	P	P	23 37 09.3	-1.8
	comp=Z,13nm,0.9s						
ILSW	Iliamna Southw	80.41	13	IAmb	IAmb	23 37 10.2	
	comp=Z,50nm,0.8s						
V12A	Nelson	80.42	48	P	P	23 37 12.0	+1.2
Q09A	Carvers	80.45	44	P	P	23 37 11.7	+0.8
Q09A				IAmb	IAmb	23 37 12.9	
	comp=Z,42nm,0.8s						
SHPR	Sheep Range	80.60	47	P	P	23 37 12.7	+0.8
O20K	Slope Mountain	80.61	13	P	P	23 37 10.5	-0.7
	baz=205						
H04A	Detroit Lake	80.67	37	P	P	23 37 12.1	+0.3
H04A				IAmb	IAmb	23 37 12.7	
	comp=Z,28nm,0.6s						
BRLK	Bradley Lake	80.70	14	P	P	23 37 12.2	+0.6
BRSE	Bradley Lake S	80.71	14	P	P	23 37 11.3	-0.3
	baz=206,SNR=5.8						
S11A	Rachel	80.78	46	IAmb	IAmb	23 37 14.6	
	comp=Z,37nm,0.9s						
W13A	Hualapai Mount	80.80	49	P	P	23 37 13.5	+0.6
Y14A	Wickenburg	80.86	50	P	P	23 37 13.8	+0.7
N19K	Bonanza Creek	80.91	12	P	P	23 37 11.7	-1.1
	baz=203,SNR=7.8						
I05D	Terrebonne, OR	80.96	38	IAmb	IAmb	23 37 15.2	
	comp=Z,27nm,0.9s						
SVW2	Sparrevohn	80.97	11	IAmb	IAmb	23 38 41.4	
	comp=Z,49nm,1.8s						
SVW2	Sparrevohn	80.97	11	P	P	23 37 13.0	+0.1
	comp=Z,12nm,2.0s						
E03A	Lebam	81.04	35	P	P	23 37 14.0	+0.4
E03A				IAmb	IAmb	23 37 15.4	
	comp=Z,55nm,0.9s						
PRN	Pahroc Range	81.14	46	IAmb	IAmb	23 37 16.9	
	comp=Z,40nm,0.9s						
BMN	Battle Mountai	81.28	43	IAmb	IAmb	23 37 17.1	
	comp=Z,41nm,1.0s						
WISH	Wishkah	81.28	34	P	P	23 37 15.2	+0.5
WISH				IAmb	IAmb	23 37 17.1	
	comp=Z,73nm,1.1s						
F04A	Amboy	81.29	36	P	P	23 37 15.4	+0.5
F04A				IAmb	IAmb	23 37 16.5	
	comp=Z,79nm,1.4s						
SEW	Seward	81.33	14	P	P	23 37 14.5	-0.2
	baz=208						
PDSI	Padang	81.34	272	P	P	23 37 14.5	-1.4
	comp=Z,34nm,0.7s						
HOOD	Mount Hood Mea	81.36	37	IAmb	IAmb	23 37 17.0	
	comp=Z,59nm,1.1s						
TIA	Tai'an	81.38	312	*e*P	P	23 37 13.5	-2.1
TIA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
NLWA	Neilton Lookou	81.40	34	P	P	23 37 16.1	+0.7
NLWA				IAmb	IAmb	23 37 17.5	
	comp=Z,43nm,1.1s						
WVOR	Wild Horse Val	81.48	40	IAmb	IAmb	23 37 18.1	
	comp=Z,48nm,1.0s						
G05A	Wamic	81.50	37	IAmb	IAmb	23 37 23.4	
	comp=Z,35nm,1.0s						
SPCR	Spurr Chakacha	81.72	12	P	P	23 37 15.5	-1.3
	baz=205						
TUC	Tucson	81.75	52	P	P	23 37 18.7	+1.0
TUC				IAmb	IAmb	23 37 20.5	
	comp=Z,31nm,1.1s						
TUC	Tucson	81.75	52	P	P	23 37 19.3	+1.6
	baz=242						
I07A	Izee	81.89	39	P	P	23 37 18.6	+0.5
I07A				IAmb	IAmb	23 37 20.1	
	comp=Z,40nm,0.8s						
G06A	Carlson Farm,	81.89	37	IAmb	IAmb	23 37 19.6	
	comp=Z,26nm,1.0s						
M19K	Big River Lodg	81.94	11	P	P	23 37 17.3	-0.5
	baz=203						
B04A	Port Angeles	82.01	34	P	P	23 37 18.4	-0.1
B04A				IAmb	IAmb	23 37 20.0	
	comp=Z,17nm,0.8s						
BELA	Belgrano 2	82.02	173	P	P	23 37 17.3	-0.8
J08A	Circle Bar Ran	82.09	40	IAmb	IAmb	23 37 21.1	
	comp=Z,49nm,1.1s						
L19K	White Mountain	82.11	11	P	P	23 37 18.7	-0.1
	baz=202						
Q12A	Willow Creek R	82.12	45	P	P	23 37 20.2	+0.7
Q12A				IAmb	IAmb	23 37 21.4	
	comp=Z,31nm,0.8s						
RC01	Rabbit Creek A	82.14	14	IAmb	IAmb	23 37 19.4	
	comp=Z,27nm,1.1s						
RC01					pwP	23 39 27.8	+3.7
RC01	Rabbit Creek A	82.14	14	P	P	23 37 18.2	-0.7
	baz=207,SNR=5.1						
M20K	Styx River	82.15	12	P	P	23 37 18.8	-0.3
	baz=204						
CLRS	Cowichan Lake	82.16	33	P	P	23 37 19.2	0.0
CLRS				IAmb	IAmb	23 37 20.3	
	comp=Z,27nm,1.0s						
LCMT	Little Creek M	82.19	47	IAmb	IAmb	23 37 21.9	
	comp=Z,23nm,0.8s						
X16A	Lo Mia Camp, P	82.23	50	P	P	23 37 21.2	+1.0
X16A				IAmb	IAmb	23 37 22.8	
	comp=Z,30nm,1.0s						
SUA	Susitna One	82.26	13	IAmb	IAmb	23 37 19.7	
	comp=Z,33nm,0.7s						
SUA				pP	pP	23 39 23.3	+1.1
SUA	Susitna One	82.26	13	P	P	23 37 18.8	-0.8
	baz=206,SNR=12						
PWL	Port Wells	82.26	14	P	P	23 37 18.8	-0.7
PWL				IAmb	IAmb	23 37 19.7	
	comp=Z,40nm,0.9s						
PWL	Port Wells	82.26	14	P	P	23 37 18.6	-0.9
	baz=209						
D05A	Enumclaw	82.29	35	P	P	23 37 20.3	+0.3
CCUT	Cedar City	82.37	47	P	P	23 37 21.7	+0.8
CCUT				IAmb	IAmb	23 37 23.3	
	comp=Z,22nm,0.9s						
PGC	Sidney	82.40	33	P	P	23 37 20.3	-0.2
SPR3	Spring Creek 3	82.43	45	P	P	23 37 21.4	+0.1
319A	Douglas	82.47	54	P	P	23 37 22.1	+0.7

319A				IAmb	IAmb	23 37 24.2	
	comp=Z,46nm,0.9s						
KNB	Kanab	82.48	47	IAmb	IAmb	23 37 23.7	
	comp=Z,24nm,0.9s						
IPM	Ipoh	82.49	277	IAmb	IAmb	23 37 22.8	
	comp=Z,42nm,0.7s						
IPM	Ipoh	82.49	277	P	P	23 37 22.0	+0.2
	comp=Z,65nm,0.9s						
L20K	Farewell, AK	82.56	11	P	P	23 37 20.4	-0.6
	baz=203						
SKT	Skwentna	82.56	12	P	P	23 37 19.2	-1.8
	baz=206						
U15A	North Rim	82.57	48	IAmb	IAmb	23 37 24.4	
	comp=Z,48nm,0.8s						
SZCU	Shurtz Canyon	82.58	47	IAmb	IAmb	23 39 53.6	
	comp=Z,72nm,1.2s						
TTA	Tatalina	82.60	10	P	P	23 37 21.3	0.0
	comp=Z,21nm,1.0s						
TTA	Tatalina	82.60	10	P	P	23 37 21.2	0.0
	baz=201,SNR=13						
EYAK	Cordova Ski Ar	82.63	16	P	P	23 37 21.9	+0.6
	baz=211						
F07A	Phinny Hill Vi	82.68	37	P	P	23 37 21.9	0.0
F07A				IAmb	IAmb	23 37 23.5	
	comp=Z,27nm,0.7s						
KNK	Knik Glacier	82.72	14	IAmb	IAmb	23 37 22.2	
	comp=Z,26nm,0.8s						
KNK	Knik Glacier	82.72	14	P	P	23 37 21.0	-0.8
	baz=208,SNR=6.3						
PMR	Palmer	82.73	14	IAmb	IAmb	23 37 21.6	
	comp=Z,16nm,0.6s						
PMR	Palmer	82.73	14	P	P	23 37 21.3	-0.5
	comp=Z,36nm,1.5s						
PMR	Palmer	82.73	14	P	P	23 37 21.0	-0.8
	baz=208,SNR=7.6						
WUAZ	Wupatki	82.80	49	IAmb	IAmb	23 37 25.9	
	comp=Z,27nm,1.1s						
WUAZ	Wupatki	82.80	49	P	P	23 37 24.0	+1.0
	baz=242,SNR=18						
ANM	Nome	82.96	6	P	P	23 37 23.0	+0.1
	baz=192						
PKCU	Pink Cliffs	83.05	47	IAmb	IAmb	23 37 27.4	
	comp=Z,42nm,1.0s						
SML	Sawmill	83.10	14	IAmb	IAmb	23 37 30.7	
	comp=Z,64nm,1.7s						
SML	Sawmill	83.10	14	P	P	23 37 22.9	-0.8
	baz=209						
U33K	Whale Pass	83.10	24	P	P	23 37 24.5	+0.7
	baz=223						
V35K	Ketchikan	83.12	25	P	P	23 37 24.2	+0.4
	baz=224						
DIV	Divide	83.12	15	IAmb	IAmb	23 37 24.3	
	comp=Z,32nm,0.7s						
HAWA	Hanford	83.19	37	IAmb	IAmb	23 37 26.2	
	comp=Z,38nm,0.9s						
CUT	Chulitna	83.20	13	P	P	23 37 23.3	-0.8
	baz=207,SNR=9.4						
M23K	Glacier View	83.22	14	P	P	23 37 23.6	-0.8
	baz=209						
K20K	Telida	83.33	11	IAmb	IAmb	23 37 25.5	
	comp=Z,31nm,0.8s						
K20K	Telida	83.33	11	P	P	23 37 24.4	-0.4
	baz=203,SNR=21						
SCM	Sheep Creek Mo	83.35	14	P	P	23 37 24.6	-0.4
	baz=210,SNR=14						
S31K	Pelican	83.36	21	P	P	23 37 25.1	+0.1
	baz=220						
KLU	Klutina	83.39	15	P	P	23 37 24.7	-0.5
	baz=211						
MTPU	Mount Pierson	83.42	47	IAmb	IAmb	23 37 29.0	
	comp=Z,21nm,0.9s						
TCRU	Three Creeks R	83.52	46	IAmb	IAmb	23 37 29.0	
	comp=Z,23nm,1.1s						
WRAK	Wrangell Islan	83.62	24	P	P	23 37 26.0	-0.3
	baz=223						
PNL	Peninsula	83.68	19	P	P	23 37 26.4	-0.2
	baz=217						
TNA	Tin City	83.73	4	P	P	23 37 26.6	-0.1
	baz=190						
SKLT	Songkhla	83.74	280	P	P	23 37 29.2	+1.3
	comp=Z,48nm,0.8s						
MFID	Camas Ranch	83.75	41	IAmb	IAmb	23 37 29.2	
	comp=Z,24nm,1.0s						
CAST	Castle Rocks	83.76	12	P	P	23 37 25.1	-1.8
	baz=205,SNR=20						
PINM	Pinnacle	83.77	18	P	P	23 37 26.7	-0.4
	baz=216						
VRDI	Verde Repeater	83.80	16	IAmb	IAmb	23 37 28.1	
	comp=Z,29nm,1.0s						
N25K	Chitina, Valde	83.82	15	IAmb	IAmb	23 37 28.1	
	comp=Z,36nm,0.7s						
N25K	Chitina, Valde	83.82	15	P	P	23 37 27.0	-0.4
	baz=212,SNR=19						
M24K	Tolsona, Glenn	83.86	15	P	P	23 37 27.8	+0.3
	baz=211,SNR=10						
R31K	City Hall, Gus	83.88	21	P	P	23 37 27.9	+0.3
	baz=220						
GLB	Gilahina Butte	83.89	16	IAmb	IAmb	23 37 28.2	
	comp=Z,26nm,0.7s						
RPSI	Rantau Prapat	83.92	275	IAmb	IAmb	23 37 29.1	
	comp=Z,32nm,0.8s						
BJI	Beijing	83.92	315	P	P	23 37 28.8	+0.6
BJI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PSI	Prapat	83.95	275	P	P	23 37 28.3	-0.9
	comp=Z,52nm,0.9s						
LYN	LuoYang	83.96	309	⇑*i*P	P	23 37 29.8	+1.2
LYN				SKS	SKSac	23 46 52.0	-5.0
LYN				S	S	23 47 05.4	+0.2
LYN				pmax	pmax		
	comp=Z,29nm,0.7s						
DUG	Dugway, Tooele	84.04	45	P	P	23 37 29.4	+0.4
	baz=240						
MCARA	McCarthy VSAT	84.05	16	IAmb	IAmb	23 37 29.9	
	comp=Z,25nm,1.1s						
MCARA	McCarthy VSAT	84.05	16	P	P	23 37 28.3	-0.1
	baz=214						
KTH	Kantishna Hill	84.10	12	IAmb	IAmb	23 37 29.4	
	comp=Z,26nm,0.9s						
121A	Cookes Peak, D	84.11	53	IAmb	IAmb	23 37 32.2	
	comp=Z,16nm,0.9s						
121A	Cookes Peak, D	84.11	53	P	P	23 37 30.1	+0.4
	baz=244						
CHUM	Lake Minchumin	84.14	11	P	P	23 37 27.5	-1.2
	baz=205,SNR=9.4						
TRF	Thorofare Moun	84.14	12	P	P	23 37 27.9	-1.1
	baz=207,SNR=34						
LOGN	Logan Glacier	84.14	17	IAmb	IAmb	23 37 29.8	
	comp=Z,36nm,1.1s						
BARN	Barnard Glacie	84.15	17	IAmb	IAmb	23 37 30.1	
	comp=Z,35nm,0.9s						
CTG	Chitna Glacier	84.16	17	P	P	23 37 29.0	-0.1
	baz=215,SNR=8.3						
CTGM	Chitina Glacie	84.16	17	IAmb	IAmb	23 37 30.0	
	comp=Z,30nm,0.9s						
GCSA	Galena City Sc	84.17	9	P	P	23 37 28.7	-0.1
	baz=200						
JIS	Juneau Island	84.24	22	P	P	23 37 30.6	+1.3
	comp=Z,28nm,1.7s						
O28M	Mount Upton	84.33	18	P	P	23 37 30.0	-0.2
	baz=216						
HARP	HAARP	84.36	15	P	P	23 37 29.7	-0.2
	baz=212,SNR=8.2						
ENH	Enshi	84.39	304	P	P	23 37 31.4	+0.5
	comp=Z,54nm,1.4s						
LLLB	Lillooet	84.41	32	IAmb	IAmb	23 37 31.7	
	comp=Z,23nm,1.1s						
B08A	Colville Reser	84.42	35	IAmb	IAmb	23 37 31.4	
	comp=Z,28nm,0.9s						
O29M	Mount Kennedy	84.43	19	P	P	23 37 30.6	+0.1
	baz=218						
PLBC	Pleasant Camp	84.47	20	P	P	23 37 30.8	+0.4
	baz=220						
TSI	Tuntungan	84.51	275	P	P	23 37 30.8	-0.9
	comp=Z,68nm,0.6s,comp=Z,10µm						
PLID	Pearl Lake	84.53	39	IAmb	IAmb	23 37 32.7	
	comp=Z,72nm,1.9s						
BPAW	Bear Paw Mtn.	84.58	12	P	P	23 37 29.2	-1.8
	baz=206						
MCK	McKinley	84.67	13	IAmb	IAmb	23 37 31.6	
	comp=Z,36nm,1.0s						
MCK	McKinley	84.67	13	P	P	23 37 30.5	-0.9
	baz=208,SNR=18						
C09A	Chrisman Ranch	84.69	36	IAmb	IAmb	23 37 33.2	
	comp=Z,22nm,0.9s						
TMUT	Trail Mountain	84.69	46	IAmb	IAmb	23 37 34.6	
	comp=Z,14nm,0.8s						
HLID	Hailey	84.70	41	IAmb	IAmb	23 37 34.2	
	comp=Z,20nm,0.8s						
HLID	Hailey	84.70	41	P	P	23 37 33.1	+0.8
	baz=239,SNR=26						
GSI	Gunungsitoli	84.76	273	P	P	23 37 33.7	+0.7
	comp=Z,76nm,0.9s						
GSI	Gunungsitoli	84.76	273	P	P	23 37 33.3	+0.3
	comp=Z,76nm,0.9s						
PAX	Paxson	84.78	14	P	P	23 37 31.2	-0.8
	baz=211,SNR=8.0						
P30M	Million Dollar	84.79	19	P	P	23 37 32.7	+0.6
	baz=219						
SKAG	Skagway	84.81	20	P	P	23 37 33.2	+1.1
	baz=221						
T35M	Bob Quinn	84.83	24	P	P	23 37 33.1	+0.8
	baz=225						
YUK8	Steele Glacier	84.87	18	P	P	23 37 32.8	0.0
	baz=216,SNR=11						
M26K	Nabesna, AK	84.90	16	P	P	23 37 32.3	-0.3
	baz=214						
BWN	Browne	84.95	12	IAmb	IAmb	23 37 33.4	
	comp=Z,33nm,0.9s						
YUK6	Outpost Mounta	85.01	18	P	P	23 37 33.2	-0.1
	baz=218						
YUK3	Moose Creek	85.07	17	P	P	23 37 33.4	-0.2
	baz=216,SNR=18						
SRU	San Rafael Swe	85.08	46	IAmb	IAmb	23 37 35.7	
	comp=Z,16nm,0.7s						
NONG	Nongkai	85.09	291	P	P	23 37 35.4	+0.9
	comp=Z,21nm,0.8s						
GYA	Guiyang	85.15	300	⇑P	P	23 37 35.4	+0.7
GYA				pmax	pmax		
	comp=Z,16nm,0.8s						
SRIT	Nakonsritamara	85.15	281	IAmb	IAmb	23 37 37.0	
	comp=Z,30nm,0.7s						
SRIT	Nakonsritamara	85.15	281	P	P	23 37 36.2	+1.4
S34M	Telegraph Cree	85.16	23	P	P	23 37 35.0	+1.1
	baz=224						
M27K	Edge Creek, AK	85.16	16	IAmb	IAmb	23 37 35.2	
	comp=Z,48nm,1.2s						
M27K	Edge Creek, AK	85.16	16	P	P	23 37 33.9	-0.1
	baz=214,SNR=15						
HYT	Haines Junctio	85.17	19	IAmb	IAmb	23 37 35.3	
	comp=Z,18nm,1.0s						
HYT	Haines Junctio	85.17	19	P	P	23 37 34.1	+0.1
	baz=219,SNR=7.8						
YUK4	Talbot Arm	85.24	18	P	P	23 37 34.8	+0.4
	baz=218						
KCSI	Kotacane, Aceh	85.27	275	P	P	23 37 34.5	-1.0
	comp=Z,26nm,0.7s,comp=Z,772nm						
SURA	Surathani	85.31	281	P	P	23 37 37.1	+1.5
	comp=Z,32nm,0.9s						
L26K	Log Cabin Wild	85.34	15	P	P	23 37 34.7	0.0
	baz=213						
I21K	Tanana	85.38	11	P	P	23 37 34.0	-0.8
	baz=205						
NEA2	Nenana	85.40	12	P	P	23 37 33.3	-1.6
	baz=208						
K24K	Donnelly Dome	85.42	14	P	P	23 37 34.5	-0.5
	baz=211,SNR=8.4						
TCUT	Toone Canyon	85.43	44	IAmb	IAmb	23 37 37.7	
	comp=Z,18nm,0.8s						
P32M	Atlin	85.46	21	P	P	23 37 35.8	+0.4
	baz=222,SNR=5.1						
MLY	Manley	85.47	11	IAmb	IAmb	23 37 35.0	
	comp=Z,40nm,1.7s						
MLY	Manley	85.47	11	P	P	23 37 33.8	-1.5
	baz=206,SNR=9.1						
BVCY	Beaver Creek	85.48	17	P	P	23 37 35.3	0.0
	baz=215,SNR=5.5						
Q32M	Nakina River	85.50	22	P	P	23 37 36.4	+0.7
	baz=223						
WRH	Wood River Hil	85.50	13	IAmb	IAmb	23 37 36.1	
	comp=Z,28nm,1.0s						
O30N	Mendenhall	85.57	19	P	P	23 37 36.1	+0.2
	baz=220,SNR=9.5						
RIDG	Independent Ri	85.58	14	IAmb	IAmb	23 37 36.4	
	comp=Z,18nm,0.9s						
RIDG	Independent Ri	85.58	14	P	P	23 37 35.1	-0.8
	baz=212,SNR=8.0						
NEW	Newport	85.59	36	P	P	23 37 36.3	+0.1
	baz=237						
MNTX	Cornudas Mount	85.61	55	P	P	23 37 37.6	+0.9
	baz=246						
MVCO	Mesa Verde	85.63	49	P	P	23 37 37.4	+0.4
	baz=243						
H21K	Melozitna Rive	85.67	10	P	P	23 37 35.7	-0.4
	baz=204						
HDA	Harding Lake	85.69	13	IAmb	IAmb	23 37 35.9	
	comp=Z,15nm,0.7s						
HDA	Harding Lake	85.69	13	P	P	23 37 35.1	-1.1
	baz=210,SNR=17						
DOT	Dot Lake	85.69	15	IAmb	IAmb	23 37 36.8	
	comp=Z,14nm,0.9s						
CCB	Clear Creek Bu	85.71	13	IAmb	IAmb	23 37 36.1	
	comp=Z,47nm,1.3s						
L27K	Beaver Creek,	85.75	16	P	P	23 37 36.4	-0.3
	baz=214						
N30M	Aishikik Lake	85.80	19	P	P	23 37 36.8	-0.1
	baz=219						
PV23	Carpenter Ridg	85.83	47	IAmb	IAmb	23 37 39.5	
	comp=Z,14nm,0.8s						
I23K	Minto, Yukon-K	85.84	12	IAmb	IAmb	23 37 37.6	
	comp=Z,35nm,1.9s						
I23K	Minto, Yukon-K	85.84	12	P	P	23 37 35.7	-1.2
	baz=208,SNR=7.6						
MDM	Murphy Dome	85.90	12	IAmb	IAmb	23 37 37.1	
	comp=Z,20nm,1.0s						
TCOL	CIGO, UAF Yank	85.90	13	P	P	23 37 35.9	-1.3
	baz=209						
COLA	College	85.90	13	P	P	23 37 36.6	-0.6
COLA				IAmb	IAmb	23 37 37.0	
	comp=Z,26nm,0.7s						
COLA	College	85.90	13	P	P	23 37 36.2	-1.0
	comp=Z,35nm,1.1s						
COLA	College	85.90	13	P	P	23 37 35.9	-1.3
	baz=209						
DLBC	Dease Lake	85.94	23	IAmb	IAmb	23 37 39.2	
	comp=Z,54nm,1.9s						
DLBC	Dease Lake	85.94	23	P	P	23 37 38.1	+0.4
	baz=225						
SCRK	Sand Creek	85.98	14	P	P	23 37 37.2	-0.6
	baz=212,SNR=7.5						
ILAR	Eielson Array	86.01	13	P	P	23 37 36.9	-0.9
	comp=Z,6.5nm,0.5s,baz=221,slow=4.9,SNR=86						
ILAR				PP	PP	23 41 02.9	-6.3
	comp=Z,0.6nm,0.8s,baz=212,slow=8.4,SNR=4.4						
	comp=Z,6.5nm,0.5s						
TXAR	Lajitas Array	86.03	58	P	P	23 37 40.5	+1.7
	comp=Z,22nm,0.8s,baz=220,slow=6.1,SNR=214						
	comp=Z,22nm,0.8s						
H22K	Ishtalitna Cre	86.13	11	P	P	23 37 37.7	-0.7
	baz=206,SNR=8.4						
ANMO	Albuquerque	86.14	51	P	P	23 37 40.0	+0.6
ANMO	Albuquerque	86.14	51	P	P	23 37 40.0	+0.6
	baz=245						
M29M	Somme Creek	86.17	17	P	P	23 37 38.5	-0.2
	baz=218						
POKR	Poker Plat Res	86.20	13	IAmb	IAmb	23 37 38.4	
	comp=Z,14nm,0.7s						
POKR	Poker Plat Res	86.20	13	P	P	23 37 37.4	-1.3
	baz=209,SNR=7.7						
P33M	Teslin, Yukon	86.22	21	P	P	23 37 39.0	0.0
	baz=223						
G21K	Allakaket	86.34	10	P	P	23 37 38.8	-0.5
	baz=204						
XAN	Xi'an	86.39	307	⇓P	P	23 37 40.3	-0.1
XAN				pP	pP	23 39 46.3	+1.1
XAN				pmax	pmax		
	comp=Z,25nm,1.1s						
H23K	Yukon River	86.41	11	P	P	23 37 38.4	-1.2
	baz=207						
AHID	Auburn Hatcher	86.41	43	IAmb	IAmb	23 37 42.3	
	comp=Z,42nm,1.6s						
K27K	Chicken	86.49	15	P	P	23 37 40.2	+0.2
	baz=214						
BILL	Bilibino	86.58	354	P	P	23 37 40.3	-0.1
MSO	Missoula	86.66	38	IAmb	IAmb	23 37 42.1	
	comp=Z,28nm,1.6s						
MSO	Missoula	86.66	38	P	P	23 37 40.7	-0.7
	baz=239,SNR=9.1						
H24K	Noodor Dome	86.74	12	P	P	23 37 39.3	-1.9
	baz=209						
M30M	Minto, Yukon	86.75	18	IAmb	IAmb	23 37 42.3	
	comp=Z,24nm,0.8s						
M30M	Minto, Yukon	86.75	18	P	P	23 37 41.4	0.0
	baz=219,SNR=19						
L29M	L29M	86.79	17	P	P	23 37 41.9	+0.3
	baz=218						
MLSI	Meulaboh, Aceh	86.80	276	P	P	23 37 42.8	+0.1
TPAW	Teton Pass	86.86	42	IAmb	IAmb	23 37 44.6	
	comp=Z,22nm,1.0s						
REDW	Red Top Meadow	86.86	42	IAmb	IAmb	23 37 44.5	
	comp=Z,36nm,1.1s						
FXWY	Fox Creek	86.88	42	IAmb	IAmb	23 37 45.6	
	comp=Z,13nm,0.9s						
PRP	Porcupine Dome	86.95	13	P	P	23 37 41.2	-1.2
	baz=211						
SNOW	Snow King Moun	86.97	42	IAmb	IAmb	23 37 45.1	
	comp=Z,37nm,1.1s						
F21K	Alatna River	87.00	9	P	P	23 37 41.6	-0.8
	baz=204						
S22A	4UR Ranch, Cre	87.06	49	P	P	23 37 44.4	+0.6
	baz=244,SNR=9.1						
G23K	Bananza Creek	87.11	11	P	P	23 37 42.7	-0.3
	baz=207						
O20A	White River Ci	87.11	46	IAmb	IAmb	23 37 45.6	
	comp=Z,16nm,1.0s						
O20A	White River Ci	87.11	46	P	P	23 37 44.2	+0.4
	baz=244,SNR=8.0						
M31M	Drury Creek, Y	87.19	19	P	P	23 37 42.9	-0.5
	baz=221,SNR=6.0						
DAWY	Dawson	87.21	16	IAmb	IAmb	23 37 44.5	
	comp=Z,23nm,1.2s						
DAWY	Dawson	87.21	16	P	P	23 37 43.5	-0.1
	baz=217,SNR=9.2						
FLWY	Flagg Ranch	87.30	42	IAmb	IAmb	23 37 46.9	
	comp=Z,30nm,0.9s						
I26K	Coal Creek Min	87.30	14	P	P	23 37 43.8	0.0
	baz=213						
EGAK	Eagle	87.34	15	IAmb	IAmb	23 37 44.7	
	comp=Z,13nm,0.8s						
EGAK	Eagle	87.34	15	P	P	23 37 43.7	-0.3
	baz=215,SNR=10						
YMR	Madison River	87.41	41	IAmb	IAmb	23 37 47.6	
	comp=Z,26nm,0.9s						
HHC	Hu-ho-hao-te	87.41	314	*e*P	P	23 37 46.1	+1.0
HHC				pmax	pmax		
	comp=Z,81nm,5.1s						
BW06	Boulder Array	87.42	43	IAmb	IAmb	23 37 46.4	
	comp=Z,16nm,0.8s						
BW06	Boulder Array	87.42	43	P	P	23 37 45.4	+0.1
	baz=242,SNR=21						
PDAR	Pinedale Array	87.42	43	P	P	23 37 45.4	+0.2
	comp=Z,12nm,0.6s,baz=218,slow=3.1,SNR=114						
PDAR				PP	PP	23 41 19.0	-2.1
	comp=Z,2.1nm,1.0s,baz=235,slow=5.2,SNR=6.8						
	comp=Z,12nm,0.6s						
BOZ	Bozeman (W)	87.44	40	IAmb	IAmb	23 37 47.1	
	comp=Z,27nm,1.3s						
BOZ	Bozeman (W)	87.44	40	P	P	23 37 45.9	+0.8
	baz=241,SNR=11						
F22K	John River	87.46	10	P	P	23 37 44.2	-0.4
	baz=205						
H17A	Grant Village	87.52	42	IAmb	IAmb	23 37 48.7	
	comp=Z,23nm,0.8s						
H17A	Grant Village	87.52	42	P	P	23 37 47.3	+1.6
	baz=242,SNR=22						
FARO	Faro, Yukon	87.54	19	P	P	23 37 44.8	-0.3
	baz=222						
K29M	Barlow Dome	87.54	17	P	P	23 37 45.2	+0.1
	baz=218						
COLD	Coldfoot	87.54	11	P	P	23 37 44.8	-0.1
	baz=207						
SMCO	Snowmass	87.57	47	IAmb	IAmb	23 37 47.9	
	comp=Z,26nm,1.6s						
G24K	Hadweenzic Riv	87.58	12	P	P	23 37 44.3	-0.8
	baz=209						
YNR	Norris Junctio	87.61	41	IAmb	IAmb	23 37 49.8	
	comp=Z,24nm,1.4s						
LKWY	Lake	87.71	42	IAmb	IAmb	23 37 49.8	
	comp=Z,20nm,0.9s						
MAYO	Mayo, Yukon	87.80	18	P	P	23 37 46.6	+0.4
	baz=220,SNR=5.0						
I27K	Kandik River	87.91	14	P	P	23 37 46.3	-0.5
	baz=215						
G25K	Bearman Lake	87.91	12	P	P	23 37 45.5	-1.1
	baz=210						
KMI	Kunming	87.94	297	⇓P	P	23 37 49.3	+1.2
KMI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ODSA	Odessa	87.99	55	IAmb	IAmb	23 37 49.6	
	comp=Z,27nm,0.9s						
SDCO	Great Sand Dun	88.02	49	P	P	23 37 48.3	+0.1
	baz=245,SNR=8.7						
E22K	Anaktuvuk Pass	88.09	10	P	P	23 37 47.1	-0.5
	baz=205						
F24K	Squaw Lake	88.22	11	P	P	23 37 48.2	0.0
	baz=209						
E23K	Chandalar	88.39	10	P	P	23 37 48.8	-0.2
	baz=207						
H27K	Steamboat Moun	88.45	14	P	P	23 37 49.0	-0.2
	baz=215						
MMPY	Sheldon Lake,	88.49	20	P	P	23 37 50.0	+0.5
	baz=224,SNR=16						
RWWY	Rawlins	88.50	45	IAmb	IAmb	23 37 51.7	
	comp=Z,34nm,1.2s						
I29M	Ogilvie Camp,	88.53	16	P	P	23 37 48.7	-0.9
I29M	Ogilvie Camp,	88.53	16	P	P	23 37 49.1	-0.5
	baz=218,SNR=6.3						
MSTX	Muleshoe	88.53	54	P	P	23 37 50.6	+0.1
	baz=247						
G26K	Porcupine Rive	88.55	13	P	P	23 37 49.5	-0.1
	baz=213						
T25A	Trinidad	88.56	50	P	P	23 37 50.8	+0.1
	baz=246						
E24K	Your Creek	88.60	11	P	P	23 37 49.8	-0.1
	baz=208						
RLMT	Red Lodge	88.69	41	P	P	23 37 51.8	+0.7
RLMT				IAmb	IAmb	23 37 53.1	
	comp=Z,14nm,0.9s						
RLMT	Red Lodge	88.69	41	P	P	23 37 51.8	+0.7
	baz=243,SNR=15						
F25K	Christian Rive	88.71	12	P	P	23 37 50.7	+0.2
	baz=211						
Q24A	Divide	88.77	48	P	P	23 37 52.2	+0.5
	baz=246						
ISCO	Idaho Springs	88.79	47	P	P	23 37 52.0	+0.2
ISCO				IAmb	IAmb	23 37 53.6	
	comp=Z,23nm,1.8s						
ISCO	Idaho Springs	88.79	47	P	P	23 37 52.0	+0.2
	baz=245,SNR=5.2						
G27K	Doyon Strip	88.89	14	P	P	23 37 50.8	-0.5
	baz=215						
CMAR	Chiang Mai Arr	88.98	290	P	P	23 37 53.8	+1.0
	comp=Z,7.9nm,0.8s,baz=111,slow=2.7,SNR=49						
CMAR				PP	PP	23 41 35.5	+1.9
	comp=Z,0.9nm,0.4s,baz=126,slow=6.5,SNR=6.4						
	comp=Z,7.9nm,0.8s						
N23A	Red Feather La	89.02	46	P	P	23 37 53.3	+0.5
N23A				IAmb	IAmb	23 37 54.7	
	comp=Z,24nm,1.1s						
N23A	Red Feather La	89.02	46	P	P	23 37 53.4	+0.6
	baz=245,SNR=12						
D23K	Nanushuk River	89.03	10	P	P	23 37 51.9	+0.1
	baz=206						
CHTO	Chiang Mai	89.10	290	P	P	23 37 53.1	-0.2
F26K	Sheenjek River	89.10	12	P	P	23 37 52.3	+0.1
	baz=212						
833A	Chaparral WMA,	89.12	60	P	P	23 37 53.1	-0.1
833A				IAmb	IAmb	23 37 54.8	
	comp=Z,14nm,0.8s						
833A	Chaparral WMA,	89.12	60	P	P	23 37 54.1	+0.9
	baz=249						
POST	Post	89.17	55	IAmb	IAmb	23 37 54.4	
	comp=Z,23nm,0.7s						
E25K	Arctic Village	89.18	12	P	P	23 37 52.7	+0.1
	baz=211						
CD2	Chengdu	89.19	303	*e*P	P	23 37 54.0	+0.5
KOTAN	Kotaneelee Air	89.36	24	P	P	23 37 53.9	+0.4
	baz=230						
K22A	Casper	89.37	45	IAmb	IAmb	23 37 55.7	
	comp=Z,23nm,1.2s						
K22A	Casper	89.37	45	P	P	23 37 54.1	-0.2
	baz=245,SNR=6.2						
PHWY	Pilot Hill	89.52	46	P	P	23 37 55.2	+0.1
PHWY				IAmb	IAmb	23 37 56.4	
	comp=Z,11nm,0.9s						
JCT	Junction City	89.56	58	P	P	23 37 55.5	+0.2
JCT				IAmb	IAmb	23 37 56.6	
	comp=Z,14nm,0.8s						
JCT	Junction City	89.56	58	P	P	23 37 55.3	0.0
	baz=249						
AMTX	Amarillo	89.72	53	P	P	23 37 55.9	0.0
AMTX				IAmb	IAmb	23 37 57.1	
	comp=Z,14nm,0.8s						
AMTX	Amarillo	89.72	53	P	P	23 37 56.2	+0.2

	baz=248						
EPYK	Eagle Plains	89.73	16	IAmb	IAmb	23 37 55.8	
	comp=Z,20nm,0.9s						
EPYK	Eagle Plains	89.73	16	P	P	23 37 54.7	-0.5
	baz=219,SNR=9.6						
C24K	Franklin Bluff	90.02	10	P	P	23 37 56.2	-0.2
	baz=208						
E27K	Coleen River	90.05	13	P	P	23 37 56.7	+0.1
	baz=215						
D25K	Kavik River	90.07	11	P	P	23 37 55.9	-0.8
	baz=210						
TROLL	Troll, Antarti	90.17	180	P	P	23 37 57.0	-0.4
G30M	tAoh Zraii Nji	90.33	15	P	P	23 37 57.4	-0.6
	baz=220						
SNAA	Sanae	90.45	179	P	P	23 37 57.8	-0.9
ABTX	Abilene, Hawle	90.46	56	P	P	23 37 59.8	+0.4
ABTX	Abilene, Hawle	90.46	56	P	P	23 37 59.8	+0.4
	baz=249						
VNA3	Neumayer Olymp	90.59	176	P	P	23 37 58.4	-0.9
C27K	Jago River	90.82	11	P	P	23 37 59.9	-0.3
	baz=213						
C26K	Camden Bay	90.85	11	P	P	23 38 00.4	+0.2
	baz=212						
LZH	Lanzhou	91.02	308	eP	P	23 38 03.3	+1.3
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LAO	LASA Array	91.28	41	P	P	23 38 03.7	+0.8
LAO	LASA Array	91.28	41	P	P	23 38 03.9	+1.1
	baz=245,SNR=8.9						
F31M	Tsiigehtchic	91.31	16	P	P	23 38 02.0	-0.3
	baz=222,SNR=38						
RSSD	Black Hills	91.63	44	P	P	23 38 04.8	+0.1
RSSD				IAmb	IAmb	23 38 05.7	
	comp=Z,14nm,0.9s						
RSSD	Black Hills	91.63	44	P	P	23 38 04.6	-0.1
	baz=246						
WMOK	Wichita Mounta	91.88	54	P	P	23 38 05.5	-0.4
WMOK	Wichita Mounta	91.88	54	P	P	23 38 05.7	-0.2
	baz=249						
INK	Inuvik	92.01	15	P	P	23 38 05.0	-0.5
	comp=Z,13nm,0.9s,baz=215,slow=4.7,SNR=18						
	comp=Z,13nm,0.9s						
INK	Inuvik	92.01	15	IAmb	IAmb	23 38 05.7	
	comp=Z,12nm,0.8s						
INK	Inuvik	92.01	15	P	P	23 38 04.8	-0.7
	baz=222						
CBKS	Cedar Bluff	92.61	50	P	P	23 38 08.8	-0.3
CBKS				IAmb	IAmb	23 38 10.5	
	comp=Z,16nm,0.9s						
CBKS	Cedar Bluff	92.61	50	P	P	23 38 09.3	+0.2
	baz=249						
OK032	Salt Plains WL	93.04	52	P	P	23 38 10.5	-0.6
DGMT	Dagmar	93.27	40	P	P	23 38 12.3	+0.5
DGMT	Dagmar	93.27	40	P	P	23 38 12.4	+0.5
	baz=246,SNR=8.9						
ULN	Ulaanbaatar	93.30	319	P	P	23 38 12.1	-0.1
KAN01	Argonia South	93.50	52	IAmb	IAmb	23 38 14.7	
	comp=Z,16nm,1.1s						
KAN09	Caldwell North	93.60	52	P	P	23 38 12.6	-1.0
KS20	Mayfield South	93.68	52	P	P	23 38 14.4	+0.4
SONM	Songino Array	93.69	319	P	P	23 38 14.5	+0.5
	comp=Z,0.2nm,0.4s,baz=148,slow=3.9,SNR=4.9						
BLOK	Blackwell	93.77	53	P	P	23 38 14.4	0.0
T35A	Sooner Cattle	94.36	53	P	P	23 38 16.8	-0.3
T35A				IAmb	IAmb	23 38 18.7	
	comp=Z,7.6nm,0.8s						
YKA	Yellowknife Ar	94.44	25	P	P	23 38 16.5	-0.3
	comp=Z,2.5nm,0.6s,baz=240,slow=4.5,SNR=42						
YKA				PP	PP	23 42 04.9	-10
	comp=Z,0.6nm,0.9s,baz=234,slow=6.5,SNR=4.3						
	comp=Z,2.5nm,0.6s						
KSU1	Kansas State U	95.00	51	P	P	23 38 20.3	+0.3
KSU1	Kansas State U	95.00	51	P	P	23 38 20.4	+0.5
	baz=251						
GTA	Gaotai	95.17	310	eP	P	23 38 21.0	+0.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
C36M	Paulatuk	95.22	17	IAmb	IAmb	23 38 20.6	
	comp=Z,6.6nm,0.8s						
MIAR	Mount Ida	95.88	56	P	P	23 38 22.8	-1.2
	baz=252						
ECSD	EROS Data Cent	96.49	46	P	P	23 38 26.0	-0.6
ECSD				IAmb	IAmb	23 38 27.1	
	comp=Z,4.8nm,0.9s						
ECSD	EROS Data Cent	96.49	46	Pdiff	P	23 38 26.0	-0.6
	baz=251						
A36M	Sachs Harbour	96.60	15	P	P	23 38 25.7	-0.6
A36M	Sachs Harbour	96.60	15	Pdiff	P	23 38 25.9	-0.4
	baz=230						
S39A	Bolivar	97.02	53	P	P	23 38 29.0	0.0
S39A				IAmb	IAmb	23 38 30.9	
	comp=Z,3.6nm,0.8s						
CCM	Cathedral Cave	98.69	53	Pdiff	Pdif	23 38 36.4	0.0
	baz=254						
JFWS	Jewell Farm	100.71	48	Pdiff	Pdif	23 38 45.2	-0.1
	baz=255						
LRAL	Lakeview Retre	100.72	59	Pdiff	Pdif	23 38 45.2	-0.4
	baz=255						
MKAR	Makanchi Array	109.27	314	PKiKP	PKiKP	23 43 22.0	-1.3
	comp=Z,0.5nm,0.5s,baz=126,slow=0.6,SNR=15						
ARCES	ARCESS Array B	126.47	350	PKP	PKPdf	23 43 55.0	-0.6
	comp=Z,2.4nm,0.6s,baz=74,slow=0.9,SNR=14						
GEYT	Alibeck	127.16	304	PKP	PKPdf	23 43 57.8	-0.2
	comp=Z,0.7nm,0.5s,baz=224,slow=4.1,SNR=4.3						
GEYT				PP	PP	23 46 03.6	-3.0
	comp=Z,2.1nm,1.0s,baz=64,slow=6.8,SNR=5.8						
FINES	FINESS Array B	133.34	344	PKP	PKPdf	23 44 08.4	-0.4
	comp=Z,1.8nm,0.6s,baz=82,slow=2.3,SNR=10						
FINES				SKPbc	SKPbc	23 46 43.4	-0.1
	comp=Z,3.2nm,0.9s,baz=122,slow=2.5,SNR=3.8						
AKASG	Malin Array Be	140.71	332	PKhKP	PKPpre	23 44 15.7	
	comp=Z,1.0nm,0.4s,baz=38,slow=4.1,SNR=9.4						
AKASG				PKP	PKPdf	23 44 24.1	+1.4
	comp=Z,0.5nm,0.4s,baz=36,slow=3.5,SNR=4.9						
AKASG				SKPbc	SKPbc	23 47 04.4	-0.9
	comp=Z,0.2nm,0.3s,baz=34,slow=3.6,SNR=4.2						
SORM	Soroca	142.94	330	⇓P	PKPdf	23 44 23.9	-2.9
BSEG	Bad Segeberg	143.56	351	ePKPbc	PKPab	23 44 26.5	0.0
	baz=17,slow=2.8						
RUE	Ruedersdorf	144.35	347	ePKPbc	PKPdf	23 44 29.0	0.0
	baz=17,slow=2.8						
VLDR	Vladesti	144.66	327	⇓P	PKPab	23 44 30.6	-0.3
TLCR		144.72	326	⇑P	PKPbc	23 44 30.6	+0.2
BURAR	Bucovina Array	144.76	332	⇓P	PKPab	23 44 31.2	-0.3
TESR	Tescani	144.91	329	⇓P	PKPbc	23 44 30.8	-0.2
BRTR	Keskin Array B	144.92	315	PKP	PKPdf	23 44 30.8	+0.2
	comp=Z,3.4nm,0.5s,baz=93,slow=2.0,SNR=26						
FLTG	Flechtingen	144.97	350	ePKPbc	PKPbc	23 44 30.7	-0.2
	baz=17,slow=2.8						
CFR	Carcaliu	145.08	327	⇑P	PKPbc	23 44 31.8	+0.3
TPGR	Topolog	145.15	326	⇑P	PKPbc	23 44 31.9	+0.1
ASSE	Asse, Remlinge	145.26	350	ePKPbc	PKPbc	23 44 31.8	+0.1
	baz=17,slow=2.8						
KSP	Ksiaz	145.26	344	ePKP	PKPbc	23 44 32.1	+0.2
VRI	Vrincioaia	145.33	329	⇑P	PKPdf	23 44 31.6	+0.6
PLOR	Plostina	145.38	329	⇓P	PKPbc	23 44 32.1	-0.3
TRPA	Tarpa	145.50	335	⇑P	PKPbc	23 44 32.4	-0.2
HARR	Harsova	145.52	326	⇓P	PKPbc	23 44 32.9	+0.1
OSTC	Ostas	145.54	344	ePKP	PKPbc	23 44 32.9	+0.2
CHVC	Chvalec	145.56	344	ePKP	PKPdf	23 44 31.8	+0.5
CLZ	Clausthal	145.59	350	ePKPbc	PKPbc	23 44 32.8	-0.1
	baz=17,slow=2.8						
CLL	Collm	145.61	347	i PKPbc	PKPbc	23 44 32.1	-0.7
	comp=Z,21nm,0.7s						
CLL				i PKPab	PKPab	23 44 34.2	-0.2
	comp=Z,17nm,1.0s						
CLL				ex	x	23 46 58.0	
CLL				ex	x	23 47 05.0	
CLL				eSKPdf	SKPdf	23 47 11.0	-0.1
CLL	Collm	145.61	347	ePKPbc	PKPbc	23 44 32.6	-0.2
	baz=17,slow=2.8						
DPC	Dobruska-Polom	145.70	343	ePKP	PKPbc	23 44 33.6	+0.4
LANS	Liptovska Anna	145.79	339	ePKP	PKPbc	23 44 34.0	+0.5
BRG	Berggiesshubel	145.82	346	i PKP	PKPbc	23 44 33.6	+0.2
BRG				Amp		23 44 34.2	
	comp=Z,8.5nm,0.8s						
BRG	Berggiesshubel	145.82	346	ePKPbc	PKPbc	23 44 33.4	-0.1
	baz=17,slow=2.8						
KRLC	Kraliky	145.82	343	ePKP	PKPbc	23 44 33.7	+0.2
MORC	Moravsky Berou	145.86	342	⇓P	PKPdf	23 44 32.6	+0.8
MORC	Moravsky Berou	145.86	342	eP	PKPbc	23 44 33.6	-0.1
DOPR	Dopca	145.91	330	⇓P	PKPbc	23 44 34.5	+0.6
GTTG	Gottingen	145.94	351	ePKPbc	PKPbc	23 44 33.8	+0.1
	baz=17,slow=2.8						
NEUB	Neuenburg	145.95	349	ePKPbc	PKPbc	23 44 33.3	-0.5
	baz=17,slow=2.8						
MLR	Muntele Rosu	145.98	329	⇑P	PKPbc	23 44 33.5	-0.8
PVCC	Panska Ves	145.99	345	ePKP	PKPbc	23 44 34.3	+0.4
MAUC	Maruska	146.14	341	ePKP	PKPbc	23 44 34.5	+0.1
MARR	Marisel-Cluj	146.41	333	⇑P	PKPbc	23 44 34.7	-0.6
VOIR		146.46	330	⇑P	PKPbc	23 44 35.0	-0.5
DRGR		146.49	333	⇑P	PKPbc	23 44 35.1	-0.4
PRU	Pruhonice	146.50	345	ePKP	PKPbc	23 44 35.3	0.0
VRAC	Vranov	146.56	342	⇑P	PKPbc	23 44 35.5	-0.1
VRAC	Vranov	146.56	342	eP	PKPbc	23 44 35.5	-0.1
PLN	Plauen	146.57	348	ePKPbc	PKPbc	23 44 35.6	+0.1
	baz=17,slow=2.8						
VYHS	Vyhne	146.57	339	ePKP	PKPbc	23 44 35.7	+0.1
TANN	Tannenbergstha	146.57	347	ePKPbc	PKPbc	23 44 35.5	-0.1
	baz=17,slow=2.8						
TANN				ePKPab	PKiKP	23 44 38.0	+0.3
WERD	Werda	146.57	348	ePKPbc	PKPbc	23 44 35.5	0.0
	baz=17,slow=2.8						
GUNZ	Gunzen	146.65	348	ePKPbc	PKPbc	23 44 36.0	+0.2
	baz=17,slow=2.8						
GUNZ				ePKPab	PKPab	23 44 38.5	-0.2
ARR	Arges	146.71	330	⇓P	PKPbc	23 44 36.7	+0.6
NKC	Novy Kostel	146.75	347	ePKP	PKPbc	23 44 36.2	+0.2
KRUC	Moravsky	146.84	342	eP	PKPbc	23 44 36.0	-0.3
MANZ	Manzenberg	147.05	348	ePKPbc	PKPbc	23 44 36.6	-0.3
	baz=17,slow=2.8						
MODS	Modra-Piesok	147.19	341	ePKP	PKPbc	23 44 37.8	+0.5
ROTZ	Rotzenmuhle	147.24	347	ePKPbc	PKPbc	23 44 37.2	-0.2
	baz=17,slow=2.8						
ROTZ				ePKPab	PKPab	23 44 41.6	+0.5
BSTI	Sart Tilman	147.39	355	dPKP	PKPbc	23 44 37.8	+0.1
TNS	Taunus Mts	147.44	352	ePKPab	PKPab	23 44 41.3	-0.6
GRF	Grafenberg Arr	147.51	348	ePKPab	PKPab	23 44 42.6	+0.4
KHC	Kasperske Hory	147.53	345	ePKP	PKPbc	23 44 38.2	0.0
GZR	Gura Zlata	147.55	332	⇓P	PKPbc	23 44 37.8	-0.5
SURR	Surduc	147.56	333	⇓P	PKPbc	23 44 37.9	-0.4
CKRC	Cesky Krumlov	147.63	344	ePKP	PKPbc	23 44 38.5	+0.1
GEC2	GERESS Array S	147.76	345	ePKPbc	PKPbc	23 44 38.9	0.0
	baz=17,slow=2.8						
GERES	GERESS Array B	147.76	345	PKPbc	PKPbc	23 44 38.7	-0.2
	comp=Z,4.6nm,0.7s,baz=28,slow=3.5,SNR=23						
BZS	Buzias	147.88	333	⇑P	PKPbc	23 44 38.6	-0.5
CONA	Conrad Observa	148.01	342	i PKP	PKPbc	23 44 39.3	-0.2
	comp=Z,5.2nm,0.8s						
RONA	Rosalia, Austr	148.09	341	i PKP	PKPbc	23 44 39.8	+0.2
	comp=Z,5.7nm,0.8s						
HERR	Herculane	148.11	332	⇑P	PKPbc	23 44 38.4	-1.3
WLF	Walferdange	148.25	354	dPKP	PKPbc	23 44 40.2	+0.3
WLF	Walferdange	148.25	354	ePKPbc	PKiKP	23 44 40.6	-0.5
	baz=17,slow=2.8						
STU	Stuttgart	148.75	350	ePKPbc	PKPbc	23 44 41.0	-0.1
	baz=17,slow=2.8						
STU				ePKPab	PKPab	23 44 46.6	-0.6
BIOA	Bad Ischl, Aus	148.85	344	i PKP	PKPbc	23 44 41.4	0.0
	comp=Z,9.7nm,1.2s						
FUR	Furstenfeldbru	148.95	347	ePKPab	PKPab	23 44 48.0	-0.1
RJOB	Jochberg	149.02	345	ePKPbc	PKPbc	23 44 41.8	-0.1
	baz=17,slow=2.8						
RJOB				ePKPab	PKPab	23 44 48.7	+0.3
BFO	Black Forest	149.31	351		PKPbc	23 44 41.6	-1.0
BFO	Black Forest	149.31	351	ePKPbc	PKPbc	23 44 42.7	+0.1
	baz=17,slow=2.8						
BFO				ePKPab	PKPab	23 44 48.9	-0.8
SOKA	Soboth	149.39	342	i PKP	PKPbc	23 44 42.0	-0.9
	comp=Z,4.7nm,0.9s						
VTS	Vitosha	149.41	328	⇑P	PKiKP	23 44 46.5	+2.6
KBA	Koelnbreinsper	149.49	344	ePKP	PKPbc	23 44 42.0	-1.2
	comp=Z,4.0nm,0.6s,SNR=6.4						
UBR	Ueberruh	149.65	349	ePKPbc	PKPbc	23 44 43.4	0.0
	baz=17,slow=2.8						
WATA	Walderalm	149.68	347	i PKP	PKPbc	23 44 42.9	-0.7
	comp=Z,5.1nm,0.6s,SNR=7.2						
OBKA	Obir	149.68	342	i PKP	PKPbc	23 44 43.1	-0.5
	comp=Z,4.7nm,1.2s						
RETA	Reutte	149.70	348	i PKP	PKPbc	23 44 43.2	-0.4
	comp=Z,4.2nm,1.0s						
WTTA	Wattenberg	149.73	346	i PKP	PKPbc	23 44 43.3	-0.5
	comp=Z,12nm,0.6s,SNR=10						
MOTA	Moosalm	149.77	347	i PKP	PKPbc	23 44 43.4	-0.5
	comp=Z,7.9nm,0.9s						
MYKA	Terra Mystica	149.83	343	i PKP	PKPbc	23 44 42.7	-1.2
	comp=Z,7.0nm,0.8s						
SQTA	Sankt Quirin	149.87	347	i PKP	PKPbc	23 44 43.7	-0.3
	comp=Z,11nm,0.8s						
ABTA	Abfaltersbach	150.01	345	i PKP	PKPbc	23 44 43.2	-1.1
	comp=Z,8.9nm,0.7s						
CRES	Cresnjev	150.02	340	⇑iP	PKPbc	23 44 43.3	-1.0
DAVA	Damuels	150.07	349	i PKiKP	PKPbc	23 44 44.9	+0.3
	comp=Z,14nm,1.1s						
LJU	Ljubljana	150.11	342	i PKPbc	PKPbc	23 44 43.7	-0.8
FETA	Feichten	150.16	347	i PKP	PKPbc	23 44 44.3	-0.5
	comp=Z,9.3nm,1.1s,SNR=5.8						
A051A	Mrakovica	150.24	338	⇑iP	PKPbc	23 44 44.2	-0.7
BLY	Banja Luka	150.37	337	⇑iP	PKPbc	23 44 45.4	+0.3
BOJS	Bojanci	150.37	340	⇑iP	PKPbc	23 44 44.6	-0.5
STAL	STALIGIAL	150.41	344		PKPbc	23 44 44.7	-0.5
CEY	Cerknica	150.42	342	⇑iP	PKPbc	23 44 44.3	-0.9
GBRS	Gornja Briga	150.49	341	i PKPbc	PKPbc	23 44 44.9	-0.5
SKDS	Skadanscina	150.71	342	⇑iP	PKPbc	23 44 44.8	-1.1
A050A	Klekovaca	150.84	338	⇑iP	PKPbc	23 44 44.7	-1.6
BRY	Bratogost	151.38	334	⇑iP	PKPbc	23 44 44.9	-2.8
TREB	Trebinje	151.61	334	⇑iP	PKPbc	23 44 46.7	-1.3
STON	Ston	151.75	335	⇑iP	PKPbc	23 44 44.9	-3.4
PBRG	Braganca	155.26	15	ePKPab	PKPab	23 45 14.4	-0.7
MVO	Moncorvo	155.79	16	ePKPab	PKPab	23 45 17.7	+0.3
ESDC	Sonseca Array	157.91	12	PKPab	PKPab	23 45 26.1	-0.5
	comp=Z,3.3nm,1.0s,baz=339,slow=4.1,SNR=12						
EVO	Evora	157.92	20	ePKPab	PKPab	23 45 26.4	-0.2
PBAR	Barrancos	158.56	19	ePKPab	PKPab	23 45 28.6	-0.8

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*INET **17** 23:37:23.5±0.4, 9°.50N×86°.32W, h15^{km}±3^{km}, ML3.8*

*UCR **17** 23:37:32.7±1.5, 10°.34N×86°.34W, h16^{km}±7^{km}, MW4.2*

ISC 17 23:37:30.8±2.2**, 10°.18N**±0°.07×**86°.31W**±0°.08**, h14**^{km}±11^{km}**,**
n44, σ0^{s}99/57**, 5C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAJU	San Juanillo,	0.60	101	eP	Pn	23 37 45.2	+0.3
SAJU				eS	Sn	23 37 55.6	+1.1
HATIL	Hatillo	0.61	79	eP	Pn	23 37 44.4	-0.7
HATIL				eS	Sn	23 37 53.4	-1.4
JUD3	Juan Diaz 3	0.76	91	eP	Pn	23 37 48.0	+0.9
NARJA	Naranjal	0.79	105	eP	Pn	23 37 48.1	+0.6
DELF	Filadelfia	0.79	71	eP	Pn	23 37 48.1	+0.6
NICO	Nicoya	0.85	93	eP	Pn	23 37 48.5	+0.1
ALIBA	Liberia Airpor	0.86	62	eP	Pn	23 37 48.3	-0.1
ALIBA				eS	Sn	23 38 00.3	-0.5
ORTG	Ortega, Santa	0.86	78	eP	Pn	23 37 48.2	-0.3
ELI1	Hacienda Flor	0.88	58	eP	Pn	23 37 48.7	0.0
HZTE	Horizontes, Gu	0.88	53	eP	Pn	23 37 48.3	-0.5
POPE	POPE, Guanacas	1.04	96	eP	Pn	23 37 51.4	+0.4
NYURE	Nandayure	1.06	100	eP	Pn	23 37 51.8	+0.6
BUEV	Buena Vista	1.08	55	eP	Pb	23 37 50.9	-0.4
BAGA	Bagaces	1.09	72	eP	Pn	23 37 52.9	+1.2
BAGA				eS	Sn	23 38 09.1	+2.6
GB1A	Borinquen Arri	1.10	55	eP	Pb	23 37 51.3	-0.4
GB1A				eS	Sn	23 38 06.2	-0.7
GPS2	Hotel Rincn d	1.10	59	⇑iP	Pb	23 37 51.5	-0.2
GPS2				eS	Sn	23 38 06.8	-0.1
VRLE	La Escondida,	1.11	57	eP	Pg	23 37 51.3	-1.0
LCRUZ	La Cruz	1.11	37	eP	Pg	23 37 51.2	-1.2
VORI	VORI	1.14	56	⇑eP	Pb	23 37 52.0	-0.5
GUAB	Guayabo de Bag	1.19	64	eP	Pn	23 37 52.8	-0.2
GUAB				eS	Sb	23 38 07.6	-0.8
COLC	Colonia	1.19	66	eP	Pn	23 37 52.9	-0.2
COLC				eS	Sn	23 38 09.1	0.0
CUI	Cuipilapa	1.23	67	eP	Pn	23 37 53.5	0.0
CUI				eS	Sn	23 38 10.7	+0.7
CLARA	Aguas Claras	1.27	62	⇑eP	Pn	23 37 54.1	0.0
MOTZ	Rio Naranjo	1.32	68	eP	Pg	23 37 55.4	-0.9
ACAL	Aguas Claras	1.33	70	⇑iP	Pg	23 37 55.6	-1.0
ACAL				eS	Sn	23 38 14.4	+1.7
VMAR	Armenia, Volca	1.33	62	eP	Pb	23 37 55.2	-0.5
VMAR				⇑eP	Pb	23 37 55.2	-0.5
VMAR				eS	Sn	23 38 13.8	+1.2
CANAL	Canalete	1.40	62	eP	Pg	23 37 56.7	-1.0
CONN	Concepcion	1.53	26	eP	Pn	23 37 57.4	-0.3
CONN				eS	Sg	23 38 24.1	+3.9
TABAC	Tabacon	1.55	78	eP	Pg	23 37 59.8	-0.9
VERA	Finca Concepci	1.57	65	eP	Pb	23 37 59.0	-0.6
CASO	Castillo	1.57	81	eP	Pg	23 37 59.7	-1.4
ARE1	Arenal 1	1.59	80	eP	Pg	23 38 00.0	-1.4
CEDE	Laguna Cedeo	1.61	79	eP	Pg	23 38 00.8	-1.1
FORC	Fortuna	1.64	80	eP	Pg	23 38 01.1	-1.3
MGAN	Managua	1.95	2	eP	Pn	23 38 03.8	+0.3
COPN	Copaltepe	2.00	352	eP	Pn	23 38 03.5	-0.7
ACON	Acoyapa	2.10	32	eP	Pn	23 38 04.8	-0.7
ACON	Acoyapa	2.10	32	eP	Pn	23 38 05.1	-0.4
MOMN	Momotombo	2.22	354	eP	Pn	23 38 07.5	+0.3
CNGN	Cerro Negro	2.33	351	eP	Pn	23 38 09.4	+0.6
BOAB	BOACO BROADBAN	2.34	16	eP	Pn	23 38 08.3	-0.6
CRIN	San Cristobal	2.60	344	eP	Pn	23 38 12.9	+0.4
MATN	Matagalpa	2.76	8	eP	Pn	23 38 15.0	+0.4
ESPN	Las Esperanzas	2.81	44	eP	Pn	23 38 15.4	+0.1

NNC 17 23:46:05.0±6.2**, 36°.81N**×**70°.39E, h116**^{km}±157^{km}**, mb2.7,**
mpv3.7, 2C-2D, Error ellipse: s-maj=65.0km
s-min=51.8km az=86.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	5.34	357	Pg	Pn	23 47 25.6	+3.1
	5.9nm,0.2s						
IUG				Lg	Lg	23 48 26.3	
	5.3nm,0.2s						
AML	Almayashu	5.90	25	⇑P	Pn	23 47 29.6	-0.7
AML				⇑S	Sn	23 48 37.7	+0.9
	0.5nm,0.5s						
KK31	Karatay Array	6.29	1	P	Pn	23 47 36.0	+0.8
	1.0nm,0.5s,baz=195,slow=15,SNR=8.4						
KK31				⇓S	Sn	23 48 46.0	+0.3
	2.6nm,0.7s						
MRKS	Merke	6.32	19	Pg	Pn	23 47 38.8	+3.1
	0.9nm,0.2s						
MRKS				Lg	Lg	23 48 48.5	
	4.9nm,0.2s						
AB31	Akbulak array	14.58	332	⇓P	Pn	23 49 25.4	0.0
	0.3nm,0.3s,baz=159,slow=11,SNR=21						

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*IDC **17** 23:53:27.5±0.8, 7°.49N×124°.47E, h0^{km}, mb4.0/9,*
mbtmp4.0/9, MS3.5/14, Error ellipse: s-maj=25.4km
s-min=10.7km az=39.0

*MAN **17** 23:53:27.6, 7°.67N×124°.67E, h1^{km}, mb5.0, ML4.0, MS4.0*

MAN INTENSITY IV - WAO LANAO DEL SUR AND
KALILANGAN BUKIDNON; INTENSITY II - BANISILAN
COTABATO.

*NEIC **17** 23:53:28.8±1.6, 7°.55N±0°.10×124°.67E±0°.05, h10^{km}±1^{km},*
mb4.4/24, Error ellipse: s-maj=16.4km s-min=8.2km
az=12.0

ISC 17 23:53:29.0±1.1**, 7°.64N**±0°.02×**124°.69E**±0°.03**, h11**^{km}±7^{km}**,**
n85, σ1^{s}74/90**, mb4.3**/22**, MS3.5**/12**, 14C-9D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.44	57	⇓eP	Pg	23 53 36.3	-1.4
BUKP				eS	Sg	23 53 43.7	+0.2
CTBH	Cotabato--PC H	0.60	226	⇑eP	Pb	23 53 41.1	-0.5
CTBH				i S	Sn	23 53 53.3	0.0
KCP	Kidapawan	0.74	148	⇑iP	Pb	23 53 42.9	-1.1
KCP				i S	Sn	23 53 54.8	-2.0
CGP	Cagayan de Oro	0.81	0	⇑iP	Pg	23 53 41.5	-3.1
CGP				i S	Sg	23 53 52.5	-2.7
DAV	Davao City (W)	1.05	123	Pg	Pn	23 53 49.1	-0.5
	250nm,0.3s,baz=325,slow=1.9,SNR=21						
DAV				Lg	Lg	23 54 07.3	
	540nm,0.3s,baz=31,slow=22,SNR=12						
DAV	Davao City (W)	1.05	123		Pg	23 53 48.5	-0.7
DAV				Sn	Sn	23 54 04.3	0.0
SKMP	Bagumbayan, Su	1.12	187	⇑iP	Pb	23 53 49.1	-1.4
PAGZ	Pagadian	1.31	279	⇓eP	Pn	23 53 51.5	-1.7
TASP	Talacogon, Agu	1.37	54	⇑eP	Pn	23 53 54.9	+0.9
TASP				eS	Sg	23 54 17.6	+4.5
GSPH	General Santos	1.57	170	⇓iP	Pg	23 54 01.1	+2.0
GSPH				i S	Sg	23 54 25.1	+5.6
BUTP	Butuan	1.61	35	⇑eP	Pn	23 53 58.0	+0.7
BUTP				eS	Sg	23 54 24.5	+3.7
DCPH	Dipolog City	1.62	305	⇑eP	Pb	23 53 59.3	+0.4
DCPH				eS	Sn	23 54 18.7	+0.3
MATI	Mati	1.70	114	⇑eP	Pb	23 54 00.2	-0.2
CDOP	Cateel, Davao	1.74	85	⇓eP	Pn	23 53 59.1	-0.1
CDOP				eS	Sb	23 54 23.5	+0.7
BIPH	Bislig	1.74	72	⇓iP	Pn	23 53 58.8	-0.4
BIPH				i S	Sn	23 54 18.8	-2.6
LSIP	Lazi, Siquijor	1.81	325	⇑eP	Pn	23 53 59.6	-0.6
LSIP				eS	Sb	23 54 27.4	+2.5
GHBP	Garcia Hernand	2.01	350	⇑eP	Pn	23 54 00.7	-2.2
TBP	Tagbilaran	2.19	338	⇑eP	Pn	23 54 03.6	-1.8
TBP				i S	Sn	23 54 34.4	+1.8
SNPH	Sibulan	2.22	320	⇑eP	Pn	23 54 05.7	-0.1
SNPH				eS	Sg	23 54 44.2	+3.9
SCPH	Surigao	2.27	20	⇑iP	Pn	23 54 06.2	-0.3
SCPH				i S	Sn	23 54 21.4	-13
TABP	Talibon, Bohol	2.46	352	⇑eP	Pn	23 54 07.5	-1.5
TABP				eS	Sn	23 54 39.3	+0.2
MSLP	Maasin	2.48	4	⇓eP	Pn	23 54 08.3	-1.0
GLSP	General Luna,	2.56	34	⇓eP	Pn	23 54 12.1	+1.7
LLP	Lapu-Lapu	2.75	345	⇓eP	Pn	23 54 12.8	-0.3
LLP				eS	Sn	23 54 49.7	+3.3
RCP	Roxas	4.34	334	⇓eP	Pn	23 54 35.5	+0.6
MYLDM	Lahad Datu	6.62	249		Pn	23 55 04.7	-1.6
TOLI2	Tolitoli	7.56	211		Pn	23 55 16.8	-2.5
TOLI2				Sn	Sn	23 56 42.6	-2.5
SBUM	Sibu	13.44	248	Pn	Pn	23 56 38.4	-1.5
KAPI	Kappang	13.50	202	LR	LR	00 01 59.0	
	comp=Z,162nm,20.4s,baz=10.0,slow=38						
KAPI	Kappang	13.50	202	Pn	Pn	23 56 37.7	-2.9
KSM	Kuching	15.58	248	P	P	23 57 10.8	-2.2
KSM				IAmb	IAmb	23 57 24.3	
	comp=Z,21nm,1.2s						
JOW	Kunigami	19.39	10	LR	LR	00 05 58.2	
	comp=Z,94nm,18.8s,baz=194,slow=38						
GUMO	Guam	20.69	72	LR	LR	00 07 44.6	
	comp=Z,124nm,18.3s,baz=84,slow=41						
JNU	Nakatsue	26.00	12	LR	LR	00 08 55.1	
	comp=Z,55nm,19.0s,baz=122,slow=35						
PHRA	Phrae	26.12	297	P	P	23 59 05.3	+2.0
CRAI	Chiangrai	26.66	300	P	P	23 59 10.7	+2.5
CRAI				IAmb	IAmb	23 59 14.6	
	comp=Z,7.5nm,1.1s						
CMAR	Chiang Mai Arr	27.25	296	P	P	23 59 16.9	+3.5
	comp=Z,1.5nm,0.3s,baz=118,slow=8.8,SNR=11						
CMAR				LR	LR	00 10 16.5	
	comp=Z,91nm,18.9s,baz=110,slow=37						
CMAR	Chiang Mai Arr	27.25	296	P	P	23 59 18.2	+4.7
WRA	Warramunga Arr	29.01	161	P	P	23 59 27.9	-1.2
	comp=Z,0.8nm,0.8s,baz=332,slow=11,SNR=5.8						
	comp=Z,0.8nm,0.8s						
KRVT	Keravat (AS076	29.75	113	LR	LR	00 11 10.4	
	comp=Z,38nm,19.4s,baz=75,slow=36						
MJAR	Matsushiro Arr	31.30	21	LR	LR	00 10 58.1	
	comp=Z,58nm,21.9s,baz=202,slow=33						
ASAR	Alice Springs	32.39	164	P	P	23 59 58.5	-0.5
	comp=Z,0.9nm,0.8s,baz=343,slow=6.8,SNR=7.4						
	comp=Z,0.9nm,0.8s						
BRDH	Bariadhala	35.11	299	LR	LR	00 16 20.9	
	comp=Z,94nm,18.1s,baz=90,slow=39						
GTA	Gaotai	38.72	329	eP	P	00 00 56.4	+3.1
GTA				sP	sP	00 01 12.0	+14
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ASAJ	Asahikawa	39.56	20	LR	LR	00 18 19.9	
	comp=Z,65nm,19.1s,baz=114,slow=38						
KLR	Kul'dur	41.87	7	LR	LR	00 22 10.0	
	comp=Z,59nm,18.1s,baz=194,slow=41						
STKA	Stephens Creek	42.49	159	P	P	00 01 24.9	+0.5
	comp=Z,1.8nm,0.3s,baz=326,slow=7.8,SNR=5.0						
	comp=Z,1.8nm,0.3s						
ULN	Ulaanbaatar	42.80	343	P	P	00 01 27.9	+1.0
SONM	Songino Array	42.97	342	P	P	00 01 29.4	+1.1
	comp=Z,2.0nm,1.2s,baz=164,slow=7.3,SNR=10						
SONM				LR	LR	00 20 33.5	
	comp=Z,162nm,19.8s,baz=152,slow=38						
	comp=Z,2.0nm,1.2s						
SONM	Songino Array	42.97	342	P	P	00 01 27.8	-0.5
MK31	Makanchi Array	53.21	325	P	P	00 02 48.0	+0.6
MKAR	Makanchi Array	53.21	325	P	P	00 02 48.2	+0.9
	comp=Z,1.5nm,0.7s,baz=131,slow=8.3,SNR=19						
	comp=Z,1.5nm,0.7s						
MKAR	Makanchi Array	53.21	325	P	P	00 02 47.0	-0.3
MAKZ	Makanchi	53.40	325	P	P	00 02 48.2	-0.6
MAKZ				IAmb	IAmb	00 03 01.8	
	comp=Z,6.8nm,1.5s						
TARG	Taragay, Kyrgy	53.51	317	P	P	00 02 48.8	-1.4
TARG				IAmb	IAmb	00 02 55.8	

	comp=Z,3.2nm,0.7s						
NIL	Nilore	53.96	306	P	P	00 02 53.1	-0.1
NIL				IAmb	IAmb	00 03 18.6	
	comp=Z,8.3nm,1.1s						
YAK	Yakutsk	54.41	3	LR	LR	00 26 54.1	
	comp=Z,47nm,20.0s,baz=290,slow=37						
AAK	Ala-Archa	56.12	317	P	P	00 03 08.1	-0.7
ZAA0	Zalesovo Array	56.20	333	P	P	00 03 08.8	-0.1
ZAA0				IAmb	IAmb	00 03 12.1	
	comp=Z,6.7nm,1.4s						
ZALV	Zalesovo Beam	56.20	333	P	P	00 03 09.6	+0.6
	comp=Z,1.2nm,0.7s,baz=120,slow=5.8,SNR=6.3						
	comp=Z,1.2nm,0.7s						
ZALV	Zalesovo Beam	56.20	333	P	P	00 03 08.6	-0.3
KURK	Kurchatov	57.37	327	P	P	00 03 17.5	+0.2
KURK				IAmb	IAmb	00 03 20.0	
	comp=Z,5.2nm,1.1s						
KBL	Kabul	57.57	306	P	P	00 03 19.3	+0.1
BTK	Batken	57.77	313	P	P	00 03 20.6	+0.1
BTK				IAmb	IAmb	00 03 30.6	
	comp=Z,4.6nm,1.4s						
GAR	Garm	57.81	312	P	P	00 03 20.3	-0.5
GAR				IAmb	IAmb	00 03 40.6	
	comp=Z,6.1nm,1.0s						
MSVF	Nonsavu	58.41	116	P	P	00 03 24.4	-0.8
KK31	Karatay Array	59.01	316	P	P	00 03 28.8	-0.2
KK31				IAmb	IAmb	00 04 00.3	
	comp=Z,4.2nm,1.4s						
KKAR	Karatay Array	59.01	316	P	P	00 03 29.1	+0.1
KKAR	Karatay Array	59.01	316	P	P	00 03 29.3	+0.3
KKAR				IAmb	IAmb	00 04 00.3	
	comp=Z,4.2nm,1.4s						
BRVK	Borovoye	63.03	327	P	P	00 03 55.4	-0.6
BRVK				IAmb	IAmb	00 04 12.7	
	comp=Z,4.1nm,1.1s						
TIXI	Tiksi	64.00	1	LR	LR	00 33 59.8	
	comp=Z,36nm,18.8s,baz=177,slow=38						
TIXI	Tiksi	64.00	1	P	P	00 04 00.8	-1.3
DCZ	Deep Cove	65.12	148	P	P	00 04 09.4	-0.4
TKNZ	Takaka Hill	65.62	142	P	P	00 04 12.4	-0.9
NRIK	Noril'sk	66.17	346	P	P	00 04 17.8	+1.5
	comp=Z,2.2nm,0.5s,baz=105,slow=4.6,SNR=8.1						
	comp=Z,2.2nm,0.5s						
NRIK	Noril'sk	66.17	346	P	P	00 04 16.1	-0.2
ABKAR	Akbulak array	67.86	320	P	P	00 04 27.5	+0.1
GURO	Guroymak-BITLI	79.55	308	P	P	00 05 35.9	-0.6
IMAR	Indian Mountai	79.63	24	P	P	00 05 36.7	+0.6
ILAR	Eielson Array	82.47	26	P	P	00 05 51.7	+0.3
	comp=Z,0.5nm,0.8s,baz=239,slow=4.4,SNR=6.0						
	comp=Z,0.5nm,0.8s						
K27K	Chicken	84.61	26	P	P	00 06 02.6	+0.2
BCAR	Beaver Creek A	84.85	27	P	P	00 06 03.6	0.0
YKA	Yellowknife Ar	96.78	24	P	P	00 06 59.3	-0.3
	comp=Z,0.3nm,0.7s,baz=292,slow=4.4,SNR=1.9						
	comp=Z,0.3nm,0.7s						
QSPA	South Pole Qui	97.52	180	LR	LR	00 53 45.6	
	comp=Z,51nm,18.4s,baz=342,slow=37						
PLCA	Paso Flores	144.35	160	PKP	PKPdf	00 13 04.9	-0.9
	comp=Z,2.7nm,1.1s,baz=308,slow=1.7,SNR=3.6						

SOME ***18*** *00:23:55.9, 41°.38N×71°.85E, h5^{km}*
ISU ***18*** *00:23:56.4, 41°.28N×71°.82E, h4^{km}*
KRNET ***18*** *00:23:56.1±0.1, 41°.31N×71°.89E, h17^{km}, mb2.8*
NNC ***18*** *00:23:57.5±0.8, 41°.39N×71°.91E, h0^{km}, mb3.0, mpv2.9,*
Error ellipse: s-maj=7.3km s-min=2.4km az=177.0

ISC 18 00:23:56.0±1.1**, 41°.36N**±0°.02×**71°.90E**±0°.02**, h6^{km}**±10^{km}**,**
n38, σ1^{s}29/59**, 17C-9D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSNS	Kasansay	0.35	235	P	Pg	00 24 03.3	+0.5
KSNS				S	Sb	00 24 33.3	+23
NAM	Namangan	0.41	206	P	Pn	00 24 10.7	+2.1
ARK	Arkit	0.44	6	⇓*i*P	Pb	00 24 05.6	-0.7
	baz=7.0						
ARK				⇓*i*S	Sb	00 24 12.4	-0.8
	baz=7.0						
TRKS	Terek-Say	0.60	287	⇑*i*P	Pg	00 24 07.0	-0.5
	baz=86						
TRKS				⇑*i*S	Sg	00 24 15.0	-0.3
	baz=86						
ANR	Andizhan	0.70	150	P	Pg	00 24 09.6	+0.2
ANR				S	Sb	00 24 20.0	-0.5
FRG	Fergana	0.99	185	P	Pg	00 24 14.6	-0.4
FRG				S	Sg	00 24 28.1	+0.3
OHH	Osh	1.07	141	⇑*i*P	Pg	00 24 16.0	-0.5
	baz=39						
OHH				⇑*i*S	Sg	00 24 30.2	-0.2
	baz=39						
CHMI	Chimion	1.13	195	P	Pg	00 24 15.5	-2.1
CHMI				S	Sg	00 24 30.8	-1.5
MNAS	Manas	1.21	22	⇓*i*P	Pb	00 24 19.6	+0.1
	baz=21						
MNAS				⇓*i*S	Sn	00 24 36.4	-0.1
	baz=21						
CHMG	Chimgan	1.43	278	P	Pn	00 24 22.7	0.0
CHMG				S	Sn	00 24 42.5	+0.5
CHRV	Charvak	1.49	281	P	Pg	00 24 24.4	-0.2
CHRV				S	Sg	00 24 45.0	+1.1
BTK	Batken	1.54	213	⇑*i*P	Pn	00 24 23.2	-0.9
	baz=13						
BTK				⇑*i*S	Sn	00 24 43.5	-1.0
	baz=13						
AML	Almayashu	1.55	60	⇓Pg	Pg	00 24 26.0	+0.3
	0.1nm,0.2s						
AML				⇑Lg	Lg	00 24 46.2	
	0.5nm,0.2s						
AML	Almayashu	1.55	60	⇑*i*P	Pb	00 24 25.5	+0.2
	baz=58						
AML				⇑*i*S	Sg	00 24 46.6	+0.9
	baz=58						
IUG	Iuzhnay	1.60	300	P	Pg	00 24 26.5	-0.2
	29nm,0.2s						
IUG				S	Sg	00 24 48.3	+0.8
	146nm,0.3s						
IUG	Iuzhnay	1.60	300	*e*P	Pg	00 24 26.5	-0.2
	baz=2.0						
IUG				*e*S	Sg	00 24 48.3	+0.8
	baz=2.0						
IUG	Iuzhnay	1.60	300	*e*P	Pg	00 24 26.5	-0.2
	29nm,0.1s						
IUG				*e*S	Sg	00 24 48.3	+0.8
	146nm,0.3s						
MRKS	Merke	1.70	35	P	Pg	00 24 28.3	-0.2
	11nm,0.2s						
MRKS				S	Sg	00 24 51.4	+0.8
	26nm,0.3s						
MRKS	Merke	1.70	35	*e*P	Pg	00 24 28.3	-0.2
	baz=34						
MRKS				*e*S	Sg	00 24 51.4	+0.8
	baz=34						
MRKS	Merke	1.70	35	*e*P	Pg	00 24 28.3	-0.2
	11nm,0.2s						
MRKS				*e*S	Sg	00 24 51.4	+0.8
	26nm,0.3s						
ARLS	Aral	1.88	74	⇑*i*P	Pb	00 24 31.1	+0.2
	baz=73						
ARLS				⇑*i*S	Sg	00 24 56.5	0.0
	baz=73						
EKS2	Erkin-Say	1.91	46	⇑*i*P	Pb	00 24 31.5	+0.2
	baz=46						
EKS2				⇑*i*S	Sg	00 24 57.5	+0.2
	baz=46						
KK31	Karatay Array	2.02	330	⇓Pg	Pb	00 24 32.9	-0.3
	3.0nm,0.2s,baz=146,slow=14,SNR=6.5						
KK31				⇓Lg	Lg	00 25 00.8	
	10nm,0.2s,baz=147,slow=22,SNR=18						
KKAR	Karatay Array	2.02	330	⇓*i*P	Pb	00 24 33.2	0.0
	baz=31						
KKAR				⇓*i*S	Sg	00 25 00.0	-1.0
	baz=31						
UCH	Uchtor	2.14	65	⇑*i*P	Pb	00 24 35.0	-0.4
	baz=64						
UCH				⇑*i*S	Sb	00 25 03.1	+0.7
	baz=64						
SGDS	Sogindy	2.91	43	Pg	Pb	00 24 49.8	+1.5
	1.4nm,0.3s						
SGDS				Lg	Lg	00 25 27.5	
	3.7nm,0.5s						
TKM2	Tokmak 2	3.16	59	⇑Pg	Pg	00 24 55.5	-1.0
	0.7nm,0.2s						
TKM2				⇑Lg	Lg	00 25 36.4	
	1.6nm,0.2s						
DGS	Degeres	3.43	56	Pg	Pb	00 24 59.2	+1.9
	1.5nm,0.4s						
DGS				Lg	Lg	00 25 44.2	
	2.6nm,0.6s						
DGS	Degeres	3.43	56	*e*Pg	Pb	00 24 59.2	+1.9
	1.5nm,0.4s						
DGS				*e*Lg	Lg	00 25 44.2	
	2.6nm,0.6s						
KST	Kastek	3.45	60	Pg	Pg	00 25 00.2	-2.0
	1.7nm,0.6s						
KST				Lg	Lg	00 25 45.5	
	7.4nm,1.0s						
KST	Kastek	3.45	60	*e*Pg	Pg	00 25 00.1	-2.0
	1.7nm,0.6s						
KST				*e*Lg	Lg	00 25 45.5	
	7.4nm,1.0s						
KRBS	Karabastau	3.64	49	Pg	Pg	00 25 03.5	-2.1
	0.8nm,0.5s						
KRBS				Lg	Lg	00 25 51.6	
	2.3nm,0.7s						
KRBS	Karabastau	3.64	49	*e*Pg	Pg	00 25 03.5	-2.1
	0.8nm,0.5s						
KRBS				*e*Lg	Lg	00 25 51.6	
	2.3nm,0.7s						
MTBS	Maitube	3.80	61	Pg	Pg	00 25 06.3	-2.4
	1.0nm,0.1s						
MTBS				Lg	Lg	00 25 55.9	
	2.6nm,0.2s						
MTBS	Maitube	3.80	61	*e*Pg	Pg	00 25 06.3	-2.4
	1.0nm,0.1s						
MTBS				*e*Lg	Lg	00 25 55.9	
	2.6nm,0.2s						
BTLS	Baital	4.00	22	*e*Pg	Pg	00 25 09.9	-2.7
	0.9nm,0.1s						
BTLS				*e*Lg	Lg	00 26 02.7	
	1.8nm,0.1s						
KTBS	Karatobe	4.24	55	Pg	Pb	00 25 14.3	+3.2
	0.4nm,0.4s						
KTBS				Lg	Lg	00 26 09.7	
	3.4nm,0.6s						
KTBS	Karatobe	4.24	55	*e*Pg	Pb	00 25 14.3	+3.2
	0.4nm,0.1s						
KTBS				*e*Lg	Lg	00 26 09.7	
	3.4nm,0.6s						

IDC 18 00:28:35.5±8.8**, 19°.52S**×**177°.47W, h607^{km}**±79^{km}**,**
mb2.4/3**, mbtmp3.3**/4**, Error ellipse: s-maj=334.0km**
s-min=32.2km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.61	292	P	P	00 30 06.0	-0.1
	3.8nm,0.6s,baz=156,slow=19,SNR=5.1						
ASAR	Alice Springs	45.24	256	P	P	00 36 00.9	+0.4
	0.3nm,0.5s,baz=101,slow=7.1,SNR=5.1						
	0.3nm,0.5s						
WRA	Warramunga Arr	45.24	261	P	P	00 36 00.1	-0.5
	0.2nm,0.4s,baz=98,slow=7.0,SNR=5.6						
	0.2nm,0.4s						
TXAR	Lajitas Array	86.11	57	P	P	00 40 13.8	0.0
	0.1nm,0.6s,baz=224,slow=3.8,SNR=1.9						
	0.1nm,0.6s						

MOS ***18*** *00:30:58.3±0.8, 59°.59S×27°.85W, h199^{km}, mb5.4/20,*
Error ellipse: s-maj=19.1km s-min=9.2km az=106.1
BJI ***18*** *00:31:00.0±0.0, 59°.60S×28°.00W, h209^{km}, mB5.2/4*
GCMT ***18*** *00:31:01.1±0.2, 59°.72S±0°.02×27°.47W±0°.03, h194^{km}±2^{km}, MW5.1/112, Moment Tensor Solution. s43,c54; s112,c143; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.33±.15; $M_{\theta\theta}$-1.84±.20; $M_{\phi\phi}$5.17±.17; $M_{r\theta}$-3.60±.13; $M_{\theta\phi}$-1.06±.17; $M_{\phi r}$0.83±.13; Best double couple: $M_0$5.91800×10^{16} NP1:ϕ_s138.00000°, δ65.00000°, λ-132.00000°. NP2:ϕ_s23.00000°, δ48.00000°, λ-35.00000°. Principal axes: T 5.5750, Plg10.0000°, Azm257.0000°; N 0.6870, Plg37.0000°, Azm159.0000°; P -6.2610, Plg51.0000°, Azm360.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***18*** *00:31:02.2±0.8, 59°.60S×27°.93W, h225^{km}±6^{km}, mb4.9/29, mbtmp5.4/30 Error ellipse: s-maj=7.6km s-min=6.1km az=24.0*
NEIC ***18*** *00:31:03.1±1.4, 59°.57S±0°.09×28°.0W±0°.2, h227^{km}±4^{km}, mb5.3/181, Error ellipse: s-maj=14.3km s-min=12.2km az=219.0*

ISC 18 00:31:01.9±0.4**, 59°.49S**±0°.04×**27°.89W**±0°.04**, h224^{km}**±3^{km}**,**
h223^{km}:pP-P, n877, σ1^{s}25/988**, mb5.3**/121**, 7C-28D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.82	152	P	P	00 34 11.4	+1.6
VNA1	Neumayer--Stat	13.82	152	ScP	ScP	00 42 28.5	+4.0
VNA3	Neumayer Olymp	13.94	155	P	P	00 34 10.9	-0.2
VNA3	Neumayer Olymp	13.94	155	ScP	ScP	00 42 28.0	+3.2
VNA2	Neumayer--Watz	14.22	152	P	Pn	00 34 12.2	-1.0
	baz=311,slow=14						
VNA2	Neumayer--Watz	14.22	152	ScP	ScP	00 42 28.0	+2.7
	baz=321,slow=6.0						
SNAA	Sanae	15.82	151	P	P	00 34 30.9	-1.2
SNAA	Sanae	15.82	151	PcP	PcP	00 39 16.6	+0.9
SNAA				S	S	00 37 31.8	+5.2
SNAA	Sanae	15.82	151	ScP	ScP	00 42 31.2	+3.0
SNAA	Sanae	15.82	151	P	P	00 34 30.4	-1.6
	11nm,0.6s,baz=303,slow=12,SNR=24						
SNAA				S	S	00 37 27.0	+0.5
	7.0nm,0.8s,baz=328,slow=17,SNR=2.3						
SNAA				PcP	PcP	00 39 15.9	+0.2
	5.9nm,0.4s,baz=255,slow=5.0,SNR=5.8						
SNAA				ScP	ScP	00 42 30.3	+2.0
	8.4nm,0.6s,baz=264,slow=4.7,SNR=21						
SNAA	Sanae	15.82	151	P	P	00 34 31.2	-0.8
TROLL	Troll, Antarti	17.41	148	P	P	00 34 47.7	-1.7
TROLL	Troll, Antarti	17.41	148	ScP	ScP	00 42 34.6	+3.0
PMSA	Palmer Station	17.52	237	P	P	00 34 51.0	+0.5
	126nm,0.7s,baz=82,slow=6.8,SNR=18						
PMSA				PcP	PcP	00 39 16.8	-1.5
	13nm,0.4s,baz=24,slow=14,SNR=7.4						
PMSA	Palmer Station	17.52	237	P	P	00 34 50.7	+0.2
PMSA	Palmer Station	17.52	237	*e*P	P	00 34 49.6	-1.0
BELA	Belgrano 2	18.61	184	P	P	00 35 01.0	-1.2
EFI	East Falkland	18.63	281	P	P	00 35 02.9	+0.3
EFI	East Falkland	18.63	281	*c i*P	P	00 35 03.2	+0.6
EFI				pmax	pmax		
	comp=Z,367nm,0.7s						
NVL	N'lazarevskaya	19.70	141	⇑*i*P	P	00 35 11.4	-2.5
NVL				*e*S	S	00 38 42.6	-0.7
NVL				pmax	pmax		
	comp=Z,53nm,0.7s						
MG01	Puerto William	21.76	265	P	P	00 35 35.4	0.0
USHA	Ushuaia	22.21	264	P	P	00 35 39.6	0.0
	comp=Z,244nm,0.8s,baz=58,slow=0.3,SNR=55						
USHA				S	S	00 39 32.0	+4.8
	comp=Z,12nm,0.4s,baz=110,slow=12,SNR=0.9						
	comp=Z,244nm,0.8s						
MG02	Cerro Sombrero	23.67	268	P	P	00 35 51.9	-0.9
MG03	Isla Dawson	23.73	265	P	P	00 35 52.9	-0.5
MG04	Isla Riesco	24.82	266	P	P	00 36 03.4	+0.1
MG05	Puerto Natales	25.96	268	P	P	00 36 12.5	-1.0
GO09	Cerro Castillo	26.11	269	P	P	00 36 13.6	-1.3
GO09				IAmb	IAmb	00 36 14.2	
	comp=Z,49nm,0.6s						
GO08	Villa O'Higgin	27.95	273	P	P	00 36 31.4	+0.1
TRQA	Tornquist	30.51	299	P	P	00 36 54.9	+0.9
TRQA				IAmb	IAmb	00 36 55.8	
	comp=Z,53nm,0.7s						
TRQA	Tornquist	30.51	299	P	P	00 36 54.9	+0.9
TRQA				pmax	pmax		
	comp=Z,53nm,0.7s						
AY01	Puyuhuapi	30.74	279	P	P	00 36 55.6	-0.2
QSPA	South Pole Qui	30.75	180	P	P	00 36 55.9	-0.1
	comp=Z,3.6nm,0.4s,baz=157,slow=16,SNR=57						
QSPA				PcP	PcP	00 39 47.1	-0.2
	comp=Z,15nm,0.4s,baz=211,slow=2.3,SNR=13						
QSPA				S	S	00 41 39.6	-2.4
	comp=Z,1.4nm,0.6s,baz=87,slow=24,SNR=1.2						
QSPA				ScP	ScP	00 43 08.9	+0.8
	comp=Z,35nm,1.1s,baz=233,slow=1.5,SNR=12						
QSPA				P3KPbc		01 08 37.8	
	comp=Z,5.6nm,0.9s,baz=356,slow=0.5,SNR=17						
	comp=Z,3.6nm,0.4s						
QSPA	South Pole Qui	30.75	180	P	P	00 36 56.1	+0.1
QSPA				IAmb	IAmb	00 37 34.5	
	comp=Z,68nm,1.1s						
LL02	Futaleuf	31.23	282	P	P	00 37 00.2	0.0
GO07	Milladeo Hill,	32.19	280	P	P	00 37 08.0	-0.6
GO07				IAmb	IAmb	00 37 16.8	
	comp=Z,37nm,0.5s						
PLCA	Paso Flores	32.42	286	P	P	00 37 10.5	-0.2
	comp=Z,17nm,0.8s,baz=147,slow=8.0,SNR=72						
PLCA				S	S	00 42 08.2	0.0
	comp=Z,1.1nm,0.7s,baz=128,slow=19,SNR=1.6						
PLCA				ScP	ScP	00 43 13.6	-0.6
	comp=Z,6.5nm,0.6s,baz=151,slow=2.6,SNR=16						
	comp=Z,17nm,0.8s						
PLCA	Paso Flores	32.42	286	P	P	00 37 10.9	+0.2
PLCA	Paso Flores	32.42	286	P	P	00 37 10.9	+0.2
PLCA				pmax	pmax		
	comp=Z,20nm,0.7s						
PLCA	Paso Flores	32.42	286	*e*P	P	00 37 10.7	0.0
PLCA	Paso Flores	32.42	286	P	P	00 37 10.3	-0.4
PLCA				ScP	ScP	00 43 14.5	+0.3
PLTB	Pedras Altas	32.64	317	P	P	00 37 13.7	+1.1
PLTB	Pedras Altas	32.64	317	*e*P	P	00 37 13.7	+1.1
LL04	Puerto Octay	33.20	284	P	P	00 37 17.1	-0.3
GO06	Curarrehue	33.75	286	P	P	00 37 22.1	-0.2
CPSB	Cacapava Do Su	33.82	318	*e*P	P	00 37 24.2	+1.4
CNLB	Canela	33.98	322	*e*P	P	00 37 25.5	+1.3
LR03	Panguipulli	34.14	285	P	P	00 37 25.5	0.0
LR03				IAmb	IAmb	00 37 26.4	
	comp=Z,41nm,0.5s						
RODS	Rosario do Sul	34.48	316	*e*P	P	00 37 29.5	+1.0
LR04	Corral	34.49	284	P	P	00 37 28.7	+0.2
LR04				IAmb	IAmb	00 37 30.3	
	comp=Z,72nm,0.8s						
ALGR	Alto Alegre (B	35.16	320	*e*P	P	00 37 35.4	+1.0
ITQB	Itaqui	35.61	314	P	P	00 37 39.0	+0.9
ITQB	Itaqui	35.61	314	*e*P	P	00 37 39.1	+0.9
ITAB	Concordia	36.32	322	P	P	00 37 45.3	+1.2
ITAB	Concordia	36.32	322	*e*P	P	00 37 44.7	+0.6
MECA	Mercedes	36.53	312	*e*P	P	00 37 46.4	+0.6
CRSM	Crissiumal (Br	36.70	319	*e*P	P	00 37 48.3	+0.9
BI05	Punta Hualpn	36.81	288	P	P	00 37 48.5	+0.3
BI05				IAmb	IAmb	00 37 50.0	
	comp=Z,53nm,0.6s						
AZCA	Azaras, Argent	36.83	316	*e*P	P	00 37 48.9	+0.5
MAW	Mawson	37.65	141	P	P	00 37 54.6	-0.2
	comp=Z,32nm,0.8s,baz=256,slow=14,SNR=2.2						
MAW				PcP	PcP	00 40 07.6	+0.7
	comp=Z,21nm,0.6s,baz=255,slow=9.6,SNR=2.2						
	comp=Z,32nm,0.8s						
BO01	Tunca	37.71	292	P	P	00 37 56.1	+0.4
PET01	Itanhaem-SP	37.72	330	*e*P	P	00 37 56.4	+0.5
LMEL	Las Melosas	37.74	294	P	P	00 37 56.9	+0.7
FRBT	Francisco Belt	37.79	321	*e*P	P	00 37 57.2	+0.7
MT13	San Alfonso	37.86	294	P	P	00 37 57.5	+0.3
MT13				IAmb	IAmb	00 38 10.3	
	comp=Z,18nm,0.5s						
MT09	Talagante	38.17	293	P	P	00 37 59.8	0.0
MT09				IAmb	IAmb	00 38 02.3	
	comp=Z,99nm,0.9s						
MT03	Universidad Ad	38.17	294	P	P	00 38 00.1	+0.3
MT03				IAmb	IAmb	00 38 06.3	
	comp=Z,52nm,0.7s						
MT01	Popeta	38.22	293	P	P	00 37 59.9	-0.1
MT01				IAmb	IAmb	00 38 04.8	
	comp=Z,37nm,0.6s						
PARB	Paraibuna	38.23	333	*e*P	P	00 38 01.8	+1.5
MT05	Renca	38.37	294	P	P	00 38 01.9	+0.6
MT05				IAmb	IAmb	00 38 03.8	
	comp=Z,60nm,0.5s						
SPB	Sao Paulo	38.43	330	P	P	00 38 02.2	+0.4
SPB				IAmb	IAmb	00 38 04.3	
	comp=Z,94nm,1.5s						
SPB	Sao Paulo	38.43	330	*e*P	P	00 38 03.0	+1.2
PEL	Peldehue	38.55	294	P	P	00 38 03.6	+0.8
PEL				IAmb	IAmb	00 38 06.0	
	comp=Z,218nm,1.4s						
PEL	Peldehue	38.55	294	P	P	00 38 03.6	+0.8
PEL				pmax	pmax		
	comp=Z,218nm,1.4s						
VA05	Santo Domingo	38.56	292	P	P	00 38 03.1	+0.3
VA05				IAmb	IAmb	00 38 10.5	
	comp=Z,58nm,0.6s						
PTGB	Pitanga	38.65	323	*e*P	P	00 38 04.2	+0.4
MT02	Curacav	38.66	293	P	P	00 38 04.4	+0.7
MT02				IAmb	IAmb	00 38 10.9	
	comp=Z,43nm,0.9s						
CFA	Coronel Fontan	38.71	298	P	P	00 38 04.1	-0.1
	comp=Z,58nm,0.6s,baz=155,slow=7.9,SNR=61						
CFA				PcP	PcP	00 40 10.9	-0.1
	comp=Z,10nm,0.4s,baz=155,slow=0.9,SNR=4.5						
	comp=Z,58nm,0.6s						
DUB01	Friburgo-RJ	38.77	338	*e*P	P	00 38 06.3	+1.5
VAS01	Vassouras-RJ	38.79	337	*e*P	P	00 38 05.9	+1.1
VA03	San Esteban	38.80	294	P	P	00 38 06.3	+1.3
VA03				IAmb	IAmb	00 38 22.4	
	comp=Z,39nm,0.7s						
ROC1	El Roble	38.84	294	P	P	00 38 07.2	+1.7
ROC1				IAmb	IAmb	00 38 15.5	
	comp=Z,49nm,0.7s						
VAO	Valinhos	38.88	331	*e*P	P	00 38 06.9	+1.3
CPUP	Villa Florida	38.91	315	P	P	00 38 06.5	+0.8
	comp=Z,158nm,0.7s,baz=154,slow=6.9,SNR=245						
CPUP				ScP	ScP	00 43 38.2	+0.2
	comp=Z,8.2nm,0.4s,baz=164,slow=1.6,SNR=14						
	comp=Z,158nm,0.7s						
CPUP	Villa Florida	38.91	315	P	P	00 38 06.6	+0.8
CPUP	Villa Florida	38.91	315	*e*P	P	00 38 06.7	+0.9
CPUP	Villa Florida	38.91	315	P	P	00 38 06.5	+0.8
CPUP				ScP	ScP	00 43 39.1	+1.1
ZON	Zonda	38.96	297	P	P	00 38 06.9	+0.6
ZON	Zonda	38.96	297	P	P	00 38 06.9	+0.6
ZON				pmax	pmax		
	comp=Z,34nm,0.8s						
VA01	Torpederas	39.10	293	P	P	00 38 08.3	+1.1
FRTB	Fartura	39.23	328	*e*P	P	00 38 09.6	+1.1
VA06	Catapilco	39.31	294	P	P	00 38 09.9	+0.8
VA06				IAmb	IAmb	00 38 11.5	
	comp=Z,48nm,0.5s						
MCR1	Marechal Candi	39.51	321	*e*P	P	00 38 11.0	+0.2
ALF01	Guarapari-ES	39.91	341	*e*P	P	00 38 15.0	+0.9
BSCB	Bom Sucesso	40.31	335	*e*P	P	00 38 18.1	+0.7
CO02	Combarbal	40.31	295	P	P	00 38 18.4	+0.9
CO02				IAmb	IAmb	00 38 23.2	
	comp=Z,44nm,0.6s						
CO03	El Pedregal	40.48	296	P	P	00 38 19.4	+0.7
ESFA	Espinillo Form	40.58	315	*e*P	P	00 38 21.0	+1.5
CO01	Juntas del Tor	40.93	297	P	P	00 38 24.2	+1.5
CO01				IAmb	IAmb	00 38 29.3	
	comp=Z,56nm,0.8s						
CO06	Fray Jorge	41.05	295	P	P	00 38 23.8	+0.5
GO04	Tololo Observa	41.09	296	P	P	00 38 24.4	+0.4
GO04				IAmb	IAmb	00 38 29.9	
	comp=Z,41nm,0.6s						
BB19B	Bebedouro	41.12	330	*e*P	P	00 38 24.7	+0.6
PCMB	Pacaembu	41.35	326	*e*P	P	00 38 26.3	+0.4
CO05	La Serena	41.50	296	P	P	00 38 27.5	+0.5
CO05				IAmb	IAmb	00 38 29.2	
	comp=Z,97nm,0.7s						
SJMB	Sao Joao De Ma	41.86	341	*e*P	P	00 38 30.3	+0.4
SUR	Sutherland	41.98	72	P	P	00 38 31.7	+0.6
	comp=Z,48nm,0.7s,baz=206,slow=8.8,SNR=50						
SUR				PcP	PcP	00 40 22.7	+1.0
	comp=Z,18nm,0.8s,baz=229,slow=5.4,SNR=4.1						
	comp=Z,48nm,0.7s						
SUR	Sutherland	41.98	72	P	P	00 38 32.2	+1.1
SUR				IAmb	IAmb	00 38 33.1	
	comp=Z,63nm,0.8s						
SUR	Sutherland	41.98	72	P	P	00 38 31.9	+0.7
SUR				PcP	PcP	00 40 23.2	+1.4
AC05	El Transito	41.98	298	P	P	00 38 32.2	+1.1
LCO	Las Campanas	42.03	297	P	P	00 38 32.2	+0.6
LCO	Las Campanas	42.03	297	P	P	00 38 32.2	+0.6
LCO				pmax	pmax		
	comp=Z,71nm,1.3s						
LCO	Las Campanas	42.03	297	P	P	00 38 32.0	+0.4
LCO				ScP	ScP	00 43 50.6	0.0
ABR01	Abrolhos, BA	42.21	345	*e*P	P	00 38 33.5	+0.7
AC04	Llanos de Chal	42.89	297	P	P	00 38 39.4	+1.2
AC04				IAmb	IAmb	00 38 40.6	
	comp=Z,96nm,0.6s						
ITRB	Iturama	42.91	328	*e*P	P	00 38 38.8	+0.3
GO03	Copiap	43.03	299	P	P	00 38 40.2	+0.8
PMNB	Patos De Minas	43.05	334	*e*P	P	00 38 40.2	+0.5
VNDA	Vanda	43.11	183	P	P	00 38 40.0	+0.7
	comp=Z,5.8nm,0.6s,baz=183,slow=7.1,SNR=42						
VNDA				PcP	PcP	00 40 25.2	+0.7

	comp=Z,2.6nm,0.5s,baz=197,slow=3.4,SNR=8.6						
VNDA				ScP	ScP	00 43 54.9	+1.0
	comp=Z,13nm,0.9s,baz=218,slow=4.4,SNR=16						
	comp=Z,5.8nm,0.6s						
VNDA	**Vanda**	**43.11**	**183**	P	**P**	**00 38 40.5**	**+1.1**
VNDA	**Vanda**	**43.11**	**183**	P	**P**	**00 38 40.5**	**+1.1**
VNDA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
VNDA	**Vanda**	**43.11**	**183**	P	**P**	**00 38 40.4**	**+1.0**
VNDA				PcP	**PcP**	**00 40 25.7**	**+1.1**
VNDA				ScP	**ScP**	**00 43 57.8**	**+3.9**
AC02	**Maricunga**	**43.20**	**301**	P	**P**	**00 38 42.5**	**+1.2**
MURT	**Porto Murtinho**	**43.30**	**318**	*e*P	**P**	**00 38 41.1**	**-0.4**
GUA01	**Guaratinga, BA**	**43.72**	**343**	*e*P	**P**	**00 38 45.3**	**+0.4**
AQDB	**Aquidauana**	**43.76**	**321**	P	**P**	**00 38 45.2**	**0.0**
AQDB				IAmb	IAmb	00 38 45.7	
	comp=Z,94nm,0.6s						
AQDB	**Aquidauana**	**43.76**	**321**	*e*P	**P**	**00 38 44.8**	**-0.4**
GRHM	**Grahamstown, E**	**44.00**	**78**	P	**P**	**00 38 47.3**	**+0.2**
GRHM				IAmb	IAmb	00 38 48.0	
	comp=Z,75nm,0.9s						
IPMB	**Ipameri, GO**	**44.00**	**332**	*e*P	**P**	**00 38 47.6**	**+0.4**
SOE	**Somerset East**	**44.05**	**77**	P	**P**	**00 38 47.8**	**+0.4**
SOE				IAmb	IAmb	00 38 49.3	
	comp=Z,80nm,1.1s						
BDQN	**Bodoquena, MS**	**44.13**	**319**	*e*P	**P**	**00 38 47.8**	**-0.3**
CCD	**Concordia, Ant**	**44.35**	**170**	P	**P**	**00 38 49.4**	**-0.2**
CCD				PcP	**PcP**	**00 40 29.5**	**+0.2**
CCD				ScP	**ScP**	**00 44 02.7**	**+3.3**
AC01	**Pan de Azucar**	**44.44**	**299**	P	**P**	**00 38 50.8**	**+0.2**
C2SB	**Chapadao do Su**	**44.49**	**325**	*e*P	**P**	**00 38 51.8**	**+0.8**
GO02	**Mina Guanaco**	**44.86**	**301**	P	**P**	**00 38 55.0**	**+0.8**
GO02				IAmb	IAmb	00 38 56.5	
	comp=Z,74nm,0.9s						
RVDE	**Rio Verde (Bra**	**44.88**	**322**	*e*P	**P**	**00 38 54.0**	**-0.1**
PB14	**IPOC Station P**	**45.68**	**301**	P	**P**	**00 39 00.6**	**0.0**
JANB	**Januaria**	**45.98**	**338**	*e*P	**P**	**00 39 02.9**	**+0.2**
PP1B	**Ponte de Pedra**	**46.20**	**323**	*e*P	**P**	**00 39 04.8**	**+0.4**
BDFB	**Brasilia**	**46.21**	**333**	P	**P**	**00 39 05.3**	**+0.7**
	comp=Z,20nm,0.4s,baz=152,slow=8.1,SNR=53						
BDFB				PcP	**PcP**	**00 40 36.4**	**0.0**
	comp=Z,17nm,0.6s,baz=164,slow=15,SNR=7.1						
BDFB				ScP	**ScP**	**00 44 08.7**	**+1.1**
	comp=Z,3.7nm,0.6s,baz=148,slow=14,SNR=2.8						
	comp=Z,20nm,0.4s						
BDFB	**Brasilia**	**46.21**	**333**	P	**P**	**00 39 05.4**	**+0.8**
BDFB	**Brasilia**	**46.21**	**333**	P	**P**	**00 39 05.4**	**+0.8**
BDFB				pmax	pmax		
	comp=Z,27nm,0.6s						
BDFB	**Brasilia**	**46.21**	**333**	*e*P	**P**	**00 39 05.3**	**+0.7**
SHEL	**Horse Pasture**	**46.40**	**30**	P	**P**	**00 39 07.0**	**+1.1**
SHEL				IAmb	IAmb	00 39 07.9	
	comp=Z,153nm,0.9s						
SHEL	**Horse Pasture**	**46.40**	**30**	P	**P**	**00 39 07.1**	**+1.1**
SHEL				pmax	pmax		
	comp=Z,153nm,0.9s						
SHEL	**Horse Pasture**	**46.40**	**30**	P	**P**	**00 39 06.5**	**+0.6**
PB15	**IPOC Station P**	**46.52**	**303**	P	**P**	**00 39 07.8**	**+0.7**
PB10	**IPOC Station P**	**46.72**	**301**	P	**P**	**00 39 08.8**	**+0.4**
LVC	**Limon Verde**	**46.81**	**304**	P	**P**	**00 39 10.3**	**+0.9**
	comp=Z,15nm,0.4s,baz=116,slow=5.3,SNR=19						
LVC				PcP	**PcP**	**00 40 39.4**	**+0.8**
	comp=Z,21nm,0.7s,baz=111,slow=8.6,SNR=4.3						
LVC				ScP	**ScP**	**00 44 09.4**	**-1.1**
	comp=Z,14nm,0.7s,baz=121,slow=5.9,SNR=8.7						
	comp=Z,15nm,0.4s						
LVC	**Limon Verde**	**46.81**	**304**	P	**P**	**00 39 10.7**	**+1.2**
LVC				IAmb	IAmb	00 39 16.9	
	comp=Z,38nm,0.5s						
LVC	**Limon Verde**	**46.81**	**304**	P	**P**	**00 39 10.7**	**+1.2**
LVC				pmax	pmax		
	comp=Z,38nm,0.5s						
LVC	**Limon Verde**	**46.81**	**304**	*e*P	**P**	**00 39 10.2**	**+0.7**
LVC	**Limon Verde**	**46.81**	**304**	P	**P**	**00 39 10.5**	**+1.0**
LVC				pP	**pwP**	**00 39 59.7**	**-1.0**
LVC				PcP	**PcP**	**00 40 39.5**	**+0.8**
LVC				ScP	**ScP**	**00 44 11.2**	**+0.7**
CRZF	**Crozet Islands**	**46.85**	**111**	P	**P**	**00 39 09.4**	**+0.3**
CRZF				IAmb	IAmb	00 39 27.5	
	comp=Z,76nm,0.9s						
PB06	**IPOC Station P**	**47.00**	**303**	P	**P**	**00 39 11.1**	**+0.3**
ARAG	**Araguaiana, MT**	**47.11**	**328**	*e*P	**P**	**00 39 11.8**	**+0.3**
BOSA	**Boshof**	**47.25**	**73**	P	**P**	**00 39 12.3**	**-0.3**
	comp=Z,95nm,0.5s,baz=215,slow=6.4,SNR=635						
BOSA				PcP	**PcP**	**00 40 40.6**	**+0.7**
	comp=Z,33nm,0.9s,baz=214,slow=3.5,SNR=4.8						
BOSA				S	**S**	**00 45 48.1**	**-0.2**
	comp=Z,6.0nm,1.1s,baz=282,slow=20,SNR=3.7						
	comp=Z,95nm,0.5s						
BOSA	**Boshof**	**47.25**	**73**	P	**P**	**00 39 12.7**	**+0.1**
BOSA				IAmb	IAmb	00 39 13.4	
	comp=Z,234nm,1.2s						
BOSA	**Boshof**	**47.25**	**73**	P	**P**	**00 39 12.7**	**+0.1**
BOSA				pmax	pmax		
	comp=Z,234nm,1.2s						
BOSA	**Boshof**	**47.25**	**73**	⇓P	**P**	**00 39 12.6**	**+0.1**
BOSA				PcP	**PcP**	**00 40 40.5**	**+0.7**
PB04	**IPOC Station P**	**47.58**	**302**	P	**P**	**00 39 15.6**	**+0.3**
PB04				IAmb	IAmb	00 39 17.5	
	comp=Z,85nm,1.0s						
PB03	**IPOC Station P**	**47.66**	**303**	P	**P**	**00 39 16.4**	**+0.5**
PB09	**IPOC Station P**	**47.67**	**304**	P	**P**	**00 39 17.4**	**+1.5**
PB07	**IPOC Station P**	**48.00**	**303**	P	**P**	**00 39 19.2**	**+0.8**
SALV	**Santo Antonio**	**48.05**	**323**	*e*P	**P**	**00 39 18.7**	**0.0**
PB02	**IPOC Station P**	**48.37**	**303**	P	**P**	**00 39 22.1**	**+0.9**
PB02				IAmb	IAmb	00 39 23.2	
	comp=Z,79nm,1.0s						
PB01	**IPOC Station P**	**48.44**	**304**	P	**P**	**00 39 22.5**	**+0.8**
BBSD	**Serra de San D**	**48.48**	**316**	*e*P	**P**	**00 39 22.5**	**+0.6**
WIN	**Windhoek**	**48.57**	**61**	P	**P**	**00 39 23.3**	**+0.5**
WIN				IAmb	IAmb	00 39 25.3	
	comp=Z,78nm,1.1s						
WIN	**Windhoek**	**48.57**	**61**	P	**P**	**00 39 23.3**	**+0.5**
WIN				pmax	pmax		
	comp=Z,78nm,1.1s						
SDBA	**SAO DESIDERIO**	**48.68**	**338**	*e*P	**P**	**00 39 23.6**	**+0.1**
PB08	**IPOC Station P**	**49.10**	**305**	P	**P**	**00 39 28.5**	**+1.4**
TA01	**Diego Aracena**	**49.16**	**304**	P	**P**	**00 39 28.5**	**+1.5**
TA02	**Huaiquique**	**49.40**	**304**	P	**P**	**00 39 29.7**	**+0.9**
GO01	**Chusmiza**	**49.54**	**305**	P	**P**	**00 39 30.8**	**+0.3**
PTLB	**Pontes e Lacer**	**49.59**	**319**	P	**P**	**00 39 30.7**	**+0.5**
PTLB	**Pontes e Lacer**	**49.59**	**319**	*e*P	**P**	**00 39 30.8**	**+0.5**
SIV	**San Ignacio**	**49.75**	**316**	P	**P**	**00 39 31.7**	**+0.2**
	comp=Z,82nm,0.5s,baz=164,slow=8.1,SNR=467						
SIV				ScP	**ScP**	**00 44 22.0**	**-0.6**
	comp=Z,4.4nm,0.4s,baz=209,slow=7.1,SNR=6.3						
	comp=Z,82nm,0.5s						
MNMC	**Minye Minye**	**50.19**	**305**	P	**P**	**00 39 36.3**	**+1.2**
MNMC				IAmb	IAmb	00 39 37.2	
	comp=Z,94nm,0.6s						
LBTB	**Lobatse**	**50.42**	**71**	P	**P**	**00 39 36.2**	**-0.4**
	comp=Z,120nm,0.6s,baz=195,slow=8.6,SNR=226						
LBTB				ScP	**ScP**	**00 44 26.1**	**+0.6**
	comp=Z,3.7nm,0.6s,baz=239,slow=3.9,SNR=3.9						
	comp=Z,120nm,0.6s						
LBTB	**Lobatse**	**50.42**	**71**	P	**P**	**00 39 36.8**	**+0.1**
LBTB				IAmb	IAmb	00 39 37.5	
	comp=Z,142nm,0.8s						
LBTB	**Lobatse**	**50.42**	**71**	*i* P	**P**	**00 39 35.6**	**-1.1**
LBTB	**Lobatse**	**50.42**	**71**	P	**P**	**00 39 36.8**	**+0.1**
LBTB				pmax	pmax		
	comp=Z,143nm,0.8s						
LBTB	**Lobatse**	**50.42**	**71**	P	**P**	**00 39 36.7**	**+0.1**
LBTB				sP	**PcP**	**00 40 52.4**	**+0.9**
LBTB				ScP	**ScP**	**00 44 26.9**	**+1.4**
SNDB	**Serra Nova Dou**	**50.54**	**330**	*e*P	**P**	**00 39 38.0**	**+0.6**
CASY	**Casey**	**50.80**	**160**	P	**P**	**00 39 39.3**	**+0.5**
CASY	**Casey**	**50.80**	**160**	P	**P**	**00 39 38.8**	**+0.1**
PB16	**IPOC Station P**	**50.86**	**306**	P	**P**	**00 39 41.8**	**+1.3**
PB12	**IPOC Station P**	**50.95**	**305**	P	**P**	**00 39 41.4**	**+0.7**
POGA	**Pongola**	**51.49**	**79**	P	**P**	**00 39 44.8**	**+0.4**
POGA				IAmb	IAmb	00 39 45.2	
	comp=Z,83nm,0.5s						
PB18	**Visviri**	**51.52**	**306**	P	**P**	**00 39 47.6**	**+2.3**
PB18				IAmb	IAmb	00 39 49.5	
	comp=Z,55nm,1.0s						
TSUM	**Tsumeb**	**51.73**	**59**	P	**P**	**00 39 46.7**	**+0.2**
	comp=Z,48nm,0.5s,baz=193,slow=6.6,SNR=61						
	comp=Z,48nm,0.5s						
TSUM	**Tsumeb**	**51.73**	**59**	P	**P**	**00 39 47.0**	**+0.5**
TSUM				IAmb	IAmb	00 39 47.4	
	comp=Z,56nm,0.6s						
TSUM	**Tsumeb**	**51.73**	**59**	P	**P**	**00 39 46.9**	**+0.5**
TSUM				pP	**pwP**	**00 40 38.7**	**+1.3**
LPAZ	**La Paz**	**52.14**	**308**	P	**P**	**00 39 51.1**	**+1.1**
	comp=Z,53nm,0.5s,baz=124,slow=4.7,SNR=206						
LPAZ				PcP	**PcP**	**00 40 58.8**	**+0.2**
	comp=Z,18nm,0.8s,baz=110,slow=5.8,SNR=1.9						
LPAZ				ScP	**ScP**	**00 44 32.8**	**-0.8**
	comp=Z,2.6nm,0.4s,baz=70,slow=3.5,SNR=4.5						
LPAZ				S	**S**	**00 46 58.9**	**+1.8**
	comp=Z,2.1nm,1.0s,baz=225,slow=21,SNR=3.1						
	comp=Z,53nm,0.5s						
LPAZ	**La Paz**	**52.14**	**308**	P	**P**	**00 39 51.5**	**+1.5**
LPAZ				IAmb	IAmb	00 39 53.0	
	comp=Z,51nm,0.7s						
LPAZ	**La Paz**	**52.14**	**308**	P	**P**	**00 39 51.5**	**+1.5**
LPAZ				pmax	pmax		
	comp=Z,51nm,0.7s						
LPAZ	**La Paz**	**52.14**	**308**	*e*P	**P**	**00 39 51.2**	**+1.2**
LPAZ	**La Paz**	**52.14**	**308**	P	**P**	**00 39 51.1**	**+1.1**
LPAZ				pP	**pwP**	**00 40 41.6**	**-0.7**
LPAZ				PcP	**PcP**	**00 40 59.3**	**+0.7**
LPAZ				ScP	**ScP**	**00 44 33.9**	**+0.3**
VILB	**Vilhena**	**52.27**	**319**	P	**P**	**00 39 50.9**	**+0.6**
VILB	**Vilhena**	**52.27**	**319**	*e*P	**P**	**00 39 50.7**	**+0.4**
PDRB	**Porto dos Gac**	**52.42**	**323**	*e*P	**P**	**00 39 51.3**	**0.0**
SMTB	**Santa Maria do**	**52.67**	**335**	*e*P	**P**	**00 39 54.0**	**+0.7**
CLDB	**Colider**	**52.84**	**325**	*e*P	**P**	**00 39 54.2**	**-0.2**
PAF	**Port-aux-Franc**	**52.87**	**126**	P	**P**	**00 39 55.5**	**+1.2**
PAF	**Port-aux-Franc**	**52.87**	**126**	P	**P**	**00 39 55.5**	**+1.2**
PAF				pmax	pmax		
	comp=Z,1μm,1.8s						
DRV	**Dumont d'Urvil**	**53.84**	**174**	⇓P	**P**	**00 40 00.8**	**-0.2**
DRV				PcP	**PcP**	**00 41 03.1**	**-0.5**
RCBR	**Riachuelo**	**53.88**	**350**	*e*P	**P**	**00 40 02.1**	**+0.1**
RCBR	**Riachuelo**	**53.88**	**350**	P	**P**	**00 40 01.5**	**-0.5**
RCBR				PcP	**PcP**	**00 41 05.2**	**+0.7**
MOPA	**Mopani**	**54.52**	**76**	*i* P	**P**	**00 40 06.5**	**0.0**
MUSN	**Musina, Limpop**	**54.80**	**73**	*i* P	**P**	**00 40 08.8**	**+0.2**
PRPB	**Parauapebas**	**55.77**	**333**	*e*P	**P**	**00 40 15.9**	**+0.4**
NPGB	**Novo Progresso**	**56.35**	**327**	*e*P	**P**	**00 40 19.5**	**-0.2**
SAML	**Samuel**	**57.02**	**317**	P	**P**	**00 40 24.7**	**+0.4**
SAML				IAmb	IAmb	00 40 25.7	
	comp=Z,120nm,1.0s						
SAML	**Samuel**	**57.02**	**317**	P	**P**	**00 40 24.7**	**+0.4**
SAML				pmax	pmax		
	comp=Z,120nm,1.0s						
SAML	**Samuel**	**57.02**	**317**	*e*P	**P**	**00 40 24.7**	**+0.4**
SAML	**Samuel**	**57.02**	**317**	⇓P	**P**	**00 40 24.6**	**+0.3**
SAML				pP	**pP**	**00 41 13.0**	**-0.2**
ETMB	**Extrema**	**57.30**	**313**	P	**P**	**00 40 26.4**	**+0.1**
ETMB	**Extrema**	**57.30**	**313**	*e*P	**P**	**00 40 26.6**	**+0.3**
ITTB	**Itaituba**	**59.01**	**327**	*e*P	**P**	**00 40 37.9**	**-0.2**
TMAB	**Tom-Au,PA,Br**	**59.08**	**336**	*e*P	**P**	**00 40 39.4**	**+0.9**
NNA	**Nana**	**59.65**	**301**	P	**P**	**00 40 43.2**	**+0.7**
	comp=Z,24nm,0.4s,baz=167,slow=6.5,SNR=18						
	comp=Z,24nm,0.4s						
NNA	**Nana**	**59.65**	**301**	P	**P**	**00 40 43.5**	**+1.0**
NNA				IAmb	IAmb	00 40 44.3	
	comp=Z,57nm,1.0s						
NNA	**Nana**	**59.65**	**301**	*de*P	**P**	**00 40 43.3**	**+0.7**
NNA	**Nana**	**59.65**	**301**	P	**P**	**00 40 43.3**	**+0.7**
LSZ	**Lusaka**	**60.00**	**68**	P	**P**	**00 40 45.4**	**+0.4**
LSZ	**Lusaka**	**60.00**	**68**	P	**P**	**00 40 45.4**	**+0.4**
LSZ				pmax	pmax		
	comp=Z,117nm,0.6s						
LSZ	**Lusaka**	**60.00**	**68**	⇓P	**P**	**00 40 45.2**	**+0.1**
MALB	**Monte Alegre**	**61.02**	**329**	*e*P	**P**	**00 40 51.5**	**-0.2**
MACA	**Manacapuru-AM**	**61.62**	**322**	P	**P**	**00 40 55.3**	**-0.4**
MACA				IAmb	IAmb	00 40 55.8	
	comp=Z,52nm,0.8s						
MACA	**Manacapuru-AM**	**61.62**	**322**	*e*P	**P**	**00 40 55.1**	**-0.6**
CZSB	**Cruzeiro do Su**	**61.73**	**308**	P	**P**	**00 40 56.6**	**+0.1**
CZSB	**Cruzeiro do Su**	**61.73**	**308**	*e*P	**P**	**00 40 56.3**	**-0.2**
MCPB	**Macapa, AP**	**61.91**	**332**	*e*P	**P**	**00 40 58.1**	**+0.5**
TEFE	**Tefe**	**62.59**	**318**	*e*P	**P**	**00 41 02.2**	**0.0**
VOI	**Vohitsoka**	**63.63**	**89**	P	**P**	**00 41 10.5**	**+1.4**
VOI				IAmb	IAmb	00 41 11.0	
	comp=Z,24nm,0.8s						
VOI	**Vohitsoka**	**63.63**	**89**	P	**P**	**00 41 10.8**	**+1.7**
TBTG	**Tabatinga, AM**	**63.87**	**312**	*e*P	**P**	**00 41 09.8**	**-0.8**
ABPO	**Ambohimpanom**	**66.26**	**87**	P	**P**	**00 41 28.2**	**+2.1**
ABPO	**Ambohimpanom**	**66.26**	**87**	P	**P**	**00 41 28.2**	**+2.1**
ABPO				pmax	pmax		
	comp=Z,38nm,1.3s						
ABPO	**Ambohimpanom**	**66.26**	**87**	P	**P**	**00 41 27.9**	**+1.8**
ABPO				pP	**pwP**	**00 42 20.8**	**+0.6**
ABPO				sP	**sP**	**00 42 46.3**	**+5.9**
SGCB	**S£o Gabriel d**	**66.57**	**317**	*e*P	**P**	**00 41 26.9**	**-1.0**
OPO	**Ambohidratompo**	**66.61**	**87**	P	**P**	**00 41 29.9**	**+1.5**
	comp=Z,24nm,0.8s,baz=223,slow=5.5,SNR=20						
	comp=Z,24nm,0.8s						
BOAV	**Boa Vista**	**66.82**	**324**	P	**P**	**00 41 29.1**	**-0.4**
BOAV	**Boa Vista**	**66.82**	**324**	*e*P	**P**	**00 41 28.7**	**-0.7**
MPGF	**Montagnes des**	**67.33**	**333**	P	**P**	**00 41 32.1**	**-0.5**
MCRA	**Macar, Loja**	**67.80**	**302**	P	**P**	**00 41 36.1**	**+0.5**
LIC	**Lamto**	**67.99**	**25**	⇑*e*P	**P**	**00 41 37.3**	**+0.6**
	comp=Z,428nm,0.5s						
KIC	**Kosan Boka**	**68.18**	**25**	⇓*e*P	**P**	**00 41 38.5**	**+0.6**
	comp=Z,302nm,0.8s						
TIC	**Toumodi**	**68.40**	**25**	⇓*i*P	**P**	**00 41 39.9**	**+0.6**
	comp=Z,198nm,0.6s						
DBIC	**Dimbokro**	**68.46**	**25**	P	**P**	**00 41 40.1**	**+0.6**
	comp=Z,97nm,0.4s,baz=195,slow=5.5,SNR=363						
	comp=Z,97nm,0.4s						
DBIC	**Dimbokro**	**68.46**	**25**	LR	LR	01 16 19.8	
	comp=Z,123nm,19.1s,baz=106,slow=39						
DBIC	**Dimbokro**	**68.46**	**25**	P	**P**	**00 41 40.5**	**+0.9**
DBIC	**Dimbokro**	**68.46**	**25**	P	**P**	**00 41 40.5**	**+0.9**
DBIC				pmax	pmax		
	comp=Z,129nm,0.5s						
DBIC	**Dimbokro**	**68.46**	**25**	P	**P**	**00 41 40.3**	**+0.7**
PORT	**Chimborazo Vol**	**69.90**	**304**	P	**P**	**00 41 51.8**	**+2.5**
CHSH	**Refugio Sur-Vo**	**69.92**	**304**	P	**P**	**00 41 51.0**	**+1.7**
SALI	**Salinas**	**70.20**	**302**	P	**P**	**00 41 51.7**	**+1.4**
SALI				IAmb	IAmb	00 41 53.3	
	comp=Z,36nm,0.7s						
SLOR	**San Lorenzo -**	**70.45**	**305**	P	**P**	**00 41 54.4**	**+2.0**
SLOR				IAmb	IAmb	00 41 58.2	
	comp=Z,52nm,0.6s						
PULU	**Pululahua**	**71.13**	**305**	P	**P**	**00 41 58.2**	**+1.8**
MACC	**Macarena, Meta**	**71.19**	**311**	*e*P	**P**	**00 41 55.9**	**-0.4**
IMBA	**Imbabura, San**	**71.23**	**306**	P	**P**	**00 41 59.1**	**+2.0**
OTAV	**Otavalo**	**71.30**	**305**	P	**P**	**00 41 59.1**	**+1.6**
OTAV				IAmb	IAmb	00 42 00.1	
	comp=Z,58nm,0.7s						
OTAV	**Otavalo**	**71.30**	**305**	P	**P**	**00 41 59.1**	**+1.6**
OTAV				pmax	pmax		
	comp=Z,58nm,0.7s						
OTAV	**Otavalo**	**71.30**	**305**	*e*P	**P**	**00 41 58.8**	**+1.3**
OTAV	**Otavalo**	**71.30**	**305**	*e*P	**P**	**00 41 59.0**	**+1.4**
OTAV	**Otavalo**	**71.30**	**305**	P	**P**	**00 41 58.8**	**+1.3**
CUSE	**Cuicocha Este**	**71.34**	**305**	*e*P	**P**	**00 42 01.7**	**+4.0**
FLOC	**Florencia**	**71.38**	**309**	*e*P	**P**	**00 41 55.9**	**-1.6**
TULM	**Tulcn-Chalpat**	**71.46**	**306**	P	**P**	**00 42 00.4**	**+1.9**
CMBC	**Cumbal**	**71.68**	**306**	*e*P	**P**	**00 41 59.8**	**0.0**
GARC	**Garzon, Huila**	**71.87**	**309**	*e*P	**P**	**00 41 59.8**	**-0.9**
CRUC	**La Cruz**	**71.89**	**307**	*e*P	**P**	**00 42 02.7**	**+1.7**
BETC	**Betania**	**72.30**	**309**	*e*P	**P**	**00 42 02.7**	**-0.3**
SBV	**Sambava**	**72.32**	**86**	P	**P**	**00 42 05.4**	**+2.4**
BBAC	**Balboa, Cauca**	**72.42**	**307**	*e*P	**P**	**00 42 02.7**	**-1.2**
POPC	**Popayan, Colom**	**72.66**	**308**	*e*P	**P**	**00 42 04.6**	**-0.7**
VILC	**Villavicencio,**	**72.93**	**312**	*e*P	**P**	**00 42 06.5**	**-0.2**
PRAC	**Prado**	**73.03**	**310**	*e*P	**P**	**00 42 06.5**	**-0.7**
JAMC	**Jamundi, Valle**	**73.28**	**308**	*e*P	**P**	**00 42 06.5**	**-2.4**
ORTC	**Ortega, Tolima**	**73.34**	**310**	*e*P	**P**	**00 42 10.4**	**+1.3**
CHIC	**Chingaza**	**73.42**	**312**	*e*P	**P**	**00 42 06.5**	**-3.4**
GR1C	**Gorgona, Isla**	**73.69**	**307**	*e*P	**P**	**00 42 10.4**	**-0.6**
ROSC	**El Rosal**	**73.84**	**311**	P	**P**	**00 42 13.4**	**+1.0**
	comp=Z,50nm,0.8s,baz=127,slow=4.5,SNR=24						
	comp=Z,50nm,0.8s						
ROSC	**El Rosal**	**73.84**	**311**	P	**P**	**00 42 13.8**	**+1.5**
ROSC				IAmb	IAmb	00 42 15.3	
	comp=Z,49nm,0.8s						
ROSC	**El Rosal**	**73.84**	**311**	P	**P**	**00 42 13.9**	**+1.5**
ROSC				pmax	pmax		
	comp=Z,49nm,0.8s						
YOTC	**Yotoco, Valle**	**73.84**	**309**	*e*P	**P**	**00 42 11.3**	**-0.7**
ANIL	**Santa Ana**	**73.94**	**310**	⇑*e*P	**P**	**00 42 11.3**	**-1.5**
MBAR	**Mbarara**	**74.06**	**63**	P	**P**	**00 42 15.9**	**+2.4**
	comp=Z,8.1nm,0.4s,baz=188,slow=4.6,SNR=25						
	comp=Z,8.1nm,0.4s						
MBAR	**Mbarara**	**74.06**	**63**	P	**P**	**00 42 16.5**	**+3.1**
MBAR	**Mbarara**	**74.06**	**63**	⇓*e*P	**P**	**00 42 11.3**	**-2.1**
MBAR				pmax	pmax		
	comp=Z,19nm,1.0s						
WHZ	**Wether Hill Ro**	**74.18**	**191**	P	**P**	**00 42 13.8**	**+0.3**
WHZ				IAmb	IAmb	00 42 51.6	
	comp=Z,119nm,1.8s						
MALC	**Bahia Malaga**	**74.27**	**308**	*e*P	**P**	**00 42 14.2**	**-0.1**
RUSC	**La Rusia**	**74.34**	**313**	P	**P**	**00 42 15.2**	**-0.2**
RUSC				IAmb	IAmb	00 42 15.7	
	comp=Z,99nm,1.1s						
RUSC	**La Rusia**	**74.34**	**313**	*e*P	**P**	**00 42 19.1**	**+3.7**
SPBC	**San Pablo de B**	**74.49**	**312**	*e*P	**P**	**00 42 13.3**	**-2.5**
GUY2C	**Guyana, Caldas**	**74.59**	**310**	*e*P	**P**	**00 42 16.2**	**-0.6**
DCZ	**Deep Cove**	**74.68**	**191**	P	**P**	**00 42 17.1**	**+0.8**
DCZ				IAmb	IAmb	00 42 50.9	
	comp=Z,87nm,1.5s						
MLZ	**Mavora Lakes**	**74.68**	**192**	P	**P**	**00 42 16.8**	**+0.3**
MLZ				IAmb	IAmb	00 44 22.6	
	comp=Z,162nm,2.0s						
NORC	**Norcasia**	**74.71**	**311**	*e*P	**P**	**00 42 15.2**	**-1.8**
ODZ	**Otahua Downs**	**74.72**	**194**	P	**P**	**00 42 17.9**	**+1.3**
ODZ				IAmb	IAmb	00 42 34.7	
	comp=Z,164nm,1.9s						
BARC	**Barichara**	**75.02**	**313**	*e*P	**P**	**00 42 16.2**	**-2.8**
TOSP	**Speyside**	**75.28**	**327**	P	**P**	**00 42 20.5**	**+0.4**
TOSP				IAmb	IAmb	00 44 22.5	
	comp=Z,127nm,1.4s						
BAUV	**El Baul**	**75.38**	**319**	P	**P**	**00 42 21.1**	**+0.5**
BAUV				IAmb	IAmb	00 42 21.9	
	comp=Z,85nm,0.9s						
LBZ	**Lake Benmore**	**75.42**	**193**	P	**P**	**00 42 21.1**	**+0.4**
LBZ				IAmb	IAmb	00 43 36.4	
	comp=Z,198nm,2.0s						
CBOC	**Ciudad Bolivar**	**75.43**	**310**	*e*P	**P**	**00 42 22.9**	**+1.7**
PTBC	**PUERTO BERRIO,**	**75.45**	**312**	*e*P	**P**	**00 42 19.1**	**-2.1**
PAMC	**Pamplona, Colo**	**75.53**	**314**	*e*P	**P**	**00 42 20.0**	**-2.1**
MQZ	**McQueen's Vall**	**75.78**	**195**	P	**P**	**00 42 23.1**	**+0.4**
KIBK	**Kibwezi**	**75.95**	**70**	P	**P**	**00 42 28.0**	**+3.8**
KIBK				IAmb	IAmb	00 42 28.8	
	comp=Z,26nm,0.8s						
RPZ	**Rata Peaks**	**75.98**	**194**	P	**P**	**00 42 24.1**	**+0.3**
	comp=Z,11nm,0.9s,baz=161,slow=17,SNR=1.6						
	comp=Z,11nm,0.9s						
RPZ	**Rata Peaks**	**75.98**	**194**	P	**P**	**00 42 23.9**	**+0.1**
SDV	**Santo Domingo**	**76.21**	**316**	P	**P**	**00 42 26.3**	**+0.6**
SDV	**Santo Domingo**	**76.21**	**316**	*e*P	**P**	**00 42 26.2**	**+0.6**
BIRV	**Birongo**	**76.23**	**321**	P	**P**	**00 42 26.3**	**+0.8**
KOWA	**Kowa**	**76.23**	**24**	P	**P**	**00 42 27.1**	**+1.7**
KOWA				IAmb	IAmb	00 42 27.7	
	comp=Z,34nm,0.6s						
TORD	**Torodi Ar. Bea**	**76.24**	**30**	P	**P**	**00 42 26.8**	**+1.3**
	comp=Z,482nm,0.4s,baz=197,slow=6.2,SNR=4628						
FOZ	**Fox Glacier**	**76.31**	**193**	P	**P**	**00 42 26.5**	**+0.9**
GRGR	**Grenville**	**76.39**	**326**		**P**	**00 42 27.0**	**+0.7**
ZARC	**Zaragoza, Cauc**	**76.48**	**312**	*e*P	**P**	**00 42 25.8**	**-1.1**
DBBC	**Dabeiba**	**76.56**	**310**	*e*P	**P**	**00 42 26.8**	**-0.7**
KMBO	**Kilima Mbogo**	**76.63**	**69**	P	**P**	**00 42 32.2**	**+4.1**
KMBO	**Kilima Mbogo**	**76.63**	**69**	P	**P**	**00 42 32.2**	**+4.1**
KMBO				pmax	pmax		
	comp=Z,20nm,1.3s						
LTZ	**Lake Taylor**	**76.74**	**195**	P	**P**	**00 42 29.0**	**+0.8**
LTZ				IAmb	IAmb	00 42 42.9	
	comp=Z,72nm,1.5s						
UREC	**San Jos de Ur**	**76.97**	**311**	*e*P	**P**	**00 42 25.8**	**-3.9**
SVB	**Belmont**	**77.36**	**327**	P	**P**	**00 42 32.4**	**+0.6**
APAC	**Apartado, Choc**	**77.51**	**310**	*e*P	**P**	**00 42 31.6**	**-1.1**
BSWZ	**Blackbirch Sta**	**77.56**	**197**	P	**P**	**00 42 33.4**	**+0.7**
THZ	**Tophouse**	**77.66**	**196**	P	**P**	**00 42 35.1**	**+1.9**
THZ				IAmb	IAmb	00 42 39.8	
	comp=Z,25nm,0.6s						
MCLT	**Moule a Chique**	**77.70**	**327**	P	**P**	**00 42 34.0**	**+0.4**
DSZ	**Denniston Nort**	**77.82**	**195**	P	**P**	**00 42 33.4**	**-0.8**
DSZ				IAmb	IAmb	00 44 43.7	
	comp=Z,97nm,1.6s						
SNZO	**South Karori**	**77.84**	**197**	P	**P**	**00 42 34.8**	**+0.6**
TAU	**Tasmania Unive**	**77.89**	**176**	P	**P**	**00 42 34.4**	**0.0**
TAU				IAmb	IAmb	00 42 34.6	
	comp=Z,26nm,0.7s						
TAU	**Tasmania Unive**	**77.89**	**176**	P	**P**	**00 42 34.4**	**0.0**
TAU				pmax	pmax		
	comp=Z,26nm,0.7s						
MRNZ	**Matariki Terra**	**78.03**	**196**	P	**P**	**00 42 35.2**	**-0.1**
NNZ	**Nelson**	**78.12**	**196**	P	**P**	**00 42 36.0**	**+0.2**
NNZ				IAmb	IAmb	00 42 57.6	
	comp=Z,125nm,1.4s						
BFZ	**Birch Farm**	**78.21**	**199**	P	**P**	**00 42 36.8**	**+0.5**
MRZ	**Mangatainoka R**	**78.34**	**198**	P	**P**	**00 42 37.4**	**+0.5**
MRZ				IAmb	IAmb	00 43 38.6	
	comp=Z,105nm,1.7s						
TKNZ	**Takaka Hill**	**78.36**	**196**	P	**P**	**00 42 36.5**	**-0.6**
MPOM	**Morne Pois Mar**	**78.37**	**327**	P	**P**	**00 42 37.4**	**+0.1**
BIM	**Bigot**	**78.50**	**327**	P	**P**	**00 42 39.0**	**+0.9**
QRZ	**Quartz Range**	**78.63**	**196**	P	**P**	**00 42 37.1**	**-1.4**
QRZ				IAmb	IAmb	00 43 28.4	
	comp=Z,192nm,1.9s						
UPD2	**Meteti**	**78.67**	**309**	*e*P	**P**	**00 42 39.3**	**+0.3**
HATO	**Hato, Curacao**	**78.71**	**319**	P	**P**	**00 42 39.5**	**+0.3**
FDF	**Fort de France**	**78.73**	**327**	P	**P**	**00 42 40.9**	**+1.6**
FDF	**Fort de France**	**78.73**	**327**	P	**P**	**00 42 40.9**	**+1.6**
FDF				pmax	pmax		
	comp=Z,139nm,1.2s						
SJCC	**San Jacinto, C**	**78.81**	**312**	*e*P	**P**	**00 42 38.3**	**-1.5**
SVN	**Savane Anatole**	**78.84**	**327**	P	**P**	**00 42 40.6**	**+0.8**
CRJC	**Cerrejon, Guaj**	**78.99**	**315**	*e*P	**P**	**00 42 36.4**	**-4.4**
URIC	**Uribia, Colomb**	**79.31**	**316**	P	**P**	**00 42 41.0**	**-1.4**
URIC	**Uribia, Colomb**	**79.31**	**316**	*e*P	**P**	**00 42 38.3**	**-4.1**
AUA1	**Aruba**	**79.36**	**318**	P	**P**	**00 42 42.5**	**-0.2**
SMRC	**Santa Marta, M**	**79.61**	**314**	*e*P	**P**	**00 42 44.1**	**0.0**
BKZ	**Black Stump Fm**	**79.65**	**199**	P	**P**	**00 42 45.2**	**+1.0**
BKZ				IAmb	IAmb	00 43 57.8	
	comp=Z,121nm,2.0s						
LODK	**Lodwar**	**79.73**	**65**	P	**P**	**00 42 48.8**	**+3.9**
BCIP	**Isla Barro Col**	**79.95**	**308**	P	**P**	**00 42 46.8**	**+0.9**
BCIP	**Isla Barro Col**	**79.95**	**308**	P	**P**	**00 42 46.8**	**+0.9**
BCIP				pmax	pmax		
	comp=Z,217nm,1.8s						
CBE	**Ff, Capester**	**80.13**	**327**	P	**P**	**00 42 47.9**	**+1.1**
GDHS	**Morne Mazeau,**	**80.36**	**327**	P	**P**	**00 42 49.3**	**+1.2**
URZ	**Urewera**	**80.43**	**200**	P	**P**	**00 42 46.7**	**-1.5**
	comp=Z,12nm,0.8s,baz=152,slow=13,SNR=8.6						
	comp=Z,12nm,0.8s						
HIZ	**Hauiti**	**80.55**	**198**	P	**P**	**00 42 48.4**	**-0.5**
HIZ				IAmb	IAmb	00 42 49.7	
	comp=Z,98nm,1.5s						
TOZ	**Tahuroa Road**	**81.21**	**199**	P	**P**	**00 42 52.5**	**0.0**
SRBA	**San Rafael, Bu**	**81.46**	**305**	P	**P**	**00 42 54.9**	**+0.9**
SRBA				IAmb	IAmb	00 42 55.8	
	comp=Z,38nm,1.1s						
PEZE	**Perez Zeledon,**	**81.73**	**304**	P	**P**	**00 42 56.5**	**+1.1**
PEZE				IAmb	IAmb	00 42 57.4	
	comp=Z,43nm,0.9s						
RIMA	**Rio Macho**	**82.16**	**304**	P	**P**	**00 42 58.5**	**+0.8**
RIMA				IAmb	IAmb	00 42 59.4	
	comp=Z,67nm,1.6s						
SMRT	**St. Maarten**	**82.42**	**326**	P	**P**	**00 42 58.9**	**+0.2**
SMRT				IAmb	IAmb	00 42 59.3	
	comp=Z,34nm,0.6s						
CDVI	**St. Croix**	**82.63**	**325**	P	**P**	**00 42 59.9**	**+0.1**
CDVI				IAmb	IAmb	00 43 02.6	
	comp=Z,40nm,0.7s						
JTS	**Las Juntas de**	**83.09**	**304**	P	**P**	**00 43 02.7**	**+0.4**
JTS				IAmb	IAmb	00 43 04.1	
	comp=Z,38nm,1.1s						
JTS	**Las Juntas de**	**83.09**	**304**	*d i*P	**P**	**00 43 02.9**	**+0.6**
JTS				pmax	pmax		
	comp=Z,43nm,1.2s						
TOO	**Toolangi**	**83.14**	**175**	P	**P**	**00 43 02.3**	**-0.2**
TOO				IAmb	IAmb	00 46 09.2	
	comp=Z,84nm,1.9s						
TOO	**Toolangi**	**83.14**	**175**	P	**P**	**00 43 02.3**	**-0.2**
TOO				pmax	pmax		
	comp=Z,84nm,1.9s						
MTP	**Monte Pirata**	**83.19**	**324**	P	**P**	**00 43 02.1**	**-0.6**
MTP				IAmb	IAmb	00 43 02.8	
	comp=Z,31nm,0.7s						
COVE	**Coope Vega, Sa**	**83.24**	**304**	P	**P**	**00 43 03.9**	**+0.8**
COVE				IAmb	IAmb	00 43 04.2	
	comp=Z,50nm,0.7s						
CUPR	**Culebra, Puert**	**83.30**	**324**	P	**P**	**00 43 03.5**	**+0.3**
CUPR				IAmb	IAmb	00 43 04.0	
	comp=Z,44nm,0.8s						
HUMP	**Col San Antoni**	**83.32**	**324**	P	**P**	**00 43 04.0**	**+0.7**
HUMP				IAmb	IAmb	00 43 54.5	
	comp=Z,45nm,1.2s						
ORTG	**Ortega, Santa**	**83.37**	**303**	P	**P**	**00 43 04.6**	**+0.8**
CBYP	**Canovanas**	**83.44**	**324**	P	**P**	**00 43 04.2**	**+0.1**
CBYP				IAmb	IAmb	00 43 04.2	

	comp=Z,49nm,0.8s						
OBIP	Obispado Ponce	83.45	323	P	P	00 43 02.4	-1.7
OBIP				IAmb	IAmb	00 43 02.6	
	comp=Z,52nm,1.2s						
CELP	Cerrillos	83.47	323	P	P	00 43 03.1	-1.1
CELP				IAmb	IAmb	00 45 51.3	
	comp=Z,95nm,1.9s						
NWAO	Narrogin (SRO)	83.50	151	P	P	00 43 03.5	-0.8
	comp=Z,15nm,0.5s,baz=175,slow=4.3,SNR=18						
	comp=Z,15nm,0.5s						
NWAO	Narrogin (SRO)	83.50	151	P	P	00 43 03.8	-0.5
NWAO				IAmb	IAmb	00 45 48.8	
	comp=Z,143nm,1.7s						
NWAO	Narrogin (SRO)	83.50	151	P	P	00 43 03.8	-0.5
NWAO				pmax	pmax		
	comp=Z,143nm,1.7s						
MLPR	Magueyes Islan	83.52	323	P	P	00 43 03.8	-0.5
MLPR				IAmb	IAmb	00 43 55.9	
	comp=Z,56nm,1.1s						
GCPR	Guaynabo City	83.55	324	P	P	00 43 03.9	-0.6
GCPR				IAmb	IAmb	00 43 05.7	
	comp=Z,19nm,0.6s						
CRPR	Cabo Rojo, PR	83.57	323	P	P	00 43 03.9	-0.7
CRPR				IAmb	IAmb	00 43 05.0	
	comp=Z,60nm,1.1s						
UUPR	Utuado, UPR, P	83.69	323	P	P	00 43 06.2	+1.0
HZTE	Horizontes, Gu	83.74	303	P	P	00 43 06.4	+0.8
ESPN	Las Esperanzas	84.52	305	P	P	00 43 09.5	0.0
ESPN				IAmb	IAmb	00 43 09.9	
	comp=Z,37nm,0.8s						
ACON	Acoyapa	84.68	304	P	P	00 43 10.2	-0.1
ACON				IAmb	IAmb	00 43 10.8	
	comp=Z,38nm,0.7s						
BOAB	BOACO BROADBAN	85.32	304	P	P	00 43 13.4	-0.1
MATN	Matagalpa	85.86	304	P	P	00 43 17.0	+0.7
SC01	Santiago de lo	86.06	320	P	P	00 43 18.0	+1.0
TAM	Tamanrasset	86.46	31	P	P	00 43 21.9	+2.8
TAM	Tamanrasset	86.46	31	P	P	00 43 21.9	+2.8
TAM				pmax	pmax		
	comp=Z,20nm,0.9s						
BBOO	Buckleboo	87.08	167	P	P	00 43 21.6	-0.5
BBOO				IAmb	IAmb	00 43 22.3	
	comp=Z,24nm,0.8s						
FORT	Forrest	87.89	159	P	P	00 43 26.3	+0.5
STKA	Stephens Creek	88.56	171	P	P	00 43 28.7	-0.3
	comp=Z,27nm,0.7s,baz=153,slow=5.7,SNR=62						
	comp=Z,27nm,0.7s						
STKA	Stephens Creek	88.56	171	P	P	00 43 29.2	+0.2
STKA	Stephens Creek	88.56	171	*d i*P	P	00 43 28.8	-0.2
ATD	Arta Tunnel	90.33	68	P	P	00 43 38.6	+1.2
	comp=Z,0.8nm,1.0s,baz=118,slow=0.5,SNR=5.1						
TTIG	Tnine Tigouga,	91.14	17	P	P	00 43 45.0	+4.1
ZGR	Zagora	91.16	19	P	P	00 43 44.0	+3.0
OUZM	OUZ	91.75	18	P	P	00 43 47.0	+3.3
TZRR	Tazzarine	91.82	19	P	P	00 43 47.0	+3.0
OUK	Oukaimeden	91.87	17	P	P	00 43 48.0	+3.5
ARF	Arif	92.68	20	P	P	00 43 51.0	+3.1
TEIG	Tepich	93.37	305	P	P	00 43 51.6	+0.4
CMIG	Matias Romero	93.47	298	P	P	00 43 51.8	0.0
	comp=Z,6.0nm,0.8s,baz=182,slow=11,SNR=4.6						
	comp=Z,6.0nm,0.8s						
FIGM	Figuig	93.91	22	P	P	00 43 57.0	+3.4
MDT	Midelt	93.97	19	P	P	00 43 56.1	+2.3
	comp=Z,10nm,0.6s,baz=281,slow=2.5,SNR=27						
	comp=Z,10nm,0.6s						
MDT	Midelt	93.97	19	P	P	00 43 56.9	+3.1
PSA00	Pilbara Seismi	95.00	150	P	P	00 43 58.5	-0.4
ASAR	Alice Springs	95.81	163	P	P	00 44 01.8	-0.9
	comp=Z,17nm,0.7s,baz=180,slow=4.2,SNR=129						
ASAR				S	SKSac	00 54 15.1	-2.1
	comp=Z,0.8nm,0.8s,baz=172,slow=8.7,SNR=7.2						
ASAR				PKKPbc	PKKPbc	01 00 48.9	+1.2
	comp=Z,2.0nm,0.4s,baz=19,slow=2.3,SNR=24						
	comp=Z,17nm,0.7s						
ASAR	Alice Springs	95.81	163	P	P	00 44 02.0	-0.6
ASAR	Alice Springs	95.81	163	P	P	00 44 02.0	-0.6
AS31	Alice Springs	95.81	163	P	P	00 44 01.7	-1.0
AS31				IAmb	IAmb	00 44 02.4	
	comp=Z,7.3nm,0.6s						
WRA	Warramunga Arr	99.53	163	P	Pdif	00 44 17.7	-1.7
	comp=Z,4.2nm,0.9s,baz=192,slow=3.8,SNR=6.0						
WRA				PKiKP	PKiKP	00 48 46.1	-1.1
	comp=Z,0.6nm,0.7s,baz=224,slow=1.4,SNR=5.2						
WRA				S	SKSac	00 54 34.5	-1.5
	comp=Z,0.8nm,1.0s,baz=194,slow=12,SNR=4.9						
WRA				PKKPbc	PKKPdf	01 00 39.3	-0.9
	comp=Z,3.0nm,0.5s,baz=351,slow=3.0,SNR=33						
WRA				PKKPab	PKKPbc	01 01 06.9	+29
	comp=Z,3.0nm,1.0s,baz=5.3,slow=4.6,SNR=9.0						
	comp=Z,4.2nm,0.9s						
WRAB	Tennant Creek	99.54	163	⇓*e*P	Pdif	00 44 17.3	-2.1
WRAB				pmax	pmax		
	comp=Z,29nm,3.0s						
KEST	Kesra	99.76	30	P	Pdif	00 44 21.2	+1.4
	comp=Z,8.0nm,0.9s,baz=146,slow=2.5,SNR=9.8						
	comp=Z,8.0nm,0.9s						
CTA	Charters Tower	100.57	174	P	Pdif	00 44 22.7	-1.2
	comp=Z,0.5nm,0.3s,baz=205,slow=4.8,SNR=1.8						
ESDC	Sonseca Array	100.77	19	P	Pdif	00 44 25.6	+1.4
	comp=Z,3.4nm,0.7s,baz=185,slow=4.4,SNR=28						
ESDC				PKiKP	PKiKP	00 48 49.4	+0.7
	comp=Z,0.5nm,0.7s,baz=267,slow=1.2,SNR=1.8						
TKL	Tuckaleechee C	105.43	316	PKiKP	PKiKP	00 48 57.3	0.0
	comp=Z,1.5nm,0.7s,baz=156,slow=17,SNR=2.0						
TXAR	Lajitas Array	108.04	297	PKiKP	PKiKP	00 49 02.2	-0.3
	comp=Z,0.3nm,0.5s,baz=160,slow=2.3,SNR=7.9						
TXAR				PKKPbc	PKKPbc	01 00 14.8	+1.9
	comp=Z,0.7nm,0.4s,baz=1.6,slow=0.3,SNR=16						
TXAR				PKKPab	PKKPdf	01 00 27.6	+0.7
	comp=Z,0.4nm,0.7s,baz=228,slow=1.5,SNR=4.7						
DAVOX	Davos/Dischmat	110.34	27	PKiKP	PKiKP	00 49 06.0	-0.3
	comp=Z,1.5nm,0.4s,baz=275,slow=12,SNR=2.6						
MNTX	Cornudas Mount	110.83	297	P	PKiKP	00 49 06.5	-1.0
	baz=148						
BRTR	Keskin Array B	111.09	47	Pdiff	Pdif	00 45 12.4	+2.2
	comp=Z,0.3nm,0.7s,baz=272,slow=11,SNR=1.8						
BRTR				PKiKP	PKiKP	00 49 06.9	-1.0
	comp=Z,0.7nm,0.6s,baz=196,slow=3.6,SNR=6.5						
BRTR				PP	PP	00 49 47.0	-4.3
	comp=Z,1.1nm,0.7s,baz=172,slow=9.5,SNR=5.5						
BRTR				SKP	SKPdf	00 52 21.1	-0.4
	comp=Z,0.6nm,0.6s,baz=197,slow=2.4,SNR=2.8						
AMTX	Amarillo	111.87	302	P	PKiKP	00 49 09.3	-0.2
	baz=148						
121A	Cookes Peak, D	112.62	296	P	PKiKP	00 49 11.5	+0.4
	baz=147						
GERES	GERESS Array B	113.17	28	PKiKP	PKiKP	00 49 10.8	-0.7
	comp=Z,0.9nm,0.6s,baz=204,slow=2.9,SNR=6.3						
GERES				PP	PP	00 50 02.4	-3.5
	comp=Z,2.4nm,0.8s,baz=190,slow=6.6,SNR=6.0						
KHC	Kasperske Hory	113.41	28	*e*PKP	PKiKP	00 49 09.2	-2.7
KHC				*e*x	x	00 49 32.9	
KHC	Kasperske Hory	113.41	28	*e*PKIKP	PKiKP	00 49 09.2	-2.7
Y22D	IRIS PASSCAL I	113.52	297	P	PKiKP	00 49 14.2	+1.5
	baz=147						
MLR	Muntele Rosu	113.54	38	PKiKP	PKiKP	00 49 11.6	-0.8
	comp=Z,1.7nm,0.4s,baz=234,slow=3.1,SNR=3.8						
TUC	Tucson	113.83	293	P	PKiKP	00 49 13.5	+0.2
	baz=147						
ANMO	Albuquerque	114.04	298	PKiKP	PKPdf	00 49 12.9	-0.8
	comp=Z,0.6nm,0.5s,baz=112,slow=1.6,SNR=2.6						
ANMO				PP	PP	00 50 10.6	-1.7
	comp=Z,2.6nm,0.8s,baz=238,slow=8.7,SNR=4.6						
VRAC	Vranov	114.33	30	Pdiff	Pdif	00 45 32.4	+8.3
	comp=Z,3.0nm,0.3s,baz=180,slow=20,SNR=5.9						
MAUC	Maruska	114.70	31	*e*PKP	PKiKP	00 49 14.6	+0.3
T25A	Trinidad	114.96	301	P	PKPdf	00 49 15.1	-0.4
	baz=147						
DPC	Dobruska-Polom	115.22	30	*e*PKP	PKiKP	00 49 15.5	+0.2
DPC	Dobruska-Polom	115.22	30	*e*PKIKP	PKiKP	00 49 15.5	+0.2
BUR08	Bucovina Ar. S	115.24	37	PKPdf	PKiKP	00 49 16.0	+0.5
OSTC	Ostas	115.38	29	*e*PKP	PKPdf	00 49 15.5	-0.1
OSTC	Ostas	115.38	29	*e*PKIKP	PKPdf	00 49 15.5	-0.1
W18A	Petrified Fore	115.67	296	P	PKPdf	00 49 16.4	-0.5
	baz=146						
GNI	Garni	115.82	54	⇑*i*PKIKP	PKPdf	00 49 16.2	-0.8
X16A	Lo Mia Camp, P	115.88	294		PKiKP	00 49 17.4	+0.1
SDCO	Great Sand Dun	115.94	301	PKPdf	PKiKP	00 49 17.5	0.0
SDCO	Great Sand Dun	115.94	301	P	PKPdf	00 49 17.3	-0.1
	baz=147						
GLA	Glamis	116.36	291	P	PKiKP	00 49 18.2	+0.1
	baz=146						
S22A	4UR Ranch, Cre	116.53	300	P	PKPdf	00 49 18.4	-0.2
	baz=146						
IKP	In-Ko-Pah, Jac	116.64	289	P	PKiKP	00 49 19.0	+0.3
	baz=145						
WUAZ	Wupatki	116.76	295	P	PKiKP	00 49 19.5	+0.5
	baz=146						
MVCO	Mesa Verde	116.83	298	P	PKPdf	00 49 19.1	-0.1
	baz=146,SNR=6.5						
MONP2	Monument Peak	116.99	289	P	PKPdf	00 49 19.3	-0.2
	baz=145						
PDMCI	Parker Dam,Lak	117.06	292	P	PKiKP	00 49 19.4	+0.1
	baz=145,SNR=7.7						
BC3	Big Chuckawall	117.15	291	P	PKiKP	00 49 19.8	0.0
	baz=145						
BELC	Belle Mtn. Jos	117.69	290	P	PKiKP	00 49 21.1	+0.3
	baz=145						
ISCO	Idaho Springs	117.69	302	P	PKiKP	00 49 21.0	+0.2
	baz=146						
KBZ	Khabaz	118.08	51	PKP	PKPdf	00 49 20.4	-0.6
	comp=Z,3.0nm,0.7s,baz=185,slow=3.3,SNR=12						
KBZ				SKP	SKPdf	00 52 35.1	+0.6
	comp=Z,2.3nm,0.8s,baz=227,slow=7.5,SNR=5.2						
KBZ	Khabaz	118.08	51	⇓*i*PKIKP	PKPdf	00 49 20.6	-0.3
SCHQ	Schefferville	118.16	336	PKP	PKPdf	00 49 19.9	-0.9
	comp=Z,5.9nm,0.3s,baz=93,slow=2.3,SNR=55						
SCHQ				SKP	SKPdf	00 52 34.8	+0.4
	comp=Z,3.7nm,0.5s,baz=112,slow=8.7,SNR=15						
SCHQ				PKKPbc	PKKPab	00 59 41.5	+0.9
	comp=Z,3.4nm,1.0s,baz=333,slow=9.0,SNR=3.7						
GMRC	Granite Mounta	118.17	291	P	PKiKP	00 49 21.8	+0.1
	baz=145						
AKT	Akhty	118.18	56	*e*PKIKP	PKiKP	00 49 22.0	+0.6
AKT				*e*		00 50 36.3	
AKT				pmax	pmax		
	comp=Z,12nm,0.6s						
KIV	Kislovodsk	118.18	51	PKPdf	PKPdf	00 49 20.6	-0.7
KIV	Kislovodsk	118.18	51	*e*PKIKP	PKPdf	00 49 21.1	-0.2
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KVAR	Kislovodsk Arr	118.19	51	PKP	PKPdf	00 49 20.7	-0.6
	comp=Z,2.4nm,0.7s,baz=163,slow=12,SNR=2.4						
N23A	Red Feather La	118.74	302	P	PKPdf	00 49 22.7	0.0
	baz=146,SNR=5.8						
O20A	White River Ci	119.12	300	P	PKPdf	00 49 23.0	-0.4
	baz=145,SNR=6.3						
GSC	Goldstone, Bar	119.14	291	P	PKiKP	00 49 23.6	+0.1
	baz=144						
AKASG	Malin Array Be	119.18	38	PKP	PKPdf	00 49 21.7	-1.1
	comp=Z,3.7nm,0.5s,baz=250,slow=1.8,SNR=24						
AKASG				PP	PP	00 50 43.6	-4.0
	comp=Z,0.6nm,0.5s,baz=218,slow=7.5,SNR=6.6						
AKASG				SKP	SKPdf	00 52 36.5	0.0
	comp=Z,3.4nm,0.6s,baz=247,slow=1.7,SNR=17						
AKBB	Malin Array Si	119.18	38	⇓*i*PKIKP	PKPdf	00 49 21.0	-1.8
EDW2	Edwards Air Fo	119.37	289	P	PKiKP	00 49 24.4	+0.5
	baz=144						
MSU	Marysvale	119.57	296		PKiKP	00 49 25.4	+1.0
MSU	Marysvale	119.57	296	PKIKP	PKiKP	00 49 25.4	+1.0
LRMC	Laurel Mtn Rad	119.70	290	P	PKiKP	00 49 24.7	+0.1
	baz=144						
TCRU	Three Creeks R	119.77	296		PKiKP	00 49 25.6	+0.8
GWY	Greenwater Val	119.79	291		PKiKP	00 49 25.3	+0.4
GEYT	Alibeck	119.89	65	PKP	PKPdf	00 49 23.4	-1.3
	comp=Z,2.8nm,0.6s,baz=209,slow=5.4,SNR=4.5						
GEYT				PP	PP	00 50 48.1	-4.6
	comp=Z,2.9nm,1.0s,baz=258,slow=7.2,SNR=4.5						
MPMC	Manual Prospec	120.07	291	P	PKiKP	00 49 25.6	+0.1
	baz=144						
TPNV	Topopah Spring	120.20	292		PKiKP	00 49 26.4	+0.7
TPNV	Topopah Spring	120.20	292	PKIKP	PKiKP	00 49 26.4	+0.7
TPNV	Topopah Spring	120.20	292	P	PKiKP	00 49 26.1	+0.4
	baz=144						
ISA	Isabella, Lake	120.23	290	P	PKiKP	00 49 26.4	+0.8
	baz=144						
PKM	Mcpherson Peak	120.25	288	P	PKiKP	00 49 26.6	+0.7
	baz=144						
DEL	Delary	120.28	25	*e*P	PKPdf	00 49 23.9	-0.8
K22A	Casper	120.42	303	P	PKPdf	00 49 25.2	-0.6
	baz=145,SNR=5.3						
RSSD	Black Hills	120.58	306	PKPdf	PKPdf	00 49 25.5	-0.6
RSSD	Black Hills	120.58	306	PKIKP	PKPdf	00 49 25.5	-0.6
RSSD	Black Hills	120.58	306	P	PKPdf	00 49 25.5	-0.6
	baz=145						
CWC	Cottonwood Cre	120.66	290	P	PKiKP	00 49 26.7	+0.2
	baz=144						
HOMB	Homborsund	120.87	21	*e*PKPdf	PKiKP	00 49 26.0	0.0
DUG	Dugway, Tooele	121.22	297	P	PKiKP	00 49 27.6	+0.1
	baz=144,SNR=15						
BLS5	Blasjo	121.58	20	*e*PKPdf	PKiKP	00 49 28.0	+0.6
PBUR	Paburge	121.79	30	*e*P	PKPdf	00 49 27.6	-0.1
BW06	Boulder Array	121.83	301	P	PKPdf	00 49 27.7	-0.8
	baz=144,SNR=8.3						
PDAR	Pinedale Array	121.83	301	PKhKP	PKPpre	00 49 12.6	
	comp=Z,0.3nm,0.5s,baz=108,slow=5.8,SNR=6.4						
PDAR				PKP	PKPdf	00 49 27.4	-1.2
	comp=Z,2.8nm,0.4s,baz=125,slow=5.4,SNR=69						
PDAR				PP	PP	00 51 04.3	-1.8
	comp=Z,0.6nm,0.9s,baz=99,slow=5.9,SNR=1.7						
PDAR				PKKPbc	PKKPab	00 59 26.4	+0.1
	comp=Z,0.4nm,0.5s,baz=68,slow=2.2,SNR=9.2						
PABE	Paberze	121.87	32	*e*P	PKPdf	00 49 27.0	-0.8
ODD1	Odda	122.08	20	*e*PKPdf	PKiKP	00 49 28.9	+0.5
MNK	Minsk	122.08	35	*i* PKP	PKPdf	00 49 28.0	-0.3
	comp=E,1.0nm,0.9s						
MNK				*i* PKP	PKPdf	00 49 28.0	-0.3
	comp=N,12nm,0.7s						
MNK				*i* PKP	PKPdf	00 49 28.0	-0.3
	comp=Z,30nm,0.9s,baz=210						
MNK				*i* pPKP	pPKPdf	00 50 24.5	-0.4
MNK				*i* PP	PP	00 51 06.3	-1.0
MNK				*i* PPP	PPP	00 53 43.8	
MNK				*i* SKS	SKSdf	00 56 18.6	+0.5
MNK				*i* SS	SS	01 07 24.7	-3.0
MNK				*i* SSS	SSS	01 11 55.5	
MNK	Minsk	122.08	35	*i* PKIKP	PKPdf	00 49 27.9	-0.3
MNK				*i*		00 51 06.2	
MNK				*i* PPP	PPP	00 53 43.7	
MNK				*i*		00 56 18.5	
MNK				*i* SS	SS	01 07 24.6	-3.1
MNK				pmax	pmax		
	comp=Z,30nm,0.9s						
MNK				pmax	pmax		
	comp=N,12nm,0.6s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
NACGM	Naroch	122.12	34	*e*PKP	PKPdf	00 49 28.1	-0.2
	comp=Z,28nm,1.0s,baz=209						
BER	Bergen	122.30	19	*e*PKPdf	PKiKP	00 49 29.1	+0.4
KONO	Kongsberg	122.36	21	*e*PKPdf	PKPdf	00 49 28.5	-0.1
NVAR	Mina Array Bea	122.36	292	PKP	PKiKP	00 49 30.2	+0.3
	comp=Z,1.4nm,0.4s,baz=159,slow=2.6,SNR=22						
NVAR				PKKPbc	PKKPab	00 59 26.3	+1.8
	comp=Z,0.6nm,0.6s,baz=302,slow=2.6,SNR=6.3						
KBL	Kabul	122.43	76	PKPdf	PKPdf	00 49 29.7	-0.3
KBL	Kabul	122.43	76	PKIKP	PKPdf	00 49 29.7	-0.3
ULM	Lac du Bonnet	122.45	315	PKP	PKPdf	00 49 27.9	-1.3
	comp=Z,7.8nm,0.3s,baz=129,slow=2.1,SNR=19						
ULM				PP	PP	00 51 06.7	-3.2
	comp=Z,2.8nm,0.7s,baz=130,slow=8.1,SNR=3.4						
ULM				PKKPbc	PKKPbc	00 59 23.9	+0.4
	comp=Z,3.7nm,0.5s,baz=328,slow=6.1,SNR=7.0						
ISAL	Salakas	122.52	33	*e*P	PKiKP	00 49 29.8	+0.5
VIKU	Vikbolandet	122.76	26	*e*P	PKPdf	00 49 29.2	-0.3
ELK	Elko	122.77	295	PKP	PKPdf	00 49 30.3	-0.1
	comp=Z,1.7nm,0.4s,baz=142,slow=2.4,SNR=12						
VSR	Storozhevoye	122.92	44	*e*PKIKP	PKPdf	00 49 29.1	-0.9
VSR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
TPAW	Teton Pass	123.02	300		PKiKP	00 49 31.3	+0.2
SKAR	Skarslia	123.09	20	*e*PKPdf	PKiKP	00 49 30.4	0.0
MOOW	Moose Ponds	123.14	301	PKPdf	PKiKP	00 49 31.2	-0.1
HYA	Hoyanger	123.18	19	*e*PKPdf	PKiKP	00 49 30.9	+0.5
SLIT	Slitere, Latvi	123.31	30	*e*P	PKPdf	00 49 29.7	-0.8
VORR	Voronezh	123.31	43	*e*PKIKP	PKPdf	00 49 29.6	-1.1
VORR				pmax	pmax		
	comp=Z,14nm,0.8s						
FOO	Floro	123.41	18	*e*PKPdf	PKiKP	00 49 31.1	+0.3
LAO	LASA Array	123.56	306	P	PKPdf	00 49 31.4	-0.1
	baz=143,SNR=7.8						
H17A	Grant Village	123.58	301	P	PKiKP	00 49 32.4	+0.2
	baz=143						
RLMT	Red Lodge	123.59	303	P	PKPdf	00 49 31.6	-0.2
	baz=143,SNR=5.3						
HFS	Hagfors	123.61	24	PKP	PKPdf	00 49 29.7	-1.4
	comp=Z,8.9nm,0.5s,baz=172,slow=4.2,SNR=39						
HFS				PP	PP	00 51 07.5	-10
	comp=Z,5.1nm,0.7s,baz=179,slow=8.3,SNR=4.5						
NAO01	NORSAR Array S	123.71	22		PKiKP	00 49 32.3	+0.8
NC602	NORSAR Array S	123.74	22	*e*PKPdf	PKPdf	00 49 31.2	-0.1
NIL	Nilore	123.82	80	PKPdf	PKPdf	00 49 32.5	+0.1
NIL	Nilore	123.82	80	PKIKP	PKPdf	00 49 32.5	+0.1
VRH	Novokhopyorsk	123.82	45	*e*PKIKP	PKPdf	00 49 31.4	-0.3
VRH				pmax	pmax		
	comp=Z,36nm,0.6s						
MPK	Martis Peak	123.87	291		PKiKP	00 49 34.0	+1.1
NB2	NORSAR Subarra	123.96	22	PKPdf	PKPdf	00 49 31.3	-0.5
	comp=Z,25nm,1.1s,baz=202,slow=1.9						
NB2	NORSAR Subarra	123.96	22	PKPdf	PKPdf	00 49 31.3	-0.5
	baz=202,slow=1.9						
NOA	NORSAR Array B	123.96	22	PKP	PKPdf	00 49 31.4	-0.5
	comp=Z,7.3nm,0.9s,baz=177,slow=2.6,SNR=32						
LPSR	Galich'ya Gora	123.99	43	*e*PKIKP	PKPdf	00 49 31.3	-0.7
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NC204	NORSAR Array S	124.09	21	PKPdf	PKPdf	00 49 31.2	-0.9
CMAR	Chiang Mai Arr	124.12	113	PKP	PKPdf	00 49 32.9	-0.5
	comp=Z,12nm,0.7s,baz=231,slow=3.8,SNR=53						
CMAR				SKP	SKPdf	00 52 47.6	+0.6
	comp=Z,2.0nm,0.6s,baz=228,slow=4.1,SNR=7.0						
DGMT	Dagmar	124.16	309	P	PKPdf	00 49 32.7	+0.1
	baz=143						
UPP	Uppsala	124.19	26	*e*P	PKPdf	00 49 31.4	-0.8
AKN	Aaknes	124.27	19	*e*PKPdf	PKiKP	00 49 32.8	+0.2
CHTO	Chiang Mai	124.43	113		PKPdf	00 49 33.6	-0.4
CHTO	Chiang Mai	124.43	113	PKIKP	PKPdf	00 49 33.6	-0.4
DOMB	Dombas	124.50	20	*e*PKPdf	PKiKP	00 49 33.0	-0.1
HLID	Hailey	124.62	298	P	PKiKP	00 49 34.3	+0.2
	baz=142						
MTSE	Matsula	124.65	30	*e*P	PKPdf	00 49 33.0	-0.1
PHRA	Phrae	124.76	115	PKPdf	PKiKP	00 49 35.0	+0.1
ISOG	Isortoq, Green	125.00	354	*i*	PKPdf	00 49 33.2	-0.3
ANGG	Ammassalik, Gr	125.00	355		PKPdf	00 49 33.3	-0.2
ANGG	Ammassalik, Gr	125.00	355	*i*	PKPdf	00 49 32.6	-0.9
AAL	Aland	125.02	27	*e*P	PKPdf	00 49 32.3	-1.4
VSU	Vasula	125.19	32	*de*PKIKP	PKPdf	00 49 33.7	-0.4
VSU	Vasula	125.19	32	*e*P	PKPdf	00 49 33.8	-0.4
OBN	Obninsk	125.27	39	PKP	PKPdf	00 49 33.6	-0.8
	comp=Z,12nm,0.4s,baz=176,slow=0.3,SNR=8.7						
OBN	Obninsk	125.27	39	*de*PKIKP	PKPdf	00 49 32.8	-1.6
OBN				*e*		00 50 24.8	
OBN				*e*		00 51 26.5	
OBN				pmax	pmax		
	comp=Z,23nm,0.4s						
MND	Mandalay	125.83	108	PKPdf	PKPdf	00 49 36.6	+0.1
EGMT	Eagleton	126.08	305	P	PKPdf	00 49 36.3	-0.1
	baz=142						
MEF	Metsahovi	126.11	29	*e*P	PKPdf	00 49 35.8	0.0
RAF	Rauma	126.18	27	*e*P	PKPdf	00 49 35.5	-0.4
DY2G	Dye2	126.39	351	*i*	PKiKP	00 49 37.3	+0.3
MSO	Missoula	126.95	301	P	PKiKP	00 49 38.5	-0.1
	baz=141,SNR=12						
BELG	Belogornoye	126.97	48	PKP	PKPdf	00 49 37.3	-0.4
	comp=Z,42nm,0.8s,baz=238,slow=1.2,SNR=26						
BELG				PP	PP	00 51 38.1	-1.7
	comp=Z,8.9nm,0.9s,baz=278,slow=8.4,SNR=3.8						
BELG	Belogornoye	126.97	48	*d i*PKIKP	PKPdf	00 49 36.6	-1.1
SFJD	Kangerlussuaq	127.29	349	PKPdf	PKiKP	00 49 38.2	-0.2
SFJD	Kangerlussuaq	127.29	349	PKIKP	PKiKP	00 49 38.2	-0.2
SFJD	Kangerlussuaq	127.29	349	*i*	PKPdf	00 49 37.9	0.0
NSS	Namsos	127.31	20	*e*PKPdf	PKiKP	00 49 38.6	+0.1
J05D	Fort Rock, OR	127.54	293	PKPdf	PKiKP	00 49 40.2	+0.3
FINES	FINESS Array B	127.59	29	PKhKP	PKPpre	00 49 20.8	
	comp=Z,1.8nm,0.8s,baz=134,slow=5.5,SNR=7.3						
FINES				PKP	PKPdf	00 49 38.5	-0.2
	comp=Z,38nm,0.6s,baz=163,slow=1.4,SNR=98						
FINES				SKPbc	SKPbc	00 52 34.8	
	comp=Z,5.4nm,0.5s,baz=187,slow=2.7,SNR=11						
FINES				SKP	SKPdf	00 52 51.9	-0.2
	comp=Z,4.0nm,0.7s,baz=188,slow=1.0,SNR=2.5						
FINES				SKKPbc	SKKPbc	01 02 33.9	-1.2
	comp=Z,1.2nm,0.8s,baz=46,slow=5.5,SNR=7.2						
FFC	Flin Flon	128.27	315		PKPdf	00 49 40.0	-0.2
FFC	Flin Flon	128.27	315	PKIKP	PKPdf	00 49 40.0	-0.2
ICESG	Greenland Ices	128.56	355	*i*	PKPdf	00 49 39.7	-1.0
FCC	Fort Churchill	128.81	322	PKPdf	PKPdf	00 49 40.1	-0.9
FCC	Fort Churchill	128.81	322	PKIKP	PKPdf	00 49 40.1	-0.9
MOR8	Moi Rana	129.24	21	*e*PKPdf	PKiKP	00 49 42.9	+0.4
KONS	Konsvik	129.30	20	*e*PKPdf	PKiKP	00 49 42.5	0.0
NEW	Newport	129.44	300	PKP	PKPdf	00 49 42.1	-0.5
	comp=Z,1.7nm,0.4s,baz=194,slow=8.2,SNR=3.1						
NEW				SKPbc	SKPab	00 52 42.5	-0.1
	comp=Z,14nm,0.6s,baz=116,slow=2.7,SNR=19						
NEW	Newport	129.44	300	P	PKPdf	00 49 43.0	+0.3
	baz=139						
ILULI	Ilulissat	129.49	349	*i*	PKiKP	00 49 42.7	-0.1
ABKAR	Akbulak array	129.57	58	PKPdf	PKiKP	00 49 43.3	-0.3
ABKAR	Akbulak array	129.57	58	PKPdf	PKPdf	00 49 43.0	+0.2
AKTO	Aktyubinsk	129.63	56	PKP	PKPdf	00 49 42.8	-0.1
	comp=Z,23nm,0.8s,baz=190,slow=1.7,SNR=53						
LSA	Lhasa	129.75	98		PKiKP	00 49 45.8	+0.6
LSA	Lhasa	129.75	98	PKIKP	PKiKP	00 49 45.8	+0.6
SCO	Scoresbysund	129.75	3	*i*	PKPdf	00 49 42.7	+0.2
KSH	Kashi	129.76	78	PKP	PKPdf	00 49 43.0	-0.7
KK31	Karatay Array	129.80	71	PKPdf	PKPdf	00 49 43.2	-0.3
KK31	Karatay Array	129.80	71	PKIKP	PKPdf	00 49 43.2	-0.3
KKAR	Karatay Array	129.80	71	PKPdf	PKPdf	00 49 43.1	-0.4
KKAR	Karatay Array	129.80	71	PKIKP	PKPdf	00 49 43.1	-0.4
FAUS	Fauske	130.48	20	*e*PKPdf	PKPdf	00 49 43.7	-0.2
B08A	Colville Reser	130.50	299	PKPdf	PKPdf	00 49 45.1	+0.4
AML	Almayashu	130.62	74	P	PKPdf	00 49 45.4	-0.2
	SNR=16						
KLMR	Klimovskoe	130.84	37	*e*PKPdf	PKPdf	00 49 42.8	-2.0
KLMR				AMP		00 49 46.1	
	comp=Z,15nm,0.6s						
KLMR				*e*pPKPdf	pPKPdf	00 50 32.4	-9.0
KLMR				*e*PP	PP	00 52 03.1	-1.8
KLMR				*e*SKPab	SKPbc	00 52 46.3	-1.2
KLMR	Klimovskoe	130.84	37	*e*PKIKP	PKPdf	00 49 42.8	-2.0
KLMR				*e*		00 50 32.3	
KLMR				*e*		00 52 03.1	
KLMR				pmax	pmax		
	comp=Z,15nm,0.6s						
LOF	Lofoten	130.85	19	*e*PKPdf	PKiKP	00 49 46.0	+0.5
STEI	Steigen	130.96	20	*e*PKPdf	PKiKP	00 49 45.7	-0.1
EKS2	Erkin-Say	131.05	73	P	PKPdf	00 49 46.2	+0.2
	SNR=12						
UCH	Uchtor	131.09	74	P	PKPdf	00 49 46.6	0.0
	SNR=11						
AAK	Ala-Archa	131.39	74	P	PKPdf	00 49 46.5	-0.2
	SNR=14						
AAK	Ala-Archa	131.39	74	PKP	PKPdf	00 49 46.4	-0.3
	comp=Z,18nm,0.6s,baz=211,slow=3.3,SNR=43						
AAK				SKPbc	SKPbc	00 52 50.6	+0.2
	comp=Z,3.0nm,0.6s,baz=181,slow=3.8,SNR=8.9						
AAK	Ala-Archa	131.39	74		PKPdf	00 49 47.1	+0.4
KBK	Karagaybulak	131.62	74	P	PKiKP	00 49 48.8	+0.6
	SNR=9.5						
KMI	Kunming	131.63	113	⇓PKP	PKiKP	00 49 49.1	+0.3
KMI				LR	LR		
	comp=Z,530nm,14.6s						
KMI				LR	LR		
	comp=Z,380nm,17.3s						
KMI				LR	LR		
	comp=Z,380nm,14.8s						
CHMS	Chumysh	131.78	74	P	PKiKP	00 49 48.6	+0.3
	SNR=6.0						
USP	Ospenovka	131.86	73	P	PKPdf	00 49 46.7	-0.8
	SNR=11						
SUMG	Summit	131.99	356	*i*	PKPdf	00 49 45.6	-1.6
SUMG	Summit	131.99	356	*e*	SKPab	00 52 53.7	+0.7
PZH	PanZhiHua	132.33	111	PKP	PKiKP	00 49 50.3	+0.2
KIRV	Kirov	132.37	44	PKP	PKPdf	00 49 47.6	-0.1
	comp=Z,19nm,0.5s,baz=173,slow=1.5,SNR=11						
KIRV				PP	PP	00 52 12.2	-2.6
	comp=Z,5.9nm,0.5s,baz=273,slow=1.0,SNR=4.7						
KIRV	Kirov	132.37	44	*de*PKIKP	PKPdf	00 49 48.2	+0.5
TRO	Tromso	133.10	20	*e*PKPdf	PKPdf	00 49 47.4	-1.4
LLLB	Lillooet	133.28	299		PKiKP	00 49 50.6	-0.5
JETT	Jettan, Norway	133.31	21	*e*PKPdf	PKPdf	00 49 49.8	+0.4
KTK1	Kautokeino	133.38	23	*e*PKPdf	PKPdf	00 49 49.5	+0.1
UPNV	Upernavik	133.40	349	*i*	PKPdf	00 49 49.2	-0.2
UPNV	Upernavik	133.40	349	*e*	SKPab	00 52 58.5	-0.2
DBG	Daneborg	133.62	3	*i*	PKPdf	00 49 49.8	0.0
DBG	Daneborg	133.62	3	*e*	SKPab	00 53 01.4	+1.8
ARU	Arti	134.23	51	PKhKP	PKPpre	00 49 37.4	
	comp=Z,2.2nm,0.5s,baz=267,slow=18,SNR=4.8						
ARU				PKP	PKPdf	00 49 50.8	-0.6
	comp=Z,4.7nm,0.5s,baz=184,slow=1.6,SNR=8.0						
ARU				PP	PP	00 52 24.6	-2.1
	comp=Z,3.0nm,0.6s,baz=202,slow=8.3,SNR=4.5						
ARU	Arti	134.23	51	*i* PKIKP	PKiKP	00 49 52.8	0.0
ARU						00 52 25.3	
ARA0	ARCESS Array S	134.27	23	*e*PKPdf	PKPdf	00 49 51.5	+0.4
ARCES	ARCESS Array B	134.27	23	PKhKP	PKPpre	00 49 34.7	

	comp=Z,1.2nm,0.3s,baz=271,slow=1.9,SNR=29						
ARCES				PKP	PKPdf	00 49 50.3	-0.8
	comp=Z,30nm,0.6s,baz=210,slow=2.8,SNR=32						
ARCES				PP	PP	00 52 22.0	-4.6
	comp=Z,11nm,0.8s,baz=205,slow=5.4,SNR=9.7						
ARCES				SKPbc	SKPbc	00 52 58.8	-0.3
	comp=Z,12nm,0.7s,baz=204,slow=2.7,SNR=11						
ARCES	ARCESS Array B	134.27	23	PKPdf	PKPdf	00 49 51.4	+0.3
ARCES	ARCESS Array B	134.27	23	PKIKP	PKPdf	00 49 51.4	+0.3
GYA	Guiyang	134.59	116	⇓PKP	PKiKP	00 49 54.8	+0.1
LVZ	Lovozero	134.99	28	⇓*e*PKIKP	PKPdf	00 49 53.0	+0.5
KULLO	Kullorsuaq	135.21	349	*i*	PKPdf	00 49 52.7	0.0
KULLO				*e*	SKPdf	00 53 03.8	-2.1
SVE	Sverdlovsk	135.33	51	*e*PKIKP	PKPdf	00 49 53.4	0.0
SVE				pmax	pmax		
	comp=Z,16nm,0.9s						
VADS	Vadso	135.54	24	*e*PKPdf	PKiKP	00 49 55.0	0.0
GOMU	GeErMu	136.78	96	PKP	PKiKP	00 49 59.6	+0.5
BRVK	Borovoye	136.84	61	⇓*e*PKIKP	PKPdf	00 49 54.4	-1.9
BVAR	Borovoye Array	136.87	61	PKhKP	PKPpre	00 49 43.9	
	comp=Z,5.3nm,0.8s,baz=205,slow=3.1,SNR=20						
BVAR				PKP	PKPdf	00 49 55.9	-0.6
	comp=Z,14nm,0.6s,baz=224,slow=2.1,SNR=20						
CD2	Chengdu	136.97	110	PKP	PKPdf	00 49 58.3	+0.9
BBB	Bella Bella	137.18	297	PKP	PKPdf	00 49 57.6	+0.7
	comp=Z,24nm,1.1s,baz=183,slow=12,SNR=1.6						
NEEM	North Greenlan	137.44	353	*i*	PKPpre	00 49 45.0	
NEEM				*e*	SKPdf	00 53 11.5	+1.2
TULEG	Thule	138.22	347	PKPdf	PKPdf	00 49 58.9	+0.7
TULEG	Thule	138.22	347	*i*	PKPpre	00 49 49.2	
TULEG				*e*	SKPdf	00 53 13.8	+2.6
MKAR	Makanchi Array	138.23	75	PKhKP	PKPpre	00 49 48.3	
	comp=Z,1.7nm,0.4s,baz=232,slow=3.5,SNR=25						
MKAR				SKPbc	SKPbc	00 53 10.9	-0.9
	comp=Z,3.3nm,0.7s,baz=236,slow=2.6,SNR=9.0						
MKAR				SKKPbc	SKKPbc	01 01 52.4	-2.0
	comp=Z,0.1nm,0.6s,baz=77,slow=4.8,SNR=1.5						
YKA	Yellowknife Ar	138.43	316	PKhKP	PKPpre	00 49 48.6	
	comp=Z,2.0nm,0.7s,baz=126,slow=3.2,SNR=24						
YKA				PKP	PKPdf	00 49 58.3	-0.6
	comp=Z,7.4nm,0.4s,baz=131,slow=2.5,SNR=48						
YKA				PP	PP	00 52 50.3	-2.4
	comp=Z,4.6nm,0.9s,baz=130,slow=6.4,SNR=15						
YKA				SKPbc	SKPbc	00 53 11.3	-0.4
	comp=Z,1.9nm,0.5s,baz=131,slow=3.4,SNR=13						
YKA				PKKP	PKKPdf	00 59 28.4	-1.1
	comp=Z,0.4nm,0.6s,baz=324,slow=2.2,SNR=5.7						
WMQ	Urumqi	138.84	83	*e*PKP	PKiKP	00 50 02.4	-0.3
WMQ				LR	LR		
	comp=Z,620nm,16.3s						
WMQ				LR	LR		
	comp=Z,290nm,18.3s						
KURBB	Kurchatov Arra	139.01	69	PKhKP	PKPpre	00 49 51.7	
	comp=Z,3.9nm,0.5s,baz=233,slow=3.6,SNR=29						
KURBB				PKP	PKiKP	00 50 01.6	-1.1
	comp=Z,6.6nm,0.7s,baz=240,slow=2.6,SNR=13						
KURBB				PP	PP	00 52 54.4	-2.1
	comp=Z,0.8nm,0.2s,baz=241,slow=5.7,SNR=4.1						
KURBB				SKPbc	SKPbc	00 53 13.3	-0.5
	comp=Z,2.7nm,0.5s,baz=231,slow=3.2,SNR=10						
KURK	Kurchatov	139.12	69	PKIKP	PKPdf	00 50 01.6	+1.0
HOPEN	Hopen	139.79	17	*e*PKPdf	PKiKP	00 50 02.8	-0.7
HOPEN	Hopen	139.79	17	*e*	PKPdf	00 49 54.6	-6.5
SPA0	Spitsbergen Ar	140.01	13	*e*	PKPdf	00 49 54.1	-7.4
KBS	Kingsbay	140.18	11	*e*	PKPdf	00 49 56.3	-5.5
NOR	Nord	140.99	3	*i*	PKPdf	00 49 58.0	-5.2
LZH	Lanzhou	141.21	105	*e*PKP	PKPdf	00 50 05.4	+0.3
LZH				sPKP		00 51 26.0	
GTA	Gaotai	141.77	98	*e*PKP	PKPdf	00 50 01.8	-4.2
GTA				LR	LR		
	comp=Z,1µm,18.5s						
GTA				LR	LR		
	comp=Z,430nm,16.7s						
GTA				LR	LR		
	comp=Z,710nm,17.4s						
DLBC	Dease Lake	141.99	303	PKhKP	PKPpre	00 50 00.8	
	comp=Z,4.4nm,0.4s,baz=125,slow=21,SNR=6.5						
DLBC				PKP	PKPdf	00 50 04.2	-1.4
	comp=Z,4.4nm,0.4s,baz=171,slow=3.2,SNR=19						
DLBC				SKPbc	SKPbc	00 53 21.8	+0.3
	comp=Z,2.3nm,0.5s,baz=122,slow=4.5,SNR=5.9						
XAN	Xi'an	142.01	113	PKP	PKPdf	00 50 01.5	-5.0
XAN				sPKP		00 51 22.4	
DGZ	Jazzator, Alta	142.73	76	*c* *i*PKIKP	PKPdf	00 50 04.3	-3.1
JOW	Kunigami	143.43	143	PKP	PKPbc	00 50 06.7	-0.3
	comp=Z,14nm,0.5s,baz=247,slow=16,SNR=2.9						
LYN	LuoYang	144.08	116	⇓*i*PKP	PKPbc	00 50 08.5	-0.2
LYN				PP	PP	00 53 29.4	+2.4
ZALV	Zalesovo Beam	144.11	68	PKP	PKPab	00 50 07.3	-0.4
	comp=Z,101nm,0.5s,baz=246,slow=3.5,SNR=482						
ZALV				SKPbc	SKPbc	00 53 26.9	+0.3
	comp=Z,5.6nm,0.7s,baz=242,slow=4.1,SNR=6.7						
ZALV				SKKPbc	SKKPbc	01 01 30.0	-1.4
	comp=Z,0.7nm,0.7s,baz=46,slow=4.2,SNR=2.7						
P33M	Teslin, Yukon	144.17	304	P	PKPbc	00 50 08.3	0.0
	baz=123,SNR=63						
P32M	Atlin	144.22	303	P	PKPbc	00 50 08.9	+0.5
	baz=123,SNR=37						
S31K	Pelican	144.42	300	P	PKPbc	00 50 09.3	+0.4
	baz=124,SNR=6.5						
R31K	City Hall, Gus	144.45	300	P	PKPbc	00 50 09.3	+0.3
	baz=124						
NJ2	Nanjing	144.74	126	⇓PKP	PKPdf	00 50 11.3	+0.1
MMPY	Sheldon Lake,	144.80	309	P	PKPdf	00 50 10.4	0.0
	baz=121						
SKAG	Skagway	144.84	302	P	PKPab	00 50 10.3	0.0
	baz=122,SNR=5.2						
PLBC	Pleasant Camp	145.28	302	P	PKPab	00 50 12.0	-0.1
	baz=122,SNR=8.8						
FARO	Faro, Yukon	145.44	307		PKPab	00 50 12.5	-0.1
FARO	Faro, Yukon	145.44	307	P	PKPbc	00 50 11.8	-0.3
	baz=120,SNR=52						
C36M	Paulatuk	145.44	322	P	PKPdf	00 50 11.0	-0.2
	baz=117						
O30N	Mendenhall	145.85	304	P	PKPdf	00 50 12.7	+0.4
	baz=120,SNR=18						
M31M	Drury Creek, Y	145.85	307		PKPbc	00 50 13.4	+0.1
M31M	Drury Creek, Y	145.85	307	P	PKPdf	00 50 12.6	+0.4
	baz=120,SNR=35						
P30M	Million Dollar	145.89	302	P	PKPab	00 50 14.0	-0.5
	baz=121						
N31M	Braeburn, Yuko	146.07	305	P	PKPbc	00 50 13.9	-0.1
	baz=120,SNR=7.7						
HYT	Haines Junctio	146.48	303	P	PKPbc	00 50 15.4	+0.1
	baz=120,SNR=11						
N30M	Aishikik Lake	146.61	304	P	PKPbc	00 50 15.7	+0.1
	baz=119						
PNL	Peninsula	146.72	301	P	PKPbc	00 50 15.9	+0.1
	baz=120						
A36M	Sachs Harbour	146.90	326	P	PKPbc	00 50 15.6	-0.4
	baz=112						
JCJ	Chichijima	146.90	164	PKPbc	PKPdf	00 50 15.6	+0.5
	comp=Z,87nm,0.4s,baz=271,slow=18,SNR=3.7						
M30M	Minto, Yukon	147.02	306	P	PKPbc	00 50 16.2	-0.4
	baz=118,SNR=26						
MAYO	Mayo, Yukon	147.12	308	P	PKPbc	00 50 16.3	-0.6
	baz=117						
YUK4	Talbot Arm	147.21	304	P	PKPbc	00 50 17.4	0.0
	baz=118,SNR=23						
PINM	Pinnacle	147.31	301	P	PKPbc	00 50 18.0	+0.5
	baz=119						
HNS	HongShan	147.45	116	⇑PKPbc	PKPdf	00 50 15.9	+0.3
TIA	Tai'an	147.56	120	PKPbc	PKPbc	00 50 19.1	+0.2
O28M	Mount Upton	147.60	302	P	PKPbc	00 50 18.8	+0.2
	baz=118						
M29M	Somme Creek	147.65	306	P	PKPbc	00 50 18.5	+0.1
	baz=117						
YUK8	Steele Glacier	147.66	303	P	PKPbc	00 50 19.1	+0.4
	baz=118,SNR=16						
BTO	Baotou	147.76	107	⇓*i*PKPbc	PKPbc	00 50 19.9	+0.5
BTO				LR	LR		
	comp=Z,630nm,9.4s						
BTO				LR	LR		
	comp=Z,570nm,6.3s						
BTO				LR	LR		
	comp=Z,600nm,12.2s						
L29M	L29M	147.81	307	P	PKPbc	00 50 18.8	0.0
	baz=116						
K29M	Barlow Dome	147.88	308	P	PKPbc	00 50 18.7	-0.4
	baz=116						
F31M	Tsiigehtchic	147.91	316	P	PKPbc	00 50 18.1	-0.7
	baz=113						
INK	Inuvik	148.16	317	PKPbc	PKPbc	00 50 18.6	-0.8
	comp=Z,41nm,0.5s,baz=90,slow=4.5,SNR=115						
INK				SKPbc	SKPbc	00 53 34.7	-0.5
	comp=Z,1.6nm,0.5s,baz=90,slow=3.0,SNR=2.3						
INK	Inuvik	148.16	317	P	PKPbc	00 50 18.8	-0.6
	baz=112						
YUK3	Moose Creek	148.18	304	P	PKPbc	00 50 19.4	-0.6
	baz=117,SNR=10						
CTG	Chitna Glacier	148.19	302	P	PKPbc	00 50 20.2	+0.2
	baz=118,SNR=16						
BARN	Barnard Glacie	148.37	302		PKPdf	00 50 15.8	-0.9
BARN				PKPbc	PKPbc	00 50 21.1	+0.6
EPYK	Eagle Plains	148.59	313	P	PKPbc	00 50 20.2	-0.5
	baz=112						
G30M	tAoh Zraii Nji	148.63	314	P	PKPbc	00 50 20.1	-0.6
	baz=112						
BVCY	Beaver Creek	148.63	305	P	PKPbc	00 50 20.4	-0.5
	baz=116,SNR=9.7						
HHC	Hu-ho-hao-te	148.70	108	*e*PKPbc	PKPbc	00 50 22.1	+0.3
DAWY	Dawson	148.72	308	PKPbc	PKPbc	00 50 20.5	-0.6
DAWY				PKPab	PKPab	00 50 26.1	+0.4
DAWY	Dawson	148.72	308	P	PKPbc	00 50 20.2	-0.8
	baz=114,SNR=29						
I29M	Ogilvie Camp,	148.81	311	PKPab	PKPab	00 50 25.8	-0.1
I29M	Ogilvie Camp,	148.81	311	P	PKPbc	00 50 20.3	-0.9
	baz=113,SNR=24						
M27K	Edge Creek, AK	149.04	304	PKPbc	PKPbc	00 50 22.3	+0.3
M27K	Edge Creek, AK	149.04	304	P	PKPbc	00 50 21.5	-0.5
	baz=115						
MCARA	McCarthy VSAT	149.11	302	P	PKPbc	00 50 22.3	+0.3
	baz=116,SNR=7.7						
L27K	Beaver Creek,	149.31	305	P	PKPbc	00 50 22.7	+0.2
	baz=114,SNR=20						
M26K	Nabesna, AK	149.53	304	P	PKPbc	00 50 23.0	-0.2
	baz=115						
EGAK	Eagle	149.71	309	P	PKPbc	00 50 23.0	-0.3
	baz=112,SNR=12						
K27K	Chicken	149.79	307	P	PKPbc	00 50 24.0	+0.3
	baz=112						
N25K	Chitina, Valde	149.89	302	P	PKiKP	00 50 24.7	-0.1
	baz=115,SNR=11						
L26K	Log Cabin Wild	149.93	305	PKPbc	PKiKP	00 50 25.0	+0.2
L26K	Log Cabin Wild	149.93	305	P	PKPbc	00 50 23.7	-0.3
	baz=113,SNR=24						
EYAK	Cordova Ski Ar	149.94	299	P	PKPbc	00 50 24.4	+0.3
	baz=116,SNR=6.1						
JNU	Nakatsue	150.09	142	PKPbc	PKPbc	00 50 25.1	-0.2
	comp=Z,24nm,0.7s,baz=357,slow=1.9,SNR=26						
I27K	Kandik River	150.18	310	P	PKPbc	00 50 24.6	0.0
	baz=110						
BJT	Baijiatuau	150.24	115		PKiKP	00 50 26.0	-0.1
BJT	Baijiatuau	150.24	115	PKIKP	PKiKP	00 50 26.0	-0.1
BJI	Beijing	150.26	115	PKPbc	PKPbc	00 50 25.3	-0.1
H27K	Steamboat Moun	150.36	311	P	PKPbc	00 50 24.9	-0.1
	baz=109						
KLU	Klutina	150.42	301	PKPab	PKPab	00 50 33.8	+1.0
KLU	Klutina	150.42	301	P	PKiKP	00 50 25.7	-0.2
	baz=114,SNR=12						
P23K	Montague Islan	150.44	298	P	PKPbc	00 50 25.3	0.0
	baz=116						
HARP	HAARP	150.45	303	P	PKPbc	00 50 25.3	0.0
	baz=113						
SCRK	Sand Creek	150.56	306	P	PKPbc	00 50 25.8	+0.2
	baz=112,SNR=62						
G27K	Doyon Strip	150.59	312	P	PKPbc	00 50 24.9	-0.6
	baz=108						
I26K	Coal Creek Min	150.69	309	P	PKPbc	00 50 25.7	0.0
	baz=110,SNR=96						
MOY	Mondy	150.73	83	*e*PKIKP	PKiKP	00 50 26.7	-0.2
MOY				pmax	pmax		
	comp=Z,85nm,1.4s						
M24K	Tolsona, Glenn	150.78	302	P	PKiKP	00 50 26.7	+0.1
	baz=113,SNR=24						
PAX	Paxson	150.81	304	PKPab	PKPab	00 50 34.4	+0.1
PAX	Paxson	150.81	304	P	PKPbc	00 50 26.1	-0.1
	baz=112,SNR=17						
RIDG	Independent Ri	150.83	306	P	PKiKP	00 50 26.4	-0.2
	baz=111,SNR=66						
E27K	Coleen River	150.97	315	P	PKPbc	00 50 26.0	-0.3
	baz=106						
SONM	Songino Array	151.11	93	PKPbc	PKPbc	00 50 27.2	-0.2
	comp=Z,58nm,0.7s,baz=168,slow=1.5,SNR=8.4						
SONM				PKPab	PKPab	00 50 35.6	-0.5
	comp=Z,11nm,0.6s,baz=218,slow=4.8,SNR=9.0						
SONM				SKKPbc		01 00 59.0	
	comp=Z,0.7nm,0.5s,baz=43,slow=3.1,SNR=5.8						
ZAK	Zakamensk	151.13	86	*e*PKIKP	PKPdf	00 50 20.6	-0.6
ZAK				pmax	pmax		
	comp=Z,54nm,1.3s						
SCM	Sheep Creek Mo	151.17	301	P	PKPbc	00 50 26.6	-0.4
	baz=113,SNR=14						
PWL	Port Wells	151.23	299	P	PKPbc	00 50 26.9	-0.2
	baz=114,SNR=11						
K24K	Donnelly Dome	151.24	305	P	PKPbc	00 50 26.7	-0.3
	baz=111,SNR=9.8						
M23K	Glacier View	151.33	301	P	PKPbc	00 50 27.4	+0.1
	baz=113,SNR=14						
SEW	Seward	151.42	297	PKPbc	PKiKP	00 50 27.9	0.0
SEW	Seward	151.42	297	P	PKPbc	00 50 27.1	-0.4
	baz=115,SNR=5.4						
G26K	Porcupine Rive	151.44	312	P	PKPbc	00 50 27.2	-0.2
	baz=106						
ULN	Ulaanbaatar	151.47	94	PKPab	PKPab	00 50 37.5	-0.2
ULN	Ulaanbaatar	151.47	94	⇓*e*PKIKP	PKPbc	00 50 27.7	-0.6
KNK	Knik Glacier	151.50	300	P	PKPbc	00 50 27.8	+0.1
	baz=113,SNR=10						
JMN	Monobe	151.55	147		PKiKP	00 50 29.5	+0.4
SML	Sawmill	151.60	301	P	PKPbc	00 50 27.7	-0.3
	baz=113,SNR=17						
PRP	Porcupine Dome	151.69	309	PKPab	PKPab	00 50 38.4	+0.3
PRP	Porcupine Dome	151.69	309	P	PKPbc	00 50 27.6	-0.6
	baz=108,SNR=26						
O22K	Cooper Landing	151.70	297	P	PKPbc	00 50 27.7	-0.4
	baz=114,SNR=7.9						
F26K	Sheenjek River	151.77	314	P	PKiKP	00 50 28.5	0.0
	baz=105						
GHO	Glory Hole Cre	151.85	300	PKPab	PKPab	00 50 38.8	0.0
BRSE	Bradley Lake S	151.86	296	P	PKPbc	00 50 28.4	-0.2
	baz=115						
KDAK	Kodiak Island	151.86	291	PKPbc	PKPbc	00 50 28.6	0.0
	comp=Z,46nm,0.3s,baz=130,slow=2.0,SNR=188						
KDAK	Kodiak Island	151.86	291		PKiKP	00 50 28.9	0.0
KDAK	Kodiak Island	151.86	291	P	PKPbc	00 50 28.6	0.0
	baz=117						
TJN	Taejon	151.86	134	PKPab	PKPab	00 50 39.9	+0.5
NRIK	Noril'sk	151.86	43	PKPbc	PKPbc	00 50 27.8	-0.5
	comp=Z,9.9nm,0.5s,baz=180,slow=6.1,SNR=29						
NRIK				PKPab	PKPab	00 50 40.4	+1.9
	comp=Z,8.6nm,0.5s,baz=167,slow=3.6,SNR=7.8						
NRIK	Noril'sk	151.86	43	PKPab	PKPab	00 50 40.9	+2.4
PMR	Palmer	151.87	300	P	PKPbc	00 50 28.1	-0.4
	baz=112,SNR=7.7						
FYU	Fort Yukon	151.88	311	PKPbc	PKiKP	00 50 29.5	+0.8
FYU				PKPab	PKPab	00 50 39.8	+1.1
HDA	Harding Lake	151.92	306	PKPab	PKPab	00 50 38.9	0.0
HDA	Harding Lake	151.92	306	P	PKPbc	00 50 28.3	-0.2
	baz=109,SNR=20						
BRLK	Bradley Lake	151.93	296	PKPab	PKPab	00 50 40.1	+1.0
OHAK	Old Harbor	151.94	290	P	PKPbc	00 50 28.6	-0.1
	baz=118						
RC01	Rabbit Creek A	151.94	299	P	PKPbc	00 50 28.5	-0.2
	baz=113,SNR=30						
IL31		152.01	307	PKPbc	PKiKP	00 50 28.9	0.0
ILAR	Eielson Array	152.01	307	PKPbc	PKPbc	00 50 28.4	-0.3
	comp=Z,22nm,0.3s,baz=145,slow=2.4,SNR=349						
ILAR	Eielson Array	152.01	307	PKPbc	PKiKP	00 50 29.2	+0.2
C27K	Jago River	152.06	318	P	PKPab	00 50 39.7	+0.4
	baz=102						
FIS	Fire Island	152.18	299	PKPab	PKPab	00 50 41.0	+1.0
G25K	Bearman Lake	152.27	311	P	PKPab	00 50 40.8	+0.5
	baz=105						
F25K	Christian Rive	152.30	313	P	PKPab	00 50 41.0	+0.5
	baz=104						
POKR	Poker Plat Res	152.34	308	PKPab	PKPab	00 50 41.0	+0.3
POKR	Poker Plat Res	152.34	308	P	PKPab	00 50 40.4	-0.2
	baz=107,SNR=6.7						
CCB	Clear Creek Bu	152.35	306	PKPab	PKPab	00 50 41.6	+0.9
RND	Reindeer	152.39	304	PKPab	PKPab	00 50 42.0	+0.9
E25K	Arctic Village	152.40	314	P	PKPab	00 50 41.2	+0.4
	baz=103						
COLA	College	152.44	307		PKPbc	00 50 29.3	-0.3
COLA	College	152.44	307	*d* *i*PKIKP	PKPbc	00 50 29.1	-0.5
TCOL	CIGO, UAF Yank	152.44	307	PKPab	PKPab	00 50 41.2	+0.2
TCOL	CIGO, UAF Yank	152.44	307	P	PKPab	00 50 41.3	+0.2
	baz=107,SNR=14						
JHS	Saijyo	152.52	145	PKPab	PKPab	00 50 42.4	+0.2
C26K	Camden Bay	152.52	318	P	PKPab	00 50 41.5	+0.3
	baz=100						
MCK	McKinley	152.53	304	PKPbc	PKiKP	00 50 30.6	+0.4
MCK	McKinley	152.53	304	PKIKP	PKiKP	00 50 30.6	+0.4
MCK	McKinley	152.53	304	P	PKPab	00 50 41.0	-0.5
	baz=109,SNR=23						
SUA	Susitna One	152.54	299	P	PKPab	00 50 41.2	-0.5
	baz=112,SNR=8.4						
MDM	Murphy Dome	152.62	307	PKPab	PKPab	00 50 42.6	+0.7
CUT	Chulitna	152.67	301	PKPab	PKPab	00 50 42.0	0.0
CUT	Chulitna	152.67	301	P	PKPab	00 50 42.0	0.0
	baz=110,SNR=5.7						
H24K	Noodor Dome	152.72	309	PKPab	PKPab	00 50 42.6	+0.3
H24K	Noodor Dome	152.72	309	P	PKPab	00 50 42.2	-0.1
	baz=106						
G24K	Hadweenzic Riv	152.78	311	P	PKPab	00 50 42.7	+0.2
	baz=104						
NEA2	Nenana	152.85	306	PKPab	PKPab	00 50 42.6	-0.2
NEA2	Nenana	152.85	306	P	PKPab	00 50 42.2	-0.7
	baz=107,SNR=29						
O20K	Slope Mountain	152.86	295	P	PKPab	00 50 43.0	-0.1
	baz=113						
D25K	Kavik River	152.92	317	P	PKPab	00 50 42.9	-0.2
	baz=100						
KSAR	Wonju Array Be	153.00	134	PKPbc	PKPbc	00 50 31.4	-0.4
KSAR	Wonju Array Be	153.00	134	PKIKP	PKPbc	00 50 31.4	-0.4
TRF	Thorofare Moun	153.02	303	P	PKPab	00 50 43.3	-0.5
	baz=108,SNR=12						
SPU	Mount Spurr	153.02	298	PKPab	PKPab	00 50 44.8	+1.1
KSRS	Korea Array	153.02	134	PKP	PKPdf	00 50 22.7	-1.6
	comp=Z,0.6nm,0.4s,baz=187,slow=2.0,SNR=6.2						
KSRS				PKPbc	PKPbc	00 50 31.8	0.0
	comp=Z,6.7nm,0.8s,baz=192,slow=2.1,SNR=21						
KSRS				PKPab	PKPab	00 50 44.4	+0.2
	comp=Z,16nm,0.8s,baz=210,slow=4.2,SNR=27						
KS19	Wonju Array Si	153.05	134	PKPbc	PKPbc	00 50 31.5	-0.4
RSO	Redoubt South	153.07	296	PKPab	PKPab	00 50 45.1	+1.0
SKT	Skwentna	153.07	300	P	PKPab	00 50 43.4	-0.5
	baz=110,SNR=23						
SPCR	Spurr Chakacha	153.10	298	P	PKPab	00 50 43.8	-0.3
	baz=112						
F24K	Squaw Lake	153.12	313	P	PKPab	00 50 44.1	+0.1
	baz=102						
I23K	Minto, Yukon-K	153.13	307	PKPab	PKPab	00 50 44.2	+0.3
I23K	Minto, Yukon-K	153.13	307	P	PKPab	00 50 43.8	-0.1
	baz=106,SNR=11						
XLT	XiLinHaoTe	153.19	109	⇓*i*PKPbc	PKiKP	00 50 32.3	+0.1
XLT				pPKP	pPKPbc	00 51 33.0	+4.3
H23K	Yukon River	153.38	309	PKPbc	PKiKP	00 50 32.3	+0.4
H23K				PKPab	PKPab	00 50 45.4	+0.4
H23K	Yukon River	153.38	309	P	PKPab	00 50 44.5	-0.5
	baz=104						
E24K	Your Creek	153.46	314	P	PKPab	00 50 45.1	-0.3
	baz=101						
BPAW	Bear Paw Mtn.	153.51	304	PKPab	PKPab	00 50 45.5	-0.2
BPAW	Bear Paw Mtn.	153.51	304	P	PKPab	00 50 45.4	-0.2
	baz=107,SNR=22						
Q17K	Contact Creek	153.65	290	P	PKPab	00 50 45.8	-0.8
	baz=115,SNR=6.2						
MLY	Manley	153.66	307	P	PKPab	00 50 45.6	-0.7
	baz=105,SNR=9.5						
PPLA	Purkeypile	153.66	301	PKPab	PKPab	00 50 46.1	-0.4
PPLA	Purkeypile	153.66	301	P	PKPab	00 50 46.3	-0.2
	baz=108,SNR=11						
O19K	Port Alsworth	153.69	295	PKPbc	PKPbc	00 50 32.3	-0.2
O19K				PKPab	PKPab	00 50 46.6	+0.1
O19K	Port Alsworth	153.69	295	P	PKPab	00 50 46.2	-0.3
	baz=112						
M20K	Styx River	153.75	299	PKPab	PKPab	00 50 46.7	-0.1
M20K	Styx River	153.75	299	P	PKPab	00 50 46.1	-0.8
	baz=110						
G23K	Bananza Creek	153.77	310	P	PKPab	00 50 47.2	+0.4
	baz=102						
CAST	Castle Rocks	153.78	303		PKPbc	00 50 32.2	-0.5
CAST				PKPab	PKPab	00 50 46.9	0.0
CAST	Castle Rocks	153.78	303	P	PKPab	00 50 46.3	-0.5
	baz=108,SNR=6.1						
C24K	Franklin Bluff	153.79	317	P	PKPab	00 50 46.9	+0.2
	baz=97						
P18K	Big Mountain,	153.80	293	P	PKPab	00 50 46.4	-0.6
	baz=114						
E23K	Chandalar	153.87	313	P	PKPab	00 50 47.5	+0.3
	baz=100						
COLD	Coldfoot	153.94	311	PKPab	PKPab	00 50 47.9	+0.5
COLD	Coldfoot	153.94	311	P	PKPab	00 50 47.7	+0.3
	baz=101						
O18K	Koktuh Hills	153.97	294	P	PKPab	00 50 47.6	-0.1
	baz=113,SNR=6.1						
N19K	Bonanza Creek	153.99	296	PKPab	PKPab	00 50 47.6	-0.3
N19K	Bonanza Creek	153.99	296	P	PKPab	00 50 47.3	-0.6
	baz=111						
CHUM	Lake Minchumin	154.01	304	P	PKPab	00 50 47.3	-0.4
	baz=106,SNR=11						
H22K	Ishtalitna Cre	154.13	308	P	PKPab	00 50 47.6	-0.6
	baz=103,SNR=6.6						
Q16K	King Salmon	154.19	291	P	PKPab	00 50 48.0	-0.6
	baz=114						
I21K	Tanana	154.21	307	PKPbc	PKiKP	00 50 33.9	+0.3
I21K				PKPab	PKPab	00 50 47.8	-0.8
I21K	Tanana	154.21	307	P	PKPab	00 50 48.4	-0.1
	baz=104						
L20K	Farewell, AK	154.28	300	P	PKPab	00 50 48.4	-0.6
	baz=108						
P17K	Kvichak River	154.30	292	P	PKPab	00 50 48.0	-1.0
	baz=113						
M19K	Big River Lodg	154.32	299	PKPab	PKPab	00 50 49.5	+0.4
M19K	Big River Lodg	154.32	299	P	PKPab	00 50 48.9	-0.3
	baz=109						
D23K	Nanushuk River	154.40	315	P	PKPab	00 50 49.6	+0.3
	baz=97						
L19K	White Mountain	154.62	299	P	PKPab	00 50 49.6	-0.8
	baz=108						
K20K	Telida	154.62	302	PKPab	PKPab	00 50 50.0	-0.5
K20K	Telida	154.62	302	P	PKPab	00 50 49.7	-0.8
	baz=106,SNR=5.3						
H21K	Melozitna Rive	154.65	307	P	PKPab	00 50 49.8	-0.7
	baz=102,SNR=8.8						
E22K	Anaktuvuk Pass	154.70	313	P	PKPab	00 50 50.4	-0.3
	baz=98,SNR=5.5						
F22K	John River	154.75	312	P	PKPab	00 50 50.8	-0.1
	baz=99						
O17K	Koliganek Bris	154.83	293	P	PKPab	00 50 51.0	-0.3
	baz=112						
P16K	Nushagak River	154.97	291	P	PKPab	00 50 51.5	-0.5
	baz=113						
G21K	Allakaket	155.10	309	P	PKPab	00 50 52.5	+0.1
	baz=100						
IMAR	Indian Mountai	155.10	308	PKPab	PKPab	00 50 52.4	0.0
F21K	Alatna River	155.20	311	P	PKPab	00 50 52.6	-0.2
	baz=99						
MJAR	Matsushiro Arr	155.33	152	PKP	PKPdf	00 50 26.7	-0.9
	comp=Z,0.6nm,0.3s,baz=167,slow=2.2,SNR=4.3						
MJAR				PKPbc	PKPbc	00 50 36.3	
	comp=Z,2.4nm,0.6s,baz=181,slow=3.3,SNR=6.7						
MJAR				PKPab	PKPab	00 50 53.0	-1.1
	comp=Z,2.4nm,0.5s,baz=179,slow=4.5,SNR=8.5						
TTA	Tatalina	155.35	300	P	PKPab	00 50 53.7	+0.1
	baz=106						
GCSA	Galena City Sc	156.15	304	P	PKPab	00 50 56.8	0.0
	baz=102						
A21K	Barrow	156.49	321	P	PKPab	00 50 58.5	+0.3
	baz=87						
UNV	Unalaska Valle	156.87	274	P	PKPab	00 50 59.5	-0.8
	baz=121						
CN2	Changchun	157.42	122	*e*PKP	PKPdf	00 50 29.5	-0.5
CN2				AMB	AMB		
	comp=Z,100nm,6.0s						
HIA	Hailar	158.77	104	PKPab	PKPab	00 51 08.9	+0.2
HIA	Hailar	158.77	104	PKP2	PKPab	00 51 08.9	+0.2
RDOG	Red Dog Mine	158.85	313	P	PKPab	00 51 08.6	+0.1
	baz=88,SNR=11						
ANM	Nome	159.74	303	P	PKPab	00 51 12.4	-0.2
	baz=96						
SPIA	Saint Paul Isl	160.28	280	P	PKPab	00 51 15.1	0.0
	baz=113						
BOD	Bodaibo	160.28	78	*e*PKP2	PKPab	00 51 14.7	-0.3
BOD				pmax	pmax		
	comp=Z,28nm,1.0s						
USRK	Ussuriysk Ar.	160.41	132	PKPab	PKPab	00 51 14.9	-1.0
	comp=Z,4.4nm,0.6s,baz=222,slow=5.0,SNR=9.5						
TNA	Tin City	160.87	305	P	PKPab	00 51 17.5	+0.1
	baz=91,SNR=6.8						
HEH	HeiHe	163.14	112	*e*P	PKPab	00 51 26.8	-1.0
HEH				pmax	pmax		
	comp=Z,21nm,0.9s						
HEH	HeiHe	163.14	112	*e*PKP	PKPdf	00 50 35.5	-0.6
KLR	Kul'dur	164.38	122	PKP	PKPdf	00 50 36.5	-0.8
	comp=Z,3.2nm,1.0s,baz=313,slow=5.7,SNR=7.0						
KLR				PKPab	PKPab	00 51 32.5	-0.7
	comp=Z,11nm,0.9s,baz=274,slow=3.9,SNR=19						

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KLR    Kul'dur           164.38 122 d iPKIKP  PKPdf   00 50 36.1 -1.2
TIXI   Tiksi             164.63  28   PKPab   PKPab   00 51 34.6 +0.9
       comp=Z,13nm,0.5s,baz=38,slow=19,SNR=28
TIXI                                  PP      PP      00 55 18.5 -2.8
       comp=Z,3.7nm,0.8s,baz=270,slow=20,SNR=7.2
TIXI   Tiksi             164.63  28   PKPab   PKPab   00 51 35.2 +1.5
ZEA    Zeya              165.21 102  ePKIKP   PKPdf   00 50 39.1 +1.3
ZEA                                  e                00 51 36.5
YAK    Yakutsk           168.75  67   PKPab   PKPab   00 51 52.7 +0.5
       comp=Z,12nm,0.4s,baz=307,slow=0.4,SNR=9.3
YAK    Yakutsk           168.75  67  ePKP2    PKPab   00 51 52.6 +0.3
YAK                                   pmax    pmax
       comp=Z,34nm,0.8s
YAK                                   pmax    pmax
       comp=E,2.0nm,0.8s
YAK                                   pmax    pmax
       comp=N,3.0nm,0.9s
BILL   Bilibino          169.41 330   PKPab   PKPab   00 51 54.8 -0.2
PETK   Petropavlovsk-    172.89 208   PKPab   PKPab   00 52 10.1 -0.7
       comp=N,6.7nm,0.9s,baz=174,slow=7.4,SNR=4.3
SEY    Seymchan          176.54 358   PKP     PKPdf   00 50 42.0 -1.4
       comp=N,3.8nm,0.7s,baz=329,slow=0.9,SNR=6.9
SEY                                   PKPab   PKPab   00 52 27.4 +0.7
       comp=N,8.7nm,0.8s,baz=9.9,slow=2.1,SNR=13
MA2    Magadan           179.31  82   PKPab           00 52 40.4
       comp=N,14nm,0.8s,baz=24,slow=3.7,SNR=5.4
```

IDC ***18*** *00:31:30.4±0.6, 27.°31N×65.°55E, h0^{km}, mb4.3/39, mbtmp4.3/42, ML3.9/3, MS4.0/36, Error ellipse: s-maj=14.7km s-min=10.6km az=178.0*

BJI ***18*** *00:31:31.2±0.0, 27.°21N×65.°71E, h11^{km}, mb4.8/47, mB5.0/22, Ms4.5/28, Ms7 4.1/28*

NEIC ***18*** *00:31:34.5±1.8, 27.°31N±0.°09×65.°54E±0.°08, h24^{km}±5^{km}, mb4.6/65, Error ellipse: s-maj=13.1km s-min=9.3km az=156.0*

GCMT ***18*** *00:31:35.5±0.5, 27.°13N±0.°03×65.°53E±0.°03, h35^{km}±1^{km}, MW4.9/65, Moment Tensor Solution. s19,c22; s65,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.73±.22; $M_{\theta\theta}$-2.56±.16; $M_{\phi\phi}$1.82±.16; $M_{r\theta}$0.89±.19; $M_{\theta\phi}$-2.05±.14; $M_{\phi r}$-0.06±.15; Best double couple: $M_0$3.11600×10^{16} NP1:ϕ_s113.00000°,δ89.00000°,λ164.00000°. NP2: ϕ_s203.00000°,δ74.00000°,λ1.00000°. Principal axes: T 2.7080, Plg12.0000°, Azm67.0000°; N 0.8100, Plg74.0000°, Azm291.0000°; P -3.5250, Plg11.0000°, Azm159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DSN ***18*** *00:31:41.5±1.8, 27.°66N×64.°69E, h23^{km}, mb4.8/2, ML3.9/11, Ms3.4/10 Error ellipse: s-maj=32.8km s-min=16.7km az=154.0*

ISC 18 00:31:34.8±0.3, **27.°14N**±0.°05×**65.°57E**±0.°03, **h35^{km}, n322,** σ**2.^{s}32**/370, **mb4.6**/102, **MS4.0**/44, **17C-8D, Pakistan**

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Code   Station Name        Δ°   AZ°   Phase ID          Time      Res
                                      Op      ISC      h  m  s    ISC
NGCH   Negor - Chabah      4.36 247   P       Pn      00 32 39.2 +0.7
       SNR=46
JASK   Jask - Hormozg      7.02 261   P       Pn      00 33 16.3 +1.2
       SNR=21
WSAR   Wadi Sarin          7.39 240   Pn      Pn      00 33 18.7 -1.5
       2.7nm,0.3s,baz=79,slow=4.5,SNR=68
WSAR                                  Sn      Sn      00 34 35.4 -7.5
       6.1nm,0.3s,baz=342,slow=1.6,SNR=5.6
WSAR                                  LR      LR      00 37 18.0
       comp=Z,914nm,18.6s,baz=106,slow=47
       16nm,0.4s
WSAR   Wadi Sarin          7.39 240   P       Pn      00 33 19.7 -0.5
WSAR                                  S       Sn      00 34 37.3 -5.6
JLN    Jalan Bani Buh      7.49 230   P       Pn      00 33 20.6 -1.0
       SNR=29
JLN                                   S       Sn      00 34 41.1 -4.2
WBK    Wadi Bani Khal      7.50 234   P       Pn      00 33 21.0 -0.8
       SNR=92
WBK                                   P       Pn      00 33 21.0 -0.8
       SNR=92
WBK                                   S       Sn      00 34 39.0 -6.7
WBK                                   S       Sn      00 34 39.0 -6.7
THW    Thamme Wali         7.77  42   P       Pn      00 33 23.0 -2.4
SARP   Sargodha            7.80  51   P       Pn      00 33 23.3 -2.5
SMDO   Samad               7.94 241   P       Pn      00 33 27.0 -0.8
       SNR=18
SMDO                                  P       Pn      00 33 27.0 -0.8
       SNR=18
SMDO                                  S       Sn      00 34 53.3 -3.2
SMDO                                  S       Sn      00 34 53.3 -3.2
KBL    Kabul               7.95  21   Pn      Pn      00 33 26.2 -1.9
AJM    Ajmer               8.13  93  eP       Pn      00 33 29.4 -0.9
AJM                                  eS       Sn      00 34 56.1 -5.0
HOQ    Hoqain              8.27 246   P       Pn      00 33 31.0 -1.3
       SNR=28
HOQ                                   P       Pn      00 33 31.0 -1.3
       SNR=28
JMDO   Jabal Madar         8.29 237   P       Pn      00 33 33.0 +0.5
       SNR=50
JMDO                                  P       Pn      00 33 33.0 +0.5
       SNR=50
JMDO                                  S       Sn      00 35 00.4 -4.5
JMDO                                  S       Sn      00 35 00.4 -4.5
BANOM  Banah               8.39 264   S       Sn      00 34 59.0 -8.5
BANOM  Banah               8.39 264   P       Pn      00 33 33.3 -0.6
       SNR=16
SHME   Shamm               8.51 265 i P       Pn      00 33 34.8 -0.8
       SNR=8.2
SHME   Shamm               8.51 265   P       Pn      00 33 36.2 +0.7
       SNR=8.8
SHME                                  P       Pn      00 33 36.2 +0.7
       SNR=8.8
SHME                                  S       Sn      00 35 08.3 -2.1
SHME                                  S       Sn      00 35 08.3 -2.1
MDH    Madha               8.53 260 i P       Pn      00 33 33.9 -1.9
       SNR=15
MDH    Madha               8.53 260   P       Pn      00 33 34.3 -1.5
       SNR=5.3
MDH                                   P       Pn      00 33 34.3 -1.5
       SNR=5.3
MDH                                   S       Sn      00 35 03.9 -6.9
MDH                                   S       Sn      00 35 03.9 -6.9
CEP    Cherat              8.61  38   P       Pn      00 33 36.2 -0.9
MSFE   Esma-Masafi         8.63 260 i P       Pn      00 33 35.2 -2.1
       SNR=24
SOHO   SOHO                8.69 252 i P       Pn      00 33 35.6 -2.4
       SNR=22
SOHO   SOHO                8.69 252   P       Pn      00 33 36.6 -1.4
SOHO                                  P       Pn      00 33 36.6 -1.4
UOSS   Minazif             8.71 258   Pn      Pn      00 33 36.4 -1.9
UOSS   Minazif             8.71 258 i P       Pn      00 33 36.3 -1.9
       SNR=14
UOSS   Minazif             8.71 258   P       Pn      00 33 36.3 -1.9
UOSS                                  P       Pn      00 33 36.3 -1.9
UOSS                                  S       Sn      00 35 09.1 -6.0
UOSS                                  S       Sn      00 35 09.1 -6.0
BSY    Bisya               8.77 242   P       Pn      00 33 39.4 +0.3
       SNR=14
BSY                                   S       Sn      00 35 13.2 -3.6
HATD   Hatta, Dubai        8.80 257 i P       Pn      00 33 38.3 -1.3
       SNR=13
ASHO   Ashiyiah            8.91 256 i P       Pn      00 33 40.6 -0.5
       SNR=64
ASHO   Ashiyiah            8.91 256   P       Pn      00 33 42.0 +0.9
       SNR=23
ASHO                                  P       Pn      00 33 42.0 +0.9
       SNR=23
ASHO                                  S       Sn      00 35 20.0 -0.2
ASHO                                  S       Sn      00 35 20.0 -0.2
ARQ    Araqi               9.03 247   P       Pn      00 33 44.0 +1.3
UMQ    Umm Al-Quwin        9.04 262   P       Pn      00 33 44.6 +1.8
UMQ                                   P       Pn      00 33 44.6 +1.8
UMQ                                   S       Sn      00 35 23.0 -0.3
UMQ                                   S       Sn      00 35 23.0 -0.3
KHET   Khetri              9.13  82  eP       Pn      00 33 43.2 -0.8
NAZ    Nazwa, Dubai        9.17 259   P       Pn      00 33 45.2 +0.6
NAZ    Nazwa, Dubai        9.17 259   P       Pn      00 33 46.3 +1.8
NAZ                                   P       Pn      00 33 46.3 +1.8
NAZ                                   S       Sn      00 35 23.8 -2.7
NAZ                                   S       Sn      00 35 23.8 -2.7
MHTO   MHTO                9.26 230   P       Pn      00 33 46.0 +0.1
MHTO                                  S       Sn      00 35 25.8 -3.1
NIL    Nilore              9.27  44   Pn      Pn      00 33 44.2 -1.8
CHCP   Chirah Chowk        9.29  44   P       Pn      00 33 44.1 -2.1
FAQ    Al Faqa, Dubai      9.29 257 i P       Pn      00 33 46.8 +0.5
       SNR=18
FAQ    Al Faqa, Dubai      9.29 257   P       Pn      00 33 47.8 +1.5
FAQ                                   P       Pn      00 33 47.8 +1.5
FAQ                                   S       Sn      00 35 27.7 -1.9
FAQ                                   S       Sn      00 35 27.7 -1.9
ALNE   Al Ain              9.38 253 i P       Pn      00 33 47.9 +0.3
       SNR=35
ALNE   Al Ain              9.38 253   P       Pn      00 33 48.6 +1.1
ALNE                                  P       Pn      00 33 48.6 +1.1
ALNE                                  S       Sn      00 35 27.7 -4.1
ALNE                                  S       Sn      00 35 27.7 -4.1
ASUD   Al Ashush, Dub      9.56 257   P       Pn      00 33 50.5 +0.6
KUDL   Kundal              9.73  82  eP       Pn      00 33 50.8 -1.5
KUDL                                 eS       Sn      00 35 31.2 -9.2
JMU    Jammu               9.81  53  eP       Pn      00 33 52.0 -1.3
JMU                                  eS       Sn      00 35 36.1 -6.2
AJN    Ajban               9.88 257   P       Pn      00 33 53.5 -0.7
AJN                                   P       Pn      00 33 53.5 -0.7
SONA   Sohna              10.26  81  eS       Sn      00 35 45.8 -7.5
THN    Thein Dam          10.27  57  eP       Pn      00 33 58.8 -0.8
THN                                  eS       Sn      00 35 45.0 -8.4
THN                                   IAML            00 35 54.7
       comp=E,2μm,0.7s
DQM    DQM                10.29 227   P       Pn      00 33 58.8 -1.1
DQM                                   S       Sn      00 35 48.1 -5.9
BHK    Bhakra             10.38  63  eP       Pn      00 33 58.5 -2.6
BHK                                  eS       Sn      00 35 47.6 -8.7
BHK                                  eS       Sn      00 35 50.4 -5.9
NDI    New Delhi          10.41  79  eP       Pn      00 34 00.6 -1.0
NDI                                  eP       Pn      00 34 01.5 -0.1
NDI                                  eS       Sn      00 35 49.6 -7.5
NDI                                  eS       Sn      00 35 51.0 -6.1
NDI                                   IAML            00 36 02.6
       comp=N,61nm,0.5s
UMZA   Um Al Zommool      10.43 247   P       Pn      00 34 01.8  0.0
UMZA                                  S       Sn      00 35 50.8 -6.6
SMLA   Simla              10.88  66  eP       Pn      00 34 06.1 -1.9
SMLA                                 eS       Sn      00 36 02.7 -5.9
SMLA                                  IAML            00 36 08.9
       comp=E,258nm,0.5s
SMLA                                  IAML            00 36 09.6
       comp=N,253nm,0.5s
BHPL   Bhopal             11.41 107  eP       Pn      00 34 14.2 -1.2
JHNI   Jhansi             11.75  95  eP       Pn      00 34 16.1 -3.9
CHGR   Chuyangaron        11.87  14   Pn      Pn      00 34 19.8 -1.8
GEYT   Alibeck            12.45 332   Pn      Pn      00 34 27.5 -2.0
       comp=N,0.3nm,0.3s,baz=165,slow=12,SNR=11
GEYT                                  Lg      Lg      00 38 01.8
       comp=N,0.2nm,0.3s,baz=150,slow=27,SNR=2.1
GEYT                                  LR      LR      00 39 52.8
       comp=N,326nm,20.8s,baz=158,slow=41
       comp=N,9.1nm,1.2s
GEYT   Alibeck            12.45 332           Pn      00 34 27.4 -2.1
GYA0B  ALIBECK ARRAY      12.45 332   Pn      Pn      00 34 26.8 -2.7
GAR    Garm               12.47  17           Pn      00 34 27.7 -2.2
PTH    Pithoragarh        13.12  76  eP       Pn      00 34 37.0 -1.8
PTH                                  eS       Sn      00 36 50.3  -13
LGTI   Lohaghat           13.13  77  eP       Pn      00 34 31.8 -7.0
LGTI                                 eS       Sn      00 36 52.1  -12
LGTI                                  IAML            00 37 07.6
       comp=E,64nm,0.8s
DRK    Karamyk            13.35  21   Pn      Pn      00 34 37.4 -4.7
DMTO   DMTO               13.58 228   P       Pn      00 34 44.8 -0.1
BTK    Batken             13.60  17           Pn      00 34 43.2 -2.0
RBK    Rabkut             14.23 230   P       Pn      00 34 54.4 +0.5
WHFO   Wadi Hawf          14.24 232   P       Pn      00 34 54.0 -0.1
WHFO                                  P       Pn      00 34 54.0 -0.1
ABTO   Aybut              14.96 232   P       Pn      00 35 03.0 -0.8
KSH    Kashi              15.08  32   P       Pn      00 34 56.1 -9.2
KSH                                   pP      P       00 35 01.1 -9.1
KSH                                   sP      pP      00 35 06.3  -13
KSH                                   S       Sn      00 37 31.1  -20
KSH                                   pmax    pmax
       comp=E,10.0nm,0.5s
KSH                                   LR      LR
       comp=E,2μm,16.0s
KSH                                   LR      LR
       comp=E,2μm,19.9s
KSH                                   LR      LR
       comp=E,1μm,18.9s
DANN   Dangsing           16.15  82  eP       Pn      00 35 15.5 -3.9
       comp=E,146nm,0.8s
AML    Almayashu          16.36  22   P       Pn      00 35 22.1  0.0
       SNR=22
KK31   Karatay Array      16.42  13   Pn      Pn      00 35 19.4 -3.1
KKAR   Karatay Array      16.42  13   P       Pn      00 35 20.2 -2.3
KKAR   Karatay Array      16.42  13           Pn      00 35 20.2 -2.3
UCH    Uchtor             16.73  24   P       Pn      00 35 23.8 -3.0
       SNR=16
EKS2   Erkin-Say          16.87  21   P       Pn      00 35 25.9 -2.3
       SNR=12
GKN    Gorkha             16.93  83  eP       Pn      00 35 25.4 -3.7
AAK    Ala-Archa          17.09  23   P       Pn      00 35 29.7 -1.3
       SNR=13
AAK    Ala-Archa          17.09  23   Pn      Pn      00 35 28.6 -2.4
       comp=E,0.6nm,0.3s,baz=191,slow=6.4,SNR=14
AAK                                   Sn      Sn      00 38 28.1  -12
       comp=E,0.1nm,0.3s,baz=196,slow=15,SNR=2.3
       comp=E,4.1nm,0.6s
AAK    Ala-Archa          17.09  23   Pn      Pn      00 35 28.3 -2.7
KBK    Karagaybulak       17.26  24   P       Pn      00 35 30.8 -2.4
       SNR=13
DMN    Daman              17.36  84  eP       Pn      00 35 31.1 -3.5
CHMS   Chumysh            17.49  23   P       P       00 35 36.6 -0.2
       SNR=7.1
KKN    Kakani             17.50  83  eP       Pn      00 35 32.1 -4.3
PKIN   Phulchoki          17.62  84  eP       Pn      00 35 33.9 -3.9
       comp=E,41nm,0.5s
PKI    Pulchoki           17.63  84  eP       Pn      00 35 33.6 -4.4
       comp=E,44nm,0.6s
USP    Ospenovka          17.64  22   P       Pn      00 35 36.5 -1.3
       SNR=8.8
TARG   Taragay, Kyrgy     17.68  31           Pn      00 35 36.9 -1.7
KDJ    Kajisay            17.71  29   P       Pn      00 35 37.1 -1.6
KDJ                                   IAmb    IAmb    00 35 42.2
       comp=Z,40nm,1.1s
TKM2   Tokmak 2           17.73  25   P       Pn      00 35 35.9 -3.1
       SNR=11
GUN    Gumba              18.03  83  eP       Pn      00 35 40.9 -2.1
       comp=Z,298nm,1.0s
JIRN   Jiri               18.32  84  eP       P       00 35 44.1 -2.3
       comp=Z,222nm,1.1s
RAYN   Ar Rayn            18.49 263           P       00 35 46.1 -1.9
RAYN   Ar Rayn            18.49 263 i P       P       00 35 45.7 -2.3
       SNR=20
RAYN   Ar Rayn            18.49 263   P       P       00 35 46.5 -1.5
BOK    Bokaro             18.64  96  eP       P       00 35 48.5 -1.1
RAMN   Ramite             18.73  86  eP       P       00 35 47.9 -2.9
       comp=Z,66nm,0.6s
ODAN   Odare              19.44  86  eP       P       00 35 57.6 -1.0
TAPN   Taplejung          19.68  84  eP       Pn      00 36 02.2 -0.7
       comp=Z,80nm,1.1s
GNI    Garni              21.59 312   P       P       00 36 21.0 -0.6
       comp=Z,27nm,0.8s,baz=24,slow=3.0,SNR=20
       comp=Z,27nm,0.8s
GNI    Garni              21.59 312   P       P       00 36 21.4 -0.3
GNI    Garni              21.59 312   P       P       00 36 22.3 +0.6
ABKAR  Akbulak array      22.50 350   P       P       00 36 29.8 -1.4
ABKAR                                 IAmb    IAmb    00 36 57.9
       comp=Z,20nm,0.8s
ABKAR  Akbulak array      22.50 350   P       P       00 36 29.1 -2.0
LSA    Lhasa              22.63  78   P       P       00 36 33.8 +0.6
LSA                                   pmax    pmax
       comp=Z,36nm,1.6s
LSA                                   LR      LR
       comp=Z,450nm,14.2s
LSA                                   LR      LR
       comp=Z,210nm,14.2s
LSA                                   LR      LR
       comp=Z,480nm,21.4s
LSA    Lhasa              22.63  78   P       P       00 36 34.0 +0.8
LSA                                   IAmb    IAmb    00 36 49.9
       comp=Z,20nm,0.9s
GURO   Guroymak-BITLI     22.75 306   P       P       00 36 33.6 -0.5
GURO                                  IAmb    IAmb    00 36 39.9
       comp=Z,23nm,1.1s
KARS   Kars               22.93 312   P       P       00 36 35.2 -0.7
AKH    Akhalkalaki        23.05 314   P       P       00 36 36.7 -0.5
MAKZ   Makanchi           23.51  29   P       P       00 36 40.5 -1.0
SHL    Shillong           23.62  88   P       P       00 36 42.1 -0.8
SHL                                   IAmb    IAmb    00 36 55.1
       comp=Z,21nm,0.7s
MK31   Makanchi Array     23.64  30   P       P       00 36 41.5 -1.2
MK31                                  IAmb    IAmb    00 36 50.8
       comp=Z,9.8nm,0.7s
MKAR   Makanchi Array     23.64  30   P       P       00 36 41.6 -1.2
       comp=Z,4.9nm,0.6s,baz=212,slow=10,SNR=38
MKAR                                  PcP     PcP     00 40 27.0 +0.3
       comp=Z,0.5nm,0.6s,baz=216,slow=1.7,SNR=1.4
MKAR                                  LR      LR      00 47 27.6
       comp=Z,514nm,21.4s,baz=225,slow=41
       comp=Z,4.9nm,0.6s
ONI    Oni                23.71 316   P       P       00 36 41.1 -2.4
ONI                                   IAmb    IAmb    00 36 51.4
       comp=Z,39nm,1.4s
AKTO   Aktyubinsk         23.97 348   P       P       00 36 44.3 -1.4
       comp=Z,4.3nm,0.5s,baz=158,slow=8.7,SNR=26
AKTO                                  LR      LR      00 48 21.1
       comp=Z,233nm,18.4s,baz=50,slow=42
       comp=Z,4.3nm,0.5s
BRDH   Bariadhala         24.04  95   P       P       00 36 49.0 +2.4
       comp=Z,53nm,0.3s,baz=270,slow=19,SNR=5.3
BRDH                                  LR      LR      00 45 43.2
       comp=Z,254nm,20.6s,baz=90,slow=35
WMQ    Urumqi             24.41  41⇑iP       P       00 36 50.5 +0.5
WMQ                                   pP      pP      00 36 55.0 -5.4
WMQ                                   PP      PnPn    00 37 28.4 +7.2
WMQ                                   S       S       00 41 10.8 +3.4
WMQ                                   sS      sS      00 41 20.1 -4.4
WMQ                                   SS      SnSn    00 42 00.6 +7.8
WMQ                                   pmax    pmax
       comp=Z,48nm,0.9s
WMQ                                   pmax    pmax
       comp=Z,77nm,3.6s
WMQ                                   LR      LR
       comp=Z,1μm,13.1s
WMQ                                   LR      LR
       comp=Z,430nm,10.3s
WMQ                                   LR      LR
       comp=Z,290nm,14.7s
KOPT   Kop Dagi           24.43 308   P       P       00 36 49.6 -0.8
KOPT                                  IAmb    IAmb    00 37 16.6
       comp=Z,14nm,1.0s
PALK   Pallekele          24.43 141   P       P       00 36 56.1 +5.7
       comp=Z,2.2nm,0.6s,baz=51,slow=14,SNR=1.6
PALK                                  LR      LR      00 45 56.9
       comp=Z,125nm,20.8s,baz=78,slow=35
KBZ    Khabaz             24.68 318   P       P       00 36 52.4 +0.1
       comp=Z,16nm,0.9s,baz=133,slow=6.3,SNR=32
       comp=Z,16nm,0.9s
KVAR   Kislovodsk Arr     24.93 318   P       P       00 36 55.4 +0.6
       comp=Z,4.9nm,0.6s,baz=58,slow=16,SNR=6.8
       comp=Z,4.9nm,0.6s
KIV    Kislovodsk         24.93 318 ⇑P       P       00 36 53.9 -0.8
KIV    Kislovodsk         24.93 318   P       P       00 36 54.4 -0.3
KIV    Kislovodsk         24.93 318 i P       P       00 36 54.3 -0.5
       SNR=13
KIV    Kislovodsk         24.93 318   P       P       00 36 55.4 +0.6
ASF    Jabal al Asfar     25.38 288   P       P       00 36 59.4 +0.4
       comp=Z,2.0nm,0.9s,baz=127,slow=8.4,SNR=2.6
       comp=Z,2.0nm,0.9s
KURBB  Kurchatov Arra     25.45  19   P       P       00 36 59.1 -0.1
       comp=Z,7.0nm,1.0s,baz=211,slow=8.4,SNR=22
KURBB                                 LR      LR      00 48 11.5
       comp=Z,283nm,18.1s,baz=174,slow=40
       comp=Z,7.0nm,1.0s
KURK   Kurchatov          25.56  19   P       P       00 36 59.5 -0.7
KURK                                  IAmb    IAmb    00 37 21.2
       comp=Z,8.4nm,0.8s
GAZ    Gaziantep          25.92 300   P       P       00 37 03.6 -0.2
BVAR   Borovoye Array     26.10   7   P       P       00 37 05.5 +0.3
       comp=Z,4.3nm,0.4s,baz=166,slow=8.7,SNR=27
BVAR                                  LR      LR      00 49 24.7
       comp=Z,389nm,19.3s,baz=192,slow=41
       comp=Z,4.3nm,0.4s
BRVK   Borovoye           26.12   6   P       P       00 37 06.1 +0.8
BRVK                                  IAmb    IAmb    00 37 13.0
       comp=Z,22nm,0.8s
BRVK   Borovoye           26.12   6   P       P       00 37 08.2 +2.9
BRVK                                  P       P       00 37 08.2 +2.9
GOMU   GeErMu             26.39  63   P       P       00 37 09.3 +0.9
GOMU                                  pP      pP      00 37 13.8 -5.0
GOMU                                  sP      sP      00 37 15.6 -7.6
GOMU                                  S       S       00 41 44.4 +4.6
GOMU                                  pmax    pmax
       comp=Z,14nm,1.1s
ATD    Arta Tunnel        26.41 238   P       P       00 37 11.3 +3.0
       comp=Z,0.6nm,1.1s,baz=81,slow=19,SNR=2.6
ATD                                   LR      LR      00 48 20.0
       comp=Z,7.2nm,18.7s,baz=98,slow=38
ATD    Arta Tunnel        26.41 238   P       P       00 37 09.1 +0.8
ATD                                   IAmb    IAmb    00 37 33.2
       comp=Z,22nm,1.1s
MMAI   Mount Meron Ar     26.70 290   P       P       00 37 12.3 +1.5
       comp=Z,3.4nm,0.7s,baz=63,slow=7.3,SNR=7.7
MMAI                                  LR      LR      00 50 42.3
       comp=Z,292nm,19.6s,baz=168,slow=43
       comp=Z,3.4nm,0.7s
EIL    Elat               27.02 283   P       P       00 37 18.4 +4.8
       comp=Z,5.0nm,0.6s,baz=73,slow=5.1,SNR=10
EIL                                   LR      LR      00 49 40.0
       comp=Z,346nm,18.9s,baz=60,slow=40
TOKA   Tokat              27.40 306   P       P       00 37 14.9 -2.1
BELG   Belogornoye        28.59 337   P       P       00 37 24.8 -2.5
       comp=Z,15nm,0.6s,baz=180,slow=14,SNR=8.8
       comp=Z,15nm,0.6s
BRTR   Keskin Array B     29.30 304   P       P       00 37 34.4 +0.4
       comp=Z,1.3nm,0.8s,baz=129,slow=10,SNR=8.1
       comp=Z,1.3nm,0.8s
BRTR   Keskin Array B     29.30 304   P       P       00 37 33.3 -0.8
ARU    Arti               29.70 352   P       P       00 37 37.0 -0.2
       comp=Z,1.2nm,0.4s,baz=122,slow=21,SNR=2.3
ARU                                   LR      LR      00 50 57.2
       comp=Z,388nm,18.0s,baz=164,slow=40
       comp=Z,1.2nm,0.4s
ZAA0   Zalesovo Array     30.31  23   P       P       00 37 42.9 +0.3
ZALV   Zalesovo Beam      30.31  23   P       P       00 37 42.4 -0.2
       comp=Z,1.7nm,0.4s,baz=234,slow=10,SNR=14
ZALV                                  LR      LR      00 51 38.4
       comp=Z,184nm,18.8s,baz=246,slow=40
       comp=Z,1.7nm,0.4s
ZALV   Zalesovo Beam      30.31  23   P       P       00 37 43.4 +0.7
GTA    Gaotai             30.95  58  eP       P       00 37 49.9 +1.3
GTA                                   pP      pP      00 37 55.3 -3.8
GTA                                   pmax    pmax
       comp=Z,14nm,0.8s
GTA                                   LR      LR
       comp=Z,180nm,16.0s
GTA                                   LR      LR
       comp=Z,300nm,14.9s
GTA                                   LR      LR
       comp=Z,340nm,16.0s
ELL    Elmali             31.59 297   P       P       00 37 53.3 -1.0
CHTO   Chiang Mai         31.75  98   P       P       00 37 56.1 +0.3
CMAR   Chiang Mai Arr     31.88  99   P       P       00 37 57.4 +0.5
       comp=Z,2.9nm,0.5s,baz=302,slow=8.1,SNR=23
CMAR                                  LR      LR      00 52 33.5
       comp=Z,140nm,19.7s,baz=280,slow=40
       comp=Z,2.9nm,0.5s
PZH    PanZhiHua          32.22  83   P       P       00 38 01.4 +1.5
PZH                                   pmax    pmax
       comp=Z,10.0nm,0.5s
PZH                                   pmax    pmax
       comp=Z,100nm,5.1s
CRAI   Chiangrai          32.53  95   P       P       00 38 03.6 +1.0
PHRA   Phrae              33.00  98   P       P       00 38 07.2 +0.5
KMI    Kunming            33.35  85 ⇓P       P       00 38 10.6 +0.6
KMI                                   pmax    pmax
       comp=Z,10.0nm,0.9s
KMI                                   LR      LR
       comp=Z,230nm,12.1s
KMI                                   LR      LR
       comp=Z,180nm,17.7s
KMI                                   LR      LR
       comp=Z,260nm,19.5s
KIRV   Kirov              33.40 345   P       P       00 38 09.4 -0.2
       comp=Z,5.6nm,0.6s,baz=299,slow=2.6,SNR=4.2
KIRV                                  LR      LR      00 54 01.9
       comp=Z,365nm,18.1s,baz=146,slow=41
       comp=Z,5.6nm,0.6s
CD2    Chengdu            33.49  74   P       P       00 38 10.8 -0.2
CD2                                   pP      pP      00 38 17.5 -4.0
CD2                                   S       S       00 43 31.8 +1.2
CD2                                   pmax    pmax
       comp=Z,10.0nm,0.7s
CD2                                   pmax    pmax
       comp=Z,100nm,4.6s
CD2                                   LR      LR
       comp=Z,290nm,7.5s
CD2                                   LR      LR
       comp=Z,240nm,8.8s
CD2                                   LR      LR
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         comp=Z,180nm,11.5s
LZH   Lanzhou          33.61  65 eP    P       00 38 13.1 +1.0
LZH                              pP    pP      00 38 20.1 -2.5
LZH                              sP    sP      00 38 23.1 -3.9
LZH                              pmax  pmax
         comp=Z,22nm,1.1s
LZH                              LR    LR
         comp=Z,250nm,14.8s
LZH                              LR    LR
         comp=Z,430nm,14.1s
LZH                              LR    LR
         comp=Z,540nm,17.0s
TIRR  Tirgusor         34.38 310 ⇑P    P       00 38 17.9 -0.5
OBN   Obninsk          35.00 331  P    P       00 38 22.0 -1.5
         comp=Z,2.1nm,0.4s,baz=265,slow=11,SNR=3.0
         comp=Z,2.1nm,0.4s
IDI   Anoyia           35.53 293  P    P       00 38 29.0 +0.5
         comp=Z,14nm,0.8s,baz=13,slow=18,SNR=1.9
IDI                               LR   LR      00 55 54.0
         comp=Z,110nm,20.7s,baz=102,slow=41
         comp=Z,14nm,0.8s
RDO   Rodhopi          35.64 304  P    P       00 38 28.8 -0.5
RDO                               IAmb IAmb    00 38 40.5
         comp=Z,8.8nm,1.1s
SORM  Soroca           35.68 316 ⇑P    P       00 38 28.2 -1.4
VRI   Vrincioaia       35.94 312 ⇓P    P       00 38 31.8 -0.1
PLOR  Plostina         35.99 312 ⇑P    P       00 38 32.6 +0.3
TESR  Tescani          36.20 313 ⇓P    P       00 38 33.8 -0.3
AKASG Malin Array Be   36.23 320  P    P       00 38 33.0 -1.2
         comp=Z,3.0nm,0.5s,baz=123,slow=7.5,SNR=16
         comp=Z,3.0nm,0.5s
AKASG Malin Array Be   36.23 320  P    P       00 38 32.7 -1.5
AKASG                             IAmb IAmb    00 38 35.2
         comp=Z,6.4nm,1.3s
AKBB  Malin Array Si   36.23 320  P    P       00 38 33.4 -0.8
AKBB                              IAmb IAmb    00 38 41.4
         comp=Z,10nm,0.9s
COVR  Voineasa-Covas   36.29 311 ⇑P    P       00 38 35.3 +0.4
MLR   Muntele Rosu     36.36 311 ⇑P    P       00 38 35.6  0.0
MLR   Muntele Rosu     36.36 311  P    P       00 38 36.0 +0.5
         comp=Z,4.2nm,0.5s,baz=68,slow=19
         comp=Z,4.2nm,0.5s
MLR   Muntele Rosu     36.36 311  P    P       00 38 36.5 +0.9
DOPR  Dopca            36.87 311 ⇑P    P       00 38 39.7 -0.1
LODK  Lodwar           37.29 236  P    P       00 38 45.5 +1.8
BURAR Bucovina Array   37.48 314 ⇓P    P       00 38 45.1 +0.1
BURAR Bucovina Array   37.48 314  P    P       00 38 44.8 -0.3
BURAR                             IAmb IAmb    00 38 54.4
         comp=Z,8.2nm,0.7s
BUR08 Bucovina Ar. S   37.50 314  IAmb IAmb    00 39 08.3
         comp=Z,16nm,1.3s
VTS   Vitosha          37.59 305 ⇓P    P       00 38 47.6 +1.4
VTS   Vitosha          37.59 305  P    P       00 38 46.4 +0.3
XAN   Xi'an            37.73  69  P    P       00 38 47.4 +0.1
XAN                               pP   pP      00 38 52.8 -5.1
XAN                               pmax pmax
         comp=Z,12nm,0.9s
XAN                               LR   LR
         comp=Z,190nm,11.6s
XAN                               LR   LR
         comp=Z,170nm,12.9s
XAN                               LR   LR
         comp=Z,280nm,12.2s
LOT   Lotru            37.82 310 ⇑P    P       00 38 47.6 -0.4
SONM  Songino Array    37.84  46  P    P       00 38 48.5 +0.3
         comp=Z,1.7nm,0.9s,baz=249,slow=7.6,SNR=11
SONM                              LR   LR      00 57 10.8
         comp=Z,560nm,18.5s,baz=248,slow=41
         comp=Z,1.7nm,0.9s
SONM  Songino Array    37.84  46  P    P       00 38 48.4 +0.3
KLMR  Klimovskoe       38.04 340 eP    P       00 38 47.3 -2.1
KLMR                              AMP          00 38 54.0
         comp=Z,30nm,1.8s
KLMR                             ePP   PP      00 40 11.4 -5.2
ULN   Ulaanbaatar      38.28  46  P    P       00 38 52.2 +0.3
GZR   Gura Zlata       38.49 310 ⇑P    P       00 38 54.8 +1.2
MARR  Marisel-Cluj     38.57 312 ⇑P    P       00 38 54.6 +0.3
FNA   Florina          38.70 302  P    P       00 38 56.5 +1.1
MNK   Minsk            38.75 325 i P   P       00 38 54.3 -1.2
         comp=E,2.0nm,1.0s
MNK                              i P   P       00 38 54.3 -1.2
         comp=N,21nm,0.7s
MNK                              i P   P       00 38 54.3 -1.2
         comp=Z,7.0nm,0.7s,baz=300
MNK                              i PP  PP      00 40 23.2 -1.3
MNK                              i PPP PPP     00 40 43.4
MNK                              i S   S       00 44 52.5 +2.2
MNK                              i SS  SS      00 47 42.8 +1.2
MNK                              i SSS SSS     00 48 00.0
MNK                              i LQ  LQ      00 51 49.2
MNK                              i LR  LR      00 54 58.5
MNK                              i LRM MLR     00 56 55.4
         comp=Z,63nm,11.6s
MNK                              i LRM MLR     00 57 03.8
         comp=N,458nm,15.5s
MNK                              i LRM MLR     00 57 16.6
         comp=E,18nm,13.5s
BTO   Baotou           38.87  58 eP    P       00 38 57.3 +0.4
BTO                               pmax pmax
         comp=E,56nm,0.6s
BTO                               pmax pmax
         comp=E,300nm,5.5s
DRGR                   38.88 312 ⇑P    P       00 38 57.1 +0.3
SURR  Surduc           39.02 310 ⇓P    P       00 38 58.6 +0.7
MDVR  Moldovita        39.09 309 ⇑P    P       00 38 58.8 +0.2
KBN   Korca            39.13 302  P    P       00 39 00.5 +1.5
KBN                               IAmb IAmb    00 39 08.4
         comp=Z,20nm,1.2s
KMBO  Kilima Mbogo     39.16 229  P    P       00 39 03.9 +4.3
BZS   Buzias           39.33 310 ⇑P    P       00 39 00.7 +0.1
TRPA  Tarpa            39.35 314 ⇑P    P       00 38 59.2 -1.4
KULM  Kulim            39.85 117  P    P       00 39 07.9 +2.8
KULM                              IAmb IAmb    00 39 11.5
         comp=Z,15nm,1.2s
GSI   Gunungsitoli     40.03 125  P    P       00 39 08.8 +2.1
GSI   Gunungsitoli     40.03 125  P    P       00 39 14.4 +7.8
HHC   Hu-ho-hao-te     40.06  58 eP    P       00 39 13.4 +6.6
HHC                               pmax pmax
         comp=Z,30nm,1.3s
HHC                               pmax pmax
         comp=Z,82nm,6.0s
RPSI  Rantau Prapat    40.12 122  P    P       00 39 07.5 +0.1
RPSI                              IAmb IAmb    00 39 13.1
         comp=Z,8.1nm,0.7s
PABE  Paberze          41.21 325  P    P       00 39 16.9 +1.0
MORH  Mrgy, Hungar     41.49 310 ⇓P    P       00 39 18.7 +0.4
OJC   Ojcow            41.66 316  P    P       00 39 19.6 -0.1
OJC                               IAmb IAmb    00 39 28.8
         comp=Z,5.9nm,0.7s
VYHS  Vyhne            41.83 313 eP    P       00 39 21.4 +0.2
TIP   Timpagrande      42.13 299 ⇑P    P       00 39 25.7 +1.9
OKC   Ostrava-Krasne   42.59 315 eP    P       00 39 27.5 +0.2
WHN   Wuhan            42.60  73⇑iP    P       00 39 28.4 +0.8
WHN                               sP   pP      00 39 33.9 -4.4
WHN                               pmax pmax
         comp=Z,74nm,0.7s
WHN                               LR   LR
         comp=Z,700nm,14.8s
MAUC  Maruska          42.68 314 eP    P       00 39 28.0 -0.1
MODS  Modra-Piesok     42.82 313 eP    P       00 39 29.0 -0.2
CUC   Castrocucco      42.88 300  P    P       00 39 30.2 +0.4
MORC  Moravsky Berou   42.96 315 ⇓P    P       00 39 29.5 -0.8
MORC  Moravsky Berou   42.96 315  P    P       00 39 29.8 -0.6
MORC                              IAmb IAmb    00 39 53.2
         comp=Z,18nm,1.5s
MORC  Moravsky Berou   42.96 315 eP    P       00 39 30.2 -0.2
FINES FINESS Array B   43.25 334  P    P       00 39 31.1 -1.3
         comp=Z,2.5nm,0.5s,baz=128,slow=8.8,SNR=18
FINES                             LR   LR      01 00 15.4
         comp=Z,288nm,18.4s,baz=61,slow=40
         comp=Z,2.5nm,0.5s
RONA  Rosalia, Austr   43.34 312 eP    P       00 39 33.3 -0.1
         comp=Z,7.9nm,1.5s
MBAR  Mbarara          43.39 236  P    P       00 39 35.5 +1.1
         comp=Z,1.2nm,0.2s,baz=109,slow=17,SNR=2.1
         comp=Z,1.2nm,0.2s
KRLC  Kraliky          43.51 315 eP    P       00 39 34.6 -0.2
KRUC  Moravsky         43.53 314 eP    P       00 39 34.6 -0.3
XLT   XiLinHaoTe       43.68  54 eP    P       00 39 35.8 -0.5
XLT                               pP   pP      00 39 43.0 -4.0
XLT                               sP   sP      00 39 46.0 -5.4
XLT                               pmax pmax
         comp=Z,4.0nm,0.6s
XLT                               pmax pmax
         comp=Z,84nm,5.0s
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ARSA  Arzberg          43.78 311 eP    P       00 39 37.3 +0.3
         comp=Z,5.7nm,0.8s
DPC   Dobruska-Polom   43.85 316 eP    P       00 39 37.7 +0.1
OSTC  Ostas            43.97 316 eP    P       00 39 38.8 +0.3
VAE   Valguarnera      43.98 297  P    P       00 39 40.8 +1.9
         comp=Z,7.3nm,0.7s,baz=59,slow=15,SNR=1.8
         comp=Z,7.3nm,0.7s
CHVC  Chvalec          44.08 316 eP    P       00 39 39.7 +0.4
NRIK  Noril'sk         44.15  11  P    P       00 39 39.8 +0.2
         comp=Z,1.0nm,0.3s,baz=177,slow=6.2,SNR=3.7
NRIK                              LR   LR      01 01 05.3
         comp=Z,308nm,18.3s,baz=208,slow=40
         comp=Z,1.0nm,0.3s
OBKA  Obir             44.33 310 eP    P       00 39 41.5  0.0
         comp=Z,3.7nm,0.8s
TIA   Tai'an           44.35  65 eP    P       00 39 41.6 -0.1
TIA                               pmax pmax
         comp=Z,10.0nm,1.3s
MOA   Molln            44.71 312 eP    P       00 39 43.9 -0.6
         comp=Z,9.5nm,1.2s
CKRC  Cesky Krumlov    44.84 313 eP    P       00 39 45.3 -0.1
PRU   Pruhonice        44.90 315 eP    P       00 39 45.6 -0.3
BIOA  Bad Ischl, Aus   45.11 311 i P   P       00 39 47.4 -0.2
         comp=Z,4.0nm,0.6s
KBA   Koelnbreinsper   45.23 310 eP    P       00 39 49.3 +0.6
         comp=Z,5.0nm,0.6s
GEC2  GERESS Array S   45.24 313  P    P       00 39 48.3 -0.4
GEC2                              IAmb IAmb    00 40 06.7
         comp=Z,9.6nm,1.3s
GERES GERESS Array B   45.24 313  P    P       00 39 48.1 -0.6
         comp=Z,1.8nm,0.6s,baz=100,slow=7.3,SNR=14
         comp=Z,1.8nm,0.6s
GERES GERESS Array B   45.24 313  P    P       00 39 48.5 -0.3
KHC   Kasperske Hory   45.37 313  P    P       00 39 50.8 +1.1
KHC   Kasperske Hory   45.37 313 eP    P       00 39 49.6  0.0
CESX  Cesi             45.41 304  P    P       00 39 51.1 +1.1
CESX                              IAmb IAmb    00 40 14.4
         comp=Z,10nm,1.1s
BRG   Berggiesshubel   45.45 316 eP    P       00 39 50.9 +0.7
BRG                               Amp          00 39 52.5
         comp=Z,7.1nm,0.8s
MURB  Monte Urbino     45.47 305  P    P       00 39 52.7 +2.1
STAL  STALIGIAL        45.57 309  P    P       00 39 52.0 +0.7
STAL                              IAmb IAmb    00 40 19.5
         comp=Z,16nm,1.4s
ABTA  Abfaltersbach    45.75 310 i P   P       00 39 52.5 -0.3
         comp=Z,12nm,1.2s
CIMO  Cimolais         45.76 309  P    P       00 39 53.5 +0.7
CIMO                              IAmb IAmb    00 40 05.9
         comp=Z,3.4nm,0.8s
BLEU  Blekinge         45.76 324 eP    P       00 39 53.6 +1.0
CLL   Collm            46.11 316  P    P       00 39 53.8 -1.6
CLL                               IAmb IAmb    00 40 09.0
         comp=Z,6.6nm,1.0s
NJ2   Nanjing          46.20  71 eP    P       00 39 57.3 +0.9
NJ2                               pmax pmax
         comp=Z,18nm,0.5s
WTTA  Wattenberg       46.41 311 i P   P       00 39 57.2 -0.8
         comp=Z,8.8nm,0.7s
WATA  Walderalm        46.45 311 eP    P       00 39 57.2 -1.2
         comp=Z,3.5nm,0.9s
SQTA  Sankt Quirin     46.69 310 i P   P       00 39 59.2 -1.0
         comp=Z,6.9nm,0.8s
MOTA  Moosalm          46.77 311 i P   P       00 39 59.4 -1.5
         comp=Z,14nm,1.0s
LUNU  Lund             46.84 322 eP    P       00 40 02.5 +1.4
DEL   Delary           46.84 323 eP    P       00 40 01.6 +0.6
FETA  Feichten         47.00 310 i P   P       00 40 01.8 -0.8
         comp=Z,6.4nm,0.9s
RETA  Reutte           47.02 311 eP    P       00 40 01.5 -1.2
         comp=Z,4.0nm,0.7s
DAVOX Davos/Dischmat   47.56 310  P    P       00 40 06.9 -0.2
         comp=Z,1.9nm,0.5s,baz=126,slow=14,SNR=3.8
         comp=Z,1.9nm,0.5s
DAVA  Damuels          47.60 310 eP    P       00 40 05.9 -1.4
         comp=Z,13nm,0.8s
FABU  Falkenberg       47.60 324 eP    P       00 40 07.3 +0.3
VADS  Vadso            47.75 344 eP    P       00 40 07.5 -0.4
BORU  Boraas           47.75 325 eP    P       00 40 09.1 +1.0
HFS   Hagfors          48.07 328  P    P       00 40 09.8 -0.8
         comp=Z,6.5nm,0.5s,baz=134,slow=8.5,SNR=24
         comp=Z,6.5nm,0.5s
KEST  Kesra            48.17 295  P    P       00 40 12.4 +0.6
         comp=Z,6.0nm,0.9s,baz=119,slow=18,SNR=2.3
         comp=Z,6.0nm,0.9s
KEST  Kesra            48.17 295  P    P       00 40 11.0 -0.8
ARA0  ARCESS Array S   48.34 342 eP    P       00 40 12.8 +0.2
ARCES ARCESS Array B   48.34 342  P    P       00 40 11.9 -0.6
         comp=Z,3.4nm,0.6s,baz=142,slow=7.4,SNR=11
ARCES                             LR   LR      01 02 57.0
         comp=Z,179nm,20.2s,baz=118,slow=39
         comp=Z,3.4nm,0.6s
NC602 NORSAR Array S   49.28 328 eP    P       00 40 20.3 +0.4
OSL   Oslo             49.43 327 eP    P       00 40 21.8 +0.8
ECH   Echery           49.49 311  P    P       00 40 20.9 -0.8
ECH                               IAmb IAmb    00 40 27.0
         comp=Z,6.6nm,0.9s
NB2   NORSAR Subarra   49.52 329  P    P       00 40 21.6 -0.2
         comp=Z,4.0nm,0.5s,baz=108,slow=7.9
NB2   NORSAR Subarra   49.52 329  P    P       00 40 21.6 -0.2
         baz=108,slow=7.9
NOA   NORSAR Array B   49.52 329  P    P       00 40 20.8 -1.0
         comp=Z,2.2nm,0.5s,baz=102,slow=7.0,SNR=10
         comp=Z,2.2nm,0.5s
HAMF  Hammerfest       49.53 343 eP    P       00 40 22.0 +0.4
KONO  Kongsberg        49.90 327 eP    P       00 40 25.5 +1.0
TRO   Tromso           50.26 341 eP    P       00 40 27.4 +0.2
NSS   Namsos           50.37 333 eP    P       00 40 27.5 -0.5
KONS  Konsvik          50.69 336 eP    P       00 40 31.9 +1.4
SKAR  Skarslia         50.79 328 eP    P       00 40 31.7 +0.3
DOMB  Dombas           50.80 330 eP    P       00 40 31.7 +0.2
SBUM  Sibu             50.92 111  P    P       00 40 33.5 +0.6
SBUM                              IAmb IAmb    00 40 39.5
         comp=Z,4.9nm,0.9s
BLS5  Blasjo           51.40 326 eP    P       00 40 36.5 +0.5
HEH   HeiHe            51.84  46 eP    P       00 40 43.0 +3.7
HEH                               LR   LR
         comp=Z,440nm,16.9s
HEH                               LR   LR
         comp=Z,440nm,14.1s
HEH                               LR   LR
         comp=Z,620nm,15.3s
HYA   Hoyanger         51.91 328 eP    P       00 40 40.0 +0.4
KSRS  Korea Array      52.85  62  P    P       00 40 46.4 -0.7
         comp=Z,1.8nm,0.6s,baz=276,slow=6.5,SNR=3.6
KSRS                              LR   LR      01 08 04.9
         comp=Z,69nm,18.5s,baz=270,slow=42
         comp=Z,1.8nm,0.6s
HOPEN Hopen            53.13 349 eP    P       00 40 48.7 +0.2
TAM   Tamanrasset      54.17 280  P    P       00 40 58.9 +1.8
TAM                               IAmb IAmb    00 41 03.2
         comp=Z,4.6nm,1.0s
YAK   Yakutsk          54.29  31  LR   LR      01 06 01.6
         comp=Z,166nm,21.1s,baz=268,slow=38
KLR   Kul'dur          54.65  47  LR   LR      01 07 37.4
         comp=Z,263nm,18.3s,baz=272,slow=40
USRK  Ussuriysk Ar.    55.13  53  LR   LR      01 08 52.5
         comp=Z,143nm,18.1s,baz=281,slow=41
LSZ   Lusaka           55.63 225  LR   LR      01 05 46.7
         comp=Z,110nm,18.5s,baz=154,slow=37
SPA0  Spitsbergen Ar   55.66 349 eP    P       00 41 07.4 +0.5
SPITS Spitsbergen Ar   55.66 349  LR   LR      01 08 20.3
         comp=Z,138nm,19.3s,baz=117,slow=40
TIXI  Tiksi            56.13  20  LR   LR      01 07 54.3
         comp=Z,138nm,18.9s,baz=187,slow=39
KBS   Kingsbay         56.81 349 eP    P       00 41 15.2 +0.1
ESDC  Sonseca Array    58.06 302  P    P       00 41 23.9 -0.7
         comp=Z,1.0nm,1.0s,baz=62,slow=6.7,SNR=6.1
         comp=Z,1.0nm,1.0s
MDT   Midelt           60.05 294  P    P       00 41 38.7 +0.1
         comp=Z,1.7nm,0.8s,baz=97,slow=8.1,SNR=2.5
         comp=Z,1.7nm,0.8s
TORD  Torodi Ar. Bea   61.00 270  P    P       00 41 45.4 +0.3
         comp=Z,12nm,0.9s,baz=58,slow=6.6,SNR=20
TORD                              LR   LR      01 13 32.4
         comp=Z,91nm,18.1s,baz=55,slow=41
         comp=Z,12nm,0.9s
MJAR  Matsushiro Arr   61.11  61  P    P       00 41 48.2 +2.6
         comp=Z,0.5nm,0.6s,baz=307,slow=1.7,SNR=1.5
         comp=Z,0.5nm,0.6s
NOR   Nord             62.19 351 eP    P       00 41 51.9 -0.3
DAG   Danmarks Havn    62.47 345 eP    P       00 41 53.5 -0.5
DAG                               IAmb IAmb    00 41 58.9
         comp=Z,5.7nm,1.1s
DBG   Daneborg         62.97 342 eP    P       00 41 59.5 +2.1
DBG                               IAmb IAmb    00 42 04.0
         comp=Z,6.7nm,1.2s
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BORG  Borgarnes        64.49 332  LR   LR      01 13 50.5
         comp=Z,91nm,18.1s,baz=69,slow=40
MA2   Magadan          64.62  34  LR   LR      01 12 38.6
         comp=Z,120nm,18.6s,baz=250,slow=38
TSUM  Tsumeb           65.47 231  LR   LR      01 11 12.1
         comp=Z,122nm,19.0s,baz=358,slow=36
BOSA  Boshof           67.59 218  LR   LR      01 10 35.4
         comp=Z,50nm,20.0s,baz=64,slow=35
SUMG  Summit           68.43 342 i P   P       00 42 33.0 -0.1
SUMG                              IAmb IAmb    00 42 39.7
         comp=Z,9.0nm,1.0s
ICESG Greenland Ices   70.15 338 eP    P       00 42 44.7 +0.9
UPNV  Upernavik        72.92 345 eP    P       00 43 02.5 +2.5
UPNV                              IAmb IAmb    00 43 06.1
         comp=Z,4.2nm,0.5s
SUR   Sutherland       72.93 219  LR   LR      01 18 09.7
         comp=Z,46nm,18.3s,baz=58,slow=38
RES   Resolute Bay     77.63 355  LR   LR      01 23 21.3
         comp=Z,47nm,18.6s,baz=358,slow=40
A36M  Sachs Harbour    80.85   3  P    P       00 43 44.9 +0.3
A36M                              IAmb IAmb    00 44 09.8
         comp=Z,4.9nm,0.8s
WRA   Warramunga Arr   81.39 118  P    P       00 43 49.1 +0.8
         comp=Z,2.4nm,1.1s,baz=316,slow=5.0,SNR=3.0
         comp=Z,2.4nm,1.1s
FRB   Frobisher Bay    82.50 341  LR   LR      01 22 20.5
         comp=Z,43nm,22.0s,baz=356,slow=37
BMAR  Burnt Mountain   83.04  11  P    P       00 43 57.7 +1.4
INK   Inuvik           83.79   7  P    P       00 43 59.9 -0.1
         comp=Z,2.2nm,0.7s,baz=12,slow=5.8,SNR=6.0
         comp=Z,2.2nm,0.7s
INK   Inuvik           83.79   7  P    P       00 44 00.3 +0.3
INK                               IAmb IAmb    00 44 24.9
         comp=Z,6.9nm,1.2s
MDM   Murphy Dome      84.52  14  P    P       00 44 04.7 +0.9
MDM                               IAmb IAmb    00 44 36.1
         comp=Z,6.1nm,1.0s
CAST  Castle Rocks     84.96  16  P    P       00 44 06.8 +0.7
ILAR  Eielson Array    84.97  13  P    P       00 44 05.9 -0.2
         comp=Z,0.7nm,0.6s,baz=323,slow=4.6,SNR=11
         comp=Z,0.7nm,0.6s
ILAR  Eielson Array    84.97  13  P    P       00 44 06.0  0.0
SCHQ  Schefferville    88.71 335  LR   LR      01 25 32.0
         comp=Z,77nm,19.6s,baz=54,slow=37
YKA   Yellowknife Ar   90.68   0  P    P       00 44 33.7 +0.2
         comp=Z,0.8nm,0.8s,baz=351,slow=4.4,SNR=12
         comp=Z,0.8nm,0.8s
TXAR  Lajitas Array   122.90 349  PKP  PKiKP   00 50 28.6 +0.6
         comp=Z,0.2nm,0.5s,baz=148,slow=2.4,SNR=2.3
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*JMA **18** 00:31:37.8±0.1, 24°N±1°×123°.0E±0°.4, h48km±1km,*
MV2.5/10, NW OFF ISHIGAKIJIMA IS
*TAP **18** 00:31:38.5, 24°.34N×122°.87E, h35km, ML2.9, D*
ISC 18 00:31:38.0±1.2**, 24°.34N**±0°.05×**122°.96E**±0°.02**, h46**km±8km**,**
n43, σ0s86/75**, Taiwan region**

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Code  Station Name      Δ°   AZ°    Phase ID          Time      Res
                                  Op    ISC         h  m  s    ISC
JYNG  Yonagunijimaku    0.11 351 i P   Pn      00 31 45.3 -0.1
JYNG                             eS    Sn      00 31 50.7 +0.1
YOJ   Yonaguni jima     0.13  19  P    Pn      00 31 45.5  0.0
YOJ                              eS    Sn      00 31 50.8 +0.1
EOS3  EOS3              0.59 265 eP    Pn      00 31 50.0  0.0
         baz=266
EOS3                             eS    Sn      00 31 58.9 +0.3
         baz=266
EOS4  EOS4              0.63 250 eP    Pn      00 31 51.1 +0.9
         baz=250
EOS2  EOS2              0.67 277 eP    Pn      00 31 51.9 +0.8
         baz=277
IRIF  Iriomote-Funau    0.70  90  P    Pn      00 31 51.2 -0.3
IRIF                              S    Sn      00 32 00.9 -0.4
HATJ  Hateruma jima     0.82 110  P    Pn      00 31 53.0 -0.1
HATJ                              S    Sn      00 32 03.9 -0.3
JKRS  Kuro-shima        0.96  96  P    Pn      00 31 55.4 +0.4
JKRS                             eS    Sn      00 32 08.0 +0.5
TWC   Suao              1.05 285  P    Pn      00 31 55.6 -0.6
         baz=297
TWC                              eS    Sn      00 32 08.1 -1.7
         baz=297
JIJ   Ishigaki jima     1.08  88  P    Pn      00 31 56.5 -0.1
JIJ                               S    Sn      00 32 09.7 -0.7
EWUT  Wuta              1.09 276  S    Sn      00 32 09.7 -1.0
         baz=287
TWB1  Santiao Chiao     1.11 307 eS    Sn      00 32 10.1 -1.2
         baz=321
ENA   Nanau             1.12 275 eP    Pn      00 31 57.3 +0.1
         baz=286
ENA                              eS    Sn      00 32 10.5 -1.0
         baz=286
NDS   Dongshan          1.17 285 eP    Pn      00 31 58.4 +0.4
         baz=296
NDS                              eS    Sn      00 32 13.3 +0.5
         baz=296
TIPB  Shuangxi          1.21 302 eP    Pn      00 31 58.4 -0.1
         baz=314
TIPB                             eS    Sn      00 32 12.9 -0.9
         baz=314
TWE   Neicheng          1.24 288 eP    Pn      00 31 59.2 +0.3
         baz=290
TWE                              eS    Sn      00 32 13.9 -0.6
         baz=290
SXI1  Grass Mountain    1.24 307 eP    Pn      00 31 58.6 -0.4
         baz=320
SXI1                             eS    Sn      00 32 14.0 -0.6
         baz=320
JISG  Ishigakijimahi    1.25  78 eP    Pn      00 31 59.0 -0.1
JISG                             eS    Sn      00 32 14.6 -0.2
NACB  Ninganchiao       1.26 263 eP    Pn      00 31 58.5 -0.7
         baz=262
ENTT  Nioudou           1.31 284 eP    Pn      00 32 00.6 +0.8
         baz=294
ENTT                             eS    Sn      00 32 16.6 +0.4
         baz=294
FUSB  Fushanzhiwuyua    1.32 289 eP    Pn      00 32 00.2 +0.2
         baz=290
FUSB                             eS    Sn      00 32 15.9 -0.7
         baz=290
LATG  Datong            1.32 279 eP    Pn      00 32 00.5 +0.4
         baz=289
LATG                             eS    Sn      00 32 16.9 +0.2
         baz=289
ETLH  Xiulin Townshi    1.36 265  P    Pn      00 32 00.6  0.0
         baz=265
ETLH                             eS    Sn      00 32 17.3 -0.2
         baz=265
NNSB  Datong            1.44 274 eP    Pn      00 32 02.1 +0.3
         baz=274
YHNB  Yeheng            1.48 283 eP    Pn      00 32 02.9 +0.6
         baz=295
YM01  YM01              1.50 303 eS    Sn      00 32 20.4 -0.5
         baz=304
WHF   Hehuan Shan       1.56 263 eP    Pn      00 32 03.6 -0.1
         baz=250
WHF                              eS    Sn      00 32 23.1 +0.1
         baz=250
JTJ   Tarama            1.61  79  P    Pn      00 32 04.4 +0.5
JTJ                               S    Sn      00 32 24.1 +0.6
HGSD  Ruisui            1.64 239 eP    Pn      00 32 02.9 -1.4
         baz=239
HGSD                             eS    Sn      00 32 21.3 -3.0
         baz=239
CHGB  Renai             1.66 261 eP    Pn      00 32 04.8 +0.1
         baz=249
OWD   Renai             1.68 257 eP    Pn      00 32 05.0  0.0
         baz=258
OWD                              eS    Sn      00 32 24.1 -1.2
         baz=258
NFF   Wufeng Townshi    1.71 280 eP    Pn      00 32 06.3 +1.0
         baz=280
EHY   Hungye            1.72 241 eP    Pn      00 32 04.8 -0.6
         baz=241
EHY                              eS    Sn      00 32 24.9 -1.3
         baz=241
WUSB  Renai             1.72 259  P    Pn      00 32 05.8 +0.2
         baz=260
WUSB                             eS    Sn      00 32 27.0 +0.5
         baz=260
VWDT  VWDT              1.77 251  P    Pn      00 32 06.1 +0.1
         baz=252
VWDT                             eS    Sn      00 32 26.4 -0.9
         baz=252
YULB  Yu-li             1.79 239 eP    Pn      00 32 05.8 -0.7
         baz=254
YULB                             eS    Sn      00 32 25.9 -2.2
         baz=254
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WCS	**Beigang Elemen**	**1.90**	**262**	eP	**Pn**	**00 32 08.7**	**+0.8**
	baz=253						
SSLB	**Suanglung**	**1.92**	**254**	i P	**Pn**	**00 32 08.5**	**+0.3**
	baz=255						
SSLB				eS	**Sn**	**00 32 30.8**	**-0.4**
	baz=255						
SMLT	**Sun Moon Lake**	**1.94**	**257**	eP	**Pn**	**00 32 09.1**	**+0.6**
	baz=258						
SMLT				eS	**Sn**	**00 32 32.3**	**+0.5**
	baz=258						
TYC	**Yuchr**	**1.97**	**258**	eP	**Pn**	**00 32 09.8**	**+0.9**
	baz=247						
TYC				eS	**Sn**	**00 32 33.0**	**+0.6**
	baz=247						
WHYT	**Xinyi Township**	**2.03**	**252**	P	**Pn**	**00 32 10.6**	**+0.8**
	baz=242						
WHYT				eS	**Sn**	**00 32 33.6**	**-0.4**
	baz=242						
CHN5	**Tsauling**	**2.22**	**251**	eP	**Pn**	**00 32 14.1**	**+1.8**
	baz=252						
CHN5				eS	**Sn**	**00 32 39.9**	**+1.3**
	baz=252						
CHN1	**Nanshi**	**2.51**	**243**	eP	**Pn**	**00 32 18.2**	**+1.9**
	baz=244						
CHN1				eS	**Sn**	**00 32 47.5**	**+1.8**
	baz=244						

UPP 18 00:36:15.6±0.1, 67°.83N×20°.21E, h0^{km}, ML2.2, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.13**	**22**	P	Pg	00 36 18.4	+0.2
RATU	**Laukkuluspa**	**0.23**	**268**	P	Pg	00 36 20.2	+0.1
KOVU	**Salmi**	**0.39**	**357**	P	Pg	00 36 23.1	0.0
NIKU	**Nikkaluokta**	**0.45**	**275**	P	Pg	00 36 24.1	0.0
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	00 36 28.9	-0.2
SALU	**Saltoluokta**	**0.79**	**236**	P	Pg	00 36 30.5	-0.3

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*HEL **18** 00:36:17.1±0.4, 67°.84N×20°.29E, h0^{km}, ML1.8, Explosion*

UPP 18 00:36:18.0±0.1, 67°.86N×20°.20E, h0^{km}, ML2.3, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.11**	**30**	P	Pg	00 36 20.4	+0.3
KUA				S	Sg	00 36 21.9	+0.5
RATU	**Laukkuluspa**	**0.23**	**261**	P	Pg	00 36 22.7	+0.3
RATU				S	Sg	00 36 25.6	+0.2
KOVU	**Salmi**	**0.36**	**358**	P	Pg	00 36 25.0	0.0
KOVU				S	Sg	00 36 29.2	-0.5
NIKU	**Nikkaluokta**	**0.44**	**271**	P	Pg	00 36 26.4	0.0
LANU	**Lannavaara**	**0.70**	**74**	P	Pg	00 36 31.1	-0.3
LANU	**Lannavaara**	**0.70**	**74**	PB	Pg	00 36 31.1	-0.4
SALU	**Saltoluokta**	**0.81**	**234**	P	Pg	00 36 32.9	-0.5
KIF	**Kilpisjarvi**	**1.17**	**11**	eP	Pg	00 36 38.8	-1.6
KIF	**Kilpisjarvi**	**1.17**	**11**	PG	Pg	00 36 38.8	-1.6
KIF				MSG		00 36 54.2	
	comp=Z,15nm,0.2s						
KIF				SG	Sg	00 36 54.9	-0.6
PAJU	**Pajala**	**1.41**	**125**	PG	Pn	00 36 41.1	-3.7
PAJU				SN	Sg	00 37 02.2	-0.8
HEF	**Hetta**	**1.41**	**65**	eP	Pn	00 36 42.1	-2.8
HEF	**Hetta**	**1.41**	**65**	PN	Pn	00 36 43.8	-1.0
HEF				MSG		00 36 58.8	
	comp=Z,11nm,0.2s						
HEF				SN	Sg	00 37 02.0	-1.2
KLF	**Kolari**	**1.58**	**112**	PG	Pn	00 36 45.0	-2.2
	baz=300						
KLF				MSG		00 37 03.2	
	comp=Z,4.6nm,0.2s						
KLF				SN	Sg	00 37 08.6	0.0
KTK1	**Kautokeino**	**1.61**	**43**	PG	Pn	00 36 47.6	0.0
KTK1				SN	Sn	00 37 08.8	-0.3
TRO	**Tromso**	**1.84**	**346**	SG	Sn	00 37 14.7	0.0
KALU	**Kalix**	**2.37**	**147**	PG	Pn	00 36 58.5	+0.6
KALU				SG	Sn	00 37 28.4	+0.8
TOF	**Tornio**	**2.42**	**136**	PG	Pn	00 36 59.9	+1.2
	baz=316						
TOF				MSG		00 37 27.3	
	comp=Z,4.6nm,0.2s						
TOF				SG	Sn	00 37 30.7	+1.8
SGF	**Sodankyl**	**2.46**	**97**	PG	Pn	00 37 00.1	+0.8
SGF				SG	Sn	00 37 31.3	+1.4
RNF	**Rovaniemi**	**2.59**	**116**	PG	Pn	00 37 02.9	+1.9
RNF				SG	Sb	00 37 35.4	-2.1
KEV	**Kevo**	**3.12**	**49**	SB	Sn	00 37 47.2	+1.0
KEV				MSG		00 37 48.3	
	comp=Z,3.0nm,0.2s						
OBF4	**Vikkela, Lumij**	**3.64**	**145**	SG	Sb	00 38 06.0	-1.9
KU6	**Riekki**	**4.24**	**111**	PB	Pn	00 37 27.1	+3.4

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*IDC **18** 00:36:20.0±1.9, 6°.26S×129°.07E, h0^{km}, mb3.8/3, mbtmp3.7/5, ML3.9/2, Error ellipse: s-maj=204.1km s-min=27.7km az=70.0*

ISC 18 00:36:21.2±0.9, 6°.02S±0°.08×129°.7E±0°.2, h10^{km}, n14, σ1^s.69/12, mb3.9/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.50**	**8**	P	**Sn**	**00 37 08.5**	**+0.6**
MTN	**Manton Dam**	**6.92**	**168**	P	Pn	00 38 08.6	+5.8
	25nm,0.5s						
KDU	**Kakadu**	**7.16**	**158**	P	**Pn**	**00 38 09.8**	**+3.7**
KNRA	**Kununurra**	**9.64**	**185**	P	Pn	00 38 46.6	+6.5
WRAB	**Tennant Creek**	**14.55**	**162**	P	**Pn**	**00 39 47.7**	**+0.4**
	3.9nm,1.1s						
WRA	**Warramunga Arr**	**14.55**	**162**	Pn	**Pn**	**00 39 46.3**	**-1.1**
	0.6nm,0.3s,baz=333,slow=13,SNR=14						
WRA				Sn	Sn	00 42 12.7	-16
	0.9nm,0.3s,baz=332,slow=23,SNR=10						
	0.4nm,0.4s						
COEN	**Coen**	**15.43**	**122**	P	**Pn**	**00 39 58.0**	**-1.1**
ASAR	**Alice Springs**	**18.00**	**167**	P	**P**	**00 40 31.1**	**-1.1**
	0.4nm,0.3s,baz=348,slow=10,SNR=19						
ASAR				S	Sn	00 43 36.5	-16
	0.2nm,0.3s,baz=355,slow=28,SNR=1.8						
	1.1nm,0.5s						
AS01	**Alice Springs**	**18.01**	**167**	P	**P**	**00 40 30.9**	**-1.4**
WRKA	**Warakurna**	**18.96**	**184**	P	**Pn**	**00 40 43.3**	**-0.1**
MULG	**Mulgathing**	**24.48**	**171**	P	**P**	**00 41 38.4**	**-2.2**
SONM	**Songino Array**	**57.43**	**342**	P	**P**	**00 46 10.5**	**+0.3**
	0.2nm,0.5s,baz=165,slow=6.0,SNR=2.2						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**67.25**	**327**	P	**P**	**00 47 16.1**	**+0.2**
	1.0nm,0.4s,baz=114,slow=8.3,SNR=34						
	1.0nm,0.4s						
KURBB	**Kurchatov Arra**	**71.53**	**328**	P	**P**	**00 47 41.4**	**-0.9**
	0.3nm,0.3s,baz=130,slow=5.1,SNR=4.7						
	0.3nm,0.3s						

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*DDA **18** 00:47:48.0±0.0, 37°.83N×27°.63E, h7^{km}±2^{km}, ML1.3*

ISK 18 00:47:47.5, 37°.90N×27°.64E, h12^{km}, ML1.8/8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AYDN	**Tasoluk**	**0.30**	**142**	P	Pg	00 47 53.6	-0.1
AYDN				S	Sg	00 47 57.4	-0.5
GCAM	**G?zelcaml?**	**0.38**	**239**	Pg	Pg	00 47 54.9	-0.2
GCAM				Sg	Sb	00 48 01.1	-0.9
GCAM	**G?zelcaml?**	**0.38**	**239**	P	Pg	00 47 55.0	-0.1
GCAM				S	Sg	00 48 00.2	0.0
MLSB	**Milas**	**0.61**	**170**	Pg	Pb	00 47 59.9	-0.3
DGB	**zmir**	**0.62**	**284**	P	Pb	00 48 00.4	+0.2
BLCB	**Balcova**	**0.68**	**316**	Pg	Pb	00 48 01.1	-0.2
BLCB				Sg	Sb	00 48 10.9	+0.3
YER	**Yerkesik**	**0.92**	**146**	Pg	Pb	00 48 05.5	+0.1
URLA	**Izmir**	**0.94**	**299**	Pg	Pn	00 48 06.6	0.0
ZEYE	**Izmir, Urla-Ze**	**0.96**	**291**	P	Pn	00 48 06.9	+0.1
ZEYE				S	Sn	00 48 19.7	-0.7
ZEYE				i AML	AML	00 48 23.0	
	comp=E,14nm,1.0s						
ZEYE				i AML	AML	00 48 24.0	
	comp=N,11nm,0.3s						
KULA	**Kula-Manisa**	**1.01**	**52**	Pg	Pn	00 48 07.5	-0.1
ZEDA	**zmir-Bergama**	**1.15**	**338**	P	Pg	00 48 11.8	+2.1
ZEDA				i AML	AML	00 48 25.0	
	comp=E,6.3nm,1.8s						
ZEDA				S	Sn	00 48 25.7	+0.6
ZEDA				i AML	AML	00 48 26.0	
	comp=N,8.2nm,1.2s						
TURN	**Turunc**	**1.22**	**157**	Pn	Pg	00 48 10.9	-0.1
APMY	**Acipayam-Deniz**	**1.38**	**107**	Pn	Pb	00 48 13.2	-0.1

ISK 18 00:48:41.9, 36°.87N×27°.52E, h5^{km}, ML1.8/7, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAT	**Datca**	**0.14**	**162**	Pg	Pg	00 48 44.9	0.0
DAT	**Datca**	**0.14**	**162**	P	Pg	00 48 44.9	+0.1
DAT				S	Sg	00 48 47.0	+0.2
BDRM	**Kayabasi**	**0.21**	**342**	P	Pg	00 48 47.0	+0.9
BDRM				S	Sg	00 48 50.8	+2.0
BODT	**Bodrum**	**0.26**	**319**	Pg	Pb	00 48 48.2	-0.9
BODT				Sg	Sb	00 48 52.7	-1.2
KOSK	**Kos Island**	**0.45**	**255**	Pg	Pb	00 48 52.3	0.0
MLSB	**Milas**	**0.47**	**25**	Pg	Pb	00 48 52.3	-0.5
TURN	**Turunc**	**0.59**	**99**	Pg	Pb	00 48 54.5	-0.1
TURN				Sg	Sb	00 49 04.1	+0.9
YER	**Yerkesik**	**0.66**	**66**	Pg	Pb	00 48 55.9	-0.1
YER				Sg	Sb	00 49 06.3	+0.7
GCAM	**G?zelcaml?**	**0.86**	**345**	Pg	Pn	00 49 00.1	-0.6

IDC 18 00:49:56.0±1.5, 27°.46N×127°.47E, h0^{km}, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=61.0km s-min=31.4km az=63.0, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**40.22**	**311**	P	P	00 57 35.4	+1.1
	1.2nm,0.8s,baz=87,slow=7.1,SNR=7.1						
	1.2nm,0.8s						
ZALV	**Zalesovo Beam**	**40.87**	**322**	P	P	00 57 37.8	-1.7
	0.9nm,0.5s,baz=115,slow=6.5,SNR=4.4						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**51.20**	**172**	P	P	00 59 01.0	-0.2
	0.1nm,0.4s,baz=341,slow=7.2,SNR=1.5						
	0.1nm,0.4s						
YKA	**Yellowknife Ar**	**77.70**	**25**	P	P	01 01 54.6	+0.3
	0.2nm,0.7s,baz=324,slow=3.8,SNR=1.5						
	0.2nm,0.7s						

MAN 18 00:52:30.3, 7°.69N×124°.63E, h1^{km}, mb4.4, ML3.3, MS3.0, 8C-6D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUKP	**Musuan**	**0.47**	**67**	⇓eP	Pg	00 52 39.4	0.0
BUKP				eS	Sg	00 52 46.9	+1.4
CTBH	**Cotabato--PC H**	**0.60**	**219**	⇓eP	Pb	00 52 44.3	+0.7
CTBH				i S	Sn	00 52 54.9	-1.5
CGP	**Cagayan de Oro**	**0.76**	**5**	⇑iP	Pg	00 52 44.0	-1.0
CGP				i S	Sg	00 52 53.9	-1.1
KCP	**Kidapawan**	**0.82**	**146**	⇓iP	Pg	00 52 46.5	+0.5
KCP				i S	Sg	00 52 56.2	-0.4
SKMP	**Bagumbayan, Su**	**1.17**	**184**	⇑eP	Pg	00 52 52.5	-0.2
SKMP				eS	Sn	00 53 10.9	+0.5
PAGZ	**Pagadian**	**1.24**	**277**	⇓eP	Pg	00 52 54.3	+0.1
PAGZ				eS	Sn	00 53 12.3	0.0
TASP	**Talacogon, Agu**	**1.40**	**57**	⇑eP	Pb	00 52 58.3	+1.1
TASP				i S	Sn	00 53 20.8	+4.8
DCPH	**Dipolog City**	**1.54**	**305**	⇓eP	Pg	00 53 02.8	+2.9
DCPH				eS	Sg	00 53 25.3	+5.4
BUTP	**Butuan**	**1.61**	**38**	⇑eP	Pb	00 53 01.0	+0.2
BUTP				eS	Sg	00 53 26.4	+4.3
LSIP	**Lazi, Siquijor**	**1.74**	**326**	⇑eP	Pb	00 53 02.8	-0.2
LSIP				eS	Sg	00 53 29.4	+3.1
BIPH	**Bislig**	**1.79**	**74**	⇓iP	Pn	00 53 01.8	-0.6
BIPH				i S	Sn	00 53 25.9	+0.1
CDOP	**Cateel, Davao**	**1.80**	**87**	⇑eP	Pn	00 53 02.6	+0.1
CDOP				eS	Sb	00 53 26.9	-0.3
SNPH	**Sibulan**	**2.14**	**320**	eP	Pb	00 53 09.1	-0.9
SCPH	**Surigao**	**2.25**	**22**	eP	Pg	00 53 27.6	+14
SCPH				i S	Sb	00 53 40.1	0.0
TABP	**Talibon, Bohol**	**2.40**	**353**	⇑eP	Pn	00 53 11.4	+0.5
TABP				eS	Sn	00 53 42.3	+1.4
LLP	**Lapu-Lapu**	**2.69**	**346**	eP	Pn	00 53 15.0	+0.2
LLP				eS	Sb	00 53 51.6	-1.2
RCP	**Roxas**	**4.27**	**334**	⇑eP	Pn	00 53 40.3	+3.8

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*IDC **18** 00:57:47.3±0.5, 7°.94S×160°.95E, h0^{km}, mb4.5/24, mbtmp4.5/29, ML4.5/4, MS3.9/28, Error ellipse: s-maj=17.6km s-min=12.0km az=111.0*

*MOS **18** 00:57:47.8±1.0, 7°.90S×160°.82E, h10^{km}, mb5.1/29, Error ellipse: s-maj=9.4km s-min=7.4km az=76.3*

*GCMT **18** 00:57:48.8±0.4, 7°.92S±0°.04×160°.89E±0°.05, h17^{km}±1^{km}, MW4.8/74, Moment Tensor Solution. s17,c17; s74,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.00±.18; $M_{\theta\theta}$-1.47±.13; $M_{\phi\phi}$-0.53±.12; $M_{r\theta}$-0.60±.39; $M_{\theta\phi}$0.57±.07; $M_{\phi r}$-0.79±.43; Best double couple: $M_0$2.05900×10^{16} NP1:ϕ_s275.00000°,δ52.00000°,λ64.00000°. NP2: ϕ_s133.00000°,δ45.00000°,λ119.00000°. Principal axes: T 2.3670, Plg70.0000°, Azm123.0000°; N -0.6140, Plg20.0000°, Azm291.0000°; P -1.7520, Plg4.0000°, Azm23.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **18** 00:57:49.8±1.6, 7°.98S±0°.08×160°.94E±0°.09, h10^{km}±1^{km}, mb5.0/96 Error ellipse: s-maj=15.0km s-min=13.3km az=82.0*

*BJI **18** 00:57:52.0±0.0, 7°.87S×161°.20E, h53^{km}, mb4.7/41, mB5.1/22, Ms4.9/6, Ms7 4.5/6*

ISC 18 00:57:53.0±0.3, 8°.00S±0°.05×160°.97E±0°.06, h35^{km}, n389, σ1^s.08/379, mb4.9/100, MS4.1/29, 9C-14D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.75**	**215**	Pn	**Pn**	**00 58 20.7**	**0.0**
	2μm,0.3s,baz=329,slow=5.9,SNR=49						
HNR				Sn	**Sn**	**00 58 45.4**	**+3.6**
	5μm,0.3s,baz=33,slow=16,SNR=7.5						
HNR				LR	LR	00 59 11.7	
	comp=Z,43μm,21.2s,baz=346,slow=47						
HNR	**Honiara**	**1.75**	**215**	Pn	**Pn**	**00 58 21.0**	**+0.2**
HNR	**Honiara**	**1.75**	**215**	P	**Pn**	**00 58 21.2**	**+0.4**
RABL	**Rabaul**	**9.54**	**293**	P	Pn	01 00 17.4	+9.5
KRVT	**Keravat (AS076**	**9.62**	**292**	Pn	**Pn**	**01 00 08.4**	**-0.6**
	5.5nm,0.3s,baz=210,slow=20,SNR=1.4						
	49nm,0.4s						
KOUNC	**Koumac, New Ca**	**12.88**	**166**	Pn	**Pn**	**01 00 54.0**	**+0.3**
KOUNC	**Koumac, New Ca**	**12.88**	**166**	P	**P**	**01 01 06.4**	**+2.4**
PMG	**Port Moresby**	**13.72**	**263**	Pn	**Pn**	**01 01 04.1**	**-1.1**
	4.2nm,0.4s,baz=49,slow=16,SNR=5.0						
PMG				LR	LR	01 06 08.9	
	comp=Z,517nm,20.2s,baz=167,slow=37						
PMG	**Port Moresby**	**13.72**	**263**	⇓eP	**Pn**	**01 01 06.5**	**+1.3**
PMG				pmax	pmax		
	comp=Z,20nm,1.4s						
LIFNC	**LIFOU**	**14.07**	**155**	Pn	**Pn**	**01 01 11.6**	**+1.7**
DZM	**Mont Dzumac**	**14.95**	**160**	ePn	**Pn**	**01 01 21.8**	**-0.1**
	comp=Z,70nm,1.2s						
DZM				eLR	LR	01 04 51.1	
	comp=Z,663nm,21.9s						
DZM	**Mont Dzumac**	**14.95**	**160**	Pn	**Pn**	**01 01 22.8**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=353,slow=16,SNR=2.3						
DZM				LR	LR	01 06 50.9	
	comp=Z,507nm,19.6s,baz=28,slow=36						
	comp=Z,13nm,1.1s						
DZM	**Mont Dzumac**	**14.95**	**160**	P	**P**	**01 01 26.8**	**-0.3**
TV1H	**Townsville Har**	**17.73**	**229**	P	**Pn**	**01 01 57.4**	**+0.2**
COEN	**Coen**	**18.44**	**250**	P	**Pn**	**01 02 06.2**	**+0.3**
COEN	**Coen**	**18.44**	**250**	P	**Pn**	**01 02 06.9**	**+1.0**
CTA	**Charters Tower**	**18.64**	**228**	P	**Pn**	**01 02 08.6**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=48,slow=10,SNR=16						
CTA				LR	LR	01 08 40.8	
	comp=Z,444nm,19.5s,baz=66,slow=35						
	comp=Z,12nm,0.6s						
CTA	**Charters Tower**	**18.64**	**228**	P	**Pn**	**01 02 09.3**	**+0.9**
CTAO	**Charters Tower**	**18.64**	**228**	P	**Pn**	**01 02 08.3**	**0.0**
CTAO	**Charters Tower**	**18.64**	**228**	P	**Pn**	**01 02 09.3**	**+0.9**
CTAO	**Charters Tower**	**18.64**	**228**	P	**Pn**	**01 02 08.3**	**0.0**
CTAO				pmax	pmax		
	comp=Z,26nm,1.1s						
MTSU	**Mount Surprise**	**19.08**	**236**	P	**Pn**	**01 02 14.2**	**+0.5**
MSVF	**Nonsavu**	**19.24**	**122**	P	**Pn**	**01 02 15.2**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=209,slow=19,SNR=4.4						
MSVF				LR	LR	01 07 52.6	
	comp=Z,173nm,21.2s,baz=24,slow=31						
	comp=Z,15nm,1.2s						
MSVF	**Nonsavu**	**19.24**	**122**	P	**Pn**	**01 02 16.6**	**+0.9**
MSVF	**Nonsavu**	**19.24**	**122**	P	**Pn**	**01 02 16.6**	**+0.9**
MSVF				pmax	pmax		
	comp=Z,63nm,1.6s						
EIDS	**Eidsvold**	**19.68**	**207**		**Pn**	**01 02 20.0**	**-0.8**
GENI	**Genyem**	**21.39**	**283**	P	**P**	**01 02 40.7**	**+2.9**
	comp=Z,37nm,0.5s						
SMPI	**Sarmi**	**22.95**	**284**	P	**P**	**01 02 56.9**	**+2.4**
	comp=Z,60nm,1.4s,comp=Z,4μm						
ARMA	**Armidale**	**23.96**	**200**	P	**P**	**01 03 03.8**	**-0.4**
ARMA				IAmb	IAmb	01 03 06.2	
	comp=Z,88nm,1.4s						
GUMO	**Guam**	**26.75**	**323**	LR	LR	01 14 05.0	
	comp=Z,122nm,18.2s,baz=45,slow=37						
H11S2	**WAKE ISLAND Hy**	**26.92**	**12**	T	T	01 31 46.6	
	baz=193,slow=76,SNR=86						
H11S3	**WAKE ISLAND Hy**	**26.93**	**12**	T	T	01 31 37.8	
	baz=193,slow=76,SNR=63						
H11S1	**WAKE ISLAND Hy**	**26.94**	**12**	T	T	01 31 38.9	
	baz=193,slow=76,SNR=37						
AFI	**Afiamalu**	**27.38**	**105**	LR	LR	01 12 13.1	
	comp=Z,99nm,21.8s,baz=313,slow=32						
H11N1	**WAKE ISLAND Hy**	**28.15**	**12**	T	T	01 33 16.3	
	baz=193,slow=76,SNR=164						
H11N3	**WAKE ISLAND Hy**	**28.16**	**12**	T	T	01 33 15.0	
	baz=193,slow=76,SNR=75						
H11N2	**WAKE ISLAND Hy**	**28.17**	**12**	T	T	01 33 17.8	
	baz=193,slow=76,SNR=182						
WB0	**Warramunga Arr**	**28.28**	**243**	P	**P**	**01 03 41.4**	**-1.9**
WRAB	**Tennant Creek**	**28.37**	**243**	P	**P**	**01 03 42.8**	**-1.3**
WRAB	**Tennant Creek**	**28.37**	**243**	c iP	**P**	**01 03 42.4**	**-1.8**
WRAB				pmax	pmax		
	comp=Z,71nm,1.7s						
WB2	**Warramunga Arr**	**28.38**	**242**	P	**P**	**01 03 42.9**	**-1.3**
WB2				IAmb	IAmb	01 03 55.2	
	comp=Z,24nm,0.8s						
WRA	**Warramunga Arr**	**28.39**	**242**	P	**P**	**01 03 42.3**	**-2.0**
	comp=Z,18nm,0.6s,baz=69,slow=9.1,SNR=171						
WRA				PcP	**PcP**	**01 06 57.0**	**+0.6**
	comp=Z,1.7nm,0.9s,baz=72,slow=3.1,SNR=0.9						
WRA				LR	LR	01 14 32.4	
	comp=Z,396nm,19.4s,baz=79,slow=35						
	comp=Z,18nm,0.6s						
WRA	**Warramunga Arr**	**28.39**	**242**	P	**P**	**01 03 42.0**	**-2.3**
WRA	**Warramunga Arr**	**28.39**	**242**	i P	**P**	**01 03 42.7**	**-1.6**
WRA				pmax	pmax		
	comp=Z,18nm,0.6s						
STKA	**Stephens Creek**	**29.82**	**215**	P	**P**	**01 03 55.5**	**-1.4**
	comp=Z,3.8nm,0.6s,baz=55,slow=16,SNR=12						
STKA				LR	LR	01 16 12.5	
	comp=Z,424nm,18.5s,baz=43,slow=37						
	comp=Z,3.8nm,0.6s						
STKA	**Stephens Creek**	**29.82**	**215**	⇓eP	**P**	**01 03 56.1**	**-0.8**
AS31	**Alice Springs**	**30.25**	**236**	P	**P**	**01 03 59.0**	**-1.8**
ASAR	**Alice Springs**	**30.25**	**236**	P	**P**	**01 03 58.6**	**-2.3**
	comp=Z,5.0nm,0.6s,baz=64,slow=9.8,SNR=70						
ASAR				PcP	**PcP**	**01 07 01.0**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=65,slow=2.9,SNR=4.6						
ASAR				LR	LR	01 15 42.2	
	comp=Z,333nm,19.6s,baz=86,slow=36						
	comp=Z,5.0nm,0.6s						
ASAR	**Alice Springs**	**30.25**	**236**	P	**P**	**01 03 58.5**	**-2.4**
KNRA	**Kununurra**	**32.40**	**253**	P	**P**	**01 04 19.1**	**-0.6**
KNRA				IAmb	IAmb	01 04 27.8	
	comp=Z,21nm,1.0s						
TOO	**Toolangi**	**32.61**	**203**	P	**P**	**01 04 21.4**	**0.0**
TOO	**Toolangi**	**32.61**	**203**	P	**P**	**01 04 21.4**	**0.0**
TOO				pmax	pmax		
	comp=Z,84nm,1.9s						
URZ	**Urewera**	**33.47**	**157**	LR	LR	01 17 18.6	
	comp=Z,161nm,18.1s,baz=34,slow=35						
BBOO	**Buckleboo**	**33.80**	**220**	P	**P**	**01 04 30.5**	**-1.3**
BBOO				IAmb	IAmb	01 05 18.7	
	comp=Z,27nm,1.2s						
LBMI	**Labuha**	**34.14**	**281**	P	**P**	**01 04 35.8**	**+0.8**
	comp=Z,76nm,1.1s,comp=Z,3μm						
JCJ	**Chichijima**	**39.35**	**333**	LR	LR	01 19 25.6	
	comp=Z,156nm,19.5s,baz=64,slow=33						
RAR	**Rarotonga**	**40.07**	**113**	LR	LR	01 17 44.8	
	comp=Z,55nm,20.3s,baz=273,slow=30						
KAPI	**Kappang**	**41.05**	**272**	LR	LR	01 24 27.9	
	comp=Z,132nm,18.1s,baz=188,slow=39						
KAPI	**Kappang**	**41.05**	**272**	⇓eP	**P**	**01 05 32.9**	**-0.6**
KAPI				pmax	pmax		
	comp=Z,12nm,1.0s						
TOLI2	**Tolitoli**	**41.08**	**281**	P	**P**	**01 05 31.6**	**-2.1**
PSA00	**Pilbara Seismi**	**41.84**	**247**	P	**P**	**01 05 38.1**	**-1.8**
PSA00				IAmb	IAmb	01 06 23.2	
	comp=Z,36nm,1.4s						
PSA00	**Pilbara Seismi**	**41.84**	**247**	P	**P**	**01 05 38.3**	**-1.6**
PSA00				IAmb	IAmb	01 05 55.0	
	comp=Z,7.8nm,0.9s						
NWAO	**Narrogin (SRO)**	**47.42**	**232**	LR	LR	01 25 49.6	
	comp=Z,212nm,21.5s,baz=106,slow=36						
PPT	**Papeete**	**49.03**	**106**	LR	LR	01 22 18.7	
	comp=Z,46nm,20.7s,baz=216,slow=30						
PPT2	**Papeete2**	**49.03**	**106**	eS	**S**	**01 13 40.3**	**+0.6**
	comp=Z,55nm,21.8s						
PPT2				eLR	LR	01 20 41.9	
	comp=Z,134nm,24.2s						
PPT2				eLR	LR	01 20 42.0	
	comp=Z,117nm,27.0s						
MJAR	**Matsushiro Arr**	**49.19**	**336**	P	**P**	**01 06 35.2**	**-2.6**
	comp=Z,0.8nm,0.4s,baz=164,slow=9.2,SNR=2.5						
	comp=Z,0.8nm,0.4s						
JNU	**Nakatsue**	**49.91**	**327**	P	**P**	**01 06 40.5**	**-2.9**
	comp=Z,11nm,1.1s,baz=132,slow=2.2,SNR=3.3						
	comp=Z,11nm,1.1s						
TJN	**Taejon**	**54.27**	**327**	⇑eP	**P**	**01 07 15.2**	**-0.4**
KSRS	**Korea Array**	**54.77**	**328**	P	**P**	**01 07 18.2**	**-1.0**
	comp=Z,2.6nm,0.8s,baz=142,slow=7.9,SNR=14						
	comp=Z,2.6nm,0.8s						
KSAR	**Wonju Array Be**	**54.78**	**328**	P	**P**	**01 07 18.9**	**-0.4**
KSAR	**Wonju Array Be**	**54.78**	**328**	P	**P**	**01 07 18.9**	**-0.4**
NJ2	**Nanjing**	**56.58**	**317**	eP	**P**	**01 07 33.8**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
YSS	**Yuzh-Sakhalins**	**57.06**	**345**	eP	**P**	**01 07 36.5**	**+1.0**
USA0B	**Ussuriysk Arra**	**58.19**	**336**	P	**P**	**01 07 43.9**	**+0.3**
USA0B	**Ussuriysk Arra**	**58.19**	**336**	ceP	**P**	**01 07 43.8**	**+0.3**
USRK	**Ussuriysk Ar.**	**58.19**	**336**	P	**P**	**01 07 43.4**	**-0.1**
	comp=Z,4.5nm,0.7s,baz=108,slow=6.2,SNR=9.5						
	comp=Z,4.5nm,0.7s						
USRK	**Ussuriysk Ar.**	**58.19**	**336**	P	**P**	**01 07 43.6**	**+0.1**
TAOE	**Nuku Hiva Isla**	**58.20**	**95**	eLR	LR	01 24 50.3	
	comp=Z,252nm,29.1s						
MDJ	**Mudanjiang**	**59.53**	**334**	P	**P**	**01 07 53.3**	**+0.5**
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,170nm,10.0s						
MDJ	**Mudanjiang**	**59.53**	**334**	P	**P**	**01 07 53.1**	**+0.3**
MDJ				IAmb	IAmb	01 07 54.2	
	comp=Z,9.6nm,1.0s						
BKNI	**Bangkinang**	**60.30**	**275**	P	**P**	**01 07 58.3**	**-0.4**
CN2	**Changchun**	**60.77**	**331**	eP	**P**	**01 08 04.5**	**+3.1**
CN2				pP	sP	01 08 17.3	+2.0
CN2				S	**S**	**01 16 17.4**	**+1.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,100nm,4.0s						
CN2				LR	LR		
	comp=Z,200nm,14.0s						
CN2				LR	LR		
	comp=Z,100nm,14.0s						
CN2				LR	LR		
	comp=Z,200nm,15.0s						
PETK	**Petropavlovsk-**	**60.94**	**358**	P	**P**	**01 08 02.4**	**+0.1**
	comp=Z,6.3nm,0.9s,baz=186,slow=12,SNR=4.1						
	comp=Z,6.3nm,0.9s						
IPM	**Ipoh**	**61.06**	**280**	P	**P**	**01 08 02.5**	**-1.5**
BNX	**BinXian**	**61.36**	**334**	⇓P	**P**	**01 08 05.3**	**0.0**
BNX				pmax	pmax		
	comp=Z,13nm,1.0s						
BNX				pmax	pmax		
	comp=Z,140nm,4.6s						
KLR	**Kul'dur**	**62.47**	**339**	P	**P**	**01 08 12.6**	**-0.1**
	comp=Z,5.0nm,1.0s,baz=152,slow=4.8,SNR=8.5						
	comp=Z,5.0nm,1.0s						
KLR	**Kul'dur**	**62.47**	**339**	⇑iP	**P**	**01 08 12.8**	**+0.1**
KLR				pmax	pmax		
	comp=Z,12nm,1.6s						
HNS	**HongShan**	**62.50**	**320**	⇓P	**P**	**01 08 13.5**	**+0.3**
HNS				pmax	pmax		

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      comp=Z,7.0nm,1.4s
RPSI  Rantau Prapat     62.79 277    P      P      01 08 13.8 -1.7
PSI   Prapat            62.80 277    P      P      01 08 13.9 -1.9
PSI                                  pmax   pmax
      comp=Z,32nm,1.8s
GYA   Guiyang           62.82 305 ⇓  P      P      01 08 16.5 +0.8
GYA                                  pmax   pmax
      comp=Z,14nm,1.0s
GSI   Gunungsitoli      63.88 275    P      P      01 08 21.5 -1.3
XAN   Xi'an             64.61 314    P      P      01 08 26.9 -0.3
XAN                                  pP     pwP    01 08 39.8 -0.6
XAN                                  pmax   pmax
      comp=Z,5.0nm,1.0s
HEH   HeiHe             64.93 337   eP      P      01 08 28.6 -0.3
PHRA  Phrae             65.43 294    P      P      01 08 32.0 -0.8
KMI   Kunming           65.52 302 ⇓  P      P      01 08 34.9 +1.3
KMI                                  pmax   pmax
      comp=Z,14nm,1.0s
XLT   XiLinHaoTe        65.69 326⇑  iP      P      01 08 34.8 +0.7
XLT                                  pP     sP     01 08 47.8 -0.2
XLT                                  sP     pwP    01 08 53.1 +6.1
XLT                                  pmax   pmax
      comp=Z,32nm,1.1s
XLT                                  pmax   pmax
      comp=Z,120nm,4.1s
CRAI  Chiangrai         65.85 296    P      P      01 08 34.7 -0.8
CRAI                                 IAmb   IAmb   01 08 37.1
      comp=Z,13nm,1.3s
HHC   Hu-ho-hao-te      66.50 321   eP      P      01 08 42.8 +3.4
HHC                                  pmax   pmax
      comp=Z,18nm,1.0s
HHC                                  pmax   pmax
      comp=Z,150nm,6.2s
CMAR  Chiang Mai Arr    66.58 294    P      P      01 08 40.6 +0.4
      comp=Z,3.8nm,0.8s,baz=109,slow=4.6,SNR=20
      comp=Z,3.8nm,0.8s
CMAR  Chiang Mai Arr    66.58 294    P      P      01 08 40.2  0.0
CMAR  Chiang Mai Arr    66.58 294   i P     P      01 08 41.2 +1.0
CMAR                                 pmax   pmax
      comp=Z,4.0nm,0.7s
CHTO  Chiang Mai        66.69 294    P      P      01 08 40.2 -0.7
CHTO  Chiang Mai        66.69 294    P      P      01 08 40.2 -0.7
CHTO                                 pmax   pmax
      comp=Z,1.0nm,1.5s
PZH   PanZhiHua         66.88 303    P      P      01 08 42.1  0.0
PZH                                  pmax   pmax
      comp=Z,10.0nm,0.6s
PZH                                  pmax   pmax
      comp=Z,90nm,5.0s
CD2   Chengdu           67.03 308    P      P      01 08 42.8 -0.1
BTO   Baotou            67.33 320⇓  iP      P      01 08 46.6 +1.9
BTO                                  pP     pP     01 09 00.1 +5.4
BTO                                  sP     sP     01 09 06.8 +8.2
BTO                                  PcP    PcP    01 09 12.8 +0.6
BTO                                  PP     PP     01 11 16.4 +2.9
BTO                                  S      S      01 17 40.0 +2.1
BTO                                  sS     sS     01 17 57.0 +2.5
BTO                                  pmax   pmax
      comp=Z,32nm,0.9s
BTO                                  pmax   pmax
      comp=Z,690nm,6.0s
BTO                                  LR     LR
      comp=Z,420nm,7.5s
BTO                                  LR     LR
      comp=Z,610nm,5.5s
BTO                                  LR     LR
      comp=Z,180nm,4.3s
ZEA   Zeya              67.78 339   eP      P      01 08 47.6 +0.5
ZEA                                  pmax   pmax
      comp=N,10.0nm,1.3s
ZEA                                  pmax   pmax
      comp=Z,10.0nm,1.5s
MA2   Magadan           67.85 354    P      P      01 08 46.3 -1.1
MA2   Magadan           67.85 354deP        P      01 08 45.2 -2.2
MA2                                  pmax   pmax
      comp=Z,35nm,1.5s
VNDA  Vanda             69.49 180    LR     LR     01 36 08.8
      comp=Z,63nm,18.3s,baz=339,slow=33
SDPT  Sand Point        70.80  22    P      P      01 09 07.0 +1.3
      baz=221
SEY   Seymchan          71.03 356⇓  eP      P      01 09 06.9 -0.1
SEY                                  pmax   pmax
      comp=Z,11nm,1.4s
ULN   Ulaanbaatar       73.11 325    P      P      01 09 20.1 +0.1
ULN                                  IAmb   IAmb   01 09 22.1
      comp=Z,23nm,1.4s
ULN   Ulaanbaatar       73.11 325c  iP      P      01 09 20.6 +0.6
ULN                                  pmax   pmax
      comp=Z,22nm,1.7s
SONM  Songino Array     73.46 325    P      P      01 09 22.3 +0.3
      comp=Z,3.0nm,0.6s,baz=138,slow=6.0,SNR=20
      comp=Z,3.0nm,0.6s
SONM  Songino Array     73.46 325    P      P      01 09 22.1 +0.1
SONM                                 IAmb   IAmb   01 09 24.0
      comp=Z,20nm,1.6s
SONM  Songino Array     73.46 325    P      P      01 09 22.1 +0.1
SONM                                 pmax   pmax
      comp=Z,20nm,1.6s
GTA   Gaotai            73.58 315   eP      P      01 09 24.1 +1.2
GTA                                  pmax   pmax
      comp=Z,8.0nm,1.1s
YAK   Yakutsk           73.91 345    P      P      01 09 24.2  0.0
YAK   Yakutsk           73.91 345   eP      P      01 09 24.7 +0.6
YAK                                  pmax   pmax
      comp=Z,21nm,0.9s
YAK                                  pmax   pmax
      comp=N,6.0nm,1.0s
N16K  Nishlik Lake      75.27  19    P      P      01 09 33.4 +1.3
      baz=222
O17K  Koliganek Bris    75.32  20    P      P      01 09 32.9 +0.5
      baz=223
P18K  Big Mountain,     75.70  21    P      P      01 09 34.8 +0.2
      baz=225
BILL  Bilibino          75.95   2    P      P      01 09 36.1 +0.3
BILL                                 IAmb   IAmb   01 09 37.6
      comp=Z,19nm,1.2s
BILL  Bilibino          75.95   2d iP       P      01 09 35.7 -0.1
BILL                                e              01 09 46.1
BILL                                e              01 12 21.3
BILL                                ePPP    PPP    01 14 18.1
BILL                                eS      SKSac  01 19 47.4 +4.0
BILL                                 pmax   pmax
      comp=Z,25nm,1.7s
Q19K  Cape Douglas,     75.96  22    P      P      01 09 36.5 +0.4
      baz=227
O18K  Koktuh Hills      76.04  21    P      P      01 09 36.9 +0.4
      baz=225
ZAK   Zakamensk         76.54 326   eP      P      01 09 39.1 -0.6
ZAK                                  pmax   pmax
      comp=Z,6.0nm,1.5s
P19K  Oil Pt            76.61  22    P      P      01 09 40.3 +0.5
      baz=227
ANM   Nome              76.63  14    P      P      01 09 40.4 +0.6
ANM                                  IAmb   IAmb   01 09 47.0
      comp=Z,22nm,1.8s
ANM   Nome              76.63  14    P      P      01 09 40.4 +0.6
ANM                                  pmax   pmax
      comp=Z,22nm,1.8s
ANM   Nome              76.63  14    P      P      01 09 40.6 +0.8
      baz=214
SVW2  Sparrevohn        76.79  20    P      P      01 09 41.8 +1.0
SVW2                                 IAmb   IAmb   01 09 42.8
      comp=Z,18nm,1.1s
TNA   Tin City          76.88  13    P      P      01 09 41.3 +0.2
      baz=212
M19K  Big River Lodg    77.77  20    P      P      01 09 47.1 +0.9
M19K  Big River Lodg    77.77  20    P      P      01 09 47.3 +1.1
      baz=226
L19K  White Mountain    77.81  20    P      P      01 09 47.2 +0.8
L19K                                 IAmb   IAmb   01 09 48.4
      comp=Z,15nm,1.2s
L19K  White Mountain    77.81  20    P      P      01 09 47.3 +0.8
      baz=225
TTA   Tatalina          77.97  19    P      P      01 09 47.9 +0.5
TTA                                  IAmb   IAmb   01 09 55.3
      comp=Z,26nm,1.6s
TTA   Tatalina          77.97  19    P      P      01 09 47.9 +0.5
TTA                                  pmax   pmax
      comp=Z,26nm,1.6s
TTA   Tatalina          77.97  19    P      P      01 09 47.9 +0.5
      baz=224
M20K  Styx River        78.18  20    P      P      01 09 49.1 +0.5
      baz=227
L20K  Farewell, AK      78.35  20    P      P      01 09 50.0 +0.6
      baz=226
O22K  Cooper Landing    78.48  23    P      P      01 09 49.9 -0.2
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O22K  Cooper Landing    78.48  23    P      P      01 09 49.4 -0.8
      baz=230
SUA   Susitna One       78.74  21    P      P      01 09 50.7 -1.1
      baz=229
RC01  Rabbit Creek A    78.87  22    P      P      01 09 51.7 -0.6
      baz=230
K20K  Telida            78.90  19    P      P      01 09 53.2 +0.7
K20K                                 IAmb   IAmb   01 09 59.9
      comp=Z,31nm,1.6s
K20K  Telida            78.90  19    P      P      01 09 52.2 -0.2
      baz=226
PMR   Palmer            79.42  22    P      P      01 09 55.3  0.0
      baz=230
KNK   Knik Glacier      79.55  22    P      P      01 09 56.5 +0.4
      baz=231
CAST  Castle Rocks      79.59  20    P      P      01 09 55.9 -0.3
CAST                                 IAmb   IAmb   01 10 03.7
      comp=Z,34nm,1.9s
CAST  Castle Rocks      79.59  20    P      P      01 09 55.9 -0.3
      baz=227
CHUM  Lake Minchumin    79.83  19    P      P      01 09 57.3 -0.2
      baz=227
SML   Sawmill           79.85  22    P      P      01 09 57.6 -0.1
      baz=231
RDOG  Red Dog Mine      80.06  13    P      P      01 09 59.1 +0.5
RDOG                                 IAmb   IAmb   01 10 00.2
      comp=Z,23nm,1.5s
RDOG  Red Dog Mine      80.06  13    P      P      01 09 59.4 +0.7
      baz=216
M23K  Glacier View      80.06  22    P      P      01 09 59.0 +0.1
      baz=232
TRF   Thorofare Moun    80.21  20    P      P      01 09 59.7 -0.1
TRF                                  IAmb   IAmb   01 10 48.2
      comp=Z,54nm,2.0s
TRF   Thorofare Moun    80.21  20    P      P      01 09 59.3 -0.5
      baz=229
SCM   Sheep Creek Mo    80.24  22    P      P      01 09 59.4 -0.4
      baz=232
BPAW  Bear Paw Mtn.     80.41  19    P      P      01 10 00.8 +0.1
      baz=228
I21K  Tanana            80.82  18    P      P      01 10 02.5 -0.3
      baz=227
IMAR  Indian Mountai    80.85  17    P      P      01 10 03.0  0.0
MCK   McKinley          80.86  20    P      P      01 10 02.8 -0.3
MCK                                  IAmb   IAmb   01 10 08.6
      comp=Z,23nm,1.2s
MCK   McKinley          80.86  20    P      P      01 10 02.8 -0.3
MCK                                  pmax   pmax
      comp=Z,23nm,1.2s
MCK   McKinley          80.86  20    P      P      01 10 02.7 -0.3
      baz=230,SNR=10.0
H21K  Melozitna Rive    80.90  18    P      P      01 10 03.0 -0.2
      baz=226
MLY   Manley            81.11  19    P      P      01 10 04.5 +0.1
MLY   Manley            81.11  19    P      P      01 10 03.7 -0.7
      baz=228
G21K  Allakaket         81.29  17    P      P      01 10 04.8 -0.5
      baz=226
NEA2  Nenana            81.37  20    P      P      01 10 05.2 -0.6
NEA2  Nenana            81.37  20    P      P      01 10 05.1 -0.6
      baz=230
HARP  HAARP             81.40  22    P      P      01 10 06.4 +0.4
      baz=234
PALK  Pallekele         81.45 279    P      P      01 10 08.1 +0.8
      comp=Z,3.4nm,0.5s,baz=185,slow=5.4,SNR=6.1
      comp=Z,3.4nm,0.5s
H22K  Ishtalitna Cre    81.49  18    P      P      01 10 06.5 +0.1
      baz=228
WRH   Wood River Hil    81.62  20    P      P      01 10 06.8 -0.3
WRH                                  IAmb   IAmb   01 10 07.5
      comp=Z,18nm,1.4s
I23K  Minto, Yukon-K    81.63  19    P      P      01 10 06.4 -0.6
      baz=230
F21K  Alatna River      81.80  16    P      P      01 10 07.7 -0.2
      baz=226
CCB   Clear Creek Bu    81.82  20    P      P      01 10 07.8 -0.3
MDM   Murphy Dome       81.88  19    P      P      01 10 07.8 -0.6
MDM                                  IAmb   IAmb   01 10 14.3
      comp=Z,14nm,1.2s
TCOL  CIGO, UAF Yank    81.95  20    P      P      01 10 08.5 -0.3
TCOL                                 IAmb   IAmb   01 10 09.1
      comp=Z,13nm,1.0s
TCOL  CIGO, UAF Yank    81.95  20    P      P      01 10 08.4 -0.3
      baz=231
COLA  College           81.95  20    P      P      01 10 08.5 -0.3
COLA                                 IAmb   IAmb   01 10 14.5
      comp=Z,12nm,1.0s
COLA  College           81.95  20⇓  iP      P      01 10 08.4 -0.3
COLA                                 pmax   pmax
      comp=Z,12nm,1.2s
COLA  College           81.95  20    P      P      01 10 08.5 -0.3
      baz=231
HDA   Harding Lake      81.97  20    P      P      01 10 08.9 +0.1
HDA                                  IAmb   IAmb   01 10 15.2
      comp=Z,19nm,1.3s
HDA   Harding Lake      81.97  20    P      P      01 10 09.0 +0.1
      baz=232,SNR=6.7
QSPA  South Pole Qui    81.98 180    P      P      01 10 09.4 +0.2
      comp=Z,8.8nm,1.0s,baz=351,slow=3.3,SNR=9.7
QSPA                                 LR     LR     01 44 21.9
      comp=Z,121nm,18.5s,baz=334,slow=34
      comp=Z,8.8nm,1.0s
QSPA  South Pole Qui    81.98 180    P      P      01 10 08.9 -0.3
QSPA                                 IAmb   IAmb   01 10 11.1
      comp=Z,17nm,1.3s
K24K  Donnelly Dome     82.00  21    P      P      01 10 09.5 +0.4
      baz=233
H23K  Yukon River       82.01  18    P      P      01 10 09.4 +0.3
H23K                                 IAmb   IAmb   01 10 16.1
      comp=Z,16nm,1.2s
H23K  Yukon River       82.01  18    P      P      01 10 09.6 +0.4
      baz=230
PINM  Pinnacle          82.09  26    P      P      01 10 10.2 +0.5
      baz=239
CTG   Chitna Glacier    82.09  25    P      P      01 10 10.7 +0.9
      baz=238
IL31                    82.21  20    P      P      01 10 09.5 -0.6
ILAR  Eielson Array     82.21  20    P      P      01 10 09.2 -0.9
      comp=Z,2.6nm,0.5s,baz=245,slow=5.1,SNR=58
      comp=Z,2.6nm,0.5s
ILAR  Eielson Array     82.21  20    P      P      01 10 10.3 +0.1
ILAR  Eielson Array     82.21  20    P      P      01 10 10.3 +0.1
M26K  Nabesna, AK       82.22  23    P      P      01 10 11.5 +1.1
      baz=236
TIXI  Tiksi             82.27 350    P      P      01 10 09.8 -0.5
TIXI  Tiksi             82.27 350⇓  iP      P      01 10 10.1 -0.2
TIXI                                 pmax   pmax
      comp=Z,16nm,1.7s
RIDG  Independent Ri    82.30  21    P      P      01 10 11.4 +0.7
RIDG                                 IAmb   IAmb   01 10 17.7
      comp=Z,15nm,1.2s
RIDG  Independent Ri    82.30  21    P      P      01 10 11.0 +0.2
      baz=234
F22K  John River        82.36  16    P      P      01 10 11.6 +0.7
      baz=227
G23K  Bananza Creek     82.45  18    P      P      01 10 11.1 -0.3
      baz=229
O28M  Mount Upton       82.47  25    P      P      01 10 12.3 +0.3
      baz=239
DOT   Dot Lake          82.53  22    IAmb   IAmb   01 11 00.3
      comp=Z,30nm,1.8s
H24K  Noodor Dome       82.55  19    P      P      01 10 11.9 -0.1
H24K  Noodor Dome       82.55  19    P      P      01 10 12.1 +0.1
      baz=231
M27K  Edge Creek, AK    82.63  23    P      P      01 10 13.7 +1.1
M27K  Edge Creek, AK    82.63  23    P      P      01 10 12.7 +0.1
      baz=237
COLD  Coldfoot          82.74  17    P      P      01 10 14.3 +1.5
COLD                                 IAmb   IAmb   01 12 00.5
      comp=Z,25nm,2.0s
SCRK  Sand Creek        82.75  21    P      P      01 10 13.4 +0.3
SCRK                                 IAmb   IAmb   01 10 14.7
      comp=Z,13nm,1.3s
SCRK  Sand Creek        82.75  21    P      P      01 10 13.7 +0.6
      baz=235,SNR=6.4
YUK3  Moose Creek       82.89  24    P      P      01 10 14.2 +0.2
      baz=238
E22K  Anaktuvuk Pass    82.89  16    P      P      01 10 14.6 +0.9
      baz=227
YUK8  Steele Glacier    82.91  25    P      P      01 10 14.2  0.0
      baz=239
L27K  Beaver Creek,     83.04  23    P      P      01 10 15.1 +0.5
L27K                                 IAmb   IAmb   01 10 22.0
      comp=Z,16nm,1.6s
L27K  Beaver Creek,     83.04  23    P      P      01 10 14.1 -0.5
      baz=237
BCAR  Beaver Creek A    83.06  23    P      P      01 10 15.5 +0.8
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BVCY  Beaver Creek      83.06  23    P      P      01 10 16.1 +1.4
      baz=238
G24K  Hadweenzic Riv    83.22  18    P      P      01 10 16.7 +1.3
      baz=231
YUK6  Outpost Mounta    83.33  25    P      P      01 10 15.6 -0.8
      baz=240
YUK4  Talbot Arm        83.41  25    P      P      01 10 18.3 +1.6
      baz=240
S32K  Killisnoo         83.43  29    P      P      01 10 16.3 -0.3
      baz=244
E23K  Chandalar         83.45  17    P      P      01 10 18.0 +1.3
      baz=229
K27K  Chicken           83.47  22    P      P      01 10 17.5 +0.7
K27K                                 IAmb   IAmb   01 10 19.4
      comp=Z,10nm,1.2s
K27K  Chicken           83.47  22    P      P      01 10 17.1 +0.4
      baz=237
PLBC  Pleasant Camp     83.49  27    P      P      01 10 17.3 +0.4
      baz=242
P30M  Million Dollar    83.54  26    P      P      01 10 16.9 -0.4
      baz=242
F24K  Squaw Lake        83.61  18    P      P      01 10 17.5 +0.1
      baz=231
WMQ   Urumqi            83.63 316   eP      P      01 10 19.3 +1.2
WMQ                                  LR     LR
      comp=Z,390nm,15.3s
WMQ                                  LR     LR
      comp=Z,280nm,17.5s
HYT   Haines Junctio    83.64  26    P      P      01 10 18.2 +0.3
      baz=241
G25K  Bearman Lake      83.69  19    P      P      01 10 19.0 +1.2
      baz=233
D23K  Nanushuk River    83.76  16    P      P      01 10 19.2 +1.1
      baz=228
E24K  Your Creek        83.79  17    P      P      01 10 19.4 +1.1
      baz=230
I26K  Coal Creek Min    83.81  20    P      P      01 10 18.6 +0.2
I26K                                 IAmb   IAmb   01 10 26.3
      comp=Z,15nm,1.4s
I26K  Coal Creek Min    83.81  20    P      P      01 10 19.7 +1.3
      baz=236
R32K  Eaglecrest        83.81  29    P      P      01 10 18.5 -0.1
      baz=244
A21K  Barrow            83.99  13    P      P      01 10 19.1  0.0
A21K  Barrow            83.99  13    P      P      01 10 19.5 +0.3
      baz=222
M29M  Somme Creek       84.03  24    P      P      01 10 19.6 -0.2
      baz=240
V35K  Ketchikan         84.04  32    P      P      01 10 20.3 +0.5
      baz=247
N30M  Aishikik Lake     84.12  25    P      P      01 10 19.9 -0.3
      baz=242
EGAK  Eagle             84.22  21    P      P      01 10 21.3 +0.8
EGAK  Eagle             84.22  21    P      P      01 10 20.3 -0.2
      baz=238,SNR=7.4
O30N  Mendenhall        84.22  26    P      P      01 10 21.2 +0.5
      baz=242
F25K  Christian Rive    84.33  18    P      P      01 10 22.8 +1.6
      baz=233
DAWY  Dawson            84.50  22    P      P      01 10 23.0 +1.0
      baz=239
L29M  L29M              84.50  24    P      P      01 10 21.9 -0.1
      baz=240
I27K  Kandik River      84.50  21    P      P      01 10 22.2 +0.1
      baz=237
G26K  Porcupine Rive    84.54  19    P      P      01 10 22.3 +0.3
      baz=235
BMAR  Burnt Mountain    84.56  18    P      P      01 10 22.1 -0.2
E25K  Arctic Village    84.67  18    P      P      01 10 22.3 -0.5
      baz=233
N31M  Braeburn, Yuko    84.69  25    P      P      01 10 23.3 +0.3
      baz=243
M30M  Minto, Yukon      84.78  24    P      P      01 10 23.4  0.0
      baz=242
C24K  Franklin Bluff    84.79  16    P      P      01 10 23.7 +0.4
      baz=230
BBB   Bella Bella       84.81  36    LR     LR     01 40 43.9
      comp=Z,60nm,20.7s,baz=281,slow=30
H27K  Steamboat Moun    84.88  20    P      P      01 10 23.6 -0.3
      baz=237
K29M  Barlow Dome       85.10  23    P      P      01 10 25.7 +0.6
      baz=241
G27K  Doyon Strip       85.15  20    P      P      01 10 25.1 -0.1
      baz=237
Q32M  Nakina River      85.17  29    P      P      01 10 25.0 -0.7
      baz=246
D25K  Kavik River       85.17  16    P      P      01 10 25.8 +0.5
      baz=232
HYB   Hyderabad         85.20 288   eP      P      01 10 26.8 +0.2
YBH   Yreka Blue Hor    85.20  47    LR     LR     01 42 03.7
      comp=Z,116nm,20.2s,baz=308,slow=31
YBH   Yreka Blue Hor    85.20  47    P      P      01 10 27.5 +1.3
YBH                                  IAmb   IAmb   01 10 29.4
      comp=Z,12nm,1.2s
YBH   Yreka Blue Hor    85.20  47    P      P      01 10 27.5 +1.3
YBH                                  pmax   pmax
      comp=Z,12nm,1.3s
HUMO  Hull Mountain     85.26  46    P      P      01 10 27.0 +0.7
HUMO                                 IAmb   IAmb   01 10 29.1
      comp=Z,17nm,1.2s
S34M  Telegraph Cree    85.30  30    P      P      01 10 25.6 -0.5
      baz=247
P33M  Teslin, Yukon     85.43  27    P      P      01 10 26.4 -0.4
      baz=246
DGZ   Jazzator, Alta    85.58 321c  iP      P      01 10 27.7 -0.2
DGZ                                  pmax   pmax
      comp=Z,12nm,1.7s
M31M  Drury Creek, Y    85.60  25    P      P      01 10 27.8 +0.2
M31M                                 IAmb   IAmb   01 10 29.2
      comp=Z,14nm,1.3s
M31M  Drury Creek, Y    85.60  25    P      P      01 10 27.1 -0.4
      baz=244
MAW   Mawson            85.74 202    P      P      01 10 27.2 -0.9
      comp=Z,19nm,0.6s,baz=162,slow=13,SNR=7.4
MAW                                  LR     LR     01 44 03.2
      comp=Z,91nm,19.8s,baz=96,slow=32
      comp=Z,19nm,0.6s
PKM   Mcpherson Peak    85.78  54    P      P      01 10 28.6 -0.7
      baz=257
E27K  Coleen River      85.93  18    P      P      01 10 29.4 +0.3
      baz=237
C26K  Camden Bay        85.94  16    P      P      01 10 29.6 +0.6
      baz=234
DLBC  Dease Lake        86.04  29    LR     LR     01 42 39.0
      comp=Z,75nm,19.8s,baz=286,slow=31
DLBC  Dease Lake        86.04  29    P      P      01 10 30.1 +0.2
      baz=248
FARO  Faro, Yukon       86.05  25    P      P      01 10 30.0 +0.2
FARO                                 IAmb   IAmb   01 10 31.3
      comp=Z,21nm,1.6s
FARO  Faro, Yukon       86.05  25    P      P      01 10 29.9 +0.2
      baz=245
C27K  Jago River        86.11  17    P      P      01 10 29.8 -0.1
      baz=235
BCW   Bitter Crk WRg    86.11  54    P      P      01 10 31.9 +1.0
RPN   Rapa Nui          86.14 117    LR     LR     01 40 27.9
      comp=Z,54nm,20.2s,baz=172,slow=30
EPYK  Eagle Plains      86.62  21    P      P      01 10 32.8 +0.2
EPYK  Eagle Plains      86.62  21    P      P      01 10 32.7 +0.2
      baz=242,SNR=6.2
J05D  Fort Rock, OR     86.65  46    P      P      01 10 34.1 +0.8
PINE  Pine Mountain     86.98  45    P      P      01 10 35.8 +0.8
G30M  tAoh Zraii Nji    87.08  21    P      P      01 10 35.3 +0.5
      baz=242
MMPY  Sheldon Lake,     87.10  25    P      P      01 10 35.1 +0.2
      baz=247
PAHR  Pah Rah Range     87.17  49    P      P      01 10 37.2 +1.2
PAHR                                 IAmb   IAmb   01 10 50.0
      comp=Z,11nm,1.4s
EDW2  Edwards Air Fo    87.24  54    P      P      01 10 36.4 +0.1
      baz=258
WTLY  Watson Lake, Y    87.25  28    P      P      01 10 37.0 +1.3
      baz=249
BFSC  Mount Baldy Ra    87.38  55    P      P      01 10 37.3 +0.2
      baz=259
CWC   Cottonwood Cre    87.49  53    P      P      01 10 38.9 +1.3
      baz=258
LRMC  Laurel Mtn Rad    87.61  54    P      P      01 10 39.6 +1.4
      baz=258
MURC  Murrieta          87.64  56    P      P      01 10 39.5 +1.3
      baz=259
NVAR  Mina Array Bea    87.72  51    P      P      01 10 38.6 -0.2
      comp=Z,1.5nm,0.9s,baz=245,slow=7.3,SNR=9.8
      comp=Z,1.5nm,0.9s
DSP   Deep Springs      87.76  52    P      P      01 10 39.1 +0.5
NV11  Mina Array Sit    87.84  51    P      P      01 10 39.6 +0.4
MPMC  Manual Prospec    87.88  53    P      P      01 10 40.7 +1.2
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	baz=259						
KVN	Kaiserville	88.01	50	P	P	01 10 40.1	+0.1
KVN				IAmb	IAmb	01 10 59.6	
	comp=Z,15nm,1.8s						
KVN	Kaiserville	88.01	50	P	P	01 10 40.1	+0.1
KVN				pmax	pmax		
	comp=Z,15nm,1.8s						
I07A	Izee	88.06	45	P	P	01 10 40.9	+0.8
I07A				IAmb	IAmb	01 10 42.4	
	comp=Z,18nm,1.4s						
MK31	Makanchi Array	88.10	318	IAmb	IAmb	01 10 41.2	
	comp=Z,15nm,1.6s						
MK31	Makanchi Array	88.10	318c	*i* P	P	01 10 39.8	-0.3
MKAR	Makanchi Array	88.10	318	P	P	01 10 39.7	-0.4
	comp=Z,3.5nm,0.5s,baz=94,slow=6.3,SNR=61						
	comp=Z,3.5nm,0.5s						
MKAR	Makanchi Array	88.10	318	P	P	01 10 39.5	-0.6
MKAR	Makanchi Array	88.10	318	*i* P	P	01 10 39.9	-0.2
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MONP2	Monument Peak	88.14	57	P	P	01 10 41.2	+0.3
	baz=259						
PFO	Pinyon Flats O	88.24	56	LR	LR	01 42 29.7	
	comp=Z,233nm,20.7s,baz=298,slow=30						
PFO	Pinyon Flats O	88.24	56	P	P	01 10 41.2	0.0
	baz=259						
TPFO	Pinon Flats	88.25	56	P	P	01 10 41.4	+0.2
	baz=259						
GSC	Goldstone, Bar	88.28	54	P	P	01 10 41.1	-0.1
	baz=259						
MAKZ	Makanchi	88.31	318	P	P	01 10 40.8	-0.3
MAKZ				IAmb	IAmb	01 10 41.9	
	comp=Z,14nm,1.5s						
MAKZ	Makanchi	88.31	318	P	P	01 10 40.8	-0.3
MAKZ				pmax	pmax		
	comp=Z,14nm,1.5s						
WVOR	Wild Horse Val	88.31	47	P	P	01 10 42.3	+0.9
WVOR				IAmb	IAmb	01 10 43.9	
	comp=Z,8.8nm,1.2s						
WVOR	Wild Horse Val	88.31	47	P	P	01 10 42.3	+0.9
WVOR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
QSM	Queen of Sheba	88.36	54	P	P	01 10 41.6	+0.1
ZALV	Zalesovo Beam	88.36	325	P	P	01 10 39.9	-1.2
	comp=Z,0.9nm,0.6s,baz=128,slow=5.3,SNR=5.9						
	comp=Z,0.9nm,0.6s						
ZALV	Zalesovo Beam	88.36	325	*i* P	P	01 10 40.0	-1.1
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FURC	Furnace Creek,	88.45	53	P	P	01 10 42.9	+1.0
	baz=259						
TPH	Tonopah	88.48	51	P	P	01 10 42.2	-0.1
TPH	Tonopah	88.48	51	P	P	01 10 42.2	-0.1
TPH				pmax	pmax		
	comp=Z,85nm,1.9s						
HEC	Hector,Ludlow	88.57	55	P	P	01 10 43.4	+0.8
	baz=259						
INK	Inuvik	88.61	20	P	P	01 10 40.5	-1.5
	comp=Z,3.5nm,1.2s,baz=231,slow=5.7,SNR=4.2						
	comp=Z,3.5nm,1.2s						
INK	Inuvik	88.61	20	P	P	01 10 42.1	+0.2
INK				IAmb	IAmb	01 10 48.8	
	comp=Z,18nm,1.6s						
INK	Inuvik	88.61	20	P	P	01 10 42.1	+0.2
INK				pmax	pmax		
	comp=Z,18nm,1.6s						
INK	Inuvik	88.61	20	P	P	01 10 42.4	+0.5
	baz=244						
BELC	Belle Mtn. Jos	88.69	56	P	P	01 10 43.5	+0.2
	baz=260						
BMN	Battle Mountai	88.95	49	P	P	01 10 45.1	+0.7
BMN	Battle Mountai	88.95	49	P	P	01 10 45.1	+0.7
BMN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BC3	Big Chuckawall	89.08	56	P	P	01 10 45.9	+0.8
	baz=260						
IRM	Iron Mountain	89.42	56	P	P	01 10 47.3	+0.7
	baz=260						
GLA	Glamis	89.49	57	P	P	01 10 47.6	+0.6
	baz=260						
KOTAN	Kotaneelee Air	89.50	29	P	P	01 10 47.3	+1.0
	baz=253						
PDMCI	Parker Dam,Lak	90.26	56	P	P	01 10 50.8	+0.4
	baz=261						
PIX	Pinacate	90.39	58	P	P	01 10 51.7	+0.6
NEW	Newport	90.56	41	LR	LR	01 43 01.4	
	comp=Z,100nm,21.8s,baz=304,slow=30						
NEW	Newport	90.56	41	P	P	01 10 51.9	+0.3
	baz=259						
PLID	Pearl Lake	90.71	45	P	P	01 10 52.6	0.0
214A	Organ Pipe Nat	90.99	58	P	P	01 10 54.4	+0.4
214A				IAmb	IAmb	01 11 03.4	
	comp=Z,20nm,1.6s						
214A	Organ Pipe Nat	90.99	58	P	P	01 10 54.8	+0.8
	baz=261						
KURK	Kurchatov	91.31	321	P	P	01 10 53.8	-1.2
KURBB	Kurchatov Arra	91.35	321	P	P	01 10 53.8	-1.3
	comp=Z,0.3nm,0.4s,baz=93,slow=5.0,SNR=3.7						
	comp=Z,0.3nm,0.4s						
HLID	Hailey	91.57	46	P	P	01 10 57.2	+0.5
HLID				IAmb	IAmb	01 11 04.7	
	comp=Z,8.7nm,1.3s						
HLID	Hailey	91.57	46	P	P	01 10 57.1	+0.5
	baz=261						
NRIK	Noril'sk	91.66	340	P	P	01 10 54.7	-1.4
	comp=Z,2.0nm,0.6s,baz=94,slow=6.3,SNR=5.2						
	comp=Z,2.0nm,0.6s						
NRIK	Noril'sk	91.66	340	P	P	01 10 55.2	-0.9
NRIK	Noril'sk	91.66	340⇑	*e*P	P	01 10 54.9	-1.3
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
LPIG	La Paz	92.06	66	LR	LR	01 46 12.9	
	comp=Z,72nm,18.7s,baz=286,slow=32						
BGU	Big Grassy Mou	92.17	49	P	P	01 10 59.8	+0.4
BGU				IAmb	IAmb	01 11 06.6	
	comp=Z,9.4nm,1.3s						
HVU	Hansel Valley	92.49	48	P	P	01 11 01.6	+0.7
HVU	Hansel Valley	92.49	48	P	P	01 11 01.6	+0.7
HVU				pmax	pmax		
	comp=Z,13nm,1.1s						
A36M	Sachs Harbour	92.60	17	P	P	01 11 00.5	0.0
A36M	Sachs Harbour	92.60	17	P	P	01 11 00.8	+0.4
	baz=252						
BELA	Belgrano 2	93.81	177	P	P	01 11 06.3	+0.2
BELA				IAmb	IAmb	01 11 07.1	
	comp=Z,14nm,1.3s						
BOZ	Bozeman (W)	93.84	45	P	P	01 11 07.2	+0.2
	baz=263						
H17A	Grant Village	94.43	46	P	P	01 11 10.2	+0.3
	baz=263						
YKA	Yellowknife Ar	94.46	28	P	P	01 11 09.0	-0.2
	comp=Z,2.3nm,0.9s,baz=254,slow=4.6,SNR=20						
YKA				LR	LR	01 47 46.8	
	comp=Z,84nm,18.7s,baz=328,slow=32						
	comp=Z,2.3nm,0.9s						
BW06	Boulder Array	94.98	48	P	P	01 11 12.9	+0.4
PDAR	Pinedale Array	94.98	48	P	P	01 11 12.7	+0.3
	comp=Z,2.4nm,0.9s,baz=250,slow=3.0,SNR=8.9						
	comp=Z,2.4nm,0.9s						
ANMO	Albuquerque	96.62	56	LR	LR	01 47 15.8	
	comp=Z,123nm,20.4s,baz=46,slow=31						
BRVK	Borovoye	96.74	323⇓	*e*P	P	01 11 18.9	-1.0
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LAO	LASA Array	97.68	44	P	Pdif	01 11 25.4	+1.0
	baz=267						
TXAR	Lajitas Array	98.52	62	P	P	01 11 27.2	-1.4
	comp=Z,0.2nm,0.7s,baz=256,slow=11,SNR=1.8						
TXAR				LR	LR	01 52 00.1	
	comp=Z,72nm,18.2s,baz=308,slow=33						
	comp=Z,0.2nm,0.7s						
RSSD	Black Hills	99.09	47	P	Pdif	01 11 31.3	+0.3
	baz=268						
MNK	Minsk	120.46	330	*i* PKP	PKPdf	01 16 37.5	-3.2
	comp=E,2.0nm,0.8s						
MNK				*i* PKP	PKPdf	01 16 37.5	-3.2
	comp=N,35nm,0.8s						
MNK				*i* PKP	PKPdf	01 16 37.5	-3.2
	comp=Z,7.0nm,1.0s,baz=237						
MNK				*i* pPKP	pPKPdf	01 16 52.6	+1.4
MNK				*i* PP	PP	01 18 04.7	-2.5
MNK				*i* PPP	PPP	01 20 35.2	
MNK				*i* SKS	SKSdf	01 23 45.1	-4.9
MNK				*i* PS	PS	01 27 56.0	-2.6
MNK				*i* SS	SKKSdf	01 34 28.8	-3.1
MNK				*i* SSS	SSS	01 38 58.9	
MNK				*i* LR	LR	02 06 31.8	
MNK				*i* LRM	MLR	02 07 45.9	
	comp=E,6.0nm,9.6s						
MNK				*i* LRM	MLR	02 08 08.3	
	comp=N,342nm,14.7s						
MNK				*i* LRM	MLR	02 08 08.3	
	comp=Z,148nm,14.7s						
MNK	Minsk	120.46	330	*i* PKIKP	PKPdf	01 16 37.4	-3.2
MNK				*i*		01 18 04.7	
MNK				*i*		01 23 45.0	
MNK				*i* PS	PS	01 27 56.0	-2.6
MNK				*i* SS	SS	01 34 28.7	-4.7
MNK				*i* SSS	SSS	01 38 58.9	
MNK				pmax	pmax		
	comp=N,35nm,0.8s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MNK				MLR	MLR		
	comp=E,6.0nm,10.0s						
MNK				MLR	MLR		
	comp=N,342nm,15.0s						
MNK				MLR	MLR		
	comp=Z,148nm,15.0s						
PKME	Peaks-Kenny Pk	123.03	40	P	PKPdf	01 16 45.8	-0.1
	baz=295						
BRTR	Keskin Array B	123.45	313	PKP	PKPdf	01 16 46.8	-0.3
	comp=Z,0.2nm,0.5s,baz=333,slow=15,SNR=2.3						
BOSA	Boshof	123.88	228	PKP	PKiKP	01 16 48.8	+0.2
	comp=Z,2.8nm,0.9s,baz=117,slow=4.1,SNR=4.4						
CLL	Collm	129.39	334	*e*PKPdf	PKPdf	01 16 58.0	+0.1
CLL				*e*x	x	01 17 11.0	
CLL	Collm	129.39	334	*e*PKIKP	PKPdf	01 16 58.0	+0.1
PBRG	Braganca	144.62	344	*e*PKP	PKPbc	01 17 25.5	+0.5
MVO	Moncorvo	145.29	344	*e*PKP	PKPdf	01 17 28.1	+0.6
POLO	Lamas de Olo	145.30	345	*e*PKP	PKPdf	01 17 28.3	+0.7
PVRL	Vila Real	145.37	345	*e*PKP	PKPdf	01 17 28.6	+1.0
ESDC	Sonseca Array	145.69	339	PKPbc	PKPbc	01 17 28.6	0.0
	comp=Z,6.0nm,1.0s,baz=14,slow=3.7,SNR=22						
PTO	Porto	145.72	346	*e*PKP	PKPab	01 17 30.3	+1.5
PVIS	Viseu	145.94	345	*e*PKP	PKPab	01 17 30.3	+0.5
COI	Coimbra	146.55	345	*e*PKP	PKiKP	01 17 33.3	-0.7
PCBR	Castelo Branco	146.65	344	*e*PKP	PKPab	01 17 32.2	-0.2
PMRV	Marv??o	147.01	343	*e*PKP	PKPab	01 17 33.4	-0.5
PESTR	Estremoz	147.59	343	*e*PKP	PKiKP	01 17 37.0	+0.8
EVO	Evora	148.02	344	*e*PKP	PKiKP	01 17 36.1	-0.9
TORD	Torodi Ar. Bea	159.00	286	PKP	PKPdf	01 17 48.6	+0.2
	comp=Z,1.5nm,1.1s,baz=116,slow=3.4,SNR=4.0						
TORD				PKPab	PKPab	01 18 24.9	0.0
	comp=Z,1.9nm,0.8s,baz=84,slow=4.7,SNR=6.6						

IDC 18 01:07:02.8±3.5**, 7°.58S**×**160°.13E, h0**km**, mb3.5**/3**, mbtmp3.5**/3**, MS3.5**/1**, Error ellipse: s-maj=78.4km s-min=29.2km az=85.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	1.85	186	Pn	Pn	01 07 36.4	+0.6
	243nm,0.3s,baz=84,slow=3.9,SNR=1.7						
HNR				Sn	Sn	01 08 00.4	+0.4
	799nm,0.3s,baz=106,slow=16,SNR=7.2						
MSVF	Nonsavu	20.17	122	LR	LR	01 18 39.0	
	comp=Z,125nm,18.2s,baz=71,slow=34						
WRA	Warramunga Arr	27.85	241	P	P	01 12 55.2	+0.8
	0.6nm,0.5s,baz=69,slow=9.1,SNR=6.2						
	0.6nm,0.5s						
ASAR	Alice Springs	29.81	235	P	P	01 13 10.7	-1.1
	0.2nm,0.4s,baz=64,slow=10,SNR=5.7						
	0.2nm,0.4s						
MKAR	Makanchi Array	87.23	318	P	P	01 19 51.3	0.0
	0.2nm,0.7s,baz=103,slow=3.1,SNR=1.6						
	0.2nm,0.7s						

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*UUSS **18** 01:09:01.5±1.6, 37°.58N±0°.04×110°.42W±0°.05, h-2km±7km, ML2.9/10, ML2.8/81(NEIC), Error ellipse: s-maj=5.7km s-min=5.3km az=55.0*

*ANF **18** 01:09:02.5±1.4, 37°.60N×110°.39W, h5km±11km, ML3.1/9, Error ellipse: s-maj=6.2km s-min=3.9km az=125.0*

*NEIC **18** 01:09:02.2±1.7, 37°.61N±0°.04×110°.45W±0°.05, h1km±7km, Error ellipse: s-maj=5.7km s-min=5.4km az=223.0*

ISC 18 01:09:01.9±0.8**, 37°.60N**±0°.02×**110°.46W**±0°.02**, h10**km**, n68, σ1s.55**/77**, Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMU	Miners Mountai	0.89	313		Pg	01 09 18.5	-0.7
BTU	Barney Top	1.13	279		Pg	01 09 23.6	-0.2
R19A	Curley Farm, L	1.18	53		Pb	01 09 23.8	-0.6
PV10	Paradox Valley	1.37	55		Pn	01 09 26.3	-1.0
PV13	Radium Mtn., P	1.41	66		Pn	01 09 27.8	-0.1
PV23	Carpenter Ridg	1.43	53		Pn	01 09 28.2	0.0
Q16A	Castle Valley	1.43	337		Pn	01 09 28.5	+0.3
Q16A				IAML		01 09 47.8	
	comp=N,84nm,0.3s						
Q16A				IAML		01 09 51.5	
	comp=E,128nm,0.6s						
MTPU	Mount Pierson	1.44	289		Pn	01 09 28.9	+0.6
MTPU				IAML		01 09 48.8	
	comp=N,91nm,0.5s						
MTPU				IAML		01 09 50.3	
	comp=E,66nm,0.3s						
PV11	David Mesa, Pa	1.44	60		Pn	01 09 28.2	0.0
PKCU	Pink Cliffs	1.48	265		Pn	01 09 29.4	+0.5
SRU	San Rafael Swe	1.51	358		Pn	01 09 29.4	+0.1
SRU				IAML		01 09 52.9	
	comp=N,179nm,0.7s						
MVCO	Mesa Verde	1.61	103	Pn	Pb	01 09 31.6	-0.3
MVCO				IAML		01 10 03.5	
	comp=N,141nm,0.6s						
MVCO	Mesa Verde	1.61	103	P	Pb	01 09 31.6	-0.3
	baz=285,SNR=22						
MVCO				S	Sb	01 09 52.4	+0.1
	baz=285						
MSU	Marysvale	1.64	305		Pn	01 09 31.6	+0.6
MVU	Marysvale	1.66	304		Pb	01 09 32.3	-0.3
PV07	Paradox Valley	1.66	59		Pb	01 09 32.6	-0.1
EKU	East Kanab	1.71	253		Pb	01 09 33.4	-0.1
PV15	Paradox Valley	1.73	64		Pb	01 09 33.8	-0.2
TMUT	Trail Mountain	1.80	341		Pb	01 09 34.9	-0.2
TMUT				IAML		01 10 02.9	
	comp=E,129nm,0.5s						
U15A	North Rim	1.87	232		Pn	01 09 35.6	+1.3
U15A				IAML		01 10 02.6	
	comp=E,73nm,0.4s						
U15A				IAML		01 10 02.8	
	comp=N,114nm,0.4s						
P17A	Butcher Ranch,	1.89	353		Pb	01 09 35.8	-0.8
P17A				IAML		01 10 02.5	
	comp=N,98nm,0.4s						
P17A				IAML		01 10 02.6	
	comp=E,111nm,0.8s						
SNO	Snow College	1.91	334		Pb	01 09 37.4	+0.3
KNB	Kanab	1.97	254		Pn	01 09 37.0	+1.4
KNB				IAML		01 10 04.9	
	comp=N,114nm,0.6s						
BCE	Book Cliffs Ea	2.02	1		Pb	01 09 38.8	-0.1
ROA	Roan Cliffs	2.06	2		Pb	01 09 39.7	0.0
SZCU	Shurtz Canyon	2.09	271		Pn	01 09 38.8	+1.7
WUAZ	Wupatki	2.20	200		Pn	01 09 40.7	+2.0
WUAZ	Wupatki	2.20	200	P	Pn	01 09 40.7	+2.0
	baz=19,SNR=30						
WUAZ				S	Sb	01 10 08.9	-0.4
	baz=19						
LCMT	Little Creek M	2.30	256		Pn	01 09 41.9	+1.9
CCUT	Cedar City	2.31	270		Pb	01 09 42.6	-1.1
CCUT				IAML		01 10 13.4	
	comp=E,33nm,0.8s						
CCUT				IAML		01 10 16.9	
	comp=N,42nm,0.7s						
W18A	Petrified Fore	2.54	166		Pn	01 09 45.6	+2.3
W18A				IAML		01 10 21.8	
	comp=N,65nm,0.6s						
W18A				IAML		01 10 23.4	
	comp=E,58nm,0.4s						
W18A	Petrified Fore	2.54	166	P	Pb	01 09 46.2	-1.5
	baz=347,SNR=5.5						
W18A				Sb	Sb	01 10 20.5	+1.4
	baz=347						
NLU	North Lily Min	2.67	332		Pn	01 09 46.8	+1.6
S22A	4UR Ranch, Cre	2.88	86		Pn	01 09 50.0	+1.8
S22A	4UR Ranch, Cre	2.88	86	Pb	Pb	01 09 54.4	+0.7
	baz=268						
S22A				Sb	Sg	01 10 32.4	-2.2
	baz=268						
BSUT	Blindstream Ca	2.95	356		Pn	01 09 49.2	+0.1
RDMU	Red Mountain	3.05	13		Pn	01 09 51.2	+0.8
RDMU				IAML		01 10 35.9	
	comp=E,33nm,0.5s						
RDMU				IAML		01 10 46.5	
	comp=N,22nm,0.6s						
O20A	White River Ci	3.07	34		Pn	01 09 52.4	+1.7
O20A	White River Ci	3.07	34	Pb	Pb	01 09 56.7	-0.1
	baz=215						
O20A				Sb	Sb	01 10 35.8	+1.4
	baz=215						
X18A	Snowflake	3.09	172		Pn	01 09 52.7	+1.8
SMCO	Snowmass	3.16	59		Pn	01 09 53.1	+1.0
SMCO				IAML		01 10 42.6	
	comp=N,46nm,0.3s						
DUG	Dugway, Tooele	3.18	325		Pn	01 09 52.5	+0.3
DUG	Dugway, Tooele	3.18	325	Pb	Pb	01 09 59.2	+0.6
	baz=144						
DUG				Sb	Sg	01 10 41.2	-2.9
	baz=144						
CTU	Camp Tracy	3.25	342		Pn	01 09 55.0	+1.8
X16A	Lo Mia Camp, P	3.27	194		Pn	01 09 54.4	+1.0
X16A				IAML		01 10 54.4	
	comp=E,25nm,0.1s						
X16A				IAML		01 10 54.6	
	comp=N,28nm,0.5s						
SPR3	Spring Creek 3	3.35	296		Pn	01 09 56.7	+2.1
TCUT	Toone Canyon	3.59	348		Pn	01 09 59.2	+1.3
TCUT				IAML		01 10 59.7	
	comp=N,28nm,0.6s						
PRN	Pahroc Range	3.66	268		Pn	01 10 00.1	+1.4
PRN				IAML		01 11 08.2	
	comp=E,21nm,0.7s						
PRN				IAML		01 11 09.2	
	comp=N,21nm,0.5s						
W13A	Hualapai Mount	3.72	229		Pn	01 10 01.0	+1.3
W13A				IAML		01 11 03.4	
	comp=N,14nm,1.0s						
Q12A	Willow Creek R	3.73	294		Pn	01 10 01.9	+2.2
Q12A				IAML		01 11 05.0	
	comp=N,17nm,0.7s						
Q12A				IAML		01 11 10.7	
	comp=E,12nm,0.9s						
BGU	Big Grassy Mou	3.88	330		Pn	01 10 03.1	+1.4
BGU				IAML		01 11 10.8	
	comp=E,7.7nm,4.3s						
SHPR	Sheep Range	3.92	255		Pn	01 10 03.5	+1.3
SHPR				IAML		01 11 04.1	
	comp=N,6.7nm,0.6s						
SHPR				IAML		01 11 04.1	
	comp=E,8.0nm,0.7s						
SDCO	Great Sand Dun	3.94	86		Pn	01 10 04.1	+1.5
SDCO	Great Sand Dun	3.94	86	Pb	Pb	01 10 13.3	+1.8
	baz=270,SNR=12						
ANMO	Albuquerque	4.18	128	Pn	Pn	01 10 07.7	+1.8
ANMO				IAML		01 11 11.8	
	comp=E,6.2nm,4.8s						
ANMO				IAML		01 11 15.9	
	comp=E,6.3nm,0.6s						
ANMO	Albuquerque	4.18	128	P	Pn	01 10 07.3	+1.4
	baz=311						
ANMO				Sb	Sb	01 11 08.8	+2.6
	baz=311						
ISCO	Idaho Springs	4.38	58		Pn	01 10 09.7	+0.9
ISCO	Idaho Springs	4.38	58	Pb	Pb	01 10 20.8	+1.6
	baz=241,SNR=5.4						
ISCO				Sb	Sb	01 11 16.5	+4.2
	baz=241						
Q24A	Divide	4.40	70	Pb	Pb	01 10 21.5	+2.1
	baz=254						
Q24A				Sb	Sg	01 11 18.1	-5.0
	baz=254						
LENM	Lemitar	4.44	139		Pn	01 10 10.6	+1.1
BNM	Barren Site	4.64	137		Pn	01 10 12.9	+0.6
TPNV	Topopah Spring	4.66	264	Pn	Pn	01 10 13.7	+1.1
TPNV	Topopah Spring	4.66	264	P	Pn	01 10 14.1	+1.5
	baz=80						
WCT	Wildcat Mounta	4.99	263		Pn	01 10 18.9	+2.0
WCT				IAML		01 11 40.3	
	comp=N,5.6nm,4.4s						
WCT				IAML		01 13 35.2	
	comp=E,7.5nm,4.8s						
GMRC	Granite Mounta	5.05	238	P	Pn	01 10 19.4	+1.5
	baz=55						
BW06	Boulder Array	5.21	7	Pn	Pn	01 10 21.6	+1.4
BW06				IAML		01 11 52.6	
	comp=E,6.0nm,1.8s						
BW06				IAML		01 12 04.0	
	comp=E,8.8nm,3.4s						
PD31	Pinedale Array	5.21	7		Pn	01 10 22.9	+2.7
121A	Cookes Peak, D	5.51	156	Pg	Pg	01 10 45.2	-2.2
	baz=337						

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*NEIC **18** 01:15:35.3±2.3, 10°.77S±0°.07×115°.16E±0°.08, h10km±1km, mb4.5/28, Error ellipse: s-maj=15.0km s-min=10.0km az=236.0*

*DJA **18** 01:15:39.1±0.5, 11°S±5°×11°5E±°, h10km, M4.6/15, mb4.8/8, mB5.2/5, MLv4.5/15, Mw(mB)4.5/5*

*IDC **18** 01:15:46.0±4.0, 10°.43S×115°.36E, h81km±37km, mb4.0/16, mbtmp4.3/17, Error ellipse: s-maj=28.5km s-min=13.2km az=74.0*

ISC 18 01:15:38.0±0.5**, 10°.91S**±0°.06×**115°.10E**±0°.06**, h35**km**, n103, σ1s.80**/105**, mb4.4**/32**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	Denpasar	2.08	1	P	Pn	01 16 10.1	-0.3
DNP	Denpasar	2.22	3	P	Pn	01 16 12.0	-0.4
JAGI	Jajag, Banyuwa	2.60	339	Pn	Pn	01 16 15.8	-1.7
JAGI				Sn	Sn	01 16 44.9	-3.0
JAGI	Jajag, Banyuwa	2.60	339	P	Pn	01 16 16.5	-1.1
JAGI	Jajag, Banyuwa	2.60	339	P	Pn	01 16 16.3	-1.3
JAGI				S	Sn	01 16 45.0	-3.0
TWSI	Taliwang, Sumb	2.79	39	P	Pn	01 16 21.8	+1.7
TWSI				S	Sn	01 16 53.5	+0.9
SRBI	Singaraja	2.81	2	P	Pn	01 16 20.9	+0.4
SRBI				S	Sn	01 16 52.0	-1.2
GMJI	Gumukmas	3.09	328	P	Pn	01 16 22.5	-1.8
ABJI	Asem Bagus	3.21	345	P	Pn	01 16 26.5	+0.5
PLAI	Plampang	3.35	52	P	Pn	01 16 29.2	+1.2
PLAI	Plampang	3.35	52	P	Pn	01 16 29.0	+1.0
BLJI	Banyuglugur	3.48	335	P	Pn	01 16 29.6	-0.1
PWJI	Pagerwojo	4.33	311	P	Pn	01 16 41.0	-0.5
UGM	Wanagama	5.41	303	Pn	Pn	01 16 55.7	-0.6
UGM	Wanagama	5.41	303	P	Pn	01 16 56.9	+0.7
	120nm,1.9s,0.6nm						
KPJI	Karang Pucung	7.05	300	P	Pn	01 17 19.7	+0.9
	38nm,0.6s,0.2nm						
BSSI	Bau Bau, Buton	7.13	49	P	Pn	01 17 22.0	+2.1
	80nm,0.9s,928nm0.3nm						
CMJI	Cimerak	7.26	295	P	Pn	01 17 22.4	+0.7
	52nm,1.0s,0.3nm						
KAPI	Kappang	7.45	39	P	Pn	01 17 26.2	+1.9
	38nm,0.4s,baz=230,slow=17,SNR=20						
KAPI				S	Sn	01 18 43.4	-4.3
	12nm,0.2s,baz=140,slow=19,SNR=2.8						
KAPI	Kappang	7.45	39	Pn	Pn	01 17 23.0	-1.3
KAPI	Kappang	7.45	39	P	Pn	01 17 27.2	+2.9
BKSI	Bulukumba	7.46	42	P	Pn	01 17 26.2	+1.9
	123nm,0.5s,1µm0.5nm						
SPSI	Sidrap Palu	8.31	34	P	Pn	01 17 38.7	+2.6
	17nm,1.0s,1µm						
SOEI	Soe	9.10	84	Pn	Pn	01 17 45.6	-1.4
CGJI	Cibinong	10.23	294	P	Pn	01 18 01.6	-0.8
MBWA	Marble Bar	11.12	157	Pn	Pn	01 18 12.1	-2.5
PSA00	Pilbara Seismi	11.54	157	Pn	Pn	01 18 16.9	-3.5
GIRL	Giralia	11.70	184	Pn	Pn	01 18 21.4	-1.0
FITZ	Fitzroy Crossi	12.46	126	Pn	Pn	01 18 33.4	+0.5
KNRA	Kununurra	14.12	111	Pn	Pn	01 18 57.2	+1.6
MORW	Morawa	18.09	177	Pn	Pn	01 19 44.7	-1.9
FAKI	Fak Fak	18.77	66	P	P	01 19 53.2	-1.2
FAKI				IAmb	IAmb	01 19 55.5	
	comp=Z,33nm,0.9s						
WB0	Warramunga Arr	20.57	118	P	Pn	01 20 15.2	-1.1
WRA	Warramunga Arr	20.59	118	P	Pn	01 20 17.8	+1.2
	comp=Z,1.9nm,0.7s,baz=295,slow=12,SNR=14						
WRA				S	S	01 23 55.5	-7.2
	comp=Z,0.3nm,0.6s,baz=284,slow=25,SNR=2.1						
	comp=Z,1.9nm,0.7s						
WRA	Warramunga Arr	20.59	118	P	Pn	01 20 15.5	-1.1

DAV	**Davao City (W)**	**20.69**	**31**	P	P	01 20 02.4	-13
	comp=Z,315nm,0.4s,baz=308,slow=12,SNR=4.5						
DAV	**Davao City (W)**	**20.69**	**31**	P	Pn	01 20 16.1	-1.6
	comp=Z,1µm,0.7s						
IPM	**Ipoh**	**20.74**	**317**		**P**	**01 20 14.0**	**-1.8**
IPM				IAmb	IAmb	01 20 17.2	
	comp=Z,15nm,0.7s						
IPM	**Ipoh**	**20.74**	**317**	P	**P**	**01 20 16.2**	**+0.4**
KULM	**Kulim**	**21.58**	**318**	P	**P**	**01 20 22.7**	**-2.2**
KULM				IAmb	IAmb	01 20 35.9	
	comp=Z,20nm,1.3s						
AS31	**Alice Springs**	**21.95**	**128**	P	**P**	**01 20 29.6**	**+0.7**
ASAR	**Alice Springs**	**21.95**	**128**	P	**P**	**01 20 33.4**	**+4.5**
	comp=Z,2.8nm,0.8s,baz=304,slow=8.1,SNR=20						
ASAR				S	**S**	**01 24 29.8**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=312,slow=26,SNR=3.5						
	comp=Z,2.8nm,0.8s						
ASAR	**Alice Springs**	**21.95**	**128**	P	**P**	**01 20 28.2**	**-0.6**
AS01	**Alice Springs**	**21.98**	**128**	P	**P**	**01 20 32.9**	**+3.7**
NWAO	**Narrogin (SRO)**	**22.00**	**175**	P	P	01 20 39.1	+10
	comp=Z,6.8nm,0.8s,baz=6.3,slow=9.2,SNR=1.9						
	comp=Z,6.8nm,0.8s						
FORT	**Forrest**	**23.14**	**151**	P	**P**	**01 20 43.1**	**+1.9**
FORT	**Forrest**	**23.14**	**151**	P	**P**	**01 20 44.5**	**+3.2**
OOD	**Oodnadatta**	**25.61**	**134**	P	**P**	**01 21 08.6**	**+4.4**
STKA	**Stephens Creek**	**32.15**	**134**	P	P	01 22 07.5	+5.0
	comp=Z,3.5nm,1.0s,baz=315,slow=4.3,SNR=6.7						
	comp=Z,3.5nm,1.0s						
STKA	**Stephens Creek**	**32.15**	**134**	P	**P**	**01 22 01.5**	**-1.0**
CMAR	**Chiang Mai Arr**	**33.25**	**331**	P	**P**	**01 22 13.2**	**+1.0**
	comp=Z,1.7nm,0.6s,baz=165,slow=8.4,SNR=13						
	comp=Z,1.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**33.25**	**331**	P	**P**	**01 22 10.1**	**-2.1**
CRAI	**Chiangrai**	**34.17**	**335**	P	**P**	**01 22 17.3**	**-2.8**
CRAI				IAmb	IAmb	01 22 23.6	
	comp=Z,5.6nm,1.0s						
PZH	**PanZhiHua**	**39.39**	**341**	P	**P**	**01 23 08.3**	**+3.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
SHL	**Shillong**	**42.73**	**328**	P	**P**	**01 23 29.9**	**-2.3**
NJ2	**Nanjing**	**42.87**	**5**	*e*P	**P**	**01 23 34.9**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
XAN	**Xi'an**	**45.09**	**353**	*e*P	**P**	**01 23 51.0**	**+0.2**
XAN				pP	pP	01 23 55.8	-4.2
XAN				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ODAN	**Odare**	**46.19**	**325**	*e*P	**P**	**01 24 00.0**	**+0.1**
TAPN	**Taplejung**	**46.39**	**326**	*e*P	**P**	**01 24 02.3**	**+0.7**
RAMN	**Ramite**	**46.71**	**324**	*e*P	**P**	**01 24 04.5**	**+0.5**
JIRN	**Jiri**	**47.48**	**324**	*e*P	**P**	**01 24 10.4**	**+0.2**
	comp=Z,35nm,0.7s						
GUN	**Gumba**	**47.85**	**324**	*e*P	**P**	**01 24 13.2**	**+0.1**
	comp=Z,30nm,0.6s						
PKI	**Pulchoki**	**47.87**	**324**	*e*P	**P**	**01 24 13.1**	**-0.1**
DMN	**Daman**	**48.07**	**323**	*e*P	**P**	**01 24 14.6**	**-0.1**
GKN	**Gorkha**	**48.64**	**323**	*e*P	**P**	**01 24 18.7**	**-0.2**
	comp=Z,5.9nm,0.3s						
DANN	**Dangsing**	**49.42**	**323**	*e*P	**P**	**01 24 24.7**	**-0.3**
	comp=Z,23nm,0.6s						
KSRS	**Korea Array**	**49.59**	**13**	P	**P**	**01 24 25.1**	**-0.6**
	comp=Z,3.3nm,0.8s,baz=190,slow=7.1,SNR=14						
	comp=Z,3.3nm,0.8s						
HHC	**Hu-ho-hao-te**	**51.60**	**357**	*e*P	**P**	**01 24 44.4**	**+3.3**
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,300nm,4.6s						
MJAR	**Matsushiro Arr**	**51.98**	**24**	P	**P**	**01 24 42.4**	**-1.4**
	comp=Z,6.1nm,0.8s,baz=194,slow=7.4,SNR=19						
	comp=Z,6.1nm,0.8s						
MDJ	**Mudanjiang**	**56.81**	**12**	P	**P**	**01 25 18.8**	**0.0**
MDJ				pmax	pmax		
	comp=Z,11nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,43nm,4.4s						
USA0B	**Ussuriysk Arra**	**56.96**	**14**	P	**P**	**01 25 19.2**	**-0.7**
USRK	**Ussuriysk Ar.**	**56.96**	**14**	P	**P**	**01 25 19.1**	**-0.7**
	comp=Z,5.2nm,0.6s,baz=202,slow=8.5,SNR=10						
	comp=Z,5.2nm,0.6s						
USRK	**Ussuriysk Ar.**	**56.96**	**14**	P	**P**	**01 25 19.3**	**-0.5**
ULN	**Ulaanbaatar**	**58.95**	**354**	P	**P**	**01 25 33.4**	**-0.6**
ULN				IAmb	IAmb	01 25 34.8	
	comp=Z,2.4nm,0.8s						
SONM	**Songino Array**	**58.99**	**353**	P	**P**	**01 25 34.0**	**-0.2**
	comp=Z,2.5nm,0.6s,baz=177,slow=8.3,SNR=22						
SONM				PcP	**PcP**	**01 26 25.3**	**+2.4**
	comp=Z,0.9nm,0.6s,baz=171,slow=3.8,SNR=5.0						
	comp=Z,2.5nm,0.6s						
SONM	**Songino Array**	**58.99**	**353**	P	**P**	**01 25 33.8**	**-0.4**
SONM				IAmb	IAmb	01 25 36.1	
	comp=Z,2.2nm,0.8s						
WMQ	**Urumqi**	**59.91**	**337**	*e*P	**P**	**01 25 43.5**	**+2.9**
WMQ				sP	sP	01 25 52.3	-1.5
WMQ				pmax	pmax		
	comp=Z,24nm,0.7s						
WMQ				LR	LR		
	comp=N,580nm,16.1s						
WMQ				LR	LR		
	comp=Z,290nm,17.9s						
KSH	**Kashi**	**61.95**	**326**	P	**P**	**01 25 55.0**	**+0.4**
KSH				ScP	**ScP**	**01 30 35.3**	**+0.8**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MK31	**Makanchi Array**	**64.50**	**336**	P	**P**	**01 26 09.8**	**-1.4**
MK31				IAmb	IAmb	01 26 12.0	
	comp=Z,1.3nm,0.6s						
MKAR	**Makanchi Array**	**64.50**	**336**	P	**P**	**01 26 11.6**	**+0.4**
	comp=Z,2.0nm,0.5s,baz=150,slow=6.7,SNR=37						
	comp=Z,2.0nm,0.5s						
MKAR	**Makanchi Array**	**64.50**	**336**	P	**P**	**01 26 10.0**	**-1.2**
MAKZ	**Makanchi**	**64.64**	**335**	P	**P**	**01 26 11.3**	**-0.8**
GAR	**Garm**	**64.83**	**323**	P	**P**	**01 26 13.2**	**-0.4**
AAK	**Ala-Archa**	**64.95**	**328**	P	**P**	**01 26 14.7**	**+0.3**
AAK				IAmb	IAmb	01 26 16.7	
	comp=Z,3.9nm,1.1s						
BTK	**Batken**	**65.22**	**324**	P	**P**	**01 26 16.2**	**0.0**
KK31	**Karatay Array**	**67.40**	**326**	P	**P**	**01 26 29.8**	**-0.2**
KKAR	**Karatay Array**	**67.40**	**326**	P	**P**	**01 26 30.1**	**+0.2**
KURK	**Kurchatov**	**69.09**	**336**	P	**P**	**01 26 40.4**	**+0.1**
KURK				IAmb	IAmb	01 26 41.4	
	comp=Z,2.6nm,0.7s						
ZAA0	**Zalesovo Array**	**69.53**	**341**	P	**P**	**01 26 42.2**	**-0.8**
ZALV	**Zalesovo Beam**	**69.53**	**341**	P	**P**	**01 26 42.7**	**-0.3**
	comp=Z,3.1nm,0.6s,baz=157,slow=5.5,SNR=16						
	comp=Z,3.1nm,0.6s						
ZALV	**Zalesovo Beam**	**69.53**	**341**	P	**P**	**01 26 42.3**	**-0.7**
GEYT	**Alibeck**	**72.06**	**316**	P	**P**	**01 27 00.3**	**+1.5**
	comp=Z,1.8nm,0.8s,baz=169,slow=3.0,SNR=4.3						
	comp=Z,1.8nm,0.8s						
GYA0B	**ALIBECK ARRAY**	**72.06**	**316**	P	**P**	**01 26 57.7**	**-1.0**
GYA0B				IAmb	IAmb	01 27 01.3	
	comp=Z,4.2nm,0.9s						
ABKAR	**Akbulak array**	**76.96**	**326**	P	**P**	**01 27 28.0**	**+1.0**
AKTO	**Aktyubinsk**	**78.65**	**327**	P	**P**	**01 27 37.4**	**+1.0**
	comp=Z,2.2nm,0.6s,baz=90,slow=7.1,SNR=8.8						
	comp=Z,2.2nm,0.6s						
ARU	**Arti**	**81.69**	**332**	P	**P**	**01 27 53.7**	**+1.1**
	comp=Z,2.7nm,0.7s,baz=123,slow=12,SNR=2.9						
	comp=Z,2.7nm,0.7s						
ARU	**Arti**	**81.69**	**332**	P	**P**	**01 27 53.2**	**+0.6**
ARU				IAmb	IAmb	01 27 54.1	
	comp=Z,2.9nm,0.7s						
NRIK	**Noril'sk**	**82.34**	**350**	P	**P**	**01 27 57.3**	**+1.6**
	comp=Z,1.5nm,0.5s,baz=127,slow=5.1,SNR=4.6						
	comp=Z,1.5nm,0.5s						
TIXI	**Tiksi**	**82.89**	**4**	P	**P**	**01 27 58.0**	**-0.5**
TIXI				IAmb	IAmb	01 27 59.5	
	comp=Z,2.8nm,0.8s						
GEVA	**Gevas**	**82.98**	**311**	P	**P**	**01 28 00.6**	**+0.6**
GEVA				IAmb	IAmb	01 28 12.7	
	comp=Z,2.9nm,0.9s						
GURO	**Guroymak-BITLI**	**83.82**	**311**	P	**P**	**01 28 04.9**	**+0.6**
GURO				IAmb	IAmb	01 28 13.4	
	comp=Z,2.4nm,0.8s						
BELG	**Belogornoye**	**85.30**	**325**	P	**P**	**01 28 12.6**	**+1.4**
	comp=Z,8.4nm,0.8s,baz=143,slow=10,SNR=6.6						
	comp=Z,8.4nm,0.8s						
BDFB	**Brasilia**	**148.76**	**213**	PKPbc	**PKPab**	**01 35 28.1**	**+1.5**
	comp=Z,1.5nm,0.7s,baz=139,slow=9.3,SNR=3.1						

MAN 18 01:19:38.4, 7°.70N×124°.67E, h3^{km}, mb4.7, ML3.6, MS3.5, 12C-8D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUKP	**Musuan**	**0.43**	**65**	⇓*e*P	Pg	01 19 47.1	+0.4
BUKP				*e*S	Sb	01 19 54.6	-1.0
CTBH	**Cotabato--PC H**	**0.63**	**222**	⇑*i*P	Pb	01 19 51.8	-0.4
CTBH				*i* S	Sb	01 20 02.7	+1.3
CGP	**Cagayan de Oro**	**0.75**	**2**	⇑*i*P	Pg	01 19 51.5	-1.3
CGP				*i* S	Sg	01 20 01.6	-1.1
KCP	**Kidapawan**	**0.80**	**149**	⇑*i*P	Pg	01 19 53.7	-0.1
KCP				*i* S	Sg	01 20 03.9	-0.3
SKMP	**Bagumbayan, Su**	**1.18**	**186**	⇑*e*P	Pg	01 20 00.2	-0.8
SKMP				*e*S	Sn	01 20 18.5	+0.1
PAGZ	**Pagadian**	**1.28**	**277**	⇓*e*P	Pg	01 20 02.0	-1.1
PAGZ				*e*S	Sn	01 20 21.2	+0.2
TASP	**Talacogon, Agu**	**1.35**	**56**	⇑*e*P	Pb	01 20 05.4	+1.0
TASP				*e*S	Sn	01 20 28.7	+6.0
DCPH	**Dipolog City**	**1.57**	**304**	⇑*e*P	Pg	01 20 08.8	+0.2
DCPH				*e*S	Sg	01 20 30.6	+1.6
BUTP	**Butuan**	**1.58**	**37**	⇑*e*P	Pb	01 20 08.2	0.0
BUTP				*e*S	Sg	01 20 34.6	+5.5
GSPH	**General Santos**	**1.62**	**170**	⇑*i*P	Pg	01 20 18.8	+9.2
GSPH				*i* S	Sg	01 20 45.3	+15
BIPH	**Bislig**	**1.74**	**74**	⇓*i*P	Pn	01 20 09.5	-0.1
BIPH				*i* S	Sb	01 20 33.7	+0.3
CDOP	**Cateel, Davao**	**1.75**	**87**	⇓*e*P	Pn	01 20 09.9	+0.2
CDOP				*e*S	Sg	01 20 34.5	-0.4
LSIP	**Lazi, Siquijor**	**1.76**	**324**	⇓*e*P	Pn	01 20 10.1	+0.3
LSIP				*e*S	Sg	01 20 36.9	+2.0
GHBP	**Garcia Hernand**	**1.95**	**350**	⇑*e*P	Pn	01 20 12.8	+0.3
GHBP				*e*S	Sg	01 20 42.0	+0.8
TBP	**Tagbilaran**	**2.13**	**338**	*e*P	Pn	01 20 14.4	-0.6
TBP				*e*S	Sn	01 20 28.9	-13
SNPH	**Sibulan**	**2.16**	**319**	*e*P	Pb	01 20 17.1	-1.2
SNPH				*e*S	Sg	01 20 47.8	-0.2
SCPH	**Surigao**	**2.22**	**21**	⇑*i*P	Pn	01 20 15.7	-0.6
SCPH				*i* S	Sn	01 20 45.3	+1.1
TABP	**Talibon, Bohol**	**2.40**	**352**	⇓*e*P	Pn	01 20 15.9	-2.7
TABP				*e*S	Sn	01 20 49.8	+1.2
MSLP	**Maasin**	**2.43**	**4**	⇑*e*P	Pn	01 20 18.3	-0.7
MSLP				*e*S	Sb	01 20 52.4	-0.8
GLSP	**General Luna,**	**2.52**	**35**	⇓*e*P	Pb	01 20 22.6	-1.8
GLSP				*e*S	Sb	01 20 54.1	-1.8
LLP	**Lapu-Lapu**	**2.69**	**345**	*e*P	Pn	01 20 23.2	+0.5
LLP				*e*S	Sb	01 20 58.6	-2.2
CNOP	**Candoni, Negro**	**2.92**	**317**	⇑*e*P	Pn	01 20 28.2	+2.4
CNOP				*e*S	Sb	01 21 07.0	-0.2
RCP	**Roxas**	**4.28**	**334**	⇓*i*P	Pn	01 20 46.0	+1.5

ROM 18 01:29:46.0±0.0, 42°.809N±0°.003×13°.111E±0°.004, h11^{km}, ML1.3/7, 3C-3D, Error ellipse: s-maj=0.3km s-min=0.3km az=281.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1245	**Castelsantange**	**0.07**	**50**	P	Pg	01 29 48.8	+0.2
T1245				S	Sg	01 29 50.6	+0.2
T1245				AML	AML		
	comp=N,482µm,0.8s						
T1245				AML	AML		
	comp=E,368µm,0.7s						
T1245				AML	AML		
	comp=N,383µm,0.6s						
T1245				AML	AML		
	comp=E,384µm,0.8s						
T1245				AML	AML		
	comp=N,482µm,0.8s						
T1245				AML	AML		
	comp=N,482µm,1.2s						
T1245				AML	AML		
	comp=E,368µm,1.3s						
T1212	**Cascia, Frazio**	**0.08**	**220**	P	Pg	01 29 48.9	+0.4
T1212				S	Sg	01 29 50.6	+0.4
T1212				AML	AML		
	comp=E,255µm,0.6s						
T1212				AML	AML		
	comp=N,396µm,0.1s						
T1212				AML	AML		
	comp=E,230µm,0.6s						
T1212				AML	AML		
	comp=N,402µm,0.1s						
T1212				AML	AML		
	comp=E,254µm,0.6s						
T1212				AML	AML		
	comp=N,396µm,0.1s						
T1212				AML	AML		
	comp=E,230µm,1.4s						
T1212				AML	AML		
	comp=E,254µm,1.4s						
T1212				AML	AML		
	comp=N,402µm,0.1s						
T1214	**Arquata del Tr**	**0.09**	**125**	P	Pg	01 29 49.0	+0.3
T1214				S	Sg	01 29 50.8	+0.2
T1214				AML	AML		
	comp=E,243µm,0.9s						
T1214				AML	AML		
	comp=N,345µm,0.1s						
T1214				AML	AML		
	comp=N,345µm,0.1s						
T1214				AML	AML		
	comp=E,244µm,0.9s						
T1216	**Preci, Frazion**	**0.11**	**320**	P	Pg	01 29 49.2	+0.4
T1216				S	Sg	01 29 51.1	+0.3
T1216				AML	AML		
	comp=E,154µm,0.4s						
T1216				AML	AML		
	comp=N,194µm,0.6s						
MC2	**Monte Cornacci**	**0.12**	**29**	⇑P	Pg	01 29 49.6	+0.4
MC2				S	Sg	01 29 52.4	+1.0
T1218	**Civita (PG)**	**0.14**	**179**	P	Pg	01 29 49.8	+0.5
T1218				S	Sg	01 29 52.5	+0.7
T1218				AML	AML		
	comp=N,109µm,0.9s						
T1218				AML	AML		
	comp=E,81µm,1.5s						
T1217	**Poggiodomo (PG**	**0.16**	**234**	P	Pg	01 29 50.3	+0.6
T1217				S	Sg	01 29 53.2	+0.9
MMO1	**Montemonaco**	**0.18**	**60**	⇑P	Pg	01 29 50.5	+0.4
MMO1				S	Sg	01 29 53.6	+0.8
T1256	**Bolognola (MC)**	**0.21**	**23**	S	Sg	01 29 54.4	+0.7
FDMO	**Fiordimonte**	**0.23**	**356**	P	Pg	01 29 51.0	+0.2
FDMO				S	Sg	01 29 55.4	+1.4
T1241	**Roccafluvione,**	**0.24**	**79**	⇓P	Pg	01 29 51.5	+0.5
T1241				S	Sg	01 29 55.5	+1.1
T1241				AML	AML		
	comp=E,54µm,0.3s						
T1241				AML	AML		
	comp=N,31µm,1.5s						
T1241				AML	AML		
	comp=N,31µm,0.5s						
T1219	**Muccia, Frazio**	**0.26**	**343**	⇓P	Pg	01 29 51.9	+0.5
RM33	**Pellescritta (**	**0.31**	**166**	⇑P	Pg	01 29 52.8	+0.5
T1211	**Morro Reatino**	**0.34**	**214**	⇓P	Pg	01 29 53.3	+0.6
T1211				AML	AML		
	comp=E,116µm,1.6s						
T1211				AML	AML		
	comp=N,141µm,1.2s						
T1211				AML	AML		
	comp=E,116µm,0.4s						
ASSB	**Assisi San Ben**	**0.41**	**305**	P	Pg	01 29 54.6	+0.5
TERO	**Teramo**	**0.41**	**117**	P	Pg	01 29 54.3	+0.2

ROM 18 01:30:18.8±0.0, 42°.807N±0°.003×13°.111E±0°.004, h11^{km}, ML1.6/10, 4C-3D, Error ellipse: s-maj=0.3km s-min=0.3km az=282.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1212	**Cascia, Frazio**	**0.07**	**222**	P	Pg	01 30 21.6	+0.3
T1212				S	Sg	01 30 23.5	+0.5
T1212				AML	AML		
	comp=E,969µm,0.6s						
T1212				AML	AML		
	comp=E,912µm,0.6s						
T1212				AML	AML		
	comp=N,970µm,0.1s						
T1212				AML	AML		
	comp=E,970µm,0.6s						
T1212				AML	AML		
	comp=N,968µm,0.1s						
T1212				AML	AML		
	comp=E,913µm,0.6s						
T1212				AML	AML		
	comp=N,974µm,0.4s						
T1245	**Castelsantange**	**0.07**	**49**	P	Pg	01 30 21.6	+0.2
T1245				S	Sg	01 30 23.4	+0.2
T1245				AML	AML		
	comp=E,1017µm,0.8s						
T1245				AML	AML		
	comp=N,1280µm,0.2s						
T1245				AML	AML		
	comp=N,1170µm,0.2s						
T1245				AML	AML		
	comp=E,1072µm,0.7s						
T1245				AML	AML		
	comp=E,1020µm,0.8s						
T1216	**Preci, Frazion**	**0.11**	**321**	P	Pg	01 30 22.0	+0.4
T1216				S	Sg	01 30 24.1	+0.4
T1216				AML	AML		
	comp=E,428µm,0.2s						
T1216				AML	AML		
	comp=N,517µm,0.6s						
T1216				AML	AML		
	comp=E,427µm,0.2s						
T1216				AML	AML		
	comp=N,518µm,0.6s						
MC2	**Monte Cornacci**	**0.12**	**29**	P	Pg	01 30 22.3	+0.3
MC2				S	Sg	01 30 24.9	+0.7
T1218	**Civita (PG)**	**0.14**	**179**	P	Pg	01 30 22.5	+0.4
T1218				S	Sg	01 30 25.2	+0.7
T1218				AML	AML		
	comp=E,394µm,0.1s						
T1218				AML	AML		
	comp=N,374µm,0.9s						
T1218				AML	AML		
	comp=N,392µm,0.9s						
T1218				AML	AML		
	comp=E,380µm,0.2s						
T1218				AML	AML		
	comp=N,392µm,1.1s						
T1218				AML	AML		
	comp=N,374µm,1.1s						
T1217	**Poggiodomo (PG**	**0.16**	**234**	P	Pg	01 30 23.1	+0.6
T1217				S	Sg	01 30 26.0	+0.9
T1256	**Bolognola (MC)**	**0.22**	**23**	AML	AML		
	comp=E,508µm,1.1s						
T1256				AML	AML		
	comp=N,380µm,1.0s						
T1241	**Roccafluvione,**	**0.24**	**78**	AML	AML		
	comp=N,107µm,0.7s						
T1241				AML	AML		
	comp=E,158µm,0.9s						
T1241				AML	AML		
	comp=N,107µm,0.7s						
T1241				AML	AML		
	comp=E,158µm,0.9s						
CESI	**CESI - Serrava**	**0.25**	**323**	P	Pg	01 30 24.6	+0.6
CESI				S	Sg	01 30 28.6	+1.1
CESI				AML	AML		
	comp=E,130µm,1.0s						
CESI				AML	AML		
	comp=N,170µm,0.5s						
CESI				AML	AML		
	comp=N,170µm,1.5s						
T1220	**Camerino, Fraz**	**0.30**	**357**	⇓P	Pg	01 30 25.6	+0.6
T1220				S	Sb	01 30 30.3	-1.1
RM33	**Pellescritta (**	**0.31**	**166**	AML	AML		
	comp=N,61µm,0.2s						
RM33				AML	AML		
	comp=N,61µm,0.2s						
RM33				AML	AML		
	comp=E,68µm,0.1s						
T1211	**Morro Reatino**	**0.33**	**215**	⇑P	Pg	01 30 26.0	+0.5
T1211				S	Sb	01 30 31.5	-0.8
T1211				AML	AML		
	comp=E,122µm,1.6s						
T1211				AML	AML		
	comp=N,201µm,0.3s						
T1211				AML	AML		
	comp=E,122µm,0.4s						
ARRO	**Arrone**	**0.34**	**228**	⇓P	Pb	01 30 26.3	-0.6
ARRO				AML	AML		
	comp=E,50µm,1.6s						
ARRO				AML	AML		
	comp=N,62µm,0.3s						
ARRO				AML	AML		
	comp=N,62µm,1.7s						
ARRO				AML	AML		
	comp=E,50µm,0.4s						
MOMA	**Monte Martano**	**0.40**	**270**	P	Pb	01 30 27.4	-0.6
TERO	**Teramo**	**0.41**	**117**	P	Pg	01 30 26.9	+0.1
TERO				S	Sb	01 30 33.3	-1.0
TERO				AML	AML		
	comp=E,61µm,0.4s						
TERO				AML	AML		
	comp=N,104µm,0.2s						
TERO				AML	AML		
	comp=E,61µm,1.6s						
ASSB	**Assisi San Ben**	**0.41**	**306**	P	Pg	01 30 27.1	+0.2
ASSB				AML	AML		
	comp=E,44µm,1.0s						
ASSB				AML	AML		
	comp=N,42µm,1.1s						
ASSB				AML	AML		
	comp=N,42µm,0.9s						
ASSB				AML	AML		
	comp=E,44µm,1.0s						
T1222	**Castel Sant'An**	**0.41**	**188**	⇓P	Pb	01 30 27.7	-0.5
OFFI	**Offida**	**0.44**	**73**	⇑P	Pb	01 30 28.7	+0.1
SNTG	**Esanatoglia**	**0.47**	**344**	P	Pg	01 30 28.5	+0.5
SNTG				AML	AML		
	comp=E,25µm,1.3s						
SNTG				AML	AML		
	comp=N,50µm,0.3s						
SNTG				AML	AML		
	comp=E,25µm,0.7s						
GIGS	**Gran Sasso**	**0.49**	**136**	⇑P	Pg	01 30 28.6	+0.1
ATCC	**AVT- Casa Cast**	**0.51**	**318**	⇑P	Pg	01 30 29.1	+0.3

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*MOS **18** 01:33:25.9±1.1, 38°.65N×143°.95E, h10^{km}, mb4.9/45, Error ellipse: s-maj=6.4km s-min=4.0km az=101.6*

*BJI **18** 01:33:27.1±0.0, 38°.78N×143°.72E, h5^{km}, mb4.6/57, mB4.9/34, Ms4.7/52, Ms7 4.4/50*

*JMA **18** 01:33:29.0±0.2, 38°.6N±0°.6×14°4E±°, h46^{km}, MD4.8/36, MW4.9/36, FAR E OFF MIYAGI PREF*

JMA Felt I J1 at FAR E OFF MIYAGI PREF .

*NIED **18** 01:33:29.0, 38°.63N×143°.90E, h46^{km}, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.40; $M_{\theta\theta}$0.54; $M_{\phi\phi}$0.86; $M_{r\theta}$-0.14; $M_{\theta\phi}$1.40; $M_{\phi r}$0.69; Fault plane solution: $M_0$1.96000×10^{16} NP1: ϕ_s197.00000°, δ58.00000°, λ-123.00000°. NP2: ϕ_s68.00000°, δ45.00000°, λ-49.00000°.*

*NEIC **18** 01:33:29.1±1.1, 38°.60N±0°.06×143°.89E±0°.09, h18^{km}±4^{km}, mb4.9/119 Error ellipse: s-maj=11.5km s-min=7.4km az=119.0*

*IDC **18** 01:33:31.9±2.1, 38°.53N×143°.94E, h42^{km}±19^{km}, mb4.2/44, mbtmp4.4/48, ML4.0/4, MS4.1/61, Error ellipse: s-maj=12.5km s-min=10.4km az=143.0*

*GCMT **18** 01:33:31.1±0.3, 38°.72N±0°.02×144°.02E±0°.02, h15^{km}±1^{km}, MW5.0/100, Moment Tensor Solution. s38,c47; s100,c151; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.62±.18; $M_{\theta\theta}$0.94±.12; $M_{\phi\phi}$1.68±.11; $M_{r\theta}$-0.35±.41; $M_{\theta\phi}$2.65±.07; $M_{\phi r}$2.29±.40; Best double couple: $M_0$4.19800×10^{16} NP1: ϕ_s192.00000°, δ65.00000°, λ-125.00000°. NP2: ϕ_s71.00000°, δ42.00000°, λ-39.00000°. Principal axes: T 4.3360, Plg13.0000°, Azm307.0000°; N -0.2740, Plg31.0000°, Azm209.0000°; P -4.0600, Plg56.0000°, Azm57.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 01:33:28.7±0.6, 38°.62N±0°.04×144°.04E±0°.04, h19^{km}±2^{km}, n700, σ1^{s}.54/695, mb4.7/153, MS4.3/76, 25C-27D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**1.91**	**285**	*i* P	**Pn**	**01 33 58.6**	**-1.5**
OFUJ	**Ofunato**	**1.91**	**285**	A	A	01 33 58.6	
	comp=E,7.0nm,3.9s,comp=E,9.0nm,7.2s						
MIYJ	**Miyakonagasawa**	**1.97**	**300**	P	**Pn**	**01 33 59.4**	**-1.7**
MIYJ				*e*S	**Sn**	**01 34 21.8**	**-3.5**
JKMT	**Kesennumamotoy**	**2.02**	**276**	*i* P	**Pn**	**01 34 00.1**	**-1.6**
JIKH	**Ishinomakikobu**	**2.04**	**262**	P	**Pn**	**01 34 00.1**	**-1.9**

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JIKH   Ishinomakikobu     2.04 262   A      A       01 34 00.1
       comp=E,5.0nm,8.1s,comp=E,12nm,3.5s
JTH    Tanohata           2.14 309   A      A       01 34 02.1
       comp=E,10.0nm,2.7s,comp=E,9.0nm,0.7s
JMK    Ichinoseki         2.23 279   P      Pn      01 34 03.3  -1.3
JMK                                  S      Sn      01 34 28.9  -2.7
JMK    Ichinoseki         2.23 279   A      A       01 34 03.3
       comp=E,6.0nm,9.9s,comp=E,9.0nm,3.9s
JOM    Ohasama            2.30 292  iP      Pn      01 34 04.5  -1.2
JOM                                 eS      Sn      01 34 30.8  -2.6
JOM    Ohasama            2.30 292   A      A       01 34 04.5
       comp=E,11nm,0.2s,comp=E,11nm,0.2s
JKEN   Kujiedanarisaw     2.40 312   A      A       01 34 05.8
       comp=E,14nm,0.5s,comp=E,13nm,1.6s
JOFO   Osakifurukawao     2.45 270   A      A       01 34 06.1
       comp=E,35nm,2.6s,comp=E,34nm,2.7s
JKZ    Kuzumaki           2.50 304   A      A       01 34 07.2
       comp=E,7.0nm,0.3s,comp=E,9.0nm,0.6s
JANG   Nango              2.62 313  iP      Pn      01 34 08.4  -1.6
JANG   Nango              2.62 313   A      A       01 34 08.4
       comp=E,5.0nm,4.0s,comp=E,5.0nm,2.9s
JSZI   Iwateshizukuis     2.65 296   A      A       01 34 09.6
       comp=E,27nm,4.2s,comp=E,32nm,5.2s
JOU    Okura              2.66 265   A      A       01 34 09.2
       comp=E,8.0nm,2.1s,comp=E,9.0nm,4.2s
JMM    Marumori           2.67 255   Pn     Pn      01 34 08.8  -1.8
JMM                                  Sn     Sn      01 34 37.4  -5.1
JMM    Marumori           2.67 255   P      Pn      01 34 09.9  -0.7
JRG    Rokugo             2.76 287   A      A       01 34 10.7
       comp=E,7.0nm,1.8s,comp=E,10.0nm,8.2s
JFK    Kawauchi           2.80 244   A      A       01 34 11.3
       comp=E,4.0nm,3.6s,comp=E,4.0nm,4.4s
JYK    Kaneyama           2.89 277  eP      Pn      01 34 12.1  -1.6
JYK    Kaneyama           2.89 277   A      A       01 34 12.1
       comp=E,4.0nm,4.7s,comp=E,7.0nm,7.0s
JOTO   OTAMA OYAMA        3.11 251   P      Pn      01 34 15.6  -1.2
JOTO                                 S      Sn      01 34 50.4  -3.1
JYW    Yuwa               3.12 288   A      A       01 34 15.7
       comp=E,13nm,3.2s,comp=E,23nm,3.6s
JARK   Aomorirokkasho     3.15 320   A      A       01 34 16.6
       comp=E,7.0nm,2.7s,comp=E,9.0nm,2.1s
JYS    Shirataka          3.15 264   A      A       01 34 16.1
       comp=E,7.0nm,2.6s,comp=E,10.0nm,2.5s
JTM    Tenmabayashi       3.15 314          Pn      01 34 16.2  -1.1
JTM                                  Sn     Sn      01 34 50.5  -3.8
JTM    Tenmabayashi       3.15 314   P      Pn      01 34 16.6  -0.7
JTM    Tenmabayashi       3.15 314   A      A       01 34 16.5
       comp=E,5.0nm,3.2s,comp=E,5.0nm,6.5s
JYYZ   Yamagatayuza       3.23 278   A      A       01 34 17.2
       comp=E,22nm,3.9s,comp=E,30nm,5.8s
JAHD   Aomorihigashid     3.36 323   A      A       01 34 19.6
       comp=E,10.0nm,1.5s,comp=E,8.0nm,0.6s
JYA    Atsumi             3.39 271   A      A       01 34 19.5
       comp=E,3.0nm,2.1s,comp=E,6.0nm,9.2s
JNTW   Noshirotokiwa      3.42 300   A      A       01 34 20.1
       comp=E,23nm,2.6s,comp=E,35nm,3.2s
ERM    Erimo              3.45 349   Pn     Pn      01 34 20.7  -0.7
ERM    Erimo              3.45 349   P      Pn      01 34 21.0  -0.4
ERM    Erimo              3.45 349   P      Pn      01 34 20.7  -0.7
JEM    Erimo              3.45 349   P      Pn      01 34 21.4  -0.1
JEM    Erimo              3.45 349   A      A       01 34 21.6
       comp=E,4.0nm,3.3s,comp=E,4.0nm,4.6s
JHHS   Hirosakihyakuz     3.49 307   A      A       01 34 21.1
       comp=E,14nm,2.5s,comp=E,15nm,6.1s
JOT    Ohata              3.59 321   P      Pn      01 34 22.1  -1.1
JOT                                 eS      Sn      01 35 01.2  -3.9
JSB    Shiboa             3.66 244   A      A       01 34 23.4
       comp=E,8.0nm,3.5s,comp=E,5.0nm,5.2s
JIW    Iwasaki            3.68 304   A      A       01 34 23.9
       comp=E,4.0nm,4.1s,comp=E,4.0nm,8.9s
JSI2   Shiura 2           3.70 312   A      A       01 34 24.3
       comp=E,4.0nm,4.5s,comp=E,5.0nm,2.8s
JAW    Awa shima          3.76 269  eP      Pn      01 34 25.5  -0.2
JNBK   Urakawa-nobuka     3.78 345  eP      Pn      01 34 25.2  -0.8
JNBK                                 S      Sn      01 35 07.8  -2.2
JNS    Sasagawa           3.81 259   P      Pn      01 34 25.6  -0.7
JSHD   Hidakashinhida     3.97 343   A      A       01 34 28.7
       comp=E,8.0nm,1.7s,comp=E,7.0nm,5.9s
JKB    Kayabe             3.99 326   A      A       01 34 28.6
       comp=E,4.0nm,4.3s,comp=E,3.0nm,4.4s
JCH    Churui             4.02 353   P      Pn      01 34 27.9  -1.3
JCH                                 eS      Sn      01 35 11.8  -3.9
JOG3   Oga3               4.06 290   A      A       01 34 21.5
       comp=E,7.0nm,2.7s,comp=E,10.0nm,3.2s
JSD    Sado               4.58 264   Pn     Pn      01 34 36.0  -1.0
JSD    Sado               4.58 264   P      Pn      01 34 36.5  -0.5
BSO1   Boso 1             4.67 213   P      Pn      01 34 35.6  -2.0
BSO1                                eS      Sn      01 35 27.5  -3.5
JAR    Ashorobuto         4.67 358   A      A       01 34 39.0
       comp=E,6.0nm,0.4s,comp=E,7.0nm,0.6s
JRY    Ryogami san        4.85 239  iP      Pn      01 34 39.6  -1.1
JRY                                  S      Sn      01 35 32.3  -4.1
JOSM   Okushiri--Mats     4.91 316   P      Pn      01 34 40.9  -0.5
NMR    Nemuro--Hokkai     4.91  15  eP      Pn      01 34 39.7  -1.7
NMR                                 eS      Sn      01 35 32.1  -5.6
JAB    Ashibetsu          5.07 345   A      A       01 34 44.1
       comp=E,4.0nm,3.5s,comp=E,5.0nm,3.1s
MJAR   Matsushiro Arr     5.08 248   P      Pn      01 34 43.8   0.0
       3.5nm,0.3s,baz=67,slow=12,SNR=66
MJAR                                 S      Sn      01 35 40.0  -1.9
       16nm,0.4s,baz=335,slow=13,SNR=1.3
MJAR                                 LR     LR      01 36 59.6
       comp=Z,3µm,18.4s,baz=66,slow=42
       22nm,0.5s
MAJO   Matsushiro         5.08 248   Pn     Pn      01 34 43.4  -0.4
MAJO   Matsushiro         5.08 248   P      Pn      01 34 44.4  +0.6
MAJO   Matsushiro         5.08 248c iP      Pn      01 34 43.9  +0.1
MJB9   Matsu-Tunnel       5.08 248          Pn      01 34 44.6  +0.7
JNSB   Nemuroshibetsu     5.20   8   A      A       01 34 46.6
       comp=E,5.0nm,5.3s,comp=E,6.0nm,2.5s
RUSJ   Misakicho          5.55   9  eP      Pn      01 34 50.0  -0.2
RUSJ                                eS      Sn      01 35 49.9  -3.6
YUK    Yuzh-Kuril'sk      5.58  14  eP      Pn      01 34 48.9  -1.7
YUK                                 eS      Sn      01 35 47.9  -6.2
YUK                                  pmax   pmax
       comp=E,384nm,0.2s
YUK                                  pmax   pmax
       comp=Z,966nm,0.2s
YUK                                  pmax   pmax
       comp=N,530nm,0.3s
YUK                                  smax   smax
       comp=N,2µm,0.5s
YUK                                  smax   smax
       comp=E,2µm,0.4s
JKA    Kamikawa-asahi     5.59 349   Pn     Pn      01 34 50.6  -0.3
ASAJ   Asahikawa          5.59 349   P      Pn      01 34 50.4  -0.4
       comp=E,73nm,0.3s,baz=210,slow=11,SNR=54
ASAJ                                 S      Sn      01 35 49.6  -5.0
       comp=E,43nm,0.3s,baz=233,slow=20,SNR=3.5
ASAJ                                 LR     LR      01 37 26.3
       comp=E,2µm,18.9s,baz=127,slow=41
ASAJ   Asahikawa          5.59 349   P      Pn      01 34 50.6  -0.3
SHO    Shikotan           5.65  21  eP      Pn      01 34 49.5  -2.1
SHO                                 eS      Sn      01 35 49.5  -6.4
SHO                                  pmax   pmax
       comp=E,120nm,0.2s
SHO                                  pmax   pmax
       comp=Z,223nm,0.2s
SHO                                  pmax   pmax
       comp=N,131nm,0.4s
SHO                                  smax   smax
       comp=N,359nm,0.3s
SHO                                  smax   smax
       comp=E,507nm,0.3s
JGF    Kuroka             6.13 243   Pn     Pn      01 34 57.9  -0.5
JGF    Kuroka             6.13 243   P      Pn      01 34 58.7  +0.4
JHJ2   Mitsune            6.48 213          Pn      01 35 01.1  -2.0
JHJ2   Mitsune            6.48 213   P      Pn      01 35 01.5  -1.6
INU    Inuyama            6.50 242   Pn     Pn      01 35 03.3  -0.1
INU    Inuyama            6.50 242   P      Pn      01 35 04.5  +1.1
KUR    Kuril'sk           7.19  22⇑iP      Pn      01 35 11.3  -1.5
KUR                                  pmax   pmax
       comp=Z,459nm,0.5s
KUR                                  pmax   pmax
       comp=N,258nm,0.3s
KUR                                  pmax   pmax
       comp=E,215nm,0.4s
YSS    Yuzh-Sakhalins     8.38 354   Pn     Pn      01 35 28.7  -0.4
YSS    Yuzh-Sakhalins     8.38 354  eP      Pn      01 35 25.8  -3.3
YSS                                 eS      Sn      01 36 56.3  -6.8
YSS                                  MLR    MLR
       comp=Z,1µm,15.0s
YSS                                  MLR    MLR
       comp=N,800nm,12.0s
TEY    Ternei             8.47 321  eP      Pn      01 35 31.2  +0.8
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JHS    Saijyo             9.48 251          Pn      01 35 42.5  -1.7
JHS    Saijyo             9.48 251   P      Pn      01 35 44.8  +0.6
JMN    Monobe             9.55 242          Pn      01 35 43.2  -2.1
JMN    Monobe             9.55 242   P      Pn      01 35 45.9  +0.6
USA0B  Ussuriysk Arra    10.62 305          Pn      01 35 59.4  -0.5
USA0B  Ussuriysk Arra    10.62 305c iP      Pn      01 36 00.5  +0.7
USRK   Ussuriysk Ar.     10.62 305   P      Pn      01 36 00.6  +0.8
       comp=N,3.6nm,0.3s,baz=102,slow=14,SNR=23
USRK                                 LR     LR      01 39 54.4
       comp=N,912nm,19.6s,baz=117,slow=36
       comp=N,15nm,0.5s
USRK   Ussuriysk Ar.     10.62 305   Pn     Pn      01 35 59.2  -0.6
JCJ    Chichijima        11.60 188   P      Pn      01 36 07.5  -5.8
       comp=N,56nm,0.3s,baz=122,slow=23,SNR=15
JCJ                                  S      Sn      01 38 06.8   -16
       comp=N,102nm,0.4s,baz=128,slow=24,SNR=7.7
JCJ    Chichijima        11.60 188   Pn     Pn      01 36 08.7  -4.6
JCJ    Chichijima        11.60 188   P      Pn      01 36 09.2  -4.1
JNU    Nakatsue          12.00 247   P      Pn      01 36 19.2  +0.4
       comp=N,0.8nm,0.3s,baz=47,slow=8.1,SNR=6.3
JNU                                  LR     LR      01 41 07.5
       comp=N,1µm,20.9s,baz=49,slow=38
       comp=N,5.3nm,0.6s
JNU    Nakatsue          12.00 247          Pn      01 36 17.2  -1.6
TYV    Tymovskoe         12.28 356  eP      Pn      01 36 23.4  +1.0
TYV                                 eS      Sn      01 38 43.4  +4.8
TYV                                  pmax   pmax
       comp=Z,10.0nm,0.7s
TYV                                  pmax   pmax
       comp=Z,100nm,3.2s
TYV                                  smax   smax
       comp=N,100nm,5.4s
TYV                                  smax   smax
       comp=E,200nm,5.4s
MDJ    Mudanjiang        12.35 304   P      Pn      01 36 23.5   0.0
MDJ                                  pP     P       01 36 27.8  -7.7
MDJ                                  sP             01 36 29.1
MDJ                                  S      Sn      01 38 41.8  +1.3
MDJ                                  SS     SnSn    01 38 55.9  +3.4
MDJ                                  PcP    PcP     01 42 09.1  +4.9
MDJ                                  ScP    ScP     01 45 34.3  -1.8
MDJ                                  PcS    PcS     01 45 35.5  -2.8
MDJ                                  pmax   pmax
       comp=E,28nm,1.5s
MDJ                                  pmax   pmax
       comp=E,320nm,6.9s
MDJ                                  LR     LR
       comp=E,1µm,12.4s
MDJ                                  LR     LR
       comp=E,2µm,13.8s
MDJ                                  LR     LR
       comp=E,2µm,15.8s
MDJ    Mudanjiang        12.35 304   Pn     Pn      01 36 22.1  -1.4
JTU    Tsushima          12.46 255   Pn     Pn      01 36 22.9  -2.1
KSRS   Korea Array       12.76 270   P      Pn      01 36 30.1  +0.9
       comp=E,0.5nm,0.3s,baz=86,slow=13,SNR=13
KSRS                                 LR     LR      01 41 23.6
       comp=E,422nm,19.1s,baz=80,slow=37
       comp=E,3.3nm,0.7s
KS19   Wonju Array Si    12.80 270   Pn     Pn      01 36 27.4  -2.2
TJN    Taejon            13.43 266⇑eP      Pn      01 36 36.6  -1.6
KLR    Kul'dur           13.79 324   P      Pn      01 36 41.9  -1.3
       comp=E,5.3nm,0.4s,baz=142,slow=14,SNR=15
KLR                                  LR     LR      01 42 31.1
       comp=E,1µm,18.7s,baz=136,slow=39
KLR    Kul'dur           13.79 324⇓iP      Pn      01 36 41.7  -1.4
KLR                                  pmax   pmax
       comp=Z,26nm,1.6s
BNX    BinXian           14.22 305 ⇓P      Pn      01 36 47.3  -1.7
BNX                                  pmax   pmax
       comp=Z,12nm,0.8s
BNX                                  pmax   pmax
       comp=Z,120nm,4.6s
CN2    Changchun         14.91 296  eP      Pn      01 36 58.1  -0.3
CN2                                  sP     P       01 37 05.0  +1.1
CN2                                  S      Sn      01 39 43.1  +0.1
CN2                                  pmax   pmax
       comp=Z,10.0nm,0.5s
CN2                                  pmax   pmax
       comp=Z,100nm,4.0s
CN2                                  LR     LR
       comp=Z,1µm,14.0s
CN2                                  LR     LR
       comp=Z,700nm,14.0s
CN2                                  LR     LR
       comp=Z,600nm,16.0s
OKH    Okha              14.95 357deP      Pn      01 36 55.5  -3.3
OKH                                 eS      Sn      01 39 51.0  +7.3
OKH                                  MLR    MLR
       comp=N,1µm,17.0s
OKH                                  MLR    MLR
       comp=Z,900nm,18.0s
OKH                                  MLR    MLR
       comp=E,2µm,17.0s
HEH    HeiHe             16.57 320  eP      Pn      01 37 16.6  -3.3
HEH                                  pP     P       01 37 21.6  -0.7
HEH                                  S      Sn      01 40 21.6  -1.7
HEH                                  pmax   pmax
       comp=E,30nm,0.8s
HEH                                  pmax   pmax
       comp=E,180nm,3.8s
HEH                                  LR     LR
       comp=E,1µm,14.9s
HEH                                  LR     LR
       comp=E,810nm,13.9s
HEH                                  LR     LR
       comp=E,1µm,15.9s
PEA0B  Petropavlovsk-    17.28  29   Pn     Pn      01 37 28.4  -0.4
PEA0B                                IAmb   IAmb    01 37 36.6
       comp=Z,180nm,1.6s
PEA0B  Petropavlovsk-    17.28  29⇓iP      P       01 37 30.5  +0.3
PETK   Petropavlovsk-    17.28  29   P      Pn      01 37 26.7  -2.1
       comp=Z,4.3nm,0.9s,baz=213,slow=7.7,SNR=2.3
PETK                                 LR     LR      01 45 55.9
       comp=Z,366nm,18.8s,baz=211,slow=43
PETK   Petropavlovsk-    17.28  29          Pn      01 37 27.8  -1.0
PETK   Petropavlovsk-    17.28  29   P      Pn      01 37 27.8  -1.0
DL2    Dalian            17.48 278   P      P       01 37 31.8  -0.6
DL2                                  pmax   pmax
       comp=Z,20nm,0.7s
DL2                                  pmax   pmax
       comp=Z,170nm,4.2s
DL2                                  LR     LR
       comp=Z,1µm,13.5s
DL2                                  LR     LR
       comp=Z,1µm,14.9s
DL2                                  LR     LR
       comp=Z,890nm,15.7s
PET    Petropavlovsk     17.59  30  eP      P       01 37 37.1  +3.6
PET                                 eS      Sn      01 40 39.1  -8.6
PET                                  pmax   pmax
       comp=Z,112nm,1.5s
PET                                  MLR    MLR
       comp=Z,600nm,19.0s
JOW    Kunigami          17.70 233   LR     LR      01 44 26.7
       comp=Z,349nm,20.9s,baz=316,slow=37
ZEA    Zeya              18.99 328  eP      P       01 37 47.4  -1.6
ZEA                                 e               01 41 24.5
ZEA                                  pmax   pmax
       comp=N,20nm,1.2s
ZEA                                  pmax   pmax
       comp=Z,30nm,1.1s
ZEA                                  MLR    MLR
       comp=E,400nm,16.0s
ZEA                                  MLR    MLR
       comp=N,500nm,15.0s
ZEA                                  MLR    MLR
       comp=Z,600nm,15.0s
HIA    Hailar            20.39 309   P      P       01 38 03.3  -1.0
HIA    Hailar            20.39 309⇓iP      P       01 38 02.9  -1.4
HIA                                  pmax   pmax
       comp=Z,29nm,1.2s
MA2    Magadan           21.41   9   P      P       01 38 16.9  +1.8
       comp=Z,8.2nm,0.6s,baz=171,slow=13,SNR=4.5
MA2                                  LR     LR      01 47 11.1
       comp=Z,336nm,20.0s,baz=195,slow=38
       comp=Z,8.2nm,0.6s
MA2    Magadan           21.41   9   P      P       01 38 15.9  +0.8
MA2    Magadan           21.41   9deP      P       01 38 15.6  +0.5
MA2                                  pmax   pmax
       comp=Z,66nm,1.5s
TIA    Tai'an            21.49 272  eP      P       01 38 13.9  -2.3
TIA                                  S      S       01 42 09.6  -4.2
TIA                                  pmax   pmax
       comp=Z,13nm,1.7s
TIA                                  pmax   pmax
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       comp=Z,180nm,6.5s
TIA                                  LR     LR
       comp=Z,1µm,14.9s
TIA                                  LR     LR
       comp=Z,800nm,15.1s
TIA                                  LR     LR
       comp=Z,880nm,15.7s
NJ2    Nanjing           21.53 260  eP      P       01 38 15.8  -0.9
NJ2                                  sS     Sn      01 42 23.5  +0.3
NJ2                                  pmax   pmax
       comp=Z,8.0nm,0.5s
NJ2                                  pmax   pmax
       comp=Z,370nm,11.4s
NJ2                                  LR     LR
       comp=Z,870nm,15.2s
NJ2                                  LR     LR
       comp=Z,1µm,12.3s
NJ2                                  LR     LR
       comp=Z,1µm,13.7s
BJI    Beijing           21.57 283   P      P       01 38 17.5  +0.4
BJI                                  sS     Sn      01 42 22.3  -1.7
BJI                                  SS     SnSn    01 42 43.4  +4.3
BJI                                  pmax   pmax
       comp=Z,5.0nm,0.5s
BJI                                  LR     LR
       comp=Z,1µm,14.4s
BJI                                  LR     LR
       comp=Z,280nm,14.4s
BJT    Baijiatuau        21.58 283   P      P       01 38 15.4  -1.8
BJT    Baijiatuau        21.58 283   P      P       01 38 15.4  -1.8
BJT                                  pmax   pmax
       comp=Z,9.0nm,0.8s
XLT    XiLinHaoTe        21.61 293  eP      P       01 38 16.6  -1.0
XLT                                  pP     pP      01 38 20.5  -0.9
XLT                                  sP     sP      01 38 23.6  +1.1
XLT                                  S      S       01 42 17.0  +0.7
XLT                                  sS     sS      01 42 21.8  -2.3
XLT                                  SS     SnSn    01 42 39.3  -1.0
XLT                                  pmax   pmax
       comp=Z,21nm,0.7s
XLT                                  pmax   pmax
       comp=Z,150nm,5.7s
XLT                                  LR     LR
       comp=Z,67nm,14.3s
XLT                                  LR     LR
       comp=Z,450nm,17.9s
XLT                                  LR     LR
       comp=Z,470nm,17.1s
HNS    HongShan          23.10 276 ⇑P      P       01 38 30.5  -2.9
HNS                                  S      S       01 42 37.8  -5.8
HNS                                  pmax   pmax
       comp=Z,11nm,1.0s
HNS                                  LR     LR
       comp=Z,2µm,17.7s
HNS                                  LR     LR
       comp=Z,510nm,17.8s
HNS                                  LR     LR
       comp=Z,1µm,15.3s
SSLB   Suanglung         24.58 240   P      P       01 38 47.0  -0.6
SEY    Seymchan          24.86   9   P      P       01 38 51.5  +1.8
       comp=Z,21nm,0.5s,baz=190,slow=7.6,SNR=73
       comp=Z,21nm,0.5s
SEY    Seymchan          24.86   9⇓iP      P       01 38 51.9  +2.1
SEY                                  pmax   pmax
       comp=Z,178nm,2.5s
GUMO   Guam              24.95 178   LR     LR      01 47 44.6
       comp=Z,157nm,20.4s,baz=49,slow=34
HHC    Hu-ho-hao-te      25.00 285  eP      P       01 38 50.3  -1.1
HHC                                  S      S       01 43 14.5  +0.1
HHC                                  sS     sS      01 43 20.8  -0.2
HHC                                  pmax   pmax
       comp=Z,14nm,1.0s
HHC                                  pmax   pmax
       comp=Z,220nm,7.1s
HHC                                  LR     LR
       comp=Z,3µm,17.0s
HHC                                  LR     LR
       comp=Z,890nm,14.1s
HHC                                  LR     LR
       comp=Z,1µm,15.4s
YAK    Yakutsk           25.05 344   P      P       01 38 52.8  +1.4
       comp=Z,20nm,0.4s,baz=177,slow=2.0,SNR=2.4
YAK                                  LR     LR      01 49 36.4
       comp=Z,601nm,18.6s,baz=149,slow=38
       comp=Z,20nm,0.4s
YAK    Yakutsk           25.05 344   P      P       01 38 51.1  -0.3
YAK    Yakutsk           25.05 344  eP      P       01 38 52.3  +0.9
YAK                                 e               01 39 33.7
YAK                                 eS      S       01 43 17.6  +3.2
YAK                                  pmax   pmax
       comp=Z,15nm,1.0s
YAK                                  pmax   pmax
       comp=E,3.0nm,0.8s
YAK                                  pmax   pmax
       comp=N,19nm,1.5s
YAK                                  pmax   pmax
       comp=Z,15nm,0.6s
YAK                                  smax   smax
       comp=E,105nm,2.5s
YAK                                  smax   smax
       comp=N,349nm,2.5s
YAK                                  MLR    MLR
       comp=Z,635nm,19.0s
YAK                                  MLR    MLR
       comp=E,582nm,14.0s
YAK                                  MLR    MLR
       comp=N,237nm,14.0s
LYN    LuoYang           25.61 271⇓iP      P       01 38 57.6  +0.8
LYN                                  PP     PnPn    01 39 37.3  +4.4
LYN                                  S      S       01 43 23.9   0.0
LYN                                  pmax   pmax
       comp=N,35nm,0.9s
LYN                                  LR     LR
       comp=N,1µm,13.7s
LYN                                  LR     LR
       comp=N,860nm,13.7s
LYN                                  LR     LR
       comp=N,850nm,14.3s
WHN    Wuhan             25.66 261 ⇓P      P       01 39 02.3  +5.0
WHN                                  sP     pwP     01 39 07.9  -2.2
WHN                                  S      S       01 43 29.9  +5.2
WHN                                  LR     LR
       comp=N,6µm,18.9s
WHN                                  LR     LR
       comp=N,1µm,11.8s
WHN                                  LR     LR
       comp=N,3µm,15.4s
BTO    Baotou            26.19 285  eP      P       01 39 02.3  +0.1
BTO                                  pP     sP      01 39 06.9  -0.4
BTO                                  sP     pwP     01 39 15.0   0.0
BTO                                  S      S       01 43 35.9  +2.6
BTO                                  pmax   pmax
       comp=N,41nm,0.6s
BTO                                  pmax   pmax
       comp=N,450nm,6.9s
BTO                                  LR     LR
       comp=N,8µm,17.7s
BTO                                  LR     LR
       comp=N,2µm,12.7s
BTO                                  LR     LR
       comp=N,3µm,15.1s
H11N2  WAKE ISLAND Hy    27.31 127   T      T       02 07 58.8
       baz=318,slow=76,SNR=66
H11N1  WAKE ISLAND Hy    27.32 127   T      T       02 07 57.1
       baz=318,slow=76,SNR=38
H11N3  WAKE ISLAND Hy    27.33 127   T      T       02 07 56.5
       baz=318,slow=76,SNR=60
BOD    Bodaibo           27.37 324  eP      P       01 39 12.6  +0.1
BOD                                  pmax   pmax
       comp=Z,34nm,2.0s
H11S1  WAKE ISLAND Hy    28.11 129   T      T       02 08 50.2
       baz=321,slow=76,SNR=4.3
H11S3  WAKE ISLAND Hy    28.11 129   T      T       02 08 50.3
       baz=321,slow=76,SNR=4.8
H11S2  WAKE ISLAND Hy    28.13 129   T      T       02 08 52.3
       baz=321,slow=76,SNR=6.0
ULN    Ulaanbaatar       28.25 301   P      P       01 39 20.2  -0.5
ULN                                  IAmb   IAmb    01 39 28.0
       comp=Z,21nm,1.3s
ULN    Ulaanbaatar       28.25 301ceP      P       01 39 22.1  +1.4
ULN                                  pmax   pmax
       comp=Z,34nm,2.5s
XAN    Xi'an             28.55 272   P      P       01 39 23.4  +0.1
XAN                                  pP     sP      01 39 30.4  +1.9
XAN                                  S      S       01 44 11.8  +1.3
XAN                                  pmax   pmax
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	comp=Z,11nm,1.1s						
XAN				LR	LR		
	comp=Z,620nm,14.5s						
XAN				LR	LR		
	comp=Z,610nm,15.1s						
XAN				LR	LR		
	comp=Z,680nm,14.9s						
SONM	**Songino Array**	**28.69**	**301**	P	**P**	**01 39 24.8**	**+0.3**
	comp=Z,2.3nm,0.6s,baz=96,slow=9.6,SNR=14						
SONM				PcP	**PcP**	**01 42 34.4**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=109,slow=3.7,SNR=3.1						
	comp=Z,2.3nm,0.6s						
SONM	**Songino Array**	**28.69**	**301**	P	**P**	**01 39 24.3**	**-0.3**
ZAK	**Zakamensk**	**30.98**	**306**	*e*P	**P**	**01 39 45.6**	**+0.9**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
LZH	**Lanzhou**	**31.88**	**278**	*e*P	P	01 39 57.6	+4.7
LZH				pP	pwP	01 40 02.3	-3.4
LZH				sP	sP	01 40 04.6	+6.6
LZH				S	**S**	**01 45 05.4**	**+2.6**
LZH				sS	sS	01 45 13.3	+3.7
LZH				SS	**SnSn**	**01 46 54.5**	**+3.4**
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
LZH				pmax	pmax		
	comp=Z,100nm,4.3s						
LZH				LR	LR		
	comp=Z,1µm,17.0s						
LZH				LR	LR		
	comp=Z,490nm,16.8s						
LZH				LR	LR		
	comp=Z,930nm,18.1s						
BILL	**Bilibino**	**31.93**	**16**	P	**P**	**01 39 53.3**	**+0.6**
BILL	**Bilibino**	**31.93**	**16**	*c* *i*P	**P**	**01 39 53.1**	**+0.3**
BILL				*e*		01 41 03.6	
BILL				pmax	pmax		
	comp=Z,59nm,1.8s						
GYA	**Guiyang**	**33.54**	**260**	⇑P	**P**	**01 40 10.8**	**+3.3**
GYA				S	**S**	**01 45 27.0**	**-1.8**
GYA				pmax	pmax		
	comp=Z,21nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,3.6s						
GYA				LR	LR		
	comp=Z,790nm,16.1s						
GYA				LR	LR		
	comp=Z,500nm,15.0s						
GYA				LR	LR		
	comp=Z,380nm,19.1s						
CD2	**Chengdu**	**33.76**	**269**	P	**P**	**01 40 07.0**	**-2.3**
CD2				S	**S**	**01 45 29.4**	**-2.6**
CD2				pmax	pmax		
	comp=Z,100nm,4.9s						
CD2				LR	LR		
	comp=Z,590nm,14.9s						
CD2				LR	LR		
	comp=Z,400nm,11.2s						
CD2				LR	LR		
	comp=Z,290nm,15.7s						
TIXI	**Tiksi**	**33.99**	**351**	LR	LR	01 55 17.3	
	comp=Z,243nm,19.5s,baz=320,slow=38						
TIXI	**Tiksi**	**33.99**	**351**	P	**P**	**01 40 09.8**	**-1.0**
TIXI				IAmb	IAmb	01 40 11.4	
	comp=Z,6.5nm,0.7s						
TIXI	**Tiksi**	**33.99**	**351**	⇓*i*P	**P**	**01 40 10.8**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GTA	**Gaotai**	**34.11**	**286**	*e*P	**P**	**01 40 14.1**	**+1.7**
GTA				sP	pwP	01 40 26.0	+0.9
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				LR	LR		
	comp=Z,1µm,18.2s						
GTA				LR	LR		
	comp=Z,420nm,16.4s						
GTA				LR	LR		
	comp=Z,710nm,16.7s						
QIZ	**Qiongzhong**	**35.47**	**246**	P	**P**	**01 40 23.3**	**-0.8**
QIZ				S	**S**	**01 45 58.9**	**+0.4**
QIZ				LR	LR		
	comp=Z,730nm,21.6s						
QIZ				LR	LR		
	comp=Z,690nm,20.1s						
QIZ				LR	LR		
	comp=Z,630nm,14.1s						
PZH	**PanZhiHua**	**37.34**	**264**	P	**P**	**01 40 39.9**	**-0.2**
PZH				S	**S**	**01 46 24.8**	**-2.3**
PZH				pmax	pmax		
	comp=Z,20nm,0.8s						
PZH				pmax	pmax		
	comp=Z,60nm,4.3s						
PZH				LR	LR		
	comp=Z,540nm,15.1s						
PZH				LR	LR		
	comp=Z,430nm,14.7s						
PZH				LR	LR		
	comp=Z,410nm,15.7s						
TNA	**Tin City**	**38.45**	**30**	P	**P**	**01 40 50.4**	**+1.6**
TNA	**Tin City**	**38.45**	**30**	P	**P**	**01 40 50.7**	**+1.8**
	baz=250,SNR=7.3						
GOMU	**GeErMu**	**38.80**	**282**	P	**P**	**01 40 54.3**	**+1.6**
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ANM	**Nome**	**39.15**	**32**	P	**P**	**01 40 56.2**	**+1.4**
ANM	**Nome**	**39.15**	**32**	P	**P**	**01 40 56.2**	**+1.4**
ANM				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ANM	**Nome**	**39.15**	**32**	P	**P**	**01 40 56.6**	**+1.8**
	baz=254,SNR=10						
SDPT	**Sand Point**	**40.20**	**47**	P	**P**	**01 41 05.3**	**+1.7**
	baz=269						
RDOG	**Red Dog Mine**	**41.15**	**27**	P	**P**	**01 41 12.8**	**+1.5**
RDOG				IAmb	IAmb	01 41 14.5	
	comp=Z,63nm,2.0s						
RDOG	**Red Dog Mine**	**41.15**	**27**	P	**P**	**01 41 13.0**	**+1.7**
	baz=252						
DGZ	**Jazzator, Alta**	**41.18**	**305**	⇓*i*P	**P**	**01 41 12.9**	**+0.9**
DGZ				pmax	pmax		
	comp=Z,10.0nm,0.6s						
N16K	**Nishlik Lake**	**41.39**	**39**	P	**P**	**01 41 15.0**	**+1.6**
	baz=265						
O16K	**Kokwok River B**	**41.66**	**40**	P	**P**	**01 41 17.1**	**+1.5**
	baz=266						
P16K	**Nushagak River**	**41.68**	**41**	P	**P**	**01 41 17.5**	**+1.8**
	baz=267						
CRAI	**Chiangrai**	**41.77**	**257**	P	**P**	**01 41 16.8**	**-0.3**
WMQ	**Urumqi**	**42.00**	**296**	*e*P	**P**	**01 41 17.9**	**-0.8**
WMQ				sP	pwP	01 41 32.3	+0.8
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
WMQ				LR	LR		
	comp=Z,610nm,16.9s						
WMQ				LR	LR		
	comp=Z,290nm,18.1s						
O17K	**Koliganek Bris**	**42.17**	**40**	P	**P**	**01 41 21.2**	**+1.4**
	baz=267						
Q16K	**King Salmon**	**42.36**	**42**	P	**P**	**01 41 22.9**	**+1.6**
	baz=269						
ZAA0	**Zalesovo Array**	**42.41**	**311**	P	**P**	**01 41 21.9**	**+0.1**
ZALV	**Zalesovo Beam**	**42.41**	**311**	P	**P**	**01 41 21.8**	**0.0**
	comp=Z,2.3nm,0.6s,baz=78,slow=7.7,SNR=8.6						
ZALV				PcP	**PcP**	**01 43 13.9**	**-0.7**
	comp=Z,7.0nm,0.5s,baz=85,slow=3.2,SNR=11						
	comp=Z,2.3nm,0.6s						
ZALV	**Zalesovo Beam**	**42.41**	**311**	P	**P**	**01 41 21.1**	**-0.7**
ZALV	**Zalesovo Beam**	**42.41**	**311**	*i* P	**P**	**01 41 24.2**	**+2.4**
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NRIK	**Noril'sk**	**42.72**	**334**	P	**P**	**01 41 24.7**	**+0.6**
	comp=Z,1.8nm,0.4s,baz=121,slow=5.9,SNR=5.9						
NRIK				LR	LR	02 00 13.0	
	comp=Z,653nm,19.6s,baz=104,slow=37						
	comp=Z,1.8nm,0.4s						
NRIK	**Noril'sk**	**42.72**	**334**	P	**P**	**01 41 24.1**	**0.0**
NRIK	**Noril'sk**	**42.72**	**334**	⇓*e*P	**P**	**01 41 25.0**	**+0.9**
NRIK				pmax	pmax		
	comp=Z,13nm,1.5s						
Q17K	**Contact Creek**	**42.76**	**42**	P	**P**	**01 41 25.4**	**+0.7**
	baz=270						
GCSA	**Galena City Sc**	**42.76**	**33**	P	**P**	**01 41 25.4**	**+0.9**
	baz=262						
TTA	**Tatalina**	**42.93**	**36**	P	**P**	**01 41 27.0**	**+1.0**
	baz=265						
P18K	**Big Mountain,**	**43.11**	**41**	P	**P**	**01 41 28.3**	**+0.8**
	baz=269						
O18K	**Koktuh Hills**	**43.13**	**40**	P	**P**	**01 41 29.0**	**+1.4**
	baz=269						
Q18K	**Katmai Hardscr**	**43.22**	**42**	P	**P**	**01 41 29.5**	**+1.0**
	baz=270						
KRVT	**Keravat (AS076**	**43.35**	**168**	LR	LR	01 55 18.0	
	comp=Z,96nm,21.5s,baz=146,slow=30						
L19K	**White Mountain**	**43.40**	**37**	P	**P**	**01 41 30.9**	**+1.1**
	baz=267						
N19K	**Bonanza Creek**	**43.52**	**39**	P	**P**	**01 41 31.6**	**+0.8**
	baz=268						
CHTO	**Chiang Mai**	**43.69**	**256**	P	**P**	**01 41 31.9**	**-0.7**
CHTO	**Chiang Mai**	**43.69**	**256**	P	**P**	**01 41 31.9**	**-0.7**
K20K	**Telida**	**43.84**	**35**	P	**P**	**01 41 34.4**	**+1.1**
	baz=266						
L20K	**Farewell, AK**	**43.87**	**36**	P	**P**	**01 41 34.7**	**+1.1**
	baz=267						
CMAR	**Chiang Mai Arr**	**43.91**	**256**	P	**P**	**01 41 33.2**	**-1.1**
	comp=Z,1.2nm,0.4s,baz=41,slow=7.6,SNR=7.0						
CMAR				LR	LR	02 00 02.2	
	comp=Z,154nm,18.8s,baz=50,slow=36						
	comp=Z,1.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**43.91**	**256**	*i* P	**P**	**01 41 35.4**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
OHAK	**Old Harbor**	**44.17**	**44**	P	**P**	**01 41 36.0**	**+0.1**
	baz=273						
A21K	**Barrow**	**44.18**	**23**	P	**P**	**01 41 36.6**	**+0.8**
	baz=255,SNR=5.7						
IMAR	**Indian Mountai**	**44.22**	**31**	P	**P**	**01 41 37.3**	**+1.1**
G21K	**Allakaket**	**44.38**	**31**	P	**P**	**01 41 38.8**	**+1.2**
	baz=263						
F21K	**Alatna River**	**44.48**	**30**	P	**P**	**01 41 39.4**	**+1.1**
	baz=263						
KDAK	**Kodiak Island**	**44.52**	**43**	LR	LR	01 59 36.3	
	comp=Z,339nm,20.5s,baz=261,slow=35						
KDAK	**Kodiak Island**	**44.52**	**43**	P	**P**	**01 41 39.5**	**+0.7**
	baz=273						
H21K	**Melozitna Rive**	**44.57**	**32**	P	**P**	**01 41 40.1**	**+1.0**
	baz=265						
SPCR	**Spurr Chakacha**	**44.63**	**38**	P	**P**	**01 41 41.0**	**+1.3**
	baz=270						
CHUM	**Lake Minchumin**	**44.66**	**34**	P	**P**	**01 41 40.9**	**+1.2**
	baz=267						
PPLA	**Purkeypile**	**44.67**	**36**	P	**P**	**01 41 41.5**	**+1.4**
	baz=268						
CAST	**Castle Rocks**	**44.74**	**35**	P	**P**	**01 41 41.9**	**+1.4**
	baz=268						
I21K	**Tanana**	**44.88**	**33**	P	**P**	**01 41 42.7**	**+1.2**
	baz=266						
SKT	**Skwentna**	**44.96**	**37**	P	**P**	**01 41 43.5**	**+1.3**
	baz=270						
F22K	**John River**	**45.01**	**29**	P	**P**	**01 41 44.0**	**+1.4**
	baz=264						
MK31	**Makanchi Array**	**45.06**	**301**	P	**P**	**01 41 43.2**	**0.0**
MK31	**Makanchi Array**	**45.06**	**301**	*d* *i*P	**P**	**01 41 43.1**	**-0.1**
MKAR	**Makanchi Array**	**45.06**	**301**	P	**P**	**01 41 43.5**	**+0.2**
	comp=Z,3.3nm,0.7s,baz=84,slow=9.3,SNR=38						
MKAR				LR	LR	02 01 05.8	
	comp=Z,404nm,21.9s,baz=84,slow=37						
	comp=Z,3.3nm,0.7s						
H22K	**Ishtalitna Cre**	**45.18**	**32**	P	**P**	**01 41 45.4**	**+1.4**
	baz=266						
E22K	**Anaktuvuk Pass**	**45.22**	**28**	P	**P**	**01 41 46.2**	**+1.9**
	baz=263,SNR=10						
BPAW	**Bear Paw Mtn.**	**45.25**	**34**	P	**P**	**01 41 46.2**	**+1.7**
BPAW				IAmb	IAmb	01 41 48.9	
	comp=Z,16nm,1.6s						
BPAW	**Bear Paw Mtn.**	**45.25**	**34**	P	**P**	**01 41 45.8**	**+1.3**
	baz=268						
MAKZ	**Makanchi**	**45.26**	**301**	P	**P**	**01 41 44.8**	**-0.1**
MAKZ				IAmb	IAmb	01 41 57.2	
	comp=Z,5.6nm,0.7s						
MAKZ	**Makanchi**	**45.26**	**301**	P	**P**	**01 41 44.8**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SUA	**Susitna One**	**45.33**	**38**	P	**P**	**01 41 46.4**	**+1.1**
	baz=271						
MLY	**Manley**	**45.40**	**33**	P	**P**	**01 41 47.3**	**+1.6**
MLY	**Manley**	**45.40**	**33**	P	**P**	**01 41 47.6**	**+1.9**
	baz=267,SNR=8.2						
TRF	**Thorofare Moun**	**45.54**	**35**	P	**P**	**01 41 48.6**	**+1.6**
	baz=269						
CUT	**Chulitna**	**45.55**	**36**	P	**P**	**01 41 48.1**	**+1.3**
	baz=270						
D23K	**Nanushuk River**	**45.73**	**27**	P	**P**	**01 41 50.2**	**+2.0**
	baz=264						
COLD	**Coldfoot**	**45.75**	**30**	P	**P**	**01 41 50.0**	**+1.6**
	baz=266						
G23K	**Bananza Creek**	**45.78**	**30**	P	**P**	**01 41 50.4**	**+1.7**
	baz=266						
RC01	**Rabbit Creek A**	**45.83**	**38**	P	**P**	**01 41 50.4**	**+1.2**
	baz=272						
H23K	**Yukon River**	**45.93**	**32**	P	**P**	**01 41 51.8**	**+1.9**
	baz=268						
I23K	**Minto, Yukon-K**	**45.98**	**33**	P	**P**	**01 41 52.0**	**+1.8**
	baz=269						
SEW	**Seward**	**46.02**	**40**	P	**P**	**01 41 52.5**	**+2.0**
	baz=273						
E23K	**Chandalar**	**46.04**	**29**	P	**P**	**01 41 52.2**	**+1.4**
	baz=266						
NEA2	**Nenana**	**46.10**	**33**	P	**P**	**01 41 52.3**	**+1.2**
NEA2				IAmb	IAmb	01 41 54.3	
	comp=Z,30nm,1.6s						
NEA2	**Nenana**	**46.10**	**33**	P	**P**	**01 41 52.7**	**+1.5**
	baz=269,SNR=5.2						
PMR	**Palmer**	**46.10**	**38**	P	**P**	**01 41 52.5**	**+1.2**
	baz=272						
MCK	**McKinley**	**46.15**	**35**	P	**P**	**01 41 53.4**	**+1.7**
	baz=270						
KNK	**Knik Glacier**	**46.43**	**38**	P	**P**	**01 41 55.1**	**+1.2**
	baz=273						
MDM	**Murphy Dome**	**46.46**	**33**	P	**P**	**01 41 55.1**	**+1.0**
MDM				IAmb	IAmb	01 41 56.3	
	comp=Z,8.0nm,0.9s						
E24K	**Your Creek**	**46.46**	**29**	P	**P**	**01 41 55.7**	**+1.6**
	baz=267						
SML	**Sawmill**	**46.48**	**37**	P	**P**	**01 41 55.6**	**+1.4**
	baz=273						
C24K	**Franklin Bluff**	**46.51**	**26**	P	**P**	**01 41 55.7**	**+1.4**
	baz=265						
WRH	**Wood River Hil**	**46.52**	**34**	P	**P**	**01 41 55.6**	**+1.1**
WRH				IAmb	IAmb	01 42 12.8	
	comp=Z,23nm,1.9s						
PWL	**Port Wells**	**46.52**	**39**	P	**P**	**01 41 56.5**	**+1.8**
	baz=274						
KURK	**Kurchatov**	**46.61**	**307**	P	**P**	**01 41 55.0**	**-0.3**
KURK	**Kurchatov**	**46.61**	**307**	*de*P	**P**	**01 41 54.7**	**-0.7**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
H24K	**Noodor Dome**	**46.62**	**32**	P	**P**	**01 41 57.0**	**+1.7**
	baz=269						
COLA	**College**	**46.62**	**33**	⇑*i*P	**P**	**01 41 56.9**	**+1.7**
COLA				pmax	pmax		
	comp=Z,15nm,1.6s						
COLA	**College**	**46.62**	**33**	P	**P**	**01 41 57.0**	**+1.7**
	baz=270						
F24K	**Squaw Lake**	**46.66**	**29**	P	**P**	**01 41 56.8**	**+1.2**
	baz=268						
KURBB	**Kurchatov Arra**	**46.68**	**307**	LR	LR	02 01 00.2	
	comp=Z,219nm,21.4s,baz=167,slow=35						
M23K	**Glacier View**	**46.76**	**37**	P	**P**	**01 41 57.9**	**+1.4**
	baz=273						
G24K	**Hadweenzic Riv**	**46.79**	**31**	P	**P**	**01 41 58.8**	**+2.1**
	baz=269						
POKR	**Poker Plat Res**	**46.80**	**33**	P	**P**	**01 41 58.1**	**+1.5**
POKR	**Poker Plat Res**	**46.80**	**33**	P	**P**	**01 41 58.2**	**+1.5**
	baz=270,SNR=6.2						
SCM	**Sheep Creek Mo**	**46.95**	**37**	P	**P**	**01 41 59.6**	**+1.6**
	baz=274						
HDA	**Harding Lake**	**47.02**	**34**	P	**P**	**01 41 59.3**	**+0.9**
HDA				IAmb	IAmb	01 41 59.5	
	comp=Z,14nm,1.3s						
HDA	**Harding Lake**	**47.02**	**34**	P	**P**	**01 41 59.2**	**+0.9**
	baz=272,SNR=5.2						
IL31		**47.03**	**33**	P	**P**	**01 41 59.4**	**+0.9**
ILAR	**Eielson Array**	**47.03**	**33**	P	**P**	**01 41 59.1**	**+0.6**
	comp=Z,2.7nm,0.6s,baz=260,slow=6.6,SNR=55						
ILAR				PcP	**PcP**	**01 43 29.4**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=270,slow=4.4,SNR=1.4						
	comp=Z,2.7nm,0.6s						
ILAR	**Eielson Array**	**47.03**	**33**	P	**P**	**01 41 59.2**	**+0.7**
ILAR	**Eielson Array**	**47.03**	**33**	P	**P**	**01 41 59.2**	**+0.7**
D25K	**Kavik River**	**47.30**	**27**	P	**P**	**01 42 01.8**	**+1.2**
	baz=267						
G25K	**Bearman Lake**	**47.34**	**30**	P	**P**	**01 42 02.7**	**+1.8**
	baz=270						
M24K	**Tolsona, Glenn**	**47.48**	**37**	P	**P**	**01 42 04.1**	**+2.0**
	baz=274						
F25K	**Christian Rive**	**47.52**	**29**	P	**P**	**01 42 04.8**	**+2.4**
	baz=270						
K24K	**Donnelly Dome**	**47.55**	**34**	P	**P**	**01 42 03.9**	**+1.3**
	baz=273						
E25K	**Arctic Village**	**47.56**	**29**	P	**P**	**01 42 04.4**	**+1.8**
	baz=269						
PRP	**Porcupine Dome**	**47.59**	**32**	P	**P**	**01 42 04.4**	**+1.4**
	baz=272						
Q23K	**Middleton Isla**	**47.64**	**40**	P	**P**	**01 42 05.4**	**+2.2**
	baz=277						
KLU	**Klutina**	**47.64**	**38**	P	**P**	**01 42 05.1**	**+1.7**
	baz=275						
FYU	**Fort Yukon**	**47.69**	**31**	P	**P**	**01 42 05.3**	**+1.8**
PAX	**Paxson**	**47.74**	**36**	P	**P**	**01 42 06.1**	**+1.9**
	baz=274						
C26K	**Camden Bay**	**47.84**	**26**	P	**P**	**01 42 06.5**	**+1.8**
	baz=268						
PMG	**Port Moresby**	**47.87**	**176**	LR	LR	02 01 24.5	
	comp=Z,96nm,19.6s,baz=22,slow=35						
TAPN	**Taplejung**	**47.91**	**274**	*e*P	**P**	**01 42 08.3**	**+2.1**
HARP	**HAARP**	**47.93**	**36**	P	**P**	**01 42 07.0**	**+1.4**
	baz=275						
BMAR	**Burnt Mountain**	**47.93**	**30**	P	**P**	**01 42 07.0**	**+1.5**
RIDG	**Independent Ri**	**47.97**	**35**	P	**P**	**01 42 07.0**	**+1.2**
	baz=274						
F26K	**Sheenjek River**	**48.09**	**29**	P	**P**	**01 42 08.3**	**+1.5**
	baz=271						
C27K	**Jago River**	**48.25**	**27**	P	**P**	**01 42 09.5**	**+1.7**
	baz=270						
G26K	**Porcupine Rive**	**48.25**	**30**	P	**P**	**01 42 09.9**	**+1.9**
	baz=272						
SCRK	**Sand Creek**	**48.33**	**34**	P	**P**	**01 42 09.3**	**+0.5**
SCRK				IAmb	IAmb	01 42 22.0	
	comp=Z,38nm,2.0s						
SCRK	**Sand Creek**	**48.33**	**34**	P	**P**	**01 42 09.9**	**+1.2**
	baz=274,SNR=5.5						
I26K	**Coal Creek Min**	**48.59**	**32**	P	**P**	**01 42 11.1**	**+0.5**
	baz=274						
L26K	**Log Cabin Wild**	**48.70**	**35**	P	**P**	**01 42 13.4**	**+1.9**
	baz=276,SNR=6.4						
KAPI	**Kappang**	**48.91**	**213**	P	**P**	**01 42 14.2**	**+0.7**
KAPI	**Kappang**	**48.91**	**213**	P	**P**	**01 42 14.2**	**+0.7**
KAPI				pmax	pmax		
	comp=Z,42nm,1.7s						
M26K	**Nabesna, AK**	**48.93**	**36**	P	**P**	**01 42 15.0**	**+1.7**
	baz=277						
JIRN	**Jiri**	**48.95**	**275**	*e*P	**P**	**01 42 15.9**	**+1.6**
RAMN	**Ramite**	**48.96**	**274**	*e*P	**P**	**01 42 14.2**	**-0.1**
MCARA	**McCarthy VSAT**	**49.04**	**38**	P	**P**	**01 42 16.1**	**+2.0**
	baz=278						
E27K	**Coleen River**	**49.04**	**28**	P	**P**	**01 42 15.5**	**+1.5**
	baz=273,SNR=6.5						
GUN	**Gumba**	**49.07**	**276**	*e*P	**P**	**01 42 16.2**	**+1.0**
G27K	**Doyon Strip**	**49.10**	**30**	P	**P**	**01 42 16.3**	**+1.8**
	baz=274						
H27K	**Steamboat Moun**	**49.20**	**31**	P	**P**	**01 42 17.5**	**+2.3**
	baz=275						
I27K	**Kandik River**	**49.21**	**32**	P	**P**	**01 42 17.3**	**+1.9**
	baz=275						
L27K	**Beaver Creek,**	**49.38**	**35**	P	**P**	**01 42 18.7**	**+2.0**
	baz=277						
BCAR	**Beaver Creek A**	**49.40**	**35**	P	**P**	**01 42 17.8**	**+0.9**
M27K	**Edge Creek, AK**	**49.45**	**36**	P	**P**	**01 42 18.8**	**+1.4**
	baz=278						
EGAK	**Eagle**	**49.48**	**33**	P	**P**	**01 42 19.1**	**+1.7**
	baz=276						
TARG	**Taragay, Kyrgy**	**49.57**	**296**	P	**P**	**01 42 19.4**	**+0.5**
TARG				IAmb	IAmb	01 42 33.5	
	comp=Z,7.4nm,0.7s						
TARG	**Taragay, Kyrgy**	**49.57**	**296**	P	**P**	**01 42 19.4**	**+0.5**
TARG				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CTG	**Chitna Glacier**	**49.91**	**38**	P	**P**	**01 42 22.5**	**+1.6**
	baz=279						
GKN	**Gorkha**	**49.99**	**276**	*e*P	**P**	**01 42 22.4**	**+0.4**
YUK3	**Moose Creek**	**50.20**	**37**	P	**P**	**01 42 24.6**	**+1.5**
	baz=279						
DAWY	**Dawson**	**50.33**	**34**	P	**P**	**01 42 25.6**	**+1.7**
	baz=278						
DANN	**Dangsing**	**50.51**	**277**	*e*P	**P**	**01 42 26.6**	**+0.5**
M29M	**Somme Creek**	**51.01**	**36**	P	**P**	**01 42 30.8**	**+1.6**
	baz=280						
L29M	**L29M**	**51.04**	**35**	P	**P**	**01 42 30.9**	**+1.6**
	baz=280						
BVAR	**Borovoye Array**	**51.05**	**312**	P	**P**	**01 42 29.9**	**+0.4**
	comp=Z,2.1nm,0.5s,baz=68,slow=8.2,SNR=13						
BVAR				PcP	**PcP**	**01 43 45.5**	**+0.3**
	comp=Z,4.8nm,0.6s,baz=85,slow=4.4,SNR=5.4						
	comp=Z,2.1nm,0.5s						
BRVK	**Borovoye**	**51.11**	**312**	P	**P**	**01 42 29.4**	**-0.5**
BRVK				IAmb	IAmb	01 42 46.8	
	comp=Z,7.8nm,0.5s						
BRVK	**Borovoye**	**51.11**	**312**	⇑*e*P	**P**	**01 42 30.4**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,21nm,3.9s						
EPYK	**Eagle Plains**	**51.11**	**31**	P	**P**	**01 42 31.4**	**+1.7**
	baz=279,SNR=6.9						
YUK4	**Talbot Arm**	**51.13**	**37**	P	**P**	**01 42 31.6**	**+1.4**
	baz=281						
K29M	**Barlow Dome**	**51.18**	**34**	P	**P**	**01 42 31.6**	**+1.1**
	baz=280						
G30M	**tAoh Zraii Nji**	**51.21**	**30**	P	**P**	**01 42 32.1**	**+1.5**
	baz=279						
AAK	**Ala-Archa**	**51.57**	**298**	P	**P**	**01 42 34.0**	**+0.2**
	comp=Z,1.0nm,0.4s,baz=33,slow=12,SNR=1.7						
AAK				LR	LR	02 04 24.8	
	comp=Z,240nm,19.9s,baz=69,slow=36						
	comp=Z,1.0nm,0.4s						
AAK	**Ala-Archa**	**51.57**	**298**	⇓*e*P	**P**	**01 42 35.1**	**+1.4**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KSH	**Kashi**	**51.66**	**294**	P	P	01 42 39.3	+4.9
KSH				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KSH				LR	LR		
	comp=Z,660nm,18.4s						
KSH				LR	LR		
	comp=Z,550nm,17.3s						
KSH				LR	LR		
	comp=Z,630nm,15.6s						
M30M	**Minto, Yukon**	**51.74**	**35**	P	**P**	**01 42 36.4**	**+1.9**
	baz=282						
HYT	**Haines Junctio**	**51.78**	**38**	P	**P**	**01 42 37.0**	**+2.0**
HYT				IAmb	IAmb	01 42 38.8	
	comp=Z,40nm,1.5s						
HYT	**Haines Junctio**	**51.78**	**38**	P	**P**	**01 42 36.6**	**+1.7**
	baz=282						
INK	**Inuvik**	**52.02**	**28**	P	**P**	**01 42 37.6**	**+1.2**
	comp=Z,3.8nm,0.4s,baz=267,slow=4.4,SNR=19						
	comp=Z,3.8nm,0.4s						
INK	**Inuvik**	**52.02**	**28**	P	**P**	**01 42 37.7**	**+1.2**
INK	**Inuvik**	**52.02**	**28**	P	**P**	**01 42 37.7**	**+1.2**
INK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
INK	**Inuvik**	**52.02**	**28**	P	**P**	**01 42 37.6**	**+1.2**
	baz=280,SNR=8.4						
F31M	**Tsiigehtchic**	**52.09**	**29**	P	**P**	**01 42 38.4**	**+1.4**
	baz=280						
MTN	**Manton Dam**	**52.60**	**196**	P	**P**	**01 42 40.5**	**-0.8**
M31M	**Drury Creek, Y**	**52.92**	**36**	P	**P**	**01 42 44.6**	**+1.3**
	baz=284						
R32K	**Eaglecrest**	**53.89**	**40**	P	**P**	**01 42 52.2**	**+1.8**
	baz=287						
A36M	**Sachs Harbour**	**54.00**	**23**	P	**P**	**01 42 52.4**	**+1.4**
A36M				IAmb	IAmb	01 42 53.9	
	comp=Z,3.8nm,0.6s						
A36M	**Sachs Harbour**	**54.00**	**23**	P	**P**	**01 42 52.6**	**+1.6**
	baz=285,SNR=6.1						
KK31	**Karatay Array**	**54.13**	**300**	P	**P**	**01 42 51.3**	**-1.1**
KK31	**Karatay Array**	**54.13**	**300**	P	**P**	**01 42 51.3**	**-1.1**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KKAR	**Karatay Array**	**54.13**	**300**	P	**P**	**01 42 51.6**	**-0.9**
KKAR	**Karatay Array**	**54.13**	**300**	P	**P**	**01 42 51.6**	**-0.9**
P33M	**Teslin, Yukon**	**54.17**	**38**	P	**P**	**01 42 54.4**	**+1.8**
	baz=287						
MMPY	**Sheldon Lake,**	**54.22**	**35**	P	**P**	**01 42 54.6**	**+1.8**
	baz=286						
Q32M	**Nakina River**	**54.81**	**39**	P	**P**	**01 42 58.5**	**+1.2**
	baz=288						
C36M	**Paulatuk**	**55.11**	**26**	P	**P**	**01 43 00.5**	**+1.4**
	baz=288,SNR=6.7						
BTK	**Batken**	**55.11**	**296**	P	**P**	**01 42 59.4**	**-0.3**
BTK	**Batken**	**55.11**	**296**	P	**P**	**01 42 59.4**	**-0.3**
BTK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SVE	**Sverdlovsk**	**55.34**	**318**	*e*P	**P**	**01 43 02.1**	**+1.2**
S34M	**Telegraph Cree**	**55.71**	**40**	P	**P**	**01 43 04.6**	**+1.0**

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             baz=289
KNRA  Kununurra         55.88 198   P      P      01 43 04.8 -0.4
GAR   Garm              55.90 295   P      P      01 43 04.6 -0.8
DLBC  Dease Lake        56.09  39   P      P      01 43 07.3 +0.9
             comp=Z,1.3nm,0.5s,baz=280,slow=6.1,SNR=5.8
             comp=Z,1.3nm,0.5s
DLBC  Dease Lake        56.09  39   P      P      01 43 06.9 +0.5
             baz=290
NIL   Nilore            56.09 288   P      P      01 43 06.2 -0.5
NIL                                 IAmb   IAmb   01 43 22.9
             comp=Z,13nm,0.7s
NIL   Nilore            56.09 288   P      P      01 43 06.3 -0.5
NIL                                 pmax   pmax
             comp=Z,13nm,0.7s
WTLY  Watson Lake, Y    56.12  37   P      P      01 43 07.4 +0.9
             baz=290
GSI   Gunungsitoli      56.40 240   P      P      01 43 08.7 -0.4
GSI                                 IAmb   IAmb   01 43 12.2
             comp=Z,21nm,1.1s
T35M  Bob Quinn         56.48  41   P      P      01 43 09.7 +0.6
             baz=291
ARU   Arti              56.55 318   P      P      01 43 10.2 +0.5
             comp=Z,5.9nm,0.7s,baz=45,slow=6.8,SNR=9.1
             comp=Z,5.9nm,0.7s
ARU   Arti              56.55 318   P      P      01 43 09.3 -0.3
ARU                                 IAmb   IAmb   01 43 11.8
             comp=Z,34nm,1.5s
ARU   Arti              56.55 318c iP      P      01 43 09.7 +0.1
ARU                                 S      S      01 51 03.3 +3.2
ARU                                 SS     SS     01 54 45.8 -1.1
ARU                                 pmax   pmax
             comp=Z,33nm,1.6s
CHGR  Chuyangaron       56.86 295   P      P      01 43 11.4 -0.8
CHGR  Chuyangaron       56.86 295   P      P      01 43 11.4 -0.8
CHGR                                pmax   pmax
             comp=Z,40nm,0.6s
WRGLY Wrigley           57.40  32   P      P      01 43 17.1 +1.6
             baz=292
KOTAN Kotaneelee Air    58.32  36   P      P      01 43 23.1 +1.0
             baz=293
ABKAR Akbulak array     58.51 310   P      P      01 43 22.8 -0.7
ABKAR Akbulak array     58.51 310   P      P      01 43 23.2 -0.3
ABKAR                               IAmb   IAmb   01 43 37.0
             comp=Z,5.6nm,0.7s
WB0   Warramunga Arr    58.78 191   P      P      01 43 24.2 -1.4
WRAB  Tennant Creek     58.95 191⇓eP      P      01 43 25.6 -1.2
WRAB                                pmax   pmax
             comp=Z,11nm,0.9s
WRA   Warramunga Arr    58.96 191   P      P      01 43 25.7 -1.2
             comp=Z,5.7nm,0.6s,baz=10,slow=7.3,SNR=51
WRA                                 LR     LR     02 06 57.8
             comp=Z,67nm,21.5s,baz=73,slow=34
             comp=Z,5.7nm,0.6s
WRA   Warramunga Arr    58.96 191   P      P      01 43 25.7 -1.2
AKTO  Aktyubinsk        59.16 312   P      P      01 43 27.4 -0.6
             comp=Z,2.3nm,0.6s,baz=58,slow=7.3,SNR=7.9
AKTO                                LR     LR     02 10 17.0
             comp=Z,184nm,19.1s,baz=71,slow=37
             comp=Z,2.3nm,0.6s
SPITS Spitsbergen Ar    59.36 349   LR     LR     02 11 44.9
             comp=Z,161nm,18.7s,baz=5.0,slow=39
SPITS Spitsbergen Ar    59.36 349   P      P      01 43 28.9 -0.2
SPITS                               pmax   pmax
             comp=Z,61nm,1.3s
BBB   Bella Bella       59.47  46   LR     LR     02 06 40.5
             comp=Z,94nm,20.0s,baz=283,slow=33
NOR   Nord              59.59 357  i P     P      01 43 30.6  0.0
NOR                                 IAmb   IAmb   01 43 32.7
             comp=Z,4.1nm,0.8s
KIRV  Kirov             60.23 323   P      P      01 43 35.5 +0.3
             comp=Z,6.1nm,0.5s,baz=63,slow=3.8,SNR=4.1
             comp=Z,6.1nm,0.5s
RES   Resolute Bay      60.53  15   P      P      01 43 37.5 +0.4
             comp=Z,1.8nm,0.5s,baz=319,slow=6.3,SNR=11
RES                                 LR     LR     02 14 43.9
             comp=Z,60nm,18.2s,baz=8.0,slow=41
             comp=Z,1.8nm,0.5s
RES   Resolute Bay      60.53  15   P      P      01 43 37.7 +0.6
RES   Resolute Bay      60.53  15   P      P      01 43 37.7 +0.6
RES                                 pmax   pmax
             comp=Z,4.0nm,0.8s
YKA   Yellowknife Ar    61.38  31   P      P      01 43 43.0  0.0
             comp=Z,1.0nm,0.7s,baz=301,slow=6.5,SNR=17
             comp=Z,1.0nm,0.7s
YKA   Yellowknife Ar    61.38  31   P      P      01 43 43.9 +0.9
YKA   Yellowknife Ar    61.38  31   P      P      01 43 43.9 +0.9
LVZ   Lovozero          61.51 336   P      P      01 43 44.0 +0.1
LVZ   Lovozero          61.51 336⇓eP      P      01 43 46.2 +2.3
LVZ                                 pmax   pmax
             comp=Z,166nm,2.5s
AS31  Alice Springs     62.69 190   P      P      01 43 51.7 -0.5
ASAR  Alice Springs     62.69 190   P      P      01 43 51.6 -0.6
             comp=Z,1.8nm,0.6s,baz=13,slow=7.0,SNR=25
             comp=Z,1.8nm,0.6s
ASAR  Alice Springs     62.69 190   P      P      01 43 51.0 -1.2
KEV   Kevo              62.69 340   P      P      01 43 51.6 -0.1
KEV   Kevo              62.69 340   P      P      01 43 51.6 -0.1
KEV                                 pmax   pmax
             comp=Z,108nm,1.9s
ARCES ARCESS Array B    63.23 340   P      P      01 43 56.2 +0.9
             comp=Z,4.4nm,0.8s,baz=51,slow=7.1,SNR=11
             comp=Z,4.4nm,0.8s
ARCES ARCESS Array B    63.23 340   P      P      01 43 55.3 -0.1
KLMR  Klimovskoe        63.52 328  eP      P      01 43 55.5 -1.9
KLMR                                AMP           01 44 08.5
             comp=Z,54nm,2.3s
KLMR                               ePcP    PcP    01 44 34.1 +0.3
KLMR                               ePP     PP     01 46 17.3 +0.7
KLMR                                LR     LR     02 09 03.2
KLMR  Klimovskoe        63.52 328  eP      P      01 43 55.4 -1.9
KLMR                               e              01 44 34.0
KLMR                               e              01 46 17.2
KLMR                                pmax   pmax
             comp=Z,54nm,2.3s
MBWA  Marble Bar        63.69 205   P      P      01 43 57.7 -1.1
MBWA                                IAmb   IAmb   01 43 59.3
             comp=Z,28nm,1.7s
NEEM  North Greenlan    63.82   4  eP      P      01 43 59.8 +0.3
DZM   Mont Dzumac       63.93 157  eLR     LR     02 03 05.7
             comp=Z,265nm,25.8s
EIDS  Eidsvold          64.00 173   P      P      01 44 00.3 -0.5
PSA00 Pilbara Seismi    64.04 205   P      P      01 43 59.9 -1.3
PSA00                               IAmb   IAmb   01 44 14.8
             comp=Z,24nm,1.8s
BELG  Belogornoye       64.05 317   LR     LR     02 14 35.5
             comp=Z,318nm,18.9s,baz=80,slow=38
BELG  Belogornoye       64.05 317⇓eP      P      01 44 01.2 +0.3
BELG                                pmax   pmax
             comp=Z,10.0nm,4.3s
DAG   Danmarks Havn     64.36 356  i P     P      01 44 02.2 -0.4
DAG                                 IAmb   IAmb   01 44 03.5
             comp=Z,7.1nm,0.8s
MSVF  Nonsavu           64.49 144   LR     LR     02 11 52.4
             comp=Z,113nm,18.1s,baz=220,slow=36
PALK  Pallekele         64.73 259   LR     LR     02 14 26.8
             comp=Z,118nm,19.6s,baz=169,slow=38
GEYT  Alibeck           64.88 299   P      P      01 44 06.9 +0.2
             comp=Z,1.8nm,0.7s,baz=33,slow=3.5,SNR=5.8
GEYT                                LR     LR     02 15 55.1
             comp=Z,115nm,18.1s,baz=36,slow=39
             comp=Z,1.8nm,0.7s
GEYT  Alibeck           64.88 299   IAmb   IAmb   01 44 20.6
             comp=Z,4.6nm,0.6s
MOS   Moscow            67.20 324  eP      P      01 44 21.6 +0.3
NEW   Newport           67.54  46   P      P      01 44 24.6 +1.0
             comp=Z,2.7nm,0.7s,baz=305,slow=6.9,SNR=4.1
NEW                                 LR     LR     02 12 51.2
             comp=Z,56nm,18.7s,baz=321,slow=35
             comp=Z,2.7nm,0.7s
NEW   Newport           67.54  46   P      P      01 44 24.8 +1.2
             baz=303
YBH   Yreka Blue Hor    67.73  54   P      P      01 44 26.2 +1.2
             comp=Z,2.2nm,0.7s,baz=123,slow=4.6,SNR=3.2
             comp=Z,2.2nm,0.7s
J05D  Fort Rock, OR     67.82  52   P      P      01 44 26.4 +0.8
OBN   Obninsk           68.06 324⇑eP      P      01 44 26.9 +0.3
OBN                                e              01 44 54.4
OBN                                e              01 46 57.5
OBN                                 pmax   pmax
             comp=Z,107nm,3.6s
OBN                                 MLR    MLR
             comp=Z,347nm,17.0s
K05A  Summer Lake       68.33  52   P      P      01 44 30.5 +1.6
K05A                                IAmb   IAmb   01 44 31.8
             comp=Z,13nm,0.9s
FIA1  FINESS Array S    68.36 333   P      P      01 44 28.7 +0.2
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FIA1                                IAmb   IAmb   01 44 29.6
             comp=Z,26nm,1.6s
FINES FINESS Array B    68.36 333   P      P      01 44 28.7 +0.2
             comp=Z,3.5nm,0.5s,baz=46,slow=8.0,SNR=37
             comp=Z,3.5nm,0.5s
FINES FINESS Array B    68.36 333   P      P      01 44 28.4 -0.1
SUMG  Summit            69.08   1  i P     P      01 44 33.4 +0.1
SUMG                                IAmb   IAmb   01 44 35.1
             comp=Z,8.1nm,0.8s
MOD   Modoc Plateau     69.15  53   P      P      01 44 34.9 +0.9
MOD                                 IAmb   IAmb   01 44 36.9
             comp=Z,29nm,1.7s
J08A  Circle Bar Ran    69.46  51   P      P      01 44 36.5 +0.7
J08A                                IAmb   IAmb   01 44 39.1
             comp=Z,23nm,1.6s
AKT   Akhty             69.79 307  eP      P      01 44 37.4 -0.5
AKT                                e              01 44 59.8
AKT                                 pmax   pmax
             comp=Z,7.0nm,0.8s
MSO   Missoula          70.13  46   P      P      01 44 40.8 +1.0
             baz=306
RAF   Rauma             70.17 334  eP      P      01 44 39.6  0.0
STKA  Stephens Creek    70.18 182   P      P      01 44 39.8 -0.2
             comp=Z,0.9nm,0.5s,baz=319,slow=11,SNR=2.0
             comp=Z,0.9nm,0.5s
SEKA  Sheki             70.27 307   P      P      01 44 38.9 -1.9
MNGR  Mingechevir, A    70.59 307   P      P      01 44 41.2 -1.4
FORT  Forrest           70.64 195   P      P      01 44 42.3 -0.4
LKRN  Lenkeran, Azer    70.67 304   P      P      01 44 41.8 -1.3
MPK   Martis Peak       70.77  55   P      P      01 44 45.3 +1.2
MPK                                 IAmb   IAmb   01 44 47.0
             comp=Z,17nm,1.3s
MFID  Camas Ranch       71.02  49   P      P      01 44 46.4 +1.0
MFID                                IAmb   IAmb   01 44 48.3
             comp=Z,16nm,1.5s
MTSE  Matsula           71.06 332  eP      P      01 44 45.6 +0.5
GANJ  Ganja             71.14 307   P      P      01 44 44.5 -1.5
FFC   Flin Flon         71.23  34   P      P      01 44 46.8 +0.5
FFC                                 IAmb   IAmb   01 44 47.6
             comp=Z,7.3nm,0.8s
FFC   Flin Flon         71.23  34   P      P      01 44 46.8 +0.5
FFC                                 pmax   pmax
             comp=Z,7.0nm,0.8s
CMB   Columbia Colle    71.25  56   P      P      01 44 47.6 +0.8
CMB                                 IAmb   IAmb   01 44 48.9
             comp=Z,6.8nm,0.9s
CMB   Columbia Colle    71.25  56   P      P      01 44 47.6 +0.8
CMB                                 pmax   pmax
             comp=Z,7.0nm,1.0s
KIV   Kislovodsk        71.42 312   P      P      01 44 47.5 -0.3
KIV                                 IAmb   IAmb   01 44 50.0
             comp=Z,11nm,0.8s
KIV   Kislovodsk        71.42 312  eP      P      01 44 49.8 +2.1
KIV                                 pmax   pmax
             comp=Z,15nm,1.1s
KBZ   Khabaz            71.43 311   P      P      01 44 48.3 +0.6
             comp=Z,5.8nm,0.8s,baz=56,slow=8.6,SNR=21
KBZ                                 LR     LR     02 17 49.5
             comp=Z,255nm,18.8s,baz=38,slow=37
             comp=Z,5.8nm,0.8s
KBZ   Khabaz            71.43 311deP      P      01 44 48.2 +0.6
KBZ                                 pmax   pmax
             comp=Z,20nm,2.2s
LRM   Limekiln Ridge    71.55  46   P      P      01 44 49.4 +0.7
FCC   Fort Churchill    71.64  28   P      P      01 44 48.7 +0.1
FCC                                 IAmb   IAmb   01 44 50.2
             comp=Z,30nm,1.9s
FCC   Fort Churchill    71.64  28   P      P      01 44 48.7 +0.1
FCC                                 pmax   pmax
             comp=Z,30nm,1.9s
HLID  Hailey            71.77  49   P      P      01 44 50.5 +0.6
HLID  Hailey            71.77  49   P      P      01 44 50.7 +0.8
             baz=306
BMN   Battle Mountai    71.89  53   P      P      01 44 51.6 +0.8
BMN                                 IAmb   IAmb   01 44 53.1
             comp=Z,5.5nm,0.8s
BMN   Battle Mountai    71.89  53   P      P      01 44 51.6 +0.8
BMN                                 pmax   pmax
             comp=Z,6.0nm,0.8s
KVN   Kaiserville       72.14  54   P      P      01 44 53.0 +0.7
KVN                                 IAmb   IAmb   01 44 55.2
             comp=Z,17nm,1.3s
KVN   Kaiserville       72.14  54   P      P      01 44 53.0 +0.7
KVN                                 pmax   pmax
             comp=Z,17nm,1.3s
BOZ   Bozeman (W)       72.15  46   P      P      01 44 52.6 +0.4
             baz=307
MNK   Minsk             72.33 327  i P     P      01 44 51.5 -1.3
             comp=E,3.0nm,1.1s
MNK                                i P     P      01 44 51.5 -1.3
             comp=N,47nm,0.8s
MNK                                i P     P      01 44 51.5 -1.3
             comp=Z,10.0nm,0.9s,baz=228
MNK                                i PcP   pwP    01 45 07.7 +1.3
MNK                                i PP    PP     01 47 30.2 -2.9
MNK                                i PPP   PPP    01 49 14.3
MNK                                i S     S      01 54 13.6 -1.3
MNK                                i ScS   SKSac  01 54 56.3  0.0
MNK                                i SS    SS     01 58 52.4 +0.3
MNK                                i SSS   SSS    02 02 12.5
MNK                                i LQ    LQ     02 11 40.6
MNK                                i LR    LR     02 17 10.9
MNK                                i LRM   MLR    02 19 59.6
             comp=E,34nm,16.6s
MNK                                i LRM   MLR    02 20 16.2
             comp=N,434nm,15.3s
MNK                                i LRM   MLR    02 20 18.1
             comp=Z,375nm,17.9s
MNK   Minsk             72.33 327  i P     P      01 44 51.5 -1.3
MNK                                i              01 45 07.6
MNK                                i              01 47 30.2
MNK                                i PPP   PPP    01 49 14.2
MNK                                i S     S      01 54 13.6 -1.3
MNK                                i              01 54 56.2
MNK                                i SS    SS     01 58 52.4 +0.3
MNK                                 pmax   pmax
             comp=E,3.0nm,1.0s
MNK                                 pmax   pmax
             comp=Z,10.0nm,0.9s
MNK                                 pmax   pmax
             comp=N,47nm,0.8s
MNK                                 MLR    MLR
             comp=E,34nm,17.0s
MNK                                 MLR    MLR
             comp=N,434nm,15.0s
MNK                                 MLR    MLR
             comp=Z,375nm,18.0s
ISAL  Salakas           72.34 328  eP      P      01 44 53.3 +0.4
NVAR  Mina Array Bea    72.37  55   P      P      01 44 55.2 +1.4
             comp=Z,2.8nm,0.7s,baz=290,slow=5.7,SNR=18
NVAR                                LR     LR     02 15 15.3
             comp=Z,74nm,18.1s,baz=302,slow=34
             comp=Z,2.8nm,0.7s
NVAR  Mina Array Bea    72.37  55   P      P      01 44 54.5 +0.8
GNI   Garni             72.41 307   LR     LR     02 19 36.0
             comp=Z,237nm,18.6s,baz=75,slow=38
GNI   Garni             72.41 307⇓eP      P      01 44 55.8 +2.0
GNI                                 pmax   pmax
             comp=Z,14nm,1.4s
WSAR  Wadi Sarin        72.45 286   LR     LR     02 20 59.0
             comp=Z,59nm,18.1s,baz=117,slow=39
NV11  Mina Array Sit    72.47  55   P      P      01 44 55.0 +0.8
NV11                                IAmb   IAmb   01 44 57.2
             comp=Z,30nm,1.9s
NAX   Nakhchivan        72.50 306   P      P      01 44 52.8 -1.5
NACGM Naroch            72.52 327  eP      P      01 44 54.8 +0.8
             comp=Z,12nm,0.8s,baz=47
ICESG Greenland Ices    72.57   1  eP      P      01 44 54.5  0.0
ICESG                               IAmb   IAmb   01 44 56.3
             comp=Z,7.1nm,0.6s
ELK   Elko              72.93  51   P      P      01 44 58.5 +1.4
             comp=Z,0.9nm,0.5s,baz=323,slow=3.8,SNR=6.1
ELK                                 LR     LR     02 18 10.2
             comp=Z,52nm,18.1s,baz=324,slow=37
             comp=Z,0.9nm,0.5s
ELK   Elko              72.93  51   P      P      01 44 58.1 +1.0
ELK                                 IAmb   IAmb   01 45 00.4
             comp=Z,22nm,1.9s
YMR   Madison River     73.09  46   P      P      01 44 58.6 +0.8
DSP   Deep Springs      73.20  55   P      P      01 44 59.9 +1.5
UOSS  Minazif           73.29 289   P      P      01 44 57.9 -1.1
UOSS                                IAmb   IAmb   01 44 59.8
             comp=Z,6.8nm,0.8s
VES   Vestal, Richgr    73.37  57   P      P      01 45 00.5 +1.1
             baz=306
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PKM   Mcpherson Peak    73.44  59   P      P      01 45 01.1 +1.0
             baz=306
H17A  Grant Village     73.47  46   P      P      01 45 03.3 +3.1
             baz=308,SNR=5.6
HFS   Hagfors           73.48 337   P      P      01 44 59.9 +0.3
             comp=Z,4.4nm,0.5s,baz=46,slow=4.7,SNR=41
HFS                                 LR     LR     02 21 40.3
             comp=Z,232nm,18.0s,baz=31,slow=39
             comp=Z,4.4nm,0.5s
NB2   NORSAR Subarra    73.51 338   P      P      01 45 00.1 +0.3
             comp=Z,8.0nm,0.8s,baz=36,slow=5.9
NOA   NORSAR Array B    73.51 338   P      P      01 45 00.1 +0.3
             comp=Z,3.8nm,0.6s,baz=44,slow=4.6,SNR=18
NOA                                 LR     LR     02 22 39.9
             comp=Z,291nm,18.5s,baz=25,slow=40
             comp=Z,3.8nm,0.6s
IMW   Indian Meadow     73.58  47   P      P      01 45 01.8 +0.9
BCW   Bitter Crk WRg    73.68  58   P      P      01 45 02.7 +1.3
CWC   Cottonwood Cre    73.68  56   P      P      01 45 02.3 +0.9
             baz=306
VIKU  Vikbolandet       73.76 334  eP      P      01 45 01.2  0.0
ISA   Isabella, Lake    73.88  57   P      P      01 45 02.9 +0.4
             baz=306
ANN   Anapa             73.91 315  eP      P      01 44 58.1 -4.3
ANN                                e              01 47 45.3
ANN                                eS      S      01 54 32.5 -0.7
ANN                                 pmax   pmax
             comp=Z,52nm,1.7s
SFJD  Kangerlussuaq     74.11   6   P      P      01 45 03.1  0.0
             comp=Z,3.7nm,0.6s,baz=11,slow=7.5,SNR=4.1
SFJD                                LR     LR     02 21 03.4
             comp=Z,77nm,19.0s,baz=346,slow=38
             comp=Z,3.7nm,0.6s
AHID  Auburn Hatcher    74.18  48   P      P      01 45 04.7 +0.4
SPUT  South Promonto    74.28  50   P      P      01 45 06.1 +1.3
SPUT                                IAmb   IAmb   01 45 08.2
             comp=Z,29nm,1.9s
MPMC  Manual Prospec    74.29  56   P      P      01 45 05.4 +0.4
             baz=307,SNR=8.9
AKASG Malin Array Be    74.29 323   P      P      01 45 04.3 -0.2
             comp=Z,3.1nm,0.6s,baz=44,slow=5.9,SNR=28
AKASG                               LR     LR     02 23 11.2
             comp=Z,313nm,18.4s,baz=52,slow=40
             comp=Z,3.1nm,0.6s
AKASG Malin Array Be    74.29 323   P      P      01 45 03.7 -0.8
AKASG Malin Array Be    74.29 323  i P     P      01 45 04.8 +0.3
AKASG                               pmax   pmax
             comp=Z,3.0nm,0.5s
AKBB  Malin Array Si    74.29 323   P      P      01 45 04.1 -0.3
AKBB                                IAmb   IAmb   01 45 05.4
             comp=Z,6.5nm,0.7s
AKBB  Malin Array Si    74.29 323⇓eP      P      01 45 04.2 -0.3
AKBB                                pmax   pmax
             comp=Z,18nm,1.9s
DGMT  Dagmar            74.29  40   P      P      01 45 05.2 +0.5
DGMT                                IAmb   IAmb   01 45 06.4
             comp=Z,7.9nm,0.7s
DGMT  Dagmar            74.29  40   P      P      01 45 04.8 +0.2
             baz=311
OSI   Osito Audit: C    74.33  58   P      P      01 45 06.6 +1.5
             baz=306
LAO   LASA Array        74.41  42   P      P      01 45 06.5 +1.2
             baz=310
FURC  Furnace Creek,    74.45  56   P      P      01 45 07.2 +1.5
             baz=307
LRMC  Laurel Mtn Rad    74.50  57   P      P      01 45 07.1 +0.8
             baz=307
TPNV  Topopah Spring    74.56  55   P      P      01 45 06.8 +0.2
TPNV                                IAmb   IAmb   01 45 10.4
             comp=Z,13nm,1.1s
TPNV  Topopah Spring    74.56  55   P      P      01 45 06.8 +0.2
TPNV                                pmax   pmax
             comp=Z,13nm,1.2s
TPNV  Topopah Spring    74.56  55   P      P      01 45 08.0 +1.4
             baz=307,SNR=7.7
HWUT  Hardware Ranch    74.62  49   P      P      01 45 07.6 +0.8
HWUT                                IAmb   IAmb   01 45 11.1
             comp=Z,17nm,1.6s
EDW2  Edwards Air Fo    74.65  58   P      P      01 45 08.3 +1.3
             baz=307,SNR=7.1
FRB   Frobisher Bay     74.74  14   P      P      01 45 07.0 +0.2
             comp=Z,4.1nm,0.6s,baz=336,slow=8.2,SNR=32
FRB                                 LR     LR     02 23 33.7
             comp=Z,112nm,18.1s,baz=322,slow=40
             comp=Z,4.1nm,0.6s
FRB   Frobisher Bay     74.74  14   P      P      01 45 07.0 +0.2
DUG   Dugway, Tooele    74.74  51   P      P      01 45 07.8 +0.3
DUG                                 IAmb   IAmb   01 45 09.7
             comp=Z,4.8nm,0.7s
DUG   Dugway, Tooele    74.74  51   P      P      01 45 07.8 +0.3
DUG                                 pmax   pmax
             comp=Z,5.0nm,0.7s
DUG   Dugway, Tooele    74.74  51   P      P      01 45 08.9 +1.3
             baz=308,SNR=7.4
GURO  Guroymak-BITLI    75.05 307   P      P      01 45 09.0 -0.3
GURO                                IAmb   IAmb   01 45 11.4
             comp=Z,4.8nm,0.6s
BW06  Boulder Array     75.07  47   P      P      01 45 10.2 +0.7
             baz=309,SNR=6.2
PD31  Pinedale Array    75.07  47   P      P      01 45 09.6 +0.1
PDAR  Pinedale Array    75.07  47   P      P      01 45 10.2 +0.7
             comp=Z,2.5nm,0.6s,baz=264,slow=1.7,SNR=42
PDAR                                LR     LR     02 17 10.0
             comp=Z,66nm,19.2s,baz=328,slow=35
             comp=Z,2.5nm,0.6s
PDAR  Pinedale Array    75.07  47   P      P      01 45 09.6 +0.1
KONO  Kongsberg         75.11 338   P      P      01 45 09.3 +0.2
KONO  Kongsberg         75.11 338   P      P      01 45 09.3 +0.2
KONO                                pmax   pmax
             comp=Z,99nm,1.8s
GSC   Goldstone, Bar    75.19  57   P      P      01 45 11.2 +1.1
             baz=307
BFSC  Mount Baldy Ra    75.26  58   P      P      01 45 12.1 +1.5
             baz=307
RRX   Edison Barstow    75.31  57   P      P      01 45 11.4 +0.6
             baz=307
TUQ   Turquoise Moun    75.68  56   P      P      01 45 14.4 +1.4
             baz=307
HEC   Hector,Ludlow     75.78  57   P      P      01 45 15.1 +1.6
             baz=307
MURC  Murrieta          75.95  58   P      P      01 45 15.6 +1.2
             baz=307
GMRC  Granite Mounta    76.25  56   P      P      01 45 17.7 +1.5
             baz=308,SNR=5.5
PFO   Pinyon Flats O    76.43  58   P      P      01 45 18.1 +0.8
             comp=Z,2.3nm,0.8s,baz=323,slow=5.1,SNR=4.8
PFO                                 LR     LR     02 15 59.4
             comp=Z,125nm,18.5s,baz=294,slow=33
             comp=Z,2.3nm,0.8s
PFO   Pinyon Flats O    76.43  58   P      P      01 45 17.6 +0.3
PFO                                 IAmb   IAmb   01 45 19.0
             comp=Z,7.2nm,1.1s
PFO   Pinyon Flats O    76.43  58   P      P      01 45 18.2 +0.8
             baz=308
TPFO  Pinon Flats       76.44  58   P      P      01 45 18.4 +1.1
             baz=308
BELC  Belle Mtn. Jos    76.50  57   P      P      01 45 18.4 +0.7
             baz=308
K22A  Casper            76.86  46   P      P      01 45 20.7 +1.1
             baz=311
MONP2 Monument Peak     76.89  58   P      P      01 45 20.5 +0.5
             baz=308
IRM   Iron Mountain     76.97  57   P      P      01 45 21.1 +0.9
             baz=308
ULM   Lac du Bonnet     77.02  35   P      P      01 45 20.4 +0.2
             comp=Z,2.3nm,0.5s,baz=316,slow=5.2,SNR=4.4
ULM                                 LR     LR     02 25 27.8
             comp=Z,33nm,18.1s,baz=336,slow=40
             comp=Z,2.3nm,0.5s
BC3   Big Chuckawall    77.07  57   P      P      01 45 21.7 +0.9
             baz=308
IKP   In-Ko-Pah, Jac    77.25  58   P      P      01 45 23.2 +1.4
             baz=308
RSSD  Black Hills       77.25  43   P      P      01 45 22.4 +0.5
             baz=312
SWSC  Sam W. Stewart    77.27  58   P      P      01 45 22.9 +1.0
             baz=308
U15A  North Rim         77.39  53   P      P      01 45 23.6 +0.7
U15A                                IAmb   IAmb   01 45 26.2
             comp=Z,39nm,2.0s
O20A  White River Ci    77.50  48   P      P      01 45 24.2 +0.8
             baz=310
PDMCI Parker Dam,Lak    77.53  56   P      P      01 45 24.8 +1.5
             baz=308
ESJX  Sierra Juarez     77.75  59   P      P      01 45 25.7 +0.9
ESJX                                IAmb   IAmb   01 45 27.6
             comp=Z,16nm,1.6s
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GLA	Glamis	77.85	57	P	P	01 45 27.2	+2.0
	baz=308						
BUR08	Bucovina Ar. S	78.32	323	P	P	01 45 28.2	+0.6
BURAR	Bucovina Array	78.33	323	⇑P	P	01 45 28.3	+0.7
BURAR	Bucovina Array	78.33	323	P	P	01 45 28.2	+0.5
BURAR	Bucovina Array	78.33	323	P	P	01 45 28.3	+0.7
N23A	Red Feather La	78.34	47	P	P	01 45 28.4	+0.4
N23A				IAmb	IAmb	01 45 30.7	
	comp=Z,7.0nm,0.8s						
N23A	Red Feather La	78.34	47	P	P	01 45 29.1	+1.1
	baz=312,SNR=6.0						
TESR	Tescani	78.42	321	⇑P	P	01 45 28.7	+0.6
AGMN	Agassiz Nation	78.44	36	P	P	01 45 28.0	-0.1
AGMN				IAmb	IAmb	01 45 29.3	
	comp=Z,26nm,1.4s						
AGMN	Agassiz Nation	78.44	36	P	P	01 45 28.0	-0.1
	baz=316						
WUAZ	Wupatki	78.54	54	P	P	01 45 30.6	+1.5
	baz=310						
CFR	Carcaliu	78.61	320	⇑P	P	01 45 29.9	+0.7
CFR	Carcaliu	78.61	320	P	P	01 45 29.8	+0.7
BNN	Bunyan	78.61	311	P	P	01 45 29.6	+0.1
BNN				IAmb	IAmb	01 45 37.5	
	comp=Z,13nm,1.1s						
VRI	Vrincioaia	78.84	321	⇑P	P	01 45 32.1	+1.6
VRI	Vrincioaia	78.84	321	P	P	01 45 32.0	+1.6
OJC	Ojcow	78.86	327	P	P	01 45 30.3	-0.1
OJC	Ojcow	78.86	327	P	P	01 45 30.3	-0.1
OJC				pmax	pmax		
	comp=Z,55nm,2.0s						
PLOR	Plostina	78.89	321	⇓P	P	01 45 32.3	+1.6
PLOR	Plostina	78.89	321	P	P	01 45 32.3	+1.6
OZUR		79.14	321	⇑P	P	01 45 33.8	+1.7
MVCO	Mesa Verde	79.24	51	P	P	01 45 34.1	+1.1
	baz=311						
ISCO	Idaho Springs	79.25	47	P	P	01 45 33.7	+0.6
ISCO				IAmb	IAmb	01 45 37.8	
	comp=Z,12nm,1.7s						
ISCO	Idaho Springs	79.25	47	P	P	01 45 33.7	+0.6
ISCO				pmax	pmax		
	comp=Z,12nm,1.7s						
ISCO	Idaho Springs	79.25	47	P	P	01 45 33.8	+0.7
	baz=312						
BR131	Keskin Array S	79.33	313	⇑eP	P	01 45 34.0	+0.6
BRTR	Keskin Array B	79.33	313	P	P	01 45 33.7	+0.3
	comp=Z,1.0nm,0.5s,baz=69,slow=4.8,SNR=12						
BRTR				LR	LR	02 25 29.8	
	comp=Z,170nm,18.2s,baz=28,slow=39						
	comp=Z,1.0nm,0.5s						
BRTR	Keskin Array B	79.33	313	P	P	01 45 33.0	-0.3
DOPR	Dopca	79.42	321	⇑P	P	01 45 35.4	+1.8
RAR	Rarotonga	79.45	128	LR	LR	02 17 48.3	
	comp=Z,88nm,19.9s,baz=294,slow=33						
MLR	Muntele Rosu	79.49	321	⇓P	P	01 45 35.3	+1.1
MLR	Muntele Rosu	79.49	321	LR	LR	02 25 00.4	
	comp=Z,200nm,18.6s,baz=45,slow=39						
MLR	Muntele Rosu	79.49	321	P	P	01 45 34.7	+0.6
MLR				IAmb	IAmb	01 45 37.6	
	comp=Z,16nm,1.7s						
MLR	Muntele Rosu	79.49	321	P	P	01 45 35.2	+1.1
PIX	Pinacate	79.69	58	P	P	01 45 35.6	+0.4
LANS	Liptovska Anna	79.80	327	eP	P	01 45 37.0	+1.4
LANS				pmax	pmax		
	comp=Z,3.0nm,1.1s						
LANS	Liptovska Anna	79.80	327	eP	P	01 45 37.0	+1.4
214A	Organ Pipe Nat	79.86	57	P	P	01 45 37.4	+1.2
	baz=309						
S22A	4UR Ranch, Cre	79.89	50	P	P	01 45 38.0	+1.3
	baz=311,SNR=5.9						
VOIR		79.97	321	⇓P	P	01 45 37.5	+0.8
VOIR		79.97	321	P	P	01 45 37.4	+0.8
Q24A	Divide	80.07	48	P	P	01 45 38.2	+0.5
	baz=312						
MORC	Moravsky Berou	80.14	328	⇓P	P	01 45 38.2	+0.8
MORC	Moravsky Berou	80.14	328	P	P	01 45 37.6	+0.2
MORC				IAmb	IAmb	01 45 40.3	
	comp=Z,18nm,1.7s						
MORC	Moravsky Berou	80.14	328	eP	P	01 45 38.2	+0.8
MORC	Moravsky Berou	80.14	328	P	P	01 45 38.2	+0.8
DPC	Dobruska-Polom	80.19	329	eP	P	01 45 38.7	+1.0
DPC	Dobruska-Polom	80.19	329	eP	P	01 45 38.7	+1.0
KRLC	Kraliky	80.22	329	eP	P	01 45 38.7	+0.8
KRLC	Kraliky	80.22	329	eP	P	01 45 38.7	+0.8
ARR	Arges	80.22	321	⇓P	P	01 45 39.7	+1.7
OGNE	Ogallala	80.49	45	P	P	01 45 40.6	+1.0
	baz=314						
VYHS	Vyhne	80.57	327	eP	P	01 45 40.4	+0.7
VYHS	Vyhne	80.57	327	eP	P	01 45 40.4	+0.7
EYMN	Ely	80.67	34	P	P	01 45 40.8	+0.5
	baz=319						
SDCO	Great Sand Dun	80.68	49	P	P	01 45 41.6	+0.7
SDCO	Great Sand Dun	80.68	49	P	P	01 45 42.0	+1.1
	baz=312						
CLL	Collm	80.73	331	eP	P	01 45 42.0	+1.5
CLL				eSS	SS	02 01 30.0	+31
CLL				AMS	AMS	02 21 00.0	
	comp=Z,200nm,21.6s						
CLL				AMS	AMS	02 22 00.0	
	comp=N,200nm,18.3s						
CLL				AMS	AMS	02 22 00.0	
	comp=E,300nm,20.7s						
CLL				AMS	AMS	04 20 00.0	
	comp=Z,200nm,19.4s						
CLL	Collm	80.73	331	eP	P	01 45 36.0	-4.5
CLL				e		01 45 42.0	
JAVC	Velka Javorina	80.79	327	eP	P	01 45 42.7	+1.7
VRAC	Vranov	80.89	328	LR	LR	02 23 28.0	
	comp=Z,254nm,19.5s,baz=18,slow=37						
VRAC	Vranov	80.89	328	eP	P	01 45 42.2	+0.8
TUC	Tucson	80.97	56	P	P	01 45 43.4	+1.2
	baz=310						
GZR	Gura Zlata	81.10	322	⇑P	P	01 45 43.2	+0.5
GZR	Gura Zlata	81.10	322	P	P	01 45 43.2	+0.5
SURR	Surduc	81.14	323	⇑P	P	01 45 43.6	+0.7
KRUC	Moravsky	81.17	328	eP	P	01 45 43.8	+0.9
ECSD	EROS Data Cent	81.37	40	P	P	01 45 44.5	+0.4
ECSD				IAmb	IAmb	01 45 45.5	
	comp=Z,39nm,1.9s						
ECSD	EROS Data Cent	81.37	40	P	P	01 45 44.5	+0.4
	baz=316,SNR=5.6						
PLVB	Pleven	81.66	320	⇑P	P	01 45 46.5	+0.9
T25A	Trinidad	81.73	49	P	P	01 45 47.1	+0.7
T25A	Trinidad	81.73	49	P	P	01 45 47.1	+0.7
	baz=313						
RAYN	Ar Rayn	81.95	294	P	P	01 45 47.3	-0.2
RAYN	Ar Rayn	81.95	294	P	P	01 45 47.7	+0.2
ANMO	Albuquerque	81.97	51	P	P	01 45 49.1	+1.4
	comp=Z,2.5nm,0.8s,baz=286,slow=7.4,SNR=8.3						
	comp=Z,2.5nm,0.8s						
ANMO	Albuquerque	81.97	51	P	P	01 45 48.2	+0.5
ANMO				IAmb	IAmb	01 45 50.5	
	comp=Z,10nm,1.3s						
ANMO	Albuquerque	81.97	51	deP	P	01 45 49.0	+1.4
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ANMO	Albuquerque	81.97	51	P	P	01 45 49.0	+1.4
	baz=312						
SPMN	Marine on St.	82.12	37	P	P	01 45 49.1	+1.1
	baz=319						
KHC	Kasperske Hory	82.25	330	eP	P	01 45 49.1	+0.5
KHC	Kasperske Hory	82.25	330	⇑eP	P	01 45 49.4	+0.8
KHC				pmax	pmax		
	comp=Z,20nm,1.7s						
BGNE	Belgrade	82.26	42	P	P	01 45 48.9	0.0
	baz=316						
RONA	Rosalia, Austr	82.27	327	i PcP	P	01 45 50.2	+1.4
	comp=Z,4.5nm,0.7s						
CONA	Conrad Observa	82.27	328	i P	P	01 45 50.1	+1.2
	comp=Z,12nm,1.9s						
EKA	Eskdalemuir Ar	82.30	342	LR	LR	02 27 25.2	
	comp=Z,74nm,18.4s,baz=12,slow=39						
GEC2	GERESS Array S	82.43	329	P	P	01 45 49.6	-0.1
GEC2				IAmb	IAmb	01 45 50.2	
	comp=Z,9.9nm,1.6s						
GERES	GERESS Array B	82.43	329	P	P	01 45 49.9	+0.3
	comp=Z,0.6nm,0.4s,baz=38,slow=6.6,SNR=10						
GERES				LR	LR	02 27 33.1	
	comp=Z,248nm,18.5s,baz=56,slow=39						
	comp=Z,0.6nm,0.4s						
GERES	GERESS Array B	82.43	329	P	P	01 45 49.5	-0.2
FRGS	Fruska Gora	82.67	324	⇑P	P	01 45 51.4	+0.5
MMAI	Mount Meron Ar	82.72	307	LR	LR	02 26 17.3	
	comp=Z,120nm,21.8s,baz=115,slow=38						
121A	Cookes Peak, D	82.74	54	P	P	01 45 52.9	+1.2
	baz=312						
VTS	Vitosha	82.92	320	⇑P	P	01 45 53.2	+0.7
VTS	Vitosha	82.92	320	P	P	01 45 53.1	+0.7
MOA	Molln	83.00	329	i P	P	01 45 53.4	+0.9
	comp=Z,5.0nm,1.4s						
SCHQ	Schefferville	83.22	17	P	P	01 45 54.0	+0.5
	comp=Z,3.0nm,0.8s,baz=331,slow=5.5,SNR=6.9						
SCHQ				LR	LR	02 25 20.2	
	comp=Z,111nm,20.5s,baz=34,slow=37						
	comp=Z,3.0nm,0.8s						
CBKS	Cedar Bluff	83.24	45	P	P	01 45 54.1	0.0
	baz=315						
BIOA	Bad Ischl, Aus	83.38	329	i P	P	01 45 55.4	+0.9
	comp=Z,3.3nm,0.9s						
PPT	Papeete	83.52	118	LR	LR	02 20 09.5	
	comp=Z,62nm,19.8s,baz=325,slow=34						
PPT2	Papeete2	83.53	118	eLR	LR	02 12 13.0	
	comp=Z,168nm,25.0s						
PPT2				eLR	LR	02 12 13.2	
	comp=Z,129nm,25.8s						
PERS	Pernice	83.60	327	i P	P	01 45 55.9	+0.1
SOKA	Soboth	83.61	327	i P	P	01 45 56.4	+0.6
	comp=Z,5.5nm,0.6s						
GOLS	Golise	83.88	327	i P	P	01 45 57.0	-0.1
OBKA	Obir	83.94	328	i P	P	01 45 57.6	+0.1
	comp=Z,2.4nm,1.0s						
KBA	Koelnbreinsper	83.99	329	i P	P	01 45 58.2	+0.3
	comp=Z,2.0nm,0.8s						
VISS	Visnje	84.38	327	i P	P	01 45 59.3	-0.3
WATA	Walderalm	84.49	330	i P	P	01 46 00.1	-0.2
	comp=Z,4.7nm,1.2s						
WTTA	Wattenberg	84.53	330	i PcP	P	01 46 01.1	+0.5
	comp=Z,2.8nm,0.6s						
RETA	Reutte	84.69	330	i PcP	P	01 46 02.1	+0.8
	comp=Z,6.7nm,0.7s						
SQTA	Sankt Quirin	84.73	330	i PcP	P	01 46 02.1	+0.6
	comp=Z,2.4nm,0.6s						
KSU1	Kansas State U	84.74	43	P	P	01 46 01.7	+0.1
	baz=317						
MNTX	Cornudas Mount	84.81	53	P	P	01 46 02.9	+0.8
	baz=313,SNR=11						
MSTX	Muleshoe	84.87	50	P	P	01 46 03.1	+0.7
	baz=314						
AMTX	Amarillo	84.89	49	P	P	01 46 03.4	+0.9
AMTX				IAmb	IAmb	01 46 04.3	
	comp=Z,12nm,0.9s						
AMTX	Amarillo	84.89	49	P	P	01 46 03.5	+0.9
	baz=314						
STAL	STALIGIAL	84.91	328	P	P	01 46 01.4	-0.9
JFWS	Jewell Farm	85.08	37	P	P	01 46 03.2	0.0
	baz=320						
FETA	Feichten	85.08	330	i P	P	01 46 02.9	-0.4
	comp=Z,2.6nm,0.6s						
DAVA	Damuels	85.19	331	i PcP	P	01 46 04.5	+0.6
	comp=Z,6.0nm,0.8s,SNR=4.5						
EIL	Elat	85.23	304	LR	LR	02 28 41.7	
	comp=Z,97nm,18.0s,baz=60,slow=39						
FUORN	Ofenpass-Fuorn	85.59	330	P	P	01 46 06.0	-0.1
FUORN				IAmb	IAmb	01 46 07.4	
	comp=Z,7.4nm,0.6s						
DAVOX	Davos/Dischmat	85.61	330	LR	LR	02 28 38.2	
	comp=Z,149nm,18.1s,baz=16,slow=39						
GLMI	Grayling	86.07	32	P	P	01 46 08.9	+0.8
	baz=324						
LPIG	La Paz	86.60	62	LR	LR	02 21 43.0	
	comp=Z,100nm,18.0s,baz=286,slow=33						
WMOK	Wichita Mounta	86.68	47	P	P	01 46 11.6	+0.3
	baz=316						
L44A	Lake County Fo	86.73	36	P	P	01 46 11.5	+0.1
	baz=322						
HDIL	Hopedale	87.35	38	P	P	01 46 14.7	+0.3
	baz=321						
IDI	Anoyia	87.40	314	LR	LR	02 32 47.0	
	comp=Z,69nm,18.3s,baz=31,slow=41						
TX31	Lajitas Ar. Si	87.50	54	P	P	01 46 16.0	+0.5
TXAR	Lajitas Array	87.50	54	P	P	01 46 16.5	+0.9
	comp=Z,2.7nm,0.5s,baz=299,slow=3.1,SNR=56						
	comp=Z,2.7nm,0.5s						
TUL1	Leonard	87.51	45	P	P	01 46 15.6	+0.3
	baz=318						
ABTX	Abilene, Hawle	87.68	49	P	P	01 46 16.8	+0.6
	baz=316						
CCM	Cathedral Cave	88.31	40	P	P	01 46 19.2	+0.1
CCM	Cathedral Cave	88.31	40	P	P	01 46 19.2	+0.1
CCM				pmax	pmax		
	comp=Z,37nm,1.5s						
CCM	Cathedral Cave	88.31	40	P	P	01 46 19.5	+0.4
	baz=320						
SADO	Sadowa	88.31	29	LR	LR	02 27 26.0	
	comp=Z,76nm,20.5s,baz=304,slow=37						
SFIN	Lafayette	88.53	37	P	P	01 46 20.3	+0.3
	baz=323						
JCT	Junction City	89.10	51	P	P	01 46 23.4	+0.4
	baz=316						
WHTX	Lake Whitney,	89.42	48	P	P	01 46 25.4	+1.0
	baz=317						
O48B	Farmland	89.52	35	P	P	01 46 24.9	+0.2
	baz=324						
MIAR	Mount Ida	89.74	44	P	P	01 46 26.3	+0.5
MIAR				IAmb	IAmb	01 46 28.6	
	comp=Z,16nm,1.6s						
MIAR	Mount Ida	89.74	44	P	P	01 46 26.3	+0.5
MIAR				pmax	pmax		
	comp=Z,16nm,1.6s						
MIAR	Mount Ida	89.74	44	P	P	01 46 26.8	+1.0
	baz=319						
WHAR	Wooly Hollow	89.87	43	P	P	01 46 26.4	0.0
ERPA	Erie	90.21	31	P	P	01 46 28.3	+0.4
	baz=327						
P49A	Miami Univ. Ec	90.30	36	P	P	01 46 28.9	+0.5
	baz=324						
M53A	WI Miller and	90.50	32	P	P	01 46 29.7	+0.5
	baz=327						
ACSO	Alum Creek Sta	90.51	34	P	P	01 46 29.4	0.0
	baz=325						
WCI	Wyandotte Cave	90.61	37	P	P	01 46 29.6	-0.2
	baz=323						
VAE	Valguarnera	91.19	322	LR	LR	02 29 35.5	
	comp=Z,56nm,20.6s,baz=52,slow=37						
P52A	Corning	91.37	34	P	P	01 46 33.5	+0.1
	baz=326						
WVT	Waverly	91.53	40	P	P	01 46 34.4	+0.2
	baz=322						
OXF	Oxford	91.98	42	P	P	01 46 36.3	+0.1
	baz=321						
TKL	Tuckaleechee C	93.88	37	P	P	01 46 45.5	+0.5
	comp=Z,2.4nm,0.7s,baz=22,slow=9.8,SNR=6.7						
TKL				LR	LR	02 30 38.4	
	comp=Z,45nm,20.8s,baz=292,slow=36						
	comp=Z,2.4nm,0.7s						
KEST	Kesra	94.98	325	LR	LR	02 35 01.8	
	comp=Z,290nm,18.3s,baz=325,slow=39						
KMSC	Kings Mountain	95.44	36	P	P	01 46 51.9	-0.3
	baz=326						
BRAL	Brewton	95.83	42	P	P	01 46 54.4	+0.4
	baz=322						
ESDC	Sonseca Array	96.74	336	P	P	01 46 58.1	0.0
	comp=Z,0.3nm,0.6s,baz=16,slow=4.4,SNR=4.7						
ESDC				LR	LR	02 34 43.5	
	comp=Z,186nm,21.1s,baz=21,slow=38						
	comp=Z,0.3nm,0.6s						
TORD	Torodi Ar. Bea	117.62	318	PKP	PKPdf	01 52 13.2	-0.8
	comp=Z,0.6nm,0.5s,baz=27,slow=1.6,SNR=17						
DBIC	Dimbokro	126.47	320	PKP	PKPdf	01 52 30.9	0.0
	comp=Z,2.9nm,0.8s,baz=349,slow=4.9,SNR=4.0						
DBIC	Dimbokro	126.47	320	PKIKP	PKPdf	01 52 31.0	0.0
LPAZ	La Paz	144.10	61	PKP	PKPab	01 53 02.3	+0.4
	comp=Z,3.1nm,0.6s,baz=337,slow=2.5,SNR=13						
PLCA	Paso Flores	153.39	106	PKPbc	PKPbc	01 53 26.1	+0.5
	comp=Z,1.5nm,0.9s,baz=344,slow=1.5,SNR=5.3						
CPUP	Villa Florida	158.26	62	PKPab	PKPab	01 53 59.0	+0.2
	comp=Z,1.4nm,0.7s,baz=45,slow=4.3,SNR=3.4						

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*FUNV **18** 01:44:03.3, 7°.95N×72°.24W, h8^{km}, MW2.7*
*RSNC **18** 01:44:06.5±0.9, 7°.57N×72°.30W, h0^{km}±7^{km}, ML1.8*
ISC 18 01:44:01.9±1.0**, 7°.78N**±0°.07×**72°.22W**±0°.04**, h14**^{km}±8^{km}**,**
n10, σ1.^{s}06/19**, 1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	0.13	310	⇓iP	Pg	01 44 05.7	+0.1
CAPV				eS	Sg	01 44 08.5	+0.4
PAMC	Pamplona, Colo	0.65	228	eP	Pg	01 44 14.2	-0.5
PAMC				eS	Sg	01 44 23.0	-0.4
PAMC				i		01 44 24.3	
	comp=Z,27nm,0.3s						
SOCV	Socops	1.44	70	eP	Pb	01 44 28.8	+0.3
SOCV				eS	Sg	01 44 47.7	-0.5
BARC	Barichara	1.52	219	eP	Pb	01 44 29.8	-0.3
BARC				eS	Sn	01 44 48.4	-0.3
BARC				i		01 44 51.2	
	comp=Z,16nm,0.5s						
BRRC	Barranca, Sant	1.63	246	eP	Pg	01 44 32.8	-0.3
BRRC				eS	Sg	01 44 53.2	-1.2
BRRC				i		01 45 03.5	
	comp=Z,14nm,0.6s						
RUSC	La Rusia	2.06	205	eP	Pb	01 44 39.2	-0.3
RUSC				eS	Sn	01 45 03.6	+1.1
RUSC				i		01 45 09.4	
	comp=Z,6.9nm,0.8s						
PTBC	PUERTO BERRIO,	2.54	241	eP	Pn	01 44 44.6	+1.8
PTBC				eS	Sn	01 45 15.5	+1.8
PTBC				i		01 45 21.9	
	comp=Z,13nm,0.4s						
ZARC	Zaragoza, Cauc	2.63	264	eP	Pb	01 44 47.6	-1.3
ZARC				eS	Sb	01 45 20.2	-1.0
BAUV	El Baul	4.29	74	eP	Pn	01 45 07.6	+0.8
BAUV				eS	Sn	01 45 55.2	-1.5
BENV	Beln	5.05	64	eP	Pn	01 45 18.0	+0.7

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*IDC **18** 02:06:51.9±0.8, 29°.21S×178°.63W, h209^{km}±9^{km}, mb3.4/4, mbtmp4.1/5, Error ellipse: s-maj=24.9km s-min=18.7km az=50.0*
ISC 18 02:06:51.0±0.8**, 29°.56S**±0°.09×**178°.7W**±0°.1**, h204**^{km}**, n12,**
σ1.^{s}67/16**, mb3.6**/4**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.78	67	P	Pn	02 07 20.6	+0.7
	2μm,0.3s,baz=94,slow=14,SNR=44						
RAO				S	S	02 07 40.8	-1.4
	565nm,0.3s,baz=110,slow=18,SNR=5.7						
URZ	Urewera	9.33	201	P	Pn	02 08 58.9	-2.6
	2.8nm,0.4s,baz=90,slow=10,SNR=1.6						
URZ				S	S	02 10 44.3	-1.8
	15nm,0.3s,baz=46,slow=18,SNR=20						
MSVF	Nonsavu	12.13	345	P	Pn	02 09 36.2	-1.5
	17nm,0.7s,baz=160,slow=16,SNR=11						
STKA	Stephens Creek	34.05	256	P	P	02 13 17.9	+2.0
	0.6nm,0.3s,baz=105,slow=16,SNR=2.9						
	0.6nm,0.3s						
ASAR	Alice Springs	42.51	266	P	P	02 14 27.9	+1.3
	0.8nm,0.5s,baz=102,slow=6.4,SNR=19						
ASAR				PcP	PcP	02 16 15.4	0.0
	0.6nm,0.5s,baz=120,slow=3.8,SNR=7.5						
	0.8nm,0.5s						
WRA	Warramunga Arr	43.42	272	P	P	02 14 34.7	+0.8
	0.7nm,0.4s,baz=112,slow=6.6,SNR=16						
WRA				PcP	PP	02 16 18.8	-0.5
	0.5nm,0.7s,baz=94,slow=3.2,SNR=3.6						
	0.7nm,0.4s						
QSPA	South Pole Qui	60.54	180	P	P	02 16 43.1	+3.5
	1.9nm,0.6s,baz=267,slow=0.4,SNR=25						
	1.9nm,0.6s						
FINES	FINESS Array B	144.14	340	PKP	PKPbc	02 25 59.4	-1.0
	1.3nm,0.4s,baz=51,slow=2.7,SNR=18						
NOA	NORSAR Array B	147.83	351	PKPbc	PKPbc	02 26 10.5	-0.7
	0.2nm,0.5s,baz=38,slow=5.1,SNR=1.0						
AKASG	Malin Array Be	150.25	323	PKPbc	PKiKP	02 26 17.0	-1.2
	0.3nm,0.4s,baz=48,slow=2.1,SNR=4.1						
BRTR	Keskin Array B	151.63	300	PKPbc	PKiKP	02 26 20.9	-0.8
	0.2nm,0.3s,baz=134,slow=4.8,SNR=2.6						
BRTR				PKPab	PKPab	02 26 30.6	-0.2
	0.4nm,0.6s,baz=111,slow=6.3,SNR=2.4						
TORD	Torodi Ar. Bea	163.66	182	PKPab	PKPab	02 27 23.4	+0.5
	0.9nm,0.6s,baz=176,slow=3.7,SNR=7.9						

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*IDC **18** 02:17:26.5±0.5, 7°.90S×160°.81E, h0^{km}, mb4.7/19, mbtmp4.7/22, ML4.4/3, MS4.0/34, Error ellipse: s-maj=19.0km s-min=12.3km az=111.0*
*NEIC **18** 02:17:27.8±1.6, 7°.96S±0°.06×160°.95E±0°.08, h10^{km}±1^{km}, mb5.1/91, Error ellipse: s-maj=14.2km s-min=10.2km az=112.0*
*GCMT **18** 02:17:27.8±0.3, 7°.97S±0°.03×160°.98E±0°.03, h18^{km}, MW4.9/95, Moment Tensor Solution. s33,c36; s95,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.92±.15; $M_{\theta\theta}$-1.76±.10; $M_{\phi\phi}$-1.16±.10; $M_{r\theta}$-0.02±.27; $M_{\theta\phi}$0.82±.07; $M_{\phi r}$0.69±.28; Best double couple: $M_0$2.70000×10^{16} NP1:ϕ_s314.00000°,δ50.00000°,λ101.00000°. NP2: ϕ_s117.00000°,δ41.00000°,λ77.00000°. Principal axes: T 3.0360, Plg80.0000°, Azm278.0000°; N -0.6720, Plg8.0000°, Azm127.0000°; P -2.3640, Plg5.0000°, Azm36.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **18** 02:17:29.5±0.0, 7°.81S×160°.95E, h32^{km}, mb4.8/62, mB5.1/27, Ms4.7/7, Ms7 4.4/8*
*MOS **18** 02:17:30.9±0.9, 7°.94S×160°.77E, h44^{km}, mb5.2/38, Error ellipse: s-maj=9.0km s-min=7.1km az=87.9*
ISC 18 02:17:31.4±0.3**, 7°.98S**±0°.04×**160°.95E**±0°.05**, h35**^{km}**, n543,**
σ1.^{s}18/528**, mb5.0**/124**, MS4.2**/37**, 14C-10D,**
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.75	214	Pn	Pn	02 17 59.5	+0.4
	3μm,0.3s,baz=347,slow=1.7,SNR=96						
HNR				Sn	Sn	02 18 22.9	+2.6
	8μm,0.3s,baz=184,slow=20,SNR=7.3						
HNR				LR	LR	02 18 49.8	
	comp=Z,60μm,21.0s,baz=196,slow=48						
HNR	Honiara	1.75	214		Pn	02 17 59.3	+0.1
HNR				Sn	Sn	02 18 19.5	-0.8
HNR	Honiara	1.75	214	P	Pn	02 17 59.6	+0.4
HNR	Honiara	1.75	214	P	Pn	02 17 59.3	+0.1
HNR						02 18 19.5	
RABL	Rabaul	9.51	293	Pn	Pn	02 19 45.5	-0.4
RABL	Rabaul	9.51	293	P	Pn	02 19 48.2	+2.3
KRVT	Keravat (AS076	9.59	292	Pn	Pn	02 19 49.5	+2.5
	2.6nm,0.3s,baz=78,slow=19,SNR=1.4						
KOUNC	Koumac, New Ca	12.91	166	Pn	Pn	02 20 31.1	-1.3
PMG	Port Moresby	13.70	263	Pn	Pn	02 20 44.9	+1.6
	1.8nm,0.3s,baz=84,slow=7.2,SNR=13						
PMG				LR	LR	02 25 47.2	
	comp=Z,822nm,19.9s,baz=118,slow=37						
PMG	Port Moresby	13.70	263	Pn	Pn	02 20 43.5	+0.2
PMG	Port Moresby	13.70	263	P	Pn	02 20 46.0	+2.7
PMG	Port Moresby	13.70	263	P	Pn	02 20 46.4	+3.1
PMG	Port Moresby	13.70	263	c iP	Pn	02 20 45.5	+2.2
PMG				pmax	pmax		
	comp=Z,40nm,1.3s						
PATS	Pohnpei	14.95	350	Pn	Pn	02 20 56.4	-3.8
DZM	Mont Dzumac	14.98	160	ePn	Pn	02 20 59.2	-1.5
	comp=Z,89nm,1.5s						
DZM				eLR	LR	02 24 27.3	
	comp=Z,656nm,20.6s						
DZM	Mont Dzumac	14.98	160	Pn	Pn	02 21 02.6	+1.9
	comp=Z,0.4nm,0.3s,baz=329,slow=18,SNR=3.3						
DZM				LR	LR	02 26 39.5	
	comp=Z,694nm,19.4s,baz=26,slow=37						
	comp=Z,14nm,0.9s						
DZM	Mont Dzumac	14.98	160	Pn	Pn	02 21 00.4	-0.2
DZM	Mont Dzumac	14.98	160	P	Pn	02 21 02.7	+2.0
TARA	Tarawa	15.12	53	Pn	Pn	02 20 59.7	-2.8
OUENC	Ouen Island, N	15.44	159	Pn	Pn	02 21 07.0	+0.4
TV1H	Townsville Har	17.73	229	P	P	02 21 37.8	+1.7
COEN	Coen	18.42	250	P	P	02 21 43.9	0.0
	baz=18,SNR=13						
COEN	Coen	18.42	250		P	02 21 43.5	-0.4
COEN	Coen	18.42	250	P	Pn	02 21 45.4	+1.3
CTA	Charters Tower	18.63	228	Pn	Pn	02 21 47.6	+1.0
	comp=Z,1.0nm,0.3s,baz=43,slow=10,SNR=30						
CTA				LR	LR	02 28 18.9	
	comp=Z,608nm,19.6s,baz=49,slow=35						
	comp=Z,32nm,0.9s						
CTAO	Charters Tower	18.63	228		Pn	02 21 46.4	-0.3
CTAO	Charters Tower	18.63	228	P	Pn	02 21 46.4	-0.3
CTAO				pmax	pmax		
	comp=Z,76nm,1.1s						
MTSU	Mount Surprise	19.07	236	P	Pn	02 21 51.5	-0.4
	baz=19,SNR=58						
MSVF	Nonsavu	19.27	122	P	Pn	02 21 56.6	+2.2
	comp=Z,0.1nm,0.3s,baz=257,slow=16,SNR=2.7						
MSVF				LR	LR	02 27 52.2	
	comp=Z,232nm,18.4s,baz=253,slow=32						
	comp=Z,8.1nm,1.0s						
EIDS	Eidsvold	19.69	207	P	P	02 21 58.0	+0.4
	baz=20,SNR=40						

EIDS	Eidsvold	19.69	207	P	P	02 21 57.3	-0.4
EIDS				IAmb	IAmb	02 21 59.7	
	comp=Z,87nm,0.8s						
GENI	Genyem	21.36	283	P	P	02 22 18.6	+2.7
GENI	Genyem	21.36	283	P	P	02 22 15.1	-0.8
	comp=Z,64nm,1.0s						
RMQ	Roma	21.74	211	P	P	02 22 20.1	+0.2
	baz=22,SNR=32						
SMPI	Sarmi	22.93	284	P	P	02 22 32.6	0.0
	comp=Z,108nm,1.8s						
ARMA	Armidale	23.97	200	P	P	02 22 43.0	+0.3
	baz=24,SNR=4.9						
ARMA	Armidale	23.97	200	P	P	02 22 41.7	-1.0
ARMA				IAmb	IAmb	02 22 57.9	
	comp=Z,91nm,1.2s						
QIS	Mount Isa	24.13	237	P	P	02 22 44.0	-0.2
	baz=24,SNR=6.0						
QLP	Quilpie	24.38	219	P	P	02 22 45.7	-0.7
	baz=24,SNR=7.6						
AUDCS	Dubbo College	26.71	204	P	P	02 23 08.0	+0.5
GUMO	Guam	26.72	323	LR	LR	02 33 34.3	
	comp=Z,171nm,19.6s,baz=111,slow=36						
H11S2	WAKE ISLAND Hy	26.91	12	T	T	02 51 17.5	
	baz=193,slow=76,SNR=181						
H11S3	WAKE ISLAND Hy	26.91	12	T	T	02 51 16.5	
	baz=193,slow=76,SNR=121						
H11S1	WAKE ISLAND Hy	26.93	12	T	T	02 51 18.2	
	baz=193,slow=76,SNR=93						
AFI	Afiamalu	27.41	105	LR	LR	02 31 41.0	
	comp=Z,269nm,19.9s,baz=284,slow=31						
INKA	Innaminka	27.41	222	P	P	02 23 12.7	-1.1
CMSA	Cobar Meteorol	27.41	209	P	P	02 23 13.0	-0.8
	baz=28,SNR=9.9						
CMSA	Cobar Meteorol	27.41	209	P	P	02 23 13.1	-0.8
H11N1	WAKE ISLAND Hy	28.14	12	T	T	02 52 42.1	
	baz=193,slow=76,SNR=423						
H11N3	WAKE ISLAND Hy	28.14	12	T	T	02 52 43.7	
	baz=193,slow=76,SNR=235						
H11N2	WAKE ISLAND Hy	28.15	12	T	T	02 52 43.1	
	baz=193,slow=76,SNR=471						
WB0	Warramunga Arr	28.26	243	P	P	02 23 20.1	-1.5
WRAB	Tennant Creek	28.36	242	P	P	02 23 21.0	-1.4
WRAB	Tennant Creek	28.36	242	c *i*P	P	02 23 20.8	-1.6
WRAB				pmax	pmax		
	comp=Z,71nm,0.8s						
WRA	Warramunga Arr	28.37	242	P	P	02 23 21.3	-1.3
	comp=Z,45nm,0.8s,baz=69,slow=9.0,SNR=268						
WRA				PcP	PcP	02 26 35.7	+0.9
	comp=Z,3.1nm,1.0s,baz=74,slow=3.3,SNR=4.9						
WRA				LR	LR	02 34 00.8	
	comp=Z,587nm,20.6s,baz=70,slow=35						
	comp=Z,45nm,0.8s						
WRA	Warramunga Arr	28.37	242	P	P	02 23 20.2	-2.4
CAN	Canberra	29.33	200	P	P	02 23 29.9	-1.0
CAN	Canberra	29.33	200	P	P	02 23 29.9	-1.0
CAN				pmax	pmax		
	comp=Z,159nm,1.9s						
MTN	Manton Dam	29.70	258	P	P	02 23 33.9	-0.5
STKA	Stephens Creek	29.83	215	P	P	02 23 34.4	-1.0
	comp=Z,3.7nm,0.5s,baz=38,slow=14,SNR=17						
STKA				PcP	PcP	02 26 39.2	+1.0
	comp=Z,0.6nm,0.3s,baz=52,slow=2.5,SNR=2.8						
STKA				LR	LR	02 35 50.7	
	comp=Z,568nm,18.8s,baz=43,slow=37						
	comp=Z,3.7nm,0.5s						
STKA	Stephens Creek	29.83	215	P	P	02 23 34.5	-0.9
	baz=30,SNR=6.0						
STKA	Stephens Creek	29.83	215	P	P	02 23 33.4	-1.9
STKA	Stephens Creek	29.83	215	c *e*P	P	02 23 34.8	-0.5
AS01	Alice Springs	30.20	236	P	P	02 23 37.2	-1.6
AS31	Alice Springs	30.24	236	P	P	02 23 36.1	-3.0
ASAR	Alice Springs	30.24	236	P	P	02 23 37.0	-2.1
	comp=Z,11nm,0.6s,baz=68,slow=8.8,SNR=114						
ASAR				PcP	PcP	02 26 39.7	+0.2
	comp=Z,2.1nm,0.9s,baz=60,slow=4.4,SNR=4.1						
ASAR				ScP	ScP	02 30 21.1	+1.7
	comp=Z,0.6nm,0.8s,baz=60,slow=3.7,SNR=3.3						
ASAR				LR	LR	02 35 10.6	
	comp=Z,507nm,20.1s,baz=76,slow=35						
	comp=Z,11nm,0.6s						
ASAR	Alice Springs	30.24	236	P	P	02 23 37.1	-2.0
ASAR	Alice Springs	30.24	236	P	P	02 23 37.2	-2.0
LCRK	Leigh Creek	30.86	221	P	P	02 23 43.1	-1.3
OOD	Oodnadatta	30.96	227	P	P	02 23 44.9	-0.4
KNRA	Kununurra	32.38	253	P	P	02 23 57.2	-0.8
	baz=32,SNR=7.8						
KNRA	Kununurra	32.38	253	P	P	02 23 56.6	-1.4
KNRA	Kununurra	32.38	253	P	P	02 23 56.8	-1.2
HTT	Hallett	32.49	216	P	P	02 23 58.6	-0.3
	baz=32,SNR=4.4						
TOO	Toolangi	32.62	203	P	P	02 24 01.1	+1.2
	baz=33,SNR=4.2						
TOO	Toolangi	32.62	203	P	P	02 23 58.9	-1.0
TOO	Toolangi	32.62	203	P	P	02 23 58.9	-1.0
TOO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WHYH	Whyalla	33.01	218	P	P	02 24 02.2	-1.1
ARPS	Mount Arapiles	33.52	208	P	P	02 24 07.9	+0.2
	baz=34,SNR=7.9						
ARPS	Mount Arapiles	33.52	208	P	P	02 24 07.8	+0.1
MULG	Mulgathing	33.56	225	P	P	02 24 06.5	-1.6
BBOO	Buckleboo	33.80	220	P	P	02 24 09.0	-1.2
	baz=34,SNR=28						
BBOO	Buckleboo	33.80	220	P	P	02 24 08.8	-1.4
BBOO				IAmb	IAmb	02 24 09.6	
	comp=Z,22nm,0.8s						
BBOO	Buckleboo	33.80	220	P	P	02 24 09.0	-1.2
BKZ	Black Stump Fm	34.05	158	P	P	02 24 11.8	-0.6
BKZ				IAmb	IAmb	02 24 30.6	
	comp=Z,32nm,1.4s						
LBMI	Labuha	34.11	281	P	P	02 24 14.3	+1.1
	comp=Z,152nm,1.1s,comp=Z,1µm						
SANI	Sanana	35.30	278	P	P	02 24 24.1	+0.7
SANI	Sanana	35.30	278	P	P	02 24 22.7	-0.7
	comp=Z,21nm,0.6s,comp=Z,3µm						
WRKA	Warakurna	35.46	238	P	P	02 24 22.4	-2.3
	baz=36,SNR=74						
WRKA	Warakurna	35.46	238	P	P	02 24 23.2	-1.5
FITZ	Fitzroy Crossi	35.77	250	P	P	02 24 27.0	-0.4
	comp=Z,1.5nm,1.6s						
LUWI	Luwuk	38.65	278	P	P	02 24 51.1	-0.8
LUWI	Luwuk	38.65	278	P	P	02 24 52.4	+0.5
LUWI	Luwuk	38.65	278	P	P	02 24 51.6	-0.3
	comp=Z,93nm,1.3s,comp=Z,5µm						
GTOI	Gorontalo	38.77	281	P	P	02 24 54.2	+1.2
	comp=Z,33nm,0.7s,comp=Z,5µm						
JCJ	Chichijima	39.32	333	LR	LR	02 41 31.3	
	comp=Z,95nm,18.7s,baz=60,slow=37						
MRSI	Marisa	39.78	280	P	P	02 25 13.7	+12
KAPI	Kappang	41.02	272	LR	LR	02 45 35.6	
	comp=Z,66nm,18.5s,baz=116,slow=41						
KAPI	Kappang	41.02	272	P	P	02 25 10.7	-1.0
KAPI	Kappang	41.02	272	P	P	02 25 11.1	-0.5
KAPI	Kappang	41.02	272	d *i*P	P	02 25 11.3	-0.3
KAPI				pmax	pmax		
	comp=Z,35nm,1.3s						
TOLI2	Tolitoli	41.05	281	P	P	02 25 10.1	-1.8
TOLI2				IAmb	IAmb	02 25 12.9	
	comp=Z,22nm,0.7s						
TOLI2	Tolitoli	41.05	281	P	P	02 25 10.7	-1.2
SPSI	Sidrap Palu	41.13	273	P	P	02 25 11.4	-1.1
	comp=Z,9.4nm,0.6s,comp=Z,815nm						
MPSI	Mapaga	41.74	279	P	P	02 25 16.0	-1.5
	comp=Z,32nm,0.9s,comp=Z,2µm						
PSA00	Pilbara Seismi	41.83	247	P	P	02 25 15.8	-2.3
PSA00	Pilbara Seismi	41.83	247	P	P	02 25 17.1	-1.1
MBWA	Marble Bar	41.85	247	P	P	02 25 16.5	-1.9
MBWA	Marble Bar	41.85	247	P	P	02 25 17.2	-1.1
PLAI	Plampang	42.70	266	P	P	02 25 24.8	-0.5
KMBL	Kambalda	43.17	232	P	P	02 25 29.4	+0.4
	baz=43,SNR=4.6						
MEEK	Meekatharra	44.20	240	P	P	02 25 36.9	-0.5
	baz=44,SNR=19						
MEEK	Meekatharra	44.20	240	P	P	02 25 37.0	-0.4
MYLDM	Lahad Datu	44.31	286	P	P	02 25 37.9	-0.4
BKB	Balikpapan	44.38	276	P	P	02 25 39.6	+0.7
	comp=Z,113nm,1.0s						
BBKI	Banjar Baru	46.07	273	P	P	02 25 52.5	+0.1
JAGI	Jajag, Banyuwa	46.29	266	P	P	02 25 51.2	-2.9
JAGI	Jajag, Banyuwa	46.29	266	P	P	02 25 51.7	-2.4
JAGI	Jajag, Banyuwa	46.29	266	P	P	02 25 51.6	-2.5
	comp=Z,48nm,1.2s						
KKM	Kota Kinabalu	46.74	286	P	P	02 25 59.5	+1.8
MORW	Morawa	47.09	238	P	P	02 25 59.3	-0.9
	baz=47,SNR=6.9						
MORW	Morawa	47.09	238	P	P	02 25 58.7	-1.5
MORW	Morawa	47.09	238	P	P	02 25 58.8	-1.4
PWJI	Pagerwojo	48.64	266	P	P	02 26 11.7	-0.6
	comp=Z,26nm,1.2s						
INU	Inuyama	48.65	334	P	P	02 26 13.2	+1.2
JMN	Monobe	48.79	330	P	P	02 26 12.9	-0.3
JMN	Monobe	48.79	330	P	P	02 26 14.3	+1.1
PPT2	Papeete2	49.06	106	*e*S	S	02 33 18.3	-0.2
	comp=Z,101nm,26.5s						
PPT2				*e*LR	LR	02 40 15.7	
	comp=Z,266nm,26.5s						
PPT2				*e*LR	LR	02 40 15.8	
	comp=Z,165nm,26.0s						
MJAR	Matsushiro Arr	49.16	336	P	P	02 26 14.9	-1.1
	comp=Z,2.5nm,0.7s,baz=164,slow=6.8,SNR=5.9						
MJAR				PcP	PcP	02 27 38.6	-0.4
	comp=Z,1.1nm,0.4s,baz=166,slow=5.1,SNR=2.5						
	comp=Z,2.5nm,0.7s						
MAJO	Matsushiro	49.17	336	⇑*e*P	P	02 26 14.3	-1.7
MAJO				pmax	pmax		
	comp=Z,19nm,1.6s						
SBUM	Sibu	49.69	280	P	P	02 26 19.9	-0.5
SBUM				IAmb	IAmb	02 26 21.8	
	comp=Z,26nm,1.1s						
JNU	Nakatsue	49.88	327	LR	LR	02 47 04.3	
	comp=Z,46nm,19.1s,baz=116,slow=36						
JNU	Nakatsue	49.88	327	P	P	02 26 21.2	-0.3
JNU				IAmb	IAmb	02 26 22.5	
	comp=Z,20nm,1.2s						
PMOR	Pomariorio Ree	50.53	103	*e*T	T	03 19 41.4	
	comp=Z,4.2nm,0.2s						
KSM	Kuching	51.36	278	P	P	02 26 31.9	-1.1
KSM	Kuching	51.36	278	P	P	02 26 32.9	-0.1
KPJI	Karang Pucung	51.53	267	P	P	02 26 33.8	-0.4
	comp=Z,29nm,1.2s						
TJN	Taejon	54.23	327	P	P	02 26 54.0	+0.2
TJN	Taejon	54.23	327	P	P	02 26 56.5	+2.7
TJN	Taejon	54.23	327	d *i*P	P	02 26 54.5	+0.7
ASAJ	Asahikawa	54.45	344	LR	LR	02 47 43.7	
	comp=Z,257nm,20.9s,baz=92,slow=33						
KSRS	Korea Array	54.73	328	P	P	02 26 56.9	-0.6
	comp=Z,8.6nm,1.1s,baz=150,slow=8.0,SNR=25						
KSRS				LR	LR	02 49 05.9	
	comp=Z,72nm,18.7s,baz=130,slow=35						
	comp=Z,8.6nm,1.1s						
KSAR	Wonju Array Be	54.75	328	P	P	02 26 57.0	-0.5
KSAR	Wonju Array Be	54.75	328	P	P	02 26 57.0	-0.5
CGJI	Cibinong	54.79	268	P	P	02 26 56.2	-2.1
	comp=Z,119nm,0.7s						
KS19	Wonju Array Si	54.80	328	P	P	02 26 57.5	-0.4
KS19				IAmb	IAmb	02 26 59.4	
	comp=Z,26nm,1.6s						
INCN	Inchon	55.44	327	P	P	02 27 01.4	-1.1
INCN	Inchon	55.44	327	P	P	02 27 01.5	-1.1
INCN				pmax	pmax		
	comp=Z,107nm,2.0s						
DLV	T Lat	55.79	290	P	P	02 27 06.9	+1.2
MDSI	Maura Dua	56.50	270	P	P	02 27 09.0	-1.6
	comp=Z,19nm,1.3s						
NJ2	Nanjing	56.54	317	*e*P	P	02 27 12.0	+1.5
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
DSRI	Dabo	56.65	275	P	P	02 27 11.1	-0.6
YSS	Yuzh-Sakhalins	57.04	345	*e*P	P	02 27 14.6	+0.9
YSS				MLR	MLR		
	comp=Z,400nm,17.0s						
YSS				MLR	MLR		
	comp=E,300nm,16.0s						
USA0B	Ussuriysk Arra	58.16	336	P	P	02 27 22.2	+0.5
USA0B	Ussuriysk Arra	58.16	336	⇑*i*P	P	02 27 19.9	-1.8
USRK	Ussuriysk Ar.	58.16	336	P	P	02 27 22.0	+0.3
	comp=E,7.1nm,0.7s,baz=142,slow=7.3,SNR=18						
USRK				LR	LR	02 52 16.9	
	comp=E,40nm,19.7s,baz=124,slow=36						
	comp=E,7.1nm,0.7s						
USRK	Ussuriysk Ar.	58.16	336	P	P	02 27 21.9	+0.1
TAOE	Nuku Hiva Isla	58.23	95	*e*LR	LR	02 44 29.9	
	comp=E,232nm,27.3s						
MDJ	Mudanjiang	59.50	334	P	P	02 27 31.8	+0.8
MDJ				sP	sP	02 27 46.8	+2.0
MDJ				PP	PP	02 29 44.0	+1.2
MDJ				PcS	PcS	02 32 17.1	-3.1
MDJ				S	S	02 35 37.6	-0.6
MDJ				SS	SS	02 39 35.9	+1.8
MDJ				pmax	pmax		
	comp=E,18nm,1.4s						
MDJ				pmax	pmax		
	comp=E,160nm,6.2s						
MDJ	Mudanjiang	59.50	334	P	P	02 27 30.4	-0.6
MDJ				IAmb	IAmb	02 27 32.7	
	comp=Z,23nm,1.2s						
MDJ	Mudanjiang	59.50	334	P	P	02 27 32.2	+1.2
SDSI	Sungai Dareh	59.70	274	P	P	02 27 32.7	-0.3
	comp=Z,99nm,1.3s,comp=Z,1µm						
BKNI	Bangkinang	60.27	275	P	P	02 27 37.6	+0.6
BKNI	Bangkinang	60.27	275	P	P	02 27 37.0	0.0
PDSI	Padang	60.65	273	P	P	02 27 38.2	-1.4
	comp=Z,34nm,0.9s						
CN2	Changchun	60.74	331	*e*P	P	02 27 40.0	+0.5
CN2				pP	pP	02 27 46.1	-3.4
CN2				S	S	02 35 55.3	+1.1
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				pmax	pmax		
	comp=Z,100nm,4.0s						
CN2				LR	LR		
	comp=Z,200nm,15.0s						
CN2				LR	LR		
	comp=Z,100nm,15.0s						
CN2				LR	LR		
	comp=Z,100nm,16.0s						
PETK	Petropavlovsk-	60.91	358	P	P	02 27 40.2	-0.3
	comp=Z,11nm,0.9s,baz=170,slow=8.8,SNR=7.6						
PETK				LR	LR	02 49 58.9	
	comp=Z,181nm,21.3s,baz=143,slow=32						
	comp=Z,11nm,0.9s						
PETK	Petropavlovsk-	60.91	358	P	P	02 27 40.7	+0.2
PETK	Petropavlovsk-	60.91	358	P	P	02 27 40.7	+0.2
IPM	Ipoh	61.04	280	P	P	02 27 41.3	-0.8
IPM	Ipoh	61.04	280	P	P	02 27 41.8	-0.4
BNX	BinXian	61.34	334	⇓P	P	02 27 43.6	+0.1
BNX				pmax	pmax		
	comp=Z,19nm,1.3s						
BNX				pmax	pmax		
	comp=Z,100nm,4.6s						
SHEM	Shemya Is, Ala	61.51	9	LR	LR	02 48 48.2	
	comp=Z,219nm,19.8s,baz=102,slow=31						
KULM	Kulim	61.57	280	P	P	02 27 44.4	-1.3
KULM				IAmb	IAmb	02 27 47.9	
	comp=Z,16nm,0.9s						
ENH	Enshi	62.31	310	P	P	02 27 50.5	+0.1
LYN	LuoYang	62.35	316	*e*P	P	02 27 50.9	+0.3
LYN				pmax	pmax		
	comp=Z,12nm,0.8s						
KLR	Kul'dur	62.44	339	LR	LR	02 54 07.5	
	comp=Z,95nm,19.5s,baz=134,slow=35						
KLR	Kul'dur	62.44	339	c *e*P	P	02 27 51.0	+0.1
KLR				pmax	pmax		
	comp=Z,18nm,1.4s						
HNS	HongShan	62.47	320	⇑P	P	02 27 51.5	+0.2
HNS				pmax	pmax		
	comp=Z,15nm,1.2s						
NONG	Nongkai	62.64	295	P	P	02 27 55.2	+2.4
	comp=Z,21nm,0.8s						
RPSI	Rantau Prapat	62.76	277	P	P	02 27 52.0	-1.7
RPSI				IAmb	IAmb	02 27 54.3	
	comp=Z,16nm,1.0s						
PSI	Prapat	62.78	277	P	P	02 27 52.4	-1.6
PSI	Prapat	62.78	277	P	P	02 27 52.1	-1.9
PSI				pmax	pmax		
	comp=Z,16nm,1.0s						
GYA	Guiyang	62.79	305	⇑P	P	02 27 55.3	+1.4
GYA				pmax	pmax		
	comp=Z,18nm,1.3s						
BJI	Beijing	63.16	323	P	P	02 27 56.1	+0.2
BJI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GSI	Gunungsitoli	63.85	275	P	P	02 27 59.9	-1.1
GSI	Gunungsitoli	63.85	275	P	P	02 28 00.5	-0.5
GSI	Gunungsitoli	63.85	275	P	P	02 28 00.7	-0.3
	comp=Z,99nm,1.2s,comp=Z,2µm						
KCSI	Kotacane, Aceh	64.04	278	P	P	02 28 00.5	-1.7
	comp=Z,28nm,0.7s,comp=Z,753nm						
XAN	Xi'an	64.58	314	P	P	02 28 04.4	-1.0
XAN				pP	pP	02 28 16.3	+1.0
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HEH	HeiHe	64.90	337	*e*P	P	02 28 07.3	+0.2
HEH				pmax	pmax		
	comp=Z,13nm,0.9s						
KMI	Kunming	65.49	302	⇓P	P	02 28 13.5	+1.8
KMI				pP	pP	02 28 22.4	+0.8
KMI				pmax	pmax		
	comp=Z,26nm,1.4s						
MLSI	Meulaboh, Aceh	65.52	278	P	P	02 28 10.9	-1.0
	comp=Z,42nm,0.7s						
XLT	XiLinHaoTe	65.66	326	⇓*i*P	P	02 28 13.4	+1.1
XLT				pP	pwP	02 28 24.4	-1.0
XLT				sP	sP	02 28 27.4	+1.3
XLT				pmax	pmax		
	comp=Z,42nm,1.2s						
CRAI	Chiangrai	65.82	296	P	P	02 28 13.6	-0.1
CRAI				IAmb	IAmb	02 28 15.6	
	comp=Z,14nm,0.9s						
HHC	Hu-ho-hao-te	66.47	321	*e*P	P	02 28 19.0	+1.4
HHC				pmax	pmax		
	comp=Z,32nm,1.3s						
HHC				pmax	pmax		
	comp=Z,250nm,4.8s						
CM31	Chiang Mai Arr	66.55	294	P	P	02 28 17.8	-0.6
CM31				IAmb	IAmb	02 28 20.5	
	comp=Z,29nm,1.2s						
CMAR	Chiang Mai Arr	66.55	294	P	P	02 28 19.3	+0.9
	comp=Z,13nm,1.0s,baz=121,slow=4.2,SNR=35						
	comp=Z,13nm,1.0s						
CMAR	Chiang Mai Arr	66.55	294	P	P	02 28 18.6	+0.2
CMAR	Chiang Mai Arr	66.55	294	*i* P	P	02 28 19.7	+1.3
CMAR				pmax	pmax		
	comp=Z,15nm,1.0s						
CHTO	Chiang Mai	66.66	294	P	P	02 28 19.3	+0.2
CHTO	Chiang Mai	66.66	294	P	P	02 28 19.3	+0.2
CHTO				pmax	pmax		
	comp=Z,1.0nm,1.1s						
PZH	PanZhiHua	66.84	303	P	P	02 28 20.3	0.0
PZH				pmax	pmax		
	comp=Z,20nm,1.3s						
PZH				pmax	pmax		
	comp=Z,140nm,5.4s						
CD2	Chengdu	67.00	308	P	P	02 28 21.3	+0.2
CD2				pP	pP	02 28 31.3	+0.3
CD2				sP	sP	02 28 35.6	+0.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BTO	Baotou	67.30	320	*e*P	P	02 28 08.8	-14
BTO				pP	PcP	02 28 59.0	+8.6
BTO				S	S	02 36 50.3	-26
BTO				sS	SKSac	02 38 08.1	-10
HIA	Hailar	67.42	332	P	P	02 28 22.9	-0.5
HIA				IAmb	IAmb	02 28 24.9	
	comp=Z,15nm,1.1s						
HIA	Hailar	67.42	332	⇓*e*P	P	02 28 24.1	+0.7
HIA				pmax	pmax		
	comp=Z,20nm,1.5s						
ZEA	Zeya	67.75	339	*e*P	P	02 28 26.3	+1.0
ZEA				*e*		02 28 42.6	
ZEA				pmax	pmax		
	comp=N,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
MA2	Magadan	67.83	354	LR	LR	02 54 02.6	
	comp=Z,111nm,21.8s,baz=136,slow=32						
TNCH	TengChong	69.03	301	P	P	02 28 34.5	+0.4
TNCH				pP	pP	02 28 42.3	-2.0
LZH	Lanzhou	69.21	313	*e*P	P	02 28 37.1	+2.1
LZH				pP	pP	02 28 46.6	+1.6
LZH				sP	sP	02 28 51.0	+2.2
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
VNDA	Vanda	69.51	180	P	P	02 28 36.8	+0.8
	comp=Z,4.1nm,0.8s,baz=6.7,slow=8.5,SNR=4.6						
	comp=Z,4.1nm,0.8s						
SEY	Seymchan	71.01	356	⇓*e*P	P	02 28 45.0	-0.2
SEY				pmax	pmax		
	comp=Z,27nm,2.5s						
ULN	Ulaanbaatar	73.08	325	P	P	02 28 58.2	+0.1
ULN				IAmb	IAmb	02 29 00.4	
	comp=Z,40nm,1.4s						
ULN	Ulaanbaatar	73.08	325	c *i*P	P	02 28 58.8	+0.6
ULN				pmax	pmax		
	comp=Z,27nm,1.3s						
SONM	Songino Array	73.43	325	P	P	02 29 01.2	+0.9
	comp=Z,6.7nm,0.8s,baz=139,slow=5.7,SNR=37						
SONM				LR	LR	03 02 16.9	
	comp=Z,41nm,18.3s,baz=126,slow=37						
	comp=Z,6.7nm,0.8s						
SONM	Songino Array	73.43	325	P	P	02 29 00.2	0.0
SONM				IAmb	IAmb	02 29 02.2	
	comp=Z,46nm,1.7s						
SONM	Songino Array	73.43	325	P	P	02 29 00.2	0.0
SONM				pmax	pmax		
	comp=Z,46nm,1.7s						
GTA	Gaotai	73.55	315	*e*P	P	02 29 02.1	+1.0
GTA				pP	pP	02 29 07.9	-3.3
GTA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
YAK	Yakutsk	73.89	345	LR	LR	02 58 19.6	
	comp=Z,136nm,21.9s,baz=98,slow=33						
YAK	Yakutsk	73.89	345	P	P	02 29 02.2	-0.1
YAK	Yakutsk	73.89	345	*e*P	P	02 29 02.3	-0.1
YAK				*e*PPP	PPP	02 33 38.0	
YAK				*e*S	S	02 38 34.2	+2.7
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,37nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				smax	smax		
	comp=E,78nm,3.9s						
R17K	Ugashik Creek	74.02	22	P	P	02 29 03.7	+0.4
	baz=224						
P16K	Nushagak River	74.45	21	P	P	02 29 06.1	+0.4
	baz=222						
Q16K	King Salmon	74.66	21	P	P	02 29 07.8	+0.8
	baz=224						
O16K	Kokwok River B	74.83	20	P	P	02 29 08.5	+0.6
	baz=222						
SHL	Shillong	74.90	299	P	P	02 29 09.2	-0.2
SHL	Shillong	74.90	299	P	P	02 29 09.2	-0.2
SHL				pmax	pmax		
	comp=Z,46nm,1.3s						
OHAK	Old Harbor	74.92	24	P	P	02 29 08.7	+0.2
	baz=227						
Q18K	Katmai Hardscr	75.25	22	P	P	02 29 10.5	-0.1
	baz=225						
N16K	Nishlik Lake	75.26	19	P	P	02 29 11.5	+1.0
	baz=221						
O17K	Koliganek Bris	75.31	20	P	P	02 29 11.0	+0.4
	baz=223						
KDAK	Kodiak Island	75.58	24	LR	LR	02 55 04.9	
	comp=Z,132nm,21.1s,baz=232,slow=30						
KDAK	Kodiak Island	75.58	24	P	P	02 29 12.7	+0.4
	baz=228						
P18K	Big Mountain,	75.69	21	P	P	02 29 13.4	+0.5
	baz=225						
BOD	Bodaibo	75.80	336	*e*P	P	02 29 12.3	-1.2
BOD				pmax	pmax		
	comp=Z,13nm,1.5s						
BILL	Bilibino	75.93	2	P	P	02 29 14.1	0.0
BILL				IAmb	IAmb	02 29 15.5	
	comp=Z,20nm,1.0s						
BILL	Bilibino	75.93	2	d *i*P	P	02 29 14.2	+0.1
BILL				*e*		02 29 25.7	
BILL				*e*		02 32 04.5	
BILL				pmax	pmax		
	comp=Z,23nm,1.0s						
BILL				MLR	MLR		
	comp=Z,44nm,15.0s						
GOMU	GeErMu	75.93	310	P	P	02 29 17.8	+2.5
GOMU				sP	pwP	02 29 28.3	-0.5
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
Q19K	Cape Douglas,	75.95	22	P	P	02 29 14.9	+0.5
	baz=227						
O18K	Koktuh Hills	76.03	21	P	P	02 29 15.4	+0.5
	baz=225						
ZAK	Zakamensk	76.51	326	*e*P	P	02 29 17.3	-0.6
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
O19K	Port Alsworth	76.58	21	P	P	02 29 18.3	+0.3
	baz=226						
P19K	Oil Pt	76.61	22	P	P	02 29 18.7	+0.6

	baz=227						
ANM	Nome	76.61	14	P	P	02 29 18.2	+0.2
ANM				IAmb	IAmb	02 29 20.1	
	comp=Z,19nm,1.4s						
ANM	Nome	76.61	14	P	P	02 29 18.2	+0.2
ANM				pmax	pmax		
	comp=Z,19nm,1.4s						
ANM	Nome	76.61	14	P	P	02 29 18.9	+0.9
	baz=214						
SVW2	Sparrevohn	76.78	20	P	P	02 29 20.9	+1.8
TNA	Tin City	76.86	13	P	P	02 29 19.2	-0.2
TNA	Tin City	76.86	13	P	P	02 29 20.4	+1.0
	baz=212						
O20K	Slope Mountain	77.12	22	P	P	02 29 21.5	+0.4
	baz=227						
BRSE	Bradley Lake S	77.61	23	P	P	02 29 24.5	+0.8
	baz=229						
M19K	Big River Lodg	77.76	20	P	P	02 29 25.4	+0.8
	baz=225						
L19K	White Mountain	77.80	20	P	P	02 29 25.7	+0.9
	baz=225						
TTA	Tatalina	77.96	19	P	P	02 29 25.8	+0.1
TTA				IAmb	IAmb	02 29 33.2	
	comp=Z,17nm,1.2s						
TTA	Tatalina	77.96	19	P	P	02 29 26.1	+0.3
TTA	Tatalina	77.96	19	P	P	02 29 25.8	+0.1
TTA				pmax	pmax		
	comp=Z,17nm,1.2s						
TTA	Tatalina	77.96	19	P	P	02 29 26.6	+0.9
	baz=224						
SPCR	Spurr Chakacha	78.03	21	P	P	02 29 26.9	+0.7
	baz=228						
CAPN	Captain Cook N	78.13	22	P	P	02 29 27.4	+0.9
	baz=229						
M20K	Styx River	78.17	20	P	P	02 29 27.4	+0.5
	baz=227						
L20K	Farewell, AK	78.33	20	P	P	02 29 28.6	+0.8
	baz=226,SNR=5.7						
SEW	Seward	78.34	23	P	P	02 29 27.5	-0.2
	baz=230						
SUA	Susitna One	78.73	21	P	P	02 29 30.2	+0.1
SUA	Susitna One	78.73	21	P	P	02 29 30.4	+0.3
	baz=229						
SKT	Skwentna	78.80	21	P	P	02 29 30.5	+0.2
	baz=228						
RC01	Rabbit Creek A	78.86	22	P	P	02 29 30.8	+0.2
	baz=230						
K20K	Telida	78.89	19	P	P	02 29 31.6	+0.8
	baz=226,SNR=6.9						
GCSA	Galena City Sc	79.03	17	P	P	02 29 31.9	+0.5
	baz=223						
P23K	Montague Islan	79.07	24	P	P	02 29 31.9	+0.1
	baz=232						
PPLA	Purkeypile	79.19	20	P	P	02 29 32.0	-0.6
	baz=227						
PWL	Port Wells	79.24	23	P	P	02 29 32.4	-0.4
	baz=231						
PMR	Palmer	79.41	22	P	P	02 29 34.2	+0.6
PMR	Palmer	79.41	22	P	P	02 29 33.3	-0.3
	baz=230						
CUT	Chulitna	79.52	21	P	P	02 29 33.8	-0.4
	baz=229						
KNK	Knik Glacier	79.55	22	P	P	02 29 34.3	-0.1
	baz=231						
CAST	Castle Rocks	79.58	20	P	P	02 29 34.0	-0.5
CAST				IAmb	IAmb	02 29 36.1	
	comp=Z,42nm,1.7s						
CAST	Castle Rocks	79.58	20	P	P	02 29 34.7	+0.1
	baz=227,SNR=9.5						
CHUM	Lake Minchumin	79.82	19	P	P	02 29 36.1	+0.3
	baz=227						
SML	Sawmill	79.84	22	P	P	02 29 36.0	0.0
	baz=231						
RDOG	Red Dog Mine	80.05	13	P	P	02 29 37.0	0.0
	baz=216						
M23K	Glacier View	80.06	22	P	P	02 29 37.0	-0.2
	baz=232						
KTH	Kantishna Hill	80.06	20	P	P	02 29 36.4	-0.8
TRF	Thorofare Moun	80.20	20	P	P	02 29 37.9	-0.2
	baz=229						
SCM	Sheep Creek Mo	80.23	22	P	P	02 29 37.8	-0.4
	baz=232						
BPAW	Bear Paw Mtn.	80.40	19	P	P	02 29 38.9	-0.1
	baz=228						
KLU	Klutina	80.56	23	P	P	02 29 40.2	+0.2
	baz=233						
I21K	Tanana	80.81	18	P	P	02 29 41.7	+0.6
	baz=227						
M24K	Tolsona, Glenn	80.83	22	P	P	02 29 41.8	+0.4
	baz=233						
IMAR	Indian Mountai	80.84	17	P	P	02 29 41.3	+0.1
MCK	McKinley	80.85	20	P	P	02 29 41.2	-0.2
MCK				IAmb	IAmb	02 29 48.3	
	comp=Z,37nm,1.1s						
MCK	McKinley	80.85	20	P	P	02 29 41.2	-0.2
MCK				pmax	pmax		
	comp=Z,37nm,1.1s						
MCK	McKinley	80.85	20	P	P	02 29 41.6	+0.2
	baz=230,SNR=11						
H21K	Melozitna Rive	80.89	18	P	P	02 29 41.9	+0.3
	baz=226						
MLY	Manley	81.10	19	P	P	02 29 43.1	+0.4
	baz=228,SNR=8.0						
N25K	Chitina, Valde	81.14	23	P	P	02 29 43.4	+0.3
	baz=235						
G21K	Allakaket	81.28	17	P	P	02 29 44.1	+0.4
	baz=226						
NEA2	Nenana	81.36	20	P	P	02 29 44.0	-0.1
	baz=230,SNR=11						
HARP	HAARP	81.39	22	P	P	02 29 43.8	-0.5
	baz=234						
PALK	Pallekele	81.42	279	P	P	02 29 44.8	-0.7
PALK				IAmb	IAmb	02 29 59.3	
	comp=Z,12nm,0.9s						
PALK	Pallekele	81.42	279	P	P	02 29 44.8	-0.7
PALK				pmax	pmax		
	comp=Z,12nm,0.9s						
H22K	Ishtalitna Cre	81.48	18	P	P	02 29 45.1	+0.4
	baz=228						
WRH	Wood River Hil	81.61	20	P	P	02 29 44.6	-0.8
WRH				IAmb	IAmb	02 29 45.8	
	comp=Z,18nm,1.4s						
I23K	Minto, Yukon-K	81.62	19	P	P	02 29 45.6	+0.2
	baz=230						
MCARA	McCarthy VSAT	81.63	24	P	P	02 29 45.1	-0.5
	baz=236						
F21K	Alatna River	81.78	16	P	P	02 29 46.4	+0.1
	baz=226						
MDM	Murphy Dome	81.87	19	P	P	02 29 46.3	-0.5
MDM				IAmb	IAmb	02 29 53.5	
	comp=Z,18nm,1.1s						
TCOL	CIGO, UAF Yank	81.94	20	P	P	02 29 46.8	-0.3
	baz=231						
COLA	College	81.94	20	P	P	02 29 46.7	-0.4
COLA				IAmb	IAmb	02 29 53.2	
	comp=Z,18nm,0.8s						
COLA	College	81.94	20	P	P	02 29 47.2	+0.1
	comp=Z,25nm,1.1s						
COLA	College	81.94	20	*d i*P	P	02 29 46.9	-0.2
COLA				pmax	pmax		
	comp=Z,20nm,1.0s						
COLA	College	81.94	20	P	P	02 29 46.7	-0.4
	baz=231						
HDA	Harding Lake	81.95	20	P	P	02 29 47.4	+0.2
	baz=232,SNR=11						
K24K	Donnelly Dome	82.00	21	P	P	02 29 48.2	+0.7
	baz=233						
H23K	Yukon River	82.00	18	P	P	02 29 48.2	+0.7
	baz=230						
QSPA	South Pole Qui	82.00	180	P	P	02 29 47.3	-0.4
QSPA				IAmb	IAmb	02 29 51.6	
	comp=Z,19nm,1.1s						
PINM	Pinnacle	82.08	26	P	P	02 29 48.6	+0.5
	baz=239						
CTG	Chitna Glacier	82.09	25	P	P	02 29 48.6	+0.4
	baz=238						
IL31		82.20	20	P	P	02 29 47.7	-0.7
IL31				IAmb	IAmb	02 29 55.2	
	comp=Z,17nm,1.1s						
ILAR	Eielson Array	82.20	20	P	P	02 29 47.5	-1.0
	comp=Z,4.9nm,0.8s,baz=246,slow=5.3,SNR=49						
ILAR				LR	LR	03 00 34.0	
	comp=Z,80nm,20.2s,baz=238,slow=32						
	comp=Z,4.9nm,0.8s						
ILAR	Eielson Array	82.20	20	P	P	02 29 47.1	-1.4
M26K	Nabesna, AK	82.21	23	P	P	02 29 49.0	+0.3
	baz=236						
POKR	Poker Plat Res	82.23	20	P	P	02 29 48.8	+0.1
	baz=232						
PNL	Peninsula	82.24	26	P	P	02 29 49.0	+0.2
	baz=240						
TIXI	Tiksi	82.24	350	LR	LR	03 08 03.9	
	comp=Z,64nm,18.7s,baz=1.5,slow=37						
TIXI	Tiksi	82.24	350	P	P	02 29 47.8	-0.7
TIXI	Tiksi	82.24	350	⇓*i*P	P	02 29 48.7	+0.2
TIXI				pmax	pmax		
	comp=Z,14nm,1.0s						
RIDG	Independent Ri	82.29	21	P	P	02 29 49.3	+0.2
	baz=234,SNR=6.2						
F22K	John River	82.35	16	P	P	02 29 49.6	+0.4
	baz=227						
L26K	Log Cabin Wild	82.43	22	P	P	02 29 50.4	+0.6
	baz=236						
G23K	Bananza Creek	82.44	18	P	P	02 29 50.3	+0.6
	baz=229						
O28M	Mount Upton	82.46	25	P	P	02 29 52.5	+2.1
	baz=239						
DOT	Dot Lake	82.52	22	P	P	02 29 50.0	-0.2
DOT				IAmb	IAmb	02 29 51.8	
	comp=Z,25nm,1.4s						
H24K	Noodor Dome	82.54	19	P	P	02 29 50.8	+0.5
	baz=231						
M27K	Edge Creek, AK	82.62	23	P	P	02 29 51.7	+0.8
	baz=237						
COLD	Coldfoot	82.72	17	P	P	02 29 52.1	+1.0
	baz=229						
SCRK	Sand Creek	82.74	21	P	P	02 29 51.4	-0.1
SCRK				IAmb	IAmb	02 29 58.7	
	comp=Z,15nm,1.1s						
SCRK	Sand Creek	82.74	21	P	P	02 29 52.0	+0.5
	baz=235,SNR=11						
YUK3	Moose Creek	82.88	24	P	P	02 29 53.2	+0.9
	baz=238						
E22K	Anaktuvuk Pass	82.88	16	P	P	02 29 53.0	+1.0
	baz=227						
SIT	Sitka	82.88	30	P	P	02 29 52.9	+0.7
	baz=244						
YUK8	Steele Glacier	82.91	25	P	P	02 29 54.1	+1.5
	baz=239						
O29M	Mount Kennedy	82.91	26	P	P	02 29 53.7	+1.3
	baz=240						
L27K	Beaver Creek,	83.03	23	P	P	02 29 53.7	+0.8
	baz=237						
BCAR	Beaver Creek A	83.05	23	P	P	02 29 52.5	-0.5
BVCY	Beaver Creek	83.05	23	P	P	02 29 53.5	+0.4
	baz=238						
PRP	Porcupine Dome	83.11	20	P	P	02 29 53.8	+0.4
	baz=233						
G24K	Hadweenzic Riv	83.21	18	P	P	02 29 54.7	+1.0
	baz=231						
YUK4	Talbot Arm	83.40	25	P	P	02 29 56.6	+1.5
	baz=240						
E23K	Chandalar	83.44	17	P	P	02 29 56.3	+1.3
	baz=229						
PLBC	Pleasant Camp	83.48	27	P	P	02 29 55.5	+0.3
	baz=242						
P30M	Million Dollar	83.53	26	P	P	02 29 56.1	+0.5
	baz=242						
U33K	Whale Pass	83.57	31	P	P	02 29 57.3	+1.6
	baz=246						
F24K	Squaw Lake	83.60	18	P	P	02 29 56.7	+1.0
	baz=231						
WMQ	Urumqi	83.60	316	*e*P	P	02 29 57.6	+1.3
WMQ				pP	pP	02 30 06.8	+0.2
WMQ				sP	sP	02 30 15.8	+5.5
WMQ				PP	PP	02 33 13.8	+4.5
WMQ				pmax	pmax		
	comp=Z,14nm,1.3s						
WMQ				LR	LR		
	comp=Z,42nm,22.3s						
HYT	Haines Junctio	83.63	26	P	P	02 29 56.5	+0.4
HYT	Haines Junctio	83.63	26	P	P	02 29 56.8	+0.7
	baz=241						
G25K	Bearman Lake	83.68	19	P	P	02 29 56.8	+0.7
	baz=233						
D23K	Nanushuk River	83.75	16	P	P	02 29 57.6	+1.2
	baz=228						
E24K	Your Creek	83.78	17	P	P	02 29 58.0	+1.3
	baz=230						
I26K	Coal Creek Min	83.79	20	P	P	02 29 57.7	+1.0
	baz=236						
R32K	Eaglecrest	83.81	29	P	P	02 29 57.7	+0.8
	baz=244						
SKAG	Skagway	83.95	27	P	P	02 29 57.5	-0.2
	baz=243						
A21K	Barrow	83.98	13	P	P	02 29 57.2	-0.3
A21K	Barrow	83.98	13	P	P	02 29 58.5	+1.0
	baz=222						
M29M	Somme Creek	84.03	24	P	P	02 29 59.4	+1.3
	baz=240						
V35K	Ketchikan	84.03	32	P	P	02 29 58.8	+0.7
	baz=247						
WRAK	Wrangell Islan	84.09	31	P	P	02 29 59.4	+1.0
	baz=246						
N30M	Aishikik Lake	84.11	25	P	P	02 29 59.1	+0.5
	baz=242						
EGAK	Eagle	84.21	21	P	P	02 29 59.2	+0.4
EGAK				IAmb	IAmb	02 30 06.4	
	comp=Z,16nm,1.0s						
EGAK	Eagle	84.21	21	P	P	02 29 59.8	+0.9
	baz=238,SNR=8.5						
O30N	Mendenhall	84.22	26	P	P	02 29 59.8	+0.8
	baz=242						
F25K	Christian Rive	84.32	18	P	P	02 30 00.7	+1.3
	baz=233						
DAWY	Dawson	84.49	22	P	P	02 30 00.5	+0.1
DAWY	Dawson	84.49	22	P	P	02 30 01.4	+1.1
	baz=239						
L29M	L29M	84.49	24	P	P	02 30 00.9	+0.5
	baz=240						
I27K	Kandik River	84.50	21	P	P	02 30 01.3	+1.0
	baz=237						
G26K	Porcupine Rive	84.53	19	P	P	02 30 01.4	+1.0
	baz=235						
BMAR	Burnt Mountain	84.55	18	P	P	02 30 01.6	+1.0
E25K	Arctic Village	84.66	18	P	P	02 30 02.0	+0.8
	baz=233						
N31M	Braeburn, Yuko	84.68	25	P	P	02 30 02.1	+0.8
	baz=243						
P32M	Atlin	84.75	28	P	P	02 30 02.5	+0.7
	baz=245						
M30M	Minto, Yukon	84.77	24	P	P	02 30 02.5	+0.7
	baz=242						
C24K	Franklin Bluff	84.78	16	P	P	02 30 02.1	+0.5
	baz=230						
F26K	Sheenjek River	84.84	18	P	P	02 30 02.2	+0.1
	baz=234						
H27K	Steamboat Moun	84.87	20	P	P	02 30 02.9	+0.6
	baz=237						
K29M	Barlow Dome	85.09	23	P	P	02 30 05.0	+1.5
	baz=241						
G27K	Doyon Strip	85.14	20	P	P	02 30 04.8	+1.2
	baz=237						
D25K	Kavik River	85.16	16	P	P	02 30 04.3	+0.7
	baz=232						
Q32M	Nakina River	85.16	29	P	P	02 30 05.1	+1.0
	baz=246						
HYB	Hyderabad	85.17	288	*e*P	P	02 30 05.0	+0.2
YBH	Yreka Blue Hor	85.21	47	P	P	02 30 05.8	+1.3
	comp=Z,6.5nm,1.0s,baz=248,slow=3.2,SNR=7.0						
	comp=Z,6.5nm,1.0s						
YBH	Yreka Blue Hor	85.21	47	P	P	02 30 04.5	-0.1
YBH				IAmb	IAmb	02 30 07.3	
	comp=Z,10nm,1.1s						
YBH	Yreka Blue Hor	85.21	47	P	P	02 30 04.5	-0.1
YBH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HUMO	Hull Mountain	85.26	46	P	P	02 30 05.1	+0.4
HUMO				IAmb	IAmb	02 30 13.7	
	comp=Z,16nm,1.1s						
S34M	Telegraph Cree	85.29	30	P	P	02 30 05.6	+1.2
	baz=247						
T35M	Bob Quinn	85.38	31	P	P	02 30 05.4	+0.5
	baz=248						
P33M	Teslin, Yukon	85.42	27	P	P	02 30 05.3	+0.1
	baz=245						
I29M	Ogilvie Camp,	85.55	22	P	P	02 30 06.4	+0.8
	baz=240,SNR=5.2						
DGZ	Jazzator, Alta	85.55	321	⇑*i*P	P	02 30 05.5	-0.6
DGZ				pmax	pmax		
	comp=Z,14nm,1.7s						
M31M	Drury Creek, Y	85.59	25	P	P	02 30 06.8	+0.9
	baz=244,SNR=7.4						
MAYO	Mayo, Yukon	85.61	24	P	P	02 30 07.2	+1.3
	baz=242						
PKM	Mcpherson Peak	85.79	54	P	P	02 30 08.1	+0.4
	baz=257						
E27K	Coleen River	85.92	18	P	P	02 30 09.1	+1.7
	baz=237						
C26K	Camden Bay	85.93	16	P	P	02 30 09.2	+1.8
	baz=234						
DLBC	Dease Lake	86.03	29	LR	LR	03 03 25.2	
	comp=Z,83nm,18.4s,baz=280,slow=32						
DLBC	Dease Lake	86.03	29	P	P	02 30 09.2	+0.9
	baz=248						
FARO	Faro, Yukon	86.04	25	P	P	02 30 09.2	+1.0
	baz=245,SNR=6.4						
C27K	Jago River	86.10	17	P	P	02 30 09.7	+1.5
	baz=235						
BCW	Bitter Crk WRg	86.12	54	P	P	02 30 09.9	+0.7
BCW				IAmb	IAmb	02 30 17.7	
	comp=Z,18nm,1.1s						
VES	Vestal, Richgr	86.58	53	P	P	02 30 12.1	+0.8
	baz=258						
CIS	Catalina Islan	86.61	56	P	P	02 30 12.3	+0.7
	baz=258						
EPYK	Eagle Plains	86.61	21	P	P	02 30 11.2	+0.3
EPYK				IAmb	IAmb	02 30 12.9	
	comp=Z,14nm,0.9s						
EPYK	Eagle Plains	86.61	21	P	P	02 30 12.2	+1.3
	baz=242,SNR=10						
J05D	Fort Rock, OR	86.65	46	P	P	02 30 12.5	+0.7
FMP	Fort Macarthur	86.77	55	P	P	02 30 12.5	+0.2
	baz=258						
G30M	tAoh Zraii Nji	87.08	21	P	P	02 30 14.2	+1.1
	baz=242						
MMPY	Sheldon Lake,	87.09	25	P	P	02 30 15.0	+1.7
	baz=247,SNR=8.1						
WTLY	Watson Lake, Y	87.24	28	P	P	02 30 14.9	+0.8
	baz=249						
EDW2	Edwards Air Fo	87.25	54	P	P	02 30 16.4	+1.7
	baz=258,SNR=9.3						
BFSC	Mount Baldy Ra	87.39	55	P	P	02 30 16.8	+1.3
	baz=259						
CWC	Cottonwood Cre	87.50	53	P	P	02 30 17.0	+1.0
	baz=258						
LRMC	Laurel Mtn Rad	87.62	54	P	P	02 30 16.9	+0.3
	baz=258						
MURC	Murrieta	87.65	56	P	P	02 30 17.2	+0.6
	baz=259						
NVAR	Mina Array Bea	87.73	51	P	P	02 30 18.2	+1.1
	comp=Z,1.6nm,0.8s,baz=244,slow=6.7,SNR=14						
NVAR				LR	LR	03 02 24.4	
	comp=Z,114nm,20.3s,baz=238,slow=31						
	comp=Z,1.6nm,0.8s						
NVAR	Mina Array Bea	87.73	51	P	P	02 30 17.2	+0.1
NV11	Mina Array Sit	87.84	51	P	P	02 30 17.3	-0.3
NV11				IAmb	IAmb	02 30 19.9	
	comp=Z,9.4nm,1.3s						
MPMC	Manual Prospec	87.89	53	P	P	02 30 19.5	+1.5
	baz=259,SNR=7.1						
MK31	Makanchi Array	88.07	318	P	P	02 30 17.9	-0.5
MK31				IAmb	IAmb	02 30 19.3	
	comp=Z,5.4nm,0.8s						
MK31	Makanchi Array	88.07	318	*ce*P	P	02 30 18.1	-0.2
MKAR	Makanchi Array	88.07	318	P	P	02 30 18.2	-0.1
	comp=Z,5.7nm,0.6s,baz=95,slow=6.3,SNR=64						
	comp=Z,5.7nm,0.6s						
MKAR	Makanchi Array	88.07	318	*i* P	P	02 30 18.6	+0.3
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
F31M	Tsiigehtchic	88.14	21	P	P	02 30 19.3	+1.2
	baz=244						
MONP2	Monument Peak	88.15	57	P	P	02 30 20.3	+1.0
	baz=259						
GRAC	Grapevine Rang	88.17	52	P	P	02 30 20.1	+1.1
	baz=259						
PFO	Pinyon Flats O	88.25	56	LR	LR	03 02 08.2	
	comp=Z,288nm,20.4s,baz=250,slow=30						
PFO	Pinyon Flats O	88.25	56	P	P	02 30 19.6	0.0
PFO	Pinyon Flats O	88.25	56	P	P	02 30 19.6	0.0
PFO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
PFO	Pinyon Flats O	88.25	56	P	P	02 30 20.2	+0.5
	baz=259						
TPFO	Pinon Flats	88.25	56	P	P	02 30 20.2	+0.5
	baz=259						
MAKZ	Makanchi	88.28	318	P	P	02 30 19.1	-0.3
MAKZ				IAmb	IAmb	02 30 20.3	
	comp=Z,7.7nm,0.9s						
MAKZ	Makanchi	88.28	318	P	P	02 30 19.1	-0.3
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GSC	Goldstone, Bar	88.29	54	P	P	02 30 19.9	+0.2
	baz=259						
WVOR	Wild Horse Val	88.32	47	P	P	02 30 19.9	+0.2
WVOR				IAmb	IAmb	02 30 27.9	
	comp=Z,12nm,1.1s						
WVOR	Wild Horse Val	88.32	47	P	P	02 30 20.0	+0.2
WVOR				pmax	pmax		
	comp=Z,13nm,1.2s						
ZALV	Zalesovo Beam	88.33	325	P	P	02 30 18.5	-0.8
	comp=Z,1.4nm,0.6s,baz=110,slow=6.9,SNR=8.1						
	comp=Z,1.4nm,0.6s						
ZALV	Zalesovo Beam	88.33	325	P	P	02 30 18.1	-1.2
FURC	Furnace Creek,	88.46	53	P	P	02 30 21.0	+0.6
	baz=259						
INK	Inuvik	88.60	20	P	P	02 30 20.6	+0.4
	comp=Z,5.4nm,1.2s,baz=249,slow=3.2,SNR=4.7						
INK				LR	LR	03 05 40.4	
	comp=Z,97nm,19.3s,baz=286,slow=33						
	comp=Z,5.4nm,1.2s						
INK	Inuvik	88.60	20	P	P	02 30 21.1	+0.8
	baz=244						
SWSC	Sam W. Stewart	88.67	57	P	P	02 30 22.6	+1.2
	baz=260						
BELC	Belle Mtn. Jos	88.70	56	P	P	02 30 21.9	+0.2
	baz=260,SNR=7.1						
SHOC	Shoshone, Teco	88.82	54	P	P	02 30 22.9	+0.7
	baz=259						
BMN	Battle Mountai	88.95	49	P	P	02 30 22.7	-0.1
BMN	Battle Mountai	88.95	49	P	P	02 30 22.7	-0.1
BMN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TPNV	Topopah Spring	89.04	53	P	P	02 30 24.0	+0.7
	baz=259						
BC3	Big Chuckawall	89.08	56	P	P	02 30 24.6	+1.1
	baz=260,SNR=8.6						
GMRC	Granite Mounta	89.11	55	P	P	02 30 25.0	+1.4
	baz=260						
IRM	Iron Mountain	89.42	56	P	P	02 30 25.4	+0.4
	baz=260,SNR=10						
KOTAN	Kotaneelee Air	89.49	29	P	P	02 30 25.1	+0.4
	baz=253						
GLA	Glamis	89.50	57	P	P	02 30 26.5	+1.1
	baz=260						
PDMCI	Parker Dam,Lak	90.27	56	P	P	02 30 30.6	+1.7
	baz=260						
113A	Mohawk Valley,	90.33	57	P	P	02 30 29.6	+0.4
ELK	Elko	90.49	49	P	P	02 30 30.0	-0.1
ELK	Elko	90.49	49	P	P	02 30 30.0	-0.1
ELK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
NEW	Newport	90.56	41	LR	LR	03 03 01.5	
	comp=Z,108nm,20.7s,baz=235,slow=30						
NEW	Newport	90.56	41	P	P	02 30 30.6	+0.6
	baz=259						
214A	Organ Pipe Nat	91.00	58	P	P	02 30 33.8	+1.4
	baz=261						
KURK	Kurchatov	91.28	321	*ce*P	P	02 30 32.1	-1.1
KURK				pmax	pmax		
	comp=Z,11nm,2.5s						
KURBB	Kurchatov Arra	91.32	321	LR	LR	03 11 16.0	
	comp=Z,52nm,20.1s,baz=162,slow=35						
LCMT	Little Creek M	91.42	53	P	P	02 30 34.9	+0.5
LCMT				IAmb	IAmb	02 30 37.2	
	comp=Z,10nm,1.1s						
HLID	Hailey	91.57	46	P	P	02 30 37.1	+2.1
	baz=260,SNR=7.7						
NRIK	Noril'sk	91.63	340	P	P	02 30 33.7	-0.7
	comp=Z,2.6nm,0.4s,baz=101,slow=6.0,SNR=3.7						
NRIK				LR	LR	03 11 04.5	
	comp=Z,126nm,20.8s,baz=101,slow=35						
	comp=Z,2.6nm,0.4s						
NRIK	Noril'sk	91.63	340	*ce*P	P	02 30 34.3	-0.1
SZCU	Shurtz Canyon	91.63	52	IAmb	IAmb	02 30 44.0	
	comp=Z,15nm,1.2s						
KNB	Kanab	91.75	53	P	P	02 30 36.4	+0.4
KNB	Kanab	91.75	53	P	P	02 30 36.4	+0.4
KNB				pmax	pmax		
	comp=Z,23nm,1.3s						

LPIG	**La Paz**	**92.08**	**66**	LR	LR	03 06 38.1	
	comp=Z,97nm,18.4s,baz=206,slow=32						
C36M	**Paulatuk**	**92.17**	**20**	P	**P**	**02 30 37.3**	**+0.4**
	baz=253						
DUG	**Dugway, Tooele**	**92.23**	**50**	P	**P**	**02 30 38.3**	**+0.2**
DUG				IAmb	IAmb	02 30 53.9	
	comp=Z,9.2nm,1.3s						
DUG	**Dugway, Tooele**	**92.23**	**50**	P	**P**	**02 30 38.3**	**+0.2**
DUG				pmax	pmax		
	comp=Z,9.0nm,1.3s						
DUG	**Dugway, Tooele**	**92.23**	**50**	P	**P**	**02 30 39.4**	**+1.3**
	baz=262						
MTPU	**Mount Pierson**	**92.40**	**52**	IAmb	IAmb	02 30 42.8	
	comp=Z,11nm,1.0s						
A36M	**Sachs Harbour**	**92.59**	**17**	P	**P**	**02 30 40.2**	**+1.4**
	baz=252						
WUAZ	**Wupatki**	**92.70**	**55**	IAmb	IAmb	02 30 43.5	
	comp=Z,11nm,1.2s						
WUAZ	**Wupatki**	**92.70**	**55**	P	**P**	**02 30 41.8**	**+1.5**
	baz=262						
TUC	**Tucson**	**92.75**	**58**	P	**P**	**02 30 41.9**	**+1.3**
	baz=262						
MPU	**Maple Canyon**	**93.10**	**50**	IAmb	IAmb	02 30 51.3	
	comp=Z,17nm,1.4s						
Q16A	**Castle Valley**	**93.31**	**51**	IAmb	IAmb	02 30 52.6	
	comp=Z,18nm,1.5s						
HWUT	**Hardware Ranch**	**93.37**	**49**	P	**P**	**02 30 43.4**	**+0.1**
HWUT				IAmb	IAmb	02 30 45.4	
	comp=Z,6.1nm,0.9s						
BELA	**Belgrano 2**	**93.83**	**177**	P	**P**	**02 30 44.3**	**-0.3**
YKA	**Yellowknife Ar**	**94.45**	**28**	P	**P**	**02 30 47.8**	**+0.2**
	comp=Z,4.2nm,1.0s,baz=256,slow=4.6,SNR=33						
	comp=Z,4.2nm,1.0s						
YKA	**Yellowknife Ar**	**94.45**	**28**	P	**P**	**02 30 47.1**	**-0.5**
BW06	**Boulder Array**	**94.99**	**48**	P	**P**	**02 30 50.0**	**-0.8**
BW06	**Boulder Array**	**94.99**	**48**	P	**P**	**02 30 51.9**	**+1.0**
	baz=264						
PD31	**Pinedale Array**	**94.99**	**48**	P	**P**	**02 30 50.0**	**-0.8**
PDAR	**Pinedale Array**	**94.99**	**48**	P	**P**	**02 30 51.7**	**+0.9**
	comp=Z,2.7nm,0.7s,baz=232,slow=2.2,SNR=28						
	comp=Z,2.7nm,0.7s						
PDAR	**Pinedale Array**	**94.99**	**48**	P	**P**	**02 30 50.3**	**-0.5**
RLMT	**Red Lodge**	**95.44**	**45**	P	**P**	**02 30 53.1**	**+0.3**
	baz=264						
KK31	**Karatay Array**	**95.70**	**313**	P	**P**	**02 30 52.5**	**-1.2**
KK31				IAmb	IAmb	02 30 54.1	
	comp=Z,16nm,1.9s						
KK31	**Karatay Array**	**95.70**	**313**	P	**P**	**02 30 52.6**	**-1.2**
KK31				pmax	pmax		
	comp=Z,16nm,2.0s						
KKAR	**Karatay Array**	**95.70**	**313**	P	**P**	**02 30 52.1**	**-1.7**
KKAR	**Karatay Array**	**95.70**	**313**	P	**P**	**02 30 52.1**	**-1.7**
S22A	**4UR Ranch, Cre**	**96.58**	**53**	P	**P**	**02 30 59.0**	**+0.7**
	baz=265						
ANMO	**Albuquerque**	**96.63**	**56**	LR	LR	03 08 52.5	
	comp=Z,124nm,19.1s,baz=329,slow=32						
ANMO	**Albuquerque**	**96.63**	**56**	P	**P**	**02 30 58.6**	**+0.1**
	baz=265						
BVAR	**Borovoye Array**	**96.64**	**323**	LR	LR	03 15 09.4	
	comp=Z,38nm,21.0s,baz=102,slow=36						
BRVK	**Borovoye**	**96.71**	**323**	*ce*P	**P**	**02 30 57.7**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
K22A	**Casper**	**97.20**	**48**	P	Pdif	02 31 01.7	+0.8
	baz=266						
MNTX	**Cornudas Mount**	**97.25**	**59**	P	Pdif	02 31 02.0	+0.8
	baz=265						
N23A	**Red Feather La**	**97.51**	**50**	P	Pdif	02 31 03.0	+0.5
	baz=266						
LAO	**LASA Array**	**97.69**	**44**	P	Pdif	02 31 04.2	+1.4
	baz=267						
ISCO	**Idaho Springs**	**97.69**	**51**	P	Pdif	02 31 03.6	+0.3
	baz=266						
KIV	**Kislovodsk**	**115.72**	**315**	*e*PKIKP	**PKiKP**	**02 36 08.1**	**-2.3**
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
O53A	**New Philadelph**	**116.28**	**49**	P	**PKiKP**	**02 36 11.8**	**+0.3**
	baz=282						
MNK	**Minsk**	**120.43**	**330**	*i* PKP	**PKPdf**	**02 36 17.2**	**-1.8**
	comp=E,1.0nm,0.6s						
MNK				*i* PKP	**PKPdf**	**02 36 17.2**	**-1.8**
	comp=N,35nm,0.9s						
MNK				*i* PKP	**PKPdf**	**02 36 17.2**	**-1.8**
	comp=Z,7.0nm,0.8s,baz=237						
MNK				*i* pPKP	**sPKPdf**	**02 36 32.3**	**-0.8**
MNK				*i* PP	**PP**	**02 37 51.0**	**+5.6**
MNK				*i* PPP	PPP	02 40 17.8	
MNK				*i* SKS	**SKSac**	**02 43 19.4**	**+5.5**
MNK				*i* PS	**PS**	**02 47 38.6**	**+1.9**
MNK				*i* SS	**SS**	**02 54 11.0**	**-0.4**
MNK				*i* SSS	SSS	02 58 33.5	
MNK				*i* LQ	LQ	03 21 18.6	
MNK				*i* LR	LR	03 26 36.0	
MNK				*i* LRM	MLR	03 27 47.6	
	comp=Z,115nm,14.2s						
MNK				*i* LRM	MLR	03 27 59.8	
	comp=E,22nm,12.9s						
MNK				*i* LRM	MLR	03 28 06.9	
	comp=N,218nm,12.9s						
MNK	**Minsk**	**120.43**	**330**	*i* PKIKP	**PKPdf**	**02 36 17.1**	**-1.8**
MNK				*i*		02 36 32.3	
MNK				*i*		02 37 50.9	
MNK				*i* PPP	PPP	02 40 17.7	
MNK				*i*		02 43 19.3	
MNK				*i* PS	**PS**	**02 47 38.6**	**+1.9**
MNK				*i* SS	SS	02 54 11.0	-0.4
MNK				*i* SSS	SSS	02 58 33.4	
MNK				pmax	pmax		
	comp=E,1.0nm,0.6s						
MNK				pmax	pmax		
	comp=N,35nm,0.9s						
MNK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MNK				MLR	MLR		
	comp=Z,115nm,14.0s						
MNK				MLR	MLR		
	comp=E,22nm,13.0s						
MNK				MLR	MLR		
	comp=N,218nm,13.0s						
BR131	**Keskin Array S**	**123.42**	**313**	*i* PKIKP	**PKPdf**	**02 36 25.3**	**-0.1**
BRTR	**Keskin Array B**	**123.42**	**313**	PKP	**PKiKP**	**02 36 25.6**	**-0.1**
	comp=N,2.3nm,1.2s,baz=325,slow=6.2,SNR=4.2						
BOSA	**Boshof**	**123.88**	**228**	PKP	**PKiKP**	**02 36 26.9**	**-0.1**
	comp=N,2.7nm,0.8s,baz=138,slow=1.1,SNR=7.5						
LPAZ	**La Paz**	**125.78**	**117**	PKP	**PKiKP**	**02 36 32.6**	**+1.1**
	comp=N,0.9nm,0.7s,baz=247,slow=9.8,SNR=3.7						
VYHS	**Vyhne**	**128.53**	**329**	*e*PKIKP	**PKiKP**	**02 36 35.9**	**+0.5**
VYHS	**Vyhne**	**128.53**	**329**	*e*PKP	**PKiKP**	**02 36 35.9**	**+0.5**
MODS	**Modra-Piesok**	**129.40**	**329**	*e*PKIKP	**PKiKP**	**02 36 37.4**	**+0.2**
MODS	**Modra-Piesok**	**129.40**	**329**	*e*PKP	**PKiKP**	**02 36 37.4**	**+0.2**
PBRG	**Braganca**	**144.59**	**344**	*e*PKP	**PKPdf**	**02 37 04.1**	**-0.6**
PGAV	**Gavieira, Arco**	**144.83**	**346**	*e*PKP	**PKPdf**	**02 37 05.2**	**+0.1**
PCAB	**Cabril**	**145.02**	**346**	*e*PKP	**PKPbc**	**02 37 04.2**	**-0.5**
MVO	**Moncorvo**	**145.27**	**344**	*e*PKP	**PKPdf**	**02 37 06.7**	**+0.8**
POLO	**Lamas de Olo**	**145.27**	**345**	*e*PKP	**PKPdf**	**02 37 06.9**	**+1.0**
PVRL	**Vila Real**	**145.35**	**345**	*e*PKP	**PKPdf**	**02 37 07.1**	**+1.1**
ESDC	**Sonseca Array**	**145.66**	**339**	PKPbc	**PKPbc**	**02 37 06.8**	**-0.1**
	comp=N,11nm,1.0s,baz=11,slow=3.0,SNR=37						
PVIS	**Viseu**	**145.92**	**345**	*e*PKP	**PKPab**	**02 37 08.8**	**+0.7**
MTE	**Manteigas**	**146.12**	**344**	*e*PKP	**PKiKP**	**02 37 10.9**	**-0.7**
PCBR	**Castelo Branco**	**146.62**	**344**	*e*PKP	**PKPab**	**02 37 11.0**	**+0.3**
PCAS	**Casmilo, Conde**	**146.70**	**345**	*e*PKP	**PKiKP**	**02 37 12.6**	**-0.1**
PMRV	**Marv??o**	**146.98**	**343**	*e*PKP	**PKPab**	**02 37 11.9**	**-0.3**
PMTG	**Montargil**	**147.55**	**344**	*e*PKP	**PKPbc**	**02 37 13.0**	**+0.7**
PESTR	**Estremoz**	**147.56**	**343**	*e*PKP	**PKiKP**	**02 37 14.8**	**+0.3**
EVO	**Evora**	**147.99**	**344**	*e*PKP	**PKiKP**	**02 37 14.6**	**-0.8**
PBEJ	**Beja**	**148.42**	**343**	*e*PKP	**PKiKP**	**02 37 16.0**	**-0.3**
PCVE	**Castro Verde**	**148.84**	**343**	*e*PKP	**PKPab**	**02 37 20.6**	**+1.0**
TORD	**Torodi Ar. Bea**	**158.97**	**286**	PKP	**PKPdf**	**02 37 27.5**	**+0.7**
	comp=N,2.3nm,1.1s,baz=77,slow=37,SNR=7.2						
TORD				PKPab	**PKPab**	**02 38 02.9**	**-0.2**
	comp=N,4.8nm,1.0s,baz=74,slow=4.2,SNR=11						

*IDC **18** 02:33:25.5±0.8, 62°.08S×164°.59E, h0^{km}, mb4.2/7, mbtmp4.3/8, ML4.9/1, MS4.5/27, Error ellipse: s-maj=39.6km s-min=18.3km az=71.0*

*NEIC **18** 02:33:28.2±1.9, 62°.4S±0°.1×164°.0E±0°.3, h10^{km}±1^{km}, mb4.7/12, Error ellipse: s-maj=20.1km s-min=19.0km az=227.0*

*GCMT **18** 02:33:30.2±0.2, 62°.16S±0°.01×165°.12E±0°.02, h19^{km}±1^{km}, MW5.2/127, Moment Tensor Solution. s74,c100; s127,c204; Duration: 1^{s}.0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.17±.02; $M_{\theta\theta}$0.97±.02; $M_{\phi\phi}$-0.80±.02; $M_{r\theta}$-0.33±.04; $M_{\theta\phi}$-0.14±.02; $M_{\phi r}$0.14±.04; Best double couple: $M_0$0.95300×10^{17} NP1:ϕ_s319.00000°, δ87.00000°, λ19.00000°. NP2:ϕ_s228.00000°, δ71.00000°, λ177.00000°. Principal axes: T 1.0710, Plg15.0000°, Azm185.0000°; N -0.2350, Plg71.0000°, Azm329.0000°; P -0.8340, Plg11.0000°, Azm92.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 02:33:27.2±0.6**, 62°.24S**±0°.09×**164°.3E**±0°.2**, h10^{km}, n68, σ1^{s}.21**/28**, mb4.6**/10**, MS4.5**/28**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**15.38**	**182**	Pn	**Pn**	**02 37 04.1**	**+0.3**
	5.0nm,0.3s,baz=358,slow=13,SNR=125						
VNDA				LR	LR	02 41 58.2	
	comp=Z,4µm,21.1s,baz=8.0,slow=33						
	20nm,0.4s						
VNDA	**Vanda**	**15.38**	**182**		**Pn**	**02 37 03.9**	**+0.1**
SBA	**Scott Base**	**15.71**	**178**		**Pn**	**02 37 06.6**	**-1.5**
RPZ	**Rata Peaks**	**18.98**	**15**	LR	LR	02 43 57.7	
	comp=Z,3µm,20.4s,baz=206,slow=34						
CASY	**Casey**	**23.05**	**236**	P	**P**	**02 38 29.5**	**-2.7**
URZ	**Urewera**	**25.28**	**24**	P	**P**	**02 38 49.9**	**-3.4**
	13nm,1.1s,baz=193,slow=18,SNR=2.9						
URZ				LR	LR	02 48 42.6	
	comp=Z,2µm,18.1s,baz=276,slow=37						
	13nm,1.1s						
QSPA	**South Pole Qui**	**27.85**	**180**	P	**P**	**02 39 17.0**	**+0.4**
	9.9nm,1.0s,baz=9.7,slow=4.7,SNR=16						
QSPA				LR	LR	02 48 52.6	
	comp=Z,1µm,19.0s,baz=28,slow=33						
	9.9nm,1.0s						
QSPA	**South Pole Qui**	**27.85**	**180**	P	**P**	**02 39 16.6**	**-0.1**
QSPA				IAmb	IAmb	02 39 18.9	
	comp=Z,18nm,1.1s						
STKA	**Stephens Creek**	**33.70**	**324**	LR	LR	02 51 44.8	
	comp=Z,638nm,19.4s,baz=155,slow=33						
MAW	**Mawson**	**38.67**	**217**	LR	LR	02 56 59.9	
	comp=Z,1µm,19.5s,baz=124,slow=36						
DZM	**Mont Dzumac**	**40.17**	**3**	*e*S	S	02 46 51.6	-18
	comp=Z,127nm,23.9s						
DZM				*e*LR	LR	02 51 47.4	
	comp=Z,609nm,31.8s						
DZM	**Mont Dzumac**	**40.17**	**3**	LR	LR	02 56 30.6	
	comp=Z,325nm,18.3s,baz=209,slow=35						
H01W1	**Cape Leeuwin H**	**41.40**	**288**	T	T	03 26 17.9	
	baz=147,slow=76,SNR=133						
H01W2	**Cape Leeuwin H**	**41.41**	**288**	T	T	03 26 13.5	
	baz=147,slow=76,SNR=114						
H01W3	**Cape Leeuwin H**	**41.42**	**288**	T	T	03 26 19.1	
	baz=147,slow=76,SNR=113						
ASAR	**Alice Springs**	**43.68**	**318**	P	**P**	**02 41 32.1**	**+0.1**
	comp=Z,2.9nm,0.8s,baz=161,slow=8.3,SNR=16						
ASAR				PcP	**PcP**	**02 43 19.2**	**+0.2**
	comp=Z,0.7nm,1.0s,baz=143,slow=3.7,SNR=2.4						
ASAR				LR	LR	02 58 03.3	
	comp=Z,273nm,21.3s,baz=168,slow=34						
	comp=Z,2.9nm,0.8s						
ASAR	**Alice Springs**	**43.68**	**318**	P	**P**	**02 41 32.8**	**+0.8**
AS31	**Alice Springs**	**43.68**	**318**	P	**P**	**02 41 32.9**	**+0.9**
CTA	**Charters Tower**	**43.92**	**335**	P	**P**	**02 41 33.3**	**-0.7**
	comp=Z,1.6nm,0.5s,baz=180,slow=5.1,SNR=4.4						
CTA				LR	LR	02 57 51.2	
	comp=Z,621nm,18.1s,baz=162,slow=33						
	comp=Z,1.6nm,0.5s						
CTAO	**Charters Tower**	**43.92**	**335**	P	**P**	**02 41 33.9**	**-0.1**
TROLL	**Troll, Antarti**	**45.44**	**188**	P	**P**	**02 41 45.8**	**+0.2**
MSVF	**Nonsavu**	**45.50**	**19**	LR	LR	02 58 28.7	
	comp=Z,987nm,19.2s,baz=194,slow=33						
SNAA	**Sanae**	**46.07**	**186**	P	**P**	**02 41 51.3**	**+0.8**
SNAA	**Sanae**	**46.07**	**186**	LR	LR	03 00 27.7	
	comp=Z,1µm,19.5s,baz=136,slow=35						
SNAA	**Sanae**	**46.07**	**186**	P	**P**	**02 41 51.0**	**+0.5**
VNA2	**Neumayer--Watz**	**46.99**	**184**	P	**P**	**02 41 58.0**	**+0.3**
	baz=168,slow=4.0						
WRA	**Warramunga Arr**	**47.05**	**320**	P	**P**	**02 41 57.9**	**-0.7**
	comp=Z,1.2nm,1.1s,baz=161,slow=6.8,SNR=4.1						
WRA				PcP	**PcP**	**02 43 29.4**	**-1.3**
	comp=Z,0.4nm,0.8s,baz=158,slow=3.4,SNR=2.2						
WRA				LR	LR	02 59 48.5	
	comp=Z,376nm,18.9s,baz=132,slow=34						
	comp=Z,1.2nm,1.1s						
RAR	**Rarotonga**	**47.82**	**48**	LR	LR	02 58 22.3	
	comp=Z,330nm,19.6s,baz=198,slow=31						
PMSA	**Palmer Station**	**48.33**	**155**	LR	LR	02 58 49.0	
	comp=Z,293nm,21.2s,baz=128,slow=32						
HNR	**Honiara**	**52.80**	**355**	LR	LR	03 01 55.9	
	comp=Z,4µm,18.4s,baz=186,slow=32						
PMG	**Port Moresby**	**54.19**	**339**	LR	LR	03 02 25.4	
	comp=Z,512nm,19.8s,baz=161,slow=32						
PMG	**Port Moresby**	**54.19**	**339**	P	**P**	**02 42 54.9**	**+2.3**
PMG				IAmb	IAmb	02 43 08.9	
	comp=Z,6.1nm,0.9s						
PAE	**Paea**	**54.85**	**57**	*e*T	T	03 41 21.0	
	comp=Z,12nm,0.2s						
TVO	**Taravao**	**54.88**	**58**	*e*T	T	03 41 22.9	
	comp=Z,10nm,0.3s						
PPT2	**Papeete2**	**54.92**	**57**	*e*LQ	LQ	02 55 58.8	
	comp=Z,314nm,23.2s						
PPT2				*e*LR	LR	02 58 19.3	
	comp=Z,228nm,22.8s						
PPT2				*e*LR	LR	02 58 19.5	
	comp=Z,327nm,22.2s						
PPT2	**Papeete2**	**54.92**	**57**	*e*T	T	03 41 21.0	
	comp=Z,18nm,0.3s						
PPT	**Papeete**	**54.94**	**57**	LR	LR	02 59 58.0	
	comp=Z,224nm,19.6s,baz=209,slow=29						
VAH	**Vaihoa**	**57.83**	**58**	*e*T	T	03 45 09.4	
	comp=Z,213nm,0.2s						
RPN	**Rapa Nui**	**64.73**	**100**	LR	LR	03 04 29.7	
	comp=Z,340nm,20.3s,baz=248,slow=29						
KAPI	**Kappang**	**65.83**	**310**	LR	LR	03 10 02.3	
	comp=Z,145nm,22.0s,baz=151,slow=33						
TAOE	**Nuku Hiva Isla**	**66.64**	**63**	*e*LR	LR	03 03 43.3	
	comp=Z,240nm,26.2s						
PLCA	**Paso Flores**	**68.33**	**138**	P	**P**	**02 44 28.4**	**+0.1**
	comp=Z,1.3nm,1.0s,baz=200,slow=6.7,SNR=4.1						
	comp=Z,1.3nm,1.0s						
H03S2	**Juan Fernandez**	**71.71**	**129**	T	T	04 03 24.9	
	baz=204,slow=74,SNR=454						
H03S1	**Juan Fernandez**	**71.71**	**129**	T	T	04 03 26.3	
	baz=204,slow=74,SNR=452						
H03S3	**Juan Fernandez**	**71.72**	**129**	T	T	04 03 25.7	
	baz=204,slow=74,SNR=352						
H03N3	**Juan Fernandez**	**72.05**	**128**	T	T	04 03 50.2	
	baz=206,slow=80,SNR=18						
H03N2	**Juan Fernandez**	**72.06**	**128**	T	T	04 03 43.2	
	baz=206,slow=80,SNR=55						
H03N1	**Juan Fernandez**	**72.07**	**128**	T	T	04 03 48.8	
	baz=206,slow=80,SNR=24						
BO02	**Sierra Bellavi**	**73.68**	**135**	P	**P**	**02 45 01.6**	**+0.8**
BO02				IAmb	IAmb	02 45 07.3	
	comp=Z,8.5nm,1.1s						
SBUM	**Sibu**	**75.50**	**306**	P	**P**	**02 45 12.3**	**+0.8**
SBUM				IAmb	IAmb	02 45 26.7	
	comp=Z,12nm,1.5s						
GUMO	**Guam**	**77.10**	**341**	LR	LR	03 14 43.2	
	comp=Z,72nm,19.9s,baz=128,slow=32						
SUR	**Sutherland**	**81.22**	**211**	LR	LR	03 19 54.4	
	comp=Z,373nm,19.5s,baz=174,slow=34						
BOSA	**Boshof**	**83.67**	**215**	LR	LR	03 19 39.6	
	comp=Z,214nm,21.4s,baz=180,slow=33						
H08S2	**Diego Garcia H**	**84.11**	**265**	T	T	04 19 47.3	
	baz=152,slow=76,SNR=25						
H08S1	**Diego Carcia H**	**84.12**	**265**	T	T	04 19 48.0	
	baz=152,slow=76,SNR=36						
H08S3	**Diego Garcia H**	**84.14**	**265**	T	T	04 19 48.8	
	baz=152,slow=76,SNR=32						
LBTB	**Lobatse**	**86.98**	**217**	LR	LR	03 23 13.4	
	comp=Z,252nm,18.2s,baz=160,slow=34						
LPAZ	**La Paz**	**91.62**	**130**	P	**P**	**02 46 36.5**	**+1.4**
	comp=Z,2.4nm,1.0s,baz=180,slow=2.0,SNR=2.9						
	comp=Z,2.4nm,1.0s						
LPAZ	**La Paz**	**91.62**	**130**	P	**P**	**02 46 34.2**	**-0.9**
LPAZ				IAmb	IAmb	02 46 41.4	
	comp=Z,3.8nm,1.0s						
NNA	**Nana**	**92.24**	**121**	LR	LR	03 18 36.5	
	comp=Z,238nm,20.4s,baz=180,slow=29						
TSUM	**Tsumeb**	**94.64**	**211**	LR	LR	03 26 59.3	
	comp=Z,530nm,21.5s,baz=163,slow=34						
CMAR	**Chiang Mai Arr**	**95.30**	**300**	LR	LR	03 27 53.3	
	comp=Z,79nm,19.1s,baz=150,slow=34						
ATAH	**Atahualpa**	**96.00**	**118**	LR	LR	03 19 58.8	
	comp=Z,167nm,21.6s,baz=183,slow=29						
JNU	**Nakatsue**	**98.77**	**332**	LR	LR	03 29 06.0	
	comp=Z,98nm,19.5s,baz=132,slow=34						
H06S1	**SOCORRO T**	**103.99**	**77**	T	T	04 43 09.1	
	SNR=65						
ILAR	**Eielson Array**	**131.78**	**26**	PKP	**PKPdf**	**02 52 38.9**	**+0.3**
	comp=Z,0.1nm,0.5s,baz=216,slow=4.5,SNR=1.8						
YKA	**Yellowknife Ar**	**138.51**	**44**	PKP	**PKPdf**	**02 52 51.3**	**+0.1**
	comp=Z,0.1nm,0.4s,baz=217,slow=2.7,SNR=3.2						
ESDC	**Sonseca Array**	**156.30**	**203**	PKPab	**PKPab**	**02 53 50.4**	**+1.1**
	comp=Z,1.1nm,0.9s,baz=176,slow=4.1,SNR=5.7						

ROM 18 02:34:55.7±0.1**, 42°.766N**±0°.002×**13°.273E**±0°.003**, h13^{km}, ML1.0**/2**, 4C-2D, Error ellipse: s-maj=0.2km s-min=0.1km az=318.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1245	**Castelsantange**	**0.11**	**325**	P	Pg	02 34 59.1	+0.2
T1245				S	Sg	02 35 01.7	+0.4
MMO1	**Montemonaco**	**0.14**	**17**	P	Pg	02 34 59.6	+0.4
MMO1				S	Sg	02 35 02.3	+0.6
T1241	**Roccafluvione,**	**0.15**	**52**	⇑P	Pg	02 34 59.7	+0.4
T1241				S	Sg	02 35 02.3	+0.4
T1218	**Civita (PG)**	**0.15**	**230**	⇑P	Pg	02 34 59.8	+0.4
T1218				S	Sg	02 35 02.6	+0.6
T1218				AML	AML		
	comp=E,80µm,0.2s						
T1218				AML	AML		
	comp=N,164µm,0.1s						
T1218				AML	AML		
	comp=E,80µm,0.2s						
T1218				AML	AML		
	comp=N,164µm,0.1s						
T1218				AML	AML		
	comp=N,164µm,1.9s						
MC2	**Monte Cornacci**	**0.16**	**337**	⇓P	Pg	02 35 00.0	+0.4
MC2				S	Sg	02 35 02.9	+0.5
T1212	**Cascia, Frazio**	**0.17**	**265**	⇑P	Pg	02 35 00.1	+0.4
T1212				S	Sg	02 35 03.0	+0.5
T1216	**Preci, Frazion**	**0.23**	**304**	P	Pg	02 35 00.9	+0.4
T1216				S	Sg	02 35 04.7	+0.8
T1217	**Poggiodomo (PG**	**0.26**	**258**	⇓P	Pg	02 35 01.5	+0.4
T1217				S	Sg	02 35 05.7	+0.8
TERO	**Teramo**	**0.28**	**120**	⇑P	Pg	02 35 01.8	+0.2
TERO				S	Sb	02 35 06.5	-0.9
TERO				AML	AML		
	comp=N,33µm,0.3s						
TERO				AML	AML		
	comp=E,21µm,1.4s						
TERO				AML	AML		
	comp=E,21µm,0.6s						

ROM 18 02:36:51.2±0.0**, 42°.726N**±0°.003×**13°.193E**±0°.004**, h11^{km}, ML1.2**/6**, 3C-3D, Error ellipse: s-maj=0.3km s-min=0.3km az=255.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1214	**Arquata del Tr**	**0.04**	**19**	P	Pg	02 36 53.6	+0.1
T1214				S	Sg	02 36 54.9	-0.2
T1218	**Civita (PG)**	**0.08**	**226**	P	Pg	02 36 54.2	+0.4
T1218				S	Sg	02 36 55.6	0.0
T1218				AML	AML		
	comp=E,362µm,0.1s						
T1218				AML	AML		
	comp=N,386µm,0.1s						
T1218				AML	AML		
	comp=N,382µm,0.1s						
T1218				AML	AML		
	comp=E,351µm,0.1s						
T1212	**Cascia, Frazio**	**0.11**	**283**	⇑P	Pg	02 36 54.6	+0.4
T1212				S	Sg	02 36 56.8	+0.5
T1212				AML	AML		
	comp=E,89µm,0.7s						
T1212				AML	AML		
	comp=N,76µm,0.5s						
T1212				AML	AML		
	comp=N,76µm,1.5s						
T1212				AML	AML		
	comp=E,89µm,1.3s						
T1245	**Castelsantange**	**0.13**	**358**	⇓P	Pg	02 36 55.1	+0.6
T1245				S	Sg	02 36 57.6	+0.7
T1245				AML	AML		
	comp=E,93µm,1.0s						
T1245				AML	AML		
	comp=N,144µm,0.2s						
MC2	**Monte Cornacci**	**0.19**	**359**	P	Pg	02 36 56.0	+0.5
MC2				S	Sg	02 36 59.6	+1.3
T1217	**Poggiodomo (PG**	**0.19**	**266**	⇓P	Pg	02 36 56.1	+0.6
T1217				S	Sg	02 36 59.2	+0.9
MMO1	**Montemonaco**	**0.20**	**30**	P	Pg	02 36 56.1	+0.6
MMO1				S	Sg	02 36 59.5	+1.0
T1216	**Preci, Frazion**	**0.21**	**322**	⇑P	Pg	02 36 56.3	+0.6
T1216				S	Sg	02 36 59.8	+1.1
RM33	**Pellescritta (**	**0.22**	**176**	⇓P	Pg	02 36 56.4	+0.6
RM33				S	Sg	02 37 00.3	+1.3
RM33				AML	AML		
	comp=E,48µm,1.0s						
RM33				AML	AML		
	comp=N,21µm,1.5s						
RM33				AML	AML		
	comp=E,48µm,1.0s						
RM33				AML	AML		
	comp=N,21µm,0.5s						
T1241	**Roccafluvione,**	**0.22**	**53**	P	Pg	02 36 56.5	+0.6
T1241				S	Sg	02 36 59.9	+0.9
T1241				AML	AML		
	comp=N,40µm,1.3s						
T1241				AML	AML		
	comp=N,40µm,1.3s						
T1241				AML	AML		
	comp=E,33µm,1.3s						
T1256	**Bolognola (MC)**	**0.28**	**5**	P	Pb	02 36 57.8	-0.6
T1256				AML	AML		
	comp=E,133µm,0.6s						
T1256				AML	AML		
	comp=N,118µm,1.1s						
T1256				AML	AML		
	comp=E,133µm,1.4s						
TERO	**Teramo**	**0.32**	**109**	⇑P	Pg	02 36 58.0	+0.3
TERO				S	Sg	02 37 03.1	+1.1

*IDC **18** 02:43:20.7±1.3, 39°.98N×145°.14E, h0^{km}, mb3.6/5, mbtmp3.7/8, ML3.1/3, Error ellipse: s-maj=31.5km s-min=28.2km az=84.0*

*JMA **18** 02:43:24.7±0.3, 40°.1N±0°.9×14°5E±°, h42^{km}, MV3.4/25, FAR E OFF NORTH HONSHU*

ISC 18 02:43:25.4±1.0**, 40°.07N**±0°.06×**144°.98E**±0°.07**, h32^{km}, n23, σ1^{s}.49**/36**, mb3.5**/5**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JEM	**Erimo**	**2.38**	**325**	*e*P	**Pn**	**02 44 01.7**	**-0.4**
JEM				*e*S	**Sn**	**02 44 29.9**	**-0.3**
JTH	**Tanohata**	**2.39**	**268**	*e*S	**Sn**	**02 44 28.1**	**-2.5**
MIYJ	**Miyakonagasawa**	**2.48**	**260**	P	**Pn**	**02 44 02.8**	**-0.8**
MIYJ				S	**Sn**	**02 44 30.9**	**-1.8**
JKEN	**Kujiedanarisaw**	**2.51**	**274**	*e*P	**Pn**	**02 44 02.6**	**-1.3**
JKEN				*e*S	**Sn**	**02 44 30.4**	**-3.0**
JANG	**Nango**	**2.67**	**278**	*e*P	**Pn**	**02 44 05.2**	**-0.9**
JANG				*e*S	**Sn**	**02 44 35.2**	**-2.2**
JNBK	**Urakawa-nobuka**	**2.77**	**323**	*e*P	**Pn**	**02 44 08.4**	**+0.8**
JNBK				*e*S	**Sn**	**02 44 40.5**	**+0.5**
JCH	**Churui**	**2.82**	**335**	P	**Pn**	**02 44 07.5**	**-0.7**
JCH				S	**Sn**	**02 44 39.6**	**-1.4**
JOM	**Ohasama**	**2.90**	**259**	P	**Pn**	**02 44 09.2**	**-0.2**
JOM				*e*S	**Sn**	**02 44 41.9**	**-1.2**
JAK	**Akkeshi**	**2.93**	**356**	*e*P	**Pn**	**02 44 09.2**	**-0.5**
JAK				*e*S	**Sn**	**02 44 43.2**	**-0.6**
JMK	**Ichinoseki**	**3.11**	**250**	*e*P	**Pn**	**02 44 11.5**	**-0.7**
JMK				*e*S	**Sn**	**02 44 46.8**	**-1.5**
JOT	**Ohata**	**3.26**	**295**	*e*P	**Pn**	**02 44 14.2**	**-0.1**
JOT				*e*S	**Sn**	**02 44 50.5**	**-1.4**
NEM2	**Nemuro 2**	**3.34**	**10**	*e*P	**Pn**	**02 44 13.5**	**-1.8**
NEM2				*e*S	**Sn**	**02 44 51.0**	**-3.0**
JAR	**Ashorobuto**	**3.35**	**345**	*e*S	**Sn**	**02 44 52.1**	**-2.0**
JYK	**Kaneyama**	**3.75**	**254**	*e*P	**Pn**	**02 44 21.2**	**+0.2**
JEW	**Eniwo**	**3.83**	**317**	*e*S	**Sn**	**02 45 06.3**	**+0.2**
ASAJ	**Asahikawa**	**4.41**	**337**	Pn	**Pn**	**02 44 29.0**	**-1.1**
	0.9nm,0.3s,baz=41,slow=30,SNR=2.0						
ASAJ				Sn	**Sn**	**02 45 17.2**	**-3.2**
	0.8nm,0.3s,baz=116,slow=30,SNR=1.5						

	4.6nm,0.4s						
MJAR	**Matsushiro Arr**	**6.38**	**239**	Pn	**Pn**	**02 44 57.0**	**-0.2**
	0.1nm,0.3s,baz=74,slow=13,SNR=10						
	6.8nm,1.2s						
USRK	**Ussuriysk Ar.**	**10.49**	**297**	Pn	**Pn**	**02 45 55.3**	**+1.8**
	0.2nm,0.3s,baz=99,slow=14,SNR=7.8						
	4.5nm,0.8s						
ZALV	**Zalesovo Beam**	**42.02**	**310**	P	**P**	**02 51 15.2**	**+1.6**
	0.3nm,0.3s,baz=74,slow=11,SNR=2.0						
ZALV				PcP	**PcP**	**02 53 08.4**	**+0.4**
	1.0nm,0.5s,baz=127,slow=3.8,SNR=4.3						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**44.94**	**300**	P	**P**	**02 51 38.4**	**+1.2**
	0.4nm,0.8s,baz=87,slow=8.2,SNR=2.7						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**60.52**	**192**	P	**P**	**02 53 31.7**	**-0.7**
	0.4nm,0.7s,baz=13,slow=6.8,SNR=2.7						
	0.4nm,0.7s						
FINES	**FINESS Array B**	**67.41**	**333**	P	**P**	**02 54 18.4**	**+1.1**
	3.0nm,0.9s,baz=70,slow=4.6,SNR=7.4						
	3.0nm,0.9s						
PDAR	**Pinedale Array**	**73.55**	**48**	P	**P**	**02 54 56.0**	**+0.6**
	0.2nm,0.5s,baz=79,slow=0.8,SNR=3.8						
	0.2nm,0.5s						

IDC 18 02:56:55.7±2.0**, 6°.48S×152°.65E, h0^{km}, mb3.4**/3**,**
mbtmp3.5/4**, ML3.9**/1**, Error ellipse: s-maj=65.4km**
s-min=25.1km az=113.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.24**	**344**	Pn	Pn	02 57 34.4	+0.3
	30nm,0.3s,baz=318,slow=1.1,SNR=11						
KRVT				Sn	Sn	02 58 00.1	-2.4
	135nm,0.3s,baz=76,slow=22,SNR=27						
	96nm,0.4s						
WRA	**Warramunga Arr**	**22.25**	**231**	P	P	03 01 55.4	+1.0
	0.4nm,0.6s,baz=55,slow=10,SNR=3.1						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**24.83**	**225**	P	P	03 02 19.4	-0.6
	0.8nm,0.6s,baz=60,slow=9.1,SNR=14						
	0.8nm,0.6s						
ILAR	**Eielson Array**	**83.76**	**22**	P	P	03 09 26.4	0.0
	0.4nm,0.9s,baz=242,slow=5.8,SNR=5.0						
	0.4nm,0.9s						

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*ANF **18** 03:03:13.3±0.6, 31°.40N×103°.48W, h5^{km}, ML3.4/7, Error ellipse: s-maj=8.4km s-min=8.0km az=136.0*
*NEIC **18** 03:03:13.3±0.7, 31°.41N±0°.04×103°.44W±0°.03, h4^{km}±7^{km}, mb_Lg2.6/16, ML3.0/28, Error ellipse: s-maj=6.2km s-min=4.2km az=173.0*
ISC 18 03:03:13.5±1.0**, 31°.42N**±0°.04×**103°.45W**±0°.03**, h10^{km}, n34,**
σ0^{s}93/37**, Western Texas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLNB	**Carlsbad**	**0.92**	**337**	Pg	**Pg**	**03 03 30.7**	**-0.6**
ODSA	**Odessa**	**1.04**	**47**	Pg	**Pg**	**03 03 32.2**	**-1.4**
ODSA				Sg	**Sg**	**03 03 46.0**	**-1.2**
ODSA				IAML		03 03 56.1	
	184nm,0.6s						
ODSA				IAML		03 03 56.8	
	226nm,0.8s						
HTMS	**Hat Mesa**	**1.06**	**352**	Pg	**Pg**	**03 03 33.2**	**-0.8**
GDL2	**Guadalupe Moun**	**1.10**	**315**	Pg	**Pg**	**03 03 33.4**	**-1.4**
CPRX	**Cap Rock**	**1.65**	**348**		**Pn**	**03 03 42.8**	**+0.1**
MNTX	**Cornudas Mount**	**1.67**	**280**	P	**Pn**	**03 03 43.0**	**+0.1**
	baz=99						
MNTX				S	**Sn**	**03 04 05.4**	**+0.9**
	baz=99						
TX31	**Lajitas Ar. Si**	**2.08**	**185**	Pn	**Pn**	**03 03 48.8**	**+0.1**
TX31	**Lajitas Ar. Si**	**2.08**	**185**	P	**Pn**	**03 03 48.9**	**+0.3**
	baz=5.3						
TX31				S	**Sn**	**03 04 15.4**	**+0.7**
	baz=5.3						
TX32	**Lajitas Array**	**2.08**	**185**	Pn	**Pn**	**03 03 48.7**	**+0.1**
TXAR	**Lajitas Array**	**2.08**	**185**	Pn	**Pn**	**03 03 48.9**	**+0.3**
POST	**Post**	**2.33**	**45**	Pn	**Pn**	**03 03 52.3**	**+0.3**
POST				IAML		03 04 30.7	
	99nm,0.5s						
POST				IAML		03 04 32.1	
	79nm,0.5s						
POST				IAmb_Lg		03 04 32.1	
	comp=Z,11nm,0.7s						
MSTX	**Muleshoe**	**2.61**	**13**	Pn	**Pn**	**03 03 55.6**	**-0.4**
MSTX	**Muleshoe**	**2.61**	**13**	P	**Pn**	**03 03 56.7**	**+0.8**
	baz=193						
MSTX				S	**Sn**	**03 04 29.8**	**+2.1**
	baz=193						
JCT	**Junction City**	**3.27**	**106**	Pn	**Pn**	**03 04 05.0**	**+0.1**
JCT	**Junction City**	**3.27**	**106**	P	**Pn**	**03 04 06.4**	**+1.4**
	baz=288						
JCT				S	**Sn**	**03 04 45.5**	**+1.6**
	baz=288						
ABTX	**Abilene, Hawle**	**3.45**	**69**	Pn	**Pn**	**03 04 07.6**	**+0.2**
ABTX				IAmb_Lg		03 05 03.8	
	comp=Z,14nm,0.9s						
ABTX	**Abilene, Hawle**	**3.45**	**69**	P	**Pn**	**03 04 07.5**	**+0.1**
	baz=250						
ABTX				S	**Sn**	**03 04 49.9**	**+1.5**
	baz=250						
AMTX	**Amarillo**	**3.76**	**23**	Pn	**Pn**	**03 04 11.8**	**+0.1**
AMTX				IAmb_Lg		03 05 20.4	
	comp=Z,21nm,0.9s						
AMTX	**Amarillo**	**3.76**	**23**	P	**Pn**	**03 04 12.5**	**+0.7**
	baz=204						
AMTX				S	**Sn**	**03 04 58.0**	**+1.8**
	baz=204						
BNM	**Barren Site**	**3.82**	**316**	Pn	**Pn**	**03 04 12.9**	**+0.3**
121A	**Cookes Peak, D**	**3.85**	**288**	Pn	**Pn**	**03 04 12.9**	**0.0**
121A				IAML		03 05 18.6	
	comp=E,14nm,0.5s						
121A				IAML		03 05 24.0	
	comp=N,24nm,0.6s						
121A	**Cookes Peak, D**	**3.85**	**288**	P	**Pn**	**03 04 14.0**	**+1.1**
	baz=106						
121A				S	**Sn**	**03 04 59.7**	**+1.3**
	baz=106						
ANMO	**Albuquerque**	**4.33**	**325**	IAmb_Lg		03 05 41.9	
	comp=Z,7.5nm,0.8s						
WTFS	**Witchita Falls**	**4.82**	**60**	Pn	**Pn**	**03 04 25.6**	**-0.6**
WTFS				IAML		03 05 54.3	
	comp=Z,25nm,0.7s						
WTFS				IAML		03 06 07.2	
	comp=Z,32nm,0.7s						
FW07	**Weatherford**	**4.98**	**74**	Pn	**Pn**	**03 04 28.4**	**0.0**
FW07				IAML		03 05 54.8	
	comp=Z,55nm,0.5s						
FW07				IAmb_Lg		03 05 55.9	
	comp=Z,16nm,0.8s						
FW07				IAML		03 06 01.3	
	comp=Z,58nm,0.7s						
319A	**Douglas**	**4.98**	**271**	Pn	**Pn**	**03 04 27.7**	**-0.8**
319A				IAML		03 06 04.3	
	comp=E,12nm,1.3s						
435B	**Jarrell**	**5.07**	**96**	IAmb_Lg		03 05 58.0	
	comp=Z,14nm,0.8s						
WMOK	**Wichita Mounta**	**5.13**	**49**	IAML		03 05 17.9	
	comp=Z,10nm,5.0s						
WMOK	**Wichita Mounta**	**5.13**	**49**	Pn	**Pn**	**03 04 29.8**	**-0.7**
WMOK				IAmb_Lg		03 06 09.3	
	comp=Z,6.7nm,1.1s						
WHTX	**Lake Whitney,**	**5.14**	**82**	Pn	**Pn**	**03 04 29.5**	**-1.1**
FW06	**Azle**	**5.23**	**71**	Pn	**Pn**	**03 04 31.3**	**-0.6**
FW06				IAML		03 06 04.8	
	comp=Z,34nm,1.0s						
FW06				IAML		03 06 05.0	
	comp=Z,25nm,0.7s						
Z35A	**Perchaven, San**	**5.58**	**68**	IAmb_Lg		03 06 20.5	
	comp=Z,8.6nm,0.8s						
X34A	**Smith Ranch, M**	**5.69**	**55**	Pn	**Pn**	**03 04 38.1**	**0.0**
OK031	**S. Brethren Rd**	**7.13**	**49**	IAmb_Lg		03 07 15.8	
	comp=Z,6.6nm,1.0s						

ROM 18 03:04:29.5±0.1**, 42°.619N**±0°.004×**13°.223E**±0°.007**,**
h13^{km}±1^{km}**, ML0.8**/2**, 5C-2D, Error ellipse: s-maj=0.6km**
s-min=0.4km az=44.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1218	**Civita (PG)**	**0.10**	**303**	⇑P	Pg	03 04 32.8	+0.3
T1218				S	Sg	03 04 34.9	+0.2
T1218				AML	AML		
	comp=E,71µm,0.4s						
T1218				AML	AML		
	comp=N,115µm,0.2s						
T1218				AML	AML		
	comp=N,115µm,0.2s						
T1218				AML	AML		
	comp=E,71µm,1.6s						
RM33	**Pellescritta (**	**0.11**	**183**	P	Pg	03 04 32.8	+0.2
RM33				S	Sg	03 04 35.2	+0.3
RM33				AML	AML		
	comp=E,50µm,0.5s						
RM33				AML	AML		
	comp=N,57µm,0.3s						
T1214	**Arquata del Tr**	**0.14**	**356**	⇑P	Pb	03 04 33.6	-0.5
T1214				S	Sb	03 04 36.5	-0.7
T1247	**Pizzolo (AQ)**	**0.19**	**163**	⇓P	Pg	03 04 34.0	+0.3
T1247				S	Sb	03 04 38.1	-0.3
T1212	**Cascia, Frazio**	**0.19**	**315**	⇑P	Pg	03 04 34.1	+0.4
T1212				S	Sg	03 04 37.3	+0.5
T1217	**Poggiodomo (PG**	**0.23**	**293**	P	Pg	03 04 34.8	+0.2
T1217				S	Sg	03 04 38.5	+0.5
TERO	**Teramo**	**0.28**	**89**	⇑P	Pg	03 04 35.6	+0.3
TERO				S	Sg	03 04 40.0	+0.7
T1216	**Preci, Frazion**	**0.31**	**331**	⇑P	Pb	03 04 36.4	-0.5
T1216				S	Sb	03 04 41.5	-0.5
T1219	**Muccia, Frazio**	**0.46**	**340**	P	Pn	03 04 41.2	-0.7
ARVD	**Arcevia**	**0.90**	**347**	⇓P	Pb	03 04 47.1	+0.1

ROM 18 03:04:59.9±0.1**, 42°.646N**±0°.004×**13°.297E**±0°.005**,**
h13^{km}, ML1.2/4**, 4C, Error ellipse: s-maj=0.4km**
s-min=0.2km az=63.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1218	**Civita (PG)**	**0.14**	**280**	⇑P	Pg	03 05 03.8	+0.4
T1218				S	Sg	03 05 06.5	+0.5
RM33	**Pellescritta (**	**0.15**	**204**	P	Pg	03 05 04.1	+0.5
RM33				S	Sg	03 05 06.9	+0.6
RM33				AML	AML		
	comp=E,69µm,1.5s						
RM33				AML	AML		
	comp=E,69µm,1.5s						
RM33				AML	AML		
	comp=N,86µm,0.3s						
RM33				AML	AML		
	comp=E,69µm,0.5s						
T1212	**Cascia, Frazio**	**0.21**	**300**	⇑P	Pg	03 05 05.1	+0.4
T1212				S	Sg	03 05 08.5	+0.6
T1245	**Castelsantange**	**0.23**	**339**	P	Pg	03 05 04.8	0.0
T1245				S	Sg	03 05 09.2	+0.9
T1245				AML	AML		
	comp=E,47µm,1.5s						
T1245				AML	AML		
	comp=N,42µm,1.1s						
T1245				AML	AML		
	comp=E,47µm,0.5s						
T1245				AML	AML		
	comp=N,42µm,0.9s						
TERO	**Teramo**	**0.23**	**96**	P	Pg	03 05 05.3	+0.5
TERO				S	Sb	03 05 09.1	-0.9
TERO				AML	AML		
	comp=N,81µm,1.4s						
TERO				AML	AML		
	comp=E,96µm,0.3s						
TERO				AML	AML		
	comp=N,81µm,0.6s						
MMO1	**Montemonaco**	**0.25**	**5**	⇑P	Pb	03 05 06.1	-0.4
MMO1				S	Sb	03 05 10.3	-0.5
T1217	**Poggiodomo (PG**	**0.28**	**284**	P	Pg	03 05 06.1	+0.3
T1217				S	Sg	03 05 10.5	+0.9
GIGS	**Gran Sasso**	**0.28**	**134**	P	Pg	03 05 06.1	+0.3
GIGS				S	Sg	03 05 10.5	+0.8
T1216	**Preci, Frazion**	**0.32**	**320**	P	Pg	03 05 06.4	-0.1
T1216				S	Sb	03 05 11.9	-0.7
ARRO	**Arrone**	**0.40**	**261**	P	Pg	03 05 08.2	+0.3
OFFI	**Offida**	**0.41**	**45**	⇑P	Pb	03 05 09.6	+0.6
LAV9	**Lanuvio**	**1.06**	**205**	S	Sb	03 05 32.2	-1.8
LAV9				AML	AML		
	comp=E,294µm,1.6s						
LAV9				AML	AML		
	comp=N,352µm,0.2s						
LAV9				AML	AML		
	comp=E,294µm,0.4s						

ROM 18 03:05:52.1±0.2**, 42°.721N**±0°.003×**13°.198E**±0°.006**,**
h13^{km}±2^{km}**, ML1.0**/1**, 2C, Error ellipse: s-maj=0.4km**
s-min=0.3km az=244.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.14**	**357**	P	Pg	03 05 56.0	+0.2
T1245				S	Sg	03 05 58.6	+0.3
T1245				AML	AML		
	comp=E,69µm,0.6s						
T1245				AML	AML		
	comp=N,90µm,1.2s						
T1245				AML	AML		
	comp=E,69µm,0.6s						
T1245				AML	AML		
	comp=N,90µm,0.8s						
MC2	**Monte Cornacci**	**0.19**	**358**	P	Pg	03 05 57.0	+0.4
MC2				S	Sb	03 06 00.5	-0.9
T1217	**Poggiodomo (PG**	**0.20**	**267**	⇑P	Pg	03 05 56.9	+0.4
T1217				S	Sg	03 06 00.2	+0.6
MMO1	**Montemonaco**	**0.20**	**28**	⇑P	Pg	03 05 57.0	+0.3
MMO1				S	Sg	03 06 00.5	+0.8
RM33	**Pellescritta (**	**0.21**	**177**	P	Pg	03 05 57.4	+0.6
RM33				S	Sb	03 06 01.0	-0.8
T1241	**Roccafluvione,**	**0.22**	**52**	P	Pg	03 05 56.9	0.0
T1241				S	Sb	03 06 01.2	-0.8
TERO	**Teramo**	**0.32**	**108**	P	Pg	03 05 58.9	+0.3
TERO				S	Sg	03 06 03.8	+0.9
T1219	**Muccia, Frazio**	**0.36**	**337**	P	Pg	03 05 58.3	-1.2
VIVA	**Pratoni del Vi**	**1.02**	**198**	S	Sn	03 06 26.2	-0.3
VIVA				AML	AML		
	comp=E,882µm,0.1s						
VIVA				AML	AML		
	comp=N,736µm,1.5s						
VIVA				AML	AML		
	comp=N,736µm,0.5s						

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*IDC **18** 03:13:06.1±0.6, 59°.10S×17°.85W, h0^{km}, mb4.2/13, mbtmp4.2/13, ML5.5/1, MS4.1/33, Error ellipse: s-maj=19.8km s-min=15.9km az=15.0*
*NEIC **18** 03:13:08.1±1.8, 59°.3S±0°.1×17°.7W±0°.2, h9^{km}±3^{km}, mb4.7/26, Error ellipse: s-maj=15.9km s-min=11.3km az=158.0*
*GCMT **18** 03:13:10.1±0.2, 59°.25S±0°.01×17°.31W±0°.02, h13^{km}±1^{km}, MW5.0/120, Moment Tensor Solution. s31,c36; s120,c168; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.47±.11; $M_{\theta\theta}$-0.85±.11; $M_{\phi\phi}$1.32±.10; $M_{r\theta}$1.24±.31; $M_{\theta\phi}$3.46±.09; $M_{\phi r}$-0.14±.24; Best double couple: $M_0$3.85200×10^{16} NP1:ϕ_s260.00000°, δ83.00000°, λ-19.00000°. NP2:ϕ_s352.00000°, δ71.00000°, λ-173.00000°. Principal axes: T 3.9520, Plg8.0000°, Azm308.0000°; N -0.1990, Plg70.0000°, Azm61.0000°; P -3.7530, Plg18.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 18 03:13:07.6±0.5**, 59°.25S**±0°.08×**17°.69W**±0°.09**, h10^{km}, n80,**
σ1^{s}18/58**, mb4.5**/22**, MS4.0**/33**, East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**11.44**	**288**	Pn	**Pn**	**03 15 50.3**	**-0.5**
VNA1	**Neumayer--Stat**	**12.10**	**165**	P	**Pn**	**03 16 00.7**	**+0.8**
VNA2	**Neumayer--Watz**	**12.47**	**164**	P	**Pn**	**03 16 04.5**	**-0.4**
	baz=336,slow=15						
VNA2				S	Sn	03 18 11.7	-12
	baz=333,slow=25						
VNA3	**Neumayer Olymp**	**12.49**	**168**	P	**Pn**	**03 16 05.8**	**+0.7**
VNA3				S	Sn	03 18 13.6	-10
SNAA	**Sanae**	**13.84**	**160**	P	**Pn**	**03 16 23.7**	**0.0**
SNAA				S	Sn	03 18 47.8	-9.4
SNAA	**Sanae**	**13.84**	**160**	Pn	**Pn**	**03 16 23.7**	**0.0**
	22nm,0.3s,baz=325,slow=14,SNR=289						
SNAA				Sn	Sn	03 18 46.0	-11
	baz=319,slow=24						
SNAA				LR	LR	03 20 38.3	
	comp=Z,665nm,20.3s,baz=308,slow=32						
SNAA	**Sanae**	**13.84**	**160**		**Pn**	**03 16 23.5**	**-0.1**
TROLL	**Troll, Antarti**	**15.15**	**156**	P	**Pn**	**03 16 41.6**	**+0.1**
TROLL				S	**Sn**	**03 19 23.9**	**-5.2**
BELA	**Belgrano 2**	**19.54**	**191**	P	**Pn**	**03 17 36.1**	**-0.1**
BELA				IAmb	IAmb	03 17 44.9	
	comp=Z,23nm,0.7s						
PMSA	**Palmer Station**	**22.02**	**236**	LR	LR	03 25 27.6	
	comp=Z,403nm,18.5s,baz=126,slow=34						
QSPA	**South Pole Qui**	**30.99**	**180**	P	**P**	**03 19 25.8**	**+0.9**
	comp=Z,6.1nm,0.9s,baz=212,slow=5.3,SNR=12						
QSPA				LR	LR	03 31 52.0	
	comp=Z,160nm,19.1s,baz=208,slow=36						
	comp=Z,6.1nm,0.9s						
QSPA	**South Pole Qui**	**30.99**	**180**	P	**P**	**03 19 25.3**	**+0.4**
MAW	**Mawson**	**34.44**	**138**	LR	LR	03 31 42.9	
	comp=Z,535nm,21.3s,baz=252,slow=32						
AY01	**Puyuhuapi**	**35.92**	**269**	P	**P**	**03 20 09.0**	**+1.3**
AY01				IAmb	IAmb	03 20 17.7	
	comp=Z,20nm,1.4s						
SUR	**Sutherland**	**37.11**	**61**	P	**P**	**03 20 19.2**	**+0.9**
	comp=Z,3.7nm,0.7s,baz=270,slow=2.0,SNR=1.7						
SUR				LR	LR	03 31 36.5	
	comp=Z,481nm,20.4s,baz=208,slow=30						
	comp=Z,3.7nm,0.7s						
SUR	**Sutherland**	**37.11**	**61**	P	**P**	**03 20 18.8**	**+0.5**
PLCA	**Paso Flores**	**37.50**	**276**	P	**P**	**03 20 20.6**	**-0.8**
	comp=Z,1.2nm,0.9s,baz=173,slow=8.1,SNR=3.0						
PLCA				LR	LR	03 35 24.2	
	comp=Z,253nm,18.8s,baz=133,slow=36						
	comp=Z,1.2nm,0.9s						
BOSA	**Boshof**	**42.31**	**63**	P	**P**	**03 21 02.2**	**+0.6**
	comp=Z,2.7nm,0.8s,baz=196,slow=10,SNR=3.8						
BOSA				LR	LR	03 34 21.7	
	comp=Z,226nm,20.6s,baz=210,slow=30						
	comp=Z,2.7nm,0.8s						
BOSA	**Boshof**	**42.31**	**63**	P	**P**	**03 21 01.4**	**-0.1**
BO01	**Tunca**	**42.63**	**281**	P	**P**	**03 21 05.6**	**+1.7**
CPUP	**Villa Florida**	**42.81**	**303**	P	**P**	**03 21 04.7**	**-0.7**
	comp=Z,4.5nm,1.1s,baz=166,slow=4.2,SNR=4.5						
CPUP				LR	LR	03 36 27.7	
	comp=Z,104nm,20.1s,baz=162,slow=33						
	comp=Z,4.5nm,1.1s						
MT09	**Talagante**	**43.07**	**282**	P	**P**	**03 21 08.0**	**+0.4**
MT09				IAmb	IAmb	03 21 11.2	
	comp=Z,16nm,0.9s						
CFA	**Coronel Fontan**	**43.45**	**287**	P	**P**	**03 21 08.9**	**-1.7**
	comp=Z,4.4nm,0.5s,baz=144,slow=11,SNR=15						
CFA				LR	LR	03 39 36.7	
	comp=Z,135nm,19.3s,baz=150,slow=37						
	comp=Z,4.4nm,0.5s						
VNDA	**Vanda**	**43.49**	**180**	P	**P**	**03 21 11.6**	**+1.2**
	comp=Z,1.4nm,1.0s,baz=180,slow=4.0,SNR=1.7						
VNDA				LR	LR	03 38 14.6	
	comp=Z,240nm,20.2s,baz=180,slow=35						
	comp=Z,1.4nm,1.0s						
VA03	**San Esteban**	**43.66**	**283**	P	**P**	**03 21 12.9**	**+0.5**
VA03				IAmb	IAmb	03 21 16.8	
	comp=Z,12nm,1.0s						
ZON	**Zonda**	**43.72**	**286**	P	**P**	**03 21 12.8**	**0.0**
ZON				IAmb	IAmb	03 21 25.3	
	comp=Z,12nm,0.8s						
LBTB	**Lobatse**	**45.56**	**61**	P	**P**	**03 21 27.7**	**+0.1**
	comp=Z,5.1nm,0.8s,baz=191,slow=11,SNR=6.5						
LBTB				LR	LR	03 37 06.6	
	comp=Z,302nm,19.3s,baz=230,slow=32						
	comp=Z,5.1nm,0.8s						
LBTB	**Lobatse**	**45.56**	**61**	P	**P**	**03 21 28.4**	**+0.8**
LBTB				IAmb	IAmb	03 21 29.0	
	comp=Z,11nm,1.0s						
CO01	**Juntas del Tor**	**45.70**	**286**	P	**P**	**03 21 29.8**	**+1.0**
TSUM	**Tsumeb**	**47.39**	**48**	LR	LR	03 37 20.1	
	comp=Z,314nm,20.0s,baz=168,slow=31						
BDFB	**Brasilia**	**48.91**	**320**	LR	LR	03 39 53.3	
	comp=Z,472nm,19.2s,baz=155,slow=33						
H10S2	**ASCENSION HYDR**	**50.23**	**4**	T	T	04 16 18.8	
	baz=38,slow=74,SNR=5.0						
H10S3	**ASCENSION HYDR**	**50.24**	**4**	T	T	04 16 17.3	
	baz=182,slow=74,SNR=4.3						
LVC	**Limon Verde**	**51.30**	**293**	P	**P**	**03 22 12.3**	**+0.1**
	comp=Z,7.5nm,0.8s,baz=158,slow=7.4,SNR=6.4						
LVC				LR	LR	03 45 54.8	
	comp=Z,99nm,18.6s,baz=160,slow=38						
	comp=Z,7.5nm,0.8s						
LVC	**Limon Verde**	**51.30**	**293**	P	**P**	**03 22 12.2**	**+0.1**
LVC				IAmb	IAmb	03 22 25.7	
	comp=Z,10nm,0.8s						
PTLB	**Pontes e Lacer**	**53.24**	**307**	P	**P**	**03 22 25.1**	**-1.0**
SIV	**San Ignacio**	**53.55**	**305**	P	**P**	**03 22 27.1**	**-1.5**
	comp=Z,2.2nm,1.1s,baz=153,slow=6.4,SNR=5.4						
SIV				LR	LR	03 44 58.8	
	comp=Z,102nm,18.9s,baz=160,slow=36						
	comp=Z,2.2nm,1.1s						
LSZ	**Lusaka**	**55.26**	**57**	LR	LR	03 41 54.3	
	comp=Z,267nm,21.1s,baz=198,slow=31						
VILB	**Vilhena**	**55.92**	**307**	P	**P**	**03 22 46.3**	**+0.6**
LPAZ	**La Paz**	**56.40**	**297**	P	**P**	**03 22 49.0**	**-0.9**
	comp=Z,1.4nm,0.6s,baz=159,slow=6.5,SNR=7.0						
LPAZ				LR	LR	03 45 50.5	
	comp=Z,137nm,21.3s,baz=151,slow=35						
	comp=Z,1.4nm,0.6s						
LPAZ	**La Paz**	**56.40**	**297**	P	**P**	**03 22 48.9**	**-0.9**
LPAZ				IAmb	IAmb	03 22 50.6	
	comp=Z,7.5nm,1.2s						
SAML	**Samuel**	**60.76**	**306**	P	**P**	**03 23 18.6**	**-0.9**
SAML				IAmb	IAmb	03 23 19.4	
	comp=Z,5.2nm,1.1s						
ETMB	**Extrema**	**61.27**	**303**	P	**P**	**03 23 21.8**	**-1.1**
NNA	**Nana**	**64.23**	**291**	LR	LR	03 50 14.7	
	comp=Z,172nm,21.8s,baz=152,slow=35						
RPN	**Rapa Nui**	**67.92**	**254**	LR	LR	03 48 25.4	
	comp=Z,75nm,20.9s,baz=122,slow=31						
ATAH	**Atahualpa**	**69.19**	**292**	LR	LR	03 54 38.6	
	comp=Z,76nm,21.0s,baz=145,slow=36						
MBAR	**Mbarara**	**69.52**	**53**	LR	LR	03 51 08.8	
	comp=Z,379nm,20.2s,baz=193,slow=33						
MBAR	**Mbarara**	**69.52**	**53**	P	**P**	**03 24 16.1**	**-0.4**
MCRA	**Macar, Loja**	**72.34**	**292**	IAmb	IAmb	03 24 42.8	
	comp=Z,5.0nm,1.0s						
TORD	**Torodi Ar. Bea**	**73.84**	**20**	P	**P**	**03 24 40.4**	**-1.8**
	comp=Z,4.9nm,0.9s,baz=186,slow=6.4,SNR=18						
	comp=Z,4.9nm,0.9s						
PORT	**Chimborazo Vol**	**74.33**	**295**	P	**P**	**03 24 44.8**	**-1.1**
PORT				IAmb	IAmb	03 24 54.7	
	comp=Z,8.8nm,1.0s						
OTAV	**Otavalo**	**75.67**	**296**	P	**P**	**03 24 53.9**	**+0.4**
OTAV				IAmb	IAmb	03 25 05.4	
	comp=Z,5.0nm,0.9s						
ROSC	**El Rosal**	**77.89**	**302**	LR	LR	04 01 10.7	
	comp=Z,61nm,19.6s,baz=125,slow=37						
RUSC	**La Rusia**	**78.30**	**303**	P	**P**	**03 25 09.0**	**+0.7**
SDV	**Santo Domingo**	**79.96**	**307**	LR	LR	03 59 34.5	
	comp=Z,157nm,21.2s,baz=106,slow=35						
URZ	**Urewera**	**82.08**	**192**	LR	LR	03 59 03.7	
	comp=Z,104nm,19.3s,baz=300,slow=34						
TAM	**Tamanrasset**	**83.95**	**21**	P	**P**	**03 25 38.7**	**+1.0**
TAM				IAmb	IAmb	03 25 41.8	
	comp=Z,5.9nm,1.5s						
ATD	**Arta Tunnel**	**85.56**	**59**	LR	LR	04 00 43.3	
	comp=Z,6.3nm,19.8s,baz=172,slow=33						
SJG	**San Juan**	**86.62**	**315**	LR	LR	04 02 19.2	
	comp=Z,144nm,21.8s,baz=117,slow=34						
JTS	**Las Juntas de**	**87.53**	**295**	LR	LR	04 06 39.6	
	comp=Z,33nm,20.2s,baz=113,slow=37						
STKA	**Stephens Creek**	**87.60**	**162**	LR	LR	04 01 19.0	
	comp=Z,215nm,21.9s,baz=203,slow=33						
RAR	**Rarotonga**	**94.00**	**215**	LR	LR	04 01 56.4	
	comp=Z,66nm,20.9s,baz=179,slow=31						
PPT	**Papeete**	**94.01**	**225**	LR	LR	04 03 42.3	
	comp=Z,47nm,18.1s,baz=160,slow=32						
ASAR	**Alice Springs**	**94.13**	**154**	P	**P**	**03 26 28.9**	**+2.5**
	comp=Z,0.3nm,0.7s,baz=190,slow=4.7,SNR=2.1						
ASAR				LR	LR	04 07 11.3	
	comp=Z,50nm,20.0s,baz=198,slow=34						
	comp=Z,0.3nm,0.7s						
WRA	**Warramunga Arr**	**97.82**	**154**	LR	LR	04 09 39.5	
	comp=Z,95nm,19.8s,baz=130,slow=35						
CMIG	**Matias Romero**	**98.14**	**290**	LR	LR	04 04 27.8	
	comp=Z,29nm,21.4s,baz=115,slow=31						
EIL	**Elat**	**98.69**	**44**	LR	LR	04 09 06.1	
	comp=Z,136nm,18.5s,baz=241,slow=34						
CMAR	**Chiang Mai Arr**	**119.25**	**103**	PKP	**PKiKP**	**03 31 58.5**	**+1.7**
	comp=Z,1.2nm,0.3s,baz=267,slow=3.6,SNR=4.1						
FINES	**FINESS Array B**	**125.03**	**24**	PKP	**PKPdf**	**03 32 04.8**	**-1.7**
	comp=Z,4.5nm,1.1s,baz=188,slow=2.8,SNR=5.5						
YKA	**Yellowknife Ar**	**142.05**	**311**	PKP	**PKPdf**	**03 32 36.7**	**-1.6**
	comp=Z,0.2nm,0.7s,baz=112,slow=2.2,SNR=2.7						
YKA				PP	**PP**	**03 35 45.3**	**+0.3**

	comp=Z,0.4nm,1.0s,baz=124,slow=8.0,SNR=3.7						
SONM	**Songino Array**	**145.89**	**84**	PKPbc	**PKPdf**	**03 32 45.4**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=219,slow=3.7,SNR=13						
SONM	**Songino Array**	**145.89**	**84**		**PKPdf**	**03 32 45.8**	**+0.2**
ULN	**Ulaanbaatar**	**146.24**	**85**	PKPbc	**PKPdf**	**03 32 46.7**	**+0.4**
NRIK	**Noril'sk**	**148.21**	**41**	PKPbc	**PKiKP**	**03 32 53.4**	**-0.3**
	comp=Z,2.1nm,0.5s,baz=182,slow=0.8,SNR=3.9						
NRIK	**Noril'sk**	**148.21**	**41**	PKPbc	**PKPbc**	**03 32 52.1**	**0.0**
KSAR	**Wonju Array Be**	**148.95**	**119**	PKPdf	**PKPdf**	**03 32 51.9**	**+1.1**
KSRS	**Korea Array**	**148.97**	**119**	PKPbc	**PKPbc**	**03 32 54.2**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=217,slow=2.7,SNR=6.1						
KS19	**Wonju Array Si**	**148.99**	**119**	PKPdf	**PKPdf**	**03 32 52.3**	**+1.3**
A36M	**Sachs Harbour**	**149.72**	**324**		**PKPbc**	**03 32 54.8**	**-0.9**
MJAR	**Matsushiro Arr**	**152.41**	**135**	PKPbc	**PKPbc**	**03 33 02.9**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=195,slow=2.1,SNR=2.1						

*SOME **18** 03:31:21.3, 41°.05N×78°.10E, h0^{km}*
*KRNET **18** 03:31:21.5±0.1, 41°.28N×78°.63E, h20^{km}, mb2.3*
*NNC **18** 03:31:24.3±2.7, 41°.07N×78°.15E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=19.3km s-min=11.1km az=171.0*
ISC 18 03:31:26.4±2.3, **41°.34N**±0°.10×**78°.36E**±0°.06, **h10**^{km}±11^{km}, **n33**, σ**1**^{s}.**67**/41, **12C-8D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.57**	**313**	⇑*i*P	**Pg**	**03 31 36.0**	**-1.6**
	baz=6.0						
TARG				⇑*i*S	**Sg**	**03 31 46.8**	**+1.6**
	baz=6.0						
PRZ	**Przheval'sk**	**1.14**	**1**	⇓*i*P	**Pn**	**03 31 44.3**	**-4.4**
	baz=52						
PRZ				⇓*e*S	**Sg**	**03 32 00.6**	**-2.7**
	baz=52						
KDJ	**Kajisay**	**1.19**	**312**	⇑*i*P	**Pn**	**03 31 46.6**	**-2.7**
	baz=9.0						
KDJ				⇑*i*S	**Sb**	**03 32 05.0**	**+0.4**
	baz=9.0						
ANVS	**Anan'yevo**	**1.53**	**340**	⇑*i*P	**Pn**	**03 31 51.6**	**-2.4**
	baz=35						
ANVS				⇑*i*S	**Sn**	**03 32 13.9**	**-0.3**
	baz=35						
SATY	**Saty**	**1.72**	**1**	Pg	**Pg**	**03 32 00.2**	**+0.8**
	4.2nm,0.3s						
SATY				Lg	Lg	03 32 28.5	
	9.8nm,0.5s						
SATY	**Saty**	**1.72**	**1**	*e*Pg	**Pg**	**03 32 00.2**	**+0.8**
	1.5nm,0.1s						
SATY				*e*Lg	Lg	03 32 28.5	
	9.8nm,0.5s						
NRN	**Naryn**	**1.78**	**274**	⇓*i*P	**Pn**	**03 31 56.7**	**-0.8**
	baz=75						
NRN				⇓*i*S	**Sb**	**03 32 22.6**	**+0.8**
	baz=75						
ULHL	**Ulahol**	**1.83**	**300**	⇓*i*P	**Pn**	**03 31 57.0**	**-1.1**
	baz=99						
ULHL				⇓*i*S	**Sn**	**03 32 23.1**	**+1.7**
	baz=99						
UZB	**Uzynbulak**	**1.87**	**15**	Pg	**Pg**	**03 32 02.7**	**+0.4**
	5.1nm,0.4s						
UZB				Lg	Lg	03 32 32.3	
	4.7nm,0.7s						
UZB	**Uzynbulak**	**1.87**	**15**	*e*Pg	**Pg**	**03 32 02.7**	**+0.4**
	2.2nm,0.1s						
UZB				*e*Lg	Lg	03 32 32.3	
	4.1nm,0.2s						
SHLS	**Shalkode**	**1.99**	**24**	Pg	Pg	03 32 08.2	+3.6
	3.5nm,0.2s						
SHLS				Lg	Lg	03 32 41.8	
	721nm,0.3s						
SHLS	**Shalkode**	**1.99**	**24**	*e*Pg	Pg	03 32 08.2	+3.6
	2.6nm,0.1s						
SHLS				*e*Lg	Lg	03 32 41.8	
	3.3nm,0.1s						
TNSS	**Tian-Shan**	**2.00**	**329**	Pg	**Pb**	**03 32 02.3**	**-0.7**
	5.2nm,0.3s						
TNSS				Lg	Lg	03 32 32.2	
	5.1nm,0.8s						
TNSS	**Tian-Shan**	**2.00**	**329**	*e*Pg	**Pb**	**03 32 02.3**	**-0.7**
	3.3nm,0.0s						
TNSS				*e*Lg	Lg	03 32 32.2	
	5.1nm,0.8s						
KOTS	**Kotyrbulak**	**2.11**	**334**	Pg	**Pb**	**03 32 05.0**	**+0.2**
	4.6nm,0.5s						
KOTS				Lg	Lg	03 32 36.4	
	12nm,0.5s						
KOTS	**Kotyrbulak**	**2.11**	**334**	*e*Pg	**Pb**	**03 32 05.0**	**+0.2**
	4.6nm,0.5s						
KOTS				*e*Lg	Lg	03 32 36.4	
	12nm,0.5s						
IZV	**Izvestkoviy**	**2.14**	**323**	Pg	**Pb**	**03 32 04.5**	**-0.8**
	2.2nm,0.6s						
IZV				Lg	Lg	03 32 35.3	
	9.4nm,0.6s						
IZV	**Izvestkoviy**	**2.14**	**323**	*e*Pg	**Pb**	**03 32 04.5**	**-0.8**
	2.2nm,0.6s						
IZV				*e*Lg	Lg	03 32 35.3	
	9.4nm,0.6s						
KPKS	**Kokpek**	**2.14**	**6**	Pg	**Pg**	**03 32 06.8**	**-0.6**
	8.3nm,0.3s						
KPKS				Lg	Lg	03 32 39.7	
	7.3nm,0.4s						
KPKS	**Kokpek**	**2.14**	**6**	*e*Pg	**Pg**	**03 32 06.8**	**-0.6**
	5.6nm,0.1s						
KPKS				*e*Lg	Lg	03 32 39.8	
	7.1nm,0.1s						
PDGK	**Podgornoye**	**2.16**	**22**	Pg	**Pg**	**03 32 09.2**	**+1.4**
	0.8nm,0.5s						
PDGK				Lg	Lg	03 32 43.4	
	2.7nm,1.0s						
PDGK	**Podgornoye**	**2.16**	**22**	⇑Pn	**Pg**	**03 32 06.5**	**-1.2**
	2.1nm,0.4s						
PDGK				⇑Sn	**Sg**	**03 32 41.1**	**+5.4**
	2.6nm,0.5s						
KST	**Kastek**	**2.47**	**314**	Pg	**Pb**	**03 32 10.3**	**-0.6**
	2.6nm,0.5s						
KST				Lg	Lg	03 32 45.3	
	6.6nm,0.6s						
KST	**Kastek**	**2.47**	**314**	*e*Pg	**Pb**	**03 32 09.4**	**-1.5**
	2.6nm,0.5s						
KST				*e*Lg	Lg	03 32 44.0	
	6.6nm,0.6s						
TKM2	**Tokmak 2**	**2.59**	**308**	⇑Pn	**Pn**	**03 32 09.4**	**+0.7**
	0.7nm,0.3s						
TKM2				⇑Sn	**Sb**	**03 32 47.6**	**+2.4**
	1.8nm,0.4s						
TKM2	**Tokmak 2**	**2.59**	**308**	⇑*i*P	**Pn**	**03 32 07.9**	**-0.7**
	baz=7.0						
TKM2				⇑*i*S	**Sn**	**03 32 41.4**	**+1.0**
	baz=7.0						
KTBS	**Karatobe**	**2.68**	**333**	Pg	**Pb**	**03 32 14.9**	**+0.5**
	1.4nm,0.5s						
KTBS				Lg	Lg	03 32 53.3	
	5.2nm,0.4s						
KTBS	**Karatobe**	**2.68**	**333**	*e*Pg	**Pb**	**03 32 14.9**	**+0.5**
	1.4nm,0.5s						
KTBS				*e*Lg	Lg	03 32 53.3	
	5.2nm,0.4s						
DGS	**Degeres**	**2.70**	**316**	Pg	**Pb**	**03 32 13.9**	**-1.1**
	1.9nm,0.5s						
DGS				Lg	Lg	03 32 51.7	
	3.6nm,0.5s						
DGS	**Degeres**	**2.70**	**316**	*e*Pg	**Pb**	**03 32 13.9**	**-1.1**
	1.9nm,0.5s						
DGS				*e*Lg	Lg	03 32 51.7	
	3.6nm,0.5s						
ARLS	**Aral**	**3.08**	**281**	⇓*e*P	**Pn**	**03 32 14.5**	**-0.7**
	baz=81						
ARLS				⇓*i*S	**Sn**	**03 32 52.8**	**+0.7**
	baz=81						
DJR	**Jarkent**	**3.17**	**19**	Pg	**Pg**	**03 32 28.2**	**+1.1**
	1.2nm,0.3s						
DJR				Lg	Lg	03 33 16.2	
	1.5nm,0.5s						
DJR	**Jarkent**	**3.17**	**19**	*e*Pg	**Pg**	**03 32 26.5**	**-0.6**
	1.2nm,0.3s						
DJR				*e*Lg	Lg	03 33 13.4	
	1.5nm,0.5s						

ROM 18 03:54:51.4±0.1, **43°.050N**±0°.004×**13°.005E**±0°.006, **h4**^{km}, **ML1.3**/7, **6C-3D, Error ellipse: s-maj=0.5km s-min=0.1km az=90.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.01**	**15**	P	Pg	03 54 52.0	-0.2
T1219				S	Sg	03 54 52.4	-0.3
FDMO	**Fiordimonte**	**0.06**	**103**	P	Pg	03 54 52.8	+0.1
FDMO				S	Sg	03 54 54.1	+0.4
FDMO				AML	AML		
	comp=E,970μm,0.2s						
FDMO				AML	AML		
	comp=N,1012μm,0.2s						
CESI	**CESI - Serrava**	**0.09**	**239**	⇑P	Pg	03 54 53.5	+0.4
CESI				S	Sg	03 54 55.3	+0.9
CESI				AML	AML		
	comp=N,524μm,0.1s						
CESI				AML	AML		
	comp=E,372μm,0.5s						
T1220	**Camerino, Fraz**	**0.09**	**46**	P	Pg	03 54 53.6	+0.4
T1220				S	Sg	03 54 55.4	+1.0
T1220				AML	AML		
	comp=E,1245μm,0.7s						
T1220				AML	AML		
	comp=N,1117μm,0.2s						
T1220				AML	AML		
	comp=E,1245μm,1.3s						
FEMA	**Monte Fema**	**0.09**	**160**	P	Pg	03 54 53.5	+0.1
FEMA				S	Sg	03 54 55.3	+0.6
T1216	**Preci, Frazion**	**0.16**	**176**	P	Pg	03 54 54.6	+0.2
T1216				S	Sg	03 54 57.6	+1.0
T1216				AML	AML		
	comp=E,210μm,0.4s						
T1216				AML	AML		
	comp=N,174μm,1.5s						
T1216				AML	AML		
	comp=E,211μm,0.4s						
T1216				AML	AML		
	comp=N,174μm,0.5s						
T1256	**Bolognola (MC)**	**0.17**	**105**	P	Pg	03 54 55.0	+0.3
T1256				S	Sg	03 54 58.2	+1.3
T1256				AML	AML		
	comp=E,99μm,0.3s						
T1256				AML	AML		
	comp=E,100μm,0.3s						
T1256				AML	AML		
	comp=N,89μm,0.2s						
T1256				AML	AML		
	comp=E,100μm,1.7s						
T1256				AML	AML		
	comp=N,89μm,1.8s						
SNTG	**Esanatoglia**	**0.21**	**347**	P	Pg	03 54 55.9	+0.4
SNTG				S	Sg	03 54 60.0	+1.7
SNTG				AML	AML		
	comp=E,51μm,0.5s						
SNTG				AML	AML		
	comp=N,45μm,1.0s						
SNTG				AML	AML		
	comp=N,45μm,1.0s						
T1245	**Castelsantange**	**0.23**	**145**	P	Pg	03 54 56.9	+1.0
T1245				S	Sg	03 55 00.5	+1.4
T1245				AML	AML		
	comp=E,206μm,0.5s						
T1245				AML	AML		
	comp=N,258μm,0.2s						
ASSB	**Assisi San Ben**	**0.25**	**268**	⇑P	Pg	03 54 56.8	+0.5
ASSB				AML	AML		
	comp=E,68μm,0.7s						
ASSB				AML	AML		
	comp=N,91μm,0.4s						
ASSB				AML	AML		
	comp=N,91μm,1.6s						
MMO1	**Montemonaco**	**0.28**	**122**	⇑P	Pg	03 54 57.0	+0.2
ATCC	**AVT- Casa Cast**	**0.30**	**297**	⇑P	Pg	03 54 58.1	+0.9
T1212	**Cascia, Frazio**	**0.30**	**174**	⇓P	Pg	03 54 57.3	+0.2
T1214	**Arquata del Tr**	**0.33**	**153**	P	Pg	03 54 57.8	+0.1
T1214				AML	AML		
	comp=E,66μm,0.8s						
T1214				AML	AML		
	comp=N,57μm,1.5s						
T1214				AML	AML		
	comp=N,57μm,0.5s						
T1214				AML	AML		
	comp=E,66μm,1.2s						
T1217	**Poggiodomo (PG**	**0.34**	**189**	P	Pg	03 54 56.8	-1.2
CING	**Cingoli**	**0.35**	**23**	P	Pg	03 54 58.6	+0.4
CING				S	Sb	03 55 04.8	-1.5
CING				AML	AML		
	comp=E,92μm,0.1s						
CING				AML	AML		
	comp=N,77μm,1.0s						
T1241	**Roccafluvione,**	**0.37**	**122**	P	Pg	03 54 58.6	+0.2
T1218	**Civita (PG)**	**0.39**	**168**	⇓P	Pg	03 54 58.8	0.0
MOMA	**Monte Martano**	**0.40**	**233**	⇓P	Pg	03 54 59.5	+0.3
MURB	**Monte Urbino**	**0.41**	**301**	⇑P	Pg	03 54 59.7	+0.4
SSP9	**Sansepolcro**	**0.82**	**310**	⇑P	Pg	03 55 05.5	-1.7

ROM 18 03:55:30.3±0.1, **42°.621N**±0°.004×**13°.212E**±0°.005, **h10**^{km}, **ML1.1**/7, **2C-4D, Error ellipse: s-maj=0.4km s-min=0.4km az=101.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1218	**Civita (PG)**	**0.09**	**304**	P	Pg	03 55 33.3	+0.4
T1218				S	Sg	03 55 35.5	+0.7
T1218				AML	AML		
	comp=E,144μm,0.2s						
T1218				AML	AML		
	comp=N,296μm,0.2s						
SMA1	**SAN MARTINO**	**0.09**	**84**	P	Pg	03 55 33.4	+0.4
SMA1				S	Sg	03 55 35.3	+0.5
SMA1				AML	AML		
	comp=N,312μm,0.2s						
SMA1				AML	AML		
	comp=N,312μm,0.2s						
SMA1				AML	AML		
	comp=E,358μm,0.3s						
T1214	**Arquata del Tr**	**0.14**	**359**	P	Pg	03 55 33.6	0.0
T1214				S	Sg	03 55 36.6	+0.6
T1212	**Cascia, Frazio**	**0.18**	**317**	⇓P	Pg	03 55 34.8	+0.6
T1212				S	Sg	03 55 37.7	+0.8
T1212				AML	AML		
	comp=E,49μm,0.5s						
T1212				AML	AML		
	comp=N,39μm,1.4s						
T1212				AML	AML		
	comp=E,49μm,1.5s						
T1212				AML	AML		
	comp=N,39μm,0.6s						
T1247	**Pizzolo (AQ)**	**0.19**	**160**	P	Pg	03 55 34.8	+0.4
T1247				S	Sg	03 55 38.4	+1.2
T1247				AML	AML		
	comp=E,69μm,0.1s						
T1247				AML	AML		
	comp=N,62μm,1.2s						
T1247				AML	AML		
	comp=E,68μm,0.1s						
T1247				AML	AML		
	comp=N,62μm,0.8s						
T1217	**Poggiodomo (PG**	**0.23**	**294**	P	Pg	03 55 35.7	+0.7
T1217				S	Sg	03 55 39.6	+1.4
T1245	**Castelsantange**	**0.24**	**356**	P	Pg	03 55 36.0	+0.7
T1245				S	Sg	03 55 39.8	+1.2
T1245				AML	AML		
	comp=N,106μm,1.1s						
T1245				AML	AML		
	comp=E,96μm,1.3s						
T1245				AML	AML		
	comp=E,96μm,0.7s						
T1222	**Castel Sant'An**	**0.26**	**211**	⇑P	Pg	03 55 36.0	+0.5
T1222				S	Sb	03 55 40.2	-1.2
T1211	**Morro Reatino**	**0.28**	**252**	⇓P	Pg	03 55 36.6	+0.6
T1211				S	Sb	03 55 41.2	-1.0
T1241	**Roccafluvione,**	**0.28**	**34**	⇓P	Pg	03 55 36.3	+0.2
T1241				S	Sg	03 55 40.6	+0.7
MMO1	**Montemonaco**	**0.29**	**17**	⇑P	Pg	03 55 36.6	+0.4
MMO1				S	Sg	03 55 41.1	+1.0
MC2	**Monte Cornacci**	**0.29**	**357**	P	Pg	03 55 36.9	+0.6
MC2				S	Sb	03 55 42.1	-0.6
T1216	**Preci, Frazion**	**0.30**	**332**	S	Sb	03 55 42.3	-0.7
T1216				AML	AML		
	comp=E,75μm,0.2s						
T1216				AML	AML		
	comp=N,74μm,0.2s						
FDMO	**Fiordimonte**	**0.42**	**348**	S	Sb	03 55 45.9	-0.4
T1219	**Muccia, Frazio**	**0.46**	**341**	S	Sb	03 55 47.0	-0.4
OFFI	**Offida**	**0.47**	**48**	⇓P	Pb	03 55 40.5	-0.1
OFFI				S	Sb	03 55 47.2	-0.4

*HVO **18** 04:09:21.3±1.0, 19°.887N±0°.006×155°.88W±0°.03, h41^{km}±3^{km}, ML3.5/38, ML3.6/58(NEIC), Error ellipse: s-maj=4.6km s-min=0.9km az=92.0*
NEIC 18 04:09:18.9±1.1, **19°.889N**±0°.009×**155°.92W**±0°.04, **h51**^{km}±3^{km}, **Error ellipse: s-maj=5.2km s-min=1.3km az=88.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUH	**Hualalai**	**0.22**	**160**		Pn	04 09 28.2	+0.4
HUH				IAML		04 09 35.0	
	comp=N,6μm,0.2s						
HUH				IAML		04 09 37.3	
	comp=E,5μm,0.3s						
HUH	**Hualalai**	**0.22**	**160**		Sn	04 09 33.5	-0.6
HPAH	**Hawaii Prepara**	**0.25**	**56**		Pn	04 09 27.9	+0.1
KHLU	**Kahalu`u**	**0.30**	**176**		Pn	04 09 28.6	+0.3
KHLU				IAML		04 09 34.9	
	comp=E,6μm,0.2s						
KHLU	**Kahalu`u**	**0.30**	**176**		Sn	04 09 34.0	-0.8
MHA	**Mahukona**	**0.30**	**2**		Pn	04 09 28.9	+0.8
MHA	**Mahukona**	**0.30**	**2**		Sn	04 09 34.8	+0.1
POHA	**Pohakuloa**	**0.38**	**110**		Pn	04 09 29.5	+0.3
POHA				IAML		04 09 35.8	
	comp=E,5μm,0.2s						
POHA	**Pohakuloa**	**0.38**	**110**		Sn	04 09 35.6	-0.9
CPH	**Captain Cook**	**0.40**	**180**		Pn	04 09 29.6	+0.5
CPH					Sn	04 09 35.4	-1.0
ALEP	**Alea Permanent**	**0.43**	**143**		Pn	04 09 30.4	+0.6
ALEP					Sn	04 09 37.4	-0.3
MLOA	**Mauna Loa Obse**	**0.47**	**138**		Pn	04 09 30.8	+0.4
MLOA				IAML		04 09 38.3	
	comp=E,3μm,0.3s						
MLOA				IAML		04 09 38.4	
	comp=N,5μm,0.3s						
MLOA	**Mauna Loa Obse**	**0.47**	**138**		Sn	04 09 37.9	-0.7
HMH	**Humu'ula Sheep**	**0.50**	**125**		Pn	04 09 31.0	+0.5
HMH					Sn	04 09 38.5	-0.3
HMH	**Humu'ula Sheep**	**0.50**	**125**	IAML		04 09 38.8	
	comp=N,3μm,0.3s						
HMH				IAML		04 09 40.4	
	comp=E,3μm,0.4s						
MWH	**Moku'aweowe**	**0.50**	**143**		Pn	04 09 30.9	+0.1
MWH				IAML		04 09 53.5	
	comp=N,2μm,0.6s						
MWH				IAML		04 09 53.8	
	comp=E,4μm,0.5s						
MWH	**Moku'aweowe**	**0.50**	**143**		Sn	04 09 38.4	-0.9
MLH	**Mauna Loa**	**0.64**	**128**		Pn	04 09 32.5	+0.4
MLH				IAML		04 09 41.4	
	comp=E,3μm,0.3s						
MLH				IAML		04 09 41.5	
	comp=N,3μm,0.4s						
MLH	**Mauna Loa**	**0.64**	**128**		Sn	04 09 40.9	-0.8
AIN	**Ainahou**	**0.67**	**140**		Sn	04 09 41.7	-0.7
AIN	**Ainahou**	**0.67**	**140**		Pn	04 09 33.0	+0.4
AIN				IAML		04 09 42.4	
	comp=E,8μm,0.3s						
AIN				IAML		04 09 42.7	
	comp=N,12μm,0.3s						
KHU	**Kahuku**	**0.70**	**156**		Pn	04 09 33.2	+0.2
KHU				IAML		04 09 42.7	
	comp=N,3μm,0.3s						
KHU	**Kahuku**	**0.70**	**156**		Sn	04 09 42.0	-1.0
RSD	**Rainshed**	**0.73**	**125**		Pn	04 09 33.6	+0.3
RSD					Sn	04 09 42.8	-0.9
UWE	**Uwekahuna**	**0.75**	**128**		Pn	04 09 33.6	+0.2
UWE				IAML		04 09 46.7	
	comp=N,3μm,0.6s						
UWE				IAML		04 09 51.3	
	comp=E,3μm,0.5s						
UWE	**Uwekahuna**	**0.75**	**128**		Sn	04 09 43.3	-0.7
WRMHI	**West Rim**	**0.75**	**129**		Pn	04 09 33.6	+0.1
OBL	**Observatory Le**	**0.76**	**128**		Pn	04 09 33.6	0.0
UWB	**Uwekahuna B**	**0.76**	**127**		Pn	04 09 33.5	-0.1
NPH	**North Pit**	**0.76**	**128**		Pn	04 09 33.6	-0.1
SBLHI	**Steaming Bluff**	**0.76**	**127**		Pn	04 09 33.6	-0.1
SBLHI				IAML		04 09 49.3	
	comp=N,2μm,0.5s						
SBLHI				IAML		04 09 49.6	
	comp=E,1μm,0.4s						
SDHHI	**Sand Hill**	**0.77**	**130**		Pn	04 09 33.8	+0.1
SDHHI				IAML		04 09 50.0	
	comp=E,2μm,0.8s						
SDHHI				IAML		04 09 56.9	
	comp=N,2μm,0.6s						
HATHI	**Halema'uma'u T**	**0.77**	**127**		Pn	04 09 33.7	-0.1
HATHI				IAML		04 10 00.1	
	comp=N,1μm,1.0s						
HATHI				IAML		04 10 00.8	
	comp=E,2μm,0.6s						
HATHI	**Halema'uma'u T**	**0.77**	**127**		Sn	04 09 42.9	-1.6
BYL	**Byron's Ledge**	**0.78**	**127**		Pn	04 09 33.8	-0.1
RIM	**Rim**	**0.78**	**129**		Pn	04 09 33.9	0.0
RIM				IAML		04 09 48.0	
	comp=E,1μm,0.8s						
RIM				IAML		04 10 00.3	
	comp=N,2μm,0.9s						
KKO	**Keanakako`i**	**0.78**	**128**		Pn	04 09 33.9	0.0
KKO				IAML		04 10 03.5	
	comp=N,3μm,0.9s						
HTC	**Hot Caves**	**0.81**	**143**		Pn	04 09 34.6	+0.4
HTC					Sn	04 09 44.5	-0.9
HLP	**Hilina Pali**	**0.82**	**136**		Pn	04 09 34.7	+0.3
HLP	**Hilina Pali**	**0.82**	**136**		Sn	04 09 44.6	-1.1
PUH	**Pauahi**	**0.83**	**128**		Pn	04 09 34.4	-0.2
HPO	**Honuapo**	**0.87**	**157**		Pn	04 09 35.2	+0.3
KNHH	**Kane Nui o Ham**	**0.87**	**126**		Pn	04 09 34.9	-0.1
STCH	**Steam Cracks**	**0.90**	**124**		Pn	04 09 35.4	0.0
STCH				IAML		04 09 46.0	
	comp=E,2μm,0.2s						
STCH				IAML		04 09 46.6	
	comp=N,2μm,0.3s						
STCH	**Steam Cracks**	**0.90**	**124**		Sn	04 09 45.8	-1.7
NPOC	**North of Pu'u**	**0.91**	**123**		Sn	04 09 45.9	-1.8
NPOC	**North of Pu'u**	**0.91**	**123**		Pn	04 09 35.4	-0.1
NPOC				IAML		04 09 46.6	
	comp=N,1μm,0.4s						
JCUZ	**Jacuzzi**	**0.92**	**123**		Sn	04 09 46.1	-1.8
JCUZ	**Jacuzzi**	**0.92**	**123**		Pn	04 09 35.6	-0.1
HLK	**Haleakala**	**0.92**	**340**		Pn	04 09 35.9	0.0
HLK	**Haleakala**	**0.92**	**340**		Sn	04 09 46.7	-1.5
JOKA	**Jonika Flow**	**0.97**	**118**		Pn	04 09 36.2	-0.1
JOKA					Sn	04 09 47.4	-1.8
KHLH	**Kahului Airpor**	**1.11**	**335**		Pn	04 09 39.1	+1.0
KHLH				IAML		04 09 53.5	
	comp=N,1μm,0.2s						
KHLH				IAML		04 09 54.5	
	comp=E,2μm,0.5s						
KHLH	**Kahului Airpor**	**1.11**	**335**		Sn	04 09 52.3	-0.1
DHH	**Diamond Head**	**2.23**	**308**		Pn	04 09 53.5	0.0
DHH					Sn	04 10 19.2	-0.7
HON	**Honolulu**	**2.42**	**307**		Pn	04 09 56.3	+0.3
KIP	**Kipapa**	**2.49**	**308**		Pn	04 09 57.2	+0.2
KIP				IAML		04 10 26.0	
	comp=E,350nm,0.5s						
OPA	**Opana**	**2.65**	**313**		Pn	04 09 58.8	-0.4
KEKH	**Kekaha**	**4.11**	**301**		Pn	04 10 18.6	-0.6

*IDC **18** 04:16:56.9±0.7, 8°.44S×159°.06E, h95^{km}±7^{km}, mb3.7/9, mbtmp4.1/9, Error ellipse: s-maj=16.9km s-min=11.7km az=44.0*
ISC 18 04:16:57.1±0.7, **8°.5S**±0°.1×**159°.1E**±0°.1, **h100**^{km}, **n11**, σ**0**^{s}.**60**/17, **mb3.8**/9, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.27**	**139**	P	**Pn**	**04 17 20.1**	**-0.5**
	6μm,0.2s,baz=346,slow=4.2,SNR=39						
HNR				S	**Sn**	**04 17 38.6**	**+0.2**
	8μm,0.3s,baz=0.0,slow=19,SNR=4.8						
WRA	**Warramunga Arr**	**26.54**	**242**	P	**P**	**04 22 25.4**	**-0.4**
	1.4nm,0.4s,baz=66,slow=9.1,SNR=29						
WRA				pP	**pP**	**04 22 46.9**	**-0.6**
	1.3nm,0.7s,baz=65,slow=8.8,SNR=4.2						
WRA				PcP	**PcP**	**04 25 48.4**	**+0.2**
	0.5nm,0.4s,baz=63,slow=3.3,SNR=7.1						
	1.4nm,0.4s						
STKA	**Stephens Creek**	**28.42**	**213**	P	**P**	**04 22 43.8**	**+1.3**
	1.2nm,0.5s,baz=43,slow=16,SNR=5.8						
	1.2nm,0.5s						
ASAR	**Alice Springs**	**28.47**	**235**	P	**P**	**04 22 42.4**	**-0.7**

	0.9nm,0.5s,baz=61,slow=9.6,SNR=34						
ASAR				pP	pP	04 23 04.6	-0.4
	0.8nm,0.8s,baz=64,slow=9.0,SNR=2.9						
ASAR				PcP	PcP	04 25 52.8	0.0
	0.3nm,0.4s,baz=77,slow=2.6,SNR=4.8						
	0.9nm,0.5s						
KSRS	Korea Array	54.20	329	P	P	04 26 12.6	+0.1
	0.7nm,0.5s,baz=155,slow=6.7,SNR=4.1						
	0.7nm,0.5s						
SONM	Songino Array	72.80	326	P	P	04 28 15.6	+0.6
	2.0nm,0.6s,baz=140,slow=6.0,SNR=17						
SONM				pP	pP	04 28 39.6	-0.4
	2.0nm,0.6s,baz=138,slow=5.6,SNR=7.9						
	2.0nm,0.6s						
ILAR	Eielson Array	83.28	20	P	P	04 29 11.9	-0.4
	0.4nm,0.4s,baz=240,slow=5.1,SNR=14						
	0.4nm,0.4s						
MKAR	Makanchi Array	87.20	318	P	P	04 29 32.3	-0.1
	1.8nm,0.7s,baz=96,slow=6.5,SNR=20						
	1.8nm,0.7s						
ZALV	Zalesovo Beam	87.68	325	P	P	04 29 33.8	-0.7
	0.6nm,0.6s,baz=93,slow=5.1,SNR=2.4						
	0.6nm,0.6s						
YKA	Yellowknife Ar	95.73	28	P	P	04 30 12.2	+0.7
	0.3nm,0.7s,baz=256,slow=4.7,SNR=4.5						
	0.3nm,0.7s						
ESDC	Sonseca Array	145.42	337	PKPbc	PKPab	04 36 24.4	+0.1
	2.0nm,1.0s,baz=29,slow=3.6,SNR=7.9						

NAO **18** *04:30:56.7±2.0, 79°.72N×3°.60E, ML4.4*
NEIC **18** *04:30:58.9±1.4, 79°.6N±0°.1×3°.5E±0°.4, h10^{km}±1^{km}, mb4.5/54, Error ellipse: s-maj=17.8km s-min=11.1km az=8.0*
MOS **18** *04:30:58.3±1.1, 79°.54N×3°.08E, h10^{km}, mb4.8/31, Error ellipse: s-maj=36.7km s-min=5.5km az=94.3*
GCMT **18** *04:30:58.9±0.3, 79°.49N±0°.04×2°.9E±0°.1, h17^{km}±1^{km}, MW4.8/95, Moment Tensor Solution. s24,c25; s95,c118; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.65±.11; M$_{\theta\theta}$0.38±.08; M$_{\phi\phi}$1.28±.07; M$_{r\theta}$-1.01±.28; M$_{\theta\phi}$0.40±.05; M$_{\phi r}$-0.14±.17; Best double couple: M$_0$1.79400×10^{16} NP1:φ$_s$45.00000°,δ58.00000°,λ-67.00000°. NP2: φ$_s$185.00000°,δ38.00000°,λ-123.00000°. Principal axes: T 1.5210, Plg11.0000°, Azm118.0000°; N 0.5540, Plg20.0000°, Azm212.0000°; P -2.0680, Plg67.0000°, Azm1.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC **18** *04:30:59.0±0.4, 79°.54N×3°.12E, h0^{km}, mb4.1/32, mbtmp4.1/38, ML3.4/5, MS3.7/55 Error ellipse: s-maj=12.5km s-min=8.2km az=34.0*
BER **18** *04:30:59.5±1.4, 79°.59N×3°.62E, h10^{km}, ML3.4, ML4.4(NAO), Confirmed Earthquake*
KOLA **18** *04:31:01.1, 79°.28N×4°.67E, h0^{km}, ML3.5, Error ellipse: s-maj=18.1km s-min=9.7km az=10.0, Greenland sea, Knipovich ridge, north*
IEPN **18** *04:31:01.0, 79°.51N×3°.79E, h10^{km}*
ISC 18 04:30:58.4±0.9**, 79°.52N**±0°.04×**3°.12E**±0°.03**, h5**^{km}±5^{km}**, n311, σ2^{s}71**/318**, mb4.5**/86**, MS3.7**/52**, 18C-12D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.76	105	Pn	Pn	04 31 26.8	-2.7
KBS				Lg	Lg	04 31 45.6	
KBS	Kingsbay	1.76	105		Pn	04 31 26.6	-2.9
KBS	Kingsbay	1.76	105	eP	Pn	04 31 26.4	-3.1
KBS				eS	Sn	04 31 44.9	-7.4
KBS	Kingsbay	1.76	105	c iP	Pn	04 31 26.7	-2.7
KBS				pmax	pmax		
	comp=Z,381nm,0.7s						
KBS	Kingsbay	1.76	105	P	Pn	04 31 26.1	-3.4
KBS				S	Sn	04 31 44.8	-7.5
KBS	Kingsbay	1.76	105	i P	Pn	04 31 26.9	-2.7
KBS	Kingsbay	1.76	105	⇑iP	Pn	04 31 26.6	-2.9
KBS				eS	Sn	04 31 45.8	-6.5
KBS				IAML		04 31 53.5	
	comp=Z,622nm,0.4s						
BRBB	Barentsburg B	2.59	118	Pn	Pn	04 31 39.7	-1.2
BRBB				Sn	Sn	04 32 07.1	-5.6
BRBB	Barentsburg B	2.59	118	P	Pn	04 31 38.6	-2.3
BRBB				S	Sn	04 32 06.8	-5.9
BRBB	Barentsburg B	2.59	118	eP	Pn	04 31 39.6	-1.3
BRBB				eS	Sn	04 32 07.0	-5.8
BRBA	Barentsburg A	2.62	119	Pn	Pn	04 31 40.1	-1.1
BRBA				Sn	Sn	04 32 07.2	-6.1
BRBA	Barentsburg A	2.62	119	eP	Pn	04 31 40.1	-1.1
BRBA				eS	Sn	04 32 07.9	-5.4
BRBA				IAML		04 32 15.3	
	comp=Z,388nm,0.4s						
SPA0	Spitsbergen Ar	2.90	111	Pn	Pn	04 31 43.4	-1.8
	baz=306,slow=7.9						
SPA0				Sn	Sn	04 32 14.2	-6.2
	baz=316,slow=14						
SPA0	Spitsbergen Ar	2.90	111	⇑iP	Pn	04 31 43.4	-1.8
SPA0				i S	Sn	04 32 13.8	-6.6
SPA0	Spitsbergen Ar	2.90	111	Pn	Pn	04 31 43.4	-1.8
	baz=306,slow=7.9						
SPA0				Sn	Sn	04 32 14.2	-6.2
	baz=316,slow=14						
SPITS	Spitsbergen Ar	2.90	111	Pn	Pn	04 31 43.4	-1.8
	comp=Z,202nm,0.3s,baz=312,slow=8.7,SNR=4703						
SPITS				Sn	Sn	04 32 14.7	-5.7
	baz=296,slow=23						
SPITS	Spitsbergen Ar	2.90	111	P	Pn	04 31 42.5	-2.7
SPITS				S	Sn	04 32 15.1	-5.3
SPB2	Spitsbergen Ar	2.91	111		Pn	04 31 43.4	-1.8
HSPB	Hornsund (broa	3.57	129	Pn	Pn	04 31 52.8	-1.6
HSPB				Sn	Sn	04 32 30.6	-6.3
HSPB	Hornsund (broa	3.57	129	eP	Pn	04 31 52.5	-1.9
HSPB				eS	Sn	04 32 30.0	-6.9
HSPB	Hornsund (broa	3.57	129	P	Pn	04 31 52.2	-2.1
HSPB				S	Sn	04 32 28.6	-8.3
HSPB	Hornsund (broa	3.57	129	eP	Pn	04 31 52.7	-1.6
HSPB				eS	Sn	04 32 30.3	-6.6
HSPB				IAML		04 32 33.4	
	comp=Z,378nm,0.4s						
NOR	Nord	3.85	312	Pn	Pn	04 31 57.0	-1.2
NOR	Nord	3.85	312	i P	Pn	04 31 57.9	-0.4
NOR	Nord	3.85	312	eP	Pn	04 31 57.2	-1.0
DAG	Danmarks Havn	5.24	249	e	Pn	04 32 14.2	-3.0
	baz=54,slow=14						
DAG				i P	Pn	04 32 16.0	-1.2
DAG				i P	Pn	04 32 16.4	-0.8
DAG				i S	Sn	04 33 12.4	-5.4
DAG				IAML		04 33 19.6	
	comp=Z,79nm,0.4s						
DAG	Danmarks Havn	5.24	249	eP	Pn	04 32 16.4	-0.8
DAG				e		04 33 10.7	
HOPEN	Hopen	5.43	112	Pn	Pn	04 32 17.5	-2.4
HOPEN				Sn	Sn	04 33 14.7	-8.0
HOPEN	Hopen	5.43	112	eP	Pn	04 32 17.5	-2.4
HOPEN				eS	Sn	04 33 14.4	-8.3
HOPEN	Hopen	5.43	112	eP	Pn	04 32 17.5	-2.4
HOPEN				eS	Sn	04 33 14.6	-8.0
HOPEN				IAML		04 33 18.8	
	comp=Z,57nm,0.4s						
BJO1	Bjornoya	6.15	137	Pn	Pn	04 32 29.8	+0.1
BJO1				Sn	Sn	04 33 33.4	-7.0
BJO1	Bjornoya	6.15	137	eP	Pn	04 32 29.1	-0.6
BJO1				eS	Sn	04 33 32.4	-7.9
BJO1	Bjornoya	6.15	137	eP	Pn	04 32 29.6	-0.1
DBG	Daneborg	7.37	237	Pn	Pn	04 32 46.0	-0.4
DBG				Sn	Sn	04 34 03.0	-7.4
DBG	Daneborg	7.37	237	i P	Pn	04 32 46.0	-0.4
DBG				i S	Sn	04 34 02.9	-7.4
DBG				IAML		04 34 04.8	
	comp=Z,53nm,0.4s						
DBG	Daneborg	7.37	237	eP	Pn	04 32 45.4	-1.1
DBG				eS	Sn	04 34 02.4	-7.9
ZFI2	Zemlya Franca-	7.57	59	eP	Pn	04 32 46.5	-2.7
ZFI2				eS	Sn	04 34 04.0	-11
	comp=Z,62nm,1.1s						
ZFI	Zemlya Franca-	7.57	59	eP	Pn	04 32 46.4	-2.7
ZFI				eS	Sn	04 34 04.4	-11
	comp=Z,89nm,0.9s						
OMEGA	Omega	7.59	59	eP	Pn	04 32 46.6	-2.8
OMEGA				eS	Sn	04 34 04.8	-11
	comp=Z,111nm,1.0s						
JMIC	Jan Mayen	9.04	205	Pn	Pn	04 33 10.1	+0.7
JMIC				Sn	Sn	04 34 45.2	-6.1
JMIC	Jan Mayen	9.04	205	Pn	Pn	04 33 09.6	+0.2
	comp=Z,22nm,0.3s,baz=63,slow=9.0,SNR=8.5						
JMIC				Sn	Sn	04 34 44.4	-7.0
	comp=Z,15nm,0.3s,baz=230,slow=22,SNR=7.8						
JMIC	Jan Mayen	9.04	205	Pn	Pn	04 33 10.1	+0.7
JMIC				Sn	Sn	04 34 45.2	-6.1
HAMF	Hammerfest	10.26	139	Pn	Pn	04 33 25.2	-0.8
HAMF	Hammerfest	10.26	139	eP	Pn	04 33 25.5	-0.5
NEEM	North Greenlan	10.67	287	i P	Pn	04 33 28.0	-3.8
NEEM				IAML		04 35 24.1	
	comp=Z,12nm,0.4s						
SCO	Scoresbysund	10.99	228		Pn	04 33 35.6	-0.4
SCO	Scoresbysund	10.99	228	P	Pn	04 33 35.6	-0.4
SCO	Scoresbysund	10.99	228	i P	Pn	04 33 35.6	-0.4
SCO				IAML		04 35 34.2	
	comp=Z,3.7nm,0.4s						
VADS	Vadso	11.49	131	S	Sn	04 35 39.2	-12
VADS	Vadso	11.49	131	eP	Pn	04 33 41.0	-1.7
VADS	Vadso	11.49	131	P	Pn	04 33 41.4	-1.4
KIF	Kilpisjarvi	11.51	147	Pn	Pn	04 33 43.0	0.0
KIF	Kilpisjarvi	11.51	147	e	Pn	04 33 42.6	-0.4
KEV	Kevo	11.51	135	Pn	Pn	04 33 42.0	-1.1
KEV	Kevo	11.51	135	P	Pn	04 33 42.0	-1.1
KEV	Kevo	11.51	135	e	Pn	04 33 42.1	-1.1
ARA0	ARCESS Array S	11.53	138	Pn	Pn	04 33 42.0	-1.4
	baz=352,slow=12						
ARA0				Sn	Sn	04 35 41.7	-11
	baz=351,slow=22						
ARA0	ARCESS Array S	11.53	138	Pn	Pn	04 33 42.0	-1.4
	baz=352,slow=12						
ARA0				Sn	Sn	04 35 41.7	-11
	baz=351,slow=22						
ARCES	ARCESS Array B	11.53	138	Pn	Pn	04 33 42.4	-1.0
	comp=Z,1.4nm,0.3s,baz=351,slow=12,SNR=57						
ARCES				Sn	Sn	04 35 41.1	-11
	comp=Z,0.3nm,0.3s,baz=346,slow=21,SNR=2.1						
ARCES				LR	LR	04 37 49.0	
	comp=Z,262nm,21.9s,baz=309,slow=36						
	comp=Z,6.9nm,0.5s						
ARCES	ARCESS Array B	11.53	138	S	Sn	04 35 41.5	-11
ARCES	ARCESS Array B	11.53	138	P	Pn	04 33 42.6	-0.8
KTK1	Kautokeino	11.76	143	eP	Pn	04 33 47.1	+0.6
LOF	Lofoten	11.77	161	eP	Pn	04 33 48.5	+1.8
SUMG	Summit	11.85	257	eP	Pn	04 33 46.1	-2.1
SUMG				IAML		04 35 56.9	
	comp=Z,11nm,0.4s						
HEF	Hetta	12.38	143	eP	Pn	04 33 56.4	+1.4
TERR	Teriberka	13.16	124	S	Sn	04 36 16.2	-16
TERR	Teriberka	13.16	124	P	Pn	04 34 01.6	-4.1
KULLO	Kullorsuaq	13.71	281	i P	Pn	04 34 09.5	-3.6
LVZ	Lovozero	14.29	127	Pn	Pn	04 34 18.0	-3.1
LVZ	Lovozero	14.29	127	P	Pn	04 34 18.0	-3.1
TULEG	Thule	14.30	296	Pn	Pn	04 34 15.8	-5.3
TULEG	Thule	14.30	296	i P	Pn	04 34 16.4	-4.7
TULEG				IAML		04 37 05.7	
	comp=Z,4.9nm,0.4s						
APA	Apatity	14.42	129	⇓iP	Pn	04 34 18.9	-3.9
APA				pmax	pmax		
	comp=Z,16nm,1.0s						
UPNV	Upernavik	14.90	276	i P	Pn	04 34 23.8	-5.5
UPNV				eS	Sn	04 36 57.0	-18
UPNV				IAML		04 37 00.8	
	comp=Z,8.6nm,0.4s						
ICESG	Greenland Ices	15.03	250	i P	Pn	04 34 29.0	-2.3
ILULI	Ilulissat	16.96	263	Pn	Pn	04 34 50.0	-5.9
ILULI	Ilulissat	16.96	263	P	Pn	04 34 50.0	-5.9
ILULI				pmax	pmax		
	comp=Z,19nm,1.0s						
ANGG	Ammassalik, Gr	17.83	242	Pn	Pn	04 35 06.4	-0.5
ANGG				IAmb	IAmb	04 35 20.3	
	comp=Z,32nm,1.2s						
DY2G	Dye2	18.51	254	i P	Pn	04 35 16.6	+1.2
NC405	NORSAR Array S	18.68	167	P	Pn	04 35 17.9	+0.6
NB2	NORSAR Subarra	18.73	168	P	Pn	04 35 19.5	+1.5
NB2	NORSAR Subarra	18.73	168	P	Pn	04 35 19.5	+1.5
NOA	NORSAR Array B	18.73	168	P	Pn	04 35 19.5	+1.5
	baz=352,slow=12,SNR=8.3						
NOA				LR	LR	04 40 49.2	
	comp=Z,141nm,21.6s,baz=0.0,slow=32						
	comp=Z,2.6nm,0.9s						
LSH	Leshukonskoye	18.82	116	eP	P	04 35 16.7	-1.7
	comp=Z,113nm,1.4s						
LSH				eS	Sn	04 38 25.0	-24
SFJD	Kangerlussuaq	18.82	259	P	P	04 35 15.9	-2.5
	comp=Z,17nm,0.7s,baz=10,slow=10,SNR=15						
SFJD				LR	LR	04 43 02.2	
	comp=Z,335nm,20.0s,baz=24,slow=38						
SFJD	Kangerlussuaq	18.82	259	P	P	04 35 15.8	-2.5
SFJD				IAmb	IAmb	04 35 18.1	
	comp=Z,28nm,1.1s						
SFJD	Kangerlussuaq	18.82	259	P	P	04 35 15.8	-2.6
SFJD				pmax	pmax		
	comp=Z,28nm,1.1s						
SFJD	Kangerlussuaq	18.82	259	i P	P	04 35 16.6	-1.8
NRA0	NORESS Array S	19.05	167	P	Pn	04 35 22.3	+0.6
	baz=356,slow=8.6						
NRA0	NORESS Array S	19.05	167	P	Pn	04 35 22.3	+0.6
	baz=356,slow=8.6						
FIA1	FINESS Array S	19.41	146	P	Pn	04 35 26.1	+0.1
FIA0	FINESS Array S	19.41	146	P	Pn	04 35 26.5	+0.5
	baz=344,slow=11						
FIA0	FINESS Array S	19.41	146	P	Pn	04 35 26.5	+0.5
	baz=344,slow=11						
FINES	FINESS Array B	19.41	146	P	Pn	04 35 26.2	+0.2
	comp=Z,0.6nm,0.3s,baz=344,slow=9.9,SNR=26						
FINES				LR	LR	04 42 37.8	
	comp=Z,136nm,22.0s,baz=16,slow=36						
	comp=Z,4.6nm,0.6s						
FINES	FINESS Array B	19.41	146	P	Pn	04 35 25.9	-0.1
HFS	Hagfors	19.75	164	P	Pn	04 35 30.4	+0.3
	baz=2.9,slow=7.4						
HFS	Hagfors	19.75	164	P	Pn	04 35 30.0	-0.1
	comp=Z,0.2nm,0.3s,baz=12,slow=7.6,SNR=6.6						
HFS				LR	LR	04 41 46.0	
	comp=Z,181nm,18.4s,baz=356,slow=33						
	comp=Z,7.1nm,0.8s						
HFS	Hagfors	19.75	164	P	Pn	04 35 30.0	-0.1
HFS	Hagfors	19.75	164	P	Pn	04 35 30.4	+0.3
	baz=2.9,slow=7.4						
RES	Resolute Bay	19.79	309	P	P	04 35 28.1	-0.8
	comp=Z,0.4nm,0.3s,baz=38,slow=12,SNR=32						
	comp=Z,5.2nm,0.7s						
RES	Resolute Bay	19.79	309		P	04 35 27.6	-1.3
KLMR	Klimovskoe	21.66	128	eP	P	04 35 48.3	-1.0
	comp=Z,28nm,1.1s						
KLMR	Klimovskoe	21.66	128	eP	P	04 35 48.4	-1.0
KLMR				AMP		04 35 56.3	
	comp=Z,28nm,1.1s						
KLMR	Klimovskoe	21.66	128	eP	P	04 35 48.3	-1.0
KLMR				pmax	pmax		
	comp=Z,28nm,1.1s						
NRIK	Noril'sk	22.27	69	P	P	04 35 56.7	+0.9
	comp=Z,8.1nm,0.8s,baz=346,slow=11,SNR=3.2						
NRIK				LR	LR	04 45 19.9	
	comp=Z,155nm,21.1s,baz=337,slow=39						
	comp=Z,8.1nm,0.8s						
NRIK	Noril'sk	22.27	69	P	P	04 35 55.0	-0.8
VSU	Vasula	22.40	146	⇓eP	P	04 35 58.6	+1.4
VSU				pmax	pmax		
	comp=Z,213nm,1.3s						
VSU	Vasula	22.40	146	eP	P	04 35 58.7	+1.4
NRS	Narsarsuaq	23.28	247	P	P	04 36 03.6	-2.8
NRS	Narsarsuaq	23.28	247	P	P	04 36 03.6	-2.8
NRS				pmax	pmax		
	comp=Z,61nm,1.1s						
NRS	Narsarsuaq	23.28	247	i P	P	04 36 03.1	-3.3
EKA	Eskdalemuir Ar	24.38	189	P	P	04 36 18.7	+1.6
	comp=Z,1.6nm,0.5s,baz=1.2,slow=7.9,SNR=13						
	comp=Z,1.6nm,0.5s						
FRB	Frobisher Bay	25.02	274	P	P	04 36 23.5	+0.8
	comp=Z,6.9nm,0.9s,baz=16,slow=11,SNR=5.9						
FRB				LR	LR	04 46 21.3	
	comp=Z,204nm,18.8s,baz=26,slow=37						
	comp=Z,6.9nm,0.9s						
PABE	Paberze	25.06	151	P	P	04 36 22.3	-0.9
PABE	Paberze	25.06	151	eP	P	04 36 24.9	+1.7
ISAL	Salakas	25.20	149	eP	P	04 36 26.1	+1.7
KIRV	Kirov	25.35	118	P	P	04 36 26.6	+0.9
	comp=Z,7.7nm,0.5s,baz=294,slow=9.4,SNR=4.0						
KIRV				LR	LR	04 47 16.3	
	comp=Z,221nm,19.7s,baz=344,slow=39						
	comp=Z,7.7nm,0.5s						
KIRV	Kirov	25.35	118	⇑eP	P	04 36 26.8	+1.1
NACGM	Naroch	25.92	148	eP	P	04 36 32.2	+1.3
	comp=E,655nm,0.9s						
A36M	Sachs Harbour	25.98	326	P	P	04 36 27.9	-3.4
MOS	Moscow	26.35	134	eP	P	04 36 39.5	+4.7
MNK	Minsk	26.42	147	i P	P	04 36 35.6	+0.1
	comp=E,4.0nm,1.1s						
MNK				i P	P	04 36 35.6	+0.1
	comp=N,43nm,1.0s						
MNK				i P	P	04 36 35.6	+0.1
	comp=Z,36nm,0.9s,baz=170						
MNK				i PP	PnPn	04 37 15.7	+1.0
MNK				i PPP	PPP	04 37 23.8	
MNK				i S	S	04 41 10.8	+1.7
MNK				i SS	SnSn	04 42 13.9	+4.7
MNK				i SSS	SSS	04 42 27.8	
MNK				i LQ	LQ	04 44 32.4	
MNK				i LR	LR	04 47 01.7	
MNK				i LRM	MLR	04 48 08.3	
	comp=E,21nm,15.4s						
MNK				i LRM	MLR	04 48 09.0	
	comp=Z,141nm,14.2s						
MNK				i LRM	MLR	04 48 09.6	
	comp=N,167nm,13.6s						
MNK	Minsk	26.42	147	i P	P	04 36 35.6	+0.1
MNK				i PPP	PPP	04 37 23.8	
MNK				i		04 39 59.8	
MNK				i S	S	04 41 10.8	+1.7
MNK				i SS	SnSn	04 42 13.8	+4.7
MNK				pmax	pmax		
	comp=E,4.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,43nm,1.0s						
MNK				pmax	pmax		
	comp=Z,36nm,0.9s						
MNK				pmax	pmax		
	comp=E,21nm,15.0s						
MNK				pmax	pmax		
	comp=Z,141nm,14.0s						
MNK				pmax	pmax		
	comp=N,167nm,14.0s						
OBN	Obninsk	26.82	135	LR	LR	04 46 49.7	
	comp=N,48nm,21.3s,baz=356,slow=35						
OBN	Obninsk	26.82	135	⇑eP	P	04 36 40.0	+0.9
OBN				pmax	pmax		
	comp=Z,41nm,2.0s						
OBN				MLR	MLR		
	comp=Z,214nm,18.0s						
ARU	Arti	28.94	109	P	P	04 36 59.5	+1.5
	comp=Z,1.6nm,0.3s,baz=47,slow=6.6,SNR=2.2						
ARU				LR	LR	04 49 54.7	
	comp=Z,192nm,20.0s,baz=322,slow=39						
	comp=Z,1.6nm,0.3s						
ARU	Arti	28.94	109	d iP	P	04 36 59.7	+1.7
ARU						04 37 50.6	
ARU				S	S	04 41 53.2	+4.5
ARU				pmax	pmax		
	comp=Z,31nm,2.8s						
BRG	Berggiesshubel	29.01	166	eP	P	04 37 01.1	+2.4
BRG				Amp		04 37 04.0	
	comp=Z,14nm,1.3s						
BRG	Berggiesshubel	29.01	166	eP	P	04 37 01.1	+2.4
BRG				pmax	pmax		
	comp=Z,14nm,1.3s						
DPC	Dobruska-Polom	29.65	163	eP	P	04 37 03.2	-1.2
DPC				epP	sP	04 37 06.7	+1.4
DPC	Dobruska-Polom	29.65	163	eP	P	04 37 03.2	-1.2
DPC				e		04 37 06.7	
PRU	Pruhonice	29.92	165	eP	P	04 37 09.5	+2.7
PRU	Pruhonice	29.92	165	eP	P	04 37 09.5	+2.7
KRLC	Kraliky	29.95	162	eP	P	04 37 09.1	+2.0
KRLC	Kraliky	29.95	162	eP	P	04 37 09.1	+2.0
OJC	Ojcow	29.99	158	P	P	04 37 07.9	+0.5
OJC				IAmb	IAmb	04 37 10.2	
	comp=Z,7.6nm,1.0s						
OJC	Ojcow	29.99	158	P	P	04 37 07.9	+0.5
OJC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MORC	Moravsky Berou	30.29	161	⇑P	P	04 37 12.2	+2.0
MORC	Moravsky Berou	30.29	161	P	P	04 37 09.6	-0.6
MORC				IAmb	IAmb	04 37 15.5	
	comp=Z,6.0nm,0.9s						
MORC	Moravsky Berou	30.29	161	eP	P	04 37 12.1	+2.0
MORC	Moravsky Berou	30.29	161	P	P	04 37 12.1	+2.0
AKASG	Malin Array Be	30.31	146	P	P	04 37 10.6	+0.4
	comp=Z,1.6nm,0.6s,baz=350,slow=8.3,SNR=8.6						
AKASG				LR	LR	04 49 08.0	
	comp=Z,124nm,21.8s,baz=4.5,slow=36						
	comp=Z,1.6nm,0.6s						
AKASG	Malin Array Be	30.31	146	P	P	04 37 09.4	-0.9
AKBB	Malin Array Si	30.31	146	⇑eP	P	04 37 11.0	+0.8
AKBB				pmax	pmax		
	comp=Z,43nm,3.1s						
INK	Inuvik	30.33	330	P	P	04 37 11.1	+0.8
	comp=Z,1.6nm,1.1s,baz=358,slow=8.1,SNR=3.4						
INK				PcP	PcP	04 40 11.2	+1.4
	comp=Z,0.9nm,0.8s,baz=327,slow=1.6,SNR=3.0						
INK				LR	LR	04 51 17.8	
	comp=Z,72nm,18.9s,baz=352,slow=40						
	comp=Z,1.6nm,1.1s						
TREC	Trest	30.66	164	eP	P	04 37 15.5	+2.2
TREC	Trest	30.66	164	eP	P	04 37 15.5	+2.2
VRAC	Vranov	30.70	163	⇑P	P	04 37 16.2	+2.5
VRAC	Vranov	30.70	163	LR	LR	04 48 25.9	
	comp=Z,115nm,19.2s,baz=349,slow=34						
VRAC	Vranov	30.70	163	eP	P	04 37 16.2	+2.5
VRAC	Vranov	30.70	163	P	P	04 37 16.2	+2.5
MAUC	Maruska	30.72	161	eP	P	04 37 15.8	+1.9
KHC	Kasperske Hory	30.73	167	eP	P	04 37 18.6	+4.6
KHC	Kasperske Hory	30.73	167	⇑eP	P	04 37 18.1	+4.1
KHC				pmax	pmax		
	comp=Z,32nm,2.2s						
STHS	Stebnicka Huta	30.89	157	eP	P	04 37 16.9	+1.5
STHS				pmax	pmax		
	comp=Z,12nm,0.8s						
STHS	Stebnicka Huta	30.89	157	eP	P	04 37 16.9	+1.5
KRUC	Moravsky	30.94	163	eP	P	04 37 18.0	+2.2
GERES	GERESS Array B	31.02	166	P	P	04 37 19.2	+2.5
	comp=Z,1.5nm,0.8s,baz=353,slow=6.9,SNR=3.0						
GERES				LR	LR	04 49 22.7	
	comp=Z,76nm,19.2s,baz=256,slow=36						
	comp=Z,1.5nm,0.8s						
BELG	Belogornoye	31.03	124	LR	LR	04 49 34.3	
	comp=Z,191nm,20.9s,baz=328,slow=36						
BELG	Belogornoye	31.03	124	⇓eP	P	04 37 19.2	+2.7
BELG				pmax	pmax		
	comp=Z,7.0nm,1.5s						
LANS	Liptovska Anna	31.03	159	eP	P	04 37 19.1	+2.4
LANS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LANS	Liptovska Anna	31.03	159	eP	P	04 37 19.1	+2.4
CKRC	Cesky Krumlov	31.08	166	eP	P	04 37 19.3	+2.3
CKRC	Cesky Krumlov	31.08	166	eP	P	04 37 19.3	+2.3
SMOL	Smolenice	31.54	162	eP	P	04 37 24.2	+3.1
VYHS	Vyhne	31.65	160	eP	P	04 37 24.3	+2.3
VYHS	Vyhne	31.65	160	eP	P	04 37 24.3	+2.3
MODS	Modra-Piesok	31.67	162	eP	P	04 37 25.1	+2.8
MODS				pmax	pmax		
	comp=Z,21nm,1.1s						
MODS	Modra-Piesok	31.67	162	eP	P	04 37 25.1	+2.8
CONA	Conrad Observa	32.04	164	i pP	pP	04 37 28.2	+2.0
	comp=Z,10nm,1.1s						
BMAR	Burnt Mountain	32.10	337	P	P	04 37 23.9	-1.9
TRPA	Tarpa	32.27	155	⇑P	P	04 37 29.8	+2.3
RONA	Rosalia, Austr	32.29	163	i pP	pP	04 37 30.5	+2.2
	comp=Z,8.5nm,1.2s						
BILL	Bilibino	32.33	12	⇑eP	P	04 37 26.3	-1.5
BILL				e		04 38 31.5	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.7s						
BILL				MLR	MLR		
	comp=Z,82nm,18.0s						
DAVOX	Davos/Dischmat	32.95	171	LR	LR	04 50 04.0	
	comp=Z,88nm,18.2s,baz=22,slow=35						
BUR08	Bucovina Ar. S	32.97	152	P	P	04 37 32.6	-1.1
BUR08				IAmb	IAmb	04 37 36.2	
	comp=Z,17nm,1.5s						
BURAR	Bucovina Array	33.00	152	⇑P	P	04 37 35.7	+1.7
BURAR	Bucovina Array	33.00	152	P	P	04 37 33.6	-0.3
BURAR				IAmb	IAmb	04 37 39.3	
	comp=Z,7.0nm,1.4s						
BURAR	Bucovina Array	33.00	152	P	P	04 37 35.6	+1.7
SCHQ	Schefferville	33.05	265	LR	LR	04 51 27.2	
	comp=Z,149nm,18.5s,baz=38,slow=37						
MYKA	Terra Mystica	33.23	167	i pP	pP	04 37 39.3	+2.6
	comp=Z,2.5nm,0.5s						
SOKA	Soboth	33.25	165	i pP	pP	04 37 38.8	+2.0

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          comp=Z,5.6nm,0.9s
CLUD  Cludinico         33.38 168   P      P       04 37 37.2  0.0
CLUD                                IAmb   IAmb    04 37 42.2
          comp=Z,11nm,1.2s
OBKA  Obir              33.39 166  epP     pP      04 37 40.6 +2.5
          comp=Z,5.6nm,0.8s
YKA   Yellowknife Ar    33.78 312   P      P       04 37 41.6 +1.1
          comp=Z,0.5nm,0.8s,baz=11,slow=8.4,SNR=7.9
YKA                                 PcP    PcP     04 40 20.9 +1.6
          comp=Z,0.6nm,0.7s,baz=13,slow=2.3,SNR=7.4
YKA                                 LR     LR      04 51 28.0
          comp=Z,140nm,19.1s,baz=277,slow=36
          comp=Z,0.5nm,0.8s
MORH  Mrgy, Hungar      33.91 161 ⇑P      P       04 37 43.9 +2.2
BRVK  Borovoye          34.24  99   P      P       04 37 43.4 -1.2
BRVK  Borovoye          34.24  99   P      P       04 37 43.4 -1.2
BRVK                                pmax   pmax
          comp=Z,4.0nm,1.0s
BVAR  Borovoye Array    34.29  99   P      P       04 37 47.2 +2.1
          comp=Z,2.0nm,0.6s,baz=344,slow=10.0,SNR=8.2
BVAR                                LR     LR      04 54 40.6
          comp=Z,241nm,18.6s,baz=341,slow=42
          comp=Z,2.0nm,0.6s
SURR  Surduc            34.60 156 ⇓P      P       04 37 50.2 +2.4
AKTO  Aktyubinsk        34.60 113   LR     LR      04 52 58.7
          comp=Z,147nm,20.8s,baz=112,slow=38
BZS   Buzias            34.70 157 ⇓P      P       04 37 50.9 +2.2
BZS   Buzias            34.70 157   P      P       04 37 50.8 +2.2
ILAR  Eielson Array     34.89 338   P      P       04 37 52.8 +2.6
          comp=Z,1.0nm,1.0s,baz=3.3,slow=7.2,SNR=6.8
ILAR                                PcP    PcP     04 40 23.7 +1.2
          comp=Z,0.5nm,0.6s,baz=342,slow=4.1,SNR=6.8
ILAR                                LR     LR      04 52 22.1
          comp=Z,73nm,19.0s,baz=330,slow=37
          comp=Z,1.0nm,1.0s
GZR   Gura Zlata        35.01 156 ⇑P      P       04 37 53.6 +2.2
GZR   Gura Zlata        35.01 156   P      P       04 37 53.6 +2.2
MLR   Muntele Rosu      35.17 152   LR     LR      04 51 51.8
          comp=Z,113nm,21.8s,baz=298,slow=36
YAK   Yakutsk           35.36  41⇓eP      P       04 37 53.6 -0.5
YAK                                 pmax   pmax
          comp=Z,11nm,0.5s
MDVR  Moldovita         35.54 157 ⇑P      P       04 37 58.2 +2.2
ZALV  Zalesovo Beam     36.04  84   P      P       04 38 01.6 +1.5
          comp=Z,0.3nm,0.3s,baz=348,slow=10,SNR=2.1
ZALV                                PcP    PcP     04 40 26.6 +0.6
          comp=Z,1.1nm,0.7s,baz=316,slow=4.0,SNR=4.1
ZALV                                LR     LR      04 55 37.1
          comp=Z,94nm,19.3s,baz=348,slow=41
          comp=Z,0.3nm,0.3s
ABKAR Akbulak array     36.07 111   P      P       04 37 59.0 -1.4
ABKAR                               IAmb   IAmb    04 38 17.0
          comp=Z,6.5nm,1.4s
DIVS  Divibare          36.10 159   P      P       04 38 01.0 +0.2
SEY   Seymchan          36.66  23⇓eP      P       04 38 05.9 +0.6
SEY                                 pmax   pmax
          comp=Z,9.0nm,1.9s
KURK  Kurchatov         38.00  91   P      P       04 38 15.3 -1.5
KURK                                IAmb   IAmb    04 38 27.5
          comp=Z,7.7nm,1.1s
KURK  Kurchatov         38.00  91   P      P       04 38 18.8 +2.0
KURBB Kurchatov Arra    38.07  92   P      P       04 38 18.8 +1.4
          comp=Z,3.3nm,0.8s,baz=341,slow=7.6,SNR=25
KURBB                               LR     LR      04 57 37.4
          comp=Z,136nm,18.3s,baz=149,slow=42
          comp=Z,3.3nm,0.8s
KBZ   Khabaz            38.81 132   P      P       04 38 26.0 +2.3
          comp=Z,3.4nm,0.8s,baz=15,slow=4.5,SNR=9.7
KBZ                                 LR     LR      04 54 40.3
          comp=Z,101nm,20.3s,baz=16,slow=37
          comp=Z,3.4nm,0.8s
KBZ   Khabaz            38.81 132⇑eP      P       04 38 26.2 +2.6
KBZ                                 pmax   pmax
          comp=Z,6.0nm,0.9s
FNA   Florina           39.49 158   P      P       04 38 30.1 +0.6
FNA   Florina           39.49 158   P      P       04 38 30.1 +0.6
FNA                                 pmax   pmax
          comp=Z,3.0nm,0.8s
DLBC  Dease Lake        39.62 323   LR     LR      04 55 28.8
          comp=Z,80nm,20.1s,baz=242,slow=37
ESDC  Sonseca Array     40.06 189   P      P       04 38 35.6 +1.5
          comp=Z,2.5nm,0.9s,baz=3.5,slow=7.6,SNR=12
          comp=Z,2.5nm,0.9s
ESDC  Sonseca Array     40.06 189   P      P       04 38 34.1 -0.1
PAB   San Pablo         40.20 189   P      P       04 38 35.5 +0.1
PAB                                 IAmb   IAmb    04 38 38.7
          comp=Z,16nm,1.4s
PAB   San Pablo         40.20 189   P      P       04 38 35.5 +0.1
PAB                                 pmax   pmax
          comp=Z,16nm,1.4s
DGZ   Jazzator, Alta    40.58  83⇓eP      P       04 38 39.3 +0.7
DGZ                                 pmax   pmax
          comp=Z,6.0nm,2.0s
LMQ   La Malbaie        40.67 265   P      P       04 38 39.3 +0.2
LMQ                                 IAmb   IAmb    04 38 42.1
          comp=Z,11nm,1.0s
BR131 Keskin Array S    41.63 144   P      P       04 38 46.6 -0.7
BR131                               IAmb   IAmb    04 38 50.3
          comp=Z,5.4nm,0.8s
BR131 Keskin Array S    41.63 144c iP     P       04 38 49.5 +2.3
BRTR  Keskin Array B    41.63 144   P      P       04 38 49.3 +2.1
          comp=Z,2.8nm,0.8s,baz=353,slow=7.0,SNR=13
BRTR                                LR     LR      04 57 33.1
          comp=Z,59nm,19.6s,baz=356,slow=38
          comp=Z,2.8nm,0.8s
BRTR  Keskin Array B    41.63 144   P      P       04 38 46.8 -0.5
AKT   Akhty             41.70 128  eP      P       04 38 49.4 +1.6
AKT                                e               04 40 23.8
AKT                                e               04 40 46.5
AKT                                 pmax   pmax
          comp=Z,13nm,1.2s
MAKZ  Makanchi          42.37  90   P      P       04 38 51.8 -1.3
MAKZ  Makanchi          42.37  90   P      P       04 38 54.6 +1.5
MK31  Makanchi Array    42.44  89   P      P       04 38 53.2 -0.4
MK31  Makanchi Array    42.44  89deP      P       04 38 54.8 +1.1
MKAR  Makanchi Array    42.44  89   P      P       04 38 54.9 +1.2
          comp=Z,2.5nm,0.7s,baz=344,slow=7.2,SNR=31
MKAR                                LR     LR      05 01 04.5
          comp=Z,126nm,19.0s,baz=4.0,slow=42
          comp=Z,2.5nm,0.7s
MKAR  Makanchi Array    42.44  89   P      P       04 38 52.8 -0.9
GNI   Garni             42.58 131   LR     LR      04 57 00.1
          comp=Z,84nm,20.6s,baz=346,slow=37
ULM   Lac du Bonnet     42.66 291   P      P       04 38 56.6 +1.3
          comp=Z,5.9nm,0.9s,baz=15,slow=6.7,SNR=6.7
ULM                                 LR     LR      04 57 00.3
          comp=Z,178nm,18.1s,baz=329,slow=37
          comp=Z,5.9nm,0.9s
ULM   Lac du Bonnet     42.66 291   P      P       04 38 55.0 -0.3
ULM                                 IAmb   IAmb    04 38 57.1
          comp=Z,11nm,1.2s
TRQ   Mont Tremblant    42.72 269   P      P       04 38 55.1 -0.9
TRQ                                 IAmb   IAmb    04 38 58.7
          comp=Z,7.7nm,1.0s
ZEA   Zeya              43.13  46⇓eP      P       04 38 57.8 -1.3
KK31  Karatay Array     43.87 103   P      P       04 39 05.1 -0.2
KK31  Karatay Array     43.87 103   P      P       04 39 05.1 -0.2
KK31                                pmax   pmax
          comp=Z,3.0nm,1.1s
KKAR  Karatay Array     43.87 103   P      P       04 39 05.0 -0.2
KKAR  Karatay Array     43.87 103   P      P       04 39 05.0 -0.2
KEST  Kesra             43.97 173   P      P       04 39 08.2 +2.1
          comp=Z,1.6nm,0.5s,baz=37,slow=10,SNR=1.7
          comp=Z,1.6nm,0.5s
SADO  Sadowa            44.96 273   LR     LR      04 57 43.6
          comp=Z,134nm,21.0s,baz=68,slow=36
AAK   Ala-Archa         45.04  99   P      P       04 39 17.5 +2.7
          comp=Z,2.0nm,0.6s,baz=297,slow=6.6,SNR=4.4
AAK                                 LR     LR      05 00 37.8
          comp=Z,200nm,20.1s,baz=356,slow=40
          comp=Z,2.0nm,0.6s
BBB   Bella Bella       45.54 320   LR     LR      04 59 32.1
          comp=Z,59nm,19.5s,baz=24,slow=38
SONM  Songino Array     45.72  66   P      P       04 39 21.2 +1.1
          comp=Z,0.7nm,0.8s,baz=328,slow=5.3,SNR=3.8
          comp=Z,0.7nm,0.8s
ULN   Ulaanbaatar       45.80  66⇓eP      P       04 39 22.0 +1.3
ULN                                 pmax   pmax
          comp=Z,5.0nm,1.2s
WMQ   Urumqi            46.30  85  eP      P       04 39 27.3 +2.7
WMQ                                 pP     pwP     04 39 30.0 +0.6
WMQ                                 pmax   pmax
          comp=Z,16nm,0.7s
GEYT  Alibeck           46.78 117   P      P       04 39 30.4 +2.1
          comp=Z,2.2nm,0.8s,baz=310,slow=6.8,SNR=4.3
GEYT                                LR     LR      05 02 03.0
          comp=Z,57nm,18.5s,baz=355,slow=40
          comp=Z,2.2nm,0.8s
GAR   Garm              47.82 104   P      P       04 39 36.1 -0.4
GAR                                 IAmb   IAmb    04 39 39.2
          comp=Z,5.7nm,0.8s
NEW   Newport           47.95 309   LR     LR      05 00 58.6
          comp=Z,84nm,19.1s,baz=8.5,slow=38
MMAI  Mount Meron Ar    48.46 143   LR     LR      05 01 54.9
          comp=Z,27nm,20.0s,baz=49,slow=38
ECSD  EROS Data Cent    49.10 289   P      P       04 39 46.5 +0.3
ASF   Jabal al Asfar    49.46 142   P      P       04 39 50.4 +1.2
          comp=Z,1.5nm,0.7s,baz=337,slow=13,SNR=2.4
          comp=Z,1.5nm,0.7s
RSSD  Black Hills       49.97 296   P      P       04 39 53.4 +0.2
RSSD                                IAmb   IAmb    04 39 56.3
          comp=Z,5.5nm,1.1s
RSSD  Black Hills       49.97 296   P      P       04 39 53.4 +0.2
RSSD                                pmax   pmax
          comp=Z,6.0nm,1.1s
EIL   Elat              51.72 144   LR     LR      05 05 34.4
          comp=Z,22nm,19.3s,baz=320,slow=40
PD31  Pinedale Array    52.18 301   P      P       04 40 10.0 +0.2
PD31                                IAmb   IAmb    04 40 12.7
          comp=Z,6.3nm,1.3s
PDAR  Pinedale Array    52.18 301   P      P       04 40 11.3 +1.5
          comp=Z,2.2nm,1.1s,baz=29,slow=3.4,SNR=10.0
PDAR                                LR     LR      05 03 46.4
          comp=Z,60nm,18.5s,baz=7.5,slow=38
          comp=Z,2.2nm,1.1s
PDAR  Pinedale Array    52.18 301   P      P       04 40 09.8  0.0
HHC   Hu-ho-hao-te      53.37  64  eP      P       04 40 17.3 -1.2
HHC                                 pmax   pmax
          comp=Z,46nm,0.8s
HHC                                 pmax   pmax
          comp=Z,200nm,5.1s
T50A  Nancy             53.52 276   P      P       04 40 20.1 +0.7
TZTN  Tazewell          53.74 274   P      P       04 40 21.1  0.0
RDMU  Red Mountain      54.33 300   P      P       04 40 25.4 -0.2
RDMU                                IAmb   IAmb    04 40 28.3
          comp=Z,7.1nm,1.2s
TKL   Tuckaleechee C    54.65 274   P      P       04 40 28.8 +1.2
          comp=Z,8.4nm,0.8s,baz=62,slow=4.3,SNR=12
TKL                                 LR     LR      05 04 04.7
          comp=Z,84nm,18.9s,baz=28,slow=36
          comp=Z,8.4nm,0.8s
TKL   Tuckaleechee C    54.65 274   P      P       04 40 27.9 +0.2
YBH   Yreka Blue Hor    55.13 312   LR     LR      05 03 52.9
          comp=Z,70nm,18.6s,baz=4.0,slow=36
Q24A  Divide            55.19 296   P      P       04 40 31.5 -0.5
SWET  Sewanee           55.47 276   P      P       04 40 33.7  0.0
SWET                                IAmb   IAmb    04 40 34.5
          comp=Z,6.0nm,0.8s
FCAR  Ozark Folk Cen    55.93 283   P      P       04 40 36.5 -0.4
FCAR                                IAmb   IAmb    04 40 38.2
          comp=Z,4.3nm,0.8s
Q16A  Castle Valley     56.20 301   P      P       04 40 39.5 +0.4
Q16A                                IAmb   IAmb    04 40 42.3
          comp=Z,7.1nm,0.9s
PV13  Radium Mtn., P    56.57 299   P      P       04 40 42.0 +0.3
TAM   Tamanrasset       56.80 177   P      P       04 40 44.2 +0.8
TAM                                 IAmb   IAmb    04 40 46.5
          comp=Z,3.1nm,0.8s
TAM   Tamanrasset       56.80 177   P      P       04 40 44.3 +0.8
TAM                                 pmax   pmax
          comp=Z,3.0nm,0.8s
X40A  Basin Creek Fa    57.42 283   P      P       04 40 47.6 +0.1
MIAR  Mount Ida         57.50 284   P      P       04 40 48.6 +0.5
MIAR  Mount Ida         57.50 284   P      P       04 40 48.6 +0.5
MIAR                                pmax   pmax
          comp=Z,9.0nm,0.9s
NVAR  Mina Array Bea    57.76 308   P      P       04 40 51.7 +1.6
          comp=Z,0.5nm,0.7s,baz=17,slow=2.3,SNR=5.7
NVAR                                LR     LR      05 07 37.6
          comp=Z,64nm,18.0s,baz=358,slow=38
          comp=Z,0.5nm,0.7s
RAYN  Ar Rayn           59.05 134   P      P       04 40 59.3 +0.2
RAYN                                IAmb   IAmb    04 41 04.4
          comp=Z,7.7nm,1.3s
RAYN  Ar Rayn           59.05 134   P      P       04 40 59.3 +0.2
RAYN                                pmax   pmax
          comp=Z,8.0nm,1.3s
ANMO  Albuquerque       59.33 296   P      P       04 41 02.6 +1.5
          comp=Z,1.7nm,0.9s,baz=24,slow=13,SNR=4.9
          comp=Z,1.7nm,0.9s
ANMO  Albuquerque       59.33 296   P      P       04 41 01.1  0.0
ANMO                                IAmb   IAmb    04 41 03.7
          comp=Z,3.9nm,1.2s
WUAZ  Wupatki           59.56 301   P      P       04 41 02.8 +0.2
WUAZ                                IAmb   IAmb    04 41 05.6
          comp=Z,6.9nm,1.1s
WSAR  Wadi Sarin        61.24 120   LR     LR      05 13 46.9
          comp=Z,50nm,18.1s,baz=28,slow=42
MJAR  Matsushiro Arr    61.42  40   P      P       04 41 16.2 +1.1
          comp=Z,1.1nm,0.7s,baz=356,slow=4.9,SNR=5.5
          comp=Z,1.1nm,0.7s
PFO   Pinyon Flats O    62.21 305   LR     LR      05 09 10.2
          comp=Z,60nm,18.0s,baz=0.5,slow=37
TUC   Tucson            62.61 299   P      P       04 41 23.8 +0.6
TUC                                 IAmb   IAmb    04 41 26.5
          comp=Z,4.6nm,1.0s
TUC   Tucson            62.61 299   P      P       04 41 23.8 +0.6
TUC                                 pmax   pmax
          comp=Z,5.0nm,1.0s
NJ2   Nanjing           63.15  59  eP      P       04 41 25.4 -1.3
NJ2                                 pmax   pmax
          comp=Z,4.0nm,0.5s
JNU   Nakatsue          63.86  48   P      P       04 41 32.8 +1.3
          comp=Z,3.4nm,0.8s,baz=52,slow=5.5,SNR=3.7
          comp=Z,3.4nm,0.8s
TX31  Lajitas Ar. Si    64.34 292   P      P       04 41 34.7 -0.1
TX31                                IAmb   IAmb    04 41 37.6
          comp=Z,4.8nm,0.8s
TXAR  Lajitas Array     64.34 292   P      P       04 41 36.2 +1.4
          comp=Z,1.1nm,0.7s,baz=36,slow=4.6,SNR=14
TXAR                                LR     LR      05 09 42.2
          comp=Z,74nm,18.8s,baz=4.0,slow=36
          comp=Z,1.1nm,0.7s
PZH   PanZhiHua         65.69  76   P      P       04 41 43.9 +0.3
PZH                                 pmax   pmax
          comp=Z,10.0nm,0.5s
PZH                                 pmax   pmax
          comp=Z,100nm,4.8s
TORD  Torodi Ar. Bea    66.39 182   P      P       04 41 48.9 +0.9
          comp=Z,5.2nm,1.0s,baz=359,slow=6.5,SNR=17
          comp=Z,5.2nm,1.0s
BRDH  Bariadhala        67.59  87   LR     LR      05 19 15.1
          comp=Z,114nm,18.2s,baz=195,slow=43
SJG   San Juan          68.57 253   LR     LR      05 11 57.8
          comp=Z,25nm,18.5s,baz=27,slow=36
LPIG  La Paz            70.57 297   LR     LR      05 13 51.3
          comp=Z,116nm,18.4s,baz=8.0,slow=36
CMAR  Chiang Mai Arr    73.04  81   P      P       04 42 29.3 +0.3
          comp=Z,1.1nm,0.4s,baz=344,slow=6.8,SNR=7.8
CMAR                                LR     LR      05 19 56.5
          comp=Z,52nm,18.0s,baz=355,slow=40
          comp=Z,1.1nm,0.4s
CMAR  Chiang Mai Arr    73.04  81   P      P       04 42 28.5 -0.5
CMAR  Chiang Mai Arr    73.04  81 i P      P       04 42 29.6 +0.6
CMAR                                pmax   pmax
          comp=Z,3.0nm,0.8s
CMIG  Matias Romero     74.77 281   LR     LR      05 18 04.7
          comp=Z,43nm,20.2s,baz=352,slow=38
SDV   Santo Domingo     78.38 256   LR     LR      05 17 26.9
          comp=Z,36nm,20.0s,baz=300,slow=36
JTS   Las Juntas de     79.60 270   LR     LR      05 18 40.6
          comp=Z,58nm,20.0s,baz=338,slow=36
PALK  Pallekele         80.64 101   LR     LR      05 21 32.4
          comp=Z,60nm,20.1s,baz=153,slow=38
MBAR  Mbarara           81.26 152ceP      P       04 43 18.2 +2.8
MBAR                                pmax   pmax
          comp=Z,9.0nm,2.5s
RUSC  La Rusia          81.74 257   P      P       04 43 18.6 +0.3
RUSC                                IAmb   IAmb    04 43 26.0
          comp=Z,7.5nm,1.0s
ROSC  El Rosal          82.99 259   LR     LR      05 21 50.7
          comp=Z,57nm,18.1s,baz=302,slow=37
TULM  Tulcn-Chalpat     87.64 261   P      P       04 43 48.1  0.0
PSI   Prapat            88.33  84   P      P       04 43 49.0 -1.9
PSI                                 pmax   pmax
          comp=Z,7.0nm,1.1s
RPSI  Rantau Prapat     88.43  84   P      P       04 43 49.0 -2.2
ATAH  Atahualpa         95.42 260   LR     LR      05 28 11.7
          comp=Z,29nm,22.0s,baz=26,slow=36
NNA   Nana              99.88 258   LR     LR      05 32 02.6
          comp=Z,27nm,18.0s,baz=306,slow=37
ASAR  Alice Springs    120.14  53   PKP    PKPdf   04 49 49.1 -0.5
          comp=Z,0.5nm,0.9s,baz=354,slow=1.9,SNR=3.0
LBZ   Lake Benmore     144.41  16   PKPdf  PKPdf   04 50 34.2 -0.1
SNAA  Sanae            151.04 184   PKPbc  PKiKP   04 50 51.7 +0.9
          comp=Z,4.5nm,0.8s,baz=275,slow=1.5,SNR=6.1
```

IDC 18 04:32:12.0±4.4,6°.19S×152°.97E,h0km,mb2.9/2,
mbtmp3.0/2,Error ellipse: s-maj=209.1km
s-min=55.6km az=124.0,New Britain region

```
Code  Station Name       Δ°   AZ°    Phase ID           Time      Res
                                    Op     ISC       h  m  s    ISC
WRA   Warramunga Arr    22.68 231   P      P       04 37 15.9 +0.5
          0.3nm,0.8s,baz=57,slow=11,SNR=2.2
          0.3nm,0.8s
ASAR  Alice Springs     25.27 225   P      P       04 37 39.9 -0.3
          0.2nm,0.5s,baz=58,slow=8.8,SNR=5.0
          0.2nm,0.5s
TORD  Torodi Ar. Bea   150.87 286   PKPbc  PKPbc   04 52 07.4 -0.3
          0.5nm,0.9s,baz=63,slow=2.1,SNR=2.6
```

PRU 18 04:51:02.5±0.0,42°.93N×13°.77E,h10km
ROM 18 04:51:01.6±0.0,43°.014N±0°.002×13°.027E±0°.004,
h9km,ML2.9/42,28C-17D,Error ellipse: s-maj=0.3km
s-min=0.1km az=77.0,Central Italy

```
Code  Station Name       Δ°   AZ°    Phase ID           Time      Res
                                    Op     ISC       h  m  s    ISC
T1219 Muccia, Frazio     0.04 341   P      Pg      04 51 03.5  0.0
T1219                               S      Sg      04 51 04.5 -0.4
T1219                               AML    AML
          comp=E,68900µm,0.6s
T1219                               AML    AML
T1219                               AML    AML
          comp=E,67750µm,0.6s
T1219                               AML    AML
T1219                               AML    AML
T1219                               AML    AML
          comp=E,67750µm,0.6s
T1219                               AML    AML
T1219                               AML    AML
          comp=E,68900µm,0.6s
FDMO  Fiordimonte        0.05  63   P      Pg      04 51 03.5  0.0
FDMO                                S      Sg      04 51 04.9  0.0
FDMO                                AML    AML
          comp=N,37700µm,0.9s
FDMO                                AML    AML
          comp=N,37700µm,1.1s
FDMO                                AML    AML
          comp=E,53150µm,0.3s
FEMA  Monte Fema         0.05 162   P      Pg      04 51 03.9 +0.2
FEMA                                S      Sg      04 51 05.1 -0.1
FEMA                                AML    AML
          comp=E,47450µm,0.3s
FEMA                                AML    AML
          comp=N,28100µm,1.5s
FEMA                                AML    AML
          comp=N,28100µm,1.5s
FEMA                                AML    AML
          comp=E,47450µm,1.7s
CESI  CESI - Serrava     0.09 264 ⇑P      Pg      04 51 04.5 +0.5
CESI                                S      Sg      04 51 06.6 +0.9
CESI                                AML    AML
          comp=E,22150µm,0.7s
CESI                                AML    AML
          comp=E,22150µm,1.3s
CESI                                AML    AML
          comp=N,21050µm,0.2s
T1220 Camerino, Fraz     0.11  25   P      Pg      04 51 04.7 +0.5
T1220                               S      Sg      04 51 06.9 +0.8
T1216 Preci, Frazion     0.12 183   P      Pg      04 51 05.0 +0.6
T1216                               S      Sg      04 51 07.3 +0.9
T1216                               AML    AML
          comp=E,12650µm,0.4s
T1216                               AML    AML
          comp=N,12150µm,0.3s
SEF1  Sefro              0.14 336   P      Pg      04 51 05.3 +0.5
SEF1                                S      Sg      04 51 07.9 +0.8
SEF1                                AML    AML
          comp=E,17050µm,1.4s
SEF1                                AML    AML
          comp=N,12600µm,1.5s
SEF1                                AML    AML
          comp=E,17050µm,0.6s
SEF1                                AML    AML
          comp=N,12600µm,0.5s
T1256 Bolognola (MC)     0.15  93   P      Pg      04 51 05.4 +0.5
T1256                               S      Sg      04 51 07.9 +0.7
T1256                               AML    AML
          comp=E,6970µm,0.8s
T1256                               AML    AML
          comp=N,9525µm,0.3s
T1256                               AML    AML
          comp=E,7650µm,0.8s
T1256                               AML    AML
          comp=E,6975µm,0.8s
T1256                               AML    AML
          comp=N,9520µm,0.3s
T1256                               AML    AML
          comp=E,7645µm,0.8s
T1256                               AML    AML
          comp=E,7645µm,1.2s
T1256                               AML    AML
          comp=N,9240µm,0.3s
T1256                               AML    AML
          comp=E,6975µm,1.2s
CSP1  Cessapalombo       0.15  59   P      Pg      04 51 05.5 +0.5
CSP1                                S      Sg      04 51 08.2 +0.9
CSP1                                AML    AML
          comp=E,14000µm,0.4s
CSP1                                AML    AML
          comp=N,11000µm,1.5s
CSP1                                AML    AML
          comp=E,14000µm,1.6s
CSP1                                AML    AML
          comp=N,11000µm,0.5s
MC2   Monte Cornacci     0.16 130   P      Pg      04 51 05.6 +0.5
MC2                                 S      Sg      04 51 08.8 +1.3
T1245 Castelsantange     0.20 143 ⇓P      Pg      04 51 06.3 +0.6
T1245                               S      Sg      04 51 10.0 +1.4
T1245                               AML    AML
          comp=E,8390µm,0.2s
T1245                               AML    AML
          comp=N,13700µm,0.4s
T1245                               AML    AML
          comp=E,9385µm,0.6s
T1245                               AML    AML
          comp=E,8385µm,0.2s
T1245                               AML    AML
          comp=N,13700µm,0.4s
T1245                               AML    AML
          comp=E,9390µm,0.6s
T1245                               AML    AML
          comp=N,12900µm,0.3s
T1245                               AML    AML
          comp=E,8385µm,0.2s
MDAR  Monte D'Aria       0.20  25   P      Pg      04 51 06.3 +0.6
MDAR                                S      Sg      04 51 09.6 +1.0
GAG1  Gagliole           0.23   7   P      Pg      04 51 07.2 +1.0
GAG1                                S      Sg      04 51 11.3 +1.9
GAG1                                AML    AML
          comp=E,9475µm,0.4s
GAG1                                AML    AML
          comp=N,11550µm,1.6s
GAG1                                AML    AML
          comp=N,11550µm,1.6s
GAG1                                AML    AML
          comp=N,11550µm,0.4s
GUMA  Gualdo di Mace     0.23  78 ⇑P      Pg      04 51 07.2 +0.9
GUMA                                S      Sg      04 51 11.4 +1.9
GUMA                                AML    AML
          comp=E,31100µm,0.3s
GUMA                                AML    AML
          comp=E,46650µm,0.2s
GUMA                                AML    AML
          comp=N,34950µm,0.3s
GUMA                                AML    AML
          comp=E,31100µm,0.3s
GUMA                                AML    AML
          comp=N,33550µm,0.3s
SSM1  San Severino M     0.24  27   P      Pg      04 51 07.2 +0.7
SSM1                                S      Sg      04 51 11.3 +1.6
MMO1  Montemonaco        0.25 117   P      Pg      04 51 07.2 +0.6
MMO1                                S      Sg      04 51 11.4 +1.4
SNTG  Esanatoglia        0.25 345   P      Pg      04 51 07.3 +0.7
SNTG                                S      Sg      04 51 11.6 +1.6
SNTG                                AML    AML
```

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,2325µm,1.2s						
SNTG				AML	AML		
	comp=E,2260µm,1.2s						
SNTG				AML	AML		
	comp=N,2725µm,0.1s						
SNTG				AML	AML		
	comp=E,2325µm,0.8s						
SNTG				AML	AML		
	comp=E,2260µm,0.8s						
SNTG				AML	AML		
	comp=N,2465µm,0.2s						
T1212	**Cascia, Frazio**	**0.26**	**177**	P	Pg	04 51 07.6	+0.7
T1212				S	Sb	04 51 12.0	-1.1
T1212				AML	AML		
	comp=N,6475µm,0.6s						
T1212				AML	AML		
	comp=N,6315µm,0.6s						
T1212				AML	AML		
	comp=E,8165µm,0.4s						
T1212				AML	AML		
	comp=E,8355µm,0.4s						
T1212				AML	AML		
	comp=N,6475µm,0.5s						
T1212				AML	AML		
	comp=N,6315µm,0.5s						
ASSB	**Assisi San Ben**	**0.27**	**276**	⇑P	Pg	04 51 07.7	+0.6
ASSB				AML	AML		
	comp=N,6730µm,0.3s						
ASSB				AML	AML		
	comp=E,4125µm,0.3s						
T1214	**Arquata del Tr**	**0.29**	**152**	P	Pg	04 51 07.9	+0.5
T1214				S	Sb	04 51 12.7	-1.2
T1214				AML	AML		
	comp=E,3275µm,0.8s						
T1214				AML	AML		
	comp=N,3435µm,0.2s						
T1214				AML	AML		
	comp=E,3080µm,0.8s						
T1214				AML	AML		
	comp=N,3460µm,0.2s						
T1214				AML	AML		
	comp=E,3080µm,0.8s						
T1214				AML	AML		
	comp=N,3460µm,0.2s						
T1214				AML	AML		
	comp=N,3435µm,0.2s						
T1214				AML	AML		
	comp=E,3275µm,1.2s						
T1214				AML	AML		
	comp=E,3080µm,1.2s						
T1217	**Poggiodomo (PG**	**0.31**	**193**	P	Pg	04 51 08.5	+0.7
T1217				S	Sb	04 51 13.9	-0.7
T1217				AML	AML		
	comp=E,3550µm,1.5s						
T1217				AML	AML		
	comp=E,3455µm,1.1s						
T1217				AML	AML		
	comp=N,3820µm,1.3s						
T1217				AML	AML		
	comp=E,3550µm,0.5s						
T1217				AML	AML		
	comp=N,3440µm,1.3s						
T1217				AML	AML		
	comp=E,3455µm,0.9s						
EL6	**Elcito**	**0.32**	**10**	⇑P	Pg	04 51 08.6	+0.6
EL6				S	Sb	04 51 14.0	-0.9
EL6				AML	AML		
	comp=E,5810µm,0.7s						
EL6				AML	AML		
	comp=E,5815µm,0.7s						
EL6				AML	AML		
	comp=N,8305µm,0.2s						
EL6				AML	AML		
	comp=E,5815µm,1.3s						
ATCC	**AVT- Casa Cast**	**0.33**	**301**	⇑P	Pg	04 51 08.8	+0.7
ATCC				AML	AML		
	comp=E,4160µm,0.3s						
ATCC				AML	AML		
	comp=N,3500µm,0.2s						
T1241	**Roccafluvione,**	**0.34**	**118**	⇓P	Pg	04 51 08.8	+0.5
T1241				AML	AML		
	comp=N,2715µm,0.7s						
T1241				AML	AML		
	comp=E,3060µm,0.6s						
T1241				AML	AML		
	comp=E,3135µm,0.6s						
T1241				AML	AML		
	comp=N,2630µm,0.7s						
FOSV	**Fossato di Vic**	**0.34**	**325**	⇓P	Pg	04 51 09.0	+0.6
FOSV				S	Sb	04 51 14.6	-0.8
FOSV				AML	AML		
	comp=N,2225µm,0.4s						
FOSV				AML	AML		
	comp=E,1780µm,0.9s						
MNTP	**Montappone**	**0.35**	**69**	P	Pb	04 51 09.3	-0.6
MNTP				AML	AML		
	comp=E,4930µm,1.2s						
MNTP				AML	AML		
	comp=N,3380µm,0.4s						
MNTP				AML	AML		
	comp=E,4930µm,1.2s						
MNTP				AML	AML		
	comp=E,4930µm,0.8s						
MNTP				AML	AML		
	comp=N,3380µm,1.6s						
T1218	**Civita (PG)**	**0.35**	**169**	P	Pg	04 51 09.1	+0.6
T1218				S	Sb	04 51 14.9	-0.8
T1218				AML	AML		
	comp=E,2395µm,0.3s						
T1218				AML	AML		
	comp=N,3680µm,0.7s						
T1218				AML	AML		
	comp=N,3685µm,0.7s						
T1218				AML	AML		
	comp=N,3805µm,0.7s						
T1218				AML	AML		
	comp=E,2390µm,0.3s						
T1218				AML	AML		
	comp=E,2310µm,0.3s						
CING	**Cingoli**	**0.38**	**19**	⇑P	Pg	04 51 09.7	+0.6
CING				AML	AML		
	comp=E,3025µm,0.2s						
CING				AML	AML		
	comp=N,2040µm,1.3s						
MOMA	**Monte Martano**	**0.40**	**238**	⇑P	Pg	04 51 10.0	+0.6
MOMA				AML	AML		
	comp=E,1300µm,0.6s						
MOMA				AML	AML		
	comp=N,1370µm,1.4s						
MOMA				AML	AML		
	comp=N,1520µm,1.4s						
MOMA				AML	AML		
	comp=N,1370µm,1.4s						
MOMA				AML	AML		
	comp=E,1300µm,1.3s						
MOMA				AML	AML		
	comp=E,1300µm,0.7s						
MOMA				AML	AML		
	comp=E,1300µm,0.6s						
MOMA				AML	AML		
	comp=N,1520µm,0.6s						
MOMA				AML	AML		
	comp=N,1370µm,0.6s						
MURB	**Monte Urbino**	**0.44**	**304**	⇑P	Pg	04 51 10.9	+0.6
MURB				AML	AML		
	comp=E,4695µm,0.3s						
MURB				AML	AML		
	comp=N,2970µm,1.4s						
MURB				AML	AML		
	comp=E,4940µm,0.2s						
MURB				AML	AML		
	comp=E,4695µm,0.2s						
MURB				AML	AML		
	comp=N,2970µm,0.6s						
MURB				AML	AML		
	comp=N,3195µm,0.2s						
SMA1	**SAN MARTINO**	**0.45**	**149**	⇓P	Pg	04 51 10.7	+0.4
SMA1				AML	AML		
	comp=E,2025µm,0.6s						
SMA1				AML	AML		
	comp=N,2060µm,0.5s						
SMA1				AML	AML		
	comp=E,2025µm,1.4s						
SSFR	**Montelago di S**	**0.46**	**337**	P	Pb	04 51 11.3	-0.5
SSFR				AML	AML		
	comp=N,2885µm,0.7s						
SSFR				AML	AML		
	comp=E,3955µm,0.3s						
SSFR				AML	AML		
	comp=N,2840µm,0.7s						
SSFR				AML	AML		
	comp=E,4110µm,0.2s						
SSFR				AML	AML		
	comp=N,2840µm,1.3s						
SSFR				AML	AML		
	comp=N,2885µm,1.3s						
ARRO	**Arrone**	**0.47**	**204**	⇑P	Pg	04 51 11.4	+0.6
ARRO				AML	AML		
	comp=N,959µm,1.0s						
ARRO				AML	AML		
	comp=E,1335µm,0.3s						
ARRO				AML	AML		
	comp=N,959µm,1.0s						
ATFO	**Monte Foce - G**	**0.48**	**317**	⇑P	Pg	04 51 11.7	+0.6
ATFO				S	Sb	04 51 19.9	+0.2
ATFO				AML	AML		
	comp=N,746µm,0.2s						
ATFO				AML	AML		
	comp=E,858µm,0.9s						
ATFO				AML	AML		
	comp=E,858µm,1.1s						
ARVD	**Arcevia**	**0.49**	**353**	⇑P	Pg	04 51 11.6	+0.5
ARVD				S	Sb	04 51 20.1	+0.4
ARVD				AML	AML		
	comp=N,884µm,0.3s						
ARVD				AML	AML		
	comp=E,1078µm,0.5s						
OFFI	**Offida**	**0.49**	**99**	⇑P	Pb	04 51 12.6	+0.2
OFFI				AML	AML		
	comp=E,2485µm,0.3s						
OFFI				AML	AML		
	comp=N,3075µm,0.3s						
T1211	**Morro Reatino**	**0.50**	**195**	⇑P	Pg	04 51 11.8	+0.6
T1211				S	Sb	04 51 20.1	+0.2
T1211				AML	AML		
	comp=N,2445µm,0.9s						
T1211				AML	AML		
	comp=N,2445µm,0.9s						
T1211				AML	AML		
	comp=E,1760µm,0.9s						
T1211				AML	AML		
	comp=E,1775µm,0.9s						
T1211				AML	AML		
	comp=N,2445µm,0.9s						
T1211				AML	AML		
	comp=E,1760µm,1.1s						
T1211				AML	AML		
	comp=E,1775µm,1.1s						
CESX	**Cesi**	**0.52**	**219**	⇑P	Pg	04 51 12.1	+0.4
CESX				S	Sb	04 51 20.4	-0.1
CESX				AML	AML		
	comp=N,1870µm,0.3s						
CESX				AML	AML		
	comp=E,1870µm,0.3s						
RM33	**Pellescritta (**	**0.52**	**165**	⇓P	Pg	04 51 12.0	+0.3
RM33				AML	AML		
	comp=E,1310µm,1.5s						
RM33				AML	AML		
	comp=N,1450µm,1.2s						
RM33				AML	AML		
	comp=E,1265µm,1.6s						
RM33				AML	AML		
	comp=E,1310µm,1.6s						
RM33				AML	AML		
	comp=N,1420µm,1.2s						
RM33				AML	AML		
	comp=N,1420µm,0.8s						
RM33				AML	AML		
	comp=E,1310µm,0.4s						
RM33				AML	AML		
	comp=E,1265µm,0.4s						
RM33				AML	AML		
	comp=N,1450µm,0.8s						
ATTE	**AVT- Monte Tez**	**0.53**	**291**	⇑P	Pg	04 51 12.3	+0.5
ATTE				AML	AML		
	comp=N,498µm,1.0s						
ATTE				AML	AML		
	comp=E,794µm,0.5s						
ATTE				AML	AML		
	comp=N,498µm,1.0s						
FRON	**Frontone**	**0.55**	**336**	⇑P	Pg	04 51 12.8	+0.5
FRON				AML	AML		
	comp=N,1073µm,1.3s						
FRON				AML	AML		
	comp=E,790µm,0.6s						
CAMP	**Campotosto**	**0.56**	**149**	⇓P	Pg	04 51 12.5	+0.1
CAMP				AML	AML		
	comp=E,465µm,1.0s						
CAMP				AML	AML		
	comp=N,452µm,0.6s						
CAMP				AML	AML		
	comp=N,452µm,1.4s						
CAMP				AML	AML		
	comp=E,465µm,1.0s						
PP3	**Marolino**	**0.56**	**49**	⇓P	Pb	04 51 13.9	+0.3
PP3				AML	AML		
	comp=N,2455µm,1.3s						
PP3				AML	AML		
	comp=N,2570µm,1.3s						
PP3				AML	AML		
	comp=N,2455µm,0.7s						
PP3				AML	AML		
	comp=E,2460µm,0.3s						
PP3				AML	AML		
	comp=E,2525µm,0.3s						
PP3				AML	AML		
	comp=N,2570µm,0.7s						
ATVO	**AVT- Monte Val**	**0.58**	**309**	⇑P	Pg	04 51 13.3	+0.4
ATVO				S	Sb	04 51 23.1	+0.7
ATVO				AML	AML		
	comp=E,526µm,0.5s						
ATVO				AML	AML		
	comp=N,428µm,0.5s						
T1247	**Pizzolo (AQ)**	**0.61**	**161**	⇑P	Pg	04 51 13.7	+0.4
T1247				S	Sb	04 51 23.4	+0.4
T1247				AML	AML		
	comp=N,1031µm,0.7s						
T1247				AML	AML		
	comp=E,1218µm,0.4s						
T1247				AML	AML		
	comp=E,1218µm,1.6s						
T1222	**Castel Sant'An**	**0.61**	**179**	⇑P	Pb	04 51 14.3	-0.2
T1222				AML	AML		
	comp=E,954µm,1.2s						
T1222				AML	AML		
	comp=E,906µm,1.1s						
T1222				AML	AML		
	comp=E,953µm,1.2s						
T1222				AML	AML		
	comp=E,906µm,1.2s						
T1222				AML	AML		
	comp=E,953µm,0.8s						
T1222				AML	AML		
	comp=N,862µm,1.0s						
T1222				AML	AML		
	comp=N,914µm,1.0s						
T1222				AML	AML		
	comp=E,906µm,0.8s						
COR1	**Corinaldo**	**0.62**	**358**	P	Pg	04 51 11.7	-1.9
ATPI	**Pietralunga -**	**0.63**	**314**	⇑P	Pg	04 51 14.2	+0.4
ATPI				AML	AML		
	comp=E,386µm,1.5s						
ATPI				AML	AML		
	comp=N,390µm,0.3s						
ATPI				AML	AML		
	comp=N,390µm,0.3s						
ATPI				AML	AML		
	comp=E,386µm,0.5s						
PIEI	**Pieia**	**0.63**	**326**	⇑P	Pg	04 51 14.0	+0.2
PIEI				S	Sb	04 51 24.7	+0.8
PIEI				AML	AML		
	comp=N,444µm,0.2s						
PIEI				AML	AML		
	comp=E,664µm,0.2s						
ATMI	**Monte Miggiano**	**0.64**	**300**	⇑P	Pb	04 51 15.6	+0.7
ATMI				S	Sb	04 51 24.8	+0.7
ATMI				AML	AML		
	comp=E,964µm,0.3s						
ATMI				AML	AML		
	comp=N,1148µm,1.6s						
MPAG	**Monte Paganucc**	**0.65**	**342**	⇑P	Pb	04 51 14.9	-0.2
MPAG				AML	AML		
	comp=E,662µm,1.5s						
MPAG				AML	AML		
	comp=N,864µm,0.5s						
MPAG				AML	AML		
	comp=N,864µm,1.5s						
MPAG				AML	AML		
	comp=E,662µm,0.5s						
MGAB	**Montegabbione**	**0.68**	**262**	⇑P	Pg	04 51 15.1	+0.4
MGAB				AML	AML		
	comp=N,812µm,0.3s						
MGAB				AML	AML		
	comp=N,846µm,1.3s						
MGAB				AML	AML		
	comp=E,856µm,1.6s						
MGAB				AML	AML		
	comp=N,846µm,0.7s						
MGAB				AML	AML		
	comp=E,776µm,0.3s						
GIGS	**Gran Sasso**	**0.69**	**145**	⇓P	Pg	04 51 14.6	-0.3
GIGS				AML	AML		
	comp=N,145µm,0.7s						
GIGS				AML	AML		
	comp=E,184µm,0.5s						
APEC	**Apecchio**	**0.70**	**321**	⇑P	Pb	04 51 15.7	-0.3
APEC				AML	AML		
	comp=E,506µm,0.4s						
APEC				AML	AML		
	comp=N,534µm,1.2s						
APEC				AML	AML		
	comp=E,507µm,0.4s						
FSSB	**Fossombrone**	**0.70**	**345**	⇓P	Pg	04 51 15.6	+0.4
FSSB				AML	AML		
	comp=E,1930µm,1.2s						
FSSB				AML	AML		
	comp=N,2605µm,1.5s						
FSSB				AML	AML		
	comp=N,2605µm,0.5s						
FSSB				AML	AML		
	comp=E,1930µm,0.8s						
FIAM	**Fiamignano**	**0.75**	**175**	P	Pg	04 51 16.2	+0.2
FIAM				S	Sb	04 51 27.9	+0.7
FIAM				AML	AML		
	comp=N,717µm,0.3s						
FIAM				AML	AML		
	comp=E,540µm,0.3s						
BADI	**Badiali**	**0.76**	**311**	⇓P	Pb	04 51 16.7	-0.3
BADI				S	Sn	04 51 29.2	-0.8
PE3	**Peglio**	**0.78**	**331**	⇓P	Pb	04 51 17.6	+0.2
SACS	**San Casciano d**	**0.84**	**259**	⇓P	Pb	04 51 18.8	+0.5
SACS				AML	AML		
	comp=E,271µm,0.6s						
SACS				AML	AML		
	comp=N,210µm,0.9s						
SACS				AML	AML		
	comp=E,262µm,0.6s						
SACS				AML	AML		
	comp=N,200µm,0.9s						
CAFI	**Castiglion Fio**	**0.84**	**292**	P	Pg	04 51 18.0	+0.3
CAFI				S	Sn	04 51 31.8	-0.3
CAFI				AML	AML		
	comp=E,368µm,0.5s						
CAFI				AML	AML		
	comp=N,312µm,0.5s						
CAFI				AML	AML		
	comp=E,367µm,0.5s						
CAFI				AML	AML		
	comp=E,367µm,1.5s						
CAFI				AML	AML		
	comp=E,368µm,1.5s						
CAFI				AML	AML		
	comp=N,334µm,0.5s						
FAGN	**Fagnano**	**0.85**	**151**	⇑P	Pg	04 51 17.5	-0.5
FAGN				AML	AML		
	comp=E,1005µm,0.5s						
FAGN				AML	AML		
	comp=N,990µm,0.4s						
FAGN				AML	AML		
	comp=N,990µm,1.6s						
SSP9	**Sansepolcro**	**0.86**	**311**	⇓P	Pn	04 51 21.3	+1.4
SRES	**S.Oreste - Sor**	**0.86**	**206**	⇓P	Pg	04 51 18.4	+0.2
SRES				AML	AML		
	comp=E,408µm,1.1s						
SRES				AML	AML		
	comp=N,378µm,1.3s						
SRES				AML	AML		
	comp=N,378µm,0.7s						
CPGN	**Carpegna, Ital**	**0.94**	**327**	P	Pg	04 51 19.2	-0.5
CPGN				AML	AML		
	comp=E,347µm,1.3s						
CPGN				AML	AML		
	comp=N,406µm,0.6s						
CPGN				AML	AML		
	comp=E,347µm,0.7s						
T0110	**Collepietro**	**0.96**	**145**	⇑P	Pg	04 51 19.6	-0.5
T0110				AML	AML		
	comp=E,670µm,0.5s						
T0110				AML	AML		
	comp=E,670µm,1.5s						
T0110				AML	AML		
	comp=N,704µm,0.4s						
CRE	**Caprese Michel**	**0.99**	**308**	⇓P	Pn	04 51 22.6	+0.8
CERT	**Cerreto**	**1.06**	**182**	⇓P	Pn	04 51 23.6	+0.9
SAMA	**S.Maria delle**	**1.27**	**195**	S	Sn	04 51 43.6	+0.8
MIDA	**Miranda**	**1.65**	**146**	⇓P	Pg	04 51 33.4	+0.3
DUGI	**Dugi Otok**	**1.77**	**56**	*e*Pn	Pb	04 51 33.8	-0.5
VITU	**Vitulano (BN)**	**2.18**	**146**	P	Pg	04 51 44.0	+0.5
GSCL	**Gusciola**	**2.22**	**308**	⇑P	Pb	04 51 42.5	+0.7
PAOL	**Paolisi**	**2.29**	**149**	S	Sg	04 52 13.4	-1.7
KIJV	**Kijevo**	**2.65**	**67**	*e*Pn	Pn	04 51 46.6	+2.2
KIJV				Sn	Sb	04 52 19.6	-2.2
RICI	**Ricice**	**3.04**	**80**	*e*Pn	Pn	04 51 51.6	+1.8
RICI				Sn	Sn	04 52 29.4	+3.1
MYKA	**Terra Mystica**	**3.64**	**7**	*i* Pn	Pn	04 52 01.1	+2.9
	comp=N,0.3nm,0.1s						
OBKA	**Obir**	**3.66**	**17**	*i* Pn	Pn	04 52 00.0	+1.6
	comp=N,0.4nm,0.2s						
OBKA				*i* Sn	Sn	04 52 43.6	+1.8
	comp=N,7.6nm,0.6s						
OBKA				*e*Sg	Sg	04 53 04.9	+5.8
	comp=N,19nm,0.8s						
ABTA	**Abfaltersbach**	**3.75**	**355**	*i* Pn	Pn	04 52 01.8	+2.1
	comp=N,1.9nm,0.3s						
ABTA				*i* Sn	Sn	04 52 45.2	+1.2
	comp=N,4.0nm,0.4s						
KBA	**Koelnbreinsper**	**4.07**	**3**	*i* Pn	Pn	04 52 07.0	+2.9
	comp=N,0.9nm,0.2s						
KBA				*i* Sn	Sn	04 52 52.8	+0.8
	comp=N,2.4nm,0.4s						
FETA	**Feichten**	**4.33**	**339**	*i* Pn	Pn	04 52 10.1	+2.5
	comp=N,1.2nm,0.4s						
FETA				*e*Sn	Sn	04 53 01.5	+3.2
	comp=N,1.0nm,0.4s						
SQTA	**Sankt Quirin**	**4.40**	**344**	*e*Pn	Pn	04 52 10.1	+1.5
	comp=N,0.3nm,0.1s						
SQTA				*i* Sn	Sn	04 53 02.7	+2.7
	comp=N,3.1nm,0.4s						
ARSA	**Arzberg**	**4.59**	**22**	*i* Sn	Sn	04 53 02.8	-1.8
	comp=N,1.7nm,0.4s						
RETA	**Reutte**	**4.75**	**341**	*i* Pn	Pn	04 52 15.8	+2.4
	comp=N,0.8nm,0.3s						
DAVA	**Damuels**	**4.82**	**334**	*e*Pn	Pn	04 52 15.7	+1.3
	comp=N,2.2nm,0.5s						
MOA	**Molln**	**4.91**	**10**	*i* Pn	Pn	04 52 16.3	+0.7
	comp=N,0.4nm,0.2s						
MOA				*i* Sn	Sn	04 53 14.4	+1.9
	comp=N,1.8nm,0.3s						
CONA	**Conrad Observa**	**5.30**	**21**	*i* Pn	Pn	04 52 22.3	+1.3
	comp=N,0.9nm,0.2s						
CONA				*i* Sn	Sn	04 53 21.8	-0.4
	comp=N,1.4nm,0.4s						
CKRC	**Cesky Krumlov**	**5.88**	**8**	*e*SN	Sn	04 53 34.6	-1.7
KHC	**Kasperske Hory**	**6.13**	**3**	*e*PN	Pn	04 52 33.7	+1.4
KHC				*e*SN	Sn	04 53 42.1	-0.5

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*NOU **18** 04:51:44.5, 37°.09S×177°.00E, h269km, MLv3.7/12, Off E. Coast of N. Island, N.Z.*

*WEL **18** 04:51:51.1±0.8, 37°S±6°×17°7E±°, h206km±7km, M3.1/28, ML3.0/8, MLv3.1/28, Error ellipse: s-maj=0.0km s-min=0.0km az=15.9, confirmed*

ISC 18 04:51:44.6±2.2**, 37°.17S**±0°.09×**176°.91E**±0°.08**, h256**km±12km**, n131,** σ1ˢ.90/147, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARZ	**Manawahe**	**0.84**	**193**	P	**Pn**	**04 52 21.3**	**+1.8**
HAZ	**Te Kaha**	**0.91**	**130**	P	**Pn**	**04 52 20.8**	**+1.1**
HAZ				S	**S**	**04 52 44.1**	**-3.4**

RUGZ	Raukumara Rang	1.01	143	P	Pn	04 52 21.0	+0.6
RUGZ				S	S	04 52 44.6	-4.0
KMRZ	Kaimai	1.02	228	P	Pn	04 52 22.0	+1.6
OMRZ	Omania	1.03	204	P	Pn	04 52 22.4	+2.0
KUZ	Kuaotunu	1.04	293	P	Pn	04 52 21.5	+1.0
KUZ	Kuaotunu	1.04	293	P	Pn	04 52 21.2	+0.8
URZ	Urewera	1.10	172	P	Pn	04 52 22.0	+1.2
URZ	Urewera	1.10	172	P	Pn	04 52 21.8	+1.1
URZ				S	S	04 52 46.9	-2.5
TARZ	Mount Tarawera	1.11	196	P	Pn	04 52 23.1	+2.1
HLRZ	Highlands Stat	1.17	202	P	Pn	04 52 23.3	+2.1
PKGZ	Pakihiroa	1.18	128	P	Pn	04 52 23.2	+1.9
PKGZ				S	S	04 52 48.5	-1.8
MXZ	Matakaoa Point	1.18	110	P	Pn	04 52 22.7	+1.4
MXZ	Matakaoa Point	1.18	110	P	Pn	04 52 23.0	+1.7
MXZ				S	S	04 52 48.5	-1.7
RRRZ	Republican Roa	1.21	195	P	Pn	04 52 23.2	+1.7
TOZ	Tahuroa Road	1.25	243	P	Pn	04 52 23.4	+1.8
HSRZ	Hossack Road	1.26	204	P	Pn	04 52 23.6	+1.9
MWZ	Matawai	1.27	157	P	Pn	04 52 23.2	+1.4
MWZ				S	S	04 52 50.1	-1.3
MUGZ	Murupara	1.31	185	P	Pn	04 52 23.6	+1.4
MUGZ				S	S	04 52 49.4	-2.4
HRRZ	Handcock Road	1.32	202	P	Pn	04 52 24.4	+2.2
TWGZ	Tauwhareparae	1.32	140	P	Pn	04 52 24.6	+2.4
TWGZ				S	S	04 52 51.4	-0.5
GRRZ	Galatos Road	1.34	208	P	Pn	04 52 24.6	+2.3
WMGZ	Waiomatatini S	1.37	119	P	Pn	04 52 24.6	+2.2
PUZ	Puketiti	1.40	131	P	Pn	04 52 24.7	+1.9
PUZ				S	S	04 52 50.9	-2.0
RTZ	Ruatahuna	1.45	178	P	Pn	04 52 24.7	+1.5
RTZ				S	S	04 52 51.7	-1.9
ALRZ	Allen Road	1.46	198	P	Pn	04 52 25.1	+1.9
WIAZ	Waiheke Island	1.47	284	P	Pn	04 52 24.5	+1.3
TKGZ	Te Karaka	1.47	150	P	Pn	04 52 25.2	+2.0
TKGZ				S	S	04 52 53.6	-0.2
GRZ	Great Barrier	1.48	308	P	Pn	04 52 24.3	+0.9
TLZ	Tolley Road	1.59	223	P	Pn	04 52 26.6	+2.5
ETAZ	East Tamaki Re	1.60	277	P	Pn	04 52 25.9	+1.7
SNGZ	Shannon Statio	1.65	168	P	Pn	04 52 26.7	+2.1
SNGZ				S	S	04 52 54.7	-1.6
CNGZ	Carnagh Statio	1.67	142	P	Pn	04 52 27.6	+2.9
RIGZ	Rimuhau	1.68	157	P	Pn	04 52 27.2	+2.4
RIGZ				S	S	04 52 56.5	-0.2
MTHZ	Maungataniwha	1.69	182	P	Pn	04 52 26.6	+1.7
MTHZ				S	S	04 52 55.4	-1.4
RAHZ	Arahi	1.75	175	P	Pn	04 52 27.7	+2.3
WATZ	Wairara	1.80	211	P	Pn	04 52 28.2	+2.4
RATZ	Rangitukua	1.92	207	P	Pn	04 52 29.0	+2.2
WHHZ	Waihua	1.93	172	P	Pn	04 52 29.4	+2.6
WHHZ				S	S	04 52 59.5	-0.8
NMHZ	Naumai	1.93	182	P	Pn	04 52 29.6	+2.6
KNZ	Kokohu	1.95	162	P	Pn	04 52 29.0	+2.0
RITZ	Rihia Road	1.99	204	P	Pn	04 52 29.8	+2.3
BKZ	Black Stump Fm	2.02	189	P	Pn	04 52 29.4	+1.6
BKZ	Black Stump Fm	2.02	189	P	Pn	04 52 29.3	+1.5
BKZ				S	S	04 52 59.9	-2.1
KATZ	Kakaramea	2.04	208	P	Pn	04 52 30.4	+2.4
ARHZ	Aropaoanui	2.10	178	P	Pn	04 52 30.7	+2.4
HIZ	Hauiti	2.11	230	P	Pn	04 52 31.3	+2.8
HIZ	Hauiti	2.11	230	P	Pn	04 52 31.1	+2.6
MHGZ	Mahia Peninsul	2.13	159	P	Pn	04 52 31.6	+2.9
NTVZ	North Tongarir	2.16	206	P	Pn	04 52 31.3	+2.2
TMVZ	Te Maari	2.17	206	P	Pn	04 52 31.2	+2.1
ETVZ	East Tongariro	2.18	205	P	Pn	04 52 31.5	+2.2
WTVZ	West Tongariro	2.21	208	P	Pn	04 52 31.7	+2.2
NNVZ	North Ngauruho	2.21	207	P	Pn	04 52 31.8	+2.2
OTVZ	Oturere	2.22	206	P	Pn	04 52 32.0	+2.3
TWVZ	Taurewa	2.23	211	P	Pn	04 52 31.8	+2.2
SNVZ	South Ngauruho	2.25	206	P	Pn	04 52 32.2	+2.2
NGZ	Ngauruhoe	2.25	207	P	Pn	04 52 32.7	+2.7
MCHZ	McNeill Hill	2.28	184	P	Pn	04 52 32.5	+2.5
KWHZ	Kaweka Forest	2.29	189	P	Pn	04 52 32.2	+2.0
TUVZ	Tukino	2.32	205	P	Pn	04 52 32.6	+2.0
FWVZ	Far West T-bar	2.34	207	P	Pn	04 52 32.8	+1.9
WHVZ	Whangaehu Hut	2.35	206	P	Pn	04 52 33.1	+2.1
DRZ	Dome Shelter	2.36	206	P	Pn	04 52 33.4	+2.2
TRVZ	Turoa	2.38	206	P	Pn	04 52 33.2	+1.9
WNVZ	Wahianoa	2.39	205	P	Pn	04 52 33.2	+1.9
WCZ	Waipu Caves	2.40	300	P	Pn	04 52 32.9	+1.6
BHHZ	Black Hill Sta	2.41	196	P	Pn	04 52 33.0	+1.6
MOVZ	Moawhango	2.42	202	P	Pn	04 52 33.0	+1.5
PKVZ	Pokaka	2.45	210	P	Pn	04 52 34.0	+2.2
MTVZ	Mangateitei	2.49	207	P	Pn	04 52 34.3	+2.2
CKHZ	Cape Kidnapper	2.49	177	P	Pn	04 52 34.4	+2.3
VRZ	Vera Road	2.59	220	P	Pn	04 52 36.2	+3.2
KAHZ	Kahuranaki	2.62	181	P	Pn	04 52 35.8	+2.3
PNHZ	Pukenui	2.80	191	P	Pn	04 52 36.8	+1.5
PXZ	Pawanui	2.86	181	P	Pn	04 52 37.8	+1.9
WPHZ	Waipukurau	2.92	187	P	Pn	04 52 38.2	+1.7
TSZ	Takapari Road	2.98	194	P	Pn	04 52 38.7	+1.5
WAZ	Wanganui	2.99	210	P	Pn	04 52 39.6	+2.3
NEZ	North Egmont	3.05	226	P	Pn	04 52 42.3	+4.3
PKE	Pukeiti	3.06	228	P	Pn	04 52 41.9	+3.8
PRHZ	Porangahau	3.10	184	P	Pn	04 52 40.4	+1.9
KHEZ	Kahui Hut	3.12	226	P	Pn	04 52 41.2	+2.5
KHEZ	Kahui Hut	3.12	226	P	Pn	04 52 42.4	+3.7
DVHZ	Dannevirke	3.18	190	P	Pn	04 52 40.7	+1.4
NBEZ	Newall Road No	3.18	228	P	Pn	04 52 43.3	+4.0
POWZ	Post Office Ro	3.34	195	P	Pn	04 52 42.5	+1.4
PRWZ	Pori Road	3.46	192	P	Pn	04 52 44.2	+1.8
BFZ	Birch Farm	3.55	188	P	Pn	04 52 45.2	+1.8
BFZ	Birch Farm	3.55	188	P	Pn	04 52 45.0	+1.6
MRZ	Mangatainoka R	3.64	196	P	Pn	04 52 45.4	+1.0
TIWZ	Tintock	3.69	192	P	Pn	04 52 46.7	+1.6
CPWZ	Castlepoint	3.78	188	P	Pn	04 52 48.3	+2.3
HOWZ	Holdsworth Sta	3.88	196	P	Pn	04 52 48.0	+0.8
OGWZ	Otaki Gorge	3.89	200	P	Pn	04 52 48.3	+1.1
KIW	Kapiti Island	4.00	202	P	Pn	04 52 49.5	+0.9
TMWZ	Te Maipa	4.01	191	P	Pn	04 52 50.3	+1.5
MTW	Mount Morrison	4.13	195	P	Pn	04 52 50.8	+0.7
CAW	Cannon Point	4.19	199	P	Pn	04 52 51.4	+0.7
DUWZ	D’Urville Isla	4.31	212	P	Pn	04 52 53.3	+1.0
TRWZ	Traveller	4.33	192	P	Pn	04 52 53.6	+1.1
PAWZ	Paruwai Farm	4.36	195	P	Pn	04 52 53.5	+0.6
SNZO	South Karori	4.48	202	P	Pn	04 52 54.6	+0.5
TCW	Tory Channel	4.53	206	P	Pn	04 52 55.6	+0.8
PLWZ	Palliser	4.58	196	P	Pn	04 52 56.1	+0.7
TUWZ	Tuamarina	4.84	207	P	Pn	04 52 57.7	-0.7
NNZ	Nelson	4.89	213	P	Pn	04 52 59.5	+0.5
TKNZ	Takaka Hill	4.93	217	P	Pn	04 53 00.0	+0.3
QRZ	Quartz Range	5.00	222	P	Pn	04 53 01.4	+1.0
	45nm,1.8s						
QRZ	Quartz Range	5.00	222	P	Pn	04 53 00.9	+0.5
BSWZ	Blackbirch Sta	5.11	206	P	Pn	04 53 03.6	+1.8
MRNZ	Matariki Terra	5.31	216	P	Pn	04 53 04.7	+0.5
THZ	Tophouse	5.54	213	P	Pn	04 53 07.8	+0.7
KHZ	Kahutara	5.85	205	P	Pn	04 53 12.0	+1.2
	99nm,0.7s						
KHZ	Kahutara	5.85	205	P	Pn	04 53 11.9	+1.0
DSZ	Denniston Nort	6.04	219	P	Pn	04 53 13.7	+0.4
GVZ	Greta Valley S	6.51	206	P	Pn	04 53 19.8	+0.8
LTZ	Lake Taylor	6.64	211	P	Pn	04 53 21.3	+0.5
INZ	Inchbonnie	6.96	215	P	Pn	04 53 25.3	+0.7
OXZ	Oxford	7.19	210	P	Pn	04 53 27.7	+0.1
MQZ	McQueen’s Vall	7.29	205	P	Pn	04 53 28.7	-0.1
RACZ	Rakaia	7.49	208	P	Pn	04 53 31.5	+0.2
MHCZ	Mount Hutt	7.55	211	P	Pn	04 53 32.7	+0.5
WACZ	Wakanui South	7.79	208	P	Pn	04 53 36.1	+1.0
GCSZ	Gaunt Creek Bo	7.94	217	P	Pn	04 53 38.0	+1.0
ARCZ	Arundel	8.05	211	P	Pn	04 53 39.5	+1.1
TMZ	Timaru	8.48	210	P	Pn	04 53 44.6	+0.7
ODZ	Otahua Downs	9.18	209	P	Pn	04 53 54.4	+1.9
	41nm,2.3s						
ODZ	Otahua Downs	9.18	209	P	Pn	04 53 54.5	+1.9
JCZ	Jackson Bay	9.26	219	P	Pn	04 53 54.4	+0.7
	54nm,2.8s						
JCZ	Jackson Bay	9.26	219	P	Pn	04 53 54.4	+0.7

RSNC 18 04:53:02.7±1.2**, 5°.33N×75°.94W, h73**^{km}±7^{km}**, ML1.8, 1D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBOC	Ciudad Bolivar	0.54	352	*e*P	Pn	04 53 16.4	0.0
CBOC				*e*S	Sn	04 53 26.1	-0.3
CBOC				*i*		04 53 28.2	
	comp=Z,27nm,0.2s						
GUY2C	Guyana, Caldas	0.58	100	⇓*i*P	Pn	04 53 16.7	-0.4
GUY2C				*e*S	Sn	04 53 28.0	+0.3
RECRC	Villamaria, Ca	0.69	122	*e*P	Pn	04 53 18.0	-0.3
RECRC				*e*P		04 53 18.0	
ANIL	Santa Ana	0.99	147	*e*P	Pn	04 53 21.2	-0.3
ANIL				*e*S	Sn	04 53 34.2	-1.3
ANIL				*i*		04 53 38.4	
	comp=Z,26nm,0.4s						
NORC	Norcasia	1.09	78	*e*P	Pn	04 53 22.0	-0.5
NORC				*e*S	Sn	04 53 37.0	-0.4
NORC				*i*		04 53 38.8	
	comp=Z,23nm,0.4s						
YOTC	Yotoco, Valle	1.40	197	*e*P	Pn	04 53 25.6	-0.9
YOTC				*e*P		04 53 25.7	
YOTC				*e*S	Sn	04 53 44.0	-0.4
ORTC	Ortega, Tolima	1.57	154	*e*P	Pn	04 53 28.7	0.0
ORTC				*e*S	Sn	04 53 48.7	+0.3
PTBC	PUERTO BERRIO,	1.90	51	*e*P	Pn	04 53 32.9	-0.3
PTBC				*e*S	Sn	04 53 55.2	-1.1
PTBC				*i*		04 54 00.3	
	comp=Z,5.2nm,0.5s						
PRAC	Prado	1.92	147	*e*P	Pn	04 53 33.4	0.0

UCR 18 05:00:14.0±1.9**, 8°.28N×82°.82W, h13**^{km}±5^{km}**, MW4.0, 1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCOL	Caracol de Cor	0.20	309	*e*P	Pb	05 00 19.2	-0.3
CCOL				*e*S	Sb	05 00 24.2	+1.0
CDITO	Canoas	0.30	349	*e*P	Pg	05 00 20.3	+0.1
CDITO				*e*S	Sg	05 00 25.1	+0.8
FITO	Golfito	0.48	316	*e*P	Pg	05 00 22.2	-1.3
EDAD	Golfito	0.51	317	*e*P	Pg	05 00 22.7	-1.3
EDAD				*e*S	Sg	05 00 29.8	-1.0
BRU2	Volcan	0.53	14	*e*P	Pg	05 00 24.2	-0.2
BRU2				*e*S	Sg	05 00 32.1	+0.7
VITO	San Vito	0.56	344	*e*P	Pg	05 00 24.7	-0.2
VITO				*e*S	Sb	05 00 33.6	-0.1
EDSV	San Vito	0.56	344	*e*P	Pg	05 00 24.7	-0.3
EDSV				*e*S	Sg	05 00 33.0	+0.5
JIME	Puerto Jimenez	0.56	297	*e*P	Pg	05 00 24.6	-0.5
EDP2	Potrero Grande	0.81	334	*e*P	Pg	05 00 28.8	-1.0
EDP2				*e*S	Sg	05 00 40.5	+0.1
POTG	Potrero Grande	0.82	339	*e*P	Pg	05 00 28.7	-1.3
EDPN	Palmar Norte	0.93	317	*e*P	Pg	05 00 29.8	-2.1
EDPN				*e*S	Sg	05 00 43.1	-0.9
PLAN	Los Planes de	0.94	295	*e*P	Pg	05 00 30.2	-1.9
EDBA	Buenos Aires	0.99	333	*e*P	Pb	05 00 31.9	-1.1
BURE	Buenos Aires	1.02	330	*e*P	Pb	05 00 31.9	-1.7
SRBA	San Rafael, Bu	1.09	331	*e*P	Pb	05 00 32.5	-2.3
RGM0	Gandoca	1.32	9	*e*S	Sg	05 00 57.3	+0.8
BRIBI	Bribri	1.34	359	*e*P	Pn	05 00 37.9	-0.5
EDDO	Dominical	1.42	313	*e*P	Pn	05 00 38.5	-0.9
EDDO				*e*S	Sn	05 00 58.1	+0.1
CDM	Cerro de Muert	1.57	324	*e*P	Pn	05 00 40.1	-1.9
MRVA	Moravia de Chi	1.65	338	*e*P	Pn	05 00 41.4	-1.5
LLNJ	Naranjito	1.74	313	*e*P	Pn	05 00 42.8	-1.1
SVQ2	Quepos	1.76	311	*e*P	Pn	05 00 43.6	-0.5
REPA	Paraso	1.85	326	*e*P	Pn	05 00 44.8	-0.9
VERB	Verbena	1.87	332	*e*P	Pn	05 00 45.0	-0.8
ABE2	San Pablo	1.87	319	*e*P	Pn	05 00 45.9	0.0
RVSTA	Santa Teresita	1.87	334	*e*P	Pn	05 00 45.5	-0.4
RVSTA				*e*S	Sn	05 01 10.1	+0.6
BATAN	Batan	1.89	343	*e*P	Pn	05 00 46.3	+0.3
PCAYA	Pacayas	1.90	329	*e*P	Pn	05 00 45.6	-0.7
LCOCO	El Coco	1.94	338	*e*P	Pn	05 00 45.5	-1.1
RAFA	San Farael, Vo	1.94	330	*e*P	Pn	05 00 46.4	-0.6
RVLA	Villa Bonita	1.97	337	*e*P	Pn	05 00 46.9	-0.2
ACOS	Acosta	2.01	319	*e*P	Pn	05 00 47.9	+0.1
CORON	Coronado	2.05	325	*e*P	Pn	05 00 48.0	-0.4
CPMI	Catarata Coope	2.52	322	*e*P	Pn	05 00 55.7	+0.8
SOCE	Pocosol	2.74	320	*e*P	Pn	05 00 58.9	+1.1
FORC	Fortuna	2.84	320	*e*P	Pn	05 01 00.5	+1.4
CASO	Castillo	2.86	319	*e*P	Pn	05 01 00.4	+1.1
ARE1	Arenal 1	2.87	319	*e*P	Pn	05 01 00.9	+1.4
CEDE	Laguna Cedeo	2.88	320	*e*P	Pn	05 01 01.0	+1.3
TABAC	Tabacon	2.92	319	*e*P	Pn	05 01 02.0	+1.7
VERA	Finca Concepci	3.26	322	*e*P	Pn	05 01 05.3	+0.5
CUI	Cuipilapa	3.31	316	*e*P	Pn	05 01 06.5	+0.9
CANAL	Canalete	3.36	319	*e*P	Pn	05 01 07.7	+1.5
SAJU	San Juanillo,	3.36	302	*e*P	Pn	05 01 05.1	-1.2
VMAR	Armenia, Volca	3.38	318	*e*P	Pn	05 01 08.3	+1.7
CLARA	Aguas Claras	3.41	317	*e*P	Pn	05 01 08.5	+1.6
GB1A	Borinquen Arri	3.58	315	⇓*i*P	Pn	05 01 11.1	+1.7

IDC ***18*** *05:05:25.6±1.7, 30°.35S×178°.75W, h216^{km}±17^{km}, mb2.9/2, mbtmp3.7/4, Error ellipse: s-maj=42.8km s-min=27.1km az=124.0*

ISC 18 05:05:24.8±1.1**, 30°.3S**±0°.1×**178°.8W**±0°.2**, h200**^{km}**, n7,** σ**1^s.87**/8**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.34	36	P	Pn	05 05 59.4	+2.2
	112nm,0.3s,baz=133,slow=19,SNR=1.5						
RAO				S	Sn	05 06 19.0	-3.2
	354nm,0.2s,baz=135,slow=16,SNR=5.6						
URZ	Urewera	8.58	202	P	Pn	05 07 26.1	+0.6
	6.1nm,0.8s,baz=27,slow=2.7,SNR=1.5						
URZ				S	Sn	05 09 00.7	-1.1
	3.1nm,0.3s,baz=47,slow=20,SNR=1.7						
MSVF	Nonsavu	12.87	347	P	Pn	05 08 21.0	+0.1
	3.7nm,0.6s,baz=139,slow=16,SNR=2.2						
ASAR	Alice Springs	42.40	267	P	P	05 13 00.0	+0.1
	0.2nm,0.6s,baz=106,slow=7.0,SNR=5.8 0.2nm,0.6s						
WRA	Warramunga Arr	43.38	273	P	P	05 13 07.3	-0.5
	0.5nm,0.4s,baz=110,slow=8.0,SNR=19 0.5nm,0.4s						
FINES	FINESS Array B	144.85	339	PKP	PKPbc	05 24 35.1	-1.5
	1.4nm,0.3s,baz=44,slow=3.8,SNR=18						
AKASG	Malin Array Be	150.82	322	PKPbc	PKPbc	05 24 52.3	-0.8
	0.4nm,0.4s,baz=38,slow=2.1,SNR=2.4						

TAP 18 05:09:18.9, 24°.37N×121°.72E, h10^{km}**, ML1.3, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.06	22	*e*P	Pg	05 09 21.6	+0.5
	baz=29						
ENA				*e*S	Sg	05 09 23.3	+0.7
	baz=29						
EWUT	Wuta	0.09	38	*i* P	Pg	05 09 21.6	+0.1
	baz=38						
EWUT				*i* S	Sg	05 09 23.4	+0.2
	baz=38						
NACB	Ninganchiao	0.23	209	P	Pg	05 09 23.6	0.0
	baz=209						
NACB				*e*S	Sg	05 09 27.5	+0.7
	baz=209						
ETL	Fush Village	0.23	202	*e*P	Pg	05 09 23.7	0.0
	baz=202						
ETL				*e*S	Sg	05 09 27.5	+0.6
	baz=202						
LATG	Datong	0.24	313	*e*P	Pg	05 09 24.5	+0.7
	baz=313						
NDS	Dongshan	0.26	360	*e*P	Pg	05 09 24.9	+0.7
	baz=4.0						
TWC	Suao	0.26	27	*e*P	Pg	05 09 23.9	-0.4
	baz=24						
TWC				*e*S	Sg	05 09 28.6	+0.7
	baz=24						
ETLH	Xiulin Townshi	0.27	232	*e*P	Pg	05 09 24.6	+0.2
	baz=232						
ETLH				*e*S	Sg	05 09 28.8	+0.6
	baz=232						
ENTT	Nioudou	0.30	333	*e*P	Pg	05 09 25.5	+0.5
	baz=334						
ENTT				*e*S	Sg	05 09 30.1	+1.1
	baz=334						
NNSB	Datong	0.31	280	*e*P	Pg	05 09 25.5	+0.3
	baz=280						
NNSB				*e*S	Sb	05 09 30.7	-1.1
	baz=280						
TWD	Chiawan	0.31	201	*e*P	Pg	05 09 24.9	-0.3
	baz=199						
FUSB	Fushanzhiwuyua	0.40	343	*e*P	Pg	05 09 27.2	+0.3
	baz=343						

WEL 18 05:43:18.9, 38°S±5°×**17°6E**±°**, h65**^{km}±15^{km}**, M2.5**/23**, ML2.7**/31**, MLv2.5**/23**, Error ellipse: s-maj=0.0km s-min=0.0km az=122.5, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MUGZ	Murupara	0.36	106	P	Pn	05 43 31.0	+1.0
RTZ	Ruatahuna	0.56	115	P	Pn	05 43 32.4	+0.4
MTHZ	Maungataniwha	0.62	140	P	Pn	05 43 33.1	+0.5
KMRZ	Kaimai	0.62	330	P	Pn	05 43 32.7	+0.2
URZ	Urewera	0.62	79	P	Pn	05 43 32.4	-0.2
TLZ	Tolley Road	0.63	275	P	Pn	05 43 33.1	+0.5
BKZ	Black Stump Fm	0.79	171	P	Pn	05 43 34.7	+0.1
RAHZ	Arahi	0.80	132	P	Pn	05 43 35.2	+0.5
NMHZ	Naumai	0.81	153	P	Pn	05 43 36.1	+1.3
NTVZ	North Tongarir	0.88	215	P	Pn	05 43 36.3	+0.6
TMVZ	Te Maari	0.88	214	P	Pn	05 43 36.2	+0.4
SNGZ	Shannon Statio	0.89	117	P	Pn	05 43 36.7	+1.0
TOZ	Tahuroa Road	0.92	314	P	Pn	05 43 35.6	-0.5
OTVZ	Oturere	0.94	214	P	Pn	05 43 36.9	+0.3
MWZ	Matawai	0.94	87	P	Pn	05 43 35.9	-0.5
SNVZ	South Ngauruho	0.97	214	P	Pn	05 43 37.4	+0.5
TWVZ	Taurewa	0.98	225	P	Pn	05 43 37.0	0.0
ARHZ	Aropaoanui	1.02	150	P	Pn	05 43 37.7	+0.3
KWHZ	Kaweka Forest	1.04	176	P	Pn	05 43 37.8	+0.1
FWVZ	Far West T-bar	1.06	215	P	Pn	05 43 38.4	+0.2
MCHZ	McNeill Hill	1.10	165	P	Pn	05 43 38.8	+0.3
TRVZ	Turoa	1.10	214	P	Pn	05 43 38.8	+0.1
WNVZ	Wahianoa	1.10	211	P	Pn	05 43 38.6	-0.1
MOVZ	Moawhango	1.12	204	P	Pn	05 43 38.4	-0.4
BHHZ	Black Hill Sta	1.13	191	P	Pn	05 43 38.5	-0.3
RUGZ	Raukumara Rang	1.14	69	P	Pn	05 43 37.0	-2.1
HIZ	Hauiti	1.17	263	P	Pn	05 43 38.7	-0.5
RIGZ	Rimuhau	1.17	107	P	Pn	05 43 39.0	-0.4
TKGZ	Te Karaka	1.19	93	P	Pn	05 43 39.5	-0.1
MTVZ	Mangateitei	1.21	214	P	Pn	05 43 39.9	0.0
HAZ	Te Kaha	1.30	62	P	Pn	05 43 39.0	-2.1
TWGZ	Tauwhareparae	1.31	82	P	Pn	05 43 41.9	+0.6
PKGZ	Pakihiroa	1.46	71	P	Pn	05 43 41.9	-1.3
KAHZ	Kahuranaki	1.47	163	P	Pn	05 43 42.5	-0.9
PNHZ	Pukenui	1.53	184	P	Pn	05 43 42.5	-1.6
PUZ	Puketiti	1.55	79	P	Pn	05 43 46.0	+1.6
WPHZ	Waipukurau	1.68	177	P	Pn	05 43 46.4	+0.3
TSZ	Takapari Road	1.70	190	P	Pn	05 43 45.3	-1.1
DVHZ	Dannevirke	1.92	184	P	Pn	05 43 46.5	-2.9
BFZ	Birch Farm	2.30	182	P	Pn	05 43 51.3	-3.1
MRZ	Mangatainoka R	2.35	194	P	Pn	05 43 51.8	-3.4
HOWZ	Holdsworth Sta	2.59	194	P	Pn	05 43 54.5	-4.0
KIW	Kapiti Island	2.71	203	P	Pn	05 43 56.1	-4.0
TMWZ	Te Maipa	2.74	187	P	Pn	05 43 56.7	-3.8
MTW	Mount Morrison	2.85	193	P	Pn	05 43 57.4	-4.5
CAW	Cannon Point	2.89	199	P	Pn	05 43 58.1	-4.4
PLWZ	Palliser	3.29	194	P	Pn	05 44 02.7	-5.2
TUWZ	Tuamarina	3.56	210	P	Pn	05 44 05.0	-6.6

IDC ***18*** *05:44:46.4±3.2, 53°.71N×90°.85E, h0^{km}, mbtmp3.5/3, ML3.3/2, Error ellipse: s-maj=28.8km s-min=22.9km az=40.0*

NNC ***18*** *05:44:48.8±2.4, 53°.59N×90°.63E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=19.1km s-min=14.7km az=35.0, Suspected Mining explosion.*

ISC 18 05:44:50.0±4.0**, 53°.7N**±0°.1×**90°.5E**±0°.2**, h0**^{km}**, n9,** σ**0^s.93**/12**, 7C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.40	277	I	I	06 10 40.0	
	0.1nm,2.1s,baz=91,slow=337,SNR=3.7						
ZAA0	Zalesovo Array	3.40	277	⇑Pg	Pb	05 45 51.8	+0.8
	2.8nm,0.7s						
ZAA0				⇓Lg	Lg	05 46 40.6	
	13nm,0.8s						
ZALV	Zalesovo Beam	3.40	277	Pn	Pn	05 45 44.1	-0.1
	2.4nm,0.3s,baz=93,slow=10,SNR=8.2						
ZALV				Lg	Lg	05 46 39.6	
	4.3nm,0.3s,baz=95,slow=26,SNR=11						
KURK	Kurchatov	7.89	253	⇑Pn	Pn	05 46 45.2	-0.6
	2.2nm,0.5s						
KURK				⇑Sn	Sn	05 48 16.5	+0.9
	9.8nm,0.7s						
KURK				⇑Lg	Lg	05 49 03.2	
	40nm,0.9s						
KURBB	Kurchatov Arra	7.98	253	Pn	Pn	05 46 46.0	-1.1
	0.3nm,0.3s,baz=64,slow=14,SNR=16						
KURBB				Sn	Sn	05 48 17.0	-0.9
	0.1nm,0.3s,baz=69,slow=27,SNR=9.8						
KURBB				Lg	Lg	05 49 06.0	
	0.1nm,0.3s,baz=61,slow=31,SNR=7.5 2.2nm,0.4s						
KURBB	Kurchatov Arra	7.98	253	⇑Pn	Pn	05 46 46.5	-0.6
	3.1nm,0.3s						
KURBB				⇑Sn	Sn	05 48 16.9	-1.1
	31nm,0.7s						
KURBB				⇑Lg	Lg	05 49 05.8	
	68nm,1.1s						
MK31	Makanchi Array	8.65	221	Pn	Pn	05 46 55.7	-0.7
	0.9nm,0.5s,baz=35,slow=12,SNR=18						
MK31				⇓Sn	Sn	05 48 35.6	+1.0
	2.2nm,0.6s,baz=37,slow=24,SNR=2.7						
MK31				⇓Lg	Lg	05 49 25.0	
	14nm,0.9s,baz=41,slow=34,SNR=3.8						
MKAR	Makanchi Array	8.65	221	Pn	Pn	05 46 55.7	-0.7
	0.4nm,0.3s,baz=30,slow=12,SNR=18						
MKAR				Sn	Sn	05 48 35.4	+0.8
	0.2nm,0.3s,baz=39,slow=25,SNR=3.0						
MKAR				Lg	Lg	05 49 22.6	
	0.1nm,0.3s,baz=38,slow=31,SNR=3.4 0.8nm,0.4s						
SONM	Songino Array	11.60	114	Lg	Lg	05 50 38.8	
	0.5nm,0.3s,baz=314,slow=27,SNR=3.8						

INET 18 05:56:27.4±0.4**, 11°.84N×86°.31W, h162**^{km}±5^{km}**, MW3.0, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TISN	Laguna Tiscapa	0.31	7	*e*P	Pn	05 56 49.7	+0.3
COPN	Copaltepe	0.44	321	*e*P	Pn	05 56 49.5	-0.4
MOMN	Momotombo	0.61	338	*e*P	Pn	05 56 50.8	0.0
BOAB	BOACO BROADBAN	0.87	46	*e*P	Pn	05 56 52.4	0.0
BOAB				*e*S	Sn	05 57 12.0	+0.4
ACON	Acoyapa	1.11	83	*e*P	Pn	05 56 54.3	0.0

IDC ***18*** *06:07:54.1±1.5, 5°.76S×152°.71E, h0^{km}, mb3.8/4, mbtmp3.9/5, ML2.1/1, MS3.2/1, Error ellipse: s-maj=46.5km s-min=19.8km az=116.0*

ISC 18 06:07:56.9±2.6**, 5°.76S**±0°.09×**152°.7E**±0°.3**, h35**^{km}**, n7,** σ**3^s.06**/7**, mb3.8**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.59	335	Pn	Pn	06 08 23.5	+0.8
	438nm,0.3s,baz=127,slow=4.9,SNR=123						
KRVT				Sn	Sn	06 08 42.4	+0.3
	191nm,0.3s,baz=150,slow=20,SNR=5.3						
KRVT				LR	LR	06 09 03.4	
	comp=Z,505nm,18.2s,baz=38,slow=43						
PMG	Port Moresby	6.59	236	Pn	Pn	06 09 33.3	+1.9
	2.3nm,0.3s,baz=54,slow=8.0,SNR=9.0						
PMG				Sn	Sn	06 10 42.9	-2.5
	14nm,0.3s,baz=332,slow=23,SNR=11						
PMG				LR	LR	06 11 44.4	
	comp=Z,172nm,18.4s,baz=321,slow=35 14nm,0.6s						
WRA	Warramunga Arr	22.76	230	P	P	06 12 58.1	+1.7
	0.8nm,0.4s,baz=54,slow=9.9,SNR=15 0.8nm,0.4s						
ASAR	Alice Springs	25.39	224	P	P	06 13 23.2	+2.0
	1.7nm,0.9s,baz=60,slow=8.8,SNR=12 1.7nm,0.9s						
PETK	Petropavlovsk-	58.79	4	P	P	06 17 54.5	+2.9
	0.8nm,0.4s,baz=173,slow=8.9,SNR=1.8 0.8nm,0.4s						
ILAR	Eielson Array	83.07	22	P	P	06 20 21.6	+3.0
	0.9nm,0.7s,baz=252,slow=5.6,SNR=14 0.9nm,0.7s						
TORD	Torodi Ar. Bea	150.50	287	PKPbc	PKPab	06 27 48.2	-4.5
	0.8nm,0.8s,baz=77,slow=3.1,SNR=4.9						

IDC ***18*** *06:13:23.7±1.1, 29°.11N×43°.38W, h0^{km}, mb3.7/7, mbtmp3.7/7, MS3.3/22, Error ellipse: s-maj=38.6km*

s-min=25.1km az=30.0

ISC 18 06:13:25.8±1.0**, 29°.1N**±0°.2×**43°.4W**±0°.2**, h14km, n30, σ0s.81**/7**, mb3.8**/7**, MS3.3**/22**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	San Juan	23.54	247	LR	LR	06 26 31.8	
	comp=Z,18nm,21.8s,baz=70,slow=34						
MDP	Montagnes des	25.46	202	LR	LR	06 27 12.4	
	comp=Z,33nm,18.4s,baz=147,slow=33						
SADO	Sadowa	32.28	309	LR	LR	06 32 00.5	
	comp=Z,55nm,18.4s,baz=125,slow=35						
SDV	Santo Domingo	32.56	237	LR	LR	06 32 20.6	
	comp=Z,29nm,19.8s,baz=62,slow=35						
MDT	Midelt	33.31	74	LR	LR	06 31 30.4	
	comp=Z,57nm,18.2s,baz=310,slow=33						
ESDC	Sonseca Array	33.93	61	LR	LR	06 30 49.7	
	comp=Z,44nm,20.6s,baz=222,slow=31						
TKL	Tuckaleechee C	34.56	291	LR	LR	06 31 38.8	
	comp=Z,50nm,20.4s,baz=94,slow=32						
ROSC	El Rosal	37.98	236	LR	LR	06 36 54.0	
	comp=Z,44nm,19.4s,baz=87,slow=37						
SFJD	Kangerlussuaq	38.16	355	LR	LR	06 33 59.3	
	comp=Z,28nm,19.2s,baz=114,slow=32						
FRB	Frobisher Bay	38.21	342	LR	LR	06 34 46.2	
	comp=Z,24nm,19.9s,baz=270,slow=34						
DBIC	Dimbokro	42.61	114	LR	LR	06 37 14.5	
	comp=Z,50nm,19.1s,baz=334,slow=34						
JTS	Las Juntas de	43.12	253	LR	LR	06 37 48.2	
	comp=Z,39nm,18.9s,baz=230,slow=34						
TORD	Torodi Ar. Bea	44.64	101	P	P	06 21 37.9	-0.3
	2.5nm,1.1s,baz=304,slow=8.4,SNR=7.4						
TORD				LR	LR	06 38 35.4	
	comp=Z,49nm,19.4s,baz=266,slow=34						
	2.5nm,1.1s						
H10N2	ASCENSION HYDR	46.08	138	T	T	07 10 53.5	
	baz=324,slow=75,SNR=98						
H10N3	ASCENSION HYDR	46.08	138	T	T	07 10 55.5	
	baz=324,slow=75,SNR=99						
H10N1	ASCENSION HYDR	46.10	138	T	T	07 10 56.8	
	baz=324,slow=75,SNR=88						
H10S3	ASCENSION HYDR	46.89	139	T	T	07 11 47.8	
	baz=324,slow=74,SNR=68						
H10S2	ASCENSION HYDR	46.90	139	T	T	07 11 47.9	
	baz=256,slow=74,SNR=32						
CMIG	Matias Romero	48.54	268	LR	LR	06 42 14.3	
	comp=Z,34nm,20.0s,baz=80,slow=36						
LPAZ	La Paz	51.09	211	P	P	06 22 29.3	+0.5
	1.0nm,0.9s,baz=36,slow=8.7,SNR=2.3						
	1.0nm,0.9s						
TXAR	Lajitas Array	52.09	286	P	P	06 22 35.4	-0.4
	1.5nm,1.0s,baz=84,slow=8.3,SNR=12						
	1.5nm,1.0s						
ANMO	Albuquerque	53.04	294	LR	LR	06 44 10.1	
	comp=Z,27nm,20.0s,baz=192,slow=35						
PDAR	Pinedale Array	54.01	304	P	P	06 22 49.9	-0.1
	1.4nm,0.7s,baz=88,slow=8.2,SNR=12						
PDAR				LR	LR	06 43 38.9	
	comp=Z,57nm,20.7s,baz=91,slow=34						
	1.4nm,0.7s						
YKA	Yellowknife Ar	55.98	328	P	P	06 23 03.5	0.0
	0.7nm,1.0s,baz=89,slow=7.3,SNR=6.9						
	0.7nm,1.0s						
NEW	Newport	58.42	311	LR	LR	06 46 45.6	
	comp=Z,46nm,20.0s,baz=130,slow=34						
ELK	Elko	58.56	302	LR	LR	06 47 29.3	
	comp=Z,31nm,20.1s,baz=100,slow=35						
NVAR	Mina Array Bea	61.43	300	P	P	06 23 41.1	-1.1
	0.1nm,0.3s,baz=74,slow=6.7,SNR=2.0						
NVAR				LR	LR	06 48 50.0	
	comp=Z,42nm,19.7s,baz=222,slow=35						
	0.1nm,0.3s						
YBH	Yreka Blue Hor	63.76	305	LR	LR	06 49 55.0	
	comp=Z,31nm,20.0s,baz=176,slow=34						
ILAR	Eielson Array	69.53	334	P	P	06 24 34.8	+1.0
	0.6nm,0.8s,baz=50,slow=4.4,SNR=6.5						
ILAR				LR	LR	06 52 16.3	
	comp=Z,21nm,21.8s,baz=223,slow=34						
	0.6nm,0.8s						
KDAK	Kodiak Island	75.26	328	LR	LR	06 58 45.4	
	comp=Z,61nm,19.1s,baz=190,slow=36						

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*IDC **18** 06:45:00.8±0.6, 26°.05N×67°.92E, h0km, mb4.2/26, mbtmp4.2/28, ML3.9/2, MS3.6/30, Error ellipse: s-maj=15.7km s-min=12.8km az=44.0*

*MOS **18** 06:45:03.8±1.5, 26°.20N×68°.01E, h23km, mb4.6/27, Error ellipse: s-maj=8.5km s-min=4.5km az=109.2*

*NEIC **18** 06:45:06.0±2.5, 26°.15N±0°.09×67°.83E±0°.07, h34km±5km, mb4.4/28, Error ellipse: s-maj=15.2km s-min=4.3km az=148.0*

ISC 18 06:45:06.1±0.4**, 26°.22N**±0°.05×**67°.98E**±0°.04**, h35km, n216, σ2s.39**/216**, mb4.3**/61**, MS3.7**/32**, 6C-1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NGCH	Negor - Chabah	6.23	264	P	Pn	06 46 36.2	+0.7
	SNR=6.8						
NGCH				S	Sn	06 47 37.8	-7.7
KHET	Khetri	7.21	73	eP	Pn	06 46 48.5	-0.5
KHET				eS	Sn	06 48 06.4	-3.3
THW	Thamme Wali	7.32	26	P	Pn	06 46 50.2	-0.4
KUDL	Kundal	7.81	74	eP	Pn	06 46 57.9	+0.6
KUDL				eS	Sn	06 48 20.8	-3.7
CEP	Cherat	8.31	23	P	Pn	06 47 03.9	-0.3
KBL	Kabul	8.34	6	Pn	Pn	06 47 05.3	+0.6
KBL	Kabul	8.34	6	P	Pn	06 47 05.3	+0.6
KBL	Kabul	8.34	6	P	Pn	06 47 07.3	+2.5
	SNR=12						
NDI	New Delhi	8.56	71	eP	Pn	06 47 06.2	-1.4
NDI				eP	Pn	06 47 09.0	+1.4
NIL	Nilore	8.70	30		Pn	06 47 10.8	+1.3
NIL	Nilore	8.70	30	P	Pn	06 47 10.8	+1.3
JLN	Jalan Bani Buh	8.81	244	P	Pn	06 47 18.2	+7.2
JLN				S	Sn	06 48 51.3	+2.2
JMU	Jammu	8.84	41	eS	Sn	06 48 46.3	-3.5
WBK	Wadi Bani Khal	8.96	248	P	Pn	06 47 12.7	-0.5
WBK				S	Sn	06 48 51.7	-1.2
WSAR	Wadi Sarin	9.00	253	Pn	Pn	06 47 10.8	-2.8
	1.8nm,0.3s,baz=89,slow=10,SNR=4.9						
WSAR				Sn	Sn	06 48 39.0	-15
	2.0nm,0.3s,baz=61,slow=22,SNR=3.2						
WSAR				LR	LR	06 51 48.5	
	comp=Z,179nm,18.6s,baz=96,slow=46						
	4.0nm,0.3s						
WSAR	Wadi Sarin	9.00	253	P	Pn	06 47 14.1	+0.4
WSAR				S	Sn	06 48 50.8	-3.0
BHK	Bhakra	9.03	53	eP	Pn	06 47 13.0	-1.0
BHK				eS	Sn	06 48 50.2	-4.2
BHK				IAML		06 48 59.4	
	comp=E,141nm,0.5s						
BHK				IAML		06 49 01.2	
	comp=N,130nm,0.6s						
BHPL	Bhopal	9.08	107	eP	Pn	06 47 14.2	-0.6
THN	Thein Dam	9.16	46	eP	Pn	06 47 15.4	-0.3
THN				eS	Sn	06 48 54.3	-3.2
THN				IAML		06 49 01.9	
	comp=E,217nm,0.8s						
BIDO	Bidbid	9.34	255	P	Pn	06 47 20.6	+2.3
BIDO				S	Sn	06 48 55.5	-6.7
SMLA	Simla	9.43	57	eP	Pn	06 47 19.1	-0.3
SMLA				eS	Sn	06 49 00.3	-4.0
SMLA				IAML		06 49 05.5	
	comp=E,178nm,0.5s						
SMLA				IAML		06 49 07.8	
	comp=N,154nm,0.5s						
SMDO	Samad	9.57	253	P	Pn	06 47 23.0	+1.5
SMDO				S	Sn	06 49 03.5	-4.3
JMDO	Jabal Madar	9.79	249	P	Pn	06 47 26.2	+1.7
JMDO				S	Sn	06 49 11.7	-1.5
HOQ	Hoqain	10.04	257	P	Pn	06 47 29.0	+1.2
HOQ				S	Sn	06 49 11.7	-7.5
BSY	Bisya	10.41	253	P	Pn	06 47 34.6	+1.7
	SNR=10						
BSY				S	Sn	06 49 20.1	-8.4
BANOM	Banah	10.51	271	P	Pn	06 47 28.8	-5.5
BANOM				S	Sn	06 49 15.5	-15
BANOM	Banah	10.51	271	P	Pn	06 47 30.8	-3.4
	SNR=11						
BANOM				S	Sn	06 49 15.9	-15
MDH	Madha	10.57	268	P	Pn	06 47 33.1	-2.1
MDH				S	Sn	06 49 19.1	-13
SOHO	SOHO	10.58	261	P	Pn	06 47 35.0	-0.1
SOHO				S	Sn	06 49 19.5	-13
SHME	Shamm	10.64	272	P	Pn	06 47 33.0	-3.0
SHME				S	Sn	06 49 19.8	-14
SHME	Shamm	10.64	272	P	Pn	06 47 34.0	-2.1
	SNR=16						
SHME				S	Sn	06 49 18.7	-15
MSFE	Esma-Masafi	10.69	268	P	Pn	06 47 31.8	-4.9
UOSS	Minazif	10.71	266	Pn	Pn	06 47 34.3	-2.7
UOSS	Minazif	10.71	266	P	Pn	06 47 31.0	-6.1
UOSS	Minazif	10.71	266	P	Pn	06 47 35.1	-1.9
UOSS				S	Sn	06 49 20.4	-15
HATD	Hatta, Dubai	10.79	265	P	Pn	06 47 36.0	-2.2
ARQ	Araqi	10.80	257	P	Pn	06 47 39.5	+1.2
ARQ				S	Sn	06 49 29.5	-8.5
ASHO	Ashiyiah	10.88	265	P	Pn	06 47 37.5	-2.0
ASHO	Ashiyiah	10.88	265	P	Pn	06 47 38.6	-0.9
ASHO				S	Sn	06 49 28.7	-11
PTH	Pithoragarh	11.32	70	eP	Pn	06 47 42.5	-3.0
PTH				eS	Sn	06 49 43.3	-7.5
LGTI	Lohaghat	11.32	71	eP	Pn	06 47 41.6	-3.7
LGTI				eS	Sn	06 49 35.3	-15
CHGR	Chuyangaron	12.44	4	Pn	Pn	06 47 59.0	-1.7
CHGR	Chuyangaron	12.44	4	P	Pn	06 47 59.0	-1.7
GAR	Garm	12.89	8		Pn	06 48 06.5	-0.5
BTK	Batken	14.00	9		Pn	06 48 22.6	+0.6
BTK	Batken	14.00	9	P	Pn	06 48 22.6	+0.6
DANN	Dangsing	14.19	78	eP	Pn	06 48 22.2	-2.6
GEYT	Alibeck	14.35	327	Pn	Pn	06 48 28.2	+1.5
	comp=N,0.3nm,0.3s,baz=154,slow=8.0,SNR=2.0						
	comp=N,1.1nm,0.5s						
GEYT	Alibeck	14.35	327	Pn	Pn	06 48 25.3	-1.4
GEYT	Alibeck	14.35	327	P	Pn	06 48 25.3	-1.4
GYA0	ALIBECK ARRAY	14.35	327	P	Pn	06 48 26.5	-0.2
GYA0B	ALIBECK ARRAY	14.35	327	Pn	Pn	06 48 25.0	-1.7
KSH	Kashi	14.85	25	P	Pn	06 48 27.6	-6.0
KSH				S	Sn	06 50 59.3	-18
KSH				sS	Sn	06 51 17.5	+0.5
KSH				pmax	pmax		
	comp=Z,22nm,0.5s						
KSH				LR	LR		
	comp=N,380nm,8.6s						
KSH				LR	LR		
	comp=E,510nm,10.8s						
KSH				LR	LR		
	comp=Z,390nm,10.1s						
PKI	Pulchoki	15.61	81	eP	Pn	06 48 40.5	-3.3
GUN	Gumba	16.03	80	eP	Pn	06 48 45.1	-4.2
ABTO	Aybut	16.23	240	P	P	06 48 55.0	+0.6
	SNR=6.7						
JIRN	Jiri	16.30	81	eP	Pn	06 48 49.1	-3.6
AML	Almayashu	16.55	15	P	Pn	06 48 53.6	-2.2
	SNR=23						
RAMN	Ramite	16.67	83	eP	Pn	06 48 53.1	-4.2
UCH	Uchtor	16.85	17	P	Pn	06 48 57.0	-2.6
	SNR=16						
KK31	Karatay Array	16.97	6	Pn	Pn	06 48 59.5	-1.2
KK31	Karatay Array	16.97	6	P	Pn	06 48 59.5	-1.2
KK31				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KKAR	Karatay Array	16.97	6		Pn	06 48 59.2	-1.5
KKAR	Karatay Array	16.97	6	P	Pn	06 48 59.2	-1.5
EKS2	Erkin-Say	17.08	15	P	Pn	06 49 00.9	-1.3
	SNR=7.9						
AAK	Ala-Archa	17.23	16	P	Pn	06 49 02.3	-1.7
	SNR=8.6						
AAK	Ala-Archa	17.23	16	P	Pn	06 49 02.0	-2.0
	comp=Z,12nm,0.6s,baz=195,slow=5.9,SNR=22						
AAK				S	Sn	06 52 07.5	-7.1
	comp=Z,0.9nm,0.6s,baz=221,slow=23,SNR=1.3						
AAK				LR	LR	06 57 44.4	
	comp=Z,127nm,18.3s,baz=200,slow=44						
AAK	Ala-Archa	17.23	16		Pn	06 49 02.3	-1.7
AAK	Ala-Archa	17.23	16	i P	Pn	06 49 02.4	-1.6
AAK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AAK	Ala-Archa	17.23	16	P	Pn	06 49 01.6	-2.5
ODAN	Odare	17.38	84	eP	Pn	06 49 00.8	-5.4
TARG	Taragay, Kyrgy	17.46	25	P	Pn	06 49 07.2	0.0
TARG	Taragay, Kyrgy	17.46	25	P	Pn	06 49 07.3	0.0
TARG				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TKM2	Tokmak 2	17.79	19	P	Pn	06 49 10.2	-0.8
	SNR=12						
MNCI	Minicoy	18.48	164	P	P	06 49 17.7	-1.4
MNCI				IAmb	IAmb	06 50 01.9	
	comp=Z,42nm,0.9s						
LKRN	Lenkeran, Azer	20.39	312	P	Pn	06 49 41.0	-1.0
RAYN	Ar Rayn	20.57	267	P	P	06 49 39.5	-2.4
RAYN				IAmb	IAmb	06 49 45.7	
	comp=Z,9.0nm,0.8s						
RAYN	Ar Rayn	20.57	267	P	P	06 49 39.6	-2.4
RAYN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
RAYN	Ar Rayn	20.57	267	P	P	06 49 39.3	-2.7
SHL	Shillong	21.51	86	P	P	06 49 52.2	0.0
SHL				IAmb	IAmb	06 50 17.8	
	comp=Z,24nm,1.3s						
SHL	Shillong	21.51	86	P	P	06 49 52.2	0.0
SHL				pmax	pmax		
	comp=Z,24nm,1.3s						
SHL	Shillong	21.51	86	P	P	06 50 07.8	+16
	SNR=5.7						
BRDH	Bariadhala	21.82	94	LR	LR	06 59 26.5	
	comp=Z,155nm,19.7s,baz=269,slow=40						
PALK	Pallekele	22.40	145	P	P	06 50 01.7	0.0
	comp=Z,6.9nm,1.1s,baz=297,slow=6.8,SNR=3.8						
	comp=Z,6.9nm,1.1s						
MNGR	Mingechevir, A	22.60	315	P	P	06 50 04.8	+1.2
AKT	Akhty	22.60	317	eP	P	06 50 04.0	+0.2
AKT				e		06 50 27.1	
AKT				pmax	pmax		
	comp=Z,43nm,1.3s						
SEKA	Sheki	22.77	316	P	P	06 50 06.0	+0.5
NAX	Nakhchivan	22.84	310	P	P	06 50 07.2	+1.0
GANJ	Ganja	23.02	314	P	P	06 50 09.1	+1.1
MAKZ	Makanchi	23.36	25	P	P	06 50 11.9	+0.6
MAKZ	Makanchi	23.36	25	P	P	06 50 11.9	+0.6
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MK31	Makanchi Array	23.46	25	P	P	06 50 12.9	+0.5
MK31	Makanchi Array	23.46	25	i P	P	06 50 14.3	+1.9
MKAR	Makanchi Array	23.46	25	P	P	06 50 12.6	+0.3
	comp=Z,1.5nm,0.6s,baz=207,slow=11,SNR=15						
MKAR				LR	LR	07 00 11.1	
	comp=Z,133nm,18.1s,baz=216,slow=38						
	comp=Z,1.5nm,0.6s						
MKAR	Makanchi Array	23.46	25	P	P	06 50 13.1	+0.8
MKAR	Makanchi Array	23.46	25	i P	P	06 50 14.1	+1.7
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WMQ	Urumqi	23.75	37	⇓iP	P	06 50 16.8	+1.6
WMQ				pP	pP	06 50 24.5	-0.6
WMQ				sP	sP	06 50 32.3	+2.9
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
WMQ				LR	LR		
	comp=N,570nm,13.3s						
WMQ				LR	LR		
	comp=E,250nm,11.3s						
WMQ				LR	LR		
	comp=Z,75nm,15.5s						
GNI	Garni	23.81	311	P	P	06 50 17.6	+1.7
	comp=Z,4.4nm,0.5s,baz=207,slow=2.3,SNR=1.7						
GNI				LR	LR	07 01 45.9	
	comp=Z,48nm,20.7s,baz=96,slow=42						
	comp=Z,4.4nm,0.5s						
GNI	Garni	23.81	311	P	P	06 50 15.9	0.0
GNI				IAmb	IAmb	06 50 50.2	
	comp=Z,13nm,0.8s						
GNI	Garni	23.81	311	P	P	06 50 15.9	0.0
GNI				pmax	pmax		
	comp=Z,13nm,0.8s						
ABKAR	Akbulak array	23.83	347	P	P	06 50 16.0	+0.2
ABKAR	Akbulak array	23.83	347	P	P	06 50 16.7	+1.0
ABKAR				IAmb	IAmb	06 50 21.8	
	comp=Z,15nm,0.9s						
GROC	Groznyy	24.77	319	eP	P	06 50 25.9	+1.4
GROC				e		06 50 58.5	
GOMU	GeErMu	24.94	60	P	P	06 50 33.9	+7.4
GOMU				pP	pP	06 50 37.0	+0.5
GURO	Guroymak-BITLI	25.04	306	P	P	06 50 29.0	+1.9
GURO				IAmb	IAmb	06 50 33.8	
	comp=Z,7.0nm,0.8s						
AKH	Akhalkalaki	25.25	313	P	P	06 50 28.9	-0.1
AKH	Akhalkalaki	25.25	313	P	P	06 50 28.9	-0.1
AKH				pmax	pmax		
	comp=Z,53nm,0.8s						
AKTO	Aktyubinsk	25.36	345	P	P	06 50 30.8	+1.0
	comp=Z,2.9nm,0.6s,baz=189,slow=5.7,SNR=11						
AKTO				LR	LR	07 02 16.3	
	comp=Z,145nm,18.2s,baz=230,slow=41						
	comp=Z,2.9nm,0.6s						
KURBB	Kurchatov Arra	25.68	16	P	P	06 50 33.4	+0.9
	comp=Z,4.5nm,0.8s,baz=211,slow=9.0,SNR=30						
KURBB				LR	LR	07 03 12.4	
	comp=Z,53nm,21.2s,baz=166,slow=42						
	comp=Z,4.5nm,0.8s						
ZEI	Tsey	25.69	316	eP	P	06 50 34.7	+1.6
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KURK	Kurchatov	25.78	16	P	P	06 50 34.1	+0.5
KURK				IAmb	IAmb	06 50 38.5	
	comp=Z,6.5nm,0.8s						
KURK	Kurchatov	25.78	16	i P	P	06 50 36.8	+3.3
KURK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NEY	Neytrino	26.67	316	i P	P	06 50 44.8	+2.9
NEY				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBZ	Khabaz	26.82	317	P	P	06 50 44.1	+1.2
	comp=Z,6.4nm,0.8s,baz=151,slow=8.5,SNR=13						
	comp=Z,6.4nm,0.8s						
KBZ	Khabaz	26.82	317	ceP	P	06 50 45.0	+2.1
KBZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BVAR	Borovoye Array	26.83	3	P	P	06 50 45.7	+2.7
	comp=Z,3.3nm,0.8s,baz=186,slow=10.0,SNR=8.1						
BVAR				LR	LR	07 03 18.9	
	comp=Z,144nm,18.7s,baz=186,slow=41						
	comp=Z,3.3nm,0.8s						
BRVK	Borovoye	26.86	3	ceP	P	06 50 46.9	+3.6
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SHA1	Shidzhatmaz	26.97	317	i P	P	06 50 47.5	+2.9
KIV	Kislovodsk	27.07	317	P	P	06 50 45.9	+0.5
KIV	Kislovodsk	27.07	317	eP	P	06 50 46.5	+1.1
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
DGZ	Jazzator, Alta	27.85	28	i P	P	06 50 56.5	+4.1
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.6s						
MMAI	Mount Meron Ar	29.04	291	LR	LR	07 04 33.2	
	comp=Z,113nm,21.6s,baz=166,slow=40						
EIL	Elat	29.33	284	LR	LR	07 05 11.0	
	comp=Z,129nm,21.1s,baz=61,slow=41						
CMAR	Chiang Mai Arr	29.61	99	P	P	06 51 08.6	+0.5
	comp=Z,1.2nm,0.3s,baz=281,slow=9.1,SNR=1.3						
CMAR				LR	LR	07 04 46.7	
	comp=Z,79nm,19.9s,baz=275,slow=40						
	comp=Z,1.2nm,0.3s						
PZH	PanZhiHua	30.20	82	P	P	06 51 15.4	+1.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,4.5s						
BELG	Belogornoye	30.31	335	P	P	06 51 14.9	+1.0
	comp=Z,12nm,0.9s,baz=110,slow=9.3,SNR=4.8						
BELG				LR	LR	07 07 18.3	
	comp=Z,148nm,18.3s,baz=235,slow=44						
	comp=Z,12nm,0.9s						
BELG	Belogornoye	30.31	335	i P	P	06 51 17.2	+3.3
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZAA0	Zalesovo Array	30.38	20		P	06 51 15.3	+0.7
ZALV	Zalesovo Beam	30.38	20	P	P	06 51 14.9	+0.3
	comp=Z,1.6nm,0.5s,baz=214,slow=7.1,SNR=9.6						
ZALV				LR	LR	07 04 46.1	
	comp=Z,90nm,18.5s,baz=222,slow=39						
	comp=Z,1.6nm,0.5s						
ZALV	Zalesovo Beam	30.38	20	P	P	06 51 15.1	+0.5
ZALV	Zalesovo Beam	30.38	20	i P	P	06 51 15.6	+1.0
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARU	Arti	30.94	350	LR	LR	07 06 01.2	
	comp=Z,100nm,21.7s,baz=150,slow=40						
BR131	Keskin Array S	31.60	304	P	P	06 51 25.4	-0.2
BR131				IAmb	IAmb	06 51 32.6	
	comp=Z,10nm,1.3s						
BR131	Keskin Array S	31.60	304	P	P	06 51 25.5	-0.2
BR131				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BRTR	Keskin Array B	31.60	304	P	P	06 51 27.1	+1.4
	comp=Z,0.4nm,0.5s,baz=123,slow=11,SNR=2.2						
	comp=Z,0.4nm,0.5s						
BRTR	Keskin Array B	31.60	304	P	P	06 51 24.6	-1.0
BRTR	Keskin Array B	31.60	304	P	P	06 51 24.7	-1.0
VRH	Novokhopyorsk	31.96	328	eP	P	06 51 31.6	+3.0
VRH				pmax	pmax		
	comp=Z,13nm,0.7s						
VORD	Divnogorie	33.00	326	eP	P	06 51 39.9	+2.3
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR	Storozhevoye	33.21	326	eP	P	06 51 41.5	+2.0
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VORR	Voronezh	33.47	327	P	P	06 51 45.4	+3.6
VORR				pmax	pmax		
	comp=Z,14nm,0.7s						
LPSR	Galich'ya Gora	34.19	328	eP	P	06 51 51.1	+3.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KIRV	Kirov	34.88	343	LR	LR	07 08 07.1	
	comp=Z,123nm,18.4s,baz=167,slow=40						
OBN	Obninsk	36.86	330	ceP	P	06 52 13.6	+2.8
OBN				e		06 53 40.6	
OBN				pmax	pmax		
	comp=Z,14nm,0.5s						
OBN				MLR	MLR		
	comp=Z,117nm,16.0s						
SONM	Songino Array	36.97	44	P	P	06 52 14.6	+2.5
	comp=Z,0.3nm,0.3s,baz=238,slow=8.3,SNR=3.7						
SONM				LR	LR	07 09 30.2	
	comp=Z,70nm,18.6s,baz=232,slow=40						
	comp=Z,0.3nm,0.3s						
IDI	Anoyia	37.88	294	LR	LR	07 12 26.5	
	comp=Z,31nm,18.3s,baz=99,slow=43						
AKASG	Malin Array Be	38.32	320	P	P	06 52 23.2	0.0
	comp=Z,4.7nm,0.8s,baz=121,slow=7.5,SNR=21						
	comp=Z,4.7nm,0.8s						
AKASG	Malin Array Be	38.32	320	P	P	06 52 23.6	+0.3
AKASG				IAmb	IAmb	06 52 28.7	
	comp=Z,5.4nm,1.4s						
AKBB	Malin Array Si	38.32	320	P	P	06 52 24.1	+0.9
AKBB	Malin Array Si	38.32	320	ceP	P	06 52 26.0	+2.7
AKBB				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC	Hu-ho-hao-te	38.74	57	eP	P	06 52 29.3	+2.2
HHC				pmax	pmax		
	comp=Z,27nm,0.9s						
HHC				pmax	pmax		
	comp=Z,340nm,5.0s						
BURAR	Bucovina Array	39.67	314	P	P	06 52 35.0	+0.2
BURAR				IAmb	IAmb	06 52 39.5	
	comp=Z,5.2nm,0.8s						
BUR08	Bucovina Ar. S	39.69	314	P	P	06 52 34.5	-0.4
BUR08				IAmb	IAmb	06 52 39.4	
	comp=Z,4.3nm,0.8s						
MNK	Minsk	40.74	325	i P	P	06 52 44.2	+0.8
	comp=E,2.0nm,0.8s						
MNK				i P	P	06 52 44.2	+0.8
	comp=N,44nm,0.8s						
MNK				i P	P	06 52 44.2	+0.8
	comp=Z,16nm,0.8s,baz=298						
MNK				i PP	PP	06 54 18.2	+0.7
MNK				i PPP	PPP	06 54 44.6	
MNK				i S	S	06 58 52.4	+1.0
MNK				i SS	SS	07 01 54.5	+1.9
MNK				i SSS	SSS	07 02 22.8	
MNK				i LQ	LQ	07 06 38.3	
MNK				i LR	LR	07 09 12.6	
MNK				i LRM	MLR	07 11 59.3	
	comp=N,597nm,15.9s						
MNK				i LRM	MLR	07 12 18.5	
	comp=E,13nm,13.4s						
MNK				i LRM	MLR	07 12 31.3	
	comp=Z,80nm,12.2s						
MNK	Minsk	40.74	325	i P	P	06 52 44.1	+0.8
MNK				i		06 54 18.2	
MNK				i PPP	PPP	06 54 44.5	
MNK				i S	S	06 58 52.3	+1.0
MNK				i SS	SS	07 01 54.5	+1.9
MNK				i SSS	SSS	07 02 22.7	

MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,16nm,0.8s						
MNK				pmax	pmax		
	comp=N,44nm,0.8s						
MNK				pmax	pmax		
	comp=N,597nm,16.0s						
MNK				pmax	pmax		
	comp=E,13nm,13.0s						
MNK				pmax	pmax		
	comp=Z,80nm,12.0s						
FNA	**Florina**	**41.02**	**303**	P	**P**	**06 52 45.1**	**-0.8**
FNA	**Florina**	**41.02**	**303**	P	**P**	**06 52 45.1**	**-0.8**
FNA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NACGM	**Naroch**	**41.49**	**325**	*e*P	**P**	**06 52 53.6**	**+4.1**
	comp=E,1μm,1.0s						
PABE	**Paberze**	**43.20**	**325**	P	**P**	**06 53 03.8**	**+0.3**
LANS	**Liptovska Anna**	**43.77**	**315**	*e*P	**P**	**06 53 12.1**	**+3.9**
LANS	**Liptovska Anna**	**43.77**	**315**	*e*P	**P**	**06 53 12.1**	**+3.9**
OJC	**Ojcow**	**43.82**	**316**	P	**P**	**06 53 09.4**	**+0.8**
OJC				IAmb	IAmb	06 53 13.6	
	comp=Z,6.3nm,0.9s						
OJC	**Ojcow**	**43.82**	**316**	P	**P**	**06 53 09.4**	**+0.8**
OJC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VYHS	**Vyhne**	**44.03**	**314**	*e*P	**P**	**06 53 13.8**	**+3.5**
VYHS				pmax	pmax		
	comp=Z,10.0nm,1.4s						
VYHS	**Vyhne**	**44.03**	**314**	*e*P	**P**	**06 53 13.8**	**+3.5**
NRIK	**Noril'sk**	**44.67**	**10**	LR	LR	07 15 36.1	
	comp=Z,109nm,19.4s,baz=214,slow=41						
NRIK	**Noril'sk**	**44.67**	**10**	*ce*P	**P**	**06 53 17.9**	**+2.9**
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
JAVC	**Velka Javorina**	**44.86**	**314**	*e*P	**P**	**06 53 19.3**	**+2.3**
MODS	**Modra-Piesok**	**45.02**	**313**	*e*P	**P**	**06 53 19.4**	**+1.2**
MODS	**Modra-Piesok**	**45.02**	**313**	*e*P	**P**	**06 53 19.4**	**+1.2**
FIA1	**FINESS Array S**	**45.04**	**333**	P	**P**	**06 53 19.1**	**+1.0**
FINES	**FINESS Array B**	**45.04**	**333**	P	**P**	**06 53 19.2**	**+1.1**
	comp=Z,3.0nm,0.8s,baz=116,slow=6.3,SNR=7.2						
FINES				LR	LR	07 16 45.7	
	comp=Z,148nm,18.1s,baz=73,slow=42						
	comp=Z,3.0nm,0.8s						
MORC	**Moravsky Berou**	**45.13**	**315**	*e*P	**P**	**06 53 21.5**	**+2.4**
VRAC	**Vranov**	**45.64**	**314**	*e*P	**P**	**06 53 25.6**	**+2.5**
KRUC	**Moravsky**	**45.73**	**314**	*e*P	**P**	**06 53 26.2**	**+2.5**
KBA	**Koelnbreinsper**	**47.46**	**311**	*e*P	**P**	**06 53 37.9**	**+0.3**
	comp=Z,1.7nm,0.7s						
BRG	**Berggiesshubel**	**47.61**	**316**	*i* P	**P**	**06 53 42.9**	**+4.5**
BRG				Amp		06 53 44.4	
	comp=Z,6.5nm,0.9s						
BRG	**Berggiesshubel**	**47.61**	**316**	*i* P	**P**	**06 53 42.9**	**+4.5**
BRG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ABTA	**Abfaltersbach**	**48.00**	**310**	*i* P	**P**	**06 53 42.7**	**+1.0**
	comp=Z,2.8nm,0.8s						
CLL	**Collm**	**48.27**	**316**	*e*Px	Px	06 53 47.0	
CLL	**Collm**	**48.27**	**316**	*e*P	**P**	**06 53 47.0**	**+3.5**
OPO	**Ambohidratompo**	**48.89**	**207**	P	**P**	**06 53 47.2**	**-1.7**
	comp=Z,5.9nm,0.9s,baz=36,slow=8.7,SNR=3.5						
	comp=Z,5.9nm,0.9s						
FETA	**Feichten**	**49.24**	**311**	*e*P	**P**	**06 53 52.7**	**+1.4**
	comp=Z,1.4nm,0.7s						
ARCES	**ARCESS Array B**	**49.88**	**342**	P	**P**	**06 53 56.1**	**+0.5**
	comp=Z,3.2nm,0.7s,baz=142,slow=7.6,SNR=7.3						
ARCES				LR	LR	07 17 03.4	
	comp=Z,95nm,19.2s,baz=142,slow=38						
	comp=Z,3.2nm,0.7s						
NC405	**NORSAR Array S**	**51.22**	**329**	P	**P**	**06 54 07.0**	**+1.1**
KSRS	**Korea Array**	**51.38**	**62**	LR	LR	07 17 06.4	
	comp=Z,54nm,19.8s,baz=230,slow=37						
NB2	**NORSAR Subarra**	**51.43**	**329**	P	**P**	**06 54 08.5**	**+1.0**
	comp=Z,1.5nm,0.8s,baz=107,slow=7.9						
NOA	**NORSAR Array B**	**51.43**	**329**	P	**P**	**06 54 07.4**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=112,slow=7.1,SNR=5.0						
	comp=Z,1.1nm,0.7s						
KLR	**Kul'dur**	**53.69**	**47**	P	**P**	**06 54 25.9**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=282,slow=14,SNR=2.2						
KLR				LR	LR	07 20 24.6	
	comp=Z,61nm,18.2s,baz=245,slow=39						
	comp=Z,0.6nm,0.6s						
TIXI	**Tiksi**	**56.27**	**19**	LR	LR	07 21 05.6	
	comp=Z,98nm,18.6s,baz=265,slow=38						
MJAR	**Matsushiro Arr**	**59.65**	**61**	LR	LR	07 21 24.9	
	comp=Z,39nm,19.3s,baz=192,slow=36						
ESDC	**Sonseca Array**	**60.38**	**302**	P	**P**	**06 55 11.2**	**-0.8**
	comp=Z,1.7nm,0.9s,baz=67,slow=6.9,SNR=9.6						
	comp=Z,1.7nm,0.9s						
MDT	**Midelt**	**62.40**	**295**	LR	LR	07 27 08.9	
	comp=Z,53nm,19.5s,baz=144,slow=40						
TORD	**Torodi Ar. Bea**	**63.18**	**272**	P	**P**	**06 55 29.9**	**-1.2**
	comp=Z,2.8nm,0.7s,baz=61,slow=5.6,SNR=14						
	comp=Z,2.8nm,0.7s						
BORG	**Borgarnes**	**66.32**	**332**	LR	LR	07 27 47.9	
	comp=Z,66nm,18.4s,baz=70,slow=39						
TSUM	**Tsumeb**	**66.58**	**233**	LR	LR	07 26 43.0	
	comp=Z,68nm,18.7s,baz=154,slow=38						
BILL	**Bilibino**	**69.00**	**23**	⇑*e*P	**P**	**06 56 08.6**	**+1.1**
BILL				*e*		06 56 38.9	
BILL				*e*		06 58 44.3	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,53nm,14.0s						
PETK	**Petropavlovsk-**	**69.31**	**40**	LR	LR	07 33 06.5	
	comp=Z,77nm,18.4s,baz=204,slow=42						
SUMG	**Summit**	**69.97**	**342**	*i* P	P	06 56 19.0	+5.0
DBIC	**Dimbokro**	**71.70**	**268**	P	**P**	**06 56 26.0**	**+1.0**
	comp=Z,3.0nm,0.9s,baz=45,slow=7.7,SNR=1.9						
DBIC				LR	LR	07 32 41.2	
	comp=Z,64nm,18.8s,baz=178,slow=40						
	comp=Z,3.0nm,0.9s						
DBIC	**Dimbokro**	**71.70**	**268**	P	**P**	**06 56 26.0**	**+1.0**
WRA	**Warramunga Arr**	**79.05**	**119**	P	**P**	**06 57 06.4**	**-0.7**
	comp=Z,1.7nm,0.9s,baz=313,slow=4.9,SNR=10						
	comp=Z,1.7nm,0.9s						
ASAR	**Alice Springs**	**80.76**	**122**	P	**P**	**06 57 15.6**	**-0.7**
	comp=Z,1.9nm,0.9s,baz=303,slow=4.5,SNR=12						
	comp=Z,1.9nm,0.9s						
IMAR	**Indian Mountai**	**82.73**	**16**	P	**P**	**06 57 26.2**	**+0.3**
BMAR	**Burnt Mountain**	**83.50**	**12**	P	**P**	**06 57 31.1**	**+1.2**
INK	**Inuvik**	**84.42**	**8**	P	**P**	**06 57 36.3**	**+1.7**
	comp=Z,2.0nm,1.0s,baz=339,slow=8.1,SNR=7.9						
	comp=Z,2.0nm,1.0s						
INK	**Inuvik**	**84.42**	**8**	P	**P**	**06 57 35.2**	**+0.7**
INK				IAmb	IAmb	06 57 47.1	
	comp=Z,5.6nm,1.3s						
INK	**Inuvik**	**84.42**	**8**	P	**P**	**06 57 35.2**	**+0.7**
INK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
CAST	**Castle Rocks**	**85.23**	**17**	P	**P**	**06 57 39.1**	**+0.3**
CAST				IAmb	IAmb	06 57 42.3	
	comp=Z,2.8nm,0.8s						
KDAK	**Kodiak Island**	**89.68**	**20**	LR	LR	07 41 40.5	
	comp=Z,46nm,19.3s,baz=325,slow=38						
STKA	**Stephens Creek**	**90.88**	**125**	P	**P**	**06 58 06.0**	**-0.2**
	comp=Z,1.6nm,1.0s,baz=333,slow=2.3,SNR=3.1						
	comp=Z,1.6nm,1.0s						
STKA	**Stephens Creek**	**90.88**	**125**	P	**P**	**06 58 06.0**	**-0.2**
YKA	**Yellowknife Ar**	**91.57**	**1**	P	**P**	**06 58 09.5**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=350,slow=4.3,SNR=12						
	comp=Z,0.7nm,0.8s						
MAW	**Mawson**	**93.61**	**182**	P	**P**	**06 58 19.5**	**+1.6**
MAW	**Mawson**	**93.61**	**182**	P	**P**	**06 58 19.5**	**+1.6**
MAW				pmax	pmax		
	comp=Z,34nm,1.5s						
TXAR	**Lajitas Array**	**124.19**	**351**	PKP	**PKiKP**	**07 04 03.9**	**+2.0**
	comp=Z,0.5nm,0.9s,baz=20,slow=3.0,SNR=3.2						

IDC ***18*** *07:04:45.5±0.8, 37.°99N×70.°50E, h0^{km}, mb4.0/18, mbtmp4.0/24, ML3.6/6, MS3.1/1, Error ellipse: s-maj=16.4km s-min=11.1km az=152.0*

BJI ***18*** *07:04:46.0±0.0, 38.°25N×70.°75E, h10^{km}, mb4.5/14, mB4.8/3, ML3.8/3*

NEIC ***18*** *07:04:47.6±1.7, 38.°08N±0.°03×70.°54E±0.°04, h10^{km}±1^{km}, mb4.5/15, Error ellipse: s-maj=6.3km s-min=4.2km az=225.0*

MOS ***18*** *07:04:48.6±1.1, 38.°09N×70.°52E, h24^{km}, mb4.3/13, Error ellipse: s-maj=8.3km s-min=4.9km az=82.7*

NNC ***18*** *07:04:48.4±3.0, 38.°19N×70.°11E, h0^{km}, mb4.2, mpv3.6, Error ellipse: s-maj=37.0km s-min=15.0km az=157.0*

ISC 18 07:04:47.3±0.4, **38.°03N**±0.°03×**70.°41E**±0.°04, **h10^{km}, n156, σ2^{s}07**/174, **mb4.2**/36, **MS3.5**/4, **16C-6D,**

Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	**Garm**	**0.97**	**356**		**Pg**	**07 05 04.6**	**-1.3**
GAR					**Sg**	**07 05 17.5**	**-1.0**
CHGR	**Chuyangaron**	**1.17**	**303**		**Pn**	**07 05 09.3**	**-0.4**
CHGR				Sn	**Sb**	**07 05 27.2**	**+2.4**
CHGR	**Chuyangaron**	**1.17**	**303**	PG	**Pn**	**07 05 09.3**	**-0.4**
CHGR						07 05 27.2	
DRK	**Karamyk**	**1.81**	**37**		**Pn**	**07 05 15.4**	**-3.4**
BTK	**Batken**	**2.05**	**9**		**Pb**	**07 05 23.9**	**-0.7**
BTK	**Batken**	**2.05**	**9**	PN	**Pb**	**07 05 23.9**	**-0.7**
KBL	**Kabul**	**3.66**	**198**	Pn	**Pb**	**07 05 50.0**	**-2.1**
KBL	**Kabul**	**3.66**	**198**	PN	**Pb**	**07 05 50.0**	**-2.1**
CEP	**Cherat**	**4.37**	**163**	P	**Pb**	**07 06 01.4**	**-2.9**
KSH	**Kashi**	**4.59**	**69**	Pg	**Pn**	**07 05 55.3**	**-1.6**
KSH				Sg	**Sn**	**07 06 47.6**	**-2.7**
KSH				smax	smax		
	comp=N,280nm,0.9s						
KSH				smax	smax		
	comp=E,250nm,0.9s						
AML	**Almayashu**	**4.80**	**31**	P	**Pn**	**07 06 01.9**	**+1.8**
	SNR=33						
AML	**Almayashu**	**4.80**	**31**	⇑Pn	**Pn**	**07 06 01.8**	**+1.8**
	0.9nm,0.4s						
AML				⇑Pg	**Pg**	**07 06 15.5**	**-3.8**
	5.5nm,0.7s						
AML				⇑Lg	Lg	07 07 13.8	
	18nm,0.8s						
AML	**Almayashu**	**4.80**	**31**	PN	**Pn**	**07 06 01.8**	**+1.8**
AML				P	**Pg**	**07 06 15.5**	**-3.8**
CHCP	**Chirah Chowk**	**4.94**	**151**	P	Pb	07 06 08.8	-5.1
NIL	**Nilore**	**4.95**	**151**	Pn	**Pn**	**07 06 03.1**	**+1.5**
NIL	**Nilore**	**4.95**	**151**	PN	**Pn**	**07 06 03.1**	**+1.5**
KK31	**Karatay Array**	**5.07**	**1**		**Pn**	**07 06 04.2**	**+0.9**
KK31	**Karatay Array**	**5.07**	**1**	⇓Pn	**Pn**	**07 06 04.7**	**+1.4**
	1.6nm,0.3s,baz=187,slow=14,SNR=21						
KK31				⇑Pg	**Pb**	**07 06 19.4**	**+3.4**
	10.0nm,0.4s,baz=176,slow=15						
KK31				⇑Lg	Lg	07 07 20.0	
	35nm,0.5s,baz=184,slow=28						
KK31	**Karatay Array**	**5.07**	**1**	PN	**Pn**	**07 06 04.2**	**+0.9**
KKAR	**Karatay Array**	**5.07**	**1**		**Pn**	**07 06 04.5**	**+1.2**
KKAR	**Karatay Array**	**5.07**	**1**	PN	**Pn**	**07 06 04.5**	**+1.2**
UCH	**Uchtor**	**5.24**	**36**	P	**Pn**	**07 06 08.1**	**+2.1**
	SNR=24						
EKS2	**Erkin-Say**	**5.29**	**28**	P	Pn	07 06 10.4	+4.0
	SNR=12						
THW	**Thamme Wali**	**5.34**	**168**	P	Pn	07 06 13.4	+6.3
AAK	**Ala-Archa**	**5.56**	**33**	P	**Pn**	**07 06 12.2**	**+2.1**
	SNR=22						
AAK	**Ala-Archa**	**5.56**	**33**	Pn	**Pn**	**07 06 12.0**	**+1.9**
	4.4nm,0.3s,baz=229,slow=7.4,SNR=20						
AAK				Sn	**Sn**	**07 07 13.2**	**-1.0**
	baz=42,slow=18						
AAK				Lg	Lg	07 07 40.4	
	1.0nm,0.3s,baz=150,slow=20,SNR=1.5						
	19nm,0.4s						
AAK	**Ala-Archa**	**5.56**	**33**		**Pn**	**07 06 11.6**	**+1.5**
AAK	**Ala-Archa**	**5.56**	**33**	*ce*PN	**Pn**	**07 06 12.1**	**+1.9**
AAK				pmax	pmax		
	comp=Z,15nm,0.6s						
KBK	**Karagaybulak**	**5.77**	**35**	P	**Pn**	**07 06 16.6**	**+3.5**
	SNR=7.8						
CHMS	**Chumysh**	**5.96**	**32**	P	**Pn**	**07 06 17.7**	**+2.2**
	SNR=10						
USP	**Ospenovka**	**6.08**	**29**	P	**Pn**	**07 06 18.8**	**+1.6**
	SNR=10						
ULHL	**Ulahol**	**6.14**	**45**	P	**Pn**	**07 06 21.4**	**+3.2**
	SNR=10						
TKM2	**Tokmak 2**	**6.28**	**37**	P	**Pn**	**07 06 23.5**	**+3.4**
	SNR=13						
TKM2	**Tokmak 2**	**6.28**	**37**	⇑Pn	**Pn**	**07 06 23.1**	**+3.0**
	comp=Z,6.5nm,0.5s						
TKM2				⇑Sn	Sb	07 07 40.9	-11
	comp=Z,18nm,0.7s						
TKM2	**Tokmak 2**	**6.28**	**37**	PN	**Pn**	**07 06 23.1**	**+3.0**
TKM2				S	Sb	07 07 40.9	-11
JMU	**Jammu**	**6.45**	**144**	*e*S	**Sn**	**07 07 40.6**	**+4.8**
THN	**Thein Dam**	**7.07**	**141**	*e*P	Pn	07 06 36.0	+5.1
THN				*e*S	**Sn**	**07 07 57.6**	**+6.3**
THN				*e*S	**Sn**	**07 07 57.9**	**+6.6**
BHK	**Bhakra**	**8.24**	**141**	*e*S	**Sn**	**07 08 25.3**	**+5.1**
PDGK	**Podgornoye**	**8.69**	**50**	⇓P	**Pn**	**07 06 54.3**	**+1.2**
	comp=Z,4.2nm,0.8s						
PDGK	**Podgornoye**	**8.69**	**50**	P	**Pn**	**07 06 54.3**	**+1.2**
SMLA	**Simla**	**8.86**	**139**	*e*P	**Pn**	**07 06 59.2**	**+3.9**
SMLA				*e*S	**Sn**	**07 08 36.2**	**+1.1**
SMLA				IAML		07 08 44.9	
	comp=E,55nm,0.4s						
GEYT	**Alibeck**	**9.71**	**273**	Pn	**Pn**	**07 07 06.0**	**-1.0**
	comp=E,1.3nm,0.3s,baz=134,slow=8.3,SNR=7.0						
GEYT				Sn	**Sn**	**07 08 50.5**	**-5.6**
	comp=E,1.5nm,0.3s,baz=101,slow=20,SNR=2.4						
GEYT				LR	LR	07 12 11.3	
	comp=E,110nm,18.1s,baz=125,slow=46						
	comp=E,2.2nm,0.3s						
GYA0	**ALIBECK ARRAY**	**9.71**	**273**	P	**Pn**	**07 07 06.2**	**-0.8**
GYA0				S	**Sn**	**07 08 53.9**	**-2.2**
GYA0B	**ALIBECK ARRAY**	**9.71**	**273**	Pn	**Pn**	**07 07 07.2**	**+0.2**
GYA0B	**ALIBECK ARRAY**	**9.71**	**273**	⇑P	**Pn**	**07 07 06.2**	**-0.8**
GYA0B				⇓S	**Sn**	**07 08 54.0**	**-2.1**
KUDL	**Kundal**	**11.10**	**151**	*e*P	**Pn**	**07 07 28.8**	**+2.8**
KUDL				*e*S	**Sn**	**07 09 29.1**	**-1.1**
KUDL				*e*S	**Sn**	**07 09 31.2**	**+1.1**
MAKZ	**Makanchi**	**12.23**	**41**		**Pn**	**07 07 40.6**	**-0.9**
MAKZ	**Makanchi**	**12.23**	**41**	P	**Pn**	**07 07 40.6**	**-0.9**
MK31	**Makanchi Array**	**12.38**	**41**		**Pn**	**07 07 43.4**	**-0.2**
MK31	**Makanchi Array**	**12.38**	**41**	P	**Pn**	**07 07 44.0**	**+0.4**
	comp=E,7.1nm,0.8s,baz=224,slow=12,SNR=34						
MK31	**Makanchi Array**	**12.38**	**41**	*i* P	**Pn**	**07 07 44.2**	**+0.6**
MKAR	**Makanchi Array**	**12.38**	**41**	Pn	**Pn**	**07 07 44.4**	**+0.8**
	comp=E,0.2nm,0.3s,baz=227,slow=14,SNR=21						
MKAR				Lg	Lg	07 11 06.8	
	comp=E,0.1nm,0.3s,baz=235,slow=30,SNR=2.8						
	comp=E,2.8nm,0.8s						
MKAR	**Makanchi Array**	**12.38**	**41**	Pn	**Pn**	**07 07 43.4**	**-0.2**
MKAR	**Makanchi Array**	**12.38**	**41**	P	**Pn**	**07 07 43.4**	**-0.2**
AB31	**Akbulak array**	**13.52**	**329**	P	**Pn**	**07 07 56.4**	**-2.7**
	comp=E,1.6nm,0.5s,baz=163,slow=11,SNR=59						
AB31	**Akbulak array**	**13.52**	**329**	P	**Pn**	**07 07 56.4**	**-2.7**
ABKAR	**Akbulak array**	**13.52**	**329**	Pn	**Pn**	**07 07 57.1**	**-1.9**
KURBB	**Kurchatov Arra**	**13.85**	**22**	Pn	**Pn**	**07 08 00.4**	**-3.1**
	comp=E,0.1nm,0.3s,baz=214,slow=12,SNR=8.1						
KURBB				Lg	Lg	07 12 04.8	
	baz=207,slow=26,SNR=2.4						
	comp=E,0.8nm,0.6s						
KURK	**Kurchatov**	**13.96**	**22**	*i* P	**Pn**	**07 08 05.6**	**+0.6**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
WMQ	**Urumqi**	**14.28**	**61**	*e*P	**Pn**	**07 08 11.4**	**+1.9**
DANN	**Dangsing**	**14.76**	**127**	*e*P	**Pn**	**07 08 13.4**	**-2.9**
	comp=Z,18nm,0.4s						
BVA0	**Borovoye Array**	**14.99**	**360**	⇓P	**Pn**	**07 08 19.1**	**0.0**
	comp=Z,2.0nm,0.5s,baz=164,slow=8.3,SNR=7.3						
BVA0	**Borovoye Array**	**14.99**	**360**	P	**Pn**	**07 08 19.1**	**0.0**
BVAR	**Borovoye Array**	**14.99**	**360**	Pn	**Pn**	**07 08 19.6**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=167,slow=12,SNR=16						
BRVK	**Borovoye**	**15.03**	**360**		**Pn**	**07 08 19.1**	**-0.4**
BRVK	**Borovoye**	**15.03**	**360**	⇑P	**Pn**	**07 08 18.3**	**-1.3**
	comp=Z,4.9nm,0.6s						
BRVK	**Borovoye**	**15.03**	**360**	*ce*P	**Pn**	**07 08 21.6**	**+2.1**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKTO	**Aktyubinsk**	**15.22**	**328**	Pn	**Pn**	**07 08 20.6**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=131,slow=11,SNR=3.6						
AKTO				Sn	**Sn**	**07 11 02.7**	**-8.0**
	comp=Z,0.3nm,0.3s,baz=270,slow=20,SNR=2.1						
	comp=Z,1.4nm,0.3s						
AKTO	**Aktyubinsk**	**15.22**	**328**	⇓P	**Pn**	**07 08 25.0**	**+2.8**
	comp=Z,11nm,0.6s						
GKN	**Gorkha**	**15.55**	**126**	*e*P	**Pn**	**07 08 23.3**	**-3.5**
	comp=Z,15nm,0.4s						
DMN	**Daman**	**16.12**	**126**	*e*P	**Pn**	**07 08 30.6**	**-3.7**
	comp=Z,16nm,0.5s						
GUN	**Gumba**	**16.42**	**123**	*e*P	**Pn**	**07 08 35.0**	**-3.2**
	comp=Z,9.4nm,0.4s						
JIRN	**Jiri**	**16.79**	**123**	*e*P	**Pn**	**07 08 40.1**	**-2.8**
	comp=Z,21nm,0.4s						
DGZ	**Jazzator, Alta**	**16.88**	**41**	*i* P	**P**	**07 08 44.4**	**-1.4**
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
RAMN	**Ramite**	**17.54**	**124**	*e*P	**Pn**	**07 08 49.2**	**-3.0**
	comp=Z,7.9nm,0.4s						
ZAA0	**Zalesovo Array**	**18.74**	**27**	P	**P**	**07 09 04.9**	**-1.1**
ZALV	**Zalesovo Beam**	**18.74**	**27**	P	**P**	**07 09 04.3**	**-1.7**
	comp=Z,0.9nm,0.3s,baz=207,slow=12,SNR=19						
	comp=Z,4.5nm,0.5s						
ZALV	**Zalesovo Beam**	**18.74**	**27**	P	**P**	**07 09 05.1**	**-1.0**
ZALV	**Zalesovo Beam**	**18.74**	**27**	*i* P	**Pn**	**07 09 05.6**	**-0.8**
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.5s						
GNI	**Garni**	**20.02**	**284**	P	**P**	**07 09 20.8**	**+0.5**
	comp=Z,3.2nm,0.3s,baz=101,slow=5.2,SNR=2.0						
	comp=Z,3.2nm,0.3s						
GNI	**Garni**	**20.02**	**284**	P	**P**	**07 09 20.8**	**+0.5**
GNI	**Garni**	**20.02**	**284**	*i* P	Pn	07 09 23.3	+1.2
GNI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ARU	**Arti**	**20.03**	**341**	P	**P**	**07 09 20.1**	**0.0**
	comp=Z,3.4nm,0.4s,baz=137,slow=4.7,SNR=6.7						
	comp=Z,3.4nm,0.4s						
ARU	**Arti**	**20.03**	**341**	P	**P**	**07 09 20.9**	**+0.8**
ARU	**Arti**	**20.03**	**341**	*d* *i*P	Pn	07 09 21.6	-0.3
ARU						07 09 37.7	
ARU				S	Sn	07 13 08.5	+1.5
ARU				SS	**SnSn**	**07 13 27.1**	**+5.7**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKH	**Akhalkalaki**	**20.95**	**288**	P	**P**	**07 09 33.4**	**+3.0**
AKH	**Akhalkalaki**	**20.95**	**288**	P	**P**	**07 09 33.4**	**+3.0**
AKH				pmax	pmax		
	comp=Z,75nm,1.4s						
ONI	**Oni**	**21.02**	**291**	P	**P**	**07 09 33.5**	**+2.5**
ONI				IAmb	IAmb	07 09 51.0	
	comp=Z,11nm,0.9s						
ONI	**Oni**	**21.02**	**291**	P	**P**	**07 09 33.5**	**+2.5**
ONI				pmax	pmax		
	comp=Z,11nm,0.9s						
BELG	**Belogornoye**	**21.41**	**319**	P	**P**	**07 09 34.6**	**-0.4**
	comp=Z,52nm,0.9s,baz=124,slow=0.3,SNR=13						
	comp=Z,52nm,0.9s						
BELG	**Belogornoye**	**21.41**	**319**	*i* P	**P**	**07 09 37.6**	**+2.6**
BELG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KBZ	**Khabaz**	**21.51**	**294**	P	**P**	**07 09 36.5**	**+0.3**
	comp=Z,4.2nm,0.9s,baz=156,slow=5.8,SNR=5.3						
	comp=Z,4.2nm,0.9s						
KBZ	**Khabaz**	**21.51**	**294**	*i* P	**P**	**07 09 39.1**	**+2.9**
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SHA1	**Shidzhatmaz**	**21.69**	**294**	*i* P	**P**	**07 09 40.9**	**+2.5**
KIV	**Kislovodsk**	**21.69**	**295**	*e*P	**P**	**07 09 41.7**	**+3.4**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,30nm,14.0s						
GTA	**Gaotai**	**22.94**	**77**	*e*P	**P**	**07 09 54.3**	**+2.6**
GTA				pP	sP	07 09 57.9	+1.1
GTA				sP	pP	07 10 00.8	+5.6
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KIRV	**Kirov**	**24.66**	**333**	P	**P**	**07 10 07.9**	**+0.1**
	comp=Z,12nm,0.5s,baz=222,slow=10,SNR=3.5						
	comp=Z,12nm,0.5s						
KIRV	**Kirov**	**24.66**	**333**	*ce*P	**P**	**07 10 10.0**	**+2.1**
RAYN	**Ar Rayn**	**25.73**	**243**	P	**P**	**07 10 19.8**	**+1.9**
RAYN				IAmb	IAmb	07 10 21.9	
	comp=Z,4.2nm,0.6s						
RAYN	**Ar Rayn**	**25.73**	**243**	P	**P**	**07 10 19.8**	**+1.9**
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TNCH	**TengChong**	**27.12**	**110**	P	**P**	**07 10 32.0**	**+1.3**
SONM	**Songino Array**	**27.88**	**58**	P	**P**	**07 10 37.2**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=283,slow=10,SNR=4.8						
	comp=Z,0.5nm,0.4s						
OBN	**Obninsk**	**28.48**	**318**	⇑*e*P	**P**	**07 10 43.4**	**+1.1**
OBN				*e*		07 11 38.6	
OBN				pmax	pmax		
	comp=Z,9.0nm,1.6s						
OBN				MLR	MLR		
	comp=Z,74nm,16.0s						
BRTR	**Keskin Array B**	**28.55**	**285**	P	**P**	**07 10 45.1**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=87,slow=12,SNR=1.7						
	comp=Z,0.3nm,0.3s						
PZH	**PanZhiHua**	**28.75**	**104**	P	**P**	**07 10 46.6**	**+1.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
AKASG	**Malin Array Be**	**31.63**	**307**	P	**P**	**07 11 11.3**	**+1.0**
	comp=Z,0.9nm,0.6s,baz=111,slow=7.7,SNR=4.7						
	comp=Z,0.9nm,0.6s						
HHC	**Hu-ho-hao-te**	**31.70**	**72**	*e*P	**P**	**07 11 11.4**	**+0.3**
HHC				pmax	pmax		
	comp=Z,24nm,0.9s						
NRIK	**Noril'sk**	**32.71**	**11**	*ce*P	**P**	**07 11 21.1**	**+1.6**
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MNK	**Minsk**	**33.09**	**314**	*i* P	**P**	**07 11 22.2**	**-0.8**
	comp=E,3.0nm,0.8s						
MNK				*i* P	**P**	**07 11 22.2**	**-0.8**
	comp=N,41nm,0.8s						
MNK				*i* P	**P**	**07 11 22.2**	**-0.8**
	comp=Z,5.0nm,0.7s,baz=282						
MNK				*i* PP	**PnPn**	**07 12 32.8**	**+0.3**
MNK				*i* PPP	PPP	07 12 44.0	
MNK				*i* S	**S**	**07 16 40.4**	**-1.5**
MNK				*i* SS	**SnSn**	**07 18 42.5**	**+2.4**
MNK				*i* SSS	SSS	07 18 59.0	
MNK				*i* LR	LR	07 23 48.1	
MNK				*i* LRM	MLR	07 26 12.7	
	comp=N,358nm,14.2s						
MNK				*i* LRM	MLR	07 26 24.1	
	comp=E,18nm,13.5s						
MNK				*i* LRM	MLR	07 26 26.0	
	comp=Z,39nm,10.9s						
MNK	**Minsk**	**33.09**	**314**	*i* P	**P**	**07 11 22.2**	**-0.8**
MNK				*i*		07 12 32.7	
MNK				*i*		07 14 04.2	
MNK				*i* S	**S**	**07 16 40.3**	**-1.5**
MNK				*i* SS	**SnSn**	**07 18 42.5**	**+2.4**
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,41nm,0.8s						
MNK				pmax	pmax		
	comp=N,358nm,14.0s						
MNK				pmax	pmax		
	comp=E,18nm,14.0s						
MNK				pmax	pmax		
	comp=Z,39nm,11.0s						
FIA1	**FINESS Array S**	**35.95**	**325**	P	**P**	**07 11 48.1**	**+0.4**
FIA1				IAmb	IAmb	07 12 02.3	
	comp=Z,18nm,1.4s						
FINES	**FINESS Array B**	**35.95**	**325**	P	**P**	**07 11 48.2**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=118,slow=8.2,SNR=16						
	comp=Z,1.8nm,0.7s						
FINES	**FINESS Array B**	**35.95**	**325**	P	**P**	**07 11 47.8**	**+0.1**
FINES	**FINESS Array B**	**35.95**	**325**	P	**P**	**07 11 47.8**	**+0.1**
VADS	**Vadso**	**38.72**	**339**	*e*P	**P**	**07 12 11.7**	**+0.7**
ARA0	**ARCESS Array S**	**39.55**	**337**	*e*P	**P**	**07 12 18.7**	**+0.7**
ARCES	**ARCESS Array B**	**39.55**	**337**	P	**P**	**07 12 18.1**	**+0.1**
	comp=Z,1.3nm,0.4s,baz=110,slow=8.1,SNR=18						
	comp=Z,1.3nm,0.4s						
ARCES	**ARCESS Array B**	**39.55**	**337**	P	**P**	**07 12 18.4**	**+0.4**
ARCES				IAmb	IAmb	07 12 23.1	
	comp=Z,19nm,1.4s						
NJ2	**Nanjing**	**39.75**	**84**	*e*P	**P**	**07 12 18.1**	**-2.0**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KTK1	**Kautokeino**	**40.03**	**336**	*e*P	**P**	**07 12 22.3**	**+0.3**
HAMF	**Hammerfest**	**40.63**	**338**	*e*P	**P**	**07 12 27.7**	**+0.8**
CLL	**Collm**	**41.87**	**308**	*e*P	**P**	**07 12 38.0**	**+0.6**
CLL	**Collm**	**41.87**	**308**	*e*P	**P**	**07 12 38.0**	**+0.6**
FAUS	**Fauske**	**42.23**	**332**	*e*P	**P**	**07 12 40.6**	**+0.5**
MOR8	**Moi Rana**	**42.25**	**330**	*e*P	**P**	**07 12 40.2**	**-0.2**
NC405	**NORSAR Array S**	**42.64**	**322**	P	**P**	**07 12 43.8**	**+0.2**
NC602	**NORSAR Array S**	**42.70**	**322**	*e*P	**P**	**07 12 44.0**	**+0.1**
NB2	**NORSAR Subarra**	**42.88**	**322**	P	**P**	**07 12 45.5**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=95,slow=7.9						
NB2	**NORSAR Subarra**	**42.88**	**322**	P	**P**	**07 12 45.5**	**-0.1**
	slow=7.9						
NOA	**NORSAR Array B**	**42.88**	**322**	P	**P**	**07 12 45.4**	**-0.1**
	comp=Z,3.0nm,0.7s,baz=96,slow=8.1,SNR=12						
	comp=Z,3.0nm,0.7s						
TIXI	**Tiksi**	**44.53**	**23**	*ce*P	**P**	**07 12 58.9**	**+0.3**
TIXI				pmax	pmax		

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             comp=Z,2.0nm,0.8s
KLR   Kul'dur            44.63  55 i P     P       07 12 59.5 -0.3
KLR                                  pmax  pmax
             comp=Z,1.0nm,1.0s
SPITS Spitsbergen Ar     45.89 347   P     P       07 13 10.2 +0.8
SPITS                                pmax  pmax
             comp=Z,74nm,1.3s
KBS   Kingsbay           47.01 347   P     P       07 13 18.2 +0.1
KBS   Kingsbay           47.01 347   P     P       07 13 18.3 +0.1
KBS                                  pmax  pmax
             comp=Z,61nm,1.2s
KBS   Kingsbay           47.01 347 eP      P       07 13 18.7 +0.6
DAG   Danmarks Havn      53.13 343 i P     P       07 14 04.0 -0.5
ESDC  Sonseca Array      56.34 297   P     P       07 14 29.1 +0.6
             comp=Z,0.9nm,0.8s,baz=57,slow=7.3,SNR=8.7
             comp=Z,0.9nm,0.8s
BILL  Bilibino           57.44  26ceP      P       07 14 36.6 +0.8
BILL                               e               07 15 35.4
BILL                               e               07 16 49.5
BILL                                 pmax  pmax
             comp=Z,1.0nm,0.9s
BILL                                 MLR   MLR
             comp=Z,37nm,15.0s
SUMG  Summit             59.46 341 i P     P       07 14 50.0 -0.3
TORD  Torodi Ar. Bea     65.30 268   P     P       07 15 29.9 +0.2
             comp=Z,2.2nm,0.5s,baz=49,slow=5.9,SNR=29
             comp=Z,2.2nm,0.5s
A36M  Sachs Harbour      69.72   5   P     P       07 15 56.9 +0.1
A36M                                 IAmb  IAmb    07 16 08.9
             comp=Z,3.2nm,0.8s
IMAR  Indian Mountai     70.86  18   P     P       07 16 03.3 -0.6
BMAR  Burnt Mountain     71.56  13   P     P       07 16 08.2  0.0
C36M  Paulatuk           72.40   5   P     P       07 16 12.7 -0.3
C36M                                 IAmb  IAmb    07 16 13.4
             comp=Z,2.8nm,0.6s
INK   Inuvik             72.47   9   P     P       07 16 13.9 +0.5
INK                                  IAmb  IAmb    07 16 38.8
             comp=Z,4.3nm,1.4s
INK   Inuvik             72.47   9   P     P       07 16 13.9 +0.5
INK                                  pmax  pmax
             comp=Z,4.0nm,1.4s
K20K  Telida             72.92  19   P     P       07 16 16.5 +0.2
K20K                                 IAmb  IAmb    07 16 25.2
             comp=Z,6.8nm,1.3s
CAST  Castle Rocks       73.38  18   P     P       07 16 19.4 +0.3
CAST                                 IAmb  IAmb    07 16 27.5
             comp=Z,6.3nm,1.4s
ILAR  Eielson Array      73.43  16   P     P       07 16 18.8 -0.5
             comp=Z,0.4nm,0.8s,baz=324,slow=4.5,SNR=3.7
             comp=Z,0.4nm,0.8s
DBIC  Dimbokro           74.32 266   P     P       07 16 24.9 -0.3
             comp=Z,3.3nm,1.0s,baz=54,slow=8.7,SNR=2.1
             comp=Z,3.3nm,1.0s
DBIC  Dimbokro           74.32 266   P     P       07 16 25.0 -0.3
YKA   Yellowknife Ar     79.74   2   P     P       07 16 55.1 +0.2
             comp=Z,1.1nm,0.7s,baz=351,slow=5.4,SNR=22
             comp=Z,1.1nm,0.7s
WRA   Warramunga Arr     83.20 122   P     P       07 17 13.2 -0.7
             comp=Z,0.3nm,0.8s,baz=324,slow=4.4,SNR=2.0
             comp=Z,0.3nm,0.8s
ASAR  Alice Springs      85.51 125   P     P       07 17 24.9 -0.6
             comp=Z,0.2nm,0.6s,baz=310,slow=4.8,SNR=4.0
             comp=Z,0.2nm,0.6s
ASAR  Alice Springs      85.51 125   P     P       07 17 25.0 -0.6
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*KRNET **18** 07:20:29.9±0.1, 39°.42N×73°.06E, mb3.2*
*SOME **18** 07:20:31.2, 39°.77N×72°.37E, h15^{km}*
*ISU **18** 07:20:31.4, 39°.65N×73°.17E, h18^{km}*
*NNC **18** 07:20:34.8±2.8, 39°.81N×72°.59E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=22.6km s-min=11.0km az=169.0*
ISC 18 07:20:31.5±1.3, **39°.62N**±0°.06×**73°.04E**±0°.03, **h10**^{km}**, n37,** σ**1ˢ.67**/49**, 18C-6D, Tajikistan-Xinjiang border region**

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Code  Station Name         Δ°  AZ°    Phase ID          Time     Res
                                    Op     ISC       h  m  s    ISC
OHH   Osh                 0.93 348⇑iP      Pn      07 20 51.3 +0.6
             baz=49
OHH                               ⇑iS      Sn      07 21 07.2 +3.1
             baz=49
FRG   Fergana             1.23 308  P      Pg      07 20 56.0 +1.0
FRG                                 S      Sn      07 21 14.0 +2.6
ANR   Andizhan            1.25 336  P      Sg      07 21 09.6 -2.1
CHMI  Chimion             1.34 300  P      Pg      07 20 57.0 -0.1
CHMI                                S      Sg      07 21 16.7 +2.2
BTK   Batken              1.77 285⇑iP      Pg      07 21 04.4 -1.0
             baz=91
BTK                               ⇑iS      Sg      07 21 29.3 +1.0
             baz=91
GAR   Garm                2.20 255⇑iP      Pn      07 21 09.4 +1.2
             baz=60
GAR                               ⇑iS      Sb      07 21 38.1 -0.7
             baz=60
ARK   Arkit               2.33 340⇑eP      Pg      07 21 14.2 -1.9
             baz=41
ARK                               ⇑iS      Sg      07 21 46.7 +0.4
             baz=41
TRKS  Terek-Say           2.40 323⇑iP      Pb      07 21 14.1 -0.7
             baz=25
TRKS                              ⇑iS      Sg      07 21 46.3 -2.2
             baz=25
ARLS  Aral                2.44  23⇑iP      Pb      07 21 15.6  0.0
             baz=21
ARLS                              ⇑iS      Sg      07 21 49.1 -0.9
             baz=21
AML   Almayashu           2.56  11 ⇑Pg     Pg      07 21 22.2 +1.6
             0.6nm,0.5s
AML                                ⇑Lg     Lg      07 21 56.2
             5.2nm,0.7s
AML   Almayashu           2.56  11⇑eP      Pb      07 21 17.6 -0.1
             baz=10.0
AML                               ⇑iS      Sg      07 21 52.1 -1.7
             baz=10.0
NRN   Naryn               2.89  50⇓eP      Pb      07 21 20.8 -2.6
             baz=47
NRN                               ⇓iS      Sb      07 21 58.0 -1.0
             baz=47
MNAS  Manas               2.90 352⇑iP      Pb      07 21 22.4 -0.9
             baz=52
MNAS                              ⇑iS      Sb      07 22 00.4 +1.6
             baz=52
CHMG  Chimgan             3.01 311  P      Sg      07 22 05.5 -2.6
MRKS  Merke               3.13   3 ePg     Pb      07 21 26.5 -0.8
             1.9nm,0.3s
MRKS                               eLg     Lg      07 22 05.9
             5.1nm,0.8s
IUG   Iuzhnay             3.40 319  Pg     Pb      07 21 28.2 -3.7
             8.8nm,0.3s
IUG                                 Lg     Lg      07 22 09.3
             18nm,0.5s
IUG   Iuzhnay             3.40 319 ePg     Pb      07 21 28.2 -3.7
             8.8nm,0.3s
IUG                                eLg     Lg      07 22 09.3
             18nm,0.5s
TKM2  Tokmak 2            3.82  29 ⇓Pg     Pg      07 21 43.5 -1.2
             3.2nm,0.6s
TKM2                               ⇓Lg     Lg      07 22 33.7
             4.4nm,0.7s
KK31  Karatay Array       3.97 332 ⇓Pn     Pn      07 21 36.0 +3.6
             1.8nm,0.4s,baz=148,slow=17,SNR=7.8
KK31                               ⇓Sn     Sb      07 22 27.8 -1.8
             5.4nm,0.6s,baz=158,slow=22,SNR=4.5
KST   Kastek              4.07  32  Pg     Pg      07 21 49.4  0.0
             4.6nm,0.6s
KST                                 Lg     Lg      07 22 45.4
             7.7nm,1.1s
KST   Kastek              4.07  32 ePg     Pg      07 21 49.4  0.0
             4.6nm,0.6s
KST                                eLg     Lg      07 22 45.4
             7.5nm,0.3s
DGS   Degeres             4.16  29  Pg     Pg      07 21 50.2 -1.0
             3.8nm,0.5s
DGS                                 Lg     Lg      07 22 46.8
             6.1nm,0.7s
DGS   Degeres             4.16  29 ePg     Pg      07 21 50.2 -1.0
             3.8nm,0.5s
DGS                                eLg     Lg      07 22 46.9
             6.1nm,0.7s
MTBS  Maitube             4.34  35  Pg     Pg      07 21 55.6 +1.1
             4.7nm,0.5s
MTBS                                Lg     Lg      07 22 55.7
             6.0nm,0.7s
MTBS  Maitube             4.34  35 ePg     Pg      07 21 55.0 +0.5
             4.7nm,0.5s
MTBS                               eLg     Lg      07 22 54.6
             4.0nm,0.2s
IZV   Izvestkoviy         4.35  37  Pg     Pg      07 21 54.3 -0.4
             2.2nm,0.7s
IZV                                 Lg     Lg      07 22 53.3
             13nm,0.6s
IZV   Izvestkoviy         4.35  37 ePg     Pg      07 21 54.3 -0.4
             2.2nm,0.7s
IZV                                eLg     Lg      07 22 53.3
             13nm,0.6s
TNSS  Tian-Shan           4.51  39  Pg     Pg      07 21 57.9 +0.1
             2.7nm,0.4s
TNSS                                Lg     Lg      07 22 59.6
             3.0nm,0.6s
TNSS  Tian-Shan           4.51  39 ePg     Pg      07 21 57.9 +0.1
             2.7nm,0.4s
TNSS                               eLg     Lg      07 22 59.6
             3.0nm,0.6s
KRBS  Karabastau          4.53  25  Pg     Pg      07 21 57.8 -0.4
             1.9nm,0.7s
KRBS                                Lg     Lg      07 22 59.4
             5.6nm,0.8s
KRBS  Karabastau          4.53  25 ePg     Pg      07 21 57.0 -1.2
             1.6nm,0.3s
KRBS                               eLg     Lg      07 22 58.0
             5.6nm,0.3s
KOTS  Kotyrbulak          4.74  39  Pg     Pg      07 22 03.7 +1.5
             5.2nm,0.7s
KOTS                                Lg     Lg      07 23 09.3
             15nm,0.8s
KOTS  Kotyrbulak          4.74  39 ePg     Pg      07 22 02.2  0.0
             5.2nm,0.7s
KOTS                               eLg     Lg      07 23 07.4
             15nm,0.8s
KTBS  Karatobe            4.92  33  Pg     Pg      07 22 05.0 -0.6
             2.3nm,1.0s
KTBS                                Lg     Lg      07 23 11.5
             10nm,0.6s
KTBS  Karatobe            4.92  33 ePg     Pg      07 22 04.7 -1.0
             2.3nm,1.0s
KTBS                               eLg     Lg      07 23 11.5
             10nm,0.6s
KUU   Kurty               4.93  29  Pg     Pg      07 22 03.8 -2.2
             1.0nm,0.2s
KUU                                 Lg     Lg      07 23 09.8
             4.1nm,0.7s
KUU   Kurty               4.93  29 ePg     Pg      07 22 03.8 -2.2
             1.0nm,0.2s
KUU                                eLg     Lg      07 23 09.8
             4.1nm,0.7s
```

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*IDC **18** 07:22:46.1±1.1, 30°.88N×141°.99E, h0^{km}, mb3.7/7, mbtmp3.7/10, ML3.3/3, Error ellipse: s-maj=43.2km s-min=17.4km az=79.0*
ISC 18 07:22:49.6±0.9, **30°.87N**±0°.09×**141°.9E**±0°.2, **h24**^{km}**, n10,** σ**1ˢ.33**/12**, mb3.7**/7**, Southeast of Honshu**

```
Code  Station Name         Δ°  AZ°    Phase ID          Time     Res
                                    Op     ISC       h  m  s    ISC
JCJ   Chichijima          3.77 176  Pn     Pn      07 23 45.9 -0.3
             3.5nm,0.3s,baz=285,slow=20,SNR=1.7
JCJ                                 Sn     Sn      07 24 27.9 -1.9
             11nm,0.3s,baz=95,slow=21,SNR=2.0
             39nm,0.6s
MJAR  Matsushiro Arr      6.43 333  Pn     Pn      07 24 22.1 -0.7
             0.2nm,0.3s,baz=155,slow=10,SNR=12
MJAR                                Sn     Sn      07 25 32.8 -2.6
             baz=138,slow=23
             2.1nm,0.5s
KLR   Kul'dur            19.88 340  P      P       07 27 18.4 -0.5
             0.2nm,0.3s,baz=159,slow=13,SNR=4.9
             1.4nm,0.7s
SONM  Songino Array      31.89 312  P      P       07 29 14.6 +1.5
             0.8nm,0.8s,baz=121,slow=7.6,SNR=3.9
             0.8nm,0.8s
MKAR  Makanchi Array     47.93 307  P      P       07 31 26.3 +0.3
             0.9nm,0.7s,baz=91,slow=9.4,SNR=13
             0.9nm,0.7s
WRA   Warramunga Arr     51.03 189  P      P       07 31 49.9 +0.1
             0.4nm,0.4s,baz=4.4,slow=7.5,SNR=15
             0.4nm,0.4s
ILAR  Eielson Array      54.57  30  P      P       07 32 15.3 -0.2
             0.8nm,1.1s,baz=280,slow=5.2,SNR=4.4
             0.8nm,1.1s
ASAR  Alice Springs      54.76 189  P      P       07 32 17.8 +0.5
             0.3nm,0.5s,baz=0.0,slow=5.6,SNR=9.5
             0.3nm,0.5s
AKASG Malin Array Be     79.43 323  P      P       07 34 53.9 +0.2
             0.4nm,0.4s,baz=42,slow=4.9,SNR=1.8
             0.4nm,0.4s
BRTR  Keskin Array B     83.25 312  P      P       07 35 16.0 +1.6
             0.5nm,0.6s,baz=93,slow=2.9,SNR=2.8
             0.5nm,0.6s
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*IDC **18** 07:26:01.3±86.0, 24°.19N×63°.40E, h0^{km}, mb4.0/3, mbtmp4.0/3, MS2.7/1, Error ellipse: s-maj=1687.0km s-min=78.2km az=174.0*
*OMAN **18** 07:26:18.8±1.5, 24°.81N×62°.80E, h25^{km}, mb4.5/6, ml3.2/7, Error ellipse: s-maj=12.3km s-min=9.8km az=77.0*
ISC 18 07:26:18.7±3.9, **24°.87N**±0°.08×**62°.9E**±0°.2, **h35**^{km}**, n21,** σ**1ˢ.50**/33**, mb3.8**/3**, Off coast of Pakistan**

```
Code  Station Name         Δ°  AZ°    Phase ID          Time     Res
                                    Op     ISC       h  m  s    ISC
NGCH  Negor - Chabah      1.66 288  P      Pn      07 26 44.6 -0.7
NGCH                                S      Sn      07 27 08.5 +3.2
JLN   Jalan Bani Buh      4.18 230  P      Pn      07 27 18.8 -1.2
             SNR=14
JLN                                 S      Sn      07 28 08.2 +0.6
WSAR  Wadi Sarin          4.21 248  P      Pn      07 27 21.4 +1.0
WSAR                                S      Sn      07 28 06.9 -1.5
WBK   Wadi Bani Khal      4.23 239  P      Pn      07 27 19.8 -0.9
             SNR=26
WBK                                 S      Sn      07 28 08.7 -0.1
BIDO  Bidbid              4.54 254  P      Pn      07 27 24.9 -0.1
BIDO                                S      Sn      07 28 17.5 +0.9
JASK  Jask - Hormozg      4.64 283  P      Pn      07 27 27.1 +0.7
JASK                                S      Sn      07 28 19.7 +0.6
SMDO  Samad               4.77 249  P      Pn      07 27 28.5 +0.3
SMDO                                S      Sn      07 28 23.4 +1.0
JMDO  Jabal Madar         5.04 241  P      Pn      07 27 32.4 +0.6
             SNR=7.6
JMDO                                S      Sn      07 28 30.7 +1.9
HOQ   Hoqain              5.24 257  P      Pn      07 27 34.6  0.0
BSY   Bisya               5.61 249  P      Pn      07 27 39.5 -0.3
BSY                                 S      Sn      07 28 45.0 +1.9
SOHO  SOHO                5.83 264  P      Pn      07 27 41.8 -0.8
SOHO                                S      Sn      07 28 46.2 -2.0
MHTO  MHTO                5.95 231  P      Pn      07 27 44.3  0.0
MHTO                                S      Sn      07 28 51.0 -0.2
MDH   Madha               5.98 276  P      Pn      07 27 46.3 +1.5
MDH                                 S      Sn      07 28 49.2 -2.9
BANOM Banah               6.04 281  P      Pn      07 27 44.2 -1.5
BANOM                               S      Sn      07 28 51.3 -2.4
UOSS  Minazif             6.06 272  P      Pn      07 27 44.4 -1.5
UOSS                                S      Sn      07 28 51.3 -2.8
ASHO  Ashiyiah            6.20 270  P      Pn      07 27 50.0 +2.1
             SNR=7.3
ASHO                                S      Sn      07 28 58.2 +0.6
SHME  Shamm               6.20 282  P      Pn      07 27 48.7 +0.9
SHME                                S      Sn      07 28 58.5 +0.9
MKAR  Makanchi Array     26.81  30  P      P       07 31 46.6 -9.0
             0.8nm,0.7s,baz=212,slow=9.2,SNR=8.0
             0.8nm,0.7s
ZALV  Zalesovo Beam      33.35  24  P      P       07 32 44.3 -9.0
             0.4nm,0.3s,baz=231,slow=9.1,SNR=1.8
             0.4nm,0.3s
ARCES ARCESS Array B     49.81 344  P      P       07 35 01.4 -6.3
             5.0nm,0.9s,baz=127,slow=5.7,SNR=2.4
             5.0nm,0.9s
NOA   NORSAR Array B     50.24 330  LR     LR      07 57 55.6
             comp=Z,7.0nm,18.2s,baz=0.0,slow=38
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*TIR **18** 07:27:16.6, 40°.46N×20°.63E, h15^{km}±1^{km}, Md2.5, Ml2.0*
*SKO **18** 07:27:16.8, 40°.40N×20°.57E, h0^{km}, ML2.0*
*ATH **18** 07:27:18.3, 40°.50N×20°.63E, h10^{km}±3^{km}, ML2.0/5, Error ellipse: s-maj=3.3km s-min=1.3km az=119.0*
*THE **18** 07:27:19.0, 40°.44N×20°.85E, h22^{km}±8^{km}, ML2.1/1, Error ellipse: s-maj=9.3km s-min=1.2km az=95.0*
ISC 18 07:27:17.5±0.9, **40°.47N**±0°.02×**20°.63E**±0°.03, **h12**^{km}±8^{km}**, n21,** σ**0ˢ.97**/34**, Greece-Albania border region**

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Code  Station Name         Δ°  AZ°    Phase ID          Time     Res
                                    Op     ISC       h  m  s    ISC
KBN   Korca               0.19  38  P      Pg      07 27 21.7 -0.1
             baz=36
KBN                                 S      Sg      07 27 25.1 +0.3
             baz=36
KBN                                 AMP
             comp=E,1.6nm,0.2s,baz=36
LSK   Leskovik            0.32 184  P      Pg      07 27 23.6 -0.5
             baz=185
LSK                                 S      Sg      07 27 28.5 +0.1
             baz=185
LSK                                 AMP
             comp=N,4.2nm,0.2s,baz=185
FNA   Florina             0.65  61  P      Pg      07 27 29.8 -0.3
FNA                                 S      Sg      07 27 37.0 -1.7
             comp=N,248nm,0.2s
FNA   Florina             0.65  61  P      Pg      07 27 30.0 -0.2
             baz=60
FNA                                 S      Sg      07 27 39.7 +1.0
             baz=60
FNA   Florina             0.65  61 ePg     Pg      07 27 29.8 -0.3
FNA                                i Sg    Sg      07 27 39.8 +1.2
FNA   Florina             0.65  61  P      Pg      07 27 30.3 +0.2
FNA                                 S      Sg      07 27 39.5 +0.8
FNA                                 AML    AML     07 27 41.8
             comp=E,393µm,0.2s
FNA                                 AML    AML     07 27 42.0
             comp=N,598µm,0.3s
OHR   Ohrid               0.65  11 ePg     Pg      07 27 30.4 +0.2
OHR                                i Sg    Sg      07 27 39.9 +1.0
OHR                                eLg     Lg      07 27 41.8
             comp=E,61nm,0.5s
OHR                                eLg     Lg      07 27 42.3
             comp=N,53nm,0.8s
KPRO  Kipourio            0.76 132  P      Pg      07 27 31.1 -1.1
KPRO                                S      Sg      07 27 39.8 -2.4
KPRO  Kipourio            0.76 132  P      Pg      07 27 32.4 +0.1
KPRO                                S      Sb      07 27 43.9 +0.8
KPRO                                AML    AML     07 27 46.1
             comp=E,324µm,0.2s
KPRO                                AML    AML     07 27 47.1
             comp=N,230µm,0.3s
SRN   Sarande             0.76 220  P      Pg      07 27 31.1 -1.2
             baz=220
SRN                                 S      Sg      07 27 43.0 +0.7
             baz=220
SRN                                 AMP
             comp=N,0.2nm,0.4s,baz=220
JAN   Janina              0.83 168  P      Pg      07 27 33.3 -0.2
JAN   Janina              0.83 168  P      Pb      07 27 34.5 +0.6
JAN                                 S      Sn      07 27 46.7 -0.6
JAN                                 AML    AML     07 27 49.6
             comp=E,345µm,0.5s
JAN                                 AML    AML     07 27 50.9
             comp=N,262µm,0.2s
KZN   Kozani              0.89 100  P      Pb      07 27 33.2 -1.7
KZN   Kozani              0.89 100  P      Pb      07 27 35.3 +0.4
KZN                                 S      Sg      07 27 47.5 +1.3
KZN                                 AML    AML     07 27 51.6
             comp=E,206µm,0.4s
KZN                                 AML    AML     07 27 52.5
             comp=N,196µm,0.2s
KEK   Kerkira             0.99 220  P      Pn      07 27 38.0 +0.7
KEK   Kerkira             0.99 220  P      Pg      07 27 37.5 +0.9
KEK                                 AML    AML     07 27 57.0
             comp=N,96µm,0.7s
KEK                                 AML    AML     07 27 57.6
             comp=E,107µm,0.3s
TIR   Tirane              1.05 327 ePg     Pb      07 27 36.0 -1.7
PHP   Peshkopia           1.22 353  P      Pn      07 27 40.4 -0.2
             baz=354
PHP                                 S      Sg      07 27 57.8 +0.9
             baz=354
PHP                                 AMP
             comp=E,0.1nm,0.7s,baz=354
THL   Klokotos Trika      1.39 130  P      Pb      07 27 43.8 +0.3
LIT   Litokhoron          1.47 104  P      Pn      07 27 44.1 +0.2
LKD2  Lefkada island      1.68 179  P      Pn      07 27 47.1 +0.3
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*FUNV **18** 07:51:05.7, 7°.58N×72°.30W, h3^{km}, MW2.9*
*RSNC **18** 07:51:08.9±1.0, 7°.47N×72°.41W, h4^{km}±6^{km}, ML1.7*
ISC 18 07:51:04.6±1.3, **7°.59N**±0°.05×**72°.29W**±0°.05, **h6**^{km}±11^{km}**, n12,** σ**1ˢ.17**/22**, 1C-1D, Northern Colombia**

```
Code  Station Name         Δ°  AZ°    Phase ID          Time     Res
                                    Op     ISC       h  m  s    ISC
CAPV  Capacho             0.28 356⇑iP      Pb      07 51 11.3 -0.9
CAPV                               eS      Sg      07 51 15.4 +1.5
PAMC  Pamplona, Colo      0.47 239⇓iP      Pg      07 51 13.5 -0.3
PAMC                               eS      Sg      07 51 19.6 -0.5
PAMC                               i               07 51 20.7
             comp=Z,41nm,0.3s
BARC  Barichara           1.32 222 eP      Pn      07 51 29.9  0.0
BARC                               eS      Sg      07 51 45.5 -1.7
BARC                               i               07 51 47.4
             comp=Z,13nm,0.4s
BRRC  Barranca, Sant      1.48 251 eP      Pb      07 51 32.5 -0.1
BRRC                               eS      Sn      07 51 50.7 -0.9
BRRC                               i               07 51 56.8
             comp=Z,13nm,0.2s
SOCV  Socops              1.58  64 eP      Pb      07 51 34.6 +0.3
SOCV                               eS      Sb      07 51 55.8 +1.1
RUSC  La Rusia            1.86 205 eP      Pn      07 51 38.2 +0.8
RUSC                               eS      Sn      07 52 01.4  0.0
RUSC                               i               07 52 05.0
             comp=Z,7.0nm,0.4s
PTBC  PUERTO BERRIO,      2.38 244 eP      Pn      07 51 45.7 +1.4
PTBC                               eS      Sn      07 52 14.0 +0.1
PTBC                               i               07 52 19.6
             comp=Z,7.1nm,0.3s
SPBC  San Pablo de B      2.61 223 eP      Pn      07 51 48.4 +1.0
SPBC                               eS      Sn      07 52 18.6 -0.9
SPBC                               i               07 52 32.4
             comp=Z,4.5nm,0.3s
CURV  Curarigua           3.34  44 eP      Pn      07 51 58.6 +1.2
CURV                               eS      Sn      07 52 35.9 -1.6
PTGC  Puerto Gaitan,      3.37 177 eS      Sn      07 52 40.0 +1.8
BAUV  El Baul             4.42  72 eP      Pn      07 52 11.7 -0.5
BAUV                               eS      Sn      07 53 02.0 -2.1
BENV  Beln                5.21  63 eP      Pn      07 52 23.5 +0.4
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*IDC **18** 08:08:11.8±1.1, 7°.94S×160°.87E, h0^{km}, mb4.1/9, mbtmp4.1/9, MS3.4/3, Error ellipse: s-maj=42.5km s-min=16.5km az=122.0*
*NEIC **18** 08:08:13.3±2.1, 7°.97S±0°.08×160°.94E±0°.08, h10^{km}±1^{km}, mb4.4/17, Error ellipse: s-maj=16.0km s-min=9.0km az=136.0*
ISC 18 08:08:16.7±0.6, **8°.01S**±0°.07×**160°.97E**±0°.08, **h35**^{km}**, n55,** σ**1ˢ.22**/45**, mb4.2**/17**, Bougainville-Solomon Islands region**

```
Code  Station Name         Δ°  AZ°    Phase ID          Time     Res
                                    Op     ISC       h  m  s    ISC
HNR   Honiara             1.74 216  Pn     Pn      08 08 44.8 +0.4
             613nm,0.3s,baz=174,slow=1.9,SNR=11
HNR                                 Sn     Sn      08 09 07.3 +1.9
             770nm,0.3s,baz=154,slow=22,SNR=8.2
HNR                                 LR     LR      08 09 34.6
             comp=Z,5µm,20.3s,baz=49,slow=48
HNR   Honiara             1.74 216         Pn      08 08 44.6 +0.1
HNR   Honiara             1.74 216  P      Pn      08 08 44.9 +0.4
RABL  Rabaul              9.54 293  Pn     Pn      08 10 30.2 -1.6
DVP   Devils Point       11.94 145  P      Pn      08 11 14.6 +10
RTV   Rentapao           12.13 144  P      P       08 11 18.2 -1.2
PMG   Port Moresby       13.73 263  Pn     Pn      08 11 29.8 +0.8
             0.9nm,0.3s,baz=81,slow=2.6,SNR=4.2
PMG   Port Moresby       13.73 263  Pn     Pn      08 11 27.0 -1.9
LIFNC LIFOU              14.07 155  Pn     Pn      08 11 32.8 -0.7
DZM   Mont Dzumac        14.94 160  LR     LR      08 17 01.9
             comp=Z,135nm,18.3s,baz=24,slow=35
CTA   Charters Tower     18.64 228  P      Pn      08 12 33.2 +1.2
             3.7nm,0.8s,baz=55,slow=6.6,SNR=7.0
CTA   Charters Tower     18.64 228  P      Pn      08 12 33.3 +1.2
CTAO  Charters Tower     18.64 228  P      P       08 12 30.9 -0.7
CTAO  Charters Tower     18.64 228  P      Pn      08 12 33.4 +1.4
EIDS  Eidsvold           19.67 207  P      P       08 12 43.5 +0.7
EIDS                                IAmb   IAmb    08 12 44.8
             comp=Z,12nm,0.8s
EIDS  Eidsvold           19.67 207  P      Pn      08 12 45.4 +1.0
             comp=Z,18nm,1.4s
AUWSH Wavell State H     20.70 200  P      Pn      08 12 57.0 +0.6
RMQ   Roma               21.73 211  P      P       08 13 08.0 +2.9
H11S2 WAKE ISLAND Hy     26.93  12  T      T       08 42 05.4
             baz=193,slow=76,SNR=21
H11S3 WAKE ISLAND Hy     26.93  12  T      T       08 42 05.3
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	baz=193,slow=76,SNR=22						
H11S1	**WAKE ISLAND Hy**	**26.95**	**12**	T	T	08 42 07.4	
	baz=193,slow=76,SNR=17						
AFI	**Afiamalu**	**27.37**	**105**	P	**P**	**08 13 58.3**	**-0.7**
H11N1	**WAKE ISLAND Hy**	**28.16**	**12**	T	T	08 43 29.5	
	baz=192,slow=76,SNR=34						
H11N3	**WAKE ISLAND Hy**	**28.16**	**12**	T	T	08 43 30.1	
	baz=192,slow=76,SNR=20						
H11N2	**WAKE ISLAND Hy**	**28.18**	**12**	T	T	08 43 30.9	
	baz=192,slow=76,SNR=56						
WB0	**Warramunga Arr**	**28.27**	**243**	P	**P**	**08 14 05.4**	**-1.6**
WB0				IAmb	IAmb	08 14 06.6	
	comp=Z,8.4nm,0.9s						
WRA	**Warramunga Arr**	**28.39**	**243**	P	**P**	**08 14 06.8**	**-1.2**
	comp=Z,6.7nm,0.7s,baz=69,slow=9.0,SNR=70						
	comp=Z,6.7nm,0.7s						
WRA	**Warramunga Arr**	**28.39**	**243**	P	**P**	**08 14 05.8**	**-2.2**
STKA	**Stephens Creek**	**29.82**	**215**	P	**P**	**08 14 21.5**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=45,slow=16,SNR=5.0						
	comp=Z,1.1nm,0.7s						
STKA	**Stephens Creek**	**29.82**	**215**	P	**P**	**08 14 21.0**	**+0.4**
AS31	**Alice Springs**	**30.25**	**236**	P	**P**	**08 14 22.5**	**-2.1**
ASAR	**Alice Springs**	**30.25**	**236**	P	**P**	**08 14 22.4**	**-2.1**
	comp=Z,1.9nm,0.6s,baz=66,slow=9.3,SNR=37						
ASAR				LR	LR	08 26 54.5	
	comp=Z,79nm,19.3s,baz=163,slow=37						
	comp=Z,1.9nm,0.6s						
ASAR	**Alice Springs**	**30.25**	**236**	P	**P**	**08 14 23.2**	**-1.4**
AUMAG	**Moama Anglican**	**31.64**	**206**	P	P	08 14 44.0	+7.4
	comp=Z,106nm,0.7s						
BBOO	**Buckleboo**	**33.79**	**220**	P	**P**	**08 14 54.1**	**-1.4**
BBOO				IAmb	IAmb	08 15 13.4	
	comp=Z,14nm,1.4s						
ASAJ	**Asahikawa**	**54.48**	**344**	LR	LR	08 37 44.7	
	comp=Z,44nm,21.6s,baz=111,slow=33						
CMAR	**Chiang Mai Arr**	**66.59**	**294**	P	**P**	**08 19 04.2**	**+0.3**
	comp=Z,1.2nm,0.4s,baz=110,slow=4.9,SNR=7.6						
	comp=Z,1.2nm,0.4s						
SONM	**Songino Array**	**73.47**	**325**	P	**P**	**08 19 46.6**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=145,slow=6.4,SNR=5.5						
	comp=Z,0.8nm,0.7s						
SONM	**Songino Array**	**73.47**	**325**	P	**P**	**08 19 46.7**	**+0.9**
SONM				IAmb	IAmb	08 19 52.6	
	comp=Z,3.2nm,1.3s						
SVW2	**Sparrevohn**	**76.80**	**20**	P	**P**	**08 20 06.0**	**+1.4**
M19K	**Big River Lodg**	**77.78**	**20**	P	**P**	**08 20 11.0**	**+1.0**
L19K	**White Mountain**	**77.82**	**20**	P	**P**	**08 20 11.8**	**+1.6**
IMAR	**Indian Mountai**	**80.85**	**17**	P	**P**	**08 20 26.9**	**+0.2**
CCB	**Clear Creek Bu**	**81.83**	**20**	P	**P**	**08 20 30.5**	**-1.4**
CCB				IAmb	IAmb	08 20 54.7	
	comp=Z,2.2nm,1.3s						
QSPA	**South Pole Qui**	**81.97**	**180**	P	**P**	**08 20 32.8**	**-0.1**
QSPA				IAmb	IAmb	08 21 03.8	
	comp=Z,5.8nm,1.4s						
ILAR	**Eielson Array**	**82.22**	**20**	P	**P**	**08 20 33.4**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=244,slow=4.7,SNR=10						
	comp=Z,1.0nm,0.8s						
EGAK	**Eagle**	**84.22**	**21**	P	**P**	**08 20 45.2**	**+0.9**
EGAK				IAmb	IAmb	08 20 51.5	
	comp=Z,5.7nm,1.1s						
MK31	**Makanchi Array**	**88.11**	**318**	P	**P**	**08 21 03.2**	**-0.6**
MK31				IAmb	IAmb	08 21 04.5	
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**88.11**	**318**	P	**P**	**08 21 03.8**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=97,slow=5.8,SNR=11						
	comp=Z,0.8nm,0.6s						
MKAR	**Makanchi Array**	**88.11**	**318**	P	**P**	**08 21 03.4**	**-0.5**
A36M	**Sachs Harbour**	**92.61**	**17**	P	**P**	**08 21 25.0**	**+0.8**
A36M				IAmb	IAmb	08 21 31.4	
	comp=Z,2.1nm,1.1s						
YKA	**Yellowknife Ar**	**94.47**	**28**	P	**P**	**08 21 33.5**	**+0.5**
	comp=Z,0.6nm,1.0s,baz=264,slow=4.4,SNR=5.9						
	comp=Z,0.6nm,1.0s						
PDAR	**Pinedale Array**	**94.98**	**48**	P	**P**	**08 21 37.0**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=162,slow=1.4,SNR=4.2						
	comp=Z,0.4nm,0.7s						
ESDC	**Sonseca Array**	**145.70**	**339**	PKPbc	**PKPab**	**08 27 53.2**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=12,slow=3.5,SNR=6.9						
TORD	**Torodi Ar. Bea**	**159.01**	**286**	PKPab	**PKPab**	**08 28 48.5**	**-0.1**
	comp=Z,0.7nm,1.0s,baz=102,slow=4.4,SNR=3.5						

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*NNC **18** 08:08:25.2±4.1, 49°.53N×83°.65E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=37.2km s-min=11.7km az=64.0, Suspected Mining explosion.*

*IDC **18** 08:08:25.3±1.7, 49°.66N×83°.79E, h0^{km}, mbtmp2.4/2, ML2.0/2, Error ellipse: s-maj=48.5km s-min=12.7km az=104.0*

ISC 18 08:08:24.3±1.2**, 49°.52N**±0°.04×**83°.5E**±0°.1**, h0^{km}, n7, σ0^{s}75**/8**, 6C-2D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**2.84**	**197**	⇑Pg	**Pg**	**08 09 18.2**	**-0.6**
	1.2nm,0.6s,baz=24,slow=15,SNR=27						
MK31				⇑Lg	Lg	08 09 56.5	
	7.2nm,0.6s,baz=24,slow=25,SNR=19						
MKAR	**Makanchi Array**	**2.84**	**197**	Pn	**Pb**	**08 09 15.9**	**0.0**
	0.5nm,0.3s,baz=20,slow=14,SNR=24						
MKAR				Sn	**Sb**	**08 09 52.4**	**+1.1**
	2.1nm,0.3s,baz=18,slow=26,SNR=31						
	1.4nm,0.5s						
MAKZ	**Makanchi**	**2.90**	**201**	⇑Pg	**Pg**	**08 09 19.7**	**-0.1**
	1.8nm,0.6s						
MAKZ				⇑Lg	Lg	08 09 57.6	
	6.5nm,0.6s						
KURK	**Kurchatov**	**3.36**	**293**	⇑Pg	**Pg**	**08 09 28.8**	**+0.2**
	2.1nm,0.6s						
KURK				⇓Lg	Lg	08 10 12.3	
	6.9nm,0.6s						
KURBB	**Kurchatov Arra**	**3.38**	**291**	⇓Pg	**Pg**	**08 09 28.5**	**-0.6**
	1.3nm,0.2s						
KURBB				⇑Lg	Lg	08 10 13.9	
	14nm,0.6s						
ZALV	**Zalesovo Beam**	**4.51**	**10**	Pn	**Pn**	**08 09 33.2**	**-0.6**
	0.1nm,0.3s,baz=197,slow=13,SNR=2.2						
ZALV				Pg	**Pb**	**08 09 45.0**	**+0.6**
	0.6nm,0.3s,baz=194,slow=18,SNR=9.6						
ZALV				Lg	Lg	08 10 41.4	
	0.5nm,0.3s,baz=190,slow=27,SNR=7.2						
	0.5nm,0.5s						
I46RU	**ZALESOVO INFRA**	**4.51**	**10**	I	I	08 35 30.0	
	baz=186,slow=331,SNR=1.5						

IDC 18 08:09:46.2±2.0**, 2°.85N×125°.88E, h0^{km}, mb3.5**/3**, mbtmp3.5**/3**, MS2.5**/1**, Error ellipse: s-maj=179.1km s-min=26.0km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**4.20**	**356**	LR	LR	08 12 40.4	
	comp=Z,66nm,21.0s,baz=94,slow=42						
WRA	**Warramunga Arr**	**24.13**	**160**	P	P	08 15 03.9	-0.1
	0.8nm,0.3s,baz=339,slow=10,SNR=21						
	0.8nm,0.3s						
ASAR	**Alice Springs**	**27.50**	**164**	P	P	08 15 34.8	+0.3
	0.4nm,0.5s,baz=338,slow=7.1,SNR=7.2						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**57.79**	**326**	P	P	08 19 39.1	-0.2
	0.1nm,0.3s,baz=117,slow=6.5,SNR=5.1						
	0.1nm,0.3s						

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*CNRM **18** 08:28:21.2, 36°.88N×9°.96W, h81^{km}, ml2.3*

*SFS **18** 08:28:22.4, 37°.07N×9°.96W, h16^{km}, ML3.1/8, ML3.3/5, MLv3.0/8*

*MDD **18** 08:28:22.4±0.9, 37°.07N×9°.96W, h18^{km}±7^{km}, mb_Lg2.1/7, Error ellipse: s-maj=10.0km s-min=5.3km az=38.0*

*IGIL **18** 08:28:23.0, 37°.08N×9°.93W, h9^{km}, ML1.7*

*INMG **18** 08:28:23.0±1.1, 37°.07N×9°.95W, h16^{km}±5^{km}, ML2.0, Error ellipse: s-maj=6.0km s-min=3.4km az=47.0*

ISC 18 08:28:18.7±2.0**, 37°.00N**±0°.05×**10°.06W**±0°.08**, h10^{km}, n44, σ2^{s}12**/72**, 2D, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.99**	**82**	P	**Pg**	**08 28 39.4**	**+1.5**
PFVI				S	**Sb**	**08 28 53.7**	**+2.5**
PFVI	**Vila Bisbo**	**0.99**	**82**	S	**Sg**	**08 28 50.8**	**+0.1**
PFVI				P	**Pg**	**08 28 39.2**	**+1.4**
PFVI	**Vila Bisbo**	**0.99**	**82**	⇓*i*P	**Pg**	**08 28 39.2**	**+1.4**
PFVI				*e*S	**Sg**	**08 28 51.6**	**+0.9**
PFVI				A	A	08 28 52.5	
	25nm,0.1s						
MORF	**Marmelete**	**1.16**	**74**	⇓*e*P	**Pg**	**08 28 41.6**	**+0.5**
MORF				*e*S	**Sg**	**08 28 55.6**	**-0.6**
MORF				A	A	08 28 56.6	
	19nm,0.1s						
MORF	**Marmelete**	**1.16**	**74**	*e*P	**Pg**	**08 28 41.6**	**+0.5**
PTEO	**Sao Teotonio**	**1.20**	**62**	*e*S	**Sg**	**08 28 57.1**	**-0.1**
PTEO				A	A	08 28 59.0	
	12nm,0.3s						
PNCL	**Nicolau / Gran**	**1.65**	**47**	*e*P	**Pn**	**08 28 48.0**	**+0.3**
PNCL				*e*S	**Sn**	**08 29 07.3**	**-1.6**
PNCL				A	A	08 29 10.4	
	6.8nm,0.3s						
MESJ	**Messejana**	**1.69**	**59**	*e*P	**Pn**	**08 28 48.9**	**+0.6**
MESJ				*e*S	**Sn**	**08 29 08.2**	**-1.7**
MESJ				A	A	08 29 09.4	
	4.7nm,0.1s						
MESJ	**Messejana**	**1.69**	**59**	*e*P	**Pn**	**08 28 48.9**	**+0.6**
MESJ				*e*S	**Sn**	**08 29 08.0**	**-1.9**
MESJ				IAML		08 29 09.2	
	comp=N,7.9nm,0.1s						
PBDV	**Barranco-do-Ve**	**1.71**	**81**	*e*P	**Pn**	**08 28 49.5**	**+0.8**
PBDV				S	**Sn**	**08 29 09.5**	**-1.2**
PBDV				A	A	08 29 14.9	
	comp=N,7.5nm,0.5s						
PCVE	**Castro Verde**	**1.73**	**68**	S	**Sn**	**08 29 09.0**	**-2.0**
PCVE				P	**Pn**	**08 28 49.4**	**+0.6**
PCVE	**Castro Verde**	**1.73**	**68**	*e*P	**Pn**	**08 28 49.4**	**+0.6**
PCVE				S	**Sn**	**08 29 09.1**	**-1.9**
PCVE				A	A	08 29 12.7	
	comp=N,4.5nm,0.2s						
PVAQ	**Vaqueiros**	**1.91**	**77**	P	**Pn**	**08 28 52.3**	**+1.0**
PVAQ				S	**Sn**	**08 29 15.4**	**0.0**
PVAQ	**Vaqueiros**	**1.91**	**77**	*e*P	**Pn**	**08 28 52.2**	**+0.9**
PVAQ				S	**Sn**	**08 29 13.9**	**-1.5**
PVAQ				A	A	08 29 16.1	
	comp=N,8.2nm,0.2s						
PBEJ	**Beja**	**2.02**	**59**	*e*P	**Pn**	**08 28 53.8**	**+0.9**
PBEJ				S	**Sn**	**08 29 16.0**	**-2.2**
PBEJ				A	A	08 29 16.7	
	comp=N,3.0nm,0.3s						
PMAFR	**Mafra**	**2.05**	**17**	S	**Sn**	**08 29 17.6**	**-1.3**
EGRO	**El Granado**	**2.12**	**75**	P	**Pn**	**08 28 54.7**	**+0.4**
EGRO				S	**Sn**	**08 29 18.3**	**-2.3**
EGRO				*i* Vmb_Lg		08 29 20.5	
EVO	**Evora**	**2.23**	**46**	S	**Sn**	**08 29 20.8**	**-2.5**
EVO	**Evora**	**2.23**	**46**	*e*P	**Pg**	**08 29 05.9**	**+4.4**
EVO				S	**Sn**	**08 29 21.1**	**-2.2**
EVO				A	A	08 29 23.0	
	comp=N,11nm,0.1s						
PMTG	**Montargil**	**2.52**	**34**	*e*P	**Pn**	**08 28 59.7**	**-0.1**
PMTG				S	**Sn**	**08 29 28.2**	**-2.4**
PMTG				A	A	08 29 29.6	
	comp=N,2.2nm,0.2s						
PBAR	**Barrancos**	**2.67**	**63**	S	**Sn**	**08 29 32.6**	**-1.6**
PBAR				P	**Pn**	**08 29 02.5**	**+0.7**
PBAR	**Barrancos**	**2.67**	**63**	*e*P	**Pn**	**08 29 02.5**	**+0.7**
PBAR				S	**Sn**	**08 29 31.8**	**-2.4**
PBAR				A	A	08 29 32.7	
	comp=N,3.1nm,0.4s						
PESTR	**Estremoz**	**2.70**	**45**	P	**Pn**	**08 29 02.2**	**0.0**
PESTR				S	**Sn**	**08 29 34.1**	**-0.9**
PESTR	**Estremoz**	**2.70**	**45**	S	**Sn**	**08 29 32.3**	**-2.7**
PSBE	**So Bento**	**2.70**	**21**	S	**Sn**	**08 29 33.1**	**-2.0**
EMIN	**Mina Concepcio**	**2.80**	**73**	P	**Pn**	**08 29 03.8**	**+0.2**
EMIN				S	**Sn**	**08 29 34.8**	**-2.7**
EMIN				*i* Vmb_Lg		08 29 36.2	
EBAD	**Badajoz**	**2.98**	**53**	P	**Pn**	**08 29 06.4**	**+0.4**
EBAD				S	**Sn**	**08 29 39.1**	**-2.7**
EBAD	**Badajoz**	**2.98**	**53**	P	**Pn**	**08 29 05.9**	**-0.1**
EBAD				S	**Sn**	**08 29 38.9**	**-3.0**
EBAD				*i* Vmb_Lg		08 29 40.1	
PMRV	**Marv??o**	**3.21**	**40**	*e*P	**Pn**	**08 29 10.1**	**+0.9**
PMRV				S	**Sn**	**08 29 43.8**	**-3.7**
PMRV				A	A	08 29 46.9	
	comp=N,1.9nm,0.2s						
PCAS	**Casmilo, Conde**	**3.29**	**21**	S	**Sn**	**08 29 46.2**	**-3.3**
ESPR	**Espera**	**3.37**	**91**	P	**Pn**	**08 29 12.2**	**+0.9**
ESPR				S	**Sn**	**08 29 49.2**	**-2.1**
ESPR	**Espera**	**3.37**	**91**	P	**Pn**	**08 29 12.3**	**+0.9**
ESPR				S	**Sn**	**08 29 48.9**	**-2.4**
ESPR				*i* Vmb_Lg		08 29 52.4	
ECAB	**El Cabril**	**3.84**	**72**	P	**Pn**	**08 29 18.2**	**+0.3**
ECAB				S	**Sn**	**08 29 59.4**	**-3.7**
ECAB	**El Cabril**	**3.84**	**72**	P	**Pn**	**08 29 18.2**	**+0.3**
ECAB				S	**Sn**	**08 29 59.4**	**-3.7**
ECAB				*i* Vmb_Lg		08 30 01.6	
EADA	**Adamuz**	**4.50**	**73**	P	**Pn**	**08 29 27.1**	**0.0**
EADA				S	**Sn**	**08 30 16.2**	**-3.3**
EADA	**Adamuz**	**4.50**	**73**	P	**Pn**	**08 29 27.3**	**+0.2**
EADA				S	**Sn**	**08 30 15.9**	**-3.6**
EADA				*i* Vmb_Lg		08 30 19.3	
ZHG	**ZHG**	**4.51**	**141**	P	Pn	08 29 26.6	-0.5
ZHG				S	**Sn**	**08 30 17.5**	**-2.2**
ELOB	**Lobios**	**5.11**	**17**	S	**Sn**	**08 30 29.4**	**-4.9**
PAB	**San Pablo**	**5.16**	**59**	P	**Pn**	**08 29 36.4**	**+0.3**
PAB				S	**Sn**	**08 30 30.6**	**-5.2**
GUD	**Guadarrama**	**5.87**	**50**	S	**Sn**	**08 30 49.4**	**-4.0**
GUD				*i* Vmb_Lg		08 30 51.3	
OUK	**Oukaimeden**	**6.05**	**162**	P	Pn	08 29 45.7	-2.9
OUK				S	Sn	08 30 52.7	-5.4
MDT	**Midelt**	**6.12**	**131**	P	Pn	08 29 48.5	-0.8
MDT				S	Sn	08 30 53.9	-5.5
TTIG	**Tnine Tigouga,**	**6.57**	**168**	P	Pn	08 29 55.3	-0.2
TTIG				S	Sn	08 31 06.2	-4.4
TAF	**Taforalt**	**6.57**	**107**	P	**Pn**	**08 29 54.6**	**-0.9**
TAF				S	**Sn**	**08 31 06.8**	**-3.7**

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*FUNV **18** 08:40:12.1, 10°.46N×62°.65W, h5^{km}, MW2.9*

*TRN **18** 08:40:13.3, 10°.37N×62°.36W, h124^{km}, MD3.4*

ISC 18 08:40:08.4±1.3**, 10°.20N**±0°.05×**62°.65W**±0°.03**, h10^{km}**±10^{km}**, n11, σ2^{s}53**/22**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.75**	**309**	*e*P	**Pg**	**08 40 22.0**	**-0.8**
CRUV				*e*S	**Sg**	**08 40 30.2**	**-2.5**
TRN	**Trinidad (W)**	**1.30**	**70**	*e*P	**Pg**	**08 40 35.2**	**+1.8**
TRN				*e*S	**Sg**	**08 40 52.0**	**+1.5**
GRGR	**Grenville**	**2.16**	**27**	*e*P	**Pn**	**08 40 45.4**	**+1.0**
GRGR				*e*S	**Sn**	**08 41 10.1**	**-1.1**
TOSP	**Speyside**	**2.35**	**62**	*e*P	**Pn**	**08 40 47.9**	**+0.9**
TOSP				*e*S	**Sn**	**08 41 11.9**	**-3.9**
PRGV	**PARIAGUAN**	**2.43**	**234**	*e*P	**Pg**	**08 40 53.9**	**-1.2**
PRGV				*e*S	**Sg**	**08 41 25.5**	**-1.2**
GCMP	**Grenada, Carri**	**2.57**	**28**	*e*P	**Pn**	**08 40 50.8**	**+0.7**
GCMP				*e*S	**Sn**	**08 41 17.4**	**-4.0**
BIRV	**Birongo**	**3.57**	**275**	*e*P	**Pn**	**08 41 06.9**	**+3.1**
BIRV				*e*S	**Sn**	**08 41 48.3**	**+2.1**
TACV	**Tcata**	**4.31**	**270**	*e*P	**Pn**	**08 41 17.2**	**+3.1**
TACV				*e*S	**Sn**	**08 42 04.4**	**-0.1**
CACV	**CAICARA DEL OR**	**4.65**	**236**	*e*P	**Pn**	**08 41 18.3**	**-0.4**
CACV				*e*S	**Sn**	**08 42 07.8**	**-4.9**
BENV	**Beln**	**4.88**	**268**	*e*P	**Pn**	**08 41 24.9**	**+3.0**
BENV				*e*S	**Sn**	**08 42 19.6**	**+1.0**
BAUV	**El Baul**	**5.46**	**257**	*e*P	**Pn**	**08 41 32.6**	**+2.8**
BAUV				*e*S	**Sn**	**08 42 32.9**	**+0.1**

ROM 18 08:42:59.1±0.1**, 43°.022N**±0°.004×**13°.033E**±0°.005**, h9^{km}, ML1.7**/16**, 3C-6D, Error ellipse: s-maj=0.5km s-min=0.3km az=34.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.04**	**332**	P	Pg	08 43 01.1	+0.2
T1219				S	Sg	08 43 02.0	-0.2
FDMO	**Fiordimonte**	**0.04**	**70**	P	Pg	08 43 01.1	+0.2
FDMO				S	Sg	08 43 02.0	-0.1
FDMO				AML	AML		
	comp=N,1720µm,0.1s						
FDMO				AML	AML		
	comp=E,2720µm,0.4s						
CESI	**CESI - Serrava**	**0.10**	**260**	P	Pg	08 43 02.2	+0.6
CESI				S	Sg	08 43 04.1	+0.9
CESI				AML	AML		
	comp=E,508µm,0.5s						
CESI				AML	AML		
	comp=N,670µm,0.2s						
CESI				AML	AML		
	comp=E,508µm,1.5s						
T1220	**Camerino, Fraz**	**0.10**	**25**	⇑P	Pg	08 43 02.3	+0.7
T1220				S	Sg	08 43 04.1	+0.8
T1220				AML	AML		
	comp=N,1410µm,0.3s						
T1220				AML	AML		
	comp=E,3125µm,0.3s						
T1220				AML	AML		
	comp=N,1410µm,0.3s						
T1220				AML	AML		
	comp=N,1410µm,1.7s						
T1216	**Preci, Frazion**	**0.13**	**184**	⇓P	Pg	08 43 02.7	+0.6
T1216				S	Sg	08 43 04.8	+0.7
T1216				AML	AML		
	comp=E,470µm,0.5s						
T1216				AML	AML		
	comp=N,472µm,0.4s						
MC2	**Monte Cornacci**	**0.16**	**133**	⇓P	Pg	08 43 03.2	+0.7
MC2				S	Sg	08 43 06.5	+1.4
T1245	**Castelsantange**	**0.20**	**145**	⇓P	Pg	08 43 03.9	+0.7
T1245				S	Sg	08 43 07.5	+1.4
T1245				AML	AML		
	comp=E,424µm,0.2s						
T1245				AML	AML		
	comp=N,571µm,1.3s						
T1245				AML	AML		
	comp=E,380µm,0.2s						
T1245				AML	AML		
	comp=N,542µm,0.3s						
SNTG	**Esanatoglia**	**0.24**	**344**	⇓P	Pg	08 43 05.1	+1.1
SNTG				AML	AML		
	comp=N,86µm,0.2s						
SNTG				AML	AML		
	comp=N,86µm,0.2s						
SNTG				AML	AML		
	comp=E,124µm,0.1s						
MMO1	**Montemonaco**	**0.25**	**119**	⇓P	Pg	08 43 04.8	+0.7
MMO1				S	Sg	08 43 09.0	+1.5
T1212	**Cascia, Frazio**	**0.27**	**178**	⇑P	Pg	08 43 05.3	+0.7
T1212				S	Sb	08 43 09.7	-1.2
T1212				AML	AML		
	comp=N,236µm,0.5s						
T1212				AML	AML		
	comp=E,298µm,0.8s						
ASSB	**Assisi San Ben**	**0.28**	**274**	P	Pg	08 43 05.3	+0.7
ASSB				S	Sb	08 43 10.1	-1.0
ASSB				AML	AML		
	comp=E,204µm,0.3s						
ASSB				AML	AML		
	comp=N,195µm,0.8s						
ASSB				AML	AML		
	comp=N,195µm,1.2s						
T1214	**Arquata del Tr**	**0.29**	**154**	⇓P	Pg	08 43 05.5	+0.5
T1217	**Poggiodomo (PG**	**0.32**	**194**	P	Pg	08 43 06.2	+0.8
T1217				S	Sb	08 43 11.3	-1.0
T1217				AML	AML		
	comp=N,140µm,0.8s						
T1217				AML	AML		
	comp=E,134µm,1.2s						
ATCC	**AVT- Casa Cast**	**0.33**	**300**	P	Pb	08 43 06.5	-0.7
ATCC				AML	AML		
	comp=N,189µm,1.1s						
ATCC				AML	AML		
	comp=E,328µm,0.1s						
ATCC				AML	AML		
	comp=N,189µm,0.9s						
T1241	**Roccafluvione,**	**0.34**	**119**	⇑P	Pb	08 43 06.5	-0.8
T1241				AML	AML		
	comp=E,16500µm,1.6s						
T1241				AML	AML		
	comp=N,20000µm,1.6s						
T1241				AML	AML		
	comp=E,16500µm,0.4s						
T1241				AML	AML		
	comp=N,20000µm,0.4s						
T1218	**Civita (PG)**	**0.36**	**170**	P	Pg	08 43 06.7	+0.5
T1218				S	Sb	08 43 12.4	-1.0
T1218				AML	AML		
	comp=E,149µm,1.6s						
T1218				AML	AML		
	comp=N,184µm,0.4s						
T1218				AML	AML		
	comp=E,108µm,0.2s						
T1218				AML	AML		
	comp=N,158µm,0.5s						
T1218				AML	AML		
	comp=N,184µm,0.5s						
T1218				AML	AML		
	comp=E,108µm,0.2s						
T1218				AML	AML		
	comp=N,158µm,0.5s						
T1218				AML	AML		
	comp=E,149µm,0.4s						
T1218				AML	AML		
	comp=N,158µm,1.5s						
MOMA	**Monte Martano**	**0.40**	**238**	P	Pb	08 43 08.5	0.0
MOMA				AML	AML		
	comp=E,195µm,0.2s						
MOMA				AML	AML		
	comp=N,104µm,0.4s						
MOMA				AML	AML		
	comp=N,236µm,1.4s						
MOMA				AML	AML		
	comp=E,160µm,1.0s						
MOMA				AML	AML		
	comp=N,104µm,1.6s						
ARVD	**Arcevia**	**0.48**	**352**	S	Sb	08 43 17.7	+0.7
T1211	**Morro Reatino**	**0.51**	**195**	P	Pg	08 43 09.2	+0.3
T1211				S	Sb	08 43 17.6	-0.2
T1211				AML	AML		
	comp=N,88µm,0.1s						
T1211				AML	AML		
	comp=E,80µm,0.9s						
CESX	**Cesi**	**0.53**	**219**	S	Sb	08 43 18.3	0.0
CESX				AML	AML		
	comp=E,60µm,0.3s						
CESX				AML	AML		
	comp=N,56µm,1.0s						
CESX				AML	AML		
	comp=N,56µm,1.0s						
RM33	**Pellescritta (**	**0.53**	**165**	P	Pg	08 43 09.6	+0.2
RM33				S	Sb	08 43 18.0	-0.4
RM33				AML	AML		
	comp=E,63µm,1.5s						
RM33				AML	AML		
	comp=N,53µm,0.8s						
RM33				AML	AML		
	comp=N,53µm,1.2s						
RM33				AML	AML		
	comp=E,63µm,0.5s						
PIEI	**Pieia**	**0.63**	**325**	P	Pb	08 43 12.2	-0.2

ROM 18 08:43:55.5±0.1**, 43°.016N**±0°.004×**13°.032E**±0°.006**, h7^{km}**±1^{km}**, ML1.4**/6**, 1C-2D, Error ellipse: s-maj=0.5km s-min=0.2km az=242.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.04**	**336**	P	Pg	08 43 57.1	+0.1
T1219				S	Sg	08 43 58.0	-0.2
T1219				AML	AML		
	comp=E,772µm,0.1s						
T1219				AML	AML		
	comp=N,1310µm,0.1s						
T1219				AML	AML		
	comp=E,860µm,0.1s						
T1219				AML	AML		
	comp=N,1255µm,0.1s						
FDMO	**Fiordimonte**	**0.05**	**63**	P	Pg	08 43 57.1	+0.1
FDMO				S	Sg	08 43 58.1	0.0
FDMO				AML	AML		
	comp=N,510µm,0.5s						
FDMO				AML	AML		
	comp=E,486µm,1.0s						
CESI	**CESI - Serrava**	**0.09**	**263**	P	Pg	08 43 58.3	+0.6
CESI				S	Sg	08 44 00.2	+1.0
CESI				AML	AML		
	comp=E,266µm,0.4s						
CESI				AML	AML		
	comp=N,356µm,0.2s						
T1220	**Camerino, Fraz**	**0.10**	**24**	⇓P	Pg	08 43 58.4	+0.6
T1220				S	Sg	08 44 00.4	+0.9
T1220				AML	AML		
	comp=E,1120µm,0.3s						
T1220				AML	AML		
	comp=N,1705µm,0.2s						
T1220				AML	AML		
	comp=E,1120µm,0.3s						

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T1220                                  AML   AML
      comp=N,1705µm,1.8s
T1216 Preci, Frazion     0.13 184   P     Pg     08 43 58.8 +0.6
T1216                               S     Sg     08 44 01.1 +1.1
T1216                               AML   AML
      comp=E,382µm,0.8s
T1216                               AML   AML
      comp=N,386µm,0.5s
T1216                               AML   AML
      comp=N,386µm,1.5s
T1216                               AML   AML
      comp=E,382µm,1.2s
T1256 Bolognola (MC)     0.14  94  ⇑P     Pg     08 44 00.3 +1.8
MC2   Monte Cornacci     0.16 131   P     Pg     08 43 59.9 +1.1
MC2                                 S     Sg     08 44 02.5 +1.5
T1245 Castelsantange     0.20 144   P     Pg     08 44 00.3 +0.8
T1245                               S     Sg     08 44 03.4 +1.2
T1245                               AML   AML
      comp=E,132µm,0.7s
T1245                               AML   AML
      comp=N,158µm,0.4s
SNTG  Esanatoglia        0.25 344   P     Pg     08 44 01.0 +0.5
SNTG                                S     Sg     08 44 05.5 +1.7
SNTG                                AML   AML
      comp=N,61µm,0.2s
SNTG                                AML   AML
      comp=E,49µm,0.3s
SNTG                                AML   AML
      comp=N,61µm,0.2s
SNTG                                AML   AML
      comp=E,49µm,1.7s
T1212 Cascia, Frazio     0.26 178   P     Pg     08 44 01.4 +0.6
T1212                               S     Sg     08 44 05.8 +1.6
ASSB  Assisi San Ben     0.28 276   P     Pg     08 44 01.4 +0.5
ASSB                                S     Sb     08 44 06.3  -1.5
ASSB                                AML   AML
      comp=N,150µm,0.2s
ASSB                                AML   AML
      comp=E,75µm,0.3s
T1214 Arquata del Tr     0.29 153   P     Pg     08 44 01.9 +0.6
T1214                               S     Sg     08 44 06.1 +1.1
ATCC  AVT- Casa Cast     0.33 301   P     Pg     08 44 02.8 +0.8
ATCC                                S     Sb     08 44 08.6  -0.9
PIEI  Pieia              0.63 325  ⇓P     Pg     08 44 08.2 +0.4
```

ROM 18 08:58:12.7±0.1,42°.535N±0°.004×13°.334E±0°.006, h10km,ML1.6/9,2C-4D,Error ellipse: s-maj=0.5km s-min=0.4km az=62.0,Central Italy

```
Code  Station Name        Δ°  AZ°    Phase ID        Time     Res
                                    Op    ISC      h  m  s    ISC
RM33  Pellescritta (     0.09 254  ⇑P     Pg     08 58 15.8 +0.5
RM33                                S     Sg     08 58 17.6 +0.3
RM33                                AML   AML
      comp=E,292µm,0.3s
RM33                                AML   AML
      comp=E,292µm,0.3s
RM33                                AML   AML
      comp=N,320µm,0.5s
SMA1  SAN MARTINO        0.10   1  ⇓P     Pg     08 58 15.7 +0.3
SMA1                                S     Sg     08 58 17.9 +0.5
SMA1                                AML   AML
      comp=E,710µm,1.3s
SMA1                                AML   AML
      comp=N,370µm,0.3s
SMA1                                AML   AML
      comp=E,710µm,1.3s
SMA1                                AML   AML
      comp=N,370µm,1.7s
T1247 Pizzolo (AQ)       0.10 196   P     Pg     08 58 16.0 +0.6
T1247                               S     Sg     08 58 17.7 +0.4
T1247                               AML   AML
      comp=E,496µm,0.5s
T1247                               AML   AML
      comp=N,791µm,0.1s
T1247                               AML   AML
      comp=E,496µm,1.5s
GIGS  Gran Sasso         0.19 116   P     Pg     08 58 17.3 +0.5
GIGS                                S     Sg     08 58 20.7 +1.0
GIGS                                AML   AML
      comp=N,23µm,0.2s
GIGS                                AML   AML
      comp=E,40µm,0.9s
GIGS                                AML   AML
      comp=E,40µm,1.1s
T1214 Arquata del Tr     0.24 338   P     Pg     08 58 18.4 +0.6
T1222 Castel Sant'An     0.26 239  ⇑P     Pg     08 58 18.5 +0.5
T1222                               S     Sg     08 58 22.6 +1.1
T1212 Cascia, Frazio     0.30 316  ⇓P     Pg     08 58 19.3 +0.5
FAGN  Fagnano            0.33 145   P     Pg     08 58 19.8 +0.5
FAGN                                S     Sb     08 58 25.4  -0.5
FAGN                                AML   AML
      comp=E,132µm,0.9s
FAGN                                AML   AML
      comp=E,132µm,1.1s
FAGN                                AML   AML
      comp=N,144µm,0.3s
T1245 Castelsantange     0.34 342   P     Pg     08 58 19.9 +0.4
T1245                               AML   AML
      comp=E,76µm,0.5s
T1245                               AML   AML
      comp=N,63µm,0.3s
T1245                               AML   AML
      comp=E,76µm,0.5s
T1245                               AML   AML
      comp=N,63µm,1.2s
T1211 Morro Reatino      0.35 270   P     Pg     08 58 19.8 +0.1
T1211                               S     Sb     08 58 26.4  -0.3
MC2   Monte Cornacci     0.39 344  ⇓P     Pg     08 58 20.9 +0.4
T0110 Collepietro        0.45 133  ⇓P     Pb     08 58 22.4  -0.3
FDMO  Fiordimonte        0.53 340   AML   AML
      comp=N,960µm,0.9s
FDMO                                AML   AML
      comp=E,1425µm,0.4s
T1219 Muccia, Frazio     0.57 335   AML   AML
      comp=E,1710µm,0.1s
T1219                               AML   AML
      comp=N,2110µm,0.1s
T1219                               AML   AML
      comp=E,1575µm,0.1s
T1219                               AML   AML
      comp=N,2170µm,0.1s
```

ROM 18 08:58:33.2±0.1,43°.019N±0°.004×13°.030E±0°.006, h10km,ML1.5/8,3C-2D,Error ellipse: s-maj=0.4km s-min=0.4km az=278.0,Central Italy

```
Code  Station Name        Δ°  AZ°    Phase ID        Time     Res
                                    Op    ISC      h  m  s    ISC
CESI  CESI - Serrava     0.09 262   P     Pg     08 58 36.2 +0.5
CESI                                S     Sg     08 58 38.0 +0.4
CESI                                AML   AML
      comp=N,312µm,1.4s
CESI                                AML   AML
      comp=E,240µm,0.6s
CESI                                AML   AML
      comp=N,312µm,0.6s
T1220 Camerino, Fraz     0.10  25   P     Pg     08 58 36.3 +0.5
T1220                               S     Sg     08 58 38.0 +0.3
T1220                               AML   AML
      comp=E,1555µm,0.3s
T1220                               AML   AML
      comp=N,796µm,0.2s
T1216 Preci, Frazion     0.13 184  ⇑P     Pg     08 58 36.8 +0.6
T1216                               S     Sg     08 58 38.9 +0.6
T1216                               AML   AML
      comp=N,252µm,0.4s
T1216                               AML   AML
      comp=N,251µm,0.4s
T1216                               AML   AML
      comp=E,263µm,0.4s
MC2   Monte Cornacci     0.16 132  ⇓P     Pg     08 58 37.4 +0.6
MC2                                 S     Sg     08 58 40.5 +1.2
T1245 Castelsantange     0.20 144   P     Pg     08 58 37.9 +0.5
T1245                               S     Sg     08 58 41.5 +1.2
T1245                               AML   AML
      comp=E,189µm,0.7s
T1245                               AML   AML
      comp=N,275µm,1.1s
T1245                               AML   AML
      comp=E,189µm,1.3s
SNTG  Esanatoglia        0.24 345   P     Pg     08 58 39.4 +1.1
SNTG                                AML   AML
      comp=E,58µm,0.9s
SNTG                                AML   AML
      comp=N,46µm,1.1s
SNTG                                AML   AML
      comp=E,58µm,1.1s
T1212 Cascia, Frazio     0.27 178  ⇓P     Pg     08 58 39.4 +0.7
T1212                               S     Sb     08 58 43.8  -1.0
T1212                               AML   AML
      comp=N,125µm,0.1s
T1212                               AML   AML
      comp=E,143µm,0.3s
ASSB  Assisi San Ben     0.27 275  ⇑P     Pg     08 58 39.5 +0.7
ASSB                                AML   AML
      comp=E,106µm,0.2s
ASSB                                AML   AML
      comp=N,99µm,0.4s
T1214 Arquata del Tr     0.29 153   P     Pg     08 58 39.6 +0.5
T1214                               S     Sb     08 58 44.4  -1.2
EL6   Elcito             0.32  10  ⇑P     Pb     08 58 40.8  -0.2
EL6                                 AML   AML
      comp=E,208µm,0.7s
EL6                                 AML   AML
      comp=E,208µm,1.3s
EL6                                 AML   AML
      comp=N,137µm,0.9s
T1241 Roccafluvione,     0.34 119   P     Pg     08 58 40.5 +0.6
T1218 Civita (PG)        0.35 170   P     Pg     08 58 40.8 +0.5
T1218                               S     Sb     08 58 46.5  -0.8
T1211 Morro Reatino      0.50 195   S     Sb     08 58 51.8 +0.2
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*JMA **18** 08:58:35.9±0.2,34°N±2°×13°7E±°,h359km,MV2.5/23, ENSYUNADA*

*IDC **18** 08:58:36.2±1.2,35°.17N×136°.82E,h418km±16km,mb2.7/2, mbtmp3.4/3,Error ellipse: s-maj=56.4km s-min=24.2km az=118.0*

ISC 18 08:58:34.4±1.1,34°.6N±0°.1×137°.2E±0°.1,h400km,n18, σ2s24/17,Near south coast of eastern Honshu

```
Code  Station Name        Δ°  AZ°    Phase ID        Time     Res
                                    Op    ISC      h  m  s    ISC
JYTA  Yamagatataniai     1.01 340   eP    Pn     08 59 25.9 +0.5
TTO1  TONANKAI O.B.S     1.07 198   eP    Pn     08 59 22.1  -3.3
JWY   Kouya              1.37 253   eP    Pn     08 59 25.2  -1.8
JTNC  Tanabenakahech     1.53 238   eP    Pn     08 59 25.0  -2.8
JWT   Wachi              1.59 294   eP    Pn     08 59 28.6 +0.7
JWT                                 eS    S      09 00 07.4  -3.8
JOD2  Odawara 2          1.69  68   P     Pn     08 59 27.9  -0.6
JKG   Kaga               1.77 337   eP    Pn     08 59 30.9 +2.0
JRY   Ryogami san        1.97  45   P     Pn     08 59 31.4 +1.3
MAT   Matsushiro         2.08  24   P     Pn     08 59 32.5 +1.8
MJAR  Matsushiro Arr     2.08  24   P     Pn     08 59 32.6 +1.8
      6.7nm,0.6s,baz=195,slow=9.3,SNR=22
JAI   Aioi               2.41 250   P     Pn     08 59 31.5  -1.6
JAG   Ashikaga           2.58  46   P     Pn     08 59 34.7 +0.5
JAG                                 S     S      09 00 19.1  -3.5
JMN   Monobe             2.88 252   P     Pn     08 59 35.7  -0.9
BSO1  Boso 1             3.14  89   P     Pn     08 59 35.8  -2.3
JHS   Saijyo             3.35 277   P     Pn     08 59 42.2 +1.6
JNU   Nakatsue           5.45 256   P     Pn     09 00 02.4 +1.3
      3.1nm,0.7s,baz=72,slow=16,SNR=2.2
WRA   Warramunga Arr    54.35 183   P     P      09 07 25.5 +3.9
      0.3nm,0.3s,baz=0.2,slow=7.6,SNR=14
      0.3nm,0.3s
YKA   Yellowknife Ar    67.58  28   P     P      09 08 47.1  -1.8
      0.2nm,0.7s,baz=295,slow=6.8,SNR=2.5
      0.2nm,0.7s
```

SCB 18 08:59:45.5±0.8,21°.38S×67°.88W,h161km±9km,ML2.7/3, MW4.0,Error ellipse: s-maj=3.7km s-min=2.8km az=1.0, Chile-Bolivia border region

```
Code  Station Name        Δ°  AZ°    Phase ID        Time     Res
                                    Op    ISC      h  m  s    ISC
PB09  IPOC Station P     1.33 252   Pg    Pn     09 00 15.1 +0.7
PB01  IPOC Station P     1.53 282   Pg    Pn     09 00 16.9 +0.5
PB01                                Sg    Sn     09 00 41.1 +1.1
PB01                                IAML         09 00 42.2
      23nm,0.5s
PB08  IPOC Station P     1.71 316   Pg    Pn     09 00 19.5 +0.9
PB02  IPOC Station P     1.88 272   Pg    Pn     09 00 20.5 +0.5
PB02                                Sg    Sn     09 00 46.8 +0.2
PB02                                IAML         09 00 47.9
      97nm,0.4s
PB07  IPOC Station P     1.90 259   Pg    Pn     09 00 21.1 +0.8
PB07                                Sg    Sn     09 00 47.4 +0.3
PB07                                IAML         09 00 48.3
      43nm,0.3s
PB06  IPOC Station P     2.05 230   Pg    Pn     09 00 23.4 +1.4
MOCB  Mochara            2.10  87   Pg    Pn     09 00 23.3 +0.4
TA01  Diego Aracena      2.30 290   Pg    Pn     09 00 25.0 +0.3
YJA   Yavi               2.34 110   Pg    Pn     09 00 26.4 +0.7
GO02  Mina Guanaco       4.08 202   Pg    Pn     09 00 47.8 +0.5
BBOE  La Paz, Chanca     4.55 359   Pg    Pn     09 00 54.0 +0.3
BBOD  La Paz, Gloria     4.77 352   Pg    Pn     09 00 57.3 +0.7
LPAZ  La Paz             5.07 357   Pg    Pn     09 01 00.7  0.0
```

ROM 18 09:00:03.0±0.1,43°.019N±0°.003×13°.027E±0°.006, h8km,ML2.2/22,4C-5D,Error ellipse: s-maj=0.5km s-min=0.1km az=71.0,Central Italy

```
Code  Station Name        Δ°  AZ°    Phase ID        Time     Res
                                    Op    ISC      h  m  s    ISC
T1219 Muccia, Frazio     0.04 339   P     Pg     09 00 04.8 +0.1
T1219                               S     Sg     09 00 05.7  -0.3
T1219                               AML   AML
      comp=E,5740µm,0.6s
T1219                               AML   AML
      comp=N,8555µm,0.3s
T1219                               AML   AML
      comp=E,6005µm,0.1s
T1219                               AML   AML
      comp=N,8385µm,0.4s
FDMO  Fiordimonte        0.05  68   P     Pg     09 00 04.8 +0.1
FDMO                                S     Sg     09 00 05.8  -0.3
FDMO                                AML   AML
      comp=E,10690µm,0.3s
FDMO                                AML   AML
      comp=N,7130µm,0.2s
FEMA  Monte Fema         0.06 163   P     Pg     09 00 05.2 +0.2
FEMA                                S     Sg     09 00 06.4  0.0
FEMA                                AML   AML
      comp=E,8420µm,0.8s
FEMA                                AML   AML
      comp=N,6200µm,0.8s
FEMA                                AML   AML
      comp=N,4075µm,0.3s
FEMA                                AML   AML
      comp=E,5045µm,0.2s
CESI  CESI - Serrava     0.09 261  ⇑P     Pg     09 00 06.0 +0.7
CESI                                AML   AML
      comp=E,2085µm,0.6s
CESI                                AML   AML
      comp=N,1985µm,1.6s
CESI                                AML   AML
      comp=N,1985µm,0.4s
T1220 Camerino, Fraz     0.10  26   P     Pg     09 00 06.0 +0.5
T1220                               S     Sg     09 00 07.8 +0.6
T1220                               AML   AML
      comp=E,11250µm,0.3s
T1220                               AML   AML
      comp=N,7910µm,1.5s
T1220                               AML   AML
      comp=E,11300µm,0.3s
T1220                               AML   AML
      comp=E,9150µm,0.3s
T1220                               AML   AML
      comp=N,7914µm,1.6s
T1220                               AML   AML
      comp=E,9355µm,0.3s
T1220                               AML   AML
      comp=N,6570µm,1.1s
T1220                               AML   AML
      comp=N,7914µm,0.4s
T1216 Preci, Frazion     0.13 183  ⇓P     Pg     09 00 06.4 +0.6
T1216                               S     Sg     09 00 08.8 +0.9
T1216                               AML   AML
      comp=E,2155µm,0.4s
T1216                               AML   AML
      comp=N,1715µm,1.5s
T1216                               AML   AML
      comp=N,1720µm,1.5s
T1216                               AML   AML
      comp=N,1720µm,0.5s
T1216                               AML   AML
      comp=E,2155µm,0.4s
CSP1  Cessapalombo       0.15  61   P     Pg     09 00 06.8 +0.6
CSP1                                S     Sg     09 00 09.5 +1.0
CSP1                                AML   AML
      comp=N,1730µm,0.2s
CSP1                                AML   AML
      comp=E,2045µm,0.5s
MC2   Monte Cornacci     0.16 131  ⇑P     Pg     09 00 07.1 +0.6
MC2                                 S     Sg     09 00 10.1 +1.2
T1245 Castelsantange     0.20 144  ⇓P     Pg     09 00 07.7 +0.6
T1245                               S     Sg     09 00 11.2 +1.3
T1245                               AML   AML
      comp=E,2045µm,0.1s
T1245                               AML   AML
      comp=N,2740µm,1.1s
T1245                               AML   AML
      comp=E,2040µm,0.1s
T1245                               AML   AML
      comp=N,2560µm,0.3s
T1245                               AML   AML
      comp=E,1845µm,0.2s
GUMA  Gualdo di Mace     0.23  79   P     Pg     09 00 08.6 +0.9
GUMA                                S     Sg     09 00 13.0 +2.2
GUMA                                AML   AML
      comp=E,3700µm,0.3s
GUMA                                AML   AML
      comp=N,4660µm,0.3s
GUMA                                AML   AML
      comp=E,5595µm,0.2s
GUMA                                AML   AML
      comp=N,4660µm,0.3s
GUMA                                AML   AML
      comp=N,4890µm,0.3s
SNTG  Esanatoglia        0.24 345  ⇓P     Pg     09 00 08.8 +0.9
SNTG                                AML   AML
      comp=E,276µm,0.1s
SNTG                                AML   AML
      comp=N,276µm,0.5s
MMO1  Montemonaco        0.25 118  ⇑P     Pg     09 00 08.6 +0.6
MMO1                                S     Sg     09 00 12.7 +1.3
T1212 Cascia, Frazio     0.27 177   AML   AML
      comp=N,970µm,0.5s
T1212                               AML   AML
      comp=E,1202µm,0.3s
T1212                               AML   AML
      comp=N,961µm,0.5s
T1212                               AML   AML
      comp=E,1211µm,0.3s
T1212                               AML   AML
      comp=N,970µm,0.5s
T1212                               AML   AML
      comp=E,1199µm,0.3s
T1212                               AML   AML
      comp=N,962µm,0.5s
T1212                               AML   AML
      comp=E,1210µm,0.3s
T1212                               AML   AML
      comp=E,1199µm,1.7s
T1212                               AML   AML
      comp=N,962µm,1.5s
T1212                               AML   AML
      comp=N,970µm,1.5s
T1212                               AML   AML
      comp=E,1210µm,1.7s
ASSB  Assisi San Ben     0.27 275  ⇑P     Pg     09 00 09.2 +0.7
ASSB                                AML   AML
      comp=N,708µm,0.2s
ASSB                                AML   AML
      comp=E,864µm,0.2s
T1214 Arquata del Tr     0.29 153   AML   AML
      comp=N,660µm,0.2s
T1214                               AML   AML
      comp=E,692µm,0.8s
T1214                               AML   AML
      comp=N,660µm,0.2s
T1214                               AML   AML
      comp=E,692µm,0.8s
T1214                               AML   AML
      comp=E,692µm,1.2s
T1214                               AML   AML
      comp=N,660µm,1.8s
T1217 Poggiodomo (PG     0.31 193   AML   AML
      comp=N,566µm,1.3s
T1217                               AML   AML
      comp=E,500µm,1.2s
T1217                               AML   AML
      comp=N,566µm,1.3s
T1217                               AML   AML
      comp=E,500µm,1.2s
T1217                               AML   AML
      comp=N,566µm,0.7s
T1217                               AML   AML
      comp=E,500µm,0.8s
EL6   Elcito             0.32  10   P     Pg     09 00 09.9 +0.6
EL6                                 S     Sb     09 00 15.4  -0.9
EL6                                 AML   AML
      comp=E,893µm,0.3s
EL6                                 AML   AML
      comp=N,996µm,1.3s
EL6                                 AML   AML
      comp=N,994µm,1.3s
EL6                                 AML   AML
      comp=N,994µm,0.7s
EL6                                 AML   AML
      comp=E,891µm,0.3s
ATCC  AVT- Casa Cast     0.33 301  ⇓P     Pb     09 00 10.4  -0.7
ATCC                                AML   AML
      comp=E,448µm,1.1s
ATCC                                AML   AML
      comp=N,368µm,0.2s
ATCC                                AML   AML
      comp=E,448µm,0.9s
FOSV  Fossato di Vic     0.34 325   P     Pg     09 00 10.5 +0.8
FOSV                                S     Sb     09 00 16.4  -0.4
FOSV                                AML   AML
      comp=E,212µm,0.2s
FOSV                                AML   AML
      comp=N,259µm,0.3s
FOSV                                AML   AML
      comp=E,212µm,1.8s
T1241 Roccafluvione,     0.34 118   AML   AML
      comp=N,386µm,1.4s
T1241                               AML   AML
      comp=E,495µm,1.5s
T1241                               AML   AML
      comp=E,494µm,1.5s
T1241                               AML   AML
      comp=E,494µm,0.5s
T1241                               AML   AML
      comp=N,385µm,1.4s
T1218 Civita (PG)        0.35 169   AML   AML
      comp=N,756µm,0.2s
T1218                               AML   AML
      comp=E,552µm,0.2s
T1218                               AML   AML
      comp=N,756µm,0.2s
T1218                               AML   AML
      comp=E,512µm,0.2s
T1218                               AML   AML
      comp=N,756µm,0.2s
T1218                               AML   AML
      comp=E,512µm,0.2s
T1218                               AML   AML
      comp=E,552µm,0.2s
CING  Cingoli            0.38  19  ⇓P     Pg     09 00 11.1 +0.7
CING                                AML   AML
      comp=E,426µm,0.2s
CING                                AML   AML
      comp=N,258µm,1.3s
CING                                AML   AML
      comp=N,258µm,0.7s
SMA1  SAN MARTINO        0.45 150   P     Pg     09 00 12.0 +0.3
SMA1                                S     Sb     09 00 19.3  -0.7
SMA1                                AML   AML
      comp=E,306µm,0.7s
SMA1                                AML   AML
      comp=N,266µm,1.2s
SMA1                                AML   AML
      comp=N,266µm,1.2s
SMA1                                AML   AML
      comp=E,306µm,1.3s
```

ROM 18 09:00:58.3±0.1,43°.022N±0°.004×13°.036E±0°.005, h10km,ML1.5/5,1C,Error ellipse: s-maj=0.5km

s-min=0.4km az=13.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	0.04	68	P	Pg	09 01 00.4	+0.1
FDMO				S	Sg	09 01 01.3	-0.4
FDMO				AML	AML		
	comp=N,440µm,0.9s						
FDMO				AML	AML		
	comp=E,524µm,0.4s						
T1219	**Muccia, Frazio**	0.04	328	P	Pg	09 01 00.4	+0.1
T1219				S	Sg	09 01 01.4	-0.4
T1219				AML	AML		
	comp=E,822µm,0.1s						
T1219				AML	AML		
	comp=N,858µm,0.1s						
T1219				AML	AML		
	comp=E,772µm,0.1s						
T1219				AML	AML		
	comp=N,883µm,0.1s						
T1219				AML	AML		
	comp=N,882µm,0.1s						
T1219				AML	AML		
	comp=E,822µm,0.1s						
T1220	**Camerino, Fraz**	0.10	24	P	Pg	09 01 01.5	+0.6
T1220				S	Sg	09 01 03.3	+0.6
T1220				AML	AML		
	comp=E,690µm,0.3s						
T1220				AML	AML		
	comp=N,356µm,0.7s						
T1220				AML	AML		
	comp=E,689µm,0.3s						
T1220				AML	AML		
	comp=N,355µm,0.7s						
T1220				AML	AML		
	comp=E,689µm,1.7s						
T1220				AML	AML		
	comp=N,355µm,1.3s						
CESI	**CESI - Serrava**	0.10	260	P	Pg	09 01 01.5	+0.5
CESI				S	Sg	09 01 03.5	+0.7
CESI				AML	AML		
	comp=E,142µm,0.7s						
CESI				AML	AML		
	comp=N,201µm,0.2s						
CESI				AML	AML		
	comp=E,142µm,1.3s						
T1216	**Preci, Frazion**	0.13	186	P	Pg	09 01 02.0	+0.7
T1216				S	Sg	09 01 04.6	+1.1
CSP1	**Cessapalombo**	0.14	60	P	Pg	09 01 02.4	+0.7
CSP1				S	Sg	09 01 05.2	+1.2
MC2	**Monte Cornacci**	0.16	134	P	Pg	09 01 02.6	+0.7
MC2				S	Sg	09 01 05.5	+1.1
T1245	**Castelsantange**	0.20	146	P	Pg	09 01 03.1	+0.5
T1245				S	Sg	09 01 06.8	+1.3
T1245				AML	AML		
	comp=E,89µm,0.2s						
T1245				AML	AML		
	comp=N,140µm,1.1s						
T1245				AML	AML		
	comp=N,140µm,0.9s						
T1245				AML	AML		
	comp=E,89µm,0.2s						
MMO1	**Montemonaco**	0.25	120	P	Pg	09 01 04.2	+0.8
MMO1				S	Sg	09 01 08.2	+1.5
T1212	**Cascia, Frazio**	0.27	179	P	Pg	09 01 04.4	+0.6
T1212				S	Sb	09 01 08.9	-1.2
ASSB	**Assisi San Ben**	0.28	274	P	Pg	09 01 04.7	+0.7
ASSB				S	Sb	09 01 09.4	-0.8
T1214	**Arquata del Tr**	0.29	154	P	Pg	09 01 04.8	+0.6
T1214				S	Sg	09 01 09.3	+1.2
T1241	**Roccafluvione,**	0.33	120	⇑P	Pb	09 01 05.8	-0.6
T1241				S	Sg	09 01 10.6	+1.2
MMUR	**Monte Murano**	0.42	356	P	Pg	09 01 06.2	-0.4
APEC	**Apecchio**	0.70	320	S	Sb	09 01 22.6	+0.2
PE3	**Peglio**	0.78	330	S	Sg	09 01 23.3	-0.3

MOS ***18*** *09:01:23.5±1.0, 56°.80N×157°.98W, h98km, mb4.3/16,*
Error ellipse: s-maj=14.1km s-min=6.9km az=86.0
NEIC ***18*** *09:01:24.7±2.5, 56°.68N±0°.09×157°.9W±0°.1, h97km±8km,*
Error ellipse: s-maj=14.6km s-min=8.3km az=140.0
IDC ***18*** *09:01:25.2±0.7, 56°.95N×158°.20W, h96km±5km, mb3.9/31,*
mbtmp4.2/35, MS3.0/5, Error ellipse: s-maj=14.0km
s-min=7.4km az=176.0
ANF ***18*** *09:01:25.0±0.3, 56°.73N×158°.05W, h100km±4km, ML4.4/27,*
Error ellipse: s-maj=4.0km s-min=3.3km az=139.0
AEIC ***18*** *09:01:26.7±2.0, 56°.69N±0°.05×158°.0W±0°.1, h87km±7km,*
ML4.1, mb4.3/7(NEIC), ML4.2/28(NEIC), Error ellipse:
s-maj=9.6km s-min=6.6km az=99.0
ISC 18 09:01:25.1±0.5**, 56°.78N**±0°.05×**158°.08W**±0°.04**,**
h100km±3km**, h100**km**:pP-P, n363,** σ1^{s}19/408**, mb4.2**/48**,**
9C-1D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHGN	**Chignik**	0.51	201		Pn	09 01 40.4	-0.5
CHGN				Sn	Sn	09 01 51.2	-1.5
CHGN	**Chignik**	0.51	201	P	Pn	09 01 40.4	-0.5
	baz=32,SNR=432						
CHGN				S	Sn	09 01 51.5	-1.3
	baz=32						
R16K	**Pilot Point**	0.84	19	P	Pn	09 01 44.3	+0.5
	baz=194						
R16K				S	Sn	09 01 59.1	+1.2
	baz=194						
R17K	**Ugashik Creek**	1.26	46	P	Pn	09 01 49.2	+0.8
	baz=223						
R17K				S	Sn	09 02 06.8	+0.6
	baz=223						
Q17K	**Contact Creek**	1.90	37	P	Pn	09 01 56.9	+0.5
	baz=216,SNR=114						
Q17K				S	Sn	09 02 20.8	+0.4
	baz=216						
SDPT	**Sand Point**	1.96	224		Pn	09 01 56.6	-0.5
SDPT				IAML		09 02 21.4	
	comp=E,2µm,0.8s						
SDPT	**Sand Point**	1.96	224	P	Pn	09 01 56.7	-0.4
SDPT	**Sand Point**	1.96	224	P	Pn	09 01 56.6	-0.5
	baz=45,SNR=123						
SDPT				S	Sn	09 02 20.9	-0.6
	baz=45						
Q16K	**King Salmon**	2.05	21	P	Pn	09 01 59.2	+0.9
	baz=200,SNR=161						
Q16K				S	Sn	09 02 24.9	+1.3
	baz=200						
P16K	**Nushagak River**	2.26	1	P	Pn	09 02 02.0	+1.0
	baz=180,SNR=54						
P16K				S	Sn	09 02 30.5	+2.1
	baz=180						
S12K	**Black Hills**	2.47	246	P	Pn	09 02 04.0	+0.3
	baz=65,SNR=88						
S12K				S	Sn	09 02 34.1	+0.7
	baz=65						
Q18K	**Katmai Hardscr**	2.50	40	P	Pn	09 02 05.0	+0.8
	baz=220,SNR=137						
Q18K				S	Sn	09 02 35.3	+1.1
	baz=220						
OHAK	**Old Harbor**	2.66	78		Pn	09 02 05.1	-1.1
OHAK				IAML		09 02 48.5	
	comp=N,960nm,0.8s						
OHAK	**Old Harbor**	2.66	78	P	Pn	09 02 05.1	-1.1
OHAK	**Old Harbor**	2.66	78	P	Pn	09 02 05.1	-1.1
	baz=260,SNR=53						
O16K	**Kokwok River B**	2.83	360	P	Pn	09 02 09.0	+0.6
	baz=179						
O16K				S	Sn	09 02 42.1	+0.4
	baz=179						
P18K	**Big Mountain,**	3.03	29	Pn	Pn	09 02 12.2	+1.1
P18K	**Big Mountain,**	3.03	29	P	Pn	09 02 12.3	+1.1
	baz=209,SNR=100						
P18K				S	Sn	09 02 47.0	+0.3
	baz=209						
O17K	**Koliganek Bris**	3.05	9	P	Pn	09 02 12.1	+0.7
	baz=189,SNR=26						
O17K				S	Sn	09 02 47.5	+0.4
	baz=189						
KDAK	**Kodiak Island**	3.15	69	P	Pn	09 02 12.4	-0.4
	comp=N,497nm,0.3s,baz=217,slow=3.5,SNR=7657						
KDAK				S	Sn	09 02 49.8	+0.3
	comp=N,152nm,0.3s,baz=234,slow=5.6,SNR=16						
KDAK				LR	LR	09 03 22.6	
	comp=N,127nm,19.8s,baz=3.4,slow=37						
KDAK	**Kodiak Island**	3.15	69		Pn	09 02 12.3	-0.4
KDAK				IAML		09 03 02.5	
	comp=N,631nm,0.7s						
KDAK				IAML		09 03 03.6	
	comp=N,619nm,0.6s						
KDAK	**Kodiak Island**	3.15	69	*d i*P	Pn	09 02 12.2	-0.5
KDAK	**Kodiak Island**	3.15	69	P	Pn	09 02 12.4	-0.4
	baz=252						
Q19K	**Cape Douglas,**	3.21	46		Pn	09 02 14.3	+0.8
Q19K	**Cape Douglas,**	3.21	46	P	Pn	09 02 14.4	+0.8
	baz=228,SNR=155						
O18K	**Koktuh Hills**	3.44	25		Pn	09 02 17.8	+1.2
O18K				IAML		09 03 02.2	
	comp=N,284nm,1.1s						
O18K	**Koktuh Hills**	3.44	25	P	Pn	09 02 17.9	+1.2
	baz=206,SNR=85						
Q20K	**Shuyak Island**	3.56	57	P	Pn	09 02 18.7	+0.4
	baz=240,SNR=69						
FALS	**False Pass**	3.57	240		Pn	09 02 18.5	+0.1
FALS	**False Pass**	3.57	240	P	Pn	09 02 18.6	+0.2
	baz=57,SNR=21						
N16K	**Nishlik Lake**	3.73	355	P	Pn	09 02 20.9	+0.4
	baz=174						
P19K	**Oil Pt**	3.86	40	P	Pn	09 02 23.3	+1.0
	baz=222						
O19K	**Port Alsworth**	3.96	28	Pn	Pn	09 02 24.8	+1.3
O19K				IAML		09 03 23.7	
	comp=N,267nm,0.5s						
O19K	**Port Alsworth**	3.96	28	P	Pn	09 02 24.9	+1.4
	baz=210,SNR=216						
ILSW	**Iliamna Southw**	4.13	37		Pn	09 02 27.0	+1.0
ILSW				IAML		09 03 17.8	
	comp=N,196nm,0.8s						
ILSW				IAML		09 03 18.1	
	comp=E,211nm,0.8s						
O20K	**Slope Mountain**	4.38	39	P	Pn	09 02 31.0	+1.6
	baz=222,SNR=30						
O20K				S	Sn	09 03 21.9	+2.6
	baz=222						
N19K	**Bonanza Creek**	4.46	23		Pn	09 02 32.0	+1.6
N19K	**Bonanza Creek**	4.46	23	P	Pn	09 02 31.9	+1.5
	baz=205						
HOM	**Homer**	4.46	47		Pn	09 02 31.5	+1.1
HOM	**Homer**	4.46	47	P	Pn	09 02 31.4	+1.0
	baz=231						
HOM				S	Sn	09 03 21.9	+0.8
	baz=231						
SVW2	**Sparrevohn**	4.52	16		Pn	09 02 32.0	+0.8
SVW2	**Sparrevohn**	4.52	16	P	Pn	09 02 32.0	+0.8
CNPM	**China Poot**	4.55	50		Pn	09 02 32.0	+0.4
CNPM				IAML		09 03 30.2	
	comp=N,164nm,0.6s						
CNPM				IAML		09 03 30.9	
	comp=E,219nm,0.6s						
RSO	**Redoubt South**	4.63	35		Pn	09 02 34.0	+1.3
RDJH	**Redoubt Jeurge**	4.71	34		Pn	09 02 35.0	+1.1
BRLK	**Bradley Lake**	4.84	49	Pn	Pn	09 02 35.0	-0.5
BRLK				IAML		09 03 32.1	
	comp=E,134nm,0.7s						
BRLK				IAML		09 03 33.1	
	comp=N,184nm,0.6s						
BRSE	**Bradley Lake S**	4.88	49		Pn	09 02 35.6	-0.5
BRSE	**Bradley Lake S**	4.88	49	P	Pn	09 02 35.8	-0.3
	baz=234,SNR=16						
AKUT	**Akutan**	5.12	242	Pn	Pn	09 02 39.6	+0.4
AKUT				IAML		09 04 01.5	
	comp=E,116nm,0.5s						
AKUT				IAML		09 04 05.5	
	comp=N,121nm,0.5s						
AKUT	**Akutan**	5.12	242	P	Pn	09 02 39.4	+0.2
SPCR	**Spurr Chakacha**	5.38	32	P	Pn	09 02 44.0	+1.2
	baz=216,SNR=38						
SPCR				S	Sn	09 03 45.4	+2.1
	baz=216						
CAPN	**Captain Cook N**	5.38	39		Pn	09 02 44.8	+2.0
CAPN	**Captain Cook N**	5.38	39	P	Pn	09 02 44.7	+1.9
	baz=224						
CAPN				S	Sn	09 03 45.6	+2.2
	baz=224						
SPU	**Mount Spurr**	5.41	33		Pn	09 02 44.5	+1.3
M19K	**Big River Lodg**	5.48	19	P	Pn	09 02 45.5	+1.3
	baz=201						
M19K				S	Sn	09 03 46.6	+0.9
	baz=201						
SLKM	**Skilak Lake**	5.55	44		Pn	09 02 44.7	-0.5
SEW	**Seward**	5.63	50	Pn	Pn	09 02 45.9	-0.2
SEW	**Seward**	5.63	50	P	Pn	09 02 46.2	+0.1
	baz=236,SNR=9.2						
UNV	**Unalaska Valle**	5.64	242	Pn	Pn	09 02 46.0	-0.2
UNV	**Unalaska Valle**	5.64	242	P	Pn	09 02 45.8	-0.5
	baz=56,SNR=8.3						
UNV				S	Sn	09 03 48.0	-1.6
	baz=56						
L19K	**White Mountain**	5.67	16	P	Pn	09 02 47.5	+0.9
	baz=198						
M20K	**Styx River**	5.71	24		Pn	09 02 49.3	+1.9
M20K	**Styx River**	5.71	24	P	Pn	09 02 49.4	+2.1
	baz=208,SNR=73						
O22K	**Cooper Landing**	5.73	46		Pn	09 02 48.5	+0.9
O22K	**Cooper Landing**	5.73	46	P	Pn	09 02 48.4	+0.9
	baz=232,SNR=25						
FIS	**Fire Island**	5.97	40	Pn	Pn	09 02 52.4	+1.6
SUA	**Susitna One**	6.03	36		Pn	09 02 52.4	+0.7
SUA	**Susitna One**	6.03	36	P	Pn	09 02 52.0	+0.3
	baz=221,SNR=86						
SUA				S	Sn	09 03 57.8	-1.5
	baz=221						
L20K	**Farewell, AK**	6.10	19	P	Pn	09 02 54.3	+1.6
	baz=202,SNR=26						
RC01	**Rabbit Creek A**	6.11	41		Pn	09 02 52.4	-0.3
RC01	**Rabbit Creek A**	6.11	41	P	Pn	09 02 52.3	-0.4
	baz=228,SNR=30						
SKT	**Skwentna**	6.20	30	Pn	Pn	09 02 55.3	+1.4
SKT	**Skwentna**	6.20	30	P	Pn	09 02 55.0	+1.1
	baz=215,SNR=24						
TTA	**Tatalina**	6.26	9	Pn	Pn	09 02 55.7	+0.9
TTA	**Tatalina**	6.26	9	P	Pn	09 02 55.5	+0.6
TTA	**Tatalina**	6.26	9	P	Pn	09 02 55.7	+0.9
TTA	**Tatalina**	6.26	9	P	Pn	09 02 55.4	+0.6
	baz=190,SNR=8.9						
P23K	**Montague Islan**	6.47	56	P	Pn	09 02 57.0	-0.7
	baz=244,SNR=8.0						
PWL	**Port Wells**	6.51	47	Pn	Pn	09 02 57.3	-0.9
PWL	**Port Wells**	6.51	47	P	Pn	09 02 57.2	-0.9
	baz=234,SNR=13						
PMR	**Palmer**	6.67	40		Pn	09 02 58.8	-1.4
PMR	**Palmer**	6.67	40	P	Pn	09 02 59.3	-0.9
PMR	**Palmer**	6.67	40	P	Pn	09 02 58.8	-1.4
PMR	**Palmer**	6.67	40	P	Pn	09 02 59.0	-1.1
	baz=227,SNR=12						
Q23K	**Middleton Isla**	6.76	62	P	Pn	09 03 00.6	-0.9
	baz=251						
MID	**Middleton Isla**	6.77	62	P	Pn	09 03 00.8	-0.8
KNK	**Knik Glacier**	6.79	43		Pn	09 03 00.9	-1.1
KNK	**Knik Glacier**	6.79	43	P	Pn	09 03 00.9	-1.1
	baz=230,SNR=19						
PPLA	**Purkeypile**	6.82	23		Pn	09 03 04.6	+2.2
PPLA	**Purkeypile**	6.82	23	P	Pn	09 03 04.7	+2.3
	baz=208,SNR=16						
GHO	**Glory Hole Cre**	6.86	39		Pn	09 03 01.1	-1.8
CUT	**Chulitna**	6.89	32		Pn	09 03 03.4	+0.1
CUT	**Chulitna**	6.89	32	P	Pn	09 03 03.6	+0.3
	baz=218,SNR=29						
K20K	**Telida**	6.90	15	Pn	Pn	09 03 04.1	+0.8
K20K	**Telida**	6.90	15	P	Pn	09 03 04.2	+0.8
	baz=198,SNR=9.1						
SML	**Sawmill**	7.09	41	P	Pn	09 03 04.4	-1.7
	baz=228,SNR=9.1						
NIKH	**Nikolski High**	7.29	243	P	Pn	09 03 09.8	+1.0
NIKH	**Nikolski High**	7.29	243	P	Pn	09 03 06.9	-1.9
	baz=55						
CAST	**Castle Rocks**	7.30	22	Pn	Pn	09 03 10.8	+1.9
CAST	**Castle Rocks**	7.30	22	P	Pn	09 03 10.6	+1.7
	baz=206,SNR=18						
M23K	**Glacier View**	7.30	42	P	Pn	09 03 07.5	-1.4
	baz=230,SNR=32						
EYAK	**Cordova Ski Ar**	7.46	54	Pn	Pn	09 03 10.1	-0.8
EYAK	**Cordova Ski Ar**	7.46	54	P	Pn	09 03 10.1	-0.8
EYAK	**Cordova Ski Ar**	7.46	54	P	Pn	09 03 10.0	-1.0
	baz=244,SNR=37						
SCM	**Sheep Creek Mo**	7.48	43		Pn	09 03 10.2	-1.1
SCM	**Sheep Creek Mo**	7.48	43	P	Pn	09 03 10.3	-1.1
SCM	**Sheep Creek Mo**	7.48	43	P	Pn	09 03 10.1	-1.2
	baz=231,SNR=21						
KTH	**Kantishna Hill**	7.67	25	Pn	Pn	09 03 14.3	+0.3
CHUM	**Lake Minchumin**	7.68	19		Pn	09 03 15.6	+1.7
CHUM	**Lake Minchumin**	7.68	19	P	Pn	09 03 15.5	+1.5
	baz=204,SNR=18						
DIV	**Divide**	7.71	50	Pn	Pn	09 03 13.7	-0.8
TRF	**Thorofare Moun**	7.74	27		Pn	09 03 14.5	-0.4
TRF	**Thorofare Moun**	7.74	27	P	Pn	09 03 14.6	-0.4
	baz=213,SNR=14						
KLU	**Klutina**	7.83	48		Pn	09 03 15.5	-0.7
KLU	**Klutina**	7.83	48	P	Pn	09 03 15.2	-0.9
	baz=237,SNR=100						
M24K	**Tolsona, Glenn**	8.08	44		Pn	09 03 18.7	-0.8
M24K	**Tolsona, Glenn**	8.08	44	P	Pn	09 03 18.3	-1.2
	baz=233,SNR=27						
RND	**Reindeer**	8.09	31		Pn	09 03 18.8	-0.8
RND	**Reindeer**	8.09	31	P	Pn	09 03 18.8	-0.8
BPAW	**Bear Paw Mtn.**	8.14	23		Pn	09 03 20.0	-0.2
BPAW	**Bear Paw Mtn.**	8.14	23	P	Pn	09 03 19.8	-0.4
	baz=208,SNR=11						
MCK	**McKinley**	8.32	29		Pn	09 03 21.6	-1.1
MCK	**McKinley**	8.32	29	P	Pn	09 03 21.6	-1.1
MCK	**McKinley**	8.32	29	P	Pn	09 03 22.3	-0.4
	baz=216,SNR=12						
N25K	**Chitina, Valde**	8.44	49		Pn	09 03 23.8	-0.6
N25K	**Chitina, Valde**	8.44	49	P	Pn	09 03 23.6	-0.8
	baz=240,SNR=33						
BWN	**Browne**	8.54	26		Pn	09 03 25.5	-0.2
ANM	**Nome**	8.59	338	Pn	Pn	09 03 27.4	+1.1
ANM	**Nome**	8.59	338	P	Pn	09 03 27.4	+1.1
ANM	**Nome**	8.59	338	P	Pn	09 03 27.0	+0.7
	baz=152,SNR=6.2						
HARP	**HAARP**	8.64	44	P	Pn	09 03 26.6	-0.4
	baz=234,SNR=22						
GLB	**Gilahina Butte**	8.70	52	Pn	Pn	09 03 27.4	-0.5
VRDI	**Verde Repeater**	8.76	53	Pn	Pn	09 03 28.2	-0.7
PAX	**Paxson**	8.86	40		Pn	09 03 28.3	-1.9
PAX	**Paxson**	8.86	40	P	Pn	09 03 28.3	-1.9
PAX	**Paxson**	8.86	40	P	Pn	09 03 29.3	-0.8
	baz=230,SNR=69						
I21K	**Tanana**	8.93	17		Pn	09 03 32.1	+1.1
I21K	**Tanana**	8.93	17	P	Pn	09 03 32.1	+1.1
	baz=202						
NEA2	**Nenana**	8.99	26	P	Pn	09 03 30.5	-1.3
	baz=213,SNR=22						
MCARA	**McCarthy VSAT**	9.01	53		Pn	09 03 31.3	-0.8
MCARA	**McCarthy VSAT**	9.01	53	P	Pn	09 03 31.4	-0.8
	baz=245,SNR=19						
MLY	**Manley**	9.01	20		Pn	09 03 31.2	-0.9
MLY	**Manley**	9.01	20	P	Pn	09 03 31.2	-0.9
	baz=206,SNR=10.0						
KIAG	**Kiagna River**	9.14	56		Pn	09 03 33.1	-0.9
BALM	**Baldy**	9.19	56		Pn	09 03 33.6	-1.0
PTPK	**Patty Peak**	9.19	55		Pn	09 03 33.9	-0.8
H21K	**Melozitna Rive**	9.26	14	P	Pn	09 03 36.7	+1.2
	baz=198						
K24K	**Donnelly Dome**	9.31	36	P	Pn	09 03 35.7	-0.5
	baz=226,SNR=31						
CCB	**Clear Creek Bu**	9.35	28		Pn	09 03 34.2	-2.5
HDA	**Harding Lake**	9.40	31	P	Pn	09 03 35.2	-2.1
	baz=220,SNR=45						
I23K	**Minto, Yukon-K**	9.40	23	P	Pn	09 03 35.8	-1.5
	baz=210,SNR=19						
IMAR	**Indian Mountai**	9.47	11		Pn	09 03 39.8	+1.6
M26K	**Nabesna, AK**	9.49	47	P	Pn	09 03 38.0	-0.6
	baz=240						
MDM	**Murphy Dome**	9.50	26		Pn	09 03 36.7	-2.0
BARN	**Barnard Glacie**	9.51	56		Pn	09 03 38.5	-0.5
TCOL	**CIGO, UAF Yank**	9.52	27	P	Pn	09 03 38.1	-0.9
	baz=216,SNR=15						
COLA	**College**	9.52	27		Pn	09 03 38.1	-0.8
COLA	**College**	9.52	27	P	Pn	09 03 38.8	-0.2
COLA	**College**	9.52	27	*i* P	Pn	09 03 38.2	-0.8
COLA				pmax	pmax		
	comp=Z,11nm,0.9s						
COLA	**College**	9.52	27	P	Pn	09 03 37.7	-1.2
	baz=216						
RIDG	**Independent Ri**	9.57	38		Pn	09 03 38.2	-1.6
RIDG	**Independent Ri**	9.57	38	P	Pn	09 03 38.7	-1.1
	baz=229,SNR=34						
CTG	**Chitna Glacier**	9.62	57	P	Pn	09 03 40.1	-0.5
	baz=251,SNR=32						
CTGM	**Chitina Glacie**	9.62	57		Pn	09 03 40.2	-0.3
SAMH	**Samovar Hills**	9.66	62		Pn	09 03 41.0	-0.1
L26K	**Log Cabin Wild**	9.68	44		Pn	09 03 41.0	-0.2
L26K	**Log Cabin Wild**	9.68	44	P	Pn	09 03 41.2	+0.1
	baz=236,SNR=30						
H22K	**Ishtalitna Cre**	9.69	17	P	Pn	09 03 42.2	+0.9
	baz=202						
IL31		9.69	30		Pn	09 03 38.6	-2.6
ILAR	**Eielson Array**	9.69	30	P	Pn	09 03 38.8	-2.5
	comp=Z,5.6nm,0.4s,baz=214,slow=14,SNR=89						
ILAR				S	Sn	09 05 23.8	-4.3
	comp=Z,4.6nm,0.5s,baz=215,slow=28,SNR=8.9						
ILAR				ScP	ScP	09 13 09.3	+0.1
	comp=Z,0.2nm,0.7s,baz=258,slow=2.8,SNR=4.1						
LOGN	**Logan Glacier**	9.74	58		Pn	09 03 41.3	-0.8
DOT	**Dot Lake**	9.79	39		Pn	09 03 40.9	-1.8
POKR	**Poker Plat Res**	9.82	27	P	Pn	09 03 41.2	-1.9
	baz=216						
PCA	**Pinnacle**	9.91	63		Pn	09 03 43.9	-0.5
PINM	**Pinnacle**	9.91	63	P	Pn	09 03 43.5	-1.0
	baz=258,SNR=6.9						
M27K	**Edge Creek, AK**	9.93	49		Pn	09 03 44.3	-0.3
M27K	**Edge Creek, AK**	9.93	49	P	Pn	09 03 44.0	-0.7
	baz=242,SNR=15						
H23K	**Yukon River**	9.95	21	P	Pn	09 03 43.8	-1.1
	baz=208						
TNA	**Tin City**	10.00	336	P	Pn	09 03 44.4	-1.0
	baz=147,SNR=6.2						
G21K	**Allakaket**	10.01	11	P	Pn	09 03 46.1	+0.5
	baz=194						
SCRK	**Sand Creek**	10.02	38		Pn	09 03 43.6	-2.3
SCRK	**Sand Creek**	10.02	38	P	Pn	09 03 43.6	-2.3
	baz=230,SNR=10						
O28M	**Mount Upton**	10.10	59	P	Pn	09 03 46.9	-0.3
	baz=254						
YKU2	**Yakutat**	10.10	67	Pn	Pn	09 03 46.9	+0.1
YKU2	**Yakutat**	10.10	67	P	Pn	09 03 47.0	+0.1
BCPM	**Bancas Point**	10.19	64		Pn	09 03 47.5	-0.6
PNL	**Peninsula**	10.26	66	P	Pn	09 03 48.5	-0.7
PNL	**Peninsula**	10.26	66	P	Pn	09 03 48.4	-0.7
	baz=261,SNR=10						
L27K	**Beaver Creek,**	10.29	46	P	Pn	09 03 48.7	-0.7
	baz=239						
YUK3	**Moose Creek**	10.30	54	P	Pn	09 03 49.4	-0.3
	baz=248,SNR=34						
BCAR	**Beaver Creek A**	10.30	46		Pn	09 03 48.7	-1.0
H24K	**Noodor Dome**	10.31	24	P	Pn	09 03 47.6	-2.2
	baz=212						
BVCY	**Beaver Creek**	10.38	50	P	Pn	09 03 50.5	-0.2
	baz=244,SNR=13						
YUK8	**Steele Glacier**	10.45	57	P	Pn	09 03 52.2	+0.3
	baz=252,SNR=32						
PRP	**Porcupine Dome**	10.64	29		Pn	09 03 52.2	-2.1
PRP	**Porcupine Dome**	10.64	29	P	Pn	09 03 52.4	-1.9
	baz=220						
G23K	**Bananza Creek**	10.66	18	P	Pn	09 03 54.3	-0.3
	baz=204						
F21K	**Alatna River**	10.70	10	P	Pn	09 03 54.0	-1.0
	baz=193						
O29M	**Mount Kennedy**	10.78	63	P	Pn	09 03 56.1	-0.1
	baz=259						
YUK4	**Talbot Arm**	10.98	57	P	Pn	09 04 00.3	+1.2
	baz=253,SNR=14						
YUK6	**Outpost Mounta**	11.01	60	P	Pn	09 03 59.1	-0.4
	baz=256						
COLD	**Coldfoot**	11.11	16	P	Pn	09 03 59.2	-1.3
	baz=203						
F22K	**John River**	11.11	12	P	Pn	09 03 59.8	-0.7
	baz=197						
G24K	**Hadweenzic Riv**	11.13	22	P	Pn	09 03 59.4	-1.5
	baz=211						
I26K	**Coal Creek Min**	11.17	34	P	Pn	09 03 58.9	-2.4
	baz=226						
HYT	**Haines Junctio**	11.40	61		Pn	09 04 05.1	+0.5
HYT	**Haines Junctio**	11.40	61	P	Pn	09 04 03.7	-0.9
	baz=258						
M29M	**Somme Creek**	11.41	52	P	Pn	09 04 04.3	-0.4
	baz=248						
EGAK	**Eagle**	11.48	39		Pn	09 04 03.2	-2.3
EGAK	**Eagle**	11.48	39	P	Pn	09 04 03.4	-2.2
	baz=233,SNR=8.9						
G25K	**Bearman Lake**	11.49	24	P	Pn	09 04 02.8	-2.8
	baz=214						
RDOG	**Red Dog Mine**	11.53	351		Pn	09 04 09.3	+3.1
RDOG	**Red Dog Mine**	11.53	351	P	Pn	09 04 08.6	+2.4
	baz=166,SNR=10						
P30M	**Million Dollar**	11.54	64	P	Pn	09 04 06.7	+0.2
	baz=262						
DAWY	**Dawson**	11.73	44	Pn	Pn	09 04 08.2	-0.8
DAWY	**Dawson**	11.73	44	P	Pn	09 04 07.4	-1.6

	baz=240,SNR=16						
N30M	Aishikik Lake	11.74	58	P	Pn	09 04 08.4	-0.6
	baz=255						
E22K	Anaktuvuk Pass	11.75	12	P	Pn	09 04 08.4	-0.8
	baz=197						
F24K	Squaw Lake	11.76	20	P	Pn	09 04 09.5	+0.2
	baz=208						
PLBC	Pleasant Camp	11.78	68	P	Pn	09 04 09.5	0.0
	baz=266,SNR=13						
L29M	L29M	11.81	49	P	Pn	09 04 09.9	-0.1
	baz=246,SNR=9.0						
S31K	Pelican	11.84	75	P	Pn	09 04 09.0	-1.4
	baz=273						
I27K	Kandik River	11.85	35	P	Pn	09 04 08.3	-2.1
	baz=229						
ADK	Adak	11.90	254	Pn	Pn	09 04 11.6	+0.4
ADK	Adak	11.90	254	P	Pn	09 04 11.4	+0.2
ADK	Adak	11.90	254	P	Pn	09 04 11.6	+0.4
O30N	Mendenhall	12.07	62	P	Pn	09 04 13.6	+0.1
	baz=260,SNR=5.4						
E24K	Your Creek	12.15	17	P	Pn	09 04 14.7	+0.1
	baz=205						
M30M	Minto, Yukon	12.19	53		Pn	09 04 14.7	-0.3
M30M	Minto, Yukon	12.19	53	P	Pn	09 04 14.8	-0.3
	baz=251,SNR=13						
G26K	Porcupine Rive	12.19	27	P	Pn	09 04 13.8	-1.1
	baz=220						
F25K	Christian Rive	12.27	23	P	Pn	09 04 14.6	-1.5
	baz=214						
H27K	Steamboat Moun	12.29	33	P	Pn	09 04 14.8	-1.6
	baz=227						
SKAG	Skagway	12.31	68	Pn	Pn	09 04 16.5	+0.1
SKAG	Skagway	12.31	68	P	Pn	09 04 16.7	+0.2
SKAG	Skagway	12.31	68	P	Pn	09 04 16.6	+0.1
	baz=267,SNR=7.1						
N31M	Braeburn, Yuko	12.35	58	Pn	Pn	09 04 17.3	+0.1
N31M	Braeburn, Yuko	12.35	58	P	Pn	09 04 16.6	-0.6
	baz=257						
K29M	Barlow Dome	12.36	47	P	Pn	09 04 17.1	-0.3
	baz=244						
SIT	Sitka	12.43	79	Pn	Pn	09 04 16.3	-1.8
SIT	Sitka	12.43	79	P	Pn	09 04 16.7	-1.4
SIT	Sitka	12.43	79	P	Pn	09 04 16.3	-1.8
SIT	Sitka	12.43	79	P	Pn	09 04 16.2	-1.8
	baz=278						
G27K	Doyon Strip	12.66	31	P	Pn	09 04 19.2	-2.0
	baz=225						
E25K	Arctic Village	12.73	22	P	Pn	09 04 21.2	-0.9
	baz=212						
R32K	Eaglecrest	12.73	73	P	Pn	09 04 20.9	-1.3
	baz=273						
S32K	Killisnoo	12.77	77	P	Pn	09 04 22.5	-0.1
	baz=276						
JIS	Juneau Island	12.80	73		Pn	09 04 23.7	+0.7
JIS	Juneau Island	12.80	73	P	Pn	09 04 23.8	+0.7
I29M	Ogilvie Camp,	12.81	40	P	Pn	09 04 22.6	-0.6
	baz=237						
MAYO	Mayo, Yukon	12.93	49		Pn	09 04 25.0	+0.3
MAYO	Mayo, Yukon	12.93	49	P	Pn	09 04 23.9	-0.9
	baz=248,SNR=7.5						
P32M	Atlin	13.13	67	P	Pn	09 04 27.6	+0.1
	baz=268						
M31M	Drury Creek, Y	13.16	56		Pn	09 04 27.9	+0.2
M31M	Drury Creek, Y	13.16	56	P	Pn	09 04 28.1	+0.4
	baz=256,SNR=9.4						
N32M	Quiet Lake	13.58	61	P	Pn	09 04 33.9	+0.7
	baz=262						
P33M	Teslin, Yukon	13.61	65		Pn	09 04 34.3	+0.5
P33M	Teslin, Yukon	13.61	65	P	Pn	09 04 33.7	-0.1
	baz=266,SNR=5.2						
FARO	Faro, Yukon	13.64	56	P	Pn	09 04 34.8	+0.8
	baz=257						
E27K	Coleen River	13.68	27	P	Pn	09 04 34.4	-0.1
	baz=221						
T33K	Petersburg	13.75	79	P	Pn	09 04 35.8	+0.4
	baz=280						
U33K	Whale Pass	13.80	82	P	Pn	09 04 35.4	-0.6
	baz=283						
Q32M	Nakina River	13.88	70	P	Pn	09 04 37.6	+0.3
	baz=272						
EPYK	Eagle Plains	13.91	38	P	Pn	09 04 38.0	+0.5
	baz=236,SNR=5.8						
CRAG	Craig	13.96	85	P	Pn	09 04 39.2	+1.1
CRAG	Craig	13.96	85	P	Pn	09 04 38.8	+0.6
	baz=285						
WRAK	Wrangell Islan	14.15	81	P	Pn	09 04 41.0	+0.3
	baz=282						
C26K	Camden Bay	14.39	18	P	P	09 04 45.9	-1.7
	baz=210						
G30M	tAoh Zraii Nji	14.42	36	P	Pn	09 04 43.1	-1.0
	baz=235						
S34M	Telegraph Cree	14.56	74	P	Pn	09 04 46.8	+1.0
	baz=277						
A21K	Barrow	14.62	2	Pn	Pn	09 04 47.4	+0.9
V35K	Ketchikan	14.82	84	P	Pn	09 04 50.7	+1.5
	baz=286						
DLBC	Dease Lake	15.08	72	P	Pn	09 04 53.5	+1.0
	comp=Z,7.0nm,0.8s,baz=315,slow=8.1,SNR=32						
DLBC	Dease Lake	15.08	72		Pn	09 04 54.0	+1.4
DLBC				IAmb	IAmb	09 04 54.7	
	comp=Z,11nm,0.9s						
DLBC	Dease Lake	15.08	72	P	Pn	09 04 52.9	+0.3
	baz=275,SNR=5.4						
T35M	Bob Quinn	15.17	78	P	P	09 04 55.4	-1.1
	baz=281						
F31M	Tsiigehtchic	15.48	37	P	Pn	09 04 56.2	-1.2
	baz=238						
WTLY	Watson Lake, Y	15.62	65	Pn	P	09 05 01.3	-0.1
WTLY				IAmb	IAmb	09 05 04.4	
	comp=E,24nm,1.1s						
WTLY	Watson Lake, Y	15.62	65	P	P	09 05 01.0	-0.4
	baz=270						
INK	Inuvik	16.02	34	P	Pn	09 05 03.4	-0.8
	comp=E,1.7nm,0.3s,baz=203,slow=12,SNR=20						
INK				S	Sn	09 08 00.9	-0.3
	comp=E,1.2nm,0.5s,baz=7.9,slow=30,SNR=2.2						
INK				ScP	ScP	09 13 18.8	-0.2
	comp=E,0.6nm,0.5s,baz=346,slow=3.9,SNR=3.9						
INK	Inuvik	16.02	34		Pn	09 05 04.8	+0.6
INK	Inuvik	16.02	34	P	Pn	09 05 04.8	+0.6
INK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
INK	Inuvik	16.02	34	P	Pn	09 05 03.7	-0.4
	baz=236						
KOTAN	Kotaneelee Air	17.99	65	P	Pn	09 05 29.3	+1.0
	baz=274						
WRGLY	Wrigley	18.29	55	P	Pn	09 05 32.3	+0.5
	baz=265						
C36M	Paulatuk	19.54	36	IAmb	IAmb	09 05 47.8	
	comp=Z,8.4nm,0.4s						
C36M	Paulatuk	19.54	36	P	P	09 05 43.5	-0.6
	baz=247,SNR=14						
BILL	Bilibino	19.64	319	P	P	09 05 46.5	+1.1
BILL				IAmb	IAmb	09 05 50.1	
	comp=Z,21nm,0.6s						
BILL	Bilibino	19.64	319	*ce*P	P	09 05 46.4	+1.0
BILL				*e*S	S	09 09 16.9	-4.4
BILL				pmax	pmax		
	comp=Z,21nm,0.7s						
A36M	Sachs Harbour	20.39	29	P	P	09 05 52.0	-1.4
A36M				IAmb	IAmb	09 06 12.4	
	comp=Z,5.6nm,0.9s						
A36M	Sachs Harbour	20.39	29	P	P	09 05 52.3	-1.1
	baz=239						
YKA	Yellowknife Ar	22.35	57	P	P	09 06 14.2	-0.2
	comp=Z,3.5nm,0.8s,baz=271,slow=9.5,SNR=59						
YKA				PcP	PcP	09 10 05.9	+0.5
	comp=Z,1.7nm,0.6s,baz=272,slow=1.7,SNR=19						
YKA				ScP	ScP	09 13 33.4	0.0
	comp=Z,0.6nm,0.8s,baz=272,slow=2.2,SNR=8.5						
YKA				LR	LR	09 14 58.7	
	comp=Z,62nm,18.6s,baz=318,slow=36						
	comp=Z,3.5nm,0.8s						
YKA	Yellowknife Ar	22.35	57	P	P	09 06 11.1	-3.2
YKA	Yellowknife Ar	22.35	57	*i* P	P	09 06 14.1	-0.2
YKA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SEY	Seymchan	25.07	305	P	P	09 06 38.8	-0.9
	comp=Z,7.5nm,0.5s,baz=88,slow=9.5,SNR=18						
	comp=Z,7.5nm,0.5s						
SEY	Seymchan	25.07	305	*ce*P	P	09 06 39.8	+0.1
SEY				pmax	pmax		
	comp=Z,3.0nm,0.6s						
PETK	Petropavlovsk-	25.32	281	P	P	09 06 41.3	-0.9
	comp=Z,2.0nm,0.5s,baz=79,slow=12,SNR=21						
	comp=Z,2.0nm,0.5s						
MA2	Magadan	26.57	298	*i* P	P	09 06 55.2	+1.9
MA2				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RES	Resolute Bay	29.45	29	P	P	09 07 18.5	-0.2
	comp=Z,0.3nm,0.3s,baz=262,slow=4.7,SNR=4.0						
RES				PcP	PcP	09 10 21.6	+0.1
	comp=Z,1.2nm,0.5s,baz=194,slow=0.9,SNR=7.8						
	comp=Z,0.3nm,0.3s						
ELK	Elko	31.84	102	LR	LR	09 18 26.0	
	comp=Z,35nm,20.0s,baz=342,slow=32						
NVAR	Mina Array Bea	31.89	108	P	P	09 07 42.9	+2.0
	comp=Z,0.4nm,0.6s,baz=302,slow=7.6,SNR=3.6						
NVAR				pP	pP	09 08 04.6	+1.3
	comp=Z,0.9nm,0.7s,baz=306,slow=9.5,SNR=6.3						
	comp=Z,0.4nm,0.6s						
TIXI	Tiksi	32.58	326	P	P	09 07 45.6	-0.5
	comp=Z,7.1nm,0.5s,baz=90,slow=20,SNR=19						
	comp=Z,7.1nm,0.5s						
TIXI	Tiksi	32.58	326	P	P	09 07 46.4	+0.2
TIXI	Tiksi	32.58	326	*ce*P	P	09 07 45.7	-0.5
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
PDAR	Pinedale Array	33.56	94	P	P	09 07 56.3	+0.9
	comp=Z,0.2nm,0.4s,baz=334,slow=6.0,SNR=2.3						
PDAR				pP	pP	09 08 19.1	+1.2
	comp=Z,0.5nm,0.7s,baz=328,slow=5.3,SNR=3.2						
	comp=Z,0.2nm,0.4s						
YAK	Yakutsk	35.37	309	P	P	09 08 09.8	-0.6
	comp=Z,15nm,0.5s,baz=75,slow=0.5,SNR=6.6						
	comp=Z,15nm,0.5s						
YAK	Yakutsk	35.37	309	*e*P	P	09 08 09.7	-0.7
YAK				pmax	pmax		
	comp=Z,25nm,0.8s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
ULM	Lac du Bonnet	36.40	73	P	P	09 08 20.8	+1.4
	comp=E,0.8nm,0.3s,baz=280,slow=7.5,SNR=3.6						
	comp=E,0.8nm,0.3s						
ASAJ	Asahikawa	38.61	277	P	P	09 08 37.8	-0.2
	comp=E,2.2nm,0.5s,baz=264,slow=13,SNR=4.7						
	comp=E,2.2nm,0.5s						
NEEM	North Greenlan	38.80	20	*e*P	P	09 08 38.6	-1.0
NEEM				IAmb	IAmb	09 08 39.1	
	comp=Z,8.6nm,0.7s						
NOR	Nord	40.31	8	*e*P	P	09 08 51.6	-0.1
KLR	Kul'dur	41.16	290	P	P	09 08 58.1	-1.0
	comp=Z,1.9nm,0.7s,baz=114,slow=5.3,SNR=7.9						
	comp=Z,1.9nm,0.7s						
KLR	Kul'dur	41.16	290	*ce*P	P	09 08 59.0	-0.1
KLR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
DAG	Danmarks Havn	44.27	12	*i* P	P	09 09 22.0	-1.8
DAG				IAmb	IAmb	09 09 23.3	
	comp=Z,6.5nm,0.7s						
USA0B	Ussuriysk Arra	44.28	285	*i* P	P	09 09 25.9	+1.5
NRIK	Noril'sk	45.58	333	P	P	09 09 33.8	-0.5
	comp=Z,6.5nm,0.4s,baz=50,slow=6.9,SNR=16						
	comp=Z,6.5nm,0.4s						
NRIK	Noril'sk	45.58	333	*ce*P	P	09 09 33.8	-0.5
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
DBG	Daneborg	46.19	15	*e*P	P	09 09 38.3	-0.8
DBG				IAmb	IAmb	09 09 38.9	
	comp=Z,3.7nm,0.7s						
MJAR	Matsushiro Arr	46.27	272	P	P	09 09 39.6	-0.6
	comp=Z,0.6nm,0.3s,baz=65,slow=16,SNR=6.0						
	comp=Z,0.6nm,0.3s						
TXAR	Lajitas Array	46.64	102	P	P	09 09 44.7	+1.5
	comp=Z,0.2nm,0.5s,baz=288,slow=5.3,SNR=9.0						
TXAR				pP	pP	09 10 07.5	+0.7
	comp=Z,0.8nm,0.8s,baz=314,slow=5.2,SNR=5.6						
	comp=Z,0.2nm,0.5s						
ICESG	Greenland Ices	46.76	26	*e*P	P	09 09 42.8	-1.2
SCHQ	Schefferville	47.62	52	P	P	09 09 50.5	0.0
	comp=Z,2.2nm,0.5s,baz=318,slow=7.8,SNR=9.5						
SCHQ				PcP	PcP	09 11 18.9	+0.4
	comp=Z,2.6nm,0.6s,baz=268,slow=6.6,SNR=5.8						
	comp=Z,2.2nm,0.5s						
JSG	Sagara	47.66	271	P	P	09 09 56.1	+5.1
KSRS	Korea Array	51.22	281	P	P	09 10 18.0	0.0
	comp=Z,3.2nm,0.6s,baz=42,slow=7.3,SNR=23						
	comp=Z,3.2nm,0.6s						
BINY	Binghamton	52.05	69	P	P	09 10 23.1	-1.0
	baz=316						
TKL	Tuckaleechee C	52.72	80	LR	LR	09 31 20.7	
	comp=Z,17nm,19.8s,baz=121,slow=34						
ARCES	ARCESS Array B	53.97	358	P	P	09 10 36.5	-1.3
	comp=Z,7.6nm,1.0s,baz=19,slow=6.9,SNR=6.4						
	comp=Z,7.6nm,1.0s						
ULN	Ulaanbaatar	54.14	304	*ce*P	P	09 10 41.0	+1.4
ULN				pmax	pmax		
	comp=Z,5.0nm,1.7s						
SONM	Songino Array	54.47	305	P	P	09 10 41.8	-0.1
	comp=Z,5.2nm,0.6s,baz=44,slow=6.3,SNR=32						
SONM				PcP	PcP	09 11 44.6	+0.5
	comp=Z,1.5nm,0.5s,baz=64,slow=1.5,SNR=8.7						
	comp=Z,5.2nm,0.6s						
ZALV	Zalesovo Beam	58.32	322	P	P	09 11 08.6	-0.4
	comp=Z,2.0nm,0.3s,baz=33,slow=8.3,SNR=10						
ZALV				PcP	PcP	09 11 57.8	-1.1
	comp=Z,1.1nm,0.6s,baz=30,slow=6.0,SNR=2.6						
	comp=Z,2.0nm,0.3s						
ZALV	Zalesovo Beam	58.32	322	*i* P	P	09 11 09.8	+0.8
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
DGZ	Jazzator, Alta	60.87	317	*i* P	P	09 11 26.4	-0.4
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	FINESS Array B	62.07	358	P	P	09 11 33.0	-1.4
	comp=Z,0.9nm,0.4s,baz=10,slow=8.5,SNR=12						
	comp=Z,0.9nm,0.4s						
NOA	NORSAR Array B	62.22	6	P	P	09 11 34.8	-0.7
	comp=Z,1.4nm,0.7s,baz=353,slow=6.9,SNR=7.4						
NOA				LR	LR	09 39 07.3	
	comp=Z,11nm,18.2s,baz=5.0,slow=36						
	comp=Z,1.4nm,0.7s						
KURK	Kurchatov	63.11	323	*ce*P	P	09 11 41.7	+0.2
KURK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
KURBB	Kurchatov Arra	63.22	323	P	P	09 11 42.1	-0.1
	comp=Z,1.8nm,0.4s,baz=27,slow=6.6,SNR=16						
	comp=Z,1.8nm,0.4s						
BRVK	Borovoye	63.59	330	*i* P	P	09 11 44.1	-0.5
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
XAN	Xi'an	63.82	292	P	P	09 11 46.5	0.0
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
GTA	Gaotai	63.99	303	*e*P	P	09 11 47.4	-0.3
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MK31	Makanchi Array	65.19	319	*i* P	P	09 11 54.8	-0.4
MKAR	Makanchi Array	65.19	319	P	P	09 11 54.7	-0.5
	comp=Z,2.1nm,0.5s,baz=34,slow=5.3,SNR=23						
MKAR				pP	pP	09 12 18.1	-2.0
	comp=Z,0.7nm,0.3s,baz=23,slow=12,SNR=4.6						
	comp=Z,2.1nm,0.5s						
WMQ	Urumqi	65.64	314	*e*P	P	09 12 04.3	+6.1
OBN	Obninsk	67.83	351	⇑*e*P	P	09 12 13.2	+1.4
OBN				*e**PP	pP	09 12 36.8	-0.1
OBN				*e*		09 14 41.2	
OBN				*e*S	SKiKP	09 21 52.0	-5.6
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MNK	Minsk	68.97	356	*i* P	P	09 12 18.4	-0.5
	comp=E,3.0nm,1.0s						
MNK				*i* P	P	09 12 18.4	-0.5
	comp=N,42nm,0.8s						
MNK				*i* P	P	09 12 18.4	-0.5
	comp=Z,8.0nm,0.7s,baz=184						
MNK				*i* pP	pP	09 12 43.6	-0.5
MNK				*i* PP	PP	09 14 51.9	+0.2
MNK				*i* PPP	PPP	09 16 33.2	
MNK				*i* S	S	09 21 16.0	+0.8
MNK				*i* sS	SKiKP	09 21 59.8	+0.5
MNK				*i* SS	SS	09 25 44.5	+3.3
MNK				*i* SSS	SSS	09 29 02.2	
MNK				*i* LR	LR	09 43 12.1	
MNK				*i* LRM	MLR	09 45 10.1	
	comp=N,363nm,17.4s						
MNK				*i* LRM	MLR	09 45 20.7	
	comp=E,7.0nm,17.4s						
MNK				*i* LRM	MLR	09 45 25.6	
	comp=Z,65nm,20.0s						
MNK	Minsk	68.97	356	*i* P	P	09 12 18.4	-0.5
MNK				*i* *PP	pP	09 12 43.6	-0.5
MNK				*i*		09 14 51.8	
MNK				*i* PPP	PPP	09 16 33.1	
MNK				*i* S	S	09 21 15.9	+0.8
MNK				*i* *SS	SKiKP	09 21 59.8	+0.5
MNK				*i* SS	SS	09 25 44.5	+3.3
MNK				pmax	pmax		
	comp=E,3.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,42nm,0.9s						
MNK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,363nm,17.0s						
MNK				pmax	pmax		
	comp=E,7.0nm,17.0s						
MNK				pmax	pmax		
	comp=Z,65nm,20.0s						
AAK	Ala-Archa	71.55	322	*ce*P	P	09 12 35.9	+0.9
AAK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKASG	Malin Array Be	72.72	355	P	P	09 12 40.2	-1.5
	comp=Z,0.9nm,0.3s,baz=8.8,slow=5.8,SNR=8.3						
	comp=Z,0.9nm,0.3s						
PZH	PanZhiHua	73.54	293	P	P	09 12 50.4	+3.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,4.9s						
KSH	Kashi	73.79	319	P	P	09 12 51.8	+3.5
KSH				pmax	pmax		
	comp=Z,13nm,0.9s						
GERES	GERESS Array B	74.52	6	P	P	09 12 52.1	-0.2
	comp=Z,1.0nm,0.6s,baz=15,slow=8.1,SNR=2.4						
	comp=Z,1.0nm,0.6s						
VYHS	Vyhne	75.07	2	*e*P	P	09 12 54.9	-0.5
VYHS	Vyhne	75.07	2	*e*P	P	09 12 54.9	-0.5
KIV	Kislovodsk	78.13	345	*e*P	P	09 13 14.8	+2.0
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,28nm,19.0s						
KBZ	Khabaz	78.32	345	*i* P	P	09 13 13.0	-0.7
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SHA1	Shidzhatmaz	78.35	345	*i* P	P	09 13 15.9	+1.7
GEYT	Alibeck	80.81	332	P	P	09 13 27.6	+0.1
	comp=Z,1.8nm,0.5s,baz=353,slow=4.9,SNR=4.0						
	comp=Z,1.8nm,0.5s						
ESDC	Sonseca Array	81.45	20	P	P	09 13 31.1	+0.3
	comp=Z,1.7nm,0.6s,baz=340,slow=5.1,SNR=14						
	comp=Z,1.7nm,0.6s						
CMAR	Chiang Mai Arr	81.64	291	P	P	09 13 31.6	-0.4
	comp=Z,3.5nm,0.3s,baz=12,slow=5.3,SNR=20						
	comp=Z,3.5nm,0.3s						
BRTR	Keskin Array B	83.36	351	P	P	09 13 40.7	-0.1
	comp=Z,0.9nm,0.7s,baz=14,slow=2.4,SNR=4.2						
	comp=Z,0.9nm,0.7s						
WRA	Warramunga Arr	94.91	241	P	P	09 14 34.7	-1.0
	comp=Z,0.9nm,1.0s,baz=46,slow=4.5,SNR=5.2						
WRA				pP	pP	09 15 01.5	-0.6
	comp=Z,0.3nm,0.7s,baz=35,slow=5.8,SNR=1.6						
	comp=Z,0.9nm,1.0s						
ASAR	Alice Springs	98.30	239	P	P	09 14 50.5	-0.5
	comp=Z,0.2nm,0.6s,baz=31,slow=4.3,SNR=1.9						
	comp=Z,0.2nm,0.6s						
PLCA	Paso Flores	121.64	117	PKP	PKPdf	09 20 05.5	-0.8
	comp=Z,1.5nm,1.0s,baz=86,slow=2.0,SNR=3.2						
BOSA	Boshof	151.75	354	PKPbc	PKPbc	09 21 07.3	-0.3
	comp=Z,4.2nm,0.4s,baz=9.4,slow=1.8,SNR=19						

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*IDC **18** 09:24:16.5±6.9, 6°.56N×76°.34W, h87^{km}±71^{km}, mb2.7/1, mbtmp3.2/2, ML2.1/1, Error ellipse: s-maj=94.2km s-min=38.4km az=74.0*

*RSNC **18** 09:24:19.4±0.8, 6°.79N×73°.18W, h137^{km}±4^{km}, ML2.8*

ISC 18 09:24:18.0±1.0, **6°.84N**±0°.03×**73°.13W**±0°.05, **h144**^{km}±6^{km}, **n24**, σ1^{s}.**31**/44, **5C**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.25	191	⇑*i*P	Pn	09 24 38.0	-0.1
BARC				*e*S	Sn	09 24 52.7	-0.6
BARC				*i*		09 24 53.8	
	comp=Z,165nm,0.4s						
BRRC	Barranca, Sant	0.63	295	⇑*i*P	Pn	09 24 39.9	+0.4
BRRC				*e*S	Sn	09 24 56.5	+0.7
BRRC				*i*		09 24 58.4	
	comp=Z,150nm,0.2s						
PAMC	Pamplona, Colo	0.66	41	⇑*i*P	Pn	09 24 40.8	+0.6
PAMC				*e*S	Sn	09 24 57.6	+0.5
PAMC				*i*		09 24 58.9	
	comp=Z,62nm,0.3s						
RUSC	La Rusia	0.94	177	⇑*e*P	Pn	09 24 41.9	-0.4
RUSC				*e*S	Sn	09 25 00.0	-0.9
RUSC				*i*		09 25 02.1	
	comp=Z,82nm,0.5s						
PTBC	PUERTO BERRIO,	1.35	257	*e*P	Pn	09 24 45.1	-0.5
PTBC				*e*S	Sn	09 25 05.8	-0.8
PTBC				*i*		09 25 07.9	
	comp=Z,111nm,0.3s						
SPBC	San Pablo de B	1.51	218	*e*P	Pn	09 24 47.0	-0.4
SPBC				*e*S	Sn	09 25 07.9	-1.9
SPBC				*i*		09 25 12.2	
	comp=Z,116nm,0.2s						
ZARC	Zaragoza, Cauc	1.83	291	*e*P	Pn	09 24 51.0	+0.2
ZARC				*e*S	Sn	09 25 16.3	+0.3
ZARC				*i*		09 25 25.0	
	comp=Z,90nm,0.3s						
CHIC	Chingaza	2.28	195	*e*P	Pn	09 24 56.9	+0.3
CHIC				*e*S	Sn	09 25 24.8	-1.3
CHIC				*i*		09 25 35.1	
	comp=Z,17nm,0.5s						
ROSC	El Rosal	2.31	211	P	Pn	09 24 58.4	+1.4
	comp=Z,7.7nm,0.3s,baz=297,slow=22,SNR=13						
ROSC				S	Sn	09 25 29.1	+2.2
	comp=Z,34nm,0.3s,baz=32,slow=22,SNR=8.9						
	comp=Z,14nm,0.3s						
ROSC	El Rosal	2.31	211	*e*P	Pn	09 24 58.9	+2.0
ROSC				*e*S	Sn	09 25 29.2	+2.2
ROSC				*i*		09 25 31.9	
	comp=Z,37nm,0.3s						
UREC	San Jos de Ur	2.54	291	*e*P	Pn	09 24 58.4	-1.1
UREC				*e*S	Sn	09 25 30.4	-1.0
UREC				*i*		09 25 42.9	
	comp=Z,60nm,0.3s						
GUY2C	Guyana, Caldas	2.74	234	*e*P	Pn	09 25 03.3	+0.9
GUY2C				*e*S	Sn	09 25 36.1	-0.4
GUY2C				IAML		09 25 45.4	
	comp=Z,35nm,0.5s						
VILC	Villavicencio,	2.77	192	*e*P	Pn	09 25 02.5	+0.1
VILC				*e*S	Sn	09 25 36.7	0.0
VILC				*i*		09 25 46.8	
	comp=Z,23nm,0.5s						
PTGC	Puerto Gaitan,	2.81	159	*e*P	Pn	09 25 01.3	-1.5
PTGC				*e*S	Sn	09 25 34.5	-2.8
PTGC				*i*		09 25 36.6	
	comp=Z,29nm,0.2s						
CBOC	Ciudad Bolivar	3.02	251	*e*S	Sn	09 25 41.1	-1.3
CBOC				*i*		09 25 44.8	
	comp=Z,11nm,0.2s						
DBBC	Dabeiba	3.06	273	*e*P	Pn	09 25 06.2	+0.2
DBBC				*e*S	Sn	09 25 41.4	-1.6
DBBC				*i*		09 25 48.1	
	comp=Z,15nm,0.2s						
ARGC	Ariguani, Magd	3.19	340	*e*P	Pn	09 25 08.5	+0.8
ARGC				*e*S	Sn	09 25 47.4	+1.3
PRAC	Prado	3.56	209	*e*P	Pn	09 25 12.3	-0.2
PRAC				*e*S	Sn	09 25 53.9	-0.9
PRAC				*i*		09 26 00.3	
	comp=Z,22nm,0.4s						
APAC	Apartado, Choc	3.58	287	⇑*e*P	Pn	09 25 12.7	+0.1
APAC				*e*S	Sn	09 25 53.6	-1.3
APAC				*i*		09 25 59.0	
	comp=Z,12nm,0.5s						
ORTC	Ortega, Tolima	3.59	216	*e*P	Pn	09 25 13.1	+0.2
ORTC				*e*S	Sn	09 25 54.6	-0.9
ORTC				*i*		09 26 02.7	
	comp=Z,16nm,0.3s						
SJCC	San Jacinto, C	3.65	326	*e*P	Pn	09 25 12.5	-1.1
SJCC				*e*S	Sn	09 25 54.0	-2.8
SJCC				*i*		09 25 58.1	
	comp=Z,17nm,0.3s						
YKA	Yellowknife Ar	63.24	340	P	P	09 34 29.7	-1.1
	comp=Z,0.1nm,0.6s,baz=129,slow=6.6,SNR=4.1						
	comp=Z,0.1nm,0.6s						
ASAR	Alice Springs	149.11	234	PKPbc	PKPdf	09 43 47.7	+1.7
	comp=Z,0.4nm,0.8s,baz=106,slow=3.3,SNR=3.7						
WRA	Warramunga Arr	150.34	241	PKPbc	PKPdf	09 43 50.7	+2.8

comp=Z,0.2nm,0.8s,baz=108,slow=2.9,SNR=5.1

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*SNET **18** 09:32:07.2±1.1, 14°.18N×90°.36W, h152km±8km, ML2.3*
*GCG **18** 09:32:10.9±0.5, 13°.98N×90°.35W, h123km±17km, MD3.4*
ISC 18 09:32:08.3±1.4**, 14°.0N**±0°.2×**90°.35W**±0°.08**, h150**km**, n13, σ0s.61**/18**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.45**	**326**	*e*P	**Pn**	**09 32 30.2**	**+0.5**
SLOZ	**Alcaldia de Sa**	**0.55**	**89**	*e*P	**Pn**	**09 32 29.8**	**-0.1**
SLOZ				*e*S	**Sn**	**09 32 47.2**	**+0.9**
SLOZ				IAML		09 32 49.9	
	comp=Z,32nm,0.4s						
NUBE	**Las Nubes**	**0.56**	**101**	*e*P	**Pn**	**09 32 30.0**	**-0.1**
NUBE				IAML		09 32 30.4	
	comp=Z,46nm,0.2s						
NUBE				*e*S	**Sn**	**09 32 46.7**	**0.0**
NBG	**Las Nubes**	**0.57**	**360**	*e*P	**Pn**	**09 32 30.9**	**+0.6**
NBG				*e*S	**Sn**	**09 32 46.5**	**-0.7**
FUG	**Fuego 3**	**0.65**	**312**	*e*P	**Pn**	**09 32 30.8**	**+0.1**
RTR	**El Retiro**	**0.69**	**100**	*e*P	**Pn**	**09 32 31.1**	**+0.2**
SBLS	**San Blas**	**0.72**	**104**	*e*P	**Pn**	**09 32 31.0**	**-0.2**
JAYA	**Jayaque - finc**	**0.94**	**112**	*e*P	**Pn**	**09 32 32.8**	**0.0**
PMON	**Piamonte**	**1.04**	**107**	*e*P	**Pn**	**09 32 34.6**	**+1.1**
ESQI	**Esquipulas**	**1.11**	**61**	*e*S	**Sn**	**09 32 53.5**	**-0.4**
ESQI				*e*S	**Sn**	**09 32 53.6**	**-0.4**
SJTE	**Alcalda de S**	**1.36**	**107**	*e*P	**Pn**	**09 32 35.9**	**-0.6**
STG3	**Santiaguito 3,**	**1.38**	**300**	*e*P	**Pn**	**09 32 36.7**	**0.0**
STG3				*e*S	**Sn**	**09 32 59.4**	**+0.8**
RTAL	**Retalhuleu**	**1.40**	**291**	*e*S	**Sn**	**09 32 57.6**	**-1.1**

WEL 18 09:34:06.1±0.5**, 42°S**±3°×**17°4E**±°**, h17**km±4km**, M2.3**/1**, ML2.3**/7**, MLv2.3**/1**, Error ellipse: s-maj=0.0km s-min=0.0km az=106.1, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.12**	**219**	P	Pb	09 34 10.7	+0.7
KHZ				S	Sb	09 34 13.8	+1.2
BSWZ	**Blackbirch Sta**	**0.63**	**16**	P	Pg	09 34 18.5	0.0
THZ	**Tophouse**	**0.78**	**315**	P	Pg	09 34 21.5	+0.1
THZ				S	Sb	09 34 31.6	-0.1
GVZ	**Greta Valley S**	**0.79**	**214**	P	Pn	09 34 22.8	+0.4
TUWZ	**Tuamarina**	**0.92**	**14**	P	Pg	09 34 23.9	-0.1
LTZ	**Lake Taylor**	**1.11**	**245**	P	Pg	09 34 27.7	+0.1
TCW	**Tory Channel**	**1.21**	**23**	P	Pn	09 34 27.9	-0.4
TCW				S	Sb	09 34 43.5	-0.4
TKNZ	**Takaka Hill**	**1.38**	**338**	P	Pb	09 34 31.5	-0.1
DSZ	**Denniston Nort**	**1.48**	**292**	P	Pb	09 34 33.7	+0.4
MQZ	**McQueen's Vall**	**1.56**	**207**	P	Pn	09 34 32.3	-0.9
MQZ				S	Sn	09 34 51.7	-1.3

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*IDC **18** 09:45:00.1±0.8, 8°.10S×161°.02E, h0km, mb4.3/14, mbtmp4.2/16, ML3.1/2, MS3.5/15, Error ellipse: s-maj=29.2km s-min=13.9km az=117.0*
*NEIC **18** 09:45:01.2±1.3, 8°.12S±0°.07×160°.99E±0°.09, h10km±1km, mb4.6/28, Error ellipse: s-maj=15.5km s-min=10.5km az=116.0*
*NOU **18** 09:46:10.5, 10°.77S×158°.19E, h411km, mb4.2/18, Solomon Islands*
ISC 18 09:45:01.2±0.5**, 8°.09S**±0°.06×**161°.00E**±0°.08**, h10**km**, n87, σ1s.39**/76**, mb4.5**/25**, MS3.5**/12**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.69**	**218**	Pn	**Pb**	**09 45 32.6**	**+0.3**
	4μm,0.3s,baz=131,slow=2.1,SNR=78						
HNR				Sn	**Sg**	**09 45 54.7**	**-0.8**
	2μm,0.3s,baz=235,slow=7.1,SNR=6.6						
HNR				LR	LR	09 46 08.1	
	comp=Z,8μm,18.1s,baz=54,slow=40						
HNR	**Honiara**	**1.69**	**218**		**Pn**	**09 45 30.8**	**+0.1**
HNR				Sn	**Sb**	**09 45 53.0**	**-0.6**
RABL	**Rabaul**	**9.60**	**293**	Pn	**Pn**	**09 47 18.3**	**-1.3**
KOUNC	**Koumac, New Ca**	**12.79**	**166**	Pn	**Pn**	**09 48 01.2**	**-2.0**
PMG	**Port Moresby**	**13.74**	**264**	Pn	**Pn**	**09 48 18.1**	**+1.9**
	0.4nm,0.3s,baz=90,slow=18,SNR=3.3						
PMG				LR	LR	09 53 13.0	
	comp=Z,240nm,19.9s,baz=114,slow=36 2.2nm,0.4s						
PMG	**Port Moresby**	**13.74**	**264**	Pn	**Pn**	**09 48 14.8**	**-1.4**
PMG	**Port Moresby**	**13.74**	**264**	P	P	09 48 38.7	+14
LIFNC	**LIFOU**	**13.98**	**155**	Pn	**Pn**	**09 48 18.4**	**-1.1**
DZM	**Mont Dzumac**	**14.85**	**160**	LR	LR	09 54 13.3	
	comp=Z,127nm,18.2s,baz=28,slow=37						
PATS	**Pohnpei**	**15.07**	**350**	Pn	**Pn**	**09 48 33.6**	**-0.7**
TARA	**Tarawa**	**15.15**	**52**	Pn	**Pn**	**09 48 34.7**	**-0.7**
TV1H	**Townsville Har**	**17.69**	**230**	P	**P**	**09 49 11.7**	**+2.9**
RK1H	**Rockhampton Ha**	**18.24**	**212**	P	**P**	**09 49 16.8**	**+2.0**
COEN	**Coen**	**18.43**	**250**	P	**P**	**09 49 15.0**	**-2.0**
COEN				IAmb	IAmb	09 49 23.5	
	comp=Z,25nm,1.2s						
COEN	**Coen**	**18.43**	**250**	P	**Pn**	**09 49 21.8**	**+4.8**
	comp=Z,15nm,0.9s						
CTA	**Charters Tower**	**18.60**	**229**	P	**Pn**	**09 49 20.7**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=36,slow=10,SNR=17						
CTA				LR	LR	09 55 51.8	
	comp=Z,171nm,18.2s,baz=86,slow=35 comp=Z,7.8nm,0.9s						
CTAO	**Charters Tower**	**18.60**	**229**	P	**P**	**09 49 17.6**	**-1.2**
CTAO	**Charters Tower**	**18.60**	**229**	P	**Pn**	**09 49 20.9**	**+1.9**
MTSU	**Mount Surprise**	**19.05**	**237**	P	**Pn**	**09 49 26.7**	**+2.2**
EIDS	**Eidsvold**	**19.61**	**208**	P	**P**	**09 49 29.0**	**-0.8**
EIDS				IAmb	IAmb	09 49 33.2	
	comp=Z,34nm,0.8s						
EIDS	**Eidsvold**	**19.61**	**208**	P	**Pn**	**09 49 32.4**	**+1.2**
RMQ	**Roma**	**21.67**	**211**	P	**P**	**09 49 54.3**	**+2.1**
ARMA	**Armidale**	**23.88**	**200**	P	**P**	**09 50 14.0**	**-1.2**
ARMA				IAmb	IAmb	09 50 17.3	
	comp=Z,18nm,0.8s						
QLP	**Quilpie**	**24.32**	**219**	P	**P**	**09 50 19.4**	**+0.2**
AULRC	**Lightning Ridg**	**24.50**	**208**	P	**P**	**09 50 21.2**	**+0.4**
AUDCS	**Dubbo College**	**26.62**	**204**	P	**P**	**09 50 43.5**	**+3.5**
H11S2	**WAKE ISLAND Hy**	**27.01**	**12**	T	T	10 18 53.4	
	baz=193,slow=75,SNR=133						
H11S3	**WAKE ISLAND Hy**	**27.01**	**12**	T	T	10 18 55.3	
	baz=193,slow=75,SNR=94						
H11S1	**WAKE ISLAND Hy**	**27.03**	**12**	T	T	10 18 56.8	
	baz=193,slow=75,SNR=82						
AFI	**Afiamalu**	**27.33**	**105**	LR	LR	09 59 14.5	
	comp=Z,57nm,20.4s,baz=282,slow=31						
INKA	**Innaminka**	**27.36**	**222**	P	**P**	**09 50 46.9**	**+0.2**
H11N1	**WAKE ISLAND Hy**	**28.24**	**12**	T	T	10 20 55.6	
	baz=192,slow=76,SNR=111						
H11N3	**WAKE ISLAND Hy**	**28.24**	**12**	T	T	10 20 38.8	
	baz=192,slow=76,SNR=100						
H11N2	**WAKE ISLAND Hy**	**28.25**	**12**	T	T	10 20 42.3	
	baz=192,slow=76,SNR=232						
WB0	**Warramunga Arr**	**28.26**	**243**	P	**P**	**09 50 53.9**	**-0.9**
WB0				IAmb	IAmb	09 50 55.3	
	comp=Z,14nm,1.0s						
WRAB	**Tennant Creek**	**28.35**	**243**	P	**P**	**09 50 54.7**	**-1.0**
WRAB				IAmb	IAmb	09 50 57.5	
	comp=Z,12nm,0.9s						
WB2	**Warramunga Arr**	**28.36**	**243**	P	**P**	**09 50 54.5**	**-1.2**
WB2				IAmb	IAmb	09 50 57.6	
	comp=Z,13nm,0.9s						
WRA	**Warramunga Arr**	**28.37**	**243**	P	**P**	**09 50 55.3**	**-0.6**
	comp=Z,9.3nm,0.8s,baz=69,slow=9.1,SNR=66						
WRA				PcP	**PcP**	**09 54 09.7**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=72,slow=3.4,SNR=4.7						
WRA				LR	LR	10 01 43.9	
	comp=Z,152nm,19.1s,baz=39,slow=35 comp=Z,9.3nm,0.8s						
WRA	**Warramunga Arr**	**28.37**	**243**	P	**P**	**09 50 55.6**	**-0.3**
YNG	**Young**	**28.54**	**202**	P	**P**	**09 51 01.5**	**+4.3**
STKA	**Stephens Creek**	**29.76**	**215**	P	**P**	**09 51 07.8**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=46,slow=12,SNR=7.3						
STKA				LR	LR	10 03 32.0	
	comp=Z,126nm,18.7s,baz=207,slow=37 comp=Z,2.9nm,0.7s						
STKA	**Stephens Creek**	**29.76**	**215**	P	**P**	**09 51 07.7**	**-0.4**
AS01	**Alice Springs**	**30.18**	**236**	P	**P**	**09 51 11.3**	**-0.7**
AS31	**Alice Springs**	**30.22**	**236**	P	**P**	**09 51 10.8**	**-1.5**
ASAR	**Alice Springs**	**30.22**	**236**	P	**P**	**09 51 11.1**	**-1.2**
	comp=Z,2.3nm,0.8s,baz=65,slow=9.0,SNR=22						
ASAR				PcP	**PcP**	**09 54 14.1**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=81,slow=0.9,SNR=5.8						
ASAR				LR	LR	10 03 05.9	
	comp=Z,156nm,19.0s,baz=80,slow=36 comp=Z,2.3nm,0.8s						
ASAR	**Alice Springs**	**30.22**	**236**	P	**P**	**09 51 11.5**	**-0.8**
LCRK	**Leigh Creek**	**30.80**	**221**	P	**P**	**09 51 16.6**	**-0.7**
KNRA	**Kununurra**	**32.40**	**254**	P	**P**	**09 51 30.8**	**-0.7**
KNRA				IAmb	IAmb	09 51 32.3	
	comp=Z,7.5nm,0.8s						
MULG	**Mulgathing**	**33.51**	**225**	P	**P**	**09 51 40.0**	**-1.1**
BBOO	**Buckleboo**	**33.74**	**220**	P	**P**	**09 51 42.2**	**-0.9**
BBOO	**Buckleboo**	**33.74**	**220**	P	**P**	**09 51 42.5**	**-0.6**
FORT	**Forrest**	**38.15**	**229**	P	**P**	**09 52 19.8**	**-1.1**
KAPI	**Kappang**	**41.08**	**272**	LR	LR	10 10 50.9	
	comp=Z,43nm,18.8s,baz=135,slow=38						
NWAO	**Narrogin (SRO)**	**47.38**	**232**	LR	LR	10 14 44.8	
	comp=Z,96nm,18.4s,baz=158,slow=38						
SBUM	**Sibu**	**49.76**	**280**	P	**P**	**09 53 53.8**	**-0.6**
SBUM				IAmb	IAmb	09 53 56.1	
	comp=Z,6.4nm,1.1s						
JNU	**Nakatsue**	**50.01**	**327**	LR	LR	10 14 57.3	
	comp=Z,16nm,18.2s,baz=129,slow=36						
KSM	**Kuching**	**51.43**	**278**	P	**P**	**09 54 06.5**	**-0.6**
KSM				IAmb	IAmb	09 54 07.8	
	comp=Z,9.7nm,0.9s						
ASAJ	**Asahikawa**	**54.57**	**344**	LR	LR	10 14 47.9	
	comp=Z,54nm,22.0s,baz=167,slow=33						
KSRS	**Korea Array**	**54.86**	**328**	P	**P**	**09 54 32.6**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=139,slow=8.3,SNR=5.8 comp=Z,0.5nm,0.4s						
USRK	**Ussuriysk Ar.**	**58.29**	**336**	P	**P**	**09 54 57.0**	**+0.8**
	comp=Z,2.2nm,0.8s,baz=133,slow=7.0,SNR=4.3 comp=Z,2.2nm,0.8s						
USRK	**Ussuriysk Ar.**	**58.29**	**336**	P	**P**	**09 54 57.1**	**+1.0**
SDSI	**Sungai Dareh**	**59.75**	**274**	P	**P**	**09 55 06.8**	**-0.1**
KLR	**Kul'dur**	**62.57**	**339**	P	**P**	**09 55 26.1**	**+0.8**
	comp=Z,1.6nm,0.9s,baz=129,slow=12,SNR=5.1						
KLR				LR	LR	10 21 32.3	
	comp=Z,27nm,19.4s,baz=150,slow=35 comp=Z,1.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**66.64**	**294**	P	**P**	**09 55 54.0**	**+1.3**
	comp=Z,1.4nm,0.3s,baz=125,slow=4.7,SNR=7.0 comp=Z,1.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**66.64**	**294**	P	**P**	**09 55 52.4**	**-0.2**
CHTO	**Chiang Mai**	**66.75**	**294**	P	**P**	**09 55 51.1**	**-2.2**
CASY	**Casey**	**67.48**	**200**	P	**P**	**09 55 55.5**	**-1.5**
MA2	**Magadan**	**67.94**	**354**	LR	LR	10 26 02.9	
	comp=Z,27nm,18.6s,baz=20,slow=36						
VNDA	**Vanda**	**69.40**	**180**	P	**P**	**09 56 09.9**	**+1.0**
	comp=Z,1.8nm,0.8s,baz=352,slow=9.0,SNR=3.1 comp=Z,1.8nm,0.8s						
VNDA	**Vanda**	**69.40**	**180**	P	**P**	**09 56 08.4**	**-0.5**
VNDA				IAmb	IAmb	09 56 10.6	
	comp=Z,3.4nm,1.1s						
ULN	**Ulaanbaatar**	**73.20**	**325**	P	**P**	**09 56 32.2**	**-0.4**
ULN				IAmb	IAmb	09 56 57.4	
	comp=Z,8.9nm,1.4s						
SONM	**Songino Array**	**73.56**	**325**	P	**P**	**09 56 35.3**	**+0.6**
	comp=Z,2.1nm,0.9s,baz=142,slow=5.7,SNR=8.2						
SONM				LR	LR	10 27 22.2	
	comp=Z,27nm,20.0s,baz=202,slow=35 comp=Z,2.1nm,0.9s						
SONM	**Songino Array**	**73.56**	**325**	P	**P**	**09 56 34.9**	**+0.3**
SONM				IAmb	IAmb	09 56 36.5	
	comp=Z,2.3nm,1.0s						
SHL	**Shillong**	**75.00**	**299**	P	**P**	**09 56 43.1**	**-0.4**
KDAK	**Kodiak Island**	**75.67**	**24**	LR	LR	10 27 02.0	
	comp=Z,38nm,19.2s,baz=240,slow=33						
SVW2	**Sparrevohn**	**76.87**	**20**	P	**P**	**09 56 52.8**	**-0.4**
SVW2				IAmb	IAmb	09 56 55.4	
	comp=Z,9.5nm,1.2s						
TNA	**Tin City**	**76.96**	**13**	P	**P**	**09 56 53.5**	**-0.1**
L19K	**White Mountain**	**77.89**	**20**	P	**P**	**09 57 01.1**	**+2.1**
L19K				IAmb	IAmb	09 57 27.3	
	comp=Z,7.2nm,1.3s						
WRH	**Wood River Hil**	**81.69**	**20**	P	**P**	**09 57 19.5**	**0.0**
WRH				IAmb	IAmb	09 57 30.0	
	comp=Z,3.5nm,1.2s						
QSPA	**South Pole Qui**	**81.89**	**180**	P	**P**	**09 57 20.6**	**-0.2**
ILAR	**Eielson Array**	**82.29**	**20**	P	**P**	**09 57 22.4**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=260,slow=5.4,SNR=7.6 comp=Z,0.7nm,0.7s						
TIXI	**Tiksi**	**82.36**	**350**	P	**P**	**09 57 23.1**	**+0.3**
	comp=Z,2.4nm,0.3s,baz=270,slow=20,SNR=3.6 comp=Z,2.4nm,0.3s						
MKAR	**Makanchi Array**	**88.19**	**318**	P	**P**	**09 57 52.9**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=101,slow=6.0,SNR=17 comp=Z,1.6nm,0.8s						
YKA	**Yellowknife Ar**	**94.53**	**28**	P	**P**	**09 58 21.6**	**-0.1**
	comp=Z,0.9nm,0.9s,baz=257,slow=4.7,SNR=10 comp=Z,0.9nm,0.9s						
PDAR	**Pinedale Array**	**95.02**	**48**	P	**P**	**09 58 25.4**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=236,slow=1.6,SNR=6.9 comp=Z,0.8nm,0.8s						
ESDC	**Sonseca Array**	**145.79**	**339**	PKPbc	**PKPab**	**10 04 41.6**	**+0.2**
	comp=Z,1.6nm,1.0s,baz=24,slow=5.1,SNR=5.9						
TORD	**Torodi Ar. Bea**	**159.05**	**286**	PKPab	**PKPab**	**10 05 37.5**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=85,slow=3.1,SNR=5.8						

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*IDC **18** 09:58:56.9±1.0, 60°.71S×49°.13W, h0km, mb4.0/6, mbtmp4.1/7, ML4.7/1, MS3.4/5, Error ellipse: s-maj=31.9km s-min=29.0km az=37.0*
*NEIC **18** 09:58:58.0±1.8, 60°.73S±0°.09×48°.53W±0°.07, h10km±1km, mb4.5/14, Error ellipse: s-maj=15.6km s-min=5.2km az=171.0*
ISC 18 09:58:58.2±0.6**, 60°.69S**±0°.09×**48°.59W**±0°.09**, h10**km**, n37, σ0s.99**/27**, mb4.4**/11**, MS3.2**/4**, Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESPZ	**Base Esperanza**	**4.80**	**232**	Pn	**Pn**	**10 00 09.1**	**-1.3**
PMSA	**Palmer Station**	**8.19**	**233**	Pn	Pn	10 00 53.1	-3.7
	10nm,0.3s,baz=32,slow=13,SNR=17						
PMSA				LR	LR	10 03 55.1	
	comp=Z,313nm,18.4s,baz=70,slow=38 23nm,0.4s						
PMSA	**Palmer Station**	**8.19**	**233**	Pn	Pn	10 00 54.2	-2.6
HOPE	**Hope Point**	**9.14**	**51**	Pn	**Pn**	**10 01 07.8**	**-2.1**
EFI	**East Falkland**	**10.45**	**326**	Pn	**Pn**	**10 01 26.9**	**-1.0**
MG01	**Puerto William**	**11.65**	**291**	Pn	**Pn**	**10 01 43.6**	**-0.6**
MG03	**Isla Dawson**	**13.62**	**290**	Pn	**Pn**	**10 02 11.0**	**-0.2**
GO08	**Villa O'Higgin**	**18.38**	**301**	P	**Pn**	**10 03 14.4**	**+1.5**
AY02	**Valle Explorad**	**20.21**	**304**	P	**P**	**10 03 32.6**	**-0.3**
COYC	**Coyhaique**	**20.50**	**307**	P	**P**	**10 03 36.9**	**+0.7**
COYC				IAmb	IAmb	10 03 49.4	
	comp=Z,20nm,1.0s						
SNAA	**Sanae**	**20.86**	**140**	LR	LR	10 09 29.6	
	comp=Z,106nm,22.0s,baz=323,slow=30						
SNAA	**Sanae**	**20.86**	**140**	P	**P**	**10 03 39.1**	**-0.7**
AY01	**Puyuhuapi**	**21.69**	**308**	P	**P**	**10 03 49.2**	**+0.4**
AY01				IAmb	IAmb	10 04 14.6	
	comp=Z,20nm,1.4s						
PLCA	**Paso Flores**	**24.12**	**316**	P	**P**	**10 04 12.8**	**-1.2**
	comp=Z,2.9nm,1.0s,baz=149,slow=8.1,SNR=6.2						
PLCA				LR	LR	10 12 20.7	
	comp=Z,89nm,18.5s,baz=188,slow=34 comp=Z,2.9nm,1.0s						
PLCA	**Paso Flores**	**24.12**	**316**	P	**P**	**10 04 13.8**	**-0.2**
PLCA				IAmb	IAmb	10 04 22.6	
	comp=Z,17nm,1.4s						
QSPA	**South Pole Qui**	**29.55**	**180**	P	**P**	**10 05 03.0**	**+0.3**
QSPA				IAmb	IAmb	10 05 18.9	
	comp=Z,8.0nm,1.1s						
MT09	**Talagante**	**30.61**	**321**	P	**P**	**10 05 11.6**	**-0.6**
MT09				IAmb	IAmb	10 05 12.1	
	comp=Z,7.0nm,0.6s						
CFA	**Coronel Fontan**	**31.85**	**327**	LR	LR	10 17 07.7	
	comp=Z,79nm,18.2s,baz=154,slow=34						
CO01	**Juntas del Tor**	**33.90**	**325**	P	**P**	**10 05 42.6**	**+1.3**
CPUP	**Villa Florida**	**34.86**	**346**	LR	LR	10 21 21.5	
	comp=Z,43nm,18.8s,baz=181,slow=39						
AC05	**El Transito**	**35.02**	**326**	P	**P**	**10 05 51.1**	**+0.2**
AC05				IAmb	IAmb	10 06 11.0	
	comp=Z,14nm,1.5s						
AC04	**Llanos de Chal**	**35.85**	**325**	P	**P**	**10 05 58.6**	**+0.8**
GO03	**Copiap**	**36.19**	**326**	P	**P**	**10 06 00.8**	**0.0**
GO03				IAmb	IAmb	10 06 02.3	
	comp=Z,6.9nm,0.8s						
AC02	**Maricunga**	**36.62**	**328**	P	**P**	**10 06 05.5**	**+0.6**
SIV	**San Ignacio**	**45.54**	**343**	P	**P**	**10 07 17.7**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=149,slow=10,SNR=2.3 comp=Z,0.5nm,0.4s						
H10S2	**ASCENSION HYDR**	**57.45**	**41**	T	T	11 11 09.2	
	baz=20,slow=74,SNR=4.6						
H10S3	**ASCENSION HYDR**	**57.45**	**41**	T	T	11 11 07.6	
	baz=200,slow=74,SNR=16						
BOSA	**Boshof**	**57.65**	**91**	P	**P**	**10 08 50.2**	**+1.7**
	comp=Z,6.1nm,1.1s,baz=233,slow=10,SNR=3.2 comp=Z,6.1nm,1.1s						
H10N3	**ASCENSION HYDR**	**58.55**	**41**	T	T	11 12 30.9	
	baz=199						
H10N1	**ASCENSION HYDR**	**58.55**	**41**	T	T	11 12 40.8	
	baz=199						
H10N2	**ASCENSION HYDR**	**58.57**	**41**	T	T	11 12 38.2	
	baz=199						
TORD	**Torodi Ar. Bea**	**83.71**	**49**	P	**P**	**10 11 28.5**	**+1.5**
	comp=Z,0.8nm,0.7s,baz=207,slow=4.8,SNR=4.2 comp=Z,0.8nm,0.7s						
KMBO	**Kilima Mbogo**	**86.98**	**87**	P	**P**	**10 11 42.8**	**-1.0**
KMBO				IAmb	IAmb	10 11 48.1	
	comp=Z,2.1nm,0.9s						
ASAR	**Alice Springs**	**95.93**	**182**	P	**P**	**10 12 25.3**	**+0.1**
	comp=Z,0.3nm,0.9s,baz=174,slow=4.4,SNR=1.5 comp=Z,0.3nm,0.9s						
WRA	**Warramunga Arr**	**99.62**	**183**	P	**Pdif**	**10 12 42.2**	**+0.4**
	comp=Z,0.4nm,1.1s,baz=182,slow=4.3,SNR=1.7 comp=Z,0.4nm,1.1s						
ILAR	**Eielson Array**	**144.78**	**313**	PKP	**PKPab**	**10 18 32.9**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=143,slow=1.6,SNR=10						
MKAR	**Makanchi Array**	**148.63**	**94**	PKPbc	**PKPbc**	**10 18 45.3**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=225,slow=2.1,SNR=5.5						

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*INET **18** 09:59:11.6±0.8, 10°.16N×86°.28W, h15km±18km, MW3.2*
*UCR **18** 09:59:12.9±1.3, 10°.36N×86°.19W, h0km±10km, MW3.8*
ISC 18 09:59:13.6±1.8**, 10°.31N**±0°.06×**86°.24W**±0°.07**, h24**km±13km**, n36, σ0s.72**/50**, 6C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATIL	**Hatillo**	**0.53**	**91**	*e*P	**Pb**	**09 59 23.9**	**-0.4**
HATIL				*e*S	**Sb**	**09 59 32.4**	**+0.8**
SAJU	**San Juanillo,**	**0.57**	**114**	*e*P	**Pb**	**09 59 24.9**	**-0.1**
SAJU				*e*S	**Sn**	**09 59 35.1**	**+0.2**
HZTE	**Horizontes, Gu**	**0.75**	**57**	*e*P	**Pb**	**09 59 27.7**	**-0.4**
HZTE				*e*S	**Sn**	**09 59 39.3**	**-0.1**
ORTG	**Ortega, Santa**	**0.77**	**86**	*e*P	**Pb**	**09 59 27.9**	**-0.5**
ORTG				*e*S	**Sn**	**09 59 39.9**	**0.0**
INDI	**Punta indio, G**	**0.85**	**121**	*e*P	**Pb**	**09 59 29.2**	**-0.5**
BUEV	**Buena Vista**	**0.95**	**59**	⇑*i*P	**Pn**	**09 59 30.4**	**-1.2**
BUEV				*e*S	**Sb**	**09 59 43.9**	**+0.1**
LCRUZ	**La Cruz**	**0.97**	**38**	*e*P	**Pn**	**09 59 31.9**	**+0.1**
GPS2	**Hotel Rincn d**	**0.98**	**63**	⇑*i*P	**Pn**	**09 59 30.9**	**-1.0**
GPS2				*e*S	**Sb**	**09 59 45.0**	**+0.5**
VORI	**VORI**	**1.02**	**60**	*e*P	**Pn**	**09 59 31.6**	**-0.9**
VORI				*e*S	**Sb**	**09 59 45.5**	**-0.1**
GUAB	**Guayabo de Bag**	**1.07**	**68**	*e*P	**Pn**	**09 59 32.2**	**-0.9**
COLC	**Colonia**	**1.08**	**71**	⇑*e*P	**Pn**	**09 59 32.4**	**-0.9**
COLC				*e*S	**Sn**	**09 59 48.5**	**+1.0**
CUI	**Cuipilapa**	**1.11**	**72**	⇑*i*P	**Pn**	**09 59 33.1**	**-0.7**
CLARA	**Aguas Claras**	**1.15**	**65**	⇑*e*P	**Pn**	**09 59 33.6**	**-0.7**
CLARA				*e*S	**Sn**	**09 59 49.2**	**-0.1**
MOTZ	**Rio Naranjo**	**1.21**	**72**	*e*P	**Pn**	**09 59 34.8**	**-0.3**
VMAR	**Armenia, Volca**	**1.22**	**65**	*e*P	**Pn**	**09 59 34.6**	**-0.5**
VMAR				⇑*e*P	**Pn**	**09 59 34.7**	**-0.5**
VMAR				*e*S	**Sb**	**09 59 52.3**	**+0.9**
ACAL	**Aguas Claras**	**1.23**	**74**	*e*P	**Pn**	**09 59 35.0**	**-0.3**
ACAL				*e*S	**Sb**	**09 59 52.9**	**+1.1**
CANAL	**Canalete**	**1.28**	**66**	*e*P	**Pn**	**09 59 35.6**	**-0.4**
CANAL				*e*S	**Sb**	**09 59 54.0**	**+0.9**
CONN	**Concepcion**	**1.39**	**26**	*e*P	**Pn**	**09 59 37.1**	**-0.4**
LAFE	**Finca La Fe, P**	**1.40**	**111**	*e*P	**Pn**	**09 59 36.6**	**-1.0**
VERA	**Finca Concepci**	**1.45**	**68**	*e*P	**Pn**	**09 59 38.3**	**0.0**
TABAC	**Tabacon**	**1.46**	**82**	*e*P	**Pn**	**09 59 39.2**	**+0.6**
CASO	**Castillo**	**1.49**	**85**	*e*P	**Pn**	**09 59 39.0**	**+0.1**
CEDE	**Laguna Cedeo**	**1.52**	**83**	*e*P	**Pn**	**09 59 40.0**	**+0.6**
FORC	**Fortuna**	**1.55**	**84**	*e*P	**Pn**	**09 59 40.5**	**+0.8**
SOCE	**Pocosol**	**1.60**	**87**	*e*P	**Pb**	**09 59 41.5**	**-1.0**
JACO	**JACO, Garabito**	**1.68**	**112**	*e*P	**Pb**	**09 59 43.9**	**0.0**
TISN	**Laguna Tiscapa**	**1.83**	**359**	*e*P	**Pn**	**09 59 43.2**	**-0.3**
COVE	**Coope Vega, Sa**	**1.85**	**77**	*e*P	**Pb**	**09 59 46.1**	**-0.7**
COPN	**Copaltepe**	**1.90**	**350**	*e*P	**Pn**	**09 59 43.2**	**-1.3**
ACON	**Acoyapa**	**1.96**	**32**	*e*P	**Pn**	**09 59 44.6**	**-0.7**
ACON				*e*S	**Sn**	**10 00 10.5**	**+1.4**
HUEN		**2.02**	**2**	*e*P	**Pn**	**09 59 45.8**	**-0.4**
MOMN	**Momotombo**	**2.11**	**352**	*e*P	**Pn**	**09 59 47.0**	**-0.4**
BOAB	**BOACO BROADBAN**	**2.20**	**15**	*e*P	**Pn**	**09 59 48.1**	**-0.6**
CNGN	**Cerro Negro**	**2.23**	**348**	*e*P	**Pn**	**09 59 50.5**	**+1.5**
MATN	**Matagalpa**	**2.63**	**7**	*e*P	**Pn**	**09 59 54.3**	**-0.4**
ESPN	**Las Esperanzas**	**2.67**	**45**	*e*P	**Pn**	**09 59 54.8**	**-0.3**

ROM 18 10:00:16.4±0.1**, 43°.034N**±0°.004×**13°.017E**±0°.005**, h9**km**, ML1.4**/7**, 1C-1D, Error ellipse: s-maj=0.4km s-min=0.4km az=281.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.05**	**87**	P	Pg	10 00 18.4	+0.1
FDMO				S	Sg	10 00 19.4	-0.3
FDMO				AML	AML		
	comp=E,292μm,0.1s						
FDMO				AML	AML		
	comp=N,320μm,0.2s						
CESI	**CESI - Serrava**	**0.09**	**250**	P	Pg	10 00 19.2	+0.5
CESI				S	Sg	10 00 21.0	+0.6
CESI				AML	AML		
	comp=E,135μm,0.7s						
CESI				AML	AML		
	comp=N,108μm,1.3s						
T1220	**Camerino, Fraz**	**0.09**	**35**	⇑P	Pg	10 00 19.3	+0.5
T1220				S	Sg	10 00 21.1	+0.6
T1220				AML	AML		
	comp=E,566μm,0.3s						
T1220				AML	AML		
	comp=N,378μm,0.6s						
CSP1	**Cessapalombo**	**0.15**	**67**	P	Pg	10 00 20.4	+0.7
CSP1				S	Sg	10 00 23.2	+1.2
T1256	**Bolognola (MC)**	**0.16**	**100**	S	Sg	10 00 24.4	+2.2
T1256				AML	AML		
	comp=N,3275μm,0.6s						
T1256				AML	AML		
	comp=N,43800μm,0.6s						
T1256				AML	AML		
	comp=E,27450μm,1.1s						
T1256				AML	AML		
	comp=E,5625μm,0.5s						
MC2	**Monte Cornacci**	**0.18**	**134**	P	Pg	10 00 20.4	+0.2
MC2				S	Sg	10 00 24.4	+1.5
T1245	**Castelsantange**	**0.22**	**145**	P	Pg	10 00 21.6	+0.8
T1245				S	Sg	10 00 25.5	+1.6
T1245				AML	AML		
	comp=N,91μm,0.4s						
T1245				AML	AML		
	comp=E,70μm,1.1s						
SNTG	**Esanatoglia**	**0.23**	**346**	P	Pg	10 00 22.0	+0.9
SNTG				S	Sg	10 00 25.8	+1.6
ASSB	**Assisi San Ben**	**0.26**	**272**	P	Pg	10 00 22.4	+0.7
ASSB				S	Sb	10 00 26.9	-1.0
ASSB				AML	AML		
	comp=N,46μm,0.7s						
ASSB				AML	AML		
	comp=E,46μm,0.5s						
T1212	**Cascia, Frazio**	**0.28**	**176**	P	Pg	10 00 22.8	+0.7
T1212				S	Sb	10 00 27.9	-0.6
EL6	**Elcito**	**0.30**	**12**	⇓P	Pg	10 00 22.5	0.0
EL6				AML	AML		
	comp=N,133μm,0.8s						
EL6				AML	AML		
	comp=E,168μm,1.2s						

ROM 18 10:00:43.6±0.2**, 42°.852N**±0°.004×**12°.933E**±0°.010**, h12**km±2km**, ML0.8**/5**, 2D, Error ellipse: s-maj=0.6km s-min=0.5km az=255.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.07**	**59**	P	Pg	10 00 46.7	+0.5
T1216				S	Sg	10 00 48.5	+0.4
T1216				AML	AML		
	comp=E,97μm,0.4s						
T1216				AML	AML		
	comp=N,122μm,0.4s						
T1212	**Cascia, Frazio**	**0.13**	**141**	P	Pg	10 00 47.4	+0.5
T1212				S	Sg	10 00 49.9	+0.6
T1212				AML	AML		
	comp=E,52μm,0.5s						
T1212				AML	AML		
	comp=N,56μm,0.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
T1217	**Poggiodomo (PG**	**0.14**	**181**	⇓P	Pg	10 00 47.6	+0.5
T1217				S	Sg	10 00 50.0	+0.5
T1217				AML	AML		
	comp=E,44μm,0.3s						
T1217				AML	AML		
	comp=N,58μm,0.8s						
CESI	**CESI - Serrava**	**0.15**	**352**	P	Pg	10 00 47.8	+0.6
CESI				S	Sg	10 00 50.8	+0.9
CESI				AML	AML		
	comp=E,36μm,0.8s						
FDMO	**Fiordimonte**	**0.22**	**32**	P	Pg	10 00 48.1	-0.2
FDMO				S	Sg	10 00 52.7	+1.2
FDMO				AML	AML		
	comp=E,40μm,1.4s						
FDMO				AML	AML		
	comp=N,44μm,0.2s						
FDMO				AML	AML		
	comp=E,40μm,0.6s						
ASSB	**Assisi San Ben**	**0.28**	**313**	P	Pg	10 00 49.7	+0.4
ASSB				S	Sg	10 00 54.1	+0.9
T1211	**Morro Reatino**	**0.32**	**190**	P	Pg	10 00 50.7	+0.5
T1211				S	Sb	10 00 56.0	-0.7
FOSV	**Fossato di Vic**	**0.46**	**344**	⇓P	Pg	10 00 53.0	+0.3
MMUR	**Monte Murano**	**0.59**	**5**	S	Sb	10 01 05.1	+0.7
AQU	**L'Aquila**	**0.61**	**145**	AML	AML		
	comp=N,150μm,0.1s						
AQU				AML	AML		
	comp=E,148μm,0.2s						

IDC 18 10:18:35.0±11.0,23°.82S×179°.86E,h539km±115km, mb3.2/4,mbtmp4.1/5,Error ellipse: s-maj=235.9km s-min=24.1km az=158.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.29**	**344**	P	P	10 20 15.6	-0.3
	3.2nm,0.6s,baz=356,slow=23,SNR=6.5						
CTA	**Charters Tower**	**31.34**	**270**	P	P	10 24 12.6	+0.8
	5.2nm,0.3s,baz=91,slow=11,SNR=20						
	5.2nm,0.3s						
ASAR	**Alice Springs**	**41.92**	**261**	P	P	10 25 38.1	-0.6
	0.8nm,0.7s,baz=86,slow=8.8,SNR=4.3						
	0.8nm,0.7s						
WRA	**Warramunga Arr**	**42.28**	**266**	P	P	10 25 40.8	-0.8
	1.7nm,0.4s,baz=103,slow=8.1,SNR=10.0						
	1.7nm,0.4s						
TXAR	**Lajitas Array**	**90.50**	**58**	P	P	10 30 39.8	0.0
	0.4nm,0.8s,baz=213,slow=7.1,SNR=6.1						
	0.4nm,0.8s						

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*IDC **18** 10:21:26.2±2.2,7°.70S×130°.11E,h0km,mb3.6/1, mbtmp3.5/3,ML3.6/2,Error ellipse: s-maj=134.0km s-min=31.9km az=69.0*

ISC 18 10:21:28.6±1.2,8°.0S±0°.1×130°.08E±0°.08,h10km,n10, σ3s.00/10,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.21**	**91**	P	**Pg**	**10 21 52.2**	**+0.4**
MTN	**Manton Dam**	**4.97**	**168**	P	Pn	10 22 50.6	+7.3
KDU	**Kakadu**	**5.26**	**154**	P	**Pn**	**10 22 51.9**	**+4.6**
SOEI	**Soe**	**6.02**	**252**	P	**Pb**	**10 23 14.4**	**+0.7**
KNRA	**Kununurra**	**7.78**	**189**	P	Pn	10 23 31.3	+9.3
WRA	**Warramunga Arr**	**12.61**	**161**	Pn	**Pn**	**10 24 29.8**	**+1.6**
	0.3nm,0.3s,baz=344,slow=13,SNR=8.1						
WRA				Sn	**Sn**	**10 26 43.2**	**-5.6**
	1.0nm,0.3s,baz=343,slow=22,SNR=9.4						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**16.05**	**167**	Pn	**P**	**10 25 17.1**	**-0.9**
	0.3nm,0.3s,baz=348,slow=9.7,SNR=16						
ASAR				Sn	**Sn**	**10 28 12.6**	**-0.1**
	0.2nm,0.3s,baz=329,slow=21,SNR=7.6						
	0.5nm,0.5s						
AS01	**Alice Springs**	**16.06**	**167**	P	**P**	**10 25 19.1**	**+1.0**
MTSU	**Mount Surprise**	**17.15**	**128**	P	**Pn**	**10 25 27.3**	**-1.3**
MKAR	**Makanchi Array**	**69.06**	**327**	P	**P**	**10 32 32.8**	**-1.9**
	0.3nm,0.5s,baz=121,slow=7.7,SNR=6.8						
	0.3nm,0.5s						

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*IDC **18** 10:31:23.5±0.9,22°.99S×112°.19W,h0km,mb4.2/16, mbtmp4.2/16,MS4.1/40,Error ellipse: s-maj=29.9km s-min=15.7km az=43.0*

*NEIC **18** 10:31:24.4±1.0,23°.24S±0°.10×112°.4W±0°.1,h10km±1km, mb4.7/138,Error ellipse: s-maj=23.3km s-min=15.9km az=254.0*

*GCMT **18** 10:31:27.4±0.2,23°.36S±0°.01×112°.30W±0°.01,h16km±1km, MW4.9/103,Moment Tensor Solution. s37,c45; s103,c149; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.71±.10; $M_{\theta\theta}$3.22±.10; $M_{\phi\phi}$-2.51±.08; $M_{r\theta}$0.35±.23; $M_{\theta\phi}$1.01±.07; $M_{\phi r}$-0.10±.24; Best double couple: $M_0$3.05800×10^{16} NP1:ϕ_s305.00000°,δ90.00000°, λ-7.00000°. NP2:ϕ_s35.00000°,δ83.00000°,λ-180.00000°. Principal axes: T 3.4190, Plg5.0000°, Azm350.0000°; N -0.7280, Plg83.0000°, Azm124.0000°; P -2.6960, Plg5.0000°, Azm260.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 10:31:24.1±0.5,23°.18S±0°.08×112°.37W±0°.09,h10km, n201,σ0s.93/122,mb4.7/84,MS4.1/43,Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA02	**Isla de Pascua**	**4.77**	**147**	Pn	**Pn**	**10 32 35.6**	**-0.3**
RPN	**Rapa Nui**	**4.79**	**146**	LR	LR	10 34 03.9	
	comp=Z,4μm,18.2s,baz=315,slow=33						
RPN	**Rapa Nui**	**4.79**	**146**	Pn	**Pn**	**10 32 36.4**	**+0.1**
TAOE	**Nuku Hiva Isla**	**30.18**	**294**	*e*LR	LR	10 44 57.5	
	comp=Z,208nm,25.9s						
H03N2	**Juan Fernandez**	**31.04**	**117**	T	T	11 10 15.6	
	baz=286,slow=75						
H03N3	**Juan Fernandez**	**31.05**	**117**	T	T	11 10 20.7	
	baz=286,slow=75						
H03N1	**Juan Fernandez**	**31.05**	**117**	T	T	11 10 16.7	
	baz=286,slow=75						
PPT2	**Papeete2**	**35.26**	**272**	*e*S	**S**	**10 43 53.0**	**-0.2**
	77nm,26.5s						
PPT2				*e*LR	LR	10 47 36.5	
	comp=Z,147nm,40.5s						
PPT2				*e*LR	LR	10 47 42.6	
	comp=Z,180nm,22.8s						
PPT	**Papeete**	**35.26**	**272**	LR	LR	10 49 17.8	
	comp=Z,133nm,18.2s,baz=132,slow=30						
NNA	**Nana**	**35.55**	**78**	LR	LR	10 48 47.0	
	comp=Z,394nm,21.0s,baz=250,slow=30						
ATAH	**Atahualpa**	**36.33**	**69**	P	**P**	**10 38 27.0**	**-1.9**
	5.3nm,0.9s,baz=274,slow=14,SNR=2.7						
ATAH				LR	LR	10 49 49.4	
	comp=Z,194nm,18.2s,baz=250,slow=31						
	5.3nm,0.9s						
MCRA	**Macar, Loja**	**36.46**	**64**	P	**P**	**10 38 29.9**	**+0.3**
LC02	**Puerto Saavedr**	**36.56**	**124**	P	**P**	**10 38 29.6**	**-0.5**
VA05	**Santo Domingo**	**37.12**	**116**	P	**P**	**10 38 34.8**	**-0.1**
VA05				IAmb	IAmb	10 38 39.7	
	comp=Z,12nm,0.8s						
LL05	**Los Muermos**	**37.18**	**129**	P	**P**	**10 38 35.2**	**-0.2**
CO05	**La Serena**	**37.25**	**109**	P	**P**	**10 38 35.7**	**-0.4**
CO02	**Combarbal**	**37.48**	**111**	P	**P**	**10 38 39.1**	**+1.0**
CO02				IAmb	IAmb	10 38 50.7	
	comp=Z,29nm,1.3s						
GO04	**Tololo Observa**	**37.63**	**110**	P	**P**	**10 38 40.5**	**+0.9**
GO04				IAmb	IAmb	10 38 53.4	
	comp=Z,13nm,0.9s						
VA03	**San Esteban**	**37.94**	**114**	P	**P**	**10 38 42.2**	**+0.2**
VA03				IAmb	IAmb	10 38 46.2	
	comp=Z,13nm,0.8s						
AC05	**El Transito**	**38.10**	**108**	P	**P**	**10 38 43.8**	**+0.3**
AC05				IAmb	IAmb	10 38 47.4	
	comp=Z,16nm,0.9s						
GO06	**Curarrehue**	**38.19**	**125**	P	**P**	**10 38 45.0**	**+0.9**
LMEL	**Las Melosas**	**38.31**	**116**	P	**P**	**10 38 44.8**	**-0.4**
LMEL				IAmb	IAmb	10 38 55.6	
	comp=Z,16nm,0.9s						
GO02	**Mina Guanaco**	**38.96**	**102**	P	**P**	**10 38 50.6**	**-0.3**
GO02				IAmb	IAmb	10 38 52.8	
	comp=Z,17nm,1.1s						
PORT	**Chimborazo Vol**	**39.08**	**61**	P	**P**	**10 38 52.2**	**-0.2**
PORT				IAmb	IAmb	10 38 59.2	
	comp=Z,13nm,0.8s						
PLCA	**Paso Flores**	**39.14**	**127**	P	**P**	**10 38 52.2**	**+0.3**
	comp=Z,3.8nm,1.1s,baz=283,slow=14,SNR=4.2						
	comp=Z,3.8nm,1.1s						
PLCA	**Paso Flores**	**39.14**	**127**	P	**P**	**10 38 50.4**	**-1.6**
PLCA	**Paso Flores**	**39.14**	**127**	*e*P	P	10 38 56.9	+4.9
PB07	**IPOC Station P**	**39.19**	**96**	P	**P**	**10 38 51.6**	**-1.1**
PB07				IAmb	IAmb	10 38 59.9	
	comp=Z,16nm,0.9s						
AC02	**Maricunga**	**39.21**	**105**	P	**P**	**10 38 52.7**	**-0.6**
PB01	**IPOC Station P**	**39.68**	**95**	P	**P**	**10 38 56.5**	**-0.2**
PB01				IAmb	IAmb	10 38 58.1	
	comp=Z,16nm,1.0s						
PB09	**IPOC Station P**	**39.76**	**97**	P	**P**	**10 38 56.9**	**-0.6**
PB09				IAmb	IAmb	10 39 00.0	
	comp=Z,31nm,1.2s						
PB11	**IPOC Station P**	**39.79**	**93**	P	**P**	**10 38 57.7**	**0.0**
PB11				IAmb	IAmb	10 39 09.9	
	comp=Z,44nm,1.6s						
CFA	**Coronel Fontan**	**39.85**	**112**	P	**P**	**10 38 57.9**	**-0.1**
	comp=Z,4.5nm,0.9s,baz=266,slow=9.6,SNR=6.9						
CFA				LR	LR	10 51 16.7	
	comp=Z,293nm,19.2s,baz=267,slow=30						
	comp=Z,4.5nm,0.9s						
LVC	**Limon Verde**	**39.92**	**98**	P	**P**	**10 39 00.1**	**+1.0**
	comp=Z,3.1nm,0.7s,baz=223,slow=8.6,SNR=3.8						
LVC				LR	LR	10 51 07.5	
	comp=Z,218nm,19.3s,baz=260,slow=30						
	comp=Z,3.1nm,0.7s						
LVC	**Limon Verde**	**39.92**	**98**	*e*P	**P**	**10 38 57.4**	**-1.7**
MNMC	**Minye Minye**	**39.99**	**93**	P	**P**	**10 38 58.6**	**-0.9**
MNMC				IAmb	IAmb	10 39 11.0	
	comp=Z,14nm,1.0s						
PB16	**IPOC Station P**	**40.26**	**91**	P	**P**	**10 39 00.6**	**-1.5**
OTAV	**Otavalo**	**40.35**	**60**	*e*P	**P**	**10 39 03.0**	**+0.2**
CZSB	**Cruzeiro do Su**	**41.03**	**74**	P	**P**	**10 39 07.9**	**+0.1**
LPAZ	**La Paz**	**42.07**	**89**	P	**P**	**10 39 17.6**	**+0.5**
	comp=Z,7.8nm,0.9s,baz=251,slow=6.1,SNR=15						
LPAZ				LR	LR	10 52 36.6	
	comp=Z,240nm,19.5s,baz=256,slow=30						
	comp=Z,7.8nm,0.9s						
LPAZ	**La Paz**	**42.07**	**89**	P	**P**	**10 39 16.4**	**-0.7**
LPAZ				IAmb	IAmb	10 39 21.6	
	comp=Z,17nm,1.1s						
CMIG	**Matias Romero**	**43.52**	**25**	LR	LR	10 53 48.2	
	comp=Z,94nm,19.2s,baz=204,slow=31						
RAR	**Rarotonga**	**43.79**	**263**	LR	LR	10 53 10.5	
	comp=Z,189nm,18.1s,baz=121,slow=30						
ETMB	**Extrema**	**46.01**	**81**	P	**P**	**10 39 46.9**	**-1.2**
ETMB	**Extrema**	**46.01**	**81**	*e*P	**P**	**10 39 47.2**	**-0.8**
ROSC	**El Rosal**	**46.42**	**58**	LR	LR	10 55 37.8	
	comp=Z,173nm,18.5s,baz=276,slow=32						
SLBS	**Sierra La Lagu**	**46.65**	**3**	P	**P**	**10 39 53.1**	**+0.2**
ZAIG	**Zacatecas**	**46.66**	**12**	P	**P**	**10 39 52.7**	**-0.6**
LPIG	**La Paz**	**47.05**	**3**	LR	LR	10 55 03.9	
	comp=Z,272nm,21.1s,baz=188,slow=30						
MECA	**Mercedes**	**48.63**	**109**	*e*P	**P**	**10 40 09.7**	**+1.3**
SIV	**San Ignacio**	**48.65**	**91**	LR	LR	10 57 07.5	
	comp=Z,82nm,18.1s,baz=272,slow=32						
BBSD	**Serra de San D**	**48.74**	**93**	*e*P	**P**	**10 40 09.3**	**0.0**
SAML	**Samuel**	**49.10**	**82**	P	**P**	**10 40 11.5**	**-0.6**
SAML				IAmb	IAmb	10 40 29.1	
	comp=Z,13nm,1.2s						
SAML	**Samuel**	**49.10**	**82**	*e*P	**P**	**10 40 11.5**	**-0.6**
SGCB	**S£o Gabriel d**	**49.63**	**69**	*e*P	**P**	**10 40 16.1**	**0.0**
CPUP	**Villa Florida**	**49.76**	**106**	P	**P**	**10 40 15.6**	**-1.5**
	comp=Z,1.8nm,0.8s,baz=252,slow=9.6,SNR=2.5						
CPUP				LR	LR	10 57 07.0	
	comp=Z,91nm,21.0s,baz=262,slow=31						
	comp=Z,1.8nm,0.8s						
SRIG	**Santa Rosalia**	**50.21**	**0**	P	**P**	**10 40 19.8**	**-0.4**
SRIG				IAmb	IAmb	10 40 28.6	
	comp=Z,16nm,1.2s						
HPIG		**50.24**	**8**	P	**P**	**10 40 21.4**	**+0.6**
VILB	**Vilhena**	**50.40**	**88**	*e*P	**P**	**10 40 21.0**	**-1.0**
PTLB	**Pontes e Lacer**	**50.59**	**91**	P	**P**	**10 40 23.1**	**-0.3**
PTLB				IAmb	IAmb	10 40 24.0	
	comp=Z,8.3nm,1.1s						
PTLB	**Pontes e Lacer**	**50.59**	**91**	*e*P	**P**	**10 40 23.4**	**-0.1**
AZCA	**Azaras, Argent**	**50.69**	**108**	*e*P	**P**	**10 40 25.3**	**+1.2**
RODS	**Rosario do Sul**	**51.09**	**111**	*e*P	**P**	**10 40 28.6**	**+1.5**
SDV	**Santo Domingo**	**51.79**	**57**	LR	LR	10 59 42.4	
	comp=Z,117nm,20.1s,baz=261,slow=33						
HSIG		**51.92**	**2**	P	**P**	**10 40 33.9**	**+0.8**
PMSA	**Palmer Station**	**51.98**	**156**	LR	LR	10 57 13.1	
	comp=Z,266nm,19.1s,baz=300,slow=30						
PLTB	**Pedras Altas**	**52.30**	**113**	P	**P**	**10 40 35.5**	**-0.5**
PLTB				IAmb	IAmb	10 40 50.3	
	comp=Z,18nm,1.4s						
PLTB	**Pedras Altas**	**52.30**	**113**	*e*P	**P**	**10 40 37.9**	**+1.8**
AMBA	**Amambai (Brazi**	**52.48**	**102**	*e*P	**P**	**10 40 37.6**	**0.0**
CPSB	**Cacapava Do Su**	**52.59**	**111**	*e*P	**P**	**10 40 40.0**	**+1.8**
TX32	**Lajitas Array**	**52.88**	**10**	P	**P**	**10 40 40.8**	**+0.5**
TXAR	**Lajitas Array**	**52.88**	**10**	P	**P**	**10 40 41.2**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=193,slow=8.9,SNR=6.3						
TXAR				LR	LR	10 58 59.3	
	comp=Z,140nm,19.6s,baz=169,slow=31						
	comp=Z,0.6nm,0.6s						
TX31	**Lajitas Ar. Si**	**52.88**	**10**	P	**P**	**10 40 40.5**	**+0.2**
TX31				IAmb	IAmb	10 40 48.7	
	comp=Z,20nm,1.3s						
MCR1	**Marechal Candi**	**53.02**	**104**	*e*P	**P**	**10 40 42.2**	**+0.7**
RVDE	**Rio Verde (Bra**	**53.45**	**97**	*e*P	**P**	**10 40 44.8**	**0.0**
SALV	**Santo Antonio**	**53.62**	**93**	*e*P	**P**	**10 40 46.1**	**+0.1**
MACA	**Manacapuru-AM**	**53.76**	**76**	P	**P**	**10 40 46.0**	**-1.0**
MACA	**Manacapuru-AM**	**53.76**	**76**	*e*P	**P**	**10 40 48.0**	**+1.0**
BAUV	**El Baul**	**53.84**	**59**	P	**P**	**10 40 46.5**	**-1.1**
BAUV				IAmb	IAmb	10 41 04.2	
	comp=Z,10nm,0.9s						
SFX	**San Felipe**	**53.96**	**357**	P	**P**	**10 40 48.4**	**+0.3**
PDRB	**Porto dos Gac**	**54.04**	**88**	*e*P	**P**	**10 40 48.5**	**-0.6**
319A	**Douglas**	**54.33**	**3**	P	**P**	**10 40 51.8**	**+0.8**
319A				IAmb	IAmb	10 40 59.4	
	comp=Z,8.9nm,0.8s						
PIX	**Pinacate**	**54.44**	**359**	P	**P**	**10 40 51.9**	**+0.3**
JCT	**Junction City**	**54.70**	**13**		**P**	**10 40 53.5**	**0.0**
PTGB	**Pitanga**	**54.73**	**105**	*e*P	**P**	**10 40 55.0**	**+0.9**
214A	**Organ Pipe Nat**	**54.83**	**360**	P	**P**	**10 40 55.3**	**+0.9**
214A				IAmb	IAmb	10 40 56.5	
	comp=Z,10.0nm,1.4s						
TUC	**Tucson**	**55.20**	**2**	P	**P**	**10 40 57.8**	**+0.6**
121A	**Cookes Peak, D**	**55.57**	**5**	IAmb	IAmb	10 41 02.0	
	comp=Z,9.8nm,1.1s						
YUH	**Yuha Desert**	**55.62**	**356**	P	**P**	**10 41 00.7**	**+0.6**
113A	**Mohawk Valley,**	**55.65**	**359**	P	**P**	**10 41 00.6**	**+0.3**
BAR	**Barrett**	**55.70**	**356**	IAmb	IAmb	10 41 09.1	
	comp=Z,16nm,1.3s						
PFO	**Pinyon Flats O**	**56.61**	**356**	P	**P**	**10 41 07.1**	**-0.3**
	comp=Z,2.1nm,1.1s,baz=261,slow=0.3,SNR=4.0						
PFO				LR	LR	10 59 30.6	
	comp=Z,235nm,20.9s,baz=208,slow=30						
	comp=Z,2.1nm,1.1s						
ELS	**Elsinore Mount**	**56.72**	**355**	P	**P**	**10 41 07.6**	**-0.5**
AFI	**Afiamalu**	**56.76**	**268**	LR	LR	10 58 34.5	
	comp=Z,110nm,20.4s,baz=102,slow=29						
Y14A	**Wickenburg**	**56.81**	**359**	P	**P**	**10 41 08.7**	**+0.1**
POST	**Post**	**56.89**	**11**	P	**P**	**10 41 09.3**	**0.0**
POST				IAmb	IAmb	10 41 09.8	
	comp=Z,10nm,0.8s						
ARAG	**Araguaiana, MT**	**57.25**	**94**	*e*P	**P**	**10 41 11.7**	**-0.4**
X18A	**Snowflake**	**57.44**	**2**	IAmb	IAmb	10 41 15.4	
	comp=Z,7.5nm,0.9s						
ITRB	**Iturama**	**57.44**	**99**	*e*P	**P**	**10 41 15.0**	**+1.5**
FW03	**Perrin-Whitt E**	**57.55**	**14**	IAmb	IAmb	10 41 29.4	
	comp=Z,82nm,0.6s						
MSTX	**Muleshoe**	**57.56**	**9**	IAmb	IAmb	10 41 14.5	
	comp=Z,8.2nm,0.7s						
ITTB	**Itaituba**	**57.70**	**80**	*e*P	**P**	**10 41 17.0**	**+1.6**
ANMO	**Albuquerque**	**58.08**	**6**	P	**P**	**10 41 17.6**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=308,slow=3.0,SNR=4.8						
ANMO				LR	LR	11 01 48.7	
	comp=Z,250nm,19.5s,baz=284,slow=32						
	comp=Z,0.8nm,0.6s						
GSC	**Goldstone, Bar**	**58.32**	**356**	IAmb	IAmb	10 41 27.7	
	comp=Z,4.0nm,0.8s						
AMTX	**Amarillo**	**58.63**	**10**	P	**P**	**10 41 20.9**	**-0.6**
AMTX				IAmb	IAmb	10 41 35.0	
	comp=Z,6.6nm,0.8s						
V12A	**Nelson**	**58.63**	**358**	P	**P**	**10 41 21.6**	**0.0**
QSM	**Queen of Sheba**	**58.98**	**356**	IAmb	IAmb	10 41 32.8	
	comp=Z,9.2nm,1.3s						
GWY	**Greenwater Val**	**59.19**	**356**	IAmb	IAmb	10 41 27.3	
	comp=Z,6.0nm,1.2s						
U15A	**North Rim**	**59.29**	**0**	IAmb	IAmb	10 41 34.0	
	comp=Z,4.7nm,1.0s						
WCT	**Wildcat Mounta**	**59.79**	**356**	IAmb	IAmb	10 41 43.1	
	comp=Z,5.9nm,1.0s						
KNB	**Kanab**	**59.88**	**360**	IAmb	IAmb	10 41 31.6	
	comp=Z,5.1nm,1.1s						
TPNV	**Topopah Spring**	**59.92**	**356**	IAmb	IAmb	10 41 33.1	
	comp=Z,13nm,1.6s						
MVCO	**Mesa Verde**	**60.18**	**4**	P	**P**	**10 41 32.3**	**-0.1**
PRN	**Pahroc Range**	**60.32**	**358**	IAmb	IAmb	10 41 35.6	
	comp=Z,5.6nm,1.2s						
CCUT	**Cedar City**	**60.42**	**359**	IAmb	IAmb	10 41 42.4	
	comp=Z,4.5nm,0.9s						
DSP	**Deep Springs**	**60.46**	**355**	P	**P**	**10 41 35.5**	**+1.6**
BDFB	**Brasilia**	**60.75**	**95**	P	**P**	**10 41 37.1**	**+0.5**
	comp=Z,4.6nm,0.9s,baz=258,slow=11,SNR=4.1						
BDFB				LR	LR	11 04 41.0	
	comp=Z,123nm,21.3s,baz=238,slow=33						
	comp=Z,4.6nm,0.9s						
TUL1	**Leonard**	**60.83**	**15**	P	**P**	**10 41 36.1**	**-0.4**
SDCO	**Great Sand Dun**	**60.95**	**6**	P	**P**	**10 41 37.5**	**-0.1**
URZ	**Urewera**	**61.12**	**238**	LR	LR	11 01 06.0	
	comp=Z,190nm,20.2s,baz=188,slow=29						
PV15	**Paradox Valley**	**61.31**	**3**	IAmb	IAmb	10 41 43.2	
	comp=Z,5.1nm,0.9s						
LHV	**Little Huntoon**	**61.38**	**354**	IAmb	IAmb	10 41 42.4	
	comp=Z,11nm,1.2s						
PV23	**Carpenter Ridg**	**61.39**	**3**	IAmb	IAmb	10 41 44.2	
	comp=Z,4.9nm,0.9s						
TCRU	**Three Creeks R**	**61.47**	**360**	IAmb	IAmb	10 41 55.5	
	comp=Z,5.5nm,0.8s						
NV11	**Mina Array Sit**	**61.53**	**355**	IAmb	IAmb	10 41 43.6	
	comp=Z,6.8nm,1.0s						
NVAR	**Mina Array Bea**	**61.54**	**355**	P	**P**	**10 41 42.3**	**+0.8**
	comp=Z,5.4nm,0.9s,baz=180,slow=9.9,SNR=33						
NVAR				LR	LR	11 02 43.1	
	comp=Z,279nm,19.1s,baz=184,slow=31						
	comp=Z,5.4nm,0.9s						
SRU	**San Rafael Swe**	**61.99**	**2**	IAmb	IAmb	10 41 56.5	
	comp=Z,4.3nm,0.9s						
KVN	**Kaiserville**	**62.14**	**355**	IAmb	IAmb	10 41 47.1	
	comp=Z,10nm,1.3s						
BSCB	**Bom Sucesso**	**62.15**	**102**	*e*P	**P**	**10 41 49.8**	**+3.8**
SMCO	**Snowmass**	**62.24**	**5**	P	**P**	**10 41 46.4**	**0.0**
SMCO				IAmb	IAmb	10 42 00.7	
	comp=Z,5.1nm,1.2s						
P17A	**Butcher Ranch,**	**62.35**	**1**	P	**P**	**10 41 46.8**	**-0.1**
P17A				IAmb	IAmb	10 41 48.2	
	comp=Z,6.5nm,1.0s						
MCPB	**Macapa, AP**	**62.73**	**78**	*e*P	**P**	**10 41 52.1**	**+2.3**
NLU	**North Lily Min**	**62.81**	**0**	IAmb	IAmb	10 41 51.8	
	comp=Z,5.0nm,1.1s						
PAHR	**Pah Rah Range**	**62.90**	**354**	IAmb	IAmb	10 42 02.2	
	comp=Z,5.7nm,1.2s						
S39A	**Bolivar**	**63.15**	**17**	IAmb	IAmb	10 41 56.9	
	comp=Z,4.5nm,0.9s						
BSUT	**Blindstream Ca**	**63.41**	**1**	IAmb	IAmb	10 42 00.1	
	comp=Z,5.8nm,1.1s						
SMTB	**Santa Maria do**	**63.42**	**88**	*e*P	**P**	**10 41 56.7**	**+2.2**
ELK	**Elko**	**63.65**	**358**	P	**P**	**10 41 55.7**	**0.0**
	comp=Z,2.1nm,1.0s,baz=145,slow=6.2,SNR=4.9						
ELK				LR	LR	11 04 08.6	
	comp=Z,231nm,19.7s,baz=164,slow=31						
	comp=Z,2.1nm,1.0s						
ELK	**Elko**	**63.65**	**358**	P	**P**	**10 41 56.0**	**+0.3**
BGU	**Big Grassy Mou**	**63.78**	**359**	P	**P**	**10 41 56.1**	**-0.3**
BGU				IAmb	IAmb	10 42 04.6	
	comp=Z,8.7nm,1.7s						
R40A	**Maddies Statio**	**63.99**	**18**	IAmb	IAmb	10 42 12.6	
	comp=Z,7.8nm,1.2s						
CCM	**Cathedral Cave**	**64.06**	**18**	P	**P**	**10 41 58.1**	**0.0**
CCM				IAmb	IAmb	10 42 13.0	
	comp=Z,5.8nm,1.1s						
JANB	**Januaria**	**64.32**	**96**	*e*P	**P**	**10 42 02.0**	**+1.6**
TKL	**Tuckaleechee C**	**64.48**	**26**	LR	LR	11 06 02.6	
	comp=Z,55nm,21.7s,baz=216,slow=32						
MDP	**Montagnes des**	**64.69**	**72**	LR	LR	11 07 50.7	
	comp=Z,122nm,19.3s,baz=213,slow=34						
BELA	**Belgrano 2**	**64.92**	**167**	P	**P**	**10 42 03.0**	**-0.3**
MOD	**Modoc Plateau**	**65.17**	**353**	IAmb	IAmb	10 42 18.5	
	comp=Z,6.4nm,0.9s						
YBH	**Yreka Blue Hor**	**65.29**	**351**	LR	LR	11 04 02.5	
	comp=Z,254nm,20.3s,baz=182,slow=30						
WVOR	**Wild Horse Val**	**65.54**	**355**	IAmb	IAmb	10 42 24.9	
	comp=Z,6.1nm,1.1s						
PDAR	**Pinedale Array**	**65.67**	**2**	P	**P**	**10 42 07.8**	**-1.0**
	comp=Z,1.8nm,0.8s,baz=169,slow=6.9,SNR=14						
PDAR				LR	LR	11 05 36.6	
	comp=Z,124nm,21.8s,baz=178,slow=31						
	comp=Z,1.8nm,0.8s						
K22A	**Casper**	**65.72**	**5**	IAmb	IAmb	10 42 16.2	
	comp=Z,6.0nm,0.9s						
MFID	**Camas Ranch**	**66.34**	**357**	IAmb	IAmb	10 42 14.9	
	comp=Z,5.2nm,0.9s						
HLID	**Hailey**	**66.44**	**358**	P	**P**	**10 42 13.5**	**-0.2**
HLID				IAmb	IAmb	10 42 15.3	
	comp=Z,8.5nm,1.2s						
J08A	**Circle Bar Ran**	**66.45**	**355**	IAmb	IAmb	10 42 15.9	
	comp=Z,10nm,1.2s						
VNDA	**Vanda**	**66.62**	**194**	LR	LR	11 04 45.2	
	comp=Z,187nm,19.7s,baz=52,slow=30						
IMW	**Indian Meadow**	**66.76**	**1**	IAmb	IAmb	10 42 16.5	
	comp=Z,12nm,1.5s						
FLWY	**Flagg Ranch**	**66.95**	**1**	IAmb	IAmb	10 42 26.2	
	comp=Z,4.7nm,0.9s						
QSPA	**South Pole Qui**	**66.97**	**180**	LR	LR	11 07 27.3	
	comp=Z,195nm,18.9s,baz=96,slow=32						
QSPA	**South Pole Qui**	**66.97**	**180**	P	**P**	**10 42 16.4**	**-0.4**
RSSD	**Black Hills**	**67.41**	**6**	P	**P**	**10 42 19.7**	**-0.2**
RSSD				IAmb	IAmb	10 42 22.7	
	comp=Z,9.8nm,1.2s						
GUA01	**Guaratinga, BA**	**67.94**	**99**	*e*P	P	10 42 28.9	+5.2
EGMT	**Eagleton**	**70.92**	**2**	IAmb	IAmb	10 42 45.4	
	comp=Z,7.7nm,1.1s						
NEW	**Newport**	**71.25**	**357**	LR	LR	11 09 06.2	
	comp=Z,164nm,18.5s,baz=186,slow=32						
NEW	**Newport**	**71.25**	**357**	IAmb	IAmb	10 42 44.6	
	comp=Z,7.8nm,1.1s						
VNA3	**Neumayer Olymp**	**72.24**	**161**	P	**P**	**10 42 47.7**	**-1.4**
VNA2	**Neumayer--Watz**	**73.05**	**161**	P	**P**	**10 42 53.0**	**-0.9**
	baz=267,slow=6.0						
DZM	**Mont Dzumac**	**73.92**	**253**	*e*LR	LR	11 05 38.0	
	comp=Z,404nm,27.4s						
SNAA	**Sanae**	**74.10**	**162**	LR	LR	11 09 56.9	
	comp=Z,96nm,18.6s,baz=22,slow=31						
SNAA	**Sanae**	**74.10**	**162**	P	**P**	**10 42 59.0**	**-1.1**
SNAA				IAmb	IAmb	10 43 03.7	
	comp=Z,7.2nm,1.1s						
SADO	**Sadowa**	**74.12**	**24**	LR	LR	11 13 59.0	
	comp=Z,63nm,18.1s,baz=284,slow=35						
ULM	**Lac du Bonnet**	**74.55**	**11**	P	**P**	**10 43 01.3**	**-1.5**
	comp=Z,1.6nm,0.8s,baz=191,slow=10,SNR=2.0						
ULM				LR	LR	11 12 07.9	
	comp=Z,117nm,21.3s,baz=244,slow=33						
	comp=Z,1.6nm,0.8s						
BBB	**Bella Bella**	**76.30**	**350**	LR	LR	11 09 16.0	
	comp=Z,49nm,21.1s,baz=192,slow=30						
DLBC	**Dease Lake**	**82.63**	**351**	IAmb	IAmb	10 43 51.2	
	comp=Z,8.9nm,1.1s						
FCC	**Fort Churchill**	**83.03**	**9**	IAmb	IAmb	10 43 53.4	
	comp=Z,6.7nm,1.2s						
HNR	**Honiara**	**84.24**	**262**	LR	LR	11 13 24.8	
	comp=Z,2μm,19.3s,baz=178,slow=30						
P33M	**Teslin, Yukon**	**84.76**	**350**	IAmb	IAmb	10 44 01.0	
	comp=Z,8.1nm,1.1s						
TOO	**Toolangi**	**85.19**	**231**	P	**P**	**10 44 00.4**	**-0.6**
YKA	**Yellowknife Ar**	**85.40**	**359**	P	**P**	**10 44 01.0**	**-0.1**
	comp=Z,4.2nm,1.1s,baz=173,slow=4.9,SNR=37						
	comp=Z,4.2nm,1.1s						
KDAK	**Kodiak Island**	**87.37**	**340**	LR	LR	11 14 17.1	
	comp=Z,62nm,19.6s,baz=213,slow=30						
H11S2	**WAKE ISLAND Hy**	**89.18**	**290**	T	T	12 22 55.4	
	baz=115,slow=75,SNR=61						
H11S1	**WAKE ISLAND Hy**	**89.19**	**290**	T	T	12 22 56.3	
	baz=115,slow=75,SNR=33						
H11S3	**WAKE ISLAND Hy**	**89.20**	**290**	T	T	12 22 56.7	
	baz=115,slow=75,SNR=47						
MAW	**Mawson**	**89.42**	**178**	LR	LR	11 20 40.8	
	comp=Z,253nm,19.3s,baz=164,slow=33						
H11N3	**WAKE ISLAND Hy**	**89.52**	**292**	T	T	12 23 31.1	
	baz=116,slow=75,SNR=31						
H11N1	**WAKE ISLAND Hy**	**89.53**	**292**	T	T	12 23 28.0	
	baz=116,slow=75,SNR=14						
H11N2	**WAKE ISLAND Hy**	**89.53**	**292**	T	T	12 23 32.3	
	baz=116,slow=75,SNR=84						
ILAR	**Eielson Array**	**91.65**	**346**	P	**P**	**10 44 30.8**	**-0.2**
	comp=Z,0.3nm,0.8s,baz=175,slow=4.5,SNR=3.0						
ILAR				LR	LR	11 18 19.8	
	comp=Z,87nm,18.1s,baz=192,slow=31						
	comp=Z,0.3nm,0.8s						
MDM	**Murphy Dome**	**92.11**	**346**	IAmb	IAmb	10 44 33.6	
	comp=Z,4.1nm,1.1s						

INK	Inuvik	92.54	352	LR	LR	11 19 29.2	
	comp=Z,157nm,20.1s,baz=198,slow=31						
FRB	Frobisher Bay	93.17	18	LR	LR	11 23 27.8	
	comp=Z,87nm,18.9s,baz=244,slow=34						
KRVT	Keravat (AS076	93.47	264	P	P	10 44 42.3	+1.7
	comp=Z,101nm,0.7s,baz=245,slow=19,SNR=2.4						
RES	Resolute Bay	98.28	5	LR	LR	11 26 24.8	
	comp=Z,99nm,18.5s,baz=12,slow=34						
AKASG	Malin Array Be	139.52	37	PKP	PKPdf	10 50 52.0	+0.3
	comp=Z,0.6nm,0.4s,baz=284,slow=2.5,SNR=6.3						
SONM	Songino Array	140.60	318	PKP	PKiKP	10 50 55.6	-0.9
	comp=Z,0.7nm,0.6s,baz=91,slow=2.4,SNR=4.7						
ZALV	Zalesovo Beam	146.66	341	PKPbc	PKPdf	10 51 04.7	+0.5
	comp=Z,8.4nm,0.8s,baz=17,slow=2.4,SNR=18						
BRTR	Keskin Array B	146.88	52	PKPbc	PKPbc	10 51 07.1	0.0
	comp=Z,2.5nm,0.7s,baz=275,slow=1.9,SNR=5.6						
PZH	PanZhiHua	148.93	283	PKPbc	PKPdf	10 51 08.3	-0.6
CMAR	Chiang Mai Arr	150.40	267	PKPbc	PKiKP	10 51 19.6	+2.2
	comp=Z,7.6nm,0.9s,baz=51,slow=0.5,SNR=26						
KBZ	Khabaz	151.10	39	PKPbc	PKiKP	10 51 18.2	+0.2
	comp=Z,5.5nm,0.8s,baz=246,slow=4.4,SNR=9.6						
GOMU	GeErMu	153.16	305	PKPbc	PKiKP	10 51 23.8	+0.8
MKAR	Makanchi Array	153.65	337	PKPbc	PKPbc	10 51 22.1	-1.1
	comp=Z,0.5nm,0.6s,baz=33,slow=2.2,SNR=5.7						

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*KRSZO **18** 10:33:33.3±1.1, 46°.15N×21°.75E, h7^{km}±7^{km}, ML1.6/4, Error ellipse: s-maj=5.8km s-min=3.7km az=93.0*

BUC 18 10:33:33.4±0.3**, 46°.14N×21°.72E, h9**^{km}±2^{km}**, ml1.6**/5**, 8C-7D, Error ellipse: s-maj=2.8km s-min=1.8km az=98.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRR	Siria	0.14	341	⇑P	Pg	10 33 36.6	+0.1
SIRR				⇑S	Sg	10 33 38.6	-0.1
SIRR	Siria	0.14	341	Pg	Pg	10 33 36.2	-0.3
	comp=Z,25nm,SNR=11						
SIRR				Pg	Pg	10 33 36.6	+0.1
SIRR				Pg	Pg	10 33 36.6	+0.1
SIRR				Lg	Lg	10 33 38.5	
SIRR				x	x	10 34 55.5	
SIRR				x	x	10 35 21.3	
SURR	Surduc	0.47	144	⇑P	Pg	10 33 43.1	+0.5
SURR				⇑S	Sg	10 33 49.8	+1.0
SURR	Surduc	0.47	144	Pg	Pg	10 33 43.1	+0.5
SURR				Pg	Pg	10 33 43.1	+0.5
SURR				Lg	Lg	10 33 49.8	
BZS	Buzias	0.53	188	⇓P	Pg	10 33 43.7	+0.1
BZS				⇑S	Sg	10 33 50.0	-0.5
BZS	Buzias	0.53	188	Pg	Pg	10 33 43.5	-0.1
	comp=Z,3.2nm,SNR=0.9						
BZS				Pg	Pb	10 33 43.7	-1.1
BZS				Pg	Pb	10 33 43.7	-1.1
BZS				Lg	Lg	10 33 50.1	
DRGR		0.94	46	⇑P	Pb	10 33 52.3	+0.3
DRGR				⇓S	Sb	10 34 04.5	-0.1
DRGR		0.94	46	Pg	Pb	10 33 52.1	+0.1
	comp=Z,14nm,SNR=1.5						
DRGR				Pg	Pn	10 33 52.3	-0.7
DRGR				Pg	Pn	10 33 52.3	-0.7
DRGR				Sn	Sb	10 34 04.5	-0.2
GZR	Gura Zlata	1.05	135	⇓P	Pn	10 33 54.4	+0.1
GZR				⇑S	Sb	10 34 07.8	+0.2
GZR	Gura Zlata	1.05	135	Pg	Pg	10 33 53.5	0.0
	comp=Z,6.4nm,SNR=1.5						
GZR				Pn	Pn	10 33 54.4	+0.1
GZR				Pn	Pn	10 33 54.4	+0.1
GZR				Lg	Lg	10 34 07.8	
MARR	Marisel-Cluj	1.10	60	⇓P	Pg	10 33 54.4	-0.2
MARR				⇑S	Sb	10 34 09.9	+0.6
MARR	Marisel-Cluj	1.10	60	Pn	Pg	10 33 54.4	-0.2
MARR				Pn	Pg	10 33 54.4	-0.2
MARR				Sn	Sb	10 34 09.9	+0.6
HERR	Herculane	1.35	159	⇓S	Sn	10 34 16.5	+0.1
HERR	Herculane	1.35	159	Sn	Sn	10 34 16.5	+0.1
HERR				Sn	Sn	10 34 16.5	+0.1
MDVR	Moldovita	1.36	180	⇓P	Pb	10 33 59.0	0.0
MDVR				⇓S	Sg	10 34 17.9	+0.9
MDVR	Moldovita	1.36	180	Pg	Pb	10 33 59.0	0.0
MDVR				Pg	Pb	10 33 59.0	0.0
MDVR				Sn	Sg	10 34 17.9	+0.9

BEO 18 10:34:21.5±0.6**, 44°.40N×21°.93E, h0**^{km}**, ML1.7**/10**, 13C-3D, Mining explosion., Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUBS	Kucevo	0.19	275	*e*Pg	Pg	10 34 23.4	-1.6
KUBS				*e*Sg	Sg	10 34 25.8	-1.7
MDVR	Moldovita	0.41	338	⇑P	Pg	10 34 28.4	-1.0
MDVR				⇑S	Sg	10 34 34.3	-0.6
HERR	Herculane	0.59	35	⇑P	Pg	10 34 32.5	-0.4
HERR				⇑S	Sb	10 34 42.2	-1.5
ZAGS	Zajecar	0.62	160	*e*Pg	Pg	10 34 32.5	-0.9
ZAGS				*e*Sg	Sg	10 34 41.8	+0.3
GRUS	Gruza	1.01	240	*e*Pg	Pb	10 34 41.6	-0.3
GRUS				*e*Sg	Sg	10 34 54.9	+0.9
TRUS	Trudelj	1.11	262	*e*Pg	Pg	10 34 42.4	-0.4
TRUS				*e*Sg	Sb	10 34 57.9	-0.7
GZR	Gura Zlata	1.16	31	⇓P	Pg	10 34 42.5	-1.3
GZR				⇑S	Sg	10 34 59.1	+0.2
ZAPS	Zavoj	1.23	155	*e*Pg	Pg	10 34 44.5	-0.6
ZAPS				*e*Sg	Sg	10 35 00.9	-0.2
BZS	Buzias	1.24	350	⇑P	Pg	10 34 43.7	-1.6
BZS				⇓S	Sg	10 35 01.1	-0.3
SELS	Selova	1.32	207	*e*Pg	Pg	10 34 45.2	-1.5
SELS				*e*Sg	Sg	10 35 03.7	-0.1
SURR	Surduc	1.36	6	⇑P	Pg	10 34 46.6	-1.0
SURR				⇑S	Sn	10 35 06.4	-0.2
DIVS	Divibare	1.43	259	*e*Pg	Pn	10 34 47.1	-1.6
DIVS				*e*Sg	Sg	10 35 06.5	-0.8
DIVS	Divibare	1.43	259	Pg	Pn	10 34 47.5	-1.2
DIVS				Lg	Lg	10 35 07.1	
IVAS	Ivanjica	1.52	238	*e*Pg	Pn	10 34 48.3	-1.8
IVAS				*e*Sg	Sg	10 35 08.6	-1.9
BARS	Barje	1.58	183	*e*Pg	Pn	10 34 50.5	-0.3
BARS				*e*Sg	Sn	10 35 11.9	-0.1
LOT	Lotru	1.68	50	⇑P	Pn	10 34 52.1	-0.1
LOT				⇑S	Sn	10 35 14.6	+0.1
SIRR	Siria	1.88	354	⇑P	Pn	10 34 53.7	-1.3
SIRR				⇑S	Sn	10 35 18.1	-1.3
PRVS	Prvonek	1.89	177	*e*Pg	Pn	10 34 55.2	+0.1
PRVS				*e*Sg	Sn	10 35 19.9	+0.3
DRGR		2.46	13	⇓P	Pn	10 35 01.5	-1.4
DRGR				⇑S	Sn	10 35 33.5	-0.2
DRGR		2.46	13	x	x	10 35 01.3	

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*MOS **18** 10:37:44.6±1.1, 17°.14N×95°.13W, h107^{km}, mb5.1/13, Error ellipse: s-maj=9.9km s-min=5.4km az=98.3*

*NEIC **18** 10:37:44.3±2.4, 17°.02N±0°.05×95°.32W±0°.04, h99^{km}±7^{km}, mb5.0/151, Mwr4.8/15, Md5.2/182(MEX), Error ellipse: s-maj=7.4km s-min=5.9km az=198.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-1.09; $M_{\theta\theta}$-0.50; $M_{\phi\phi}$1.59; $M_{r\theta}$1.04; $M_{\theta\phi}$-0.54; $M_{\phi r}$-0.61; Fault plane solution: $M_0$1.93000×10^{16} NP1:ϕ_s316.44000°, δ68.40000°, λ-123.56000°. NP2:ϕ_s197.42000°, δ39.21000°, λ-35.61000°. Principal axes: T 1.9694, Plg17.0000°, Azm71.0000°; N -0.0877, Plg31.0000°, Azm330.0000°; P -1.8817, Plg54.0000°, Azm185.0000°;*

*IDC **18** 10:37:45.3±0.4, 17°.15N×95°.11W, h98^{km}±2^{km}, mb4.2/26, mbtmp4.5/29, MS3.5/5 Error ellipse: s-maj=16.0km s-min=6.8km az=50.0*

*NEIC **18** 10:37:45.3, 17°.20N×95°.21W, h90^{km}*

*MEX **18** 10:37:46.0±0.5, 17°.07N×95°.31W, h102^{km}±2^{km}, MD5.2*

*GCMT **18** 10:37:46.3±0.4, 17°.20N±0°.02×95°.13W±0°.02, h113^{km}±4^{km}, MW4.9/97, Moment Tensor Solution. s20,c21; s97,c129; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.26±.09; $M_{\theta\theta}$-0.57±.10; $M_{\phi\phi}$1.82±.10; $M_{r\theta}$1.35±.06; $M_{\theta\phi}$-1.02±.10; $M_{\phi r}$-0.75±.07; Best double couple: $M_0$2.44400×10^{16} NP1:ϕ_s309.00000°, δ70.00000°, λ-124.00000°. NP2: ϕ_s193.00000°, δ39.00000°, λ-32.00000°. Principal axes: T 2.5810, Plg18.0000°, Azm64.0000°; N -0.2800, Plg32.0000°, Azm322.0000°; P -2.3080, Plg52.0000°, Azm179.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 10:37:44.4±0.3**, 17°.07N**±0°.03×**95°.33W**±0°.03**, h98**^{km}±2^{km}**, h99**^{km}**:pP-P, n818, σ1**^{s}**66**/973**, mb5.0**/121**, 26C-6D, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.43	87	P	Pn	10 37 60.0	+0.4
	30µm,0.3s,baz=249,slow=9.4						
CMIG				S	Sn	10 38 11.6	+0.7
	25µm,0.3s,baz=136,slow=20,SNR=212						
CMIG	Matias Romero	0.43	87		Pn	10 38 00.2	+0.7
CMIG					Sn	10 38 11.3	+0.5
CMIG	Matias Romero	0.43	87	*i* P	Pn	10 38 00.2	+0.7
CMIG				*i* S	Sn	10 38 11.3	+0.5
NEUV	Arroyo Zacate	0.78	325	*i* P	Pn	10 38 02.8	+0.3
NEUV				*i* S	Sn	10 38 16.5	+0.5
NILT	Santiago Nilte	0.85	126	⇑*e*P	Pn	10 38 03.5	+0.4
NILT				*i* S	Sn	10 38 17.3	+0.1
TUIG	Tuzandepetl	1.29	42	⇓*i*P	Pn	10 38 09.2	+1.1
TUIG				*e*S	Sn	10 38 26.5	+0.5
OXBJ	Oaxaca	1.33	270		Pn	10 38 09.5	+0.7
OXBJ					Sn	10 38 27.5	+0.4
OXBJ	Oaxaca	1.33	270	⇑*e*P	Pn	10 38 09.5	+0.7
OXBJ				*e*S	Sn	10 38 27.5	+0.4
OXIG	Oaxaca	1.34	270		Pn	10 38 09.5	+0.7
OXIG					Sn	10 38 28.0	+0.7
VHO	Vista Hermosa	1.34	270	⇑*i*P	Pn	10 38 09.5	+0.7
VHO				*e*S	Sn	10 38 28.0	+0.7
PMUV	Sontecomapan	1.48	8	⇓*i*P	Pn	10 38 10.7	+0.2
PMUV				*i* S	Sn	10 38 29.7	-0.5
HUIG	Huatulco	1.49	210		Pn	10 38 08.9	-1.6
HUIG					Sn	10 38 28.4	-1.9
HUIG	Huatulco	1.49	210	⇑*i*P	Pn	10 38 08.9	-1.6
HUIG				*e*S	Sn	10 38 28.4	-1.9
PANG	Puerto Angel	1.77	218		Pn	10 38 11.7	-2.4
PANG					Sn	10 38 34.4	-2.2
PANG	Puerto Angel	1.77	218	*e*P	Pn	10 38 11.7	-2.4
PANG				*e*S	Sn	10 38 34.4	-2.2
TOIG	Toxpalan	1.94	302		Pn	10 38 17.6	+1.2
TOIG					Sn	10 38 41.1	+0.4
TOIG	Toxpalan	1.94	302	⇓*i*P	Pn	10 38 17.6	+1.2
TOIG				*e*S	Sn	10 38 41.1	+0.4
PEIG	Puerto Escondi	2.04	239		Pn	10 38 15.3	-2.2
PEIG					Sn	10 38 41.2	-1.6
PEIG	Puerto Escondi	2.04	239	⇑*e*P	Pn	10 38 15.3	-2.2
PEIG				*e*S	Sn	10 38 41.2	-1.6
YOIG	Yosondua	2.13	265		Pn	10 38 18.6	-0.3
YOIG					Sn	10 38 43.6	-1.6
YOIG	Yosondua	2.13	265	⇑*i*P	Pn	10 38 18.6	-0.3
YOIG				*e*S	Sn	10 38 43.6	-1.6
TGIG		2.13	97		Pn	10 38 19.3	+0.5
TGIG					Sn	10 38 44.1	-0.9
TGIG		2.13	97	⇑*i*P	Pn	10 38 19.3	+0.5
TGIG				*e*S	Sn	10 38 44.1	-0.9
TGBT	Tuxtla Gutierr	2.17	97		Pn	10 38 19.2	+0.1
TGBT					Sn	10 38 45.2	-0.4
TGBT	Tuxtla Gutierr	2.17	97	*e*P	Pn	10 38 19.2	+0.1
TGBT				*e*S	Sn	10 38 45.2	-0.4
TXIG	Tlaxiaco	2.34	275		Pn	10 38 22.1	+0.5
TXIG					Sn	10 38 50.2	+0.1
TXIG	Tlaxiaco	2.34	275	⇑*i*P	Pn	10 38 22.1	+0.5
TXIG				*e*S	Sn	10 38 50.2	+0.1
TPIG	Tehuac#an	2.36	305		Pn	10 38 22.9	+1.1
TPIG					Sn	10 38 51.2	+0.8
TPIG	Tehuac#an	2.36	305	*e*P	Pn	10 38 22.9	+1.1
TPIG				*e*S	Sn	10 38 51.2	+0.8
PCIG		2.44	123		Pn	10 38 22.5	-0.2
PCIG					Sn	10 38 47.2	-4.8
PCIG		2.44	123	*e*P	Pn	10 38 22.5	-0.2
PCIG				*i* S	Sn	10 38 47.2	-4.8
OZST	Orizaba	2.45	317	*e*P	Pn	10 38 22.8	-0.2
OZST				*i* S	Sn	10 38 51.5	-1.0
HLIG	Huajuapan de L	2.48	288		Pn	10 38 24.4	+1.0
HLIG					Sn	10 38 52.3	-1.1
HLIG	Huajuapan de L	2.48	288	⇑*i*P	Pn	10 38 24.4	+1.0
HLIG				*e*S	Sn	10 38 52.3	-1.1
JAUV	Jalcomulco	2.68	329	⇓*i*P	Pn	10 38 25.3	-0.7
JAUV				*i* S	Sn	10 38 57.4	-0.5
PNIG	Pinotepa	2.76	256		Pn	10 38 25.2	-1.8
PNIG					Sn	10 38 58.0	-1.8
PNIG	Pinotepa	2.76	256	⇑*i*P	Pn	10 38 25.2	-1.8
PNIG				*e*S	Sn	10 38 58.0	-1.8
FTIG	Fresnillo de T	2.80	288		Pn	10 38 28.7	+1.0
FTIG					Sn	10 38 59.3	-1.5
FTIG	Fresnillo de T	2.80	288	⇑*e*P	Pn	10 38 28.7	+1.0
FTIG				*e*S	Sn	10 38 59.3	-1.5
LVIG	Laguna Verde	2.84	339	⇓*e*P	Pn	10 38 26.4	-1.6
LVIG				*e*S	Sn	10 38 58.4	-3.0
TLIG	Tlapa	3.13	280	Pn	Pn	10 38 32.8	+0.8
TLIG	Tlapa	3.13	280	⇑*i*P	Pn	10 38 32.7	+0.7
TLIG				*e*S	Sn	10 39 06.8	-1.9
CCIG	Comitan	3.16	104		Pn	10 38 33.7	+1.2
CCIG				Sn	Sn	10 39 06.0	-3.4
CCIG	Comitan	3.16	104	⇑*e*P	Pn	10 38 33.1	+0.6
CCIG				*e*S	Sn	10 39 09.4	0.0
MGIG	Malinaltepec	3.16	273		Pn	10 38 32.8	+0.3
MGIG					Sn	10 39 10.7	+1.2
MGIG	Malinaltepec	3.16	273	⇑*i*P	Pn	10 38 32.8	+0.3
MGIG				*e*S	Sn	10 39 10.7	+1.2
PATR	El Naranjo	3.55	123	*e*P	Pn	10 38 38.4	+0.6
PATR				*e*S	Sn	10 39 18.8	-0.2
PAVE	Pavencul	3.56	121	*e*P	Pn	10 38 38.6	+0.8
PAVE				*e*S	Sn	10 39 19.3	+0.2
THIG		3.65	126		Pn	10 38 40.1	+1.3
THIG					Sn	10 39 21.2	+0.3
THIG		3.65	126	*e*P	Pn	10 38 40.1	+1.3
THIG				*e*S	Sn	10 39 21.2	+0.3
CHUJ	Union Juarez	3.67	122	*e*P	Pn	10 38 40.1	+0.7
CHUJ				*e*S	Sn	10 39 22.2	+0.4
CXUV	Coxquihui	3.76	326	⇓*i*P	Pn	10 38 40.6	+0.2
CXUV				*e*S	Sn	10 39 24.0	+0.3
AMVM	AMECAMECA	3.88	303		Pn	10 38 44.9	+2.7
AMVM	AMECAMECA	3.88	303	*e*P	Pn	10 38 44.9	+2.7
AMVM				*e*S	Sn	10 39 18.2	-8.7
YAIG	Yautepec	3.98	297		Pn	10 38 45.5	+2.0
YAIG					Sn	10 39 26.9	-2.3
YAIG	Yautepec	3.98	297	⇑*i*P	Pn	10 38 45.5	+2.0
YAIG				*e*S	Sn	10 39 26.9	-2.3
HUEH	Huehuetenango	4.07	115		Pn	10 38 45.2	+0.5
MPVM	San Francisco	4.09	302	*i* P	Pn	10 38 47.9	+2.8
MPVM				*e*S	Sn	10 39 25.1	-7.0
THVM	De Xico	4.12	303	*e*P	Pn	10 38 48.3	+2.8
THVM				*e*S	Sn	10 39 23.6	-9.1
DAIG	Los Arroyos	4.13	270		Pn	10 38 44.6	-0.9
DAIG					Sn	10 39 31.1	-1.7
DAIG	Los Arroyos	4.13	270	⇑*i*P	Pn	10 38 44.6	-0.9
DAIG				*e*S	Sn	10 39 31.1	-1.7
TXVM	Universitario	4.14	305	*e*S	Sn	10 39 28.4	-5.0
MEIG	Mezcala	4.18	282		Pn	10 38 47.1	+1.0
MEIG					Sn	10 39 31.8	-2.2
MEIG	Mezcala	4.18	282	⇑*i*P	Pn	10 38 47.1	+1.0
MEIG				*e*S	Sn	10 39 31.8	-2.2
PLIG	Platanillo	4.19	289		Pn	10 38 47.6	+1.4
PLIG					Sn	10 39 34.1	-0.1
PLIG	Platanillo	4.19	289	⇑*i*P	Pn	10 38 47.6	+1.4
PLIG				*e*S	Sn	10 39 34.1	-0.1
XCVM	Xochimilco	4.21	302	*e*P	Pn	10 38 49.3	+2.6
XCVM				*e*S	Sn	10 39 35.1	+0.3
TLVM	San Miguel Top	4.21	301	*e*P	Pn	10 38 49.6	+2.8
TLVM				*e*S	Sn	10 39 29.9	-5.3
VTVM	Tizayuca	4.23	310	*e*P	Pn	10 38 49.1	+2.1
VTVM				*e*S	Sn	10 39 35.8	+0.2
PBVM	Pinon	4.28	304	*e*P	Pn	10 38 50.0	+2.7
PBVM				*e*S	Sn	10 39 30.1	-6.1
CNCY	Coyoacan	4.28	302	*e*P	Pn	10 38 50.0	+2.3
CNCY				*e*S	Sn	10 39 35.6	-1.2
COVM	Coyoacan	4.29	303	*e*P	Pn	10 38 49.1	+1.4
COVM				*e*S	Sn	10 39 38.8	+1.9
COVM				*e*S	Sn	10 39 40.0	+3.2
VRVM	Mexico City	4.29	304	*e*S	Sn	10 39 31.9	-4.9
UNM	Universidad Na	4.29	302		Pn	10 38 50.7	+2.8
UNM	Universidad Na	4.29	302	P	Pn	10 38 50.7	+2.8
UNM	Universidad Na	4.29	302	*e*P	Pn	10 38 50.5	+2.6
UNM				*e*P	Pn	10 38 50.6	+2.8
UNM				*e*S	Sn	10 39 35.8	-1.2
UNM				*e*S	Sn	10 39 36.0	-1.0
CUIG	Ciudad Univers	4.30	302		Pn	10 38 50.6	+2.8
CUIG					Sn	10 39 36.0	-1.0
VNTA	La Mica	4.30	269	*e*P	Pn	10 38 46.4	-1.2
VNTA				*e*S	Sn	10 39 34.1	-2.6
BJVM	Benito Juarez	4.31	303	*e*P	Pn	10 38 50.5	+2.4
BJVM				*e*S	Sn	10 39 34.5	-3.0
RTAL	Retalhuleu	4.32	125		Pn	10 38 49.8	+1.8
GMVM	Gustavo A Made	4.33	304	*i* P	Pn	10 38 50.7	+2.4
GMVM				*e*S	Sn	10 39 35.1	-2.7
MHVM	Bosque de Chap	4.36	303	*e*P	Pn	10 38 50.4	+1.7
MHVM				*e*S	Sn	10 39 38.9	+0.3
ACP2	Acapulco	4.36	268		Pn	10 38 46.9	-1.6
ACP2					Sn	10 39 35.8	-2.5
ACP2	Acapulco	4.36	268	*e*P	Pn	10 38 46.9	-1.6
ACP2				*e*S	Sn	10 39 35.8	-2.5
SCIG	Sabancuy	4.37	64	*e*P	Pn	10 38 47.7	-0.9
SCIG				*e*S	Sn	10 39 35.0	-3.6
AOVM	Tlapan	4.38	301	*e*P	Pn	10 38 51.6	+2.4
AOVM				*e*		10 39 26.2	
PTVM	Pico Tres Padr	4.38	306	*e*P	Pn	10 38 51.4	+2.3
PTVM				*e*S	Sn	10 39 31.1	-8.1
MAVM	Malinalco, Edo	4.38	296	*e*P	Pn	10 39 00.6	+12
MAVM				*e*S	Sn	10 39 40.8	+1.6
CJVM	Cuajimalpa	4.40	302	*e*P	Pn	10 38 49.6	+0.3
CJVM				*e*S	Sn	10 39 36.5	-3.0
INVM	La Marquesa	4.44	300	*i* P	Pn	10 38 52.1	+2.2
INVM				*e*S	Sn	10 39 41.4	+0.7
ZUVM	ZUMPANGO	4.49	308	*e*P	Pn	10 38 53.1	+2.6
ZUVM				*e*S	Sn	10 39 33.2	-8.6
TOVM	TOLUCA	4.68	299	*e*P	Pn	10 38 55.7	+2.5
TOVM				*e*S	Sn	10 39 44.8	-1.8
CAIG	El Cayaco	4.72	270		Pn	10 38 52.5	-0.9
CAIG					Sn	10 39 46.6	-0.4
CAIG	El Cayaco	4.72	270	⇑*i*P	Pn	10 38 52.5	-0.9
CAIG				*e*S	Sn	10 39 46.6	-0.4
DEIG	Demacu	4.76	313	*e*P	Pn	10 38 56.0	+1.9
DEIG				*e*S	Sn	10 39 45.7	-2.6
DHIG	Demacu	4.76	313		Pn	10 38 56.0	+1.9
DHIG					Sn	10 39 45.7	-2.6
TEJU	Tejupilco	4.95	292	*e*P	Pn	10 38 58.8	+2.2
TEJU				*e*S	Sn	10 39 51.2	-1.4
ATVM	ATLACOMULCO	5.05	303		Pn	10 39 00.7	+2.6
ATVM	ATLACOMULCO	5.05	303	*e*P	Pn	10 39 00.7	+2.6
ATVM				*e*		10 39 40.4	
ACIG	Acambay	5.20	305		Pn	10 39 02.3	+2.3
ACIG	Acambay	5.20	305	*e*P	Pn	10 39 02.9	+2.9
ACIG				*e*		10 39 41.0	
CTUV	Llano Grande	5.23	327	*i* P	Pn	10 38 59.9	-0.4
CTUV				*e*S	Sn	10 39 58.2	-1.2
PETF	Flores	5.23	91		Pn	10 39 00.2	-0.1
ZIIG	Zihuatanejo	5.88	276		Pn	10 39 09.3	+0.2
ZIIG					Sn	10 40 15.0	-0.2
ZIIG	Zihuatanejo	5.88	276	⇑*i*P	Pn	10 39 09.3	+0.2
ZIIG				*e*S	Sn	10 40 15.0	-0.2
MOIG	Morelia	6.14	296		Pn	10 39 15.8	+2.9
MOIG	Morelia	6.14	296	⇑*i*P	Pn	10 39 15.9	+3.0
MOIG				*e*S	Sn	10 40 21.5	-0.3
ESQI	Esquipulas	6.28	113		Pn	10 39 15.4	+0.7
RPIG	Rio Verde	6.50	318		Pn	10 39 18.5	+0.9
RPIG					Sn	10 40 32.7	+2.3
RPIG	Rio Verde	6.50	318	*e*P	Pn	10 39 18.5	+0.9
RPIG				*e*S	Sn	10 40 32.7	+2.3
MYIG	Mrida	6.55	53	*e*P	Pn	10 39 17.4	-0.8
MYIG				*e*S	Sn	10 40 29.4	-2.2
IGIG	Irapuato, Guan	6.76	304	*e*	Pn	10 39 24.1	+2.8
IGIG				*e*		10 40 12.1	
SNET	Serv Nac Est T	6.78	119		Pn	10 39 22.8	+1.5
GTIG	Gomez Farias	6.97	329		Pn	10 39 24.8	+0.8
GTIG					Sn	10 40 40.1	-1.7
GTIG	Gomez Farias	6.97	329	*e*P	Pn	10 39 24.8	+0.8
GTIG				*e*S	Sn	10 40 40.1	-1.7
TEIG	Tepich	7.39	64	Pn	Pn	10 39 27.6	-2.0
MMIG	Aquila	7.74	280		Pn	10 39 35.1	+0.7
MMIG					Sn	10 40 59.0	-1.3
MMIG	Aquila	7.74	280	⇑*i*P	Pn	10 39 35.1	+0.7
MMIG				*e*S	Sn	10 40 59.0	-1.3
JUBC	Volcan de Coli	8.20	289	*e*P	Pn	10 39 42.1	+1.2
JUBC				*e*S	Sn	10 41 11.0	-1.0
EZ5V		8.22	288		Pn	10 39 43.4	+2.2
EZ5V		8.22	288	*e*P	Pn	10 39 43.4	+2.2
EZ5V				*e*S	Sn	10 41 13.0	+0.5
COIG	Colima	8.22	286	⇑*i*P	Pn	10 39 43.2	+2.1
COIG				*e*S	Sn	10 41 11.7	-0.7
MNGA	Volcan de Coli	8.23	288	*e*P	Pn	10 39 44.5	+3.2
MNGA				*e*S	Sn	10 41 12.4	-0.4
INCO	Volcan de Coli	8.23	289	*e*P	Pn	10 39 44.1	+2.6
INCO				*e*S	Sn	10 41 11.5	-1.5
AAIG	Aguscalientes	8.24	307		Pn	10 39 40.6	-0.8
AAIG					Sn	10 41 15.3	+2.3
AAIG	Aguscalientes	8.24	307	*e*P	Pn	10 39 40.6	-0.8
AAIG				*e*S	Sn	10 41 15.3	+2.3
SOMAC	Volcano de Col	8.25	288	*e*P	Pn	10 39 43.7	+2.0
SOMAC				*e*S	Sn	10 41 12.6	-0.9
TGUH	Tegucigalpa,Un	8.32	110	Pn	Pn	10 39 43.3	+0.8
CDAR	Ciudad de Arme	8.47	284	*e*P	Pn	10 39 44.7	+0.4
CDAR				*e*S	Sn	10 41 17.5	-0.7
R15V		8.49	286		Pn	10 39 46.1	+1.5
R15V					Sn	10 41 18.1	-0.7
R15V		8.49	286	*e*P	Pn	10 39 46.1	+1.5
R15V				*e*S	Sn	10 41 17.5	-1.3
LNIG	Linares	8.70	334	*e*P	Pn	10 39 46.9	-0.6
LNIG				*e*S	Sn	10 41 22.2	-1.5
ZAIG	Zacatecas	8.86	311	*e*P	Pn	10 39 53.2	+3.3
ZAIG				*e*S	Sn	10 41 25.8	-2.3
CRIN	San Cristobal	9.11	117		Pn	10 39 54.8	+1.6
CIHU	Emiliano Zapat	9.20	285	⇑*i*P	Pn	10 39 54.6	+0.3
CIHU				*e*S	Sn	10 41 33.8	-2.4
CNGN	Cerro Negro	9.50	117		Pn	10 39 59.2	+0.7
CJM	Chamela	9.54	286	*e*P	Pn	10 39 59.0	+0.2
CJM				*e*S	Sn	10 41 43.4	-0.9
ANIG	Ahuacatlan	9.55	296	*e*	Pn	10 40 02.2	+3.0
ANIG				*e*		10 41 44.4	
MNIG	Monterrey	9.67	332		Pn	10 40 01.2	+0.4
MNIG					Sn	10 41 45.9	-1.8
MNIG	Monterrey	9.67	332	*e*P	Pn	10 40 01.2	+0.4
MNIG				*e*S	Sn	10 41 45.9	-1.8
MATN	Matagalpa	9.97	113		Pn	10 40 05.4	+0.4
BOAB	BOACO BROADBAN	10.41	115	Pn	Pn	10 40 10.7	-0.1
ACON	Acoyapa	11.06	116		Pn	10 40 20.2	+0.6
HZTE	Horizontes, Gu	11.36	123		Pn	10 40 24.9	+1.1
ORTG	Ortega, Santa	11.68	124		Pn	10 40 28.8	+0.8
ESPN	Las Esperanzas	11.72	113		Pn	10 40 29.0	+0.5
833A	Chaparral WMA,	11.81	342		Pn	10 40 31.4	+1.8
833A	Chaparral WMA,	11.81	342	P	Pn	10 40 31.8	+2.1
	baz=161,SNR=58						
833A				S	Sn	10 42 34.3	-5.2
	baz=161						
DUNO	Dulce Nombre,	11.82	125		Pn	10 40 30.9	+1.1
735A	Kenedy	11.95	349		Pn	10 40 32.0	+0.5
JTS	Las Juntas de	12.12	122	P	Pn	10 40 34.1	+0.2
	57nm,0.4s,baz=318,slow=15,SNR=37						
JTS				S	Sn	10 42 42.3	-5.0
	4.9nm,0.5s,baz=258,slow=14,SNR=1.3						
JACO	JACO, Garabito	12.72	124		Pn	10 40 42.1	+0.3
HKT	Hockley	12.83	358		Pn	10 40 41.7	-1.4
HKT	Hockley	12.83	358	*i* P	Pn	10 40 43.9	+0.8
SOR	Soroa	12.91	62		Pn	10 40 43.9	-0.4
SOR	Soroa	12.91	62	P	Pn	10 40 43.9	-0.4
HDC	Heredia	12.97	121		Pn	10 40 44.2	-1.0
HDC	Heredia	12.97	121	*e*P	Pn	10 40 44.7	-0.5
RIMA	Rio Macho	13.30	122		Pn	10 40 49.5	-0.2
PEZE	Perez Zeledon,	13.67	123		Pn	10 40 54.6	+0.3
HPIG		13.71	318		Pn	10 40 55.7	+0.8
441A	DeRidder	13.76	8		Pn	10 40 54.7	-0.6
435B	Jarrell	13.81	352	P	Pn	10 40 58.5	+2.5
	baz=171						
435B				S	Sn	10 43 21.6	-6.3
	baz=171						
JCT	Junction City	13.96	344	P	Pn	10 40 54.3	-3.7
	baz=162,SNR=6.7						
SRBA	San Rafael, Bu	14.01	122		Pn	10 40 57.4	-1.5
TX32	Lajitas Array	14.41	329		Pn	10 41 03.7	-0.1
TXAR	Lajitas Array	14.41	329	P	P	10 41 06.7	-1.2
	2.2nm,0.8s,baz=149,slow=14,SNR=9.0						
TXAR				LR	LR	10 47 23.7	
	comp=Z,51nm,19.4s,baz=134,slow=40						
TXAR	Lajitas Array	14.41	329		Pn	10 41 03.7	-0.1
TXAR	Lajitas Array	14.41	329	P	Pn	10 41 03.7	-0.1
TX31	Lajitas Ar. Si	14.41	329		Pn	10 41 03.8	0.0
342A	Flagon Creek P	14.50	10		Pn	10 41 04.7	-0.2
NATX	Nacogdoches	14.64	2		Pn	10 41 06.8	+0.1
NATX	Nacogdoches	14.64	2	P	Pn	10 41 04.7	-2.0
	baz=182,SNR=6.5						
NATX				S	Sn	10 43 38.6	-10

	baz=182						
CDITO	Canoas	14.79	123		Pn	10 41 08.2	-0.4
BRU2	Volcan	14.80	122		Pn	10 41 08.3	-0.7
237A	Washetta, Mont	14.88	358		Pn	10 41 09.4	-0.2
344A	Westbrook Farm	14.92	15		Pn	10 41 10.2	0.0
WHTX	Lake Whitney,	14.98	353	P	Pn	10 41 07.1	-3.9
	baz=172,SNR=61						
WHTX				S	Sn	10 43 49.1	-7.3
	baz=172						
346A	Big Creek Wild	15.22	19		Pn	10 41 13.7	-0.3
FW13	Cleburne	15.34	353		Pn	10 41 16.1	+0.6
FW14	Alvarado	15.36	354		Pn	10 41 16.0	+0.3
FW16	Waxahatchie	15.41	355	P	Pn	10 41 17.4	+1.0
CSIG	Choix	15.50	311	*e*	P	10 41 20.6	+0.7
LPIG	La Paz	15.67	299	P	P	10 41 22.8	+1.1
	7.0nm,0.3s,baz=180,slow=5.5,SNR=2.5						
VBMS	Vicksburg	15.70	15		Pn	10 41 19.4	-0.6
VBMS	Vicksburg	15.70	15	P	Pn	10 41 17.5	-2.6
	baz=197						
VBMS				S	Sn	10 44 01.4	-12
	baz=197						
FW07	Weatherford	15.73	352	P	P	10 41 21.6	-0.7
BRAL	Brewton	15.93	27		Pn	10 41 21.8	-1.2
BRAL	Brewton	15.93	27	S	Sn	10 44 06.3	-13
	baz=210						
FW06	Azle	15.96	353	P	Pn	10 41 23.8	+0.5
143A	Socs Landing,	15.97	12	Pn	Pn	10 41 22.1	-1.2
ABTX	Abilene, Hawle	15.97	347	Pn	Pn	10 41 23.3	-0.2
ABTX	Abilene, Hawle	15.97	347	P	Pn	10 41 23.2	-0.2
	baz=165,SNR=25						
451A	Vernon	16.07	31		Pn	10 41 24.2	-0.4
Z38A	Mt. Pleasant	16.13	1	P	Pn	10 41 25.7	+0.4
Z41A	Richland Creek	16.28	8	P	Pn	10 41 27.3	0.0
Z35A	Perchaven, San	16.29	354	P	Pn	10 41 27.7	+0.3
553A	Crawfordville	16.43	35		Pn	10 41 28.1	-0.9
146A	Union	16.51	19		Pn	10 41 29.1	-0.9
WLAR	White Oak Lake	16.67	6	P	Pn	10 41 31.6	-0.5
WTFS	Witchita Falls	16.87	351	P	P	10 41 35.0	0.0
POST	Post	16.88	342	P	P	10 41 35.6	+0.5
DWPF	Disney Wildern	16.88	47		Pn	10 41 32.6	-2.1
DWPF	Disney Wildern	16.88	47	P	Pn	10 41 32.8	-1.9
	baz=232						
656A	Willston	16.96	42		Pn	10 41 33.4	-2.2
250A	Grady	16.97	27	P	Pn	10 41 34.7	-1.0
GDL2	Guadalupe Moun	17.14	333	P	P	10 41 38.7	+0.5
352A	Blakely	17.18	31		Pn	10 41 37.3	-1.0
MNTX	Cornudas Mount	17.19	330	P	P	10 41 40.2	+1.7
	baz=146						
Z47A	Carrollton	17.35	21	P	P	10 41 38.4	-1.8
MIAR	Mount Ida	17.48	5	P	P	10 41 41.8	+0.2
MIAR	Mount Ida	17.48	5	P	P	10 41 41.8	+0.2
MIAR	Mount Ida	17.48	5	P	P	10 41 40.1	-1.6
	baz=186,SNR=30						
X40A	Basin Creek Fa	17.49	7	P	P	10 41 41.1	-0.7
Y45A	Yeager Farm, C	17.52	16	P	P	10 41 41.7	-0.4
LRAL	Lakeview Retre	17.59	24		P	10 41 42.1	-0.7
LRAL	Lakeview Retre	17.59	24	P	P	10 41 41.9	-1.0
	baz=207,SNR=13						
LRAL				S	Sn	10 44 44.8	-14
	baz=207						
UALR	University of	17.84	8		P	10 41 45.9	+0.3
TIGA	Tifton	17.85	35	P	P	10 41 44.9	-0.9
TIGA	Tifton	17.85	35	P	P	10 41 44.3	-1.5
	baz=219,SNR=39						
WMOK	Wichita Mounta	17.87	351		Pn	10 41 46.5	-0.2
WMOK	Wichita Mounta	17.87	351	P	Pn	10 41 46.5	-0.2
WMOK	Wichita Mounta	17.87	351	P	P	10 41 46.2	+0.2
	baz=169,SNR=11						
WMOK				S	Sn	10 44 57.6	-8.2
	baz=169						
W35A	Tecumseh	18.07	356		Pn	10 41 48.8	-0.2
MSTX	Muleshoe	18.11	340	P	Pn	10 41 50.5	+0.8
	baz=157,SNR=11						
OXF	Oxford	18.16	16	P	P	10 41 49.2	0.0
OXF	Oxford	18.16	16	P	P	10 41 49.2	0.0
OXF	Oxford	18.16	16	P	P	10 41 48.3	-0.9
	baz=198,SNR=22						
152A	Waverly Hall	18.25	30	P	P	10 41 49.9	-0.3
WHAR	Wooly Hollow	18.35	8	P	P	10 41 51.1	-0.1
Y49A	Blount Mountai	18.54	24	P	P	10 41 52.6	-0.8
AMTX	Amarillo	18.63	343	P	Pn	10 41 55.3	-0.5
	baz=161						
DEOK	Depew	18.73	357		P	10 41 55.5	+0.1
TUL1	Leonard	18.77	359	P	P	10 41 55.5	-0.4
	baz=179,SNR=16						
OK030	Cody Creek RV	18.83	356	P	P	10 41 56.9	+0.4
HBAR	Harrisburg	18.88	12	P	P	10 41 56.3	-0.7
OK052	Battle Ridge R	18.90	356	P	P	10 41 57.6	+0.4
OK033	Mehan	18.96	356		P	10 41 57.9	0.0
FCAR	Ozark Folk Cen	18.96	8	P	P	10 41 58.0	+0.1
121A	Cookes Peak, D	19.08	326	P	Pn	10 42 01.5	+0.3
	baz=141,SNR=8.6						
SWET	Sewanee	19.93	23	P	P	10 42 07.6	-0.8
KAN13	South Haven SW	19.96	355	P	P	10 42 08.8	0.0
WVT	Waverly	20.12	18	P	P	10 42 08.9	-1.6
	baz=201						
W50A	Signal Mountai	20.15	24	P	P	10 42 09.6	-1.3
KS20	Mayfield South	20.18	355	P	P	10 42 11.0	-0.2
ANMO	Albuquerque	20.39	333	P	Pn	10 42 16.7	+0.1
	6.9nm,0.6s,baz=233,slow=12,SNR=24						
	6.9nm,0.6s						
ANMO	Albuquerque	20.39	333	*i* P	Pn	10 42 17.2	+0.6
ANMO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ANMO	Albuquerque	20.39	333	P	Pn	10 42 16.7	+0.1
	baz=148						
CLTN	Cedars of Leba	20.57	21	P	P	10 42 14.2	-1.1
S39A	Bolivar	20.62	5	P	P	10 42 15.9	0.0
TUC	Tucson	20.64	320	P	Pn	10 42 18.8	-0.5
TUC	Tucson	20.64	320	P	Pn	10 42 18.8	-0.6
TUC	Tucson	20.64	320	P	P	10 42 17.7	+1.5
	baz=134						
W52A	Murphy	20.64	27	P	P	10 42 15.1	-1.0
HODGE	Hodges	20.73	32	P	P	10 42 15.7	-1.3
T45A	Paducah	20.73	15	P	P	10 42 16.9	-0.2
CGM3	Cape Girardeau	20.77	13	P	P	10 42 17.0	-0.4
SJCC	San Jacinto, C	20.84	107	*e*P	P	10 42 19.3	+0.8
BG3	Lake Jocassee	21.01	29	P	P	10 42 19.0	-1.1
NHSC	New Hope	21.02	38	P	P	10 42 19.0	-1.1
	baz=224						
V51A	Loudon	21.06	26	P	P	10 42 19.0	-1.7
T47A	Sharon Grove	21.13	19	P	P	10 42 20.2	-1.2
U49A	Red Boiling Sp	21.14	22	P	P	10 42 19.8	-1.6
TKL	Tuckaleechee C	21.18	27	P	P	10 42 20.5	-1.4
	comp=Z,44nm,0.6s,baz=188,slow=12,SNR=84						
	comp=Z,44nm,0.6s						
TKL	Tuckaleechee C	21.18	27	P	P	10 42 20.7	-1.3
TKL	Tuckaleechee C	21.18	27	P	P	10 42 20.7	-1.3
CCM	Cathedral Cave	21.22	9	P	P	10 42 21.5	-0.7
CCM	Cathedral Cave	21.22	9	P	P	10 42 21.5	-0.7
CCM	Cathedral Cave	21.22	9	P	P	10 42 21.7	-0.6
	baz=191						
S44A	Carbondale	21.23	13	P	P	10 42 22.1	-0.3
FVM	French Village	21.28	11	P	P	10 42 22.0	-0.9
FVM	French Village	21.28	11	P	P	10 42 22.0	-0.9
JSC	Jenkinsville	21.28	34	P	P	10 42 21.9	-1.1
JSC	Jenkinsville	21.28	34	P	P	10 42 21.9	-1.1
R40A	Maddies Statio	21.32	7	P	P	10 42 22.6	-0.8
PAULI	Pauline	21.41	32	P	P	10 42 23.4	-1.0
V52A	Sevierville	21.41	27	P	P	10 42 23.0	-1.4
UREC	San Jos de Ur	21.42	113	*e*P	P	10 42 22.7	-1.9
R32A	Long Quarter,	21.48	353	P	P	10 42 25.8	+0.7
T25A	Trinidad	21.54	340	P	P	10 42 28.7	+2.7
T25A	Trinidad	21.54	340	P	P	10 42 27.9	+1.9
	baz=156,SNR=8.0						
Y57A	Sumter	21.55	36	P	P	10 42 24.5	-1.4
V53A	Saluda	21.62	29	P	P	10 42 25.3	-1.3
214A	Organ Pipe Nat	21.70	316	P	P	10 42 30.2	+2.7
214A	Organ Pipe Nat	21.70	316	P	P	10 42 29.3	+1.8
	baz=129,SNR=6.4						
X18A	Snowflake	21.76	326	P	P	10 42 32.4	+4.1
USIN	University of	21.88	16	P	P	10 42 28.1	-1.2
Y58A	Scranton	21.89	37	P	P	10 42 28.4	-1.0
PIX	Pinacate	21.89	315	P	P	10 42 32.0	+2.5
KMSC	Kings Mountain	21.91	32	P	P	10 42 28.4	-1.2
KMSC	Kings Mountain	21.91	32	P	P	10 42 28.6	-1.2
	baz=218,SNR=48						
T50A	Nancy	21.93	23	P	P	10 42 28.1	-1.8
CBOC	Ciudad Bolivar	21.94	118	*e*P	P	10 42 29.5	-0.8
SLM	Saint Louis	21.95	11	P	P	10 42 29.4	-0.6
SLM	Saint Louis	21.95	11	P	P	10 42 29.4	-0.6
KSU1	Kansas State U	21.98	357	P	P	10 42 28.5	-1.9
	baz=177,SNR=18						
BIRD	Birdtown, Kers	21.98	34	P	P	10 42 29.5	-1.0
CBKS	Cedar Bluff	22.01	351	P	P	10 42 31.4	+0.7
CBKS	Cedar Bluff	22.01	351	P	P	10 42 31.4	+0.7
CBKS	Cedar Bluff	22.01	351	P	P	10 42 29.7	-1.0
	baz=169						
TZTN	Tazewell	22.03	26	P	P	10 42 29.2	-1.7
TZTN	Tazewell	22.03	26	P	P	10 42 29.5	-1.4
	baz=211,SNR=17						
ZARC	Zaragoza, Cauc	22.13	113	*e*P	P	10 42 34.7	+2.5
SDCO	Great Sand Dun	22.46	339	P	P	10 42 35.0	-0.7
SDCO	Great Sand Dun	22.46	339	P	P	10 42 36.4	+0.6
	baz=154						
OLIL	Olney	22.50	15	P	P	10 42 34.8	-0.9
WCI	Wyandotte Cave	22.52	19	P	P	10 42 34.9	-1.2
WCI	Wyandotte Cave	22.52	19	P	P	10 42 34.9	-1.2
WCI	Wyandotte Cave	22.52	19	P	P	10 42 34.5	-1.6
	baz=203						
WCI				S	S	10 46 35.5	-0.6
	baz=203						
V55A	Taylorsville	22.53	31	P	P	10 42 34.8	-1.4
P38A	Dawn	22.53	4	P	P	10 42 34.8	-1.3
X58A	Rowland	22.54	36	P	P	10 42 35.2	-1.0
SFX	San Felipe	22.56	312	P	P	10 42 39.2	+2.7
P40A	Paris	22.56	7	P	P	10 42 35.1	-1.4
W57A	Gilead	22.62	34	P	P	10 42 35.5	-1.6
YOTC	Yotoco, Valle	22.71	123	*e*P	P	10 42 39.8	+1.4
KSCO	Kaye Shedlock’	22.77	345	P	P	10 42 39.8	+1.0
KSCO	Kaye Shedlock’	22.77	345	P	P	10 42 39.5	+0.7
	baz=162						
U54A	Nelsons Funny	22.77	29	P	P	10 42 37.4	-1.4
GUY2C	Guyana, Caldas	22.82	119	*e*P	P	10 42 40.0	+0.2
113A	Mohawk Valley,	22.83	317	P	P	10 42 41.7	+2.4
PTBC	PUERTO BERRIO,	22.93	115	*e*P	P	10 42 42.1	+1.7
SDDR	Presa de Saban	22.94	82	P	P	10 42 40.0	-0.5
R49A	Shelbyville	22.95	21	P	P	10 42 38.5	-1.9
S22A	4UR Ranch, Cre	22.95	336	P	P	10 42 44.3	+3.5
S22A	4UR Ranch, Cre	22.95	336	P	P	10 42 42.0	+1.3
	baz=151						
S51A	Beattyville	22.95	24	P	P	10 42 38.5	-1.9
P43A	Skaggs, Pawnee	23.05	12	P	P	10 42 40.8	-0.5
MVCO	Mesa Verde	23.19	332	P	P	10 42 44.3	+1.4
	baz=146						
ANIL	Santa Ana	23.19	120	*e*P	P	10 42 43.8	+0.5
URIC	Uribia, Colomb	23.22	100	P	P	10 42 42.1	-1.1
BBAC	Balboa, Cauca	23.23	128	*e*P	P	10 42 46.1	+2.6
R50A	Paris	23.23	22	P	P	10 42 41.4	-1.7
WUAZ	Wupatki	23.27	325	P	P	10 42 45.7	+2.0
	baz=138						
PAC1	Pacto, Paraso	23.32	134	*e*P	P	10 42 50.9	+6.6
BLO	Bloomington	23.33	17	P	P	10 42 43.4	-0.5
BLO	Bloomington	23.33	17	P	P	10 42 43.4	-0.5
POPC	Popayan, Colom	23.33	126	*e*P	P	10 42 47.0	+2.6
U56A	King	23.33	32	P	P	10 42 42.6	-1.4
Q24A	Divide	23.44	340	P	P	10 42 49.4	+4.0
Q24A	Divide	23.44	340	P	P	10 42 45.9	+0.5
	baz=156						
CMBC	Cumbal	23.53	131	*e*P	P	10 42 49.9	+3.4
P46A	Rosedale	23.56	16	P	P	10 42 45.6	-0.3
V58A	Windy Hill, Pi	23.57	35	P	P	10 42 44.5	-1.7
OTAV	Otavalo	23.58	133	P	P	10 42 47.2	+0.2
OTAV	Otavalo	23.58	133	P	P	10 42 47.2	+0.2
OTAV	Otavalo	23.58	133	*e*P	P	10 42 47.6	+0.6
ORTC	Ortega, Tolima	23.65	121	*e*P	P	10 42 49.0	+1.9
N33A	J Bar K, Exete	23.66	356	P	P	10 42 48.9	+2.0
GCUF	Volcan Galeras	23.68	130	*e*P	P	10 42 53.0	+5.0
GLA	Glamis	23.71	316	P	P	10 42 49.9	+2.4
GLA	Glamis	23.71	316	P	P	10 42 49.9	+2.4
GLA	Glamis	23.71	316	P	P	10 42 48.6	+1.1
	baz=128,SNR=6.2						
N35A	Tabor	23.71	359	P	P	10 42 47.5	+0.1
N38A	Joes South For	23.71	4	P	P	10 42 47.1	-0.3
CRUC	La Cruz	23.75	128	*e*P	P	10 42 50.8	+2.5
O44A	Mansfield	23.76	13	P	P	10 42 47.7	-0.1
CNNC	Cliffs of the	23.86	37	P	P	10 42 47.5	-1.2
CNNC	Cliffs of the	23.86	37	P	P	10 42 47.4	-1.4
	baz=225						
ESJX	Sierra Juarez	23.87	312	P	P	10 42 51.7	+2.6
N41A	Harden Midland	23.87	8	P	P	10 42 48.3	-0.5
P48A	Milroy	23.92	19	P	P	10 42 47.8	-1.5
HDIL	Hopedale	23.98	11	P	P	10 42 49.5	-0.2
HDIL	Hopedale	23.98	11	P	P	10 42 48.8	-1.0
	baz=194,SNR=9.3						
BLA	Blacksburg	24.00	30	P	P	10 42 48.8	-1.2
BLA	Blacksburg	24.00	30	P	P	10 42 48.8	-1.2
BLA	Blacksburg	24.00	30	P	P	10 42 48.9	-1.2
	baz=217,SNR=25						
BARC	Barichara	24.02	113	*e*P	P	10 42 49.3	-1.3
PRAC	Prado	24.05	121	P	P	10 42 49.2	-1.6
PRAC	Prado	24.05	121	*e*P	P	10 42 48.8	-2.0
PDMCI	Parker Dam,Lak	24.05	319	P	P	10 42 51.6	+1.1
	baz=131						
S54A	Dingess, Beckl	24.05	28	P	P	10 42 48.9	-1.6
PAMC	Pamplona, Colo	24.11	111	*e*P	P	10 42 51.0	-0.7
BETC	Betania	24.21	124	*e*P	P	10 42 54.8	+2.6
R53A	Hurricane	24.22	26	P	P	10 42 50.7	-1.3
YUH	Yuha Desert	24.22	314	P	P	10 42 54.6	+2.6
P49A	Miami Univ. Ec	24.22	20	P	P	10 42 50.6	-1.4
P49A	Miami Univ. Ec	24.22	20	P	P	10 42 50.7	-1.2
	baz=205,SNR=20						
SLOR	San Lorenzo -	24.25	135	P	P	10 42 53.2	+0.2
SMCO	Snowmass	24.26	338	P	P	10 42 52.5	-0.3
SFIN	Lafayette	24.30	15	P	P	10 42 51.9	-0.8
SFIN	Lafayette	24.30	15	P	P	10 42 51.9	-0.8
	baz=199,SNR=21						
SWSC	Sam W. Stewart	24.30	314	P	P	10 42 53.6	+0.8
	baz=126						
IKP	In-Ko-Pah, Jac	24.35	313	P	P	10 42 54.8	+1.5
	baz=125						
ISCO	Idaho Springs	24.35	341	P	P	10 42 56.7	+3.2
ISCO	Idaho Springs	24.35	341	P	P	10 42 56.7	+3.2
ISCO	Idaho Springs	24.35	341	P	P	10 42 54.7	+1.2
	baz=156						
BGNE	Belgrade	24.38	355	P	P	10 42 54.7	+1.3
BGNE	Belgrade	24.38	355	P	P	10 42 53.1	-0.3
	baz=174						
T57A	Hurt	24.41	32	P	P	10 42 52.5	-1.2
RUSC	La Rusia	24.43	114	P	P	10 42 54.9	+0.2
RUSC	La Rusia	24.43	114	*e*P	P	10 42 57.4	+2.7
U15A	North Rim	24.45	325	P	P	10 42 58.9	+4.4
OGNE	Ogallala	24.49	348	P	P	10 42 57.1	+2.6
OGNE	Ogallala	24.49	348	P	P	10 42 55.6	+1.1
	baz=164,SNR=7.3						
BC3	Big Chuckawall	24.49	316	P	P	10 42 56.5	+1.9
	baz=128,SNR=14						
CHIC	Chingaza	24.51	118	*e*P	P	10 42 56.3	+1.0
CBX	Cerro Bola	24.55	312	P	P	10 42 58.0	+2.8
IRM	Iron Mountain	24.60	318	P	P	10 42 57.1	+1.6
	baz=129,SNR=7.3						
Q52A	Bidwell	24.62	25	P	P	10 42 54.5	-1.1
MONP2	Monument Peak	24.70	314	P	P	10 42 57.8	+1.2
	baz=125,SNR=8.4						
U59A	Littleton	24.71	36	P	P	10 42 55.5	-1.0
FLOC	Florencia	24.73	126	*e*P	P	10 42 59.1	+2.2
O48B	Farmland	24.73	19	P	P	10 42 55.0	-1.7
	baz=204,SNR=57						
P51A	Williamsport	24.76	23	P	P	10 42 55.5	-1.3
SCIA	State Center	24.82	4	P	P	10 42 57.7	+0.2
SCIA	State Center	24.82	4	P	P	10 42 57.6	+0.2
	baz=185,SNR=9.4						
L34A	Svendsen Farm,	24.83	358	P	P	10 42 58.1	+0.6
O49A	Covington	24.93	20	P	P	10 42 57.1	-1.4
R55A	Marlinton	24.99	29	P	P	10 42 58.1	-1.0
M44A	Midewin, Midew	25.04	13	P	P	10 42 58.9	-0.4
BELC	Belle Mtn. Jos	25.06	316	P	P	10 43 01.2	+1.4
	baz=127						
PMD	Palm Desert	25.11	315	P	P	10 43 02.6	+2.5
TPFO	Pinon Flats	25.13	315	P	P	10 43 02.2	+1.7
	baz=126						
PFO	Pinyon Flats O	25.14	315	P	P	10 43 03.0	+2.4
	comp=Z,3.1nm,0.8s,baz=110,slow=6.8,SNR=9.4						
PFO				pP	pP	10 43 23.3	+0.9
	comp=Z,2.3nm,0.7s,baz=121,slow=7.3,SNR=3.7						
	comp=Z,3.1nm,0.8s						
PFO	Pinyon Flats O	25.14	315	P	P	10 43 03.0	+2.4
PFO	Pinyon Flats O	25.14	315	*i* P	P	10 43 02.7	+2.1
PFO				pmax	pmax		
	comp=Z,18nm,1.5s						
PFO	Pinyon Flats O	25.14	315	P	P	10 43 02.2	+1.7
	baz=126						
N47A	Urbana	25.15	17	P	P	10 42 58.9	-1.5
S57A	Dark Hollow, R	25.15	32	P	P	10 42 59.0	-1.4
L40A	Anamosa	25.16	7	P	P	10 43 00.1	-0.4
109C	Camp Elliot, M	25.18	313	P	P	10 43 03.5	+2.8
	baz=124						
Q54A	Coxs Mills	25.24	27	P	P	10 43 00.1	-1.2
P52A	Corning	25.25	24	P	P	10 42 59.9	-1.4
P52A	Corning	25.25	24	P	P	10 42 59.7	-1.6
	baz=211,SNR=25						
T59A	Double "B" Far	25.29	35	P	P	10 43 00.2	-1.5
GMRC	Granite Mounta	25.32	318	P	P	10 43 04.4	+2.1
	baz=129						
L42A	Oliver, Polo	25.32	10	P	P	10 43 01.2	-0.8
SDV	Santo Domingo	25.38	106	P	P	10 43 02.1	-0.9
	comp=Z,22nm,0.6s,baz=304,slow=3.5,SNR=14						
	comp=Z,22nm,0.6s						
SDV	Santo Domingo	25.38	106	P	P	10 42 59.9	-3.1
SDV	Santo Domingo	25.38	106	*e*P	P	10 43 02.3	-0.7
P53A	Whipple	25.43	26	P	P	10 43 01.8	-1.2
V12A	Nelson	25.43	321	P	P	10 43 05.7	+2.5
ACSO	Alum Creek Sta	25.45	22	P	P	10 43 01.5	-1.6
ACSO				IAmb	IAmb	10 43 02.4	
	comp=Z,45nm,0.8s						
ACSO	Alum Creek Sta	25.45	22	P	P	10 43 01.4	-1.7
	baz=208,SNR=15						
N23A	Red Feather La	25.45	341	P	P	10 43 05.2	+1.7
	baz=156						
K38A	Parkersburg	25.59	4	P	P	10 43 03.7	-0.7
MURC	Murrieta	25.63	314	P	P	10 43 07.4	+2.4
	baz=125						
K31A	O'Neill	25.64	354	P	P	10 43 06.1	+1.2
K31A				IAmb	IAmb	10 43 34.3	
	comp=Z,57nm,0.9s						
N49A	Columbus Grove	25.65	20	P	P	10 43 03.7	-1.2
N49A				IAmb	IAmb	10 43 06.6	
	comp=Z,28nm,0.8s						
O52A	Adamsville	25.78	24	P	P	10 43 04.7	-1.4
O52A				IAmb	IAmb	10 43 05.6	
	comp=Z,77nm,1.1s						
HEC	Hector,Ludlow	25.79	317	P	P	10 43 08.6	+2.3
	baz=128,SNR=5.2						
ELS	Elsinore Mount	25.82	314	P	P	10 43 09.1	+2.4
L44A	Lake County Fo	25.82	13	P	P	10 43 06.3	-0.2
L44A	Lake County Fo	25.82	13	P	P	10 43 06.4	-0.1
	baz=196,SNR=14						
BBRC	Big Bear Solar	25.83	316	P	P	10 43 08.8	+1.9
	baz=126						
R58B	Mineral	25.85	33	P	P	10 43 05.3	-1.5
TUQ	Turquoise Moun	25.90	319	P	P	10 43 09.7	+2.2
	baz=130						
Q56A	Snyder Ridge,	26.04	30	P	P	10 43 07.6	-0.9
Q56A				IAmb	IAmb	10 43 08.5	
	comp=Z,36nm,0.7s						
L46A	Eue Claire	26.04	15	P	P	10 43 08.0	-0.5
L46A				IAmb	IAmb	10 43 35.4	
	comp=Z,48nm,0.8s						
JFWS	Jewell Farm	26.12	8	P	P	10 43 08.7	-0.5
JFWS	Jewell Farm	26.12	8	P	P	10 43 08.7	-0.5
JFWS				pmax	pmax		
	comp=Z,83nm,0.7s						
JFWS	Jewell Farm	26.12	8	P	P	10 43 08.8	-0.5
	baz=191,SNR=28						
O53A	New Philadelph	26.14	25	P	P	10 43 08.1	-1.3
O53A	New Philadelph	26.14	25	P	P	10 43 08.2	-1.3
	baz=212,SNR=34						
MCRA	Macar, Loja	26.16	143	P	P	10 43 11.4	+1.6
MCWV	Mont Chateau	26.23	28	P	P	10 43 09.2	-1.1
MCWV				IAmb	IAmb	10 43 46.9	
	comp=Z,36nm,0.6s						
MCWV	Mont Chateau	26.23	28	P	P	10 43 08.7	-1.6
	baz=215,SNR=6.7						
K43A	Burlington	26.24	12	P	P	10 43 10.0	-0.2
CBN	Corbin Frederi	26.30	33	P	P	10 43 10.1	-0.7
	baz=222						
BFSC	Mount Baldy Ra	26.31	315	P	P	10 43 12.7	+1.5
	baz=125						
GSC	Goldstone, Bar	26.38	318	P	P	10 43 12.4	+0.7
	baz=128						
SHOC	Shoshone, Teco	26.42	319	P	P	10 43 14.3	+2.3
	baz=130						
O54A	Avella	26.43	26	P	P	10 43 10.6	-1.4
O54A				IAmb	IAmb	10 43 11.4	
	comp=Z,35nm,0.6s						
M50A	Fremont	26.46	21	P	P	10 43 10.9	-1.3
M50A				IAmb	IAmb	10 43 11.4	
	comp=Z,49nm,0.7s						
L48A	N Adams	26.50	18	P	P	10 43 10.8	-1.8
L48A				IAmb	IAmb	10 43 12.7	
	comp=Z,37nm,0.7s						
ECSD	EROS Data Cent	26.60	358	P	P	10 43 13.5	0.0
ECSD				IAmb	IAmb	10 43 53.7	
	comp=Z,24nm,0.7s						
ECSD	EROS Data Cent	26.60	358	P	P	10 43 13.1	-0.4
	baz=177,SNR=6.3						
N53A	Lisbon	26.77	25	P	P	10 43 13.7	-1.3
EDW2	Edwards Air Fo	26.91	316	P	P	10 43 17.7	+1.3
	baz=126						
I37A	Lemond, Waseca	26.91	3	P	P	10 43 15.5	-0.7
I37A				IAmb	IAmb	10 43 59.7	
	comp=Z,51nm,0.8s						
P57A	Homestead Farm	26.95	31	P	P	10 43 15.6	-1.1
P57A				IAmb	IAmb	10 43 16.5	
	comp=Z,25nm,0.8s						
I40A	Norwalk	27.04	8	P	P	10 43 17.1	-0.3
I40A				IAmb	IAmb	10 43 18.4	
	comp=Z,31nm,0.6s						
AAM	Ann Arbor	27.06	19	P	P	10 43 17.4	-0.2
AAM	Ann Arbor	27.06	19	P	P	10 43 17.4	-0.2
AAM				pmax	pmax		
	comp=Z,20nm,0.7s						
AAM	Ann Arbor	27.06	19	P	P	10 43 15.3	-2.3
	baz=205						
TPNV	Topopah Spring	27.08	321	P	P	10 43 20.3	+2.2
	baz=132						
FURC	Furnace Creek,	27.14	320	P	P	10 43 20.0	+1.6
	baz=130						
M52A	Chesterland	27.19	23	P	P	10 43 17.4	-1.4
M52A				IAmb	IAmb	10 43 17.9	
	comp=Z,35nm,0.7s						
MPMC	Manual Prospec	27.28	318	P	P	10 43 21.2	+1.3
	baz=128,SNR=6.8						
I42A	Draeger Farm,	27.29	10	P	P	10 43 19.3	-0.3
M53A	WI Miller and	27.37	24	P	P	10 43 19.3	-1.1
M53A	WI Miller and	27.37	24	P	P	10 43 19.1	-1.3
	baz=212,SNR=19						
SUSD	Miller	27.46	354	P	P	10 43 21.7	+0.5
SUSD				IAmb	IAmb	10 43 48.3	
	comp=Z,22nm,0.8s						
SUSD	Miller	27.46	354	P	P	10 43 21.2	0.0
	baz=172						
SDMD	Soldier’s Deli	27.48	32	P	P	10 43 20.3	-1.1
SCZ2	Santa Cruz Isl	27.55	312	P	P	10 43 23.6	+1.4
	baz=122						
ARVC	Arvin	27.61	315	P	P	10 43 24.8	+2.1
	baz=125						
TCUT	Toone Canyon	27.69	333	P	P	10 43 26.5	+3.0
TCUT				IAmb	IAmb	10 44 05.1	
	comp=Z,29nm,1.1s						
ALLY	Alegheny Colle	27.76	25	P	P	10 43 22.6	-1.3
GRAC	Grapevine Rang	27.79	320	P	P	10 43 26.4	+2.0
	baz=130						
K50A	Casco	27.82	20	P	P	10 43 23.6	-0.8
K50A				IAmb	IAmb	10 44 09.2	
	comp=Z,26nm,0.7s						
SSPA	Standing Stone	27.91	29	P	P	10 43 23.9	-1.3
SSPA	Standing Stone	27.91	29	P	P	10 43 23.2	-2.0
	baz=218						
H43A	Windswept, Lux	28.05	12	P	P	10 43 26.0	-0.4
LCH	Last Change Ra	28.12	320	P	P	10 43 29.9	+2.6
PKM	Mcpherson Peak	28.15	314	P	P	10 43 28.4	+0.7
	baz=123						
SPMN	Marine on St.	28.15	4	P	P	10 43 27.1	-0.3
SPMN	Marine on St.	28.15	4	P	P	10 43 26.2	-1.1
	baz=185,SNR=18						
PAGS	Pennsylvania G	28.15	31	P	P	10 43 25.8	-1.6
MVL	Millersville	28.17	32	P	P	10 43 26.4	-1.1
MVL				IAmb	IAmb	10 43 26.9	
	comp=Z,20nm,0.7s						
M55A	Ridgway	28.18	27	P	P	10 43 26.3	-1.3
M55A				IAmb	IAmb	10 44 12.6	
	comp=Z,34nm,0.9s						
VES	Vestal, Richgr	28.19	316	P	P	10 43 30.2	+2.4
	baz=126						
ERPA	Erie	28.21	25	P	P	10 43 26.6	-1.4
ERPA	Erie	28.21	25	P	P	10 43 26.2	-1.7
	baz=212,SNR=13						
PDAR	Pinedale Array	28.34	338	P	P	10 43 32.0	+2.7
	comp=Z,0.8nm,0.7s,baz=161,slow=8.3,SNR=2.1						
PDAR				pP	pP	10 43 51.4	0.0
	comp=Z,1.1nm,0.7s,baz=144,slow=10,SNR=4.0						

PDAR				PcP	PcP	10 46 38.8	-1.0
	comp=Z,0.6nm,0.7s,baz=132,slow=2.6,SNR=2.3						
	comp=Z,0.8nm,0.7s						
DSP	Deep Springs	28.40	320	P	P	10 43 33.0	+3.3
G40A	Rib Lake	28.44	8	P	P	10 43 29.4	-0.6
N58A	Sunbury	28.63	30	P	P	10 43 29.9	-1.7
F36A	Milaca	28.75	3	P	P	10 43 32.2	-0.4
M57A	Sunshine Farm,	28.82	29	P	P	10 43 31.9	-1.4
HVU	Hansel Valley	28.82	332	P	P	10 43 36.1	+2.6
HVU	Hansel Valley	28.82	332	P	P	10 43 36.1	+2.6
HVU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WVNY	West Valley, N	29.02	26	P	P	10 43 33.7	-1.4
WVNY				IAmb	IAmb	10 43 34.6	
	comp=Z,33nm,0.6s						
G45A	Suttons Bay	29.05	14	P	P	10 43 34.8	-0.5
G45A				IAmb	IAmb	10 43 42.9	
	comp=Z,23nm,0.6s						
GLMI	Grayling	29.10	16	P	P	10 43 35.2	-0.6
GLMI				IAmb	IAmb	10 43 36.9	
	comp=Z,38nm,0.9s						
GLMI	Grayling	29.10	16	P	P	10 43 33.9	-1.8
	baz=201						
LUPA	Lehigh Univers	29.11	32	P	P	10 43 34.8	-1.1
ELK	Elko	29.20	328	P	P	10 43 39.2	+2.3
	comp=Z,1.0nm,0.7s,baz=162,slow=9.1,SNR=3.0						
ELK				pP	pP	10 44 00.2	+1.1
	comp=Z,2.0nm,0.8s,baz=135,slow=3.6,SNR=3.6						
ELK				PcP	PcP	10 46 42.8	+0.8
	comp=Z,2.4nm,0.8s,baz=171,slow=0.2,SNR=4.4						
	comp=Z,1.0nm,0.7s						
OMMB	Old Mammoth Mi	29.20	319	P	P	10 43 39.9	+2.8
NV11	Mina Array Sit	29.20	321	P	P	10 43 39.6	+2.8
F42A	Maple Grove Fa	29.23	10	P	P	10 43 36.1	-0.7
F42A				IAmb	IAmb	10 43 36.6	
	comp=Z,21nm,0.6s						
L56A	Greenwood	29.25	28	P	P	10 43 35.5	-1.7
L56A				IAmb	IAmb	10 44 26.0	
	comp=Z,21nm,0.8s						
MDPB	Devils Postpil	29.26	319	P	P	10 43 40.5	+3.0
NVAR	Mina Array Bea	29.28	321	P	P	10 43 40.5	+2.8
	comp=Z,7.5nm,0.8s,baz=136,slow=9.0,SNR=20						
NVAR				pP	pP	10 44 02.5	+2.6
	comp=Z,6.7nm,0.8s,baz=126,slow=8.1,SNR=4.5						
NVAR				PcP	PcP	10 46 42.2	-0.1
	comp=Z,2.1nm,0.9s,baz=139,slow=4.3,SNR=4.3						
NVAR				ScP	ScP	10 50 15.9	+0.8
	comp=Z,0.7nm,0.9s,baz=145,slow=5.4,SNR=3.6						
	comp=Z,7.5nm,0.8s						
NVAR	Mina Array Bea	29.28	321	P	P	10 43 40.2	+2.5
LHV	Little Huntoon	29.29	321	P	P	10 43 41.1	+3.6
LHV				IAmb	IAmb	10 44 14.8	
	comp=Z,54nm,1.8s						
ATAH	Atahualpa	29.30	144	P	P	10 43 39.6	+1.3
	comp=Z,8.2nm,0.8s,baz=304,slow=2.2,SNR=5.4						
	comp=Z,8.2nm,0.8s						
REDW	Red Top Meadow	29.34	337	P	P	10 43 40.7	+2.6
REDW				IAmb	IAmb	10 44 14.7	
	comp=Z,23nm,1.0s						
SNOW	Snow King Moun	29.39	337	P	P	10 43 40.9	+2.2
SNOW				IAmb	IAmb	10 44 15.3	
	comp=Z,38nm,1.1s						
COWI	Conover	29.41	9	P	P	10 43 37.9	-0.6
COWI				IAmb	IAmb	10 43 38.5	
	comp=Z,20nm,0.8s						
MMNY	Mt. Morris Dam	29.58	27	P	P	10 43 38.9	-1.2
MMNY				IAmb	IAmb	10 43 39.4	
	comp=Z,56nm,1.0s						
BRNJ	Basking Ridge	29.59	33	P	P	10 43 38.6	-1.5
BRNJ				IAmb	IAmb	10 43 39.4	
	comp=Z,24nm,0.6s						
E38A	The Farm, Brul	29.62	5	P	P	10 43 40.0	-0.3
MEDO	Medina	29.71	25	P	P	10 43 40.0	-1.2
MEDO				IAmb	IAmb	10 43 40.4	
	comp=Z,35nm,0.7s						
E28A	Huff	29.76	353	P	P	10 43 42.9	+1.3
E28A				IAmb	IAmb	10 44 19.9	
	comp=Z,58nm,1.4s						
WAKR	Walker	30.02	320	P	P	10 43 47.9	+3.7
BINY	Binghamton	30.02	29	P	P	10 43 42.7	-1.3
BINY				IAmb	IAmb	10 43 43.3	
	comp=Z,25nm,0.7s						
BINY	Binghamton	30.02	29	P	P	10 43 42.3	-1.7
	baz=219,SNR=7.3						
E43A	Lone Tree Farm	30.04	12	P	P	10 43 42.8	-1.1
TRNY	Table Rock, Ra	30.10	33	P	P	10 43 43.1	-1.6
PAL	Palisades	30.17	33	P	P	10 43 43.1	-2.1
	baz=224						
K57A	Scipio Center	30.19	28	P	P	10 43 44.0	-1.5
K57A				IAmb	IAmb	10 43 44.6	
	comp=Z,21nm,0.8s						
RLMT	Red Lodge	30.32	340	P	P	10 43 47.1	+0.4
	baz=153						
D41A	Chassel	30.43	9	P	P	10 43 47.0	-0.4
D41A				IAmb	IAmb	10 43 47.7	
	comp=Z,38nm,0.8s						
L59A	Walton	30.47	31	P	P	10 43 46.5	-1.5
L59A				IAmb	IAmb	10 43 47.3	
	comp=Z,29nm,0.7s						
J56A	Wolcott	30.48	27	P	P	10 43 46.3	-1.6
EMB	Emerald Bay	30.72	320	P	P	10 43 53.7	+3.3
SADO	Sadowa	30.79	23	LR	LR	10 59 38.3	
	comp=Z,56nm,18.7s,baz=260,slow=43						
SADO	Sadowa	30.79	23	P	P	10 43 49.0	-1.7
SADO				IAmb	IAmb	10 43 49.6	
	comp=Z,63nm,1.5s						
MDND	Maddock	30.90	354	P	P	10 43 51.9	+0.3
MDND				IAmb	IAmb	10 43 52.7	
	comp=Z,34nm,0.8s						
MDND	Maddock	30.90	354	P	P	10 43 52.0	+0.4
	baz=172,SNR=6.0						
KSCT	Kent School, K	30.91	33	P	P	10 43 50.3	-1.4
KSCT				IAmb	IAmb	10 43 50.8	
	comp=Z,20nm,0.6s						
PECO	Prince Edward	30.95	26	P	P	10 43 50.7	-1.4
EYMN	Ely	30.96	5	P	P	10 43 50.8	-1.3
EYMN	Ely	30.96	5	P	P	10 43 50.7	-1.4
	baz=187						
J57A	Williamstown	30.96	28	P	P	10 43 50.8	-1.4
AGMN	Agassiz Nation	31.15	359	P	P	10 43 53.2	-0.6
AGMN				IAmb	IAmb	10 43 54.3	
	comp=Z,19nm,0.7s						
AGMN	Agassiz Nation	31.15	359	P	P	10 43 53.6	-0.2
	baz=179,SNR=17						
DELO	Deloro Mine	31.17	25	P	P	10 43 52.7	-1.3
B35A	Bob, Littlefor	31.24	2	P	P	10 43 54.1	-0.5
J58A	Remsen	31.25	29	P	P	10 43 52.9	-1.8
J58A				IAmb	IAmb	10 43 53.9	
	comp=Z,20nm,0.7s						
J59A	Piesco	31.69	30	P	P	10 43 57.1	-1.5
J59A				IAmb	IAmb	10 43 58.2	
	comp=Z,70nm,1.8s						
L61B	Northampton	31.84	33	P	P	10 43 58.1	-1.8
L61B				IAmb	IAmb	10 45 02.6	
	comp=Z,75nm,1.9s						
L61B	Northampton	31.84	33	P	P	10 43 57.8	-2.1
	baz=224						
NCB	Newcomb	32.21	29	P	P	10 44 01.8	-1.4
NCB				IAmb	IAmb	10 44 02.3	
	comp=Z,23nm,0.8s						
LONY	Lake Ozonia	32.55	28	P	P	10 44 04.6	-1.5
LONY	Lake Ozonia	32.55	28	P	P	10 44 04.4	-1.7
	baz=219						
J61A	Chester	32.55	32	P	P	10 44 05.2	-0.9
J61A				IAmb	IAmb	10 44 06.1	
	comp=Z,13nm,0.7s						
SGCB	S£o Gabriel d	32.69	119	eP	P	10 44 08.6	+0.9
J08A	Circle Bar Ran	32.75	328	P	P	10 44 10.7	+2.7
J08A				IAmb	IAmb	10 44 46.3	
	comp=Z,14nm,0.7s						
ULM	Lac du Bonnet	33.10	359	P	P	10 44 09.5	-1.4
	comp=Z,5.5nm,0.8s,baz=183,slow=10,SNR=7.8						
ULM				LR	LR	10 59 15.9	
	comp=Z,59nm,19.5s,baz=175,slow=39						
	comp=Z,5.5nm,0.8s						
ULM	Lac du Bonnet	33.10	359	P	P	10 44 09.9	-0.9
ULM	Lac du Bonnet	33.10	359	P	P	10 44 09.9	-0.9
ULM				pmax	pmax		
	comp=Z,11nm,1.1s						
FRNY	Flat Rock	33.16	29	P	P	10 44 10.2	-1.3
FRNY				IAmb	IAmb	10 44 10.8	
	comp=Z,18nm,0.7s						
VT1	Waterbury	33.18	30	P	P	10 44 10.2	-1.4
CZSB	Cruzeiro do Su	33.28	136	eP	P	10 44 14.5	+1.7
LBNH	Lisbon	33.52	31	P	P	10 44 13.3	-1.3
LBNH				IAmb	IAmb	10 44 14.2	
	comp=Z,17nm,0.7s						
LBNH	Lisbon	33.52	31	P	P	10 44 13.3	-1.3
LBNH				pmax	pmax		
	comp=Z,17nm,0.7s						
LBNH	Lisbon	33.52	31	P	P	10 44 12.8	-1.8
	baz=223						
TRQ	Mont Tremblant	33.81	26	P	P	10 44 16.2	-1.0
H62A	Milan	34.14	31	P	P	10 44 18.8	-1.1
H62A				IAmb	IAmb	10 44 47.3	
	comp=Z,66nm,1.9s						
NNA	Nana	34.16	146	i P	P	10 44 21.6	+1.1
NNA				pmax	pmax		
	comp=Z,49nm,1.3s						
G62A	West of Eustis	34.91	31	P	P	10 44 25.4	-1.2
LATQ	La Tuque	35.48	27	P	P	10 44 30.3	-1.1
F62A	Pittston Farm,	35.67	31	P	P	10 44 31.9	-1.2
F62A				IAmb	IAmb	10 44 32.4	
	comp=Z,16nm,0.8s						
E62A	Clayton Lake	36.40	30	P	P	10 44 38.1	-1.2
G65A	Princeton	36.42	34	P	P	10 44 37.9	-1.6
LMQ	La Malbaie	36.70	29	P	P	10 44 40.7	-1.1
LMQ				IAmb	IAmb	10 44 41.2	
	comp=Z,20nm,0.7s						
D62A	Allapoint, All	36.96	30	P	P	10 44 42.9	-1.2
BOAV	Boa Vista	37.17	109	P	P	10 44 45.0	-1.3
BOAV	Boa Vista	37.17	109	eP	P	10 44 45.3	-1.0
PQI	Presque Isle	37.18	32	P	P	10 44 44.7	-1.2
PQI				IAmb	IAmb	10 44 45.2	
	comp=Z,14nm,0.7s						
FFC	Flin Flon	37.93	354	P	P	10 44 52.4	+0.2
FFC				IAmb	IAmb	10 45 30.2	
	comp=Z,11nm,0.8s						
FFC	Flin Flon	37.93	354	P	P	10 44 52.4	+0.2
FFC				pmax	pmax		
	comp=Z,11nm,0.8s						
FFC	Flin Flon	37.93	354	P	P	10 44 52.4	+0.2
FFC				pP	pP	10 45 15.2	+0.5
FFC				sP	sP	10 45 26.7	+0.6
BATG	Bathurst New B	38.58	32	P	P	10 44 56.4	-1.3
BATG				IAmb	IAmb	10 44 57.0	
	comp=Z,20nm,0.9s						
ETMB	Extrema	39.27	131	P	P	10 45 01.9	-2.0
ETMB	Extrema	39.27	131	eP	P	10 45 03.3	-0.5
SAML	Samuel	40.97	127	P	P	10 45 15.6	-2.3
SAML	Samuel	40.97	127	P	P	10 45 15.6	-2.3
SAML				pmax	pmax		
	comp=Z,15nm,1.0s						
SAML	Samuel	40.97	127	P	P	10 45 16.5	-1.4
SAML				pP	pP	10 45 38.5	-2.3
SAML				sP	sP	10 45 51.1	-0.9
FCC	Fort Churchill	41.64	1	P	P	10 45 21.8	-1.0
FCC	Fort Churchill	41.64	1	P	P	10 45 21.8	-1.0
FCC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LPAZ	La Paz	42.63	140	P	P	10 45 32.1	0.0
	comp=Z,4.9nm,0.7s,baz=339,slow=6.7,SNR=13						
	comp=Z,4.9nm,0.7s						
LPAZ	La Paz	42.63	140	P	P	10 45 30.9	-1.1
LPAZ				IAmb	IAmb	10 45 38.0	
	comp=Z,16nm,0.7s						
LPAZ	La Paz	42.63	140	eP	P	10 45 32.6	+0.6
LPAZ	La Paz	42.63	140	P	P	10 45 32.0	-0.1
PB16	IPOC Station P	43.40	143	P	P	10 45 36.5	-1.7
PB16				IAmb	IAmb	10 45 46.4	
	comp=Z,20nm,0.9s						
SCHQ	Schefferville	43.59	24	P	P	10 45 37.0	-1.7
	comp=Z,20nm,0.8s,baz=208,slow=4.7,SNR=27						
SCHQ				pP	pP	10 46 00.1	-1.7
	comp=Z,4.6nm,0.5s,baz=230,slow=12,SNR=2.4						
	comp=Z,20nm,0.8s						
SCHQ	Schefferville	43.59	24	P	P	10 45 36.8	-1.8
SCHQ				IAmb	IAmb	10 45 38.5	
	comp=Z,23nm,0.9s						
MNMC	Minye Minye	43.98	144	P	P	10 45 43.4	+0.9
MNMC				IAmb	IAmb	10 45 50.6	
	comp=Z,29nm,0.8s						
PB11	IPOC Station P	44.45	144	P	P	10 45 46.9	+0.8
PB11				IAmb	IAmb	10 45 54.1	
	comp=Z,21nm,0.8s						
ITTB	Itaituba	44.53	115	eP	P	10 45 47.1	+0.4
GO01	Chusmiza	44.63	144	P	P	10 45 49.0	+1.1
GO01				IAmb	IAmb	10 45 56.5	
	comp=Z,19nm,0.8s						
MALB	Monte Alegre	44.65	111	eP	P	10 45 47.4	-0.2
VILB	Vilhena	45.76	128	P	P	10 45 56.2	-0.1
VILB				IAmb	IAmb	10 45 56.7	
	comp=Z,14nm,0.8s						
VILB	Vilhena	45.76	128	eP	P	10 45 56.3	-0.1
MCPB	Macapa, AP	46.01	108	eP	P	10 45 56.8	-1.6
NPGB	Novo Progresso	46.21	118	eP	P	10 45 59.3	-0.7
SIV	San Ignacio	47.12	132	P	P	10 46 06.5	-0.5
	comp=Z,16nm,0.8s,baz=301,slow=8.9,SNR=23						
SIV				pP	pP	10 46 29.0	-1.5
	comp=Z,7.9nm,0.6s,baz=301,slow=6.8,SNR=4.9						
	comp=Z,16nm,0.8s						
LVC	Limon Verde	47.15	146	LR	LR	11 06 02.6	
	comp=Z,56nm,18.1s,baz=257,slow=36						
YKA	Yellowknife Ar	47.35	348	P	P	10 46 08.1	0.0
	comp=Z,2.7nm,0.7s,baz=153,slow=7.5,SNR=27						
YKA				pP	pP	10 46 30.9	-0.6
	comp=Z,5.7nm,0.7s,baz=151,slow=7.7,SNR=11						
	comp=Z,2.7nm,0.7s						
YKA	Yellowknife Ar	47.35	348	P	P	10 46 07.7	-0.4
PTLB	Pontes e Lacer	48.15	130	P	P	10 46 13.6	-1.4
PTLB	Pontes e Lacer	48.15	130	eP	P	10 46 14.6	-0.3
BBSD	Serra de San D	48.25	133	eP	P	10 46 15.0	-0.7
TMAB	Tom-Au,PA,Br	50.44	108	eP	P	10 46 31.8	-0.7
AC02	Maricunga	50.52	149	P	P	10 46 34.8	+1.4
PRPB	Parauapebas	50.56	113	eP	P	10 46 33.1	-0.3
SALV	Santo Antonio	51.00	128	eP	P	10 46 36.2	-0.3
LCO	Las Campanas	51.62	152	P	P	10 46 41.8	+0.4
LCO				pP	pP	10 47 06.7	+1.6
SNDB	Serra Nova Dou	52.21	121	eP	P	10 46 45.6	-0.1
PP1B	Ponte de Pedra	52.66	129	eP	P	10 46 49.5	+0.6
CO03	El Pedregal	53.20	153	P	P	10 46 53.3	+0.5
MURT	Porto Murtinho	53.36	135	eP	P	10 46 54.9	+0.9
CO02	Combarbal	53.38	154	P	P	10 46 55.0	+0.8
CO02				IAmb	IAmb	10 46 55.7	
	comp=Z,21nm,0.9s						
RVDE	Rio Verde (Bra	53.51	130	eP	P	10 46 56.1	+0.9
SMTB	Santa Maria do	53.77	115	eP	P	10 46 57.3	+0.1
ARAG	Araguaiana, MT	53.87	125	eP	P	10 46 57.6	-0.2
AQDB	Aquidauana	53.90	132	eP	P	10 46 57.5	-0.4
ROSB	Rosrio	54.28	106	eP	P	10 46 59.7	-1.2
VA06	Catapilco	54.45	155	P	P	10 47 02.1	+0.5
ZON	Zonda	54.69	152	P	P	10 47 05.0	+1.4
ZON	Zonda	54.69	152	P	P	10 47 05.0	+1.4
ZON				pmax	pmax		
	comp=Z,64nm,0.1s						
C2SB	Chapadao do Su	54.90	129	eP	P	10 47 06.3	+1.0
VA03	San Esteban	54.93	154	P	P	10 47 06.0	+0.7
CFA	Coronel Fontan	54.94	152	P	P	10 47 05.9	+0.5
	comp=Z,12nm,0.7s,baz=328,slow=6.8,SNR=9.6						
	comp=Z,12nm,0.7s						
MT03	Universidad Ad	55.58	155	P	P	10 47 11.1	+1.1
MT09	Talagante	55.63	155	P	P	10 47 09.1	-1.3
DAWY	Dawson	55.65	338	P	P	10 47 10.1	0.0
	baz=126						
MT13	San Alfonso	55.89	155	P	P	10 47 13.5	+1.3
MT13				IAmb	IAmb	10 47 14.3	
	comp=Z,27nm,1.2s						
L27K	Beaver Creek,	55.97	337	P	P	10 47 12.5	+0.1
	baz=123						
AMBA	Amambai (Brazi	56.00	134	eP	P	10 47 13.4	+0.3
LMEL	Las Melosas	56.01	155	P	P	10 47 14.1	+1.0
LMEL				IAmb	IAmb	10 47 15.1	
	comp=Z,19nm,0.8s						
F31M	Tsiigehtchic	56.06	343	P	P	10 47 12.9	+0.1
	baz=134						
BO01	Tunca	56.14	156	P	P	10 47 14.5	+0.7
BO01				IAmb	IAmb	10 47 15.2	
	comp=Z,20nm,1.1s						
N25K	Chitina, Valde	56.32	334	P	P	10 47 16.4	+1.4
	baz=120						
BO02	Sierra Bellavi	56.61	156	P	P	10 47 18.0	+0.7
BO02				IAmb	IAmb	10 47 18.6	
	comp=Z,8.9nm,0.8s						
INK	Inuvik	56.61	344	P	P	10 47 17.3	+0.6
	comp=Z,3.1nm,0.6s,baz=113,slow=6.1,SNR=14						
	comp=Z,3.1nm,0.6s						
INK	Inuvik	56.61	344	P	P	10 47 17.6	+0.9
INK				IAmb	IAmb	10 47 55.8	
	comp=Z,11nm,0.8s						
INK	Inuvik	56.61	344	P	P	10 47 17.7	+0.9
INK				pmax	pmax		
	comp=Z,11nm,0.8s						
INK	Inuvik	56.61	344	P	P	10 47 17.1	+0.3
	baz=135						
CPUP	Villa Florida	56.79	139	P	P	10 47 20.6	+2.0
	comp=Z,8.1nm,0.7s,baz=331,slow=3.8,SNR=5.4						
	comp=Z,8.1nm,0.7s						
KLU	Klutina	56.82	334	P	P	10 47 19.7	+1.3
	baz=118						
BDFB	Brasilia	56.87	122	P	P	10 47 19.4	0.0
	comp=Z,2.7nm,0.6s,baz=274,slow=12,SNR=4.1						
	comp=Z,2.7nm,0.6s						
BDFB	Brasilia	56.87	122	eP	P	10 47 19.6	+0.1
PAX	Paxson	57.35	335	P	P	10 47 22.4	+0.2
	baz=119						
RIDG	Independent Ri	57.49	336	P	P	10 47 23.7	+0.6
	baz=120						
RES	Resolute Bay	57.63	0	P	P	10 47 23.4	-0.4
RES	Resolute Bay	57.63	0	P	P	10 47 23.4	-0.4
RES				pmax	pmax		
	comp=Z,6.0nm,1.3s						
A36M	Sachs Harbour	57.65	349	P	P	10 47 24.1	+0.2
A36M	Sachs Harbour	57.65	349	P	P	10 47 24.1	+0.2
	baz=146						
H27K	Steamboat Moun	57.65	340	P	P	10 47 25.4	+1.2
	baz=125						
MCR1	Marechal Candi	57.67	135	eP	P	10 47 24.4	-0.4
SDBA	SAO DESIDERIO	57.79	117	eP	P	10 47 25.9	-0.1
K24K	Donnelly Dome	57.88	336	P	P	10 47 27.2	+1.4
	baz=120						
SML	Sawmill	57.99	333	P	P	10 47 25.4	-1.3
	baz=116						
IPMB	Ipameri, GO	58.00	125	eP	P	10 47 28.1	+0.8
G27K	Doyon Strip	58.03	340	P	P	10 47 27.5	+0.6
	baz=125						
BRSE	Bradley Lake S	58.23	331	P	P	10 47 28.7	+0.4
	baz=112						
PMR	Palmer	58.24	333	P	P	10 47 28.4	+0.1
	baz=115						
RC01	Rabbit Creek A	58.30	332	P	P	10 47 30.4	+1.6
	baz=114						
KDAK	Kodiak Island	58.43	328	i P	P	10 47 31.9	+2.2
KDAK				pmax	pmax		
	comp=Z,31nm,1.3s						
KDAK	Kodiak Island	58.43	328	P	P	10 47 30.1	+0.4
	baz=109						
HDA	Harding Lake	58.62	336	P	P	10 47 31.8	+0.9
	baz=119						
DY2G	Dye2	58.75	21	eP	P	10 47 32.5	+0.5
DY2G				IAmb	IAmb	10 47 33.7	
	comp=Z,9.2nm,0.9s						
DY2G				e		10 47 56.3	
ILAR	Eielson Array	58.77	337	P	P	10 47 32.6	+0.7
	comp=Z,0.7nm,0.8s,baz=168,slow=3.6,SNR=9.6						
ILAR				pP	pP	10 47 58.1	+1.8
	comp=Z,2.8nm,0.9s,baz=128,slow=5.3,SNR=8.6						
	comp=Z,0.7nm,0.8s						
G26K	Porcupine Rive	58.81	340	P	P	10 47 33.1	+0.9
	baz=123						
E27K	Coleen River	58.82	342	P	P	10 47 32.5	+0.2
	baz=126						
SUA	Susitna One	58.90	333	P	P	10 47 34.5	+1.5
	baz=113						
MCK	McKinley	59.09	335	P	P	10 47 34.7	+0.5
	baz=116						
COLA	College	59.19	337	i P	P	10 47 34.5	-0.3
COLA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
COLA	College	59.19	337	P	P	10 47 35.6	+0.8
COLA				pP	pP	10 47 59.8	+0.7
COLA				sP	sP	10 48 11.8	+1.8
RSO	Redoubt South	59.43	331	P	P	10 47 37.9	+1.0
SKT	Skwentna	59.44	333	P	P	10 47 37.9	+1.2
	baz=113						
SPCR	Spurr Chakacha	59.45	332	P	P	10 47 37.8	+1.0
	baz=112						
G25K	Bearman Lake	59.49	339	P	P	10 47 36.9	0.0
	baz=121						
TRF	Thorofare Moun	59.51	335	P	P	10 47 38.5	+1.2
TRF	Thorofare Moun	59.51	335	P	P	10 47 38.4	+1.2
	baz=115						
JANB	Januaria	59.60	119	eP	P	10 47 39.0	+0.5
H24K	Noodor Dome	59.65	338	P	P	10 47 38.8	+0.7
	baz=118						
F25K	Christian Rive	59.76	340	P	P	10 47 40.0	+1.2
	baz=122						
I23K	Minto, Yukon-K	59.88	337	P	P	10 47 40.8	+1.2
I23K				IAmb	IAmb	10 48 17.9	
	comp=Z,10nm,0.8s						
I23K	Minto, Yukon-K	59.88	337	P	P	10 47 40.5	+0.9
	baz=116						
Q18K	Katmai Hardscr	59.92	329	P	P	10 47 39.8	-0.4
	baz=108						
BPAW	Bear Paw Mtn.	60.06	335	P	P	10 47 41.2	+0.3
	baz=114						
O19K	Port Alsworth	60.08	330	P	P	10 47 42.0	+1.0
	baz=109						
M20K	Styx River	60.11	332	P	P	10 47 42.4	+1.1
M20K				IAmb	IAmb	10 48 19.9	
	comp=Z,8.1nm,0.8s						
M20K	Styx River	60.11	332	P	P	10 47 41.5	+0.2
	baz=111						
CAST	Castle Rocks	60.24	334	P	P	10 47 42.6	+0.6
	baz=113						
P18K	Big Mountain,	60.26	329	P	P	10 47 42.7	+0.4
	baz=108						
C27K	Jago River	60.28	342	P	P	10 47 42.1	-0.1
	baz=125						
N19K	Bonanza Creek	60.35	331	P	P	10 47 43.6	+0.6
	baz=109						
MLY	Manley	60.36	336	P	P	10 47 43.9	+1.0
MLY				IAmb	IAmb	10 48 21.5	
	comp=Z,9.1nm,0.8s						
MLY	Manley	60.36	336	P	P	10 47 43.0	+0.1
	baz=115						
O18K	Koktuh Hills	60.39	330	P	P	10 47 44.0	+0.8
	baz=108						
CHUM	Lake Minchumin	60.51	335	P	P	10 47 43.6	-0.3
	baz=113						
L20K	Farewell, AK	60.65	333	P	P	10 47 44.8	-0.1
	baz=111						
M19K	Big River Lodg	60.68	332	P	P	10 47 45.7	+0.6
	baz=110						
Q16K	King Salmon	60.76	328	P	P	10 47 46.4	+0.8
	baz=106						
I21K	Tanana	60.90	336	P	P	10 47 46.6	+0.2
	baz=114						
D25K	Kavik River	60.90	342	P	P	10 47 47.1	+0.6
	baz=122						
ISOG	Isortoq, Green	60.93	23	eP	P	10 47 46.1	-0.6
E24K	Your Creek	60.94	340	P	P	10 47 46.7	-0.1
	baz=119						
K20K	Telida	61.04	334	P	P	10 47 48.0	+0.4
K20K	Telida	61.04	334	P	P	10 47 47.2	-0.3
	baz=111						
TULEG	Thule	61.05	7	eP	P	10 47 50.2	+2.9
COLD	Coldfoot	61.12	339	P	P	10 47 47.5	-0.5
	baz=117						
KULLO	Kullorsuaq	61.16	11	eP	P	10 47 48.4	+0.3
KULLO				IAmb	IAmb	10 47 49.2	
	comp=Z,40nm,1.7s						
O17K	Koliganek Bris	61.28	329	P	P	10 47 49.6	+0.5
	baz=106						
E23K	Chandalar	61.30	340	P	P	10 47 50.3	+1.0
	baz=118						
LL04	Puerto Octay	61.48	160	P	P	10 47 50.8	+0.1
P16K	Nushagak River	61.52	328	P	P	10 47 51.3	+0.6
	baz=105						
O16K	Kokwok River B	61.72	329	P	P	10 47 52.4	+0.3
	baz=105						
TTA	Tatalina	61.73	333	P	P	10 47 52.8	+0.6
	baz=109						
C24K	Franklin Bluff	61.81	341	P	P	10 47 53.5	+0.9
	baz=120						
F22K	John River	61.93	339	P	P	10 47 53.9	+0.4
	baz=115						
PLCA	Paso Flores	61.94	159	P	P	10 47 54.1	+0.2
	comp=Z,19nm,0.9s,baz=331,slow=8.2,SNR=19						
	comp=Z,19nm,0.9s						
PLCA	Paso Flores	61.94	159	P	P	10 47 53.0	-1.0
PLCA				IAmb	IAmb	10 47 55.1	
	comp=Z,21nm,0.8s						
PLCA	Paso Flores	61.94	159	eP	P	10 47 54.3	+0.4
PLCA	Paso Flores	61.94	159	P	P	10 47 54.2	+0.3
PLCA				pP	pP	10 48 18.8	+0.3
PLCA				sP	sP	10 48 31.1	+1.9

SDPT	Sand Point	62.03	324	P	P	10 47 55.2	+1.0
	baz=101						
D23K	Nanushuk River	62.07	340	P	P	10 47 53.9	-0.4
	baz=117						
ICESG	Greenland Ices	62.23	20	eP	P	10 47 54.9	-0.9
ICESG				IAmb	IAmb	10 47 57.2	
	comp=Z,14nm,0.6s						
ICESG				e		10 48 20.3	
N16K	Nishlik Lake	62.27	330	P	P	10 47 57.2	+1.3
	baz=105						
F21K	Alatna River	62.28	338	P	P	10 47 55.3	-0.5
	baz=113						
RCBR	Riachuelo	62.96	106	eP	P	10 48 02.0	+0.8
RCBR	Riachuelo	62.96	106	P	P	10 48 01.6	+0.4
RCBR				pP	pP	10 48 25.8	0.0
TRQA	Tornquist	63.15	151	P	P	10 48 01.1	-0.8
TRQA				IAmb	IAmb	10 48 02.9	
	comp=Z,50nm,1.5s						
TRQA	Tornquist	63.15	151	P	P	10 48 01.1	-0.8
TRQA				pmax	pmax		
	comp=Z,50nm,1.5s						
LL02	Futaleuf	63.72	161	P	P	10 48 05.1	-0.5
LL02				IAmb	IAmb	10 48 07.0	
	comp=Z,21nm,1.2s						
SUMG	Summit	64.18	16	iP	P	10 48 08.8	+0.1
SUMG				e		10 48 34.1	
NEEM	North Greenlan	64.25	10	iP	P	10 48 09.0	0.0
NEEM				IAmb	IAmb	10 48 09.3	
	comp=Z,17nm,0.9s						
AY01	Puyuhuapi	64.60	162	P	P	10 48 11.2	0.0
AY01				IAmb	IAmb	10 48 12.2	
	comp=Z,18nm,0.8s						
COYC	Coyhaique	65.81	162	P	P	10 48 19.7	+0.6
COYC				IAmb	IAmb	10 48 20.6	
	comp=Z,19nm,0.8s						
COYC	Coyhaique	65.81	162	P	P	10 48 19.6	+0.6
ANM	Nome	66.17	334	P	P	10 48 20.7	-0.5
	baz=101						
TNA	Tin City	67.40	335	P	P	10 48 29.6	+0.6
	baz=99						
DBG	Daneborg	69.66	16	eP	P	10 48 42.4	-0.5
DBG				IAmb	IAmb	10 48 45.6	
	comp=Z,3.6nm,1.1s						
DBG				e		10 49 08.7	
DAG	Danmarks Havn	70.45	14	iP	P	10 48 47.0	-0.8
DAG				IAmb	IAmb	10 48 47.9	
	comp=Z,6.5nm,0.7s						
DAG				e		10 49 12.5	
NOR	Nord	71.57	9	eP	P	10 48 54.4	0.0
NOR				IAmb	IAmb	10 48 55.1	
	comp=Z,3.2nm,0.9s						
NOR				e		10 49 20.4	
LIS	Lisbon	76.61	53	eP	P	10 49 24.2	-0.3
PVIS	Viseu	77.17	51	eP	P	10 49 27.7	0.0
PTEO	Sao Teotonio	77.17	54	eP	P	10 49 28.5	+0.8
PVRL	Vila Real	77.19	51	eP	P	10 49 28.8	+1.0
PNCL	Nicolau / Gran	77.21	54	eP	P	10 49 27.9	0.0
PMTG	Montargil	77.25	53	eP	P	10 49 27.9	-0.2
BILL	Bilibino	77.42	338	⇑eP	P	10 49 27.8	-0.7
BILL				e*PP	pP	10 49 56.3	+2.4
BILL				eS	sS	10 59 49.3	-5.2
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MTE	Manteigas	77.50	51	P	P	10 49 30.0	+0.5
MTE	Manteigas	77.50	51	eP	P	10 49 29.9	+0.4
MESJ	Messejana	77.50	54	eP	P	10 49 29.8	+0.2
MESJ				eS	S	10 59 12.6	-0.3
MESJ	Messejana	77.50	54	eP	P	10 49 29.8	+0.2
MESJ	Messejana	77.50	54	eP	P	10 49 29.8	+0.2
MESJ				IAmb	IAmb	10 49 31.0	
	comp=Z,13nm,0.9s						
MESJ				eS	S	10 59 12.6	-0.3
EVO	Evora	77.52	53	eP	P	10 49 30.3	+0.7
PCBR	Castelo Branco	77.66	52	eP	P	10 49 31.4	+1.0
MVO	Moncorvo	77.72	51	eP	P	10 49 30.6	-0.2
PBEJ	Beja	77.74	54	eP	P	10 49 31.6	+0.7
PBRG	Braganca	77.80	50	eP	P	10 49 31.9	+0.7
PMRV	Marv??o	77.81	52	eP	P	10 49 30.9	-0.4
PBAR	Barrancos	78.34	54	eP	P	10 49 34.4	+0.2
PAB	San Pablo	80.08	52	P	P	10 49 44.2	+0.5
PAB	San Pablo	80.08	52	P	P	10 49 44.2	+0.5
PAB				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ESDC	Sonseca Array	80.34	52	P	P	10 49 44.9	-0.2
	comp=Z,8.8nm,1.0s,baz=294,slow=5.3,SNR=37						
	comp=Z,8.8nm,1.0s						
ESDC	Sonseca Array	80.34	52	P	P	10 49 44.7	-0.4
ESBB	Sonseca Array	80.34	52	P	P	10 49 45.7	+0.6
NB2	NORSAR Subarra	82.98	28	P	P	10 49 59.2	+0.7
	comp=Z,21nm,1.4s,baz=294,slow=5.3						
NB2	NORSAR Subarra	82.98	28	P	P	10 49 59.2	+0.7
	baz=294,slow=5.3						
NOA	NORSAR Array B	82.98	28	P	P	10 49 59.1	+0.6
	comp=Z,1.1nm,0.8s,baz=291,slow=5.2,SNR=4.0						
NOA				pP	pP	10 50 24.4	+0.2
	comp=Z,2.9nm,0.9s,baz=297,slow=5.1,SNR=4.6						
	comp=Z,1.1nm,0.8s						
ARCES	ARCESS Array B	84.22	18	P	P	10 50 04.7	0.0
	comp=Z,3.4nm,0.7s,baz=328,slow=4.3,SNR=12						
ARCES				pP	pP	10 50 30.0	-0.4
	comp=Z,6.7nm,0.8s,baz=299,slow=2.7,SNR=2.3						
	comp=Z,3.4nm,0.7s						
ARCES	ARCESS Array B	84.22	18	eP	P	10 50 05.1	+0.4
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TIXI	Tiksi	86.59	347	LR	LR	11 35 20.9	
	comp=Z,96nm,19.2s,baz=1.0,slow=40						
TIXI	Tiksi	86.59	347	iP	P	10 50 17.6	+1.2
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.2s						
DBIC	Dimbokro	88.52	84	P	P	10 50 28.4	+1.7
	comp=Z,10nm,0.7s,baz=303,slow=4.9,SNR=11						
	comp=Z,10nm,0.7s						
DBIC	Dimbokro	88.52	84	P	P	10 50 28.4	+1.7
DBIC				IAmb	IAmb	10 50 29.0	
	comp=Z,12nm,0.8s						
DBIC	Dimbokro	88.52	84	P	P	10 50 28.4	+1.7
DBIC				pmax	pmax		
	comp=Z,12nm,0.8s						
FINES	FINESS Array B	89.07	24	P	P	10 50 28.9	+0.6
	comp=Z,2.8nm,0.9s,baz=328,slow=6.8,SNR=3.4						
	comp=Z,2.8nm,0.9s						
FINES	FINESS Array B	89.07	24	eP	P	10 50 32.0	+3.7
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GERES	GERESS Array B	89.26	39	P	P	10 50 30.2	+0.5
	comp=Z,0.8nm,0.6s,baz=331,slow=3.8,SNR=2.2						
	comp=Z,0.8nm,0.6s						
TORD	Torodi Ar. Bea	92.75	75	P	P	10 50 47.0	+0.6
	comp=Z,1.0nm,0.8s,baz=292,slow=4.8,SNR=6.7						
	comp=Z,1.0nm,0.8s						
MNK	Minsk	93.94	29	iP	P	10 50 50.4	-0.7
	comp=E,2.0nm,0.8s						
MNK				iP	P	10 50 50.4	-0.7
	comp=N,17nm,0.7s						
MNK				iP	P	10 50 50.4	-0.7
	comp=Z,8.0nm,0.8s,baz=127						
MNK				ipP	pP	10 51 16.8	-0.3
MNK				iPP	PP	10 54 37.0	-0.4
MNK				iPPP	PPP	10 56 38.1	
MNK				iS	SKSac	11 01 15.4	-1.5
MNK				isS	ScS	11 02 03.2	+9.1
MNK				iPS	PS	11 03 19.7	+0.1
MNK				iSS	SS	11 08 14.1	+0.9
MNK				iSSS	SSS	11 11 55.9	
MNK				iLQ	LQ	11 27 59.2	
MNK				iLR	LR	11 32 58.8	
MNK				iLRM	MLR	11 35 02.8	
	comp=E,11nm,17.2s						
MNK				iLRM	MLR	11 35 10.8	
	comp=Z,63nm,16.6s						
MNK				iLRM	MLR	11 35 17.1	
	comp=N,367nm,17.9s						
MNK	Minsk	93.94	29	iP	P	10 50 50.4	-0.7
MNK				i*PP	pP	10 51 16.8	-0.3
MNK				i		10 54 37.0	
MNK				iPPP	PPP	10 56 38.1	
MNK				iS	SKSac	11 01 15.3	-1.5
MNK				iPS	PS	11 03 19.6	+0.1
MNK				iSS	SS	11 08 14.1	+0.9
MNK				iSSS	SSS	11 11 55.8	
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,17nm,0.7s						
MNK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,11nm,17.0s						
MNK				pmax	pmax		
	comp=Z,63nm,17.0s						
MNK				pmax	pmax		
	comp=N,367nm,18.0s						
AKBB	Malin Array Si	96.89	32	iP	P	10 51 05.9	+1.3
AKBB				pmax	pmax		
	comp=Z,3.0nm,1.0s						
OBN	Obninsk	97.37	26	⇑eP	Pdif	10 51 07.0	+0.3
OBN				e*PP	pP	10 51 35.1	+2.3
OBN				eS	SKSac	11 01 33.5	-1.4
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YSS	Yuzh-Sakhalins	97.69	324	iP	Pdif	10 51 10.1	+1.7
YSS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KURK	Kurchatov	112.30	4	iPKIKP	PKiKP	10 56 07.3	-1.5
ULN	Ulaanbaatar	112.33	344	iPKIKP	PKiKP	10 56 10.7	+1.6
HHC	Hu-ho-hao-te	117.20	337	eP	PKPdf	10 56 18.1	-0.5
WMQ	Urumqi	119.35	357	eP	PKPdf	10 56 20.0	-2.6
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
NJ2	Nanjing	121.19	326	eP	PKiKP	10 56 27.8	+1.3
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CTA	Charters Tower	121.83	257	PKP	PKPdf	10 56 27.7	-0.2
	comp=Z,1.1nm,0.5s,baz=198,slow=3.2,SNR=2.0						
BOSA	Boshof	124.53	113	PKP	PKPdf	10 56 31.6	-1.4
	comp=Z,3.7nm,0.9s,baz=351,slow=4.4,SNR=4.6						
STKA	Stephens Creek	126.68	243	PKP	PKPdf	10 56 36.5	-0.3
	comp=Z,5.3nm,0.8s,baz=66,slow=3.4,SNR=7.7						
STKA				pPKP	pPKPdf	10 57 04.4	+0.3
	comp=Z,2.1nm,0.7s,baz=336,slow=20,SNR=2.5						
STKA	Stephens Creek	126.68	243	ePKIKP	PKPdf	10 56 37.0	+0.1
STKA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WRA	Warramunga Arr	132.94	258	PKP	PKPdf	10 56 49.0	0.0
	comp=Z,2.6nm,0.8s,baz=82,slow=2.2,SNR=9.7						
WRA				pPKP	pPKPdf	10 57 17.4	+1.0
	comp=Z,1.4nm,0.6s,baz=81,slow=2.3,SNR=4.4						
WRA	Warramunga Arr	132.94	258	ePKIKP	PKPdf	10 56 47.9	-1.2
WRA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ASAR	Alice Springs	133.56	253	PKP	PKPdf	10 56 50.0	-0.1
	comp=Z,1.4nm,0.8s,baz=106,slow=1.9,SNR=4.5						
PZH	PanZhiHua	133.62	339	PKP	PKPdf	10 56 49.8	-0.6

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*SJA **18** 10:40:17.6±0.7, 31°.52S×68°.73W, h108^{km}±4^{km}, ML3.5, MW3.5, Hypocentre not reviewed by the ISC*
*IDC **18** 10:40:17.9±1.1, 31°.50S×68°.66W, h100^{km}±10^{km}, mb3.3/3, mbtmp3.7/8, Error ellipse: s-maj=34.2km s-min=25.3km az=98.0*
ISC 18 10:40:18.0±0.9, **31°.38S**±0°.07×**68°.7W**±0°.1, **h104**^{km}, **n9**, σ**1^{s}.92**/12, **mb3.3**/3, **San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJA	San Juan	0.16	153	iP		10 40 33.8	
SJA				IAML		10 40 48.1	
	comp=Z,971nm,0.4s						
CFA	Coronel Fontan	0.41	123	P	Pn	10 40 34.0	+0.3
	comp=Z,992nm,0.4s,baz=263,slow=6.2,SNR=3017						
CFA				S	Sn	10 40 46.1	+0.7
	comp=Z,1µm,0.3s,baz=157,slow=21,SNR=30						
CFA	Coronel Fontan	0.41	123	iP		10 40 34.4	
CFA				iS		10 40 46.6	
CFA				IAML		10 40 48.8	
	comp=Z,2µm,0.2s						
RTLS	Leoncito	0.69	233	iP		10 40 36.0	
RTLS				iS		10 40 49.6	
RTLS				IAML		10 40 50.2	
	comp=Z,1µm,0.5s						
ASAL	Salagasta	1.22	188	iP		10 40 40.5	
ASAL				iS		10 40 57.6	
ASAL				IAML		10 40 58.2	
	comp=Z,598nm,0.5s						
AVFE	Valle Fertil	1.25	55	iP		10 40 44.0	
AVFE				IAML		10 41 07.4	
	comp=Z,542nm,0.4s						
ARCO	CERRO ARCO	1.48	189	iP		10 40 43.4	
AAGR	Agrelo	1.71	185	iP		10 40 46.1	
AAGR				IAML		10 41 08.4	
	comp=Z,329nm,1.2s						
LVC	Limon Verde	8.74	358	P	Pn	10 42 21.9	0.0
	comp=Z,7.8nm,0.4s,baz=178,slow=11,SNR=15						
LVC				S	Sn	10 43 55.4	-3.5
	comp=Z,2.9nm,0.5s,baz=238,slow=8.9,SNR=1.3						
PLCA	Paso Flores	9.46	189	P	Pn	10 42 28.2	-3.0
	comp=Z,0.5nm,0.6s,baz=356,slow=14,SNR=1.9						
CPUP	Villa Florida	11.12	66	P	Pn	10 42 53.5	-0.3
	comp=Z,0.7nm,0.4s,baz=220,slow=16,SNR=1.3						
CPUP				S	Sn	10 44 54.7	-1.5
	comp=Z,2.0nm,0.6s,baz=251,slow=13,SNR=2.0						
LPAZ	La Paz	15.03	2	P	Pn	10 43 47.6	+2.0
	comp=Z,3.6nm,0.7s,baz=176,slow=8.9,SNR=11						
SIV	San Ignacio	16.81	26	P	P	10 44 08.7	+1.2
	comp=Z,2.1nm,0.8s,baz=219,slow=14,SNR=5.3						
TXAR	Lajitas Array	68.96	328	P	P	10 51 12.8	+0.8
	comp=Z,0.2nm,0.6s,baz=150,slow=7.3,SNR=2.3						
	comp=Z,0.2nm,0.6s						
TORD	Torodi Ar. Bea	80.61	68	P	P	10 52 20.2	+0.8
	comp=Z,1.6nm,1.0s,baz=247,slow=4.3,SNR=3.9						
	comp=Z,1.6nm,1.0s						
NVAR	Mina Array Bea	83.45	323	P	P	10 52 35.6	+1.5
	comp=Z,0.2nm,0.5s,baz=117,slow=5.6,SNR=2.7						
	comp=Z,0.2nm,0.5s						

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*IDC **18** 10:40:59.2±1.3, 55°.07S×30°.65W, h0^{km}, mb4.2/5, mbtmp4.2/5, Error ellipse: s-maj=43.6km s-min=31.6km az=58.0*
*NEIC **18** 10:41:03.1±0.9, 55°.3S±0°.2×31°.26W±0°.09, h10^{km}±2^{km}, mb4.6/20, Error ellipse: s-maj=29.1km s-min=5.3km az=14.0*
ISC 18 10:41:00.9±1.0, **55°.1S**±0°.1×**30°.9W**±0°.1, **h10**^{km}, **n30**, σ**0^{s}.88**/29, **mb4.6**/12, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	3.37	282		Pn	10 41 52.9	-0.6
HOPE	Hope Point	3.37	282	P	Pn	10 41 52.9	-0.6
SNAA	Sanae	20.46	155	P	Pn	10 45 40.9	+0.5
MG02	Cerro Sombrero	22.51	260	P	P	10 45 59.6	-0.7
MG03	Isla Dawson	22.83	257	P	P	10 46 03.0	-0.8
MG03				IAmb	IAmb	10 46 18.0	
	comp=Z,33nm,1.2s						
MG05	Puerto Natales	24.79	261	P	P	10 46 22.0	-0.6
TRQA	Tornquist	27.03	296	P	P	10 46 43.6	+0.5
PLTB	Pedras Altas	28.34	316	P	P	10 46 55.3	+0.4
PLTB				IAmb	IAmb	10 46 56.7	
	comp=Z,18nm,1.1s						
MECA	Mercedes	32.39	312	eP	P	10 47 30.9	+0.3
CPUP	Villa Florida	34.65	315	P	P	10 47 50.0	-0.3
	comp=Z,3.0nm,0.6s,baz=156,slow=10.0,SNR=1.8						
	comp=Z,3.0nm,0.6s						
CPUP	Villa Florida	34.65	315	P	P	10 47 50.5	+0.2
CPUP				IAmb	IAmb	10 47 51.5	
	comp=Z,11nm,1.4s						
QSPA	South Pole Qui	35.14	180	P	P	10 47 54.0	-0.4
CO01	Juntas del Tor	37.53	296	P	P	10 48 17.0	+1.8
CO01				IAmb	IAmb	10 48 17.8	
	comp=Z,18nm,1.4s						
CO06	Fray Jorge	37.78	293	P	P	10 48 17.9	+0.9
AC05	El Transito	38.54	297	P	P	10 48 25.0	+1.4
AC04	Llanos de Chal	39.46	296	P	P	10 48 32.3	+1.1
AC04				IAmb	IAmb	10 48 32.5	
	comp=Z,11nm,0.8s						
GO02	Mina Guanaco	41.21	301	P	P	10 48 46.7	+0.6
GO02				IAmb	IAmb	10 49 14.6	
	comp=Z,14nm,1.3s						
LVC	Limon Verde	43.03	303	P	P	10 49 01.4	+0.4
	comp=Z,3.4nm,0.7s,baz=130,slow=7.9,SNR=3.0						
	comp=Z,3.4nm,0.7s						
LVC	Limon Verde	43.03	303	P	P	10 49 00.3	-0.7
PB01	IPOC Station P	44.65	304	P	P	10 49 14.4	+0.8
GO01	Chusmiza	45.69	305	P	P	10 49 23.4	+0.9
GO01				IAmb	IAmb	10 49 24.0	
	comp=Z,5.5nm,0.8s						
MNMC	Minye Minye	46.34	305	P	P	10 49 28.2	+0.9
PB16	IPOC Station P	46.99	306	P	P	10 49 33.6	+0.8
PB16				IAmb	IAmb	10 49 53.1	
	comp=Z,7.0nm,1.2s						
VNDA	Vanda	47.39	184	P	P	10 49 34.9	+0.4
	comp=Z,1.3nm,0.9s,baz=186,slow=10,SNR=1.9						
	comp=Z,1.3nm,0.9s						
VNDA	Vanda	47.39	184	P	P	10 49 36.1	+1.5
VNDA				IAmb	IAmb	10 49 53.1	
	comp=Z,5.2nm,1.2s						
LPAZ	La Paz	48.15	309	P	P	10 49 42.6	+0.8
	comp=Z,3.4nm,0.5s,baz=127,slow=5.4,SNR=13						
	comp=Z,3.4nm,0.5s						
LPAZ	La Paz	48.15	309	P	P	10 49 42.6	+0.8
LPAZ				IAmb	IAmb	10 49 43.0	
	comp=Z,4.4nm,0.6s						
TORD	Torodi Ar. Bea	73.34	33	P	P	10 52 32.2	-0.4
	comp=Z,0.6nm,0.5s,baz=203,slow=7.1,SNR=4.9						
	comp=Z,0.6nm,0.5s						
YKA	Yellowknife Ar	134.09	320	PKP	PKPdf	11 00 16.1	-1.0
	comp=Z,0.2nm,0.6s,baz=128,slow=2.6,SNR=5.7						
ILAR	Eielson Array	147.94	313	PKPbc	PKPbc	11 00 43.9	-1.0
	comp=Z,2.8nm,0.9s,baz=120,slow=1.7,SNR=11						

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*KRNET **18** 10:44:05.7±0.1, 39°.27N×73°.51E, mb3.2*
*SOME **18** 10:44:08.1, 39°.50N×73°.45E, h15^{km}*
*NNC **18** 10:44:10.9±2.6, 39°.55N×73°.72E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=18.7km s-min=9.5km az=172.0*
ISC 18 10:44:08.1±2.1, **39°.40N**±0°.08×**73°.39E**±0°.04, **h4**^{km}±13^{km}, **n34**, σ**1^{s}.85**/46, **16C-11D**, **Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	1.21	338	⇑iP	Pb	10 44 31.4	-0.3
	baz=36						
OHH				⇑iS	Sg	10 44 50.5	+3.4
	baz=36						
DRK	Karamyk	1.23	274	⇑iP	Pn	10 44 31.2	-1.1
	baz=80						
DRK				⇑iS	Sn	10 44 49.5	-0.1
	baz=80						
BTK	Batken	2.09	289	⇑eP	Pn	10 44 45.8	+1.9
	baz=92						
BTK				⇑iS	Sg	10 45 14.9	-0.2
	baz=92						
GAR	Garm	2.42	261	⇑iP	Pn	10 44 49.4	+0.9
	baz=65						
GAR				⇑iS	Sn	10 45 21.1	+2.5
	baz=65						
ARLS	Aral	2.56	16	⇑iP	Pn	10 44 51.5	+1.0
	baz=13						
ARLS				⇑iS	Sb	10 45 25.0	-1.5
	baz=13						
TRKS	Terek-Say	2.73	322	⇑iP	Pn	10 44 54.2	+1.3
	baz=22						
TRKS				⇑iS	Sb	10 45 29.1	-2.4
	baz=22						
AML	Almayashu	2.74	5	⇑Pg	Pb	10 44 56.4	-1.4
	0.5nm,0.4s						
AML				⇓Lg	Lg	10 45 34.2	
	3.4nm,0.6s						
AML	Almayashu	2.74	5	⇓eP	Pn	10 44 54.6	+1.4
	baz=3.0						
AML				⇓iS	Sb	10 45 30.3	-1.6
	baz=3.0						
NRN	Naryn	2.85	44	⇑eP	Pn	10 44 54.4	-0.2
	baz=40						
NRN				⇑iS	Sn	10 45 29.9	+0.4
	baz=40						
UCH	Uchtor	2.95	16	⇓iP	Pn	10 44 56.9	+0.8
	baz=14						
UCH				⇓iS	Sb	10 45 35.0	-3.1
	baz=14						
MNAS	Manas	3.15	348	⇓iP	Pn	10 45 00.4	+1.7
	baz=47						
MNAS				⇓eS	Sb	10 45 40.6	-3.0
	baz=47						
MRKS	Merke	3.34	358	ePg	Pb	10 45 06.3	-1.7
	2.8nm,0.1s						
MRKS				eLg	Lg	10 45 47.2	
	14nm,0.2s						
IUG	Iuzhnay	3.74	318	Pg	Pg	10 45 19.6	-0.2
	20nm,0.8s						
IUG				Lg	Lg	10 46 10.5	
	23nm,0.6s						
IUG	Iuzhnay	3.74	318	ePg	Pb	10 45 14.7	-0.1
	6.9nm,0.2s						
IUG				eLg	Lg	10 46 02.6	
	21nm,0.3s						
TKM2	Tokmak 2	3.89	25	⇓Pg	Pg	10 45 21.2	-1.5
	4.1nm,0.6s						
TKM2				⇑Lg	Lg	10 46 07.6	
	4.6nm,0.5s						
DGS	Degeres	4.24	24	Pg	Pb	10 45 24.7	+1.5
	4.4nm,0.5s						
DGS				Lg	Lg	10 46 19.6	
	12nm,0.9s						
DGS	Degeres	4.24	24	ePg	Pb	10 45 24.0	+0.8
	4.4nm,0.5s						
DGS				eLg	Lg	10 46 18.1	
	12nm,0.9s						
KK31	Karatay Array	4.29	331	⇓Pn	Pn	10 45 17.4	+3.3
	0.5nm,0.3s,baz=135,slow=12,SNR=8.5						
KK31				Pg	Pg	10 45 28.9	-1.3
	1.4nm,0.5s,baz=146,slow=16,SNR=6.2						
KK31				⇓Sn	Sb	10 46 11.2	-4.9
	2.0nm,0.5s						
KK31				⇓Lg	Lg	10 46 24.8	
	2.3nm,0.4s,baz=177,slow=35,SNR=3.6						
IZV	Izvestkoviy	4.37	33	Pg	Pb	10 45 27.9	+2.4
	2.7nm,0.7s						
IZV				Lg	Lg	10 46 24.7	
	14nm,1.1s						
IZV	Izvestkoviy	4.37	33	ePg	Pb	10 45 26.5	+1.0
	2.7nm,0.7s						
IZV				eLg	Lg	10 46 22.8	
	14nm,1.1s						
MTBS	Maitube	4.37	31	Pg	Pb	10 45 25.2	-0.3
	3.6nm,0.4s						
MTBS				Lg	Lg	10 46 19.7	
	5.4nm,0.5s						
MTBS	Maitube	4.37	31	ePg	Pb	10 45 25.2	-0.3
	3.6nm,0.4s						
MTBS				eLg	Lg	10 46 19.7	
	5.4nm,0.5s						
TNSS	Tian-Shan	4.52	35	Pg	Pb	10 45 28.5	+0.3
	4.1nm,1.0s						
TNSS				Lg	Lg	10 46 25.7	
	4.0nm,0.8s						
TNSS	Tian-Shan	4.52	35	ePg	Pb	10 45 28.5	+0.3
	3.9nm,0.3s						
TNSS				eLg	Lg	10 46 25.7	
	4.0nm,0.1s						
KRBS	Karabastau	4.62	21	Pg	Pb	10 45 30.1	+0.3
	1.9nm,0.5s						
KRBS				Lg	Lg	10 46 28.8	
	5.6nm,0.7s						
KRBS	Karabastau	4.62	21	ePg	Pb	10 45 30.1	+0.3
	2.0nm,0.0s						
KRBS				eLg	Lg	10 46 28.8	
	5.6nm,0.7s						
KOTS	Kotyrbulak	4.75	35	Pg	Pb	10 45 33.1	+1.2
	5.1nm,0.6s						
KOTS				Lg	Lg	10 46 33.9	
	19nm,1.8s						
KOTS	Kotyrbulak	4.75	35	ePg	Pb	10 45 33.1	+1.2
	5.1nm,0.6s						
KOTS				eLg	Lg	10 46 33.9	
	19nm,1.8s						
KTBS	Karatobe	4.97	29	Pg	Pb	10 45 34.7	-0.9
	1.9nm,0.9s						
KTBS				Lg	Lg	10 46 36.8	
	9.9nm,0.9s						
KTBS	Karatobe	4.97	29	ePg	Pb	10 45 36.3	+0.7
	1.7nm,0.1s						
KTBS				eLg	Lg	10 46 39.3	
	8.3nm,0.2s						
KUU	Kurty	5.00	25	Pg	Pb	10 45 36.8	+0.6
	2.2nm,0.3s						
KUU				Lg	Lg	10 46 39.8	
	4.9nm,0.8s						
KUU	Kurty	5.00	25	ePg	Pb	10 45 36.8	+0.6
	2.1nm,0.1s						
KUU				eLg	Lg	10 46 39.8	
	8.5nm,0.3s						
BTLS	Baital	5.66	5	Pg	Pb	10 45 50.8	+3.5
	2.3nm,1.0s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BTLS	Baital	5.66	5	*e*Pg	Pb	10 45 50.8	+3.5
	2.1nm,0.2s						
BTLS				*e*Lg	Lg	10 47 03.7	
	2.6nm,0.3s						

DJA ***18*** *10:47:15.9±0.7, 5°S±5°×15°2E±°, h43^{km}±9^{km}, M5.1/9, mB4.9/3, mb4.8/9, MLv5.3/2, Mw(mB)4.2/3*

IDC ***18*** *10:47:15.8±1.0, 5°.36S×151°.96E, h58^{km}±8^{km}, mb4.1/17, mbtmp4.4/20, MS3.8/16, Error ellipse: s-maj=15.9km s-min=8.4km az=111.0*

NEIC ***18*** *10:47:16.5±0.6, 5°.26S±0°.07×151°.88E±0°.07, h58^{km}±7^{km}, mb4.6/31, Error ellipse: s-maj=11.1km s-min=9.2km az=115.0*

ISC 18 10:47:14.9±0.4**, 5°.33S**±0°.05×**151°.91E**±0°.07**, h45^{km}, n99, σ1^{s}14**/96**, mb4.5**/33**, MS3.9**/14**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.02	7	P	Pn	10 47 33.7	+0.8
	19µm,0.6s,baz=217,slow=1.9,SNR=1058						
KRVT				S	Sn	10 47 48.6	+2.6
	16µm,0.5s,baz=168,slow=23,SNR=12						
KRVT				LR	LR	10 47 56.4	
	comp=Z,2µm,18.5s,baz=281,slow=39						
RABL	Rabaul	1.16	13		Pn	10 47 36.1	+1.4
RABL	Rabaul	1.16	13	P	Pn	10 47 36.3	+1.6
PMG	Port Moresby	6.21	229	P	Pn	10 48 46.4	+2.2
	160nm,0.8s,baz=39,slow=9.9,SNR=75						
PMG				S	Sn	10 49 57.6	+3.7
	79nm,0.6s,baz=141,slow=22,SNR=8.0						
PMG	Port Moresby	6.21	229		Pn	10 48 45.7	+1.6
PMG	Port Moresby	6.21	229	P	Pn	10 48 46.9	+2.8
HNR	Honiara	8.96	118	P	Pn	10 49 22.1	+0.3
	154nm,0.3s,baz=202,slow=5.4,SNR=1.3						
HNR				LR	LR	10 53 12.4	
	comp=Z,2µm,20.2s,baz=334,slow=40						
HNR	Honiara	8.96	118	Pn	Pn	10 49 23.9	+2.0
COEN	Coen	12.15	224	Pn	Pn	10 50 06.7	+1.2
MTSU	Mount Surprise	14.73	210	P	P	10 50 43.4	-2.4
CTA	Charters Tower	15.67	200	P	Pn	10 50 53.6	+0.8
	9.4nm,0.8s,baz=21,slow=12,SNR=16						
CTA				LR	LR	10 56 44.0	
	comp=Z,351nm,19.3s,baz=58,slow=36						
CTAO	Charters Tower	15.67	200	Pn	Pn	10 50 53.8	+1.0
CTAO	Charters Tower	15.67	200	P	P	10 50 55.1	-1.1
	22nm,1.4s						
RK1H	Rockhampton Ha	18.01	184	P	P	10 51 24.3	+2.2
	13nm,0.8s						
QIS	Mount Isa	19.29	217	P	Pn	10 51 37.9	+0.4
EIDS	Eidsvold	19.95	182	P	Pn	10 51 44.5	-0.8
EIDS				IAmb	IAmb	10 51 47.6	
	comp=Z,47nm,1.2s						
EIDS	Eidsvold	19.95	182	P	Pn	10 51 44.4	-0.8
GUMO	Guam	20.05	340	LR	LR	11 00 13.9	
	comp=Z,68nm,18.1s,baz=124,slow=39						
KDU	Kakadu	20.53	248	P	P	10 51 49.7	0.0
RMQ	Roma	21.26	188	P	P	10 51 59.2	+1.7
DZM	Mont Dzumac	21.80	141	P	P	10 52 02.9	-0.5
	comp=Z,10nm,0.8s,baz=316,slow=20,SNR=7.6						
DZM				LR	LR	10 59 31.1	
	comp=Z,278nm,21.1s,baz=292,slow=34						
	comp=Z,10nm,0.8s						
DZM	Mont Dzumac	21.80	141	P	P	10 52 04.0	+0.6
DZM				IAmb	IAmb	10 52 16.7	
	comp=Z,32nm,1.3s						
MTN	Manton Dam	21.82	249	P	P	10 52 03.3	-0.3
MTN				IAmb	IAmb	10 52 14.8	
	comp=Z,42nm,1.3s						
MTN	Manton Dam	21.82	249	P	P	10 52 04.5	+0.9
WB0	Warramunga Arr	22.28	228	P	P	10 52 08.4	-0.2
WB0				IAmb	IAmb	10 52 21.8	
	comp=Z,39nm,1.1s						
QLP	Quilpie	22.37	198	P	P	10 52 11.3	+1.9
	comp=Z,56nm,1.6s						
WRAB	Tennant Creek	22.42	228	P	P	10 52 09.7	-0.2
WRAB				IAmb	IAmb	10 52 23.0	
	comp=Z,35nm,0.8s						
WRAB	Tennant Creek	22.42	228	P	P	10 52 09.8	-0.2
WB2	Warramunga Arr	22.42	228	P	P	10 52 09.9	-0.2
WB2				IAmb	IAmb	10 52 23.1	
	comp=Z,37nm,0.9s						
WRA	Warramunga Arr	22.43	228	P	P	10 52 09.8	-0.4
	comp=Z,17nm,0.8s,baz=53,slow=9.9,SNR=51						
WRA				PcP	PcP	10 56 01.5	-2.2
	comp=Z,1.1nm,0.9s,baz=36,slow=1.7,SNR=3.8						
WRA				S	S	10 56 12.7	-1.1
	comp=Z,2.7nm,1.0s,baz=51,slow=18,SNR=8.1						
WRA				LR	LR	11 01 38.1	
	comp=Z,235nm,18.4s,baz=55,slow=38						
	comp=Z,17nm,0.8s						
WRA	Warramunga Arr	22.43	228	P	P	10 52 09.1	-1.0
AULRC	Lightning Ridg	24.26	188	P	P	10 52 28.3	+0.4
INKA	Innaminka	24.69	204	P	P	10 52 33.2	+1.3
KNRA	Kununurra	24.94	244		P	10 52 34.5	+0.2
KNRA	Kununurra	24.94	244	P	P	10 52 34.6	+0.3
AS01	Alice Springs	25.13	222	P	P	10 52 36.2	+0.2
AS31	Alice Springs	25.16	222	P	P	10 52 36.5	+0.2
AS31				IAmb	IAmb	10 52 49.2	
	comp=Z,11nm,0.8s						
ASAR	Alice Springs	25.16	222	P	P	10 52 36.2	-0.1
	comp=Z,30nm,0.8s,baz=55,slow=8.0,SNR=114						
ASAR				LR	LR	11 03 26.8	
	comp=Z,167nm,18.1s,baz=98,slow=39						
	comp=Z,30nm,0.8s						
ASAR	Alice Springs	25.16	222	P	P	10 52 36.3	+0.1
CMSA	Cobar Meteorol	26.72	192	P	P	10 52 50.1	-0.1
OOD	Oodnadatta	27.15	213	P	P	10 52 55.0	+0.9
LCRK	Leigh Creek	28.12	206	P	P	10 53 02.7	-0.1
STKA	Stephens Creek	28.12	199	P	P	10 53 00.8	-2.0
	comp=Z,2.1nm,0.7s,baz=12,slow=14,SNR=3.2						
STKA				LR	LR	11 04 26.4	
	comp=Z,277nm,19.6s,baz=96,slow=37						
	comp=Z,2.1nm,0.7s						
STKA	Stephens Creek	28.12	199	P	P	10 53 02.8	0.0
STKA	Stephens Creek	28.12	199	P	P	10 53 03.5	+0.7
FITZ	Fitzroy Crossi	28.62	241	P	P	10 53 06.8	-0.6
FITZ	Fitzroy Crossi	28.62	241	P	P	10 53 07.4	0.0
MULG	Mulgathing	29.99	212	P	P	10 53 18.8	-0.5
BBOO	Buckleboo	31.09	206	P	P	10 53 28.8	-0.2
BBOO				IAmb	IAmb	10 53 29.7	
	comp=Z,6.9nm,0.8s						
ARPS	Mount Arapiles	32.63	195	P	P	10 53 42.7	+0.2
FORT	Forrest	33.82	219	P	P	10 53 52.4	-0.6
MBWA	Marble Bar	34.94	240	P	P	10 54 02.8	0.0
MBWA				IAmb	IAmb	10 54 15.1	
	comp=Z,8.4nm,0.8s						
KKM	Kota Kinabalu	37.38	287	P	P	10 54 22.9	-1.1
RTZ	Ruatahuna	40.20	149	P	P	10 54 47.8	+0.6
JNU	Nakatsue	43.13	334	P	P	10 55 11.1	0.0
	comp=Z,6.8nm,0.9s,baz=169,slow=6.5,SNR=7.3						
	comp=Z,6.8nm,0.9s						
MJAR	Matsushiro Arr	43.58	344	P	P	10 55 14.9	+0.2
	comp=Z,2.1nm,1.0s,baz=165,slow=9.4,SNR=5.4						
	comp=Z,2.1nm,1.0s						
KSRS	Korea Array	48.07	334	P	P	10 55 51.9	+1.8
	comp=Z,1.2nm,0.8s,baz=147,slow=7.7,SNR=7.8						
	comp=Z,1.2nm,0.8s						
NJ2	Nanjing	48.70	322	*e*P	P	10 55 56.4	+1.4
RAR	Rarotonga	49.39	113	LR	LR	11 14 26.9	
	comp=Z,44nm,18.8s,baz=306,slow=33						
MDJ	Mudanjiang	53.60	340	P	P	10 56 33.1	+1.5
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,150nm,8.1s						
CMAR	Chiang Mai Arr	57.30	296	P	P	10 56 59.2	+0.5
	comp=Z,2.6nm,0.9s,baz=109,slow=5.1,SNR=5.9						
	comp=Z,2.6nm,0.9s						
CD2	Chengdu	58.41	311	P	P	10 57 05.8	-0.5
CD2				S	S	11 05 05.3	-1.0
CD2				pmax	pmax		
	comp=Z,120nm,5.7s						
PETK	Petropavlovsk-	58.42	4	P	P	10 57 04.9	-1.0
	comp=Z,4.5nm,0.9s,baz=167,slow=7.3,SNR=3.0						
PETK				LR	LR	11 18 38.1	
	comp=Z,85nm,19.1s,baz=197,slow=32						
	comp=Z,4.5nm,0.9s						
HHC	Hu-ho-hao-te	58.96	325	*e*P	P	10 57 11.8	+1.8
HHC				pmax	pmax		
	comp=Z,35nm,0.8s						
HHC				pmax	pmax		
	comp=Z,230nm,5.5s						
HEH	HeiHe	59.27	342	*e*P	P	10 57 26.4	+15
SONM	Songino Array	66.30	328	P	P	10 57 58.8	0.0
	comp=Z,3.3nm,0.6s,baz=148,slow=5.3,SNR=16						
	comp=Z,3.3nm,0.6s						
SONM	Songino Array	66.30	328	P	P	10 57 58.9	0.0
SONM				IAmb	IAmb	10 58 03.4	
	comp=Z,2.9nm,0.6s						
VNDA	Vanda	72.34	178	P	P	10 58 36.4	+0.8
BILL	Bilibino	73.89	6	P	P	10 58 45.1	+0.2
KDAK	Kodiak Island	77.05	27	LR	LR	11 25 28.4	
	comp=Z,88nm,21.9s,baz=303,slow=30						
MK31	Makanchi Array	80.14	319	P	P	10 59 19.8	-0.6
MK31				IAmb	IAmb	10 59 31.9	
	comp=Z,6.5nm,1.2s						
MKAR	Makanchi Array	80.14	319	P	P	10 59 19.9	-0.6
	comp=Z,1.5nm,0.9s,baz=92,slow=6.1,SNR=10.0						
	comp=Z,1.5nm,0.9s						
MAKZ	Makanchi	80.34	319	P	P	10 59 21.0	-0.5
KTH	Kantishna Hill	80.84	22	P	P	10 59 23.4	-0.5
KTH				IAmb	IAmb	10 59 31.9	
	comp=Z,10nm,1.5s						
ZALV	Zalesovo Beam	81.09	327	P	P	10 59 24.0	-1.4
	comp=Z,2.2nm,0.6s,baz=97,slow=7.6,SNR=8.2						
	comp=Z,2.2nm,0.6s						
MCK	McKinley	81.69	23	P	P	10 59 27.9	-0.5
MCK				IAmb	IAmb	10 59 29.0	
	comp=Z,11nm,1.2s						
ILAR	Eielson Array	82.98	22	P	P	10 59 33.6	-1.4
	comp=Z,1.3nm,0.6s,baz=254,slow=5.0,SNR=20						
	comp=Z,1.3nm,0.6s						
RIDG	Independent Ri	83.29	24	P	P	10 59 35.6	-1.1
KURK	Kurchatov	83.63	322	P	P	10 59 37.8	-0.8
KURK				IAmb	IAmb	11 00 03.9	
	comp=Z,4.9nm,1.0s						
AAK	Ala-Archa	84.38	314	P	P	10 59 41.9	-1.0
AAK				IAmb	IAmb	11 00 02.6	
	comp=Z,4.3nm,1.1s						
QSPA	South Pole Qui	84.64	180	P	P	10 59 43.2	-0.4
	comp=Z,1.6nm,0.9s,baz=311,slow=1.2,SNR=3.2						
	comp=Z,1.6nm,0.9s						
BMAR	Burnt Mountain	85.05	20	P	P	10 59 45.2	-0.4
HYT	Haines Junctio	85.31	28	P	P	10 59 47.1	0.0
KKAR	Karatay Array	87.34	314	P	P	10 59 56.3	-1.0
DLBC	Dease Lake	88.29	31	LR	LR	11 33 16.9	
	comp=Z,101nm,21.6s,baz=279,slow=31						
YBH	Yreka Blue Hor	90.07	48	LR	LR	11 32 48.2	
	comp=Z,43nm,21.6s,baz=311,slow=30						
A36M	Sachs Harbour	92.81	18	P	P	11 00 21.7	-0.5
A36M				IAmb	IAmb	11 00 45.6	
	comp=Z,3.3nm,0.9s						
NVAR	Mina Array Bea	93.11	52	P	P	11 00 25.4	+0.7
	comp=Z,1.7nm,0.8s,baz=252,slow=6.7,SNR=14						
NVAR				LR	LR	11 34 03.8	
	comp=Z,83nm,21.8s,baz=276,slow=30						
	comp=Z,1.7nm,0.8s						
NVAR	Mina Array Bea	93.11	52	P	P	11 00 23.5	-1.2
WVOR	Wild Horse Val	93.15	48	P	P	11 00 25.8	+1.1
PFO	Pinyon Flats O	94.27	57	LR	LR	11 34 03.5	
	comp=Z,65nm,21.9s,baz=242,slow=30						
WCT	Wildcat Mounta	94.33	54	P	P	11 00 29.6	-0.6
WCT				IAmb	IAmb	11 00 31.8	
	comp=Z,3.9nm,1.2s						
ELK	Elko	95.60	50	LR	LR	11 36 07.0	
	comp=Z,43nm,21.3s,baz=304,slow=31						
YKA	Yellowknife Ar	96.30	28	P	P	11 00 38.0	-0.5
	comp=Z,0.3nm,0.6s,baz=269,slow=4.8,SNR=5.4						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	99.86	48	P	Pdif	11 00 54.5	-0.8
	comp=Z,0.7nm,0.8s,baz=112,slow=0.8,SNR=6.8						
PDAR				LR	LR	11 40 19.8	
	comp=Z,39nm,19.3s,baz=316,slow=32						
	comp=Z,0.7nm,0.8s						
GERES	GERESS Array B	124.03	328	PKP	PKPdf	11 06 07.6	-1.0
	comp=Z,0.5nm,0.5s,baz=85,slow=2.1,SNR=3.8						
LPAZ	La Paz	134.95	119	PKP	PKPdf	11 06 31.4	+0.5
	comp=Z,1.2nm,0.8s,baz=175,slow=0.2,SNR=4.4						
TORD	Torodi Ar. Bea	149.61	287	PKPbc	PKPbc	11 06 59.9	-0.8
	comp=Z,13nm,0.7s,baz=73,slow=3.0,SNR=60						
BDFB	Brasilia	151.31	137	PKPbc	PKPbc	11 07 02.9	-2.0
	comp=Z,2.3nm,0.5s,baz=153,slow=7.4,SNR=4.0						

BJI ***18*** *10:51:05.4±0.0, 2°.86N×98°.61E, h5^{km}, mb4.6/40, mB4.9/22, Ms4.7/26, Ms7 4.3/26*

IDC ***18*** *10:51:06.7±0.5, 3°.34N×98°.40E, h0^{km}, mb4.3/24, mbtmp4.3/26, ML4.3/2, MS4.0/42, Error ellipse: s-maj=19.2km s-min=11.7km az=47.0*

NEIC ***18*** *10:51:10.2±2.3, 3°.28N±0°.04×98°.45E±0°.05, h10^{km}±1^{km}, mb4.8/56, Error ellipse: s-maj=8.8km s-min=5.5km az=55.0*

DJA ***18*** *10:51:11.3±0.2, 3°N±2°×9°8E±°, h10^{km}, M4.8/23, mB5.3/9, mb4.8/23, MLv5.0/18, Mw(mB)4.7/9*

GCMT ***18*** *10:51:11.2±0.3, 3°.42N±0°.03×98°.47E±0°.02, h21^{km}±1^{km}, MW4.9/66, Moment Tensor Solution. s24,c30; s66,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.94±.19; $M_{\theta\theta}$-0.21±.10; $M_{\phi\phi}$2.15±.12; $M_{r\theta}$0.92±.24; $M_{\theta\phi}$-0.77±.07; $M_{\phi r}$-0.99±.19; Best double couple: $M_0$2.56700×10^{16} NP1:ϕ_s328.00000°, δ62.00000°, λ-107.00000°. NP2: ϕ_s181.00000°, δ33.00000°, λ-61.00000°. Principal axes: T 2.7040, Plg15.0000°, Azm71.0000°; N -0.2760, Plg15.0000°, Azm336.0000°; P -2.4290, Plg68.0000°, Azm203.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 10:51:09.6±0.3**, 3°.28N**±0°.03×**98°.42E**±0°.03**, h10^{km}, n211, σ1^{s}75**/190**, mb4.7**/73**, MS4.1**/52**, 14C-9D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSI	Tuntungan	0.26	35	P	Pg	10 51 14.6	-0.4
KCSI	Kotacane, Aceh	0.69	290	P	Pg	10 51 24.1	+1.2
KCSI				S	Sb	10 51 34.4	+1.1
PSI	Prapat	0.70	133	P	Pb	10 51 25.0	+1.0
RPSI	Rantau Prapat	0.78	139	Pg	Pg	10 51 23.7	-0.9
RPSI				Sg	Sg	10 51 34.7	-0.1
GSI	Gunungsitoli	2.14	203	Pn	Pn	10 51 46.5	+1.1
GSI	Gunungsitoli	2.14	203	P	Pb	10 51 48.9	+0.4
GSI	Gunungsitoli	2.14	203	P	Pb	10 51 48.0	-0.5
MLSI	Meulaboh, Aceh	2.23	296	P	Pn	10 51 49.1	+2.4
SNSI	Sinabang, Aceh	2.26	247	P	Pb	10 51 50.7	+0.1
LHMI	Lhok Sumawe	2.42	323		Pn	10 51 49.9	+0.5
LHMI	Lhok Sumawe	2.42	323	P	Pb	10 51 53.6	+0.2
LHMI	Lhok Sumawe	2.42	323	P	Pn	10 51 50.5	+1.2
IPM	Ipoh	2.86	65	Pn	Pn	10 51 54.6	-0.8
IPM	Ipoh	2.86	65	P	Pn	10 51 56.1	+0.7
KULM	Kulim	2.99	48	Pn	Pn	10 51 56.1	-1.0
PBSI	Pulau Batu	3.32	182	P	Pn	10 52 04.5	+2.8
BKNI	Bangkinang	3.94	138		Pn	10 52 11.4	+1.2
BKNI	Bangkinang	3.94	138	P	Pn	10 52 14.9	+4.7
SKLT	Songkhla	4.44	30	P	Pn	10 52 17.1	0.0
PDSI	Padang	4.64	154	P	Pn	10 52 23.4	+3.5
SDSI	Sungai Dareh	5.16	144	P	Pn	10 52 30.4	+3.4
	153nm,0.9s,3µm1.3nm						
SRIT	Nakonsritamara	5.41	13		Pn	10 52 32.5	+2.2
SRIT	Nakonsritamara	5.41	13	P	Pn	10 52 32.4	+2.0
MYKOM	Kota Tinggi	5.63	105		Pn	10 52 34.3	+0.9
SURA	Surathani	5.97	12	P	Pn	10 52 38.6	+0.5
TPRI	Tanjung Pinang	6.54	111	P	Pn	10 52 49.2	+3.2
	95nm,0.6s,1.1nm						
DSRI	Dabo	7.21	121	P	Pn	10 52 57.5	+2.4
	33nm,0.8s,2µm0.5nm						
MASI	Maura Aman, Be	7.44	149	P	Pn	10 53 02.4	+4.0
	130nm,1.4s,1µm0.6nm						
MDSI	Maura Dua	9.63	143	P	Pn	10 53 32.0	+3.6
	39nm,1.2s,1µm						
PBA	Port Blair	10.04	326	Pn	Pn	10 53 35.0	+1.0
KSM	Kuching	12.02	98	Pn	Pn	10 54 00.4	-0.8
SBUM	Sibu	13.81	93	Pn	Pn	10 54 26.0	+0.3
CM31	Chiang Mai Arr	15.09	2		Pn	10 54 44.8	+1.8
CMAR	Chiang Mai Arr	15.09	2	Pn	Pn	10 54 41.5	-1.6
	0.5nm,0.3s,baz=196,slow=11,SNR=1.0						
CMAR				Lg	Lg	10 59 01.2	
	0.2nm,0.3s,baz=188,slow=29,SNR=1.8						
CMAR				LR	LR	11 00 37.3	
	comp=Z,313nm,18.6s,baz=185,slow=38						
	0.7nm,0.3s						
CMAR	Chiang Mai Arr	15.09	2		Pn	10 54 44.1	+1.1
PHRA	Phrae	15.22	7		Pn	10 54 44.4	-0.4
CHTO	Chiang Mai	15.44	2		Pn	10 54 47.5	-0.2
SMRI	Semarang	15.79	131	Pn	Pn	10 54 51.9	-0.5
SMRI				IAmb	IAmb	10 54 58.7	
	comp=Z,53nm,1.0s						
NGJI	Ngawi	16.78	129	P	P	10 55 06.7	-0.4
	comp=Z,42nm,1.3s						
BBKI	Banjar Baru	17.73	112	P	P	10 55 19.1	+1.4
	comp=Z,45nm,0.9s						
PALK	Pallekele	18.07	283	P	Pn	10 55 20.7	-0.4
	comp=Z,0.6nm,0.3s,baz=210,slow=13,SNR=7.7						
PALK				LR	LR	11 02 15.1	
	comp=Z,709nm,19.0s,baz=206,slow=37						
	comp=Z,4.5nm,0.5s						
PALK	Pallekele	18.07	283	P	P	10 55 22.4	+0.8
MND	Mandalay	18.75	353	P	Pn	10 55 31.0	+1.7
QIZ	Qiongzhong	19.23	35	P	P	10 55 34.3	+0.1
QIZ				S	S	10 59 11.9	-0.3
QIZ				LR	LR		
	comp=Z,730nm,10.3s						
QIZ				LR	LR		
	comp=Z,840nm,17.3s						
QIZ				LR	LR		
	comp=Z,400nm,16.5s						
ABJI	Asem Bagus	19.24	125	P	Pn	10 55 36.1	+0.8
	comp=Z,87nm,0.9s						
MYLDM	Lahad Datu	20.12	84	P	P	10 55 44.1	+0.2
SRBI	Singaraja	20.21	124	P	Pn	10 55 46.7	-0.1
	comp=Z,151nm,1.0s						
BRDH	Bariadhala	20.36	342	LR	LR	11 05 23.5	
	comp=Z,641nm,20.5s,baz=280,slow=42						
MPSI	Mapaga	21.67	97	P	P	10 55 59.7	-1.0
	comp=Z,22nm,1.2s						
TWSI	Taliwang, Sumb	21.95	123	P	P	10 56 05.7	+2.0
	comp=Z,39nm,1.1s						
KMI	Kunming	22.11	10	⇓P	P	10 56 07.8	+2.2
KMI				S	S	11 00 14.4	+4.9
KMI				pmax	pmax		
	comp=Z,20nm,0.9s						
KMI				pmax	pmax		
	comp=Z,210nm,3.9s						
KMI				LR	LR		
	comp=Z,740nm,15.9s						
KMI				LR	LR		
	comp=Z,2µm,15.6s						
KMI				LR	LR		
	comp=Z,620nm,13.7s						
PLAI	Plampang	22.75	122	P	P	10 56 14.1	+1.9
PLAI	Plampang	22.75	122	P	P	10 56 13.1	+0.9
	comp=Z,62nm,1.0s						
KAPI	Kappang	22.85	111	P	P	10 56 13.7	+0.3
	comp=Z,5.0nm,0.4s,baz=288,slow=9.8,SNR=4.0						
KAPI				LR	LR	11 05 31.9	
	comp=Z,440nm,18.4s,baz=289,slow=38						
	comp=Z,5.0nm,0.4s						
KAPI	Kappang	22.85	111	P	P	10 56 13.9	+0.5
KAPI				IAmb	IAmb	10 56 21.3	
	comp=Z,28nm,1.2s						
KAPI	Kappang	22.85	111	P	P	10 56 16.0	+2.6
SHL	Shillong	23.03	345	P	P	10 56 15.7	+0.5
BKSI	Bulukumba	23.31	111	P	P	10 56 19.2	+1.2
	comp=Z,94nm,1.0s,comp=Z,1µm						
PZH	PanZhiHua	23.31	8	P	P	10 56 19.1	+1.1
PZH				pP	sP	10 56 23.5	+1.1
PZH				S	S	11 00 35.5	+4.7
PZH				sS	sS	11 00 42.4	+6.5
PZH				pmax	pmax		
	comp=Z,20nm,1.4s						
PZH				pmax	pmax		
	comp=Z,190nm,4.4s						
PZH				LR	LR		
	comp=Z,1µm,20.2s						
PZH				LR	LR		
	comp=Z,3µm,20.0s						
PZH				LR	LR		
	comp=Z,1µm,23.0s						
MRSI	Marisa	23.67	96	P	P	10 56 23.2	+1.5
	comp=Z,20nm,0.5s,comp=Z,670nm						
GYA	Guiyang	24.36	18	⇓P	P	10 56 32.1	+3.9
GYA				S	S	11 00 48.8	+1.0
GYA				pmax	pmax		
	comp=Z,34nm,1.1s						
GYA				LR	LR		
	comp=Z,420nm,11.9s						
GYA				LR	LR		
	comp=Z,560nm,13.2s						
GYA				LR	LR		
	comp=Z,460nm,13.2s						
KAAM	Kaadhehdhoo	25.56	264	P	P	10 56 40.4	+1.4
KAAM				IAmb	IAmb	10 57 02.2	
	comp=Z,34nm,1.1s						
LSA	Lhasa	27.16	346	P	P	10 56 57.9	+4.0
CD2	Chengdu	27.94	10	P	P	10 57 01.4	+1.1
CD2				S	S	11 01 47.0	+2.7
CD2				LR	LR		
	comp=Z,520nm,8.4s						
CD2				LR	LR		
	comp=Z,620nm,8.4s						
CD2				LR	LR		
	comp=Z,350nm,11.4s						
ENH	Enshi	28.82	20	P	P	10 57 07.2	-0.9
ENH				IAmb	IAmb	10 57 12.7	
	comp=Z,16nm,0.7s						
XAN	Xi'an	32.13	17	P	P	10 57 37.3	-0.1
XAN				pP	pP	10 57 42.1	+1.2
XAN				S	S	11 02 50.4	+0.4
XAN				pmax	pmax		
	comp=Z,13nm,1.0s						
XAN				LR	LR		
	comp=Z,610nm,13.6s						
XAN				LR	LR		
	comp=Z,1µm,14.0s						
XAN				LR	LR		
	comp=Z,540nm,11.8s						
PSA00	Pilbara Seismi	32.41	141	P	P	10 57 41.2	+1.2
PSA00	Pilbara Seismi	32.41	141	P	P	10 57 41.2	+1.2
PSA00				IAmb	IAmb	10 57 43.5	
	comp=Z,8.8nm,0.8s						
LZH	Lanzhou	33.02	8	*e*P	P	10 57 50.4	+5.0
LZH				pP	sP	10 57 55.0	+4.7
LZH				sP	pP	10 57 57.5	+8.6
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
LZH				LR	LR		
	comp=Z,480nm,15.4s						
LZH				LR	LR		
	comp=Z,1µm,15.6s						
LZH				LR	LR		
	comp=Z,470nm,18.1s						
LYN	LuoYang	33.74	21	⇓P	P	10 57 54.9	+3.4
LYN				S	S	11 03 18.8	+3.8
LYN				pmax	pmax		
	comp=Z,21nm,1.0s						
LYN				LR	LR		
	comp=Z,400nm,13.6s						
LYN				LR	LR		
	comp=Z,610nm,12.6s						
LYN				LR	LR		
	comp=Z,310nm,11.8s						
FITZ	Fitzroy Crossi	34.23	129	P	P	10 57 56.0	+0.1
FITZ	Fitzroy Crossi	34.23	129	P	P	10 57 56.6	+0.8
NJ2	Nanjing	34.46	32	*e*P	P	10 57 57.5	-0.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,190nm,11.3s						
NJ2				LR	LR		
	comp=Z,740nm,20.4s						
NJ2				LR	LR		
	comp=Z,1µm,18.5s						
NJ2				LR	LR		
	comp=Z,630nm,20.6s						
GTA	Gaotai	35.98	2	*e*P	P	10 58 12.5	+1.6
GTA				sP	sP	10 58 19.8	+4.0
GTA				PcP	PcP	11 00 40.0	+2.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				LR	LR		
	comp=Z,230nm,9.5s						
GTA				LR	LR		
	comp=Z,370nm,10.9s						
GTA				LR	LR		
	comp=Z,280nm,9.8s						
JOW	Kunigami	36.94	48	LR	LR	11 12 37.0	
	comp=Z,154nm,21.6s,baz=236,slow=35						
HHC	Hu-ho-hao-te	39.23	16	*e*P	P	10 58 40.9	+2.5
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,5.5s						
HHC				LR	LR		
	comp=Z,530nm,17.6s						

HHC				LR	LR		
	comp=Z,660nm,16.9s						
HHC				LR	LR		
	comp=Z,600nm,15.6s						
BJI	Beijing	39.97	21	P	P	10 58 45.0	+0.6
BJI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BJI				LR	LR		
	comp=Z,160nm,16.9s						
BJI				LR	LR		
	comp=Z,170nm,14.9s						
BJI				LR	LR		
	comp=Z,200nm,15.1s						
WMQ	Urumqi	41.47	348	*e*P	P	10 59 05.0	+8.2
WMQ				pmax	pmax		
	comp=Z,20nm,0.8s						
WB0	Warramunga Arr	42.12	124	P	P	10 59 00.8	-1.6
WB0				IAmb	IAmb	10 59 04.2	
	comp=Z,12nm,0.9s						
WRA	Warramunga Arr	42.16	125	P	P	10 59 01.4	-1.4
	comp=Z,14nm,0.9s,baz=303,slow=9.1,SNR=34						
WRA				PcP	PcP	11 00 56.4	-0.8
	comp=Z,1.8nm,0.8s,baz=314,slow=2.6,SNR=4.7						
WRA				LR	LR	11 17 20.7	
	comp=Z,106nm,21.6s,baz=299,slow=37						
	comp=Z,14nm,0.9s						
WRA	Warramunga Arr	42.16	125	P	P	10 59 01.9	-0.8
WRAB	Tennant Creek	42.16	125	P	P	10 59 01.2	-1.6
WRAB				IAmb	IAmb	10 59 06.0	
	comp=Z,18nm,0.8s						
WB2	Warramunga Arr	42.17	125	P	P	10 59 01.6	-1.2
WB2				IAmb	IAmb	10 59 04.7	
	comp=Z,18nm,0.9s						
TJN	Taejon	42.38	35	P	P	10 59 04.2	-0.2
JNU	Nakatsue	42.45	42	LR	LR	11 16 48.6	
	comp=Z,134nm,21.4s,baz=242,slow=36						
WSAR	Wadi Sarin	43.28	301	P	P	10 59 11.9	+0.1
	comp=Z,7.0nm,0.5s,baz=137,slow=7.4,SNR=21						
WSAR				LR	LR	11 17 19.2	
	comp=Z,142nm,19.1s,baz=115,slow=36						
	comp=Z,7.0nm,0.5s						
KSAR	Wonju Array Be	43.42	35	P	P	10 59 11.6	-1.2
KSRS	Korea Array	43.45	35	P	P	10 59 11.9	-1.0
	comp=Z,2.6nm,1.0s,baz=223,slow=9.2,SNR=11						
KSRS				LR	LR	11 19 55.5	
	comp=Z,69nm,19.9s,baz=230,slow=40						
	comp=Z,2.6nm,1.0s						
ASAR	Alice Springs	43.73	130	P	P	10 59 13.7	-1.8
	comp=Z,4.7nm,0.9s,baz=304,slow=7.4,SNR=23						
ASAR				PcP	PcP	11 01 00.3	-2.1
	comp=Z,0.9nm,0.9s,baz=319,slow=3.7,SNR=1.8						
ASAR				LR	LR	11 18 50.8	
	comp=Z,165nm,19.4s,baz=339,slow=38						
	comp=Z,4.7nm,0.9s						
AS31	Alice Springs	43.73	130	P	P	10 59 14.8	-0.7
AS01	Alice Springs	43.76	130	P	P	10 59 17.1	+1.3
FORT	Forrest	44.12	142	P	P	10 59 18.0	-0.5
AAK	Ala-Archa	44.62	335	LR	LR	11 19 56.5	
	comp=Z,184nm,19.9s,baz=159,slow=39						
SONM	Songino Array	44.91	8	P	P	10 59 24.2	-0.5
	comp=Z,0.6nm,0.5s,baz=184,slow=7.3,SNR=3.5						
SONM				PcP	PcP	11 01 04.1	-2.1
	comp=Z,0.9nm,0.6s,baz=201,slow=3.9,SNR=4.4						
SONM				LR	LR	11 20 08.6	
	comp=Z,164nm,18.2s,baz=186,slow=39						
	comp=Z,0.6nm,0.5s						
SONM	Songino Array	44.91	8	P	P	10 59 25.1	+0.4
MKAR	Makanchi Array	45.55	344	P	P	10 59 27.6	-2.1
	comp=Z,2.1nm,0.8s,baz=150,slow=7.9,SNR=12						
MKAR				LR	LR	11 21 43.2	
	comp=Z,126nm,20.0s,baz=157,slow=40						
	comp=Z,2.1nm,0.8s						
KK31	Karatay Array	46.77	332	P	P	10 59 38.0	-1.3
KK31				IAmb	IAmb	11 01 00.8	
	comp=Z,9.2nm,1.6s						
KKAR	Karatay Array	46.77	332	P	P	10 59 37.6	-1.7
QIS	Mount Isa	46.83	122	P	P	10 59 41.8	+1.7
GUMO	Guam	46.99	75	LR	LR	11 18 23.0	
	comp=Z,70nm,21.0s,baz=106,slow=35						
OOD	Oodnadatta	47.36	133	P	P	10 59 43.4	-0.7
MDJ	Mudanjiang	49.47	29	P	P	11 00 02.0	+1.9
MDJ				pmax	pmax		
	comp=Z,4.0nm,2.2s						
MDJ				pmax	pmax		
	comp=Z,210nm,4.9s						
MTSU	Mount Surprise	49.98	117	P	P	11 00 04.6	+0.1
KURK	Kurchatov	50.12	344	P	P	11 00 03.2	-1.8
PMG	Port Moresby	50.18	105	LR	LR	11 25 08.6	
	comp=Z,108nm,18.1s,baz=312,slow=41						
PMG	Port Moresby	50.18	105	P	P	11 00 05.4	-0.6
PMG				IAmb	IAmb	11 00 08.6	
	comp=Z,16nm,1.1s						
PMG	Port Moresby	50.18	105	P	P	11 00 06.6	+0.5
PMG	Port Moresby	50.18	105	P	P	11 00 06.5	+0.5
USA0B	Ussuriysk Arra	50.37	31	P	P	11 00 07.5	+0.5
USA0B				IAmb	IAmb	11 00 10.5	
	comp=Z,6.3nm,0.8s						
USRK	Ussuriysk Ar.	50.37	31	P	P	11 00 06.6	-0.4
	comp=Z,3.5nm,0.8s,baz=224,slow=4.0,SNR=3.3						
USRK				LR	LR	11 23 27.4	
	comp=Z,287nm,18.2s,baz=211,slow=39						
	comp=Z,3.5nm,0.8s						
USRK	Ussuriysk Ar.	50.37	31	P	P	11 00 06.9	-0.1
GEYT	Alibeck	50.44	318	P	P	11 00 04.9	-2.7
	comp=Z,4.3nm,0.8s,baz=157,slow=7.9,SNR=5.8						
GEYT				LR	LR	11 23 50.5	
	comp=Z,200nm,19.6s,baz=167,slow=39						
	comp=Z,4.3nm,0.8s						
GEYT	Alibeck	50.44	318	IAmb	IAmb	11 00 16.5	
	comp=Z,6.4nm,0.7s						
GYA0B	ALIBECK ARRAY	50.44	318	P	P	11 00 07.2	-0.5
GYA0B				IAmb	IAmb	11 00 16.5	
	comp=Z,8.2nm,0.7s						
INKA	Innaminka	51.11	130	P	P	11 00 14.7	+1.9
ZAA0	Zalesovo Array	51.72	350	P	P	11 00 17.5	+0.5
ZALV	Zalesovo Beam	51.72	350	P	P	11 00 14.5	-2.5
	comp=Z,2.9nm,0.6s,baz=182,slow=5.4,SNR=7.9						
ZALV				LR	LR	11 26 04.5	
	comp=Z,90nm,18.1s,baz=123,slow=41						
	comp=Z,2.9nm,0.6s						
ZALV	Zalesovo Beam	51.72	350	P	P	11 00 15.2	-1.8
CTA	Charters Tower	52.38	118	P	P	11 00 20.4	-2.1
	comp=Z,3.1nm,0.8s,baz=239,slow=5.9,SNR=3.7						
CTA				LR	LR	11 24 51.0	
	comp=Z,208nm,18.7s,baz=274,slow=39						
	comp=Z,3.1nm,0.8s						
HEH	HeiHe	52.83	23	*e*P	P	11 00 25.4	+0.1
HEH				LR	LR		
	comp=Z,390nm,17.3s						
HEH				LR	LR		
	comp=Z,450nm,17.5s						
HEH				LR	LR		
	comp=Z,310nm,15.9s						
KLR	Kul'dur	53.86	26	P	P	11 00 31.7	-1.2
	comp=Z,7.7nm,0.9s,baz=262,slow=6.8,SNR=17						
	comp=Z,7.7nm,0.9s						
STKA	Stephens Creek	53.88	134	P	P	11 00 32.6	-0.7
	comp=Z,5.5nm,0.8s,baz=301,slow=7.8,SNR=8.7						
STKA				LR	LR	11 25 02.7	
	comp=Z,140nm,20.2s,baz=235,slow=38						
	comp=Z,5.5nm,0.8s						
STKA	Stephens Creek	53.88	134	P	P	11 00 34.3	+1.0
RAYN	Ar Rayn	54.89	296	P	P	11 00 40.5	-0.4
RAYN				IAmb	IAmb	11 00 41.5	
	comp=Z,24nm,1.7s						
ASAJ	Asahikawa	56.28	37	LR	LR	11 25 24.3	
	comp=Z,126nm,18.7s,baz=170,slow=37						
ABKAR	Akbulak array	56.28	331	P	P	11 00 47.9	-2.5
AKTO	Aktyubinsk	58.00	331	LR	LR	11 28 20.6	
	comp=Z,95nm,18.7s,baz=30,slow=39						
GNI	Garni	60.67	315	LR	LR	11 31 35.3	
	comp=Z,60nm,19.4s,baz=86,slow=40						
GURO	Guroymak-BITLI	62.05	312	IAmb	IAmb	11 01 31.0	
	comp=Z,8.6nm,1.2s						
YAK	Yakutsk	63.09	16	LR	LR	11 31 01.7	
	comp=Z,167nm,18.3s,baz=244,slow=38						
KBZ	Khabaz	63.32	318	P	P	11 01 37.5	-1.4
	comp=Z,4.3nm,0.8s,baz=125,slow=4.6,SNR=7.9						
	comp=Z,4.3nm,0.8s						
EIL	Elat	65.41	301	LR	LR	11 31 32.0	
	comp=Z,234nm,18.3s,baz=86,slow=37						
MMAI	Mount Meron Ar	65.70	305	LR	LR	11 33 07.1	
	comp=Z,145nm,18.1s,baz=212,slow=38						
MBAR	Mbarara	67.75	268	LR	LR	11 28 03.5	
	comp=Z,91nm,21.9s,baz=84,slow=33						
BRTR	Keskin Array B	68.63	311	P	P	11 02 11.2	-2.3
	comp=Z,4.5nm,0.9s,baz=127,slow=6.4,SNR=16						
BRTR				LR	LR	11 34 32.4	
	comp=Z,69nm,19.2s,baz=108,slow=38						
	comp=Z,4.5nm,0.9s						
DZM	Mont Dzumac	71.02	115	LR	LR	11 36 57.4	
	comp=Z,84nm,18.5s,baz=218,slow=39						
SEY	Seymchan	71.38	23	P	P	11 02 26.4	-3.3
	comp=Z,1.3nm,0.8s,baz=270,slow=10,SNR=2.4						
	comp=Z,1.3nm,0.8s						
LSZ	Lusaka	71.88	253	LR	LR	11 29 34.4	
	comp=Z,129nm,20.7s,baz=121,slow=32						
SORM	Soroca	74.32	319	⇑P	P	11 02 45.2	-2.2
AKASG	Malin Array Be	74.37	322	P	P	11 02 44.6	-3.0
	comp=Z,0.9nm,0.5s,baz=81,slow=4.1,SNR=14						
	comp=Z,0.9nm,0.5s						
AKASG	Malin Array Be	74.37	322	P	P	11 02 45.1	-2.5
VRI	Vrincioaia	74.94	317	⇑P	P	11 02 50.0	-1.1
PLOR	Plostina	74.99	317	⇓P	P	11 02 50.8	-0.6
TESR	Tescani	75.11	317	⇑P	P	11 02 50.5	-1.6
MLR	Muntele Rosu	75.41	316	⇑P	P	11 02 52.6	-1.4
MLR	Muntele Rosu	75.41	316	LR	LR	11 43 11.8	
	comp=Z,67nm,18.1s,baz=91,slow=42						
MLR	Muntele Rosu	75.41	316	IAmb	IAmb	11 02 56.5	
	comp=Z,9.9nm,0.9s						
LBTB	Lobatse	75.90	243	LR	LR	11 29 37.3	
	comp=Z,208nm,20.7s,baz=84,slow=30						
LBTB	Lobatse	75.90	243	P	P	11 02 57.1	-0.1
LBTB				IAmb	IAmb	11 03 00.9	
	comp=Z,11nm,0.9s						
PLVB	Pleven	75.99	314	⇑P	P	11 02 55.6	-1.6
VOIR		76.02	316	⇓P	P	11 02 55.5	-1.9
BURAR	Bucovina Array	76.28	318	⇓P	P	11 02 57.8	-1.1
BURAR	Bucovina Array	76.28	318	P	P	11 02 57.9	-1.0
BURAR				IAmb	IAmb	11 03 02.0	
	comp=Z,5.7nm,0.9s						
ARR	Arges	76.30	316	⇓P	P	11 02 56.9	-2.1
BUR08	Bucovina Ar. S	76.30	318	P	P	11 02 58.0	-1.0
BUR08				IAmb	IAmb	11 03 05.2	
	comp=Z,7.8nm,1.1s						
NACGM	Naroch	76.81	326	*e*P	P	11 02 59.4	-2.1
	comp=Z,16nm,1.0s,baz=103						
BOSA	Boshof	76.87	240	P	P	11 03 02.2	-0.4
	comp=Z,1.7nm,0.6s,baz=97,slow=5.0,SNR=2.1						
BOSA				LR	LR	11 31 51.9	
	comp=Z,105nm,21.3s,baz=85,slow=32						
	comp=Z,1.7nm,0.6s						
VTS	Vitosha	76.89	313	⇑P	P	11 03 00.7	-1.8
VTS	Vitosha	76.89	313	IAmb	IAmb	11 03 09.3	
	comp=Z,17nm,1.5s						
MARR	Marisel-Cluj	77.54	317	⇑P	P	11 03 04.8	-1.2
DRGR		77.83	317	⇑P	P	11 03 06.6	-1.0
SURR	Surduc	78.09	316	⇑P	P	11 03 07.9	-1.0
TRPA	Tarpa	78.14	318	⇑P	P	11 03 08.0	-1.1
MDVR	Moldovita	78.26	315	⇑P	P	11 03 08.6	-1.4
BZS	Buzias	78.43	316	⇓P	P	11 03 09.4	-1.5
SIRR	Siria	78.48	316	⇑P	P	11 03 10.1	-1.1
FINES	FINESS Array B	78.73	332	P	P	11 03 10.1	-2.0
	comp=Z,1.1nm,0.4s,baz=103,slow=5.4,SNR=18						
	comp=Z,1.1nm,0.4s						
STHS	Stebnicka Huta	79.17	320	*e*P	P	11 03 13.3	-1.6
DIVS	Divibare	79.41	314	IAmb	IAmb	11 03 19.4	
	comp=Z,12nm,1.3s						
PDG	Podgorica	79.79	312	⇑P	P	11 03 16.5	-1.8
RPZ	Rata Peaks	79.81	135	LR	LR	11 38 55.9	
	comp=Z,120nm,20.0s,baz=270,slow=36						
MORH	Mrgy, Hungar	80.56	316	⇑P	P	11 03 20.8	-1.6
VYHS	Vyhne	80.64	318	*e*P	P	11 03 21.4	-1.4
ARCES	ARCESS Array B	81.00	340	P	P	11 03 22.4	-1.9
	comp=Z,8.5nm,1.2s,baz=102,slow=3.0,SNR=4.3						
ARCES				LR	LR	11 42 51.6	
	comp=Z,121nm,19.9s,baz=68,slow=38						
	comp=Z,8.5nm,1.2s						
SUR	Sutherland	81.31	237	LR	LR	11 33 49.1	
	comp=Z,144nm,18.8s,baz=118,slow=32						
JAVC	Velka Javorina	81.44	319	*e*P	P	11 03 26.1	-1.1
MORC	Moravsky Berou	81.61	320	⇓P	P	11 03 27.2	-0.8
MORC	Moravsky Berou	81.61	320	IAmb	IAmb	11 03 27.8	
	comp=Z,21nm,1.6s						
MORC	Moravsky Berou	81.61	320	*e*P	P	11 03 26.4	-1.6
VRAC	Vranov	82.19	319	*e*P	P	11 03 30.3	-0.7
TSUM	Tsumeb	82.43	250	LR	LR	11 38 07.4	
	comp=Z,77nm,18.3s,baz=150,slow=34						
TSUM	Tsumeb	82.43	250	P	P	11 03 33.0	0.0
TSUM				IAmb	IAmb	11 03 37.1	
	comp=Z,10nm,1.2s						
ARSA	Arzberg	82.77	317	*e*P	P	11 03 32.5	-1.6
	comp=Z,12nm,1.7s						
SOKA	Soboth	83.08	316	*i* P	P	11 03 34.6	-1.2
	comp=Z,3.6nm,0.6s						
URZ	Urewera	83.17	129	LR	LR	11 41 44.7	
	comp=Z,141nm,19.5s,baz=4.0,slow=36						
OBKA	Obir	83.41	316	*e*P	P	11 03 35.2	-2.3
	comp=Z,5.6nm,1.0s						
BRG	Berggiesshubel	83.98	321	*e*P	P	11 03 39.2	-1.0
BRG				Amp		11 03 41.3	
	comp=Z,6.8nm,1.0s						
GEC2	GERESS Array S	84.06	319	IAmb	IAmb	11 03 40.4	
	comp=Z,9.9nm,1.3s						
GERES	GERESS Array B	84.06	319	P	P	11 03 39.6	-1.3
	comp=Z,0.6nm,0.4s,baz=101,slow=6.9,SNR=5.7						
	comp=Z,0.6nm,0.4s						
PRED	Cave del Predi	84.08	316	IAmb	IAmb	11 03 43.2	
	comp=Z,7.6nm,0.9s						
HFS	Hagfors	84.53	330	LR	LR	11 44 41.2	
	comp=Z,93nm,18.1s,baz=27,slow=38						
CIMO	Cimolais	84.86	316	P	P	11 03 43.6	-1.3
CIMO				IAmb	IAmb	11 03 47.0	
	comp=Z,12nm,0.9s						
WTTA	Wattenberg	85.42	317	*i* P	P	11 03 45.8	-2.0
	comp=Z,11nm,1.8s						
WATA	Walderalm	85.46	317	*e*P	P	11 03 45.8	-2.1
	comp=Z,7.0nm,1.3s						
SQTA	Sankt Quirin	85.71	317	*i* P	P	11 03 47.3	-1.9
	comp=Z,7.2nm,1.1s						
MOTA	Moosalm	85.78	317	*i* P	P	11 03 47.6	-2.0
	comp=Z,4.6nm,0.9s						
NOA	NORSAR Array B	85.79	331	LR	LR	11 47 14.1	
	comp=Z,64nm,18.4s,baz=95,slow=39						
RETA	Reutte	86.01	317	*i* P	P	11 03 49.0	-1.6
	comp=Z,3.5nm,0.7s						
FUORN	Ofenpass-Fuorn	86.36	316	P	P	11 03 52.3	-0.3
FUORN				IAmb	IAmb	11 03 57.3	
	comp=Z,11nm,1.4s						
DAVA	Damuels	86.61	317	*e*P	P	11 03 51.8	-2.0
	comp=Z,14nm,1.2s						
KEST	Kesra	87.35	305	P	P	11 03 56.2	-1.2
	comp=Z,4.1nm,1.0s,baz=295,slow=8.7,SNR=2.6						
	comp=Z,4.1nm,1.0s						
VNDA	Vanda	87.62	169	P	P	11 03 56.9	-0.8
	comp=Z,1.2nm,0.8s,baz=273,slow=3.8,SNR=1.8						
	comp=Z,1.2nm,0.8s						
QSPA	South Pole Qui	93.21	180	P	P	11 04 23.5	-0.7
	comp=Z,1.2nm,0.8s,baz=352,slow=7.1,SNR=2.5						
	comp=Z,1.2nm,0.8s						
KDAK	Kodiak Island	97.24	31	LR	LR	11 53 44.4	
	comp=Z,32nm,18.4s,baz=328,slow=39						
KLU	Klutina	99.06	26	P	Pdif	11 04 51.0	+0.1
BORG	Borgarnes	99.27	338	LR	LR	11 52 58.1	
	comp=Z,43nm,19.9s,baz=31,slow=37						
NVAR	Mina Array Bea	126.39	36	PKP	PKPdf	11 10 12.5	-1.2
	comp=Z,1.0nm,0.9s,baz=270,slow=3.8,SNR=4.0						
PDAR	Pinedale Array	127.65	26	PKP	PKPdf	11 10 14.7	-1.2
	comp=Z,0.2nm,0.5s,baz=69,slow=3.0,SNR=2.8						
TXAR	Lajitas Array	141.27	32	PKP	PKPdf	11 10 40.3	-1.3
	comp=Z,0.6nm,0.8s,baz=290,slow=1.2,SNR=5.8						
BDFB	Brasilia	144.75	247	PKP	PKPab	11 10 46.9	+0.1
	comp=Z,4.3nm,0.8s,baz=118,slow=6.1,SNR=3.8						
CPUP	Villa Florida	147.35	223	PKPbc	PKPdf	11 10 53.1	+1.0
	comp=Z,0.8nm,0.4s,baz=124,slow=3.6,SNR=1.9						

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*SNET **18** 10:53:19.0±0.8, 13°.97N×89°.95W, h5^{km}, ML3.8*

*GCG **18** 10:53:21.8±1.0, 14°.19N×90°.02W, h1^{km}±34^{km}, MD3.6*

ISC 18 10:53:19.4±0.9, **14°.06N**±0°.10×**89°.89W**±0°.05, **h15**^{km}±6^{km}, **n17**, σ**0ˢ.60**/22, **1C-1D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLOZ	Alcaldia de Sa	0.11	107	⇑*i*P	Pg	10 53 23.0	+0.1
SLOZ				*e*S	Sg	10 53 26.2	+1.1
NUBE	Las Nubes	0.19	144	*e*P	Pg	10 53 23.2	-0.8
NUBE				*e*S	Sg	10 53 26.4	-0.7
CEVE	Cerro Verde	0.35	131	*e*P	Pg	10 53 26.8	+0.1
CEDA	San Andres	0.55	118	*e*P	Pg	10 53 30.0	-0.2
JAYA	Jayaque - finc	0.59	133	*e*P	Pg	10 53 30.5	-0.6
NBG	Las Nubes	0.69	320	⇓*e*P	Pn	10 53 33.7	-1.2
UEES	Universidad Ev	0.72	118	*e*P	Pg	10 53 33.5	-0.1
PCG	Pacaya	0.77	296	*e*P	Pb	10 53 34.4	-0.3
SJTE	Alcalda de S	0.97	117	*e*P	Pg	10 53 37.8	-0.4
PAVA	Las Pavas	0.99	110	*e*P	Pg	10 53 38.3	-0.4
PAVA				*e*S	Sn	10 53 53.2	+0.4
FUG	Fuego 3	1.00	293	*e*P	Pg	10 53 38.4	-0.3
SCLA	Alcaldia de Sa	1.19	107	*e*P	Pb	10 53 41.7	0.0
TECO	Alcaldia de Te	1.20	115	*e*P	Pn	10 53 41.9	+0.2
COEB	Comit de Eme	1.44	113	*e*P	Pn	10 53 45.3	+0.2
ALJI	Alcalda de J	1.48	119	*e*S	Sg	10 54 06.9	-0.2
SULM	Suchitepequez,	1.64	279	*e*P	Pg	10 53 51.5	+0.6
SULM				*e*S	Sb	10 54 10.8	+0.9
STG3	Santiaguito 3,	1.75	292	*e*P	Pb	10 53 51.4	0.0
STG3				*e*S	Sb	10 54 13.8	+0.5

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*GCG **18** 11:11:58.0±0.5, 13°.43N×90°.92W, h26^{km}±6^{km}, MD3.4*

*SNET **18** 11:12:01.5±0.9, 13°.45N×90°.73W, h11^{km}±13^{km}, ML2.8*

ISC 18 11:12:00.1±6.9, **13°.5N**±0°.2×**90°.9W**±0°.1, **h39**^{km}±43^{km}, **n9**, σ**0ˢ.88**/17, **1C, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.93	19	*e*P	Pn	11 12 16.7	-0.2
PCG				*e*S	Sn	11 12 28.1	-1.2
FUG	Fuego 3	0.94	5	*e*P	Pn	11 12 17.0	0.0
FUG				*e*S	Sn	11 12 31.4	+2.2
NUBE	Las Nubes	1.18	71	*e*P	Pn	11 12 20.1	-0.3
NUBE				*e*S	Sn	11 12 34.3	-1.0
NUBE				IAML		11 12 35.8	
	comp=Z,205nm,0.3s						
NBG	Las Nubes	1.21	28	⇑*e*P	Pn	11 12 21.0	+0.2
NBG				*e*S	Sn	11 12 36.6	+0.4
SLOZ	Alcaldia de Sa	1.22	65	*e*P	Pn	11 12 20.7	-0.1
SLOZ				*e*S	Sn	11 12 36.0	-0.2
SLOZ				IAML		11 12 39.9	
	comp=Z,190nm,0.4s						
CEVE	Cerro Verde	1.31	76	*e*P	Pn	11 12 22.4	+0.3
CEVE				*e*S	Sn	11 12 38.9	+0.5
STG3	Santiaguito 3,	1.35	332	*e*P	Pn	11 12 22.6	0.0
STG3				*e*S	Sn	11 12 38.8	-0.6
JAYA	Jayaque - finc	1.45	84	*e*P	Pn	11 12 24.0	0.0
JAYA				*e*S	Sn	11 12 41.2	-0.5
JAYA				IAML		11 12 42.7	
	comp=Z,678nm,0.2s						
COEG	Centro de Oper	1.99	87	*e*S	Sn	11 12 56.5	+1.3

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*IDC **18** 11:22:47.6±1.1, 27°.98N×143°.10E, h0^{km}, mb3.6/5, mbtmp3.6/5, MS3.4/3, Error ellipse: s-maj=41.2km s-min=19.4km az=109.0*

*JMA **18** 11:22:57.4±0.1, 28°N±1°×14°2E±°, h37^{km}, MV3.9/11, NEAR CHICHIJIMA ISLAND*

ISC 18 11:22:51.5±1.0, **27°.85N**±0°.09×**142°.9E**±0°.2, **h22**^{km}, **n20**, σ**1ˢ.50**/14, **mb3.8**/6, **MS3.6**/3, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	0.98	220	P	Pn	11 23 10.7	+0.8
CBIJ				S	Sb	11 23 20.4	-2.0
JCJ	Chichijima	0.98	220	Pn	Pn	11 23 10.8	+0.8
	308nm,0.3s,baz=298,slow=23,SNR=240						
JCJ				Sn	Sb	11 23 20.4	-2.0
	916nm,0.3s,baz=188,slow=24,SNR=28						
JHH2	Haha-jima-NKT2	1.37	208	P	Pb	11 23 17.5	+1.0
JHH2				*e*S	Sn	11 23 32.0	-0.9
JHO	Hitachi	8.95	348	P	Pn	11 25 00.6	+1.1
JAG	Ashikaga	9.03	342	P	Pn	11 25 00.8	+0.2
KLR	Kul'dur	23.01	341	P	P	11 27 53.5	-1.2
	1.2nm,0.7s,baz=162,slow=8.7,SNR=3.0						
	1.2nm,0.7s						
H11N2	WAKE ISLAND Hy	23.37	105	T	T	11 53 03.5	
	baz=294,slow=75,SNR=22						
H11N1	WAKE ISLAND Hy	23.38	105	T	T	11 53 04.5	
	baz=294,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	23.39	105	T	T	11 53 04.8	
	baz=294,slow=75,SNR=22						
H11S3	WAKE ISLAND Hy	23.74	108	T	T	11 53 29.5	
	baz=297,slow=74,SNR=30						
H11S1	WAKE ISLAND Hy	23.74	108	T	T	11 53 30.0	
	baz=297,slow=74,SNR=17						
H11S2	WAKE ISLAND Hy	23.75	108	T	T	11 53 30.7	
	baz=297,slow=74,SNR=21						
DAV	Davao City (W)	26.39	222	P	P	11 28 28.3	+1.8
	331nm,0.5s,baz=43,slow=19,SNR=11						
CMAR	Chiang Mai Arr	41.30	267	LR	LR	11 46 38.4	
	comp=Z,17nm,20.7s,baz=160,slow=34						
WRA	Warramunga Arr	48.23	191	P	P	11 31 32.2	+1.5
	0.6nm,0.4s,baz=8.3,slow=7.7,SNR=18						
	0.6nm,0.4s						
ASAR	Alice Springs	51.95	190	P	P	11 31 58.7	-0.2
	0.1nm,0.6s,baz=358,slow=5.2,SNR=1.6						
	0.1nm,0.6s						
AAK	Ala-Archa	56.35	304	LR	LR	11 59 51.7	
	comp=Z,60nm,18.1s,baz=14,slow=39						
ILAR	Eielson Array	56.75	29	LR	LR	11 56 43.7	
	comp=Z,47nm,19.5s,baz=275,slow=36						
FINES	FINESS Array B	77.55	334	P	P	11 34 45.4	+0.1
	3.7nm,1.1s,baz=74,slow=7.4,SNR=5.3						
	3.7nm,1.1s						
NVAR	Mina Array Bea	79.56	52	P	P	11 34 54.9	-2.3
	0.1nm,0.3s,baz=280,slow=5.4,SNR=1.6						
	0.1nm,0.3s						

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*SOME **18** 11:32:30.9, 43°.65N×69°.77E*

*NNC **18** 11:32:31.9±1.5, 43°.72N×69°.82E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=11.0km s-min=6.2km az=120.0, Suspected Mining explosion.*

*KRNET **18** 11:32:32.0±0.1, 43°.62N×69°.73E, mb2.5*

ISC 18 11:32:30.7±1.6, **43°.68N**±0°.04×**69°.69E**±0°.09, **h0**^{km}, **n15**, σ**1ˢ.50**/20, **14C-3D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	0.83	134	⇑P	Pg	11 32 46.6	-0.1
	1.9nm,0.4s,baz=300,slow=16,SNR=134						
KK31				⇑S	Sg	11 32 57.8	+0.4
	34nm,0.7s,baz=324,slow=32,SNR=140						
KKAR	Karatay Array	0.83	134	⇑*i*P	Pg	11 32 46.5	-0.2
	baz=32						
KKAR				⇑*i*S	Sg	11 32 57.5	+0.1
	baz=32						
IUG	Iuzhnay	1.55	171	P	Pn	11 33 00.3	+0.5
	33nm,0.6s						
IUG				S	Sg	11 33 22.3	+1.7
	77nm,0.6s						
MNAS	Manas	2.38	119	⇑*e*P	Pb	11 33 13.3	-1.3
	baz=18						
MNAS				⇑*i*S	Sb	11 33 42.9	-1.7
	baz=18						
TRKS	Terek-Say	2.40	153	⇑*e*P	Pb	11 33 14.4	-0.5
	baz=53						
TRKS				⇑*i*S	Sb	11 33 44.8	-0.4
	baz=53						
ARK	Arkit	2.52	138	⇑*i*P	Pn	11 33 15.0	+2.0
	baz=37						
ARK				⇑*i*S	Sb	11 33 46.9	-1.6
	baz=37						
MRKS	Merke	2.75	109	Pg	Pb	11 33 20.6	-0.2
	3.4nm,0.8s						
MRKS				Lg	Lg	11 33 58.6	
	13nm,0.5s						
BTLS	Baital	3.41	65	Pg	Pg	11 33 36.0	0.0
	12nm,0.4s						
BTLS				Lg	Lg	11 34 24.4	
	3.6nm,0.5s						
KRBS	Karabastau	4.34	88	Pg	Pb	11 33 49.9	+2.0
	3.0nm,0.6s						
KRBS				Lg	Lg	11 34 49.8	
	5.7nm,0.7s						
TKM2	Tokmak 2	4.38	98	⇑Pg	Pg	11 33 52.6	-2.0
	2.6nm,0.7s						
TKM2				⇑Lg	Lg	11 34 48.7	
	5.3nm,0.7s						
DGS	Degeres	4.45	94	Pg	Pb	11 33 51.7	+1.9
	3.5nm,0.5s						
DGS				Lg	Lg	11 34 52.4	
	11nm,1.1s						
OTUK	Ortayu	4.92	21	⇓Pn	Pn	11 33 46.2	+0.3
	2.9nm,0.5s						
OTUK				⇓Sn	Sn	11 34 41.4	-2.2
	1.1nm,0.3s						
OTUK				⇑Lg	Lg	11 35 04.3	
	2.0nm,0.5s						
TNSS	Tian-Shan	5.33	94	Pg	Pb	11 34 07.6	+2.7

	2.1nm,0.8s						
KURBB	Kurchatov Arra	9.19	38	⇑Lg	Lg	11 37 22.4	
	7.1nm,0.8s						
KURK	Kurchatov	9.29	38	⇓Lg	Lg	11 37 23.5	
	3.4nm,0.9s						

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*IDC **18** 11:43:24.3±0.9, 3°.48S×76°.16W, h0km, mb3.8/9, mbtmp3.9/13, ML3.6/4, MS3.1/3, Error ellipse: s-maj=37.5km s-min=19.0km az=72.0*

*VAO **18** 11:43:32.7±0.5, 3°.85S×75°.88W, h10km, mb4.1*

ISC 18 11:43:25.1±0.6, **3°.81S**±0°.05×**76°.54W**±0°.08, **h10km, n50,** σ**1ˢ.71**/46, **mb3.9**/8, **Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	Atahualpa	3.78	209	Pn	Pb	11 44 31.1	-1.1
	4.6nm,0.3s,baz=21,slow=6.3,SNR=49						
ATAH				Sn	Sb	11 45 18.2	-0.1
	12nm,0.3s,baz=330,slow=15,SNR=8.6						
ATAH				LR	LR	11 46 47.0	
	comp=Z,100nm,19.9s,baz=1.6,slow=48						
	27nm,0.6s						
BONI	La Bonita	4.35	347	eP	Pn	11 44 33.1	+1.5
PAC1	Pacto, Paraso	4.64	331	eP	Pb	11 44 45.5	-1.1
TULM	Tulcn-Chalpat	4.67	344	eP	Pg	11 45 04.1	+9.4
GCUF	Volcan Galeras	5.07	351	eP	Pn	11 44 44.8	+3.1
CRUC	La Cruz	5.36	356	eP	Pn	11 44 47.4	+1.8
FLOC	Florencia	5.43	9	eP	Pn	11 44 47.4	+1.2
CZSB	Cruzeiro do Su	5.45	136	eP	Pn	11 44 48.7	+2.3
BBAC	Balboa, Cauca	5.84	353	eP	Pn	11 44 55.0	+3.0
GARC	Garzon, Huila	6.05	10	eP	Pn	11 44 55.7	+0.8
MACC	Macarena, Meta	6.50	24	eP	Pn	11 45 01.4	+0.5
BETC	Betania	6.54	10	eP	Pn	11 45 04.1	+2.5
TBTG	Tabatinga, AM	6.62	93	eP	Pn	11 45 03.7	+1.1
PRAC	Prado	7.66	12	eP	Pn	11 45 18.3	+1.5
YOTC	Yotoco, Valle	7.75	1	eP	Pn	11 45 21.0	+2.9
ANIL	Santa Ana	8.33	8	eP	Pn	11 45 35.9	+10
VILC	Villavicencio,	8.37	20	eP	Pn	11 45 28.2	+1.5
CHIC	Chingaza	8.84	18	eP	Pn	11 45 34.6	+1.2
GUY2C	Guyana, Caldas	9.05	7	eP	Pn	11 45 40.5	+4.1
CBOC	Ciudad Bolivar	9.63	3	eP	Pn	11 45 47.2	+3.2
SGCB	S£o Gabriel d	10.18	69	eP	Pn	11 45 50.0	-1.4
RUSC	La Rusia	10.24	20	eP	Pn	11 45 54.4	+1.7
PTBC	PUERTO BERRIO,	10.49	11	eP	Pn	11 45 56.3	+0.6
ETMB	Extrema	11.85	121	eP	Pn	11 46 13.6	-0.8
TEFE	Tefe	11.88	89	eP	Pn	11 46 13.2	-1.5
SDV	Santo Domingo	13.92	25	Pn	Pn	11 46 38.4	-4.4
	0.5nm,0.3s,baz=255,slow=20,SNR=1.9						
	2.8nm,0.4s						
SAML	Samuel	14.21	112	eP	Pn	11 46 44.3	-2.4
LPAZ	La Paz	14.90	147	Pn	Pn	11 46 57.2	+0.8
	0.3nm,0.3s,baz=319,slow=8.0,SNR=7.2						
	1.3nm,0.5s						
LPAZ	La Paz	14.90	147	eP	Pn	11 46 57.5	+1.0
MACA	Manacapuru-AM	15.84	88	eP	Pn	11 47 06.5	-1.8
SIV	San Ignacio	19.43	130	P	P	11 47 51.7	-0.2
	baz=303,slow=12,SNR=8.1						
SIV				LR	LR	11 55 41.8	
	comp=Z,57nm,18.2s,baz=278,slow=38						
	1.2nm,0.6s						
LVC	Limon Verde	20.09	159	P	Pn	11 48 02.8	+1.6
	7.7nm,0.9s,baz=348,slow=9.3,SNR=2.9						
	7.7nm,0.9s						
BBSD	Serra de San D	20.51	132	eP	P	11 48 03.4	-0.3
PTLB	Pontes e Lacer	20.66	125	eP	P	11 48 05.5	+0.3
PDRB	Porto dos Gac	21.09	113	eP	P	11 48 09.1	-0.8
NPGB	Novo Progresso	21.32	100	eP	P	11 48 13.3	+0.8
PP1B	Ponte de Pedra	25.26	124	eP	P	11 48 53.2	+1.5
BDQN	Bodoquena, MS	25.39	132	eP	P	11 48 54.2	+1.3
RVDE	Rio Verde (Bra	25.96	127	eP	P	11 49 00.2	+2.2
SNDB	Serra Nova Dou	26.26	109	eP	P	11 49 02.2	+1.4
PRPB	Parauapebas	26.72	96	eP	P	11 49 05.5	+0.4
ANMO	Albuquerque	47.72	326	P	P	11 52 03.5	+1.0
	1.2nm,0.8s,baz=241,slow=9.8,SNR=5.0						
	1.2nm,0.8s						
PDAR	Pinedale Array	55.15	331	P	P	11 52 58.7	+0.6
	0.4nm,0.6s,baz=101,slow=7.7,SNR=4.5						
	0.4nm,0.6s						
ULM	Lac du Bonnet	56.37	345	P	P	11 53 04.9	-1.5
	2.1nm,0.7s,baz=162,slow=7.8,SNR=4.3						
	2.1nm,0.7s						
NVAR	Mina Array Bea	57.07	321	P	P	11 53 13.1	+1.2
	0.1nm,0.3s,baz=144,slow=6.7,SNR=2.1						
	0.1nm,0.3s						
SCHQ	Schefferville	58.99	7	P	P	11 53 24.2	-0.6
	0.8nm,0.5s,baz=168,slow=9.3,SNR=1.4						
	0.8nm,0.5s						
YKA	Yellowknife Ar	72.17	342	P	P	11 54 49.6	-0.2
	0.6nm,0.7s,baz=138,slow=6.0,SNR=14						
	0.6nm,0.7s						
MDT	Midelt	77.00	55	LR	LR	12 29 04.2	
	comp=Z,26nm,18.2s,baz=116,slow=36						
RES	Resolute Bay	79.17	355	P	P	11 55 28.6	-1.1
	0.6nm,0.7s,baz=173,slow=8.5,SNR=3.6						
	0.6nm,0.7s						
INK	Inuvik	81.91	342	P	P	11 55 42.4	-2.0
	1.5nm,0.6s,baz=163,slow=4.6,SNR=9.7						
	1.5nm,0.6s						

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*IDC **18** 12:12:20.4±1.0, 1°.69N×98°.98E, h138km±7km, mb3.8/12, mbtmp4.2/13, Error ellipse: s-maj=26.7km s-min=12.1km az=60.0*

*DJA **18** 12:12:20.7±0.3, 2°N±2°×9°9E±°, h142km±4km, M4.4/16, mb4.5/5, mB4.8/1, MLv4.4/16, Mw(mB)4.0/1*

*NEIC **18** 12:12:21.9±1.5, 1°.84N±0°.06×99°.04E±0°.04, h144km±6km, mb4.6/22, Error ellipse: s-maj=9.2km s-min=6.1km az=163.0*

ISC 18 12:12:21.9±0.4, **1°.82N**±0°.05×**99°.06E**±0°.05, **h150km, n77,** σ**1ˢ.10**/84, **mb4.3**/25, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBSI	Sibolga	0.32	212	P	Pn	12 12 42.9	+0.4
SBSI				S	Sn	12 12 58.9	+0.7
RPSI	Rantau Prapat	0.88	351	Pn	Pn	12 12 44.7	-1.0
PSI	Prapat	0.98	352	P	Pn	12 12 44.8	-1.9
GSI	Gunungsitoli	1.57	251	Pn	Pn	12 12 52.0	-0.2
GSI	Gunungsitoli	1.57	251	P	Pn	12 12 52.6	+0.4
GSI	Gunungsitoli	1.57	251	P	Pn	12 12 52.3	+0.1
GSI				S	Sn	12 13 14.6	-0.8
TSI	Tuntungan	1.74	344	P	Pn	12 12 53.4	-0.7
PBSI	Pulau Batu	2.02	203	P	Pn	12 12 57.2	0.0
KCSI	Kotacane, Aceh	2.12	323	P	Pn	12 12 57.1	-1.4
BKNI	Bangkinang	2.47	127		Pn	12 13 03.3	+0.6
BKNI	Bangkinang	2.47	127	P	Pn	12 13 04.0	+1.3
BKNI	Bangkinang	2.47	127	P	Pn	12 13 00.9	-1.8
SNSI	Sinabang, Aceh	2.79	282	P	Pn	12 13 06.7	+0.1
PDSI	Padang	3.06	153	P	Pn	12 13 09.0	-1.0
IPM	Ipoh	3.29	37	Pn	Pn	12 13 12.6	-0.4
IPM	Ipoh	3.29	37	P	Pn	12 13 13.5	+0.5
MLSI	Meulaboh, Aceh	3.60	313	P	Pn	12 13 16.1	-0.8
SDSI	Sungai Dareh	3.62	139	P	Pn	12 13 16.1	-1.1
KULM	Kulim	3.79	25	Pn	Pn	12 13 18.6	-0.9
LHMI	Lhok Sumawe	3.99	328	Pn	Pn	12 13 20.9	-1.0
LHMI	Lhok Sumawe	3.99	328	P	Pn	12 13 21.6	-0.4
LHMI	Lhok Sumawe	3.99	328	P	Pn	12 13 21.0	-1.0
PPSI	Pulau Pagai	4.65	168	P	Pn	12 13 27.7	-3.0
SKLT	Songkhla	5.54	16	P	Pn	12 13 41.7	-0.8
MASI	Maura Aman, Be	5.87	147	P	Pn	12 13 44.5	-2.4
	37nm,0.7s,0.2nm						
SRIT	Nakonsritamara	6.75	5	P	Pn	12 13 58.3	-0.4
MNAI	Manna	7.27	148	Pn	Pn	12 14 04.5	-1.1
MNAI	Manna	7.27	148	P	Pn	12 14 03.7	-1.9
	117nm,1.1s,1.1nm						
SURA	Surathani	7.32	4	P	Pn	12 14 05.1	-1.1
MDSI	Maura Dua	8.09	141	P	Pn	12 14 14.3	-2.2
	17nm,0.7s						
KASI	Kota Agung	9.10	143	P	Pn	12 14 27.3	-2.6
CMAR	Chiang Mai Arr	16.54	360	P	Pn	12 16 05.8	+0.6
	12nm,0.8s,baz=190,slow=11,SNR=79						
TOLI2	Tolitoli	21.73	92	P	P	12 17 02.5	+1.0
TOLI2				IAmb	IAmb	12 17 46.7	
	comp=Z,24nm,1.0s						
FITZ	Fitzroy Crossi	32.81	128	P	P	12 18 41.9	+0.6
KNRA	Kununurra	34.13	122	P	P	12 18 53.6	+1.0
KNRA				IAmb	IAmb	12 18 59.9	
	comp=Z,27nm,1.4s						
MTN	Manton Dam	35.01	115	P	P	12 18 59.7	-0.6
MTN				IAmb	IAmb	12 19 09.5	
	comp=Z,23nm,1.4s						
WB0	Warramunga Arr	40.77	123	P	P	12 19 47.6	-1.0
WB0				IAmb	IAmb	12 19 51.4	
	comp=Z,16nm,0.6s						
WRA	Warramunga Arr	40.81	124	P	P	12 19 48.6	-0.3
	comp=Z,20nm,0.3s,baz=322,slow=11,SNR=132						
WRA				PcP	PcP	12 21 46.7	-0.5
	comp=Z,0.6nm,0.5s,baz=304,slow=3.0,SNR=3.6						
WRA	Warramunga Arr	40.81	124	P	P	12 19 49.2	+0.3
WRAB	Tennant Creek	40.81	124	P	P	12 19 48.7	-0.3
WB2	Warramunga Arr	40.82	124	P	P	12 19 48.9	-0.1
ASAR	Alice Springs	42.31	129	P	P	12 20 00.4	-0.7
	comp=Z,1.0nm,0.5s,baz=299,slow=7.5,SNR=20						
ASAR				PcP	PcP	12 21 52.4	+0.2
	comp=Z,0.7nm,0.6s,baz=312,slow=2.4,SNR=7.7						
	comp=Z,1.0nm,0.5s						
FORT	Forrest	42.58	142	P	P	12 20 02.7	-0.4
FORT				IAmb	IAmb	12 20 43.2	
	comp=Z,25nm,1.1s						
KSRS	Korea Array	44.30	33	P	P	12 20 17.4	+0.6
	comp=Z,1.6nm,0.7s,baz=219,slow=9.0,SNR=10						
	comp=Z,1.6nm,0.7s						
SONM	Songino Array	46.27	7	P	P	12 20 33.4	+1.0
	comp=Z,1.0nm,0.4s,baz=190,slow=9.8,SNR=4.5						
SONM				PcP	PcP	12 22 06.1	+0.8
	comp=Z,0.4nm,0.4s,baz=191,slow=2.9,SNR=1.5						
	comp=Z,1.0nm,0.4s						
MK31	Makanchi Array	47.12	344	P	P	12 20 39.7	+0.8
MKAR	Makanchi Array	47.12	344	P	P	12 20 39.5	+0.6
	comp=Z,1.3nm,0.4s,baz=157,slow=7.7,SNR=22						
MKAR				pP	pP	12 21 11.0	-2.1
	comp=Z,0.5nm,0.5s,baz=164,slow=10,SNR=2.1						
MKAR				PcP	PcP	12 22 08.9	+0.6
	comp=Z,0.3nm,0.6s,baz=160,slow=4.6,SNR=1.8						
	comp=Z,1.3nm,0.4s						
MKAR	Makanchi Array	47.12	344	P	P	12 20 39.9	+1.0
BBOO	Buckleboo	49.06	138	P	P	12 20 52.7	-1.3
BBOO				IAmb	IAmb	12 20 53.9	
	comp=Z,6.6nm,1.1s						
CTAO	Charters Tower	51.13	118	P	P	12 21 11.0	+1.3
CTAO				IAmb	IAmb	12 21 29.0	
	comp=Z,8.0nm,1.5s						
USRK	Ussuriysk Ar.	51.30	30	P	P	12 21 11.2	+0.6
	comp=Z,5.3nm,0.8s,baz=240,slow=6.6,SNR=7.0						
	comp=Z,5.3nm,0.8s						
USRK	Ussuriysk Ar.	51.30	30	P	P	12 21 11.8	+1.3
KURK	Kurchatov	51.70	344	P	P	12 21 14.1	+0.6
STKA	Stephens Creek	52.41	133	P	P	12 21 18.6	-0.5
	comp=Z,1.6nm,0.6s,baz=320,slow=16,SNR=4.7						
	comp=Z,1.6nm,0.6s						
ZAA0	Zalesovo Array	53.27	350	P	P	12 21 25.4	+0.4
ZAA0				IAmb	IAmb	12 21 26.4	
	comp=Z,4.1nm,0.6s						
ZALV	Zalesovo Beam	53.27	350	P	P	12 21 25.8	+0.9
	comp=Z,4.8nm,0.5s,baz=168,slow=7.0,SNR=31						
	comp=Z,4.8nm,0.5s						
ZALV	Zalesovo Beam	53.27	350	P	P	12 21 25.6	+0.6
BRVK	Borovoye	56.36	340	P	P	12 21 47.0	-0.2
BRVK				IAmb	IAmb	12 21 54.6	
	comp=Z,2.8nm,0.6s						
JKA	Kamikawa-asahi	57.06	36	P	P	12 21 53.4	+1.0
EIDS	Eidsvold	57.11	122	P	P	12 21 53.9	+0.8
EIDS				IAmb	IAmb	12 22 16.0	
	comp=Z,11nm,1.5s						
ABKAR	Akbulak array	57.86	331	P	P	12 21 57.8	0.0
BRTR	Keskin Array B	70.08	312	P	P	12 23 17.0	-1.1
	comp=Z,0.5nm,0.7s,baz=101,slow=7.5,SNR=2.3						
	comp=Z,0.5nm,0.7s						
PETK	Petropavlovsk-	70.20	33	P	P	12 23 18.6	+0.2
	comp=Z,2.2nm,0.8s,baz=278,slow=1.0,SNR=5.8						
	comp=Z,2.2nm,0.8s						
PET	Petropavlovsk	70.69	34	P	P	12 23 21.9	+0.6
AKASG	Malin Array Be	75.91	322	pP	pP	12 24 24.4	-4.9
	comp=Z,0.2nm,0.3s,baz=86,slow=4.0,SNR=2.4						
FINES	FINESS Array B	80.31	332	P	P	12 24 16.3	+0.3
	comp=Z,1.1nm,0.4s,baz=106,slow=4.9,SNR=17						
FINES				pP	pP	12 24 50.9	-2.9
	comp=Z,1.3nm,0.5s,baz=102,slow=6.8,SNR=2.4						
	comp=Z,1.1nm,0.4s						
FINES	FINESS Array B	80.31	332	P	P	12 24 16.1	+0.1
BKZ	Black Stump Fm	81.42	130	P	P	12 24 22.3	-0.1
ARCES	ARCESS Array B	82.58	340	P	P	12 24 28.4	+0.5
	comp=Z,0.9nm,0.4s,baz=104,slow=4.2,SNR=14						
ARCES				pP	pP	12 25 03.0	-2.8
	comp=Z,5.7nm,1.0s,baz=66,slow=2.9,SNR=2.6						
	comp=Z,0.9nm,0.4s						
ARCES	ARCESS Array B	82.58	340	P	P	12 24 27.6	-0.2
ARCES				IAmb	IAmb	12 25 05.2	
	comp=Z,12nm,1.2s						
VNDA	Vanda	86.07	169	P	P	12 24 44.4	-0.9
	comp=Z,1.8nm,0.9s,baz=308,slow=3.4,SNR=1.4						
	comp=Z,1.8nm,0.9s						
VNDA	Vanda	86.07	169	P	P	12 24 44.2	-0.9
QSPA	South Pole Qui	91.76	180	P	P	12 25 13.4	+1.1
QSPA				IAmb	IAmb	12 25 47.8	
	comp=Z,5.3nm,1.4s						
NVAR	Mina Array Bea	127.19	37	PKP	PKiKP	12 31 10.6	+0.8
	comp=Z,0.3nm,0.5s,baz=262,slow=0.6,SNR=3.1						
PDAR	Pinedale Array	128.67	27	PKP	PKPdf	12 31 12.3	+0.3
	comp=Z,0.4nm,0.8s,baz=251,slow=2.8,SNR=2.8						
TXAR	Lajitas Array	142.15	33	PKhKP	PKPpre	12 31 33.9	
	comp=Z,0.3nm,0.7s,baz=13,slow=2.7,SNR=6.0						
BDFB	Brasilia	144.76	245	PKP	PKPab	12 31 41.2	-0.2
	comp=Z,1.8nm,0.4s,baz=108,slow=20,SNR=1.9						

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*IDC **18** 12:24:48.8±4.4, 9°.65S×114°.25E, h0km, mb3.2/4, mbtmp3.3/4, Error ellipse: s-maj=278.9km s-min=23.7km az=47.0*

*DJA **18** 12:24:54.1±0.5, 10°S±4°×11°4E±°, h10km, M3.7/12, MLv3.7/12*

ISC 18 12:24:54.1±1.2, **9°.70S**±0°.08×**114°.21E**±0°.05, **h31km, n16,** σ**1ˢ.36**/20, **mb3.3**/4, **South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	Jajag, Banyuwa	1.23	357	P	Pb	12 25 16.2	-0.5
JAGI				S	Sb	12 25 31.9	-0.3
IGBI	Denpasar	1.28	47	P	Pn	12 25 16.0	+0.2
IGBI				S	Sb	12 25 34.1	+0.5
DNP	Denpasar	1.42	44	P	Pn	12 25 18.9	+1.1
DNP				S	Sb	12 25 38.3	+0.6
GMJI	Gumukmas	1.61	332	P	Pn	12 25 21.4	+1.0
GMJI				S	Sb	12 25 42.5	-0.6
SRBI	Singaraja	1.89	32	P	Pn	12 25 26.2	+1.9
ABJI	Asem Bagus	1.90	1	P	Pb	12 25 28.5	+0.4
BLJI	Banyuglugur	2.04	343	P	Pb	12 25 29.9	-0.6
TWSI	Taliwang, Sumb	2.81	70	P	Pn	12 25 39.0	+2.1
PWJI	Pagerwojo	2.91	305	P	Pn	12 25 40.7	+2.5
GRJI	Gresik	3.26	328	P	Pn	12 25 44.6	+1.5
PLAI	Plampang	3.63	76	P	Pn	12 25 49.8	+1.6
UGM	Wanagama	4.05	296	P	Pn	12 25 55.9	+1.8
WRA	Warramunga Arr	21.94	120	P	P	12 29 44.3	-0.9
	0.1nm,0.4s,baz=293,slow=12,SNR=1.6						
	0.1nm,0.4s						
ASAR	Alice Springs	23.38	129	P	P	12 29 59.2	-1.1
	0.2nm,0.4s,baz=308,slow=8.3,SNR=2.0						
	0.2nm,0.4s						
CMAR	Chiang Mai Arr	31.78	332	P	P	12 31 16.0	+0.1
	0.7nm,0.4s,baz=162,slow=8.0,SNR=5.9						
	0.7nm,0.4s						
MKAR	Makanchi Array	63.05	336	P	P	12 35 16.7	-1.6
	0.2nm,0.4s,baz=149,slow=6.5,SNR=4.6						
	0.2nm,0.4s						

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*IDC **18** 12:31:52.9±0.8, 15°.41S×173°.23W, h0km, mb4.0/10, mbtmp4.0/11, ML4.3/1, MS3.5/8, Error ellipse: s-maj=40.4km s-min=16.1km az=137.0*

ISC 18 12:31:57.3±0.9, **15°.4S**±0°.2×**173°.2W**±0°.2, **h29km, n21,** σ**1ˢ.03**/13, **mb3.9**/10, **MS3.7**/6, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	1.99	44	Pn	Pn	12 32 30.1	+1.1
	100nm,0.3s,baz=193,slow=3.4,SNR=741						
AFI				Sn	Sn	12 32 50.4	-2.6
	341nm,0.3s,baz=39,slow=18,SNR=15						
AFI				LR	LR	12 33 10.4	
	comp=Z,311nm,19.0s,baz=158,slow=38						
	279nm,0.3s						
MSVF	Nonsavu	8.72	253	LR	LR	12 37 01.1	
	comp=Z,117nm,20.8s,baz=159,slow=36						
DZM	Mont Dzumac	20.40	248	LR	LR	12 43 40.8	
	comp=Z,53nm,18.2s,baz=228,slow=35						
URZ	Urewera	24.37	199	P	P	12 37 12.3	-0.6
	4.4nm,0.3s,baz=348,slow=2.3,SNR=16						
	4.4nm,0.3s						
HNR	Honiara	26.87	279	LR	LR	12 46 28.8	
	comp=Z,943nm,19.8s,baz=96,slow=33						
H11N3	WAKE ISLAND Hy	39.97	330	T	T	13 22 17.3	
	baz=150,slow=76,SNR=2.7						
H11N1	WAKE ISLAND Hy	39.98	330	T	T	13 22 17.6	
	baz=150,slow=76,SNR=4.0						
H11N2	WAKE ISLAND Hy	39.99	330	T	T	13 22 20.7	
	baz=150,slow=76,SNR=2.9						
STKA	Stephens Creek	44.23	240	P	P	12 40 03.6	-0.7
	1.2nm,0.8s,baz=94,slow=15,SNR=1.9						
	1.2nm,0.8s						
WRA	Warramunga Arr	50.05	257	P	P	12 40 49.7	-0.1
	0.5nm,1.0s,baz=86,slow=5.9,SNR=5.7						
	0.5nm,1.0s						
ASAR	Alice Springs	50.31	252	P	P	12 40 51.4	-0.4
	1.2nm,0.6s,baz=87,slow=8.1,SNR=21						
	1.2nm,0.6s						
PETK	Petropavlovsk-	72.65	342	P	P	12 43 21.6	-0.4
	5.7nm,0.9s,baz=236,slow=1.6,SNR=4.4						
	5.7nm,0.9s						
NVAR	Mina Array Bea	74.16	42	P	P	12 43 31.9	+0.4
	1.6nm,0.8s,baz=227,slow=10,SNR=12						
	1.6nm,0.8s						
KDAK	Kodiak Island	74.84	11	LR	LR	13 09 35.3	
	comp=Z,41nm,19.6s,baz=228,slow=30						
TXAR	Lajitas Array	80.42	56	P	P	12 44 06.9	+0.2
	0.8nm,0.9s,baz=212,slow=6.9,SNR=7.4						
	0.8nm,0.9s						
PDAR	Pinedale Array	82.10	42	P	P	12 44 15.9	+0.4
	1.4nm,1.0s,baz=211,slow=1.7,SNR=9.7						
PDAR				LR	LR	13 13 50.4	
	comp=Z,20nm,18.8s,baz=274,slow=31						
	1.4nm,1.0s						
ILAR	Eielson Array	82.36	11	P	P	12 44 16.9	+0.8
	0.5nm,0.6s,baz=226,slow=6.4,SNR=14						
	0.5nm,0.6s						
CMIG	Matias Romero	83.68	70	LR	LR	13 12 49.4	
	comp=Z,38nm,20.1s,baz=116,slow=29						
YKA	Yellowknife Ar	89.98	23	P	P	12 44 54.1	+0.6
	0.4nm,0.8s,baz=239,slow=4.6,SNR=8.4						
	0.4nm,0.8s						
TKL	Tuckaleechee C	98.32	55	LR	LR	13 26 03.5	
	comp=Z,24nm,19.2s,baz=287,slow=33						
BRTR	Keskin Array B	146.25	321	PKPbc	PKPab	12 51 36.3	0.0
	1.9nm,0.8s,baz=116,slow=1.7,SNR=7.9						

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*NEIC **18** 12:50:52.5±1.6, 19°.1S±0°.2×175°.23W±0°.04, h240km±15km, mb4.1/12, Error ellipse: s-maj=23.0km s-min=4.5km az=170.0*

*IDC **18** 12:50:58.1±2.9, 19°.33S×175°.75W, h262km±28km, mb3.4/8, mbtmp4.0/10, Error ellipse: s-maj=24.3km s-min=17.3km az=146.0*

ISC 18 12:50:51.6±0.7, **19°.3S**±0°.1×**175°.38W**±0°.09, **h200km, n26,** σ**1ˢ.86**/20, **mb3.8**/12, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	5.16	89	Pn	Pn	12 52 07.6	-0.4
AFI	Afiamalu	6.37	33	Pn	Pn	12 52 22.6	-1.1
MSVF	Nonsavu	6.42	283	P	Pn	12 52 27.9	+3.4
	6.0nm,0.4s,baz=81,slow=22,SNR=18						
MSVF	Nonsavu	6.42	283	Pn	Pn	12 52 27.3	+2.9
PINNC	Pines Island,	16.38	255	P	P	12 54 31.4	+1.7
DZM	Mont Dzumac	17.23	258	P	P	12 54 38.2	-1.0
DZM				IAmb	IAmb	12 55 15.7	
	comp=Z,25nm,1.3s						
URZ	Urewera	20.00	198	P	P	12 55 09.2	+0.4
	comp=Z,4.3nm,0.5s,baz=99,slow=3.2,SNR=6.0						
RTZ	Ruatahuna	20.37	197	P	P	12 55 13.8	+0.9
INZ	Inchbonnie	25.88	203	P	P	12 56 04.3	-0.5
CTA	Charters Tower	36.08	262	P	P	12 57 32.8	-1.7
	comp=Z,4.6nm,0.6s,baz=89,slow=8.6,SNR=14						
	comp=Z,4.6nm,0.6s						
CTAO	Charters Tower	36.08	262	P	P	12 57 31.8	-2.6
CTAO				IAmb	IAmb	12 57 33.6	
	comp=Z,7.2nm,0.9s						
BBOO	Buckleboo	45.29	243	P	P	12 58 47.1	-2.5
BBOO				IAmb	IAmb	12 59 01.3	
	comp=Z,10nm,1.4s						
WB0	Warramunga Arr	47.20	261	P	P	12 59 01.8	-2.8
WB0				IAmb	IAmb	12 59 34.6	
	comp=Z,10nm,1.4s						
AS31	Alice Springs	47.20	255	P	P	12 59 02.7	-1.9
ASAR	Alice Springs	47.20	255	P	P	12 59 02.8	-1.9
	comp=Z,6.4nm,0.6s,baz=89,slow=8.5,SNR=162						
	comp=Z,6.4nm,0.6s						
ASAR	Alice Springs	47.20	255	P	P	12 59 01.4	-3.2
WB2	Warramunga Arr	47.21	260	P	P	12 59 01.7	-3.0
WRAB	Tennant Creek	47.21	260	P	P	12 59 02.0	-2.7
WRAB				IAmb	IAmb	12 59 20.0	
	comp=Z,5.6nm,1.4s						
WRA	Warramunga Arr	47.22	260	P	P	12 59 02.4	-2.4
	comp=Z,1.0nm,0.5s,baz=97,slow=5.7,SNR=26						
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	47.22	260	P	P	12 59 02.6	-2.2
MJAR	Matsushiro Arr	70.74	322	P	P	13 01 44.0	-2.1
	comp=Z,1.1nm,0.6s,baz=156,slow=6.2,SNR=6.4						
	comp=Z,1.1nm,0.6s						
QSPA	South Pole Qui	70.78	180	P	P	13 01 46.1	+0.1
QSPA				IAmb	IAmb	13 01 54.7	
	comp=Z,8.2nm,1.4s						
NVAR	Mina Array Bea	78.47	42	P	P	13 02 32.4	+1.7
	comp=Z,0.7nm,0.7s,baz=223,slow=8.3,SNR=8.0						
	comp=Z,0.7nm,0.7s						
TXAR	Lajitas Array	84.33	56	P	P	13 03 03.7	+2.1
	comp=Z,0.5nm,0.8s,baz=214,slow=8.1,SNR=5.8						
	comp=Z,0.5nm,0.8s						
PDAR	Pinedale Array	86.40	42	P	P	13 03 11.7	0.0
	comp=Z,0.4nm,0.9s,baz=204,slow=7.9,SNR=3.5						
	comp=Z,0.4nm,0.9s						
YKA	Yellowknife Ar	94.40	24	P	P	13 03 48.3	+0.1
	comp=Z,0.2nm,0.8s,baz=239,slow=4.3,SNR=2.9						
	comp=Z,0.2nm,0.8s						

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*IDC **18** 13:11:19.5±2.7, 11°.02S×112°.80E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=106.6km s-min=24.0km az=48.0*

*DJA **18** 13:11:30.3±0.6, 11°S±4°×11°4E±°, h10km, M4.0/13, MLv4.0/13*

ISC 18 13:11:22.1±2.1, **10°.73S**±0°.08×**113°.53E**±0°.05, **h1km**±12km, **n17,** σ**2ˢ.26**/28, **mb3.4**/4, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	Jajag, Banyuwa	2.33	15	P	Pg	13 12 06.8	-0.1
JAGI				S	Sb	13 12 33.7	-0.6
GMJI	Gumukmas	2.44	358	P	Pg	13 12 10.2	+1.2
GMJI				S	Sg	13 12 40.0	-0.8
IGBI	Denpasar	2.48	40	P	Pb	13 12 08.4	+0.8
IGBI				S	Sn	13 12 37.1	+2.4
DNP	Denpasar	2.63	39	P	Pb	13 12 09.3	-0.8
DNP				S	Sn	13 12 39.6	+1.2
BLJI	Banyuglugur	2.97	1	P	Pg	13 12 18.6	-0.5
BLJI				S	Sb	13 12 53.4	+0.7
ABJI	Asem Bagus	3.00	14	P	Pg	13 12 18.4	-1.3
ABJI				S	Sb	13 12 53.8	+0.2
SRBI	Singaraja	3.11	32	P	Pb	13 12 17.2	-1.1
SRBI				S	Sn	13 12 52.6	+2.4
PWJI	Pagerwojo	3.18	328	P	Pg	13 12 21.0	-2.2
PWJI				S	Sb	13 12 59.9	+1.0
TWSI	Taliwang, Sumb	3.86	59	P	Pn	13 12 25.1	+2.5
TWSI				S	Sn	13 13 04.2	-4.4
NGJI	Ngawi	3.92	328	P	Pg	13 12 38.8	+1.5
NGJI				S	Sb	13 13 22.4	+2.5
GRJI	Gresik	3.93	345	P	Pb	13 12 31.1	-1.2
TBJI	Tambak Boyo	4.23	337	P	Pb	13 12 35.6	-1.7
PLAI	Plampang	4.60	66	P	Pn	13 12 35.5	+2.7
PLAI				S	Sn	13 13 21.0	-5.9
WRA	Warramunga Arr	22.04	117	P	P	13 16 21.2	+2.8
	0.9nm,0.6s,baz=289,slow=12,SNR=15						
	0.9nm,0.6s						
ASAR	Alice Springs	23.29	126	P	P	13 16 33.1	+1.5
	0.6nm,0.6s,baz=302,slow=9.0,SNR=11						
	0.6nm,0.6s						
SONM	Songino Array	58.65	354	P	P	13 21 20.2	-0.9
	0.4nm,0.3s,baz=174,slow=5.8,SNR=2.2						
	0.4nm,0.3s						
MKAR	Makanchi Array	63.71	337	P	P	13 21 53.1	-2.2
	0.1nm,0.5s,baz=141,slow=5.5,SNR=2.5						
	0.1nm,0.5s						

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*IDC **18** 13:12:28.3±3.5, 2°.58N×128°.32E, h115km±34km, mb3.4/6,* *mbtmp3.8/7,MS3.2/3,Error ellipse: s-maj=56.9km s-min=15.5km az=70.0*

*DJA **18** 13:12:32.5±1.3,2°N±8°×12°8E±1°2,h61km±5km,M4.1/6, mb4.3/6,mB5.0/1,MLv4.0/6,Mw(mB)4.3/1,MwMwp4.5/1, Mwp4.9/1*

ISC 18 13:12:26.9±1.0,**2°.49N**±0°.09×**128°.3E**±0°.1,**h100**km,**n22**, σ**2s.37**/15,**mb3.7**/6,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.95**	**209**	P	**Pn**	**13 12 55.0**	**-3.8**
SGSI	**Sangihe**	**3.03**	**293**	P	Pn	13 13 17.8	+4.8
LBMI	**Labuha**	**3.21**	**195**	P	**Pn**	**13 13 16.4**	**+1.0**
SANI	**Sanana**	**5.07**	**207**	P	**Pn**	**13 13 39.1**	**-1.5**
DAV	**Davao City (W)**	**5.31**	**329**	P	**Pn**	**13 13 45.2**	**+1.4**
	109nm,0.3s,baz=308,slow=7.4,SNR=3.7						
GTOI	**Gorontalo**	**5.61**	**251**	P	**Pn**	**13 13 45.3**	**-2.6**
	21nm,0.7s,0.1nm						
MRSI	**Marisa**	**6.68**	**253**	P	**Pn**	**13 14 02.2**	**-0.2**
	147nm,1.1s,1µm0.4nm						
MPSI	**Mapaga**	**8.68**	**256**	P	**Pn**	**13 14 29.6**	**-0.1**
	14nm,0.7s,2µm						
PMG	**Port Moresby**	**22.18**	**122**	LR	LR	13 26 08.5	
	comp=Z,66nm,20.4s,baz=278,slow=37						
WRA	**Warramunga Arr**	**23.06**	**165**	P	**P**	**13 17 24.2**	**+0.4**
	4.6nm,0.8s,baz=345,slow=10,SNR=27						
	4.6nm,0.8s						
MDSI	**Maura Dua**	**25.09**	**254**	P	**P**	**13 17 48.2**	**+5.7**
ASAR	**Alice Springs**	**26.56**	**168**	P	**P**	**13 17 56.5**	**+0.8**
	0.5nm,0.5s,baz=351,slow=9.1,SNR=12						
ASAR				PcP	**PcP**	**13 21 18.9**	**+1.0**
	0.2nm,0.4s,baz=0.6,slow=1.9,SNR=2.5						
ASAR				LR	LR	13 28 36.5	
	comp=Z,89nm,18.1s,baz=204,slow=36						
	0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**32.87**	**301**	P	**P**	**13 18 50.5**	**-1.0**
	0.4nm,0.6s,baz=103,slow=6.6,SNR=1.9						
	0.4nm,0.6s						
KSRS	**Korea Array**	**34.80**	**359**	P	**P**	**13 19 06.7**	**-1.3**
	0.7nm,0.7s,baz=175,slow=10.0,SNR=5.5						
KSRS				LR	LR	13 35 13.1	
	comp=Z,15nm,18.9s,baz=230,slow=39						
	0.7nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**40.81**	**64**	T	T	14 03 18.9	
	baz=252,slow=74,SNR=6.9						
H11S2	**WAKE ISLAND Hy**	**40.82**	**64**	T	T	14 03 20.3	
	baz=252,slow=74,SNR=3.4						
H11S1	**WAKE ISLAND Hy**	**40.82**	**64**	T	T	14 03 19.6	
	baz=252						
H11N1	**WAKE ISLAND Hy**	**41.38**	**63**	T	T	14 03 52.7	
	baz=258,slow=74,SNR=10						
H11N2	**WAKE ISLAND Hy**	**41.40**	**63**	T	T	14 03 58.7	
	baz=258						
H11N3	**WAKE ISLAND Hy**	**41.40**	**63**	T	T	14 03 54.4	
	baz=258,slow=74,SNR=7.3						
MKAR	**Makanchi Array**	**59.48**	**325**	P	**P**	**13 22 19.2**	**-0.2**
	0.4nm,0.6s,baz=114,slow=8.6,SNR=8.1						
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**62.41**	**333**	P	**P**	**13 22 37.2**	**-1.9**
	0.5nm,0.5s,baz=142,slow=7.2,SNR=2.9						
	0.5nm,0.5s						

MAN 18 13:13:23.7,7°.63N×124°.61E,h1km,mb4.0,ML2.7,MS2.3, 9C-3D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.54**	**222**	⇑*i*P	Pb	13 13 37.0	+1.1
CTBH				*i* S	Sn	13 13 47.3	-0.9
KCP	**Kidapawan**	**0.78**	**142**	⇑*i*P	Pb	13 13 39.5	-0.6
KCP				*i* S	Sg	13 13 49.5	+0.7
CGP	**Cagayan de Oro**	**0.83**	**6**	⇑*i*P	Pg	13 13 38.4	-1.2
CGP				*i* S	Sg	13 13 48.9	-1.4
SKMP	**Bagumbayan, Su**	**1.10**	**183**	⇑*e*P	Pb	13 13 45.6	+0.1
SKMP				*e*S	Sn	13 14 01.5	-0.6
PAGZ	**Pagadian**	**1.23**	**280**	⇓*e*P	Pb	13 13 47.9	0.0
PAGZ				*e*S	Sn	13 14 05.7	+0.3
TASP	**Talacogon, Agu**	**1.44**	**55**	*e*S	Sn	13 14 14.0	+3.4
TASP	**Talacogon, Agu**	**1.44**	**55**	⇑*e*P	Pb	13 13 55.9	+4.5
DCPH	**Dipolog City**	**1.56**	**307**	⇑*e*P	Pg	13 13 54.2	+0.4
BUTP	**Butuan**	**1.67**	**37**	⇑*e*P	Pg	13 13 58.3	+2.6
BUTP				*e*S	Sg	13 14 20.9	+3.5
CDOP	**Cateel, Davao**	**1.82**	**85**	⇑*e*P	Pn	13 13 56.2	0.0
CDOP				*e*S	Sg	13 14 22.8	+0.5
BIPH	**Bislig**	**1.82**	**72**	⇓*i*P	Pn	13 13 55.4	-0.8
BIPH				*i* S	Sn	13 14 17.4	-2.5
GLSP	**General Luna,**	**2.62**	**35**	⇑*e*P	Pn	13 14 07.5	+0.4
CNOP	**Candoni, Negro**	**2.93**	**318**	⇓*e*P	Pn	13 14 13.6	+2.1
CNOP				*e*S	Sb	13 14 54.6	+1.6

JMA 18 13:24:38.0±0.1,**24°N**±4°×**122°.9E**±0°.7,**h52**km±2km, **MV1.4**/9,**NW OFF ISHIGAKIJIMA IS,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.15**	**34**	P	Pn	13 24 46.1	-0.1
JYNG				S	Sn	13 24 52.0	-0.1
YOJ	**Yonaguni jima**	**0.20**	**47**	*i* P	Pn	13 24 46.5	0.0
YOJ				*e*S	Sn	13 24 52.8	+0.3
IRIF	**Iriomote-Funau**	**0.80**	**89**	*e*P	Pn	13 24 53.0	0.0
JKRS	**Kuro-shima**	**1.06**	**95**	P	Pn	13 24 57.1	+0.6
JKRS				*e*S	Sn	13 25 11.1	+0.9
JIJ	**Ishigaki jima**	**1.18**	**88**	*e*P	Pn	13 24 58.1	0.0
JIJ				*e*S	Sn	13 25 13.1	0.0
JISG	**Ishigakijimahi**	**1.35**	**79**	*e*P	Pn	13 25 00.7	+0.3

TAP 18 13:25:10.1,24°.52N×121°.44E,h7km,ML0.4,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LATG	**Datong**	**0.08**	**81**	P	Pg	13 25 12.5	+0.4
	baz=82						
LATG				S	Sg	13 25 14.1	+0.5
	baz=82						
NNS	**Nan Shan**	**0.10**	**217**	*e*P	Pg	13 25 12.8	+0.4
	baz=212						
NNS				*e*S	Sg	13 25 14.6	+0.4
	baz=212						
NNSB	**Datong**	**0.11**	**209**	*i* P	Pg	13 25 12.9	+0.4
	baz=209						
NNSB				*i* S	Sg	13 25 14.6	+0.3
	baz=209						
NNSH	**Datong**	**0.11**	**209**	*i* P	Pg	13 25 12.9	+0.4
	baz=209						
NNSH				S	Sg	13 25 14.5	+0.2
	baz=209						
YHNB	**Yeheng**	**0.16**	**338**	*e*P	Pg	13 25 12.1	-1.2
	baz=338						
YHNB				*e*S	Sg	13 25 16.2	+0.5
	baz=338						
ENTT	**Nioudou**	**0.16**	**44**	*i* P	Pg	13 25 13.8	+0.4
	baz=47						
ENTT				S	Sg	13 25 16.1	+0.4
	baz=47						
NSK	**Sanguang**	**0.17**	**334**	*e*P	Pg	13 25 14.1	+0.5
	baz=336						
NSK				*e*S	Sg	13 25 16.6	+0.6
	baz=336						
FUSB	**Fushanzhiwuyua**	**0.27**	**29**	*e*P	Pg	13 25 15.7	+0.2
	baz=30						

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*IDC **18** 13:29:50.2±1.9,33°.61S×77°.79E,h0km,mb3.7/5, mbtmp3.7/5,MS3.6/8,Error ellipse: s-maj=69.0km s-min=33.8km az=18.0*

ISC 18 13:29:51.9±1.7,**33°.6S**±0°.4×**77°.8E**±0°.2,**h10**km,**n18**, σ**1s.21**/6,**mb3.8**/5,**MS3.6**/8,**Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**26.32**	**348**	T	T	14 02 28.2	
	baz=170,slow=76,SNR=525						
H08S1	**Diego Carcia H**	**26.32**	**348**	T	T	14 02 27.7	
	baz=170,slow=76,SNR=746						
H08S3	**Diego Garcia H**	**26.33**	**348**	T	T	14 02 29.6	
	baz=170,slow=76,SNR=738						
H01W2	**Cape Leeuwin H**	**29.94**	**103**	T	T	14 07 21.2	
	baz=262,slow=74,SNR=51						
H01W3	**Cape Leeuwin H**	**29.94**	**103**	T	T	14 07 21.8	
	baz=262,slow=74,SNR=43						
H01W1	**Cape Leeuwin H**	**29.96**	**103**	T	T	14 07 23.3	
	baz=262,slow=74,SNR=44						
PALK	**Pallekele**	**40.76**	**4**	LR	LR	13 50 16.5	
	comp=Z,92nm,19.2s,baz=270,slow=30						
BOSA	**Boshof**	**44.89**	**262**	LR	LR	13 52 46.4	
	comp=Z,52nm,20.6s,baz=180,slow=31						
SUR	**Sutherland**	**47.30**	**255**	LR	LR	13 55 21.7	
	comp=Z,52nm,18.4s,baz=158,slow=32						
ASAR	**Alice Springs**	**49.69**	**94**	P	**P**	**13 38 44.7**	**+0.4**
	0.4nm,0.7s,baz=248,slow=6.8,SNR=5.3						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**51.69**	**90**	P	**P**	**13 38 59.4**	**0.0**
	1.0nm,0.8s,baz=247,slow=7.6,SNR=5.0						
	1.0nm,0.8s						
TSUM	**Tsumeb**	**55.14**	**269**	LR	LR	13 59 48.1	
	comp=Z,72nm,19.1s,baz=155,slow=33						
CMAR	**Chiang Mai Arr**	**55.57**	**24**	P	**P**	**13 39 28.2**	**+0.6**
	0.6nm,0.8s,baz=216,slow=7.5,SNR=2.1						
	0.6nm,0.8s						
AAK	**Ala-Archa**	**75.95**	**357**	LR	LR	14 10 43.9	
	comp=Z,38nm,19.8s,baz=190,slow=32						
MKAR	**Makanchi Array**	**80.15**	**3**	LR	LR	14 16 27.0	
	comp=Z,24nm,19.9s,baz=161,slow=35						
TORD	**Torodi Ar. Bea**	**85.97**	**289**	P	**P**	**13 42 33.4**	**+0.7**
	0.6nm,0.9s,baz=134,slow=4.2,SNR=3.2						
TORD				LR	LR	14 19 23.0	
	comp=Z,36nm,18.9s,baz=182,slow=35						
	0.6nm,0.9s						
ZALV	**Zalesovo Beam**	**87.42**	**4**	P	**P**	**13 42 38.5**	**-0.4**
	0.4nm,0.4s,baz=188,slow=4.2,SNR=4.9						
ZALV				LR	LR	14 20 58.0	
	comp=Z,16nm,18.7s,baz=112,slow=35						
	0.4nm,0.4s						
YKA	**Yellowknife Ar**	**150.05**	**12**	PKPbc	**PKPbc**	**13 49 40.1**	**-1.8**
	0.2nm,0.8s,baz=329,slow=3.3,SNR=2.4						

IDC 18 13:33:48.0±4.6,**4°.45S**×**147°.95E**,**h0**km,**mb3.5**/2, **mbtmp3.7**/2,**Error ellipse: s-maj=160.2km s-min=50.9km az=107.0,Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.99**	**189**	Sn	Sn	13 36 03.8	+1.1
	1.5nm,0.3s,baz=22,slow=22,SNR=7.4						
WRA	**Warramunga Arr**	**20.32**	**220**	P	P	13 38 26.4	+0.5
	0.8nm,0.3s,baz=44,slow=11,SNR=34						
	0.8nm,0.3s						
ASAR	**Alice Springs**	**23.43**	**214**	P	P	13 38 58.9	-0.2
	1.5nm,0.8s,baz=47,slow=7.9,SNR=17						
	1.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**145.59**	**287**	PKPbc	PKPdf	13 53 28.7	-0.8
	0.2nm,0.5s,baz=85,slow=4.1,SNR=1.2						

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*IDC **18** 13:47:26.1±1.2,34°.70N×72°.60E,h0km,mb3.7/5, mbtmp3.6/6,Error ellipse: s-maj=33.3km s-min=30.3km az=81.0*

ISC 18 13:47:30.1±1.2,**34°.7N**±0°.2×**72°.6E**±0°.2,**h25**km,**n6**,σ**0s.89**/6, **mb3.7**/5,**Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.11**	**28**	Pn	**Pn**	**13 50 48.7**	**+0.4**
	0.2nm,0.6s,baz=199,slow=12,SNR=1.4						
ZALV	**Zalesovo Beam**	**21.06**	**20**	P	**P**	**13 52 10.9**	**-1.2**
	0.6nm,0.3s,baz=210,slow=10,SNR=4.5						
	0.6nm,0.3s						
ARCES	**ARCESS Array B**	**43.28**	**338**	P	**P**	**13 55 29.8**	**+0.5**
	2.2nm,0.8s,baz=111,slow=6.8,SNR=3.5						
	2.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**67.00**	**270**	P	**P**	**13 58 20.9**	**-0.2**
	0.4nm,0.6s,baz=42,slow=7.1,SNR=6.0						
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**79.95**	**123**	P	**P**	**13 59 37.0**	**-0.3**
	0.5nm,1.1s,baz=321,slow=5.3,SNR=2.2						
	0.5nm,1.1s						
ASAR	**Alice Springs**	**82.17**	**126**	P	**P**	**13 59 49.5**	**+0.5**
	0.2nm,0.2s,baz=306,slow=5.1,SNR=2.5						
	0.2nm,0.2s						

WEL 18 13:50:46.0,39°S±2°×**17°5E**±°,**h11**km±3km,**M1.5**/12, **ML1.1**/13,**MLv1.5**/12,**Error ellipse: s-maj=0.0km s-min=0.0km az=65.7,confirmed,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWVZ	**Taurewa**	**0.10**	**30**	P	Pg	13 50 49.3	+0.5
TWVZ				S	Sg	13 50 52.0	+1.2
PKVZ	**Pokaka**	**0.13**	**188**	P	Pg	13 50 49.5	+0.4
PKVZ				S	Sg	13 50 52.7	+1.3
FWVZ	**Far West T-bar**	**0.17**	**123**	P	Pb	13 50 50.7	-0.7
FWVZ				S	Sg	13 50 54.4	+1.8
WTVZ	**West Tongariro**	**0.18**	**75**	P	Pg	13 50 50.6	+0.7
NNVZ	**North Ngauruho**	**0.19**	**81**	P	Pg	13 50 50.9	+0.7
TRVZ	**Turoa**	**0.20**	**135**	P	Pg	13 50 51.0	+0.7
SNVZ	**South Ngauruho**	**0.21**	**97**	P	Pb	13 50 51.4	-0.6
KRVZ	**Karewarewa**	**0.22**	**72**	P	Pg	13 50 51.2	+0.5
MTVZ	**Mangateitei**	**0.24**	**161**	P	Pg	13 50 51.1	+0.2
WNVZ	**Wahianoa**	**0.24**	**133**	P	Pg	13 50 51.7	+0.6
TUVZ	**Tukino**	**0.24**	**116**	P	Pb	13 50 51.8	-0.7
NTVZ	**North Tongarir**	**0.25**	**75**	P	Pg	13 50 51.6	+0.6
TMVZ	**Te Maari**	**0.26**	**80**	P	Pg	13 50 52.0	+0.6
KATZ	**Kakaramea**	**0.32**	**54**	P	Pb	13 50 53.4	-0.4

WEL 18 13:51:09.0±0.5,**42°S**±3°×**17°4E**±°,**h19**km±3km,**M3.6**/23, **ML3.8**/23,**MLv3.6**/23,**Error ellipse: s-maj=0.0km s-min=0.0km az=129.0,confirmed,South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.05**	**271**	P	Pg	13 51 12.8	+0.3
KHZ				S	Sg	13 51 15.2	+0.4
GVZ	**Greta Valley S**	**0.69**	**217**	P	Pn	13 51 24.4	+0.5
GVZ				S	Sn	13 51 35.2	+1.1
BSWZ	**Blackbirch Sta**	**0.73**	**16**	P	Pb	13 51 22.9	-0.3
CMWZ	**Cape Campbell**	**0.81**	**34**	P	Pn	13 51 26.0	+0.6
THZ	**Tophouse**	**0.84**	**321**	P	Pb	13 51 23.8	-1.2
THZ				S	Sb	13 51 33.9	-2.0
TUWZ	**Tuamarina**	**1.02**	**14**	P	Pb	13 51 28.1	+0.1
AMCZ	**Amberley**	**1.03**	**222**	P	Pg	13 51 28.9	-0.2
LTZ	**Lake Taylor**	**1.05**	**249**	P	Pb	13 51 28.1	-0.5
LTZ				S	Sn	13 51 42.6	-0.4
MRNZ	**Matariki Terra**	**1.20**	**328**	P	Pn	13 51 30.4	-0.4
NNZ	**Nelson**	**1.21**	**352**	P	Pn	13 51 30.5	-0.5
TCW	**Tory Channel**	**1.31**	**23**	P	Pn	13 51 32.3	0.0
WEL	**Wellington**	**1.43**	**38**	P	Pn	13 51 34.3	+0.3
TKNZ	**Takaka Hill**	**1.47**	**340**	P	Pn	13 51 34.6	+0.1
MQZ	**McQueen's Vall**	**1.47**	**208**	P	Pn	13 51 34.0	-0.5
MQZ				S	Sn	13 51 53.1	0.0
OXZ	**Oxford**	**1.47**	**231**	P	Pn	13 51 34.0	-0.5
PLWZ	**Palliser**	**1.49**	**56**	P	Pn	13 51 34.9	0.0
DSZ	**Denniston Nort**	**1.50**	**296**	P	Pn	13 51 35.3	+0.3
DSZ				S	Sb	13 51 55.6	+0.6
AKCZ	**Akaroa Harbour**	**1.54**	**199**	P	Pn	13 51 35.6	+0.1
AKCZ				S	Sb	13 51 55.7	-0.4
INZ	**Inchbonnie**	**1.63**	**258**	P	Pn	13 51 36.8	+0.1
DUWZ	**D'Urville Isla**	**1.63**	**8**	P	Pn	13 51 36.9	+0.1
RACZ	**Rakaia**	**1.69**	**219**	P	Pn	13 51 37.3	-0.3
RACZ				S	Sn	13 51 58.2	-0.6
CAW	**Cannon Point**	**1.71**	**40**	P	Pn	13 51 37.8	+0.1
PAWZ	**Paruwai Farm**	**1.71**	**53**	P	Pn	13 51 37.6	-0.3
QRZ	**Quartz Range**	**1.78**	**333**	P	Pn	13 51 39.7	+0.8
KIW	**Kapiti Island**	**1.84**	**33**	P	Pn	13 51 39.9	+0.3
TRWZ	**Traveller**	**1.86**	**57**	P	Pn	13 51 39.5	-0.4
MHCZ	**Mount Hutt**	**1.86**	**233**	P	Pn	13 51 39.3	-0.7
MTW	**Mount Morrison**	**1.90**	**49**	P	Pn	13 51 40.0	-0.4
OGWZ	**Otaki Gorge**	**1.98**	**37**	P	Pn	13 51 41.6	+0.1
WACZ	**Wakanui South**	**2.00**	**220**	P	Pn	13 51 41.4	-0.3
HOWZ	**Holdsworth Sta**	**2.09**	**44**	P	Pn	13 51 42.5	-0.5
TMWZ	**Te Maipa**	**2.15**	**53**	P	Pn	13 51 43.3	-0.6
WVZ	**Waitaha Valley**	**2.21**	**252**	P	Pn	13 51 45.0	+0.3
RPZ	**Rata Peaks**	**2.28**	**234**	P	Pn	13 51 45.2	-0.5
MRZ	**Mangatainoka R**	**2.30**	**41**	P	Pn	13 51 45.5	-0.4
ARCZ	**Arundel**	**2.34**	**228**	P	Pn	13 51 45.9	-0.6
TIWZ	**Tintock**	**2.37**	**47**	P	Pn	13 51 46.4	-0.5
PRWZ	**Pori Road**	**2.57**	**44**	P	Pn	13 51 49.1	-0.6
GCSZ	**Gaunt Creek Bo**	**2.57**	**248**	P	Pn	13 51 50.1	+0.4
POWZ	**Post Office Ro**	**2.60**	**39**	P	Pn	13 51 49.6	-0.4
BFZ	**Birch Farm**	**2.63**	**50**	P	Pn	13 51 49.0	-1.5
TMZ	**Timaru**	**2.73**	**223**	P	Pn	13 51 51.5	-0.4
WAZ	**Wanganui**	**2.86**	**22**	P	Pn	13 51 55.3	+1.6
DVHZ	**Dannevirke**	**2.86**	**43**	P	Pn	13 51 52.4	-1.3
TSZ	**Takapari Road**	**2.95**	**38**	P	Pn	13 51 54.1	-0.8
FOZ	**Fox Glacier**	**3.00**	**247**	P	Pn	13 51 56.1	+0.7
NMEZ	**Namu Road**	**3.01**	**4**	P	Pb	13 52 02.3	+0.4
LREZ	**Lake Rotokare**	**3.02**	**12**	P	Pn	13 51 57.9	+2.1
PREZ	**Palmer Road**	**3.10**	**8**	P	Pn	13 51 59.4	+2.4
PRHZ	**Porangahau**	**3.13**	**48**	P	Pn	13 51 56.5	-0.9
KHEZ	**Kahui Hut**	**3.13**	**6**	P	Pn	13 51 59.5	+2.0
NBEZ	**Newall Road No**	**3.15**	**4**	P	Pn	13 51 59.8	+2.1
NEZ	**North Egmont**	**3.17**	**7**	P	Pn	13 52 00.9	+3.0
PNHZ	**Pukenui**	**3.18**	**39**	P	Pn	13 51 57.0	-1.1
LBZ	**Lake Benmore**	**3.18**	**231**	P	Pn	13 51 57.7	-0.3
PKE	**Pukeiti**	**3.23**	**5**	P	Pn	13 52 00.5	+1.7
DREZ	**Durham Road**	**3.26**	**8**	P	Pn	13 52 01.2	+2.1
MTVZ	**Mangateitei**	**3.34**	**26**	P	Pn	13 52 01.3	+0.9
MHEZ	**Mangahewa**	**3.38**	**9**	P	Pn	13 52 03.2	+2.4
ODZ	**Otahua Downs**	**3.39**	**218**	P	Pn	13 52 00.2	-0.7
PKVZ	**Pokaka**	**3.39**	**23**	P	Pn	13 52 01.6	+0.6
VRZ	**Vera Road**	**3.40**	**15**	P	Pn	13 52 02.6	+1.5
MOVZ	**Moawhango**	**3.42**	**29**	P	Pn	13 52 01.4	+0.1
WNVZ	**Wahianoa**	**3.44**	**27**	P	Pn	13 52 02.2	+0.5
TRVZ	**Turoa**	**3.44**	**26**	P	Pn	13 52 02.7	+0.8
BHHZ	**Black Hill Sta**	**3.47**	**33**	P	Pn	13 52 01.6	-0.4
DRZ	**Dome Shelter**	**3.47**	**26**	P	Pn	13 52 03.6	+1.3
WHVZ	**Whangaehu Hut**	**3.47**	**26**	P	Pn	13 52 03.3	+1.0
FWVZ	**Far West T-bar**	**3.49**	**26**	P	Pn	13 52 03.2	+0.7
TUVZ	**Tukino**	**3.51**	**27**	P	Pn	13 52 03.3	+0.6
NGZ	**Ngauruhoe**	**3.57**	**26**	P	Pn	13 52 04.3	+0.7
SNVZ	**South Ngauruho**	**3.58**	**26**	P	Pn	13 52 04.3	+0.6
KAHZ	**Kahuranaki**	**3.60**	**44**	P	Pn	13 52 02.2	-1.7
OTVZ	**Oturere**	**3.61**	**26**	P	Pn	13 52 04.6	+0.6
NNVZ	**North Ngauruho**	**3.62**	**26**	P	Pn	13 52 04.9	+0.7
TWVZ	**Taurewa**	**3.62**	**23**	P	Pn	13 52 04.8	+0.6
WTVZ	**West Tongariro**	**3.63**	**25**	P	Pn	13 52 04.9	+0.6
ETVZ	**East Tongariro**	**3.65**	**27**	P	Pn	13 52 05.6	+1.0
KRVZ	**Karewarewa**	**3.66**	**26**	P	Pn	13 52 05.3	+0.5
TMVZ	**Te Maari**	**3.66**	**26**	P	Pn	13 52 05.3	+0.5
NTVZ	**North Tongarir**	**3.67**	**26**	P	Pn	13 52 05.5	+0.7
KWHZ	**Kaweka Forest**	**3.67**	**36**	P	Pn	13 52 03.6	-1.3
MCHZ	**McNeill Hill**	**3.78**	**39**	P	Pn	13 52 05.0	-1.3
KATZ	**Kakaramea**	**3.79**	**25**	P	Pn	13 52 07.7	+1.2
RITZ	**Rihia Road**	**3.84**	**27**	P	Pn	13 52 09.1	+2.0
JCZ	**Jackson Bay**	**3.89**	**243**	P	Pn	13 52 08.1	+0.2
BKZ	**Black Stump Fm**	**3.92**	**35**	P	Pn	13 52 07.0	-1.2
HIZ	**Hauiti**	**4.01**	**14**	P	Pn	13 52 11.0	+1.5
HHSZ	**Highcliff Hill**	**4.09**	**211**	P	Pn	13 52 10.6	+0.1
NMHZ	**Naumai**	**4.11**	**37**	P	Pn	13 52 09.9	-1.0
WKZ	**Wanaka**	**4.11**	**233**	P	Pn	13 52 10.4	-0.4
EAZ	**Earnscleugh**	**4.19**	**226**	P	Pn	13 52 11.3	-0.7
MTHZ	**Maungataniwha**	**4.33**	**36**	P	Pn	13 52 12.6	-1.3
TLZ	**Tolley Road**	**4.34**	**20**	P	Pn	13 52 14.6	+0.5
RAHZ	**Arahi**	**4.38**	**38**	P	Pn	13 52 16.1	+1.4
TUZ	**Tuapeka**	**4.55**	**218**	P	Pn	13 52 16.4	-0.3
MSZ	**Milford Sound**	**4.71**	**239**	P	Pn	13 52 19.9	+0.9
RIGZ	**Rimuhau**	**4.87**	**42**	P	Pn	13 52 18.7	-2.6
TOZ	**Tahuroa Road**	**4.90**	**18**	P	Pn	13 52 22.1	+0.4
URZ	**Urewera**	**4.94**	**34**	P	Pn	13 52 19.9	-2.3
MLZ	**Mavora Lakes**	**4.94**	**232**	P	Pn	13 52 21.8	-0.5
SYZ	**Scrubby Hill**	**5.21**	**216**	P	Pn	13 52 25.8	-0.1
TWGZ	**Tauwhareparae**	**5.39**	**40**	P	Pn	13 52 26.9	-1.6
AWAZ	**Awhitu Peninsu**	**5.41**	**9**	P	Pn	13 52 29.8	+1.2
RUGZ	**Raukumara Rang**	**5.43**	**36**	P	Pn	13 52 29.0	-0.1
WTAZ	**Waiatarua**	**5.53**	**8**	P	Pn	13 52 31.8	+1.4
ETAZ	**East Tamaki Re**	**5.55**	**11**	P	Pn	13 52 31.5	+0.9
EPAZ	**Eden Park BICE**	**5.60**	**9**	P	Pn	13 52 32.6	+1.3
HAZ	**Te Kaha**	**5.65**	**36**	P	Pn	13 52 30.2	-1.8
RVAZ	**Riverhead Bore**	**5.69**	**8**	P	Pn	13 52 33.5	+1.0
MBAZ	**Motutapu North**	**5.73**	**10**	P	Pn	13 52 34.3	+1.3
WIAZ	**Waiheke Island**	**5.74**	**12**	P	Pn	13 52 33.8	+0.5
ABAZ	**Army Bay**	**5.89**	**10**	P	Pn	13 52 36.5	+1.3
WCZ	**Waipu Caves**	**6.50**	**5**	P	Pn	13 52 44.9	+1.4
CTZ	**Chatham Island**	**7.28**	**104**	P	Pn	13 52 53.9	-0.4

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*NEIC **18** 14:24:41.0±2.5,30°.47S±0°.05×177°.4W±0°.2,h10km±2km, mb4.5/16,Error ellipse: s-maj=25.6km s-min=7.2km az=83.0*

*IDC **18** 14:24:41.1±0.9,30°.28S×177°.51W,h0km,mb4.3/5, mbtmp4.2/6,ML3.6/1,MS3.0/2,Error ellipse: s-maj=29.7km s-min=16.7km az=84.0*

ISC 18 14:24:42.0±0.8,**30°.40S**±0°.06×**177°.7W**±0°.1,**h10**km,**n39**, σ**1s.39**/42,**mb4.5**/11,**Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.17**	**348**	Pn	**Pn**	**14 25 04.4**	**-0.1**
	2µm,0.3s,baz=116,slow=5.4,SNR=61						
RAO				Sn	**Sb**	**14 25 18.7**	**-0.8**
	2µm,0.3s,baz=96,slow=15,SNR=11						
RAO	**Raoul Island**	**1.17**	**348**		**Pn**	**14 25 04.2**	**-0.3**
URZ	**Urewera**	**8.95**	**208**	Pn	**Pn**	**14 26 51.8**	**+0.5**
	0.6nm,0.3s,baz=351,slow=4.5,SNR=7.9						
URZ				Sn	**Sn**	**14 28 31.9**	**-0.3**
	1.5nm,0.3s,baz=300,slow=8.1,SNR=9.9						
	1.6nm,0.3s						
RTZ	**Ruatahuna**	**9.31**	**207**	Pn	**Pn**	**14 26 54.9**	**-1.5**
BKZ	**Black Stump Fm**	**9.98**	**207**	Pn	**Pn**	**14 27 04.8**	**-0.7**
MRZ	**Mangatainoka R**	**11.62**	**206**	Pn	**Pn**	**14 27 26.4**	**-1.5**
MSVF	**Nonsavu**	**13.21**	**342**	LR	LR	14 30 52.5	
	comp=Z,48nm,21.4s,baz=197,slow=28						
THZ	**Tophouse**	**13.66**	**211**	Pn	**Pn**	**14 27 59.1**	**+3.3**
LTZ	**Lake Taylor**	**14.76**	**210**	Pn	**Pn**	**14 28 11.8**	**+1.0**
OXZ	**Oxford**	**15.30**	**210**		**P**	**14 28 21.2**	**-1.6**
OXZ				IAmb	IAmb	14 28 35.3	
	comp=Z,35nm,1.5s						
KOUNC	**Koumac, New Ca**	**19.01**	**297**	P	**P**	**14 29 03.2**	**-0.8**
KOUNC				IAmb	IAmb	14 29 31.6	
	comp=Z,26nm,1.2s						
TOO	**Toolangi**	**31.24**	**247**	P	**P**	**14 31 00.4**	**-1.4**
CTAO	**Charters Tower**	**34.10**	**279**	P	**P**	**14 31 26.2**	**-0.9**
CTAO				IAmb	IAmb	14 31 44.4	
	comp=Z,3.6nm,0.7s						
STKA	**Stephens Creek**	**34.78**	**257**	P	**P**	**14 31 35.1**	**+2.4**
	comp=Z,1.9nm,0.5s,baz=99,slow=12,SNR=11						
	comp=Z,1.9nm,0.5s						
STKA	**Stephens Creek**	**34.78**	**257**	P	**P**	**14 31 34.6**	**+1.9**
BBOO	**Buckleboo**	**39.26**	**254**	P	**P**	**14 32 12.9**	**+2.0**
BBOO				IAmb	IAmb	14 32 50.5	
	comp=Z,16nm,1.4s						
AS31	**Alice Springs**	**43.41**	**267**	P	**P**	**14 32 47.3**	**+2.1**
ASAR	**Alice Springs**	**43.41**	**267**	P	**P**	**14 32 46.8**	**+1.6**
	comp=Z,0.7nm,0.4s,baz=105,slow=7.1,SNR=29						
ASAR				PcP	**PcP**	**14 34 35.9**	**+2.3**
	comp=Z,0.3nm,0.6s,baz=124,slow=4.6,SNR=2.4						
ASAR				ScP	**ScP**	**14 38 26.2**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=121,slow=4.4,SNR=3.2						
	comp=Z,0.7nm,0.4s						
ASAR	**Alice Springs**	**43.41**	**267**	P	**P**	**14 32 44.7**	**-0.5**
WB2	**Warramunga Arr**	**44.39**	**272**	P	**P**	**14 32 53.6**	**+0.5**
WB2				IAmb	IAmb	14 33 32.2	
	comp=Z,6.8nm,1.2s						
WRAB	**Tennant Creek**	**44.40**	**272**	P	**P**	**14 32 53.7**	**+0.6**
WRAB				IAmb	IAmb	14 32 56.4	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**44.40**	**272**	P	**P**	**14 32 54.6**	**+1.5**
	comp=Z,2.1nm,0.3s,baz=110,slow=8.1,SNR=117						
WRA				PcP	**PcP**	**14 34 37.3**	**+0.4**
	comp=Z,0.5nm,0.9s,baz=120,slow=3.7,SNR=1.8						
	comp=Z,2.1nm,0.3s						
WRA	**Warramunga Arr**	**44.40**	**272**	P	**P**	**14 32 53.7**	**+0.6**
WB0	**Warramunga Arr**	**44.43**	**272**	P	**P**	**14 32 53.5**	**+0.2**
WB0				IAmb	IAmb	14 32 57.6	
	comp=Z,3.8nm,0.8s						
FORT	**Forrest**	**46.34**	**255**	P	**P**	**14 33 06.1**	**-2.3**
VNDA	**Vanda**	**48.12**	**186**	P	**P**	**14 33 19.8**	**-1.8**
VNDA				IAmb	IAmb	14 33 43.0	
	comp=Z,5.2nm,1.2s						
KNRA	**Kununurra**	**51.01**	**274**	P	**P**	**14 33 44.2**	**-0.2**
FITZ	**Fitzroy Crossi**	**52.67**	**270**	P	**P**	**14 33 58.6**	**+1.8**
RPN	**Rapa Nui**	**59.14**	**105**	LR	LR	14 57 30.9	
	comp=Z,16nm,18.2s,baz=124,slow=33						
QSPA	**South Pole Qui**	**59.71**	**180**	P	**P**	**14 34 48.9**	**+2.4**
	comp=Z,2.7nm,0.7s,baz=56,slow=1.7,SNR=15						
	comp=Z,2.7nm,0.7s						
QSPA	**South Pole Qui**	**59.71**	**180**	P	**P**	**14 34 47.2**	**+0.6**
PETK	**Petropavlovsk-**	**85.89**	**345**	P	**P**	**14 37 22.9**	**+1.3**
	comp=Z,3.7nm,0.9s,baz=177,slow=8.7,SNR=2.6						
	comp=Z,3.7nm,0.9s						
MKAR	**Makanchi Array**	**118.01**	**310**	PKP	**PKPdf**	**14 43 27.5**	**-1.3**
	comp=Z,0.3nm,0.7s,baz=168,slow=1.9,SNR=2.5						
FINES	**FINESS Array B**	**145.25**	**340**	PKPbc	**PKPab**	**14 44 19.2**	**+0.1**
	comp=Z,4.2nm,0.6s,baz=53,slow=3.3,SNR=32						
NB2	**NORSAR Subarra**	**148.80**	**352**	PKP	**PKPbc**	**14 44 28.9**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=14,slow=4.3						
NOA	**NORSAR Array B**	**148.80**	**352**	PKPbc	**PKPbc**	**14 44 28.6**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=13,slow=4.1,SNR=3.3						
AKASG	**Malin Array Be**	**151.49**	**323**	PKPbc	**PKiKP**	**14 44 36.0**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=37,slow=2.3,SNR=6.0						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRTR	Keskin Array B	152.87	299	PKPbc	PKiKP	14 44 39.8	0.0
	comp=Z,0.4nm,0.4s,baz=138,slow=4.7,SNR=4.8						
TORD	Torodi Ar. Bea	162.82	178	PKPab	PKPab	14 45 34.1	+0.3
	comp=Z,0.4nm,0.9s,baz=198,slow=5.0,SNR=1.7						

IDC 18 14:32:05.6±12.0**, 23°.25S×176°.67W, h430**km±160km**,**
mb2.4/3**, mbtmp3.5**/4**, Error ellipse: s-maj=93.1km**
s-min=33.8km az=173.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	15.88	198	P	P	14 35 26.4	0.0
	2.5nm,0.4s,baz=25,slow=17,SNR=1.7						
URZ				S	S	14 38 14.4	+1.9
	11nm,1.0s,baz=17,slow=11,SNR=2.1						
ASAR	Alice Springs	45.16	259	P	P	14 39 41.4	-1.0
	0.1nm,0.5s,baz=102,slow=7.0,SNR=4.9						
	0.1nm,0.5s						
WRA	Warramunga Arr	45.51	264	P	P	14 39 45.5	+0.4
	0.1nm,0.3s,baz=102,slow=7.6,SNR=11						
	0.1nm,0.3s						
NVAR	Mina Array Bea	82.19	42	P	P	14 43 40.5	0.0
	0.1nm,0.4s,baz=213,slow=6.5,SNR=2.1						
	0.1nm,0.4s						

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*IDC **18** 14:48:56.6±0.8, 54°.75N×167°.33E, h0km, mb3.5/10,*
mbtmp3.5/12, ML3.2/2, Error ellipse: s-maj=32.2km
s-min=15.2km az=165.0
*KRSC **18** 14:48:57.9±1.1, 54°.80N×166°.85E, h23km±9km, Ml3.9*
ISC 18 14:48:59.3±0.7**, 54°.85N**±0°.08×**167°.06E**±0°.06**, h19**km**, n37,**
σ1s.47/35**, mb3.5**/10**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.72	300	*e*P	Pb	14 49 10.7	-2.5
BKI				*e*S	Sb	14 49 19.8	-2.9
SMKR	Semkarok	3.61	301	*e*P	Pn	14 49 55.3	+1.1
SRKR	Sorokina	3.79	301	*e*P	Pn	14 49 58.3	+1.6
TUMD	Tumrok D	3.85	278	*e*P	Pn	14 49 57.4	0.0
TUMD				*e*S	Sn	14 50 42.7	+0.5
KLY	Klyuchi	3.92	295	*e*P	Pn	14 49 57.3	-1.1
KLY				*e*S	Sn	14 50 41.6	-2.3
TUMR	Tumrok	4.00	279	*e*P	Pn	14 49 59.9	+0.3
KMNR	Kamenistaya	4.01	286	*e*P	Pn	14 50 00.6	+0.9
SRDR	Sredinnyy	4.42	292	*e*P	Pn	14 50 06.9	+1.6
SHEM	Shemya Is, Ala	4.68	114	Pn	Pn	14 50 07.3	-1.5
	5.7nm,0.3s,baz=284,slow=23,SNR=1.3						
	65nm,0.9s						
SMAR	Somma	5.12	255	*e*P	Pn	14 50 16.0	+1.0
KRER	Koryakskii	5.13	256	*e*P	Pn	14 50 16.4	+1.2
AVH	Avacha	5.15	255	*e*P	Pn	14 50 16.8	+1.4
KRX	Arik	5.17	257	*e*P	Pn	14 50 16.2	+0.5
KOK	Koryaka	5.20	256	*e*P	Pn	14 50 16.7	+0.7
DALK	Dalny	5.23	253	*e*P	Pn	14 50 16.9	+0.5
PET	Petropavlovsk	5.29	253	*e*P	Pn	14 50 17.8	+0.6
GNL	Ganaly	5.47	262	*e*P	Pn	14 50 20.7	+0.9
KRMR	Karymshinskiy	5.66	253	*e*P	Pn	14 50 24.1	+1.9
PALN	Palana	5.75	321	*e*P	Pn	14 50 26.4	+2.8
PETK	Petropavlovsk-	5.79	256	Pn	Pn	14 50 24.0	-0.1
	0.6nm,0.3s,baz=98,slow=18,SNR=28						
PETK				Sn	Sn	14 51 29.6	-0.4
	0.3nm,0.3s,baz=89,slow=17,SNR=1.1						
	0.9nm,0.3s						
GRL	Gorelyy	5.81	250	*e*P	Pn	14 50 25.6	+1.1
KLR	Kul'dur	22.27	270	P	P	14 53 57.1	+2.2
	0.8nm,0.7s,baz=63,slow=9.9,SNR=4.0						
	0.8nm,0.7s						
KDAK	Kodiak Island	22.34	66	P	P	14 53 55.0	-0.6
	3.8nm,0.7s,baz=27,slow=0.6,SNR=9.0						
	3.8nm,0.7s						
ILAR	Eielson Array	24.62	48	P	P	14 54 16.7	-1.3
	0.8nm,0.6s,baz=253,slow=7.8,SNR=16						
	0.8nm,0.6s						
H11N2	WAKE ISLAND Hy	35.06	180	T	T	15 32 47.2	
	baz=0.7,slow=76,SNR=258						
H11N3	WAKE ISLAND Hy	35.07	180	T	T	15 32 48.8	
	baz=0.7,slow=76,SNR=275						
H11N1	WAKE ISLAND Hy	35.07	180	T	T	15 32 55.3	
	baz=0.7,slow=76,SNR=268						
H11S1	WAKE ISLAND Hy	36.27	181	T	T	15 34 25.5	
	baz=0.5,slow=76,SNR=77						
H11S3	WAKE ISLAND Hy	36.29	181	T	T	15 34 26.6	
	baz=0.5,slow=76,SNR=32						
H11S2	WAKE ISLAND Hy	36.29	181	T	T	15 34 26.9	
	baz=0.5,slow=76,SNR=96						
SONM	Songino Array	37.46	285	P	P	14 56 13.3	+2.0
	0.5nm,0.6s,baz=71,slow=8.8,SNR=2.9						
	0.5nm,0.6s						
YKA	Yellowknife Ar	39.03	46	P	P	14 56 23.1	-1.0
	0.2nm,0.5s,baz=296,slow=7.7,SNR=3.8						
	0.2nm,0.5s						
MKAR	Makanchi Array	51.03	298	P	P	14 58 02.1	+2.4
	0.2nm,0.3s,baz=47,slow=6.0,SNR=6.1						
	0.2nm,0.3s						
PDAR	Pinedale Array	53.06	66	P	P	14 58 15.2	0.0
	0.3nm,0.7s,baz=8.1,slow=3.1,SNR=3.5						
	0.3nm,0.7s						
TXAR	Lajitas Array	66.17	73	P	P	14 59 45.5	0.0
	0.3nm,0.4s,baz=301,slow=4.0,SNR=8.9						
	0.3nm,0.4s						
WRA	Warramunga Arr	79.56	211	P	P	15 01 04.1	-0.6
	0.1nm,0.6s,baz=25,slow=6.4,SNR=1.2						
	0.1nm,0.6s						
ASAR	Alice Springs	83.21	210	P	P	15 01 24.6	+0.6
	0.3nm,0.7s,baz=4.7,slow=5.2,SNR=7.7						
	0.3nm,0.7s						

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*IDC **18** 15:05:56.1±0.5, 2°.68S×139°.17E, h0km, mb4.5/16,*
mbtmp4.5/18, ML4.2/2, MS3.9/49, Error ellipse:
s-maj=23.8km s-min=10.5km az=85.0
*DJA **18** 15:06:00.0±0.2, 3°S±3°×13°9E±°, h10km, M4.9/18, mB5.2/5,*
mb4.9/18, MLv5.1/6, Mw(mB)4.6/5
*NEIC **18** 15:06:02.5±1.6, 2°.68S±0°.09×139°.18E±0°.08, h49km±6km,*
mb4.7/65, Error ellipse: s-maj=13.3km s-min=10.7km
az=213.0
ISC 18 15:06:01.5±0.3**, 2°.66S**±0°.04×**139°.23E**±0°.04**, h37**km**, n223,**
σ1s.49/199**, mb4.7**/64**, MS4.0**/51**, 2C-2D, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.84	322	P	Pn	15 06 15.5	-1.3
GENI	Genyem	0.94	86	P	Pn	15 06 18.0	-0.2
GENI	Genyem	0.94	86	P	Pn	15 06 17.5	-0.7
GENI				S	Sn	15 06 31.7	+1.2
SRPI	Serui, Papua	3.08	285	P	Pn	15 06 48.7	+1.1
SRPI				S	Sn	15 07 26.7	+3.4
RKPI	Ransiki, Papua	5.17	283	P	Pn	15 07 19.1	+2.7
	173nm,0.8s,1.3nm						
FAKI	Fak Fak	6.97	268	Pn	Pn	15 07 42.0	+0.9
FAKI	Fak Fak	6.97	268	P	Pn	15 07 43.0	+1.9
FAKI	Fak Fak	6.97	268	P	Pn	15 07 42.3	+1.2
	75nm,0.5s,1µm0.4nm						
FAKI				S	Sn	15 09 01.9	+2.7
	75nm,0.5s,1µm0.4nm						
MSAI	Masohi	10.30	266	P	Pn	15 08 28.5	+1.7
	14nm,0.7s						
PMG	Port Moresby	10.35	131	Pn	Pn	15 08 30.0	+2.6
	2.4nm,0.3s,baz=315,slow=10.0,SNR=20						
PMG				Sn	Sn	15 10 27.3	+5.1
	1.5nm,0.3s,baz=109,slow=16,SNR=1.3						
PMG	Port Moresby	10.35	131	Pn	Pn	15 08 30.2	+2.7
PMG	Port Moresby	10.35	131	P	Pn	15 08 28.1	+0.6
PMG	Port Moresby	10.35	131	P	Pn	15 08 27.8	+0.3
COEN	Coen	11.89	161	Pn	Pn	15 08 48.2	-0.3
COEN	Coen	11.89	161	P	Pn	15 08 49.2	+0.7
LBMI	Labuha	11.89	280	P	Pn	15 08 50.8	+2.2
	57nm,0.9s						
KDU	Kakadu	12.00	214	P	Pn	15 08 49.3	-0.7
NLAI	Namlea	12.12	267	P	Pn	15 08 53.3	+1.6
	58nm,0.9s,5µm						
KRVT	Keravat (AS076	12.88	98	LR	LR	15 13 57.5	
	comp=Z,572nm,20.8s,baz=61,slow=37						
MTN	Manton Dam	12.90	218	Pn	Pn	15 09 01.0	-1.4
MTN	Manton Dam	12.90	218	P	Pn	15 09 01.3	-1.1
SANI	Sanana	13.24	272	P	Pn	15 09 09.3	+2.3
SANI	Sanana	13.24	272	P	Pn	15 09 06.0	-1.0
	41nm,0.7s						
MTSU	Mount Surprise	16.17	162	P	Pn	15 09 47.0	+0.9
SOEI	Soe	16.45	244		P	15 09 52.8	+0.7
SOEI	Soe	16.45	244	P	P	15 09 52.5	+0.4
SOEI	Soe	16.45	244	P	P	15 09 53.4	+1.3
	140nm,1.0s,1µm						
LUWI	Luwuk	16.52	275	P	P	15 10 06.2	+13
GTOI	Gorontalo	16.54	281	P	P	15 09 53.5	+0.5
	12nm,0.9s						
KNRA	Kununurra	16.54	218	Pn	Pn	15 09 48.4	-2.4
KNRA	Kununurra	16.54	218	P	Pn	15 09 50.6	-0.1
DAV	Davao City (W)	16.70	305	LR	LR	15 17 08.2	
	comp=Z,273nm,18.4s,baz=11,slow=40						
GUMO	Guam	17.09	19	LR	LR	15 15 08.0	
	comp=Z,466nm,21.8s,baz=210,slow=32						
MRSI	Marisa	17.56	280	P	P	15 10 19.7	+15
WB0	Warramunga Arr	17.65	195	Pn	Pn	15 10 01.9	-2.7
WB0				IAmb	IAmb	15 10 28.0	
	comp=Z,108nm,1.4s						
QIS	Mount Isa	17.80	179	P	Pn	15 10 05.2	-1.2
WRAB	Tennant Creek	17.82	195		Pn	15 10 03.7	-2.9
WRAB				IAmb	IAmb	15 10 21.1	
	comp=Z,63nm,0.8s						
WRAB	Tennant Creek	17.82	195	P	Pn	15 10 05.5	-1.2
WB2	Warramunga Arr	17.83	195	Pn	Pn	15 10 04.0	-2.7
WB2				IAmb	IAmb	15 10 21.2	
	comp=Z,64nm,0.8s						
WRA	Warramunga Arr	17.83	195	P	Pn	15 10 03.8	-3.0
	comp=Z,1.3nm,0.3s,baz=14,slow=13,SNR=53						
WRA				S	Sn	15 13 19.2	-5.4
	comp=Z,18nm,1.1s,baz=13,slow=22,SNR=5.0						
WRA				LR	LR	15 17 35.9	
	comp=Z,2µm,18.4s,baz=9.0,slow=39						
	comp=Z,15nm,0.7s						
WRA	Warramunga Arr	17.83	195	P	Pn	15 10 05.0	-1.8
CTA	Charters Tower	18.63	159	P	Pn	15 10 16.4	-0.2
	comp=Z,0.2nm,0.3s,baz=336,slow=8.1,SNR=6.4						
CTA				LR	LR	15 17 49.9	
	comp=Z,1µm,21.7s,baz=340,slow=38						
	comp=Z,3.1nm,0.5s						
CTAO	Charters Tower	18.63	159	P	P	15 10 13.5	-2.6
TOLI2	Tolitoli	18.81	281	Pn	Pn	15 10 18.7	-0.2
SPSI	Sidrap Palu	19.47	266	P	Pn	15 10 28.6	+1.9
	comp=Z,25nm,0.8s						
MPSI	Mapaga	19.55	278	P	Pn	15 10 29.1	+1.4
KAPI	Kappang	19.57	263	LR	LR	15 18 59.4	
	comp=Z,76nm,18.5s,baz=72,slow=40						
FITZ	Fitzroy Crossi	20.32	220	P	P	15 10 33.3	-1.2
FITZ	Fitzroy Crossi	20.32	220	P	P	15 10 34.7	+0.2
PATS	Pohnpei	21.26	64	P	P	15 10 45.9	+1.2
AS01	Alice Springs	21.50	193	P	P	15 10 46.0	-1.2
	comp=Z,51nm,1.1s						
AS31	Alice Springs	21.51	193	P	P	15 10 46.2	-1.1
AS31				IAmb	IAmb	15 11 12.4	
	comp=Z,18nm,0.7s						
ASAR	Alice Springs	21.51	193	P	P	15 10 46.0	-1.3
	comp=Z,7.1nm,0.6s,baz=17,slow=9.7,SNR=166						
ASAR				S	S	15 14 47.5	+3.5
	comp=Z,3.9nm,0.8s,baz=214,slow=47,SNR=2.8						
ASAR				LR	LR	15 19 50.7	
	comp=Z,1µm,19.0s,baz=18,slow=39						
	comp=Z,7.1nm,0.6s						
ASAR	Alice Springs	21.51	193	P	P	15 10 45.8	-1.6
HNR	Honiara	21.67	109	P	P	15 10 49.8	+0.7
	comp=Z,871nm,0.8s,baz=302,slow=1.9,SNR=5.2						
HNR	Honiara	21.67	109	P	P	15 10 49.6	+0.5
PLAI	Plampang	22.19	253	P	P	15 10 56.0	+1.2
QLP	Quilpie	24.27	169	P	P	15 11 17.8	+2.5
INKA	Innaminka	24.98	177	P	P	15 11 24.3	+2.5
OOD	Oodnadatta	25.22	187	P	P	15 11 23.4	-0.5
EIDS	Eidsvold	25.30	154	P	P	15 11 25.1	+0.4
EIDS				IAmb	IAmb	15 11 32.5	
	comp=Z,32nm,0.8s						
EIDS	Eidsvold	25.30	154	P	P	15 11 26.7	+2.0
RMQ	Roma	25.40	160	P	P	15 11 28.8	+3.2
MBWA	Marble Bar	26.43	224	P	P	15 11 34.0	-1.0
MBWA				IAmb	IAmb	15 11 40.3	
	comp=Z,13nm,0.8s						
MBWA	Marble Bar	26.43	224	P	P	15 11 35.9	+0.9
PSA00	Pilbara Seismi	26.62	224	P	P	15 11 36.2	-0.5
PSA00	Pilbara Seismi	26.62	224	P	P	15 11 38.8	+2.1
LCRK	Leigh Creek	27.66	182	P	P	15 11 47.0	+1.1
MULG	Mulgathing	27.91	190	P	P	15 11 48.8	+0.7
STKA	Stephens Creek	29.15	176	P	P	15 11 58.4	-0.8
	comp=Z,4.1nm,0.7s,baz=350,slow=8.8,SNR=11						
STKA				LR	LR	15 24 55.8	
	comp=Z,934nm,19.1s,baz=354,slow=39						
	comp=Z,4.1nm,0.7s						
STKA	Stephens Creek	29.15	176	P	P	15 11 58.7	-0.5
STKA	Stephens Creek	29.15	176	P	P	15 12 00.9	+1.7
CMSA	Cobar Meteorol	29.37	169	P	P	15 12 02.2	+1.1
JCJ	Chichijima	29.72	5	LR	LR	15 21 32.5	
	comp=Z,195nm,21.2s,baz=176,slow=32						
FORT	Forrest	29.90	200	P	P	15 12 04.5	-1.4
FORT	Forrest	29.90	200	P	P	15 12 07.0	+1.2
ARMA	Armidale	30.00	158	P	P	15 12 07.0	+0.1
ARMA				IAmb	IAmb	15 12 16.0	
	comp=Z,24nm,1.1s						
BBOO	Buckleboo	30.14	185	P	P	15 12 07.1	-0.9
BBOO	Buckleboo	30.14	185	P	P	15 12 07.8	-0.2
HTT	Hallett	30.61	180	P	P	15 12 12.7	+0.5
JOW	Kunigami	31.17	341	LR	LR	15 22 22.0	
	comp=Z,356nm,21.2s,baz=108,slow=32						
DZM	Mont Dzumac	32.73	128	*e*S	S	15 17 44.0	-1.5
	comp=Z,98nm,26.1s						
DZM				*e*LR	LR	15 21 13.3	
	comp=Z,443nm,31.1s						
DZM	Mont Dzumac	32.73	128	LR	LR	15 25 05.4	
	comp=Z,183nm,21.8s,baz=262,slow=35						
ARPS	Mount Arapiles	34.03	176	P	P	15 12 43.8	+1.8
TOO	Toolangi	35.22	171	P	P	15 12 53.7	+1.4
TOO	Toolangi	35.22	171	P	P	15 12 53.0	+0.7
QIZ	Qiongzhong	36.05	308	P	P	15 12 59.6	-0.1
QIZ				S	S	15 18 36.8	+0.3
QIZ				LR	LR		
	comp=N,200nm,3.3s						
QIZ				LR	LR		
	comp=E,190nm,11.2s						
QIZ				LR	LR		
	comp=Z,210nm,15.3s						
JNU	Nakatsue	36.45	348	P	P	15 13 03.4	+0.4
	comp=Z,10nm,1.0s,baz=143,slow=7.1,SNR=6.2						
JNU				LR	LR	15 25 29.8	
	comp=Z,251nm,21.0s,baz=150,slow=32						
	comp=Z,10nm,1.0s						
JNU	Nakatsue	36.45	348	P	P	15 13 02.4	-0.5
JNU				IAmb	IAmb	15 13 04.2	
	comp=Z,13nm,1.0s						
JHS	Saijyo	37.90	352	P	P	15 13 15.0	-0.2
JHS				IAmb	IAmb	15 13 33.1	
	comp=Z,16nm,1.2s						
MJAR	Matsushiro Arr	39.01	359	P	P	15 13 23.3	-1.2
	comp=Z,1.7nm,0.6s,baz=179,slow=8.9,SNR=8.1						
MJAR				LR	LR	15 27 32.8	
	comp=Z,169nm,20.8s,baz=160,slow=33						
	comp=Z,1.7nm,0.6s						
MAJO	Matsushiro	39.01	359	P	P	15 13 23.0	-1.5
KULM	Kulim	39.33	282	P	P	15 13 26.1	-1.4
NJ2	Nanjing	39.57	332	*e*P	P	15 13 31.4	+2.2
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
MSVF	Nonsavu	40.92	114	LR	LR	15 30 01.0	
	comp=Z,166nm,21.6s,baz=322,slow=35						
KSRS	Korea Array	41.27	346	P	P	15 13 44.1	+0.9
	comp=Z,1.4nm,0.7s,baz=154,slow=8.4,SNR=8.2						
KSRS				LR	LR	15 28 19.3	
	comp=Z,167nm,21.8s,baz=160,slow=32						
	comp=Z,1.4nm,0.7s						
PHRA	Phrae	43.76	300	P	P	15 14 02.5	-1.2
TIA	Tai'an	43.83	334	*e*P	P	15 14 02.3	-1.7
TIA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
TIA				LR	LR		
	comp=N,170nm,16.1s						
TIA				LR	LR		
	comp=E,90nm,7.1s						
TIA				LR	LR		
	comp=Z,280nm,24.0s						
CMAR	Chiang Mai Arr	44.86	300	P	P	15 14 12.5	-0.1
	comp=Z,4.0nm,0.8s,baz=119,slow=6.4,SNR=31						
CMAR				PcP	PcP	15 15 55.0	+1.0
	comp=Z,1.9nm,0.9s,baz=153,slow=2.7,SNR=6.6						
CMAR				LR	LR	15 31 49.3	
	comp=Z,57nm,21.7s,baz=110,slow=35						
	comp=Z,4.0nm,0.8s						
CMAR	Chiang Mai Arr	44.86	300	P	P	15 14 11.0	-1.6
KMI	Kunming	44.88	310	⇓P	P	15 14 13.8	+0.9
KMI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HNS	HongShan	45.90	333	⇓P	P	15 14 20.8	+0.4
HNS				S	S	15 21 01.4	-1.0
HNS				pmax	pmax		
	comp=Z,18nm,1.1s						
HNS				pmax	pmax		
	comp=Z,250nm,19.9s						
HNS				LR	LR		
	comp=Z,290nm,24.3s						
XAN	Xi'an	46.33	325	P	P	15 14 23.8	-0.2
XAN				pP	sP	15 14 38.9	-0.4
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XAN				LR	LR		
	comp=N,150nm,18.4s						
XAN				LR	LR		
	comp=E,130nm,14.7s						
XAN				LR	LR		
	comp=Z,270nm,21.3s						
PZH	PanZhiHua	46.38	311	P	P	15 14 24.9	+0.3
PZH				S	S	15 21 07.6	-2.4
PZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PZH				pmax	pmax		
	comp=Z,160nm,5.7s						
PZH				LR	LR		
	comp=N,330nm,20.0s						
PZH				LR	LR		
	comp=E,480nm,21.0s						
PZH				LR	LR		
	comp=Z,670nm,24.5s						
ASAJ	Asahikawa	46.66	3	LR	LR	15 31 24.4	
	comp=Z,118nm,21.8s,baz=183,slow=33						
USRK	Ussuriysk Ar.	47.10	353	P	P	15 14 30.9	+1.2
	comp=Z,4.5nm,0.8s,baz=195,slow=10.0,SNR=7.0						
USRK				LR	LR	15 31 21.6	
	comp=Z,168nm,20.7s,baz=150,slow=32						
	comp=Z,4.5nm,0.8s						
BJI	Beijing	47.46	336	P	P	15 14 33.3	+0.7
BJI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BJI				LR	LR		
	comp=N,150nm,20.6s						
BJI				LR	LR		
	comp=E,70nm,18.7s						
BJI				LR	LR		
	comp=Z,160nm,20.6s						
CD2	Chengdu	47.49	317	P	P	15 14 32.9	-0.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MDJ	Mudanjiang	47.85	351	P	P	15 14 36.4	+0.8
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,49nm,3.8s						
BNX	BinXian	49.32	349	⇑P	P	15 14 47.5	+0.6
BNX				pmax	pmax		
	comp=Z,17nm,0.9s						
BNX				pmax	pmax		
	comp=Z,150nm,4.6s						
URZ	Urewera	49.53	141	LR	LR	15 36 34.8	
	comp=Z,162nm,18.2s,baz=30,slow=37						
TUWZ	Tuamarina	49.62	146	P	P	15 14 48.5	-0.8
AFI	Afiamalu	49.65	106	LR	LR	15 35 26.6	
	comp=Z,123nm,19.8s,baz=280,slow=36						
RPZ	Rata Peaks	49.67	150	LR	LR	15 35 40.9	
	comp=Z,162nm,19.4s,baz=295,slow=36						
RPZ	Rata Peaks	49.67	150	P	P	15 14 49.1	-0.6
CMWZ	Cape Campbell	49.99	146	P	P	15 14 51.2	-0.9
HHC	Hu-ho-hao-te	50.12	333	*e*P	P	15 14 56.4	+3.2
HHC				pmax	pmax		
	comp=Z,26nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,6.2s						
LZH	Lanzhou	50.75	323	*e*P	P	15 14 59.4	+1.2
LZH				pP	pP	15 15 17.0	+7.7
LZH				sP	sP	15 15 25.0	+11
LZH				pmax	pmax		
	comp=Z,28nm,1.0s						
XLT	XiLinHaoTe	50.79	338	*e*P	P	15 14 58.1	-0.1
XLT				pP	pP	15 15 13.3	+4.1
XLT				sP	sP	15 15 19.8	+6.3
XLT				pmax	pmax		
	comp=Z,97nm,7.2s						
XLT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KLR	Kul'dur	52.09	354	LR	LR	15 33 34.3	
	comp=Z,144nm,22.0s,baz=179,slow=32						
HEH	HeiHe	53.68	351	*e*P	P	15 15 19.8	+0.4
HEH				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GTA	Gaotai	55.33	323	*e*P	P	15 15 32.6	+0.8
GTA				sP	sP	15 15 56.0	+8.7
GTA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GOMU	GeErMu	56.63	317	P	P	15 15 42.5	+1.1
GOMU				sP	sP	15 16 09.4	+12
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,130nm,4.9s						
ULN	Ulaanbaatar	57.64	335	P	P	15 15 46.6	-1.5
ULN				IAmb	IAmb	15 15 52.2	
	comp=Z,3.0nm,0.6s						
PETK	Petropavlovsk-	57.69	13	P	P	15 15 49.3	+1.1
	comp=Z,2.6nm,0.7s,baz=160,slow=4.7,SNR=7.7						
PETK				LR	LR	15 36 43.3	
	comp=Z,140nm,21.9s,baz=211,slow=32						
	comp=Z,2.6nm,0.7s						
PETK	Petropavlovsk-	57.69	13	P	P	15 15 48.0	-0.2
TAPN	Taplejung	57.87	305	*e*P	P	15 15 50.4	+0.1
	comp=Z,33nm,1.1s						
SONM	Songino Array	57.89	334	P	P	15 15 50.7	+0.9
	comp=Z,1.2nm,0.7s,baz=156,slow=7.2,SNR=8.3						
SONM				LR	LR	15 39 42.6	
	comp=Z,251nm,21.2s,baz=139,slow=35						
	comp=Z,1.2nm,0.7s						
SONM	Songino Array	57.89	334	P	P	15 15 49.4	-0.5
RAMN	Ramite	58.63	304	*e*P	P	15 15 55.2	-0.4
JIRN	Jiri	59.23	304	*e*P	P	15 15 59.5	-0.4
	comp=Z,11nm,0.6s						
GUN	Gumba	59.58	305	*e*P	P	15 16 02.2	-0.1
	comp=Z,29nm,0.8s						
PKI	Pulchoki	59.85	304	*e*P	P	15 16 03.5	-0.6
PKIN	Phulchoki	59.86	304	*e*P	P	15 16 03.8	-0.3
DMN	Daman	60.11	304	*e*P	P	15 16 04.8	-1.0
	comp=Z,4.3nm,0.2s						
GKN	Gorkha	60.64	304	*e*P	P	15 16 09.2	-0.1
DANN	Dangsing	61.49	304	*e*P	P	15 16 14.8	-0.4
	comp=Z,18nm,0.8s						
RAR	Rarotonga	62.07	113	LR	LR	15 42 10.0	
	comp=Z,60nm,18.6s,baz=290,slow=35						
SHEM	Shemya Is, Ala	62.49	23	LR	LR	15 39 57.6	
	comp=Z,102nm,20.5s,baz=284,slow=33						
MA2	Magadan	62.71	7	LR	LR	15 39 53.6	
	comp=Z,38nm,21.8s,baz=194,slow=32						
YAK	Yakutsk	64.92	355	LR	LR	15 41 28.2	
	comp=Z,118nm,21.7s,baz=128,slow=33						
WMQ	Urumqi	65.29	321	⇑*i*P	P	15 16 40.8	+1.0
WMQ				pmax	pmax		
	comp=Z,24nm,0.7s						
SEY	Seymchan	66.17	7	LR	LR	15 42 46.8	
	comp=Z,79nm,21.7s,baz=313,slow=33						
MK31	Makanchi Array	70.06	322	P	P	15 17 09.2	-0.6
MK31				IAmb	IAmb	15 17 11.2	
	comp=Z,8.1nm,0.8s						
MKAR	Makanchi Array	70.06	322	P	P	15 17 10.3	+0.5
	comp=Z,10nm,0.6s,baz=112,slow=8.0,SNR=140						
MKAR				LR	LR	15 49 56.9	
	comp=Z,37nm,18.8s,baz=102,slow=38						
	comp=Z,10nm,0.6s						
MKAR	Makanchi Array	70.06	322	P	P	15 17 09.4	-0.4
MAKZ	Makanchi	70.26	322	P	P	15 17 10.4	-0.6
PPT	Papeete	71.28	108	LR	LR	15 45 37.8	
	comp=Z,32nm,21.5s,baz=310,slow=33						
PPT2	Papeete2	71.28	108	*e*LR	LR	15 39 05.6	
	comp=Z,141nm,24.0s						
PPT2				*e*LR	LR	15 39 06.0	
	comp=Z,183nm,29.0s						
KSH	Kashi	71.42	313	P	P	15 17 19.6	+1.2
KSH				pmax	pmax		
	comp=Z,11nm,1.1s						
ZAA0	Zalesovo Array	72.15	330	P	P	15 17 20.8	-1.4
ZALV	Zalesovo Beam	72.15	330	P	P	15 17 21.8	-0.4
	comp=Z,4.5nm,0.6s,baz=110,slow=6.3,SNR=24						
ZALV				LR	LR	15 48 46.3	
	comp=Z,104nm,21.5s,baz=110,slow=36						
	comp=Z,4.5nm,0.6s						
ZALV	Zalesovo Beam	72.15	330	P	P	15 17 20.4	-1.8
TKM2	Tokmak 2	72.86	316	P	P	15 17 27.6	+0.6

	SNR=8.3						
UCH	Uchtor	73.38	316	P	P	15 17 31.5	+1.1
	SNR=8.7						
AAK	Ala-Archa	73.53	316	LR	LR	15 50 23.7	
	comp=Z,53nm,21.9s,baz=100,slow=36						
AAK	Ala-Archa	73.53	316	P	P	15 17 29.9	-1.0
USP	Ospenovka	73.73	317	P	P	15 17 32.5	+0.6
	SNR=9.0						
AML	Almayashu	73.92	315	P	P	15 17 34.4	+1.0
	SNR=11						
KURK	Kurchatov	73.97	325	P	P	15 17 31.6	-1.4
KURK				IAmb	IAmb	15 17 34.0	
	comp=Z,7.1nm,0.8s						
EKS2	Erkin-Say	74.03	316	P	P	15 17 34.7	+0.9
	SNR=5.3						
TIXI	Tiksi	74.48	357	LR	LR	15 48 22.4	
	comp=Z,85nm,21.0s,baz=7.0,slow=34						
VNDA	Vanda	75.79	175	P	P	15 17 43.7	+0.6
	comp=Z,5.2nm,0.5s,baz=329,slow=6.9,SNR=42						
VNDA				LR	LR	15 51 22.8	
	comp=Z,260nm,18.3s,baz=332,slow=36						
	comp=Z,5.2nm,0.5s						
VNDA	Vanda	75.79	175	P	P	15 17 42.6	-0.5
VNDA				IAmb	IAmb	15 17 47.7	
	comp=Z,6.5nm,0.7s						
CHGR	Chuyangaron	76.23	311	P	P	15 17 45.1	-1.4
KKAR	Karatay Array	76.45	315	P	P	15 17 47.0	-0.6
TNA	Tin City	77.93	20	P	P	15 17 54.4	-0.9
TNA				IAmb	IAmb	15 17 57.4	
	comp=Z,7.3nm,1.1s						
ANM	Nome	78.26	21	P	P	15 17 57.7	+0.5
BVAR	Borovoye Array	79.56	325	P	P	15 18 04.7	+0.1
	comp=Z,14nm,0.6s,baz=112,slow=7.4,SNR=59						
BVAR				LR	LR	15 55 29.6	
	comp=Z,45nm,19.6s,baz=94,slow=37						
	comp=Z,14nm,0.6s						
BRVK	Borovoye	79.64	325	P	P	15 18 03.5	-1.4
BRVK				IAmb	IAmb	15 18 06.0	
	comp=Z,11nm,0.7s						
NRIK	Noril'sk	79.82	344	P	P	15 18 05.6	0.0
	comp=Z,4.6nm,0.7s,baz=143,slow=4.8,SNR=6.2						
NRIK				LR	LR	15 56 00.0	
	comp=Z,72nm,18.6s,baz=118,slow=38						
	comp=Z,4.6nm,0.7s						
O18K	Koktuh Hills	80.28	28	P	P	15 18 08.2	-0.1
O18K				IAmb	IAmb	15 18 32.2	
	comp=Z,15nm,1.4s						
SVW2	Sparrevohn	80.60	27	P	P	15 18 09.7	-0.4
SVW2				IAmb	IAmb	15 18 14.8	
	comp=Z,10nm,1.4s						
KDAK	Kodiak Island	80.80	30	LR	LR	15 51 04.9	
	comp=Z,108nm,19.5s,baz=258,slow=34						
N19K	Bonanza Creek	80.98	27	P	P	15 18 12.4	+0.2
N19K				IAmb	IAmb	15 18 26.3	
	comp=Z,14nm,1.4s						
M20K	Styx River	81.98	26	P	P	15 18 18.4	+1.0
M20K				IAmb	IAmb	15 18 34.6	
	comp=Z,9.0nm,1.1s						
K20K	Telida	82.13	25	P	P	15 18 18.1	0.0
K20K				IAmb	IAmb	15 18 20.5	
	comp=Z,8.9nm,0.9s						
MAW	Mawson	82.36	202	LR	LR	15 52 60.0	
	comp=Z,124nm,18.4s,baz=83,slow=34						
SKT	Skwentna	82.73	26	P	P	15 18 19.7	-1.5
PPLA	Purkeypile	82.76	25	P	P	15 18 21.2	-0.3
PPLA				IAmb	IAmb	15 18 43.0	
	comp=Z,10.0nm,1.4s						
IMAR	Indian Mountai	83.25	22	P	P	15 18 23.3	-0.6
RC01	Rabbit Creek A	83.25	28	P	P	15 18 23.1	-0.9
RC01				IAmb	IAmb	15 18 24.6	
	comp=Z,6.8nm,0.6s						
KNK	Knik Glacier	83.94	27	P	P	15 18 26.6	-0.9
SCM	Sheep Creek Mo	84.58	27	P	P	15 18 30.5	-0.3
GEYT	Alibeck	84.61	308	P	P	15 18 32.0	+0.5
	comp=Z,4.5nm,0.8s,baz=177,slow=3.0,SNR=8.2						
GEYT				LR	LR	15 58 42.2	
	comp=Z,68nm,21.7s,baz=105,slow=37						
	comp=Z,4.5nm,0.8s						
I23K	Minto, Yukon-K	84.68	24	P	P	15 18 31.0	-0.1
I23K				IAmb	IAmb	15 18 32.7	
	comp=Z,5.7nm,1.0s						
WRH	Wood River Hil	84.99	25	P	P	15 18 31.4	-1.3
WRH				IAmb	IAmb	15 18 33.2	
	comp=Z,6.8nm,1.0s						
ABKAR	Akbulak array	85.01	320	P	P	15 18 32.1	-1.1
ABKAR	Akbulak array	85.01	320	P	P	15 18 31.7	-1.4
ABKAR				IAmb	IAmb	15 18 33.8	
	comp=Z,4.4nm,0.7s						
MDM	Murphy Dome	85.08	24	P	P	15 18 32.6	-0.6
CCB	Clear Creek Bu	85.16	24	P	P	15 18 32.2	-1.3
CCB				IAmb	IAmb	15 18 33.9	
	comp=Z,7.3nm,0.9s						
H24K	Noodor Dome	85.47	23	P	P	15 18 34.2	-1.0
IL31		85.57	24	P	P	15 18 33.6	-1.9
IL31				IAmb	IAmb	15 18 35.5	
	comp=Z,4.3nm,0.8s						
ILAR	Eielson Array	85.57	24	P	P	15 18 34.8	-0.8
	comp=Z,3.0nm,0.7s,baz=264,slow=4.3,SNR=34						
	comp=Z,3.0nm,0.7s						
ILAR	Eielson Array	85.57	24	P	P	15 18 33.3	-2.4
N25K	Chitina, Valde	85.78	28	P	P	15 18 35.1	-1.7
N25K				IAmb	IAmb	15 18 39.4	
	comp=Z,4.6nm,0.9s						
AKTO	Aktyubinsk	86.43	321	LR	LR	16 01 06.4	
	comp=Z,29nm,18.0s,baz=82,slow=38						
FYU	Fort Yukon	86.70	23	P	P	15 18 41.9	+0.7
ARU	Arti	87.03	327	LR	LR	15 59 18.6	
	comp=Z,51nm,20.5s,baz=88,slow=37						
BARN	Barnard Glacie	87.05	29	P	P	15 18 43.2	0.0
BARN				IAmb	IAmb	15 18 44.8	
	comp=Z,5.6nm,0.9s						
BMAR	Burnt Mountain	87.16	22	P	P	15 18 43.5	+0.1
CTGM	Chitina Glacie	87.19	29	P	P	15 18 42.9	-0.9
QSPA	South Pole Qui	87.29	180	LR	LR	15 56 40.8	
	comp=Z,220nm,21.0s,baz=9.0,slow=35						
QSPA	South Pole Qui	87.29	180	P	P	15 18 43.8	-0.4
LOGN	Logan Glacier	87.32	29	P	P	15 18 43.8	-0.7
LOGN				IAmb	IAmb	15 18 50.5	
	comp=Z,7.9nm,1.2s						
EGAK	Eagle	87.97	25	P	P	15 18 46.5	-0.8
EGAK				IAmb	IAmb	15 19 03.0	
	comp=Z,11nm,1.2s						
DAWY	Dawson	88.60	26	P	P	15 18 50.4	0.0
HYT	Haines Junctio	89.02	29	P	P	15 18 52.2	-0.3
HYT				IAmb	IAmb	15 18 55.9	
	comp=Z,5.2nm,1.0s						
N31M	Braeburn, Yuko	89.92	29	P	P	15 18 55.6	-1.0
N31M				IAmb	IAmb	15 19 07.6	
	comp=Z,7.1nm,1.1s						
DLBC	Dease Lake	92.64	32	LR	LR	15 54 36.9	
	comp=Z,38nm,20.8s,baz=282,slow=32						
BELG	Belogornoye	93.07	322	LR	LR	16 02 51.6	
	comp=Z,52nm,21.8s,baz=175,slow=37						
BBB	Bella Bella	93.72	38	LR	LR	15 52 46.4	
	comp=Z,69nm,21.4s,baz=222,slow=30						
YBH	Yreka Blue Hor	97.78	48	LR	LR	15 55 05.5	
	comp=Z,85nm,21.6s,baz=276,slow=30						
SPITS	Spitsbergen Ar	99.02	350	LR	LR	16 03 34.0	
	comp=Z,102nm,21.8s,baz=25,slow=35						
YKA	Yellowknife Ar	99.79	27	LR	LR	16 00 38.9	
	comp=Z,85nm,20.1s,baz=324,slow=33						
ARCES	ARCESS Array B	100.63	341	P	Pdif	15 19 44.1	-1.1
	comp=Z,4.9nm,0.9s,baz=67,slow=6.8,SNR=8.3						
MNK	Minsk	104.44	326	*i* P	Pdif	15 19 58.0	-4.5
	comp=E,2.0nm,1.1s						
MNK				*i* P	Pdif	15 19 58.0	-4.5
	comp=N,34nm,0.8s						
MNK				*i* P	Pdif	15 19 58.0	-4.5
	comp=Z,5.0nm,0.7s,baz=254						
MNK				*i* PP	PKiKP	15 24 16.8	-1.8
MNK				*i* PPP	PPP	15 26 28.9	
MNK				*i* SKS		15 31 26.2	
MNK				*i* SS	SS	15 39 09.1	-0.2
MNK				*i* SSS	SSS	15 43 05.9	
MNK				*i* LQ	LQ	16 01 47.2	
MNK				*i* LR	LR	16 06 34.0	
MNK				*i* LRM	MLR	16 08 02.8	
	comp=E,18nm,14.7s						
MNK				*i* LRM	MLR	16 08 39.9	
	comp=N,364nm,14.1s						
MNK				*i* LRM	MLR	16 08 45.0	
	comp=Z,78nm,13.4s						
TORD	Torodi Ar. Bea	136.74	286	PKP	PKPdf	15 25 20.4	-0.6
	comp=Z,1.9nm,0.7s,baz=64,slow=2.2,SNR=6.4						
PB11	IPOC Station P	143.93	129	PKPdf	PKPbc	15 25 32.3	+0.3
DBIC	Dimbokro	143.99	278	PKP	PKPab	15 25 31.7	+0.2
	comp=Z,8.8nm,0.9s,baz=75,slow=3.4,SNR=7.3						
DBIC	Dimbokro	143.99	278	PKPdf	PKPab	15 25 30.7	-0.8
MNMC	Minye Minye	144.34	129	PKPdf	PKPdf	15 25 34.5	-0.6
LPAZ	La Paz	147.06	126	PKPbc	PKPbc	15 25 43.0	+0.7
	comp=Z,1.7nm,0.7s,baz=271,slow=5.0,SNR=6.4						

NEIC ***18*** *15:22:56.4±1.6, 5°.9S±0°.2×154°.9E±0°.1, h176^{km}±12^{km}, mb4.4/21, Error ellipse: s-maj=32.9km s-min=6.8km az=206.0*

IDC ***18*** *15:22:56.5±1.9, 5°.92S×154°.80E, h175^{km}±16^{km}, mb3.6/5, mbtmp4.1/9, Error ellipse: s-maj=26.1km s-min=15.7km az=60.0*

ISC 18 15:22:54.8±0.8, **5°.79S**±0°.09×**154°.99E**±0°.09, **h175**^{km}, **n41**, σ**1^{s}24**/40, **mb4.3**/15, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	3.23	299	Pn	Pn	15 23 46.8	+0.6
KRVT	Keravat (AS076	3.30	296	P	Pn	15 23 46.9	-0.1
	72nm,0.6s,baz=211,slow=1.9,SNR=21						
KRVT				S	Sn	15 24 27.3	-0.3
	162nm,0.3s,baz=209,slow=19,SNR=11						
PMG	Port Moresby	8.56	245	P	Pn	15 24 56.1	+0.6
	4.7nm,0.5s,baz=24,slow=7.0,SNR=5.4						
PMG				S	Sn	15 26 35.0	+3.8
	3.3nm,0.5s,baz=314,slow=9.2,SNR=1.7						
COEN	Coen	14.19	234	P	P	15 26 09.1	-1.4
CTA	Charters Tower	16.56	210	P	Pn	15 26 36.4	-0.8
	2.6nm,1.0s,baz=12,slow=11,SNR=3.9						
KOUNC	Koumac, New Ca	17.23	149	P	P	15 26 42.4	-1.6
KOUNC				IAmb	IAmb	15 26 47.7	
	comp=Z,16nm,0.9s						
DZM	Mont Dzumac	19.61	147	P	P	15 27 11.1	+1.1
	comp=Z,14nm,0.4s,baz=300,slow=16,SNR=41						
DZM	Mont Dzumac	19.61	147	P	P	15 27 11.2	+1.2
FAKI	Fak Fak	22.85	276	P	P	15 27 42.9	-0.4
FAKI				IAmb	IAmb	15 27 48.5	
	comp=Z,14nm,0.9s						
WB0	Warramunga Arr	24.38	233	P	P	15 27 56.8	-0.3
WB0				IAmb	IAmb	15 27 59.1	
	comp=Z,4.4nm,0.5s						
WRAB	Tennant Creek	24.50	233	P	P	15 27 58.0	-0.2
WB2	Warramunga Arr	24.51	233	P	P	15 27 57.8	-0.4
WRA	Warramunga Arr	24.52	233	P	P	15 27 58.2	-0.1
	comp=Z,2.9nm,0.4s,baz=57,slow=10.0,SNR=116						
	comp=Z,2.9nm,0.4s						
WRA	Warramunga Arr	24.52	233	P	P	15 27 56.7	-1.7
MTN	Manton Dam	24.55	252	P	P	15 27 59.4	+0.7
MTN				IAmb	IAmb	15 28 14.6	
	comp=Z,11nm,1.1s						
H11S3	WAKE ISLAND Hy	26.74	25	T	T	15 57 11.4	
	baz=203						
H11S2	WAKE ISLAND Hy	26.75	25	T	T	15 57 11.4	
	baz=203						
H11S1	WAKE ISLAND Hy	26.76	25	T	T	15 57 11.4	
	baz=203						
AS31	Alice Springs	26.98	227	P	P	15 28 19.4	-1.1
ASAR	Alice Springs	26.98	227	P	P	15 28 19.5	-1.0
	comp=Z,1.1nm,0.4s,baz=56,slow=9.3,SNR=60						
	comp=Z,1.1nm,0.4s						
ASAR	Alice Springs	26.98	227	P	P	15 28 19.1	-1.4
KNRA	Kununurra	27.55	247	P	P	15 28 24.6	-0.9
KNRA				IAmb	IAmb	15 28 34.7	
	comp=Z,5.6nm,1.0s						
FITZ	Fitzroy Crossi	31.15	244	P	P	15 28 55.8	-1.7
TOLI2	Tolitoli	34.84	280	P	P	15 29 29.1	-0.4
RTZ	Ruatahuna	38.28	152	P	P	15 29 59.3	+1.0
RTZ				IAmb	IAmb	15 30 00.8	
	comp=Z,9.3nm,1.1s						
MRNZ	Matariki Terra	38.85	159	P	P	15 30 04.2	+1.2
THZ	Tophouse	39.22	159	P	P	15 30 06.5	+0.4
THZ				IAmb	IAmb	15 30 07.7	
	comp=Z,8.8nm,0.8s						
TCW	Tory Channel	39.26	157	P	P	15 30 07.0	+0.7
TUWZ	Tuamarina	39.32	157	P	P	15 30 05.1	-1.7
INZ	Inchbonnie	39.57	161	P	P	15 30 08.7	-0.2
LTZ	Lake Taylor	39.89	160	P	P	15 30 12.8	+1.2
LTZ				IAmb	IAmb	15 30 30.9	
	comp=Z,10nm,1.2s						
KHZ	Kahutara	40.02	159	P	P	15 30 13.1	+0.6
KHZ				IAmb	IAmb	15 30 19.2	
	comp=Z,8.9nm,0.9s						
OXZ	Oxford	40.30	161	P	P	15 30 14.4	-0.5
OXZ				IAmb	IAmb	15 30 15.8	
	comp=Z,7.1nm,0.7s						
GVZ	Greta Valley S	40.32	159	P	P	15 30 16.1	+1.0
RPZ	Rata Peaks	40.34	162	P	P	15 30 16.5	+1.3
	comp=Z,9.2nm,0.6s,baz=352,slow=7.5,SNR=8.9						
	comp=Z,9.2nm,0.6s						
RPZ	Rata Peaks	40.34	162	P	P	15 30 14.8	-0.4
MQZ	McQueen's Vall	40.84	160	P	P	15 30 19.8	+0.5
YULB	Yu-li	43.86	313	P	P	15 30 42.5	-1.5
YULB				IAmb	IAmb	15 30 47.5	
	comp=Z,9.6nm,1.1s						
SONM	Songino Array	68.33	327	P	P	15 33 40.0	+2.8
	comp=Z,0.3nm,0.4s,baz=139,slow=7.7,SNR=3.6						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	82.50	319	P	P	15 34 59.1	+1.2
	comp=Z,0.4nm,0.7s,baz=120,slow=5.9,SNR=4.6						
	comp=Z,0.4nm,0.7s						
QSPA	South Pole Qui	84.18	180	P	P	15 35 06.1	-0.1

ISK ***18*** *15:29:13.3, 39°.53N×26°.15E, h5^{km}, ML3.0/20*

DDA ***18*** *15:29:13.3±0.0, 39°.52N×26°.18E, h9^{km}, MW3.2*

THE ***18*** *15:29:13.8, 39°.52N×26°.17E, h9^{km}±1^{km}, ML2.9/2, Error ellipse: s-maj=1.1km s-min=0.4km az=118.0*

ATH ***18*** *15:29:14.0, 39°.51N×26°.15E, h11^{km}±2^{km}, ML2.8/4, Error ellipse: s-maj=3.0km s-min=1.1km az=241.0*

ISC 18 15:29:13.4±0.8, **39°.51N**±0°.01×**26°.16E**±0°.02, **h11**^{km}±5^{km}, **n63**, σ**0^{s}53**/99, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	Canakkale, Ayv	0.02	232	P	Pg	15 29 15.4	0.0
KOCA				S	Sg	15 29 16.6	-0.2
GPNR	Gulpinar-Canak	0.06	198	Pg	Pg	15 29 15.5	-0.2
GPNR				Sg	Sg	15 29 17.1	-0.2
PRK	Paraskevi	0.28	162	P	Pg	15 29 19.6	+0.5
PRK				S	Sg	15 29 24.1	+1.1
	5µm,0.2s						
PRK	Paraskevi	0.28	162	P	Pg	15 29 19.6	+0.5
PRK				S	Sg	15 29 23.5	+0.5
PRK				AML	AML	15 29 24.6	
	comp=N,9234µm,0.2s						
PRK				AML	AML	15 29 24.9	
	comp=E,12550µm,0.5s						
BOZC	Bozcaada	0.34	346	Pg	Pg	15 29 20.1	-0.1
BOZC				Sg	Sg	15 29 25.2	+0.5
BOZC	Bozcaada	0.34	346	SPECP		15 29 20.0	
BOZC				P	Pg	15 29 20.4	+0.2
BOZC				S	Sg	15 29 25.1	+0.3
EZN	Ezine	0.34	22	P	Pg	15 29 20.3	+0.1
EZN				S	Sg	15 29 25.2	+0.5
EZN	Ezine	0.34	22	Pg	Pg	15 29 20.3	+0.1
EZN				Sg	Sg	15 29 25.2	+0.5
BAYC	CANAKKALE_Bayr	0.38	53	SPECP		15 29 20.0	
BAYC				P	Pg	15 29 20.7	-0.3
BAYC				S	Sg	15 29 25.6	-0.4
SIGR	SIGRI	0.38	218	P	Pg	15 29 21.3	+0.3
SIGR				S	Sg	15 29 27.2	+1.2
	comp=E,1µm,0.3s						
SIGR	SIGRI	0.38	218	Pg	Pg	15 29 21.4	+0.3
SIGR				Sg	Sg	15 29 27.3	+1.2
SIGR	SIGRI	0.38	218	P	Pg	15 29 21.4	+0.3
SIGR				S	Sg	15 29 26.7	+0.6
SIGR				AML	AML	15 29 28.4	
	comp=N,3872µm,0.3s						
SIGR				AML	AML	15 29 28.6	
	comp=E,2068µm,0.6s						
AYVA	Ayvalik	0.46	116	SPECP		15 29 22.0	
AYVA				P	Pg	15 29 22.6	+0.2
AYVA				S	Sg	15 29 28.7	+0.2
ECEA	Canakkale, Ece	0.53	1	SPECP		15 29 23.0	
ECEA				P	Pg	15 29 23.4	-0.4
ECEA				S	Sg	15 29 31.4	+0.6
COMU	Canakkale	0.63	23	Pg	Pg	15 29 25.8	+0.1
COMU				Sg	Sg	15 29 34.9	+0.8
GOKA	anakkale-Gk	0.70	344	SPECP		15 29 26.0	
GOKA				P	Pg	15 29 26.9	-0.2
GOKA				S	Sg	15 29 36.4	+0.1
GADA	Gvkgeada	0.70	344	Pg	Pg	15 29 27.3	+0.2
BUHA	Balikesir, Bur	0.71	91	SPECP		15 29 26.0	
BUHA				P	Pg	15 29 26.9	-0.3
BUHA				S	Sg	15 29 36.2	-0.3
DKL	Dikili	0.73	127	Pg	Pg	15 29 27.8	+0.3
DKL				Sg	Sb	15 29 38.9	+0.8
LIA	Limnos Island	0.84	297	P	Pg	15 29 30.2	+0.4
LIA	Limnos Island	0.84	297	P	Pg	15 29 30.1	+0.4
LIA				S	Sg	15 29 40.6	-0.1
LIA				AML	AML	15 29 45.2	
	comp=E,1370µm,0.3s						
LIA				AML	AML	15 29 46.9	
	comp=N,1427µm,0.3s						
CANM	Can-anakkale	0.85	54	Pg	Pg	15 29 30.1	+0.3
KARB	zmir-Karabur	0.87	167	SPECP		15 29 30.0	
KARB				P	Pg	15 29 30.5	+0.2
KARB				S	Sb	15 29 42.7	+0.5
ZEDA	zmir-Bergama	0.90	127	SPECP		15 29 31.0	
ZEDA				P	Pb	15 29 31.4	+0.4
ZEDA				S	Sb	15 29 43.2	+0.2
GELI	Tayfur-Gelibol	0.92	15	Pg	Pg	15 29 31.0	-0.1
LPK	Lapseki	0.97	28	Pg	Pg	15 29 31.9	-0.3
SMTH	Samothraki Isl	1.07	333	P	Pg	15 29 33.7	-0.4
SMTH	Samothraki Isl	1.07	333	P	Pg	15 29 33.7	-0.4
SMTH				S	Sb	15 29 48.6	+0.6
PSRA	Psara	1.07	206	P	Pg	15 29 34.6	+0.5
PSRA				S	Sg	15 29 48.7	+0.6
CHOS	Chios island	1.13	184	P	Pg	15 29 34.7	-0.4
CHOS	Chios island	1.13	184	P	Pg	15 29 34.6	-0.6
BALY	Balya	1.15	78	SPECP		15 29 35.0	
BALY				P	Pg	15 29 35.5	-0.1
BALY				S	Sg	15 29 50.3	-0.2
CAVK	Edirne/Enez-Ca	1.18	0	SPECP		15 29 35.0	
CAVK				P	Pb	15 29 35.1	-0.7
CAVK				S	Sg	15 29 51.8	+0.4
ERIK	Erikli-Kesan	1.19	13	Pn	Pb	15 29 35.5	-0.5
URLA	Izmir	1.20	163	Pn	Pb	15 29 35.8	-0.4
URLA	Izmir	1.20	163	SPECP		15 29 35.0	
URLA				P	Pb	15 29 35.3	-0.9
URLA				S	Sb	15 29 51.8	+0.1
STEP	BALIKESIR_Sava	1.22	96	SPECP		15 29 36.0	
STEP				P	Pb	15 29 36.5	+0.1
STEP				S	Sb	15 29 52.1	-0.1
ENEZ	Enez	1.22	360	Pn	Pb	15 29 36.9	+0.4
KRBG	Karabiga-Canak	1.24	45	Pn	Pb	15 29 37.2	+0.3
GONE	Gonen-Balikesi	1.29	65	Pn	Pb	15 29 38.1	+0.3
KNL	Balıkesir	1.30	54	SPECP		15 29 37.0	
KNL				P	Pn	15 29 37.1	-0.4
KNL				S	Sb	15 29 54.1	-0.3
ZEYE	Izmir, Urla-Ze	1.30	168	SPECP		15 29 36.0	
ZEYE				P	Pn	15 29 36.8	-0.7
ZEYE				S	Sb	15 29 54.2	-0.4
BLCB	Balcova	1.32	148	Pn	Pg	15 29 39.3	+0.5
BALB	Balikesir	1.34	84	Pn	Pn	15 29 38.7	+0.7
ALN	Alexandroupoli	1.39	356	P	Pn	15 29 38.2	-0.5
ALN				S	Sb	15 29 57.1	+0.1
ALN	Alexandroupoli	1.39	356	Pn	Pb	15 29 39.5	+0.2
ALN	Alexandroupoli	1.39	356	P	Pn	15 29 38.9	+0.2
ALN				S	Sb	15 29 55.9	-1.1
ALN				AML	AML	15 29 59.2	
	comp=N,514µm,0.4s						
ALN				AML	AML	15 30 00.6	
	comp=E,503µm,0.3s						
BKES	Balkesir-Mer	1.39	80	SPECP		15 29 39.0	
BKES				P	Pn	15 29 39.1	+0.4
BKES				S	Sg	15 29 58.0	0.0
RKY	Sarkoy-Tekirda	1.41	33	Pn	Pn	15 29 39.4	+0.3
AKHS	Akhisar	1.44	116	SPECP		15 29 39.0	
AKHS				P	Pn	15 29 39.4	0.0
AKHS				S	Sn	15 29 56.9	-1.3
THAS	Thassos island	1.55	315	P	Pn	15 29 40.4	-0.6
EDC	Edincik	1.55	57	Pn	Pb	15 29 42.2	0.0
DGB	zmir	1.57	159	SPECP		15 29 40.0	
DGB				P	Pn	15 29 40.8	-0.4
DGB				S	Sn	15 30 00.1	-1.3
UKOP	Uzunkopru-Edir	1.65	13	Pn	Pn	15 29 43.4	+1.0
RDO	Rodhopi	1.70	344	Pn	Pn	15 29 43.7	+0.7
RDO	Rodhopi	1.70	344	P	Pn	15 29 43.4	+0.3
BAND	Balkesir-Ban	1.71	60	SPECP		15 29 43.0	
BAND				P	Pn	15 29 43.8	+0.5
BAND				S	Sn	15 30 05.2	+0.1
DURS	Dursunbey	1.79	86	SPECP		15 29 44.0	
DURS				P	Pn	15 29 44.4	0.0
DURS				S	Sn	15 30 07.4	+0.1
TKR	Tekirdag	1.81	35	Pn	Pn	15 29 45.6	+1.0
KCTX	Karacabey (Bur	1.85	65	Pn	Pn	15 29 45.9	+0.8
SMG	Samos	1.88	163	P	Pn	15 29 44.8	-0.7
SMG	Samos	1.88	163	P	Pn	15 29 44.6	-0.9
DST	Dursunbey	1.91	87	Pn	Pn	15 29 47.1	+1.2

SJA ***18*** *15:54:24.9±1.5, 22°.95S×68°.43W, h100^{km}, ML4.3, MW4.0, Hypocentre not reviewed by the ISC*

NEIC ***18*** *15:54:24.4±1.5, 22°.96S±0°.05×68°.44W±0°.05, h124^{km}±8^{km}, mb4.2/6, ML4.3(GUC), Error ellipse: s-maj=8.7km s-min=6.1km az=218.0*

IDC ***18*** *15:54:24.2±0.7, 22°.89S×68°.27W, h101^{km}±5^{km}, mb3.9/9, mbtmp4.1/13, MS2.7/1, Error ellipse: s-maj=19.3km s-min=15.2km az=32.0*

GUC ***18*** *15:54:25.5±0.7, 22°.86S×68°.41W, h113^{km}±5^{km}, ML4.3*

VAO ***18*** *15:54:26.1±0.6, 22°.47S×68°.46W, h98^{km}, mb4.4*

ISC 18 15:54:23.8±0.6, **22°.93S**±0°.04×**68°.36W**±0°.05, **h109**^{km}±6^{km}, **n102**, σ**1^{s}76**/117, **mb4.3**/11, **8C**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	0.60	303	P	Pn	15 54 42.8	+1.2
	2µm,0.4s,baz=128,slow=4.9,SNR=4295						
LVC				S	Sn	15 54 56.0	+1.0
	3µm,0.4s,baz=304,slow=20,SNR=32						
LVC	Limon Verde	0.60	303		Pn	15 54 42.9	+1.2
LVC				Sn	Sn	15 54 55.5	+0.5
LVC	Limon Verde	0.60	303	*e*P	Pn	15 54 42.5	+0.8
LVC				*i* S	Sn	15 54 55.5	+0.5
LVC	Limon Verde	0.60	303	*e*P	Pn	15 54 42.7	+1.1
PB15	IPOC Station P	1.05	255		Pn	15 54 47.0	+1.3
PB15	IPOC Station P	1.05	255⇑	*i*P	Pn	15 54 47.5	+1.8
PB15				*i* S	Sn	15 55 04.6	+2.4
PB15	IPOC Station P	1.05	255	*e*P		15 54 47.6	
PB15				*e*S		15 55 04.1	
PB15				IAML		15 55 09.4	
	comp=Z,12µm,0.2s						
PB06	IPOC Station P	1.14	281		Pn	15 54 47.8	+1.3
PB06				Sn	Sn	15 55 05.4	+1.7
PB06	IPOC Station P	1.14	281⇑	*i*P	Pn	15 54 47.9	+1.3
PB06				*i* S	Sn	15 55 05.0	+1.3
PB06				IAML		15 55 05.8	
	comp=N,10µm,0.5s						
PB06	IPOC Station P	1.14	281	*e*P		15 54 48.0	
PB06				*e*S		15 55 05.4	
PB06				IAML		15 55 06.9	
	comp=Z,5µm,0.4s						
PB09	IPOC Station P	1.39	324		Pn	15 54 51.1	+1.6
PB09				Sn	Sn	15 55 10.8	+1.9
PB09	IPOC Station P	1.39	324⇑	*i*P	Pn	15 54 51.0	+1.6
PB09				*i* S	Sn	15 55 10.2	+1.3
PB09	IPOC Station P	1.39	324	*e*P		15 54 51.1	
PB09				*e*S		15 55 10.8	
PB09				IAML		15 55 13.0	
	comp=Z,2µm,0.3s						
PB03	IPOC Station P	1.56	304		Pn	15 54 51.8	+0.4
PB03	IPOC Station P	1.56	304⇑	*i*P	Pn	15 54 52.5	+1.1
PB03				*i* S	Sn	15 55 12.7	+0.4
PB03				IAML		15 55 14.0	
	comp=N,5µm,0.6s						
PB03	IPOC Station P	1.56	304	*e*P		15 54 52.5	
PB03				*e*S		15 55 13.3	
PB03				IAML		15 55 18.9	
	comp=Z,3µm,0.3s						
PB04	IPOC Station P	1.75	290		Pn	15 54 54.5	+0.7
PB04	IPOC Station P	1.75	290⇑	*i*P	Pn	15 54 54.7	+0.9
PB04				*i* S	Sn	15 55 16.9	+0.2
PB04				IAML		15 55 23.9	
	comp=N,3µm,0.6s						
PB04	IPOC Station P	1.75	290	*e*P		15 54 54.7	
PB04				*e*S		15 55 18.1	
PB04				IAML		15 55 23.8	
	comp=Z,2µm,0.2s						
PB07	IPOC Station P	1.85	310		Pn	15 54 55.7	+0.6
PB07	IPOC Station P	1.85	310⇑	*i*P	Pn	15 54 56.1	+1.1

PB07				*i* S	Sn	15 55 18.6	-0.3
PB07				IAML		15 55 20.0	
	comp=E,3µm,0.6s						
PB07	IPOC Station P	1.85	310	*e*P		15 54 56.1	
PB07				*e*S		15 55 19.6	
PB07				IAML		15 55 21.8	
	comp=Z,2µm,0.6s						
PB10	IPOC Station P	2.10	254		Pn	15 54 58.7	+0.8
PB10	IPOC Station P	2.10	254	⇑*i*P	Pn	15 54 58.6	+0.7
PB10				IAML		15 55 35.2	
	comp=N,882nm,0.7s						
PB10	IPOC Station P	2.10	254	*e*P		15 54 58.9	
PB10				*e*S		15 55 24.2	
PB02	IPOC Station P	2.15	318		Pn	15 54 59.5	+0.9
PB02	IPOC Station P	2.15	318	*e*P	Pn	15 54 59.7	+1.0
PB02				*i* S	Sn	15 55 24.6	-0.7
PB02				IAML		15 55 31.9	
	comp=E,5µm,0.2s						
PB02	IPOC Station P	2.15	318	*e*P		15 54 59.7	
PB02				*e*S		15 55 25.8	
PB02				IAML		15 55 27.6	
	comp=Z,4µm,0.2s						
PB01	IPOC Station P	2.15	331		Pn	15 54 59.7	+0.9
PB01	IPOC Station P	2.15	331	*e*P	Pn	15 54 59.8	+1.1
PB01				*i* S	Sn	15 55 26.1	+0.6
PB01				IAML		15 55 27.9	
	comp=E,4µm,0.3s						
PB01	IPOC Station P	2.15	331	*e*P		15 54 59.9	
PB01				*e*S		15 55 27.0	
PB01				IAML		15 55 27.4	
	comp=Z,1µm,0.2s						
GO02	Mina Guanaco	2.49	207		Pn	15 55 05.2	+1.9
GO02	Mina Guanaco	2.49	207	*e*P		15 55 05.3	
GO02				*e*S		15 55 33.4	
PB14	IPOC Station P	2.52	228	Pn	Pn	15 55 04.5	+0.9
PB14	IPOC Station P	2.52	228	*e*P	Pn	15 55 04.5	+0.9
PB14	IPOC Station P	2.52	228	*e*P		15 55 05.3	
PB14				*e*S		15 55 31.6	
PB14				IAML		15 55 42.2	
	comp=Z,584nm,0.5s						
HJA	Humahuaca	2.73	96	*e*P		15 55 10.4	
YJA	Yavi	2.74	75	*e*P		15 55 10.5	
PB08	IPOC Station P	2.88	345		Pn	15 55 10.0	+1.6
PB08	IPOC Station P	2.88	345	*e*P	Pn	15 55 10.1	+1.6
PB08				IAML		15 55 46.7	
	comp=E,345nm,0.5s						
PB08	IPOC Station P	2.88	345	*e*P		15 55 10.1	
PB08				*e*S		15 55 44.2	
TA01	Diego Aracena	2.90	324	Pn	Pn	15 55 08.1	-0.3
TA01	Diego Aracena	2.90	324	⇑*e*P	Pn	15 55 08.0	-0.4
TA01				*i* S	Sn	15 55 38.0	-4.8
TA01				IAML		15 55 51.4	
	comp=E,1µm,0.3s						
TA02	Huaiquique	3.12	328	Pn	Pn	15 55 10.6	-0.7
TA02	Huaiquique	3.12	328	*e*P	Pn	15 55 11.1	-0.2
SLA	San Lorenzo	3.17	125	*e*P		15 55 16.0	
GO01	Chusmiza	3.34	346		Pn	15 55 15.9	+1.2
PB11	IPOC Station P	3.38	339		Pn	15 55 14.8	-0.1
PB11	IPOC Station P	3.38	339	*e*P	Pn	15 55 14.6	-0.3
PB11				IAML		15 56 05.1	
	comp=E,714nm,0.7s						
PB11	IPOC Station P	3.38	339	*e*P		15 55 15.0	
PB11				*e*S		15 55 46.0	
PB11				IAML		15 56 04.6	
	comp=Z,323nm,0.5s						
AC01	Pan de Azucar	3.79	212		Pn	15 55 20.0	-0.3
AC02	Maricunga	3.95	190		Pn	15 55 24.9	+2.1
MNMC	Minye Minye	3.96	343		Pn	15 55 22.6	-0.2
MNMCX	Minye Minye	3.96	343	*e*P		15 55 22.7	
MNMCX				*e*S		15 56 09.7	
MNMCX				IAML		15 56 12.7	
	comp=Z,325nm,0.5s						
PB12	IPOC Station P	4.67	336		Pn	15 55 30.7	-1.6
PB12	IPOC Station P	4.67	336	*e*P		15 55 30.7	
PB12				*e*S		15 56 22.1	
PB12				IAML		15 56 50.9	
	comp=Z,164nm,0.5s						
PB16	IPOC Station P	4.70	347	*e*P		15 55 34.0	
PB16				*e*S		15 56 29.0	
PB16	IPOC Station P	4.70	347	Pn	Pn	15 55 33.8	+0.8
GO03	Copiap	4.94	200	Pn	Pn	15 55 35.3	-0.5
AC04	Llanos de Chal	5.79	204	Pn	Pn	15 55 45.6	-1.7
AC05	El Transito	6.12	196	Pn	Pn	15 55 51.4	-0.6
LCO	Las Campanas	6.41	199	Pn	Pn	15 55 53.8	-2.1
LPAZ	La Paz	6.62	2	P	Pn	15 55 59.8	+0.8
	comp=Z,7.5nm,0.5s,baz=203,slow=5.3,SNR=32						
LPAZ				S	Sn	15 57 07.0	-6.4
	comp=Z,3.8nm,0.4s,baz=207,slow=16,SNR=1.6						
LPAZ	La Paz	6.62	2	Pn	Pn	15 56 00.2	+1.1
CO01	Juntas del Tor	7.18	192		Pn	15 56 06.2	-0.2
GO04	Tololo Observa	7.53	196		Pn	15 56 08.2	-2.8
CO03	El Pedregal	8.14	194	Pn	Pn	15 56 16.9	-2.4
CO06	Fray Jorge	8.24	200	Pn	Pn	15 56 17.1	-3.4
CO02	Combarbal	8.56	195	Pn	Pn	15 56 21.3	-3.7
CFA	Coronel Fontan	8.64	179	P	Pn	15 56 25.0	-0.9
	comp=Z,2.9nm,0.3s,baz=287,slow=10,SNR=13						
CFA				S	Sn	15 57 55.6	-6.0
	comp=Z,3.1nm,0.2s,baz=347,slow=19,SNR=1.4						
BBSD	Serra de San D	9.26	53	*e*P	Pn	15 56 32.8	-1.6
SIV	San Ignacio	9.74	46	P	Pn	15 56 39.1	-1.9
	comp=Z,88nm,0.4s,baz=221,slow=11,SNR=344						
SIV				S	Sn	15 58 21.5	-7.1
	comp=Z,7.9nm,0.7s,baz=138,slow=23,SNR=2.8						
CPUP	Villa Florida	10.59	111	P	Pn	15 56 52.8	+0.4
	comp=Z,4.5nm,0.9s,baz=293,slow=13,SNR=6.0						
CPUP				LR	LR	16 01 06.2	
	comp=Z,42nm,20.4s,baz=215,slow=38						
PTLB	Pontes e Lacer	11.46	51		Pn	15 57 02.0	-2.1
PTLB	Pontes e Lacer	11.46	51	*e*P	Pn	15 57 02.0	-2.1
AQDB	Aquidauana	12.02	81	Pn	Pn	15 57 12.9	+1.3
AQDB	Aquidauana	12.02	81	*e*P	Pn	15 57 13.8	+2.2
VILB	Vilhena	12.60	39		Pn	15 57 17.7	-1.5
VILB	Vilhena	12.60	39	*e*P	Pn	15 57 17.8	-1.5
RVDE	Rio Verde (Bra	13.13	75	*e*P	Pn	15 57 26.1	0.0
PP1B	Ponte de Pedra	13.72	70	*e*P	Pn	15 57 33.7	-0.1
CRSM	Crissiumal (Br	13.73	112	*e*P	P	15 57 39.3	+0.5
SALV	Santo Antonio	13.84	62	*e*P	Pn	15 57 35.1	-0.3
RODS	Rosario do Sul	13.89	125	*e*P	P	15 57 41.4	+0.8
FRBT	Francisco Belt	14.26	105	*e*P	P	15 57 45.7	+0.9
ALGR	Alto Alegre (B	14.98	116	*e*P	P	15 57 54.3	+1.5
PTGB	Pitanga	15.02	100	*e*P	P	15 57 55.7	+2.5
ITAB	Concordia	15.32	110	P	P	15 57 57.7	+1.3
ITAB	Concordia	15.32	110	*e*P	P	15 57 58.2	+1.8
PDRB	Porto dos Gac	15.80	47	*e*P	Pn	15 57 59.9	-0.4
PCMB	Pacaembu	15.89	89	*e*P	P	15 58 04.3	+1.6
TRQA	Tornquist	16.04	161		Pn	15 58 01.3	-1.7
TRQA				IAmb	IAmb	15 58 09.4	
	comp=Z,4.5nm,0.7s						
ITRB	Iturama	17.08	83	*e*P	Pn	15 58 17.5	+1.5
ARAG	Araguaiana, MT	17.19	68	*e*P	Pn	15 58 18.6	+1.4
PLCA	Paso Flores	17.84	185	P	Pn	15 58 26.4	+1.4
	comp=Z,1.3nm,1.0s,baz=355,slow=12,SNR=1.5						
LL04	Puerto Octay	18.24	190	P	Pn	15 58 27.7	-2.0
NPGB	Novo Progresso	20.16	40	*e*P	P	15 58 48.3	-1.3
BDFB	Brasilia	20.52	73	P	P	15 58 53.2	-0.4
	comp=Z,2.2nm,0.3s,baz=263,slow=13,SNR=5.2						
	comp=Z,2.2nm,0.3s						
BDFB	Brasilia	20.52	73	*e*P	P	15 58 54.2	+0.6
PMNB	Patos De Minas	20.96	82	*e*P	P	15 58 59.7	+1.4
MCRA	Macar, Loja	21.59	327	P	P	15 59 04.2	-0.9
MCRA				IAmb	IAmb	15 59 10.1	
	comp=Z,7.5nm,0.8s						
BSCB	Bom Sucesso	21.96	89	*e*P	P	15 59 12.1	+3.1
ITTB	Itaituba	22.13	35	*e*P	P	15 59 08.6	-2.1
BOAV	Boa Vista	26.31	18	P	P	15 59 48.8	-0.6
BOAV				IAmb	IAmb	15 59 52.1	
	comp=Z,18nm,1.5s						
BOAV	Boa Vista	26.31	18	*e*P	P	15 59 49.2	-0.2
RUSC	La Rusia	29.02	350	P	P	16 00 12.9	-1.2
RUSC				IAmb	IAmb	16 00 56.0	
	comp=Z,16nm,1.5s						
TXAR	Lajitas Array	62.09	325	P	P	16 04 34.2	+0.9
	comp=Z,0.4nm,0.7s,baz=143,slow=8.0,SNR=5.6						
	comp=Z,0.4nm,0.7s						
DBIC	Dimbokro	68.67	73	P	P	16 05 16.9	+1.0
	comp=Z,3.1nm,0.7s,baz=275,slow=3.1,SNR=3.3						
	comp=Z,3.1nm,0.7s						
PDAR	Pinedale Array	75.60	330	P	P	16 05 58.2	+1.4
	comp=Z,0.9nm,0.6s,baz=141,slow=7.5,SNR=11						
	comp=Z,0.9nm,0.6s						
ULM	Lac du Bonnet	76.83	342	P	P	16 06 04.0	+0.7
	comp=Z,4.1nm,0.5s,baz=144,slow=6.3,SNR=8.3						
	comp=Z,4.1nm,0.5s						
NVAR	Mina Array Bea	76.93	322	P	P	16 06 06.5	+2.0
	comp=Z,0.6nm,0.6s,baz=146,slow=6.7,SNR=6.7						
	comp=Z,0.6nm,0.6s						
TORD	Torodi Ar. Bea	77.37	70	P	P	16 06 08.0	+0.8
	comp=Z,4.3nm,0.7s,baz=256,slow=5.5,SNR=24						
	comp=Z,4.3nm,0.7s						
SCHQ	Schefferville	77.46	1	P	P	16 06 07.3	+0.5
	comp=Z,2.5nm,0.9s,baz=162,slow=2.3,SNR=4.5						
	comp=Z,2.5nm,0.9s						
YKA	Yellowknife Ar	92.70	340	P	P	16 07 24.2	+1.2
	comp=Z,1.2nm,0.6s,baz=134,slow=4.9,SNR=29						
	comp=Z,1.2nm,0.6s						
ASAR	Alice Springs	128.87	207	PKP	PKiKP	16 13 20.8	+0.8
	comp=Z,1.0nm,0.7s,baz=133,slow=2.0,SNR=18						
WRA	Warramunga Arr	131.97	209	PKP	PKiKP	16 13 26.4	+0.1
	comp=Z,0.8nm,0.6s,baz=158,slow=1.8,SNR=20						
ZALV	Zalesovo Beam	143.02	26	PKP	PKPdf	16 13 43.5	-0.9
	comp=Z,1.1nm,0.5s,baz=324,slow=4.0,SNR=5.5						
KSH	Kashi	145.58	53	PKPbc	PKiKP	16 13 51.6	-2.0
MKAR	Makanchi Array	146.47	38	PKPbc	PKiKP	16 13 52.6	-2.4
	comp=Z,2.4nm,0.7s,baz=320,slow=2.7,SNR=25						
SONM	Songino Array	154.80	8	PKPab	PKPab	16 14 29.4	+1.7
	comp=Z,0.9nm,0.8s,baz=322,slow=3.7,SNR=5.6						
PZH	PanZhiHua	170.33	66	PKP	PKPdf	16 14 17.0	-2.5

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*IDC **18** 15:58:17.7±0.7, 12°.89N×95°.68E, h0^{km}, mb3.9/13, mbtmp3.9/14, ML3.4/1, MS3.4/18, Error ellipse: s-maj=30.4km s-min=15.3km az=56.0*

*BJI **18** 15:58:20.8±0.0, 12°.58N×96°.08E, h27^{km}, mb4.2/21, mB4.6/9, Ms4.1/5, Ms7 3.8/4*

*NEIC **18** 15:58:21.6±2.3, 12°.91N±0°.07×95°.81E±0°.04, h23^{km}±6^{km}, mb4.4/25, Error ellipse: s-maj=10.5km s-min=3.4km az=156.0*

ISC 18 15:58:22.3±0.5**, 12°.82N**±0°.06×**95°.84E**±0°.05**, h35^{km}, n82, σ1^{s}.78**/81**, mb4.3**/31**, MS3.5**/18**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGPR	DIGLIPUR	2.86	277	*e*P	Pn	15 59 02.6	-2.9
DGPR				*e*S	Sn	15 59 41.2	+2.5
PBA	Port Blair	3.25	249	Pn	Pn	15 59 09.8	-1.0
PBA	Port Blair	3.25	249	*e*P	Pn	15 59 10.1	-0.7
SRIT	Nakonsritamara	5.59	138	Pn	Pn	15 59 44.9	+1.9
CMAR	Chiang Mai Arr	6.35	28	Pn	Pn	15 59 52.6	-0.9
	0.2nm,0.3s,baz=217,slow=15,SNR=10						
CMAR				Lg	Lg	16 01 48.3	
	0.2nm,0.3s,baz=251,slow=38,SNR=2.2						
CMAR				LR	LR	16 02 48.4	
	comp=Z,94nm,19.3s,baz=200,slow=42						
	1.2nm,0.6s						
KULM	Kulim	8.86	147	Pn	Pn	16 00 27.8	-0.2
MND	Mandalay	9.15	2	Pn	Pn	16 00 29.7	-2.2
IPM	Ipoh	9.74	148	Pn	Pn	16 00 38.9	-1.2
BRDH	Bariadhala	10.59	338	LR	LR	16 06 19.4	
	comp=Z,43nm,20.4s,baz=269,slow=46						
TNCH	TengChong	12.40	11	*e*P	P	16 01 24.1	-4.1
TNCH				pmax	pmax		
	comp=Z,85nm,3.9s						
PZH	PanZhiHua	14.70	21	P	Pn	16 01 47.8	-0.1
PZH				S	Sn	16 04 32.3	+2.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,4.2s						
PZH				LR	LR		
	comp=N,420nm,10.3s						
PZH				LR	LR		
	comp=E,380nm,10.0s						
PZH				LR	LR		
	comp=Z,530nm,11.3s						
QIZ	Qiongzhong	14.81	64	P	Pn	16 01 48.0	-1.3
QIZ				S	Sn	16 04 32.3	+0.1
QIZ				LR	LR		
	comp=N,470nm,9.4s						
QIZ				LR	LR		
	comp=E,330nm,10.6s						
QIZ				LR	LR		
	comp=Z,180nm,6.8s						
PALK	Pallekele	15.89	251	Pn	Pn	16 02 03.5	0.0
TAPN	Taplejung	16.34	333	*e*P	Pn	16 02 06.9	-2.5
RAMN	Ramite	16.52	330	*e*P	P	16 02 15.7	+1.8
	3.4nm,0.4s						
JIRN	Jiri	17.31	330	*e*P	Pn	16 02 19.3	-2.4
PKI	Pulchoki	17.63	328	*e*P	P	16 02 26.2	-0.1
	1.1nm,0.2s						
PKIN	Phulchoki	17.64	328	*e*P	P	16 02 26.2	-0.2
GUN	Gumba	17.67	330	*e*P	Pn	16 02 22.0	-4.1
	1.6nm,0.4s						
DMN	Daman	17.82	327	*e*P	P	16 02 28.4	+0.1
	3.7nm,0.4s						
GKN	Gorkha	18.38	327	*e*P	P	16 02 31.5	-2.9
	1.5nm,0.3s						
DANN	Dangsing	19.12	326	*e*P	P	16 02 39.8	-3.0
	4.8nm,0.6s						
SBUM	Sibu	19.21	121	P	P	16 02 43.2	-0.2
GOMU	GeErMu	23.30	358	P	P	16 03 32.9	+5.4
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,93nm,5.3s						
XAN	Xi'an	24.25	27	*e*P	P	16 03 37.1	+0.9
XAN				pP	pP	16 03 44.3	-1.3
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
XAN				LR	LR		
	comp=N,170nm,10.3s						
XAN				LR	LR		
	comp=E,180nm,10.4s						
GTA	Gaotai	26.72	7	*e*P	P	16 04 03.8	+5.2
GTA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
KAPI	Kappang	29.64	125	LR	LR	16 17 50.9	
	comp=Z,52nm,18.8s,baz=268,slow=39						
DAV	Davao City (W)	29.82	98	LR	LR	16 17 13.5	
	comp=Z,135nm,18.1s,baz=346,slow=38						
HHC	Hu-ho-hao-te	31.14	23	*e*P	P	16 04 39.6	+1.7
HHC				pmax	pmax		
	comp=Z,22nm,0.8s						
HHC				pmax	pmax		
	comp=Z,200nm,4.7s						
WMQ	Urumqi	31.68	349	*e*P	P	16 04 45.6	+3.0
KSH	Kashi	31.86	330	P	P	16 04 47.0	+2.7
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TARG	Taragay, Kyrgy	32.82	335	P	P	16 04 53.6	+0.6
BTK	Batken	34.95	325	P	P	16 05 11.9	+0.8
BTK				IAmb	IAmb	16 05 20.5	
	comp=Z,4.5nm,0.9s						
AAK	Ala-Archa	35.00	332	P	P	16 05 13.7	+2.0
	comp=Z,1.8nm,0.8s,baz=167,slow=14,SNR=1.9						
AAK				LR	LR	16 21 46.2	
	comp=Z,85nm,19.4s,baz=143,slow=40						
AAK	Ala-Archa	35.00	332	P	P	16 05 12.6	+1.0
AAK				IAmb	IAmb	16 05 19.3	
	comp=Z,3.6nm,1.0s						
MK31	Makanchi Array	35.74	344	P	P	16 05 17.6	-0.1
MK31				IAmb	IAmb	16 05 24.6	
	comp=Z,5.6nm,1.0s						
MKAR	Makanchi Array	35.74	344	P	P	16 05 18.0	+0.3
	comp=Z,2.4nm,1.0s,baz=153,slow=9.4,SNR=12						
MKAR				LR	LR	16 21 17.7	
	comp=Z,35nm,18.9s,baz=152,slow=39						
	comp=Z,2.4nm,1.0s						
MKAR	Makanchi Array	35.74	344	P	P	16 05 17.7	-0.1
MAKZ	Makanchi	35.84	344	P	P	16 05 18.4	-0.2
MAKZ				IAmb	IAmb	16 05 25.2	
	comp=Z,5.3nm,0.8s						
SONM	Songino Array	36.00	12	P	P	16 05 22.9	+2.7
	comp=Z,0.2nm,0.8s,baz=188,slow=7.0,SNR=1.5						
KK31	Karatay Array	37.27	329	P	P	16 05 28.8	-2.1
KK31				IAmb	IAmb	16 05 38.0	
	comp=Z,6.6nm,1.5s						
KKAR	Karatay Array	37.27	329	P	P	16 05 29.1	-1.8
KKAR	Karatay Array	37.27	329	P	P	16 05 28.6	-2.3
KKAR				IAmb	IAmb	16 05 38.0	
	comp=Z,6.6nm,1.5s						
KS19	Wonju Array Si	37.69	44	P	P	16 05 32.8	-1.7
KS19				IAmb	IAmb	16 06 15.9	
	comp=Z,9.0nm,1.2s						
KSRS	Korea Array	37.70	44	P	P	16 05 35.2	+0.7
	comp=Z,0.9nm,0.8s,baz=238,slow=9.1,SNR=3.0						
	comp=Z,0.9nm,0.8s						
KURBB	Kurchatov Arra	40.26	343	P	P	16 05 55.5	-0.3
	comp=Z,2.0nm,0.8s,baz=153,slow=8.2,SNR=13						
	comp=Z,2.0nm,0.8s						
KURK	Kurchatov	40.32	343	P	P	16 05 56.5	+0.2
KURK				IAmb	IAmb	16 06 02.9	
	comp=Z,9.0nm,0.9s						
GEYT	Alibeck	41.84	313	P	P	16 06 09.9	+0.8
	comp=Z,1.4nm,0.5s,baz=187,slow=7.1,SNR=3.1						
GEYT				LR	LR	16 25 25.0	
	comp=Z,26nm,18.4s,baz=106,slow=39						
	comp=Z,1.4nm,0.5s						
GEYT	Alibeck	41.84	313	P	P	16 06 09.1	+0.1
GEYT				IAmb	IAmb	16 06 16.0	
	comp=Z,6.0nm,0.7s						
GYA0B	ALIBECK ARRAY	41.84	313	P	P	16 06 07.6	-1.5
GYA0B				IAmb	IAmb	16 06 15.9	
	comp=Z,7.3nm,0.7s						
ZAA0	Zalesovo Array	41.95	350	P	P	16 06 09.2	-0.4
ZALV	Zalesovo Beam	41.95	350	P	P	16 06 09.7	+0.1
	comp=Z,0.7nm,0.5s,baz=177,slow=5.2,SNR=4.6						
	comp=Z,0.7nm,0.5s						
ZALV	Zalesovo Beam	41.95	350	P	P	16 06 09.1	-0.5
KNRA	Kununurra	43.16	130	P	P	16 06 21.2	+1.3
BVAR	Borovoye Array	44.95	338	LR	LR	16 27 19.3	
	comp=Z,40nm,19.8s,baz=139,slow=39						
BRVK	Borovoye	45.02	338	P	P	16 06 33.3	-1.1
BRVK				IAmb	IAmb	16 06 40.7	
	comp=Z,2.8nm,0.7s						
ROCAM	Rodrigues Isla	45.50	225	P	P	16 06 39.1	+0.5
ABKAR	Akbulak array	46.82	328	P	P	16 06 49.1	+0.4
AKTO	Aktyubinsk	48.53	328	LR	LR	16 30 46.6	
	comp=Z,29nm,18.6s,baz=72,slow=40						
WB0	Warramunga Arr	49.89	130	P	P	16 07 13.5	+0.8
WB0				IAmb	IAmb	16 07 47.7	
	comp=Z,7.4nm,1.3s						
WRA	Warramunga Arr	49.95	130	P	P	16 07 15.4	+2.2
	comp=Z,1.8nm,0.6s,baz=312,slow=8.3,SNR=46						
	comp=Z,1.8nm,0.6s						
WRA	Warramunga Arr	49.95	130	P	P	16 07 13.6	+0.4
WRAB	Tennant Creek	49.95	130	P	P	16 07 13.4	+0.2
WB2	Warramunga Arr	49.96	130	P	P	16 07 13.4	+0.1
WB2				IAmb	IAmb	16 07 15.6	
	comp=Z,6.8nm,1.2s						
AS31	Alice Springs	51.96	134	P	P	16 07 29.4	+1.1
ASAR	Alice Springs	51.96	134	P	P	16 07 30.6	+2.3
	comp=Z,2.6nm,0.8s,baz=310,slow=7.1,SNR=55						
	comp=Z,2.6nm,0.8s						
ASAR	Alice Springs	51.96	134	P	P	16 07 29.9	+1.5
ARU	Arti	52.09	335	LR	LR	16 31 29.0	
	comp=Z,26nm,21.3s,baz=162,slow=38						
GNI	Garni	52.33	311	LR	LR	16 32 55.5	
	comp=Z,40nm,18.7s,baz=126,slow=40						
COEN	Coen	53.92	118	P	P	16 07 41.1	-1.7
BRTR	Keskin Array B	60.59	308	P	P	16 08 28.0	-1.8
	comp=Z,0.6nm,0.8s,baz=116,slow=8.4,SNR=3.5						
BRTR				LR	LR	16 37 53.1	
	comp=Z,36nm,18.8s,baz=134,slow=39						
	comp=Z,0.6nm,0.8s						
STKA	Stephens Creek	62.41	137	P	P	16 08 42.4	+0.4
	comp=Z,1.8nm,0.7s,baz=312,slow=8.2,SNR=4.7						
STKA				LR	LR	16 37 37.7	
	comp=Z,111nm,19.0s,baz=210,slow=38						
	comp=Z,1.8nm,0.7s						
MNK	Minsk	66.89	324	*i* P	P	16 09 11.0	+0.1
	comp=E,3.0nm,1.0s						
MNK				*i* P	P	16 09 11.0	+0.1
	comp=N,29nm,0.8s						
MNK				*i* P	P	16 09 11.0	+0.1
	comp=Z,6.0nm,0.8s,baz=280						
MNK				*i* PcP	PcP	16 09 39.1	-0.2
MNK				*i* PP	PP	16 11 38.5	+0.2
MNK				*i* PPP	PPP	16 13 14.9	
MNK				*i* S	S	16 18 02.5	+1.3
MNK				*i* ScS	ScS	16 19 05.6	+0.1
MNK				*i* SS	SS	16 22 22.3	+2.7
MNK				*i* SSS	SSS	16 25 34.7	
MNK				*i* LQ	LQ	16 33 48.7	
MNK				*i* LR	LR	16 37 60.0	
MNK				*i* LRM	MLR	16 40 13.4	
	comp=N,304nm,15.5s						
MNK				*i* LRM	MLR	16 40 27.6	
	comp=E,8.0nm,10.3s						
MNK				*i* LRM	MLR	16 40 29.5	
	comp=Z,75nm,12.9s						
FINES	FINESS Array B	69.18	331	P	P	16 09 24.2	-0.9
	comp=Z,2.4nm,1.0s,baz=91,slow=7.0,SNR=7.1						
FINES				LR	LR	16 45 56.2	
	comp=Z,41nm,18.2s,baz=35,slow=41						
	comp=Z,2.4nm,1.0s						
ARCES	ARCESS Array B	71.23	340	LR	LR	16 47 09.7	
	comp=Z,32nm,19.3s,baz=103,slow=41						
HFS	Hagfors	75.08	329	LR	LR	16 50 53.8	
	comp=Z,35nm,18.3s,baz=47,slow=42						
NB2	NORSAR Subarra	76.29	330	P	P	16 10 12.6	+5.2
	comp=Z,0.7nm,0.6s,baz=93,slow=5.3						
NOA	NORSAR Array B	76.29	330	P	P	16 10 07.0	-0.4
	comp=Z,1.7nm,1.0s,baz=125,slow=3.6,SNR=3.5						
NOA				LR	LR	16 46 41.7	
	comp=Z,13nm,21.3s,baz=95,slow=38						
	comp=Z,1.7nm,1.0s						
DZM	Mont Dzumac	77.40	116	LR	LR	16 49 52.2	
	comp=Z,66nm,18.0s,baz=224,slow=40						
ILAR	Eielson Array	89.56	22	P	P	16 11 16.0	0.0
	comp=Z,0.3nm,0.8s,baz=320,slow=34,SNR=2.8						
	comp=Z,0.3nm,0.8s						
TORD	Torodi Ar. Bea	91.08	284	P	P	16 11 23.3	-0.8
	comp=Z,0.2nm,0.7s,baz=156,slow=33,SNR=2.0						
	comp=Z,0.2nm,0.7s						
PLCA	Paso Flores	149.74	201	PKPbc	PKiKP	16 18 10.9	+0.9
	comp=Z,1.5nm,0.8s,baz=268,slow=2.4,SNR=6.2						

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*NEIC **18** 16:19:09.9±1.3, 61°.56N±0°.04×148°.05W±0°.06, h26^{km}±6^{km}, Error ellipse: s-maj=5.3km s-min=3.8km az=157.0*

*ANF **18** 16:19:09.5±0.1, 61°.55N×148°.07W, h23^{km}±1^{km}, ML3.6/85, ML3.6/86, Error ellipse: s-maj=1.2km s-min=0.8km az=154.0*

*AEIC **18** 16:19:10.4±1.3, 61°.56N±0°.04×148°.07W±0°.05, h20^{km}±4^{km}, ML3.3, ML3.5/138(NEIC), Error ellipse: s-maj=5.1km s-min=3.5km az=177.0*

ISC 18 16:19:09.6±0.9**, 61°.55N**±0°.03×**148°.06W**±0°.03**, h29^{km}**±7^{km}**, n248, σ0^{s}.73**/253**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNK	Knik Glacier	0.23	235		Pb	16 19 16.5	+0.3
KNK	Knik Glacier	0.23	235	IAML		16 19 22.8	
	comp=N,3µm,0.3s						
KNK				IAML		16 19 22.8	
	comp=E,3µm,0.3s						
KNK	Knik Glacier	0.23	235	P	Pb	16 19 16.5	+0.3
	baz=51,SNR=439						
SML	Sawmill	0.29	334		Sb	16 19 22.0	+0.1
SML	Sawmill	0.29	334		Pb	16 19 16.1	-0.9
SML	Sawmill	0.29	334	IAML		16 19 22.2	
	comp=E,8µm,0.8s						
SML				IAML		16 19 22.4	
	comp=N,8µm,0.5s						
SML	Sawmill	0.29	334	P	Pb	16 19 16.4	-0.5
	baz=153,SNR=1000						
SML				S	Sb	16 19 21.8	-0.1
	baz=153						
M23K	Glacier View	0.29	33	P	Pb	16 19 16.4	-0.5
	baz=215,SNR=1000						
M23K				S	Sb	16 19 21.9	-0.1
	baz=215						
SCM	Sheep Creek Mo	0.45	50		Pb	16 19 18.5	-0.8
SCM				IAML		16 19 26.6	
	comp=N,5µm,0.2s						
SCM	Sheep Creek Mo	0.45	50		Sb	16 19 25.8	-0.1
SCM	Sheep Creek Mo	0.45	50	P	Pb	16 19 18.5	-0.8
	baz=233,SNR=151						
SCM				S	Sb	16 19 25.6	-0.3
	baz=233						
GHO	Glory Hole Cre	0.47	299		Sb	16 19 26.0	-0.4
PMR	Palmer	0.51	275		Pb	16 19 19.5	-0.8
PMR				IAML		16 19 27.4	
	comp=E,2µm,0.6s						
PMR	Palmer	0.51	275	P	Pb	16 19 19.4	-0.8
PMR	Palmer	0.51	275	P	Pb	16 19 19.5	-0.8
	baz=93,SNR=284						
PMR				S	Sb	16 19 27.2	-0.3
	baz=93						
PWL	Port Wells	0.70	191		Pb	16 19 23.0	-0.4
PWL				IAML		16 19 34.5	
	comp=N,2µm,0.3s						
PWL				IAML		16 19 35.5	
	comp=E,2µm,0.5s						
PWL	Port Wells	0.70	191	P	Pb	16 19 23.0	-0.4

	baz=10,SNR=70						
PWL				S	Sb	16 19 33.4	+0.6
	baz=10						
RC01	Rabbit Creek A	0.93	241		Pn	16 19 26.7	-0.1
RC01	Rabbit Creek A	0.93	241	P	Pn	16 19 26.4	-0.3
	baz=59,SNR=88						
RC01				S	Sb	16 19 39.0	-0.1
	baz=59						
KLU	Klutina	1.03	92		Pn	16 19 27.1	-1.0
KLU				IAML		16 19 42.4	
	comp=N,1µm,0.3s						
KLU				IAML		16 19 42.8	
	comp=E,998nm,0.2s						
KLU	Klutina	1.03	92	P	Pn	16 19 27.1	-1.0
	baz=275,SNR=490						
M24K	Tolsona, Glenn	1.06	57		Pn	16 19 28.1	-0.4
M24K				IAML		16 19 44.2	
	comp=N,1µm,0.7s						
M24K	Tolsona, Glenn	1.06	57	P	Pn	16 19 28.1	-0.4
	baz=240,SNR=70						
M24K				S	Sn	16 19 42.6	+0.3
	baz=240						
FIS	Fire Island	1.12	250		Pn	16 19 30.1	+0.8
FIS				IAML		16 19 58.2	
	comp=N,1µm,0.7s						
DIV	Divide	1.18	110	Pn	Pn	16 19 28.9	-1.3
SUA	Susitna One	1.29	267		Pn	16 19 31.4	-0.4
SUA	Susitna One	1.29	267		Sn	16 19 49.0	+0.9
SUA	Susitna One	1.29	267	IAML		16 19 51.3	
	comp=N,761nm,0.5s						
SUA				IAML		16 19 51.7	
	comp=E,892nm,0.7s						
SUA	Susitna One	1.29	267	P	Pn	16 19 31.6	-0.2
	baz=84,SNR=350						
O22K	Cooper Landing	1.34	218		Pn	16 19 32.3	-0.1
O22K	Cooper Landing	1.34	218	P	Pn	16 19 32.5	+0.1
	baz=36,SNR=37						
CUT	Chulitna	1.35	310		Pn	16 19 32.0	-0.5
CUT	Chulitna	1.35	310	P	Pn	16 19 32.1	-0.5
	baz=128,SNR=233						
CUT				S	Sn	16 19 49.6	+0.1
	baz=128						
EYAK	Cordova Ski Ar	1.51	131		Pn	16 19 35.8	+1.2
EYAK	Cordova Ski Ar	1.51	131	P	Pn	16 19 35.9	+1.3
EYAK	Cordova Ski Ar	1.51	131	P	Pn	16 19 35.6	+1.0
	baz=313,SNR=41						
P23K	Montague Islan	1.59	168	P	Pn	16 19 36.2	+0.4
	baz=348,SNR=6.7						
SEW	Seward	1.60	206	Pn	Pn	16 19 36.2	+0.3
SEW	Seward	1.60	206	P	Pn	16 19 36.6	+0.7
	baz=24,SNR=35						
HARP	HAARP	1.61	57	P	Pn	16 19 36.7	+0.6
	baz=240,SNR=75						
N25K	Chitina, Valde	1.66	86		Pn	16 19 36.4	-0.4
N25K				IAML		16 20 01.0	
	comp=N,450nm,0.5s						
N25K				IAML		16 20 01.4	
	comp=E,358nm,0.4s						
N25K	Chitina, Valde	1.66	86	P	Pn	16 19 36.5	-0.3
	baz=270,SNR=61						
CAPN	Captain Cook N	1.69	244		Pb	16 19 39.4	-0.6
CAPN	Captain Cook N	1.69	244	P	Pn	16 19 39.1	+1.9
	baz=60,SNR=6.1						
SKT	Skwentna	1.71	286		Pn	16 19 37.7	+0.2
SKT				IAML		16 20 01.6	
	comp=E,503nm,0.3s						
SKT				IAML		16 20 01.9	
	comp=N,508nm,0.4s						
SKT	Skwentna	1.71	286	P	Pn	16 19 37.6	+0.2
	baz=103,SNR=210						
PAX	Paxson	1.87	39		Pn	16 19 40.0	+0.2
PAX	Paxson	1.87	39	P	Pn	16 19 39.9	+0.2
	baz=222,SNR=75						
RND	Reindeer	1.90	349		Pn	16 19 40.4	+0.2
SPU	Mount Spurr	1.96	261		Pn	16 19 41.4	+0.5
SPCR	Spurr Chakacha	2.03	262	P	Pn	16 19 42.4	+0.5
	baz=78,SNR=26						
TRF	Thorofare Moun	2.17	333		Pn	16 19 44.1	+0.1
TRF				IAML		16 20 13.1	
	comp=N,337nm,0.5s						
TRF				IAML		16 20 16.3	
	comp=E,330nm,0.7s						
TRF	Thorofare Moun	2.17	333	P	Pn	16 19 44.4	+0.5
	baz=150,SNR=105						
MCK	McKinley	2.23	350		Pn	16 19 45.1	+0.5
MCK	McKinley	2.23	350	P	Pn	16 19 45.4	+0.7
	baz=169,SNR=64						
VRDI	Verde Repeater	2.24	96		Pn	16 19 44.8	-0.1
VRDI				IAML		16 20 20.9	
	comp=N,232nm,0.5s						
BRSE	Bradley Lake S	2.24	217		Pn	16 19 45.2	+0.4
BRSE	Bradley Lake S	2.24	217	P	Pn	16 19 45.4	+0.6
	baz=35,SNR=14						
BRLK	Bradley Lake	2.27	219		Pn	16 19 46.0	+0.9
BRLK				IAML		16 20 23.0	
	comp=N,180nm,0.5s						
BRLK				IAML		16 20 23.3	
	comp=E,238nm,0.5s						
MID	Middleton Isla	2.29	157	P	Pn	16 19 48.3	+2.9
PPLA	Purkeypile	2.36	307		Pn	16 19 47.0	+0.5
PPLA	Purkeypile	2.36	307	P	Pn	16 19 47.1	+0.5
	baz=123,SNR=48						
KTH	Kantishna Hill	2.41	328	Pn	Pn	16 19 47.6	+0.5
KTH				IAML		16 20 18.7	
	comp=E,318nm,0.8s						
KTH				IAML		16 20 19.8	
	comp=N,242nm,0.8s						
MCARA	McCarthy VSAT	2.42	92	P	Pn	16 19 47.9	+0.7
	baz=276,SNR=47						
M20K	Styx River	2.44	280		Pn	16 19 47.9	+0.4
M20K	Styx River	2.44	280	P	Pn	16 19 48.0	+0.4
	baz=95						
K24K	Donnelly Dome	2.50	24	P	Pn	16 19 49.7	+1.4
	baz=206,SNR=181						
RSO	Redoubt South	2.53	247		Pn	16 19 49.6	+0.6
M26K	Nabesna, AK	2.54	68		Pn	16 19 49.9	+0.9
M26K				IAML		16 20 28.6	
	comp=N,157nm,0.6s						
M26K	Nabesna, AK	2.54	68	P	Pn	16 19 49.7	+0.8
	baz=253						
CNPM	China Poot	2.56	219		Pn	16 19 50.5	+1.2
CNPM				IAML		16 20 32.7	
	comp=N,133nm,0.6s						
CNPM				IAML		16 20 33.7	
	comp=E,150nm,0.6s						
HOM	Homer	2.59	225		Pn	16 19 51.1	+1.6
HOM	Homer	2.59	225	P	Pn	16 19 50.9	+1.4
	baz=41						
CAST	Castle Rocks	2.65	317	Pn	Pn	16 19 50.5	+0.2
CAST				IAML		16 20 36.1	
	comp=N,125nm,0.5s						
CAST				IAML		16 20 37.4	
	comp=E,194nm,0.7s						
CAST	Castle Rocks	2.65	317	P	Pn	16 19 50.7	+0.3
	baz=133,SNR=66						
RIDG	Independent Ri	2.65	33		Pn	16 19 51.7	+1.3
RIDG				IAML		16 20 29.8	
	comp=N,136nm,0.7s						
RIDG				IAML		16 20 39.5	
	comp=E,150nm,0.7s						
RIDG	Independent Ri	2.65	33	P	Pn	16 19 51.4	+0.9
	baz=216,SNR=47						
L26K	Log Cabin Wild	2.66	54		Pn	16 19 51.9	+1.4
L26K				IAML		16 20 36.3	
	comp=N,156nm,0.5s						
L26K				IAML		16 20 42.8	
	comp=E,154nm,0.5s						
O20K	Slope Mountain	2.68	239	P	Pn	16 19 51.4	+0.6
	baz=54						
BWN	Browne	2.71	347		Pn	16 19 51.5	+0.3
DOT	Dot Lake	2.80	40		Pn	16 19 53.8	+1.2
BPAW	Bear Paw Mtn.	2.89	334	Pn	Pn	16 19 53.8	+0.1
BPAW				IAML		16 20 40.0	
	comp=E,160nm,1.4s						
BPAW	Bear Paw Mtn.	2.89	334	P	Pn	16 19 53.8	+0.1
	baz=151,SNR=37						
L20K	Farewell, AK	2.90	291	P	Pn	16 19 53.7	-0.1
	baz=106						
HDA	Harding Lake	2.92	10		Pn	16 19 54.8	+0.8
HDA	Harding Lake	2.92	10	P	Pn	16 19 54.8	+0.8
	baz=191,SNR=68						
WRH	Wood River Hil	2.94	360	Pn	Pn	16 19 54.6	+0.4
WRH				IAML		16 20 33.7	
	comp=N,106nm,0.4s						
ILSW	Iliamna Southw	2.95	240		Pn	16 19 55.4	+0.8
ILSW				IAML		16 20 40.6	
	comp=E,98nm,0.7s						
M27K	Edge Creek, AK	3.03	72		Pn	16 19 57.5	+1.7
M27K	Edge Creek, AK	3.03	72	P	Pn	16 19 56.6	+0.9
	baz=258						
M19K	Big River Lodg	3.03	280		Pn	16 19 55.4	-0.3
M19K	Big River Lodg	3.03	280	P	Pn	16 19 55.5	-0.2
	baz=94,SNR=20						
CHUM	Lake Minchumin	3.05	322		Pn	16 19 56.1	+0.2
CHUM	Lake Minchumin	3.05	322	P	Pn	16 19 56.4	+0.5
	baz=138,SNR=91						
SCRK	Sand Creek	3.07	36		Pn	16 19 57.2	+0.9
SCRK	Sand Creek	3.07	36	P	Pn	16 19 56.8	+0.5
	baz=220,SNR=27						
NEA2	Nenana	3.09	352		Pn	16 19 56.3	-0.1
NEA2				IAML		16 20 37.4	
	comp=E,128nm,0.5s						
NEA2				IAML		16 20 37.9	
	comp=N,83nm,0.5s						
NEA2	Nenana	3.09	352	P	Pn	16 19 56.4	0.0
	baz=171,SNR=27						
CCB	Clear Creek Bu	3.11	2		Pn	16 19 56.9	+0.2
CCB				IAML		16 20 37.9	
	comp=N,94nm,0.3s						
CCB				IAML		16 20 38.5	
	comp=E,138nm,0.5s						
BARN	Barnard Glacie	3.13	96		Pn	16 19 57.7	+0.6
BARN				IAML		16 20 50.1	
	comp=N,120nm,1.0s						
P19K	Oil Pt	3.18	236	Pn	Pn	16 19 59.2	+1.5
P19K	Oil Pt	3.18	236	P	Pn	16 19 58.7	+1.0
	baz=51						
N19K	Bonanza Creek	3.20	259		Pn	16 19 58.2	+0.3
N19K	Bonanza Creek	3.20	259	P	Pn	16 19 58.3	+0.3
	baz=74						
IL31		3.28	9		Pn	16 19 59.4	+0.4
ILAR	Eielson Array	3.28	9		Pn	16 19 59.5	+0.5
L19K	White Mountain	3.28	284		Pn	16 19 59.0	-0.1
L19K	White Mountain	3.28	284	P	Pn	16 19 59.0	-0.1
	baz=98						
L27K	Beaver Creek,	3.28	60		Pn	16 19 59.9	+0.8
L27K	Beaver Creek,	3.28	60	P	Pn	16 19 59.7	+0.6
	baz=245						
CTG	Chitna Glacier	3.30	97	P	Pn	16 19 59.7	+0.3
	baz=283,SNR=32						
BCAR	Beaver Creek A	3.30	60	Pn	Pn	16 20 00.1	+0.7
CTGM	Chitina Glacie	3.30	97		Pn	16 20 00.3	+0.9
CTGM				IAML		16 20 51.0	
	comp=N,107nm,0.6s						
CTGM				IAML		16 20 55.6	
	comp=E,79nm,0.6s						
K20K	Telida	3.33	306	Pn	Pn	16 19 59.6	0.0
K20K				IAML		16 20 59.0	
	comp=E,82nm,0.6s						
K20K	Telida	3.33	306	P	Pn	16 19 59.7	0.0
	baz=120,SNR=55						
COLA	College	3.34	2		Pn	16 20 00.4	+0.6
COLA	College	3.34	2	P	Pn	16 20 00.6	+0.8
COLA	College	3.34	2	P	Pn	16 20 00.3	+0.6
	baz=182						
TCOL	CIGO, UAF Yank	3.34	1		Pn	16 20 00.4	+0.6
TCOL	CIGO, UAF Yank	3.34	1	P	Pn	16 20 00.4	+0.6
	baz=182,SNR=22						
O19K	Port Alsworth	3.35	249		Pn	16 19 59.9	0.0
O19K	Port Alsworth	3.35	249	P	Pn	16 19 59.9	0.0
	baz=63						
MDM	Murphy Dome	3.42	359	Pn	Pn	16 20 01.2	+0.2
MDM				IAML		16 20 45.6	
	comp=N,140nm,0.9s						
MDM				IAML		16 20 45.6	
	comp=E,124nm,0.6s						
LOGN	Logan Glacier	3.49	99		Pn	16 20 02.0	-0.1
LOGN				IAML		16 20 59.2	
	comp=E,73nm,1.3s						
BVCY	Beaver Creek	3.51	73	P	Pn	16 20 02.8	+0.6
	baz=259						
POKR	Poker Plat Res	3.59	4		Pn	16 20 04.2	+0.9
POKR				IAML		16 20 47.6	
	comp=N,58nm,0.8s						
POKR				IAML		16 21 03.8	
	comp=E,72nm,0.7s						
POKR	Poker Plat Res	3.59	4	P	Pn	16 20 03.6	+0.3
	baz=185,SNR=13						
YUK3	Moose Creek	3.63	83	P	Pn	16 20 04.4	+0.3
	baz=270,SNR=12						
SVW2	Sparrevohn	3.65	266		Pn	16 20 03.9	-0.3
SVW2				IAML		16 21 10.8	
	comp=N,52nm,0.7s						
SVW2	Sparrevohn	3.65	266	P	Pn	16 20 03.8	-0.3
I23K	Minto, Yukon-K	3.66	351		Pn	16 20 04.6	+0.4
I23K				IAML		16 21 07.1	
	comp=N,62nm,0.7s						
I23K	Minto, Yukon-K	3.66	351	P	Pn	16 20 04.7	+0.5
	baz=170,SNR=36						
Q20K	Shuyak Island	3.66	218	P	Pn	16 20 04.6	+0.4
	baz=34						
MLY	Manley	3.70	342		Pn	16 20 05.1	+0.3
MLY				IAML		16 20 49.3	
	comp=E,54nm,0.3s						
MLY				IAML		16 20 50.0	
	comp=N,98nm,0.6s						
MLY	Manley	3.70	342	P	Pn	16 20 05.2	+0.3
	baz=160,SNR=47						
Q19K	Cape Douglas,	3.83	229	Pn	Pn	16 20 07.3	+0.7
Q19K	Cape Douglas,	3.83	229	P	Pn	16 20 06.8	+0.2
	baz=44						
O28M	Mount Upton	3.89	98	P	Pn	16 20 07.7	0.0
	baz=285,SNR=31						
O18K	Koktuh Hills	3.90	247		Pn	16 20 07.2	-0.4
O18K				IAML		16 20 52.6	
	comp=N,55nm,1.6s						
O18K	Koktuh Hills	3.90	247	P	Pn	16 20 07.0	-0.5
	baz=61						
TTA	Tatalina	3.97	294	Pn	Pn	16 20 07.9	-0.6
TTA	Tatalina	3.97	294	P	Pn	16 20 08.2	-0.4
TTA	Tatalina	3.97	294	P	Pn	16 20 08.1	-0.5
	baz=107,SNR=14						
YUK8	Steele Glacier	4.00	90	P	Pn	16 20 09.4	+0.3
	baz=278,SNR=16						
I21K	Tanana	4.05	336		Pn	16 20 09.9	+0.3
I21K				IAML		16 21 19.5	
	comp=E,39nm,1.4s						
I21K				IAML		16 21 19.6	
	comp=N,40nm,1.5s						
I21K	Tanana	4.05	336	P	Pn	16 20 10.0	+0.4
	baz=152						
PCA	Pinnacle	4.09	107		Pn	16 20 11.4	+1.2
PINM	Pinnacle	4.09	107	P	Pn	16 20 10.4	+0.1
	baz=294,SNR=11						
PRP	Porcupine Dome	4.14	15	Pn	Pn	16 20 11.3	+0.3
PRP				IAML		16 21 06.2	
	comp=E,51nm,0.6s						
PRP	Porcupine Dome	4.14	15	P	Pn	16 20 11.3	+0.3
	baz=197,SNR=51						
P18K	Big Mountain,	4.16	242	Pn	Pn	16 20 11.1	+0.1
P18K	Big Mountain,	4.16	242	P	Pn	16 20 11.2	+0.1
	baz=55						
H24K	Noodor Dome	4.31	1		Pn	16 20 14.2	+1.0
H24K				IAML		16 21 30.1	
	comp=E,40nm,0.8s						
H24K	Noodor Dome	4.31	1	P	Pn	16 20 13.8	+0.6
	baz=181,SNR=8.4						
H23K	Yukon River	4.34	352		Pn	16 20 14.1	+0.4
H23K				IAML		16 21 31.5	
	comp=E,36nm,1.0s						
H23K	Yukon River	4.34	352	P	Pn	16 20 14.0	+0.4
	baz=171						
I26K	Coal Creek Min	4.37	28		Pn	16 20 15.2	+1.2
I26K				IAML		16 21 29.5	
	comp=N,53nm,0.5s						
I26K				IAML		16 21 31.2	
	comp=E,60nm,1.1s						
I26K	Coal Creek Min	4.37	28	P	Pn	16 20 15.0	+1.1
	baz=213						
KDAK	Kodiak Island	4.42	213	Pn	Pn	16 20 14.5	-0.1
KDAK				IAML		16 21 01.9	
	comp=E,63nm,3.4s						
KDAK				IAML		16 21 24.5	
	comp=E,59nm,3.0s						
KDAK	Kodiak Island	4.42	213	P	Pn	16 20 14.5	-0.1
	baz=29						
BCPM	Bancas Point	4.43	107	Pn	Pn	16 20 15.2	+0.3
BCPM				IAML		16 21 20.7	
	comp=N,60nm,0.3s						
EGAK	Eagle	4.50	41		Pn	16 20 16.4	+0.6
EGAK				IAML		16 21 30.4	
	comp=N,48nm,0.8s						
EGAK				IAML		16 21 37.5	
	comp=N,57nm,0.8s						
EGAK	Eagle	4.50	41	P	Pn	16 20 16.3	+0.5
	baz=227						
YUK4	Talbot Arm	4.52	88	P	Pn	16 20 17.0	+0.7
	baz=276						
Q18K	Katmai Hardscr	4.53	233	P	Pn	16 20 16.2	-0.1
	baz=47						
H22K	Ishtalitna Cre	4.61	343	P	Pn	16 20 17.5	+0.3
	baz=160						
M29M	Somme Creek	4.61	75	P	Pn	16 20 18.3	+0.9
	baz=263						
H21K	Melozitna Rive	4.64	335		Pn	16 20 17.5	-0.1
H21K				IAML		16 21 36.3	
	comp=E,37nm,0.9s						
H21K				IAML		16 21 39.2	
	comp=N,35nm,1.7s						
H21K	Melozitna Rive	4.64	335	P	Pn	16 20 17.9	+0.2
	baz=151						
PNL	Peninsula	4.67	110	P	Pn	16 20 20.0	+1.9
PNL	Peninsula	4.67	110	P	Pn	16 20 18.5	+0.5
	baz=298						
DAWY	Dawson	4.71	54	P	Pn	16 20 19.1	+0.4
	baz=242						
YUK6	Outpost Mounta	4.72	93	P	Pn	16 20 19.9	+0.8
	baz=282						
O17K	Koliganek Bris	4.79	252	P	Pn	16 20 19.6	-0.1
	baz=64						
O29M	Mount Kennedy	4.79	101	P	Pn	16 20 20.1	+0.2
	baz=289						
L29M	L29M	4.89	67	P	Pn	16 20 22.1	+0.9
	baz=256						
I27K	Kandik River	4.98	32	P	Pn	16 20 24.2	+1.7
	baz=218						
OHAK	Old Harbor	5.09	214	Pn	Pn	16 20 23.0	-0.9
OHAK				IAML		16 21 24.0	
	comp=N,40nm,3.0s						
OHAK				IAML		16 23 25.5	
	comp=E,41nm,2.8s						
OHAK	Old Harbor	5.09	214	P	Pn	16 20 24.6	+0.7
OHAK	Old Harbor	5.09	214	P	Pn	16 20 23.5	-0.4
	baz=29						
IMAR	Indian Mountai	5.12	333	Pn	Pn	16 20 24.5	+0.3
GCSA	Galena City Sc	5.12	313	P	Pn	16 20 23.5	-0.8
	baz=125						
Q17K	Contact Creek	5.13	234	P	Pn	16 20 23.9	-0.7
	baz=47						
HYT	Haines Junctio	5.16	93	Pn	Pn	16 20 26.2	+1.3
HYT				IAML		16 21 30.6	
	comp=E,18nm,4.0s						
HYT	Haines Junctio	5.16	93	P	Pn	16 20 25.1	+0.2
	baz=283						
Q16K	King Salmon	5.17	240	P	Pn	16 20 25.2	+0.2
	baz=52						
G24K	Hadweenzic Riv	5.18	3	P	Pn	16 20 25.8	+0.7
	baz=183						
FYU	Fort Yukon	5.19	13	Pn	Pn	16 20 25.3	+0.1
G23K	Bananza Creek	5.25	351	P	Pn	16 20 26.5	+0.4
	baz=170						
N30M	Aishikik Lake	5.26	86	P	Pn	16 20 25.8	-0.4
	baz=276						
G25K	Bearman Lake	5.31	8	P	Pn	16 20 27.6	+0.8
	baz=190						
N16K	Nishlik Lake	5.32	263	P	Pn	16 20 26.6	-0.4
	baz=74						
O16K	Kokwok River B	5.32	253	P	Pn	16 20 26.7	-0.3
	baz=64						
K29M	Barlow Dome	5.37	60	P	Pn	16 20 28.3	+0.4
	baz=250						
M30M	Minto, Yukon	5.40	74	Pn	Pn	16 20 28.3	+0.1
M30M	Minto, Yukon	5.40	74	P	Pn	16 20 28.8	+0.7
	baz=264						
H27K	Steamboat Moun	5.51	29	P	Pn	16 20 31.2	+1.5
	baz=215						
G21K	Allakaket	5.53	337	P	Pn	16 20 29.9	0.0
	baz=152						
P16K	Nushagak River	5.55	247	P	Pn	16 20 30.2	+0.1
	baz=58						
P30M	Million Dollar	5.62	100	P	Pn	16 20 31.6	+0.5
	baz=290						
G26K	Porcupine Rive	5.73	17	P	Pn	16 20 33.7	+1.0
	baz=201						
R17K	Ugashik Creek	5.76	231	P	Pn	16 20 33.8	+0.7
	baz=44						
O30N	Mendenhall	5.85	92	P	Pn	16 20 34.7	+0.4
	baz=283						
N31M	Braeburn, Yuko	5.88	85	P	Pn	16 20 35.4	+0.7
	baz=276						
G27K	Doyon Strip	5.97	25	P	Pn	16 20 37.8	+1.8
	baz=211,SNR=5.1						
F24K	Squaw Lake	6.00	1	P	Pn	16 20 37.3	+1.0
	baz=181						
BMAR	Burnt Mountain	6.09	13	Pn	Pn	16 20 39.4	+1.8
PLBC	Pleasant Camp	6.15	105	P	Pn	16 20 38.2	-0.1
	baz=295						
F25K	Christian Rive	6.16	9	P	Pn	16 20 39.8	+1.2
	baz=191						
F21K	Alatna River	6.16	340	P	Pn	16 20 38.8	+0.3
	baz=155						
F22K	John River	6.24	345	P	Pn	16 20 40.4	+0.7
	baz=162						
R16K	Pilot Point	6.27	235	P	Pn	16 20 39.6	-0.4
	baz=46						
F26K	Sheenjek River	6.40	14	P	Pn	16 20 42.5	+0.7
	baz=197						
M31M	Drury Creek, Y	6.50	78	Pn	Pn	16 20 43.2	0.0
E24K	Your Creek	6.56	359	P	Pn	16 20 44.6	+0.6
	baz=178						
E23K	Chandalar	6.57	355	P	Pn	16 20 45.1	+0.9
	baz=174						
SKAG	Skagway	6.63	103	Pn	Pn	16 20 46.2	+1.3
SKAG	Skagway	6.63	103	P	Pn	16 20 46.2	+1.3
SKAG	Skagway	6.63	103	P	Pn	16 20 46.2	+1.3
	baz=294						
E25K	Arctic Village	6.69	8	P	Pn	16 20 47.1	+1.4
	baz=190,SNR=8.1						
E22K	Anaktuvuk Pass	6.80	348	P	Pn	16 20 49.3	+1.9
	baz=165						
EPYK	Eagle Plains	6.95	41	Pn	Pn	16 20 51.0	+1.7
EPYK	Eagle Plains	6.95	41	P	Pn	16 20 50.0	+0.7
	baz=231						
FARO	Faro, Yukon	6.99	78	Pn	Pn	16 20 50.8	+0.9
FARO	Faro, Yukon	6.99	78	P	Pn	16 20 50.2	+0.3
	baz=271						
E27K	Coleen River	7.21	20	P	Pn	16 20 53.2	+0.3
	baz=206						
N32M	Quiet Lake	7.21	87	P	Pn	16 20 53.4	+0.3
	baz=280						
BESE	Bessie Mountai	7.25	108		Pn	16 20 53.3	-0.2
P32M	Atlin	7.34	99	P	Pn	16 20 55.1	+0.4
	baz=292						
G30M	tAoh Zraii Nji	7.49	38	P	Pn	16 20 57.1	+0.3
	baz=229						
D23K	Nanushuk River	7.53	353	P	Pn	16 20 58.8	+1.5
	baz=170						
P33M	Teslin, Yukon	7.56	93	Pn	Pn	16 20 58.1	+0.3
P33M	Teslin, Yukon	7.56	93	P	Pn	16 20 57.5	-0.3
	baz=287						
JIS	Juneau Island	7.61	109	P	Pn	16 20 59.1	+0.7
D25K	Kavik River	7.84	4	P	Pn	16 21 02.2	+0.6
	baz=186,SNR=9.8						
S32K	Killisnoo	7.98	115	P	Pn	16 21 03.6	+0.2
	baz=307						
C24K	Franklin Bluff	8.21	358	P	Pn	16 21 06.4	-0.2
	baz=178						
Q32M	Nakina River	8.27	101	P	Pn	16 21 07.9	+0.2
	baz=295						
C27K	Jago River	8.31	11	P	Pn	16 21 07.8	-0.1
	baz=195						
ANM	Nome	8.41	299	Pn	Pn	16 21 10.3	+0.8
ANM	Nome	8.41	299	P	Pn	16 21 09.9	+0.4
	baz=103,SNR=5.0						
F31M	Tsiigehtchic	8.53	40	P	Pn	16 21 11.9	+0.9
	baz=233						
INK	Inuvik	9.14	36	P	Pn	16 21 20.6	+1.2
	baz=229						
S34M	Telegraph Cree	9.29	106	P	Pn	16 21 21.5	+0.2
	baz=300						
DLBC	Dease Lake	9.55	101	Pn	Pn	16 21 25.4	+0.3
WRAK	Wrangell Islan	9.59	115	Pn	Pn	16 21 26.0	+0.5
TNA	Tin City	9.71	303	Pn	Pn	16 21 27.4	+0.3
TNA	Tin City	9.71	303	P	Pn	16 21 27.4	+0.3
	baz=105,SNR=6.2						

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*IDC **18** 16:42:02.7±0.7, 29°.03N×127°.99E, h201^{km}±8^{km}, mb3.5/20, mbtmp4.1/22, MS2.1/1, Error ellipse: s-maj=14.2km*

s-min=9.0km az=85.0

NEIC ***18*** *16:42:03.6±1.8, 28°.93N±0°.06×128°.00E±0°.10, h216^{km}±7^{km}, mb4.2/66, Error ellipse: s-maj=12.7km s-min=8.9km az=101.0*

NIED ***18*** *16:42:04.9, 28°.91N×127°.99E, h207^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.31; M$_{\theta\theta}$1.60; M$_{\phi\phi}$-0.29; M$_{r\theta}$-0.63; M$_{\theta\phi}$0.04; M$_{\phi r}$-0.16; Fault plane solution: M$_{0}$1.59000×10^{15} NP1:φ$_{s}$82.00000°, δ57.00000°, λ-98.00000°. NP2:φ$_{s}$277.00000°, δ34.00000°, λ-78.00000°.*

JMA ***18*** *16:42:04.9±0.2, 29°N±1°×12°8E±°, h207^{km}±3^{km}, MD4.0/35, MV4.2/35, NW OFF AMAMI-OSHIMA IS*

ISC 18 16:42:03.4±0.5**, 28°.92N**±0°.04×**128°.02E**±0°.05**, h216**^{km}±5^{km}**, n165,** σ1^{s}.13/187**, mb4.2**/52**, 2D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTAJ	Takarajima	1.06	77	P	Pn	16 42 36.4	+1.2
JTAJ				S	S	16 43 00.6	+0.8
JAMN	Amaminishikomi	1.22	123	P	Pn	16 42 37.0	+0.7
JAMN				S	S	16 43 02.0	+0.3
JTK	Tokunoshima	1.39	144	P	Pn	16 42 38.7	+1.0
JTK				S	S	16 43 03.8	-0.3
JTK	Tokunoshima	1.39	144	A	A	16 42 38.7	
	comp=E,2.0nm,0.7s,comp=E,3.0nm,1.4s						
JAM	Amami Oshima	1.48	109	P	Pn	16 42 39.1	+0.8
JOKE	Okinoerabujima	1.62	162	i P	Pn	16 42 40.6	+1.0
JOKE				S	S	16 43 07.1	-0.6
JZK	Kikaishima	1.82	109	i P	Pn	16 42 43.7	+2.4
JZK				S	S	16 43 12.9	+2.2
JNN	Nakanoshima	1.86	60	P	Pn	16 42 43.1	+1.3
JIH	Iheya	1.87	181	i P	Pn	16 42 43.1	+1.2
JIH				S	S	16 43 11.5	-0.2
JIH	Iheya	1.87	181	A	A	16 42 43.1	
	comp=E,2.0nm,1.1s,comp=E,2.0nm,1.1s						
JYRO	Yoronjima	1.92	168	i P	Pn	16 42 43.4	+1.0
JYRO				S	S	16 43 11.6	-1.0
JOW	Kunigami	2.09	174	P	Pn	16 42 45.0	+1.0
	562nm,0.3s,baz=87,slow=12,SNR=1065						
JOW				LR	LR	16 43 08.2	
	comp=Z,40nm,20.9s,baz=274,slow=30						
JOW				S	S	16 43 15.1	-0.4
	1µm,0.3s,baz=158,slow=27,SNR=16						
JOW	Kunigami	2.09	174	Pn	Pn	16 42 45.0	+1.0
JOW				Sn	S	16 43 14.6	-0.9
JOW	Kunigami	2.09	174	P	Pn	16 42 45.2	+1.1
JOW	Kunigami	2.09	174	i P	Pn	16 42 45.1	+1.0
JOW				S	S	16 43 14.7	-0.8
JOW	Kunigami	2.09	174	A	A	16 42 45.1	
	comp=E,6.0nm,0.5s,comp=E,3.0nm,0.4s						
JNTH	Nagotoyohara	2.39	180	i P	Pn	16 42 48.4	+1.2
JNTH				S	S	16 43 20.1	-0.9
JAGN	Aguni-jima	2.42	197	P	Pn	16 42 48.6	+1.1
JAGN				eS	S	16 43 21.8	+0.2
JYAK	Yakushimahirau	2.54	58	eP	Pn	16 42 49.0	+0.3
JYAK				S	S	16 43 22.4	-1.3
JJT3	Tamagusuku3	2.77	184	P	Pn	16 42 53.1	+1.7
JJT3				S	S	16 43 29.0	+0.5
JKE	Kume jima 2	2.80	203	P	Pn	16 42 52.4	+0.7
JKE				eS	S	16 43 29.7	+0.5
JMTN	Minamitane	2.91	59	P	Pn	16 42 53.7	+0.9
JMTN				S	S	16 43 29.4	-1.9
JTN	Tanegashima 3	3.10	55	P	Pn	16 42 56.3	+1.3
JSJ	Shimokoshiki	3.12	28	P	Pn	16 42 56.5	+1.3
JSU	Suzuyama	3.33	39	Pn	Pn	16 42 59.5	+1.7
JSU	Suzuyama	3.33	39	P	Pn	16 42 59.4	+1.7
JTZ	Takazaki	3.98	41	i P	Pn	16 43 06.9	+1.3
JTZ				S	S	16 43 53.4	-0.8
JMZ	Minamidaito 2	4.20	137	Pn	Pn	16 43 10.8	+2.5
JMZ	Minamidaito 2	4.20	137	P	Pn	16 43 10.7	+2.5
JIU3	Izumi3	4.35	33	P	Pn	16 43 12.2	+2.2
JNU	Nakatsue	4.86	30	P	Pn	16 43 18.4	+2.0
	33nm,0.7s,baz=217,slow=8.5,SNR=30						
JNU				S	S	16 44 17.8	+3.9
	8.8nm,0.6s,baz=276,slow=7.0,SNR=2.0						
JNU	Nakatsue	4.86	30	Pn	Pn	16 43 18.3	+1.9
JNU	Nakatsue	4.86	30	P	Pn	16 43 18.8	+2.4
JTU	Tsushima	5.71	12	Pn	Pn	16 43 26.5	-0.7
JTU	Tsushima	5.71	12	P	Pn	16 43 29.4	+2.2
YOJ	Yonaguni jima	6.30	226	Pn	Pn	16 43 35.5	+0.6
JMN	Monobe	6.94	45	Pn	Pn	16 43 41.7	-1.3
JMN	Monobe	6.94	45	P	Pn	16 43 42.2	-0.7
YHNB	Yeheng	7.29	236	Pn	Pn	16 43 49.2	+1.6
YHNB	Yeheng	7.29	236	P	Pn	16 43 49.2	+1.6
NACB	Ninganchiao	7.44	232	Pn	Pn	16 43 46.5	-3.0
JHS	Saijyo	7.45	34	Pn	Pn	16 43 47.9	-1.7
TJN	Taejon	7.46	356	Pn	Pn	16 43 49.0	-0.6
SSLB	Suanglung	8.14	233	Pn	Pn	16 43 57.9	-0.6
SSLB	Suanglung	8.14	233	P	Pn	16 43 58.2	-0.3
YULB	Yu-li	8.17	229	Pn	Pn	16 43 56.3	-2.6
YULB	Yu-li	8.17	229	P	Pn	16 43 56.5	-2.4
KSRS	Korea Array	8.52	359	P	Pn	16 44 05.2	+2.0
	6.8nm,0.7s,baz=181,slow=14,SNR=28						
TPUB	Ta-pu	8.68	232	Pn	Pn	16 44 04.0	-1.5
TPUB	Ta-pu	8.68	232	P	Pn	16 44 04.5	-1.0
MJAR	Matsushiro Arr	11.46	46	P	P	16 44 46.0	0.0
	1.6nm,0.5s,baz=228,slow=9.9,SNR=5.1						
JMM	Marumori	13.90	47	Pn	Pn	16 45 08.9	-2.6
LYN	LuoYang	14.37	297	eP	P	16 45 19.8	+1.5
LYN				pmax	pmax		
	comp=Z,18nm,0.5s						
USRK	Ussuriysk Ar.	15.58	11	P	Pn	16 45 32.7	+0.9
	comp=Z,3.1nm,0.5s,baz=187,slow=8.6,SNR=18						
USRK	Ussuriysk Ar.	15.58	11	P	P	16 45 30.5	-1.1
BNX	BinXian	16.80	359	⇓P	Pn	16 45 47.1	+0.7
BNX				pmax	pmax		
	comp=Z,11nm,1.0s						
BNX				pmax	pmax		
	comp=Z,49nm,3.8s						
XAN	Xi'an	17.07	292	⇓P	Pn	16 45 50.3	+0.6
XAN				pP	sP	16 46 48.6	-1.5
XAN				pmax	pmax		
	comp=Z,97nm,0.6s						
XLT	XiLinHaoTe	17.75	331	eP	Pn	16 45 57.4	-0.2
XLT				pmax	pmax		
	comp=Z,64nm,3.6s						
XLT				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC	Hu-ho-hao-te	17.96	316	eP	Pn	16 45 59.5	-0.7
HHC				pmax	pmax		
	comp=Z,35nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,6.2s						
ASAJ	Asahikawa	19.12	34	P	P	16 46 09.8	-0.4
	comp=Z,3.4nm,0.8s,baz=239,slow=14,SNR=6.4						
JKA	Kamikawa-asahi	19.12	34	P	P	16 46 07.5	-2.7
JKA				IAmb	IAmb	16 46 41.5	
	comp=Z,8.7nm,1.0s						
KLR	Kul'dur	20.49	7	P	P	16 46 23.2	-1.5
	comp=Z,0.6nm,0.3s,baz=217,slow=11,SNR=4.8						
	comp=Z,0.6nm,0.3s						
PZH	PanZhiHua	23.37	270	P	P	16 46 53.0	0.0
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,60nm,4.3s						
SONM	Songino Array	25.23	324	P	P	16 47 10.3	+0.6
	comp=Z,12nm,0.7s,baz=141,slow=8.9,SNR=70						
	comp=Z,12nm,0.7s						
SONM	Songino Array	25.23	324	P	P	16 47 10.3	+0.6
GTA	Gaotai	25.48	302	eP	P	16 47 12.8	+0.8
GTA				pP	pP	16 47 56.5	+2.0
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
FAKI	Fak Fak	31.91	172	P	P	16 48 07.9	-1.0
PETK	Petropavlovsk-	32.54	34	P	P	16 48 13.4	-0.6
	comp=Z,2.3nm,0.9s,baz=270,slow=1.5,SNR=7.6						
	comp=Z,2.3nm,0.9s						
PETK	Petropavlovsk-	32.54	34	P	P	16 48 13.2	-0.9
PET	Petropavlovsk	32.96	34	P	P	16 48 16.6	-1.1
KULM	Kulim	34.98	233	P	P	16 48 35.5	+0.1
KULM				IAmb	IAmb	16 48 39.1	
	comp=Z,6.2nm,0.5s						
IPM	Ipoh	35.30	232	P	P	16 48 39.6	+1.4
IPM				IAmb	IAmb	16 48 41.2	
	comp=Z,10nm,0.8s						
WMQ	Urumqi	35.34	306	eP	P	16 48 40.1	+1.8
SEY	Seymchan	37.52	18	P	P	16 48 56.4	0.0
	comp=Z,0.5nm,0.4s,baz=230,slow=8.9,SNR=8.2						
	comp=Z,0.5nm,0.4s						
MK31	Makanchi Array	39.65	310	P	P	16 49 13.5	-0.8
MK31				PcP	PcP	16 51 17.8	+1.1
MKAR	Makanchi Array	39.65	310	P	P	16 49 14.3	+0.1
	comp=Z,1.2nm,0.6s,baz=92,slow=9.7,SNR=20						
MKAR				PcP	PcP	16 51 17.3	+0.6
	comp=Z,1.0nm,0.6s,baz=76,slow=2.7,SNR=9.0						
	comp=Z,1.2nm,0.6s						
MKAR	Makanchi Array	39.65	310	P	P	16 49 12.9	-1.3
MAKZ	Makanchi	39.86	310	P	P	16 49 14.3	-1.8
MAKZ				PcP	PcP	16 51 18.1	+0.8
GSI	Gunungsitoli	39.96	232	P	P	16 49 16.3	-0.9
ZAA0	Zalesovo Array	40.02	321	P	P	16 49 15.8	-1.4
ZALV	Zalesovo Beam	40.02	321	P	P	16 49 16.8	-0.4
	comp=Z,2.2nm,0.4s,baz=110,slow=8.5,SNR=16						
ZALV				PcP	PcP	16 51 17.7	0.0
	comp=Z,0.7nm,0.3s,baz=116,slow=5.0,SNR=4.9						
	comp=Z,2.2nm,0.4s						
ZALV	Zalesovo Beam	40.02	321	P	P	16 49 16.0	-1.2
MTN	Manton Dam	41.62	175	P	P	16 49 29.8	-0.9
KURK	Kurchatov	42.77	315	P	P	16 49 38.5	-1.1
KURK				IAmb	IAmb	16 49 40.8	
	comp=Z,4.0nm,0.5s						
KNRA	Kununurra	44.34	179	P	P	16 49 52.2	-0.2
AAK	Ala-Archa	44.83	303	P	P	16 49 56.7	+0.4
	comp=Z,0.5nm,0.3s,baz=118,slow=2.8,SNR=4.4						
	comp=Z,0.5nm,0.3s						
AAK	Ala-Archa	44.83	303	P	P	16 49 55.5	-0.7
BILL	Bilibino	45.20	19	P	P	16 49 57.5	-1.0
FITZ	Fitzroy Crossi	46.79	183	P	P	16 50 12.6	+1.1
KK31	Karatay Array	47.74	303	P	P	16 50 18.7	0.0
KKAR	Karatay Array	47.74	303	P	P	16 50 18.6	-0.1
KKAR	Karatay Array	47.74	303	P	P	16 50 19.1	+0.3
BRVK	Borovoye	48.24	317	P	P	16 50 21.8	-0.6
WB0	Warramunga Arr	48.79	172	P	P	16 50 28.0	+1.1
WB0				IAmb	IAmb	16 50 49.4	
	comp=Z,14nm,1.5s						
WRAB	Tennant Creek	48.95	172	P	P	16 50 27.8	-0.3
WRA	Warramunga Arr	48.95	172	P	P	16 50 29.5	+1.3
	comp=Z,1.2nm,0.4s,baz=353,slow=8.4,SNR=24						
	comp=Z,1.2nm,0.4s						
WRA	Warramunga Arr	48.95	172	P	P	16 50 27.8	-0.3
AS31	Alice Springs	52.58	173	P	P	16 50 55.4	+0.3
ASAR	Alice Springs	52.58	173	P	P	16 50 56.8	+1.6
	comp=Z,0.8nm,0.5s,baz=2.1,slow=14,SNR=37						
	comp=Z,0.8nm,0.5s						
ASAR	Alice Springs	52.58	173	P	P	16 50 55.7	+0.6
TNA	Tin City	53.34	28	P	P	16 50 59.6	-0.5
TNA				IAmb	IAmb	16 51 02.0	
	comp=Z,6.7nm,1.4s						
ANM	Nome	54.26	29	P	P	16 51 05.8	-0.9
ANM				IAmb	IAmb	16 51 09.1	
	comp=Z,3.8nm,0.8s						
ABKAR	Akbulak array	54.70	312	P	P	16 51 09.8	-0.4
TTA	Tatalina	58.33	31	P	P	16 51 36.0	+0.3
TTA				IAmb	IAmb	16 51 56.1	
	comp=Z,6.8nm,1.4s						
SVW2	Sparrevohn	58.63	34	P	P	16 51 37.8	+0.1
SVW2				IAmb	IAmb	16 51 38.2	
	comp=Z,12nm,1.4s						
O18K	Koktuh Hills	58.90	35	P	P	16 51 38.6	-0.9
K20K	Telida	59.19	31	P	P	16 51 42.3	+0.8
K20K				IAmb	IAmb	16 51 44.5	
	comp=Z,5.3nm,0.9s						
IMAR	Indian Mountai	59.20	28	P	P	16 51 40.7	-0.8
RSO	Redoubt South	60.06	34	P	P	16 51 48.4	+0.7
CAST	Castle Rocks	60.08	31	P	P	16 51 49.0	+1.4
CAST				IAmb	IAmb	16 51 49.4	
	comp=Z,3.3nm,0.8s						
PPLA	Purkeypile	60.08	31	P	P	16 51 47.7	0.0
PPLA				IAmb	IAmb	16 51 50.0	
	comp=Z,7.2nm,0.9s						
SKT	Skwentna	60.48	32	P	P	16 51 49.5	-0.8
SKT				IAmb	IAmb	16 51 56.8	
	comp=Z,9.4nm,1.4s						
BPAW	Bear Paw Mtn.	60.50	30	P	P	16 51 50.2	-0.2
BPAW				IAmb	IAmb	16 52 00.3	
	comp=Z,6.7nm,1.4s						
MLY	Manley	60.51	29	P	P	16 51 50.9	+0.4
MLY				IAmb	IAmb	16 51 52.3	
	comp=Z,3.5nm,0.6s						
KTH	Kantishna Hill	60.59	31	P	P	16 51 51.3	+0.3
KTH				IAmb	IAmb	16 51 58.6	
	comp=Z,8.7nm,1.4s						
SUA	Susitna One	60.91	33	P	P	16 51 53.0	-0.4
SUA				PcP	PcP	16 52 34.8	+0.2
BRLK	Bradley Lake	61.08	35	P	P	16 51 54.3	-0.1
I23K	Minto, Yukon-K	61.08	29	P	P	16 51 54.6	+0.4
MDM	Murphy Dome	61.58	29	P	P	16 51 57.8	+0.1
WRH	Wood River Hil	61.71	29	P	P	16 51 58.9	+0.4
WRH				IAmb	IAmb	16 52 37.2	
	comp=Z,4.5nm,1.2s						
GHO	Glory Hole Cre	61.73	32	P	P	16 51 59.2	+0.4
CCB	Clear Creek Bu	61.80	29	P	P	16 51 59.4	+0.3
STKA	Stephens Creek	61.82	167	P	P	16 52 01.4	+1.8
	comp=Z,0.5nm,0.3s,baz=349,slow=9.8,SNR=4.0						
	comp=Z,0.5nm,0.3s						
SML	Sawmill	62.01	32	P	P	16 52 01.0	+0.4
ILAR	Eielson Array	62.18	29	P	P	16 52 01.3	-0.3
	comp=Z,0.6nm,0.5s,baz=262,slow=3.9,SNR=16						
	comp=Z,0.6nm,0.5s						
ILAR	Eielson Array	62.18	29	P	P	16 52 00.9	-0.7
HDA	Harding Lake	62.21	29	P	P	16 52 00.8	-0.9
HDA				IAmb	IAmb	16 52 03.0	
	comp=Z,4.8nm,0.8s						
BMAR	Burnt Mountain	62.67	26	P	P	16 52 06.1	+1.2
BMAR				PcP	PcP	16 52 42.2	+0.7
M24K	Tolsona, Glenn	62.96	32	P	P	16 52 08.2	+1.4
RIDG	Independent Ri	63.24	30	P	P	16 52 08.7	+0.1
RIDG				IAmb	IAmb	16 52 10.1	
	comp=Z,3.1nm,0.8s						
SCRK	Sand Creek	63.56	29	P	P	16 52 11.0	+0.1
SCRK				IAmb	IAmb	16 52 12.1	
	comp=Z,2.3nm,0.6s						
DOT	Dot Lake	63.60	30	P	P	16 52 10.3	-0.7
DOT				IAmb	IAmb	16 52 12.1	
	comp=Z,4.2nm,0.8s						
N25K	Chitina, Valde	63.79	32	P	P	16 52 11.9	-0.4
N25K				IAmb	IAmb	16 52 19.5	
	comp=Z,8.4nm,1.2s						
L26K	Log Cabin Wild	64.05	30	P	P	16 52 14.1	+0.2
L26K				IAmb	IAmb	16 52 15.6	
	comp=Z,2.8nm,0.8s						
EGAK	Eagle	64.58	28	P	P	16 52 17.2	0.0
L27K	Beaver Creek,	64.71	30	P	P	16 52 19.0	+0.7
L27K				IAmb	IAmb	16 52 36.9	
	comp=Z,6.5nm,1.5s						
BCAR	Beaver Creek A	64.73	30	P	P	16 52 19.7	+1.3
M27K	Edge Creek, AK	64.86	31	P	P	16 52 20.3	+1.0
M27K				IAmb	IAmb	16 52 22.1	
	comp=Z,3.1nm,0.8s						
BARN	Barnard Glacie	65.30	32	P	P	16 52 23.0	+0.7
BARN				IAmb	IAmb	16 52 43.8	
	comp=Z,8.6nm,1.3s						
CTGM	Chitina Glacie	65.48	32	P	P	16 52 23.6	+0.2
CTGM				IAmb	IAmb	16 52 26.1	
	comp=Z,4.3nm,0.9s						
PCA	Pinnacle	66.23	33	P	P	16 52 28.5	+0.5
INK	Inuvik	66.51	24	P	P	16 52 30.2	+0.7
	comp=Z,0.7nm,0.4s,baz=265,slow=5.8,SNR=4.9						
	comp=Z,0.7nm,0.4s						
INK	Inuvik	66.51	24	P	P	16 52 29.6	0.0
INK				IAmb	IAmb	16 52 31.8	
	comp=Z,5.3nm,1.5s						
M30M	Minto, Yukon	67.07	30	P	P	16 52 34.9	+1.7
A36M	Sachs Harbour	67.75	19	P	P	16 52 37.8	+0.5
A36M				IAmb	IAmb	16 52 38.9	
	comp=Z,3.1nm,0.7s						
M31M	Drury Creek, Y	68.25	30	P	P	16 52 41.2	+0.6
M31M				IAmb	IAmb	16 52 42.8	
	comp=Z,3.3nm,1.0s						
FARO	Faro, Yukon	68.69	30	P	P	16 52 44.6	+1.2
FARO				IAmb	IAmb	16 52 45.7	
	comp=Z,6.2nm,1.0s						
C36M	Paulatuk	69.26	21	P	P	16 52 46.8	+0.1
C36M				IAmb	IAmb	16 52 48.1	
	comp=Z,3.8nm,0.7s						
P33M	Teslin, Yukon	69.69	32	P	P	16 52 49.6	0.0
P33M				IAmb	IAmb	16 53 23.0	
	comp=Z,8.7nm,1.5s						
FINES	FINESS Array B	70.45	330	P	P	16 52 53.4	-0.6
	comp=Z,1.1nm,0.5s,baz=60,slow=5.9,SNR=12						
	comp=Z,1.1nm,0.5s						
FINES	FINESS Array B	70.45	330	P	P	16 52 53.0	-1.0
BR131	Keskin Array S	75.25	307	P	P	16 53 21.9	-0.9
BR131				IAmb	IAmb	16 53 23.1	
	comp=Z,2.5nm,0.8s						
BRTR	Keskin Array B	75.25	307	P	P	16 53 22.6	-0.3
	comp=Z,0.8nm,0.7s,baz=99,slow=5.0,SNR=4.9						
	comp=Z,0.8nm,0.7s						
BRTR	Keskin Array B	75.25	307	P	P	16 53 22.4	-0.5
YKA	Yellowknife Ar	76.18	25	P	P	16 53 28.4	+0.9
	comp=Z,2.2nm,0.6s,baz=299,slow=5.5,SNR=38						
	comp=Z,2.2nm,0.6s						
YKA	Yellowknife Ar	76.18	25	P	P	16 53 27.4	0.0
HFS	Hagfors	76.37	332	P	P	16 53 28.3	-0.3
	comp=Z,0.5nm,0.4s,baz=49,slow=4.5,SNR=4.6						
	comp=Z,0.5nm,0.4s						
NB2	NORSAR Subarra	76.83	334	P	P	16 53 30.3	-0.9
	comp=Z,0.4nm,0.5s,baz=53,slow=5.9						
NOA	NORSAR Array B	76.83	334	P	P	16 53 30.7	-0.5
	comp=Z,0.3nm,0.5s,baz=55,slow=6.9,SNR=4.4						
	comp=Z,0.3nm,0.5s						
NC204	NORSAR Array S	76.87	334	P	P	16 53 30.0	-1.4
BURAR	Bucovina Array	77.13	317	P	P	16 53 32.4	-0.8
CLL	Collm	81.85	325	eP	P	16 53 59.0	+0.6
CLL				esP	sP	16 55 13.0	0.0
DAVOX	Davos/Dischmat	86.26	323	P	P	16 54 21.3	+0.3
	comp=Z,1.4nm,0.5s,baz=6.4,slow=3.7,SNR=2.5						
	comp=Z,1.4nm,0.5s						
PDAR	Pinedale Array	91.19	38	P	P	16 54 45.2	+0.8
	comp=Z,0.9nm,0.7s,baz=162,slow=0.2,SNR=9.8						
	comp=Z,0.9nm,0.7s						
ULM	Lac du Bonnet	92.11	26	P	P	16 54 48.4	+0.3
	comp=Z,1.9nm,0.5s,baz=11,slow=1.8,SNR=4.2						
	comp=Z,1.9nm,0.5s						

DDA ***18*** *16:43:49.3±0.0, 37°.64N×38°.45E, h7^{km}±2^{km}, ML3.0*

ISK ***18*** *16:43:49.6, 37°.55N×38°.46E, h14^{km}, ML2.8/4*

ISC 18 16:43:49.5±1.0**, 37°.63N**±0°.03×**38°.45E**±0°.02**, h9**^{km}±9^{km}**, n20,** σ0^{s}.65/39**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HANM	anlurfa/Hi	0.35	98	P	Pg	16 43 56.1	-0.2
HANM				S	Sg	16 44 01.5	+0.6
HANM				i AML	AML	16 44 04.0	
	comp=N,2µm,0.3s						
URFA	Urfa	0.35	122	Pg	Pg	16 43 56.5	+0.1
URFA				Sg	Sg	16 44 01.5	+0.4
NARI	Adyaman-Kaht	0.35	44	P	Pg	16 43 56.6	+0.1
NARI				S	Sg	16 44 01.6	+0.4
AKCA	Adyaman/G¶l	0.63	285	P	Pg	16 44 01.6	0.0
AKCA				S	Sg	16 44 09.5	-0.3
MAYA	Malatya/Merkez	0.69	358	P	Pg	16 44 02.3	-0.6
MAYA				S	Sg	16 44 12.5	+0.5
GZT	Gaziantep	0.76	249	P	Pg	16 44 04.1	0.0
GZT				S	Sn	16 44 17.9	-0.1
GZT				i AML	AML	16 44 18.0	
	comp=E,1µm,0.3s						
AKCD	Akcadag	0.78	328	P	Pg	16 44 04.5	-0.1
AKCD				S	Sg	16 44 13.9	-1.0
AKCD				i AML	AML	16 44 18.0	
	comp=N,504nm,0.4s						
NZIP	Nizip/Gaziante	0.85	227	P	Pn	16 44 06.7	-1.0
NZIP				S	Sg	16 44 16.7	-0.3
NZIP				i AML	AML	16 44 20.0	
	comp=E,623nm,0.6s						
GAZ	Gaziantep	1.09	246	Pg	Pn	16 44 10.6	-0.3
GAZ				Sg	Sn	16 44 25.7	-0.5
KAHM	Kahramanmaras,	1.17	265	P	Pb	16 44 11.4	-0.4
KAHM				S	Sg	16 44 27.2	+0.1
DARE	Darende-Malaty	1.21	321	Pn	Pg	16 44 13.5	+0.8
DARE				Sn	Sn	16 44 31.0	+1.7
KMRS	Kahramanmaras	1.24	265	Pn	Pg	16 44 13.1	-0.1
KMRS				Sn	Sn	16 44 30.1	+0.3
ELBS	KAHRAMANMARAS	1.25	304	P	Pg	16 44 14.3	+0.8
ELBS				S	Sb	16 44 29.3	-0.3
HCB	Kahramanmara	1.26	257	P	Pn	16 44 12.7	-0.6
HCB				S	Sb	16 44 29.5	-0.2
DIYA	Diyarbakir	1.36	77	P	Pb	16 44 14.8	-0.3
DIYA				S	Sg	16 44 33.7	+0.6
DIYA				i AML	AML	16 44 39.0	
	comp=E,324nm,0.5s						
DYBB	Diyarbakir	1.38	76	Pn	Pb	16 44 15.4	0.0
DYBB				Sn	Sg	16 44 33.9	+0.1
KUZU	Kuzuini	1.39	233	P	Pg	16 44 17.7	+1.6
KUZU				S	Sg	16 44 35.3	+1.1
KUZU				i AML	AML	16 44 39.0	
	comp=E,624nm,0.4s						
ARPR	Arapgir-MALATY	1.46	357	Pn	Pb	16 44 17.5	+0.5
KAMA	Osmaniye	1.49	253	P	Pb	16 44 16.8	-0.5
KAMA				S	Sg	16 44 38.2	+0.9
KEMA	Kemaliye	1.64	1	P	Pb	16 44 20.0	+0.1
KEMA				S	Sn	16 44 40.2	+0.5

IDC 18 16:52:53.7±1.7**, 1°.41N**×**124°.40E, h0**^{km}**, mb3.2**/3**, mbtmp3.2**/3**, Error ellipse: s-maj=186.5km s-min=28.0km az=67.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.36	156	P	P	16 58 03.7	-0.4
	0.2nm,0.4s,baz=333,slow=11,SNR=6.7						
	0.2nm,0.4s						
ASAR	Alice Springs	26.59	160	P	P	16 58 34.4	+0.5
	0.1nm,0.5s,baz=342,slow=7.7,SNR=5.4						
	0.1nm,0.5s						
ZALV	Zalesovo Beam	61.63	335	P	P	17 03 13.0	-0.2
	0.3nm,0.3s,baz=126,slow=7.3,SNR=2.3						
	0.3nm,0.3s						

IDC ***18*** *16:56:39.5±1.5, 7°.75S×107°.99E, h52^{km}±12^{km}, mb4.2/25, mbtmp4.4/25, MS3.7/35, Error ellipse: s-maj=16.4km s-min=10.7km az=57.0*

DJA ***18*** *16:56:40.6±0.3, 8°S±3°×10°8E±°, h43^{km}±4^{km}, M4.8/30, mB5.3/20, mb5.1/30, MLv5.2/28, Mw(mB)4.7/20*

NEIC ***18*** *16:56:40.8±2.1, 7°.95S±0°.08×107°.96E±0°.04, h78^{km}±5^{km}, mb4.8/62, Error ellipse: s-maj=12.2km s-min=5.0km az=171.0*

ISC 18 16:56:40.0±0.5**, 7°.97S**±0°.05×**107°.93E**±0°.03**, h62**^{km}±4^{km}**, n345,** σ1^{s}.76/354**, mb4.7**/59**, 5C-5D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	Cimerak	0.55	70	P	Pn	16 56 53.2	+0.6
CMJI				S	Sn	16 57 02.2	+0.3
BBJI	Bungbulang	0.58	332	P	Pn	16 56 53.7	+0.7
CNJI	Cibinong	1.03	310	P	Pn	16 56 59.2	+0.7
CNJI				S	Sn	16 57 12.3	+0.1
KPJI	Karang Pucung	1.18	58	P	Pn	16 57 02.6	+2.1
SKJI	Sukabumi	1.66	305	P	Pn	16 57 08.4	+1.4
SKJI				S	Sn	16 57 28.8	+1.5
YOGI	Yogyakarta	2.35	86	P	Pn	16 57 17.1	+0.8
YOGI				S	Sn	16 57 44.3	+0.2
SBJI	Serang	2.56	316	P	Pn	16 57 21.6	+2.4
SBJI				S	Sn	16 57 51.9	+2.7
UGM	Wanagama	2.57	89	Pn	Pn	16 57 20.1	+0.8
UGM	Wanagama	2.57	89	P	Pn	16 57 20.4	+1.0
UGM	Wanagama	2.57	89	P	Pn	16 57 20.2	+0.8
UGM				S	Sn	16 57 49.7	+0.1
CGJI	Cibinong	2.59	301	P	Pn	16 57 20.2	+0.6
SMRI	Semarang	2.66	70	Pn	Pn	16 57 22.3	+1.8
SMRI	Semarang	2.66	70	P	Pn	16 57 23.8	+3.3
SMRI	Semarang	2.66	70	P	Pn	16 57 23.5	+3.0
SMRI				S	Sn	16 57 57.1	+5.5
XMI	Christmas Isla	3.31	222	P	Pn	16 57 27.0	-2.4
UWJI	Ujung Watu	3.37	63	P	Pn	16 57 32.6	+2.4
NGJI	Ngawi	3.56	80	P	Pn	16 57 35.9	+3.2
BLSI	Bandar Lampung	3.71	314	P	Pn	16 57 38.4	+3.5
PWJI	Pagerwojo	3.84	91	P	Pn	16 57 37.8	+1.1
TBJI	Tambak Boyo	4.06	74	P	Pn	16 57 41.5	+1.9
TBJI				S	Sn	16 58 29.0	+3.1
KASI	Kota Agung	4.18	305	P	Pn	16 57 43.4	+2.0
KLI	Kotabumi	4.34	315	P	Pn	16 57 47.2	+3.7
GRJI	Gresik	4.64	77	P	Pn	16 57 49.5	+1.9
GRJI				S	Sn	16 58 42.6	+2.5
LWLI	Liwa	4.83	307	P	Pn	16 57 53.9	+3.5
MDSI	Maura Dua	5.09	313	P	Pn	16 57 56.5	+2.8
	188nm,1.0s,2µm0.7nm						
GMJI	Gumukmas	5.47	94	P	Pn	16 58 00.3	+1.3
	165nm,0.7s,2µm1.1nm						
GMJI				S	Sn	16 59 03.1	+2.5
	165nm,0.7s,2µm1.1nm						
BLJI	Banyuglugur	5.62	88	P	Pn	16 58 03.5	+2.4
	235nm,0.5s,3µm1.0nm						
PMBI	Palembang	5.91	328	P	Pn	16 58 10.3	+5.2
	584nm,0.9s,4µm1.6nm						

PPBI	Pangkal Pinang	6.04	343	P	Pn	16 58 10.4	+3.6
	232nm,0.8s,4μm1.0nm						
MNAI	Manna	6.11	306	Pn	Pn	16 58 07.8	+0.1
MNAI	Manna	6.11	306	P	Pn	16 58 09.6	+1.9
JAGI	Jajag, Banyuwa	6.18	95	Pn	Pn	16 58 09.0	+0.2
JAGI	Jajag, Banyuwa	6.18	95	P	Pn	16 58 12.0	+3.2
JAGI	Jajag, Banyuwa	6.18	95	P	Pn	16 58 11.0	+2.2
	242nm,0.8s,4μm1.8nm						
JAGI				S	Sn	16 59 17.3	-0.9
	242nm,0.8s,4μm1.8nm						
ABJI	Asem Bagus	6.25	89	P	Pn	16 58 14.2	+4.5
	303nm,0.6s,3μm1.2nm						
PBKI	Pangkalan Bun	6.42	36	P	Pn	16 58 14.5	+2.4
	298nm,0.8s,1.0nm						
KSI	Kapahiang	6.82	309	P	Pn	16 58 20.4	+2.8
	229nm,0.5s,5μm0.9nm						
SRBI	Singaraja	7.22	91	P	Pn	16 58 26.8	+3.9
	159nm,0.7s,2μm1.0nm						
MASI	Maura Aman, Be	7.42	310	P	Pn	16 58 27.9	+2.2
	96nm,1.1s,0.6nm						
DSRI	Dabo	8.16	336	P	Pn	16 58 39.8	+4.0
	89nm,0.4s,2μm						
BBKI	Banjar Baru	8.21	57	P	Pn	16 58 38.3	+1.8
	62nm,1.0s,1μm						
TWSI	Taliwang, Sumb	8.89	96	P	Pn	16 58 47.9	+2.0
	82nm,0.7s,1μm						
TPRI	Tanjung Pinang	9.46	339	P	Pn	16 58 58.2	+4.6
SDSI	Sungai Dareh	9.53	317	P	Pn	16 58 54.4	-0.2
	11nm,0.5s						
KSM	Kuching	9.68	14	Pn	Pn	16 58 58.8	+2.1
KSM	Kuching	9.68	14	P	Pn	16 59 00.1	+3.5
PLAI	Plampang	9.78	96	P	Pn	16 59 00.0	+1.9
PLAI	Plampang	9.78	96	P	Pn	16 59 00.0	+1.9
	101nm,0.7s,1μm						
PDSI	Padang	10.22	313	P	Pn	16 59 14.1	+10
MYKOM	Kota Tinggi	10.52	337		Pn	16 59 10.1	+2.0
SBUM	Sibu	11.21	23		Pn	16 59 21.3	+3.8
KAPI	Kappang	12.11	77	P	Pn	16 59 33.6	+3.7
	11nm,0.6s,baz=256,slow=12,SNR=5.3						
KAPI				LR	LR	17 04 34.6	
	comp=Z,292nm,21.3s,baz=260,slow=40						
BKSI	Bulukumba	12.40	78	P	Pn	16 59 38.2	+4.4
	25nm,0.6s						
GSI	Gunungsitoli	13.84	311	Pn	Pn	16 59 48.0	-5.3
GSI	Gunungsitoli	13.84	311	P	Pn	16 59 53.4	+0.1
GSI	Gunungsitoli	13.84	311	P	Pn	16 59 48.9	-4.4
MMRI	Maumere	14.18	94	Pn	Pn	16 59 55.9	-1.9
MMRI	Maumere	14.18	94	P	Pn	16 59 57.2	-0.6
MMRI	Maumere	14.18	94	P	Pn	16 59 57.4	-0.4
	82nm,0.7s,1μm						
MPSI	Mapaga	14.51	56	P	P	17 00 07.1	-0.1
	28nm,0.9s						
KULM	Kulim	15.04	331	Pn	Pn	17 00 07.3	-1.8
TOLI2	Tolitoli	15.68	55	Pn	Pn	17 00 13.6	-3.6
TOLI2	Tolitoli	15.68	55	P	P	17 00 20.1	-0.1
GIRL	Giralia	15.80	158	Pn	Pn	17 00 14.7	-4.0
GIRL	Giralia	15.80	158	P	Pn	17 00 18.0	-0.7
KKM	Kota Kinabalu	16.19	31		Pn	17 00 24.0	+0.1
KKM				IAmb	IAmb	17 00 32.3	
	comp=Z,44nm,1.1s						
KKM	Kota Kinabalu	16.19	31	P	P	17 00 27.8	+1.8
SOEI	Soe	16.24	97	P	Pn	17 00 23.1	-1.5
SOEI				IAmb	IAmb	17 00 30.2	
	comp=Z,78nm,1.0s						
SOEI	Soe	16.24	97	P	Pn	17 00 22.9	-1.6
SOEI	Soe	16.24	97	P	Pn	17 00 17.7	-6.8
MRSI	Marisa	16.30	60	P	P	17 00 29.3	+2.2
	comp=Z,43nm,0.6s						
MYLDM	Lahad Datu	16.79	39		Pn	17 00 29.2	-2.1
MYLDM				IAmb	IAmb	17 00 51.3	
	comp=Z,86nm,1.4s						
GTOI	Gorontalo	17.30	61	P	P	17 00 38.2	0.0
	comp=Z,32nm,0.6s,comp=Z,352nm						
MBWA	Marble Bar	17.37	140	Pn	Pn	17 00 33.8	-4.6
MBWA	Marble Bar	17.37	140	P	Pn	17 00 38.6	+0.2
	comp=Z,14nm,2.4s						
PSA00	Pilbara Seismi	17.75	141		Pn	17 00 38.2	-4.8
PSA00	Pilbara Seismi	17.75	141	P	Pn	17 00 41.4	-1.6
SANI	Sanana	18.92	73	P	Pn	17 00 57.6	+0.3
SANI	Sanana	18.92	73	P	Pn	17 00 57.2	-0.1
	comp=Z,99nm,0.8s,comp=Z,909nm						
FITZ	Fitzroy Crossi	19.96	122	P	P	17 01 05.4	-1.9
FITZ	Fitzroy Crossi	19.96	122	P	Pn	17 01 08.9	-0.6
AAI	Ambon	20.61	79	P	P	17 01 15.3	+1.0
	comp=Z,104nm,0.6s,comp=Z,1μm						
LBMI	Labuha	20.82	70	P	Pn	17 01 18.6	-1.1
	comp=Z,173nm,0.7s,comp=Z,2μm						
MEEK	Meekatharra	21.16	153	P	P	17 01 23.2	+3.0
TNTI	Ternate	21.24	67	P	P	17 01 20.2	-1.0
TNTI				IAmb	IAmb	17 01 26.4	
	comp=Z,161nm,1.5s						
TNTI	Ternate	21.24	67	P	P	17 01 22.1	+0.9
TNTI	Ternate	21.24	67	P	P	17 01 22.9	+1.7
	comp=Z,66nm,0.6s,comp=Z,1μm						
KNRA	Kununurra	21.77	112	P	P	17 01 23.8	-3.0
KNRA				IAmb	IAmb	17 01 37.1	
	comp=Z,25nm,0.7s						
KNRA	Kununurra	21.77	112	P	P	17 01 27.2	+0.4
MTN	Manton Dam	23.32	104	P	P	17 01 40.8	-2.2
MTN				IAmb	IAmb	17 02 04.3	
	comp=Z,30nm,0.5s						
KDU	Kakadu	24.59	103	P	P	17 01 54.3	-0.3
FAKI	Fak Fak	24.72	80	P	P	17 01 53.3	-2.5
FAKI				IAmb	IAmb	17 01 59.4	
	comp=Z,16nm,0.8s						
FAKI	Fak Fak	24.72	80	P	P	17 01 55.7	-0.1
WRKA	Warakurna	25.81	134	P	P	17 02 08.3	+2.7
QIZ	Qiongzhong	26.90	4	P	P	17 02 16.4	+1.0
QIZ				S	S	17 06 50.9	+2.9
QIZ				LR	LR		
	comp=Z,170nm,3.5s						
PHRA	Phrae	27.38	344	P	P	17 02 18.5	-1.2
PHRA				PcP	PcP	17 05 39.5	+1.9
CMAR	Chiang Mai Arr	27.72	341	P	P	17 02 21.3	-1.4
	comp=Z,1.0nm,0.6s,baz=176,slow=9.0,SNR=13						
CMAR				PcP	PcP	17 05 40.1	+1.6
	comp=Z,2.9nm,0.7s,baz=200,slow=3.2,SNR=17						
CMAR				ScP	ScP	17 09 15.2	+1.1
	comp=Z,1.9nm,0.9s,baz=203,slow=3.0,SNR=13						
CMAR				LR	LR	17 13 25.5	
	comp=Z,82nm,21.3s,baz=165,slow=36						
	comp=Z,1.0nm,0.6s						
CMAR	Chiang Mai Arr	27.72	341	P	P	17 02 20.3	-2.5
CMAR				PcP	PcP	17 05 40.1	+1.6
WB0	Warramunga Arr	28.19	117	P	P	17 02 27.4	+0.4
WRA	Warramunga Arr	28.21	118	P	P	17 02 27.5	+0.3
	comp=Z,1.6nm,0.5s,baz=296,slow=12,SNR=56						
WRA				PcP	PcP	17 05 40.1	+0.3
	comp=Z,1.1nm,0.5s,baz=309,slow=2.0,SNR=6.5						
WRA				LR	LR	17 16 15.0	
	comp=Z,79nm,18.1s,baz=216,slow=42						
	comp=Z,1.6nm,0.5s						
WRA	Warramunga Arr	28.21	118	P	P	17 02 24.8	-2.4
WRAB	Tennant Creek	28.21	118	P	P	17 02 23.3	-4.0
WRAB	Tennant Creek	28.21	118	P	P	17 02 28.2	+0.9
WB2	Warramunga Arr	28.22	118	P	P	17 02 23.6	-3.7
WB2				IAmb	IAmb	17 02 32.5	
	comp=Z,12nm,1.2s						
AS31	Alice Springs	29.38	125	P	P	17 02 36.4	-1.2
ASAR	Alice Springs	29.38	125	P	P	17 02 38.1	+0.5
	comp=Z,1.2nm,0.5s,baz=304,slow=9.1,SNR=32						
ASAR				PcP	PcP	17 05 43.6	+0.9
	comp=Z,1.7nm,0.4s,baz=304,slow=2.1,SNR=16						
ASAR				ScP	ScP	17 09 21.1	+1.7
	comp=Z,2.1nm,0.9s,baz=315,slow=4.3,SNR=9.5						
ASAR				PKiKP	PKiKP	17 13 15.7	-0.6
	comp=Z,0.3nm,0.5s,baz=346,slow=0.5,SNR=8.0						
ASAR				LR	LR	17 15 38.6	
	comp=Z,134nm,18.6s,baz=268,slow=39						
	comp=Z,1.2nm,0.5s						
ASAR	Alice Springs	29.38	125	P	P	17 02 35.0	-2.6
AS01	Alice Springs	29.42	125	P	P	17 02 38.8	+0.8
FORT	Forrest	29.48	143	P	P	17 02 31.0	-7.3
FORT				IAmb	IAmb	17 02 45.6	
	comp=Z,45nm,1.3s						
PALK	Pallekele	31.08	298	P	P	17 02 55.2	+2.4
	comp=Z,2.1nm,0.5s,baz=241,slow=16,SNR=2.3						
PALK				LR	LR	17 14 38.5	
	comp=Z,94nm,18.8s,baz=234,slow=35						
PALK	Pallekele	31.08	298	P	P	17 02 55.8	+3.0
OOD	Oodnadatta	32.82	130	P	P	17 03 08.4	+0.6
MULG	Mulgathing	33.04	136	P	P	17 03 10.7	+1.0
QIS	Mount Isa	33.08	116	P	P	17 03 13.5	+3.3
TPUB	Ta-pu	33.47	22	P	P	17 03 12.5	-1.1
TPUB	Ta-pu	33.47	22	P	P	17 03 16.2	+2.7
	comp=Z,32nm,2.3s						
YULB	Yu-li	33.80	22	P	P	17 03 15.0	-1.4
YULB				IAmb	IAmb	17 03 31.2	
	comp=Z,12nm,0.9s						
YULB	Yu-li	33.80	22	P	P	17 03 19.6	+3.2
	comp=Z,14nm,1.0s						
SSLB	Suanglung	34.04	22	P	P	17 03 17.5	-0.9
SSLB				IAmb	IAmb	17 03 29.1	
	comp=Z,24nm,1.4s						
SSLB	Suanglung	34.04	22	P	P	17 03 17.5	-0.9
TNCH	TengChong	34.06	345	⇑P	P	17 03 20.8	+2.0
TNCH				pP	pP	17 03 39.6	+5.5
TNCH				sP	sP	17 03 52.0	+11
TNCH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TNCH				pmax	pmax		
	comp=Z,77nm,4.0s						
GYA	Guiyang	34.25	358	⇓P	P	17 03 24.8	+4.5
GYA				pmax	pmax		
	comp=Z,11nm,0.6s						
BRDH	Bariadhala	34.38	333	LR	LR	17 20 47.3	
	comp=Z,110nm,18.7s,baz=102,slow=42						
NACB	Ninganchiao	34.63	22	P	P	17 03 24.3	+0.8
	comp=Z,23nm,1.6s						
PZH	PanZhiHua	34.79	350	P	P	17 03 25.6	+0.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,5.1s						
YHNB	Yeheng	35.00	22	P	P	17 03 31.0	+4.2
COEN	Coen	35.08	103	P	P	17 03 27.7	+0.1
COEN				IAmb	IAmb	17 03 44.6	
	comp=Z,15nm,1.1s						
COEN	Coen	35.08	103	P	P	17 03 27.8	+0.2
H08S2	Diego Garcia H	35.10	268	T	T	17 40 41.0	
	baz=92,slow=76,SNR=157						
H08S3	Diego Garcia H	35.11	268	T	T	17 40 43.7	
	baz=92,slow=76,SNR=47						
H08S1	Diego Carcia H	35.12	268	T	T	17 40 39.3	
	baz=92,slow=76,SNR=164						
YOJ	Yonaguni jima	35.44	24	P	P	17 03 29.6	-0.9
YOJ	Yonaguni jima	35.44	24	P	P	17 03 31.0	+0.6
	comp=Z,75nm,1.4s						
KAAM	Kaadhehdhoo	35.82	282	P	P	17 03 36.4	+2.5
BBOO	Buckleboo	35.92	137	P	P	17 03 32.0	-2.6
BBOO				IAmb	IAmb	17 03 52.1	
	comp=Z,8.7nm,1.1s						
BBOO	Buckleboo	35.92	137	P	P	17 03 35.7	+1.1
LCRK	Leigh Creek	36.09	132	P	P	17 03 37.2	+1.1
PCHI	Peechi	36.41	300	*e*P	P	17 03 40.7	+1.7
MTSU	Mount Surprise	36.79	110	P	P	17 03 43.6	+1.4
HTT	Hallett	38.23	136	P	P	17 03 55.1	+0.9
PMG	Port Moresby	38.80	95	P	P	17 03 60.0	+0.8
CTA	Charters Tower	38.98	112	P	P	17 04 02.5	+1.8
	comp=Z,3.1nm,0.9s,baz=252,slow=16,SNR=2.9						
	comp=Z,3.1nm,0.9s						
STKA	Stephens Creek	39.31	132	P	P	17 04 04.4	+1.1
	comp=Z,9.0nm,0.5s,baz=309,slow=8.3,SNR=41						
STKA				PcP	PcP	17 06 12.0	+1.0
	comp=Z,3.2nm,0.5s,baz=314,slow=3.3,SNR=4.6						
STKA				LR	LR	17 21 18.1	
	comp=Z,130nm,19.4s,baz=215,slow=38						
	comp=Z,9.0nm,0.5s						
STKA	Stephens Creek	39.31	132	P	P	17 04 02.1	-1.1
STKA	Stephens Creek	39.31	132	P	P	17 04 04.1	+0.8
JOW	Kunigami	39.83	29	LR	LR	17 22 21.5	
	comp=Z,44nm,18.4s,baz=272,slow=39						
JOW	Kunigami	39.83	29	P	P	17 04 07.2	-0.4
JOW	Kunigami	39.83	29	P	P	17 04 09.1	+1.5
ODAN	Odare	39.95	331	*e*P	P	17 04 08.2	-0.6
TAPN	Taplejung	40.20	332	*e*P	P	17 04 09.5	-1.5
	comp=Z,5.6nm,0.3s						
RAMN	Ramite	40.41	330	*e*P	P	17 04 11.2	-1.4
	comp=Z,9.0nm,0.3s						
LSA	Lhasa	40.79	337	P	P	17 04 16.7	+0.8
NJ2	Nanjing	41.15	14	⇑P	P	17 04 20.8	+2.5
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
JIRN	Jiri	41.20	330	*e*P	P	17 04 17.8	-1.5
	comp=Z,17nm,0.3s						
PKI	Pulchoki	41.52	329	*e*P	P	17 04 21.4	-0.4
	comp=Z,3.2nm,0.2s						
PKIN	Phulchoki	41.53	329	*e*P	P	17 04 21.5	-0.4
	comp=Z,8.0nm,0.4s						
GUN	Gumba	41.56	330	*e*P	P	17 04 20.7	-1.5
	comp=Z,17nm,0.4s						
KKN	Kakani	41.76	329	*e*P	P	17 04 23.0	-0.7
XAN	Xi'an	41.79	1	P	P	17 04 25.4	+1.7
XAN				pP	sP	17 04 44.6	-2.0
XAN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XAN				LR	LR		
	comp=N,85nm,16.5s						
XAN				LR	LR		
	comp=E,120nm,14.9s						
XAN				LR	LR		
	comp=Z,150nm,19.6s						
XAN	Xi'an	41.79	1	P	P	17 04 22.8	-0.9
ARPS	Mount Arapiles	42.09	138	P	P	17 04 29.0	+3.0
CMSA	Cobar Meteorol	42.24	129	P	P	17 04 29.2	+1.8
GKN	Gorkha	42.26	329	*e*P	P	17 04 27.6	-0.1
	comp=Z,29nm,0.3s						
DANN	Dangsing	43.00	328	*e*P	P	17 04 33.7	-0.1
	comp=Z,41nm,0.3s						
TOO	Toolangi	44.97	137	P	P	17 04 47.9	-1.4
TOO				IAmb	IAmb	17 05 13.9	
	comp=Z,20nm,1.5s						
JNU	Nakatsue	46.34	27	LR	LR	17 26 01.7	
	comp=Z,35nm,19.2s,baz=210,slow=38						
GTA	Gaotai	47.74	352	*e*P	P	17 05 12.5	+1.5
GTA				pP	sP	17 05 37.4	+3.3
GTA				PcP	PcP	17 06 40.0	+0.6
GTA				ScP	ScP	17 10 29.3	+0.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
HHC	Hu-ho-hao-te	48.70	4	*e*P	P	17 05 20.3	+2.0
HHC				pmax	pmax		
	comp=Z,27nm,0.9s						
HHC				pmax	pmax		
	comp=Z,280nm,6.2s						
KSRS	Korea Array	48.91	21	P	P	17 05 19.0	-0.8
	comp=Z,0.7nm,0.5s,baz=209,slow=7.2,SNR=6.0						
KSRS				PcP	PcP	17 06 43.8	+0.4
	comp=Z,1.0nm,0.8s,baz=207,slow=4.2,SNR=5.3						
KSRS				LR	LR	17 27 49.9	
	comp=Z,19nm,18.1s,baz=195,slow=38						
	comp=Z,0.7nm,0.5s						
JHS	Saijyo	48.92	28	P	P	17 05 17.8	-2.3
JHS				IAmb	IAmb	17 05 19.3	
	comp=Z,19nm,1.3s						
MJAR	Matsushiro Arr	52.62	31	P	P	17 05 45.5	-2.4
	comp=Z,1.3nm,0.5s,baz=197,slow=9.0,SNR=7.5						
MJAR				PcP	PcP	17 06 57.9	+0.6
	comp=Z,2.4nm,0.7s,baz=194,slow=5.2,SNR=5.7						
	comp=Z,1.3nm,0.5s						
NIL	Nilore	52.88	323	P	P	17 05 49.3	-0.6
NIL	Nilore	52.88	323	P	P	17 05 48.9	-1.0
WMQ	Urumqi	54.72	342	*e*P	P	17 06 03.8	+0.7
SONM	Songino Array	55.58	359	P	P	17 06 08.7	-0.7
	comp=Z,3.7nm,0.6s,baz=178,slow=8.7,SNR=25						
SONM				PcP	PcP	17 07 08.6	+0.2
	comp=Z,11nm,0.4s,baz=177,slow=4.2,SNR=57						
SONM				ScP	ScP	17 11 01.5	-0.7
	comp=Z,1.0nm,1.0s,baz=183,slow=5.0,SNR=4.5						
SONM				LR	LR	17 31 30.2	
	comp=Z,88nm,21.6s,baz=198,slow=38						
	comp=Z,3.7nm,0.6s						
SONM	Songino Array	55.58	359	P	P	17 06 07.4	-1.9
KSH	Kashi	55.76	330	P	P	17 06 09.3	-1.5
KSH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KBL	Kabul	56.03	321	P	P	17 06 12.0	-0.9
JLN	Jalan Bani Buh	56.18	303	P	P	17 06 15.2	+1.3
USRK	Ussuriysk Ar.	56.31	21	P	P	17 06 13.9	-0.5
	comp=Z,1.6nm,0.5s,baz=200,slow=8.0,SNR=3.3						
	comp=Z,1.6nm,0.5s						
WBK	Wadi Bani Khal	56.75	304	P	P	17 06 18.7	+0.7
MHTO	MHTO	56.88	301	P	P	17 06 19.3	+0.4
WSAR	Wadi Sarin	57.31	304	P	P	17 06 22.8	+0.9
	comp=Z,8.2nm,0.5s,baz=163,slow=4.6,SNR=30						
	comp=Z,8.2nm,0.5s						
WSAR	Wadi Sarin	57.31	304	P	P	17 06 23.0	+1.0
	SNR=16						
JMDO	Jabal Madar	57.36	303	P	P	17 06 22.9	+0.6
SMDO	Samad	57.71	304	P	P	17 06 25.8	+0.9
BIDO	Bidbid	57.85	304	P	P	17 06 26.6	+0.8
DZM	Mont Dzumac	57.91	111	LR	LR	17 34 12.5	
	comp=Z,97nm,18.2s,baz=225,slow=39						
BSY	Bisya	58.27	303	P	P	17 06 29.7	+0.9
GAR	Garm	58.33	326	P	P	17 06 25.3	-3.7
HOQ	Hoqain	58.55	304	P	P	17 06 31.5	+0.9
	SNR=7.7						
CHGR	Chuyangaron	58.74	325	P	P	17 06 29.0	-2.8
RBK	Rabkut	58.80	296	P	P	17 06 32.7	+0.2
AAK	Ala-Archa	58.87	332	P	P	17 06 32.5	-0.2
MK31	Makanchi Array	59.11	340	P	P	17 06 31.7	-2.4
MK31				IAmb	IAmb	17 06 37.8	
	comp=Z,3.5nm,0.7s						
MKAR	Makanchi Array	59.11	340	P	P	17 06 32.4	-1.7
	comp=Z,5.5nm,0.4s,baz=154,slow=7.9,SNR=156						
MKAR				PcP	PcP	17 07 22.6	+0.4
	comp=Z,2.3nm,0.6s,baz=131,slow=6.3,SNR=4.2						
MKAR				ScP	ScP	17 11 17.3	-0.4
	comp=Z,0.4nm,0.9s,baz=169,slow=2.0,SNR=3.8						
MKAR				PKiKP	PKiKP	17 13 43.2	-0.4
	comp=Z,0.1nm,0.4s,baz=160,slow=1.9,SNR=4.3						
	comp=Z,5.5nm,0.4s						
MKAR	Makanchi Array	59.11	340	P	P	17 06 32.2	-1.9
MAKZ	Makanchi	59.23	340	P	P	17 06 33.4	-1.6
MAKZ	Makanchi	59.23	340	P	P	17 06 33.4	-1.6
MAKZ				pP	pP	17 06 49.9	-1.4
MAKZ				sP	sP	17 06 55.8	-2.4
WHFO	Wadi Hawf	59.33	296	P	P	17 06 35.9	-0.3
SOHO	SOHO	59.43	304	P	P	17 06 36.9	+0.2
SOHO	SOHO	59.43	304	P	P	17 06 37.2	+0.5
ABTO	Aybut	59.55	295	P	P	17 06 38.0	+0.3
OPO	Ambohidratompo	59.81	253	P	P	17 06 41.3	+1.6
	comp=Z,1.9nm,0.5s,baz=104,slow=8.6,SNR=5.0						
	comp=Z,1.9nm,0.5s						
UMZA	Um Al Zommool	59.97	302	P	P	17 06 40.7	+0.2
ALNE	Al Ain	60.04	304	P	P	17 06 41.8	+0.9
	SNR=5.4						
UOSS	Minazif	60.05	305	P	P	17 06 39.7	-1.3
UOSS	Minazif	60.05	305	P	P	17 06 40.8	-0.2
UOSS	Minazif	60.05	305	P	P	17 06 41.1	+0.1
UOSS	Minazif	60.05	305	P	P	17 06 41.1	+0.1
ASHO	Ashiyiah	60.06	304	P	P	17 06 41.5	+0.4
ASHO	Ashiyiah	60.06	304	P	P	17 06 41.7	+0.7
	SNR=13						
HATD	Hatta, Dubai	60.06	305	P	P	17 06 41.1	+0.1
HATD	Hatta, Dubai	60.06	305	P	P	17 06 41.7	+0.6
	SNR=5.2						
MDH	Madha	60.13	305	P	P	17 06 40.7	-0.8
MDH	Madha	60.13	305	P	P	17 06 41.1	-0.4
MSFE	Esma-Masafi	60.27	305	P	P	17 06 41.9	-0.6
MASF	Masafi	60.28	305	P	P	17 06 42.6	0.0
VOI	Vohitsoka	60.32	249	P	P	17 06 44.7	+1.6
BANOM	Banah	60.41	306	P	P	17 06 43.8	+0.4
BANOM	Banah	60.41	306	P	P	17 06 44.1	+0.6
HEH	HeiHe	60.41	14	*e*P	P	17 06 40.9	-2.0
FAQ	Al Faqa, Dubai	60.47	304	P	P	17 06 44.4	+0.5
	SNR=5.8						
SHME	Shamm	60.59	306	P	P	17 06 44.4	-0.3
SHME	Shamm	60.59	306	P	P	17 06 45.0	+0.3
ASUD	Al Ashush, Dub	60.63	304	P	P	17 06 45.4	+0.5
ASUD	Al Ashush, Dub	60.63	304	P	P	17 06 45.7	+0.8
	SNR=15						
KLR	Kul'dur	60.67	18	LR	LR	17 34 11.2	
	comp=Z,29nm,18.2s,baz=197,slow=37						
KK31	Karatay Array	61.16	329	P	P	17 06 46.5	-1.7
KK31				IAmb	IAmb	17 06 48.8	
	comp=Z,2.5nm,0.5s						
KKAR	Karatay Array	61.16	329	P	P	17 06 46.1	-2.1
KKAR	Karatay Array	61.16	329	P	P	17 06 46.2	-2.1
KKAR				IAmb	IAmb	17 06 48.7	
	comp=Z,2.5nm,0.5s						
MZWR	Madinat Zayed	61.47	302	P	P	17 06 51.0	+0.4
DRV	Dumont d'Urvil	62.57	166	P	P	17 06 57.8	+0.5
DRV				pP	pP	17 07 14.8	+2.1
JRN	Qarnain Island	62.81	303	P	P	17 06 59.7	+0.1
KURK	Kurchatov	63.72	340	P	P	17 07 03.2	-1.9
KURK				IAmb	IAmb	17 07 05.1	
	comp=Z,3.4nm,0.7s						
KURK	Kurchatov	63.72	340	P	P	17 07 04.3	-0.8
KURK	Kurchatov	63.72	340	P	P	17 07 04.3	-0.8
ZAA0	Zalesovo Array	64.70	345	P	P	17 07 09.0	-2.4
ZALV	Zalesovo Beam	64.70	345	P	P	17 07 10.1	-1.4
	comp=Z,2.2nm,0.3s,baz=152,slow=6.3,SNR=25						
ZALV				PcP	PcP	17 07 43.5	-1.2
	comp=Z,2.3nm,0.4s,baz=162,slow=2.9,SNR=6.4						
	comp=Z,2.2nm,0.3s						
ZALV	Zalesovo Beam	64.70	345	P	P	17 07 09.1	-2.3
SHMA	Al-Shehemyia	64.74	303	P	P	17 07 13.5	+1.3
GEYT	Alibeck	65.10	318	P	P	17 07 14.4	-0.1
	comp=Z,16nm,0.6s,baz=145,slow=5.4,SNR=39						
GEYT				LR	LR	17 37 14.8	
	comp=Z,57nm,18.6s,baz=130,slow=38						
	comp=Z,16nm,0.6s						
GEYT	Alibeck	65.10	318	P	P	17 07 14.2	-0.3
GEYT				IAmb	IAmb	17 07 15.3	
	comp=Z,17nm,0.7s						
GYA0B	ALIBECK ARRAY	65.10	318	P	P	17 07 14.1	-0.3
GYA0B				IAmb	IAmb	17 07 15.2	
	comp=Z,16nm,0.7s						
RPZ	Rata Peaks	65.20	135	LR	LR	17 35 18.8	
	comp=Z,41nm,19.4s,baz=266,slow=36						
CCD	Concordia, Ant	67.66	176	P	P	17 07 33.3	+2.6
CCD				pP	pwP	17 07 50.8	+0.4
CCD				sP	PcP	17 07 58.3	+1.0
RAYN	Ar Rayn	68.52	299	P	P	17 07 33.8	-2.7
RAYN	Ar Rayn	68.52	299	P	P	17 07 35.9	-0.6
RAYN	Ar Rayn	68.52	299	P	P	17 07 35.9	-0.6
BVAR	Borovoye Array	68.62	337	LR	LR	17 42 09.2	
	comp=Z,59nm,18.7s,baz=168,slow=40						
BRVK	Borovoye	68.68	337	P	P	17 07 35.6	-1.2
BRVK				IAmb	IAmb	17 07 38.0	
	comp=Z,4.5nm,0.8s						
BRVK	Borovoye	68.68	337	P	P	17 07 36.1	-0.7
BRVK	Borovoye	68.68	337	P	P	17 07 36.5	-0.4
BRVK				sP	PcP	17 08 01.5	+0.2
URZ	Urewera	68.77	128	LR	LR	17 38 21.3	
	comp=Z,86nm,20.1s,baz=335,slow=36						
KIBK	Kibwezi	69.76	270	P	P	17 07 45.8	+1.4
ABKAR	Akbulak array	70.71	329	P	P	17 07 48.4	-1.0
YAK	Yakutsk	71.81	11	LR	LR	17 42 32.1	
	comp=Z,26nm,18.2s,baz=240,slow=38						
YAK	Yakutsk	71.81	11	P	P	17 07 52.5	-3.3
YAK				IAmb	IAmb	17 07 56.1	
	comp=Z,11nm,0.6s						
YAK	Yakutsk	71.81	11	P	P	17 07 53.7	-2.1
PEA0B	Petropavlovsk-	74.00	29	P	P	17 08 07.4	-1.5
PETK	Petropavlovsk-	74.00	29	P	P	17 08 07.5	-1.5
	comp=Z,1.5nm,0.6s,baz=185,slow=0.7,SNR=13						
	comp=Z,1.5nm,0.6s						
PETK	Petropavlovsk-	74.00	29	P	P	17 08 07.2	-1.7
VNDA	Vanda	74.85	170	P	P	17 08 14.6	+1.1
	comp=Z,1.5nm,0.4s,baz=318,slow=6.1,SNR=12						
	comp=Z,1.5nm,0.4s						
VNDA	Vanda	74.85	170	P	P	17 08 12.6	-0.9
VNDA				IAmb	IAmb	17 08 33.6	
	comp=Z,8.4nm,1.2s						
GNI	Garni	75.29	315	LR	LR	17 44 41.6	
	comp=Z,18nm,18.8s,baz=104,slow=38						
ARU	Arti	75.89	334	LR	LR	17 49 10.6	
	comp=Z,63nm,19.0s,baz=174,slow=42						
ARU	Arti	75.89	334	P	P	17 08 18.8	-0.9
ARU				IAmb	IAmb	17 08 20.4	
	comp=Z,24nm,1.5s						
MBAR	Mbarara	77.23	271	P	P	17 08 30.0	+1.6
KBZ	Khabaz	77.98	318	P	P	17 08 31.6	-0.1
	comp=Z,3.3nm,0.8s,baz=210,slow=9.9,SNR=8.8						
	comp=Z,3.3nm,0.8s						
LSZ	Lusaka	78.09	256	LR	LR	17 38 20.5	
	comp=Z,44nm,19.9s,baz=132,slow=32						
NRIK	Noril'sk	78.42	353	P	P	17 08 32.2	-1.4
	comp=Z,2.6nm,0.4s,baz=136,slow=5.5,SNR=5.6						
NRIK				LR	LR	17 46 08.2	
	comp=Z,57nm,18.6s,baz=80,slow=38						
	comp=Z,2.6nm,0.4s						
EIL	Elat	79.37	302	LR	LR	17 45 01.6	
	comp=Z,31nm,19.6s,baz=136,slow=37						
BOSA	Boshof	79.82	242	P	P	17 08 43.7	+1.3
	comp=Z,3.0nm,0.7s,baz=112,slow=4.8,SNR=9.7						
BOSA				LR	LR	17 37 00.9	
	comp=Z,50nm,20.8s,baz=161,slow=30						
	comp=Z,3.0nm,0.7s						
BOSA	Boshof	79.82	242	P	P	17 08 42.0	-0.4
BOSA				IAmb	IAmb	17 08 55.3	
	comp=Z,8.6nm,1.2s						
TIXI	Tiksi	80.66	7	LR	LR	17 47 12.7	
	comp=Z,38nm,18.2s,baz=214,slow=38						

TIXI	Tiksi	80.66	7	P	P	17 08 43.8	-2.0
TIXI				IAmb	IAmb	17 08 45.4	
	comp=Z,8.1nm,0.5s						
QSPA	South Pole Qui	82.02	180	P	P	17 08 54.3	+0.9
	comp=Z,3.2nm,0.8s,baz=357,slow=23,SNR=5.4						
QSPA				LR	LR	17 40 48.4	
	comp=Z,76nm,20.4s,baz=328,slow=32						
	comp=Z,3.2nm,0.8s						
QSPA	South Pole Qui	82.02	180	P	P	17 08 53.4	0.0
QSPA				IAmb	IAmb	17 09 01.2	
	comp=Z,14nm,1.3s						
BR131	Keskin Array S	83.16	312	P	P	17 08 59.7	-0.1
	SNR=6.7						
BRTR	Keskin Array B	83.16	312	P	P	17 08 59.5	-0.4
	comp=Z,3.1nm,0.8s,baz=134,slow=7.2,SNR=16						
	comp=Z,3.1nm,0.8s						
BRTR	Keskin Array B	83.16	312	P	P	17 08 58.1	-1.7
SUR	Sutherland	83.36	238	LR	LR	17 39 05.6	
	comp=Z,55nm,20.4s,baz=146,slow=30						
BILL	Bilibino	86.11	19	P	P	17 09 12.4	-1.5
KLMR	Klimovskoe	86.66	333	*e*P	P	17 09 14.3	-2.4
KLMR				AMP		17 09 19.0	
	comp=Z,36nm,1.5s						
TSUM	Tsumeb	87.74	251	LR	LR	17 42 18.6	
	comp=Z,49nm,20.1s,baz=152,slow=31						
CFR	Carcaliu	88.47	316	⇓P	P	17 09 26.4	+0.7
HARR	Harsova	88.50	315	⇓P	P	17 09 26.7	+0.8
SNAA	Sanae	88.88	197	LR	LR	17 44 25.8	
	comp=Z,105nm,21.0s,baz=120,slow=32						
IDI	Anoyia	88.91	306		P	17 09 27.6	-0.5
AKASG	Malin Array Be	89.02	321	P	P	17 09 27.2	-1.0
	comp=Z,0.3nm,0.4s,baz=75,slow=3.6,SNR=11						
AKASG				PP	PP	17 12 56.9	-1.9
	comp=Z,0.5nm,0.6s,baz=84,slow=5.4,SNR=5.7						
AKASG				LR	LR	17 56 16.5	
	comp=Z,22nm,19.6s,baz=82,slow=40						
	comp=Z,0.3nm,0.4s						
VRI	Vrincioaia	89.58	316	⇓P	P	17 09 32.2	+1.2
MLR	Muntele Rosu	90.04	316	⇓P	P	17 09 33.8	+0.5
MLR	Muntele Rosu	90.04	316	LR	LR	17 58 08.4	
	comp=Z,24nm,18.1s,baz=96,slow=41						
MLR	Muntele Rosu	90.04	316		P	17 09 31.4	-1.9
MLR				IAmb	IAmb	17 09 40.5	
	comp=Z,4.7nm,0.9s						
VOIR		90.65	316	⇑P	P	17 09 36.2	+0.2
ARR	Arges	90.93	316	⇑P	P	17 09 37.4	0.0
BURAR	Bucovina Array	90.94	318	⇑P	P	17 09 39.0	+1.6
FIA1	FINESS Array S	93.06	332	P	P	17 09 44.8	-1.9
FINES	FINESS Array B	93.06	332	P	P	17 09 46.2	-0.4
	comp=Z,4.0nm,0.7s,baz=114,slow=6.6,SNR=38						
FINES				PKiKP	PKiKP	17 14 33.5	-0.1
	comp=Z,1.2nm,0.6s,baz=90,slow=2.4,SNR=11						
FINES				LR	LR	17 57 38.4	
	comp=Z,50nm,18.5s,baz=57,slow=39						
	comp=Z,4.0nm,0.7s						
UNV	Unalaska Valle	93.77	36	P	P	17 09 48.8	-1.3
AKUT	Akutan	94.23	36	P	P	17 09 50.4	-1.9
ARCES	ARCESS Array B	94.76	340	P	P	17 09 54.2	-0.2
	comp=Z,3.8nm,0.9s,baz=95,slow=5.6,SNR=9.4						
ARCES				LR	LR	17 58 53.1	
	comp=Z,66nm,19.9s,baz=105,slow=40						
	comp=Z,3.8nm,0.9s						
ANM	Nome	95.72	26	P	P	17 09 58.3	-0.6
ANM				IAmb	IAmb	17 10 00.7	
	comp=Z,2.2nm,0.7s						
SPITS	Spitsbergen Ar	98.07	348	LR	LR	18 00 34.2	
	comp=Z,50nm,18.3s,baz=14,slow=39						
GERES	GERESS Array B	98.72	318	P	Pdif	17 10 13.2	+0.2
	comp=Z,0.4nm,0.5s,baz=108,slow=4.3,SNR=2.1						
	comp=Z,0.4nm,0.5s						
HFS	Hagfors	98.97	330	LR	LR	18 00 39.1	
	comp=Z,27nm,18.2s,baz=352,slow=39						
ILAR	Eielson Array	103.63	25	PKiKP	PKiKP	17 14 53.2	+0.9
	comp=Z,0.2nm,0.6s,baz=274,slow=3.9,SNR=4.5						
TORD	Torodi Ar. Bea	107.51	281	PKiKP	PKiKP	17 15 00.7	-0.1
	comp=Z,0.8nm,0.5s,baz=78,slow=1.4,SNR=11						
ESDC	Sonseca Array	111.88	309	PKiKP	PKiKP	17 15 08.9	+0.4
	comp=Z,0.4nm,0.5s,baz=33,slow=3.2,SNR=5.7						
YKA	Yellowknife Ar	117.45	21	PKP	PKiKP	17 15 18.5	+0.1
	comp=Z,2.3nm,0.5s,baz=345,slow=1.6,SNR=78						
YKA				SKP	SKPdf	17 18 48.4	-0.4
	comp=Z,0.3nm,0.8s,baz=326,slow=1.8,SNR=3.7						
NVAR	Mina Array Bea	128.57	46	PKP	PKiKP	17 15 43.1	+1.7
	comp=Z,0.8nm,0.6s,baz=253,slow=1.8,SNR=6.7						
EGMT	Eagleton	128.93	32	PKPdf	PKiKP	17 15 42.6	+0.9
PDAR	Pinedale Array	132.22	37	PKP	PKPdf	17 15 47.2	-0.4
	comp=Z,1.1nm,0.5s,baz=31,slow=0.4,SNR=14						
PDAR				SKPbc	SKPab	17 19 09.6	-0.5
	comp=Z,0.6nm,0.8s,baz=48,slow=2.2,SNR=4.5						
SCHQ	Schefferville	133.08	356	PKP	PKiKP	17 15 49.5	-0.3
	comp=Z,5.7nm,0.5s,baz=309,slow=1.5,SNR=27						
ULM	Lac du Bonnet	133.43	21	PKP	PKiKP	17 15 50.4	-0.2
	comp=Z,2.5nm,0.4s,baz=284,slow=2.5,SNR=7.1						
RSSD	Black Hills	134.49	32	PKPdf	PKPdf	17 15 52.3	+0.4
CPUP	Villa Florida	143.02	202	PKP	PKPdf	17 16 08.4	+0.8
	comp=Z,4.2nm,1.1s,baz=252,slow=3.2,SNR=3.4						
TX31	Lajitas Ar. Si	143.50	50	PKPdf	PKPbc	17 16 06.2	+0.3
TXAR	Lajitas Array	143.50	50	PKP	PKPbc	17 16 06.9	+1.0
	comp=Z,1.8nm,0.4s,baz=238,slow=0.5,SNR=60						
ABTX	Abilene, Hawle	144.57	42	PKPdf	PKPdf	17 16 09.8	-0.5
WTFS	Witchita Falls	144.62	40		PKPbc	17 16 09.5	+0.4
S39A	Bolivar	144.71	30	PKPdf	PKPab	17 16 09.2	0.0
N47A	Urbana	145.06	18	PKPdf	PKPbc	17 16 09.7	-0.5
U38A	Gravette	145.12	32		PKPdf	17 16 11.0	-0.1
K57A	Scipio Center	145.16	6		PKPab	17 16 10.6	0.0
CCM	Cathedral Cave	145.40	27		PKPab	17 16 11.8	+0.2
N49A	Columbus Grove	145.46	16		PKPab	17 16 11.9	+0.1
HHAR	Hobbs	145.48	32		PKPab	17 16 12.2	+0.2
M52A	Chesterland	145.57	12		PKPab	17 16 12.3	+0.2
HRV	Adam Dziewonsk	145.60	359		PKPab	17 16 12.1	-0.1
L56A	Greenwood	145.63	7		PKPbc	17 16 12.0	-0.1
JCT	Junction City	145.73	46		PKPab	17 16 14.4	+1.2
BDFB	Brasilia	146.56	225	PKPbc	PKPab	17 16 17.6	+0.8
	comp=Z,4.9nm,0.5s,baz=120,slow=2.6,SNR=7.5						
N58A	Sunbury	147.01	6		PKPbc	17 16 16.3	+0.2
WCI	Wyandotte Cave	147.25	21		PKPbc	17 16 17.2	+0.3
Q52A	Bidwell	147.81	15		PKPbc	17 16 18.3	-0.1
WVT	Waverly	148.50	25		PKPbc	17 16 21.0	+0.7
OXF	Oxford	149.15	29		PKPbc	17 16 22.5	+0.5
Y45A	Yeager Farm, C	149.60	30		PKiKP	17 16 24.3	+0.1
V51A	Loudon	150.11	20		PKiKP	17 16 24.9	-0.3
Z47A	Carrollton	150.86	28		PKiKP	17 16 26.9	+0.1
Y49A	Blount Mountai	151.04	25		PKiKP	17 16 27.0	-0.2
LRAL	Lakeview Retre	151.49	27		PKPbc	17 16 27.8	+0.1
Y52A	Lilburn	151.96	22		PKiKP	17 16 30.0	+0.9
W57A	Gilead	151.99	14		PKiKP	17 16 29.1	+0.1

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*ISK **18** 17:20:08.3, 39°.53N×26°.15E, h5^{km}, ML3.0/31*
*ATH **18** 17:20:08.9, 39°.52N×26°.18E, h5^{km}±2^{km}, ML2.7/7, Error ellipse: s-maj=3.0km s-min=0.7km az=238.0*
*DDA **18** 17:20:08.4±0.0, 39°.54N×26°.19E, h3^{km}±1^{km}, ML3.1*
*THE **18** 17:20:08.9, 39°.53N×26°.16E, h4^{km}±1^{km}, ML2.6/2, Error ellipse: s-maj=1.6km s-min=0.4km az=182.0*

ISC 18 17:20:08.7±0.8, **39°.53N**±0°.01×**26°.18E**±0°.02, **h10**^{km}±5^{km}, **n76**, σ**1^{s}.00**/110, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.04	234	P	Pg	17 20 10.2	-0.5
KOCA				S	Sg	17 20 11.3	-0.8
GPNR	Gulpinar-Canak	0.08	207	Pg	Pg	17 20 10.6	-0.4
PRK	Paraskevi	0.29	165	P	Pg	17 20 14.7	+0.2
PRK				S	Sg	17 20 19.2	+0.8
	3µm,0.3s						
PRK	Paraskevi	0.29	165	P	Pg	17 20 14.6	+0.2
PRK				S	Sg	17 20 18.4	0.0
PRK				AML	AML	17 20 19.5	
	comp=E,6591µm,0.3s						
PRK				AML	AML	17 20 21.2	
	comp=N,5086µm,0.4s						
EZN	Ezine	0.32	21	P	Pg	17 20 15.1	0.0
EZN	Ezine	0.32	21	Pg	Pg	17 20 15.1	0.0
BOZC	Bozcaada	0.33	343	Pg	Pg	17 20 15.2	-0.1
BOZC				Sg	Sg	17 20 19.8	0.0
BAYC	CANAKKALE_Bayr	0.36	53	P	Pg	17 20 15.4	-0.4
BAYC				S	Sg	17 20 19.9	-0.7
SIGR	SIGRI	0.40	219	P	Pg	17 20 16.4	-0.2
SIGR				S	Sg	17 20 22.2	+0.3
	comp=N,902nm,0.3s						
SIGR	SIGRI	0.40	219	Pg	Pg	17 20 16.4	-0.2
SIGR				Sg	Sg	17 20 22.4	+0.5
SIGR	SIGRI	0.40	219	P	Pg	17 20 16.4	-0.2
SIGR				S	Sg	17 20 22.1	+0.2
SIGR				AML	AML	17 20 23.3	
	comp=N,2074µm,0.4s						
SIGR				AML	AML	17 20 23.7	
	comp=E,1503µm,0.2s						
ECEA	Canakkale, Ece	0.52	360	P	Pg	17 20 18.3	-0.5
ECEA				S	Sg	17 20 25.8	+0.2
COMU	Canakkale	0.62	22	Pg	Pg	17 20 20.7	0.0
BUHA	Balikesir, Bur	0.69	92	P	Pg	17 20 21.7	-0.5
BUHA				S	Sg	17 20 31.9	+0.6
GOKA	anakkale-Gk	0.70	343	P	Pg	17 20 22.0	-0.2
GOKA				S	Sg	17 20 30.9	-0.5
GADA	Gvkgeada	0.70	342	Pg	Pg	17 20 21.9	-0.3
DKL	Dikili	0.72	129	Pg	Pg	17 20 23.1	+0.4
CANM	Can-anakkale	0.83	54	Pg	Pg	17 20 24.6	-0.1
LIA	Limnos Island	0.85	296	P	Pg	17 20 25.0	-0.2
LIA	Limnos Island	0.85	296	P	Pg	17 20 24.9	-0.2
LIA				S	Sg	17 20 36.8	+0.5
LIA				AML	AML	17 20 39.6	
	comp=N,3229µm,0.3s						
LIA				AML	AML	17 20 39.7	
	comp=E,3396µm,0.4s						
KARB	zmir-Karabur	0.88	168	P	Pg	17 20 25.6	0.0
KARB				S	Sg	17 20 37.7	+0.7
KARB				*i* AML	AML	17 20 40.0	
	comp=E,554nm,0.4s						
ZEDA	zmir-Bergama	0.89	128	P	Pg	17 20 25.9	0.0
ZEDA				S	Sb	17 20 39.7	+1.5
GELI	Tayfur-Gelibol	0.90	15	Pg	Pg	17 20 26.2	+0.1
LPK	Lapseki	0.96	28	Pg	Pg	17 20 26.9	-0.2
SMTH	Samothraki Isl	1.07	332	P	Pg	17 20 28.8	-0.4
SMTH	Samothraki Isl	1.07	332	P	Pg	17 20 29.1	-0.1
SMTH				S	Sg	17 20 43.3	+0.1
SMTH				AML	AML	17 20 45.2	
	comp=N,490µm,0.4s						
SMTH				AML	AML	17 20 45.3	
	comp=E,400µm,0.2s						
PSRA	Psara	1.09	206	P	Pg	17 20 29.9	+0.2
PSRA				S	Sg	17 20 44.5	+0.6
PSRA				AML	AML	17 20 48.3	
	comp=E,1643µm,0.2s						
PSRA				AML	AML	17 20 49.2	
	comp=N,1391µm,0.2s						
CHOS	Chios island	1.14	185	P	Pg	17 20 29.9	-0.7
CHOS	Chios island	1.14	185	P	Pg	17 20 29.8	-0.9
CAVK	Edirne/Enez-Ca	1.17	360	P	Pg	17 20 30.0	-1.1
CAVK				S	Sb	17 20 46.8	+0.7
ERIK	Erikli-Kesan	1.17	13	Pn	Pg	17 20 30.3	-0.9
STEP	BALIKESIR_Sava	1.20	97	P	Pg	17 20 31.9	+0.1
STEP				S	Sb	17 20 48.3	+1.2
URLA	Izmir	1.21	164	Pn	Pg	17 20 30.9	-1.0
ENEZ	Enez	1.21	359	P	Pg	17 20 31.4	-0.5
ENEZ				S	Sn	17 20 48.6	+0.6
ENEZ	Enez	1.21	359	Pn	Pb	17 20 32.2	+0.6
KRBG	Karabiga-Canak	1.22	44	Pn	Pg	17 20 31.4	-0.8
GONE	Gonen-Balikesi	1.27	65	Pn	Pg	17 20 33.1	0.0
KNL	Balıkesir	1.28	54	P	Pb	17 20 33.8	+1.0
KNL				S	Sg	17 20 48.1	-1.7
ZEYE	Izmir, Urla-Ze	1.31	169	P	Pn	17 20 32.1	-0.8
ZEYE				S	Sg	17 20 49.9	-0.9
BALB	Balikesir	1.32	84	Pn	Pb	17 20 34.0	+0.5
BLCB	Balcova	1.32	149	Pn	Pb	17 20 34.3	+0.8
BKES	Balkesir-Mer	1.37	81	P	Pn	17 20 34.7	+0.9
BKES				S	Sg	17 20 52.9	+0.2
ALN	Alexandroupoli	1.38	356	P	Pn	17 20 34.0	+0.1
ALN				S	Sb	17 20 52.5	+0.5
ALN	Alexandroupoli	1.38	356	Pn	Pn	17 20 34.3	+0.4
ALN	Alexandroupoli	1.38	356	P	Pn	17 20 33.7	-0.1
ALN				S	Sb	17 20 52.0	0.0
ALN				AML	AML	17 20 53.9	
	comp=N,647µm,0.4s						
ALN				AML	AML	17 20 54.3	
	comp=E,874µm,0.3s						
RKY	Sarkoy-Tekirda	1.39	33	Pn	Pn	17 20 34.8	+0.6
AKS	Akhisar	1.42	116	Pn	Pn	17 20 35.3	+0.7
EDC	Edincik	1.53	57	Pn	Pn	17 20 36.7	+0.6
DGB	zmir	1.57	159	P	Pn	17 20 36.0	-0.5
DGB				S	Sn	17 20 54.5	-2.3
UKOP	Uzunkopru-Edir	1.64	12	Pn	Pn	17 20 38.1	+0.6
RDO	Rodhopi	1.69	343	Pn	Pn	17 20 38.1	-0.1
RDO	Rodhopi	1.69	343	P	Pn	17 20 38.5	+0.3
RDO				S	Sn	17 21 00.0	+0.1
RDO				AML	AML	17 21 05.2	
	comp=N,120µm,0.4s						
RDO				AML	AML	17 21 05.5	
	comp=E,96µm,0.3s						
BAND	Balkesir-Ban	1.69	60	P	Pn	17 20 38.8	+0.6
BAND				S	Sn	17 21 00.3	+0.4
TKR	Tekirdag	1.79	35	Pn	Pn	17 20 40.9	+1.3
KCTX	Karacabey (Bur	1.83	65	Pn	Pn	17 20 41.1	+0.9
SMG	Samos	1.89	164	P	Pn	17 20 41.0	+0.1
DST	Dursunbey	1.89	87	Pn	Pn	17 20 42.0	+1.0
KAVA	Kavala	1.94	320	P	Pn	17 20 41.5	-0.2
CRLT	Corlu	2.00	36	Pn	Pn	17 20 43.5	+1.1
GCAM	G?zelcaml?	2.00	155	Pn	Pn	17 20 43.5	+1.1
MANT	Manisa	2.12	118	P	Pn	17 20 44.5	+0.1
MANT				S	Sn	17 21 07.4	-3.5
KULA	Kula-Manisa	2.18	117	Pn	Pn	17 20 45.8	+0.8
KDZ	Kurdzhali	2.20	345	Pn	Pn	17 20 46.4	+1.1
SIMA	Simav-Kutahya	2.22	101	Pn	Pn	17 20 46.7	+1.1
MDNY	Mudanya-Bursa	2.24	67	Pn	Pn	17 20 47.6	+1.8
SLVT	Silivri	2.30	42	Pn	Pn	17 20 48.0	+1.4
USAK	Uak-Merkez	2.35	109	P	Pn	17 20 47.8	+0.4
USAK				S	Sg	17 21 23.5	-0.7
EDRB	Edirne	2.36	10	Pn	Pn	17 20 48.4	+1.0
KIRK	Kırklareli	2.36	17	P	Pn	17 20 47.3	-0.1
KIRK				S	Sn	17 21 14.1	-2.3
CTKS	Kestanelik-??a	2.47	45	Pn	Pn	17 20 50.3	+1.4
NVR	Nevrokopi	2.54	317	P	Pn	17 20 50.4	+0.5
ANDZ	Kutahya, Merke	2.88	89	P	Pn	17 20 53.1	-1.5
ANDZ				S	Sn	17 21 30.3	+0.9
BILE	Bilecik/Merkez	2.92	76	P	Pn	17 20 56.2	+1.1
HISA	Bilecik-Osmane	3.02	71	P	Pn	17 20 56.9	+0.3
HISA				S	Sn	17 21 31.0	-2.0
SEMS	Kocaeli-K¶rfe	3.04	63	P	Pn	17 20 59.2	+2.4
SEMS				S	Sn	17 21 28.8	-4.4
KAYN	Sakarya, Kayna	3.50	64	P	Pn	17 21 02.3	-0.7
KAYN				S	Sn	17 21 42.0	-2.4

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*IDC **18** 17:28:44.0±1.2, 27°.22N×65°.59E, h0^{km}, mb3.7/16, mbtmp3.7/18, ML3.5/2, MS3.4/6, Error ellipse: s-maj=26.7km s-min=17.4km az=170.0*
*DSN **18** 17:28:52.3±0.2, 26°.95N×64°.93E, h10^{km}, ML3.3/6, Error ellipse: s-maj=12.2km s-min=3.4km az=1.0*

ISC 18 17:28:47.5±0.7, **27°.15N**±0°.10×**65°.53E**±0°.06, **h35**^{km}, **n35**, σ**2^{s}.53**/38, **mb3.7**/16, **MS3.2**/4, **Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	7.36	240	Pn	Pn	17 30 33.7	+1.2
	1.0nm,0.3s,baz=63,slow=11,SNR=2.4						
WSAR				Sn	Sn	17 31 48.4	-6.5
	1.1nm,0.3s,baz=86,slow=2.4,SNR=5.6						
WSAR				LR	LR	17 34 31.5	
	comp=Z,154nm,18.5s,baz=106,slow=47						
	2.3nm,0.4s						
THW	Thamme Wali	7.79	42	P	Pn	17 30 36.4	-2.1
BANOM	Banah	8.36	264	P	Pn	17 30 45.4	-0.8
BANOM				S	Sn	17 32 13.4	-6.0
SHME	Shamm	8.47	265	P	Pn	17 30 48.4	+0.5
SHME				S	Sn	17 32 19.8	-2.5
MDH	Madha	8.49	260	P	Pn	17 30 43.8	-4.3
MSFE	Esma-Masafi	8.60	260	P	Pn	17 30 47.6	-2.0
CEP	Cherat	8.63	38	P	Pn	17 30 50.5	+0.4
CEP				S	Sn	17 32 19.0	-7.3
UOSS	Minazif	8.67	257	P	Pn	17 30 49.6	-0.9
HATD	Hatta, Dubai	8.77	257	P	Pn	17 30 51.7	-0.2
ASHO	Ashiyiah	8.87	256	P	Pn	17 30 53.8	+0.5
DANN	Dangsing	16.19	82	*e*P	Pn	17 32 32.5	-0.1
	37nm,0.8s						
AAK	Ala-Archa	17.10	23	P	Pn	17 32 42.7	-1.2
	0.1nm,0.3s,baz=214,slow=13,SNR=1.8						
AAK				S	Sn	17 35 41.1	-12
	0.9nm,0.8s,baz=196,slow=18,SNR=1.9						
AAK				LR	LR	17 39 03.6	
	comp=Z,49nm,18.7s,baz=200,slow=36						
	0.8nm,0.6s						
PKIN	Phulchoki	17.66	84	*e*P	Pn	17 32 48.5	-2.6
	0.9nm,0.2s						
PKI	Pulchoki	17.67	84	*e*P	Pn	17 32 49.1	-2.2
GUN	Gumba	18.07	83	*e*P	Pn	17 32 54.9	-1.3
JIRN	Jiri	18.35	84	*e*P	P	17 32 57.8	-1.8
RAMN	Ramite	18.77	86	*e*P	P	17 33 01.8	-2.2
	10nm,0.5s						
TAPN	Taplejung	19.72	84	*e*P	P	17 33 15.8	+1.3
GNI	Garni	21.56	312	P	P	17 33 35.1	+1.0
	1.4nm,0.5s,baz=115,slow=19,SNR=2.1						
	1.4nm,0.5s						
MKAR	Makanchi Array	23.66	30	P	P	17 33 55.3	-0.4
	1.1nm,0.6s,baz=211,slow=9.7,SNR=5.8						
MKAR				LR	LR	17 45 18.8	
	comp=Z,69nm,18.2s,baz=234,slow=42						
	1.1nm,0.6s						
KBZ	Khabaz	24.66	318	P	P	17 34 07.3	+2.5
	4.2nm,1.2s,baz=113,slow=13,SNR=2.1						
	4.2nm,1.2s						
KURBB	Kurchatov Arra	25.46	19	P	P	17 34 12.9	+0.9
	1.7nm,0.9s,baz=211,slow=8.9,SNR=8.0						
	1.7nm,0.9s						
BVAR	Borovoye Array	26.10	7	P	P	17 34 19.2	+1.3
	2.0nm,0.8s						
	2.0nm,0.8s						
ZALV	Zalesovo Beam	30.32	23	P	P	17 34 56.4	+0.9
	0.6nm,0.5s,baz=214,slow=11,SNR=2.2						
ZALV				LR	LR	17 49 52.0	
	comp=Z,54nm,18.3s,baz=260,slow=42						
	0.6nm,0.5s						
CMAR	Chiang Mai Arr	31.91	99	P	P	17 35 11.4	+1.4
	0.6nm,0.6s,baz=295,slow=8.0,SNR=5.8						
	0.6nm,0.6s						
AKASG	Malin Array Be	36.21	320	P	P	17 35 48.3	+1.4
	0.4nm,0.4s,baz=123,slow=7.6,SNR=2.2						
	0.4nm,0.4s						
SONM	Songino Array	37.87	46	P	P	17 36 02.1	+0.9
	0.2nm,0.5s,baz=237,slow=7.9,SNR=1.9						
	0.2nm,0.5s						
FINES	FINESS Array B	43.23	334	P	P	17 36 46.5	+1.4
	0.6nm,0.7s,baz=133,slow=10,SNR=4.7						
	0.6nm,0.7s						
GERES	GERESS Array B	45.21	313	P	P	17 37 03.5	+2.2
	0.3nm,0.5s,baz=76,slow=4.1,SNR=1.5						
	0.3nm,0.5s						
ARCES	ARCESS Array B	48.33	342	P	P	17 37 25.2	0.0
	6.3nm,1.0s,baz=133,slow=6.3,SNR=2.2						
	6.3nm,1.0s						
NOA	NORSAR Array B	49.50	329	P	P	17 37 34.9	+0.5
	0.3nm,0.4s,baz=108,slow=7.5,SNR=1.8						
	0.3nm,0.4s						
KSRS	Korea Array	52.88	62	P	P	17 38 00.7	+0.7
	0.2nm,0.4s,baz=272,slow=8.5,SNR=2.7						
KSRS				LR	LR	18 01 10.0	
	comp=Z,23nm,18.9s,baz=155,slow=37						
	0.2nm,0.4s						
TORD	Torodi Ar. Bea	60.97	270	P	P	17 38 59.4	+1.8
	2.2nm,0.8s,baz=67,slow=5.6,SNR=11						
	2.2nm,0.8s						
SEY	Seymchan	64.79	30	LR	LR	18 09 24.8	
	comp=Z,121nm,18.7s,baz=92,slow=38						
YKA	Yellowknife Ar	90.67	0	P	P	17 41 48.6	+2.3
	0.2nm,0.7s,baz=347,slow=4.6,SNR=4.2						
	0.2nm,0.7s						

DJA 18 17:32:45.4±0.4, **6°S**±4°×**10°5E**±°, **h10**^{km}, **M3.0**/6, **MLv3.0**/6, **Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGJI	Cibinong	0.59	158	P	Pg	17 32 56.0	-0.9
SBJI	Serang	0.66	95	P	Pg	17 32 58.4	+0.2
BLSI	Bandar Lampung	0.72	342	P	Pg	17 32 58.9	-0.5
BLSI				S	Sg	17 33 09.2	+0.3
KLI	Kotabumi	1.34	333	P	Pn	17 33 10.0	-0.1
KLI				S	Sg	17 33 28.7	+0.2
SKJI	Sukabumi	1.43	131	P	Pn	17 33 11.5	+0.1
LWLI	Liwa	1.75	306	P	Pn	17 33 15.8	-0.1
MDSI	Maura Dua	2.02	320	P	Pn	17 33 20.4	+0.8

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*IDC **18** 17:33:16.8±2.1, 0°.73N×97°.67E, h0^{km}, mb3.7/8, mbtmp3.7/9, ML3.3/1, MS3.4/4, Error ellipse: s-maj=67.2km s-min=20.9km az=59.0*
*DJA **18** 17:33:21.5±0.8, 1°N±3°×9°7E±°, h17^{km}±5^{km}, M4.2/9, mb4.3/3, MLv4.1/9*

ISC 18 17:33:18.3±1.2, **0°.75N**±0°.06×**97°.11E**±0°.08, **h10**^{km}, **n23**, σ**2^{s}.11**/20, **mb3.8**/8, **MS3.4**/3, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.72	40	P	Pb	17 33 33.6	+0.7
GSI				S	Sb	17 33 41.3	-1.5
PBSI	Pulau Batu	1.42	125	P	Pn	17 33 44.4	+0.3
PBSI				S	Sb	17 33 59.2	-3.8
PBSI	Pulau Batu	1.42	125	P	Pg	17 33 49.7	+4.2
KCSI	Kotacane, Aceh	2.83	13	P	Pn	17 34 04.4	+0.8
KCSI				S	Sg	17 34 49.4	+0.2
PDSI	Padang	3.73	116	P	Pn	17 34 15.6	-0.5
PDSI				S	Sn	17 34 56.8	-3.4
BKNI	Bangkinang	3.95	96	P	Pn	17 34 18.3	-0.7
BKNI				S	Sg	17 35 28.3	+3.1
SDSI	Sungai Dareh	4.63	111	P	Pn	17 34 28.5	+0.2
SDSI				S	Sn	17 35 20.8	-1.4
CMAR	Chiang Mai Arr	17.68	6	P	Pn	17 37 24.7	-0.2
	baz=195,slow=11,SNR=10						
CMAR				LR	LR	17 45 32.6	
	comp=Z,93nm,18.6s,baz=205,slow=42						
	1.2nm,0.8s						
H08S2	Diego Garcia H	25.93	251	T	T	18 06 20.7	
	baz=72,slow=75,SNR=236						
H08S3	Diego Garcia H	25.94	251	T	T	18 06 27.2	
	baz=72,slow=75,SNR=192						
H08S1	Diego Carcia H	25.95	251	T	T	18 06 16.7	
	baz=72,slow=75,SNR=253						
H01W3	Cape Leeuwin H	38.87	157	T	T	18 22 07.4	
	baz=334,slow=76,SNR=3.6						
H01W2	Cape Leeuwin H	38.88	157	T	T	18 22 03.7	
	baz=334,slow=76,SNR=3.8						
H01W1	Cape Leeuwin H	38.88	157	T	T	18 22 06.6	
	baz=334,slow=76,SNR=3.2						
WRA	Warramunga Arr	41.88	122	P	P	17 41 05.8	-3.4
	0.7nm,0.9s,baz=302,slow=8.7,SNR=5.4						
	0.7nm,0.9s						
ASAR	Alice Springs	43.20	127	P	P	17 41 15.4	-4.5
	0.7nm,0.8s,baz=300,slow=7.3,SNR=4.5						
	0.7nm,0.8s						
JNU	Nakatsue	45.20	41	LR	LR	18 00 23.1	
	comp=Z,51nm,20.8s,baz=246,slow=36						
KSRS	Korea Array	46.26	34	P	P	17 41 41.0	-3.0
	0.6nm,0.5s,baz=217,slow=8.7,SNR=2.0						
	0.6nm,0.5s						
SONM	Songino Array	47.58	8	P	P	17 41 53.4	-1.0
	0.5nm,0.7s,baz=189,slow=8.3,SNR=4.6						
	0.5nm,0.7s						
MKAR	Makanchi Array	47.65	346	P	P	17 41 55.3	+0.5
	1.1nm,0.7s,baz=159,slow=8.4,SNR=13						
MKAR				LR	LR	18 06 05.8	
	comp=Z,32nm,19.2s,baz=144,slow=41						
	1.1nm,0.7s						
KURBB	Kurchatov Arra	52.14	345	P	P	17 42 30.6	+1.8
	0.3nm,0.7s,baz=167,slow=7.5,SNR=4.9						
	0.3nm,0.7s						
USRK	Ussuriysk Ar.	53.20	31	P	P	17 42 35.4	-1.4
	2.2nm,0.8s,baz=234,slow=4.6,SNR=4.2						
USRK				LR	LR	18 07 03.9	
	comp=Z,40nm,18.1s,baz=352,slow=38						
	2.2nm,0.8s						
ZALV	Zalesovo Beam	53.98	351	P	P	17 42 43.7	+1.4
	1.1nm,0.5s,baz=182,slow=4.5,SNR=7.6						
	1.1nm,0.5s						

ROM 18 17:33:23.3±0.1, **42°.553N**±0°.004×**13°.343E**±0°.004, **h10**^{km}, **ML1.8**/23, **8C-3D, Error ellipse: s-maj=0.4km s-min=0.3km az=169.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	Campotosto	0.05	109	P	Pg	17 33 25.7	+0.4
CAMP				S	Sg	17 33 26.9	+0.1
CAMP				AML	AML		
	comp=N,3070µm,0.5s						
CAMP				AML	AML		
	comp=E,2675µm,1.0s						
CAMP				AML	AML		
	comp=E,2675µm,1.0s						
SMA1	SAN MARTINO	0.08	356	⇑P	Pg	17 33 26.0	+0.3
SMA1				S	Sg	17 33 27.7	+0.4
SMA1				AML	AML		
	comp=N,4435µm,1.4s						
SMA1				AML	AML		

	comp=E,6395µm,0.2s						
SMA1				AML	AML		
	comp=N,4435µm,0.6s						
RM33	**Pellescritta (**	**0.10**	**245**	P	Pg	17 33 26.5	+0.6
RM33				S	Sg	17 33 28.6	+0.7
T1246	**Crognaleto (TE**	**0.12**	**75**	P	Pg	17 33 26.7	+0.6
T1246				S	Sg	17 33 28.8	+0.6
T1247	**Pizzolo (AQ)**	**0.12**	**197**	P	Pg	17 33 27.2	+1.1
T1247				AML	AML		
	comp=N,1800µm,0.8s						
T1247				AML	AML		
	comp=E,1715µm,0.2s						
GIGS	**Gran Sasso**	**0.20**	**122**	⇓P	Pg	17 33 28.1	+0.6
GIGS				AML	AML		
	comp=E,132µm,0.2s						
GIGS				AML	AML		
	comp=N,132µm,0.1s						
AQU	**L'Aquila**	**0.20**	**168**	P	Pg	17 33 28.4	+0.9
T1218	**Civita (PG)**	**0.20**	**305**	P	Pg	17 33 28.1	+0.5
T1218				S	Sg	17 33 31.5	+1.0
T1218				AML	AML		
	comp=N,377µm,0.8s						
T1218				AML	AML		
	comp=E,308µm,0.9s						
T1218				AML	AML		
	comp=E,318µm,1.4s						
T1218				AML	AML		
	comp=E,309µm,0.9s						
T1218				AML	AML		
	comp=N,384µm,0.8s						
T1218				AML	AML		
	comp=N,384µm,1.2s						
T1218				AML	AML		
	comp=E,318µm,0.6s						
T1218				AML	AML		
	comp=N,377µm,1.2s						
TERO	**Teramo**	**0.20**	**70**	P	Pg	17 33 28.2	+0.6
TERO				S	Sg	17 33 31.5	+1.0
TERO				AML	AML		
	comp=E,1440µm,0.3s						
TERO				AML	AML		
	comp=E,1545µm,0.3s						
TERO				AML	AML		
	comp=N,1655µm,0.3s						
TERO				AML	AML		
	comp=N,1495µm,0.3s						
T1214	**Arquata del Tr**	**0.23**	**334**	⇓P	Pg	17 33 28.8	+0.7
T1214				AML	AML		
	comp=E,348µm,1.0s						
T1214				AML	AML		
	comp=N,222µm,1.0s						
T1214				AML	AML		
	comp=E,348µm,1.0s						
T1214				AML	AML		
	comp=N,222µm,1.0s						
T1222	**Castel Sant'An**	**0.27**	**236**	⇑P	Pg	17 33 29.4	+0.6
T1222				AML	AML		
	comp=N,184µm,0.3s						
T1222				AML	AML		
	comp=E,166µm,0.5s						
T1212	**Cascia, Frazio**	**0.30**	**312**	P	Pg	17 33 29.7	+0.4
T1212				S	Sb	17 33 34.8	-1.0
T1212				AML	AML		
	comp=E,187µm,1.5s						
T1212				AML	AML		
	comp=N,226µm,0.6s						
T1212				AML	AML		
	comp=E,187µm,1.5s						
T1212				AML	AML		
	comp=N,226µm,1.4s						
T1241	**Roccafluvione,**	**0.31**	**12**	P	Pg	17 33 29.9	+0.4
T1241				S	Sb	17 33 35.1	-1.1
T1241				AML	AML		
	comp=E,116µm,0.8s						
T1241				AML	AML		
	comp=N,110µm,0.2s						
T1241				AML	AML		
	comp=E,116µm,0.8s						
T1245	**Castelsantange**	**0.32**	**339**	P	Pg	17 33 30.3	+0.5
T1245				AML	AML		
	comp=E,292µm,1.4s						
T1245				AML	AML		
	comp=N,421µm,1.1s						
T1245				AML	AML		
	comp=N,421µm,0.9s						
FIAM	**Fiamignano**	**0.33**	**211**	⇑P	Pb	17 33 30.9	-0.5
FIAM				AML	AML		
	comp=N,96µm,0.9s						
FIAM				AML	AML		
	comp=E,84µm,0.5s						
FIAM				AML	AML		
	comp=E,84µm,1.5s						
FAGN	**Fagnano**	**0.34**	**148**	⇑P	Pb	17 33 30.7	-0.7
FAGN				AML	AML		
	comp=N,452µm,1.5s						
FAGN				AML	AML		
	comp=E,396µm,0.3s						
FAGN				AML	AML		
	comp=N,452µm,0.5s						
T1217	**Poggiodomo (PG**	**0.34**	**298**	P	Pg	17 33 30.5	+0.4
T1217				AML	AML		
	comp=E,125µm,1.6s						
T1217				AML	AML		
	comp=N,132µm,1.5s						
T1217				AML	AML		
	comp=E,125µm,1.5s						
T1217				AML	AML		
	comp=E,125µm,0.5s						
T1211	**Morro Reatino**	**0.36**	**267**	⇑P	Pg	17 33 30.8	+0.4
T1211				S	Sb	17 33 36.6	-1.1
T1211				AML	AML		
	comp=E,166µm,1.0s						
T1211				AML	AML		
	comp=N,196µm,1.3s						
T1211				AML	AML		
	comp=N,196µm,1.3s						
T1211				AML	AML		
	comp=E,166µm,1.1s						
T1211				AML	AML		
	comp=N,196µm,0.7s						
MC2	**Monte Cornacci**	**0.38**	**343**	P	Pg	17 33 31.5	+0.7
MC2				S	Sb	17 33 37.8	-0.5
VCEL	**Villa Celiera**	**0.40**	**113**	P	Pb	17 33 32.5	0.0
VCEL				AML	AML		
	comp=N,202µm,0.4s						
VCEL				AML	AML		
	comp=E,214µm,1.1s						
VCEL				AML	AML		
	comp=N,201µm,0.4s						
T1216	**Preci, Frazion**	**0.41**	**325**	P	Pg	17 33 31.9	+0.5
T1216				S	Sb	17 33 38.6	-0.5
T1216				AML	AML		
	comp=E,194µm,1.0s						
T1216				AML	AML		
	comp=N,170µm,0.2s						
T1216				AML	AML		
	comp=E,194µm,1.0s						
ARRO	**Arrone**	**0.43**	**274**	P	Pg	17 33 31.9	+0.3
ARRO				AML	AML		
	comp=E,113µm,0.1s						
ARRO				AML	AML		
	comp=N,81µm,0.2s						
T0110	**Collepietro**	**0.46**	**135**	⇑P	Pb	17 33 33.0	-0.5
T0110				AML	AML		
	comp=N,174µm,1.2s						
T0110				AML	AML		
	comp=E,176µm,0.2s						
T1256	**Bolognola (MC)**	**0.46**	**349**	P	Pb	17 33 33.0	-0.6
T1256				AML	AML		
	comp=N,262µm,0.7s						
T1256				AML	AML		
	comp=E,398µm,0.6s						
FDMO	**Fiordimonte**	**0.52**	**339**	P	Pg	17 33 34.0	+0.6
FDMO				AML	AML		
	comp=N,68µm,0.2s						
FDMO				AML	AML		
	comp=E,61µm,1.2s						
FDMO				AML	AML		
	comp=E,61µm,0.8s						
T1219	**Muccia, Frazio**	**0.56**	**334**	P	Pg	17 33 34.6	+0.5
T1219				S	Sb	17 33 43.2	-0.2
CESX	**Cesi**	**0.57**	**276**	⇑P	Pg	17 33 34.8	+0.5
MOMA	**Monte Martano**	**0.62**	**294**	⇓P	Pb	17 33 36.0	-0.4
MOMA				AML	AML		
	comp=E,102µm,0.2s						
MOMA				AML	AML		
	comp=N,86µm,0.2s						
INTR	**Introdacqua**	**0.68**	**142**	⇑P	Pg	17 33 36.7	+0.3
LPEL	**Lama dei Pelig**	**0.80**	**129**	P	Pg	17 33 39.0	+0.2
LPEL				S	Sn	17 33 51.7	-1.1
VIVA	**Pratoni del Vi**	**0.91**	**208**	S	Sg	17 33 51.4	-1.2

ROM 18 17:33:58.7±0.1**, 43°.051N**±0°.003×**13°.049E**±0°.004**, h10^{km}, ML2.0**/11**, 1C-1D, Error ellipse: s-maj=0.4km s-min=0.3km az=41.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.03**	**279**	P	Pg	17 34 00.8	+0.2
T1219				S	Sg	17 34 01.9	0.0
T1219				AML	AML		
	comp=E,2580µm,0.3s						
T1219				AML	AML		
	comp=N,5765µm,0.3s						
T1219				AML	AML		
	comp=E,3075µm,0.3s						
T1219				AML	AML		
	comp=N,6105µm,0.3s						
FDMO	**Fiordimonte**	**0.03**	**117**	P	Pg	17 34 00.7	+0.1
FDMO				S	Sg	17 34 01.6	-0.2
FDMO				AML	AML		
	comp=E,5240µm,0.2s						
FDMO				AML	AML		
	comp=N,4370µm,0.2s						
T1220	**Camerino, Fraz**	**0.07**	**27**	P	Pg	17 34 01.2	+0.4
T1220				S	Sg	17 34 02.8	+0.3
T1220				AML	AML		
	comp=E,9110µm,0.2s						
T1220				AML	AML		
	comp=N,7220µm,0.3s						
FEMA	**Monte Fema**	**0.09**	**179**	P	Pg	17 34 01.6	+0.4
FEMA				S	Sg	17 34 03.5	+0.5
CESI	**CESI - Serrava**	**0.12**	**246**	P	Pg	17 34 02.2	+0.7
CESI				S	Sg	17 34 04.6	+1.0
CESI				AML	AML		
	comp=E,535µm,1.3s						
CESI				AML	AML		
	comp=N,620µm,0.3s						
CESI				AML	AML		
	comp=E,535µm,0.7s						
T1216	**Preci, Frazion**	**0.16**	**188**	P	Pg	17 34 02.8	+0.5
T1216				S	Sg	17 34 05.7	+1.0
T1216				AML	AML		
	comp=N,1265µm,0.2s						
T1216				AML	AML		
	comp=E,1054µm,0.3s						
MC2	**Monte Cornacci**	**0.17**	**143**	P	Pg	17 34 03.5	+1.0
MC2				S	Sg	17 34 06.1	+1.0
GUMA	**Gualdo di Mace**	**0.21**	**87**	P	Pg	17 34 03.9	+0.8
GUMA				S	Sg	17 34 07.7	+1.7
SNTG	**Esanatoglia**	**0.22**	**339**	P	Pg	17 34 04.3	+1.1
SNTG				S	Sg	17 34 07.6	+1.3
T1245	**Castelsantange**	**0.22**	**152**	P	Pg	17 34 03.8	+0.5
T1245				S	Sg	17 34 08.2	+1.8
T1245				AML	AML		
	comp=E,438µm,1.1s						
T1245				AML	AML		
	comp=N,376µm,0.2s						
ASSB	**Assisi San Ben**	**0.29**	**268**	P	Pg	17 34 05.1	+0.6
ASSB				S	Sb	17 34 09.8	-1.1
ASSB				AML	AML		
	comp=E,360µm,1.5s						
ASSB				AML	AML		
	comp=N,488µm,0.2s						
T1212	**Cascia, Frazio**	**0.30**	**181**	P	Pg	17 34 05.3	+0.6
T1212				S	Sb	17 34 10.2	-1.1
T1212				AML	AML		
	comp=N,384µm,1.1s						
T1212				AML	AML		
	comp=E,383µm,0.4s						
T1212				AML	AML		
	comp=N,384µm,0.9s						
T1214	**Arquata del Tr**	**0.31**	**158**	P	Pg	17 34 05.6	+0.5
T1214				S	Sb	17 34 10.7	-1.0
T1241	**Roccafluvione,**	**0.34**	**125**	P	Pg	17 34 06.0	+0.5
T1241				S	Sb	17 34 11.6	-0.9
T1218	**Civita (PG)**	**0.38**	**173**	P	Pg	17 34 06.7	+0.4
T1218				S	Sb	17 34 12.8	-0.9
T1218				AML	AML		
	comp=N,270µm,0.3s						
T1218				AML	AML		
	comp=E,255µm,0.7s						
T1218				AML	AML		
	comp=N,274µm,0.3s						
T1218				AML	AML		
	comp=E,264µm,0.7s						
MOMA	**Monte Martano**	**0.43**	**235**	P	Pg	17 34 07.7	+0.6
MOMA				S	Sb	17 34 14.7	-0.3
MOMA				AML	AML		
	comp=E,122µm,0.7s						
MOMA				AML	AML		
	comp=N,148µm,1.1s						
MOMA				AML	AML		
	comp=N,148µm,0.9s						
MOMA				AML	AML		
	comp=E,122µm,1.3s						
ARVD	**Arcevia**	**0.45**	**350**	S	Sb	17 34 15.5	-0.2
SMA1	**SAN MARTINO**	**0.47**	**153**	⇓P	Pg	17 34 08.4	+0.5
T1211	**Morro Reatino**	**0.54**	**195**	S	Sb	17 34 17.7	-0.4
RM33	**Pellescritta (**	**0.56**	**167**	S	Sb	17 34 18.6	-0.1
CESX	**Cesi**	**0.56**	**218**	S	Sb	17 34 18.9	+0.2
CESX				AML	AML		
	comp=E,119µm,0.6s						
CESX				AML	AML		
	comp=N,116µm,1.3s						
CESX				AML	AML		
	comp=N,116µm,0.7s						
TERO	**Teramo**	**0.59**	**136**	P	Pb	17 34 10.7	-0.5
GIGS	**Gran Sasso**	**0.71**	**147**	⇑P	Pg	17 34 12.1	-0.4
CMPO	**Campotto Po**	**1.77**	**330**	AML	AML		
	comp=N,1775µm,1.4s						
CMPO				AML	AML		
	comp=E,1730µm,1.0s						

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*IDC **18** 17:53:16.4±14.0, 14°.05N×90°.49W, h0^{km}, mb3.6/3, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=283.9km s-min=56.9km az=179.0*
*SNET **18** 17:53:30.4±1.3, 14°.18N×91°.37W, h73^{km}±60^{km}, ML3.6*
*GCG **18** 17:53:35.5±0.8, 14°.41N×91°.18W, h58^{km}±18^{km}, MD3.9*
ISC 18 17:53:31.6±1.6**, 14°.1N**±0°.1×**91°.28W**±0°.07**, h92**^{km}±12^{km}**, n14, σ0ˢ.99**/18**, mb3.7**/3**, 2D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SULM	**Suchitepequez,**	**0.32**	**300**	*e*P	**Pn**	**17 53 46.3**	**+1.0**
SULM				*e*S	**Sn**	**17 53 54.2**	**-1.5**
FUG	**Fuego 3**	**0.52**	**54**	⇓*e*P	**Pn**	**17 53 46.6**	**-0.3**
STG3	**Santiaguito 3,**	**0.63**	**334**	*e*P	**Pn**	**17 53 47.7**	**-0.2**
PCG	**Pacaya**	**0.70**	**69**	*e*P	**Pn**	**17 53 48.3**	**-0.2**
PCG				*e*S	**Sn**	**17 54 02.0**	**+0.8**
NBG	**Las Nubes**	**1.01**	**64**	⇓*e*P	**Pn**	**17 53 52.0**	**+0.2**
NBG				*e*S	**Sn**	**17 54 06.6**	**-0.4**
SLOZ	**Alcaldia de Sa**	**1.46**	**94**	*e*P	**Pn**	**17 53 56.2**	**-0.7**
SLOZ				*e*S	**Sn**	**17 54 16.2**	**0.0**
SLOZ				IAML		17 54 23.0	
	comp=Z,379nm,0.4s						
NUBE	**Las Nubes**	**1.48**	**99**	*e*P	**Pn**	**17 53 56.6**	**-0.7**
NUBE				*e*S	**Sn**	**17 54 16.5**	**-0.3**
SBLS	**San Blas**	**1.64**	**100**	*e*P	**Pn**	**17 53 59.1**	**-0.3**
CEVE	**Cerro Verde**	**1.64**	**101**	*e*P	**Pn**	**17 53 58.9**	**-0.5**
CEVE				*e*S	**Sn**	**17 54 23.3**	**+2.8**
JAYA	**Jayaque - finc**	**1.84**	**105**	*e*P	**Pn**	**17 54 01.6**	**-0.4**
JAYA				*e*S	**Sn**	**17 54 24.8**	**-0.3**
JAYA				IAML		17 54 27.9	
	comp=Z,725nm,0.2s						
TXAR	**Lajitas Array**	**18.97**	**325**	P	**P**	**17 57 46.0**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=146,slow=13,SNR=4.3						
	comp=Z,0.3nm,0.5s						
NVAR	**Mina Array Bea**	**34.00**	**320**	P	P	18 00 07.6	+0.7
	comp=Z,0.8nm,0.7s,baz=130,slow=8.3,SNR=5.4						
	comp=Z,0.8nm,0.7s						
SCHQ	**Schefferville**	**44.85**	**20**	P	P	18 01 31.8	-4.7
	comp=Z,1.8nm,0.7s,baz=204,slow=12,SNR=3.7						
	comp=Z,1.8nm,0.7s						
YKA	**Yellowknife Ar**	**51.05**	**346**	P	P	18 02 20.3	-3.8
	comp=Z,0.2nm,0.6s,baz=141,slow=7.9,SNR=3.0						
	comp=Z,0.2nm,0.6s						

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*JMA **18** 18:01:13.2±0.3, 33°.3N±0°.7×12°7E±°, h25^{km}, MV3.1/17, S KOREAN PENINSULA REG*
*KMA **18** 18:01:14.3±0.3, 33°.30N×127°.20E, h18^{km}, Error ellipse: s-maj=5.8km s-min=1.1km az=314.0*
ISC 18 18:01:14.2±1.0**, 33°.29N**±0°.08×**127°.20E**±0°.04**, h10**^{km}**, n9, σ0ˢ.50**/11**, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSJJU	**Jeju**	**0.57**	**285**	P	**Pg**	**18 01 25.6**	**+0.4**
	SNR=292						
KSSGP	**Seogwipo**	**0.59**	**268**	P	**Pb**	**18 01 26.0**	**-0.6**
	SNR=208						
GMDB	**Geomundo**	**0.76**	**6**	P	**Pg**	**18 01 28.7**	**-0.1**
	SNR=103						
HALB	**Hallimjungang-**	**0.79**	**279**	P	**Pg**	**18 01 29.3**	**0.0**
	SNR=549						
GOS2	**Gosang-Q330s**	**0.83**	**271**	P	**Pb**	**18 01 30.2**	**-0.5**
	SNR=77						
JFU	**Fukue jima 2**	**1.45**	**115**	*e*P	**Pb**	**18 01 40.6**	**-0.6**
JFU				*e*S	**Sg**	**18 02 00.8**	**+0.2**
JTSM	**Tsushimamitsus**	**2.10**	**59**	*e*P	**Pn**	**18 01 50.0**	**+0.6**
JTSM				*e*S	**Sn**	**18 02 15.3**	**-0.2**
JII	**Iki**	**2.17**	**76**	*e*P	**Pn**	**18 01 50.9**	**+0.5**
JTU	**Tsushima**	**2.21**	**55**	*e*P	**Pn**	**18 01 51.3**	**+0.5**

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*IDC **18** 18:15:23.5±0.6, 34°.53N×32°.21E, h0^{km}, mb4.4/25, mbtmp4.4/38, ML4.3/12, MS3.5/46, Error ellipse: s-maj=12.4km s-min=10.9km az=179.0*
*GII **18** 18:15:25.8±0.0, 34°.38N×32°.20E, h10^{km}, mb4.6/3, MD4.5/3, Mm4.5/4*
*MOS **18** 18:15:26.2±1.0, 34°.48N×32°.22E, h30^{km}, mb4.6/32, Error ellipse: s-maj=4.9km s-min=3.1km az=98.3*
*ISK **18** 18:15:26.9, 34°.36N×32°.22E, h66^{km}, ML4.5/49*
*DDA **18** 18:15:27.6±0.0, 34°.57N×32°.14E, h56^{km}±3^{km}, MW4.5*
*NIC **18** 18:15:27.5±0.0, 34°.46N×32°.18E, h49^{km}±4^{km}, Ml4.6/8*
*MED_RC **18** 18:15:28.0±0.5, 34°.53N×32°.18E, h43^{km}±3^{km}, MW4.5/16, Moment Tensor Solution. Mantle waves: s16,c19; Duration: 1ˢ.0 Moment tensor: Scale 10^{15}Nm; M_{rr}0.05±.65; $M_{\theta\theta}$3.49±.40; $M_{\phi\phi}$-3.53±.45; $M_{r\theta}$2.81±.25; $M_{\theta\phi}$3.65±.49; $M_{\phi r}$-1.39±.23; Best double couple: $M_0$5.95000×10^{15} NP1:ϕ_s292.00000°, δ89.00000°, λ-32.00000°. NP2:ϕ_s22.00000°, δ58.00000°, λ-179.00000°. Principal axes: T 5.8300, Plg21.0000°, Azm342.0000°; N 0.2400, Plg58.0000°, Azm111.0000°; P -6.0700, Plg22.0000°, Azm243.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*NEIC **18** 18:15:28.7±2.3, 34°.47N±0°.05×32°.23E±0°.05, h35^{km}±5^{km}, mb4.5/104, Mwr4.3/21 Error ellipse: s-maj=7.9km s-min=5.6km az=175.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.36; $M_{\theta\theta}$2.95; $M_{\phi\phi}$-1.58; $M_{r\theta}$-0.47; $M_{\theta\phi}$0.99; $M_{\phi r}$-2.42; Fault plane solution: $M_0$3.69000×10^{15} NP1:ϕ_s293.59000°, δ49.17000°, λ-24.08000°. NP2:ϕ_s39.88000°, δ72.02000°, λ-136.57000°. Principal axes: T 3.3992, Plg14.0000°, Azm162.0000°; N 0.5212, Plg44.0000°, Azm58.0000°; P -3.9204, Plg43.0000°, Azm265.0000°;*
*NEIC **18** 18:15:29, 34°.49N×32°.22E, h36^{km}*
*THE **18** 18:15:32.9, 34°.50N×31°.99E, h54^{km}±3^{km}, ML4.6/6, Error ellipse: s-maj=3.4km s-min=1.8km az=60.0*
ISC 18 18:15:28.0±0.6**, 34°.45N**±0°.03×**32°.18E**±0°.02**, h30**^{km}±4^{km}**, n727, σ1ˢ.35**/799**, mb4.5**/88**, MS3.5**/38**, 37C-29D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NATA	**Nata**	**0.46**	**44**	⇓*i*P	**Pb**	**18 15 38.2**	**+0.3**
NATA				S	**Sn**	**18 15 47.4**	**+1.6**
AKMS	**Akamas**	**0.58**	**13**	⇑*i*P	**Pb**	**18 15 39.7**	**-0.2**
AKMS				S	**Sn**	**18 15 48.6**	**-0.2**
AKMS				AML	AML	18 15 51.7	
	145nm,0.4s						
AKMS				AML	AML	18 15 51.7	
	145nm,0.4s						
AKMS				AML	AML	18 15 57.1	
	131nm,0.5s						
AKMS				AML	AML	18 15 57.1	
	131nm,0.5s						
SZAC	**Souni**	**0.66**	**62**	⇓*i*P	**Pb**	**18 15 40.4**	**-0.6**
SZAC				S	**Sn**	**18 15 50.6**	**0.0**
SZAC				AML	AML	18 15 54.4	
	179nm,0.3s						
SZAC				AML	AML	18 15 54.4	
	179nm,0.3s						
SZAC				AML	AML	18 15 57.9	
	286nm,0.4s						
SZAC				AML	AML	18 15 57.9	
	286nm,0.4s						
TROD	**Troodos**	**0.75**	**48**	P	**Pn**	**18 15 41.8**	**-0.9**
TROD				S	**Sb**	**18 15 52.5**	**-0.4**
TROD				AML	AML	18 15 57.8	
	171nm,0.4s						
TROD				AML	AML	18 15 57.8	
	171nm,0.4s						
TROD				AML	AML	18 15 58.6	
	142nm,0.6s						
TROD				AML	AML	18 15 58.6	
	142nm,0.6s						
ALFC	**Alefka**	**0.79**	**26**	⇑*i*P	**Pn**	**18 15 42.4**	**-0.7**
ALFC				S	**Sb**	**18 15 53.8**	**+0.2**
LEF	**Lefka**	**0.89**	**41**	Pg	**Pn**	**18 15 44.2**	**-0.2**
LEF	**Lefka**	**0.89**	**41**	P	**Pn**	**18 15 43.2**	**-1.2**
LEF				S	**Sn**	**18 15 55.9**	**-0.4**
ASGA	**Asgata**	**0.94**	**69**	P	**Pn**	**18 15 44.2**	**-1.0**
ASGA				S	**Sn**	**18 15 57.8**	**+0.1**
ASGA				AML	AML	18 15 58.7	
	63nm,0.4s						
ASGA				AML	AML	18 15 58.7	
	63nm,0.4s						
ASGA				AML	AML	18 15 58.9	
	67nm,0.4s						
ASGA				AML	AML	18 15 58.9	
	67nm,0.4s						
AKDN	**Akdeniz- Kıbrı**	**1.07**	**37**	Pn	**Pb**	**18 15 47.7**	**-0.2**
CSS	**Mathiatis**	**1.08**	**61**	Pn	**Pn**	**18 15 46.3**	**-0.7**
CSS				Sn	**Sb**	**18 16 02.1**	**+0.3**
CSS	**Mathiatis**	**1.08**	**61**		**Pn**	**18 15 46.4**	**-0.6**
CSS				Sn	**Sn**	**18 16 00.2**	**-0.8**
CSS	**Mathiatis**	**1.08**	**61**	P	**Pn**	**18 15 46.3**	**-0.7**
CSS				S	**Sn**	**18 16 00.3**	**-0.7**
CSS				AML	AML	18 16 07.3	
	15nm,0.6s						
CSS				AML	AML	18 16 07.3	
	15nm,0.6s						
CSS				AML	AML	18 16 08.3	
	12nm,0.3s						
CSS				AML	AML	18 16 08.3	
	12nm,0.3s						
CSS	**Mathiatis**	**1.08**	**61**	Pg	**Pn**	**18 15 45.9**	**-1.1**
CSS				Sg	**Sn**	**18 16 01.0**	**0.0**
OSC1	**CSNet OBS 1**	**1.21**	**219**	P	**Pn**	**18 15 48.2**	**-0.5**
OSC1				S	**Sn**	**18 16 04.3**	**+0.2**
OSC1				AML	AML	18 16 06.1	
	7.4nm,0.2s						
OSC1				AML	AML	18 16 06.1	
	7.4nm,0.2s						
OSC1				AML	AML	18 16 11.2	
	7.0nm,0.4s						
OSC1				AML	AML	18 16 11.2	
	7.0nm,0.4s						
ATHAL	**Athalassa**	**1.22**	**55**	⇑*e*P	**Pn**	**18 15 49.4**	**+0.5**
MVOU	**Mavrovouni**	**1.32**	**64**	P	**Pn**	**18 15 50.4**	**0.0**
OSC2	**CSNet OBS 4**	**1.37**	**177**	P	Pn	18 15 43.1	-7.9
OSC2				AML	AML	18 16 04.2	
	21nm,0.6s						
OSC2				AML	AML	18 16 04.3	
	14nm,0.4s						
LFK	**Lefkose**	**1.39**	**53**	Pn	**Pn**	**18 15 51.7**	**+0.4**
LFK				Sn	**Sb**	**18 16 10.2**	**-0.5**
PARAL	**Paralimni**	**1.63**	**70**	P	**Pn**	**18 15 55.5**	**+1.0**
PARAL				AML	AML	18 16 28.2	
	32nm,0.8s						
GAZI	**Gazipasa**	**1.79**	**4**	Pn	**Pn**	**18 15 56.5**	**-0.2**
GAZI	**Gazipasa**	**1.79**	**4**	P	**Pn**	**18 15 56.6**	**-0.2**
GAZI				S	**Sn**	**18 16 17.0**	**-1.5**
EREN	**Erenkoy**	**1.96**	**56**	Pn	**Pn**	**18 15 59.8**	**+0.7**
EREN	**Erenkoy**	**1.96**	**56**	SPECP		18 16 00.0	
EREN				P	**Pn**	**18 16 00.3**	**+1.2**

EREN				S	Sn	18 16 23.5	+0.8
AKK2	Akkuyu-Mersin	2.02	33	Pn	Pn	18 16 00.6	+0.6
AKK1	Akkuyu-Mersin	2.02	33	Pn	Pn	18 16 01.2	+1.2
AKKU	Akkuyu-Mersin	2.04	33	Pn	Pn	18 16 00.9	+0.6
OREN	Orenkoy-Mersin	2.04	30	Pn	Pn	18 16 00.9	+0.6
BERE	Bereket-Mersin	2.08	24	Pn	Pn	18 16 01.6	+0.7
TEPK	Tepekoy-MERSIN	2.09	32	Pn	Pn	18 16 01.8	+0.8
TISA	Tisan-Mersin	2.10	35	Pn	Pn	18 16 01.9	+0.8
YESI	Yesilovacik-Me	2.11	34	Pn	Pn	18 16 02.1	+0.8
KARG	Kargicak-Mersi	2.15	35	Pn	Pn	18 16 02.9	+1.1
TEVE	Tevekalti-Mers	2.24	27	Pn	Pn	18 16 03.9	+0.9
SILI	Silifke-Mersin	2.39	36	Pn	Pn	18 16 05.7	+0.7
AKUM	Antalya-Kumluc	2.40	322	P	Pn	18 16 06.8	+1.7
AKUM				S	Sn	18 16 34.2	+0.7
KEPZ	Antalya-Kepez	2.49	349	P	Pn	18 16 07.0	+0.5
HDMB	Hadim	2.52	6	Pn	Pn	18 16 08.4	+1.3
KIZK	Mersin	2.58	38	Pn	Pn	18 16 08.9	+1.2
KIZK	Mersin	2.58	38	P	Pn	18 16 08.8	+1.0
KIZK				S	Sn	18 16 37.4	-0.7
KSL	Kastellorizon	2.72	309	P	Pn	18 16 11.0	+1.4
KSL				S	Sn	18 16 41.3	-0.1
	985nm,0.5s						
ANTB	Antalya	2.74	334	Pn	Pn	18 16 11.8	+1.9
AKAS	Kas	2.76	311	Pn	Pn	18 16 11.2	+1.0
AKAS	Kas	2.76	311	Pn	Pn	18 16 10.6	+0.4
AKAS	Kas	2.76	311	P	Pn	18 16 11.2	+1.0
AKAS				S	Sn	18 16 39.6	-3.0
KKBE	Karaman, Kazim	2.83	12	P	Pn	18 16 13.7	+2.4
KKBE				S	Sn	18 16 42.5	-1.9
HNTI	Hanita	2.84	118	Pn	Pn	18 16 10.0	-1.3
HNTI	Hanita	2.84	118	P	Pn	18 16 10.7	-0.6
KRMN	Karaman	2.86	18	Pn	Pn	18 16 13.3	+1.7
DQRL	Deir Qamar	2.91	104	*e*P	Pn	18 16 11.0	-1.3
BHL	Bhannes	2.93	100	*e*P	Pn	18 16 11.0	-1.6
ELL	Elmali	2.95	322	Pn	Pn	18 16 14.8	+1.9
ELL	Elmali	2.95	322		Pn	18 16 14.3	+1.4
ELL				Sn	Sn	18 16 49.8	+2.5
ELL	Elmali	2.95	322	P	Pn	18 16 14.3	+1.4
ELL						18 16 49.8	
KORT	Korkueli	2.95	330	Pn	Pn	18 16 14.6	+1.7
KORT	Korkueli	2.95	330	P	Pn	18 16 16.3	+3.4
KORT				S	Sn	18 16 49.5	+2.1
SEYD	Seydisehir-KON	2.96	355	Pn	Pn	18 16 14.8	+1.7
OFRI	`Ofer	2.97	127	Pn	Pn	18 16 12.1	-0.9
OFRI				Sn	Sn	18 16 46.7	-0.9
OFRI	`Ofer	2.97	127	P	Pn	18 16 12.2	-0.8
OFRI				IAML		18 17 09.4	
SEDI	Konya, Seydise	3.02	354	P	Pn	18 16 16.6	+2.8
SEDI				S	Sn	18 16 49.1	+0.1
BLGI	Bet Lehem HaGe	3.04	123	Pn	Pn	18 16 12.1	-1.9
BLGI				Sn	Sn	18 16 48.9	-0.5
BLGI	Bet Lehem HaGe	3.04	123	P	Pn	18 16 13.4	-0.6
MMA0B	Mount Meron ar	3.04	117	Pn	Pn	18 16 12.8	-1.3
MMAI	Mount Meron Ar	3.04	117	Pn	Pn	18 16 13.4	-0.7
	82nm,0.3s,baz=307,slow=12,SNR=408						
MMAI				Sn	Sn	18 16 47.2	-2.3
	384nm,0.3s,baz=305,slow=23,SNR=14						
MMAI				LR	LR	18 17 45.9	
	comp=Z,655nm,18.5s,baz=16,slow=46						
	53nm,0.3s						
QRWL	Qaraoun	3.04	106	*e*P	Pn	18 16 13.0	-1.2
HWQ	Hawqa	3.12	92	*e*P	Pn	18 16 14.6	-0.6
IZZE	Mula-Seydike	3.12	310	P	Pn	18 16 15.9	+0.7
IZZE				S	Sn	18 16 48.0	-3.4
ZAHL	Zahle	3.13	100	*e*P	Pn	18 16 14.5	-0.9
GEM	Giv'at Ha'Em	3.15	112	Pn	Pn	18 16 14.3	-1.3
GEM	Giv'at Ha'Em	3.15	112	P	Pn	18 16 14.2	-1.3
BUCA	Burdur, Bucak-	3.16	336	P	Pn	18 16 17.8	+2.1
BUCA				S	Sn	18 16 49.7	-2.8
SUTC	Sutluce-Ispart	3.17	343	Pn	Pn	18 16 17.9	+2.0
RCY	Rachaya	3.18	106	*e*P	Pn	18 16 14.9	-1.2
NATI	Neve Ativ	3.19	111	Pn	Pn	18 16 14.9	-1.1
NATI	Neve Ativ	3.19	111	P	Pn	18 16 15.2	-0.8
SLTI	Sal'it	3.25	132	Pn	Pn	18 16 15.6	-1.3
SLTI				Sn	Sn	18 16 53.5	-1.1
SLTI	Sal'it	3.25	132	P	Pn	18 16 16.7	-0.2
BCK	Bucak	3.27	337	Pn	Pn	18 16 19.4	+2.1
DED	Mersin	3.29	40	SPECP		18 16 18.0	
DED				P	Pn	18 16 18.4	+0.9
DED				S	Sn	18 16 55.4	-0.2
BEIL	Beino	3.31	87	*e*P	Pn	18 16 16.3	-1.4
KMER	Konya-Meram	3.32	3	P	Pn	18 16 20.6	+2.7
KMER				S	Sn	18 16 57.6	+1.2
FETY	Fethiye	3.34	312	Pn	Pn	18 16 19.5	+1.4
FETY	Fethiye	3.34	312	P	Pn	18 16 20.0	+1.9
FETY				S	Sn	18 16 55.3	-1.5
KERG	Konya-Eregli	3.35	28	P	Pn	18 16 21.4	+3.0
KERG				S	Sn	18 16 59.3	+2.0
MMLI	Mount Malkishu	3.37	126	Pn	Pn	18 16 18.6	0.0
MMLI	Mount Malkishu	3.37	126	Pn	Pn	18 16 18.0	-0.6
MMLI				Sn	Sn	18 16 56.8	-0.8
CAME	Cameli-Denizli	3.42	318	Pn	Pn	18 16 21.4	+2.1
SHMJ	Saham	3.45	119	P	Pn	18 16 19.5	-0.1
SHMJ				P	Pn	18 16 20.9	+1.3
SALP	Salfit	3.46	132	Pn	Pn	18 16 19.4	-0.5
SALP				Sn	Sn	18 16 59.3	-0.6
ASUZ	Hatay-Arsuz	3.47	57	P	Pn	18 16 21.4	+1.4
ASUZ				S	Sn	18 16 59.8	-0.2
KONT	Konya--Tatoy	3.49	2	Pn	Pn	18 16 22.3	+2.0
KONT	Konya--Tatoy	3.49	2	P	Pn	18 16 21.9	+1.6
GOLH	Golhisar	3.50	323	P	Pn	18 16 23.6	+3.1
GOLH				S	Sn	18 17 01.7	+0.7
QRNJ	Al-Qirein	3.54	126	P	Pn	18 16 20.8	0.0
CAEL	Denizli, Camel	3.54	320	P	Pn	18 16 23.3	+2.3
CAEL				S	Sn	18 17 00.5	-1.4
HMDT	Nahal Hemdat	3.55	127	Pn	Pn	18 16 20.5	-0.6
HMDT				Sn	Sn	18 17 02.1	+0.1
HMDT	Nahal Hemdat	3.55	127	P	Pn	18 16 22.8	+1.7
YESY	Yesilyurt	3.56	20	Pn	Pn	18 16 23.2	+1.9
ISP	Isparta	3.62	339	Pn	Pn	18 16 24.3	+2.1
ISP	Isparta	3.62	339	Pn	Pn	18 16 24.0	+1.8
ISP				Sn	Sn	18 17 04.3	+0.3
ISP	Isparta	3.62	339	Pn	Pn	18 16 23.7	+1.6
ISP				Sn	Sn	18 17 07.3	+3.3
ISP	Isparta	3.62	339	*i* P	Pn	18 16 23.8	+1.6
KARA	Karaisali	3.65	39	Pn	Pn	18 16 24.0	+1.6
BRDR	BURDUR-Merkez	3.67	333	P	Pn	18 16 24.8	+2.1
BRDR				S	Sn	18 17 06.9	+1.9
DOGA	KONYA_Doganhis	3.67	354	P	Pn	18 16 25.8	+2.9
YURE	YUREGIR	3.68	49	P	Pn	18 16 23.7	+0.9
YURE				S	Sn	18 16 58.9	-6.2
AMAZ	Amatzia	3.71	141	Pn	Pn	18 16 22.7	-0.5
AMAZ	Amatzia	3.71	141	x	Pn	18 16 23.2	0.0
AMAZ				IAML		18 17 25.7	
BAGO	Egridir - ISPA	3.71	343	P	Pn	18 16 25.2	+1.9
BAGO				S	Sn	18 17 06.5	+0.5
UJAP	Al Uja	3.71	131	Pn	Pn	18 16 23.5	+0.3
UJAP	Al Uja	3.71	131	P	Pn	18 16 24.0	+0.8
DALY	Dalyan (Mula)	3.72	310	Pn	Pn	18 16 24.7	+1.4
LADK	Ladik-KONYA	3.75	2	Pn	Pn	18 16 25.9	+2.1
ARG	Arkhangelos	3.75	299	P	Pn	18 16 24.4	+0.6
ARG				S	Sn	18 17 05.9	-1.1
	2µm,0.4s						
ARG	Arkhangelos	3.75	299	Pn	Pn	18 16 24.8	+1.0
ARG	Arkhangelos	3.75	299		Pn	18 16 24.4	+0.6
ARG				Sn	Sn	18 17 06.0	-0.9
ARG	Arkhangelos	3.75	299	P	Pn	18 16 24.4	+0.6
ARG						18 17 06.1	
APMY	Acipayam-Deniz	3.81	323	Pn	Pn	18 16 26.9	+2.2
CEYT	Ceyhan	3.87	48	Pn	Pn	18 16 25.9	+0.5
BASM	Basmaki-Afyon	3.87	334	Pn	Pn	18 16 27.9	+2.4
ALIN	Konya, Altinte	3.88	8	P	Pn	18 16 26.9	+1.2
YVAC	Isparta, Yalva	3.89	349	P	Pn	18 16 27.7	+1.9
DSI	Dead Sea	3.93	136	Pn	Pn	18 16 25.7	-0.6
DSI				Sn	Sn	18 17 10.7	-0.7
DSI	Dead Sea	3.93	136	P	Pn	18 16 26.4	+0.1
DSI				IAML		18 17 26.4	
YTIR	Yattir	3.94	140	Pn	Pn	18 16 26.2	-0.3
YTIR	Yattir	3.94	140	P	Pn	18 16 26.6	+0.1
TURN	Turunc	3.96	307	Pn	Pn	18 16 27.8	+1.2
TURN	Turunc	3.96	307	P	Pn	18 16 27.3	+0.7
KZIT	Kziot	4.00	151	Pn	Pn	18 16 26.8	-0.4
KZIT	Kziot	4.00	151	P	Pn	18 16 27.4	+0.2
AKO	Adana	4.01	40	P	Pn	18 16 28.2	+0.9
TAVA	DENIZLI_Tavas	4.01	320	P	Pn	18 16 29.0	+1.6
RHAN	Hatay/Reyhanl	4.04	62	P	Pn	18 16 28.0	+0.3
RHAN				S	Sn	18 17 12.5	-1.5
DNIZ	Denizli-Tavas-	4.07	322	SPECP		18 16 30.0	
DNIZ				P	Pn	18 16 30.0	+1.8
DNIZ				S	Sn	18 17 14.3	-0.5
KDHN	Kadinhani	4.07	359	P	Pn	18 16 28.8	+0.6
HSUJ	Al Zarqa	4.09	124	P	Pn	18 16 30.3	+1.8
HSUJ				P	Pn	18 16 30.6	+2.1
HSUJ				P	Pn	18 16 30.7	+2.2
HSUJ				S	Sn	18 17 16.8	+1.4
MDBI	Mazsada	4.11	139	Pn	Pn	18 16 27.6	-1.1
MDBI	Mazsada	4.11	139	P	Pn	18 16 28.7	0.0
MSBI	Mazada	4.11	139	Pn	Pn	18 16 28.3	-0.4
MSBI				Sn	Sn	18 17 15.0	-0.8
NIDE	Nigde/Merkez-G	4.12	30	P	Pn	18 16 31.3	+2.3
NIDE				S	Sn	18 17 16.5	+0.3
KZIL	AFYON_Kizioren	4.14	337	P	Pn	18 16 31.3	+2.0
YER	Yerkesik	4.15	311	P	Pn	18 16 30.3	+1.0
YER				S	Sn	18 17 16.1	-0.7
YER	Yerkesik	4.15	311	Pn	Pn	18 16 31.1	+1.8
CHBY	Cihanbeyli	4.17	8	Pn	Pn	18 16 31.8	+2.2
WALJ	Wala	4.19	132	P	Pn	18 16 30.3	+0.4
GULA	Gulagac	4.23	22	Pn	Pn	18 16 32.4	+2.0
KOZT	Kozan	4.23	43	Pn	Pn	18 16 31.8	+1.4
GHAJ	Ghor Haditha	4.24	137	Pn	Pn	18 16 31.7	+1.3
GHAJ	Ghor Haditha	4.24	137	P	Pn	18 16 33.1	+2.7
LISJ	El Lisan	4.24	138	P	Pn	18 16 31.0	+0.6
LISJ				P	Pn	18 16 31.2	+0.8
LISJ				P	Pn	18 16 31.6	+1.2
LISJ				S	Sn	18 17 15.9	-2.9
LISJ				IAML		18 17 31.3	
KARP	Karpathos	4.26	286	P	Pn	18 16 31.8	+0.9
KARP				S	Sn	18 17 18.1	-1.5
	2µm,0.3s						
KARP	Karpathos	4.26	286	Pn	Pn	18 16 31.6	+0.8
KARP				Sn	Sn	18 17 17.4	-2.2
SHUT	Suhut-Afyon	4.30	343	Pn	Pn	18 16 33.9	+2.4
AKSY	AKSARAY - Alti	4.38	16	P	Pn	18 16 33.5	+1.0
DAT	Datca	4.39	303	P	Pn	18 16 33.4	+0.8
DAT				S	Sn	18 17 21.5	-1.2
DAT	Datca	4.39	303	SPECP		18 16 33.0	
DAT				P	Pn	18 16 33.9	+1.3
KURO	Afyon-Bolvadin	4.39	347	P	Pn	18 16 33.1	+0.4
KHL	Karahalli	4.42	332	Pn	Pn	18 16 35.3	+2.2
KARJ	KARJ	4.42	138	P	Pn	18 16 24.4	-8.6
KIZT	Kizilcal	4.43	357	Pn	Pn	18 16 35.3	+2.1
YAHY	KAYSERI_Yahyal	4.46	34	P	Pn	18 16 35.7	+2.2
YAHY				S	Sn	18 17 21.7	-2.7
PASA	Karahalli, USA	4.46	332	P	Pn	18 16 34.5	+1.0
ASF	Jabal al Asfar	4.55	119	Pn	Pn	18 16 35.0	+0.2
	17nm,0.3s,baz=322,slow=4.6,SNR=42						
ASF				Sn	Sn	18 17 28.1	+1.2
	22nm,0.3s,baz=22,slow=11,SNR=2.0						
	45nm,0.3s						
ASF	Jabal al Asfar	4.55	119	P	Pn	18 16 35.1	+0.2
ASF				P	Pn	18 16 37.4	+2.5
KAMA	Osmaniye	4.56	52	P	Pn	18 16 35.7	+0.8
SWQJ	Swaqa	4.57	133	P	Pn	18 16 34.6	-0.5
SWQJ				P	Pn	18 16 35.0	-0.1
AFYO	Afyonkarahisar	4.59	341	P	Pn	18 16 37.1	+1.7
KUZU	Kuzuini	4.61	58	P	Pn	18 16 36.5	+0.8
KUZU				S	Sn	18 17 23.4	-4.9
SERE	Sereflikochisa	4.62	14	Pn	Pn	18 16 37.8	+1.9
KULU	Kulu	4.63	8	Pn	Pn	18 16 37.8	+1.8
ZFRI	Zfri	4.63	146	Pn	Pn	18 16 35.0	-0.9
ZFRI	Zfri	4.63	146	P	Pn	18 16 35.6	-0.3
NISR	Nisiros	4.65	299	P	Pn	18 16 37.0	+0.9
BDRM	Kayabasi	4.65	306	P	Pn	18 16 37.2	+1.0
SAIM	ADANA	4.73	41	P	Pn	18 16 38.2	+0.9
PRNI	Paran	4.73	149	Pn	Pn	18 16 36.2	-1.1
PRNI				Sn	Sn	18 17 30.4	-0.7
PRNI	Paran	4.73	149	P	Pn	18 16 37.2	-0.1
AYDN	Tasoluk	4.74	314	P	Pn	18 16 39.0	+1.7
BODT	Bodrum	4.74	305	P	Pn	18 16 38.5	+1.1
BODT				S	Sn	18 17 28.1	-3.3
KKUL	Konya-Kulu	4.75	7	P	Pn	18 16 37.4	-0.3
KOSK	Kos Island	4.82	300	P	Pn	18 16 39.5	+1.0
KOSK				S	Sn	18 17 30.6	-2.6
	825nm,0.5s						
KRMI	Paran Flat	4.83	153	Pn	Pn	18 16 38.0	-0.6
AVNS	Nevsehir-Avano	4.85	25	P	Pn	18 16 40.6	+1.6
KIRS	Kirsehir-Merke	4.88	16	P	Pn	18 16 41.4	+2.0
KMRS	Kahramanmaras	4.89	50	Pn	Pn	18 16 40.9	+1.4
GAZ	Gaziantep	4.91	55	Pn	Pn	18 16 40.4	+0.6
GAZ	Gaziantep	4.91	55	Pn	Pn	18 16 39.8	0.0
KULA	Kula-Manisa	4.95	326	P	Pn	18 16 40.8	+0.5
ZKR	Zakros	4.95	279	P	Pn	18 16 41.3	+1.0
ZKR				S	Sn	18 17 33.7	-2.8
	872nm,0.6s						
KAHM	Kahramanmaras,	4.96	50	P	Pn	18 16 41.0	+0.6
USAK	Uak-Merkez	4.96	330	P	Pn	18 16 41.7	+1.3
MANT	Manisa	4.98	325		Pn	18 16 41.3	+0.5
MANT				Sn	Sn	18 17 34.0	-3.5
MANT	Manisa	4.98	325	P	Pn	18 16 41.5	+0.7
AUKIR	Kırka- Seyitga	5.00	345	P	Pn	18 16 42.8	+1.8
DDIM	Aydin, Didim	5.01	308	P	Pn	18 16 41.9	+0.9
HRFI	Mount Harif	5.02	150	Pn	Pn	18 16 40.5	-0.8
HRFI				Sn	Sn	18 17 37.9	-0.4
STIA	Sitia Lasithi	5.07	280	P	Pn	18 16 42.3	+0.5
MCUR	KIREHR	5.07	21	P	Pn	18 16 43.1	+1.2
GDZ	Gediz	5.11	336	P	Pn	18 16 43.9	+1.3
HSNJ	Maan	5.12	144	P	Pn	18 16 47.7	+4.9
BBAL	Bala	5.14	8	P	Pn	18 16 44.3	+1.3
GCAM	G?zelcaml?	5.16	310	P	Pn	18 16 44.1	+1.1
NZIP	Nizip/Gaziante	5.17	58	P	Pn	18 16 43.8	+0.5
SGAZ	Eskisehir, Sey	5.18	348	P	Pn	18 16 44.6	+1.1
MBRI	Mt Berech	5.19	153	Pn	Pn	18 16 43.2	-0.4
MBRI	Mt Berech	5.19	153	P	Pn	18 16 44.5	+0.9
GUNE	Kayseri	5.24	31	P	Pn	18 16 45.6	+1.3
GZT	Gaziantep	5.25	55	SPECP		18 16 44.0	
GZT				P	Pn	18 16 44.6	+0.1
AKPI	Kirsehir/Akpin	5.25	16	P	Pn	18 16 46.1	+1.6
BNN	Bunyan	5.29	33	Pn	Pn	18 16 46.0	+0.9
AQBJ	Aqaba	5.30	152	P	Pn	18 16 45.4	+0.3
AQBJ				S	Sn	18 17 46.1	+1.0
AQBJ				IAML		18 18 00.6	
EIL	Elat	5.31	153	Pn	Pn	18 16 45.3	+0.1
	12nm,0.3s,baz=339,slow=3.4,SNR=254						
EIL				Sn	Sn	18 17 43.8	-1.6
	54nm,0.3s,baz=88,slow=1.6,SNR=6.7						
EIL				LR	LR	18 19 20.5	
	comp=Z,408nm,18.7s,baz=318,slow=44						
	60nm,0.3s						
EIL	Elat	5.31	153	Pn	Pn	18 16 44.5	-0.8
EIL	Elat	5.31	153	P	Pn	18 16 45.0	-0.3
EIL				S	Sn	18 17 41.5	-3.9
EIL				IAML		18 17 54.6	
DEMI	Demirci	5.36	330	P	Pn	18 16 46.4	+0.4
ANDZ	Kutahya, Merke	5.37	341	P	Pn	18 16 47.0	+0.8
BR131	Keskin Array S	5.39	12	Pn	Pn	18 16 46.6	+0.1
BR131	Keskin Array S	5.39	12	P	Pn	18 16 46.6	+0.1
BRTR	Keskin Array B	5.39	12	Pn	Pn	18 16 47.0	+0.5
	4.2nm,0.3s,baz=194,slow=15,SNR=68						
BRTR				LR	LR	18 19 26.9	
	comp=Z,1µm,18.6s,baz=188,slow=46						
	15nm,0.5s						
BRTR	Keskin Array B	5.39	12	Pn	Pn	18 16 47.4	+0.9
BRTR	Keskin Array B	5.39	12	*i* P	Pn	18 16 47.7	+1.2
BRTR				pmax	pmax		
	comp=Z,16nm,0.5s						
BR231	Keskin MP Arra	5.41	5		Pn	18 16 46.3	-0.3
SMG	Samos	5.41	308	P	Pn	18 16 47.2	+0.6
SMG				S	Sn	18 17 44.4	-3.5
ANTO	Ankara	5.43	5		Pn	18 16 46.8	-0.2
ANTO	Ankara	5.43	5	P	Pn	18 16 46.8	-0.2
CDAG	Cicekdag	5.46	18	P	Pn	18 16 50.3	+3.0
AKCA	Adyaman/G¶l	5.57	52	P	Pn	18 16 49.8	+0.9
DGB	zmir	5.59	312	P	Pn	18 16 48.7	-0.3
BORA	Eskisehir	5.59	346		Pn	18 16 49.8	+0.6
BORA	Eskisehir	5.59	346	P	Pn	18 16 49.4	+0.2
AKHS	Akhisar	5.64	323	P	Pn	18 16 49.5	-0.3
BLCB	Balcova	5.71	315	P	Pn	18 16 51.2	+0.5
SURC	SANLIURFA_SURC	5.77	63	P	Pn	18 16 51.3	-0.3
SANT	Santorini	5.81	291	Pn	Pn	18 16 51.9	-0.3
HRKL	Herakleio	5.88	280	P	Pn	18 16 53.6	+0.6
CMBO	Columbo, Santo	5.89	292	P	Pn	18 16 53.1	0.0
CUGUR	Gurin_SVAS	5.92	42	P	Pn	18 16 55.5	+1.8
DURS	Dursunbey	5.94	331	P	Pn	18 16 54.8	+0.9
ZEYE	Izmir, Urla-Ze	5.94	311	SPECP		18 16 54.0	
ZEYE				P	Pn	18 16 54.2	+0.4
URLA	Izmir	5.96	313	P	Pn	18 16 54.5	+0.3
HACI	Hacifakili, Ak	5.96	27	P	Pn	18 16 55.9	+1.6
BILE	Bilecik/Merkez	5.99	343	P	Pn	18 16 56.0	+1.3
APE	Apeiranthos	6.01	298	P	Pn	18 16 55.1	+0.3
APE	Apeiranthos	6.01	298	Pn	Pn	18 16 54.6	-0.2
APE	Apeiranthos	6.01	298	*i* P	Pn	18 16 54.7	-0.1
AKCD	Akcadag	6.02	49	P	Pn	18 16 55.9	+0.8
CUAYA	Sivas-Altinyay	6.04	36	P	Pn	18 16 57.3	+1.9
IDI	Anoyia	6.05	280	Pn	Pn	18 16 55.3	-0.2
	comp=Z,8.2nm,0.3s,baz=76,slow=5.7,SNR=57						
IDI				Sn	Sn	18 18 00.9	-2.8
	comp=Z,38nm,0.3s,baz=229,slow=19,SNR=16						
	comp=Z,26nm,0.4s						
IDI	Anoyia	6.05	280	P	Pn	18 16 55.9	+0.4
MDUB	Mudurnu	6.06	353	Pn	Pn	18 16 55.0	-0.6
STEP	BALIKESIR_Sava	6.08	325	P	Pn	18 16 56.4	+0.6
ZEDA	zmir-Bergama	6.09	319	SPECP		18 16 56.0	
ZEDA				P	Pn	18 16 56.9	+1.0
SANL	SANLIURFA_Merk	6.16	62	P	Pn	18 16 57.1	+0.1
BTAS	Taskesti	6.18	352	P	Pn	18 16 59.4	+2.1
GEYV	SAKARYA_Geyve	6.21	347	P	Pn	18 16 58.5	+1.0
BALB	Balikesir	6.22	328	Pn	Pn	18 16 57.8	+0.2
KARB	zmir-Karabur	6.26	314	SPECP		18 16 58.0	
KARB				P	Pn	18 16 58.9	+0.6
HANM	anlurfa/Hi	6.26	58	P	Pn	18 16 58.8	+0.4
HISA	Bilecik-Osmane	6.27	344	P	Pn	18 16 59.5	+1.0
BKES	Balkesir-Mer	6.27	328	P	Pn	18 16 58.8	+0.4
CHOS	Chios island	6.31	310	P	Pn	18 16 59.8	+0.8
NARI	Adyaman-Kaht	6.33	55	P	Pn	18 16 59.5	+0.2
MAYA	Malatya/Merkez	6.35	51	P	Pn	18 17 00.8	+1.3
BCAM	Yenicaga	6.36	359	P	Pn	18 17 00.4	+0.7
BALY	Balya	6.42	327	P	Pn	18 17 00.4	-0.1
CUKAN	kangal_SIVAS	6.45	40	P	Pn	18 17 02.0	+1.1
SAHE	Sakarya_HENDEK	6.48	351	P	Pn	18 17 03.0	+1.7
BUHA	Balikesir, Bur	6.49	322	SPECP		18 17 02.0	
BUHA				P	Pn	18 17 02.4	+1.1
AYVA	Ayvalik	6.55	319	P	Pn	18 17 03.1	+0.9
GVD	Gavdhos	6.68	276	P	Pn	18 17 04.6	+0.6
GVD				S	Sn	18 18 16.3	-2.8
SEMS	Kocaeli-K¶rfe	6.70	344	P	Pn	18 17 05.6	+1.3
ILGA	Ilgaz	6.70	10	Pn	Pn	18 17 03.8	-0.8
BAND	Balkesir-Ban	6.73	332	SPECP		18 17 05.0	
BAND				P	Pn	18 17 05.5	+0.8
PRK	Paraskevi	6.74	317	P	Pn	18 17 06.2	+1.5
TOKA	Tokat	6.79	29		Pn	18 17 07.7	+2.1
IMMV	Iera Moni Meta	6.81	281	P	Pn	18 17 06.5	+0.7
IMMV				S	Sn	18 18 19.1	-3.2
	comp=Z,682nm,0.5s						
KAND	Kocaeli-Kandir	6.82	347	P	Pn	18 17 04.1	-1.8
BAYC	CANAKKALE_Bayr	6.94	321	SPECP		18 17 08.0	
BAYC				P	Pn	18 17 08.6	+1.1
SIGR	SIGRI	6.95	315	P	Pn	18 17 08.6	+0.9
KOCA	Canakkale, Ayv	6.99	318	P	Pn	18 17 09.6	+1.4
EZN	Ezine	7.12	321	P	Pn	18 17 10.7	+0.7
ECEA	Canakkale, Ece	7.36	321	SPECP		18 17 13.0	
ECEA				P	Pn	18 17 13.7	+0.4
VLY	Voula,Athens	7.59	299	P	Pn	18 17 17.1	+0.6
GOKA	anakkale-Gk	7.60	321	SPECP		18 17 18.0	
GOKA				P	Pn	18 17 18.3	+1.6
BZK	Bozkurt	7.64	10	Pn	Pn	18 17 16.4	-0.6
HANI	Diyarbakir_Han	7.72	57	P	Pn	18 17 19.1	+0.8
LIA	Limnos Island	7.79	316	P	Pn	18 17 20.2	+0.9
SMTH	Samothraki Isl	8.00	321	P	Pn	18 17 22.8	+0.6
ALN	Alexandroupoli	8.07	325	Pn	Pn	18 17 24.5	+1.5
ALN	Alexandroupoli	8.07	325	P	Pn	18 17 24.5	+1.5
KIRK	Kırklareli	8.34	333	P	Pn	18 17 26.9	+0.1
RDO	Rodhopi	8.50	324	Pn	Pn	18 17 30.1	+1.0
KOPT	Kop Dagi	8.65	48	Pn	Pn	18 17 31.8	+0.4
ITM	Ithomi	8.76	291		Pn	18 17 32.3	-0.4
OUR	Ouranopolis	8.78	314	P	Pn	18 17 33.0	+0.2
GURO	Guroymak-BITLI	8.93	60	Pn	Pn	18 17 35.6	+0.6
KDZ	Kurdzhali	8.95	325	P	Pn	18 17 35.2	0.0
AGG	Agios Georgios	9.13	303		Pn	18 17 38.9	+1.3
AGG	Agios Georgios	9.13	303	P	Pn	18 17 38.9	+1.3
JMB	Yambol	9.13	333	P	Pn	18 17 39.0	+1.4
RZN	Rozhen	9.32	323	P	Pn	18 17 41.4	+1.1
LIT	Litokhoron	9.56	309	Pn	Pn	18 17 45.3	+1.8
LIT	Litokhoron	9.56	309	P	Pn	18 17 45.3	+1.8
PLD	Plovdiv	9.64	325	P	Pn	18 17 45.7	+1.1
MMB	Musomiste	9.76	319	P	Pn	18 17 46.2	0.0
SZH	Strazhica	10.06	333	P	Pn	18 17 48.7	-1.6
VAY	Valandovo	10.23	315	*i* P	Pn	18 17 55.8	+3.1
KKB	Krupnik	10.30	319	P	Pn	18 17 55.0	+1.4
TIRR	Tirgusor	10.41	345	⇓P	Pn	18 17 55.2	+0.1
TIRR	Tirgusor	10.41	345	Pn	Pn	18 17 55.0	-0.1
TIRR	Tirgusor	10.41	345	⇓P	Pn	18 17 55.2	+0.1
SIM	Simferopol'	10.59	7	*e*P	Pn	18 18 00.2	+2.6
SIM				*e*S	Sn	18 20 00.7	+5.5
SIM				pmax	pmax		
	comp=Z,83nm,0.9s						
SIM				MLR	MLR		
	comp=Z,334nm,19.0s						
FNA	Florina	10.64	310	Pn	Pn	18 17 60.0	+1.5
FNA	Florina	10.64	310	P	Pn	18 18 00.0	+1.5
STIP	Stip	10.69	316	⇓*i*P	Pn	18 18 00.0	+1.1
HARR	Harsova	10.74	344	⇓P	Pn	18 17 59.9	+0.3
HARR	Harsova	10.74	344	⇓P	Pn	18 17 59.9	+0.3
VTS	Vitosha	10.75	322	⇓P	Pn	18 18 06.2	+6.3
VTS	Vitosha	10.75	322	Pn	Pn	18 18 04.9	+5.0
VTS	Vitosha	10.75	322	⇓P	Pn	18 18 06.2	+6.3
TPGR	Topolog	10.79	346	⇑P	Pn	18 18 01.9	+1.5
SOC	Sochi	10.84	30	*e*P	Pn	18 17 58.5	-2.5
SOC				*e*S	Sn	18 19 57.1	-4.1
SOC				pmax	pmax		
	comp=Z,31nm,1.0s						
SOC				MLR	MLR		
	comp=Z,90nm,7.0s						
KBN	Korca	10.94	308		Pn	18 18 04.2	+1.7
KBN	Korca	10.94	308	P	Pn	18 18 04.2	+1.7
CFR	Carcaliu	11.16	345	⇓P	Pn	18 18 06.2	+0.9
CFR	Carcaliu	11.16	345	⇓P	Pn	18 18 06.2	+0.9
KEK	Kerkira	11.20	302	Pn	Pn	18 18 05.9	0.0
SKO	Skopje	11.30	315	*i* P	Pn	18 18 10.4	+3.1
AKH	Akhalkalaki	11.31	49	Pn	Pn	18 18 06.1	-1.6
AKH	Akhalkalaki	11.31	49	P	Pn	18 18 06.1	-1.6
GNI	Garni	11.51	57	Pn	Pn	18 18 10.4	+0.2
	comp=Z,0.3nm,0.3s,baz=117,slow=4.5,SNR=1.7						
GNI				LR	LR	18 23 38.6	
	comp=Z,202nm,18.7s,baz=280,slow=43						
	comp=Z,2.5nm,0.5s						
GNI	Garni	11.51	57	Pn	Pn	18 18 10.7	+0.4
GNI	Garni	11.51	57	*ce*P	Pn	18 18 09.8	-0.5
GNI				pmax	pmax		
	comp=Z,11nm,1.7s						
TATR	Tatarca	11.57	345	⇓P	Pn	18 18 13.7	+2.7
NAX	Nakhchivan	11.66	62	P	Pn	18 18 11.8	-0.6
TIR	Tirane	11.91	309	Pn	Pn	18 18 17.4	+1.7
TIR	Tirane	11.91	309	P	Pn	18 18 17.4	+1.7
ONI	Oni	11.99	44	Pn	Pn	18 18 17.8	+1.0
ONI	Oni	11.99	44	P	Pn	18 18 17.8	+1.0
MLR	Muntele Rosu	12.02	338	⇑P	Pn	18 18 18.4	+1.2
MLR	Muntele Rosu	12.02	338	Pn	Pn	18 18 17.7	+0.4
	comp=Z,0.4nm,0.3s,baz=79,slow=2.6,SNR=7.9						
MLR				LR	LR	18 24 07.8	
	comp=Z,268nm,19.3s,baz=164,slow=44						
	comp=Z,8.2nm,1.0s						
MLR	Muntele Rosu	12.02	338	Pn	Pn	18 18 17.0	-0.3
MLR	Muntele Rosu	12.02	338	⇑P	Pn	18 18 18.4	+1.2
PANC	Panciu	12.04	343	⇑P	Pn	18 18 20.1	+2.7
VRI	Vrincioaia	12.14	342	⇑P	Pn	18 18 20.7	+1.9
VRI	Vrincioaia	12.14	342	⇑P	Pn	18 18 20.7	+1.9
PLOR	Plostina	12.15	341	⇓P	Pn	18 18 21.2	+2.3
PLOR	Plostina	12.15	341	⇓P	Pn	18 18 21.2	+2.3
VOIR		12.26	336	⇑P	Pn	18 18 20.9	+0.4
VOIR		12.26	336	⇑P	Pn	18 18 20.9	+0.4
SHA1	Shidzhatmaz	12.33	38	*i* P	Pn	18 18 21.3	-0.3
ARR	Arges	12.34	334	⇑P	Pn	18 18 22.5	+0.9
ZEI	Tsey	12.37	44	*e*P	Pn	18 18 24.5	+2.3
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KBZ	Khabaz	12.45	39	Pn	Pn	18 18 24.1	+1.1
	comp=Z,2.4nm,0.9s,baz=230,slow=15,SNR=2.5						
KBZ				LR	LR	18 24 08.5	
	comp=Z,99nm,21.7s,baz=220,slow=42						
KBZ	Khabaz	12.45	39	*i* P	Pn	18 18 21.8	-1.2
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KIV	Kislovodsk	12.50	37	Pn	Pn	18 18 22.4	-1.4
KIV	Kislovodsk	12.50	37	*e*P	Pn	18 18 22.5	-1.4
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
KIV				MLR	MLR		
	comp=Z,40nm,11.0s						
KVAR	Kislovodsk Arr	12.51	37	Pn	Pn	18 18 24.7	+0.8
	baz=298,slow=23						
KVAR				LR	LR	18 24 01.4	
	comp=Z,91nm,21.4s,baz=102,slow=42						
	comp=Z,3.1nm,0.4s						

OZUR		12.61	339	⇑P	Pn	18 18 24.5	-0.8
DOPR	Dopca	12.62	338	⇓P	Pn	18 18 26.7	+1.3
DJES	Djerdap	12.63	327	Pn	Pn	18 18 24.8	-0.6
GANJ	Ganja	12.81	57	P	Pn	18 18 27.9	-0.1
HERR	Herculane	12.84	327	⇑P	Pn	18 18 28.7	+0.4
PDG	Podgorica	12.88	312	⇓P	Pn	18 18 33.6	+4.7
PDG	Podgorica	12.88	312	Pn	Pn	18 18 29.4	+0.5
GZR	Gura Zlata	13.09	329	⇑P	Pn	18 18 31.2	-0.6
GZR	Gura Zlata	13.09	329	⇑P	Pn	18 18 31.2	-0.6
MDVR	Moldovita	13.09	325	⇑P	Pn	18 18 32.9	+1.1
TIP	Timpagrande	13.22	295	Pn	Pn	18 18 30.0	-3.8
MNGR	Mingechevir, A	13.39	58	P	Pn	18 18 35.8	-0.1
DIVS	Divibare	13.48	319	Pn	Pn	18 18 36.6	-0.6
GOF	Gofitskoye	13.48	35	⇑eP	Pn	18 18 39.5	+2.4
SEKA	Sheki	13.65	56	P	Pn	18 18 40.1	+0.7
SURR	Surduc	13.65	329	⇑P	P	18 18 48.1	+0.3
BZS	Buzias	13.77	327	⇑P	P	18 18 49.3	+0.2
BZS	Buzias	13.77	327	⇑P	P	18 18 49.3	+0.2
SORM	Soroca	13.97	349	⇑P	P	18 18 50.5	-0.9
SORM	Soroca	13.97	349	⇑P	P	18 18 50.5	-0.9
MARR	Marisel-Cluj	14.01	333	⇑P	Pn	18 18 47.0	+2.6
TIM	Timisoara	14.04	327	⇓P	Pn	18 18 30.8	-14
BURAR	Bucovina Array	14.16	340	⇓P	P	18 18 55.6	+2.0
BURAR	Bucovina Array	14.16	340	Pn	Pn	18 18 46.3	-0.1
BURAR	Bucovina Array	14.16	340	⇓P	P	18 18 55.6	+2.0
CUC	Castrocucco	14.16	298		Pn	18 18 43.0	-3.4
BUR08	Bucovina Ar. S	14.19	340	Pn	Pn	18 18 46.9	+0.1
VAE	Valguarnera	14.71	287	Sn	Sn	18 21 20.8	-15
	comp=Z,2.3nm,0.3s,baz=156,slow=18,SNR=2.5						
RAFF	Raffo Rosso	14.72	286	Pn	Pn	18 18 49.3	-4.7
SGRT	San Giovanni R	14.84	304	Pn	Pn	18 18 52.6	-3.1
PAOL	Paolisi	15.39	300	Pn	Pn	18 19 02.4	-0.7
PAOL				IAmb	IAmb	18 19 24.9	
	comp=Z,37nm,1.2s						
TRPA	Tarpa	15.45	335	⇑P	Pn	18 19 04.5	+0.8
MORH	Mrgy, Hungar	15.62	323	⇑P	Pn	18 19 05.1	-0.6
RAYN	Ar Rayn	15.93	130		Pn	18 19 11.6	+1.5
RAYN	Ar Rayn	15.93	130	⇑P	P	18 19 13.1	-0.3
INTR	Introdacqua	16.21	303	P	Pn	18 19 13.4	-0.1
INTR				IAmb	IAmb	18 19 27.6	
	comp=Z,40nm,1.5s						
AKASG	Malin Array Be	16.39	353	Pn	Pn	18 19 12.2	-3.4
	comp=Z,2.3nm,0.3s,baz=175,slow=8.5,SNR=51						
AKASG				LR	LR	18 26 30.6	
	comp=Z,125nm,18.9s,baz=175,slow=41						
	comp=Z,2.7nm,0.6s						
AKASG	Malin Array Be	16.39	353	Pn	Pn	18 19 11.9	-3.6
AKASG				P	P	18 19 17.1	-1.1
AKASG	Malin Array Be	16.39	353	P	Pn	18 19 12.0	-3.6
AKASG				pmax	pmax		
	comp=Z,94nm,0.8s						
AKBB	Malin Array Si	16.39	353	Pn	Pn	18 19 12.4	-3.2
AKBB				P	P	18 19 17.4	-0.8
AKBB	Malin Array Si	16.39	353	ceP	Pn	18 19 16.7	+1.1
AKBB				pmax	pmax		
	comp=Z,113nm,0.8s						
LVV	L'vov	16.49	341	eP	P	18 19 20.4	+1.1
KECS	Kecovo	16.51	332	eP	P	18 19 20.1	+0.5
KECS				pmax	pmax		
	comp=Z,29nm,0.9s						
KECS	Kecovo	16.51	332	eP	P	18 19 20.1	+0.5
AQU	L'Aquila	16.68	304	P	Pn	18 19 20.0	+0.5
AQU				IAmb	IAmb	18 19 34.4	
	comp=Z,26nm,1.0s						
AQU	L'Aquila	16.68	304	P	Pn	18 19 20.0	+0.5
AQU				pmax	pmax		
	comp=Z,26nm,1.0s						
CAMP	Campotosto	16.75	304	P	Pn	18 19 21.2	+0.8
STHS	Stebnicka Huta	17.00	335	eP	Pn	18 19 23.5	+0.1
STHS				pmax	pmax		
	comp=Z,16nm,1.0s						
STHS	Stebnicka Huta	17.00	335	eP	Pn	18 19 23.5	+0.1
GUMA	Gualdo di Mace	17.00	306	P	Pn	18 19 23.1	-0.4
GUMA				IAmb	IAmb	18 19 53.6	
	comp=Z,40nm,1.2s						
VYHS	Vyhne	17.19	329	eP	P	18 19 27.6	+0.4
VYHS				pmax	pmax		
	comp=Z,17nm,0.9s						
VYHS	Vyhne	17.19	329	eP	P	18 19 27.6	+0.4
CESX	Cesi	17.34	304		Pn	18 19 27.3	-0.4
LANS	Liptovska Anna	17.45	331	eP	P	18 19 31.3	+1.3
LANS				pmax	pmax		
	comp=Z,11nm,0.8s						
LANS	Liptovska Anna	17.45	331	eP	P	18 19 31.3	+1.3
VSR	Storozhevoye	17.51	15	eP	Pn	18 19 29.7	0.0
VSR				pmax	pmax		
	comp=Z,20nm,0.7s						
MURB	Monte Urbino	17.63	306	P	Pn	18 19 31.4	+0.2
MURB				IAmb	IAmb	18 20 14.2	
	comp=Z,31nm,1.1s						
MODS	Modra-Piesok	17.80	326	eP	P	18 19 33.7	-0.2
MODS				pmax	pmax		
	comp=Z,31nm,0.8s						
MODS	Modra-Piesok	17.80	326	eP	P	18 19 33.7	-0.2
RONA	Rosalia, Austr	17.80	323	ePn	P	18 19 34.2	+0.3
	comp=Z,25nm,1.0s,SNR=7.4						
SOKA	Soboth	17.81	318	ePn	Pn	18 19 33.8	+0.2
	comp=Z,10nm,0.7s,SNR=5.5						
LATE	Laterza	17.88	303	P	Pn	18 19 34.4	0.0
LATE				IAmb	IAmb	18 19 41.4	
	comp=Z,70nm,1.5s						
ARSA	Arzberg	17.91	321	i Pn	P	18 19 35.5	+0.4
	comp=Z,14nm,1.1s						
VORR	Voronezh	17.95	14	eP	Pn	18 19 34.0	-1.1
VORR				pmax	pmax		
	comp=Z,50nm,0.5s						
JAVC	Velka Javorina	17.98	328	ePN	P	18 19 36.4	+0.5
OBKA	Obir	17.98	317	ePn	P	18 19 35.8	-0.1
	comp=Z,5.8nm,0.7s						
VRH	Novokhopyorsk	18.12	20	eP	P	18 19 37.4	+0.1
VRH				pmax	pmax		
	comp=Z,142nm,0.8s						
CONA	Conrad Observa	18.18	323	ePn	Pn	18 19 38.0	0.0
	comp=Z,9.2nm,0.9s						
OJC	Ojcow	18.18	334	P	Pn	18 19 36.3	-1.7
OJC	Ojcow	18.18	334	P	Pn	18 19 36.3	-1.7
OJC				pmax	pmax		
	comp=Z,11nm,0.8s						
SABO	M.te Sabotino	18.23	315	P	Pn	18 19 37.2	-1.4
SABO				IAmb	IAmb	18 19 52.4	
	comp=Z,14nm,0.9s						
MAUC	Maruska	18.29	329	eP	Pn	18 19 40.3	+1.0
PRED	Cave del Predi	18.50	316	P	P	18 19 41.5	-0.1
OKC	Ostrava-Krasne	18.52	330	eP	Pn	18 19 42.1	0.0
OKC	Ostrava-Krasne	18.52	330	eP	Pn	18 19 42.1	0.0
MYKA	Terra Mystica	18.56	317	eP	Pn	18 19 43.0	+0.3
	comp=Z,7.4nm,0.7s						
CASP	Castiglione de	18.59	303	P	P	18 19 41.6	-1.0
CASP				IAmb	IAmb	18 19 48.4	
	comp=Z,58nm,1.3s						
OSSC	Osservatorio P	18.59	305	P	Pn	18 19 43.4	+0.4
KRUC	Moravsky	18.70	326	ePN	P	18 19 43.6	-0.2
MORC	Moravsky Berou	18.72	329	P	P	18 19 43.0	-1.0
MORC	Moravsky Berou	18.72	329	ePN	Pn	18 19 44.6	0.0
MORC	Moravsky Berou	18.72	329	P	P	18 19 43.1	-1.0
MORC				pmax	pmax		
	comp=Z,12nm,1.1s						
KEST	Kesra	18.73	280	P	Pn	18 19 45.5	+0.7
	comp=Z,0.4nm,0.3s,baz=59,slow=4.7,SNR=7.5						
	comp=Z,4.6nm,0.8s						
KEST	Kesra	18.73	280	P	P	18 19 43.0	-1.3
KEST				IAmb	IAmb	18 20 07.6	
	comp=Z,30nm,1.2s						
LPSR	Galich'ya Gora	18.78	13	eP	P	18 19 44.4	-0.1
LPSR				pmax	pmax		
	comp=Z,70nm,0.6s						
VRAC	Vranov	18.79	327	P	P	18 19 44.3	-0.4
	comp=Z,0.2nm,0.3s,baz=135,slow=8.5,SNR=8.2						
VRAC				LR	LR	18 27 26.3	
	comp=Z,109nm,19.3s,baz=126,slow=39						
	comp=Z,7.2nm,0.9s						
VRAC	Vranov	18.79	327	ePN	P	18 19 44.6	-0.1
STAL	STALIGIAL	18.90	314	P	P	18 19 44.2	-1.8
STAL				IAmb	IAmb	18 19 46.5	
	comp=Z,31nm,1.5s						
CLUD	Cludinico	18.91	315	P	P	18 19 44.1	-2.0
MOA	Molln	18.95	320	eP	Pn	18 19 46.8	-0.5
	comp=Z,12nm,1.2s						
KBA	Koelnbreinsper	18.98	317	eP	Pn	18 19 47.7	-0.2
	comp=Z,23nm,1.1s,SNR=9.7						
CIMO	Cimolais	19.09	314	P	P	18 19 46.4	-1.6
CIMO				IAmb	IAmb	18 19 51.0	
	comp=Z,8.9nm,0.7s						
TEOL	Teolo	19.09	311	P	P	18 19 46.7	-1.3
ZCCA	Zocca	19.09	308	P	Pn	18 19 48.6	-0.5
ZCCA				IAmb	IAmb	18 20 07.3	
	comp=Z,27nm,1.0s						
BIOA	Bad Ischl, Aus	19.18	319	i P	P	18 19 49.1	0.0
	comp=Z,11nm,0.9s						
ABTA	Abfaltersbach	19.28	315	eP	Pn	18 19 50.9	-0.5
	comp=Z,6.1nm,0.7s						
CTI	Castel Tesino	19.43	313	P	P	18 19 50.8	-1.1
CTI	Castel Tesino	19.43	313	P	P	18 19 50.8	-1.1
CTI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CKRC	Cesky Krumlov	19.54	323	eP	P	18 19 53.5	+0.5
CKRC				ex	Pn	18 19 56.3	+1.9
CKRC	Cesky Krumlov	19.54	323	eP	P	18 19 53.5	+0.5
DPC	Dobruska-Polom	19.67	329	eP	P	18 19 54.3	-0.1
DPC				ex	Pn	18 19 56.5	+0.5
DPC	Dobruska-Polom	19.67	329	eP	P	18 19 54.3	-0.1
GEC2	GERESS Array S	19.86	322	P	P	18 19 56.0	-0.6
GEC2				IAmb	IAmb	18 20 00.1	
	comp=Z,19nm,0.8s						
GEC2	GERESS Array S	19.86	322	eP	P	18 19 55.7	-0.9
	comp=Z,19nm,0.8s,baz=127,slow=12						
GERES	GERESS Array B	19.86	322	P	P	18 19 56.0	-0.6
	comp=Z,1.2nm,0.3s,baz=125,slow=12,SNR=38						
GERES				LR	LR	18 29 08.0	
	comp=Z,119nm,18.8s,baz=54,slow=42						
	comp=Z,9.6nm,0.6s						
GERES	GERESS Array B	19.86	322	P	P	18 19 56.2	-0.4
GERES	GERESS Array B	19.86	322	P	P	18 19 56.0	-0.6
OSTC	Ostas	19.87	329	eP	P	18 19 57.0	+0.4
OSTC				ex	Pn	18 19 59.5	+1.2
OSTC	Ostas	19.87	329	eP	P	18 19 57.0	+0.4
SALO	Salr	19.92	311	P	P	18 19 56.3	-0.8
SALO				IAmb	IAmb	18 20 12.4	
	comp=Z,33nm,1.1s						
UPC	Upice	19.92	329	eP	P	18 19 57.1	0.0
UPC	Upice	19.92	329	eP	P	18 19 57.1	0.0
CHVC	Chvalec	19.96	329	eP	P	18 19 57.7	+0.1
CHVC	Chvalec	19.96	329	eP	P	18 19 57.7	+0.1
WTTA	Wattenberg	20.06	316	eP	P	18 19 59.1	+0.3
	comp=Z,49nm,1.2s,SNR=12						
KHC	Kasperske Hory	20.11	322	P	P	18 19 58.8	-0.4
KHC	Kasperske Hory	20.11	322	eP	P	18 19 59.1	-0.1
KHC				epP	sP	18 20 11.0	+0.7
KHC	Kasperske Hory	20.11	322	i P	P	18 19 59.7	+0.5
KHC				pmax	pmax		
	comp=Z,63nm,0.7s						
WATA	Walderalm	20.13	316	eP	P	18 19 59.6	0.0
	comp=Z,46nm,1.2s,SNR=14						
PRU	Pruhonice	20.21	326	eP	P	18 19 59.8	-0.5
PRU	Pruhonice	20.21	326	eP	P	18 19 59.8	-0.5
MNK	Minsk	20.28	353	i P	P	18 19 58.9	-2.0
	comp=E,7.0nm,0.9s						
MNK				i P	P	18 19 58.9	-2.0
	comp=N,126nm,1.0s						
MNK				i P	P	18 19 58.9	-2.0
	comp=Z,174nm,0.8s,baz=170						
MNK				i PP	PnPn	18 20 16.2	-1.9
MNK				i S	S	18 23 45.3	-1.3
MNK				i SS	SnSn	18 24 05.2	+0.2
MNK				i SSS	SSS	18 24 19.1	
MNK				i LR	LR	18 27 35.6	
MNK				i LRM	MLR	18 29 31.6	
	comp=Z,105nm,18.7s						
MNK				i LRM	MLR	18 29 50.3	
	comp=N,253nm,19.4s						
MNK				i LRM	MLR	18 30 16.1	
	comp=E,36nm,21.9s						
MNK	Minsk	20.28	353	i P	P	18 19 58.9	-2.0
MNK				i		18 20 16.1	
MNK				i S	S	18 23 45.2	-1.3
MNK				i SS	SnSn	18 24 05.2	+0.2
MNK				i SSS	SSS	18 24 19.1	
MNK				pmax	pmax		
	comp=Z,174nm,0.9s						
MNK				pmax	pmax		
	comp=N,126nm,1.0s						
MNK				pmax	pmax		
	comp=E,7.0nm,0.9s						
MNK				MLR	MLR		
	comp=Z,105nm,19.0s						
MNK				MLR	MLR		
	comp=N,253nm,19.0s						
MNK				MLR	MLR		
	comp=E,36nm,22.0s						
SQTA	Sankt Quirin	20.28	315	eP	P	18 20 01.4	+0.2
	comp=E,19nm,0.7s,SNR=11						
MOTA	Moosalm	20.41	315	eP	P	18 20 02.3	-0.3
	comp=E,29nm,1.1s,SNR=9.1						
FETA	Feichten	20.46	314	eP	P	18 20 03.3	+0.2
	comp=E,39nm,1.1s,SNR=12						
FUORN	Ofenpass-Fuorn	20.55	313	P	P	18 20 03.9	-0.3
PVCC	Panska Ves	20.58	327	eP	P	18 20 04.5	+0.3
PVCC	Panska Ves	20.58	327	eP	P	18 20 04.5	+0.3
RETA	Reutte	20.68	315	eP	P	18 20 04.8	-0.7
	comp=E,9.0nm,0.5s						
FUR	Furstenfeldbru	20.75	318	eP	P	18 19 59.4	-6.8
	baz=127,slow=12						
NACGM	Naroch	20.80	351	eP	P	18 20 05.4	-1.1
	comp=E,5µm,1.0s						
OBN	Obninsk	20.89	7	P	P	18 20 05.5	-2.0
	comp=E,9.7nm,0.6s,baz=198,slow=20,SNR=9.1						
OBN				LR	LR	18 29 52.1	
	comp=E,30nm,21.4s,baz=196,slow=42						
	comp=E,9.7nm,0.6s						
OBN	Obninsk	20.89	7	P	P	18 20 05.5	-2.0
OBN	Obninsk	20.89	7	d iP	P	18 20 06.0	-1.5
OBN				e		18 20 24.4	
OBN				pmax	pmax		
	comp=Z,87nm,1.3s						
OBN				MLR	MLR		
	comp=Z,149nm,19.0s						
BELG	Belogornoye	21.08	27	P	P	18 20 08.4	-1.1
	comp=Z,105nm,0.8s,baz=322,slow=0.4,SNR=65						
BELG				LR	LR	18 31 18.2	
	comp=Z,85nm,19.4s,baz=321,slow=46						
	comp=Z,105nm,0.8s						
BELG	Belogornoye	21.08	27	i P	P	18 20 09.1	-0.4
BELG				pmax	pmax		
	comp=Z,19nm,0.8s						
DAVA	Damuels	21.10	314	i P	P	18 20 09.4	-0.6
	comp=Z,12nm,0.6s						
BRG	Berggiesshubel	21.10	327	i P	P	18 20 09.8	-0.1
BRG				Amp		18 20 11.3	
	comp=Z,19nm,1.1s						
BRG	Berggiesshubel	21.10	327	P	P	18 20 19.1	+9.2
BRG				Amp		18 20 20.5	
	comp=Z,12nm,1.0s						
BRG	Berggiesshubel	21.10	327	i P	P	18 20 09.7	-0.1
BRG				e		18 20 19.0	
BRG				pmax	pmax		
	comp=Z,19nm,1.1s						
BRG				pmax	pmax		
	comp=Z,12nm,1.0s						
BRG	Berggiesshubel	21.10	327	eP	P	18 20 09.4	-0.5
	comp=Z,28nm,1.2s,baz=127,slow=12						
GEYT	Alibeck	21.20	73	P	P	18 20 11.3	+0.2
	comp=Z,18nm,1.0s,baz=272,slow=12,SNR=24						
GEYT				LR	LR	18 31 04.1	
	comp=Z,68nm,18.3s,baz=342,slow=44						
	comp=Z,18nm,1.0s						
GYA0B	ALIBECK ARRAY	21.20	73	P	P	18 20 10.4	-0.7
GYA0B				IAmb	IAmb	18 20 13.5	
	comp=Z,27nm,1.1s						
MANZ	Manzenberg	21.39	323	eP	P	18 20 11.9	-1.1
	comp=Z,2.1nm,0.9s,baz=127,slow=12						
FBE	Freiberg	21.41	326	eP	P	18 20 12.9	-0.3
	comp=Z,34nm,1.0s,baz=127,slow=12						
WERN	Wernitzgruen	21.45	324	eP	P	18 20 13.3	-0.3
	comp=Z,17nm,1.2s,baz=127,slow=12						
TANN	Tannenbergstha	21.49	324	eP	P	18 20 14.3	+0.1
	comp=Z,27nm,1.4s,baz=127,slow=12						
GUNZ	Gunzen	21.52	324	eP	P	18 20 15.7	+1.2
	comp=Z,18nm,0.9s,baz=127,slow=12						
ISAL	Salakas	21.54	351	eP	P	18 20 14.6	+0.1
GKP	Gorka Klasztor	21.60	335	eP	P	18 20 14.0	-1.2
MOS	Moscow	21.62	8	eP	P	18 20 11.8	-3.5
GRA1	Grafenberg Arr	21.66	321	P	P	18 20 17.2	+1.2
GRA1				IAmb	IAmb	18 20 33.8	
	comp=Z,21nm,1.1s						
GRF	Grafenberg Arr	21.66	321	P	P	18 20 17.2	+1.2
GRF				pmax	pmax		
	comp=Z,21nm,1.1s						
GRF	Grafenberg Arr	21.66	321	eP	P	18 20 17.5	+1.6
	baz=127,slow=12						
GRFO	Grafenberg	21.66	321	P	P	18 20 17.4	+1.4
GRFO				IAmb	IAmb	18 20 33.7	
	comp=Z,19nm,1.0s						
GRFO	Grafenberg	21.66	321	P	P	18 20 17.4	+1.4
GRFO				pmax	pmax		
	comp=Z,19nm,1.0s						
PABE	Paberze	21.81	347	P	P	18 20 15.6	-1.8
PABE	Paberze	21.81	347	eP	P	18 20 16.2	-1.2
CLL	Collm	21.83	326	P	P	18 20 15.8	-1.9
CLL				IAmb	IAmb	18 20 22.5	
	comp=Z,15nm,1.0s						
CLL	Collm	21.83	326	eP	P	18 20 16.0	-1.7
CLL				i Pmax		18 20 19.8	
	comp=Z,20nm,1.2s						
CLL				esP	sP	18 20 29.0	+0.2
CLL				ePPP	PPP	18 20 49.0	
CLL	Collm	21.83	326	eP	P	18 20 16.0	-1.7
CLL				pmax	pmax		
	comp=Z,20nm,1.2s						
MOX	Moxa	22.05	323	eP	P	18 20 21.7	+1.6
	baz=127,slow=12						
BNI	Bardonecchia	22.20	306	P	P	18 20 21.0	-0.8
BNI				IAmb	IAmb	18 20 24.4	
	comp=Z,13nm,0.8s						
BNI	Bardonecchia	22.20	306	P	P	18 20 21.0	-0.8
BNI				pmax	pmax		
	comp=Z,13nm,0.9s						
STU	Stuttgart	22.25	317	P	P	18 20 21.1	-1.1
STU				IAmb	IAmb	18 20 22.1	
	comp=Z,17nm,0.8s						
STU	Stuttgart	22.25	317	P	P	18 20 21.1	-1.1
STU				pmax	pmax		
	comp=Z,17nm,0.8s						
VSVD	Vaisvydziai	22.27	348	eP	P	18 20 21.4	-1.0
SENIN	Lac Senin/Sane	22.27	310	P	P	18 20 21.4	-1.3
RUE	Ruedersdorf	22.32	329	eP	P	18 20 22.9	0.0
	baz=127,slow=12						
BFO	Black Forest	22.52	315	P	P	18 20 23.7	-1.4
BFO				IAmb	IAmb	18 20 36.4	
	comp=Z,10nm,0.8s						
BFO	Black Forest	22.52	315	P	P	18 20 23.7	-1.4
BFO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PBUR	Paburge	22.70	345	eP	P	18 20 26.4	-0.5
MAHO	Mahon	22.85	292	P	P	18 20 27.6	-1.1
MAHO				IAmb	IAmb	18 20 53.8	
	comp=Z,36nm,1.1s						
ECH	Echery	23.16	314	P	P	18 20 30.4	-1.4
ECH	Echery	23.16	314	P	P	18 20 30.4	-1.4
ECH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SSB	Saint Sauveur	23.70	305	P	P	18 20 37.6	+0.5
SSB	Saint Sauveur	23.70	305	P	P	18 20 37.7	+0.5
SSB				pmax	pmax		
	comp=Z,11nm,1.3s						
VSU	Vasula	24.30	353	eP	P	18 20 42.0	-0.4
WLF	Walferdange	24.42	316	dP	P	18 20 42.7	-1.1
BLEU	Blekinge	24.57	338	eP	P	18 20 41.8	-3.1
AKTO	Aktyubinsk	24.70	42	P	P	18 20 45.7	-0.5
	comp=Z,10nm,0.5s,baz=240,slow=7.7,SNR=40						
AKTO				LR	LR	18 31 26.0	
	comp=Z,71nm,18.6s,baz=132,slow=39						
	comp=Z,10nm,0.5s						
ATD	Arta Tunnel	24.80	154	P	P	18 20 48.8	+1.3
ATD				IAmb	IAmb	18 20 49.9	
	comp=Z,24nm,1.2s						
LUNU	Lund	24.82	334	eP	P	18 20 45.7	-1.5
MTSE	Matsula	24.91	350	eP	P	18 20 48.5	+0.6
MEM	Membach	24.97	318	dP	P	18 20 48.5	-0.1
MEM				dx	x	18 20 55.1	
ABKAR	Akbulak array	25.24	46	P	P	18 20 50.5	-0.7
ABKAR	Akbulak array	25.24	46	P	P	18 20 50.9	-0.2
ABKAR				IAmb	IAmb	18 21 13.9	
	comp=Z,7.1nm,1.0s						
BCLA	Clavier	25.27	317	dP	P	18 20 51.8	+0.5
BJUU	Bjuv	25.32	335	eP	P	18 20 51.0	-0.8
DEL	Delary	25.34	336	eP	P	18 20 51.0	-0.9
DEL	Delary	25.34	336	i P	P	18 20 51.0	-0.9
BGES	Gesves	25.37	317	dP	P	18 20 51.8	-0.5
BGES				dpP	pP	18 21 00.8	+0.5
DOU	Dourbes	25.51	316	dP	P	18 20 52.8	-0.8
DOU				dPP	PnPn	18 21 29.3	-0.4
WSAR	Wadi Sarin	25.65	109	LR	LR	18 32 13.7	
	comp=Z,88nm,20.5s,baz=306,slow=39						
TAM	Tamanrasset	26.04	251	P	P	18 21 00.8	+2.0
TAM				IAmb	IAmb	18 21 04.8	
	comp=Z,17nm,1.0s						
TAM	Tamanrasset	26.04	251	P	P	18 21 00.8	+2.0
TAM				pmax	pmax		
	comp=Z,17nm,1.0s						
VIKU	Vikbolandet	26.19	341	eP	P	18 20 59.8	+0.2
MEF	Metsahovi	26.28	351	eP	P	18 21 00.3	-0.1
BORU	Boraas	26.63	336	eP	P	18 21 03.1	-0.5
ONAU	Onsala	26.73	335	eP	P	18 21 05.2	+0.7
KIRV	Kirov	26.74	20	P	P	18 21 02.7	-1.8
	comp=Z,36nm,0.7s,baz=226,slow=3.6,SNR=7.5						
KIRV				LR	LR	18 32 25.2	
	comp=Z,77nm,21.6s,baz=205,slow=38						
	comp=Z,36nm,0.7s						
KIRV	Kirov	26.74	20	ceP	P	18 21 03.3	-1.2
KLMR	Klimovskoe	26.84	8	eP	P	18 21 02.5	-3.0
KLMR				AMP		18 21 19.8	
	comp=Z,50nm,1.4s						
KLMR	Klimovskoe	26.84	8	eP	P	18 21 02.4	-3.0
KLMR				pmax	pmax		
	comp=Z,50nm,1.4s						
CART	Cartagena	26.94	286	P	P	18 21 05.7	-0.9
CART				IAmb	IAmb	18 21 26.0	
	comp=Z,14nm,0.9s						
FINES	FINESS Array B	27.30	354	P	P	18 21 07.8	-1.7
	comp=Z,9.3nm,0.5s,baz=156,slow=12,SNR=82						
FINES				LR	LR	18 33 22.8	
	comp=Z,104nm,19.2s,baz=155,slow=40						
	comp=Z,9.3nm,0.5s						
FINES	FINESS Array B	27.30	354	P	P	18 21 07.6	-1.9
FINES	FINESS Array B	27.30	354	i P	P	18 21 08.3	-1.2
FINES				pmax	pmax		
	comp=Z,9.0nm,0.4s						
FIA1	FINESS Array S	27.30	354	P	P	18 21 08.2	-1.3
FIA1				IAmb	IAmb	18 21 10.5	
	comp=Z,21nm,0.9s						
TJOU	Tjoern	27.32	336	eP	P	18 21 09.1	-0.7
STRU	Stroemstad	28.25	337	eP	P	18 21 17.1	-1.0
HFS	Hagfors	28.39	341	P	P	18 21 18.4	-0.9
	comp=Z,5.3nm,0.7s,baz=145,slow=11,SNR=14						
HFS				LR	LR	18 33 42.6	
	comp=Z,56nm,19.1s,baz=159,slow=39						
	comp=Z,5.3nm,0.7s						
ARU	Arti	28.42	31	P	P	18 21 18.6	-1.0
	comp=Z,1.5nm,0.3s,baz=256,slow=11,SNR=4.2						
ARU				LR	LR	18 35 19.6	
	comp=Z,55nm,19.8s,baz=224,slow=42						
	comp=Z,1.5nm,0.3s						
ARU	Arti	28.42	31	P	P	18 21 18.2	-1.5
ARU				IAmb	IAmb	18 21 35.3	
	comp=Z,24nm,1.3s						
ARU	Arti	28.42	31	d iP	P	18 21 20.1	+0.4
ARU				S	S	18 26 07.3	+2.6
ARU				SS	SnSn	18 27 26.3	+2.3
ARU				pmax	pmax		
	comp=Z,16nm,1.9s						
ESDC	Sonseca Array	29.18	291	P	P	18 21 27.1	+0.5
	comp=Z,0.8nm,0.9s,baz=86,slow=9.1,SNR=7.4						
	comp=Z,0.8nm,0.9s						
KONO	Kongsberg	29.24	336	P	P	18 21 25.9	-1.0
KONO	Kongsberg	29.24	336	P	P	18 21 25.9	-1.0
KONO				pmax	pmax		
	comp=Z,32nm,1.4s						
KONO	Kongsberg	29.24	336	eP	P	18 21 26.9	0.0
KONO				IAmb	IAmb	18 21 30.7	
PAB	San Pablo	29.48	291	P	P	18 21 29.5	+0.1
PAB	San Pablo	29.48	291	P	P	18 21 29.5	+0.1
PAB				pmax	pmax		
	comp=Z,7.0nm,1.2s						
NC602	NORSAR Array S	29.49	339	P	P	18 21 28.2	-0.9
NC602				IAmb	IAmb	18 21 48.0	
	comp=Z,11nm,1.0s						
NC602	NORSAR Array S	29.49	339	eP	P	18 21 28.6	-0.5
SVE	Sverdlovsk	29.57	32	eP	P	18 21 38.9	+9.1
SVE				pmax	pmax		
	comp=Z,14nm,1.1s						
NC405	NORSAR Array S	29.75	340	P	P	18 21 30.8	-0.7
NAO01	NORSAR Array S	29.77	339	P	P	18 21 30.9	-0.8
NB201	NORSAR Array S	29.82	340	P	P	18 21 30.4	-1.7
NB2	NORSAR Subarra	29.84	340	P	P	18 21 31.1	-1.1
	comp=Z,5.0nm,0.7s,baz=143,slow=9.3						

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NB2   NORSAR Subarra 29.84 340  P     P       18 21 31.1 -1.1
      slow=9.3
NOA   NORSAR Array B 29.84 340  P     P       18 21 31.4 -0.8
      comp=Z,5.0nm,0.8s,baz=138,slow=8.6,SNR=16
NOA                             LR    LR      18 36 12.8
      comp=Z,95nm,18.0s,baz=160,slow=42
      comp=Z,5.0nm,0.8s
NC303 NORSAR Array S 29.94 340  P     P       18 21 31.7 -1.4
NBO00 NORSAR Array S 29.95 339  P     P       18 21 33.0 -0.3
NC204 NORSAR Array S 30.16 339  P     P       18 21 33.2 -1.9
NC204                           IAmb  IAmb    18 21 43.3
      comp=Z,9.3nm,0.8s
BLS5  Blasjo         30.17 334 eP     P       18 21 34.9 -0.3
SKAR  Skarslia       30.45 337 eP     P       18 21 38.6 +1.0
ODD1  Odda           30.45 335 eP     P       18 21 38.4 +0.7
KK31  Karatay Array  30.89  62  P     P       18 21 42.3 +0.6
KK31  Karatay Array  30.89  62  P     P       18 21 42.3 +0.6
KK31                            pmax  pmax
      comp=Z,4.0nm,0.9s
KKAR  Karatay Array  30.89  62  P     P       18 21 42.1 +0.4
KKAR  Karatay Array  30.89  62  P     P       18 21 42.2 +0.4
KKAR                            IAmb  IAmb    18 21 51.2
      comp=Z,3.7nm,0.8s
KKAR  Karatay Array  30.89  62  P     P       18 21 42.1 +0.4
LODK  Lodwar         31.01 174  P     P       18 21 43.2 +0.1
BTK   Batken         31.09  68  P     P       18 21 44.2 +0.6
BTK                             IAmb  IAmb    18 21 57.1
      comp=Z,9.8nm,1.5s
BTK   Batken         31.09  68  P     P       18 21 44.2 +0.6
BTK                             pmax  pmax
      comp=Z,10.0nm,1.5s
DOMB  Dombas         31.26 339 eP     P       18 21 45.1 +0.4
MTE   Manteigas      31.91 293  P     P       18 21 53.5 +2.8
AKN   Aaknes         31.99 338 eP     P       18 21 51.9 +0.7
NSS   Namsos         32.54 344 eP     P       18 21 56.2 +0.3
NSS                             IAmb  IAmb    18 21 56.9
      comp=Z,536nm,2.5s
BRVK  Borovoye       32.71  44  P     P       18 21 57.2 -0.3
BRVK                            IAmb  IAmb    18 21 59.0
      comp=Z,6.4nm,0.7s
BRVK  Borovoye       32.71  44ceP     P       18 21 57.7 +0.2
BRVK                            pmax  pmax
      comp=Z,11nm,1.3s
BVAR  Borovoye Array 32.76  44  LR    LR      18 38 16.9
      comp=Z,61nm,19.4s,baz=254,slow=42
AAK   Ala-Archa      33.80  63  P     P       18 22 06.8 -0.6
AAK                             IAmb  IAmb    18 22 14.6
      comp=Z,3.6nm,0.8s
AAK   Ala-Archa      33.80  63 i P    P       18 22 07.5 +0.1
AAK                             pmax  pmax
      comp=Z,4.0nm,0.9s
NIL   Nilore         33.88  79  P     P       18 22 08.1 +0.1
NIL   Nilore         33.88  79  P     P       18 22 08.1 +0.1
NIL                             pmax  pmax
      comp=Z,7.0nm,0.6s
FAUS  Fauske         34.40 349 eP     P       18 22 12.3 +0.3
TOA0  Torodi Ar. Sit 34.81 240  P     P       18 22 15.4 -0.9
TOA0                            IAmb  IAmb    18 22 40.9
      comp=Z,10nm,1.4s
TORD  Torodi Ar. Bea 34.81 240  P     P       18 22 16.3  0.0
      comp=Z,1.9nm,0.7s,baz=61,slow=9.7,SNR=13
TORD                            LR    LR      18 38 19.0
      comp=Z,72nm,18.7s,baz=64,slow=39
      comp=Z,1.9nm,0.7s
TORD  Torodi Ar. Bea 34.81 240  P     P       18 22 15.5 -0.8
TORD                            IAmb  IAmb    18 22 17.7
      comp=Z,4.9nm,1.1s
MBAR  Mbarara        34.89 183  LR    LR      18 37 13.2
      comp=Z,88nm,18.8s,baz=340,slow=37
MBAR  Mbarara        34.89 183  P     P       18 22 16.8 -0.2
MBAR                            IAmb  IAmb    18 22 18.7
      comp=Z,5.0nm,1.0s
MBAR  Mbarara        34.89 183ceP     P       18 22 18.3 +1.3
MBAR                            pmax  pmax
      comp=Z,10.0nm,2.4s
KTK1  Kautokeino     34.98 354 eP     P       18 22 16.3 -0.8
ARA0  ARCESS Array S 35.34 356 eP     P       18 22 19.2 -1.0
ARCES ARCESS Array B 35.34 356  P     P       18 22 18.9 -1.2
      comp=Z,7.0nm,0.7s,baz=173,slow=8.3,SNR=18
ARCES                           LR    LR      18 38 00.4
      comp=Z,110nm,20.1s,baz=146,slow=38
      comp=Z,7.0nm,0.7s
ARCES ARCESS Array B 35.34 356  P     P       18 22 18.4 -1.8
ARCES ARCESS Array B 35.34 356  P     P       18 22 18.4 -1.8
ARCES                           pmax  pmax
      comp=Z,19nm,1.5s
VADS  Vadso          35.76 358 eP     P       18 22 24.0 +0.2
KURBB Kurchatov Arra 37.12  50  LR    LR      18 40 40.7
      comp=Z,165nm,19.0s,baz=178,slow=41
KURK  Kurchatov      37.19  50  P     P       18 22 35.5 -0.6
KURK                            IAmb  IAmb    18 22 37.5
      comp=Z,9.5nm,1.0s
KURK  Kurchatov      37.19  50ceP     P       18 22 36.7 +0.5
KURK                            pmax  pmax
      comp=Z,13nm,1.3s
MAKZ  Makanchi       39.14  56  P     P       18 22 52.7  0.0
MAKZ  Makanchi       39.14  56  P     P       18 22 52.7  0.0
MAKZ                            pmax  pmax
      comp=Z,3.0nm,0.6s
MK31  Makanchi Array 39.35  56  P     P       18 22 54.4 -0.2
MK31  Makanchi Array 39.35  56 i P    P       18 22 55.6 +1.1
MKAR  Makanchi Array 39.35  56  P     P       18 22 54.5  0.0
      comp=Z,2.2nm,0.8s,baz=272,slow=5.9,SNR=25
MKAR                            LR    LR      18 42 54.7
      comp=Z,44nm,19.3s,baz=254,slow=42
      comp=Z,2.2nm,0.8s
ZAA0  Zalesovo Array 41.36  45  P     P       18 23 10.2 -0.8
ZALV  Zalesovo Beam  41.36  45  P     P       18 23 10.4 -0.5
      comp=Z,3.6nm,0.6s,baz=269,slow=9.4,SNR=20
ZALV                            LR    LR      18 41 35.2
      comp=Z,39nm,19.2s,baz=208,slow=38
      comp=Z,3.6nm,0.6s
ZALV  Zalesovo Beam  41.36  45  P     P       18 23 09.6 -1.4
ZALV  Zalesovo Beam  41.36  45  P     P       18 23 09.6 -1.4
HOPEN Hopen          42.28 358 eP     P       18 23 17.9 -0.3
JMIC  Jan Mayen      42.49 342  LR    LR      18 42 13.0
      comp=Z,69nm,19.1s,baz=214,slow=38
DGZ   Jazzator, Alta 42.77  52 i P    P       18 23 22.6 -0.2
DGZ                             pmax  pmax
      comp=Z,3.0nm,1.2s
WMQ   Urumqi         43.35  60 eP     P       18 23 31.9 +4.5
WMQ                             pmax  pmax
      comp=Z,10.0nm,0.6s
DBIC  Dimbokro       43.92 240  P     P       18 23 32.0 -0.3
      comp=Z,2.3nm,0.4s,baz=52,slow=8.3,SNR=6.4
      comp=Z,2.3nm,0.4s
DBIC  Dimbokro       43.92 240  P     P       18 23 31.9 -0.4
DBIC                            IAmb  IAmb    18 23 46.9
      comp=Z,8.2nm,1.0s
DBIC  Dimbokro       43.92 240  P     P       18 23 31.9 -0.3
DBIC                            pmax  pmax
      comp=Z,8.0nm,1.0s
BORG  Borgarnes      43.99 330  LR    LR      18 44 12.7
      comp=Z,34nm,18.3s,baz=62,slow=39
DANN  Dangsing       44.06  83 eP     P       18 23 34.4 +0.8
      comp=Z,40nm,0.7s
SPB2  Spitsbergen Ar 44.36 355  P     P       18 23 34.2 -0.7
SPA0  Spitsbergen Ar 44.36 355 eP     P       18 23 35.0 -0.1
SPITS Spitsbergen Ar 44.36 355  P     P       18 23 34.1 -0.9
SPITS                           pmax  pmax
      comp=Z,45nm,1.2s
GKN   Gorkha         44.91  83 eP     P       18 23 40.4 +0.2
DMN   Daman          45.44  84 eP     P       18 23 44.4 -0.1
      comp=Z,13nm,0.6s
KKN   Kakani         45.51  83 eP     P       18 23 45.0 -0.1
      comp=Z,23nm,0.7s
PKIN  Phulchoki      45.69  83 eP     P       18 23 46.3 -0.2
PKI   Pulchoki       45.70  83 eP     P       18 23 46.8 +0.1
GUN   Gumba          45.96  83 eP     P       18 23 49.1 +0.3
NRIK  Noril'sk       46.13  24  P     P       18 23 48.6 -0.4
      comp=Z,2.9nm,0.4s,baz=195,slow=2.9,SNR=4.6
NRIK                            LR    LR      18 46 28.8
      comp=Z,55nm,19.8s,baz=182,slow=40
      comp=Z,2.9nm,0.4s
NRIK  Noril'sk       46.13  24  P     P       18 23 48.8 -0.2
NRIK                            IAmb  IAmb    18 23 55.3
      comp=Z,9.0nm,1.4s
NRIK  Noril'sk       46.13  24ceP     P       18 23 49.0 -0.1
NRIK                            pmax  pmax
      comp=Z,3.0nm,1.1s
JIRN  Jiri           46.31  83 eP     P       18 23 51.8 +0.3
      comp=Z,26nm,0.7s
RAMN  Ramite         46.92  84 eP     P       18 23 56.0 -0.2
      comp=Z,10nm,0.7s
TAPN  Taplejung      47.67  83 eP     P       18 24 01.7 -0.4
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LSZ   Lusaka         49.59 185  LR    LR      18 47 47.2
      comp=Z,91nm,19.6s,baz=118,slow=39
MOY   Mondy          51.20  48 eP     P       18 24 29.5 +1.0
SHL   Shillong       51.81  83  P     P       18 24 31.7 -1.8
SHL                             IAmb  IAmb    18 24 38.8
      comp=Z,6.5nm,1.0s
SHL   Shillong       51.81  83  P     P       18 24 31.7 -1.8
SHL                             pmax  pmax
      comp=Z,7.0nm,1.0s
ZAK   Zakamensk      52.85  49 eP     P       18 24 40.1 -0.7
ZAK                             pmax  pmax
      comp=Z,4.0nm,1.0s
GTA   Gaotai         53.16  64 eP     P       18 24 43.8 +0.6
GTA                             sP    pP      18 24 49.6 -2.2
GTA                             pmax  pmax
      comp=Z,3.0nm,0.7s
SACV  Santiago Islan 53.59 263  P     P       18 24 48.1 +1.6
TSUM  Tsumeb         55.13 197  LR    LR      18 52 02.2
      comp=Z,91nm,19.6s,baz=26,slow=40
SONM  Songino Array  55.42  52  P     P       18 24 59.5 -0.1
      comp=Z,3.5nm,0.7s,baz=287,slow=7.3,SNR=30
SONM                            LR    LR      18 52 01.5
      comp=Z,189nm,18.7s,baz=274,slow=40
      comp=Z,3.5nm,0.7s
SONM  Songino Array  55.42  52  P     P       18 24 59.7 +0.2
SONM                            IAmb  IAmb    18 25 00.9
      comp=Z,3.6nm,0.9s
ULN   Ulaanbaatar    55.84  52  P     P       18 25 02.4 -0.2
ULN                             IAmb  IAmb    18 25 03.8
      comp=Z,3.9nm,0.8s
ULN   Ulaanbaatar    55.84  52ceP     P       18 25 03.3 +0.7
ULN                             pmax  pmax
      comp=Z,4.0nm,0.8s
SFJD  Kangerlussuaq  56.05 332  LR    LR      18 53 47.2
      comp=Z,42nm,19.3s,baz=86,slow=41
LZH   Lanzhou        57.26  66 eP     P       18 25 18.6 +5.7
LZH                             pP    sP      18 25 25.4 +0.6
LZH                             sP    pwP     18 25 28.4 +3.6
LZH                             pmax  pmax
      comp=Z,16nm,1.0s
BOD   Bodaibo        57.41  39 eP     P       18 25 12.5 -0.9
BOD                             pmax  pmax
      comp=Z,7.0nm,1.8s
PZH   PanZhiHua      59.44  77  P     P       18 25 27.1 -1.1
PZH                             pmax  pmax
      comp=Z,10.0nm,0.9s
PZH                             pmax  pmax
      comp=Z,140nm,5.1s
LBTB  Lobatse        59.47 187  LR    LR      18 51 58.0
      comp=Z,103nm,19.8s,baz=73,slow=37
TIXI  Tiksi          59.76  21  LR    LR      18 53 58.1
      comp=Z,48nm,20.6s,baz=358,slow=39
TIXI  Tiksi          59.76  21 i P    P       18 25 29.7 +0.2
TIXI                            pmax  pmax
      comp=Z,1.0nm,1.0s
CM31  Chiang Mai Arr 60.88  87  P     P       18 25 36.3 -1.7
CM31                            IAmb  IAmb    18 25 55.5
      comp=Z,4.0nm,1.0s
CMAR  Chiang Mai Arr 60.88  87  P     P       18 25 37.5 -0.6
      comp=Z,1.7nm,0.8s,baz=295,slow=8.5,SNR=16
      comp=Z,1.7nm,0.8s
CMAR  Chiang Mai Arr 60.88  87  P     P       18 25 37.1 -0.9
CMAR  Chiang Mai Arr 60.88  87  P     P       18 25 37.1 -0.9
HHC   Hu-ho-hao-te   61.16  58 eP     P       18 25 40.8 +1.0
HHC                             pmax  pmax
      comp=Z,27nm,0.8s
HHC                             pmax  pmax
      comp=Z,140nm,5.5s
XAN   Xi'an          61.89  66 eP     P       18 25 43.9 -0.8
XAN                             pP    pP      18 25 51.0 -2.3
XAN                             pmax  pmax
      comp=Z,6.0nm,0.9s
PHRA  Phrae          61.92  86  P     P       18 25 43.2 -1.8
BOSA  Boshof         63.06 187  P     P       18 25 53.6 +1.1
      comp=Z,5.0nm,1.0s,baz=318,slow=12,SNR=3.1
BOSA                            LR    LR      18 54 02.6
      comp=Z,80nm,19.2s,baz=112,slow=37
      comp=Z,5.0nm,1.0s
BOSA  Boshof         63.06 187  P     P       18 25 53.5 +1.1
BOSA  Boshof         63.06 187  P     P       18 25 53.5 +1.1
BOSA                            pmax  pmax
      comp=Z,19nm,1.5s
YAK   Yakutsk        63.53  31  P     P       18 25 56.0 +1.0
YAK   Yakutsk        63.53  31 i P    P       18 25 55.6 +0.5
YAK                             pmax  pmax
      comp=Z,2.0nm,0.8s
ENH   Enshi          63.93  70  P     P       18 25 57.2 -1.1
FRB   Frobisher Bay  64.16 331  LR    LR      18 55 10.4
      comp=Z,34nm,18.9s,baz=244,slow=37
DRLN  Deer Lake      64.64 314  P     P       18 26 03.3 +0.7
RES   Resolute Bay   65.77 347  P     P       18 26 09.4 -0.1
RES   Resolute Bay   65.77 347  P     P       18 26 09.4 -0.1
RES                             pmax  pmax
      comp=Z,2.0nm,1.2s
SUR   Sutherland     67.33 190  LR    LR      18 58 24.7
      comp=Z,74nm,19.0s,baz=56,slow=38
SCHQ  Schefferville  67.40 322  P     P       18 26 19.5 -0.8
      comp=Z,2.2nm,0.6s,baz=43,slow=5.5,SNR=6.4
      comp=Z,2.2nm,0.6s
SCHQ  Schefferville  67.40 322  P     P       18 26 19.7 -0.6
SCHQ                            IAmb  IAmb    18 26 36.9
      comp=Z,10.0nm,1.2s
HEH   HeiHe          67.46  44 eP     P       18 26 21.1 +0.4
HEH                             pmax  pmax
      comp=Z,5.0nm,0.9s
GBN   Guysborough    68.77 311  P     P       18 26 28.7 -0.2
NJ2   Nanjing        70.24  64 eP     P       18 26 37.3 -1.0
NJ2                             pmax  pmax
      comp=Z,6.0nm,0.5s
KLR   Kul'dur        70.42  43  LR    LR      18 59 23.0
      comp=Z,38nm,18.7s,baz=278,slow=38
KLR   Kul'dur        70.42  43ceP     P       18 26 39.8 +0.7
KLR                             pmax  pmax
      comp=Z,3.0nm,1.3s
BATG  Bathurst New B 70.63 314  P     P       18 26 41.4 +1.0
BATG                            IAmb  IAmb    18 27 06.4
      comp=Z,13nm,1.5s
PQI   Presque Isle   72.09 315  P     P       18 26 49.6 +0.3
BILL  Bilibino       72.22  16ceP     P       18 26 49.8 +0.2
BILL                           e              18 29 31.6
BILL                           eS     SKSac   18 36 52.3 +0.8
BILL                            pmax  pmax
      comp=Z,3.0nm,1.1s
BILL                            MLR   MLR
      comp=Z,43nm,16.0s
D62A  Allapoint, All 72.48 315  P     P       18 26 53.0 +1.5
D62A                            IAmb  IAmb    18 27 02.4
      comp=Z,7.1nm,0.9s
A36M  Sachs Harbour  72.68 353  P     P       18 26 52.4 +0.1
A36M                            IAmb  IAmb    18 27 06.7
      comp=Z,5.9nm,0.8s
LMQ   La Malbaie     72.97 316  P     P       18 26 55.3 +0.9
LMQ                             IAmb  IAmb    18 27 11.6
      comp=Z,12nm,1.5s
E62A  Clayton Lake   73.00 315  P     P       18 26 55.9 +1.2
E62A                            IAmb  IAmb    18 27 32.0
      comp=Z,8.4nm,1.4s
MA2   Magadan        73.53  28  LR    LR      19 05 55.9
      comp=Z,33nm,18.0s,baz=44,slow=41
KSAR  Wonju Array Be 74.01  55  P     P       18 26 59.6 -1.2
KSAR  Wonju Array Be 74.01  55  P     P       18 26 59.6 -1.2
KSRS  Korea Array    74.03  55  P     P       18 27 00.1 -0.7
      comp=Z,1.6nm,0.8s,baz=299,slow=4.6,SNR=6.5
KSRS                            LR    LR      19 04 11.5
      comp=Z,55nm,19.1s,baz=20,slow=40
      comp=Z,1.6nm,0.8s
C36M  Paulatuk       75.04 351  P     P       18 27 05.8 -0.4
C36M                            IAmb  IAmb    18 27 06.5
      comp=Z,6.1nm,1.1s
JNU   Nakatsue       78.38  58  LR    LR      19 08 06.0
      comp=Z,25nm,19.8s,baz=188,slow=40
ASAJ  Asahikawa      79.46  43  LR    LR      19 05 50.8
      comp=Z,66nm,18.1s,baz=330,slow=38
YKA   Yellowknife Ar 79.77 345  P     P       18 27 32.3 -0.4
      comp=Z,1.2nm,0.8s,baz=31,slow=5.4,SNR=15
      comp=Z,1.2nm,0.8s
ILAR  Eielson Array  81.11 360  P     P       18 27 39.4 -0.5
      comp=Z,0.8nm,1.0s,baz=337,slow=4.3,SNR=8.9
      comp=Z,0.8nm,1.0s
MJAR  Matsushiro Arr 81.37  52  P     P       18 27 41.7 -0.1
      comp=Z,1.8nm,0.8s,baz=317,slow=3.3,SNR=5.4
MJAR                            LR    LR      19 07 10.9
      comp=Z,35nm,18.3s,baz=262,slow=38
      comp=Z,1.8nm,0.8s
SCRK  Sand Creek     81.86 358  P     P       18 27 44.1  0.0
SCRK                            IAmb  IAmb    18 27 45.6
```

```
      comp=Z,4.7nm,0.9s
CAST  Castle Rocks   82.41   2  P     P       18 27 46.5 -0.4
CAST                            IAmb  IAmb    18 28 12.5
      comp=Z,6.7nm,1.3s
ULM   Lac du Bonnet  83.99 329  P     P       18 27 56.5 +1.3
      comp=Z,1.0nm,0.5s,baz=62,slow=4.1,SNR=1.4
      comp=Z,1.0nm,0.5s
ELK   Elko           99.38 336  LR    LR      19 17 10.1
      comp=Z,43nm,18.8s,baz=254,slow=37
```

IDC 18 18:24:09.5±8.6**,16°.51S**×**173°.70W,h0^{km},mb3.6**/2**,**
mbtmp3.6/2**,Error ellipse: s-maj=393.0km**
s-min=66.9km az=141.0,Tonga Islands

```
Code  Station Name      Δ°  AZ°    Phase ID           Time     Res
                                 Op      ISC        h  m  s    ISC
WRA   Warramunga Arr  49.32 258  P       P          18 33 00.3 -0.6
      0.4nm,0.8s,baz=95,slow=6.8,SNR=2.4
      0.4nm,0.8s
ASAR  Alice Springs   49.50 253  P       P          18 33 02.4 +0.1
      1.0nm,0.6s,baz=87,slow=8.2,SNR=21
      1.0nm,0.6s
BRTR  Keskin Array B 146.82 320  PKPbc   PKPbc      18 43 53.5 -0.7
      0.7nm,0.8s,baz=46,slow=6.2,SNR=3.6
```

IDC 18 18:29:51.0±2.6**,10°.56S**×**113°.45E,h0^{km},mb3.1**/4**,**
mbtmp3.2/4**,Error ellipse: s-maj=131.9km**
s-min=23.8km az=46.0,South of Jawa

```
Code  Station Name      Δ°  AZ°    Phase ID           Time     Res
                                 Op      ISC        h  m  s    ISC
WRA   Warramunga Arr  22.18 117  P       P          18 34 48.7 -0.3
      0.2nm,0.5s,baz=290,slow=12,SNR=2.1
      0.2nm,0.5s
ASAR  Alice Springs   23.45 126  P       P          18 35 02.6 +0.3
      0.5nm,0.8s,baz=305,slow=9.9,SNR=5.7
      0.5nm,0.8s
CMAR  Chiang Mai Arr  32.20 333  P       P          18 36 21.6 +0.6
      0.2nm,0.4s,baz=167,slow=8.8,SNR=2.6
      0.2nm,0.4s
H08S2 Diego Garcia H  40.53 271  T       T          19 20 44.6
      baz=96,slow=75,SNR=7.2
H08S3 Diego Garcia H  40.54 271  T       T          19 20 49.3
      baz=96,slow=75,SNR=6.2
H08S1 Diego Carcia H  40.55 271  T       T          19 20 45.2
      baz=96,slow=75,SNR=4.6
MKAR  Makanchi Array  63.53 337  P       P          18 40 22.8 -0.5
      0.1nm,0.5s,baz=146,slow=6.9,SNR=4.1
      0.1nm,0.5s
```

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*IDC **18** 18:38:03.0±1.3, 43°.96N×105°.78W, h0^{km}, mbtmp3.2/4,*
ML3.3/4, Error ellipse: s-maj=29.4km s-min=8.1km
az=144.0

*NEIC **18** 18:38:03.5±2.1, 43°.65N±0°.03×105°.30W±0°.05, h0^{km}±2^{km},*
ML3.5/75, Error ellipse: s-maj=6.3km s-min=4.7km
az=299.0

ISC 18 18:38:01.4±0.8**,43°.64N**±0°.04×**105°.30W**±0°.05**,h0^{km},n53,**
σ**2^{s}00**/56**,Wyoming**

```
Code  Station Name      Δ°  AZ°    Phase ID           Time     Res
                                 Op      ISC        h  m  s    ISC
RSSD  Black Hills      1.03  62          Pb         18 38 22.3 +0.1
RSSD                                     Sn         18 38 38.5 -0.1
K22A  Casper           1.34 223          Pg         18 38 27.6 +0.6
K22A                             Sn      Sn         18 38 46.5 +0.5
K22A                             IAML               18 38 50.1
      comp=E,1µm,0.4s
K22A                             IAML               18 38 50.9
      comp=N,665nm,0.3s
PHWY  Pilot Hill       2.34 183          Pn         18 38 42.2 +0.8
PHWY                                     Pb         18 38 42.3 -2.3
PHWY                             IAML               18 39 21.9
      comp=N,203nm,0.6s
RWWY  Rawlins          2.41 216          Pn         18 38 44.0 +1.7
N23A  Red Feather La   2.79 190          Pb         18 38 50.3 -1.9
N23A                             Sn      Sb         18 39 27.4 +0.4
N23A                             IAML               18 39 31.0
      comp=N,185nm,0.5s
N23A                             IAML               18 39 36.0
      comp=E,225nm,0.7s
LAO   LASA Array       3.12 348          Pn         18 38 54.2 +2.4
LAO                              IAML               18 39 49.5
      comp=E,174nm,0.8s
LAO                              IAML               18 39 53.0
      comp=E,117nm,0.8s
BRIGG Briggsdale       3.15 166          Pn         18 38 53.6 +1.3
RLMT  Red Lodge        3.21 299          Pn         18 38 54.6 +1.4
BW06  Boulder Array    3.24 256          Pn         18 38 55.8 +2.1
PD31  Pinedale Array   3.24 256          Pn         18 38 55.8 +2.1
PDAR  Pinedale Array   3.24 256  Pn      Pn         18 38 55.8 +2.1
      comp=E,4.3nm,0.3s,baz=70,slow=15,SNR=43
PDAR                             Lg      Lg         18 39 36.0
      comp=E,4.8nm,0.3s,baz=84,slow=30,SNR=3.7
      comp=E,5.8nm,0.4s
PDAR  Pinedale Array   3.24 256          Pn         18 38 55.5 +1.9
OGNE  Ogallala         3.62 137          Pn         18 39 02.2 +3.4
LKWY  Lake             3.79 286          Pn         18 39 03.0 +1.8
LKWY                             IAML               18 40 13.5
      comp=E,90nm,1.4s
LKWY                             IAML               18 40 18.3
      comp=E,74nm,2.2s
ISCO  Idaho Springs    3.85 184          Pn         18 39 04.3 +2.2
H17A  Grant Village    3.88 283          Pn         18 39 04.4 +1.9
H17A                             IAML               18 40 08.6
      comp=N,62nm,1.5s
H17A                             IAML               18 40 09.6
      comp=E,61nm,1.8s
FLWY  Flagg Ranch      3.93 278          Pn         18 39 06.9 +3.8
FLWY                             IAML               18 40 12.1
      comp=E,79nm,2.0s
FLWY                             IAML               18 40 36.9
      comp=E,91nm,2.0s
MOOW  Moose Ponds      3.95 273          Pn         18 39 05.5 +2.1
SNOW  Snow King Moun   3.97 269          Pn         18 39 04.8 +1.0
SNOW                             IAML               18 40 19.2
      comp=E,88nm,1.8s
SNOW                             IAML               18 40 54.8
      comp=E,98nm,1.6s
REDW  Red Top Meadow   4.05 268          Pn         18 39 08.1 +3.3
REDW                             IAML               18 40 33.1
      comp=E,86nm,1.6s
IMW   Indian Meadow    4.09 275          Pn         18 39 07.9 +2.4
IMW                              IAML               18 40 20.4
      comp=E,59nm,0.8s
TPAW  Teton Pass       4.11 270          Pn         18 39 08.9 +3.2
TPAW                             IAML               18 40 35.1
      comp=E,62nm,1.1s
O20A  White River Ci   4.14 213          Pn         18 39 08.2 +2.2
AHID  Auburn Hatcher   4.33 260          Pn         18 39 09.3 +0.7
AHID                             IAML               18 40 27.8
      comp=E,56nm,1.1s
E28A  Huff             4.38  46  Pn      Pn         18 39 08.7 -0.5
RDMU  Red Mountain     4.42 227          Pn         18 39 14.1 +4.3
RDMU                             IAML               18 40 28.0
      comp=E,52nm,0.9s
RDMU                             IAML               18 40 55.9
      comp=N,52nm,1.8s
Q24A  Divide           4.68 179          Pn         18 39 14.7 +1.2
Q24A                             IAML               18 40 41.6
      comp=N,30nm,0.7s
DGMT  Dagmar           4.89   9          Pn         18 39 17.6 +1.5
KSCO  Kaye Shedlock'   5.04 156          Pn         18 39 20.6 +2.2
HWUT  Hardware Ranch   5.05 248          Pn         18 39 21.5 +2.9
HWUT                             IAML               18 41 13.6
      comp=N,36nm,0.9s
BSUT  Blindstream Ca   5.12 234          Pn         18 39 20.9 +1.3
BSUT                             IAML               18 41 05.8
      comp=E,29nm,1.9s
BSUT                             IAML               18 41 06.4
      comp=N,28nm,1.8s
TCUT  Toone Canyon     5.18 243          Pn         18 39 21.3 +0.9
EGMT  Eagleton         5.38 326          Pn         18 39 24.0 +1.2
MCMT  McKenzie Canyo   5.55 285          Pn         18 39 27.2 +1.7
PV07  Paradox Valley   5.78 207          Pn         18 39 30.7 +2.1
HVU   Hansel Valley    5.81 254          Pn         18 39 31.6 +2.6
PV15  Paradox Valley   5.82 206          Pn         18 39 30.9 +1.7
P17A  Butcher Ranch,   5.83 226          Pn         18 39 29.6 +0.3
PV23  Carpenter Ridg   5.90 210          Pn         18 39 32.5 +2.3
PV10  Paradox Valley   5.97 210  Pn      Pn         18 39 32.3 +1.0
PV11  David Mesa, Pa   5.99 208          Pn         18 39 30.4 -1.0
SRU   San Rafael Swe   6.00 223          Pn         18 39 32.5 +0.9
S22A  4UR Ranch, Cre   6.00 192          Pn         18 39 33.9 +2.2
```

PV13	**Radium Mtn., P**	**6.09**	**207**		**Pn**	**18 39 34.0**	**+1.1**
TMUT	**Trail Mountain**	**6.21**	**228**		**Pn**	**18 39 35.7**	**+1.1**
ECSD	**EROS Data Cent**	**6.30**	**86**		**Pn**	**18 39 36.8**	**+1.3**
Q16A	**Castle Valley**	**6.47**	**225**		**Pn**	**18 39 40.2**	**+2.1**
DUG	**Dugway, Tooele**	**6.58**	**241**		**Pn**	**18 39 39.4**	**-0.1**
I10CA	**LAC DU BONNET**	**9.12**	**41**	I	I	19 33 30.0	
	comp=N,0.1nm,1.5s,baz=224,slow=321,SNR=8.2						
ULM	**Lac du Bonnet**	**9.22**	**41**	Pn	**Pn**	**18 40 15.1**	**-0.5**
	comp=N,1.1nm,0.3s,baz=228,slow=13,SNR=4.9						
ULM				Sn	**Sn**	**18 41 55.9**	**-4.1**
	comp=N,0.4nm,0.3s,baz=199,slow=1.4,SNR=5.6						
ULM				Lg	Lg	18 42 44.7	
	comp=N,0.4nm,0.3s,baz=311,slow=20,SNR=1.6						
	comp=N,2.3nm,0.3s						
NVAR	**Mina Array Bea**	**11.12**	**246**	Pn	**Pn**	**18 40 43.0**	**+1.3**
	comp=N,0.1nm,0.3s,baz=61,slow=13,SNR=1.8						
	comp=N,0.1nm,0.3s						
TXAR	**Lajitas Array**	**14.34**	**174**	Pg	Pg	18 42 32.8	
	baz=9.1,slow=13,SNR=4.9						
TXAR				Lg	Lg	18 45 39.0	
	baz=349,slow=34						
YKA	**Yellowknife Ar**	**19.66**	**347**	P	**P**	**18 42 30.5**	**-0.9**
	comp=N,0.1nm,0.3s,baz=156,slow=11,SNR=2.0						
YKA				Lg	Lg	18 47 57.7	
	comp=N,0.1nm,0.3s,baz=155,slow=27,SNR=2.4						
	comp=N,0.1nm,0.6s						

IDC 18 18:40:20.0±4.9**, 2.°62S×139.°00E, h0^{km}, mb2.9**/2**,**
mbtmp3.1/3**, ML3.2**/1**, Error ellipse: s-maj=192.1km**
s-min=32.7km az=87.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.81**	**194**	P	P	18 44 30.2	-0.1
	0.1nm,0.3s,baz=18,slow=13,SNR=5.4						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**21.50**	**193**	P	P	18 45 10.8	+0.2
	0.1nm,0.3s,baz=20,slow=10,SNR=1.8						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**69.89**	**322**	P	P	18 51 32.7	-0.3
	0.1nm,0.6s,baz=105,slow=7.6,SNR=1.6						
	0.1nm,0.6s						

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*MDD **18** 18:51:56.2±0.5, 35.°66N×3.°63W, h0^{km}±3^{km}, mb_Lg2.6/13,*
Error ellipse: s-maj=3.5km s-min=2.8km az=7.0
*SFS **18** 18:51:57.9, 35.°63N×3.°62W, h22^{km}, ML2.8/10, ML2.9/10,*
MLv2.8/10
*INMG **18** 18:51:57.5±1.4, 35.°71N×3.°69W, h0^{km}, ML2.2, Error*
ellipse: s-maj=3.3km s-min=2.8km az=28.0
*CNRM **18** 18:51:57.5, 35.°69N×3.°53W, h18^{km}, ml2.7*
ISC 18 18:51:57.1±1.1**, 35.°71N**±0.°02×**3.°59W**±0.°02**, h16**^{km}±9^{km}**,**
n50, σ1.^{s}04/89**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EALB	**Alboran**	**0.51**	**63**	P	**Pg**	**18 52 07.9**	**+0.7**
EALB				S	**Sb**	**18 52 16.4**	**+1.6**
EALB	**Alboran**	**0.51**	**63**	Pg	**Pg**	**18 52 08.0**	**+0.7**
EALB				Sg	**Sb**	**18 52 16.1**	**+1.3**
EALB				*i* Vmb_Lg		18 52 17.7	
PALE	**Palemas**	**0.56**	**210**	P	**Pg**	**18 52 08.2**	**0.0**
PALE				S	**Sb**	**18 52 17.1**	**+0.7**
WMELI	**Melilla**	**0.65**	**126**	S	**Sg**	**18 52 17.8**	**-0.7**
WMELI				P	**Pg**	**18 52 09.6**	**-0.2**
EMEL	**Melilla**	**0.66**	**128**	Pg	**Pb**	**18 52 10.9**	**+0.8**
EMEL				Sg	**Sb**	**18 52 19.6**	**+0.6**
GOG	**Mont Gurugu**	**0.69**	**135**	P	**Pg**	**18 52 10.1**	**-0.4**
GOG				S	**Sg**	**18 52 19.6**	**0.0**
PVLZ	**Peæn de**	**0.79**	**228**	P	**Pb**	**18 52 11.3**	**-1.0**
CHAS	**Isla Isabel II**	**1.08**	**118**	S	**Sb**	**18 52 29.9**	**-1.4**
CHAS				P	**Pb**	**18 52 15.6**	**-1.8**
ELGU	**Los Guajares,**	**1.16**	**359**	P	**Pn**	**18 52 17.5**	**-1.2**
ELGU				S	**Sb**	**18 52 34.3**	**+0.7**
ELGU	**Los Guajares,**	**1.16**	**359**	Pg	**Pn**	**18 52 18.1**	**-0.7**
ELGU				Sg	**Sb**	**18 52 33.8**	**+0.2**
ELGU				*i* Vmb_Lg		18 52 37.5	
AKLM	**AKL**	**1.21**	**191**	P	**Pn**	**18 52 19.4**	**0.0**
AKLM				S	**Sn**	**18 52 35.4**	**-0.2**
EMIJ	**Mijas**	**1.28**	**312**	S	**Sb**	**18 52 35.4**	**-1.8**
EMIJ				P	**Pn**	**18 52 19.3**	**-1.0**
EMIJ	**Mijas**	**1.28**	**312**	Pg	**Pn**	**18 52 19.3**	**-1.0**
EMIJ				Sg	**Sb**	**18 52 36.2**	**-0.9**
EMIJ				*i* Vmb_Lg		18 52 36.6	
TAF	**Taforalt**	**1.31**	**132**	P	**Pn**	**18 52 20.0**	**-0.8**
TAF				S	**Sb**	**18 52 38.8**	**+0.8**
EBER	**Berja**	**1.32**	**25**	Pg	**Pn**	**18 52 20.2**	**-0.8**
EBER				Sg	**Sb**	**18 52 39.3**	**+1.1**
EBER				*i* Vmb_Lg		18 52 45.6	
EGOR	**Sierra Gorda,**	**1.46**	**344**	P	**Pn**	**18 52 22.8**	**-0.1**
EGOR				S	**Sn**	**18 52 42.4**	**+0.6**
EGOR	**Sierra Gorda,**	**1.46**	**344**	Pn	**Pn**	**18 52 23.0**	**0.0**
EGOR				Sn	**Sb**	**18 52 44.1**	**+1.7**
EGOR				*i* Vmb_Lg		18 52 52.3	
ECEU	**Ceuta**	**1.46**	**278**	P	**Pn**	**18 52 22.4**	**-0.4**
EQUE	**Quentar**	**1.50**	**5**	Pn	**Pn**	**18 52 23.9**	**+0.5**
EQUE				Sn	**Sb**	**18 52 44.3**	**+0.8**
EQUE				*i* Vmb_Lg		18 52 57.6	
JBK	**JBK**	**1.61**	**148**	P	**Pn**	**18 52 23.7**	**-1.2**
JBK				S	**Sn**	**18 52 43.9**	**-1.5**
ENIJ	**Nijar**	**1.69**	**41**	Pn	**Pn**	**18 52 24.2**	**-1.7**
ENIJ				Sn	**Sn**	**18 52 46.0**	**-1.2**
EQES	**Quesada**	**2.13**	**11**	Pn	**Pb**	**18 52 34.6**	**-0.9**
EQES				Sn	**Sb**	**18 53 00.8**	**-0.9**
EQES				*i* Vmb_Lg		18 53 08.3	
EADA	**Adamuz**	**2.58**	**342**	P	**Pn**	**18 52 39.3**	**+1.1**
EADA				S	**Sn**	**18 53 08.1**	**-1.1**
EADA	**Adamuz**	**2.58**	**342**	Pn	**Pn**	**18 52 39.7**	**+1.5**
EADA				Sn	**Sn**	**18 53 09.5**	**+0.2**
EADA				*i* Vmb_Lg		18 53 21.3	
EZAR	**Zarzadilla de**	**2.65**	**35**	Pn	**Pn**	**18 52 39.3**	**+0.1**
EZAR				Sn	**Sn**	**18 53 10.4**	**-0.6**
ECAB	**El Cabril**	**2.78**	**329**	Pn	**Pn**	**18 52 41.5**	**+0.6**
ECAB				Sn	**Sn**	**18 53 15.4**	**+1.2**
ECAB				*i* Vmb_Lg		18 53 30.3	
EMUR	**La Murta**	**2.85**	**41**	P	**Pn**	**18 52 42.9**	**+1.0**
EMUR	**La Murta**	**2.85**	**41**	Pn	**Pn**	**18 52 43.6**	**+1.7**
EMUR				Sn	**Sn**	**18 53 15.5**	**-0.3**
EMUR				*i* Vmb_Lg		18 53 19.2	
TDRA	**Tendrara**	**2.96**	**154**	P	**Pn**	**18 52 44.1**	**+0.6**
TDRA				S	**Sn**	**18 53 19.0**	**+0.2**
MD31	**MD31**	**2.99**	**199**	P	**Pn**	**18 52 45.4**	**+1.5**
MD31				S	**Sn**	**18 53 20.7**	**+1.2**
MDT	**Midelt**	**3.00**	**197**	P	**Pn**	**18 52 44.2**	**+0.1**
MDT				S	**Sn**	**18 53 20.8**	**+1.0**
EMIN	**Mina Concepcio**	**3.22**	**311**	Pn	**Pn**	**18 52 47.2**	**+0.3**
EMIN				Sn	**Sn**	**18 53 24.3**	**-0.6**
ETOB	**Tobarra**	**3.36**	**28**	P	**Pn**	**18 52 50.3**	**+1.4**
ETOB	**Tobarra**	**3.36**	**28**	Pn	**Pn**	**18 52 50.7**	**+1.8**
ZHG	**ZHG**	**3.38**	**229**	P	**Pn**	**18 52 51.8**	**+2.6**
EGRO	**El Granado**	**3.62**	**301**	Pn	**Pn**	**18 52 52.7**	**+0.2**
EGRO				Sn	**Sn**	**18 53 33.9**	**-1.0**
EGRO				*i* Vmb_Lg		18 53 41.9	
PBAR	**Barrancos**	**3.70**	**313**	*e*P	**Pn**	**18 52 54.0**	**+0.4**
PBAR				*e*S	**Sn**	**18 53 36.1**	**-0.7**
PBAR				A	A	18 53 39.7	
	3.2nm,0.6s						
PVAQ	**Vaqueiros**	**3.73**	**298**	P	**Pn**	**18 52 54.6**	**+0.6**
PVAQ	**Vaqueiros**	**3.73**	**298**	*e*P	**Pn**	**18 52 54.4**	**+0.5**
PVAQ				*e*S	**Sn**	**18 53 36.4**	**-1.1**
PVAQ				A	A	18 53 38.8	
	4.7nm,0.7s						
PBDV	**Barranco-do-Ve**	**3.82**	**295**	*e*S	**Sn**	**18 53 39.8**	**0.0**
PBDV				A	A	18 53 54.3	
	3.1nm,0.9s						
PCVE	**Castro Verde**	**4.06**	**300**	*e*P	**Pn**	**18 52 59.7**	**+1.2**
PCVE				*e*S	**Sn**	**18 53 45.1**	**-0.6**
PCVE				A	A	18 53 54.5	
	3.8nm,0.5s						
EBAD	**Badajoz**	**4.09**	**319**	Pn	**Pn**	**18 52 59.4**	**+0.5**
EBAD				Sn	**Sn**	**18 53 45.4**	**-1.0**
EBAD				*i* Vmb_Lg		18 53 50.0	
MESJ	**Messejana**	**4.28**	**301**	*e*P	**Pn**	**18 53 02.5**	**+1.0**
MESJ				*e*S	**Sn**	**18 53 50.2**	**-1.0**
MESJ				A	A	18 53 56.1	
	2.3nm,0.4s						
MORF	**Marmelete**	**4.38**	**293**	*e*S	**Sn**	**18 53 53.0**	**-0.6**
PESTR	**Estremoz**	**4.49**	**316**	P	**Pn**	**18 53 05.6**	**+1.3**
PESTR	**Estremoz**	**4.49**	**316**	*e*P	**Pn**	**18 53 06.7**	**+2.3**
PESTR				*e*S	**Sn**	**18 53 55.5**	**-0.7**
PESTR				A	A	18 54 01.6	
	2.3nm,0.5s						
EVO	**Evora**	**4.52**	**310**	*e*P	**Pn**	**18 53 05.6**	**+0.8**
EVO				*e*S	**Sn**	**18 53 57.1**	**+0.1**
EVO				A	A	18 54 02.4	
	4.8nm,0.1s						
PNCL	**Nicolau / Gran**	**4.63**	**303**	*e*S	**Sn**	**18 53 59.8**	**+0.1**
PMRV	**Marv??o**	**4.79**	**322**	*e*P	**Pn**	**18 53 10.3**	**+1.8**
PMRV				*e*S	**Sn**	**18 54 02.7**	**-0.9**
PMTG	**Montargil**	**4.99**	**314**	*e*P	**Pn**	**18 53 12.7**	**+1.5**
PMTG				*e*S	**Sn**	**18 54 07.6**	**-0.9**

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*SOME **18** 18:52:31.4, 42.°80N×79.°27E, h5^{km}*
*KRNET **18** 18:52:31.1±0.1, 43.°01N×79.°40E, h35^{km}, mb2.7*
*NNC **18** 18:52:32.9±0.7, 42.°88N×79.°29E, h0^{km}, mb3.2, mpv2.9,*
Error ellipse: s-maj=5.4km s-min=2.5km az=159.0
ISC 18 18:52:33.8±1.2**, 42.°91N**±0.°04×**79.°19E**±0.°03**, h14**^{km}±8^{km}**,**
n54, σ1.^{s}33/83**, 12C-18D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	**Uzynbulak**	**0.27**	**332**	P	**Pg**	**18 52 38.9**	**-0.7**
	9.1nm,0.2s						
UZB				S	**Sb**	**18 52 44.6**	**-0.3**
	65nm,0.2s						
UZB	**Uzynbulak**	**0.27**	**332**	*e*P	**Pg**	**18 52 38.9**	**-0.7**
	10nm,0.1s						
UZB				*e*S	**Sb**	**18 52 44.6**	**-0.3**
	65nm,0.2s						
SHLS	**Shalkode**	**0.32**	**39**	P	**Pn**	**18 52 42.6**	**-1.5**
	38nm,0.2s						
SHLS				S	**Sb**	**18 52 50.9**	**+4.6**
	106nm,0.6s						
SHLS	**Shalkode**	**0.32**	**39**	*e*P	**Pn**	**18 52 42.4**	**-1.7**
	38nm,0.2s						
SHLS				*e*S	**Sb**	**18 52 50.6**	**+4.3**
	104nm,0.2s						
PDGK	**Podgornoye**	**0.47**	**27**	P	**Pg**	**18 52 41.6**	**-1.5**
	39nm,0.2s						
PDGK				S	**Sb**	**18 52 49.2**	**-1.6**
	22nm,0.5s						
PDGK	**Podgornoye**	**0.47**	**27**	⇓P	**Pg**	**18 52 42.0**	**-1.2**
	19nm,0.2s						
PDGK				⇑S	**Sb**	**18 52 49.1**	**-1.7**
	17nm,0.3s						
SATY	**Saty**	**0.60**	**285**	*e*P	**Pg**	**18 52 45.1**	**-0.4**
	8.3nm,0.2s						
SATY				*e*S	**Sb**	**18 52 55.0**	**+0.6**
	35nm,0.1s						
ZHN	**Zhinishke**	**0.61**	**295**	P	**Pg**	**18 52 45.3**	**-0.5**
	5.9nm,0.4s						
ZHN				S	**Sb**	**18 52 55.6**	**+0.7**
	60nm,0.3s						
ZHN	**Zhinishke**	**0.61**	**295**	*e*P	**Pg**	**18 52 45.3**	**-0.5**
	5.9nm,0.4s						
ZHN				*e*S	**Sb**	**18 52 55.6**	**+0.7**
	60nm,0.3s						
KPKS	**Kokpek**	**0.67**	**326**	P	**Pb**	**18 52 46.6**	**-0.7**
	6.5nm,0.1s						
KPKS				S	**Sb**	**18 52 57.5**	**+1.0**
	59nm,0.4s						
KPKS	**Kokpek**	**0.67**	**326**	*e*P	**Pb**	**18 52 46.6**	**-0.7**
	9.5nm,0.0s						
KPKS				*e*S	**Sb**	**18 52 57.5**	**+1.0**
	59nm,0.4s						
PRZ	**Przheval'sk**	**0.72**	**234**	⇓*e*P	**Pn**	**18 52 48.5**	**-1.3**
	baz=35						
PRZ				⇓*i*S	**Sn**	**18 53 01.2**	**+0.5**
	baz=35						
KURS	**Kuram**	**0.94**	**308**	P	**Pb**	**18 52 51.8**	**-0.1**
	7.2nm,0.5s						
KURS				S	**Sn**	**18 53 06.9**	**+0.9**
	10nm,0.5s						
KURS	**Kuram**	**0.94**	**308**	*e*P	**Pb**	**18 52 51.8**	**-0.1**
	7.2nm,0.5s						
KURS				*e*S	**Sn**	**18 53 06.9**	**+0.9**
	10nm,0.5s						
ANVS	**Anan'yevo**	**1.13**	**264**	⇑*i*P	**Pb**	**18 52 54.0**	**-1.2**
	baz=60						
ANVS				⇑*i*S	**Sn**	**18 53 10.7**	**0.0**
	baz=60						
DJR	**Jarkent**	**1.48**	**17**	P	**Pb**	**18 53 00.5**	**-0.7**
	5.8nm,0.2s						
DJR				S	**Sg**	**18 53 21.4**	**-0.2**
	16nm,0.3s						
DJR	**Jarkent**	**1.48**	**17**	*e*P	**Pb**	**18 53 00.5**	**-0.7**
	3.5nm,0.1s						
DJR				*e*S	**Sg**	**18 53 21.4**	**-0.2**
	16nm,0.3s						
KOTS	**Kotyrbulak**	**1.56**	**283**	P	**Pg**	**18 53 02.9**	**-0.9**
	4.0nm,0.3s						
KOTS				S	**Sg**	**18 53 25.5**	**+1.4**
	40nm,0.4s						
KOTS	**Kotyrbulak**	**1.56**	**283**	*e*P	**Pg**	**18 53 02.9**	**-0.9**
	4.0nm,0.3s						
KOTS				*e*S	**Sg**	**18 53 25.5**	**+1.4**
	40nm,0.1s						
TARG	**Taragay, Kyrgy**	**1.57**	**222**	⇑*i*P	**Pn**	**18 53 00.4**	**-1.1**
	baz=23						
TARG				⇑*i*S	**Sn**	**18 53 21.6**	**-0.2**
	baz=23						
ARXS	**Arharly**	**1.64**	**323**	P	**Pb**	**18 53 03.8**	**0.0**
	16nm,0.6s						
ARXS				S	**Sg**	**18 53 27.1**	**+0.6**
	26nm,0.6s						
ARXS	**Arharly**	**1.64**	**323**	*e*P	**Pb**	**18 53 03.9**	**+0.2**
	16nm,0.6s						
ARXS				*e*S	**Sg**	**18 53 27.4**	**+0.9**
	26nm,0.6s						
TNSS	**Tian-Shan**	**1.65**	**275**	P	**Pg**	**18 53 04.7**	**-0.9**
	4.9nm,0.3s						
TNSS				S	**Sg**	**18 53 28.3**	**+1.2**
	7.1nm,0.3s						
TNSS	**Tian-Shan**	**1.65**	**275**	*e*P	**Pg**	**18 53 04.7**	**-0.9**
	5.0nm,0.1s						
TNSS				*e*S	**Sg**	**18 53 28.3**	**+1.2**
	7.6nm,0.1s						
KNDC	**Almaty**	**1.66**	**281**	⇓P	**Pg**	**18 53 08.3**	**+2.6**
	8.7nm,0.3s						
KNDC				⇓S	**Sg**	**18 53 30.8**	**+3.5**
	18nm,0.4s						
KDJ	**Kajisay**	**1.68**	**243**	⇓*i*P	**Pn**	**18 53 01.7**	**-1.2**
	baz=42						
KDJ				⇓*i*S	**Sn**	**18 53 24.1**	**-0.2**
	baz=42						
CHKK	**Chushkaly**	**1.86**	**301**	Pg	**Pb**	**18 53 07.9**	**+0.3**
	3.2nm,0.3s						
CHKK				Lg	Lg	18 53 34.1	
	29nm,0.3s						
CHKK	**Chushkaly**	**1.86**	**301**	*e*P	**Pb**	**18 53 07.9**	**+0.3**
	1.9nm,0.1s						
CHKK				*e*S	**Sg**	**18 53 34.1**	**+0.4**
	29nm,0.3s						
IZV	**Izvestkoviy**	**1.90**	**275**	Pg	**Pg**	**18 53 08.8**	**-1.5**
	2.7nm,0.4s						
IZV				Lg	Lg	18 53 35.3	
	24nm,0.6s						
IZV	**Izvestkoviy**	**1.90**	**275**	*e*P	**Pg**	**18 53 08.8**	**-1.5**
	1.1nm,0.9s						
IZV				*e*S	**Sg**	**18 53 35.3**	**+0.4**
	23nm,0.1s						
KTBS	**Karatobe**	**2.00**	**294**	Pg	**Pb**	**18 53 10.2**	**+0.2**
	11nm,0.7s						
KTBS				Lg	Lg	18 53 38.4	
	102nm,0.5s						
KTBS	**Karatobe**	**2.00**	**294**	*e*Pg	**Pb**	**18 53 10.2**	**+0.2**
	4.4nm,0.1s						
KTBS				*e*Lg	Lg	18 53 38.4	
	106nm,0.3s						
MTBS	**Maitube**	**2.04**	**277**	Pg	**Pb**	**18 53 11.2**	**+0.5**
	5.0nm,0.4s						
MTBS				Lg	Lg	18 53 39.7	
	17nm,0.5s						
MTBS	**Maitube**	**2.04**	**277**	*e*Pg	**Pb**	**18 53 11.2**	**+0.5**
	5.1nm,0.2s						
MTBS				*e*Lg	Lg	18 53 39.7	
	16nm,0.0s						
TDK	**Taldyqorghan**	**2.17**	**345**	*e*Pg	**Pg**	**18 53 13.5**	**-1.8**
	36nm,0.2s						
TDK				*e*Lg	Lg	18 53 43.4	
	97nm,0.1s						
ULHL	**Ulahol**	**2.28**	**254**	⇓*e*P	**Pn**	**18 53 10.1**	**-1.1**
	baz=53						
ULHL				⇓*i*S	**Sn**	**18 53 38.7**	**-0.4**
	baz=53						
KUU	**Kurty**	**2.30**	**296**	Pg	**Pb**	**18 53 15.2**	**+0.1**
	2.6nm,0.4s						
KUU				Lg	Lg	18 53 46.7	
	28nm,0.5s						
KUU	**Kurty**	**2.30**	**296**	*e*Pg	**Pb**	**18 53 15.3**	**+0.3**
	2.6nm,0.4s						
KUU				*e*Lg	Lg	18 53 46.9	
	28nm,0.5s						
KST	**Kastek**	**2.38**	**274**	Pg	**Pg**	**18 53 17.9**	**-1.4**
	10nm,0.9s						
KST				Lg	Lg	18 53 51.5	
	22nm,0.7s						
KST	**Kastek**	**2.38**	**274**	*e*Pg	**Pg**	**18 53 17.9**	**-1.4**
	10nm,0.1s						
KST				*e*Lg	Lg	18 53 51.5	
	21nm,0.4s						
BOOM	**Boomskoye usch**	**2.44**	**261**	⇓*e*P	**Pn**	**18 53 12.0**	**-1.3**
	baz=60						
BOOM				⇓*i*S	**Sn**	**18 53 42.1**	**-0.8**
	baz=60						
DGS	**Degeres**	**2.53**	**279**	Pg	**Pb**	**18 53 19.2**	**+0.2**
	5.7nm,0.6s						
DGS				Lg	Lg	18 53 54.0	
	27nm,0.5s						
DGS	**Degeres**	**2.53**	**279**	*e*Pg	**Pb**	**18 53 19.2**	**+0.2**
	5.4nm,0.2s						
DGS				*e*Lg	Lg	18 53 54.0	
	27nm,0.1s						
TKM2	**Tokmak 2**	**2.64**	**271**	⇓Pg	**Pb**	**18 53 22.0**	**+1.0**
	3.8nm,0.4s						
TKM2				⇑Lg	Lg	18 53 58.2	
	7.6nm,0.5s						
TKM2	**Tokmak 2**	**2.64**	**271**	⇓*e*P	**Pn**	**18 53 14.8**	**-1.3**
	baz=69						
TKM2				⇓*i*S	**Sn**	**18 53 46.8**	**-1.3**
	baz=69						
KRBS	**Karabastau**	**2.69**	**288**	Pg	**Pb**	**18 53 22.0**	**+0.4**
	2.8nm,0.5s						
KRBS				Lg	Lg	18 53 58.7	
	18nm,0.5s						
KRBS	**Karabastau**	**2.69**	**288**	*e*Pg	**Pb**	**18 53 22.0**	**+0.4**
	2.2nm,0.1s						
KRBS				*e*Lg	Lg	18 53 58.7	
	18nm,0.1s						
NRN	**Naryn**	**2.80**	**239**	⇑*e*P	**Pn**	**18 53 17.6**	**-0.8**
	baz=39						
NRN				⇑*i*S	**Sn**	**18 53 51.6**	**-0.4**
	baz=39						
SGDS	**Sogindy**	**3.38**	**281**	Pg	**Pb**	**18 53 35.4**	**+1.9**
	2.5nm,0.8s						
AML	**Almayashu**	**4.14**	**261**	⇑Pg	Pg	18 53 57.7	+4.6
	0.2nm,0.6s						
AML				⇓Lg	Lg	18 54 45.1	
	0.4nm,0.6s						
MK31	**Makanchi Array**	**4.46**	**28**	⇑Pg	**Pb**	**18 53 54.3**	**+2.4**
	0.1nm,0.2s,baz=203,slow=14,SNR=3.8						
MK31				⇓Sn	**Sn**	**18 54 35.9**	**+3.2**
	0.4nm,0.5s						
MK31				⇑Lg	Lg	18 54 51.9	
	0.1nm,0.2s						
KK31	**Karatay Array**	**6.37**	**275**	⇑Lg	Lg	18 55 58.4	
	0.4nm,0.4s,baz=82,slow=28,SNR=3.6						
OTUK	**Ortayu**	**7.18**	**320**	⇓Lg	Lg	18 56 19.6	
	1.4nm,0.5s						
KURBB	**Kurchatov Arra**	**7.73**	**357**	⇓Lg	Lg	18 56 38.0	
	6.2nm,0.8s						

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*NEIC **18** 18:54:32.0±2.3, 24.°94N±0.°08×122.°30E±0.°05,*
h125^{km}±5^{km}, mb4.0/5, Error ellipse: s-maj=11.4km
s-min=6.0km az=191.0
*JMA **18** 18:54:32.6±0.3, 25.°N±2°×122.°2E±0.°7, h125^{km}±3^{km},*
MV3.3/15, TAIWAN REGION
*TAP **18** 18:54:33.1, 24.°91N×122.°23E, h124^{km}, ML4.3, B*
*IDC **18** 18:54:37.0±7.3, 25.°09N×122.°61E, h170^{km}±79^{km}, mb3.4/5,*
mbtmp3.9/6, Error ellipse: s-maj=71.3km s-min=16.2km
az=66.0
ISC 18 18:54:32.4±0.7**, 24.°87N**±0.°03×**122.°27E**±0.°02**, h128**^{km}±4^{km}**,**
n197, σ1.^{s}01/357**, mb3.8**/7**, 51C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.29**	**299**	⇑*i*P	**Pn**	**18 54 50.5**	**+0.3**
	baz=294						
TWB1				*e*S	**Sn**	**18 55 02.9**	**-0.8**
	baz=294						
EGS		**0.30**	**265**	*i* P	**Pn**	**18 54 50.7**	**+0.4**
	baz=255						
NTC	**Toucheng**	**0.40**	**268**	*e*P	**Pn**	**18 54 50.9**	**+0.3**
	baz=261						
TIPB	**Shuangxi**	**0.41**	**284**	⇑*i*P	**Pn**	**18 54 51.1**	**+0.4**
	baz=279						
TIPB				S	**Sn**	**18 55 04.1**	**-0.5**
	baz=279						
SXI1	**Grass Mountain**	**0.42**	**302**	⇑*i*P	**Pn**	**18 54 51.1**	**+0.2**
	baz=299						
SXI1				S	**Sn**	**18 55 04.6**	**-0.2**
	baz=299						
EOS2	**EOS2**	**0.45**	**184**	*i* P	**Pn**	**18 54 51.6**	**+0.8**
	baz=180						
EOS2				S	**Sn**	**18 55 05.2**	**+0.6**
	baz=180						
TWC	**Suao**	**0.46**	**235**	⇑*i*P	**Pn**	**18 54 51.1**	**+0.1**
	baz=228						
TWC				*e*S	**Sn**	**18 55 04.4**	**-0.5**
	baz=228						
ILA	**Ilan**	**0.48**	**257**	⇑*i*P	**Pn**	**18 54 51.6**	**+0.5**
	baz=251						
ILA				*e*S	**Sn**	**18 55 05.0**	**-0.2**
	baz=251						
WFSB	**Wu-fen Shan**	**0.48**	**294**	⇑*i*P	**Pn**	**18 54 51.5**	**+0.5**
	baz=291						
WFSB				*e*S	**Sn**	**18 55 04.7**	**-0.5**
	baz=291						
TNOU	**National Taiwa**	**0.53**	**302**	⇑P	**Pn**	**18 54 51.7**	**+0.4**
	baz=299						
TNOU				*e*S	**Sn**	**18 55 05.3**	**-0.4**
	baz=299						
NDS	**Dongshan**	**0.55**	**245**	⇑P	**Pn**	**18 54 52.1**	**+0.6**
	baz=239						
NDS				*e*S	**Sn**	**18 55 06.9**	**+1.0**
	baz=239						
TWE	**Neicheng**	**0.56**	**255**	⇑*i*P	**Pn**	**18 54 51.9**	**+0.3**
	baz=249						
TWE				*e*S	**Sn**	**18 55 06.4**	**+0.4**
	baz=249						
EOS3	**EOS3**	**0.58**	**175**	⇑*i*P	**Pn**	**18 54 52.6**	**+1.1**
	baz=173						
EOS3				S	**Sn**	**18 55 07.0**	**+1.0**
	baz=173						
EWUT	**Wuta**	**0.61**	**226**	⇑*i*P	**Pn**	**18 54 52.3**	**+0.4**
	baz=221						
EWUT				*e*S	**Sn**	**18 55 06.1**	**-0.5**
	baz=221						
FUSB	**Fushanzhiwuyua**	**0.62**	**260**	⇑*i*P	**Pn**	**18 54 52.3**	**+0.3**
	baz=255						
FUSB				*e*S	**Sn**	**18 55 07.1**	**+0.2**
	baz=255						
TWA	**Mucha**	**0.63**	**280**	⇑*i*P	**Pn**	**18 54 52.2**	**+0.2**
	baz=276						
TWA				*e*S	**Sn**	**18 55 05.7**	**-1.2**
	baz=276						
NWRT	**Kuosheng**	**0.64**	**301**	*e*P	**Pn**	**18 54 52.5**	**+0.4**
	baz=299						
ENA	**Nanau**	**0.65**	**227**	⇑*i*P	**Pn**	**18 54 52.8**	**+0.6**
	baz=222						
ENA				*e*S	**Sn**	**18 55 07.4**	**+0.3**
	baz=222						
NHY	**Taipei**	**0.65**	**285**	*e*P	**Pn**	**18 54 52.6**	**+0.4**
	baz=282						
ENTT	**Nioudou**	**0.68**	**250**	⇑*i*P	**Pn**	**18 54 53.0**	**+0.6**
	baz=245						
ENTT				*e*S	**Sn**	**18 55 08.6**	**+1.1**
	baz=245						
NHDH	**Xindian Distri**	**0.68**	**278**	⇑*i*P	**Pn**	**18 54 52.6**	**+0.3**
	baz=274						
NHDH				*e*S	**Sn**	**18 55 08.1**	**+0.6**
	baz=274						
YM01	**YM01**	**0.69**	**294**	⇑*i*P	**Pn**	**18 54 52.8**	**+0.4**
	baz=291						
YM01				*e*S	**Sn**	**18 55 07.0**	**-0.7**
	baz=291						
YM08	**YM08**	**0.69**	**297**	⇑*e*P	**Pn**	**18 54 52.7**	**+0.2**
	baz=295						
YM08				*e*S	**Sn**	**18 55 06.7**	**-1.0**
	baz=295						
TAP1	**Taipei**	**0.69**	**284**	*e*P	**Pn**	**18 54 53.9**	**+1.5**
	baz=281						
TAP1				*e*S	**Sn**	**18 55 09.8**	**+2.2**
	baz=281						

TAP	Taipei	0.71	284	⇑*e*P	Pn	18 54 52.9	+0.3
	baz=281						
TAP				*e*S	Sn	18 55 06.8	-1.0
	baz=281						
TATO	Taipei	0.71	279		Pn	18 54 52.7	+0.1
TATO				Sn	Sn	18 55 06.4	-1.5
TATO	Taipei	0.71	279	P	Pn	18 54 52.6	0.0
TATO	Taipei	0.71	279	*e*P	Pn	18 54 52.6	0.0
	baz=275						
TATO				*e*S	Sn	18 55 06.3	-1.5
	baz=275						
TWY	Chenhua	0.72	304	⇑*i*P	Pn	18 54 53.3	+0.7
	baz=302						
TWY				*e*S	Sn	18 55 07.9	-0.1
	baz=302						
EHP	Heping Village	0.73	221	*e*P	Pn	18 54 53.4	+0.6
	baz=216						
EHP				*e*S	Sn	18 55 08.4	+0.1
	baz=216						
ANP	Anpu	0.74	295	*e*P	Pn	18 54 53.2	+0.3
	baz=293						
ANP				*e*S	Sn	18 55 08.8	+0.2
	baz=293						
JYNG	Yonagunijimaku	0.75	124	P	Pn	18 54 53.4	+0.5
JYNG				*e*S	Sn	18 55 07.7	-0.6
EOS4	EOS4	0.75	176	*i* P	Pn	18 54 52.9	+0.4
	baz=174						
EOS4				S	Sn	18 55 07.3	-0.3
	baz=174						
LATG	Datong	0.75	244	⇑*i*P	Pn	18 54 54.0	+0.9
	baz=240						
LATG				*e*S	Sn	18 55 09.3	+0.7
	baz=240						
BACT	New Taipei Cit	0.76	280	*e*P	Pn	18 54 53.4	+0.5
	baz=277						
BACT				*e*S	Sn	18 55 09.4	+0.9
	baz=277						
PCYT	Pengchaiyu	0.78	347	⇑*i*P	Pn	18 54 54.0	+0.9
	baz=349						
PCYT				*e*S	Sn	18 55 08.3	-0.5
	baz=349						
YOJ	Yonaguni jima	0.79	121		Pn	18 54 53.6	+0.4
YOJ				Sn	Sn	18 55 07.8	-1.1
YOJ	Yonaguni jima	0.79	121	P	Pn	18 54 53.7	+0.4
YOJ	Yonaguni jima	0.79	121	P	Pn	18 54 53.6	+0.4
YOJ				*e*S	Sn	18 55 08.3	-0.7
YOJ	Yonaguni jima	0.79	121	*i* P	Pn	18 54 53.8	+0.5
	baz=122						
YOJ				*e*S	Sn	18 55 08.3	-0.7
	baz=122						
NTST	Danshui	0.80	292	⇑*e*P	Pn	18 54 53.8	+0.6
	baz=289						
NTST				*e*S	Sn	18 55 10.0	+1.0
	baz=289						
TWS1	Kuangyinshan	0.80	287	⇑P	Pn	18 54 53.9	+0.6
	baz=284						
TWS1				*e*S	Sn	18 55 10.8	+1.6
	baz=284						
YHNB	Yeheng	0.83	256		Pn	18 54 54.1	+0.4
YHNB				Sn	Sn	18 55 09.2	-0.5
YHNB	Yeheng	0.83	256	P	Pn	18 54 54.0	+0.4
YHNB	Yeheng	0.83	256	⇑*i*P	Pn	18 54 54.1	+0.4
	baz=253						
YHNB				*e*S	Sn	18 55 09.3	-0.5
	baz=253						
NSK	Sanguang	0.85	257	⇑*i*P	Pn	18 54 54.2	+0.5
	baz=253						
NSK				*e*S	Sn	18 55 09.3	-0.7
	baz=253						
NTY	Taoyuan	0.89	278	*e*P	Pn	18 54 55.0	+1.0
	baz=276						
NTY				*e*S	Sn	18 55 11.1	+0.6
	baz=276						
NNSB	Datong	0.92	241	⇑P	Pn	18 54 55.4	+0.9
	baz=238						
NNSB				*e*S	Sn	18 55 11.1	-0.1
	baz=238						
NNSH	Datong	0.92	241	*e*P	Pn	18 54 55.4	+1.0
	baz=238						
NNSH				*e*S	Sn	18 55 10.9	-0.2
	baz=238						
NNS	Nan Shan	0.92	242	⇑*i*P	Pn	18 54 55.4	+0.9
	baz=238						
NNS				*e*S	Sn	18 55 11.2	0.0
	baz=238						
ETL	Fush Village	0.92	220	*e*P	Pn	18 54 54.5	+0.2
	baz=216						
ETL				*e*S	Sn	18 55 10.5	-0.6
	baz=216						
NACB	Ninganchiao	0.93	221		Pn	18 54 54.4	0.0
NACB				Sn	Sn	18 55 10.7	-0.4
NACB	Ninganchiao	0.93	221	P	Pn	18 54 54.5	0.0
NACB	Ninganchiao	0.93	221	⇑*i*P	Pn	18 54 54.4	0.0
	baz=218						
NACB				*e*S	Sn	18 55 10.5	-0.5
	baz=218						
ETLH	Xiulin Townshi	0.97	227	⇑*i*P	Pn	18 54 55.2	+0.2
	baz=224						
ETLH				*i* S	Sn	18 55 11.2	-0.8
	baz=224						
NCU	National Centr	0.98	276	P	Pn	18 54 55.6	+0.7
	baz=273						
NCU				*e*S	Sn	18 55 12.7	+0.7
	baz=273						
NCUH	Zhongli	0.98	276	⇑*e*P	Pn	18 54 55.5	+0.6
	baz=273						
NCUH				*e*S	Sn	18 55 11.5	-0.5
	baz=273						
TWD	Chiawan	1.00	218	⇑P	Pn	18 54 55.2	+0.1
	baz=215						
TWD				*e*S	Sn	18 55 11.6	-0.6
	baz=215						
NFF	Wufeng Townshi	1.07	257	⇑*i*P	Pn	18 54 56.3	+0.5
	baz=254						
NFF				S	Sn	18 55 12.9	-0.7
	baz=254						
HWA	Hwalien	1.07	214	*e*P	Pn	18 54 56.4	+0.6
	baz=211						
HWA				*e*S	Sn	18 55 14.2	+0.7
	baz=211						
NJD	Zhudong	1.08	263	⇑*e*P	Pn	18 54 56.8	+1.0
	baz=260						
NJD				*e*S	Sn	18 55 13.9	+0.4
	baz=260						
NHW	Xinwu Township	1.11	277	*e*P	Pn	18 54 56.9	+0.7
	baz=275						
NHW				*e*S	Sn	18 55 14.9	+0.6
	baz=275						
HSN1	Hsinchu	1.14	266	*e*P	Pn	18 54 57.3	+0.9
	baz=263						
HSN1				*e*S	Sn	18 55 15.0	+0.3
	baz=263						
ETM	Tongmen	1.14	218	⇑*e*P	Pn	18 54 56.5	0.0
	baz=215						
ETM				*e*S	Sn	18 55 13.4	-1.4
	baz=215						
LIOB	Emei	1.16	259	⇑*i*P	Pn	18 54 57.4	+0.8
	baz=256						
LIOB				*e*S	Sn	18 55 14.9	-0.2
	baz=256						
WHF	Hehuan Shan	1.16	232	⇑P	Pn	18 54 57.8	+0.7
	baz=229						
WHF				*e*S	Sn	18 55 16.0	+0.1
	baz=229						
SBCB	Hsinchu	1.17	266	⇑*e*P	Pn	18 54 57.6	+0.9
	baz=264						
SBCB				*e*S	Sn	18 55 15.4	+0.2
	baz=264						
TWT	Tachien	1.17	238	*e*P	Pn	18 54 58.3	+1.4
	baz=236						
TWT				*e*S	Sn	18 55 16.1	+0.6
	baz=236						
TEYL	Yanliau Villag	1.17	211	*e*P	Pn	18 54 57.0	+0.3
	baz=210						
TEYL				*e*S	Sn	18 55 15.1	-0.1
	baz=210						
NSTT	Nanjuang	1.17	259	⇑P	Pn	18 54 57.4	+0.6
	baz=256						
NSTT				*e*S	Sn	18 55 14.8	-0.5
	baz=256						
HSN	Hsinchu	1.18	267	⇑P	Pn	18 54 57.3	+0.5
	baz=266						
HSN				*e*S	Sn	18 55 14.9	-0.5
	baz=266						
TDCB	Techi	1.18	239	⇑*e*P	Pn	18 54 58.3	+1.3
	baz=236						
TDCB				*e*S	Sn	18 55 15.8	+0.1
	baz=236						
CHGB	Renai	1.28	231	⇑P	Pn	18 54 59.2	+1.1
	baz=229						
CHGB				*e*S	Sn	18 55 17.9	+0.1
	baz=229						
NJN	Zhunan	1.28	262	*e*P	Pn	18 54 58.9	+1.0
	baz=259						
NJN				*e*S	Sn	18 55 17.4	+0.2
	baz=259						
ESL	Shilin	1.30	216	⇑P	Pn	18 54 57.8	-0.3
	baz=213						
ESL				*e*S	Sn	18 55 15.9	-1.7
	baz=213						
TEGC	Jichi Village	1.33	210	*e*P	Pn	18 54 59.1	+0.7
	baz=207						
TEGC				*e*S	Sn	18 55 18.7	+0.4
	baz=207						
OWD	Renai	1.35	228	*e*P	Pn	18 54 59.7	+0.9
	baz=225						
OWD				*e*S	Sn	18 55 18.4	-0.5
	baz=225						
WUSB	Renai	1.36	230	⇑P	Pn	18 55 00.1	+1.2
	baz=228						
WUSB				*e*S	Sn	18 55 19.7	+0.5
	baz=228						
NMLH	Miaoli	1.38	256	⇑P	Pn	18 54 59.8	+0.8
	baz=254						
NMLH				*e*S	Sn	18 55 19.1	-0.1
	baz=254						
EGFH	Guangfu	1.42	213	⇑P	Pn	18 54 59.0	-0.4
	baz=211						
EGFH				*e*S	Sn	18 55 18.6	-1.4
	baz=211						
IRIF	Iriomote-Funau	1.44	112	P	Pn	18 54 59.9	+0.4
IRIF				*e*S	Sn	18 55 20.2	0.0
NSY	Sanyi	1.44	252	⇑*e*P	Pn	18 55 00.8	+1.1
	baz=249						
NSY				*e*S	Sn	18 55 21.0	+0.6
	baz=249						
TWQ1	Liyutan	1.45	249	*e*P	Pn	18 55 00.7	+0.9
	baz=247						
TWQ1				*e*S	Sn	18 55 20.7	0.0
	baz=247						
WPL	Puli Township	1.47	235	*e*P	Pn	18 55 01.4	+1.5
	baz=232						
WPL				*e*S	Sn	18 55 21.9	+0.9
	baz=232						
WCS	Beigang Elemen	1.48	237	⇑*e*P	Pn	18 55 01.3	+1.3
	baz=235						
WCS				*e*S	Sn	18 55 21.7	+0.6
	baz=235						
DPDB	Guoxing	1.48	236	*e*P	Pn	18 55 01.6	+1.5
	baz=234						
DPDB				*e*S	Sn	18 55 22.2	+0.9
	baz=234						
VWDT	VWDT	1.51	223	⇑*i*P	Pn	18 55 01.6	+1.1
	baz=221						
VWDT				S	Sn	18 55 21.9	+0.1
	baz=221						
WDJ	Dajia District	1.57	251	*e*P	Pn	18 55 02.0	+1.0
	baz=249						
WDJ				*e*S	Sn	18 55 23.0	0.0
	baz=249						
HGSD	Ruisui	1.57	209	⇑P	Pn	18 55 01.6	+0.5
	baz=207						
HGSD				*e*S	Sn	18 55 23.3	+0.3
	baz=207						
SMLT	Sun Moon Lake	1.59	232	*e*P	Pn	18 55 02.8	+1.4
	baz=230						
SMLT				*e*S	Sn	18 55 24.8	+1.3
	baz=230						
TYC	Yuchr	1.60	233	*e*P	Pn	18 55 02.8	+1.3
	baz=231						
TYC				*e*S	Sn	18 55 24.7	+1.0
	baz=231						
EHY	Hungye	1.61	213	*e*P	Pn	18 55 01.0	-0.6
	baz=210						
EHY				*e*S	Sn	18 55 21.9	-2.0
	baz=210						
SSLB	Suanglung	1.61	228		Pn	18 55 02.6	+0.9
SSLB				Sn	Sn	18 55 24.3	+0.4
SSLB	Suanglung	1.61	228	P	Pn	18 55 03.3	+1.7
SSLB	Suanglung	1.61	228	*e*P	Pn	18 55 02.9	+1.3
	baz=226						
SSLB				*e*S	Sn	18 55 24.5	+0.6
	baz=226						
TCU	Taichung	1.62	244	*e*P	Pn	18 55 02.8	+1.2
	baz=241						
TCU				*e*S	Sn	18 55 24.2	+0.3
	baz=241						
HATJ	Hateruma jima	1.62	120	P	Pn	18 55 02.6	+0.9
HATJ				*e*S	Sn	18 55 24.8	+0.8
JKRS	Kuro-shima	1.71	111	P	Pn	18 55 03.5	+0.8
JKRS				S	Sn	18 55 26.2	+0.4
ECBN	Changbin	1.72	206	*e*P	Pn	18 55 03.3	+0.5
	baz=204						
ECBN				*e*S	Sn	18 55 25.4	-0.6
	baz=204						
YULB	Yu-li	1.72	211		Pn	18 55 02.1	-0.8
YULB				Sn	Sn	18 55 24.2	-2.0
YULB	Yu-li	1.72	211	P	Pn	18 55 02.9	0.0
YULB	Yu-li	1.72	211	⇑*e*P	Pn	18 55 02.3	-0.6
	baz=209						
YULB				*e*S	Sn	18 55 24.6	-1.5
	baz=209						
WNT1	Nantou City	1.73	237	*e*P	Pn	18 55 04.6	+1.5
	baz=235						
WNT1				*e*S	Sn	18 55 27.4	+1.0
	baz=235						
WHYT	Xinyi Township	1.74	228	⇓*e*P	Pn	18 55 04.7	+1.6
	baz=226						
WHYT				*e*S	Sn	18 55 27.7	+1.1
	baz=226						
WCHH	Zhanghua	1.74	243	*e*P	Pn	18 55 04.1	+1.0
	baz=241						
WCHH				*e*S	Sn	18 55 26.5	-0.1
	baz=241						
EYUL	Yuli	1.75	210	*e*P	Pn	18 55 03.5	+0.3
	baz=208						
EYUL				*e*S	Sn	18 55 27.7	+1.0
	baz=208						
WJS	Zhushan	1.75	234	*e*P	Pn	18 55 04.5	+1.3
	baz=232						
WJS				*e*S	Sn	18 55 27.5	+0.7
	baz=232						
WNT	Mingjian	1.75	236	*e*P	Pn	18 55 04.6	+1.4
	baz=234						
WNT				*e*S	Sn	18 55 27.7	+1.0
	baz=234						
TWF1	Yuli	1.75	211	*e*P	Pn	18 55 02.9	-0.4
	baz=209						
TWF1				*e*S	Sn	18 55 25.4	-1.4
	baz=209						
JIJ	Ishigaki jima	1.78	106	P	Pn	18 55 04.2	+0.7
JIJ				S	Sn	18 55 26.6	-0.8
WYL	Yuanlin Townsh	1.78	240	*e*P	Pn	18 55 04.8	+1.3
	baz=238						
WYL				*e*S	Sn	18 55 28.2	+0.7
	baz=238						
JISG	Ishigakijimahi	1.88	98	P	Pn	18 55 05.5	+0.8
JISG				*e*S	Sn	18 55 29.2	-0.3
FULB	Fuli	1.89	208	*e*P	Pn	18 55 05.3	+0.4
	baz=207						
FULB				*e*S	Sn	18 55 30.1	+0.3
	baz=207						
ALS	Alishan	1.90	225	*e*P	Pn	18 55 06.8	+1.5
	baz=223						
ALS				*e*S	Sn	18 55 31.9	+1.4
	baz=223						
CHN5	Tsauling	1.93	229	*e*P	Pn	18 55 06.6	+1.2
	baz=227						
CHN5				*e*S	Sn	18 55 31.8	+1.1
	baz=227						
CHKT	Chengkung	1.95	205	*e*P	Pn	18 55 05.6	0.0
	baz=203						
CHKT				*e*S	Sn	18 55 29.1	-1.9
	baz=203						
WGK	Gukeng	1.95	233	*e*P	Pn	18 55 07.0	+1.3
	baz=231						
WGK				*e*S	Sn	18 55 32.2	+1.2
	baz=231						
WDLH	Douliu	1.97	234	*e*P	Pn	18 55 07.0	+1.2
	baz=232						
WDLH				*e*S	Sn	18 55 32.2	+0.8
	baz=232						
EHD	Haiduan	1.97	210	*e*P	Pn	18 55 05.2	-0.6
	baz=208						
EHD				*e*S	Sn	18 55 29.9	-1.6
	baz=208						
WRL	Guolierlin Hig	1.97	241	*e*P	Pn	18 55 06.6	+0.7
	baz=239						
WRL				*e*S	Sn	18 55 30.9	-0.6
	baz=239						
ECS	Chishang	2.01	209	*e*P	Pn	18 55 06.7	+0.3
	baz=207						
ECS				*e*S	Sn	18 55 32.3	-0.1
	baz=207						
ELDTW	Lidau	2.03	215	*e*P	Pn	18 55 06.9	+0.2
	baz=213						
ELDTW				*e*S	Sn	18 55 32.7	-0.2
	baz=213						
WTCT	Ta-ch'eng	2.07	241	*e*P	Pn	18 55 08.0	+1.0
	baz=239						
WTCT				*e*S	Sn	18 55 33.5	0.0
	baz=239						
WCKO	Fanlu	2.08	227	*e*P	Pn	18 55 08.5	+1.2
	baz=225						
WCKO				*e*S	Sn	18 55 35.1	+1.1
	baz=225						
EDH	Donghe	2.08	205	*e*P	Pn	18 55 07.6	+0.3
	baz=204						
EDH				*e*S	Sn	18 55 32.8	-1.2
	baz=204						
CHN2	Minshiung	2.11	231	*e*P	Pn	18 55 09.0	+1.4
	baz=229						
CHN2				*e*S	Sn	18 55 35.9	+1.3
	baz=229						
CHN4	Tsaushan	2.15	226	*e*P	Pn	18 55 09.3	+1.2
	baz=224						
CHN4				*e*S	Sn	18 55 35.8	+0.3
	baz=224						
TPUB	Ta-pu	2.16	224		Pn	18 55 09.3	+1.0
TPUB				Sn	Sn	18 55 35.7	-0.1
TPUB	Ta-pu	2.16	224	P	Pn	18 55 09.6	+1.3
TPUB	Ta-pu	2.16	224	*e*P	Pn	18 55 09.4	+1.1
	baz=222						
TPUB				*e*S	Sn	18 55 36.5	+0.8
	baz=222						
CHY	Chiayi	2.17	231	*e*P	Pn	18 55 09.3	+1.0
	baz=229						
CHY				*e*S	Sn	18 55 36.0	+0.2
	baz=229						
STYH	Taoyuan	2.17	219	*e*P	Pn	18 55 09.8	+1.4
	baz=218						
STYH				*e*S	Sn	18 55 36.6	+0.7
	baz=218						
STYT	Tauyuan	2.19	219	*e*P	Pn	18 55 10.0	+1.3
	baz=218						
STYT				*e*S	Sn	18 55 37.2	+0.8
	baz=218						
WTP	Ta-pu	2.21	223	*e*P	Pn	18 55 09.9	+1.0
	baz=221						
WTP				*e*S	Sn	18 55 37.6	+0.7
	baz=221						
LONT	Longtian	2.21	208	*e*P	Pn	18 55 08.6	-0.3
	baz=207						
LONT				*e*S	Sn	18 55 36.4	-0.6
	baz=207						
JTJ	Tarama	2.23	95	P	Pn	18 55 10.3	+1.3
JTJ				S	Sn	18 55 38.0	+0.9
WSF	Szhu	2.23	237	*e*P	Pn	18 55 10.0	+0.9
	baz=235						
WSF				*e*S	Sn	18 55 37.6	+0.3
	baz=235						
TWK	Hsinying	2.28	226	*e*P	Pn	18 55 10.6	+0.9
	baz=224						
TWK				*e*S	Sn	18 55 39.0	+0.6
	baz=224						
SNST	Tainan City	2.31	225	*e*P	Pn	18 55 11.6	+1.6
	baz=223						
SNST				*e*S	Sn	18 55 40.9	+2.0
	baz=223						
LDUT	Ludao	2.31	199	*e*P	Pn	18 55 09.8	-0.3
	baz=197						
LDUT				*e*S	Sn	18 55 37.3	-1.6
	baz=197						
CHN1	Nanshi	2.31	224	*e*P	Pn	18 55 11.1	+0.9
	baz=222						
CHN1				*e*S	Sn	18 55 39.8	+0.7
	baz=222						
TWGBT	Beinan	2.31	208	P	Pn	18 55 11.7	+1.5
TWGBT	Beinan	2.31	208	*e*P	Pn	18 55 10.5	+0.3
	baz=207						
TWGBT				*e*S	Sn	18 55 37.7	-1.5
	baz=207						
TWG	Pinlang	2.31	208		Pn	18 55 09.7	-0.5
TWG				Sn	Sn	18 55 37.5	-1.7
TWG	Pinlang	2.31	208	*e*P	Pn	18 55 09.9	-0.3
	baz=207						
TWG				*e*S	Sn	18 55 37.3	-1.9
	baz=207						
TTN	Taitung	2.34	206	*e*P	Pn	18 55 11.5	+1.0
	baz=205						
TTN				*e*S	Sn	18 55 40.2	+0.5
	baz=205						
SGST	Jiashian	2.35	221	*e*P	Pn	18 55 11.0	+0.4
	baz=219						
SGST				*e*S	Sn	18 55 40.3	+0.3
	baz=219						
ICHU	Yijhu	2.36	231	*e*P	Pn	18 55 11.4	+0.7
	baz=229						
ICHU				*e*S	Sn	18 55 39.5	-0.5
	baz=229						
SLGT	Liugui	2.38	219	*e*P	Pn	18 55 13.7	+2.7
	baz=217						
SLGT				*e*S	Sn	18 55 42.9	+2.2
	baz=217						
CHN8	Yiju	2.41	231	*e*P	Pn	18 55 12.2	+0.8
	baz=230						
CHN8				*e*S	Sn	18 55 41.8	+0.5
	baz=230						
MATB	Ma-tsu	2.45	302	*e*P	Pn	18 55 12.0	+0.1
	baz=300						
CHN3	Shinhua	2.49	225	*e*P	Pn	18 55 14.5	+2.1
	baz=223						
CHN3				*e*S	Sn	18 55 45.4	+2.2
	baz=223						
SCLT	Jiali	2.54	229	*e*P	Pn	18 55 14.1	+1.1
	baz=227						
SCLT				*e*S	Sn	18 55 44.8	+0.7
	baz=227						
SCST	Cishan	2.56	220	*e*P	Pn	18 55 14.9	+1.7
	baz=218						
SCST				*e*S	Sn	18 55 46.0	+1.5
	baz=218						
VWUC	VWUC	2.56	273	*e*P	Pn	18 55 13.6	+0.4
	baz=272						
VWUC				*e*S	Sn	18 55 42.5	-2.1
	baz=272						
ECL	Taimali	2.56	208	*e*P	Pn	18 55 13.8	+0.5
	baz=207						
ECL				*e*S	Sn	18 55 42.3	-2.4
	baz=207						
SSD	Sandimen	2.59	216	*e*P	Pn	18 55 15.2	+1.6
	baz=214						
SSD				*e*S	Sn	18 55 46.6	+1.2
	baz=214						
JIRB	Irabujima	2.64	90	P	Pn	18 55 15.2	+1.0
JIRB				S	Sn	18 55 47.4	+0.9
TWM1	Shoushan	2.65	220	*e*P	Pn	18 55 16.4	+2.1
	baz=218						
MASBT	Mashibuluo	2.70	214	*e*P	Pn	18 55 16.6	+1.5
	baz=213						
MASBT				*e*S	Sn	18 55 48.5	+0.6
	baz=213						
JIKM	Ikemajima	2.71	88	P	Pn	18 55 16.5	+1.4
JIKM				S	Sn	18 55 49.2	+1.1
JMJ	Miyako jima 2	2.75	91	P	Pn	18 55 18.2	+2.5
JMJ	Miyako jima 2	2.75	91	*e*P	Pn	18 55 17.4	+1.7
	baz=92						
XPSS	Dashiqiu	2.77	318	*e*P	Pn	18 55 16.1	+0.2
	baz=317						
JMJ2	Miyako jima3	2.79	92	P	Pn	18 55 17.8	+1.7
PNG	Penghu	2.79	243	*e*P	Pn	18 55 16.3	+0.1
	baz=241						
PNG				*e*S	Sn	18 55 48.2	-1.8
	baz=241						
EAST	Anshuo	2.80	208	*e*P	Pn	18 55 16.7	+0.3
	baz=207						
EAST				*e*S	Sn	18 55 50.0	-0.2
	baz=207						
PHUB	P'eng-hu	2.81	242	*e*P	Pn	18 55 16.3	-0.1
	baz=240						
PHUB				*e*S	Sn	18 55 48.1	-2.2
	baz=240						
LYJJ	Jianjiangzhen	2.81	307	*e*P	Pn	18 55 16.8	+0.3
	baz=306						

LYJJ				*e*S	Sn	18 55 50.3	-0.1
	baz=306						
JOGS	Gusukube	2.86	92	P	Pn	18 55 18.6	+1.6
JOGS				*e*S	Sn	18 55 52.8	+1.3
WDGT	Dungji	2.87	237	*e*P	Pn	18 55 17.5	+0.3
	baz=235						
LAY	Lan-yu	2.90	193	*e*P	Pn	18 55 17.6	0.0
	baz=192						
LAY				*e*S	Sn	18 55 50.0	-2.5
	baz=192						
SCZT	Fangliau	2.91	212	*e*P	Pn	18 55 19.1	+1.4
	baz=210						
SCZT				*e*S	Sn	18 55 53.0	+0.3
	baz=210						
LYUB	Lan-yu	2.92	192	*e*P	Pn	18 55 17.2	-0.7
	baz=192						
LYUB				*e*S	Sn	18 55 50.0	-3.1
	baz=192						
VCHM	Qimei	3.08	238	*e*P	Pn	18 55 20.1	+0.2
	baz=236						
VCHM				*e*S	Sn	18 55 55.2	-1.4
	baz=236						
SMST	Manzhou Townsh	3.13	205	*e*P	Pn	18 55 22.1	+1.5
	baz=204						
SMST				*e*S	Sn	18 55 57.7	0.0
	baz=204						
MHZQ	Yeshan	3.17	293	*e*P	Pn	18 55 21.9	+0.8
	baz=292						
HEN	Hengchun	3.18	206	*e*P	Pn	18 55 22.3	+1.0
	baz=205						
KNM	Kinmen	3.52	263	*e*P	Pn	18 55 27.8	+2.2
	baz=262						
KNMB	Chin-men Tao	3.55	264	Pn	Pn	18 55 26.3	+0.2
KNMB				Sn	Sn	18 56 04.9	-2.8
KNMB	Chin-men Tao	3.55	264	*e*P	Pn	18 55 26.5	+0.4
	baz=263						
AXDP	Jialang	3.90	271	*e*P	Pn	18 55 31.6	+0.8
	baz=270						
ZPLA	Ao Xicun	4.22	258	*e*P	Pn	18 55 35.8	+0.8
	baz=257						
JOW	Kunigami	5.76	69	P	Pn	18 55 55.6	+0.1
	11nm,0.4s,baz=264,slow=18,SNR=39						
JOW				S	Sn	18 56 58.3	-2.1
	7.8nm,0.3s,baz=288,slow=20,SNR=8.4						
JOW	Kunigami	5.76	69	Pn	Pn	18 55 55.5	-0.1
JOW				Sn	Sn	18 56 56.2	-4.2
KSRS	Korea Array	13.44	20	P	P	18 57 41.3	-1.4
	1.2nm,0.5s,baz=200,slow=11,SNR=9.2						
SONM	Songino Array	26.14	335	P	P	18 59 55.3	+0.7
	1.4nm,0.7s,baz=152,slow=10,SNR=12						
	1.4nm,0.7s						
SONM	Songino Array	26.14	335	P	P	18 59 55.3	+0.7
MTN	Manton Dam	38.47	166	P	P	19 01 42.3	+0.2
MK31	Makanchi Array	38.54	315	P	P	19 01 41.7	-0.8
MK31				IAmb	IAmb	19 01 51.0	
	comp=Z,2.9nm,1.5s						
MKAR	Makanchi Array	38.54	315	P	P	19 01 40.8	-1.6
ZALV	Zalesovo Beam	40.21	326	P	P	19 01 56.0	-0.2
	comp=Z,0.6nm,0.4s,baz=126,slow=8.5,SNR=3.9						
	comp=Z,0.6nm,0.4s						
WB0	Warramunga Arr	45.91	164	P	P	19 02 43.6	+1.3
WB0				IAmb	IAmb	19 03 23.5	
	comp=Z,4.9nm,1.2s						
WRA	Warramunga Arr	46.07	164	P	P	19 02 44.6	+1.0
	comp=Z,0.8nm,0.6s,baz=347,slow=8.6,SNR=7.1						
	comp=Z,0.8nm,0.6s						
WB2	Warramunga Arr	46.07	164	P	P	19 02 45.0	+1.4
ASAR	Alice Springs	49.55	166	P	P	19 03 12.1	+1.7
	comp=Z,0.4nm,0.6s,baz=341,slow=6.8,SNR=6.0						
	comp=Z,0.4nm,0.6s						
ARCES	ARCESS Array B	69.27	338	P	P	19 05 24.4	-0.9
	comp=Z,4.1nm,0.9s,baz=74,slow=6.8,SNR=2.2						
	comp=Z,4.1nm,0.9s						

ROM 18 18:59:32.9±0.1**,43°.037N**±0°.004×**13°.018E**±0°.006**,**
h3^{km}±1^{km}**,ML1.4**/6**,1C-1D,Error ellipse: s-maj=0.5km**
s-min=0.2km az=81.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1219	Muccia, Frazio	0.02	338	P	Pg	18 59 33.4	-0.3
T1219				S	Sg	18 59 33.9	-0.4
T1219				AML	AML		
	comp=E,3180µm,0.3s						
T1219				AML	AML		
	comp=N,4415µm,0.3s						
T1219				AML	AML		
	comp=E,3395µm,0.3s						
T1219				AML	AML		
	comp=N,4115µm,0.3s						
FDMO	Fiordimonte	0.05	91	P	Pg	18 59 34.0	-0.1
FDMO				S	Sg	18 59 35.1	+0.3
FDMO				AML	AML		
	comp=E,520µm,0.7s						
FDMO				AML	AML		
	comp=E,520µm,0.7s						
FDMO				AML	AML		
	comp=N,558µm,0.7s						
FEMA	Monte Fema	0.08	162	P	Pg	18 59 34.5	-0.1
FEMA				S	Sg	18 59 36.2	+0.5
CESI	CESI - Serrava	0.09	249	P	Pg	18 59 34.9	+0.1
CESI				S	Sg	18 59 36.7	+0.7
CESI				AML	AML		
	comp=N,462µm,0.3s						
CESI				AML	AML		
	comp=E,317µm,0.8s						
CESI				AML	AML		
	comp=N,462µm,0.3s						
CESI				AML	AML		
	comp=E,317µm,1.2s						
T1220	Camerino, Fraz	0.09	36	P	Pg	18 59 34.8	0.0
T1220				S	Sg	18 59 36.8	+0.8
T1220				AML	AML		
	comp=E,1360µm,0.4s						
T1220				AML	AML		
	comp=N,1072µm,1.5s						
T1220				AML	AML		
	comp=E,1360µm,0.3s						
T1220				AML	AML		
	comp=N,1070µm,1.5s						
T1220				AML	AML		
	comp=E,1360µm,1.7s						
T1220				AML	AML		
	comp=N,1070µm,0.5s						
T1216	Preci, Frazion	0.15	180	P	Pg	18 59 35.7	0.0
T1216				S	Sg	18 59 38.7	+1.0
MC2	Monte Cornacci	0.18	134	P	Pg	18 59 36.9	+0.5
T1245	Castelsantange	0.22	145	P	Pg	18 59 36.5	-0.7
T1245				S	Sg	18 59 41.4	+1.3
T1245				AML	AML		
	comp=E,127µm,1.4s						
T1245				AML	AML		
	comp=E,126µm,1.4s						
T1245				AML	AML		
	comp=E,126µm,0.6s						
T1245				AML	AML		
	comp=N,180µm,0.3s						
SNTG	Esanatoglia	0.23	346	P	Pg	18 59 37.4	+0.2
SNTG				S	Sg	18 59 41.2	+1.0
ASSB	Assisi San Ben	0.26	271	⇑P	Pg	18 59 38.0	0.0
ASSB				AML	AML		
	comp=N,116µm,0.2s						
ASSB				AML	AML		
	comp=E,155µm,0.3s						
T1212	Cascia, Frazio	0.29	176	P	Pg	18 59 38.5	+0.1
T1212				S	Sg	18 59 43.6	+1.4
EL6	Elcito	0.30	12	S	Sg	18 59 44.2	+1.6
ATCC	AVT- Casa Cast	0.31	298	⇓P	Pg	18 59 39.0	+0.1
ATCC				AML	AML		
	comp=N,65µm,0.3s						
ATCC				AML	AML		
	comp=E,99µm,0.2s						
T1241	Roccafluvione,	0.35	121	P	Pg	18 59 39.8	+0.1
T1241				S	Sg	18 59 45.7	+1.4
T1218	Civita (PG)	0.37	169	P	Pg	18 59 39.8	-0.3
T1218				S	Sg	18 59 46.1	+1.1
PIEI	Pieia	0.61	325	S	Sb	18 59 54.9	-0.3
PIEI				AML	AML		
	comp=E,55µm,0.4s						
PIEI				AML	AML		
	comp=N,24µm,0.9s						

ROM 18 19:00:16.0±0.1**,42°.818N**±0°.002×**13°.192E**±0°.004**,**
h14^{km}**,ML1.3**/1**,Error ellipse: s-maj=0.3km**
s-min=0.1km az=68.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1245	Castelsantange	0.04	356	P	Pg	19 00 18.9	+0.1
T1245				S	Sg	19 00 20.7	0.0
T1245				AML	AML		
	comp=E,288µm,0.9s						
T1245				AML	AML		
	comp=N,243µm,0.5s						
T1245				AML	AML		
	comp=E,288µm,0.9s						
T1245				AML	AML		
	comp=N,317µm,1.5s						
T1245				AML	AML		
	comp=E,192µm,0.2s						
T1245				AML	AML		
	comp=N,243µm,1.5s						
T1245				AML	AML		
	comp=N,317µm,0.5s						
T1245				AML	AML		
	comp=E,288µm,1.1s						
T1214	Arquata del Tr	0.06	168	P	Pg	19 00 19.1	+0.2
T1214				S	Sg	19 00 21.0	+0.2
MC2	Monte Cornacci	0.10	359	P	Pg	19 00 19.5	+0.2
T1212	Cascia, Frazio	0.13	239	P	Pg	19 00 19.8	+0.3
T1212				S	Sg	19 00 22.3	+0.4
T1216	Preci, Frazion	0.15	300	P	Pg	19 00 20.0	+0.3
T1216				S	Sg	19 00 22.8	+0.5
T1218	Civita (PG)	0.16	201	P	Pg	19 00 20.3	+0.3
T1218				S	Sg	19 00 23.2	+0.6
T1241	Roccafluvione,	0.18	78	P	Pg	19 00 20.5	+0.2
T1241				S	Sg	19 00 23.6	+0.4
SMA1	SAN MARTINO	0.21	151	P	Pg	19 00 20.6	-0.2
SMA1				S	Sg	19 00 24.7	+0.6
T1217	Poggiodomo (PG	0.22	241	P	Pg	19 00 21.2	+0.3
T1217				S	Sg	19 00 24.9	+0.7
FDMO	Fiordimonte	0.23	341	P	Pg	19 00 21.5	+0.4
FDMO				S	Sb	19 00 25.4	-0.6
RM33	Pellescritta (	0.31	177	P	Pg	19 00 22.8	+0.3
RM33				S	Sb	19 00 27.8	-0.5
TERO	Teramo	0.36	123	P	Pg	19 00 23.5	+0.2
TERO				S	Sb	19 00 29.2	-0.5

ROM 18 19:01:47.9±0.1**,42°.804N**±0°.002×**13°.084E**±0°.004**,**
h11^{km}**,ML0.9**/5**,Error ellipse: s-maj=0.3km**
s-min=0.2km az=245.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1212	Cascia, Frazio	0.06	209	P	Pg	19 01 50.6	+0.3
T1212				S	Sg	19 01 52.3	+0.3
T1245	Castelsantange	0.09	55	P	Pg	19 01 51.1	+0.4
T1245				S	Sg	19 01 53.1	+0.3
T1245				AML	AML		
	comp=E,46µm,1.5s						
T1245				AML	AML		
	comp=N,50µm,1.1s						
T1245				AML	AML		
	comp=N,50µm,0.9s						
T1245				AML	AML		
	comp=E,46µm,0.5s						
T1216	Preci, Frazion	0.10	331	P	Pg	19 01 51.1	+0.4
T1216				S	Sg	19 01 53.4	+0.6
T1214	Arquata del Tr	0.10	116	P	Pg	19 01 51.2	+0.4
T1214				S	Sg	19 01 53.4	+0.4
T1218	Civita (PG)	0.14	170	P	Pg	19 01 51.7	+0.4
T1218				S	Sg	19 01 54.4	+0.8
T1218				AML	AML		
	comp=E,49µm,0.3s						
T1218				AML	AML		
	comp=N,82µm,0.2s						
T1218				AML	AML		
	comp=N,81µm,0.2s						
T1218				AML	AML		
	comp=E,49µm,0.3s						
T1217	Poggiodomo (PG	0.14	231	S	Sg	19 01 51.9	-2.0
T1217				AML	AML		
	comp=N,30µm,1.6s						
T1217				AML	AML		
	comp=E,40µm,1.6s						
FDMO	Fiordimonte	0.23	1	P	Pg	19 01 53.2	+0.4
FDMO				S	Sg	19 01 57.2	+1.0

IDC ***18*** *19:33:07.5±1.8, 9°.59S×123°.94E, h0*^{km}*, mb3.9/4, mbtmp3.7/6, ML3.4/2, MS3.0/1, Error ellipse: s-maj=69.2km s-min=30.2km az=61.0*
DJA ***18*** *19:33:12.0±0.5, 10°S±7°×12°3E±°, h10*^{km}*, M4.3/4, mb4.7/2, mB5.0/1, MLv4.1/4, Mw(mB)4.2/1*
ISC 18 19:33:10.9±0.9**,10°.52S**±0°.09×**123°.02E**±0°.06**,h50**^{km}**,n11,**
σ**2**^{s}**.27**/12**,mb3.9**/4**,Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	1.45	59	P	Pn	19 33 35.4	+0.6
SOEI				S	Sn	19 33 54.4	+1.7
MMRI	Maumere	2.02	338	P	Pn	19 33 37.0	-5.6
MMRI				S	Sn	19 33 56.4	-10
BASI	Baing, Sumba	2.42	277	P	Pn	19 33 48.4	+0.4
PLAI	Plampang	5.43	288	P	Pn	19 34 29.8	+0.4
	66nm,0.7s,0.2nm						
TWSI	Taliwang, Sumb	6.30	286	P	Pn	19 34 41.8	+0.5
WRA	Warramunga Arr	14.38	132	Pn	Pn	19 36 33.2	+1.4
	0.1nm,0.3s,baz=310,slow=15,SNR=13						
WRA				Sn	Sn	19 39 06.6	-3.5
	0.4nm,0.3s,baz=304,slow=23,SNR=6.1						
	0.3nm,0.5s						
ASAR	Alice Springs	16.70	143	Pn	P	19 37 05.6	+2.4
	0.2nm,0.3s,baz=319,slow=12,SNR=13						
ASAR				Sn	Sn	19 40 04.8	-1.4
	0.3nm,0.3s,baz=316,slow=23,SNR=9.0						
	0.3nm,0.3s						
MJAR	Matsushiro Arr	48.95	16	P	P	19 41 46.8	-5.4
	0.9nm,0.4s,baz=192,slow=8.8,SNR=8.5						
	0.9nm,0.4s						
USRK	Ussuriysk Ar.	55.06	8	P	P	19 42 33.3	-4.3
	1.5nm,0.5s,baz=207,slow=6.4,SNR=5.0						
USRK				LR	LR	20 06 02.3	
	comp=Z,16nm,20.2s,baz=339,slow=37						
	1.5nm,0.5s						
MKAR	Makanchi Array	67.65	331	P	P	19 44 04.2	+1.5
	0.5nm,0.7s,baz=140,slow=7.5,SNR=6.7						
	0.5nm,0.7s						
ZALV	Zalesovo Beam	71.91	337	P	P	19 44 29.4	+0.7
	0.3nm,0.3s,baz=134,slow=6.2,SNR=2.0						
	0.3nm,0.3s						

TAP ***18*** *19:42:33.8, 24°.91N×122°.42E, h11*^{km}*, ML2.8, C*
JMA ***18*** *19:42:33.3±0.1, 24°.8N±0°.8×122°.5E±0°.4, h0*^{km}*, MV2.6/6, NW OFF ISHIGAKIJIMA IS*
ISC 18 19:42:33.4±1.2**,24°.88N**±0°.03×**122°.46E**±0°.02**,h4**^{km}±11^{km}**,**
n57,σ**0**^{s}**.63**/83**,2C,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.44	287	*i* P	Pg	19 42 42.6	+0.6
	baz=284						
TWB1				*i* S	Sg	19 42 49.0	+1.2
	baz=284						
EGS		0.48	266	*e*P	Pb	19 42 43.5	-0.9
	baz=261						
EOS2	EOS2	0.50	204	*i* P	Pb	19 42 44.4	-0.3
	baz=199						
EOS2				*i* S	Sb	19 42 52.6	+0.2
	baz=199						
SXI1	Grass Mountain	0.57	292	⇑*i*P	Pb	19 42 45.4	-0.7
	baz=290						
SXI1				S	Sb	19 42 53.7	-0.8
	baz=290						
TIPB	Shuangxi	0.58	279	*i* P	Pb	19 42 45.4	-0.8
	baz=276						
TIPB				S	Sb	19 42 53.9	-0.9
	baz=276						
EOS3	EOS3	0.60	192	*i* P	Pb	19 42 46.4	-0.1
	baz=189						
EOS3				S	Sb	19 42 56.6	+1.4
	baz=189						
TWC	Suao	0.61	244	*i* P	Pg	19 42 45.5	+0.3
	baz=239						
TWC				*e*S	Sb	19 42 55.8	0.0
	baz=239						
JYNG	Yonagunijimaku	0.62	134	P	Pg	19 42 45.2	-0.1
JYNG				S	Sg	19 42 53.5	+0.2
WFSB	Wu-fen Shan	0.64	287	*e*P	Pb	19 42 47.0	-0.2
	baz=285						
WFSB				*e*S	Sb	19 42 56.0	-0.5
	baz=285						
YOJ	Yonaguni jima	0.65	129	P	Pg	19 42 46.0	0.0
YOJ	Yonaguni jima	0.65	129	P	Pg	19 42 45.7	-0.3
YOJ				*e*S	Sg	19 42 54.4	-0.1
YOJ	Yonaguni jima	0.65	129	*i* P	Pg	19 42 46.1	+0.1
	baz=130						
YOJ				S	Sg	19 42 54.7	+0.2
	baz=130						
TNOU	National Taiwa	0.68	294	*e*P	Pb	19 42 47.3	-0.5
	baz=292						
NDS	Dongshan	0.72	250	*e*P	Pb	19 42 48.0	-0.5
	baz=247						
NDS				*e*S	Sb	19 42 58.0	-0.7
	baz=247						
TWE	Neicheng	0.73	258	*e*P	Pg	19 42 47.8	+0.2
	baz=254						
TWE				*e*S	Sb	19 42 57.9	-1.3
	baz=254						
EWUT	Wuta	0.75	235	*i* P	Pg	19 42 48.3	+0.3
	baz=232						
EWUT				*e*S	Sb	19 42 58.7	-1.0
	baz=232						
EOS4	EOS4	0.77	190	*i* P	Pb	19 42 49.2	+0.1
	baz=187						
EOS4				*e*S	Sb	19 43 00.0	+0.3
	baz=187						
NWRT	Kuosheng	0.79	294	*e*P	Pb	19 42 49.7	0.0
	baz=293						
ENA	Nanau	0.79	235	P	Pg	19 42 48.9	+0.2
	baz=232						
FUSB	Fushanzhiwuyua	0.80	262	*e*P	Pb	19 42 49.7	-0.2
	baz=259						
FUSB				*e*S	Sb	19 43 00.7	-0.4
	baz=259						
TWA	Mucha	0.80	277	*e*P	Pb	19 42 49.5	-0.4
	baz=275						
PCYT	Pengchaiyu	0.82	335	*e*P	Pb	19 42 50.1	-0.2
	baz=336						
YM08	YM08	0.84	291	*e*P	Pb	19 42 50.5	-0.2
	baz=290						
YM08				*e*S	Sg	19 43 01.0	+0.4
	baz=290						
ENTT	Nioudou	0.84	254	*e*P	Pb	19 42 50.0	-0.6
	baz=250						
ENTT				*e*S	Sb	19 43 02.9	+0.5
	baz=250						
YM01	YM01	0.85	288	*e*P	Pb	19 42 50.8	+0.1
	baz=287						
YM01				*e*S	Sb	19 43 01.4	-1.0
	baz=287						
NHDH	Xindian Distri	0.85	276	*e*P	Pb	19 42 50.4	-0.4
	baz=274						
TWY	Chenhua	0.87	297	*e*P	Pb	19 42 51.0	-0.1
	baz=296						
TWY				*e*S	Sb	19 43 03.0	-0.1
	baz=296						
TATO	Taipei	0.89	276	P	Pb	19 42 51.6	+0.3
ANP	Anpu	0.90	290	*e*P	Pb	19 42 51.5	-0.2
	baz=288						
LATG	Datong	0.91	248	*e*P	Pg	19 42 51.3	+0.3
	baz=245						
LATG				*e*S	Sb	19 43 03.6	-0.8
	baz=245						
TWS1	Kuangyinshan	0.97	283	*e*P	Pn	19 42 53.5	-0.3
	baz=282						
YHNB	Yeheng	1.00	258	P	Pn	19 42 53.8	-0.6
YHNB	Yeheng	1.00	258	*e*P	Pb	19 42 53.2	-0.3
	baz=256						
NSK	Sanguang	1.02	259	*e*P	Pg	19 42 53.2	+0.2
	baz=256						
NSK				*e*S	Sb	19 43 07.6	+0.1
	baz=256						
NACB	Ninganchiao	1.05	228	P	Pb	19 42 54.0	-0.2
NACB	Ninganchiao	1.05	228	⇑*i*P	Pg	19 42 53.8	+0.1
	baz=226						
NACB				*e*S	Sg	19 43 07.4	0.0
	baz=226						
NNSB	Datong	1.08	245	*e*P	Pg	19 42 54.1	0.0
	baz=243						
NNSB				*e*S	Sb	19 43 08.9	-0.2
	baz=243						
NNSH	Datong	1.08	245	*e*P	Pg	19 42 54.1	0.0
	baz=243						
NNS	Nan Shan	1.08	246	*e*P	Pg	19 42 54.1	-0.1
	baz=243						
ETLH	Xiulin Townshi	1.11	233	*e*P	Pg	19 42 54.5	-0.3
	baz=231						
TWD	Chiawan	1.12	225	*e*P	Pb	19 42 55.1	-0.2
	baz=222						
NFF	Wufeng Townshi	1.24	259	*e*P	Pg	19 42 56.7	-0.6
	baz=257						
IRIF	Iriomote-Funau	1.28	115	P	Pn	19 42 58.0	-0.1
WHF	Hehuan Shan	1.31	236	*e*P	Pg	19 42 58.4	-0.2
	baz=234						
WHF				*e*S	Sg	19 43 15.6	0.0
	baz=234						
LIOB	Emei	1.33	260	*e*P	Pg	19 43 01.0	+2.0
	baz=258						
NSTT	Nanjuang	1.35	260	*e*P	Pg	19 42 59.5	+0.2
	baz=258						
CHGB	Renai	1.43	235	*e*P	Pb	19 43 00.6	-0.1
	baz=233						
CHGB				*e*S	Sn	19 43 21.9	+2.3
	baz=233						
OWD	Renai	1.49	232	*e*P	Pn	19 43 00.9	-0.2
	baz=230						
WUSB	Renai	1.51	234	*e*P	Pb	19 43 01.7	-0.4
	baz=232						
JKRS	Kuro-shima	1.55	114	P	Pn	19 43 01.9	+0.1
JKRS				*e*S	Sn	19 43 22.6	+0.2
VWDT	VWDT	1.64	227	*e*P	Pb	19 43 03.8	-0.5
	baz=225						
HGSD	Ruisui	1.67	215	*e*P	Pn	19 43 02.4	-1.1
	baz=213						
SSLB	Suanglung	1.75	232	P	Pg	19 43 06.6	-0.4
SSLB	Suanglung	1.75	232	*e*P	Pb	19 43 06.0	-0.1
	baz=230						
YULB	Yu-li	1.82	216	P	Pb	19 43 07.1	-0.2
YULB	Yu-li	1.82	216	*e*P	Pn	19 43 05.6	+0.1
	baz=214						
TPUB	Ta-pu	2.29	227	P	Pb	19 43 13.6	-1.8

DJA 18 19:48:57.3±0.8**,8°S**±5°×**10°8E**±°**,h13**^{km}±3^{km}**,M3.6**/6**,**
MLv3.6/6**,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMJI	Cimerak	0.67	61	P	Pb	19 49 11.2	+0.4
CMJI				S	Sb	19 49 20.1	+0.1
CNJI	Cibinong	1.08	318	P	Pb	19 49 17.1	-0.7
CNJI				S	Sb	19 49 30.5	-1.3
KPJI	Karang Pucung	1.31	54	P	Pn	19 49 20.6	-0.7
KPJI				S	Sn	19 49 39.1	+0.4
CGJI	Cibinong	2.61	305	P	Pn	19 49 38.8	-0.5
CGJI				S	Sn	19 50 07.0	-3.9

NIED ***18*** *19:54:24.9, 37°.94N×141°.90E, h43*^{km}*, MW3.7, Moment Tensor Solution.   s3   Moment tensor: Scale* 10^{14}*Nm;* M_{rr}*-0.60;* $M_{\theta\theta}$*1.60;* $M_{\phi\phi}$*-1.01;* $M_{r\theta}$*-2.46;* $M_{\theta\phi}$*0.51;* $M_{\phi r}$*2.87;*
Fault plane solution: M_0*4.00000×*10^{14} *NP1:* ϕ_s*132.00000°, δ88.00000°, λ-70.00000°.   NP2:* ϕ_s*229.00000°, δ20.00000°, λ-173.00000°.*
JMA ***18*** *19:54:24.9±0.1, 37°.9N±0°.4×141°.9E±0°.8, h43*^{km}*±1*^{km}*, MV3.7/40, SE OFF MIYAGI PREF*
ISC 18 19:54:24.9±1.8**,37°.96N**±0°.04×**141°.86E**±0°.08**,h18**^{km}±5^{km}**,**
n24,σ**1**^{s}**.50**/37**,8D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.47	318	P	Pg	19 54 35.8	+1.4
JIKH				S	Sg	19 54 43.3	+2.4
JIO	Ouri	0.64	321	P	Pg	19 54 38.1	+0.5
JIO				S	Sg	19 54 47.4	+1.3
JMST	Minamisoumatoc	0.81	253	⇓P	Pg	19 54 40.1	-0.6
JMST				⇓S	Sg	19 54 51.0	-0.4
JMM	Marumori	0.85	264	P	Pg	19 54 41.1	-0.4
JMM	Marumori	0.85	264	⇓*i*P	Pg	19 54 40.9	-0.5
JMM				⇓S	Sg	19 54 51.9	-0.8
JKMT	Kesennumamotoy	0.90	340	*i* P	Pg	19 54 41.4	-1.1
JKMT				S	Sg	19 54 53.0	-1.4
JFK	Kawauchi	0.98	233	⇓*i*P	Pg	19 54 42.2	-1.8

JFK				⇓S	Sg	19 54 54.8	-2.1
JOU	Okura	1.03	294	⇓iP	Pg	19 54 43.9	-0.9
JOU				⇓S	Sg	19 54 57.8	-0.6
JMK	Ichinoseki	1.11	333	iP	Pg	19 54 44.6	-1.8
JMK				S	Sg	19 54 58.7	-2.4
JOTO	OTAMA OYAMA	1.28	252	iP	Pn	19 54 47.5	-0.3
JOTO				S	Sb	19 55 03.3	-1.1
JYS	Shirataka	1.44	281	P	Pn	19 54 50.5	+0.5
JYS				S	Sn	19 55 09.4	+0.8
JYK	Kaneyama	1.52	309	iP	Pn	19 54 51.0	-0.2
JOM	Ohasama	1.58	344	iP	Pn	19 54 51.3	-0.6
JRG	Rokugo	1.73	327	P	Pn	19 54 54.1	+0.1
JRG				eS	Sn	19 55 16.3	+0.8
JFY	Yanaizu	1.80	253	P	Pn	19 54 54.7	-0.3
JFY				eS	Sn	19 55 17.0	-0.3
JYA	Atsumi	1.81	291	P	Pn	19 54 55.0	0.0
JYA				eS	Sn	19 55 17.0	-0.5
JSD	Sado	2.85	273	P	Pn	19 55 11.4	+2.0
JTM	Tenmabayashi	2.89	348	P	Pn	19 55 10.9	+1.0
MAJO	Matsushiro	3.24	245	P	Pn	19 55 17.2	+2.4
ERM	Erimo	4.17	13	P	Pn	19 55 26.9	-0.6
JEM	Erimo	4.17	13	P	Pn	19 55 30.0	+2.5
JGF	Kuroka	4.32	238	P	Pn	19 55 31.7	+2.1
INU	Inuyama	4.69	238	P	Pn	19 55 37.7	+3.1
JHJ2	Mitsune	5.12	200	P	Pn	19 55 43.3	+2.8

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*NEIC **18** 19:56:08.9±1.3, 7°01S±0°10×125°0E±0°1, h565km±9km, mb4.4/60, Error ellipse: s-maj=15.4km s-min=13.2km az=52.0*

*DJA **18** 19:56:09.0±0.2, 7°S±3°×12°5E±°, h561km±3km, M4.3/25, mB4.8/17, mb4.7/25, MLv4.7/12, Mw(mB)4.0/17*

*IDC **18** 19:56:09.4±0.9, 6°99S×125°05E, h570km±11km, mb3.5/15, mbtmp4.5/18, Error ellipse: s-maj=16.0km s-min=7.9km az=56.0*

ISC 18 19:56:07.7±0.3, **7°01S**±0°06×**125°02E**±0°06, **h550**km, **n165**, σ**1s27**/174, **mb4.4**/53, **1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	2.83	195	P	P	19 57 24.4	+2.5
SOEI	Soe	2.83	195	P	P	19 57 24.5	+2.7
SOEI	Soe	2.83	195	P	P	19 57 24.3	+2.5
MMRI	Maumere	3.19	239	P	P	19 57 25.5	+1.6
MMRI	Maumere	3.19	239	P	P	19 57 25.9	+2.0
MMRI	Maumere	3.19	239	P	P	19 57 25.7	+1.8
BSSI	Bau Bau, Buton	4.58	281	P	P	19 57 37.4	+3.3
SANI	Sanana	5.02	11	P	P	19 57 39.9	+2.1
	38nm,0.9s						
SANI	Sanana	5.02	11	P	P	19 57 40.5	+2.7
	38nm,0.9s,0.1nm						
BKSI	Bulukumba	5.15	289	P	P	19 57 41.6	+2.8
	116nm,0.7s,1μm0.4nm						
KAPI	Kappang	5.60	290	P	P	19 57 45.8	+3.0
	102nm,0.5s,baz=132,slow=6.0,SNR=33						
KAPI				S	S	19 59 04.5	+4.1
	6.5nm,0.5s,baz=232,slow=21,SNR=0.9						
KAPI	Kappang	5.60	290	P	P	19 57 44.9	+2.1
	200nm,0.8s						
SPSI	Sidrap Palu	6.04	300	P	P	19 57 49.2	+2.5
	225nm,0.7s,2μm0.8nm						
SAUI	Saumlaki	6.30	99	P	P	19 57 50.0	+0.9
SAUI	Saumlaki	6.30	99	P	P	19 57 50.9	+1.8
	284nm,0.9s						
SAUI	Saumlaki	6.30	99	P	P	19 57 50.6	+1.5
	304nm,0.7s,7μm1.7nm						
LUWI	Luwuk	6.34	339	P	P	19 57 51.5	+2.1
PLAI	Plampang	7.40	255	P	P	19 57 59.4	-0.1
	61nm,0.6s						
PLAI	Plampang	7.40	255	P	P	19 57 59.3	-0.2
	63nm,0.5s,1μm0.3nm						
GTOI	Gorontalo	7.86	345	P	P	19 58 07.5	+3.5
	58nm,0.9s,646nm						
MRSI	Marisa	8.05	337	P	P	19 58 07.5	+1.6
	137nm,0.6s,1μm0.5nm						
TNTI	Ternate	8.08	17		P	19 58 08.4	+2.1
TWSI	Taliwang, Sumb	8.24	257	P	P	19 58 07.4	-0.5
	56nm,0.7s,1μm						
FAKI	Fak Fak	8.27	61	P	P	19 58 08.2	+0.1
FAKI	Fak Fak	8.27	61	P	P	19 58 10.7	+2.5
	118nm,0.6s						
FAKI	Fak Fak	8.27	61	P	P	19 58 08.3	+0.1
	118nm,0.5s,2μm						
MTN	Manton Dam	8.36	134	P	P	19 58 10.4	+1.4
MTN	Manton Dam	8.36	134	P	P	19 58 10.8	+1.8
MPSI	Mapaga	8.91	325	P	P	19 58 16.9	+2.3
	43nm,0.7s,441nm						
TOLI2	Tolitoli	9.11	332	P	P	19 58 17.7	+1.1
TOLI2	Tolitoli	9.11	332	P	P	19 58 17.9	+1.3
	48nm,0.6s						
KDU	Kakadu	9.26	128	P	P	19 58 19.1	+1.0
	67nm,0.8s						
KNRA	Kununurra	9.36	157	P	P	19 58 20.9	+1.8
KNRA	Kununurra	9.36	157	P	P	19 58 20.9	+1.8
	55nm,0.7s						
BBKI	Banjar Baru	10.73	289	P	P	19 58 35.5	+2.3
	87nm,0.7s,3μm						
JAGI	Jajag, Banyuwa	10.87	262	P	P	19 58 33.8	-0.9
JAGI	Jajag, Banyuwa	10.87	262	P	P	19 58 33.7	-0.9
	120nm,0.7s						
JAGI	Jajag, Banyuwa	10.87	262	P	P	19 58 33.5	-1.1
	119nm,0.6s,2μm						
FITZ	Fitzroy Crossi	11.04	177	P	P	19 58 37.4	+1.2
SRPI	Serui, Papua	12.29	66	P	P	19 58 51.4	+2.0
	28nm,0.6s						
MYLDM	Lahad Datu	13.75	332	P	P	19 59 05.7	+1.4
UGM	Wanagama	14.40	266	P	P	19 59 10.4	-0.7
MBWA	Marble Bar	14.97	199	P	P	19 59 16.4	-0.4
PSA00	Pilbara Seismi	15.32	199	P	P	19 59 19.8	-0.6
PSA00	Pilbara Seismi	15.32	199	P	P	19 59 20.1	-0.3
PSA00				IAmb	IAmb	19 59 20.5	
	comp=Z,14nm,1.4s						
WB0	Warramunga Arr	15.61	145	P	P	19 59 23.2	-0.2
KKM	Kota Kinabalu	15.66	326	P	P	19 59 23.7	-0.5
GENI	Genyem	15.72	75	P	P	19 59 26.1	+1.5
	comp=Z,61nm,0.7s						
GENI	Genyem	15.72	75	P	P	19 59 26.2	+1.6
	comp=Z,60nm,0.7s						
WRAB	Tennant Creek	15.72	146	P	P	19 59 24.6	+0.1
	comp=Z,45nm,0.7s						
WRA	Warramunga Arr	15.72	146	P	P	19 59 24.2	-0.3
	comp=Z,16nm,0.3s,baz=324,slow=11,SNR=416						
WRA				S	S	20 02 05.1	-0.6
	comp=Z,2.4nm,0.7s,baz=316,slow=19,SNR=4.8						
WRA	Warramunga Arr	15.72	146	P	P	19 59 23.3	-1.3
WB1	Warramunga Ar.	15.74	146	P	P	19 59 24.4	-0.3
SBUM	Sibu	15.86	306	P	P	19 59 26.2	+0.3
SBUM				IAmb	IAmb	19 59 27.6	
	comp=Z,7.2nm,0.8s						
KSM	Kuching	16.93	299	P	P	19 59 36.4	+0.5
KSM				IAmb	IAmb	19 59 38.5	
	comp=Z,9.8nm,0.6s						
KSM	Kuching	16.93	299	P	P	19 59 37.3	+1.4
	comp=Z,18nm,0.7s						
BBJI	Bungbulang	17.24	267	P	P	19 59 40.2	+1.4
	comp=Z,52nm,1.2s						
WRKA	Warakurna	18.20	170	P	P	19 59 48.7	+1.3
	comp=Z,34nm,0.8s						
AS31	Alice Springs	18.63	154	P	P	19 59 52.4	+1.0
ASAR	Alice Springs	18.63	154	P	P	19 59 52.2	+0.9
	comp=Z,13nm,0.3s,baz=328,slow=8.8,SNR=516						
ASAR				S	S	20 02 52.4	-0.9
	comp=Z,1.4nm,0.5s,baz=342,slow=21,SNR=4.9						
ASAR				ScP	ScP	20 06 33.2	-2.5
	comp=Z,1.1nm,0.4s,baz=351,slow=2.0,SNR=11						
ASAR	Alice Springs	18.63	154	P	P	19 59 52.4	+1.0
AS01	Alice Springs	18.65	154	P	P	19 59 52.7	+1.1
	comp=Z,45nm,0.5s						
COEN	Coen	19.13	113	P	P	19 59 56.0	0.0
QIS	Mount Isa	19.52	135	P	P	20 00 00.1	+0.6
PMG	Port Moresby	22.04	98	P	P	20 00 23.1	+0.8
	comp=Z,4.7nm,0.4s,baz=146,slow=3.5,SNR=8.3						
	comp=Z,4.7nm,0.4s						
PMG	Port Moresby	22.04	98	P	P	20 00 22.2	-0.1
PMG				IAmb	IAmb	20 00 24.2	
	comp=Z,4.8nm,0.6s						
FORT	Forrest	23.82	174	P	P	20 00 38.0	+0.1
CTA	Charters Tower	24.35	124	P	P	20 00 43.9	+1.0
	comp=Z,6.1nm,0.8s,baz=294,slow=8.8,SNR=7.1						
	comp=Z,6.1nm,0.8s						
CTAO	Charters Tower	24.35	124	P	P	20 00 42.0	-0.8
CTAO				IAmb	IAmb	20 00 44.5	
	comp=Z,6.3nm,0.9s						
INKA	Innaminka	25.44	146	P	P	20 00 53.8	+1.5
	comp=Z,42nm,2.1s						
LCRK	Leigh Creek	26.40	154	P	P	20 01 01.6	+0.8
	comp=Z,19nm,1.0s						
QLP	Quilpie	26.71	139	P	P	20 01 05.0	+1.5
	comp=Z,61nm,0.8s						
KULM	Kulim	27.22	296	P	P	20 01 07.2	-1.0
KULM				IAmb	IAmb	20 01 16.2	
	comp=Z,7.4nm,1.1s						
BBOO	Buckleboo	27.65	160	P	P	20 01 12.0	+0.3
BBOO				IAmb	IAmb	20 01 12.9	
	comp=Z,10nm,0.7s						
RPSI	Rantau Prapat	27.77	289	P	P	20 01 12.4	-0.6
RPSI				IAmb	IAmb	20 01 14.0	
	comp=Z,5.9nm,0.8s						
GSI	Gunungsitoli	28.60	286	P	P	20 01 19.9	-0.4
GSI				IAmb	IAmb	20 01 28.5	
	comp=Z,18nm,1.2s						
STKA	Stephens Creek	29.18	150	P	P	20 01 26.1	+1.0
	comp=Z,14nm,0.5s,baz=323,slow=9.1,SNR=111						
STKA				ScP	ScP	20 07 01.5	-3.2
	comp=Z,1.3nm,0.8s,baz=313,slow=7.0,SNR=3.0						
	comp=Z,14nm,0.5s						
STKA	Stephens Creek	29.18	150	P	P	20 01 25.6	+0.6
STKA				IAmb	IAmb	20 01 26.8	
	comp=Z,3.5nm,0.6s						
STKA	Stephens Creek	29.18	150	P	P	20 01 26.0	+1.0
	comp=Z,4.9nm,0.8s						
HTT	Hallett	29.28	156	P	P	20 01 27.2	+1.3
	comp=Z,29nm,1.7s						
CMSA	Cobar Meteorol	31.12	144	P	P	20 01 43.1	+1.4
	comp=Z,19nm,0.9s						
YHNB	Yeheng	31.69	354	P	P	20 01 45.6	-1.2
ARPS	Mount Arapiles	33.36	155	P	P	20 02 02.0	+1.3
	comp=Z,47nm,0.7s						
ARMA	Armidale	34.14	136	P	P	20 02 07.0	-0.4
TOO	Toolangi	35.66	152	P	P	20 02 20.4	+0.5
TOO				IAmb	IAmb	20 02 42.8	
	comp=Z,16nm,1.4s						
CAN	Canberra	35.76	145	P	P	20 02 22.5	+1.6
CMAR	Chiang Mai Arr	36.09	315	P	P	20 02 24.4	+0.7
	comp=Z,1.0nm,0.6s,baz=145,slow=6.7,SNR=15						
CMAR				PcP	PcP	20 04 35.3	+0.7
	comp=Z,1.2nm,0.5s,baz=169,slow=2.9,SNR=11						
CMAR				ScP	ScP	20 07 28.6	-0.5
	comp=Z,0.1nm,0.3s,baz=171,slow=4.5,SNR=4.3						
	comp=Z,1.0nm,0.6s						
CMAR	Chiang Mai Arr	36.09	315	P	P	20 02 23.8	+0.1
CHTO	Chiang Mai	36.32	315	P	P	20 02 25.3	-0.3
JSU	Suzuyama	38.65	7	P	P	20 02 43.9	-0.5
ENH	Enshi	39.95	339	P	P	20 02 54.6	-0.4
ENH				IAmb	IAmb	20 02 55.7	
	comp=Z,10nm,0.7s						
PZH	PanZhiHua	40.24	327	P	P	20 02 59.3	+1.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,4.7s						
JMN	Monobe	41.38	11	P	P	20 03 06.5	+0.3
JMN				IAmb	IAmb	20 03 08.0	
	comp=Z,21nm,1.0s						
JHS	Saijyo	42.48	10	P	P	20 03 15.4	+0.6
JHS				IAmb	IAmb	20 03 16.9	
	comp=Z,11nm,0.7s						
DZM	Mont Dzumac	42.63	115	P	P	20 03 17.1	+0.6
	comp=Z,3.0nm,0.7s,baz=301,slow=19,SNR=1.4						
	comp=Z,3.0nm,0.7s						
XAN	Xi'an	43.58	340	P	P	20 03 22.8	-0.7
XAN				pP	PcP	20 04 59.0	+0.2
XAN				pmax	pmax		
	comp=Z,14nm,0.8s						
INU	Inuyama	43.62	14	P	P	20 03 23.2	-0.5
INU				IAmb	IAmb	20 03 49.8	
	comp=Z,18nm,1.5s						
JGF	Kuroka	43.95	15	P	P	20 03 25.5	-0.8
JGF				IAmb	IAmb	20 03 43.6	
	comp=Z,25nm,1.4s						
KSRS	Korea Array	44.31	3	P	P	20 03 29.1	+0.1
	comp=Z,2.9nm,0.7s,baz=181,slow=9.7,SNR=11						
KSRS				PcP	PcP	20 05 01.1	0.0
	comp=Z,1.1nm,0.5s,baz=180,slow=3.3,SNR=6.1						
	comp=Z,2.9nm,0.7s						
MAJO	Matsushiro	45.05	15	P	P	20 03 33.9	-0.9
MAJO				IAmb	IAmb	20 03 35.0	
	comp=Z,12nm,1.0s						
MJAR	Matsushiro Arr	45.05	15	P	P	20 03 33.9	-0.9
	comp=Z,5.0nm,0.7s,baz=192,slow=9.2,SNR=18						
	comp=Z,5.0nm,0.7s						
MJB9	Matsu-Tunnel	45.06	15	P	P	20 03 34.4	-0.5
MJB9				IAmb	IAmb	20 03 35.9	
	comp=Z,12nm,1.0s						
JSD	Sado	46.48	14	P	P	20 03 45.0	-0.6
JMM	Marumori	47.01	17	P	P	20 03 49.8	+0.2
JMM				IAmb	IAmb	20 03 52.8	
	comp=Z,13nm,0.6s						
LSA	Lhasa	48.90	320	P	P	20 04 04.6	+0.1
LSA				IAmb	IAmb	20 04 06.2	
	comp=Z,9.0nm,0.6s						
HHC	Hu-ho-hao-te	49.20	347	eP	P	20 04 10.0	+4.0
HHC				pmax	pmax		
	comp=Z,16nm,0.7s						
HHC				pmax	pmax		
	comp=Z,190nm,7.6s						
TAPN	Taplejung	49.70	315	eP	P	20 04 10.5	+0.4
	comp=Z,9.8nm,0.4s						
JTM	Tenmabayashi	49.80	16	P	P	20 04 10.4	+0.2
RAMN	Ramite	50.24	314	eP	P	20 04 14.5	+0.4
	comp=Z,29nm,0.6s						
JIRN	Jiri	50.96	314	eP	P	20 04 19.3	-0.1
XLT	XiLinHaoTe	51.31	352	eP	P	20 04 21.3	0.0
XLT				pmax	pmax		
	comp=Z,72nm,4.3s						
XLT				pmax	pmax		
	comp=Z,12nm,0.9s						
GUN	Gumba	51.33	314	eP	P	20 04 22.0	-0.1
	comp=Z,10nm,0.5s						
USA0B	Ussuriysk Arra	51.36	6	P	P	20 04 21.6	0.0
USRK	Ussuriysk Ar.	51.36	6	P	P	20 04 21.6	+0.1
	comp=Z,4.9nm,0.5s,baz=200,slow=7.0,SNR=11						
	comp=Z,4.9nm,0.5s						
USRK	Ussuriysk Ar.	51.36	6	P	P	20 04 21.3	-0.2
PKI	Pulchoki	51.46	314	eP	P	20 04 22.8	-0.2
	comp=Z,12nm,0.5s						
PKIN	Phulchoki	51.48	314	eP	P	20 04 22.9	-0.2
	comp=Z,13nm,0.4s						
MDJ	Mudanjiang	51.55	4	P	P	20 04 23.1	+0.2
MDJ				IAmb	IAmb	20 04 24.3	
	comp=Z,14nm,0.8s						
DMN	Daman	51.70	313	eP	P	20 04 24.8	+0.1
	comp=Z,2.8nm,0.3s						
GTA	Gaotai	51.75	335	eP	P	20 04 25.4	+0.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GKN	Gorkha	52.27	314	eP	P	20 04 28.7	+0.1
	comp=Z,16nm,0.4s						
DANN	Dangsing	53.10	313	eP	P	20 04 34.5	-0.2
	comp=Z,16nm,0.6s						
JKA	Kamikawa-asahi	53.31	16	P	P	20 04 35.6	+0.1
JKA				IAmb	IAmb	20 04 36.7	
	comp=Z,29nm,1.4s						
MNCI	Minicoy	53.98	285	P	P	20 04 41.0	+0.2
MNCI				IAmb	IAmb	20 04 42.6	
	comp=Z,23nm,0.8s						
QRZ	Quartz Range	54.00	136	P	P	20 04 39.9	-0.7
QRZ				IAmb	IAmb	20 04 51.6	
	comp=Z,51nm,1.4s						
MRZ	Mangatainoka R	56.05	135	P	P	20 04 54.1	-0.7
MRZ				IAmb	IAmb	20 04 59.9	
	comp=Z,20nm,1.2s						
ULN	Ulaanbaatar	56.90	346	P	P	20 05 00.9	+0.2
SONM	Songino Array	57.03	345	P	P	20 05 01.7	+0.1
	comp=Z,1.5nm,0.6s,baz=162,slow=8.9,SNR=18						
SONM				PcP	PcP	20 05 48.1	-0.7
	comp=Z,0.8nm,0.8s,baz=154,slow=6.0,SNR=2.7						
	comp=Z,1.5nm,0.6s						
SONM	Songino Array	57.03	345	P	P	20 05 01.3	-0.2
HEH	HeiHe	57.06	2	eP	P	20 05 01.1	-0.4
HEH				pmax	pmax		
	comp=Z,17nm,0.7s						
WMQ	Urumqi	60.81	330	⇑iP	P	20 05 27.5	+0.6
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NIL	Nilore	63.54	313	P	P	20 05 44.1	-0.7
NIL				IAmb	IAmb	20 05 45.1	
	comp=Z,8.4nm,0.6s						
KSH	Kashi	64.76	320	P	P	20 05 53.3	+0.8
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MK31	Makanchi Array	65.61	329	P	P	20 05 57.2	-0.3
MKAR	Makanchi Array	65.61	329	P	P	20 05 57.7	+0.2
	comp=Z,4.8nm,0.5s,baz=125,slow=7.2,SNR=113						
	comp=Z,4.8nm,0.5s						
MKAR	Makanchi Array	65.61	329	P	P	20 05 57.6	0.0
MAKZ	Makanchi	65.78	329	P	P	20 05 58.3	-0.3
PEA0B	Petropavlovsk-	65.98	21	P	P	20 06 00.2	+0.5
PETK	Petropavlovsk-	65.98	21	P	P	20 05 59.8	0.0
	comp=Z,4.7nm,0.6s,baz=208,slow=3.0,SNR=27						
	comp=Z,4.7nm,0.6s						
PETK	Petropavlovsk-	65.98	21	P	P	20 05 59.4	-0.3
KBL	Kabul	67.04	312	P	P	20 06 06.8	-0.1
KBL				IAmb	IAmb	20 06 07.5	
	comp=Z,4.8nm,0.6s						
AAK	Ala-Archa	67.43	322	P	P	20 06 08.7	-0.3
GAR	Garm	68.23	317	P	P	20 06 13.3	-0.6
CHGR	Chuyangaron	68.86	316	P	P	20 06 16.9	-0.9
YAK	Yakutsk	68.93	2	P	P	20 06 17.2	-0.3
MA2	Magadan	69.47	14	P	P	20 06 21.2	+0.3
MA2				IAmb	IAmb	20 06 31.1	
	comp=Z,37nm,1.5s						
ZAA0	Zalesovo Array	69.49	336	P	P	20 06 20.2	-0.9
ZAA0				IAmb	IAmb	20 06 21.0	
	comp=Z,10nm,0.9s						
ZALV	Zalesovo Beam	69.49	336	P	P	20 06 20.2	-0.8
	comp=Z,8.2nm,0.4s,baz=137,slow=5.3,SNR=48						
	comp=Z,8.2nm,0.4s						
KURK	Kurchatov	70.03	331	P	P	20 06 24.3	0.0
KKAR	Karatay Array	70.15	321	P	P	20 06 24.8	-0.5
BRVK	Borovoye	75.57	329	P	P	20 06 55.8	-0.2
GEYT	Alibeck	76.48	312	P	P	20 07 01.9	+0.3
	comp=Z,3.1nm,0.7s,baz=174,slow=2.9,SNR=8.5						
	comp=Z,3.1nm,0.7s						
VOI	Vohitsoka	76.52	249	P	P	20 07 02.0	-0.2
VOI				IAmb	IAmb	20 07 21.4	
	comp=Z,25nm,1.4s						
ABKAR	Akbulak array	79.48	323	P	P	20 07 16.5	-0.9
ABKAR	Akbulak array	79.48	323	P	P	20 07 16.7	-0.7
RAYN	Ar Rayn	83.24	295	P	P	20 07 36.7	-0.6
ANM	Nome	87.71	24	P	P	20 07 57.5	-0.3
ILAR	Eielson Array	95.47	25	P	P	20 08 31.1	-2.3
	comp=Z,0.3nm,0.4s,baz=270,slow=4.9,SNR=4.3						
	comp=Z,0.3nm,0.4s						
BRTR	Keskin Array B	95.49	309	P	P	20 08 32.8	-1.5
	comp=Z,0.6nm,0.8s,baz=126,slow=7.4,SNR=3.0						
	comp=Z,0.6nm,0.8s						
ARCES	ARCESS Array B	99.86	339	P	Pdif	20 08 51.8	-1.2
	comp=Z,9.7nm,1.2s,baz=95,slow=6.4,SNR=1.9						
FINES	FINESS Array B	100.40	331	PKiKP	PKiKP	20 13 17.7	-1.1
	comp=Z,0.3nm,0.6s,baz=100,slow=8.3,SNR=3.9						
PDAR	Pinedale Array	120.38	44	PKP	PKPdf	20 13 56.9	-0.4
	comp=Z,0.2nm,0.3s,baz=330,slow=5.6,SNR=6.0						
TORD	Torodi Ar. Bea	123.96	281	PKP	PKPdf	20 14 04.1	-0.5
	comp=Z,1.4nm,0.7s,baz=81,slow=2.0,SNR=9.3						
TXAR	Lajitas Array	129.15	58	PKP	PKPdf	20 14 14.1	-0.2
	comp=Z,0.2nm,0.4s,baz=230,slow=2.2,SNR=2.3						
TXAR				SKPbc	SKPab	20 16 42.9	-1.5
	comp=Z,0.2nm,0.5s,baz=256,slow=3.7,SNR=4.1						
CPUP	Villa Florida	146.78	176	PKPbc	PKPdf	20 14 47.6	+1.3
	comp=Z,1.3nm,0.4s,baz=228,slow=1.2,SNR=4.2						

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*TAP **18** 20:00:19.0, 24°95N×122°47E, h22km, ML2.6, C*

*JMA **18** 20:00:19.4±0.2, 24°8N±0°6×122°5E±0°3, h3km±2km, MV2.2/7, NW OFF ISHIGAKIJIMA IS*

ISC 18 20:00:19.3±1.1, **24°88N**±0°04×**122°46E**±0°03, **h12**km±9km, **n35**, σ**0s43**/58, **1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.45	286	iP	Pg	20 00 28.3	+0.1
	baz=278						
TWB1				iS	Sg	20 00 34.6	+0.4
	baz=278						
EGS		0.48	265	P	Pb	20 00 29.5	-0.3
	baz=258						
EGS				S	Sb	20 00 36.5	-0.4
	baz=258						
EOS2	EOS2	0.51	204	iP	Pb	20 00 30.1	0.0
	baz=202						
EOS2				S	Sb	20 00 38.2	+0.8
	baz=202						
SXI1	Grass Mountain	0.57	292	⇑iP	Pb	20 00 31.0	-0.4
	baz=285						
SXI1				eS	Sb	20 00 39.3	-0.1
	baz=285						
TIPB	Shuangxi	0.59	279	P	Pb	20 00 31.2	-0.3
	baz=272						
TIPB				eS	Sb	20 00 39.9	+0.1
	baz=272						
EOS3	EOS3	0.61	193	P	Pb	20 00 32.2	+0.4
	baz=192						
EOS3				eS	Sn	20 00 42.0	-1.3
	baz=192						
JYNG	Yonagunijimaku	0.61	134	eP	Pg	20 00 31.1	-0.2
JYNG				eS	Sg	20 00 39.2	-0.3
TWC	Suao	0.62	244	iP	Pg	20 00 31.1	-0.4
	baz=239						
TWC				eS	Sb	20 00 40.3	-0.5
	baz=239						
WFSB	Wu-fen Shan	0.65	287	eP	Pb	20 00 32.4	-0.1
	baz=281						
WFSB				eS	Sb	20 00 41.8	+0.3
	baz=281						
YOJ	Yonaguni jima	0.65	130	P	Pg	20 00 31.8	-0.3
YOJ				eS	Sg	20 00 40.1	-0.5
YOJ	Yonaguni jima	0.65	130	iP	Pg	20 00 31.8	-0.3
	baz=134						
YOJ				iS	Sg	20 00 40.3	-0.3
	baz=134						
TNOU	National Taiwa	0.68	293	eP	Pb	20 00 33.0	-0.1
	baz=288						
NDS	Dongshan	0.72	250	eP	Pb	20 00 33.8	-0.1
	baz=246						
NDS				eS	Sb	20 00 43.4	-0.4
	baz=246						
TWE	Neicheng	0.74	258	eP	Pb	20 00 33.8	-0.3
	baz=252						
TWE				eS	Sb	20 00 44.1	-0.2
	baz=252						
EWUT	Wuta	0.76	235	iP	Pg	20 00 34.0	-0.1
	baz=232						
EWUT				eS	Sb	20 00 45.2	+0.4
	baz=232						
EOS4	EOS4	0.77	190	eP	Pb	20 00 35.0	+0.5
	baz=190						
EOS4				eS	Sb	20 00 45.6	+0.9
	baz=190						
ENA	Nanau	0.80	236	P	Pg	20 00 34.7	-0.1
	baz=232						
ENA				eS	Sn	20 00 47.5	-0.8
	baz=232						
FUSB	Fushanzhiwuyua	0.81	261	eP	Pb	20 00 35.4	+0.1
	baz=257						
FUSB				eS	Sb	20 00 46.4	+0.2
	baz=257						
YM08	YM08	0.85	291	eP	Pb	20 00 36.1	+0.1
	baz=287						
ENTT	Nioudou	0.85	254	eP	Pb	20 00 35.9	-0.1
	baz=249						
ENTT				eS	Sn	20 00 48.6	-0.9
	baz=249						
YM01	YM01	0.85	288	eP	Pb	20 00 36.0	-0.1
	baz=284						
NHDH	Xindian Distri	0.86	275	eP	Pg	20 00 35.7	-0.2
	baz=271						
ANP	Anpu	0.91	290	eP	Pb	20 00 37.3	+0.3
	baz=285						
LATG	Datong	0.92	248	iP	Pg	20 00 37.0	-0.1
	baz=245						
LATG				S	Sb	20 00 49.3	-0.2
	baz=245						
TWS1	Kuangyinshan	0.97	283	eP	Pn	20 00 39.5	+0.7
	baz=279						
YHNB	Yeheng	1.01	258	eP	Pg	20 00 38.7	-0.1
	baz=255						
NSK	Sanguang	1.03	259	eP	Pg	20 00 39.1	0.0
	baz=255						
NSK				eS	Sb	20 00 52.7	+0.2
	baz=255						
NACB	Ninganchiao	1.06	228	P	Pb	20 00 39.4	-0.2
	baz=226						
NNSB	Datong	1.08	245	eP	Pb	20 00 39.9	-0.2
	baz=242						
NNSH	Datong	1.08	245	eP	Pb	20 00 39.9	-0.2
	baz=242						

NNSH				*e*S	**Sn**	**20 00 55.3**	**-0.1**
	baz=242						
ETLH	**Xiulin Townshi**	**1.12**	**233**	*e*P	**Pb**	**20 00 40.4**	**-0.3**
	baz=231						
ETLH				*e*S	**Sn**	**20 00 56.3**	**0.0**
	baz=231						
NFF	**Wufeng Townshi**	**1.25**	**259**	*e*P	**Pg**	**20 00 44.6**	**+1.3**
	baz=256						
IRIF	**Iriomote-Funau**	**1.28**	**115**	*e*P	**Pb**	**20 00 43.5**	**+0.2**
WHF	**Hehuan Shan**	**1.32**	**236**	*e*P	**Pb**	**20 00 44.3**	**+0.1**
	baz=234						
WHF				*e*S	**Sn**	**20 01 01.3**	**-0.3**
	baz=234						
JKRS	**Kuro-shima**	**1.55**	**114**	*e*P	**Pb**	**20 00 48.2**	**+0.3**

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*SOME **18** 20:05:43.3, 42°.83N×79°.32E, h5^{km}*
*NNC **18** 20:05:44.7±0.7, 42°.87N×79°.30E, h0^{km}, mb3.1, mpv2.9, Error ellipse: s-maj=5.4km s-min=2.5km az=159.0*
*KRNET **18** 20:05:45.4±0.1, 42°.69N×79°.22E, h16^{km}, mb2.6*
ISC 18 20:05:44.0±1.4**, 42°.85N**±0°.04×**79°.32E**±0°.04**, h10**^{km}±10^{km}**, n49, σ1^{s}41**/79**, 11C-9D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.33**	**19**	P	**Pn**	**20 05 54.7**	**-0.4**
	13nm,0.2s						
SHLS				S	**Sb**	**20 06 03.0**	**+5.5**
	796nm,0.3s						
SHLS	**Shalkode**	**0.33**	**19**	*e*P	**Pn**	**20 05 54.6**	**-0.4**
	13nm,0.2s						
SHLS				*e*S	**Sb**	**20 06 03.0**	**+5.5**
	796nm,0.3s						
UZB	**Uzynbulak**	**0.37**	**325**	P	**Pg**	**20 05 51.3**	**-0.2**
	20nm,0.2s						
UZB				S	**Sb**	**20 05 57.6**	**-1.1**
	41nm,0.1s						
UZB	**Uzynbulak**	**0.37**	**325**	*e*P	**Pg**	**20 05 51.3**	**-0.2**
	20nm,0.2s						
UZB				*e*S	**Sb**	**20 05 57.6**	**-1.1**
	41nm,0.1s						
PDGK	**Podgornoye**	**0.50**	**15**	P	**Pb**	**20 05 53.8**	**-1.2**
	13nm,0.2s						
PDGK				S	**Sb**	**20 06 01.4**	**-1.0**
	23nm,0.4s						
PDGK	**Podgornoye**	**0.50**	**15**	⇑P	**Pb**	**20 05 53.5**	**-1.5**
	7.4nm,0.3s						
PDGK				⇓S	**Sb**	**20 06 01.0**	**-1.4**
	8.9nm,0.5s						
SATY	**Saty**	**0.70**	**288**	P	**Pg**	**20 05 57.7**	**0.0**
	5.7nm,0.4s						
SATY				S	**Sb**	**20 06 08.6**	**+0.4**
	26nm,0.3s						
SATY	**Saty**	**0.70**	**288**	*e*P	**Pg**	**20 05 57.6**	**0.0**
	5.7nm,0.4s						
SATY				*e*S	**Sb**	**20 06 08.0**	**-0.2**
	26nm,0.3s						
ZHN	**Zhinishke**	**0.72**	**297**	P	**Pg**	**20 05 57.2**	**-0.8**
	5.5nm,0.1s						
ZHN				S	**Sg**	**20 06 07.7**	**+0.3**
	29nm,0.2s						
ZHN	**Zhinishke**	**0.72**	**297**	*e*P	**Pg**	**20 05 57.2**	**-0.8**
	5.5nm,0.1s						
ZHN				*e*S	**Sg**	**20 06 07.7**	**+0.3**
	29nm,0.2s						
KPKS	**Kokpek**	**0.77**	**324**	P	**Pg**	**20 05 58.4**	**-0.6**
	9.2nm,0.2s						
KPKS				S	**Sb**	**20 06 09.5**	**-0.7**
	24nm,0.3s						
KPKS	**Kokpek**	**0.77**	**324**	*e*P	**Pg**	**20 05 58.4**	**-0.6**
	9.2nm,0.2s						
KPKS				*e*S	**Sb**	**20 06 09.5**	**-0.7**
	24nm,0.3s						
KURS	**Kuram**	**1.05**	**308**	P	**Pb**	**20 06 02.8**	**-1.7**
	3.4nm,0.7s						
KURS				S	**Sb**	**20 06 17.3**	**-1.0**
	3.6nm,0.7s						
KURS	**Kuram**	**1.05**	**308**	*e*P	**Pb**	**20 06 02.8**	**-1.7**
	3.4nm,0.7s						
KURS				*e*S	**Sb**	**20 06 17.3**	**-1.0**
	3.6nm,0.7s						
ANVS	**Anan'yevo**	**1.21**	**268**	⇑*i*P	**Pg**	**20 06 07.3**	**-0.1**
	baz=75						
ANVS				⇑*i*S	**Sn**	**20 06 23.4**	**-0.5**
	baz=75						
DJR	**Jarkent**	**1.52**	**13**	P	**Pg**	**20 06 12.5**	**-0.8**
	2.2nm,0.2s						
DJR				S	**Sg**	**20 06 33.8**	**+0.7**
	5.8nm,0.4s						
DJR	**Jarkent**	**1.52**	**13**	*e*P	**Pg**	**20 06 12.5**	**-0.8**
	2.2nm,0.2s						
DJR				*e*S	**Sg**	**20 06 33.8**	**+0.7**
	5.8nm,0.4s						
TARG	**Taragay, Kyrgy**	**1.58**	**226**	⇑*i*P	**Pn**	**20 06 12.4**	**-0.1**
	baz=28						
TARG				⇑*i*S	**Sn**	**20 06 32.1**	**-1.1**
	baz=28						
KOTS	**Kotyrbulak**	**1.66**	**284**	P	**Pg**	**20 06 15.3**	**-0.6**
	4.2nm,0.3s						
KOTS				S	**Sg**	**20 06 38.5**	**+1.0**
	21nm,0.3s						
KOTS	**Kotyrbulak**	**1.66**	**284**	*e*P	**Pg**	**20 06 15.3**	**-0.6**
	4.2nm,0.3s						
KOTS				*e*S	**Sg**	**20 06 38.5**	**+1.0**
	21nm,0.3s						
KDJ	**Kajisay**	**1.73**	**246**	⇓*e*P	**Pb**	**20 06 15.5**	**-0.6**
	baz=50						
KDJ				⇓*i*S	**Sb**	**20 06 37.4**	**-0.6**
	baz=50						
ARXS	**Arharly**	**1.74**	**322**	P	**Pb**	**20 06 16.0**	**-0.2**
	6.8nm,0.4s						
ARXS				S	**Sg**	**20 06 40.0**	**-0.1**
	12nm,0.5s						
ARXS	**Arharly**	**1.74**	**322**	*e*P	**Pb**	**20 06 16.0**	**-0.2**
	6.8nm,0.4s						
ARXS				*e*S	**Sg**	**20 06 40.0**	**-0.1**
	12nm,0.5s						
TNSS	**Tian-Shan**	**1.75**	**277**	P	**Pg**	**20 06 17.8**	**+0.1**
	2.5nm,0.8s						
TNSS				S	**Sg**	**20 06 42.6**	**+2.3**
	3.2nm,0.3s						
TNSS	**Tian-Shan**	**1.75**	**277**	*e*P	**Pg**	**20 06 17.8**	**+0.1**
	0.8nm,0.0s						
TNSS				*e*S	**Sg**	**20 06 42.6**	**+2.3**
	3.2nm,0.3s						
CHKK	**Chushkaly**	**1.97**	**301**	Pg	**Pb**	**20 06 19.7**	**-0.3**
	5.0nm,0.5s						
CHKK				Lg	Lg	20 06 46.3	
	13nm,0.5s						
CHKK	**Chushkaly**	**1.97**	**301**	*e*Pg	**Pb**	**20 06 19.7**	**-0.3**
	5.0nm,0.5s						
CHKK				*e*Lg	Lg	20 06 46.3	
	13nm,0.5s						
IZV	**Izvestkoviy**	**1.99**	**276**	Pg	**Pg**	**20 06 21.4**	**-0.9**
	2.1nm,0.2s						
IZV				Lg	Lg	20 06 49.0	
	8.4nm,0.4s						
IZV	**Izvestkoviy**	**1.99**	**276**	*e*Pg	**Pg**	**20 06 21.4**	**-0.9**
	2.1nm,0.2s						
IZV				*e*Lg	Lg	20 06 49.0	
	8.4nm,0.4s						
KTBS	**Karatobe**	**2.11**	**295**	Pg	**Pb**	**20 06 22.4**	**0.0**
	5.9nm,0.3s						
KTBS				Lg	Lg	20 06 50.6	
	37nm,0.6s						
KTBS	**Karatobe**	**2.11**	**295**	*e*Pg	**Pb**	**20 06 22.4**	**0.0**
	5.9nm,0.3s						
KTBS				*e*Lg	Lg	20 06 50.6	
	37nm,0.6s						
MTBS	**Maitube**	**2.14**	**279**	Pg	**Pb**	**20 06 22.8**	**-0.1**
	1.8nm,0.4s						
MTBS				Lg	Lg	20 06 51.3	
	9.9nm,0.4s						
MTBS	**Maitube**	**2.14**	**279**	*e*Pg	**Pb**	**20 06 22.8**	**-0.1**
	1.8nm,0.4s						
MTBS				*e*Lg	Lg	20 06 51.3	
	9.9nm,0.4s						
TDK	**Taldyqorghan**	**2.25**	**343**	Pg	**Pg**	**20 06 25.3**	**-1.9**
	12nm,0.3s						
TDK				Lg	Lg	20 06 55.5	
	37nm,0.4s						
TDK	**Taldyqorghan**	**2.25**	**343**	*e*Pg	**Pg**	**20 06 25.3**	**-1.9**
	12nm,0.3s						
TDK				*e*Lg	Lg	20 06 55.5	
	36nm,0.2s						
ULHL	**Ulahol**	**2.35**	**256**	⇑*i*P	**Pb**	**20 06 26.1**	**-0.5**
	baz=60						
ULHL				⇑*i*S	**Sb**	**20 06 55.6**	**-0.1**
	baz=60						
KUU	**Kurty**	**2.41**	**297**	Pg	**Pb**	**20 06 27.3**	**-0.2**
	1.0nm,0.3s						
KUU				Lg	Lg	20 06 59.1	
	9.0nm,0.7s						
KUU	**Kurty**	**2.41**	**297**	*e*Pg	**Pb**	**20 06 27.3**	**-0.2**
	1.0nm,0.3s						
KUU				*e*Lg	Lg	20 06 59.1	
	9.0nm,0.7s						
KST	**Kastek**	**2.47**	**276**	Pg	**Pg**	**20 06 29.8**	**-1.6**
	7.5nm,0.7s						
KST				Lg	Lg	20 07 03.3	
	8.8nm,0.9s						
KST	**Kastek**	**2.47**	**276**	*e*Pg	**Pg**	**20 06 29.8**	**-1.6**
	3.5nm,0.0s						
KST				*e*Lg	Lg	20 07 03.2	
	8.8nm,0.9s						
BOOM	**Boomskoye usch**	**2.51**	**263**	⇓*e*P	**Pb**	**20 06 28.6**	**-0.8**
	baz=66						
BOOM				⇓*e*S	**Sb**	**20 06 59.8**	**-0.6**
	baz=66						
DGS	**Degeres**	**2.63**	**280**	Pg	**Pb**	**20 06 32.1**	**+0.8**
	3.8nm,0.5s						
DGS				Lg	Lg	20 07 07.4	
	10nm,0.6s						
DGS	**Degeres**	**2.63**	**280**	*e*Pg	**Pb**	**20 06 32.1**	**+0.8**
	3.8nm,0.5s						
DGS				*e*Lg	Lg	20 07 07.4	
	9.9nm,0.2s						
TKM2	**Tokmak 2**	**2.73**	**273**	⇓Pg	**Pb**	**20 06 34.5**	**+1.4**
	2.4nm,0.6s						
TKM2				⇓Lg	Lg	20 07 10.4	
	3.4nm,0.5s						
TKM2	**Tokmak 2**	**2.73**	**273**	⇑*e*P	**Pb**	**20 06 32.2**	**-0.9**
	baz=76						
TKM2				⇑*i*S	**Sb**	**20 07 06.0**	**-0.8**
	baz=76						
KRBS	**Karabastau**	**2.79**	**289**	Pg	**Pb**	**20 06 34.3**	**+0.3**
	1.4nm,0.5s						
KRBS				Lg	Lg	20 07 11.0	
	7.0nm,0.4s						
KRBS	**Karabastau**	**2.79**	**289**	*e*Pg	**Pb**	**20 06 34.3**	**+0.3**
	1.4nm,0.5s						
KRBS				*e*Lg	Lg	20 07 11.0	
	7.0nm,0.4s						
NRN	**Naryn**	**2.84**	**241**	⇓*i*P	**Pb**	**20 06 32.9**	**-2.1**
	baz=43						
NRN				⇓*i*S	**Sb**	**20 07 07.3**	**-2.7**
	baz=43						
ARLS	**Aral**	**3.83**	**257**	⇑*e*P	**Pn**	**20 06 46.7**	**+3.5**
	baz=59						
ARLS				⇑*i*S	**Sn**	**20 07 30.7**	**+2.4**
	baz=59						

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*IDC **18** 20:08:01.6±0.7, 29°.10S×61°.32E, h0^{km}, mb4.2/11, mbtmp4.2/12, ML3.7/1, MS3.6/21, Error ellipse: s-maj=25.3km s-min=19.6km az=29.0*
*NEIC **18** 20:08:03.2±0.9, 29°.1S±0°.1×61°.2E±0°.2, h10^{km}±1^{km}, mb4.7/23, Error ellipse: s-maj=27.5km s-min=21.2km az=222.0*
ISC 18 20:08:03.2±0.7**, 29°.0S**±0°.1×**61°.3E**±0°.1**, h11**^{km}**, n72, σ0^{s}79**/50**, mb4.6**/23**, MS3.7**/21**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VOI	**Vohitsoka**	**14.88**	**295**	Pn	**Pn**	**20 11 32.8**	**-0.8**
ABPO	**Ambohimpanom**	**16.24**	**305**	Pn	**Pn**	**20 11 51.6**	**0.0**
OPO	**Ambohidratompo**	**16.56**	**306**	Pn	**Pn**	**20 11 56.8**	**+1.2**
	baz=75,slow=14,SNR=1.3						
OPO				Sn	Sn	20 14 44.4	-15
	baz=146,slow=19,SNR=2.3						
	1.1nm,0.3s						
H08S1	**Diego Carcia H**	**23.76**	**29**	T	T	20 38 11.1	
	baz=203						
H08S2	**Diego Garcia H**	**23.77**	**29**	T	T	20 38 07.7	
	baz=203						
H08S3	**Diego Garcia H**	**23.78**	**29**	T	T	20 37 58.1	
	baz=203						
BOSA	**Boshof**	**31.48**	**262**	LR	LR	20 24 58.6	
	comp=Z,62nm,19.7s,baz=151,slow=32						
LSZ	**Lusaka**	**33.44**	**287**	LR	LR	20 28 07.2	
	comp=Z,65nm,19.4s,baz=136,slow=36						
SUR	**Sutherland**	**34.80**	**254**	LR	LR	20 26 39.0	
	comp=Z,58nm,20.9s,baz=164,slow=32						
MAW	**Mawson**	**38.60**	**179**	LR	LR	20 29 14.1	
	comp=Z,134nm,18.1s,baz=322,slow=33						
MBAR	**Mbarara**	**40.61**	**309**	LR	LR	20 30 47.7	
	comp=Z,86nm,19.0s,baz=119,slow=34						
PALK	**Pallekele**	**40.67**	**30**	LR	LR	20 28 37.1	
	comp=Z,103nm,19.1s,baz=254,slow=30						
TSUM	**Tsumeb**	**40.87**	**274**	LR	LR	20 29 55.3	
	comp=Z,65nm,21.8s,baz=156,slow=32						
H01W2	**Cape Leeuwin H**	**44.80**	**112**	T	T	21 03 54.7	
	baz=261,slow=75,SNR=6.6						
H01W3	**Cape Leeuwin H**	**44.80**	**112**	T	T	21 03 53.7	
	baz=261,slow=75,SNR=4.4						
H01W1	**Cape Leeuwin H**	**44.81**	**112**	T	T	21 03 54.7	
	baz=261,slow=75,SNR=4.9						
WSAR	**Wadi Sarin**	**52.04**	**357**	LR	LR	20 33 32.6	
	comp=Z,35nm,21.8s,baz=202,slow=29						
BRDH	**Bariadhala**	**59.16**	**33**	LR	LR	20 42 55.8	
	comp=Z,48nm,18.1s,baz=344,slow=35						
CMAR	**Chiang Mai Arr**	**59.61**	**42**	P	**P**	**20 18 07.8**	**+0.5**
	1.1nm,0.8s,baz=232,slow=6.8,SNR=9.2						
CMAR				LR	LR	20 42 14.8	
	comp=Z,24nm,18.4s,baz=180,slow=34						
	1.1nm,0.8s						
RAMN	**Ramite**	**60.74**	**26**	*e*P	**P**	**20 18 15.9**	**+0.7**
	18nm,0.9s						
DMN	**Daman**	**60.78**	**24**	*e*P	**P**	**20 18 16.4**	**+0.9**
	3.0nm,0.3s						
PKI	**Pulchoki**	**60.86**	**25**	*e*P	**P**	**20 18 17.1**	**+1.0**
GKN	**Gorkha**	**60.97**	**24**	*e*P	**P**	**20 18 17.1**	**+0.4**
DANN	**Dangsing**	**60.99**	**23**	*e*P	**P**	**20 18 17.4**	**+0.4**
	30nm,0.8s						
QSPA	**South Pole Qui**	**61.11**	**180**	P	**P**	**20 18 16.9**	**-0.3**
	6.7nm,1.0s,baz=291,slow=2.8,SNR=11						
QSPA				LR	LR	20 40 47.1	
	comp=Z,83nm,21.4s,baz=290,slow=32						
	6.7nm,1.0s						
QSPA	**South Pole Qui**	**61.11**	**180**	P	**P**	**20 18 17.1**	**-0.1**
QSPA				IAmb	IAmb	20 18 18.4	
	comp=Z,8.6nm,1.0s						
JIRN	**Jiri**	**61.22**	**25**	*e*P	**P**	**20 18 18.4**	**-0.3**
	comp=Z,8.8nm,0.7s						
GUN	**Gumba**	**61.34**	**25**	*e*P	**P**	**20 18 19.6**	**+0.2**
TAPN	**Taplejung**	**61.53**	**27**	*e*P	**P**	**20 18 20.1**	**-0.5**
	comp=Z,12nm,0.9s						
SHL	**Shillong**	**61.74**	**31**	P	**P**	**20 18 22.3**	**+0.3**
NIL	**Nilore**	**63.38**	**11**	P	**P**	**20 18 32.6**	**0.0**
EIL	**Elat**	**63.56**	**334**	LR	LR	20 42 47.3	
	comp=Z,53nm,19.2s,baz=241,slow=33						
VNDA	**Vanda**	**64.12**	**166**	LR	LR	20 44 35.1	
	comp=Z,82nm,18.3s,baz=288,slow=34						
ASAR	**Alice Springs**	**64.38**	**104**	P	**P**	**20 18 39.4**	**-0.2**
	comp=Z,3.2nm,0.7s,baz=245,slow=6.2,SNR=32						
	comp=Z,3.2nm,0.7s						
ASAR	**Alice Springs**	**64.38**	**104**	P	**P**	**20 18 38.6**	**-0.9**
AS31	**Alice Springs**	**64.38**	**104**	P	**P**	**20 18 39.1**	**-0.5**
LSA	**Lhasa**	**65.00**	**29**	P	**P**	**20 18 44.2**	**+0.4**
LSA				IAmb	IAmb	20 18 46.6	
	comp=Z,6.5nm,1.1s						
WRA	**Warramunga Arr**	**66.19**	**100**	P	**P**	**20 18 51.3**	**-0.1**
	comp=Z,2.4nm,0.7s,baz=246,slow=5.6,SNR=12						
	comp=Z,2.4nm,0.7s						
WRA	**Warramunga Arr**	**66.19**	**100**	P	**P**	**20 18 51.0**	**-0.3**
WB0	**Warramunga Arr**	**66.31**	**100**	P	**P**	**20 18 51.6**	**-0.5**
WB0				IAmb	IAmb	20 18 55.5	
	comp=Z,7.1nm,1.2s						
KSH	**Kashi**	**69.57**	**12**	P	**P**	**20 19 10.3**	**-1.9**
KSH				PP	**PP**	**20 21 43.6**	**-2.8**
KSH				pmax	pmax		
	comp=Z,16nm,0.8s						
GNI	**Garni**	**70.53**	**347**	LR	LR	20 47 10.5	
	comp=Z,44nm,21.9s,baz=212,slow=33						
TOA0	**Torodi Ar. Sit**	**71.17**	**297**	P	**P**	**20 19 22.6**	**+0.3**
TOA0				IAmb	IAmb	20 20 02.8	
	comp=Z,3.5nm,1.1s						
TORD	**Torodi Ar. Bea**	**71.17**	**297**	P	**P**	**20 19 22.6**	**+0.2**
	comp=Z,1.4nm,0.9s,baz=115,slow=5.1,SNR=7.8						
	comp=Z,1.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**71.17**	**297**	P	**P**	**20 19 22.4**	**+0.1**
KK31	**Karatay Array**	**72.29**	**7**	P	**P**	**20 19 29.1**	**+0.5**
KK31				IAmb	IAmb	20 19 30.9	
	comp=Z,5.7nm,0.9s						
KKAR	**Karatay Array**	**72.29**	**7**	P	**P**	**20 19 29.0**	**+0.5**
AAK	**Ala-Archa**	**72.36**	**10**	LR	LR	20 47 37.0	
	comp=Z,35nm,18.3s,baz=176,slow=33						
AAK	**Ala-Archa**	**72.36**	**10**	P	**P**	**20 19 29.7**	**+0.6**
AAK				IAmb	IAmb	20 19 31.7	
	comp=Z,7.3nm,1.1s						
DBIC	**Dimbokro**	**72.77**	**288**	P	**P**	**20 19 33.0**	**+1.1**
	comp=Z,3.4nm,0.8s,baz=110,slow=6.3,SNR=3.4						
	comp=Z,3.4nm,0.8s						
KBZ	**Khabaz**	**74.35**	**346**	LR	LR	20 50 23.1	
	comp=Z,47nm,21.4s,baz=173,slow=34						
KOWA	**Kowa**	**76.44**	**295**	P	**P**	**20 19 52.2**	**-1.1**
GTA	**Gaotai**	**76.98**	**30**	*e*P	**P**	**20 19 57.3**	**+1.3**
GTA				sP	pwP	20 20 05.1	+1.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
MAKZ	**Makanchi**	**77.78**	**14**	P	**P**	**20 19 58.2**	**-1.9**
MAKZ				IAmb	IAmb	20 20 02.7	
	comp=Z,11nm,1.4s						
MK31	**Makanchi Array**	**77.84**	**15**	P	**P**	**20 20 00.4**	**0.0**
MK31				IAmb	IAmb	20 20 02.1	
	comp=Z,3.6nm,1.1s						
MKAR	**Makanchi Array**	**77.84**	**15**	P	**P**	**20 20 01.1**	**+0.6**
	comp=Z,3.0nm,0.8s,baz=188,slow=4.9,SNR=35						
	comp=Z,3.0nm,0.8s						
MKAR	**Makanchi Array**	**77.84**	**15**	P	**P**	**20 20 00.3**	**-0.2**
ABKAR	**Akbulak array**	**77.95**	**359**	P	**P**	**20 20 01.1**	**+0.1**
ABKAR				IAmb	IAmb	20 20 02.7	
	comp=Z,5.0nm,0.8s						
ABKAR	**Akbulak array**	**77.95**	**359**	P	**P**	**20 20 01.3**	**+0.4**
KURK	**Kurchatov**	**80.88**	**11**	P	**P**	**20 20 16.7**	**-0.1**
KURK				IAmb	IAmb	20 20 18.9	
	comp=Z,8.0nm,1.0s						
KEST	**Kesra**	**80.88**	**320**	LR	LR	20 54 38.7	
	comp=Z,54nm,21.4s,baz=292,slow=35						
BVAR	**Borovoye Array**	**82.11**	**6**	LR	LR	20 53 45.3	
	comp=Z,29nm,18.2s,baz=155,slow=33						
BRVK	**Borovoye**	**82.13**	**5**	P	**P**	**20 20 23.9**	**+0.4**
AKASG	**Malin Array Be**	**84.31**	**340**	P	**P**	**20 20 34.4**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=172,slow=3.5,SNR=5.2						
	comp=Z,0.3nm,0.4s						
ZAA0	**Zalesovo Array**	**85.13**	**14**	P	**P**	**20 20 38.8**	**0.0**
ZALV	**Zalesovo Beam**	**85.13**	**14**	P	**P**	**20 20 39.1**	**+0.3**
	comp=Z,5.8nm,0.8s,baz=205,slow=4.8,SNR=33						
ZALV				LR	LR	20 54 59.8	
	comp=Z,29nm,20.0s,baz=164,slow=33						
	comp=Z,5.8nm,0.8s						
ARU	**Arti**	**85.16**	**358**	P	**P**	**20 20 39.1**	**+0.2**
ARU				IAmb	IAmb	20 20 41.0	
	comp=Z,7.1nm,1.0s						
SONM	**Songino Array**	**86.59**	**29**	P	**P**	**20 20 46.9**	**+0.5**
	comp=Z,0.5nm,0.9s,baz=210,slow=5.0,SNR=5.3						
	comp=Z,0.5nm,0.9s						
MDT	**Midelt**	**87.66**	**310**	LR	LR	21 02 16.8	
	comp=Z,33nm,18.2s,baz=156,slow=37						
ESDC	**Sonseca Array**	**91.38**	**315**	P	**P**	**20 21 10.0**	**+0.8**
	comp=Z,1.1nm,0.9s,baz=108,slow=3.9,SNR=6.2						
ESDC				LR	LR	21 03 07.6	
	comp=Z,26nm,19.4s,baz=121,slow=36						
	comp=Z,1.1nm,0.9s						
YKA	**Yellowknife Ar**	**146.44**	**357**	PKPbc	**PKPbc**	**20 27 43.1**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=355,slow=3.4,SNR=17						
TXAR	**Lajitas Array**	**166.84**	**275**	PKPab	**PKPab**	**20 29 13.3**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=106,slow=6.7,SNR=2.8						

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*WEL **18** 20:09:00, 40°.38S×176°.25E, h38^{km}, ML4.5, Mw4.1, Moment Tensor Solution. s5 Moment tensor: Scale 10^{15} Nm; M_{rr}-1.89; $M_{\theta\theta}$0.48; $M_{\phi\phi}$1.41; $M_{r\theta}$-1.28; $M_{\theta\phi}$0.03; $M_{\phi r}$-0.13; Fault plane solution: $M_0$1.94000×10^{15} NP1: ϕ_s167.00000°, δ44.00000°, λ-124.00000°. NP2: ϕ_s30.00000°, δ55.00000°, λ-62.00000°. Principal axes: T -245.3100, Plg6.0000°, Azm100.0000°; N 102.2400, Plg23.0000°, Azm192.0000°; P 143.0700, Plg66.0000°, Azm357.0000°;*
*IDC **18** 20:09:38.7±1.3, 40°.56S×176°.38E, h0^{km}, mb4.0/5, mbtmp3.9/7, ML3.5/2, MS3.4/6 Error ellipse: s-maj=40.2km s-min=26.7km az=140.0*
*NOU **18** 20:09:43.7, 40°.56S×176°.61E, h56^{km}, MLv4.5/13, North Island, New Zealand*
*WEL **18** 20:09:45.9±0.3, 40°S±2°×17°6E±°, h29^{km}±2^{km}, M4.5/36, ML4.8/36, MLv4.5/36, Error ellipse: s-maj=0.0km s-min=0.0km az=109.7, confirmed*
ISC 18 20:09:45.8±0.8**, 40°.42S**±0°.03×**176°.32E**±0°.04**, h49**^{km}±5^{km}**, n176, σ1^{s}31**/189**, mb4.0**/5**, MS3.4**/4**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVHZ	**Dannevirke**	**0.17**	**316**	P	**Pn**	**20 09 52.1**	**-1.7**
DVHZ				S	**Sn**	**20 09 57.1**	**-2.4**
BFZ	**Birch Farm**	**0.27**	**191**	P	**Pn**	**20 09 55.0**	**+0.4**
BFZ	**Birch Farm**	**0.27**	**191**	P	**Pn**	**20 09 54.8**	**+0.3**
BFZ				S	**Sn**	**20 10 01.7**	**+0.9**
PRHZ	**Porangahau**	**0.29**	**58**	P	**Pn**	**20 09 55.0**	**+0.3**
PRHZ				S	**Sn**	**20 10 02.1**	**+1.1**
PRWZ	**Pori Road**	**0.30**	**242**	P	**Pn**	**20 09 54.5**	**-0.3**
PRWZ				S	**Sn**	**20 10 01.1**	**-0.1**
WPHZ	**Waipukurau**	**0.36**	**15**	P	**Pn**	**20 09 54.8**	**-0.6**
POWZ	**Post Office Ro**	**0.42**	**273**	P	**Pn**	**20 09 54.9**	**-1.1**
TSZ	**Takapari Road**	**0.45**	**323**	P	**Pn**	**20 09 54.7**	**-1.7**
TSZ				S	**Sn**	**20 10 01.1**	**-2.9**
TIWZ	**Tintock**	**0.49**	**222**	P	**Pn**	**20 09 57.2**	**+0.4**
TIWZ				S	**Sn**	**20 10 06.0**	**+1.3**
CPWZ	**Castlepoint**	**0.50**	**190**	P	Pn	20 09 58.4	+1.5
CPWZ				S	**Sn**	**20 10 08.3**	**+3.3**
PNHZ	**Pukenui**	**0.51**	**350**	P	**Pn**	**20 09 56.0**	**-1.2**
PNHZ				S	**Sn**	**20 10 03.7**	**-1.5**
PXZ	**Pawanui**	**0.57**	**47**	P	**Pn**	**20 09 58.1**	**+0.3**
MRZ	**Mangatainoka R**	**0.61**	**246**	P	**Pn**	**20 09 58.1**	**-0.2**
KAHZ	**Kahuranaki**	**0.76**	**35**	P	**Pn**	**20 10 00.5**	**+0.3**
TMWZ	**Te Maipa**	**0.76**	**205**	P	**Pn**	**20 10 00.8**	**+0.5**
HOWZ	**Holdsworth Sta**	**0.78**	**232**	P	**Pn**	**20 10 00.6**	**+0.1**
HOWZ				S	**Sn**	**20 10 11.6**	**+0.4**
BHHZ	**Black Hill Sta**	**0.95**	**348**	P	**Pn**	**20 10 02.2**	**-0.6**
CKHZ	**Cape Kidnapper**	**0.96**	**38**	P	**Pn**	**20 10 02.7**	**-0.1**
OGWZ	**Otaki Gorge**	**0.96**	**245**	P	**Pn**	**20 10 02.9**	**0.0**
OGWZ				S	**Sn**	**20 10 15.5**	**0.0**
MTW	**Mount Morrison**	**0.96**	**220**	P	**Pn**	**20 10 03.0**	**0.0**
KWHZ	**Kaweka Forest**	**1.00**	**5**	P	**Pn**	**20 10 03.1**	**-0.3**
MCHZ	**McNeill Hill**	**1.01**	**17**	P	**Pn**	**20 10 03.7**	**0.0**
TRWZ	**Traveller**	**1.09**	**206**	P	**Pn**	**20 10 04.9**	**+0.2**
MOVZ	**Moawhango**	**1.10**	**337**	P	**Pn**	**20 10 04.5**	**-0.4**
MOVZ				S	**Sn**	**20 10 18.4**	**-0.6**
KIW	**Kapiti Island**	**1.16**	**247**	P	**Pn**	**20 10 05.5**	**-0.1**
CAW	**Cannon Point**	**1.17**	**234**	P	**Pn**	**20 10 05.7**	**-0.1**
CAW				S	**Sn**	**20 10 20.9**	**+0.2**
PAWZ	**Paruwai Farm**	**1.18**	**215**	P	**Pn**	**20 10 05.7**	**-0.2**
WAZ	**Wanganui**	**1.22**	**303**	P	**Pn**	**20 10 06.7**	**+0.3**
MTVZ	**Mangateitei**	**1.22**	**327**	P	**Pn**	**20 10 06.5**	**0.0**
MTVZ				S	**Sn**	**20 10 22.4**	**+0.5**
WNVZ	**Wahianoa**	**1.22**	**333**	P	**Pn**	**20 10 06.5**	**-0.1**
TUVZ	**Tukino**	**1.26**	**336**	P	**Pn**	**20 10 07.3**	**+0.2**
BKZ	**Black Stump Fm**	**1.26**	**6**	P	**Pn**	**20 10 06.7**	**-0.3**
BKZ	**Black Stump Fm**	**1.26**	**6**	P	**Pn**	**20 10 06.5**	**-0.5**
TRVZ	**Turoa**	**1.26**	**332**	P	**Pn**	**20 10 07.3**	**0.0**
WHVZ	**Whangaehu Hut**	**1.27**	**333**	P	**Pn**	**20 10 07.3**	**0.0**
ARHZ	**Aropaoanui**	**1.27**	**25**	P	**Pn**	**20 10 06.9**	**-0.2**
DRZ	**Dome Shelter**	**1.28**	**333**	P	**Pn**	**20 10 07.7**	**+0.1**
FWVZ	**Far West T-bar**	**1.30**	**333**	P	**Pn**	**20 10 07.7**	**-0.1**
SNVZ	**South Ngauruho**	**1.34**	**337**	P	**Pn**	**20 10 08.1**	**-0.1**
OTVZ	**Oturere**	**1.35**	**338**	P	**Pn**	**20 10 08.3**	**-0.1**
PKVZ	**Pokaka**	**1.35**	**326**	P	**Pn**	**20 10 08.4**	**+0.1**
NGZ	**Ngauruhoe**	**1.36**	**336**	P	**Pn**	**20 10 08.4**	**-0.1**
ETVZ	**East Tongariro**	**1.36**	**340**	P	**Pn**	**20 10 08.9**	**+0.4**
NMHZ	**Naumai**	**1.37**	**16**	P	**Pn**	**20 10 08.4**	**-0.2**
TMVZ	**Te Maari**	**1.38**	**340**	P	**Pn**	**20 10 08.7**	**-0.1**
NNVZ	**North Ngauruho**	**1.39**	**337**	P	**Pn**	**20 10 08.9**	**0.0**
PLWZ	**Palliser**	**1.40**	**215**	P	**Pn**	**20 10 08.4**	**-0.6**
NTVZ	**North Tongarir**	**1.41**	**339**	P	**Pn**	**20 10 09.0**	**-0.1**
WTVZ	**West Tongariro**	**1.42**	**336**	P	**Pn**	**20 10 09.1**	**-0.1**
KRVZ	**Karewarewa**	**1.42**	**338**	P	**Pn**	**20 10 09.7**	**+0.4**
WEL	**Wellington**	**1.46**	**233**	P	**Pn**	**20 10 09.3**	**-0.4**
RITZ	**Rihia Road**	**1.48**	**346**	P	**Pn**	**20 10 10.2**	**+0.2**
TWVZ	**Taurewa**	**1.51**	**333**	P	**Pn**	**20 10 10.4**	**-0.1**
SNZO	**South Karori**	**1.51**	**233**	P	**Pn**	**20 10 10.1**	**-0.3**
WHHZ	**Waihua**	**1.51**	**28**	P	**Pn**	**20 10 10.2**	**-0.3**
KATZ	**Kakaramea**	**1.52**	**341**	P	**Pn**	**20 10 11.2**	**+0.5**
MRHZ	**Matea Rd**	**1.58**	**3**	P	**Pn**	**20 10 11.2**	**-0.2**
RATZ	**Rangitukua**	**1.60**	**345**	P	**Pn**	**20 10 11.8**	**0.0**
RAHZ	**Arahi**	**1.61**	**22**	P	**Pn**	**20 10 11.2**	**-0.6**
MTHZ	**Maungataniwha**	**1.61**	**15**	P	**Pn**	**20 10 11.2**	**-0.7**
TCW	**Tory Channel**	**1.74**	**242**	P	**Pn**	**20 10 12.8**	**-0.8**

KNZ	Kokohu	1.74	37	P	Pn	20 10 12.7	-0.9
LREZ	Lake Rotokare	1.75	302	P	Pn	20 10 14.9	+1.2
MHGZ	Mahia Peninsul	1.76	45	P	Pn	20 10 13.1	-0.7
VRZ	Vera Road	1.76	317	P	Pn	20 10 14.0	+0.2
WATZ	Wairara	1.77	345	P	Pn	20 10 13.7	-0.2
WHTZ	Whakaora	1.77	351	P	Pn	20 10 14.0	0.0
SNGZ	Shannon Statio	1.81	26	P	Pn	20 10 13.9	-0.7
ALRZ	Allen Road	1.85	1	P	Pn	20 10 14.3	-0.8
DUWZ	D'Urville Isla	1.86	257	P	Pn	20 10 14.8	-0.4
RTZ	Ruatahuna	1.87	16	P	Pn	20 10 14.5	-0.9
WPRZ	Whakapapatarin	1.90	356	P	Pn	20 10 15.0	-0.7
PRRZ	Plateau Road	1.92	2	P	Pn	20 10 15.3	-0.6
KUTZ	Kaahu Road	1.96	349	P	Pn	20 10 16.2	-0.4
MUGZ	Murupara	1.97	10	P	Pn	20 10 15.7	-1.0
PREZ	Palmer Road	1.98	302	P	Pn	20 10 17.8	+1.0
HRRZ	Handcock Road	2.02	359	P	Pn	20 10 17.1	-0.4
MHEZ	Mangahewa	2.04	310	P	Pn	20 10 19.9	+2.3
DREZ	Durham Road	2.04	306	P	Pn	20 10 18.3	+0.7
RIGZ	Rimuhau	2.04	34	P	Pn	20 10 16.8	-0.9
NEZ	North Egmont	2.06	303	P	Pn	20 10 19.0	+1.0
TUWZ	Tuamarina	2.06	240	P	Pn	20 10 16.8	-1.1
GRRZ	Galatos Road	2.07	355	P	Pn	20 10 17.7	-0.4
CMWZ	Cape Campbell	2.07	229	P	Pn	20 10 17.6	-0.5
RRRZ	Republican Roa	2.08	4	P	Pn	20 10 17.3	-1.0
KHEZ	Kahui Hut	2.10	302	P	Pn	20 10 20.6	+2.1
KHEZ	Kahui Hut	2.10	302	P	Pn	20 10 19.7	+1.2
RAGZ	Rawiri	2.10	24	P	Pn	20 10 17.5	-1.0
HSRZ	Hossack Road	2.10	358	P	Pn	20 10 17.9	-0.6
NMEZ	Namu Road	2.13	297	P	Pn	20 10 19.9	+1.1
HLRZ	Highlands Stat	2.16	1	P	Pn	20 10 19.6	+0.2
PKE	Pukeiti	2.17	304	P	Pn	20 10 20.5	+1.1
TLZ	Tolley Road	2.17	344	P	Pn	20 10 19.6	+0.1
TARZ	Mount Tarawera	2.18	4	P	Pn	20 10 19.0	-0.7
NBEZ	Newall Road No	2.21	301	P	Pn	20 10 20.9	+1.0
HIZ	Hauiti	2.21	329	P	Pn	20 10 22.3	+2.3
HIZ	Hauiti	2.21	329	P	Pn	20 10 21.2	+1.2
UTU	Utuhina	2.24	358	P	Pn	20 10 20.2	-0.2
URZ	Urewera	2.24	16	Pn	Pn	20 10 18.8	-1.6
	35nm,0.3s,baz=320,slow=4.2,SNR=141						
URZ				Sn	Sn	20 10 43.2	-3.6
	108nm,0.3s,baz=156,slow=19,SNR=7.0						
URZ				LR	LR	20 11 34.7	
	comp=Z,662nm,19.0s,baz=308,slow=49 65nm,0.3s						
URZ	Urewera	2.24	16	P	Pn	20 10 19.0	-1.4
URZ	Urewera	2.24	16	P	Pn	20 10 18.8	-1.6
BSWZ	Blackbirch Sta	2.25	234	P	Pn	20 10 19.5	-1.1
MKRZ	Makatiti	2.28	3	P	Pn	20 10 24.2	+3.2
MWZ	Matawai	2.28	25	P	Pn	20 10 19.6	-1.4
TKGZ	Te Karaka	2.30	31	P	Pn	20 10 20.0	-1.2
EDRZ	Edgecumbe	2.33	8	P	Pn	20 10 20.5	-1.2
NNZ	Nelson	2.37	249	P	Pn	20 10 21.4	-0.7
KARZ	Kaharoa	2.40	359	P	Pn	20 10 23.4	+0.8
CNGZ	Carnagh Statio	2.42	38	P	Pn	20 10 21.9	-1.0
MARZ	Manawahe	2.44	7	P	Pn	20 10 24.0	+0.8
TWGZ	Tauwhareparae	2.58	31	P	Pn	20 10 24.0	-1.2
KMRZ	Kaimai	2.58	353	P	Pn	20 10 24.4	-0.7
WHRZ	Whale Island	2.61	12	P	Pn	20 10 24.5	-0.9
TKNZ	Takaka Hill	2.62	255	P	Pn	20 10 25.1	-0.5
RUGZ	Raukumara Rang	2.67	24	P	Pn	20 10 24.7	-1.7
TGRZ	Tauranga	2.69	359	P	Pn	20 10 25.6	-0.9
TOZ	Tahuroa Road	2.76	346	P	Pn	20 10 26.9	-0.5
PUZ	Puketiti	2.79	33	P	Pn	20 10 26.0	-1.9
MRNZ	Matariki Terra	2.87	249	P	Pn	20 10 28.4	-0.7
PKGZ	Pakihiroa	2.87	29	P	Pn	20 10 27.5	-1.6
KHZ	Kahutara	2.89	225	P	Pn	20 10 27.4	-1.8
HAZ	Te Kaha	2.89	24	P	Pn	20 10 26.9	-2.4
THZ	Tophouse	2.91	241	P	Pn	20 10 28.4	-1.1
QRZ	Quartz Range	2.91	261	P	Pn	20 10 29.2	-0.4
QRZ	Quartz Range	2.91	261	P	Pn	20 10 28.2	-1.3
WMGZ	Waiomatatini S	3.06	33	P	Pn	20 10 28.8	-2.9
MXZ	Matakaoa Point	3.25	29	P	Pn	20 10 33.0	-1.2
MXZ	Matakaoa Point	3.25	29	P	Pn	20 10 33.0	-1.2
GVZ	Greta Valley S	3.54	223	P	Pn	20 10 36.2	-2.0
AWAZ	Awhitu Peninsu	3.59	338	P	Pn	20 10 39.6	+0.7
ETAZ	East Tamaki Re	3.63	342	P	Pn	20 10 39.4	0.0
DSZ	Denniston Nort	3.66	247	P	Pn	20 10 39.4	-0.5
KUZ	Kuaotunu	3.70	353	P	Pn	20 10 40.0	-0.3
KUZ	Kuaotunu	3.70	353	P	Pn	20 10 40.2	-0.2
WIAZ	Waiheke Island	3.74	345	P	Pn	20 10 40.8	-0.1
WTAZ	Waiatarua	3.74	338	P	Pn	20 10 41.8	+0.9
LTZ	Lake Taylor	3.84	231	P	Pn	20 10 40.5	-1.9
AMCZ	Amberley	3.89	224	P	Pn	20 10 41.8	-1.1
RVAZ	Riverhead Bore	3.89	339	P	Pn	20 10 43.6	+0.6
ABAZ	Army Bay	3.98	343	P	Pn	20 10 45.1	+0.8
MQZ	McQueen's Vall	4.27	218	P	Pn	20 10 45.4	-2.8
AKCZ	Akaroa Harbour	4.28	215	P	Pn	20 10 47.6	-0.8
INZ	Inchbonnie	4.32	236	P	Pn	20 10 46.8	-2.1
MHCZ	Mount Hutt	4.71	227	P	Pn	20 10 51.4	-2.9
WCZ	Waipu Caves	4.73	340	P	Pn	20 10 55.2	+0.6
WACZ	Wakanui South	4.84	222	P	Pn	20 10 53.7	-2.4
WVZ	Waitaha Valley	4.95	236	P	Pn	20 10 55.1	-2.3
RPZ	Rata Peaks	5.12	228	Pn	Pn	20 10 55.5	-4.3
	0.6nm,0.3s,baz=214,slow=1.2,SNR=8.0						
RPZ				Sn	Sn	20 11 51.1	-6.5
	16nm,0.3s,baz=136,slow=23,SNR=28						
RPZ				LR	LR	20 13 23.4	
	comp=Z,246nm,21.1s,baz=49,slow=44 11nm,0.9s						
RPZ	Rata Peaks	5.12	228	P	Pn	20 10 58.2	-1.7
RPZ	Rata Peaks	5.12	228	P	Pn	20 10 57.9	-2.0
ARCZ	Arundel	5.20	226	P	Pn	20 10 58.9	-2.0
GCSZ	Gaunt Creek Bo	5.33	235	P	Pn	20 11 02.4	-0.3
TMZ	Timaru	5.58	223	P	Pn	20 11 04.0	-2.2
FOZ	Fox Glacier	5.76	235	P	Pn	20 11 06.4	-2.1
LBZ	Lake Benmore	6.03	227	P	Pn	20 11 10.3	-2.0
CTZ	Chatham Island	6.21	125	P	Pn	20 11 16.1	+1.3
ODZ	Otahua Downs	6.23	220	P	Pn	20 11 12.7	-2.4
ODZ	Otahua Downs	6.23	220	P	Pn	20 11 12.5	-2.6
JCZ	Jackson Bay	6.67	234	P	Pn	20 11 21.1	-0.2
JCZ	Jackson Bay	6.67	234	P	Pn	20 11 18.6	-2.7
HHSZ	Highcliff Hill	6.88	216	P	Pn	20 11 22.8	-1.2
MLZ	Mavora Lakes	7.79	228	P	Pn	20 11 35.7	-0.7
SYZ	Scrubby Hill	8.04	218	P	Pn	20 11 39.5	-0.3
DZM	Mont Dzumac	20.12	332	LR	LR	20 21 03.7	
	comp=Z,100nm,19.6s,baz=192,slow=34						
AFI	Afiamalu	28.39	25	LR	LR	20 26 34.6	
	comp=Z,35nm,18.5s,baz=295,slow=36						
STKA	Stephens Creek	29.16	276	P	P	20 15 43.5	+1.3
	0.7nm,0.7s,baz=99,slow=13,SNR=1.8 0.7nm,0.7s						
CTA	Charters Tower	32.69	299	LR	LR	20 28 40.9	
	comp=Z,112nm,18.9s,baz=168,slow=35						
ASAR	Alice Springs	39.23	282	P	P	20 17 09.2	-0.3
	0.5nm,0.4s,baz=121,slow=6.8,SNR=24						
ASAR				PcP	PcP	20 19 17.1	-0.7
	0.6nm,0.7s,baz=117,slow=4.2,SNR=3.0						
ASAR				LR	LR	20 33 53.7	
	comp=Z,83nm,18.1s,baz=156,slow=37 0.5nm,0.4s						
WRA	Warramunga Arr	41.16	287	P	P	20 17 25.2	-0.2
	1.0nm,0.3s,baz=125,slow=8.2,SNR=34						
WRA				PcP	PcP	20 19 23.5	-0.5
	1.0nm,1.1s,baz=138,slow=2.8,SNR=2.1 1.0nm,0.3s						
KSRS	Korea Array	89.29	323	P	P	20 22 37.4	+1.1
	0.9nm,0.7s,baz=140,slow=3.8,SNR=3.3 0.9nm,0.7s						
CMAR	Chiang Mai Arr	92.57	292	P	P	20 22 53.0	+1.0
	0.3nm,0.3s,baz=132,slow=4.0,SNR=4.1 0.3nm,0.3s						
MKAR	Makanchi Array	120.40	307	PKP	PKPdf	20 28 31.0	-0.1
	0.4nm,0.6s,baz=190,slow=4.1,SNR=5.9						
ARCES	ARCESS Array B	147.03	342	PKPbc	PKPbc	20 29 22.4	+0.5
	2.9nm,0.6s,baz=57,slow=1.2,SNR=18						
BRTR	Keskin Array B	151.56	281	PKPbc	PKPbc	20 29 34.8	+0.4
	0.7nm,0.7s,baz=159,slow=2.5,SNR=4.7						
FINES	FINESS Array B	152.23	329	PKPbc	PKPbc	20 29 35.4	+0.5
	1.8nm,0.9s,baz=356,slow=3.5,SNR=5.2						
TORD	Torodi Ar. Bea	152.43	191	PKPbc	PKPbc	20 29 37.4	+0.6
	0.4nm,0.5s,baz=149,slow=1.9,SNR=3.1						

NEIC 18 20:20:50.1±1.8, 11.°6S±0.°1×77.°2W±0.°1, h67^{km}±13^{km}, mb4.2/2, Error ellipse: s-maj=17.5km s-min=14.8km az=60.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	0.55	139	Pn	Pn	20 21 02.7	-0.5
NNA				Sn	Sn	20 21 13.2	+0.5
CZSB	Cruzeiro do Su	5.85	50	Pn	Pn	20 22 15.6	+1.3
CZSB				Sn	Sn	20 23 20.2	0.0
MCRA	Macar, Loja	7.65	339	Pn	Pn	20 22 35.3	-3.7
PB16	IPOC Station P	10.03	133	Pn	Pn	20 23 11.4	-0.5
CHSH	Refugio Sur-Vo	10.15	351	Pn	Pn	20 23 12.9	-0.7
PORT	Chimborazo Vol	10.16	351	Pn	Pn	20 23 14.4	+0.6
TBTG	Tabatinga, AM	10.30	45	Pn	Pn	20 23 15.0	-0.2
MNMC	Minye Minye	10.50	137	Pn	Pn	20 23 18.6	+0.4
SLOR	San Lorenzo -	10.85	353	Pn	Pn	20 23 23.4	+0.3
ETMB	Extrema	10.94	82	Pn	Pn	20 23 23.1	-0.9
OTAV	Otavalo	11.80	354	Pn	Pn	20 23 35.4	-0.6
SAML	Samuel	14.04	81		Pn	20 24 04.5	-1.5
BOAV	Boa Vista	21.63	51	P	P	20 25 33.2	-1.8
BOAV				IAmb	IAmb	20 25 53.6	
	comp=Z,11nm,1.4s						
BAUV	El Baul	22.32	24	P	P	20 25 41.7	-0.8
BAUV				IAmb	IAmb	20 25 46.5	
	comp=Z,12nm,0.8s						

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*ISK **18** 20:37:38.4, 38.°24N×42.°84E, h3^{km}, ML3.7/18*
*NSSP **18** 20:37:38.9, 38.°38N×42.°80E, h10^{km}, Ms3.4*
*IDC **18** 20:37:38.4±1.3, 38.°25N×42.°89E, h0^{km}, mb3.3/5, mbtmp3.3/11, ML3.0/6, MS3.4/2, Error ellipse: s-maj=23.9km s-min=13.4km az=148.0*
*ISN **18** 20:37:39.4±1.1, 38.°32N×42.°76E, h10^{km}±325^{km}, ML3.6*
*DDA **18** 20:37:39.2±0.0, 38.°26N×42.°78E, h15^{km}±2^{km}, MW3.7*
*TEH **18** 20:37:39.0, 38.°28N×42.°85E, h11^{km}±21^{km}, ML3.3*
*AZER **18** 20:37:41.0±2.1, 38.°26N×42.°86E, h5^{km}, Error ellipse: s-maj=12.9km s-min=5.8km az=61.0*
ISC 18 20:37:39.4±1.1, 38.°25N±0.°02×42.°82E±0.°02, h3^{km}±8^{km}, n122, σ1^{s}22/180, mb3.2/4, 1C-3D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKDM	Akdamar-Van	0.14	59	Pg	Pg	20 37 42.2	-0.2
AKDM				Sg	Sg	20 37 44.5	+0.2
AKDM	Akdamar-Van	0.14	59	Pg	Pg	20 37 42.1	-0.3
PERV	Siirt/Pervari-	0.38	216	SPECP		20 37 46.0	
PERV				P	Pg	20 37 46.9	+0.1
PERV				S	Sg	20 37 53.2	+1.5
ADCV	BITLIS_Adilcev	0.56	352	SPECP		20 37 50.0	
ADCV				P	Pg	20 37 50.0	-0.2
ADCV				S	Sg	20 37 58.4	+0.9
ADCV	BITLIS_Adilcev	0.56	352	Pg	Pg	20 37 50.0	-0.2
VANB	Van	0.56	52	Pg	Pg	20 37 48.5	-1.7
VANB	Van	0.56	52	Pg	Pg	20 37 48.5	-1.7
BLIS	Bitlis-Merkez	0.58	286	SPECP		20 37 50.0	
BLIS				P	Pg	20 37 50.2	-0.4
BLIS				S	Sg	20 37 58.0	-0.1
BLIS	Bitlis-Merkez	0.58	286	Pg	Pg	20 37 50.2	-0.4
GURO	Guroymak-BITLI	0.69	296	Pg	Pg	20 37 52.2	-0.5
GURO	Guroymak-BITLI	0.69	296	Pg	Pg	20 37 52.1	-0.6
ERCV	ERCIS-VAN	0.86	28	Pg	Pg	20 37 56.1	0.0
ERCV	ERCIS-VAN	0.86	28	Pg	Pg	20 37 56.0	0.0
MLAZ	Malazgirt-MUS	0.91	347	Pg	Pg	20 37 56.2	-0.8
MLAZ	Malazgirt-MUS	0.91	347	Pg	Pg	20 37 56.2	-0.8
OZAP	Van, Ozalp-Mer	1.00	66	SPECP		20 37 56.0	
OZAP				P	Pg	20 37 56.7	-2.0
OZAP				S	Sn	20 38 15.9	+0.5
CUKT	Cukurca	1.18	148	Pn	Pg	20 38 01.4	-0.7
CUKT				Sn	Sb	20 38 18.4	+0.1
CUKT	Cukurca	1.18	148	SPECP		20 38 01.0	
CUKT				P	Pg	20 38 01.6	-0.5
CUKT				S	Sn	20 38 20.8	+1.2
CUKT	Cukurca	1.18	148	Pg	Pg	20 38 01.4	-0.7
SVAN	Silvan-Diyarba	1.28	266	Pn	Pn	20 38 03.8	-0.5
SVAN				Sn	Sn	20 38 22.4	+0.4
SVAN	Silvan-Diyarba	1.28	266	SPECP		20 38 03.0	
SVAN				P	Pn	20 38 03.9	-0.5
SVAN				S	Sn	20 38 21.5	-0.4
SVAN	Silvan-Diyarba	1.28	266	Pg	Pn	20 38 03.8	-0.5
YOVA	Hakkari_Yksek	1.34	119	SPECP		20 38 04.0	
YOVA				P	Pn	20 38 04.5	-0.7
YOVA				S	Sn	20 38 23.7	+0.2
YOVA	Hakkari_Yksek	1.34	119	Pg	Pn	20 38 04.4	-0.7
VRTB	Varto-Mus	1.40	311	Pn	Pn	20 38 05.1	-0.9
VRTB				Sn	Sn	20 38 25.6	+0.5
VRTB	Varto-Mus	1.40	311	SPECP		20 38 04.0	
VRTB				P	Pn	20 38 05.0	-1.1
VRTB				S	Sb	20 38 22.8	-1.9
VRTB	Varto-Mus	1.40	311	Pg	Pn	20 38 04.9	-1.1
MIDY	Mardin/Midyat-	1.41	234	SPECP		20 38 06.0	
MIDY				P	Pb	20 38 06.4	-0.1
MIDY				S	Sn	20 38 26.2	+1.1
SLHN	Bingol, Solhan	1.57	297	SPECP		20 38 08.0	
SLHN				P	Pn	20 38 08.4	+0.1
SLHN				S	Sb	20 38 29.7	+0.1
MAKU	Maku	1.82	52	Pg	Pn	20 38 10.6	-1.3
BNGB	Bingl	1.83	294	Pn	Pn	20 38 12.5	+0.6
MSL	Mosul	1.86	173	*e*Pn	Pb	20 38 14.0	-0.1
MSL				*e*Sn	Sg	20 38 39.0	-0.3
MSL				AML	AML	20 38 43.3	
	comp=E,622nm,0.6s						
MSL				AML	AML	20 38 43.7	
	comp=N,855nm,0.7s						
IGDI	IGDIR	1.89	31	SPECP		20 38 13.0	
IGDI				P	Pn	20 38 13.3	+0.7
IGDI				S	Sg	20 38 42.3	+2.3
KOPR	Koprukoy-ERZUR	1.89	337	Pn	Pn	20 38 12.5	-0.3
HANI	Diyarbakir_Han	1.91	276	SPECP		20 38 12.0	
HANI				P	Pn	20 38 13.0	0.0
HANI				S	Sb	20 38 39.7	+0.4
BINT	Bingol	1.93	289	Pn	Pn	20 38 12.5	-0.8
VNNZ	Vanand	2.00	23	*e*P	Pn	20 38 15.2	+1.0
VNNZ				*e*S	Sn	20 38 40.6	+0.7
MAZI	Mazidag	2.04	248	Pn	Pn	20 38 14.9	+0.1
MAZI	Mazidag	2.04	248	Pn	Pn	20 38 14.8	0.0
TASB	TASBURUN-IGDIR	2.05	32	Pn	Pn	20 38 15.2	+0.4
METS	Metsamor	2.13	27	*e*P	Pb	20 38 17.9	-0.8
METS				*e*S	Sb	20 38 45.3	-0.3
YEDI	Yedisu-Bingol	2.14	304	Pn	Pn	20 38 16.9	+0.8
YEDI	Yedisu-Bingol	2.14	304	Pn	Pn	20 38 16.8	+0.7
DYBB	Diyarbakir	2.14	263	Pn	Pn	20 38 16.5	+0.5
HYR	Heyderabad	2.15	47	P	Pn	20 38 17.5	+1.2
	SNR=11						
HYR				S	Sb	20 38 45.5	-0.8
NRKZ	NAREK	2.25	39	⇑*i*P	Pn	20 38 18.9	+1.3
NRKZ				⇓*i*S	Sb	20 38 47.9	-1.3
EMRE	Erzurum,Aziziy	2.28	322	P	Pb	20 38 21.4	+0.1
NAX	Nakhchivan	2.28	65	P	Pn	20 38 19.4	+1.4
	SNR=12						
NAX				S	Sn	20 38 47.7	+1.0
IMRD	Marand	2.31	78	Pn	Pn	20 38 18.9	+0.4
SENK	Senkaya-Erzuru	2.33	351	Pn	Pn	20 38 19.6	+0.7
SENK	Senkaya-Erzuru	2.33	351	Pn	Pn	20 38 19.6	+0.7
BOZK	Kars-Merkez-Bo	2.34	3	SPECP		20 38 19.0	
BOZK				P	Pn	20 38 19.2	+0.3
KARS	Kars	2.38	5	Pn	Pn	20 38 20.2	+0.8
KOVA	Elazig, Kovanc	2.41	282	P	Pn	20 38 20.8	+1.0
KOVA				S	Sg	20 38 57.0	+0.3
GNI	Garni	2.41	38	Pn	Pn	20 38 21.1	+1.3
	comp=N,3.3nm,0.3s,baz=254,slow=2.6,SNR=30 comp=N,28nm,0.7s						
GNI	Garni	2.41	38	⇓*i*P	Pb	20 38 22.6	-0.9
GNI				⇓*i*S	Sb	20 38 54.3	+0.6
GNI	Garni	2.41	38	Pn	Pn	20 38 20.4	+0.5
SBZ	Shahbuz	2.42	61	P	Pn	20 38 21.5	+1.5
	SNR=23						
SBZ				S	Sn	20 38 51.3	+1.2
KOPT	Kop Dagi	2.52	315	SPECP		20 38 25.0	
KOPT				P	Pb	20 38 25.2	-0.3
KAPZ	Kaputan	2.53	35	*e*P	Pb	20 38 24.5	-1.0
KAPZ				*e*S	Sb	20 38 57.6	+0.5
KRIK	Erzurum-spir	2.55	325	SPECP		20 38 23.0	
KRIK				P	Pn	20 38 23.8	+2.0
ORD	Ordubad	2.58	74	P	Pn	20 38 22.8	+0.8
	SNR=87						
ORD				S	Sn	20 38 55.3	+1.4
ITBZ	Tabriz	2.62	89	Pn	Pn	20 38 22.9	+0.1
MAHB	Mahabad	2.73	122	Pn	Pn	20 38 25.3	+1.0
BAYT	Aydıntepe-Bayb	2.98	317	Pn	Pn	20 38 29.1	+1.3
IKRK	Kirkuk	3.10	156	*e*Pn	Pn	20 38 32.0	+2.8
IKRK				*e*Sn	Sn	20 39 08.0	+1.3
HANM	anlurfa/Hi	3.19	259	SPECP		20 38 31.0	
HANM				P	Pn	20 38 31.0	+0.6
SANL	SANLIURFA_Merk	3.23	252	SPECP		20 38 30.0	
SANL				P	Pn	20 38 30.9	0.0
CHOM	Cayeli-Rize	3.25	331	Pn	Pn	20 38 32.7	+1.3
URFA	Urfa	3.27	257	Pn	Pn	20 38 32.8	+1.2
IHRS	Heris	3.32	88	Pn	Pn	20 38 32.9	+0.4
GDB	GEDABAY	3.35	42	P	Pn	20 38 34.1	+1.3
	SNR=6.1						
GDB				S	Sn	20 39 13.9	+0.8
QZX	Qazax, Azerbai	3.42	34	P	Pn	20 38 34.9	+1.3
	SNR=8.1						
QZX				S	Sn	20 39 16.8	+2.0
GANJ	Ganja	3.61	47	P	Pn	20 38 37.4	+1.2
GANJ				S	Sn	20 39 19.8	+0.4
QRD	Qoradiz	3.71	70	P	Pn	20 38 38.6	+1.0
	SNR=6.0						
QRD				S	Sn	20 39 22.1	+0.2
AGDM	Agdam	3.81	60	P	Pn	20 38 40.5	+1.5
	SNR=5.6						
AGDM				S	Sn	20 39 25.3	+1.0
ISRB	Sarab	3.85	95	Pn	Pn	20 38 40.1	+0.4
BRDA	Brd	3.93	58	P	Pn	20 38 42.1	+1.5
BRDA				S	Sn	20 39 27.4	+0.1
BLQ	Beylaqan	3.97	67	P	Pn	20 38 42.6	+1.4
BLQ				S	Sn	20 39 28.5	+0.2
MNGR	Mingechevir, A	4.15	51	P	Pn	20 38 45.3	+1.7
MNGR				S	Sn	20 39 32.6	0.0
ZRD	Zardab	4.28	60	P	Pn	20 38 46.4	+1.0
ZRD				S	Sn	20 39 36.9	+1.0
YRD	Yardimli	4.30	79	P	Pn	20 38 46.6	+0.8
	SNR=11						
YRD				S	Sn	20 39 37.5	+0.9
LRK	Lerik	4.35	83	P	Pn	20 38 47.4	+0.9
	SNR=4.7						
LRK				S	Sn	20 39 39.0	+1.2
GLBA	Clilabad	4.46	76	P	Pn	20 38 49.1	+1.1
GLBA				S	Sn	20 39 40.4	0.0
ZKTA	Zakatala	4.47	40	P	Pn	20 38 48.9	+0.8
ZKTA				S	Sn	20 39 42.1	+1.6
SEKA	Sheki	4.48	47	P	Pn	20 38 50.0	+1.7
SEKA				S	Sn	20 39 43.3	+2.3
IDHR	Dehrash	4.56	140	Pn	Pn	20 38 50.4	+0.9
SAAT	Saatly	4.64	68	P	Pn	20 38 51.7	+1.3
SAAT				S	Sn	20 39 46.1	+1.3
KDMR	Kurdemir	4.67	61	P	Pn	20 38 51.4	+0.6
KDMR				S	Sn	20 39 47.7	+2.4
LKRN	Lenkeran, Azer	4.70	83	P	Pn	20 38 51.6	+0.5
LKRN				S	Sn	20 39 47.4	+1.3
ASTR	Astara	4.70	84	P	Pn	20 38 51.2	+0.1
ASTR				S	Sn	20 39 47.6	+1.5
QBL	Gabala	4.71	54	P	Pn	20 38 52.3	+0.9
QBL				S	Sn	20 39 49.1	+2.5
IML	Ismayilli	4.86	57	P	Pn	20 38 55.1	+1.7
IML				S	Sn	20 39 53.2	+3.0
XNQ	Khinaliq	5.03	53	P	Pn	20 38 56.6	+0.7
XNQ				S	Sn	20 39 56.0	+1.3
ALIB	Äli-Bayra	5.10	69	P	Pn	20 38 57.5	+0.8
ALIB				S	Sn	20 39 56.7	+0.6
PQL	Pirkuli	5.13	59	P	Pn	20 38 57.8	+0.6
PQL				S	Sn	20 39 58.1	+1.0
BHD	Baghdad	5.13	165	*e*Pn	Pn	20 39 01.0	+3.9
BHD				*e*Sn	Sn	20 39 57.0	+0.2
GBS	Qobustan	5.26	62	P	Pn	20 38 59.7	+0.8
GBS				S	Sn	20 40 01.1	+1.1
QSAR	Qusar	5.30	50	P	Pn	20 39 00.6	+1.1
QSAR				S	Sn	20 40 03.1	+1.9
QUBA	Quba, Azerbaij	5.35	53	P	Pn	20 39 00.8	+0.6
QUBA				S	Sn	20 40 04.3	+1.9
ILBA	Ilam Banvizeh	5.37	148	Pn	Pn	20 39 01.4	+0.9
ATGJ	Altiaghaj	5.40	59	P	Pn	20 39 02.6	+1.8
ATGJ				S	Sn	20 40 05.0	+1.5
KBZ	Khabaz	5.47	1	Pn	Pn	20 39 03.4	+1.6
	comp=N,0.1nm,0.3s,baz=218,slow=17,SNR=2.2 comp=N,1.1nm,0.8s						
SIZA	Siyzn	5.47	57	P	Pn	20 39 03.4	+1.6
SIZA				S	Sn	20 40 08.6	+3.3
IBDR	Badra	5.72	153	*e*Pn	Pn	20 39 08.5	+3.3
IBDR				*e*Sn	Sn	20 40 12.0	+0.6
GOBA	Gobu	5.77	66	P	Pn	20 39 07.2	+1.3
GOBA				S	Sn	20 40 15.3	+2.8
NDR	Nardaran	6.01	65	P	Pn	20 39 10.6	+1.3
NDR				S	Sn	20 40 21.4	+2.9
GALA	Gala	6.08	67	P	Pn	20 39 11.7	+1.6
GALA				S	Sn	20 40 21.0	+0.9
IDOB	Doab	6.22	134	Pn	Pn	20 39 14.0	+1.7
IKFM	Kafar-mosalman	6.24	138	Pn	Pn	20 39 13.1	+0.8
BRTR	Keskin Array B	7.30	284	Pn	Pn	20 39 27.9	+0.9
	comp=N,0.1nm,0.3s,baz=123,slow=10,SNR=2.7 comp=N,0.8nm,0.9s						
ASF	Jabal al Asfar	7.76	220	Pn	Pn	20 39 33.6	+0.2
	comp=N,0.2nm,0.3s,baz=63,slow=6.8,SNR=1.9						
ASF				Lg	Lg	20 41 46.6	
	comp=N,0.8nm,0.3s,baz=36,slow=22,SNR=2.4 comp=N,2.5nm,0.7s						
MMAI	Mount Meron Ar	7.99	231	Pn	Pn	20 39 38.4	+2.0
	comp=N,0.7nm,0.3s,baz=66,slow=15,SNR=5.6 comp=N,0.6nm,0.4s						
AKASG	Malin Array Be	15.75	327	Pn	Pn	20 41 22.9	+0.9
	comp=N,0.3nm,0.3s,baz=136,slow=11,SNR=15 comp=N,2.4nm,0.7s						
VYHS	Vyhne	20.14	308	*e*P	Pn	20 42 16.6	+0.3
ARU	Arti	20.99	25	P	P	20 42 23.9	+0.2
	comp=N,1.0nm,0.4s,baz=236,slow=8.4,SNR=3.7 comp=N,1.0nm,0.4s						
BVAR	Borovoye Array	24.08	43	P	P	20 42 53.3	-2.6
	comp=N,0.3nm,0.7s,baz=259,slow=12,SNR=1.9 comp=N,0.3nm,0.7s						
FINES	FINESS Array B	25.45	341	P	P	20 43 06.0	-2.1
	comp=N,1.2nm,0.9s,baz=165,slow=7.9,SNR=3.5 comp=N,1.2nm,0.9s						
KURBB	Kurchatov Arra	28.05	52	P	P	20 43 31.8	0.0
	comp=N,0.1nm,0.3s,baz=259,slow=9.2,SNR=2.3 comp=N,0.1nm,0.3s						
MKAR	Makanchi Array	30.05	61	P	P	20 43 48.1	-1.6
	comp=N,0.3nm,0.7s,baz=260,slow=8.4,SNR=3.7 comp=N,0.3nm,0.7s						
NRIK	Noril'sk	39.20	23	LR	LR	21 02 36.2	
	comp=N,47nm,21.0s,baz=10,slow=38						
TIXI	Tiksi	52.98	23	LR	LR	21 11 30.4	
	comp=N,34nm,19.2s,baz=358,slow=38						

NEIC 18 20:43:45.6±1.7, 35.°18N±0.°02×111.°94W±0.°02, h2^{km}±7^{km}, ML2.6/29, Error ellipse: s-maj=3.9km s-min=1.4km az=150.0, Eastern Arizona

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WUAZ	Wupatki	0.58	54	Pg	Pg	20 43 56.5	-0.2
WUAZ				Sg	Sg	20 44 04.0	-0.1
WUAZ				IAML		20 44 05.5	
	542nm,0.5s						
X16A	Lo Mia Camp, P	0.86	151	Pg	Pg	20 44 02.1	0.0
X16A				Sg	Sg	20 44 13.2	0.0
X16A				IAML		20 44 13.8	
	comp=N,140nm,0.4s						
X16A				IAML		20 44 14.2	
	comp=E,135nm,0.4s						
U15A	North Rim	1.28	347		Pg	20 44 09.5	-0.7
U15A				IAML		20 44 30.9	
	comp=E,151nm,0.7s						
U15A				IAML		20 44 31.4	
	comp=N,135nm,0.4s						
Y14A	Wickenburg	1.51	216	Pn	Pn	20 44 13.5	-0.2
Y14A				IAML		20 44 36.8	
	comp=E,46nm,0.5s						
Y14A				IAML		20 44 36.8	
	comp=N,76nm,0.7s						
W13A	Hualapai Mount	1.59	268		Pn	20 44 14.5	-0.5
X18A	Snowflake	1.76	111		Pn	20 44 17.5	+0.2
X18A				IAML		20 44 44.7	
	comp=N,76nm,0.4s						
W18A	Petrified Fore	1.81	91		Pb	20 44 18.9	-0.6
KNB	Kanab	1.97	339		Pn	20 44 21.0	+0.9
KNB				IAML		20 44 47.9	
	comp=E,58nm,0.7s						
KNB				IAML		20 44 51.6	
	comp=N,54nm,0.9s						
LCMT	Little Creek M	2.11	330		Pn	20 44 22.9	+0.8
LCMT				IAML		20 44 51.7	
	comp=N,34nm,0.2s						
V12A	Nelson	2.44	284		Pn	20 44 25.8	-0.7
BLYC	Blythe	2.56	237		Pn	20 44 27.9	-0.2
BLYC				IAML		20 45 12.7	
	comp=E,15nm,0.9s						
BLYC				IAML		20 45 15.5	
	comp=N,18nm,0.8s						
SZCU	Shurtz Canyon	2.59	339		Pn	20 44 29.1	+0.5
CCUT	Cedar City	2.63	335		Pn	20 44 29.5	+0.2
CCUT				IAML		20 45 09.3	
	comp=N,35nm,0.7s						

SHPR	Sheep Range	2.93	298	Pn	Pn	20 44 33.6	+0.2
TUC	Tucson	3.02	161		Pn	20 44 33.7	-0.7
TUC				IAML		20 45 23.1	
	comp=N,10.0nm,0.7s						
DUN6	Lazy B Ranch	3.53	137		Pn	20 44 40.8	-0.7
Q16A	Castle Valley	3.79	9	Pn	Pn	20 44 44.0	-1.1
PV10	Paradox Valley	3.96	35	Pn	Pn	20 44 47.8	+0.3
GWY	Greenwater Val	3.98	286	Pn	Pn	20 44 48.5	+0.8
SRU	San Rafael Swe	4.09	16		Pn	20 44 49.0	-0.3
PV07	Paradox Valley	4.20	38	Pn	Pn	20 44 51.6	+0.9
SPR3	Spring Creek 3	4.27	334	Pn	Pn	20 44 52.5	+0.6
SMCO	Snowmass	5.63	43	Pn	Pn	20 45 09.7	-0.9

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*IDC **18** 20:52:18.9±3.3, 30°.44S×179°.15W, h295^{km}±29^{km}, mb2.9/2, mbtmp4.1/5, Error ellipse: s-maj=33.9km s-min=30.3km az=106.0*

*NOU **18** 20:53:06.5, 34°.38S×179°.94W, h375^{km}, MLv4.4/6, South of Kermadec Islands*

ISC 18 20:52:18.6±0.8**, 30°.42S**±0°.07×**179°.1W**±0°.1**, h300^{km}, n71, σ1^{s}62**/85**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.51	41	P	Pn	20 53 03.5	+1.5
GLKZ				S	S	20 53 37.9	+1.5
RAO	Raoul Island	1.52	40	S	S	20 53 35.4	-1.1
	120nm,0.3s,baz=224,slow=23,SNR=1.7						
MXZ	Matakaoa Point	7.45	196	P	Pn	20 54 12.3	+6.9
MXZ	Matakaoa Point	7.45	196	P	Pn	20 54 05.6	+0.2
MXZ				S	S	20 55 32.2	+0.4
WMGZ	Waiomatatini S	7.67	195	P	Pn	20 54 12.5	+4.4
HAZ	Te Kaha	7.77	199	P	Pn	20 54 10.8	+1.5
HAZ				S	S	20 55 41.2	+2.2
PKGZ	Pakihiroa	7.82	197	P	Pn	20 54 10.7	+0.8
PKGZ				S	S	20 55 38.0	-2.1
PUZ	Puketiti	7.95	196	P	Pn	20 54 14.2	+2.7
PUZ				S	S	20 55 42.1	-1.0
RUGZ	Raukumara Rang	8.00	199	P	Pn	20 54 13.6	+1.4
TWGZ	Tauwhareparae	8.12	197	P	Pn	20 54 12.5	-1.0
TWGZ				S	S	20 55 48.3	+1.5
CNGZ	Carnagh Statio	8.36	195	P	Pn	20 54 18.0	+1.6
MWZ	Matawai	8.38	199	P	Pn	20 54 17.0	+0.2
MWZ				S	S	20 55 53.2	+0.4
TKGZ	Te Karaka	8.40	197	P	Pn	20 54 19.5	+2.6
TKGZ				S	S	20 55 51.8	-1.3
URZ	Urewera	8.44	201	P	Pn	20 54 17.2	-0.3
	5.3nm,0.3s,baz=349,slow=4.2,SNR=48						
URZ				S	S	20 55 49.1	-4.8
	6.8nm,0.4s,baz=339,slow=4.6,SNR=2.4						
URZ	Urewera	8.44	201	P	Pn	20 54 21.4	+4.0
URZ	Urewera	8.44	201	P	Pn	20 54 18.9	+1.4
URZ				S	S	20 55 54.0	+0.1
TARZ	Mount Tarawera	8.62	204	P	P	20 54 27.2	+2.2
RIGZ	Rimuhau	8.67	197	P	Pn	20 54 22.8	+2.4
RIGZ				S	S	20 55 59.7	+0.3
MUGZ	Murupara	8.74	202	P	Pn	20 54 22.3	+1.1
MUGZ				S	S	20 56 01.4	+0.5
RTZ	Ruatahuna	8.80	201	P	Pn	20 54 22.2	+0.2
SNGZ	Shannon Statio	8.86	199	P	P	20 54 25.9	-1.6
SNGZ				S	S	20 56 03.6	+0.2
ALRZ	Allen Road	8.97	204	P	P	20 54 28.4	-0.4
RAHZ	Arahi	9.05	200	P	Pn	20 54 25.4	+0.4
RAHZ				S	S	20 56 06.9	-1.0
MHGZ	Mahia Peninsul	9.06	195	P	P	20 54 28.1	-1.7
MTHZ	Maungataniwha	9.07	201	P	Pn	20 54 25.9	+0.7
MTHZ				S	S	20 56 06.5	-1.7
TLZ	Tolley Road	9.07	208	P	P	20 54 32.2	+2.3
WHHZ	Waihua	9.16	198	P	P	20 54 31.6	+0.7
NMHZ	Naumai	9.30	200	P	P	20 54 30.2	-2.3
ARHZ	Aropaoanui	9.40	199	P	P	20 54 32.4	-1.2
BKZ	Black Stump Fm	9.46	202	P	P	20 54 33.1	-1.2
BKZ	Black Stump Fm	9.46	202	P	P	20 54 33.0	-1.3
HIZ	Hauiti	9.51	210	P	P	20 54 38.0	+3.2
MCHZ	McNeill Hill	9.65	200	P	P	20 54 35.8	-0.6
NTVZ	North Tongarir	9.68	205	P	P	20 54 35.9	-0.9
TMVZ	Te Maari	9.69	205	P	P	20 54 36.4	-0.4
KWHZ	Kaweka Forest	9.72	201	P	P	20 54 35.7	-1.5
WTVZ	West Tongariro	9.73	205	P	P	20 54 36.9	-0.4
OTVZ	Oturere	9.74	205	P	P	20 54 35.7	-1.8
TWVZ	Taurewa	9.75	206	P	P	20 54 38.1	+0.6
SNVZ	South Ngauruho	9.77	205	P	P	20 54 37.6	-0.2
NGZ	Ngauruhoe	9.78	205	P	P	20 54 37.2	-0.7
FWVZ	Far West T-bar	9.86	205	P	P	20 54 38.2	-0.8
BHHZ	Black Hill Sta	9.89	203	P	Pn	20 54 35.7	+0.3
TRVZ	Turoa	9.90	205	P	P	20 54 38.9	-0.5
WNVZ	Wahianoa	9.91	205	P	P	20 54 37.5	-1.9
MOVZ	Moawhango	9.93	204	P	P	20 54 37.5	-2.0
KAHZ	Kahuranaki	9.93	199	P	P	20 54 37.5	-1.9
PKVZ	Pokaka	9.97	206	P	P	20 54 40.2	+0.3
MTVZ	Mangateitei	10.01	205	P	P	20 54 40.4	0.0
PXZ	Pawanui	10.15	198	P	Pn	20 54 39.9	+1.5
PNHZ	Pukenui	10.24	201	P	Pn	20 54 40.6	+1.1
PRHZ	Porangahau	10.43	199	P	P	20 54 43.9	-1.1
DVHZ	Dannevirke	10.60	200	P	Pn	20 54 45.1	+1.1
PRWZ	Pori Road	10.89	201	P	P	20 54 49.7	-0.5
BFZ	Birch Farm	10.93	199	P	P	20 54 50.1	-0.4
BFZ	Birch Farm	10.93	199	P	P	20 54 50.2	-0.3
TIWZ	Tintock	11.12	200	P	Pn	20 54 50.6	+0.2
CPWZ	Castlepoint	11.15	199	P	P	20 54 54.4	+1.4
HOWZ	Holdsworth Sta	11.35	201	P	Pn	20 54 53.7	+0.6
TMWZ	Te Maipa	11.42	200	P	P	20 54 55.3	-0.8
TRWZ	Traveller	11.75	200	P	P	20 54 59.6	-0.1
PAWZ	Paruwai Farm	11.81	201	P	P	20 54 60.0	-0.4
QRZ	Quartz Range	12.43	211	P	P	20 55 09.2	+2.0
MSVF	Nonsavu	12.91	348	P	Pn	20 55 11.8	-0.5
	9.4nm,0.5s,baz=168,slow=8.5,SNR=10						
RPZ	Rata Peaks	15.43	208	S	S	20 58 22.1	-5.5
	4.5nm,0.8s,baz=125,slow=18,SNR=2.0						
DZM	Mont Dzumac	15.44	299	P	Pn	20 55 41.8	-0.6
	9.5nm,0.9s,baz=164,slow=16,SNR=8.1						
ASAR	Alice Springs	42.20	267	P	P	20 59 42.6	-0.3
	0.3nm,0.4s,baz=103,slow=7.4,SNR=9.4						
	0.3nm,0.4s						
WRA	Warramunga Arr	43.20	273	P	P	20 59 50.8	-0.1
	0.3nm,0.2s,baz=110,slow=8.1,SNR=40						
	0.3nm,0.2s						
FINES	FINESS Array B	144.85	339	PKP	PKPab	21 11 19.8	+0.5
	2.3nm,0.4s,baz=48,slow=2.1,SNR=41						
NOA	NORSAR Array B	148.63	350	PKPbc	PKiKP	21 11 30.7	-0.3
	0.4nm,0.7s,baz=16,slow=4.5,SNR=1.6						
AKASG	Malin Array Be	150.76	322	PKPbc	PKPbc	21 11 35.1	0.0
	0.2nm,0.3s,baz=28,slow=2.2,SNR=4.9						

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*NEIC **18** 21:03:02.3±1.7, 16°.72N±0°.07×120°.60E±0°.06, h94^{km}±6^{km}, mb4.6/77, Error ellipse: s-maj=10.7km s-min=7.0km az=153.0*

*MAN **18** 21:03:02.2, 16°.86N×120°.39E, h82^{km}, mb5.3, ML4.3, MS4.5*

*IDC **18** 21:03:03.5±3.2, 16°.68N×120°.62E, h112^{km}±29^{km}, mb3.9/26, mbtmp4.2/28, MS3.0/3, Error ellipse: s-maj=14.9km s-min=10.7km az=69.0*

*BJI **18** 21:03:03.1±0.0, 16°.76N×120°.46E, h101^{km}, mb4.3/42, mB4.6/15*

ISC 18 21:03:03.6±0.6**, 16°.78N**±0°.03×**120°.51E**±0°.04**, h110**^{km}±5^{km}**, n299, σ1^{s}37**/323**, mb4.4**/67**, 16C-12D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAMP	Sagada Mountai	0.48	51	⇑eP	Pn	21 03 18.5	-1.8
SAMP				eS	Sn	21 03 30.4	-2.6
SMPP	San Manuel, Pa	0.65	165	⇑eP	Pn	21 03 20.0	-1.6
SMPP				eS	Sn	21 03 32.9	-2.2
SIPP	Brgy, Tapao	1.14	357	⇓eP	Pn	21 03 24.5	-1.8
SIPP				eS	Sn	21 03 48.3	+4.9
CAUP	Cauayan	1.27	82	⇓eP	Pn	21 03 28.5	+0.9
CAUP				eS	Sn	21 03 49.2	+3.3
PCPH	Palayan	1.33	155	⇓eP	Pn	21 03 27.6	-0.9
PCPH				eS	Sn	21 03 46.6	-0.8
BALP	Baler	1.45	135	⇓eP	Pn	21 03 30.5	+0.6
BALP				eS	Sn	21 03 51.5	+1.7
CVP	Callao Caves	1.55	54	⇑iP	Pn	21 03 30.6	-0.5
CVP				i S	Sn	21 03 51.3	-0.6
PALP	Palanan	1.85	81	⇑eP	Pn	21 03 35.3	+0.5
PALP				eS	Sn	21 04 01.4	+2.9
SGCP	Gonzaga	2.06	45	⇓eP	Pn	21 03 33.4	-4.0
SGCP				eS	Sn	21 04 03.5	+0.2
SGCP	Gonzaga	2.06	45	⇑eP	Pn	21 03 33.5	-4.0
SGCP				eS	Sn	21 04 03.2	-0.1
QVP	Quezon City--P	2.20	167	⇑eP	Pn	21 03 38.9	-0.3
QVP				eS	Sn	21 04 07.0	+0.7
MACP	Maragondon, Ca	2.51	175	⇑eP	Pn	21 03 43.1	-0.1
MACP				eS	Sn	21 04 14.7	+1.1
CICP	Calayan Island	2.64	20	⇓eP	Pn	21 03 43.6	-1.3
CICP				eS	Sn	21 04 14.7	-1.9
TGY	Tagaytay City	2.69	171	⇓eP	Pn	21 03 47.0	+1.4
TGY				eS	Sn	21 04 20.8	+2.8
LQP	Lukban	2.83	159	⇑eP	Pn	21 03 48.3	+0.7
LQP				i S	Sn	21 04 22.7	+1.3
LUBP	Lubang	3.04	185	⇓eP	Pn	21 03 49.5	-0.6
LUBP				eS	Sn	21 04 28.6	+2.6
LUBP	Lubang	3.04	185	⇑iP	Pn	21 03 51.9	+1.7
JCNP	Jose Panganiba	3.25	139	⇑eP	Pn	21 03 53.7	+0.8
JCNP				eS	Sn	21 04 33.1	+2.1
GQP	Guinayangan	3.41	147	⇑eP	Pn	21 03 55.8	+0.7
GQP				eS	Sn	21 04 36.0	+1.0
BOAC	Boac	3.54	159	⇓eP	Pn	21 03 58.0	+1.1
BBP	Basco	3.89	20	⇑eP	Pn	21 04 00.4	-1.1
BBP				eS	Sn	21 04 42.9	-3.5
OTRP	Odiongan	4.63	161	⇓eP	Pn	21 04 12.7	+1.2
BUSP	Coron	4.76	184	⇑eP	Pn	21 04 13.0	-0.2
BUSP				eS	Sn	21 05 05.6	-1.7
TWGBT	Beinan	6.03	5	P	Pn	21 04 29.6	-0.8
TWG	Pinlang	6.03	5		Pn	21 04 28.7	-1.7
TPUB	Ta-pu	6.49	1		Pn	21 04 34.8	-1.8
YULB	Yu-li	6.62	6		Pn	21 04 36.2	-2.2
YULB	Yu-li	6.62	6	P	Pn	21 04 36.8	-1.6
SSLB	Suanglung	6.99	3		Pn	21 04 42.4	-0.9
SSLB	Suanglung	6.99	3	P	Pn	21 04 43.6	+0.3
NACB	Ninganchiao	7.43	8		Pn	21 04 48.3	-1.0
YHNB	Yeheng	7.89	6		Pn	21 04 55.7	0.0
YHNB	Yeheng	7.89	6	P	Pn	21 04 56.4	+0.7
YOJ	Yonaguni jima	7.99	17	Pn	Pn	21 04 56.5	-0.5
HKPS	Hong Kong Po S	8.12	313		Pn	21 04 56.5	-2.3
TATO	Taipei	8.21	6	Pn	Pn	21 04 60.0	+0.1
QIZ	Qiongzhong	10.40	284	Pn	Pn	21 05 28.5	-1.2
DAV	Davao City (W)	10.85	152	LR	LR	21 09 39.2	
	comp=Z,130nm,21.1s,baz=320,slow=37						
MYLDM	Lahad Datu	11.70	190	Pn	Pn	21 05 47.4	+0.3
JOW	Kunigami	12.33	34	P	Pn	21 05 55.3	-0.1
	12nm,0.8s,baz=204,slow=20,SNR=2.4						
WHN	Wuhan	14.81	339	⇑P	P	21 06 36.3	+5.8
NJ2	Nanjing	15.28	355	eP	P	21 06 35.5	-0.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
TOLI2	Tolitoli	15.57	179		Pn	21 06 37.6	+0.5
TOLI2				IAmb	IAmb	21 06 41.2	
	comp=Z,52nm,1.5s						
SBUM	Sibu	16.41	211	P	Pn	21 06 47.9	+0.4
LUWI	Luwuk	17.85	173	P	P	21 07 04.3	+0.2
KSM	Kuching	18.23	214	P	P	21 07 08.7	+0.4
BKB	Balikpapan	18.28	192	P	P	21 07 06.3	-2.6
JNU	Nakatsue	18.77	28	P	Pn	21 07 15.8	-0.1
	comp=Z,6.0nm,0.8s,baz=118,slow=6.2,SNR=4.4						
LYN	LuoYang	19.11	339	⇑P	Pn	21 07 20.3	+0.5
LYN				pP	pwP	21 07 40.4	-0.8
LYN				pmax	pmax		
	comp=Z,15nm,0.7s						
JTU	Tsushima	19.38	23	P	P	21 07 21.0	+0.2
JTU				IAmb	IAmb	21 07 34.4	
	comp=Z,37nm,1.3s						
PHRA	Phrae	19.41	278	P	Pn	21 07 22.7	-0.8
TIA	Tai'an	19.59	352	eP	Pn	21 07 24.3	-1.1
TIA				pmax	pmax		
	comp=Z,12nm,1.0s						
PZH	PanZhiHua	19.93	302	P	Pn	21 07 30.1	+0.5
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,170nm,5.0s						
XAN	Xi'an	20.09	331	⇓P	P	21 07 30.0	+1.4
XAN				pP	pP	21 07 48.3	-0.1
XAN				pmax	pmax		
	comp=Z,15nm,0.8s						
CM31	Chiang Mai Arr	20.62	278	P	P	21 07 35.6	+1.2
CMAR	Chiang Mai Arr	20.62	278	P	Pn	21 07 36.9	-0.8
	comp=Z,2.7nm,0.7s,baz=96,slow=7.5,SNR=31						
CMAR				LR	LR	21 15 11.9	
	comp=Z,26nm,19.4s,baz=245,slow=35						
	comp=Z,2.7nm,0.7s						
CMAR	Chiang Mai Arr	20.62	278	P	P	21 07 34.9	+0.5
CHTO	Chiang Mai	20.64	279	P	P	21 07 35.7	+1.2
CD2	Chengdu	20.76	316	P	P	21 07 37.3	+1.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HNS	HongShan	21.17	347	⇑P	P	21 07 42.1	+2.1
HNS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
JHS	Saijyo	21.36	29	P	P	21 07 41.3	-0.8
KSAR	Wonju Array Be	21.59	16	P	P	21 07 44.1	-0.4
KSRS	Korea Array	21.61	16	P	P	21 07 44.1	-0.5
	comp=Z,4.2nm,0.9s,baz=199,slow=11,SNR=13						
	comp=Z,4.2nm,0.9s						
TNCH	TengChong	22.10	295	⇓P	P	21 07 51.8	+1.6
TNCH				pP	pwP	21 08 12.8	-1.3
TNCH				sP	sP	21 08 26.3	+2.4
TNCH				S	S	21 11 43.6	-3.4
TNCH				sS	sS	21 12 21.3	-2.1
TNCH				pmax	pmax		
	comp=Z,14nm,1.3s						
TNCH				pmax	pmax		
	comp=Z,85nm,4.1s						
FAKI	Fak Fak	22.75	148	P	P	21 07 55.6	-1.1
FAKI				IAmb	IAmb	21 08 18.8	
	comp=Z,67nm,1.3s						
BJT	Baijiatuau	23.46	352	P	P	21 08 03.4	+0.2
BJT				IAmb	IAmb	21 08 05.4	
	comp=Z,10nm,0.7s						
BJI	Beijing	23.48	352	P	P	21 08 04.3	+1.0
BJI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MND	Mandalay	23.58	287	P	P	21 08 04.9	+0.4
INU	Inuyama	23.64	35	P	P	21 08 04.5	-0.3
INU				IAmb	IAmb	21 08 06.7	
	comp=Z,16nm,0.8s						
JGF	Kuroka	24.01	35	P	P	21 08 08.1	-0.2
JGF				IAmb	IAmb	21 08 09.5	
	comp=Z,8.3nm,0.6s						
LZH	Lanzhou	24.27	326	eP	P	21 08 13.3	+2.6
LZH				pP	pwP	21 08 35.6	-0.8
LZH				sP	sP	21 08 49.9	+2.7
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
MJAR	Matsushiro Arr	25.17	35	P	P	21 08 18.7	0.0
	comp=Z,1.8nm,0.9s,baz=207,slow=8.6,SNR=2.8						
MJAR				LR	LR	21 17 16.6	
	comp=Z,27nm,19.5s,baz=190,slow=34						
	comp=Z,1.8nm,0.9s						
HHC	Hu-ho-hao-te	25.20	344	eP	P	21 08 21.8	+2.7
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,6.2s						
UGM	Wanagama	26.45	203	P	P	21 08 31.3	+0.9
SOEI	Soe	26.62	172	P	P	21 08 31.5	-0.6
SOEI				IAmb	IAmb	21 08 42.2	
	comp=Z,10nm,0.9s						
GTA	Gaotai	28.88	325	eP	P	21 08 53.8	+1.8
GTA				sP	sP	21 09 33.4	+4.6
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LSA	Lhasa	29.79	301	P	P	21 09 02.1	+1.5
LSA				IAmb	IAmb	21 09 03.3	
	comp=Z,4.6nm,0.4s						
TAPN	Taplejung	32.08	295	eP	P	21 09 21.5	+0.9
	comp=Z,6.2nm,0.4s						
ULN	Ulaanbaatar	32.92	343	P	P	21 09 28.4	+0.9
RAMN	Ramite	32.97	294	eP	P	21 09 29.2	+0.9
SONM	Songino Array	33.08	342	P	P	21 09 29.5	+0.7
	comp=Z,2.8nm,0.7s,baz=163,slow=10,SNR=18						
SONM				PcP	PcP	21 12 10.5	+0.7
	comp=Z,0.4nm,0.5s,baz=171,slow=3.2,SNR=4.1						
	comp=Z,2.8nm,0.7s						
SONM	Songino Array	33.08	342	P	P	21 09 29.3	+0.5
KNRA	Kununurra	33.26	165	P	P	21 09 28.8	-1.7
KNRA				IAmb	IAmb	21 09 31.7	
	comp=Z,23nm,1.4s						
JIRN	Jiri	33.46	295	eP	P	21 09 33.7	+0.9
	comp=Z,4.4nm,0.4s						
KLR	Kul'dur	33.63	13	P	P	21 09 33.7	+0.2
	comp=Z,1.1nm,0.6s,baz=230,slow=9.3,SNR=6.4						
	comp=Z,1.1nm,0.6s						
GUN	Gumba	33.78	295	eP	P	21 09 36.2	+0.7
PKI	Pulchoki	34.12	295	eP	P	21 09 38.5	0.0
PKIN	Phulchoki	34.14	295	eP	P	21 09 38.5	0.0
	comp=Z,2.2nm,0.4s						
DMN	Daman	34.40	294	eP	P	21 09 41.0	+0.3
GKN	Gorkha	34.88	295	eP	P	21 09 44.8	+0.1
FITZ	Fitzroy Crossi	35.02	171	P	P	21 09 43.7	-2.1
DANN	Dangsing	35.70	295	eP	P	21 09 52.1	+0.1
	comp=Z,25nm,0.8s						
MBWA	Marble Bar	37.71	181	P	P	21 10 06.7	-1.9
MBWA				IAmb	IAmb	21 10 08.3	
	comp=Z,18nm,1.2s						
COEN	Coen	37.87	142	P	P	21 10 07.3	-2.7
COEN				IAmb	IAmb	21 10 25.1	
	comp=Z,18nm,1.4s						
PSA00	Pilbara Seismi	38.12	181	P	P	21 10 10.2	-1.8
PSA00	Pilbara Seismi	38.12	181	P	P	21 10 10.1	-2.0
PSA00				IAmb	IAmb	21 10 19.1	
	comp=Z,9.9nm,1.5s						
WMQ	Urumqi	38.67	321	eP	P	21 10 19.0	+2.4
WB0	Warramunga Arr	38.80	159	P	P	21 10 15.4	-2.3
WRA	Warramunga Arr	38.94	159	P	P	21 10 16.4	-2.6
	comp=Z,0.8nm,0.3s,baz=339,slow=9.1,SNR=38						
WRA				PcP	PcP	21 12 27.2	-0.3
	comp=Z,0.3nm,0.6s,baz=340,slow=3.3,SNR=1.7						
	comp=Z,0.8nm,0.3s						
WRA	Warramunga Arr	38.94	159	P	P	21 10 16.4	-2.6
AS31	Alice Springs	42.27	162	P	P	21 10 45.0	-1.4
ASAR	Alice Springs	42.27	162	P	P	21 10 45.0	-1.4
	comp=Z,1.7nm,0.3s,baz=338,slow=7.1,SNR=80						
	comp=Z,1.7nm,0.3s						
ASAR	Alice Springs	42.27	162	P	P	21 10 44.6	-1.7
MK31	Makanchi Array	43.48	322	P	P	21 10 56.2	+0.3
MKAR	Makanchi Array	43.48	322	P	P	21 10 56.6	+0.7
	comp=Z,0.6nm,0.4s,baz=124,slow=8.5,SNR=21						
MKAR				PcP	PcP	21 12 42.8	+0.8
	comp=Z,2.1nm,0.6s,baz=104,slow=4.2,SNR=13						
	comp=Z,0.6nm,0.4s						
MKAR	Makanchi Array	43.48	322	P	P	21 10 56.5	+0.5
MAKZ	Makanchi	43.68	322	P	P	21 10 57.5	0.0
CTAO	Charters Tower	44.52	144	P	P	21 11 03.2	-1.2
CTAO				IAmb	IAmb	21 11 09.5	
	comp=Z,10nm,1.2s						
KSH	Kashi	44.76	310	P	P	21 11 09.6	+3.2
KSH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NIL	Nilore	45.53	301	P	P	21 11 12.7	+0.3
ZALV	Zalesovo Beam	46.27	331	P	P	21 11 18.1	+0.3
	comp=Z,0.9nm,0.6s,baz=116,slow=6.8,SNR=5.6						
ZALV				PcP	PcP	21 12 51.0	-0.5
	comp=Z,1.3nm,0.6s,baz=150,slow=4.9,SNR=5.5						
	comp=Z,0.9nm,0.6s						
ZALV	Zalesovo Beam	46.27	331	P	P	21 11 17.6	-0.2
ZALV				PcP	PcP	21 12 51.3	-0.2
PEA0B	Petropavlovsk-	46.45	30	P	P	21 11 19.1	-0.1
PETK	Petropavlovsk-	46.45	30	P	P	21 11 19.9	+0.7
	comp=Z,4.9nm,0.9s,baz=235,slow=3.8,SNR=6.1						
	comp=Z,4.9nm,0.9s						
PETK	Petropavlovsk-	46.45	30	P	P	21 11 19.6	+0.4
AAK	Ala-Archa	46.80	313	P	P	21 11 23.8	+1.4
	comp=Z,0.5nm,0.4s,baz=37,slow=15,SNR=1.8						
	comp=Z,0.5nm,0.4s						
AAK	Ala-Archa	46.80	313	P	P	21 11 23.7	+1.4
KURK	Kurchatov	47.56	325	P	P	21 11 28.0	+0.1
KURK				IAmb	IAmb	21 11 29.7	
	comp=Z,5.8nm,0.9s						
KURBB	Kurchatov Arra	47.56	325	P	P	21 11 28.6	+0.6
	comp=Z,1.7nm,0.4s,baz=119,slow=8.2,SNR=18						
	comp=Z,1.7nm,0.4s						
GAR	Garm	48.88	307	P	P	21 11 39.0	+0.6
KBL	Kabul	49.11	301	P	P	21 11 40.8	+0.4
KBL				IAmb	IAmb	21 11 42.2	
	comp=Z,4.5nm,0.7s						
CHGR	Chuyangaron	49.69	307	P	P	21 11 44.9	+0.3
KK31	Karatay Array	49.73	313	P	P	21 11 45.3	+0.6
KK31				IAmb	IAmb	21 11 46.4	
	comp=Z,3.9nm,0.7s						
KKAR	Karatay Array	49.73	313	P	P	21 11 45.5	+0.8
EIDS	Eidsvold	51.40	144	P	P	21 11 55.6	-1.7
EIDS				IAmb	IAmb	21 12 21.4	
	comp=Z,3.8nm,1.1s						
BBOO	Buckleboo	51.50	163	P	P	21 11 56.5	-1.5
BBOO				IAmb	IAmb	21 11 57.5	
	comp=Z,7.5nm,0.9s						
STKA	Stephens Creek	52.44	157	P	P	21 12 04.0	-0.9
	comp=Z,2.4nm,0.5s,baz=325,slow=7.5,SNR=13						
	comp=Z,2.4nm,0.5s						
STKA	Stephens Creek	52.44	157	P	P	21 12 03.8	-1.1
TIXI	Tiksi	55.09	3	P	P	21 12 23.5	-0.2
TIXI				IAmb	IAmb	21 12 24.3	
	comp=Z,6.8nm,0.6s						
NRIK	Noril'sk	56.39	347	P	P	21 12 33.6	+0.5
	comp=Z,6.3nm,0.7s,baz=131,slow=6.6,SNR=12						
	comp=Z,6.3nm,0.7s						
NRIK	Noril'sk	56.39	347	P	P	21 12 33.3	+0.2
NRIK				IAmb	IAmb	21 12 34.5	
	comp=Z,7.7nm,0.8s						
GEYT	Alibeck	58.22	304	P	P	21 12 48.3	+1.7
	comp=Z,5.1nm,0.7s,baz=104,slow=6.1,SNR=12						
	comp=Z,5.1nm,0.7s						
GEYT	Alibeck	58.22	304	P	P	21 12 47.7	+1.2
GEYT				IAmb	IAmb	21 12 49.2	
	comp=Z,6.0nm,0.8s						
ABKAR	Akbulak array	58.32	318	P	P	21 12 47.7	+0.7
ABKAR				PcP	PcP	21 13 36.8	-0.1
ABKAR	Akbulak array	58.32	318	P	P	21 12 47.9	+0.9
ABKAR				IAmb	IAmb	21 12 48.2	
	comp=Z,5.6nm,0.6s						
ARU	Arti	60.74	326	P	P	21 13 03.4	-0.1
ARU				IAmb	IAmb	21 13 04.5	
	comp=Z,8.4nm,1.0s						
UNV	Unalaska Valle	66.59	38	P	P	21 13 41.7	-0.2
	baz=266						
TNA	Tin City	67.24	25	P	P	21 13 46.7	+1.0
TNA	Tin City	67.24	25	P	P	21 13 47.0	+1.2
	baz=260						
ANM	Nome	68.16	27	P	P	21 13 52.7	+1.0
ANM				IAmb	IAmb	21 13 54.1	
	comp=Z,2.9nm,0.7s						
ANM	Nome	68.16	27	P	P	21 13 53.1	+1.5
	baz=263						
KBZ	Khabaz	69.72	311	P	P	21 14 01.9	+0.3
	comp=Z,3.0nm,0.9s,baz=188,slow=5.4,SNR=4.5						
	comp=Z,3.0nm,0.9s						
RAYN	Ar Rayn	70.04	289	P	P	21 14 04.3	+0.2
RAYN				IAmb	IAmb	21 14 05.7	
	comp=Z,3.7nm,0.7s						
N16K	Nishlik Lake	70.99	31	P	P	21 14 10.9	+1.8
	baz=270						
KLMR	Klimovskoe	71.12	329	eP	P	21 14 08.8	-1.0
KLMR				AMP		21 14 10.8	
	comp=Z,10.0nm,1.0s						
O16K	Kokwok River B	71.34	32	P	P	21 14 12.9	+1.7
	baz=271						
O17K	Koliganek Bris	71.84	32	P	P	21 14 15.6	+1.4
	baz=272						
A21K	Barrow	71.95	20	P	P	21 14 15.9	+1.3
	baz=269						
TTA	Tatalina	72.25	29	P	P	21 14 17.6	+0.9
TTA				IAmb	IAmb	21 14 18.7	
	comp=Z,4.5nm,0.6s						
TTA	Tatalina	72.25	29	P	P	21 14 17.8	+1.1
	baz=272						
Q17K	Contact Creek	72.54	33	P	P	21 14 18.9	+0.3
	baz=274						
O18K	Koktuh Hills	72.79	32	P	P	21 14 21.4	+1.5
	baz=274						
P18K	Big Mountain,	72.81	32	P	P	21 14 21.2	+1.2
	baz=274						
L19K	White Mountain	72.82	29	P	P	21 14 22.0	+1.9
	baz=273						
Q18K	Katmai Hardscr	72.98	33	P	P	21 14 21.7	+0.6
	baz=274						
M19K	Big River Lodg	73.05	30	P	P	21 14 23.0	+1.6
	baz=274						
N19K	Bonanza Creek	73.08	31	P	P	21 14 22.9	+1.2
	baz=274						
IMAR	Indian Mountai	73.09	25	P	P	21 14 22.8	+1.2
K20K	Telida	73.11	28	P	P	21 14 23.0	+1.3
	baz=274						
F21K	Alatna River	73.13	24	P	P	21 14 23.2	+1.4
	baz=273						
G21K	Allakaket	73.16	25	P	P	21 14 23.4	+1.5
	baz=273						
L20K	Farewell, AK	73.25	29	P	P	21 14 24.1	+1.5
	baz=274						
H21K	Melozitna Rive	73.50	26	P	P	21 14 25.5	+1.6

H21K				IAmb	IAmb	21 14 26.9	
	comp=Z,11nm,1.1s						
H21K	**Melozitna Rive**	**73.50**	**26**	P	**P**	**21 14 25.6**	**+1.7**
	baz=274						
F22K	**John River**	**73.61**	**24**	P	**P**	**21 14 26.2**	**+1.6**
	baz=274						
M20K	**Styx River**	**73.65**	**30**	P	**P**	**21 14 26.5**	**+1.5**
	baz=275						
E22K	**Anaktuvuk Pass**	**73.70**	**23**	P	**P**	**21 14 26.4**	**+1.3**
	baz=274						
CHUM	**Lake Minchumin**	**73.85**	**27**	P	**P**	**21 14 27.9**	**+1.9**
	baz=275						
I21K	**Tanana**	**73.88**	**26**	P	**P**	**21 14 28.3**	**+2.2**
	baz=275						
CAST	**Castle Rocks**	**73.99**	**28**	P	**P**	**21 14 28.5**	**+1.6**
CAST	**Castle Rocks**	**73.99**	**28**	P	**P**	**21 14 28.7**	**+1.8**
	baz=275,SNR=15						
PPLA	**Purkeypile**	**74.00**	**28**	P	**P**	**21 14 28.7**	**+1.7**
	baz=275						
D23K	**Nanushuk River**	**74.05**	**22**	P	**P**	**21 14 29.0**	**+1.9**
	baz=275						
H22K	**Ishtalitna Cre**	**74.06**	**25**	P	**P**	**21 14 29.3**	**+2.0**
	baz=275						
KDAK	**Kodiak Island**	**74.34**	**34**	P	**P**	**21 14 29.6**	**+0.7**
	comp=Z,3.9nm,0.4s,baz=294,slow=3.0,SNR=11						
	comp=Z,3.9nm,0.4s						
KDAK	**Kodiak Island**	**74.34**	**34**	P	**P**	**21 14 29.4**	**+0.5**
SKT	**Skwentna**	**74.39**	**29**	P	**P**	**21 14 29.8**	**+0.5**
	baz=276						
COLD	**Coldfoot**	**74.40**	**24**	P	**P**	**21 14 30.9**	**+1.7**
	baz=276						
BPAW	**Bear Paw Mtn.**	**74.41**	**27**	P	**P**	**21 14 30.8**	**+1.5**
BPAW				IAmb	IAmb	21 14 32.2	
	comp=Z,11nm,1.0s						
BPAW	**Bear Paw Mtn.**	**74.41**	**27**	P	**P**	**21 14 31.1**	**+1.8**
	baz=276,SNR=9.9						
MLY	**Manley**	**74.42**	**26**	P	**P**	**21 14 31.5**	**+2.1**
	baz=276,SNR=11						
G23K	**Bananza Creek**	**74.53**	**24**	P	**P**	**21 14 31.7**	**+1.7**
	baz=276						
E23K	**Chandalar**	**74.53**	**23**	P	**P**	**21 14 31.9**	**+1.9**
	baz=276						
C24K	**Franklin Bluff**	**74.67**	**21**	P	**P**	**21 14 32.2**	**+1.5**
	baz=277						
CAPN	**Captain Cook N**	**74.71**	**31**	P	**P**	**21 14 32.3**	**+1.3**
	baz=277						
TRF	**Thorofare Moun**	**74.79**	**28**	P	**P**	**21 14 32.9**	**+1.2**
	baz=277						
H23K	**Yukon River**	**74.82**	**25**	P	**P**	**21 14 33.5**	**+1.9**
	baz=277						
SUA	**Susitna One**	**74.83**	**30**	P	**P**	**21 14 32.1**	**+0.3**
SUA				IAmb	IAmb	21 14 33.7	
	comp=Z,10nm,0.8s						
SUA	**Susitna One**	**74.83**	**30**	P	**P**	**21 14 33.0**	**+1.1**
	baz=277						
CUT	**Chulitna**	**74.93**	**29**	P	**P**	**21 14 33.9**	**+1.6**
	baz=277						
E24K	**Your Creek**	**74.95**	**23**	P	**P**	**21 14 34.2**	**+1.8**
	baz=277						
I23K	**Minto, Yukon-K**	**74.98**	**26**	P	**P**	**21 14 34.5**	**+2.0**
	baz=277,SNR=6.8						
NEA2	**Nenana**	**75.18**	**27**	P	**P**	**21 14 35.3**	**+1.6**
	baz=278,SNR=12						
F24K	**Squaw Lake**	**75.25**	**23**	P	**P**	**21 14 36.1**	**+2.0**
	baz=278						
MCK	**McKinley**	**75.36**	**27**	P	**P**	**21 14 35.6**	**+0.8**
MCK				IAmb	IAmb	21 14 36.4	
	comp=Z,8.9nm,0.6s						
MCK	**McKinley**	**75.36**	**27**	P	**P**	**21 14 35.7**	**+1.0**
	baz=278,SNR=6.1						
RC01	**Rabbit Creek A**	**75.36**	**30**	P	**P**	**21 14 35.5**	**+0.7**
	baz=278						
MDM	**Murphy Dome**	**75.48**	**26**	P	**P**	**21 14 36.3**	**+0.8**
MDM				IAmb	IAmb	21 14 37.9	
	comp=Z,7.0nm,0.8s						
H24K	**Noodor Dome**	**75.50**	**25**	P	**P**	**21 14 37.3**	**+1.7**
	baz=278						
G24K	**Hadweenzic Riv**	**75.53**	**24**	P	**P**	**21 14 37.2**	**+1.5**
	baz=278						
D25K	**Kavik River**	**75.54**	**21**	P	**P**	**21 14 37.1**	**+1.4**
	baz=279						
PMR	**Palmer**	**75.58**	**30**	P	**P**	**21 14 36.5**	**+0.6**
	baz=278						
WRH	**Wood River Hil**	**75.61**	**27**	P	**P**	**21 14 36.6**	**+0.5**
WRH				IAmb	IAmb	21 14 38.2	
	comp=Z,5.6nm,0.7s						
POKR	**Poker Plat Res**	**75.79**	**26**	P	**P**	**21 14 39.4**	**+2.2**
	baz=279						
LBZ	**Lake Benmore**	**75.85**	**146**	P	**P**	**21 14 37.6**	**-0.1**
SML	**Sawmill**	**75.92**	**29**	P	**P**	**21 14 39.0**	**+0.9**
SML				IAmb	IAmb	21 14 39.3	
	comp=Z,12nm,1.0s						
SML	**Sawmill**	**75.92**	**29**	P	**P**	**21 14 39.3**	**+1.2**
	baz=279						
KNK	**Knik Glacier**	**75.92**	**30**	P	**P**	**21 14 39.2**	**+1.2**
	baz=279						
C26K	**Camden Bay**	**75.94**	**21**	P	**P**	**21 14 39.4**	**+1.5**
	baz=280						
G25K	**Bearman Lake**	**76.06**	**24**	P	**P**	**21 14 40.4**	**+1.7**
	baz=280						
PWL	**Port Wells**	**76.07**	**30**	P	**P**	**21 14 39.9**	**+1.0**
	baz=279						
IL31		**76.08**	**26**	P	**P**	**21 14 38.8**	**0.0**
IL31				IAmb	IAmb	21 14 56.8	
	comp=Z,7.1nm,1.5s						
ILAR	**Eielson Array**	**76.08**	**26**	P	**P**	**21 14 38.5**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=277,slow=5.3,SNR=16						
	comp=Z,1.3nm,0.7s						
F25K	**Christian Rive**	**76.09**	**23**	P	**P**	**21 14 40.8**	**+1.9**
	baz=280						
HDA	**Harding Lake**	**76.11**	**27**	P	**P**	**21 14 39.3**	**+0.3**
	baz=280						
ARCES	**ARCESS Array B**	**76.16**	**339**	P	**P**	**21 14 39.4**	**+0.2**
	comp=Z,5.2nm,0.9s,baz=83,slow=5.5,SNR=9.6						
	comp=Z,5.2nm,0.9s						
M23K	**Glacier View**	**76.20**	**29**	P	**P**	**21 14 40.3**	**+0.7**
	baz=280						
SCM	**Sheep Creek Mo**	**76.38**	**29**	P	**P**	**21 14 41.5**	**+0.8**
SCM	**Sheep Creek Mo**	**76.38**	**29**	P	**P**	**21 14 41.8**	**+1.1**
	baz=280						
C27K	**Jago River**	**76.41**	**21**	P	**P**	**21 14 42.2**	**+1.5**
	baz=281						
BMAR	**Burnt Mountain**	**76.52**	**23**	P	**P**	**21 14 42.9**	**+1.5**
F26K	**Sheenjek River**	**76.64**	**23**	P	**P**	**21 14 43.7**	**+1.8**
	baz=281						
P23K	**Montague Islan**	**76.67**	**31**	P	**P**	**21 14 43.9**	**+1.6**
	baz=280						
M24K	**Tolsona, Glenn**	**76.87**	**29**	P	**P**	**21 14 44.8**	**+1.3**
	baz=281						
G26K	**Porcupine Rive**	**76.92**	**24**	P	**P**	**21 14 45.1**	**+1.6**
	baz=282						
PAX	**Paxson**	**77.02**	**28**	P	**P**	**21 14 45.5**	**+1.2**
	baz=281						
KLU	**Klutina**	**77.11**	**29**	P	**P**	**21 14 45.7**	**+1.0**
	baz=281						
BRTR	**Keskin Array B**	**77.12**	**308**	P	**P**	**21 14 45.3**	**0.0**
	comp=Z,0.4nm,0.3s,baz=101,slow=2.9,SNR=8.3						
	comp=Z,0.4nm,0.3s						
BRTR	**Keskin Array B**	**77.12**	**308**	P	**P**	**21 14 45.2**	**-0.2**
RIDG	**Independent Ri**	**77.15**	**27**	P	**P**	**21 14 45.3**	**+0.4**
RIDG				IAmb	IAmb	21 14 46.9	
	comp=Z,13nm,1.2s						
RIDG	**Independent Ri**	**77.15**	**27**	P	**P**	**21 14 45.9**	**+1.0**
	baz=282,SNR=5.1						
HARP	**HAARP**	**77.28**	**28**	P	**P**	**21 14 46.5**	**+0.9**
	baz=282						
EYAK	**Cordova Ski Ar**	**77.38**	**30**	P	**P**	**21 14 47.2**	**+1.1**
	baz=282						
SCRK	**Sand Creek**	**77.47**	**27**	P	**P**	**21 14 48.0**	**+1.2**
	baz=282						
E27K	**Coleen River**	**77.47**	**22**	P	**P**	**21 14 48.1**	**+1.4**
	baz=284						
FIA1	**FINESS Array S**	**77.52**	**331**	P	**P**	**21 14 47.0**	**0.0**
FIA1				IAmb	IAmb	21 14 57.2	
	comp=Z,5.7nm,1.1s						
FINES	**FINESS Array B**	**77.52**	**331**	P	**P**	**21 14 47.0**	**0.0**
	comp=Z,3.0nm,0.6s,baz=60,slow=6.2,SNR=34						
	comp=Z,3.0nm,0.6s						
FINES	**FINESS Array B**	**77.52**	**331**	P	**P**	**21 14 47.1**	**+0.2**
I26K	**Coal Creek Min**	**77.53**	**25**	P	**P**	**21 14 47.9**	**+0.9**
	baz=283						
N25K	**Chitina, Valde**	**77.70**	**29**	P	**P**	**21 14 49.7**	**+1.6**
	baz=282						
G27K	**Doyon Strip**	**77.78**	**24**	P	**P**	**21 14 50.3**	**+1.9**
	baz=284						
VSU	**Vasula**	**77.82**	**328**	*e*P	**P**	**21 14 48.9**	**+0.2**
L26K	**Log Cabin Wild**	**77.96**	**28**	P	**P**	**21 14 50.9**	**+1.5**
	baz=283						
H27K	**Steamboat Moun**	**77.97**	**24**	P	**P**	**21 14 51.2**	**+1.8**
	baz=284						
AKASG	**Malin Array Be**	**78.01**	**319**	P	**P**	**21 14 49.6**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=58,slow=4.1,SNR=17						
	comp=Z,1.2nm,0.6s						
I27K	**Kandik River**	**78.08**	**25**	P	**P**	**21 14 51.8**	**+1.6**
	baz=284						
M26K	**Nabesna, AK**	**78.26**	**28**	P	**P**	**21 14 52.7**	**+1.6**
	baz=284						
K27K	**Chicken**	**78.28**	**26**	P	**P**	**21 14 53.0**	**+1.9**
	baz=284						
CSS	**Mathiatis**	**78.32**	**303**	P	**P**	**21 14 52.2**	**+0.2**
EGAK	**Eagle**	**78.48**	**26**	P	**P**	**21 14 52.9**	**+0.7**
EGAK				IAmb	IAmb	21 14 54.0	
	comp=Z,3.4nm,0.7s						
EGAK	**Eagle**	**78.48**	**26**	P	**P**	**21 14 53.5**	**+1.3**
	baz=285						
MCARA	**McCarthy VSAT**	**78.49**	**29**	P	**P**	**21 14 54.1**	**+1.7**
	baz=284						
NACGM	**Naroch**	**78.56**	**324**	*e*P	**P**	**21 14 52.4**	**-0.5**
	comp=Z,17nm,0.9s,baz=77						
MEF	**Metsahovi**	**78.60**	**330**	*e*P	**P**	**21 14 52.9**	**0.0**
L27K	**Beaver Creek,**	**78.62**	**27**	P	**P**	**21 14 55.0**	**+1.9**
	baz=284						
BCAR	**Beaver Creek A**	**78.64**	**27**	P	**P**	**21 14 54.6**	**+1.4**
M27K	**Edge Creek, AK**	**78.78**	**28**	P	**P**	**21 14 54.5**	**+0.4**
	baz=284						
BVCY	**Beaver Creek**	**79.22**	**28**	P	**P**	**21 14 58.5**	**+2.1**
	baz=285						
MTSE	**Matsula**	**79.25**	**328**	*e*P	**P**	**21 14 56.5**	**0.0**
CTG	**Chitna Glacier**	**79.39**	**29**	P	**P**	**21 14 59.1**	**+1.7**
	baz=285						
DAWY	**Dawson**	**79.41**	**26**	P	**P**	**21 14 58.6**	**+1.2**
DAWY	**Dawson**	**79.41**	**26**	P	**P**	**21 14 59.0**	**+1.6**
	baz=286						
YUK3	**Moose Creek**	**79.58**	**29**	P	**P**	**21 15 00.1**	**+1.5**
	baz=286						
G30M	**tAoh Zraii Nji**	**79.78**	**23**	P	**P**	**21 15 00.1**	**+0.7**
	baz=289						
EPYK	**Eagle Plains**	**79.79**	**24**	P	**P**	**21 15 00.3**	**+0.9**
	baz=288						
VSVD	**Vaisvydziai**	**79.89**	**325**	*e*P	**P**	**21 15 00.6**	**+0.6**
PABE	**Paberze**	**79.99**	**325**	P	**P**	**21 15 00.7**	**+0.1**
PABE	**Paberze**	**79.99**	**325**	*e*P	**P**	**21 15 01.3**	**+0.8**
L29M	**L29M**	**80.23**	**27**	P	**P**	**21 15 03.7**	**+1.9**
	baz=288						
K29M	**Barlow Dome**	**80.26**	**26**	P	**P**	**21 15 03.5**	**+1.5**
	baz=288						
M29M	**Somme Creek**	**80.28**	**28**	P	**P**	**21 15 04.3**	**+2.1**
	baz=287						
INK	**Inuvik**	**80.31**	**21**	P	**P**	**21 15 02.4**	**+0.4**
	comp=Z,3.6nm,0.7s,baz=288,slow=6.6,SNR=16						
	comp=Z,3.6nm,0.7s						
INK	**Inuvik**	**80.31**	**21**	P	**P**	**21 15 02.9**	**+0.8**
	baz=291,SNR=5.6						
F31M	**Tsiigehtchic**	**80.54**	**22**	P	**P**	**21 15 04.0**	**+0.7**
	baz=291,SNR=6.2						
M30M	**Minto, Yukon**	**80.98**	**27**	P	**P**	**21 15 07.8**	**+2.0**
	baz=289						
N30M	**Aishikik Lake**	**81.21**	**28**	P	**P**	**21 15 09.0**	**+1.9**
	baz=289						
BURAR	**Bucovina Array**	**81.29**	**317**	P	**P**	**21 15 08.5**	**+0.6**
BUR08	**Bucovina Ar. S**	**81.29**	**317**	P	**P**	**21 15 08.8**	**+0.9**
A36M	**Sachs Harbour**	**81.36**	**17**	P	**P**	**21 15 08.6**	**+1.0**
	baz=298,SNR=6.4						
N31M	**Braeburn, Yuko**	**81.79**	**28**	P	**P**	**21 15 11.4**	**+1.3**
	baz=290						
M31M	**Drury Creek, Y**	**82.16**	**27**	P	**P**	**21 15 13.3**	**+1.3**
	baz=291						
FARO	**Faro, Yukon**	**82.60**	**27**	P	**P**	**21 15 15.4**	**+1.0**
	baz=292						
C36M	**Paulatuk**	**82.97**	**19**	P	**P**	**21 15 16.6**	**+0.6**
	baz=299,SNR=5.6						
N32M	**Quiet Lake**	**83.13**	**28**	P	**P**	**21 15 18.4**	**+1.3**
	baz=292						
MMPY	**Sheldon Lake,**	**83.35**	**26**	P	**P**	**21 15 19.4**	**+1.2**
	baz=294						
DAG	**Danmarks Havn**	**83.55**	**351**	*i* P	**P**	**21 15 18.5**	**-0.4**
DAG				IAmb	IAmb	21 15 19.1	
	comp=Z,7.4nm,0.3s						
P33M	**Teslin, Yukon**	**83.61**	**29**	P	**P**	**21 15 20.5**	**+0.9**
	baz=292						
NB2	**NORSAR Subarra**	**84.46**	**333**	P	**P**	**21 15 23.8**	**-0.1**
	comp=Z,4.0nm,0.7s,baz=62,slow=5.3						
NOA	**NORSAR Array B**	**84.46**	**333**	P	**P**	**21 15 23.4**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=66,slow=4.6,SNR=10.0						
	comp=Z,1.2nm,0.5s						
S34M	**Telegraph Cree**	**85.32**	**31**	P	**P**	**21 15 29.6**	**+1.5**
	baz=294						
DBG	**Daneborg**	**85.74**	**350**	*i* P	**P**	**21 15 30.6**	**+0.6**
KONO	**Kongsberg**	**85.78**	**332**	P	**P**	**21 15 30.4**	**0.0**
NEEM	**North Greenlan**	**85.83**	**358**	*i* P	**P**	**21 15 31.9**	**+1.2**
NEEM				IAmb	IAmb	21 15 32.9	
	comp=Z,14nm,0.7s						
RES	**Resolute Bay**	**86.04**	**9**	P	**P**	**21 15 31.6**	**+0.3**
	comp=Z,5.1nm,0.8s,baz=307,slow=5.4,SNR=28						
	comp=Z,5.1nm,0.8s						
RES	**Resolute Bay**	**86.04**	**9**	P	**P**	**21 15 31.6**	**+0.3**
RES				IAmb	IAmb	21 15 33.1	
	comp=Z,5.3nm,0.8s						
WRGLY	**Wrigley**	**86.25**	**24**	P	**P**	**21 15 33.7**	**+1.1**
	baz=300						
YKA	**Yellowknife Ar**	**90.02**	**22**	P	**P**	**21 15 50.6**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=308,slow=4.3,SNR=26						
	comp=Z,1.8nm,0.7s						
O20A	**White River Ci**	**107.46**	**37**	P	**PKiKP**	**21 21 16.5**	**-1.4**
	baz=311						
AGMN	**Agassiz Nation**	**107.55**	**25**	P	**PKiKP**	**21 21 16.4**	**-1.2**
	baz=323						

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*ANF **18** 21:17:43.5±0.2, 34°.02N×117°.25W, h17^{km}±1^{km}, ML3.4/36, Error ellipse: s-maj=1.1km s-min=0.9km az=26.0*

*NEIC **18** 21:17:44.0±0.8, 34°.044N±0°.008×117°.239W±0°.010, h20^{km}±1^{km}, Error ellipse: s-maj=1.4km s-min=0.9km az=51.0*

*PAS **18** 21:17:44.5±1.2, 34°.040N±0°.009×117°.238W±0°.010, h18^{km}±1^{km}, ML3.5/355, ML3.3/82(NEIC), Error ellipse: s-maj=1.3km s-min=1.3km az=198.0*

ISC 18 21:17:44.0±0.8**, 34°.03N**±0°.01×**117°.24W**±0°.01**, h19**^{km}±2^{km}**,**
n157, σ0^{s}**61**/238**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CFSC	**Central Fire S**	**0.08**	**335**		**Pg**	**21 17 47.7**	**+0.1**
CFSC					**Sg**	**21 17 50.4**	**+0.3**
CLTC	**Calectric**	**0.09**	**315**		**Pg**	**21 17 48.0**	**+0.3**
CLTC					**Sg**	**21 17 51.5**	**+1.2**
RSBC	**Riverside Bore**	**0.09**	**232**		**Pg**	**21 17 47.8**	**+0.1**
RSBC					**Sg**	**21 17 50.5**	**+0.2**
RSBC	**Riverside Bore**	**0.09**	**232**		**Pg**	**21 17 47.9**	**+0.2**
HLNC	**Highland**	**0.09**	**11**		**Pg**	**21 17 47.7**	**0.0**
HLNC					**Sg**	**21 17 50.4**	**+0.1**
CFT	**Crafton Hills**	**0.11**	**87**		**Pg**	**21 17 48.1**	**+0.1**
CFT					**Sg**	**21 17 50.9**	**+0.4**
RVR	**Riverside**	**0.12**	**252**		**Pg**	**21 17 48.0**	**+0.1**
RVR					**Sg**	**21 17 50.8**	**+0.2**
SVD	**Seven Oaks Dam**	**0.14**	**57**		**Pb**	**21 17 48.2**	**+1.7**
SVD					**Sg**	**21 17 51.3**	**+0.1**
PEC	**Perris**	**0.15**	**154**		**Pg**	**21 17 48.6**	**+0.2**
PEC					**Sg**	**21 17 51.8**	**+0.4**
FON	**Fontana**	**0.18**	**293**		**Pb**	**21 17 48.8**	**+0.9**
FON					**Sg**	**21 17 52.1**	**+0.1**
BBSC	**Beaumont Base**	**0.24**	**116**		**Pb**	**21 17 50.1**	**+0.5**
BBSC					**Sg**	**21 17 54.3**	**+0.7**
MLSC	**Mira Loma**	**0.27**	**265**		**Pg**	**21 17 50.0**	**0.0**
MLSC					**Sg**	**21 17 54.3**	**+0.1**
SS2	**San Sevaine**	**0.28**	**310**		**Pg**	**21 17 50.3**	**0.0**
CSP	**Cedar Springs**	**0.29**	**340**		**Pg**	**21 17 50.3**	**-0.2**
BTL	**Butler Peak**	**0.30**	**41**		**Pg**	**21 17 50.7**	**-0.2**
CRNC	**Corona**	**0.31**	**240**		**Pg**	**21 17 50.8**	**+0.1**
CRNC					**Sg**	**21 17 55.6**	**+0.3**
BBRC	**Big Bear Solar**	**0.35**	**49**		**Pg**	**21 17 51.4**	**-0.2**
BBRC					**Sg**	**21 17 56.5**	**-0.3**
BBRC	**Big Bear Solar**	**0.35**	**49**	P	**Pg**	**21 17 51.4**	**-0.2**
	baz=230,SNR=103						
BBRC				S	**Sg**	**21 17 56.5**	**-0.3**
	baz=230						
CHNC	**Chino**	**0.37**	**265**		**Pg**	**21 17 51.7**	**0.0**
CHNC					**Sg**	**21 17 57.5**	**+0.5**
HMTC	**Hemet**	**0.38**	**148**		**Pg**	**21 17 51.8**	**-0.1**
HMTC					**Sg**	**21 17 57.3**	**0.0**
BFSC	**Mount Baldy Ra**	**0.41**	**301**		**Pg**	**21 17 52.0**	**-0.5**
BFSC					**Sg**	**21 17 57.7**	**-0.6**
BFSC	**Mount Baldy Ra**	**0.41**	**301**	P	**Pg**	**21 17 51.9**	**-0.5**
	baz=120,SNR=421						
BFSC				S	**Sg**	**21 17 57.7**	**-0.6**
	baz=120						
ELS	**Elsinore Mount**	**0.41**	**202**		**Pg**	**21 17 52.5**	**-0.1**
ELS				IAML		21 17 59.3	
	comp=E,3µm,0.3s						
ELS				IAML		21 17 60.0	
	comp=N,1µm,0.4s						
ELS	**Elsinore Mount**	**0.41**	**202**		**Sg**	**21 17 59.0**	**+0.7**
SSK	**Sunset Peak**	**0.42**	**296**		**Pg**	**21 17 52.5**	**-0.3**
DGR	**Domenigoni Val**	**0.42**	**153**		**Pg**	**21 17 52.5**	**-0.2**
DGR					**Sg**	**21 17 58.6**	**-0.1**
MURC	**Murrieta**	**0.43**	**175**		**Pg**	**21 17 52.8**	**0.0**
MURC					**Sg**	**21 17 59.1**	**+0.3**
MURC	**Murrieta**	**0.43**	**175**	P	**Pg**	**21 17 52.8**	**0.0**
	baz=356,SNR=298						
MURC				S	**Sg**	**21 17 59.2**	**+0.3**
	baz=356						
POB	**Polly Butte**	**0.43**	**142**		**Pg**	**21 17 52.8**	**-0.2**
POB					**Sg**	**21 17 58.8**	**-0.1**
BACC	**Bachelor Mtn.**	**0.45**	**158**		**Pg**	**21 17 52.9**	**-0.3**
BACC					**Sg**	**21 17 59.4**	**+0.1**
SIL	**Silver Peak**	**0.47**	**47**		**Pg**	**21 17 53.2**	**-0.4**
SIL					**Sg**	**21 17 59.8**	**-0.3**
PSRC	**Puddingstone R**	**0.47**	**278**		**Pg**	**21 17 53.4**	**-0.3**
PSRC					**Sg**	**21 18 00.2**	**0.0**
VTV	**Victorville**	**0.54**	**352**		**Pg**	**21 17 54.3**	**-0.5**
VTV					**Sg**	**21 18 01.2**	**-0.9**
PEM	**Pine Mountain**	**0.54**	**285**		**Pg**	**21 17 54.5**	**-0.3**
ADO	**Adelanto Recei**	**0.54**	**343**		**Pg**	**21 17 54.6**	**-0.3**
ADO					**Sg**	**21 18 02.7**	**+0.3**
DEVC	**Devers**	**0.56**	**99**		**Pb**	**21 17 55.1**	**0.0**
DEVC					**Sg**	**21 18 03.3**	**+0.6**
XTL	**Crystal Lake,**	**0.58**	**297**		**Pb**	**21 17 54.9**	**-0.7**
FULC	**Fullerton**	**0.59**	**255**		**Pb**	**21 17 56.3**	**+0.7**
FULC					**Sn**	**21 18 05.8**	**-0.6**
GVDA	**Garner Valley**	**0.59**	**127**		**Pb**	**21 17 55.3**	**-0.4**
GVDA					**Sg**	**21 18 03.1**	**-0.7**
CRY	**Cary Ranch**	**0.62**	**138**		**Pb**	**21 17 56.0**	**-0.2**
CRY					**Sb**	**21 18 04.5**	**-0.1**
SANC	**Santa Ana**	**0.63**	**239**		**Pb**	**21 17 56.9**	**+0.6**
SANC					**Sg**	**21 18 06.7**	**+1.8**
RHC	**Rose Hills Cem**	**0.64**	**268**		**Pb**	**21 17 56.4**	**-0.2**
BREC	**Barre Substati**	**0.66**	**251**		**Pg**	**21 17 57.6**	**+0.7**
BREC					**Sn**	**21 18 07.8**	**-0.3**
HOLC	**Holcomb Ridge**	**0.66**	**311**		**Pb**	**21 17 56.4**	**-0.6**
HOLC					**Sb**	**21 18 05.3**	**-0.5**
DNR	**Dunn Ranch,Anz**	**0.69**	**132**		**Pb**	**21 17 57.2**	**-0.2**
DNR					**Sg**	**21 18 08.0**	**+1.3**
EW2	**E Wide Canyon**	**0.70**	**97**		**Pb**	**21 17 57.4**	**-0.1**
EW2					**Sb**	**21 18 07.3**	**+0.5**
MWC	**Mount Wilson**	**0.71**	**286**		**Pb**	**21 17 57.2**	**-0.6**
MWC					**Sb**	**21 18 06.9**	**-0.3**
SNDA	**J Saunders Pla**	**0.71**	**132**		**Pb**	**21 17 57.6**	**-0.2**
SNDA					**Sb**	**21 18 07.6**	**+0.5**
BLAC	**Blackrock camp**	**0.71**	**86**		**Pb**	**21 17 57.4**	**-0.4**
BLAC					**Sb**	**21 18 07.0**	**-0.2**
BZNA	**Buzz No.'s Pla**	**0.72**	**138**		**Pb**	**21 17 57.8**	**-0.2**
BZNA					**Sb**	**21 18 07.4**	**-0.1**
CHFC	**Chilao Flat St**	**0.72**	**295**		**Pb**	**21 17 57.1**	**-0.9**
CHFC					**Sb**	**21 18 06.8**	**-0.8**
JNH	**Juniper Hills**	**0.72**	**305**		**Pb**	**21 17 57.4**	**-0.7**
JNH					**Sb**	**21 18 07.1**	**-0.6**
GVRC	**Garvey Reservo**	**0.73**	**272**		**Pb**	**21 17 58.0**	**-0.1**
GVRC	**Garvey Reservo**	**0.73**	**272**		**Sb**	**21 18 08.4**	**+0.6**
DLAC	**Del Amo**	**0.73**	**256**		**Pg**	**21 17 59.1**	**+0.6**
DLAC					**Sn**	**21 18 10.6**	**+0.5**
CACC	**Caltech Cellar**	**0.74**	**279**		**Pb**	**21 17 57.4**	**-0.9**
CACC					**Sb**	**21 18 07.8**	**-0.2**
PLM	**Palomar**	**0.74**	**155**		**Pb**	**21 17 58.0**	**-0.4**
PLM					**Sb**	**21 18 08.1**	**-0.2**
CBCC	**Caltech Broad**	**0.74**	**279**		**Sb**	**21 18 08.2**	**0.0**
FRD	**Ford Ranch, An**	**0.75**	**135**		**Pb**	**21 17 58.3**	**-0.3**
FRD					**Sb**	**21 18 08.5**	**0.0**
FRD	**Ford Ranch, An**	**0.75**	**135**		**Pb**	**21 17 58.3**	**-0.3**
FRD					**Sb**	**21 18 08.5**	**0.0**
PFO	**Pinyon Flats O**	**0.77**	**122**	Pg	**Pb**	**21 17 58.5**	**-0.5**
PFO				Sg	**Sb**	**21 18 08.7**	**-0.5**
PFO				IAML		21 18 09.7	
	comp=N,2µm,0.4s						
PFO				IAML		21 18 09.8	
	comp=N,1µm,0.1s						
PFO	**Pinyon Flats O**	**0.77**	**122**		**Pb**	**21 17 58.4**	**-0.5**
PFO					**Sb**	**21 18 08.5**	**-0.5**
PFO	**Pinyon Flats O**	**0.77**	**122**	P	**Pb**	**21 17 58.4**	**-0.5**
	baz=304,SNR=246						
PFO				S	**Sb**	**21 18 08.6**	**-0.5**
	baz=304						
XPFO	**Pion Flat**	**0.78**	**122**		**Pb**	**21 17 58.5**	**-0.5**
XPFO					**Sb**	**21 18 08.4**	**-0.8**
GTM	**Goat Mountain**	**0.78**	**70**		**Pb**	**21 17 58.4**	**-0.6**
GTM					**Sb**	**21 18 08.6**	**-0.7**
PASC	**Pasadena Art C**	**0.80**	**281**		**Pb**	**21 17 58.5**	**-0.7**
PASC					**Sb**	**21 18 09.3**	**-0.4**
PASC	**Pasadena Art C**	**0.80**	**281**	IAML		21 18 11.3	
	comp=N,2µm,0.6s						
PMD	**Palm Desert**	**0.81**	**118**	Pg	**Pb**	**21 17 59.1**	**-0.4**
PMD				Sg	**Sb**	**21 18 09.8**	**-0.3**
PMD				IAML		21 18 10.8	
	comp=E,2µm,0.3s						
PMD				IAML		21 18 10.8	
	comp=N,1µm,0.5s						
SBB	**Saddle Back Bu**	**0.82**	**324**		**Pb**	**21 17 59.0**	**-0.7**
SBB					**Sb**	**21 18 09.8**	**-0.5**
LRRC	**Littlerock Res**	**0.82**	**307**		**Pb**	**21 17 59.1**	**-0.5**
LRRC					**Sb**	**21 18 10.3**	**0.0**
WTT2	**Watts, South G**	**0.85**	**265**		**Pb**	**21 18 00.9**	**+0.8**
WTT2					**Sn**	**21 18 13.5**	**+0.7**
RRX	**Edison Barstow**	**0.87**	**13**		**Pb**	**21 18 00.4**	**-0.1**
RRX					**Sb**	**21 18 12.1**	**+0.4**
RRX	**Edison Barstow**	**0.87**	**13**	P	**Pb**	**21 18 00.5**	**-0.1**
	baz=193,SNR=35						
RRX				S	**Sb**	**21 18 12.2**	**+0.4**
	baz=193						
GORC	**Green Oak Ranc**	**0.87**	**179**		**Pb**	**21 17 59.9**	**-0.7**
GORC					**Sb**	**21 18 11.4**	**-0.4**
HYS	**Haystack Butte**	**0.88**	**342**		**Pb**	**21 18 00.3**	**-0.3**
HYS					**Sb**	**21 18 11.5**	**-0.6**
GR2C	**Griffith Obs.**	**0.89**	**276**		**Pb**	**21 18 00.1**	**-0.6**
GR2C					**Sb**	**21 18 12.0**	**-0.2**
CJV	**Casa Juvan**	**0.90**	**304**		**Pb**	**21 18 00.5**	**-0.6**
CJV					**Sb**	**21 18 12.0**	**-0.8**
FMP	**Fort Macarthur**	**0.93**	**251**	P	**Pb**	**21 18 01.0**	**-0.6**
	baz=69						
FMP				S	**Sb**	**21 18 14.1**	**+0.5**
	baz=69						
DECC	**Green Verdugo**	**0.93**	**284**	P	**Pb**	**21 18 01.1**	**-0.5**
	baz=103,SNR=16						
DECC				S	**Sb**	**21 18 13.6**	**-0.1**
	baz=103						
BELC	**Belle Mtn. Jos**	**1.03**	**91**	P	**Pb**	**21 18 03.3**	**-0.1**
	baz=273,SNR=512						
BELC				S	**Sb**	**21 18 16.9**	**+0.3**
	baz=273						
EDW2	**Edwards Air Fo**	**1.05**	**324**	P	**Pb**	**21 18 03.3**	**-0.4**
	baz=143,SNR=178						
EDW2				S	**Sb**	**21 18 17.1**	**0.0**
	baz=143						
HEC	**Hector,Ludlow**	**1.09**	**43**	P	**Pb**	**21 18 03.8**	**-0.5**
	baz=224,SNR=231						
HEC				S	**Sb**	**21 18 18.8**	**+0.5**
	baz=224						
109C	**Camp Elliot, M**	**1.14**	**174**		**Pn**	**21 18 04.3**	**-0.7**
109C	**Camp Elliot, M**	**1.14**	**174**	P	**Pn**	**21 18 04.3**	**-0.7**
	baz=355,SNR=16						
109C				S	**Sb**	**21 18 19.3**	**-0.3**
	baz=355						
CIS	**Catalina Islan**	**1.16**	**238**	P	**Pn**	**21 18 04.5**	**-0.8**
	baz=57,SNR=49						
CIS				S	**Sb**	**21 18 20.8**	**+0.6**
	baz=57						
CCAC	**Calif City Air**	**1.29**	**330**		**Pn**	**21 18 06.7**	**-0.4**
CCAC				Sn	**Sn**	**21 18 23.9**	**0.0**
CCAC				IAML		21 18 25.3	
	comp=E,707nm,0.4s						
GSC	**Goldstone, Bar**	**1.32**	**16**		**Pn**	**21 18 07.4**	**-0.1**
GSC	**Goldstone, Bar**	**1.32**	**16**	P	**Pn**	**21 18 07.4**	**-0.1**
	baz=196,SNR=210						
GSC				S	**Sb**	**21 18 25.6**	**+0.7**
	baz=196						
MONP2	**Monument Peak**	**1.32**	**149**	P	**Pn**	**21 18 07.8**	**+0.2**
	baz=330,SNR=207						

MONP2				S	**Sn**	**21 18 25.5**	**+0.6**
	baz=330						
OSI	**Osito Audit: C**	**1.36**	**296**	P	**Pn**	**21 18 07.8**	**-0.3**
	baz=115,SNR=6.9						
OSI				S	**Sn**	**21 18 26.2**	**+0.6**
	baz=115						
BAR	**Barrett**	**1.43**	**160**		**Pn**	**21 18 08.8**	**-0.1**
LRMC	**Laurel Mtn Rad**	**1.49**	**346**	Pb	**Pb**	**21 18 11.4**	**+0.2**
	baz=166,SNR=43						
GMRC	**Granite Mounta**	**1.51**	**60**	P	**Pn**	**21 18 09.3**	**-0.8**
	baz=241,SNR=111						
TJX	**Tijuana**	**1.52**	**174**		**Pn**	**21 18 10.6**	**+0.3**
BC3	**Big Chuckawall**	**1.53**	**104**	P	**Pn**	**21 18 09.9**	**-0.6**
	baz=285,SNR=239						
BC3				S	**Sn**	**21 18 30.6**	**+0.6**
	baz=285						
TKX	**Tecate**	**1.55**	**160**		**Pn**	**21 18 10.8**	**+0.1**
SWSC	**Sam W. Stewart**	**1.62**	**132**	P	**Pn**	**21 18 10.6**	**-0.9**
	baz=313,SNR=72						
SWSC				Sb	**Sg**	**21 18 35.6**	**-0.7**
	baz=313						
IKP	**In-Ko-Pah, Jac**	**1.67**	**145**	P	**Pn**	**21 18 12.0**	**-0.3**
	baz=326,SNR=142						
IKP				Sb	**Sb**	**21 18 36.4**	**+1.5**
	baz=326						
ARVC	**Arvin**	**1.71**	**310**	P	**Pn**	**21 18 12.7**	**-0.1**
	baz=129,SNR=25						
ARVC				Sb	**Sb**	**21 18 37.5**	**+1.5**
	baz=129						
RMX	**La Rumorosa**	**1.72**	**145**		**Pn**	**21 18 13.7**	**+0.6**
RMX				IAML		21 18 40.4	
	comp=E,285nm,0.4s						
RMX				IAML		21 18 40.4	
	comp=N,166nm,0.3s						
IRM	**Iron Mountain**	**1.74**	**85**	P	**Pn**	**21 18 12.6**	**-0.7**
	baz=267,SNR=77						
IRM				Sb	**Sb**	**21 18 38.9**	**+2.0**
	baz=267						
YUH	**Yuha Desert**	**1.76**	**141**	Pn	**Pn**	**21 18 12.9**	**-0.7**
TUQ	**Turquoise Moun**	**1.77**	**37**	P	**Pn**	**21 18 13.3**	**-0.5**
	baz=218,SNR=7.2						
TUQ				Sb	**Sb**	**21 18 39.5**	**+1.6**
	baz=218						
CBX	**Cerro Bola**	**1.78**	**164**		**Pn**	**21 18 14.5**	**+0.6**
CBX				IAML		21 18 39.8	
	comp=N,353nm,0.8s						
CBX				IAML		21 18 40.2	
	comp=E,446nm,0.6s						
ISA	**Isabella, Lake**	**1.92**	**328**		**Pn**	**21 18 15.7**	**-0.1**
ISA	**Isabella, Lake**	**1.92**	**328**	P	**Pn**	**21 18 15.4**	**-0.4**
	baz=148,SNR=35						
ISA				Sb	**Sb**	**21 18 43.6**	**+1.5**
	baz=148						
QSM	**Queen of Sheba**	**1.96**	**9**		**Pn**	**21 18 16.1**	**-0.1**
SCZ2	**Santa Cruz Isl**	**1.99**	**270**	P	**Pn**	**21 18 16.1**	**-0.6**
	baz=88						
BCW	**Bitter Crk WRg**	**2.01**	**297**		**Pn**	**21 18 17.1**	**+0.1**
BCW				IAML		21 18 50.7	
	comp=N,389nm,0.4s						
SHOC	**Shoshone, Teco**	**2.03**	**23**	P	**Pn**	**21 18 17.0**	**-0.2**
	baz=203,SNR=27						
MPMC	**Manual Prospec**	**2.04**	**354**	P	**Pn**	**21 18 17.4**	**-0.1**
	baz=174,SNR=187						
MPMC				Sb	**Sb**	**21 18 48.0**	**+2.4**
	baz=174						
SNCC	**San Nicolas Is**	**2.06**	**248**		**Pn**	**21 18 16.8**	**-0.9**
SNCC				IAML		21 18 49.6	
	comp=N,109nm,0.3s						
SNCC				IAML		21 18 56.9	
	comp=E,132nm,0.7s						
SNCC	**San Nicolas Is**	**2.06**	**248**	P	**Pn**	**21 18 16.7**	**-0.9**
	baz=67						
GWY	**Greenwater Val**	**2.20**	**12**		**Pn**	**21 18 19.6**	**-0.1**
CCX	**Cicese**	**2.21**	**167**		**Pn**	**21 18 20.4**	**+0.7**
CCX				IAML		21 18 53.9	
	comp=N,203nm,0.5s						
CCX				IAML		21 18 55.9	
	comp=E,188nm,0.6s						
GLA	**Glamis**	**2.24**	**115**		**Pn**	**21 18 19.1**	**-1.0**
GLA				IAML		21 18 55.9	
	comp=E,256nm,0.6s						
GLA				IAML		21 18 57.0	
	comp=N,132nm,0.5s						
GLA	**Glamis**	**2.24**	**115**	P	**Pn**	**21 18 19.1**	**-1.0**
	baz=297,SNR=18						
BLYC	**Blythe**	**2.28**	**96**	Pn	**Pn**	**21 18 19.7**	**-0.9**
BLYC				IAML		21 18 57.2	
	comp=E,243nm,0.3s						
BLYC				IAML		21 18 57.6	
	comp=N,224nm,0.5s						
NEE2	**Needles Airpor**	**2.29**	**70**	P	**Pn**	**21 18 20.3**	**-0.5**
	baz=252						
ESJX	**Sierra Juarez**	**2.29**	**151**		**Pn**	**21 18 21.6**	**+0.6**
ESJX				IAML		21 18 55.6	
	comp=E,101nm,0.2s						
ESJX				IAML		21 18 56.1	
	comp=N,81nm,0.4s						
PKM	**Mcpherson Peak**	**2.29**	**293**	P	**Pn**	**21 18 21.1**	**+0.1**
	baz=111,SNR=21						
VES	**Vestal, Richgr**	**2.36**	**321**	P	**Pn**	**21 18 21.9**	**+0.1**
	baz=139,SNR=18						
CWC	**Cottonwood Cre**	**2.50**	**344**	P	**Pn**	**21 18 24.3**	**+0.4**
	baz=164						
PDMCI	**Parker Dam,Lak**	**2.58**	**83**	P	**Pn**	**21 18 25.1**	**+0.3**
	baz=265						
V12A	**Nelson**	**2.59**	**49**	Pn	**Pn**	**21 18 24.7**	**-0.3**
V12A				IAML		21 19 06.3	
	comp=E,79nm,0.4s						
V12A				IAML		21 19 07.3	
	comp=N,66nm,0.4s						
WCT	**Wildcat Mounta**	**2.80**	**10**		**Pn**	**21 18 28.4**	**+0.5**
WCT				IAML		21 19 15.6	
	comp=E,115nm,0.6s						
WCT				IAML		21 19 16.0	
	comp=N,55nm,0.5s						
VTX	**Valle De La Tr**	**2.90**	**155**		**Pn**	**21 18 29.6**	**+0.4**
VTX				IAML		21 19 14.0	
	comp=E,60nm,0.6s						
VTX				IAML		21 19 15.6	
	comp=N,49nm,1.3s						
GRAC	**Grapevine Rang**	**2.96**	**358**	Pn	**Pn**	**21 18 30.4**	**+0.3**
GRAC				IAML		21 19 25.7	
	comp=E,149nm,0.6s						
W13A	**Hualapai Mount**	**2.97**	**68**		**Pn**	**21 18 30.5**	**+0.2**
W13A				IAML		21 19 05.8	
	comp=E,69nm,0.2s						
W13A				IAML		21 19 06.5	
	comp=N,65nm,0.5s						
SHPR	**Sheep Range**	**3.00**	**34**		**Pn**	**21 18 31.2**	**+0.5**
TPNV	**Topopah Spring**	**3.02**	**15**		**Pn**	**21 18 31.3**	**+0.3**
TPNV	**Topopah Spring**	**3.02**	**15**	P	**Pn**	**21 18 31.4**	**+0.4**
	baz=196						
113A	**Mohawk Valley,**	**3.17**	**112**		**Pn**	**21 18 31.9**	**-0.9**
LCH	**Last Change Ra**	**3.21**	**354**		**Pn**	**21 18 34.0**	**+0.4**
DSP	**Deep Springs**	**3.39**	**350**	Pn	**Pn**	**21 18 36.7**	**+0.9**
Y14A	**Wickenburg**	**3.52**	**90**		**Pn**	**21 18 37.5**	**-0.2**
Y14A				IAML		21 19 19.2	
	comp=N,62nm,0.3s						
Y14A				IAML		21 19 42.0	
	comp=E,40nm,0.6s						
PRN	**Pahroc Range**	**3.81**	**27**		**Pn**	**21 18 42.5**	**+0.7**
OMMB	**Old Mammoth Mi**	**3.85**	**339**	Pn	**Pn**	**21 18 44.3**	**+1.8**
MDPB	**Devils Postpil**	**3.89**	**338**		**Pn**	**21 18 44.7**	**+1.6**
214A	**Organ Pipe Nat**	**4.26**	**118**		**Pn**	**21 18 47.9**	**0.0**
LHV	**Little Huntoon**	**4.34**	**347**		**Pn**	**21 18 49.7**	**+0.9**
LCMT	**Little Creek M**	**4.41**	**46**		**Pn**	**21 18 50.6**	**+0.5**
NV11	**Mina Array Sit**	**4.46**	**351**	Pn	**Pn**	**21 18 50.0**	**-0.7**
NVAR	**Mina Array Bea**	**4.47**	**349**		**Pn**	**21 18 50.7**	**-0.3**
KNB	**Kanab**	**4.68**	**49**	Pn	**Pn**	**21 18 54.5**	**+0.7**
U15A	**North Rim**	**4.71**	**58**		**Pn**	**21 18 54.8**	**+0.6**
CCUT	**Cedar City**	**4.72**	**41**	Pn	**Pn**	**21 18 55.5**	**+1.1**
CMB	**Columbia Colle**	**4.74**	**328**	Pn	**Pn**	**21 18 55.3**	**+0.8**
X16A	**Lo Mia Camp, P**	**4.82**	**84**		**Pn**	**21 18 55.8**	**0.0**
WUAZ	**Wupatki**	**5.05**	**71**	Pn	**Pn**	**21 18 59.2**	**+0.3**
WUAZ				IAML		21 19 58.2	
	comp=E,16nm,0.4s						
WUAZ				IAML		21 19 58.8	
	comp=E,17nm,0.5s						
WUAZ	**Wupatki**	**5.05**	**71**	P	**Pn**	**21 18 58.1**	**-0.8**
	baz=255						
KVN	**Kaiserville**	**5.06**	**352**		**Pn**	**21 18 59.7**	**+0.7**
PKCU	**Pink Cliffs**	**5.26**	**48**	Pn	**Pn**	**21 19 03.1**	**+1.2**
TUC	**Tucson**	**5.68**	**106**	Pn	**Pn**	**21 19 06.4**	**-1.1**
MTPU	**Mount Pierson**	**5.73**	**44**	Pn	**Pn**	**21 19 07.7**	**-0.6**
ELK	**Elko**	**6.89**	**13**	Pn	**Pn**	**21 19 24.7**	**+0.5**
121A	**Cookes Peak, D**	**8.06**	**98**	P	**Pn**	**21 19 40.2**	**0.0**
	baz=283						

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*IDC **18** 21:20:29.9±0.8, 2°.95S×142°.23E, h0^{km}, mb4.0/8, mbtmp4.0/10, ML1.5/1, MS3.6/30, Error ellipse: s-maj=32.0km s-min=17.3km az=76.0*

*NEIC **18** 21:20:32.1±1.4, 2°.93S±0°.05×142°.11E±0°.07, h10^{km}±1^{km}, mb4.7/41, Error ellipse: s-maj=12.3km s-min=8.7km az=93.0*

*DJA **18** 21:20:38.5±1.3, 3°S±8°×14°2E±°, h43^{km}±10^{km}, M4.4/12, mB4.8/3, mb4.6/12, MLv4.3/2, Mw(mB)4.1/3*

ISC 18 21:20:34.6±0.4**, 2°.99S**±0°.06×**142°.09E**±0°.06**, h30^{km}, n114,** σ**0^{s}88**/86**, mb4.6**/40**, MS3.7**/25**, 1C-2D, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**1.96**	**281**	P	**Pn**	**21 21 05.0**	**-0.8**
SMPI	**Sarmi**	**3.52**	**286**	P	**Pn**	**21 21 28.9**	**+1.6**
PMG	**Port Moresby**	**8.12**	**142**	Pn	**Pn**	**21 22 30.2**	**-0.4**
	0.4nm,0.3s,baz=356,slow=11,SNR=1.9						
PMG				Sn	**Sn**	**21 24 01.8**	**+0.4**
	0.4nm,0.3s,baz=323,slow=20,SNR=1.0						
PMG				LR	LR	21 26 06.4	
	comp=Z,289nm,19.3s,baz=122,slow=42						
	1.7nm,0.4s						
PMG	**Port Moresby**	**8.12**	**142**	Pn	**Pn**	**21 22 30.8**	**+0.2**
FAKI	**Fak Fak**	**9.83**	**270**	Pn	**Pn**	**21 22 54.2**	**+0.2**
KRVT	**Keravat (AS076**	**10.00**	**98**	LR	LR	21 26 06.8	
	comp=Z,582nm,20.8s,baz=63,slow=34						
RABL	**Rabaul**	**10.12**	**97**	Pn	**Pn**	**21 22 58.0**	**0.0**
COEN	**Coen**	**10.95**	**174**	Pn	**Pn**	**21 23 11.2**	**+1.8**
MTN	**Manton Dam**	**14.61**	**227**	Pn	**Pn**	**21 23 59.4**	**0.0**
GUMO	**Guam**	**16.70**	**9**	LR	LR	21 29 55.4	
	comp=Z,169nm,21.9s,baz=164,slow=34						
KNRA	**Kununurra**	**18.20**	**225**	P	**Pn**	**21 24 44.0**	**-1.2**
WB0	**Warramunga Arr**	**18.29**	**204**		**P**	**21 24 46.0**	**-0.3**
WRA	**Warramunga Arr**	**18.47**	**204**	P	**P**	**21 24 48.4**	**+0.2**
	2.5nm,0.6s,baz=12,slow=13,SNR=38						
WRA				LR	LR	21 32 13.3	
	comp=Z,459nm,21.8s,baz=10,slow=38						
WRA	**Warramunga Arr**	**18.47**	**204**	P	**P**	**21 24 48.4**	**+0.2**
HNR	**Honiara**	**18.86**	**111**	P	**P**	**21 24 51.3**	**-1.2**
SOEI	**Soe**	**18.94**	**248**		**P**	**21 24 52.4**	**-1.1**
SOEI				IAmb	IAmb	21 25 13.0	
	comp=Z,68nm,0.9s						
SOEI	**Soe**	**18.94**	**248**	P	**Pn**	**21 24 54.4**	**+0.1**
	comp=Z,82nm,1.0s						
DAV	**Davao City (W)**	**19.27**	**301**	LR	LR	21 31 55.8	
	comp=Z,71nm,19.1s,baz=338,slow=35						
MRSI	**Marisa**	**20.44**	**279**	P	**P**	**21 25 10.4**	**+0.7**
	comp=Z,25nm,0.9s						
TOLI2	**Tolitoli**	**21.69**	**281**	P	**P**	**21 25 20.4**	**-2.9**
TOLI2				IAmb	IAmb	21 25 34.2	
	comp=Z,18nm,0.8s						
AS31	**Alice Springs**	**22.03**	**200**	P	**P**	**21 25 26.0**	**-0.8**
ASAR	**Alice Springs**	**22.03**	**200**	P	**P**	**21 25 26.8**	**-0.1**
	comp=Z,2.9nm,0.8s,baz=28,slow=11,SNR=39						
ASAR				LR	LR	21 34 00.4	
	comp=Z,341nm,18.7s,baz=21,slow=37						
	comp=Z,2.9nm,0.8s						
ASAR	**Alice Springs**	**22.03**	**200**	P	**P**	**21 25 25.9**	**-1.0**
FITZ	**Fitzroy Crossi**	**22.03**	**226**	P	**P**	**21 25 25.5**	**-1.4**
KAPI	**Kappang**	**22.38**	**264**	LR	LR	21 36 39.2	
	comp=Z,126nm,20.9s,baz=82,slow=43						
MPSI	**Mapaga**	**22.43**	**278**	P	**P**	**21 25 29.7**	**-1.5**
	comp=Z,20nm,1.1s,comp=Z,463nm						
EIDS	**Eidsvold**	**23.88**	**160**	P	**P**	**21 25 46.2**	**+0.6**
EIDS				IAmb	IAmb	21 25 53.0	
	comp=Z,39nm,1.4s						
MYLDM	**Lahad Datu**	**24.93**	**289**	P	**P**	**21 25 55.9**	**+0.5**
STKA	**Stephens Creek**	**28.74**	**181**	P	**P**	**21 26 28.5**	**-1.1**
	comp=Z,1.5nm,0.6s,baz=6.3,slow=8.5,SNR=5.3						
STKA				LR	LR	21 38 23.1	
	comp=Z,132nm,18.7s,baz=323,slow=37						
	comp=Z,1.5nm,0.6s						
STKA	**Stephens Creek**	**28.74**	**181**	P	**P**	**21 26 29.6**	**+0.1**
JCJ	**Chichijima**	**29.91**	**0**	LR	LR	21 37 51.4	
	comp=Z,82nm,20.2s,baz=150,slow=35						
BBOO	**Buckleboo**	**30.20**	**190**	P	**P**	**21 26 42.3**	**-0.2**
BBOO				IAmb	IAmb	21 27 18.4	
	comp=Z,10nm,1.2s						
DZM	**Mont Dzumac**	**30.31**	**131**	P	**P**	**21 26 43.7**	**0.0**
DZM				IAmb	IAmb	21 27 01.1	
	comp=Z,27nm,1.4s						
FORT	**Forrest**	**30.66**	**204**	P	**P**	**21 26 46.8**	**+0.2**
KSM	**Kuching**	**32.08**	**278**	P	**P**	**21 26 59.2**	**-0.1**
KSM				IAmb	IAmb	21 27 01.5	
	comp=Z,18nm,1.3s						
H11S3	**WAKE ISLAND Hy**	**32.28**	**48**	T	T	22 00 51.8	
	baz=232,slow=75,SNR=48						
H11S2	**WAKE ISLAND Hy**	**32.30**	**48**	T	T	22 00 52.7	
	baz=232,slow=75,SNR=34						
H11S1	**WAKE ISLAND Hy**	**32.30**	**48**	T	T	22 00 49.7	
	baz=232,slow=75,SNR=27						
CAN	**Canberra**	**32.80**	**170**	P	**P**	**21 27 06.6**	**+1.2**
H11N1	**WAKE ISLAND Hy**	**33.20**	**46**	T	T	22 01 55.5	
	baz=229,slow=76,SNR=186						
H11N2	**WAKE ISLAND Hy**	**33.22**	**46**	T	T	22 01 56.7	
	baz=229,slow=76,SNR=216						
H11N3	**WAKE ISLAND Hy**	**33.22**	**46**	T	T	22 01 56.7	
	baz=229,slow=76,SNR=151						
MORW	**Morawa**	**35.86**	**221**	P	**P**	**21 27 32.2**	**+0.2**
JMN	**Monobe**	**37.33**	**349**	P	**P**	**21 27 43.6**	**-0.8**
JMN				IAmb	IAmb	21 28 22.0	
	comp=Z,28nm,1.3s						
MDSI	**Maura Dua**	**37.86**	**267**	P	**P**	**21 27 49.3**	**+0.1**
	comp=Z,12nm,1.1s						
MJAR	**Matsushiro Arr**	**39.49**	**355**	LR	LR	21 41 39.0	
	comp=Z,49nm,20.1s,baz=188,slow=32						
SDSI	**Sungai Dareh**	**40.69**	**272**	P	**P**	**21 28 13.1**	**+0.3**
	comp=Z,11nm,1.2s						
BKNI	**Bangkinang**	**41.17**	**274**	P	**P**	**21 28 16.4**	**-0.3**
NJ2	**Nanjing**	**41.25**	**329**	*e*P	**P**	**21 28 17.8**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KULM	**Kulim**	**42.21**	**281**	P	**P**	**21 28 24.7**	**-0.6**
RPSI	**Rantau Prapat**	**43.52**	**277**	P	**P**	**21 28 35.5**	**-0.4**
RPSI				IAmb	IAmb	21 28 41.4	
	comp=Z,18nm,1.0s						
GSI	**Gunungsitoli**	**44.70**	**275**	P	**P**	**21 28 44.0**	**-1.5**
GSI				IAmb	IAmb	21 29 10.6	
	comp=Z,16nm,1.1s						
AFI	**Afiamalu**	**46.81**	**106**	LR	LR	21 46 01.7	
	comp=Z,121nm,18.3s,baz=312,slow=33						
ASAJ	**Asahikawa**	**46.89**	**0**	LR	LR	21 48 03.3	
	comp=Z,24nm,21.8s,baz=180,slow=35						
TKNZ	**Takaka Hill**	**46.97**	**148**	P	**P**	**21 29 02.2**	**-0.7**
KMI	**Kunming**	**47.30**	**309**	⇓P	**P**	**21 29 07.0**	**+1.0**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
URZ	**Urewera**	**47.48**	**142**	LR	LR	21 50 08.7	
	comp=Z,113nm,18.4s,baz=12,slow=38						
CMAR	**Chiang Mai Arr**	**47.52**	**298**	P	**P**	**21 29 08.5**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=112,slow=5.8,SNR=5.7						
CMAR				LR	LR	21 52 10.7	
	comp=Z,8.3nm,18.2s,baz=160,slow=40						
	comp=Z,0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**47.52**	**298**	P	**P**	**21 29 07.6**	**0.0**
RTZ	**Ruatahuna**	**47.63**	**143**	P	**P**	**21 29 07.9**	**-0.3**
USA0B	**Ussuriysk Arra**	**47.84**	**350**	P	**P**	**21 29 09.1**	**-0.4**
USA0B				IAmb	IAmb	21 29 28.9	
	comp=Z,6.5nm,0.7s						
XAN	**Xi'an**	**48.30**	**323**	P	**P**	**21 29 14.0**	**+0.6**
XAN				pP	pP	21 29 18.8	-3.5
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PZH	**PanZhiHua**	**48.77**	**310**	P	**P**	**21 29 17.4**	**+0.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PZH				pmax	pmax		
	comp=Z,120nm,5.4s						
BJT	**Baijiatuau**	**48.96**	**334**	P	**P**	**21 29 18.2**	**0.0**
BJT				IAmb	IAmb	21 29 53.2	
	comp=Z,4.9nm,1.1s						
BNX	**BinXian**	**50.24**	**347**	⇓P	**P**	**21 29 28.4**	**+0.5**
BNX				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BNX				pmax	pmax		
	comp=Z,130nm,5.2s						
HHC	**Hu-ho-hao-te**	**51.77**	**331**	*e*P	**P**	**21 29 41.4**	**+1.7**
HHC				pmax	pmax		
	comp=Z,16nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,7.6s						
KLR	**Kul'dur**	**52.78**	**352**	LR	LR	21 48 21.1	
	comp=Z,40nm,21.7s,baz=170,slow=32						
LZH	**Lanzhou**	**52.78**	**321**	*e*P	**P**	**21 29 49.1**	**+1.8**
LZH				pP	pP	21 29 54.8	-1.5
LZH				sP	sP	21 29 57.5	-2.3
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
GTA	**Gaotai**	**57.34**	**322**	⇑P	**P**	**21 30 21.9**	**+1.7**
GTA				sP	pP	21 30 27.8	-1.4
GTA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PETK	**Petropavlovsk-**	**57.41**	**11**	LR	LR	21 51 06.8	
	comp=Z,44nm,21.3s,baz=213,slow=32						
LSA	**Lhasa**	**58.54**	**308**	P	**P**	**21 30 29.6**	**+0.4**
LSA				IAmb	IAmb	21 30 32.7	
	comp=Z,5.4nm,1.0s						
SONM	**Songino Array**	**59.46**	**333**	P	**P**	**21 30 34.6**	**-0.2**
	comp=Z,0.8nm,0.9s,baz=132,slow=6.8,SNR=3.7						
	comp=Z,0.8nm,0.9s						
SHEM	**Shemya Is, Ala**	**61.71**	**21**	LR	LR	21 53 49.5	
	comp=Z,68nm,19.1s,baz=95,slow=32						
MA2	**Magadan**	**62.75**	**5**	LR	LR	21 55 30.9	
	comp=Z,41nm,21.4s,baz=129,slow=34						
YAK	**Yakutsk**	**65.53**	**354**	LR	LR	21 56 16.1	
	comp=Z,29nm,21.4s,baz=208,slow=33						
YAK	**Yakutsk**	**65.53**	**354**	P	**P**	**21 31 15.0**	**+0.1**
WMQ	**Urumqi**	**67.35**	**320**	*e*P	**P**	**21 31 27.8**	**+0.7**
WMQ				pP	pP	21 31 33.3	-2.9
WMQ				PP	**PP**	**21 33 55.4**	**-0.4**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MK31	**Makanchi Array**	**72.09**	**321**	P	**P**	**21 31 55.5**	**-0.6**
MK31				IAmb	IAmb	21 31 58.5	
	comp=Z,4.5nm,1.1s						
MKAR	**Makanchi Array**	**72.09**	**321**	P	**P**	**21 31 57.4**	**+1.2**
	comp=Z,2.9nm,0.9s,baz=108,slow=8.0,SNR=17						
	comp=Z,2.9nm,0.9s						
MKAR	**Makanchi Array**	**72.09**	**321**	P	**P**	**21 31 56.0**	**-0.2**
MAKZ	**Makanchi**	**72.29**	**321**	P	**P**	**21 31 57.5**	**+0.1**
MAKZ				IAmb	IAmb	21 31 59.7	
	comp=Z,5.2nm,1.1s						
KSH	**Kashi**	**73.75**	**313**	P	**P**	**21 32 08.6**	**+2.3**
KSH				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ZALV	**Zalesovo Beam**	**73.90**	**329**	P	**P**	**21 32 06.0**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=113,slow=5.8,SNR=9.1						
	comp=Z,1.3nm,0.6s						
ZALV	**Zalesovo Beam**	**73.90**	**329**	P	**P**	**21 32 05.8**	**-0.9**
NIL	**Nilore**	**74.21**	**306**	P	**P**	**21 32 08.0**	**-1.0**
VNDA	**Vanda**	**75.23**	**176**	LR	LR	22 03 18.5	
	comp=Z,51nm,18.6s,baz=330,slow=34						
VNDA	**Vanda**	**75.23**	**176**	P	**P**	**21 32 14.1**	**+0.1**
GAR	**Garm**	**77.82**	**311**	P	**P**	**21 32 29.0**	**-0.6**
GAR				IAmb	IAmb	21 32 34.0	
	comp=Z,12nm,1.3s						
CHGR	**Chuyangaron**	**78.62**	**310**	P	**P**	**21 32 33.8**	**-0.2**
CHGR				IAmb	IAmb	21 32 41.1	
	comp=Z,13nm,1.2s						
KK31	**Karatay Array**	**78.71**	**315**	P	**P**	**21 32 34.0**	**-0.3**
KKAR	**Karatay Array**	**78.71**	**315**	P	**P**	**21 32 33.7**	**-0.6**
KDAK	**Kodiak Island**	**79.65**	**30**	LR	LR	22 01 24.3	
	comp=Z,80nm,20.6s,baz=264,slow=31						
NRIK	**Noril'sk**	**80.95**	**343**	P	**P**	**21 32 46.2**	**+0.4**
NRIK				IAmb	IAmb	21 33 04.6	
	comp=Z,7.1nm,1.3s						
CAST	**Castle Rocks**	**82.08**	**24**	P	**P**	**21 32 51.4**	**-0.5**
IMAR	**Indian Mountai**	**82.48**	**22**	P	**P**	**21 32 54.1**	**+0.2**
TRF	**Thorofare Moun**	**82.84**	**25**	P	**P**	**21 32 56.9**	**+0.7**
TRF				IAmb	IAmb	21 33 20.4	
	comp=Z,8.6nm,1.3s						
CCB	**Clear Creek Bu**	**84.28**	**24**	P	**P**	**21 33 02.4**	**-0.8**
CCB				IAmb	IAmb	21 33 08.3	
	comp=Z,3.0nm,0.9s						
ILAR	**Eielson Array**	**84.70**	**24**	P	**P**	**21 33 04.0**	**-1.4**
	comp=Z,0.9nm,0.7s,baz=254,slow=4.5,SNR=12						
ILAR				LR	LR	22 06 05.3	
	comp=Z,31nm,20.0s,baz=257,slow=32						
	comp=Z,0.9nm,0.7s						
ILAR	**Eielson Array**	**84.70**	**24**	P	**P**	**21 33 04.3**	**-1.0**
BMAR	**Burnt Mountain**	**86.40**	**22**	P	**P**	**21 33 13.9**	**+0.1**
QSPA	**South Pole Qui**	**86.96**	**180**	LR	LR	22 12 16.9	
	comp=Z,62nm,18.2s,baz=2.5,slow=36						
GEYT	**Alibeck**	**87.07**	**308**	P	**P**	**21 33 19.1**	**+1.4**
	comp=Z,0.6nm,0.4s,baz=85,slow=7.3,SNR=2.1						
	comp=Z,0.6nm,0.4s						
ABKAR	**Akbulak array**	**87.12**	**319**	P	**P**	**21 33 17.3**	**-0.4**
DAWY	**Dawson**	**87.66**	**26**	P	**P**	**21 33 20.2**	**+0.2**
DAWY				IAmb	IAmb	21 33 29.2	
	comp=Z,8.7nm,1.5s						
DLBC	**Dease Lake**	**91.41**	**32**	LR	LR	22 08 34.3	
	comp=Z,45nm,20.1s,baz=286,slow=32						
BBB	**Bella Bella**	**92.21**	**38**	LR	LR	22 08 18.4	
	comp=Z,46nm,19.2s,baz=202,slow=31						
YBH	**Yreka Blue Hor**	**95.86**	**49**	LR	LR	22 09 49.3	
	comp=Z,70nm,20.2s,baz=293,slow=31						
YKA	**Yellowknife Ar**	**98.77**	**27**	LR	LR	22 13 14.8	
	comp=Z,56nm,20.8s,baz=294,slow=32						
NVAR	**Mina Array Bea**	**99.38**	**52**	LR	LR	22 11 19.5	
	comp=Z,28nm,21.9s,baz=286,slow=31						
NEW	**Newport**	**99.40**	**42**	LR	LR	22 10 47.9	
	comp=Z,37nm,20.8s,baz=286,slow=30						
SPITS	**Spitsbergen Ar**	**99.84**	**350**	LR	LR	22 19 17.9	
	comp=Z,18nm,20.9s,baz=7.0,slow=35						
TORD	**Torodi Ar. Bea**	**139.57**	**287**	PKP	**PKPdf**	**21 40 01.2**	**+0.8**
	comp=Z,0.8nm,0.9s,baz=85,slow=1.3,SNR=3.7						
LPAZ	**La Paz**	**144.52**	**124**	PKP	**PKPdf**	**21 40 09.9**	**0.0**
	comp=Z,3.9nm,0.9s,baz=250,slow=1.9,SNR=7.3						
SDV	**Santo Domingo**	**146.94**	**78**	PKPbc	**PKPbc**	**21 40 15.9**	**+0.3**
	comp=Z,7.1nm,0.9s,baz=279,slow=1.6,SNR=5.5						

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*IDC **18** 21:24:42.6±10.0, 39°.64N×20°.95E, h0^{km}, mb3.5/3, mbtmp3.5/4, Error ellipse: s-maj=204.7km s-min=29.5km az=32.0*

*ATH **18** 21:24:43.2, 39°.37N×20°.50E, h5^{km}±31^{km}, ML2.7/14, Error ellipse: s-maj=31.6km s-min=0.8km az=0.0*

*THE **18** 21:24:43.3, 39°.37N×20°.55E, h1^{km}±2^{km}, ML2.8/4, Error ellipse: s-maj=2.2km s-min=0.5km az=193.0*

ISC 18 21:24:43.1±0.9**, 39°.37N**±0°.02×**20°.53E**±0°.02**, h12^{km}**±7^{km}**, n78,** σ**1^{s}08**/102**, mb3.5**/3**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGT	**Igoumenitsa**	**0.22**	**318**	P	**Pg**	**21 24 47.8**	**-0.1**
IGT				S	**Sg**	**21 24 51.9**	**+0.8**
	6µm,0.3s						
JAN	**Janina**	**0.38**	**41**	P	**Pg**	**21 24 50.1**	**-0.6**
JAN				S	**Sg**	**21 24 56.0**	**+0.1**
	3µm,0.2s						
JAN	**Janina**	**0.38**	**41**	P	**Pg**	**21 24 50.2**	**-0.6**
JAN				S	**Sg**	**21 24 56.1**	**+0.2**
JAN				AML	AML	21 24 56.9	
	comp=N,4806µm,0.2s						
JAN				AML	AML	21 24 57.1	
	comp=E,7104µm,0.2s						
TSLK	**Tsoukalades, L**	**0.55**	**169**	P	**Pg**	**21 24 53.8**	**-0.1**
TSLK				S	**Sg**	**21 25 02.4**	**+1.2**
TSLK	**Tsoukalades, L**	**0.55**	**169**	P	**Pg**	**21 24 53.5**	**-0.3**
TSLK				S	**Sg**	**21 25 00.7**	**-0.4**
TSLK				AML	AML	21 25 05.5	
	comp=E,922µm,0.2s						
TSLK				AML	AML	21 25 06.9	
	comp=N,933µm,0.3s						
LKD2	**Lefkada island**	**0.59**	**170**	P	**Pg**	**21 24 54.1**	**-0.5**
LKD2	**Lefkada island**	**0.59**	**170**	P	**Pg**	**21 24 53.9**	**-0.6**
LKD2				S	**Sg**	**21 25 02.2**	**-0.2**
LKD2				AML	AML	21 25 08.7	
	comp=N,1379µm,0.3s						
LKD2				AML	AML	21 25 11.2	
	comp=E,1572µm,0.3s						
KASA	**Kassiopi**	**0.59**	**310**	P	**Pg**	**21 24 53.9**	**-0.8**
KASA				S	**Sg**	**21 25 01.8**	**-0.7**
KASA				AML	AML	21 25 04.9	
	comp=E,1827µm,0.2s						
KASA				AML	AML	21 25 05.7	
	comp=N,1249µm,0.2s						
SRN	**Sarande**	**0.65**	**322**	P	**Pg**	**21 24 54.2**	**-1.6**
SRN				S	**Sg**	**21 25 05.4**	**+1.0**
KEK	**Kerkira**	**0.66**	**302**	P	**Pg**	**21 24 56.6**	**+0.7**
KEK	**Kerkira**	**0.66**	**302**	P	**Pg**	**21 24 56.1**	**+0.1**
KEK				S	**Sg**	**21 25 04.4**	**-0.3**
KEK				AML	AML	21 25 12.9	
	comp=E,1421µm,0.3s						
KEK				AML	AML	21 25 13.2	
	comp=N,916µm,0.3s						

NYDR	Nydri-Lefkada	0.67	168	P	Pg	21 24 55.3	-0.8
NYDR				S	Sb	21 25 06.3	+0.5
	comp=N,362nm,0.3s						
DRAG	Dragano-Lefkad	0.68	177	P	Pg	21 24 55.7	-0.7
EVGI	Lefkada island	0.75	172	P	Pg	21 24 57.2	-0.5
EVGI	Lefkada island	0.75	172	P	Pg	21 24 56.7	-0.9
EVGI				S	Sg	21 25 08.1	+0.6
LSK	Leskovik	0.78	4	P	Pg	21 24 57.5	-0.8
KPRO	Kipourio	0.87	48	P	Pg	21 24 59.0	-1.0
KPRO	Kipourio	0.87	48	P	Pg	21 24 58.8	-1.1
KPRO				S	Sg	21 25 11.3	-0.1
KPRO				AML	AML	21 25 14.7	
	comp=N,1028µm,0.6s						
KPRO				AML	AML	21 25 16.3	
	comp=E,894µm,0.6s						
FSK	Fiskardo	0.91	178	P	Pg	21 25 00.6	0.0
FSK				S	Sb	21 25 14.1	+1.3
FSK	Fiskardo	0.91	178	P	Pg	21 24 59.9	-0.7
FSK				S	Sg	21 25 12.5	0.0
FSK				AML	AML	21 25 17.1	
	comp=N,2360µm,0.4s						
FSK				AML	AML	21 25 18.1	
	comp=E,1766µm,0.3s						
PENT	Pentalofos	0.95	30	P	Pg	21 25 00.6	-0.9
PENT	Pentalofos	0.95	30	P	Pg	21 25 00.5	-1.0
PENT				S	Sb	21 25 14.7	+0.4
PVO	Paravola	1.08	134	P	Pg	21 25 02.6	-1.3
EVR	Evrytania	1.09	114	P	Pg	21 25 03.9	-0.3
EVR	Evrytania	1.09	114	P	Pb	21 25 04.5	+0.4
EVR				S	Sb	21 25 19.8	+1.5
EVR				AML	AML	21 25 24.6	
	comp=N,742µm,0.7s						
EVR				AML	AML	21 25 25.6	
	comp=E,598µm,0.3s						
KEF4	Livadi, Kephal	1.11	184	P	Pg	21 25 03.6	-0.9
KEF4	Livadi, Kephal	1.11	184	P	Pg	21 25 03.4	-1.1
KEF4				S	Sg	21 25 19.3	+0.4
DMLN	Damoulianata-K	1.13	186	P	Pg	21 25 04.6	-0.3
THL	Klokotos Trika	1.17	80	P	Pg	21 25 04.3	-1.3
THL	Klokotos Trika	1.17	80	P	Pg	21 25 04.3	-1.3
THL				S	Sb	21 25 21.2	+0.9
THL				AML	AML	21 25 25.1	
	comp=E,335µm,0.7s						
THL				AML	AML	21 25 25.5	
	comp=N,352µm,0.7s						
VLS	Valsamata	1.19	178	P	Pg	21 25 05.1	-0.9
VLS	Valsamata	1.19	178	P	Pg	21 25 05.0	-0.9
VLS				S	Sg	21 25 21.3	-0.1
VLS				AML	AML	21 25 24.0	
	comp=E,1134µm,0.6s						
VLS				AML	AML	21 25 25.0	
	comp=N,1085µm,0.4s						
PSDA	Pessada-Kefalo	1.25	178	P	Pg	21 25 06.5	-0.7
PSDA	Pessada-Kefalo	1.25	178	P	Pg	21 25 05.7	-1.5
KBN	Korca	1.27	9	P	Pg	21 25 06.9	-0.6
MAKR	Makrakomi, Fth	1.30	105	P	Pg	21 25 07.5	-0.6
ANX	Ano Chora	1.33	125	P	Pg	21 25 08.2	-0.5
ANX	Ano Chora	1.33	125	P	Pg	21 25 08.2	-0.5
ANX				S	Sg	21 25 25.9	-0.2
ANX				AML	AML	21 25 30.0	
	comp=N,364µm,0.6s						
ANX				AML	AML	21 25 36.9	
	comp=E,483µm,0.5s						
KZN	Kozani	1.34	45	P	Pg	21 25 08.5	-0.4
KZN	Kozani	1.34	45	P	Pg	21 25 08.6	-0.3
KZN				AML	AML	21 25 32.0	
	comp=N,638µm,0.4s						
KZN				AML	AML	21 25 34.4	
	comp=E,482µm,0.5s						
TYRN	Tyrnavos	1.36	75	P	Pg	21 25 07.7	-1.5
EFP	Efpalio	1.43	131	P	Pn	21 25 09.0	+0.2
EFP	Efpalio	1.43	131	P	Pn	21 25 09.8	+1.0
AGG	Agios Georgios	1.44	103	P	Pn	21 25 09.7	+0.6
AGG	Agios Georgios	1.44	103	P	Pn	21 25 09.6	+0.6
RLS	Riolos of Patr	1.50	150	P	Pn	21 25 09.8	-0.1
SERG	Sergoula	1.53	128	P	Pn	21 25 11.5	+1.3
SERG				AML	AML	21 25 40.5	
	comp=N,300µm,0.3s						
SERG				AML	AML	21 25 45.5	
	comp=E,400µm,0.4s						
FNA	Florina	1.56	24	P	Pn	21 25 11.1	+0.4
FNA				S	Sn	21 25 32.4	+1.5
	comp=E,265nm,0.5s						
FNA	Florina	1.56	24	P	Pn	21 25 11.2	+0.6
FNA				S	Sn	21 25 32.6	+1.7
FNA				AML	AML	21 25 36.8	
	comp=N,478µm,0.5s						
FNA				AML	AML	21 25 38.0	
	comp=E,582µm,0.5s						
LAKA	Lakka	1.60	134	P	Pn	21 25 12.7	+1.4
LTHK	Lithakia	1.67	172	P	Pn	21 25 13.2	+1.0
LIT	Litokhoron	1.68	64	P	Pn	21 25 13.9	+1.5
DRO	Drossia	1.69	146	P	Pn	21 25 13.5	+1.0
SCTE	Santa Cesarea	1.74	295	P	Pn	21 25 13.1	0.0
OHR	Ohrid	1.75	7	*e*Pn	Pg	21 25 17.2	+0.5
OHR				*e*Sg	Sg	21 25 40.6	+1.0
AXAR	Agios Charalam	1.77	109	P	Pn	21 25 15.1	+1.6
KLV	Kalavryta, Ach	1.83	136	P	Pn	21 25 16.0	+1.5
GUR	Goura	2.02	135	P	Pn	21 25 18.7	+1.6
ATAL	Atalanti	2.06	108	P	Pn	21 25 18.9	+1.4
XOR	Xorichti	2.07	89	P	Pn	21 25 18.5	+0.8
XOR	Xorichti	2.07	89	P	Pn	21 25 18.0	+0.3
NEO	Neokhori	2.09	91	P	Pn	21 25 19.5	+1.5
GRG	Griva	2.14	42	P	Pn	21 25 19.8	+1.2
VIL2	Platees	2.43	117	P	Pn	21 25 24.9	+2.2
ITM	Ithomi	2.45	153	P	Pn	21 25 24.4	+1.5
VAY	Valandovo	2.50	38	*e*Pn	Pn	21 25 26.6	+3.0
VAY				*e*Sn	Sn	21 25 56.1	+2.1
KNT	Kendrikon	2.55	45	P	Pn	21 25 24.5	+0.2
SOH	Sokhos	2.61	55	P	Pn	21 25 26.8	+1.7
STIP	Stip	2.65	28	*e*Pn	Pb	21 25 29.6	-0.9
PYL	PYLOS	2.65	158	P	Pn	21 25 26.2	+0.6
EREA	Eretria	2.82	109	P	Pn	21 25 29.6	+1.6
SRS	Serrai	2.93	52	P	Pn	21 25 30.3	+0.9
DION	Dionisos Attik	2.96	115	P	Pn	21 25 31.9	+2.0
VLY	Voula,Athens	2.97	120	P	Pn	21 25 31.3	+1.2
GERES	GERESS Array B	10.66	335	Pn	Pn	21 27 16.2	+0.5
	comp=E,0.7nm,0.8s,baz=137,slow=9.4,SNR=4.0						
FINES	FINESS Array B	22.37	7	P	P	21 29 38.7	-2.1
	comp=E,1.2nm,0.8s,baz=177,slow=9.5,SNR=3.5						
	comp=E,1.2nm,0.8s						
MKAR	Makanchi Array	44.68	59	P	P	21 32 53.6	-2.2
	comp=E,0.4nm,0.6s,baz=274,slow=6.2,SNR=5.7						
	comp=E,0.4nm,0.6s						
ZALV	Zalesovo Beam	44.90	49	P	P	21 32 55.3	-2.0
	comp=E,0.5nm,0.4s,baz=272,slow=7.1,SNR=1.4						
	comp=E,0.5nm,0.4s						

ROM 18 21:51:17.5±0.0**, 42°.747N**±0°.002×**13°.178E**±0°.004**,**
h10^{km}, ML1.4/16**, 8C-2D, Error ellipse: s-maj=0.3km**
s-min=0.2km az=260.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
T1218	Civita (PG)	0.09	211	⇑P	Pg	21 51 20.4	+0.3
T1218				S	Sg	21 51 22.3	+0.3
T1218				AML	AML		
	comp=E,180µm,1.5s						
T1218				AML	AML		
	comp=N,200µm,0.9s						
T1218				AML	AML		
	comp=E,191µm,0.5s						
T1218				AML	AML		
	comp=N,160µm,0.9s						
T1218				AML	AML		
	comp=E,1058µm,0.4s						
T1218				AML	AML		
	comp=E,1030µm,0.2s						
T1218				AML	AML		
	comp=E,1056µm,0.4s						
T1218				AML	AML		
	comp=N,1710µm,0.2s						
T1218				AML	AML		
	comp=E,1027µm,0.2s						
T1218				AML	AML		
	comp=N,1670µm,0.2s						
T1218				AML	AML		
	comp=N,140µm,0.1s						
T1218				AML	AML		
	comp=N,146µm,0.1s						
T1218				AML	AML		
	comp=E,133µm,0.1s						
T1218				AML	AML		
	comp=E,133µm,0.2s						
T1212	Cascia, Frazio	0.10	273	⇑P	Pg	21 51 20.5	+0.4
T1212				S	Sg	21 51 22.6	+0.4
T1212				AML	AML		
	comp=E,112µm,1.4s						
T1212				AML	AML		
	comp=N,86µm,0.1s						
T1212				AML	AML		
	comp=E,112µm,1.4s						
T1212				AML	AML		
	comp=N,107µm,0.1s						
T1212				AML	AML		
	comp=E,82µm,0.1s						
T1212				AML	AML		
	comp=E,105µm,0.8s						
T1212				AML	AML		
	comp=N,86µm,0.1s						
T1212				AML	AML		
	comp=N,75µm,0.1s						
T1245	Castelsantange	0.11	4	P	Pg	21 51 20.6	+0.2
T1245				S	Sg	21 51 23.1	+0.5
T1245				AML	AML		
	comp=E,120µm,1.4s						
T1245				AML	AML		
	comp=N,181µm,1.2s						
T1245				AML	AML		
	comp=N,198µm,0.2s						
T1245				AML	AML		
	comp=E,140µm,0.2s						
T1245				AML	AML		
	comp=N,169µm,0.3s						
T1245				AML	AML		
	comp=E,115µm,0.2s						
SMA1	SAN MARTINO	0.16	135	P	Pg	21 51 21.7	+0.5
SMA1				AML	AML		
	comp=E,3400µm,0.3s						
SMA1				AML	AML		
	comp=N,1450µm,0.1s						
SMA1				AML	AML		
	comp=N,1455µm,0.1s						
SMA1				AML	AML		
	comp=E,3395µm,0.3s						
SMA1				AML	AML		
	comp=N,1452µm,0.1s						
MC2	Monte Cornacci	0.17	3	P	Pg	21 51 21.8	+0.5
MC2				S	Sg	21 51 25.1	+1.1
T1216	Preci, Frazion	0.18	321	⇑P	Pg	21 51 22.1	+0.6
T1216				AML	AML		
	comp=E,80µm,1.5s						
T1216				AML	AML		
	comp=N,107µm,1.3s						
T1216				AML	AML		
	comp=E,81µm,1.5s						
T1216				AML	AML		
	comp=N,108µm,1.3s						
T1216				AML	AML		
	comp=N,98µm,0.1s						
T1216				AML	AML		
	comp=E,55µm,0.2s						
T1217	Poggiodomo (PG	0.18	259	P	Pb	21 51 22.2	-0.7
T1217				S	Sg	21 51 25.6	+1.3
T1217				AML	AML		
	comp=E,82µm,0.6s						
T1217				AML	AML		
	comp=N,31µm,0.1s						
T1217				AML	AML		
	comp=N,204µm,0.6s						
T1217				AML	AML		
	comp=E,37µm,0.1s						
T1241	Roccafluvione,	0.22	60	P	Pg	21 51 22.5	+0.5
T1241				S	Sg	21 51 26.3	+1.1
T1241				AML	AML		
	comp=E,71µm,0.4s						
T1241				AML	AML		
	comp=N,53µm,0.3s						
T1241				AML	AML		
	comp=N,127µm,0.7s						
T1241				AML	AML		
	comp=E,34µm,0.3s						
T1241				AML	AML		
	comp=E,116µm,0.5s						
T1241				AML	AML		
	comp=N,51µm,0.4s						
RM33	Pellescritta (	0.24	174	⇑P	Pb	21 51 23.2	-0.7
RM33				S	Sg	21 51 27.1	+1.3
RM33				AML	AML		
	comp=E,1186µm,1.5s						
RM33				AML	AML		
	comp=N,754µm,0.5s						
RM33				AML	AML		
	comp=E,1139µm,1.5s						
RM33				AML	AML		
	comp=E,1185µm,1.5s						
RM33				AML	AML		
	comp=N,752µm,0.5s						
RM33				AML	AML		
	comp=N,786µm,0.5s						
RM33				AML	AML		
	comp=N,753µm,0.5s						
RM33				AML	AML		
	comp=N,635µm,0.1s						
RM33				AML	AML		
	comp=E,1091µm,0.1s						
RM33				AML	AML		
	comp=N,629µm,0.1s						
RM33				AML	AML		
	comp=E,1135µm,0.1s						
CAMP	Campotosto	0.27	141	P	Pg	21 51 23.5	+0.5
CAMP				S	Sg	21 51 28.0	+1.2
CAMP				AML	AML		
	comp=E,159µm,0.8s						
CAMP				AML	AML		
	comp=N,176µm,1.0s						
CAMP				AML	AML		
	comp=E,107µm,0.4s						
CAMP				AML	AML		
	comp=N,146µm,0.4s						
FDMO	Fiordimonte	0.30	347	⇓P	Pg	21 51 24.1	+0.6
FDMO				AML	AML		
	comp=E,34µm,0.2s						
FDMO				AML	AML		
	comp=N,37µm,0.2s						
T1247	Pizzolo (AQ)	0.32	164	AML	AML		
	comp=N,456µm,0.5s						
T1247				AML	AML		
	comp=E,410µm,0.7s						
T1219	Muccia, Frazio	0.33	338	S	Sg	21 51 29.7	+1.1
TERO	Teramo	0.34	111	⇑P	Pg	21 51 24.5	+0.2
TERO				AML	AML		
	comp=E,309µm,0.1s						
TERO				AML	AML		
	comp=E,286µm,0.1s						
TERO				AML	AML		
	comp=N,192µm,0.8s						
TERO				AML	AML		
	comp=N,211µm,0.8s						
TERO				AML	AML		
	comp=E,286µm,0.1s						
TERO				AML	AML		
	comp=N,201µm,0.1s						
TERO				AML	AML		
	comp=E,309µm,0.1s						
TERO				AML	AML		
	comp=N,178µm,0.1s						
T1222	Castel Sant'An	0.36	197	AML	AML		
	comp=E,314µm,0.3s						
T1222				AML	AML		
	comp=N,148µm,0.4s						
T1222				AML	AML		
	comp=N,148µm,0.3s						
T1222				AML	AML		
	comp=E,314µm,0.3s						
T1220	Camerino, Fraz	0.37	350	⇑P	Pb	21 51 25.5	-0.6
T1220				AML	AML		
	comp=E,77µm,0.2s						
T1220				AML	AML		
	comp=N,2748µm,3.7s						
T1220				AML	AML		
	comp=E,12739µm,4.2s						
T1220				AML	AML		
	comp=N,84µm,0.2s						
GIGS	Gran Sasso	0.41	136	S	Sb	21 51 33.7	+0.5
GIGS				AML	AML		
	comp=E,48µm,0.1s						
GIGS				AML	AML		
	comp=N,47µm,0.1s						
GIGS				AML	AML		
	comp=E,48µm,0.1s						
GIGS				AML	AML		
	comp=N,47µm,0.1s						
OFFI	Offida	0.42	63	⇓P	Pb	21 51 27.3	+0.4
OFFI				AML	AML		
	comp=E,176µm,1.5s						
OFFI				AML	AML		
	comp=N,151µm,0.4s						
FAGN	Fagnano	0.57	148	S	Sg	21 51 36.5	+0.6
FAGN				AML	AML		
	comp=E,138µm,0.3s						
FAGN				AML	AML		
	comp=N,98µm,0.3s						
EL6	Elcito	0.58	355	P	Pg	21 51 26.0	-2.8
EL6				AML	AML		
	comp=N,59µm,0.5s						
EL6				AML	AML		
	comp=E,69µm,0.3s						
VCEL	Villa Celiera	0.60	126	AML	AML		
	comp=E,156µm,0.4s						
VCEL				AML	AML		
	comp=N,115µm,1.6s						
VCEL				AML	AML		
	comp=E,156µm,1.6s						
VCEL				AML	AML		
	comp=N,115µm,0.4s						
T0110	Collepietro	0.69	139	S	Sg	21 51 38.4	-1.3
SRES	S.Oreste - Sor	0.71	224	S	Sg	21 51 39.6	-0.8
SRES				AML	AML		
	comp=E,30µm,1.3s						
SRES				AML	AML		
	comp=N,36µm,1.5s						
SRES				AML	AML		
	comp=E,30µm,1.3s						
SRES				AML	AML		
	comp=N,35µm,1.5s						
APEC	Apecchio	0.98	326	⇑P	Pn	21 51 38.5	+1.3
VIVA	Pratoni del Vi	1.04	197	⇑P	Pg	21 51 34.4	-3.1
VIVA				AML	AML		
	comp=E,109µm,0.2s						
VIVA				AML	AML		
	comp=N,134µm,0.3s						
TOLF	Tolfa	1.11	232	S	Sn	21 51 56.7	+2.4
LIK	San Giovanni I	1.27	167	S	Sb	21 51 55.2	-2.6

ROM 18 21:51:27.5±0.0**, 42°.601N**±0°.002×**13°.226E**±0°.002**,**
h13^{km}, ML1.6/9**, 5C-1D, Error ellipse: s-maj=0.2km**
s-min=0.0km az=237.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RM33	Pellescritta (	0.09	185	P	Pg	21 51 30.8	+0.3
RM33				S	Sg	21 51 33.1	+0.4
T1218	Civita (PG)	0.11	310	⇑P	Pg	21 51 31.0	+0.3
T1218				S	Sg	21 51 33.2	+0.2
T1218				AML	AML		
	comp=E,1056µm,0.4s						
T1218				AML	AML		
	comp=N,1710µm,0.2s						
T1218				AML	AML		
	comp=E,1027µm,0.2s						
T1218				AML	AML		
	comp=N,1670µm,0.2s						
T1218				AML	AML		
	comp=E,1056µm,0.4s						
T1218				AML	AML		
	comp=N,1710µm,0.2s						
T1218				AML	AML		
	comp=N,1670µm,0.2s						
T1218				AML	AML		
	comp=E,1029µm,0.1s						
T1218				AML	AML		
	comp=E,1057µm,0.1s						
T1218				AML	AML		
	comp=N,1672µm,0.2s						
T1218				AML	AML		
	comp=N,1708µm,0.2s						
CAMP	Campotosto	0.15	116	P	Pg	21 51 31.6	+0.3
CAMP				S	Sg	21 51 34.3	+0.4
T1214	Arquata del Tr	0.16	355	⇑P	Pg	21 51 31.8	+0.3
T1214				S	Sb	21 51 35.0	-0.7
T1214				AML	AML		
	comp=N,222µm,0.2s						
T1214				AML	AML		
	comp=N,209µm,0.2s						
T1214				AML	AML		
	comp=E,183µm,0.2s						
T1214				AML	AML		
	comp=E,161µm,0.2s						
T1247	Pizzolo (AQ)	0.17	161	P	Pg	21 51 31.9	+0.4
T1247				S	Sb	21 51 35.1	-0.7
T1247				AML	AML		
	comp=E,410µm,0.7s						
T1247				AML	AML		
	comp=N,456µm,0.5s						
T1246	Crognaleto (TE	0.20	95	P	Pg	21 51 32.2	+0.2
T1246				S	Sg	21 51 35.6	+0.5
T1212	Cascia, Frazio	0.20	318	P	Pg	21 51 32.3	+0.3
T1212				S	Sg	21 51 35.9	+0.7
T1212				AML	AML		
	comp=E,202µm,1.1s						
T1212				AML	AML		
	comp=N,252µm,0.2s						
T1212				AML	AML		
	comp=E,219µm,0.3s						
T1212				AML	AML		
	comp=N,274µm,0.2s						
T1212				AML	AML		
	comp=E,170µm,0.1s						
T1212				AML	AML		
	comp=N,252µm,0.2s						
T1217	Poggiodomo (PG	0.24	297	P	Pg	21 51 33.0	+0.3
T1217				S	Sg	21 51 37.2	+0.8
T1217				AML	AML		
	comp=E,98µm,1.5s						
T1217				AML	AML		
	comp=N,131µm,0.5s						
T1217				AML	AML		
	comp=E,95µm,0.1s						
T1217				AML	AML		
	comp=E,100µm,0.1s						
T1217				AML	AML		
	comp=N,117µm,0.1s						
T1217				AML	AML		
	comp=N,201µm,0.9s						
T1222	Castel Sant'An	0.24	215	P	Pg	21 51 33.1	+0.3
T1222				S	Sb	21 51 37.2	-0.8
T1222				AML	AML		
	comp=E,314µm,0.3s						
T1222				AML	AML		
	comp=N,148µm,0.3s						
AQU	L'Aquila	0.28	152	P	Pg	21 51 33.7	+0.3
AQU				S	Sb	21 51 38.5	-0.5
TERO	Teramo	0.28	85	AML	AML		
	comp=N,211µm,0.8s						
TERO				AML	AML		
	comp=E,286µm,0.1s						
TERO				AML	AML		
	comp=N,192µm,0.8s						
TERO				AML	AML		
	comp=E,309µm,0.1s						
T1211	Morro Reatino	0.28	256	⇑P	Pg	21 51 33.7	+0.3
T1211				AML	AML		
	comp=E,258µm,1.3s						
T1211				AML	AML		
	comp=N,274µm,0.1s						
T1211				AML	AML		
	comp=E,290µm,1.3s						
T1211				AML	AML		
	comp=N,260µm,0.1s						
T1211				AML	AML		
	comp=E,213µm,0.1s						
T1211				AML	AML		
	comp=E,218µm,0.1s						
T1211				AML	AML		
	comp=N,260µm,0.1s						
T1211				AML	AML		
	comp=N,275µm,0.1s						
T1241	Roccafluvione,	0.30	31	⇓P	Pg	21 51 33.9	+0.2
T1241				AML	AML		
	comp=N,161µm,0.8s						
T1241				AML	AML		
	comp=N,40µm,0.2s						
T1241				AML	AML		
	comp=E,172µm,0.7s						
T1241				AML	AML		

	comp=E,61µm,0.2s						
T1216	**Preci, Frazion**	**0.33**	**332**	⇑P	Pg	21 51 34.5	+0.3
T1216				S	Sb	21 51 39.8	-0.6
T1216				AML	AML		
	comp=E,85µm,0.1s						
T1216				AML	AML		
	comp=N,113µm,0.1s						
ARRO	**Arrone**	**0.34**	**267**	⇑P	Pg	21 51 34.7	+0.3
ARRO				AML	AML		
	comp=E,58µm,1.3s						
ARRO				AML	AML		
	comp=N,56µm,0.1s						
ARRO				AML	AML		
	comp=N,56µm,0.1s						
ARRO				AML	AML		
	comp=E,58µm,0.2s						
FIAM	**Fiamignano**	**0.34**	**194**	P	Pg	21 51 34.7	+0.2
FIAM				S	Sb	21 51 40.2	-0.7
T1219	**Muccia, Frazio**	**0.48**	**341**	S	Sb	21 51 44.5	-0.4
VCEL	**Villa Celiera**	**0.50**	**114**	AML	AML		
	comp=E,156µm,0.4s						
VCEL				AML	AML		
	comp=N,115µm,1.6s						

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*ISK **18** 22:01:30.9, 41°.88N×24°.42E, h2^{km}, ML2.6/14*
*ATH **18** 22:01:32.4, 41°.86N×24°.37E, h10^{km}±2^{km}, ML2.2/3, Error ellipse: s-maj=3.7km s-min=1.8km az=191.0*
*THE **18** 22:01:32.1, 41°.85N×24°.37E, h7^{km}±1^{km}, ML2.4/2, Error ellipse: s-maj=1.9km s-min=1.1km az=188.0*
*BEO **18** 22:01:33.5±0.8, 42°.01N×24°.40E, h7^{km}±8^{km}, ML2.3/7*
ISC 18 22:01:31.1±1.0, **41°.87N**±0°.02×**24°.41E**±0°.02, **h18**^{km}±6^{km}, **n43, σ0^{s}82**/66, **Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLD	**Plovdiv**	**0.32**	**43**	Pg	**Pg**	**22 01 37.9**	**-0.1**
PLD				Sg	**Sg**	**22 01 42.9**	**+0.2**
PLD	**Plovdiv**	**0.32**	**43**	*e*Pg	**Pg**	**22 01 37.9**	**-0.1**
PLD				*e*Sg	**Sg**	**22 01 42.7**	**0.0**
KDZ	**Kurdzhali**	**0.79**	**106**	Pg	**Pb**	**22 01 45.3**	**-1.0**
KDZ				Sg	**Sb**	**22 01 57.0**	**+0.4**
KAVA	**Kavala**	**0.88**	**175**	P	**Pn**	**22 01 48.2**	**-0.4**
KAVA				S	**Sn**	**22 02 00.8**	**0.0**
	328nm,0.2s						
KAVA	**Kavala**	**0.88**	**175**	P	**Pn**	**22 01 48.1**	**-0.4**
KAVA				S	**Sn**	**22 02 00.5**	**-0.3**
KVLA	**Kavala**	**0.93**	**181**	P	**Pn**	**22 01 50.4**	**+1.1**
KVLA				S	**Sn**	**22 02 02.0**	**-0.2**
SRS	**Serrai**	**0.97**	**219**	P	**Pn**	**22 01 50.1**	**+0.2**
SRS	**Serrai**	**0.97**	**219**	P	**Pn**	**22 01 50.1**	**+0.2**
SRS				S	**Sn**	**22 02 03.7**	**+0.5**
SRS				AML	AML	22 02 09.0	
	comp=E,372µm,0.4s						
SRS				AML	AML	22 02 09.3	
	comp=N,252µm,0.3s						
KOKK	**Kokkinochori,**	**1.09**	**197**	P	**Pg**	**22 01 52.4**	**+0.1**
KOKK	**Kokkinochori,**	**1.09**	**197**	P	**Pg**	**22 01 52.4**	**+0.1**
KOKK				S	**Sg**	**22 02 06.8**	**+0.1**
KOKK				AML	AML	22 02 11.4	
	comp=N,373µm,0.4s						
KOKK				AML	AML	22 02 12.8	
	comp=E,210µm,0.2s						
RDO	**Rodhopi**	**1.11**	**130**	P	**Pg**	**22 01 52.5**	**-0.2**
RDO	**Rodhopi**	**1.11**	**130**	Pn	**Pg**	**22 01 52.9**	**+0.2**
RDO	**Rodhopi**	**1.11**	**130**	P	**Pg**	**22 01 52.5**	**-0.2**
RDO				S	**Sg**	**22 02 08.3**	**+1.0**
VTS	**Vitosha**	**1.15**	**311**	*e*Pg	**Pn**	**22 01 51.9**	**-0.6**
VTS				*e*Sg	**Sb**	**22 02 07.6**	**+0.4**
THAS	**Thassos island**	**1.28**	**169**	P	**Pg**	**22 01 55.8**	**-0.1**
THAS				S	**Sg**	**22 02 13.6**	**+1.0**
THAS	**Thassos island**	**1.28**	**169**	P	**Pg**	**22 01 55.8**	**-0.1**
THAS				S	**Sg**	**22 02 12.6**	**-0.1**
SOH	**Sokhos**	**1.31**	**218**	P	**Pb**	**22 01 55.2**	**-0.1**
SOH	**Sokhos**	**1.31**	**218**	P	**Pb**	**22 01 55.1**	**-0.1**
KNT	**Kendrikon**	**1.34**	**239**	P	**Pb**	**22 01 55.7**	**0.0**
KNT				S	**Sg**	**22 02 14.3**	**-0.1**
	comp=E,95nm,0.3s						
KNT	**Kendrikon**	**1.34**	**239**	Pn	**Pg**	**22 01 57.3**	**+0.4**
KNT	**Kendrikon**	**1.34**	**239**	P	**Pb**	**22 01 55.5**	**-0.2**
KNT				S	**Sg**	**22 02 13.2**	**-1.1**
KNT				AML	AML	22 02 16.3	
	comp=E,189µm,0.3s						
KNT				AML	AML	22 02 18.6	
	comp=N,191µm,0.3s						
VAY	**Valandovo**	**1.48**	**249**	*e*Pn	**Pg**	**22 01 59.2**	**-0.4**
VAY				*e*Sn	**Sg**	**22 02 20.7**	**+1.7**
OUR	**Ouranopolis**	**1.57**	**192**	Pn	**Pg**	**22 02 01.2**	**-0.1**
OUR	**Ouranopolis**	**1.57**	**192**	P	**Pb**	**22 01 58.7**	**-0.8**
ALN	**Alexandroupoli**	**1.57**	**128**	P	**Pg**	**22 02 00.5**	**-0.8**
ALN	**Alexandroupoli**	**1.57**	**128**	Pn	**Pg**	**22 02 00.8**	**-0.5**
ALN				Sn	**Sg**	**22 02 22.3**	**+0.6**
ALN	**Alexandroupoli**	**1.57**	**128**	P	**Pg**	**22 02 00.7**	**-0.5**
SMTH	**Samothraki Isl**	**1.63**	**148**	P	**Pb**	**22 02 01.2**	**+0.5**
SMTH				S	**Sb**	**22 02 21.7**	**+0.7**
STIP	**Stip**	**1.67**	**265**	*e*Pn	**Pn**	**22 01 58.5**	**-1.0**
STIP				*e*Sn	**Sn**	**22 02 18.4**	**-2.1**
ENEZ	**Enez**	**1.73**	**130**	Pn	**Pb**	**22 02 03.0**	**+0.6**
EDRB	**Edirne**	**1.74**	**90**	Pn	**Pb**	**22 02 02.9**	**+0.3**
GRG	**Griva**	**1.76**	**240**	P	**Pb**	**22 02 02.6**	**-0.3**
UKOP	**Uzunkopru-Edir**	**1.83**	**113**	Pn	**Pb**	**22 02 04.9**	**+0.9**
PRVS	**Prvonek**	**1.85**	**291**	*e*Pg	**Pg**	**22 02 05.7**	**-0.9**
PRVS				*e*Sg	**Sg**	**22 02 31.5**	**+0.9**
ZAPS	**Zavoj**	**1.92**	**318**	*e*Pg	**Pb**	**22 02 05.8**	**+0.2**
ZAPS				*e*Sg	**Sb**	**22 02 31.3**	**+2.0**
ERIK	**Erikli-Kesan**	**1.99**	**126**	Pn	**Pb**	**22 02 06.8**	**+0.1**
GADA	**Gvkgeada**	**2.02**	**146**	Pn	**Pb**	**22 02 06.9**	**-0.4**
BARS	**Barje**	**2.14**	**297**	*e*Pg	**Pb**	**22 02 10.8**	**+1.4**
BARS				*e*Sg	**Sg**	**22 02 39.1**	**-1.0**
GELI	**Tayfur-Gelibol**	**2.14**	**133**	Pn	**Pb**	**22 02 09.0**	**-0.4**
LPK	**Lapseki**	**2.32**	**129**	Pn	**Pb**	**22 02 11.5**	**-0.9**
ZAGS	**Zajecar**	**2.52**	**321**	*e*Pg	**Pb**	**22 02 17.6**	**+1.8**
ZAGS				*e*Sg	**Sg**	**22 02 50.5**	**-1.5**
KRBG	**Karabiga-Canak**	**2.63**	**123**	Pn	**Pb**	**22 02 16.0**	**-1.7**
SELS	**Selova**	**2.78**	**300**	*e*Pg	**Pb**	**22 02 21.5**	**+1.2**
SELS				*e*Sg	**Sg**	**22 02 59.1**	**-1.4**

ROM 18 22:02:02.1±0.1, **42°.781N**±0°.005×**12°.760E**±0°.009, **h8**^{km}, **ML1.2**/2, **3C-2D, Error ellipse: s-maj=0.6km s-min=0.4km az=101.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMA	**Monte Martano**	**0.14**	**280**	AML	AML		
	comp=N,118µm,0.9s						
MOMA				AML	AML		
	comp=E,121µm,0.9s						
T1216	**Preci, Frazion**	**0.22**	**60**	P	Pg	22 02 07.5	+0.9
T1216				S	Sg	22 02 11.5	+1.9
T1216				AML	AML		
	comp=E,97µm,1.4s						
T1216				AML	AML		
	comp=N,116µm,0.3s						
T1216				AML	AML		
	comp=E,97µm,0.6s						
T1211	**Morro Reatino**	**0.26**	**164**	P	Pg	22 02 07.6	+0.4
T1211				S	Sb	22 02 12.5	-1.1
ASSB	**Assisi San Ben**	**0.27**	**344**	⇑P	Pg	22 02 08.1	+0.6
ASSB				S	Sg	22 02 12.7	+1.4
T1245	**Castelsantange**	**0.32**	**76**	⇑P	Pg	22 02 09.2	+0.7
T1245				S	Sb	22 02 14.9	-0.8
T1245				AML	AML		
	comp=E,49µm,1.5s						
T1245				AML	AML		
	comp=N,54µm,0.8s						
T1219	**Muccia, Frazio**	**0.33**	**33**	⇓P	Pg	22 02 09.1	+0.5
T1219				S	Sb	22 02 14.4	-1.3
T1214	**Arquata del Tr**	**0.33**	**93**	⇑P	Pg	22 02 09.2	+0.5
T1214				S	Sb	22 02 14.9	-1.0
FDMO	**Fiordimonte**	**0.35**	**43**	⇓P	Pg	22 02 09.8	+0.8
FDMO				S	Sb	22 02 15.4	-1.0
T1220	**Camerino, Fraz**	**0.41**	**36**	P	Pg	22 02 10.8	+0.7
T1220				S	Sb	22 02 17.9	-0.1
RM33	**Pellescritta (**	**0.43**	**129**	P	Pg	22 02 10.0	-0.5
MGAB	**Montegabbione**	**0.49**	**286**	P	Pb	22 02 13.0	0.0
MGAB				S	Sb	22 02 19.9	-0.6
EL6	**Elcito**	**0.60**	**24**	S	Sb	22 02 23.3	-0.4

ROM 18 22:03:00.4±0.1, **42°.694N**±0°.003×**13°.227E**±0°.004, **h11**^{km}, **ML1.2**/3, **8C-1D, Error ellipse: s-maj=0.3km s-min=0.1km az=79.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.07**	**349**	P	Pg	22 03 03.2	+0.2
T1214				S	Sg	22 03 05.0	+0.2
T1214				AML	AML		
	comp=E,140µm,1.4s						
T1214				AML	AML		
	comp=E,138µm,1.4s						
T1214				AML	AML		
	comp=N,206µm,0.2s						
T1214				AML	AML		
	comp=N,206µm,1.8s						
T1214				AML	AML		
	comp=E,138µm,0.6s						
T1218	**Civita (PG)**	**0.09**	**254**	⇑P	Pg	22 03 03.4	+0.4
T1218				S	Sg	22 03 05.5	+0.4
T1218				AML	AML		
	comp=E,198µm,0.2s						
T1218				AML	AML		
	comp=N,397µm,0.1s						
T1218				AML	AML		
	comp=E,184µm,0.2s						
T1218				AML	AML		
	comp=N,384µm,0.1s						
T1218				AML	AML		
	comp=E,184µm,0.2s						
T1218				AML	AML		
	comp=N,384µm,0.1s						
T1218				AML	AML		
	comp=E,198µm,0.2s						
SMA1	**SAN MARTINO**	**0.10**	**128**	⇑P	Pg	22 03 03.7	+0.4
SMA1				S	Sg	22 03 06.0	+0.6
T1212	**Cascia, Frazio**	**0.15**	**293**	⇓P	Pg	22 03 04.3	+0.4
T1212				S	Sg	22 03 06.8	+0.5
T1245	**Castelsantange**	**0.17**	**350**	⇑P	Pg	22 03 04.7	+0.4
T1245				S	Sg	22 03 07.7	+0.8
T1245				AML	AML		
	comp=E,95µm,0.2s						
T1245				AML	AML		
	comp=N,126µm,0.2s						
RM33	**Pellescritta (**	**0.18**	**183**	P	Pg	22 03 04.9	+0.4
RM33				S	Sg	22 03 08.4	+1.1
MMO1	**Montemonaco**	**0.22**	**20**	P	Pg	22 03 05.5	+0.4
MMO1				S	Sg	22 03 09.3	+1.0
T1217	**Poggiodomo (PG**	**0.22**	**275**	⇑P	Pg	22 03 05.6	+0.5
T1217				S	Sg	22 03 09.3	+1.0
MC2	**Monte Cornacci**	**0.22**	**353**	P	Pg	22 03 05.6	+0.4
MC2				S	Sg	22 03 10.1	+1.7
T1241	**Roccafluvione,**	**0.22**	**43**	P	Pg	22 03 05.5	+0.4
T1241				S	Sg	22 03 09.1	+0.8
T1216	**Preci, Frazion**	**0.25**	**322**	P	Pg	22 03 06.2	+0.6
T1216				S	Sg	22 03 10.2	+1.1
T1256	**Bolognola (MC)**	**0.31**	**360**	⇑P	Pg	22 03 07.1	+0.3
T1211	**Morro Reatino**	**0.32**	**240**	P	Pg	22 03 07.2	+0.4
FDMO	**Fiordimonte**	**0.36**	**343**	⇑P	Pg	22 03 08.0	+0.4
T1219	**Muccia, Frazio**	**0.40**	**336**	S	Sb	22 03 14.8	-0.8
EL6	**Elcito**	**0.64**	**352**	S	Sb	22 03 23.2	+0.5
PE3	**Peglio**	**1.14**	**332**	⇑P	Pn	22 03 22.4	+0.2
LIK	**San Giovanni I**	**1.21**	**168**	⇑P	Pn	22 03 21.4	-1.9
TRIV	**Trivento**	**1.35**	**133**	S	Sn	22 03 43.2	0.0
BRSN	**Barisano**	**1.80**	**333**	S	Sb	22 03 56.3	+0.5

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*BJI **18** 22:24:35.0±0.0, 32°.00N×138°.10E, h369^{km}, mb4.2/29, mB4.4/15*
*IDC **18** 22:24:37.8±1.0, 31°.95N×137°.98E, h370^{km}±9^{km}, mb3.3/19, mbtmp4.1/26, Error ellipse: s-maj=13.1km s-min=11.7km az=79.0*
*MOS **18** 22:24:37.8±0.7, 32°.04N×138°.00E, h384^{km}, mb4.0/27, Error ellipse: s-maj=11.6km s-min=5.9km az=120.8*
*JMA **18** 22:24:38.1±0.2, 32°N±2°×13°8E±°, h390^{km}, MV3.8/30, FAR S OFF TOKAI DISTRICT*
*NEIC **18** 22:24:38.8±1.2, 32°.00N±0°.09×138°.07E±0°.10, h379^{km}±7^{km}, mb4.0/38, Error ellipse: s-maj=12.5km s-min=11.7km az=160.0*
*NIED **18** 22:24:38.1, 32°.10N×138°.15E, h390^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.53; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$0.54; $M_{r\theta}$-0.68; $M_{\theta\phi}$-0.71; $M_{\phi r}$-2.07; Fault plane solution: $M_0$2.33000×10^{15} NP1: ϕ_s12.00000°, δ85.00000°, λ-70.00000°. NP2: ϕ_s117.00000°, δ20.00000°, λ-164.00000°.*
ISC 18 22:24:38.0±0.5, **31°.93N**±0°.06×**138°.12E**±0°.05, **h380**^{km}, **n178, σ1^{s}05**/194, **mb3.9**/50, **11C-1D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.49**	**69**	*e*P	**Pn**	**22 25 30.8**	**+1.6**
JHJ2	**Mitsune**	**1.86**	**50**		**Pn**	**22 25 31.6**	**+0.6**
JHJ2				Sn	**S**	**22 26 14.0**	**0.0**
JHJ2	**Mitsune**	**1.86**	**50**	P	**Pn**	**22 25 31.8**	**+0.7**
JHJ2	**Mitsune**	**1.86**	**50**	*e*P	**Pn**	**22 25 31.7**	**+0.6**
TK01	**Tokai 1**	**1.88**	**347**	*e*S	**S**	**22 26 13.7**	**+0.1**
TTO2	**TONANKAI O.B.S**	**2.02**	**333**	P	**Pn**	**22 25 33.2**	**+1.5**
TTO1	**TONANKAI O.B.S**	**2.02**	**327**	*e*P	**Pn**	**22 25 33.0**	**+1.2**
TK02	**Tokai 2**	**2.03**	**352**	*e*P	**Pn**	**22 25 33.2**	**+1.3**
JIE	**Ise**	**2.72**	**335**	*e*P	**Pn**	**22 25 37.9**	**+0.6**
JTNC	**Tanabenakahech**	**2.83**	**312**	*e*P	**Pn**	**22 25 38.3**	**+0.2**
JTNC				*e*S	**S**	**22 26 24.8**	**-2.0**
JWY	**Kouya**	**3.11**	**318**	P	**Pn**	**22 25 41.3**	**+0.7**
JWY				*e*S	**S**	**22 26 30.4**	**-0.9**
JOD2	**Odawara 2**	**3.42**	**13**	P	**Pn**	**22 25 43.0**	**-0.3**
JOD2				*e*S	**S**	**22 26 34.5**	**-1.5**
INU	**Inuyama**	**3.53**	**345**	Pn	**Pn**	**22 25 44.5**	**+0.2**
INU	**Inuyama**	**3.53**	**345**	P	**Pn**	**22 25 44.9**	**+0.7**
JAI	**Aioi**	**3.60**	**302**	*e*P	**Pn**	**22 25 45.1**	**+0.2**
BSO1	**Boso 1**	**3.62**	**41**	P	**Pn**	**22 25 43.7**	**-0.8**
BSO1				S	**S**	**22 26 35.1**	**-3.3**
JGF	**Kuroka**	**3.71**	**350**	Pn	**Pn**	**22 25 46.3**	**+0.3**
JGF	**Kuroka**	**3.71**	**350**	P	**Pn**	**22 25 46.3**	**+0.3**
JYTA	**Yamagatataniai**	**3.83**	**343**	*e*P	**Pn**	**22 25 47.6**	**+0.5**
JMN	**Monobe**	**3.99**	**298**	Pn	**Pn**	**22 25 49.3**	**+0.6**
JMN	**Monobe**	**3.99**	**298**	P	**Pn**	**22 25 49.2**	**+0.5**
JRY	**Ryogami san**	**4.13**	**9**	*e*P	**Pn**	**22 25 49.9**	**-0.1**
JRY				*e*S	**S**	**22 26 45.5**	**-2.9**
JTO	**Tosashimizu**	**4.59**	**283**	*e*P	**Pn**	**22 25 55.1**	**+0.4**
MJAR	**Matsushiro Arr**	**4.60**	**1**	P	**Pn**	**22 25 54.0**	**-0.8**
	19nm,0.6s,baz=177,slow=11,SNR=69						
MJAR				S	**S**	**22 26 54.6**	**-2.5**
	3.2nm,0.4s,baz=123,slow=18,SNR=2.2						
MAJO	**Matsushiro**	**4.60**	**1**		**Pn**	**22 25 54.4**	**-0.3**
MAJO	**Matsushiro**	**4.60**	**1**	P	**Pn**	**22 25 54.2**	**-0.6**
MAJO	**Matsushiro**	**4.60**	**1**	*i* P	**Pn**	**22 25 54.0**	**-0.8**
MJB9	**Matsu-Tunnel**	**4.60**	**1**	Pn	**Pn**	**22 25 55.2**	**+0.4**
JHS	**Saijyo**	**5.18**	**308**	Pn	**Pn**	**22 26 01.2**	**+0.3**
JHS	**Saijyo**	**5.18**	**308**	P	**Pn**	**22 26 01.1**	**+0.2**
	73nm,0.8s						
JHS	**Saijyo**	**5.18**	**308**	*e*P	**Pn**	**22 26 01.2**	**+0.3**
JOI	**OKI**	**5.93**	**318**	*e*P	**Pn**	**22 26 09.0**	**0.0**
CBIJ	**Chichi jima**	**5.98**	**143**	*e*P	**Pn**	**22 26 09.1**	**-0.7**
CBIJ				*e*S	**S**	**22 27 20.4**	**-4.0**
JCJ	**Chichijima**	**5.98**	**143**	P	**Pn**	**22 26 09.2**	**-0.6**
	39nm,0.4s,baz=6.5,slow=23,SNR=16						
JCJ				S	**S**	**22 27 19.7**	**-4.7**
	87nm,0.3s,baz=284,slow=22,SNR=19						
JCJ	**Chichijima**	**5.98**	**143**	Pn	**Pn**	**22 26 09.0**	**-0.8**
JSD	**Sado**	**6.09**	**1**	Pn	**Pn**	**22 26 09.5**	**-1.3**
JSD	**Sado**	**6.09**	**1**	P	**Pn**	**22 26 10.0**	**-0.7**
	51nm,2.5s						
JNU	**Nakatsue**	**6.23**	**283**	P	**Pn**	**22 26 11.1**	**-1.3**
	29nm,0.8s,baz=103,slow=5.0,SNR=21						
JNU				S	**S**	**22 27 28.9**	**-0.4**
	9.7nm,0.9s,baz=291,slow=16,SNR=2.3						
JNU	**Nakatsue**	**6.23**	**283**		**Pn**	**22 26 11.8**	**-0.6**
JNU	**Nakatsue**	**6.23**	**283**	P	**Pn**	**22 26 13.1**	**+0.7**
	45nm,1.0s						
JMM	**Marumori**	**6.31**	**20**		**Pn**	**22 26 11.8**	**-1.4**
JMM	**Marumori**	**6.31**	**20**	P	**Pn**	**22 26 12.2**	**-1.0**
	39nm,1.4s						
JSU	**Suzuyama**	**6.54**	**268**	Pn	**P**	**22 26 16.1**	**-0.8**
JTU	**Tsushima**	**7.75**	**292**	Pn	**P**	**22 26 29.8**	**-0.6**
JTM	**Tenmabayashi**	**9.15**	**14**		**Pn**	**22 26 45.4**	**-0.4**
TJN	**Taejon**	**9.95**	**299**	P	**P**	**22 26 55.7**	**+0.2**
TJN	**Taejon**	**9.95**	**299**	P	**P**	**22 26 55.7**	**+0.2**
KSRS	**Korea Array**	**10.03**	**306**	P	**P**	**22 26 56.2**	**-0.3**
	3.5nm,0.6s,baz=118,slow=12,SNR=16						
KSRS				S	**S**	**22 28 48.6**	**-1.0**
	1.4nm,1.0s,baz=116,slow=20,SNR=4.4						
KSAR	**Wonju Array Be**	**10.05**	**306**		**P**	**22 26 56.3**	**-0.4**
KSAR	**Wonju Array Be**	**10.05**	**306**	P	**P**	**22 26 56.3**	**-0.4**
KS19	**Wonju Array Si**	**10.10**	**306**	P	**P**	**22 26 57.6**	**+0.4**
ERM	**Erimo**	**10.84**	**20**	P	**Pn**	**22 27 05.9**	**+0.3**
ERM	**Erimo**	**10.84**	**20**	P	**Pn**	**22 27 05.9**	**+0.3**
INCN	**Inchon**	**10.95**	**304**	P	**Pn**	**22 27 06.8**	**-0.2**
INCN	**Inchon**	**10.95**	**304**	P	**Pn**	**22 27 06.8**	**-0.2**
ASAJ	**Asahikawa**	**12.66**	**15**	P	**Pn**	**22 27 26.9**	**-0.1**
	6.0nm,0.7s,baz=207,slow=11,SNR=2.4						
JKA	**Kamikawa-asahi**	**12.66**	**15**	P	**Pn**	**22 27 26.7**	**-0.2**
USA0B	**Ussuriysk Arra**	**13.16**	**340**	P	**P**	**22 27 30.8**	**-0.1**
USA0B	**Ussuriysk Arra**	**13.16**	**340**	P	**P**	**22 27 30.8**	**-0.1**
USRK	**Ussuriysk Ar.**	**13.16**	**340**	P	**Pn**	**22 27 30.9**	**-1.7**
	2.9nm,0.5s,baz=166,slow=12,SNR=16						
USRK	**Ussuriysk Ar.**	**13.16**	**340**	P	**P**	**22 27 30.7**	**-0.2**
USRK	**Ussuriysk Ar.**	**13.16**	**340**	P	**Pn**	**22 27 31.0**	**-1.7**
YSS	**Yuzh-Sakhalins**	**15.42**	**12**	*ce*P	**Pn**	**22 28 00.1**	**+1.6**
YSS				pmax	pmax		
	comp=Z,25nm,1.2s						
KLR	**Kul'dur**	**17.93**	**346**	P	**P**	**22 28 21.6**	**-0.9**
	comp=Z,5.8nm,0.6s,baz=159,slow=8.1,SNR=28						
KLR	**Kul'dur**	**17.93**	**346**	*i* P	**P**	**22 28 21.9**	**-0.5**
KLR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BJT	**Baijiatuau**	**19.48**	**301**	P	**P**	**22 28 36.2**	**-2.5**
BJT				IAmb	IAmb	22 28 38.0	
	comp=Z,8.6nm,1.1s						
BJT	**Baijiatuau**	**19.48**	**301**	P	**P**	**22 28 36.2**	**-2.5**
BJT				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HEH	**HeiHe**	**19.96**	**340**	*e*P	**P**	**22 28 43.5**	**+0.3**
HEH				pmax	pmax		
	comp=Z,11nm,1.0s						
HIA	**Hailar**	**22.14**	**327**	P	**P**	**22 29 02.5**	**-0.6**
HIA				IAmb	IAmb	22 29 04.2	
	comp=Z,5.4nm,0.6s						
HIA	**Hailar**	**22.14**	**327**	P	**P**	**22 29 02.5**	**-0.6**
HIA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ZEA	**Zeya**	**23.15**	**343**	*e*P	**P**	**22 29 09.8**	**-2.4**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XAN	**Xi'an**	**24.55**	**283**	P	**P**	**22 29 24.5**	**-0.5**
XAN				pmax	pmax		
	comp=Z,13nm,1.1s						
ULN	**Ulaanbaatar**	**28.41**	**313**	P	**P**	**22 29 59.4**	**+0.2**
ULN				IAmb	IAmb	22 30 00.8	
	comp=Z,17nm,1.5s						
ULN	**Ulaanbaatar**	**28.41**	**313**	*ce*P	**P**	**22 29 59.2**	**0.0**
ULN				pmax	pmax		
	comp=Z,15nm,1.7s						
SONM	**Songino Array**	**28.81**	**313**	P	**P**	**22 30 03.2**	**+0.5**
	comp=Z,2.0nm,0.5s,baz=117,slow=7.8,SNR=17						
	comp=Z,2.0nm,0.5s						
SONM	**Songino Array**	**28.81**	**313**	P	**P**	**22 30 02.4**	**-0.3**
ZAK	**Zakamensk**	**31.66**	**316**	*e*P	**P**	**22 30 26.2**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA	**Gaotai**	**31.82**	**294**	*e*P	**P**	**22 30 28.8**	**-0.3**
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GOMU	**GeErMu**	**35.90**	**289**	P	**P**	**22 31 04.8**	**+0.6**
GOMU				pmax	pmax		
	comp=Z,23nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,130nm,5.2s						
PHRA	**Phrae**	**36.60**	**258**	P	**P**	**22 31 09.7**	**0.0**
CMAR	**Chiang Mai Arr**	**37.69**	**259**	P	**P**	**22 31 18.3**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=54,slow=7.1,SNR=5.1						
	comp=Z,0.8nm,0.3s						
BILL	**Bilibino**	**39.67**	**16**	⇑*e*P	P	22 31 39.3	+4.9
BILL				*e**PP	pP	22 32 54.4	+6.8
BILL				*e*		22 33 17.0	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.6s						
TIXI	**Tiksi**	**40.09**	**355**	*i* P	**P**	**22 31 37.9**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,15nm,4.9s						
LSA	**Lhasa**	**40.15**	**280**	P	**P**	**22 31 39.7**	**+0.3**
LSA	**Lhasa**	**40.15**	**280**	P	**P**	**22 31 39.7**	**+0.3**
LSA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SHL	**Shillong**	**40.79**	**273**	P	**P**	**22 31 43.0**	**-1.3**
SHL				IAmb	IAmb	22 31 44.2	
	comp=Z,3.7nm,0.7s						
SHL	**Shillong**	**40.79**	**273**	P	**P**	**22 31 43.0**	**-1.3**
SHL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DGZ	**Jazzator, Alta**	**41.40**	**311**	*i* P	**P**	**22 31 48.4**	**-0.5**
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ZAA0	**Zalesovo Array**	**43.54**	**317**	P	**P**	**22 32 04.3**	**-1.2**
ZALV	**Zalesovo Beam**	**43.54**	**317**	P	**P**	**22 32 04.6**	**-0.9**
	comp=Z,1.1nm,0.6s,baz=101,slow=7.7,SNR=6.3						
ZALV				PcP	**PcP**	**22 33 46.3**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=115,slow=4.7,SNR=6.1						
ZALV				ScP	**ScP**	**22 36 59.4**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=94,slow=8.7,SNR=1.6						
	comp=Z,1.1nm,0.6s						
ZALV	**Zalesovo Beam**	**43.54**	**317**	P	**P**	**22 32 04.8**	**-0.7**
ZALV	**Zalesovo Beam**	**43.54**	**317**	*i* P	**P**	**22 32 05.8**	**+0.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TAPN	**Taplejung**	**43.73**	**277**	*e*P	**P**	**22 32 07.8**	**-0.1**
	comp=Z,8.1nm,0.4s						
MK31	**Makanchi Array**	**44.72**	**306**	P	**P**	**22 32 14.4**	**-0.6**
MK31				IAmb	IAmb	22 32 16.0	
	comp=Z,4.4nm,0.8s						
MK31	**Makanchi Array**	**44.72**	**306**	P	**P**	**22 32 14.4**	**-0.6**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MKAR	**Makanchi Array**	**44.72**	**306**	P	**P**	**22 32 14.6**	**-0.4**
	comp=Z,4.1nm,0.6s,baz=92,slow=9.9,SNR=52						
MKAR				PcP	**PcP**	**22 33 50.0**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=103,slow=5.0,SNR=3.4						
MKAR				ScP	**ScP**	**22 37 06.4**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=82,slow=5.9,SNR=8.2						
	comp=Z,4.1nm,0.6s						
MKAR	**Makanchi Array**	**44.72**	**306**	P	**P**	**22 32 14.7**	**-0.3**
MKAR	**Makanchi Array**	**44.72**	**306**	*ce*P	**P**	**22 32 15.3**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
RAMN	**Ramite**	**44.80**	**277**	*e*P	**P**	**22 32 16.2**	**0.0**
JIRN	**Jiri**	**44.91**	**279**	*e*P	**P**	**22 32 17.8**	**+0.6**
	comp=Z,58nm,0.7s						
MAKZ	**Makanchi**	**44.93**	**306**	P	**P**	**22 32 16.6**	**-0.1**
MAKZ				IAmb	IAmb	22 32 17.3	
	comp=Z,3.2nm,0.7s						
MAKZ	**Makanchi**	**44.93**	**306**	P	**P**	**22 32 16.6**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GUN	**Gumba**	**45.10**	**279**	*e*P	**P**	**22 32 19.0**	**+0.4**
	comp=Z,44nm,0.7s						
PKI	**Pulchoki**	**45.60**	**279**	*e*P	**P**	**22 32 22.2**	**-0.3**
GKN	**Gorkha**	**46.11**	**280**	*e*P	**P**	**22 32 26.2**	**0.0**
DANN	**Dangsing**	**46.74**	**280**	*e*P	**P**	**22 32 31.7**	**+0.5**
	comp=Z,48nm,1.0s						
NRIK	**Noril'sk**	**46.86**	**338**	P	**P**	**22 32 30.7**	**-0.4**
	comp=Z,2.2nm,0.4s,baz=123,slow=10,SNR=2.0						
	comp=Z,2.2nm,0.4s						
NRIK	**Noril'sk**	**46.86**	**338**	*ce*P	**P**	**22 32 31.6**	**+0.5**
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KURK	**Kurchatov**	**47.10**	**312**	P	**P**	**22 32 32.4**	**-0.8**
KURK				IAmb	IAmb	22 32 33.9	
	comp=Z,7.9nm,0.9s						
KURK	**Kurchatov**	**47.10**	**312**	*ce*P	**P**	**22 32 32.5**	**-0.8**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GSI	**Gunungsitoli**	**48.86**	**240**	P	**P**	**22 32 47.3**	**+0.2**
KSH	**Kashi**	**50.14**	**297**	P	**P**	**22 33 00.4**	**+3.9**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AAK	**Ala-Archa**	**50.65**	**301**	P	**P**	**22 32 59.8**	**-0.5**
AAK				IAmb	IAmb	22 33 20.2	
	comp=Z,5.4nm,1.4s						
AAK	**Ala-Archa**	**50.65**	**301**	P	**P**	**22 32 59.8**	**-0.5**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
WB0	**Warramunga Arr**	**51.53**	**184**	P	**P**	**22 33 07.9**	**+1.3**
WRA	**Warramunga Arr**	**51.71**	**185**	P	**P**	**22 33 08.6**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=0.5,slow=7.6,SNR=14						
	comp=Z,0.2nm,0.3s						
WRA	**Warramunga Arr**	**51.71**	**185**	P	**P**	**22 33 08.7**	**+0.7**
WRA	**Warramunga Arr**	**51.71**	**185**	*i* P	**P**	**22 33 09.3**	**+1.3**
K20K	**Telida**	**52.08**	**32**	P	**P**	**22 33 11.9**	**+1.7**
K20K				IAmb	IAmb	22 33 13.8	

	comp=Z,8.6nm,1.1s						
BRVK	Borovoye	52.17	315	P	P	22 33 10.7	-0.2
BRVK	Borovoye	52.17	315	ceP	P	22 33 10.9	-0.1
BRVK				pmax	pmax		
	comp=Z,18nm,3.8s						
IMAR	Indian Mountai	52.42	29	P	P	22 33 14.0	+1.5
KDAK	Kodiak Island	52.74	39	P	P	22 33 16.1	+1.1
KDAK				IAmb	IAmb	22 33 25.4	
	comp=Z,19nm,1.3s						
KDAK	Kodiak Island	52.74	39	P	P	22 33 16.1	+1.1
KDAK				pmax	pmax		
	comp=Z,19nm,1.3s						
H21K	Melozitna Rive	52.78	29	P	P	22 33 17.2	+2.0
KK31	Karatay Array	53.44	303	P	P	22 33 20.6	+0.2
KK31				IAmb	IAmb	22 33 21.4	
	comp=Z,4.7nm,0.8s						
KK31	Karatay Array	53.44	303	P	P	22 33 20.6	+0.2
KK31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KKAR	Karatay Array	53.44	303	P	P	22 33 20.3	-0.1
KKAR	Karatay Array	53.44	303	P	P	22 33 20.3	-0.1
NIL	Nilore	53.73	291	P	P	22 33 22.8	+0.2
NIL	Nilore	53.73	291	P	P	22 33 22.8	+0.2
NIL				pmax	pmax		
	comp=Z,13nm,0.9s						
GAR	Garm	54.53	298	P	P	22 33 28.3	-0.1
GAR				IAmb	IAmb	22 33 29.5	
	comp=Z,12nm,1.0s						
MDM	Murphy Dome	54.68	30	P	P	22 33 30.3	+1.5
ILAR	Eielson Array	55.26	30	P	P	22 33 34.2	+1.4
	comp=Z,0.6nm,0.8s,baz=270,slow=6.1,SNR=7.2						
	comp=Z,0.6nm,0.8s						
CHGR	Chuyangaron	55.49	298	P	P	22 33 34.6	-0.5
CHGR	Chuyangaron	55.49	298	P	P	22 33 34.6	-0.5
CHGR				pmax	pmax		
	comp=Z,31nm,0.8s						
BMAR	Burnt Mountain	56.10	27	P	P	22 33 40.8	+2.0
SCRK	Sand Creek	56.56	31	P	P	22 33 43.4	+1.2
KBL	Kabul	56.78	293	P	P	22 33 44.1	-0.3
KBL				IAmb	IAmb	22 33 45.3	
	comp=Z,5.6nm,0.8s						
KBL	Kabul	56.78	293	P	P	22 33 44.1	-0.3
KBL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BCAR	Beaver Creek A	57.64	32	P	P	22 33 51.7	+2.1
ARU	Arti	58.45	320	P	P	22 33 55.0	-0.1
ARU				IAmb	IAmb	22 33 55.6	
	comp=Z,4.6nm,0.7s						
ARU	Arti	58.45	320	d iP	P	22 33 54.7	-0.4
ARU				*PP	pP	22 35 13.0	-1.5
ARU						22 35 59.0	
ARU				S	S	22 41 28.4	+0.8
ARU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ABKAR	Akbulak array	59.21	312	P	P	22 34 00.5	+0.1
ABKAR	Akbulak array	59.21	312	P	P	22 34 00.6	+0.1
ABKAR				IAmb	IAmb	22 34 01.4	
	comp=Z,5.9nm,0.7s						
INK	Inuvik	60.15	25	P	P	22 34 07.7	+1.2
	comp=Z,0.5nm,0.5s,baz=293,slow=7.8,SNR=3.5						
	comp=Z,0.5nm,0.5s						
KIRV	Kirov	62.71	324	ceP	P	22 34 24.7	+1.2
C36M	Paulatuk	63.19	23	P	P	22 34 27.5	+1.0
C36M				IAmb	IAmb	22 34 28.9	
	comp=Z,2.0nm,0.8s						
GEYT	Alibeck	63.96	300	P	P	22 34 32.9	+0.7
	comp=Z,2.0nm,0.9s,baz=336,slow=6.8,SNR=4.0						
	comp=Z,2.0nm,0.9s						
ARCES	ARCESS Array B	67.80	339	P	P	22 34 56.3	+0.6
	comp=Z,3.2nm,0.9s,baz=67,slow=9.3,SNR=5.8						
	comp=Z,3.2nm,0.9s						
YKA	Yellowknife Ar	69.58	28	P	P	22 35 08.0	+1.4
	comp=Z,0.5nm,0.6s,baz=296,slow=6.1,SNR=11						
	comp=Z,0.5nm,0.6s						
YKA	Yellowknife Ar	69.58	28	iP	P	22 35 08.3	+1.7
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
OBN	Obninsk	70.55	323	iP	P	22 35 12.3	-0.3
OBN				e		22 38 01.8	
OBN				pmax	pmax		
	comp=Z,39nm,2.3s						
FIA1	FINESS Array S	72.04	332	P	P	22 35 21.5	+0.2
FINES	FINESS Array B	72.04	332	P	P	22 35 21.2	-0.1
	comp=Z,2.5nm,0.5s,baz=73,slow=6.0,SNR=34						
	comp=Z,2.5nm,0.5s						
FINES	FINESS Array B	72.04	332	P	P	22 35 21.7	+0.4
FINES	FINESS Array B	72.04	332	P	P	22 35 21.7	+0.4
KBZ	Khabaz	72.15	311	P	P	22 35 22.8	+0.5
	comp=Z,4.8nm,0.8s,baz=87,slow=2.3,SNR=9.3						
	comp=Z,4.8nm,0.8s						
KBZ	Khabaz	72.15	311	ceP	P	22 35 22.5	+0.2
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV	Kislovodsk	72.18	311	P	P	22 35 23.4	+0.8
KIV				IAmb	IAmb	22 35 25.3	
	comp=Z,5.2nm,0.8s						
KIV	Kislovodsk	72.18	311	eP	P	22 35 23.0	+0.3
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
AKASG	Malin Array Be	76.63	322	P	P	22 35 48.0	+0.3
	comp=Z,1.3nm,0.5s,baz=47,slow=5.6,SNR=17						
	comp=Z,1.3nm,0.5s						
AKASG	Malin Array Be	76.63	322	P	P	22 35 48.0	+0.3
AKBB	Malin Array Si	76.63	322	P	P	22 35 47.6	-0.2
AKBB	Malin Array Si	76.63	322	ceP	P	22 35 47.3	-0.4
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NC405	NORSAR Array S	77.58	336	P	P	22 35 53.3	+0.6
NB2	NORSAR Subarra	77.80	337	P	P	22 35 54.2	+0.2
	comp=Z,0.5nm,0.5s,baz=44,slow=5.3						
NOA	NORSAR Array B	77.80	337	P	P	22 35 54.1	+0.1
	comp=Z,1.5nm,0.8s,baz=44,slow=5.4,SNR=5.5						
	comp=Z,1.5nm,0.8s						
RAYN	Ar Rayn	80.02	291	P	P	22 36 07.2	+0.5
RAYN				IAmb	IAmb	22 36 08.3	
	comp=Z,4.4nm,0.8s						
RAYN	Ar Rayn	80.02	291	P	P	22 36 07.2	+0.5
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRTR	Keskin Array B	80.15	311	P	P	22 36 07.1	-0.1
	comp=Z,2.2nm,0.8s,baz=60,slow=3.5,SNR=13						
	comp=Z,2.2nm,0.8s						
BRTR	Keskin Array B	80.15	311	P	P	22 36 08.0	+0.8
BRTR	Keskin Array B	80.15	311	ceP	P	22 36 08.1	+0.9
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NVAR	Mina Array Bea	80.27	51	P	P	22 36 08.9	+0.9
	comp=Z,0.5nm,0.6s,baz=297,slow=5.0,SNR=2.3						
	comp=Z,0.5nm,0.6s						
BURAR	Bucovina Array	80.58	321	P	P	22 36 08.5	-0.7
PDAR	Pinedale Array	83.21	43	P	P	22 36 25.1	+2.1
	comp=Z,0.5nm,0.7s,baz=348,slow=3.6,SNR=4.9						
	comp=Z,0.5nm,0.7s						
GERES	GERESS Array B	85.54	327	P	P	22 36 34.2	-0.1
	comp=Z,0.2nm,0.3s,baz=59,slow=9.6,SNR=1.6						
	comp=Z,0.2nm,0.3s						
FUORN	Ofenpass-Fuorn	88.75	327	P	P	22 36 49.7	-0.1
FUORN				IAmb	IAmb	22 37 15.0	
	comp=Z,2.8nm,1.1s						

NEIC ***18*** *22:26:45.8±1.6, 20°.31S±0°.04×68°.65W±0°.07, h116^{km}±5^{km}, mb4.7/62, Mwr4.5/33, ML4.6(GUC), Error ellipse: s-maj=9.2km s-min=6.1km az=97.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-4.68; $M_{\theta\theta}$-1.91; $M_{\phi\phi}$6.59; $M_{r\theta}$2.43; $M_{\theta\phi}$-0.70; $M_{\phi r}$-1.69; Fault plane solution: $M_0$6.62000×10^{15} NP1:ϕ_s330.51000°, δ60.11000°, λ-121.96000°. NP2:ϕ_s201.90000°, δ42.65000°, λ-47.36000°. Principal axes: T 6.9724, Plg10.0000°, Azm83.0000°; N -0.7771, Plg27.0000°, Azm348.0000°; P -6.1953, Plg61.0000°, Azm191.0000°;*

SJA ***18*** *22:26:45.9±1.0, 20°.29S×68°.79W, h122^{km}±6^{km}, ML4.5, MW4.8, Hypocentre not reviewed by the ISC*

NEIC ***18*** *22:26:45.7, 20°.31S×68°.63W, h115^{km}*

VAO ***18*** *22:26:46.8±0.3, 20°.16S×68°.63W, h115^{km}, mb4.7*

IDC ***18*** *22:26:46.5±0.4, 20°.26S×68°.54W, h121^{km}±4^{km}, mb4.1/14, mbtmp4.5/18, Error ellipse: s-maj=14.6km s-min=7.0km az=94.0*

GUC ***18*** *22:26:47.0±0.8, 20°.29S×68°.72W, h117^{km}±4^{km}, ML4.6*

ISC 18 22:26:45.7±0.5**, 20°.27S**±0°.03×**68°.64W**±0°.05**, h115**^{km}±4^{km}**, n301,** σ1°.07/326**, mb4.6**/38**, 13C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	0.50	285		Pn	22 27 04.2	+0.6
PB08				Sn	Sn	22 27 17.5	+0.4
PB08	IPOC Station P	0.50	285	⇑iP	Pn	22 27 04.3	+0.7
PB08				iS	Sn	22 27 17.8	+0.7
PB08				IAML		22 27 18.5	
	comp=E,40µm,0.6s						
PB08	IPOC Station P	0.50	285	eP		22 27 04.4	
PB08				eS		22 27 18.1	
PB08				IAML		22 27 21.2	
	comp=Z,16µm,0.7s						
GO01	Chusmiza	0.80	319		Pn	22 27 06.6	+0.6
PB11	IPOC Station P	1.08	298		Pn	22 27 08.2	-0.1
PB11				Sn	Sn	22 27 25.2	-0.4
PB11	IPOC Station P	1.08	298	⇑iP	Pn	22 27 08.5	+0.1
PB11				iS	Sn	22 27 25.1	-0.4
PB11	IPOC Station P	1.08	298	eP		22 27 08.4	
PB11				eS		22 27 25.2	
PB11				IAML		22 27 26.4	
	comp=Z,14µm,0.6s						
PB01	IPOC Station P	1.10	226		Pn	22 27 08.6	0.0
PB01				Sn	Sn	22 27 25.6	-0.2
PB01	IPOC Station P	1.10	226	⇑iP	Pn	22 27 08.9	+0.4
PB01				iS	Sn	22 27 25.7	-0.1
PB01				IAML		22 27 27.3	
	comp=E,32µm,0.3s						
PB01	IPOC Station P	1.10	226	eP		22 27 08.8	
PB01				eS		22 27 26.0	
PB01				IAML		22 27 27.2	
	comp=Z,13µm,0.4s						
TA02	Huaiquique	1.40	270		Pn	22 27 11.4	-0.3
TA02				Sn	Sn	22 27 30.3	-1.1
TA02	Huaiquique	1.40	270	⇑iP	Pn	22 27 11.4	-0.3
TA02				iS	Sn	22 27 30.6	-0.8
TA02				IAML		22 27 32.4	
	comp=N,19µm,0.2s						
TA02	Huaiquique	1.40	270	eP		22 27 11.4	
TA02				eS		22 27 30.7	
TA02				IAML		22 27 32.1	
	comp=Z,6µm,0.4s						
MNMC	Minye Minye	1.45	321		Pn	22 27 13.3	+0.7
MNMC	Minye Minye	1.45	321	⇑iP	Pn	22 27 13.5	+1.0
MNMC				iS	Sn	22 27 33.9	+1.0
MNMCX	Minye Minye	1.45	321	eP		22 27 13.6	
MNMCX				eS		22 27 33.6	
MNMCX				IAML		22 27 35.1	
	comp=Z,18µm,0.4s						
TA01	Diego Aracena	1.48	258		Pn	22 27 11.9	-0.6
TA01	Diego Aracena	1.48	258	⇑iP	Pn	22 27 12.0	-0.6
TA01				iS	Sn	22 27 31.4	-1.5
TA01	Diego Aracena	1.48	258	eP		22 27 11.9	
TA01				eS		22 27 32.2	
TA01				IAML		22 27 34.4	
	comp=Z,3µm,0.9s						
PB02	IPOC Station P	1.57	228		Pn	22 27 13.8	+0.1
PB02	IPOC Station P	1.57	228	⇑iP	Pn	22 27 13.9	+0.1
PB02				iS	Sn	22 27 34.3	-0.9
PB02				IAML		22 27 36.3	
	comp=E,18µm,0.5s						
PB02	IPOC Station P	1.57	228	eP		22 27 14.0	
PB02				eS		22 27 35.2	
PB02				IAML		22 27 35.9	
	comp=Z,15µm,1.1s						
PB09	IPOC Station P	1.62	200		Pn	22 27 15.6	+1.2
PB09	IPOC Station P	1.62	200	⇑iP	Pn	22 27 15.6	+1.2
PB09				iS	Sn	22 27 37.1	+0.8
PB09				IAML		22 27 40.0	
	comp=N,4µm,0.5s						
PB07	IPOC Station P	1.86	219	eP		22 27 17.3	
PB07				eS		22 27 41.5	
PB07				IAML		22 27 48.6	
	comp=Z,3µm,0.3s						
PB07	IPOC Station P	1.86	219		Pn	22 27 17.1	-0.2
PB07	IPOC Station P	1.86	219	⇑iP	Pn	22 27 17.3	-0.1
PB07				iS	Sn	22 27 40.5	-1.0
PB07				IAML		22 27 46.9	
	comp=E,4µm,0.3s						
PB03	IPOC Station P	2.05	210		Pn	22 27 19.6	-0.1
PB03	IPOC Station P	2.05	210	⇑iP	Pn	22 27 19.9	+0.1
PB03				iS	Sn	22 27 44.9	-0.9
PB03				IAML		22 27 49.4	
	comp=N,3µm,0.3s						
PB03	IPOC Station P	2.05	210	eP		22 27 20.3	
PB03				eS		22 27 45.3	
PB03				IAML		22 27 45.8	
	comp=Z,3µm,0.5s						
PB16	IPOC Station P	2.10	337	Pn	Pn	22 27 22.3	+1.6
PB16	IPOC Station P	2.10	337	eP	Pn	22 27 22.3	+1.6
PB16				iS	Sn	22 27 48.7	+1.3
PB16				IAML		22 27 50.7	
	comp=N,2µm,0.7s						
PB16	IPOC Station P	2.10	337	eP		22 27 22.4	
PB16				eS		22 27 49.3	
PB16				IAML		22 27 58.1	
	comp=Z,986nm,0.5s						
PB12	IPOC Station P	2.29	316	eP		22 27 22.4	
PB12				IAML		22 29 29.9	
	comp=Z,118nm,0.5s						
PB12	IPOC Station P	2.29	316		Pn	22 27 22.5	-0.3
LVC	Limon Verde	2.34	186	P	Pn	22 27 25.2	+1.6
	comp=Z,364nm,0.5s,baz=11,slow=8.2,SNR=395						
LVC				S	Sn	22 27 53.7	+1.0
	comp=Z,415nm,0.3s,baz=344,slow=15,SNR=21						
LVC	Limon Verde	2.34	186		Pn	22 27 25.0	+1.4
LVC	Limon Verde	2.34	186	⇑iP	Pn	22 27 25.2	+1.6
LVC				iS	Sn	22 27 52.8	+0.1
LVC	Limon Verde	2.34	186	eP	Pn	22 27 25.1	+1.4
AP01	Chacalluta	2.48	319		Pn	22 27 24.7	-0.4
AP01	Chacalluta	2.48	319	⇑iP	Pn	22 27 25.0	-0.1
AP01				iS	Sn	22 27 53.4	-2.0
PB04	IPOC Station P	2.49	214		Pn	22 27 24.7	-0.6
PB04	IPOC Station P	2.49	214	eP	Pn	22 27 25.5	+0.2
PB06	IPOC Station P	2.57	200		Pn	22 27 27.2	+0.7
PB06	IPOC Station P	2.57	200	eP	Pn	22 27 26.9	+0.4
PB06				iS	Sn	22 27 56.7	-1.0
PB06				IAML		22 28 04.1	
	comp=E,2µm,0.3s						
PB18	Visviri	2.79	343		Pn	22 27 32.5	+2.9
PB18	Visviri	2.79	343	eP	Pn	22 27 32.7	+3.1
PB15	IPOC Station P	3.02	195		Pn	22 27 32.5	+0.2
PB15	IPOC Station P	3.02	195	eP	Pn	22 27 32.7	+0.3
PB10	IPOC Station P	3.68	209		Pn	22 27 39.6	-1.3
PB10	IPOC Station P	3.68	209	⇑iP	Pn	22 27 39.4	-1.5
LPAZ	La Paz	3.99	7	P	Pn	22 27 47.8	+2.1
	comp=E,72nm,0.7s,baz=179,slow=7.7,SNR=177						
LPAZ				S	Sn	22 28 30.1	-1.9
	comp=E,30nm,0.6s,baz=162,slow=20,SNR=1.6						
LPAZ	La Paz	3.99	7	Pn	Pn	22 27 48.4	+2.8
PB14	IPOC Station P	4.63	200		Pn	22 27 51.9	-2.0
GO02	Mina Guanaco	4.95	190	Pn	Pn	22 27 57.5	-0.6
AC01	Pan de Azucar	6.12	197		Pn	22 28 11.1	-2.7
AC02	Maricunga	6.55	184	Pn	Pn	22 28 19.4	-0.6
GO03	Copiap	7.43	191	Pn	Pn	22 28 28.6	-3.0
SIV	San Ignacio	8.36	61	P	Pn	22 28 42.5	-1.6
	comp=E,109nm,0.7s,baz=249,slow=9.9,SNR=589						
AC05	El Transito	8.65	190	Pn	Pn	22 28 45.2	-2.9
LCO	Las Campanas	8.90	192	Pn	Pn	22 28 47.5	-4.1
CO01	Juntas del Tor	9.75	187		Pn	22 28 59.6	-3.5
GO04	Tololo Observa	10.05	191		Pn	22 29 02.6	-4.5
PTLB	Pontes e Lacer	10.24	64	Pn	Pn	22 29 07.8	-1.8
PTLB	Pontes e Lacer	10.24	64	eP	Pn	22 29 08.2	-1.4
ESFA	Espinillo Form	10.47	118	eP	Pn	22 29 13.0	+0.4
ETMB	Extrema	10.65	13	Pn	Pn	22 29 12.9	-2.2
ETMB	Extrema	10.65	13	eP	Pn	22 29 13.4	-1.8
CO03	El Pedregal	10.68	190	Pn	Pn	22 29 10.7	-4.9
VILB	Vilhena	10.88	49	Pn	Pn	22 29 17.1	-1.1
VILB	Vilhena	10.88	49	eP	Pn	22 29 17.2	-1.0
BDQN	Bodoquena, MS	11.15	93	eP	Pn	22 29 19.8	-2.1
CFA	Coronel Fontan	11.29	178	P	Pn	22 29 21.4	-2.2
	comp=E,2.6nm,0.4s,baz=347,slow=11,SNR=7.4						
CFA				S	Sn	22 31 17.9	-10
	comp=E,6.1nm,0.6s,baz=211,slow=5.8,SNR=4.0						
CPUP	Villa Florida	12.01	122	P	Pn	22 29 33.1	0.0
	comp=E,36nm,0.7s,baz=304,slow=12,SNR=83						
CPUP	Villa Florida	12.01	122		Pn	22 29 32.8	-0.4
CPUP	Villa Florida	12.01	122	eP	Pn	22 29 32.9	-0.2
AQDB	Aquidauana	12.14	93	Pn	Pn	22 29 34.0	-0.9
AQDB	Aquidauana	12.14	93	eP	Pn	22 29 34.2	-0.6
SAML	Samuel	12.43	26	Pn	Pn	22 29 36.9	-1.8
SAML	Samuel	12.43	26	eP	Pn	22 29 36.8	-1.9
AMBA	Amambai (Brazi	12.97	104	eP	Pn	22 29 45.5	-0.2
SALV	Santo Antonio	13.05	73	eP	Pn	22 29 45.7	-1.2
MECA	Mercedes	13.07	135	eP	Pn	22 29 48.6	+1.6
CZSB	Cruzeiro do Su	13.08	342		Pn	22 29 46.3	-0.9
MT08	Bocatoma Ro	13.18	185		Pn	22 29 46.8	-1.8
PP1B	Ponte de Pedra	13.29	81	eP	Pn	22 29 48.5	-1.4
LMEL	Las Melosas	13.59	186		Pn	22 29 52.4	-1.5
MT09	Talagante	13.61	188		Pn	22 29 52.7	-1.4
MT01	Popeta	13.74	189		Pn	22 29 54.7	-0.9
AZCA	Azaras, Argent	13.91	126	eP	Pn	22 29 57.8	-0.1
MCR1	Marechal Candi	14.13	110	eP	Pn	22 30 00.9	+0.1
BO01	Tunca	14.23	188		Pn	22 30 00.7	-1.3
ITQB	Itaqui	14.35	133	eP	Pn	22 30 04.3	+0.8
BO02	Sierra Bellavi	14.59	187		Pn	22 30 05.7	-0.9
C2SB	Chapadao do Su	14.97	87	eP	Pn	22 30 11.7	+0.3
CRSM	Crissiumal (Br	15.15	121	eP	Pn	22 30 14.2	+0.5
FRBT	Francisco Belt	15.41	115	eP	P	22 30 17.7	-1.3
RODS	Rosario do Sul	15.74	132	eP	P	22 30 21.7	-0.9
PTGB	Pitanga	15.94	109	eP	P	22 30 24.6	-0.3
PCMB	Pacaembu	16.29	98	eP	P	22 30 28.2	-0.6
ALGR	Alto Alegre (B	16.53	124	eP	P	22 30 32.8	+1.3
ITAB	Concordia	16.62	118	P	Pn	22 30 31.1	-0.7
ITAB				IAmb	IAmb	22 30 34.3	
	comp=Z,46nm,0.6s						
ITAB	Concordia	16.62	118	eP	P	22 30 33.0	+0.8
ARAG	Araguaiana, MT	16.64	77	eP	P	22 30 32.8	+0.3
CPSB	Cacapava Do Su	17.03	129	eP	Pn	22 30 37.4	+0.6
ITRB	Iturama	17.19	91	eP	Pn	22 30 39.6	+0.7
PLTB	Pedras Altas	17.68	133	P	P	22 30 42.9	-1.1
PLTB	Pedras Altas	17.68	133	eP	Pn	22 30 45.0	+0.2
FRTB	Fartura	17.97	103	eP	Pn	22 30 47.7	-0.6
NPGB	Novo Progresso	18.40	46	eP	P	22 30 51.1	-0.9
CNLB	Canela	18.47	123	eP	Pn	22 30 52.9	-1.3
SNDB	Serra Nova Dou	18.58	66	eP	Pn	22 30 54.1	-1.4
TRQA	Tornquist	18.64	163	P	P	22 30 54.2	-0.2
TRQA				IAmb	IAmb	22 30 56.0	
	comp=Z,14nm,0.6s						
MACA	Manacapuru-AM	18.69	26	eP	P	22 30 54.8	-0.4
TIJ01	Guaruva-PR	18.78	109	eP	Pn	22 30 57.8	-0.2
BB19B	Bebedouro	18.84	96	eP	Pn	22 30 56.9	-1.7
MCRA	Macar, Loja	19.27	324	P	P	22 31 01.1	-0.4
MCRA				IAmb	IAmb	22 31 07.6	
	comp=Z,21nm,1.0s						
GO06	Curarrehue	19.40	187	P	P	22 31 02.9	0.0
GO06				IAmb	IAmb	22 31 05.5	
	comp=Z,28nm,1.0s						
IPMB	Ipameri, GO	19.43	87	eP	P	22 31 03.6	+0.3
RCLB	Rio Claro- Sao	19.78	100	eP	P	22 31 06.8	-0.2
SPB	Sao Paulo	19.95	103	eP	Pn	22 31 09.5	-1.9
SGCB	S£o Gabriel d	20.09	5	eP	P	22 31 09.8	-0.5
BDFB	Brasilia	20.15	80	P	P	22 31 10.8	-0.3
	comp=Z,8.3nm,0.5s,baz=262,slow=9.8,SNR=20						
	comp=Z,8.3nm,0.5s						
BDFB	Brasilia	20.15	80	P	P	22 31 10.7	-0.3
BDFB	Brasilia	20.15	80	eP	P	22 31 11.5	+0.4
PET01	Itanhaem-SP	20.16	105	eP	P	22 31 11.6	+0.5
ITTB	Itaituba	20.19	40	eP	P	22 31 10.7	-0.7
VAO	Valinhos	20.33	102	eP	P	22 31 12.0	-1.0
PLCA	Paso Flores	20.46	184	P	P	22 31 14.9	+0.7
	comp=Z,22nm,0.8s,baz=8.1,slow=10,SNR=25						
PLCA				PcP	PcP	22 35 22.3	+0.7
	comp=Z,1.3nm,0.8s,baz=333,slow=2.3,SNR=6.1						
	comp=Z,22nm,0.8s						
PLCA	Paso Flores	20.46	184	P	P	22 31 14.1	-0.1
PLCA				IAmb	IAmb	22 31 18.9	
	comp=Z,25nm,0.8s						
PLCA	Paso Flores	20.46	184	eP	P	22 31 15.3	+1.1
PMNB	Patos De Minas	21.01	89	eP	P	22 31 19.8	-0.6
CHSH	Refugio Sur-Vo	21.17	331	P	P	22 31 22.5	-0.1
CHSH				IAmb	IAmb	22 32 08.2	
	comp=Z,30nm,1.0s						
PARB	Paraibuna	21.58	102	eP	P	22 31 26.9	+0.5
SLOR	San Lorenzo -	21.68	332	P	P	22 31 28.3	+0.3
LL06	Loncomilla	22.28	190	P	P	22 31 33.0	-0.4
LL06				IAmb	IAmb	22 32 01.2	
	comp=Z,102nm,1.4s						
BSCB	Bom Sucesso	22.34	96	eP	P	22 31 34.1	-0.2
TULM	Tulcn-Chalpat	22.70	336	P	P	22 31 38.6	+0.2
TULM				IAmb	IAmb	22 32 10.2	
	comp=Z,21nm,0.8s						
LL02	Futaleuf	23.01	186	P	P	22 31 39.2	-1.4
PRPB	Parauapebas	23.03	55	eP	P	22 31 39.8	-1.3
SMTB	Santa Maria do	23.28	64	eP	P	22 31 43.1	-0.3
VAS01	Vassouras-RJ	23.56	99	eP	P	22 31 47.3	+1.4
JANB	Januaria	23.74	81	eP	P	22 31 46.5	-1.1
BOAV	Boa Vista	23.89	20	P	P	22 31 48.9	0.0
BOAV	Boa Vista	23.89	20	eP	P	22 31 48.7	-0.2
SDBA	SAO DESIDERIO	24.06	75	eP	P	22 31 49.8	-0.7
AY01	Puyuhuapi	24.31	187	P	P	22 31 51.7	-0.7
AY01				IAmb	IAmb	22 31 53.1	
	comp=Z,16nm,0.7s						
DUB01	Friburgo-RJ	24.55	99	eP	P	22 31 55.3	+0.4
COYC	Coyhaique	25.39	186	P	P	22 32 01.4	-0.8
COYC				IAmb	IAmb	22 32 03.5	
	comp=Z,20nm,0.7s						
MCPB	Macapa, AP	25.59	41	eP	P	22 32 04.8	+0.4
SJMB	Sao Joao De Ma	25.92	91	eP	P	22 32 07.1	-0.2
ALF01	Guarapari-ES	26.15	96	eP	P	22 32 09.1	-0.2
RUSC	La Rusia	26.37	350	P	P	22 32 11.3	-0.5
RUSC				IAmb	IAmb	22 32 15.3	
	comp=Z,39nm,1.1s						
GUA01	Guaratinga, BA	27.58	87	eP	P	22 32 22.2	0.0
GO08	Villa O'Higgin	28.30	186	P	P	22 32 28.9	+0.7
BAUV	El Baul	29.04	1	P	P	22 32 34.4	-0.7
BAUV				IAmb	IAmb	22 32 35.9	
	comp=Z,24nm,1.2s						
SDV	Santo Domingo	29.04	356	P	P	22 32 33.9	-1.4
	comp=Z,1.9nm,0.4s,baz=228,slow=15,SNR=3.6						
	comp=Z,1.9nm,0.4s						
SDV	Santo Domingo	29.04	356	eP	P	22 32 35.2	-0.1
MG02	Cerro Sombrero	32.45	181	P	P	22 33 05.8	+1.1
MG03	Isla Dawson	33.55	182	P	P	22 33 14.4	+0.2
MG03				IAmb	IAmb	22 33 48.1	
	comp=Z,34nm,1.2s						
RCBR	Riachuelo	34.87	70	eP	P	22 33 26.7	+0.4
OBIP	Obispado Ponce	38.13	3	P	P	22 33 52.4	-1.4
CELP	Cerrillos	38.16	3	P	P	22 33 53.1	-0.9
SJG	San Juan	38.22	4	P	P	22 33 52.5	-2.0
TEIG	Tepich	44.61	333	P	P	22 34 46.5	-0.1
DWPF	Disney Wildern	49.66	345	P	P	22 35 25.2	-0.5
	baz=164						
ZAIG	Zacatecas	54.10	321	P	P	22 35 59.0	-0.1
ZAIG				IAmb	IAmb	22 36 01.6	
	comp=Z,9.5nm,1.2s						
BRAL	Brewton	54.12	340	P	P	22 35 57.8	-0.9
	baz=159						
BIRD	Birdtown, Kers	55.76	348	P	P	22 36 10.5	0.0
BIRD				IAmb	IAmb	22 36 11.4	
	comp=Z,14nm,0.8s						
LRAL	Lakeview Retre	55.84	341	P	P	22 36 10.5	-0.6
	baz=159						
KMSC	Kings Mountain	56.41	348	P	P	22 36 15.6	+0.4
	baz=166						
833A	Chaparral WMA,	56.72	327	P	P	22 36 17.4	-0.1
	baz=145						
X48A	Hartselle	57.17	342	P	P	22 36 19.7	-0.8
X48A				IAmb	IAmb	22 36 20.3	
	comp=Z,5.3nm,0.7s						
NATX	Nacogdoches	57.44	334	P	P	22 36 22.5	0.0
	baz=151						
TKL	Tuckaleechee C	57.45	345	P	P	22 36 21.6	-0.8
TKL				IAmb	IAmb	22 36 22.7	
	comp=Z,8.2nm,0.8s						
SWET	Sewanee	57.57	343	P	P	22 36 22.5	-0.9
SWET				IAmb	IAmb	22 36 23.5	
	comp=Z,8.1nm,0.7s						
BLA	Blacksburg	58.24	349	P	P	22 36 29.5	+1.4
	baz=167						
WLAR	White Oak Lake	58.52	336	P	P	22 36 29.9	0.0
WHTX	Lake Whitney,	58.85	331	P	P	22 36 32.5	+0.1
	baz=148						
WVT	Waverly	58.96	342	P	P	22 36 32.0	-1.0
WVT	Waverly	58.96	342	P	P	22 36 32.3	-0.7
	baz=159						
SLBS	Sierra La Lagu	59.41	315	P	P	22 36 38.1	+1.6
SLBS				IAmb	IAmb	22 37 22.3	
	comp=Z,15nm,1.2s						
MIAR	Mount Ida	59.45	336	P	P	22 36 36.3	-0.2
MIAR				IAmb	IAmb	22 36 37.0	
	comp=Z,6.1nm,0.8s						
MIAR	Mount Ida	59.45	336	P	P	22 36 36.4	0.0
	baz=153,SNR=5.3						
TXAR	Lajitas Array	59.78	325	P	P	22 36 38.5	-0.4
	comp=Z,0.8nm,0.7s,baz=153,slow=8.8,SNR=10						

TXAR				pP	**pP**	**22 37 07.7**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=156,slow=9.6,SNR=2.9						
	comp=Z,0.8nm,0.7s						
TXAR	**Lajitas Array**	**59.78**	**325**	P	**P**	**22 36 38.3**	**-0.6**
TX32	**Lajitas Array**	**59.78**	**325**	P	**P**	**22 36 38.5**	**-0.4**
X37A	**Clayton**	**60.19**	**335**		**P**	**22 36 42.0**	**+0.5**
ABTX	**Abilene, Hawle**	**60.38**	**330**	P	**P**	**22 36 42.9**	**+0.1**
	baz=146						
WCI	**Wyandotte Cave**	**60.51**	**344**	P	**P**	**22 36 42.3**	**-1.3**
	baz=161						
MCWV	**Mont Chateau**	**60.53**	**350**	P	**P**	**22 36 43.1**	**-0.6**
	baz=168						
WTFS	**Witchita Falls**	**60.80**	**332**	P	**P**	**22 36 45.6**	**-0.1**
WTFS				IAmb	IAmb	22 36 46.5	
	comp=Z,16nm,0.7s						
P52A	**Corning**	**60.91**	**348**	P	**P**	**22 36 45.5**	**-0.8**
	baz=166						
O53A	**New Philadelph**	**61.34**	**349**	P	**P**	**22 36 48.9**	**-0.3**
O53A	**New Philadelph**	**61.34**	**349**	P	**P**	**22 36 48.6**	**-0.6**
	baz=167						
P49A	**Miami Univ. Ec**	**61.36**	**346**	P	**P**	**22 36 48.5**	**-0.9**
	baz=163						
TUL1	**Leonard**	**61.51**	**335**		**P**	**22 36 50.1**	**-0.3**
TUL1				IAmb	IAmb	22 36 51.2	
	comp=Z,12nm,0.9s						
TUL1	**Leonard**	**61.51**	**335**	P	**P**	**22 36 49.3**	**-1.1**
	baz=151						
ACSO	**Alum Creek Sta**	**61.66**	**348**	P	**P**	**22 36 50.9**	**-0.4**
	baz=165						
WMOK	**Wichita Mounta**	**61.76**	**332**	P	**P**	**22 36 51.4**	**-0.8**
	baz=148						
CCM	**Cathedral Cave**	**61.79**	**340**	P	**P**	**22 36 51.8**	**-0.4**
CCM				IAmb	IAmb	22 36 53.2	
	comp=Z,18nm,1.3s						
CCM	**Cathedral Cave**	**61.79**	**340**	P	**P**	**22 36 51.8**	**-0.4**
	baz=156						
O48B	**Farmland**	**62.15**	**346**	P	**P**	**22 36 54.0**	**-0.6**
	baz=162						
L61B	**Northampton**	**62.52**	**357**	P	**P**	**22 36 57.0**	**0.0**
	baz=176						
BINY	**Binghamton**	**62.53**	**354**	P	**P**	**22 36 56.7**	**-0.4**
	baz=172						
MNTX	**Cornudas Mount**	**62.54**	**325**	P	**P**	**22 36 56.1**	**-1.3**
	baz=141						
ERPA	**Erie**	**62.96**	**351**	P	**P**	**22 36 59.6**	**-0.3**
ERPA	**Erie**	**62.96**	**351**	P	**P**	**22 36 58.8**	**-1.1**
	baz=168						
MSTX	**Muleshoe**	**62.98**	**328**	P	**P**	**22 36 59.6**	**-0.8**
MSTX				IAmb	IAmb	22 37 01.5	
	comp=Z,12nm,0.9s						
MSTX	**Muleshoe**	**62.98**	**328**	P	**P**	**22 36 59.5**	**-0.8**
	baz=144						
AMTX	**Amarillo**	**63.20**	**330**	P	**P**	**22 37 01.5**	**-0.3**
	baz=145						
SNAA	**Sanae**	**63.35**	**161**	P	**P**	**22 37 03.0**	**+0.7**
SNAA				IAmb	IAmb	22 37 04.0	
	comp=Z,6.0nm,0.8s						
HDIL	**Hopedale**	**63.50**	**343**	P	**P**	**22 37 02.4**	**-1.1**
HDIL	**Hopedale**	**63.50**	**343**	P	**P**	**22 37 02.9**	**-0.6**
	baz=158						
121A	**Cookes Peak, D**	**64.49**	**324**	P	**P**	**22 37 10.2**	**-0.2**
	baz=139						
KSU1	**Kansas State U**	**64.61**	**336**	P	**P**	**22 37 10.7**	**-0.1**
	baz=151						
LONY	**Lake Ozonia**	**64.80**	**355**	P	**P**	**22 37 11.7**	**-0.3**
LONY				IAmb	IAmb	22 37 12.8	
	comp=Z,4.9nm,0.8s						
CBKS	**Cedar Bluff**	**65.61**	**334**	P	**P**	**22 37 17.2**	**-0.1**
	baz=148						
ANMO	**Albuquerque**	**65.62**	**326**	P	**P**	**22 37 17.9**	**+0.2**
ANMO	**Albuquerque**	**65.62**	**326**	P	**P**	**22 37 17.4**	**-0.3**
	baz=141						
SCIA	**State Center**	**65.92**	**340**	P	**P**	**22 37 19.0**	**-0.2**
	baz=155						
JFWS	**Jewell Farm**	**65.95**	**343**	P	**P**	**22 37 19.3**	**-0.1**
	baz=158						
TUC	**Tucson**	**66.03**	**322**	P	**P**	**22 37 19.9**	**-0.3**
	baz=137						
T25A	**Trinidad**	**66.32**	**329**	P	**P**	**22 37 22.1**	**-0.1**
	baz=143						
GLMI	**Grayling**	**66.40**	**348**	P	**P**	**22 37 23.2**	**+1.0**
	baz=164						
214A	**Organ Pipe Nat**	**66.99**	**320**	P	**P**	**22 37 26.8**	**+0.5**
214A	**Organ Pipe Nat**	**66.99**	**320**	P	**P**	**22 37 26.4**	**+0.1**
	baz=135						
KSCO	**Kaye Shedlock'**	**67.01**	**332**	P	**P**	**22 37 26.7**	**+0.2**
	baz=145						
BGNE	**Belgrade**	**67.19**	**336**	P	**P**	**22 37 27.1**	**-0.3**
BGNE	**Belgrade**	**67.19**	**336**	P	**P**	**22 37 27.8**	**+0.4**
	baz=150						
BATG	**Bathurst New B**	**67.27**	**2**	P	**P**	**22 37 27.4**	**-0.3**
SDCO	**Great Sand Dun**	**67.33**	**329**	P	**P**	**22 37 29.1**	**+0.5**
SDCO				IAmb	IAmb	22 37 30.5	
	comp=Z,5.4nm,0.7s						
SDCO	**Great Sand Dun**	**67.33**	**329**	P	**P**	**22 37 29.7**	**+1.1**
	baz=142,SNR=12						
S22A	**4UR Ranch, Cre**	**67.98**	**328**	P	**P**	**22 37 33.9**	**+1.1**
	baz=141						
Q24A	**Divide**	**68.13**	**330**	P	**P**	**22 37 34.4**	**+0.7**
	baz=143						
DBIC	**Dimbokro**	**68.15**	**74**	P	**P**	**22 37 33.0**	**-0.9**
	comp=Z,3.8nm,0.4s,baz=244,slow=7.5,SNR=13						
	comp=Z,3.8nm,0.4s						
DBIC	**Dimbokro**	**68.15**	**74**	P	**P**	**22 37 33.1**	**-0.8**
DBIC				IAmb	IAmb	22 38 01.5	
	comp=Z,11nm,1.2s						
OGNE	**Ogallala**	**68.35**	**333**	P	**P**	**22 37 35.6**	**+0.8**
	baz=146						
MVCO	**Mesa Verde**	**68.41**	**327**	P	**P**	**22 37 35.6**	**+0.2**
MVCO	**Mesa Verde**	**68.41**	**327**	P	**P**	**22 37 36.7**	**+1.3**
	baz=140						
ECSD	**EROS Data Cent**	**68.67**	**339**	P	**P**	**22 37 36.0**	**-0.6**
ECSD				IAmb	IAmb	22 37 37.4	
	comp=Z,13nm,1.5s						
ECSD	**EROS Data Cent**	**68.67**	**339**	P	**P**	**22 37 35.7**	**-0.9**
	baz=152						
WUAZ	**Wupatki**	**68.70**	**324**	P	**P**	**22 37 38.5**	**+1.3**
	baz=137						
SPMN	**Marine on St.**	**68.80**	**342**	P	**P**	**22 37 36.6**	**-0.7**
	baz=156						
ISCO	**Idaho Springs**	**69.01**	**330**	P	**P**	**22 37 39.5**	**+0.4**
ISCO	**Idaho Springs**	**69.01**	**330**	P	**P**	**22 37 40.4**	**+1.3**
	baz=143,SNR=6.0						
SMCO	**Snowmass**	**69.17**	**329**	P	**P**	**22 37 40.6**	**+0.4**
YUH	**Yuha Desert**	**69.37**	**319**	P	**P**	**22 37 41.4**	**+0.3**
IKP	**In-Ko-Pah, Jac**	**69.49**	**318**	P	**P**	**22 37 43.7**	**+1.8**
	baz=133						
SWSC	**Sam W. Stewart**	**69.49**	**319**	P	**P**	**22 37 43.9**	**+2.0**
	baz=133						
BC3	**Big Chuckawall**	**69.76**	**320**	P	**P**	**22 37 45.2**	**+1.6**
	baz=133						
MONP2	**Monument Peak**	**69.84**	**318**	P	**P**	**22 37 45.9**	**+1.6**
	baz=132						
QSPA	**South Pole Qui**	**69.91**	**180**	P	**P**	**22 37 45.3**	**+1.2**
QSPA				IAmb	IAmb	22 37 46.9	
	comp=Z,16nm,1.1s						
DRLN	**Deer Lake**	**69.92**	**8**	P	**P**	**22 37 43.7**	**-0.4**
DRLN				IAmb	IAmb	22 37 49.8	
	comp=Z,23nm,1.2s						
IRM	**Iron Mountain**	**69.92**	**320**	P	**P**	**22 37 46.8**	**+2.3**
	baz=134						
N23A	**Red Feather La**	**70.03**	**331**	P	**P**	**22 37 47.3**	**+2.0**
	baz=143,SNR=5.2						
BELC	**Belle Mtn. Jos**	**70.33**	**320**	P	**P**	**22 37 49.0**	**+1.9**
	baz=133						
TPFO	**Pinon Flats**	**70.34**	**319**	P	**P**	**22 37 48.8**	**+1.5**
	baz=133						
PFO	**Pinyon Flats O**	**70.35**	**319**	P	**P**	**22 37 48.7**	**+1.4**
	baz=133						
O20A	**White River Ci**	**70.53**	**329**	P	**P**	**22 37 49.2**	**+0.9**
	baz=141						
KNB	**Kanab**	**70.59**	**324**	P	**P**	**22 37 49.6**	**+0.9**
KNB				IAmb	IAmb	22 37 51.8	
	comp=Z,14nm,1.0s						
GMRC	**Granite Mounta**	**70.66**	**320**	P	**P**	**22 37 50.7**	**+1.6**
	baz=133,SNR=7.9						
HEC	**Hector,Ludlow**	**71.10**	**320**	P	**P**	**22 37 53.3**	**+1.6**
	baz=133						
CIS	**Catalina Islan**	**71.43**	**318**	P	**P**	**22 37 56.5**	**+2.8**
	baz=131						
BFSC	**Mount Baldy Ra**	**71.51**	**319**	P	**P**	**22 37 55.6**	**+1.3**
	baz=132						
GSC	**Goldstone, Bar**	**71.70**	**320**	P	**P**	**22 37 56.8**	**+1.5**
	baz=133						
RSSD	**Black Hills**	**71.81**	**334**	P	**P**	**22 37 57.5**	**+1.6**
	baz=145						
EDW2	**Edwards Air Fo**	**72.14**	**319**	P	**P**	**22 37 59.0**	**+1.0**
	baz=132						
AGMN	**Agassiz Nation**	**72.48**	**341**	P	**P**	**22 37 59.6**	**0.0**
	baz=153						
FURC	**Furnace Creek,**	**72.52**	**321**	P	**P**	**22 37 58.9**	**-1.1**
	baz=133						
SCZ2	**Santa Cruz Isl**	**72.59**	**317**	P	**P**	**22 38 01.6**	**+1.0**
	baz=130						
WCT	**Wildcat Mounta**	**72.60**	**321**	P	**P**	**22 38 01.7**	**+1.0**
MPMC	**Manual Prospec**	**72.62**	**320**	P	**P**	**22 38 02.2**	**+1.3**
	baz=132						
DUG	**Dugway, Tooele**	**72.88**	**326**	P	**P**	**22 38 03.8**	**+1.5**
	baz=137,SNR=5.3						
BW06	**Boulder Array**	**73.18**	**330**	P	**P**	**22 38 04.4**	**+0.2**
	baz=140						
PDAR	**Pinedale Array**	**73.18**	**330**	P	**P**	**22 38 04.1**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=133,slow=6.3,SNR=8.1						
	comp=Z,1.0nm,0.8s						
CWC	**Cottonwood Cre**	**73.23**	**320**	P	**P**	**22 38 05.1**	**+0.6**
	baz=132						
PKM	**Mcpherson Peak**	**73.28**	**318**	P	**P**	**22 38 06.5**	**+1.6**
	baz=130,SNR=5.2						
MDND	**Maddock**	**73.28**	**339**	P	**P**	**22 38 05.2**	**+0.8**
	baz=150						
VES	**Vestal, Richgr**	**73.44**	**319**	P	**P**	**22 38 07.6**	**+2.0**
	baz=131						
SMMC	**Simmler**	**73.67**	**318**	P	**P**	**22 38 08.8**	**+1.9**
	baz=130						
ULM	**Lac du Bonnet**	**74.23**	**342**	P	**P**	**22 38 09.2**	**-0.6**
	comp=Z,5.2nm,0.7s,baz=154,slow=7.0,SNR=9.9						
	comp=Z,5.2nm,0.7s						
NVAR	**Mina Array Bea**	**74.69**	**322**	P	**P**	**22 38 14.1**	**+1.1**
	comp=Z,1.3nm,0.7s,baz=149,slow=7.5,SNR=8.3						
	comp=Z,1.3nm,0.7s						
FLWY	**Flagg Ranch**	**74.72**	**330**	P	**P**	**22 38 14.1**	**+1.0**
FLWY				IAmb	IAmb	22 38 15.6	
	comp=Z,14nm,0.8s						
SCHQ	**Schefferville**	**74.81**	**1**	P	**P**	**22 38 12.8**	**-0.3**
	comp=Z,3.8nm,0.8s,baz=181,slow=5.5,SNR=6.7						
	comp=Z,3.8nm,0.8s						
RLMT	**Red Lodge**	**74.86**	**331**	P	**P**	**22 38 15.3**	**+1.4**
	baz=141						
H17A	**Grant Village**	**74.90**	**330**	P	**P**	**22 38 16.6**	**+2.5**
	baz=140						
DGMT	**Dagmar**	**75.45**	**336**	P	**P**	**22 38 18.6**	**+1.7**
	baz=146						
HLID	**Hailey**	**76.15**	**328**	P	**P**	**22 38 23.4**	**+2.2**
	baz=136						
TORD	**Torodi Ar. Bea**	**76.71**	**70**	P	**P**	**22 38 24.3**	**-0.4**
	comp=Z,6.4nm,0.4s,baz=251,slow=5.3,SNR=219						
	comp=Z,6.4nm,0.4s						
EGMT	**Eagleton**	**77.32**	**333**	P	**P**	**22 38 28.7**	**+1.2**
	baz=141						
VNDA	**Vanda**	**78.10**	**190**	P	**P**	**22 38 33.5**	**+2.1**
	comp=Z,1.6nm,0.8s,baz=119,slow=2.7,SNR=5.4						
	comp=Z,1.6nm,0.8s						
MSO	**Missoula**	**78.29**	**330**	P	**P**	**22 38 34.2**	**+1.2**
	baz=137						
FCC	**Fort Churchill**	**81.50**	**347**	P	**P**	**22 38 50.0**	**+0.2**
FCC				IAmb	IAmb	22 38 50.5	
	comp=Z,5.4nm,0.6s						
BOSA	**Boshof**	**83.80**	**118**	P	**P**	**22 39 03.0**	**+0.2**
	comp=Z,6.6nm,1.0s,baz=240,slow=20,SNR=4.4						
	comp=Z,6.6nm,1.0s						
ESDC	**Sonseca Array**	**84.78**	**44**	P	**P**	**22 39 07.1**	**-0.2**
	comp=Z,1.3nm,0.9s,baz=245,slow=5.8,SNR=7.5						
	comp=Z,1.3nm,0.9s						
YKA	**Yellowknife Ar**	**90.12**	**340**	P	**P**	**22 39 32.6**	**+0.4**
	comp=Z,12nm,0.8s,baz=134,slow=4.7,SNR=200						
YKA				pP	**pP**	**22 40 04.7**	**+1.1**
	comp=Z,2.1nm,0.6s,baz=134,slow=4.8,SNR=5.2						
	comp=Z,12nm,0.8s						
V35K	**Ketchikan**	**92.23**	**329**	P	**P**	**22 39 44.2**	**+2.0**
	baz=123						
ASAR	**Alice Springs**	**131.11**	**208**	PKP	**PKPdf**	**22 45 45.1**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=132,slow=1.7,SNR=14						
WRA	**Warramunga Arr**	**134.13**	**211**	PKP	**PKPdf**	**22 45 50.6**	**0.0**
	comp=Z,1.7nm,0.6s,baz=157,slow=1.7,SNR=15						
ZALV	**Zalesovo Beam**	**140.74**	**25**	PKhKP	PKPpre	22 45 58.4	
	comp=Z,2.8nm,0.8s,baz=336,slow=3.3,SNR=4.9						
ZALV				PKP	**PKPdf**	**22 46 02.4**	**+0.9**
	comp=Z,2.7nm,0.8s,baz=325,slow=2.1,SNR=9.3						
ZALV				pPKP	pPKPdf	22 46 35.4	+1.1
	comp=Z,0.7nm,0.6s,baz=324,slow=2.0,SNR=2.0						
KSH	**Kashi**	**144.13**	**50**	PKP	**PKPdf**	**22 46 08.6**	**+0.4**
MKAR	**Makanchi Array**	**144.49**	**35**	PKP	PKPbc	22 46 07.4	0.0
	comp=Z,2.6nm,0.9s,baz=329,slow=2.1,SNR=21						
MKAR				pPKP	pPKPdf	22 46 40.6	-0.6
	comp=Z,0.7nm,0.6s,baz=351,slow=2.8,SNR=2.9						
HEH	**HeiHe**	**147.49**	**341**	PKPbc	**PKPdf**	**22 46 13.3**	**-0.1**
HEH				sPKP		22 46 49.3	
WMQ	**Urumqi**	**149.32**	**35**	*e*P	**PKPdf**	**22 46 16.8**	**+0.1**
USRK	**Ussuriysk Ar.**	**150.60**	**329**	PKPbc	**PKiKP**	**22 46 25.1**	**+0.2**
	comp=Z,5.5nm,0.7s,baz=44,slow=2.0,SNR=13						
USRK				pPKPbc	**pPKPbc**	**22 46 58.0**	**+1.2**
	comp=Z,6.6nm,0.7s,baz=40,slow=1.3,SNR=8.3						
MJAR	**Matsushiro Arr**	**151.49**	**310**	PKPbc	**PKPbc**	**22 46 26.0**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=82,slow=0.8,SNR=6.8						
MJAR				PKPab	**PKPab**	**22 46 34.7**	**-0.6**
	comp=Z,2.5nm,1.0s,baz=55,slow=3.4,SNR=4.7						
MJAR				pPKPbc	**pPKPbc**	**22 46 59.8**	**+0.7**
	comp=Z,2.5nm,0.6s,baz=90,slow=1.6,SNR=5.7						
SONM	**Songino Array**	**152.21**	**7**	PKP	**PKPdf**	**22 46 22.3**	**+1.1**
	comp=Z,0.8nm,0.8s,baz=328,slow=5.1,SNR=5.8						
SONM				PKPbc	**PKiKP**	**22 46 28.1**	**-0.1**
	comp=Z,2.4nm,0.7s,baz=320,slow=3.8,SNR=15						
SONM				PKPab	**PKPab**	**22 46 37.9**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=331,slow=3.8,SNR=4.9						
SONM				pPKPbc	**pPKPbc**	**22 47 00.5**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=318,slow=2.0,SNR=2.8						
KSRS	**Korea Array**	**157.62**	**323**	PKPab	**PKPab**	**22 47 02.1**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=54,slow=4.0,SNR=6.1						
HHC	**Hu-ho-hao-te**	**159.49**	**360**	*e*P	**PKPdf**	**22 46 31.6**	**+0.6**
NJ2	**Nanjing**	**166.48**	**332**	*e*P	**PKPdf**	**22 46 37.3**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
PZH	**PanZhiHua**	**169.21**	**53**	PKP	**PKPdf**	**22 46 38.1**	**-2.0**

GII ***18*** *22:31:11.5±0.0, 27°.49N×34°.76E, h20^{km}, Mm2.5/3*

HLW ***18*** *22:31:15.2, 27°.89N×34°.38E, h8^{km}±6^{km}, Md2.3, Ml2.3*

ISC 18 22:31:15.4±1.6**, 27°.93N**±0°.07×**34°.44E**±0°.08**, h15**^{km}**, n10, σ1^{s}.00**/14**, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HKAT	**Jabal Katrina**	**0.71**	**327**	P	**Pg**	**22 31 29.1**	**-0.2**
	baz=332						
HKAT				S	**Sg**	**22 31 38.4**	**-0.3**
	baz=332						
TR2	**Tor 2**	**0.77**	**306**	P	**Pb**	**22 31 30.5**	**-0.1**
	baz=311						
HHRG	**Al Ghardaqah**	**1.05**	**227**	P	**Pb**	**22 31 35.0**	**-0.2**
	baz=220						
GRB	**Gharib**	**1.50**	**283**	P	**Pn**	**22 31 41.2**	**-0.6**
	baz=286						
EIL	**Elat**	**1.79**	**15**	Pn	**Pb**	**22 31 46.9**	**-1.0**
EIL				Sn	**Sg**	**22 32 13.3**	**+0.2**
HRFI	**Mount Harif**	**2.16**	**14**	Pn	**Pb**	**22 31 52.3**	**-2.0**
HRFI				Sn	**Sb**	**22 32 22.0**	**+1.1**
KRMI	**Paran Flat**	**2.19**	**7**	Sn	**Sb**	**22 32 23.2**	**+1.4**
PRNI	**Paran**	**2.46**	**12**	Pn	**Pn**	**22 31 55.9**	**+0.8**
PRNI				Sn	**Sb**	**22 32 30.7**	**+1.1**
KZIT	**Kziot**	**2.96**	**359**	Sn	**Sb**	**22 32 44.4**	**+0.4**
DSI	**Dead Sea**	**3.72**	**13**	Pn	**Pn**	**22 32 12.8**	**+0.5**

IDC ***18*** *22:37:28.5±2.8, 33°.83S×178°.99W, h0^{km}, mb4.0/2, mbtmp4.0/3, ML4.0/1, MS3.1/2, Error ellipse: s-maj=66.1km s-min=35.0km az=119.0*

WEL ***18*** *22:37:33.6±0.9, 34°S±7°×17°8W±°, h33^{km}, M4.1/10, mB4.8/3, ML4.5/19, MLv4.2/10, Mw(mB)4.0/3, Error ellipse: s-maj=0.0km s-min=0.0km az=136.0, confirmed*

ISC 18 22:37:29.6±1.6**, 34°.0S**±0°.1×**178°.3W**±0°.1**, h37**^{km}**, n29, σ2^{s}.08**/48**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.47**	**217**	P	**Pn**	**22 38 35.9**	**+1.0**
MXZ				S	**Sn**	**22 39 26.6**	**+0.9**
WMGZ	**Waiomatatini S**	**4.62**	**214**	P	**Pn**	**22 38 40.1**	**+3.2**
WMGZ				S	**Sn**	**22 39 31.6**	**+2.3**
PKGZ	**Pakihiroa**	**4.84**	**216**	P	**Pn**	**22 38 38.9**	**-1.1**
PKGZ				S	**Sn**	**22 39 35.7**	**+0.9**
HAZ	**Te Kaha**	**4.89**	**219**	P	**Pn**	**22 38 41.9**	**+1.3**
HAZ				S	**Sn**	**22 39 39.1**	**+3.2**
PUZ	**Puketiti**	**4.90**	**214**	P	**Pn**	**22 38 42.9**	**+2.1**
PUZ				S	**Sn**	**22 39 37.5**	**+1.3**
RUGZ	**Raukumara Rang**	**5.10**	**219**	P	**Pn**	**22 38 44.4**	**+0.8**
TWGZ	**Tauwhareparae**	**5.12**	**215**	P	**Pn**	**22 38 46.7**	**+2.9**
TWGZ				S	**Sn**	**22 39 44.1**	**+2.6**
CNGZ	**Carnagh Statio**	**5.26**	**211**	P	**Pn**	**22 38 46.7**	**+1.0**
MWZ	**Matawai**	**5.46**	**217**	P	**Pn**	**22 38 49.3**	**+0.9**
MWZ				S	**Sn**	**22 39 51.7**	**+1.7**
URZ	**Urewera**	**5.62**	**220**	Pn	**Pn**	**22 38 50.8**	**+0.3**
	4.4nm,0.3s,baz=356,slow=4.8,SNR=15						
URZ				Sn	**Sn**	**22 39 53.1**	**-0.8**
	5.8nm,0.3s,baz=163,slow=22,SNR=9.7						
URZ				LR	LR	22 41 06.1	
	comp=Z,116nm,18.6s,baz=281,slow=40						
	14nm,0.5s						
URZ	**Urewera**	**5.62**	**220**	P	**Pn**	**22 38 51.0**	**+0.4**
URZ				S	**Sn**	**22 39 53.1**	**-0.8**
RIGZ	**Rimuhau**	**5.64**	**213**	P	**Pn**	**22 38 51.7**	**+0.8**
RIGZ				S	**Sn**	**22 39 55.7**	**+1.2**
SNGZ	**Shannon Statio**	**5.90**	**215**	P	**Pn**	**22 38 55.8**	**+1.3**
SNGZ				S	**Sn**	**22 40 02.1**	**+1.2**
RTZ	**Ruatahuna**	**5.95**	**218**	P	**Pn**	**22 38 56.7**	**+1.4**
MUGZ	**Murupara**	**5.96**	**221**	P	**Pn**	**22 38 57.0**	**+1.7**
MUGZ				S	**Sn**	**22 40 01.5**	**-0.8**
MTHZ	**Maungataniwha**	**6.20**	**218**	P	**Pn**	**22 39 00.3**	**+1.6**
MTHZ				S	**Sn**	**22 40 08.7**	**+0.4**
NMHZ	**Naumai**	**6.41**	**217**	P	**Pn**	**22 39 04.5**	**+3.0**
NMHZ				S	**Sn**	**22 40 13.7**	**+0.4**
BKZ	**Black Stump Fm**	**6.62**	**218**	P	**Pn**	**22 39 04.0**	**-0.4**
BKZ				S	**Sn**	**22 40 16.9**	**-1.6**
KWHZ	**Kaweka Forest**	**6.85**	**217**	P	**Pn**	**22 39 07.6**	**+0.1**
TMVZ	**Te Maari**	**7.00**	**222**	P	**Pn**	**22 39 11.4**	**+1.8**
TMVZ				S	**Sn**	**22 40 25.8**	**-2.3**
NTVZ	**North Tongarir**	**7.00**	**222**	P	**Pn**	**22 39 10.2**	**+0.5**
BHHZ	**Black Hill Sta**	**7.08**	**218**	P	**Pn**	**22 39 12.1**	**+1.4**
BHHZ				S	**Sn**	**22 40 27.1**	**-2.8**
BFZ	**Birch Farm**	**7.93**	**212**	P	**Pn**	**22 39 22.0**	**-0.3**
BFZ				S	**Sn**	**22 40 45.8**	**-4.9**
MRZ	**Mangatainoka R**	**8.22**	**215**	P	**Pn**	**22 39 25.8**	**-0.4**
MRZ				S	**Sn**	**22 40 51.7**	**-6.1**
CTZ	**Chatham Island**	**9.77**	**173**	P	**Pn**	**22 39 50.9**	**+3.3**
CTZ				S	**Sn**	**22 41 31.6**	**-4.4**
RPZ	**Rata Peaks**	**12.73**	**217**	LR	LR	22 46 05.9	
	comp=Z,103nm,19.1s,baz=205,slow=41						
ASAR	**Alice Springs**	**42.79**	**271**	P	**P**	**22 45 23.7**	**-0.2**
	1.2nm,0.6s,baz=114,slow=7.4,SNR=22						
	1.2nm,0.6s						
WRA	**Warramunga Arr**	**44.11**	**276**	P	**P**	**22 45 33.6**	**-1.0**
	1.5nm,0.5s,baz=116,slow=8.1,SNR=29						
	1.5nm,0.5s						
FINES	**FINESS Array B**	**148.44**	**338**	PKPbc	**PKPab**	**22 57 14.4**	**-0.4**
	1.4nm,0.6s,baz=31,slow=3.6,SNR=11						

ROM 18 22:44:58.8±0.2**, 42°.862N**±0°.005×**13°.160E**±0°.009**, h10**^{km}**, ML1.6**/4**, 3C, Error ellipse: s-maj=0.7km s-min=0.4km az=314.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MC2	**Monte Cornacci**	**0.06**	**24**	P	Pg	22 45 01.2	0.0
MC2				S	Sg	22 45 02.8	0.0
T1214	**Arquata del Tr**	**0.11**	**161**	⇑P	Pg	22 45 02.3	+0.6
T1214				S	Sg	22 45 04.6	+0.9
MMO1	**Montemonaco**	**0.13**	**73**	P	Pg	22 45 02.3	+0.4
MMO1				S	Sg	22 45 04.6	+0.6
T1212	**Cascia, Frazio**	**0.14**	**218**	⇑P	Pg	22 45 02.6	+0.6
T1212				S	Sg	22 45 05.2	+0.9
T1212				AML	AML		
	comp=E,169µm,1.5s						
T1212				AML	AML		
	comp=N,132µm,0.6s						
T1212				AML	AML		
	comp=E,169µm,0.5s						
T1212				AML	AML		
	comp=N,132µm,1.4s						
T1218	**Civita (PG)**	**0.20**	**190**	P	Pb	22 45 03.9	-0.6
T1218				S	Sg	22 45 06.5	+0.7
T1218				AML	AML		
	comp=N,555µm,0.2s						
T1218				AML	AML		
	comp=E,526µm,0.1s						
T1218				AML	AML		
	comp=N,552µm,0.2s						
T1218				AML	AML		
	comp=E,554µm,0.4s						
T1241	**Roccafluvione,**	**0.20**	**92**	P	Pg	22 45 03.7	+0.7
T1241				S	Sg	22 45 07.2	+1.3
T1241				AML	AML		
	comp=E,74µm,0.5s						
T1241				AML	AML		
	comp=N,65µm,1.5s						
T1241				AML	AML		
	comp=N,65µm,0.5s						
SMA1	**SAN MARTINO**	**0.27**	**151**	⇑P	Pb	22 45 06.1	+0.4
SMA1				AML	AML		
	comp=N,1195µm,0.3s						
SMA1				AML	AML		
	comp=E,1695µm,0.5s						
RM33	**Pellescritta (**	**0.35**	**173**	AML	AML		
	comp=E,1510µm,0.1s						
RM33				AML	AML		
	comp=N,991µm,0.3s						
RM33				AML	AML		
	comp=E,1520µm,0.1s						
RM33				AML	AML		
	comp=N,974µm,0.7s						
RM33				AML	AML		
	comp=N,974µm,1.3s						
TERO	**Teramo**	**0.41**	**126**	P	Pg	22 45 07.2	+0.4
TERO				AML	AML		
	comp=E,120µm,0.4s						
TERO				AML	AML		
	comp=N,135µm,0.1s						
PTRJ	**Pietraroja**	**1.81**	**145**	P	Pn	22 45 28.7	-1.3
PTRJ				AML	AML		
	comp=E,78µm,1.2s						
PTRJ				AML	AML		
	comp=N,108µm,1.2s						
PTRJ				AML	AML		
	comp=E,78µm,0.8s						

ROM 18 22:45:09.3±0.1**, 42°.604N**±0°.004×**13°.251E**±0°.004**, h11**^{km}**, ML1.5**/12**, 9C-8D, Error ellipse: s-maj=0.4km s-min=0.1km az=214.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1218	**Civita (PG)**	**0.12**	**304**	⇓P	Pg	22 45 12.8	+0.4
T1218				S	Sg	22 45 15.0	+0.4
T1218				AML	AML		
	comp=E,526µm,0.1s						
T1218				AML	AML		
	comp=N,552µm,0.2s						
T1218				AML	AML		
	comp=N,555µm,0.2s						
T1218				AML	AML		
	comp=E,526µm,0.1s						
T1218				AML	AML		
	comp=E,554µm,0.4s						
T1218				AML	AML		
	comp=N,552µm,0.2s						
CAMP	**Campotosto**	**0.14**	**120**	⇑P	Pg	22 45 13.2	+0.5
CAMP				S	Sg	22 45 15.6	+0.6
CAMP				AML	AML		
	comp=N,76µm,0.7s						
CAMP				AML	AML		
	comp=E,74µm,0.6s						
T1214	**Arquata del Tr**	**0.16**	**349**	⇑P	Pg	22 45 13.5	+0.5
T1214				S	Sg	22 45 16.5	+0.9
T1247	**Pizzolo (AQ)**	**0.17**	**168**	⇑P	Pb	22 45 13.7	-0.7
T1247				S	Sg	22 45 16.9	+1.2
T1247				AML	AML		
	comp=E,317µm,0.2s						
T1247				AML	AML		
	comp=N,231µm,1.2s						
T1247				AML	AML		
	comp=N,231µm,0.8s						
T1212	**Cascia, Frazio**	**0.21**	**314**	⇓P	Pg	22 45 14.3	+0.4
T1212				S	Sg	22 45 17.7	+0.7
T1212				AML	AML		
	comp=E,169µm,1.5s						
T1212				AML	AML		
	comp=N,132µm,0.6s						
T1212				AML	AML		

	comp=E,169μm,1.5s						
T1212				AML	AML		
	comp=N,132μm,0.6s						
T1212				AML	AML		
	comp=E,169μm,0.5s						
T1212				AML	AML		
	comp=N,132μm,1.4s						
T1222	**Castel Sant'An**	0.26	218	P	Pg	22 45 15.1	+0.5
T1222				S	Sb	22 45 19.5	-0.8
T1222				AML	AML		
	comp=E,198μm,0.3s						
T1222				AML	AML		
	comp=N,105μm,0.2s						
T1245	**Castelsantange**	0.26	350	⇑P	Pg	22 45 15.2	+0.5
T1245				S	Sb	22 45 19.8	-0.7
T1217	**Poggiodomo (PG**	0.26	295	⇑P	Pg	22 45 15.1	+0.4
T1217				S	Sg	22 45 19.2	+0.9
TERO	**Teramo**	0.26	86	P	Pg	22 45 15.0	+0.3
TERO				S	Sg	22 45 19.1	+0.8
TERO				AML	AML		
	comp=E,118μm,1.2s						
TERO				AML	AML		
	comp=N,129μm,1.3s						
TERO				AML	AML		
	comp=E,120μm,0.4s						
TERO				AML	AML		
	comp=N,135μm,0.1s						
TERO				AML	AML		
	comp=N,129μm,0.7s						
GIGS	**Gran Sasso**	0.28	123	P	Pg	22 45 15.4	+0.3
GIGS				S	Sg	22 45 19.8	+0.9
T1241	**Roccafluvione,**	0.28	28	⇑P	Pg	22 45 15.5	+0.3
MMO1	**Montemonaco**	0.30	11	⇑P	Pg	22 45 15.8	+0.4
T1211	**Morro Reatino**	0.30	257	⇑P	Pg	22 45 15.8	+0.4
T1211				AML	AML		
	comp=E,268μm,0.1s						
T1211				AML	AML		
	comp=E,268μm,0.1s						
T1211				AML	AML		
	comp=N,348μm,0.4s						
MC2	**Monte Cornacci**	0.31	352	⇓P	Pg	22 45 16.1	+0.5
T1216	**Preci, Frazion**	0.33	329	P	Pg	22 45 16.6	+0.6
FIAM	**Fiamignano**	0.35	196	⇓P	Pg	22 45 16.9	+0.6
FIAM				AML	AML		
	comp=E,48μm,0.6s						
FIAM				AML	AML		
	comp=N,55μm,0.7s						
ARRO	**Arrone**	0.36	266	⇓P	Pg	22 45 16.8	+0.4
ARRO				AML	AML		
	comp=E,70μm,1.3s						
ARRO				AML	AML		
	comp=N,77μm,0.3s						
ARRO				AML	AML		
	comp=N,77μm,1.7s						
T1256	**Bolognola (MC)**	0.40	357	⇑P	Pg	22 45 17.4	+0.1
T1256				AML	AML		
	comp=E,196μm,0.4s						
T1256				AML	AML		
	comp=N,165μm,1.3s						
T1256				AML	AML		
	comp=N,165μm,0.7s						
FDMO	**Fiordimonte**	0.45	345	⇓P	Pg	22 45 18.4	+0.3
FDMO				AML	AML		
	comp=E,34μm,1.5s						
FDMO				AML	AML		
	comp=N,34μm,1.4s						
FDMO				AML	AML		
	comp=N,34μm,0.6s						
FDMO				AML	AML		
	comp=E,34μm,0.5s						
OFFI	**Offida**	0.46	44	⇓P	Pb	22 45 19.5	+0.1
CESX	**Cesi**	0.49	271	⇓P	Pg	22 45 19.3	+0.4

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*SOF **18** 22:52:08.3, 39°.46N×23°.41E, h2^{km}, MD3.5*
*BEO **18** 22:52:15.3±1.6, 39°.81N×23°.55E, h11^{km}±8^{km}, ML2.8/4*
*ISK **18** 22:52:15.9, 39°.89N×23°.51E, h17^{km}, ML3.0/21*
*THE **18** 22:52:16.7, 39°.92N×23°.50E, h9^{km}±1^{km}, ML2.9/4, Error ellipse: s-maj=1.1km s-min=0.6km az=114.0*
*ATH **18** 22:52:16.8, 39°.90N×23°.49E, h11^{km}±1^{km}, ML2.8/22, Error ellipse: s-maj=1.7km s-min=0.7km az=313.0*
ISC 18 22:52:15.9±1.1**, 39°.88N**±0°.02×**23°.50E**±0°.02**, h9**^{km}±10^{km}**,**
n141, σ**0^{s}.78**/162**, 12C-10D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XOR	**Xorichti**	0.57	205	P	**Pb**	**22 52 28.0**	**-0.1**
XOR				AML	AML	22 52 39.9	
	comp=E,1528μm,0.3s						
XOR				AML	AML	22 52 41.3	
	comp=N,2674μm,0.4s						
OUR	**Ouranopolis**	0.58	39	P	**Pg**	**22 52 27.7**	**+0.5**
OUR				S	**Sg**	**22 52 35.0**	**+0.2**
	comp=N,4μm,0.3s						
OUR	**Ouranopolis**	0.58	39	Pg	**Pg**	**22 52 27.3**	**+0.1**
OUR				Sg	**Sb**	**22 52 36.0**	**-0.7**
OUR	**Ouranopolis**	0.58	39	P	**Pb**	**22 52 28.4**	**+0.1**
OUR				S	**Sb**	**22 52 35.9**	**-0.8**
NEO	**Neokhori**	0.61	201	P	**Pb**	**22 52 29.0**	**+0.1**
NEO				S	**Sb**	**22 52 38.3**	**+0.6**
	comp=N,2μm,0.4s						
NEO	**Neokhori**	0.61	201	P	**Pb**	**22 52 29.1**	**+0.1**
NEO				S	**Sb**	**22 52 37.2**	**-0.5**
NEO				AML	AML	22 52 40.0	
	comp=N,3981μm,0.4s						
NEO				AML	AML	22 52 40.2	
	comp=E,4697μm,0.3s						
LIT	**Litokhoron**	0.81	286	P	**Pg**	**22 52 31.7**	**+0.2**
LIT				S	**Sb**	**22 52 42.7**	**-0.6**
THE	**Thessaloniki**	0.85	331	P	**Pg**	**22 52 31.9**	**-0.5**
THE	**Thessaloniki**	0.85	331	P	**Pg**	**22 52 32.2**	**-0.2**
THE				S	**Sg**	**22 52 43.3**	**-0.2**
THE				AML	AML	22 52 46.1	
	comp=N,718μm,0.3s						
THE				AML	AML	22 52 47.2	
	comp=E,928μm,0.3s						
LRSO	**Larissa Observ**	0.88	257	P	**Pn**	**22 52 33.9**	**-0.7**
LRSO				S	**Sb**	**22 52 46.1**	**+0.8**
SOH	**Sokhos**	0.94	353	P	**Pg**	**22 52 33.7**	**-0.4**
SOH	**Sokhos**	0.94	353	P	**Pg**	**22 52 33.7**	**-0.4**
SOH				S	**Sg**	**22 52 46.1**	**-0.3**
SOH				AML	AML	22 52 50.5	
	comp=E,3865μm,0.5s						
SOH				AML	AML	22 52 51.6	
	comp=N,4068μm,0.6s						
TYRN	**Tyrnavos**	0.99	260	P	**Pb**	**22 52 35.2**	**-0.2**
TYRN	**Tyrnavos**	0.99	260	P	**Pb**	**22 52 35.4**	**+0.1**
KOKK	**Kokkinochori,**	1.01	22	P	**Pg**	**22 52 34.7**	**-0.6**
KOKK	**Kokkinochori,**	1.01	22	P	**Pg**	**22 52 35.3**	**0.0**
KOKK				S	**Sb**	**22 52 49.0**	**0.0**
THAS	**Thassos island**	1.18	52	P	**Pb**	**22 52 38.1**	**-0.4**
THAS	**Thassos island**	1.18	52	P	**Pb**	**22 52 38.3**	**-0.2**
THAS				AML	AML	22 52 57.8	
	comp=N,1583μm,0.2s						
THAS				AML	AML	22 52 59.0	
	comp=E,980μm,0.2s						
KTI	**Kastanea**	1.18	296	P	**Pn**	**22 52 38.7**	**-0.1**
THL	**Klokotos Trika**	1.19	255	P	**Pb**	**22 52 38.6**	**-0.1**
THL				S	**Sn**	**22 52 55.3**	**+0.1**
	comp=E,182nm,0.6s						
THL	**Klokotos Trika**	1.19	255	P	**Pb**	**22 52 38.0**	**-0.7**
THL				S	**Sg**	**22 52 54.4**	**+0.1**
THL				AML	AML	22 52 58.4	
	comp=E,260μm,0.7s						
THL				AML	AML	22 53 07.5	
	comp=N,468μm,0.6s						
SRS	**Serrai**	1.23	3	P	**Pn**	**22 52 38.8**	**-0.7**
SRS				S	**Sb**	**22 52 55.5**	**-0.1**
	comp=N,382nm,0.5s						
SRS	**Serrai**	1.23	3	*e*Pg	**Pb**	**22 52 39.4**	**-0.1**
SRS				*e*Sg	**Sn**	**22 52 56.2**	**-0.1**
SRS	**Serrai**	1.23	3	P	**Pn**	**22 52 39.1**	**-0.4**
SRS				AML	AML	22 52 58.4	
	comp=N,800μm,0.5s						
SRS				AML	AML	22 52 59.8	
	comp=E,555μm,0.2s						
ATAL	**Atalanti**	1.25	198	P	**Pn**	**22 52 39.0**	**-0.6**
ATAL				AML	AML	22 53 09.3	
	comp=N,236μm,0.7s						
ATAL				AML	AML	22 53 15.6	
	comp=E,318μm,0.7s						
KVLA	**Kavala**	1.25	32	P	**Pg**	**22 52 40.2**	**+0.2**
AGG	**Agios Georgios**	1.25	227	P	**Pn**	**22 52 39.2**	**-0.5**
AGG	**Agios Georgios**	1.25	227	Pn	**Pn**	**22 52 39.2**	**-0.5**
AGG	**Agios Georgios**	1.25	227	P	**Pn**	**22 52 39.3**	**-0.4**
LKR	**Lokris**	1.29	198	P	**Pn**	**22 52 39.6**	**-0.6**
LKR				AML	AML	22 53 01.1	
	comp=E,380μm,0.2s						
LKR				AML	AML	22 53 02.9	
	comp=N,302μm,0.3s						
LIA	**Limnos Island**	1.29	89	P	**Pn**	**22 52 40.2**	**+0.1**
LIA	**Limnos Island**	1.29	89	P	**Pn**	**22 52 40.3**	**+0.1**
LIA				S	**Sb**	**22 52 56.8**	**-0.3**
LIA				AML	AML	22 53 01.1	
	comp=E,1429μm,0.5s						
LIA				AML	AML	22 53 03.1	
	comp=N,1297μm,0.5s						
AXAR	**Agios Charalam**	1.29	211	P	**Pn**	**22 52 39.9**	**-0.4**
AXAR				AML	AML	22 53 11.3	
	comp=N,1286μm,0.5s						
AXAR				AML	AML	22 53 15.8	
	comp=E,742μm,0.6s						
KYMI	**Kymi, Euboea I**	1.33	159	P	**Pn**	**22 52 40.8**	**+0.1**
KYMI	**Kymi, Euboea I**	1.33	159	P	**Pn**	**22 52 40.9**	**+0.1**
KYMI				S	**Sn**	**22 52 58.4**	**-0.2**
KYMI				AML	AML	22 53 12.0	
	comp=N,425μm,0.5s						
KYMI				AML	AML	22 53 14.5	
	comp=E,401μm,0.5s						
KAVA	**Kavala**	1.35	34	P	**Pn**	**22 52 40.5**	**-0.6**
KAVA	**Kavala**	1.35	34	P	**Pn**	**22 52 40.7**	**-0.4**
KNT	**Kendrikon**	1.36	340	P	**Pn**	**22 52 40.5**	**-0.7**
KNT	**Kendrikon**	1.36	340	Pn	**Pn**	**22 52 40.5**	**-0.7**
KNT				Sn	**Sb**	**22 52 58.5**	**-0.6**
KNT	**Kendrikon**	1.36	340	P	**Pn**	**22 52 40.8**	**-0.4**
GRG	**Griva**	1.36	322	P	**Pn**	**22 52 41.1**	**-0.1**
GRG	**Griva**	1.36	322	Pn	**Pn**	**22 52 40.9**	**-0.3**
GRG				Sn	**Sb**	**22 52 59.1**	**-0.2**
GRG	**Griva**	1.36	322	P	**Pn**	**22 52 41.0**	**-0.3**
GRG				AML	AML	22 53 02.0	
	comp=N,1099μm,0.4s						
GRG				AML	AML	22 53 02.2	
	comp=E,832μm,0.7s						
MAKR	**Makrakomi, Fth**	1.37	231	P	**Pb**	**22 52 41.5**	**-0.3**
MAKR				AML	AML	22 53 15.9	
	comp=E,1139μm,0.7s						
MAKR				AML	AML	22 53 20.1	
	comp=N,1376μm,0.7s						
KZN	**Kozani**	1.40	288	P	**Pb**	**22 52 42.0**	**-0.3**
KZN	**Kozani**	1.40	288	P	**Pb**	**22 52 42.3**	**0.0**
KZN				AML	AML	22 53 03.1	
	comp=E,322μm,0.5s						
KZN				AML	AML	22 53 07.7	
	comp=N,180μm,0.5s						
EREA	**Eretria**	1.50	167	P	**Pn**	**22 52 43.2**	**+0.1**
EREA				AML	AML	22 53 15.9	
	comp=N,533μm,0.6s						
EREA				AML	AML	22 53 22.1	
	comp=E,536μm,0.9s						
VAY	**Valandovo**	1.60	334	*e*Pg	**Pb**	**22 52 45.0**	**-0.8**
VAY				*e*Sg	**Sg**	**22 53 07.2**	**-0.3**
VAY	**Valandovo**	1.60	334	*e*Pn	**Pb**	**22 52 44.9**	**-0.8**
VAY				*e*Sg	**Sb**	**22 53 06.3**	**+0.2**
EVR	**Evrytania**	1.63	234	P	**Pb**	**22 52 45.6**	**-0.7**
KPRO	**Kipourio**	1.65	273	P	**Pn**	**22 52 45.7**	**+0.5**
SMTH	**Samothraki Isl**	1.66	69	P	**Pn**	**22 52 44.8**	**-0.5**
SMTH	**Samothraki Isl**	1.66	69	P	**Pn**	**22 52 44.6**	**-0.7**
SMTH				AML	AML	22 53 14.3	
	comp=E,239μm,0.6s						
SMTH				AML	AML	22 53 15.3	
	comp=N,265μm,0.3s						
VIL2	**Platees**	1.68	186	P	**Pn**	**22 52 46.0**	**+0.5**
VIL2				AML	AML	22 53 24.5	
	comp=N,345μm,0.7s						
VIL2				AML	AML	22 53 25.2	
	comp=E,434μm,0.8s						
MMB	**Musomiste**	1.71	6	P	**Pn**	**22 52 46.0**	**-0.1**
ANX	**Ano Chora**	1.78	224	P	**Pn**	**22 52 46.9**	**-0.1**
DION	**Dionisos Attik**	1.83	169	P	**Pb**	**22 52 49.1**	**-0.6**
DION	**Dionisos Attik**	1.83	169	P	**Pb**	**22 52 48.7**	**-1.0**
DION				AML	AML	22 53 22.0	
	comp=N,483μm,0.4s						
DION				AML	AML	22 53 29.1	
	comp=E,561μm,0.6s						
SERG	**Sergoula**	1.85	218	P	**Pn**	**22 52 47.6**	**-0.3**
PTL	**Penteli**	1.85	171	P	**Pb**	**22 52 49.4**	**-0.6**
PTL	**Penteli**	1.85	171	P	**Pb**	**22 52 49.0**	**-1.0**
PTL				AML	AML	22 53 27.5	
	comp=E,298μm,0.7s						
PTL				AML	AML	22 53 28.2	
	comp=N,420μm,0.6s						
FNA	**Florina**	1.86	300	P	**Pn**	**22 52 48.2**	**+0.1**
FNA	**Florina**	1.86	300	*e*Pn	**Pn**	**22 52 48.2**	**+0.1**
FNA	**Florina**	1.86	300	P	**Pn**	**22 52 47.8**	**-0.3**
FNA				AML	AML	22 53 17.6	
	comp=N,156μm,0.5s						
FNA				AML	AML	22 53 17.7	
	comp=E,194μm,0.5s						
GADA	**Gvkgeada**	1.86	80	Pn	**Pn**	**22 52 48.1**	**0.0**
EFP	**Efpalio**	1.91	221	P	**Pn**	**22 52 48.8**	**+0.1**
ATH	**Athens Observa**	1.92	175	P	**Pn**	**22 52 49.5**	**+0.7**
ATHU	**Athens Univers**	1.93	173	P	**Pn**	**22 52 49.2**	**+0.3**
SIGR	**SIGRI**	1.94	109	P	**Pn**	**22 52 49.3**	**+0.2**
SIGR	**SIGRI**	1.94	109	Pn	**Pn**	**22 52 48.8**	**-0.2**
SIGR	**SIGRI**	1.94	109	P	**Pn**	**22 52 48.8**	**-0.2**
THAL	**Thalero**	1.96	200	P	**Pn**	**22 52 49.5**	**+0.2**
BOZC	**Bozcaada**	1.96	90	Pn	**Pn**	**22 52 49.7**	**+0.3**
PVO	**Paravola**	1.99	231	P	**Pn**	**22 52 49.0**	**-0.8**
RDO	**Rodhopi**	2.00	50	P	**Pn**	**22 52 49.7**	**-0.2**
RDO	**Rodhopi**	2.00	50	Pn	**Pn**	**22 52 49.7**	**-0.2**
RDO	**Rodhopi**	2.00	50	P	**Pn**	**22 52 49.7**	**-0.2**
RDO				AML	AML	22 53 24.7	
	comp=N,302μm,0.3s						
RDO				AML	AML	22 53 25.8	
	comp=E,247μm,0.5s						
KKB	**Krupnik**	2.01	351	P	**Pn**	**22 52 50.4**	**+0.3**
LAKA	**Lakka**	2.02	216	P	**Pn**	**22 52 49.9**	**-0.4**
RZN	**Rozhen**	2.02	27	P	**Pn**	**22 52 51.1**	**+0.6**
VLY	**Voula,Athens**	2.04	174	P	**Pn**	**22 52 50.8**	**+0.3**
VLY	**Voula,Athens**	2.04	174	P	**Pn**	**22 52 50.5**	**0.0**
STIP	**Stip**	2.07	331	*e*Pn	**Pn**	**22 52 50.8**	**-0.1**
STIP				*e*Sg	**Sb**	**22 53 20.0**	**+0.5**
KLV	**Kalavryta, Ach**	2.12	210	P	**Pn**	**22 52 51.4**	**-0.2**
GUR	**Goura**	2.14	205	P	**Pn**	**22 52 52.0**	**-0.1**
EZN	**Ezine**	2.17	91	Pn	**Pn**	**22 52 52.7**	**+0.4**
ALN	**Alexandroupoli**	2.19	62	P	**Pn**	**22 52 52.3**	**-0.2**
ALN	**Alexandroupoli**	2.19	62	Pn	**Pn**	**22 52 52.6**	**+0.1**
ALN	**Alexandroupoli**	2.19	62	P	**Pn**	**22 52 52.2**	**-0.4**
ENEZ	**Enez**	2.20	66	Pn	**Pn**	**22 52 52.8**	**+0.2**
EPID	**Epidavros**	2.29	188	P	**Pn**	**22 52 54.9**	**+1.0**
KDZ	**Kurdzhali**	2.29	39	Pn	**Pn**	**22 52 53.4**	**-0.5**
KDZ	**Kurdzhali**	2.29	39	P	**Pn**	**22 52 53.4**	**-0.5**
COMU	**Canakkale**	2.29	84	Pn	**Pn**	**22 52 53.9**	**-0.1**
GELI	**Tayfur-Gelibol**	2.33	76	Pn	**Pn**	**22 52 54.4**	**-0.1**
DRO	**Drossia**	2.38	217	P	**Pn**	**22 52 55.3**	**+0.1**
PLD	**Plovdiv**	2.40	22	Pn	**Pn**	**22 52 55.6**	**+0.2**
PLD	**Plovdiv**	2.40	22	P	**Pn**	**22 52 56.7**	**+1.3**
RLS	**Riolos of Patr**	2.42	222	P	**Pn**	**22 52 56.6**	**+0.9**
ERIK	**Erikli-Kesan**	2.43	70	Pn	**Pn**	**22 52 55.5**	**-0.4**
CHOS	**Chios island**	2.48	126	Pn	**Pn**	**22 52 56.6**	**-0.1**
CHOS	**Chios island**	2.48	126	P	**Pn**	**22 52 57.6**	**+0.9**
KRND	**KRANIDI**	2.51	186	P	**Pn**	**22 52 57.3**	**+0.3**
LPK	**Lapseki**	2.54	78	Pn	**Pn**	**22 52 57.0**	**-0.4**
DIM	**Dimitrovgrad**	2.66	35	P	**Pn**	**22 52 59.5**	**+0.6**
UKOP	**Uzunkopru-Edir**	2.69	61	Pn	**Pn**	**22 52 59.6**	**+0.2**
CANM	**Can-anakkale**	2.73	86	Pn	**Pn**	**22 52 59.8**	**-0.2**
VTS	**Vitosha**	2.74	356	⇓P	**Pb**	**22 53 05.2**	**0.0**
VTS	**Vitosha**	2.74	356	P	**Pn**	**22 53 00.9**	**+0.6**
DKL	**Dikili**	2.75	106	Pn	**Pn**	**22 53 00.4**	**+0.1**
PRVS	**Prvonek**	2.84	338	*e*Pn	**Pn**	**22 53 02.0**	**+0.5**
PRVS				*e*Sg	**Sg**	**22 53 50.4**	**+3.4**
KRBG	**Karabiga-Canak**	2.95	79	Pn	**Pn**	**22 53 03.5**	**+0.5**
EDRB	**Edirne**	3.14	50	Pn	**Pn**	**22 53 06.5**	**+0.8**
BARS	**Barje**	3.19	337	*e*Pn	**Pn**	**22 53 07.0**	**+0.6**
APE	**Apeiranthos**	3.23	150	⇑P	**Pn**	**22 53 07.2**	**+0.3**
SELS	**Selova**	3.78	333	*e*Pn	**Pn**	**22 53 14.5**	**0.0**
ZAGS	**Zajecar**	4.04	347	*e*Pn	**Pn**	**22 53 18.3**	**+0.3**
GRUS	**Gruza**	4.51	333	*e*Pn	**Pn**	**22 53 25.9**	**+1.4**
KUBS	**Kucevo**	4.73	344	*e*Pn	**Pn**	**22 53 26.8**	**-0.6**
HUMR	**Humele**	4.77	13	⇑P	**Pn**	**22 53 28.7**	**+0.7**
TRUS	**Trudelj**	4.91	333	*e*Pn	**Pn**	**22 53 31.0**	**+1.0**
DIVS	**Divibare**	4.96	329	*e*Pn	**Pn**	**22 53 28.5**	**-2.2**
HERR	**Herculane**	5.06	351	⇑P	**Pn**	**22 53 31.6**	**-0.4**
MDVR	**Moldovita**	5.07	345	⇑P	**Pn**	**22 53 32.1**	**-0.2**
MTUR	**Matau**	5.46	12	⇑P	**Pn**	**22 53 38.8**	**+1.1**
GZR	**Gura Zlata**	5.53	355	⇑P	**Pn**	**22 53 38.0**	**-0.6**
ARR	**Arges**	5.54	8	⇓P	**Pn**	**22 53 39.5**	**+0.7**
VOIR		5.67	11	⇑P	**Pn**	**22 53 41.4**	**+1.0**
MLR	**Muntele Rosu**	5.89	17	⇓P	Pn	22 53 49.6	+6.1
BZS	**Buzias**	5.90	347	⇓P	**Pn**	**22 53 43.1**	**-0.4**
DOPR	**Dopca**	6.24	12	⇑P	**Pn**	**22 53 49.7**	**+1.5**
COVR	**Voineasa-Covas**	6.28	18	⇓P	**Pn**	**22 53 50.3**	**+1.5**
VRI	**Vrincioaia**	6.43	21	⇓P	**Pn**	**22 53 53.8**	**+2.9**
SIRR	**Siria**	6.52	349	⇑P	**Pn**	**22 53 52.1**	**0.0**
GIUM	**Giurgiulesti**	6.58	30	⇓P	**Pb**	**22 54 07.7**	**-2.9**
TLCR		6.59	35	⇑P	**Pn**	**22 53 53.9**	**+0.9**
TATR	**Tatarca**	6.62	29	⇓P	**Pn**	**22 53 56.9**	**+3.5**
VLDR	**Vladesti**	6.84	28	⇓P	**Pn**	**22 53 58.7**	**+2.3**
TESR	**Tescani**	7.01	18	⇑P	**Pn**	**22 54 00.2**	**+1.4**
MORH	**Mrgy, Hungar**	7.26	332	⇓P	**Pn**	**22 54 02.9**	**+0.7**
BURAR	**Bucovina Array**	7.83	9	⇑P	**Pn**	**22 54 11.5**	**+1.4**

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*TEH **18** 23:10:48.4, 36°.79N×55°.36E, h6^{km}±50^{km}, ML3.5*
*AZER **18** 23:10:49.2±0.1, 36°.48N×55°.06E, h49^{km}±315^{km}, Error ellipse: s-maj=4.5km s-min=3.0km az=281.0*
ISC 18 23:10:50.6±1.0**, 36°.86N**±0°.05×**55°.32E**±0°.03**, h24**^{km}**, n52,**
σ**2^{s}.12**/61**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMND	**Minoodasht**	0.40	10	Pg	**Pb**	**23 10 58.1**	**-1.0**
MRVT	**Maraveh tapeh**	1.01	38	Pg	**Pn**	**23 11 09.6**	**+0.3**
MRVT				Sg	**Sn**	**23 11 24.5**	**+1.8**
IGLO	**Ghaloghah**	1.25	254	Pg	**Pn**	**23 11 13.7**	**+1.0**
IANJ	**Anjilo**	1.80	220	Pg	**Pn**	**23 11 21.4**	**+1.1**
SBZV	**Sabzevar**	1.90	104	Pn	**Pb**	**23 11 23.7**	**-1.1**
ISHM	**Shahmirzad**	1.95	238	Pn	**Pn**	**23 11 24.7**	**+2.3**
IFIR	**Firoozkooh**	2.40	240	Pn	**Pn**	**23 11 31.6**	**+2.9**
IPRN	**Peran**	2.48	256	Pn	**Pb**	**23 11 32.8**	**-1.7**
IEMG	**Emamgholi**	2.72	77	Pn	**Pb**	**23 11 36.0**	**-2.8**
IAKL	**Akhelmad**	2.77	94	Pn	**Pn**	**23 11 35.8**	**+1.9**
IDMV	**Damavand**	2.95	245	Pn	**Pb**	**23 11 40.9**	**-1.7**
IPAY	**Payeh**	2.99	97	Pn	**Pn**	**23 11 39.1**	**+2.4**
MZPU	**Pul - Mazandar**	3.04	263	Pn	**Pn**	**23 11 41.0**	**+3.5**
TNSJ	**Nastanj**	3.08	160	Pn	**Pn**	**23 11 39.1**	**+1.3**
IMOG	**Moghan**	3.33	102	Pn	**Pn**	**23 11 43.6**	**+2.2**
KLST	**Kelardasht - M**	3.44	266	Pn	**Pn**	**23 11 46.6**	**+3.6**
IVRN	**Varamin**	3.46	238	Pn	**Pn**	**23 11 46.1**	**+3.1**
ISFB	**Sefidab**	3.54	226	Pn	**Pn**	**23 11 46.4**	**+2.2**
TKDS	**Koohdasht(Taba**	3.56	155	Pn	**Pn**	**23 11 46.1**	**+1.6**
QALM	**Alamut, Qazvin**	3.78	265	Pn	**Pn**	**23 11 51.6**	**+3.9**
IMYA	**Miami**	3.88	96	Pn	**Pn**	**23 11 50.9**	**+1.9**
KRSH	**Karshahi**	3.88	223	Pn	**Pn**	**23 11 51.1**	**+2.1**
ANAR	**Anarak**	3.89	200	Pn	**Pn**	**23 11 50.9**	**+1.9**
TPRV	**Parvadeh(Tabas**	3.99	163	Pn	**Pn**	**23 11 51.7**	**+1.4**
IQOM	**Qom**	4.00	241	Pn	**Pn**	**23 11 53.4**	**+2.8**
JRKH	**Jarkhoshk**	4.17	102	Pn	**Pn**	**23 11 55.0**	**+2.2**
TBJM	**Torbat-e-JAM**	4.36	110	Pn	**Pn**	**23 11 57.8**	**+2.3**
QAMS	**Qamsar**	4.47	227	Pn	**Pn**	**23 11 59.2**	**+2.1**
AFRZ	**Afriz**	4.58	137	Pn	**Pn**	**23 12 00.4**	**+1.9**
IRAZ	**Razeghan**	4.60	253	Pn	**Pn**	**23 12 02.1**	**+3.3**
ITEG	**Tejag**	4.86	144	Pn	**Pn**	**23 12 04.4**	**+2.0**
SHRT	**Shahrakht**	5.18	127	Pn	**Pn**	**23 12 08.0**	**+1.3**
ASTR	**Astara**	5.45	290	S	**Sn**	**23 13 09.1**	**-3.0**
LRK	**Lerik**	5.81	290	P	**Pn**	**23 12 16.0**	**+0.6**
LRK				S	**Sn**	**23 13 18.1**	**-3.2**
BSRN	**Basiran**	5.81	146	Pn	**Pn**	**23 12 16.7**	**+1.2**
SHK1	**Shahrekord**	5.81	220	Pn	**Pn**	**23 12 18.1**	**+2.5**
YRD	**Yardimli**	5.96	292	P	**Pn**	**23 12 17.3**	**-0.2**
YRD				S	**Sn**	**23 13 22.6**	**-2.5**
IBRJ	**Brojen**	5.97	215	Pn	**Pn**	**23 12 20.8**	**+3.0**
GBS	**Qobustan**	6.19	308	S	**Sn**	**23 13 33.7**	**+3.2**
ATGJ	**Altiaghaj**	6.38	311	S	**Sn**	**23 13 35.1**	**-0.2**
SIZA	**Siyzn**	6.53	312	S	**Sn**	**23 13 42.4**	**+3.3**
PQL	**Pirkuli**	6.55	309	P	**Pn**	**23 12 26.9**	**+1.3**
PQL				S	**Sn**	**23 13 39.9**	**+0.3**
KLNJ	**Kolanjah**	6.61	209	Pn	**Pn**	**23 12 29.5**	**+2.9**
NHDN	**Nehbandan**	6.72	143	Pn	**Pn**	**23 12 29.5**	**+1.6**
IML	**Ismayilli**	6.81	307	P	**Pn**	**23 12 29.9**	**+0.8**
IML				S	**Sn**	**23 13 45.0**	**-0.9**
QUBA	**Quba, Azerbaij**	6.95	312	S	**Sn**	**23 13 49.6**	**+0.5**
XNQ	**Khinaliq**	7.05	310	P	**Pn**	**23 12 32.8**	**+0.3**
XNQ				S	**Sn**	**23 13 53.2**	**+1.3**
QBL	**Gabala**	7.12	307	P	**Pn**	**23 12 33.5**	**+0.3**
QBL				S	**Sn**	**23 13 52.7**	**-0.6**
ORD	**Ordubad**	7.66	288	P	**Pn**	**23 12 38.8**	**-1.8**
ORD				S	**Sn**	**23 14 04.8**	**-1.8**
SEKA	**Sheki**	7.67	307	S	**Sn**	**23 14 07.3**	**+0.5**
GANJ	**Ganja**	7.98	301	S	**Sn**	**23 14 11.8**	**-2.7**
GDB	**GEDABAY**	8.40	300	P	**Pn**	**23 12 50.1**	**-0.8**
GDB				S	**Sn**	**23 14 24.3**	**-0.9**

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*NEIC **18** 23:12:58.5±0.6, 18°.1N±0°.2×67°.83W±0°.08, h136^{km}±6^{km}, ML2.5/26, Md3.5/26(RSPR), Error ellipse: s-maj=26.1km s-min=7.4km az=201.0*
*RSPR **18** 23:12:58.8, 18°.16N×67°.79W, h137^{km}±1^{km}, MD3.5/10*
ISC 18 23:12:56.3±1.5**, 18°.1N**±0°.2×**67°.87W**±0°.06**, h150**^{km}**, n51,**
σ**0^{s}.69**/53**, 10C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDE	**Isla Desecheo**	0.47	53	⇑*e*P	**Pn**	**23 13 17.8**	**+0.3**
IDE	**Isla Desecheo**	0.47	53		**Pn**	**23 13 17.8**	**+0.3**
PCDR	**Punta Cana, DR**	0.64	310	⇓*e*P	**Pn**	**23 13 19.0**	**+0.6**
PCDR	**Punta Cana, DR**	0.64	310	*e*S	**Sn**	**23 13 35.1**	**-0.1**
PCDR	**Punta Cana, DR**	0.64	310		**Pn**	**23 13 18.7**	**+0.3**
PCDR				IAML		23 13 47.9	
	comp=E,92nm,2.1s						
PCDR	**Punta Cana, DR**	0.64	310		**Sn**	**23 13 35.1**	**-0.1**
CRPR	**Cabo Rojo, PR**	0.73	98	⇑*e*P	**Pn**	**23 13 19.3**	**+0.4**
CRPR	**Cabo Rojo, PR**	0.73	98	*e*S	**Sn**	**23 13 35.7**	**-0.5**
CRPR	**Cabo Rojo, PR**	0.73	98		**Pn**	**23 13 19.3**	**+0.4**
CRPR	**Cabo Rojo, PR**	0.73	98		**Sn**	**23 13 35.3**	**-0.9**
CRPR				IAML		23 14 09.0	
	comp=E,50nm,2.8s						
CRPR				IAML		23 14 10.8	
	comp=N,70nm,3.4s						
LSP	**Las Mesas**	0.74	85	⇑*e*P	**Pn**	**23 13 19.2**	**0.0**
LSP	**Las Mesas**	0.74	85	*e*S	**Sn**	**23 13 35.5**	**-1.0**
LSP	**Las Mesas**	0.74	85		**Pn**	**23 13 19.2**	**0.0**
LSP					**Sn**	**23 13 35.5**	**-1.0**
MLPR	**Magueyes Islan**	0.79	100	⇑*e*P	**Pn**	**23 13 20.0**	**+0.5**
MLPR	**Magueyes Islan**	0.79	100	*e*S	**Sn**	**23 13 36.0**	**-1.0**
MLPR	**Magueyes Islan**	0.79	100		**Pn**	**23 13 20.0**	**+0.5**
MLPR					**Sn**	**23 13 36.0**	**-1.0**
AGPR	**Aguadilla, PR**	0.80	63	⇑*e*P	**Pn**	**23 13 20.1**	**+0.6**
AGPR	**Aguadilla, PR**	0.80	63	*e*S	**Sn**	**23 13 36.5**	**-0.7**
AGPR	**Aguadilla, PR**	0.80	63		**Pn**	**23 13 20.0**	**+0.5**
AGPR				IAML		23 14 16.9	
	comp=N,152nm,2.9s						
AGPR	**Aguadilla, PR**	0.80	63		**Sn**	**23 13 36.5**	**-0.7**
AOPR	**Arecibo Observ**	1.08	77	⇑*e*P	**Pn**	**23 13 22.1**	**+0.3**
AOPR	**Arecibo Observ**	1.08	77	*e*S	**Sn**	**23 13 40.6**	**-0.7**
AOPR	**Arecibo Observ**	1.08	77		**Sn**	**23 13 40.6**	**-0.7**
AOPR	**Arecibo Observ**	1.08	77		**Pn**	**23 13 22.0**	**+0.2**
UUPR	**Utuado, UPR, P**	1.10	82		**Pn**	**23 13 21.5**	**-0.5**
OBIP	**Obispado Ponce**	1.20	93	⇑*e*P	**Pn**	**23 13 22.8**	**-0.1**
OBIP	**Obispado Ponce**	1.20	93	*e*S	**Sn**	**23 13 41.9**	**-1.2**
OBIP	**Obispado Ponce**	1.20	93		**Pn**	**23 13 22.8**	**-0.1**
OBIP					**Sn**	**23 13 41.9**	**-1.2**
OBIP	**Obispado Ponce**	1.20	93	IAML		23 13 49.2	
	comp=N,40nm,3.2s						
CELP	**Cerrillos**	1.22	91	⇑*e*P	**Pn**	**23 13 23.8**	**+0.7**
CELP	**Cerrillos**	1.22	91	*e*S	**Sn**	**23 13 43.0**	**-0.6**
CELP	**Cerrillos**	1.22	91		**Pn**	**23 13 23.8**	**+0.7**
CELP					**Sn**	**23 13 43.0**	**-0.6**
CELP	**Cerrillos**	1.22	91	IAML		23 13 44.1	
	comp=N,37nm,0.5s						
CELP				IAML		23 13 50.2	
	comp=E,36nm,2.2s						
SJG	**San Juan**	1.63	90	Pn	**Pn**	**23 13 27.8**	**+0.5**
GCPR	**Guaynabo City**	1.71	83	*e*S	**Sn**	**23 13 51.2**	**-1.2**
GCPR	**Guaynabo City**	1.71	83	Pn	**Pn**	**23 13 28.2**	**+0.2**
GCPR				IAML		23 13 52.2	
	comp=N,27nm,0.6s						
GCPR				IAML		23 13 52.6	
	comp=E,24nm,1.2s						
CBYP	**Canovanas**	1.92	85	⇑*e*P	**Pn**	**23 13 31.2**	**+0.7**
CBYP	**Canovanas**	1.92	85	*e*S	**Sn**	**23 13 56.4**	**-0.4**
CBYP	**Canovanas**	1.92	85		**Pn**	**23 13 31.0**	**+0.5**
CBYP	**Canovanas**	1.92	85		**Sn**	**23 13 56.4**	**-0.4**
CBYP	**Canovanas**	1.92	85	IAML		23 13 58.1	
	comp=E,130nm,0.2s						
CBYP				IAML		23 13 58.4	
	comp=N,156nm,0.2s						

HUMP	**Col San Antoni**	**1.92**	**89**	⇑*e*P	**Pn**	**23 13 31.8**	**+1.3**
HUMP	**Col San Antoni**	**1.92**	**89**	*e*S	**Sn**	**23 13 56.4**	**-0.2**
HUMP	**Col San Antoni**	**1.92**	**89**		**Pn**	**23 13 31.4**	**+1.0**
HUMP				IAML		23 13 58.1	
	comp=E,39nm,0.9s						
HUMP				IAML		23 13 58.4	
	comp=N,40nm,0.2s						
MTP	**Monte Pirata**	**2.20**	**90**	⇓*e*P	**Pn**	**23 13 35.0**	**+1.2**
MTP	**Monte Pirata**	**2.20**	**90**	*e*S	**Sn**	**23 14 03.6**	**+1.0**
MTP	**Monte Pirata**	**2.20**	**90**		**Pn**	**23 13 34.6**	**+0.8**
MTP					**Sn**	**23 14 03.2**	**+0.6**
MTP				IAML		23 14 09.6	
	comp=E,34nm,2.9s						
MTP				IAML		23 15 02.5	
	comp=N,26nm,3.9s						
CUPR	**Culebra, Puert**	**2.46**	**85**	⇓*e*P	**Pn**	**23 13 37.5**	**+0.5**
CUPR	**Culebra, Puert**	**2.46**	**85**	*e*S	**Sn**	**23 14 07.9**	**-0.4**
CUPR	**Culebra, Puert**	**2.46**	**85**		**Pn**	**23 13 37.5**	**+0.5**
CUPR					**Sn**	**23 14 07.9**	**-0.4**
CUPR	**Culebra, Puert**	**2.46**	**85**	IAML		23 14 18.5	
	comp=E,12nm,1.1s						

IDC ***18*** *23:30:22.4±0.7, 39°.93N×145°.06E, h0^{km}, mb3.9/16, mbtmp3.9/20, ML3.6/4, MS2.8/4, Error ellipse: s-maj=17.7km s-min=15.9km az=109.0*

NEIC ***18*** *23:30:24.2±2.0, 39°.96N±0°.07×145°.0E±0°.1, h10^{km}±1^{km}, mb4.3/12, Error ellipse: s-maj=14.9km s-min=10.1km az=115.0*

JMA ***18*** *23:30:26.2±0.3, 40°.0N±0°.9×14°5E±°, h46^{km}, MV4.1/31, FAR E OFF NORTH HONSHU*

NIED ***18*** *23:30:26.2, 40°.04N×144°.85E, h46^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-5.51; $M_{\theta\theta}$1.77; $M_{\phi\phi}$3.74; $M_{r\theta}$1.01; $M_{\theta\phi}$1.76; $M_{\phi r}$-0.07; Fault plane solution: $M_0$5.23000×10^{14} NP1: ϕ_s219.00000°, δ48.00000°, λ-79.00000°. NP2:ϕ_s23.00000°, δ43.00000°, λ-102.00000°.*

ISC 18 23:30:27.4±0.6**, 40°.02N**±0°.05×**144°.96E**±0°.06**, h32^{km}, n69, σ1^{s}.47**/85**, mb4.0**/22**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**2.38**	**269**	P	**Pn**	**23 31 03.2**	**-1.0**
ERM	**Erimo**	**2.42**	**326**		**Pn**	**23 31 04.0**	**-0.7**
ERM				Sn	**Sn**	**23 31 31.3**	**-1.9**
JEM	**Erimo**	**2.42**	**326**	P	**Pn**	**23 31 03.9**	**-0.8**
JEM				S	**Sn**	**23 31 32.5**	**-0.7**
MIYJ	**Miyakonagasawa**	**2.46**	**261**	P	**Pn**	**23 31 04.0**	**-1.2**
JKEN	**Kujiedanarisaw**	**2.50**	**275**	P	**Pn**	**23 31 04.0**	**-1.8**
JKEN				*e*S	**Sn**	**23 31 31.6**	**-3.6**
JANG	**Nango**	**2.66**	**279**	*i* P	**Pn**	**23 31 06.7**	**-1.3**
JANG				S	**Sn**	**23 31 36.2**	**-3.0**
JNBK	**Urakawa-nobuka**	**2.81**	**324**	P	**Pn**	**23 31 10.1**	**+0.1**
JNBK				S	**Sn**	**23 31 42.7**	**-0.1**
JCH	**Churui**	**2.86**	**336**	P	**Pn**	**23 31 09.5**	**-1.3**
JCH				S	**Sn**	**23 31 42.2**	**-1.9**
JOM	**Ohasama**	**2.88**	**260**	*i* P	**Pn**	**23 31 10.4**	**-0.6**
JOM				S	**Sn**	**23 31 42.6**	**-1.9**
JAK	**Akkeshi**	**2.98**	**356**	*e*P	**Pn**	**23 31 10.7**	**-1.8**
JAK				*e*S	**Sn**	**23 31 45.4**	**-1.8**
JTM	**Tenmabayashi**	**3.07**	**286**		**Pn**	**23 31 13.1**	**-0.5**
JTM				Sn	**Sn**	**23 31 47.5**	**-1.8**
JMK	**Ichinoseki**	**3.08**	**251**	P	**Pn**	**23 31 12.7**	**-1.1**
JMK				S	**Sn**	**23 31 47.1**	**-2.4**
JOT	**Ohata**	**3.27**	**296**	P	**Pn**	**23 31 15.9**	**-0.5**
JOT				*e*S	**Sn**	**23 31 52.2**	**-2.0**
JAR	**Ashorobuto**	**3.40**	**345**	*i* P	**Pn**	**23 31 16.9**	**-1.3**
JAR				S	**Sn**	**23 31 54.7**	**-2.6**
NEM2	**Nemuro 2**	**3.40**	**10**	*e*P	**Pn**	**23 31 15.8**	**-2.3**
NEM2				S	**Sn**	**23 31 52.7**	**-4.6**
JYK	**Kaneyama**	**3.73**	**254**	P	**Pn**	**23 31 21.9**	**-0.7**
JMM	**Marumori**	**3.89**	**238**		**Pn**	**23 31 22.7**	**-2.2**
JRA	**Rausu**	**3.92**	**2**	*e*P	**Pn**	**23 31 23.2**	**-2.1**
JRA				*e*S	**Sn**	**23 32 06.5**	**-3.7**
JTKR	**Abashiri--Toko**	**4.03**	**349**	*e*P	**Pn**	**23 31 26.3**	**-0.5**
JTKR				*e*S	**Sn**	**23 32 11.1**	**-1.8**
JHR	**Hokuryu**	**4.44**	**328**	P	**Pn**	**23 31 33.9**	**+1.5**
JKA	**Kamikawa-asahi**	**4.46**	**338**		**Pn**	**23 31 31.8**	**-0.9**
ASAJ	**Asahikawa**	**4.46**	**338**	Pn	**Pn**	**23 31 32.1**	**-0.6**
	4.2nm,0.3s,baz=192,slow=10,SNR=21						
ASAJ				Sn	**Sn**	**23 32 26.3**	**+2.8**
	3.0nm,0.3s,baz=299,slow=28,SNR=5.5						
	16nm,0.4s						
JOSM	**Okushiri--Mats**	**4.63**	**298**	P	**Pn**	**23 31 34.5**	**-0.6**
JSD	**Sado**	**5.58**	**251**	Pn	**Pn**	**23 31 47.0**	**-1.1**
MJAR	**Matsushiro Arr**	**6.34**	**239**	Pn	**Pn**	**23 31 57.4**	**-1.3**
	0.6nm,0.3s,baz=59,slow=11,SNR=42						
MJAR				Sn	**Sn**	**23 33 10.9**	**+1.0**
	0.1nm,0.3s,baz=320,slow=24,SNR=1.3						
	9.8nm,0.6s						
MAJO	**Matsushiro**	**6.34**	**239**		**Pn**	**23 31 58.4**	**-0.2**
MJB9	**Matsu-Tunnel**	**6.34**	**239**		**Pn**	**23 31 59.4**	**+0.7**
YSS	**Yuzh-Sakhalins**	**7.12**	**348**	Pn	**Pn**	**23 32 09.1**	**-0.1**
JGF	**Kuroka**	**7.46**	**236**		**Pn**	**23 32 13.4**	**-0.5**
INU	**Inuyama**	**7.83**	**236**	Pn	**Pn**	**23 32 17.5**	**-1.6**
USRK	**Ussuriysk Ar.**	**10.50**	**298**	Pn	**Pn**	**23 32 56.4**	**+0.8**
	0.3nm,0.3s,baz=102,slow=14,SNR=16						
	8.2nm,0.7s						
USRK	**Ussuriysk Ar.**	**10.50**	**298**		**Pn**	**23 32 56.3**	**+0.7**
JHS	**Saijyo**	**10.65**	**246**	Pn	**Pn**	**23 32 56.9**	**-0.8**
KLR	**Kul'dur**	**13.15**	**319**	Pn	**Pn**	**23 33 31.6**	**-0.2**
	0.2nm,0.3s,baz=120,slow=13,SNR=6.8						
KLR				LR	LR	23 38 29.8	
	comp=Z,43nm,21.5s,baz=152,slow=37						
	1.5nm,0.6s						
JNU	**Nakatsue**	**13.24**	**243**	LR	LR	23 39 09.3	
	comp=Z,30nm,18.4s,baz=104,slow=40						
KSRS	**Korea Array**	**13.54**	**265**	LR	LR	23 38 05.8	
	comp=Z,32nm,20.9s,baz=95,slow=34						
SEY	**Seymchan**	**23.38**	**9**	P	**P**	**23 35 32.9**	**-0.1**
	7.6nm,0.7s,baz=189,slow=7.1,SNR=14						
	7.6nm,0.7s						
YAK	**Yakutsk**	**23.92**	**342**	P	**P**	**23 35 37.9**	**-0.2**
	12nm,0.6s,baz=107,slow=0.6,SNR=6.3						
	12nm,0.6s						
YAK	**Yakutsk**	**23.92**	**342**	P	**P**	**23 35 37.4**	**-0.7**
SONM	**Songino Array**	**28.61**	**299**	P	**P**	**23 36 21.1**	**+0.3**
	0.5nm,0.6s,baz=95,slow=8.7,SNR=3.2						
	0.5nm,0.6s						
SONM	**Songino Array**	**28.61**	**299**	P	**P**	**23 36 20.7**	**-0.1**
ZALV	**Zalesovo Beam**	**42.05**	**310**	P	**P**	**23 38 16.9**	**+1.3**
	0.6nm,0.5s,baz=96,slow=9.1,SNR=4.2						
ZALV				PcP	**PcP**	**23 40 11.3**	**+1.2**
	2.2nm,0.5s,baz=90,slow=2.8,SNR=9.6						
	0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**42.05**	**310**	P	**P**	**23 38 17.2**	**+1.6**
H21K	**Melozitna Rive**	**43.02**	**33**	P	**P**	**23 38 25.0**	**+1.5**
H21K				IAmb	IAmb	23 38 42.2	
	comp=Z,3.5nm,1.2s						
MK31	**Makanchi Array**	**44.96**	**300**	P	**P**	**23 38 39.3**	**0.0**
MKAR	**Makanchi Array**	**44.96**	**300**	P	**P**	**23 38 39.6**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=89,slow=9.9,SNR=6.8						
MKAR				LR	LR	23 57 21.7	
	comp=Z,27nm,21.0s,baz=157,slow=36						
	comp=Z,0.3nm,0.6s						
MAKZ	**Makanchi**	**45.16**	**300**	P	**P**	**23 38 40.2**	**-0.7**
MAKZ				IAmb	IAmb	23 38 57.0	
	comp=Z,1.5nm,0.7s						
ILAR	**Eielson Array**	**45.48**	**34**	P	**P**	**23 38 43.4**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=269,slow=6.4,SNR=4.6						
	comp=Z,0.4nm,0.7s						
KURK	**Kurchatov**	**46.34**	**306**	P	**P**	**23 38 52.0**	**+1.8**
SCRK	**Sand Creek**	**46.78**	**35**	P	**P**	**23 38 54.4**	**+0.9**
SCRK				IAmb	IAmb	23 39 03.5	
	comp=Z,4.6nm,1.4s						
BCAR	**Beaver Creek A**	**47.86**	**36**	P	**P**	**23 39 02.8**	**+1.0**
ABKAR	**Akbulak array**	**58.16**	**310**	P	**P**	**23 40 18.4**	**+0.5**
ABKAR	**Akbulak array**	**58.16**	**310**	P	**P**	**23 40 18.3**	**+0.4**
ABKAR				IAmb	IAmb	23 40 19.5	
	comp=Z,2.2nm,0.7s						
RES	**Resolute Bay**	**59.01**	**16**	P	**P**	**23 40 23.8**	**+0.4**
RES				IAmb	IAmb	23 40 35.6	
	comp=Z,3.8nm,1.3s						
YKA	**Yellowknife Ar**	**59.83**	**32**	P	**P**	**23 40 28.6**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=298,slow=6.3,SNR=5.1						
	comp=Z,0.2nm,0.7s						
WB0	**Warramunga Arr**	**60.28**	**191**	P	**P**	**23 40 30.9**	**-1.8**
WB0				IAmb	IAmb	23 41 00.4	
	comp=Z,7.2nm,1.4s						
WRA	**Warramunga Arr**	**60.46**	**191**	P	**P**	**23 40 32.4**	**-1.6**
	comp=Z,1.0nm,0.6s,baz=9.3,slow=6.9,SNR=10						
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**60.46**	**191**	P	**P**	**23 40 31.9**	**-2.1**
ASAR	**Alice Springs**	**64.19**	**191**	P	**P**	**23 40 58.7**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=14,slow=6.4,SNR=5.5						
	comp=Z,0.5nm,0.7s						
FIA1	**FINESS Array S**	**67.45**	**333**	P	**P**	**23 41 20.1**	**+0.6**
FINES	**FINESS Array B**	**67.45**	**333**	P	**P**	**23 41 20.1**	**+0.6**
	comp=Z,1.8nm,0.5s,baz=45,slow=7.4,SNR=22						
	comp=Z,1.8nm,0.5s						
FINES	**FINESS Array B**	**67.45**	**333**	P	**P**	**23 41 19.9**	**+0.3**
NVAR	**Mina Array Bea**	**70.99**	**56**	P	**P**	**23 41 42.4**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=307,slow=6.6,SNR=1.6						
	comp=Z,0.4nm,0.3s						
KBZ	**Khabaz**	**71.05**	**311**	P	**P**	**23 41 43.7**	**+1.7**
	comp=Z,2.9nm,0.9s,baz=45,slow=5.7,SNR=4.2						
	comp=Z,2.9nm,0.9s						
NC204	**NORSAR Array S**	**72.41**	**339**	P	**P**	**23 41 50.2**	**+0.1**
NOA	**NORSAR Array B**	**72.48**	**338**	P	**P**	**23 41 50.4**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=37,slow=6.2,SNR=2.6						
	comp=Z,0.9nm,0.8s						
PDAR	**Pinedale Array**	**73.60**	**48**	P	**P**	**23 41 57.8**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=305,slow=1.5,SNR=12						
	comp=Z,0.7nm,0.5s						
BRTR	**Keskin Array B**	**78.91**	**313**	P	**P**	**23 42 29.0**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=66,slow=1.7,SNR=2.9						
	comp=Z,0.6nm,0.7s						
TXAR	**Lajitas Array**	**86.11**	**55**	P	**P**	**23 43 05.9**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=287,slow=3.3,SNR=4.1						
	comp=Z,0.4nm,0.6s						

ROM 18 23:34:56.0±0.0**, 42°.903N**±0°.002×**13°.062E**±0°.003**, h10^{km}, ML1.2**/12**, 8C-2D, Error ellipse: s-maj=0.2km s-min=0.2km az=49.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1216	**Preci, Frazion**	**0.03**	**249**	⇑P	Pg	23 34 58.3	+0.3
T1216				S	Sg	23 34 59.5	+0.2
T1216				AML	AML		
	comp=E,1280µm,0.3s						
T1216				AML	AML		
	comp=N,966µm,0.3s						
FEMA	**Monte Fema**	**0.06**	**351**	P	Pg	23 34 58.6	+0.3
FEMA				S	Sg	23 35 00.1	+0.1
MC2	**Monte Cornacci**	**0.10**	**84**	⇓P	Pg	23 34 59.1	+0.4
MC2				S	Sg	23 35 01.2	+0.5
T1245	**Castelsantange**	**0.10**	**116**	⇓P	Pg	23 34 59.2	+0.4
T1245				S	Sg	23 35 01.3	+0.5
T1245				AML	AML		
	comp=E,500µm,0.4s						
T1245				AML	AML		
	comp=E,504µm,0.4s						
T1245				AML	AML		
	comp=N,674µm,0.5s						
T1245				AML	AML		
	comp=N,588µm,0.8s						
T1245				AML	AML		
	comp=N,588µm,1.2s						
FDMO	**Fiordimonte**	**0.14**	**8**	P	Pg	23 34 59.7	+0.5
FDMO				S	Sg	23 35 02.1	+0.7
T1212	**Cascia, Frazio**	**0.15**	**185**	P	Pg	23 35 00.1	+0.6
T1212				S	Sg	23 35 02.8	+1.0
T1212				AML	AML		
	comp=E,156µm,0.1s						
T1212				AML	AML		
	comp=N,98µm,0.1s						
T1212				AML	AML		
	comp=E,156µm,0.2s						
T1212				AML	AML		
	comp=N,98µm,0.1s						
T1212				AML	AML		
	comp=N,90µm,0.1s						
T1212				AML	AML		
	comp=E,155µm,0.1s						
T1212				AML	AML		
	comp=E,156µm,1.8s						
CESI	**CESI - Serrava**	**0.15**	**311**	⇑P	Pg	23 35 00.1	+0.6
CESI				S	Sg	23 35 02.9	+1.0
CESI				AML	AML		
	comp=E,120µm,0.1s						
CESI				AML	AML		
	comp=N,299µm,0.2s						
T1219	**Muccia, Frazio**	**0.16**	**345**	P	Pg	23 35 00.0	+0.5
T1219				S	Sg	23 35 02.8	+0.8
T1219				AML	AML		
	comp=E,133µm,0.4s						
T1219				AML	AML		
	comp=N,114µm,0.3s						
T1219				AML	AML		
	comp=E,111µm,0.1s						
T1219				AML	AML		
	comp=E,133µm,1.6s						
T1219				AML	AML		
	comp=N,87µm,0.1s						
T1256	**Bolognola (MC)**	**0.16**	**49**	P	Pg	23 35 00.2	+0.6
T1256				S	Sg	23 35 03.0	+0.8
T1256				AML	AML		
	comp=E,162µm,0.2s						
T1256				AML	AML		
	comp=E,152µm,0.2s						
T1256				AML	AML		
	comp=N,180µm,0.1s						
T1256				AML	AML		
	comp=N,215µm,0.1s						
T1214	**Arquata del Tr**	**0.18**	**143**	⇑P	Pg	23 35 00.5	+0.5
T1214				S	Sg	23 35 03.5	+0.8
MMO1	**Montemonaco**	**0.19**	**91**	⇑P	Pg	23 35 00.7	+0.5
MMO1				S	Sg	23 35 04.0	+1.0
T1220	**Camerino, Fraz**	**0.21**	**5**	P	Pg	23 35 01.4	+1.0
T1220				S	Sg	23 35 04.7	+1.3
T1217	**Poggiodomo (PG**	**0.21**	**207**	⇑P	Pg	23 35 01.1	+0.7
T1217				S	Sg	23 35 04.8	+1.2
T1217				AML	AML		
	comp=E,81µm,0.1s						
T1217				AML	AML		
	comp=N,106µm,0.0s						
T1217				AML	AML		
	comp=E,66µm,0.1s						
T1218	**Civita (PG)**	**0.24**	**170**	P	Pg	23 35 01.4	+0.6
T1218				S	Sg	23 35 05.5	+1.3
T1218				AML	AML		
	comp=N,49µm,0.1s						
T1241	**Roccafluvione,**	**0.28**	**100**	⇑P	Pg	23 35 02.1	+0.5
T1241				S	Sb	23 35 06.7	-1.1
T1241				AML	AML		
	comp=E,92µm,0.2s						
ASSB	**Assisi San Ben**	**0.33**	**295**	⇑P	Pg	23 35 02.9	+0.4
ASSB				S	Sb	23 35 08.2	-1.2
ASSB				AML	AML		
	comp=E,98µm,1.5s						
ASSB				AML	AML		
	comp=N,109µm,0.2s						
ASSB				AML	AML		
	comp=E,98µm,0.5s						
SMA1	**SAN MARTINO**	**0.34**	**143**	P	Pg	23 35 03.1	+0.4
SMA1				S	Sb	23 35 08.9	-0.8
ARRO	**Arrone**	**0.39**	**214**	P	Pb	23 35 04.4	-0.7
ARRO				S	Sb	23 35 10.1	-1.0
RM33	**Pellescritta (**	**0.41**	**164**	P	Pb	23 35 05.0	-0.4
RM33				S	Sb	23 35 11.0	-0.7
ATCC	**AVT- Casa Cast**	**0.42**	**312**	⇑P	Pg	23 35 04.7	+0.4
ATCC				S	Sb	23 35 11.5	-0.5
ATCC				AML	AML		
	comp=N,22µm,0.1s						
TERO	**Teramo**	**0.49**	**125**	P	Pg	23 35 05.5	0.0
TERO				S	Sb	23 35 13.2	-0.7
TERO				AML	AML		
	comp=N,22µm,0.1s						
TERO				AML	AML		
	comp=E,22µm,0.1s						
TERO				AML	AML		
	comp=N,18µm,0.0s						
TERO				AML	AML		
	comp=E,17µm,0.1s						
MA9	**Marino**	**1.17**	**195**	P	Pb	23 35 16.5	-1.8

ROM 18 23:35:44.5±0.1**, 42°.748N**±0°.002×**13°.267E**±0°.002**, h14^{km}, ML1.0**/2**, 5C-1D, Error ellipse: s-maj=0.2km s-min=0.0km az=247.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1214	**Arquata del Tr**	**0.04**	**285**	P	Pg	23 35 47.5	+0.1
T1214				S	Sg	23 35 49.5	+0.2
T1245	**Castelsantange**	**0.12**	**332**	P	Pg	23 35 48.3	+0.1
T1245				S	Sg	23 35 51.0	+0.4
T1245				AML	AML		
T1245				AML	AML		
	comp=N,78000µm,1.6s						
T1245				AML	AML		
	comp=N,44µm,1.3s						
T1245				AML	AML		
	comp=E,41µm,0.8s						
SMA1	**SAN MARTINO**	**0.13**	**157**	⇓P	Pg	23 35 48.4	+0.2
SMA1				S	Sg	23 35 51.0	+0.3
T1218	**Civita (PG)**	**0.14**	**235**	⇑P	Pg	23 35 48.5	+0.2
T1218				S	Sb	23 35 51.3	-0.5
MMO1	**Montemonaco**	**0.16**	**16**	⇑P	Pg	23 35 48.8	+0.2
MMO1				S	Sg	23 35 51.8	+0.5
T1212	**Cascia, Frazio**	**0.16**	**271**	⇑P	Pg	23 35 48.9	+0.2
T1212				S	Sg	23 35 51.9	+0.5
MC2	**Monte Cornacci**	**0.17**	**341**	P	Pg	23 35 49.1	+0.2
T1216	**Preci, Frazion**	**0.23**	**308**	⇑P	Pg	23 35 50.0	+0.3
T1216				S	Sb	23 35 53.9	-0.7
RM33	**Pellescritta (**	**0.24**	**189**	⇑P	Pg	23 35 49.3	-0.6
RM33				AML	AML		
	comp=E,846µm,1.6s						
RM33				AML	AML		
	comp=N,633µm,0.4s						
RM33				AML	AML		
	comp=E,49µm,1.2s						
RM33				AML	AML		
	comp=N,49µm,1.0s						
RM33				AML	AML		
	comp=E,844µm,1.6s						
RM33				AML	AML		
	comp=N,632µm,0.4s						
RM33				AML	AML		
	comp=E,844µm,0.4s						
RM33				AML	AML		
	comp=E,49µm,1.2s						
TERO	**Teramo**	**0.28**	**117**	P	Pg	23 35 50.0	-0.4
T1247	**Pizzolo (AQ)**	**0.31**	**176**	P	Pg	23 35 49.8	-1.2
CSP1	**Cessapalombo**	**0.35**	**352**	P	Pg	23 35 52.0	+0.3
CSP1				S	Sn	23 36 03.2	+1.2
T1220	**Camerino, Fraz**	**0.39**	**340**	S	Sb	23 35 58.4	-0.5
T1220				AML	AML		
	comp=E,27470µm,1.4s						
T1220				AML	AML		
	comp=N,3560µm,1.6s						
T1220				AML	AML		
	comp=E,27470µm,0.6s						
T1220				AML	AML		
	comp=N,3560µm,0.4s						

IDC ***18*** *23:46:21.4±0.6, 3°.69S×151°.19E, h0^{km}, mb4.1/10, mbtmp4.1/11, ML2.7/1, MS3.6/34, Error ellipse: s-maj=18.7km s-min=10.0km az=40.0*

NEIC ***18*** *23:46:22.4±0.8, 3°.80S±0°.04×151°.38E±0°.08, h10^{km}±1^{km}, mb4.6/25, Error ellipse: s-maj=13.3km s-min=6.1km az=72.0*

ISC 18 23:46:22.1±0.5**, 3°.73S**±0°.07×**151°.36E**±0°.07**, h10^{km}, n82, σ1^{s}.03**/57**, mb4.5**/26**, MS3.7**/32**, 1C-1D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**0.88**	**130**	Pg	**Pn**	**23 46 39.9**	**-0.6**
	232nm,0.3s,baz=171,slow=1.2,SNR=69						
KRVT				Lg	Lg	23 46 58.0	
	198nm,0.3s,baz=164,slow=5.8,SNR=5.9						
KRVT				LR	LR	23 47 16.4	
	comp=Z,8µm,18.6s,baz=21,slow=53						
RABL	**Rabaul**	**0.93**	**119**		**Pn**	**23 46 40.8**	**-0.4**
PMG	**Port Moresby**	**7.01**	**216**	Pn	**Pn**	**23 48 05.7**	**+0.9**
	7.8nm,0.3s,baz=37,slow=5.6,SNR=8.5						
PMG				Sn	**Sn**	**23 49 26.5**	**+1.7**
	0.5nm,0.3s,baz=292,slow=13,SNR=1.0						
PMG				LR	LR	23 50 56.1	
	comp=Z,816nm,21.3s,baz=3.5,slow=40						
	20nm,0.4s						
PMG	**Port Moresby**	**7.01**	**216**		**Pn**	**23 48 04.2**	**-0.6**
HNR	**Honiara**	**10.24**	**124**	LR	LR	23 52 52.2	
	comp=Z,11µm,21.5s,baz=302,slow=38						
CTA	**Charters Tower**	**17.00**	**197**	Pn	**P**	**23 50 23.3**	**+1.3**
	0.2nm,0.3s,baz=18,slow=15,SNR=5.1						
CTA				LR	LR	23 56 11.9	
	comp=Z,311nm,19.5s,baz=29,slow=35						
CTAO	**Charters Tower**	**17.00**	**197**	P	**Pn**	**23 50 19.8**	**-0.4**
CTAO				IAmb	IAmb	23 50 36.9	
	comp=Z,34nm,1.4s						
GUMO	**Guam**	**18.38**	**340**	LR	LR	23 55 43.2	
	comp=Z,124nm,20.9s,baz=122,slow=31						
EIDS	**Eidsvold**	**21.51**	**181**		**P**	**23 51 11.4**	**+0.1**
EIDS				IAmb	IAmb	23 51 17.8	
	comp=Z,18nm,1.3s						
WB0	**Warramunga Arr**	**22.98**	**225**	P	**P**	**23 51 25.9**	**-1.2**
WB0				IAmb	IAmb	23 51 37.5	
	comp=Z,19nm,1.4s						
WRA	**Warramunga Arr**	**23.13**	**224**	P	**P**	**23 51 27.8**	**-0.9**
	comp=Z,2.6nm,0.8s,baz=49,slow=10,SNR=29						
	comp=Z,2.6nm,0.8s						
WRA	**Warramunga Arr**	**23.13**	**224**	P	**P**	**23 51 27.0**	**-1.6**
DZM	**Mont Dzumac**	**23.38**	**143**	P	**P**	**23 51 33.3**	**+2.1**
	comp=Z,16nm,1.0s,baz=54,slow=3.1,SNR=5.6						
DZM				LR	LR	23 59 37.9	
	comp=Z,205nm,20.8s,baz=20,slow=34						
	comp=Z,16nm,1.0s						
DZM	**Mont Dzumac**	**23.38**	**143**	P	**P**	**23 51 30.6**	**-0.6**
OUENC	**Ouen Island, N**	**23.88**	**142**	P	**P**	**23 51 35.1**	**-0.9**
OUENC				IAmb	IAmb	23 51 51.3	
	comp=Z,21nm,0.9s						
AS31	**Alice Springs**	**26.02**	**219**	P	**P**	**23 51 55.4**	**-0.2**
ASAR	**Alice Springs**	**26.02**	**219**	P	**P**	**23 51 55.6**	**0.0**
	comp=Z,2.0nm,1.0s,baz=57,slow=8.0,SNR=10						
ASAR				LR	LR	00 02 03.4	
	comp=Z,166nm,20.4s,baz=26,slow=36						
	comp=Z,2.0nm,1.0s						
ASAR	**Alice Springs**	**26.02**	**219**	P	**P**	**23 51 54.5**	**-1.1**
FITZ	**Fitzroy Crossi**	**28.94**	**239**	P	**P**	**23 52 20.6**	**-1.3**
STKA	**Stephens Creek**	**29.46**	**197**	LR	LR	00 04 04.8	
	comp=Z,188nm,19.1s,baz=17,slow=36						
JOW	**Kunigami**	**37.70**	**325**	LR	LR	00 05 59.7	
	comp=Z,132nm,20.5s,baz=226,slow=31						
AFI	**Afiamalu**	**37.75**	**108**	LR	LR	00 08 39.9	
	comp=Z,71nm,18.3s,baz=266,slow=35						
JNU	**Nakatsue**	**41.47**	**334**	LR	LR	00 10 20.7	
	comp=Z,35nm,19.5s,baz=106,slow=35						
RPZ	**Rata Peaks**	**43.47**	**159**	LR	LR	00 10 12.3	
	comp=Z,119nm,22.0s,baz=324,slow=33						
KSRS	**Korea Array**	**46.41**	**334**	LR	LR	00 14 01.1	
	comp=Z,23nm,18.1s,baz=225,slow=36						
QIZ	**Qiongzhong**	**46.69**	**300**	P	**P**	**23 54 49.1**	**-2.4**
QIZ				pmax	pmax		
	comp=Z,28nm,1.2s						
QIZ				LR	LR		
	comp=N,180nm,23.9s						
QIZ				LR	LR		
	comp=E,190nm,24.9s						
QIZ				LR	LR		
	comp=Z,200nm,23.1s						
RAR	**Rarotonga**	**50.53**	**114**	LR	LR	00 15 47.7	
	comp=Z,46nm,18.1s,baz=322,slow=35						
BNX	**BinXian**	**53.66**	**339**	⇓P	**P**	**23 55 43.9**	**0.0**
BNX				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BNX				pmax	pmax		
	comp=Z,100nm,4.9s						
PHRA	**Phrae**	**54.98**	**296**	P	**P**	**23 55 53.7**	**-0.3**
CRAI	**Chiangrai**	**55.41**	**298**	P	**P**	**23 55 56.9**	**-0.2**
CRAI				IAmb	IAmb	23 56 12.4	
	comp=Z,6.8nm,1.1s						
CMAR	**Chiang Mai Arr**	**56.12**	**295**	P	**P**	**23 56 03.3**	**+1.0**
	comp=Z,2.6nm,0.9s,baz=105,slow=5.4,SNR=13						
CMAR				LR	LR	00 17 37.8	
	comp=Z,33nm,21.8s,baz=140,slow=34						
	comp=Z,2.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**56.12**	**295**	P	**P**	**23 56 02.3**	**0.0**
CHTO	**Chiang Mai**	**56.23**	**295**	P	**P**	**23 56 02.7**	**-0.3**
PETK	**Petropavlovsk-**	**56.88**	**5**	LR	LR	00 14 48.0	
	comp=Z,69nm,20.6s,baz=180,slow=30						
HHC	**Hu-ho-hao-te**	**57.35**	**325**	*e*P	**P**	**23 56 13.8**	**+3.1**
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,80nm,5.4s						
HEH	**HeiHe**	**57.60**	**342**	*e*P	**P**	**23 56 11.8**	**-0.3**
SHEM	**Shemya Is, Ala**	**59.45**	**16**	LR	LR	00 17 22.7	
	comp=Z,61nm,19.9s,baz=106,slow=31						
MA2	**Magadan**	**63.12**	**360**	LR	LR	00 18 08.8	
	comp=Z,33nm,21.9s,baz=152,slow=30						
GTA	**Gaotai**	**63.90**	**318**	*e*P	**P**	**23 56 55.4**	**-0.1**

GTA				sP	pwP	23 57 05.6	+4.4
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ULN	Ulaanbaatar	64.34	329	P	P	23 56 58.9	+0.7
ULN				IAmb	IAmb	23 57 12.1	
	comp=Z,3.0nm,1.1s						
SHL	Shillong	64.53	300	P	P	23 56 59.5	-0.5
SHL				IAmb	IAmb	23 57 07.8	
	comp=Z,6.2nm,1.2s						
SONM	Songino Array	64.66	328	P	P	23 57 01.0	+0.7
	comp=Z,1.1nm,1.0s,baz=141,slow=6.1,SNR=4.9						
SONM				LR	LR	00 27 15.6	
	comp=Z,39nm,18.1s,baz=137,slow=38						
	comp=Z,1.1nm,1.0s						
SONM	Songino Array	64.66	328	P	P	23 57 01.0	+0.7
SONM				IAmb	IAmb	23 57 13.3	
	comp=Z,5.0nm,1.5s						
WMQ	Urumqi	73.99	318	⇑*i*P	P	23 58 00.3	+2.2
WMQ				pP	pwP	23 58 03.4	-0.4
WMQ				sP	PcP	23 58 11.4	-2.0
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KDAK	Kodiak Island	75.89	27	LR	LR	00 23 39.8	
	comp=Z,42nm,21.7s,baz=251,slow=30						
CNPM	China Poot	77.39	26	P	P	23 58 18.1	+0.9
MK31	Makanchi Array	78.58	319	P	P	23 58 22.3	-1.8
MKAR	Makanchi Array	78.58	319	P	P	23 58 24.3	+0.2
	comp=Z,0.6nm,0.5s,baz=102,slow=6.6,SNR=11						
MKAR				LR	LR	00 31 28.8	
	comp=Z,54nm,21.6s,baz=124,slow=34						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	78.58	319	P	P	23 58 22.2	-1.9
MAKZ	Makanchi	78.79	319	P	P	23 58 25.1	-0.2
ZALV	Zalesovo Beam	79.47	327	P	P	23 58 29.0	+0.3
	comp=Z,0.4nm,0.5s,baz=122,slow=5.2,SNR=2.1						
ZALV				LR	LR	00 33 40.4	
	comp=Z,23nm,21.3s,baz=120,slow=36						
	comp=Z,0.4nm,0.5s						
ZALV	Zalesovo Beam	79.47	327	P	P	23 58 29.2	+0.4
IMAR	Indian Mountai	79.87	20	P	P	23 58 31.2	+0.5
MLY	Manley	80.42	21	P	P	23 58 34.5	+0.8
MLY				IAmb	IAmb	23 58 41.0	
	comp=Z,7.1nm,1.1s						
MCK	McKinley	80.44	23	P	P	23 58 34.2	+0.3
ILAR	Eielson Array	81.72	22	P	P	23 58 41.3	+0.7
	comp=Z,1.8nm,0.7s,baz=256,slow=5.2,SNR=13						
ILAR				LR	LR	00 29 25.4	
	comp=Z,26nm,21.4s,baz=236,slow=32						
	comp=Z,1.8nm,0.7s						
ILAR	Eielson Array	81.72	22	P	P	23 58 41.1	+0.5
KURK	Kurchatov	82.05	322	P	P	23 58 42.3	-0.3
KURK				IAmb	IAmb	23 58 52.3	
	comp=Z,5.6nm,1.3s						
AAK	Ala-Archa	82.89	314	LR	LR	00 35 41.9	
	comp=Z,49nm,20.7s,baz=160,slow=36						
BCAR	Beaver Creek A	83.05	25	P	P	23 58 47.9	+0.2
HYT	Haines Junctio	84.16	28	P	P	23 58 54.2	+0.6
NRIK	Noril'sk	84.50	341	P	P	23 58 55.0	+0.1
	comp=Z,4.2nm,1.0s,baz=114,slow=6.1,SNR=6.1						
	comp=Z,4.2nm,1.0s						
NRIK	Noril'sk	84.50	341	P	P	23 58 55.0	+0.1
BTK	Batken	85.16	311	P	P	23 58 58.8	-0.1
BTK				IAmb	IAmb	23 59 03.1	
	comp=Z,9.8nm,1.5s						
KKAR	Karatay Array	85.86	314	P	P	23 59 02.5	+0.2
KKAR	Karatay Array	85.86	314	P	P	23 59 02.1	-0.2
KKAR				IAmb	IAmb	23 59 04.2	
	comp=Z,4.6nm,1.1s						
QSPA	South Pole Qui	86.22	180	P	P	23 59 03.6	-0.1
QSPA				IAmb	IAmb	23 59 10.0	
	comp=Z,12nm,1.4s						
BBB	Bella Bella	87.13	37	LR	LR	00 29 20.4	
	comp=Z,44nm,21.5s,baz=276,slow=30						
DLBC	Dease Lake	87.22	31	LR	LR	00 29 10.1	
	comp=Z,49nm,21.6s,baz=281,slow=29						
BVAR	Borovoye Array	87.53	323	LR	LR	00 38 57.9	
	comp=Z,40nm,19.7s,baz=97,slow=36						
INK	Inuvik	87.98	21	LR	LR	00 37 11.7	
	comp=Z,30nm,18.4s,baz=288,slow=35						
YBH	Yreka Blue Hor	89.42	48	LR	LR	00 33 35.9	
	comp=Z,37nm,18.5s,baz=308,slow=32						
NEW	Newport	93.77	42	LR	LR	00 36 33.4	
	comp=Z,23nm,19.0s,baz=80,slow=32						
PFO	Pinyon Flats O	93.86	57	LR	LR	00 34 05.0	
	comp=Z,46nm,19.8s,baz=226,slow=30						
ARU	Arti	94.64	326	LR	LR	00 43 18.3	
	comp=Z,52nm,20.7s,baz=90,slow=36						
AKTO	Aktyubinsk	94.98	320	LR	LR	00 44 09.2	
	comp=Z,32nm,18.7s,baz=240,slow=37						
YKA	Yellowknife Ar	95.16	28	P	P	23 59 47.4	+1.9
	comp=Z,0.8nm,0.9s,baz=276,slow=4.4,SNR=7.9						
	comp=Z,0.8nm,0.9s						
RPN	Rapa Nui	96.58	118	LR	LR	00 35 29.7	
	comp=Z,22nm,21.2s,baz=251,slow=30						
LPIG	La Paz	99.12	66	LR	LR	00 36 31.8	
	comp=Z,43nm,20.6s,baz=230,slow=30						
PDAR	Pinedale Array	99.19	47	LR	LR	00 40 44.0	
	comp=Z,25nm,18.8s,baz=290,slow=33						
LPAZ	La Paz	136.19	118	PKP	PKPdf	00 05 45.0	-0.7
	comp=Z,1.5nm,0.5s,baz=239,slow=5.9,SNR=9.5						
TORD	Torodi Ar. Bea	148.60	289	PKPbc	PKPbc	00 06 09.9	-0.6
	comp=Z,2.3nm,1.1s,baz=92,slow=1.8,SNR=4.5						

IDC 18 23:53:42.8±7.1**, 6°.42S**×**149°.07E, h92**^{km}±50^{km}**, mb3.2**/1**, mbtmp3.7**/3**, Error ellipse: s-maj=110.9km s-min=51.3km az=119.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.52	212	P	Pn	23 54 35.5	+0.1
	9.3nm,0.3s,baz=37,slow=10,SNR=9.2						
PMG				S	Sn	23 55 17.0	+1.0
	170nm,0.5s,baz=3.7,slow=21,SNR=26						
WRA	Warramunga Arr	19.63	225	P	P	23 58 03.4	-0.9
	1.0nm,0.3s,baz=53,slow=11,SNR=27						
ASAR	Alice Springs	22.51	219	P	P	23 58 34.9	-0.2
	1.2nm,0.7s,baz=48,slow=9.7,SNR=15						
	1.2nm,0.7s						
TORD	Torodi Ar. Bea	147.19	284	PKPbc	PKPbc	00 13 16.3	-0.3
	0.2nm,0.6s,baz=89,slow=2.6,SNR=1.6						

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*IDC **19** 00:01:06.8±0.7, 5°.05S×151°.29E, h138^{km}±7^{km}, mb3.4/5, mbtmp3.9/6, MS3.3/1, Error ellipse: s-maj=31.5km s-min=11.6km az=128.0*

ISC 19 00:01:07.6±0.8**, 5°.0S**±0°.1×**151°.3E**±0°.2**, h150**^{km}**, n10, σ2.^{s}01**/11**, mb3.7**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	0.98	46	P	Pn	00 01 30.9	-1.3
	388nm,0.3s,baz=262,slow=0.3,SNR=84						
KRVT				S	Sn	00 01 49.4	-1.6
	426nm,0.7s,baz=171,slow=23,SNR=8.6						
PMG	Port Moresby	6.02	223	P	Pn	00 02 33.7	-0.8
	18nm,0.3s,baz=43,slow=8.9,SNR=13						
PMG				S	Sn	00 03 39.6	-3.0
	21nm,0.4s,baz=72,slow=9.8,SNR=6.9						
CTA	Charters Tower	15.79	198	P	P	00 04 46.2	+3.6
	1.4nm,0.5s,baz=23,slow=15,SNR=6.4						
WRA	Warramunga Arr	22.22	227	P	P	00 05 51.8	-0.4
	2.9nm,0.8s,baz=50,slow=10,SNR=16						
	2.9nm,0.8s						
DZM	Mont Dzumac	22.43	141	P	P	00 05 54.0	-0.2
	4.2nm,0.8s,baz=27,slow=14,SNR=1.6						
	4.2nm,0.8s						
ASAR	Alice Springs	25.03	220	P	P	00 06 18.5	+0.6
	2.0nm,0.6s,baz=56,slow=9.0,SNR=28						
	2.0nm,0.6s						
MSVF	Nonsavu	29.06	118	LR	LR	00 18 58.2	
	comp=Z,53nm,19.6s,baz=143,slow=37						
SONM	Songino Array	65.70	329	P	P	00 11 38.0	+1.9
	0.4nm,0.5s,baz=131,slow=6.5,SNR=3.0						
	0.4nm,0.5s						
ILAR	Eielson Array	82.90	22	P	P	00 13 15.0	-0.1
	0.5nm,0.7s,baz=248,slow=5.2,SNR=10						
	0.5nm,0.7s						
TORD	Torodi Ar. Bea	148.95	287	PKPbc	PKiKP	00 20 39.0	-1.1
	0.3nm,1.0s,baz=85,slow=4.0,SNR=2.1						

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*DJA **19** 00:12:31.6±1.1, 2°N±4°×12°7E±°, h26^{km}±12^{km}, M4.3/8, mb4.5/2, mB5.1/2, MLv4.3/8, Mw(mB)4.4/2*

*IDC **19** 00:12:31.0±3.5, 1°.49N×126°.66E, h65^{km}±33^{km}, mb3.6/10, mbtmp4.0/11, ML4.0/1, MS2.9/1, Error ellipse: s-maj=30.0km s-min=11.6km az=78.0*

*NEIC **19** 00:12:32.3±1.2, 1°.57N±0°.07×126°.83E±0°.07, h74^{km}±7^{km}, mb4.3/22, Error ellipse: s-maj=11.7km s-min=8.3km az=222.0*

ISC 19 00:12:30.0±0.5**, 1°.64N**±0°.04×**126°.78E**±0°.05**, h50**^{km}**, n59, σ1.^{s}99**/67**, mb4.2**/19**, 1C-1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.04	145		Pn	00 12 50.4	+2.1
TNTI				Sn	Sn	00 13 04.9	+3.1
TNTI	Ternate	1.04	145	P	Pn	00 12 50.7	+2.4
TNTI	Ternate	1.04	145	P	Pn	00 12 50.1	+1.8
TNTI				S	Sn	00 13 05.8	+4.0
LBMI	Labuha	2.37	162	P	Pn	00 13 09.3	+2.8
LBMI				S	Sn	00 13 38.4	+4.0
SANI	Sanana	3.74	192	P	Pn	00 13 26.8	+1.5
GTOI	Gorontalo	3.89	255	P	Pn	00 13 29.6	+2.3
GTOI				S	Sn	00 14 14.2	+2.4
LUWI	Luwuk	4.81	236	Pn	Pn	00 13 42.8	+2.9
LUWI				Sn	Sn	00 14 37.5	+3.2
LUWI	Luwuk	4.81	236	P	Pn	00 13 41.9	+2.0
LUWI	Luwuk	4.81	236	P	Pn	00 13 42.8	+2.9
LUWI				S	Sn	00 14 38.1	+3.8
MRSI	Marisa	4.97	257	P	Pn	00 13 43.8	+1.7
SKMP	Bagumbayan, Su	5.34	335	⇓*e*P	Pn	00 13 49.3	+2.1
SKMP				*e*S	Sn	00 14 46.2	-1.2
KCP	Kidapawan	5.60	343	⇑*e*P	Pn	00 14 03.5	+13
KCP				*i* S	Sn	00 14 59.2	+5.4
TOLI2	Tolitoli	6.01	265	Pn	Pn	00 13 56.7	+0.3
TOLI2	Tolitoli	6.01	265	P	Pn	00 13 56.8	+0.3
FAKI	Fak Fak	7.10	130	Pn	Pn	00 14 12.5	+1.2
FAKI	Fak Fak	7.10	130	P	Pn	00 14 18.0	+6.6
MYLDM	Lahad Datu	8.98	293		Pn	00 14 39.5	+2.4
KAPI	Kappang	9.64	227	P	Pn	00 14 44.8	-1.3
	1.6nm,0.3s,baz=160,slow=9.7,SNR=4.2						
KAPI				S	Sn	00 16 27.7	-5.4
	14nm,0.8s,baz=226,slow=23,SNR=1.6						
	6.7nm,0.3s						
SBUM	Sibu	14.57	273		Pn	00 15 55.5	+2.1
MTN	Manton Dam	15.02	163	Pn	Pn	00 15 58.7	-0.6
KSM	Kuching	16.46	270	P	Pn	00 16 19.3	+1.6
KSM				IAmb	IAmb	00 16 20.9	
	comp=Z,11nm,0.6s						
KNRA	Kununurra	17.31	174		Pn	00 16 27.6	-0.6
KNRA				IAmb	IAmb	00 16 41.4	
	comp=Z,32nm,1.4s						
FITZ	Fitzroy Crossi	19.64	183	P	P	00 16 52.4	-2.2
TPUB	Ta-pu	22.35	345	P	P	00 17 23.8	0.0
COEN	Coen	22.45	134	P	P	00 17 23.7	-1.4
COEN				IAmb	IAmb	00 17 43.8	
	comp=Z,20nm,1.4s						
WB0	Warramunga Arr	22.55	161	P	P	00 17 24.6	-1.4
WB0				IAmb	IAmb	00 17 41.4	
	comp=Z,7.6nm,0.8s						
WRA	Warramunga Arr	22.69	161	P	P	00 17 25.2	-2.3
	comp=Z,2.1nm,0.4s,baz=341,slow=11,SNR=45						
WRA				S	S	00 21 29.2	-3.3
	comp=Z,0.4nm,0.6s,baz=336,slow=19,SNR=1.9						
	comp=Z,2.1nm,0.4s						
WRA	Warramunga Arr	22.69	161	P	P	00 17 24.9	-2.7
MBWA	Marble Bar	23.68	197	P	P	00 17 37.9	+0.6
MBWA				IAmb	IAmb	00 17 38.3	
	comp=Z,31nm,1.4s						
AS31	Alice Springs	26.09	165	P	P	00 17 59.4	+0.2
AS31				IAmb	IAmb	00 18 09.6	
	comp=Z,2.5nm,0.3s						
ASAR	Alice Springs	26.09	165	P	P	00 17 59.0	-0.1
	comp=Z,1.0nm,0.4s,baz=348,slow=13,SNR=16						
	comp=Z,1.0nm,0.4s						
ASAR	Alice Springs	26.09	165	P	P	00 17 59.6	+0.4
BBOO	Buckleboo	35.37	166	P	P	00 19 19.8	-1.1
BBOO				IAmb	IAmb	00 19 20.2	
	comp=Z,7.4nm,1.1s						
KSRS	Korea Array	35.66	2	P	P	00 19 23.8	+0.5
	comp=Z,1.0nm,0.8s,baz=174,slow=9.1,SNR=4.1						
	comp=Z,1.0nm,0.8s						
STKA	Stephens Creek	36.17	158	P	P	00 19 28.1	+0.3
	comp=Z,0.9nm,0.4s,baz=313,slow=3.1,SNR=3.7						
	comp=Z,0.9nm,0.4s						
STKA	Stephens Creek	36.17	158	P	P	00 19 26.7	-1.1
MJAR	Matsushiro Arr	36.31	16	P	P	00 19 27.9	-1.0
	comp=Z,1.2nm,0.9s,baz=174,slow=9.6,SNR=4.2						
	comp=Z,1.2nm,0.9s						
USRK	Ussuriysk Ar.	42.64	6	P	P	00 20 22.6	+1.1
	comp=Z,1.9nm,0.5s,baz=175,slow=6.1,SNR=2.3						
USRK				LR	LR	00 40 09.4	
	comp=Z,15nm,20.0s,baz=197,slow=39						
	comp=Z,1.9nm,0.5s						
SONM	Songino Array	49.29	342	P	P	00 21 15.4	+1.4
	comp=Z,0.4nm,0.6s,baz=153,slow=7.7,SNR=4.8						
	comp=Z,0.4nm,0.6s						
SONM	Songino Array	49.29	342	P	P	00 21 14.8	+0.8
SONM				IAmb	IAmb	00 21 21.1	
	comp=Z,3.2nm,1.4s						
MK31	Makanchi Array	59.30	326	P	P	00 22 26.2	-0.5
MK31				IAmb	IAmb	00 22 52.8	
	comp=Z,1.6nm,0.8s						
MKAR	Makanchi Array	59.30	326	P	P	00 22 26.1	-0.7
	comp=Z,1.3nm,0.5s,baz=118,slow=7.0,SNR=20						
	comp=Z,1.3nm,0.5s						
MKAR	Makanchi Array	59.30	326	P	P	00 22 25.9	-0.8
MAKZ	Makanchi	59.48	326	P	P	00 22 28.1	+0.1
MAKZ				IAmb	IAmb	00 22 55.1	
	comp=Z,3.0nm,1.1s						
ZALV	Zalesovo Beam	62.47	334	P	P	00 22 47.2	-0.8
	comp=Z,0.5nm,0.4s,baz=132,slow=4.4,SNR=4.0						
	comp=Z,0.5nm,0.4s						
ZALV	Zalesovo Beam	62.47	334	P	P	00 22 49.2	+1.2
GAR	Garm	63.38	313	P	P	00 22 53.8	-0.8
GAR				IAmb	IAmb	00 23 15.8	
	comp=Z,4.0nm,0.9s						
KURK	Kurchatov	63.52	328	P	P	00 22 55.3	+0.2
KK31	Karatay Array	64.79	318	P	P	00 23 03.6	0.0
KKAR	Karatay Array	64.79	318	P	P	00 23 03.0	-0.6
BRVK	Borovoye	69.17	327	P	P	00 23 31.1	-0.1
BRVK				IAmb	IAmb	00 23 35.1	
	comp=Z,2.8nm,0.8s						
GEYT	Alibeck	72.24	309	P	P	00 23 50.6	+0.4
	comp=Z,0.7nm,0.5s,baz=56,slow=5.4,SNR=2.1						
	comp=Z,0.7nm,0.5s						
ABKAR	Akbulak array	73.80	321	P	P	00 23 58.4	-0.8
ABKAR	Akbulak array	73.80	321	P	P	00 23 58.7	-0.4
ABKAR				IAmb	IAmb	00 24 04.1	
	comp=Z,3.3nm,1.3s						
VNDA	Vanda	81.36	173	P	P	00 24 39.9	-0.9
IMAR	Indian Mountai	84.23	24	P	P	00 24 56.4	+0.5
SKT	Skwentna	84.65	28	P	P	00 24 57.6	-0.6
SML	Sawmill	86.15	28	P	P	00 25 05.3	-0.4
QSPA	South Pole Qui	91.56	180	P	P	00 25 30.6	-0.7

IDC 19 00:35:04.6±999.0**, 29°.70N**×**76°.27W, h0**^{km}**, Error ellipse: s-maj=535.1km s-min=191.3km az=59.0, Off east coast of United States**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I51GB	BERMUDA INFRAS	10.28	72	I	I	01 36 30.0	
	baz=258,slow=317,SNR=2.5						
I42PT	GRACIOSA ISLAN	40.51	63	I	I	04 44 00.0	
	baz=276,slow=319,SNR=0.5						
I18DK	QAANAAQ INFRAS	47.96	2	I	I	05 29 23.4	
	baz=190,slow=340,SNR=1.5						

IDC 19 00:38:58.8±9.1**, 12°.95N**×**95°.76E, h0**^{km}**, mb3.7**/4**, mbtmp3.7**/4**, MS3.2**/1**, Error ellipse: s-maj=603.8km s-min=23.2km az=59.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	35.59	344	P	P	00 45 58.2	+0.1
	0.3nm,0.6s,baz=160,slow=9.5,SNR=5.6						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	40.12	343	P	P	00 46 35.9	-0.3
	0.8nm,0.2s,baz=155,slow=8.6,SNR=1.0						
	0.8nm,0.2s						
JCJ	Chichijima	45.58	65	LR	LR	01 05 55.3	
	comp=Z,27nm,21.0s,baz=330,slow=36						
WRA	Warramunga Arr	50.09	130	P	P	00 47 55.9	-0.2
	0.9nm,0.8s,baz=308,slow=7.4,SNR=10						
	0.9nm,0.8s						
ASAR	Alice Springs	52.11	134	P	P	00 48 11.1	0.0
	0.6nm,0.7s,baz=311,slow=7.6,SNR=6.6						
	0.6nm,0.7s						

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*IDC **19** 01:08:13.2±1.9, 42°.08S×173°.80E, h0^{km}, mb3.7/2, mbtmp3.8/4, ML3.6/2, Error ellipse: s-maj=45.2km s-min=25.9km az=137.0*

*NEIC **19** 01:08:15.8±1.2, 42°.29S±0°.03×173°.85E±0°.04, h21^{km}±6^{km}, mb4.2/6, Error ellipse: s-maj=4.7km s-min=2.9km az=124.0*

*WEL **19** 01:08:15.7±0.5, 42°S±4°×17°4E±°, h11^{km}±4^{km}, M3.8/17, ML4.1/17, MLv3.8/17, Error ellipse: s-maj=0.0km s-min=0.0km az=127.1, confirmed*

*NOU **19** 01:08:15.5, 42°.40S×173°.88E, h14^{km}, MLv4.1/11, South Island, New Zealand*

ISC 19 01:08:14.9±1.2**, 42°.30S**±0°.03×**173°.88E**±0°.03**, h15**^{km}±8^{km}**, n162, σ1.^{s}24**/180**, mb4.3**/7**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHZ	Kahutara	0.28	244		Pb	01 08 22.1	+0.5
KHZ				Sg	Sb	01 08 26.2	+0.1
KHZ	Kahutara	0.28	244	P	Pb	01 08 22.1	+0.5
KHZ	Kahutara	0.28	244	P	Pb	01 08 22.3	+0.7
KHZ				S	Sb	01 08 26.6	+0.4
BSWZ	Blackbirch Sta	0.58	360		Pb	01 08 27.1	+0.4
BSWZ				Sg	Sb	01 08 35.0	+0.2
BSWZ	Blackbirch Sta	0.58	360	P	Pb	01 08 27.3	+0.5
CMWZ	Cape Campbell	0.60	25		Pn	01 08 29.2	+0.3
CMWZ				Sg	Sn	01 08 40.5	+2.1
CMWZ	Cape Campbell	0.60	25	P	Pn	01 08 29.6	+0.7
TUWZ	Tuamarina	0.87	3		Pg	01 08 32.4	+0.7
TUWZ					Sn	01 08 44.5	-0.4
TUWZ	Tuamarina	0.87	3	P	Pn	01 08 32.5	0.0
TUWZ				S	Sn	01 08 44.9	0.0
THZ	Tophouse	0.90	306		Pb	01 08 31.8	-0.4
THZ				Sg	Sb	01 08 42.6	-1.4
THZ	Tophouse	0.90	306	P	Pb	01 08 31.9	-0.4
THZ				S	Sb	01 08 43.0	-1.0
GVZ	Greta Valley S	0.92	222		Pn	01 08 34.0	+0.8
GVZ					Sn	01 08 47.3	+1.1
GVZ	Greta Valley S	0.92	222	P	Pn	01 08 34.2	+0.9
GVZ				S	Sn	01 08 47.9	+1.6
TCW	Tory Channel	1.12	16		Pb	01 08 36.6	+0.6
TCW				Sn	Sg	01 08 51.7	+0.4
TCW	Tory Channel	1.12	16	P	Pb	01 08 36.8	+0.7
TCW				S	Sg	01 08 51.7	+0.4
NNZ	Nelson	1.14	341		Pn	01 08 36.1	-0.2
NNZ				Sn	Sg	01 08 51.8	0.0
NNZ	Nelson	1.14	341	P	Pn	01 08 36.3	0.0
NNZ				S	Sg	01 08 52.0	+0.2
BHW	Baring Head	1.16	40		Pb	01 08 37.5	+0.9
SNZO	South Karori	1.16	32		Pg	01 08 37.6	+0.2
SNZO	South Karori	1.16	32	P	Pg	01 08 37.9	+0.5
WEL	Wellington	1.21	34	P	Pg	01 08 38.5	+0.2
MRNZ	Matariki Terra	1.23	317		Pb	01 08 37.9	+0.1
MRNZ	Matariki Terra	1.23	317	P	Pb	01 08 37.9	+0.1
PLWZ	Palliser	1.26	55		Pn	01 08 38.6	+0.6
PLWZ	Palliser	1.26	55	P	Pb	01 08 38.7	+0.3
AMCZ	Amberley	1.26	225		Pn	01 08 38.1	+0.1
AMCZ	Amberley	1.26	225	P	Pb	01 08 38.5	0.0
LTZ	Lake Taylor	1.28	247		Pb	01 08 38.6	-0.2
LTZ	Lake Taylor	1.28	247	P	Pb	01 08 38.8	0.0
LTZ				S	Sn	01 08 55.1	-0.2
TKNZ	Takaka Hill	1.44	331		Pb	01 08 41.0	-0.3
TKNZ	Takaka Hill	1.44	331	P	Pb	01 08 41.1	-0.3
TKNZ				S	Sb	01 09 00.3	+0.8
PAWZ	Paruwai Farm	1.47	52	P	Pn	01 08 41.5	+0.6
CAW	Cannon Point	1.48	37	P	Pn	01 08 41.9	+0.9
DUWZ	D'Urville Isla	1.49	1	P	Pn	01 08 41.8	+0.6
DUWZ				S	Sg	01 09 02.6	-0.5
TRWZ	Traveller	1.62	57	P	Pn	01 08 43.3	+0.4
KIW	Kapiti Island	1.63	29	P	Pb	01 08 44.2	-0.5
DSZ	Denniston Nort	1.64	289		Pb	01 08 44.1	-0.9
DSZ	Denniston Nort	1.64	289	P	Pb	01 08 44.0	-0.9
MTW	Mount Morrison	1.66	47	P	Pn	01 08 43.9	+0.3
MQZ	McQueen's Vall	1.67	212		Pn	01 08 43.3	-0.3
MQZ	McQueen's Vall	1.67	212	P	Pn	01 08 43.2	-0.4
OXZ	Oxford	1.70	232		Pn	01 08 43.7	-0.3
OXZ	Oxford	1.70	232	P	Pn	01 08 43.8	-0.3
AKCZ	Akaroa Harbour	1.73	204	P	Pn	01 08 44.8	+0.3
OGWZ	Otaki Gorge	1.77	34	P	Pn	01 08 45.8	+0.9
QRZ	Quartz Range	1.78	325		Pb	01 08 46.4	-0.9
QRZ	Quartz Range	1.78	325	P	Pb	01 08 46.6	-0.7
QRZ	Quartz Range	1.78	325	P	Pb	01 08 46.5	-0.9
INZ	Inchbonnie	1.85	256		Pn	01 08 46.4	+0.3
INZ	Inchbonnie	1.85	256	P	Pn	01 08 46.4	+0.3
HOWZ	Holdsworth Sta	1.86	42	P	Pn	01 08 46.7	+0.4
RACZ	Rakaia	1.92	221	P	Pn	01 08 46.8	-0.3
TMWZ	Te Maipa	1.92	52	P	Pn	01 08 47.3	+0.3
MRZ	Mangatainoka R	2.07	39	Pn	Pn	01 08 49.5	+0.4
MRZ	Mangatainoka R	2.07	39	P	Pn	01 08 49.6	+0.4
MHCZ	Mount Hutt	2.10	233	P	Pn	01 08 49.1	-0.5
TIWZ	Tintock	2.14	45	P	Pn	01 08 50.2	+0.1
WACZ	Wakanui South	2.22	221	P	Pn	01 08 50.9	-0.3
PRWZ	Pori Road	2.34	43	P	Pn	01 08 53.1	+0.2
POWZ	Post Office Ro	2.38	37	P	Pn	01 08 53.8	+0.4
BFZ	Birch Farm	2.40	49		Pn	01 08 53.9	+0.2
BFZ	Birch Farm	2.40	49	P	Pn	01 08 53.4	-0.3
WVZ	Waitaha Valley	2.44	250	P	Pn	01 08 54.6	+0.3
RPZ	Rata Peaks	2.51	235	Pn	Pn	01 08 54.7	-0.5
	70nm,0.3s,baz=266,slow=0.7,SNR=427						
RPZ				Sn	Sn	01 09 23.9	-1.6
	46nm,0.3s,baz=342,slow=23,SNR=55						
	188nm,0.4s						
RPZ	Rata Peaks	2.51	235	Pn	Pn	01 08 54.9	-0.3
RPZ	Rata Peaks	2.51	235	P	Pn	01 08 55.0	-0.3
RPZ	Rata Peaks	2.51	235	P	Pn	01 08 54.7	-0.5
ARCZ	Arundel	2.58	229	P	Pn	01 08 55.5	-0.6
DVHZ	Dannevirke	2.64	42	P	Pn	01 08 56.5	-0.5
WAZ	Wanganui	2.67	19	P	Pn	01 08 59.9	+2.5
TSZ	Takapari Road	2.73	36	P	Pn	01 08 58.5	+0.2
GCSZ	Gaunt Creek Bo	2.81	247	P	Pn	01 08 59.8	+0.6
LREZ	Lake Rotokare	2.86	8	P	Pb	01 09 05.0	-0.7
NMEZ	Namu Road	2.88	360	P	Pb	01 09 04.6	-1.4
PNHZ	Pukenui	2.96	37	P	Pn	01 09 01.7	+0.3
PREZ	Palmer Road	2.96	4	P	Pb	01 09 05.3	-2.1
TMZ	Timaru	2.96	224	P	Pn	01 09 01.2	-0.2
KHEZ	Kahui Hut	3.00	2	P	Pb	01 09 05.5	-2.6
NBEZ	Newall Road No	3.02	360	P	Pb	01 09 05.6	-2.8
NEZ	North Egmont	3.03	3	P	Pb	01 09 06.6	-2.0
PKE	Pukeiti	3.10	2	P	Pb	01 09 06.8	-3.0
DREZ	Durham Road	3.11	5	P	Pb	01 09 07.0	-2.9
MTVZ	Mangateitei	3.15	23	P	Pn	01 09 06.5	+2.4
PXZ	Pawanui	3.19	46	P	Pb	01 09 08.4	-2.9
MOVZ	Moawhango	3.22	27	P	Pn	01 09 06.1	+1.2
FOZ	Fox Glacier	3.23	246		Pn	01 09 05.5	+0.5
FOZ	Fox Glacier	3.23	246	P	Pn	01 09 05.6	+0.5
VRZ	Vera Road	3.24	12	P	Pn	01 09 07.5	+2.3
WNVZ	Wahianoa	3.24	24	P	Pn	01 09 07.3	+1.9
TRVZ	Turoa	3.25	24	P	Pn	01 09 07.5	+1.9
BHHZ	Black Hill Sta	3.25	31	P	Pn	01 09 06.4	+0.9
WHVZ	Whangaehu Hut	3.28	24	P	Pn	01 09 09.3	+3.3
FWVZ	Far West T-bar	3.29	23	P	Pn	01 09 08.0	+1.8
TUVZ	Tukino	3.31	25	P	Pn	01 09 08.3	+1.9
NGZ	Ngauruhoe	3.38	23	P	Pn	01 09 10.2	+3.0
SNVZ	South Ngauruho	3.38	24	P	Pn	01 09 09.1	+1.7
LBZ	Lake Benmore	3.41	231		Pn	01 09 07.5	-0.1
LBZ	Lake Benmore	3.41	231	P	Pn	01 09 07.3	-0.2
OTVZ	Oturere	3.41	24	P	Pn	01 09 09.3	+1.5
NNVZ	North Ngauruho	3.42	23	P	Pn	01 09 09.6	+1.7
WTVZ	West Tongariro	3.43	23	P	Pn	01 09 09.9	+2.0
ETVZ	East Tongariro	3.45	24	P	Pn	01 09 09.3	+1.0
KWHZ	Kaweka Forest	3.46	35	P	Pn	01 09 08.1	-0.2
TMVZ	Te Maari	3.47	24	P	Pn	01 09 10.4	+1.9
KRVZ	Karewarewa	3.47	23	P	Pn	01 09 12.4	+4.0
NTVZ	North Tongarir	3.47	24	P	Pn	01 09 10.0	+1.5
MCHZ	McNeill Hill	3.56	38	P	Pb	01 09 15.7	-1.9
KATZ	Kakaramea	3.59	23	P	Pn	01 09 13.1	+2.9
ODZ	Otahua Downs	3.61	219		Pn	01 09 10.0	-0.3
ODZ	Otahua Downs	3.61	219	P	Pn	01 09 10.1	-0.3
ODZ	Otahua Downs	3.61	219	P	Pn	01 09 09.9	-0.3
BKZ	Black Stump Fm	3.70	33		Pn	01 09 11.4	-0.2
BKZ	Black Stump Fm	3.70	33	P	Pn	01 09 12.9	+1.2
BKZ	Black Stump Fm	3.70	33	P	Pn	01 09 11.3	-0.4
HIZ	Hauiti	3.85	12		Pn	01 09 14.3	+0.7
HIZ	Hauiti	3.85	12	P	Pn	01 09 16.1	+2.5
HIZ	Hauiti	3.85	12	P	Pn	01 09 15.6	+2.0
JCZ	Jackson Bay	4.13	243	P	Pn	01 09 17.7	+0.2
JCZ	Jackson Bay	4.13	243	P	Pn	01 09 17.0	-0.5
HHSZ	Highcliff Hill	4.30	212	P	Pn	01 09 19.9	+0.2
WKZ	Wanaka	4.34	233		Pn	01 09 19.4	-1.0

WKZ	Wanaka	4.34	233	P	Pn	01 09 19.4	-1.0
RTZ	Ruatahuna	4.37	34		Pn	01 09 20.6	-0.2
EAZ	Earnscleugh	4.42	227	P	Pn	01 09 20.8	-0.7
EDRZ	Edgecumbe	4.72	29	P	Pn	01 09 26.4	+0.8
TOZ	Tahuroa Road	4.73	16	Pn	Pn	01 09 26.5	+0.8
TOZ	Tahuroa Road	4.73	16	P	Pn	01 09 26.8	+1.2
URZ	Urewera	4.73	33	Pn	Pn	01 09 24.5	-1.2
	0.5nm,0.3s,baz=188,slow=3.5,SNR=1.8						
URZ				Sn	Sn	01 10 16.8	-3.4
	4.3nm,0.3s,baz=141,slow=18,SNR=8.0						
	5.6nm,0.8s						
URZ	Urewera	4.73	33	P	Pn	01 09 28.1	+2.4
URZ	Urewera	4.73	33	P	Pn	01 09 26.9	+1.2
TUZ	Tuapeka	4.77	218	P	Pn	01 09 26.2	0.0
MLZ	Mavora Lakes	5.17	232	Pn	Pn	01 09 31.2	-0.7
MLZ	Mavora Lakes	5.17	232	P	Pn	01 09 30.9	-1.0
AWAZ	Awhitu Peninsu	5.26	7	P	Pn	01 09 34.9	+2.0
ETAZ	East Tamaki Re	5.40	9	P	Pn	01 09 36.9	+2.1
SYZ	Scrubby Hill	5.43	217	P	Pn	01 09 34.4	-0.9
	72nm,1.7s						
SYZ	Scrubby Hill	5.43	217	P	Pn	01 09 35.5	+0.2
HAZ	Te Kaha	5.43	35	P	Pn	01 09 36.1	+0.8
WIAZ	Waiheke Island	5.58	10	P	Pn	01 09 39.2	+1.9
WHZ	Wether Hill Ro	5.58	228	Pn	Pn	01 09 36.1	-1.3
WHZ	Wether Hill Ro	5.58	228	P	Pn	01 09 35.7	-1.8
DCZ	Deep Cove	5.80	235	Pn	Pn	01 09 39.0	-1.3
MXZ	Matakaoa Point	5.82	37	Pn	Pn	01 09 39.4	-1.4
APZ	The Paps	6.18	221	P	Pn	01 09 45.9	+0.2
CTZ	Chatham Island	7.12	105	Pn	Pn	01 09 58.2	-0.2
CTZ	Chatham Island	7.12	105	P	Pn	01 09 58.7	+0.3
	67nm,2.4s						
CTZ	Chatham Island	7.12	105	P	Pn	01 09 58.8	+0.3
RIZ	Raoul Island	14.61	30	P	P	01 11 47.1	-0.3
VNDA	Vanda	35.68	184	P	P	01 15 11.9	-0.1
AS31	Alice Springs	37.91	287	P	P	01 15 31.3	-0.4
AS31				IAmb	IAmb	01 15 33.4	
	comp=Z,0.9nm,1.1s						
ASAR	Alice Springs	37.91	287	P	P	01 15 32.0	+0.3
	comp=Z,0.5nm,0.5s,baz=119,slow=6.5,SNR=14						
	comp=Z,0.5nm,0.5s						
ASAR	Alice Springs	37.91	287	P	P	01 15 30.7	-1.0
COEN	Coen	38.74	308	P	P	01 15 38.1	-0.5
COEN				IAmb	IAmb	01 15 38.9	
	comp=Z,10nm,1.0s						
WB2	Warramunga Arr	40.03	291	P	P	01 15 48.5	-0.9
WB2				IAmb	IAmb	01 15 52.8	
	comp=Z,10nm,1.4s						
WRA	Warramunga Arr	40.04	291	P	P	01 15 48.5	-1.0
	comp=Z,1.1nm,0.7s,baz=129,slow=7.6,SNR=7.2						
	comp=Z,1.1nm,0.7s						
WRA	Warramunga Arr	40.04	291	P	P	01 15 48.1	-1.4
WB0	Warramunga Arr	40.12	292	P	P	01 15 48.9	-1.2
WB0				IAmb	IAmb	01 16 17.9	
	comp=Z,8.5nm,1.3s						
SNAA	Sanae	66.32	181	P	P	01 19 01.6	-0.7
PZH	PanZhiHua	95.37	301	P	P	01 21 41.6	+2.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,5.0s						
HHC	Hu-ho-hao-te	100.10	317	*e*P	Pdif	01 22 02.1	+2.5
KSH	Kashi	120.25	298	PKP	PKPdf	01 26 55.1	-10
TORD	Torodi Ar. Bea	150.18	195	PKPbc	PKiKP	01 28 06.8	+0.5
	comp=Z,0.3nm,0.5s,baz=159,slow=3.3,SNR=5.4						

OMAN ***19*** *01:10:12.4±0.3, 21°.88N×62°.03E, h33km, mb4.8/12, ml3.7/11, Error ellipse: s-maj=5.8km s-min=3.0km az=250.0*

DSN ***19*** *01:10:14.8±1.9, 22°.33N×61°.77E, h10km, ML3.2/9, Error ellipse: s-maj=21.0km s-min=17.1km az=35.0*

ISC 19 01:10:12.4±2.7, **21°.92N**±0°.07×**62°.0E**±0°.1, **h35**km, **n34**, σ**1ˢ.85**/58, **Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JLN	Jalan Bani Buh	2.45	276	P	Pn	01 10 48.2	-1.8
	SNR=69						
JLN				S	Sn	01 11 17.5	-1.2
WBK	Wadi Bani Khal	2.93	284	P	Pn	01 10 56.5	-0.1
	SNR=100						
WBK				S	Sn	01 11 32.2	+1.6
WSAR	Wadi Sarin	3.42	293	P	Pn	01 11 02.6	-0.7
WSAR				S	Sn	01 11 41.9	-0.7
NGCH	Negor - Chabah	3.52	347	P	Pn	01 11 05.5	+0.8
NGCH				S	Sn	01 11 48.9	+3.7
JMDO	Jabal Madar	3.68	278	P	Pn	01 11 07.0	+0.2
	SNR=90						
JMDO				S	Sn	01 11 50.8	+1.7
SMDO	Samad	3.86	288	P	Pn	01 11 10.0	+0.5
	SNR=73						
SMDO				S	Sn	01 11 54.9	+1.1
MHTO	MHTO	3.91	257	P	Pn	01 11 09.1	-0.9
	SNR=64						
MHTO				S	Sn	01 11 56.2	+1.5
BIDO	Bidbid	3.95	295	P	Pn	01 11 11.2	+0.6
BIDO				S	Sn	01 11 56.4	+0.6
BSY	Bisya	4.56	281	P	Pn	01 11 19.9	+0.9
BSY				S	Sn	01 12 11.3	+0.5
DQM	DQM	4.65	246	P	Pn	01 11 20.0	-0.2
	SNR=11						
DQM				S	Sn	01 12 12.6	-0.5
HOQ	Hoqain	4.67	292	P	Pn	01 11 21.7	+1.2
	SNR=12						
HOQ				S	Sn	01 12 16.4	+2.8
ARQ	Araqi	5.29	287	P	Pn	01 11 31.1	+2.0
	SNR=7.6						
ARQ				S	Sn	01 12 31.7	+2.8
JASK	Jask - Hormozg	5.48	317	P	Pn	01 11 32.1	+0.5
	SNR=16						
SOHO	SOHO	5.53	295	P	Pn	01 11 32.3	0.0
SOHO	SOHO	5.53	295	P	Pn	01 11 34.0	+1.6
SOHO				S	Sn	01 12 34.0	-0.8
UOSS	Minazif	6.15	300	P	Pn	01 11 38.5	-2.3
UOSS	Minazif	6.15	300	P	Pn	01 11 41.4	+0.5
UOSS				S	Sn	01 12 49.4	-0.6
ASHO	Ashiyiah	6.15	298	P	Pn	01 11 40.5	-0.4
ASHO	Ashiyiah	6.15	298	P	Pn	01 11 42.7	+1.8
	SNR=19						
ASHO				S	Sn	01 12 53.4	+3.3
HATD	Hatta, Dubai	6.15	299	P	Pn	01 11 40.9	0.0
HATD	Hatta, Dubai	6.15	299	P	Pn	01 11 43.8	+2.9
HATD				S	Sn	01 12 53.8	+3.7
MDH	Madha	6.25	304	P	Pn	01 11 39.2	-3.0
MDH	Madha	6.25	304	P	Pn	01 11 40.8	-1.5
MDH				S	Sn	01 12 49.0	-3.4
MSFE	Esma-Masafi	6.39	304	P	Pn	01 11 42.3	-1.9
MASF	Masafi	6.40	304	P	Pn	01 11 45.2	+1.0
MASF				S	Sn	01 12 53.7	-2.4
UMZA	Um Al Zommool	6.42	278	P	Pn	01 11 45.2	+0.6
UMZA				S	Sn	01 12 55.9	-0.7
FAQ	Al Faqa, Dubai	6.56	297	P	Pn	01 11 47.2	+0.7
FAQ	Al Faqa, Dubai	6.56	297	P	Pn	01 11 47.7	+1.2
FAQ				S	Sn	01 12 59.7	-0.4
	SNR=5.4						
BANOM	Banah	6.59	308	P	Pn	01 11 45.6	-1.4
BANOM				S	Sn	01 12 55.2	-5.8
BANOM	Banah	6.59	308	P	Pn	01 11 46.1	-0.9
	SNR=7.8						
BANOM				S	Sn	01 12 57.9	-3.1
SHME	Shamm	6.79	308	P	Pn	01 11 49.8	+0.2
SHME				S	Sn	01 13 03.8	-1.8
SHME	Shamm	6.79	308	P	Pn	01 11 51.3	+1.7
SHME				S	Sn	01 13 05.6	0.0
	SNR=5.5						
WHFO	Wadi Hawf	8.74	244	P	Pn	01 12 16.1	-0.3
	SNR=15						
ABTO	Aybut	9.41	243	P	Pn	01 12 25.1	-0.5

IDC ***19*** *01:13:21.6±0.7, 14°.88S×174°.29W, h0km, mb4.0/9, mbtmp4.0/9, MS3.7/45, Error ellipse: s-maj=36.2km s-min=17.6km az=134.0*

NEIC ***19*** *01:13:22.8±1.8, 14°.8S±0°.1×173°.87W±0°.09, h10km±1km, mb4.5/14, Error ellipse: s-maj=21.9km s-min=11.8km az=153.0*

NOU ***19*** *01:13:42.0, 13°.74S×172°.68W, h67km, MLv3.5/4, Samoa Islands*

ISC 19 01:13:22.1±0.5, **14°.90S**±0°.09×**173°.85W**±0°.08, **h10**km, **n108**, σ**1ˢ.42**/54, **mb4.5**/18, **MS3.8**/43, **Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.23	64	Pn	Pn	01 13 59.4	+0.1
	46nm,0.3s,baz=44,slow=1.1,SNR=57						
AFI				Sn	Sn	01 14 24.3	-2.8
	142nm,0.3s,baz=348,slow=21,SNR=21						
AFI	Afiamalu	2.23	64	Pn	Pn	01 13 59.0	-0.3
NIUE	Niue	5.60	138	Pn	Pn	01 14 46.9	+1.3
MSVF	Nonsavu	8.27	249	LR	LR	01 17 50.1	
	comp=Z,300nm,20.2s,baz=143,slow=34						
MSVF	Nonsavu	8.27	249	Pn	Pn	01 15 22.3	0.0
RAR	Rarotonga	14.78	117	LR	LR	01 21 45.2	
	comp=Z,216nm,21.4s,baz=281,slow=33						
RAR	Rarotonga	14.78	117	Pn	Pn	01 16 49.8	-1.6
DZM	Mont Dzumac	19.99	246	*e*LR	LR	01 23 26.1	
	comp=Z,170nm,23.5s						
DZM	Mont Dzumac	19.99	246	LR	LR	01 24 22.7	
	comp=Z,228nm,18.7s,baz=222,slow=34						
PPT	Papeete	23.45	100	LR	LR	01 26 50.0	
	comp=Z,57nm,18.0s,baz=324,slow=34						
PPT2	Papeete2	23.45	100	*e*LR	LR	01 23 55.8	
	comp=Z,478nm,27.2s						
PPT2				*e*LR	LR	01 23 56.0	
	comp=Z,300nm,28.5s						
PPT2	Papeete2	23.45	100	*e*T	T	01 43 02.3	
	7.9nm,0.3s						
PAE	Paea	23.45	100	*e*T	T	01 43 06.9	
	12nm,0.2s						
URZ	Urewera	24.61	197	P	P	01 18 41.6	-1.0
	14nm,0.9s,baz=97,slow=11,SNR=3.6						
URZ				LR	LR	01 27 15.9	
	comp=Z,272nm,19.6s,baz=102,slow=34						
	14nm,0.9s						
PMOR	Pomariorio Ree	25.07	94	*e*T	T	01 45 47.9	
	7.0nm,0.2s						
HNR	Honiara	26.17	279	LR	LR	01 28 22.5	
	comp=Z,1µm,19.0s,baz=138,slow=35						
RPZ	Rata Peaks	31.48	201	LR	LR	01 31 04.6	
	comp=Z,167nm,18.2s,baz=18,slow=34						
KRVT	Keravat (AS076	35.20	284	LR	LR	01 33 34.8	
	comp=Z,104nm,18.8s,baz=252,slow=35						
H11S2	WAKE ISLAND Hy	38.31	329	T	T	02 00 53.9	
	baz=149,slow=76,SNR=250						
H11S3	WAKE ISLAND Hy	38.32	329	T	T	02 00 55.6	
	baz=149,slow=76,SNR=266						
H11S1	WAKE ISLAND Hy	38.33	329	T	T	02 00 58.0	
	baz=149,slow=76,SNR=223						
CTA	Charters Tower	38.34	256	LR	LR	01 34 32.6	
	comp=Z,104nm,18.2s,baz=80,slow=34						
H11N3	WAKE ISLAND Hy	39.26	331	T	T	02 02 08.2	
	baz=150,slow=76,SNR=273						
H11N1	WAKE ISLAND Hy	39.27	331	T	T	02 02 08.1	
	baz=150,slow=76,SNR=467						
H11N2	WAKE ISLAND Hy	39.28	331	T	T	02 02 10.8	
	baz=150,slow=76,SNR=252						
STKA	Stephens Creek	43.91	239	P	P	01 21 28.6	-0.7
	2.5nm,0.8s,baz=31,slow=7.9,SNR=4.8						
	2.5nm,0.8s						
WB0	Warramunga Arr	49.50	257	P	P	01 22 10.4	-2.9
WB0				IAmb	IAmb	01 22 12.0	
	comp=Z,5.7nm,0.8s						
WRA	Warramunga Arr	49.54	256	P	P	01 22 10.7	-2.9
	comp=Z,3.1nm,0.8s,baz=91,slow=7.5,SNR=26						
WRA				LR	LR	01 42 51.3	
	comp=Z,93nm,18.5s,baz=90,slow=36						
	comp=Z,3.1nm,0.8s						
WRA	Warramunga Arr	49.54	256	P	P	01 22 11.8	-1.8
GUMO	Guam	49.70	303	LR	LR	01 39 35.2	
	comp=Z,52nm,20.9s,baz=92,slow=32						
ASAR	Alice Springs	49.85	252	P	P	01 22 14.1	-1.9
	comp=Z,25nm,0.7s,baz=85,slow=8.5,SNR=202						
ASAR				LR	LR	01 40 28.4	
	comp=Z,143nm,21.8s,baz=112,slow=33						
ASAR	Alice Springs	49.85	252	P	P	01 22 14.3	-1.6
JCJ	Chichijima	59.69	314	LR	LR	01 42 47.7	
	comp=Z,59nm,19.7s,baz=128,slow=30						
RPN	Rapa Nui	60.88	113	LR	LR	01 41 50.5	
	comp=Z,25nm,21.5s,baz=328,slow=28						
VNDA	Vanda	63.83	186	P	P	01 23 55.3	+1.0
	comp=Z,0.5nm,0.5s,baz=6.2,slow=5.3,SNR=6.9						
	comp=Z,0.5nm,0.5s						
KAPI	Kappang	65.93	271	LR	LR	01 53 58.5	
	comp=Z,36nm,18.0s,baz=258,slow=37						
MJAR	Matsushiro Arr	68.28	320	LR	LR	01 48 03.7	
	comp=Z,67nm,21.1s,baz=143,slow=31						
ASAJ	Asahikawa	70.89	328	LR	LR	01 49 35.7	
	comp=Z,52nm,21.4s,baz=83,slow=31						
JNU	Nakatsue	71.14	313	LR	LR	01 49 08.9	
	comp=Z,58nm,21.9s,baz=124,slow=30						
PETK	Petropavlovsk-	72.02	342	LR	LR	01 50 06.7	
	comp=Z,28nm,21.8s,baz=143,slow=31						
CMB	Columbia Colle	72.68	42	P	P	01 24 51.0	+0.6
CMB				IAmb	IAmb	01 24 58.8	
	comp=Z,4.9nm,1.2s						
PFO	Pinyon Flats O	72.90	47	LR	LR	01 50 39.1	
	comp=Z,75nm,18.1s,baz=226,slow=31						
YBH	Yreka Blue Hor	73.46	37	LR	LR	01 48 34.7	
	comp=Z,61nm,21.3s,baz=252,slow=29						
NVAR	Mina Array Bea	74.25	42	P	P	01 25 03.2	+3.4
	comp=Z,0.3nm,0.4s,baz=212,slow=7.9,SNR=4.9						
NVAR				LR	LR	01 49 37.2	
	comp=Z,58nm,20.8s,baz=260,slow=29						
	comp=Z,0.3nm,0.4s						
NVAR	Mina Array Bea	74.25	42	P	P	01 24 59.7	-0.1
KDAK	Kodiak Island	74.52	12	LR	LR	01 48 50.6	
	comp=Z,43nm,20.9s,baz=226,slow=28						
MOD	Modoc Plateau	75.00	38	P	P	01 25 05.3	+1.3
MOD				IAmb	IAmb	01 25 12.7	
	comp=Z,6.7nm,1.2s						
KSRS	Korea Array	75.50	316	LR	LR	01 53 03.6	
	comp=Z,31nm,21.6s,baz=125,slow=32						
USRK	Ussuriysk Ar.	76.72	323	LR	LR	01 53 39.5	
	comp=Z,53nm,20.2s,baz=142,slow=32						
WUAZ	Wupatki	77.48	48	P	P	01 25 17.5	-0.8
ELK	Elko	77.50	42	LR	LR	01 55 03.4	
	comp=Z,32nm,18.7s,baz=252,slow=32						
BBB	Bella Bella	77.63	27	LR	LR	01 50 27.9	
	comp=Z,36nm,19.8s,baz=257,slow=29						
MA2	Magadan	79.56	343	LR	LR	01 56 55.7	
	comp=Z,32nm,20.7s,baz=103,slow=33						
KLR	Kul'dur	79.86	327	LR	LR	01 55 26.8	
	comp=Z,25nm,20.3s,baz=156,slow=32						
PV14	Lion Creek, Pa	80.48	46	P	P	01 25 35.5	+0.7
PV14				IAmb	IAmb	01 25 41.5	
	comp=Z,6.2nm,1.1s						
NEW	Newport	80.54	34	LR	LR	01 52 51.2	
	comp=Z,37nm,20.0s,baz=170,slow=29						
TXAR	Lajitas Array	80.69	56	P	P	01 25 39.5	+3.5
	comp=Z,1.4nm,0.9s,baz=225,slow=6.4,SNR=9.0						
TXAR				LR	LR	01 56 56.2	
	comp=Z,30nm,18.3s,baz=268,slow=32						
	comp=Z,1.4nm,0.9s						
TXAR	Lajitas Array	80.69	56	P	P	01 25 36.3	+0.3
ANMO	Albuquerque	80.81	50	LR	LR	01 53 39.6	
	comp=Z,59nm,19.4s,baz=344,slow=30						
DLBC	Dease Lake	81.39	22	LR	LR	01 54 24.1	
	comp=Z,40nm,20.9s,baz=265,slow=30						
MLY	Manley	81.60	10	P	P	01 25 40.1	+0.2
MLY				IAmb	IAmb	01 25 44.6	
	comp=Z,6.0nm,1.3s						
TPAW	Teton Pass	81.64	41	P	P	01 25 39.4	-1.5
HDA	Harding Lake	81.70	11	P	P	01 25 41.4	+1.0
CCB	Clear Creek Bu	81.75	11	P	P	01 25 39.2	-1.4
CCB				IAmb	IAmb	01 25 45.1	
	comp=Z,4.8nm,1.1s						
H21K	Melozitna Rive	81.86	9	P	P	01 25 43.1	+1.9
ILAR	Eielson Array	82.04	11	P	P	01 25 42.6	+0.4
	comp=Z,1.1nm,0.9s,baz=214,slow=6.0,SNR=6.6						
ILAR				LR	LR	01 53 58.8	
	comp=Z,25nm,20.5s,baz=200,slow=30						
	comp=Z,1.1nm,0.9s						
IMAR	Indian Mountai	82.04	8	P	P	01 25 42.5	+0.3
PDAR	Pinedale Array	82.18	42	P	P	01 25 46.3	+2.6
	comp=Z,0.3nm,0.7s,baz=235,slow=3.2,SNR=2.5						
PDAR				LR	LR	01 57 09.9	
	comp=Z,37nm,18.6s,baz=288,slow=32						
	comp=Z,0.3nm,0.7s						
I26K	Coal Creek Min	83.26	12	P	P	01 25 48.3	-0.2
I26K				IAmb	IAmb	01 25 53.8	
	comp=Z,6.9nm,1.4s						
COLD	Coldfoot	83.72	9	P	P	01 25 50.9	+0.1
COLD				IAmb	IAmb	01 25 56.6	
	comp=Z,4.3nm,1.0s						
PMSA	Palmer Station	84.81	156	LR	LR	01 59 05.4	
	comp=Z,42nm,20.2s,baz=198,slow=32						
BMAR	Burnt Mountain	84.84	11	P	P	01 25 57.5	+0.9
H03S2	Juan Fernandez	85.84	124	T	T	03 01 20.4	
	baz=251,slow=74						
H03S1	Juan Fernandez	85.86	124	T	T	03 01 27.7	
	baz=251,slow=74						
H03S3	Juan Fernandez	85.86	124	T	T	03 01 24.5	
	baz=251						
H03N2	Juan Fernandez	85.94	123	T	T	03 01 29.9	
	baz=251						
H03N3	Juan Fernandez	85.94	123	T	T	03 01 27.6	
	baz=251						
H03N1	Juan Fernandez	85.95	123	T	T	03 01 30.9	
	baz=251						
YKA	Yellowknife Ar	89.81	24	P	P	01 26 21.7	+1.1
	comp=Z,0.7nm,0.9s,baz=235,slow=4.3,SNR=11						
	comp=Z,0.7nm,0.9s						
PLCA	Paso Flores	90.17	132	LR	LR	01 58 12.6	
	comp=Z,62nm,18.8s,baz=212,slow=30						
CMAR	Chiang Mai Arr	92.05	288	LR	LR	02 02 00.7	
	comp=Z,24nm,21.4s,baz=95,slow=32						
A36M	Sachs Harbour	92.52	14	P	P	01 26 33.3	+0.3
ATAH	Atahualpa	93.42	98	LR	LR	01 58 27.0	
	comp=Z,58nm,21.9s,baz=268,slow=29						
NNA	Nana	93.59	103	LR	LR	02 00 53.2	
	comp=Z,24nm,18.4s,baz=222,slow=30						
ULM	Lac du Bonnet	93.82	39	LR	LR	02 00 50.6	
	comp=Z,40nm,19.5s,baz=338,slow=30						
SONM	Songino Array	94.18	318	LR	LR	02 03 31.0	
	comp=Z,26nm,20.2s,baz=147,slow=32						
TIXI	Tiksi	94.41	344	LR	LR	02 09 24.1	
	comp=Z,20nm,18.4s,baz=181,slow=36						
CFA	Coronel Fontan	95.09	124	LR	LR	01 59 45.2	
	comp=Z,62nm,20.8s,baz=236,slow=29						
LVC	Limon Verde	97.62	116	LR	LR	02 01 29.0	
	comp=Z,46nm,20.9s,baz=244,slow=30						
KHC	Kasperske Hory	145.32	351	PKPbc	PKPbc	01 32 59.1	-1.0
KHC	Kasperske Hory	145.32	351	*e*PKP	PKPdf	01 33 01.8	+1.5
BR131	Keskin Array S	145.50	321	PKPbc	PKPbc	01 32 59.6	-1.5
BRTR	Keskin Array B	145.50	321	PKPbc	PKPab	01 33 01.8	+0.4
	comp=Z,2.6nm,0.8s,baz=109,slow=2.6,SNR=12						
BRTR	Keskin Array B	145.50	321	PKPbc	PKPbc	01 32 59.9	-1.2
CKRC	Cesky Krumlov	145.51	350	*e*PKP	PKPab	01 33 01.7	+0.8
GERES	GERESS Array B	145.58	351	PKPbc	PKPdf	01 33 01.1	+0.3
	comp=Z,0.4nm,0.7s,baz=16,slow=4.4,SNR=4.0						
GERES	GERESS Array B	145.58	351		PKPdf	01 32 59.3	-1.6
CONA	Conrad Observa	146.10	348	*e*PKP	PKPab	01 33 04.2	+1.0
	comp=Z,8.7nm,1.2s						
RONA	Rosalia, Austr	146.23	348	*e*PKP	PKPab	01 33 04.3	+0.6
	comp=Z,3.1nm,0.9s						
MOA	Molln	146.46	350	*e*PKP	PKPab	01 33 05.0	+0.4
	comp=Z,7.7nm,1.6s						
ARSA	Arzberg	146.81	348	*e*PKP	PKPab	01 33 06.8	+0.9
	comp=Z,4.3nm,1.5s						
RETA	Reutte	147.28	354	*e*PKP	PKPbc	01 33 06.0	-0.1
	comp=Z,12nm,2.6s						
WATA	Walderalm	147.34	353	*e*PKP	PKPab	01 33 08.7	+0.6
	comp=Z,5.0nm,1.4s						
KBA	Koelnbreinsper	147.36	351	*e*PKP	PKiKP	01 33 09.1	+0.4
	comp=Z,7.0nm,1.7s						
WTTA	Wattenberg	147.41	353	*e*PKP	PKPbc	01 33 06.7	+0.2
	comp=Z,3.8nm,1.3s						
DAVA	Damuels	147.56	355	*e*PKP	PKiKP	01 33 10.0	+0.9
	comp=Z,2.9nm,0.8s						
ABTA	Abfaltersbach	147.80	352	*e*PKP	PKPbc	01 33 07.2	-0.3
	comp=Z,3.4nm,1.1s						
FUORN	Ofenpass-Fuorn	148.19	355	PKPbc	PKPdf	01 33 07.1	+1.6

ROM 19 01:15:11.9±0.1, **42°.989N**±0°.005×**13°.119E**±0°.006, **h10**km, **ML1.5**/13, **4C-11D, Error ellipse: s-maj=0.5km s-min=0.5km az=5.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1256	Bolognola (MC)	0.08	77	⇓P	Pg	01 15 14.2	-0.1
T1256				AML	AML		
	comp=E,662µm,1.4s						
T1256				AML	AML		
	comp=N,486µm,0.2s						
T1256				AML	AML		
	comp=E,663µm,1.4s						
T1256				AML	AML		
	comp=N,486µm,1.8s						
T1256				AML	AML		
	comp=E,663µm,0.6s						
MC2	Monte Cornacci	0.09	145	⇓P	Pg	01 15 14.5	-0.1
MC2				S	Sg	01 15 17.0	+0.5
T1216	Preci, Frazion	0.12	217	P	Pg	01 15 15.1	+0.3
T1216				S	Sg	01 15 17.9	+1.0
T1220	Camerino, Fraz	0.12	350	P	Pg	01 15 15.0	+0.1
T1220				S	Sg	01 15 18.3	+1.4
T1220				AML	AML		
	comp=N,1975µm,0.3s						
T1220				AML	AML		
	comp=E,2530µm,0.3s						
T1220				AML	AML		
	comp=N,1975µm,1.7s						
T1245	Castelsantange	0.14	159	⇓P	Pg	01 15 15.4	+0.2
T1245				S	Sg	01 15 18.6	+1.1
T1245				AML	AML		
	comp=E,419µm,1.1s						
T1245				AML	AML		
	comp=N,434µm,1.0s						
T1245				AML	AML		
	comp=E,419µm,1.1s						
T1245				AML	AML		
	comp=N,444µm,1.2s						
T1245				AML	AML		
	comp=E,349µm,1.5s						
T1245				AML	AML		
	comp=E,419µm,0.9s						
T1245				AML	AML		
	comp=N,434µm,1.0s						
T1245				AML	AML		
	comp=E,349µm,0.5s						
CESI	CESI - Serrava	0.16	276	P	Pg	01 15 15.8	+0.4
CESI				S	Sg	01 15 18.9	+1.1
CESI				AML	AML		
	comp=E,248µm,0.5s						
CESI				AML	AML		
	comp=N,358µm,0.2s						
GUMA	Gualdo di Mace	0.17	65	⇑P	Pg	01 15 16.4	+0.8
GUMA				S	Sg	01 15 20.2	+1.9
GUMA				AML	AML		
	comp=E,660µm,0.5s						
GUMA				AML	AML		
	comp=N,671µm,1.1s						
MMO1	Montemonaco	0.18	120	⇓P	Pg	01 15 15.9	+0.3
MMO1				S	Sg	01 15 19.2	+0.9
T1214	Arquata del Tr	0.24	164	⇑P	Pg	01 15 17.2	+0.4
T1214				S	Sg	01 15 22.4	+2.3
T1214				AML	AML		
	comp=E,147µm,1.4s						
T1214				AML	AML		
	comp=N,122µm,1.4s						
T1214				AML	AML		
	comp=N,122µm,0.6s						
T1212	Cascia, Frazio	0.24	193	⇓P	Pg	01 15 17.5	+0.6
T1212				S	Sg	01 15 21.9	+1.8
T1212				AML	AML		
	comp=N,192µm,0.9s						
T1212				AML	AML		
	comp=E,248µm,0.9s						
T1241	Roccafluvione,	0.27	120	⇓P	Pg	01 15 17.6	+0.4
T1241				S	Sb	01 15 22.5	-0.9
T1241				AML	AML		
	comp=E,106µm,0.6s						
T1241				AML	AML		
	comp=N,76µm,0.3s						
T1241				AML	AML		
	comp=E,106µm,1.4s						
SNTG	Esanatoglia	0.30	334	⇑P	Pg	01 15 18.3	+0.4
SNTG				AML	AML		
	comp=N,56µm,0.7s						
SNTG				AML	AML		
	comp=E,60µm,0.6s						
T1217	Poggiodomo (PG	0.31	207	P	Pg	01 15 18.6	+0.5
T1217				S	Sb	01 15 24.1	-0.7
T1217				AML	AML		
	comp=N,142µm,0.2s						
T1217				AML	AML		
	comp=E,83µm,0.5s						
T1218	Civita (PG)	0.32	181	P	Pg	01 15 18.6	+0.3
EL6	Elcito	0.34	358	⇓P	Pg	01 15 19.0	+0.3
ASSB	Assisi San Ben	0.34	279	⇓P	Pg	01 15 19.1	+0.4
CING	Cingoli	0.39	8	⇓P	Pg	01 15 20.0	+0.4
SMA1	SAN MARTINO	0.39	156	P	Pg	01 15 19.8	+0.2
SMA1				AML	AML		
	comp=E,79µm,1.5s						

SMA1				AML	AML		
	comp=N,74µm,1.5s						
SMA1				AML	AML		
	comp=N,74µm,0.5s						
SMA1				AML	AML		
	comp=E,79µm,0.5s						
ATCC	AVT- Casa Cast	0.40	299	⇑P	Pb	01 15 20.5	-0.6
ATCC				AML	AML		
	comp=E,124µm,0.3s						
ATCC				AML	AML		
	comp=N,94µm,0.3s						
ATCC				AML	AML		
	comp=E,124µm,1.7s						
ATCC				AML	AML		
	comp=N,94µm,1.7s						
FOSV	Fossato di Vic	0.40	320	⇓P	Pg	01 15 20.2	+0.4
FOSV				AML	AML		
	comp=E,50µm,1.6s						
FOSV				AML	AML		
	comp=N,59µm,0.3s						
MURB	Monte Urbino	0.51	302	⇓P	Pb	01 15 23.0	-0.1

ROM 19 01:15:40.4±0.1, 42°.865N±0°.003×13°.092E±0°.004, h11^{km}, ML1.1/7, Error ellipse: s-maj=0.3km s-min=0.1km az=272.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1216	Preci, Frazion	0.06	296	P	Pg	01 15 43.0	+0.2
T1216				S	Sg	01 15 44.7	+0.2
T1216				AML	AML		
	comp=E,466µm,0.5s						
T1216				AML	AML		
	comp=N,424µm,0.2s						
T1216				AML	AML		
	comp=E,466µm,0.5s						
T1216				AML	AML		
	comp=N,424µm,0.2s						
T1216				AML	AML		
	comp=N,424µm,1.8s						
T1216				AML	AML		
	comp=E,466µm,1.5s						
T1245	Castelsantange	0.07	97	P	Pg	01 15 43.2	+0.2
T1245				S	Sg	01 15 45.2	+0.2
T1245				AML	AML		
	comp=E,195µm,0.1s						
MC2	Monte Cornacci	0.09	57	P	Pg	01 15 43.5	+0.3
MC2				S	Sg	01 15 45.8	+0.4
FEMA	Monte Fema	0.10	342	P	Pg	01 15 43.8	+0.4
FEMA				S	Sg	01 15 46.0	+0.5
T1212	Cascia, Frazio	0.12	197	P	Pg	01 15 43.9	+0.4
T1212				S	Sg	01 15 46.3	+0.6
T1212				AML	AML		
	comp=E,92µm,0.2s						
T1214	Arquata del Tr	0.14	141	P	Pg	01 15 44.1	+0.3
T1214				S	Sg	01 15 46.7	+0.4
T1214				AML	AML		
	comp=E,111µm,0.0s						
FDMO	Fiordimonte	0.17	359	P	Pg	01 15 44.9	+0.6
FDMO				S	Sg	01 15 47.6	+0.6
FDMO				AML	AML		
	comp=N,52µm,0.2s						
MMO1	Montemonaco	0.18	79	P	Pg	01 15 44.8	+0.4
MMO1				S	Sg	01 15 47.7	+0.6
T1217	Poggiodomo (PG	0.19	218	P	Pb	01 15 45.6	-0.5
T1217				S	Sg	01 15 48.4	+0.8
CESI	CESI - Serrava	0.20	316	P	Pg	01 15 45.2	+0.5
CESI				S	Sg	01 15 48.6	+0.9
CESI				AML	AML		
	comp=N,46µm,0.1s						
T1218	Civita (PG)	0.20	175	P	Pb	01 15 45.5	-0.6
T1218				S	Sg	01 15 48.4	+0.8
T1220	Camerino, Fraz	0.24	360	P	Pg	01 15 46.2	+0.6
T1220				S	Sg	01 15 50.2	+1.2
T1241	Roccafluvione,	0.25	92	P	Pg	01 15 46.0	+0.4
T1241				S	Sg	01 15 50.3	+1.2
T1241				AML	AML		
	comp=E,63µm,0.3s						

AUST ***19*** *01:38:41.5±9.0, 38°.08S×140°.80E, h10^{km}, Error ellipse: s-maj=101.8km s-min=24.6km az=161.0*

IDC ***19*** *01:38:49.8±7.6, 37°.30S×139°.79E, h0^{km}, mbtmp3.1/3, ML3.1/3, Error ellipse: s-maj=92.1km s-min=45.8km az=127.0*

ISC 19 01:38:43.8±3.0, 37°.8S±0°.2×140°.62E±0°.09, h10^{km}, n7, σ2^{s}89/10, Near coast of South Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARPS	Mount Arapiles	1.41	44	P	Pn	01 39 09.0	-0.4
	baz=1.5,SNR=311						
ARPS				S	Sg	01 39 29.9	+0.9
	baz=1.5						
HTT	Hallett	4.56	342	P	Pn	01 39 55.8	+3.0
	baz=4.9,SNR=3.8						
STKA	Stephens Creek	5.95	8	Pn	Pn	01 40 13.8	+1.9
	0.6nm,0.3s,baz=188,slow=14,SNR=6.8						
STKA				Sn	Sn	01 41 21.1	+1.0
	0.9nm,0.3s,baz=180,slow=10,SNR=5.9						
STKA				Lg	Lg	01 41 47.3	
	0.9nm,0.3s,baz=106,slow=21,SNR=2.0						
	1.3nm,0.3s						
STKA	Stephens Creek	5.95	8	P	Pn	01 40 14.1	+2.2
	baz=6.2,SNR=4.3						
BBOO	Buckleboo	6.20	322	P	Pn	01 40 16.9	+1.5
	baz=6.5,SNR=5.5						
ASAR	Alice Springs	15.20	336	Pn	Pn	01 42 17.3	-1.3
	0.1nm,0.3s,baz=168,slow=10,SNR=5.4						
ASAR				Sn	Sn	01 45 01.1	-5.9
	baz=165,slow=22,SNR=2.1						
	0.2nm,0.7s						
WRA	Warramunga Arr	18.60	341	P	P	01 43 00.8	-0.3
	baz=177,slow=12,SNR=2.3						
	0.5nm,0.8s						

IDC ***19*** *01:55:36.0±0.9, 21°.36S×67°.49W, h150^{km}±12^{km}, mb3.4/2, mbtmp3.9/5, Error ellipse: s-maj=25.7km s-min=11.1km az=115.0*

NEIC ***19*** *01:55:36.1±2.2, 21°.36S±0°.04×68°.0W±0°.1, h195^{km}±12^{km}, mb4.1/4, ML3.8(GUC), Error ellipse: s-maj=17.9km s-min=6.3km az=92.0*

SJA ***19*** *01:55:37.4±1.1, 21°.30S×67°.81W, h150^{km}, ML3.8, MW3.7, Hypocentre not reviewed by the ISC*

SCB ***19*** *01:55:37.5±1.4, 21°.37S×67°.89W, h161^{km}±15^{km}, ML3.9/3, MW3.3, Error ellipse: s-maj=5.7km s-min=4.2km az=1.0*

GUC ***19*** *01:55:37.8±0.6, 21°.32S×68°.06W, h189^{km}±5^{km}, ML3.8*

ISC 19 01:55:35.5±0.7, 21°.34S±0°.04×67°.86W±0°.06, h180^{km}±7^{km}, n81, σ1^{s}67/117, 15C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	1.36	250		Pn	01 56 07.8	+1.4
PB09				Sn	Sn	01 56 31.2	+0.9
PB09	IPOC Station P	1.36	250	⇑eP	Pn	01 56 07.8	+1.4
PB09				eS	Sn	01 56 31.3	+0.9
PB09				IAML		01 56 32.1	
	comp=N,308nm,0.4s						
PB09	IPOC Station P	1.36	250	Pg	Pn	01 56 07.8	+1.4
PB09	IPOC Station P	1.36	250	eP		01 56 07.9	
PB09				eS		01 56 31.4	
PB01	IPOC Station P	1.54	281	Pn	Pn	01 56 08.8	+0.7
PB01				Sn	Sn	01 56 32.7	-0.5
PB01	IPOC Station P	1.54	281	⇑eP	Pn	01 56 08.2	+0.2
PB01				eS	Sn	01 56 32.4	-0.8
PB01				IAML		01 56 33.8	
	comp=N,744nm,0.2s						
PB01	IPOC Station P	1.54	281	Pg	Pn	01 56 08.8	+0.7
PB01				Sg	Sn	01 56 32.9	-0.3
PB01				IAML		01 56 33.8	
	comp=N,762nm,0.2s						
PB01	IPOC Station P	1.54	281	eP		01 56 08.7	
PB01				eS		01 56 32.9	
PB01				IAML		01 56 36.1	
	comp=Z,510nm,0.1s						
LVC	Limon Verde	1.59	217	P	Pn	01 56 09.9	+1.1
	comp=Z,74nm,0.2s,baz=30,slow=8.2,SNR=372						
LVC				S	Sn	01 56 34.9	+0.3
	comp=Z,34nm,0.3s,baz=211,slow=19,SNR=33						
LVC	Limon Verde	1.59	217	⇑eP	Pn	01 56 09.8	+1.1
LVC				eS	Sn	01 56 34.1	-0.5
LVC	Limon Verde	1.59	217	Pg	Pn	01 56 09.9	+1.1
LVC	Limon Verde	1.59	217	eP		01 56 09.9	
LVC				eS		01 56 34.2	
PB08	IPOC Station P	1.70	314	Pn	Pn	01 56 11.2	+1.3
PB08				Sn	Sn	01 56 36.6	+0.1
PB08	IPOC Station P	1.70	314	⇑eP	Pn	01 56 11.1	+1.2
PB08				eS	Sn	01 56 36.6	+0.1
PB08				IAML		01 56 37.9	
	comp=N,304nm,0.2s						
PB08	IPOC Station P	1.70	314	Pg	Pn	01 56 11.2	+1.2
PB08	IPOC Station P	1.70	314	eP		01 56 11.3	
PB08				eS		01 56 37.4	
PB03	IPOC Station P	1.89	248		Pn	01 56 12.4	+0.8
PB03				Sn	Sn	01 56 38.9	-0.8
PB03	IPOC Station P	1.89	248	⇑eP	Pn	01 56 12.7	+1.0
PB03				eS	Sn	01 56 39.0	-0.7
PB03				IAML		01 56 40.0	
	comp=E,570nm,0.2s						
PB03	IPOC Station P	1.89	248	Pg	Pn	01 56 12.8	+1.1
PB03	IPOC Station P	1.89	248	eP		01 56 12.8	
PB03				eS		01 56 39.4	
PB03				IAML		01 56 40.2	
	comp=Z,426nm,0.2s						
PB02	IPOC Station P	1.90	270		Pn	01 56 12.2	+0.5
PB02				Sn	Sn	01 56 39.1	-0.5
PB02	IPOC Station P	1.90	270	⇑eP	Pn	01 56 12.1	+0.5
PB02				eS	Sn	01 56 38.1	-1.4
PB02				IAML		01 56 40.4	
	comp=E,1µm,0.4s						
PB02	IPOC Station P	1.90	270	Pg	Pn	01 56 12.4	+0.8
PB02				Sg	Sn	01 56 38.9	-0.7
PB02				IAML		01 56 40.4	
	comp=E,912nm,0.3s						
PB02	IPOC Station P	1.90	270	eP		01 56 12.6	
PB02				eS		01 56 39.0	
PB02				IAML		01 56 41.0	
	comp=Z,906nm,0.2s						
PB07	IPOC Station P	1.92	258	Pn	Pn	01 56 12.9	+0.9
PB07				Sn	Sn	01 56 39.3	-0.9
PB07	IPOC Station P	1.92	258	⇑eP	Pn	01 56 13.0	+0.9
PB07				eS	Sn	01 56 39.0	-1.2
PB07				IAML		01 56 40.7	
	comp=E,937nm,0.3s						
PB07	IPOC Station P	1.92	258	Pg	Pn	01 56 12.9	+0.9
PB07				Sg	Sn	01 56 39.3	-0.9
PB07				IAML		01 56 39.7	
	comp=E,408nm,0.2s						
PB07	IPOC Station P	1.92	258	eP		01 56 12.9	
PB07				eS		01 56 39.4	
PB07				IAML		01 56 41.3	
	comp=Z,343nm,0.3s						
MOCB	Mochara	2.08	88	Pg	Pn	01 56 15.1	+1.2
GO01	Chusmiza	2.08	323	Pn	Pn	01 56 14.9	+0.9
GO01				Sn	Sn	01 56 45.5	+1.6
PB06	IPOC Station P	2.09	229	Pn	Pn	01 56 14.7	+1.0
PB06				Sn	Sn	01 56 43.1	-0.3
PB06	IPOC Station P	2.09	229	⇑eP	Pn	01 56 14.8	+1.0
PB06				eS	Sn	01 56 42.9	-0.5
PB06				IAML		01 56 44.5	
	comp=E,296nm,0.2s						
PB06	IPOC Station P	2.09	229	Pg	Pn	01 56 14.9	+1.2
PB06	IPOC Station P	2.09	229	eP		01 56 15.0	
PB06				eS		01 56 43.8	
TA01	Diego Aracena	2.30	289	Pn	Pn	01 56 16.2	+0.3
TA01				Sn	Sn	01 56 45.6	-1.7
TA01	Diego Aracena	2.30	289	⇑eP	Pn	01 56 16.2	+0.3
TA01				eS	Sn	01 56 44.7	-2.7
TA01				IAML		01 56 47.8	
	comp=E,486nm,0.3s						
TA01	Diego Aracena	2.30	289	Pg	Pn	01 56 16.6	+0.6
TA01	Diego Aracena	2.30	289	eP		01 56 16.3	
TA01				eS		01 56 45.7	
PB11	IPOC Station P	2.30	313	Pn	Pn	01 56 16.7	+0.5
PB11				Sn	Sn	01 56 46.6	-1.1
PB11	IPOC Station P	2.30	313	⇑eP	Pn	01 56 16.7	+0.5
PB11				eS	Sn	01 56 46.5	-1.3
PB11				IAML		01 56 48.5	
	comp=E,591nm,0.1s						
PB11	IPOC Station P	2.30	313	eP		01 56 16.7	
PB11				eS		01 56 46.8	
PB11				IAML		01 56 49.3	
	comp=Z,205nm,0.2s						
YJA	Yavi	2.33	111	Pg	Pn	01 56 18.3	+1.5
YJA	Yavi	2.33	111	eP		01 56 18.5	
YJA				eS		01 56 40.1	
PB04	IPOC Station P	2.34	245	Pn	Pn	01 56 17.0	+0.4
PB04				Sn	Sn	01 56 48.2	-0.3
PB04	IPOC Station P	2.34	245	⇑eP	Pn	01 56 17.1	+0.4
PB04				eS	Sn	01 56 47.2	-1.3
PB04				IAML		01 56 50.4	
	comp=E,382nm,0.1s						
PB04	IPOC Station P	2.34	245	Pg	Pn	01 56 17.6	+1.0
PB04	IPOC Station P	2.34	245	eP		01 56 17.5	
PB04				eS		01 56 47.7	
PB04				IAML		01 56 50.4	
	comp=Z,260nm,0.1s						
TA02	Huaiquique	2.38	296	Pn	Pn	01 56 17.0	+0.2
TA02				Sn	Sn	01 56 47.0	-1.9
TA02	Huaiquique	2.38	296	⇑eP	Pn	01 56 16.3	-0.5
TA02				eS	Sn	01 56 46.3	-2.6
TA02				IAML		01 56 48.6	
	comp=N,942nm,0.1s						
TA02	Huaiquique	2.38	296	Pg	Pn	01 56 17.4	+0.6
TA02	Huaiquique	2.38	296	eP		01 56 17.4	
TA02				eS		01 56 48.4	
TA02				IAML		01 56 51.6	
	comp=Z,420nm,0.1s						
PB15	IPOC Station P	2.38	218		Pn	01 56 18.5	+1.5
PB15				Sn	Sn	01 56 49.3	-0.1
PB15	IPOC Station P	2.38	218	⇑eP	Pn	01 56 18.6	+1.5
PB15				eS	Sn	01 56 50.0	+0.5
PB15	IPOC Station P	2.38	218	eP		01 56 18.6	
PB15				eS		01 56 50.4	
PB15				IAML		01 56 55.2	
	comp=Z,467nm,0.2s						
MNMC	Minye Minye	2.74	323	Pn	Pn	01 56 22.1	+0.7
MNMC	Minye Minye	2.74	323	⇑eP	Pn	01 56 22.5	+1.1
MNMC				eS	Sn	01 56 56.3	-0.7
MNMC				IAML		01 56 58.4	
	comp=N,600nm,0.1s						
MNMCX	Minye Minye	2.74	323	eP		01 56 22.5	
MNMCX				eS		01 56 56.5	
MNMCX				IAML		01 56 58.5	
	comp=Z,300nm,0.2s						
HJA	Humahuaca	2.93	130	eP		01 56 25.9	
HJA				eS		01 57 02.9	
PB10	IPOC Station P	3.30	229	Pn	Pn	01 56 28.1	+0.2
PB10	IPOC Station P	3.30	229	eP		01 56 28.6	
PB10				eS		01 57 06.1	
PB16	IPOC Station P	3.37	332	Pn	Pn	01 56 29.8	+0.4
PB16	IPOC Station P	3.37	332	eP	Pn	01 56 30.8	+1.4
PB16				eS	Sn	01 57 11.2	-0.1
PB16				IAML		01 57 12.9	
	comp=N,57nm,0.5s						
PB16	IPOC Station P	3.37	332	eP		01 56 31.0	
PB12	IPOC Station P	3.57	319	Pn	Pn	01 56 30.9	-0.5
PB12	IPOC Station P	3.57	319	⇑eP	Pn	01 56 30.7	-0.7
PB12				eS	Sn	01 57 11.2	-3.7
PB12				IAML		01 57 16.9	
	comp=E,92nm,0.6s						
SOET	ToroToro	3.75	31	Pg	Pn	01 56 35.3	+1.4
SLA	San Lorenzo	4.00	148	Pg	Pn	01 56 39.3	+2.5
PB14	IPOC Station P	4.02	215	Pn	Pn	01 56 37.2	0.0
PB18	Visviri	4.03	338		Pn	01 56 39.5	+1.8
GO02	Mina Guanaco	4.12	202	Pn	Pn	01 56 39.4	+0.9
GO02	Mina Guanaco	4.12	202	Pg	Pn	01 56 39.5	+1.0
SOEJ	Jacaque	4.36	356	Pg	Pn	01 56 44.9	+3.1
BBOE	La Paz, Chanca	4.51	359	Pg	Pn	01 56 46.9	+3.1
BBOD	La Paz, Gloria	4.73	351	Pg	Pn	01 56 48.8	+2.2
LPAZ	La Paz	5.04	357	P	Pn	01 56 52.7	+2.1
	comp=E,6.5nm,0.4s,baz=166,slow=5.8,SNR=34						
LPAZ				S	Sn	01 57 49.7	+0.2
	comp=E,2.1nm,0.6s,baz=346,slow=16,SNR=1.3						
LPAZ	La Paz	5.04	357	Pn	Pn	01 56 52.4	+1.8
LPAZ	La Paz	5.04	357	Pg	Pn	01 56 52.8	+2.1
AC01	Pan de Azucar	5.40	207	eP		01 56 54.6	
AC01				eS		01 57 54.0	
AC01	Pan de Azucar	5.40	207		Pn	01 56 54.5	-0.2
AC02	Maricunga	5.59	192		Pn	01 56 58.5	+0.9
GO03	Copiap	6.59	199	Pn	Pn	01 57 09.3	-1.0
AC04	Llanos de Chal	7.43	202	Pn	Pn	01 57 19.2	-2.1
AC05	El Transito	7.77	196		Pn	01 57 24.8	-1.2
LCO	Las Campanas	8.06	198	Pn	Pn	01 57 27.9	-1.9
SIV	San Ignacio	8.35	52	P	Pn	01 57 31.4	-2.1
	comp=E,4.1nm,0.4s,baz=247,slow=13,SNR=25						
SIV				S	Sn	01 58 58.6	-8.6
	comp=E,1.1nm,0.5s,baz=150,slow=22,SNR=1.8						
CO01	Juntas del Tor	8.83	193	Pn	Pn	01 57 40.4	+0.4
GO04	Tololo Observa	9.18	196	Pn	Pn	01 57 42.5	-2.1
CO03	El Pedregal	9.79	194	Pn	Pn	01 57 50.5	-1.9
PTLB	Pontes e Lacer	10.15	56	Pn	Pn	01 57 57.1	0.0
CO02	Combarbal	10.21	195	Pn	Pn	01 57 55.3	-2.7
CFA	Coronel Fontan	10.23	182	P	Pn	01 57 58.9	+0.9
	comp=E,1.3nm,0.3s,baz=354,slow=14,SNR=1.8						
CFA				S	Sn	01 59 46.3	-5.5
	comp=E,0.6nm,0.4s,baz=260,slow=20,SNR=2.0						
CPUP	Villa Florida	10.84	119	Pn	Pn	01 58 05.9	-0.1
ITAB	Concordia	15.49	115		Pn	01 59 04.6	0.0
PLTB	Pedras Altas	16.43	132	P	Pn	01 59 16.4	+0.5
PLTB				IAmb	IAmb	01 59 30.7	
	comp=Z,14nm,1.4s						
TRQA	Tornquist	17.41	164	P	P	01 59 24.8	-1.5
TRQA				IAmb	IAmb	01 59 39.3	
	comp=Z,9.2nm,1.4s						
GO06	Curarrehue	18.44	189	P	P	01 59 34.9	-2.6
TORD	Torodi Ar. Bea	76.39	70	P	P	02 07 08.0	+2.5
	comp=Z,0.4nm,0.6s,baz=252,slow=5.8,SNR=4.3						
	comp=Z,0.4nm,0.6s						
YKA	Yellowknife Ar	91.37	340	P	P	02 08 24.1	+3.8
	comp=Z,0.4nm,0.5s,baz=135,slow=4.6,SNR=9.8						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	144.93	37	PKP	PKiKP	02 14 54.4	-0.6
	comp=Z,0.4nm,0.5s,baz=323,slow=2.1,SNR=7.8						
PZH	PanZhiHua	169.20	60	PKP	PKPdf	02 15 19.9	-1.9

DJA 19 01:59:45.9±0.5, 7°S±4°×12°9E±°, h103^{km}±25^{km}, M4.3/3, mb4.2/3, MLv4.4/1, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	5.11	33	P	Pn	02 01 02.7	+2.6
FAKI				S	Sn	02 01 58.4	+0.5
SOEI	Soe	5.73	244	P	Pn	02 01 09.8	+1.0
	33nm,0.8s,0.2nm						
SOEI				S	Sn	02 02 13.1	-0.2
	33nm,0.8s,0.2nm						

IDC 19 02:06:35.0±6.1, 29°.47S×179°.38W, h0^{km}, mb3.3/2, mbtmp3.3/2, Error ellipse: s-maj=336.7km s-min=88.1km az=166.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	41.97	267	P	P	02 14 28.0	0.0
	0.4nm,0.9s,baz=102,slow=8.0,SNR=2.1						
	0.4nm,0.9s						
WRA	Warramunga Arr	42.87	272	P	P	02 14 35.0	-0.3
	0.5nm,1.0s,baz=110,slow=8.1,SNR=5.2						
	0.5nm,1.0s						
FINES	FINESS Array B	143.86	340	PKP	PKPdf	02 26 11.0	-0.5
	2.0nm,1.1s,baz=54,slow=3.6,SNR=5.3						

IDC ***19*** *02:09:27.1±4.6, 1°.10S×97°.61E, h0^{km}, mb3.4/5, mbtmp3.4/5, Error ellipse: s-maj=194.9km s-min=24.8km az=56.0*

ISC 19 02:09:28.5±3.2, 1°.1S±0°.5×97°.6E±0°.8, h10^{km}, n12, σ0^{s}30/6, mb3.3/5, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	Diego Garcia H	25.89	255	T	T	02 42 17.9	
	baz=76,slow=76,SNR=21						
H08S3	Diego Garcia H	25.89	255	T	T	02 42 12.2	
	baz=76,slow=76,SNR=25						
H08S1	Diego Carcia H	25.90	255	T	T	02 42 15.0	
	baz=76,slow=76,SNR=25						
H01W3	Cape Leeuwin H	36.98	157	T	T	02 55 54.7	
	baz=333						
H01W2	Cape Leeuwin H	37.00	157	T	T	02 55 57.1	
	baz=333						
H01W1	Cape Leeuwin H	37.00	157	T	T	02 56 00.9	
	baz=333						
WRA	Warramunga Arr	40.50	120	P	P	02 17 07.8	-0.2
	0.3nm,0.7s,baz=300,slow=9.0,SNR=4.6						
	0.3nm,0.7s						
ASAR	Alice Springs	41.70	125	P	P	02 17 18.1	+0.1
	0.6nm,1.0s,baz=301,slow=7.5,SNR=2.8						
	0.6nm,1.0s						
SONM	Songino Array	49.32	8	P	P	02 18 18.2	+0.2
	0.3nm,0.9s,baz=201,slow=7.7,SNR=1.5						
	0.3nm,0.9s						
MKAR	Makanchi Array	49.55	346	P	P	02 18 19.4	-0.2
	0.2nm,0.4s,baz=152,slow=8.6,SNR=5.0						
	0.2nm,0.4s						
ZALV	Zalesovo Beam	55.87	351	P	P	02 19 06.0	-0.2
	0.3nm,0.2s,baz=162,slow=7.3,SNR=1.8						
	0.3nm,0.2s						
TXAR	Lajitas Array	145.34	34	PKPbc	PKPdf	02 29 07.9	+0.2
	0.2nm,0.7s,baz=264,slow=0.8,SNR=2.0						

GCG ***19*** *02:29:46.2±1.3, 13°.96N×91°.86W, h71^{km}±35^{km}, MD3.9*

IDC ***19*** *02:29:46.6±9.1, 14°.68N×91°.72W, h52^{km}±69^{km}, mb3.1/2, mbtmp3.3/4, ML3.3/2, MS3.2/1, Error ellipse: s-maj=143.1km s-min=57.9km az=34.0*

ISC 19 02:29:42.3±2.0, 13°.9N±0°.2×92°.20W±0°.06, h50^{km}, n10, σ1^{s}63/13, 1C, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SULM	Suchitepequez,	0.76	54	eP	Pn	02 29 58.4	+1.6
STG3	Santiaguito 3,	1.05	36	⇑eP	Pn	02 29 59.7	-1.1
STG3				eS	Sn	02 30 17.0	+2.5
FUG	Fuego 3	1.45	66	eP	Pn	02 30 06.2	0.0
PCG	Pacaya	1.64	71	eP	Pn	02 30 09.6	+0.7
PCG				eS	Sn	02 30 26.8	-2.2
NBG	Las Nubes	1.94	68	eP	Pn	02 30 14.6	+1.5
NBG				eS	Sn	02 30 34.8	-1.6
CMIG	Matias Romero	4.13	322	P	Pn	02 30 43.6	+0.8
	1.7nm,0.3s,baz=134,slow=12,SNR=13						
CMIG				S	Sn	02 31 28.2	-1.6
	14nm,0.3s,baz=125,slow=8.1,SNR=6.7						
	5.0nm,0.3s						
TXAR	Lajitas Array	18.71	327	P	Pn	02 33 58.2	+0.6
	baz=152,slow=11,SNR=4.2						
	0.4nm,0.8s						
NVAR	Mina Array Bea	33.66	321	P	P	02 36 19.7	+1.0
	0.6nm,0.7s,baz=139,slow=8.4,SNR=5.2						
	0.6nm,0.7s						
SCHQ	Schefferville	45.42	20	LR	LR	02 58 46.1	
	comp=Z,24nm,18.3s,baz=126,slow=39						
YKA	Yellowknife Ar	51.12	347	P	P	02 38 38.3	-1.5
	0.1nm,0.5s,baz=135,slow=8.9,SNR=5.3						
	0.1nm,0.5s						

JMA ***19*** *03:05:11.4±0.4, 47°N±1°×14°2E±°, h36^{km}, MV2.5/10, SOUTH SAKHALIN*

SKHL ***19*** *03:05:11.4±0.4, 46°.45N×141°.96E, h10^{km}, mb3.8/3*

ISC 19 03:05:11.7±1.3, 46°.58N±0°.06×141°.8E±0°.1, h26^{km}±8^{km}, n5, σ0^{s}39/9, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEVR	Nevel`sk	0.11	30	ePg	Pb	03 05 16.5	-0.1
NEVR				eSg	Sb	03 05 20.0	+0.1
NEVR				A	A	03 05 20.1	
	3µm,0.3s						
NEVR				A	A	03 05 20.1	
	2µm,0.3s						
KHLM	Kholmsk	0.51	22	i Pg	Pn	03 05 23.2	-0.1
KHLM				AMB	AMB	03 05 23.7	
	40nm,0.2s						
KHLM				eSg	Sn	03 05 31.4	+0.2
KHLM				A	A	03 05 32.8	
	780nm,0.3s						
KHLM				A	A	03 05 32.8	
	590nm,0.3s						
YSS	Yuzh-Sakhalins	0.77	61	ePg	Pb	03 05 26.4	-0.1
YSS				AMB	AMB	03 05 26.8	
	10.0nm,0.3s						
YSS				eSg	Sb	03 05 36.5	0.0
YSS				A	A	03 05 37.1	
	200nm,0.4s						
YSS				A	A	03 05 37.1	
	130nm,0.4s						

JRBN	Rebuntou	1.26	203	*e*P	Pn	03 05 33.6	+0.1
JWK2	Keihoku	1.27	176	*e*P	Pb	03 05 34.4	-0.5
JWK2				*e*S	Sb	03 05 51.4	+0.7

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*NOU **19** 03:18:01.3, 24°.08S × 179°.31W, h508^{km}, mb4.7/35, South of Fiji Islands*

*NEIC **19** 03:18:02.8±1.7, 24°.07S±0°.10 × 179°.7W±0°.1, h483^{km}±8^{km}, mb4.5/52, Error ellipse: s-maj=16.3km s-min=12.5km az=131.0*

*IDC **19** 03:18:02.3±1.1, 23°.96S × 179°.77W, h482^{km}±10^{km}, mb3.8/14, mbtmp4.6/16, Error ellipse: s-maj=14.2km s-min=12.8km az=119.0*

ISC 19 03:18:03.3±0.3, **24°.09S**±0°.05 × **179°.71W**±0°.06, **h500**^{km}, **n145**, σ**1^{s}.48**/159, **mb4.5**/42, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.39	163	P	P	03 19 34.4	+0.7
	2µm,0.2s,baz=81,slow=6.0,SNR=51						
RAO				S	S	03 20 44.3	-3.4
	666nm,0.3s,baz=75,slow=23,SNR=2.9						
RAO	Raoul Island	5.39	163	P	P	03 19 32.0	-1.8
MSVF	Nonsavu	6.66	341	P	P	03 19 44.3	-1.9
	7.6nm,0.5s,baz=91,slow=21,SNR=12						
TAVE	Taveuni	7.34	359	P	P	03 19 52.4	-0.7
YSA	Yasawairara	7.78	340	P	P	03 19 56.6	-0.9
FUTU	Fugatoga	9.84	9	P	P	03 20 18.1	-1.0
NIUE	Niue	10.38	63	P	P	03 20 23.6	-1.1
NIUE				S	S	03 22 21.1	-0.1
PINNC	Pines Island,	11.89	275	P	P	03 20 40.0	-0.7
PINNC	Pines Island,	11.89	275	P	P	03 20 41.9	+1.2
OUENC	Ouen Island, N	12.47	275	P	P	03 20 46.5	-0.4
OUENC	Ouen Island, N	12.47	275	P	P	03 20 48.2	+1.3
LIFNC	LIFOU	12.51	283	P	P	03 20 46.5	-0.8
AFI	Afiamalu	12.60	38	P	P	03 20 43.1	-5.3
	65nm,0.4s,baz=27,slow=9.3,SNR=18						
AFI				S	S	03 22 49.8	-15
	19nm,0.5s,baz=51,slow=20,SNR=2.3						
ONTNC	Ouen Toro	12.84	275	P	P	03 20 49.1	-1.8
DZM	Mont Dzumac	12.90	276	P	P	03 20 51.5	-0.1
	16nm,0.8s,baz=204,slow=23,SNR=13						
DZM	Mont Dzumac	12.90	276	P	P	03 20 49.4	-2.2
MXZ	Matakaoa Point	13.54	187	P	P	03 20 56.1	-1.9
MXZ				S	S	03 23 21.1	-1.0
HAZ	Te Kaha	13.79	188	P	P	03 20 58.9	-1.7
HAZ				S	S	03 23 30.5	+3.6
PKGZ	Pakihiroa	13.89	187	P	P	03 21 00.2	-1.5
RUGZ	Raukumara Rang	14.01	189	P	P	03 21 02.0	-1.2
TGRZ	Tauranga	14.03	193	P	P	03 21 05.1	+1.9
PUZ	Puketiti	14.05	187	P	P	03 21 04.2	+0.9
PUZ				S	S	03 23 26.0	-5.9
TWGZ	Tauwhareparae	14.18	187	P	P	03 21 04.3	-0.5
TOZ	Tahuroa Road	14.20	196	P	P	03 21 05.1	+0.2
URZ	Urewera	14.39	190	P	P	03 21 03.7	-3.2
	17nm,0.4s,baz=59,slow=2.3,SNR=22						
URZ				S	S	03 23 31.8	-6.5
	11nm,0.8s,baz=172,slow=21,SNR=1.6						
URZ	Urewera	14.39	190	P	P	03 21 04.7	-2.1
URZ	Urewera	14.39	190	P	P	03 21 04.8	-2.1
URZ				S	S	03 23 32.7	-5.5
MWZ	Matawai	14.40	189	P	P	03 21 06.2	-0.8
TKGZ	Te Karaka	14.46	188	P	P	03 21 06.5	-1.2
CNGZ	Carnagh Statio	14.46	187	P	P	03 21 08.3	+0.6
CNGZ				S	S	03 23 45.4	+5.7
KOUNC	Koumac, New Ca	15.22	280	P	P	03 21 14.1	-1.8
KOUNC				IAmb	IAmb	03 21 29.3	
	comp=Z,28nm,1.2s						
BFZ	Birch Farm	16.89	191	P	P	03 21 31.1	-1.9
BFZ				IAmb	IAmb	03 21 46.9	
	comp=Z,22nm,1.1s						
QRZ	Quartz Range	17.91	199	P	P	03 21 42.1	-0.6
TKNZ	Takaka Hill	17.98	198	P	P	03 21 43.5	+0.2
LTZ	Lake Taylor	19.79	198	P	P	03 21 59.1	-0.8
LTZ				IAmb	IAmb	03 22 18.3	
	comp=Z,9.3nm,0.7s						
RPZ	Rata Peaks	21.00	199	P	P	03 22 10.3	-0.5
	comp=Z,6.2nm,0.4s,baz=13,slow=4.8,SNR=9.9						
	comp=Z,6.2nm,0.4s						
WHZ	Wether Hill Ro	23.93	202	P	P	03 22 37.9	+0.8
WHZ				IAmb	IAmb	03 22 56.9	
	comp=Z,24nm,1.3s						
ARMA	Armidale	26.20	250	P	P	03 22 56.4	-1.2
ARMA				IAmb	IAmb	03 22 59.9	
	comp=Z,12nm,0.7s						
EIDS	Eidsvold	26.54	261	P	P	03 23 00.9	+0.5
EIDS				IAmb	IAmb	03 23 01.7	
	comp=Z,13nm,0.6s						
EIDS	Eidsvold	26.54	261	P	P	03 23 01.0	+0.5
RMQ	Roma	28.57	258	P	P	03 23 19.6	+1.3
CAN	Canberra	29.28	240	P	P	03 23 25.4	+1.0
CAN				IAmb	IAmb	03 23 30.6	
	comp=Z,40nm,1.5s						
AULRC	Lightning Ridg	29.28	252	P	P	03 23 25.5	+1.1
CMSA	Cobar Meteorol	31.39	249	P	P	03 23 43.1	+0.4
CTAO	Charters Tower	31.74	270	P	P	03 23 46.4	+0.5
CTAO	Charters Tower	31.74	270	P	P	03 23 46.2	+0.4
TOO	Toolangi	32.57	237	P	P	03 23 53.6	+0.9
TOO				IAmb	IAmb	03 23 54.4	
	comp=Z,7.1nm,0.7s						
QLP	Quilpie	32.61	258	P	P	03 23 53.5	+0.3
TAU	Tasmania Unive	33.00	227	P	P	03 23 56.3	+0.1
BRAT	Ballarat	33.77	238	P	P	03 24 04.3	+1.5
MTSU	Mount Surprise	34.01	273	P	P	03 24 05.4	+0.3
PMG	Port Moresby	34.80	289	P	P	03 24 11.2	-0.6
	comp=Z,45nm,0.7s,baz=100,slow=5.0,SNR=20						
	comp=Z,45nm,0.7s						
PMG	Port Moresby	34.80	289	P	P	03 24 11.4	-0.3
PMG	Port Moresby	34.80	289	P	P	03 24 11.8	0.0
PMG	Port Moresby	34.80	289	P	P	03 24 11.7	0.0
STKA	Stephens Creek	34.90	248	P	P	03 24 12.7	+0.3
	comp=Z,7.1nm,0.4s,baz=96,slow=10,SNR=34						
	comp=Z,7.1nm,0.4s						
STKA	Stephens Creek	34.90	248	P	P	03 24 12.8	+0.5
STKA	Stephens Creek	34.90	248	P	P	03 24 13.0	+0.6
ARPS	Mount Arapiles	35.25	240	P	P	03 24 15.7	+0.4
INKA	Innaminka	35.65	256	P	P	03 24 19.8	+1.1
COEN	Coen	36.40	279	P	P	03 24 25.2	+0.1
COEN				IAmb	IAmb	03 24 26.4	
	comp=Z,12nm,0.8s						
HTT	Hallett	37.24	246	P	P	03 24 31.8	0.0
QIS	Mount Isa	37.71	267	P	P	03 24 35.6	-0.2
LCRK	Leigh Creek	37.77	251	P	P	03 24 36.3	+0.2
WHYH	Whyalla	38.34	247	P	P	03 24 41.0	+0.2
	comp=Z,20nm,0.7s						
BBOO	Buckleboo	39.61	247	P	P	03 24 50.8	-0.3
BBOO				IAmb	IAmb	03 24 51.5	
	comp=Z,33nm,1.2s						
OOD	Oodnadatta	40.11	255	P	P	03 24 56.0	+0.8
MULG	Mulgathing	41.36	251	P	P	03 25 04.9	-0.3
AS01	Alice Springs	42.22	261	P	P	03 25 12.1	0.0
AS31	Alice Springs	42.26	261	P	P	03 25 12.4	-0.1
ASAR	Alice Springs	42.26	261	P	P	03 25 12.2	-0.2
	comp=Z,8.1nm,0.6s,baz=96,slow=7.2,SNR=182						
ASAR				ScP	ScP	03 30 01.2	+3.4
	comp=Z,1.9nm,0.9s,baz=105,slow=4.0,SNR=7.0						
	comp=Z,8.1nm,0.6s						
ASAR	Alice Springs	42.26	261	P	P	03 25 12.4	0.0
WB2	Warramunga Arr	42.64	266	P	P	03 25 14.9	-0.5
WB2				IAmb	IAmb	03 25 15.4	
	comp=Z,21nm,0.7s						
WRAB	Tennant Creek	42.65	266	P	P	03 25 14.6	-0.9
WB0	Warramunga Arr	42.65	267	P	P	03 25 15.1	-0.4
WRA	Warramunga Arr	42.66	266	P	P	03 25 14.8	-0.8
	comp=Z,20nm,0.6s,baz=97,slow=8.3,SNR=477						
WRA				ScP	ScP	03 30 03.6	+4.2
	comp=Z,2.0nm,1.0s,baz=97,slow=4.2,SNR=6.4						
	comp=Z,20nm,0.6s						
WRA	Warramunga Arr	42.66	266	P	P	03 25 14.8	-0.8
FORT	Forrest	46.49	250	P	P	03 25 44.5	-0.5
FORT	Forrest	46.49	250	P	P	03 25 44.4	-0.6
WRKA	Warakurna	47.05	258	P	P	03 25 49.1	-0.3
MTN	Manton Dam	47.73	274	P	P	03 25 53.7	-0.9
MTN				IAmb	IAmb	03 25 56.2	
	comp=Z,16nm,1.2s						
KNRA	Kununurra	48.95	270	P	P	03 26 03.5	-0.2
KNRA				IAmb	IAmb	03 26 04.2	
	comp=Z,23nm,0.8s						
KHLU	Kahalu`u	49.23	30	P	P	03 26 05.7	0.0
HMH	Humu‘ula Sheep	49.43	31	P	P	03 26 07.4	-0.1
HPAH	Hawaii Prepara	49.70	30	P	P	03 26 09.5	+0.4
MHA	Mahukona	49.74	30	P	P	03 26 10.3	+1.0
FAKI	Fak Fak	50.89	287	P	P	03 26 17.3	-0.6
FAKI				IAmb	IAmb	03 26 34.8	
	comp=Z,16nm,1.1s						
FAKI	Fak Fak	50.89	287	P	P	03 26 16.8	-1.2
	comp=Z,14nm,1.6s						
FITZ	Fitzroy Crossi	51.08	266	P	P	03 26 19.5	+0.2
FITZ	Fitzroy Crossi	51.08	266	P	P	03 26 19.1	-0.2
VNDA	Vanda	54.22	185	P	P	03 26 43.0	+2.2
	comp=Z,1.2nm,0.5s,baz=27,slow=6.8,SNR=11						
	comp=Z,1.2nm,0.5s						
VNDA	Vanda	54.22	185	P	P	03 26 43.1	+2.2
PSA00	Pilbara Seismi	55.39	260	P	P	03 26 49.1	-0.8
NWAO	Narrogin (SRO)	55.40	246	P	P	03 26 49.7	-0.2
NWAO				IAmb	IAmb	03 26 58.7	
	comp=Z,46nm,1.5s						
MBWA	Marble Bar	55.60	260	P	P	03 26 50.9	-0.6
MBWA				IAmb	IAmb	03 26 52.1	
	comp=Z,18nm,0.8s						
MORW	Morawa	57.06	250	P	P	03 27 01.4	-0.1
MORW				IAmb	IAmb	03 27 01.7	
	comp=Z,17nm,0.5s						
GIRL	Giralia	60.13	257	P	P	03 27 22.6	+0.3
PLAI	Plampang	61.39	273	P	P	03 27 30.3	-0.4
	comp=Z,34nm,0.9s						
TWSI	Taliwang, Sumb	62.24	273	P	P	03 27 36.0	-0.3
	comp=Z,14nm,0.9s						
TOLI2	Tolitoli	62.88	285	P	P	03 27 39.8	-0.6
TOLI2				IAmb	IAmb	03 27 40.5	
	comp=Z,11nm,0.9s						
MPSI	Mapaga	63.31	283	P	P	03 27 42.6	-0.6
	comp=Z,15nm,0.8s						
QSPA	South Pole Qui	66.00	180	P	P	03 28 01.5	+2.0
QSPA				IAmb	IAmb	03 28 02.4	
	comp=Z,9.8nm,0.9s						
UGM	Wanagama	68.37	271	P	P	03 28 14.2	-0.7
KPJI	Karang Pucung	70.05	271	P	P	03 28 24.6	-0.3
ADK	Adak	75.69	2	P	P	03 28 56.3	-0.2
BELA	Belgrano 2	76.22	173	P	P	03 28 59.4	+0.1
BELA				IAmb	IAmb	03 29 01.1	
	comp=Z,23nm,1.5s						
MAW	Mawson	77.67	200	P	P	03 29 08.4	+1.1
	comp=Z,28nm,0.9s,baz=280,slow=11,SNR=2.1						
	comp=Z,28nm,0.9s						
MAW	Mawson	77.67	200	P	P	03 29 08.6	+1.3
MAW				IAmb	IAmb	03 29 21.3	
	comp=Z,27nm,1.3s						
UNV	Unalaska Valle	78.44	8	P	P	03 29 10.9	-0.6
PEA0B	Petropavlovsk-	79.34	346	P	P	03 29 16.9	+0.5
PETK	Petropavlovsk-	79.34	346	P	P	03 29 16.1	-0.2
	comp=Z,6.2nm,0.9s,baz=122,slow=5.0,SNR=7.0						
	comp=Z,6.2nm,0.9s						
PETK	Petropavlovsk-	79.34	346	P	P	03 29 17.1	+0.7
NJ2	Nanjing	80.98	311	*e*P	P	03 29 26.1	+0.7
NJ2				pP	pP	03 31 13.3	+0.4
NJ2				sP	sP	03 32 04.3	+0.5
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,56nm,4.9s						
VTX	Valle De La Tr	82.35	51	P	P	03 29 32.2	-0.4
ELS	Elsinore Mount	82.49	48	P	P	03 29 33.7	+0.5
CMB	Columbia Colle	83.16	43	P	P	03 29 37.7	+1.3
YBH	Yreka Blue Hor	84.06	39	P	P	03 29 42.4	+1.5
	comp=Z,2.2nm,0.9s,baz=157,slow=5.1,SNR=3.6						
	comp=Z,2.2nm,0.9s						
SNAA	Sanae	84.48	179	P	P	03 29 43.1	+0.6
SNAA				IAmb	IAmb	03 29 57.0	
	comp=Z,8.4nm,1.2s						
NVAR	Mina Array Bea	84.70	44	P	P	03 29 45.0	+0.7
	comp=Z,0.9nm,0.7s,baz=221,slow=7.3,SNR=7.2						
	comp=Z,0.9nm,0.7s						
NVAR	Mina Array Bea	84.70	44	P	P	03 29 44.5	+0.1
WCT	Wildcat Mounta	84.83	46	P	P	03 29 46.4	+1.5
I03D	Drain, OR	84.96	37	P	P	03 29 46.5	+1.4
I03D				IAmb	IAmb	03 29 56.9	
	comp=Z,21nm,1.4s						
TUC	Tucson	86.42	52	P	P	03 29 54.1	+1.5
XAN	Xi'an	89.06	308	*e*P	P	03 30 03.0	-1.9
XAN				sP	sP	03 32 34.9	-10
XAN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
MFID	Camas Ranch	89.13	41	P	P	03 30 05.7	+0.6
CMAR	Chiang Mai Arr	89.84	290	P	P	03 30 09.7	+0.9
	comp=Z,1.2nm,0.2s,baz=148,slow=2.4,SNR=9.0						
	comp=Z,1.2nm,0.2s						
HVU	Hansel Valley	90.09	43	P	P	03 30 11.0	+1.4
TX31	Lajitas Ar. Si	90.31	58	P	P	03 30 11.7	+0.9
TX31				IAmb	IAmb	03 30 13.6	
	comp=Z,5.1nm,0.8s						
TXAR	Lajitas Array	90.31	58	P	P	03 30 11.8	+0.9
	comp=Z,1.4nm,0.7s,baz=213,slow=6.9,SNR=17						
	comp=Z,1.4nm,0.7s						
BSUT	Blindstream Ca	90.72	45	P	P	03 30 14.3	+1.5
BSUT				IAmb	IAmb	03 30 15.1	
	comp=Z,4.6nm,0.7s						
HHC	Hu-ho-hao-te	90.73	315	*e*P	P	03 30 12.4	-0.1
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,6.3s						
PZH	PanZhiHua	91.00	299	P	P	03 30 15.6	+1.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,120nm,6.3s						
BTO	Baotou	91.61	314	*e*P	P	03 30 16.8	+0.2
BTO				pP	pP	03 32 07.4	+0.5
BTO	Baotou	91.61	314	S	SKKSac	03 40 21.3	+1.8
BTO	Baotou	91.61	314	sS	sS	03 43 56.1	+4.2
ILAR	Eielson Array	92.15	13	P	P	03 30 17.1	-1.3
	comp=Z,0.4nm,0.6s,baz=226,slow=5.4,SNR=9.0						
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	92.64	44	P	P	03 30 20.3	-1.2
	comp=Z,0.6nm,0.7s,baz=201,slow=4.4,SNR=7.5						
	comp=Z,0.6nm,0.7s						
MKAR	Makanchi Array	112.47	313	PKiKP	PKiKP	03 35 41.4	-0.8
	comp=Z,0.2nm,0.6s,baz=107,slow=1.5,SNR=2.4						
FINES	FINESS Array B	138.70	342	PKhKP	PKPpre	03 36 21.5	
	comp=Z,3.6nm,1.1s,baz=79,slow=3.0,SNR=2.0						
FINES				PKP	PKiKP	03 36 32.5	-1.2
	comp=Z,1.6nm,0.9s,baz=48,slow=2.8,SNR=4.3						
FINES				SKPbc	SKiKP	03 39 20.4	-1.8
	comp=Z,4.7nm,1.0s,baz=46,slow=1.9,SNR=8.5						
AKASG	Malin Array Be	145.27	327	PKPbc	PKPbc	03 36 43.6	-0.7
	comp=Z,0.7nm,0.5s,baz=34,slow=4.2,SNR=5.7						
AKASG				SKPbc	SKiKP	03 39 36.6	+0.6
	comp=Z,0.3nm,0.4s,baz=35,slow=3.0,SNR=6.7						
GAZ	Gaziantep	145.87	301	PKPbc	PKPab	03 36 47.4	-1.0
BRTR	Keskin Array B	147.90	307	PKPbc	PKPbc	03 36 52.3	+0.2
	comp=Z,0.6nm,0.5s,baz=145,slow=5.0,SNR=8.9						
BRTR	Keskin Array B	147.90	307	PKPbc	PKPbc	03 36 52.1	-0.1
CLL	Collm	151.11	343	*e*PKPbc	PKiKP	03 37 00.0	+0.4
TORD	Torodi Ar. Bea	169.04	187	PKP	PKPdf	03 37 13.3	-0.2
	comp=Z,1.1nm,1.1s,baz=162,slow=1.4,SNR=2.6						
TORD				PKPab	PKPab	03 38 28.6	+0.5
	comp=Z,1.8nm,0.7s,baz=166,slow=3.5,SNR=12						

ROM 19 03:47:35.6±0.0, **42°.805N**±0°.003 × **13°.143E**±0°.004, **h11**^{km}, **ML1.5**/8, **11C-4D, Error ellipse: s-maj=0.3km s-min=0.2km az=303.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1245	Castelsantange	0.06	33	⇑P	Pg	03 47 38.3	+0.2
T1245				S	Sg	03 47 40.0	+0.1
T1245				AML	AML		
	comp=E,490µm,1.6s						
T1245				AML	AML		
	comp=N,691µm,0.2s						
T1245				AML	AML		
	comp=E,464µm,0.3s						
T1245				AML	AML		
	comp=E,464µm,0.3s						
T1245				AML	AML		
	comp=N,638µm,0.2s						
T1245				AML	AML		
	comp=E,464µm,1.7s						
T1245				AML	AML		
	comp=E,490µm,1.6s						
T1214	Arquata del Tr	0.07	133	⇓P	Pg	03 47 38.4	+0.2
T1214				S	Sg	03 47 40.0	+0.1
T1214				AML	AML		
	comp=E,262µm,0.5s						
T1214				AML	AML		
	comp=N,310µm,0.2s						
T1214				AML	AML		
	comp=N,310µm,0.2s						
T1214				AML	AML		
	comp=E,262µm,0.5s						
T1212	Cascia, Frazio	0.09	234	⇓P	Pg	03 47 38.7	+0.4
T1212				S	Sg	03 47 40.6	+0.4
T1212				AML	AML		
	comp=E,92µm,0.3s						
T1212				AML	AML		
	comp=N,144µm,1.0s						
T1212				AML	AML		
	comp=E,91µm,0.3s						
T1212				AML	AML		
	comp=N,144µm,1.0s						
T1212				AML	AML		
	comp=N,144µm,1.0s						
MC2	Monte Cornacci	0.11	18	⇑P	Pg	03 47 39.0	+0.3
MC2				S	Sg	03 47 41.9	+0.9
T1216	Preci, Frazion	0.12	313	⇑P	Pg	03 47 39.1	+0.3
T1216				S	Sg	03 47 41.6	+0.6
T1216				AML	AML		
	comp=E,298µm,1.2s						
T1216				AML	AML		
	comp=E,298µm,1.2s						
T1216				AML	AML		
	comp=E,298µm,0.8s						
T1216				AML	AML		
	comp=N,330µm,1.5s						
T1218	Civita (PG)	0.14	189	⇑P	Pg	03 47 39.4	+0.4
T1218				S	Sg	03 47 42.2	+0.9
T1218				AML	AML		
	comp=E,117µm,0.4s						
T1218				AML	AML		
	comp=N,159µm,1.5s						
MMO1	Montemonaco	0.17	55	⇑P	Pg	03 47 39.7	+0.3
MMO1				S	Sg	03 47 42.9	+0.9
T1217	Poggiodomo (PG	0.18	239	P	Pg	03 47 40.3	+0.6
T1217				S	Sg	03 47 43.6	+1.1
T1256	Bolognola (MC)	0.21	17	P	Pg	03 47 40.6	+0.4
T1256				AML	AML		
	comp=N,121µm,1.2s						
T1256				AML	AML		
	comp=N,121µm,0.8s						
T1256				AML	AML		
	comp=E,105µm,0.7s						
T1241	Roccafluvione,	0.22	76	⇓P	Pg	03 47 40.7	+0.5
T1241				S	Sg	03 47 44.5	+1.1
SMA1	SAN MARTINO	0.23	141	P	Pg	03 47 40.9	+0.5
SMA1				S	Sg	03 47 44.8	+1.1
FDMO	Fiordimonte	0.23	350	⇑P	Pg	03 47 40.9	+0.3
FDMO				AML	AML		
	comp=E,438µm,0.2s						
FDMO				AML	AML		
	comp=N,406µm,0.2s						
CESI	CESI - Serrava	0.27	319	⇑P	Pb	03 47 43.2	+0.7
CESI				AML	AML		
	comp=E,350µm,0.4s						
CESI				AML	AML		
	comp=N,432µm,0.3s						
T1219	Muccia, Frazio	0.27	338	⇑P	Pg	03 47 41.5	+0.3
T1219				AML	AML		
	comp=N,598µm,0.4s						
T1219				AML	AML		
	comp=E,533µm,0.3s						
T1219				AML	AML		
	comp=N,610µm,0.4s						
T1219				AML	AML		
	comp=E,536µm,0.2s						
T1219				AML	AML		
	comp=E,533µm,1.7s						
T1219				AML	AML		
	comp=N,598µm,1.6s						
T1219				AML	AML		
	comp=N,610µm,1.6s						
RM33	Pellescritta (	0.30	170	P	Pg	03 47 42.1	+0.4
T1220	Camerino, Fraz	0.31	353	⇑P	Pb	03 47 43.9	+0.6
T1220				AML	AML		
	comp=E,859µm,0.3s						
T1220				AML	AML		
	comp=N,510µm,0.2s						
T1211	Morro Reatino	0.34	218	P	Pb	03 47 43.9	+0.1
ASSB	Assisi San Ben	0.43	304	P	Pg	03 47 44.3	+0.2
ASSB				AML	AML		
	comp=E,122µm,1.6s						
ASSB				AML	AML		
	comp=N,158µm,0.1s						
ASSB				AML	AML		
	comp=E,122µm,0.4s						
EL6	Elcito	0.53	357	⇑P	Pg	03 47 46.1	+0.1
ATCC	AVT- Casa Cast	0.53	316	⇑P	Pb	03 47 48.0	+1.0
CING	Cingoli	0.57	4	⇓P	Pn	03 47 49.2	-0.6
PIEI	Pieia	0.86	329	S	Sb	03 48 04.7	+0.6
PE3	Peglio	1.01	332	S	Sg	03 48 07.7	-0.5

ROM 19 03:48:18.4±0.0, **42°.771N**±0°.002 × **13°.066E**±0°.004, **h11**^{km}, **ML1.5**/7, **3C-2D, Error ellipse: s-maj=0.3km s-min=0.2km az=92.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	Cascia, Frazio	0.03	220	P	Pg	03 48 20.7	+0.3
T1212				S	Sg	03 48 21.9	+0.1
T1212				AML	AML		
	comp=N,1008µm,0.2s						
T1212				AML	AML		
	comp=N,1017µm,0.2s						
T1212				AML	AML		
	comp=E,914µm,0.4s						
T1212				AML	AML		
	comp=E,978µm,0.2s						
T1214	Arquata del Tr	0.11	96	P	Pg	03 48 21.7	+0.4
T1214				S	Sg	03 48 23.8	+0.4
T1214				AML	AML		
	comp=E,276µm,0.2s						
T1214				AML	AML		
	comp=N,216µm,0.7s						
T1214				AML	AML		
	comp=E,258µm,0.2s						
T1214				AML	AML		
	comp=N,220µm,0.7s						
T1214				AML	AML		
	comp=N,220µm,0.7s						
T1214				AML	AML		
	comp=E,258µm,0.2s						
T1218	Civita (PG)	0.11	160	P	Pg	03 48 21.6	+0.3
T1218				S	Sg	03 48 23.8	+0.5
T1218				AML	AML		
	comp=N,523µm,0.2s						
T1218				AML	AML		
	comp=N,502µm,0.2s						
T1218				AML	AML		
	comp=E,242µm,0.2s						
T1218				AML	AML		
	comp=E,244µm,1.0s						
T1218				AML	AML		
	comp=E,244µm,1.0s						
T1218				AML	AML		
	comp=N,503µm,0.2s						
T1217	Poggiodomo (PG	0.12	240	P	Pg	03 48 21.8	+0.4
T1217				S	Sg	03 48 24.0	+0.5
T1245	Castelsantange	0.12	46	P	Pg	03 48 22.1	+0.5
T1245				S	Sg	03 48 24.3	+0.5
T1245				AML	AML		
	comp=E,543µm,0.1s						
T1245				AML	AML		
	comp=N,595µm,1.4s						
T1245				AML	AML		
	comp=E,464µm,0.2s						
T1245				AML	AML		
	comp=E,543µm,0.1s						
T1245				AML	AML		
	comp=N,503µm,0.7s						
T1245				AML	AML		
	comp=N,503µm,1.3s						
T1245				AML	AML		
	comp=N,595µm,0.6s						
T1245				AML	AML		
	comp=E,543µm,1.9s						
T1216	Preci, Frazion	0.12	344	P	Pg	03 48 22.0	+0.5
T1216				S	Sg	03 48 24.3	+0.6
T1216				AML	AML		
	comp=N,319µm,0.7s						
T1216				AML	AML		
	comp=E,220µm,0.1s						
T1216				AML	AML		
	comp=N,319µm,1.3s						

MC2	**Monte Cornacci**	**0.17**	**33**	P	Pg	03 48 22.8	+0.5
MC2				S	Sg	03 48 25.9	+0.9
FEMA	**Monte Fema**	**0.19**	**356**	P	Pb	03 48 23.5	-0.6
FEMA				S	Sg	03 48 26.6	+1.1
MMO1	**Montemonaco**	**0.23**	**56**	P	Pg	03 48 23.7	+0.5
MMO1				S	Sg	03 48 27.5	+0.9
SMA1	**SAN MARTINO**	**0.24**	**125**	⇑P	Pb	03 48 24.5	-0.5
CESI	**CESI - Serrava**	**0.26**	**333**	P	Pg	03 48 24.4	+0.6
CESI				S	Sg	03 48 28.6	+1.1
T1256	**Bolognola (MC)**	**0.26**	**26**	P	Pg	03 48 24.4	+0.6
FDMO	**Fiordimonte**	**0.27**	**3**	P	Pg	03 48 24.3	+0.5
FDMO				S	Sb	03 48 28.8	-1.1
FDMO				AML	AML		
	comp=E,59µm,1.0s						
FDMO				AML	AML		
	comp=N,55µm,0.2s						
T1241	**Roccafluvione,**	**0.28**	**72**	⇑P	Pg	03 48 24.6	+0.5
T1241				AML	AML		
	comp=N,76µm,1.3s						
T1241				AML	AML		
	comp=E,116µm,0.2s						
RM33	**Pellescritta (**	**0.28**	**157**	⇓P	Pg	03 48 24.5	+0.3
T1211	**Morro Reatino**	**0.28**	**213**	⇑P	Pg	03 48 24.8	+0.6
T1211				AML	AML		
	comp=E,160µm,1.2s						
T1211				AML	AML		
	comp=E,138µm,0.1s						
T1211				AML	AML		
	comp=N,138µm,0.2s						
T1211				AML	AML		
	comp=E,160µm,0.8s						
T1211				AML	AML		
	comp=N,142µm,0.2s						
T1219	**Muccia, Frazio**	**0.29**	**351**	P	Pg	03 48 24.7	+0.4
ARRO	**Arrone**	**0.29**	**229**	⇓P	Pg	03 48 24.9	+0.6
T1222	**Castel Sant'An**	**0.37**	**183**	S	Sb	03 48 31.8	-1.0
ASSB	**Assisi San Ben**	**0.40**	**312**	P	Pb	03 48 27.3	-0.4

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*NEIC **19** 03:52:05.3±2.6, 28°.93S±0°.01×72°.51W±0°.07, h6^{km}±3^{km}, mb4.4/30, Mwr4.2/76, ML3.9(GUC), Error ellipse: s-maj=8.5km s-min=1.8km az=96.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.86; M$_{\theta\theta}$-0.58; M$_{\phi\phi}$-1.28; M$_{r\theta}$-0.50; M$_{\theta\phi}$0.17; M$_{\phi r}$-1.54; Fault plane solution: M$_{0}$2.32000×10^{15} NP1:ϕ_{s}188.37000°, δ67.86000°, λ98.87000°. NP2:ϕ_{s}345.87000°, δ23.77000°, λ69.23000°. Principal axes: T 2.5759, Plg66.0000°, Azm114.0000°; N -0.6692, Plg8.0000°, Azm5.0000°; P -1.9068, Plg22.0000°, Azm272.0000°;*

*NEIC **19** 03:52:05.5, 28°.92S×72°.49W, h6^{km}*

*SJA **19** 03:52:05.5±1.7, 29°.01S×72°.31W, h10^{km}, ML4.0, MW4.1, Hypocentre not reviewed by the ISC*

*IDC **19** 03:52:06.2±0.7, 28°.99S×72°.30W, h0^{km}, mb4.2/8, mbtmp4.2/11, ML4.3/3, MS3.4/17, Error ellipse: s-maj=23.7km s-min=21.7km az=74.0*

*VAO **19** 03:52:10.7±1.4, 28°.84S×72°.39W, h16^{km}, mb4.5*

*GUC **19** 03:52:10.6±0.9, 29°.01S×72°.12W, h38^{km}±3^{km}, ML3.9*

ISC 19 03:52:05.1±3.4**, 28°.97S**±0°.03×**72°.42W**±0°.06**, h1**^{km}±21^{km}**,**
n170, σ1^{s}.**73**/172**, mb4.4**/19**, MS3.5**/11**, 10C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	**1.40**	**133**		**Pn**	**03 52 32.2**	**+0.4**
CO05				Sn	**Sn**	**03 52 48.9**	**-2.0**
CO05	**La Serena**	**1.40**	**133**	⇑*e*P	**Pn**	**03 52 31.8**	**0.0**
CO05				*e*S	**Sn**	**03 52 47.5**	**-3.4**
CO05				IAML		03 52 52.1	
	comp=N,4µm,0.6s						
AC04	**Llanos de Chal**	**1.41**	**58**	Pn	**Pn**	**03 52 31.2**	**-0.8**
AC04				Sn	**Sn**	**03 52 48.5**	**-2.7**
AC04	**Llanos de Chal**	**1.41**	**58**	⇑*e*P	**Pn**	**03 52 31.2**	**-0.8**
AC04				*e*S	**Sn**	**03 52 48.3**	**-2.8**
AC04				IAML		03 52 50.9	
	comp=E,2µm,0.2s						
AC04	**Llanos de Chal**	**1.41**	**58**	*i* P		03 52 31.2	
AC04				*e*S		03 52 48.2	
LCO	**Las Campanas**	**1.50**	**92**	Pn	**Pn**	**03 52 34.3**	**+0.7**
LCO					**Sn**	**03 52 52.9**	**-1.0**
LCO	**Las Campanas**	**1.50**	**92**	⇑*e*P	**Pn**	**03 52 33.1**	**-0.4**
LCO				*e*S	**Sn**	**03 52 50.4**	**-3.6**
LCO	**Las Campanas**	**1.50**	**92**	*e*P		03 52 34.2	
LCO				*e*S		03 52 53.1	
CO06	**Fray Jorge**	**1.83**	**158**		**Pn**	**03 52 37.5**	**-0.4**
CO06	**Fray Jorge**	**1.83**	**158**	⇓*e*P	**Pn**	**03 52 37.4**	**-0.4**
CO06				*i* S	**Sn**	**03 52 57.7**	**-4.0**
CO06				IAML		03 52 58.7	
	comp=E,956nm,0.6s						
GO04	**Tololo Observa**	**1.85**	**131**		**Pn**	**03 52 39.4**	**+1.0**
GO04	**Tololo Observa**	**1.85**	**131**	⇓*e*P	**Pn**	**03 52 39.3**	**+1.0**
GO04				*e*S	**Sn**	**03 52 59.9**	**-2.6**
GO04	**Tololo Observa**	**1.85**	**131**	*e*P		03 52 39.4	
GO04				*e*S		03 53 02.6	
AC05	**El Transito**	**1.88**	**86**	Pn	**Pn**	**03 52 39.9**	**+1.3**
AC05	**El Transito**	**1.88**	**86**	⇑*e*P	**Pn**	**03 52 39.8**	**+1.2**
AC05				*e*S	**Sn**	**03 53 01.1**	**-2.1**
AC05				IAML		03 53 04.1	
	comp=N,2µm,0.2s						
AC05	**El Transito**	**1.88**	**86**	*e*P		03 52 39.0	
AC05				*e*S		03 53 03.6	
AC05				IAML		03 53 05.8	
	comp=Z,1µm,0.3s						
CO01	**Juntas del Tor**	**2.26**	**117**		**Pn**	**03 52 46.2**	**+2.3**
CO01	**Juntas del Tor**	**2.26**	**117**	⇑*e*P	**Pn**	**03 52 46.3**	**+2.3**
CO01				*e*S	**Sn**	**03 53 09.6**	**-3.1**
CO01				IAML		03 53 15.6	
	comp=N,903nm,0.7s						
CO01	**Juntas del Tor**	**2.26**	**117**	*e*P		03 52 46.2	
CO01				*e*S		03 53 12.9	
CO01				IAML		03 53 17.9	
	comp=Z,462nm,0.7s						
GO03	**Copiap**	**2.36**	**55**	Pn	**Pn**	**03 52 45.9**	**+0.7**
GO03	**Copiap**	**2.36**	**55**	⇑*e*P	**Pn**	**03 52 46.0**	**+0.9**
GO03				*e*S	**Sn**	**03 53 12.9**	**-2.0**
GO03				IAML		03 53 15.9	
	comp=E,2µm,0.4s						
GO03	**Copiap**	**2.36**	**55**	*e*P		03 52 46.0	
GO03				*e*S		03 53 15.3	
CO03	**El Pedregal**	**2.39**	**142**	Pn	**Pn**	**03 52 46.5**	**+0.9**
CO03	**El Pedregal**	**2.39**	**142**	⇑*e*P	**Pn**	**03 52 46.5**	**+0.9**
CO03				*e*S	**Sn**	**03 53 12.9**	**-2.8**
CO03				IAML		03 53 20.2	
	comp=E,2µm,0.8s						
CO03	**El Pedregal**	**2.39**	**142**	*e*P		03 52 46.6	
CO03				*e*S		03 53 16.0	
CO03				IAML		03 53 16.8	
	comp=Z,522nm,0.5s						
CO02	**Combarbal**	**2.54**	**151**		**Pn**	**03 52 48.8**	**+1.1**
CO02	**Combarbal**	**2.54**	**151**	⇓*e*P	**Pn**	**03 52 48.8**	**+1.1**
CO02				*e*S	**Sn**	**03 53 17.7**	**-1.7**
CO02				IAML		03 53 21.1	
	comp=N,2µm,0.5s						
CO02	**Combarbal**	**2.54**	**151**	*e*P		03 52 48.8	
CO02				*e*S		03 53 18.5	
CO02				IAML		03 53 21.4	
	comp=Z,717nm,1.0s						
AC01	**Pan de Azucar**	**3.24**	**30**		**Pn**	**03 52 56.1**	**-1.1**
AC01	**Pan de Azucar**	**3.24**	**30**	⇑*e*P	**Pn**	**03 52 56.0**	**-1.2**
AC01				*e*S	**Sn**	**03 53 31.9**	**-4.6**
AC01				IAML		03 53 35.4	
	comp=E,222nm,0.2s						
AC01	**Pan de Azucar**	**3.24**	**30**	*e*P		03 52 56.1	
AC01				*e*S		03 53 35.6	
AC02	**Maricunga**	**3.60**	**55**		**Pn**	**03 53 04.4**	**+1.7**
VA06	**Catapilco**	**3.71**	**165**	Pn	**Pn**	**03 53 03.5**	**-0.1**
RTLS	**Leoncito**	**3.90**	**137**	*e*P		03 53 10.9	
RTLS				*e*S		03 53 54.5	
RTLS				IAML		03 54 10.0	
	comp=Z,643nm,1.5s						
VA01	**Torpederas**	**4.09**	**171**	Pn	**Pn**	**03 53 08.1**	**-0.8**
VA03	**San Esteban**	**4.11**	**157**	Pn	**Pn**	**03 53 10.4**	**+1.2**
VA03	**San Esteban**	**4.11**	**157**	*e*P		03 53 10.7	
VA03				*e*S		03 53 58.5	
VA03				IAML		03 54 13.9	
	comp=Z,199nm,1.1s						
ZON	**Zonda**	**4.13**	**129**		**Pn**	**03 53 11.8**	**+2.3**
ROC1	**El Roble**	**4.17**	**164**		**Pn**	**03 53 10.0**	**-0.2**
MT02	**Curacav**	**4.42**	**166**		**Pn**	**03 53 13.7**	**+0.4**
MT02	**Curacav**	**4.42**	**166**	*e*P		03 53 13.3	
MT02				*e*S		03 54 03.7	
PEL	**Peldehue**	**4.42**	**161**		**Pn**	**03 53 14.2**	**+0.7**
CFA	**Coronel Fontan**	**4.47**	**127**	Pn	**Pn**	**03 53 17.5**	**+3.4**
	comp=Z,4.9nm,0.3s,baz=313,slow=12,SNR=40						
CFA				Sn	**Sn**	**03 54 08.8**	**+2.0**
	comp=Z,12nm,0.3s,baz=84,slow=18,SNR=8.2						
CFA				Lg	Lg	03 54 24.9	
	comp=Z,20nm,0.3s,baz=203,slow=13,SNR=11						
CFA				LR	LR	03 55 04.6	
	comp=Z,414nm,19.8s,baz=298,slow=41						
CFA	**Coronel Fontan**	**4.47**	**127**	*e*P		03 53 17.0	
CFA				*e*S		03 54 15.0	
GO02	**Mina Guanaco**	**4.55**	**34**		**Pn**	**03 53 15.2**	**-0.4**
GO02	**Mina Guanaco**	**4.55**	**34**	⇑*e*P	**Pn**	**03 53 15.1**	**-0.4**
GO02				*e*S	**Sn**	**03 54 07.3**	**-2.0**
GO02	**Mina Guanaco**	**4.55**	**34**	*e*P		03 53 15.2	
GO02				*e*S		03 54 08.7	
MT05	**Renca**	**4.64**	**162**	Pn	**Pn**	**03 53 16.2**	**-0.3**
MT05	**Renca**	**4.64**	**162**	*e*P		03 53 17.4	
MT05				*e*P		03 53 17.5	
MT05				*e*S		03 54 10.4	
PB14	**IPOC Station P**	**4.69**	**23**	Pn	**Pn**	**03 53 15.5**	**-1.8**
PB14	**IPOC Station P**	**4.69**	**23**	*e*P		03 53 15.6	
PB14				*e*S		03 54 07.0	
VA05	**Santo Domingo**	**4.72**	**172**	Pn	**Pn**	**03 53 17.0**	**-0.6**
ASAL	**Salagasta**	**4.75**	**140**	*e*P		03 53 22.1	
ASAL				*e*S		03 54 14.0	
MT03	**Universidad Ad**	**4.80**	**161**		**Pn**	**03 53 19.4**	**+0.7**
MT03	**Universidad Ad**	**4.80**	**161**	*e*P		03 53 20.1	
MT03				*e*S		03 54 13.9	
MT08	**Bocatoma Ro**	**4.91**	**156**		**Pn**	**03 53 21.1**	**+0.7**
MT09	**Talagante**	**4.95**	**166**		**Pn**	**03 53 21.4**	**+0.6**
MT01	**Popeta**	**4.98**	**169**	Pn	**Pn**	**03 53 20.9**	**-0.2**
MT13	**San Alfonso**	**5.10**	**160**	Pn	**Pn**	**03 53 23.9**	**+1.1**
LMEL	**Las Melosas**	**5.22**	**159**		**Pn**	**03 53 26.2**	**+1.6**
BO01	**Tunca**	**5.52**	**168**		**Pn**	**03 53 28.5**	**-0.1**
PB10	**IPOC Station P**	**5.69**	**18**		**Pn**	**03 53 27.9**	**-2.9**
BO02	**Sierra Bellavi**	**5.97**	**167**		**Pn**	**03 53 34.9**	**+0.2**
PB15	**IPOC Station P**	**6.32**	**25**		**Pn**	**03 53 38.8**	**-1.0**
PB06	**IPOC Station P**	**6.74**	**23**		**Pn**	**03 53 43.1**	**-2.4**
PB04	**IPOC Station P**	**6.92**	**18**		**Pn**	**03 53 45.5**	**-2.4**
LVC	**Limon Verde**	**7.08**	**27**	Pn	**Pn**	**03 53 49.7**	**-0.5**
	comp=Z,2.5nm,0.3s,baz=161,slow=8.0,SNR=33						
LVC				Sn	**Sn**	**03 55 05.9**	**-5.6**
	comp=Z,4.3nm,0.3s,baz=145,slow=18,SNR=3.7						
LVC				Lg	Lg	03 55 48.3	
	comp=Z,6.0nm,0.3s,baz=51,slow=8.5,SNR=2.3						
LVC				LR	LR	03 56 41.8	
	comp=Z,240nm,21.7s,baz=226,slow=39						
	comp=Z,14nm,0.6s						
LVC	**Limon Verde**	**7.08**	**27**		**Pn**	**03 53 49.4**	**-0.8**
H03N1	**Juan Fernandez**	**7.13**	**230**	T	T	04 01 48.3	
	baz=59,slow=71,SNR=109						
H03N2	**Juan Fernandez**	**7.14**	**230**	T	T	04 01 58.8	
	baz=59,slow=71,SNR=114						
H03N3	**Juan Fernandez**	**7.14**	**230**	T	T	04 01 51.2	
	baz=59,slow=71,SNR=102						
VA04	**Juan Fernndez**	**7.20**	**228**		Pn	03 53 48.1	-3.4
PB03	**IPOC Station P**	**7.30**	**20**		**Pn**	**03 53 50.9**	**-2.3**
PB07	**IPOC Station P**	**7.57**	**18**		**Pn**	**03 53 54.5**	**-2.3**
PB09	**IPOC Station P**	**7.70**	**23**		**Pn**	**03 53 56.8**	**-1.8**
PB02	**IPOC Station P**	**7.95**	**17**		**Pn**	**03 53 60.0**	**-2.0**
PB01	**IPOC Station P**	**8.33**	**19**	Pn	**Pn**	**03 54 04.6**	**-2.6**
TA01	**Diego Aracena**	**8.61**	**14**	Pn	**Pn**	**03 54 09.1**	**-1.9**
PB08	**IPOC Station P**	**9.28**	**19**		**Pn**	**03 54 18.4**	**-2.0**
PB11	**IPOC Station P**	**9.51**	**16**	Pn	**Pn**	**03 54 20.7**	**-2.7**
GO01	**Chusmiza**	**9.71**	**18**		**Pn**	**03 54 24.0**	**-2.5**
MNMC	**Minye Minye**	**10.13**	**15**		**Pn**	**03 54 30.1**	**-1.9**
PB12	**IPOC Station P**	**10.48**	**11**	Pn	**Pn**	**03 54 35.0**	**-1.8**
GO06	**Curarrehue**	**10.62**	**176**	Pn	**Pn**	**03 54 38.4**	**-0.2**
LR03	**Panguipulli**	**10.64**	**180**	Pn	**Pn**	**03 54 38.8**	**+0.1**
PB16	**IPOC Station P**	**10.91**	**15**	Pn	**Pn**	**03 54 40.7**	**-2.4**
PB16					**Sn**	**03 56 43.3**	**-2.9**
LR04	**Corral**	**10.92**	**184**	Pn	**Pn**	**03 54 42.4**	**-0.1**
PB18	**Visviri**	**11.64**	**14**		**Pn**	**03 54 51.9**	**-1.1**
PLCA	**Paso Flores**	**11.84**	**173**	Pn	**Pn**	**03 54 54.8**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=340,slow=12,SNR=39						
PLCA				LR	LR	03 59 04.8	
	comp=Z,194nm,20.4s,baz=352,slow=36						
	comp=Z,2.5nm,0.5s						
PLCA	**Paso Flores**	**11.84**	**173**	Pn	**Pn**	**03 54 55.2**	**0.0**
LL04	**Puerto Octay**	**11.91**	**180**	Pn	**Pn**	**03 54 54.7**	**-1.5**
TRQA	**Tornquist**	**12.56**	**139**		**Pn**	**03 55 05.6**	**+0.5**
LPAZ	**La Paz**	**13.22**	**18**	Pn	**Pn**	**03 55 13.5**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=204,slow=6.5,SNR=10						
LPAZ				LR	LR	04 01 03.9	
	comp=Z,37nm,19.6s,baz=198,slow=41						
	comp=Z,2.1nm,0.5s						
LPAZ	**La Paz**	**13.22**	**18**		**Pn**	**03 55 13.4**	**-1.4**
LPAZ	**La Paz**	**13.22**	**18**	*e*P	**Pn**	**03 55 13.9**	**-0.8**
CPUP	**Villa Florida**	**13.63**	**82**	Pn	**P**	**03 55 26.1**	**-2.7**
	baz=240,slow=16						
CPUP				LR	LR	04 01 02.6	
	comp=Z,211nm,18.9s,baz=240,slow=40						
RODS	**Rosario do Sul**	**15.04**	**99**	*e*P	**P**	**03 55 42.8**	**-1.7**
AY01	**Puyuhuapi**	**15.42**	**181**	P	**P**	**03 55 47.6**	**-1.0**
AY01				IAmb	IAmb	03 55 50.9	
	comp=Z,12nm,0.8s						
COYC	**Coyhaique**	**16.58**	**179**	Pn	**Pn**	**03 55 57.0**	**-1.8**
SIV	**San Ignacio**	**16.62**	**41**	Pn	**Pn**	**03 55 53.6**	**-6.0**
	comp=Z,0.1nm,0.3s,baz=245,slow=7.1,SNR=12						
SIV				LR	LR	04 03 06.4	
	comp=Z,109nm,21.9s,baz=269,slow=40						
AMBA	**Amambai (Brazi**	**16.78**	**73**	*e*P	**Pn**	**03 56 03.4**	**+1.8**
AQDB	**Aquidauana**	**17.37**	**65**	P	**Pn**	**03 56 09.5**	**+0.6**
AQDB	**Aquidauana**	**17.37**	**65**	*e*P	**P**	**03 56 11.7**	**+1.4**
PTLB	**Pontes e Lacer**	**18.20**	**45**	P	**Pn**	**03 56 17.8**	**-1.4**
PTLB	**Pontes e Lacer**	**18.20**	**45**	*e*P	**P**	**03 56 20.6**	**+1.0**
RVDE	**Rio Verde (Bra**	**18.76**	**62**	*e*P	**Pn**	**03 56 27.4**	**+1.2**
GO08	**Villa O'Higgin**	**19.47**	**180**	P	**P**	**03 56 32.6**	**-0.7**
VILB	**Vilhena**	**19.57**	**38**	P	**P**	**03 56 32.4**	**-2.3**
VILB				IAmb	IAmb	03 56 36.9	
	comp=Z,15nm,0.7s						
VILB	**Vilhena**	**19.57**	**38**	*e*P	**Pn**	**03 56 36.1**	**+0.2**
PP1B	**Ponte de Pedra**	**19.66**	**59**	*e*P	**Pn**	**03 56 37.4**	**+0.4**
ETMB	**Extrema**	**19.92**	**18**	P	**P**	**03 56 36.6**	**-1.8**
ETMB				IAmb	IAmb	03 56 48.5	
	comp=Z,12nm,1.0s						
ETMB	**Extrema**	**19.92**	**18**	*e*P	**Pn**	**03 56 40.4**	**+0.4**
SALV	**Santo Antonio**	**20.17**	**53**	*e*P	**P**	**03 56 42.4**	**+1.3**
PCMB	**Pacaembu**	**20.47**	**74**	*e*P	**P**	**03 56 46.0**	**+1.6**
CZSB	**Cruzeiro do Su**	**21.13**	**359**	P	**P**	**03 56 51.6**	**+0.1**
CZSB	**Cruzeiro do Su**	**21.13**	**359**	*e*P	**P**	**03 56 54.3**	**+2.8**
FRTB	**Fartura**	**21.25**	**80**	*e*P	**P**	**03 56 54.3**	**+1.4**
SAML	**Samuel**	**21.73**	**25**	P	**P**	**03 56 57.1**	**-0.8**
SAML				IAmb	IAmb	03 57 03.6	
	comp=Z,14nm,0.9s						
SAML	**Samuel**	**21.73**	**25**	*e*P	**P**	**03 56 59.3**	**+1.3**
ITRB	**Iturama**	**22.08**	**70**	*e*P	**P**	**03 57 02.6**	**+0.7**
ATAH	**Atahualpa**	**22.44**	**344**	LR	LR	04 03 58.9	
	comp=Z,72nm,22.0s,baz=90,slow=32						
PDRB	**Porto dos Gac**	**22.64**	**43**	*e*P	**P**	**03 57 08.3**	**+0.5**
ARAG	**Araguaiana, MT**	**23.13**	**60**	*e*P	**P**	**03 57 14.2**	**+1.2**
TBTG	**Tabatinga, AM**	**24.76**	**6**	P	**P**	**03 57 26.8**	**-1.8**
TBTG	**Tabatinga, AM**	**24.76**	**6**	*e*P	**P**	**03 57 30.3**	**+1.8**
MCRA	**Macar, Loja**	**25.49**	**342**	P	**P**	**03 57 32.7**	**-2.5**
MCRA				IAmb	IAmb	03 57 45.9	
	comp=Z,3.7nm,0.7s						
SNDB	**Serra Nova Dou**	**25.95**	**54**	*e*P	**P**	**03 57 40.1**	**+0.7**
BDFB	**Brasilia**	**26.12**	**65**	P	**P**	**03 57 41.8**	**+0.8**
	comp=Z,7.6nm,0.7s,baz=237,slow=9.8,SNR=18						
	comp=Z,7.6nm,0.7s						
BDFB	**Brasilia**	**26.12**	**65**	P	**P**	**03 57 40.6**	**-0.4**
BDFB				IAmb	IAmb	03 57 42.9	
	comp=Z,11nm,0.8s						
BDFB	**Brasilia**	**26.12**	**65**	*e*P	**P**	**03 57 42.2**	**+1.2**
MG01	**Puerto William**	**26.18**	**174**	P	**P**	**03 57 39.3**	**-1.7**
NPGB	**Novo Progresso**	**27.11**	**40**	*e*P	**P**	**03 57 50.6**	**+0.8**
JANB	**Januaria**	**29.41**	**68**	*e*P	**P**	**03 58 11.3**	**+0.9**
RPN	**Rapa Nui**	**32.55**	**264**	LR	LR	04 07 59.4	
	comp=Z,110nm,21.6s,baz=62,slow=29						
CHIC	**Chingaza**	**33.43**	**358**	*e*P	P	03 58 50.3	+4.2
ROSC	**El Rosal**	**33.66**	**357**	LR	LR	04 11 12.7	
	comp=Z,61nm,21.6s,baz=118,slow=34						
GUY2C	**Guyana, Caldas**	**34.11**	**355**	⇑*e*P	P	03 58 58.9	+6.8
RUSC	**La Rusia**	**34.66**	**359**	*e*P	**P**	**03 59 00.8**	**+3.9**
CBOC	**Ciudad Bolivar**	**34.80**	**354**	*e*P	**P**	**03 58 59.9**	**+2.1**
TMAB	**Tom-Au,PA,Br**	**35.15**	**46**	*e*P	**P**	**03 59 02.8**	**+2.1**
ZARC	**Zaragoza, Cauc**	**36.33**	**356**	*e*P	P	03 59 15.3	+4.6
SDV	**Santo Domingo**	**37.67**	**3**	LR	LR	04 15 45.5	
	comp=Z,53nm,19.5s,baz=7.5,slow=38						
BAUV	**El Baul**	**37.93**	**7**	P	**P**	**03 59 23.0**	**-1.3**
BAUV				IAmb	IAmb	03 59 27.8	
	comp=Z,13nm,0.8s						
MDP	**Montagnes des**	**38.85**	**32**	LR	LR	04 17 29.1	
	comp=Z,41nm,19.2s,baz=167,slow=39						
SNAA	**Sanae**	**56.37**	**159**	P	**P**	**04 01 46.2**	**-1.4**
QSPA	**South Pole Qui**	**61.25**	**180**	P	**P**	**04 02 21.9**	**+0.1**
TXAR	**Lajitas Array**	**65.21**	**330**	P	**P**	**04 02 50.5**	**+2.1**
	comp=Z,0.8nm,0.7s,baz=160,slow=8.0,SNR=8.4						
	comp=Z,0.8nm,0.7s						
TXAR	**Lajitas Array**	**65.21**	**330**	P	**P**	**04 02 47.6**	**-0.8**
HHAR	**Hobbs**	**67.99**	**341**	P	**P**	**04 03 06.9**	**+1.0**
VNDA	**Vanda**	**68.96**	**191**	P	**P**	**04 03 11.2**	**-0.3**
SDCO	**Great Sand Dun**	**73.25**	**333**	P	**P**	**04 03 36.2**	**-2.1**
SDCO				IAmb	IAmb	04 03 44.6	
	comp=Z,2.3nm,1.0s						
DBIC	**Dimbokro**	**73.94**	**73**	P	**P**	**04 03 43.5**	**+0.9**
	comp=Z,5.0nm,0.8s,baz=239,slow=6.1,SNR=5.8						
DBIC				LR	LR	04 33 31.1	
	comp=Z,24nm,20.3s,baz=154,slow=34						
	comp=Z,5.0nm,0.8s						
PFO	**Pinyon Flats O**	**74.92**	**323**	LR	LR	04 29 48.2	
	comp=Z,42nm,22.0s,baz=216,slow=30						
PV21	**Cone Mtn., Par**	**75.36**	**331**	P	**P**	**04 03 50.4**	**-0.2**
PV21				IAmb	IAmb	04 04 07.4	
	comp=Z,1.9nm,0.7s						
ELS	**Elsinore Mount**	**75.46**	**322**	P	**P**	**04 03 49.9**	**-1.2**
ELS				IAmb	IAmb	04 03 56.6	
	comp=Z,5.2nm,1.1s						
ECSD	**EROS Data Cent**	**75.67**	**342**	P	**P**	**04 03 52.5**	**+0.6**
ECSD				IAmb	IAmb	04 03 56.3	
	comp=Z,7.8nm,0.9s						
LCMT	**Little Creek M**	**76.00**	**327**	P	**P**	**04 03 53.8**	**-0.4**
SHPR	**Sheep Range**	**76.52**	**326**	P	**P**	**04 03 57.5**	**+0.4**
PRN	**Pahroc Range**	**77.18**	**326**	P	**P**	**04 04 00.7**	**-0.1**
PRN				IAmb	IAmb	04 04 06.2	
	comp=Z,2.3nm,0.9s						
WCT	**Wildcat Mounta**	**77.48**	**325**	P	**P**	**04 04 00.8**	**-1.6**
WCT				IAmb	IAmb	04 04 06.2	
	comp=Z,2.7nm,1.1s						
RAR	**Rarotonga**	**77.82**	**252**	LR	LR	04 30 12.3	
	comp=Z,77nm,21.6s,baz=214,slow=29						
MAW	**Mawson**	**78.09**	**164**	P	**P**	**04 04 06.8**	**+1.5**
	comp=Z,40nm,1.0s,baz=172,slow=5.4,SNR=2.5						
PD31	**Pinedale Array**	**79.14**	**333**	P	**P**	**04 04 11.4**	**-0.3**
PDAR	**Pinedale Array**	**79.14**	**333**	P	**P**	**04 04 12.8**	**+1.1**
	comp=Z,1.2nm,0.9s,baz=172,slow=4.0,SNR=8.7						
	comp=Z,1.2nm,0.9s						
PDAR	**Pinedale Array**	**79.14**	**333**	P	**P**	**04 04 11.1**	**-0.6**
NVAR	**Mina Array Bea**	**79.58**	**325**	P	**P**	**04 04 16.0**	**+1.8**
	comp=Z,0.4nm,0.6s,baz=148,slow=7.1,SNR=3.7						
	comp=Z,0.4nm,0.6s						
ULM	**Lac du Bonnet**	**81.57**	**345**	P	**P**	**04 04 25.6**	**+1.4**
	comp=Z,3.9nm,0.9s,baz=130,slow=2.3,SNR=4.4						
	comp=Z,3.9nm,0.9s						
HLID	**Hailey**	**81.81**	**331**	P	**P**	**04 04 25.9**	**0.0**
HLID				IAmb	IAmb	04 04 29.8	
	comp=Z,2.8nm,1.1s						
TOA0	**Torodi Ar. Sit**	**82.83**	**71**	P	**P**	**04 04 32.2**	**+0.5**
TOA0				IAmb	IAmb	04 04 35.7	
	comp=Z,4.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**82.83**	**71**	P	**P**	**04 04 32.8**	**+1.1**
	comp=Z,4.2nm,1.0s,baz=272,slow=4.1,SNR=18						
	comp=Z,4.2nm,1.0s						
TORD	**Torodi Ar. Bea**	**82.83**	**71**	P	**P**	**04 04 33.0**	**+1.3**
TORD				IAmb	IAmb	04 04 35.7	
	comp=Z,4.0nm,0.9s						
LBTB	**Lobatse**	**84.73**	**116**	LR	LR	04 40 16.4	
	comp=Z,39nm,21.0s,baz=151,slow=34						
FCC	**Fort Churchill**	**89.25**	**349**	P	**P**	**04 05 02.5**	**+0.2**
AFI	**Afiamalu**	**91.33**	**253**	LR	LR	04 36 06.3	
	comp=Z,41nm,19.3s,baz=216,slow=29						
ESDC	**Sonseca Array**	**93.33**	**46**	LR	LR	04 45 25.5	
	comp=Z,24nm,18.6s,baz=176,slow=34						
YKA	**Yellowknife Ar**	**97.20**	**342**	P	Pdif	04 05 39.7	+0.7
	comp=Z,0.4nm,0.9s,baz=144,slow=3.9,SNR=5.8						
	comp=Z,0.4nm,0.9s						
AKASG	**Malin Array Be**	**118.97**	**45**	PKP	**PKPdf**	**04 10 55.4**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=266,slow=2.0,SNR=4.2						
ASAR	**Alice Springs**	**121.86**	**209**	PKP	**PKPdf**	**04 11 01.9**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=193,slow=2.6,SNR=5.3						
WRA	**Warramunga Arr**	**124.94**	**211**	PKP	**PKPdf**	**04 11 08.1**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=161,slow=1.7,SNR=16						
KK31	**Karatay Array**	**147.15**	**54**	PKPbc	**PKPdf**	**04 11 48.8**	**+0.9**
KKAR	**Karatay Array**	**147.15**	**54**	PKPbc	**PKPdf**	**04 11 48.6**	**+0.7**
KURK	**Kurchatov**	**149.24**	**37**	PKPbc	**PKPbc**	**04 11 54.1**	**-1.2**
ZALV	**Zalesovo Beam**	**150.03**	**27**	PKP	**PKPdf**	**04 11 53.4**	**+1.2**
	comp=Z,11nm,0.8s,baz=306,slow=2.8,SNR=20						
ZALV				PKPbc	**PKiKP**	**04 11 58.7**	**+0.7**
	comp=Z,11nm,0.8s,baz=301,slow=3.0,SNR=26						
KSH	**Kashi**	**151.96**	**60**	PKPbc	**PKiKP**	**04 12 04.5**	**+1.8**
MJAR	**Matsushiro Arr**	**153.24**	**294**	PKPab	**PKPab**	**04 12 18.7**	**+1.8**
	comp=Z,1.6nm,0.7s,baz=109,slow=2.2,SNR=6.3						
MKAR	**Makanchi Array**	**153.44**	**41**	PKPbc	**PKiKP**	**04 12 06.6**	**+1.3**
	comp=Z,1.9nm,0.7s,baz=327,slow=1.8,SNR=17						
MKAR				PKPab	**PKPab**	**04 12 16.1**	**-1.4**
	comp=Z,1.3nm,0.7s,baz=306,slow=1.3,SNR=9.7						
SONM	**Songino Array**	**161.14**	**2**	PKPab	**PKPab**	**04 12 52.6**	**+2.0**
	comp=Z,0.5nm,0.8s,baz=316,slow=7.3,SNR=4.6						
PZH	**PanZhiHua**	**174.27**	**114**	PKP	**PKPdf**	**04 12 14.1**	**-3.2**

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*IDC **19** 04:09:43.4±1.4, 28°.04N×104°.85E, h0^{km}, mb3.5/3, mbtmp3.4/4, ML3.5/1, MS3.7/1, Error ellipse: s-maj=91.1km s-min=24.0km az=63.0*

ISC 19 04:09:44.8±1.4**, 28°.1N**±0°.1×**105°.0E**±0°.2**, h10**^{km}**, n6,**
σ**0**^{s}.**31**/6**, mb3.5**/3**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XAN	**Xi'an**	**6.81**	**29**	Pg	**Pb**	**04 11 43.3**	**+0.1**
XAN				Sn	**Sn**	**04 12 42.4**	**0.0**
XAN				Sg	Sg	04 13 16.1	-7.2
XAN				smax	smax		
	comp=N,28nm,1.0s						
XAN				smax	smax		
	comp=E,23nm,1.2s						
SONM	**Songino Array**	**19.71**	**3**	P	**Pn**	**04 14 15.6**	**-0.3**
	comp=E,0.1nm,0.3s,baz=179,slow=12,SNR=3.0						
	comp=E,0.4nm,0.5s						
MKAR	**Makanchi Array**	**25.75**	**322**	P	**P**	**04 15 15.7**	**+0.1**
	comp=E,0.8nm,0.7s,baz=132,slow=11,SNR=7.5						
	comp=E,0.8nm,0.7s						
KVAR	**Kislovodsk Arr**	**51.59**	**305**	LR	LR	04 45 08.5	
	comp=E,65nm,18.3s,baz=87,slow=41						
WRA	**Warramunga Arr**	**55.60**	**146**	P	**P**	**04 19 20.5**	**-0.3**
	comp=E,0.5nm,0.8s,baz=335,slow=8.3,SNR=4.9						
	comp=E,0.5nm,0.8s						
ASAR	**Alice Springs**	**58.57**	**149**	P	**P**	**04 19 42.2**	**+0.3**
	comp=E,0.2nm,0.5s,baz=327,slow=7.0,SNR=4.8						
	comp=E,0.2nm,0.5s						

ROM 19 04:29:49.4±0.0**, 42°.800N**±0°.003×**13°.124E**±0°.004**,**
h11^{km}**, ML1.5**/16**, 14C-3D, Error ellipse: s-maj=0.3km**
s-min=0.3km az=100.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1214	**Arquata del Tr**	**0.07**	**123**	⇓P	Pg	04 29 52.1	+0.2
T1214				S	Sg	04 29 53.8	0.0
T1214				AML	AML		
	comp=E,1050µm,0.2s						
T1214				AML	AML		
	comp=E,1100µm,0.2s						
T1214				AML	AML		
	comp=N,1205µm,0.3s						
T1214				AML	AML		
	comp=N,1255µm,0.3s						
T1245	**Castelsantange**	**0.07**	**40**	P	Pg	04 29 52.1	+0.2
T1245				S	Sg	04 29 53.9	+0.2
T1245				AML	AML		
	comp=E,1250µm,0.9s						
T1245				AML	AML		
	comp=N,1655µm,0.4s						
T1245				AML	AML		
	comp=E,1380µm,0.2s						
T1245				AML	AML		
	comp=N,1755µm,0.4s						
T1216	**Preci, Frazion**	**0.12**	**320**	⇑P	Pg	04 29 52.8	+0.5
T1216				S	Sg	04 29 55.2	+0.7
T1216				AML	AML		
	comp=E,186µm,1.3s						
T1216				AML	AML		
	comp=N,206µm,0.5s						
T1216				AML	AML		
	comp=E,186µm,0.7s						
MC2	**Monte Cornacci**	**0.12**	**23**	⇑P	Pg	04 29 53.0	+0.4
MC2				S	Sg	04 29 55.8	+0.9
T1218	**Civita (PG)**	**0.13**	**183**	⇑P	Pg	04 29 52.9	+0.3

T1218				S	Sg	04 29 55.6	+0.8
T1218				AML	AML		
	comp=E,582µm,0.8s						
T1218				AML	AML		
	comp=N,554µm,1.4s						
T1218				AML	AML		
	comp=E,596µm,0.8s						
T1218				AML	AML		
	comp=N,581µm,1.4s						
T1218				AML	AML		
	comp=E,596µm,0.8s						
T1218				AML	AML		
	comp=N,582µm,1.4s						
T1218				AML	AML		
	comp=N,582µm,0.6s						
T1218				AML	AML		
	comp=E,582µm,0.8s						
T1218				AML	AML		
	comp=N,554µm,0.6s						
T1217	**Poggiodomo (PG**	**0.17**	**238**	⇑P	Pg	04 29 53.6	+0.4
T1217				S	Sg	04 29 57.0	+1.3
T1217				AML	AML		
	comp=E,224µm,0.4s						
T1217				AML	AML		
	comp=N,246µm,0.4s						
T1217				AML	AML		
	comp=E,223µm,0.4s						
T1217				AML	AML		
	comp=E,223µm,1.6s						
T1217				AML	AML		
	comp=N,246µm,1.6s						
MMO1	**Montemonaco**	**0.18**	**56**	⇑P	Pg	04 29 53.8	+0.4
MMO1				S	Sg	04 29 57.3	+1.2
SMA1	**SAN MARTINO**	**0.23**	**137**	P	Pg	04 29 54.6	+0.4
SMA1				S	Sg	04 29 59.5	+2.1
SMA1				AML	AML		
	comp=N,160µm,0.5s						
SMA1				AML	AML		
	comp=E,170µm,0.3s						
T1241	**Roccafluvione,**	**0.23**	**76**	⇑P	Pg	04 29 54.7	+0.4
T1241				S	Sg	04 29 58.6	+1.1
T1241				AML	AML		
	comp=E,188µm,0.3s						
T1241				AML	AML		
	comp=N,209µm,0.2s						
FDMO	**Fiordimonte**	**0.24**	**353**	⇑P	Pg	04 29 54.9	+0.5
FDMO				AML	AML		
	comp=E,138µm,0.1s						
FDMO				AML	AML		
	comp=N,115µm,0.8s						
FDMO				AML	AML		
	comp=N,115µm,1.2s						
CESI	**CESI - Serrava**	**0.26**	**322**	⇑P	Pg	04 29 55.4	+0.6
CESI				AML	AML		
	comp=E,114µm,0.2s						
CESI				AML	AML		
	comp=N,159µm,0.4s						
CESI				AML	AML		
	comp=E,114µm,1.8s						
T1219	**Muccia, Frazio**	**0.27**	**341**	⇑P	Pg	04 29 55.4	+0.4
T1219				AML	AML		
	comp=N,234µm,1.0s						
T1219				AML	AML		
	comp=N,216µm,0.3s						
T1219				AML	AML		
	comp=E,216µm,0.2s						
T1219				AML	AML		
	comp=E,200µm,0.1s						
RM33	**Pellescritta (**	**0.30**	**167**	⇑P	Pg	04 29 55.6	+0.2
RM33				AML	AML		
	comp=E,68µm,0.1s						
RM33				AML	AML		
	comp=N,97µm,0.9s						
T1220	**Camerino, Fraz**	**0.31**	**355**	P	Pg	04 29 54.6	-1.1
T1211	**Morro Reatino**	**0.33**	**217**	⇑P	Pg	04 29 56.3	+0.3
T1211				S	Sb	04 30 01.9	-0.9
ARRO	**Arrone**	**0.34**	**230**	⇑P	Pg	04 29 56.6	+0.4
ARRO				AML	AML		
	comp=E,67µm,1.1s						
ARRO				AML	AML		
	comp=N,66µm,1.1s						
ARRO				AML	AML		
	comp=E,67µm,0.9s						
T1247	**Pizzolo (AQ)**	**0.38**	**160**	⇑P	Pb	04 29 57.9	-0.3
TERO	**Teramo**	**0.40**	**116**	P	Pg	04 29 57.3	+0.1
TERO				AML	AML		
	comp=E,59µm,0.1s						
TERO				AML	AML		
	comp=N,60µm,0.1s						
T1222	**Castel Sant'An**	**0.40**	**189**	S	Sb	04 30 04.0	-0.7
ASSB	**Assisi San Ben**	**0.42**	**306**	P	Pg	04 29 58.0	+0.3
ASSB				AML	AML		
	comp=E,51µm,1.0s						
ASSB				AML	AML		
	comp=N,42µm,1.4s						
ASSB				AML	AML		
	comp=E,51µm,1.0s						
ASSB				AML	AML		
	comp=N,42µm,0.6s						
SNTG	**Esanatoglia**	**0.47**	**344**	P	Pg	04 29 59.0	+0.3
GIGS	**Gran Sasso**	**0.48**	**137**	P	Pg	04 29 58.9	+0.1
ATCC	**AVT- Casa Cast**	**0.52**	**317**	⇓P	Pb	04 30 00.1	-0.5
ATCC				AML	AML		
	comp=E,54µm,1.0s						
ATCC				AML	AML		
	comp=N,44µm,1.4s						
ATCC				AML	AML		
	comp=N,44µm,0.6s						
EL6	**Elcito**	**0.53**	**358**	⇓P	Pg	04 30 00.0	+0.3
FIAM	**Fiamignano**	**0.53**	**181**	P	Pg	04 29 59.5	-0.3
FOSV	**Fossato di Vic**	**0.56**	**332**	P	Pg	04 30 00.7	+0.3
CING	**Cingoli**	**0.58**	**5**	⇑P	Pg	04 30 00.8	+0.1

ROM 19 04:30:29.0±0.3**, 42°.942N**±0°.005×**13°.026E**±0°.007**,**
h10^{km}±1^{km}**, ML1.1**/4**, 5C-4D, Error ellipse: s-maj=0.6km**
s-min=0.1km az=43.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1216	**Preci, Frazion**	**0.05**	**186**	⇓P	Pg	04 30 31.3	+0.2
T1216				S	Sg	04 30 32.8	+0.3
T1216				AML	AML		
	comp=E,179µm,0.2s						
T1216				AML	AML		
	comp=N,212µm,0.3s						
T1216				AML	AML		
	comp=N,212µm,0.3s						
T1216				AML	AML		
	comp=N,212µm,1.7s						
T1216				AML	AML		
	comp=E,179µm,0.2s						
FDMO	**Fiordimonte**	**0.10**	**25**	⇓P	Pg	04 30 32.0	+0.3
FDMO				S	Sg	04 30 34.2	+0.5
FDMO				AML	AML		
	comp=E,76µm,1.4s						
FDMO				AML	AML		
	comp=N,94µm,0.2s						
FDMO				AML	AML		
	comp=E,75µm,1.4s						
FDMO				AML	AML		
	comp=E,75µm,0.6s						
CESI	**CESI - Serrava**	**0.11**	**305**	P	Pg	04 30 32.3	+0.5
CESI				S	Sg	04 30 34.6	+0.8
CESI				AML	AML		
	comp=E,246µm,0.1s						
CESI				AML	AML		
	comp=N,306µm,0.1s						
CESI				AML	AML		
	comp=N,306µm,1.9s						
T1219	**Muccia, Frazio**	**0.12**	**353**	⇓P	Pg	04 30 32.2	+0.4
T1219				S	Sg	04 30 34.5	+0.6
MC2	**Monte Cornacci**	**0.12**	**103**	⇓P	Pg	04 30 32.3	+0.2
MC2				S	Sg	04 30 35.7	+1.4
T1245	**Castelsantange**	**0.15**	**126**	⇑P	Pg	04 30 32.6	+0.2
T1245				S	Sg	04 30 35.4	+0.6
T1245				AML	AML		
	comp=N,162µm,0.1s						
T1245				AML	AML		
	comp=E,124µm,0.1s						
T1256	**Bolognola (MC)**	**0.16**	**66**	P	Pg	04 30 32.9	+0.3
T1256				S	Sg	04 30 36.1	+0.9
T1220	**Camerino, Fraz**	**0.17**	**15**	⇑P	Pg	04 30 33.2	+0.5
T1212	**Cascia, Frazio**	**0.19**	**176**	P	Pg	04 30 33.6	+0.6
MMO1	**Montemonaco**	**0.23**	**101**	P	Pg	04 30 33.8	+0.2
T1214	**Arquata del Tr**	**0.23**	**144**	⇑P	Pg	04 30 33.9	+0.1
ASSB	**Assisi San Ben**	**0.29**	**291**	⇑P	Pg	04 30 35.1	+0.3
TERO	**Teramo**	**0.53**	**127**	⇑P	Pg	04 30 39.1	-0.2

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*JMA **19** 04:34:14.4±0.2, 37°.1N±0°.3×141°.4E±0°.8, h27^{km}±1^{km}, MV3.6/40, E OFF FUKUSHIMA PREF*
*NIED **19** 04:34:14.4, 37°.14N×141°.44E, h27^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-1.95; M$_{\theta\theta}$0.95; M$_{\phi\phi}$1.00; M$_{r\theta}$-0.64; M$_{\theta\phi}$1.49; M$_{\phi r}$1.38; Fault plane solution: M$_0$2.71000×10^{14} NP1: φ$_s$196.00000°, δ60.00000°, λ-126.00000°. NP2: φ$_s$71.00000°, δ45.00000°, λ-45.00000°.*
*IDC **19** 04:34:18.2±3.1, 37°.08N×141°.38E, h40^{km}±27^{km}, mb3.4/10, mbtmp3.6/14, ML3.2/4 Error ellipse: s-maj=25.3km s-min=20.4km az=127.0*
ISC 19 04:34:15.4±1.1**, 37°.13N**±0°.04×**141°.39E**±0°.05**, h19**^{km}±3^{km}**,**
n33, σ0ˢ89/36**, mb3.6**/10**, 4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.47**	**300**	*i* P	**Pg**	**04 34 24.1**	**-0.8**
JFK				S	**Sg**	**04 34 31.1**	**-0.3**
ONAJ	**Iwakimizuishiy**	**0.47**	**266**	P	**Pg**	**04 34 24.5**	**-0.5**
ONAJ				S	**Sb**	**04 34 31.8**	**+0.1**
JFFD	**Fukushimafurud**	**0.66**	**267**	⇓*i*P	**Pb**	**04 34 27.6**	**-0.6**
JFFD				⇓S	**Sg**	**04 34 37.4**	**+0.1**
JMST	**Minamisoumatoc**	**0.71**	**326**	*i* P	**Pb**	**04 34 28.1**	**-1.0**
JMST				S	**Sb**	**04 34 38.4**	**-0.1**
JHO	**Hitachi**	**0.84**	**232**	⇓*i*P	**Pb**	**04 34 29.9**	**-1.4**
JHO				⇓S	**Sb**	**04 34 42.0**	**-0.2**
JMM	**Marumori**	**0.87**	**327**	*i* P	**Pb**	**04 34 30.8**	**-1.1**
JMM				S	**Sb**	**04 34 42.9**	**-0.3**
JOTO	**OTAMA OYAMA**	**0.94**	**297**	*i* P	**Pb**	**04 34 32.7**	**-0.3**
JOTO				S	**Sg**	**04 34 45.8**	**-0.3**
JIO	**Ouri**	**1.32**	**359**	P	**Pn**	**04 34 37.4**	**-1.3**
JIO				S	**Sn**	**04 34 55.1**	**-0.7**
JOU	**Okura**	**1.36**	**335**	P	**Pn**	**04 34 39.0**	**-0.3**
JOU				S	**Sb**	**04 34 57.4**	**+0.3**
JFY	**Yanaizu**	**1.37**	**282**	P	**Pn**	**04 34 39.9**	**+0.4**
JFY				S	**Sb**	**04 34 58.4**	**+0.9**
MJAR	**Matsushiro Arr**	**2.62**	**258**	P	**Pn**	**04 34 57.6**	**+1.0**
	1.2nm,0.3s,baz=74,slow=10,SNR=107						
MJAR				S	**Sb**	**04 35 31.8**	**-1.7**
	22nm,0.8s,baz=18,slow=32,SNR=3.4						
	8.5nm,0.4s						
ASAJ	**Asahikawa**	**7.04**	**7**	P	**Pn**	**04 35 58.2**	**+0.9**
	0.8nm,0.3s,baz=191,slow=34,SNR=1.8						
	2.1nm,0.3s						
USRK	**Ussuriysk Ar.**	**10.03**	**318**	P	**Pn**	**04 36 40.6**	**+2.2**
	0.1nm,0.3s,baz=133,slow=14,SNR=2.0						
	1.1nm,0.6s						
KSRS	**Korea Array**	**10.73**	**276**	P	**Pn**	**04 36 49.5**	**+1.5**
	0.2nm,0.3s,baz=88,slow=15,SNR=1.6						
	0.4nm,0.5s						
SONM	**Songino Array**	**27.71**	**304**	P	**P**	**04 40 02.6**	**+0.1**
	0.4nm,0.5s,baz=104,slow=6.1,SNR=2.7						
	0.4nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**28.22**	**121**	T	T	05 09 35.3	
	baz=314,slow=75,SNR=220						
H11N1	**WAKE ISLAND Hy**	**28.23**	**121**	T	T	05 09 36.0	
	baz=314,slow=75,SNR=216						
H11N3	**WAKE ISLAND Hy**	**28.23**	**121**	T	T	05 09 36.6	
	baz=314,slow=75,SNR=152						
H11S1	**WAKE ISLAND Hy**	**28.93**	**123**	T	T	05 10 29.5	
	baz=316,slow=76,SNR=57						
H11S3	**WAKE ISLAND Hy**	**28.93**	**123**	T	T	05 10 25.8	
	baz=316,slow=76,SNR=48						
H11S2	**WAKE ISLAND Hy**	**28.95**	**123**	T	T	05 10 32.0	
	baz=316,slow=76,SNR=33						
ZALV	**Zalesovo Beam**	**41.83**	**312**	P	**P**	**04 42 04.5**	**+0.7**
	1.0nm,0.7s,baz=96,slow=11,SNR=4.0						
	1.0nm,0.7s						
MKAR	**Makanchi Array**	**44.05**	**302**	P	**P**	**04 42 21.9**	**0.0**
	0.6nm,0.6s,baz=88,slow=11,SNR=5.1						
	0.6nm,0.6s						
ILAR	**Eielson Array**	**49.42**	**32**	P	**P**	**04 43 04.4**	**+0.7**
	0.7nm,0.8s,baz=263,slow=5.7,SNR=8.6						
ILAR				PcP	**PcP**	**04 44 24.1**	**-1.6**
	0.3nm,0.6s,baz=264,slow=5.6,SNR=2.2						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**57.16**	**188**	P	**P**	**04 44 00.4**	**-0.5**
	0.4nm,0.5s,baz=4.6,slow=7.3,SNR=10						
	0.4nm,0.5s						
YKA	**Yellowknife Ar**	**63.73**	**30**	P	**P**	**04 44 45.8**	**+0.4**
	0.3nm,0.8s,baz=304,slow=6.6,SNR=3.9						
	0.3nm,0.8s						
FINES	**FINESS Array B**	**68.72**	**332**	P	**P**	**04 45 17.8**	**+0.4**
	1.5nm,0.8s,baz=38,slow=7.0,SNR=2.4						
	1.5nm,0.8s						
AKASG	**Malin Array Be**	**74.20**	**322**	P	**P**	**04 45 50.7**	**0.0**
	0.6nm,0.5s,baz=44,slow=5.8,SNR=3.1						
	0.6nm,0.5s						
NVAR	**Mina Array Bea**	**74.95**	**53**	P	**P**	**04 45 56.1**	**+0.6**
	0.2nm,0.6s,baz=269,slow=4.4,SNR=2.3						
	0.2nm,0.6s						
PDAR	**Pinedale Array**	**77.61**	**45**	P	**P**	**04 46 10.7**	**+0.1**
	0.1nm,0.4s,baz=310,slow=5.6,SNR=1.4						
	0.1nm,0.4s						
H03N2	**Juan Fernandez**	**147.06**	**96**	T	T	07 38 15.6	
	baz=291,slow=76,SNR=10						
H03N3	**Juan Fernandez**	**147.07**	**96**	T	T	07 38 17.0	
	baz=291,slow=76,SNR=9.4						
H03N1	**Juan Fernandez**	**147.07**	**96**	T	T	07 38 15.2	
	baz=291,slow=76,SNR=13						

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*IDC **19** 04:39:35.9±0.8, 36°.97N×141°.51E, h0^{km}, mb3.8/14, mbtmp3.8/19, ML3.2/5, MS2.9/6, Error ellipse: s-maj=19.3km s-min=16.0km az=142.0*
*JMA **19** 04:39:38.2±0.2, 37°.2N±0°.3×141°.4E±0°.9, h27^{km}±1^{km}, MV3.8/35, E OFF FUKUSHIMA PREF*
*NIED **19** 04:39:38.2, 37°.15N×141°.42E, h27^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-4.18; M$_{\theta\theta}$1.00; M$_{\phi\phi}$3.18; M$_{r\theta}$-1.72; M$_{\theta\phi}$2.57; M$_{\phi r}$0.85; Fault plane solution: M$_0$4.96000×10^{14} NP1:φ$_s$56.00000°, δ51.00000°, λ-59.00000°. NP2:φ$_s$192.00000°, δ48.00000°, λ-123.00000°.*
ISC 19 04:39:36.7±2.2**, 37°.10N**±0°.06×**141°.50E**±0°.08**, h2**^{km}±13^{km}**,**
n40, σ0ˢ92/34**, mb3.9**/14**, MS3.5**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.56**	**271**	P	**Pg**	**04 39 48.1**	**+0.6**
ONAJ				S	**Sg**	**04 39 55.7**	**+0.8**
JFK	**Kawauchi**	**0.57**	**299**	*i* P	**Pg**	**04 39 47.8**	**+0.2**
JFK				S	**Sg**	**04 39 54.9**	**-0.2**
JFFD	**Fukushimafurud**	**0.75**	**270**	P	**Pg**	**04 39 51.3**	**+0.1**
JFFD				S	**Sg**	**04 40 00.8**	**-0.2**
JMST	**Minamisoumatoc**	**0.80**	**322**	*i* P	**Pg**	**04 39 51.9**	**-0.2**
JMST				S	**Sg**	**04 40 01.8**	**-0.5**
JHO	**Hitachi**	**0.89**	**237**	*i* P	**Pg**	**04 39 53.7**	**-0.1**
JMM	**Marumori**	**0.95**	**324**	*i* P	**Pg**	**04 39 54.6**	**-0.5**
JMM				*e*S	**Sg**	**04 40 06.4**	**-1.0**
JOTO	**OTAMA OYAMA**	**1.04**	**297**	P	**Pg**	**04 39 56.4**	**-0.3**
JOTO				*e*S	**Sg**	**04 40 09.4**	**-0.7**
MJAR	**Matsushiro Arr**	**2.70**	**259**	Pn	**Pn**	**04 40 21.2**	**+0.1**
	1.3nm,0.3s,baz=72,slow=10.0,SNR=28						
MJAR				Sn	**Sn**	**04 40 55.2**	**+0.8**
	1.4nm,0.3s,baz=88,slow=28,SNR=4.8						
MJAR				LR	LR	04 40 55.5	
	comp=Z,28nm,19.9s,baz=30,slow=30						
	9.4nm,0.4s						
ASAJ	**Asahikawa**	**7.06**	**6**	Pn	**Pn**	**04 41 22.8**	**+1.7**
	1.3nm,0.3s,baz=328,slow=18,SNR=4.8						
	3.6nm,0.4s						
USRK	**Ussuriysk Ar.**	**10.12**	**317**	Pn	**Pn**	**04 42 03.1**	**+0.1**
	0.2nm,0.3s,baz=133,slow=14,SNR=3.9						
	0.7nm,0.6s						
KSRS	**Korea Array**	**10.83**	**276**	Pn	**Pn**	**04 42 12.3**	**-0.4**
	0.1nm,0.3s,baz=87,slow=15,SNR=1.5						
KSRS				LR	LR	04 45 58.6	
	comp=Z,43nm,20.7s,baz=155,slow=35						
	0.3nm,0.4s						
KLR	**Kul'dur**	**14.05**	**333**	LR	LR	04 48 18.2	
	comp=Z,37nm,19.2s,baz=179,slow=37						
PETK	**Petropavlovsk-**	**19.60**	**30**	P	**Pn**	**04 44 08.6**	**+1.3**
	0.1nm,0.3s,baz=204,slow=10,SNR=2.3						
	2.7nm,0.9s						
SEY	**Seymchan**	**26.72**	**11**	P	**P**	**04 45 17.8**	**+0.6**
	0.5nm,0.3s,baz=212,slow=9.5,SNR=1.6						
	0.5nm,0.3s						
SONM	**Songino Array**	**27.81**	**304**	P	**P**	**04 45 27.2**	**-0.1**
	0.9nm,0.6s,baz=108,slow=8.6,SNR=6.7						
	0.9nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.12**	**121**	T	T	05 14 59.9	
	baz=314,slow=75,SNR=195						
H11N1	**WAKE ISLAND Hy**	**28.13**	**121**	T	T	05 15 00.4	
	baz=314,slow=75,SNR=290						
H11N3	**WAKE ISLAND Hy**	**28.14**	**121**	T	T	05 15 01.3	
	baz=314,slow=75,SNR=235						
H11S1	**WAKE ISLAND Hy**	**28.83**	**123**	T	T	05 15 50.4	
	baz=315,slow=75,SNR=81						
H11S3	**WAKE ISLAND Hy**	**28.83**	**123**	T	T	05 15 50.8	
	baz=315,slow=75,SNR=41						
H11S2	**WAKE ISLAND Hy**	**28.85**	**123**	T	T	05 15 52.2	
	baz=315,slow=75,SNR=45						
ZALV	**Zalesovo Beam**	**41.92**	**312**	P	**P**	**04 47 30.1**	**+1.6**
	2.1nm,0.8s,baz=77,slow=6.4,SNR=8.8						
	2.1nm,0.8s						
MKAR	**Makanchi Array**	**44.15**	**302**	P	**P**	**04 47 45.5**	**-1.1**
	1.5nm,0.8s,baz=90,slow=9.7,SNR=13						
	1.5nm,0.8s						
KDAK	**Kodiak Island**	**47.01**	**42**	P	**P**	**04 48 08.5**	**-0.5**
	3.1nm,0.8s,baz=311,slow=20,SNR=1.2						
	3.1nm,0.8s						
ILAR	**Eielson Array**	**49.40**	**32**	P	**P**	**04 48 28.6**	**+1.1**
	1.2nm,0.7s,baz=263,slow=5.5,SNR=7.8						
	1.2nm,0.7s						
BVAR	**Borovoye Array**	**50.58**	**312**	LR	LR	05 09 58.1	
	comp=Z,26nm,19.2s,baz=146,slow=36						
INK	**Inuvik**	**54.30**	**27**	P	**P**	**04 49 03.6**	**-0.3**
	0.4nm,0.4s,baz=251,slow=16,SNR=1.8						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**57.13**	**188**	P	**P**	**04 49 23.1**	**-1.7**
	0.4nm,0.6s,baz=4.9,slow=7.3,SNR=12						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**60.86**	**188**	P	**P**	**04 49 50.2**	**-0.4**
	0.4nm,0.8s,baz=17,slow=9.7,SNR=2.5						
	0.4nm,0.8s						
ARCES	**ARCESS Array B**	**63.96**	**339**	P	**P**	**04 50 12.3**	**+1.4**
	4.0nm,0.9s,baz=50,slow=8.4,SNR=4.2						
	4.0nm,0.9s						
FINES	**FINESS Array B**	**68.79**	**332**	P	**P**	**04 50 41.1**	**-0.8**
	2.0nm,0.8s,baz=46,slow=8.4,SNR=2.8						
	2.0nm,0.8s						
GNI	**Garni**	**71.73**	**307**	LR	LR	05 25 37.3	
	comp=Z,22nm,18.9s,baz=255,slow=38						
AKASG	**Malin Array Be**	**74.29**	**322**	P	**P**	**04 51 14.5**	**-0.8**
	1.0nm,0.5s,baz=46,slow=6.1,SNR=4.5						
	1.0nm,0.5s						
PDAR	**Pinedale Array**	**77.57**	**45**	P	**P**	**04 51 33.0**	**-1.5**
	0.2nm,0.6s,baz=284,slow=3.6,SNR=2.0						
	0.2nm,0.6s						
LPIG	**La Paz**	**89.10**	**60**	LR	LR	05 32 07.7	
	comp=Z,22nm,18.3s,baz=186,slow=35						
TXAR	**Lajitas Array**	**90.03**	**52**	P	**P**	**04 52 39.3**	**+1.0**
	0.1nm,0.6s,baz=335,slow=4.0,SNR=2.2						
	0.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**117.34**	**315**	PKP	**PKPdf**	**04 58 23.4**	**-1.0**
	0.2nm,0.6s,baz=28,slow=2.0,SNR=1.1						
H03N2	**Juan Fernandez**	**146.96**	**96**	T	T	07 43 41.1	
	baz=291,slow=76,SNR=4.1						
H03N3	**Juan Fernandez**	**146.97**	**96**	T	T	07 43 38.8	
	baz=291,slow=76,SNR=4.4						
H03N1	**Juan Fernandez**	**146.98**	**96**	T	T	07 43 40.0	
	baz=291,slow=76,SNR=11						

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*IDC **19** 04:49:59.9±4.3, 40°.95S×90°.64W, h0^{km}, mb3.7/6, mbtmp3.7/7, ML3.2/1, MS4.0/38, Error ellipse: s-maj=108.2km s-min=35.0km az=8.0*
*GCMT **19** 04:50:00.0±0.2, 41°.25S±0°.01×90°.95W±0°.02, h22^{km}±1^{km}, MW5.0/109, Moment Tensor Solution. s45,c50; s109,c152; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.24±.20; M$_{\theta\theta}$0.71±.15; M$_{\phi\phi}$0.53±.14; M$_{r\theta}$-1.06±.23; M$_{\theta\phi}$-3.99±.10; M$_{\phi r}$0.35±.20; Best double couple: M$_0$4.13200×10^{16} NP1:φ$_s$90.00000°, δ88.00000°, λ-164.00000°. NP2:φ$_s$360.00000°, δ74.00000°, λ-3.00000°. Principal axes: T 4.7780, Plg10.0000°, Azm224.0000°; N -1.2950, Plg74.0000°, Azm99.0000°; P -3.4850, Plg13.0000°, Azm316.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*
ISC 19 04:49:58.9±3.0**, 41°.4S**±0°.5×**90°.6W**±0°.2**, h10**^{km}**, n46,**
σ1ˢ04/7**, mb3.6**/5**, MS4.1**/37**, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03S2	**Juan Fernandez**	**11.92**	**54**	T	T	05 05 11.9	
	baz=228,slow=73,SNR=89						
H03S1	**Juan Fernandez**	**11.93**	**54**	T	T	05 05 14.1	
	baz=228,slow=73,SNR=110						
H03S3	**Juan Fernandez**	**11.94**	**54**	T	T	05 05 19.1	
	baz=228,slow=73,SNR=106						
H03N3	**Juan Fernandez**	**12.19**	**53**	T	T	05 05 35.1	
	baz=229,slow=71,SNR=426						
H03N2	**Juan Fernandez**	**12.19**	**53**	T	T	05 05 26.7	
	baz=229,slow=71,SNR=411						
H03N1	**Juan Fernandez**	**12.20**	**53**	T	T	05 05 31.6	
	baz=229,slow=71,SNR=387						
PLCA	**Paso Flores**	**15.11**	**94**	Pn	**P**	**04 53 37.5**	**-0.2**
	baz=274,slow=9.4,SNR=2.8						
PLCA				LR	LR	04 58 11.1	
	comp=Z,415nm,19.0s,baz=262,slow=32						
	0.5nm,0.7s						
CFA	**Coronel Fontan**	**20.39**	**68**	P	**P**	**04 54 37.0**	**+1.1**
	0.9nm,0.4s,baz=216,slow=11,SNR=3.7						
CFA				LR	LR	05 00 46.6	
	comp=Z,731nm,19.7s,baz=236,slow=32						
	0.9nm,0.4s						
RPN	**Rapa Nui**	**21.01**	**307**	LR	LR	05 00 13.4	
	comp=Z,760nm,21.3s,baz=130,slow=30						
LVC	**Limon Verde**	**26.12**	**51**	LR	LR	05 03 19.3	
	comp=Z,432nm,20.8s,baz=224,slow=31						
PMSA	**Palmer Station**	**27.88**	**156**	LR	LR	05 03 55.8	
	comp=Z,493nm,21.7s,baz=307,slow=30						
CPUP	**Villa Florida**	**31.20**	**72**	LR	LR	05 07 32.5	
	comp=Z,412nm,19.8s,baz=244,slow=34						
LPAZ	**La Paz**	**31.64**	**44**	P	**P**	**04 56 21.5**	**-1.4**
	3.3nm,1.0s,baz=207,slow=6.8,SNR=4.8						
LPAZ				LR	LR	05 06 23.6	
	comp=Z,369nm,19.4s,baz=206,slow=31						
	3.3nm,1.0s						
NNA	**Nana**	**31.69**	**26**	LR	LR	05 05 38.7	
	comp=Z,327nm,20.9s,baz=194,slow=30						
ATAH	**Atahualpa**	**35.82**	**21**	LR	LR	05 07 57.5	
	comp=Z,596nm,20.9s,baz=218,slow=30						
SIV	**San Ignacio**	**35.90**	**54**	LR	LR	05 10 01.6	
	comp=Z,418nm,21.9s,baz=285,slow=34						
BDFB	**Brasilia**	**44.73**	**68**	LR	LR	05 16 26.0	
	comp=Z,424nm,18.5s,baz=205,slow=36						
ROSC	**El Rosal**	**48.37**	**22**	P	**P**	**04 58 42.4**	**+1.0**
	3.2nm,0.5s,baz=108,slow=19,SNR=1.8						
ROSC				LR	LR	05 16 56.9	
	comp=Z,131nm,18.6s,baz=184,slow=34						
	3.2nm,0.5s						
QSPA	**South Pole Qui**	**48.81**	**180**	LR	LR	05 16 41.6	
	comp=Z,183nm,18.6s,baz=132,slow=32						
SNAA	**Sanae**	**50.60**	**156**	LR	LR	05 17 25.2	
	comp=Z,196nm,18.9s,baz=279,slow=32						
JTS	**Las Juntas de**	**51.71**	**7**	LR	LR	05 15 30.6	
	comp=Z,208nm,19.0s,baz=156,slow=30						
SDV	**Santo Domingo**	**53.31**	**25**	LR	LR	05 19 54.9	
	comp=Z,215nm,21.3s,baz=203,slow=34						
VNDA	**Vanda**	**53.57**	**195**	LR	LR	05 17 51.3	
	comp=Z,152nm,19.9s,baz=102,slow=31						
MDP	**Montagnes des**	**57.81**	**46**	LR	LR	05 23 09.8	
	comp=Z,147nm,18.8s,baz=188,slow=35						
RAR	**Rarotonga**	**60.92**	**267**	LR	LR	05 18 52.0	
	comp=Z,61nm,21.2s,baz=125,slow=28						
SJG	**San Juan**	**63.41**	**26**	LR	LR	05 26 60.0	
	comp=Z,138nm,19.1s,baz=176,slow=35						
MAW	**Mawson**	**69.45**	**169**	LR	LR	05 29 24.5	
	comp=Z,120nm,19.9s,baz=195,slow=34						
TXAR	**Lajitas Array**	**71.44**	**348**	P	**P**	**05 01 19.1**	**-0.3**
	0.3nm,0.9s,baz=170,slow=9.8,SNR=3.5						
	0.3nm,0.9s						
AFI	**Afiamalu**	**74.40**	**265**	LR	LR	05 27 32.7	
	comp=Z,127nm,18.1s,baz=136,slow=30						
TKL	**Tuckaleechee C**	**76.96**	**6**	LR	LR	05 29 49.3	
	comp=Z,52nm,21.7s,baz=176,slow=31						
ANMO	**Albuquerque**	**77.39**	**347**	LR	LR	05 29 28.5	
	comp=Z,50nm,18.9s,baz=256,slow=31						
PFO	**Pinyon Flats O**	**78.38**	**338**	LR	LR	05 27 49.7	
	comp=Z,90nm,21.3s,baz=205,slow=29						
SUR	**Sutherland**	**83.14**	**127**	LR	LR	05 32 56.7	
	comp=Z,60nm,21.7s,baz=191,slow=31						
NVAR	**Mina Array Bea**	**83.41**	**338**	P	**P**	**05 02 26.4**	**0.0**

	0.1nm,0.4s,baz=171,slow=6.4,SNR=2.0						
NVAR				LR	LR	05 31 59.6	
	comp=Z,33nm,20.3s,baz=254,slow=30						
	0.1nm,0.4s						
DZM	**Mont Dzumac**	**84.88**	**245**	LR	LR	05 35 32.9	
	comp=Z,135nm,18.3s,baz=204,slow=32						
PDAR	**Pinedale Array**	**85.54**	**346**	P	**P**	**05 02 37.4**	**+0.3**
	0.3nm,0.6s,baz=152,slow=5.9,SNR=3.7						
	0.3nm,0.6s						
SADO	**Sadowa**	**86.42**	**8**	LR	LR	05 35 39.8	
	comp=Z,102nm,20.4s,baz=154,slow=32						
YBH	**Yreka Blue Hor**	**87.74**	**337**	LR	LR	05 33 18.3	
	comp=Z,28nm,22.0s,baz=172,slow=30						
BBTS	**Babate**	**88.02**	**69**	LR	LR	05 41 11.0	
	comp=Z,132nm,18.1s,baz=214,slow=35						
BOSA	**Boshof**	**88.50**	**128**	LR	LR	05 39 45.5	
	comp=Z,51nm,18.2s,baz=192,slow=34						
TSUM	**Tsumeb**	**90.33**	**116**	LR	LR	05 36 18.3	
	comp=Z,39nm,20.1s,baz=170,slow=31						
DBIC	**Dimbokro**	**91.15**	**82**	LR	LR	05 43 12.4	
	comp=Z,42nm,18.1s,baz=222,slow=35						
LBTB	**Lobatse**	**91.35**	**125**	LR	LR	05 40 42.6	
	comp=Z,51nm,18.1s,baz=196,slow=33						
STKA	**Stephens Creek**	**92.65**	**222**	LR	LR	05 38 12.8	
	comp=Z,100nm,18.0s,baz=201,slow=31						
SCHQ	**Schefferville**	**98.00**	**14**	LR	LR	05 44 51.8	
	comp=Z,49nm,18.9s,baz=190,slow=34						
CTA	**Charters Tower**	**99.32**	**233**	LR	LR	05 41 32.4	
	comp=Z,137nm,18.5s,baz=90,slow=31						

WEL 19 05:07:11.5±0.6**, 42°S**±2°×**17°4E**±°**, h5**^{km}±4^{km}**, M2.5**/6**,**
ML2.6/7**, MLv2.5**/6**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=103.0, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHZ	**Kahutara**	**0.22**	**175**	P	Pg	05 07 16.1	+0.3
KHZ				S	Sg	05 07 19.7	+0.9
BSWZ	**Blackbirch Sta**	**0.55**	**29**	P	Pg	05 07 22.4	+0.2
THZ	**Tophouse**	**0.63**	**314**	P	Pg	05 07 23.9	+0.3
CMWZ	**Cape Campbell**	**0.69**	**50**	P	Pb	05 07 25.5	-0.5
TUWZ	**Tuamarina**	**0.83**	**23**	P	Pg	05 07 27.5	0.0
TUWZ				S	Sb	05 07 40.0	+0.1
GVZ	**Greta Valley S**	**0.85**	**204**	P	Pg	05 07 28.1	+0.3
GVZ				S	Sb	05 07 40.8	+0.4
MRNZ	**Matariki Terra**	**0.98**	**324**	P	Pg	05 07 30.4	+0.1
LTZ	**Lake Taylor**	**1.09**	**237**	P	Pg	05 07 31.5	-0.9
TCW	**Tory Channel**	**1.14**	**30**	P	Pg	05 07 32.5	-0.9
TKNZ	**Takaka Hill**	**1.23**	**340**	P	Pg	05 07 34.7	-0.4
DSZ	**Denniston Nort**	**1.35**	**289**	P	Pn	05 07 37.1	0.0
DUWZ	**D'Urville Isla**	**1.43**	**13**	P	Pn	05 07 37.5	-0.6
PLWZ	**Palliser**	**1.44**	**65**	P	Pn	05 07 35.7	-2.6
QRZ	**Quartz Range**	**1.56**	**331**	P	Pn	05 07 40.0	+0.2
OXZ	**Oxford**	**1.57**	**223**	P	Pn	05 07 39.0	-0.9
CAW	**Cannon Point**	**1.59**	**47**	P	Pn	05 07 38.3	-2.0
MQZ	**McQueen's Vall**	**1.64**	**202**	P	Pn	05 07 37.5	-3.4
PAWZ	**Paruwai Farm**	**1.65**	**61**	P	Pn	05 07 38.3	-2.8
KIW	**Kapiti Island**	**1.70**	**39**	P	Pn	05 07 40.3	-1.5
MTW	**Mount Morrison**	**1.82**	**56**	P	Pn	05 07 40.5	-2.9
HOWZ	**Holdsworth Sta**	**1.99**	**50**	P	Pb	05 07 48.3	+0.1
MRZ	**Mangatainoka R**	**2.18**	**46**	P	Pn	05 07 46.0	-2.5
OTVZ	**Oturere**	**3.44**	**29**	P	Pn	05 08 05.2	-0.8
CKHZ	**Cape Kidnapper**	**3.71**	**48**	P	Pn	05 08 07.8	-1.6
WHRZ	**Whale Island**	**5.08**	**33**	P	Pn	05 08 25.1	-3.3

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*IDC **19** 05:07:09.8±1.8, 44°.00N×84°.70E, h0^{km}, mb3.2/3,*
mbtmp3.2/8, ML2.6/5, MS2.9/3, Error ellipse: s-maj=22.8km
s-min=16.7km az=82.0
*SOME **19** 05:07:14.6, 44°.20N×84°.28E, h0^{km}*
*NNC **19** 05:07:15.8±1.2, 44°.10N×84°.36E, h0^{km}, mb3.8, mpv3.4,*
Error ellipse: s-maj=10.7km s-min=4.7km az=130.0
ISC 19 05:07:12.6±1.2**, 43°.87N**±0°.08×**84°.26E**±0°.07**, h10**^{km}**, n58,**
σ**1^{s}48**/54**, mb3.4**/3**, 12C-7D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**3.24**	**335**	⇓Pn	**Pn**	**05 08 05.0**	**+1.6**
	0.1nm,0.2s,baz=148,slow=14,SNR=464						
MK31				⇑Pg	**Pb**	**05 08 12.7**	**+2.6**
	27nm,0.6s,baz=144,slow=17,SNR=104						
MK31				⇑Lg	Lg	05 08 53.6	
	41nm,0.5s,baz=147,slow=30,SNR=9.4						
MKAR	**Makanchi Array**	**3.24**	**335**	Pn	**Pn**	**05 08 04.9**	**+1.5**
	0.7nm,0.3s,baz=148,slow=14,SNR=84						
MKAR				Pg	**Pb**	**05 08 11.6**	**+1.5**
	9.1nm,0.3s,baz=152,slow=19,SNR=110						
MKAR				Lg	Lg	05 08 52.4	
	8.4nm,0.3s,baz=146,slow=29,SNR=4.2						
MKAR				LR	LR	05 09 08.0	
	comp=Z,64nm,19.8s,baz=174,slow=36						
	1.0nm,0.2s						
DJR	**Jarkent**	**3.25**	**280**	Pg	**Pg**	**05 08 16.0**	**+1.2**
	15nm,0.4s						
DJR				Lg	Lg	05 09 00.9	
	82nm,0.6s						
DJR	**Jarkent**	**3.25**	**280**	*e*Pg	**Pg**	**05 08 16.0**	**+1.2**
	15nm,0.4s						
DJR				*e*Lg	Lg	05 09 00.9	
	82nm,0.6s						
MAKZ	**Makanchi**	**3.35**	**332**	⇑Pn	**Pn**	**05 08 06.6**	**+1.7**
	1.0nm,0.4s						
MAKZ				⇑Pg	**Pb**	**05 08 15.0**	**+2.9**
	12nm,0.5s						
MAKZ				⇑Lg	Lg	05 08 57.1	
	54nm,0.8s						
PDGK	**Podgornoye**	**3.50**	**263**	Pg	**Pg**	**05 08 20.1**	**+0.4**
	2.4nm,0.3s						
PDGK				Lg	Lg	05 09 07.1	
	18nm,0.5s						
PDGK	**Podgornoye**	**3.50**	**263**	⇑Pn	**Pb**	**05 08 13.9**	**-0.9**
	3.6nm,0.5s						
PDGK				⇓Pg	**Pg**	**05 08 24.0**	**+4.4**
	11nm,0.7s						
PDGK				⇓Sn	**Sb**	**05 08 57.2**	**-0.2**
	26nm,0.6s						
PDGK				⇑Lg	Lg	05 09 12.4	
	55nm,0.7s						
SHLS	**Shalkode**	**3.56**	**260**	Pg	**Pb**	**05 08 16.4**	**+0.7**
	15nm,0.4s						
SHLS				Lg	Lg	05 09 00.8	
	172nm,0.6s						
SHLS	**Shalkode**	**3.56**	**260**	*e*Pg	**Pb**	**05 08 16.4**	**+0.7**
	15nm,0.4s						
SHLS				*e*Lg	Lg	05 09 00.8	
	172nm,0.6s						
ZSN	**Zaisan**	**3.61**	**7**	*e*Pg	**Pb**	**05 08 16.4**	**0.0**
	22nm,0.3s						
ZSN				*e*Lg	Lg	05 09 01.6	
	94nm,0.6s						
UZB	**Uzynbulak**	**3.88**	**261**	Pg	**Pg**	**05 08 29.1**	**+2.3**
	4.6nm,0.5s						
UZB				Lg	Lg	05 09 22.1	
	24nm,0.5s						
UZB	**Uzynbulak**	**3.88**	**261**	*e*Pg	**Pg**	**05 08 29.1**	**+2.3**
	4.6nm,0.5s						
UZB				*e*Lg	Lg	05 09 22.1	
	24nm,0.5s						
KPKS	**Kokpek**	**4.06**	**266**	Pg	**Pg**	**05 08 30.3**	**0.0**
	6.0nm,0.3s						
KPKS				Lg	Lg	05 09 25.6	
	39nm,0.5s						
KPKS	**Kokpek**	**4.06**	**266**	*e*Pg	**Pg**	**05 08 30.4**	**0.0**
	6.0nm,0.3s						
KPKS				*e*Lg	Lg	05 09 25.6	
	39nm,0.5s						
SATY	**Saty**	**4.33**	**261**	Pg	**Pg**	**05 08 36.0**	**+0.4**
	3.7nm,0.3s						
SATY				Lg	Lg	05 09 34.4	
	26nm,0.7s						
SATY	**Saty**	**4.33**	**261**	*e*Pg	**Pg**	**05 08 36.0**	**+0.4**
	3.7nm,0.3s						
SATY				*e*Lg	Lg	05 09 34.4	
	26nm,0.7s						
KURS	**Kuram**	**4.43**	**267**	Pg	**Pg**	**05 08 39.3**	**+1.9**
	3.0nm,0.5s						
KURS				Lg	Lg	05 09 40.6	
	18nm,0.6s						
KURS	**Kuram**	**4.43**	**267**	*e*Pg	**Pg**	**05 08 39.3**	**+1.9**
	3.0nm,0.5s						
KURS				*e*Lg	Lg	05 09 40.5	
	18nm,0.6s						
ARXS	**Arharly**	**4.65**	**276**	Pg	**Pg**	**05 08 41.9**	**+0.4**
	6.8nm,0.3s						
ARXS				Lg	Lg	05 09 45.2	
	40nm,0.6s						
ARXS	**Arharly**	**4.65**	**276**	*e*Pg	**Pg**	**05 08 41.9**	**+0.4**
	6.8nm,0.3s						
ARXS				*e*Lg	Lg	05 09 45.2	
	40nm,0.6s						
KOTS	**Kotyrbulak**	**5.23**	**265**	Pg	**Pg**	**05 08 53.2**	**+0.5**
	3.3nm,0.4s						
KOTS				Lg	Lg	05 10 04.0	
	22nm,0.4s						
KOTS	**Kotyrbulak**	**5.23**	**265**	*e*Pg	**Pg**	**05 08 53.2**	**+0.5**
	3.3nm,0.4s						
KOTS				*e*Lg	Lg	05 10 04.0	
	22nm,0.4s						
CHKK	**Chushkaly**	**5.26**	**272**	Pg	**Pg**	**05 08 52.4**	**-0.8**
	2.3nm,0.5s						
CHKK				Lg	Lg	05 10 02.8	
	15nm,0.2s						
CHKK	**Chushkaly**	**5.26**	**272**	*e*Pg	**Pg**	**05 08 52.4**	**-0.8**
	2.3nm,0.5s						
CHKK				*e*Lg	Lg	05 10 02.8	
	15nm,0.2s						
KTBS	**Karatobe**	**5.49**	**271**	Pg	**Pg**	**05 08 56.7**	**-0.9**
	2.0nm,0.4s						
KTBS				Lg	Lg	05 10 09.9	
	24nm,0.5s						
KTBS	**Karatobe**	**5.49**	**271**	*e*Pg	**Pg**	**05 08 56.7**	**-0.9**
	2.0nm,0.4s						
KTBS				*e*Lg	Lg	05 10 09.9	
	24nm,0.5s						
IZV	**Izvestkoviy**	**5.63**	**264**	Pg	**Pg**	**05 09 01.1**	**+0.9**
	3.3nm,0.7s						
IZV				Lg	Lg	05 10 18.7	
	11nm,0.4s						
IZV	**Izvestkoviy**	**5.63**	**264**	*e*Pg	**Pg**	**05 09 01.1**	**+0.9**
	3.3nm,0.7s						
IZV				*e*Lg	Lg	05 10 18.7	
	11nm,0.4s						
KUU	**Kurty**	**5.72**	**273**	Pg	**Pg**	**05 09 01.3**	**-0.9**
	2.4nm,0.5s						
KUU				Lg	Lg	05 10 18.1	
	20nm,0.5s						
KUU	**Kurty**	**5.72**	**273**	*e*Pg	**Pg**	**05 09 01.3**	**-0.9**
	2.4nm,0.5s						
KUU				*e*Lg	Lg	05 10 18.1	
	20nm,0.5s						
MTBS	**Maitube**	**5.74**	**265**	Pg	**Pg**	**05 09 02.7**	**+0.2**
	2.2nm,0.4s						
MTBS				Lg	Lg	05 10 20.1	
	10nm,0.4s						
MTBS	**Maitube**	**5.74**	**265**	*e*Pg	**Pg**	**05 09 02.7**	**+0.2**
	2.2nm,0.4s						
MTBS				*e*Lg	Lg	05 10 20.1	
	10nm,0.4s						
KST	**Kastek**	**6.09**	**265**	Pg	**Pg**	**05 09 10.0**	**+0.8**
	1.9nm,0.5s						
KST				Lg	Lg	05 10 33.4	
	10nm,0.6s						
KST	**Kastek**	**6.09**	**265**	*e*Pg	**Pg**	**05 09 10.0**	**+0.8**
	1.9nm,0.5s						
KST				*e*Lg	Lg	05 10 33.4	
	10nm,0.6s						
DGS	**Degeres**	**6.20**	**267**	*e*Pg	**Pg**	**05 09 09.2**	**-2.0**
	2.9nm,0.5s						
DGS				*e*Lg	Lg	05 10 31.4	
	18nm,0.5s						
KRBS	**Karabastau**	**6.21**	**271**	*e*Pg	**Pg**	**05 09 09.3**	**-2.2**
	2.0nm,0.7s						
KRBS				*e*Lg	Lg	05 10 31.6	
	5.1nm,0.6s						
TKM2	**Tokmak 2**	**6.38**	**264**	⇑Pn	Pn	05 08 55.0	+8.2
	3.4nm,0.8s						
TKM2				⇓Lg	Lg	05 10 43.9	
	9.1nm,0.7s						
SGDS	**Sogindy**	**7.00**	**270**	Pg	**Pg**	**05 09 25.8**	**-0.6**
	1.3nm,0.4s						
SGDS				Lg	Lg	05 10 59.7	
	4.7nm,0.6s						
AAK	**Ala-Archa**	**7.23**	**264**	Pn	Pn	05 09 04.2	+5.8
	0.2nm,0.3s,baz=100,slow=17,SNR=2.3						
AAK				Pg	**Pg**	**05 09 30.6**	**-0.4**
	0.3nm,0.3s,baz=342,slow=4.4,SNR=2.5						
AAK				Lg	Lg	05 11 10.1	
	0.2nm,0.3s,baz=319,slow=23,SNR=1.2						
	0.7nm,0.4s						
KURBB	**Kurchatov Arra**	**7.80**	**332**	Pn	**Pn**	**05 09 05.2**	**-0.7**
	0.1nm,0.3s,baz=143,slow=13,SNR=6.9						
KURBB				Sn	**Sn**	**05 10 32.9**	**-1.3**
	0.2nm,0.3s,baz=138,slow=18,SNR=4.5						
KURBB				Lg	Lg	05 11 16.1	
	0.2nm,0.3s,baz=142,slow=31,SNR=5.7						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**7.80**	**332**	⇓Pn	**Pn**	**05 09 06.0**	**+0.1**
	2.0nm,0.5s						
KURBB				⇓Lg	Lg	05 11 19.2	
	65nm,0.7s						
KURK	**Kurchatov**	**7.84**	**333**	⇓Lg	Lg	05 11 21.5	
	31nm,0.7s						
MRKS	**Merke**	**8.12**	**266**	Pg	**Pg**	**05 09 47.0**	**-1.0**
	1.2nm,0.7s						
MRKS				Lg	Lg	05 11 36.1	
	4.5nm,1.1s						
MRKS	**Merke**	**8.12**	**266**	*e*Pg	**Pg**	**05 09 47.0**	**-1.0**
	1.2nm,0.7s						
MRKS				*e*Lg	Lg	05 11 36.1	
	4.5nm,1.1s						
OTUK	**Ortayu**	**9.37**	**302**	⇑Lg	Lg	05 12 13.9	
	11nm,0.8s						
BRZS	**Berezniki**	**10.00**	**312**	Pg	Pn	05 10 15.3	+39
	1.7nm,0.7s						
BRZS				Lg	Lg	05 12 25.7	
	4.8nm,0.7s						
BRZS	**Berezniki**	**10.00**	**312**	*e*P	Pn	05 10 15.3	+39
	1.7nm,0.7s						
BRZS				*e*S	Sn	05 12 25.7	+57
	4.8nm,0.7s						
KK31	**Karatay Array**	**10.02**	**270**	⇑Lg	Lg	05 12 37.8	
	2.9nm,0.7s,baz=71,slow=29,SNR=3.8						
ZALV	**Zalesovo Beam**	**10.09**	**2**	Pn	**Pn**	**05 09 34.5**	**-3.0**
	0.2nm,0.3s,baz=178,slow=14,SNR=6.6						
ZALV				Sn	Sn	05 11 22.1	-8.5
	0.6nm,0.3s,baz=168,slow=24,SNR=6.1						
ZALV				Lg	Lg	05 12 26.5	
	0.2nm,0.3s,baz=178,slow=27,SNR=5.4						
	0.5nm,0.4s						
BVA0	**Borovoye Array**	**12.96**	**320**	⇑Lg	Lg	05 14 05.1	
	12nm,1.1s						
BVAR	**Borovoye Array**	**12.96**	**320**	Pn	**Pn**	**05 10 14.1**	**-2.6**
	baz=124,slow=8.9,SNR=2.0						
BVAR				Lg	Lg	05 14 05.5	
	baz=123,slow=26,SNR=2.7						
	0.7nm,0.5s						
BRVK	**Borovoye**	**13.04**	**320**	⇑Lg	Lg	05 14 05.2	
	8.0nm,1.2s						
SONM	**Songino Array**	**15.91**	**68**	Pn	**Pn**	**05 10 58.5**	**+1.9**
	0.2nm,0.3s,baz=266,slow=11,SNR=16						
SONM				Lg	Lg	05 15 19.2	
	0.1nm,0.3s,baz=261,slow=27,SNR=1.8						
KIRV	**Kirov**	**25.95**	**317**	LR	LR	05 22 34.0	
	comp=Z,50nm,21.1s,baz=166,slow=35						
OBN	**Obninsk**	**32.33**	**307**	LR	LR	05 28 47.1	
	comp=Z,26nm,19.1s,baz=13,slow=40						
NOA	**NORSAR Array B**	**45.09**	**319**	P	**P**	**05 15 28.5**	**0.0**
	0.3nm,0.6s,baz=75,slow=7.9,SNR=1.2						
	0.3nm,0.6s						
YKA	**Yellowknife Ar**	**72.91**	**9**	P	**P**	**05 18 39.7**	**-1.7**
	0.1nm,0.6s,baz=347,slow=5.2,SNR=2.4						
	0.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**75.68**	**275**	P	**P**	**05 18 58.8**	**+0.5**
	0.2nm,0.5s,baz=38,slow=4.9,SNR=1.4						
	0.2nm,0.5s						

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*IDC **19** 05:10:50.9±0.8, 1°.94N×126°.53E, h0^{km}, mb4.0/9,*
mbtmp4.0/9, Error ellipse: s-maj=57.9km s-min=15.9km
az=69.0
*DJA **19** 05:10:55.9±0.4, 2°N±4°×12°6E±°, h10^{km}, M4.0/10, mb4.4/4,*
MLv3.9/10
ISC 19 05:10:57.5±0.7**, 1°.98N**±0°.07×**126°.54E**±0°.09**, h47**^{km}**, n17,**
σ**0^{s}85**/19**, mb4.0**/9**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.46**	**145**	P	**Pn**	**05 11 21.3**	**-0.1**
SGSI	**Sangihe**	**1.97**	**329**	P	**Pn**	**05 11 29.2**	**+0.7**
LBMI	**Labuha**	**2.77**	**160**	P	**Pn**	**05 11 40.7**	**+1.2**
GTOI	**Gorontalo**	**3.77**	**249**	P	**Pn**	**05 11 54.0**	**+0.8**
SANI	**Sanana**	**4.04**	**188**	P	**Pn**	**05 11 56.5**	**-0.4**
LUWI	**Luwuk**	**4.82**	**231**	P	**Pn**	**05 12 08.4**	**+0.9**
MRSI	**Marisa**	**4.83**	**252**	P	**Pn**	**05 12 08.2**	**+0.4**
FAKI	**Fak Fak**	**7.50**	**130**	P	**Pn**	**05 12 45.9**	**+1.5**
	9.7nm,1.3s,0.1nm						
WRA	**Warramunga Arr**	**23.09**	**161**	P	**P**	**05 15 58.0**	**-1.4**
	2.2nm,0.4s,baz=338,slow=11,SNR=37						
WRA				PcP	**PcP**	**05 19 47.8**	**+0.4**
	0.2nm,0.4s,baz=333,slow=1.8,SNR=1.6						
	2.2nm,0.4s						
ASAR	**Alice Springs**	**26.48**	**165**	P	**P**	**05 16 29.8**	**-0.8**
	0.5nm,0.4s,baz=343,slow=7.3,SNR=18						
ASAR				PcP	**PcP**	**05 19 55.2**	**+0.4**
	0.5nm,0.6s,baz=347,slow=2.3,SNR=6.7						
	0.5nm,0.4s						
CTA	**Charters Tower**	**29.24**	**140**	P	**P**	**05 16 54.6**	**-0.7**
	1.9nm,0.8s,baz=309,slow=6.5,SNR=1.6						
	1.9nm,0.8s						
MJAR	**Matsushiro Arr**	**36.05**	**16**	P	**P**	**05 17 54.1**	**-0.4**
	0.5nm,0.5s,baz=192,slow=10.0,SNR=2.5						
	0.5nm,0.5s						
SONM	**Songino Array**	**48.89**	**342**	P	**P**	**05 19 39.6**	**+0.8**
	0.6nm,0.5s,baz=159,slow=9.1,SNR=5.0						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**58.88**	**326**	P	**P**	**05 20 51.4**	**-0.4**
	1.7nm,0.5s,baz=120,slow=7.7,SNR=28						
	1.7nm,0.5s						
AKTO	**Aktyubinsk**	**74.91**	**322**	P	**P**	**05 22 34.6**	**+1.1**
	1.3nm,0.5s,baz=106,slow=6.1,SNR=4.8						
	1.3nm,0.5s						
ARU	**Arti**	**76.31**	**328**	P	**P**	**05 22 40.9**	**-0.5**
	2.0nm,0.5s,baz=123,slow=1.6,SNR=5.1						
	2.0nm,0.5s						
VNDA	**Vanda**	**81.72**	**173**	P	**P**	**05 23 10.5**	**-0.1**
	1.6nm,0.8s,baz=165,slow=2.7,SNR=3.3						
	1.6nm,0.8s						

IDC 19 05:30:49.0±3.9**, 2°.22S**×**141°.29E, h0**^{km}**, mb3.6**/2**,**
mbtmp3.7/3**, ML3.9**/1**, MS3.4**/6**, Error ellipse:**
s-maj=131.5km s-min=31.8km az=88.0, Near north
coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**10.92**	**101**	LR	LR	05 37 07.3	
	comp=Z,130nm,19.7s,baz=163,slow=35						
GUMO	**Guam**	**16.11**	**13**	LR	LR	05 40 19.3	
	comp=Z,64nm,18.9s,baz=90,slow=35						
DAV	**Davao City (W)**	**18.20**	**301**	LR	LR	05 42 38.0	
	comp=Z,77nm,19.5s,baz=332,slow=39						
WRA	**Warramunga Arr**	**18.87**	**201**	P	P	05 35 10.7	-0.4
	0.4nm,0.3s,baz=23,slow=12,SNR=18						
WRA				LR	LR	05 43 56.0	
	comp=Z,160nm,20.2s,baz=174,slow=42						
	1.9nm,0.6s						
ASAR	**Alice Springs**	**22.48**	**198**	P	P	05 35 50.1	-0.1
	1.8nm,0.6s,baz=27,slow=10,SNR=33						
	1.8nm,0.6s						
URZ	**Urewera**	**48.58**	**142**	LR	LR	06 01 02.5	
	comp=Z,75nm,18.8s,baz=37,slow=37						
MKAR	**Makanchi Array**	**71.00**	**321**	P	P	05 42 09.1	+0.4
	0.5nm,0.9s,baz=104,slow=6.1,SNR=1.8						
	0.5nm,0.9s						
BVAR	**Borovoye Array**	**80.40**	**325**	LR	LR	06 19 40.9	
	comp=Z,54nm,20.1s,baz=298,slow=36						

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*INET **19** 05:35:53.8±1.6, 13°.75N×88°.65W, h1^{km}±3^{km}, MW3.6*
*SNET **19** 05:35:53.0±1.1, 13°.63N×88°.62W, h1^{km}±3^{km}*
ISC 19 05:35:53.5±1.0**, 13°.68N**±0°.04×**88°.60W**±0°.03**, h7**^{km}±7^{km}**,**
n32, σ**0^{s}95**/38**, 1C-18D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PQSS	**Presa 15 de Se**	**0.07**	**146**	*i* P	**Pg**	**05 35 55.1**	**-0.3**
PQSS				*e*S	**Sg**	**05 35 56.6**	**0.0**
PQSS				IAML		05 35 57.5	
	comp=Z,110μm,0.2s						
SCLA	**Alcaldia de Sa**	**0.13**	**279**	⇓*i*P	**Pg**	**05 35 56.7**	**+0.4**
COEB	**Comit de Eme**	**0.20**	**160**	⇓*i*P	**Pg**	**05 35 56.8**	**-0.7**
COEB				IAML		05 36 03.4	
	comp=Z,27μm,0.4s						
TECA	**Tecapa**	**0.21**	**153**	⇓*i*P	**Pg**	**05 35 57.2**	**-0.6**
TECO	**Alcaldia de Te**	**0.23**	**231**	*i* P	**Pg**	**05 35 57.3**	**-0.7**
COEG	**Centro de Oper**	**0.28**	**257**	⇓*e*P	**Pg**	**05 35 58.9**	**-0.2**
COEG				*e*S	**Sg**	**05 36 03.1**	**+0.3**
COEG				IAML		05 36 04.5	
	comp=Z,45μm,0.5s						
PAVA	**Las Pavas**	**0.33**	**276**	⇓*i*P	**Pg**	**05 36 00.1**	**0.0**
PAVA				*e*S	**Sb**	**05 36 05.2**	**-2.2**
P5NO	**Presa 5 de nov**	**0.34**	**333**	⇓*i*P	**Pg**	**05 36 00.5**	**+0.3**
PACA	**Pacayal**	**0.34**	**128**	⇓*e*P	**Pg**	**05 35 59.8**	**-0.5**
PACA				*e*S	**Sg**	**05 36 04.8**	**0.0**
ALJI	**Alcalda de J**	**0.35**	**175**	⇑*i*P	**Pg**	**05 35 59.4**	**-1.0**
LCY	**Lacayo**	**0.39**	**131**	⇓*i*P	**Pg**	**05 36 00.8**	**-0.4**
VSM	**San Miguel**	**0.41**	**128**	⇓*i*P	**Pg**	**05 36 00.9**	**-0.6**
LBRS	**Las Brisas**	**0.43**	**278**	⇓*i*P	**Pg**	**05 36 02.0**	**0.0**
LFRS	**El Faro**	**0.45**	**263**	⇓*i*P	**Pg**	**05 36 02.0**	**-0.3**
LFU	**La Fuente**	**0.50**	**278**	⇓*i*P	**Pg**	**05 36 03.1**	**-0.2**
SNET	**Serv Nac Est T**	**0.61**	**271**	⇓*i*P	**Pg**	**05 36 05.0**	**-0.3**
UEES	**Universidad Ev**	**0.62**	**273**	⇓*i*P	**Pg**	**05 36 05.3**	**-0.2**
BOQS	**Boqueron**	**0.66**	**275**	*e*P	**Pg**	**05 36 06.1**	**-0.3**
CEDA	**San Andres**	**0.78**	**279**	*i* P	**Pg**	**05 36 07.8**	**-0.7**
LCND	**La Caada**	**0.78**	**118**	⇓*i*P	**Pg**	**05 36 07.6**	**-1.0**
JAYA	**Jayaque - finc**	**0.82**	**268**	*e*P	**Pg**	**05 36 08.9**	**-0.5**
CNCH	**Conchagua**	**0.85**	**118**	⇓*e*P	**Pg**	**05 36 08.8**	**-1.0**
MTO3	**Montecristo**	**1.03**	**314**	*e*P	**Pg**	**05 36 12.4**	**-0.8**
RTR	**El Retiro**	**1.04**	**282**	*e*P	**Pg**	**05 36 12.9**	**-0.5**
ESQI	**Esquipulas**	**1.13**	**321**	*i* P	**Pg**	**05 36 14.5**	**-0.7**
NUBE	**Las Nubes**	**1.17**	**281**	⇓*i*P	**Pg**	**05 36 14.7**	**-1.2**
SLOZ	**Alcaldia de Sa**	**1.20**	**287**	⇓*e*P	**Pg**	**05 36 15.2**	**-1.4**
TGUH	**Tegucigalpa,Un**	**1.34**	**74**	*e*P	**Pg**	**05 36 17.5**	**-1.7**
CRIN	**San Cristobal**	**1.80**	**123**	*e*P	**Pn**	**05 36 25.3**	**+0.3**
CRIN				*e*S	**Sb**	**05 36 51.5**	**+1.9**
MOMN	**Momotombo**	**2.37**	**122**	*e*P	**Pn**	**05 36 33.1**	**+0.2**
MATN	**Matagalpa**	**2.71**	**106**	*e*P	**Pn**	**05 36 37.1**	**-0.5**
MATN				*e*S	**Sn**	**05 37 13.4**	**+2.7**
BOAB	**BOACO BROADBAN**	**3.11**	**113**	*e*P	**Pn**	**05 36 42.5**	**-0.5**

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*NEIC **19** 05:42:02.8±1.5, 11°.0S±0°.1×162°.44E±0°.05, h35^{km}±2^{km},*
mb4.4/22, Error ellipse: s-maj=19.5km s-min=5.2km
az=157.0
*IDC **19** 05:42:05.1±2.7, 11°.05S×162°.40E, h68^{km}±22^{km}, mb3.8/11,*
mbtmp4.2/14, MS3.5/11, Error ellipse: s-maj=23.4km
s-min=14.0km az=77.0
ISC 19 05:42:03.0±0.6**, 11°.05S**±0°.08×**162°.47E**±0°.09**, h46**^{km}**, n52,**
σ**1^{s}15**/44**, mb4.3**/20**, MS3.5**/8**, Bougainville-Solomon**
Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.96**	**303**	P	**Pn**	**05 42 47.6**	**0.0**
	13μm,0.4s,baz=151,slow=11,SNR=33						
HNR				S	**Sn**	**05 43 23.7**	**+1.9**
	16μm,0.4s,baz=132,slow=20,SNR=9.7						
HNR				LR	LR	05 44 08.5	
	comp=Z,8μm,18.0s,baz=100,slow=43						
HNR	**Honiara**	**2.96**	**303**		**Pn**	**05 42 47.1**	**-0.4**
DZM	**Mont Dzumac**	**11.60**	**161**	P	**Pn**	**05 44 48.3**	**+2.1**
	6.7nm,0.7s,baz=19,slow=6.9,SNR=36						
DZM				S	**Sn**	**05 46 51.0**	**-3.3**
	3.0nm,0.8s,baz=81,slow=23,SNR=0.9						
PMG	**Port Moresby**	**15.16**	**275**	P	**Pn**	**05 45 34.1**	**-0.1**
	4.0nm,0.3s,baz=255,slow=17,SNR=1.5						
PMG				LR	LR	05 50 37.7	
	comp=Z,207nm,18.5s,baz=157,slow=34						
MSVF	**Nonsavu**	**16.48**	**116**	LR	LR	05 51 21.8	
	comp=Z,103nm,19.2s,baz=168,slow=34						
EIDS	**Eidsvold**	**17.86**	**216**	P	**P**	**05 46 08.7**	**+0.3**
CTA	**Charters Tower**	**18.00**	**238**	P	**P**	**05 46 11.9**	**+1.8**
	4.0nm,0.6s,baz=60,slow=12,SNR=8.9						
CTAO	**Charters Tower**	**18.00**	**238**	P	**P**	**05 46 10.3**	**+0.2**
COEN	**Coen**	**19.05**	**259**	P	**P**	**05 46 21.8**	**+0.2**
COEN				IAmb	IAmb	05 46 28.2	
	comp=Z,12nm,0.7s						
AFI	**Afiamalu**	**25.30**	**99**	LR	LR	05 55 46.9	
	comp=Z,72nm,19.1s,baz=288,slow=32						
WB0	**Warramunga Arr**	**28.38**	**249**	P	**P**	**05 47 52.7**	**-0.6**
WB0				IAmb	IAmb	05 47 56.3	
	comp=Z,6.7nm,1.1s						
WRAB	**Tennant Creek**	**28.46**	**249**	P	**P**	**05 47 55.2**	**+1.2**
WRAB				IAmb	IAmb	05 48 19.1	
	comp=Z,19nm,1.2s						
WB2	**Warramunga Arr**	**28.46**	**248**	P	**P**	**05 47 52.6**	**-1.4**
WB2				IAmb	IAmb	05 48 17.6	

```
          comp=Z,15nm,1.4s
WRA   Warramunga Arr   28.47 248  P      P       05 47 53.0 -1.1
          comp=Z,1.2nm,0.4s,baz=78,slow=9.0,SNR=16
WRA                               PcP    PcP     05 51 04.7 -0.7
          comp=Z,0.4nm,0.8s,baz=78,slow=3.1,SNR=2.3
WRA                               LR     LR      05 59 02.9
          comp=Z,178nm,19.9s,baz=93,slow=36
          comp=Z,1.2nm,0.4s
WRA   Warramunga Arr   28.47 248  P      P       05 47 53.2 -0.9
H11S2 WAKE ISLAND Hy   29.65   8  T      T       06 18 55.5
          baz=188,slow=76,SNR=163
H11S3 WAKE ISLAND Hy   29.65   8  T      T       06 19 01.9
          baz=188,slow=76,SNR=136
H11S1 WAKE ISLAND Hy   29.67   8  T      T       06 18 56.8
          baz=188,slow=76,SNR=164
AS31  Alice Springs    29.94 241  P      P       05 48 06.4 -0.7
ASAR  Alice Springs    29.94 241  P      P       05 48 06.0 -1.1
          comp=Z,1.3nm,0.6s,baz=70,slow=9.7,SNR=28
ASAR                              PcP    PcP     05 51 07.8 -1.3
          comp=Z,0.3nm,0.7s,baz=68,slow=2.5,SNR=2.8
ASAR                              LR     LR      05 59 54.3
          comp=Z,100nm,18.5s,baz=76,slow=36
          comp=Z,1.3nm,0.6s
ASAR  Alice Springs    29.94 241  P      P       05 48 05.8 -1.3
GUMO  Guam             30.07 324  LR     LR      05 59 34.3
          comp=Z,22nm,19.9s,baz=77,slow=35
H11N1 WAKE ISLAND Hy   30.88   8  T      T       06 20 27.7
          baz=188,slow=76,SNR=94
H11N3 WAKE ISLAND Hy   30.89   8  T      T       06 20 28.2
          baz=188,slow=76,SNR=106
H11N2 WAKE ISLAND Hy   30.90   8  T      T       06 20 31.3
          baz=188,slow=76,SNR=84
BBOO  Buckleboo        32.53 224  P      P       05 48 30.2 +0.5
KNRA  Kununurra        33.09 258  P      P       05 48 34.2 -0.6
FITZ  Fitzroy Crossi   36.27 255  P      P       05 49 01.2 -1.1
MBWA  Marble Bar       42.15 251  P      P       05 49 51.0 -0.4
MJAR  Matsushiro Arr   52.57 335  P      P       05 51 10.0 -2.1
          comp=Z,1.3nm,0.6s,baz=168,slow=8.5,SNR=6.7
          comp=Z,1.3nm,0.6s
JNU   Nakatsue         53.26 327  LR     LR      06 13 25.2
          comp=Z,22nm,18.9s,baz=150,slow=35
ASAJ  Asahikawa        57.80 343  P      P       05 51 49.9 +0.3
          comp=Z,5.6nm,0.7s,baz=232,slow=33,SNR=4.7
ASAJ                              LR     LR      06 13 18.5
          comp=Z,44nm,21.4s,baz=110,slow=32
          comp=Z,5.6nm,0.7s
KSRS  Korea Array      58.12 328  P      P       05 51 52.5 +0.5
          comp=Z,2.2nm,0.9s,baz=136,slow=6.7,SNR=7.5
          comp=Z,2.2nm,0.9s
USA0B Ussuriysk Arra   61.56 335  P      P       05 52 15.6 +0.1
USRK  Ussuriysk Ar.    61.56 335  P      P       05 52 15.6 +0.1
          comp=Z,6.8nm,0.9s,baz=161,slow=7.6,SNR=9.7
          comp=Z,6.8nm,0.9s
USRK  Ussuriysk Ar.    61.56 335  P      P       05 52 15.7 +0.2
MDJ   Mudanjiang       62.90 334  P      P       05 52 24.6 +0.1
MDJ                               IAmb   IAmb    05 52 27.0
          comp=Z,4.8nm,0.7s
VNDA  Vanda            66.46 180  P      P       05 52 47.5 +0.3
          comp=Z,0.8nm,0.4s,baz=278,slow=22,SNR=10
          comp=Z,0.8nm,0.4s
VNDA  Vanda            66.46 180  P      P       05 52 48.8 +1.6
VNDA                              IAmb   IAmb    05 53 06.9
          comp=Z,6.1nm,1.4s
ULN   Ulaanbaatar      76.44 325  P      P       05 53 47.9 -0.2
ULN                               IAmb   IAmb    05 53 50.0
          comp=Z,3.8nm,0.6s
SONM  Songino Array    76.80 325  P      P       05 53 49.7 -0.3
          comp=Z,3.0nm,0.7s,baz=144,slow=5.5,SNR=19
          comp=Z,3.0nm,0.7s
SONM  Songino Array    76.80 325  P      P       05 53 49.7 -0.3
SONM                              IAmb   IAmb    05 53 52.1
          comp=Z,3.0nm,0.8s
QSPA  South Pole Qui   78.95 180  P      P       05 54 03.2 +1.5
QSPA                              IAmb   IAmb    05 54 16.4
          comp=Z,10.0nm,1.4s
SVW2  Sparrevohn       79.15  19  P      P       05 54 04.1 +1.5
WRH   Wood River Hil   83.98  19  P      P       05 54 29.4 +1.3
WRH                               IAmb   IAmb    05 54 41.5
          comp=Z,5.3nm,1.5s
CCB   Clear Creek Bu   84.19  19  P      P       05 54 29.1  0.0
CCB                               IAmb   IAmb    05 54 50.0
          comp=Z,1.6nm,1.0s
H23K  Yukon River      84.43  18  P      P       05 54 31.1 +0.7
H23K                              IAmb   IAmb    05 54 37.1
          comp=Z,2.0nm,1.1s
ILAR  Eielson Array    84.57  19  P      P       05 54 29.8 -1.2
          comp=Z,0.4nm,0.8s,baz=252,slow=5.2,SNR=6.6
          comp=Z,0.4nm,0.8s
NVAR  Mina Array Bea   88.50  51  P      P       05 54 51.6 +0.5
          comp=Z,0.3nm,0.7s,baz=230,slow=6.8,SNR=2.7
          comp=Z,0.3nm,0.7s
PFO   Pinyon Flats O   88.73  56  LR     LR      06 27 56.9
          comp=Z,25nm,19.9s,baz=229,slow=31
INK   Inuvik           90.97  20  LR     LR      06 30 31.6
          comp=Z,36nm,19.6s,baz=288,slow=32
MKAR  Makanchi Array   91.34 317  P      P       05 55 02.2 -1.8
          comp=Z,0.7nm,0.8s,baz=94,slow=6.2,SNR=6.4
          comp=Z,0.7nm,0.8s
```

RSNC 19 06:01:05.1±1.0, 6°.90N×73°.18W, h174^{km}±9^{km}, ML1.1, Northern Colombia

```
Code  Station Name      Δ°   AZ°   Phase ID        Time      Res
                                   Op     ISC      h  m  s   ISC
BARC  Barichara         0.31 180  eP     Pn      06 01 28.5 -0.4
BRRC  Barranca, Sant    0.57 291  eP     Pn      06 01 27.5 -2.1
BRRC                              eS     Sn      06 01 47.9 -0.4
PAMC  Pamplona, Colo    0.65  48  eP     Pn      06 01 29.7 -0.8
PAMC                              eS     Sn      06 01 49.6 -0.5
PAMC                              i              06 01 51.7
          comp=Z,2.2nm,0.5s
RUSC  La Rusia          1.01 175  eP     Pn      06 01 33.3 +0.4
PTBC  PUERTO BERRIO,    1.32 254  eP     Pn      06 01 34.1 -0.8
PTBC                              eS     Sn      06 01 57.0 -0.9
PTBC                              i              06 02 04.6
          comp=Z,1.5nm,0.3s
SPBC  San Pablo de B    1.53 216  eS     Sn      06 02 00.7 -0.9
ZARC  Zaragoza, Cauc    1.77 290  eS     Sn      06 02 05.7  0.0
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*IDC **19** 06:10:42.6±1.3, 39°.78N×145°.02E, h0^{km}, mb3.4/3, mbtmp3.4/5, ML3.3/1, Error ellipse: s-maj=46.6km s-min=28.9km az=119.0*

*JMA **19** 06:10:48.2±0.5, 40°N±1°×14°5E±°, h45^{km}, MV3.4/27, FAR E OFF NORTH HONSHU*

ISC 19 06:10:49.5±3.3, **40°.09N**±0°.10×**145°.0E**±0°.2, **h68**^{km}±44^{km}, **n21**, σ**2^s.05**/14, **mb3.5**/3, **Off east coast of Honshu**

```
Code  Station Name      Δ°   AZ°   Phase ID        Time      Res
                                   Op     ISC      h  m  s   ISC
JEM   Erimo             2.36 325  eP     Pn      06 11 26.1 +0.2
JEM                               eS     Sn      06 11 54.3 +0.4
JTH   Tanohata          2.39 267  eS     Sn      06 11 52.1 -2.5
MIYJ  Miyakonagasawa    2.48 259  eS     Sn      06 11 55.2 -1.6
JTHR  Tokachihiroo      2.54 331  eP     Pn      06 11 27.4 -0.9
JTHR                              eS     Sn      06 11 57.2 -0.8
JANG  Nango             2.66 277  eP     Pn      06 11 27.8 -2.2
JANG                               S     Sn      06 11 58.8 -2.5
JNBK  Urakawa-nobuka    2.75 323   P     Pn      06 11 32.0 +0.7
JNBK                              eS     Sn      06 12 04.3 +0.9
JCH   Churui            2.80 335   P     Pn      06 11 30.9 -1.0
JCH                                S     Sn      06 12 02.8 -1.7
JOM   Ohasama           2.90 259   P     Pn      06 11 33.3  0.0
JAK   Akkeshi           2.91 356  eP     Pn      06 11 32.0 -1.4
JAK                               eS     Sn      06 12 05.5 -1.7
JMK   Ichinoseki        3.12 250  eP     Pn      06 11 35.7 -0.6
JMK                               eS     Sn      06 12 10.4 -1.9
JOT   Ohata             3.25 295   S     Sn      06 12 14.2 -1.3
NEM2  Nemuro 2          3.32  10   P     Pn      06 11 36.6 -2.4
NEM2                               S     Sn      06 12 13.4 -3.8
JAR   Ashorobuto        3.33 345   P     Pn      06 11 38.1 -1.0
JAR                               eS     Sn      06 12 15.9 -1.5
JYK   Kaneyama          3.76 253   P     Pn      06 11 45.5 +0.5
JEW   Eniwo             3.81 317  eP     Pn      06 11 46.9 +1.1
JTKR  Abashiri--Toko    3.96 349   P     Pn      06 11 47.5 -0.2
JTKR                              eS     Sn      06 12 32.5 -0.2
ASAJ  Asahikawa         4.39 337   Pn    Pn      06 11 53.6 -0.1
          1.1nm,0.3s,baz=162,slow=20,SNR=1.7
ASAJ                               Sn    Sn      06 12 42.2 -1.3
          0.9nm,0.3s,baz=288,slow=20,SNR=2.0
          2.7nm,0.3s
MJAR  Matsushiro Arr    6.39 238   Pn    Pn      06 12 17.6 -3.4
          1.1nm,0.7s,baz=69,slow=15,SNR=2.7
WRA   Warramunga Arr   60.54 192   P     P       06 20 52.0 -0.7
          0.3nm,0.6s,baz=8.7,slow=6.9,SNR=4.7
          0.3nm,0.6s
PDAR  Pinedale Array   73.54  48   P     P       06 22 19.2 +3.9
          0.2nm,0.6s,baz=311,slow=4.2,SNR=2.2
          0.2nm,0.6s
TXAR  Lajitas Array    86.06  55   P     P       06 23 26.2 +3.2
          0.3nm,0.8s,baz=278,slow=3.7,SNR=3.5
          0.3nm,0.8s
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*IDC **19** 06:14:52.9±0.6, 49°.98N×159°.48E, h0^{km}, mb3.9/22, mbtmp4.0/27, ML4.1/5, MS2.9/5, Error ellipse: s-maj=14.3km s-min=12.6km az=147.0*

*KRSC **19** 06:14:55.9±2.2, 49°.91N×159°.50E, h59^{km}±36^{km}, Ml5.2*

*NEIC **19** 06:14:55.1±1.7, 49°.86N±0°.08×159°.39E±0°.06, h10^{km}±1^{km}, mb4.5/32, Error ellipse: s-maj=12.9km s-min=7.0km az=182.0*

*MOS **19** 06:14:56.9±0.8, 49°.85N×159°.53E, h50^{km}, mb4.6/9, Error ellipse: s-maj=8.8km s-min=3.3km az=92.4*

MOS Felt (II) at Severo-Kuril'sk.

ISC 19 06:14:58.9±0.9, **49°.90N**±0°.06×**159°.48E**±0°.05, **h49**^{km}±7^{km}, **n190**, σ**1^s.55**/210, **mb4.4**/46, **5C-2D, East of Kuril Islands**

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Code  Station Name      Δ°   AZ°   Phase ID        Time      Res
                                   Op     ISC      h  m  s   ISC
KDTR  Khodutka, Kamc    2.10 335   PN    Pn      06 15 31.9 +0.2
KDTR                               S     Sn      06 15 55.7 -0.9
KDTR  Khodutka, Kamc    2.10 335  eP     Pn      06 15 31.9 +0.2
KDTR                              eS     Sn      06 15 55.4 -1.2
SKR   Severo-Kuril's    2.30 291⇓iPN     Pn      06 15 34.3  0.0
SKR                               i S    Sn      06 15 59.8 -1.5
SKR                                pmax  pmax
          comp=Z,2µm,0.4s
SKR                                smax  smax
          comp=E,15µm,0.5s
SKR                                smax  smax
          comp=N,20µm,0.4s
SKR                                MLR   MLR
          comp=Z,700nm,12.0s
SKR   Severo-Kuril's    2.30 291  eP     Pn      06 15 34.5 +0.3
SKR                               eS     Sn      06 16 00.3 -1.0
PAU   Pauzhetka         2.31 314   PN    Pn      06 15 36.2 +1.7
PAU                                S     Sn      06 16 02.5 +0.9
PAU   Pauzhetka         2.31 314  eP     Pn      06 15 36.3 +1.9
PAU                               eS     Sn      06 16 02.6 +0.9
RUS   Russkaya          2.60 347   PN    Pn      06 15 38.0 -0.5
RUS                                S     Sn      06 16 06.9 -2.0
RUS   Russkaya          2.60 347  eP     Pn      06 15 38.1 -0.5
RUS                               eS     Sn      06 16 06.5 -2.4
MTVR  Mutnovka          2.71 343   PN    Pn      06 15 40.2 +0.1
MTVR                               S     Sn      06 16 10.5 -1.1
MTVR  Mutnovka          2.71 343  eP     Pn      06 15 40.2 +0.1
MTVR                              eS     Sn      06 16 10.6 -1.1
GRL   Gorelyy           2.80 342   PN    Pn      06 15 41.7 +0.4
GRL                                S     Sn      06 16 13.6 -0.2
GRL   Gorelyy           2.80 342  eP     Pn      06 15 42.0 +0.8
GRL                               eS     Sn      06 16 13.6 -0.2
KRMR  Karymshinskiy     3.05 344   PN    Pn      06 15 45.2 +0.6
KRMR                               S     Sn      06 16 19.5 -0.3
KRMR  Karymshinskiy     3.05 344  eP     Pn      06 15 45.2 +0.6
KRMR                              eS     Sn      06 16 19.5 -0.3
DALK  Dalny             3.16 352   PN    Pn      06 15 46.0 -0.1
DALK                               S     Sn      06 16 20.0 -2.6
DALK  Dalny             3.16 352  eP     Pn      06 15 46.1 -0.1
PET   Petropavlovsk     3.17 351         Pn      06 15 46.1 -0.2
PET                                Sn    Sn      06 16 21.1 -1.5
PET   Petropavlovsk     3.17 351⇓iPN     Pn      06 15 46.0 -0.2
PET                               eS     Sn      06 16 20.5 -2.2
PET                                pmax  pmax
          comp=Z,275nm,0.4s
PET                                smax  smax
          comp=N,2µm,0.4s
PET                                smax  smax
          comp=E,2µm,0.4s
PET                                smax  smax
          comp=N,3µm,0.3s
PET                                MLR   MLR
          comp=Z,200nm,10.0s
PET   Petropavlovsk     3.17 351  eP     Pn      06 15 46.1 -0.2
PET                               eS     Sn      06 16 20.4 -2.2
INSR  Institute         3.21 350  eP     Pn      06 15 47.1 +0.3
SPN   Mys Shipunski     3.22   6   PN    Pn      06 15 46.4 -0.5
SPN                                S     Sn      06 16 21.1 -2.8
SPN   Mys Shipunski     3.22   6  eP     Pn      06 15 46.4 -0.5
SPN                               eS     Sn      06 16 21.6 -2.3
NLC   Nalytchevo        3.27 359   PN    Pn      06 15 48.1 +0.5
NLC                                S     Sn      06 16 24.3 -1.0
NLC   Nalytchevo        3.27 359  eP     Pn      06 15 47.3 -0.4
NLC                               eS     Sn      06 16 25.7 +0.4
UGLR  Uglovaya          3.33 353   PN    Pn      06 15 48.6  0.0
UGLR                               S     Sn      06 16 26.0 -1.0
UGLR  Uglovaya          3.33 353  eP     Pn      06 15 48.6  0.0
UGLR                              eS     Sn      06 16 26.6 -0.4
APC   Apacha            3.36 335   PN    Pn      06 15 49.8 +1.0
APC                                S     Sn      06 16 27.5 +0.1
APC   Apacha            3.36 335  eP     Pn      06 15 49.9 +1.0
APC                               eS     Sn      06 16 28.2 +0.9
SMAR  Somma             3.39 353   PN    Pn      06 15 49.2 -0.2
SMAR                               S     Sn      06 16 26.1 -2.4
SMAR  Somma             3.39 353  eP     Pn      06 15 49.3 -0.2
SMAR                              eS     Sn      06 16 30.0 +1.5
PEA0B Petropavlovsk-    3.40 342   Pn    Pn      06 15 50.4 +1.0
PEA0B Petropavlovsk-    3.40 342cePN     Pn      06 15 50.1 +0.7
PETK  Petropavlovsk-    3.40 342   Pn    Pn      06 15 48.1 -1.3
          comp=Z,77nm,0.3s,baz=136,slow=16,SNR=1389
PETK                               Sn    Sn      06 16 28.1 -0.3
          comp=Z,82nm,0.3s,baz=270,slow=13,SNR=8.7
PETK                               LR    LR      06 17 14.0
          comp=Z,183nm,21.2s,baz=160,slow=42
          comp=Z,132nm,0.4s
PETK  Petropavlovsk-    3.40 342   Pn    Pn      06 15 49.3 -0.1
PETK  Petropavlovsk-    3.40 342   PN    Pn      06 15 49.3 -0.1
AVH   Avacha            3.40 352   PN    Pn      06 15 49.7 +0.3
AVH                                S     Sn      06 16 27.7 -0.8
AVH   Avacha            3.40 352  eP     Pn      06 15 49.7 +0.3
AVH                               eS     Sn      06 16 28.4 -0.2
KOK   Koryaka           3.43 351   PN    Pn      06 15 50.4 +0.4
KOK                                S     Sn      06 16 28.6 -0.8
KOK   Koryaka           3.43 351  eP     Pn      06 15 50.4 +0.4
KOK                               eS     Sn      06 16 29.5 +0.1
KRER  Koryakskii        3.44 353   PN    Pn      06 15 50.3 +0.2
KRER                               S     Sn      06 16 27.8 -1.8
KRER  Koryakskii        3.44 353  eP     Pn      06 15 50.4 +0.2
KRER                              eS     Sn      06 16 28.4 -1.2
KRX   Arik              3.50 352   PN    Pn      06 15 51.0 +0.1
KRX                                S     Sn      06 16 29.9 -1.2
KRX   Arik              3.50 352  eP     Pn      06 15 51.1 +0.1
KRX                               eS     Sn      06 16 30.1 -1.0
GNL   Ganaly            3.92 346   PN    Pn      06 15 57.4 +0.8
GNL   Ganaly            3.92 346  eP     Pn      06 15 57.4 +0.8
GNL                               eS     Sn      06 16 41.3  0.0
TUMD  Tumrok D          5.34   6  eP     Pn      06 16 16.2 +0.2
TUMD                              eS     Sn      06 17 13.5 -2.6
TUMR  Tumrok            5.40   4   PN    Pn      06 16 16.1 -0.9
TUMR  Tumrok            5.40   4  eP     Pn      06 16 18.3 +1.4
TUMR                              eS     Sn      06 17 16.4 -1.5
KMNR  Kamenistaya       5.88   4   PN    Pn      06 16 25.2 +1.7
KMNR  Kamenistaya       5.88   4  eP     Pn      06 16 25.1 +1.7
KMNR                              eS     Sn      06 17 32.6 +3.1
ESO   Esso              6.05 356   PN    Pn      06 16 27.9 +2.2
ESO   Esso              6.05 356  eP     Pn      06 16 28.4 +2.6
ESO                               eS     Sn      06 17 35.4 +1.8
BZMR  Bezymyannaya      6.07   5   PN    Pn      06 16 27.7 +1.5
BZMR  Bezymyannaya      6.07   5  eP     Pn      06 16 28.0 +1.8
BZMR                              eS     Sn      06 17 35.1 +0.8
KIRR  Kirishev          6.08   5   PN    Pn      06 16 27.8 +1.5
KIRR  Kirishev          6.08   5  eP     Pn      06 16 28.0 +1.7
KIRR                              eS     Sn      06 17 36.1 +1.5
KPT   Kopyto            6.09   4   PN    Pn      06 16 27.7 +1.3
KPT   Kopyto            6.09   4  eP     Pn      06 16 27.6 +1.3
KPT                               eS     Sn      06 17 36.7 +2.0
BZGR  Bezymyannyi-Gr    6.09   6   PN    Pn      06 16 28.0 +1.6
BZGR  Bezymyannyi-Gr    6.09   6  eP     Pn      06 16 27.9 +1.5
BZGR                              eS     Sn      06 17 33.9 -0.9
BZWR  Bezymyannyi-We    6.10   5   PN    Pn      06 16 27.8 +1.2
BZWR  Bezymyannyi-We    6.10   5  eP     Pn      06 16 28.2 +1.7
BZWR                              eS     Sn      06 17 35.8 +0.7
KOZ   Kozyrevsk         6.17   2   PN    Pn      06 16 28.5 +1.1
KOZ   Kozyrevsk         6.17   2  eP     Pn      06 16 28.4 +1.1
KOZ                               eS     Sn      06 17 37.5 +1.0
SRDR  Sredinnyy         6.43   1   PN    Pn      06 16 31.9 +1.0
SRDR  Sredinnyy         6.43   1  eP     Pn      06 16 32.0 +1.1
KLY   Klyuchi           6.46   6   PN    Pn      06 16 32.4 +1.1
KLY   Klyuchi           6.46   6  eP     Pn      06 16 32.5 +1.2
BKI   Bering            6.62  34   PN    Pn      06 16 32.8 -0.7
BKI   Bering            6.62  34  eP     Pn      06 16 32.5 -0.9
KBTR  Krutoberegovo     6.63  16   PN    Pn      06 16 33.4 -0.2
KBTR  Krutoberegovo     6.63  16  eP     Pn      06 16 33.6  0.0
KBG   Krutoberegovo     6.65  16   PN    Pn      06 16 34.2 +0.3
KBG   Krutoberegovo     6.65  16  eP     Pn      06 16 33.8 -0.1
SMKR  Semkarok          6.79   9   PN    Pn      06 16 36.4 +0.4
SMKR  Semkarok          6.79   9  eP     Pn      06 16 36.9 +0.9
SMKR                              eS     Sn      06 17 52.1 +0.2
SRKR  Sorokina          6.84   8   PN    Pn      06 16 37.5 +0.9
SRKR  Sorokina          6.84   8  eP     Pn      06 16 37.2 +0.6
SRKR                              eS     Sn      06 17 52.3 -0.7
KUR   Kuril'sk          9.14 244  ePN    Pn      06 17 09.2 +1.2
KUR                                pmax  pmax
          comp=Z,131nm,0.5s
KUR                                pmax  pmax
          comp=N,38nm,0.3s
KUR                                pmax  pmax
          comp=E,35nm,0.6s
KUR   Kuril'sk          9.14 244  eP     Pn      06 17 09.6 +1.6
SHEM  Shemya Is, Ala    9.58  67   Pn    Pn      06 17 13.0 -1.0
          comp=E,92nm,0.3s,baz=141,slow=3.8,SNR=69
SHEM                               Sn    Sn      06 18 52.5 -7.6
          comp=E,43nm,0.3s,baz=211,slow=20,SNR=12
SMY   Shemya            9.58  67   Pn    Pn      06 17 14.6 +0.6
SMY   Shemya            9.58  67   PN    Pn      06 17 14.6 +0.6
SHO   Shikotan         10.55 240c iPN    Pn      06 17 24.2 -3.1
SHO                                pmax  pmax
          comp=N,27nm,0.3s
SHO                                pmax  pmax
          comp=E,30nm,0.3s
SHO                                pmax  pmax
          comp=Z,68nm,0.3s
SHO   Shikotan         10.55 240  eP     Pn      06 17 24.5 -2.8
MA2   Magadan          10.91 336   Pn    Pn      06 17 31.9 -0.3
          comp=Z,0.6nm,0.3s,baz=149,slow=18,SNR=2.8
MA2                                LR    LR      06 21 39.8
          comp=Z,74nm,19.3s,baz=212,slow=38
          comp=Z,10nm,0.9s
MA2   Magadan          10.91 336  i PN   Pn      06 17 31.2 -1.0
MA2                                pmax  pmax
          comp=Z,11nm,1.0s
YUK   Yuzh-Kuril'sk    11.00 243c iPN    Pn      06 17 33.0 -0.5
YUK                                pmax  pmax
          comp=Z,275nm,0.3s
YUK                                pmax  pmax
          comp=N,38nm,0.2s
YUK                                pmax  pmax
          comp=E,43nm,0.1s
NMR   Nemuro--Hokkai   11.49 241⇑iPN     Pn      06 17 37.3 -2.8
YSS   Yuzh-Sakhalins   11.50 262   Pn    Pn      06 17 38.2 -2.1
YSS   Yuzh-Sakhalins   11.50 262  ePN    Pn      06 17 39.8 -0.5
YSS                                pmax  pmax
          comp=Z,10.0nm,1.2s
JKA   Kamikawa-asahi   12.88 250   Pn    Pn      06 17 56.0 -3.2
ASAJ  Asahikawa        12.89 250   Pn    Pn      06 17 59.2 -0.1
          comp=Z,1.2nm,0.3s,baz=83,slow=17,SNR=11
ASAJ                               LR    LR      06 24 47.9
          comp=Z,38nm,18.1s,baz=102,slow=46
          comp=Z,14nm,0.7s
SEY   Seymchan         13.62 346   Pn    Pn      06 18 09.0 -0.2
          comp=Z,0.2nm,0.3s,baz=176,slow=14,SNR=4.7
          comp=Z,1.4nm,0.5s
ERM   Erimo            13.81 241   Pn    Pn      06 18 07.9 -4.0
ERM   Erimo            13.81 241  i P    Pn      06 18 10.4 -1.4
JTM   Tenmabayashi     15.80 242   Pn    Pn      06 18 32.8 -5.2
KLR   Kul'dur          17.97 279   P     P       06 19 05.7 +0.7
          comp=Z,0.1nm,0.3s,baz=77,slow=10.0,SNR=6.1
          comp=Z,1.6nm,0.7s
BILL  Bilibino         18.50   8   P     Pn      06 19 11.8 +0.6
BILL  Bilibino         18.50   8  i P    Pn      06 19 13.4 +2.2
BILL                               pmax  pmax
          comp=Z,6.0nm,1.0s
JSD   Sado             19.26 240   P     Pn      06 19 17.9 -2.7
JSD                                IAmb  IAmb    06 19 27.9
          comp=Z,18nm,0.8s
ZEA   Zeya             20.19 293  eP     Pn      06 19 29.3 -2.1
MJAR  Matsushiro Arr   20.37 237   P     Pn      06 19 32.0 -1.7
          comp=Z,5.0nm,0.9s,baz=36,slow=8.4,SNR=15
MJAR                               LR    LR      06 26 17.3
          comp=Z,24nm,21.9s,baz=32,slow=34
          comp=Z,5.0nm,0.9s
MJB9  Matsu-Tunnel     20.37 237   P     Pn      06 19 30.5 -3.2
MJB9                               IAmb  IAmb    06 19 37.3
          comp=Z,13nm,0.8s
MAJO  Matsushiro       20.37 237   P     Pn      06 19 29.7 -4.0
MAJO                               IAmb  IAmb    06 19 36.3
          comp=Z,14nm,0.8s
MAJO  Matsushiro       20.37 237  i P    Pn      06 19 30.1 -3.6
MAJO                               pmax  pmax
          comp=Z,16nm,1.1s
YAK   Yakutsk          20.40 318   P     Pn      06 19 30.4 -3.5
          comp=Z,83nm,0.5s,baz=81,slow=0.3,SNR=46
YAK                                LR    LR      06 27 21.4
          comp=Z,62nm,21.4s,baz=94,slow=37
YAK   Yakutsk          20.40 318   P     Pn      06 19 30.3 -3.6
YAK   Yakutsk          20.40 318  eP     Pn      06 19 30.1 -3.8
YAK                               eS     S       06 23 12.2 -4.7
YAK                               e*SS   sS      06 23 49.0 +16
YAK                                pmax  pmax
          comp=Z,152nm,0.9s
YAK                                pmax  pmax
          comp=N,14nm,1.0s
YAK                                pmax  pmax
          comp=E,31nm,1.3s
YAK                                smax  smax
          comp=N,141nm,5.8s
YAK                                smax  smax
          comp=E,86nm,4.7s
HEH   HeiHe            20.51 283  eP     Pn      06 19 31.8 -3.4
MDJ   Mudanjiang       20.88 267   P     Pn      06 19 41.0 +1.3
MDJ                                pP    pP      06 19 43.6 -2.6
MDJ                                PP    PnPn    06 19 57.3 +0.7
MDJ                                pmax  pmax
          comp=Z,7.0nm,0.7s
MDJ                                pmax  pmax
          comp=Z,190nm,5.2s
TNA   Tin City         23.03  35   P     P       06 20 00.8 +1.4
ANM   Nome             23.60  38   P     P       06 20 06.8 +1.9
ANM                                IAmb  IAmb    06 20 21.7
          comp=Z,15nm,1.1s
ANM   Nome             23.60  38   P     P       06 20 06.8 +1.9
ANM                                pmax  pmax
          comp=Z,15nm,1.1s
KSRS  Korea Array      25.79 253   P     P       06 20 27.1 +2.0
          comp=Z,1.9nm,0.7s,baz=46,slow=9.9,SNR=8.9
          comp=Z,1.9nm,0.7s
TIXI  Tiksi            25.87 338   P     P       06 20 26.3 +0.9
TIXI  Tiksi            25.87 338   P     P       06 20 26.3 +0.9
TIXI                               pmax  pmax
          comp=Z,42nm,0.9s
SVW2  Sparrevohn       27.23  49   P     P       06 20 39.6 +1.7
SVW2                               IAmb  IAmb    06 21 06.9
          comp=Z,13nm,1.4s
O19K  Port Alsworth    27.82  51   IAmb  IAmb    06 20 47.4
          comp=Z,12nm,1.2s
IMAR  Indian Mountai   28.68  38   P     P       06 20 51.6 +0.9
H21K  Melozitna Rive   29.01  39   P     P       06 20 55.3 +1.7
H11N2 WAKE ISLAND Hy   30.68 166   T     T       06 53 43.7
          baz=349
H11N3 WAKE ISLAND Hy   30.70 166   T     T       06 53 50.3
          baz=349,slow=74
H11N1 WAKE ISLAND Hy   30.70 166   T     T       06 53 49.4
          baz=349,slow=74
ILAR  Eielson Array    31.40  41   P     P       06 21 14.8  0.0
          comp=Z,0.6nm,0.7s,baz=249,slow=7.2,SNR=19
          comp=Z,0.6nm,0.7s
H11S1 WAKE ISLAND Hy   31.85 167   T     T       06 55 11.6
          baz=352
H11S3 WAKE ISLAND Hy   31.86 167   T     T       06 55 14.0
          baz=352
H11S2 WAKE ISLAND Hy   31.87 167   T     T       06 55 15.6
          baz=352
BMAR  Burnt Mountain   32.49  37   P     P       06 21 26.4 +2.1
K27K  Chicken          33.50  43   IAmb  IAmb    06 21 44.3
          comp=Z,6.5nm,0.9s
L27K  Beaver Creek,    33.68  45   IAmb  IAmb    06 21 46.5
          comp=Z,4.7nm,0.8s
BCAR  Beaver Creek A   33.70  45   P     P       06 21 37.0 +2.1
EGAK  Eagle            33.85  41   P     P       06 21 37.0 +0.8
EGAK                               IAmb  IAmb    06 21 55.2
          comp=Z,5.8nm,0.9s
HHC   Hu-ho-hao-te     34.34 273  eP     P       06 21 42.3 +1.5
HHC                                pmax  pmax
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	comp=Z,34nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,5.9s						
SONM	**Songino Array**	**34.38**	**287**	P	**P**	**06 21 41.3**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=68,slow=7.9,SNR=3.0						
	comp=Z,0.7nm,0.5s						
NJ2	**Nanjing**	**34.96**	**255**	*e*P	**P**	**06 21 46.4**	**+0.3**
NJ2				pP	pP	06 21 48.8	-8.3
NJ2				sP	sP	06 21 50.0	-12
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,140nm,4.3s						
BTO	**Baotou**	**35.46**	**274**	*e*P	**P**	**06 21 46.8**	**-3.7**
BTO				pP	**pwP**	**06 22 11.5**	**+0.7**
BTO				sP	sP	06 22 25.9	+20
BTO				PP	PnPn	06 22 59.0	-11
BTO				PcP	**PcP**	**06 24 13.1**	**-6.0**
BTO				S	**S**	**06 27 16.3**	**-5.7**
BTO				sS	**ScP**	**06 28 02.3**	**+1.8**
BTO				SS	SnSn	06 29 22.8	-22
BTO				pmax	pmax		
	comp=Z,27nm,0.6s						
BTO				pmax	pmax		
	comp=Z,250nm,4.0s						
BTO				LR	LR		
	comp=N,400nm,4.6s						
BTO				LR	LR		
	comp=E,450nm,6.0s						
BTO				LR	LR		
	comp=Z,380nm,5.9s						
HYT	**Haines Junctio**	**36.02**	**48**	P	P	06 21 57.0	+1.9
INK	**Inuvik**	**36.67**	**35**	P	**P**	**06 21 59.3**	**-1.0**
	comp=Z,0.5nm,0.7s,baz=293,slow=6.6,SNR=3.6						
	comp=Z,0.5nm,0.7s						
NRIK	**Noril'sk**	**38.34**	**327**	P	**P**	**06 22 15.2**	**+0.8**
	comp=Z,2.8nm,0.6s,baz=93,slow=8.2,SNR=4.3						
	comp=Z,2.8nm,0.6s						
NRIK	**Noril'sk**	**38.34**	**327**	*ce*P	**P**	**06 22 11.1**	**-3.3**
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LZH	**Lanzhou**	**42.02**	**273**	*e*P	P	06 22 48.0	+2.5
LZH				pP	pP	06 22 51.3	-5.4
LZH				sP	sP	06 22 53.4	-8.3
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
ZAA0	**Zalesovo Array**	**44.24**	**305**	P	**P**	**06 23 02.6**	**-0.4**
ZALV	**Zalesovo Beam**	**44.24**	**305**	P	**P**	**06 23 02.0**	**-1.0**
	comp=Z,0.9nm,0.4s,baz=56,slow=7.1,SNR=6.2						
	comp=Z,0.9nm,0.4s						
ZALV	**Zalesovo Beam**	**44.24**	**305**	P	**P**	**06 23 02.5**	**-0.6**
YKA	**Yellowknife Ar**	**45.81**	**40**	P	**P**	**06 23 15.8**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=292,slow=7.5,SNR=6.2						
	comp=Z,0.6nm,0.9s						
WMQ	**Urumqi**	**47.73**	**292**	*e*P	**P**	**06 23 32.0**	**+1.3**
WMQ				pP	pP	06 23 37.1	-4.7
WMQ				sP	sP	06 23 39.3	-7.4
WMQ				ScP	**ScP**	**06 28 52.1**	**+3.0**
WMQ				pmax	pmax		
	comp=Z,15nm,1.1s						
KURK	**Kurchatov**	**49.15**	**304**	P	**P**	**06 23 41.8**	**+0.4**
KURK	**Kurchatov**	**49.15**	**304**	P	**P**	**06 23 41.8**	**+0.4**
KURK				pmax	pmax		
	comp=Z,18nm,1.1s						
MK31	**Makanchi Array**	**49.25**	**298**	P	**P**	**06 23 43.0**	**+0.7**
MK31				IAmb	IAmb	06 23 44.0	
	comp=Z,8.5nm,1.2s						
MK31	**Makanchi Array**	**49.25**	**298**	*i* P	**P**	**06 23 42.9**	**+0.6**
MKAR	**Makanchi Array**	**49.25**	**298**	P	**P**	**06 23 43.1**	**+0.8**
	comp=Z,3.2nm,0.6s,baz=57,slow=6.5,SNR=40						
	comp=Z,3.2nm,0.6s						
MAKZ	**Makanchi**	**49.42**	**298**	P	**P**	**06 23 42.7**	**-0.9**
MAKZ				IAmb	IAmb	06 23 45.2	
	comp=Z,5.3nm,0.9s						
MAKZ	**Makanchi**	**49.42**	**298**	P	**P**	**06 23 42.7**	**-0.9**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PZH	**PanZhiHua**	**49.62**	**264**	P	P	06 23 47.3	+1.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,5.6s						
BRVK	**Borovoye**	**52.15**	**310**	P	**P**	**06 24 05.0**	**+1.0**
BRVK				IAmb	IAmb	06 24 05.5	
	comp=Z,7.8nm,0.8s						
BRVK	**Borovoye**	**52.15**	**310**	P	**P**	**06 24 05.0**	**+1.0**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ARU	**Arti**	**55.51**	**319**	P	**P**	**06 24 29.2**	**+0.8**
AAK	**Ala-Archa**	**56.19**	**298**	P	**P**	**06 24 34.4**	**+0.7**
AAK				IAmb	IAmb	06 24 36.1	
	comp=Z,3.2nm,0.9s						
AAK	**Ala-Archa**	**56.19**	**298**	P	**P**	**06 24 34.4**	**+0.7**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	**ARCESS Array B**	**56.21**	**342**	P	**P**	**06 24 32.5**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=37,slow=9.1,SNR=1.2						
	comp=Z,1.2nm,0.5s						
NVAR	**Mina Array Bea**	**57.25**	**68**	P	P	06 24 43.2	+1.8
	comp=Z,0.6nm,0.7s,baz=285,slow=5.7,SNR=5.0						
	comp=Z,0.6nm,0.7s						
KSH	**Kashi**	**57.32**	**294**	P	P	06 24 35.8	-5.9
KSH				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KK31	**Karatay Array**	**58.14**	**300**	P	**P**	**06 24 48.2**	**+1.0**
KK31	**Karatay Array**	**58.14**	**300**	P	**P**	**06 24 48.3**	**+1.0**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KKAR	**Karatay Array**	**58.14**	**300**	P	**P**	**06 24 48.5**	**+1.2**
KKAR	**Karatay Array**	**58.14**	**300**	P	**P**	**06 24 48.5**	**+1.2**
PDAR	**Pinedale Array**	**59.46**	**59**	P	**P**	**06 24 57.6**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=318,slow=2.0,SNR=5.3						
	comp=Z,0.5nm,0.8s						
ABKAR	**Akbulak array**	**59.60**	**311**	P	**P**	**06 24 58.7**	**+1.4**
ABKAR				IAmb	IAmb	06 24 59.9	
	comp=Z,2.4nm,0.8s						
CHGR	**Chuyangaron**	**61.86**	**297**	P	**P**	**06 25 13.4**	**+0.4**
CHGR	**Chuyangaron**	**61.86**	**297**	P	**P**	**06 25 13.4**	**+0.4**
CHGR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SBUM	**Sibu**	**61.91**	**236**	P	**P**	**06 25 13.2**	**-0.2**
SBUM				IAmb	IAmb	06 25 31.0	
	comp=Z,6.8nm,1.3s						
FIA1	**FINESS Array S**	**62.90**	**337**	P	P	06 25 22.6	+3.2
FIA1				IAmb	IAmb	06 25 51.1	
	comp=Z,8.4nm,1.2s						
FINES	**FINESS Array B**	**62.90**	**337**	P	**P**	**06 25 19.4**	**0.0**
	comp=Z,3.0nm,0.6s,baz=40,slow=7.5,SNR=20						
	comp=Z,3.0nm,0.6s						
NB2	**NORSAR Subarra**	**66.50**	**344**	P	P	06 25 47.7	+4.8
	comp=Z,0.3nm,0.4s,baz=25,slow=6.5						
NOA	**NORSAR Array B**	**66.50**	**344**	P	P	06 25 45.0	+2.1
	comp=Z,1.2nm,0.6s,baz=23,slow=6.8,SNR=7.5						
	comp=Z,1.2nm,0.6s						
GEYT	**Alibeck**	**68.52**	**304**	P	P	06 25 58.4	+2.3
	comp=Z,2.3nm,0.6s,baz=79,slow=3.1,SNR=2.0						
	comp=Z,2.3nm,0.6s						
AKASG	**Malin Array Be**	**71.16**	**329**	P	**P**	**06 26 10.7**	**-1.2**
	comp=Z,1.3nm,0.6s,baz=29,slow=6.3,SNR=7.5						
	comp=Z,1.3nm,0.6s						
KIV	**Kislovodsk**	**71.51**	**317**	*e*P	P	06 26 04.7	-10
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KBZ	**Khabaz**	**71.60**	**317**	P	**P**	**06 26 15.7**	**+0.9**
	comp=Z,3.6nm,1.0s,baz=63,slow=9.0,SNR=1.7						
	comp=Z,3.6nm,1.0s						
TX32	**Lajitas Array**	**72.27**	**66**	P	P	06 26 20.8	+1.6
TXAR	**Lajitas Array**	**72.27**	**66**	P	**P**	**06 26 20.2**	**+1.0**
	comp=Z,0.9nm,0.6s,baz=302,slow=4.2,SNR=17						
	comp=Z,0.9nm,0.6s						
WB0	**Warramunga Arr**	**72.84**	**205**	P	**P**	**06 26 23.3**	**+1.0**
WRA	**Warramunga Arr**	**73.02**	**205**	P	**P**	**06 26 24.0**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=20,slow=6.1,SNR=12						
	comp=Z,1.2nm,0.6s						
WRA	**Warramunga Arr**	**73.02**	**205**	P	**P**	**06 26 24.0**	**+0.6**
BURAR	**Bucovina Array**	**75.14**	**330**	P	**P**	**06 26 36.5**	**+0.7**
ASAR	**Alice Springs**	**76.69**	**204**	P	**P**	**06 26 45.5**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=17,slow=5.4,SNR=12						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	**76.69**	**204**	P	**P**	**06 26 46.0**	**+1.4**
GERES	**GERESS Array B**	**77.32**	**338**	P	**P**	**06 26 47.6**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=37,slow=6.7,SNR=1.6						
	comp=Z,0.2nm,0.5s						
BRTR	**Keskin Array B**	**78.84**	**320**	P	**P**	**06 26 56.7**	**0.0**
	comp=Z,0.4nm,0.6s,baz=94,slow=6.2,SNR=2.3						
	comp=Z,0.4nm,0.6s						

IDC ***19*** *06:22:16.9±3.5, 11°.00S×162°.64E, h72^{km}±25^{km}, mb3.5/3, mbtmp4.0/5, MS3.4/2, Error ellipse: s-maj=47.0km s-min=20.6km az=51.0*

ISC 19 06:22:14.9±2.0, **11°.0S**±0°.2×**162°.7E**±0°.2, **h46^{km}, n14,** σ1^s.49/8, **mb3.6**/3, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.16**	**300**	P	**Pn**	**06 23 03.4**	**+1.2**
	8µm,0.5s,baz=172,slow=12,SNR=20						
HNR				S	**Sn**	**06 23 39.4**	**+0.7**
	7µm,0.4s,baz=153,slow=5.7,SNR=5.1						
DZM	**Mont Dzumac**	**11.55**	**163**	P	**Pn**	**06 24 59.2**	**+1.8**
	5.4nm,0.9s,baz=13,slow=9.4,SNR=13						
DZM				S	**Sn**	**06 27 04.4**	**-0.7**
	6.8nm,0.9s,baz=311,slow=20,SNR=1.7						
PMG	**Port Moresby**	**15.41**	**275**	LR	LR	06 30 42.6	
	comp=Z,176nm,19.8s,baz=60,slow=33						
CTA	**Charters Tower**	**18.24**	**238**	P	**P**	**06 26 24.7**	**+0.1**
	13nm,1.0s,baz=62,slow=12,SNR=8.5						
AFI	**Afiamalu**	**25.05**	**99**	LR	LR	06 36 04.9	
	comp=Z,66nm,18.3s,baz=282,slow=33						
WRA	**Warramunga Arr**	**28.73**	**249**	P	**P**	**06 28 07.2**	**-1.0**
	0.9nm,0.5s,baz=78,slow=9.2,SNR=11						
	0.9nm,0.5s						
H11S2	**WAKE ISLAND Hy**	**29.58**	**8**	T	T	06 59 11.7	
	baz=188,slow=76,SNR=44						
H11S3	**WAKE ISLAND Hy**	**29.58**	**8**	T	T	06 59 11.7	
	baz=188,slow=76,SNR=14						
H11S1	**WAKE ISLAND Hy**	**29.60**	**8**	T	T	06 59 09.5	
	baz=188,slow=76,SNR=16						
ASAR	**Alice Springs**	**30.18**	**242**	P	**P**	**06 28 19.5**	**-1.6**
	0.8nm,0.7s,baz=65,slow=9.4,SNR=9.3						
	0.8nm,0.7s						
H11N1	**WAKE ISLAND Hy**	**30.81**	**8**	T	T	07 00 43.8	
	baz=188,slow=76,SNR=23						
H11N3	**WAKE ISLAND Hy**	**30.82**	**8**	T	T	07 00 40.7	
	baz=188,slow=76,SNR=36						
H11N2	**WAKE ISLAND Hy**	**30.83**	**8**	T	T	07 00 46.1	
	baz=188,slow=76,SNR=26						
MKAR	**Makanchi Array**	**91.48**	**317**	P	**P**	**06 35 15.3**	**-1.3**
	0.4nm,1.1s,baz=106,slow=4.9,SNR=2.4						
	0.4nm,1.1s						

ROM 19 06:31:49.6±0.1, **42°.854N**±0°.004×**13°.229E**±0°.005, **h6^{km}**±1^{km}, **ML0.8**/7, **1C, Error ellipse: s-maj=0.4km s-min=0.1km az=248.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.03**	**275**	⇑P	Pg	06 31 50.8	-0.2
T1245				S	Sg	06 31 51.5	-0.6
T1245				AML	AML		
	comp=E,3497µm,0.1s						
T1245				AML	AML		
	comp=N,1559µm,0.2s						
MC2	**Monte Cornacci**	**0.07**	**334**	P	Pg	06 31 51.5	0.0
MC2				S	Sg	06 31 53.2	+0.4
MMO1	**Montemonaco**	**0.09**	**58**	P	Pg	06 31 51.9	+0.2
MMO1				S	Sg	06 31 53.4	+0.4
T1241	**Roccafluvione,**	**0.15**	**89**	P	Pg	06 31 53.3	+0.6
T1241				S	Sg	06 31 56.1	+1.4
T1241				AML	AML		
	comp=N,78µm,1.4s						
T1241				AML	AML		
	comp=N,78µm,1.4s						
T1241				AML	AML		
	comp=N,78µm,0.6s						
T1241				AML	AML		
	comp=E,139µm,0.3s						
T1256	**Bolognola (MC)**	**0.15**	**359**	P	Pg	06 31 53.2	+0.5
T1256				S	Sg	06 31 56.0	+1.0
T1256				AML	AML		
	comp=E,47µm,0.3s						
T1216	**Preci, Frazion**	**0.16**	**284**	P	Pg	06 31 53.2	+0.4
T1216				S	Sg	06 31 56.5	+1.5
T1216				AML	AML		
	comp=E,160µm,0.4s						
T1216				AML	AML		
	comp=N,197µm,0.3s						
T1216				AML	AML		
	comp=N,197µm,1.7s						
T1212	**Cascia, Frazio**	**0.17**	**233**	P	Pg	06 31 53.7	+0.6
T1212				S	Sg	06 31 56.5	+1.2
T1212				AML	AML		
	comp=N,34µm,0.0s						
FEMA	**Monte Fema**	**0.17**	**309**	P	Pg	06 31 53.7	+0.6
FEMA				S	Sg	06 31 57.0	+1.5
T1218	**Civita (PG)**	**0.20**	**205**	P	Pg	06 31 54.4	+0.8
T1218				S	Sg	06 31 58.0	+1.7
FDMO	**Fiordimonte**	**0.21**	**330**	P	Pg	06 31 54.0	+0.3
FDMO				S	Sg	06 31 58.0	+1.3
FDMO				AML	AML		
	comp=N,35µm,1.5s						
FDMO				AML	AML		
	comp=E,32µm,1.4s						
FDMO				AML	AML		
	comp=N,35µm,1.5s						
FDMO				AML	AML		
	comp=E,32µm,0.6s						
FDMO				AML	AML		
	comp=N,35µm,0.5s						
SMA1	**SAN MARTINO**	**0.24**	**161**	P	Pg	06 31 54.7	+0.5
SMA1				S	Sg	06 31 58.5	+1.1
SMA1				AML	AML		
	comp=N,11µm,0.2s						
T1219	**Muccia, Frazio**	**0.26**	**321**	P	Pg	06 31 55.0	+0.3
T1219				S	Sg	06 31 59.5	+1.3
ARVD	**Arcevia**	**0.68**	**342**	P	Pg	06 32 02.5	-0.1

ROM 19 06:32:47.7±0.1, **42°.737N**±0°.003×**13°.236E**±0°.004, **h12^{km}, ML2.0**/31, **10C-15D, Error ellipse: s-maj=0.3km s-min=0.1km az=247.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1218	**Civita (PG)**	**0.11**	**233**	P	Pg	06 32 51.1	+0.3
T1218				S	Sg	06 32 53.6	+0.5
T1218				AML	AML		
	comp=N,7650µm,0.1s						
T1218				AML	AML		
	comp=E,4955µm,0.1s						
T1218				AML	AML		
	comp=N,7965µm,0.1s						
T1218				AML	AML		
	comp=N,7965µm,0.1s						
T1218				AML	AML		
	comp=N,7650µm,0.1s						
T1218				AML	AML		
	comp=E,4955µm,0.1s						
T1218				AML	AML		
	comp=E,5375µm,0.1s						
T1245	**Castelsantange**	**0.12**	**344**	⇓P	Pg	06 32 51.3	+0.3
T1245				S	Sg	06 32 54.1	+0.6
T1245				AML	AML		
	comp=E,2020µm,0.2s						
T1245				AML	AML		
	comp=N,2125µm,1.0s						
T1245				AML	AML		
	comp=N,2235µm,1.2s						
T1245				AML	AML		
	comp=E,1890µm,0.2s						
T1245				AML	AML		
	comp=N,2125µm,1.0s						
SMA1	**SAN MARTINO**	**0.13**	**145**	⇓P	Pg	06 32 51.4	+0.3
SMA1				S	Sg	06 32 53.9	+0.5
SMA1				AML	AML		
	comp=E,620µm,0.4s						
SMA1				AML	AML		
	comp=N,575µm,0.2s						
SMA1				AML	AML		
	comp=N,575µm,1.8s						
T1212	**Cascia, Frazio**	**0.14**	**276**	⇑P	Pg	06 32 51.6	+0.4
T1212				S	Sg	06 32 54.3	+0.6
T1212				AML	AML		
	comp=E,1825µm,0.4s						
T1212				AML	AML		
	comp=N,1685µm,0.3s						
T1212				AML	AML		
	comp=E,1705µm,0.6s						
T1212				AML	AML		
	comp=N,1735µm,0.3s						
T1212				AML	AML		
	comp=E,1825µm,0.3s						
T1212				AML	AML		
	comp=N,1685µm,0.3s						
T1212				AML	AML		
	comp=E,1705µm,0.6s						
T1212				AML	AML		
	comp=N,1735µm,0.3s						
MMO1	**Montemonaco**	**0.18**	**22**	P	Pg	06 32 52.1	+0.3
MMO1				S	Sg	06 32 55.3	+0.7
MC2	**Monte Cornacci**	**0.18**	**349**	⇓P	Pg	06 32 52.2	+0.3
MC2				S	Sg	06 32 56.0	+1.2
T1241	**Roccafluvione,**	**0.19**	**50**	P	Pg	06 32 52.2	+0.3
T1241				S	Sg	06 32 55.5	+0.7
T1241				AML	AML		
	comp=E,1320µm,0.3s						
T1241				AML	AML		
	comp=N,550µm,1.1s						
T1241				AML	AML		
	comp=E,1310µm,0.3s						
T1241				AML	AML		
	comp=N,500µm,1.1s						
T1241				AML	AML		
	comp=N,500µm,0.9s						
T1241				AML	AML		
	comp=N,550µm,0.9s						
T1216	**Preci, Frazion**	**0.22**	**314**	⇓P	Pg	06 32 52.8	+0.3
T1216				S	Sg	06 32 56.8	+1.0
T1216				AML	AML		
	comp=E,578µm,0.4s						
T1216				AML	AML		
	comp=N,757µm,1.6s						
T1216				AML	AML		
	comp=E,578µm,0.5s						
T1217	**Poggiodomo (PG**	**0.23**	**264**	⇑P	Pg	06 32 52.9	+0.3
T1217				AML	AML		
	comp=E,635µm,0.1s						
T1217				AML	AML		
	comp=N,710µm,1.3s						
T1217				AML	AML		
	comp=N,694µm,0.2s						
T1217				AML	AML		
	comp=E,634µm,0.1s						
T1217				AML	AML		
	comp=E,540µm,0.1s						
T1217				AML	AML		
	comp=E,634µm,0.1s						
T1217				AML	AML		
	comp=N,694µm,0.2s						
T1217				AML	AML		
	comp=E,540µm,0.1s						
T1217				AML	AML		
	comp=N,710µm,1.3s						
RM33	**Pellescritta (**	**0.23**	**184**	P	Pg	06 32 52.9	+0.3
RM33				S	Sg	06 32 57.0	+1.1
RM33				AML	AML		
	comp=E,1320µm,0.5s						
RM33				AML	AML		
	comp=E,1315µm,0.5s						
RM33				AML	AML		
	comp=N,777µm,0.3s						
RM33				AML	AML		
	comp=N,745µm,0.3s						
CAMP	**Campotosto**	**0.24**	**147**	P	Pg	06 32 53.0	+0.3
CAMP				S	Sg	06 32 57.0	+0.8
CAMP				AML	AML		
	comp=N,138µm,0.2s						
CAMP				AML	AML		
	comp=E,234µm,0.2s						
CAMP				AML	AML		
	comp=N,138µm,1.8s						
T1256	**Bolognola (MC)**	**0.27**	**358**	⇑P	Pg	06 32 53.7	+0.3
T1256				AML	AML		
	comp=E,306µm,0.7s						
T1256				AML	AML		
	comp=N,367µm,1.5s						
T1256				AML	AML		
	comp=N,367µm,0.5s						
T1256				AML	AML		
	comp=E,306µm,1.3s						
T1247	**Pizzolo (AQ)**	**0.30**	**171**	⇓P	Pg	06 32 54.2	+0.3
T1247				S	Sb	06 32 59.5	-0.5
T1247				AML	AML		
	comp=E,644µm,1.2s						
T1247				AML	AML		
	comp=E,644µm,0.8s						
T1247				AML	AML		
	comp=N,641µm,0.4s						
FDMO	**Fiordimonte**	**0.32**	**340**	⇓P	Pg	06 32 54.4	+0.2
FDMO				AML	AML		
	comp=E,187µm,1.5s						
FDMO				AML	AML		
	comp=E,187µm,0.5s						
FDMO				AML	AML		
	comp=N,188µm,0.3s						
T1211	**Morro Reatino**	**0.35**	**234**	⇑P	Pg	06 32 54.9	+0.1
T1211				AML	AML		
	comp=N,364µm,0.3s						
T1211				AML	AML		
	comp=E,422µm,0.1s						
T1211				AML	AML		
	comp=N,311µm,0.3s						
T1211				AML	AML		
	comp=E,414µm,0.1s						
T1219	**Muccia, Frazio**	**0.36**	**332**	P	Pg	06 32 55.2	+0.2
T1219				AML	AML		
	comp=E,317µm,0.2s						
T1219				AML	AML		
	comp=N,482µm,1.3s						
T1219				AML	AML		
	comp=E,336µm,0.2s						
T1219				AML	AML		
	comp=N,462µm,0.1s						
T1219				AML	AML		
	comp=E,317µm,0.2s						
T1219				AML	AML		
	comp=N,462µm,0.1s						
T1219				AML	AML		
	comp=N,482µm,1.3s						
T1219				AML	AML		
	comp=E,336µm,0.2s						
CESI	**CESI - Serrava**	**0.36**	**318**	⇓P	Pg	06 32 55.3	+0.3
CESI				AML	AML		
	comp=E,138µm,0.8s						
CESI				AML	AML		
	comp=N,317µm,0.3s						
T1222	**Castel Sant’An**	**0.37**	**204**	P	Pg	06 32 55.1	+0.1
T1222				AML	AML		
	comp=E,373µm,0.1s						
T1222				AML	AML		
	comp=E,350µm,0.1s						
T1222				AML	AML		
	comp=N,250µm,0.2s						
T1222				AML	AML		
	comp=E,373µm,0.1s						
T1222				AML	AML		
	comp=N,256µm,1.2s						
T1222				AML	AML		
	comp=E,350µm,0.1s						
T1222				AML	AML		
	comp=N,256µm,0.8s						
T1222				AML	AML		
	comp=N,250µm,1.8s						
GIGS	**Gran Sasso**	**0.38**	**139**	P	Pg	06 32 55.3	0.0
GIGS				S	Sb	06 33 01.6	-0.7
GIGS				AML	AML		
	comp=N,56µm,0.1s						
GIGS				AML	AML		
	comp=E,59µm,0.1s						
ARRO	**Arrone**	**0.38**	**246**	⇓P	Pg	06 32 55.7	+0.3
ARRO				AML	AML		
	comp=N,166µm,1.1s						
ARRO				AML	AML		
	comp=E,134µm,0.7s						
ARRO				AML	AML		
	comp=N,166µm,0.9s						
OFFI	**Offida**	**0.39**	**59**	⇑P	Pb	06 32 56.5	-0.1
OFFI				AML	AML		
	comp=E,264µm,0.8s						
OFFI				AML	AML		
	comp=N,246µm,0.6s						
T1220	**Camerino, Fraz**	**0.39**	**344**	P	Pg	06 32 55.6	+0.1
T1220				AML	AML		
	comp=E,836µm,0.5s						
T1220				AML	AML		
	comp=N,896µm,0.2s						
T1220				AML	AML		
	comp=E,836µm,0.5s						
FIAM	**Fiamignano**	**0.48**	**191**	⇑P	Pg	06 32 57.1	0.0

FIAM				AML	AML		
	comp=E,166µm,0.7s						
FIAM				AML	AML		
	comp=N,180µm,1.1s						
FIAM				AML	AML		
	comp=N,180µm,0.9s						
MOMA	**Monte Martano**	**0.49**	**278**	P	Pg	06 32 57.6	+0.2
MOMA				AML	AML		
	comp=N,214µm,0.2s						
MOMA				AML	AML		
	comp=E,248µm,0.2s						
ASSB	**Assisi San Ben**	**0.52**	**306**	⇑P	Pg	06 32 58.1	+0.1
ASSB				AML	AML		
	comp=E,95µm,1.3s						
ASSB				AML	AML		
	comp=N,99µm,1.5s						
ASSB				AML	AML		
	comp=E,95µm,0.7s						
ASSB				AML	AML		
	comp=N,99µm,0.5s						
FAGN	**Fagnano**	**0.54**	**151**	⇓P	Pb	06 32 58.7	-0.4
FAGN				AML	AML		
	comp=E,164µm,0.3s						
FAGN				AML	AML		
	comp=N,140µm,1.5s						
FAGN				AML	AML		
	comp=N,140µm,0.5s						
SNTG	**Esanatoglia**	**0.56**	**337**	⇓P	Pg	06 32 58.8	+0.1
SNTG				AML	AML		
	comp=E,59µm,1.3s						
SNTG				AML	AML		
	comp=E,59µm,1.3s						
SNTG				AML	AML		
	comp=N,52µm,0.3s						
VCEL	**Villa Celiera**	**0.56**	**127**	⇑P	Pb	06 32 59.2	-0.4
VCEL				AML	AML		
	comp=E,108µm,0.3s						
VCEL				AML	AML		
	comp=N,141µm,1.5s						
EL6	**Elcito**	**0.60**	**351**	⇑P	Pg	06 32 59.7	+0.2
EL6				AML	AML		
	comp=N,131µm,0.8s						
EL6				AML	AML		
	comp=N,131µm,0.8s						
EL6				AML	AML		
	comp=E,108µm,1.0s						
EL6				AML	AML		
	comp=N,131µm,1.2s						
ATCC	**AVT- Casa Cast**	**0.63**	**316**	⇓P	Pg	06 33 00.1	+0.2
CING	**Cingoli**	**0.64**	**357**	P	Pb	06 33 00.9	+0.1
CING				AML	AML		
	comp=E,79µm,0.1s						
CING				AML	AML		
	comp=N,90µm,0.1s						
T0110	**Collepietro**	**0.65**	**142**	⇓P	Pg	06 33 00.4	+0.1
T0110				AML	AML		
	comp=E,82µm,0.6s						
T0110				AML	AML		
	comp=N,79µm,1.4s						
T0110				AML	AML		
	comp=N,79µm,0.6s						
PP3	**Marolino**	**0.70**	**23**	⇓P	Pb	06 33 02.4	+0.5
SRES	**S.Oreste - Sor**	**0.73**	**227**	⇑P	Pg	06 33 02.1	+0.2
ARVD	**Arcevia**	**0.79**	**344**	S	Sn	06 33 15.5	-1.1
CERT	**Cerreto**	**0.81**	**194**	⇓P	Pg	06 33 02.7	-0.7
CERT				AML	AML		
	comp=E,104µm,0.5s						
CERT				AML	AML		
	comp=N,69µm,1.4s						
SSP9	**Sansepolcro**	**1.16**	**316**	S	Sn	06 33 27.0	+1.2
RNI2	**Rionero Sannit**	**1.24**	**146**	⇓P	Pb	06 33 11.2	+0.1
RNI2				S	Sb	06 33 25.8	-1.3
ASQU	**Asqua**	**1.50**	**316**	P	Pn	06 33 14.1	-0.5

RSNC 19 06:36:34.5±1.0**, 7°.06N×73°.61W, h139^{km}**±8^{km}**, ML1.4, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRRC	**Barranca, Sant**	**0.11**	**293**	*e*P	Pn	06 36 52.9	-0.3
BRRC				*i*		06 37 07.6	
	comp=Z,6.6nm,0.3s						
BARC	**Barichara**	**0.63**	**138**	*e*P	Pn	06 36 55.9	+0.2
BARC				*e*S	Sn	06 37 11.4	-0.2
BARC				*i*		06 37 12.0	
	comp=Z,7.2nm,0.2s						
PAMC	**Pamplona, Colo**	**0.94**	**73**	*e*P	Pn	06 36 58.1	-0.2
PAMC				*e*S	Sn	06 37 15.9	-0.3
PAMC				*i*		06 37 17.9	
	comp=Z,7.3nm,0.5s						
RUSC	**La Rusia**	**1.27**	**156**	*e*P	Pn	06 37 00.2	-1.2
RUSC				*e*S	Sn	06 37 19.1	-2.7
RUSC				*i*		06 37 23.9	
	comp=Z,1.2nm,0.2s						
CHIC	**Chingaza**	**2.42**	**183**	*e*P	Pn	06 37 14.4	-0.1
CHIC				*e*S	Sn	06 37 45.0	-0.3
CHIC				*i*		06 37 46.7	
	comp=Z,2.6nm,0.7s						
GUY2C	**Guyana, Caldas**	**2.53**	**224**	*e*P	Pn	06 37 18.8	+2.8
GUY2C				IAML		06 37 47.2	
	comp=Z,1.7nm,0.2s						
GUY2C				*e*S	Sn	06 37 51.1	+3.3

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*TEH **19** 06:59:55.7, 39°.78N×54°.52E, h10^{km}, ML3.3*

*NNC **19** 07:00:01.4±4.3, 39°.99N×55°.32E, h0^{km}, mb3.6, Error ellipse: s-maj=66.7km s-min=15.3km az=72.0*

ISC 19 07:00:00.5±1.2**, 39°.79N**±0°.07×**54°.56E**±0°.07**, h35^{km}, n18, σ0.s90**/20**, 4C-1D, Turkmenistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRVT	**Maraveh tapeh**	**2.44**	**150**	Pn	**Pn**	**07 00 37.2**	**-0.8**
IMND	**Minoodasht**	**2.61**	**165**	Pn	**Pn**	**07 00 39.3**	**-0.9**
GYA0B	**ALIBECK ARRAY**	**3.34**	**123**	⇑Pn	**Pn**	**07 00 49.6**	**-0.7**
GYA0B				⇑Lg	Lg	07 01 39.1	
IPRN	**Peran**	**3.95**	**207**	Pn	**Pn**	**07 00 57.7**	**-1.0**
MZPU	**Pul - Mazandar**	**4.09**	**216**	Pn	**Pn**	**07 00 60.0**	**-0.8**
ISHM	**Shahmirzad**	**4.10**	**195**	Pn	**Pn**	**07 01 00.9**	**0.0**
KLST	**Kelardasht - M**	**4.28**	**221**	Pn	**Pn**	**07 01 02.9**	**-0.5**
IFIR	**Firoozkooh**	**4.38**	**200**	Pn	**Pn**	**07 01 05.1**	**+0.3**
QALM	**Alamut, Qazvin**	**4.56**	**224**	Pn	**Pn**	**07 01 06.6**	**-0.5**
ILAS	**Lasjerd**	**4.58**	**197**	Pn	**Pn**	**07 01 08.1**	**+0.6**
IAKL	**Akhelmad**	**4.59**	**133**	Pn	**Pn**	**07 01 08.0**	**+0.3**
IDMV	**Damavand**	**4.66**	**206**	Pn	**Pn**	**07 01 09.1**	**+0.5**
IPAY	**Payeh**	**4.83**	**132**	Pn	**Pn**	**07 01 11.3**	**+0.4**
ISFB	**Sefidab**	**5.74**	**200**	Pn	**Pn**	**07 01 23.1**	**-0.1**
TKDS	**Koohdasht(Taba**	**6.50**	**161**	Pn	**Pn**	**07 01 33.6**	**-0.2**
TPRV	**Parvadeh(Tabas**	**6.96**	**165**	Pn	**Pn**	**07 01 40.1**	**0.0**
AB31	**Akbulak array**	**10.21**	**20**	⇑Pn	**Pn**	**07 02 24.8**	**+0.4**
	0.3nm,0.2s,baz=204,slow=13,SNR=47						
AB31				Sn	**Sn**	**07 04 15.2**	**-2.4**
	0.4nm,0.3s,baz=198,slow=23,SNR=5.8						
AKTO	**Aktyubinsk**	**10.92**	**12**	⇑Pn	**Pn**	**07 02 35.7**	**+1.5**
	1.9nm,1.1s						
AKTO				⇓Sn	**Sn**	**07 04 35.4**	**+0.5**
	2.7nm,1.4s						

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*DDA **19** 07:01:53.0±0.0, 37°.61N×38°.47E, h7^{km}±1^{km}, MW3.5*

*ISK **19** 07:01:53.2, 37°.54N×38°.49E, h15^{km}, ML3.6/21*

ISC 19 07:01:53.2±0.8**, 37°.59N**±0°.03×**38°.48E**±0°.02**, h9^{km}, n34, σ0.s76**/47**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.31**	**118**	Pg	**Pg**	**07 01 59.6**	**+0.1**
URFA				Sg	**Sg**	**07 02 04.2**	**+0.6**
HANM	**anlurfa/Hi**	**0.32**	**91**	SPECP		07 01 59.0	
HANM				P	**Pg**	**07 01 59.6**	**0.0**
HANM				S	**Sg**	**07 02 04.8**	**+0.8**
NARI	**Adyaman-Kaht**	**0.37**	**37**	SPECP		07 02 00.0	
NARI				P	**Pg**	**07 02 00.2**	**-0.4**
NARI				S	**Sg**	**07 02 05.4**	**-0.1**
SANL	**SANLIURFA_Merk**	**0.58**	**135**	SPECP		07 02 05.0	
SANL				P	**Pb**	**07 02 05.1**	**-0.6**
SANL				S	**Sb**	**07 02 13.4**	**-0.6**
AKCA	**Adyaman/G¶l**	**0.66**	**288**	SPECP		07 02 05.0	
AKCA				P	**Pg**	**07 02 05.8**	**-0.2**
AKCA				S	**Sb**	**07 02 15.4**	**-0.9**
SURC	**SANLIURFA_SURC**	**0.72**	**171**	SPECP		07 02 07.0	
SURC				P	**Pb**	**07 02 07.6**	**-0.3**
MAYA	**Malatya/Merkez**	**0.74**	**357**	SPECP		07 02 06.0	
MAYA				P	**Pg**	**07 02 06.7**	**-0.8**
GZT	**Gaziantep**	**0.76**	**253**	SPECP		07 02 08.0	
GZT				P	**Pb**	**07 02 08.2**	**-0.6**
GZT				S	**Sn**	**07 02 22.3**	**+0.3**
NZIP	**Nizip/Gaziante**	**0.84**	**230**	SPECP		07 02 09.0	
NZIP				P	**Pb**	**07 02 09.7**	**-0.3**
NZIP				S	**Sb**	**07 02 22.0**	**+0.5**
ELZG	**Elazig**	**0.99**	**24**	SPECP		07 02 11.0	
ELZG				P	**Pg**	**07 02 11.4**	**-1.0**
ELZG				S	**Sn**	**07 02 27.8**	**0.0**
GAZ	**Gaziantep**	**1.09**	**248**	Pn	**Pn**	**07 02 15.2**	**+0.4**
GAZ				Sn	**Sn**	**07 02 29.5**	**-0.5**
KMRS	**Kahramanmaras**	**1.25**	**267**	Pn	**Pn**	**07 02 16.4**	**-0.6**
DARE	**Darende-Malaty**	**1.26**	**322**	Pn	**Pg**	**07 02 17.3**	**-0.1**
DARE				Sn	**Sn**	**07 02 35.4**	**+1.2**
ELBS	**KAHRAMANMARAS**	**1.29**	**305**	SPECP		07 02 16.0	
ELBS				P	**Pn**	**07 02 17.0**	**-0.6**
ELBS				S	**Sn**	**07 02 35.0**	**-0.1**
DYBB	**Diyarbakir**	**1.37**	**74**	Pn	**Pb**	**07 02 18.7**	**-0.4**
ARPR	**Arapgir-MALATY**	**1.51**	**356**	Pn	**Pn**	**07 02 20.5**	**-0.1**
KOVA	**Elazig, Kovanc**	**1.54**	**43**	P	**Pg**	**07 02 22.4**	**-0.3**
KOVA				S	**Sg**	**07 02 43.8**	**+1.2**
MAZI	**Mazidag**	**1.57**	**94**	Pn	**Pb**	**07 02 21.7**	**-0.9**
HANI	**Diyarbakir_Han**	**1.73**	**61**	SPECP		07 02 23.0	
HANI				P	**Pn**	**07 02 24.0**	**+0.4**
HANI				S	**Sg**	**07 02 48.2**	**-0.7**
SARI	**SarD1z-Kayseri**	**1.82**	**297**	Pn	**Pb**	**07 02 26.2**	**-0.6**
KOZT	**Kozan**	**2.11**	**268**	Pn	**Pn**	**07 02 28.5**	**-0.2**
ERZN	**Erzincan**	**2.22**	**26**	Pn	**Pn**	**07 02 31.4**	**+1.0**
SVAN	**Silvan-Diyarba**	**2.23**	**75**	Pn	**Pn**	**07 02 30.0**	**-0.4**
BNGB	**Bingl**	**2.23**	**50**	Pn	**Pn**	**07 02 30.9**	**+0.4**
CEYT	**Ceyhan**	**2.25**	**256**	Pn	**Pn**	**07 02 31.2**	**+0.6**
BNN	**Bunyan**	**2.42**	**302**	Pn	**Pn**	**07 02 34.4**	**+1.2**
SVSK	**Karacayir**	**2.60**	**334**	Pn	**Pn**	**07 02 36.9**	**+1.5**
KARA	**Karaisali**	**2.74**	**264**	Pn	**Pn**	**07 02 38.6**	**+1.2**
GURO	**Guroymak-BITLI**	**2.97**	**70**	Pn	**Pn**	**07 02 40.1**	**-0.5**
BAYT	**Aydıntepe-Bayb**	**3.09**	**24**	Pn	**Pn**	**07 02 43.7**	**+1.4**
TOKT	**Tokat**	**3.12**	**332**	Pn	**Pn**	**07 02 43.6**	**+1.0**
YOZ	**Yozgat**	**3.21**	**311**	Pn	**Pn**	**07 02 45.3**	**+1.3**
KOPR	**Koprukoy-ERZUR**	**3.57**	**47**	Pn	**Pn**	**07 02 50.1**	**+1.2**
AKDM	**Akdamar-Van**	**3.64**	**77**	Pn	**Pn**	**07 02 50.9**	**+1.0**

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*NNC **19** 07:12:01.9±0.4, 50°.04N×78°.83E, h0^{km}, mb2.9, mpv2.6, Error ellipse: s-maj=7.7km s-min=2.2km az=71.0, Suspected Mining explosion.*

*IDC **19** 07:12:02.5±1.2, 50°.04N×78°.73E, h0^{km}, mbtmp2.6/2, ML2.1/2, Error ellipse: s-maj=22.0km s-min=6.5km az=68.0*

ISC 19 07:12:02.0±0.9**, 49°.97N**±0°.04×**78°.67E**±0°.07**, h0^{km}, n20, σ1.s13**/31**, 19C-10D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.62**	**351**	⇑P	**Pg**	**07 12 13.3**	**-0.6**
KUR07				⇑S	**Sb**	**07 12 22.2**	**-2.8**
KUR06	**Kurchatov Arra**	**0.64**	**351**	⇓P	**Pg**	**07 12 13.5**	**-0.7**
KUR06				⇓S	**Sg**	**07 12 22.4**	**-0.1**
KUR14	**Kurchatov Arra**	**0.64**	**355**	⇑P	**Pg**	**07 12 13.4**	**-0.9**
KUR14				⇓S	**Sg**	**07 12 22.5**	**-0.2**
KUR15	**Kurchatov Arra**	**0.65**	**354**	⇑P	**Pg**	**07 12 13.6**	**-0.9**
KUR15				⇑S	**Sg**	**07 12 22.8**	**-0.1**
KURBB	**Kurchatov Arra**	**0.66**	**352**	Pg	**Pg**	**07 12 14.2**	**-0.4**
	1.2nm,0.3s,baz=167,slow=18,SNR=86						
KURBB				Lg	Lg	07 12 22.2	
	1.8nm,0.3s,baz=100,slow=18,SNR=25						
KURBB	**Kurchatov Arra**	**0.66**	**352**	⇑P	**Pg**	**07 12 13.8**	**-0.8**
	14nm,0.5s						
KURBB				⇑S	**Sg**	**07 12 22.7**	**-0.4**
	44nm,0.5s						
KUR16	**Kurchatov Arra**	**0.66**	**350**	⇓P	**Pg**	**07 12 13.8**	**-1.0**
KUR16				⇓S	**Sg**	**07 12 23.2**	**-0.1**
KUR17	**Kurchatov Arra**	**0.67**	**349**	⇑P	**Pg**	**07 12 14.3**	**-0.6**
KUR17				⇑S	**Sg**	**07 12 23.7**	**+0.1**
KUR05	**Kurchatov Arra**	**0.68**	**353**	⇑P	**Pg**	**07 12 14.1**	**-0.8**
KUR05				⇑S	**Sg**	**07 12 23.3**	**-0.4**
KUR04	**Kurchatov Arra**	**0.69**	**353**	⇑P	**Pg**	**07 12 14.4**	**-0.9**
KUR04				⇓S	**Sg**	**07 12 23.6**	**-0.8**
KURK	**Kurchatov**	**0.74**	**357**	⇑P	**Pg**	**07 12 15.2**	**-1.1**
	5.2nm,0.4s						
KURK				⇓S	**Sg**	**07 12 24.7**	**-1.2**
	16nm,0.6s						
MAKZ	**Makanchi**	**3.86**	**144**	⇑Pg	**Pg**	**07 13 13.7**	**-2.3**
	1.1nm,0.7s						
MAKZ				⇑Lg	Lg	07 14 02.7	
	4.5nm,0.6s						
MK31	**Makanchi Array**	**3.99**	**141**	⇑Pn	**Pn**	**07 13 05.9**	**+1.4**
	0.1nm,0.2s,baz=326,slow=10,SNR=21						
MK31				⇓Pg	**Pb**	**07 13 14.7**	**+1.5**
	1.1nm,0.5s,baz=320,slow=15,SNR=13						
MK31				⇓Lg	Lg	07 14 09.2	
	5.3nm,0.6s,baz=328,slow=27,SNR=8.8						
MKAR	**Makanchi Array**	**3.99**	**141**	Pn	**Pn**	**07 13 06.0**	**+1.5**
	0.1nm,0.3s,baz=322,slow=10,SNR=26						
MKAR				Pg	**Pb**	**07 13 12.7**	**-0.5**
	0.3nm,0.3s,baz=322,slow=16,SNR=13						
MKAR				Lg	Lg	07 14 06.7	
	1.8nm,0.3s,baz=329,slow=27,SNR=24						
	0.2nm,0.4s						
I46RU	**ZALESOVO INFRA**	**5.50**	**41**	I	I	07 47 38.3	
	baz=224,slow=332,SNR=11						
ZALV	**Zalesovo Beam**	**5.50**	**41**	Pn	**Pn**	**07 13 26.6**	**+1.5**
	0.3nm,0.3s,baz=236,slow=15,SNR=4.7						
ZALV				Sn	**Sn**	**07 14 30.4**	**+1.4**
	0.1nm,0.3s,baz=305,slow=35,SNR=1.3						
ZALV				Lg	Lg	07 15 00.9	
	0.2nm,0.3s,baz=237,slow=24,SNR=2.6						
	1.1nm,0.5s						
BVA0	**Borovoye Array**	**6.01**	**304**	⇓Sn	**Sn**	**07 14 42.9**	**+1.3**
	1.4nm,0.6s,baz=114,slow=22,SNR=6.4						
BVA0				⇑Lg	Lg	07 15 12.8	
	2.2nm,0.7s						
BVAR	**Borovoye Array**	**6.01**	**304**	Sn	**Sn**	**07 14 41.7**	**+0.2**
	0.1nm,0.3s,baz=111,slow=24,SNR=9.7						
BVAR				Lg	Lg	07 15 14.7	
	baz=117,slow=29,SNR=5.0						
BRVK	**Borovoye**	**6.08**	**304**	⇑Sn	**Sn**	**07 14 44.1**	**+0.8**
	1.0nm,0.5s						
BRVK				⇑Lg	Lg	07 15 14.7	
	2.6nm,0.9s						
AAK	**Ala-Archa**	**7.89**	**203**	Lg	Lg	07 16 12.9	
	0.1nm,0.3s,baz=18,slow=20,SNR=1.6						

TAP 19 07:49:57.9, 23°.79N×121°.39E, h10^{km}±1^{km}**, ML1.1, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESL	**Shilin**	**0.05**	**52**	*i* P	Pg	07 50 01.0	+1.1
	baz=59						
ESL				*i* S	Sg	07 50 02.1	+0.7
	baz=59						
EGFH	**Guangfu**	**0.12**	**164**	P	Pg	07 50 01.3	+0.5
	baz=164						
EGFH				*i* S	Sg	07 50 04.0	+1.1
	baz=164						
ETM	**Tongmen**	**0.20**	**27**	P	Pb	07 50 03.3	-0.4
	baz=27						
ETM				S	Sg	07 50 06.3	+1.2
	baz=27						
VWDT	**VWDT**	**0.23**	**262**	*i* P	Pb	07 50 04.4	+0.1
	baz=262						
VWDT				*i* S	Sg	07 50 07.7	+1.8
	baz=262						
OWD	**Renai**	**0.26**	**311**	*e*S	Sb	07 50 08.2	-1.2
	baz=310						
EHY	**Hungye**	**0.28**	**193**	*i* P	Pb	07 50 04.7	-0.4
	baz=191						
EHY				*i* S	Sg	07 50 08.2	+0.7
	baz=191						
HGSD	**Ruisui**	**0.29**	**174**	*e*P	Pb	07 50 05.6	+0.4
	baz=174						
HGSD				*e*S	Sb	07 50 10.5	+0.3
	baz=174						
WUSB	**Renai**	**0.33**	**309**	*e*P	Pg	07 50 05.1	+0.6
	baz=309						
WUSB				S	Sb	07 50 10.6	-0.6
	baz=309						
CHGB	**Renai**	**0.34**	**324**	*e*P	Pb	07 50 06.0	-0.2
	baz=323						
CHGB				S	Sb	07 50 11.2	-0.6
	baz=323						
TWD	**Chiawan**	**0.35**	**32**	P	Pb	07 50 05.8	-0.4
	baz=33						
TWD				S	Sb	07 50 11.0	-0.8
	baz=33						
WHF	**Hehuan Shan**	**0.38**	**342**	P	Pb	07 50 06.5	-0.5
	baz=342						
WHF				S	Sb	07 50 12.8	-0.2
	baz=342						
YULB	**Yu-li**	**0.40**	**193**	*i* P	Pb	07 50 07.5	+0.4
	baz=192						
YULB				S	Sb	07 50 12.8	-0.5
	baz=192						
SSLB	**Suanglung**	**0.40**	**270**	*i* P	Pb	07 50 07.4	+0.2
	baz=270						
SSLB				*i* S	Sb	07 50 12.4	-0.9
	baz=270						
ETLH	**Xiulin Townshi**	**0.43**	**11**	*e*P	Pb	07 50 08.0	+0.4
	baz=11						
ETLH				*e*S	Sb	07 50 13.3	-0.9
	baz=11						

JMA 19 07:50:41.1±0.2**, 24°N**±1°×**123°.4E**±0°.6**, h49^{km}**±2^{km}**, MV0.8**/9**, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.28**	**77**	P	Pn	07 50 49.8	-0.2
IRIF				*e*S	Sn	07 50 56.1	-0.1
HATJ	**Hateruma jima**	**0.40**	**122**	*e*P	Pn	07 50 50.9	-0.3
HATJ				*e*S	Sn	07 50 59.0	+0.7
YOJ	**Yonaguni jima**	**0.43**	**297**	P	Pn	07 50 51.4	0.0
YOJ				*e*S	Sn	07 50 58.9	+0.1
JYNG	**Yonagunijimaku**	**0.48**	**292**	P	Pn	07 50 51.9	0.0
JKRS	**Kuro-shima**	**0.53**	**93**	P	Pn	07 50 52.9	+0.3
JKRS				*e*S	Sn	07 51 01.9	+1.0
JIJ	**Ishigaki jima**	**0.66**	**82**	P	Pn	07 50 54.0	-0.2
JIJ				*e*S	Sn	07 51 03.6	-0.1
JISG	**Ishigakijimahi**	**0.86**	**68**	*e*P	Pn	07 50 57.8	+0.9

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*KRNET **19** 07:57:04.9±0.1, 39°.92N×75°.58E, mb3.5*

*SOME **19** 07:57:04.6, 40°.02N×75°.43E, h10^{km}*

*NNC **19** 07:57:07.8±1.2, 40°.10N×75°.55E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=9.1km s-min=5.3km az=166.0*

ISC 19 07:57:06.8±1.2**, 39°.94N**±0°.05×**75°.53E**±0°.03**, h10^{km}, n76, σ2.s08**/100**, 34C-20D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.53**	**13**	⇑*i*P	**Pb**	**07 57 33.6**	**-1.9**
	baz=11						
NRN				⇑*i*S	**Sg**	**07 57 54.6**	**-1.5**
	baz=11						
ARLS	**Aral**	**2.12**	**335**	⇓*e*P	**Pb**	**07 57 43.9**	**-1.6**
	baz=34						
ARLS				⇓*e*S	**Sb**	**07 58 12.3**	**+0.4**
	baz=34						
OHH	**Osh**	**2.18**	**286**	⇑*e*P	**Pb**	**07 57 44.7**	**-1.7**
	baz=87						
OHH				⇑*e*S	**Sb**	**07 58 13.9**	**+0.4**
	baz=87						
ULHL	**Ulahol**	**2.36**	**13**	P	**Pb**	**07 57 48.3**	**-1.3**
	SNR=8.2						
ULHL	**Ulahol**	**2.36**	**13**	⇑*e*P	**Pb**	**07 57 47.1**	**-2.5**
	baz=12						
ULHL				⇑*e*S	**Sb**	**07 58 17.7**	**-1.2**
	baz=12						
UCH	**Uchtor**	**2.41**	**342**	P	**Pb**	**07 57 48.8**	**-1.7**
	SNR=152						
UCH	**Uchtor**	**2.41**	**342**	⇓*e*P	**Pb**	**07 57 48.1**	**-2.4**
	baz=41						
UCH				⇓*e*S	**Sb**	**07 58 19.6**	**-0.8**
	baz=41						
TARG	**Taragay, Kyrgy**	**2.48**	**43**	⇓*e*P	**Pb**	**07 57 48.5**	**-3.2**
	baz=42						
TARG				⇓*i*S	**Sb**	**07 58 20.2**	**-2.3**
	baz=42						
KDJ	**Kajisay**	**2.52**	**29**	⇑*e*P	**Pb**	**07 57 49.0**	**-3.2**
	baz=28						
KDJ				⇑*e*S	**Sb**	**07 58 21.1**	**-2.2**
	baz=28						
BOOM	**Boomskoye usch**	**2.56**	**7**	⇓*e*P	**Pb**	**07 57 49.9**	**-3.1**
	baz=6.0						
BOOM				⇓*e*S	**Sb**	**07 58 22.8**	**-1.8**
	baz=6.0						
AML	**Almayashu**	**2.59**	**328**	P	**Pb**	**07 57 51.7**	**-1.8**
	SNR=100						
AML	**Almayashu**	**2.59**	**328**	⇑Pn	**Pb**	**07 57 51.2**	**-2.3**
	6.9nm,0.7s						
AML				⇑Lg	Lg	07 58 28.1	
	10nm,0.7s						
AML	**Almayashu**	**2.59**	**328**	⇑*e*P	**Pb**	**07 57 50.7**	**-2.8**
	baz=28						
AML				⇑*e*S	**Sb**	**07 58 24.2**	**-1.4**
	baz=28						
KBK	**Karagaybulak**	**2.75**	**351**	P	**Pb**	**07 57 54.0**	**-2.1**
	SNR=8.1						
KBK	**Karagaybulak**	**2.75**	**351**	⇑*e*P	**Pb**	**07 57 52.6**	**-3.5**
	baz=50						
KBK				⇑*i*S	**Sb**	**07 58 27.3**	**-2.6**
	baz=50						
AAK	**Ala-Archa**	**2.80**	**344**	P	**Pb**	**07 57 54.6**	**-2.4**
	SNR=47						
AAK	**Ala-Archa**	**2.80**	**344**	⇓*e*P	**Pb**	**07 57 53.4**	**-3.6**
	baz=44						
AAK				⇓*e*S	**Sb**	**07 58 28.9**	**-2.6**
	baz=44						
DRK	**Karamyk**	**2.91**	**262**	⇑*i*P	**Pb**	**07 57 54.9**	**-4.1**
	baz=63						
DRK				⇑*i*S	**Sb**	**07 58 31.5**	**-3.3**
	baz=63						
FRU1	**Bishkek**	**2.94**	**347**	⇓*i*P	**Pb**	**07 57 55.2**	**-4.2**
	baz=46						
FRU1				⇓*i*S	**Sb**	**07 58 32.0**	**-3.4**
	baz=46						
TKM2	**Tokmak 2**	**2.98**	**1**	P	**Pb**	**07 57 56.7**	**-3.3**
	SNR=29						
TKM2	**Tokmak 2**	**2.98**	**1**	⇑Pn	**Pb**	**07 57 56.3**	**-3.7**
	15nm,0.5s						
TKM2				⇓Lg	Lg	07 58 39.0	
	19nm,0.3s						
TKM2	**Tokmak 2**	**2.98**	**1**	⇓*e*P	**Pb**	**07 57 55.7**	**-4.3**
	baz=0.0						
TKM2				⇓*e*S	**Sb**	**07 58 32.7**	**-3.8**
	baz=0.0						
EKS2	**Erkin-Say**	**3.02**	**335**	P	**Pb**	**07 57 57.8**	**-2.9**
	SNR=7.3						
EKS2	**Erkin-Say**	**3.02**	**335**	⇑*e*P	**Pb**	**07 57 56.5**	**-4.2**
	baz=34						
EKS2				⇑*e*S	**Sb**	**07 58 34.1**	**-3.6**
	baz=34						
CHMS	**Chumysh**	**3.11**	**349**	P	**Pb**	**07 57 58.5**	**-3.6**
	SNR=9.7						
CHMS	**Chumysh**	**3.11**	**349**	⇑*e*P	**Pn**	**07 57 57.5**	**+1.6**
	baz=49						
CHMS				⇑*e*S	**Sb**	**07 58 35.8**	**-4.4**
	baz=49						
KST	**Kastek**	**3.12**	**6**	Pg	**Pb**	**07 58 02.1**	**-0.2**
	17nm,0.4s						
KST				Lg	Lg	07 58 43.8	
	44nm,0.6s						
KST	**Kastek**	**3.12**	**6**	*e*Pg	**Pb**	**07 58 01.9**	**-0.5**
	17nm,0.4s						
KST				*e*Lg	Lg	07 58 43.1	
	44nm,0.6s						
IZV	**Izvestkoviy**	**3.20**	**14**	Pg	**Pb**	**07 58 03.3**	**-0.4**
	26nm,0.5s						
IZV				Lg	Lg	07 58 45.3	
	45nm,0.6s						
IZV	**Izvestkoviy**	**3.20**	**14**	*e*Pg	**Pb**	**07 58 03.3**	**-0.4**
	26nm,0.5s						
IZV				*e*Lg	Lg	07 58 45.3	
	45nm,0.6s						
MTBS	**Maitube**	**3.25**	**12**	Pg	**Pb**	**07 58 03.8**	**-0.9**
	16nm,0.6s						
MTBS				Lg	Lg	07 58 46.2	
	38nm,0.5s						
MTBS	**Maitube**	**3.25**	**12**	*e*Pg	**Pb**	**07 58 03.8**	**-0.9**
	16nm,0.6s						
MTBS				*e*Lg	Lg	07 58 46.2	
	38nm,0.5s						
ANVS	**Anan'yevo**	**3.26**	**29**	⇑*i*P	**Pn**	**07 57 59.4**	**+1.2**
	baz=28						
ANVS				⇑*i*S	**Sn**	**07 58 39.1**	**+2.0**
	baz=28						
TNSS	**Tian-Shan**	**3.27**	**19**	Pg	**Pb**	**07 58 04.6**	**-0.6**
	28nm,0.6s						

TNSS				Lg	Lg	07 58 47.2	
	16nm,0.6s						
TNSS	**Tian-Shan**	**3.27**	**19**	*e*Pg	**Pb**	**07 58 04.6**	**-0.6**
	28nm,0.6s						
TNSS				*e*Lg	Lg	07 58 47.2	
	16nm,0.6s						
ARK	**Arkit**	**3.28**	**306**	⇓*i*P	**Pn**	**07 58 00.1**	**+1.8**
	baz=6.0						
ARK				⇓*i*S	**Sn**	**07 58 40.5**	**+3.1**
	baz=6.0						
MRKS	**Merke**	**3.29**	**329**	Pg	**Pb**	**07 58 03.4**	**-2.0**
	3.2nm,0.3s						
MRKS				Lg	Lg	07 58 45.2	
	27nm,0.7s						
MRKS	**Merke**	**3.29**	**329**	*e*Pg	**Pb**	**07 58 03.4**	**-2.0**
	3.2nm,0.3s						
MRKS				*e*Lg	Lg	07 58 45.2	
	27nm,0.7s						
DGS	**Degeres**	**3.30**	**3**	Pg	**Pb**	**07 58 05.5**	**0.0**
	20nm,0.4s						
DGS				Lg	Lg	07 58 49.6	
	39nm,0.6s						
DGS	**Degeres**	**3.30**	**3**	*e*Pg	**Pb**	**07 58 05.8**	**+0.3**
	20nm,0.4s						
DGS				*e*Lg	Lg	07 58 49.6	
	39nm,0.6s						
USP	**Ospenovka**	**3.41**	**347**	P	Pb	07 58 02.3	-5.0
	SNR=35						
MDOK	**Medeo**	**3.41**	**19**	⇑Pn	**Pn**	**07 58 02.1**	**+1.9**
	23nm,0.7s						
MDOK				Pg	**Pb**	**07 58 06.9**	**-0.5**
	16nm,0.4s						
MDOK				⇑Lg	Lg	07 58 51.0	
	37nm,0.8s						
MDOK				Lg	Lg	07 58 51.5	
	38nm,0.8s						
MNAS	**Manas**	**3.42**	**319**	⇑*i*P	**Pn**	**07 58 01.9**	**+1.7**
	baz=19						
MNAS				⇑*i*S	**Sn**	**07 58 43.7**	**+2.8**
	baz=19						
KOTS	**Kotyrbulak**	**3.50**	**19**	Pg	**Pb**	**07 58 08.8**	**0.0**
	14nm,0.4s						
KOTS				Lg	Lg	07 58 54.8	
	123nm,0.8s						
KOTS	**Kotyrbulak**	**3.50**	**19**	*e*Pg	**Pb**	**07 58 08.8**	**0.0**
	14nm,0.4s						
KOTS				*e*Lg	Lg	07 58 54.8	
	123nm,0.8s						
SGDS	**Sogindy**	**3.57**	**349**	Pg	**Pb**	**07 58 10.7**	**+0.6**
	5.6nm,0.3s						
SGDS				Lg	Lg	07 58 57.7	
	16nm,0.5s						
BTK	**Batken**	**3.62**	**273**	⇑*i*P	**Pn**	**07 58 04.6**	**+1.6**
	baz=74						
BTK				⇑*i*S	**Sn**	**07 58 48.4**	**+2.6**
	baz=74						
KRBS	**Karabastau**	**3.75**	**2**	Pg	**Pb**	**07 58 13.5**	**+0.3**
	16nm,0.4s						
KRBS				Lg	Lg	07 59 02.8	
	17nm,0.6s						
KRBS	**Karabastau**	**3.75**	**2**	*e*Pg	**Pb**	**07 58 13.5**	**+0.3**
	16nm,0.4s						
KRBS				*e*Lg	Lg	07 59 02.8	
	17nm,0.6s						
SATY	**Saty**	**3.79**	**34**	Pg	**Pb**	**07 58 12.6**	**-1.2**
	15nm,0.8s						
SATY				Lg	Lg	07 59 01.5	
	22nm,0.7s						
SATY	**Saty**	**3.79**	**34**	*e*Pg	**Pb**	**07 58 12.6**	**-1.2**
	15nm,0.8s						
SATY				*e*Lg	Lg	07 59 01.5	
	22nm,0.7s						
KTBS	**Karatobe**	**3.86**	**12**	Pg	**Pb**	**07 58 15.0**	**0.0**
	20nm,0.5s						
KTBS				Lg	Lg	07 59 06.2	
	41nm,0.4s						
KTBS	**Karatobe**	**3.86**	**12**	*e*Pg	**Pb**	**07 58 15.0**	**0.0**
	20nm,0.5s						
KTBS				*e*Lg	Lg	07 59 05.5	
	41nm,0.4s						
ZHN	**Zhinishke**	**3.89**	**33**	Pg	**Pb**	**07 58 15.2**	**-0.3**
	2.6nm,0.2s						
ZHN				Lg	Lg	07 59 05.4	
	23nm,0.5s						
ZHN	**Zhinishke**	**3.89**	**33**	*e*Pg	**Pb**	**07 58 15.2**	**-0.3**
	2.6nm,0.2s						
ZHN				*e*Lg	Lg	07 59 05.4	
	23nm,0.5s						
KUU	**Kurty**	**3.99**	**8**	Pg	**Pb**	**07 58 17.7**	**+0.5**
	9.8nm,0.5s						
KUU				Lg	Lg	07 59 09.8	
	34nm,0.7s						
KUU	**Kurty**	**3.99**	**8**	*e*Pg	**Pb**	**07 58 17.7**	**+0.5**
	9.8nm,0.5s						
KUU				*e*Lg	Lg	07 59 09.8	
	34nm,0.7s						
KURS	**Kuram**	**4.06**	**28**	Pg	**Pb**	**07 58 17.0**	**-1.3**
	12nm,0.7s						
KURS				Lg	Lg	07 59 08.0	
	15nm,0.8s						
KURS	**Kuram**	**4.06**	**28**	*e*Pg	**Pb**	**07 58 17.0**	**-1.3**
	12nm,0.7s						
KURS				*e*Lg	Lg	07 59 09.0	
	15nm,0.8s						
CHKK	**Chushkaly**	**4.06**	**15**	Pg	**Pb**	**07 58 18.7**	**+0.4**
	13nm,0.8s						
CHKK				Lg	Lg	07 59 11.7	
	40nm,1.1s						
CHKK	**Chushkaly**	**4.06**	**15**	*e*Pg	**Pb**	**07 58 18.7**	**+0.4**
	13nm,0.8s						
CHKK				*e*Lg	Lg	07 59 11.7	
	40nm,1.1s						
UZB	**Uzynbulak**	**4.14**	**38**	Pg	**Pb**	**07 58 19.2**	**-0.5**
	5.7nm,0.5s						
UZB				Lg	Lg	07 59 12.3	
	12nm,0.9s						
UZB	**Uzynbulak**	**4.14**	**38**	*e*Pg	**Pb**	**07 58 19.2**	**-0.5**
	5.7nm,0.5s						
UZB				*e*Lg	Lg	07 59 12.3	
	12nm,0.9s						
KPKS	**Kokpek**	**4.24**	**33**	Pg	**Pb**	**07 58 21.4**	**-0.1**
	12nm,0.6s						
KPKS				Lg	Lg	07 59 16.3	
	46nm,0.6s						
KPKS	**Kokpek**	**4.24**	**33**	*e*Pg	**Pb**	**07 58 21.4**	**-0.1**
	12nm,0.6s						
KPKS				*e*Lg	Lg	07 59 16.4	
	46nm,0.6s						
PDGK	**Podgornoye**	**4.50**	**40**	Pg	**Pb**	**07 58 26.1**	**+0.2**
	2.7nm,0.8s						
PDGK				Lg	Lg	07 59 24.1	
	5.7nm,0.8s						
PDGK	**Podgornoye**	**4.50**	**40**	⇑Pn	**Pn**	**07 58 14.9**	**-0.2**
	4.5nm,0.5s						
PDGK				⇓Pg	**Pb**	**07 58 26.4**	**+0.5**
	9.5nm,0.9s						
PDGK				⇑Sn	**Sn**	**07 59 10.6**	**+3.0**
	25nm,0.7s						
PDGK				⇓Lg	Lg	07 59 27.9	
	23nm,0.9s						
ARXS	**Arharly**	**4.60**	**21**	Pg	**Pb**	**07 58 27.4**	**-0.1**
	9.0nm,0.6s						
ARXS				Lg	Lg	07 59 26.9	
	16nm,0.6s						
ARXS	**Arharly**	**4.60**	**21**	*e*Pg	**Pb**	**07 58 27.4**	**-0.1**
	9.0nm,0.6s						
ARXS				*e*Lg	Lg	07 59 26.9	
	16nm,0.6s						
IUG	**Iuzhnay**	**4.71**	**300**	Pg	**Pb**	**07 58 29.7**	**+0.3**
	7.1nm,0.3s						
IUG				Lg	Lg	07 59 30.6	
	18nm,0.8s						
IUG	**Iuzhnay**	**4.71**	**300**	*e*Pg	**Pb**	**07 58 29.7**	**+0.3**
	7.1nm,0.3s						
IUG				*e*Lg	Lg	07 59 30.6	
	18nm,0.8s						
KK31	**Karatay Array**	**4.92**	**312**	⇑Pn	**Pn**	**07 58 21.3**	**+0.6**
	0.2nm,0.2s,baz=128,slow=13,SNR=17						
KK31				⇑Pg	**Pb**	**07 58 35.3**	**+2.4**
	1.5nm,0.5s,baz=123,slow=17,SNR=9.4						
KK31				⇓Sn	**Sn**	**07 59 18.9**	**+1.3**
	0.9nm,0.3s						
KK31				⇑Lg	Lg	07 59 40.7	
	3.7nm,0.6s,baz=125,slow=28,SNR=2.9						
BTLS	**Baital**	**5.21**	**348**	Pg	**Pb**	**07 58 40.0**	**+2.0**
	2.5nm,0.7s						
BTLS				Lg	Lg	07 59 48.3	
	9.9nm,0.8s						
BTLS	**Baital**	**5.21**	**348**	*e*Pg	**Pb**	**07 58 40.0**	**+2.0**
	2.5nm,0.7s						
BTLS				*e*Lg	Lg	07 59 48.3	
	9.9nm,0.8s						
DJR	**Jarkent**	**5.41**	**34**	Pg	**Pb**	**07 58 43.3**	**+1.9**
	3.9nm,0.3s						
DJR				Lg	Lg	07 59 53.8	
	3.5nm,0.3s						
DJR	**Jarkent**	**5.41**	**34**	*e*Pg	**Pb**	**07 58 43.3**	**+1.9**
	3.9nm,0.3s						
DJR				*e*Lg	Lg	07 59 53.8	
	3.5nm,0.3s						

WEL 19 08:09:08.7±0.5**, 42°S**±2°×**17°4E**±°**, h5**^{km}±2^{km}**, M2.4**/6**,**
ML2.5/11**, MLv2.4**/6**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=118.2, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHZ	**Kahutara**	**0.36**	**202**	P	Pg	08 09 15.6	-0.1
KHZ				S	Sg	08 09 21.0	+0.6
BSWZ	**Blackbirch Sta**	**0.38**	**17**	P	Pg	08 09 16.5	+0.4
BSWZ				S	Sg	08 09 22.5	+1.5
CMWZ	**Cape Campbell**	**0.49**	**48**	P	Pg	08 09 19.0	+0.8
TUWZ	**Tuamarina**	**0.67**	**14**	P	Pg	08 09 21.8	+0.3
TUWZ				S	Sb	08 09 31.6	-0.8
THZ	**Tophouse**	**0.69**	**297**	P	Pg	08 09 22.1	+0.2
THZ				S	Sg	08 09 31.9	+1.1
NNZ	**Nelson**	**0.90**	**343**	P	Pg	08 09 25.8	-0.1
TCW	**Tory Channel**	**0.96**	**26**	P	Pg	08 09 26.6	-0.5
MRNZ	**Matariki Terra**	**0.99**	**313**	P	Pg	08 09 27.9	+0.2
GVZ	**Greta Valley S**	**1.02**	**210**	P	Pg	08 09 28.0	-0.3
GVZ				S	Sb	08 09 43.2	+0.5
WEL	**Wellington**	**1.11**	**45**	P	Pg	08 09 29.4	-0.6
TKNZ	**Takaka Hill**	**1.19**	**331**	P	Pg	08 09 31.1	-0.4
LTZ	**Lake Taylor**	**1.28**	**236**	P	Pg	08 09 32.1	-1.2
DUWZ	**D'Urville Isla**	**1.28**	**7**	P	Pg	08 09 32.4	-0.9
AMCZ	**Amberley**	**1.35**	**215**	P	Pn	08 09 32.2	-2.1
CAW	**Cannon Point**	**1.40**	**47**	P	Pn	08 09 33.0	-1.9
PAWZ	**Paruwai Farm**	**1.45**	**62**	P	Pn	08 09 33.0	-2.6
DSZ	**Denniston Nort**	**1.47**	**282**	P	Pg	08 09 36.9	0.0
KIW	**Kapiti Island**	**1.51**	**37**	P	Pn	08 09 35.2	-1.2
QRZ	**Quartz Range**	**1.54**	**324**	P	Pn	08 09 37.0	+0.2
MTW	**Mount Morrison**	**1.62**	**56**	P	Pn	08 09 35.4	-2.6
OGWZ	**Otaki Gorge**	**1.67**	**41**	P	Pn	08 09 36.8	-1.8
OXZ	**Oxford**	**1.76**	**224**	P	Pn	08 09 37.3	-2.6
HOWZ	**Holdsworth Sta**	**1.79**	**49**	P	Pb	08 09 41.4	-0.6
MQZ	**McQueen's Vall**	**1.81**	**205**	P	Pn	08 09 37.1	-3.3
INZ	**Inchbonnie**	**1.81**	**248**	P	Pn	08 09 39.8	-0.7
MRZ	**Mangatainoka R**	**1.99**	**45**	P	Pn	08 09 40.7	-2.3
RACZ	**Rakaia**	**2.02**	**215**	P	Pn	08 09 40.3	-3.0
MHCZ	**Mount Hutt**	**2.15**	**227**	P	Pn	08 09 42.6	-2.6
WACZ	**Wakanui South**	**2.32**	**216**	P	Pn	08 09 42.9	-4.6
WVZ	**Waitaha Valley**	**2.42**	**245**	P	Pn	08 09 47.5	-1.4
WAZ	**Wanganui**	**2.51**	**23**	P	Pb	08 09 54.1	-0.1
RPZ	**Rata Peaks**	**2.55**	**229**	P	Pn	08 09 48.4	-2.4
ARCZ	**Arundel**	**2.64**	**224**	P	Pn	08 09 49.3	-2.7
PKE	**Pukeiti**	**2.89**	**4**	P	Pn	08 09 57.8	+2.4
TMZ	**Timaru**	**3.04**	**220**	P	Pn	08 09 54.9	-2.5
VRZ	**Vera Road**	**3.06**	**15**	P	Pb	08 10 01.5	-2.0
WNVZ	**Wahianoa**	**3.10**	**28**	P	Pb	08 10 02.7	-1.6
OTVZ	**Oturere**	**3.27**	**28**	P	Pb	08 10 05.5	-1.7
HIZ	**Hauiti**	**3.67**	**14**	P	Pn	08 10 08.4	+2.4
ODZ	**Otahua Downs**	**3.71**	**216**	P	Pn	08 10 03.3	-3.4

IDC 19 08:17:32.7±5.4**, 17°.57S**×**75°.93W, h0**^{km}**, mb3.6**/2**,**
mbtmp3.6/3**, ML3.9**/1**, MS2.8**/1**, Error ellipse:**
s-maj=183.5km s-min=38.4km az=19.0, Off coast of
Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**7.57**	**81**	Pn	Pn	08 19 25.1	+0.2
	0.8nm,0.3s,baz=264,slow=9.7,SNR=21						
LPAZ				LR	LR	08 22 16.9	
	comp=Z,73nm,19.6s,baz=312,slow=38						
	1.8nm,0.3s						
TXAR	**Lajitas Array**	**53.77**	**330**	P	P	08 26 57.2	0.0
	0.1nm,0.6s,baz=138,slow=9.6,SNR=2.0						
	0.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**82.45**	**74**	P	P	08 29 57.5	-0.1
	1.2nm,0.7s,baz=260,slow=5.5,SNR=7.6						
	1.2nm,0.7s						
H11S2	**WAKE ISLAND Hy**	**120.71**	**281**	T	T	10 49 13.0	
	baz=98,slow=75,SNR=4.9						
H11S1	**WAKE ISLAND Hy**	**120.72**	**281**	T	T	10 49 09.0	
	baz=98,slow=75,SNR=5.5						
H11N3	**WAKE ISLAND Hy**	**120.72**	**283**	T	T	10 49 12.8	
	baz=98						
H11S3	**WAKE ISLAND Hy**	**120.73**	**281**	T	T	10 49 10.8	
	baz=98,slow=75,SNR=6.4						
H11N2	**WAKE ISLAND Hy**	**120.74**	**283**	T	T	10 49 12.5	
	baz=98						
H11N1	**WAKE ISLAND Hy**	**120.74**	**283**	T	T	10 49 11.6	
	baz=98						

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*IDC **19** 08:22:33.2±1.0, 52°.61N×106°.57E, h0^{km}, mb3.5/6,*
mbtmp3.4/10, ML2.8/4, Error ellipse: s-maj=19.0km
s-min=16.4km az=63.0
*MOS **19** 08:22:33.7±1.2, 52°.61N×106°.66E, h10^{km}, mb4.0/2, Error*
ellipse: s-maj=8.7km s-min=7.6km az=50.4
MOS Felt (III) at Tyrgan.
*BYKL **19** 08:22:35.5±0.2, 52°.67N×106°.54E, h17^{km}±3^{km}, FELT*
I=III-IV MSK at Tyrgan, Yelantsy; II at Irkutsk
ISC 19 08:22:35.3±0.8**, 52°.66N**±0°.02×**106°.58E**±0°.02**, h12**^{km}±5^{km}**,**
n73, σ1^{s}.**99**/115**, mb3.5**/7**, 15C-13D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRG	**Tyrgan**	**0.17**	**305**	⇓*i*Pg	**Pb**	**08 22 39.9**	**-0.5**
TRG				*e*Sg	**Sb**	**08 22 42.9**	**+0.9**
TRG				Pmax			
	11µm,0.1s						
TRG				Smax			
	54µm,0.2s						
TRG	**Tyrgan**	**0.17**	**305**	⇓*i*PG	**Pb**	**08 22 39.9**	**-0.5**
TRG				*e*		08 22 42.9	
TRG				pmax	pmax		
	comp=Z,10µm,0.1s						
TRG				smax	smax		
	comp=N,54µm,0.2s						
ZRHB	**Zarechye**	**0.37**	**107**	⇑*i*Pg	**Pg**	**08 22 43.0**	**+0.3**
ZRHB				*e*Sg	**Sg**	**08 22 48.8**	**+1.1**
ZRHB				Pmax			
	comp=N,2µm,0.2s						
ZRHB				Smax			
	comp=N,8µm,0.3s						
STDB	**Stepnoy Dvoret**	**0.51**	**195**	⇑*i*Pg	**Pb**	**08 22 46.1**	**-0.1**
STDB				*e*Sg	**Sb**	**08 22 53.8**	**+0.2**
KAB	**Kabansk**	**0.62**	**175**	⇑*i*Pg	**Pg**	**08 22 47.0**	**-0.3**
KAB				*e*Sg	**Sg**	**08 22 55.6**	**+0.2**
KAB				Pmax			
	comp=N,439nm,0.2s						
KAB				Smax			
	comp=N,5µm,0.2s						
FFNB	**Fofonovo**	**0.63**	**169**	⇑*i*Pg	**Pg**	**08 22 47.0**	**-0.5**
FFNB				*e*Sg	**Sg**	**08 22 55.2**	**-0.6**
KELR	**Kotokel**	**0.92**	**83**	⇑*i*Pg	**Pb**	**08 22 51.9**	**-1.3**
KELR				*e*Sg	**Sb**	**08 23 04.2**	**-1.2**
KELR				*e*Sb	**Sg**	**08 23 06.4**	**+1.3**
BGT	**Bolshoye Golou**	**0.95**	**230**	*e*Pg	**Pb**	**08 22 52.8**	**-0.8**
BGT				*e*Pb	**Pn**	**08 22 54.5**	**+0.1**
BGT				*e*		08 22 56.1	
BGT				*e*Sg	**Sb**	**08 23 04.9**	**-1.2**
BGT				*e*		08 23 06.7	
BGT				*e*Sb	**Sn**	**08 23 08.2**	**+0.4**
BGT				max			
	comp=N,402nm,0.2s						
BGT				max			
	comp=N,2µm,0.2s						
OGRR	**Ongureny**	**1.16**	**32**	⇑*i*Pg	**Pn**	**08 22 56.5**	**-0.8**
OGRR				*e*Pb	**Pg**	**08 22 58.8**	**+1.2**
OGRR				*e*Sg	**Sb**	**08 23 12.2**	**0.0**
OGRR				*e*		08 23 27.4	
OGRR				Pmax			
	comp=N,229nm,0.4s						
OGRR				Smax			
	comp=N,1µm,0.4s						
OGRR	**Ongureny**	**1.16**	**32**	⇑*i*PG	**Pg**	**08 22 59.5**	**+1.9**
OGRR				*e*		08 23 15.3	
OGRR				pmax	pmax		
	comp=Z,223nm,0.4s						
OGRR				smax	smax		
	comp=N,1µm,0.5s						
LSTR	**Listvyanka**	**1.33**	**234**	*e*Pg	**Pn**	**08 22 59.4**	**-0.3**
LSTR				*e*Pb	**Pb**	**08 23 00.2**	**-0.1**
LSTR				*e*Sg	**Sn**	**08 23 16.4**	**-1.0**
LSTR				*e*Sb	**Sg**	**08 23 17.8**	**-0.5**
LSTR				max			
	comp=N,295nm,0.2s						
LSTR				max			
	comp=N,768nm,0.2s						
LSTR	**Listvyanka**	**1.33**	**234**	⇑*i*PG	**Pn**	**08 22 59.3**	**-0.4**
LSTR				*e*		08 23 16.3	
LSTR				pmax	pmax		
	comp=Z,295nm,0.1s						
LSTR				smax	smax		
	comp=E,872nm,0.3s						
MXMB	**Maximikha**	**1.44**	**65**	*e*Pg	**Pn**	**08 23 01.3**	**0.0**
MXMB				*e*Pb	**Pb**	**08 23 01.9**	**-0.2**
MXMB				*e*Sg	**Sg**	**08 23 21.7**	**-0.1**
IRK	**Irkutsk**	**1.47**	**254**	*e*Pg	**Pb**	**08 23 02.2**	**-0.4**
IRK				*e*		08 23 07.8	
IRK				*e*Sg	**Sb**	**08 23 21.1**	**-0.1**
IRK				Pmax			
	comp=E,1µm,0.2s						
IRK				Smax			
	comp=E,7µm,0.4s						
IRK	**Irkutsk**	**1.47**	**254**	*e*PG	**Pb**	**08 23 02.2**	**-0.4**
IRK				*e*		08 23 21.4	
IRK				pmax	pmax		
	comp=Z,1µm,0.2s						
IRK				smax	smax		
	comp=N,7µm,0.4s						
TLY	**Talaya**	**2.06**	**243**	⇑*i*Pn	**Pn**	**08 23 10.3**	**+0.6**
TLY				*e*Pg	**Pb**	**08 23 12.0**	**-0.6**
TLY				*e*		08 23 14.5	
TLY				*e*Sn	**Sb**	**08 23 36.0**	**-2.0**
TLY				*e*Sg	**Sg**	**08 23 38.7**	**-2.7**
TLY				Pmax			
	comp=N,141nm,0.2s						
TLY				Smax			
	comp=N,1µm,0.4s						
TLY	**Talaya**	**2.06**	**243**	*e*PN	**Pn**	**08 23 10.1**	**+0.4**
SYVR	**Suvo**	**2.29**	**63**	⇓*i*Pn	**Pn**	**08 23 13.2**	**+0.3**
SYVR				*e*Pg	**Pb**	**08 23 16.7**	**+0.2**
SYVR				*e*Sn	**Sn**	**08 23 41.1**	**+0.1**
SYVR				*e*Sg	**Sb**	**08 23 46.8**	**+2.0**
SYVR				Pmax			
	comp=N,63nm,0.4s						
SYVR				Smax			
	comp=N,283nm,0.4s						
SYVR	**Suvo**	**2.29**	**63**	⇓*i*PN	**Pn**	**08 23 13.1**	**+0.2**
SYVR				*e*		08 23 16.6	
SYVR				*e*		08 23 46.8	
SYVR				pmax	pmax		
	comp=Z,64nm,0.4s						
SYVR				smax	smax		
	comp=N,283nm,0.4s						
ARS	**Arshan**	**2.66**	**255**	*e*Pn	**Pn**	**08 23 18.1**	**+0.1**
ARS				*e*Pg	**Pb**	**08 23 22.0**	**-0.8**
ARS				*e*		08 23 23.9	
ARS				*e*		08 23 52.7	
ARS				*e*Sg	**Sb**	**08 23 55.8**	**+0.4**
ARS				max			
	comp=N,206nm,0.2s						
ARS				Smax			
	comp=N,2µm,0.5s						
ARS	**Arshan**	**2.66**	**255**	*e*PN	**Pn**	**08 23 18.1**	**+0.1**
ARS				*e*		08 23 22.8	
ARS				*e*		08 23 57.2	
ARS				pmax	pmax		
	comp=Z,206nm,0.2s						
ARS				smax	smax		
	comp=N,2µm,0.4s						
ZAK	**Zakamensk**	**3.07**	**223**	*e*Pn	**Pn**	**08 23 25.0**	**+1.3**
ZAK				*e*Pg	**Pb**	**08 23 30.5**	**+0.5**
ZAK				*e*PgPg	**Pg**	**08 23 34.4**	**+0.2**
ZAK				*e*Sn	**Sn**	**08 24 00.4**	**0.0**
ZAK				*e*Sg	**Sg**	**08 24 10.7**	**-3.3**
ZAK				max			
	comp=N,36nm,0.3s						
ZAK				Smax			
	comp=N,168nm,0.3s						
ZAK	**Zakamensk**	**3.07**	**223**	*e*PN	**Pn**	**08 23 25.0**	**+1.3**
ZAK				*e*		08 23 30.2	
ZAK				*e*		08 24 10.1	
ZAK				pmax	pmax		
	comp=Z,34nm,0.1s						
ZAK				smax	smax		
	comp=N,166nm,0.3s						
YLYR	**Ulyunkhan**	**3.51**	**49**	⇓*i*Pn	**Pn**	**08 23 30.2**	**+0.6**
YLYR				*e*Pg	**Pb**	**08 23 37.7**	**+0.4**
YLYR				*e*		08 23 44.5	
YLYR				*e*Sn	**Sn**	**08 24 10.8**	**-0.3**
YLYR				*e*Sg	**Sb**	**08 24 23.3**	**+3.4**
YLYR				max			
	comp=N,31nm,0.5s						
YLYR				Smax			
	comp=N,239nm,1.2s						
YLYR	**Ulyunkhan**	**3.51**	**49**	⇓*i*PN	**Pn**	**08 23 30.1**	**+0.5**
YLYR				*e*		08 23 38.1	
YLYR				*e*		08 24 22.4	
YLYR				pmax	pmax		
	comp=Z,31nm,0.5s						
YLYR				smax	smax		
	comp=N,240nm,1.2s						
MOY	**Mondy**	**3.58**	**256**	*e*Pn	**Pn**	**08 23 33.1**	**+2.4**
MOY				*e*Pg	**Pb**	**08 23 39.1**	**+0.5**
MOY				*e*		08 24 16.6	
MOY				*e*Sg	**Sb**	**08 24 25.0**	**+3.0**
MOY				*e*		08 24 31.4	
MOY				Pmax			
	comp=N,135nm,0.8s						
MOY				max			
	comp=N,609nm,1.1s						
MOY	**Mondy**	**3.58**	**256**	*e*PN	**Pn**	**08 23 33.1**	**+2.4**
MOY				*e*		08 23 40.6	
MOY				*e*		08 24 24.7	
MOY				pmax	pmax		
	comp=Z,112nm,0.4s						
MOY				smax	smax		
	comp=N,555nm,0.5s						
ORL	**Orlik**	**4.13**	**271**	⇑*i*Pn	**Pn**	**08 23 39.7**	**+1.5**
ORL				*e*Pg	**Pb**	**08 23 48.7**	**+0.8**
ORL				*e*		08 24 30.1	
ORL				*e*Sg	**Sb**	**08 24 41.7**	**+4.0**
ORL				Pmax			
	comp=N,41nm,0.8s						
ORL				Smax			
	comp=N,417nm,0.8s						
ORL	**Orlik**	**4.13**	**271**	⇑*i*PN	**Pn**	**08 23 39.6**	**+1.4**
ORL				*e*		08 23 49.2	
ORL				*e*		08 24 43.5	
ORL				pmax	pmax		
	comp=Z,47nm,0.4s						
ORL				smax	smax		
	comp=N,418nm,0.8s						
KMO	**Kumora**	**4.22**	**38**	*e*Pn	**Pn**	**08 23 40.1**	**+0.8**
KMO				*e*Pg	**Pb**	**08 23 50.7**	**+1.3**
KMO				*e*Sn	**Sn**	**08 24 27.4**	**-1.1**
KMO				*e*Sg	**Sb**	**08 24 45.4**	**+5.2**
KMO				*e*		08 25 01.1	
KMO				Pmax			
	comp=N,48nm,0.7s						
KMO				max			
	comp=N,286nm,1.2s						
KMO	**Kumora**	**4.22**	**38**	*e*PN	**Pb**	**08 23 50.6**	**+1.2**
CIT	**Chita**	**4.33**	**96**	*e*Sg	**Sg**	**08 24 50.5**	**-3.7**
CIT				Smax			
	comp=N,490nm,0.5s						
CIT	**Chita**	**4.33**	**96**	*e*PN	**Pn**	**08 23 42.0**	**+1.1**
CIT				*e*		08 23 53.5	
YOA	**Uoyan**	**4.60**	**39**	*e*Sg	**Sg**	**08 24 58.2**	**-4.6**
YOA				*e*		08 25 28.2	
YOA				max			
	comp=N,765nm,1.6s						
KPC	**Khapcheranga**	**4.70**	**127**	*e*Pn	**Pn**	**08 23 44.8**	**-1.3**
KPC				*e*Pg	**Pb**	**08 23 59.8**	**+2.1**
KPC				*e*Sn	**Sn**	**08 24 39.4**	**-1.1**
KPC				*e*Sg	**Sg**	**08 25 01.3**	**-4.9**
KPC				Pmax			
	comp=N,31nm,0.8s						
KPC				Smax			

	comp=N,181nm,0.5s						
KPC	**Khapcheranga**	**4.70**	**127**	*e*PN	**Pn**	**08 23 44.8**	**-1.3**
KPC				*e*		08 23 58.7	
KPC				*e*		08 24 58.8	
KPC				pmax	pmax		
	comp=Z,21nm,0.4s						
KPC				smax	smax		
	comp=N,177nm,0.5s						
ULN	**Ulaanbaatar**	**4.81**	**176**	*d i*PN	**Pn**	**08 23 48.0**	**+0.3**
SONM	**Songino Array**	**4.84**	**181**	Pn	**Pn**	**08 23 48.4**	**+0.4**
	comp=N,0.5nm,0.3s,baz=358,slow=10,SNR=16						
SONM				Pg	**Pb**	**08 24 02.0**	**+2.0**
	comp=N,3.6nm,0.3s,baz=351,slow=16,SNR=28						
SONM				Lg	Lg	08 25 04.0	
	comp=N,28nm,0.3s,baz=3.4,slow=30,SNR=20						
	comp=N,0.9nm,0.3s						
UKT	**Uakit**	**5.03**	**53**	*e*Pn	**Pn**	**08 23 51.3**	**+0.8**
UKT				*e*Pg	**Pb**	**08 24 05.6**	**+2.4**
UKT				*e*		08 24 43.1	
UKT				*e*Sg	**Sg**	**08 25 11.5**	**-5.0**
UKT				Pmax			
	comp=N,19nm,1.2s						
UKT				Smax			
	comp=N,96nm,1.0s						
SVKR	**Severomuysk**	**5.35**	**47**	*e*Sg	**Sg**	**08 25 20.9**	**-6.0**
SVKR				Smax			
	comp=N,275nm,1.1s						
NLYR	**Nelyaty**	**6.55**	**51**	*e*Pn	**Pn**	**08 24 11.8**	**+0.5**
NLYR				*e*		08 24 41.5	
NLYR				*e*Sn	**Sn**	**08 25 24.3**	**-1.5**
NLYR				*e*Sg	**Sg**	**08 25 58.4**	**-6.8**
NLYR				*e*		08 26 12.7	
NLYR				max			
	comp=N,22nm,1.3s						
NLYR				max			
	comp=N,99nm,1.8s						
BOD	**Bodaibo**	**6.69**	**36**	*e*Sn	**Sn**	**08 25 25.6**	**-3.6**
BOD				*e*Sg	**Sg**	**08 26 01.8**	**-7.9**
BOD				Smax			
	comp=N,89nm,1.6s						
KZLR	**Kyzyl**	**7.51**	**267**	*e*Sg	Sg	08 26 27.2	-9.1
VTMR	**Vitim**	**7.57**	**24**	*e*Sg	Sg	08 26 30.6	-7.3
CRS	**Chara**	**7.98**	**53**	*e*Sg	Sg	08 26 43.3	-7.8
CRS				Smax			
	comp=N,63nm,2.1s						
TUP	**Tupik**	**8.16**	**72**	*e*Pn	**Pn**	**08 24 33.3**	**-0.2**
TUP				*e*		08 24 41.6	
TUP				*e*		08 26 41.7	
TUP				*e*Sg	Sg	08 26 48.2	-8.8
TUP				max			
	comp=N,5.0nm,0.9s						
TUP				Smax			
	comp=N,132nm,1.2s						
KHNR	**Khani**	**8.84**	**56**	*e*Sg	Sg	08 27 10.8	-7.8
HIA	**Hailar**	**8.98**	**107**	⇓*e*PN	**Pn**	**08 24 45.0**	**+0.3**
YKLR	**Yuktali**	**9.59**	**60**	*e*Sg	Sg	08 27 34.0	
IENR	**Iengra**	**11.22**	**64**	*e*Sg		08 28 21.6	
DGZ	**Jazzator, Alta**	**12.37**	**264**	⇓*e*P	**Pn**	**08 25 31.1**	**-0.1**
ZEA	**Zeya**	**12.44**	**77**	⇑*e*P	**Pn**	**08 25 32.6**	**+0.6**
ZALV	**Zalesovo Beam**	**13.07**	**284**	Pn	**Pn**	**08 25 40.4**	**-0.1**
	comp=N,0.1nm,0.3s,baz=86,slow=9.7,SNR=5.4						
ZALV				Lg	Lg	08 29 19.7	
	comp=N,0.1nm,0.3s,baz=100,slow=23,SNR=4.4						
	comp=N,1.8nm,0.9s						
ZALV	**Zalesovo Beam**	**13.07**	**284**	*i* P	**Pn**	**08 25 42.7**	**+2.2**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KLR	**Kul'dur**	**16.20**	**92**	Lg	Lg	08 31 06.7	
	baz=207,slow=16,SNR=4.1						
KLR	**Kul'dur**	**16.20**	**92**	⇓*e*P	**Pn**	**08 26 21.5**	**-1.1**
KLR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MK31	**Makanchi Array**	**16.72**	**259**	⇑*e*P	**Pn**	**08 26 29.0**	**-0.2**
MKAR	**Makanchi Array**	**16.72**	**259**	Pn	**Pn**	**08 26 27.4**	**-1.8**
	baz=59,slow=9.1,SNR=1.2						
MKAR				Lg	Lg	08 31 24.8	
	comp=Z,0.1nm,0.3s,baz=80,slow=32,SNR=2.1						
	comp=Z,0.1nm,0.4s						
MKAR	**Makanchi Array**	**16.72**	**259**	*i* P	**P**	**08 26 32.7**	**+1.2**
KURK	**Kurchatov**	**17.40**	**275**	⇑*e*P	**Pn**	**08 26 37.5**	**-0.2**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURBB	**Kurchatov Arra**	**17.48**	**275**	Pn	**Pn**	**08 26 37.2**	**-1.5**
	baz=74,slow=12,SNR=5.7						
KURBB				Lg	Lg	08 31 49.3	
	baz=73,slow=33,SNR=5.3						
	comp=Z,0.2nm,0.4s						
USA0B	**Ussuriysk Arra**	**18.79**	**107**	⇑*e*P	**P**	**08 26 52.9**	**-1.4**
NRIK	**Noril'sk**	**18.94**	**339**	⇓*e*P	**P**	**08 26 54.4**	**-1.4**
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	**Borovoye Array**	**21.72**	**285**	P	**P**	**08 27 24.6**	**-1.4**
	comp=Z,1.2nm,0.4s,baz=73,slow=10,SNR=5.0						
	comp=Z,1.2nm,0.4s						
BRVK	**Borovoye**	**21.77**	**286**	⇓*e*P	**P**	**08 27 26.6**	**0.0**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TJN	**Taejon**	**21.89**	**130**	⇓*e*P	**P**	**08 27 26.7**	**-1.3**
CMAR	**Chiang Mai Arr**	**34.66**	**193**	*i* P	**P**	**08 29 27.7**	**+3.2**
FINES	**FINESS Array B**	**41.94**	**315**	P	**P**	**08 30 24.6**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=46,slow=8.0,SNR=3.7						
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**41.94**	**315**	*i* P	**P**	**08 30 27.8**	**+2.5**
FINES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ILAR	**Eielson Array**	**50.04**	**32**	P	**P**	**08 31 29.4**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=297,slow=6.2,SNR=2.9						
	comp=Z,0.4nm,0.8s						
YKA	**Yellowknife Ar**	**60.69**	**21**	P	**P**	**08 32 46.7**	**+0.9**
	comp=Z,0.1nm,0.7s,baz=331,slow=6.3,SNR=2.6						
	comp=Z,0.1nm,0.7s						
WRA	**Warramunga Arr**	**76.22**	**153**	P	**P**	**08 34 22.7**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=348,slow=5.7,SNR=2.4						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**79.66**	**155**	P	**P**	**08 34 41.8**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=343,slow=5.6,SNR=6.3						
	comp=Z,0.4nm,0.6s						

IDC 19 08:32:26.1±1.6**,30°.01N×102°.76E,h0^{km},mb3.3**/3**,**
mbtmp3.6/4**,ML4.5**/1**,Error ellipse: s-maj=71.1km**
s-min=28.8km az=59.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.02**	**198**	Pn	Pn	08 35 19.1	+0.4
	0.9nm,0.3s,baz=23,slow=12,SNR=3.4						
	3.4nm,0.3s						
MKAR	**Makanchi Array**	**23.09**	**322**	P	P	08 37 33.3	0.0
	0.5nm,0.9s,baz=146,slow=11,SNR=3.8						
	0.5nm,0.9s						
WRA	**Warramunga Arr**	**58.23**	**145**	P	P	08 42 22.4	0.0
	0.5nm,0.8s,baz=333,slow=7.7,SNR=8.1						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**61.18**	**147**	P	P	08 42 42.4	-0.3
	0.2nm,0.5s,baz=333,slow=7.3,SNR=2.8						
	0.2nm,0.5s						

IDC 19 08:40:38.1±13.0**,5°.72S×128°.70E,h250^{km}**±150^{km}**,**
mb2.8/1**,mbtmp3.8**/3**,Error ellipse: s-maj=108.2km**
s-min=48.9km az=68.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.17**	**159**	P	P	08 43 59.3	-0.6
	1.1nm,0.3s,baz=341,slow=12,SNR=19						
WRA				S	S	08 46 48.9	+1.3
	0.1nm,0.3s,baz=323,slow=21,SNR=1.9						
ASAR	**Alice Springs**	**18.54**	**165**	P	P	08 44 36.8	+0.1
	1.7nm,0.4s,baz=348,slow=12,SNR=33						
MKAR	**Makanchi Array**	**66.45**	**327**	P	P	08 51 00.9	+0.1
	0.2nm,0.4s,baz=116,slow=8.8,SNR=2.4						
	0.2nm,0.4s						

*NEIC **19** 08:50:56.9±1.0,20°.5S±0°.1×178°.3W±0°.2,h554^{km}±6^{km},*
mb4.3/23,Error ellipse: s-maj=24.6km s-min=16.1km
az=69.0
*IDC **19** 08:50:59.3±2.0,20°.72S×178°.40W,h593^{km}±23^{km},*
mb3.3/12,mbtmp4.3/14,Error ellipse: s-maj=19.6km
s-min=12.0km az=148.0
ISC 19 08:50:59.5±0.6**,20°.59S**±0°.10×**178°.47W**±0°.10**,h587^{km},**
n47,σ1s.**03**/54**,mb4.2**/24**,1C-1D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.14**	**261**	P	**P**	**08 53 59.2**	**-0.9**
	7.8nm,0.9s,baz=90,slow=20,SNR=2.4						
TOZ	**Tahuroa Road**	**17.87**	**196**	P	**P**	**08 54 35.3**	**+1.0**
TOZ				IAmb	IAmb	08 54 37.4	
	comp=Z,4.2nm,0.8s						
URZ	**Urewera**	**18.02**	**191**	P	**P**	**08 54 32.4**	**-3.3**
	comp=Z,6.2nm,0.8s,baz=6.0,slow=2.7,SNR=2.5						
URZ				S	**S**	**08 57 28.7**	**-2.7**
	comp=Z,10nm,1.0s,baz=137,slow=19,SNR=2.7						
QRZ	**Quartz Range**	**21.59**	**199**	P	**P**	**08 55 07.9**	**0.0**
EIDS	**Eidsvold**	**28.40**	**255**	P	**P**	**08 56 08.8**	**+0.6**
EIDS				IAmb	IAmb	08 56 09.2	
	comp=Z,4.6nm,0.7s						
ARMA	**Armidale**	**28.64**	**244**	P	**P**	**08 56 11.7**	**+1.4**
CTA	**Charters Tower**	**33.05**	**265**	P	**P**	**08 56 48.1**	**+0.1**
	comp=Z,13nm,0.6s,baz=94,slow=9.6,SNR=30						
	comp=Z,13nm,0.6s						
CTAO	**Charters Tower**	**33.05**	**265**	P	**P**	**08 56 48.0**	**+0.1**
PMG	**Port Moresby**	**34.94**	**283**	P	**P**	**08 57 03.2**	**-0.6**
	comp=Z,6.3nm,0.3s,baz=34,slow=7.5,SNR=4.6						
	comp=Z,6.3nm,0.3s						
PMG	**Port Moresby**	**34.94**	**283**	P	**P**	**08 57 04.1**	**+0.3**
TOO	**Toolangi**	**35.49**	**234**	P	**P**	**08 57 09.0**	**+0.8**
TOO				IAmb	IAmb	08 57 18.2	
	comp=Z,17nm,1.5s						
STKA	**Stephens Creek**	**37.36**	**244**	P	**P**	**08 57 23.7**	**+0.2**
	comp=Z,3.1nm,0.9s,baz=55,slow=6.8,SNR=4.3						
	comp=Z,3.1nm,0.9s						
STKA	**Stephens Creek**	**37.36**	**244**	P	**P**	**08 57 24.4**	**+0.8**
BBOO	**Buckleboo**	**42.12**	**244**	P	**P**	**08 58 01.7**	**+0.1**
BBOO				IAmb	IAmb	08 58 06.7	
	comp=Z,27nm,1.4s						
AS31	**Alice Springs**	**44.07**	**257**	P	**P**	**08 58 16.9**	**0.0**
AS31				IAmb	IAmb	08 58 17.7	
	comp=Z,3.8nm,0.7s						
ASAR	**Alice Springs**	**44.07**	**257**	P	**P**	**08 58 17.1**	**+0.1**
	comp=Z,16nm,0.8s,baz=99,slow=7.6,SNR=135						
ASAR				PcP	**PcP**	**08 59 49.0**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=108,slow=3.4,SNR=5.2						
ASAR				S	**S**	**09 04 08.3**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=92,slow=15,SNR=8.8						
	comp=Z,16nm,0.8s						
ASAR	**Alice Springs**	**44.07**	**257**	P	**P**	**08 58 17.4**	**+0.5**
WB0	**Warramunga Arr**	**44.13**	**262**	P	**P**	**08 58 16.8**	**-0.5**
WB0				IAmb	IAmb	08 58 17.7	
	comp=Z,9.9nm,0.7s						
WB2	**Warramunga Arr**	**44.15**	**262**	P	**P**	**08 58 17.2**	**-0.3**
WB2				IAmb	IAmb	08 58 17.9	
	comp=Z,13nm,1.0s						
WRAB	**Tennant Creek**	**44.15**	**262**	P	**P**	**08 58 17.4**	**-0.1**
WRAB				IAmb	IAmb	08 58 17.8	
	comp=Z,10nm,0.9s						
WRA	**Warramunga Arr**	**44.16**	**262**	P	**P**	**08 58 17.0**	**-0.5**
	comp=Z,5.2nm,0.5s,baz=98,slow=8.6,SNR=91						
WRA				PcP	**PcP**	**08 59 50.0**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=95,slow=2.8,SNR=3.1						
WRA				S	**S**	**09 04 07.6**	**-1.5**
	comp=Z,0.8nm,0.9s,baz=95,slow=12,SNR=4.1						
	comp=Z,5.2nm,0.5s						
WRA	**Warramunga Arr**	**44.16**	**262**	P	**P**	**08 58 17.0**	**-0.5**
KNRA	**Kununurra**	**50.22**	**266**	P	**P**	**08 59 03.1**	**+0.2**
KNRA				IAmb	IAmb	08 59 15.3	
	comp=Z,29nm,1.5s						
SOEI	**Soe**	**56.07**	**272**	P	**P**	**08 59 46.2**	**+1.7**
PSA00	**Pilbara Seismi**	**57.22**	**257**	P	**P**	**08 59 52.6**	**+0.4**
VNDA	**Vanda**	**57.79**	**185**	P	**P**	**08 59 56.1**	**+1.1**
QSPA	**South Pole Qui**	**69.48**	**180**	P	**P**	**09 01 11.0**	**+1.2**
PETK	**Petropavlovsk-**	**76.24**	**345**	P	**P**	**09 01 48.1**	**-0.2**
	comp=Z,4.3nm,0.9s,baz=141,slow=9.3,SNR=4.3						
	comp=Z,4.3nm,0.9s						
KSRS	**Korea Array**	**76.66**	**319**	P	**P**	**09 01 50.2**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=116,slow=5.5,SNR=2.8						
	comp=Z,0.6nm,0.6s						
NVAR	**Mina Array Bea**	**81.39**	**44**	P	**P**	**09 02 16.8**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=227,slow=8.5,SNR=3.1						
	comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**87.47**	**58**	P	**P**	**09 02 46.7**	**+0.8**
	comp=Z,0.4nm,1.0s,baz=218,slow=5.6,SNR=3.2						
	comp=Z,0.4nm,1.0s						
WRH	**Wood River Hil**	**87.98**	**13**	P	**P**	**09 02 47.2**	**-0.1**
WRH				IAmb	IAmb	09 03 00.4	
	comp=Z,4.9nm,1.4s						
HDA	**Harding Lake**	**88.16**	**13**	P	**P**	**09 02 48.2**	**0.0**
HDA				IAmb	IAmb	09 02 49.2	
	comp=Z,3.4nm,0.8s						
H21K	**Melozitna Rive**	**88.17**	**10**	P	**P**	**09 02 48.6**	**+0.4**
H21K				IAmb	IAmb	09 03 00.0	
	comp=Z,3.1nm,1.3s						
CCB	**Clear Creek Bu**	**88.19**	**13**	P	**P**	**09 02 47.9**	**-0.4**
CCB				IAmb	IAmb	09 02 48.3	
	comp=Z,4.0nm,0.7s						
ILAR	**Eielson Array**	**88.49**	**13**	P	**P**	**09 02 48.3**	**-1.4**
	comp=Z,1.1nm,0.8s,baz=226,slow=5.3,SNR=13						
	comp=Z,1.1nm,0.8s						
PDAR	**Pinedale Array**	**89.32**	**43**	P	**P**	**09 02 54.0**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=207,slow=3.4,SNR=2.6						
	comp=Z,0.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**89.73**	**290**	P	**P**	**09 02 57.4**	**+0.9**
	comp=Z,0.8nm,0.3s,baz=117,slow=3.1,SNR=4.6						
	comp=Z,0.8nm,0.3s						
ZALV	**Zalesovo Beam**	**110.28**	**321**	PKiKP	**PKiKP**	**09 08 24.1**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=92,slow=5.6,SNR=2.5						
MKAR	**Makanchi Array**	**110.94**	**313**	PKiKP	**PKiKP**	**09 08 25.7**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=57,slow=2.3,SNR=4.0						
KURBB	**Kurchatov Arra**	**113.81**	**317**	PKiKP	**PKiKP**	**09 08 31.0**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=105,slow=1.9,SNR=4.2						
BVAR	**Borovoye Array**	**118.86**	**320**	PKP	**PKPdf**	**09 08 41.4**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=96,slow=1.6,SNR=5.6						
AKASG	**Malin Array Be**	**142.88**	**331**	PKP	**PKPdf**	**09 09 23.9**	**-2.8**
	comp=Z,3.7nm,0.5s,baz=37,slow=4.3,SNR=22						
BRTR	**Keskin Array B**	**146.57**	**312**	PKPbc	**PKPdf**	**09 09 35.4**	**+1.7**
	comp=Z,1.3nm,0.6s,baz=138,slow=6.0,SNR=6.1						
CLL	**Collm**	**148.04**	**346**	PKPdf	**PKPdf**	**09 09 34.6**	**-0.9**
CLL					**PKPbc**	**09 09 40.2**	**+0.6**
CLL	**Collm**	**148.04**	**346**	⇓*i*PKPbc	**PKPbc**	**09 09 39.8**	**+0.2**
	comp=Z,9.0nm,0.8s						
CLL				⇑*i*PKPab	**PKPab**	**09 09 44.5**	**0.0**
	comp=Z,4.0nm,0.8s						
GERES	**GERESS Array B**	**150.16**	**344**	PKPbc	**PKPbc**	**09 09 44.5**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=5.7,slow=1.0,SNR=5.0						

*SJA **19** 08:55:57.2±1.6,23°.11S×69°.02W,h85^{km},ML3.9,MW3.8,*
Hypocentre not reviewed by the ISC
GUC 19 08:55:57.8±0.8**,23°.14S×69°.02W,h93^{km}**±4^{km}**,ML3.8,**
4C-4D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**0.42**	**260**	⇓*i*P	Pn	08 56 12.5	0.0
PB15				*i* S	Sn	08 56 23.0	-0.5
PB15	**IPOC Station P**	**0.42**	**260**	*e*P		08 56 12.7	
PB15				*e*S		08 56 23.2	
PB15				IAML		08 56 24.5	
	comp=Z,11µm,0.2s						
LVC	**Limon Verde**	**0.54**	**11**	*i* P	Pn	08 56 12.2	-1.4
LVC	**Limon Verde**	**0.54**	**11**	*e*P		08 56 13.0	
LVC				*e*S		08 56 24.3	
LVC				IAML		08 56 26.4	
	comp=Z,2µm,0.6s						
PB06	**IPOC Station P**	**0.67**	**310**	⇑*i*P	Pn	08 56 14.2	-0.2
PB06				*i* S	Sn	08 56 26.4	-0.5
PB06				IAML		08 56 28.1	
	comp=N,3µm,0.1s						
PB06	**IPOC Station P**	**0.67**	**310**	*e*P		08 56 14.3	
PB04	**IPOC Station P**	**1.31**	**307**	*i* P	Pn	08 56 21.4	-0.2
PB04				*i* S	Sn	08 56 39.3	-0.2
PB04				IAML		08 56 46.5	
	comp=E,1µm,0.2s						
PB04	**IPOC Station P**	**1.31**	**307**	*e*P		08 56 21.6	
PB04				*e*S		08 56 39.0	
PB04				IAML		08 56 45.4	
	comp=Z,881nm,0.2s						
PB09	**IPOC Station P**	**1.35**	**351**	⇑*i*P	Pn	08 56 22.7	+0.6
PB09				*i* S	Sn	08 56 40.9	+0.6
PB09				IAML		08 56 43.3	
	comp=E,1µm,0.4s						
PB09	**IPOC Station P**	**1.35**	**351**	*e*P		08 56 22.7	
PB09				*e*S		08 56 41.0	
PB09				IAML		08 56 43.0	
	comp=Z,2µm,0.3s						
PB10	**IPOC Station P**	**1.46**	**255**	*i* P	Pn	08 56 23.4	+0.3
PB10				*i* S	Sn	08 56 42.2	-0.2
PB10				IAML		08 56 49.9	
	comp=N,592nm,0.3s						
PB10	**IPOC Station P**	**1.46**	**255**	*e*P		08 56 23.0	
PB10				*e*S		08 56 43.5	
PB07	**IPOC Station P**	**1.62**	**330**	⇑*i*P	Pn	08 56 25.5	+0.1
PB07				*i* S	Sn	08 56 46.2	0.0
PB07				IAML		08 56 50.7	
	comp=E,1µm,0.2s						
PB07	**IPOC Station P**	**1.62**	**330**	*e*P		08 56 25.6	
PB07				*e*S		08 56 46.9	
PB07				IAML		08 56 51.4	
	comp=Z,1µm,0.3s						
PB14	**IPOC Station P**	**1.95**	**220**	*i* P	Pn	08 56 30.0	+0.3
PB14				IAML		08 57 02.2	
	comp=E,315nm,0.6s						
PB14	**IPOC Station P**	**1.95**	**220**	*e*P		08 56 29.0	
PB14				*e*P		08 56 29.9	
PB14				*e*S		08 56 56.0	
PB14				IAML		08 57 02.9	
	comp=Z,497nm,0.3s						
PB02	**IPOC Station P**	**1.98**	**336**	⇓*i*P	Pn	08 56 30.1	+0.1
PB02				*i* S	Sn	08 56 55.0	+0.5
PB02				IAML		08 57 00.5	
	comp=E,2µm,0.6s						
PB02	**IPOC Station P**	**1.98**	**336**	*e*P		08 56 30.2	
PB02				*e*S		08 56 54.5	
PB02				IAML		08 57 00.4	
	comp=Z,2µm,0.4s						
GO02	**Mina Guanaco**	**2.08**	**194**	⇑*i*P	Pn	08 56 32.3	+0.8
GO02	**Mina Guanaco**	**2.08**	**194**	*e*P		08 56 32.3	
GO02				*e*S		08 57 00.5	
GO02				IAML		08 57 03.1	
	comp=Z,439nm,0.1s						
PB01	**IPOC Station P**	**2.13**	**348**	⇓*i*P	Pn	08 56 32.1	+0.2
PB01				*i* S	Sn	08 56 59.1	+1.2
PB01				IAML		08 57 05.5	
	comp=E,1µm,0.2s						
PB01	**IPOC Station P**	**2.13**	**348**	*e*P		08 56 32.3	
PB01				*e*S		08 57 00.5	
PB01				*e*S		08 57 00.5	
PB01				IAML		08 57 07.1	
	comp=Z,689nm,0.2s						
TA01	**Diego Aracena**	**2.78**	**337**	⇓*e*P	Pn	08 56 39.2	-1.2
TA01				IAML		08 57 23.4	
	comp=N,593nm,0.3s						
TA01	**Diego Aracena**	**2.78**	**337**	*e*P		08 56 39.6	
TA01				*e*S		08 57 21.2	
TA01				IAML		08 57 22.9	
	comp=Z,295nm,0.7s						
PB08	**IPOC Station P**	**2.99**	**358**	*i* P	Pn	08 56 43.7	+0.1
PB08				IAML		08 57 30.8	
	comp=E,356nm,0.3s						
PB08	**IPOC Station P**	**2.99**	**358**	*e*P		08 56 43.0	
PB08				*e*S		08 57 19.5	
PB08				*e*S		08 57 19.7	
TA02	**Huaiquique**	**3.04**	**340**	*e*P		08 56 45.0	
TA02				*e*S		08 57 28.7	
TA02				IAML		08 57 30.5	
	comp=Z,328nm,0.4s						
AC01	**Pan de Azucar**	**3.32**	**205**	*i* P	Pn	08 56 46.6	-1.1
AC01				IAML		08 57 36.0	
	comp=E,468nm,0.4s						
HJA	**Humahuaca**	**3.33**	**92**	*e*P		08 56 50.0	
YJA	**Yavi**	**3.38**	**74**	*e*P		08 56 51.0	
PB11	**IPOC Station P**	**3.41**	**350**	*i* P	Pn	08 56 47.9	-1.3
PB11				IAML		08 57 41.2	
	comp=E,476nm,0.2s						
PB11	**IPOC Station P**	**3.41**	**350**	*e*P		08 56 48.1	
PB11				*e*S		08 57 29.0	
PB11				IAML		08 57 40.8	
	comp=Z,277nm,0.2s						
MNMC	**Minye Minye**	**4.02**	**352**	*e*P	Pn	08 56 56.4	-1.1
MNMC				*e*S	Sn	08 57 44.6	+0.9
MNMCX	**Minye Minye**	**4.02**	**352**	*e*P		08 56 56.6	
MNMCX				*e*S		08 57 55.0	
MNMCX				IAML		08 58 00.8	
	comp=Z,450nm,0.3s						
GO03	**Copiap**	**4.57**	**194**	*e*P	Pn	08 57 03.4	-1.3
PB12	**IPOC Station P**	**4.67**	**345**	*e*P		08 57 04.7	
PB12				*e*S		08 58 13.3	
PB16	**IPOC Station P**	**4.80**	**354**	*e*P		08 57 08.0	
PB16				*e*S		08 58 19.7	
AC04	**Llanos de Chal**	**5.37**	**200**	*e*P	Pn	08 57 12.2	-3.3

*BJI **19** 08:57:03.8±0.0,9°.78N×93°.46E,h38^{km},mb4.5/43,*
mB4.7/20,Ms4.2/10,Ms7 4.0/13
*NDI **19** 08:57:05.5±3.0,10°.21N×93°.81E,h10^{km},ML4.0,*
mb4.6(NEIC)
*NEIC **19** 08:57:07.0±1.4,9°.96N±0°.07×93°.56E±0°.07,h36^{km}±8^{km},*
mb4.6/48,Error ellipse: s-maj=11.4km s-min=8.5km
az=218.0
*DJA **19** 08:57:08.5±0.4,10°N±4°×9°4E±°,h93^{km}±6^{km},M4.7/14,*
mB5.3/5,mb4.6/14,MLv4.7/4,Mw(mB)4.8/5
*IDC **19** 08:57:08.2±3.2,10°.08N×93°.63E,h53^{km}±28^{km},mb4.0/19,*
mbtmp4.2/21,ML3.8/2,MS3.6/48,Error ellipse:
s-maj=18.7km s-min=12.8km az=55.0
ISC 19 08:57:04.6±0.4**,9°.94N**±0°.05×**93°.46E**±0°.04**,h24^{km},n185,**
σ1s.**69**/159**,mb4.5**/57**,MS3.6**/48**,9C-2D,Nicobar Islands**
region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.85**	**338**	Pn	**Pn**	**08 57 35.3**	**+0.5**
PBA	**Port Blair**	**1.85**	**338**	*e*P	**Pn**	**08 57 35.3**	**+0.5**
PBA				*e*S	**Sn**	**08 57 59.8**	**+2.3**
PBA				IAML		08 58 12.0	
	comp=N,2µm,0.4s						
PBA				IAML		08 58 13.2	
	comp=E,2µm,0.5s						
DGPR	**DIGLIPUR**	**3.26**	**351**	*e*P	**Pn**	**08 57 57.0**	**+2.7**
SRIT	**Nakonsritamara**	**6.21**	**102**	Pn	**Pn**	**08 58 32.6**	**-2.3**
MLSI	**Meulaboh, Aceh**	**6.34**	**152**	P	**Pn**	**08 58 36.1**	**-0.6**
	comp=E,92nm,0.5s,comp=E,0.4nm						
KCSI	**Kotacane, Aceh**	**7.67**	**146**	P	**Pn**	**08 58 55.0**	**0.0**
	comp=E,59nm,1.0s,comp=E,974nmcomp=E,0.2nm						
SNSI	**Sinabang, Aceh**	**8.00**	**159**	P	**Pn**	**08 58 57.1**	**-2.4**
	comp=E,28nm,0.5s,comp=E,0.2nm						
RPSI	**Rantau Prapat**	**9.01**	**143**		**Pn**	**08 59 13.7**	**+0.3**
IPM	**Ipoh**	**9.26**	**125**	Pn	**Pn**	**08 59 14.7**	**-2.1**
CM31	**Chiang Mai Arr**	**10.00**	**31**	Pn	**Pn**	**08 59 27.1**	**+0.2**
CMAR	**Chiang Mai Arr**	**10.00**	**31**	P	**Pn**	**08 59 27.8**	**+0.8**
	comp=E,0.2nm,0.3s,baz=221,slow=14,SNR=27						
CMAR				LR	LR	09 03 07.8	
	comp=E,142nm,19.0s,baz=210,slow=37						
	comp=E,5.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**10.00**	**31**	Pn	**Pn**	**08 59 27.4**	**+0.4**
CHTO	**Chiang Mai**	**10.30**	**30**	Pn	**Pn**	**08 59 31.2**	**+0.2**
PHRA	**Phrae**	**10.74**	**37**	Pn	**Pn**	**08 59 35.9**	**-1.2**
CRAI	**Chiangrai**	**12.21**	**32**		**Pn**	**08 59 58.0**	**+0.8**
MND	**Mandalay**	**12.28**	**12**	Pn	**Pn**	**08 59 58.7**	**+0.6**
VIS	**Vishakhapatnam**	**12.51**	**309**	*e*P	**Pn**	**09 00 03.1**	**+1.8**
VIS				*e*S	**Sn**	**09 02 13.6**	**-6.4**
BRDH	**Bariadhala**	**12.79**	**352**	LR	LR	09 06 44.5	
	comp=E,318nm,18.0s,baz=90,slow=46						
PALK	**Pallekele**	**12.89**	**259**	P	Pn	09 00 11.7	+5.2
	comp=E,0.5nm,0.3s,baz=171,slow=13,SNR=2.1						
PALK				S	**Sn**	**09 02 26.5**	**-2.8**
	comp=E,14nm,0.4s,baz=104,slow=20,SNR=9.0						
PALK				LR	LR	09 04 52.7	
	comp=E,460nm,20.7s,baz=183,slow=36						
	comp=E,1.8nm,0.5s						
PALK	**Pallekele**	**12.89**	**259**	Pn	**Pn**	**09 00 08.6**	**+2.0**
RAGD	**RAYAGADA**	**13.39**	**315**	*e*P	**Pn**	**09 00 13.0**	**-0.3**
RAGD				*e*S	**Sn**	**09 02 34.7**	**-6.8**
SALM	**Salem**	**15.09**	**278**	*e*P	**P**	**09 00 43.2**	**+1.7**
SALM				*e*S	**Sn**	**09 03 20.4**	**-2.6**
SHL	**Shillong**	**15.62**	**355**	Pn	**Pn**	**09 00 44.4**	**+0.9**
SHL				IAmb	IAmb	09 00 46.4	
	comp=Z,26nm,0.6s						
TNCH	**TengChong**	**15.76**	**17**	*e*P	**Pn**	**09 00 46.6**	**+1.2**
TNCH				pP	pP	09 00 55.0	-0.1
PCHI	**Peechi**	**16.86**	**274**	*e*P	**P**	**09 01 05.0**	**+3.9**
PCHI				*e*S	**Sn**	**09 04 02.8**	**-3.1**
KMI	**Kunming**	**17.49**	**29**	⇑P	**P**	**09 01 10.8**	**+2.5**
KMI				pP	pwP	09 01 18.4	+1.0
KMI				pmax	pmax		
	comp=Z,20nm,1.5s						
KMI				pmax	pmax		
	comp=Z,140nm,4.7s						
KMI				LR	LR		
	comp=Z,340nm,12.4s						
KMI				LR	LR		

	comp=Z,370nm,11.6s						
KMI				LR	LR		
	comp=Z,150nm,9.8s						
RAMN	Ramite	18.12	340	*e*P	P	09 01 16.1	+0.8
	comp=Z,11nm,0.4s						
TAPN	Taplejung	18.15	343	*e*P	Pn	09 01 15.1	-0.4
	comp=Z,11nm,0.5s						
QIZ	Qiongzhong	18.24	58	P	P	09 01 16.8	+0.4
QIZ				S	Sn	09 04 39.5	0.0
QIZ				pmax	pmax		
	comp=Z,220nm,7.6s						
QIZ				LR	LR		
	comp=Z,380nm,14.3s						
QIZ				LR	LR		
	comp=Z,360nm,12.7s						
QIZ				LR	LR		
	comp=Z,370nm,10.4s						
PZH	PanZhiHua	18.25	24	P	P	09 01 17.5	+0.9
PZH				S	Sn	09 04 31.9	-7.8
PZH				pmax	pmax		
	comp=Z,20nm,1.7s						
PZH				pmax	pmax		
	comp=Z,290nm,4.2s						
PZH				LR	LR		
	comp=Z,450nm,13.3s						
PZH				LR	LR		
	comp=Z,270nm,12.0s						
PZH				LR	LR		
	comp=Z,440nm,11.2s						
JBP	Jabalpur	18.42	317	*e*P	Pn	09 01 24.4	+5.9
JIRN	Jiri	18.92	340	*e*P	Pn	09 01 25.1	+0.2
	comp=Z,16nm,0.4s						
GUN	Gumba	19.25	339	*e*P	Pn	09 01 29.1	+0.2
	comp=Z,27nm,0.6s						
LSA	Lhasa	19.78	354	P	P	09 01 33.8	+0.1
LSA				pmax	pmax		
	comp=Z,14nm,1.0s						
GKN	Gorkha	19.80	336	*e*P	P	09 01 34.9	+1.3
	comp=Z,38nm,0.5s						
KOLN	Koldanda	20.02	334	*e*P	Pn	09 01 38.4	+0.4
	comp=Z,26nm,0.5s						
SBUM	Sibu	20.07	111	P	P	09 01 35.7	-0.8
DANN	Dangsing	20.46	335	*e*P	P	09 01 42.4	+1.4
	comp=Z,42nm,0.5s						
PYUN	Piuthan	20.58	333	*e*P	Pn	09 01 44.2	-0.3
	comp=Z,28nm,0.5s						
GYA	Guiyang	20.64	36	⇓P	Pn	09 01 44.1	-1.0
GYA				pmax	pmax		
	comp=Z,18nm,0.7s						
MTKI	Muara Teweh, K	23.92	116	P	P	09 02 09.0	-8.0
	comp=Z,118nm,0.5s,comp=Z,7μm						
MYLDM	Lahad Datu	25.26	99	P	P	09 02 28.1	-1.1
GOMU	GeErMu	26.17	2	P	P	09 02 38.0	+0.3
GOMU				pmax	pmax		
	comp=Z,14nm,1.0s						
GOMU				pmax	pmax		
	comp=Z,130nm,5.6s						
XAN	Xi'an	27.87	28	P	P	09 02 54.3	+1.6
XAN				sP	pwP	09 03 07.5	+5.5
XAN				S	S	09 07 37.5	+2.7
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN				LR	LR		
	comp=Z,130nm,12.2s						
XAN				LR	LR		
	comp=Z,210nm,14.8s						
XAN				LR	LR		
	comp=Z,320nm,13.7s						
GTA	Gaotai	29.89	10	*e*P	P	09 03 11.3	+0.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LYN	LuoYang	30.05	32	*e*P	P	09 03 12.0	+0.1
KAPI	Kappang	30.11	118	LR	LR	09 15 53.0	
	comp=Z,138nm,19.1s,baz=256,slow=38						
NJ2	Nanjing	32.19	43	*e*P	P	09 03 31.9	+1.1
NJ2				pP	pwP	09 03 41.3	+1.0
NJ2				sP	sP	09 03 45.0	+4.9
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,110nm,4.1s						
KBL	Kabul	33.15	321	P	P	09 03 40.1	+0.7
KSH	Kashi	33.33	335	P	P	09 03 40.3	-0.6
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HNS	HongShan	33.39	32	⇑P	P	09 03 41.5	+0.2
HNS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WMQ	Urumqi	34.13	353	*e*P	P	09 03 48.9	+1.2
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
WMQ				LR	LR		
	comp=Z,93nm,21.7s						
SANI	Sanana	34.51	108	P	P	09 03 44.5	-6.8
	comp=Z,12nm,0.6s						
HHC	Hu-ho-hao-te	34.71	24	*e*P	P	09 03 56.4	+3.6
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,220nm,6.7s						
HHC				LR	LR		
	comp=Z,420nm,11.4s						
HHC				LR	LR		
	comp=Z,210nm,11.4s						
HHC				LR	LR		
	comp=Z,320nm,11.4s						
DRK	Karamyk	35.20	330	P	P	09 03 54.7	-2.6
GAR	Garm	35.58	328	P	P	09 04 00.7	+0.3
WSAR	Wadi Sarin	35.80	296	LR	LR	09 17 46.4	
	comp=Z,106nm,22.0s,baz=124,slow=34						
CHGR	Chuyangaron	35.94	327	P	P	09 04 03.9	+0.4
BTK	Batken	36.12	330	P	P	09 04 06.5	+1.5
BTK				IAmb	IAmb	09 04 09.2	
	comp=Z,14nm,1.1s						
BJI	Beijing	36.14	30	P	P	09 04 05.9	+0.9
BJI				pP	pwP	09 04 14.8	+0.4
BJI				sP	sP	09 04 19.8	+5.4
BJI				S	S	09 09 45.1	+1.7
BJI				pmax	pmax		
	comp=Z,58nm,4.7s						
UCH	Uchtor	36.21	336	P	P	09 04 07.6	+1.5
	SNR=5.0						
SOEI	Soe	36.37	122	P	P	09 03 59.1	-8.3
	comp=Z,30nm,1.2s						
AML	Almayashu	36.47	335	P	P	09 04 09.4	+1.1
	SNR=14						
AAK	Ala-Archa	36.56	336	P	P	09 04 10.6	+1.8
	SNR=6.2						
AAK	Ala-Archa	36.56	336	LR	LR	09 20 46.0	
	comp=Z,130nm,20.5s,baz=152,slow=39						
CHMS	Chumysh	36.77	337	P	P	09 04 11.4	+1.0
	SNR=5.2						
EKS2	Erkin-Say	36.87	336	P	P	09 04 13.5	+2.1
	SNR=9.2						
JOW	Kunigami	36.90	58	LR	LR	09 20 06.5	
	comp=Z,85nm,19.2s,baz=186,slow=38						
USP	Ospenovka	37.09	337	P	P	09 04 13.8	+0.7
	SNR=10						
MK31	Makanchi Array	37.94	347	P	P	09 04 19.9	-0.4
MKAR	Makanchi Array	37.94	347	P	P	09 04 19.2	-1.0
	comp=Z,4.7nm,0.8s,baz=166,slow=8.4,SNR=42						
MKAR				PcP	PcP	09 06 35.0	-0.9
	comp=Z,0.6nm,0.7s,baz=112,slow=1.6,SNR=3.2						
MKAR				LR	LR	09 22 59.6	
	comp=Z,91nm,20.4s,baz=160,slow=41						
	comp=Z,4.7nm,0.8s						
MKAR	Makanchi Array	37.94	347	P	P	09 04 19.9	-0.4
MAKZ	Makanchi	38.02	347	P	P	09 04 20.2	-0.8
MAKZ				IAmb	IAmb	09 04 21.4	
	comp=Z,3.3nm,0.7s						
KK31	Karatay Array	38.63	333	P	P	09 04 26.8	+0.7
KK31				IAmb	IAmb	09 04 28.5	
	comp=Z,6.4nm,1.0s						
KKAR	Karatay Array	38.63	333	P	P	09 04 26.8	+0.7
KKAR				IAmb	IAmb	09 04 28.5	
	comp=Z,6.4nm,1.0s						
XLT	XiLinHaoTe	39.12	26	*e*P	P	09 04 30.4	+0.1
XLT				pP	pwP	09 04 40.4	+0.7
XLT				sP	sP	09 04 44.1	+4.4
XLT				pmax	pmax		
	comp=Z,9.0nm,1.1s						
XLT				pmax	pmax		
	comp=Z,41nm,5.0s						
SONM	Songino Array	39.32	14	P	P	09 04 30.8	-1.2
	comp=Z,2.7nm,0.8s,baz=196,slow=9.4,SNR=15						
SONM				PcP	PcP	09 06 38.1	-2.2
	comp=Z,1.8nm,0.6s,baz=199,slow=3.8,SNR=9.9						
	comp=Z,2.7nm,0.8s						
SONM	Songino Array	39.32	14	P	P	09 04 31.3	-0.7
ULN	Ulaanbaatar	39.51	14	P	P	09 04 32.5	-1.0
KSAR	Wonju Array Be	41.36	43	P	P	09 04 47.8	-1.0
KS19	Wonju Array Si	41.38	43	P	P	09 04 48.3	-0.8
KS19				IAmb	IAmb	09 05 11.1	
	comp=Z,24nm,1.4s						
KSRS	Korea Array	41.39	43	P	P	09 04 47.6	-1.5
	comp=Z,3.3nm,1.0s,baz=251,slow=8.8,SNR=12						
KSRS				LR	LR	09 24 17.2	
	comp=Z,72nm,18.6s,baz=210,slow=40						
	comp=Z,3.3nm,1.0s						
JNU	Nakatsue	41.42	50	LR	LR	09 25 02.1	
	comp=Z,45nm,18.2s,baz=218,slow=41						
GEYT	Alibeck	42.23	317	P	P	09 04 56.9	+0.8
	comp=Z,16nm,0.6s,baz=147,slow=8.8,SNR=24						
GEYT				LR	LR	09 24 03.3	
	comp=Z,78nm,21.6s,baz=135,slow=38						
	comp=Z,16nm,0.6s						
KURBB	Kurchatov Arra	42.40	346	P	P	09 04 56.8	-0.3
	comp=Z,2.7nm,0.7s,baz=166,slow=7.6,SNR=28						
KURBB				PcP	PcP	09 06 48.9	-1.2
	comp=Z,1.0nm,0.6s,baz=148,slow=3.2,SNR=6.3						
	comp=Z,2.7nm,0.7s						
KURK	Kurchatov	42.46	346	P	P	09 04 57.6	0.0
MTN	Manton Dam	43.72	120	P	P	09 05 07.9	-0.5
MTN				IAmb	IAmb	09 05 16.2	
	comp=Z,16nm,1.4s						
ZAA0	Zalesovo Array	44.44	353	P	P	09 05 13.9	+0.4
ZAA0				IAmb	IAmb	09 05 14.2	
	comp=Z,8.8nm,0.8s						
ZALV	Zalesovo Beam	44.44	353	P	P	09 05 13.5	0.0
	comp=Z,9.1nm,0.6s,baz=175,slow=8.9,SNR=42						
ZALV				LR	LR	09 28 57.2	
	comp=Z,51nm,19.1s,baz=199,slow=43						
	comp=Z,9.1nm,0.6s						
ZALV	Zalesovo Beam	44.44	353	P	P	09 05 13.9	+0.4
BVAR	Borovoye Array	46.83	341	P	P	09 05 31.9	-0.6
	comp=Z,1.9nm,0.5s,baz=142,slow=8.4,SNR=14						
BVAR				PcP	PcP	09 07 05.0	-0.3
	comp=Z,1.6nm,0.7s,baz=178,slow=3.8,SNR=4.2						
BVAR				LR	LR	09 28 09.1	
	comp=Z,46nm,21.1s,baz=153,slow=40						
	comp=Z,1.9nm,0.5s						
BRVK	Borovoye	46.90	341	P	P	09 05 33.1	+0.1
BRVK				IAmb	IAmb	09 05 33.6	
	comp=Z,2.8nm,0.7s						
ABKAR	Akbulak array	48.11	331	P	P	09 05 43.5	+1.0
ABKAR				IAmb	IAmb	09 05 53.4	
	comp=Z,9.0nm,1.1s						
NWAO	Narrogin (SRO)	48.28	153	LR	LR	09 25 04.1	
	comp=Z,110nm,20.3s,baz=30,slow=35						
MJAR	Matsushiro Arr	48.31	49	PcP	PcP	09 07 10.7	-0.2
	comp=Z,1.3nm,0.7s,baz=177,slow=1.6,SNR=5.1						
MJAR				LR	LR	09 27 21.2	
	comp=Z,44nm,19.2s,baz=244,slow=38						
HEH	HeiHe	49.00	28	*e*P	P	09 05 48.1	-1.2
HEH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
WB0	Warramunga Arr	49.96	126	P	P	09 05 56.8	-0.3
WB0				IAmb	IAmb	09 06 07.1	
	comp=Z,9.1nm,1.2s						
WRA	Warramunga Arr	50.01	127	P	P	09 05 56.9	-0.6
	comp=Z,1.5nm,0.7s,baz=305,slow=8.6,SNR=11						
WRA				LR	LR	09 31 07.2	
	comp=Z,73nm,20.2s,baz=292,slow=41						
	comp=Z,1.5nm,0.7s						
WRA	Warramunga Arr	50.01	127	P	P	09 05 56.6	-0.8
WRAB	Tennant Creek	50.01	127	P	P	09 05 57.7	+0.2
WRAB				IAmb	IAmb	09 06 07.5	
	comp=Z,16nm,1.4s						
WB2	Warramunga Arr	50.02	127	P	P	09 05 57.7	+0.1
WB2				IAmb	IAmb	09 06 07.0	
	comp=Z,9.7nm,1.4s						
GUMO	Guam	50.39	81	LR	LR	09 25 05.5	
	comp=Z,30nm,20.4s,baz=142,slow=33						
KLR	Kul'dur	50.48	32	LR	LR	09 30 02.0	
	comp=Z,26nm,18.7s,baz=231,slow=39						
JMM	Marumori	50.71	49	P	P	09 06 02.2	-0.4
ASAR	Alice Springs	51.75	131	P	P	09 06 09.2	-1.4
	comp=Z,2.3nm,0.8s,baz=308,slow=7.1,SNR=19						
ASAR				LR	LR	09 31 55.7	
	comp=Z,75nm,19.3s,baz=317,slow=40						
	comp=Z,2.3nm,0.8s						
ASAR	Alice Springs	51.75	131	P	P	09 06 09.0	-1.6
AS31	Alice Springs	51.75	131	P	P	09 06 09.9	-0.7
GNI	Garni	52.53	313	LR	LR	09 31 37.8	
	comp=Z,50nm,22.0s,baz=139,slow=39						
ARU	Arti	53.74	337	LR	LR	09 31 17.9	
	comp=Z,133nm,21.2s,baz=128,slow=38						
ASAJ	Asahikawa	54.33	42	LR	LR	09 31 13.6	
	comp=Z,57nm,18.2s,baz=208,slow=38						
KBZ	Khabaz	55.13	317	P	P	09 06 35.7	+0.7
	comp=Z,3.3nm,0.9s,baz=125,slow=9.1,SNR=5.4						
	comp=Z,3.3nm,0.9s						
BELG	Belogornoye	56.21	328	LR	LR	09 34 31.1	
	comp=Z,38nm,18.8s,baz=125,slow=40						
PMG	Port Moresby	56.79	108	LR	LR	09 36 55.9	
	comp=Z,56nm,18.3s,baz=305,slow=42						
PMG	Port Moresby	56.79	108	P	P	09 06 46.9	-0.5
KMBO	Kilima Mbogo	57.01	262	P	P	09 06 48.2	-1.1
EIL	Elat	57.84	299	LR	LR	09 35 46.5	
	comp=Z,34nm,19.0s,baz=62,slow=40						
MMAI	Mount Meron Ar	57.93	303	LR	LR	09 34 47.4	
	comp=Z,81nm,20.9s,baz=184,slow=39						
YAK	Yakutsk	58.27	19	LR	LR	09 36 21.7	
	comp=Z,41nm,20.1s,baz=261,slow=40						
YAK	Yakutsk	58.27	19	P	P	09 06 55.2	-1.9
KIRV	Kirov	58.87	335	LR	LR	09 34 38.8	
	comp=Z,60nm,21.4s,baz=132,slow=38						
NRIK	Noril'sk	59.47	358	P	P	09 07 04.3	-1.0
	comp=Z,2.0nm,0.5s,baz=154,slow=7.3,SNR=5.4						
NRIK				LR	LR	09 33 54.4	
	comp=Z,40nm,19.7s,baz=163,slow=37						
	comp=Z,2.0nm,0.5s						
NRIK	Noril'sk	59.47	358	P	P	09 07 04.6	-0.7
NRIK				IAmb	IAmb	09 07 14.4	
	comp=Z,3.5nm,0.8s						
CTA	Charters Tower	59.91	120	LR	LR	09 33 25.5	
	comp=Z,55nm,21.6s,baz=260,slow=36						
BRTR	Keskin Array B	60.59	310	P	P	09 07 13.1	-0.6
	comp=Z,2.4nm,0.6s,baz=127,slow=7.7,SNR=15						
BRTR				LR	LR	09 36 55.4	
	comp=Z,26nm,19.3s,baz=117,slow=39						
	comp=Z,2.4nm,0.6s						
BRTR	Keskin Array B	60.59	310	P	P	09 07 13.3	-0.4
BR131	Keskin Array S	60.59	310	P	P	09 07 13.1	-0.6
BR131				IAmb	IAmb	09 07 14.5	
	comp=Z,5.9nm,0.7s						
STKA	Stephens Creek	62.01	134	P	P	09 07 22.9	-0.3
	comp=Z,2.2nm,0.8s,baz=290,slow=8.4,SNR=3.9						
	comp=Z,2.2nm,0.8s						
MBAR	Mbarara	63.28	264	LR	LR	09 33 21.8	
	comp=Z,76nm,19.9s,baz=54,slow=34						
OBN	Obninsk	63.29	327	LR	LR	09 38 25.1	
	comp=Z,16nm,18.2s,baz=346,slow=39						
MA2	Magadan	65.27	28	LR	LR	09 39 02.4	
	comp=Z,21nm,19.4s,baz=292,slow=39						
AKASG	Malin Array Be	66.13	321	P	P	09 07 48.6	-1.4
	comp=Z,0.2nm,0.3s,baz=79,slow=4.3,SNR=6.8						
	comp=Z,0.2nm,0.3s						
AKASG	Malin Array Be	66.13	321	P	P	09 07 48.9	-1.1
PETK	Petropavlovsk-	66.74	36	LR	LR	09 39 46.0	
	comp=Z,37nm,18.5s,baz=234,slow=38						
VRI	Vrincioaia	66.76	316	⇑P	P	09 07 55.8	+1.6
PLOR	Plostina	66.81	316	⇓P	P	09 07 55.6	+1.1
TESR	Tescani	66.93	316	⇑P	P	09 07 55.6	+0.4
MLR	Muntele Rosu	67.24	315	⇑P	P	09 07 58.9	+1.5
VOIR		67.86	315	⇑P	P	09 08 01.4	+0.2
PLVB	Pleven	67.88	313	⇑P	P	09 08 02.2	+0.9
BURAR	Bucovina Array	68.08	317	⇑P	P	09 07 54.7	-7.9
BURAR	Bucovina Array	68.08	317	P	P	09 08 03.0	+0.5
BUR08	Bucovina Ar. S	68.10	317	P	P	09 08 03.5	+0.9
BUR08				IAmb	IAmb	09 08 04.2	
	comp=Z,3.2nm,0.8s						
LSZ	Lusaka	69.34	250	LR	LR	09 35 30.4	
	comp=Z,79nm,18.6s,baz=165,slow=33						
HERR	Herculane	69.63	314	⇑P	P	09 08 07.6	-4.5
FINES	FINESS Array B	70.59	332	P	P	09 08 16.4	-1.2
	comp=Z,1.3nm,0.5s,baz=96,slow=5.3,SNR=15						
	comp=Z,1.3nm,0.5s						
FINES	FINESS Array B	70.59	332	P	P	09 08 17.6	-0.1
VYHS	Vyhne	72.44	318	*e*P	P	09 08 29.6	+0.5
VYHS				*e*		09 09 42.6	
VYHS				*e*		09 09 48.8	
KEV	Kevo	72.68	340	P	P	09 08 29.9	-0.3
ARCES	ARCESS Array B	73.11	340	P	P	09 08 32.1	-0.6
	comp=Z,1.4nm,0.4s,baz=91,slow=6.0,SNR=28						
ARCES				LR	LR	09 43 15.6	
	comp=Z,90nm,21.7s,baz=94,slow=38						
	comp=Z,1.4nm,0.4s						
ARCES	ARCESS Array B	73.11	340	P	P	09 08 32.8	+0.1
MORC	Moravsky Berou	73.39	319	P	P	09 08 35.4	+0.6
VRAC	Vranov	73.97	318	LR	LR	09 46 02.4	
	comp=Z,23nm,19.6s,baz=78,slow=40						
DPC	Dobruska-Polom	74.21	320	*e*P	P	09 08 39.7	+0.1
DPC				*e*x	x	09 09 10.7	
LBTB	Lobatse	74.65	241	LR	LR	09 36 05.2	
	comp=Z,47nm,21.5s,baz=3.0,slow=31						
OBKA	Obir	75.24	316	*e*P	P	09 08 46.1	+0.4
	comp=Z,1.6nm,0.5s						
GERES	GERESS Array B	75.85	318	P	P	09 08 49.1	-0.1
	comp=Z,1.5nm,0.5s,baz=90,slow=6.3,SNR=19						
	comp=Z,1.5nm,0.5s						
GERES	GERESS Array B	75.85	318	P	P	09 08 49.7	+0.5
SABO	M.te Sabotino	75.89	315	P	P	09 08 49.1	-0.3
SABO				IAmb	IAmb	09 09 16.5	
	comp=Z,11nm,1.2s						
PRED	Cave del Predi	75.92	315	P	P	09 08 49.9	+0.4
PRED				IAmb	IAmb	09 08 50.7	
	comp=Z,4.8nm,0.7s						
KHC	Kasperske Hory	75.94	318	*e*P	P	09 08 49.6	0.0
KHC				*e*x	x	09 09 44.2	
BOSA	Boshof	76.12	237	P	P	09 08 52.5	+1.5
	comp=Z,3.7nm,0.8s,baz=88,slow=4.0,SNR=7.0						
	comp=Z,3.7nm,0.8s						
HFS	Hagfors	76.35	330	LR	LR	09 45 07.1	
	comp=Z,44nm,21.0s,baz=80,slow=38						
CIMO	Cimolais	76.69	315	P	P	09 08 54.5	+0.5
CIMO				IAmb	IAmb	09 08 55.2	
	comp=Z,7.9nm,0.6s						
WTTA	Wattenberg	77.24	316	*i* P	P	09 08 56.6	-0.6
	comp=Z,3.1nm,0.3s						
CTI	Castel Tesino	77.25	315	IAmb	IAmb	09 08 58.2	
	comp=Z,4.2nm,0.6s						
WATA	Walderalm	77.28	316	*e*P	P	09 08 56.8	-0.5
	comp=Z,0.8nm,0.2s						
SQTA	Sankt Quirin	77.53	316	*i* P	P	09 08 58.2	-0.5
	comp=Z,2.9nm,0.4s						
MOTA	Moosalm	77.60	316	*i* P	P	09 08 58.4	-0.8
	comp=Z,1.2nm,0.3s						
NOA	NORSAR Array B	77.62	330	LR	LR	09 46 38.0	
	comp=Z,39nm,19.9s,baz=105,slow=38						
SPB2	Spitsbergen Ar	77.69	348	P	P	09 08 58.8	-0.1
SPITS	Spitsbergen Ar	77.69	348	LR	LR	09 48 48.9	
	comp=Z,28nm,21.9s,baz=48,slow=40						
RETA	Reutte	77.83	317	*i* P	P	09 09 00.0	-0.3
	comp=Z,3.0nm,0.6s						
FETA	Feichten	77.86	316	*e*P	P	09 09 00.3	-0.3
	comp=Z,1.6nm,0.5s						
ESDC	Sonseca Array	89.38	310	P	P	09 09 59.8	+0.1
	comp=Z,0.4nm,0.5s,baz=55,slow=3.8,SNR=2.2						
ESDC				LR	LR	09 53 37.7	
	comp=Z,23nm,19.2s,baz=118,slow=38						
	comp=Z,0.4nm,0.5s						
TORD	Torodi Ar. Bea	89.47	283	LR	LR	09 48 23.0	
	comp=Z,42nm,21.5s,baz=93,slow=34						
URZ	Urewera	91.14	129	LR	LR	09 53 10.8	
	comp=Z,58nm,19.1s,baz=352,slow=37						
MDT	Midelt	91.37	303	LR	LR	09 58 39.4	
	comp=Z,19nm,18.3s,baz=142,slow=40						
RES	Resolute Bay	95.38	2	P	P	09 10 27.4	+0.8
RES				IAmb	IAmb	09 10 36.9	
	comp=Z,2.4nm,1.1s						
DBIC	Dimbokro	97.00	278	LR	LR	09 53 27.5	
	comp=Z,18nm,18.2s,baz=118,slow=35						
SFJD	Kangerlussuaq	98.97	347	LR	LR	10 05 31.8	
	comp=Z,50nm,18.0s,baz=22,slow=42						
PDAR	Pinedale Array	123.49	20	PKP	PKPdf	09 15 60.0	-0.7
	comp=Z,0.8nm,0.7s,baz=177,slow=0.6,SNR=11						
NVAR	Mina Array Bea	123.49	30	PKP	PKiKP	09 16 01.0	+0.1
	comp=Z,0.9nm,0.6s,baz=329,slow=2.4,SNR=12						
TXAR	Lajitas Array	137.61	22	PKP	PKPdf	09 16 27.1	-0.5
	comp=Z,0.5nm,0.5s,baz=152,slow=0.6,SNR=12						
PLCA	Paso Flores	146.22	202	PKPbc	PKPab	09 16 44.4	+0.2
	comp=Z,5.0nm,0.6s,baz=110,slow=1.0,SNR=30						
CPUP	Villa Florida	147.92	236	PKPbc	PKPbc	09 16 49.6	+1.0
	comp=Z,1.2nm,0.7s,baz=110,slow=4.1,SNR=4.8						

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*ISK **19** 09:01:07.6, 38°.38N×42°.84E, h10^{km}, ML2.6/9*

*DDA **19** 09:01:09.0±0.0, 38°.27N×42°.88E, h6^{km}±2^{km}, ML2.5*

ISC 19 09:01:08.0±0.9**, 38°.32N**±0°.03×**42°.87E**±0°.02**, h14**^{km}±7^{km}**,**
n21, σ0^{s}.89/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AKDM	Akdamar-Van	0.09	87	Pg	Pg	09 01 10.9	-0.3
AKDM				Sg	Sg	09 01 13.4	0.0
GEVA	Gevas	0.15	94	P	Pb	09 01 12.0	-0.8
GEVA				S	Sg	09 01 15.7	+1.1
GEVA				*i* AML	AML	09 01 18.0	
	comp=E,1μm,0.2s						
PERV	Siirt/Pervari-	0.46	214	P	Pg	09 01 16.8	-0.3
PERV				S	Sg	09 01 23.5	+0.2
PERV				*i* AML	AML	09 01 24.0	
	comp=E,443nm,0.4s						
PERV				*i* AML	AML	09 01 27.0	
	comp=N,572nm,0.4s						
TVAN	Van	0.47	64	P	Pb	09 01 17.7	-0.6
VANB	Van	0.49	56	Pg	Pg	09 01 16.9	-0.9
ADCV	BITLIS_Adilcev	0.50	347	P	Pb	09 01 18.8	0.0
ADCV				*i* AML	AML	09 01 27.0	
	comp=N,494nm,0.3s						
ADCV				*i* AML	AML	09 01 27.0	
	comp=E,377nm,0.6s						
ADCV				S	Sb	09 01 27.3	+1.3
BLIS	Bitlis-Merkez	0.60	279	P	Pg	09 01 18.2	-1.6
BLIS				S	Sg	09 01 26.9	-0.9
BLIS				*i* AML	AML	09 01 27.0	
	comp=N,242nm,0.3s						
BLIS				*i* AML	AML	09 01 29.0	
	comp=E,241nm,0.2s						
GURO	Guroymak-BITLI	0.69	289	Pg	Pg	09 01 21.4	-0.2
GURO				Sg	Sg	09 01 30.1	-0.7
MLAZ	Malazgirt-MUS	0.85	343	Pg	Pg	09 01 23.4	-1.2
OZAP	Van, Ozalp-Mer	0.95	69	P	Pn	09 01 28.7	+1.5
HAKT	HAKKARI	1.01	139	P	Pb	09 01 27.1	-0.4
HAKT				S	Sg	09 01 38.8	-2.0
CUKT	Cukurca	1.22	151	Pn	Pg	09 01 31.4	-0.2
AGRB	Hanur-Agry	1.25	4	Pn	Pn	09 01 31.3	-0.1
BTMN	Batman	1.33	252	P	Pg	09 01 33.4	-0.3
BTMN				S	Sg	09 01 51.6	+0.6
MIDY	Mardin/Midyat-	1.48	232	P	Pb	09 01 35.4	0.0
MIDY				S	Sg	09 01 56.3	+0.6
EATA	Eleskirt	1.56	349	P	Pg	09 01 37.6	-0.6
EATA				S	Sg	09 01 59.5	+1.0
BNGB	Bingl	1.84	292	Pn	Pn	09 01 39.7	+0.3
KOPR	Koprukoy-ERZUR	1.84	335	Pn	Pn	09 01 39.1	-0.4
HOMI	Horasan	1.88	337	P	Pb	09 01 43.0	+0.8
HANI	Diyarbakir_Han	1.94	273	P	Pb	09 01 43.0	-0.3
HANI				S	Sg	09 02 09.3	-1.2
MAZI	Mazidag	2.10	246	Pn	Pn	09 01 43.8	+0.8

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*IDC **19** 09:11:41.0±0.7, 27°.93N×140°.48E, h501^{km}±15^{km}, mb2.7/4, mbtmp3.6/5, Error ellipse: s-maj=53.4km s-min=18.4km az=79.0*

*JMA **19** 09:11:43.0±0.2, 28°N±2°×14°0E±°, h495^{km}, MV3.7/22, W OFF OGASAWARA*

ISC 19 09:11:41.5±0.9**, 27°.8N**±0°.1×**140°.2E**±0°.2**, h500**^{km}**, n15,**
σ1^{s}.15/18**, mb3.1**/4**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.90	111	*e*P	P	09 12 46.8	+0.6
CBIJ				*e*S	S	09 13 37.5	-1.1
JCJ	Chichijima	1.90	111	P	P	09 12 46.6	+0.5
	75nm,0.3s,baz=2.8,slow=15,SNR=53						
JCJ				S	S	09 13 36.7	-1.9
	144nm,0.3s,baz=307,slow=22,SNR=18						
JHH2	Haha-jima-NKT2	2.11	123	*e*P	P	09 12 48.6	+1.4
JHH2				*e*S	S	09 13 40.1	-0.3
BSO1	Boso 1	6.86	5	*e*P	P	09 13 27.2	+1.7
JIE	Ise	7.21	336	*e*P	P	09 13 31.8	+2.1
JKN2	Miekihoku	7.24	333	*e*P	P	09 13 31.4	+1.4
JOD2	Odawara 2	7.49	353	*e*P	P	09 13 33.4	+0.8
JRY	Ryogami san	8.26	353	*e*P	P	09 13 40.4	-0.1
JAG	Ashikaga	8.62	356	*e*P	P	09 13 43.4	-0.7
JHO	Hitachi	8.78	2	*e*P	P	09 13 46.6	+0.7
MJAR	Matsushiro Arr	8.87	350	P	P	09 13 46.0	-0.9

	0.8nm,0.3s,baz=167,slow=11,SNR=9.1						
SONM	Songino Array	32.98	316	P	P	09 17 33.7	-0.7
	0.3nm,0.5s,baz=134,slow=10,SNR=1.9						
	0.3nm,0.5s						
WRA	Warramunga Arr	47.81	187	P	P	09 19 33.2	+0.1
	0.2nm,0.4s,baz=5.3,slow=7.9,SNR=7.4						
	0.2nm,0.4s						
MKAR	Makanchi Array	48.66	309	P	P	09 19 39.2	-0.2
	0.2nm,0.3s,baz=87,slow=9.4,SNR=5.4						
	0.2nm,0.3s						
FINES	FINESS Array B	76.53	333	P	P	09 22 39.3	-0.1
	0.7nm,0.4s,baz=72,slow=4.5,SNR=13						
	0.7nm,0.4s						

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*NOU **19** 09:20:06.8, 30°.40S×117°.97E, h0^{km}, MLv3.8/13, Western Australia*

*AUST **19** 09:20:07.7±0.9, 30°.42S×117°.79E, h10^{km}, Error ellipse: s-maj=9.4km s-min=8.8km az=156.0*

*CUPWA **19** 09:20:09.1±0.9, 30°.42S×117°.76E, h1^{km}±14^{km}, ML3.0, Region: WESTERN AUSTRALIA*

ISC 19 09:20:06.8±0.7**, 30°.38S**±0°.03×**117°.81E**±0°.03**, h10^{km}, n37, σ1^{s}56**/47**, 1C-1D, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BR4	Bonnie Rock 4	0.52	121	P	Pg	09 20 18.8	+1.9
BR4	Bonnie Rock 4	0.52	121	S	Sg	09 20 26.0	+2.3
KOO6	Koorda	0.53	213	P	Pg	09 20 17.6	+0.5
BLDU	Ballidu	0.98	256	⇓P	Pg	09 20 25.9	+0.2
	baz=0.9						
BLDU				S	Sg	09 20 38.0	-0.5
	baz=0.9						
BLDU	Ballidu	0.98	256	P	Pg	09 20 26.1	+0.4
BLDU	Ballidu	0.98	256	P	Pg	09 20 25.9	+0.2
BLDU	Ballidu	0.98	256	S	Sg	09 20 38.0	-0.5
KLBR	Kellerberrin	1.21	182	⇑P	Pb	09 20 30.2	+0.5
	baz=1.2,SNR=276						
KLBR				S	Sb	09 20 45.0	-0.6
	baz=1.2,SNR=39						
KLBR	Kellerberrin	1.21	182	P	Pb	09 20 30.3	+0.5
KLBR	Kellerberrin	1.21	182	P	Pb	09 20 30.2	+0.5
KLBR				S	Sb	09 20 45.0	-0.6
MORW	Morawa	2.02	310	P	Pn	09 20 42.6	+1.7
	baz=2.0						
MORW				S	Sn	09 21 07.8	+1.6
	baz=2.0						
MORW	Morawa	2.02	310	P	Pb	09 20 44.6	+1.0
MORW	Morawa	2.02	310	P	Pn	09 20 42.6	+1.7
MORW				S	Sn	09 21 07.8	+1.6
MUN	Mundaring	2.11	220	P	Pn	09 20 43.5	+1.4
	baz=2.1,SNR=28						
MUN				S	Sn	09 21 09.5	+1.1
	baz=2.1,SNR=12						
MUN	Mundaring	2.11	220	P	Pn	09 20 43.8	+1.7
MUN	Mundaring	2.11	220	P	Pn	09 20 43.5	+1.4
MUN				S	Sn	09 21 09.4	+1.1
AUMAZ	Mazenod Senior	2.23	223	P	Pn	09 20 45.1	+1.4
	baz=2.2						
NWAO	Narrogin (SRO)	2.59	191	P	Pn	09 20 50.0	+1.2
	baz=2.6,SNR=8.3						
NWAO				P	Pn	09 20 50.0	+1.2
	baz=2.6,SNR=8.3						
NWAO	Narrogin (SRO)	2.59	191	P	Pn	09 20 49.7	+1.0
NWAO	Narrogin (SRO)	2.59	191	P	Pn	09 20 49.8	+1.0
NWAO	Narrogin (SRO)	2.59	191	P	Pn	09 20 50.0	+1.2
KMBL	Kambalda	3.63	107	P	Pn	09 21 04.5	+1.4
	baz=3.6						
KMBL	Kambalda	3.63	107	P	Pn	09 21 04.5	+1.4
MEEK	Meekatharra	3.79	11	P	Pn	09 21 07.5	+2.2
	baz=3.9						
MEEK				S	Sn	09 21 49.5	-0.5
	baz=3.9						
MEEK	Meekatharra	3.79	11	P	Pn	09 21 07.6	+2.3
MEEK	Meekatharra	3.79	11	P	Pn	09 21 07.5	+2.2
MEEK	Meekatharra	3.79	11	S	Sn	09 21 49.5	-0.5
RKGY	Rocky Gully	4.28	189	P	Pn	09 21 13.6	+1.6
FORT	Forrest	8.84	95	P	Pn	09 22 15.2	+0.5
	baz=8.8						
FORT				S	Sn	09 23 48.6	-5.8
	baz=8.8						
FORT	Forrest	8.84	95	P	Pn	09 22 15.1	+0.5
FORT	Forrest	8.84	95	P	Pn	09 22 15.2	+0.5
WRKA	Warakurna	10.70	63	P	Pn	09 22 40.2	+0.1
	baz=11						
WRKA				S	Sn	09 24 31.0	-9.1
	baz=11						
WRKA	Warakurna	10.70	63	P	Pn	09 22 40.3	+0.1
MULG	Mulgathing	14.03	94	P	Pn	09 23 23.5	-2.1
	baz=14						
MULG	Mulgathing	14.03	94	P	Pn	09 23 23.6	-2.1
FITZ	Fitzroy Crossi	14.15	32	P	Pn	09 23 26.6	-0.7
OOD	Oodnadatta	15.84	85	P	Pn	09 23 48.4	-1.5

IDC 19 09:37:54.4±7.8**, 6°.75S×149°.15E, h78^{km}**±56^{km}**, mb2.8**/1**, mbtmp3.3**/3**, ML3.4**/1**, Error ellipse: s-maj=122.0km s-min=54.9km az=120.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.30	217	P	Pn	09 38 44.2	+0.4
	11nm,0.3s,baz=60,slow=14,SNR=12						
PMG				S	Sn	09 39 22.4	+0.5
	19nm,0.3s,baz=339,slow=21,SNR=4.0						
WRA	Warramunga Arr	19.46	226	P	P	09 42 14.9	-0.2
	0.1nm,0.3s,baz=52,slow=11,SNR=9.0						
	0.3nm,0.3s						
ASAR	Alice Springs	22.31	219	P	P	09 42 46.0	+0.3
	0.5nm,0.7s,baz=54,slow=9.0,SNR=10						
	0.5nm,0.7s						
TORD	Torodi Ar. Bea	147.35	284	PKPbc	PKPbc	09 57 29.2	-0.9
	0.2nm,0.3s,baz=61,slow=3.7,SNR=4.4						

ROM 19 09:48:43.7±0.1**, 43°.021N**±0°.003×**13°.031E**±0°.004**, h8^{km}, ML1.4**/11**, 4C-4D, Error ellipse: s-maj=0.3km s-min=0.1km az=68.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1219	Muccia, Frazio	0.04	334	⇓P	Pg	09 48 45.4	-0.1
T1219				S	Sg	09 48 46.2	-0.5
T1219				AML	AML		
	comp=E,1350µm,0.2s						
T1219				AML	AML		
	comp=N,2185µm,0.1s						
T1219				AML	AML		
	comp=N,2135µm,0.1s						
T1219				AML	AML		
	comp=E,1385µm,0.2s						
FDMO	Fiordimonte	0.04	69	P	Pg	09 48 45.4	0.0
FDMO				S	Sg	09 48 46.4	-0.3
FDMO				AML	AML		
	comp=N,924µm,0.6s						
FDMO				AML	AML		
	comp=N,925µm,0.6s						
FDMO				AML	AML		
	comp=E,952µm,0.8s						
FEMA	Monte Fema	0.06	167	P	Pg	09 48 45.9	+0.2
FEMA				S	Sg	09 48 47.3	+0.2
CESI	CESI - Serrava	0.09	260	⇑P	Pg	09 48 46.6	+0.5
CESI				S	Sg	09 48 48.6	+0.9
CESI				AML	AML		
	comp=E,289µm,0.5s						
CESI				AML	AML		
	comp=N,426µm,0.2s						
T1220	Camerino, Fraz	0.10	25	⇑P	Pg	09 48 46.6	+0.5
T1220				S	Sg	09 48 48.7	+0.9
T1220				AML	AML		
	comp=E,1250µm,0.2s						
T1220				AML	AML		
	comp=N,1605µm,0.2s						
T1220				AML	AML		
	comp=N,1610µm,0.2s						
T1220				AML	AML		
	comp=E,1245µm,0.2s						
T1216	Preci, Frazion	0.13	184	P	Pg	09 48 47.2	+0.6
T1216				S	Sg	09 48 49.7	+1.1
T1216				AML	AML		
	comp=E,351µm,0.5s						
T1216				AML	AML		
	comp=E,351µm,1.5s						
T1216				AML	AML		
	comp=N,409µm,1.4s						
SEF1	Sefro	0.14	334	P	Pg	09 48 47.2	+0.4
SEF1				S	Sg	09 48 50.0	+1.1
T1256	Bolognola (MC)	0.14	96	P	Pg	09 48 47.5	+0.6
T1256				S	Sg	09 48 50.2	+1.1
T1256				AML	AML		
	comp=E,167µm,0.7s						
T1256				AML	AML		
	comp=N,194µm,0.3s						
T1256				AML	AML		
	comp=E,167µm,1.3s						
MC2	Monte Cornacci	0.16	133	P	Pg	09 48 47.7	+0.6
MC2				S	Sg	09 48 50.8	+1.2
T1245	Castelsantange	0.20	145	P	Pg	09 48 48.5	+0.6
T1245				S	Sg	09 48 52.1	+1.4
T1245				AML	AML		
	comp=E,208µm,0.7s						
T1245				AML	AML		
	comp=N,284µm,0.3s						
GUMA	Gualdo di Mace	0.23	79	P	Pg	09 48 49.5	+1.2
GUMA				S	Sg	09 48 53.5	+2.2
GUMA				AML	AML		
	comp=N,431µm,0.2s						
GUMA				AML	AML		
	comp=E,1066µm,0.2s						
GUMA				AML	AML		
	comp=N,431µm,1.8s						
SNTG	Esanatoglia	0.24	344	P	Pg	09 48 49.3	+0.7
SNTG				S	Sg	09 48 53.9	+2.0
SNTG				AML	AML		
	comp=E,47µm,0.5s						
SNTG				AML	AML		
	comp=E,47µm,0.5s						
SNTG				AML	AML		
	comp=N,73µm,0.1s						
T1212	Cascia, Frazio	0.27	178	P	Pg	09 48 49.8	+0.7
T1212				S	Sb	09 48 54.5	-1.0
T1212				AML	AML		
	comp=N,194µm,1.0s						
T1212				AML	AML		
	comp=E,161µm,0.6s						
ASSB	Assisi San Ben	0.27	275	P	Pg	09 48 49.8	+0.7
ASSB				S	Sb	09 48 54.7	-1.0
ASSB				AML	AML		
	comp=N,103µm,0.3s						
ASSB				AML	AML		
	comp=E,89µm,0.1s						
T1214	Arquata del Tr	0.29	153	P	Pg	09 48 50.1	+0.6
T1214				S	Sb	09 48 55.1	-1.2
EL6	Elcito	0.31	10	P	Pg	09 48 50.5	+0.6
EL6				S	Sb	09 48 56.1	-0.8
EL6				AML	AML		
	comp=E,190µm,0.2s						
EL6				AML	AML		
	comp=N,190µm,0.3s						
T1217	Poggiodomo (PG	0.32	193	P	Pg	09 48 50.8	+0.8
T1217				S	Sb	09 48 56.1	-0.9
ATCC	AVT- Casa Cast	0.33	300	P	Pg	09 48 51.0	+0.8
ATCC				S	Sb	09 48 57.0	-0.3
T1241	Roccafluvione,	0.34	119	P	Pg	09 48 51.0	+0.6
T1241				S	Sb	09 48 56.7	-0.8
FOSV	Fossato di Vic	0.34	324	P	Pg	09 48 51.0	+0.7
FOSV				S	Sb	09 48 56.6	-0.9
FOSV				AML	AML		
	comp=E,36µm,0.4s						
FOSV				AML	AML		
	comp=N,58µm,0.3s						
CING	Cingoli	0.38	19	⇓P	Pg	09 48 51.7	+0.6
CING				S	Sb	09 48 58.1	-0.5
CING				AML	AML		
	comp=N,51µm,0.1s						
CING				AML	AML		
	comp=E,75µm,0.2s						
MOMA	Monte Martano	0.40	238	P	Pb	09 48 52.8	-0.3
MOMA				S	Sb	09 48 59.2	-0.2
T1246	Crognaleto (TE	0.55	142	P	Pg	09 48 54.5	+0.1
TERO	Teramo	0.58	133	AML	AML		
	comp=E,106µm,0.2s						
TERO				AML	AML		
	comp=E,106µm,0.2s						
TERO				AML	AML		
	comp=N,87µm,0.2s						
LIK	San Giovanni I	1.56	165	⇑P	Pn	09 49 09.3	-2.4
LIK				S	Sn	09 49 30.5	-1.7
VAGA	Valle Agricola	1.84	150	P	Pn	09 49 12.4	-3.1
CIGN	Sant'Elia a Pi	1.95	134	S	Sg	09 49 48.3	+2.1
PTRJ	Pietraroja	2.00	146	S	Sg	09 49 46.9	-0.9
SNAL	S. Angelo Dei	2.65	141	P	Pb	09 49 31.2	-0.3
TREG	Tregnago	2.84	332	P	Pn	09 49 29.8	+0.5
SABO	M.te Sabotino	2.99	8	⇑P	Pn	09 49 32.2	+0.8
SABO				AML	AML		
	comp=E,487µm,1.2s						
SABO				AML	AML		
	comp=N,531µm,1.6s						
RNCA	Ronca, Sant'Ol	3.29	298	S	Sg	09 50 27.9	-1.5
MGR	Morigerati	3.45	146	P	Pb	09 49 41.7	-3.2
EUCT	Pavia	3.55	309	⇓P	Pn	09 49 36.1	-3.0
CORL	Corleone	5.12	178	⇓P	Pn	09 49 54.5	-6.3

ROM 19 09:49:12.9±0.1**, 42°.506N**±0°.004×**13°.399E**±0°.004**, h10^{km}, ML1.4**/6**, 1C-2D, Error ellipse: s-maj=0.4km s-min=0.3km az=158.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	Campotosto	0.03	13	P	Pg	09 49 15.2	+0.2
CAMP				S	Sg	09 49 16.4	0.0
T1247	Pizzolo (AQ)	0.10	229	P	Pg	09 49 15.9	+0.3
T1247				S	Sg	09 49 18.3	+0.8
T1247				AML	AML		
	comp=E,519µm,0.3s						
T1247				AML	AML		
	comp=N,562µm,0.4s						
T1246	Crognaleto (TE	0.10	42	P	Pg	09 49 16.3	+0.5
T1246				S	Sg	09 49 18.2	+0.6
SMA1	SAN MARTINO	0.13	339	P	Pg	09 49 16.6	+0.5
SMA1				S	Sg	09 49 19.3	+0.9
SMA1				AML	AML		
	comp=E,154µm,0.2s						
SMA1				AML	AML		
	comp=N,138µm,1.1s						
SMA1				AML	AML		
	comp=N,138µm,0.9s						
GIGS	Gran Sasso	0.14	114	P	Pg	09 49 16.6	+0.5
GIGS				S	Sg	09 49 19.1	+0.6
GIGS				AML	AML		
	comp=N,158µm,0.2s						
GIGS				AML	AML		
	comp=E,164µm,0.1s						
RM33	Pellescritta (	0.14	272	⇑P	Pg	09 49 16.6	+0.4
RM33				S	Sg	09 49 18.8	+0.4
RM33				AML	AML		
	comp=E,473µm,0.3s						
RM33				AML	AML		
	comp=N,548µm,0.3s						
RM33				AML	AML		
	comp=E,432µm,1.0s						
RM33				AML	AML		
	comp=E,474µm,0.3s						
RM33				AML	AML		
	comp=N,548µm,0.3s						
RM33				AML	AML		
	comp=N,508µm,0.3s						
RM33				AML	AML		
	comp=N,548µm,1.7s						
RM33				AML	AML		
	comp=N,508µm,1.7s						
AQU	L'Aquila	0.15	179	P	Pg	09 49 17.2	+0.9
AQU				AML	AML		
	comp=E,158µm,1.0s						
AQU				AML	AML		
	comp=N,165µm,1.6s						
AQU				AML	AML		
	comp=N,165µm,0.4s						
TERO	Teramo	0.19	52	⇓P	Pg	09 49 17.6	+0.6
TERO				S	Sg	09 49 20.7	+0.9
TERO				AML	AML		
	comp=N,89µm,1.5s						
TERO				AML	AML		
	comp=E,106µm,0.2s						
TERO				AML	AML		
	comp=E,106µm,1.8s						
TERO				AML	AML		
	comp=N,89µm,1.5s						
T1214	Arquata del Tr	0.29	331	P	Pg	09 49 19.5	+0.7
T1241	Roccafluvione,	0.35	4	P	Pb	09 49 20.7	-0.6
T1212	Cascia, Frazio	0.36	313	P	Pg	09 49 20.3	+0.2
T1212				S	Sg	09 49 25.9	+1.0
T1245	Castelsantange	0.38	336	P	Pg	09 49 21.1	+0.5
T1211	Morro Reatino	0.40	274	P	Pg	09 49 21.3	+0.4
MC2	Monte Cornacci	0.43	339	P	Pg	09 49 22.0	+0.4
T1256	Bolognola (MC)	0.52	346	P	Pg	09 49 23.3	+0.3
T1256				S	Sb	09 49 31.3	-0.5
FDMO	Fiordimonte	0.58	337	P	Pg	09 49 24.5	+0.3
FDMO				S	Sb	09 49 33.2	-0.3
T1219	Muccia, Frazio	0.62	332	P	Pg	09 49 24.8	-0.3
FOSV	Fossato di Vic	0.92	329	⇓P	Pg	09 49 30.2	-0.4

IDC 19 09:56:25.2±7.1**, 6°.62S×153°.98E, h69^{km}**±51^{km}**, mb3.1**/3**, mbtmp3.5**/4**, ML3.7**/1**, Error ellipse: s-maj=69.0km s-min=28.2km az=94.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	3.01	320	P	Pn	09 57 09.2	-1.4
	9.5nm,0.3s,baz=154,slow=1.7,SNR=9.1						
KRVT				S	Sn	09 57 46.3	+0.9
	71nm,0.6s,baz=316,slow=16,SNR=3.9						
	23nm,0.3s						
WRA	Warramunga Arr	23.22	233	P	P	10 01 26.5	-0.1
	1.3nm,0.9s,baz=56,slow=8.6,SNR=6.0						
	1.3nm,0.9s						
ASAR	Alice Springs	25.68	227	P	P	10 01 48.5	-0.6
	0.3nm,0.7s,baz=54,slow=9.4,SNR=4.8						
	0.3nm,0.7s						
MKAR	Makanchi Array	82.46	319	P	P	10 08 41.1	+0.8
	0.3nm,0.6s,baz=104,slow=4.6,SNR=4.0						
	0.3nm,0.6s						

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*TRN **19** 10:00:32.8, 10°.89N×62°.50W, h103^{km}, MD3.4*

*FUNV **19** 10:00:35.0, 10°.90N×62°.48W, h30^{km}, MW3.5*

ISC 19 10:00:32.8±1.4**, 10°.91N**±0°.06×**62°.53W**±0°.05**, h95^{km}**±14^{km}**, n14, σ1^{s}43**/25**, 1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUV	Carupano	0.74	251	⇓iP	Pn	10 00 51.5	+1.4
CRUV				eS	Sn	10 01 00.5	-2.6
TRN	Trinidad (W)	1.13	103	eP	Pn	10 00 55.1	+0.8
TRN				eS	Sn	10 01 10.4	-0.2
GRGR	Grenville	1.48	35	eP	Pn	10 00 59.0	+0.4
GRGR				eS	Sn	10 01 18.7	+0.5
GCMP	Grenada, Carri	1.90	34	eP	Pn	10 01 04.0	+0.1
GCMP				eS	Sn	10 01 27.2	-0.3
TOSP	Speyside	1.99	79	eP	Pn	10 01 05.1	0.0
TOSP				eS	Sn	10 01 29.0	-0.7
SVB	Belmont	2.66	28	eP	Pn	10 01 15.1	+1.2
SVB				eS	Sn	10 01 45.3	-0.2
PRGV	PARIAGUAN	2.99	225	eP	Pn	10 01 19.3	+1.0
PRGV				eS	Sn	10 01 53.1	-0.3
SLBI	Saint Lucia, B	3.44	26	eP	Pn	10 01 24.3	-0.1
SLBI				eS	Sn	10 02 03.1	-1.2
BIRV	Birongo	3.71	264	eP	Pn	10 01 30.5	+2.5
BIRV				eS	Sn	10 02 10.6	-0.1
MERV	Las Mercedes	4.06	246	eP	Pn	10 01 34.2	+1.4
MERV				eS	Sn	10 02 19.0	-0.3
BENV	Beln	5.08	260	eP	Pn	10 01 48.2	+1.6
BENV				eS	Sn	10 02 42.8	-1.3
CACV	CAICARA DEL OR	5.17	230	eP	Pn	10 01 42.6	-5.2
CACV				eS	Sn	10 02 34.5	-12
BAUV	El Baul	5.78	251	eP	Pn	10 01 56.1	+0.1
BAUV				eS	Sn	10 02 57.5	-3.5
MAPV	Macapo	5.93	260	eS	Sn	10 03 02.9	-2.0

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*SJA **19** 10:03:27.9±1.8, 18°.69S×69°.72W, h85^{km}, ML3.9, MW3.9, Hypocentre not reviewed by the ISC*

*NEIC **19** 10:03:27.4±2.6, 18°.63S±0°.06×69°.63W±0°.07, h104^{km}±7^{km}, mb4.1/16, ML4.2(GUC), Error ellipse: s-maj=11.1km s-min=5.6km az=49.0*

*IDC **19** 10:03:28.4±0.7, 18°.73S×69°.32W, h111^{km}±5^{km}, mb3.9/7, mbtmp4.2/11, Error ellipse: s-maj=17.4km s-min=8.7km az=100.0*

*GUC **19** 10:03:28.2±0.6, 18°.63S×69°.58W, h103^{km}±2^{km}, ML4.2*

*VAO **19** 10:03:29.6±0.5, 18°.59S×69°.52W, h123^{km}, mb4.4*

ISC 19 10:03:27.3±0.5**, 18°.68S**±0°.04×**69°.52W**±0°.06**, h104^{km}**±5^{km}**, n111, σ1^{s}26**/112**, mb4.1**/10**, 5C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB16	IPOC Station P	0.34	2	Pn	Pn	10 03 44.0	+0.7
PB16	IPOC Station P	0.34	2	⇓iP	Pn	10 03 44.2	+0.9
PB16				iS	Sn	10 03 56.4	+1.2
PB16				IAML		10 03 58.0	
	comp=E,20µm,0.5s						
PB16	IPOC Station P	0.34	2	eP		10 03 56.7	
MNMC	Minye Minye	0.46	189		Pn	10 03 44.4	+0.7
MNMC	Minye Minye	0.46	189	⇑iP	Pn	10 03 44.4	+0.7
MNMC				iS	Sn	10 03 56.8	+0.9
MNMC				IAML		10 03 58.2	
	comp=E,23µm,0.7s						
MNMCX	Minye Minye	0.46	189	eP		10 03 57.0	
MNMCX				IAML		10 04 22.8	
	comp=Z,1µm,0.5s						
PB12	IPOC Station P	0.77	274	Pn	Pn	10 03 45.3	-0.5
PB12	IPOC Station P	0.77	274	⇑iP	Pn	10 03 45.5	-0.3
PB12				iS	Sn	10 03 58.7	-1.1
PB12				IAML		10 04 00.1	
	comp=N,10µm,0.3s						
PB12	IPOC Station P	0.77	274	eP		10 03 44.0	
PB12				IAML		10 03 59.5	
	comp=Z,3µm,0.3s						
AP01	Chacalluta	0.84	291		Pn	10 03 46.3	-0.1
AP01	Chacalluta	0.84	291	⇑iP	Pn	10 03 46.4	-0.1
AP01				iS	Sn	10 03 59.9	-0.9
AP01				IAML		10 04 01.9	
	comp=E,11µm,0.4s						
AP01	Chacalluta	0.84	291	eP		10 03 45.0	
AP01				IAML		10 04 07.8	
	comp=Z,4µm,0.3s						
GO01	Chusmiza	1.03	163		Pn	10 03 50.9	+1.9
PB18	Visviri	1.08	2	⇓iP	Pn	10 03 52.1	+2.5
PB11	IPOC Station P	1.09	187	⇑iP	Pn	10 03 49.9	+0.7
PB11				iS	Sn	10 04 06.8	+1.1
PB11				IAML		10 04 08.2	
	comp=E,7µm,0.3s						
PB11	IPOC Station P	1.09	187	eP		10 03 50.1	
PB11				eS		10 04 07.1	
PB11				IAML		10 04 08.0	
	comp=Z,3µm,0.6s						
PB08	IPOC Station P	1.50	167	⇑iP	Pn	10 03 56.0	+1.8
PB08				iS	Sn	10 04 16.6	+2.1
PB08				IAML		10 04 18.9	
	comp=E,2µm,0.2s						
PB08	IPOC Station P	1.50	167	eP		10 03 56.0	
PB08				eS		10 04 17.6	
PB08				IAML		10 04 18.5	
	comp=Z,958nm,0.7s						
TA02	Huaiquique	1.69	200	eP		10 03 56.6	
TA02				eS		10 04 17.5	
TA02				IAML		10 04 22.6	
	comp=Z,1µm,0.1s						
TA01	Diego Aracena	1.98	198	Pn	Pn	10 04 00.2	+0.3
TA01	Diego Aracena	1.98	198	iP	Pn	10 03 59.2	-0.6
TA01				iS	Sn	10 04 22.5	-2.2
TA01				IAML		10 04 29.5	
	comp=N,660nm,0.4s						
TA01	Diego Aracena	1.98	198	eP		10 03 59.6	
TA01				eS		10 04 24.0	
PB01	IPOC Station P	2.36	179	iP	Pn	10 04 05.3	+0.5
PB01				IAML		10 04 34.5	
	comp=E,812nm,0.4s						
PB01	IPOC Station P	2.36	179	eP		10 04 05.5	
PB01				eS		10 04 34.6	
PB01				IAML		10 04 36.4	
	comp=Z,531nm,0.2s						
PB02	IPOC Station P	2.66	188	iP	Pn	10 04 09.0	+0.3
PB02				IAML		10 04 47.7	
	comp=N,1µm,0.6s						
PB02	IPOC Station P	2.66	188	eP		10 04 09.7	
PB02				eS		10 04 40.4	
PB02				IAML		10 04 55.0	
	comp=Z,833nm,0.4s						
LPAZ	La Paz	2.72	29	P	Pn	10 04 12.8	+2.8
	comp=Z,30nm,0.3s,baz=268,slow=3.4,SNR=409						
LPAZ				S	Sn	10 04 43.9	+1.1

	comp=Z,32nm,0.6s,baz=234,slow=13,SNR=2.4						
LPAZ	La Paz	2.72	29	eP	Pn	10 04 12.5	+2.5
LPAZ	La Paz	2.72	29	eP		10 04 13.0	
PB07	IPOC Station P	3.06	186	eP	Pn	10 04 14.9	+0.8
PB07				IAML		10 05 02.1	
	comp=E,685nm,0.3s						
PB03	IPOC Station P	3.36	184		Pn	10 04 18.8	+0.5
PB04	IPOC Station P	3.69	189	eP		10 04 11.1	
PB04				eP		10 04 22.8	
PB04				eS		10 05 04.6	
PB04				IAML		10 05 17.9	
	comp=Z,249nm,0.5s						
PB04	IPOC Station P	3.69	189	eP	Pn	10 04 22.3	-0.3
LVC	Limon Verde	3.96	172	P	Pn	10 04 28.0	+1.6
	comp=Z,19nm,0.3s,baz=6.5,slow=12,SNR=16						
LVC				S	Sn	10 05 10.9	-1.1
	comp=Z,78nm,0.4s,baz=130,slow=19,SNR=18						
LVC	Limon Verde	3.96	172	i P	Pn	10 04 27.8	+1.5
LVC	Limon Verde	3.96	172	eP	Pn	10 04 27.9	+1.5
LVC	Limon Verde	3.96	172	eP		10 04 27.8	
LVC				eS		10 05 10.4	
PB06	IPOC Station P	4.01	181	i P	Pn	10 04 27.0	+0.1
PB06	IPOC Station P	4.01	181	eP		10 04 27.1	
PB06				eS		10 05 11.1	
PB06				IAML		10 05 14.8	
	comp=Z,163nm,0.3s						
YJA	Yavi	5.12	134	eP		10 04 45.0	
YJA				eP		10 04 45.6	
GO02	Mina Guanaco	6.46	181	Pn	Pn	10 04 59.0	-1.1
AC01	Pan de Azucar	7.50	187	Pn	Pn	10 05 11.0	-3.1
SIV	San Ignacio	8.50	73	P	Pn	10 05 26.6	-1.1
	comp=Z,9.2nm,0.4s,baz=272,slow=8.6,SNR=70						
SIV				S	Sn	10 06 58.4	-3.5
	comp=Z,3.7nm,0.8s,baz=178,slow=9.2,SNR=4.8						
BBSD	Serra de San D	8.61	81	eP	Pn	10 05 28.4	-0.8
ETMB	Extrema	9.37	20	Pn	Pn	10 05 39.4	-0.1
ETMB	Extrema	9.37	20	eP	Pn	10 05 38.3	-1.2
AC05	El Transito	10.14	184	Pn	Pn	10 05 46.5	-3.5
PTLB	Pontes e Lacer	10.43	74	Pn	Pn	10 05 51.7	-2.2
PTLB	Pontes e Lacer	10.43	74	eP	Pn	10 05 53.2	-0.8
VILB	Vilhena	10.62	59	Pn	Pn	10 05 56.2	-0.3
VILB	Vilhena	10.62	59	eP	Pn	10 05 56.7	+0.2
GO04	Tololo Observa	11.51	186	Pn	Pn	10 06 03.8	-4.8
CO03	El Pedregal	12.16	185	Pn	Pn	10 06 12.4	-4.7
CFA	Coronel Fontan	12.93	175	P	Pn	10 06 23.5	-3.7
	comp=Z,1.7nm,0.3s,baz=351,slow=9.4,SNR=6.8						
SALV	Santo Antonio	13.49	80	eP	Pn	10 06 35.4	+0.8
CPUP	Villa Florida	13.59	126	P	Pn	10 06 34.9	-0.9
	comp=Z,0.8nm,0.4s,baz=274,slow=11,SNR=3.4						
RVDE	Rio Verde (Bra	13.81	94	eP	Pn	10 06 38.1	-0.6
VA03	San Esteban	14.06	184	Pn	Pn	10 06 42.6	+0.7
PDRB	Porto dos Gac	14.20	62	eP	Pn	10 06 44.8	+1.0
AMBA	Amambai (Brazi	14.23	110	eP	Pn	10 06 45.6	+1.5
MT02	Curacav	14.60	185	Pn	Pn	10 06 47.9	-0.8
MT09	Talagante	15.10	185	Pn	Pn	10 06 55.8	+0.6
BO01	Tunca	15.72	185	P	Pn	10 07 03.8	+0.9
TEFE	Tefe	15.81	18	eP	Pn	10 07 03.8	-0.4
BO02	Sierra Bellavi	16.09	184	P	Pn	10 07 07.3	-0.3
BO02				IAmb	IAmb	10 07 25.0	
	comp=Z,17nm,1.4s						
FRBT	Francisco Belt	16.86	118	eP	P	10 07 18.6	+1.1
H03N1	Juan Fernandez	16.94	208	T	T	10 25 12.4	
	baz=29,slow=73,SNR=18						
H03N2	Juan Fernandez	16.95	208	T	T	10 24 41.2	
	baz=29,slow=73,SNR=24						
H03N3	Juan Fernandez	16.96	208	T	T	10 24 43.4	
	baz=29,slow=73,SNR=27						
ARAG	Araguaiana, MT	17.17	83	eP	Pn	10 07 21.3	+0.3
PTGB	Pitanga	17.29	113	eP	Pn	10 07 23.9	+1.4
MACA	Manacapuru-AM	17.68	30	eP	P	10 07 26.1	-0.4
NPGB	Novo Progresso	17.99	52	eP	P	10 07 29.4	-0.6
ITAB	Concordia	18.12	121	P	P	10 07 31.7	+0.4
ITAB				IAmb	IAmb	10 08 14.3	
	comp=Z,14nm,1.2s						
ITAB	Concordia	18.12	121	eP	Pn	10 07 32.4	+0.1
ITRB	Iturama	18.13	96	eP	Pn	10 07 32.1	-0.4
ALGR	Alto Alegre (B	18.13	127	eP	Pn	10 07 32.5	0.0
SGCB	S£o Gabriel d	18.60	8	eP	P	10 07 35.6	-1.0
CPSB	Cacapava Do Su	18.69	132	eP	Pn	10 07 38.5	-0.6
SNDB	Serra Nova Dou	18.79	72	eP	P	10 07 38.5	-0.2
FRTB	Fartura	19.20	107	eP	P	10 07 43.8	+0.7
PLTB	Pedras Altas	19.39	135	P	P	10 07 44.8	-0.3
PLTB				IAmb	IAmb	10 08 15.7	
	comp=Z,15nm,1.3s						
PLTB	Pedras Altas	19.39	135	eP	P	10 07 45.5	+0.4
ITTB	Itaituba	19.59	45	eP	P	10 07 46.6	-0.8
BB19B	Bebedouro	19.88	100	eP	P	10 07 50.3	-0.4
IPMB	Ipameri, GO	20.24	91	eP	P	10 07 53.6	-0.9
TRQA	Tornquist	20.40	163	P	P	10 07 56.8	+0.7
TRQA				IAmb	IAmb	10 08 01.1	
	comp=Z,11nm,1.4s						
BDFB	Brasilia	20.77	85	P	P	10 07 59.2	-1.0
	comp=Z,5.3nm,0.5s,baz=258,slow=12,SNR=6.7						
	comp=Z,5.3nm,0.5s						
BDFB	Brasilia	20.77	85	P	P	10 07 59.8	-0.4
BDFB				IAmb	IAmb	10 08 03.8	
	comp=Z,5.4nm,0.6s						
BDFB	Brasilia	20.77	85	eP	P	10 07 59.8	-0.4
GO06	Curarrehue	20.91	184	P	P	10 08 02.2	+0.7
RCLB	Rio Claro- Sao	20.92	104	eP	P	10 08 01.4	-0.4
VAO	Valinhos	21.51	105	eP	P	10 08 07.0	-1.1
PLCA	Paso Flores	22.00	182	P	P	10 08 13.9	+0.8
	comp=Z,8.7nm,1.1s,baz=355,slow=10,SNR=18						
	comp=Z,8.7nm,1.1s						
PLCA	Paso Flores	22.00	182	P	P	10 08 14.6	+1.4
PLCA	Paso Flores	22.00	182	eP	P	10 08 15.4	+2.2
MALB	Monte Alegre	22.43	44	eP	P	10 08 16.1	-1.6
BOAV	Boa Vista	22.73	24	P	P	10 08 20.0	-0.8
BOAV	Boa Vista	22.73	24	eP	P	10 08 18.9	-1.9
SMTB	Santa Maria do	23.40	68	eP	P	10 08 27.0	-0.2
JANB	Januaria	24.38	85	eP	P	10 08 36.0	-0.1
SDBA	SAO DESIDERIO	24.50	79	eP	P	10 08 37.3	0.0
RUSC	La Rusia	24.66	351	P	P	10 08 38.8	-0.3
RUSC				IAmb	IAmb	10 08 40.6	
	comp=Z,6.0nm,0.8s						
MCPB	Macapa, AP	25.00	45	eP	P	10 08 41.3	-0.4
SDV	Santo Domingo	27.41	358	P	P	10 09 01.5	-2.0
	comp=Z,2.0nm,0.4s,baz=216,slow=16,SNR=2.0						
BAUV	El Baul	27.48	3	P	P	10 09 02.9	-1.1
MDP	Montagnes des	28.89	37	P	P	10 09 15.1	-1.5
	comp=Z,13nm,1.1s,baz=226,slow=10,SNR=1.5						
	comp=Z,13nm,1.1s						
BIRV	Birongo	29.14	7	P	P	10 09 17.1	-1.6
TXAR	Lajitas Array	58.00	325	P	P	10 13 11.2	+1.7
	comp=Z,0.2nm,0.8s,baz=159,slow=7.7,SNR=1.8						
DBIC	Dimbokro	68.51	75	P	P	10 14 18.5	-0.6
	comp=Z,3.9nm,0.8s,baz=263,slow=8.1,SNR=4.2						
	comp=Z,3.9nm,0.8s						
QSPA	South Pole Qui	71.50	180	P	P	10 14 38.5	+1.8
QSPA				IAmb	IAmb	10 14 40.7	
	comp=Z,4.6nm,1.3s						
TOA0	Torodi Ar. Sit	76.97	71	P	P	10 15 08.1	-1.0
TORD	Torodi Ar. Bea	76.97	71	P	P	10 15 08.1	-1.1
	comp=Z,2.4nm,0.4s,baz=252,slow=5.4,SNR=42						
TORD				pP	pP	10 15 37.5	+0.3
	comp=Z,2.4nm,0.8s,baz=251,slow=5.4,SNR=4.7						
	comp=Z,2.4nm,0.4s						
TORD	Torodi Ar. Bea	76.97	71	P	P	10 15 07.9	-1.2
TORD				IAmb	IAmb	10 15 11.1	
	comp=Z,2.6nm,0.7s						
ESDC	Sonseca Array	84.24	45	P	P	10 15 48.1	+0.6
	comp=Z,1.9nm,0.8s,baz=246,slow=5.5,SNR=12						
	comp=Z,1.9nm,0.8s						
YKA	Yellowknife Ar	88.35	341	P	P	10 16 07.2	+0.2
	comp=Z,0.3nm,0.5s,baz=133,slow=5.3,SNR=6.5						
YKA				pP	pP	10 16 34.9	-0.4
	comp=Z,1.3nm,0.6s,baz=134,slow=4.9,SNR=12						
	comp=Z,0.3nm,0.5s						
H11S2	WAKE ISLAND Hy	126.91	279	T	T	12 41 48.0	
	baz=100,slow=74,SNR=20						
H11N3	WAKE ISLAND Hy	126.91	281	T	T	12 41 56.8	
	baz=101,slow=74,SNR=5.1						
H11S1	WAKE ISLAND Hy	126.91	279	T	T	12 41 49.6	
	baz=100,slow=74,SNR=13						
H11S3	WAKE ISLAND Hy	126.92	279	T	T	12 41 50.3	
	baz=100,slow=74,SNR=13						
H11N2	WAKE ISLAND Hy	126.93	281	T	T	12 41 58.1	
	baz=101,slow=74,SNR=6.9						
H11N1	WAKE ISLAND Hy	126.93	281	T	T	12 41 54.6	
	baz=101,slow=74,SNR=4.4						
ASAR	Alice Springs	132.11	209	PKP	PKiKP	10 22 30.1	-0.7
	comp=Z,0.4nm,1.1s,baz=160,slow=2.9,SNR=4.1						
WRA	Warramunga Arr	135.05	213	PKP	PKiKP	10 22 35.6	-1.2
	comp=Z,0.6nm,1.1s,baz=152,slow=1.7,SNR=5.2						
MKAR	Makanchi Array	143.64	33	PKP	PKPbc	10 22 47.5	-0.3
	comp=Z,0.2nm,0.5s,baz=325,slow=3.4,SNR=2.9						
MKAR				pPKP	pPKPdf	10 23 21.0	+1.0
	comp=Z,0.1nm,0.5s,baz=346,slow=3.0,SNR=1.9						
SONM	Songino Array	150.72	6	PKPbc	PKiKP	10 23 08.1	-0.1
	comp=Z,0.8nm,0.5s,baz=320,slow=1.0,SNR=5.0						
SONM				pPKPbc	pPKPbc	10 23 37.8	+0.7
	comp=Z,0.7nm,0.7s,baz=314,slow=2.4,SNR=3.2						

TAP ***19*** *10:15:05.9, 24°.90N×122°.37E, h144^{km}, ML2.8, D*
JMA ***19*** *10:15:06.2±0.2, 25°N±1°×122°.4E±0°.5, h141^{km}±1^{km},*
MV2.4/11, TAIWAN REGION
ISC 19 10:15:06.4±2.1**, 24°.92N**±0°.09×**122°.36E**±0°.03**,**
h139^{km}±13^{km}**, n40,** σ**0^{s}57**/75**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.35	286	eP	Pn	10 15 26.0	+0.2
	baz=277						
TWB1				eS	Sn	10 15 40.5	-0.1
	baz=277						
SXI1	Grass Mountain	0.47	292	eP	Pn	10 15 26.5	0.0
	baz=294						
TIPB	Shuangxi	0.49	277	eP	Pn	10 15 26.6	+0.1
	baz=279						
TIPB				eS	Sn	10 15 41.4	-0.4
	baz=279						
TWC	Suao	0.56	237	eP	Pn	10 15 26.8	0.0
	baz=238						
TWC				eS	Sn	10 15 41.6	-0.6
	baz=238						
NDS	Dongshan	0.65	245	eP	Pn	10 15 26.8	-0.6
	baz=246						
TWE	Neicheng	0.66	253	eP	Pn	10 15 27.8	+0.3
	baz=257						
TWE				eS	Sn	10 15 43.6	+0.2
	baz=257						
JYNG	Yonagunijimaku	0.70	131	P	Pn	10 15 27.9	+0.1
JYNG				eS	Sn	10 15 44.3	+0.3
EWUT	Wuta	0.71	229	eP	Pn	10 15 27.6	-0.2
	baz=228						
EWUT				eS	Sn	10 15 44.0	0.0
	baz=228						
FUSB	Fushanzhiwuyua	0.72	258	eP	Pn	10 15 27.8	-0.2
	baz=263						
FUSB				eS	Sn	10 15 43.0	-1.3
	baz=263						
ENA	Nanau	0.74	229	eP	Pn	10 15 28.1	0.0
	baz=228						
ENA				eS	Sn	10 15 44.6	+0.1
	baz=228						
YOJ	Yonaguni jima	0.74	127	eP	Pn	10 15 28.1	+0.1
	baz=133						
YOJ				eS	Sn	10 15 45.7	+1.2
	baz=133						
YM01	YM01	0.75	288	eP	Pn	10 15 28.2	0.0
	baz=281						
ENTT	Nioudou	0.77	249	eP	Pn	10 15 28.9	+0.6
	baz=251						
ENTT				eS	Sn	10 15 45.7	+0.8
	baz=251						
LATG	Datong	0.85	244	eP	Pn	10 15 29.7	+0.7
	baz=245						
LATG				eS	Sn	10 15 46.9	+0.7
	baz=245						
YHNB	Yeheng	0.93	255	P	Pn	10 15 29.7	+0.1
	baz=256						
YHNB				eS	Sn	10 15 46.9	-0.4
	baz=256						
NSK	Sanguang	0.94	256	P	Pn	10 15 29.8	+0.1
	baz=257						
NSK				eS	Sn	10 15 47.0	-0.4
	baz=257						
ETL	Fush Village	1.01	222	eP	Pn	10 15 29.7	-0.6
	baz=218						
ETL				eS	Sn	10 15 48.4	0.0
	baz=218						
NNSB	Datong	1.01	242	eP	Pn	10 15 31.0	+0.6
	baz=235						
NNSB				eS	Sn	10 15 48.8	+0.1
	baz=235						
NACB	Ninganchiao	1.01	224	eP	Pn	10 15 29.5	-0.8
	baz=219						
NACB				eS	Sn	10 15 47.7	-0.8
	baz=219						
NNS	Nan Shan	1.01	242	eP	Pn	10 15 30.6	+0.2
	baz=237						
NNS				eS	Sn	10 15 49.3	+0.6
	baz=237						
ETLH	Xiulin Townshi	1.07	229	eP	Pn	10 15 31.0	+0.1
	baz=238						
ETLH				eS	Sn	10 15 49.5	0.0
	baz=238						
TWD	Chiawan	1.08	220	eP	Pn	10 15 30.6	-0.3
	baz=217						
TWD				eS	Sn	10 15 48.8	-0.8
	baz=217						
NFF	Wufeng Townshi	1.16	256	eP	Pn	10 15 31.4	-0.3
	baz=257						
NFF				eS	Sn	10 15 50.4	-0.7
	baz=257						
LIOB	Emei	1.25	258	eP	Pn	10 15 32.8	+0.2
	baz=259						
LIOB				eS	Sn	10 15 51.7	-0.8
	baz=259						
WHF	Hehuan Shan	1.26	233	eP	Pn	10 15 33.8	+0.6
	baz=233						
WHF				eS	Sn	10 15 54.1	+0.7
	baz=233						
TWT	Tachien	1.26	239	eP	Pn	10 15 33.8	+0.9
	baz=235						
TWT				eS	Sn	10 15 53.8	+0.8
	baz=235						
NSTT	Nanjuang	1.27	257	eP	Pn	10 15 32.5	-0.2
	baz=258						
NSTT				eS	Sn	10 15 52.3	-0.4
	baz=258						
IRIF	Iriomote-Funau	1.37	115	P	Pn	10 15 33.7	-0.1
IRIF				S	Sn	10 15 54.8	+0.2
CHGB	Renai	1.38	232	eP	Pn	10 15 34.9	+0.8
	baz=232						
CHGB				eS	Sn	10 15 55.8	+0.7
	baz=232						
OWD	Renai	1.44	229	eP	Pn	10 15 35.4	+0.7
	baz=226						
OWD				eS	Sn	10 15 55.9	-0.4
	baz=226						
WUSB	Renai	1.46	231	eP	Pn	10 15 34.7	-0.2
	baz=236						
WUSB				eS	Sn	10 15 56.1	-0.4
	baz=236						
HATJ	Hateruma jima	1.57	123	P	Pn	10 15 36.5	+0.5
HATJ				S	Sn	10 15 58.9	+0.4
WCS	Beigang Elemen	1.57	237	eP	Pn	10 15 36.5	+0.5
	baz=238						
WCS				eS	Sn	10 15 58.8	+0.3
	baz=238						
JKRS	Kuro-shima	1.65	114	P	Pn	10 15 36.9	+0.1
JKRS				S	Sn	10 15 60.0	0.0
HGSD	Ruisui	1.65	211	eP	Pn	10 15 35.0	-1.9
	baz=219						
SSLB	Suanglung	1.70	229	P	Pn	10 15 38.4	+0.9
	baz=232						
SSLB				eS	Sn	10 16 01.4	+0.1
	baz=232						
JIJ	Ishigaki jima	1.71	108	P	Pn	10 15 37.7	+0.2
JIJ				S	Sn	10 16 00.2	-1.1
JISG	Ishigakijimahi	1.80	100	P	Pn	10 15 38.7	+0.1
JISG				eS	Sn	10 16 02.5	-0.7
WHYT	Xinyi Township	1.83	229	eP	Pn	10 15 39.3	+0.3
	baz=237						
JTJ	Tarama	2.15	97	P	Pn	10 15 43.0	+0.3
JTJ				S	Sn	10 16 10.0	-0.4

IDC 19 10:18:08.2±2.8**, 1°.49S**×**132°.89E, h0^{km}, mb3.3**/2**,**
mbtmp3.3/3**, ML3.2**/1**, Error ellipse: s-maj=130.4km**
s-min=29.4km az=75.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.40	176	P	Pn	10 22 24.6	-0.4
	0.1nm,0.3s,baz=355,slow=12,SNR=5.9						
	0.4nm,0.7s						
ASAR	Alice Springs	22.07	178	P	P	10 23 05.2	+0.2
	0.8nm,0.6s,baz=359,slow=12,SNR=12						
	0.8nm,0.6s						
MKAR	Makanchi Array	65.34	324	P	P	10 28 52.2	-0.1
	0.2nm,0.5s,baz=106,slow=8.2,SNR=2.2						
	0.2nm,0.5s						

IDC ***19*** *10:35:21.7±0.6, 8°.26S×38°.26E, h0^{km}, mb4.3/20,*
mbtmp4.3/21, ML5.2/2, MS3.7/31, Error ellipse:
s-maj=19.5km s-min=12.8km az=121.0
NEIC ***19*** *10:35:24.7±2.9, 8°.20S±0°.07×38°.17E±0°.10, h15^{km}±4^{km},*
mb4.9/37, Error ellipse: s-maj=14.2km s-min=10.6km
az=97.0
ISC 19 10:35:22.9±0.3**, 8°.25S**±0°.05×**38°.01E**±0°.06**, h10^{km}, n132,**
σ**1^{s}91**/129**, mb4.6**/52**, MS3.7**/32**, 1D, Tanzania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIBK	Kibwezi	5.87	0	Pn	Pn	10 36 49.1	-1.1
KIBK				Sn	Sn	10 37 51.6	-6.0
KMBO	Kilima Mbogo	7.12	354	Pn	Pn	10 37 04.4	-3.0
	0.2nm,0.3s,baz=180,slow=20,SNR=45						
KMBO				Sn	Sn	10 38 18.8	-10
	0.2nm,0.3s,baz=238,slow=24,SNR=2.4						
KMBO				Lg	Lg	10 39 04.2	
	0.4nm,0.3s,baz=226,slow=24,SNR=3.8						
KMBO	Kilima Mbogo	7.12	354	Pn	Pn	10 37 06.1	-1.3
ZOMB	Zomba	7.55	200	i P	Pn	10 37 14.4	+1.1
ZOMB				S	Sn	10 38 35.2	-3.9
MBAR	Mbarara	10.50	316	Pn	Pn	10 37 52.9	-0.8
	27nm,0.3s,baz=127,slow=14,SNR=69						
MBAR				Sn	Sn	10 39 45.0	-6.6
	9.6nm,0.3s,baz=238,slow=24,SNR=3.8						
MBAR				Lg	Lg	10 40 55.8	
	11nm,0.3s,baz=102,slow=24,SNR=6.0						
MBAR				LR	LR	10 42 28.2	
	comp=Z,288nm,18.8s,baz=132,slow=40						
MBAR	Mbarara	10.50	316		Pn	10 37 53.1	-0.7
MBAR	Mbarara	10.50	316	i P	Pn	10 37 54.3	+0.5
MBAR				i S	Sn	10 39 48.3	-3.4
KRI	Karoi	11.82	223	i P	Pn	10 38 11.3	-0.6
KRI				i S	Sn	10 40 15.9	-8.2
LSZ	Lusaka	11.88	233	Pn	Pn	10 38 14.2	+1.6
	23nm,0.3s,baz=58,slow=12,SNR=144						
LSZ				Sn	Sn	10 40 19.7	-5.8
	9.5nm,0.3s,baz=157,slow=19,SNR=3.3						
LSZ				Lg	Lg	10 41 42.7	
	4.4nm,0.3s,baz=325,slow=14,SNR=3.1						
LODK	Lodwar	11.89	347	Pn	Pn	10 38 11.5	-1.2
SBV	Sambava	12.79	115	P	Pn	10 38 22.9	-2.0
OPO	Ambohidratompo	13.59	140	Pn	Pn	10 38 33.8	-2.2
	0.2nm,0.3s,baz=252,slow=9.6,SNR=5.7						
OPO				Sn	Sn	10 40 51.8	-15
	0.1nm,0.3s,baz=281,slow=23,SNR=1.3						
	4.2nm,0.3s						
ABPO	Ambohimpanom	13.95	141		Pn	10 38 38.2	-2.7
VOI	Vohitsoka	15.99	149	Pn	Pn	10 39 06.5	-1.7
MUSN	Musina, Limpop	16.01	208	i P	Pn	10 39 07.7	-0.7
MUSN				i S	Sn	10 41 59.0	-7.1
MOPA	Mopani	16.45	202	i P	P	10 39 16.7	0.0
MSEY	Mahe Island	17.71	80		Pn	10 39 25.7	-4.2
POGA	Pongola	19.91	197	P	P	10 39 53.2	-1.7
POGA				IAmb	IAmb	10 39 54.1	
	comp=Z,37nm,1.3s						
ATD	Arta Tunnel	20.23	14	P	P	10 39 58.5	0.0
	comp=Z,0.4nm,0.7s,baz=184,slow=19,SNR=3.6						
ATD				LR	LR	10 48 03.2	
	comp=Z,8.4nm,18.3s,baz=62,slow=38						
ATD	Arta Tunnel	20.23	14	P	P	10 39 57.9	-0.6
ATD				IAmb	IAmb	10 39 59.8	
	comp=Z,76nm,1.7s						
LBTB	Lobatse	20.45	214	P	P	10 40 01.3	+0.4
	comp=Z,15nm,0.7s,baz=28,slow=11,SNR=16						
LBTB				S	S	10 43 38.6	-11
	comp=Z,16nm,0.6s,baz=290,slow=21,SNR=5.7						
LBTB				Lg	Lg	10 46 11.8	
	comp=Z,0.7nm,0.3s,baz=340,slow=22,SNR=1.9						
LBTB				LR	LR	10 47 49.1	
	comp=Z,206nm,19.8s,baz=40,slow=36						
	comp=Z,15nm,0.7s						
LBTB	Lobatse	20.45	214	P	P	10 40 01.1	+0.3
LBTB				IAmb	IAmb	10 40 08.4	
	comp=Z,42nm,0.7s						
LBTB	Lobatse	20.45	214	i P	P	10 40 00.6	-0.3
TSUM	Tsumeb	22.61	239	P	P	10 40 27.3	+3.2
	comp=Z,32nm,1.0s,baz=61,slow=9.9,SNR=27						
TSUM				Lg	Lg	10 47 25.4	
	comp=Z,0.6nm,0.3s,baz=102,slow=5.8,SNR=3.4						
TSUM				LR	LR	10 49 04.3	
	comp=Z,222nm,21.9s,baz=140,slow=36						
	comp=Z,32nm,1.0s						
TSUM	Tsumeb	22.61	239	P	P	10 40 26.2	+2.1
TSUM				IAmb	IAmb	10 40 28.6	
	comp=Z,42nm,1.0s						
BOSA	Boshof	23.56	209	P	P	10 40 35.1	+1.4
	comp=Z,28nm,0.9s,baz=30,slow=9.8,SNR=27						
BOSA				S	S	10 44 51.1	+3.0
	comp=Z,5.5nm,0.8s,baz=60,slow=8.2,SNR=2.2						
BOSA				Lg	Lg	10 47 43.9	
	comp=Z,0.1nm,0.3s,baz=137,slow=22,SNR=1.2						
BOSA				LR	LR	10 49 19.8	
	comp=Z,205nm,18.6s,baz=35,slow=35						
	comp=Z,28nm,0.9s						
BOSA	Boshof	23.56	209	P	P	10 40 35.2	+1.4
BOSA				IAmb	IAmb	10 40 40.8	
	comp=Z,31nm,0.7s						
BOSA	Boshof	23.56	209	i P	P	10 40 35.2	+1.4
WIN	Windhoek	24.63	232	P	P	10 40 45.6	+1.6
SUR	Sutherland	28.84	211	P	P	10 41 24.3	+2.5
	comp=Z,7.1nm,0.8s,baz=27,slow=9.0,SNR=2.3						
SUR				LR	LR	10 52 02.0	
	comp=Z,120nm,19.7s,baz=44,slow=35						
	comp=Z,7.1nm,0.8s						
SUR	Sutherland	28.84	211	P	P	10 41 24.9	+3.1
WSAR	Wadi Sarin	37.23	32	LR	LR	10 59 34.6	
	comp=Z,136nm,18.4s,baz=215,slow=39						
UOSS	Minazif	37.46	28	P	P	10 42 36.7	0.0
EIL	Elat	37.82	356	LR	LR	10 59 29.1	
	comp=Z,35nm,19.0s,baz=76,slow=38						
TORD	Torodi Ar. Bea	41.87	300	P	P	10 43 15.9	+2.2
	comp=Z,0.7nm,0.7s,baz=108,slow=8.0,SNR=3.3						
TORD				LR	LR	10 59 41.6	
	comp=Z,150nm,20.2s,baz=122,slow=35						
	comp=Z,0.7nm,0.7s						
PCHI	Peechi	42.47	65	eP	P	10 43 18.2	-0.4
DBIC	Dimbokro	45.24	288	LR	LR	11 03 18.1	
	comp=Z,90nm,18.5s,baz=118,slow=37						
PALK	Pallekele	45.26	71	LR	LR	10 59 39.5	
	comp=Z,154nm,18.3s,baz=324,slow=32						
BRTR	Keskin Array B	47.90	355	P	P	10 44 03.0	+1.5
	comp=Z,4.8nm,1.0s,baz=178,slow=10,SNR=20						
	comp=Z,4.8nm,1.0s						
BR131	Keskin Array S	47.91	355	P	P	10 44 03.3	+1.8
BR131				IAmb	IAmb	10 44 04.9	
	comp=Z,17nm,1.1s						
BORA	Eskisehir	48.40	352	P	P	10 44 06.7	+1.4
BORA				IAmb	IAmb	10 44 09.0	
	comp=Z,19nm,1.3s						
GNI	Garni	48.56	7	LR	LR	11 04 37.9	
	comp=Z,56nm,18.9s,baz=190,slow=36						
GEYT	Alibeck	49.63	21	P	P	10 44 14.6	-0.1
	comp=Z,2.7nm,0.6s,baz=213,slow=10,SNR=3.8						
GEYT				LR	LR	11 07 50.3	
	comp=Z,232nm,18.8s,baz=198,slow=39						
	comp=Z,2.7nm,0.6s						
KEST	Kesra	51.41	330	LR	LR	11 08 30.6	
	comp=Z,54nm,18.8s,baz=258,slow=39						
KBL	Kabul	51.71	33	P	P	10 44 30.1	-0.6
KBZ	Khabaz	51.92	4	LR	LR	11 06 44.5	
	comp=Z,75nm,18.5s,baz=194,slow=36						
CHGR	Chuyangaron	54.93	30	P	P	10 44 54.5	+0.3
GAR	Garm	55.77	30	P	P	10 45 00.8	+0.5
BURAR	Bucovina Array	56.77	350	P	P	10 45 09.5	+2.3
BTK	Batken	56.83	30	P	P	10 45 07.3	-0.4
BTK				IAmb	IAmb	10 45 19.1	
	comp=Z,5.9nm,0.5s						
DRK	Karamyk	56.88	31	P	P	10 45 03.9	-4.5
MDT	Midelt	57.56	317	LR	LR	11 11 53.7	
	comp=Z,125nm,18.3s,baz=140,slow=38						
SOKA	Soboth	58.40	342	eP	P	10 45 21.0	+2.3
	comp=Z,3.9nm,0.9s						
BBTS	Babate	58.68	293	LR	LR	11 14 09.7	
	comp=Z,82nm,18.5s,baz=98,slow=40						
ARSA	Arzberg	58.76	342	eP	P	10 45 23.2	+2.1
	comp=Z,2.9nm,1.1s						
RONA	Rosalia, Austr	58.94	343	eP	P	10 45 24.3	+1.9
	comp=Z,4.0nm,0.8s						

VYHS	Vyhne	58.98	345	eP	P	10 45 24.6	+2.0
KK31	Karatay Array	59.05	27	P	P	10 45 23.0	-0.2
KK31				IAmb	IAmb	10 45 24.4	
	comp=Z,9.8nm,1.2s						
KKAR	Karatay Array	59.05	27	P	P	10 45 23.0	-0.2
KKAR				IAmb	IAmb	10 45 24.4	
	comp=Z,9.8nm,1.2s						
KKAR	Karatay Array	59.05	27	P	P	10 45 23.2	0.0
AKASG	Malin Array Be	59.20	354	P	P	10 45 24.3	+0.2
	comp=Z,4.3nm,1.1s,baz=184,slow=4.8,SNR=9.0						
	comp=Z,4.3nm,1.1s						
CONA	Conrad Observa	59.27	343	eP	P	10 45 26.5	+1.8
	comp=Z,4.4nm,1.0s						
KBA	Koelnbreinsper	59.29	341	eP	P	10 45 26.8	+1.7
	comp=Z,3.3nm,0.8s						
LANS	Liptovska Anna	59.43	346	eP	P	10 45 28.4	+2.6
JAVC	Velka Javorina	59.61	345	eP	P	10 45 27.5	+0.5
FETA	Feichten	60.14	339	eP	P	10 45 32.6	+1.8
	comp=Z,6.7nm,1.0s						
SQTA	Sankt Quirin	60.14	339	eP	P	10 45 32.8	+2.0
	comp=Z,3.8nm,0.9s						
KRUC	Moravsky	60.14	344	eP	P	10 45 30.9	+0.3
MOTA	Moosalm	60.28	339	eP	P	10 45 33.6	+1.7
	comp=Z,3.6nm,0.8s						
VRAC	Vranov	60.31	344	eP	P	10 45 32.1	+0.3
ABKAR	Akbulak array	60.40	16	P	P	10 45 32.3	0.0
ABKAR	Akbulak array	60.40	16	P	P	10 45 32.4	0.0
ABKAR				IAmb	IAmb	10 45 33.2	
	comp=Z,4.4nm,0.8s						
MORC	Moravsky Berou	60.49	345	P	P	10 45 33.6	+0.5
MORC				IAmb	IAmb	10 45 35.6	
	comp=Z,8.9nm,1.0s						
MORC	Moravsky Berou	60.49	345	eP	P	10 45 33.4	+0.4
RETA	Reutte	60.53	339	eP	P	10 45 35.2	+1.8
	comp=Z,4.1nm,1.0s						
CKRC	Cesky Krumlov	60.53	342	eP	P	10 45 34.9	+1.6
AAK	Ala-Archa	60.59	30	LR	LR	11 12 18.0	
	comp=Z,48nm,21.5s,baz=216,slow=37						
GERES	GERESS Array B	60.74	342	P	P	10 45 35.8	+0.9
	comp=Z,1.3nm,0.7s,baz=146,slow=5.8,SNR=12						
	comp=Z,1.3nm,0.7s						
AKTO	Aktyubinsk	60.98	14	LR	LR	11 18 01.5	
	comp=Z,28nm,18.3s,baz=276,slow=42						
KHC	Kasperske Hory	61.03	342	eP	P	10 45 37.4	+0.7
DPC	Dobruska-Polom	61.33	344	eP	P	10 45 39.1	+0.3
ESDC	Sonseca Array	61.49	324	P	P	10 45 41.5	+1.4
	comp=Z,1.5nm,0.9s,baz=143,slow=6.5,SNR=11						
	comp=Z,1.5nm,0.9s						
MNK	Minsk	63.10	353	i P	P	10 45 50.1	-0.3
	comp=E,2.0nm,0.9s						
MNK				i P	P	10 45 50.1	-0.3
	comp=N,6.0nm,0.9s						
MNK				i P	P	10 45 50.1	-0.3
	comp=Z,13nm,0.9s,baz=169						
MNK				i PcP	PcP	10 46 27.9	-0.1
MNK				i PP	PP	10 48 08.4	-0.9
MNK				i PPP	PPP	10 49 29.8	
MNK				i S	S	10 54 20.8	-0.4
MNK				i SS	SS	10 58 42.7	+15
MNK				i SSS	SSS	11 01 22.4	
MNK				i LQ	LQ	11 08 48.4	
MNK				i LR	LR	11 11 13.6	
MNK				i LRM	MLR	11 14 45.5	
	comp=Z,44nm,16.2s						
MNK				i LRM	MLR	11 15 32.5	
	comp=N,237nm,16.1s						
MNK				i LRM	MLR	11 15 37.9	
	comp=E,10.0nm,16.1s						
NACGM	Naroch	63.62	353	eP	P	10 45 55.0	+1.1
	comp=Z,23nm,0.9s,baz=168						
CMAR	Chiang Mai Arr	65.69	66	P	P	10 46 06.9	-1.3
	comp=Z,2.1nm,0.6s,baz=255,slow=8.3,SNR=18						
CMAR				LR	LR	11 12 06.6	
	comp=Z,31nm,19.2s,baz=170,slow=34						
	comp=Z,2.1nm,0.6s						
CHTO	Chiang Mai	65.81	65	P	P	10 46 07.8	-1.2
ARU	Arti	66.65	12	LR	LR	11 17 50.6	
	comp=Z,86nm,20.7s,baz=174,slow=38						
ARU	Arti	66.65	12	P	P	10 46 13.6	0.0
ARU				IAmb	IAmb	10 46 14.6	
	comp=Z,13nm,1.1s						
PHRA	Phrae	66.87	66	P	P	10 46 15.6	-0.1
BRVK	Borovoye	66.95	20	P	P	10 46 15.1	-0.5
BRVK				IAmb	IAmb	10 46 21.7	
	comp=Z,3.3nm,0.8s						
BVAR	Borovoye Array	66.96	21	LR	LR	11 18 45.8	
	comp=Z,70nm,18.0s,baz=195,slow=39						
MAKZ	Makanchi	67.31	31	P	P	10 46 17.7	-0.3
MAKZ				IAmb	IAmb	10 46 18.4	
	comp=Z,7.7nm,0.8s						
MK31	Makanchi Array	67.46	31	P	P	10 46 18.7	-0.3
MK31				IAmb	IAmb	10 46 19.6	
	comp=Z,5.7nm,0.8s						
MKAR	Makanchi Array	67.46	31	P	P	10 46 18.6	-0.4
	comp=Z,5.8nm,0.8s,baz=222,slow=6.1,SNR=64						
MKAR				LR	LR	11 19 05.6	
	comp=Z,32nm,18.3s,baz=152,slow=39						
	comp=Z,5.8nm,0.8s						
KURK	Kurchatov	68.43	26	P	P	10 46 25.0	+0.1
KURK				IAmb	IAmb	10 46 26.1	
	comp=Z,10nm,0.9s						
WMQ	Urumqi	68.58	36	eP	P	10 46 26.9	+0.8
WMQ				pP	sP	10 46 33.5	+2.8
WMQ				sP	pP	10 46 34.5	+5.0
WMQ				sS	sS	10 55 36.8	+2.5
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,87nm,4.1s						
KLMR	Klimovskoe	68.90	1	eP	P	10 46 26.5	-1.1
KLMR				AMP		10 46 28.7	
	comp=Z,20nm,1.1s						
GOMU	GeErMu	69.23	46	P	P	10 46 32.6	+1.9
GOMU				sP	sP	10 46 35.8	+0.5
GOMU				PcP	PcP	10 46 55.9	+1.4
GOMU				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GOMU				pmax	pmax		
	comp=Z,99nm,5.6s						
FINES	FINESS Array B	70.11	354	P	P	10 46 35.5	+0.5
	comp=Z,3.2nm,0.7s,baz=152,slow=6.3,SNR=10.0						
	comp=Z,3.2nm,0.7s						
FINES	FINESS Array B	70.11	354	P	P	10 46 34.8	-0.3
PZH	PanZhiHua	70.77	58	P	P	10 46 39.1	-1.0
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,6.5s						
NOA	NORSAR Array B	72.22	347	P	P	10 46 48.6	+0.6
	comp=Z,2.1nm,0.9s,baz=152,slow=6.0,SNR=3.3						
	comp=Z,2.1nm,0.9s						
ZAA0	Zalesovo Array	73.41	27	P	P	10 46 53.9	-1.3
ZALV	Zalesovo Beam	73.41	27	P	P	10 46 54.2	-0.9
	comp=Z,1.7nm,0.5s,baz=239,slow=5.2,SNR=12						
ZALV				PP	PP	10 49 40.2	+1.3
	comp=Z,0.7nm,0.7s,baz=212,slow=8.1,SNR=3.7						
ZALV				LR	LR	11 21 19.7	
	comp=Z,32nm,18.1s,baz=212,slow=38						
	comp=Z,1.7nm,0.5s						
ZALV	Zalesovo Beam	73.41	27	P	P	10 46 54.0	-1.1
GTA	Gaotai	74.20	45	eP	P	10 47 00.4	+0.1
GTA				sP	sP	10 47 09.3	+4.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GYA	Guiyang	74.94	60	⇓P	P	10 47 11.3	+6.5
GYA				pmax	pmax		
	comp=Z,12nm,1.0s						
ARCES	ARCESS Array B	78.09	356	P	P	10 47 22.4	+0.8
	comp=Z,5.9nm,1.0s,baz=185,slow=6.2,SNR=7.3						
ARCES				LR	LR	11 22 56.2	
	comp=Z,22nm,18.4s,baz=68,slow=36						
	comp=Z,5.9nm,1.0s						
XAN	Xi'an	79.08	53	P	P	10 47 27.6	-0.3
XAN				pP	sP	10 47 32.5	0.0
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
QSPA	South Pole Qui	81.83	180	P	P	10 47 43.4	+1.2
QSPA				IAmb	IAmb	10 47 53.0	
	comp=Z,10nm,1.0s						
BTO	Baotou	81.93	47	eP	P	10 47 44.1	+0.9
BTO				sP	PcP	10 47 51.5	+2.7
BTO	Baotou	81.93	47	S	S	10 58 02.5	+5.2
BTO	Baotou	81.93	47	SS	SS	11 03 21.6	+5.4
BTO				pmax	pmax		
	comp=Z,24nm,0.6s						
BTO				pmax	pmax		
	comp=Z,310nm,3.7s						
BTO				LR	LR		
	comp=N,430nm,5.4s						
BTO				LR	LR		
	comp=E,300nm,4.4s						
BTO				LR	LR		
	comp=Z,800nm,5.0s						
SONM	Songino Array	81.93	39	P	P	10 47 43.6	+0.6
	comp=Z,2.7nm,0.9s,baz=258,slow=5.7,SNR=12						
SONM				LR	LR	11 26 34.9	
	comp=Z,30nm,19.0s,baz=236,slow=38						
	comp=Z,2.7nm,0.9s						
SONM	Songino Array	81.93	39	P	P	10 47 43.9	+0.8
LYN	LuoYang	82.04	53	eP	P	10 47 44.4	+0.7
ULN	Ulaanbaatar	82.36	39	P	P	10 47 45.5	+0.2
HHC	Hu-ho-hao-te	83.12	47	eP	P	10 47 50.9	+1.5
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,4.7s						
NJ2	Nanjing	86.65	57	eP	P	10 48 08.0	+0.8
NJ2				pP	pP	10 48 10.8	+0.2
NJ2				sP	sP	10 48 12.0	+0.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,92nm,3.7s						
XLT	XiLinHaoTe	87.17	45	eP	P	10 48 11.8	+2.2
XLT				pP	pP	10 48 16.1	+3.1
XLT				sP	sP	10 48 19.3	+5.1
XLT				pmax	pmax		
	comp=Z,68nm,5.1s						
XLT				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CPUP	Villa Florida	91.14	243	LR	LR	11 27 14.2	
	comp=Z,54nm,18.8s,baz=72,slow=34						
ASAR	Alice Springs	92.08	114	P	P	10 48 32.5	-0.6
	comp=Z,0.8nm,0.9s,baz=264,slow=4.5,SNR=5.4						
	comp=Z,0.8nm,0.9s						
WRA	Warramunga Arr	93.11	111	P	P	10 48 38.4	+0.5
	comp=Z,0.3nm,0.7s,baz=266,slow=3.5,SNR=2.1						
	comp=Z,0.3nm,0.7s						
JOW	Kunigami	93.90	64	LR	LR	11 31 55.6	
	comp=Z,41nm,18.5s,baz=282,slow=36						
KSRS	Korea Array	94.88	53	P	P	10 48 43.9	-1.7
	comp=Z,1.2nm,1.0s,baz=260,slow=6.7,SNR=4.7						
KSRS				LR	LR	11 31 34.6	
	comp=Z,22nm,19.8s,baz=100,slow=36						
	comp=Z,1.2nm,1.0s						
SIV	San Ignacio	96.39	253	LR	LR	11 27 48.9	
	comp=Z,72nm,21.8s,baz=114,slow=33						
KLR	Kul'dur	98.62	41	LR	LR	11 34 26.8	
	comp=Z,37nm,20.4s,baz=238,slow=36						
CFA	Coronel Fontan	99.32	236	LR	LR	11 32 44.9	
	comp=Z,59nm,21.2s,baz=109,slow=35						
YKA	Yellowknife Ar	122.30	345	PKP	PKPdf	10 54 18.0	0.0
	comp=Z,0.2nm,0.8s,baz=30,slow=1.7,SNR=3.4						
ILAR	Eielson Array	123.47	3	PKP	PKPdf	10 54 19.7	-0.5
	comp=Z,0.2nm,0.9s,baz=343,slow=4.5,SNR=4.2						
TXAR	Lajitas Array	138.38	305	PKP	PKiKP	10 54 51.7	+0.1
	comp=Z,0.2nm,0.6s,baz=108,slow=2.9,SNR=2.6						
NVAR	Mina Array Bea	143.15	328	PKP	PKPdf	10 54 57.1	-0.9
	comp=Z,2.8nm,0.9s,baz=68,slow=2.4,SNR=17						

ROM 19 10:37:10.8±0.1, 43°.012N±0°.004×13°.032E±0°.004, h5^{km}, ML1.0/7, 1C, Error ellipse: s-maj=0.4km s-min=0.1km az=224.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FDMO	Fiordimonte	0.05	58	⇑P	Pg	10 37 12.1	-0.1
FDMO				S	Sg	10 37 13.0	-0.1
FDMO				AML	AML		
	comp=E,660µm,0.3s						
FDMO				AML	AML		
	comp=N,512µm,0.2s						
T1219	Muccia, Frazio	0.05	338	P	Pg	10 37 12.2	+0.1
T1219				S	Sg	10 37 13.3	+0.2
FEMA	Monte Fema	0.05	165	P	Pg	10 37 12.2	0.0
FEMA				S	Sg	10 37 13.4	+0.1
CESI	CESI - Serrava	0.09	266	P	Pg	10 37 13.3	+0.5
CESI				S	Sg	10 37 15.2	+1.0
CESI				AML	AML		
	comp=N,130µm,1.4s						
CESI				AML	AML		
	comp=E,146µm,0.6s						
CESI				AML	AML		
	comp=N,130µm,0.6s						
CESI				AML	AML		
	comp=E,146µm,1.4s						
T1220	Camerino, Fraz	0.11	23	P	Pg	10 37 13.6	+0.5
T1220				AML	AML		
	comp=E,356µm,0.5s						
T1220				AML	AML		
	comp=N,504µm,0.2s						
T1216	Preci, Frazion	0.12	184	P	Pg	10 37 14.2	+0.9
T1216				S	Sg	10 37 16.2	+1.3
T1216				AML	AML		
	comp=E,103µm,0.4s						
T1216				AML	AML		
	comp=N,103µm,0.8s						
T1216				AML	AML		
	comp=E,103µm,0.4s						
T1216				AML	AML		
	comp=N,103µm,0.8s						
T1216				AML	AML		
	comp=N,103µm,1.2s						
T1216				AML	AML		
	comp=E,103µm,1.6s						
T1256	Bolognola (MC)	0.14	92	P	Pg	10 37 13.9	+0.2
T1256				S	Sg	10 37 16.4	+0.8
T1256				AML	AML		
	comp=E,72µm,1.1s						
T1256				AML	AML		
	comp=N,74µm,1.3s						
T1256				AML	AML		
	comp=E,73µm,1.1s						
T1256				AML	AML		
	comp=N,74µm,1.3s						
T1256				AML	AML		
	comp=N,74µm,0.7s						
T1256				AML	AML		
	comp=E,73µm,0.9s						
MC2	Monte Cornacci	0.15	130	P	Pg	10 37 14.1	+0.2
MC2				S	Sg	10 37 17.2	+1.2
T1245	Castelsantange	0.19	143	P	Pg	10 37 15.1	+0.5
T1245				S	Sg	10 37 18.3	+1.1
T1245				AML	AML		
	comp=E,93µm,0.4s						
T1245				AML	AML		
	comp=N,114µm,0.3s						
GUMA	Gualdo di Mace	0.23	77	P	Pg	10 37 16.4	+1.1
GUMA				S	Sg	10 37 20.2	+1.9
SNTG	Esanatoglia	0.25	345	P	Pg	10 37 16.4	+0.7
SNTG				S	Sb	10 37 20.9	-1.7
SNTG				AML	AML		
	comp=E,31µm,0.9s						
SNTG				AML	AML		
	comp=N,35µm,1.0s						
SNTG				AML	AML		
	comp=E,31µm,1.1s						
SNTG				AML	AML		
	comp=N,35µm,1.0s						
T1212	Cascia, Frazio	0.26	178	P	Pg	10 37 16.3	+0.5
T1212				S	Sg	10 37 20.8	+1.5
ASSB	Assisi San Ben	0.28	277	P	Pg	10 37 16.6	+0.4
ASSB				S	Sg	10 37 21.4	+1.6
ASSB				AML	AML		
	comp=E,66µm,1.1s						
ASSB				AML	AML		
	comp=N,56µm,0.5s						
ASSB				AML	AML		
	comp=E,66µm,0.9s						

ROM 19 10:37:39.9±0.1, 43°.025N±0°.004×13°.027E±0°.007, h8^{km}, ML0.9/2, Error ellipse: s-maj=0.6km s-min=0.3km az=77.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	Muccia, Frazio	0.03	335	P	Pg	10 37 41.5	-0.1
T1219				S	Sg	10 37 42.4	-0.3
T1219				AML	AML		
	comp=E,355µm,0.3s						
T1219				AML	AML		
	comp=N,436µm,0.2s						
FDMO	Fiordimonte	0.05	75	P	Pg	10 37 41.5	-0.1
FDMO				AML	AML		
	comp=N,191µm,0.5s						
FDMO				AML	AML		
	comp=E,160µm,0.2s						
FDMO				AML	AML		
	comp=N,191µm,1.5s						
FEMA	Monte Fema	0.07	165	P	Pg	10 37 41.9	0.0
FEMA				S	Sg	10 37 43.4	+0.1
CESI	CESI - Serrava	0.09	258	P	Pg	10 37 42.8	+0.5
CESI				S	Sg	10 37 44.7	+0.9
T1220	Camerino, Fraz	0.10	28	P	Pg	10 37 42.6	+0.3
T1220				S	Sg	10 37 44.9	+1.0
T1216	Preci, Frazion	0.13	183	P	Pg	10 37 43.4	+0.6
T1216				S	Sg	10 37 45.9	+1.1
T1216				AML	AML		
	comp=E,86µm,1.6s						
T1216				AML	AML		
	comp=N,91µm,0.3s						
T1216				AML	AML		
	comp=N,91µm,0.3s						
T1216				AML	AML		
	comp=E,86µm,1.6s						
MC2	Monte Cornacci	0.16	133	P	Pg	10 37 44.2	+0.8
MC2				S	Sg	10 37 47.2	+1.3
SNTG	Esanatoglia	0.24	345	P	Pg	10 37 45.4	+0.7
SNTG				S	Sg	10 37 49.8	+1.8
T1212	Cascia, Frazio	0.27	177	P	Pg	10 37 45.9	+0.5
T1212				S	Sb	10 37 50.6	-1.4

ROM 19 10:38:32.2±0.0, 43°.355N±0°.002×12°.612E±0°.004, h10^{km}, ML0.9/9, 1D, Error ellipse: s-maj=0.2km s-min=0.2km az=259.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATFO	Monte Foce - G	0.03	291	P	Pg	10 38 34.0	-0.1
ATFO				AML	AML		
	comp=E,1061µm,0.2s						
ATFO				AML	AML		
	comp=N,1305µm,0.1s						
MURB	Monte Urbino	0.11	215	P	Pg	10 38 35.5	+0.5
MURB				S	Sg	10 38 37.9	+0.9
MURB				AML	AML		
	comp=N,737µm,0.3s						
MURB				AML	AML		
	comp=E,683µm,0.2s						
FOSV	Fossato di Vic	0.12	119	P	Pg	10 38 35.4	+0.3
FOSV				S	Sg	10 38 38.0	+0.8
FOSV				AML	AML		
	comp=N,72µm,0.3s						
FOSV				AML	AML		
	comp=E,46µm,1.4s						
SSFR	Montelago di S	0.15	57	P	Pg	10 38 35.9	+0.4
SSFR				S	Sg	10 38 38.7	+0.8
ATVO	AVT- Monte Val	0.15	280	P	Pg	10 38 36.2	+0.6
ATVO				S	Sg	10 38 38.8	+0.9
ATVO				AML	AML		
	comp=E,124µm,1.1s						
ATVO				AML	AML		
	comp=N,117µm,0.2s						
ATVO				AML	AML		
	comp=N,117µm,1.8s						
ATVO				AML	AML		
	comp=E,124µm,0.9s						
ATCC	AVT- Casa Cast	0.17	173	P	Pg	10 38 36.5	+0.6
ATCC				S	Sg	10 38 39.8	+1.4
ATCC				AML	AML		
	comp=E,147µm,1.4s						
ATCC				AML	AML		
	comp=N,162µm,0.2s						
ATCC				AML	AML		
	comp=N,162µm,1.8s						
ATPI	Pietralunga -	0.18	302	P	Pg	10 38 36.8	+0.7
ATPI				S	Sg	10 38 39.9	+1.2
ATPI				AML	AML		
	comp=E,37µm,0.3s						
ATPI				AML	AML		
	comp=N,49µm,1.6s						
ATPI				AML	AML		
	comp=N,49µm,0.4s						
FRON	Frontone	0.18	27	P	Pg	10 38 36.6	+0.5
FRON				S	Sg	10 38 39.9	+1.2
FRON				AML	AML		
	comp=E,54µm,0.4s						
FRON				AML	AML		
	comp=N,94µm,1.4s						
PIEI	Pieia	0.19	343	P	Pg	10 38 36.8	+0.6
PIEI				S	Sg	10 38 40.5	+1.5
PIEI				AML	AML		
	comp=E,149µm,0.3s						
PIEI				AML	AML		
	comp=N,57µm,0.6s						
ATTE	AVT- Monte Tez	0.25	230	⇓P	Pg	10 38 38.2	+1.0
NARO	Abbazia di Nar	0.26	355	P	Pg	10 38 37.9	+0.5
NARO				S	Sb	10 38 42.4	-1.1
NARO				AML	AML		
	comp=E,49µm,0.1s						
NARO				AML	AML		
	comp=N,42µm,1.0s						
NARO				AML	AML		
	comp=E,49µm,1.9s						
SNTG	Esanatoglia	0.26	113	P	Pg	10 38 38.1	+0.6
SNTG				S	Sb	10 38 42.5	-1.1
SNTG				AML	AML		
	comp=E,41µm,1.6s						
SNTG				AML	AML		
	comp=N,51µm,0.3s						
SNTG				AML	AML		
	comp=E,41µm,0.4s						
ARVD	Arcevia	0.28	59	P	Pg	10 38 38.5	+0.6
ARVD				S	Sb	10 38 43.3	-0.9
ARVD				AML	AML		
	comp=E,25µm,0.4s						
ARVD				AML	AML		
	comp=N,21µm,1.1s						
ARVD				AML	AML		
	comp=E,25µm,1.6s						
MPAG	Monte Paganucc	0.29	21	P	Pg	10 38 38.7	+0.6
MPAG				S	Sb	10 38 44.1	-0.5
ASSB	Assisi San Ben	0.31	174	P	Pg	10 38 38.9	+0.4
ASSB				S	Sb	10 38 44.1	-1.0
ASSB				AML	AML		
	comp=E,48µm,1.5s						
ASSB				AML	AML		
	comp=N,62µm,1.1s						
ASSB				AML	AML		
	comp=E,48µm,0.5s						
EL6	Elcito	0.36	94	P	Pg	10 38 39.8	+0.5
EL6				S	Sb	10 38 45.9	-0.5
FSSB	Fossombrone	0.36	20	P	Pg	10 38 39.9	+0.6

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*UPP **19** 10:46:39.4±0.0, 67°.63N×21°.02E, h0^{km}, ML2.6, Suspected explosion*

*HEL **19** 10:46:39.6±0.1, 67°.63N×20°.97E, h0^{km}, Explosion*

ISC 19 10:46:38.2±1.0, 67°.59N±0°.04×21°.07E±0°.03, h0^{km}, n21, σ0^{s}.46/23, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASU	Masugnsbyn	0.38	111	P	Pb	10 46 47.4	-0.4
MASU				S	Sb	10 46 53.3	-1.0
KUA	Kurravaara	0.46	323	P	Pg	10 46 47.5	+0.5
KUA				S	Sg	10 46 53.2	+0.4
DUNU	Dundret	0.51	202	P	Pb	10 46 49.8	-0.2
LANU	Lannavaara	0.58	37	P	Pg	10 46 49.9	+0.7
LANU	Lannavaara	0.58	37	eP	Pg	10 46 49.9	+0.7
RATU	Laukkuluspa	0.61	293	P	Pg	10 46 50.3	+0.4
KOVU	Salmi	0.72	332	P	Pg	10 46 52.2	+0.3
NIKU	Nikkaluokta	0.82	290	P	Pg	10 46 54.2	+0.2
PAJU	Pajala	0.98	125	P	Pb	10 46 58.1	+0.1
PAJU	Pajala	0.98	125	eP	Pb	10 46 58.1	+0.1
SALU	Saltoluokta	1.01	259	P	Pb	10 46 58.0	-0.5
KLF	Kolari	1.18	107	eP	Pb	10 47 01.4	+0.1
HEF	Hetta	1.27	49	eP	Pb	10 47 02.8	-0.2
HEF	Hetta	1.27	49	eP	Pg	10 47 02.5	0.0
KIF	Kilpisjarvi	1.42	356	eP	Pg	10 47 05.3	0.0
KIF	Kilpisjarvi	1.42	356	eP	Pn	10 47 05.1	-0.1
HARU	Harads	1.44	182	P	Pb	10 47 06.4	+0.6
KALU	Kalix	1.96	151	eP	Pb	10 47 15.1	+0.4
TOF	Tornio	1.99	138	ePG	Pg	10 47 16.3	0.0

SGF	**Sodankyl**	**2.10**	**92**	*e*PB	**Pb**	**10 47 17.0**	**-0.1**
RNF	**Rovaniemi**	**2.17**	**115**	*e*PG	**Pb**	**10 47 18.9**	**+0.6**

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*IDC **19** 10:48:20.5±5.0, 0°.38S×131°.34E, $h0^{km}$, mb3.1/2, mbtmp3.1/3, ML3.0/1, Error ellipse: s-maj=343.6km s-min=29.7km az=72.0*

*DJA **19** 10:48:25.1±1.3, 0°S±7°×13°2E±°, $h17^{km}$±15^{km}, M3.4/6, MLv3.4/6*

ISC 19 10:48:25.2±1.5**, 0°.3S**±0°.1×**131°.5E**±0°.1**, $h35^{km}$, n6, σ1^{s}.11**/7**,**

Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	**Sorong**	**0.59**	**203**	P	**Pn**	**10 48 37.4**	**+0.2**
SWI				S	**Sn**	**10 48 46.7**	**+1.0**
FAKI	**Fak Fak**	**2.69**	**164**	P	**Pn**	**10 49 06.9**	**+0.8**
RKPI	**Ransiki, Papua**	**2.93**	**114**	P	**Pn**	**10 49 09.9**	**+0.5**
WRA	**Warramunga Arr**	**19.71**	**172**	P	**Pn**	**10 52 52.2**	**-1.2**
	baz=352,slow=11,SNR=2.1						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**23.33**	**174**	P	**P**	**10 53 29.3**	**-1.1**
	0.2nm,0.7s,baz=355,slow=11,SNR=1.9						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**63.58**	**324**	P	**P**	**10 58 52.9**	**+0.4**
	0.4nm,0.8s,baz=116,slow=6.6,SNR=3.9						
	0.4nm,0.8s						

WEL 19 11:03:13.0±0.5**, 42°S**±4°×**17°3E**±°**, $h22^{km}$**±9^{km}**, M2.4**/3**, ML2.4**/7**, MLv2.4**/3**, Error ellipse: s-maj=0.0km s-min=0.0km az=119.5, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.46**	**103**	P	Pn	11 03 23.4	-0.8
KHZ				S	Sn	11 03 31.3	-0.5
THZ	**Tophouse**	**0.55**	**358**	P	Pb	11 03 24.3	+0.3
GVZ	**Greta Valley S**	**0.66**	**173**	P	Pb	11 03 26.4	+0.5
GVZ				S	Sn	11 03 36.6	-0.2
LTZ	**Lake Taylor**	**0.68**	**226**	P	Pn	11 03 27.0	-0.3
LTZ				S	Sn	11 03 36.6	-0.6
MRNZ	**Matariki Terra**	**0.92**	**352**	P	Pb	11 03 30.1	-0.2
DSZ	**Denniston Nort**	**1.01**	**304**	P	Pb	11 03 29.7	-2.1
NNZ	**Nelson**	**1.14**	**17**	P	Pn	11 03 33.5	-0.1
INZ	**Inchbonnie**	**1.17**	**249**	P	Pn	11 03 34.2	+0.2
INZ				S	Sn	11 03 49.6	+0.2
TKNZ	**Takaka Hill**	**1.28**	**1**	P	Pn	11 03 35.4	-0.1
MQZ	**McQueen's Vall**	**1.41**	**188**	P	Pn	11 03 35.4	-1.9
MQZ				S	Sn	11 03 51.6	-3.5
QRZ	**Quartz Range**	**1.52**	**348**	P	Pn	11 03 38.7	-0.1

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*IDC **19** 11:12:37.6±1.6, 32°.35N×137°.66E, $h396^{km}$±27^{km}, mb2.5/4, mbtmp3.3/7, Error ellipse: s-maj=45.9km s-min=21.1km az=62.0*

ISC 19 11:12:36.5±0.9**, 32°.23N**±0°.09×**138°.0E**±0°.1**, $h400^{km}$, n8, σ2^{s}.07**/9**, mb2.7**/4**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**4.31**	**2**	P	**Pn**	**11 13 51.5**	**+0.1**
	2.1nm,0.6s,baz=178,slow=10,SNR=17						
MJAR				S	**S**	**11 14 50.5**	**-1.8**
	0.5nm,0.5s,baz=194,slow=33,SNR=2.5						
JCJ	**Chichijima**	**6.29**	**143**	S	**S**	**11 15 27.5**	**-2.9**
	26nm,0.5s,baz=189,slow=22,SNR=1.3						
KSRS	**Korea Array**	**9.77**	**305**	P	**Pn**	**11 14 51.1**	**-0.6**
	0.4nm,0.5s,baz=124,slow=11,SNR=4.2						
ASAJ	**Asahikawa**	**12.41**	**16**	P	**P**	**11 15 22.1**	**+1.7**
	4.7nm,0.9s,baz=217,slow=11,SNR=6.5						
MKAR	**Makanchi Array**	**44.45**	**306**	P	**P**	**11 20 09.1**	**-0.7**
	0.3nm,0.6s,baz=84,slow=9.6,SNR=4.7						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**46.88**	**311**	P	**P**	**11 20 27.0**	**-1.3**
	0.1nm,0.3s,baz=92,slow=9.0,SNR=4.2						
	0.1nm,0.3s						
WRA	**Warramunga Arr**	**51.99**	**184**	P	**P**	**11 21 08.0**	**+1.2**
	0.5nm,0.9s,baz=352,slow=7.9,SNR=2.2						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**55.72**	**185**	P	**P**	**11 21 36.0**	**+2.7**
	0.2nm,0.7s,baz=21,slow=5.2,SNR=4.3						
	0.2nm,0.7s						

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*NAO **19** 11:13:40.8±1.8, 78°.45N×6°.76E, ML2.9*

*KOLA **19** 11:13:41.4, 78°.35N×7°.59E, $h0^{km}$, ML2.5, Error ellipse: s-maj=6.4km s-min=4.7km az=100.0, Greenland sea, Knipovich ridge, middle*

*IDC **19** 11:13:43.8±1.4, 78°.61N×7°.38E, $h0^{km}$, mb3.5/3, mbtmp3.6/5, ML2.6/2, MS3.3/3, Error ellipse: s-maj=31.4km s-min=16.4km az=14.0*

*DNK **19** 11:13:44.1±2.5, 78°.32N×7°.32E, $h36^{km}$±24^{km}, ML1.8*

*BER **19** 11:13:44.7±1.9, 78°.36N×6°.85E, $h27^{km}$±17^{km}, ML2.7, Confirmed Earthquake*

*IEPN **19** 11:13:45.0, 78°.28N×7°.54E, $h10^{km}$*

ISC 19 11:13:39.0±0.7**, 78°.38N**±0°.05×**6°.53E**±0°.04**, $h10^{km}$, n46, σ2^{s}.98**/66**, mb3.5**/3**, 2C, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.20**	**60**	Pg	**Pg**	**11 14 03.2**	**+1.1**
KBS				Lg	Lg	11 14 16.4	
KBS	**Kingsbay**	**1.20**	**60**	⇑*i*P	**Pg**	**11 14 03.0**	**+1.0**
KBS				*i* S	**Sb**	**11 14 14.8**	**-2.6**
KBS	**Kingsbay**	**1.20**	**60**	P	**Pg**	**11 14 02.5**	**+0.5**
KBS				S	**Sb**	**11 14 15.3**	**-2.1**
KBS	**Kingsbay**	**1.20**	**60**	*i* P	**Pg**	**11 14 03.1**	**+1.0**
KBS				*i* S	**Sb**	**11 14 16.3**	**-1.0**
KBS	**Kingsbay**	**1.20**	**60**	*e*P	**Pg**	**11 14 03.1**	**+1.1**
KBS				*e*S	**Sb**	**11 14 16.1**	**-1.3**
KBS				IAML		11 14 20.0	
	comp=Z,282nm,0.5s						
BRBB	**Barentsburg B**	**1.60**	**97**	Pn	**Pb**	**11 14 08.5**	**0.0**
BRBB				Lg	Lg	11 14 25.5	
BRBB	**Barentsburg B**	**1.60**	**97**	P	**Pb**	**11 14 08.2**	**-0.3**
BRBB				S	**Sn**	**11 14 26.1**	**-1.8**
BRBB	**Barentsburg B**	**1.60**	**97**	*e*P	**Pb**	**11 14 08.6**	**0.0**
BRBA	**Barentsburg A**	**1.61**	**98**	Pn	**Pb**	**11 14 08.9**	**+0.2**
BRBA				Lg	Lg	11 14 25.9	
BRBA	**Barentsburg A**	**1.61**	**98**	*e*P	**Pb**	**11 14 08.6**	**-0.1**
BRBA				*e*S	**Sn**	**11 14 26.7**	**-1.4**
BRBA				IAML		11 14 31.6	
	comp=Z,155nm,0.6s						
SPA0	**Spitsbergen Ar**	**2.02**	**91**	Pn	**Pb**	**11 14 15.6**	**-0.2**
	baz=276,slow=11						
SPA0				Lg	Lg	11 14 38.8	
	baz=280,slow=22						
SPA0	**Spitsbergen Ar**	**2.02**	**91**	⇑*i*P	**Pb**	**11 14 15.5**	**-0.2**
SPA0				*i* S	**Sn**	**11 14 37.9**	**-0.4**
SPA0	**Spitsbergen Ar**	**2.02**	**91**	*e*P	**Pb**	**11 14 15.5**	**-0.2**
SPA0				*e*S	**Sn**	**11 14 38.2**	**-0.1**
SPA0				IAML		11 14 45.2	
	comp=Z,107nm,0.6s						
SPITS	**Spitsbergen Ar**	**2.02**	**91**	Pn	**Pb**	**11 14 15.5**	**-0.2**
	baz=277,slow=12						
SPITS				Sn	**Sn**	**11 14 38.3**	**0.0**
	baz=273,slow=24						
SPITS	**Spitsbergen Ar**	**2.02**	**91**	P	**Pb**	**11 14 14.9**	**-0.8**
SPITS				S	**Sn**	**11 14 37.0**	**-1.3**
HSPB	**Hornsund (broa**	**2.37**	**121**	Pn	**Pn**	**11 14 19.5**	**+1.7**
HSPB				Sn	**Sn**	**11 14 44.4**	**-2.5**
HSPB	**Hornsund (broa**	**2.37**	**121**	*e*P	**Pn**	**11 14 18.8**	**+0.9**
HSPB				*i* S	**Sn**	**11 14 44.2**	**-2.7**
HSPB	**Hornsund (broa**	**2.37**	**121**	P	**Pn**	**11 14 19.1**	**+1.2**
HSPB				S	**Sn**	**11 14 44.5**	**-2.5**
HSPB	**Hornsund (broa**	**2.37**	**121**	*e*P	**Pn**	**11 14 19.1**	**+1.2**
HSPB				*e*S	**Sn**	**11 14 44.5**	**-2.5**
HSPB				IAML		11 14 48.4	
	comp=Z,38nm,0.2s						
HOPEN	**Hopen**	**4.43**	**106**	Pn	**Pn**	**11 14 47.7**	**+1.6**
HOPEN				Sn	**Sn**	**11 15 34.7**	**-3.0**
HOPEN	**Hopen**	**4.43**	**106**	*e*P	**Pn**	**11 14 47.0**	**+0.9**
HOPEN				*e*S	**Sn**	**11 15 33.9**	**-3.7**
HOPEN	**Hopen**	**4.43**	**106**	*e*P	**Pn**	**11 14 47.6**	**+1.5**
HOPEN				*e*S	**Sn**	**11 15 34.6**	**-3.0**
HOPEN				IAML		11 15 36.5	
	comp=Z,64nm,0.3s						
NOR	**Nord**	**5.13**	**320**	Pn	**Pn**	**11 14 58.3**	**+2.6**
NOR				Sn	**Sn**	**11 15 54.5**	**-0.4**
NOR	**Nord**	**5.13**	**320**	*e*P	**Pn**	**11 14 58.7**	**+3.0**
NOR				*e*S	**Sn**	**11 15 54.3**	**-0.6**
NOR				IAML		11 16 01.1	
	comp=Z,1.4nm,0.4s						
NOR	**Nord**	**5.13**	**320**	*e*P	**Pn**	**11 14 58.4**	**+2.6**
NOR				*e*S	**Sn**	**11 15 54.4**	**-0.6**
DAG	**Danmarks Havn**	**5.64**	**266**	*e*	**Pn**	**11 15 04.9**	**+2.2**
	baz=64,slow=18						
DAG				*i* P	**Pn**	**11 15 05.8**	**+3.2**
DAG				*e*S	**Sn**	**11 16 05.8**	**-1.6**
DAG				IAML		11 16 10.6	
	comp=Z,12nm,0.4s						
DAG	**Danmarks Havn**	**5.64**	**266**	*e*P	**Pn**	**11 15 05.4**	**+2.8**
DAG				*e*S	**Sn**	**11 16 04.6**	**-2.7**
DBG	**Daneborg**	**7.46**	**251**	Pn	**Pn**	**11 15 30.6**	**+3.0**
DBG				Sn	**Sn**	**11 16 47.7**	**-4.4**
DBG	**Daneborg**	**7.46**	**251**	*i* P	**Pn**	**11 15 30.5**	**+2.9**
DBG				*i* S	**Sn**	**11 16 48.0**	**-4.1**
DBG				IAML		11 16 53.1	
	comp=Z,3.8nm,0.4s						
DBG	**Daneborg**	**7.46**	**251**	*e*P	**Pn**	**11 15 30.2**	**+2.6**
DBG				*e*S	**Sn**	**11 16 46.6**	**-5.5**
OMEGA	**Omega**	**7.69**	**53**	*e*P	**Pn**	**11 15 33.2**	**+2.5**
OMEGA				*e*S	**Sn**	**11 16 52.2**	**-5.4**
	comp=Z,12nm,3.0s						
ARA0	**ARCESS Array S**	**10.23**	**140**	Sn	**Sn**	**11 17 55.0**	**-5.1**
	baz=346,slow=22						
ARCES	**ARCESS Array B**	**10.23**	**140**	Pn	**Pn**	**11 16 10.1**	**+4.5**
	comp=Z,0.2nm,0.3s,baz=338,slow=12,SNR=8.9						
ARCES				Sn	**Sn**	**11 17 55.1**	**-5.0**
	comp=Z,0.1nm,0.3s,baz=350,slow=6.5,SNR=1.2						
	comp=Z,4.0nm,0.8s						
ARCES	**ARCESS Array B**	**10.23**	**140**	S	**Sn**	**11 17 53.7**	**-6.5**
ARCES	**ARCESS Array B**	**10.23**	**140**	P	Pn	11 16 13.0	+7.4
VADS	**Vadso**	**10.24**	**132**	S	**Sn**	**11 17 52.5**	**-7.7**
VADS	**Vadso**	**10.24**	**132**	P	Pn	11 16 12.4	+6.7
NEEM	**North Greenlan**	**11.68**	**294**	*i* P	**Pn**	**11 16 26.6**	**+1.0**
NEEM				*i* S	**Sn**	**11 18 28.0**	**-8.0**
NEEM				IAML		11 18 30.5	
	comp=Z,1.7nm,0.4s						
SUMG	**Summit**	**12.33**	**266**	*i* P	Pn	11 16 39.7	+5.1
SUMG				*e*S	Sn	11 18 42.9	-9.1
SUMG				IAML		11 18 55.7	
	comp=Z,1.1nm,0.4s						
FINES	**FINESS Array B**	**18.09**	**149**	P	**P**	**11 17 56.8**	**+6.5**
	baz=7.9,slow=13,SNR=1.8						
	comp=Z,1.0nm,0.8s						
SFJD	**Kangerlussuaq**	**19.33**	**266**	LR	LR	11 25 50.0	
	comp=Z,49nm,18.7s,baz=34,slow=37						
SCHQ	**Schefferville**	**33.67**	**270**	LR	LR	11 34 12.3	
	comp=Z,42nm,20.4s,baz=62,slow=36						
KURBB	**Kurchatov Arra**	**37.36**	**93**	P	P	11 20 57.1	+6.0
	comp=Z,0.8nm,0.7s,baz=339,slow=8.0,SNR=7.0						
	comp=Z,0.8nm,0.7s						
MKAR	**Makanchi Array**	**41.77**	**92**	P	P	11 21 34.1	+6.2
	comp=Z,0.7nm,0.7s,baz=352,slow=7.4,SNR=9.2						
	comp=Z,0.7nm,0.7s						
AAK	**Ala-Archa**	**44.19**	**101**	LR	LR	11 42 49.8	
	comp=Z,50nm,18.3s,baz=202,slow=40						
TXAR	**Lajitas Array**	**65.41**	**296**	P	P	11 24 27.1	+5.6
	comp=Z,0.2nm,0.7s,baz=52,slow=3.6,SNR=3.5						
	comp=Z,0.2nm,0.7s						

ROM 19 11:13:40.5±0.0**, 42°.873N**±0°.002×**13°.182E**±0°.004**, $h9^{km}$, ML1.5**/21**, 3C-2D, Error ellipse: s-maj=0.3km s-min=0.1km az=262.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.02**	**164**	P	Pg	11 13 41.9	-0.5
MC2	**Monte Cornacci**	**0.04**	**9**	⇑P	Pg	11 13 42.4	-0.2
MC2				S	Sg	11 13 43.5	-0.5
T1214	**Arquata del Tr**	**0.12**	**170**	⇑P	Pg	11 13 43.8	+0.4
T1214				S	Sg	11 13 46.2	+0.9
T1214				AML	AML		
	comp=E,890µm,0.3s						
T1214				AML	AML		
	comp=E,889µm,0.3s						
T1214				AML	AML		
	comp=N,624µm,0.4s						
T1214				AML	AML		
	comp=E,889µm,1.7s						
T1216	**Preci, Frazion**	**0.12**	**279**	P	Pg	11 13 43.7	+0.4
T1216				S	Sg	11 13 46.3	+0.9
T1216				AML	AML		
	comp=N,829µm,1.0s						
T1216				AML	AML		
	comp=E,799µm,0.4s						
T1216				AML	AML		
	comp=N,829µm,1.0s						
FEMA	**Monte Fema**	**0.13**	**313**	P	Pg	11 13 44.0	+0.4
T1256	**Bolognola (MC)**	**0.14**	**14**	P	Pg	11 13 44.1	+0.4
T1256				S	Sg	11 13 46.5	+0.6
T1256				AML	AML		
	comp=E,367µm,0.6s						
T1256				AML	AML		
	comp=N,428µm,0.5s						
T1256				AML	AML		
	comp=E,367µm,1.4s						
T1212	**Cascia, Frazio**	**0.16**	**220**	P	Pg	11 13 44.6	+0.6
T1212				S	Sg	11 13 47.5	+1.2
T1212				AML	AML		
	comp=E,207µm,0.6s						
T1212				AML	AML		
	comp=E,207µm,1.4s						
T1212				AML	AML		
	comp=N,284µm,0.2s						
FDMO	**Fiordimonte**	**0.18**	**337**	P	Pg	11 13 44.9	+0.6
FDMO				AML	AML		
	comp=E,117µm,0.3s						
FDMO				AML	AML		
	comp=N,167µm,0.5s						
T1241	**Roccafluvione,**	**0.18**	**95**	⇓P	Pg	11 13 45.1	+0.7
T1241				S	Sg	11 13 48.6	+1.5
T1241				AML	AML		
	comp=E,198µm,0.5s						
T1241				AML	AML		
	comp=N,122µm,0.4s						
T1241				AML	AML		
	comp=N,122µm,1.6s						
T1218	**Civita (PG)**	**0.21**	**194**	P	Pg	11 13 45.7	+0.9
T1218				AML	AML		
	comp=N,203µm,0.7s						
T1218				AML	AML		
	comp=N,203µm,1.3s						
T1218				AML	AML		
	comp=E,195µm,1.2s						
GUMA	**Gualdo di Mace**	**0.22**	**31**	P	Pg	11 13 46.1	+1.0
GUMA				S	Sg	11 13 50.0	+1.8
GUMA				AML	AML		
	comp=E,344µm,0.4s						
GUMA				AML	AML		
	comp=N,356µm,0.3s						
T1219	**Muccia, Frazio**	**0.22**	**325**	⇑P	Pg	11 13 45.7	+0.6
T1219				S	Sg	11 13 49.6	+1.4
T1219				AML	AML		
	comp=E,158µm,0.2s						
T1219				AML	AML		
	comp=N,142µm,0.5s						
T1219				AML	AML		
	comp=E,158µm,1.8s						
CESI	**CESI - Serrava**	**0.24**	**303**	P	Pg	11 13 46.1	+0.6
CESI				S	Sg	11 13 50.6	+1.8
CESI				AML	AML		
	comp=E,182µm,0.2s						
CESI				AML	AML		
	comp=N,256µm,0.2s						
T1217	**Poggiodomo (PG**	**0.24**	**229**	P	Pg	11 13 46.1	+0.6
T1217				S	Sg	11 13 50.4	+1.6
T1220	**Camerino, Fraz**	**0.25**	**344**	P	Pg	11 13 46.2	+0.6
T1220				S	Sg	11 13 50.5	+1.6
T1220				AML	AML		
	comp=E,438µm,1.2s						
T1220				AML	AML		
	comp=N,484µm,1.4s						
T1220				AML	AML		
	comp=N,484µm,0.6s						
T1220				AML	AML		
	comp=E,438µm,0.8s						
SMA1	**SAN MARTINO**	**0.27**	**155**	P	Pg	11 13 46.6	+0.7
SMA1				AML	AML		
	comp=E,98µm,0.4s						
SMA1				AML	AML		
	comp=N,112µm,0.7s						
RM33	**Pellescritta (**	**0.36**	**176**	P	Pg	11 13 48.2	+0.4
RM33				AML	AML		
	comp=E,90µm,1.4s						
RM33				AML	AML		
	comp=E,90µm,0.6s						
RM33				AML	AML		
	comp=N,62µm,1.0s						
CAMP	**Campotosto**	**0.38**	**153**	P	Pg	11 13 48.4	+0.5
CAMP				S	Sb	11 13 54.6	-0.8
OFFI	**Offida**	**0.38**	**80**	P	Pb	11 13 49.3	0.0
TERO	**Teramo**	**0.40**	**129**	P	Pg	11 13 48.7	+0.4
TERO				AML	AML		
	comp=E,48µm,0.3s						
TERO				AML	AML		
	comp=N,67µm,0.3s						
ASSB	**Assisi San Ben**	**0.42**	**294**	P	Pg	11 13 49.3	+0.5
ASSB				S	Sb	11 13 56.0	-0.6
ASSB				AML	AML		
	comp=E,203µm,0.3s						
ASSB				AML	AML		
	comp=N,144µm,0.5s						
SNTG	**Esanatoglia**	**0.42**	**335**	P	Pg	11 13 49.2	+0.5
SNTG				AML	AML		
	comp=E,56µm,0.1s						
SNTG				AML	AML		
	comp=N,50µm,0.7s						
MOMA	**Monte Martano**	**0.46**	**262**	⇓P	Pb	11 13 50.3	-0.4
MOMA				AML	AML		
	comp=E,62µm,0.9s						
MOMA				AML	AML		
	comp=N,55µm,1.6s						
MOMA				AML	AML		
	comp=N,55µm,0.4s						
EL6	**Elcito**	**0.46**	**353**	P	Pg	11 13 50.0	+0.5
EL6				AML	AML		
	comp=E,110µm,0.2s						
EL6				AML	AML		
	comp=N,108µm,1.1s						
EL6				AML	AML		
	comp=N,108µm,0.9s						
CING	**Cingoli**	**0.50**	**1**	AML	AML		
	comp=N,64µm,0.5s						
CING				AML	AML		
	comp=E,66µm,0.7s						
CING				AML	AML		
	comp=N,64µm,1.5s						
ARVD	**Arcevia**	**0.65**	**344**	AML	AML		
	comp=E,54µm,1.2s						
ARVD				AML	AML		
	comp=N,40µm,0.1s						
ARVD				AML	AML		
	comp=E,54µm,0.8s						
FSSB	**Fossombrone**	**0.87**	**340**	AML	AML		
	comp=N,147µm,0.4s						
FSSB				AML	AML		
	comp=E,96µm,0.4s						
FSSB				AML	AML		
	comp=N,147µm,1.6s						

ROM 19 11:13:58.2±0.1**, 43°.006N**±0°.003×**13°.140E**±0°.004**, $h6^{km}$**±1^{km}**, ML1.6**/10**, 2C, Error ellipse: s-maj=0.4km s-min=0.1km az=242.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.05**	**308**	⇑P	Pg	11 13 59.6	-0.1
FDMO				S	Sg	11 14 00.7	-0.1
FDMO				AML	AML		
	comp=E,1445µm,0.1s						
FDMO				AML	AML		
	comp=N,1375µm,0.3s						
FDMO				AML	AML		
	comp=N,1370µm,0.3s						
FDMO				AML	AML		
	comp=E,1443µm,0.1s						
FDMO				AML	AML		
	comp=N,1038µm,0.2s						
T1256	**Bolognola (MC)**	**0.06**	**90**	⇑P	Pg	11 13 60.0	-0.1
T1256				S	Sg	11 14 01.4	+0.1
T1256				AML	AML		
	comp=E,686µm,1.2s						
T1256				AML	AML		
	comp=N,673µm,0.4s						
T1256				AML	AML		
	comp=N,674µm,0.4s						
T1256				AML	AML		
	comp=E,503µm,0.1s						
T1256				AML	AML		
	comp=N,627µm,0.2s						
T1256				AML	AML		
	comp=N,698µm,0.2s						
T1256				AML	AML		
	comp=E,500µm,0.1s						
FEMA	**Monte Fema**	**0.08**	**236**	P	Pg	11 14 00.5	+0.2
FEMA				S	Sg	11 14 02.3	+0.7
MC2	**Monte Cornacci**	**0.10**	**158**	P	Pg	11 14 00.8	+0.3
MC2				S	Sg	11 14 02.8	+0.6
T1219	**Muccia, Frazio**	**0.11**	**297**	P	Pg	11 14 00.9	+0.3
T1219				S	Sg	11 14 03.1	+0.9
T1219				AML	AML		
	comp=N,646µm,0.4s						
T1219				AML	AML		
	comp=E,664µm,0.3s						
T1219				AML	AML		
	comp=N,602µm,0.5s						
T1219				AML	AML		
	comp=E,614µm,0.3s						
T1219				AML	AML		
	comp=N,646µm,0.4s						
T1219				AML	AML		
	comp=E,665µm,0.3s						
T1219				AML	AML		
	comp=N,603µm,0.5s						
T1219				AML	AML		
	comp=E,586µm,0.1s						
T1219				AML	AML		
	comp=N,593µm,0.2s						
T1219				AML	AML		
	comp=N,576µm,0.2s						
T1219				AML	AML		
	comp=E,610µm,0.1s						
T1220	**Camerino, Fraz**	**0.11**	**340**	P	Pg	11 14 00.8	+0.2
T1220				S	Sg	11 14 03.4	+1.1
T1220				AML	AML		
	comp=E,1980µm,0.3s						
T1220				AML	AML		
	comp=N,1540µm,0.4s						
T1220				AML	AML		
	comp=N,1390µm,0.3s						
T1220				AML	AML		
	comp=N,935µm,0.3s						
T1220				AML	AML		
	comp=E,1980µm,0.3s						
T1220				AML	AML		
	comp=N,2974µm,0.8s						
T1220				AML	AML		
	comp=E,29129µm,1.3s						
T1216	**Preci, Frazion**	**0.15**	**218**	P	Pg	11 14 02.0	+0.8
T1216				S	Sg	11 14 04.5	+1.2
T1216				AML	AML		
	comp=N,439µm,0.3s						
T1216				AML	AML		
	comp=E,610µm,0.3s						
GUMA	**Gualdo di Mace**	**0.15**	**68**	P	Pg	11 14 02.1	+0.8
GUMA				S	Sg	11 14 05.3	+1.8
T1245	**Castelsantange**	**0.15**	**167**	P	Pg	11 14 01.8	+0.4
T1245				S	Sg	11 14 05.0	+1.4
T1245				AML	AML		
	comp=N,311µm,0.3s						
T1245				AML	AML		
	comp=N,315µm,0.3s						
T1245				AML	AML		
	comp=E,375µm,0.1s						
T1245				AML	AML		
	comp=E,343µm,0.1s						
CESI	**CESI - Serrava**	**0.17**	**270**	P	Pg	11 14 02.3	+0.6
CESI				S	Sg	11 14 05.5	+1.4
CESI				AML	AML		
	comp=E,281µm,0.2s						
CESI				AML	AML		
	comp=N,380µm,0.2s						
MDAR	**Monte D'Aria**	**0.19**	**1**	P	Pg	11 14 02.6	+0.6
MDAR				S	Sg	11 14 05.5	+1.0
T1214	**Arquata del Tr**	**0.25**	**168**	P	Pg	11 14 03.8	+0.6
T1214				S	Sg	11 14 07.9	+1.4
T1214				AML	AML		
	comp=N,135µm,0.2s						
T1214				AML	AML		
	comp=E,104µm,0.2s						

T1214				AML	AML		
	comp=N,119µm,0.2s						
T1214				AML	AML		
	comp=E,139µm,0.2s						
T1241	**Roccafluvione,**	**0.26**	**125**	P	Pg	11 14 03.4	+0.1
T1241				S	Sg	11 14 08.3	+1.5
T1241				AML	AML		
	comp=N,88µm,0.2s						
T1241				AML	AML		
	comp=E,78µm,1.7s						
T1212	**Cascia, Frazio**	**0.26**	**195**	P	Pg	11 14 04.0	+0.6
T1212				S	Sg	11 14 08.4	+1.5
T1212				AML	AML		
	comp=N,138µm,0.5s						
T1212				AML	AML		
	comp=N,105µm,0.2s						
T1212				AML	AML		
	comp=E,108µm,0.2s						
ATTE	**AVT- Monte Tez**	**0.61**	**289**	P	Pb	11 14 10.9	-0.3

ROM 19 11:18:47.1±0.1, 42°.621N±0°.003×13°.229E±0°.004, h12^{km}, ML1.2/5, 1C, Error ellipse: s-maj=0.4km s-min=0.1km az=230.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	**0.08**	**83**	P	Pg	11 18 50.3	+0.4
SMA1				S	Sg	11 18 52.3	+0.5
T1218	**Civita (PG)**	**0.10**	**300**	⇑P	Pg	11 18 50.4	+0.3
T1218				S	Sg	11 18 52.4	+0.2
T1218				AML	AML		
	comp=E,310µm,0.1s						
T1218				AML	AML		
	comp=N,287µm,1.4s						
T1218				AML	AML		
	comp=E,309µm,0.1s						
T1218				AML	AML		
	comp=N,254µm,0.3s						
T1218				AML	AML		
	comp=N,287µm,1.5s						
T1218				AML	AML		
	comp=E,310µm,0.1s						
T1218				AML	AML		
	comp=N,254µm,0.3s						
T1218				AML	AML		
	comp=N,287µm,0.5s						
RM33	**Pellescritta (**	**0.11**	**186**	P	Pg	11 18 50.7	+0.5
RM33				S	Sg	11 18 53.1	+0.6
RM33				AML	AML		
	comp=E,202µm,0.3s						
RM33				AML	AML		
	comp=E,202µm,0.3s						
RM33				AML	AML		
	comp=N,238µm,0.2s						
T1214	**Arquata del Tr**	**0.14**	**354**	P	Pg	11 18 51.0	+0.3
T1214				S	Sg	11 18 53.5	+0.3
CAMP	**Campotosto**	**0.16**	**123**	P	Pg	11 18 51.3	+0.4
CAMP				S	Sg	11 18 54.2	+0.7
T1212	**Cascia, Frazio**	**0.19**	**314**	P	Pg	11 18 51.7	+0.3
T1212				S	Sg	11 18 54.8	+0.5
T1246	**Crognaleto (TE**	**0.20**	**101**	P	Pg	11 18 51.9	+0.4
T1246				S	Sg	11 18 55.2	+0.6
T1245	**Castelsantange**	**0.24**	**353**	P	Pg	11 18 52.8	+0.6
T1245				S	Sg	11 18 56.6	+0.9
T1245				AML	AML		
	comp=N,55µm,1.2s						
T1245				AML	AML		
	comp=N,55µm,0.8s						
T1245				AML	AML		
	comp=E,62µm,0.5s						
T1217	**Poggiodomo (PG**	**0.24**	**292**	P	Pg	11 18 52.5	+0.3
T1217				S	Sg	11 18 56.4	+0.8
T1211	**Morro Reatino**	**0.29**	**252**	P	Pg	11 18 53.6	+0.5
T1211				S	Sb	11 18 58.3	-0.9
GIGS	**Gran Sasso**	**0.30**	**124**	P	Pg	11 18 53.6	+0.2
GIGS				S	Sg	11 18 58.3	+0.8
T1216	**Preci, Frazion**	**0.31**	**330**	P	Pg	11 18 54.1	+0.6
T1216				S	Sb	11 18 58.9	-0.9
FDMO	**Fiordimonte**	**0.43**	**346**	P	Pg	11 18 55.8	+0.2
FDMO				S	Sb	11 19 02.8	-0.3
FDMO				AML	AML		
	comp=E,19µm,1.5s						
FDMO				AML	AML		
	comp=E,19µm,0.5s						
FDMO				AML	AML		
	comp=N,16µm,1.6s						

ROM 19 11:19:26.6±0.1, 42°.494N±0°.002×13°.304E±0°.002, h12^{km}, ML1.5/13, Error ellipse: s-maj=0.3km s-min=0.0km az=48.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1247	**Pizzolo (AQ)**	**0.05**	**185**	P	Pg	11 19 29.4	+0.3
T1247				S	Sg	11 19 31.0	+0.2
T1247				AML	AML		
	comp=E,6960µm,0.4s						
T1247				AML	AML		
	comp=N,3035µm,1.5s						
RM33	**Pellescritta (**	**0.07**	**283**	P	Pg	11 19 29.4	+0.1
RM33				S	Sg	11 19 31.2	0.0
RM33				AML	AML		
	comp=E,950µm,0.3s						
RM33				AML	AML		
	comp=N,596µm,1.2s						
RM33				AML	AML		
	comp=E,970µm,0.3s						
RM33				AML	AML		
	comp=N,589µm,0.2s						
CAMP	**Campotosto**	**0.09**	**61**	P	Pg	11 19 29.8	+0.3
CAMP				S	Sg	11 19 31.9	+0.3
CAMP				AML	AML		
	comp=E,327µm,0.7s						
CAMP				AML	AML		
	comp=N,616µm,0.4s						
SMA1	**SAN MARTINO**	**0.14**	**10**	P	Pg	11 19 30.6	+0.5
SMA1				S	Sg	11 19 33.3	+0.7
SMA1				AML	AML		
	comp=E,1318µm,0.6s						
SMA1				AML	AML		
	comp=N,2385µm,0.4s						
SMA1				AML	AML		
	comp=E,1318µm,1.4s						
GIGS	**Gran Sasso**	**0.20**	**102**	P	Pg	11 19 31.5	+0.4
GIGS				S	Sg	11 19 34.8	+0.7
GIGS				AML	AML		
	comp=E,69µm,1.2s						
GIGS				AML	AML		
	comp=N,82µm,0.8s						
GIGS				AML	AML		
	comp=E,69µm,0.8s						
GIGS				AML	AML		
	comp=N,82µm,1.2s						
T1218	**Civita (PG)**	**0.23**	**322**	AML	AML		
	comp=N,148µm,0.2s						
T1218				AML	AML		
	comp=E,100µm,0.1s						
TERO	**Teramo**	**0.26**	**60**	P	Pg	11 19 32.1	+0.1
TERO				S	Sg	11 19 36.5	+0.8
TERO				AML	AML		
	comp=E,166µm,0.9s						
TERO				AML	AML		
	comp=N,182µm,0.5s						
TERO				AML	AML		
	comp=E,166µm,1.1s						
T1214	**Arquata del Tr**	**0.28**	**345**	P	Pg	11 19 32.7	+0.3
T1214				S	Sg	11 19 37.2	+0.9
T1214				AML	AML		
	comp=E,139µm,0.2s						
T1214				AML	AML		
	comp=N,136µm,0.3s						
T1214				AML	AML		
	comp=E,140µm,0.2s						
T1212	**Cascia, Frazio**	**0.32**	**323**	P	Pg	11 19 33.6	+0.4
T1212				S	Sb	11 19 38.6	-0.9
T1212				AML	AML		
	comp=N,166µm,0.4s						
T1212				AML	AML		
	comp=N,166µm,0.4s						
T1212				AML	AML		
	comp=E,141µm,0.2s						
T1211	**Morro Reatino**	**0.33**	**277**	AML	AML		
	comp=E,134µm,1.2s						
T1211				AML	AML		
	comp=N,131µm,0.2s						
T1211				AML	AML		
	comp=E,134µm,1.2s						
T1211				AML	AML		
	comp=N,131µm,0.2s						
T1217	**Poggiodomo (PG**	**0.35**	**309**	P	Pg	11 19 34.0	+0.2
T1217				S	Sb	11 19 39.6	-0.8
T1217				AML	AML		
	comp=E,48µm,1.6s						
T1217				AML	AML		
	comp=N,50µm,1.2s						
T1217				AML	AML		
	comp=E,48µm,1.6s						
T1217				AML	AML		
	comp=N,49µm,1.2s						
T1245	**Castelsantange**	**0.37**	**347**	P	Pg	11 19 34.4	+0.2
T1245				S	Sb	11 19 40.4	-0.7
T1245				AML	AML		
	comp=N,245µm,0.3s						
T1245				AML	AML		
	comp=E,167µm,0.4s						
T1245				AML	AML		
	comp=N,246µm,0.3s						
ARRO	**Arrone**	**0.41**	**282**	AML	AML		
	comp=E,51µm,1.2s						
ARRO				AML	AML		
	comp=E,51µm,1.2s						
ARRO				AML	AML		
	comp=N,55µm,1.0s						
ARRO				AML	AML		
	comp=N,55µm,1.0s						
ARRO				AML	AML		
	comp=E,51µm,0.8s						
MC2	**Monte Cornacci**	**0.43**	**349**	P	Pg	11 19 35.4	+0.3
MC2				S	Sg	11 19 41.8	+0.8
T0110	**Collepietro**	**0.44**	**127**	P	Pg	11 19 35.6	+0.3
T0110				S	Sb	11 19 42.2	-0.7
T0110				AML	AML		
	comp=E,77µm,0.5s						
T0110				AML	AML		
	comp=N,88µm,0.4s						
T0110				AML	AML		
	comp=E,77µm,1.5s						
FDMO	**Fiordimonte**	**0.57**	**344**	AML	AML		
	comp=N,78µm,0.2s						
FDMO				AML	AML		
	comp=E,61µm,0.2s						
FDMO				AML	AML		
	comp=E,61µm,1.8s						
FDMO				AML	AML		
	comp=N,78µm,1.8s						
T1219	**Muccia, Frazio**	**0.60**	**339**	AML	AML		
	comp=N,35µm,0.5s						
T1219				AML	AML		
	comp=E,31µm,1.4s						
T1219				AML	AML		
	comp=N,35µm,1.5s						
T1219				AML	AML		
	comp=E,31µm,1.4s						
T1219				AML	AML		
	comp=N,35µm,1.5s						
T1219				AML	AML		
	comp=E,31µm,0.6s						

SOME ***19*** *11:20:55.8, 40°.67N×79°.00E, h15^{km}*
KRNET ***19*** *11:20:56.3±0.1, 40°.57N×78°.98E, mb3.2*
IDC ***19*** *11:20:56.5±2.2, 40°.74N×79°.23E, h0^{km}, mb3.4/3, mbtmp3.1/6, ML2.4/3, Error ellipse: s-maj=26.8km s-min=17.8km az=171.0*
NNC ***19*** *11:21:02.5±2.9, 41°.03N×79°.10E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=20.7km s-min=16.0km az=161.0*

ISC 19 11:20:56.3±1.9, 40°.66N±0°.08×79°.20E±0°.04, h4^{km}±10^{km}, n64, $\sigma 1^{s}.47$/82, 26C-23D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.50**	**316**	⇑*e*P	**Pn**	**11 21 23.4**	**-0.9**
	baz=23						
TARG				⇑*e*S	**Sn**	**11 21 43.4**	**-1.1**
	baz=23						
PRZ	**Przheval'sk**	**1.91**	**342**	⇑*i*P	**Pb**	**11 21 32.3**	**+0.5**
	baz=48						
PRZ				⇑*i*S	**Sg**	**11 21 58.8**	**+1.1**
	baz=48						
KDJ	**Kajisay**	**2.11**	**315**	⇓*e*P	**Pn**	**11 21 33.5**	**+1.0**
	baz=20						
KDJ				⇓*e*S	**Sb**	**11 22 00.8**	**-1.0**
	baz=20						
ANVS	**Anan'yevo**	**2.41**	**332**	⇓*e*P	**Pn**	**11 21 38.6**	**+2.0**
	baz=37						
ANVS				⇓*e*S	**Sb**	**11 22 09.3**	**-1.1**
	baz=37						
SATY	**Saty**	**2.46**	**346**	Pg	**Pb**	**11 21 41.0**	**-0.2**
	108nm,0.5s						
SATY				Lg	Lg	11 22 13.6	
	135nm,0.6s						
SATY	**Saty**	**2.46**	**346**	*e*Pg	**Pb**	**11 21 40.6**	**-0.6**
	108nm,0.5s						
SATY				*e*Lg	Lg	11 22 13.0	
	135nm,0.6s						
UZB	**Uzynbulak**	**2.48**	**357**	Pg	**Pb**	**11 21 40.6**	**-1.0**
	15nm,0.6s						
UZB				Lg	Lg	11 22 13.5	
	64nm,0.6s						
UZB	**Uzynbulak**	**2.48**	**357**	*e*Pg	**Pb**	**11 21 40.6**	**-1.0**
	15nm,0.6s						
UZB				*e*Lg	Lg	11 22 12.8	
	64nm,0.6s						
NRN	**Naryn**	**2.54**	**289**	⇑*e*P	**Pn**	**11 21 38.7**	**+0.2**
	baz=92						
NRN				⇑*e*S	**Sn**	**11 22 09.6**	**-0.4**
	baz=92						
ZHN	**Zhinishke**	**2.57**	**347**	Pg	**Pb**	**11 21 42.0**	**-0.9**
	35nm,0.3s						
ZHN				Lg	Lg	11 22 16.2	
	155nm,0.5s						
ZHN	**Zhinishke**	**2.57**	**347**	*e*Pg	**Pb**	**11 21 42.7**	**-0.3**
	35nm,0.3s						
ZHN				*e*Lg	Lg	11 22 16.2	
	155nm,0.5s						
PDGK	**Podgornoye**	**2.67**	**5**	Pg	**Pn**	**11 21 42.7**	**+2.5**
	11nm,0.5s						
PDGK				Lg	Lg	11 22 16.9	
	30nm,0.7s						
PDGK	**Podgornoye**	**2.67**	**5**	⇓Pn	**Pn**	**11 21 42.8**	**+2.5**
	26nm,0.6s						
PDGK				⇑Lg	Lg	11 22 14.9	
	54nm,0.6s						
ULHL	**Ulahol**	**2.73**	**306**	⇓*e*P	**Pn**	**11 21 41.8**	**+0.8**
	baz=10.0						
ULHL				⇓*e*S	**Sn**	**11 22 15.0**	**+0.5**
	baz=10.0						
KPKS	**Kokpek**	**2.83**	**352**	Pg	**Pb**	**11 21 46.5**	**-0.8**
	31nm,0.5s						
KPKS				Lg	Lg	11 22 23.6	
	194nm,0.5s						
KPKS	**Kokpek**	**2.83**	**352**	*e*Pg	**Pb**	**11 21 46.0**	**-1.4**
	31nm,0.5s						
KPKS				*e*Lg	Lg	11 22 22.4	
	194nm,0.5s						
TNSS	**Tian-Shan**	**2.91**	**325**	Pg	**Pb**	**11 21 48.5**	**-0.4**
	18nm,0.3s						
TNSS				Lg	Lg	11 22 27.1	
	43nm,0.8s						
TNSS	**Tian-Shan**	**2.91**	**325**	*e*Pg	**Pb**	**11 21 48.5**	**-0.4**
	18nm,0.3s						
TNSS				*e*Lg	Lg	11 22 26.3	
	43nm,0.8s						
KURS	**Kuram**	**2.92**	**345**	Pg	**Pb**	**11 21 48.2**	**-0.8**
	33nm,0.5s						
KURS				Lg	Lg	11 22 26.5	
	38nm,0.6s						
KURS	**Kuram**	**2.92**	**345**	*e*Pg	**Pb**	**11 21 47.6**	**-1.4**
	33nm,0.5s						
KURS				*e*Lg	Lg	11 22 25.1	
	38nm,0.6s						
MDOK	**Medeo**	**2.97**	**328**	⇑Pn	**Pb**	**11 21 47.8**	**-2.0**
	18nm,0.6s						
MDOK				Pg	**Pn**	**11 21 48.8**	**+4.5**
	19nm,0.5s						
MDOK				⇑Lg	Lg	11 22 25.5	
	92nm,0.8s						
MDOK				Lg	Lg	11 22 27.6	
	56nm,0.6s						
MDOK	**Medeo**	**2.97**	**328**	*e*Pg	**Pb**	**11 21 49.0**	**-0.8**
	19nm,0.5s						
MDOK				*e*Lg	Lg	11 22 27.6	
	56nm,0.6s						
KOTS	**Kotyrbulak**	**3.00**	**329**	Pg	**Pb**	**11 21 50.2**	**-0.2**
	17nm,0.5s						
KOTS				Lg	Lg	11 22 29.6	
	122nm,0.7s						
KOTS	**Kotyrbulak**	**3.00**	**329**	*e*Pg	**Pb**	**11 21 49.9**	**-0.5**
	17nm,0.5s						
KOTS				*e*Lg	Lg	11 22 29.0	
	122nm,0.7s						
KNDC	**Almaty**	**3.05**	**328**	⇓Pg	**Pb**	**11 21 51.9**	**+0.8**
	25nm,0.5s						
KNDC				⇓Lg	Lg	11 22 28.2	
	137nm,0.7s						
BOOM	**Boomskoye usch**	**3.05**	**308**	⇓*e*P	**Pn**	**11 21 46.4**	**+1.0**
	baz=11						
BOOM				⇓*e*S	**Sn**	**11 22 22.8**	**+0.3**
	baz=11						
IZV	**Izvestkoviy**	**3.06**	**322**	Pg	**Pb**	**11 21 49.9**	**-1.4**
	6.2nm,0.5s						
IZV				Lg	Lg	11 22 30.0	
	80nm,0.7s						
IZV	**Izvestkoviy**	**3.06**	**322**	*e*Pg	**Pb**	**11 21 50.5**	**-0.8**
	12nm,0.4s						
IZV				*e*Lg	Lg	11 22 30.0	
	80nm,0.7s						
MTBS	**Maitube**	**3.21**	**321**	Pg	**Pb**	**11 21 51.6**	**-2.3**
	5.1nm,0.4s						
MTBS				Lg	Lg	11 22 32.2	
	15nm,0.6s						
MTBS	**Maitube**	**3.21**	**321**	*e*Pg	**Pn**	**11 21 51.3**	**+3.7**
	6.3nm,0.4s						
MTBS				*e*Lg	Lg	11 22 31.2	
	15nm,0.6s						
KST	**Kastek**	**3.39**	**316**	Pg	**Pb**	**11 21 57.1**	**+0.1**
	18nm,0.7s						
KST				Lg	Lg	11 22 41.9	
	82nm,0.7s						
KST	**Kastek**	**3.39**	**316**	*e*Pg	**Pb**	**11 21 56.2**	**-0.7**
	18nm,0.7s						
KST				*e*Lg	Lg	11 22 39.5	
	82nm,0.7s						
TKM2	**Tokmak 2**	**3.51**	**311**	⇑Pn	**Pn**	**11 21 55.3**	**+3.5**
	3.9nm,0.4s						
TKM2				⇑Lg	Lg	11 22 46.3	
	21nm,0.5s						
TKM2	**Tokmak 2**	**3.51**	**311**	⇓*i*P	**Pn**	**11 21 52.8**	**+1.0**
	baz=14						
TKM2				⇓*i*S	**Sn**	**11 22 34.3**	**+0.4**
	baz=14						
KTBS	**Karatobe**	**3.57**	**329**	Pg	**Pb**	**11 21 59.9**	**-0.1**
	3.8nm,0.3s						
KTBS				Lg	Lg	11 22 46.6	
	49nm,0.6s						
KTBS	**Karatobe**	**3.57**	**329**	*e*Pg	**Pb**	**11 21 60.0**	**-0.1**
	3.3nm,0.6s						
KTBS				*e*Lg	Lg	11 22 46.6	
	49nm,0.6s						
DGS	**Degeres**	**3.63**	**316**	Pg	**Pb**	**11 22 00.4**	**-0.6**
	22nm,0.7s						
DGS				Lg	Lg	11 22 47.3	
	53nm,0.6s						
DGS	**Degeres**	**3.63**	**316**	*e*Pg	**Pb**	**11 22 00.7**	**-0.4**
	22nm,0.7s						
DGS				*e*Lg	Lg	11 22 47.3	
	53nm,0.6s						
ARXS	**Arharly**	**3.69**	**345**	Pg	**Pb**	**11 22 02.2**	**+0.1**
	8.9nm,0.6s						
ARXS				Lg	Lg	11 22 50.0	
	36nm,0.6s						
ARXS	**Arharly**	**3.69**	**345**	*e*Pg	**Pb**	**11 22 02.4**	**+0.4**
	8.9nm,0.6s						
ARXS				*e*Lg	Lg	11 22 50.0	
	36nm,0.6s						
DJR	**Jarkent**	**3.69**	**7**	Pg	**Pb**	**11 22 01.2**	**-0.9**
	4.3nm,0.5s						
DJR				Lg	Lg	11 22 48.4	
	23nm,0.6s						
DJR	**Jarkent**	**3.69**	**7**	*e*Pg	**Pb**	**11 22 00.5**	**-1.6**
	4.3nm,0.5s						
DJR				*e*Lg	Lg	11 22 46.9	
	23nm,0.6s						
KBK	**Karagaybulak**	**3.75**	**303**	⇓*e*P	**Pn**	**11 21 55.8**	**+0.7**
	baz=6.0						
KBK				⇓*i*S	**Sn**	**11 22 39.6**	**-0.3**
	baz=6.0						
UCH	**Uchtor**	**3.85**	**295**	⇓*e*P	**Pn**	**11 21 57.1**	**+0.4**
	baz=98						
UCH				⇓*e*S	**Sn**	**11 22 41.5**	**-1.1**
	baz=98						
KUU	**Kurty**	**3.86**	**328**	Pg	**Pb**	**11 22 04.4**	**-0.5**
	1.9nm,0.1s						
KUU				Lg	Lg	11 22 54.1	
	18nm,0.7s						
KUU	**Kurty**	**3.86**	**328**	*e*Pg	**Pb**	**11 22 04.6**	**-0.3**
	2.0nm,0.4s						
KUU				*e*Lg	Lg	11 22 53.8	
	18nm,0.7s						
ARLS	**Aral**	**3.86**	**290**	⇓*i*P	**Pn**	**11 21 56.8**	**+0.2**
	baz=92						
ARLS				⇓*i*S	**Sn**	**11 22 40.8**	**-1.7**
	baz=92						
KRBS	**Karabastau**	**4.00**	**320**	Pg	**Pb**	**11 22 07.7**	**+0.3**
	5.3nm,0.5s						
KRBS				Lg	Lg	11 22 59.5	
	21nm,0.8s						
KRBS	**Karabastau**	**4.00**	**320**	*e*Pg	**Pb**	**11 22 07.7**	**+0.3**
	5.3nm,0.5s						
KRBS				*e*Lg	Lg	11 22 59.5	
	21nm,0.8s						
AAK	**Ala-Archa**	**4.04**	**301**	Pn	**Pn**	**11 22 03.3**	**+4.3**
	0.1nm,0.3s,baz=124,slow=18,SNR=4.1						
AAK				Pg	**Pb**	**11 22 10.3**	**+2.3**
	1.3nm,0.3s,baz=124,slow=12,SNR=14						
AAK				Lg	Lg	11 23 03.2	
	1.0nm,0.3s,baz=107,slow=19,SNR=9.1 0.8nm,0.4s						
AAK	**Ala-Archa**	**4.04**	**301**	⇑*i*P	**Pn**	**11 21 59.8**	**+0.8**
	baz=3.0						
AAK				⇑*e*S	**Sn**	**11 22 46.0**	**-0.8**
	baz=3.0						
AML	**Almayashu**	**4.39**	**291**	⇓Pg	**Pg**	**11 22 21.9**	**+1.5**
	0.9nm,0.6s						
AML				⇑Lg	Lg	11 23 16.4	
	1.8nm,0.6s						
AML	**Almayashu**	**4.39**	**291**	⇑*e*P	**Pn**	**11 22 04.3**	**+0.2**
	baz=93						
AML				⇑*i*S	**Sn**	**11 22 53.8**	**-2.0**
	baz=93						
EKS2	**Erkin-Say**	**4.52**	**298**	⇓*e*P	**Pn**	**11 22 06.3**	**+0.7**
	baz=0.0						
EKS2				⇓*e*S	**Sn**	**11 22 57.3**	**-1.4**
	baz=0.0						
MAKZ	**Makanchi**	**6.46**	**17**	⇑Pn	**Pn**	**11 22 35.6**	**+3.4**
	2.4nm,1.1s						
MAKZ				⇑Sn	**Sn**	**11 23 46.6**	**+0.2**
	2.6nm,1.1s						
MAKZ				⇑Lg	Lg	11 24 14.4	
	4.1nm,1.1s						
MK31	**Makanchi Array**	**6.52**	**19**	⇑Pn	**Pn**	**11 22 34.7**	**+1.7**
	0.5nm,0.6s,baz=200,slow=13,SNR=13						
MK31				⇓Pg	**Pg**	**11 22 58.5**	**-2.6**
	0.7nm,0.5s,baz=186,slow=15,SNR=3.9						
MK31				⇑Sn	**Sn**	**11 23 50.2**	**+2.3**
	1.8nm,0.6s,baz=166,slow=39,SNR=5.2						
MK31				⇑Lg	Lg	11 24 17.3	
	2.0nm,0.6s,baz=197,slow=25,SNR=3.7						
MKAR	**Makanchi Array**	**6.52**	**19**	Pn	**Pn**	**11 22 34.7**	**+1.7**
	0.3nm,0.3s,baz=200,slow=14,SNR=13						
MKAR				Sn	**Sn**	**11 23 47.5**	**-0.3**
	0.2nm,0.3s,baz=198,slow=16,SNR=2.8						
MKAR				Lg	Lg	11 24 19.7	
	0.3nm,0.3s,baz=204,slow=31,SNR=5.2 0.3nm,0.3s						
KK31	**Karatay Array**	**6.92**	**293**	⇑Pg	**Pg**	**11 23 08.6**	**-0.3**
	1.3nm,0.6s,baz=93,slow=14,SNR=12						
KK31				⇑Lg	Lg	11 24 36.0	
	1.7nm,0.6s,baz=84,slow=29,SNR=9.0						
KURBB	**Kurchatov Arra**	**9.97**	**358**	Pn	**Pn**	**11 23 20.3**	**+0.1**
	baz=184,slow=12,SNR=1.6						
KURBB				Lg	Lg	11 26 08.8	
	baz=184,slow=28,SNR=3.1 0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**9.97**	**358**	⇑Lg	Lg	11 26 07.3	
	9.5nm,0.8s						
KURK	**Kurchatov**	**10.06**	**358**	⇑Lg	Lg	11 26 07.7	
	5.5nm,1.4s						
SONM	**Songino Array**	**20.69**	**61**	P	**P**	**11 25 37.6**	**+0.2**
	0.4nm,0.5s,baz=258,slow=12,SNR=4.1						

	0.4nm,0.5s						
FINES	FINESS Array B	37.94	321	P	P	11 28 14.0	-0.5
	1.5nm,0.9s,baz=98,slow=10.0,SNR=2.1						
	1.5nm,0.9s						
YKA	Yellowknife Ar	76.59	7	P	P	11 32 47.3	-0.2
	0.2nm,0.6s,baz=342,slow=5.7,SNR=4.0						
	0.2nm,0.6s						

IDC 19 11:35:07.1±4.0**, 16°.66S**×**174°.88W, h203**^{km}±44^{km}**, mb3.5**/4**, mbtmp4.1**/5**, Error ellipse: s-maj=124.1km s-min=36.1km az=152.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.05	48	P	Pn	11 36 11.7	+2.0
	20nm,0.3s,baz=230,slow=7.9,SNR=31						
AFI				S	S	11 36 58.5	+0.1
	59nm,0.3s,baz=154,slow=12,SNR=16						
CTA	Charters Tower	36.99	259	P	P	11 41 57.3	-0.1
	3.9nm,1.0s,baz=97,slow=8.1,SNR=2.3						
	3.9nm,1.0s						
STKA	Stephens Creek	42.18	241	P	P	11 42 39.8	-0.3
	0.5nm,0.3s,baz=81,slow=11,SNR=3.3						
	0.5nm,0.3s						
WRA	Warramunga Arr	48.18	258	P	P	11 43 27.3	-0.1
	0.3nm,0.4s,baz=96,slow=7.1,SNR=15						
WRA				PcP	PcP	11 44 51.7	+0.1
	0.1nm,0.5s,baz=99,slow=3.5,SNR=1.8						
	0.3nm,0.4s						
ASAR	Alice Springs	48.38	253	P	P	11 43 28.6	-0.3
	5.1nm,0.6s,baz=87,slow=8.8,SNR=129						
ASAR				PcP	PcP	11 44 51.9	-0.3
	0.2nm,0.5s,baz=110,slow=4.0,SNR=4.3						
	5.1nm,0.6s						

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*IDC **19** 11:35:42.7±2.0, 35°.62N×140°.26E, h59^{km}±18^{km}, mb3.6/17, mbtmp3.9/20, MS2.9/3, Error ellipse: s-maj=18.2km s-min=14.0km az=80.0*

*NIED **19** 11:35:43.3, 35°.73N×140°.20E, h66^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.81; $M_{\theta\theta}$0.47; $M_{\phi\phi}$-1.28; $M_{r\theta}$0.22; $M_{\theta\phi}$0.24; $M_{\phi r}$0.79; Fault plane solution: $M_0$1.37000×10^{15} NP1:ϕ_s13.00000°, δ67.00000°, λ114.00000°. NP2:ϕ_s145.00000°, δ33.00000°, λ47.00000°.*

*NEIC **19** 11:35:43.6±1.2, 35°.69N±0°.05×140°.25E±0°.04, h60^{km}±8^{km}, mb4.5/16 Error ellipse: s-maj=8.5km s-min=3.0km az=209.0*

*JMA **19** 11:35:43.3±0.2, 35°.7N±0°.6×140°.2E±0°.8, h66^{km}±1^{km}, MV3.5/40, NORTHERN CHIBA PREF*

JMA Felt I J1 at NORTHERN CHIBA PREF .

ISC 19 11:35:43.5±0.7**, 35°.67N**±0°.05×**140°.24E**±0°.05**, h69**^{km}±6^{km}**, n93,** σ1^{s}**43**/98**, mb4.1**/25**, 10D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSMT	Sammumatsuo	0.17	98	*i* P	Pn	11 35 53.9	0.0
JSMT				*e*S	Sn	11 36 02.0	+0.5
JCN	Nagara	0.25	187	*i* P	Pn	11 35 54.8	+0.5
JCN				*e*S	Sn	11 36 03.4	+1.3
JIHU	Itakohorinouch	0.38	38	*i* P	Pn	11 35 55.0	-0.2
TOK	Tokyo	0.39	273	*i* P	Pn	11 35 55.5	+0.3
BSO3	Boso 3	0.89	165	⇓*i*P	Pn	11 36 00.6	+0.2
JAG	Ashikaga	0.99	320	⇓*i*P	Pn	11 36 01.1	-0.8
JOD2	Odawara 2	1.02	247	⇓*i*P	Pn	11 36 01.6	-0.6
JOD2				⇓S	Sn	11 36 14.7	-1.5
JRY	Ryogami san	1.14	288	⇓*i*P	Pn	11 36 03.8	0.0
JIM2	Oshima 3	1.15	215	*i* P	Pn	11 36 02.9	-1.1
JIM2				S	Sn	11 36 17.8	-1.4
BSO1	Boso 1	1.18	149	P	Pn	11 36 04.4	+0.7
JFNN	Fujinakano	1.35	250	⇓*i*P	Pn	11 36 06.2	-0.3
JFNN				⇓S	Sn	11 36 23.1	-0.6
JKT	Katashina	1.36	324	*i* P	Pn	11 36 06.0	-0.7
JYN	Shimob	1.39	264	⇓*i*P	Pn	11 36 06.7	-0.4
JIZS	Izushimoda	1.46	230	⇓*i*P	Pn	11 36 07.4	-0.6
JIZS				⇓*e*S	Sn	11 36 24.8	-1.5
MJAR	Matsushiro Arr	1.86	299	P	Pn	11 36 13.1	-0.2
	78nm,0.4s,baz=114,slow=5.2,SNR=154						
MJAR				LR	LR	11 36 56.1	
	comp=Z,166nm,20.6s,baz=94,slow=38						
MAJO	Matsushiro	1.86	299		Pn	11 36 13.7	+0.4
MAJO	Matsushiro	1.86	299	P	Pn	11 36 13.9	+0.6
MJB9	Matsu-Tunnel	1.87	299		Pn	11 36 13.7	+0.4
JSG	Sagara	1.95	240	Pn	Pn	11 36 16.3	+1.8
JSG	Sagara	1.95	240	P	Pn	11 36 16.9	+2.4
JMM	Marumori	2.24	11		Pn	11 36 18.3	0.0
JMM	Marumori	2.24	11	P	Pn	11 36 19.3	+0.9
JGF	Kuroka	2.35	269		Pn	11 36 19.1	-0.8
JGF	Kuroka	2.35	269	P	Pn	11 36 21.4	+1.5
JHJ2	Mitsune	2.57	188	Pn	Pn	11 36 22.5	-0.4
JHJ2	Mitsune	2.57	188	P	Pn	11 36 23.0	+0.1
INU	Inuyama	2.65	264		Pn	11 36 24.3	+0.4
INU	Inuyama	2.65	264	P	Pn	11 36 24.4	+0.5
JSD	Sado	2.85	327		Pn	11 36 26.1	-0.5
JSD	Sado	2.85	327	P	Pn	11 36 26.9	+0.3
JTM	Tenmabayashi	5.15	7	Pn	Pn	11 36 58.2	+0.1
JTM	Tenmabayashi	5.15	7	P	Pn	11 36 58.7	+0.6
JMN	Monobe	5.58	252	Pn	Pn	11 37 04.6	+0.5
JMN	Monobe	5.58	252	P	Pn	11 37 04.4	+0.4
JHS	Saijyo	5.86	266		Pn	11 37 09.2	+1.4
JHS	Saijyo	5.86	266	P	Pn	11 37 09.8	+2.0
ERM	Erimo	6.74	19	Pn	Pn	11 37 18.9	-0.8
ERM	Erimo	6.74	19	P	Pn	11 37 18.4	-1.3
JEM	Erimo	6.74	19	P	Pn	11 37 18.5	-1.2
JNU	Nakatsue	8.14	255	P	Pn	11 37 39.1	+0.1
	11nm,1.1s,baz=29,slow=10,SNR=4.5						
JNU				LR	LR	11 41 00.8	
	comp=Z,62nm,21.9s,baz=118,slow=39						
ASAJ	Asahikawa	8.63	11	P	Pn	11 37 43.5	-2.1
	2.1nm,0.4s,baz=205,slow=21,SNR=9.1						
ASAJ				S	Sn	11 39 15.7	-5.6
	4.9nm,0.7s,baz=336,slow=15,SNR=1.8						
JKA	Kamikawa-asahi	8.63	11	Pn	Pn	11 37 43.8	-1.8
JCJ	Chichijima	8.70	168	P	Pn	11 37 44.2	-2.5
	31nm,0.3s,baz=282,slow=21,SNR=16						
JCJ				S	Sn	11 39 15.6	-7.7
	33nm,0.6s,baz=230,slow=19,SNR=2.0						
JCJ	Chichijima	8.70	168	Pn	Pn	11 37 44.6	-2.1
JCJ	Chichijima	8.70	168	P	Pn	11 37 44.0	-2.7
KSRS	Korea Array	10.07	284	P	Pn	11 38 08.2	+2.9
	3.3nm,0.7s,baz=96,slow=14,SNR=15						
KSRS				LR	LR	11 42 14.2	
	comp=Z,26nm,18.9s,baz=60,slow=39						
KLR	Kul'dur	14.92	338	P	Pn	11 39 07.4	-3.0
	0.8nm,0.5s,baz=131,slow=8.3,SNR=2.4						
SONM	Songino Array	27.80	306	P	P	11 41 25.6	-0.4
	0.3nm,0.5s,baz=103,slow=9.5,SNR=2.5						
SONM				PcP	PcP	11 44 41.0	+0.3
	0.2nm,0.5s,baz=169,slow=2.9,SNR=1.8						
	0.3nm,0.5s						
H11N2	WAKE ISLAND Hy	28.32	117	T	T	12 11 22.8	
	baz=308,slow=75,SNR=18						
H11N1	WAKE ISLAND Hy	28.33	117	T	T	12 11 11.2	
	baz=308,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	28.34	117	T	T	12 11 12.0	
	baz=308,slow=75,SNR=13						
H11S1	WAKE ISLAND Hy	28.97	119	T	T	12 11 37.9	
	baz=312,slow=75,SNR=11						
H11S3	WAKE ISLAND Hy	28.97	119	T	T	12 11 27.7	
	baz=312,slow=75,SNR=7.6						
H11S2	WAKE ISLAND Hy	28.98	119	T	T	12 11 43.3	
	baz=312,slow=75,SNR=5.3						
ZALV	Zalesovo Beam	42.15	314	P	P	11 43 29.5	+0.6
	1.4nm,0.4s,baz=92,slow=9.8,SNR=8.1						
ZALV				PcP	PcP	11 45 22.2	+0.1
	1.4nm,0.6s,baz=85,slow=3.7,SNR=5.9						
	1.4nm,0.4s						
ZALV	Zalesovo Beam	42.15	314	P	P	11 43 29.3	+0.4
MK31	Makanchi Array	44.05	303	P	P	11 43 44.6	+0.2
MKAR	Makanchi Array	44.05	303	P	P	11 43 45.3	+0.9
	1.8nm,0.7s,baz=92,slow=10,SNR=20						
MKAR				PcP	PcP	11 45 29.1	+0.4
	0.6nm,0.7s,baz=77,slow=5.1,SNR=3.5						
	1.8nm,0.7s						
MKAR	Makanchi Array	44.05	303	P	P	11 43 44.9	+0.4
NRIK	Noril'sk	44.12	336	P	P	11 43 45.3	+0.7
	2.0nm,0.6s,baz=117,slow=11,SNR=4.7						
	2.0nm,0.6s						
MAKZ	Makanchi	44.27	303	P	P	11 43 46.2	0.0
KURK	Kurchatov	46.04	309	P	P	11 44 00.7	+0.6
KURK				IAmb	IAmb	11 44 02.8	
	comp=Z,4.6nm,0.8s						
MTN	Manton Dam	49.01	192	P	P	11 44 23.6	+0.2
MDM	Murphy Dome	50.58	32	P	P	11 44 36.8	+1.9
MDM				IAmb	IAmb	11 45 04.7	
	comp=Z,2.8nm,0.9s						
ILAR	Eielson Array	51.16	32	P	P	11 44 40.6	+1.5
	comp=Z,0.5nm,0.8s,baz=270,slow=7.0,SNR=6.4						
	comp=Z,0.5nm,0.8s						
KNRA	Kununurra	52.21	194	P	P	11 44 47.6	+0.2
KKAR	Karatay Array	53.00	301	P	P	11 44 53.6	+0.5
FITZ	Fitzroy Crossi	55.23	197	P	P	11 45 10.8	+1.3
WB0	Warramunga Arr	55.41	187	P	P	11 45 11.5	+0.7
WB0				IAmb	IAmb	11 45 12.2	
	comp=Z,3.9nm,0.7s						
WRAB	Tennant Creek	55.58	187	P	P	11 45 12.7	+0.7
WRAB				IAmb	IAmb	11 45 22.5	
	comp=Z,7.6nm,1.4s						
WB2	Warramunga Arr	55.59	187	P	P	11 45 13.4	+1.4
WB2				IAmb	IAmb	11 45 46.6	
	comp=Z,8.2nm,1.4s						
WRA	Warramunga Arr	55.59	187	P	P	11 45 11.8	-0.3
	comp=Z,2.5nm,0.6s,baz=0.1,slow=7.5,SNR=59						
	comp=Z,2.5nm,0.6s						
WRA	Warramunga Arr	55.59	187	P	P	11 45 12.1	+0.1
ARU	Arti	56.76	319	P	P	11 45 20.2	+0.1
ARU				IAmb	IAmb	11 45 21.2	
	comp=Z,3.4nm,0.7s						
ABKAR	Akbulak array	58.10	310	P	P	11 45 30.2	+0.7
ABKAR				IAmb	IAmb	11 45 30.9	
	comp=Z,3.6nm,1.1s						
ASAR	Alice Springs	59.31	187	P	P	11 45 38.5	+0.2
	comp=Z,0.7nm,0.7s,baz=18,slow=9.0,SNR=13						
	comp=Z,0.7nm,0.7s						
PSA00	Pilbara Seismi	60.12	202	P	P	11 45 43.2	-0.5
PSA00				IAmb	IAmb	11 45 57.9	
	comp=Z,4.8nm,1.1s						
RES	Resolute Bay	64.16	14	P	P	11 46 10.7	+0.5
	comp=Z,0.8nm,0.8s,baz=300,slow=4.9,SNR=4.3						
	comp=Z,0.8nm,0.8s						
YKA	Yellowknife Ar	65.46	30	P	P	11 46 19.2	+0.3
	comp=Z,0.2nm,0.7s,baz=292,slow=6.6,SNR=4.0						
	comp=Z,0.2nm,0.7s						
YKA	Yellowknife Ar	65.46	30	P	P	11 46 19.5	+0.7
FINES	FINESS Array B	69.58	332	P	P	11 46 45.0	+0.2
	comp=Z,3.1nm,0.9s,baz=69,slow=4.4,SNR=7.0						
	comp=Z,3.1nm,0.9s						
FINES	FINESS Array B	69.58	332	P	P	11 46 45.4	+0.6
KBZ	Khabaz	71.07	311	P	P	11 46 54.5	+0.3
	comp=Z,2.3nm,0.8s,baz=40,slow=6.6,SNR=4.4						
	comp=Z,2.3nm,0.8s						
AKASG	Malin Array Be	74.79	322	P	P	11 47 16.4	+0.3
	comp=Z,1.0nm,0.4s,baz=46,slow=6.0,SNR=12						
AKASG				LR	LR	12 21 20.0	
	comp=Z,18nm,18.4s,baz=246,slow=37						
	comp=Z,1.0nm,0.4s						
NC405	NORSAR Array S	74.86	337	P	P	11 47 16.8	+0.5
NB2	NORSAR Subarra	75.08	337	P	P	11 47 17.8	+0.2
	comp=Z,0.4nm,0.4s,baz=39,slow=6.5						
NOA	NORSAR Array B	75.08	337	P	P	11 47 18.0	+0.4
	comp=Z,0.9nm,0.7s,baz=60,slow=6.8,SNR=3.6						
	comp=Z,0.9nm,0.7s						
NVAR	Mina Array Bea	76.57	52	P	P	11 47 26.9	+0.1
	comp=Z,0.2nm,0.5s,baz=308,slow=4.4,SNR=2.2						
	comp=Z,0.2nm,0.5s						
BRTR	Keskin Array B	79.04	311	P	P	11 47 41.2	+0.8
	comp=Z,0.9nm,0.7s,baz=56,slow=2.2,SNR=4.1						
	comp=Z,0.9nm,0.7s						
PDAR	Pinedale Array	79.30	45	P	P	11 47 42.6	+0.7
	comp=Z,0.4nm,0.6s,baz=251,slow=2.2,SNR=6.1						
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	79.30	45	P	P	11 47 42.7	+0.8
TXAR	Lajitas Array	91.71	52	P	P	11 48 44.4	+0.7
	comp=Z,0.3nm,0.6s,baz=293,slow=2.1,SNR=4.1						
	comp=Z,0.3nm,0.6s						
TORD	Torodi Ar. Bea	117.60	313	PKP	PKPdf	11 54 21.2	-0.9
	comp=Z,0.3nm,0.7s,baz=28,slow=2.3,SNR=2.2						

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*NOU **19** 11:38:04.8, 33°.88S×176°.91W, h102^{km}, mb5.1/21, South of Kermadec Islands*

*WEL **19** 11:38:11.4±1.3, 33°S±10°×17°8W±2°9, h33^{km}, M5.4/15, mB5.8/13, ML5.7/15, MLv5.6/15, Mw(mB)5.4/13, Error ellipse: s-maj=0.0km s-min=0.0km az=107.6, confirmed*

*MOS **19** 11:38:13.2±1.0, 33°.11S×179°.20W, h31^{km}, mb5.3/17, Error ellipse: s-maj=13.5km s-min=12.3km az=96.1*

*NEIC **19** 11:38:15.0±2.2, 33°.15S±0°.07×179°.1W±0°.1, h33^{km}±2^{km}, mb5.2/46, Error ellipse: s-maj=16.6km s-min=10.0km az=105.0*

*GCMT **19** 11:38:17.0±0.3, 33°.16S±0°.02×179°.08W±0°.03, h49^{km}±1^{km}, MW4.9/59, Moment Tensor Solution. s45,c51; s59,c78; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.60±.18; $M_{\theta\theta}$-1.35±.14; $M_{\phi\phi}$-1.25±.12; $M_{r\theta}$-0.53±.11; $M_{\theta\phi}$-1.67±.08; $M_{\phi r}$-1.19±.09; Best double couple: $M_0$3.08200×10^{16} NP1:ϕ_s216.00000°, δ58.00000°, λ78.00000°. NP2: ϕ_s57.00000°, δ34.00000°, λ108.00000°. Principal axes: T 2.9390, Plg74.0000°, Azm93.0000°; N 0.2860, Plg10.0000°, Azm222.0000°; P -3.2250, Plg12.0000°, Azm314.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **19** 11:38:19.0±1.6, 33°.13S×179°.17W, h72^{km}±13^{km}, mb4.4/23, mbtmp4.7/24, MS4.0/50 Error ellipse: s-maj=14.7km s-min=11.7km az=10.0*

ISC 19 11:38:14.2±0.2**, 33°.21S**±0°.04×**178°.95W**±0°.05**, h35**^{km}±2^{km}**, h37**^{km}**:pP-P, n528,** σ1^{s}**91**/500**, mb5.2**/60**, MS4.1**/51**, 12C-5D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.04	13	P	Pn	11 39 12.2	-1.2
GLKZ				S	Sn	11 39 58.9	-0.6
RAO	Raoul Island	4.04	13	P	Pn	11 39 12.6	-1.0
	752nm,0.2s,baz=115,slow=9.0,SNR=9.4						
RAO				S	Sn	11 39 58.1	-1.6
	764nm,0.3s,baz=108,slow=19,SNR=1.8						
RAO				LR	LR	11 40 46.4	
	comp=Z,1μm,19.7s,baz=164,slow=37						
RAO	Raoul Island	4.04	13	Pn	Pn	11 39 12.4	-1.2
RAO	Raoul Island	4.04	13	P	Pn	11 39 12.6	-1.0
RAO	Raoul Island	4.04	13	P	Pn	11 39 12.4	-1.2
RIZ	Raoul Island	4.05	13	P	Pn	11 39 12.3	-1.3
RIZ				S	Sn	11 40 00.1	+0.3
MXZ	Matakaoa Point	4.88	207	Pn	Pn	11 39 25.0	-0.1
MXZ	Matakaoa Point	4.88	207	P	Pn	11 39 24.2	-0.9
MXZ	Matakaoa Point	4.88	207	P	Pn	11 39 24.5	-0.6
MXZ				S	Sn	11 40 20.8	+0.4
WMGZ	Waiomatatini S	5.07	204	P	Pn	11 39 27.8	+0.1
WMGZ				S	Sn	11 40 25.9	+0.8
PKGZ	Pakihiroa	5.26	207	P	Pn	11 39 29.5	-0.8
PKGZ				S	Sn	11 40 30.9	+1.3
HAZ	Te Kaha	5.26	210	P	Pn	11 39 30.1	-0.2
PUZ	Puketiti	5.36	204	P	Pn	11 39 31.1	-0.5
RUGZ	Raukumara Rang	5.48	209	P	Pn	11 39 32.7	-0.7
TWGZ	Tauwhareparae	5.55	206	P	Pn	11 39 33.4	-0.9
KUZ	Kuaotunu	5.62	230	P	Pn	11 39 38.1	+2.9
WHRZ	Whale Island	5.70	214	P	Pn	11 39 38.1	+1.7
CNGZ	Carnagh Statio	5.75	203	P	Pn	11 39 35.9	-1.0
TKGZ	Te Karaka	5.83	206	P	Pn	11 39 36.3	-1.7
MWZ	Matawai	5.86	208	P	Pn	11 39 37.0	-1.5
MARZ	Manawahe	5.95	216	P	Pn	11 39 41.5	+1.8
URZ	Urewera	5.97	211	P	Pn	11 39 38.8	-1.2
	96nm,0.3s,baz=3.4,slow=19,SNR=106						
URZ				S	Sn	11 40 46.4	-0.6
	131nm,0.3s,baz=0.0,slow=20,SNR=6.0						
URZ	Urewera	5.97	211	P	Pn	11 39 39.4	-0.6
URZ	Urewera	5.97	211	P	Pn	11 39 38.7	-1.2
EDRZ	Edgecumbe	6.01	214	P	Pn	11 39 42.2	+1.6
RAGZ	Rawiri	6.04	208	P	Pn	11 39 41.1	0.0
RIGZ	Rimuhau	6.10	205	P	Pn	11 39 40.3	-1.4
LIRZ	Lichensteins R	6.11	217	P	Pn	11 39 44.9	+3.0
MKRZ	Makatiti	6.17	216	P	Pn	11 39 46.4	+3.6
KARZ	Kaharoa	6.19	218	P	Pn	11 39 44.8	+1.8
OMRZ	Omania	6.19	217	P	Pn	11 39 45.8	+2.7
KMRZ	Kaimai	6.22	221	P	Pn	11 39 45.8	+2.3
TARZ	Mount Tarawera	6.23	215	P	Pn	11 39 45.1	+1.5
MUGZ	Murupara	6.30	212	P	Pn	11 39 42.8	-1.8
RRRZ	Republican Roa	6.30	214	P	Pn	11 39 45.6	+1.0
HLRZ	Highlands Stat	6.32	216	P	Pn	11 39 46.9	+2.1
SNGZ	Shannon Statio	6.32	207	P	Pn	11 39 44.1	-0.8
RTZ	Ruatahuna	6.32	210	Pn	Pn	11 39 43.2	-1.7
RTZ	Ruatahuna	6.32	210	P	Pn	11 39 43.0	-1.9
UTU	Utuhina	6.34	217	P	Pn	11 39 49.4	+4.4
KNZ	Kokohu	6.41	204	P	Pn	11 39 44.2	-1.8
HSRZ	Hossack Road	6.41	216	P	Pn	11 39 49.0	+2.9
MHGZ	Mahia Peninsul	6.45	202	P	Pn	11 39 44.6	-2.0
HRRZ	Handcock Road	6.46	215	P	Pn	11 39 48.7	+2.0
PRRZ	Plateau Road	6.49	214	P	Pn	11 39 47.3	+0.1
GRRZ	Galatos Road	6.51	217	P	Pn	11 39 49.8	+2.4
RAHZ	Arahi	6.53	208	P	Pn	11 39 47.2	-0.5
ALRZ	Allen Road	6.56	214	P	Pn	11 39 47.7	-0.5
MTHZ	Maungataniwha	6.58	210	P	Pn	11 39 48.1	-0.3
WHHZ	Waihua	6.62	207	P	Pn	11 39 50.1	+1.3
WPRZ	Whakapapatarin	6.62	215	P	Pn	11 39 51.0	+2.1
MRHZ	Matea Rd	6.75	212	P	Pn	11 39 50.5	-0.2
KUTZ	Kaahu Road	6.76	217	P	Pn	11 39 52.6	+1.7
TLZ	Tolley Road	6.79	220	P	Pn	11 39 53.5	+2.2
NMHZ	Naumai	6.80	209	P	Pn	11 39 51.0	-0.5
ARHZ	Aropaoanui	6.87	207	P	Pn	11 39 50.8	-1.5
WATZ	Wairara	6.97	217	P	Pn	11 39 55.1	+1.2
BKZ	Black Stump Fm	6.99	210	Pn	Pn	11 39 51.5	-2.5
BKZ	Black Stump Fm	6.99	210	P	Pn	11 39 52.1	-2.0
BKZ	Black Stump Fm	6.99	210	P	Pn	11 39 51.6	-2.5
RATZ	Rangitukua	7.08	216	P	Pn	11 39 55.8	+0.6
RITZ	Rihia Road	7.12	215	P	Pn	11 39 55.7	-0.2
MCHZ	McNeill Hill	7.14	208	P	Pn	11 39 54.1	-2.0
CKHZ	Cape Kidnapper	7.18	205	P	Pn	11 39 54.4	-2.3
KATZ	Kakaramea	7.20	215	P	Pn	11 39 58.5	+1.4
KWHZ	Kaweka Forest	7.24	210	P	Pn	11 39 52.8	-4.7
HIZ	Hauiti	7.30	222	P	Pn	11 40 00.5	+2.3
HIZ	Hauiti	7.30	222	P	Pn	11 40 00.8	+2.5
NTVZ	North Tongarir	7.31	215	P	Pn	11 39 58.6	+0.2
TMVZ	Te Maari	7.31	215	P	Pn	11 39 57.4	-1.0
KRVZ	Karewarewa	7.32	215	P	Pn	11 39 59.3	+0.7
NNVZ	North Ngauruho	7.36	215	P	Pn	11 39 58.9	-0.3
WTVZ	West Tongariro	7.36	215	P	Pn	11 39 59.2	0.0
OTVZ	Oturere	7.36	215	P	Pn	11 39 58.3	-0.9
SNVZ	South Ngauruho	7.39	215	P	Pn	11 39 59.8	+0.1
TWVZ	Taurewa	7.40	216	P	Pn	11 39 60.0	+0.2
NGZ	Ngauruhoe	7.40	215	P	Pn	11 40 00.3	+0.5
BHHZ	Black Hill Sta	7.44	211	P	Pn	11 39 59.5	-0.8
TUVZ	Tukino	7.45	214	P	Pn	11 40 00.1	-0.4
FWVZ	Far West T-bar	7.49	215	P	Pn	11 40 00.8	-0.3
WHVZ	Whangaehu Hut	7.49	214	P	Pn	11 40 01.3	+0.2
DRZ	Dome Shelter	7.50	215	P	Pn	11 40 01.6	+0.3
MOVZ	Moawhango	7.51	213	P	Pn	11 40 00.1	-1.2
WNVZ	Wahianoa	7.52	214	P	Pn	11 40 00.6	-0.9
TRVZ	Turoa	7.53	215	P	Pn	11 40 01.4	-0.1
PXZ	Pawanui	7.59	205	P	Pn	11 39 59.0	-3.3
PKVZ	Pokaka	7.62	216	P	Pn	11 40 02.6	0.0
MTVZ	Mangateitei	7.63	215	P	Pn	11 40 02.6	-0.3
PNHZ	Pukenui	7.74	209	P	Pn	11 40 01.3	-3.0
WPHZ	Waipukurau	7.78	207	P	Pn	11 40 01.8	-3.0
VRZ	Vera Road	7.79	219	P	Pn	11 40 05.5	+0.5
PRHZ	Porangahau	7.88	205	P	Pn	11 40 04.0	-2.3
TSZ	Takapari Road	7.96	209	P	Pn	11 40 05.5	-1.9
MHEZ	Mangahewa	7.99	221	P	Pn	11 40 13.6	+5.8
DVHZ	Dannevirke	8.09	208	P	Pn	11 40 06.1	-3.0
WAZ	Wanganui	8.15	215	P	Pn	11 40 09.1	-0.9
LREZ	Lake Rotokare	8.22	219	P	Pn	11 40 11.4	+0.5
NEZ	North Egmont	8.25	221	P	Pn	11 40 14.1	+2.7
PKE	Pukeiti	8.26	222	P	Pn	11 40 13.6	+2.1
PREZ	Palmer Road	8.27	220	P	Pn	11 40 14.4	+2.9
KHEZ	Kahui Hut	8.31	221	P	Pn	11 40 13.2	+1.0
KHEZ	Kahui Hut	8.31	221	P	Pn	11 40 14.2	+2.0
POWZ	Post Office Ro	8.32	209	P	Pn	11 40 10.4	-1.9
NBEZ	Newall Road No	8.38	222	P	Pn	11 40 15.5	+2.5
PRWZ	Pori Road	8.38	208	P	Pn	11 40 10.6	-2.5
BFZ	Birch Farm	8.39	206	P	Pn	11 40 09.4	-3.8
BFZ	Birch Farm	8.39	206	P	Pn	11 40 09.3	-3.9
CPWZ	Castlepoint	8.60	205	P	Pn	11 40 15.5	-0.6
TIWZ	Tintock	8.60	207	P	Pn	11 40 13.8	-2.4
MRZ	Mangatainoka R	8.63	209	P	Pn	11 40 12.3	-4.2
HOWZ	Holdsworth Sta	8.85	208	P	Pn	11 40 15.3	-4.2
TMWZ	Te Maipa	8.89	206	P	Pn	11 40 15.4	-4.7
OGWZ	Otaki Gorge	8.93	210	P	Pn	11 40 16.6	-4.0
KIW	Kapiti Island	9.07	211	P	Pn	11 40 18.5	-4.1
MTW	Mount Morrison	9.08	208	P	Pn	11 40 18.2	-4.5
TRWZ	Traveller	9.22	206	P	Pn	11 40 21.1	-3.4
PAWZ	Paruwai Farm	9.30	207	P	Pn	11 40 21.5	-4.2
WEL	Wellington	9.48	210	P	Pn	11 40 24.3	-3.8
PLWZ	Palliser	9.53	207	P	Pn	11 40 25.0	-3.9
SNZO	South Karori	9.53	210	P	Pn	11 40 23.7	-5.1
QRZ	Quartz Range	10.20	219	P	Pn	11 40 35.9	-2.1
BSWZ	Blackbirch Sta	10.22	212	P	Pn	11 40 34.7	-3.6
KHZ	Kahutara	10.94	211	P	Pn	11 40 42.9	-5.2
GVZ	Greta Valley S	11.60	211	Pn	Pn	11 40 51.5	-5.7
MQZ	McQueen's Vall	12.36	210	Pn	Pn	11 41 01.1	-6.4
RPZ	Rata Peaks	13.08	214	P	Pn	11 41 10.6	-6.7
	7.6nm,0.4s,baz=4.1,slow=17,SNR=18						
RPZ				S	Sn	11 43 27.5	-14
	14nm,0.4s,baz=69,slow=17,SNR=7.7						
RPZ				LR	LR	11 46 32.0	
	comp=Z,669nm,21.2s,baz=46,slow=38						
RPZ	Rata Peaks	13.08	214	P	Pn	11 41 11.4	-6.0
ODZ	Otahua Downs	14.29	211	P	Pn	11 41 27.1	-6.8
JCZ	Jackson Bay	14.45	218	P	Pn	11 41 32.1	-4.1
SYZ	Scrubby Hill	16.12	211	P	Pn	11 41 50.1	-7.8
NIUE	Niue	16.23	32		Pn	11 41 56.6	-2.9
NIUE				IAmb	IAmb	11 42 04.8	
	comp=Z,234nm,0.9s						
OUENC	Ouen Island, N	16.52	307	P	P	11 42 09.2	+3.7
OUENC				IAmb	IAmb	11 42 10.6	
	comp=Z,248nm,1.3s						
OUENC	Ouen Island, N	16.52	307	P	P	11 42 10.1	+4.6
DZM	Mont Dzumac	17.03	307	*e*Pn	P	11 42 11.6	+0.4
	comp=Z,204nm,1.1s						
DZM				*e*LR	LR	11 46 04.3	
	comp=Z,3μm,24.6s						
DZM	Mont Dzumac	17.03	307	P	P	11 42 11.6	+0.4
	comp=Z,62nm,1.0s,baz=118,slow=14,SNR=13						
DZM				LR	LR	11 47 20.2	
	comp=Z,2μm,20.4s,baz=150,slow=32						
DZM	Mont Dzumac	17.03	307	P	P	11 42 13.2	+2.0
DZM	Mont Dzumac	17.03	307	P	P	11 42 16.2	+5.0
KOUNC	Koumac, New Ca	19.53	306	P	P	11 42 37.0	-1.6
KOUNC	Koumac, New Ca	19.53	306	P	Pn	11 42 44.3	+4.2
	comp=Z,40nm,0.8s						
AFI	Afiamalu	20.30	20	P	P	11 42 45.4	-1.7
	comp=Z,9.4nm,0.4s,baz=143,slow=10,SNR=3.0						
AFI				S	S	11 46 16.6	-16
	comp=Z,13nm,0.6s,baz=232,slow=19,SNR=2.2						
AFI	Afiamalu	20.30	20	P	P	11 42 44.9	-2.2
AFI	Afiamalu	20.30	20	P	P	11 42 44.9	-2.2
AFI				pmax	pmax		
	comp=Z,88nm,1.4s						
RAR	Rarotonga	20.79	60	P	Pn	11 42 54.7	-0.1
	comp=Z,22nm,0.8s,baz=228,slow=4.4,SNR=4.6						
RAR				S	S	11 46 33.7	-8.7
	comp=Z,6.1nm,0.6s,baz=339,slow=13,SNR=1.3						
RAR				LR	LR	11 51 58.7	
	comp=Z,131nm,18.1s,baz=240,slow=39						
	comp=Z,22nm,0.8s						
ARMA	Armidale	25.12	268	P	P	11 43 34.3	-1.6
ARMA				IAmb	IAmb	11 43 41.7	
	comp=Z,78nm,1.8s						
EIDS	Eidsvold	27.21	279	P	P	11 43 56.5	+1.7
TAU	Tasmania Unive	28.11	240	P	P	11 44 01.8	-0.8
TAU				IAmb	IAmb	11 44 15.9	
	comp=Z,179nm,1.8s						
TAU	Tasmania Unive	28.11	240	P	P	11 44 01.8	-0.8
TAU				pmax	pmax		
	comp=Z,179nm,1.8s						
TOO	Toolangi	29.20	251	P	P	11 44 13.1	+0.7
TOO	Toolangi	29.20	251	P	P	11 44 13.1	+0.7
TOO				pmax	pmax		
	comp=Z,40nm,1.9s						
PAE	Paea	30.57	67	*e*T	T	12 16 10.4	
	comp=Z,37nm,0.2s						
PPT2	Papeete2	30.62	67	*e*S	S	11 49 29.0	+3.8
	comp=Z,81nm,25.5s						
PPT2				*e*LR	LR	11 52 23.8	
	comp=Z,504nm,24.8s						
PPT2				*e*LR	LR	11 52 24.0	
	comp=Z,369nm,26.0s						
PPT2	Papeete2	30.62	67	*e*T	T	12 16 19.4	
	comp=Z,32nm,0.3s						
PPTF	Pamatai, Papee	30.63	67	P	P	11 44 27.0	+1.7
PPT	Papeete	30.63	67	P	P	11 44 27.4	+2.2
	comp=Z,69nm,0.9s,baz=225,slow=4.3,SNR=4.3						
PPT				LR	LR	11 53 26.0	
	comp=Z,154nm,21.9s,baz=246,slow=30						
	comp=Z,69nm,0.9s						
HNR	Honiara	30.64	316	P	P	11 44 24.8	-0.4

	comp=Z,910nm,0.8s,baz=176,slow=13,SNR=3.9						
HNR	Honiara	30.64	316	P	P	11 44 23.2	-2.0
HNR				pmax	pmax		
	comp=Z,78nm,0.9s						
HNR	Honiara	30.64	316	P	P	11 44 24.7	-0.4
HNR				pP	pP	11 44 36.0	+1.4
HNR	Honiara	30.64	316	P	P	11 44 23.2	-2.0
TVO	Taravao	30.76	67	eT	T	12 16 40.1	
	comp=Z,4.4nm,0.3s						
MEH	Mehetia	31.63	69	eT	T	12 17 44.3	
	comp=Z,38nm,0.3s						
STKA	Stephens Creek	33.15	261	P	P	11 44 47.1	-0.1
	comp=Z,2.0nm,0.7s,baz=82,slow=9.1,SNR=3.9						
STKA				PcP	PcP	11 47 28.7	-1.0
	comp=Z,3.3nm,0.8s,baz=0.0,slow=2.0,SNR=3.5						
STKA				LR	LR	11 56 47.2	
	comp=Z,601nm,20.0s,baz=69,slow=34						
	comp=Z,2.0nm,0.7s						
STKA	Stephens Creek	33.15	261⇓	eP	P	11 44 47.4	+0.1
PMOR	Pomariorio Ree	33.46	65	eT	T	12 19 56.9	
	comp=Z,11nm,0.3s						
VAH	Vaihoa	33.52	65	eT	T	12 20 05.2	
	comp=Z,64nm,0.2s						
CTA	Charters Tower	33.57	284	P	P	11 44 52.0	+1.0
	comp=Z,20nm,0.6s,baz=113,slow=10.0,SNR=61						
CTA				LR	LR	11 56 14.3	
	comp=Z,354nm,21.1s,baz=104,slow=32						
	comp=Z,20nm,0.6s						
CTAO	Charters Tower	33.57	284	P	P	11 44 52.7	+1.7
CTAO				IAmb	IAmb	11 44 53.5	
	comp=Z,21nm,0.7s						
CTAO	Charters Tower	33.57	284	P	P	11 44 52.7	+1.7
CTAO				pmax	pmax		
	comp=Z,21nm,0.7s						
CTAO	Charters Tower	33.57	284	P	P	11 44 52.5	+1.5
CTAO				pP	pwP	11 45 03.9	+0.3
BBOO	Buckleboo	37.51	258	P	P	11 45 24.0	-0.7
BBOO				IAmb	IAmb	11 46 27.2	
	comp=Z,49nm,1.4s						
PMG	Port Moresby	39.18	299	P	P	11 45 38.8	0.0
	comp=Z,32nm,0.8s,baz=121,slow=4.9,SNR=19						
PMG				LR	LR	11 59 08.7	
	comp=Z,467nm,20.2s,baz=156,slow=32						
	comp=Z,32nm,0.8s						
PMG	Port Moresby	39.18	299	P	P	11 45 39.6	+0.7
PMG				IAmb	IAmb	11 45 40.7	
	comp=Z,31nm,0.8s						
PMG	Port Moresby	39.18	299	P	P	11 45 39.6	+0.7
PMG				pmax	pmax		
	comp=Z,31nm,0.8s						
PMG	Port Moresby	39.18	299	P	P	11 45 39.6	+0.7
PMG				pP	pwP	11 45 50.8	-1.3
COEN	Coen	39.37	290	P	P	11 45 41.4	+0.9
KRVT	Keravat (AS076	39.49	310	P	P	11 45 41.6	+0.1
	comp=Z,481nm,0.8s,baz=178,slow=1.5,SNR=43						
KRVT				LR	LR	11 59 41.9	
	comp=Z,98nm,18.6s,baz=269,slow=33						
DRV	Dumont d’Urvil	41.24	203	P	P	11 45 55.5	+0.2
AS31	Alice Springs	42.23	270	P	P	11 46 04.2	+0.1
ASAR	Alice Springs	42.23	270	P	P	11 46 03.7	-0.4
	comp=Z,15nm,0.7s,baz=108,slow=7.4,SNR=79						
ASAR				PcP	PcP	11 47 55.5	-2.2
	comp=Z,2.3nm,0.8s,baz=110,slow=5.3,SNR=1.8						
ASAR				ScP	ScP	11 51 41.5	-4.1
	comp=Z,0.6nm,0.7s,baz=116,slow=4.2,SNR=2.9						
ASAR				S	S	11 52 16.1	-6.2
	comp=Z,2.5nm,0.9s,baz=112,slow=16,SNR=9.0						
ASAR				PKiKP	PKiKP	11 55 01.9	-1.4
	comp=Z,0.4nm,0.6s,baz=118,slow=1.5,SNR=4.9						
ASAR				LR	LR	12 02 51.3	
	comp=Z,198nm,19.0s,baz=130,slow=35						
	comp=Z,15nm,0.7s						
TAOE	Nuku Hiva Isla	43.20	65	eLR	LR	11 58 13.0	
	comp=Z,259nm,24.2s						
WB2	Warramunga Arr	43.47	276	P	P	11 46 13.2	-0.9
WB2				IAmb	IAmb	11 46 14.2	
	comp=Z,26nm,0.6s						
WRAB	Tennant Creek	43.47	276	P	P	11 46 13.2	-1.0
WRAB				IAmb	IAmb	11 46 14.1	
	comp=Z,22nm,0.7s						
WRAB	Tennant Creek	43.47	276	d iP	P	11 46 13.5	-0.7
WRAB				pmax	pmax		
	comp=Z,33nm,1.3s						
WRAB	Tennant Creek	43.47	276	P	P	11 46 13.2	-1.0
WRA	Warramunga Arr	43.48	276	P	P	11 46 13.7	-0.5
	comp=Z,16nm,0.5s,baz=112,slow=11,SNR=63						
WRA				ScP	ScP	11 51 44.1	-6.5
	comp=Z,2.3nm,1.0s,baz=114,slow=4.3,SNR=4.9						
WRA				S	S	11 52 33.7	-6.9
	comp=Z,0.5nm,1.0s,baz=110,slow=17,SNR=4.5						
WRA				PKiKP	PKiKP	11 55 03.1	-1.3
	comp=Z,0.4nm,0.5s,baz=151,slow=0.3,SNR=7.4						
WRA				LR	LR	12 03 04.2	
	comp=Z,244nm,21.3s,baz=132,slow=34						
	comp=Z,16nm,0.5s						
WRA	Warramunga Arr	43.48	276	P	P	11 46 13.0	-1.2
WRA	Warramunga Arr	43.48	276	P	P	11 46 13.0	-1.2
WRA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WB0	Warramunga Arr	43.52	276	P	P	11 46 13.7	-0.8
WB0				IAmb	IAmb	11 46 14.5	
	comp=Z,29nm,0.6s						
FORT	Forrest	44.61	258	P	P	11 46 22.8	-0.4
FORT				IAmb	IAmb	11 47 42.8	
	comp=Z,54nm,1.1s						
VNDA	Vanda	45.23	186	P	P	11 46 28.8	+1.4
	comp=Z,2.3nm,1.0s,baz=358,slow=11,SNR=2.7						
VNDA				PcP	PcP	11 48 08.3	+1.4
	comp=Z,3.2nm,0.8s,baz=333,slow=4.4,SNR=4.7						
VNDA				LR	LR	12 01 33.5	
	comp=Z,205nm,18.5s,baz=12,slow=31						
	comp=Z,2.3nm,1.0s						
VNDA	Vanda	45.23	186	P	P	11 46 28.9	+1.5
VNDA	Vanda	45.23	186	P	P	11 46 28.9	+1.5
VNDA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VNDA	Vanda	45.23	186	P	P	11 46 30.2	+2.8
VNDA				pP	pwP	11 46 43.1	+1.4
GENI	Genyem	48.88	300	P	P	11 46 56.7	0.0
	comp=Z,72nm,1.2s						
MTN	Manton Dam	49.69	282	P	P	11 47 02.0	-0.9
MTN				IAmb	IAmb	11 47 03.4	
	comp=Z,12nm,0.8s						
CCD	Concordia, Ant	50.03	197	P	P	11 47 06.2	+1.0
CCD				ScP	ScP	11 52 16.1	-1.5
KNRA	Kununurra	50.18	277	P	P	11 47 06.1	-0.5
KNRA				IAmb	IAmb	11 47 21.6	
	comp=Z,63nm,1.6s						
FITZ	Fitzroy Crossi	51.61	273		P	11 47 16.4	-1.0
CASY	Casey	52.29	209	P	P	11 47 21.4	-0.3
NWAO	Narrogin (SRO)	52.70	252	LR	LR	12 08 32.7	
	comp=Z,166nm,19.1s,baz=286,slow=34						
FAKI	Fak Fak	54.62	293	P	P	11 47 38.0	-1.5
FAKI				IAmb	IAmb	11 48 00.0	
	comp=Z,20nm,1.1s						
FAKI	Fak Fak	54.62	293	P	P	11 47 37.9	-1.6
	comp=Z,15nm,1.1s						
PSA00	Pilbara Seismi	54.89	266	P	P	11 47 40.4	-1.1
PSA00				IAmb	IAmb	11 48 20.5	
	comp=Z,56nm,1.6s						
MORW	Morawa	55.00	256	P	P	11 47 39.8	-2.4
MBWA	Marble Bar	55.17	266	P	P	11 47 41.7	-1.7
MBWA				IAmb	IAmb	11 49 06.1	
	comp=Z,76nm,2.0s						
MBWA	Marble Bar	55.17	266	P	P	11 47 39.2	-4.2
QSPA	South Pole Qui	56.91	180	P	P	11 47 57.9	+2.5
	comp=Z,48nm,0.8s,baz=35,slow=1.5,SNR=197						
QSPA				LR	LR	12 08 26.3	
	comp=Z,217nm,21.4s,baz=40,slow=32						
	comp=Z,48nm,0.8s						
QSPA	South Pole Qui	56.91	180	P	P	11 47 57.3	+1.9
QSPA	South Pole Qui	56.91	180	P	P	11 47 57.9	+2.5
QSPA				pP	pwP	11 48 11.3	+1.3
SOEI	Soe	57.01	281	P	P	11 47 56.1	-0.7
SOEI	Soe	57.01	281	P	P	11 47 57.1	+0.2
	comp=Z,71nm,1.1s						
KIP	Kipapa	57.89	23⇑	eP	P	11 48 04.7	+2.1
KIP				pmax	pmax		
	comp=Z,91nm,1.7s						
GUMO	Guam	57.95	317	LR	LR	12 11 21.0	
	comp=Z,50nm,18.6s,baz=130,slow=34						
GIRL	Giralia	59.10	262	P	P	11 48 10.0	-1.2
RPN	Rapa Nui	59.50	104	LR	LR	12 07 26.4	
	comp=Z,192nm,19.5s,baz=220,slow=29						
PLAI	Plampang	62.89	277	P	P	11 48 35.7	-1.4
	comp=Z,34nm,1.1s						
KAPI	Kappang	63.36	282	LR	LR	12 16 24.2	
	comp=Z,143nm,19.2s,baz=149,slow=36						
TWSI	Taliwang, Sumb	63.68	277	P	P	11 48 41.1	-1.2
	comp=Z,42nm,0.9s						
MPSI	Mapaga	66.34	287	P	P	11 48 57.8	-1.8
	comp=Z,13nm,0.8s						
BELA	Belgrano 2	67.12	172	P	P	11 49 04.3	+0.7
BELA				IAmb	IAmb	11 49 05.6	
	comp=Z,24nm,0.9s						
MAW	Mawson	69.40	201	LR	LR	12 18 40.2	
	comp=Z,154nm,19.3s,baz=116,slow=35						
PMSA	Palmer Station	70.04	156	LR	LR	12 14 23.4	
	comp=Z,148nm,18.7s,baz=240,slow=31						
JCJ	Chichijima	70.43	324	LR	LR	12 14 06.5	
	comp=Z,95nm,21.0s,baz=88,slow=31						
KKM	Kota Kinabalu	72.69	289	P	P	11 49 37.3	-1.6
KKM				IAmb	IAmb	11 50 01.8	
	comp=Z,20nm,1.1s						
MG03	Isla Dawson	73.64	144	P	P	11 49 45.5	+1.7
MG05	Puerto Natales	73.81	142	P	P	11 49 46.4	+1.6
TROLL	Troll, Antarti	75.06	180	P	P	11 49 53.2	+1.2
SNAA	Sanae	75.37	179	P	P	11 49 54.9	+1.2
SNAA	Sanae	75.37	179	LR	LR	12 20 42.7	
	comp=Z,129nm,18.7s,baz=244,slow=34						
SNAA	Sanae	75.37	179	P	P	11 49 54.1	+0.4
SNAA				IAmb	IAmb	11 50 11.1	
	comp=Z,18nm,1.1s						
SNAA	Sanae	75.37	179	deP	P	11 49 54.7	+1.0
SNAA				pmax	pmax		
	comp=Z,13nm,1.3s						
VNA3	Neumayer Olymp	75.56	176	P	P	11 49 55.6	+0.9
VNA2	Neumayer--Watz	75.98	177	P	P	11 49 58.3	+1.3
	baz=195,slow=5.0						
NVL	N'lazarevskaya	76.03	184	eP	P	11 49 55.0	-2.3
NVL				eS	ScS	12 00 13.4	+4.5
NVL				pmax	pmax		
	comp=Z,14nm,0.8s						
VNA1	Neumayer--Stat	76.22	177	P	P	11 49 59.9	+1.6
MDSI	Maura Dua	76.57	273	P	P	11 49 58.5	-2.9
	comp=Z,20nm,0.9s						
JOW	Kunigami	77.97	313	LR	LR	12 20 04.7	
	comp=Z,81nm,20.2s,baz=139,slow=32						
LL02	Futaleuf	78.96	135	P	P	11 50 15.8	+1.6
LL02				IAmb	IAmb	11 50 17.8	
	comp=Z,34nm,0.9s						
H03S2	Juan Fernandez	79.59	124	T	T	13 18 39.9	
	baz=236,slow=74,SNR=24						
H03S1	Juan Fernandez	79.60	124	T	T	13 18 37.9	
	baz=236,slow=74,SNR=18						
H03S3	Juan Fernandez	79.61	124	T	T	13 18 40.4	
	baz=236,slow=74,SNR=24						
H03N3	Juan Fernandez	79.80	123	T	T	13 18 52.5	
	baz=239,slow=72,SNR=187						
H03N2	Juan Fernandez	79.80	123	T	T	13 18 50.8	
	baz=239,slow=72,SNR=122						
H03N1	Juan Fernandez	79.81	123	T	T	13 18 55.4	
	baz=239,slow=72,SNR=222						
MJAR	Matsushiro Arr	80.10	326	P	P	11 50 20.0	-0.3
	comp=Z,1.1nm,0.7s,baz=162,slow=6.5,SNR=5.5						
MJAR				LR	LR	12 20 36.3	
	comp=Z,69nm,19.9s,baz=150,slow=32						
	comp=Z,1.1nm,0.7s						
EFI	East Falkland	80.87	147	P	P	11 50 26.5	+2.2
EFI	East Falkland	80.87	147	c iP	P	11 50 26.0	+1.6
EFI				pmax	pmax		
	comp=Z,112nm,2.5s						
JNU	Nakatsue	81.13	319	LR	LR	12 22 10.8	
	comp=Z,40nm,19.1s,baz=139,slow=32						
PLCA	Paso Flores	81.18	133	P	P	11 50 28.5	+2.1
	comp=Z,20nm,0.9s,baz=232,slow=5.6,SNR=36						
PLCA				LR	LR	12 22 04.6	
	comp=Z,55nm,18.2s,baz=220,slow=32						
	comp=Z,20nm,0.9s						
PLCA	Paso Flores	81.18	133	P	P	11 50 29.0	+2.6
PLCA				IAmb	IAmb	11 50 30.1	
	comp=Z,45nm,1.1s						
PLCA	Paso Flores	81.18	133	P	P	11 50 29.0	+2.6
PLCA				pmax	pmax		
	comp=Z,45nm,1.2s						
ASAJ	Asahikawa	84.57	333	LR	LR	12 21 30.6	
	comp=Z,185nm,21.3s,baz=168,slow=31						
BO02	Sierra Bellavi	84.58	128	P	P	11 50 46.6	+2.5
MT09	Talagante	85.05	127	P	P	11 50 48.0	+1.4
GSI	Gunungsitoli	85.24	275	P	P	11 50 46.7	-0.9
MT13	San Alfonso	85.53	128	P	P	11 50 49.7	+0.7
MT13				IAmb	IAmb	11 50 52.4	
	comp=Z,23nm,0.8s						
SHEM	Shemya Is, Ala	85.79	356	LR	LR	12 24 35.7	
	comp=Z,151nm,18.8s,baz=120,slow=32						
KSRS	Korea Array	85.97	320	P	P	11 50 50.6	+0.1
	comp=Z,1.5nm,0.7s,baz=140,slow=5.8,SNR=9.5						
	comp=Z,1.5nm,0.7s						
NIKH	Nikolski High	86.27	6	P	P	11 50 52.1	+0.4
	baz=188						
SNCC	San Nicolas Is	86.57	46	P	P	11 50 54.5	+0.8
	baz=226						
LPIG	La Paz	86.70	58	LR	LR	12 22 03.5	
	comp=Z,74nm,20.1s,baz=202,slow=30						
YSS	Yuzh-Sakhalins	86.93	335	eP	P	11 50 55.6	+0.6
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
SCZ2	Santa Cruz Isl	87.02	46	P	P	11 50 56.7	+0.8
	baz=226						
SBC	Santa Barbara	87.28	45	P	P	11 50 58.9	+1.9
	baz=226						
CIS	Catalina Islan	87.35	47	P	P	11 50 59.1	+1.6
	baz=227						
NJ2	Nanjing	87.47	311	eP	P	11 51 01.4	+3.4
NJ2				pP	PcP	11 51 04.0	+4.0
NJ2				sP	pP	11 51 05.3	-3.0
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,98nm,3.7s						
PKM	Mcpherson Peak	87.53	45	P	P	11 51 00.3	+1.7
	baz=226						
FMP	Fort Macarthur	87.64	47	P	P	11 51 00.4	+1.6
	baz=227						
SMMC	Simmler	87.72	45	P	P	11 51 01.0	+1.8
	baz=226						
OSI	Osito Audit: C	87.99	46	P	P	11 51 02.9	+2.3
	baz=227						
TRQA	Tornquist	88.02	135	P	P	11 51 02.7	+1.8
TRQA				IAmb	IAmb	11 51 03.6	
	comp=Z,15nm,0.9s						
TRQA	Tornquist	88.02	135	P	P	11 51 02.7	+1.8
TRQA				pmax	pmax		
	comp=Z,15nm,1.0s						
CFA	Coronel Fontan	88.21	127	LR	LR	12 21 22.6	
	comp=Z,128nm,21.4s,baz=236,slow=29						
MURC	Murrieta	88.23	47	P	P	11 51 04.3	+2.5
	baz=228,SNR=9.8						
MONP2	Monument Peak	88.24	48	P	P	11 51 04.6	+2.6
	baz=228,SNR=8.3						
IKP	In-Ko-Pah, Jac	88.28	49	P	P	11 51 04.5	+2.5
	baz=228						
ARVC	Arvin	88.28	45	P	P	11 51 03.9	+2.1
	baz=227,SNR=9.5						
PEA0B	Petropavlovsk-	88.33	346	P	P	11 51 02.0	+0.4
PEA0B	Petropavlovsk-	88.33	346	P	P	11 51 02.0	+0.4
PEA0B				pmax	pmax		
	comp=Z,47nm,1.4s						
PETK	Petropavlovsk-	88.33	346	P	P	11 51 01.9	+0.2
	comp=Z,7.1nm,0.9s,baz=132,slow=6.9,SNR=14						
PETK				LR	LR	12 27 47.2	
	comp=Z,53nm,18.4s,baz=162,slow=34						
	comp=Z,7.1nm,0.9s						
PETK	Petropavlovsk-	88.33	346	P	P	11 51 02.5	+0.8
PETK	Petropavlovsk-	88.33	346	P	P	11 51 02.5	+0.8
BFSC	Mount Baldy Ra	88.38	47	P	P	11 51 04.2	+1.7
	baz=227,SNR=16						
EDW2	Edwards Air Fo	88.61	46	P	P	11 51 05.9	+2.4
	baz=227,SNR=19						
VES	Vestal, Richgr	88.62	45	P	P	11 51 05.5	+2.1
	baz=226,SNR=12						
SWSC	Sam W. Stewart	88.67	49	P	P	11 51 06.1	+2.4
	baz=228						
TPFO	Pinon Flats	88.69	48	P	P	11 51 06.2	+2.1
	baz=228,SNR=8.1						
PFO	Pinyon Flats O	88.70	48	P	P	11 51 05.9	+1.9
	comp=Z,4.8nm,0.8s,baz=260,slow=4.2,SNR=14						
PFO				LR	LR	12 25 54.2	
	comp=Z,69nm,18.1s,baz=227,slow=32						
	comp=Z,4.8nm,0.8s						
PFO	Pinyon Flats O	88.70	48	ceP	P	11 51 06.0	+1.9
PFO				pmax	pmax		
	comp=Z,12nm,1.0s						
PFO	Pinyon Flats O	88.70	48	P	P	11 51 05.9	+1.9
	baz=228,SNR=6.8						
ISA	Isabella, Lake	88.86	45	P	P	11 51 07.0	+2.3
	baz=227,SNR=5.4						
USRK	Ussuriysk Ar.	89.06	327	P	P	11 51 05.6	+0.3
	comp=Z,2.9nm,1.0s,baz=177,slow=2.9,SNR=1.9						
USRK				LR	LR	12 28 15.4	
	comp=Z,42nm,18.1s,baz=172,slow=34						
	comp=Z,2.9nm,1.0s						
LRMC	Laurel Mtn Rad	89.20	46	P	P	11 51 08.5	+2.1
	baz=227,SNR=8.3						
RRX	Edison Barstow	89.21	47	P	P	11 51 08.6	+2.3
	baz=228						
BELC	Belle Mtn. Jos	89.24	48	P	P	11 51 09.2	+2.6
	baz=228,SNR=18						
GLA	Glamis	89.35	49	P	P	11 51 09.9	+2.9
	baz=229						
BC3	Big Chuckawall	89.35	48	P	P	11 51 10.0	+2.9
	baz=229,SNR=12						
HEC	Hector,Ludlow	89.58	47	P	P	11 51 10.3	+2.2
	baz=228,SNR=8.1						
GSC	Goldstone, Bar	89.61	46	P	P	11 51 10.4	+2.1
	baz=228,SNR=11						
CWC	Cottonwood Cre	89.62	45	P	P	11 51 10.5	+2.2
	baz=227						
SDPT	Sand Point	89.62	10	P	P	11 51 10.1	+2.5
	baz=196						
MPMC	Manual Prospec	89.71	45	P	P	11 51 10.8	+2.0
	baz=227,SNR=12						
S12K	Black Hills	89.73	9	P	P	11 51 09.8	+1.7
	baz=194						
IRM	Iron Mountain	89.88	48	P	P	11 51 11.6	+2.1
	baz=229,SNR=23						
214A	Organ Pipe Nat	89.94	51	P	P	11 51 11.9	+2.1
	baz=230,SNR=5.5						
GMRC	Granite Mounta	89.97	47	P	P	11 51 12.4	+2.4
	baz=228,SNR=5.5						
TUQ	Turquoise Moun	90.24	47	P	P	11 51 13.8	+2.6
	baz=228,SNR=6.4						
SHOC	Shoshone, Teco	90.33	46	P	P	11 51 14.3	+2.8
	baz=228,SNR=7.4						
FURC	Furnace Creek,	90.36	45	P	P	11 51 13.8	+2.3
	baz=228						
GRAC	Grapevine Rang	90.42	45	P	P	11 51 14.6	+2.7
	baz=228						
MDJ	Mudanjiang	90.49	326	P	P	11 51 15.5	+3.5
MDJ				sP	pP	11 51 22.0	-0.2
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,110nm,4.6s						
AC02	Maricunga	90.53	123	P	P	11 51 15.0	+1.5
AC02				IAmb	IAmb	11 52 52.7	
	comp=Z,14nm,0.9s						
PDMCI	Parker Dam,Lak	90.60	49	P	P	11 51 15.4	+2.6
	baz=229						
YBH	Yreka Blue Hor	90.73	38	P	P	11 51 15.0	+1.7
	comp=Z,4.3nm,1.0s,baz=172,slow=2.7,SNR=4.8						
YBH				LR	LR	12 27 15.3	
	comp=Z,50nm,18.5s,baz=219,slow=32						
	comp=Z,4.3nm,1.0s						
NVAR	Mina Array Bea	90.84	43	P	P	11 51 16.1	+2.0
	comp=Z,6.5nm,0.9s,baz=219,slow=8.0,SNR=42						
NVAR				LR	LR	12 25 28.9	
	comp=Z,64nm,19.5s,baz=230,slow=31						
	comp=Z,6.5nm,0.9s						
NVAR	Mina Array Bea	90.84	43	P	P	11 51 15.6	+1.6
CHGN	Chignik	90.86	11	P	P	11 51 14.4	+1.0
	baz=197						
TPNV	Topopah Spring	91.05	45	P	P	11 51 16.3	+1.3
	baz=228,SNR=7.0						
Y14A	Wickenburg	91.08	49	P	P	11 51 17.7	+2.7
TUC	Tucson	91.49	52	P	P	11 51 19.3	+2.3
	baz=231						
KLR	Kul'dur	93.06	330	LR	LR	12 30 02.2	
	comp=Z,119nm,19.8s,baz=158,slow=33						
WUAZ	Wupatki	93.12	49	P	P	11 51 26.5	+1.9
	baz=231						
Q17K	Contact Creek	93.16	12	P	P	11 51 24.7	+0.6
	baz=199						
LVC	Limon Verde	93.27	120	LR	LR	12 24 37.3	
	comp=Z,112nm,21.7s,baz=214,slow=30						
KDAK	Kodiak Island	93.32	14	LR	LR	12 27 53.2	
	comp=Z,80nm,19.5s,baz=233,slow=32						
NNA	Nana	93.42	107	LR	LR	12 23 54.0	
	comp=Z,149nm,20.9s,baz=236,slow=29						
Q16K	King Salmon	93.42	11	P	P	11 51 25.7	+0.5
	baz=199						
P16K	Nushagak River	93.54	11	P	P	11 51 26.0	+0.3
	baz=198						
CMAR	Chiang Mai Arr	93.57	290	P	P	11 51 26.5	-0.4
	comp=Z,0.6nm,0.3s,baz=134,slow=2.6,SNR=5.0						
CMAR				PP	PP	11 55 10.3	-1.8
	comp=Z,1.3nm,0.3s,baz=133,slow=5.9,SNR=7.7						
CMAR				LR	LR	12 35 50.1	
	comp=Z,51nm,19.5s,baz=115,slow=37						
	comp=Z,0.6nm,0.3s						
Q18K	Katmai Hardscr	93.68	12	P	P	11 51 27.2	+0.7
	baz=200						
O16K	Kokwok River B	94.06	10	P	P	11 51 27.8	-0.3
	baz=198						
ELK	Elko	94.15	43	P	P	11 51 30.8	+1.5
	comp=Z,1.8nm,0.8s,baz=246,slow=6.1,SNR=7.5						
ELK				LR	LR	12 28 21.2	
	comp=Z,83nm,19.1s,baz=238,slow=32						
	comp=Z,1.8nm,0.8s						
P18K	Big Mountain,	94.34	12	P	P	11 51 30.4	+1.0
	baz=200						
BJI	Beijing	94.36	316	P	P	11 51 33.4	+3.4
BJI				pP	pP	11 51 35.8	-4.4
CMIG	Matias Romero	94.38	73	LR	LR	12 27 44.7	
	comp=Z,50nm,18.3s,baz=227,slow=31						
TXAR	Lajitas Array	94.57	58	P	P	11 51 32.7	+1.3
	comp=Z,0.6nm,0.8s,baz=198,slow=7.9,SNR=7.0						
TXAR				LR	LR	12 26 41.3	
	comp=Z,41nm,20.6s,baz=251,slow=31						
	comp=Z,0.6nm,0.8s						
MNTX	Cornudas Mount	94.76	55	P	P	11 51 32.7	+0.6
	baz=234						
O18K	Koktuh Hills	94.78	12	P	P	11 51 32.5	+1.1
	baz=200						
N16K	Nishlik Lake	94.81	10	P	P	11 51 33.1	+1.6
	baz=197						
ATAH	Atahualpa	94.88	102	LR	LR	12 24 20.4	
	comp=Z,58nm,22.0s,baz=212,slow=29						
P19K	Oil Pt	94.94	13	P	P	11 51 33.6	+1.4
	baz=202						
XAN	Xi'an	95.17	307	eP	P	11 51 37.0	+3.1
XAN				pP	pP	11 51 41.9	-2.3
XAN				pmax	pmax		
	comp=Z,4.0nm,1.5s						
DUG	Dugway, Tooele	95.20	45	P	P	11 51 35.3	+1.2
	baz=230						
O19K	Port Alsworth	95.25	12	P	P	11 51 34.9	+1.4
	baz=201						
MA2	Magadan	95.79	345	LR	LR	12 29 51.2	
	comp=Z,85nm,22.0s,baz=140,slow=32						
PZH	PanZhiHua	95.89	298	P	P	11 51 40.3	+2.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,4.5s						
BBB	Bella Bella	95.95	29	LR	LR	12 26 27.2	
	comp=Z,56nm,19.9s,baz=284,slow=30						
ANMO	Albuquerque	95.95	52	P	P	11 51 38.7	+1.0
	comp=Z,0.3nm,0.3s,baz=263,slow=8.1,SNR=1.8						
ANMO				LR	LR	12 29 32.5	
	comp=Z,40nm,18.3s,baz=326,slow=32						
	comp=Z,0.3nm,0.3s						
ANMO	Albuquerque	95.95	52⇑	eP	P	11 51 40.0	+2.3
ANMO				pmax	pmax		
	comp=Z,6.0nm,2.5s						
ANMO	Albuquerque	95.95	52	P	P	11 51 38.5	+0.8
	baz=234						
CAPN	Captain Cook N	96.37	13	P	P	11 51 41.4	+2.8
	baz=203						
HLID	Hailey	96.45	41	P	P	11 51 41.8	+2.1
	baz=230						
M19K	Big River Lodg	96.85	11	P	P	11 51 41.8	+1.0
	baz=201						
L19K	White Mountain	97.03	11	P	Pdif	11 51 43.0	+1.2
	baz=200						
SUA	Susitna One	97.09	13	P	Pdif	11 51 43.4	+1.2
	baz=204						
SKT	Skwentna	97.42	13	P	Pdif	11 51 44.4	+0.9
	baz=203						

TNCH	TengChong	97.50	295	*e*P	Pdif	11 51 47.4	+2.4
TNCH				pP	pP	11 51 51.8	-3.2
TNCH				pmax	pmax		
	comp=Z,44nm,0.4s						
KNK	Knik Glacier	97.50	14	P	Pdif	11 51 45.5	+1.7
	baz=206						
TTA	Tatalina	97.56	10	P	Pdif	11 51 45.2	+1.1
	baz=199						
HHC	Hu-ho-hao-te	97.60	314	*e*P	Pdif	11 51 47.3	+2.4
HHC				pmax	pmax		
	comp=Z,19nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,5.8s						
S31K	Pelican	97.64	21	P	Pdif	11 51 45.4	+1.0
	baz=215						
LPAZ	La Paz	97.71	115	P	Pdif	11 51 48.8	+2.0
	comp=Z,1.8nm,0.9s,baz=193,slow=5.3,SNR=7.3						
LPAZ				LR	LR	12 26 30.4	
	comp=Z,48nm,19.7s,baz=240,slow=30						
	comp=Z,1.8nm,0.9s						
CUT	Chulitna	98.05	13	P	Pdif	11 51 46.3	+0.1
	baz=204						
KLU	Klutina	98.11	15	P	Pdif	11 51 47.2	+0.6
	baz=208						
NEW	Newport	98.11	37	LR	LR	12 27 31.3	
	comp=Z,70nm,21.4s,baz=238,slow=30						
SCM	Sheep Creek Mo	98.11	15	P	Pdif	11 51 46.9	+0.2
	baz=206						
R31K	City Hall, Gus	98.16	21	P	Pdif	11 51 47.3	+0.5
	baz=216						
K20K	Telida	98.26	11	P	Pdif	11 51 48.5	+1.3
	baz=201						
BTO	Baotou	98.39	313	*e*P	Pdif	11 51 51.4	+3.0
BTO				pP	sP	11 52 02.0	-0.4
BTO				sP	pwP	11 52 05.8	+3.3
BTO	Baotou	98.39	313	S	S	12 03 17.9	+3.8
BTO	Baotou	98.39	313	sS	sS	12 03 43.4	+11
BTO	Baotou	98.39	313	SS	SS	12 10 03.8	+4.2
BTO				pmax	pmax		
	comp=Z,15nm,0.7s						
BTO				pmax	pmax		
	comp=Z,440nm,5.6s						
BTO				LR	LR		
	comp=N,430nm,5.4s						
BTO				LR	LR		
	comp=E,500nm,5.6s						
BTO				LR	LR		
	comp=Z,270nm,7.7s						
T25A	Trinidad	98.58	51	P	P	11 51 49.2	-0.3
	baz=235						
CAST	Castle Rocks	98.65	12	P	Pdif	11 51 49.7	+0.8
	baz=203						
PDAR	Pinedale Array	98.72	44	P	Pdif	11 51 51.0	+1.0
	comp=Z,0.8nm,0.9s,baz=242,slow=3.2,SNR=6.6						
PDAR				LR	LR	12 30 22.4	
	comp=Z,57nm,19.6s,baz=258,slow=32						
	comp=Z,0.8nm,0.9s						
CPUP	Villa Florida	98.86	129	LR	LR	12 27 58.6	
	comp=Z,193nm,21.9s,baz=227,slow=30						
TRF	Thorofare Moun	99.00	13	P	Pdif	11 51 51.4	+0.8
	baz=204						
CHUM	Lake Minchumin	99.04	12	P	Pdif	11 51 51.0	+0.4
	baz=202						
GCSA	Galena City Sc	99.16	9	P	Pdif	11 51 51.6	+0.6
	baz=199						
BOZ	Bozeman (W)	99.28	41	P	Pdif	11 51 52.4	+0.1
	baz=232						
MCK	McKinley	99.51	13	P	Pdif	11 51 53.9	+1.1
	baz=205						
M26K	Nabesna, AK	99.58	16	P	Pdif	11 51 54.4	+1.3
	baz=210						
M27K	Edge Creek, AK	99.80	17	P	Pdif	11 51 55.6	+1.4
	baz=211						
I21K	Tanana	100.30	11	P	Pdif	11 51 57.2	+1.0
	baz=203						
MLY	Manley	100.37	12	P	Pdif	11 51 57.6	+1.0
	baz=204						
P33M	Teslin, Yukon	100.50	21	P	Pdif	11 52 00.3	+3.0
	baz=218						
HDA	Harding Lake	100.50	14	P	Pdif	11 51 59.0	+1.9
	baz=207						
H21K	Melozitna Rive	100.61	11	P	Pdif	11 51 59.0	+1.4
	baz=202						
N31M	Braeburn, Yuko	100.66	20	P	Pdif	11 51 58.9	+1.0
	baz=216						
I23K	Minto, Yukon-K	100.72	12	P	Pdif	11 51 59.3	+1.3
	baz=205						
TCOL	CIGO, UAF Yank	100.75	13	P	Pdif	11 51 58.2	+0.1
	baz=206						
COLA	College	100.75	13	⇓*e*P	Pdif	11 51 59.9	+1.8
COLA				pmax	pmax		
	comp=Z,25nm,3.5s						
COLA	College	100.75	13	P	Pdif	11 51 58.8	+0.7
	baz=206						
ILAR	Eielson Array	100.84	13	P	Pdif	11 51 58.8	+0.2
	comp=Z,1.3nm,0.8s,baz=223,slow=6.3,SNR=13						
ILAR				PKiKP	PKiKP	11 56 25.9	+1.8
	comp=Z,0.5nm,0.7s,baz=237,slow=3.1,SNR=4.1						
WMOK	Wichita Mounta	101.03	56	P	Pdif	11 51 59.6	-0.7
	baz=237						
POKR	Poker Plat Res	101.05	13	P	Pdif	11 52 01.5	+2.0
	baz=207						
H22K	Ishtalitna Cre	101.06	11	P	Pdif	11 52 01.1	+1.6
	baz=203						
M30M	Minto, Yukon	101.27	18	P	Pdif	11 52 02.9	+2.2
	baz=215						
H23K	Yukon River	101.31	12	P	Pdif	11 52 02.4	+1.7
	baz=205						
G21K	Allakaket	101.31	10	P	Pdif	11 52 01.8	+1.1
	baz=202						
PRP	Porcupine Dome	101.77	14	P	Pdif	11 52 04.1	+1.2
	baz=208						
DAWY	Dawson	101.85	17	P	Pdif	11 52 04.7	+1.5
	baz=213						
FARO	Faro, Yukon	101.94	20	P	Pdif	11 52 05.6	+2.0
	baz=218						
EGAK	Eagle	102.05	16	P	Pdif	11 52 05.5	+1.5
	baz=212						
I26K	Coal Creek Min	102.07	15	P	Pdif	11 52 05.4	+1.4
	baz=210						
E22K	Anaktuvuk Pass	103.06	10	P	Pdif	11 52 10.1	+1.7
	baz=203						
H27K	Steamboat Moun	103.21	15	P	Pdif	11 52 10.9	+1.7
	baz=212						
E23K	Chandalar	103.33	11	P	Pdif	11 52 11.3	+1.6
	baz=205						
E24K	Your Creek	103.53	11	P	Pdif	11 52 12.2	+1.6
	baz=206						
D23K	Nanushuk River	103.99	10	P	Pdif	11 52 13.5	+0.9
	baz=204						
SONM	Songino Array	104.68	318	PKKPbc	PKKPbc	12 08 01.4	-0.1
	comp=Z,0.9nm,0.8s,baz=231,slow=2.6,SNR=4.5						
YKA	Yellowknife Ar	108.32	26	PKiKP	PKiKP	11 56 37.9	+0.1
	comp=Z,0.1nm,0.5s,baz=242,slow=1.3,SNR=5.8						
YKA				PKKPbc	PKKPbc	12 07 48.1	-2.2
	comp=Z,0.9nm,0.7s,baz=46,slow=3.1,SNR=14						
A36M	Sachs Harbour	111.33	16	P	PKiKP	11 56 43.4	+0.2
	baz=227						
WMQ	Urumqi	114.31	308	*e*P	PKiKP	11 56 51.4	+1.5
BOSA	Boshof	114.36	203	PKP	PKPdf	11 56 51.2	+0.5
	comp=Z,2.9nm,0.6s,baz=45,slow=4.3,SNR=5.5						
MK31	Makanchi Array	118.94	309		PKPdf	11 56 57.1	-1.5
MK31	Makanchi Array	118.94	309	PKIKP	PKPdf	11 56 57.1	-1.5
MKAR	Makanchi Array	118.94	309	PKP	PKPdf	11 56 57.0	-1.6
	comp=Z,1.6nm,0.7s,baz=86,slow=0.6,SNR=11						
MKAR				SKP	SKPdf	12 00 28.7	-2.6
	comp=Z,1.2nm,1.0s,baz=85,slow=1.0,SNR=4.8						
MKAR				PKKPbc	PKKPbc	12 07 13.5	-0.2
	comp=Z,1.1nm,0.7s,baz=295,slow=3.8,SNR=11						
MAKZ	Makanchi	119.14	309		PKPdf	11 56 57.8	-1.2
MAKZ	Makanchi	119.14	309	PKIKP	PKPdf	11 56 57.8	-1.2
ZALV	Zalesovo Beam	119.57	317	PKP	PKPdf	11 56 58.0	-1.6
	comp=Z,2.2nm,0.6s,baz=174,slow=1.5,SNR=11						
RES	Resolute Bay	120.16	18	PKP	PKPdf	11 56 59.1	-1.0
	comp=Z,2.8nm,0.8s,baz=270,slow=2.0,SNR=12						
RES	Resolute Bay	120.16	18	PKPdf	PKiKP	11 57 00.3	+0.1
RES	Resolute Bay	120.16	18	PKIKP	PKiKP	11 57 00.3	+0.1
NRIK	Noril'sk	121.86	335	PKP	PKPdf	11 57 02.3	-1.2
	comp=Z,4.1nm,0.6s,baz=103,slow=4.3,SNR=6.8						
NRIK	Noril'sk	121.86	335	PKPdf	PKPdf	11 57 03.0	-0.5
KURK	Kurchatov	122.38	313	PKPdf	PKPdf	11 57 04.0	-1.1
KURK	Kurchatov	122.38	313	*c i*PKIKP	PKPdf	11 57 03.5	-1.6
KURK				pmax	pmax		
	comp=Z,15nm,1.7s						
TSUM	Tsumeb	125.54	199	PKPdf	PKiKP	11 57 12.8	0.0
LMQ	La Malbaie	125.62	52	PKPdf	PKPdf	11 57 11.4	0.0
BVAR	Borovoye Array	127.82	314	PKP	PKPdf	11 57 14.7	-0.7
	comp=Z,4.0nm,0.5s,baz=118,slow=1.4,SNR=27						
BRVK	Borovoye	127.88	314	PKPdf	PKPdf	11 57 14.6	-1.0
BRVK	Borovoye	127.88	314	*ce*PKIKP	PKPdf	11 57 14.1	-1.4
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
SCHQ	Schefferville	128.85	43	PKP	PKiKP	11 57 17.9	-0.2
	comp=Z,2.7nm,0.9s,baz=256,slow=3.9,SNR=2.8						
GEYT	Alibeck	133.96	293	SKPbc	SKPbc	12 00 49.5	-4.5
	comp=Z,4.8nm,0.8s,baz=193,slow=6.1,SNR=6.2						
ABKAR	Akbulak array	134.08	309		PKPdf	11 57 26.2	-1.1
SPITS	Spitsbergen Ar	134.44	356	PKP	PKPdf	11 57 27.5	+0.2
	comp=Z,6.4nm,0.7s,baz=82,slow=6.0,SNR=8.1						
ARU	Arti	134.70	319	PKP	PKPdf	11 57 28.6	+0.3
	comp=Z,6.0nm,0.5s,baz=143,slow=2.4,SNR=11						
ARU				SKPbc	SKPbc	12 00 52.1	-3.6
	comp=Z,1.3nm,0.3s,baz=68,slow=11,SNR=2.4						
ARU	Arti	134.70	319	*i* PKIKP	PKPdf	11 57 27.4	-0.9
ARU				SS	SS	12 17 43.7	-8.5
SFJD	Kangerlussuaq	134.88	26	PKP	PKiKP	11 57 29.7	-0.1
	comp=Z,4.6nm,0.7s,baz=272,slow=6.0,SNR=2.1						
AKTO	Aktyubinsk	135.35	310	PKP	PKPdf	11 57 29.0	-0.7
	comp=Z,1.2nm,0.4s,baz=37,slow=2.2,SNR=5.0						
ARCES	ARCESS Array B	141.14	347	PKhKP	PKPpre	11 57 34.5	
	comp=Z,2.3nm,0.7s,baz=46,slow=2.1,SNR=9.8						
KTK1	Kautokeino	142.02	347	*e*	PKPdf	11 57 36.9	-4.5
KLMR	Klimovskoe	142.81	330	*e*PKPdf	PKPdf	11 57 40.8	-2.2
KLMR				AMP		11 57 44.0	
	comp=Z,23nm,1.9s						
KLMR	Klimovskoe	142.81	330	*e*PKIKP	PKPdf	11 57 40.8	-2.2
KLMR				pmax	pmax		
	comp=Z,23nm,1.9s						
STEI	Steigen	144.28	351	*e*PKPdf	PKPab	11 57 43.1	-0.2
FAUS	Fauske	144.79	351	*e*PKPbc	PKPab	11 57 44.6	-0.7
ZEI	Tsey	145.23	299	*i* PKIKP	PKPbc	11 57 45.5	-2.3
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
VRH	Novokhopyorsk	145.46	314	*e*PKP2	PKPdf	11 57 46.6	-1.3
VRH				pmax	pmax		
	comp=Z,26nm,0.8s						
ONI	Oni	145.56	298	PKPdf	PKPdf	11 57 48.3	-0.2
ONI	Oni	145.56	298	PKIKP	PKPdf	11 57 48.3	-0.2
BORG	Borgarnes	145.59	17	PKPbc	PKPdf	11 57 47.4	-0.4
	comp=Z,17nm,0.9s,baz=40,slow=0.7,SNR=3.1						
GEVA	Gevas	145.75	291		PKPdf	11 57 48.3	-0.8
KBZ	Khabaz	145.92	300	PKPbc	PKPdf	11 57 48.3	-0.6
	comp=Z,3.8nm,0.8s,baz=102,slow=7.8,SNR=9.5						
KBZ	Khabaz	145.92	300	⇑*e*PKIKP	PKPdf	11 57 48.4	-0.5
MOR8	Moi Rana	146.04	350	*e*PKPdf	PKPdf	11 57 47.8	-0.7
KIV	Kislovodsk	146.05	301	*i* PKP2	PKiKP	11 57 52.4	-1.1
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,39nm,25.0s						
MOS	Moscow	146.13	323	*i* PKIKP	PKPdf	11 57 48.1	-0.8
GURO	Guroymak-BITLI	146.57	291	PKPdf	PKPdf	11 57 51.1	+0.7
LPSR	Galich'ya Gora	146.68	317	*e*PKIKP	PKPdf	11 57 49.9	-0.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VORR	Voronezh	146.83	315	*e*PKP2	PKPbc	11 57 52.2	+0.1
VORR				pmax	pmax		
	comp=Z,40nm,0.6s						
OBN	Obninsk	146.95	322	PKPbc	PKPdf	11 57 50.8	+0.5
	comp=Z,4.4nm,0.4s,baz=77,slow=14,SNR=3.0						
OBN	Obninsk	146.95	322	⇑*e*PKP2	PKPbc	11 57 52.9	+0.6
OBN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR	Storozhevoye	147.00	315	*e*PKIKP	PKPdf	11 57 50.3	-0.2
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VORD	Divnogorie	147.00	314	*e*PKIKP	PKPdf	11 57 50.6	+0.1
VORD				pmax	pmax		
	comp=Z,4.0nm,0.5s						
FINES	FINESS Array B	147.47	338	PKPbc	PKPbc	11 57 52.9	-0.7
	comp=Z,60nm,0.8s,baz=41,slow=3.7,SNR=235						
FINES	FINESS Array B	147.47	338	PKPdf	PKPbc	11 57 52.7	-0.9
FINES	FINESS Array B	147.47	338	PKP2	PKPbc	11 57 52.7	-0.9
MEF	Metsahovi	148.94	337	*e*P	PKPbc	11 57 57.1	-0.4
RAF	Rauma	149.09	340	*e*P	PKPbc	11 57 56.9	-0.9
VSU	Vasula	149.41	333	*i* PKHKP	PKPpre	11 57 57.6	
VSU	Vasula	149.41	333	*e*P	PKPbc	11 57 58.3	-0.4
MTSE	Matsula	150.28	336	*e*P	PKPbc	11 58 00.3	-0.4
AAL	Aland	150.28	341	*e*P	PKPbc	11 57 59.8	-1.0
DOMB	Dombas	150.70	352	*e*PKPbc	PKPbc	11 58 01.1	-0.7
UPP	Uppsala	151.18	343	*e*P	PKPbc	11 58 01.8	-1.1
NC405	NORSAR Array S	151.24	349		PKPbc	11 58 02.9	-0.1
NB2	NORSAR Subarra	151.38	350	PKP	PKPbc	11 58 02.7	-0.7
	comp=Z,11nm,0.6s,baz=16,slow=2.6						
NOA	NORSAR Array B	151.38	350	PKPbc	PKPbc	11 58 02.5	-0.9
	comp=Z,11nm,0.8s,baz=20,slow=4.7,SNR=76						
FOO	Floro	151.48	356	*e*PKPbc	PKPbc	11 58 03.8	+0.2
MNK	Minsk	151.54	326	*i* PKiKP	PKPbc	11 58 02.8	-1.1
	comp=E,3.0nm,0.9s						
MNK				*i* PKiKP	PKPbc	11 58 02.8	-1.1
	comp=N,24nm,0.9s						
MNK				*i* PKiKP	PKPbc	11 58 02.8	-1.1
	comp=Z,51nm,0.9s,baz=53						
MNK				*i* SKP		12 01 07.3	
MNK				*i* PKS	PKSdf	12 01 30.2	-1.9
MNK				*i* PP	PP	12 01 45.3	+1.6
MNK				*i* SKS	SKSdf	12 04 58.8	-3.4
MNK				*i* PPP	PPP	12 05 05.7	
MNK				*i* SKKS		12 06 49.6	
MNK				*i* SS	SS	12 21 07.3	+1.5
MNK				*i* SSS	SSS	12 26 51.6	
MNK				*i* LQ	LQ	12 59 00.5	
MNK				*i* LR	LR	13 09 03.9	
MNK	Minsk	151.54	326	*i* PKIKP	PKPbc	11 58 02.8	-1.1
MNK				*i*		12 01 45.3	
MNK				*i*		12 04 58.7	
MNK				*i* PPP	PPP	12 05 05.7	
MNK				*i* SS	SS	12 21 07.3	+1.5
MNK				*i* SSS	SSS	12 26 51.6	
MNK				pmax	pmax		
	comp=N,24nm,0.9s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,51nm,0.9s						
NC602	NORSAR Array S	151.62	349	*e*PKPbc	PKPbc	11 58 03.2	-0.7
SLIT	Slitere, Latvi	151.63	336	*e*P	PKPbc	11 58 02.2	-1.8
ISAL	Salakas	151.64	330	*e*P	PKiKP	11 58 05.1	+0.6
NACGM	Naroch	151.79	328	⇑*i*PKP	PKPbc	11 58 04.7	+0.2
	comp=Z,106nm,0.9s,baz=50						
HFS	Hagfors	151.81	347	PKPbc	PKPbc	11 58 03.4	-1.0
	comp=Z,31nm,0.7s,baz=119,slow=1.9,SNR=54						
SKAR	Skarslia	152.11	352	*e*PKPbc	PKPbc	11 58 04.8	-0.3
VSVD	Vaisvydziai	152.25	332	*e*P	PKPbc	11 58 05.3	-0.2
LIC	Lamto	152.56	167	⇑*e*PKP1	PKiKP	11 58 07.8	+0.1
	comp=Z,61nm,0.7s						
PABE	Paberze	152.58	331	*e*P	PKPbc	11 58 05.6	-0.6
VIKU	Vikbolandet	152.60	342	*e*P	PKPbc	11 58 05.6	-0.5
KIC	Kosan Boka	152.75	167	⇑*e*PKP1	PKiKP	11 58 08.2	+0.1
	comp=Z,26nm,0.8s						
KONO	Kongsberg	152.95	350	*e*PKPbc	PKPbc	11 58 06.5	-0.5
AKASG	Malin Array Be	152.96	319	PKPbc	PKPbc	11 58 06.3	-0.9
	comp=Z,7.8nm,0.7s,baz=40,slow=2.1,SNR=23						
AKBB	Malin Array Si	152.96	319	*c i*PKIKP	PKPbc	11 58 07.1	-0.1
TIC	Toumodi	152.97	167	⇓*i*PKP1	PKiKP	11 58 08.9	+0.3
	comp=Z,19nm,0.9s						
DBIC	Dimbokro	153.03	167	PKPbc	PKPbc	11 58 07.5	-1.0
	comp=Z,7.9nm,0.9s,baz=231,slow=2.8,SNR=5.8						
ODD1	Odda	153.04	354	*e*PKPbc	PKPbc	11 58 06.8	-0.4
BR131	Keskin Array S	153.10	293		PKPbc	11 58 06.8	-1.3
BR131	Keskin Array S	153.10	293	PKIKP	PKPbc	11 58 06.8	-1.3
BRTR	Keskin Array B	153.10	293	PKPbc	PKPbc	11 58 07.2	-0.9
	comp=Z,3.3nm,0.6s,baz=129,slow=3.4,SNR=19						
BRTR	Keskin Array B	153.10	293		PKPbc	11 58 06.6	-1.5
BRTR	Keskin Array B	153.10	293	PKIKP	PKPbc	11 58 06.6	-1.5
BLS5	Blasjo	153.53	354	*e*PKPbc	PKiKP	11 58 08.8	+0.4
BSD	Bornholm Skovb	156.04	340	*e*P	PKPdf	11 58 11.6	+7.6
EKA	Eskdalemuir Ar	157.69	6	PKPab	PKPab	11 58 38.2	-0.3
	comp=Z,6.0nm,0.8s,baz=341,slow=3.2,SNR=7.6						
DPC	Dobruska-Polom	159.50	331	*e*PKPDF	PKPdf	11 58 08.1	-0.5
DPC	Dobruska-Polom	159.50	331	*e*PKIKP	PKPdf	11 58 08.1	-0.5
VYHS	Vyhne	159.73	324	*e*PKP2	PKPab	11 58 48.4	+0.6
CLL	Collm	159.92	338	*e*x	x	11 59 06.0	
CLL	Collm	159.92	338	*e*PKP2	PKPab	11 58 51.0	+2.6
CLL				pmax	pmax		
	comp=Z,7.0nm,1.3s						
CLL	Collm	159.92	338	*e*PKPab	PKPab	11 58 51.0	+2.6
	comp=Z,7.0nm,1.3s						
CLL	Collm	159.92	338	*e*pPKPab	pPKPab	11 58 58.0	-0.5
TOA0	Torodi Ar. Sit	160.02	182	PKPdf	PKPdf	11 58 11.4	+1.2
TOA0					PKPab	11 58 50.2	+0.6
TORD	Torodi Ar. Bea	160.02	182	PKP	PKPdf	11 58 10.1	-0.1
	comp=Z,2.7nm,0.9s,baz=101,slow=1.5,SNR=11						
TORD				PKPab	PKPab	11 58 50.2	+0.5
	comp=Z,16nm,0.9s,baz=177,slow=3.7,SNR=20						
TORD	Torodi Ar. Bea	160.02	182	PKPdf	PKPdf	11 58 10.5	+0.3
TORD				PKPab	PKPab	11 58 51.1	+1.4
RONA	Rosalia, Austr	161.50	326	*e*PKP	PKPab	11 58 55.5	0.0
	comp=Z,8.1nm,1.6s						
CONA	Conrad Observa	161.54	327	*e*PKP	PKPab	11 58 55.5	-0.2
	comp=Z,4.9nm,1.3s						
KHC	Kasperske Hory	161.55	333	*e*PKPDF	PKPdf	11 58 10.9	0.0
KHC	Kasperske Hory	161.55	333	*e*PKIKP	PKPdf	11 58 10.9	0.0
GERES	GERESS Array B	161.74	333	PKP	PKPdf	11 58 09.9	-1.2
	comp=Z,0.6nm,0.8s,baz=5.4,slow=2.1,SNR=4.8						
GERES				PKPab	PKPab	11 58 56.2	-0.4
	comp=Z,0.6nm,0.7s,baz=54,slow=3.4,SNR=3.7						
OBKA	Obir	163.19	326	*e*PKP	PKPdf	11 58 13.3	+0.6
	comp=Z,2.8nm,1.1s						
ABTA	Abfaltersbach	163.90	330	*e*PKP	PKPdf	11 58 12.9	-0.5
	comp=Z,3.3nm,1.2s						
MOTA	Moosalm	163.95	335	PKP	PKPdf	11 58 12.6	-0.9
	comp=Z,6.3nm,1.5s						
FETA	Feichten	164.36	335	*e*PKP	PKPdf	11 58 13.2	-0.6
	comp=Z,5.9nm,1.1s						
ESDC	Sonseca Array	172.39	31	PKP	PKPdf	11 58 18.8	-0.5
	comp=Z,1.0nm,1.0s,baz=359,slow=4.3,SNR=5.8						
ESDC				PKPab	PKPab	11 59 44.0	+0.1
	comp=Z,2.4nm,0.9s,baz=325,slow=4.3,SNR=11						
ESDC	Sonseca Array	172.39	31		PKPdf	11 58 18.8	-0.5
ESDC					PKPab	11 59 44.7	+0.9
KEST	Kesra	172.70	292	PKP	PKPdf	11 58 19.3	-0.3
	comp=Z,6.5nm,1.0s,baz=304,slow=7.3,SNR=4.5						

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*IDC **19** 11:52:29.8±5.2, 21°.23S×169°.51E, h0^{km}, mb3.5/3,*
mbtmp3.6/4, ML3.7/1, MS4.0/2, Error ellipse:
s-maj=204.3km s-min=32.0km az=150.0

*NOU **19** 11:52:52.3, 22°.00S×168°.02E, h0^{km}, MLv3.0/6, New*
Caledonia

ISC 19 11:52:29.0±1.5**, 21°.6S**±0°.3×**169°.8E**±0°.2**, h10^{km}, n20,**
σ**1^{s}.18**/19**, mb3.6**/3**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINNC	Pines Island,	2.36	245	P	Pn	11 53 07.7	-0.1
YATNC	Mamie plateau,	2.71	261	P	Pn	11 53 11.9	-0.7
OUENC	Ouen Island, N	2.83	254	P	Pn	11 53 14.8	+0.6
DZM	Mont Dzumac	3.12	262	Pn	Pn	11 53 19.1	+0.7
	9.6nm,0.3s,baz=87,slow=19,SNR=170						
DZM				Sn	Sn	11 53 54.8	-0.9
	27nm,0.3s,baz=37,slow=20,SNR=10						
	24nm,0.3s						
DZM	Mont Dzumac	3.12	262	P	Pn	11 53 19.7	+1.4
ONTNC	Ouen Toro	3.15	257	P	Pn	11 53 19.4	+0.7
NOUC	Port Laguerre	3.25	261	P	Pn	11 53 20.8	+0.7
HNR	Honiara	15.38	321	LR	LR	12 01 18.3	
	comp=Z,2µm,19.4s,baz=125,slow=36						
URZ	Urewera	17.73	161	LR	LR	12 02 04.0	
	comp=Z,116nm,18.5s,baz=20,slow=32						
ASAR	Alice Springs	33.11	260	P	P	11 59 06.1	+0.6
	0.6nm,0.7s,baz=82,slow=8.2,SNR=12						
	0.6nm,0.7s						
WRA	Warramunga Arr	33.12	266	P	P	11 59 05.5	-0.1
	0.3nm,0.9s,baz=100,slow=6.4,SNR=1.9						
	0.3nm,0.9s						
SONM	Songino Array	89.43	323	P	P	12 05 26.8	+0.7
	0.2nm,0.4s,baz=106,slow=4.7,SNR=1.8						
	0.2nm,0.4s						
RONA	Rosalia, Austr	146.37	327	*e*PKP	PKPab	12 12 10.9	-0.1
	3.2nm,1.0s						
CONA	Conrad Observa	146.44	328	*e*PKP	PKPab	12 12 11.4	+0.1
	4.8nm,1.3s						
GERES	GERESS Array B	146.83	331	PKPbc	PKPab	12 12 11.6	-1.2
	1.5nm,0.8s,baz=29,slow=2.2,SNR=11						
KBA	Koelnbreinsper	148.26	329	*e*PKP	PKPbc	12 12 14.3	-1.2
	2.5nm,0.9s						
ABTA	Abfaltersbach	148.90	329	*e*PKP	PKPbc	12 12 15.4	-1.7
	3.2nm,1.3s						
MOTA	Moosalm	149.11	331	PKP	PKPbc	12 12 15.9	-1.8
	3.4nm,0.8s						
SQTA	Sankt Quirin	149.16	331	*e*PKP	PKPbc	12 12 16.1	-1.7
	1.1nm,0.6s						
FETA	Feichten	149.52	331	PKP	PKPdf	12 12 16.3	+2.0
	4.4nm,1.7s						

ROM 19 11:55:51.2±0.4**, 41°.62N**±0°.01×**14°.61E**±0°.02**, h25^{km}**±2^{km}**,**
ML1.1/7**, Error ellipse: s-maj=1.6km s-min=0.5km**
az=134.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSSO	Busso	0.08	189	P	Pb	11 55 55.7	-0.3
BSSO				S	Sb	11 55 59.2	+0.1
BSSO				AML	AML		
	comp=E,302µm,1.6s						
BSSO				AML	AML		
	comp=N,175µm,1.6s						
BSSO				AML	AML		
	comp=E,119µm,1.6s						
BSSO				AML	AML		
	comp=N,70µm,0.4s						
BSSO				AML	AML		
	comp=N,92µm,1.0s						
BSSO				AML	AML		
	comp=N,92µm,1.0s						
TRIV	Trivento	0.15	342	P	Pb	11 55 56.0	-0.5
TRIV				S	Sb	11 56 01.3	+1.3
TRIV				AML	AML		
	comp=E,152µm,0.5s						
TRIV				AML	AML		
	comp=N,136µm,0.5s						
TRIV				AML	AML		
	comp=N,57µm,1.5s						
TRIV				AML	AML		
	comp=E,69µm,2.1s						
TRIV				AML	AML		
	comp=N,57µm,0.5s						
TRIV				AML	AML		
	comp=E,69µm,0.1s						
CIGN	Sant'Elia a Pi	0.22	82	P	Pn	11 55 58.2	-0.8
CIGN				S	Sb	11 56 01.9	+0.6
SACR	S. Croce Del S	0.24	162	P	Pb	11 55 56.7	-0.8
SACR				S	Sb	11 56 03.1	+1.4
SACR				AML	AML		
	comp=N,52µm,2.1s						
SACR				AML	AML		
	comp=N,52µm,0.1s						
MIDA	Miranda	0.27	274	P	Pb	11 55 57.7	-0.2
MIDA				S	Sb	11 56 01.9	-0.6
MIDA				AML	AML		
	comp=E,47µm,0.3s						
MIDA				AML	AML		
	comp=N,54µm,0.5s						
MIDA				AML	AML		
	comp=N,57µm,2.2s						
MIDA				AML	AML		
	comp=N,57µm,0.2s						
SGG	Gregorio Mates	0.29	216	P	Pb	11 55 58.5	+0.2
SGG				S	Sb	11 56 03.4	+0.3
SGG				AML	AML		
	comp=E,29µm,3.1s						
SGG				AML	AML		
	comp=N,30µm,0.6s						
SGG				AML	AML		
	comp=E,29µm,0.9s						
VAGA	Valle Agricola	0.35	234	P	Pb	11 55 59.6	+0.4
VAGA				S	Sb	11 56 05.6	+1.1
FRES	Fresagrandinar	0.35	7	P	Pb	11 55 59.3	+0.1
RNI2	Rionero Sannit	0.35	283	P	Pb	11 55 59.3	+0.1
RNI2				S	Sb	11 56 05.3	+0.8

ROM 19 11:55:55.0±0.0**, 42°.725N**±0°.002×**13°.200E**±0°.004**,**
h11^{km}, ML1.7/23**, 12C-8D, Error ellipse: s-maj=0.3km**
s-min=0.2km az=236.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1214	Arquata del Tr	0.04	10	P	Pg	11 55 57.4	+0.1
T1214				S	Sg	11 55 58.7	-0.2
T1214				AML	AML		
	comp=E,3085µm,0.2s						
T1214				AML	AML		
	comp=N,4240µm,0.2s						
T1214				AML	AML		

	comp=E,3085µm,0.2s						
T1214				AML	AML		
	comp=N,4245µm,0.2s						
T1214				AML	AML		
	comp=E,3000µm,0.2s						
T1214				AML	AML		
	comp=E,3090µm,0.2s						
T1214				AML	AML		
	comp=N,4070µm,0.3s						
T1214				AML	AML		
	comp=E,3000µm,0.2s						
T1218	**Civita (PG)**	**0.08**	**229**	P	Pg	11 55 58.0	+0.4
T1218				S	Sg	11 55 60.0	+0.4
T1218				AML	AML		
	comp=E,5860µm,0.2s						
T1218				AML	AML		
	comp=E,5310µm,0.1s						
T1218				AML	AML		
	comp=N,9545µm,0.3s						
T1218				AML	AML		
	comp=N,9520µm,0.3s						
T1212	**Cascia, Frazio**	**0.12**	**283**	⇓P	Pg	11 55 58.5	+0.5
T1212				S	Sg	11 56 00.7	+0.4
T1212				AML	AML		
	comp=E,698µm,0.3s						
T1212				AML	AML		
	comp=N,680µm,0.4s						
T1212				AML	AML		
	comp=N,666µm,0.4s						
T1212				AML	AML		
	comp=E,698µm,0.3s						
T1212				AML	AML		
	comp=N,680µm,0.4s						
T1212				AML	AML		
	comp=E,694µm,0.3s						
T1212				AML	AML		
	comp=N,665µm,0.4s						
T1212				AML	AML		
	comp=E,693µm,0.3s						
T1212				AML	AML		
	comp=N,680µm,1.6s						
T1212				AML	AML		
	comp=N,666µm,1.6s						
T1212				AML	AML		
	comp=E,698µm,1.7s						
T1212				AML	AML		
	comp=E,693µm,1.7s						
T1245	**Castelsantange**	**0.13**	**356**	⇑P	Pg	11 55 58.7	+0.4
T1245				S	Sg	11 56 01.4	+0.6
T1245				AML	AML		
	comp=E,1192µm,0.4s						
T1245				AML	AML		
	comp=N,1075µm,0.1s						
T1245				AML	AML		
	comp=E,1246µm,0.2s						
T1245				AML	AML		
	comp=N,1106µm,0.9s						
T1245				AML	AML		
	comp=E,1244µm,0.2s						
T1245				AML	AML		
	comp=N,1110µm,0.9s						
T1245				AML	AML		
	comp=N,1110µm,1.1s						
SMA1	**SAN MARTINO**	**0.14**	**133**	⇓P	Pg	11 55 58.9	+0.5
SMA1				S	Sg	11 56 01.5	+0.8
SMA1				AML	AML		
	comp=E,516µm,0.6s						
SMA1				AML	AML		
	comp=N,472µm,0.8s						
MC2	**Monte Cornacci**	**0.19**	**358**	⇑P	Pg	11 55 59.8	+0.5
MC2				S	Sg	11 56 03.4	+1.2
T1217	**Poggiodomo (PG**	**0.20**	**266**	⇑P	Pg	11 55 59.9	+0.5
T1217				S	Sg	11 56 03.2	+0.9
T1217				AML	AML		
	comp=E,250µm,0.2s						
T1217				AML	AML		
	comp=N,615µm,0.3s						
T1216	**Preci, Frazion**	**0.21**	**321**	P	Pg	11 56 00.1	+0.6
T1216				S	Sg	11 56 03.5	+0.9
T1216				AML	AML		
	comp=E,249µm,1.0s						
T1216				AML	AML		
	comp=N,373µm,0.3s						
T1216				AML	AML		
	comp=N,374µm,0.3s						
T1216				AML	AML		
	comp=E,249µm,1.0s						
T1216				AML	AML		
	comp=N,373µm,0.4s						
T1241	**Roccafluvione,**	**0.21**	**52**	⇑P	Pg	11 56 00.1	+0.5
T1241				S	Sg	11 56 03.6	+0.9
T1241				AML	AML		
	comp=E,216µm,0.9s						
T1241				AML	AML		
	comp=N,156µm,1.4s						
T1241				AML	AML		
	comp=N,156µm,0.6s						
T1241				AML	AML		
	comp=E,216µm,1.1s						
RM33	**Pellescritta (**	**0.22**	**177**	⇑P	Pg	11 56 00.1	+0.5
RM33				S	Sg	11 56 03.7	+0.9
RM33				AML	AML		
	comp=E,328µm,0.8s						
RM33				AML	AML		
	comp=N,241µm,0.5s						
RM33				AML	AML		
	comp=E,328µm,1.2s						
CAMP	**Campotosto**	**0.24**	**141**	P	Pg	11 56 00.6	+0.5
CAMP				S	Sg	11 56 04.3	+0.8
CAMP				AML	AML		
	comp=N,131µm,0.3s						
CAMP				AML	AML		
	comp=E,85µm,0.2s						
T1256	**Bolognola (MC)**	**0.28**	**4**	⇑P	Pg	11 56 01.2	+0.4
T1256				AML	AML		
	comp=E,202µm,1.2s						
T1256				AML	AML		
	comp=N,181µm,1.0s						
TERO	**Teramo**	**0.32**	**109**	⇑P	Pg	11 56 01.7	+0.3
TERO				S	Sg	11 56 06.6	+1.0
TERO				AML	AML		
	comp=E,122µm,0.1s						
TERO				AML	AML		
	comp=N,208µm,0.1s						
T1211	**Morro Reatino**	**0.32**	**233**	⇓P	Pg	11 56 02.0	+0.5
T1211				AML	AML		
	comp=E,150µm,0.3s						
T1211				AML	AML		
	comp=N,203µm,0.4s						
T1211				AML	AML		
	comp=E,150µm,0.3s						
T1211				AML	AML		
	comp=N,202µm,0.4s						
FDMO	**Fiordimonte**	**0.32**	**345**	⇑P	Pg	11 56 01.9	+0.4
FDMO				AML	AML		
	comp=N,223µm,0.3s						
FDMO				AML	AML		
	comp=E,126µm,0.2s						
T1222	**Castel Sant'An**	**0.34**	**201**	⇓P	Pg	11 56 02.3	+0.4
ARRO	**Arrone**	**0.35**	**246**	⇓P	Pb	11 56 03.0	-0.3
ARRO				AML	AML		
	comp=E,54µm,0.2s						
ARRO				AML	AML		
	comp=E,54µm,1.8s						
ARRO				AML	AML		
	comp=N,63µm,1.0s						
GUMA	**Gualdo di Mace**	**0.35**	**16**	⇑P	Pb	11 56 02.9	-0.4
GUMA				AML	AML		
	comp=N,492µm,0.6s						
GUMA				AML	AML		
	comp=E,370µm,0.7s						
GUMA				AML	AML		
	comp=E,421µm,0.6s						
GUMA				AML	AML		
	comp=N,492µm,0.6s						
GUMA				AML	AML		
	comp=N,552µm,1.4s						
GUMA				AML	AML		
	comp=N,552µm,0.6s						
GUMA				AML	AML		
	comp=N,492µm,1.4s						
GUMA				AML	AML		
	comp=E,421µm,1.4s						
CESI	**CESI - Serrava**	**0.35**	**322**	P	Pg	11 56 02.6	+0.5
CESI				AML	AML		
	comp=E,154µm,0.2s						
CESI				AML	AML		
	comp=N,289µm,1.0s						
CESI				AML	AML		
	comp=N,289µm,1.0s						
T1219	**Muccia, Frazio**	**0.36**	**337**	⇓P	Pg	11 56 02.6	+0.4
T1219				AML	AML		
	comp=E,345µm,0.3s						
T1219				AML	AML		
	comp=E,345µm,0.2s						
T1219				AML	AML		
	comp=N,419µm,0.2s						
T1219				AML	AML		
	comp=E,384µm,0.2s						
T1219				AML	AML		
	comp=N,401µm,0.2s						
GIGS	**Gran Sasso**	**0.39**	**135**	P	Pg	11 56 03.1	+0.4
GIGS				AML	AML		
	comp=N,22µm,1.2s						
GIGS				AML	AML		
	comp=E,28µm,0.4s						
GIGS				AML	AML		
	comp=E,28µm,1.6s						
GIGS				AML	AML		
	comp=N,22µm,0.8s						
T1220	**Camerino, Fraz**	**0.39**	**348**	⇑P	Pg	11 56 03.3	+0.5
T1220				AML	AML		
	comp=E,598µm,0.4s						
T1220				AML	AML		
	comp=N,780µm,1.4s						
T1220				AML	AML		
	comp=N,780µm,1.3s						
T1220				AML	AML		
	comp=E,598µm,0.4s						
FIAM	**Fiamignano**	**0.46**	**188**	⇓P	Pg	11 56 04.3	+0.3
FIAM				AML	AML		
	comp=E,47µm,1.6s						
FIAM				AML	AML		
	comp=E,47µm,0.4s						
FIAM				AML	AML		
	comp=N,58µm,1.0s						
MOMA	**Monte Martano**	**0.47**	**280**	⇑P	Pg	11 56 03.5	-0.8
MOMA				S	Sb	11 56 12.4	0.0
MOMA				AML	AML		
	comp=E,103µm,0.2s						
MOMA				AML	AML		
	comp=N,102µm,1.0s						
MOMA				AML	AML		
	comp=N,102µm,1.0s						
ASSB	**Assisi San Ben**	**0.51**	**309**	P	Pg	11 56 05.3	+0.3
ASSB				AML	AML		
	comp=E,48µm,1.2s						
ASSB				AML	AML		
	comp=N,59µm,0.8s						
ASSB				AML	AML		
	comp=E,48µm,0.8s						
ASSB				AML	AML		
	comp=N,59µm,1.2s						
FAGN	**Fagnano**	**0.54**	**148**	⇑P	Pb	11 56 06.6	+0.1
FAGN				AML	AML		
	comp=N,84µm,0.6s						
FAGN				AML	AML		
	comp=E,130µm,1.0s						
FAGN				AML	AML		
	comp=E,130µm,1.0s						
FAGN				AML	AML		
	comp=N,84µm,1.4s						
SNTG	**Esanatoglia**	**0.56**	**340**	P	Pg	11 56 06.4	+0.4
SNTG				S	Sb	11 56 15.1	+0.1
SNTG				AML	AML		
	comp=E,45µm,0.1s						
SNTG				AML	AML		
	comp=N,56µm,1.6s						
SNTG				AML	AML		
	comp=N,56µm,0.4s						
EL6	**Elcito**	**0.61**	**353**	P	Pg	11 56 07.0	+0.2
EL6				S	Sb	11 56 16.9	+0.5
EL6				AML	AML		
	comp=N,102µm,0.4s						
EL6				AML	AML		
	comp=E,152µm,0.1s						
EL6				AML	AML		
	comp=N,101µm,0.4s						
ARVD	**Arcevia**	**0.80**	**346**	⇓P	Pg	11 56 10.6	+0.2
ARVD				S	Sn	11 56 22.9	-1.1
APEC	**Apecchio**	**1.01**	**326**	P	Pn	11 56 15.5	+0.4

ROM 19 11:56:14.6±0.1, 42°.720N±0°.003×13°.250E±0°.004, h14^{km}, ML1.7/7, 2C-2D, Error ellipse: s-maj=0.3km s-min=0.1km az=359.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.05**	**322**	P	Pg	11 56 17.4	+0.1
T1214				S	Sg	11 56 19.1	-0.2
T1214				AML	AML		
	comp=E,507µm,0.2s						
T1218	**Civita (PG)**	**0.11**	**243**	⇑P	Pg	11 56 18.2	+0.3
T1218				S	Sg	11 56 20.6	+0.3
T1218				AML	AML		
	comp=E,615µm,0.4s						
T1218				AML	AML		
	comp=E,579µm,0.2s						
T1245	**Castelsantange**	**0.14**	**341**	⇓P	Pg	11 56 18.7	+0.3
T1212	**Cascia, Frazio**	**0.15**	**282**	⇓P	Pg	11 56 18.8	+0.3
T1212				S	Sg	11 56 21.6	+0.4
T1212				AML	AML		
	comp=N,341µm,0.2s						
T1241	**Roccafluvione,**	**0.19**	**44**	⇑P	Pg	11 56 19.4	+0.4
T1241				S	Sg	11 56 22.6	+0.6
T1241				AML	AML		
	comp=E,176µm,0.2s						
T1241				AML	AML		
	comp=N,65µm,0.6s						
MC2	**Monte Cornacci**	**0.20**	**347**	P	Pg	11 56 19.5	+0.3
MC2				S	Sb	11 56 23.2	-0.7
RM33	**Pellescritta (**	**0.21**	**187**	P	Pg	11 56 19.8	+0.5
RM33				S	Sb	11 56 23.5	-0.7
RM33				AML	AML		
	comp=E,397µm,0.2s						
RM33				AML	AML		
	comp=E,407µm,0.2s						
T1217	**Poggiodomo (PG**	**0.23**	**268**	P	Pg	11 56 20.1	+0.3
T1217				S	Sg	11 56 23.9	+0.7
T1217				AML	AML		
	comp=E,170µm,0.1s						
T1216	**Preci, Frazion**	**0.24**	**315**	P	Pg	11 56 20.1	+0.3
TERO	**Teramo**	**0.28**	**110**	P	Pg	11 56 20.8	+0.3
TERO				S	Sg	11 56 25.1	+0.7
GIGS	**Gran Sasso**	**0.36**	**139**	P	Pg	11 56 21.9	0.0
GIGS				S	Sg	11 56 27.5	+0.8

IDC 19 12:00:04.3±2.3, 2°.85N×126°.05E, h0^{km}, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=197.8km s-min=27.9km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.07**	**161**	P	P	12 05 22.1	+0.6
	0.4nm,0.5s,baz=340,slow=10,SNR=9.9						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**27.44**	**164**	P	P	12 05 51.7	-0.5
	0.2nm,0.6s,baz=340,slow=7.1,SNR=9.5						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**57.89**	**326**	P	P	12 09 58.0	-0.1
	0.1nm,0.4s,baz=120,slow=5.7,SNR=1.6						
	0.1nm,0.4s						

WEL 19 12:02:09.7±0.4, 42°S±4°×17°3E±°, h32^{km}±6^{km}, M2.1/3, ML2.2/8, MLv2.1/3, Error ellipse: s-maj=0.0km s-min=0.0km az=86.1, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THZ	**Tophouse**	**0.26**	**306**	P	Pn	12 02 18.3	+0.9
THZ				S	Sn	12 02 24.5	+2.1
BSWZ	**Blackbirch Sta**	**0.55**	**69**	P	Pn	12 02 22.1	+0.8
BSWZ				S	Sn	12 02 31.0	+1.5
KHZ	**Kahutara**	**0.56**	**152**	P	Pn	12 02 21.8	+0.3
MRNZ	**Matariki Terra**	**0.61**	**328**	P	Pn	12 02 22.5	+0.4
MRNZ				S	Sn	12 02 32.0	+1.2
NNZ	**Nelson**	**0.71**	**12**	P	Pb	12 02 23.8	+0.1
NNZ				S	Sn	12 02 34.5	+1.1
TKNZ	**Takaka Hill**	**0.90**	**349**	P	Pb	12 02 26.5	-0.3
DSZ	**Denniston Nort**	**1.05**	**279**	P	Pb	12 02 28.8	-0.5
GVZ	**Greta Valley S**	**1.06**	**186**	P	Pn	12 02 28.0	-0.3
GVZ				S	Sn	12 02 42.0	+0.1
TCW	**Tory Channel**	**1.08**	**50**	P	Pn	12 02 28.9	+0.3
LTZ	**Lake Taylor**	**1.10**	**218**	P	Pn	12 02 29.2	+0.2
QRZ	**Quartz Range**	**1.20**	**335**	P	Pn	12 02 30.9	+0.7
CAW	**Cannon Point**	**1.63**	**61**	P	Pn	12 02 35.3	-0.8
MQZ	**McQueen's Vall**	**1.83**	**192**	P	Pn	12 02 36.8	-2.1

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*SOME **19** 12:09:35.0, 44°.27N×83°.00E, h20^{km}*

*NNC **19** 12:09:36.7±3.4, 44°.38N×82°.73E, h0^{km}, mb2.7, mpv2.3, Error ellipse: s-maj=36.6km s-min=8.7km az=118.0*

ISC 19 12:09:34.5±4.6, 44°.2N±0°.2×83°.1E±0°.3, h10^{km}, n7, σ1^{s}.12/7, 3C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	**Jarkent**	**2.38**	**274**	*e*Pg	**Pb**	**12 10 17.3**	**-0.3**
	5.4nm,0.2s						
DJR				*e*Lg	Lg	12 10 48.5	
	10nm,0.5s						
MK31	**Makanchi Array**	**2.64**	**348**	⇑Pg	**Pb**	**12 10 20.7**	**-1.2**
	0.2nm,0.2s,baz=174,slow=16,SNR=91						
MK31				⇑Lg	Lg	12 10 53.2	
	3.0nm,0.3s,baz=167,slow=26,SNR=13						
MAKZ	**Makanchi**	**2.71**	**343**	⇑Pg	**Pb**	**12 10 23.3**	**+0.1**
	1.0nm,0.3s						
MAKZ				⇓Lg	Lg	12 10 55.5	
	1.8nm,0.4s						
PDGK	**Podgornoye**	**2.77**	**253**	⇓Pg	**Pb**	**12 10 23.2**	**-0.9**
	0.7nm,0.4s						
PDGK				⇓Lg	Lg	12 10 59.3	
	3.4nm,0.4s						
SHLS	**Shalkode**	**2.85**	**249**	*e*Pg	**Pn**	**12 10 21.2**	**+1.1**
	8.0nm,0.2s						
SHLS				*e*Lg	Lg	12 10 55.0	
	25nm,0.4s						
KPKS	**Kokpek**	**3.29**	**258**	*e*Pg	**Pb**	**12 10 32.0**	**-0.9**
	2.6nm,0.2s						
KPKS				*e*Lg	Lg	12 11 13.7	
	8.1nm,0.3s						
SATY	**Saty**	**3.60**	**253**	*e*Pg	**Pb**	**12 10 37.7**	**-0.7**
	0.7nm,0.3s						
SATY				*e*Lg	Lg	12 11 22.8	
	2.3nm,0.4s						

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*SOME **19** 12:47:26.9, 40°.77N×79°.65E, h5^{km}*

*NNC **19** 12:47:28.9±0.9, 40°.82N×79°.69E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=6.4km s-min=5.0km az=159.0*

*KRNET **19** 12:47:28.3±0.1, 40°.60N×79°.49E, mb2.9*

ISC 19 12:47:27.9±2.2, 40°.75N±0°.10×79°.70E±0°.06, h10^{km}, n58, σ1^{s}.50/70, 24C-14D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**1.99**	**331**	⇓*i*P	**Pg**	**12 48 05.1**	**-1.0**
	baz=37						
PRZ				⇓*i*S	**Sg**	**12 48 32.4**	**+0.6**
	baz=37						
KDJ	**Kajisay**	**2.34**	**307**	⇑*e*P	**Pb**	**12 48 08.8**	**-1.6**
	baz=12						
KDJ				⇑*e*S	**Sb**	**12 48 37.8**	**-1.6**
	baz=12						
SHLS	**Shalkode**	**2.41**	**356**	Pg	**Pb**	**12 48 12.3**	**+0.8**
	26nm,0.4s						
SHLS				Lg	Lg	12 48 45.3	
	112nm,0.6s						
SHLS	**Shalkode**	**2.41**	**356**	*e*Pg	**Pb**	**12 48 12.3**	**+0.8**
	26nm,0.4s						
SHLS				*e*Lg	Lg	12 48 45.3	
	112nm,0.6s						
UZB	**Uzynbulak**	**2.45**	**348**	Pg	**Pb**	**12 48 12.8**	**+0.6**
	20nm,0.4s						
UZB				Lg	Lg	12 48 45.5	
	69nm,0.5s						
UZB	**Uzynbulak**	**2.45**	**348**	*e*Pg	**Pb**	**12 48 12.8**	**+0.6**
	20nm,0.4s						
UZB				*e*Lg	Lg	12 48 45.5	
	69nm,0.5s						
SATY	**Saty**	**2.50**	**338**	Pg	**Pb**	**12 48 14.1**	**+1.0**
	38nm,0.6s						
SATY				Lg	Lg	12 48 48.1	
	210nm,0.5s						
SATY	**Saty**	**2.50**	**338**	*e*Pg	**Pb**	**12 48 14.1**	**+1.0**
	38nm,0.6s						
SATY				*e*Lg	Lg	12 48 48.1	
	210nm,0.5s						
ANVS	**Anan'yevo**	**2.54**	**324**	⇓*i*P	**Pb**	**12 48 12.3**	**-1.4**
	baz=29						
ANVS				⇓*i*S	**Sb**	**12 48 43.9**	**-1.1**
	baz=29						
PDGK	**Podgornoye**	**2.58**	**357**	Pg	**Pb**	**12 48 13.9**	**-0.5**
	8.1nm,0.4s						
PDGK				Lg	Lg	12 48 47.8	
	45nm,0.6s						
PDGK	**Podgornoye**	**2.58**	**357**	⇓Pn	**Pn**	**12 48 11.9**	**+1.9**
	23nm,0.8s						
PDGK				⇑Lg	Lg	12 48 48.0	
	57nm,0.5s						
ZHN	**Zhinishke**	**2.59**	**339**	Pg	**Pb**	**12 48 15.7**	**+1.1**
	16nm,0.2s						
ZHN				Lg	Lg	12 48 50.8	
	223nm,0.2s						
ZHN	**Zhinishke**	**2.59**	**339**	*e*Pg	**Pb**	**12 48 15.7**	**+1.1**
	16nm,0.2s						
ZHN				*e*Lg	Lg	12 48 50.8	
	223nm,0.2s						
KPKS	**Kokpek**	**2.82**	**345**	Pg	**Pb**	**12 48 19.4**	**+1.0**
	20nm,0.3s						
KPKS				Lg	Lg	12 48 57.2	
	100nm,0.3s						
KPKS	**Kokpek**	**2.82**	**345**	*e*Pg	**Pb**	**12 48 19.4**	**+1.0**
	20nm,0.3s						
KPKS				*e*Lg	Lg	12 48 57.2	
	100nm,0.3s						
NRN	**Naryn**	**2.88**	**285**	⇑*e*P	**Pn**	**12 48 15.2**	**+1.0**
	baz=88						
NRN				⇑*e*S	**Sn**	**12 48 49.6**	**+0.6**
	baz=88						
KURS	**Kuram**	**2.96**	**338**	Pg	**Pb**	**12 48 22.3**	**+1.5**
	13nm,0.7s						
KURS				Lg	Lg	12 49 02.6	
	142nm,0.6s						
KURS	**Kuram**	**2.96**	**338**	*e*Pg	**Pb**	**12 48 22.3**	**+1.5**
	13nm,0.7s						
KURS				*e*Lg	Lg	12 49 02.6	
	142nm,0.6s						
ULHL	**Ulahol**	**3.00**	**301**	⇓*e*P	**Pn**	**12 48 17.5**	**+1.8**
	baz=5.0						
ULHL				⇓*e*S	**Sn**	**12 48 53.4**	**+1.6**
	baz=5.0						
TNSS	**Tian-Shan**	**3.07**	**319**	Pg	**Pb**	**12 48 23.7**	**+0.8**
	5.9nm,0.2s						
TNSS				Lg	Lg	12 49 05.0	
	28nm,0.8s						
TNSS	**Tian-Shan**	**3.07**	**319**	*e*Pg	**Pb**	**12 48 23.8**	**+0.8**
	5.9nm,0.2s						
TNSS				*e*Lg	Lg	12 49 05.0	
	28nm,0.8s						
MDOK	**Medeo**	**3.12**	**322**	⇑Pn	**Pn**	**12 48 19.1**	**+1.8**
	3.5nm,0.5s						
MDOK				Pg	**Pb**	**12 48 24.4**	**+0.9**
	17nm,0.5s						
MDOK				⇑Pg	**Pg**	**12 48 25.4**	**-2.3**
	11nm,0.5s						
MDOK				Lg	Lg	12 49 05.9	
	34nm,1.0s						
MDOK				Lg	Lg	12 49 06.1	
	41nm,0.8s						
KOTS	**Kotyrbulak**	**3.14**	**323**	Pg	**Pb**	**12 48 25.3**	**+1.3**
	13nm,0.3s						
KOTS				Lg	Lg	12 49 07.4	
	81nm,0.6s						
KOTS	**Kotyrbulak**	**3.14**	**323**	*e*Pg	**Pb**	**12 48 25.3**	**+1.3**
	13nm,0.3s						
KOTS				*e*Lg	Lg	12 49 07.4	
	81nm,0.6s						
IZV	**Izvestkoviy**	**3.24**	**316**	Pg	**Pb**	**12 48 26.9**	**+1.2**
	4.5nm,0.4s						
IZV				Lg	Lg	12 49 09.9	
	40nm,0.7s						
IZV	**Izvestkoviy**	**3.24**	**316**	*e*Pg	**Pb**	**12 48 26.9**	**+1.2**
	4.5nm,0.4s						
IZV				*e*Lg	Lg	12 49 09.9	
	40nm,0.7s						
BOOM	**Boomskoye usch**	**3.31**	**303**	⇑*e*P	**Pn**	**12 48 21.7**	**+1.7**

	baz=7.0						
BOOM				⇑*e*S	**Sn**	**12 49 01.1**	**+1.6**
	baz=7.0						
MTBS	**Maitube**	**3.41**	**315**	Pg	**Pb**	**12 48 29.4**	**+1.0**
	4.6nm,0.4s						
MTBS				Lg	Lg	12 49 14.5	
	17nm,0.4s						
MTBS	**Maitube**	**3.41**	**315**	*e*Pg	**Pb**	**12 48 29.4**	**+1.0**
	4.6nm,0.4s						
MTBS				*e*Lg	Lg	12 49 14.5	
	17nm,0.4s						
DJR	**Jarkent**	**3.58**	**1**	Pg	**Pb**	**12 48 32.2**	**+0.8**
	4.5nm,0.3s						
DJR				Lg	Lg	12 49 19.7	
	30nm,0.4s						
DJR	**Jarkent**	**3.58**	**1**	*e*Pg	**Pb**	**12 48 32.2**	**+0.8**
	4.5nm,0.3s						
DJR				*e*Lg	Lg	12 49 19.7	
	30nm,0.4s						
KST	**Kastek**	**3.61**	**311**	Pg	**Pb**	**12 48 32.8**	**+0.9**
	4.3nm,0.5s						
KST				Lg	Lg	12 49 20.7	
	46nm,1.0s						
KST	**Kastek**	**3.61**	**311**	*e*Pg	**Pb**	**12 48 32.9**	**+0.9**
	4.3nm,0.5s						
KST				*e*Lg	Lg	12 49 20.7	
	46nm,1.0s						
CHKK	**Chushkaly**	**3.70**	**328**	Pg	**Pb**	**12 48 35.0**	**+1.6**
	4.7nm,0.3s						
CHKK				Lg	Lg	12 49 24.2	
	68nm,0.6s						
CHKK	**Chushkaly**	**3.70**	**328**	*e*Pg	**Pb**	**12 48 35.0**	**+1.6**
	4.7nm,0.3s						
CHKK				*e*Lg	Lg	12 49 24.2	
	68nm,0.6s						
KTBS	**Karatobe**	**3.71**	**324**	Pg	**Pb**	**12 48 35.6**	**+2.0**
	2.8nm,0.4s						
KTBS				Lg	Lg	12 49 24.8	
	9.4nm,0.4s						
KTBS	**Karatobe**	**3.71**	**324**	*e*Pg	**Pb**	**12 48 35.6**	**+2.0**
	2.8nm,0.4s						
KTBS				*e*Lg	Lg	12 49 24.8	
	9.4nm,0.4s						
ARXS	**Arharly**	**3.73**	**339**	Pg	**Pb**	**12 48 36.0**	**+2.1**
	5.4nm,0.2s						
ARXS				Lg	Lg	12 49 26.2	
	38nm,0.6s						
ARXS	**Arharly**	**3.73**	**339**	*e*Pg	**Pb**	**12 48 36.0**	**+2.1**
	5.4nm,0.2s						
ARXS				*e*Lg	Lg	12 49 26.1	
	38nm,0.6s						
TKM2	**Tokmak 2**	**3.75**	**307**	⇓Pn	**Pn**	**12 48 28.0**	**+1.8**
	1.5nm,0.2s						
TKM2				⇑Lg	Lg	12 49 26.0	
	12nm,0.5s						
DGS	**Degeres**	**3.84**	**312**	Pg	**Pb**	**12 48 36.9**	**+1.0**
	5.8nm,0.3s						
DGS				Lg	Lg	12 49 27.5	
	30nm,0.7s						
DGS	**Degeres**	**3.84**	**312**	*e*Pg	**Pb**	**12 48 36.9**	**+1.0**
	5.8nm,0.3s						
DGS				*e*Lg	Lg	12 49 27.5	
	30nm,0.7s						
KUU	**Kurty**	**4.01**	**323**	Pg	**Pb**	**12 48 39.4**	**+0.8**
	3.8nm,0.7s						
KUU				Lg	Lg	12 49 32.1	
	13nm,0.9s						
KUU	**Kurty**	**4.01**	**323**	*e*Pg	**Pb**	**12 48 39.4**	**+0.8**
	3.8nm,0.7s						
KUU				*e*Lg	Lg	12 49 32.1	
	13nm,0.9s						
KBK	**Karagaybulak**	**4.04**	**300**	⇓*e*P	**Pn**	**12 48 31.7**	**+1.8**
	baz=3.0						
KBK				⇓*e*S	**Sn**	**12 49 17.9**	**+0.6**
	baz=3.0						
UCH	**Uchtor**	**4.17**	**292**	⇑*e*P	**Pn**	**12 48 33.4**	**+1.4**
	baz=95						
UCH				⇑*e*S	**Sn**	**12 49 20.7**	**-0.2**
	baz=95						
KRBS	**Karabastau**	**4.20**	**316**	Pg	**Pb**	**12 48 43.6**	**+1.8**
	5.0nm,0.4s						
KRBS				Lg	Lg	12 49 38.8	
	11nm,0.8s						
KRBS	**Karabastau**	**4.20**	**316**	*e*Pg	**Pb**	**12 48 43.6**	**+1.8**
	5.0nm,0.4s						
KRBS				*e*Lg	Lg	12 49 38.8	
	11nm,0.8s						
ARLS	**Aral**	**4.20**	**287**	⇑*e*P	**Pn**	**12 48 33.5**	**+1.3**
	baz=90						
ARLS				⇑*e*S	**Sn**	**12 49 20.9**	**-0.5**
	baz=90						
AAK	**Ala-Archa**	**4.33**	**298**	⇓*e*P	**Pn**	**12 48 35.6**	**+1.6**
	baz=0.0						
AAK				⇓*e*S	**Sn**	**12 49 25.1**	**+0.5**
	baz=0.0						
TDK	**Taldyqorghan**	**4.36**	**348**	*e*Pg	**Pg**	**12 48 48.2**	**-3.1**
	27nm,0.4s						
TDK				*e*Lg	Lg	12 49 46.4	
	56nm,0.7s						
SGDS	**Sogindy**	**4.64**	**307**	Pg	**Pb**	**12 48 51.6**	**+2.2**
	2.3nm,0.4s						
SGDS				Lg	Lg	12 49 52.5	
	7.7nm,0.9s						
AML	**Almayashu**	**4.72**	**289**	⇑Pg	**Pb**	**12 48 53.7**	**+2.7**
	0.5nm,0.7s						
AML				⇑Lg	Lg	12 49 58.3	
	0.9nm,0.6s						
MAKZ	**Makanchi**	**6.28**	**14**	⇑Pn	**Pn**	**12 49 01.3**	**+0.8**
	0.9nm,0.6s						
MAKZ				⇓Sn	**Sn**	**12 50 11.4**	**-0.9**
	1.0nm,0.7s						
MAKZ				⇑Lg	Lg	12 50 42.7	
	1.9nm,0.7s						
MK31	**Makanchi Array**	**6.33**	**16**	⇑Pn	**Pn**	**12 49 02.3**	**+1.0**
	0.3nm,0.4s,baz=202,slow=14,SNR=15						
MK31				⇑Sn	**Sn**	**12 50 14.3**	**+0.8**
	0.8nm,0.5s,baz=156,slow=38,SNR=3.7						
MK31				⇓Lg	Lg	12 50 43.4	
	1.3nm,0.6s						
KK31	**Karatay Array**	**7.24**	**292**	⇑Pg	**Pg**	**12 49 42.2**	**-4.4**
	0.3nm,0.5s,baz=112,slow=16,SNR=5.8						
KK31				⇑Lg	Lg	12 51 16.6	
	1.0nm,0.6s,baz=103,slow=28,SNR=4.3						
KURBB	**Kurchatov Arra**	**9.91**	**356**	⇑Lg	Lg	12 52 39.4	
	5.2nm,0.8s						
KURK	**Kurchatov**	**10.00**	**356**	⇑Lg	Lg	12 52 41.7	
	6.8nm,1.2s						

ROM 19 12:50:12.2±0.0**, 42°.881N**±0°.002×**13°.048E**±0°.004**, h11^{km}, ML1.3**/4**, 1C-4D, Error ellipse: s-maj=0.3km s-min=0.1km az=280.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.02**	**294**	P	Pg	12 50 14.6	+0.3
T1216				S	Sg	12 50 16.1	+0.3
T1216				AML	AML		
	comp=E,552μm,0.4s						
T1216				AML	AML		
	comp=N,614μm,0.2s						
T1216				AML	AML		
	comp=E,552μm,0.4s						
T1245	**Castelsantange**	**0.11**	**103**	P	Pg	12 50 15.4	+0.3
T1245				S	Sg	12 50 17.6	+0.3
T1245				AML	AML		
	comp=E,298μm,0.7s						
T1245				AML	AML		
	comp=E,298μm,0.7s						
T1245				AML	AML		
	comp=N,404μm,0.7s						
T1245				AML	AML		
	comp=E,298μm,1.3s						
MC2	**Monte Cornacci**	**0.11**	**73**	P	Pg	12 50 15.6	+0.3
MC2				S	Sg	12 50 17.9	+0.4
T1212	**Cascia, Frazio**	**0.13**	**181**	P	Pg	12 50 15.8	+0.4
T1212				S	Sg	12 50 18.4	+0.7
FDMO	**Fiordimonte**	**0.16**	**10**	⇑P	Pg	12 50 16.3	+0.5
FDMO				S	Sg	12 50 19.2	+0.8
FDMO				AML	AML		
	comp=N,67μm,0.2s						
FDMO				AML	AML		
	comp=N,67μm,0.2s						
FDMO				AML	AML		
	comp=E,61μm,0.9s						
CESI	**CESI - Serrava**	**0.16**	**320**	P	Pg	12 50 16.5	+0.6
CESI				S	Sg	12 50 19.5	+1.0
CESI				AML	AML		
	comp=E,74μm,0.9s						
CESI				AML	AML		
	comp=N,134μm,0.3s						
CESI				AML	AML		
	comp=E,74μm,1.1s						
T1219	**Muccia, Frazio**	**0.18**	**350**	⇓P	Pg	12 50 16.6	+0.4
T1219				S	Sg	12 50 19.7	+0.8
T1217	**Poggiodomo (PG**	**0.19**	**207**	P	Pg	12 50 16.8	+0.5
T1217				S	Sg	12 50 20.1	+0.9
T1218	**Civita (PG)**	**0.22**	**167**	P	Pg	12 50 17.5	+0.7
T1218				S	Sg	12 50 21.0	+1.0
T1220	**Camerino, Fraz**	**0.23**	**7**	⇓P	Pg	12 50 17.5	+0.4
T1241	**Roccafluvione,**	**0.28**	**95**	⇓P	Pg	12 50 18.3	+0.4
T1211	**Morro Reatino**	**0.38**	**202**	S	Sb	12 50 26.6	-0.2
SNTG	**Esanatoglia**	**0.38**	**348**	P	Pg	12 50 20.4	+0.6
TERO	**Teramo**	**0.48**	**122**	⇓P	Pg	12 50 21.6	0.0
MURB	**Monte Urbino**	**0.54**	**315**	P	Pb	12 50 24.7	+1.0

ROM 19 12:51:05.3±0.1**, 42°.651N**±0°.004×**13°.305E**±0°.004**, h10^{km}, ML0.8**/2**, 1C-3D, Error ellipse: s-maj=0.4km s-min=0.1km az=20.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	**0.03**	**132**	P	Pg	12 51 07.5	+0.2
SMA1				S	Sg	12 51 08.7	0.0
CAMP	**Campotosto**	**0.14**	**146**	P	Pg	12 51 09.1	+0.6
CAMP				S	Sg	12 51 11.7	+0.8
T1218	**Civita (PG)**	**0.14**	**278**	P	Pg	12 51 09.1	+0.5
T1218				S	Sg	12 51 11.6	+0.7
T1246	**Crognaleto (TE**	**0.15**	**116**	P	Pg	12 51 09.5	+0.7
T1246				S	Sg	12 51 12.3	+1.1
RM33	**Pellescritta (**	**0.16**	**205**	⇑P	Pg	12 51 09.5	+0.6
RM33				S	Sg	12 51 12.6	+1.3
RM33				AML	AML		
	comp=E,58μm,1.5s						
RM33				AML	AML		
	comp=N,45μm,0.5s						
RM33				AML	AML		
	comp=E,57μm,1.5s						
RM33				AML	AML		
	comp=N,46μm,0.5s						
RM33				AML	AML		
	comp=E,57μm,0.5s						
T1212	**Cascia, Frazio**	**0.22**	**298**	P	Pg	12 51 10.5	+0.6
T1212				S	Sg	12 51 14.3	+1.4
TERO	**Teramo**	**0.22**	**97**	P	Pg	12 51 10.6	+0.7
TERO				S	Sg	12 51 14.3	+1.2
T1245	**Castelsantange**	**0.22**	**337**	P	Pg	12 51 11.0	+1.0
T1245				AML	AML		
	comp=N,51μm,0.7s						
T1245				AML	AML		
	comp=E,33μm,0.2s						
T1241	**Roccafluvione,**	**0.23**	**24**	⇓P	Pg	12 51 10.7	+0.7
T1241				S	Sg	12 51 14.8	+1.6
GIGS	**Gran Sasso**	**0.28**	**136**	P	Pg	12 51 11.7	+0.7
GIGS				S	Sg	12 51 16.0	+1.2
T1211	**Morro Reatino**	**0.35**	**251**	P	Pg	12 51 12.7	+0.4
T1211				S	Sb	12 51 18.5	-0.9
ARRO	**Arrone**	**0.41**	**260**	⇓P	Pb	12 51 15.8	+1.2
PP3	**Marolino**	**0.76**	**17**	⇓P	Pn	12 51 22.1	0.0
MORC	**Moravsky Berou**	**7.71**	**21**	*e*PN	Pn	12 52 58.7	+1.1
MORC				*e*SG		12 53 24.4	

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*ISK **19** 13:11:27.9, 39°.51N×26°.04E, h10^{km}, ML2.6/15*

*THE **19** 13:11:28.6, 39°.51N×26°.06E, h4^{km}±2^{km}, ML2.4/2, Error ellipse: s-maj=2.1km s-min=0.6km az=177.0*

*DDA **19** 13:11:28.5±0.0, 39°.52N×26°.09E, h10^{km}, ML2.3*

*ATH **19** 13:11:28.7, 39°.50N×26°.06E, h14^{km}±2^{km}, ML2.4/7, Error ellipse: s-maj=2.4km s-min=1.0km az=187.0*

ISC 19 13:11:28.3±0.8**, 39°.51N**±0°.02×**26°.05E**±0°.02**, h12**^{km}±5^{km}**, n48, σ0^{s}.56**/86**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.07**	**94**	P	**Pg**	**13 11 30.8**	**-0.1**
KOCA				S	**Sg**	**13 11 32.2**	**-0.5**
GPNR	**Gulpinar-Canak**	**0.08**	**130**	Pg	**Pg**	**13 11 30.7**	**-0.2**
GPNR				Sg	**Sg**	**13 11 32.6**	**-0.3**
PRK	**Paraskevi**	**0.31**	**147**	P	**Pg**	**13 11 34.8**	**+0.1**
PRK				S	**Sg**	**13 11 39.6**	**+0.7**
	2μm,0.2s						
PRK	**Paraskevi**	**0.31**	**147**	P	**Pg**	**13 11 34.8**	**+0.1**
PRK				S	**Sg**	**13 11 38.7**	**-0.2**
PRK				AML	AML	13 11 39.7	
	comp=N,3474μm,0.2s						
PRK				AML	AML	13 11 39.7	
	comp=E,4148μm,0.2s						
SIGR	**SIGRI**	**0.33**	**208**	P	**Pg**	**13 11 35.1**	**+0.1**
SIGR				S	**Sg**	**13 11 40.0**	**+0.5**
	comp=E,590nm,0.4s						
SIGR	**SIGRI**	**0.33**	**208**	Pg	**Pg**	**13 11 35.2**	**+0.1**
SIGR				Sg	**Sg**	**13 11 40.3**	**+0.8**
SIGR	**SIGRI**	**0.33**	**208**	P	**Pg**	**13 11 35.1**	**+0.1**
SIGR				S	**Sg**	**13 11 39.8**	**+0.3**
SIGR				AML	AML	13 11 40.8	
	comp=E,1199μm,0.3s						
SIGR				AML	AML	13 11 43.5	
	comp=N,1136μm,0.4s						
BOZC	**Bozcaada**	**0.34**	**360**	Pg	**Pg**	**13 11 35.1**	**0.0**
BOZC				Sg	**Sg**	**13 11 40.2**	**+0.6**
BOZC	**Bozcaada**	**0.34**	**360**	P	**Pg**	**13 11 35.2**	**0.0**
BOZC				P	**Pg**	**13 11 35.2**	**0.0**
BOZC				S	**Sg**	**13 11 40.0**	**+0.3**
BOZC				*i* AML	AML	13 11 40.0	
	comp=N,421nm,0.5s						
BOZC				*i* AML	AML	13 11 40.0	
	comp=N,413nm,0.5s						
BOZC				*i* AML	AML	13 11 40.0	
	comp=N,349nm,0.2s						
BOZC				*i* AML	AML	13 11 40.0	
	comp=N,284nm,0.3s						
BOZC				S	**Sg**	**13 11 40.3**	**+0.6**
EZN	**Ezine**	**0.38**	**33**	P	**Pg**	**13 11 35.9**	**-0.1**
EZN				S	**Sg**	**13 11 41.6**	**+0.5**
EZN	**Ezine**	**0.38**	**33**	Pg	**Pg**	**13 11 35.9**	**-0.1**
EZN				Sg	**Sg**	**13 11 41.7**	**+0.6**
BAYC	**CANAKKALE_Bayr**	**0.45**	**58**	P	**Pg**	**13 11 36.8**	**-0.4**
BAYC				S	**Sg**	**13 11 42.9**	**-0.2**
BAYC				*i* AML	AML	13 11 48.0	
	comp=N,140nm,0.1s						
AYVA	**Ayvalik**	**0.53**	**112**	P	**Pb**	**13 11 39.6**	**+0.1**
AYVA				S	**Sg**	**13 11 46.2**	**+0.4**
AYVA				*i* AML	AML	13 11 55.0	
	comp=N,144nm,0.1s						
ECEA	**Canakkale, Ece**	**0.55**	**10**	P	**Pg**	**13 11 39.0**	**0.0**
ECEA				S	**Sg**	**13 11 46.5**	**+0.2**
ECEA				*i* AML	AML	13 11 47.0	
	comp=N,224nm,0.3s						
ECEA				*i* AML	AML	13 11 50.0	
	comp=N,281nm,0.5s						
COMU	**Canakkale**	**0.67**	**28**	Pg	**Pg**	**13 11 41.7**	**+0.2**
COMU				Sg	**Sb**	**13 11 51.6**	**+0.3**
GOKA	**anakkale-Gk**	**0.69**	**351**	P	**Pg**	**13 11 41.8**	**0.0**
GOKA				S	**Sg**	**13 11 50.7**	**-0.2**
GOKA				*i* AML	AML	13 11 55.0	
	comp=N,242nm,0.2s						
GOKA				*i* AML	AML	13 11 55.0	
	comp=N,277nm,0.2s						
GADA	**Gvkgeada**	**0.69**	**350**	Pg	**Pg**	**13 11 41.7**	**-0.1**
GADA				Sg	**Sg**	**13 11 51.3**	**+0.3**
LIA	**Limnos Island**	**0.78**	**300**	P	**Pg**	**13 11 43.6**	**+0.2**
LIA				S	**Sb**	**13 11 55.2**	**+0.9**
LIA	**Limnos Island**	**0.78**	**300**	P	**Pg**	**13 11 43.7**	**+0.3**
LIA				S	**Sb**	**13 11 55.0**	**+0.7**
LIA				AML	AML	13 11 57.6	
	comp=E,603μm,0.4s						
LIA				AML	AML	13 11 58.1	
	comp=N,473μm,0.2s						
BUHA	**Balikesir, Bur**	**0.79**	**90**	P	**Pg**	**13 11 43.2**	**-0.4**
BUHA				S	**Sg**	**13 11 53.5**	**-0.5**
BUHA				*i* AML	AML	13 11 57.0	
	comp=N,87nm,0.6s						
BUHA				*i* AML	AML	13 11 58.0	
	comp=N,105nm,0.7s						
DKL	**Dikili**	**0.79**	**123**	Pg	**Pb**	**13 11 44.3**	**+0.3**
KARB	**zmir-Karabur**	**0.89**	**162**	P	**Pg**	**13 11 45.6**	**+0.2**
KARB				S	**Sg**	**13 11 57.2**	**+0.2**
KARB				*i* AML	AML	13 11 59.0	
	comp=N,170nm,0.2s						
KARB				*i* AML	AML	13 11 59.0	
	comp=N,160nm,0.2s						
GELI	**Tayfur-Gelibol**	**0.95**	**20**	Pg	**Pg**	**13 11 46.4**	**-0.2**
GELI				Sg	**Sb**	**13 12 00.1**	**+0.9**
ZEDA	**zmir-Bergama**	**0.96**	**124**	P	**Pg**	**13 11 46.7**	**-0.1**
ZEDA				S	**Sb**	**13 12 00.3**	**+0.8**
ZEDA				*i* AML	AML	13 12 02.0	
	comp=N,80nm,0.3s						
ZEDA				*i* AML	AML	13 12 02.0	
	comp=N,70nm,0.4s						
LPK	**Lapseki**	**1.02**	**32**	Pg	**Pg**	**13 11 47.8**	**-0.2**
PSRA	**Psara**	**1.04**	**202**	P	**Pg**	**13 11 48.7**	**+0.4**
PSRA				S	**Sg**	**13 12 02.1**	**+0.3**
PSRA				AML	AML	13 12 05.4	
	comp=N,1005μm,0.3s						
PSRA				AML	AML	13 12 06.1	
	comp=E,660μm,0.3s						
SMTH	**Samothraki Isl**	**1.04**	**337**	P	**Pg**	**13 11 48.0**	**-0.5**
SMTH				S	**Sb**	**13 12 02.3**	**+0.3**
SMTH	**Samothraki Isl**	**1.04**	**337**	P	**Pg**	**13 11 48.1**	**-0.3**
SMTH				S	**Sg**	**13 12 01.5**	**-0.6**
SMTH				AML	AML	13 12 04.2	
	comp=N,263μm,0.1s						
SMTH				AML	AML	13 12 04.7	
	comp=E,199μm,0.3s						
ERIK	**Erikli-Kesan**	**1.22**	**17**	Pn	**Pn**	**13 11 50.8**	**-0.3**
URLA	**Izmir**	**1.22**	**160**	Pn	**Pn**	**13 11 50.6**	**-0.6**
URLA	**Izmir**	**1.22**	**160**	P	**Pn**	**13 11 50.5**	**-0.7**
URLA				S	**Sb**	**13 12 06.3**	**-0.8**
URLA				*i* AML	AML	13 12 09.0	
	comp=E,67nm,0.3s						
URLA				*i* AML	AML	13 12 09.0	
	comp=E,69nm,0.4s						
BALY	**Balya**	**1.23**	**79**	P	**Pn**	**13 11 50.1**	**-1.2**
BALY				S	**Sb**	**13 12 07.5**	**+0.1**
BALY				*i* AML	AML	13 12 09.0	
	comp=E,93nm,0.6s						
BALY				*i* AML	AML	13 12 10.0	
	comp=E,51nm,0.4s						
ENEZ	**Enez**	**1.23**	**3**	Pn	**Pn**	**13 11 51.2**	**-0.1**
KRBG	**Karabiga-Canak**	**1.30**	**47**	Pn	**Pn**	**13 11 52.4**	**+0.1**
ZEYE	**Izmir, Urla-Ze**	**1.31**	**164**	P	**Pn**	**13 11 52.5**	**0.0**
ZEYE				S	**Sb**	**13 12 09.0**	**-0.7**
BLCB	**Balcova**	**1.36**	**145**	Pn	**Pn**	**13 11 53.6**	**+0.5**
GONE	**Gonen-Balikesi**	**1.37**	**66**	Pn	**Pn**	**13 11 53.2**	**0.0**
ALN	**Alexandroupoli**	**1.39**	**360**	P	**Pn**	**13 11 53.9**	**+0.5**
ALN				S	**Sn**	**13 12 12.6**	**+0.8**
ALN	**Alexandroupoli**	**1.39**	**360**	Pn	**Pn**	**13 11 54.0**	**+0.5**
ALN	**Alexandroupoli**	**1.39**	**360**	P	**Pn**	**13 11 53.7**	**+0.2**
ALN				S	**Sb**	**13 12 10.8**	**-1.1**
ALN				AML	AML	13 12 13.8	
	comp=E,354μm,0.4s						
ALN				AML	AML	13 12 13.9	
	comp=N,191μm,0.5s						
RKY	**Sarkoy-Tekirda**	**1.46**	**36**	Pn	**Pn**	**13 11 55.0**	**+0.5**
BKES	**Balkesir-Mer**	**1.47**	**81**	P	**Pn**	**13 11 54.3**	**-0.3**
BKES				S	**Sb**	**13 12 15.0**	**+0.9**
BKES				*i* AML	AML	13 12 17.0	
	comp=N,49nm,0.5s						
THAS	**Thassos island**	**1.50**	**317**	P	**Pn**	**13 11 54.5**	**-0.5**
THAS				S	**Sn**	**13 12 12.7**	**-1.8**
THAS				AML	AML	13 12 19.1	
	comp=E,80μm,0.4s						
THAS				AML	AML	13 12 19.8	
	comp=N,78μm,0.3s						
EDC	**Edincik**	**1.62**	**58**	Pn	**Pn**	**13 11 57.2**	**+0.5**
BAND	**Balkesir-Ban**	**1.79**	**61**	P	**Pb**	**13 12 01.7**	**+0.7**
BAND				S	**Sn**	**13 12 20.3**	**-1.3**
BAND				*i* AML	AML	13 12 22.0	
	comp=N,28nm,0.3s						
BAND				*i* AML	AML	13 12 22.0	
	comp=N,32nm,0.2s						
DURS	**Dursunbey**	**1.87**	**86**	P	**Pn**	**13 12 00.2**	**-0.1**
DURS				S	**Sn**	**13 12 24.7**	**+0.8**
KAVA	**Kavala**	**1.90**	**322**	P	**Pn**	**13 12 00.2**	**-0.3**
KAVA				S	**Sn**	**13 12 22.7**	**-1.7**
EREA	**Eretria**	**1.98**	**237**	P	**Pn**	**13 12 00.9**	**-0.7**

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*IDC **19** 13:20:34.7±4.6, 35°.36N×140°.84E, h0^{km}, mb3.2/2, mbtmp3.1/3, ML2.2/1, Error ellipse: s-maj=139.8km s-min=27.4km az=51.0*

*JMA **19** 13:20:40.2±0.2, 35°.4N±0°.5×140°.6E±0°.9, h42^{km}±2^{km}, MV2.7/36, KUJUKURI COAST BOSO PEN*

ISC 19 13:20:40.6±1.1**, 35°.35N**±0°.04×**140°.68E**±0°.06**, h40**^{km}±9^{km}**, n19, σ0^{s}.84**/18**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSMT	**Sammumatsuo**	**0.34**	**327**	P	**Pn**	**13 20 48.8**	**-0.6**
JSMT				S	**Sn**	**13 20 55.5**	**0.0**
KTR	**Katsuura**	**0.36**	**235**	P	**Pn**	**13 20 49.2**	**-0.3**
KTR				*e*S	**Sn**	**13 20 56.1**	**+0.3**
CHOJ	**Chosi**	**0.38**	**23**	P	**Pn**	**13 20 49.4**	**-0.4**
CHOJ				S	**Sn**	**13 20 57.0**	**+0.8**
JCN	**Nagara**	**0.40**	**280**	P	**Pn**	**13 20 49.8**	**-0.2**
JKUC	**kamogawauchiur**	**0.44**	**244**	*i* P	**Pn**	**13 20 50.0**	**-0.6**
JKUC				*e*S	**Sn**	**13 20 57.4**	**-0.1**
BSO4	**Boso 4**	**0.46**	**218**	P	**Pn**	**13 20 50.9**	**+0.1**
BSO3	**Boso 3**	**0.57**	**194**	P	**Pn**	**13 20 52.0**	**0.0**
BSO1	**Boso 1**	**0.74**	**161**	P	**Pn**	**13 20 53.7**	**-0.4**
JYT	**Yasato**	**0.96**	**336**	P	**Pn**	**13 20 56.4**	**-1.2**
JIM2	**Oshima 3**	**1.20**	**239**	P	**Pn**	**13 20 59.5**	**-1.5**
MJAR	**Matsushiro Arr**	**2.33**	**301**	Pn	**Pn**	**13 21 16.4**	**0.0**
	0.5nm,0.3s,baz=132,slow=14,SNR=13						
MJAR				Sn	**Sn**	**13 21 45.9**	**+2.1**
	0.4nm,0.3s,baz=137,slow=20,SNR=5.3						
	3.5nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**27.86**	**117**	T	T	13 55 39.8	
	baz=309,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**27.86**	**117**	T	T	13 55 31.2	
	baz=309,slow=75,SNR=13						
H11N3	**WAKE ISLAND Hy**	**27.88**	**117**	T	T	13 55 36.1	
	baz=309,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**28.50**	**119**	T	T	13 56 18.7	
	baz=312,slow=75,SNR=22						
H11S3	**WAKE ISLAND Hy**	**28.50**	**119**	T	T	13 56 19.5	
	baz=312,slow=75,SNR=16						
H11S2	**WAKE ISLAND Hy**	**28.52**	**119**	T	T	13 56 20.2	
	baz=312,slow=75,SNR=16						
MKAR	**Makanchi Array**	**44.53**	**303**	P	**P**	**13 28 48.2**	**0.0**
	0.1nm,0.6s,baz=80,slow=9.2,SNR=2.3						
	0.1nm,0.6s						
WRA	**Warramunga Arr**	**55.32**	**187**	P	**P**	**13 30 10.3**	**0.0**
	0.4nm,0.9s,baz=1.0,slow=7.4,SNR=4.9						
	0.4nm,0.9s						

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*IDC **19** 13:31:48.5±1.0, 21°.52S×169°.83E, h0^{km}, mb4.0/10, mbtmp4.1/12, ML3.7/2, MS3.7/24, Error ellipse: s-maj=32.1km s-min=20.6km az=154.0*

*NEIC **19** 13:31:50.4±1.6, 21°.9S±0°.1×169°.8E±0°.2, h9^{km}±8^{km}, mb4.4/15, Error ellipse: s-maj=21.4km s-min=14.5km az=72.0*

ISC 19 13:31:50.1±0.5**, 21°.64S**±0°.10×**169°.75E**±0°.07**, h10^{km}, n79, σ1^{s}.26**/64**, mb4.1**/19**, MS3.7**/24**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	**Pines Island,**	**2.34**	**245**		**Pn**	**13 32 28.5**	**-0.1**
LIFNC	**LIFOU**	**2.50**	**290**		**Pn**	**13 32 30.8**	**+0.1**
OUENC	**Ouen Island, N**	**2.81**	**254**		**Pn**	**13 32 35.5**	**+0.4**
DZM	**Mont Dzumac**	**3.10**	**262**	*e*Pn	**Pn**	**13 32 38.2**	**-1.0**
	294nm,0.8s						
DZM				*e*LR	LR	13 33 17.2	
	comp=Z,2μm,24.4s						
DZM	**Mont Dzumac**	**3.10**	**262**	Pn	**Pn**	**13 32 39.9**	**+0.7**
	9.6nm,0.3s,baz=93,slow=16,SNR=349						
DZM				Sn	**Sn**	**13 33 14.6**	**-1.8**
	30nm,0.3s,baz=28,slow=23,SNR=7.8						
DZM				LR	LR	13 33 31.4	
	comp=Z,346nm,18.9s,baz=108,slow=32						
	56nm,0.5s						
DZM	**Mont Dzumac**	**3.10**	**262**		**Pn**	**13 32 40.1**	**+0.9**
ONTNC	**Ouen Toro**	**3.13**	**257**		**Pn**	**13 32 40.1**	**+0.6**
KOUNC	**Koumac, New Ca**	**5.22**	**281**		**Pn**	**13 33 10.1**	**+2.0**
URZ	**Urewera**	**17.73**	**161**	P	**P**	**13 35 59.5**	**+1.6**
	0.2nm,0.3s,baz=69,slow=9.2,SNR=5.3						
URZ				LR	LR	13 41 26.8	
	comp=Z,274nm,19.1s,baz=64,slow=32						
	21nm,1.0s						
AFI	**Afiamalu**	**19.19**	**69**	LR	LR	13 42 04.1	
	comp=Z,224nm,20.4s,baz=252,slow=32						

CTA	**Charters Tower**	**22.01**	**270**	P	**P**	**13 36 46.5**	**+1.8**
	4.9nm,0.8s,baz=99,slow=12,SNR=6.8						
CTA				LR	LR	13 45 15.1	
	comp=Z,310nm,18.4s,baz=92,slow=36						
	4.9nm,0.8s						
CTAO	**Charters Tower**	**22.01**	**270**	P	**P**	**13 36 46.2**	**+1.4**
CTAO				IAmb	IAmb	13 37 06.6	
	comp=Z,9.2nm,0.9s						
RPZ	**Rata Peaks**	**22.04**	**177**	LR	LR	13 44 28.2	
	comp=Z,233nm,19.3s,baz=350,slow=34						
PMG	**Port Moresby**	**24.89**	**296**	P	**P**	**13 37 14.4**	**+1.1**
	comp=Z,6.4nm,0.6s,baz=194,slow=12,SNR=2.5						
PMG				LR	LR	13 46 09.6	
	comp=Z,247nm,18.4s,baz=118,slow=35						
	comp=Z,6.4nm,0.6s						
COEN	**Coen**	**26.40**	**282**	P	**P**	**13 37 28.9**	**+1.9**
COEN				IAmb	IAmb	13 37 45.4	
	comp=Z,12nm,1.2s						
STKA	**Stephens Creek**	**27.06**	**242**	P	**P**	**13 37 34.0**	**+1.2**
	comp=Z,3.4nm,0.7s,baz=54,slow=7.8,SNR=6.5						
STKA				LR	LR	13 47 13.7	
	comp=Z,192nm,19.7s,baz=56,slow=34						
	comp=Z,3.4nm,0.7s						
STKA	**Stephens Creek**	**27.06**	**242**	P	**P**	**13 37 33.8**	**+1.0**
RAR	**Rarotonga**	**28.35**	**95**	LR	LR	13 48 56.6	
	comp=Z,55nm,18.2s,baz=253,slow=36						
WB0	**Warramunga Arr**	**33.09**	**267**	P	**P**	**13 38 26.1**	**-0.2**
WB0				IAmb	IAmb	13 38 37.6	
	comp=Z,3.9nm,0.9s						
AS31	**Alice Springs**	**33.09**	**260**	P	**P**	**13 38 26.4**	**0.0**
AS31				IAmb	IAmb	13 38 41.6	
	comp=Z,1.6nm,0.9s						
ASAR	**Alice Springs**	**33.09**	**260**	P	**P**	**13 38 25.9**	**-0.4**
	comp=Z,2.0nm,0.8s,baz=85,slow=8.9,SNR=24						
ASAR				LR	LR	13 52 39.2	
	comp=Z,198nm,18.3s,baz=82,slow=38						
	comp=Z,2.0nm,0.8s						
ASAR	**Alice Springs**	**33.09**	**260**	P	**P**	**13 38 26.8**	**+0.4**
WB2	**Warramunga Arr**	**33.10**	**266**	P	**P**	**13 38 26.4**	**0.0**
WB2				IAmb	IAmb	13 38 48.9	
	comp=Z,8.5nm,1.4s						
WRA	**Warramunga Arr**	**33.11**	**266**	P	**P**	**13 38 25.7**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=102,slow=7.9,SNR=9.6						
WRA				LR	LR	13 52 04.9	
	comp=Z,282nm,19.8s,baz=108,slow=37						
	comp=Z,0.9nm,0.7s						
WRA	**Warramunga Arr**	**33.11**	**266**	P	**P**	**13 38 25.3**	**-1.3**
MTN	**Manton Dam**	**37.82**	**277**	P	**P**	**13 39 07.3**	**+0.2**
MTN				IAmb	IAmb	13 39 44.6	
	comp=Z,17nm,1.3s						
PPT2	**Papeete2**	**38.45**	**91**	*e*S	**S**	**13 45 12.8**	**+4.9**
	comp=Z,42nm,24.0s						
PPT2				*e*LR	LR	13 49 45.1	
	comp=Z,130nm,28.2s						
KNRA	**Kununurra**	**39.20**	**272**	P	**P**	**13 39 18.3**	**-0.4**
KNRA				IAmb	IAmb	13 39 19.5	
	comp=Z,7.6nm,0.8s						
FITZ	**Fitzroy Crossi**	**41.53**	**267**	P	**P**	**13 39 38.6**	**+0.6**
GUMO	**Guam**	**42.69**	**323**	LR	LR	13 56 37.8	
	comp=Z,81nm,20.1s,baz=134,slow=35						
NWAO	**Narrogin (SRO)**	**47.58**	**245**	LR	LR	14 00 12.1	
	comp=Z,191nm,18.8s,baz=46,slow=36						
NWAO	**Narrogin (SRO)**	**47.58**	**245**	P	**P**	**13 40 26.5**	**+0.2**
TAOE	**Nuku Hiva Isla**	**49.77**	**83**	*e*LR	LR	13 54 56.9	
	comp=Z,152nm,26.0s						
KAPI	**Kappang**	**51.13**	**281**	LR	LR	14 05 43.5	
	comp=Z,76nm,19.0s,baz=202,slow=40						
DAV	**Davao City (W)**	**51.87**	**298**	LR	LR	14 02 43.1	
	comp=Z,54nm,19.1s,baz=43,slow=36						
TOLI2	**Tolitoli**	**52.88**	**289**	P	**P**	**13 41 07.7**	**+1.2**
JCJ	**Chichijima**	**55.31**	**330**	LR	LR	14 03 05.2	
	comp=Z,23nm,21.2s,baz=237,slow=34						
MJAR	**Matsushiro Arr**	**65.09**	**332**	P	**P**	**13 42 30.1**	**-0.8**
	comp=Z,1.1nm,0.9s,baz=162,slow=8.6,SNR=4.2						
MJAR				LR	LR	14 08 56.9	
	comp=Z,19nm,21.1s,baz=172,slow=34						
	comp=Z,1.1nm,0.9s						
JNU	**Nakatsue**	**65.89**	**325**	LR	LR	14 08 23.2	
	comp=Z,27nm,21.2s,baz=146,slow=33						
QSPA	**South Pole Qui**	**68.42**	**180**	P	**P**	**13 42 51.9**	**-0.1**
QSPA				IAmb	IAmb	13 42 53.5	
	comp=Z,10nm,1.3s						
ASAJ	**Asahikawa**	**70.01**	**340**	LR	LR	14 09 25.0	
	comp=Z,45nm,21.7s,baz=158,slow=32						
KSRS	**Korea Array**	**70.75**	**326**	LR	LR	14 11 46.0	
	comp=Z,25nm,20.2s,baz=220,slow=34						
PETK	**Petropavlovsk-**	**75.17**	**353**	P	**P**	**13 43 31.5**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=129,slow=4.1,SNR=1.8						
PETK				LR	LR	14 10 37.1	
	comp=Z,62nm,19.5s,baz=174,slow=31						
	comp=Z,1.2nm,0.7s						
BELA	**Belgrano 2**	**79.67**	**175**	P	**P**	**13 43 55.1**	**-2.3**
BELA				IAmb	IAmb	13 44 20.7	
	comp=Z,7.9nm,1.3s						
CMAR	**Chiang Mai Arr**	**79.93**	**294**	P	**P**	**13 44 01.8**	**+2.0**
	comp=Z,0.9nm,1.0s,baz=130,slow=5.2,SNR=6.2						
	comp=Z,0.9nm,1.0s						
MA2	**Magadan**	**82.41**	**350**	LR	LR	14 15 31.9	
	comp=Z,62nm,20.8s,baz=191,slow=32						
TROLL	**Troll, Antarti**	**86.18**	**184**	P	**P**	**13 44 30.5**	**-1.0**
SNAA	**Sanae**	**86.79**	**182**	P	**P**	**13 44 33.3**	**-1.1**
SNAA	**Sanae**	**86.79**	**182**	P	**P**	**13 44 33.5**	**-0.9**
VNA3	**Neumayer Olymp**	**87.36**	**180**	P	**P**	**13 44 35.8**	**-1.2**
VNA2	**Neumayer--Watz**	**87.66**	**181**	P	**P**	**13 44 37.7**	**-0.8**
	baz=174,slow=2.0						
YAK	**Yakutsk**	**89.30**	**342**	LR	LR	14 19 27.6	
	comp=Z,35nm,21.7s,baz=187,slow=32						
SONM	**Songino Array**	**89.42**	**323**	P	**P**	**13 44 46.7**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=131,slow=6.1,SNR=5.5						
	comp=Z,0.8nm,0.9s						
LPIG	**La Paz**	**90.02**	**64**	LR	LR	14 16 30.9	
	comp=Z,48nm,19.2s,baz=196,slow=30						
NVAR	**Mina Array Bea**	**90.03**	**48**	P	**P**	**13 44 49.4**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=228,slow=9.0,SNR=7.0						
	comp=Z,0.8nm,0.7s						
PALK	**Pallekele**	**91.77**	**277**	LR	LR	14 27 39.9	
	comp=Z,49nm,20.0s,baz=225,slow=36						
ILAR	**Eielson Array**	**92.37**	**17**	P	**P**	**13 44 57.3**	**-3.0**
	comp=Z,0.2nm,0.6s,baz=230,slow=5.1,SNR=6.8						
ARCES	**ARCESS Array B**	**127.50**	**345**	PKP	**PKPdf**	**13 50 53.5**	**-1.1**
	comp=Z,1.0nm,0.5s,baz=52,slow=2.0,SNR=10						
FINES	**FINESS Array B**	**132.98**	**337**	PKP	**PKPdf**	**13 51 05.0**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=5.7,slow=3.8,SNR=9.2						
AKASG	**Malin Array Be**	**137.70**	**323**	PKP	**PKPdf**	**13 51 13.3**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=50,slow=1.5,SNR=1.9						
NOA	**NORSAR Array B**	**137.88**	**345**	PKP	**PKPdf**	**13 51 14.8**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=31,slow=4.1,SNR=3.1						
OSTC	**Ostas**	**144.45**	**331**	*e*PKP	**PKPdf**	**13 51 28.9**	**+2.3**
DPC	**Dobruska-Polom**	**144.55**	**330**	*e*PKP	**PKPab**	**13 51 25.2**	**0.0**
CLL	**Collm**	**145.28**	**334**	*i* PKPbc	**PKPdf**	**13 51 27.2**	**-0.7**
	comp=Z,8.0nm,0.7s						
CLL				*i* x	x	13 51 30.0	
	comp=Z,7.0nm,0.8s						
CLL				AMS	AMS	15 15 00.0	
	comp=Z,100nm,20.5s						
PRU	**Pruhonice**	**145.61**	**331**	*e*PKP	**PKPdf**	**13 51 27.9**	**-0.6**
RONA	**Rosalia, Austr**	**146.36**	**327**	*e*PKP	**PKPdf**	**13 51 31.2**	**+1.2**
	comp=Z,4.2nm,0.7s						
CONA	**Conrad Observa**	**146.43**	**328**	PKP	**PKPbc**	**13 51 31.6**	**+0.2**
	comp=Z,3.7nm,0.9s						
CKRC	**Cesky Krumlov**	**146.56**	**330**	*e*PKP	**PKPdf**	**13 51 30.6**	**+0.4**
KHC	**Kasperske Hory**	**146.67**	**331**	*e*PKP	**PKPdf**	**13 51 31.2**	**+0.8**
GERES	**GERESS Array B**	**146.82**	**331**	PKPbc	**PKPdf**	**13 51 32.1**	**+1.3**
	comp=Z,2.9nm,0.8s,baz=5.7,slow=1.3,SNR=12						
ARSA	**Arzberg**	**147.05**	**327**	*e*PKP	**PKPbc**	**13 51 34.3**	**+1.1**
	comp=Z,4.9nm,1.6s						
KBA	**Koelnbreinsper**	**148.25**	**329**	*e*PKP	**PKPdf**	**13 51 33.2**	**-0.1**
	comp=Z,3.8nm,1.0s						
ABTA	**Abfaltersbach**	**148.89**	**329**	*e*PKP	**PKPdf**	**13 51 34.1**	**-0.1**
	comp=Z,5.1nm,0.9s						
WATA	**Walderalm**	**148.90**	**331**	*e*PKP	**PKPbc**	**13 51 37.5**	**-0.8**
	comp=Z,9.9nm,2.0s						
WTTA	**Wattenberg**	**148.92**	**331**	*e*PKP	**PKPbc**	**13 51 37.7**	**-0.7**
	comp=Z,4.8nm,0.8s						
MOTA	**Moosalm**	**149.10**	**331**	*e*PKP	**PKPbc**	**13 51 37.8**	**-1.0**
	comp=Z,6.8nm,1.0s,SNR=5.4						
SQTA	**Sankt Quirin**	**149.15**	**331**	*e*PKP	**PKPbc**	**13 51 38.2**	**-0.6**
	comp=Z,6.1nm,0.8s						
FETA	**Feichten**	**149.51**	**331**	*e*PKP	**PKPbc**	**13 51 39.4**	**-0.5**
	comp=Z,6.7nm,1.0s,SNR=6.3						
DAVA	**Damuels**	**149.69**	**332**	*e*PKP	**PKPbc**	**13 51 39.7**	**-0.5**
	comp=Z,8.4nm,1.0s						

IDC 19 13:38:01.8±4.8**, 21°.63S**×**169°.70E, h0^{km}, mb3.6**/3**,**
mbtmp3.6/3**, Error ellipse: s-maj=199.5km**
s-min=53.4km az=157.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**21.96**	**270**	P	P	13 42 59.3	+1.9
	3.9nm,1.0s,baz=101,slow=10,SNR=2.7						
	3.9nm,1.0s						
ASAR	**Alice Springs**	**33.05**	**260**	P	P	13 44 38.6	-0.7
	0.6nm,0.7s,baz=80,slow=8.6,SNR=7.1						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**33.06**	**266**	P	P	13 44 38.6	-0.9
	0.3nm,0.8s,baz=99,slow=8.0,SNR=2.6						
	0.3nm,0.8s						
GERES	**GERESS Array B**	**146.79**	**331**	PKPbc	PKPbc	13 57 45.4	-0.5
	0.5nm,0.5s,baz=31,slow=4.6,SNR=4.1						

IDC ***19*** *13:45:09.6±0.6, 37°.00N×77°.84E, h0^{km}, mb3.9/23,*
mbtmp4.0/28, ML3.6/5, MS3.4/17, Error ellipse:
s-maj=16.6km s-min=11.9km az=37.0
MOS ***19*** *13:45:14.6±1.5, 37°.14N×77°.87E, h47^{km}, mb4.4/7, Error*
ellipse: s-maj=7.4km s-min=4.3km az=100.2
NNC ***19*** *13:45:15.4±1.0, 37°.34N×78°.10E, h0^{km}, mb4.8, mpv4.5,*
Error ellipse: s-maj=8.5km s-min=7.4km az=101.0
NEIC ***19*** *13:45:16.8±2.0, 37°.20N±0°.07×77°.89E±0°.10, h45^{km}±6^{km},*
mb4.4/33, Error ellipse: s-maj=11.4km s-min=10.3km
az=112.0
ISC 19 13:45:12.2±0.3**, 37°.11N**±0°.03×**78°.03E**±0°.04**, h10^{km}, n179,**
σ**2^{s}16**/191**, mb4.2**/43**, MS3.4**/14**, 20C-13D, Southern**
Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**2.90**	**327**	Pn	**Pn**	**13 45 58.5**	**0.0**
KSH				Sn	**Sn**	**13 46 34.1**	**+0.6**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KSH				smax	smax		
	comp=N,3μm,1.0s						
KSH				smax	smax		
	comp=E,3μm,0.7s						
THN	**Thein Dam**	**5.03**	**203**	*e*P	Pn	13 46 32.5	+4.7
THN				*e*S	**Sn**	**13 47 31.0**	**+5.1**
THN				IAML		13 47 33.6	
	comp=N,147nm,0.3s						
KDJ	**Kajisay**	**5.06**	**353**	Pn	**Pn**	**13 46 29.9**	**+1.6**
KDJ	**Kajisay**	**5.06**	**353**	P	**Pn**	**13 46 29.9**	**+1.6**
JMU	**Jammu**	**5.08**	**211**	*e*P	Pn	13 46 32.6	+4.2
JMU				*e*S	**Sn**	**13 47 30.8**	**+3.8**
CHCP	**Chirah Chowk**	**5.19**	**230**	P	**Pn**	**13 46 33.8**	**+3.8**
NIL	**Nilore**	**5.21**	**230**	Pn	**Pn**	**13 46 33.0**	**+2.8**
NIL	**Nilore**	**5.21**	**230**	P	**Pn**	**13 46 33.0**	**+2.8**
ULHL	**Ulahol**	**5.31**	**346**	P	**Pg**	**13 46 51.8**	**-2.2**
	SNR=7.6						
DRK	**Karamyk**	**5.44**	**298**		**Pn**	**13 46 34.0**	**+0.4**
BOOM	**Boomskoye usch**	**5.61**	**344**	Pn	**Pn**	**13 46 37.6**	**+1.8**
BOOM	**Boomskoye usch**	**5.61**	**344**	P	**Pn**	**13 46 37.6**	**+1.8**
UCH	**Uchtor**	**5.79**	**333**	P	**Pn**	**13 46 40.5**	**+2.0**
	SNR=29						
BHK	**Bhakra**	**5.83**	**194**	*e*P	Pn	13 46 43.2	+4.5
BHK				*e*S	**Sn**	**13 47 48.5**	**+2.9**
BHK				*e*S	**Sn**	**13 47 48.5**	**+2.9**
SATY	**Saty**	**5.95**	**3**	Pg	**Pb**	**13 47 00.9**	**+4.8**
	comp=N,121nm,0.7s						
SATY				Lg	Lg	13 48 20.6	
	comp=N,167nm,0.7s						
CEP	**Cherat**	**5.97**	**239**	P	**Pn**	**13 46 43.7**	**+2.9**
TNSS	**Tian-Shan**	**5.98**	**352**	Pg	**Pb**	**13 47 00.1**	**+3.3**
	comp=N,85nm,0.6s						
TNSS				Lg	Lg	13 48 19.2	
	comp=N,61nm,0.5s						
SMLA	**Simla**	**6.01**	**187**	*e*P	**Pn**	**13 46 44.9**	**+3.8**
SMLA				*e*S	**Sn**	**13 47 51.2**	**+1.3**
SMLA				IAML		13 47 54.2	
	comp=E,240nm,0.5s						
SMLA				IAML		13 47 54.7	
	comp=N,316nm,0.5s						
KBK	**Karagaybulak**	**6.03**	**338**	P	**Pn**	**13 46 43.7**	**+2.1**
	SNR=10						
AML	**Almayashu**	**6.03**	**328**	P	**Pn**	**13 46 43.2**	**+1.4**
	SNR=13						
AML	**Almayashu**	**6.03**	**328**	⇓Pn	**Pn**	**13 46 43.2**	**+1.4**
	comp=N,0.6nm,0.5s						
AML				⇓Pg	Pb	13 47 02.6	+5.1
	comp=N,4.0nm,0.5s						
AML				⇑Lg	Lg	13 48 23.6	
	comp=N,13nm,0.7s						
AML	**Almayashu**	**6.03**	**328**	P	**Pn**	**13 46 43.2**	**+1.4**
ZHN	**Zhinishke**	**6.06**	**3**	Pg	**Pb**	**13 47 01.5**	**+3.5**
	comp=N,73nm,0.5s						
ZHN				Lg	Lg	13 48 21.8	
	comp=N,113nm,0.5s						
UZB	**Uzynbulak**	**6.08**	**7**	Pg	**Pb**	**13 47 02.4**	**+4.1**
	comp=N,47nm,0.5s						
UZB				Lg	Lg	13 48 23.5	
	comp=N,102nm,0.7s						
UZB	**Uzynbulak**	**6.08**	**7**	*e*P	Pn	13 46 48.9	+6.6
MDOK	**Medeo**	**6.09**	**353**	⇑Pn	**Pn**	**13 46 44.5**	**+2.0**
	comp=N,5.9nm,0.4s						
MDOK				Pg	**Pb**	**13 47 02.3**	**+3.7**
	comp=N,73nm,0.6s						
MDOK				⇑Pg	**Pb**	**13 47 02.5**	**+4.0**
	comp=N,63nm,0.6s						
MDOK				⇓Lg	Lg	13 48 23.1	
	comp=N,329nm,1.0s						
MDOK				Lg	Lg	13 48 23.1	
	comp=N,200nm,0.8s						
MDOK	**Medeo**	**6.09**	**353**	P	**Pn**	**13 46 44.5**	**+2.0**
TKM2	**Tokmak 2**	**6.10**	**343**	P	**Pn**	**13 46 45.3**	**+2.7**
	SNR=18						
TKM2	**Tokmak 2**	**6.10**	**343**	⇑Pn	**Pn**	**13 46 45.1**	**+2.5**
	comp=N,4.6nm,0.4s						
TKM2				⇓Pg	**Pb**	**13 47 02.2**	**+3.6**
	comp=N,59nm,0.9s						
TKM2				⇑Lg	Lg	13 48 21.5	
	comp=N,61nm,0.5s						
TKM2	**Tokmak 2**	**6.10**	**343**	P	**Pn**	**13 46 45.7**	**+3.1**
KST	**Kastek**	**6.14**	**346**	Pg	**Pb**	**13 47 03.8**	**+4.6**
	comp=N,29nm,0.9s						
KST				Lg	Lg	13 48 25.2	
	comp=N,110nm,0.5s						
MTBS	**Maitube**	**6.14**	**349**	Pg	**Pb**	**13 47 01.6**	**+2.4**
	comp=N,17nm,0.5s						
MTBS				Lg	Lg	13 48 22.3	
	comp=N,49nm,0.4s						
SHLS	**Shalkode**	**6.14**	**10**	*e*P	**Pn**	**13 46 46.2**	**+3.1**
AAA	**Alma-Ata**	**6.15**	**352**	Pg	**Pb**	**13 47 03.5**	**+4.0**
	comp=N,82nm,0.3s						
AAA				Lg	Lg	13 48 24.6	
	comp=N,180nm,0.5s						
AAK	**Ala-Archa**	**6.15**	**335**	P	**Pn**	**13 46 45.6**	**+2.3**
	SNR=9.2						
AAK	**Ala-Archa**	**6.15**	**335**	Pn	**Pn**	**13 46 45.8**	**+2.5**
	comp=N,3.8nm,0.3s,baz=149,slow=7.3,SNR=41						
AAK				Lg	Lg	13 48 22.0	
	comp=N,7.5nm,0.3s,baz=132,slow=22,SNR=1.9						
AAK				LR	LR	13 49 36.5	
	comp=N,259nm,18.9s,baz=153,slow=43						
	comp=N,10nm,0.4s						
KNDC	**Almaty**	**6.16**	**353**	⇑Pg	Pb	13 47 04.6	+5.1
	comp=N,131nm,0.7s						
KNDC				⇑Lg	Lg	13 48 23.6	
	comp=N,264nm,0.7s						
PDGK	**Podgornoye**	**6.32**	**10**	⇓Pn	**Pn**	**13 46 47.1**	**+1.6**
	comp=N,40nm,0.5s						
PDGK				⇑Pg	Pb	13 47 07.2	+5.0
	comp=N,77nm,0.6s						
PDGK				⇑Lg	Lg	13 48 26.4	
	comp=N,83nm,0.6s						
PDGK	**Podgornoye**	**6.32**	**10**	P	**Pn**	**13 46 47.1**	**+1.6**
DGS	**Degeres**	**6.37**	**345**	Pg	**Pb**	**13 47 06.7**	**+3.6**
	comp=N,54nm,0.7s						
DGS				Lg	Lg	13 48 30.8	
	comp=N,74nm,0.6s						
BTK	**Batken**	**6.37**	**300**	Pn	**Pn**	**13 46 46.3**	**+0.2**
BTK	**Batken**	**6.37**	**300**	P	**Pn**	**13 46 46.3**	**+0.2**
GAR	**Garm**	**6.37**	**290**		**Pn**	**13 46 46.3**	**+0.1**
KPKS	**Kokpek**	**6.37**	**4**	Pg	**Pb**	**13 47 07.5**	**+4.3**
	comp=N,86nm,0.6s						
KPKS				Lg	Lg	13 48 32.1	
	comp=N,153nm,0.5s						
KPKS	**Kokpek**	**6.37**	**4**	*e*P	**Pn**	**13 46 47.8**	**+1.6**
EKS2	**Erkin-Say**	**6.44**	**331**	P	**Pn**	**13 46 49.7**	**+2.6**
	SNR=17						
THW	**Thamme Wali**	**6.72**	**232**	P	**Pn**	**13 46 53.4**	**+2.5**
USP	**Ospenovka**	**6.72**	**337**	P	**Pn**	**13 46 54.3**	**+3.4**
	SNR=5.1						
MRKS	**Merke**	**6.73**	**328**	Pg	**Pb**	**13 47 13.8**	**+4.5**
	comp=N,10nm,0.6s						
MRKS				Lg	Lg	13 48 42.8	
	comp=N,61nm,0.7s						
DDI	**Dehra Dun**	**6.77**	**180**	*e*P	Pn	13 46 56.5	+4.8
DDI				*e*S	**Sn**	**13 48 10.3**	**+1.5**
DDI				IAML		13 48 15.9	
	comp=E,299nm,0.3s						
CHKK	**Chushkaly**	**6.79**	**354**	Pg	**Pb**	**13 47 14.9**	**+4.7**
	comp=E,39nm,0.5s						
CHKK				Lg	Lg	13 48 44.3	
	comp=E,88nm,0.4s						
SGDS	**Sogindy**	**6.85**	**339**	Pg	**Pb**	**13 47 15.5**	**+4.1**
	comp=E,19nm,0.5s						
SGDS				Lg	Lg	13 48 45.6	
	comp=E,70nm,0.8s						
ARXS	**Arharly**	**7.10**	**359**	Pg	**Pb**	**13 47 19.5**	**+3.9**
	comp=E,16nm,0.5s						
ARXS				Lg	Lg	13 48 52.7	
	comp=E,57nm,0.6s						
CHGR	**Chuyangaron**	**7.18**	**285**	Pn	**Pn**	**13 46 57.1**	**-0.2**
CHGR	**Chuyangaron**	**7.18**	**285**	P	**Pn**	**13 46 57.1**	**-0.2**
KBL	**Kabul**	**7.73**	**253**	Pn	**Pn**	**13 47 05.2**	**+0.2**
KBL	**Kabul**	**7.73**	**253**	P	**Pn**	**13 47 05.2**	**+0.2**
PTH	**Pithoragarh**	**7.76**	**166**	*e*P	**Pn**	**13 47 02.2**	**-3.1**
PTH				*e*S	**Sn**	**13 48 29.4**	**-4.0**
LGTI	**Lohaghat**	**7.86**	**166**	*e*P	**Pn**	**13 47 09.6**	**+3.0**
IUG	**Iuzhnay**	**7.96**	**312**	*e*P	**Pn**	**13 47 06.3**	**-1.7**
KK31	**Karatay Array**	**8.30**	**318**	Pn	**Pn**	**13 47 11.8**	**-0.9**
KK31	**Karatay Array**	**8.30**	**318**	⇑Pn	**Pn**	**13 47 16.5**	**+3.8**
	comp=E,1.2nm,0.3s,baz=124,slow=13,SNR=36						
KK31				⇑Lg	Lg	13 49 35.9	
	comp=E,6.1nm,0.5s,baz=124,slow=27,SNR=3.6						
KK31	**Karatay Array**	**8.30**	**318**	P	**Pn**	**13 47 11.8**	**-0.9**
KKAR	**Karatay Array**	**8.30**	**318**		**Pn**	**13 47 11.9**	**-0.8**
KKAR	**Karatay Array**	**8.30**	**318**		**Pn**	**13 47 11.8**	**-0.8**
KKAR	**Karatay Array**	**8.30**	**318**	P	**Pn**	**13 47 11.8**	**-0.8**
NDI	**New Delhi**	**8.43**	**185**	*e*P	**Pn**	**13 47 15.7**	**+1.3**
NDI				*e*P	**Pn**	**13 47 16.0**	**+1.6**
NDI				*e*S	**Sn**	**13 48 46.8**	**-2.8**
NDI				*e*S	**Sn**	**13 48 48.0**	**-1.6**
BTLS	**Baital**	**8.47**	**341**	Pg	Pg	13 47 45.8	-8.6
	comp=E,6.2nm,0.5s						
BTLS				Lg	Lg	13 49 37.7	
	comp=E,24nm,0.9s						
SONA	**Sohna**	**8.87**	**185**	*e*P	**Pn**	**13 47 21.9**	**+1.5**
SONA				*e*S	**Sn**	**13 48 57.0**	**-3.4**
KUDL	**Kundal**	**9.03**	**189**	*e*P	**Pn**	**13 47 24.7**	**+2.1**
KUDL				*e*S	**Sn**	**13 49 01.3**	**-3.0**
WMQ	**Urumqi**	**9.96**	**45**	*e*Pn	**Pn**	**13 47 36.6**	**+1.2**
WMQ				Sn	**Sn**	**13 49 26.8**	**-0.4**
WMQ				smax	smax		
	comp=N,61nm,1.1s						
WMQ				smax	smax		
	comp=E,57nm,1.3s						
WMQ				LR	LR		
	comp=E,260nm,14.3s						
WMQ				LR	LR		
	comp=Z,32nm,15.9s						
MAKZ	**Makanchi**	**10.13**	**16**	Pn	**Pn**	**13 47 38.0**	**+0.3**
MAKZ	**Makanchi**	**10.13**	**16**	⇓Pn	**Pn**	**13 47 38.3**	**+0.7**
	comp=Z,16nm,0.6s						
MAKZ				⇑Sn	**Sn**	**13 49 31.4**	**+0.1**
	comp=Z,8.4nm,0.6s						
MAKZ	**Makanchi**	**10.13**	**16**	P	**Pn**	**13 47 38.0**	**+0.3**
MK31	**Makanchi Array**	**10.19**	**17**		**Pn**	**13 47 39.1**	**+0.7**
MK31	**Makanchi Array**	**10.19**	**17**	Pn	**Pn**	**13 47 39.1**	**+0.7**
	comp=Z,1.2nm,0.2s,baz=198,slow=12,SNR=440						
MK31				⇑Sn	**Sn**	**13 49 31.5**	**-1.2**
	comp=Z,20nm,0.6s,baz=198,slow=28,SNR=7.0						
MK31	**Makanchi Array**	**10.19**	**17**	*d i*P	**Pn**	**13 47 39.2**	**+0.8**
MKAR	**Makanchi Array**	**10.19**	**17**	Pn	**Pn**	**13 47 39.3**	**+0.8**
	comp=Z,2.4nm,0.3s,baz=199,slow=13,SNR=122						
MKAR				Sn	**Sn**	**13 49 28.6**	**-4.1**
	comp=Z,4.3nm,0.3s,baz=198,slow=22,SNR=7.3						
	comp=Z,4.7nm,0.3s						
MKAR	**Makanchi Array**	**10.19**	**17**	Pn	**Pn**	**13 47 38.9**	**+0.5**
JHNI	**Jhansi**	**11.61**	**178**	*e*P	**Pn**	**13 47 58.2**	**+0.1**
JHNI				*e*S	**Sn**	**13 50 00.7**	**-7.1**
GOMU	**GeErMu**	**13.52**	**89**	P	**Pn**	**13 48 24.8**	**+0.5**
KURBB	**Kurchatov Arra**	**13.52**	**1**	Pn	**Pn**	**13 48 22.9**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=187,slow=13,SNR=34						
KURBB				Lg	Lg	13 52 19.1	
	comp=Z,0.1nm,0.3s,baz=184,slow=28,SNR=2.5						
	comp=Z,2.6nm,0.7s						
KURBB	**Kurchatov Arra**	**13.52**	**1**	⇓Pn	**Pn**	**13 48 26.3**	**+2.4**
	comp=Z,4.8nm,0.8s						
KURBB				⇓Lg	Lg	13 52 15.6	
	comp=Z,27nm,0.8s						
KURBB	**Kurchatov Arra**	**13.52**	**1**	P	**Pn**	**13 48 26.3**	**+2.4**
KURK	**Kurchatov**	**13.61**	**2**	Pn	**Pn**	**13 48 23.9**	**-1.2**
KURK	**Kurchatov**	**13.61**	**2**	⇓Pn	**Pn**	**13 48 23.8**	**-1.4**
	comp=Z,12nm,1.2s						
KURK				⇑Lg	Lg	13 52 21.1	
	comp=Z,17nm,1.1s						
KURK	**Kurchatov**	**13.61**	**2**	⇑*e*P	**Pn**	**13 48 24.6**	**-0.6**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
DGZ	**Jazzator, Alta**	**14.31**	**25**	*ce*P	**Pn**	**13 48 34.3**	**-0.6**
GEYT	**Alibeck**	**15.82**	**279**	Pn	**Pn**	**13 48 53.4**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=88,slow=7.4,SNR=2.1						
GEYT				Sn	**Sn**	**13 51 44.0**	**-6.4**
	comp=Z,0.5nm,0.3s,baz=47,slow=30,SNR=1.8						
GEYT				LR	LR	13 57 09.9	
	comp=Z,53nm,18.9s,baz=278,slow=46						
	comp=Z,1.7nm,0.7s						
GYA0	**ALIBECK ARRAY**	**15.82**	**279**	P	**Pn**	**13 48 56.7**	**+1.7**
GYA0B	**ALIBECK ARRAY**	**15.82**	**279**		**Pn**	**13 48 56.7**	**+1.7**
GYA0B				IAmb	IAmb	13 49 08.0	
	comp=Z,11nm,0.6s						
BVAR	**Borovoye Array**	**16.79**	**344**	Pn	**Pn**	**13 49 05.7**	**-1.6**
	baz=157,slow=13,SNR=7.7						
BVAR				Lg	Lg	13 53 54.7	
	baz=159,slow=29,SNR=1.6						
BVAR				LR	LR	13 56 03.1	
	comp=Z,115nm,18.8s,baz=156,slow=39						
	comp=Z,0.8nm,0.6s						
BRVK	**Borovoye**	**16.84**	**344**		**Pn**	**13 49 07.8**	**-0.1**
BRVK				IAmb	IAmb	13 49 19.0	
	comp=Z,19nm,1.0s						
BRVK	**Borovoye**	**16.84**	**344**	⇑*e*P	**Pn**	**13 49 06.7**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,13nm,4.2s						
GTA	**Gaotai**	**17.27**	**76**	*e*P	**P**	**13 49 18.4**	**+3.4**
GTA				pP	sP	13 49 22.9	+2.8
GTA				sP	pP	13 49 26.4	+7.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				LR	LR		
	comp=N,91nm,13.5s						
GTA				LR	LR		
	comp=E,130nm,12.7s						
GTA				LR	LR		
	comp=Z,150nm,12.4s						
ZAA0	**Zalesovo Array**	**17.49**	**13**	P	**Pn**	**13 49 13.9**	**-2.1**
ZALV	**Zalesovo Beam**	**17.49**	**13**	P	**Pn**	**13 49 13.8**	**-2.2**
	comp=Z,2.5nm,0.4s,baz=206,slow=11,SNR=7.7						
ZALV	**Zalesovo Beam**	**17.49**	**13**		**Pn**	**13 49 13.5**	**-2.5**
ZALV	**Zalesovo Beam**	**17.49**	**13**	P	**Pn**	**13 49 13.5**	**-2.5**
KOHI	**KOHIMA**	**17.79**	**125**	*e*P	**Pn**	**13 49 19.0**	**-1.0**
ABKAR	**Akbulak array**	**17.87**	**318**	P	**Pn**	**13 49 20.5**	**-0.2**
AKTO	**Aktyubinsk**	**19.57**	**319**	P	**P**	**13 49 41.0**	**+0.8**
	comp=Z,1.3nm,0.4s,baz=116,slow=14,SNR=4.3						
AKTO				LR	LR	13 57 15.2	
	comp=Z,46nm,18.9s,baz=174,slow=37						
HYB	**Hyderabad**	**19.62**	**178**	*e*P	**Pn**	**13 49 42.1**	**-0.2**
WSAR	**Wadi Sarin**	**21.67**	**236**	P	**P**	**13 50 05.4**	**+2.4**
	comp=Z,7.0nm,0.6s,baz=103,slow=3.8,SNR=6.8						
WSAR				LR	LR	14 00 16.5	
	comp=Z,39nm,18.8s,baz=114,slow=42						
ZAK	**Zakamensk**	**22.43**	**46**	*e*P	**P**	**13 50 13.7**	**+2.6**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
PZH	**PanZhiHua**	**22.70**	**111**	P	**P**	**13 50 15.1**	**+0.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,120nm,5.2s						
ARU	**Arti**	**23.33**	**332**	P	**P**	**13 50 20.1**	**-0.2**
	comp=Z,1.1nm,0.3s,baz=175,slow=19,SNR=1.6						
ARU				LR	LR	14 00 19.1	
	comp=Z,128nm,18.7s,baz=132,slow=39						
	comp=Z,1.1nm,0.3s						
ARU	**Arti**	**23.33**	**332**	*d i*P	**P**	**13 50 20.7**	**+0.4**
ARU						13 50 45.3	
ARU				S	**S**	**13 54 32.9**	**+0.1**

ARU				SS	SnSn	13 55 07.5	+0.4
ARU				pmax	pmax		
	comp=Z,24nm,3.4s						
SONM	**Songino Array**	23.39	54	P	P	13 50 22.0	+0.9
	comp=Z,1.1nm,0.6s,baz=254,slow=9.1,SNR=8.4						
SONM				LR	LR	14 00 54.2	
	comp=Z,119nm,18.2s,baz=228,slow=40						
	comp=Z,1.1nm,0.6s						
SONM	**Songino Array**	23.39	54	P	P	13 50 23.5	+2.3
SONM	**Songino Array**	23.39	54	P	P	13 50 22.0	+0.9
ULN	**Ulaanbaatar**	23.82	54	⇑*e*P	P	13 50 25.2	-0.2
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CHTO	**Chiang Mai**	25.85	129	P	P	13 50 43.9	-0.1
CHTO	**Chiang Mai**	25.85	129	P	P	13 50 43.9	-0.1
CM31	**Chiang Mai Arr**	26.12	130	P	P	13 50 48.2	+1.8
CM31				IAmb	IAmb	13 50 51.2	
	comp=Z,14nm,0.9s						
CMAR	**Chiang Mai Arr**	26.12	130	P	P	13 50 46.2	-0.2
	comp=Z,7.1nm,0.7s,baz=313,slow=9.6,SNR=10						
	comp=Z,7.1nm,0.7s						
CMAR	**Chiang Mai Arr**	26.12	130	P	P	13 50 48.0	+1.6
HHC	**Hu-ho-hao-te**	26.25	71	*e*P	P	13 50 47.8	+0.2
HHC				pmax	pmax		
	comp=Z,30nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,5.0s						
ONI	**Oni**	26.98	293	P	P	13 50 53.2	-0.9
ONI				IAmb	IAmb	13 51 01.9	
	comp=Z,5.1nm,0.7s						
ONI	**Oni**	26.98	293	P	P	13 50 53.2	-0.9
ONI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KBZ	**Khabaz**	27.40	295	LR	LR	14 03 37.0	
	comp=Z,36nm,20.4s,baz=48,slow=40						
KBZ	**Khabaz**	27.40	295	⇓*e*P	P	13 50 55.6	-2.2
KBZ				pmax	pmax		
	comp=Z,7.0nm,2.0s						
KIV	**Kislovodsk**	27.56	295	*e*P	P	13 50 56.6	-2.8
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,27nm,15.0s						
KIRV	**Kirov**	28.44	328	P	P	13 51 07.1	+0.3
	comp=Z,4.9nm,0.6s,baz=92,slow=2.6,SNR=1.8						
KIRV				LR	LR	14 03 39.8	
	comp=Z,136nm,18.2s,baz=124,slow=39						
	comp=Z,4.9nm,0.6s						
KIRV	**Kirov**	28.44	328	⇓*e*P	P	13 51 04.8	-2.0
XLT	**XiLinHaoTe**	29.52	65	*e*P	P	13 51 18.6	+1.8
XLT				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PALK	**Pallekele**	29.80	175	LR	LR	14 03 53.2	
	comp=Z,63nm,19.6s,baz=280,slow=38						
BRTR	**Keskin Array B**	34.61	288	P	P	13 52 01.1	-0.5
	comp=Z,0.5nm,0.7s,baz=125,slow=9.0,SNR=2.3						
	comp=Z,0.5nm,0.7s						
AKASG	**Malin Array Be**	37.02	307	P	P	13 52 19.7	-2.1
	comp=Z,0.1nm,0.3s,baz=72,slow=7.1,SNR=5.1						
AKASG				LR	LR	14 10 26.5	
	comp=Z,42nm,18.4s,baz=26,slow=41						
	comp=Z,0.1nm,0.3s						
KSRS	**Korea Array**	39.32	74	P	P	13 52 42.4	+0.9
	comp=Z,0.7nm,0.8s,baz=286,slow=8.7,SNR=3.4						
	comp=Z,0.7nm,0.8s						
GSI	**Gunungsitoli**	39.94	149	P	P	13 52 47.0	+0.3
KLR	**Kul'dur**	40.21	55	P	P	13 52 49.4	+0.8
	comp=Z,1.6nm,0.9s,baz=271,slow=9.1,SNR=4.6						
	comp=Z,1.6nm,0.9s						
KLR	**Kul'dur**	40.21	55	⇑*e*P	P	13 52 49.6	+0.9
KLR				pmax	pmax		
	comp=Z,21nm,4.9s						
FINES	**FINESS Array B**	40.22	324	P	P	13 52 47.9	-0.7
	comp=Z,1.0nm,0.4s,baz=105,slow=8.8,SNR=17						
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	40.22	324	P	P	13 52 48.0	-0.5
ARCES	**ARCESS Array B**	42.82	336	P	P	13 53 09.6	-0.3
	comp=Z,5.3nm,0.9s,baz=106,slow=7.4,SNR=7.8						
ARCES				LR	LR	14 11 16.9	
	comp=Z,50nm,18.2s,baz=126,slow=37						
	comp=Z,5.3nm,0.9s						
JOW	**Kunigami**	43.41	89	P	P	13 53 15.6	+0.5
HFS	**Hagfors**	46.10	321	LR	LR	14 13 45.7	
	comp=Z,64nm,18.2s,baz=48,slow=37						
GERES	**GERESS Array B**	47.17	306	P	P	13 53 43.0	-1.8
	comp=Z,0.6nm,0.6s,baz=120,slow=15,SNR=2.0						
GERES				LR	LR	14 18 08.0	
	comp=Z,34nm,19.2s,baz=268,slow=42						
	comp=Z,0.6nm,0.6s						
KHC	**Kasperske Hory**	47.20	306	⇑*e*P	P	13 53 45.1	+0.1
KHC				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NC303	**NORSAR Array S**	47.23	323	P	P	13 53 44.8	-0.3
NB2	**NORSAR Subarra**	47.31	323	P	P	13 53 44.7	-1.0
	comp=Z,0.6nm,0.5s,baz=89,slow=7.9						
NOA	**NORSAR Array B**	47.31	323	P	P	13 53 44.4	-1.3
	comp=Z,0.6nm,0.5s,baz=103,slow=7.3,SNR=4.0						
NOA				LR	LR	14 14 40.5	
	comp=Z,61nm,18.2s,baz=85,slow=37						
	comp=Z,0.6nm,0.5s						
MJAR	**Matsushiro Arr**	47.45	72	P	P	13 53 47.7	+0.6
	comp=Z,1.3nm,0.9s,baz=284,slow=9.3,SNR=3.3						
	comp=Z,1.3nm,0.9s						
NC204	**NORSAR Array S**	47.53	323	P	P	13 53 46.6	-0.8
ESDC	**Sonseca Array**	62.10	300	P	P	13 55 31.7	-1.6
	comp=Z,0.3nm,0.7s,baz=57,slow=7.1,SNR=4.1						
	comp=Z,0.3nm,0.7s						
PSA00	**Pilbara Seismi**	70.43	139	P	P	13 56 26.2	-0.5
PSA00				IAmb	IAmb	13 56 26.4	
	comp=Z,2.8nm,0.8s						
FITZ	**Fitzroy Crossi**	70.91	132	P	P	13 56 29.6	0.0
BMAR	**Burnt Mountain**	70.91	16	P	P	13 56 28.6	-0.5
KNRA	**Kununurra**	70.97	128	P	P	13 56 30.3	+0.2
TOA0	**Torodi Ar. Sit**	71.35	273	P	P	13 56 30.1	-2.5
TORD	**Torodi Ar. Bea**	71.35	273	P	P	13 56 30.2	-2.4
	comp=Z,1.6nm,0.8s,baz=43,slow=5.0,SNR=8.8						
	comp=Z,1.6nm,0.8s						
TORD	**Torodi Ar. Bea**	71.35	273	P	P	13 56 30.0	-2.6
CAST	**Castle Rocks**	72.19	21	P	P	13 56 37.6	+0.6
CAST				IAmb	IAmb	13 56 47.2	
	comp=Z,2.4nm,0.9s						
INK	**Inuvik**	72.28	12	P	P	13 56 38.1	+0.8
	comp=Z,0.7nm,0.9s,baz=321,slow=6.5,SNR=2.6						
	comp=Z,0.7nm,0.9s						
KTH	**Kantishna Hill**	72.42	21	P	P	13 56 38.4	+0.1
KTH				IAmb	IAmb	13 56 53.9	
	comp=Z,7.1nm,1.2s						
ILAR	**Eielson Array**	72.54	18	P	P	13 56 38.1	-0.8
	comp=Z,0.5nm,0.9s,baz=301,slow=5.7,SNR=6.2						
	comp=Z,0.5nm,0.9s						
C36M	**Paulatuk**	72.61	8	P	P	13 56 38.1	-1.1
C36M				IAmb	IAmb	13 57 02.0	
	comp=Z,5.8nm,1.4s						
O18K	**Koktuh Hills**	73.92	25	P	P	13 56 47.5	+0.3
WB0	**Warramunga Arr**	77.58	127	P	P	13 57 08.0	-0.6
WB0				IAmb	IAmb	13 57 45.2	
	comp=Z,7.0nm,1.3s						
WRA	**Warramunga Arr**	77.67	127	P	P	13 57 08.4	-0.8
	comp=Z,1.5nm,0.6s,baz=330,slow=5.9,SNR=27						
	comp=Z,1.5nm,0.6s						
WRAB	**Tennant Creek**	77.67	127	P	P	13 57 07.8	-1.3
WRAB				IAmb	IAmb	13 57 09.5	
	comp=Z,9.3nm,1.4s						
WRAB	**Tennant Creek**	77.67	127	P	P	13 57 07.8	-1.3
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.4s						
WB2	**Warramunga Arr**	77.68	127	P	P	13 57 07.6	-1.6
WB2				IAmb	IAmb	13 57 10.2	
	comp=Z,2.8nm,0.8s						
HYT	**Haines Junctio**	78.18	17	P	P	13 57 11.4	-0.2
HYT				IAmb	IAmb	13 57 14.5	
	comp=Z,6.3nm,1.2s						
NWAO	**Narrogin (SRO)**	78.70	147	P	P	13 57 13.0	-1.5
NWAO	**Narrogin (SRO)**	78.70	147	P	P	13 57 13.0	-1.5
NWAO				pmax	pmax		
	comp=Z,39nm,1.5s						
LBTB	**Lobatse**	79.07	227	P	P	13 57 15.9	-1.0
LBTB				IAmb	IAmb	13 57 25.1	
	comp=Z,18nm,1.4s						
LBTB	**Lobatse**	79.07	227	P	P	13 57 15.9	-1.0
LBTB				pmax	pmax		
	comp=Z,18nm,1.5s						
ASAR	**Alice Springs**	80.13	130	P	P	13 57 21.9	-0.7
	comp=Z,2.0nm,0.7s,baz=321,slow=5.8,SNR=10						
	comp=Z,2.0nm,0.7s						
YKA	**Yellowknife Ar**	80.22	6	P	P	13 57 21.4	-1.1
	comp=Z,0.9nm,0.7s,baz=345,slow=5.2,SNR=16						
	comp=Z,0.9nm,0.7s						
DBIC	**Dimbokro**	80.34	271	P	P	13 57 21.4	-2.5
	comp=Z,2.1nm,0.8s,baz=90,slow=2.0,SNR=1.5						
	comp=Z,2.1nm,0.8s						
DLBC	**Dease Lake**	81.96	14	LR	LR	14 38 57.1	
	comp=Z,37nm,18.5s,baz=338,slow=39						
BOSA	**Boshof**	82.01	225	P	P	13 57 30.7	-1.9
	comp=Z,1.4nm,0.6s,baz=360,slow=2.9,SNR=3.6						
	comp=Z,1.4nm,0.6s						
BOSA	**Boshof**	82.01	225	P	P	13 57 31.1	-1.5
BOSA				IAmb	IAmb	13 57 48.7	
	comp=Z,11nm,1.2s						
SCHQ	**Schefferville**	83.58	340	LR	LR	14 39 21.0	
	comp=Z,28nm,18.9s,baz=66,slow=39						
CTA	**Charters Tower**	85.78	119	P	P	13 57 51.0	-0.9
	comp=Z,2.3nm,0.7s,baz=354,slow=8.5,SNR=5.6						
	comp=Z,2.3nm,0.7s						
CTAO	**Charters Tower**	85.78	119	P	P	13 57 51.2	-0.7
CTAO	**Charters Tower**	85.78	119	P	P	13 57 51.2	-0.7
CTAO				pmax	pmax		
	comp=Z,14nm,1.3s						

IDC ***19*** *14:14:33.9±1.6, 24°.07S×66°.75W, h156^{km}±24^{km}, mb3.1/1, mbtmp3.8/7, Error ellipse: s-maj=26.5km s-min=19.4km az=96.0*

NEIC ***19*** *14:14:33.7±1.3, 24°.11S±0°.08×66°.8W±0°.1, h160^{km}±6^{km}, mb4.2/1, Error ellipse: s-maj=16.0km s-min=11.3km az=107.0*

SJA ***19*** *14:14:35.7±1.4, 24°.03S×67°.00W, h180^{km}, ML3.8, MW3.5, Hypocentre not reviewed by the ISC*

GUC ***19*** *14:14:36.6±0.6, 24°.01S×67°.35W, h221^{km}±8^{km}, ML3.9*

ISC 19 14:14:35.0±1.0**, 24°.03S**±0°.06×**67°.1W**±0°.1**, h197**^{km}±15^{km}**, n44, σ1^{s}07**/55**, 4C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	1.62	116	*e*P		14 15 09.0	
HJA	**Humahuaca**	1.76	63	*e*P		14 15 10.9	
HJA				*e*S		14 15 37.7	
LVC	**Limon Verde**	2.18	310	P	Pn	14 15 16.8	+1.3
	21nm,0.2s,baz=145,slow=11,SNR=151						
LVC				S	Sn	14 15 47.0	0.0
	57nm,0.2s,baz=75,slow=20,SNR=43						
LVC	**Limon Verde**	2.18	310		Pn	14 15 16.1	+0.6
LVC	**Limon Verde**	2.18	310	⇑*i*P	Pn	14 15 16.7	+1.2
LVC				*e*S	Sn	14 15 47.3	+0.3
LVC				IAML		14 15 49.0	
	471nm,0.3s						
LVC	**Limon Verde**	2.18	310	*e*P		14 15 16.7	
LVC				*e*S		14 15 48.4	
PB15	**IPOC Station P**	2.32	290		Pn	14 15 17.9	+1.1
PB15				Sn	Sn	14 15 49.8	+0.4
PB15	**IPOC Station P**	2.32	290	⇑*i*P	Pn	14 15 18.3	+1.4
PB15				*e*S	Sn	14 15 49.5	+0.2
PB15	**IPOC Station P**	2.32	290	*e*P		14 15 18.3	
PB15				*e*S		14 15 50.9	
PB15				IAML		14 15 54.0	
	comp=Z,797nm,0.1s						
YJA	**Yavi**	2.36	39	*e*P		14 15 17.6	
YJA				*e*S		14 15 49.4	
GO02	**Mina Guanaco**	2.53	243		Pn	14 15 20.4	+1.2
GO02	**Mina Guanaco**	2.53	243	⇑*i*P	Pn	14 15 20.5	+1.2
GO02				*e*S	Sn	14 15 54.5	+0.8
GO02				IAML		14 15 55.5	
	comp=N,470nm,0.6s						
GO02				IAML		14 15 56.8	
	comp=E,398nm,0.2s						
GO02	**Mina Guanaco**	2.53	243	*e*P		14 15 20.5	
GO02				*e*S		14 15 55.3	
PB06	**IPOC Station P**	2.62	300		Pn	14 15 21.3	+1.1
PB06	**IPOC Station P**	2.62	300	⇑*i*P	Pn	14 15 21.5	+1.3
PB06				*e*S	Sn	14 15 55.2	-0.2
PB06				IAML		14 15 57.7	
	comp=E,282nm,0.2s						
PB06	**IPOC Station P**	2.62	300	*e*P		14 15 21.4	
PB06				*e*S		14 15 56.0	
PB06				IAML		14 15 56.7	
	comp=Z,212nm,0.3s						
PB09	**IPOC Station P**	2.97	318		Pn	14 15 25.8	+1.5
PB09	**IPOC Station P**	2.97	318	*e*P	Pn	14 15 26.0	+1.7
PB09				*e*S	Sn	14 16 02.9	+0.2
PB09				IAML		14 16 04.3	
	comp=N,90nm,0.5s						
PB09	**IPOC Station P**	2.97	318	*e*P		14 15 25.9	
PB09				*e*S		14 16 04.5	
PB14	**IPOC Station P**	3.06	258		Pn	14 15 25.7	+0.2
PB14	**IPOC Station P**	3.06	258	*e*P	Pn	14 15 26.4	+0.9
PB14				*e*S	Sn	14 16 04.0	-1.0
PB14	**IPOC Station P**	3.06	258	*e*P		14 15 26.6	
PB14				*e*S		14 16 05.4	
PB03	**IPOC Station P**	3.13	308		Pn	14 15 26.4	+0.2
PB03	**IPOC Station P**	3.13	308	*e*P	Pn	14 15 27.1	+0.9
PB03				*e*S	Sn	14 16 05.1	-1.2
PB03				IAML		14 16 06.7	
	comp=E,175nm,0.3s						
PB03	**IPOC Station P**	3.13	308	*e*P		14 15 27.3	
PB03				*e*S		14 16 05.5	
PB03				IAML		14 16 09.2	
	comp=Z,166nm,0.6s						
PB10	**IPOC Station P**	3.20	279		Pn	14 15 26.9	+0.1
PB10	**IPOC Station P**	3.20	279	*e*P	Pn	14 15 27.5	+0.7
PB10				*e*S	Sn	14 16 05.8	-1.5
PB10				IAML		14 16 12.5	
	comp=N,76nm,0.3s						
PB10	**IPOC Station P**	3.20	279	*e*P		14 15 28.2	
PB10				*e*S		14 16 08.3	
PB04	**IPOC Station P**	3.27	300		Pn	14 15 27.3	-0.5
PB04	**IPOC Station P**	3.27	300	*e*P	Pn	14 15 28.6	+0.8
PB04				*e*S	Sn	14 16 07.8	-1.3
PB04	**IPOC Station P**	3.27	300	*e*P		14 15 29.0	
PB04				*e*S		14 16 08.3	
PB04				*e*S		14 16 08.4	
PB04				IAML		14 16 14.5	
	comp=Z,133nm,0.2s						
AC02	**Maricunga**	3.34	213		Pn	14 15 29.4	+0.4
PB07	**IPOC Station P**	3.44	311		Pn	14 15 30.1	+0.2
PB07	**IPOC Station P**	3.44	311	*e*P	Pn	14 15 30.6	+0.7
PB07	**IPOC Station P**	3.44	311	*e*P		14 15 30.6	
PB07				*e*S		14 16 12.1	
PB07				IAML		14 16 12.5	
	comp=Z,126nm,0.2s						
PB01	**IPOC Station P**	3.70	323		Pn	14 15 33.1	+0.1
PB02	**IPOC Station P**	3.73	316		Pn	14 15 33.1	-0.3
PB02	**IPOC Station P**	3.73	316	*e*P		14 15 33.1	
PB02				*e*S		14 16 18.3	
PB02				IAML		14 16 32.3	
	comp=Z,145nm,0.6s						
AC01	**Pan de Azucar**	3.80	236		Pn	14 15 33.9	-0.2
AC01	**Pan de Azucar**	3.80	236	*e*P		14 15 34.2	
AC01				*e*S		14 16 19.7	
AC01				IAML		14 16 22.7	
	comp=Z,50nm,0.2s						
PB08	**IPOC Station P**	4.31	333		Pn	14 15 41.5	+0.5
GO03	**Copiap**	4.53	218	Pn	Pn	14 15 42.1	-1.2
GO03	**Copiap**	4.53	218	*e*P		14 15 43.1	
GO03				*e*S		14 16 35.6	
CYA	**Choya**	4.55	165	*e*P		14 15 44.2	
CYA				*e*S		14 16 35.9	
GO01	**Chusmiza**	4.75	336		Pn	14 15 45.9	-0.8
PB11	**IPOC Station P**	4.86	330		Pn	14 15 47.0	-0.7
MNMC	**Minye Minye**	5.40	334		Pn	14 15 53.8	-0.9
AC04	**Llanos de Chal**	5.48	220	Pn	Pn	14 15 53.6	-1.7
AC05	**El Transito**	5.56	210	Pn	Pn	14 15 55.8	-0.9
LCO	**Las Campanas**	5.91	212	Pn	Pn	14 15 59.9	-1.4
PB16	**IPOC Station P**	6.09	338		Pn	14 16 02.4	-1.5
PB12	**IPOC Station P**	6.17	330	Pn	Pn	14 16 03.3	-1.2
CFA	**Coronel Fontan**	7.61	187	P	Pn	14 16 22.4	-0.8
	comp=Z,2.2nm,0.3s,baz=19,slow=15,SNR=28						
LPAZ	**La Paz**	7.76	353	P	Pn	14 16 25.9	+0.1
	comp=Z,3.6nm,0.4s,baz=164,slow=8.0,SNR=27						
LPAZ	**La Paz**	7.76	353		Pn	14 16 26.0	+0.2
SIV	**San Ignacio**	9.80	36	P	Pn	14 16 49.2	-2.6
	comp=Z,1.4nm,0.4s,baz=224,slow=11,SNR=11						
PLCA	**Paso Flores**	16.91	189	P	P	14 18 19.9	+0.8
	comp=Z,0.6nm,0.6s,baz=23,slow=13,SNR=4.0						
BDFB	**Brasilia**	19.79	69	P	P	14 18 49.5	-1.1
	comp=Z,6.6nm,0.7s,baz=243,slow=12,SNR=10.0						
BDFB	**Brasilia**	19.79	69	P	P	14 18 49.8	-0.8
BDFB				IAmb	IAmb	14 18 51.2	
	comp=Z,7.2nm,0.7s						
TORD	**Torodi Ar. Bea**	76.67	69	P	P	14 26 05.2	+0.5
	comp=Z,0.2nm,0.4s,baz=251,slow=5.5,SNR=1.6						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	146.61	39	PKPbc	PKPab	14 33 57.2	+2.5
	comp=Z,0.1nm,0.5s,baz=300,slow=1.4,SNR=2.1						

NEIC ***19*** *14:17:32.0±1.1, 19°.37N±0°.02×155°.30W±0°.01, h36^{km}±1^{km}, Error ellipse: s-maj=2.3km s-min=2.0km az=197.0*

HVO 19 14:17:33.5±1.1**, 19°.36N**±0°.05×**155°.27W**±0°.04**, h33**^{km}±7^{km}**, ML2.7**/23**, ML3.5**/40(NEIC)**, Error ellipse: s-maj=7.1km s-min=5.3km az=185.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDHHI	**Sand Hill**	0.03	323		Pb	14 17 38.4	-0.8
SDHHI	**Sand Hill**	0.03	323	IAML		14 17 42.4	
	comp=E,6µm,0.4s						
SDHHI				IAML		14 17 42.8	
	comp=N,9µm,0.2s						
NPH	**North Pit**	0.05	351		Pb	14 17 38.3	-0.9
NPH					Sb	14 17 41.6	-1.5
BYL	**Byron's Ledge**	0.05	14		Sb	14 17 42.0	-1.0
WRMHI	**West Rim**	0.05	330		Pb	14 17 38.3	-0.9
WRMHI					Sb	14 17 41.6	-1.5
OBL	**Observatory Le**	0.06	349		Sb	14 17 42.0	-1.1
PUH	**Pauahi**	0.06	78		Pb	14 17 38.6	-0.6
PUH					Sb	14 17 42.0	-1.1
PUH	**Pauahi**	0.06	78	IAML		14 17 42.1	
	comp=E,8µm,0.4s						
PUH				IAML		14 17 42.5	
	comp=N,5µm,0.6s						
HATHI	**Halema‘uma‘u T**	0.06	11		Sb	14 17 42.0	-1.2
HATHI	**Halema‘uma‘u T**	0.06	11	Pg	Pb	14 17 38.2	-1.0
HATHI	**Halema‘uma‘u T**	0.06	11	IAML		14 17 44.0	
	comp=N,2µm,0.6s						
HATHI				IAML		14 17 47.0	
	comp=E,3µm,0.5s						
UWE	**Uwekahuna**	0.06	342		Sb	14 17 41.9	-1.3
UWB	**Uwekahuna B**	0.06	356		Pb	14 17 38.2	-1.0
UWB					Sb	14 17 41.3	-1.8
HLP	**Hilina Pali**	0.07	206		Pb	14 17 38.7	-0.5
HLP	**Hilina Pali**	0.07	206	IAML		14 17 42.6	
	comp=E,16µm,0.1s						
HLP				IAML		14 17 42.7	
	comp=N,18µm,0.2s						
KNHH	**Kane Nui o Ham**	0.10	80		Pb	14 17 38.8	-0.6
KNHH					Sb	14 17 42.3	-1.1
RSD	**Rainshed**	0.10	357		Pb	14 17 38.4	-1.0
STCH	**Steam Cracks**	0.14	81		Pn	14 17 39.0	-0.1
STCH					Sn	14 17 42.7	+1.0
STCH	**Steam Cracks**	0.14	81	IAML		14 17 42.8	
	comp=E,10µm,0.1s						
STCH				IAML		14 17 43.0	
	comp=N,9µm,0.1s						
NPOC	**North of Pu‘u**	0.16	79		Sn	14 17 43.0	+0.7
JCUZ	**Jacuzzi**	0.16	83		Pn	14 17 39.1	-0.4
JCUZ	**Jacuzzi**	0.16	83	IAML		14 17 43.5	
	comp=E,3µm,0.2s						
JCUZ				IAML		14 17 43.9	
	comp=N,2µm,0.7s						
MLH	**Mauna Loa**	0.17	321		Pn	14 17 39.3	-0.4
MLH					Sn	14 17 43.3	+0.5
MLH	**Mauna Loa**	0.17	321	IAML		14 17 43.5	
	comp=E,5µm,0.2s						
MLH				IAML		14 17 43.9	
	comp=N,7µm,0.2s						
HTC	**Hot Caves**	0.17	223		Pn	14 17 39.4	-0.2
HTC					Sb	14 17 43.9	-0.2
AIN	**Ainahou**	0.17	273		Pn	14 17 39.4	-0.3
AIN					Sn	14 17 43.6	+0.7
AIN	**Ainahou**	0.17	273	IAML		14 17 44.0	
	comp=E,7µm,0.3s						
AIN				IAML		14 17 44.1	
	comp=N,9µm,0.1s						
JOKA	**Jonika Flow**	0.26	74		Pb	14 17 39.9	-0.9
JOKA					Sb	14 17 44.7	-1.1
HMH	**Humu‘ula Sheep**	0.31	320		Pb	14 17 40.9	-0.8
HMH					Sb	14 17 46.4	-0.8
HMH	**Humu‘ula Sheep**	0.31	320	IAML		14 17 46.5	
	comp=N,33µm,0.3s						
HMH				IAML		14 17 46.5	
	comp=E,6µm,0.4s						
MWH	**Moku‘aweowe**	0.33	292		Pb	14 17 40.8	-1.3
MWH					Sb	14 17 46.4	-1.5
MWH	**Moku‘aweowe**	0.33	292	IAML		14 17 46.8	
	comp=E,2µm,0.5s						
MWH				IAML		14 17 46.9	
	comp=N,1µm,0.4s						
MLOA	**Mauna Loa Obse**	0.33	301		Pb	14 17 41.0	-1.1
MLOA					Sb	14 17 46.5	-1.4
MLOA	**Mauna Loa Obse**	0.33	301	IAML		14 17 46.7	
	comp=E,11µm,0.3s						
MLOA				IAML		14 17 46.7	
	comp=N,16µm,0.3s						
KHU	**Kahuku**	0.34	250		Pb	14 17 40.8	-1.2
KHU					Sb	14 17 46.1	-1.7
KHU	**Kahuku**	0.34	250	IAML		14 17 46.4	
	comp=N,3µm,0.4s						
KHU				IAML		14 17 46.5	
	comp=E,5µm,0.4s						
PHO	**Puu Honuaula**	0.38	72		Sb	14 17 47.5	-0.8
HPO	**Honuapo**	0.38	224		Pb	14 17 41.2	-1.1
ALEP	**Alea Permanent**	0.39	297		Pb	14 17 41.3	-1.5
ALEP					Sb	14 17 47.2	-2.0
POHA	**Pohakuloa**	0.46	328		Pb	14 17 42.2	-1.5
POHA	**Pohakuloa**	0.46	328		Sb	14 17 48.4	-2.3
POHA	**Pohakuloa**	0.46	328	IAML		14 17 48.9	
	comp=E,7µm,0.2s						
POHA				IAML		14 17 49.0	
	comp=E,5µm,0.2s						
HUH	**Hualalai**	0.62	301		Pb	14 17 44.5	-1.7
HUH					Sb	14 17 51.6	-3.3
HUH	**Hualalai**	0.62	301	IAML		14 17 55.6	
	comp=E,3µm,0.3s						
CPH	**Captain Cook**	0.62	282		Pn	14 17 43.9	-2.2
CPH					Sb	14 17 51.7	-2.9
KHLU	**Kahalu`u**	0.63	291		Pn	14 17 44.2	-2.0
KHLU					Sb	14 17 52.4	-2.6
KHLU	**Kahalu`u**	0.63	291	IAML		14 17 52.5	
	comp=N,6µm,0.3s						
KHLU				IAML		14 17 52.6	
	comp=E,5µm,0.2s						
HPAH	**Hawaii Prepara**	0.78	329		Pn	14 17 46.0	-2.2
HPAH	**Hawaii Prepara**	0.78	329		Sn	14 17 54.6	-4.2
HPAH	**Hawaii Prepara**	0.78	329	IAML		14 17 55.5	
	comp=N,3µm,0.2s						
HPAH				IAML		14 17 55.6	
	comp=E,2µm,0.2s						
MHA	**Mahukona**	1.01	324	Pn	Pn	14 17 49.3	-2.1
KHLH	**Kahului Airpor**	1.87	325	Pn	Pn	14 18 01.3	-1.9
HON	**Honolulu**	3.22	308	Pn	Pn	14 18 19.1	-2.7
KIP	**Kipapa**	3.29	309	IAML		14 18 58.2	
	comp=E,136nm,0.5s						
KIP				IAML		14 18 58.4	
	comp=E,124nm,0.5s						
KIP	**Kipapa**	3.29	309	Pn	Pn	14 18 20.2	-2.6
KEKH	**Kekaha**	4.91	303	Pn	Pn	14 18 41.5	-3.5

IDC ***19*** *14:25:11.7±0.8, 36°.90N×89°.09W, h0^{km}, mb3.2/3, mbtmp3.4/8, ML3.4/5, Error ellipse: s-maj=13.2km s-min=7.6km az=14.0*

ANF ***19*** *14:25:11.9±0.4, 36°.87N×89°.11W, h0^{km}, ML4.3/8, Error ellipse: s-maj=4.4km s-min=3.3km az=6.0*

SLM ***19*** *14:25:12.6±0.6, 36°.88N±0°.01×89°.13W±0°.01, h12^{km}±5^{km}, Md3.2/68, mb_Lg3.4/155(NEIC), ML3.6/30(NEIC), Error ellipse: s-maj=1.5km s-min=1.3km az=197.0*

NEIC ***19*** *14:25:12.8±0.6, 36°.88N±0°.01×89°.13W±0°.01, h10^{km}±5^{km}, Error ellipse: s-maj=1.7km s-min=1.4km az=143.0*

ISC 19 14:25:12.7±0.8**, 36°.85N**±0°.02×**89°.18W**±0°.02**, h18**^{km}±3^{km}**, n243, σ1^{s}53**/237**, mb3.0**/3**, New Madrid region, Missouri**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHRM	**Charleston**	0.15	269		Pg	14 25 16.1	-0.8
CHRM					Sg	14 25 19.9	+0.2
EPRM	**East Prairie**	0.20	227		Pg	14 25 17.1	-0.5
EPRM					Sg	14 25 21.6	+0.7
DWDM	**Dogwood**	0.26	258		Pg	14 25 18.3	-0.2
HENM	**Henderson Moun**	0.28	240		Pg	14 25 18.5	-0.3
HENM					Sg	14 25 23.3	+0.4
FMKY	**Fulgham**	0.28	131		Pg	14 25 17.4	-1.6
HICK	**Hickman**	0.32	188		Pb	14 25 18.8	-1.0

HICK				IAML		14 25 27.6	
	comp=E,6µm,0.2s						
SJMO	Saint John's B	0.33	227		Pb	14 25 19.5	-0.5
SJMO					Sb	14 25 26.4	+1.4
MATM	Matthews	0.35	257		Pb	14 25 20.0	-0.4
KEWM	Kewanee	0.37	245		Pb	14 25 20.3	-0.4
NMMO	New Madrid	0.40	229		Pb	14 25 20.9	-0.4
NMMO					Sb	14 25 27.3	+0.2
WALK	Watson Lake	0.43	223		Pb	14 25 21.4	-0.4
WALK					Sb	14 25 28.1	+0.2
NMEM	New Madrid Sch	0.43	230		Pb	14 25 21.4	-0.4
NMEM					Sb	14 25 28.2	+0.3
CATM	Catron	0.45	238		Pb	14 25 21.8	-0.3
CATM					Sb	14 25 28.7	+0.3
T45B	Paducah	0.45	69	P	Pg	14 25 20.1	-1.8
	baz=251						
T45B				S	Sg	14 25 26.1	-2.0
	baz=251						
T45A	Paducah	0.46	68		Pg	14 25 20.1	-1.9
T45A				IAML		14 25 33.4	
	comp=N,5µm,0.6s						
FLPT	Flippin	0.46	195		Pb	14 25 21.7	-0.5
COKM	Charter Oak	0.47	252		Pb	14 25 22.0	-0.3
COKM					Sb	14 25 29.2	+0.3
PARMO	Parma	0.50	248		Pb	14 25 22.5	-0.5
PARMO	Parma	0.50	248		Sb	14 25 30.1	+0.2
PARMO	Parma	0.50	248	IAML		14 25 30.5	
	comp=N,4µm,0.2s						
PARMO				IAML		14 25 30.5	
	comp=E,3µm,0.2s						
MARMO	Marston	0.51	231		Pb	14 25 22.9	-0.2
MARMO					Sb	14 25 30.8	+0.6
MCIL	McClure	0.51	330		Pg	14 25 22.4	-0.7
GUAMO	Guam	0.53	274		Pb	14 25 23.3	-0.2
GUAMO					Sb	14 25 31.1	+0.3
PENMO	Penman	0.54	222		Pb	14 25 23.4	-0.2
PENMO					Sb	14 25 31.5	+0.5
PPLM	Point Pleasant	0.56	216		Pb	14 25 23.6	-0.2
WYBT	Wynnburg	0.57	207		Pb	14 25 23.9	-0.2
WYBT					Sb	14 25 32.3	+0.5
UTMT	University of	0.57	154		Pg	14 25 22.9	-1.1
UTMT	University of	0.57	154		Sg	14 25 31.0	-0.6
UTMT	University of	0.57	154	IAML		14 25 35.2	
	comp=N,4µm,0.7s						
CGM3	Cape Girardeau	0.59	319		Pg	14 25 23.7	-0.7
CGM3	Cape Girardeau	0.59	319		Sg	14 25 31.8	-0.5
CGM3	Cape Girardeau	0.59	319	IAML		14 25 32.0	
	comp=N,4µm,0.2s						
CGM3				IAML		14 25 33.1	
	comp=E,5µm,0.2s						
GLAT	Glass	0.59	189		Pb	14 25 24.0	-0.4
GLAT				IAML		14 25 34.9	
	comp=E,3µm,0.4s						
GLAT				IAML		14 25 41.9	
	comp=N,4µm,0.5s						
POBM	Portage Bay	0.59	222		Pb	14 25 24.3	-0.2
PGVM	Portageville	0.59	229		Pb	14 25 24.3	-0.2
PGVM					Sb	14 25 33.1	+0.6
PVMO	Portageville	0.61	224	Pg	Pb	14 25 24.4	-0.3
PVMO				IAML		14 25 43.6	
	comp=N,3µm,0.6s						
PVMO				IAML		14 25 44.0	
	comp=E,3µm,0.5s						
MLDM	Malden	0.64	249		Pb	14 25 25.1	-0.2
MLDM					Sb	14 25 34.4	+0.5
TOPM	Tallapoosa	0.66	241		Pb	14 25 25.5	-0.1
BRNM	Bernie	0.67	259		Pb	14 25 25.6	-0.3
WADM	Wardell	0.70	226		Pb	14 25 26.3	0.0
MIST	Miston	0.73	201		Pb	14 25 26.8	-0.1
BETM	Bethany	0.75	252		Pb	14 25 27.2	0.0
LNXT	Lenox	0.79	199		Pb	14 25 27.8	-0.2
LNXT	Lenox	0.79	199	P	Pb	14 25 27.9	0.0
	baz=20,SNR=65						
RELT	Roellen	0.82	187		Pb	14 25 28.6	+0.1
S44A	Carbondale	0.84	356		Pg	14 25 27.6	-1.5
S44A	Carbondale	0.84	356	P	Pg	14 25 27.6	-1.5
	baz=173,SNR=108						
S44A				S	Sg	14 25 39.6	-0.7
	baz=173						
BRGM	Braggadocio	0.85	221		Pb	14 25 29.0	+0.1
CWPT	Cottonwood Poi	0.92	204		Pb	14 25 30.6	+0.5
PEBM	Pemiscott Bayo	0.92	217		Pb	14 25 30.1	0.0
PEBM				IAML		14 25 49.5	
	comp=N,2µm,0.4s						
PEBM				IAML		14 25 51.5	
	comp=E,2µm,0.7s						
HALT	Halls	0.95	188		Pb	14 25 30.3	-0.3
PBMO	Poplar Bluff	1.01	266		Pb	14 25 31.3	-0.4
PBMO				IAML		14 25 50.2	
	comp=N,2µm,0.3s						
PBMO	Poplar Bluff	1.01	266	P	Pb	14 25 31.4	-0.2
	baz=84,SNR=40						
PBMO				S	Sb	14 25 45.1	+0.6
	baz=84						
CHNM	Channel	1.01	217		Pb	14 25 32.2	+0.5
EDIT	Edith	1.03	197		Pb	14 25 32.5	+0.5
HAIL	Harrisburg (So	1.07	33		Pg	14 25 31.9	-1.6
GNAR	Gosnell	1.12	218	Pn	Pb	14 25 33.8	+0.4
GNAR				IAML		14 25 58.5	
	comp=E,2µm,0.4s						
WVT	Waverly	1.30	123	Pn	Pg	14 25 34.8	-3.0
WVT				IAML		14 25 55.7	
	comp=E,1µm,0.1s						
WVT				IAML		14 25 58.1	
	comp=E,1µm,0.1s						
WVT	Waverly	1.30	123	P	Pg	14 25 35.0	-2.9
	baz=306						
FVM	French Village	1.51	319		Pn	14 25 39.6	+0.8
FVM	French Village	1.51	319	P	Pn	14 25 39.5	+0.8
	baz=136,SNR=419						
FVM				S	Sg	14 25 59.8	-1.6
	baz=136						
LPAR	Lepanto	1.54	216		Pg	14 25 41.1	-1.4
T42A	Van Buren	1.55	277		Pn	14 25 40.3	+0.9
T42A	Van Buren	1.55	277	P	Pn	14 25 40.5	+1.1
	baz=95,SNR=550						
T42A				S	Sg	14 26 01.6	-1.0
	baz=95						
NHIN	New Harmony	1.61	37		Pn	14 25 41.3	+1.1
USIN	University of	1.64	47	Pn	Pn	14 25 40.8	+0.2
SFTN	Shelby Forest	1.64	205		Pb	14 25 42.1	-0.3
T47A	Sharon Grove	1.66	85		Pn	14 25 41.0	0.0
T47A	Sharon Grove	1.66	85	P	Pn	14 25 41.0	0.0
	baz=267,SNR=193						
T47A				S	Sn	14 26 02.6	+0.8
	baz=267						
W45A	Hickory Valley	1.69	180		Pn	14 25 41.9	+0.6
W45A	Hickory Valley	1.69	180	P	Pn	14 25 42.3	+1.0
	baz=1.6,SNR=19						
EBZ	Ebenezer Churc	1.71	185		Pn	14 25 43.0	+1.3
HBAR	Harrisburg	1.77	223	Pn	Pn	14 25 43.2	+0.9
LCAR	Lake Charles	1.78	244	Pn	Pb	14 25 44.0	-0.7
LCAR	Lake Charles	1.78	244	P	Pb	14 25 44.5	-0.2
	baz=63,SNR=45						
MET	Memphis--Engin	1.83	200	Pn	Pn	14 25 44.3	+1.0
MET				IAmb_Lg		14 26 11.7	
	comp=Z,177nm,0.7s						
SLM	Saint Louis	1.97	335		Pn	14 25 46.3	+1.2
SLM				IAmb_Lg		14 26 15.4	
	comp=Z,238nm,0.7s						
SLM	Saint Louis	1.97	335	P	Pb	14 25 47.5	-0.5
	baz=153,SNR=11						
SLM				S	Sb	14 26 12.9	+0.7
	baz=153						
CCM	Cathedral Cave	2.04	307	Pn	Pn	14 25 47.5	+1.4
CCM				IAmb_Lg		14 26 20.4	
	comp=Z,222nm,0.7s						
CCM	Cathedral Cave	2.04	307	P	Pn	14 25 48.2	+2.1
	baz=124						
CCM				S	Sb	14 26 15.2	+1.0
	baz=124						
CCM	Cathedral Cave	2.04	307	P	Pn	14 25 48.3	+2.1
	baz=124,SNR=290						
CCM				S	Sb	14 26 15.2	+1.0
	baz=124						
Q44A	Meyer Farm, Va	2.05	3		Pn	14 25 47.8	+1.5
Q44A	Meyer Farm, Va	2.05	3	P	Pn	14 25 48.5	+2.2
	baz=182,SNR=56						
Q44A				S	Sb	14 26 15.6	+1.0
	baz=182						
OLIL	Olney	2.06	24	Pn	Pn	14 25 47.5	+1.1
OLIL	Olney	2.06	24	P	Pn	14 25 48.4	+1.9
	baz=204,SNR=18						
OLIL				S	Sb	14 26 15.9	+1.1
	baz=204						
PLAL	Pickwick Lake	2.07	154		Pn	14 25 46.8	+0.3
V48A	Smith Brothers	2.20	120	IAmb_Lg		14 26 26.6	
	comp=Z,155nm,0.9s						
V48A	Smith Brothers	2.20	120	P	Pn	14 25 49.8	+1.4
	baz=302,SNR=119						
OXF	Oxford	2.34	185		Pn	14 25 51.5	+1.2
OXF	Oxford	2.34	185	P	Pn	14 25 51.7	+1.4
	baz=5.4,SNR=24						
FCAR	Ozark Folk Cen	2.57	249		Pn	14 25 54.7	+1.3
WCI	Wyandotte Cave	2.67	58	Pn	Pn	14 25 55.7	+0.9
WCI	Wyandotte Cave	2.67	58	P	Pn	14 25 56.1	+1.3
	baz=240						
WCI				Sb	Sb	14 26 33.7	+1.3
	baz=240						
WCI	Wyandotte Cave	2.67	58	P	Pn	14 25 56.1	+1.3
	baz=240,SNR=30						
U49A	Red Boiling Sp	2.75	96	P	Pn	14 25 58.1	+2.3
	baz=279,SNR=106						
P43A	Skaggs, Pawnee	2.80	355		Pn	14 25 58.2	+1.7
P43A				IAmb_Lg		14 26 42.3	
	comp=Z,116nm,0.8s						
R40A	Maddies Statio	2.85	301		Pn	14 25 59.2	+1.9
R40A	Maddies Statio	2.85	301	P	Pn	14 25 59.6	+2.3
	baz=119,SNR=22						
X48A	Hartselle	2.96	143		Pn	14 25 59.7	+0.9
X48A	Hartselle	2.96	143	P	Pn	14 25 59.9	+1.2
	baz=326,SNR=31						
WHAR	Wooly Hollow	2.96	239		Pn	14 26 00.8	+1.9
WHAR				IAmb_Lg		14 26 55.7	
	comp=Z,103nm,0.8s						
Y45A	Yeager Farm, C	3.00	186	Pn	Pn	14 26 00.4	+1.2
Y45A	Yeager Farm, C	3.00	186	P	Pn	14 26 01.5	+2.2
	baz=6.3,SNR=11						
SWET	Sewanee	3.09	121		Pn	14 26 01.8	+1.2
BLO	Bloomington	3.12	41	IAmb_Lg		14 26 56.6	
	comp=Z,98nm,0.7s						
UALR	University of	3.31	232	Pn	Pn	14 26 05.6	+2.1
O44A	Mansfield	3.34	9		Pn	14 26 05.1	+1.1
O44A				IAmb_Lg		14 26 59.4	
	comp=Z,139nm,0.8s						
O44A	Mansfield	3.34	9	P	Pn	14 26 06.5	+2.5
	baz=189,SNR=5.7						
S39A	Bolivar	3.41	285		Pn	14 26 07.2	+2.2
S39A				IAmb_Lg		14 27 04.5	
	comp=Z,121nm,0.9s						
S39A	Bolivar	3.41	285	P	Pn	14 26 07.2	+2.2
	baz=102,SNR=34						
S39A				S	Sn	14 26 47.5	+2.5
	baz=102						
T50A	Nancy	3.48	86		Pn	14 26 07.0	+1.1
T50A				IAmb_Lg		14 27 08.4	
	comp=Z,100nm,0.9s						
T50A	Nancy	3.48	86	P	Pn	14 26 07.7	+1.8
	baz=269						
T50A				P	Pn	14 26 07.7	+1.8
	baz=269						
R49A	Shelbyville	3.49	64		Pn	14 26 07.2	+1.2
R49A	Shelbyville	3.49	64	P	Pn	14 26 07.3	+1.2
	baz=247,SNR=12						
R49A				P	Pn	14 26 07.3	+1.2
	baz=247,SNR=12						
R49A				S	Sn	14 26 49.4	+2.5
	baz=247						
R49A				S	Sn	14 26 49.4	+2.5
	baz=247						
P40A	Paris	3.50	321		Pn	14 26 08.1	+1.9
P40A				IAmb_Lg		14 27 07.2	
	comp=Z,99nm,0.8s						
P40A	Paris	3.50	321	P	Pn	14 26 09.1	+2.8
	baz=138						
W50A	Signal Mountai	3.54	117		Pn	14 26 08.3	+1.5
W50A				IAmb_Lg		14 27 06.6	
	comp=Z,119nm,1.0s						
CCAR	Cane Creek	3.62	217		Pn	14 26 10.0	+2.2
CCAR				IAmb_Lg		14 27 14.0	
	comp=Z,84nm,0.7s						
HDIL	Hopedale	3.70	359	IAmb_Lg		14 27 13.7	
	comp=Z,89nm,0.7s						
FPAL	Fort Paine	3.71	127		Pn	14 26 10.5	+1.4
Y49A	Blount Mountai	3.75	142		Pn	14 26 10.3	+0.7
Y49A				IAmb_Lg		14 27 14.9	
	comp=Z,91nm,0.7s						
Y49A	Blount Mountai	3.75	142	P	Pn	14 26 10.1	+0.5
	baz=324,SNR=16						
Z47A	Carrollton	3.76	166		Pn	14 26 10.8	+1.0
Z47A	Carrollton	3.76	166	P	Pn	14 26 11.0	+1.3
	baz=347,SNR=7.3						
Z47A				S	Sn	14 26 54.5	+1.0
	baz=347						
X40A	Basin Creek Fa	3.80	233		Pn	14 26 11.7	+1.3
HHAR	Hobbs	3.88	263	Pn	Pn	14 26 13.6	+2.2
HHAR				IAmb_Lg		14 27 26.3	
	comp=Z,72nm,0.7s						
SFIN	Lafayette	3.88	24		Pn	14 26 12.4	+1.0
SFIN				IAmb_Lg		14 27 17.5	
	comp=Z,89nm,0.8s						
SFIN	Lafayette	3.88	24	P	Pn	14 26 13.1	+1.7
	baz=205,SNR=6.7						
P48A	Milroy	3.94	47	Pn	Pn	14 26 13.0	+0.8
P48A				IAmb_Lg		14 27 24.8	
	comp=Z,78nm,0.7s						
CPCT	Cooper Cave	4.02	109		Pn	14 26 14.5	+1.2
V51A	Loudon	4.03	104		Pn	14 26 15.1	+1.6
V51A				IAmb_Lg		14 27 19.2	
	comp=Z,113nm,1.0s						
V51A	Loudon	4.03	104	P	Pn	14 26 15.6	+2.0
	baz=287,SNR=25						
N41A	Harden Midland	4.07	342	Pn	Pn	14 26 15.9	+1.9
N41A	Harden Midland	4.07	342	P	Pn	14 26 16.2	+2.2
	baz=160						
R50A	Paris	4.11	68	IAmb_Lg		14 27 23.9	
	comp=Z,112nm,0.8s						
R50A	Paris	4.11	68	P	Pn	14 26 16.3	+1.8
	baz=251						
R50A				P	Pn	14 26 16.3	+1.8
	baz=251						
X51A	Calhoun	4.19	122		Pn	14 26 16.9	+1.3
LRAL	Lakeview Retre	4.21	154	IAmb_Lg		14 27 33.4	
	comp=Z,76nm,0.9s						
LRAL	Lakeview Retre	4.21	154	Sb	Sb	14 27 22.0	+5.4
	baz=336						
U38A	Gravette	4.21	266		Pn	14 26 17.6	+1.6
U38A	Gravette	4.21	266	P	Pn	14 26 18.3	+2.3
	baz=82,SNR=18						
MIAR	Mount Ida	4.26	239		Pn	14 26 18.6	+2.0
MIAR				IAmb_Lg		14 27 28.2	
	comp=Z,108nm,0.8s						
MIAR	Mount Ida	4.26	239	P	Pn	14 26 18.8	+2.1
	baz=56						
MIAR				Sb	Sg	14 27 25.3	-4.1
	baz=56						
MIAR	Mount Ida	4.26	239	P	Pn	14 26 18.8	+2.1
	baz=56,SNR=31						
P38A	Dawn	4.41	310	Pn	Pn	14 26 20.1	+1.5
P38A	Dawn	4.41	310	P	Pn	14 26 20.3	+1.6
	baz=127,SNR=33						
P49A	Miami Univ. Ec	4.42	51		Pn	14 26 19.3	+0.5
P49A				IAmb_Lg		14 27 31.3	
	comp=Z,106nm,0.8s						
P49A	Miami Univ. Ec	4.42	51	P	Pn	14 26 19.3	+0.5
	baz=234						
P49A	Miami Univ. Ec	4.42	51	P	Pn	14 26 19.2	+0.5
	baz=234,SNR=8.4						
S51A	Beattyville	4.52	78	Pn	Pn	14 26 21.4	+1.2
S51A				IAmb_Lg		14 27 36.1	
	comp=Z,104nm,0.8s						
S51A	Beattyville	4.52	78	P	Pn	14 26 22.3	+2.0
	baz=262,SNR=14						
S51A				P	Pn	14 26 22.3	+2.0
	baz=262,SNR=14						
TKL	Tuckaleechee C	4.53	104	Pn	Pn	14 26 22.2	+1.9
	comp=Z,2.9nm,0.3s,baz=287,slow=14,SNR=31						
TKL				Pg	Pb	14 26 31.2	-0.4
	comp=Z,7.0nm,0.3s,baz=281,slow=15,SNR=28						
TKL				Sn	Sn	14 27 13.8	+1.3
	comp=Z,4.4nm,0.3s,baz=270,slow=20,SNR=5.1						
TKL				Lg	Lg	14 27 30.5	
	comp=Z,25nm,0.3s,baz=270,slow=20,SNR=22						
	comp=Z,7.6nm,0.3s						
TKL	Tuckaleechee C	4.53	104		Pn	14 26 21.9	+1.5
TKL				IAmb_Lg		14 27 33.4	
	comp=Z,106nm,0.8s						
TKL	Tuckaleechee C	4.53	104	P	Pn	14 26 22.9	+2.6
	baz=287,SNR=8.7						
143A	Socs Landing,	4.53	205	IAmb_Lg		14 27 48.5	
	comp=Z,62nm,0.9s						
TZTN	Tazewell	4.53	92	Pn	Pn	14 26 22.2	+1.8
TZTN				IAmb_Lg		14 27 40.8	
	comp=Z,102nm,0.9s						
TZTN	Tazewell	4.53	92	Sb	Sb	14 27 32.1	+6.1
	baz=276						
TZTN	Tazewell	4.53	92	P	Pn	14 26 22.5	+2.1
	baz=276,SNR=13						
W52A	Murphy	4.60	111		Pn	14 26 22.5	+1.1
W52A				IAmb_Lg		14 27 46.4	
	comp=Z,64nm,0.7s						
V52A	Sevierville	4.62	101		Pn	14 26 22.5	+1.0
V52A	Sevierville	4.62	101	P	Pn	14 26 23.3	+1.8
	baz=285,SNR=16						
O48B	Farmland	4.63	42	Pb	Pb	14 26 33.0	-0.4
	baz=224						
RLO	Rose Lookout	4.76	263	Pn	Pn	14 26 25.4	+1.8
RLO				IAmb_Lg		14 27 43.5	
	comp=Z,44nm,0.7s						
N47A	Urbana	4.85	33	Pn	Pn	14 26 24.6	-0.2
N47A				IAmb_Lg		14 27 52.0	
	comp=Z,55nm,0.8s						
O49A	Covington	5.05	47	Pn	Pn	14 26 28.1	+0.6
N38A	Joes South For	5.05	322	Pn	Pn	14 26 29.2	+1.7
Y52A	Lilburn	5.13	124	Pn	Pn	14 26 29.6	+1.0
L42A	Oliver, Polo	5.16	356	Pn	Pn	14 26 30.0	+1.0
L42A				IAmb_Lg		14 27 57.6	
	comp=Z,65nm,0.8s						
V53A	Saluda	5.28	101		Pn	14 26 31.9	+1.2
V53A				IAmb_Lg		14 27 56.3	
	comp=Z,79nm,0.7s						
V53A	Saluda	5.28	101	P	Pn	14 26 32.3	+1.6
	baz=285,SNR=8.3						
V53A				P	Pn	14 26 32.3	+1.6
	baz=285,SNR=8.3						
BG3	Lake Jocassee	5.39	108	Pn	Pn	14 26 33.7	+1.4
TUL1	Leonard	5.42	262		Pn	14 26 33.4	+0.8
250A	Grady	5.42	153	Pn	Pn	14 26 34.3	+1.7
L40A	Anamosa	5.44	344		Pn	14 26 34.2	+1.4
L40A	Anamosa	5.44	344	P	Pn	14 26 34.3	+1.5
	baz=162						
P51A	Williamsport	5.49	60	IAmb_Lg		14 28 03.0	
	comp=Z,59nm,0.7s						
X37A	Clayton	5.52	248		Pn	14 26 35.8	+1.8
X37A				IAmb_Lg		14 28 18.1	
	comp=Z,49nm,0.8s						
152A	Waverly Hall	5.56	137	IAmb_Lg		14 28 11.9	
	comp=Z,65nm,0.7s						
L46A	Eue Claire	5.61	22	IAmb_Lg		14 28 14.6	
	comp=Z,69nm,0.7s						
N49A	Columbus Grove	5.63	42	Pn	Pn	14 26 36.5	+1.1
N49A				IAmb_Lg		14 28 10.9	
	comp=Z,54nm,0.8s						
Q52A	Bidwell	5.85	67	Pn	Pn	14 26 39.5	+1.0
Q52A				IAmb_Lg		14 28 24.1	
	comp=Z,52nm,0.8s						
Q52A	Bidwell	5.85	67	P	Pn	14 26 40.3	+1.7
	baz=251,SNR=6.5						
Q52A				P	Pn	14 26 40.3	+1.7
	baz=251,SNR=6.5						
Q52A				S	Sn	14 27 44.9	-0.3
	baz=251						
Q52A				S	Sn	14 27 44.9	-0.3
	baz=251						
K43A	Burlington	5.88	6	Pn	Pn	14 26 40.1	+1.2
T35A	Sooner Cattle	5.88	273	Pn	Pn	14 26 40.9	+2.0
ACSO	Alum Creek Sta	5.91	53	Pn	Pn	14 26 39.8	+0.5
ACSO				IAmb_Lg		14 28 18.6	
	comp=Z,67nm,0.8s						
U54A	Nelsons Funny	5.92	91	Pn	Pn	14 26 40.1	+0.5
U54A	Nelsons Funny	5.92	91	S	Sn	14 27 45.9	-1.0
	baz=276						
U54A				S	Sn	14 27 45.9	-1.0
	baz=276						
R53A	Hurricane	5.92	73	Pn	Pn	14 26 40.2	+0.7
R53A				IAmb_Lg		14 28 20.6	
	comp=Z,68nm,0.8s						
DEOK	Depew	6.00	262	IAmb_Lg		14 28 35.1	
	comp=Z,71nm,0.8s						
QUOK	Quay	6.11	266	IAmb_Lg		14 28 36.3	
	comp=Z,74nm,0.8s						
JFWS	Jewell Farm	6.11	353		Pn	14 26 43.3	+1.2
JFWS	Jewell Farm	6.11	353	P	Pn	14 26 43.4	+1.2
	baz=172						
JFWS	Jewell Farm	6.11	353	P	Pn	14 26 43.1	+1.1
	baz=172,SNR=14						
P52A	Corning	6.20	61	Pn	Pn	14 26 43.6	+0.3
P52A				IAmb_Lg		14 28 31.5	
	comp=Z,70nm,0.8s						
OK030	Cody Creek RV	6.21	264	IAmb_Lg		14 28 39.9	
	comp=Z,72nm,0.9s						
HODGE	Hodges	6.21	113	Pn	Pn	14 26 43.9	+0.4
HODGE				IAmb_Lg		14 28 32.6	
	comp=Z,52nm,1.0s						
OK046	Pawnee Station	6.24	268	Pn	Pn	14 26 45.6	+1.8
OK048	Pawnee Station	6.26	268	IAmb_Lg		14 28 42.6	
	comp=Z,67nm,0.9s						
L48A	N Adams	6.27	34	IAmb_Lg		14 28 28.5	
	comp=Z,59nm,0.7s						
KSU1	Kansas State U	6.29	293	IAmb_Lg		14 28 31.9	
	comp=Z,61nm,0.8s						
KSU1	Kansas State U	6.29	293	P	Pn	14 26 45.9	+1.4
	baz=108						
KSU1	Kansas State U	6.29	293	P	Pn	14 26 45.9	+1.4
	baz=108,SNR=28						
S54A	Dingess, Beckl	6.34	79	IAmb_Lg		14 28 39.3	
	comp=Z,62nm,0.7s						
K38A	Parkersburg	6.42	336	IAmb_Lg		14 28 38.7	
	comp=Z,47nm,0.7s						
BLOK	Blackwell	6.45	272	IAmb_Lg		14 28 40.5	
	comp=Z,48nm,0.7s						
W35A	Tecumseh	6.47	257	IAmb_Lg		14 28 51.9	
	comp=Z,60nm,0.9s						
V55A	Taylorsville	6.50	96	IAmb_Lg		14 28 38.4	
	comp=Z,60nm,0.9s						
M50A	Fremont	6.58	44	IAmb_Lg		14 28 49.4	
	comp=Z,37nm,0.9s						
O52A	Adamsville	6.61	58	IAmb_Lg		14 28 44.0	
	comp=Z,58nm,0.9s						
P53A	Whipple	6.67	64	IAmb_Lg		14 28 40.4	
	comp=Z,39nm,0.8s						
OKCSW	OKLAHOMA CITY	6.84	260	IAmb_Lg		14 29 05.8	
	comp=Z,53nm,0.9s						
FNO	Franklin	6.85	259	IAmb_Lg		14 29 07.0	
	comp=Z,59nm,1.3s						
AAM	Ann Arbor	6.91	36	IAmb_Lg		14 28 47.9	
	comp=Z,33nm,0.8s						
CROK	Carrier	7.09	270	IAmb_Lg		14 29 12.9	
	comp=Z,57nm,0.8s						
I40A	Norwalk	7.12	352	P	Pn	14 26 56.8	+0.9
	baz=170,SNR=5.7						
LOOK	Love County	7.13	249	IAmb_Lg		14 29 14.2	
	comp=Z,33nm,0.9s						
J47A	Sunmer	7.20	26	IAmb_Lg		14 29 16.4	
	comp=Z,33nm,0.8s						
X34A	Smith Ranch, M	7.39	255	IAmb_Lg		14 29 17.6	
	comp=Z,31nm,0.8s						
I45A	Fountain	7.52	16	IAmb_Lg		14 29 16.8	
	comp=Z,48nm,0.9s						
N53A	Lisbon	7.61	56	IAmb_Lg		14 29 07.8	
	comp=Z,42nm,0.8s						
H43A	Windswept, Lux	7.68	8	IAmb_Lg		14 29 18.0	
	comp=Z,30nm,1.1s						
OK038	West end E0370	7.70	270	IAmb_Lg		14 29 37.0	
	comp=Z,52nm,0.8s						
R32A	Long Quarter,	7.73	285	IAmb_Lg		14 29 31.4	
	comp=Z,38nm,1.0s						
K50A	Casco	7.77	38	IAmb_Lg		14 29 25.4	
	comp=Z,32nm,0.8s						
NOKA	Waynoka	7.84	271	IAmb_Lg		14 29 31.3	
	comp=Z,40nm,0.8s						
U32A	Winter Ranch,	7.92	270	IAmb_Lg		14 29 29.7	
	comp=Z,40nm,0.8s						
T57A	Hurt	7.95	86	IAmb_Lg		14 29 24.5	
	comp=Z,44nm,1.1s						
M53A	WI Miller and	8.04	53	IAmb_Lg		14 29 28.2	
	comp=Z,48nm,0.9s						
WMOK	Wichita Mounta	8.09	258	IAmb_Lg		14 29 31.9	
	comp=Z,30nm,1.1s						
FW03	Perrin-Whitt E	8.23	245	IAmb_Lg		14 29 50.8	
	comp=Z,21nm,1.2s						
X58A	Rowland	8.32	103	IAmb_Lg		14 29 51.8	
	comp=Z,37nm,0.8s						
ALLY	Alegheny Colle	8.48	53	IAmb_Lg		14 29 42.7	
	comp=Z,48nm,0.9s						
GLMI	Grayling	8.68	22	IAmb_Lg		14 29 54.6	
	comp=Z,47nm,0.7s						
SPMN	Marine on St.	8.80	343	IAmb_Lg		14 29 54.0	

	comp=Z,28nm,0.8s						
E43A	**Lone Tree Farm**	**9.65**	**9**	P	**Pn**	**14 27 30.6**	**-0.1**
	baz=190						
SADO	**Sadowa**	**10.96**	**41**	Pn	**Pn**	**14 27 46.0**	**-2.5**
	comp=Z,0.3nm,0.3s,baz=231,slow=12,SNR=3.6						
SADO				Sn	**Sn**	**14 29 45.1**	**-5.6**
	comp=Z,0.5nm,0.3s,baz=257,slow=15,SNR=2.1						
SADO				Lg	Lg	14 30 44.9	
	comp=Z,0.5nm,0.3s,baz=150,slow=20,SNR=1.7						
	comp=Z,2.0nm,0.7s						
ANMO	**Albuquerque**	**14.14**	**267**	Lg	Lg	14 32 36.2	
	comp=Z,0.1nm,0.3s,baz=6.4,slow=19,SNR=4.9						
ULM	**Lac du Bonnet**	**14.24**	**342**	Pn	Pn	14 28 28.7	-4.5
	comp=Z,0.4nm,0.3s,baz=173,slow=8.4,SNR=2.0						
ULM				Sn	Sn	14 31 02.0	-8.6
	comp=Z,0.3nm,0.3s,baz=31,slow=15,SNR=1.9						
ULM				Lg	Lg	14 32 30.9	
	comp=Z,0.3nm,0.3s,baz=241,slow=20,SNR=4.1						
	comp=Z,1.1nm,0.4s						
TXAR	**Lajitas Array**	**14.27**	**242**	Pn	**Pn**	**14 28 31.9**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=68,slow=12,SNR=7.4						
TXAR				Sn	**Sn**	**14 31 06.3**	**-5.4**
	comp=Z,0.1nm,0.3s,baz=62,slow=24,SNR=1.6						
TXAR				Lg	Lg	14 32 32.9	
	comp=Z,0.1nm,0.3s,baz=54,slow=29,SNR=2.2						
	comp=Z,0.2nm,0.5s						
PDAR	**Pinedale Array**	**16.72**	**297**	Pn	**P**	**14 29 08.9**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=104,slow=15,SNR=3.2						
PDAR				Lg	Lg	14 33 50.5	
	comp=Z,0.1nm,0.3s,baz=110,slow=29,SNR=2.3						
	comp=Z,0.8nm,0.8s						
NVAR	**Mina Array Bea**	**23.08**	**283**	P	**P**	**14 30 20.2**	**+2.6**
	comp=Z,0.1nm,0.4s,baz=81,slow=11,SNR=1.8						
	comp=Z,0.1nm,0.4s						
YKA	**Yellowknife Ar**	**30.09**	**337**	P	**P**	**14 31 21.4**	**+0.6**
	comp=Z,0.2nm,0.8s,baz=133,slow=9.6,SNR=2.5						
	comp=Z,0.2nm,0.8s						
ILAR	**Eielson Array**	**43.68**	**328**	P	**P**	**14 33 18.4**	**+2.3**
	comp=Z,0.7nm,0.9s,baz=98,slow=6.5,SNR=7.6						
	comp=Z,0.7nm,0.9s						

JMA ***19*** *14:36:16.0±0.2, 35°.6N±0°.6×14°1E±°, h38^{km}±1^{km}, MV3.2/34, NEAR CHOSHI CITY*

IDC ***19*** *14:36:17.5±2.7, 35°.44N×140°.97E, h45^{km}±26^{km}, mb3.4/12, mbtmp3.7/14, ML3.5/2, MS2.9/4, Error ellipse: s-maj=24.7km s-min=16.0km az=81.0*

ISC 19 14:36:15.7±0.7**, 35°.48N**±0°.05×**141°.09E**±0°.06**, h33**^{km}**, n46,** σ**2^{s}.05**/39**, mb3.6**/12**, 6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.29**	**320**	⇓*i*P	**Pb**	**14 36 23.1**	**-0.2**
CHOJ				⇓S	**Sb**	**14 36 28.0**	**-0.5**
JSMT	**Sammumatsuo**	**0.55**	**287**	⇓P	**Pb**	**14 36 26.7**	**-0.3**
JIHU	**Itakohorinouch**	**0.67**	**317**	⇓*i*P	**Pn**	**14 36 28.3**	**-0.5**
JCN	**Nagara**	**0.73**	**265**	P	**Pn**	**14 36 30.3**	**+0.7**
BSO4	**Boso 4**	**0.79**	**232**	P	**Pn**	**14 36 31.0**	**+0.6**
BSO3	**Boso 3**	**0.83**	**215**	*i*P	**Pn**	**14 36 31.5**	**+0.7**
BSO1	**Boso 1**	**0.83**	**186**	⇓P	**Pn**	**14 36 31.5**	**+0.9**
JYT	**Yasato**	**1.04**	**316**	⇓*i*P	**Pn**	**14 36 33.1**	**-0.9**
JMM	**Marumori**	**2.39**	**354**	P	**Pn**	**14 36 53.3**	**+0.8**
JSG	**Sagara**	**2.51**	**252**	P	**Pn**	**14 36 56.5**	**+2.3**
MJAR	**Matsushiro Arr**	**2.56**	**295**	P	**Pn**	**14 36 55.5**	**+0.6**
	0.9nm,0.3s,baz=101,slow=8.0,SNR=130						
MJAR				S	**Sn**	**14 37 20.8**	**-4.2**
	12nm,0.6s,baz=124,slow=28,SNR=4.6						
MJAR				LR	LR	14 38 02.4	
	comp=Z,205nm,19.6s,baz=161,slow=42						
	5.6nm,0.4s						
MAJO	**Matsushiro**	**2.56**	**295**	P	**Pn**	**14 36 56.6**	**+1.6**
JHJ2	**Mitsune**	**2.59**	**204**	P	**Pn**	**14 36 57.0**	**+1.7**
JGF	**Kuroka**	**3.05**	**273**	P	**Pn**	**14 37 04.0**	**+2.4**
INU	**Inuyama**	**3.33**	**269**	P	**Pn**	**14 37 07.5**	**+2.1**
JSD	**Sado**	**3.41**	**319**	P	**Pn**	**14 37 08.5**	**+1.9**
JTM	**Tenmabayashi**	**5.30**	**360**	P	**Pn**	**14 37 33.8**	**+1.4**
JHS	**Saijyo**	**6.54**	**268**	P	**Pn**	**14 37 52.2**	**+2.6**
JEM	**Erimo**	**6.72**	**13**	P	**Pn**	**14 37 52.0**	**0.0**
JCJ	**Chichijima**	**8.41**	**173**	P	**Pn**	**14 38 14.6**	**-0.7**
	5.2nm,0.3s,baz=72,slow=20,SNR=1.7						
JCJ				S	**Sn**	**14 39 42.9**	**-6.3**
	45nm,0.9s,baz=301,slow=15,SNR=2.3						
	19nm,0.4s						
JCJ	**Chichijima**	**8.41**	**173**	P	**Pn**	**14 38 16.6**	**+1.3**
	63nm,0.9s						
ASAJ	**Asahikawa**	**8.70**	**7**	P	**Pn**	**14 38 17.5**	**-1.6**
	1.5nm,0.3s,baz=219,slow=11,SNR=9.1						
ASAJ				S	**Sn**	**14 39 51.1**	**-4.9**
	3.3nm,0.9s,baz=199,slow=28,SNR=1.2						
JNU	**Nakatsue**	**8.77**	**257**	LR	LR	14 42 04.9	
	comp=Z,93nm,20.9s,baz=104,slow=40						
KSRS	**Korea Array**	**10.78**	**284**	P	**Pn**	**14 38 51.8**	**+4.1**
	1.0nm,1.0s,baz=108,slow=14,SNR=4.0						
KSRS				LR	LR	14 42 57.7	
	comp=Z,80nm,20.0s,baz=95,slow=37						
JOW	**Kunigami**	**13.94**	**235**	LR	LR	14 44 47.8	
	comp=Z,47nm,18.1s,baz=127,slow=37						
H11N2	**WAKE ISLAND Hy**	**27.62**	**118**	T	T	15 11 05.9	
	baz=310,slow=75,SNR=23						
H11N1	**WAKE ISLAND Hy**	**27.63**	**118**	T	T	15 11 08.1	
	baz=310,slow=75,SNR=30						
H11N3	**WAKE ISLAND Hy**	**27.64**	**118**	T	T	15 11 06.3	
	baz=310,slow=75,SNR=41						
H11S1	**WAKE ISLAND Hy**	**28.27**	**120**	T	T	15 11 49.3	
	baz=312,slow=75,SNR=100						
H11S3	**WAKE ISLAND Hy**	**28.27**	**120**	T	T	15 11 49.6	
	baz=312,slow=75,SNR=118						
H11S2	**WAKE ISLAND Hy**	**28.29**	**120**	T	T	15 11 52.0	
	baz=312,slow=75,SNR=90						
SEY	**Seymchan**	**28.36**	**11**	P	**P**	**14 42 08.2**	**+1.8**
	1.4nm,0.8s,baz=145,slow=12,SNR=2.2						
	1.4nm,0.8s						
SONM	**Songino Array**	**28.46**	**306**	P	**P**	**14 42 07.5**	**-0.2**
	0.5nm,0.6s,baz=100,slow=9.3,SNR=5.2						
	0.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**40.87**	**257**	P	**P**	**14 43 55.9**	**+1.2**
	0.2nm,0.4s,baz=73,slow=6.7,SNR=1.7						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**42.78**	**314**	P	**P**	**14 44 09.8**	**-0.1**
	0.7nm,0.5s,baz=92,slow=7.2,SNR=4.2						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**44.73**	**303**	P	**P**	**14 44 25.6**	**-0.2**
	0.4nm,0.5s,baz=93,slow=9.4,SNR=8.4						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**50.95**	**32**	P	**P**	**14 45 14.7**	**+1.2**
	0.4nm,0.6s,baz=266,slow=5.8,SNR=6.3						
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**55.49**	**188**	P	**P**	**14 45 47.2**	**-0.2**
	1.2nm,0.7s,baz=5.4,slow=7.9,SNR=17						
	1.2nm,0.7s						
ASAR	**Alice Springs**	**59.22**	**188**	P	**P**	**14 46 14.0**	**+0.3**
	0.4nm,0.8s,baz=15,slow=9.4,SNR=6.8						
	0.4nm,0.8s						
YKA	**Yellowknife Ar**	**65.28**	**30**	P	**P**	**14 46 55.5**	**+1.7**
	0.1nm,0.7s,baz=292,slow=6.0,SNR=2.4						
	0.1nm,0.7s						
FINES	**FINESS Array B**	**70.06**	**332**	P	**P**	**14 47 23.9**	**-0.1**
	0.6nm,0.5s,baz=45,slow=3.0,SNR=6.1						
	0.6nm,0.5s						
AKASG	**Malin Array Be**	**75.36**	**322**	P	**P**	**14 47 54.5**	**-1.2**
	0.4nm,0.4s,baz=34,slow=5.5,SNR=4.0						
	0.4nm,0.4s						
NOA	**NORSAR Array B**	**75.51**	**337**	P	**P**	**14 47 56.6**	**+0.2**
	0.5nm,0.7s,baz=51,slow=2.2,SNR=1.5						
	0.5nm,0.7s						
H03N2	**Juan Fernandez**	**147.09**	**98**	T	T	17 40 23.3	
	baz=289,slow=76,SNR=4.2						
H03N3	**Juan Fernandez**	**147.10**	**98**	T	T	17 40 23.9	
	baz=289,slow=76,SNR=6.3						
H03N1	**Juan Fernandez**	**147.11**	**98**	T	T	17 40 24.0	
	baz=289,slow=76,SNR=6.3						

NEIC ***19*** *14:45:04.4±1.2, 10°.48S±0°.08×161°.33E±0°.10, h57^{km}±6^{km}, mb4.4/30, Error ellipse: s-maj=14.6km s-min=11.3km az=117.0*

IDC ***19*** *14:45:04.7±3.5, 10°.52S×161°.32E, h67^{km}±27^{km}, mb3.6/14, mbtmp3.9/14, MS3.4/8, Error ellipse: s-maj=29.8km s-min=16.8km az=99.0*

ISC 19 14:45:04.0±0.6**, 10°.47S**±0°.08×**161°.36E**±0°.10**, h61**^{km}**, n52,** σ**0^{s}.98**/49**, mb4.2**/29**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.73**	**306**	P	**Pn**	**14 45 31.7**	**-0.1**
	2µm,0.5s,baz=193,slow=8.4,SNR=34						
HNR				LR	LR	14 45 53.5	
	comp=Z,812nm,20.1s,baz=190,slow=28						
HNR				S	**Sn**	**14 45 54.0**	**+1.1**
	12µm,0.5s,baz=180,slow=20,SNR=8.8						
KRVT	**Keravat (AS076**	**11.09**	**303**	LR	LR	14 51 03.1	
	comp=Z,124nm,20.4s,baz=249,slow=32						
DZM	**Mont Dzumac**	**12.52**	**158**	LR	LR	14 51 46.0	
	comp=Z,138nm,20.1s,baz=24,slow=32						
PMG	**Port Moresby**	**14.03**	**273**	LR	LR	14 52 44.9	
	comp=Z,138nm,18.6s,baz=209,slow=33						
CTA	**Charters Tower**	**17.41**	**235**	P	**P**	**14 49 05.1**	**+1.6**
	4.2nm,1.0s,baz=45,slow=17,SNR=2.2						
CTA				LR	LR	14 54 51.9	
	comp=Z,101nm,19.9s,baz=61,slow=34						
CTAO	**Charters Tower**	**17.41**	**235**	P	**P**	**14 49 05.1**	**+1.6**
ARMA	**Armidale**	**21.82**	**203**	P	**P**	**14 49 50.9**	**-0.5**
ARMA				IAmb	IAmb	14 50 06.8	
	comp=Z,29nm,1.4s						
WB0	**Warramunga Arr**	**27.59**	**247**	P	**P**	**14 50 45.8**	**+0.1**
WB0				IAmb	IAmb	14 50 46.2	
	comp=Z,4.0nm,0.6s						
WRAB	**Tennant Creek**	**27.67**	**247**	P	**P**	**14 50 46.2**	**-0.3**
WRAB				IAmb	IAmb	14 51 02.4	
	comp=Z,13nm,1.4s						
WB2	**Warramunga Arr**	**27.67**	**247**	P	**P**	**14 50 46.2**	**-0.3**
WB2				IAmb	IAmb	14 51 02.4	
	comp=Z,11nm,1.5s						
WRA	**Warramunga Arr**	**27.68**	**247**	P	**P**	**14 50 46.0**	**-0.6**
	comp=Z,1.9nm,0.5s,baz=77,slow=8.9,SNR=38						
WRA				LR	LR	15 00 39.2	
	comp=Z,121nm,19.4s,baz=330,slow=34						
	comp=Z,1.9nm,0.5s						
WRA	**Warramunga Arr**	**27.68**	**247**	P	**P**	**14 50 46.4**	**-0.3**
STKA	**Stephens Creek**	**28.07**	**218**	P	**P**	**14 50 50.2**	**+0.4**
	comp=Z,2.2nm,0.9s,baz=85,slow=16,SNR=3.1						
STKA				LR	LR	15 01 58.4	
	comp=Z,210nm,19.8s,baz=28,slow=36						
	comp=Z,2.2nm,0.9s						
GUMO	**Guam**	**28.97**	**325**	LR	LR	15 02 02.2	
	comp=Z,37nm,18.4s,baz=176,slow=35						
AS31	**Alice Springs**	**29.27**	**240**	P	**P**	**14 50 59.9**	**-0.8**
ASAR	**Alice Springs**	**29.27**	**240**	P	**P**	**14 50 59.7**	**-1.0**
	comp=Z,0.8nm,0.6s,baz=63,slow=9.9,SNR=12						
ASAR				LR	LR	15 02 14.1	
	comp=Z,143nm,18.7s,baz=50,slow=35						
	comp=Z,0.8nm,0.6s						
ASAR	**Alice Springs**	**29.27**	**240**	P	**P**	**14 51 00.1**	**-0.6**
FAKI	**Fak Fak**	**29.85**	**283**	P	**P**	**14 51 05.7**	**-0.2**
TOO	**Toolangi**	**30.53**	**205**	P	**P**	**14 51 11.9**	**+0.2**
TOO				IAmb	IAmb	14 51 12.3	
	comp=Z,4.0nm,0.7s						
BKZ	**Black Stump Fm**	**31.61**	**157**	P	**P**	**14 51 20.8**	**-0.3**
BKZ				IAmb	IAmb	14 51 42.6	
	comp=Z,24nm,1.5s						
KNRA	**Kununurra**	**32.15**	**257**	P	**P**	**14 51 26.3**	**+0.2**
BBOO	**Buckleboo**	**32.20**	**222**	P	**P**	**14 51 25.9**	**-0.5**
TCW	**Tory Channel**	**32.67**	**162**	P	**P**	**14 51 30.3**	**-0.1**
FITZ	**Fitzroy Crossi**	**35.38**	**254**	P	**P**	**14 51 53.9**	**-0.4**
JAGI	**Jajag, Banyuwa**	**46.57**	**268**	P	**P**	**14 53 25.5**	**-0.8**
MAJO	**Matsushiro**	**51.59**	**336**	P	**P**	**14 54 02.0**	**-2.3**
MAJO				IAmb	IAmb	14 54 19.3	
	comp=Z,9.7nm,1.4s						
MJB9	**Matsu-Tunnel**	**51.60**	**336**	P	**P**	**14 54 01.9**	**-2.4**
MJB9				IAmb	IAmb	14 54 21.9	
	comp=Z,9.6nm,1.4s						
KSRS	**Korea Array**	**57.05**	**328**	P	**P**	**14 54 44.6**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=144,slow=7.5,SNR=2.3						
	comp=Z,0.3nm,0.5s						
USRK	**Ussuriysk Ar.**	**60.59**	**336**	P	**P**	**14 55 09.6**	**+1.3**
	comp=Z,1.5nm,0.8s,baz=141,slow=7.1,SNR=2.4						
	comp=Z,1.5nm,0.8s						
KLR	**Kul'dur**	**64.90**	**339**	P	**P**	**14 55 36.5**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=241,slow=10,SNR=3.8						
	comp=Z,1.1nm,0.7s						
VNDA	**Vanda**	**67.03**	**180**	P	**P**	**14 55 50.2**	**0.0**
	comp=Z,2.2nm,0.9s,baz=13,slow=7.2,SNR=5.3						
	comp=Z,2.2nm,0.9s						
VNDA	**Vanda**	**67.03**	**180**	P	**P**	**14 55 50.4**	**+0.2**
VNDA				IAmb	IAmb	14 56 10.7	
	comp=Z,3.1nm,1.2s						
CMAR	**Chiang Mai Arr**	**67.94**	**295**	P	**P**	**14 55 57.5**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=120,slow=3.6,SNR=4.1						
	comp=Z,0.5nm,0.8s						
SONM	**Songino Array**	**75.70**	**325**	P	**P**	**14 56 43.7**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=138,slow=4.8,SNR=8.1						
	comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	**75.70**	**325**	P	**P**	**14 56 43.6**	**+0.5**
P18K	**Big Mountain,**	**77.85**	**21**	P	**P**	**14 56 54.8**	**0.0**
SVW2	**Sparrevohn**	**78.97**	**20**	P	**P**	**14 57 02.4**	**+1.4**
SVW2				IAmb	IAmb	14 57 21.8	
	comp=Z,9.2nm,1.3s						
QSPA	**South Pole Qui**	**79.53**	**180**	P	**P**	**14 57 03.9**	**-0.2**
QSPA				IAmb	IAmb	14 57 17.8	
	comp=Z,3.3nm,1.2s						
M19K	**Big River Lodg**	**79.95**	**20**	P	**P**	**14 57 07.6**	**+1.3**
M19K				IAmb	IAmb	14 57 42.0	
	comp=Z,10nm,1.5s						
L19K	**White Mountain**	**80.00**	**19**	P	**P**	**14 57 07.9**	**+1.4**
L19K				IAmb	IAmb	14 57 38.8	
	comp=Z,7.3nm,1.4s						
CAST	**Castle Rocks**	**81.78**	**19**	P	**P**	**14 57 16.1**	**+0.2**
M24K	**Tolsona, Glenn**	**82.97**	**22**	P	**P**	**14 57 23.6**	**+1.4**
MLY	**Manley**	**83.32**	**18**	P	**P**	**14 57 25.0**	**+1.0**
MLY				IAmb	IAmb	14 57 29.4	
	comp=Z,4.7nm,1.4s						
CCB	**Clear Creek Bu**	**84.00**	**20**	P	**P**	**14 57 27.7**	**+0.3**
LOGN	**Logan Glacier**	**84.23**	**25**	P	**P**	**14 57 29.7**	**+0.8**
ILAR	**Eielson Array**	**84.39**	**20**	P	**P**	**14 57 29.1**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=241,slow=5.2,SNR=6.5						
	comp=Z,0.2nm,0.4s						
M27K	**Edge Creek, AK**	**84.74**	**23**		**P**	**14 57 33.0**	**+1.6**
M27K				IAmb	IAmb	14 57 53.8	
	comp=Z,8.9nm,1.3s						
M30M	**Minto, Yukon**	**86.86**	**24**		**P**	**14 57 43.0**	**+1.2**
M30M				IAmb	IAmb	14 58 10.2	
	comp=Z,8.2nm,1.5s						
NVAR	**Mina Array Bea**	**88.97**	**51**	P	**P**	**14 57 53.9**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=226,slow=4.8,SNR=1.7						
	comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**90.17**	**318**	P	**P**	**14 57 57.0**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=98,slow=6.6,SNR=8.1						
	comp=Z,0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**93.50**	**321**	P	**P**	**14 58 11.3**	**-1.7**
	comp=Z,0.1nm,0.4s,baz=96,slow=4.7,SNR=2.3						
	comp=Z,0.1nm,0.4s						
YKA	**Yellowknife Ar**	**96.46**	**28**	P	**P**	**14 58 25.9**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=262,slow=4.5,SNR=2.9						
	comp=Z,0.2nm,0.5s						

TEH ***19*** *14:55:29.1, 38°.35N×55°.48E, h6^{km}±60^{km}, ML4.4*

IDC ***19*** *14:55:30.8±0.8, 38°.37N×55°.43E, h0^{km}, mb3.7/14, mbtmp3.9/23, ML3.9/9, MS3.6/33, Error ellipse: s-maj=16.4km s-min=8.9km az=179.0*

MOS ***19*** *14:55:32.9±1.9, 38°.49N×55°.61E, h33^{km}, mb4.2/4, Error ellipse: s-maj=6.4km s-min=6.2km az=128.0*

NNC ***19*** *14:55:33.1±1.9, 38°.83N×55°.81E, h0^{km}, mb4.3, Error ellipse: s-maj=19.8km s-min=7.9km az=68.0*

NEIC ***19*** *14:55:33.5±2.2, 38°.44N±0°.10×55°.67E±0°.08, h21^{km}±7^{km}, mb4.1/13, Error ellipse: s-maj=14.1km s-min=8.8km az=189.0*

AZER ***19*** *14:55:33.1±0.8, 37°.99N×54°.94E, h10^{km}±32^{km}, Error ellipse: s-maj=101.6km s-min=5.3km az=291.0*

ISC 19 14:55:31.2±0.4**, 38°.43N**±0°.04×**55°.60E**±0°.03**, h10**^{km}**, n191,** σ**2^{s}.36**/208**, mb4.0**/21**, MS3.6**/30**, 11C-13D, Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRVT	**Maraveh tapeh**	**0.87**	**153**	Pg	**Pg**	**14 55 46.0**	**-1.9**
MRVT				Sg	**Sg**	**14 55 58.0**	**-1.2**
IMND	**Minoodasht**	**1.18**	**187**	Pg	Pb	14 55 51.4	-2.4
IMND				Sg	**Sb**	**14 56 07.8**	**-1.3**
BJRD	**Bojnurd**	**1.61**	**117**	Pg	**Pn**	**14 55 60.0**	**+0.2**
GEYT	**Alibeck**	**2.05**	**103**	Pn	**Pn**	**14 56 07.4**	**+1.5**
	193nm,0.3s,baz=280,slow=22,SNR=496						
GEYT				Sn	**Sg**	**14 56 38.3**	**+1.2**
	62nm,0.3s,baz=285,slow=19,SNR=2.4						
	1µm,0.5s						
GYA0	**ALIBECK ARRAY**	**2.05**	**103**	P	**Pn**	**14 56 06.1**	**+0.3**
GYA0	**ALIBECK ARRAY**	**2.05**	**103**	Pn	**Pn**	**14 56 06.1**	**+0.3**
GYA0B	**ALIBECK ARRAY**	**2.05**	**103**		**Pn**	**14 56 06.1**	**+0.2**
GYA0B	**ALIBECK ARRAY**	**2.05**	**103**	⇓Pn	**Pn**	**14 56 07.5**	**+1.7**
GYA0B				⇓Lg	Lg	14 56 39.3	
IGLO	**Ghaloghah**	**2.38**	**217**	Pn	**Pn**	**14 56 10.3**	**-0.3**
SHRO	**Shahrood**	**2.46**	**172**	Pn	**Pn**	**14 56 11.3**	**-0.2**
SBZV	**Sabzevar**	**2.60**	**141**	Pn	**Pn**	**14 56 15.0**	**+1.5**
IEMG	**Emamgholi**	**2.62**	**112**	Pn	**Pn**	**14 56 17.0**	**+3.1**
IAKL	**Akhelmad**	**3.11**	**125**	Pn	**Pn**	**14 56 22.8**	**+2.2**
IANJ	**Anjilo**	**3.25**	**205**	Pn	**Pn**	**14 56 22.9**	**+0.3**
IPAY	**Payeh**	**3.35**	**125**	Pn	**Pn**	**14 56 25.4**	**+1.5**
IPRN	**Peran**	**3.40**	**231**	Pn	**Pn**	**14 56 24.1**	**-0.3**
IFIR	**Firoozkooh**	**3.60**	**220**	Pn	**Pn**	**14 56 27.5**	**+0.2**
MZPU	**Pul - Mazandar**	**3.77**	**239**	Pn	**Pn**	**14 56 29.0**	**-0.7**
IMOG	**Moghan**	**3.78**	**127**	Pn	**Pn**	**14 56 31.8**	**+1.9**
IDMV	**Damavand**	**4.03**	**226**	Pn	**Pn**	**14 56 32.2**	**-1.1**
KLST	**Kelardasht - M**	**4.08**	**243**	Pn	Pn	14 56 30.5	-3.5
IMYA	**Miami**	**4.15**	**119**	Pn	**Pn**	**14 56 35.8**	**+0.9**
TBHD	**Torbat heydari**	**4.19**	**135**	Pn	**Pn**	**14 56 37.8**	**+2.3**
TNSJ	**Nastanj**	**4.54**	**169**	Pn	**Pn**	**14 56 40.5**	**+0.5**
JRKH	**Jarkhoshk**	**4.56**	**122**	Pn	**Pn**	**14 56 42.2**	**+1.9**
IVRN	**Varamin**	**4.63**	**223**	Pn	**Pn**	**14 56 41.3**	**0.0**
ISFB	**Sefidab**	**4.89**	**215**	Pn	**Pn**	**14 56 44.0**	**-0.9**
TBJM	**Torbat-e-JAM**	**4.94**	**128**	Pn	**Pn**	**14 56 47.5**	**+1.9**
TKDS	**Koohdasht(Taba**	**4.97**	**165**	Pn	**Pn**	**14 56 46.7**	**+0.7**
IQOM	**Qom**	**5.11**	**227**	Pn	**Pn**	**14 56 47.4**	**-0.6**
KRSH	**Karshahi**	**5.26**	**213**	Pn	**Pn**	**14 56 50.4**	**+0.3**
ASTR	**Astara**	**5.34**	**273**	P	Pn	14 56 49.2	-1.8
	SNR=6.0						
ASTR				S	Sn	14 57 46.6	-5.9
LKRN	**Lenkeran, Azer**	**5.35**	**275**	P	**Pn**	**14 56 50.3**	**-0.9**
	SNR=6.2						
LKRN				S	**Sn**	**14 57 48.2**	**-4.5**
ANAR	**Anarak**	**5.45**	**197**	Pn	**Pn**	**14 56 52.0**	**-0.7**
TPRV	**Parvadeh(Tabas**	**5.47**	**170**	Pn	**Pn**	**14 56 52.6**	**-0.3**
ATGJ	**Altiaghaj**	**5.68**	**297**	P	**Pn**	**14 56 58.4**	**+2.6**
	SNR=5.9						
ATGJ				S	**Sn**	**14 58 02.3**	**+1.2**
GLBA	**Clilabad**	**5.68**	**280**	P	Pn	14 56 53.6	-2.0
	SNR=5.5						
GLBA				P	Pn	14 56 53.6	-2.0
	SNR=5.5						
GLBA				S	**Sn**	**14 57 56.6**	**-4.3**
GLBA				S	**Sn**	**14 57 56.6**	**-4.3**
LRK	**Lerik**	**5.69**	**274**	P	Pn	14 56 54.1	-1.9
	SNR=22						
LRK				P	Pn	14 56 54.1	-1.9
	SNR=22						
LRK				S	**Sn**	**14 57 56.4**	**-5.1**
LRK				S	**Sn**	**14 57 56.4**	**-5.1**
AFRZ	**Afriz**	**5.72**	**150**	Pn	**Pn**	**14 56 57.3**	**+1.0**
ZNJK	**Zanjan**	**5.77**	**254**	Pn	**Pn**	**14 56 56.8**	**-0.3**
YRD	**Yardimli**	**5.78**	**277**	P	Pn	14 56 55.3	-1.8
	SNR=4.1						
YRD				P	Pn	14 56 55.3	-1.8
	SNR=4.1						
YRD				S	Sn	14 57 58.0	-5.6
YRD				S	Sn	14 57 58.0	-5.6
SIZA	**Siyzn**	**5.80**	**299**	P	**Pn**	**14 56 59.9**	**+2.6**
SIZA				S	**Sn**	**14 58 03.6**	**-0.3**
PQL	**Pirkuli**	**5.90**	**296**	P	**Pn**	**14 57 00.6**	**+1.8**
	SNR=8.2						
PQL				S	**Sn**	**14 58 05.8**	**-0.7**
SHRT	**Shahrakht**	**6.11**	**140**	Pn	**Pn**	**14 57 02.1**	**+0.5**
IML	**Ismayilli**	**6.19**	**295**	P	**Pn**	**14 57 05.2**	**+2.5**
IML				S	**Sn**	**14 58 13.8**	**+0.2**
QUBA	**Quba, Azerbaij**	**6.19**	**300**	P	**Pn**	**14 57 05.2**	**+2.5**
QUBA				S	**Sn**	**14 58 15.5**	**+1.9**
XNQ	**Khinaliq**	**6.36**	**298**	P	**Pn**	**14 57 06.4**	**+1.2**
	SNR=4.8						
XNQ				S	**Sn**	**14 58 18.9**	**+1.0**
BLQ	**Beylaqan**	**6.38**	**284**	P	**Pn**	**14 57 03.9**	**-1.5**
	SNR=7.1						
BLQ				P	**Pn**	**14 57 03.9**	**-1.5**
	SNR=7.1						
BLQ				S	**Sn**	**14 58 14.3**	**-3.9**
BLQ				S	**Sn**	**14 58 14.3**	**-3.9**
ZRD	**Zardab**	**6.40**	**289**	P	**Pn**	**14 57 06.7**	**+1.1**
ZRD				S	**Sn**	**14 58 15.8**	**-2.9**
QSAR	**Qusar**	**6.42**	**301**	P	**Pn**	**14 57 08.6**	**+2.8**
QSAR				S	**Sn**	**14 58 19.2**	**+0.1**
QBL	**Gabala**	**6.49**	**295**	P	**Pn**	**14 57 07.3**	**+0.5**
QBL				S	**Sn**	**14 58 19.8**	**-1.2**
QRD	**Qoradiz**	**6.53**	**282**	S	Sn	14 58 16.4	-5.5
AKT	**Akhty**	**6.76**	**299**	*e*P	**Pn**	**14 57 10.7**	**0.0**
AKT				*e*S	**Sn**	**14 58 27.6**	**-0.2**
AKT				pmax	pmax		
	comp=Z,15nm,0.5s						
AKT				smax	smax		
	comp=E,42nm,0.4s						
AKT				smax	smax		
	comp=N,93nm,0.4s						
AKT				smax	smax		
	comp=N,93nm,0.4s						
AGDM	**Agdam**	**6.79**	**287**	P	**Pn**	**14 57 10.6**	**-0.4**
AGDM				P	**Pn**	**14 57 10.6**	**-0.4**
AGDM				S	**Sn**	**14 58 24.1**	**-4.3**
AGDM				S	**Sn**	**14 58 24.1**	**-4.3**
SEKA	**Sheki**	**7.03**	**296**	P	**Pn**	**14 57 15.2**	**+0.9**
	SNR=5.7						
SEKA				S	**Sn**	**14 58 32.6**	**-1.7**
BSRN	**Basiran**	**7.07**	**155**	Pn	**Pn**	**14 57 15.6**	**+0.7**
SHK1	**Shahrekord**	**7.20**	**214**	Pn	**Pn**	**14 57 16.5**	**-0.3**
GANJ	**Ganja**	**7.50**	**290**	P	Pn	14 57 17.7	-3.0
	SNR=4.4						
GANJ				S	Sn	14 58 38.5	-7.3
ORD	**Ordubad**	**7.53**	**277**	P	**Pn**	**14 57 20.7**	**-0.5**
ORD				S	**Sn**	**14 58 42.0**	**-4.6**
ZKTA	**Zakatala**	**7.59**	**298**	P	**Pn**	**14 57 23.8**	**+1.9**
ZKTA				S	**Sn**	**14 58 47.1**	**-0.9**
IAZR	**Azarshahr**	**7.62**	**267**	Pn	**Pn**	**14 57 23.0**	**+0.3**
MAK	**Makhachkala**	**7.63**	**309**	*e*P	**Pn**	**14 57 22.1**	**-0.3**
MAK				*e*S	**Sn**	**14 58 52.3**	**+3.4**
MAK				pmax	pmax		
	comp=Z,112nm,0.8s						
MAK				MLR	MLR		
	comp=Z,90nm,7.0s						
SBZ	**Shahbuz**	**7.89**	**280**	P	**Pn**	**14 57 25.5**	**-0.6**
	SNR=21						
SBZ				S	**Sn**	**14 58 51.6**	**-3.9**
NHDN	**Nehbandan**	**7.92**	**151**	Pn	**Pn**	**14 57 28.6**	**+2.0**
NAX	**Nakhchivan**	**7.92**	**278**	P	**Pn**	**14 57 24.9**	**-1.6**
	SNR=6.9						
NAX				P	**Pn**	**14 57 24.9**	**-1.6**
	SNR=6.9						
NAX				S	Sn	14 58 50.4	-5.9
NAX				S	Sn	14 58 50.4	-5.9
GDB	**GEDABAY**	**7.94**	**290**	P	**Pn**	**14 57 26.7**	**-0.1**
	SNR=13						
GDB				S	**Sn**	**14 58 51.9**	**-4.8**
KHGB	**Koh Gabri**	**8.07**	**175**	Pn	**Pn**	**14 57 28.9**	**+0.2**
KLNJ	**Kolanjah**	**8.11**	**205**	Pn	**Pn**	**14 57 30.0**	**+0.7**
QZX	**Qazax, Azerbai**	**8.30**	**292**	P	**Pn**	**14 57 32.9**	**+1.2**
QZX				S	**Sn**	**14 59 04.5**	**-1.0**
MAKU	**Maku**	**8.56**	**280**	Pn	**Pn**	**14 57 35.7**	**+0.3**
GNI	**Garni**	**8.59**	**285**	Pn	**Pn**	**14 57 36.1**	**+0.4**
	comp=Z,2.1nm,0.3s,baz=360,slow=5.6,SNR=8.2						
GNI				Sn	**Sn**	**14 59 13.6**	**+0.9**
	comp=Z,1.1nm,0.3s,baz=76,slow=22,SNR=1.9						
	comp=Z,12nm,0.5s						
GNI	**Garni**	**8.59**	**285**	Pn	**Pn**	**14 57 37.9**	**+2.1**
GROC	**Groznyy**	**8.82**	**306**	*e*P	**Pn**	**14 57 37.9**	**-0.9**
GROC				*e*S	**Sn**	**14 59 18.8**	**+0.6**
AKH	**Akhalkalaki**	**9.76**	**292**	Pn	**Pn**	**14 57 54.0**	**+2.1**
AKH	**Akhalkalaki**	**9.76**	**292**	P	**Pn**	**14 57 54.0**	**+2.1**
GEVA	**Gevas**	**9.85**	**273**		**Pn**	**14 57 55.2**	**+2.2**
ONI	**Oni**	**10.13**	**298**	Pn	**Pn**	**14 57 59.0**	**+2.2**
ONI	**Oni**	**10.13**	**298**	P	**Pn**	**14 57 59.0**	**+2.2**
CHGR	**Chuyangaron**	**10.63**	**85**	Pn	**Pn**	**14 58 02.0**	**-1.6**
CHGR	**Chuyangaron**	**10.63**	**85**	P	**Pn**	**14 58 02.0**	**-1.6**
KBZ	**Khabaz**	**10.94**	**303**	Pn	**Pn**	**14 58 07.9**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=16,slow=8.0,SNR=8.4						
KBZ				Sn	**Sn**	**15 00 04.8**	**-5.5**
	comp=Z,0.3nm,0.3s,baz=280,slow=19,SNR=2.1						
	comp=Z,1.4nm,0.3s						
KBZ	**Khabaz**	**10.94**	**303**	⇓*e*P	**Pn**	**14 58 09.7**	**+1.9**
KVAR	**Kislovodsk Arr**	**11.17**	**304**	Pn	Pn	14 58 08.5	-2.5
	baz=135,slow=5.7						
KVAR				Sn	Sn	15 00 08.2	-7.9
	baz=101,slow=23						
KIV	**Kislovodsk**	**11.18**	**304**	Pn	**Pn**	**14 58 11.6**	**+0.5**
KIV	**Kislovodsk**	**11.18**	**304**	*e*P	**Pn**	**14 58 11.0**	**-0.1**
KIV				*e*S	**Sn**	**15 00 16.7**	**+0.6**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,45nm,13.0s						

AB31	Akbulak array	11.26	15	Pn	Pn	14 58 11.4	-0.7
	comp=Z,2.3nm,0.4s,baz=199,slow=14,SNR=77						
AB31				⇓Sn	Sn	15 00 11.1	-6.9
	comp=Z,3.6nm,0.4s,baz=196,slow=22,SNR=6.7						
AB31	Akbulak array	11.26	15	P	Pn	14 58 11.5	-0.7
AB31				S	Sn	15 00 11.1	-6.9
ABKAR	Akbulak array	11.26	15		Pn	14 58 11.0	-1.1
KBL	Kabul	11.50	106	Pn	Pn	14 58 15.6	-0.1
KBL	Kabul	11.50	106	P	Pn	14 58 15.6	-0.1
GAR	Garm	11.52	83		Pn	14 58 14.7	-1.1
AKTO	Aktyubinsk	12.12	7	Pn	Pn	14 58 24.1	+0.1
	comp=Z,2.4nm,0.3s,baz=186,slow=8.7,SNR=28						
AKTO				Sn	Sn	15 00 34.1	-5.0
	comp=Z,0.4nm,0.3s,baz=198,slow=21,SNR=1.4						
AKTO				LR	LR	15 04 13.4	
	comp=Z,536nm,19.1s,baz=21,slow=43						
	comp=Z,6.0nm,0.3s						
AKTO	Aktyubinsk	12.12	7	⇑Pn	Pn	14 58 22.5	-1.4
	comp=Z,15nm,0.9s						
AKTO				⇓Sn	Sn	15 00 34.6	-4.4
	comp=Z,12nm,1.1s						
KK31	Karatay Array	12.23	63		Pn	14 58 24.7	-0.8
KK31	Karatay Array	12.23	63	⇓Pn	Pn	14 58 25.1	-0.4
	comp=Z,3.6nm,0.6s,baz=255,slow=8.9,SNR=44						
KK31				⇑Sn	Sn	15 00 37.4	-4.5
	comp=Z,14nm,0.8s,baz=258,slow=27,SNR=5.1						
KK31	Karatay Array	12.23	63	P	Pn	14 58 24.7	-0.8
KKAR	Karatay Array	12.23	63	Pn	Pn	14 58 24.6	-0.8
KKAR	Karatay Array	12.23	63		Pn	14 58 24.9	-0.5
KKAR	Karatay Array	12.23	63	P	Pn	14 58 25.0	-0.5
AAK	Ala-Archa	14.97	68	Pn	Pn	14 59 02.3	-0.7
	comp=Z,0.4nm,0.3s,baz=236,slow=6.4,SNR=10						
AAK				Sn	Sn	15 01 42.7	-6.2
	comp=Z,0.1nm,0.3s,baz=234,slow=24,SNR=3.0						
	comp=Z,2.7nm,0.6s						
BELG	Belogornoye	15.03	341	Pn	Pn	14 59 02.8	-0.7
	comp=Z,0.8nm,0.3s,baz=138,slow=22,SNR=1.8						
BELG				Sn	Sn	15 01 43.0	-6.9
	comp=Z,0.4nm,0.3s,baz=60,slow=20,SNR=1.6						
BELG				LR	LR	15 06 47.8	
	comp=Z,118nm,18.3s,baz=163,slow=45						
	comp=Z,7.3nm,0.7s						
WSAR	Wadi Sarin	15.37	169	LR	LR	15 05 49.1	
	comp=Z,88nm,18.6s,baz=3.5,slow=40						
TKM2	Tokmak 2	15.81	67	⇑Pn	Pn	14 59 14.7	+0.5
	comp=Z,5.5nm,0.8s						
TKM2	Tokmak 2	15.81	67	P	Pn	14 59 14.7	+0.5
KSH	Kashi	15.89	80	P	Pn	14 59 09.8	-5.2
KSH				pP	P	14 59 15.8	-2.9
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KSH				LR	LR		
	comp=N,490nm,10.1s						
KSH				LR	LR		
	comp=E,840nm,13.1s						
KSH				LR	LR		
	comp=Z,640nm,11.9s						
BOOM	Boomskoye usch	16.00	69	P	Pn	14 59 19.5	+3.0
BOOM	Boomskoye usch	16.00	69	P	Pn	14 59 19.5	+3.0
BOOM				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ASF	Jabal al Asfar	16.48	253	Pn	Pn	14 59 21.5	-1.2
	comp=Z,0.7nm,0.3s,baz=11,slow=13,SNR=2.5						
	comp=Z,2.7nm,0.4s						
BRTR	Keskin Array B	17.10	281	Pn	Pn	14 59 30.2	-0.2
	comp=Z,0.2nm,0.3s,baz=101,slow=11,SNR=6.3						
BRTR				LR	LR	15 08 09.7	
	comp=Z,159nm,18.0s,baz=94,slow=45						
	comp=Z,0.4nm,0.5s						
BRTR	Keskin Array B	17.10	281	*ce*P	Pn	14 59 34.0	+3.6
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
RAYN	Ar Rayn	17.18	213	Pn	Pn	14 59 32.0	+0.6
RAYN				IAmb	IAmb	14 59 35.4	
	comp=Z,12nm,1.0s						
RAYN	Ar Rayn	17.18	213	P	Pn	14 59 32.0	+0.6
RAYN				pmax	pmax		
	comp=Z,12nm,1.0s						
MMAI	Mount Meron Ar	17.25	258	LR	LR	15 08 11.1	
	comp=Z,55nm,19.3s,baz=135,slow=44						
BRVK	Borovoye	17.80	30	P	P	14 59 41.2	+1.4
BRVK	Borovoye	17.80	30	⇓Pn	Pn	14 59 38.4	-0.6
	comp=Z,11nm,1.2s						
BRVK				⇓Sn	Sn	15 02 51.2	-6.1
	comp=Z,9.5nm,1.2s						
BRVK	Borovoye	17.80	30	⇑*e*P	Pn	14 59 39.2	+0.2
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BVA0	Borovoye Array	17.82	30	⇑Pn	Pn	14 59 37.8	-1.4
	comp=Z,8.1nm,0.9s,baz=224,slow=14,SNR=4.9						
BVA0				⇓Sn	Sn	15 02 51.2	-6.5
	comp=Z,8.2nm,1.4s,baz=220,slow=25,SNR=5.3						
BVA0	Borovoye Array	17.82	30	P	Pn	14 59 37.8	-1.4
BVA0				S	Sn	15 02 51.2	-6.5
BVAR	Borovoye Array	17.82	30	P	Pn	14 59 40.1	+0.9
	comp=Z,0.1nm,0.3s,baz=206,slow=9.5,SNR=7.9						
BVAR				S	Sn	15 02 49.0	-8.8
	comp=Z,1.5nm,0.5s,baz=225,slow=26,SNR=1.8						
	comp=Z,14nm,1.3s						
ARU	Arti	18.11	5	P	Pn	14 59 42.2	-0.5
	comp=Z,2.7nm,0.4s,baz=218,slow=7.7,SNR=4.0						
ARU				S	Sn	15 02 54.7	-10
	comp=Z,1.5nm,0.4s,baz=244,slow=23,SNR=1.7						
ARU				LR	LR	15 08 01.4	
	comp=Z,342nm,18.5s,baz=182,slow=41						
ARU	Arti	18.11	5	P	Pn	14 59 43.2	+0.5
ARU				IAmb	IAmb	14 59 54.5	
	comp=Z,31nm,1.4s						
ARU	Arti	18.11	5	*d i*P	Pn	14 59 43.0	+0.3
ARU				S	Sn	15 03 06.2	+1.5
ARU				pmax	pmax		
	comp=Z,8.0nm,1.2s						
EIL	Elat	19.18	249	LR	LR	15 09 04.1	
	comp=Z,209nm,18.3s,baz=59,slow=43						
KURBB	Kurchatov Arra	20.30	46	P	P	15 00 08.8	+1.8
	comp=Z,1.2nm,0.9s,baz=249,slow=12,SNR=10						
KURBB				S	S	15 03 50.9	-3.5
	comp=Z,0.4nm,0.7s,baz=255,slow=22,SNR=1.6						
	comp=Z,1.2nm,0.9s						
KURK	Kurchatov	20.39	46	Pn	Pn	15 00 11.3	+1.2
KURK				IAmb	IAmb	15 00 31.7	
	comp=Z,4.7nm,0.8s						
KURK	Kurchatov	20.39	46	⇑*e*P	P	15 00 07.0	-1.0
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIRV	Kirov	20.56	351	P	P	15 00 10.4	+0.6
	comp=Z,4.9nm,0.7s,baz=243,slow=22,SNR=1.8						
KIRV				LR	LR	15 10 02.5	
	comp=Z,404nm,18.2s,baz=181,slow=42						
	comp=Z,4.9nm,0.7s						
KIRV	Kirov	20.56	351	⇓*e*P	P	15 00 12.9	+3.1
OBN	Obninsk	21.05	329	⇑*e*P	P	15 00 17.4	+2.2
OBN				*i*		15 00 35.1	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,106nm,16.0s						
MAKZ	Makanchi	21.07	58	Pn	P	15 00 17.6	+2.1
MAKZ				IAmb	IAmb	15 00 22.8	
	comp=Z,14nm,1.2s						
MAKZ	Makanchi	21.07	58	⇑Pn	P	15 00 17.5	+2.0
	comp=Z,16nm,1.2s						
MAKZ	Makanchi	21.07	58	P	P	15 00 17.6	+2.1
MAKZ				pmax	pmax		
	comp=Z,14nm,1.2s						
MK31	Makanchi Array	21.27	58	P	P	15 00 19.4	+1.7
MK31				IAmb	IAmb	15 00 25.3	
	comp=Z,9.4nm,1.1s						
MK31	Makanchi Array	21.27	58	⇑Pn	P	15 00 19.7	+2.0
	comp=Z,14nm,1.1s,baz=250,slow=8.9,SNR=49						
MK31	Makanchi Array	21.27	58	*c i*P	P	15 00 19.7	+2.0
MKAR	Makanchi Array	21.27	58	P	P	15 00 19.6	+1.9
	comp=Z,5.1nm,0.8s,baz=251,slow=7.5,SNR=34						
MKAR				LR	LR	15 09 08.2	
	comp=Z,124nm,18.6s,baz=305,slow=38						
	comp=Z,5.1nm,0.8s						
MKAR	Makanchi Array	21.27	58	P	P	15 00 18.9	+1.2
MKAR	Makanchi Array	21.27	58	P	P	15 00 18.9	+1.2
AKASG	Malin Array Be	22.30	312	P	P	15 00 28.7	+0.1
	comp=Z,3.3nm,0.7s,baz=113,slow=11,SNR=19						
AKASG				LR	LR	15 10 44.0	
	comp=Z,87nm,18.1s,baz=166,slow=41						
	comp=Z,3.3nm,0.7s						
AKASG	Malin Array Be	22.30	312	P	P	15 00 29.4	+0.7
AKASG				IAmb	IAmb	15 00 47.7	
	comp=Z,6.2nm,1.3s						
AKBB	Malin Array Si	22.30	312	P	P	15 00 29.5	+0.9
AKBB	Malin Array Si	22.30	312	⇓*e*P	P	15 00 31.0	+2.4
MLR	Muntele Rosu	23.06	297	P	P	15 00 40.6	+3.7
	comp=Z,6.3nm,0.7s,baz=144,slow=17,SNR=3.0						
MLR				LR	LR	15 11 45.6	
	comp=Z,91nm,18.8s,baz=104,slow=42						
BURAR	Bucovina Array	23.90	302	P	P	15 00 46.1	+1.0
BURAR	Bucovina Array	23.90	302	P	P	15 00 46.1	+1.0
BUR08	Bucovina Ar. S	23.92	302	P	P	15 00 46.4	+1.0
BUR08				IAmb	IAmb	15 01 28.2	
	comp=Z,4.2nm,0.9s						
WMQ	Urumqi	24.68	67	*e*P	P	15 00 53.8	+1.5
WMQ				LR	LR		
	comp=N,290nm,15.7s						
WMQ				LR	LR		
	comp=E,350nm,15.7s						
WMQ				LR	LR		
	comp=Z,120nm,18.1s						
IDI	Anoyia	24.71	272	P	P	15 00 53.8	+1.2
	comp=Z,6.3nm,0.5s,baz=114,slow=11,SNR=10						
	comp=Z,6.3nm,0.5s						
IDI	Anoyia	24.71	272	P	P	15 00 53.7	+1.0
PYUN	Piuthan	25.03	106	*e*P	P	15 00 57.3	+1.5
ZALV	Zalesovo Beam	25.25	43	P	P	15 00 59.5	+2.3
	comp=Z,0.6nm,0.4s,baz=264,slow=12,SNR=4.2						
ZALV				LR	LR	15 11 27.8	
	comp=Z,88nm,21.2s,baz=239,slow=38						
	comp=Z,0.6nm,0.4s						
DGZ	Jazzator, Alta	25.31	53	⇓*e*P	P	15 00 58.5	+0.5
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.2s						
DANN	Dangsing	25.49	105	*e*P	P	15 01 01.6	+1.6
GKN	Gorkha	26.33	105	*e*P	P	15 01 09.4	+1.9
DMN	Daman	26.89	105	*e*P	P	15 01 14.5	+1.8
PKIN	Phulchoki	27.13	105	*e*P	P	15 01 16.6	+1.8
	comp=Z,31nm,0.9s						
PKI	Pulchoki	27.14	105	*e*P	P	15 01 16.8	+1.8
	comp=Z,33nm,0.9s						
GUN	Gumba	27.32	104	*e*P	P	15 01 18.3	+1.6
	comp=Z,33nm,1.0s						
JIRN	Jiri	27.69	104	*e*P	P	15 01 21.8	+1.8
RAMN	Ramite	28.36	105	*e*P	P	15 01 27.8	+1.9
ATD	Arta Tunnel	29.11	206	LR	LR	15 14 32.3	
	comp=Z,4.6nm,19.4s,baz=71,slow=39						
FINES	FINESS Array B	29.39	331	P	P	15 01 37.2	+2.9
	comp=Z,1.2nm,0.9s,baz=145,slow=10.0,SNR=1.6						
	comp=Z,1.2nm,0.9s						
VRAC	Vranov	29.83	304	LR	LR	15 15 37.8	
	comp=Z,86nm,20.1s,baz=92,slow=41						
GERES	GERESS Array B	31.69	303	LR	LR	15 16 57.4	
	comp=Z,62nm,20.5s,baz=87,slow=41						
HFS	Hagfors	34.06	323	LR	LR	15 17 10.6	
	comp=Z,42nm,19.0s,baz=44,slow=38						
BRDH	Bariadhala	34.53	107	LR	LR	15 20 38.7	
	comp=Z,200nm,18.3s,baz=89,slow=44						
ARCES	ARCESS Array B	35.07	342	LR	LR	15 17 52.8	
	comp=Z,102nm,19.1s,baz=124,slow=38						
NRIK	Noril'sk	35.39	19	LR	LR	15 18 51.7	
	comp=Z,171nm,18.3s,baz=221,slow=40						
NOA	NORSAR Array B	35.52	324	P	P	15 02 27.7	-0.3
	comp=Z,0.6nm,0.8s,baz=96,slow=7.9,SNR=2.3						
	comp=Z,0.6nm,0.8s						
KEST	Kesra	36.70	280	LR	LR	15 20 12.6	
	comp=Z,45nm,18.6s,baz=282,slow=40						
SONM	Songino Array	37.64	59	P	P	15 02 47.7	+1.4
	comp=Z,0.3nm,0.6s,baz=343,slow=16,SNR=2.4						
SONM				LR	LR	15 19 31.7	
	comp=Z,82nm,21.2s,baz=268,slow=38						
	comp=Z,0.3nm,0.6s						
PALK	Pallekele	38.43	137	LR	LR	15 21 51.3	
	comp=Z,95nm,20.0s,baz=239,slow=41						
PZH	PanZhiHua	40.33	93	P	P	15 03 09.6	+0.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,5.1s						
CMAR	Chiang Mai Arr	42.53	105	P	P	15 03 30.7	+3.5
	comp=Z,1.3nm,0.3s,baz=298,slow=9.0,SNR=4.4						
CMAR				LR	LR	15 24 29.3	
	comp=Z,40nm,18.0s,baz=305,slow=41						
	comp=Z,1.3nm,0.3s						
CMAR	Chiang Mai Arr	42.53	105	*i* P	P	15 03 26.1	-1.0
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
HHC	Hu-ho-hao-te	42.54	68	*e*P	P	15 03 26.6	-0.5
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,97nm,5.5s						
ESDC	Sonseca Array	45.51	291	P	P	15 03 51.5	+0.5
	comp=Z,0.6nm,0.7s,baz=56,slow=9.0,SNR=5.2						
	comp=Z,0.6nm,0.7s						
JMIC	Jan Mayen	45.79	336	LR	LR	15 22 24.4	
	comp=Z,28nm,18.0s,baz=302,slow=35						
YAK	Yakutsk	49.65	37	LR	LR	15 26 56.2	
	comp=Z,60nm,18.6s,baz=272,slow=38						
BORG	Borgarnes	50.55	327	LR	LR	15 25 59.3	
	comp=Z,22nm,18.7s,baz=86,slow=36						
HEH	HeiHe	50.80	52	*e*P	P	15 04 33.4	+1.8
HEH				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HEH				pmax	pmax		
	comp=Z,150nm,5.6s						
HEH				LR	LR		
	comp=N,310nm,14.3s						
HEH				LR	LR		
	comp=E,190nm,13.6s						
HEH				LR	LR		
	comp=Z,100nm,14.8s						
KLR	Kul'dur	53.79	52	LR	LR	15 28 17.7	
	comp=Z,65nm,18.8s,baz=279,slow=36						
TORD	Torodi Ar. Bea	53.80	257	P	P	15 04 54.7	+0.4
	comp=Z,0.2nm,0.4s,baz=46,slow=9.2,SNR=2.1						
	comp=Z,0.2nm,0.4s						
KSRS	Korea Array	55.63	67	P	P	15 05 08.4	+1.2
	comp=Z,0.4nm,0.8s,baz=284,slow=7.0,SNR=2.3						
KSRS				LR	LR	15 29 28.9	
	comp=Z,66nm,18.1s,baz=240,slow=37						
	comp=Z,0.4nm,0.8s						
LSZ	Lusaka	59.28	211	LR	LR	15 36 01.8	
	comp=Z,80nm,18.0s,baz=160,slow=41						
MA2	Magadan	60.21	36	LR	LR	15 32 50.2	
	comp=Z,39nm,18.9s,baz=273,slow=37						
DBIC	Dimbokro	62.86	256	LR	LR	15 37 14.1	
	comp=Z,46nm,18.7s,baz=91,slow=40						
RES	Resolute Bay	65.47	352	LR	LR	15 38 24.5	
	comp=Z,53nm,19.4s,baz=28,slow=39						
LBTB	Lobatse	69.10	209	LR	LR	15 39 20.5	
	comp=Z,84nm,19.5s,baz=40,slow=38						
BOSA	Boshof	72.48	208	LR	LR	15 40 06.5	
	comp=Z,87nm,20.0s,baz=17,slow=37						
ILAR	Eielson Array	75.62	10	P	P	15 07 17.8	+1.8
	comp=Z,0.2nm,0.8s,baz=323,slow=34,SNR=2.4						
	comp=Z,0.2nm,0.8s						

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*IDC **19** 15:18:49.6±2.1, 5°.08S×129°.09E, h0^{km}, mb3.6/1, mbtmp4.2/3, ML4.5/2, MS3.5/1, Error ellipse: s-maj=130.9km s-min=29.0km az=68.0*

*DJA **19** 15:19:08.7±0.4, 5°S±3°×13°0E±°, h200^{km}±5^{km}, M4.1/13, mB5.0/3, mb4.2/6, MLv4.0/13, Mw(mB)4.4/3*

*NEIC **19** 15:19:09.0±1.2, 5°.38S±0°.08×129°.8E±0°.1, h192^{km}±9^{km}, mb4.1/10, Error ellipse: s-maj=17.0km s-min=11.9km az=88.0*

ISC 19 15:19:08.9±0.7**, 5°.39S**±0°.07×**129°.77E**±0°.07**, h200^{km}, n47, σ1^{s}02**/48**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.88	9	P	Pn	15 19 38.5	+0.6
BNDI	Bandanaira	0.88	9	P	Pn	15 19 38.1	+0.2
BNDI				S	Sn	15 20 00.5	+0.1
MSAI	Masohi	2.20	338	P	Pn	15 19 48.7	-0.8
AAI	Ambon	2.31	317	P	Pn	15 19 50.6	-0.1
SAUI	Saumlaki	2.99	149	Pn	Pn	15 19 58.4	0.0
SAUI	Saumlaki	2.99	149	P	Pn	15 19 59.3	+0.9
NLAI	Namlea	3.41	309	P	Pn	15 20 02.6	-0.9
FAKI	Fak Fak	3.49	45	Pn	Pn	15 20 03.8	-0.6
FAKI	Fak Fak	3.49	45	P	Pn	15 20 03.9	-0.6
FAKI	Fak Fak	3.49	45	P	Pn	15 20 04.0	-0.4
SWI	Sorong	4.74	18	P	Pn	15 20 19.1	-0.9
SANI	Sanana	5.02	311	P	Pn	15 20 23.1	-0.5
SANI	Sanana	5.02	311	P	Pn	15 20 23.1	-0.5
	35nm,0.7s,0.2nm						
LBMI	Labuha	5.24	334	P	Pn	15 20 26.1	-0.3
	54nm,0.4s,2μm0.3nm						
RKPI	Ransiki, Papua	5.85	49	P	Pn	15 20 34.2	-0.1
	57nm,0.5s,11μm0.7nm						
TNTI	Ternate	6.58	339	Pn	Pn	15 20 43.0	-0.7
SOEI	Soe	6.96	231	Pn	Pn	15 20 49.8	+0.9
SOEI	Soe	6.96	231	P	Pn	15 20 49.1	+0.3
	22nm,1.4s,0.1nm						
MTN	Manton Dam	7.53	170	Pn	Pn	15 20 55.2	-0.8
KDU	Kakadu	7.72	160	P	Pn	15 20 58.2	-0.4
KNRA	Kununurra	10.27	185	Pn	Pn	15 21 30.2	-1.5
KNRA	Kununurra	10.27	185	P	Pn	15 21 30.0	-1.6
	10nm,0.8s						
FITZ	Fitzroy Crossi	13.26	197	Pn	Pn	15 22 09.6	0.0
WB0	Warramunga Arr	14.98	163	Pn	Pn	15 22 30.2	-0.8
WRAB	Tennant Creek	15.13	163		Pn	15 22 32.0	-0.8
WRAB				IAmb	IAmb	15 22 46.5	
	comp=Z,4.5nm,0.8s						
WRAB	Tennant Creek	15.13	163	P	Pn	15 22 32.1	-0.6
WRA	Warramunga Arr	15.13	163	Pn	Pn	15 22 32.0	-0.9
	comp=Z,1.7nm,0.3s,baz=340,slow=12,SNR=57						
WRA				Sn	S	15 25 08.4	-13
	comp=Z,0.4nm,0.3s,baz=333,slow=23,SNR=5.1						
	comp=Z,2.0nm,0.3s						
WRA	Warramunga Arr	15.13	163		Pn	15 22 31.9	-0.9
WB2	Warramunga Arr	15.14	163	P	Pn	15 22 32.2	-0.7
WB2				IAmb	IAmb	15 22 35.2	
	comp=Z,5.6nm,0.4s						
COEN	Coen	15.71	124		P	15 22 39.5	-0.3
COEN				IAmb	IAmb	15 22 44.9	
	comp=Z,9.7nm,1.2s						
QIS	Mount Isa	17.85	149	P	Pn	15 23 05.7	+0.4
MBWA	Marble Bar	18.45	211	P	P	15 23 10.0	+0.3
AS31	Alice Springs	18.60	168	P	Pn	15 23 13.2	-0.9
AS31				IAmb	IAmb	15 23 14.4	
	comp=Z,7.6nm,0.7s						
ASAR	Alice Springs	18.60	168	P	Pn	15 23 13.4	-0.7
	comp=Z,2.8nm,0.3s,baz=343,slow=10,SNR=425						
ASAR				S	S	15 26 29.8	-3.1
	comp=Z,0.3nm,0.7s,baz=354,slow=26,SNR=2.4						
	comp=Z,14nm,0.6s						
ASAR	Alice Springs	18.60	168	P	Pn	15 23 13.2	-0.9
AS01	Alice Springs	18.61	168	P	P	15 23 12.9	+1.5
	comp=Z,24nm,0.7s						
PSA00	Pilbara Seismi	18.74	210	P	P	15 23 13.2	+0.3
PSA00				IAmb	IAmb	15 23 24.2	
	comp=Z,21nm,1.4s						
MTSU	Mount Surprise	19.04	133	P	Pn	15 23 19.6	+0.3
WRKA	Warakurna	19.59	184	P	P	15 23 23.3	+1.4
CTA	Charters Tower	21.69	134	LR	LR	15 33 17.4	
	comp=Z,109nm,18.0s,baz=256,slow=39						
OOD	Oodnadatta	22.98	166	P	P	15 23 58.7	+2.6
MULG	Mulgathing	25.09	171	P	P	15 24 17.6	+2.4
STKA	Stephens Creek	28.58	159	P	P	15 24 47.5	+1.1
STKA				IAmb	IAmb	15 25 26.2	
	comp=Z,2.4nm,1.4s						
ARMA	Armidale	32.30	143	P	P	15 25 18.7	-0.6
MK31	Makanchi Array	66.76	327	P	P	15 29 39.6	+0.8
MKAR	Makanchi Array	66.76	327	P	P	15 29 38.9	+0.1
	comp=Z,0.2nm,0.3s,baz=119,slow=7.4,SNR=7.2						
	comp=Z,0.2nm,0.3s						
MKAR	Makanchi Array	66.76	327	P	P	15 29 39.4	+0.6

SCB 19 15:35:51.6±1.1**, 20°.80S**×**66°.84W, h230^{km}**±12^{km}**, ML2.8**/4**, MW4.2, Error ellipse: s-maj=7.4km s-min=4.5km az=0.0, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCB	Mochara	1.21	112	Pg	Pn	15 36 26.6	+0.2
YJA	Yavi	1.84	138	Pg	Pn	15 36 32.0	+0.5
PB08	IPOC Station P	2.27	286	Pg	Pn	15 36 36.2	+0.7
PB09	IPOC Station P	2.45	246	Pg	Pn	15 36 38.4	+1.2
GO01	Chusmiza	2.48	296	Pg	Pn	15 36 38.0	+0.2
PB01	IPOC Station P	2.49	264	Pg	Pn	15 36 37.8	+0.3
PB01				Sg	S	15 37 13.2	-0.1
PB01				IAML		15 37 16.4	
	18nm,0.2s						
LVC	Limon Verde	2.64	227	Pg	Pn	15 36 40.4	+1.1
PB02	IPOC Station P	2.90	259	Pg	Pn	15 36 42.7	+0.8
PB02				Sg	S	15 37 20.9	-0.5
PB02				IAML		15 37 27.1	
	31nm,0.3s						
PB03	IPOC Station P	2.99	245	Pg	Pn	15 36 43.6	+0.7
PB03				Sg	S	15 37 22.0	-1.2
PB03				IAML		15 37 24.7	
	14nm,0.3s						
PB07	IPOC Station P	2.99	251	Pg	Pn	15 36 43.7	+0.7
PB07				Sg	S	15 37 22.6	-0.7
PB07				IAML		15 37 23.4	
	17nm,0.3s						
PB06	IPOC Station P	3.17	233	Pg	Pn	15 36 46.5	+1.5
PB04	IPOC Station P	3.44	243	Pg	Pn	15 36 48.2	+0.1
GO02	Mina Guanaco	5.03	210	Pg	Pn	15 37 07.8	+0.3

IDC 19 15:37:14.1±2.1**, 6°.13S**×**154°.41E, h0^{km}, mb3.1**/3**, mbtmp3.2**/4**, ML3.6**/1**, Error ellipse: s-maj=50.1km s-min=31.6km az=119.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.99	307	Pn	Pn	15 38 03.4	+0.7
	8.9nm,0.3s,baz=273,slow=1.2,SNR=16						
KRVT				Sn	Sb	15 38 44.7	-0.6
	12nm,0.3s,baz=18,slow=18,SNR=3.6						
	21nm,0.3s						
WRA	Warramunga Arr	23.85	233	P	P	15 42 29.2	-0.1
	0.2nm,0.4s,baz=57,slow=10.0,SNR=5.8						
	0.2nm,0.4s						
ASAR	Alice Springs	26.33	226	P	P	15 42 52.0	0.0
	0.2nm,0.6s,baz=56,slow=9.3,SNR=5.7						
	0.2nm,0.6s						
ILAR	Eielson Array	82.78	22	P	P	15 49 39.6	-0.3
	0.2nm,0.8s,baz=251,slow=5.6,SNR=1.7						
	0.2nm,0.8s						

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*IDC **19** 15:43:19.2±3.9, 8°.35S×161°.16E, h57^{km}±33^{km}, mb3.6/8, mbtmp3.9/9, ML3.9/1, Error ellipse: s-maj=55.9km s-min=26.6km az=124.0*

ISC 19 15:43:18.8±0.9**, 8°.2S**±0°.1×**160°.9E**±0°.2**, h35^{km}, n20, σ1^{s}84**/20**, mb3.7**/8**, 3C-2D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.54	219	P	Pn	15 43 45.4	+1.6
	4μm,0.4s,baz=130,slow=3.1,SNR=98						
HNR	Honiara	1.54	219	⇑P	Pn	15 43 45.0	+1.2
PATS	Pohnpei	15.19	350	P	P	15 46 59.2	+3.8
	baz=15,SNR=4.8						
TARA	Tarawa	15.28	52	⇓P	P	15 47 00.0	+3.5
CTA	Charters Tower	18.46	229	P	P	15 47 31.4	-0.3
	0.3nm,0.3s,baz=44,slow=5.6,SNR=5.8						
	2.6nm,0.7s						
EIDS	Eidsvold	19.46	208	⇓P	Pn	15 47 45.5	+1.4
WRAB	Tennant Creek	28.23	243	⇑sP	P	15 49 08.2	-0.6
WRA	Warramunga Arr	28.25	243	P	P	15 49 08.2	-0.7
	3.1nm,0.5s,baz=68,slow=9.1,SNR=45						
	3.1nm,0.5s						
STKA	Stephens Creek	29.62	215	P	P	15 49 20.4	-0.5
	2.8nm,0.7s,baz=49,slow=16,SNR=4.4						
	2.8nm,0.7s						
ASAR	Alice Springs	30.09	236	P	P	15 49 23.8	-1.5
	1.0nm,0.7s,baz=64,slow=10,SNR=20						
	1.0nm,0.7s						
SWI	Sorong	30.44	282	P	P	15 49 28.1	-0.3
WRKA	Warakurna	35.32	238	⇑sP	P	15 50 10.2	-0.7
SKJI	Sukabumi	53.87	267	P	P	15 52 39.0	0.0
CGJI	Cibinong	54.76	268	P	P	15 52 47.8	+2.3
CMAR	Chiang Mai Arr	66.63	294	P	P	15 54 05.8	-0.5
	0.5nm,0.8s,baz=118,slow=4.3,SNR=5.0						
	0.5nm,0.8s						
SONM	Songino Array	73.62	325	P	P	15 54 48.4	-0.4
	0.6nm,0.7s,baz=136,slow=4.8,SNR=4.8						
	0.6nm,0.7s						
ILAR	Eielson Array	82.43	20	P	P	15 55 35.2	-1.9
	0.3nm,0.7s,baz=247,slow=4.6,SNR=3.3						
	0.3nm,0.7s						
MKAR	Makanchi Array	88.24	318	P	P	15 56 05.5	-1.1
	0.6nm,0.6s,baz=100,slow=6.0,SNR=9.5						
	0.6nm,0.6s						
YKA	Yellowknife Ar	94.68	28	P	P	15 56 32.9	-3.1
	0.3nm,0.8s,baz=263,slow=4.3,SNR=2.9						
	0.3nm,0.8s						
TORD	Torodi Ar. Bea	159.02	285	PKPab	PKPab	16 03 50.9	+0.1

1.1nm,0.5s,baz=58,slow=2.0,SNR=3.8

IDC ***19*** *15:43:23.0±0.4, 8°.06S×160°.95E, h0^{km}, mb5.0/27, mbtmp5.0/31, ML4.5/3, MS5.7/56, Error ellipse: s-maj=10.2km s-min=9.1km az=95.0*

MOS ***19*** *15:43:25.5±1.1, 8°.14S×160°.73E, h19^{km}, mb5.6/58, MS5.8/33, Error ellipse: s-maj=7.0km s-min=5.5km az=91.4*

NEIC ***19*** *15:43:25.7±1.9, 8°.14S±0°.07×160°.75E±0°.08, h8^{km}±3^{km}, mb5.6/209, Ms_20 5.9/413, Mwb5.9/67, Mww6.0/21, Error ellipse: s-maj=11.3km s-min=9.4km az=107.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}6.57; $M_{\theta\theta}$-4.37; $M_{\phi\phi}$-2.20; $M_{r\theta}$-5.61; $M_{\theta\phi}$3.40; $M_{\phi r}$4.15; Fault plane solution: $M_0$9.69000×10^{17} NP1: ϕ_s125.85000°, δ21.95000°, λ89.46000°. NP2: ϕ_s306.43000°, δ68.05000°, λ90.22000°. Principal axes: T 9.5444, Plg67.0000°, Azm217.0000°; N 0.2856, Plg0.0000°, Azm126.0000°; P -9.8300, Plg23.0000°, Azm36.0000°;*

NEIC ***19*** *15:43:25.4, 8°.05S×161°.04E, h16^{km}, Moment Tensor Solution. Duration: 5^{s}0 Moment tensor: Scale 10^{18}Nm; M_{rr}1.24; $M_{\theta\theta}$-0.58; $M_{\phi\phi}$-0.65; $M_{r\theta}$-0.60; $M_{\theta\phi}$0.53; $M_{\phi r}$0.46; Fault plane solution: $M_0$1.41000×10^{18} NP1: ϕ_s312.21000°, δ61.22000°, λ85.71000°. NP2: ϕ_s141.05000°, δ29.07000°, λ97.75000°. Principal axes: T 1.4620, Plg73.0000°, Azm212.0000°; N -0.1001, Plg4.0000°, Azm314.0000°; P -1.3619, Plg16.0000°, Azm45.0000°;*

NEIC ***19*** *15:43:25.4, 8°.15S×160°.74E, h16^{km}*

NEIC ***19*** *15:43:26, 8°.13S×160°.75E, h10^{km}*

BJI ***19*** *15:43:28.3±0.0, 8°.24S×160°.85E, h40^{km}, mb5.2/79, mB5.7/77, Ms5.9/96, Ms7 5.7/89*

GCMT ***19*** *15:43:30.7±0.1, 8°.02S×161°.07E, h12^{km}, MW6.0/170, Moment Tensor Solution. s164,c336; s170,c584; Duration: 2^{s}3 Moment tensor: Scale 10^{18}Nm; M_{rr}0.99±.01; $M_{\theta\theta}$-0.47±.01; $M_{\phi\phi}$-0.51±.01; $M_{r\theta}$-0.29±.01; $M_{\theta\phi}$0.49±.00; $M_{\phi r}$0.35±.01; Best double couple: $M_0$1.08300×10^{18} NP1: ϕ_s318.00000°, δ57.00000°, λ92.00000°. NP2: ϕ_s134.00000°, δ33.00000°, λ87.00000°. Principal axes: T 1.0850, Plg78.0000°, Azm235.0000°; N -0.0050, Plg2.0000°, Azm137.0000°; P -1.0800, Plg12.0000°, Azm47.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 19 15:43:30.0±0.4**, 8°.18S**±0°.03×**160°.81E**±0°.03**, h33**^{km}±1^{km}**, h34**^{km}**:pP-P, n1311,** σ**1^{s}92**/1202**, mb5.5**/252**, MS5.9**/323**, 66C-29D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.51	214	Pn	Pn	15 43 55.0	+0.2
	12µm,0.3s,baz=118,slow=5.2,SNR=37						
HNR	Honiara	1.51	214	Pn	Pn	15 43 51.8	-2.9
HNR	Honiara	1.51	214	P	Pn	15 43 51.8	-2.9
RABL	Rabaul	9.46	294	Pn	Pn	15 45 40.2	-3.9
RABL	Rabaul	9.46	294	P	Pn	15 45 45.6	+1.5
RABL	Rabaul	9.46	294	⇓P	Pn	15 45 49.0	+4.9
KRVT	Keravat (AS076	9.54	293	Pn	Pn	15 45 42.7	-2.5
	2.9nm,0.3s,baz=95,slow=7.9,SNR=3.0						
KRVT				Sn	Sn	15 47 34.4	+3.0
	baz=327,slow=20						
	44nm,0.5s						
KOUNC	Koumac, New Ca	12.75	165	Pn	Pn	15 46 27.9	-1.2
KOUNC	Koumac, New Ca	12.75	165	P	Pn	15 46 30.9	+1.8
KOUNC	Koumac, New Ca	12.75	165	⇑P	Pn	15 46 29.8	+0.8
PMG	Port Moresby	13.55	264	Pn	Pn	15 46 39.9	-0.1
	7.4nm,1.0s,baz=80,slow=7.7,SNR=9.9						
PMG				Sn	Sn	15 49 14.4	+5.0
	0.8nm,0.3s,baz=272,slow=23,SNR=1.0						
PMG				LR	LR	15 51 50.3	
	comp=Z,65µm,19.9s,baz=100,slow=37						
PMG	Port Moresby	13.55	264	Pn	Pn	15 46 37.6	-2.4
PMG	Port Moresby	13.55	264	P	P	15 46 44.6	-4.0
PMG	Port Moresby	13.55	264	⇓eP	Pn	15 46 39.1	-0.9
PMG				pmax	pmax		
	comp=Z,33nm,2.2s						
LIFNC	LIFOU	13.98	154	Pn	Pn	15 46 44.8	-1.1
MANU	Manus Island	14.71	294	P	P	15 47 00.6	-1.0
NOUC	Port Laguerre	14.82	160	P	Pn	15 46 57.8	+0.5
DZM	Mont Dzumac	14.84	159	ePn	Pn	15 46 53.9	-3.7
	comp=Z,305nm,1.1s						
DZM				eLR	LR	15 50 19.3	
	comp=Z,24µm,20.4s						
DZM	Mont Dzumac	14.84	159	Pn	Pn	15 46 55.7	-1.9
	comp=Z,1.0nm,0.3s,baz=13,slow=9.8,SNR=22						
DZM				Sn	Sn	15 49 44.4	+3.3
	comp=Z,0.5nm,0.3s,baz=308,slow=23,SNR=1.0						
DZM				LR	LR	15 52 30.8	
	comp=Z,27µm,19.1s,baz=338,slow=37						
	comp=Z,7.3nm,0.9s						
DZM	Mont Dzumac	14.84	159	Pn	Pn	15 46 57.9	+0.3
DZM	Mont Dzumac	14.84	159	P	Pn	15 47 00.4	+2.8
DZM	Mont Dzumac	14.84	159	⇑P	Pn	15 46 58.1	+0.5
YATNC	Mamie plateau,	14.99	158	P	Pn	15 47 01.9	+2.3
ONTNC	Ouen Toro	15.06	159	Pn	Pn	15 46 58.2	-2.3
ONTNC	Ouen Toro	15.06	159	P	P	15 47 03.8	-1.6
ONTNC	Ouen Toro	15.06	159	⇑P	Pn	15 47 00.8	+0.3
PATS	Pohnpei	15.12	350	Pn	Pn	15 46 56.3	-5.0
PATS				IAmb	IAmb	15 47 02.0	
	comp=Z,132nm,0.8s						
PATS	Pohnpei	15.12	350	P	Pn	15 47 01.0	-0.3
OUENC	Ouen Island, N	15.30	158	Pn	Pn	15 47 02.3	-1.3
OUENC	Ouen Island, N	15.30	158	P	Pn	15 47 05.1	+1.4
TARA	Tarawa	15.35	52	Pn	Pn	15 47 00.6	-3.7
TARA	Tarawa	15.35	52	P	Pn	15 47 05.0	+0.7
PINNC	Pines Island,	15.71	157	Pn	Pn	15 47 06.9	-2.0
PINNC				IAmb	IAmb	15 47 15.3	
	comp=Z,826nm,2.0s						
PINNC	Pines Island,	15.71	157	P	P	15 47 11.8	-0.8
TV1H	Townsville Har	17.50	230	P	P	15 47 34.5	+2.0
GD1S	Gladstone Soft	18.11	210	P	P	15 47 42.1	+2.9
	comp=Z,304nm,0.9s						
KWAJ	Kwajalein Atol	18.18	22	P	Pn	15 47 37.0	-2.9
KWAJ				IAmb	IAmb	15 47 46.7	
	comp=Z,323nm,0.8s						
KWAJ	Kwajalein Atol	18.18	22	P	Pn	15 47 37.1	-2.9
KWAJ				pmax	pmax		
	comp=Z,323nm,0.8s						
FUNA	Funafuti	18.19	92	P	P	15 47 44.3	+4.1
COEN	Coen	18.23	250	P	Pn	15 47 43.2	+2.6
	baz=18,SNR=60						
COEN	Coen	18.23	250		P	15 47 37.9	-2.8
COEN	Coen	18.23	250	P	Pn	15 47 43.2	+2.6
CTA	Charters Tower	18.41	228	P	P	15 47 42.5	0.0
	comp=Z,2.1nm,0.3s,baz=40,slow=11,SNR=30						
CTA				S	S	15 51 13.4	+2.3
	comp=Z,8.0nm,0.9s,baz=35,slow=21,SNR=1.0						
CTA				LR	LR	15 54 20.0	
	comp=Z,33µm,19.7s,baz=49,slow=35						
	comp=Z,37nm,0.7s						
CTA	Charters Tower	18.41	228	P	Pn	15 47 43.0	+0.3
CTAO	Charters Tower	18.41	228		P	15 47 41.0	-1.5
CTAO	Charters Tower	18.41	228	P	Pn	15 47 44.0	+1.3
CTAO	Charters Tower	18.41	228	⇑P	Pn	15 47 43.5	+0.7
CTAO	Charters Tower	18.41	228	P	P	15 47 41.0	-1.5
CTAO				pmax	pmax		
	comp=Z,252nm,1.1s						
YSA	Yasawairara	18.42	119	P	Pn	15 47 43.4	+0.5
MTSU	Mount Surprise	18.85	237	P	Pn	15 47 48.4	+0.3
	baz=19,SNR=43						
EIDS	Eidsvold	19.45	207	P	P	15 47 54.5	+0.6
	baz=20,SNR=5.4						
EIDS	Eidsvold	19.45	207	P	P	15 47 51.3	-2.6
AUWSH	Wavell State H	20.49	200	P	P	15 48 05.9	+0.7
TAVE	Taveuni	20.63	116	P	Pn	15 48 09.6	+0.3
GC1S	Gold Coast 1 S	21.04	198	P	P	15 48 14.9	+3.8
GENI	Genyem	21.28	284	P	P	15 48 15.9	+2.0
GENI	Genyem	21.28	284	P	P	15 48 12.2	-1.7
	comp=Z,430nm,1.1s,comp=Z,10µmcomp=Z,16µm						
RMQ	Roma	21.51	211	P	P	15 48 16.2	0.0
	baz=22,SNR=120						
FUTU	Fugatoga	21.53	108	P	P	15 48 19.6	+3.0
LKBA	Tubou, Lakemba	22.19	119	P	P	15 48 26.8	+3.2
	comp=Z,2.8nm,1.4s						
SMPI	Sarmi	22.85	284	P	P	15 48 29.5	-1.2
	comp=Z,549nm,1.6s						
LHI	Lord Howe Isla	23.28	184	P	P	15 48 33.4	-1.5
	baz=23,SNR=4.2						
LHI	Lord Howe Isla	23.28	184		P	15 48 33.2	-1.6
LHI	Lord Howe Isla	23.28	184	P	P	15 48 36.4	+1.6
LHI	Lord Howe Isla	23.28	184	⇑P	P	15 48 36.5	+1.6
ARMA	Armidale	23.74	200	P	P	15 48 39.0	-0.4
	baz=24,SNR=53						
ARMA	Armidale	23.74	200	P	P	15 48 38.7	-0.7
ARMA	Armidale	23.74	200	P	P	15 48 39.6	+0.2
ARMA	Armidale	23.74	200	⇑P	P	15 48 38.9	-0.6
QIS	Mount Isa	23.91	237	P	P	15 48 40.5	-0.5
	baz=24,SNR=19						
QIS	Mount Isa	23.91	237	P	P	15 48 43.0	+1.9
QLP	Quilpie	24.14	219	P	P	15 48 41.5	-1.6
	baz=24,SNR=39						
QLP	Quilpie	24.14	219	P	P	15 48 42.2	-0.9
QLP	Quilpie	24.14	219	⇓P	P	15 48 42.0	-1.1
SRPI	Serui, Papua	25.25	283	P	P	15 48 54.2	+0.8
	comp=Z,103nm,1.2s,comp=Z,4µmcomp=Z,7µm						
NTLH	Newcastle Hard	26.01	198	P	P	15 49 02.3	+2.3
AUDCS	Dubbo College	26.48	204	P	P	15 49 06.5	+2.2
MGCD	Mangrove Creek	26.48	198	P	P	15 49 02.8	-1.4
	baz=27,SNR=14						
MGCD	Mangrove Creek	26.48	198	P	P	15 49 06.6	+2.3
GUMO	Guam	26.80	324	P	P	15 49 03.4	-3.9
	comp=Z,109nm,1.0s,baz=213,slow=4.3,SNR=2.4						
GUMO				S	S	15 53 43.4	+1.9
	comp=Z,66nm,0.8s,baz=182,slow=15,SNR=1.7						
GUMO				LR	LR	15 59 27.5	
	comp=Z,12µm,20.5s,baz=142,slow=36						
	comp=Z,109nm,1.0s						
GUMO	Guam	26.80	324	P	P	15 49 03.6	-3.7
GUMO	Guam	26.80	324	P	P	15 49 10.0	+2.7
GUMO	Guam	26.80	324	P	P	15 49 03.6	-3.7
GUMO				pmax	pmax		
	comp=Z,534nm,1.1s						
GUMO				MLR	MLR		
	comp=Z,15µm,22.0s						
SYDH	Sydney Hard Ro	27.10	199	P	P	15 49 11.8	+1.9
H11S2	WAKE ISLAND Hy	27.13	12	T	T	16 17 20.0	
	baz=193,slow=76,SNR=4403						
H11S3	WAKE ISLAND Hy	27.13	12	T	T	16 17 21.2	
	baz=193,slow=76,SNR=3684						
H11S1	WAKE ISLAND Hy	27.15	12	T	T	16 17 22.3	
	baz=193,slow=76,SNR=2476						
INKA	Innaminka	27.18	222	P	P	15 49 09.3	-1.3
CMSA	Cobar Meteorol	27.18	209	P	P	15 49 09.3	-1.3
	baz=27,SNR=44						
CMSA	Cobar Meteorol	27.18	209	P	P	15 49 09.0	-1.6
RKPI	Ransiki, Papua	27.34	283	P	P	15 49 13.9	+1.7
	comp=Z,149nm,1.1s,comp=Z,4µmcomp=Z,9µm						
AFI	Afiamalu	27.48	104	P	P	15 49 09.4	-4.2
	comp=Z,6.6nm,0.4s,baz=84,slow=19,SNR=2.7						
AFI				S	S	15 53 53.8	+1.2
	comp=Z,7.7nm,0.7s,baz=330,slow=22,SNR=1.3						
AFI				LR	LR	15 59 02.0	
	comp=Z,13µm,18.1s,baz=291,slow=34						
	comp=Z,6.6nm,0.4s						
WOLH	Wollongong Har	27.66	198	P	P	15 49 18.1	+3.3
WB0	Warramunga Arr	28.06	243	P	P	15 49 16.6	-2.0
WRAB	Tennant Creek	28.15	243	P	P	15 49 17.9	-1.6
WRAB	Tennant Creek	28.15	243	IAMs_20	IAMs_20	15 59 50.1	
	comp=Z,36µm,20.0s						
WRAB	Tennant Creek	28.15	243	P	P	15 49 18.3	-1.2
WRAB	Tennant Creek	28.15	243	⇑eP	P	15 49 17.7	-1.8
WRAB				pmax	pmax		
	comp=Z,40nm,0.8s						
WRAB				MLR	MLR		
	comp=Z,36µm,19.0s						
WB2	Warramunga Arr	28.16	243	P	P	15 49 17.8	-1.7
WB1	Warramunga Ar.	28.16	243	P	P	15 49 19.0	-0.6
WRA	Warramunga Arr	28.17	243	P	P	15 49 17.7	-1.9
	comp=Z,66nm,0.9s,baz=68,slow=9.1,SNR=57						
WRA				S	S	15 54 02.2	-0.9
	comp=Z,3.1nm,1.1s,baz=84,slow=9.4,SNR=1.9						
WRA				LR	LR	16 00 12.1	
	comp=Z,36µm,19.7s,baz=69,slow=36						
	comp=Z,66nm,0.9s						
WRA	Warramunga Arr	28.17	243	P	P	15 49 17.9	-1.7
WRA	Warramunga Arr	28.17	243	P	P	15 49 17.9	-1.7
WRA				pmax	pmax		
	comp=Z,13nm,1.5s						
KDU	Kakadu	28.22	258	P	P	15 49 19.3	-0.7
	baz=28,SNR=7.2						
KDU	Kakadu	28.22	258	P	P	15 49 20.4	+0.3
KDU	Kakadu	28.22	258	⇑P	P	15 49 20.3	+0.3
H11N1	WAKE ISLAND Hy	28.36	12	T	T	16 18 48.7	
	baz=193,slow=76,SNR=4110						
H11N3	WAKE ISLAND Hy	28.36	12	T	T	16 18 54.6	
	baz=193,slow=76,SNR=7716						
H11N2	WAKE ISLAND Hy	28.37	12	T	T	16 18 51.6	
	baz=193,slow=76,SNR=4160						
YNG	Young	28.40	202	P	P	15 49 23.0	+1.5
AUUHS	Ulladulla High	28.67	198	P	P	15 49 25.2	+1.4
FAKI	Fak Fak	28.89	279	P	P	15 49 23.7	-2.4
FAKI				IAmb	IAmb	15 50 26.9	
	comp=Z,178nm,1.8s						
FAKI				IAMs_20	IAMs_20	16 02 42.7	
	comp=Z,22µm,19.0s						
RAO	Raoul Island	28.97	139	LR	LR	15 59 25.4	
	comp=Z,9µm,19.2s,baz=310,slow=33						
CNB	Canberra Magne	28.98	200	P	P	15 49 28.5	+1.8
CAN	Canberra	29.10	200	P	P	15 49 26.6	-1.1
CAN				IAmb	IAmb	15 49 32.5	
	comp=Z,139nm,1.1s						
CAN				IAMs_20	IAMs_20	16 00 05.5	
	comp=Z,24µm,20.0s						
CAN	Canberra	29.10	200	P	P	15 49 29.5	+1.7
CAN	Canberra	29.10	200	⇑P	P	15 49 27.7	-0.1
CAN	Canberra	29.10	200	P	P	15 49 26.7	-1.1
CAN				pmax	pmax		
	comp=Z,139nm,1.1s						
CAN				MLR	MLR		
	comp=Z,24µm,20.0s						
MTN	Manton Dam	29.53	258	P	P	15 49 33.0	+1.2
	baz=30,SNR=6.2						
MTN	Manton Dam	29.53	258	P	P	15 49 29.7	-2.0
MTN				IAmb	IAmb	15 50 19.8	
	comp=Z,127nm,1.6s						
MTN	Manton Dam	29.53	258	P	P	15 49 31.0	-0.8
MTN	Manton Dam	29.53	258	⇑P	P	15 49 33.2	+1.4
STKA	Stephens Creek	29.59	215	P	P	15 49 30.5	-1.5
	comp=Z,21nm,0.5s,baz=49,slow=13,SNR=23						
STKA				S	S	15 54 26.6	+1.4
	comp=Z,5.5nm,0.9s,baz=88,slow=23,SNR=1.2						
STKA				LR	LR	16 01 50.6	
	comp=Z,26µm,18.7s,baz=40,slow=37						
	comp=Z,21nm,0.5s						
STKA	Stephens Creek	29.59	215	P	P	15 49 30.6	-1.5
	baz=30,SNR=16						
STKA	Stephens Creek	29.59	215	P	P	15 49 30.3	-1.8
STKA	Stephens Creek	29.59	215	P	P	15 49 31.7	-0.4
STKA	Stephens Creek	29.59	215	ceP	P	15 49 31.9	-0.2
AS01	Alice Springs	29.98	236	P	P	15 49 34.7	-1.0
AS31	Alice Springs	30.02	236	P	P	15 49 33.3	-2.8
ASAR	Alice Springs	30.02	236	P	P	15 49 33.6	-2.5
	comp=Z,14nm,0.9s,baz=63,slow=10.0,SNR=32						
ASAR				S	S	15 54 31.0	-1.3
	comp=Z,1.2nm,0.8s,baz=293,slow=26,SNR=1.4						
ASAR				LR	LR	16 01 21.9	
	comp=Z,31µm,19.5s,baz=69,slow=36						
	comp=Z,14nm,0.9s						
ASAR	Alice Springs	30.02	236	P	P	15 49 33.3	-2.8
NIUE	Niue	30.38	114	P	P	15 49 42.0	+2.8
LCRK	Leigh Creek	30.62	221	P	P	15 49 39.3	-1.9
MILA	Mila	30.64	198	P	P	15 49 41.2	-0.1
	baz=31,SNR=19						
MILA	Mila	30.64	198	P	P	15 49 43.1	+1.8
MILA	Mila	30.64	198	⇑P	P	15 49 41.3	-0.1
OOD	Oodnadatta	30.73	227	P	P	15 49 42.6	+0.4
KNRA	Kununurra	32.20	254	P	P	15 49 52.8	-2.5
	baz=32,SNR=16						
KNRA	Kununurra	32.20	254	P	P	15 49 52.5	-2.8
KNRA	Kununurra	32.20	254	P	P	15 49 55.3	0.0
HTT	Hallett	32.26	216	P	P	15 49 53.9	-1.7
	baz=32,SNR=27						
HTT	Hallett	32.26	216	P	P	15 49 55.0	-0.7
HTT	Hallett	32.26	216	⇓P	P	15 49 54.4	-1.3
AUSSC	Sale College,	32.27	201	P	P	15 49 56.8	+1.2
TOZ	Tahuroa Road	32.29	158	P	P	15 49 54.9	-0.9
TOO	Toolangi	32.39	203	P	P	15 49 56.5	-0.2
	baz=32,SNR=12						
TOO	Toolangi	32.39	203	P	P	15 49 55.7	-1.0
TOO				IAmb	IAmb	15 50 00.9	
	comp=Z,73nm,1.1s						
TOO	Toolangi	32.39	203	P	P	15 49 58.6	+1.9
TOO	Toolangi	32.39	203	⇓P	P	15 49 56.5	-0.2
TOO	Toolangi	32.39	203	P	P	15 49 55.7	-1.0
TOO				pmax	pmax		
	comp=Z,73nm,1.1s						
AAI	Ambon	32.74	276	P	P	15 49 59.9	-0.2
	comp=Z,43nm,1.2s,comp=Z,2µmcomp=Z,8µm						
WHYH	Whyalla	32.77	218	P	P	15 50 00.4	+0.3
	comp=Z,93nm,1.1s						
BRAT	Ballarat	33.00	205	P	P	15 50 04.2	+2.2
KHEZ	Kahui Hut	33.17	161	P	P	15 50 07.5	+3.9
ARPS	Mount Arapiles	33.28	208	P	P	15 50 04.2	-0.3
	baz=33,SNR=26						
ARPS	Mount Arapiles	33.28	208	P	P	15 50 04.2	-0.3
MULG	Mulgathing	33.32	225	P	P	15 50 03.8	-1.2
URZ	Urewera	33.37	156	P	P	15 50 02.5	-2.7
	comp=Z,4.7nm,0.8s,baz=167,slow=13,SNR=3.3						
URZ				LR	LR	16 02 05.6	
	comp=Z,7µm,18.1s,baz=53,slow=34						
	comp=Z,4.7nm,0.8s						
URZ	Urewera	33.37	156	⇓P	P	15 50 07.6	+2.4
GHSS	Government Hou	33.52	214	P	P	15 50 09.6	+3.0
BBOO	Buckleboo	33.56	220	P	P	15 50 05.0	-2.0
	baz=34,SNR=24						
BBOO	Buckleboo	33.56	220	P	P	15 50 05.0	-2.0
BBOO	Buckleboo	33.56	220	P	P	15 50 05.4	-1.6
RTZ	Ruatahuna	33.62	157	P	P	15 50 06.4	-1.2
BKZ	Black Stump Fm	33.92	158	P	P	15 50 08.4	-1.6
BKZ				IAmb	IAmb	15 50 21.0	
	comp=Z,35nm,0.6s						
BKZ	Black Stump Fm	33.92	158	P	P	15 50 08.8	-1.3
LBMI	Labuha	34.02	281	P	P	15 50 12.8	+1.5
	comp=Z,470nm,1.5s,comp=Z,7µm						
QRZ	Quartz Range	34.14	164	P	P	15 50 12.7	+0.7
QRZ				IAmb	IAmb	15 50 19.5	
	comp=Z,83nm,1.2s						
TNTI	Ternate	34.51	283	P	P	15 50 16.3	+0.9
TNTI	Ternate	34.51	283	P	P	15 50 15.1	-0.3
	comp=Z,85nm,1.5s,comp=Z,2µmcomp=Z,3µm						
GLAD	Gladstone	34.60	197	P	P	15 50 15.6	-0.3
MRZ	Mangatainoka R	34.92	160	P	P	15 50 17.3	-1.4
SANI	Sanana	35.20	278	P	P	15 50 21.9	+0.5
SANI	Sanana	35.20	278	P	P	15 50 21.8	+0.4
	comp=Z,102nm,1.4s,comp=Z,4µmcomp=Z,6µm						
WRKA	Warakurna	35.24	238	P	P	15 50 19.7	-2.0
	baz=35,SNR=18						
WRKA	Warakurna	35.24	238	P	P	15 50 20.0	-1.7
CORO	Coronation Par	35.28	198	P	P	15 50 22.1	+0.3
FITZ	Fitzroy Crossi	35.58	250	P	P	15 50 22.1	-2.6
FITZ	Fitzroy Crossi	35.58	250	P	P	15 50 23.4	-1.2
LTZ	Lake Taylor	35.91	166	IAMs_20	IAMs_20	16 04 07.8	
	comp=Z,13µm,18.0s						
FOZ	Fox Glacier	36.09	169	P	P	15 50 27.2	-1.4
FOZ				IAmb	IAmb	15 50 33.0	
	comp=Z,109nm,1.0s						
SOEI	Soe	36.12	265	P	P	15 50 27.1	-2.4
SOEI				IAmb	IAmb	15 50 53.6	
	comp=Z,77nm,0.8s						
SOEI				IAMs_20	IAMs_20	16 06 09.3	
	comp=Z,29µm,21.0s						
SOEI	Soe	36.12	265	P	P	15 50 30.1	+0.6
SOEI	Soe	36.12	265	P	P	15 50 27.4	-2.1
	comp=Z,111nm,0.9s,comp=Z,2µmcomp=Z,8µm						
MOO	Moorlands	36.18	197	P	P	15 50 30.8	+1.3
	baz=36,SNR=13						
MOO	Moorlands	36.18	197	P	P	15 50 31.7	+2.2
GVZ	Greta Valley S	36.28	165	IAMs_20	IAMs_20	16 04 30.5	
	comp=Z,13µm,18.0s						
JCZ	Jackson Bay	36.43	170	P	P	15 50 33.3	+1.6
RPZ	Rata Peaks	36.52	167	P	P	15 50 30.0	-2.4
	comp=Z,50nm,0.9s,baz=145,slow=2.3,SNR=18						
RPZ				LR	LR	16 04 50.1	
	comp=Z,13µm,18.4s,baz=332,slow=35						
	comp=Z,50nm,0.9s						
RPZ	Rata Peaks	36.52	167	P	P	15 50 31.6	-0.8
RPZ				IAmb	IAmb	15 50 35.4	
	comp=Z,101nm,1.1s						
RPZ	Rata Peaks	36.52	167	P	P	15 50 31.8	-0.5
TAU	Tasmania Unive	36.57	197	P	P	15 50 32.1	-0.7
TAU	Tasmania Unive	36.57	197	P	P	15 50 34.9	+2.1
TAU	Tasmania Unive	36.57	197	⇑P	P	15 50 34.7	+1.9
TAU	Tasmania Unive	36.57	197	P	P	15 50 32.1	-0.7
TAU				pmax	pmax		
	comp=Z,215nm,1.3s						
AUTAR	Taroona High S	36.59	197	P	P	15 50 35.6	+2.7
MQZ	McQueen's Vall	36.88	166	P	P	15 50 34.6	-0.7
MQZ				IAmb	IAmb	15 50 37.7	
	comp=Z,177nm,1.2s						
MLZ	Mavora Lakes	37.59	172	IAMs_20	IAMs_20	16 05 54.9	
	comp=Z,16µm,18.0s						
ODZ	Otahua Downs	37.70	169	P	P	15 50 44.4	+2.0
FORT	Forrest	37.95	229	P	P	15 50 47.0	+2.3
	baz=38,SNR=11						
FORT	Forrest	37.95	229	P	P	15 50 43.5	-1.2
FORT				IAmb	IAmb	15 50 56.3	
	comp=Z,92nm,0.8s						
FORT	Forrest	37.95	229	P	P	15 50 44.8	+0.1
FORT	Forrest	37.95	229	⇑P	P	15 50 45.1	+0.4
MMRI	Maumere	38.15	266	P	P	15 50 44.7	-2.0
MMRI	Maumere	38.15	266	P	P	15 50 48.6	+2.0
	comp=Z,175nm,0.8s						
MMRI	Maumere	38.15	266	P	P	15 50 41.1	-5.5
DAV	Davao City (W)	38.25	292	LR	LR	16 06 50.0	
	comp=Z,5µm,18.0s,baz=98,slow=37						
JOHN	Johnston Islan	38.38	50	IAMs_20	IAMs_20	16 03 17.3	
	comp=Z,19µm,20.0s						
LUWI	Luwuk	38.55	279	P	P	15 50 47.7	-2.2
LUWI	Luwuk	38.55	279	P	P	15 50 51.0	+1.1
	comp=Z,240nm,1.1s						
LUWI	Luwuk	38.55	279	P	P	15 50 50.7	+0.8
	comp=Z,244nm,1.1s,comp=Z,7µmcomp=Z,6µm						
GTOI	Gorontalo	38.68	281	P	P	15 50 50.3	-0.8
	comp=Z,61nm,0.7s,comp=Z,1µm						
JCJ	Chichijima	39.44	333	P	P	15 50 53.5	-3.7
	comp=Z,51nm,0.8s,baz=289,slow=22,SNR=3.5						
JCJ				LR	LR	16 04 34.9	
	comp=Z,6µm,21.8s,baz=152,slow=32						
	comp=Z,51nm,0.8s						
JCJ	Chichijima	39.44	333	P	P	15 50 54.9	-2.3
JCJ	Chichijima	39.44	333	P	P	15 50 57.3	+0.1
MRSI	Marisa	39.69	281	P	P	15 51 00.9	+1.4
	comp=Z,95nm,1.4s,comp=Z,2µmcomp=Z,4µm						
BSSI	Bau Bau, Buton	40.05	270	P	P	15 51 04.1	+1.6
	comp=Z,205nm,1.4s,comp=Z,4µmcomp=Z,4µm						
RAR	Rarotonga	40.14	113	LR	LR	16 04 48.4	
	comp=Z,1µm,19.4s,baz=280,slow=32						
BKSI	Bulukumba	40.49	271	P	P	15 51 07.8	+1.6
	comp=Z,48nm,1.4s,comp=Z,2µmcomp=Z,5µm						
KAPI	Kappang	40.90	272	LR	LR	16 11 18.7	
	comp=Z,4µm,18.1s,baz=106,slow=41						
KAPI	Kappang	40.90	272	P	P	15 51 07.8	-1.7
KAPI				IAmb	IAmb	15 51 25.1	
	comp=Z,93nm,1.1s						
KAPI	Kappang	40.90	272	P	P	15 51 12.1	+2.6
	comp=Z,75nm,1.4s						
KAPI	Kappang	40.90	272	⇑eP	P	15 51 09.6	+0.1
KAPI				pmax	pmax		
	comp=Z,52nm,1.1s						
TOLI2	Tolitoli	40.96	281	P	P	15 51 06.9	-3.1
TOLI2	Tolitoli	40.96	281	P	P	15 51 07.5	-2.5
SPSI	Sidrap Palu	41.01	273	P	P	15 51 09.0	-1.4
	comp=Z,68nm,1.2s,comp=Z,2µmcomp=Z,5µm						
PSA00	Pilbara Seismi	41.63	247	P	P	15 51 12.2	-3.2
PSA00	Pilbara Seismi	41.63	247	P	P	15 51 14.2	-1.3
MPSI	Mapaga	41.65	280	P	P	15 51 12.5	-3.2
	comp=Z,73nm,1.1s,comp=Z,2µmcomp=Z,4µm						
MBWA	Marble Bar	41.65	247	P	P	15 51 12.7	-2.9
MBWA	Marble Bar	41.65	247	IAMs_20	IAMs_20	16 09 21.8	
	comp=Z,15µm,19.0s						
MBWA	Marble Bar	41.65	247	P	P	15 51 15.7	+0.1
MBWA	Marble Bar	41.65	247	⇑P	P	15 51 15.0	-0.6
MIDW	Midway	41.88	29	IAMs_20	IAMs_20	16 04 24.8	
	comp=Z,16µm,22.0s						
PLAI	Plampang	42.55	266	P	P	15 51 22.4	-0.6
PLAI	Plampang	42.55	266	P	P	15 51 22.1	-0.9
	comp=Z,114nm,1.3s,comp=Z,3µmcomp=Z,5µm						
KMBL	Kambalda	42.95	232	P	P	15 51 26.1	+0.1
	baz=43,SNR=8.0						
KMBL	Kambalda	42.95	232	P	P	15 51 26.7	+0.6
TWSI	Taliwang, Sumb	43.44	266	P	P	15 51 27.8	-2.4
	comp=Z,61nm,1.0s,comp=Z,2µm						
MEEK	Meekatharra	43.99	240	P	P	15 51 32.8	-1.8
	baz=44,SNR=19						
MEEK	Meekatharra	43.99	240	P	P	15 51 33.9	-0.7
MYLDM	Lahad Datu	44.24	286	IAMs_20	IAMs_20	16 04 06.4	
	comp=Z,13µm,21.0s						
MYLDM	Lahad Datu	44.24	286	⇓P	P	15 51 37.4	+0.8

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BKB   Balikpapan        44.27 277  P         P         15 51 38.3 +1.4
BKB   Balikpapan        44.27 277  P         P         15 51 38.6 +1.7
      comp=Z,214nm,1.1s,comp=Z,6µmcomp=Z,8µm
SRBI  Singaraja         45.12 267  P         P         15 51 43.5 -0.2
      comp=Z,88nm,1.4s,comp=Z,3µm
BBKI  Banjar Baru       45.95 273  P         P         15 51 50.7 +0.4
      comp=Z,145nm,1.4s,comp=Z,6µm
ABJI  Asem Bagus        46.11 267  P         P         15 51 50.8 -0.7
      comp=Z,65nm,1.4s
JAGI  Jajag, Banyuwa    46.15 266  P         P         15 51 47.9 -3.9
JAGI  Jajag, Banyuwa    46.15 266  P         P         15 51 50.6 -1.2
JAGI  Jajag, Banyuwa    46.15 266  P         P         15 51 50.1 -1.8
      comp=Z,108nm,1.1s
KLBR  Kellerberrin      46.30 234  P         P         15 51 53.0 +0.2
      baz=46,SNR=5.2
KLBR  Kellerberrin      46.30 234  P         P         15 51 53.0 +0.2
KKM   Kota Kinabalu     46.66 286  P         P         15 51 54.2 -1.8
KKM   Kota Kinabalu     46.66 286  P         P         15 51 57.0 +1.0
KKM   Kota Kinabalu     46.66 286 ⇑P         P         15 51 55.7 -0.3
BLJI  Banyuglugur       46.74 267  P         P         15 51 55.9 -0.6
      comp=Z,55nm,1.5s
BLDU  Ballidu           46.81 235  P         P         15 51 56.8  0.0
      baz=47,SNR=8.6
BLDU  Ballidu           46.81 235  P         P         15 51 57.5 +0.7
MORW  Morawa            46.88 238  P         P         15 51 58.1 +0.8
      baz=47,SNR=8.4
MORW  Morawa            46.88 238  P         P         15 51 56.5 -0.9
MORW  Morawa            46.88 238  P         P         15 51 58.0 +0.6
MORW  Morawa            46.88 238 ⇓P         P         15 51 58.3 +0.9
JOW   Kunigami          46.98 319  P         P         15 52 00.4 +2.3
NWAO  Narrogin (SRO)    47.19 232  P         P         15 51 59.2 -0.5
      comp=Z,77nm,1.2s,baz=51,slow=7.0,SNR=13
NWAO                               LR        LR        16 13 08.3
      comp=Z,14µm,18.1s,baz=65,slow=38
      comp=Z,77nm,1.2s
NWAO  Narrogin (SRO)    47.19 232  P         P         15 52 01.4 +1.7
      baz=47,SNR=12
NWAO                               P         P         15 52 01.4 +1.7
      baz=47,SNR=12
NWAO  Narrogin (SRO)    47.19 232  P         P         15 51 58.5 -1.2
NWAO  Narrogin (SRO)    47.19 232  IAMs_20   IAMs_20   16 12 39.4
      comp=Z,17µm,18.0s
NWAO  Narrogin (SRO)    47.19 232  P         P         15 51 59.8  0.0
NWAO  Narrogin (SRO)    47.19 232  P         P         15 51 59.7  0.0
AUALB St Joseph's Co    47.47 229  P         P         15 52 03.8 +1.9
MUN   Mundaring         47.66 234  P         P         15 52 03.3 -0.1
      baz=48,SNR=8.6
MUN   Mundaring         47.66 234  P         P         15 52 05.3 +1.8
JOD2  Odawara 2         47.83 336  P         P         15 52 05.7 +1.1
RKGY  Rocky Gully       48.02 230  P         P         15 52 09.2 +3.0
PWJI  Pagerwojo         48.49 267  P         P         15 52 10.5 +0.4
      comp=Z,130nm,1.1s
INU   Inuyama           48.77 334  P         P         15 52 11.0 -0.8
INU                                IAmb      IAmb      15 52 19.1
      comp=Z,48nm,1.0s
INU   Inuyama           48.77 334  P         P         15 52 11.3 -0.5
INU   Inuyama           48.77 334 ⇓P         P         15 52 12.1 +0.2
JGF   Kuroka            48.84 334  P         P         15 52 10.8 -1.7
JGF                                IAmb      IAmb      15 52 18.5
      comp=Z,37nm,1.0s
JGF   Kuroka            48.84 334  P         P         15 52 12.6 +0.2
JGF   Kuroka            48.84 334 ⇑P         P         15 52 12.6 +0.2
NGJI  Ngawi             48.88 267  P         P         15 52 14.6 +1.5
      comp=Z,76nm,2.0s
JMN   Monobe            48.89 330  P         P         15 52 13.3 +0.4
JMN   Monobe            48.89 330 ⇑P         P         15 52 13.7 +0.8
PPT   Papeete           49.13 106  P         P         15 52 13.0 -2.0
      comp=Z,52nm,0.9s,baz=117,slow=13,SNR=2.7
PPT                                LR        LR        16 07 24.0
      comp=Z,4µm,21.6s,baz=274,slow=29
      comp=Z,52nm,0.9s
PPT   Papeete           49.13 106  P         P         15 52 13.0 -2.0
PPT2  Papeete2          49.13 106 eP         P         15 52 09.7 -5.4
      comp=Z,120nm,1.2s
PPT2                              eS         S         15 59 21.7 +3.1
      comp=Z,6µm,25.8s
PPT2                              eSS        SS        16 02 54.7 +4.5
      comp=Z,2µm,25.0s
PPT2                              eLQ        LQ        16 04 09.0
      comp=Z,17µm,25.5s
PPT2                              eLR        LR        16 06 13.5
      comp=Z,18µm,27.5s
PPT2                              eLR        LR        16 06 13.6
      comp=Z,11µm,26.5s
PPTF  Pamatai, Papee    49.15 106  P         P         15 52 17.7 +2.5
PBKI  Pangkalan Bun     49.19 273  P         P         15 52 16.9 +1.4
      comp=Z,135nm,1.1s,comp=Z,3µm
MJAR  Matsushiro Arr    49.29 336  P         P         15 52 12.5 -3.3
      comp=Z,2.6nm,0.5s,baz=161,slow=8.1,SNR=19
      comp=Z,2.6nm,0.5s
MAJO  Matsushiro        49.29 336  P         P         15 52 13.7 -2.1
MAJO  Matsushiro        49.29 336  P         P         15 52 16.5 +0.7
MAJO  Matsushiro        49.29 336 ⇑P         P         15 52 16.1 +0.3
MAJO  Matsushiro        49.29 336ceP         P         15 52 16.7 +0.9
MAJO                               pmax      pmax
      comp=Z,22nm,1.0s
MJB9  Matsu-Tunnel      49.30 336  P         P         15 52 13.5 -2.4
TIAR  Tiarei            49.35 106 eP         P         15 52 16.3 -0.4
      comp=Z,17nm,1.1s
TVO   Taravao           49.46 106 eP         P         15 52 19.5 +2.0
      comp=Z,97nm,1.3s
UWJI  Ujung Watu        49.47 269  P         P         15 52 16.4 -1.2
      comp=Z,109nm,1.7s
JMM   Marumori          49.48 339  P         P         15 52 19.1 +1.9
SBUM  Sibu              49.59 280 ⇑P         P         15 52 18.6  0.0
YULB  Yu-li             49.77 310  P         P         15 52 17.9 -1.8
YULB  Yu-li             49.77 310  P         P         15 52 19.5 -0.2
SMRI  Semarang          49.91 268  P         P         15 52 24.3 +3.3
      comp=Z,137nm,1.2s
SMRI  Semarang          49.91 268  P         P         15 52 27.6 +6.6
JNU   Nakatsue          49.98 327  P         P         15 52 19.4 -1.8
      comp=Z,24nm,1.0s,baz=176,slow=1.8,SNR=8.8
JNU                                LR        LR        16 12 57.5
      comp=Z,1µm,18.8s,baz=126,slow=36
      comp=Z,24nm,1.0s
JNU   Nakatsue          49.98 327  P         P         15 52 20.4 -0.7
JNU                                IAmb      IAmb      15 52 35.3
      comp=Z,58nm,1.1s
JNU   Nakatsue          49.98 327  P         P         15 52 22.7 +1.5
JNU   Nakatsue          49.98 327  P         P         15 52 22.7 +1.5
JNU   Nakatsue          49.98 327 ⇑P         P         15 52 21.8 +0.6
KIP   Kipapa            49.99  53  IAMs_20   IAMs_20   16 09 37.8
      comp=Z,14µm,20.0s
KIP   Kipapa            49.99  53⇑eP         P         15 52 20.9 -0.5
KIP                                pmax      pmax
      comp=Z,53nm,1.1s
NACB  Ninganchiao       49.99 311  P         P         15 52 21.4 +0.1
TPUB  Ta-pu             50.22 309  P         P         15 52 22.2 -0.9
TPUB  Ta-pu             50.22 309  P         P         15 52 25.7 +2.5
SSLB  Suanglung         50.25 310  P         P         15 52 25.3 +1.9
JHS   Saijyo            50.29 330  P         P         15 52 22.2 -1.3
JHS                                IAmb      IAmb      15 52 27.5
      comp=Z,73nm,1.4s
JHS   Saijyo            50.29 330  P         P         15 52 23.2 -0.3
JHS   Saijyo            50.29 330 ⇑P         P         15 52 24.6 +1.1
YHNB  Yeheng            50.44 311  P         P         15 52 26.9 +2.1
POHA  Pohakuloa         51.16  57  P         P         15 52 32.8 +2.2
KSM   Kuching           51.26 278  P         P         15 52 29.2 -1.9
KSM   Kuching           51.26 278  P         P         15 52 29.1 -2.0
KSM   Kuching           51.26 278 ⇓P         P         15 52 29.5 -1.7
KPJI  Karang Pucung     51.38 267  P         P         15 52 31.6 -0.5
      comp=Z,119nm,0.9s,comp=Z,3µm
CMJI  Cimerak           51.83 267  P         P         15 52 41.3 +5.9
JTM   Tenmabayashi      52.01 341  P         P         15 52 35.9 -0.3
JTM                                IAmb      IAmb      15 53 15.1
      comp=Z,107nm,1.4s
JCJI  Jatiwangi         52.11 268  P         P         15 52 37.7 +0.2
      comp=Z,296nm,0.5s,comp=Z,8µm
BBJI  Bungbulang        52.64 267  P         P         15 52 46.0 +4.5
CNJI  Cibinong          53.17 267  P         P         15 52 45.9 +0.6
      comp=Z,67nm,1.0s,comp=Z,1µmcomp=Z,2µm
YUK   Yuzh-Kuril'sk     53.70 347 eP         P         15 52 45.3 -3.4
YUK                                S         S         16 00 21.5 +1.0
YUK                                pmax      pmax
      comp=Z,368nm,1.1s
YUK                                pmax      pmax
      comp=N,123nm,1.0s
YUK                                pmax      pmax
      comp=E,266nm,1.0s
JSH   Shimam            54.01 341  P         P         15 52 50.6 -0.3
TJN   Taejon            54.33 327  P         P         15 52 56.1 +2.7
TJN   Taejon            54.33 327⇑eP         P         15 52 52.4 -1.0
SSE   Sheshan           54.45 318  P         P         15 52 54.1 -0.2
SSE                                S         S         16 00 34.3 +3.3
SSE                                pmax      pmax
      comp=E,18nm,0.7s
SSE                                pmax      pmax
      comp=E,210nm,4.8s
SSE                                LR        LR
      comp=E,2µm,17.5s
ASAJ  Asahikawa         54.60 344  P         P         15 52 52.8 -2.5
      comp=E,22nm,0.9s,baz=14,slow=3.8,SNR=4.1
ASAJ                               LR        LR        16 13 37.0
      comp=E,14µm,21.1s,baz=181,slow=33
      comp=E,22nm,0.9s
ASAJ  Asahikawa         54.60 344  P         P         15 52 55.4 +0.2
PPBI  Pangkal Pinang    54.74 273  P         P         15 52 54.6 -2.2
      comp=E,41nm,1.5s,comp=E,5µmcomp=E,5µm
KSRS  Korea Array       54.83 328  P         P         15 52 55.2 -1.8
      comp=E,5.8nm,0.7s,baz=139,slow=7.4,SNR=26
KSRS                               LR        LR        16 14 51.4
      comp=E,4µm,18.9s,baz=130,slow=34
      comp=E,5.8nm,0.7s
KSAR  Wonju Array Be    54.84 328  P         P         15 52 57.0 -0.1
KSAR  Wonju Array Be    54.84 328  P         P         15 52 57.0 -0.1
KS19  Wonju Array Si    54.90 328  P         P         15 52 57.4 -0.2
INCN  Inchon            55.54 327  P         P         15 53 02.3 +0.1
INCN  Inchon            55.54 327  P         P         15 53 05.1 +2.9
      comp=E,48nm,1.6s
INCN  Inchon            55.54 327  P         P         15 53 02.3 +0.1
INCN                               pmax      pmax
      comp=Z,132nm,1.6s
DLV   T  Lat            55.73 290  P         P         15 53 06.1 +2.0
DLV   T  Lat            55.73 290 ⇑P         P         15 53 06.2 +2.0
GZH   Guangzhou         55.86 305  P         P         15 53 04.3 -0.4
GZH                                S         S         16 00 49.5 -0.8
GZH                                LR        LR
      comp=Z,1µm,12.9s
GZH                                LR        LR
      comp=Z,760nm,11.9s
KASI  Kota Agung        55.94 269  P         P         15 53 03.8 -1.7
      comp=Z,119nm,1.5s
MDSI  Maura Dua         56.37 270  P         P         15 53 05.5 -3.1
      comp=Z,68nm,1.4s,comp=Z,2µm
HJU   Haeju             56.44 327  P         P         15 53 08.6 +0.1
HJU                                S         S         16 00 57.3 -0.1
HJU                                AmB
      comp=Z,2µm,6.2s
HJU                                AMS       AMS
      comp=Z,6µm,19.3s
DSRI  Dabo              56.54 275  P         P         15 53 08.0 -1.8
      comp=Z,79nm,1.6s,comp=Z,2µmcomp=Z,3µm
NJ2   Nanjing           56.60 317⇓iP         P         15 53 12.9 +3.1
NJ2                                pP        sP        15 53 22.0 -1.4
NJ2                                sP        pP        15 53 26.3 +6.5
NJ2                                S         S         16 01 06.9 +7.2
NJ2                                pmax      pmax
      comp=Z,32nm,1.2s
NJ2                                pmax      pmax
      comp=Z,1µm,6.3s
NJ2                                LR        LR
      comp=Z,5µm,16.3s
NJ2                                LR        LR
      comp=Z,4µm,15.4s
NJ2                                LR        LR
      comp=Z,3µm,17.1s
TPRI  Tanjung Pinang    56.83 276  P         P         15 53 11.4 -0.4
      comp=Z,62nm,1.1s,comp=Z,4µm
HHU   Hamhung           56.90 330  P         P         15 53 11.9 +0.1
HHU                                S         S         16 01 04.3 +0.9
HHU                                AmB
      comp=Z,1µm,4.8s
HHU                                AMS       AMS
      comp=Z,4µm,16.7s
QIZ   Qiongzhong        57.05 299⇓iP         P         15 53 10.6 -2.6
QIZ                                S         S         16 01 07.0 +0.9
QIZ                                sS        sS        16 01 27.8 +7.0
QIZ                                ScS       ScS       16 02 56.1 -4.6
QIZ                                SS        SS        16 04 54.8 -0.6
QIZ                                pmax      pmax
      comp=Z,2µm,10.8s
QIZ                                LR        LR
      comp=Z,3µm,17.5s
QIZ                                LR        LR
      comp=Z,3µm,19.1s
QIZ                                LR        LR
      comp=Z,5µm,19.1s
QIZ   Qiongzhong        57.05 299  P         P         15 53 14.9 +1.7
PYAG  Pyongyang         57.16 328  P         P         15 53 13.7 +0.1
PYAG                               S         S         16 01 08.2 +1.4
PYAG                               AmB
      comp=Z,884nm,3.5s
PYAG                               AMS       AMS
      comp=Z,4µm,16.3s
YSS   Yuzh-Sakhalins    57.19 345  P         P         15 53 16.6 +2.9
      comp=Z,45nm,1.0s
YSS   Yuzh-Sakhalins    57.19 345 eP         P         15 53 14.2 +0.5
YSS                               e                    15 54 10.0
YSS                               e                    15 55 19.6
YSS                               eS         S         16 01 05.3 -1.7
YSS                               ePS        PnS       16 01 16.0 -5.0
YSS                               ePPS       PPS       16 01 31.9
YSS                               eSS        SS        16 05 01.0 +4.3
YSS                                pmax      pmax
      comp=Z,700nm,5.3s
YSS                                pmax      pmax
      comp=Z,30nm,0.9s
YSS                                MLR       MLR
      comp=N,5µm,15.0s
YSS                                MLR       MLR
      comp=E,4µm,15.0s
YSS                                MLR       MLR
      comp=Z,8µm,15.0s
TEY   Ternei            57.28 340⇑eP         P         15 53 13.6 -0.8
TEY                                                    16 01 07.2
TEY                                pmax      pmax
      comp=Z,10.0nm,0.7s
TEY                                pmax      pmax
      comp=Z,100nm,5.2s
TEY                                MLR       MLR
      comp=E,100nm,15.0s
TEY                                MLR       MLR
      comp=N,200nm,17.0s
TEY                                MLR       MLR
      comp=Z,200nm,17.0s
VLA   Vladivostok       57.44 335⇑eP         P         15 53 16.8 +1.3
VLA                                pmax      pmax
      comp=Z,35nm,1.1s
MYKOM Kota Tinggi       57.65 277  P         P         15 53 15.1 -2.5
MYKOM                              IAmb      IAmb      15 53 28.0
      comp=Z,46nm,0.9s
MYKOM Kota Tinggi       57.65 277 ⇑P         P         15 53 17.8 +0.2
USA0B Ussuriysk Arra    58.29 336ceP         P         15 53 22.1 +0.6
USRK  Ussuriysk Ar.     58.29 336  P         P         15 53 19.3 -2.2
      comp=Z,13nm,0.7s,baz=161,slow=6.4,SNR=23
USRK                               LR        LR        16 18 21.6
      comp=Z,2µm,19.9s,baz=133,slow=36
      comp=Z,13nm,0.7s
USRK  Ussuriysk Ar.     58.29 336  P         P         15 53 19.1 -2.4
TAOE  Nuku Hiva Isla    58.34  95 eP         P         15 53 24.0 +1.4
      comp=Z,268nm,22.3s
TAOE                              eS         S         16 01 26.4 +2.9
      comp=Z,4µm,26.6s
TAOE                              eSS        SS        16 05 19.7 +3.7
      comp=Z,1µm,26.4s
TAOE                              eLQ        LQ        16 08 01.3
      comp=Z,7µm,23.3s
TAOE                              eLR        LR        16 10 29.2
      comp=Z,13µm,25.6s
TAOE  Nuku Hiva Isla    58.34  95 eT         T         16 56 25.3
      comp=Z,82nm,0.3s
MASI  Maura Aman, Be    58.46 271  P         P         15 53 22.4 -1.0
      comp=Z,219nm,1.4s,comp=Z,3µm
SUJ   Sinuiju           58.59 328  P         P         15 53 23.8 +0.1
SUJ                                S         S         16 01 26.7 +1.1
SUJ                                AmB
      comp=Z,1µm,4.2s
SUJ                                AMS       AMS
      comp=Z,5µm,14.0s
CNSH  ChangSha          58.69 310 ⇑P         P         15 53 27.0 +2.4
CNSH                               S         S         16 01 32.8 +5.5
CNSH                               pmax      pmax
      comp=Z,33nm,1.6s
CNSH                               LR        LR
      comp=Z,2µm,15.9s
CNSH                               LR        LR
      comp=Z,2µm,15.5s
CNSH                               LR        LR
      comp=Z,3µm,18.2s
SKR   Severo-Kuril's    58.76 357 eP         P         15 53 24.5 -0.1
SKR                               eS         S         16 01 32.8 +5.4
SKR                               eSSS       SSS       16 05 18.1
SKR                                pmax      pmax
      comp=Z,300nm,5.7s
SKR                                MLR       MLR
      comp=Z,3µm,22.0s
WHN   Wuhan             58.88 313 ⇓P         P         15 53 30.0 +4.1
WHN                                S         S         16 01 36.3 +6.6
WHN                                LR        LR
      comp=Z,7µm,12.8s
WHN                                LR        LR
      comp=Z,7µm,14.6s
WHN                                LR        LR
      comp=Z,12µm,19.9s
GULI  GuiLin            59.29 306 ⇑P         P         15 53 36.5 +7.6
GULI                               S         S         16 01 49.9  +15
GULI                               pmax      pmax
      comp=Z,30nm,1.7s
GULI                               LR        LR
      comp=N,3µm,23.8s
GULI                               LR        LR
      comp=E,1µm,24.9s
GULI                               LR        LR
      comp=Z,3µm,20.1s
DL2   Dalian            59.31 325 ⇑P         P         15 53 28.6 -0.1
DL2                                S         S         16 01 38.5 +3.5
DL2                                pmax      pmax
      comp=Z,51nm,1.0s
DL2                                pmax      pmax
      comp=Z,740nm,6.8s
DL2                                LR        LR
      comp=Z,5µm,17.5s
DL2                                LR        LR
      comp=Z,2µm,18.9s
DL2                                LR        LR
      comp=Z,4µm,16.6s
UGL   Uglegorsk         59.34 346 eP         P         15 53 31.4 +2.7
UGL                               eS         S         16 01 26.2 -8.7
UGL                               eSS        SS        16 05 28.8 -1.6
UGL                                pmax      pmax
      comp=Z,2µm,8.0s
UGL                                smax      smax
      comp=E,3µm,13.0s
UGL                                smax      smax
      comp=N,1µm,8.2s
SDSI  Sungai Dareh      59.58 274  P         P         15 53 29.2 -1.9
      comp=N,153nm,1.3s,comp=N,4µmcomp=N,5µm
MDJ   Mudanjiang        59.62 335  P         P         15 53 30.6 -0.2
MDJ                                PP        PP        15 55 42.6 -0.2
MDJ                                S         S         16 01 44.5 +5.7
MDJ                                pmax      pmax
      comp=N,16nm,1.0s
MDJ                                pmax      pmax
      comp=N,600nm,3.8s
MDJ                                LR        LR
      comp=N,8µm,22.2s
MDJ                                LR        LR
      comp=N,7µm,18.0s
MDJ                                LR        LR
      comp=N,7µm,17.0s
MDJ   Mudanjiang        59.62 335  P         P         15 53 30.9 +0.1
BKNI  Bangkinang        60.16 275  P         P         15 53 38.0 +2.9
      comp=N,285nm,1.6s
BKNI  Bangkinang        60.16 275  P         P         15 53 34.3 -0.8
      comp=N,287nm,1.5s,comp=N,3µmcomp=N,5µm
TIA   Tai'an            60.28 320 eP         P         15 53 36.0 +0.6
TIA                                S         S         16 01 44.5 -3.1
TIA                                pmax      pmax
      comp=N,11nm,1.5s
TIA                                pmax      pmax
      comp=N,660nm,11.7s
TIA                                LR        LR
      comp=N,4µm,20.6s
TIA                                LR        LR
      comp=N,2µm,14.7s
TIA                                LR        LR
      comp=N,4µm,14.2s
SNY   Shenyang          60.32 329 ⇑P         P         15 53 35.0 -0.6
SNY                                S         S         16 01 51.5 +3.7
SNY                                pmax      pmax
      comp=N,11nm,1.5s
SNY                                pmax      pmax
      comp=N,610nm,5.1s
SNY                                LR        LR
      comp=N,7µm,20.2s
SNY                                LR        LR
      comp=N,4µm,22.9s
SNY                                LR        LR
      comp=N,10µm,21.0s
PDSI  Padang            60.53 274  P         P         15 53 36.7 -1.0
      comp=N,70nm,1.1s,comp=N,1µmcomp=N,3µm
CN2   Changchun         60.85 331 eP         P         15 53 37.8 -1.4
CN2                               ePP        PP        15 55 54.3 +0.6
CN2                               eS         S         16 01 54.1 -0.5
CN2                               eSS        SS        16 05 54.9 +0.5
CN2                                pmax      pmax
      comp=N,40nm,1.4s
CN2                                pmax      pmax
      comp=N,490nm,5.5s
CN2                                LR        LR
      comp=N,5µm,17.0s
CN2                                LR        LR
      comp=N,2µm,17.0s
CN2                                LR        LR
      comp=N,4µm,19.0s
IPM   Ipoh              60.94 280  P         P         15 53 38.3 -2.1
IPM   Ipoh              60.94 280  P         P         15 53 39.4 -1.0
IPM   Ipoh              60.94 280 ⇑P         P         15 53 39.8 -0.6
PET   Petropavlovsk     60.99 359  P         P         15 53 39.2 -0.7
PET                                IAMs_20   IAMs_20   16 16 43.8
      comp=Z,6µm,19.0s
PET   Petropavlovsk     60.99 359  P         P         15 53 40.4 +0.5
PET   Petropavlovsk     60.99 359 eP         P         15 53 39.2 -0.7
PET                               eS         S         16 01 56.8 +0.8
PET                                pmax      pmax
      comp=Z,101nm,1.0s
PET                                pmax      pmax
      comp=Z,800nm,5.7s
PET                                pmax      pmax
      comp=Z,1µm,5.2s
PET                                MLR       MLR
      comp=Z,4µm,19.0s
PET                                MLR       MLR
      comp=Z,4µm,16.0s
PEA0B Petropavlovsk-    61.10 358  P         P         15 53 40.2 -0.6
PEA0B Petropavlovsk-    61.10 358deP         P         15 53 41.4 +0.7
PETK  Petropavlovsk-    61.10 358  P         P         15 53 38.8 -1.9
      comp=Z,12nm,0.9s,baz=190,slow=15,SNR=23
PETK                               LR        LR        16 16 12.8
      comp=Z,8µm,21.1s,baz=163,slow=32
PETK                               PKP2bc    P'P'bc    16 23 03.0 -0.4
      comp=Z,1.2nm,0.5s,baz=38,slow=10,SNR=6.6
      comp=Z,12nm,0.9s
PETK  Petropavlovsk-    61.10 358  P         P         15 53 39.7 -1.0
PETK  Petropavlovsk-    61.10 358  P         P         15 53 39.7 -1.0
BNX   BinXian           61.45 334 ⇓P         P         15 53 42.9 -0.3
BNX                                pP        pP        15 53 54.5 +1.5
BNX                                sP        sP        15 53 56.0 -1.0
BNX                                PP        PP        15 55 58.8 -0.1
BNX                                S         S         16 02 05.4 +3.2
BNX                                sS        sS        16 02 26.3 +7.9
BNX                                pmax      pmax
      comp=Z,58nm,1.4s
BNX                                pmax      pmax
      comp=Z,830nm,5.2s
BNX                                LR        LR
      comp=Z,9µm,20.6s
BNX                                LR        LR
      comp=Z,10µm,22.8s
BNX                                LR        LR
      comp=Z,5µm,20.6s
KULM  Kulim             61.48 281  P         P         15 53 41.8 -2.3
KULM                               IAmb      IAmb      15 53 50.2
      comp=Z,74nm,1.3s
KULM  Kulim             61.48 281 ⇑P         P         15 53 44.0  0.0
SHEM  Shemya Is, Ala    61.72   9  LR        LR        16 17 42.8
      comp=Z,5µm,19.5s,baz=177,slow=33
SKLT  Songkhla          61.91 283  P         P         15 53 49.3 +2.3
ENH   Enshi             62.34 310  P         P         15 53 47.6 -1.9
ENH                                IAmb      IAmb      15 54 10.5
      comp=Z,54nm,1.0s
ENH   Enshi             62.34 310  P         P         15 53 51.3 +1.8
GRNR  Gornyy            62.40 343⇑iP         P         15 53 49.6 +0.1
GRNR                              eS         S         16 02 16.1 +2.1
GRNR                               pmax      pmax
      comp=E,1.0nm,1.2s
GRNR                               pmax      pmax
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	comp=N,3.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GRNR				smax	smax		
	comp=N,1.0nm,0.9s						
LYN	**LuoYang**	**62.40**	**316**	⇑*i*P	**P**	**15 53 49.5**	**-0.3**
LYN				S	**S**	**16 02 15.4**	**+0.8**
LYN				pmax	pmax		
	comp=N,25nm,0.5s						
LYN				pmax	pmax		
	comp=N,470nm,4.8s						
LYN				LR	LR		
	comp=N,4µm,14.6s						
LYN				LR	LR		
	comp=N,4µm,16.0s						
LYN				LR	LR		
	comp=N,3µm,24.3s						
HNS	**HongShan**	**62.54**	**320**	⇑P	**P**	**15 53 50.8**	**+0.1**
HNS				S	**S**	**16 02 14.5**	**-1.7**
HNS				SS	**SS**	**16 06 18.3**	**-2.7**
HNS				pmax	pmax		
	comp=N,49nm,1.5s						
HNS				pmax	pmax		
	comp=N,920nm,8.8s						
HNS				LR	LR		
	comp=N,4µm,18.0s						
HNS				LR	LR		
	comp=N,4µm,17.1s						
KLR	**Kul'dur**	**62.58**	**339**	LR	LR	16 20 11.0	
	comp=N,5µm,19.6s,baz=146,slow=35						
KLR	**Kul'dur**	**62.58**	**339**	*de*P	**P**	**15 53 49.3**	**-1.4**
KLR				pmax	pmax		
	comp=Z,54nm,1.3s						
NONG	**Nongkai**	**62.60**	**295**	P	**P**	**15 53 54.3**	**+2.8**
RPSI	**Rantau Prapat**	**62.65**	**277**	P	**P**	**15 53 48.8**	**-3.1**
RPSI				IAmb	IAmb	15 54 00.6	
	comp=Z,45nm,1.0s						
PSI	**Prapat**	**62.67**	**277**	P	**P**	**15 53 53.0**	**+0.8**
PSI	**Prapat**	**62.67**	**277**	P	**P**	**15 53 48.8**	**-3.4**
PSI				pmax	pmax		
	comp=Z,45nm,1.0s						
PSI				MLR	MLR		
	comp=Z,3µm,19.0s						
KIWB	**Kanaga Island**	**62.72**	**15**	P	**P**	**15 53 50.1**	**-1.5**
GYA	**Guiyang**	**62.80**	**305**	⇓P	**P**	**15 53 54.0**	**+1.2**
GYA				SKS	**SKSac**	**16 03 41.0**	**-2.5**
GYA				SS	**SS**	**16 06 24.8**	**-0.9**
GYA				pmax	pmax		
	comp=Z,11nm,1.1s						
GYA				pmax	pmax		
	comp=Z,2µm,12.8s						
GYA				LR	LR		
	comp=Z,2µm,17.1s						
GYA				LR	LR		
	comp=Z,2µm,20.5s						
GYA				LR	LR		
	comp=Z,4µm,24.0s						
ADK	**Adak**	**62.87**	**15**	IAMs_20	IAMs_20	16 14 42.8	
	comp=Z,7µm,22.0s						
ADK	**Adak**	**62.87**	**15**	P	**P**	**15 53 55.4**	**+2.8**
NAYO	**Nakonayok**	**63.10**	**291**	P	**P**	**15 53 56.7**	**+1.9**
TSI	**Tuntungan**	**63.16**	**278**	P	**P**	**15 53 55.2**	**-0.1**
	comp=Z,100nm,0.7s,comp=Z,3µmcomp=Z,4µm						
SRIT	**Nakonsritamara**	**63.22**	**284**	P	**P**	**15 53 59.5**	**+3.8**
BJT	**Baijiatuau**	**63.23**	**323**	P	**P**	**15 53 53.2**	**-2.1**
BJT	**Baijiatuau**	**63.23**	**323**	P	**P**	**15 53 58.0**	**+2.8**
	comp=Z,19nm,1.7s						
BJT	**Baijiatuau**	**63.23**	**323**	P	**P**	**15 53 53.2**	**-2.1**
BJT				pmax	pmax		
	comp=Z,29nm,1.2s						
BJI	**Beijing**	**63.24**	**323**	P	**P**	**15 53 53.9**	**-1.4**
BJI				S	**S**	**16 02 29.8**	**+4.9**
BJI				pmax	pmax		
	comp=Z,240nm,4.6s						
BJI				LR	LR		
	comp=Z,3µm,18.2s						
BJI				LR	LR		
	comp=Z,2µm,20.0s						
SURA	**Surathani**	**63.33**	**285**	P	**P**	**15 54 00.8**	**+4.4**
NKL	**Nikolayevsk**	**63.45**	**347**	*e*P	**P**	**15 53 57.0**	**+0.6**
NKL				*e*S	**S**	**16 02 21.2**	**-5.7**
NKL				pmax	pmax		
	comp=E,24nm,1.1s						
NKL				pmax	pmax		
	comp=N,38nm,1.2s						
NKL				pmax	pmax		
	comp=Z,126nm,1.2s						
NKL				smax	smax		
	comp=N,422nm,8.3s						
NKL				smax	smax		
	comp=E,614nm,8.3s						
GSI	**Gunungsitoli**	**63.74**	**276**	P	**P**	**15 53 56.3**	**-2.8**
GSI	**Gunungsitoli**	**63.74**	**276**	P	**P**	**15 53 57.3**	**-1.8**
GSI	**Gunungsitoli**	**63.74**	**276**	P	**P**	**15 53 56.1**	**-3.0**
	comp=E,206nm,0.9s						
KCSI	**Kotacane, Aceh**	**63.94**	**278**	P	**P**	**15 53 57.2**	**-3.3**
	comp=E,80nm,0.7s,comp=E,1µm						
TIY	**Taiyuan**	**64.19**	**319**	⇑P	**P**	**15 54 02.6**	**+0.9**
TIY				S	**S**	**16 02 41.5**	**+4.5**
TIY				SS	**SS**	**16 06 49.3**	**+2.3**
TIY				pmax	pmax		
	comp=E,450nm,4.7s						
TIY				LR	LR		
	comp=E,2µm,19.2s						
TIY				LR	LR		
	comp=E,2µm,19.9s						
TIY				LR	LR		
	comp=E,3µm,22.7s						
XAN	**Xi'an**	**64.62**	**314**	P	**P**	**15 54 04.1**	**-0.5**
XAN				PcP	**PcP**	**15 54 35.5**	**-2.8**
XAN				S	**S**	**16 02 43.8**	**+1.4**
XAN				SS	**SS**	**16 06 54.9**	**+1.1**
XAN				pmax	pmax		
	comp=E,27nm,1.4s						
XAN				pmax	pmax		
	comp=E,930nm,6.9s						
XAN				LR	LR		
	comp=E,3µm,14.9s						
XAN				LR	LR		
	comp=E,3µm,17.8s						
XAN				LR	LR		
	comp=E,5µm,18.8s						
HEH	**HeiHe**	**65.03**	**337**	*e*P	**P**	**15 54 04.0**	**-2.8**
HEH				pP	**pP**	**15 54 18.5**	**+1.8**
HEH				S	**S**	**16 02 46.9**	**+0.2**
HEH				sS	**sS**	**16 03 07.4**	**+3.6**
HEH				pmax	pmax		
	comp=E,52nm,0.9s						
HEH				pmax	pmax		
	comp=E,1µm,6.2s						
HEH				LR	LR		
	comp=E,6µm,17.3s						
HEH				LR	LR		
	comp=E,7µm,17.5s						
HEH				LR	LR		
	comp=E,6µm,18.4s						
PHRA	**Phrae**	**65.36**	**295**	P	**P**	**15 54 08.4**	**-1.2**
MLSI	**Meulaboh, Aceh**	**65.42**	**278**	P	**P**	**15 54 09.7**	**-0.4**
	comp=E,68nm,1.1s						
KMI	**Kunming**	**65.48**	**302**	⇑P	**P**	**15 54 12.1**	**+1.5**
KMI				S	**S**	**16 02 59.8**	**+6.1**
KMI				SS	**SS**	**16 07 01.3**	**-6.6**
KMI				pmax	pmax		
	comp=E,55nm,1.5s						
KMI				pmax	pmax		
	comp=E,1µm,7.4s						
KMI				LR	LR		
	comp=E,3µm,20.1s						
KMI				LR	LR		
	comp=E,2µm,19.3s						
KMI				LR	LR		
	comp=E,3µm,19.1s						
XLT	**XiLinHaoTe**	**65.75**	**326**	⇑*i*P	**P**	**15 54 10.3**	**-1.5**
XLT				S	**S**	**16 02 54.6**	**-1.4**
XLT				pmax	pmax		
	comp=E,55nm,1.0s						
XLT				pmax	pmax		
	comp=E,660nm,4.4s						
XLT				LR	LR		
	comp=E,670nm,18.2s						
XLT				LR	LR		
	comp=E,4µm,20.0s						
XLT				LR	LR		
	comp=E,4µm,21.1s						
CRAI	**Chiangrai**	**65.79**	**296**	P	**P**	**15 54 11.1**	**-1.3**
CM31	**Chiang Mai Arr**	**66.51**	**294**	P	**P**	**15 54 15.8**	**-1.2**
CM31				IAmb	IAmb	15 54 26.1	
	comp=Z,46nm,1.0s						
CMAR	**Chiang Mai Arr**	**66.51**	**294**	P	**P**	**15 54 16.6**	**-0.5**
	comp=Z,13nm,1.0s,baz=114,slow=4.5,SNR=33						
CMAR				LR	LR	16 22 18.9	
	comp=Z,2µm,21.2s,baz=110,slow=35						
CMAR				PKP2bc	**P'P'df**	**16 22 48.7**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=275,slow=4.3,SNR=4.3						
	comp=Z,13nm,1.0s						
CMAR	**Chiang Mai Arr**	**66.51**	**294**	P	**P**	**15 54 15.7**	**-1.4**
CMAR	**Chiang Mai Arr**	**66.51**	**294**	P	**P**	**15 54 15.7**	**-1.4**
HHC	**Hu-ho-hao-te**	**66.54**	**321**	*e*P	**P**	**15 54 17.1**	**+0.2**
HHC				S	**S**	**16 03 07.3**	**+1.6**
HHC				SS	**SS**	**16 07 24.4**	**+0.9**
HHC				pmax	pmax		
	comp=Z,28nm,0.8s						
HHC				pmax	pmax		
	comp=Z,960nm,5.9s						
HHC				LR	LR		
	comp=Z,6µm,17.8s						
HHC				LR	LR		
	comp=Z,6µm,17.1s						
HHC				LR	LR		
	comp=Z,9µm,17.8s						
CHTO	**Chiang Mai**	**66.62**	**294**	P	**P**	**15 54 16.7**	**-1.1**
CHTO	**Chiang Mai**	**66.62**	**294**	P	**P**	**15 54 16.7**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,6.0nm,2.0s						
PZH	**PanZhiHua**	**66.84**	**303**	P	**P**	**15 54 19.5**	**+0.3**
PZH				PcP	**PcP**	**15 54 48.6**	**+0.8**
PZH				S	**S**	**16 03 15.3**	**+5.3**
PZH				pmax	pmax		
	comp=Z,30nm,1.3s						
PZH				pmax	pmax		
	comp=Z,1µm,9.5s						
PZH				LR	LR		
	comp=Z,2µm,17.3s						
PZH				LR	LR		
	comp=Z,2µm,19.4s						
PZH				LR	LR		
	comp=Z,3µm,21.0s						
CD2	**Chengdu**	**67.01**	**308**	P	**P**	**15 54 20.0**	**-0.1**
CD2				S	**S**	**16 03 14.8**	**+3.1**
CD2				pmax	pmax		
	comp=Z,50nm,0.7s						
CD2				pmax	pmax		
	comp=Z,1µm,9.4s						
CD2				LR	LR		
	comp=Z,2µm,13.9s						
CD2				LR	LR		
	comp=Z,1µm,11.0s						
CD2				LR	LR		
	comp=Z,2µm,15.1s						
BTO	**Baotou**	**67.37**	**320**	*e*P	**P**	**15 54 24.4**	**+2.2**
BTO				pP	**pP**	**15 54 29.5**	**-2.8**
BTO				PP	**PP**	**15 56 56.6**	**+5.5**
BTO				S	**S**	**16 03 20.1**	**+4.4**
BTO				pmax	pmax		
	comp=Z,29nm,0.6s						
BTO				pmax	pmax		
	comp=Z,4µm,9.3s						
BTO				LR	LR		
	comp=Z,8µm,15.7s						
BTO				LR	LR		
	comp=Z,10µm,16.0s						
BTO				LR	LR		
	comp=Z,18µm,15.2s						
HIA	**Hailar**	**67.53**	**332**	P	**P**	**15 54 21.1**	**-1.9**
HIA				IAmb	IAmb	15 54 32.0	
	comp=Z,33nm,0.9s						
HIA	**Hailar**	**67.53**	**332**	IAMs_20	IAMs_20	16 22 13.5	
	comp=Z,5µm,18.0s						
HIA	**Hailar**	**67.53**	**332**	P	**P**	**15 54 23.6**	**+0.6**
HIA	**Hailar**	**67.53**	**332**	P	**P**	**15 54 21.1**	**-1.9**
HIA				pmax	pmax		
	comp=Z,33nm,0.9s						
UNV	**Unalaska Valle**	**67.67**	**20**	P	**P**	**15 54 24.0**	**+0.3**
UNV				IAmb	IAmb	15 54 31.4	
	comp=Z,70nm,1.3s						
UNV	**Unalaska Valle**	**67.67**	**20**	P	**P**	**15 54 25.5**	**+1.8**
UNV	**Unalaska Valle**	**67.67**	**20**	P	**P**	**15 54 24.6**	**+1.0**
	baz=215						
ZEA	**Zeya**	**67.89**	**339**	*e*P	**P**	**15 54 23.2**	**-1.9**
ZEA				*e*S	**S**	**16 03 19.5**	**-1.8**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=N,20nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,80nm,1.1s						
ZEA				pmax	pmax		
	comp=E,200nm,8.5s						
ZEA				pmax	pmax		
	comp=N,200nm,7.1s						
ZEA				pmax	pmax		
	comp=Z,500nm,7.4s						
ZEA				smax	smax		
	comp=E,800nm,8.4s						
MA2	**Magadan**	**68.01**	**355**	LR	LR	16 20 06.3	
	comp=E,5µm,21.9s,baz=166,slow=32						
MA2	**Magadan**	**68.01**	**355**	P	**P**	**15 54 24.6**	**-1.1**
MA2				IAmb	IAmb	15 54 55.4	
	comp=Z,57nm,1.2s						
MA2				IAMs_20	IAMs_20	16 19 43.3	
	comp=Z,6µm,20.0s						
MA2	**Magadan**	**68.01**	**355**	⇑*e*P	**P**	**15 54 25.7**	**0.0**
MA2				pmax	pmax		
	comp=Z,40nm,1.1s						
TNCH	**TengChong**	**69.02**	**301**	⇑P	**P**	**15 54 33.5**	**+0.5**
TNCH				PcP	**PcP**	**15 54 58.1**	**+1.1**
TNCH				S	**S**	**16 03 37.8**	**+1.6**
TNCH				SS	**SS**	**16 08 04.8**	**+2.2**
TNCH				pmax	pmax		
	comp=Z,85nm,0.6s						
TNCH				pmax	pmax		
	comp=Z,1µm,7.2s						
TNCH				LR	LR		
	comp=Z,1µm,18.9s						
TNCH				LR	LR		
	comp=Z,990nm,17.9s						
TNCH				LR	LR		
	comp=Z,2µm,18.8s						
LZH	**Lanzhou**	**69.25**	**313**	⇑P	**P**	**15 54 35.3**	**+1.1**
LZH				S	**S**	**16 03 41.8**	**+3.3**
LZH				sS	sS	16 03 55.0	-0.1
LZH				SS	**SS**	**16 08 09.9**	**+4.0**
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,620nm,4.1s						
LZH				LR	LR		
	comp=Z,3µm,16.0s						
LZH				LR	LR		
	comp=Z,2µm,14.9s						
LZH				LR	LR		
	comp=Z,5µm,17.0s						
VNDA	**Vanda**	**69.31**	**180**	P	**P**	**15 54 32.3**	**-1.4**
	comp=Z,36nm,0.9s,baz=340,slow=5.6,SNR=18						
VNDA				LR	LR	16 20 31.1	
	comp=Z,3µm,20.7s,baz=1.5,slow=32						
	comp=Z,36nm,0.9s						
VNDA	**Vanda**	**69.31**	**180**	P	**P**	**15 54 32.4**	**-1.2**
VNDA				IAmb	IAmb	15 54 37.5	
	comp=Z,62nm,1.1s						
VNDA	**Vanda**	**69.31**	**180**	P	**P**	**15 54 32.4**	**-1.2**
VNDA				pmax	pmax		
	comp=Z,62nm,1.1s						
SBA	**Scott Base**	**69.72**	**179**	P	**P**	**15 54 35.9**	**-0.2**
SBA	**Scott Base**	**69.72**	**179**	P	**P**	**15 54 35.9**	**-0.2**
SBA				pmax	pmax		
	comp=Z,86nm,1.2s						
MND	**Mandalay**	**70.12**	**297**	P	**P**	**15 54 40.8**	**+1.2**
	comp=Z,13nm,1.2s						
S12K	**Black Hills**	**70.71**	**21**	P	**P**	**15 54 43.0**	**+0.5**
	baz=219						
SDPT	**Sand Point**	**71.02**	**22**	P	**P**	**15 54 45.4**	**+1.0**
	baz=221						
SEY	**Seymchan**	**71.20**	**356**	LR	LR	16 23 22.5	
	comp=Z,5µm,21.1s,baz=172,slow=34						
SEY	**Seymchan**	**71.20**	**356**	⇓*e*P	**P**	**15 54 45.5**	**+0.2**
SEY				pmax	pmax		
	comp=Z,58nm,1.7s						
CHGN	**Chignik**	**72.51**	**22**	P	**P**	**15 54 54.8**	**+1.6**
	baz=223						
MOKO	**MOKOCHONG**	**72.85**	**301**	*e*P	**P**	**15 54 56.2**	**0.0**
MOKO				IAmb	IAmb	15 55 07.2	
	comp=Z,94nm,1.1s						
IMP	**Imphal**	**72.88**	**299**	*e*P	**P**	**15 54 56.5**	**+0.2**
IMP				IAmb	IAmb	15 55 05.3	
	comp=Z,58nm,0.9s						
KOHI	**KOHIMA**	**73.01**	**300**	*e*P	**P**	**15 54 57.1**	**-0.1**
KOHI				IAmb	IAmb	15 55 06.3	
	comp=Z,180nm,1.2s						
SAIH	**SAIHA**	**73.03**	**296**	*e*P	**P**	**15 54 57.9**	**+0.6**
SAIH				IAmb	IAmb	15 55 12.3	
	comp=Z,59nm,0.9s						
ULN	**Ulaanbaatar**	**73.17**	**325**	P	**P**	**15 54 55.9**	**-1.7**
ULN				IAmb	IAmb	15 55 04.5	
	comp=Z,98nm,1.4s						
ULN	**Ulaanbaatar**	**73.17**	**325**	IAMs_20	IAMs_20	16 30 26.4	
	comp=Z,4µm,19.0s						
ULN	**Ulaanbaatar**	**73.17**	**325**	⇓P	**P**	**15 54 56.6**	**-1.0**
ULN	**Ulaanbaatar**	**73.17**	**325**	*ce*P	**P**	**15 54 58.2**	**+0.6**
ULN				pmax	pmax		
	comp=Z,52nm,1.4s						
ULN				MLR	MLR		
	comp=Z,4µm,18.0s						
SONM	**Songino Array**	**73.52**	**325**	P	**P**	**15 54 58.1**	**-1.5**
	comp=Z,18nm,1.0s,baz=140,slow=5.8,SNR=36						
SONM				PKPPKP	**P'P'df**	**16 22 35.7**	**+0.4**
	comp=Z,0.2nm,0.8s,baz=242,slow=1.2,SNR=2.3						
SONM				LR	LR	16 27 42.2	
	comp=Z,3µm,18.8s,baz=114,slow=36						
	comp=Z,18nm,1.0s						
SONM	**Songino Array**	**73.52**	**325**	P	**P**	**15 54 57.8**	**-1.9**
SONM				IAmb	IAmb	15 55 04.6	
	comp=Z,83nm,1.5s						
GTA	**Gaotai**	**73.59**	**315**	*e*P	**P**	**15 55 00.0**	**-0.3**
GTA				pP	pP	15 55 10.0	-0.5
GTA				S	**S**	**16 04 34.6**	**+6.1**
GTA				pmax	pmax		
	comp=Z,24nm,1.5s						
GTA				pmax	pmax		
	comp=Z,500nm,6.9s						
GTA				LR	LR		
	comp=Z,3µm,16.7s						
GTA				LR	LR		
	comp=Z,2µm,18.2s						
GTA				LR	LR		
	comp=Z,5µm,18.9s						
ITAN	**ITANAGAR**	**73.78**	**301**	*e*P	**P**	**15 55 02.8**	**+1.3**
ITAN				IAmb	IAmb	15 55 12.1	
	comp=Z,121nm,1.0s						
ZIRO	**ZIRO**	**73.79**	**302**	*e*P	**P**	**15 55 03.1**	**+1.3**
YAK	**Yakutsk**	**74.05**	**345**	LR	LR	16 24 34.4	
	comp=Z,6µm,21.7s,baz=142,slow=33						
YAK	**Yakutsk**	**74.05**	**345**	P	**P**	**15 54 59.1**	**-3.1**
YAK				IAMs_20	IAMs_20	16 23 03.7	
	comp=Z,7µm,20.0s						
YAK	**Yakutsk**	**74.05**	**345**	*e*P	**P**	**15 55 01.7**	**-0.5**
YAK				*e**PP	**pP**	**15 55 12.2**	**-0.1**
YAK				*e*S	**S**	**16 04 31.1**	**-1.2**
YAK				*e**SS	**SKKSac**	**16 05 08.4**	**+1.4**
YAK				pmax	pmax		
	comp=Z,122nm,1.0s						
YAK				pmax	pmax		
	comp=E,13nm,1.3s						
YAK				pmax	pmax		
	comp=N,24nm,1.1s						
YAK				pmax	pmax		
	comp=Z,687nm,8.2s						
YAK				pmax	pmax		
	comp=N,148nm,6.7s						
YAK				pmax	pmax		
	comp=E,97nm,4.5s						
YAK				smax	smax		
	comp=E,1µm,7.8s						
YAK				smax	smax		
	comp=N,201nm,5.3s						
YAK				MLR	MLR		
	comp=N,3µm,25.0s						
YAK				MLR	MLR		
	comp=E,1µm,24.0s						
R17K	**Ugashik Creek**	**74.25**	**22**	P	**P**	**15 55 03.7**	**+0.1**
	baz=224						
BRDH	**Bariadhala**	**74.28**	**296**	LR	LR	16 26 31.2	
	comp=E,2µm,22.0s,baz=4.5,slow=35						
TEZP	**TEZPUR**	**74.41**	**300**	*e*P	**P**	**15 55 05.6**	**+0.5**
TEZP				IAmb	IAmb	15 55 12.2	
	comp=Z,54nm,1.0s						
P16K	**Nushagak River**	**74.68**	**21**	P	**P**	**15 55 06.4**	**+0.4**
	baz=223						
Q17K	**Contact Creek**	**74.88**	**22**	P	**P**	**15 55 07.7**	**+0.3**
	baz=225						
SHL	**Shillong**	**74.88**	**299**	*e*P	**P**	**15 55 08.2**	**+0.1**
SHL				IAmb	IAmb	15 55 15.3	
	comp=Z,120nm,1.3s						
Q16K	**King Salmon**	**74.89**	**21**	P	**P**	**15 55 07.5**	**+0.3**
	baz=224						
O16K	**Kokwok River B**	**75.06**	**20**	P	**P**	**15 55 09.3**	**+1.1**
	baz=222						
OHAK	**Old Harbor**	**75.16**	**24**	P	**P**	**15 55 09.4**	**+0.6**
	baz=227						
Q18K	**Katmai Hardscr**	**75.48**	**22**	P	**P**	**15 55 11.9**	**+1.1**
	baz=226						
N16K	**Nishlik Lake**	**75.49**	**19**	P	**P**	**15 55 11.7**	**+1.0**
	baz=222						
O17K	**Koliganek Bris**	**75.54**	**21**	P	**P**	**15 55 11.2**	**+0.3**
	baz=223						
KDAK	**Kodiak Island**	**75.82**	**24**	LR	LR	16 25 30.1	
	comp=Z,6µm,19.0s,baz=249,slow=33						
KDAK	**Kodiak Island**	**75.82**	**24**	IAMs_20	IAMs_20	16 25 37.6	
	comp=Z,6µm,20.0s						
KDAK	**Kodiak Island**	**75.82**	**24**	P	**P**	**15 55 12.9**	**+0.4**
	baz=228						
BOD	**Bodaibo**	**75.92**	**336**	*e*P	**P**	**15 55 12.4**	**-0.8**
BOD				pmax	pmax		
	comp=Z,46nm,1.5s						
P18K	**Big Mountain,**	**75.92**	**21**	P	**P**	**15 55 12.2**	**-1.0**
P18K				IAmb	IAmb	15 55 26.1	
	comp=Z,42nm,1.1s						
P18K				IAMs_20	IAMs_20	16 22 07.3	
	comp=Z,5µm,22.0s						
P18K	**Big Mountain,**	**75.92**	**21**	P	**P**	**15 55 14.0**	**+0.8**
	baz=225						
GOMU	**GeErMu**	**75.96**	**310**	P	**P**	**15 55 18.3**	**+3.9**
GOMU				S	**S**	**16 04 59.4**	**+3.9**
GOMU				SS	**SS**	**16 09 51.8**	**+3.0**
GOMU				pmax	pmax		
	comp=Z,12nm,1.4s						
GOMU				pmax	pmax		
	comp=Z,1µm,9.7s						
GOMU				LR	LR		
	comp=Z,2µm,17.1s						
GOMU				LR	LR		
	comp=Z,1µm,17.6s						
GOMU				LR	LR		
	comp=Z,2µm,18.2s						
BILL	**Bilibino**	**76.13**	**2**	P	**P**	**15 55 12.3**	**-1.9**
BILL				IAmb	IAmb	15 55 18.4	
	comp=Z,49nm,1.0s						
BILL				IAMs_20	IAMs_20	16 23 22.0	
	comp=Z,5µm,20.0s						
BILL	**Bilibino**	**76.13**	**2**	*i* P	**P**	**15 55 12.8**	**-1.4**
BILL				*i*		15 55 26.8	
BILL				*i* S	**S**	**16 04 50.3**	**-5.1**
BILL				*i* SS	**SS**	**16 09 57.8**	**+8.4**
BILL				pmax	pmax		
	comp=Z,54nm,1.1s						
BILL				MLR	MLR		
	comp=Z,4µm,18.0s						
Q19K	**Cape Douglas,**	**76.19**	**22**	P	**P**	**15 55 13.1**	**-1.6**
Q19K				IAMs_20	IAMs_20	16 23 37.3	
	comp=Z,8µm,20.0s						
Q19K	**Cape Douglas,**	**76.19**	**22**	P	**P**	**15 55 15.1**	**+0.4**
	baz=227						
O18K	**Koktuh Hills**	**76.26**	**21**	IAMs_20	IAMs_20	16 22 19.1	
	comp=Z,5µm,21.0s						
O18K	**Koktuh Hills**	**76.26**	**21**	P	**P**	**15 55 15.4**	**+0.3**
	baz=225						
ZAK	**Zakamensk**	**76.60**	**326**	*e*P	**P**	**15 55 17.1**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,27nm,1.4s						
LSA	**Lhasa**	**76.72**	**303**	P	**P**	**15 55 20.4**	**+1.5**
LSA				pP	**pP**	**15 55 25.8**	**-3.4**
LSA				PP	**PP**	**15 58 16.4**	**+4.5**
LSA				S	**S**	**16 05 07.5**	**+3.2**
LSA				pmax	pmax		
	comp=Z,19nm,1.6s						
LSA				pmax	pmax		
	comp=Z,340nm,3.4s						
LSA				LR	LR		
	comp=Z,2µm,25.6s						

LSA				LR	LR		
	comp=Z,2µm,25.6s						
LSA				LR	LR		
	comp=Z,3µm,25.6s						
LSA	**Lhasa**	**76.72**	**303**	P	**P**	**15 55 16.9**	**-2.1**
LSA	**Lhasa**	**76.72**	**303**	P	**P**	**15 55 16.9**	**-2.1**
LSA				pmax	pmax		
	comp=Z,22nm,1.0s						
LSA				MLR	MLR		
	comp=Z,2µm,21.0s						
O19K	**Port Alsworth**	**76.82**	**21**	IAMs_20	IAMs_20	16 22 34.9	
	comp=Z,4µm,22.0s						
O19K	**Port Alsworth**	**76.82**	**21**	P	**P**	**15 55 18.8**	**+0.6**
	baz=226						
ANM	**Nome**	**76.84**	**14**	P	**P**	**15 55 18.3**	**+0.1**
ANM				IAmb	IAmb	15 55 32.6	
	comp=Z,41nm,1.2s						
ANM				IAMs_20	IAMs_20	16 25 51.0	
	comp=Z,4µm,19.0s						
ANM	**Nome**	**76.84**	**14**	P	**P**	**15 55 18.3**	**+0.1**
ANM				pmax	pmax		
	comp=Z,41nm,1.2s						
ANM				MLR	MLR		
	comp=Z,4µm,19.0s						
ANM	**Nome**	**76.84**	**14**	P	**P**	**15 55 19.0**	**+0.8**
	baz=214,SNR=16						
P19K	**Oil Pt**	**76.84**	**22**	IAMs_20	IAMs_20	16 24 19.5	
	comp=Z,6µm,21.0s						
P19K	**Oil Pt**	**76.84**	**22**	P	**P**	**15 55 19.4**	**+1.0**
	baz=227						
SVW2	**Sparrevohn**	**77.01**	**20**	P	**P**	**15 55 17.1**	**-2.2**
SVW2				IAmb	IAmb	15 55 33.4	
	comp=Z,66nm,1.0s						
SVW2	**Sparrevohn**	**77.01**	**20**	P	**P**	**15 55 19.9**	**+0.6**
IRK	**Irkutsk**	**77.05**	**328**	*e*P	**P**	**15 55 18.9**	**-0.8**
IRK				pmax	pmax		
	comp=Z,88nm,2.1s						
TNA	**Tin City**	**77.08**	**13**	⇑P	**P**	**15 55 18.0**	**-1.5**
TNA	**Tin City**	**77.08**	**13**	P	**P**	**15 55 20.6**	**+1.0**
	baz=212						
N19K	**Bonanza Creek**	**77.19**	**21**	P	**P**	**15 55 19.2**	**-1.3**
N19K				IAMs_20	IAMs_20	16 27 36.8	
	comp=Z,4µm,19.0s						
N19K	**Bonanza Creek**	**77.19**	**21**	P	**P**	**15 55 21.5**	**+1.1**
	baz=226						
O20K	**Slope Mountain**	**77.36**	**22**	P	**P**	**15 55 22.0**	**+0.7**
	baz=228						
HOM	**Homer**	**77.44**	**23**	IAMs_20	IAMs_20	16 24 16.3	
	comp=Z,9µm,21.0s						
HOM	**Homer**	**77.44**	**23**	P	**P**	**15 55 22.2**	**+0.5**
	baz=228						
CNPM	**China Poot**	**77.50**	**23**	P	**P**	**15 55 20.1**	**-2.0**
CNPM				IAmb	IAmb	15 55 36.8	
	comp=Z,69nm,1.1s						
BRSE	**Bradley Lake S**	**77.84**	**23**	P	**P**	**15 55 24.3**	**+0.4**
	baz=229						
M19K	**Big River Lodg**	**77.99**	**20**	P	**P**	**15 55 22.8**	**-2.0**
M19K				IAmb	IAmb	15 55 39.4	
	comp=Z,44nm,0.8s						
M19K				IAMs_20	IAMs_20	16 24 53.8	
	comp=Z,5µm,21.0s						
M19K	**Big River Lodg**	**77.99**	**20**	P	**P**	**15 55 24.6**	**-0.1**
	baz=226,SNR=12						
L19K	**White Mountain**	**78.03**	**20**	P	**P**	**15 55 23.8**	**-1.2**
L19K				IAmb	IAmb	15 55 32.3	
	comp=Z,38nm,0.9s						
L19K	**White Mountain**	**78.03**	**20**	P	**P**	**15 55 25.6**	**+0.6**
	baz=225						
TTA	**Tatalina**	**78.19**	**19**	P	**P**	**15 55 26.6**	**+0.7**
TTA	**Tatalina**	**78.19**	**19**	⇓P	**P**	**15 55 26.6**	**+0.7**
TTA	**Tatalina**	**78.19**	**19**	P	**P**	**15 55 26.3**	**+0.4**
	baz=224,SNR=6.3						
GTK	**Tadong**	**78.19**	**300**	*e*P	**P**	**15 55 28.1**	**+1.3**
GTK				IAmb	IAmb	15 55 34.5	
	comp=Z,122nm,1.2s						
CAPN	**Captain Cook N**	**78.36**	**22**	IAMs_20	IAMs_20	16 27 26.7	
	comp=Z,6µm,19.0s						
CAPN	**Captain Cook N**	**78.36**	**22**	P	**P**	**15 55 27.4**	**+0.7**
	baz=229						
M20K	**Styx River**	**78.40**	**20**	IAMs_20	IAMs_20	16 28 53.8	
	comp=Z,4µm,19.0s						
M20K	**Styx River**	**78.40**	**20**	P	**P**	**15 55 27.4**	**+0.2**
	baz=227						
MOY	**Mondy**	**78.50**	**327**	*e*P	**P**	**15 55 28.0**	**+0.1**
MOY				pmax	pmax		
	comp=Z,64nm,2.3s						
L20K	**Farewell, AK**	**78.56**	**20**	P	**P**	**15 55 28.6**	**+0.6**
	baz=226						
SEW	**Seward**	**78.57**	**23**	P	**P**	**15 55 28.5**	**+0.6**
	baz=230						
FIS	**Fire Island**	**78.95**	**22**	IAMs_20	IAMs_20	16 25 19.3	
	comp=Z,7µm,21.0s						
SUA	**Susitna One**	**78.97**	**21**	P	**P**	**15 55 30.0**	**-0.3**
SUA				IAmb	IAmb	15 55 36.1	
	comp=Z,41nm,1.1s						
SUA	**Susitna One**	**78.97**	**21**	P	**P**	**15 55 30.9**	**+0.6**
	baz=229						
TAPN	**Taplejung**	**78.97**	**300**	*e*P	**P**	**15 55 31.2**	**-0.1**
	comp=Z,67nm,0.9s						
RC01	**Rabbit Creek A**	**79.09**	**22**	P	**P**	**15 55 29.5**	**-1.4**
RC01				IAmb	IAmb	15 55 35.0	
	comp=Z,83nm,1.4s						
RC01	**Rabbit Creek A**	**79.09**	**22**	P	**P**	**15 55 31.6**	**+0.7**
	baz=230						
ODAN	**Odare**	**79.12**	**299**	*e*P	**P**	**15 55 32.2**	**+0.2**
K20K	**Telida**	**79.12**	**19**	P	**P**	**15 55 29.2**	**-1.7**
K20K	**Telida**	**79.12**	**19**	P	**P**	**15 55 32.2**	**+1.2**
	baz=226,SNR=16						
GCSA	**Galena City Sc**	**79.26**	**17**	P	**P**	**15 55 32.9**	**+1.3**
	baz=223,SNR=8.8						
Q23K	**Middleton Isla**	**79.39**	**24**	IAMs_20	IAMs_20	16 22 20.2	
	comp=Z,7µm,22.0s						
Q23K	**Middleton Isla**	**79.39**	**24**	P	**P**	**15 55 32.5**	**+0.1**
	baz=233						
PPLA	**Purkeypile**	**79.42**	**20**	P	**P**	**15 55 32.9**	**+0.1**
	baz=228						
PWL	**Port Wells**	**79.47**	**23**	IAMs_20	IAMs_20	16 24 16.3	
	comp=Z,7µm,22.0s						
PWL	**Port Wells**	**79.47**	**23**	P	**P**	**15 55 33.4**	**+0.5**
	baz=231						
PMR	**Palmer**	**79.64**	**22**	P	**P**	**15 55 32.0**	**-1.8**
PMR	**Palmer**	**79.64**	**22**	P	**P**	**15 55 34.6**	**+0.8**
PMR	**Palmer**	**79.64**	**22**	P	**P**	**15 55 32.0**	**-1.8**
PMR				pmax	pmax		
	comp=Z,230nm,2.0s						
PMR	**Palmer**	**79.64**	**22**	P	**P**	**15 55 34.2**	**+0.4**
	baz=230						
BOK	**Bokaro**	**79.68**	**296**	*e*P	**P**	**15 55 36.5**	**+1.6**
BOK				IAmb	IAmb	15 55 45.1	
	comp=Z,35nm,0.9s						
CUT	**Chulitna**	**79.75**	**21**	P	**P**	**15 55 34.3**	**-0.1**
	baz=229						
KNK	**Knik Glacier**	**79.78**	**22**	P	**P**	**15 55 35.7**	**+1.1**
	baz=231						
CAST	**Castle Rocks**	**79.81**	**20**	P	**P**	**15 55 32.4**	**-2.4**
CAST				IAMs_20	IAMs_20	16 24 23.9	
	comp=Z,4µm,22.0s						
CAST	**Castle Rocks**	**79.81**	**20**	P	**P**	**15 55 34.6**	**-0.1**
	baz=228,SNR=8.4						
RAMN	**Ramite**	**79.82**	**299**	*e*P	**P**	**15 55 35.0**	**-0.9**
CHUM	**Lake Minchumin**	**80.05**	**19**	P	**P**	**15 55 37.0**	**+1.0**
	baz=227,SNR=8.5						
SML	**Sawmill**	**80.07**	**22**	P	**P**	**15 55 36.4**	**+0.2**
	baz=231						
RDOG	**Red Dog Mine**	**80.27**	**13**	IAMs_20	IAMs_20	16 24 59.7	
	comp=Z,4µm,21.0s						
RDOG	**Red Dog Mine**	**80.27**	**13**	P	**P**	**15 55 37.9**	**+0.8**
	baz=216						
KTH	**Kantishna Hill**	**80.29**	**20**	P	**P**	**15 55 36.2**	**-1.2**
KTH				IAMs_20	IAMs_20	16 26 16.5	
	comp=Z,5µm,20.0s						
M23K	**Glacier View**	**80.29**	**22**	P	**P**	**15 55 38.0**	**+0.7**
	baz=232						
EYAK	**Cordova Ski Ar**	**80.30**	**24**	P	**P**	**15 55 38.3**	**+0.9**
	baz=234						
JIRN	**Jiri**	**80.35**	**300**	*e*P	**P**	**15 55 37.6**	**-1.3**
	comp=Z,29nm,0.6s						
TRF	**Thorofare Moun**	**80.43**	**20**	P	**P**	**15 55 37.3**	**-0.9**
TRF				IAMs_20	IAMs_20	16 24 56.4	
	comp=Z,6µm,22.0s						
TRF	**Thorofare Moun**	**80.43**	**20**	P	**P**	**15 55 38.0**	**-0.3**
	baz=229,SNR=7.8						
SCM	**Sheep Creek Mo**	**80.46**	**22**	IAMs_20	IAMs_20	16 24 50.3	
	comp=Z,8µm,22.0s						
SCM	**Sheep Creek Mo**	**80.46**	**22**	P	**P**	**15 55 38.0**	**-0.3**
	baz=232						
BPAW	**Bear Paw Mtn.**	**80.63**	**19**	P	**P**	**15 55 39.1**	**-0.1**
BPAW				IAMs_20	IAMs_20	16 26 47.6	
	comp=Z,4µm,21.0s						
BPAW	**Bear Paw Mtn.**	**80.63**	**19**	P	**P**	**15 55 40.0**	**+0.9**
	baz=228,SNR=6.0						
GUN	**Gumba**	**80.68**	**300**	*e*P	**P**	**15 55 39.2**	**-1.4**
	comp=Z,54nm,0.7s						
KLU	**Klutina**	**80.79**	**23**	IAMs_20	IAMs_20	16 26 56.0	
	comp=Z,6µm,20.0s						
KLU	**Klutina**	**80.79**	**23**	P	**P**	**15 55 40.6**	**+0.5**
	baz=234						
RND	**Reindeer**	**80.90**	**21**	P	**P**	**15 55 40.8**	**+0.1**
RND				IAmb	IAmb	15 55 44.3	
	comp=Z,146nm,2.0s						
RND	**Reindeer**	**80.90**	**21**	P	**P**	**15 55 40.8**	**+0.1**
RND				pmax	pmax		
	comp=Z,146nm,2.0s						
RND				MLR	MLR		
	comp=Z,2µm,20.0s						
PKI	**Pulchoki**	**81.00**	**300**	*e*P	**P**	**15 55 40.3**	**-2.0**
	comp=Z,134nm,1.1s						
PKIN	**Phulchoki**	**81.01**	**300**	*e*P	**P**	**15 55 40.1**	**-2.2**
	comp=Z,94nm,0.9s						
I21K	**Tanana**	**81.04**	**18**	P	**P**	**15 55 38.9**	**-2.3**
I21K				IAmb	IAmb	15 55 55.0	
	comp=Z,40nm,1.0s						
I21K				IAMs_20	IAMs_20	16 24 57.3	
	comp=Z,5µm,22.0s						
I21K	**Tanana**	**81.04**	**18**	P	**P**	**15 55 42.1**	**+0.9**
	baz=227,SNR=9.6						
M24K	**Tolsona, Glenn**	**81.06**	**22**	IAMs_20	IAMs_20	16 24 45.2	
	comp=Z,7µm,22.0s						
M24K	**Tolsona, Glenn**	**81.06**	**22**	P	**P**	**15 55 41.6**	**0.0**
	baz=233						
IMAR	**Indian Mountai**	**81.06**	**17**	P	**P**	**15 55 38.8**	**-2.6**
MCK	**McKinley**	**81.08**	**20**	P	**P**	**15 55 39.2**	**-2.4**
MCK				IAmb	IAmb	15 55 54.6	
	comp=Z,67nm,0.8s						
MCK	**McKinley**	**81.08**	**20**	P	**P**	**15 55 39.2**	**-2.4**
MCK				pmax	pmax		
	comp=Z,67nm,0.8s						
MCK	**McKinley**	**81.08**	**20**	P	**P**	**15 55 41.1**	**-0.5**
	baz=230,SNR=22						
H21K	**Melozitna Rive**	**81.11**	**18**	P	**P**	**15 55 40.9**	**-0.8**
H21K				IAMs_20	IAMs_20	16 25 23.3	
	comp=Z,5µm,20.0s						
H21K	**Melozitna Rive**	**81.11**	**18**	P	**P**	**15 55 42.6**	**+0.9**
	baz=227						
KKN	**Kakani**	**81.17**	**300**	*e*P	**P**	**15 55 42.0**	**-1.1**
BWN	**Browne**	**81.18**	**20**	P	**P**	**15 55 42.5**	**+0.4**
BWN				IAMs_20	IAMs_20	16 30 44.7	
	comp=Z,5µm,19.0s						
DMN	**Daman**	**81.27**	**300**	*e*P	**P**	**15 55 42.4**	**-1.3**
	comp=Z,164nm,1.0s						
PALK	**Pallekele**	**81.32**	**279**	LR	LR	16 33 27.7	
	comp=Z,864nm,21.4s,baz=217,slow=37						
PALK	**Pallekele**	**81.32**	**279**	P	**P**	**15 55 42.7**	**-1.2**
PALK	**Pallekele**	**81.32**	**279**	*de*P	**P**	**15 55 41.1**	**-2.8**
PALK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MLY	**Manley**	**81.33**	**19**	P	**P**	**15 55 42.4**	**-0.5**
MLY	**Manley**	**81.33**	**19**	P	**P**	**15 55 43.8**	**+0.9**
	baz=229,SNR=8.6						
N25K	**Chitina, Valde**	**81.37**	**23**	P	**P**	**15 55 42.7**	**-0.5**
N25K				IAmb	IAmb	15 55 47.3	
	comp=Z,88nm,1.9s						
N25K				IAMs_20	IAMs_20	16 26 53.4	
	comp=Z,7µm,20.0s						
N25K	**Chitina, Valde**	**81.37**	**23**	P	**P**	**15 55 43.8**	**+0.5**
	baz=235						
G21K	**Allakaket**	**81.51**	**17**	P	**P**	**15 55 44.8**	**+1.1**
	baz=226						
GLB	**Gilahina Butte**	**81.58**	**24**	IAMs_20	IAMs_20	16 25 36.1	
	comp=Z,7µm,21.0s						
NEA2	**Nenana**	**81.58**	**20**	P	**P**	**15 55 44.0**	**-0.2**
	baz=230,SNR=17						
VRDI	**Verde Repeater**	**81.61**	**24**	IAMs_20	IAMs_20	16 25 02.7	
	comp=Z,7µm,22.0s						
HARP	**HAARP**	**81.62**	**22**	P	**P**	**15 55 45.2**	**+0.8**
	baz=234						
H22K	**Ishtalitna Cre**	**81.71**	**18**	P	**P**	**15 55 45.5**	**+0.6**
	baz=228						
GKN	**Gorkha**	**81.77**	**300**	*e*P	**P**	**15 55 44.4**	**-1.8**
	comp=Z,68nm,0.6s						
QSPA	**South Pole Qui**	**81.81**	**180**	P	**P**	**15 55 43.9**	**-1.7**
	comp=Z,40nm,0.9s,baz=53,slow=1.1,SNR=27						
QSPA				LR	LR	16 30 09.1	
	comp=Z,4µm,18.1s,baz=14,slow=34						
	comp=Z,40nm,0.9s						
QSPA	**South Pole Qui**	**81.81**	**180**	IAMs_20	IAMs_20	16 29 58.5	
	comp=Z,5µm,19.0s						
WRH	**Wood River Hil**	**81.83**	**20**	P	**P**	**15 55 44.4**	**-1.1**
WRH				IAMs_20	IAMs_20	16 31 11.5	
	comp=Z,6µm,19.0s						
PAX	**Paxson**	**81.84**	**22**	P	**P**	**15 55 46.2**	**+0.5**
	baz=234						
I23K	**Minto, Yukon-K**	**81.85**	**19**	IAMs_20	IAMs_20	16 26 05.8	
	comp=Z,4µm,21.0s						
I23K	**Minto, Yukon-K**	**81.85**	**19**	P	**P**	**15 55 46.1**	**+0.6**
	baz=230,SNR=7.0						
MCARA	**McCarthy VSAT**	**81.86**	**24**	IAMs_20	IAMs_20	16 28 59.5	
	comp=Z,6µm,20.0s						
MCARA	**McCarthy VSAT**	**81.86**	**24**	P	**P**	**15 55 45.2**	**-0.5**
	baz=236						
F21K	**Alatna River**	**82.01**	**16**	P	**P**	**15 55 45.3**	**-1.1**
	baz=226,SNR=9.3						
CCB	**Clear Creek Bu**	**82.04**	**20**	P	**P**	**15 55 45.0**	**-1.6**
CCB				IAMs_20	IAMs_20	16 26 04.9	
	comp=Z,6µm,20.0s						
MDM	**Murphy Dome**	**82.10**	**19**	P	**P**	**15 55 45.4**	**-1.5**
MDM				IAmb	IAmb	15 55 50.1	
	comp=Z,45nm,1.2s						
MDM				IAMs_20	IAMs_20	16 27 21.4	
	comp=Z,4µm,20.0s						
TCOL	**CIGO, UAF Yank**	**82.16**	**20**	P	**P**	**15 55 45.6**	**-1.5**
TCOL				IAmb	IAmb	15 55 52.9	
	comp=Z,44nm,0.8s						
TCOL				IAMs_20	IAMs_20	16 27 23.2	
	comp=Z,5µm,20.0s						
TCOL	**CIGO, UAF Yank**	**82.16**	**20**	P	**P**	**15 55 47.3**	**+0.2**
	baz=231,SNR=8.1						
COLA	**College**	**82.17**	**20**	P	**P**	**15 55 45.5**	**-1.7**
COLA				IAmb	IAmb	15 56 00.1	
	comp=Z,42nm,0.8s						
COLA	**College**	**82.17**	**20**	IAMs_20	IAMs_20	16 27 23.2	
	comp=Z,5µm,20.0s						
COLA	**College**	**82.17**	**20**	P	**P**	**15 55 46.5**	**-0.7**
COLA	**College**	**82.17**	**20**	⇑P	**P**	**15 55 46.3**	**-0.9**
COLA	**College**	**82.17**	**20**	*ce*P	**P**	**15 55 46.3**	**-0.9**
COLA				pmax	pmax		
	comp=Z,36nm,1.0s						
COLA	**College**	**82.17**	**20**	P	**P**	**15 55 47.6**	**+0.5**
	baz=231						
HDA	**Harding Lake**	**82.18**	**20**	P	**P**	**15 55 45.9**	**-1.5**
HDA	**Harding Lake**	**82.18**	**20**	P	**P**	**15 55 48.0**	**+0.7**
	baz=232,SNR=18						
K24K	**Donnelly Dome**	**82.22**	**21**	P	**P**	**15 55 47.8**	**+0.2**
	baz=233						
H23K	**Yukon River**	**82.23**	**18**	P	**P**	**15 55 47.0**	**-0.6**
	baz=230						
BARN	**Barnard Glacie**	**82.24**	**24**	P	**P**	**15 55 46.8**	**-1.2**
BARN				IAMs_20	IAMs_20	16 27 12.5	
	comp=Z,5µm,20.0s						
PINM	**Pinnacle**	**82.32**	**26**	P	**P**	**15 55 48.3**	**0.0**
	baz=239						
CTG	**Chitna Glacier**	**82.32**	**25**	P	**P**	**15 55 47.9**	**-0.4**
	baz=238,SNR=31						
CTGM	**Chitina Glacie**	**82.32**	**25**	P	**P**	**15 55 46.5**	**-1.8**
CTGM				IAmb	IAmb	15 56 01.3	
	comp=Z,86nm,1.4s						
CTGM				IAMs_20	IAMs_20	16 31 27.6	
	comp=Z,4µm,19.0s						
LOGN	**Logan Glacier**	**82.39**	**25**	IAMs_20	IAMs_20	16 25 52.3	
	comp=Z,5µm,21.0s						
TIXI	**Tiksi**	**82.41**	**350**	IAMs_20	IAMs_20	16 28 35.6	
	comp=Z,5µm,18.0s						
IL31		**82.43**	**20**	P	**P**	**15 55 46.6**	**-2.0**
IL31				IAmb	IAmb	15 55 51.9	
	comp=Z,30nm,1.0s						
ILAR	**Eielson Array**	**82.43**	**20**	P	**P**	**15 55 45.1**	**-3.5**
	comp=Z,3.5nm,0.6s,baz=250,slow=4.2,SNR=25						
ILAR				PKKPbc	**PKKPbc**	**16 14 17.4**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=335,slow=2.5,SNR=8.2						
ILAR				LR	LR	16 26 37.3	
	comp=Z,4µm,21.3s,baz=214,slow=32						
	comp=Z,3.5nm,0.6s						
ILAR	**Eielson Array**	**82.43**	**20**	P	**P**	**15 55 47.1**	**-1.5**
ILAR	**Eielson Array**	**82.43**	**20**	P	**P**	**15 55 47.1**	**-1.5**
M26K	**Nabesna, AK**	**82.44**	**23**	P	**P**	**15 55 49.5**	**+0.7**
M26K				IAMs_20	IAMs_20	16 26 28.8	
	comp=Z,5µm,20.0s						
M26K	**Nabesna, AK**	**82.44**	**23**	P	**P**	**15 55 48.5**	**-0.4**
	baz=236						
POKR	**Poker Plat Res**	**82.46**	**20**	P	**P**	**15 55 47.6**	**-1.2**
POKR				IAMs_20	IAMs_20	16 27 53.0	
	comp=Z,5µm,21.0s						
POKR	**Poker Plat Res**	**82.46**	**20**	P	**P**	**15 55 48.0**	**-0.8**
	baz=232						
PNL	**Peninsula**	**82.47**	**26**	P	**P**	**15 55 48.6**	**-0.4**
	baz=240						
BCPM	**Bancas Point**	**82.51**	**26**	IAMs_20	IAMs_20	16 27 57.8	
	comp=Z,5µm,19.0s						
RIDG	**Independent Ri**	**82.52**	**21**	P	**P**	**15 55 48.2**	**-1.0**
RIDG				IAmb	IAmb	15 56 03.7	
	comp=Z,48nm,1.0s						
RIDG	**Independent Ri**	**82.52**	**21**	P	**P**	**15 55 49.3**	**+0.1**
	baz=234,SNR=16						
F22K	**John River**	**82.57**	**16**	P	**P**	**15 55 48.8**	**-0.6**
	baz=227						
DANN	**Dangsing**	**82.60**	**300**	*e*P	**P**	**15 55 48.5**	**-2.2**
	comp=Z,58nm,0.6s						
KOLN	**Koldanda**	**82.61**	**299**	*e*P	**P**	**15 55 47.7**	**-2.9**
G23K	**Bananza Creek**	**82.66**	**18**	P	**P**	**15 55 49.1**	**-0.7**
	baz=229						
L26K	**Log Cabin Wild**	**82.66**	**22**	IAMs_20	IAMs_20	16 27 56.5	
	comp=Z,6µm,20.0s						
L26K	**Log Cabin Wild**	**82.66**	**22**	P	**P**	**15 55 49.5**	**-0.4**
	baz=236						
O28M	**Mount Upton**	**82.70**	**25**	P	**P**	**15 55 49.5**	**-0.9**
	baz=239						
DOT	**Dot Lake**	**82.75**	**22**	P	**P**	**15 55 48.9**	**-1.5**
DOT				IAmb	IAmb	15 55 54.6	
	comp=Z,46nm,1.2s						
H24K	**Noodor Dome**	**82.77**	**19**	P	**P**	**15 55 48.7**	**-1.7**
H24K				IAMs_20	IAMs_20	16 29 38.0	
	comp=Z,4µm,20.0s						
H24K	**Noodor Dome**	**82.77**	**19**	P	**P**	**15 55 50.8**	**+0.4**
	baz=231,SNR=5.2						
M27K	**Edge Creek, AK**	**82.86**	**23**	P	**P**	**15 55 49.9**	**-1.2**
M27K				IAmb	IAmb	15 56 05.1	
	comp=Z,72nm,1.4s						
M27K				IAMs_20	IAMs_20	16 25 44.7	
	comp=Z,7µm,22.0s						
M27K	**Edge Creek, AK**	**82.86**	**23**	P	**P**	**15 55 50.8**	**-0.3**
	baz=237						
SCRK	**Sand Creek**	**82.97**	**21**	IAMs_20	IAMs_20	16 25 49.5	
	comp=Z,7µm,22.0s						
SCRK	**Sand Creek**	**82.97**	**21**	P	**P**	**15 55 50.6**	**-1.0**
	baz=235,SNR=26						
S31K	**Pelican**	**83.09**	**29**	P	**P**	**15 55 51.4**	**-0.7**
	baz=243						
E22K	**Anaktuvuk Pass**	**83.10**	**16**	P	**P**	**15 55 51.5**	**-0.6**
	baz=227,SNR=10.0						
YUK3	**Moose Creek**	**83.11**	**24**	P	**P**	**15 55 52.0**	**-0.5**
	baz=238						
YUK8	**Steele Glacier**	**83.14**	**25**	P	**P**	**15 55 51.8**	**-0.9**
	baz=239,SNR=7.2						
O29M	**Mount Kennedy**	**83.15**	**26**	P	**P**	**15 55 51.8**	**-0.8**
	baz=240						
PYUN	**Piuthan**	**83.21**	**300**	*e*P	**P**	**15 55 51.4**	**-2.3**
	comp=Z,156nm,1.2s						
L27K	**Beaver Creek,**	**83.26**	**23**	P	**P**	**15 55 52.1**	**-0.9**
L27K				IAmb	IAmb	15 56 06.3	
	comp=Z,90nm,1.9s						
L27K				IAMs_20	IAMs_20	16 28 16.3	
	comp=Z,6µm,20.0s						
L27K	**Beaver Creek,**	**83.26**	**23**	P	**P**	**15 55 53.1**	**+0.1**
	baz=237,SNR=9.9						
BCAR	**Beaver Creek A**	**83.28**	**23**	P	**P**	**15 55 52.3**	**-0.8**
BVCY	**Beaver Creek**	**83.29**	**24**	P	**P**	**15 55 53.0**	**-0.1**
	baz=238,SNR=6.7						
PRP	**Porcupine Dome**	**83.34**	**20**	P	**P**	**15 55 52.7**	**-0.8**
PRP				IAMs_20	IAMs_20	16 28 17.3	
	comp=Z,5µm,20.0s						
PRP	**Porcupine Dome**	**83.34**	**20**	P	**P**	**15 55 53.5**	**0.0**
	baz=233,SNR=9.2						
G24K	**Hadweenzic Riv**	**83.44**	**18**	P	**P**	**15 55 54.4**	**+0.6**
	baz=232						
CRAG	**Craig**	**83.54**	**32**	P	**P**	**15 55 55.9**	**+1.4**
YUK6	**Outpost Mounta**	**83.56**	**25**	P	**P**	**15 55 55.3**	**+0.5**
	baz=240,SNR=76						
YUK4	**Talbot Arm**	**83.64**	**25**	P	**P**	**15 55 55.6**	**+0.4**
	baz=240,SNR=29						
WMQ	**Urumqi**	**83.65**	**316**	*e*P	**P**	**15 55 55.4**	**-0.1**
WMQ				PP	**PP**	**15 59 06.8**	**-1.8**
WMQ				S	**S**	**16 06 17.8**	**+2.0**
WMQ				pmax	pmax		
	comp=Z,21nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,720nm,4.5s						
WMQ				LR	LR		
	comp=Z,4µm,18.7s						
WMQ				LR	LR		
	comp=Z,2µm,22.9s						
WMQ				LR	LR		
	comp=Z,4µm,23.7s						
S32K	**Killisnoo**	**83.66**	**29**	P	**P**	**15 55 55.8**	**+0.8**
	baz=244						
E23K	**Chandalar**	**83.67**	**17**	P	**P**	**15 55 55.5**	**+0.4**
	baz=229,SNR=17						
K27K	**Chicken**	**83.70**	**22**	IAMs_20	IAMs_20	16 26 06.8	
	comp=Z,7µm,22.0s						
K27K	**Chicken**	**83.70**	**22**	P	**P**	**15 55 56.3**	**+1.1**
	baz=237						
PLBC	**Pleasant Camp**	**83.72**	**27**	P	**P**	**15 55 55.1**	**-0.3**
	baz=242,SNR=11						
P30M	**Million Dollar**	**83.76**	**26**	P	**P**	**15 55 55.8**	**+0.1**
	baz=242						
U33K	**Whale Pass**	**83.81**	**31**	P	**P**	**15 55 56.2**	**+0.4**
	baz=246,SNR=5.8						
F24K	**Squaw Lake**	**83.82**	**18**	P	**P**	**15 55 55.9**	**0.0**
	baz=231						
HYT	**Haines Junctio**	**83.86**	**26**	P	**P**	**15 55 54.9**	**-1.3**
HYT				IAmb	IAmb	15 56 31.7	
	comp=Z,52nm,1.2s						
HYT	**Haines Junctio**	**83.86**	**26**	P	**P**	**15 55 55.8**	**-0.4**
	baz=241						
G25K	**Bearman Lake**	**83.91**	**19**	P	**P**	**15 55 56.2**	**0.0**
	baz=233,SNR=13						
D23K	**Nanushuk River**	**83.97**	**16**	P	**P**	**15 55 56.6**	**+0.1**
	baz=228						
E24K	**Your Creek**	**84.00**	**17**	P	**P**	**15 55 56.9**	**+0.1**
	baz=230						
I26K	**Coal Creek Min**	**84.03**	**21**	IAMs_20	IAMs_20	16 28 54.4	
	comp=Z,8µm,20.0s						
I26K	**Coal Creek Min**	**84.03**	**21**	P	**P**	**15 55 56.7**	**-0.2**
	baz=236						
R32K	**Eaglecrest**	**84.04**	**29**	P	**P**	**15 55 57.0**	**-0.1**
	baz=244						
FYU	**Fort Yukon**	**84.06**	**19**	P	**P**	**15 55 56.9**	**-0.1**
FYU				IAmb	IAmb	15 56 54.5	
	comp=Z,53nm,1.5s						
FYU				IAMs_20	IAMs_20	16 31 47.3	
	comp=Z,3µm,20.0s						
JIS	**Juneau Island**	**84.11**	**29**	P	**P**	**15 55 57.5**	**+0.1**
JIS				IAMs_20	IAMs_20	16 26 03.1	
	comp=Z,8µm,20.0s						
JIS	**Juneau Island**	**84.11**	**29**	P	**P**	**15 56 01.9**	**+4.6**
	comp=Z,38nm,1.3s						
T33K	**Petersburg**	**84.18**	**30**	P	**P**	**15 55 57.9**	**+0.2**
	baz=246						
SKAG	**Skagway**	**84.19**	**27**	P	**P**	**15 55 58.3**	**+0.5**
SKAG				IAmb	IAmb	15 56 05.6	
	comp=Z,68nm,1.4s						
SKAG	**Skagway**	**84.19**	**27**	P	**P**	**15 55 59.9**	**+2.2**
SKAG	**Skagway**	**84.19**	**27**	⇑P	**P**	**15 56 00.7**	**+3.0**
SKAG	**Skagway**	**84.19**	**27**	P	**P**	**15 55 58.1**	**+0.3**
	baz=243						
A21K	**Barrow**	**84.20**	**13**	P	**P**	**15 55 57.2**	**-0.4**
A21K				IAMs_20	IAMs_20	16 28 33.5	
	comp=Z,5µm,21.0s						
A21K	**Barrow**	**84.20**	**13**	P	**P**	**15 55 58.4**	**+0.9**
	baz=222						
M29M	**Somme Creek**	**84.26**	**24**	P	**P**	**15 55 58.4**	**+0.2**
	baz=240						
V35K	**Ketchikan**	**84.27**	**32**	P	**P**	**15 55 58.6**	**+0.3**
	baz=247						
KMRM	**Mail Ridge**	**84.31**	**48**	P	**P**	**15 55 58.4**	**-0.6**
WRAK	**Wrangell Islan**	**84.33**	**31**	IAMs_20	IAMs_20	16 27 08.5	
	comp=Z,6µm,20.0s						
WRAK	**Wrangell Islan**	**84.33**	**31**	P	**P**	**15 55 58.9**	**+0.4**
	baz=246						
N30M	**Aishikik Lake**	**84.35**	**25**	P	**P**	**15 55 58.8**	**+0.2**
	baz=242						
MCCM	**Marconi Confer**	**84.39**	**50**	IAMs_20	IAMs_20	16 25 46.6	

	comp=Z,5µm,20.0s						
EGAK	**Eagle**	84.44	21	IAMs_20	IAMs_20	16 26 55.4	
	comp=Z,7µm,22.0s						
EGAK	**Eagle**	84.44	21	P	P	15 56 00.2	+1.2
	baz=238,SNR=19						
O30N	**Mendenhall**	84.45	26	P	P	15 56 00.1	+1.0
	baz=242,SNR=10						
HOPS	**Hopland Field**	84.46	49	IAMs_20	IAMs_20	16 27 08.5	
	comp=Z,5µm,20.0s						
F25K	**Christian Rive**	84.55	18	P	P	15 55 59.9	+0.3
	baz=233						
DAWY	**Dawson**	84.72	22	P	P	15 55 59.1	-1.3
DAWY	**Dawson**	84.72	22	P	P	15 56 00.9	+0.5
	baz=239,SNR=6.8						
L29M	**L29M**	84.72	24	P	P	15 56 01.0	+0.5
	baz=240						
I27K	**Kandik River**	84.72	21	P	P	15 56 01.1	+0.6
	baz=237						
G26K	**Porcupine Rive**	84.75	19	P	P	15 56 01.1	+0.7
	baz=235,SNR=33						
BMAR	**Burnt Mountain**	84.78	18	P	P	15 55 59.1	-1.6
E25K	**Arctic Village**	84.89	18	P	P	15 56 01.8	+0.6
	baz=233,SNR=5.2						
N31M	**Braeburn, Yuko**	84.91	26	IAMs_20	IAMs_20	16 27 02.3	
	comp=Z,5µm,21.0s						
N31M	**Braeburn, Yuko**	84.91	26	P	P	15 56 01.6	+0.1
	baz=243,SNR=14						
P32M	**Atlin**	84.99	28	P	P	15 56 02.6	+0.7
	baz=245						
C24K	**Franklin Bluff**	85.00	16	P	P	15 56 01.8	+0.1
	baz=230						
M30M	**Minto, Yukon**	85.00	24	P	P	15 56 01.2	-0.7
M30M				IAMs_20	IAMs_20	16 28 50.5	
	comp=Z,5µm,20.0s						
M30M	**Minto, Yukon**	85.00	24	P	P	15 56 01.6	-0.3
	baz=242,SNR=7.7						
BBB	**Bella Bella**	85.05	36	LR	LR	16 26 54.4	
	comp=Z,5µm,20.0s,baz=270,slow=31						
F26K	**Sheenjek River**	85.07	18	P	P	15 56 02.4	+0.2
	baz=235						
H27K	**Steamboat Moun**	85.10	20	P	P	15 56 02.0	-0.3
	baz=237						
HYB	**Hyderabad**	85.11	288	*e*P	P	15 56 03.8	+0.4
HYB				IAmb	IAmb	15 56 10.1	
	comp=Z,105nm,1.5s						
HYB	**Hyderabad**	85.11	288	*e*P	P	15 56 02.7	-0.7
HYB				IVmB_BB		15 56 18.4	
	comp=Z,532nm,2.9s						
HYB				IVMs_BB	IVMs_BB	16 30 34.6	
	comp=Z,345nm,32.0s						
SAO	**San Andreas Ge**	85.15	52	P	P	15 56 03.4	+0.2
SAO				IAmb	IAmb	15 56 08.3	
	comp=Z,36nm,1.4s						
SAO	**San Andreas Ge**	85.15	52	⇓P	P	15 56 07.3	+4.1
SAO	**San Andreas Ge**	85.15	52	P	P	15 56 03.4	+0.2
SAO				pmax	pmax		
	comp=Z,36nm,1.4s						
SAO				MLR	MLR		
	comp=Z,9µm,20.0s						
K29M	**Barlow Dome**	85.32	23	P	P	15 56 03.9	+0.3
	baz=241,SNR=13						
J29M	**Klondike Camp**	85.36	22	IAMs_20	IAMs_20	16 29 40.7	
	comp=Z,6µm,20.0s						
G27K	**Doyon Strip**	85.37	20	P	P	15 56 03.5	-0.1
	baz=237,SNR=8.1						
D25K	**Kavik River**	85.39	16	P	P	15 56 03.5	-0.2
	baz=232						
Q32M	**Nakina River**	85.40	29	P	P	15 56 03.9	-0.3
	baz=246						
DBO	**Dodson Butte**	85.42	45	P	P	15 56 04.5	0.0
DBO				IAmb	IAmb	15 56 09.2	
	comp=Z,34nm,1.2s						
YBH	**Yreka Blue Hor**	85.44	47	LR	LR	16 26 12.2	
	comp=Z,5µm,21.3s,baz=259,slow=30						
YBH	**Yreka Blue Hor**	85.44	47	IAMs_20	IAMs_20	16 25 39.2	
	comp=Z,5µm,22.0s						
HUMO	**Hull Mountain**	85.49	46	P	P	15 56 04.8	0.0
HUMO				IAmb	IAmb	15 56 10.3	
	comp=Z,44nm,1.1s						
HUMO	**Hull Mountain**	85.49	46	⇓P	P	15 56 06.3	+1.6
HUMO				⇑P	PcP	15 56 08.8	+1.1
I03D	**Drain, OR**	85.50	45	P	P	15 56 04.3	-0.4
I03D				IAmb	IAmb	15 56 09.9	
	comp=Z,48nm,1.2s						
MAW	**Mawson**	85.52	202	LR	LR	16 29 41.9	
	comp=Z,5µm,21.6s,baz=85,slow=32						
PMPB	**Monarch Peak**	85.53	53	P	P	15 56 05.0	-0.1
PMPB				IAmb	IAmb	15 56 38.8	
	comp=Z,75nm,1.4s						
S34M	**Telegraph Cree**	85.53	30	P	P	15 56 04.6	+0.1
	baz=247,SNR=6.2						
DGZ	**Jazzator, Alta**	85.62	321	⇑*e*P	P	15 56 02.8	-2.6
DGZ				pmax	pmax		
	comp=Z,27nm,1.3s						
DGZ				MLR	MLR		
	comp=Z,4µm,18.0s						
P33M	**Teslin, Yukon**	85.66	27	P	P	15 56 04.6	-0.7
	baz=246,SNR=6.0						
I29M	**Ogilvie Camp,**	85.78	22	IAMs_20	IAMs_20	16 27 44.8	
	comp=Z,4µm,22.0s						
I29M	**Ogilvie Camp,**	85.78	22	P	P	15 56 05.4	-0.3
	baz=240,SNR=6.3						
COR	**Corvallis**	85.78	44	IAMs_20	IAMs_20	16 25 38.9	
	comp=Z,8µm,22.0s						
ORV	**Oroville**	85.78	49	IAMs_20	IAMs_20	16 28 12.5	
	comp=Z,4µm,20.0s						
M31M	**Drury Creek, Y**	85.83	25	P	P	15 56 04.1	-1.9
M31M				IAmb	IAmb	15 56 09.8	
	comp=Z,37nm,1.0s						
M31M				IAMs_20	IAMs_20	16 28 02.3	
	comp=Z,7µm,21.0s						
M31M	**Drury Creek, Y**	85.83	25	P	P	15 56 05.8	-0.1
	baz=244,SNR=24						
MAYO	**Mayo, Yukon**	85.84	24	P	P	15 56 06.1	0.0
	baz=242						
SNCC	**San Nicolas Is**	85.89	56	P	P	15 56 06.6	-0.3
SNCC				IAmb	IAmb	15 56 11.5	
	comp=Z,62nm,1.1s						
SNCC	**San Nicolas Is**	85.89	56	P	P	15 56 06.2	-0.7
	baz=258						
N32M	**Quiet Lake**	85.94	26	P	P	15 56 06.3	-0.3
	baz=245						
SCZ2	**Santa Cruz Isl**	85.96	55	P	P	15 56 06.8	-0.5
	baz=257						
SBC	**Santa Barbara**	85.99	55	P	P	15 56 06.6	-0.8
	baz=257						
PKM	**Mcpherson Peak**	86.01	54	P	P	15 56 07.3	-0.4
	baz=257						
PCHI	**Peechi**	86.09	281	*e*P	P	15 56 09.5	+1.2
PCHI				*e*S	S	16 06 38.7	-2.3
E27K	**Coleen River**	86.15	18	P	P	15 56 07.3	-0.1
	baz=237						
H04D	**Lebanon**	86.15	44	P	P	15 56 07.5	-0.5
C26K	**Camden Bay**	86.16	16	P	P	15 56 07.7	+0.3
	baz=234						
NLWA	**Neilton Lookou**	86.17	41	IAMs_20	IAMs_20	16 28 08.1	
	comp=Z,6µm,20.0s						
RPN	**Rapa Nui**	86.20	117	LR	LR	16 26 07.9	
	comp=Z,3µm,21.7s,baz=265,slow=30						
J04A	**Umpqua Nationa**	86.26	46	P	P	15 56 07.9	-0.9
CMB	**Columbia Colle**	86.27	51	IAMs_20	IAMs_20	16 26 36.5	
	comp=Z,7µm,21.0s						
DLBC	**Dease Lake**	86.27	30	LR	LR	16 30 16.0	
	comp=Z,4µm,18.9s,baz=282,slow=33						
DLBC	**Dease Lake**	86.27	30	P	P	15 56 08.8	+0.5
DLBC	**Dease Lake**	86.27	30	P	P	15 56 07.8	-0.5
	baz=248						
FARO	**Faro, Yukon**	86.28	25	P	P	15 56 08.0	-0.2
FARO				IAmb	IAmb	15 56 21.0	
	comp=Z,90nm,1.6s						
FARO	**Faro, Yukon**	86.28	25	P	P	15 56 08.2	0.0
	baz=245,SNR=21						
C27K	**Jago River**	86.32	17	P	P	15 56 08.6	+0.4
	baz=235						
K04D	**Chiloquin, OR**	86.35	46	P	P	15 56 09.6	+0.5
K04D				IAmb	IAmb	15 56 21.8	
	comp=Z,57nm,1.3s						
H04A	**Detroit Lake**	86.57	44	P	P	15 56 10.2	+0.2
H04A				IAmb	IAmb	15 56 18.9	
	comp=Z,62nm,1.5s						
ZSN	**Zaisan**	86.60	319	*e*P	P	15 56 10.1	0.0
	baz=319						
ZSN	**Zaisan**	86.60	319	*e*P	P	15 56 10.1	0.0
VES	**Vestal, Richgr**	86.80	53	P	P	15 56 11.5	+0.2
	baz=258						
CIS	**Catalina Islan**	86.83	56	P	P	15 56 11.1	-0.5
	baz=258,SNR=9.0						
OSI	**Osito Audit: C**	86.83	55	P	P	15 56 11.1	-0.5
	baz=258						
EPYK	**Eagle Plains**	86.84	21	IAMs_20	IAMs_20	16 28 41.9	
	comp=Z,6µm,22.0s						
EPYK	**Eagle Plains**	86.84	21	P	P	15 56 11.1	+0.2
	baz=242,SNR=17						
ARVC	**Arvin**	86.85	54	P	P	15 56 11.5	-0.1
	baz=258,SNR=9.4						
J05D	**Fort Rock, OR**	86.89	46	P	P	15 56 09.8	-2.0
FMP	**Fort Macarthur**	86.99	56	P	P	15 56 11.6	-0.7
	baz=258						
DECC	**Green Verdugo**	87.07	55	P	P	15 56 12.7	-0.1
	baz=258						
I05D	**Terrebonne, OR**	87.07	45	P	P	15 56 10.5	-2.0
I05D				IAmb	IAmb	15 56 17.0	
	comp=Z,52nm,1.1s						
WAKR	**Walker**	87.10	51	P	P	15 56 11.6	-1.4
WAKR				IAmb	IAmb	15 56 23.6	
	comp=Z,51nm,1.5s						
BHPL	**Bhopal**	87.17	294	*e*P	P	15 56 17.0	+3.5
PASC	**Pasadena Art C**	87.17	55	P	P	15 56 12.4	-0.8
PASC				IAmb	IAmb	15 56 25.1	
	comp=Z,48nm,1.2s						
PINE	**Pine Mountain**	87.22	45	P	P	15 56 12.2	-1.2
MOD	**Modoc Plateau**	87.22	47	IAMs_20	IAMs_20	16 26 48.5	
	comp=Z,4µm,22.0s						
OMMB	**Old Mammoth Mi**	87.24	52	P	P	15 56 12.6	-1.3
ISA	**Isabella, Lake**	87.25	54	P	P	15 56 13.8	+0.1
	baz=258						
G30M	**tAoh Zraii Nji**	87.31	21	P	P	15 56 14.9	+1.7
	baz=242						
MMPY	**Sheldon Lake,**	87.32	25	P	P	15 56 14.4	+1.0
	baz=247,SNR=18						
DGAR	**Diego Garcia**	87.35	263	IAMs_20	IAMs_20	16 30 18.0	
	comp=Z,4µm,22.0s						
PAHR	**Pah Rah Range**	87.41	49	P	P	15 56 14.3	-0.1
PAHR				IAmb	IAmb	15 56 24.6	
	comp=Z,64nm,1.6s						
EDW2	**Edwards Air Fo**	87.47	54	P	P	15 56 15.3	+0.6
	baz=258,SNR=39						
BFSC	**Mount Baldy Ra**	87.61	55	P	P	15 56 15.7	+0.2
	baz=258,SNR=17						
ELS	**Elsinore Mount**	87.69	56	P	P	15 56 15.8	+0.1
ELS				IAmb	IAmb	15 56 20.0	
	comp=Z,23nm,1.2s						
CWC	**Cottonwood Cre**	87.72	53	P	P	15 56 16.4	+0.4
	baz=258						
TIN	**Tinemaha, Big**	87.73	52	P	P	15 56 16.4	+0.4
	baz=258						
109C	**Camp Elliot, M**	87.80	57	P	P	15 56 17.1	+0.9
	baz=259						
LRMC	**Laurel Mtn Rad**	87.84	54	P	P	15 56 17.4	+0.8
	baz=258,SNR=6.4						
MURC	**Murrieta**	87.86	56	P	P	15 56 17.4	+0.8
	baz=259,SNR=7.4						
NVAR	**Mina Array Bea**	87.95	51	P	P	15 56 15.2	-2.0
	comp=Z,2.4nm,0.9s,baz=239,slow=8.1,SNR=15						
NVAR				LR	LR	16 28 16.8	
	comp=Z,7µm,20.6s,baz=272,slow=31						
	comp=Z,2.4nm,0.9s						
NVAR	**Mina Array Bea**	87.95	51	P	P	15 56 14.7	-2.5
NV11	**Mina Array Sit**	88.07	51	P	P	15 56 17.1	-0.5
NV11				IAmb	IAmb	15 56 55.9	
	comp=Z,25nm,1.2s						
MPMC	**Manual Prospec**	88.11	53	P	P	15 56 18.6	+0.6
	baz=258,SNR=16						
BAR	**Barrett**	88.12	57	P	P	15 56 17.8	-0.1
BAR				IAmb	IAmb	15 56 22.1	
	comp=Z,26nm,1.3s						
MK31	**Makanchi Array**	88.13	318	P	P	15 56 14.9	-2.6
MK31				IAmb	IAmb	15 56 22.9	
	comp=Z,16nm,0.8s						
MK31	**Makanchi Array**	88.13	318	*c i*P	P	15 56 15.1	-2.4
MKAR	**Makanchi Array**	88.13	318	P	P	15 56 15.2	-2.4
	comp=Z,11nm,0.6s,baz=100,slow=5.7,SNR=41						
MKAR				LR	LR	16 35 41.3	
	comp=Z,2µm,21.2s,baz=100,slow=36						
	comp=Z,11nm,0.6s						
MKAR	**Makanchi Array**	88.13	318	P	P	15 56 14.9	-2.6
KVN	**Kaiserville**	88.24	50	P	P	15 56 16.9	-1.6
KVN				IAmb	IAmb	15 56 56.6	
	comp=Z,29nm,1.3s						
KVN	**Kaiserville**	88.24	50	P	P	15 56 16.9	-1.6
KVN				pmax	pmax		
	comp=Z,29nm,1.3s						
I07A	**Izee**	88.29	45	P	P	15 56 17.0	-1.5
I07A				IAmb	IAmb	15 56 23.1	
	comp=Z,32nm,1.2s						
MAKZ	**Makanchi**	88.34	318	P	P	15 56 16.7	-1.8
MAKZ				IAmb	IAmb	15 56 36.2	
	comp=Z,42nm,1.2s						
MAKZ	**Makanchi**	88.34	318	⇓P	P	15 56 16.4	-2.1
MAKZ				⇑P	PcP	15 56 17.1	-3.1
MAKZ	**Makanchi**	88.34	318	P	P	15 56 16.7	-1.8
MAKZ				pmax	pmax		
	comp=Z,42nm,1.2s						
MAKZ				MLR	MLR		
	comp=Z,3µm,19.0s						
MONP2	**Monument Peak**	88.37	57	P	P	15 56 19.4	+0.2
	baz=259,SNR=18						
F31M	**Tsiigehtchic**	88.38	21	P	P	15 56 19.1	+1.0
	baz=244						
GRAC	**Grapevine Rang**	88.39	52	P	P	15 56 19.2	+0.2
	baz=259,SNR=7.9						
ZAA0	**Zalesovo Array**	88.42	325	P	P	15 56 15.1	-3.5
ZALV	**Zalesovo Beam**	88.42	325	P	P	15 56 14.9	-3.7
	comp=Z,4.3nm,0.7s,baz=98,slow=4.0,SNR=10						
ZALV				LR	LR	16 32 51.5	
	comp=Z,1µm,21.9s,baz=100,slow=34						
	comp=Z,4.3nm,0.7s						
ZALV	**Zalesovo Beam**	88.42	325	P	P	15 56 14.3	-4.3
ZALV	**Zalesovo Beam**	88.42	325	*i* P	P	15 56 17.2	-1.4
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PFO	**Pinyon Flats O**	88.47	56	LR	LR	16 28 10.3	
	comp=Z,18µm,20.4s,baz=294,slow=30						
PFO	**Pinyon Flats O**	88.47	56	P	P	15 56 19.9	+0.3
PFO				IAmb	IAmb	15 56 33.1	
	comp=Z,78nm,1.9s						
PFO	**Pinyon Flats O**	88.47	56	⇑*e*P	P	15 56 20.0	+0.4
PFO				pmax	pmax		
	comp=Z,23nm,1.3s						
PFO	**Pinyon Flats O**	88.47	56	P	P	15 56 19.9	+0.3
	baz=259						
TPFO	**Pinon Flats**	88.47	56	P	P	15 56 19.5	-0.1
	baz=259						
GSC	**Goldstone, Bar**	88.51	54	P	P	15 56 19.3	-0.4
GSC				IAmb	IAmb	15 56 53.5	
	comp=Z,74nm,1.9s						
GSC	**Goldstone, Bar**	88.51	54	P	P	15 56 19.3	-0.4
GSC				pmax	pmax		
	comp=Z,74nm,1.9s						
GSC	**Goldstone, Bar**	88.51	54	P	P	15 56 20.1	+0.4
	baz=259						
LIRD	**Liard River Hi**	88.52	29	P	P	15 56 19.8	+0.8
	baz=251						
PMD	**Palm Desert**	88.54	56	P	P	15 56 19.9	+0.1
PMD				IAmb	IAmb	15 56 53.5	
	comp=Z,34nm,1.4s						
WVOR	**Wild Horse Val**	88.55	47	IAMs_20	IAMs_20	16 27 17.6	
	comp=Z,5µm,22.0s						
WVOR	**Wild Horse Val**	88.55	47	⇓P	P	15 56 21.2	+1.4
WVOR				⇑p	PcP	15 56 23.6	+2.2
IKP	**In-Ko-Pah, Jac**	88.58	57	P	P	15 56 19.8	-0.3
	baz=259						
QSM	**Queen of Sheba**	88.58	54	P	P	15 56 19.5	-0.4
RMX	**La Rumorosa**	88.60	57	P	P	15 56 19.6	-0.6
FURC	**Furnace Creek,**	88.69	53	P	P	15 56 20.7	+0.4
	baz=259,SNR=5.2						
TPH	**Tonopah**	88.72	51	P	P	15 56 19.7	-1.1
TPH	**Tonopah**	88.72	51	P	P	15 56 19.7	-1.1
TPH				pmax	pmax		
	comp=Z,78nm,1.2s						
YUH	**Yuha Desert**	88.74	57	P	P	15 56 20.4	-0.3
YUH				IAmb	IAmb	15 56 54.7	
	comp=Z,75nm,1.6s						
SMLA	**Simla**	88.78	302	*e*P	P	15 56 19.6	-1.3
SMLA				IAmb	IAmb	15 56 31.1	
	comp=Z,34nm,0.8s						
GWY	**Greenwater Val**	88.79	53	P	P	15 56 20.7	-0.3
HAWA	**Hanford**	88.80	43	P	P	15 56 20.0	-0.6
HAWA				IAMs_20	IAMs_20	16 27 57.7	
	comp=Z,7µm,21.0s						
HEC	**Hector,Ludlow**	88.80	55	P	P	15 56 21.4	+0.4
	baz=259						
INK	**Inuvik**	88.83	20	LR	LR	16 32 14.4	
	comp=Z,6µm,20.4s,baz=236,slow=33						
INK	**Inuvik**	88.83	20	P	P	15 56 20.1	-0.1
INK	**Inuvik**	88.83	20	P	P	15 56 20.1	-0.1
INK				pmax	pmax		
	comp=Z,21nm,1.3s						
INK	**Inuvik**	88.83	20	P	P	15 56 21.2	+1.0
	baz=244						
SWSC	**Sam W. Stewart**	88.89	57	P	P	15 56 21.9	+0.5
	baz=260,SNR=7.5						
BELC	**Belle Mtn. Jos**	88.92	56	P	P	15 56 22.0	+0.3
	baz=259,SNR=20						
SHOC	**Shoshone, Teco**	89.05	54	P	P	15 56 22.6	+0.5
	baz=259						
BMN	**Battle Mountai**	89.18	49	P	P	15 56 22.1	-0.7
BMN	**Battle Mountai**	89.18	49	P	P	15 56 22.1	-0.7
BMN				pmax	pmax		
	comp=Z,24nm,1.2s						
TUQ	**Turquoise Moun**	89.24	54	P	P	15 56 23.3	+0.1
	baz=260						
TPNV	**Topopah Spring**	89.26	53	P	P	15 56 22.8	-0.5
TPNV				IAmb	IAmb	15 56 33.8	
	comp=Z,36nm,1.5s						
TPNV				IAMs_20	IAMs_20	16 30 29.8	
	comp=Z,7µm,20.0s						
TPNV	**Topopah Spring**	89.26	53	⇑P	P	15 56 26.7	+3.4
TPNV				⇑p	P	15 56 26.7	+3.4
TPNV	**Topopah Spring**	89.26	53	P	P	15 56 22.8	-0.5
TPNV				pmax	pmax		
	comp=Z,36nm,1.5s						
TPNV				MLR	MLR		
	comp=Z,7µm,20.0s						
TPNV	**Topopah Spring**	89.26	53	P	P	15 56 23.4	+0.1
	baz=259						
SHLS	**Shalkode**	89.28	314	*e*P	P	15 56 21.7	-1.5
	comp=Z,38nm,2.8s,baz=314						
SHLS	**Shalkode**	89.28	314	*e*P	P	15 56 21.6	-1.5
SHLS				pmax	pmax		
	comp=Z,38nm,2.8s						
BC3	**Big Chuckawall**	89.30	56	P	P	15 56 23.6	+0.1
	baz=260,SNR=24						
GMRC	**Granite Mounta**	89.34	55	P	P	15 56 23.9	+0.2
	baz=260,SNR=13						
UZB	**Uzynbulak**	89.59	314	*e*P	P	15 56 24.4	-0.2
	comp=Z,55nm,2.5s,baz=314						
UZB	**Uzynbulak**	89.59	314	*e*P	P	15 56 24.4	-0.2
UZB				pmax	pmax		
	comp=Z,55nm,2.5s						
IRM	**Iron Mountain**	89.64	56	P	P	15 56 24.6	-0.4
	baz=260,SNR=32						
GLA	**Glamis**	89.72	57	P	P	15 56 25.3	-0.1
	baz=260,SNR=10.0						
KOTAN	**Kotaneelee Air**	89.73	29	P	P	15 56 25.8	+1.1
	baz=253						
KPKS	**Kokpek**	89.89	314	*e*P	P	15 56 25.6	-0.5
	comp=Z,34nm,2.1s,baz=314						
KPKS	**Kokpek**	89.89	314	*e*P	P	15 56 25.5	-0.5
KPKS				pmax	pmax		
	comp=Z,34nm,2.1s						
BMO	**Blue Mountains**	89.99	45	P	P	15 56 26.3	-0.2
BMO				IAmb	IAmb	15 56 30.6	
	comp=Z,32nm,1.4s						
BMO	**Blue Mountains**	89.99	45	P	P	15 56 26.3	-0.2
BMO				pmax	pmax		
	comp=Z,32nm,1.4s						
BMO				MLR	MLR		
	comp=Z,8µm,22.0s						
SATY	**Saty**	90.01	313	*e*P	P	15 56 26.1	-0.5
	comp=Z,42nm,2.5s,baz=313						
SATY	**Saty**	90.01	313	*e*P	P	15 56 26.1	-0.5
SATY				pmax	pmax		
	comp=Z,42nm,2.5s						
ZHN	**Zhinishke**	90.01	314	*e*P	P	15 56 26.1	-0.6
	baz=314						
ZHN	**Zhinishke**	90.01	314	*e*P	P	15 56 26.0	-0.6
BLYC	**Blythe**	90.08	56	P	P	15 56 26.4	-0.6
BLYC				IAmb	IAmb	15 56 31.9	
	comp=Z,42nm,1.3s						
NEE2	**Needles Airpor**	90.18	55	P	P	15 56 27.3	-0.1
	baz=260,SNR=5.5						
TDK	**Taldyqorghan**	90.39	315	*e*P	P	15 56 28.5	+0.3
	baz=315						
TDK	**Taldyqorghan**	90.39	315	*e*P	P	15 56 28.4	+0.3
PDMCI	**Parker Dam,Lak**	90.49	56	P	P	15 56 28.9	0.0
	baz=260,SNR=7.1						
113A	**Mohawk Valley,**	90.55	57	P	P	15 56 28.4	-0.7
113A				IAmb	IAmb	15 56 34.0	
	comp=Z,34nm,1.3s						
ELK	**Elko**	90.72	49	LR	LR	16 29 22.9	
	comp=Z,3µm,21.1s,baz=234,slow=30						
MFID	**Camas Ranch**	90.77	46	IAMs_20	IAMs_20	16 31 42.2	
	comp=Z,5µm,20.0s						
NEW	**Newport**	90.79	41	LR	LR	16 28 53.6	
	comp=Z,7µm,21.7s,baz=252,slow=30						
NEW	**Newport**	90.79	41	P	P	15 56 29.0	-1.0
NEW	**Newport**	90.79	41	IAMs_20	IAMs_20	16 28 20.4	
	comp=Z,8µm,22.0s						
NEW	**Newport**	90.79	41	P	P	15 56 29.0	-1.0
NEW				pmax	pmax		
	comp=Z,18nm,1.4s						
NEW				MLR	MLR		
	comp=Z,8µm,22.0s						
NEW	**Newport**	90.79	41	P	P	15 56 31.0	+1.0
	baz=259						
W13A	**Hualapai Mount**	90.83	55	P	P	15 56 28.4	-2.3
PLID	**Pearl Lake**	90.95	45	P	P	15 56 28.8	-2.3
PLID				IAmb	IAmb	15 56 41.7	
	comp=Z,23nm,1.0s						
PLID				IAMs_20	IAMs_20	16 28 33.8	
	comp=Z,7µm,22.0s						
MDOK	**Medeo**	91.01	313	*e*P	P	15 56 30.7	-0.6
	baz=313						
MDOK	**Medeo**	91.01	313	*e*P	P	15 56 30.6	-0.6
TNSS	**Tian-Shan**	91.06	313	*e*P	P	15 56 31.2	-0.6
	baz=313						
TNSS	**Tian-Shan**	91.06	313	*e*P	P	15 56 31.2	-0.6
CHKK	**Chushkaly**	91.17	314	*e*P	P	15 56 31.8	-0.1
	baz=314						
CHKK	**Chushkaly**	91.17	314	*e*P	P	15 56 31.7	-0.1
KSH	**Kashi**	91.18	310	P	P	15 56 33.5	+1.4
KSH				PP	PP	16 00 10.5	+1.1
KSH				S	S	16 07 33.6	+5.1
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,380nm,6.5s						
KSH				LR	LR		
	comp=Z,3µm,19.0s						
KSH				LR	LR		
	comp=Z,3µm,21.3s						
KSH				LR	LR		
	comp=Z,4µm,23.2s						
214A	**Organ Pipe Nat**	91.22	58	P	P	15 56 32.5	+0.1
	baz=261						
KURK	**Kurchatov**	91.35	321	P	P	15 56 30.3	-2.2
KURK				IAmb	IAmb	15 56 50.5	
	comp=Z,51nm,1.6s						
KURK	**Kurchatov**	91.35	321	IAMs_20	IAMs_20	16 35 09.6	
	comp=Z,5µm,22.0s						
KURK	**Kurchatov**	91.35	321	⇑*e*P	P	15 56 31.4	-1.0
KURK				pmax	pmax		
	comp=Z,24nm,1.6s						
KURBB	**Kurchatov Arra**	91.39	321	LR	LR	16 40 43.7	
	comp=Z,2µm,18.1s,baz=101,slow=38						
CCUT	**Cedar City**	91.63	52	P	P	15 56 32.9	-1.5
CCUT				IAmb	IAmb	15 56 40.2	
	comp=Z,35nm,1.1s						
LCMT	**Little Creek M**	91.64	53	P	P	15 56 33.8	-0.6
LCMT				IAmb	IAmb	15 56 40.0	
	comp=Z,44nm,1.2s						
KUU	**Kurty**	91.64	314	*e*P	P	15 56 33.7	-0.3
	comp=Z,83nm,2.2s,baz=314						
KUU	**Kurty**	91.64	314	*e*P	P	15 56 33.6	-0.4
KUU				pmax	pmax		
	comp=Z,83nm,2.2s						
NRIK	**Noril'sk**	91.77	340	P	P	15 56 30.9	-3.1
	comp=Z,4.2nm,0.9s,baz=99,slow=2.1,SNR=7.9						
NRIK				LR	LR	16 36 58.2	
	comp=Z,7µm,21.1s,baz=102,slow=35						
	comp=Z,4.2nm,0.9s						
NRIK	**Noril'sk**	91.77	340	*ce*P	P	15 56 33.3	-0.7
NRIK				pmax	pmax		
	comp=Z,17nm,1.1s						
NRIK				MLR	MLR		
	comp=Z,6µm,19.0s						
HLID	**Hailey**	91.81	46	P	P	15 56 34.5	-0.5
HLID				IAmb	IAmb	15 56 40.6	
	comp=Z,30nm,1.2s						

HLID				IAMs_20	IAMs_20	16 30 05.7	
	comp=Z,7µm,21.0s						
HLID	**Hailey**	**91.81**	**46**	P	**P**	**15 56 35.1**	**+0.2**
	baz=260,SNR=27						
SZCU	**Shurtz Canyon**	**91.86**	**52**	P	**P**	**15 56 34.9**	**-0.5**
KNB	**Kanab**	**91.98**	**53**	P	**P**	**15 56 35.5**	**-0.5**
KNB	**Kanab**	**91.98**	**53**	P	**P**	**15 56 35.5**	**-0.5**
KNB				pmax	pmax		
	comp=Z,105nm,1.4s						
LPIG	**La Paz**	**92.28**	**66**	LR	LR	16 32 30.8	
	comp=Z,6µm,18.6s,baz=260,slow=32						
U15A	**North Rim**	**92.31**	**54**	P	**P**	**15 56 37.0**	**-0.6**
C36M	**Paulatuk**	**92.40**	**20**	P	**P**	**15 56 36.5**	**-0.4**
C36M				IAmb	IAmb	15 56 49.5	
	comp=Z,30nm,1.3s						
C36M				IAMs_20	IAMs_20	16 31 36.8	
	comp=Z,4µm,22.0s						
C36M	**Paulatuk**	**92.40**	**20**	P	**P**	**15 56 38.5**	**+1.7**
	baz=253						
BGU	**Big Grassy Mou**	**92.41**	**49**	P	**P**	**15 56 36.6**	**-1.2**
BGU				IAmb	IAmb	15 56 47.4	
	comp=Z,28nm,1.1s						
DUG	**Dugway, Tooele**	**92.46**	**50**	P	**P**	**15 56 37.3**	**-0.8**
DUG				IAmb	IAmb	15 56 51.7	
	comp=Z,38nm,1.4s						
DUG				IAMs_20	IAMs_20	16 35 27.3	
	comp=Z,4µm,18.0s						
DUG	**Dugway, Tooele**	**92.46**	**50**	P	**P**	**15 56 37.3**	**-0.8**
DUG				pmax	pmax		
	comp=Z,38nm,1.4s						
DUG				MLR	MLR		
	comp=Z,4µm,18.0s						
DUG	**Dugway, Tooele**	**92.46**	**50**	P	**P**	**15 56 38.5**	**+0.5**
	baz=261,SNR=12						
MTPU	**Mount Pierson**	**92.63**	**52**	P	**P**	**15 56 38.6**	**-0.6**
MSO	**Missoula**	**92.66**	**43**	IAMs_20	IAMs_20	16 30 28.0	
	comp=Z,7µm,21.0s						
MSO	**Missoula**	**92.66**	**43**	P	**P**	**15 56 39.6**	**+0.8**
	baz=261						
MSU	**Marysvale**	**92.70**	**52**	P	**P**	**15 56 38.1**	**-1.2**
MSU	**Marysvale**	**92.70**	**52**	P	**P**	**15 56 38.1**	**-1.2**
X16A	**Lo Mia Camp, P**	**92.71**	**56**	P	**P**	**15 56 38.6**	**-0.8**
X16A				IAmb	IAmb	15 56 44.6	
	comp=Z,20nm,1.2s						
HVU	**Hansel Valley**	**92.72**	**48**	P	**P**	**15 56 37.4**	**-1.8**
HVU	**Hansel Valley**	**92.72**	**48**	P	**P**	**15 56 37.4**	**-1.8**
HVU				pmax	pmax		
	comp=Z,68nm,1.1s						
SGDS	**Sogindy**	**92.80**	**313**	*e*P	**P**	**15 56 38.9**	**-0.6**
	baz=313						
SGDS	**Sogindy**	**92.80**	**313**	*e*P	**P**	**15 56 38.8**	**-0.6**
A36M	**Sachs Harbour**	**92.81**	**17**	P	**P**	**15 56 36.9**	**-1.9**
A36M				IAmb	IAmb	15 56 52.8	
	comp=Z,28nm,0.9s						
A36M	**Sachs Harbour**	**92.81**	**17**	P	**P**	**15 56 40.4**	**+1.7**
	baz=252						
WUAZ	**Wupatki**	**92.92**	**55**	P	**P**	**15 56 39.1**	**-1.3**
WUAZ				IAmb	IAmb	15 56 46.2	
	comp=Z,40nm,1.4s						
WUAZ	**Wupatki**	**92.92**	**55**	⇑P	**P**	**15 56 43.9**	**+3.6**
WUAZ				⇓p	**PcP**	**15 56 45.1**	**+4.2**
WUAZ	**Wupatki**	**92.92**	**55**	P	**P**	**15 56 40.6**	**+0.3**
	baz=262,SNR=9.5						
TUC	**Tucson**	**92.97**	**58**	IAMs_20	IAMs_20	16 33 00.5	
	comp=Z,6µm,19.0s						
TUC	**Tucson**	**92.97**	**58**	P	**P**	**15 56 40.1**	**-0.4**
	baz=262						
MCMT	**McKenzie Canyo**	**93.11**	**45**	P	**P**	**15 56 39.5**	**-1.6**
CTU	**Camp Tracy**	**93.33**	**50**	P	**P**	**15 56 40.2**	**-1.9**
CTU				IAmb	IAmb	15 56 47.3	
	comp=Z,24nm,1.1s						
DLMT	**Dillon**	**93.37**	**45**	IAMs_20	IAMs_20	16 30 23.8	
	comp=Z,7µm,22.0s						
BTLS	**Baital**	**93.44**	**315**	*e*P	**P**	**15 56 42.6**	**+0.2**
	comp=Z,25nm,2.3s,baz=315						
BTLS	**Baital**	**93.44**	**315**	*e*P	**P**	**15 56 42.5**	**+0.2**
BTLS				pmax	pmax		
	comp=Z,25nm,2.3s						
LRM	**Limekiln Ridge**	**93.53**	**44**	P	**P**	**15 56 41.3**	**-1.7**
TMUT	**Trail Mountain**	**93.56**	**51**	P	**P**	**15 56 41.5**	**-1.9**
HWUT	**Hardware Ranch**	**93.59**	**49**	P	**P**	**15 56 41.2**	**-2.1**
HWUT				IAmb	IAmb	15 56 47.5	
	comp=Z,24nm,1.2s						
HWUT				IAMs_20	IAMs_20	16 31 23.2	
	comp=Z,3µm,21.0s						
BELA	**Belgrano 2**	**93.65**	**177**	P	**P**	**15 56 40.8**	**-1.9**
BOZ	**Bozeman (W)**	**94.07**	**45**	P	**P**	**15 56 45.7**	**+0.3**
	baz=263,SNR=7.2						
HRY	**Holter Researc**	**94.08**	**44**	P	**P**	**15 56 43.8**	**-1.5**
AHID	**Auburn Hatcher**	**94.09**	**48**	IAMs_20	IAMs_20	16 33 58.2	
	comp=Z,4µm,20.0s						
W18A	**Petrified Fore**	**94.20**	**55**	P	**P**	**15 56 45.9**	**-0.3**
	baz=263						
ROCAM	**Rodrigues Isla**	**94.20**	**249**	IAMs_20	IAMs_20	16 36 58.1	
	comp=Z,4µm,20.0s						
FXWY	**Fox Creek**	**94.25**	**47**	P	**P**	**15 56 45.0**	**-1.4**
FXWY				IAMs_20	IAMs_20	16 31 26.4	
	comp=Z,6µm,22.0s						
TPAW	**Teton Pass**	**94.29**	**47**	IAMs_20	IAMs_20	16 31 27.3	
	comp=Z,4µm,21.0s						
REDW	**Red Top Meadow**	**94.34**	**47**	IAMs_20	IAMs_20	16 31 18.9	
	comp=Z,3µm,21.0s						
IMW	**Indian Meadow**	**94.35**	**46**	IAMs_20	IAMs_20	16 33 29.8	
	comp=Z,6µm,20.0s						
SNOW	**Snow King Moun**	**94.42**	**47**	IAMs_20	IAMs_20	16 31 21.0	
	comp=Z,3µm,21.0s						
MOOW	**Moose Ponds**	**94.47**	**47**	IAMs_20	IAMs_20	16 31 44.1	
	comp=Z,6µm,21.0s						
FLWY	**Flagg Ranch**	**94.54**	**46**	IAMs_20	IAMs_20	16 33 46.0	
	comp=Z,6µm,20.0s						
H17A	**Grant Village**	**94.67**	**46**	P	**P**	**15 56 47.5**	**-0.8**
	baz=263,SNR=7.7						
YKA	**Yellowknife Ar**	**94.69**	**28**	P	**P**	**15 56 44.5**	**-3.1**
	comp=Z,3.7nm,0.9s,baz=255,slow=4.5,SNR=25						
YKA				PKKPbc	**PKKPdf**	**16 13 45.2**	**-2.2**
	comp=Z,1.2nm,0.8s,baz=78,slow=2.7,SNR=13						
YKA				LR	LR	16 33 07.9	
	comp=Z,6µm,20.5s,baz=274,slow=32						
	comp=Z,3.7nm,0.9s						
RDMU	**Red Mountain**	**94.97**	**50**	P	**P**	**15 56 48.1**	**-1.6**
BRZS	**Berezniki**	**95.00**	**320**	*e*P	**P**	**15 56 48.3**	**-1.0**
	baz=320						
BRZS	**Berezniki**	**95.00**	**320**	*e*P	**P**	**15 56 48.3**	**-1.0**
PV23	**Carpenter Ridg**	**95.16**	**52**	P	**P**	**15 56 49.3**	**-1.4**
PV23				IAmb	IAmb	15 56 56.0	
	comp=Z,25nm,1.1s						
BW06	**Boulder Array**	**95.22**	**48**	P	**P**	**15 56 48.9**	**-1.9**
BW06				IAmb	IAmb	15 57 04.8	
	comp=Z,14nm,1.0s						
BW06				IAMs_20	IAMs_20	16 34 25.0	
	comp=Z,4µm,20.0s						
BW06	**Boulder Array**	**95.22**	**48**	P	**P**	**15 56 50.4**	**-0.4**
	baz=264,SNR=7.1						
PD31	**Pinedale Array**	**95.22**	**48**	P	**P**	**15 56 48.7**	**-2.1**
PDAR	**Pinedale Array**	**95.22**	**48**	P	**P**	**15 56 48.1**	**-2.6**
	comp=Z,3.3nm,0.8s,baz=232,slow=2.1,SNR=16						
PDAR				LR	LR	16 34 26.4	
	comp=Z,3µm,19.8s,baz=292,slow=32						
	comp=Z,3.3nm,0.8s						
MVCO	**Mesa Verde**	**95.43**	**53**	P	**P**	**15 56 51.4**	**-0.5**
	baz=264						
EGMT	**Eagleton**	**95.63**	**42**	IAMs_20	IAMs_20	16 33 38.6	
	comp=Z,4µm,20.0s						
EGMT	**Eagleton**	**95.63**	**42**	P	**P**	**15 56 52.5**	**+0.2**
	baz=264						
RLMT	**Red Lodge**	**95.67**	**45**	IAMs_20	IAMs_20	16 31 26.9	
	comp=Z,7µm,22.0s						
RLMT	**Red Lodge**	**95.67**	**45**	P	**P**	**15 56 52.3**	**-0.5**
	baz=264						
KK31	**Karatay Array**	**95.74**	**313**	P	**P**	**15 56 50.0**	**-2.9**
KK31	**Karatay Array**	**95.74**	**313**	P	**P**	**15 56 50.0**	**-2.9**
KK31				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KKAR	**Karatay Array**	**95.74**	**313**	P	**P**	**15 56 49.6**	**-3.3**
KKAR	**Karatay Array**	**95.74**	**313**	P	**P**	**15 56 50.1**	**-2.8**
KKAR				IAmb	IAmb	15 57 00.0	
	comp=Z,9.9nm,1.1s						
KKAR	**Karatay Array**	**95.74**	**313**	P	**P**	**15 56 50.1**	**-2.8**
KKAR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
O20A	**White River Ci**	**95.93**	**50**	P	**P**	**15 56 53.5**	**-0.5**
	baz=264						
IUG	**Iuzhnay**	**96.00**	**312**	*e*P	**P**	**15 56 53.7**	**-0.6**
	baz=312						
IUG	**Iuzhnay**	**96.00**	**312**	*e*P	**P**	**15 56 53.6**	**-0.6**
BVAR	**Borovoye Array**	**96.72**	**323**	LR	LR	16 43 58.3	
	comp=Z,2µm,18.6s,baz=81,slow=38						
BRVK	**Borovoye**	**96.79**	**323**	P	**P**	**15 56 53.6**	**-3.7**
BRVK				IAmb	IAmb	15 57 03.5	
	comp=Z,14nm,1.0s						
BRVK	**Borovoye**	**96.79**	**323**	IAMs_20	IAMs_20	16 44 32.3	
	comp=Z,3µm,18.0s						
BRVK	**Borovoye**	**96.79**	**323**	*ce*P	**P**	**15 56 55.9**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,11nm,0.9s						
S22A	**4UR Ranch, Cre**	**96.80**	**53**	P	**P**	**15 56 57.2**	**-1.0**
	baz=265						
RWWY	**Rawlins**	**96.85**	**49**	IAMs_20	IAMs_20	16 39 14.3	
	comp=Z,4µm,18.0s						
ANMO	**Albuquerque**	**96.85**	**56**	LR	LR	16 32 56.6	
	comp=Z,7µm,21.2s,baz=20,slow=31						
ANMO	**Albuquerque**	**96.85**	**56**	⇑*e*P	**P**	**15 56 54.4**	**-4.0**
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ANMO	**Albuquerque**	**96.85**	**56**	P	**P**	**15 56 57.2**	**-1.1**
	baz=265						
K22A	**Casper**	**97.43**	**48**	P	**P**	**15 57 00.3**	**-0.5**
	baz=266						
MNTX	**Cornudas Mount**	**97.46**	**59**	P	**P**	**15 57 00.2**	**-0.8**
	baz=265						
N23A	**Red Feather La**	**97.74**	**50**	P	**P**	**15 57 00.9**	**-1.4**
	baz=266						
ISCO	**Idaho Springs**	**97.91**	**51**	P	**P**	**15 57 02.1**	**-1.1**
	baz=266						
LAO	**LASA Array**	**97.92**	**44**	P	**P**	**15 57 01.8**	**-0.9**
	baz=266						
PHWY	**Pilot Hill**	**98.13**	**49**	IAMs_20	IAMs_20	16 41 06.4	
	comp=Z,3µm,19.0s						
Q24A	**Divide**	**98.21**	**52**	P	**P**	**15 57 03.2**	**-1.4**
	baz=266						
NVL	**N'lazarevskaya**	**98.50**	**190**	*e*P	Pdif	15 57 09.5	+4.7
NVL				*e*S	**SKSac**	**16 07 45.3**	**+5.3**
NVL				pmax	pmax		
	comp=Z,9.0nm,1.2s						
NVL				MLR	MLR		
	comp=Z,3µm,16.0s						
T25A	**Trinidad**	**98.68**	**54**	P	**P**	**15 57 06.0**	**-0.6**
	baz=266						
TROLL	**Troll, Antarti**	**98.71**	**187**	Pdiff	**P**	**15 57 05.8**	**-0.1**
TXAR	**Lajitas Array**	**98.75**	**62**	PP	**PP**	**16 01 06.9**	**-1.6**
	comp=Z,0.9nm,1.1s,baz=242,slow=5.8,SNR=2.8						
TXAR				PKKP	**PKKPdf**	**16 13 39.5**	**+0.2**
	comp=Z,0.3nm,0.8s,baz=91,slow=5.4,SNR=3.6						
TXAR				LR	LR	16 33 42.8	
	comp=Z,5µm,21.3s,baz=272,slow=31						
BRIGG	**Briggsdale**	**98.95**	**50**	IAMs_20	IAMs_20	16 33 36.1	
	comp=Z,5µm,22.0s						
RSSD	**Black Hills**	**99.33**	**47**	IAMs_20	IAMs_20	16 33 46.7	
	comp=Z,6µm,22.0s						
RSSD	**Black Hills**	**99.33**	**47**	P	**Pdif**	**15 57 08.7**	**-0.6**
	baz=268						
DGMT	**Dagmar**	**99.37**	**42**	IAMs_20	IAMs_20	16 42 07.4	
	comp=Z,3µm,19.0s						
SNAA	**Sanae**	**99.58**	**185**	Pdiff	**Pdif**	**15 57 14.7**	**+5.0**
SNAA	**Sanae**	**99.58**	**185**	LR	LR	16 39 32.5	
	comp=Z,4µm,19.9s,baz=163,slow=34						
SNAA	**Sanae**	**99.58**	**185**	IAMs_20	IAMs_20	16 40 18.9	
	comp=Z,5µm,20.0s						
SNAA	**Sanae**	**99.58**	**185**	⇑*e*P	**Pdif**	**15 57 05.9**	**-3.8**
SNAA				pmax	pmax		
	comp=Z,15nm,1.7s						
VNA3	**Neumayer Olymp**	**100.49**	**183**	Pdiff	**Pdif**	**15 57 19.6**	**+5.8**
VNA2	**Neumayer--Watz**	**100.67**	**184**	Pdiff	**Pdif**	**15 57 16.1**	**+1.6**
	baz=212,slow=3.0						
OGNE	**Ogallala**	**100.70**	**50**	IAMs_20	IAMs_20	16 36 10.4	
	comp=Z,5µm,21.0s						
FFC	**Flin Flon**	**100.79**	**36**	IAMs_20	IAMs_20	16 35 53.3	
	comp=Z,5µm,21.0s						
UNM	**Universidad Na**	**102.06**	**72**	IAMs_20	IAMs_20	16 35 34.3	
	comp=Z,4µm,20.0s						
JCT	**Junction City**	**102.16**	**61**	IAMs_20	IAMs_20	16 39 49.1	
	comp=Z,5µm,19.0s						
ARU	**Arti**	**103.54**	**326**	IAMs_20	IAMs_20	16 45 27.8	
	comp=Z,5µm,18.0s						
ARU	**Arti**	**103.54**	**326**	P	**Pdif**	**15 57 34.7**	**+7.2**
ARU						16 01 48.6	
ARU				PPP	PPP	16 03 58.0	
ARU				S	**SKSac**	**16 08 09.9**	**+5.1**
ARU				SS	**SS**	**16 16 20.5**	**-5.9**
ARU				MLR	MLR		
	comp=Z,4µm,18.0s						
ALE	**Alert**	**103.59**	**5**	IAMs_20	IAMs_20	16 44 09.7	
	comp=Z,4µm,19.0s						
KVTX	**Kingsville**	**103.72**	**64**	IAMs_20	IAMs_20	16 44 17.6	
	comp=Z,5µm,18.0s						
435B	**Jarrell**	**104.08**	**60**	IAMs_20	IAMs_20	16 39 35.9	
	comp=Z,5µm,19.0s						
MSEY	**Mahe Island**	**104.45**	**263**	IAMs_20	IAMs_20	16 44 54.1	
	comp=Z,3µm,20.0s						
ECSD	**EROS Data Cent**	**104.69**	**47**	IAMs_20	IAMs_20	16 37 14.6	
	comp=Z,5µm,22.0s						
AGMN	**Agassiz Nation**	**104.93**	**42**	IAMs_20	IAMs_20	16 44 09.4	
	comp=Z,3µm,19.0s						
NATX	**Nacogdoches**	**106.59**	**59**	IAMs_20	IAMs_20	16 38 46.3	
	comp=Z,5µm,22.0s						
SCIA	**State Center**	**107.30**	**49**	IAMs_20	IAMs_20	16 41 37.0	
	comp=Z,5µm,20.0s						
KBS	**Kingsbay**	**107.61**	**354**	IAMs_20	IAMs_20	16 43 07.8	
	comp=Z,4µm,21.0s						
EYMN	**Ely**	**107.87**	**42**	IAMs_20	IAMs_20	16 46 33.3	
	comp=Z,4µm,19.0s						
VOI	**Vohitsoka**	**108.77**	**244**	IAMs_20	IAMs_20	16 41 25.7	
	comp=Z,4µm,22.0s						
ABPO	**Ambohimpanom**	**109.20**	**247**	IAMs_20	IAMs_20	16 44 23.4	
	comp=Z,3µm,20.0s						
JFWS	**Jewell Farm**	**109.39**	**47**	IAMs_20	IAMs_20	16 48 57.0	
	comp=Z,3µm,18.0s						
COWI	**Conover**	**109.73**	**44**	IAMs_20	IAMs_20	16 41 39.8	
	comp=Z,3µm,21.0s						
LVZ	**Lovozero**	**110.60**	**341**	IAMs_20	IAMs_20	16 50 16.8	
	comp=Z,5µm,21.0s						
APA	**Apatity**	**111.18**	**341**	⇓*i*PKIKP	**PKiKP**	**16 02 01.4**	**+1.6**
APA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
L44A	**Lake County Fo**	**111.19**	**48**	IAMs_20	IAMs_20	16 43 25.9	
	comp=Z,5µm,20.0s						
KEV	**Kevo**	**111.78**	**344**	IAMs_20	IAMs_20	16 52 57.8	
	comp=Z,3µm,20.0s						
KLMR	**Klimovskoe**	**112.02**	**333**	*e*PKiKP	**PKiKP**	**16 02 03.6**	**+2.0**
KLMR				*e*PP	**PP**	**16 02 42.1**	**-3.3**
KLMR				SP	SP	16 12 09.3	-4.7
KLMR				PS	**PS**	**16 12 20.8**	**+1.8**
KLMR				PS	**PS**	**16 12 20.8**	**+1.8**
KLMR				*e*PKKPab	**PKKPab**	**16 13 03.6**	**+1.2**
KLMR				LQ	LQ	16 36 34.8	
KLMR				LQ	LQ	16 36 34.8	
KLMR				LR	LR	16 40 12.5	
KLMR				AMP		16 50 38.8	
	comp=Z,5µm,19.2s						
KLMR	**Klimovskoe**	**112.02**	**333**	*i* PKIKP	**PKiKP**	**16 02 03.6**	**+2.0**
KLMR				*e*		16 02 42.0	
KLMR				SP	SP	16 12 09.3	-4.7
KLMR				PS	**PS**	**16 12 20.8**	**+1.8**
KLMR				MLR	MLR		
	comp=Z,5µm,19.0s						
ARCES	**ARCESS Array B**	**112.32**	**344**	PKKPbc	PKKPbc	16 12 52.7	-2.4
	comp=Z,4.5nm,1.0s,baz=295,slow=2.6,SNR=6.6						
TEIG	**Tepich**	**112.36**	**72**	IAMs_20	IAMs_20	16 40 32.0	
	comp=Z,4µm,21.0s						
MAK	**Makhachkala**	**112.55**	**313**	*i* P	**Pdif**	**15 58 06.8**	**-1.0**
MAK				*i*		16 02 00.7	
MAK				*e*		16 02 48.4	
MAK				*e*PPP	PPP	16 05 12.0	
MAK				*e*		16 08 43.4	
MAK				*e*PS	**PS**	**16 12 24.1**	**-0.5**
MAK				*e*SS	SS	16 18 36.4	+7.6
MAK				pmax	pmax		
	comp=Z,151nm,1.2s						
MAK				MLR	MLR		
	comp=Z,2µm,17.0s						
GLMI	**Grayling**	**113.09**	**45**	IAMs_20	IAMs_20	16 53 45.8	
	comp=Z,2µm,19.0s						
TGUH	**Tegucigalpa,Un**	**113.12**	**78**	IAMs_20	IAMs_20	16 46 44.6	
	comp=Z,3µm,19.0s						
VRH	**Novokhopyorsk**	**114.37**	**323**	*e*PKIKP	**PKiKP**	**16 02 12.2**	**+5.8**
VRH				pmax	pmax		
	comp=Z,11nm,0.5s						
BOAB	**BOACO BROADBAN**	**114.59**	**80**	IAMs_20	IAMs_20	16 45 21.7	
	comp=Z,4µm,19.0s						
GNI	**Garni**	**115.10**	**311**	⇓*i*PKIKP	**PKiKP**	**16 02 07.0**	**-1.4**
JTS	**Las Juntas de**	**115.15**	**82**	IAMs_20	IAMs_20	16 40 43.5	
	comp=Z,2µm,20.0s						
KBZ	**Khabaz**	**115.68**	**315**	PKKPab	PKKPab	16 12 45.3	-1.2
	comp=Z,2.0nm,0.9s,baz=0.7,slow=1.4,SNR=3.9						
VORR	**Voronezh**	**115.70**	**324**	*e*PKIKP	**PKPdf**	**16 02 11.8**	**+2.9**
VORR				pmax	pmax		
	comp=Z,38nm,0.4s						
KIV	**Kislovodsk**	**115.77**	**315**	IAMs_20	IAMs_20	16 58 42.0	
	comp=Z,2µm,18.0s						
KIV	**Kislovodsk**	**115.77**	**315**	*i* PKIKP	**PKiKP**	**16 02 06.9**	**-2.6**
KIV				*e*		16 03 10.6	
KIV				*e*PS	**PS**	**16 12 52.2**	**-2.2**
KIV				*e*SS	SS	16 19 09.1	-2.3
KIV				*e*SSS	SSS	16 23 26.7	
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
OBN	**Obninsk**	**115.83**	**328**	IAMs_20	IAMs_20	16 53 12.6	
	comp=Z,4µm,18.0s						
HDC	**Heredia**	**115.95**	**83**	IAMs_20	IAMs_20	16 47 54.9	
	comp=Z,2µm,18.0s						
O53A	**New Philadelph**	**116.51**	**49**	IAMs_20	IAMs_20	16 45 24.8	
	comp=Z,5µm,21.0s						
FINES	**FINESS Array B**	**117.31**	**337**	PKP	**PKPdf**	**16 02 11.4**	**-0.3**
	comp=Z,2.4nm,0.9s,baz=205,slow=12,SNR=2.5						
DWPF	**Disney Wildern**	**118.26**	**63**	IAMs_20	IAMs_20	16 46 17.6	
	comp=Z,4µm,22.0s						
ANN	**Anapa**	**119.14**	**317**	*e*PKIKP	**PKPdf**	**16 02 11.2**	**-4.5**
ANN				MLR	MLR		
	comp=Z,2µm,18.0s						
ANN				MLR	MLR		
	comp=N,2µm,16.0s						
LONY	**Lake Ozonia**	**120.03**	**43**	IAMs_20	IAMs_20	16 50 27.0	
	comp=Z,3µm,20.0s						
BCIP	**Isla Barro Col**	**120.10**	**84**	IAMs_20	IAMs_20	16 46 37.7	
	comp=Z,2µm,20.0s						
OTAV	**Otavalo**	**120.44**	**95**	IAMs_20	IAMs_20	16 42 08.6	
	comp=Z,2µm,22.0s						
MNK	**Minsk**	**120.53**	**330**	*i* LRM	MLR	16 53 49.0	
	comp=Z,3µm,19.8s						
MNK	**Minsk**	**120.53**	**330**	*i* PKIKP	**PKiKP**	**16 02 22.2**	**+4.0**
MNK				*i*		16 03 49.9	
MNK				*i* PPP	PPP	16 06 23.4	
MNK				*i*		16 09 23.4	
MNK				*i* SS	SS	16 20 16.1	+4.3
MNK				*i* SSS	SSS	16 24 43.8	
MNK				pmax	pmax		
	comp=N,27nm,0.9s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MNK				MLR	MLR		
	comp=N,2µm,20.0s						
MNK				MLR	MLR		
	comp=E,236nm,20.0s						
MNK				MLR	MLR		
	comp=Z,3µm,20.0s						
MNK	**Minsk**	**120.53**	**330**	*i* PKP	**PKiKP**	**16 02 22.2**	**+4.0**
	comp=Z,7.0nm,0.9s						
MNK	**Minsk**	**120.53**	**330**	*i* PKP	**PKiKP**	**16 02 22.2**	**+4.0**
	comp=E,1.0nm,0.9s						
MNK	**Minsk**	**120.53**	**330**	*i* PKP	**PKiKP**	**16 02 22.2**	**+4.0**
	comp=N,27nm,0.9s,baz=57						
MNK	**Minsk**	**120.53**	**330**	*i* pPKP	pPKPdf	16 02 39.8	+11
MNK	**Minsk**	**120.53**	**330**	*i* sPKP		16 02 46.5	
MNK	**Minsk**	**120.53**	**330**	*i* PP	PP	16 03 49.9	+4.9
MNK	**Minsk**	**120.53**	**330**	*i* SKP		16 05 17.5	
MNK	**Minsk**	**120.53**	**330**	*i* PKS		16 05 26.6	
MNK	**Minsk**	**120.53**	**330**	*i* PPP	PPP	16 06 23.5	
MNK	**Minsk**	**120.53**	**330**	*i* SKS	**SKSdf**	**16 09 23.5**	**-4.2**
MNK	**Minsk**	**120.53**	**330**	*i* SKKS		16 11 14.7	
MNK	**Minsk**	**120.53**	**330**	*i* SP	SP	16 13 14.6	-17
MNK	**Minsk**	**120.53**	**330**	*i* PS	PS	16 13 21.0	-16
MNK	**Minsk**	**120.53**	**330**	*i* SS	SS	16 20 16.1	+4.3
MNK	**Minsk**	**120.53**	**330**	*i* SSS	SSS	16 24 43.9	
MNK	**Minsk**	**120.53**	**330**	*i* LQ	LQ	16 44 15.0	
MNK	**Minsk**	**120.53**	**330**	*i* LR	LR	16 48 16.5	
MNK	**Minsk**	**120.53**	**330**	*i* LRM	MLR	16 53 22.5	
	comp=N,2µm,19.6s						
MNK	**Minsk**	**120.53**	**330**	*i* LRM	MLR	16 53 43.7	
	comp=E,236nm,19.8s						
NACGM	**Naroch**	**120.85**	**331**	*e*PKP	**PKPdf**	**16 02 17.8**	**-0.9**
	comp=Z,20nm,1.4s,baz=56						
SIM	**Simferopol'**	**121.30**	**318**	*i* PKIKP	**PKiKP**	**16 02 23.2**	**+3.1**
SIM				pmax	pmax		
	comp=Z,15nm,0.8s						
SIM				pmax	pmax		
	comp=Z,55nm,14.5s						
VT1	**Waterbury**	**121.36**	**43**	IAMs_20	IAMs_20	16 51 55.3	
	comp=Z,4µm,19.0s						
AKASG	**Malin Array Be**	**121.80**	**326**	PKP	**PKPdf**	**16 02 18.3**	**-2.4**
	comp=Z,0.2nm,0.4s,baz=58,slow=2.5,SNR=2.2						
AKASG				PKKPbc	**PKKPab**	**16 12 19.1**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=246,slow=3.3,SNR=5.0						
AKBB	**Malin Array Si**	**121.80**	**326**	⇑*i*PKIKP	**PKPdf**	**16 02 20.8**	**+0.1**
PABE	**Paberze**	**121.81**	**333**	IAMs_20	IAMs_20	16 58 19.4	
	comp=Z,4µm,20.0s						
HNH	**Hanover**	**121.90**	**43**	IAMs_20	IAMs_20	16 56 23.5	
	comp=Z,3µm,18.0s						
KIBK	**Kibwezi**	**121.98**	**262**	IAMs_20	IAMs_20	16 52 14.7	
	comp=Z,3µm,20.0s						
NB2	**NORSAR Subarra**	**122.62**	**343**	PKPdf	**PKiKP**	**16 02 24.1**	**+1.9**
	comp=Z,1.6nm,0.9s,baz=39,slow=1.9						
NOA	**NORSAR Array B**	**122.62**	**343**	PKP	**PKPdf**	**16 02 20.7**	**-1.3**
	comp=Z,0.9nm,0.8s,baz=37,slow=1.7,SNR=2.1						
FURI	**Furi**	**122.82**	**275**	IAMs_20	IAMs_20	16 57 41.7	
	comp=Z,2µm,20.0s						
HRV	**Adam Dziewonsk**	**122.83**	**44**	IAMs_20	IAMs_20	16 54 41.2	
	comp=Z,2µm,18.0s						
HRV	**Adam Dziewonsk**	**122.83**	**44**	P	**PKPdf**	**16 02 21.3**	**-1.6**
	baz=291						
KMBO	**Kilima Mbogo**	**122.98**	**263**	IAMs_20	IAMs_20	16 52 13.4	
	comp=Z,4µm,21.0s						
PKME	**Peaks-Kenny Pk**	**123.26**	**40**	P	**PKPdf**	**16 02 21.6**	**-2.1**
	baz=295						
BRTR	**Keskin Array B**	**123.45**	**313**	PKP	**PKPdf**	**16 02 22.4**	**-2.1**
	comp=Z,0.9nm,1.0s,baz=313,slow=23,SNR=2.9						
BRTR				PP	**PP**	**16 04 01.3**	**-4.5**
	comp=Z,1.3nm,1.0s,baz=78,slow=9.4,SNR=1.9						
BRTR				PKKPbc	**PKKPbc**	**16 12 14.4**	**+0.1**
	comp=Z,1.1nm,1.0s,baz=225,slow=7.1,SNR=4.6						
BRTR	**Keskin Array B**	**123.45**	**313**	PKPdf	**PKPdf**	**16 02 23.0**	**-1.5**
BOSA	**Boshof**	**123.65**	**228**	PKP	**PKPdf**	**16 02 24.0**	**-1.2**
	comp=Z,2.8nm,0.8s,baz=320,slow=20,SNR=2.6						
BOSA	**Boshof**	**123.65**	**228**	PKIKP	**PKPdf**	**16 02 24.0**	**-1.2**
KIS	**Kishinev**	**123.81**	**322**	*e*P	**Pdif**	**15 58 56.0**	**-1.8**
KIS				*e*		16 09 26.0	
KIS				MLR	MLR		
	comp=Z,800nm,17.0s						
GUY2C	**Guyana, Caldas**	**124.17**	**89**	*e*P	**PKPdf**	**16 02 23.9**	**-3.1**
GTBY	**Guantanamo Bay**	**124.73**	**71**	IAMs_20	IAMs_20	16 48 25.9	
	comp=Z,2µm,20.0s						
LVV	**L'vov**	**125.10**	**327**	*i* PKIKP	**PKiKP**	**16 02 29.8**	**+2.4**
LVV				*e*		16 04 22.4	
LVV				*e*		16 09 20.0	
LVV				MLR	MLR		
	comp=E,2µm,19.0s						
LVV				MLR	MLR		
	comp=N,1µm,18.0s						
LVV				MLR	MLR		
	comp=Z,3µm,19.0s						
CHIC	**Chingaza**	**125.71**	**90**	*e*P	**PKPdf**	**16 02 27.9**	**-1.9**
LPAZ	**La Paz**	**125.81**	**117**	PKP	**PKPdf**	**16 02 28.0**	**-2.1**
	comp=Z,1.8nm,0.8s,baz=180,slow=2.0,SNR=4.3						
MLR	**Muntele Rosu**	**126.28**	**322**	IAMs_20	IAMs_20	16 59 37.4	
	comp=Z,4µm,20.0s						
BARC	**Barichara**	**126.46**	**88**	*e*P	PKiKP	16 02 42.0	+11
RUSC	**La Rusia**	**126.49**	**89**	PKPdf	**PKPdf**	**16 02 28.6**	**-2.8**
RUSC	**La Rusia**	**126.49**	**89**	*e*P	**PKPdf**	**16 02 29.5**	**-1.9**
PAMC	**Pamplona, Colo**	**127.00**	**87**	*e*P	PKPdf	16 02 20.4	-12
ITQB	**Itaqui**	**127.92**	**138**	*e*P	**PKPdf**	**16 02 32.9**	**-0.2**
OKC	**Ostrava-Krasne**	**128.12**	**330**	*e*PKP	**PKiKP**	**16 02 39.0**	**+5.6**
OKC				*e*SS	SS	16 21 36.2	-11
OKC				AMS	AMS	16 53 20.0	
	comp=Z,3µm,27.6s						
OKC	**Ostrava-Krasne**	**128.12**	**330**	*e*PKIKP	**PKiKP**	**16 02 39.0**	**+5.6**
OKC				MLR	MLR		
	comp=Z,3µm,27.6s						
GRTK	**Grand Turk**	**128.30**	**69**	IAMs_20	IAMs_20	16 50 29.1	
	comp=Z,3µm,22.0s						
SDDR	**Presa de Saban**	**128.40**	**72**	IAMs_20	IAMs_20	17 00 20.1	
	comp=Z,3µm,19.0s						
PLTB	**Pedras Altas**	**128.44**	**142**	*e*P	**PKPdf**	**16 02 33.6**	**-0.4**
MORC	**Moravsky Berou**	**128.46**	**330**	*e*PKIKP	**PKPdf**	**16 02 33.9**	**+0.3**
OSTC	**Ostas**	**128.57**	**332**	*e*PKP	**PKiKP**	**16 02 36.8**	**+2.4**
OSTC				*e*SS	SS	16 21 40.3	-13
OSTC				AMS	AMS	16 56 00.0	
	comp=Z,4µm,22.5s						

OSTC	**Ostas**	**128.57**	**332**	*e*PKIKP	**PKiKP**	**16 02 36.8**	**+2.4**
OSTC				MLR	MLR		
	comp=Z,4µm,22.5s						
MAUC	**Maruska**	**128.59**	**330**	*e*PKP	**PKiKP**	**16 02 37.8**	**+3.3**
MAUC				AMS	AMS	16 53 50.0	
	comp=Z,4µm,20.3s						
CHVC	**Chvalec**	**128.63**	**332**	*e*PKP	**PKiKP**	**16 02 39.3**	**+4.8**
CHVC				AMS	AMS	16 57 40.0	
	comp=Z,4µm,21.4s						
CHVC	**Chvalec**	**128.63**	**332**	*e*PKIKP	**PKiKP**	**16 02 39.3**	**+4.8**
CHVC				MLR	MLR		
	comp=Z,4µm,21.4s						
VYHS	**Vyhne**	**128.63**	**328**	*e*PKIKP	**PKiKP**	**16 02 37.7**	**+3.2**
VYHS	**Vyhne**	**128.63**	**328**	*e*PKP	**PKiKP**	**16 02 37.7**	**+3.2**
KRLC	**Kraliky**	**128.63**	**331**	*e*PKP	**PKiKP**	**16 02 39.2**	**+4.7**
KRLC				*e*SS	SS	16 21 54.1	+0.2
KRLC				AMS	AMS	16 59 10.0	
	comp=Z,3µm,19.2s						
KRLC	**Kraliky**	**128.63**	**331**	*e*PKIKP	**PKiKP**	**16 02 39.2**	**+4.7**
KRLC				*e*SS	SS	16 21 54.1	+0.2
KRLC				MLR	MLR		
	comp=Z,3µm,19.2s						
DPC	**Dobruska-Polom**	**128.66**	**332**	*e*PKP	**PKiKP**	**16 02 37.7**	**+3.1**
DPC				*e*SS	SS	16 21 49.3	-5.0
DPC				AMS	AMS	16 56 20.0	
	comp=Z,3µm,21.9s						
DPC	**Dobruska-Polom**	**128.66**	**332**	*e*PKIKP	**PKiKP**	**16 02 37.7**	**+3.1**
DPC				*e*SS	SS	16 21 49.3	-5.0
DPC				MLR	MLR		
	comp=Z,3µm,21.9s						
UPC	**Upice**	**128.70**	**332**	*e*SS	SS	16 21 50.5	-4.2
UPC				AMS	AMS	16 57 50.0	
	comp=Z,4µm,20.4s						
JAVC	**Velka Javorina**	**128.99**	**329**	*e*PKIKP	**PKiKP**	**16 02 37.5**	**+2.2**
SDV	**Santo Domingo**	**129.15**	**85**	PKP	**PKPdf**	**16 02 34.3**	**-1.8**
	comp=Z,17nm,0.9s,baz=231,slow=2.5,SNR=14						
VRAC	**Vranov**	**129.23**	**330**	*e*PKIKP	**PKPdf**	**16 02 35.1**	**+0.1**
PVCC	**Panska Ves**	**129.35**	**333**	AMS	AMS	16 58 10.0	
	comp=Z,5µm,20.2s						
AZCA	**Azaras, Argent**	**129.37**	**137**	*e*P	**PKPdf**	**16 02 35.1**	**-0.9**
BRG	**Berggiesshubel**	**129.39**	**333**	*e*PKP	**PKiKP**	**16 02 39.4**	**+3.4**
BRG				Amp		16 02 46.5	
	comp=Z,20nm,1.4s						
BRG	**Berggiesshubel**	**129.39**	**333**	SS	SS	16 22 08.0	+5.0
BRG				Amp		17 04 29.0	
	comp=Z,5.6nm,18.8s						
BRG				Amp		17 04 34.0	
	comp=N,2.6nm,18.1s						
BRG				Amp		17 04 34.0	
	comp=E,2.8nm,19.3s						
BRG	**Berggiesshubel**	**129.39**	**333**	*e*PKIKP	**PKiKP**	**16 02 39.4**	**+3.4**
BRG				SP	SP	16 14 53.0	+3.8
BRG				SS	SS	16 22 08.0	+5.0
BRG				pmax	pmax		
	comp=Z,20nm,1.4s						
BRG				pmax	pmax		
	comp=Z,19nm,1.4s						
BRG				pmax	pmax		
	comp=Z,6µm,18.8s						
BRG				MLR	MLR		
	comp=N,3µm,18.1s						
BRG				MLR	MLR		
	comp=E,3µm,19.3s						
CPSB	**Cacapava Do Su**	**129.48**	**141**	*e*P	**PKPdf**	**16 02 35.8**	**-0.3**
MBAR	**Mbarara**	**129.48**	**262**	IAMs_20	IAMs_20	16 55 28.5	
	comp=Z,3µm,21.0s						
CLL	**Collm**	**129.49**	**334**	*e*PKPdf	**PKiKP**	**16 02 36.0**	**-0.1**
CLL				*e*x	x	16 02 40.0	
	comp=Z,22nm,1.5s						
CLL				*e*x	x	16 02 43.0	
CLL				*e*PP	**PP**	**16 04 39.0**	**-5.7**
CLL				*e*SKPdf	**SKPdf**	**16 06 05.0**	**-3.4**
CLL				*e*PPP	PPP	16 07 36.0	
CLL				*e*x	x	16 08 24.0	
CLL				*e*(SKKSac)		16 11 24.0	
CLL				*e*PS	**PS**	**16 14 48.0**	**-7.3**
CLL				*e*PPS	PPS	16 16 30.0	
CLL				*e*x	x	16 21 24.0	
CLL				*e*SS	**SS**	**16 22 06.0**	**+1.9**
CLL				*e*x	x	16 23 18.0	
CLL				*e*SSS	SSS	16 27 00.0	
CLL				*e*SSSS		16 30 36.0	
CLL				AMS	AMS	16 59 00.0	
	comp=Z,5µm,21.2s						
CLL	**Collm**	**129.49**	**334**	*e*PKIKP	**PKiKP**	**16 02 36.0**	**-0.1**
CLL				*e*		16 02 40.0	
CLL				MLR	MLR		
	comp=Z,5µm,21.2s						
KRUC	**Moravsky**	**129.50**	**330**	*e*PKIKP	**PKPdf**	**16 02 35.7**	**+0.2**
MODS	**Modra-Piesok**	**129.51**	**329**	*e*PKIKP	**PKiKP**	**16 02 40.5**	**+4.2**
MODS	**Modra-Piesok**	**129.51**	**329**	*e*PKP	**PKiKP**	**16 02 40.5**	**+4.2**
CPUP	**Villa Florida**	**129.52**	**134**	PKP	**PKPdf**	**16 02 35.4**	**-0.8**
	comp=Z,6.3nm,1.1s,baz=264,slow=1.4,SNR=7.8						
PRU	**Pruhonice**	**129.75**	**332**	*e*SS	SS	16 21 51.7	-16
PRU				AMS	AMS	16 58 40.0	
	comp=Z,5µm,21.8s						
TREC	**Trest**	**129.78**	**331**	AMS	AMS	16 57 40.0	
	comp=Z,3µm,21.1s						
ETMB	**Extrema**	**129.88**	**110**	PKPdf	**PKPdf**	**16 02 35.2**	**-2.0**
RONA	**Rosalia, Austr**	**130.44**	**329**	PKP	**PKPdf**	**16 02 36.3**	**-1.2**
	comp=Z,17nm,1.5s						
NKC	**Novy Kostel**	**130.51**	**334**	AMS	AMS	16 58 50.0	
	comp=Z,2µm,19.3s						
CONA	**Conrad Observa**	**130.51**	**329**	*e*pPKiKP	**PKiKP**	**16 02 38.9**	**+0.5**
	comp=Z,19nm,1.8s						
CKRC	**Cesky Krumlov**	**130.67**	**331**	*e*PKP	**PKiKP**	**16 02 40.1**	**+1.5**
CKRC				*e*SS	SS	16 22 12.3	-6.6
CKRC	**Cesky Krumlov**	**130.67**	**331**	*e*PKIKP	**PKiKP**	**16 02 40.1**	**+1.5**
CKRC				*e*SS	SS	16 22 12.3	-6.6
SANT	**Santorini**	**130.68**	**312**	IAMs_20	IAMs_20	17 07 23.0	
	comp=Z,2µm,21.0s						
KHC	**Kasperske Hory**	**130.79**	**332**	*e*PKP	**PKiKP**	**16 02 41.4**	**+2.5**
KHC				*e*SS	SS	16 22 17.3	-3.2
KHC				AMS	AMS	16 59 10.0	
	comp=Z,7µm,19.7s						
KHC	**Kasperske Hory**	**130.79**	**332**	⇓*i*PKIKP	**PKPdf**	**16 02 38.2**	**+0.2**
ALGR	**Alto Alegre (B**	**130.84**	**140**	*e*P	**PKPdf**	**16 02 38.1**	**-0.7**
HATO	**Hato, Curacao**	**130.91**	**81**	IAMs_20	IAMs_20	16 51 23.0	
	comp=Z,3µm,22.0s						
GERES	**GERESS Array B**	**130.94**	**332**	PKP	**PKPdf**	**16 02 37.5**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=5.7,slow=3.0,SNR=1.7						
GRF	**Grafenberg Arr**	**131.45**	**334**	*e*PKP	**PKiKP**	**16 02 43.0**	**+2.8**
	baz=42,slow=1.6						
GRF				*e*L	L	17 01 09.9	
	comp=Z,5µm,20.9s						
BBSR	**BB Station**	**131.48**	**54**	IAMs_20	IAMs_20	16 54 26.7	
	comp=Z,3µm,20.0s						
SOKA	**Soboth**	**131.77**	**329**	*e*pPKiKP	**PKiKP**	**16 02 40.9**	**-0.1**
	comp=Z,9.8nm,1.3s						
BIOA	**Bad Ischl, Aus**	**131.78**	**331**	*e*pPKP	**PKPdf**	**16 02 40.6**	**+0.7**
	comp=Z,6.2nm,0.9s						
BBSD	**Serra de San D**	**131.92**	**122**	*e*P	**PKPdf**	**16 02 41.1**	**0.0**
PDG	**Podgorica**	**131.99**	**322**	IAMs_20	IAMs_20	17 11 34.6	
	comp=Z,2µm,20.0s						
SIV	**San Ignacio**	**132.08**	**120**	PKP	**PKPdf**	**16 02 40.4**	**-1.0**
	comp=Z,4.7nm,1.1s,baz=234,slow=5.3,SNR=8.1						
OBKA	**Obir**	**132.13**	**329**	*e*pPKiKP	**PKiKP**	**16 02 42.7**	**+1.0**
	comp=Z,5.3nm,1.3s						
TIR	**Tirane**	**132.21**	**320**	IAMs_20	IAMs_20	17 04 29.5	
	comp=Z,3µm,22.0s						
KBA	**Koelnbreinsper**	**132.34**	**330**	*e*pPKiKP	**PKPdf**	**16 02 41.9**	**+0.7**
	comp=Z,2.9nm,0.8s						
FRBT	**Francisco Belt**	**132.71**	**137**	*e*P	**PKPdf**	**16 02 41.8**	**-0.6**
ABTA	**Abfaltersbach**	**132.98**	**330**	PKP	**PKPdf**	**16 02 40.7**	**-1.6**
	comp=Z,8.8nm,1.4s						
SAML	**Samuel**	**132.98**	**110**	*e*P	**PKPdf**	**16 02 42.5**	**-0.6**
STU	**Stuttgart**	**133.01**	**335**	IAMs_20	IAMs_20	17 07 19.6	
	comp=Z,3µm,20.0s						
WATA	**Walderalm**	**133.01**	**332**	*e*pPKiKP	**PKiKP**	**16 02 43.5**	**-0.1**
	comp=Z,14nm,1.5s						
WTTA	**Wattenberg**	**133.04**	**331**	*e*pPKP	**PKPdf**	**16 02 43.0**	**+0.5**
	comp=Z,16nm,1.6s						
MOTA	**Moosalm**	**133.23**	**332**	*e*pPKiKP	**PKiKP**	**16 02 44.8**	**+0.8**
	comp=Z,7.8nm,1.2s						
SQTA	**Sankt Quirin**	**133.27**	**332**	*e*pPKiKP	**PKiKP**	**16 02 45.2**	**+1.1**
	comp=Z,13nm,1.9s						
SJG	**San Juan**	**133.33**	**73**	PKP	**PKPdf**	**16 02 41.9**	**-1.7**
	comp=Z,5.1nm,0.6s,baz=345,slow=23,SNR=1.9						
WLF	**Walferdange**	**133.53**	**337**	IAMs_20	IAMs_20	17 08 22.3	
	comp=Z,3µm,20.0s						
FETA	**Feichten**	**133.64**	**332**	*e*pPKP	**PKPdf**	**16 02 43.0**	**-0.6**
	comp=Z,5.6nm,1.0s						
BFO	**Black Forest**	**133.72**	**335**	IAMs_20	IAMs_20	17 00 13.3	
	comp=Z,3µm,22.0s						
DAVA	**Damuels**	**133.83**	**333**	*e*PKiKP	**PKPdf**	**16 02 44.5**	**+0.6**
	comp=Z,5.4nm,0.9s						
PTLB	**Pontes e Lacer**	**133.98**	**121**	PKPdf	**PKPdf**	**16 02 42.0**	**-2.8**
PTLB	**Pontes e Lacer**	**133.98**	**121**	*e*P	**PKPdf**	**16 02 44.8**	**-0.1**
FUORN	**Ofenpass-Fuorn**	**134.15**	**332**	IAMs_20	IAMs_20	17 02 37.9	
	comp=Z,3µm,20.0s						
PTGB	**Pitanga**	**134.22**	**136**	*e*P	**PKPdf**	**16 02 44.5**	**-0.8**
TUE	**Stuetta**	**134.69**	**332**	IAMs_20	IAMs_20	17 03 28.1	
	comp=Z,4µm,21.0s						
TIP	**Timpagrande**	**135.38**	**319**	IAMs_20	IAMs_20	17 08 49.7	
	comp=Z,2µm,20.0s						
AQU	**L'Aquila**	**135.49**	**325**	IAMs_20	IAMs_20	17 06 56.8	
	comp=Z,2µm,19.0s						
SABA	**Saba**	**136.14**	**73**	IAMs_20	IAMs_20	16 56 10.2	
	comp=Z,2µm,21.0s						
SMRT	**St. Maarten**	**136.25**	**72**	IAMs_20	IAMs_20	16 54 06.0	
	comp=Z,2µm,21.0s						
CEL	**Celeste**	**136.46**	**319**	IAMs_20	IAMs_20	17 06 04.2	
	comp=Z,2µm,21.0s						
SALV	**Santo Antonio**	**136.65**	**123**	*e*P	**PKPdf**	**16 02 50.1**	**+0.2**
ANWB	**Willy Bob**	**137.51**	**73**	IAMs_20	IAMs_20	16 58 03.6	
	comp=Z,2µm,21.0s						
SSB	**Saint Sauveur**	**137.73**	**335**	IAMs_20	IAMs_20	17 06 14.3	
	comp=Z,3µm,20.0s						
PDRB	**Porto dos Gac**	**137.80**	**117**	*e*P	**PKPdf**	**16 02 51.8**	**-0.4**
CBE	**Ff, Capester**	**137.86**	**75**	IAMs_20	IAMs_20	16 57 58.9	
	comp=Z,3µm,21.0s						
ABD	**La Joyeuse, An**	**137.93**	**75**	IAMs_20	IAMs_20	16 57 38.8	
	comp=Z,3µm,22.0s						
GRGR	**Grenville**	**138.05**	**81**	IAMs_20	IAMs_20	16 58 01.3	
	comp=Z,2µm,20.0s						
MAGL	**Barre de l'ile**	**138.18**	**75**	IAMs_20	IAMs_20	16 58 18.5	
	comp=Z,3µm,22.0s						
SVN	**Savane Anatole**	**138.39**	**77**	IAMs_20	IAMs_20	17 01 55.1	
	comp=Z,2µm,22.0s						
FDF	**Fort de France**	**138.41**	**77**	IAMs_20	IAMs_20	16 58 25.8	
	comp=Z,2µm,22.0s						
BOAV	**Boa Vista**	**138.47**	**96**	*e*P	**PKPdf**	**16 02 52.8**	**-0.5**
BIM	**Bigot**	**138.50**	**77**	IAMs_20	IAMs_20	17 03 28.3	
	comp=Z,2µm,20.0s						
ITRB	**Iturama**	**138.65**	**132**	*e*P	**PKPdf**	**16 02 53.1**	**-0.4**
ILAM	**Ilet Lapin Mar**	**138.68**	**77**	IAMs_20	IAMs_20	17 03 49.7	
	comp=Z,2µm,20.0s						
MPOM	**Morne Pois Mar**	**138.72**	**77**	IAMs_20	IAMs_20	17 03 45.8	
	comp=Z,2µm,21.0s						
ARAG	**Araguaiana, MT**	**139.91**	**126**	*e*P	**PKPdf**	**16 02 55.6**	**-0.2**
NPGB	**Novo Progresso**	**140.90**	**112**	*e*P	**PKPdf**	**16 02 58.1**	**+0.3**
IPMB	**Ipameri, GO**	**141.31**	**132**	*e*P	**PKPdf**	**16 02 58.3**	**-0.1**
ITTB	**Itaituba**	**141.48**	**108**	*e*P	**PKPdf**	**16 02 59.1**	**+0.3**
MAHO	**Mahon**	**142.09**	**330**	IAMs_20	IAMs_20	17 07 59.1	
	comp=Z,2µm,21.0s						
KEST	**Kesra**	**142.16**	**321**	PKP	**PKPdf**	**16 02 58.1**	**-1.5**
	comp=Z,2.6nm,0.8s,baz=251,slow=13,SNR=2.5						
SNDB	**Serra Nova Dou**	**142.32**	**122**	*e*P	**PKPdf**	**16 02 59.1**	**-1.1**
BDFB	**Brasilia**	**142.91**	**130**	PKP	**PKPdf**	**16 02 59.2**	**-2.2**
	comp=Z,1.3nm,0.4s,baz=158,slow=6.2,SNR=4.1						
BDFB	**Brasilia**	**142.91**	**130**	PKPdf	**PKPdf**	**16 02 58.8**	**-2.6**
BDFB	**Brasilia**	**142.91**	**130**	PKIKP	**PKPdf**	**16 02 58.8**	**-2.6**
MALB	**Monte Alegre**	**143.63**	**104**	*e*P	**PKPdf**	**16 03 02.4**	**-0.2**
EIBI	**Ibiza**	**144.17**	**332**	PKP	**PKPdf**	**16 03 02.7**	**-0.2**
ECHE	**Chera**	**144.72**	**335**	PKP	**PKPab**	**16 03 02.6**	**0.0**
PBRG	**Braganca**	**144.75**	**344**	*e*PKP	**PKPab**	**16 03 00.2**	**-2.4**
PGAV	**Gavieira, Arco**	**144.99**	**346**	*e*PKP	**PKPab**	**16 03 03.2**	**-0.4**
PGAV	**Gavieira, Arco**	**144.99**	**346**	*e*SS	SS	16 25 18.7	+11
PGAV	**Gavieira, Arco**	**144.99**	**346**	*e*LR	LR	16 54 27.8	
PGAV				A	A	17 16 42.1	
	comp=Z,2µm,18.0s						
PCAB	**Cabril**	**145.17**	**345**	*e*PKP	**PKPab**	**16 03 04.4**	**+0.2**
MVO	**Moncorvo**	**145.42**	**344**	*e*PKP	**PKPbc**	**16 03 04.0**	**-1.0**
MVO	**Moncorvo**	**145.42**	**344**	*e*SS	SS	16 25 20.4	+7.5
MVO	**Moncorvo**	**145.42**	**344**	*e*LR	LR	16 53 41.0	
MVO				A	A	17 17 18.3	
	comp=Z,2µm,20.0s						
POLO	**Lamas de Olo**	**145.43**	**345**	*e*PKP	**PKPbc**	**16 03 01.4**	**-3.6**
PVRL	**Vila Real**	**145.50**	**345**	*e*PKP	**PKPdf**	**16 03 03.7**	**-1.5**
SJMB	**Sao Joao De Ma**	**145.59**	**141**	*e*P	**PKPdf**	**16 03 05.9**	**0.0**
ETOB	**Tobarra**	**145.76**	**335**	PKP	**PKPdf**	**16 03 04.3**	**-1.4**
ESDC	**Sonseca Array**	**145.80**	**339**	PKPbc	**PKPdf**	**16 03 04.1**	**-1.6**
	comp=Z,9.2nm,1.0s,baz=13,slow=2.9,SNR=29						
ESDC	**Sonseca Array**	**145.80**	**339**	PKPdf	**PKPdf**	**16 03 03.7**	**-2.0**
JANB	**Januaria**	**146.04**	**133**	*e*P	**PKPdf**	**16 03 05.7**	**-1.1**
PAB	**San Pablo**	**146.05**	**339**	IAMs_20	IAMs_20	17 12 34.4	
	comp=Z,2µm,20.0s						
PVIS	**Viseu**	**146.07**	**345**	*e*PKP	**PKPbc**	**16 03 07.5**	**+0.5**
MCPB	**Macapa, AP**	**146.16**	**103**	*e*P	**PKPdf**	**16 03 06.7**	**-0.3**
MTE	**Manteigas**	**146.27**	**344**	IAMs_20	IAMs_20	17 13 58.0	
	comp=Z,3µm,21.0s						
MTE	**Manteigas**	**146.27**	**344**	*e*PKP	**PKPab**	**16 03 09.8**	**+1.4**
MTE	**Manteigas**	**146.27**	**344**	*e*SS	SS	16 25 25.5	+2.9
MTE	**Manteigas**	**146.27**	**344**	*e*LR	LR	16 53 26.2	
MTE				A	A	17 14 27.9	
	comp=Z,3µm,20.0s						
PRPB	**Parauapebas**	**146.29**	**114**	*e*P	**PKPdf**	**16 03 08.0**	**+0.7**
CART	**Cartagena**	**146.41**	**333**	IAMs_20	IAMs_20	17 05 21.1	
	comp=Z,2µm,22.0s						
MDP	**Montagnes des**	**146.64**	**93**	PKPbc	**PKPdf**	**16 03 07.8**	**-0.1**
	comp=Z,17nm,1.0s,baz=272,slow=2.5,SNR=2.2						
COI	**Coimbra**	**146.68**	**345**	IAMs_20	IAMs_20	17 16 11.9	
	comp=Z,3µm,20.0s						
COI	**Coimbra**	**146.68**	**345**	*e*PKP	**PKPab**	**16 03 10.7**	**+0.9**
PCBR	**Castelo Branco**	**146.78**	**343**	*e*PKP	**PKPab**	**16 03 10.2**	**0.0**
SMTB	**Santa Maria do**	**147.03**	**120**	*e*P	**PKPdf**	**16 03 08.4**	**-0.1**
PMRV	**Marv??o**	**147.13**	**343**	*e*PKP	**PKPdf**	**16 03 08.8**	**+0.9**
PMRV	**Marv??o**	**147.13**	**343**	*e*LR	LR	16 55 34.0	
PMRV				A	A	17 13 26.8	
	comp=Z,2µm,18.0s						
SDBA	**SAO DESIDERIO**	**147.27**	**128**	*e*P	**PKPdf**	**16 03 08.8**	**-0.1**
PSBE	**So Bento**	**147.44**	**345**	*e*PKP	**PKPab**	**16 03 13.2**	**+0.3**
PMTG	**Montargil**	**147.70**	**344**	*e*PKP	**PKPbc**	**16 03 12.0**	**+0.4**
PESTR	**Estremoz**	**147.71**	**343**	*e*PKP	**PKPbc**	**16 03 12.1**	**+0.4**
GUA01	**Guaratinga, BA**	**148.04**	**140**	*e*P	**PKPdf**	**16 03 09.8**	**-0.2**
EVO	**Evora**	**148.14**	**343**	*e*PKP	**PKPbc**	**16 03 12.6**	**-0.2**
PBAR	**Barrancos**	**148.18**	**342**	*e*PKP	**PKiKP**	**16 03 14.5**	**-0.2**
LIS	**Lisbon**	**148.28**	**345**	*e*PKP2	**PKPbc**	**16 03 13.5**	**+0.3**
LIS	**Lisbon**	**148.28**	**345**	*e*PKPdf	**PKPbc**	**16 03 13.5**	**+0.3**
LIS				IAMs_20	IAMs_20	17 08 49.7	
	comp=Z,3µm,18.4s						
PBEJ	**Beja**	**148.57**	**343**	*e*PKP	**PKiKP**	**16 03 16.0**	**+0.5**
MESJ	**Messejana**	**148.85**	**343**	*e*PKP2	**PKPbc**	**16 03 14.2**	**-0.5**
MESJ	**Messejana**	**148.85**	**343**	*e*PKP	**PKiKP**	**16 03 16.9**	**+0.8**
MESJ	**Messejana**	**148.85**	**343**	*e*PKPdf	**PKPbc**	**16 03 14.2**	**-0.5**
MESJ				IAMs_20	IAMs_20	17 04 37.1	
	comp=Z,3µm,27.0s						
PCVE	**Castro Verde**	**148.99**	**343**	*e*PKP	**PKPbc**	**16 03 14.8**	**-0.3**
PVAQ	**Vaqueiros**	**149.10**	**342**	*e*PKP	**PKiKP**	**16 03 16.5**	**-0.1**
PVAQ	**Vaqueiros**	**149.10**	**342**	*e*LR	LR	16 55 22.6	
PVAQ				A	A	17 10 43.3	
	comp=Z,3µm,20.0s						
MORF	**Marmelete**	**149.47**	**343**	*e*PKP2	**PKPbc**	**16 03 15.3**	**-1.0**
MORF	**Marmelete**	**149.47**	**343**	*e*PKPdf	**PKPbc**	**16 03 15.3**	**-1.0**
MORF				IAMs_20	IAMs_20	17 08 06.9	
	comp=Z,3µm,24.8s						
EKNA	**AfricaArray -**	**151.39**	**264**	*e*P	**PKPab**	**16 03 37.6**	**+7.7**
TAM	**Tamanrasset**	**152.17**	**304**	IAMs_20	IAMs_20	17 20 47.7	
	comp=Z,3µm,20.0s						
AVE	**Averroes**	**152.73**	**338**	IAMs_20	IAMs_20	17 25 07.3	
	comp=Z,3µm,20.0s						
PMOZ	**Porto Moniz, M**	**155.41**	**356**	*e*SS	SS	16 27 17.4	+14
PMOZ	**Porto Moniz, M**	**155.41**	**356**	*e*LR	LR	16 56 34.0	
PMOZ				A	A	17 29 17.6	
	comp=Z,2µm,22.0s						
RCBR	**Riachuelo**	**158.29**	**129**	IAMs_20	IAMs_20	17 22 07.5	
	comp=Z,3µm,21.0s						
TORD	**Torodi Ar. Bea**	**158.90**	**285**	PKP	**PKPdf**	**16 03 23.7**	**-1.9**
	comp=Z,4.0nm,1.1s,baz=18,slow=1.7,SNR=9.5						
TORD				PKPab	**PKPab**	**16 04 01.4**	**-0.4**
	comp=Z,18nm,1.1s,baz=78,slow=4.0,SNR=8.9						
TORD	**Torodi Ar. Bea**	**158.90**	**285**	PKPdf	**PKPdf**	**16 03 23.5**	**-2.1**
DBIC	**Dimbokro**	**165.71**	**265**	PKP	**PKPdf**	**16 03 31.2**	**-1.2**
	comp=Z,2.5nm,0.7s,baz=279,slow=15,SNR=2.2						
DBIC				PKPab	**PKPab**	**16 04 32.0**	**+0.3**
	comp=Z,11nm,1.0s,baz=142,slow=2.8,SNR=3.6						

ROM 19 15:46:44.1±0.1**, 43.°258N**±0.°003×**13.°060E**±0.°005**,**
h14km**, ML1.5**/26**, 9C-6D, Error ellipse: s-maj=0.4km**
s-min=0.1km az=96.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GAG1	**Gagliole**	**0.02**	**164**	P	Pg	15 46 47.0	+0.2
GAG1				S	Sg	15 46 49.0	+0.6
EL6	**Elcito**	**0.08**	**23**	P	Pg	15 46 47.4	+0.1
EL6				S	Sg	15 46 49.7	+0.4
EL6				AML	AML		
	comp=E,616µm,0.9s						
EL6				AML	AML		
	comp=N,697µm,0.5s						
EL6				AML	AML		
	comp=N,696µm,0.5s						
EL6				AML	AML		
	comp=N,696µm,1.5s						
EL6				AML	AML		
	comp=E,616µm,1.1s						
SNTG	**Esanatoglia**	**0.09**	**268**	P	Pg	15 46 47.5	+0.2
SNTG				S	Sg	15 46 49.9	+0.6
SNTG				AML	AML		
	comp=E,415µm,0.2s						
SNTG				AML	AML		
	comp=N,579µm,0.1s						
SSM1	**San Severino M**	**0.09**	**109**	P	Pg	15 46 47.4	+0.1
SSM1				S	Sg	15 46 49.7	+0.4
SEF1	**Sefro**	**0.14**	**217**	P	Pg	15 46 48.0	+0.2
SEF1				S	Sb	15 46 51.0	-0.5
T1220	**Camerino, Fraz**	**0.15**	**172**	P	Pg	15 46 48.1	+0.2
T1220				S	Sb	15 46 51.3	-0.4
T1220				AML	AML		
	comp=N,1096µm,1.4s						
T1220				AML	AML		
	comp=E,974µm,0.4s						
T1220				AML	AML		
	comp=N,1096µm,1.4s						
T1220				AML	AML		
	comp=N,1096µm,0.6s						
T1220				AML	AML		
	comp=E,974µm,1.6s						
CING	**Cingoli**	**0.15**	**40**	P	Pg	15 46 48.2	+0.1
CING				S	Sb	15 46 51.4	-0.6
CING				AML	AML		
	comp=E,238µm,0.3s						
CING				AML	AML		
	comp=N,448µm,0.2s						
CSP1	**Cessapalombo**	**0.20**	**147**	P	Pg	15 46 48.9	+0.1
CSP1				S	Sb	15 46 52.6	-0.6
CSP1				AML	AML		
	comp=E,273µm,0.5s						
CSP1				AML	AML		
	comp=N,312µm,0.6s						
CSP1				AML	AML		
	comp=N,312µm,1.4s						
T1219	**Muccia, Frazio**	**0.20**	**191**	P	Pg	15 46 49.0	+0.1
T1219				S	Sb	15 46 52.8	-0.6
T1219				AML	AML		
	comp=E,176µm,0.2s						
T1219				AML	AML		
	comp=E,196µm,0.6s						
T1219				AML	AML		
	comp=N,190µm,1.6s						
T1219				AML	AML		
	comp=E,176µm,0.2s						
T1219				AML	AML		
	comp=N,220µm,1.6s						
T1219				AML	AML		
	comp=E,196µm,0.6s						
T1219				AML	AML		
	comp=N,190µm,1.6s						
T1219				AML	AML		
	comp=N,190µm,0.4s						
T1219				AML	AML		
	comp=E,196µm,1.4s						
T1219				AML	AML		
	comp=E,176µm,0.2s						
FOSV	**Fossato di Vic**	**0.22**	**280**	P	Pg	15 46 49.5	+0.4
FOSV				AML	AML		
	comp=E,108µm,1.0s						
FOSV				AML	AML		
	comp=N,108µm,0.4s						
FOSV				AML	AML		
	comp=N,108µm,1.6s						
ARVD	**Arcevia**	**0.26**	**340**	P	Pg	15 46 49.9	+0.2
ARVD				S	Sb	15 46 54.4	-0.4
ARVD				AML	AML		
	comp=N,132µm,1.2s						
ARVD				AML	AML		
	comp=E,158µm,1.4s						
ARVD				AML	AML		
	comp=E,158µm,0.6s						
ARVD				AML	AML		
	comp=N,132µm,0.8s						
SSFR	**Montelago di S**	**0.27**	**312**	P	Pg	15 46 50.2	+0.2
SSFR				AML	AML		
	comp=E,422µm,1.2s						
SSFR				AML	AML		
	comp=E,228µm,0.3s						
SSFR				AML	AML		
	comp=N,354µm,0.4s						
SSFR				AML	AML		
	comp=E,422µm,0.8s						
SSFR				AML	AML		
	comp=E,228µm,1.7s						
SSFR				AML	AML		
	comp=N,496µm,0.4s						
CESI	**CESI - Serrava**	**0.28**	**204**	P	Pg	15 46 50.2	+0.2
CESI				S	Sb	15 46 55.1	-0.4
CESI				AML	AML		
	comp=N,288µm,0.5s						
CESI				AML	AML		
	comp=E,172µm,1.3s						
CESI				AML	AML		
	comp=E,172µm,0.7s						
T1256	**Bolognola (MC)**	**0.28**	**154**	P	Pg	15 46 50.1	0.0
T1256				AML	AML		
	comp=E,84µm,1.1s						
T1256				AML	AML		
	comp=N,87µm,1.2s						
T1256				AML	AML		
	comp=N,87µm,0.8s						
T1256				AML	AML		
	comp=E,84µm,0.9s						
GUMA	**Gualdo di Mace**	**0.28**	**134**	P	Pg	15 46 50.5	+0.4
GUMA				S	Sb	15 46 55.7	+0.1
GUMA				AML	AML		
	comp=E,424µm,0.3s						
GUMA				AML	AML		
	comp=N,243µm,0.5s						
ATCC	**AVT- Casa Cast**	**0.32**	**257**	P	Pg	15 46 51.1	+0.4
ATCC				AML	AML		
	comp=E,66µm,1.4s						
ATCC				AML	AML		
	comp=E,66µm,0.6s						
ATCC				AML	AML		
	comp=N,72µm,0.3s						
FRON	**Frontone**	**0.36**	**317**	⇑P	Pg	15 46 51.7	+0.3
FRON				AML	AML		
	comp=E,67µm,1.3s						
FRON				AML	AML		
	comp=N,98µm,0.6s						
FRON				AML	AML		
	comp=E,67µm,0.7s						
MC2	**Monte Cornacci**	**0.36**	**164**	⇓P	Pg	15 46 51.6	+0.1
ASSB	**Assisi San Ben**	**0.36**	**234**	⇓P	Pg	15 46 51.7	+0.1
ASSB				AML	AML		
	comp=N,109µm,1.3s						
ASSB				AML	AML		
	comp=E,112µm,1.3s						
ASSB				AML	AML		
	comp=N,109µm,0.7s						
T1216	**Preci, Frazion**	**0.37**	**185**	⇑P	Pg	15 46 51.6	0.0
T1216				AML	AML		
	comp=E,120µm,1.0s						
T1216				AML	AML		
	comp=N,119µm,0.4s						
T1216				AML	AML		
	comp=E,120µm,1.0s						
ATFO	**Monte Foce - G**	**0.37**	**287**	⇓P	Pg	15 46 52.0	+0.3
ATFO				AML	AML		
	comp=E,64µm,0.7s						
ATFO				AML	AML		
	comp=N,49µm,0.5s						
ATFO				AML	AML		
	comp=E,64µm,1.3s						
COR1	**Corinaldo**	**0.38**	**353**	P	Pb	15 46 53.0	+0.3
MURB	**Monte Urbino**	**0.39**	**271**	⇑P	Pb	15 46 52.7	-0.2
MURB				AML	AML		
	comp=E,108µm,0.3s						
MURB				AML	AML		
	comp=N,102µm,0.2s						
MMO1	**Montemonaco**	**0.41**	**151**	P	Pg	15 46 52.0	-0.4
T1245	**Castelsantange**	**0.41**	**167**	⇑P	Pg	15 46 52.4	-0.1
T1245				AML	AML		
	comp=N,136µm,0.3s						
T1245				AML	AML		
	comp=E,126µm,0.6s						

T1245				AML	AML		
	comp=N,136μm,1.7s						
MPAG	**Monte Paganucc**	**0.43**	**330**	⇑P	Pg	15 46 52.9	+0.1
MPAG				AML	AML		
	comp=N,37μm,0.7s						
MPAG				AML	AML		
	comp=E,62μm,0.1s						
MPAG				AML	AML		
	comp=N,37μm,0.7s						
PIEI	**Pieia**	**0.47**	**306**	⇑P	Pg	15 46 51.7	-1.9
FSSB	**Fossombrone**	**0.48**	**335**	⇓P	Pg	15 46 54.0	+0.3
FSSB				AML	AML		
	comp=E,134μm,1.2s						
FSSB				AML	AML		
	comp=N,170μm,0.2s						
T1241	**Roccafluvione,**	**0.48**	**146**	⇑P	Pg	15 46 53.7	0.0
T1241				AML	AML		
	comp=E,88μm,0.7s						
T1241				AML	AML		
	comp=N,85μm,0.2s						
T1241				AML	AML		
	comp=E,88μm,1.3s						
ATVO	**AVT- Monte Val**	**0.49**	**285**	⇑P	Pg	15 46 54.1	+0.2
ATVO				AML	AML		
	comp=E,34μm,0.3s						
ATVO				AML	AML		
	comp=N,38μm,0.3s						
ATVO				AML	AML		
	comp=E,34μm,1.7s						
ATVO				AML	AML		
	comp=N,38μm,1.7s						
T1212	**Cascia, Frazio**	**0.51**	**181**	⇓P	Pg	15 46 54.0	-0.2
T1214	**Arquata del Tr**	**0.51**	**168**	P	Pg	15 46 54.0	-0.2
ATPI	**Pietralunga -**	**0.52**	**292**	⇓P	Pb	15 46 54.8	-0.3
ATPI				AML	AML		
	comp=E,30μm,0.5s						
ATPI				AML	AML		
	comp=N,39μm,1.3s						
ATPI				AML	AML		
	comp=N,39μm,1.3s						
TERO	**Teramo**	**0.75**	**148**	⇑P	Pg	15 46 58.4	-0.3
TERO				AML	AML		
	comp=E,32μm,1.3s						
TERO				AML	AML		
	comp=N,33μm,1.5s						
TERO				AML	AML		
	comp=E,32μm,0.7s						
TERO				AML	AML		
	comp=N,33μm,0.5s						
RM33	**Pellescritta (**	**0.76**	**171**	P	Pg	15 46 58.1	-0.8
RM33				AML	AML		
	comp=E,30μm,0.7s						
RM33				AML	AML		
	comp=N,33μm,0.4s						

ROM 19 15:47:15.7±0.1**, 43°.068N**±0°.003×**13°.052E**±0°.004**,**
h7^{km}, ML1.8/21**, 4C-7D, Error ellipse: s-maj=0.3km**
s-min=0.0km az=62.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.04**	**250**	P	Pg	15 47 17.2	+0.2
T1219				S	Sg	15 47 18.3	+0.2
T1219				AML	AML		
	comp=N,6755μm,0.2s						
T1219				AML	AML		
	comp=E,9640μm,0.1s						
T1219				AML	AML		
	comp=N,5740μm,0.2s						
T1219				AML	AML		
	comp=N,5740μm,0.2s						
T1219				AML	AML		
	comp=E,9495μm,0.1s						
T1219				AML	AML		
	comp=N,6755μm,0.2s						
T1219				AML	AML		
	comp=E,9640μm,0.1s						
FDMO	**Fiordimonte**	**0.04**	**140**	P	Pg	15 47 17.2	0.0
FDMO				S	Sg	15 47 18.0	-0.1
FDMO				AML	AML		
	comp=E,4655μm,0.1s						
FDMO				AML	AML		
	comp=N,3590μm,0.2s						
T1220	**Camerino, Fraz**	**0.05**	**33**	P	Pg	15 47 17.5	+0.2
T1220				S	Sg	15 47 18.8	+0.4
T1220				AML	AML		
	comp=E,13900μm,0.3s						
T1220				AML	AML		
	comp=N,8925μm,0.5s						
T1220				AML	AML		
	comp=N,8925μm,0.5s						
T1220				AML	AML		
	comp=E,13850μm,0.3s						
SEF1	**Sefro**	**0.11**	**316**	P	Pg	15 47 18.5	+0.4
SEF1				S	Sg	15 47 20.6	+0.8
CSP1	**Cessapalombo**	**0.12**	**78**	P	Pg	15 47 18.5	+0.3
CSP1				S	Sg	15 47 20.8	+0.8
CSP1				AML	AML		
	comp=E,1008μm,0.8s						
CSP1				AML	AML		
	comp=N,684μm,1.2s						
CSP1				AML	AML		
	comp=E,1008μm,1.2s						
CSP1				AML	AML		
	comp=N,684μm,0.8s						
CESI	**CESI - Serrava**	**0.12**	**240**	P	Pg	15 47 18.9	+0.5
CESI				S	Sg	15 47 21.4	+1.2
CESI				AML	AML		
	comp=E,462μm,0.7s						
CESI				AML	AML		
	comp=N,593μm,0.5s						
T1256	**Bolognola (MC)**	**0.14**	**116**	P	Pg	15 47 19.0	+0.3
T1256				S	Sg	15 47 21.7	+0.9
T1256				AML	AML		
	comp=E,976μm,0.3s						
T1256				AML	AML		
	comp=N,746μm,0.2s						
T1256				AML	AML		
	comp=N,746μm,0.2s						
T1256				AML	AML		
	comp=E,976μm,1.7s						
T1216	**Preci, Frazion**	**0.18**	**188**	P	Pg	15 47 19.6	+0.3
T1216				S	Sg	15 47 22.9	+1.2
T1216				AML	AML		
	comp=E,789μm,0.3s						
T1216				AML	AML		
	comp=N,776μm,0.2s						
T1216				AML	AML		
	comp=E,790μm,0.3s						
T1216				AML	AML		
	comp=N,776μm,0.3s						
MC2	**Monte Cornacci**	**0.18**	**147**	P	Pg	15 47 20.1	+0.7
MC2				S	Sg	15 47 23.4	+1.3
SNTG	**Esanatoglia**	**0.20**	**337**	P	Pg	15 47 20.2	+0.4
SNTG				S	Sg	15 47 24.1	+1.5
SNTG				AML	AML		
	comp=E,178μm,0.3s						
SNTG				AML	AML		
	comp=N,121μm,0.1s						
GUMA	**Gualdo di Mace**	**0.21**	**91**	P	Pg	15 47 20.5	+0.7
GUMA				S	Sg	15 47 24.4	+1.8
GUMA				AML	AML		
	comp=E,1255μm,0.4s						
GUMA				AML	AML		
	comp=N,1154μm,0.2s						
GUMA				AML	AML		
	comp=E,1425μm,0.3s						
GUMA				AML	AML		
	comp=N,1045μm,0.2s						
GUMA				AML	AML		
	comp=E,1255μm,1.6s						
T1245	**Castelsantange**	**0.23**	**155**	P	Pg	15 47 20.7	+0.4
T1245				S	Sg	15 47 25.0	+1.6
T1245				AML	AML		
	comp=E,328μm,0.6s						
T1245				AML	AML		
	comp=N,305μm,1.1s						
T1245				AML	AML		
	comp=E,328μm,1.4s						
EL6	**Elcito**	**0.26**	**8**	P	Pg	15 47 21.3	+0.4
EL6				S	Sg	15 47 26.0	+1.5
EL6				AML	AML		
	comp=E,386μm,1.5s						
EL6				AML	AML		
	comp=N,406μm,1.1s						
EL6				AML	AML		
	comp=E,386μm,0.5s						
ASSB	**Assisi San Ben**	**0.29**	**265**	⇑P	Pg	15 47 21.7	+0.4
ASSB				AML	AML		
	comp=E,369μm,0.4s						
ASSB				AML	AML		
	comp=N,440μm,1.1s						
ASSB				AML	AML		
	comp=N,440μm,0.9s						
T1212	**Cascia, Frazio**	**0.32**	**181**	⇓P	Pg	15 47 22.2	+0.3
T1212				AML	AML		
	comp=E,292μm,0.6s						
T1212				AML	AML		
	comp=N,388μm,0.3s						
T1212				AML	AML		
	comp=E,292μm,0.6s						
CING	**Cingoli**	**0.33**	**19**	⇑P	Pg	15 47 22.4	+0.3
CING				AML	AML		
	comp=E,372μm,0.2s						
CING				AML	AML		
	comp=N,280μm,0.4s						
T1214	**Arquata del Tr**	**0.33**	**159**	⇓P	Pg	15 47 22.6	+0.4
T1241	**Roccafluvione,**	**0.35**	**127**	⇓P	Pg	15 47 22.8	+0.3
T1241				AML	AML		
	comp=E,120μm,0.7s						
T1241				AML	AML		
	comp=E,120μm,0.7s						
T1241				AML	AML		
	comp=N,151μm,0.2s						
T1217	**Poggiodomo (PG**	**0.37**	**194**	⇓P	Pg	15 47 22.7	-0.1
T1218	**Civita (PG)**	**0.40**	**173**	P	Pg	15 47 23.5	0.0
SSFR	**Montelago di S**	**0.42**	**332**	⇑P	Pg	15 47 24.4	+0.5
SSFR				AML	AML		
	comp=E,146μm,1.3s						
SSFR				AML	AML		
	comp=N,160μm,1.3s						
SSFR				AML	AML		
	comp=N,160μm,0.7s						
SSFR				AML	AML		
	comp=E,146μm,0.7s						
MURB	**Monte Urbino**	**0.43**	**297**	⇑P	Pg	15 47 24.5	+0.4
MURB				AML	AML		
	comp=E,236μm,1.4s						
MURB				AML	AML		
	comp=N,318μm,0.2s						
MURB				AML	AML		
	comp=E,236μm,0.6s						
ARVD	**Arcevia**	**0.44**	**349**	⇓P	Pg	15 47 24.4	+0.3
ARVD				AML	AML		
	comp=E,103μm,0.1s						
ARVD				AML	AML		
	comp=N,87μm,1.0s						
MOMA	**Monte Martano**	**0.44**	**233**	P	Pg	15 47 24.9	+0.7
MOMA				AML	AML		
	comp=N,118μm,1.4s						
MOMA				AML	AML		
	comp=E,143μm,1.4s						
MOMA				AML	AML		
	comp=N,118μm,0.6s						
ATFO	**Monte Foce - G**	**0.46**	**311**	P	Pg	15 47 25.1	+0.4
T1211	**Morro Reatino**	**0.55**	**195**	S	Sb	15 47 35.0	-0.9
ATVO	**AVT- Monte Val**	**0.57**	**304**	⇓P	Pg	15 47 26.6	0.0
ATVO				AML	AML		
	comp=E,33μm,0.3s						
ATVO				AML	AML		
	comp=N,31μm,1.6s						
ATVO				AML	AML		
	comp=N,31μm,0.4s						
CESX	**Cesi**	**0.57**	**217**	⇓P	Pg	15 47 26.6	-0.1
CESX				S	Sb	15 47 35.5	-0.9
CESX				AML	AML		
	comp=N,97μm,1.2s						
CESX				AML	AML		
	comp=N,97μm,0.8s						
CESX				AML	AML		
	comp=E,109μm,1.0s						
MPAG	**Monte Paganucc**	**0.60**	**339**	P	Pg	15 47 27.9	+0.6
MPAG				S	Sb	15 47 38.0	+0.6
PIEI	**Pieia**	**0.60**	**321**	P	Pg	15 47 27.7	+0.4
PIEI				S	Sb	15 47 37.3	0.0
PIEI				AML	AML		
	comp=E,44μm,1.2s						
PIEI				AML	AML		
	comp=N,31μm,0.4s						
PIEI				AML	AML		
	comp=E,44μm,0.8s						
TERO	**Teramo**	**0.60**	**137**	P	Pg	15 47 27.1	-0.1
TERO				AML	AML		
	comp=N,64μm,1.5s						
TERO				AML	AML		
	comp=N,64μm,0.5s						
TERO				AML	AML		
	comp=E,57μm,0.2s						
NARO	**Abbazia di Nar**	**0.64**	**328**	S	Sb	15 47 38.8	+0.4
FSSB	**Fossombrone**	**0.66**	**342**	P	Pb	15 47 29.2	-0.3
FSSB				AML	AML		
	comp=N,196μm,0.4s						
FSSB				AML	AML		
	comp=E,131μm,0.2s						

*IDC **19** 15:48:16.6±1.4, 7°.89S×160°.92E, h0^{km}, mb4.2/7,*
mbtmp4.1/7, Error ellipse: s-maj=52.6km s-min=21.9km
az=124.0
*NEIC **19** 15:48:17.6±1.0, 7°.90S±0°.05×161°.0E±0°.2, h10^{km}±1^{km},*
mb4.8/8, Error ellipse: s-maj=36.4km s-min=7.8km
az=274.0
ISC 19 15:48:21.3±0.7**, 8°.0S**±0°.1×**161°.0E**±0°.2**, h35^{km}, n25,**
σ1^{s}30/20**, mb4.1**/9**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.80**	**216**	Pn	**Pn**	**15 48 49.2**	**-0.7**
	1μm,0.3s,baz=68,slow=23,SNR=1.3						
HNR				Sn	**Sn**	**15 49 15.4**	**+3.8**
	4μm,0.3s,baz=217,slow=21,SNR=2.6						
HNR	**Honiara**	**1.80**	**216**	Pn	**Pn**	**15 48 49.4**	**-0.5**
EIDS	**Eidsvold**	**19.73**	**208**		**P**	**15 52 48.1**	**0.0**
EIDS				IAmb	IAmb	15 52 55.1	
	comp=Z,81nm,1.5s						
ARMA	**Armidale**	**24.01**	**200**	P	**P**	**15 53 32.6**	**-0.4**
ARMA				IAmb	IAmb	15 53 45.1	
	comp=Z,20nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**26.88**	**12**	T	T	16 22 32.3	
	baz=192						
H11S3	**WAKE ISLAND Hy**	**26.88**	**12**	T	T	16 22 32.7	
	baz=192						
H11S1	**WAKE ISLAND Hy**	**26.90**	**12**	T	T	16 22 41.6	
	baz=192						
H11N1	**WAKE ISLAND Hy**	**28.11**	**12**	T	T	16 23 55.7	
	baz=194						
H11N3	**WAKE ISLAND Hy**	**28.11**	**12**	T	T	16 23 55.6	
	baz=194						
H11N2	**WAKE ISLAND Hy**	**28.12**	**12**	T	T	16 23 55.2	
	baz=194						
WRA	**Warramunga Arr**	**28.45**	**242**	P	**P**	**15 54 11.6**	**-1.6**
	comp=Z,4.6nm,1.1s,baz=61,slow=7.1,SNR=1.7						
	comp=Z,4.6nm,1.1s						
BBOO	**Buckleboo**	**33.86**	**220**	P	**P**	**15 54 58.7**	**-2.0**
BKZ	**Black Stump Fm**	**34.03**	**158**	P	**P**	**15 55 01.1**	**-1.0**
BKZ				IAmb	IAmb	15 56 18.9	
	comp=Z,33nm,1.5s						
GVZ	**Greta Valley S**	**36.42**	**165**	P	**P**	**15 55 22.2**	**-0.4**
OXZ	**Oxford**	**36.52**	**166**	P	**P**	**15 55 23.4**	**0.0**
WHZ	**Wether Hill Ro**	**38.25**	**172**	P	**P**	**15 55 39.0**	**+0.9**
CMAR	**Chiang Mai Arr**	**66.62**	**294**	P	**P**	**15 59 09.9**	**+1.2**
	comp=Z,1.1nm,0.9s,baz=110,slow=3.9,SNR=2.7						
	comp=Z,1.1nm,0.9s						
SONM	**Songino Array**	**73.47**	**325**	P	**P**	**15 59 50.3**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=140,slow=5.0,SNR=1.4						
	comp=Z,1.4nm,0.7s						
QSPA	**South Pole Qui**	**82.01**	**180**	P	**P**	**16 00 37.7**	**0.0**
ILAR	**Eielson Array**	**82.16**	**20**	P	**P**	**16 00 38.4**	**+0.2**
	comp=Z,4.0nm,1.3s,baz=239,slow=5.0,SNR=1.8						
	comp=Z,4.0nm,1.3s						
ILAR	**Eielson Array**	**82.16**	**20**	P	**P**	**16 00 38.0**	**-0.2**
MKAR	**Makanchi Array**	**88.12**	**318**	P	**P**	**16 01 08.3**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=92,slow=5.1,SNR=2.0						
	comp=Z,1.1nm,0.8s						
MKAR	**Makanchi Array**	**88.12**	**318**	P	**P**	**16 01 07.7**	**-0.8**
YKA	**Yellowknife Ar**	**94.41**	**28**	P	**P**	**16 01 38.1**	**+0.9**
	comp=Z,0.7nm,0.9s,baz=253,slow=4.7,SNR=2.2						
	comp=Z,0.7nm,0.9s						
PDAR	**Pinedale Array**	**94.92**	**48**	P	**P**	**16 01 41.8**	**+1.4**
	comp=Z,0.5nm,0.8s,baz=234,slow=5.5,SNR=1.6						
	comp=Z,0.5nm,0.8s						

WEL 19 15:49:48.0±0.5**, 42°S**±3°×**17°4E**±°**, h5^{km}**±3^{km}**, M2.6**/9**,**
ML2.5/10**, MLv2.6**/9**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=122.7, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSWZ	**Blackbirch Sta**	**0.28**	**27**	P	Pg	15 49 53.7	+0.3
BSWZ				S	Sg	15 49 58.5	+1.4
CMWZ	**Cape Campbell**	**0.44**	**61**	P	Pg	15 49 57.2	+0.8
KHZ	**Kahutara**	**0.47**	**195**	P	Pg	15 49 57.3	+0.3
KHZ				S	Sg	15 50 03.9	+0.8
TUWZ	**Tuamarina**	**0.56**	**18**	P	Pg	15 49 59.1	+0.3
THZ	**Tophouse**	**0.63**	**288**	P	Pg	15 50 00.5	+0.3
THZ				S	Sg	15 50 09.2	+0.8
NNZ	**Nelson**	**0.79**	**342**	P	Pg	15 50 03.0	-0.1
TCW	**Tory Channel**	**0.87**	**30**	P	Pg	15 50 04.1	-0.5
MRNZ	**Matariki Terra**	**0.91**	**308**	P	Pg	15 50 05.6	+0.2
TKNZ	**Takaka Hill**	**1.09**	**329**	P	Pg	15 50 08.5	-0.3
TKNZ				S	Sb	15 50 23.7	0.0
GVZ	**Greta Valley S**	**1.12**	**206**	P	Pg	15 50 09.2	-0.3
DUWZ	**D'Urville Isla**	**1.17**	**8**	P	Pg	15 50 09.7	-0.8
CAW	**Cannon Point**	**1.33**	**50**	P	Pn	15 50 12.3	-1.0
LTZ	**Lake Taylor**	**1.34**	**232**	P	Pn	15 50 12.7	-0.7
LTZ				S	Sg	15 50 30.9	-0.1
QRZ	**Quartz Range**	**1.44**	**322**	P	Pn	15 50 14.1	-0.7
QRZ	**Quartz Range**	**1.44**	**322**	P	Pn	15 50 14.2	-0.6
MTW	**Mount Morrison**	**1.57**	**60**	P	Pn	15 50 15.1	-1.4
OGWZ	**Otaki Gorge**	**1.59**	**44**	P	Pn	15 50 16.3	-0.5
HOWZ	**Holdsworth Sta**	**1.73**	**53**	P	Pn	15 50 18.5	-0.2
INZ	**Inchbonnie**	**1.84**	**245**	P	Pn	15 50 20.1	-0.2
TMWZ	**Te Maipa**	**1.85**	**63**	P	Pg	15 50 23.7	+0.2
MQZ	**McQueen's Vall**	**1.90**	**204**	P	Pn	15 50 18.1	-3.0
WACZ	**Wakanui South**	**2.41**	**214**	P	Pn	15 50 25.8	-2.2
WVZ	**Waitaha Valley**	**2.46**	**242**	P	Pn	15 50 28.2	-0.6
GCSZ	**Gaunt Creek Bo**	**2.83**	**240**	P	Pn	15 50 32.8	-1.1
TMZ	**Timaru**	**3.12**	**218**	P	Pn	15 50 34.9	-3.0

PRU 19 16:00:23.4±0.0**, 50°.30N**×**18°.78E, h0^{km}, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.62**	**222**	*e*SG	Sg	16 00 42.7	-0.5
OJC	**Ojcow**	**0.66**	**97**	*e*Pg	Pg	16 00 35.6	-0.4
OJC				*e*Sg	Sg	16 00 44.7	+0.2
MORC	**Moravsky Berou**	**0.95**	**237**	*e*PG	Pg	16 00 41.3	-0.4
MORC				*e*SG	Sg	16 00 52.1	-1.9
MAUC	**Maruska**	**1.12**	**214**	*e*PG	Pg	16 00 43.6	-1.2
MAUC				*e*SG	Sg	16 00 58.9	-0.5
LANS	**Liptovska Anna**	**1.23**	**159**	*e*PG	Pg	16 00 46.1	-0.9
LANS				*e*SG	Sg	16 01 03.1	+0.1
LANS				*e*LG	Lg	16 01 05.9	
KRLC	**Kraliky**	**1.30**	**261**	*e*SG	Sg	16 01 04.7	-0.6
DPC	**Dobruska-Polom**	**1.58**	**273**	*e*PG	Pn	16 00 51.6	-1.1
DPC				*e*SG	Sg	16 01 14.0	0.0
OSTC	**Ostas**	**1.66**	**280**	*e*SG	Sn	16 01 15.7	-0.1
VRAC	**Vranov**	**1.73**	**236**	*e*SG	Sn	16 01 15.8	-1.7
CHVC	**Chvalec**	**1.77**	**280**	*e*SG	Sg	16 01 20.1	0.0
KHC	**Kasperske Hory**	**3.57**	**253**	*e*SG	Sg	16 02 15.6	-2.5

IDC 19 16:05:02.9±6.5**, 7°.49S**×**160°.08E, h0^{km}, mb3.5**/4**,**
mbtmp3.5/4**, Error ellipse: s-maj=188.4km**
s-min=36.1km az=113.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S2	**WAKE ISLAND Hy**	**26.63**	**14**	T	T	16 39 01.4	
	baz=193,slow=76,SNR=80						
H11S3	**WAKE ISLAND Hy**	**26.63**	**14**	T	T	16 38 56.6	
	baz=193,slow=76,SNR=60						
H11S1	**WAKE ISLAND Hy**	**26.64**	**14**	T	T	16 38 52.6	
	baz=193,slow=76,SNR=58						
H11N1	**WAKE ISLAND Hy**	**27.85**	**14**	T	T	16 40 23.3	
	baz=193,slow=76,SNR=85						
WRA	**Warramunga Arr**	**27.85**	**241**	P	P	16 10 55.0	+0.6
	0.7nm,0.5s,baz=68,slow=9.2,SNR=12						
	0.7nm,0.5s						
H11N3	**WAKE ISLAND Hy**	**27.86**	**14**	T	T	16 40 26.9	
	baz=193,slow=76,SNR=98						
H11N2	**WAKE ISLAND Hy**	**27.87**	**14**	T	T	16 40 22.7	
	baz=193,slow=76,SNR=87						
ASAR	**Alice Springs**	**29.82**	**234**	P	P	16 11 11.2	-0.8
	0.2nm,0.4s,baz=64,slow=10,SNR=8.6						
	0.2nm,0.4s						
SONM	**Songino Array**	**72.55**	**325**	P	P	16 16 30.9	-1.1
	0.3nm,0.7s,baz=105,slow=4.8,SNR=1.4						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**87.14**	**318**	P	P	16 17 52.4	+1.5
	0.2nm,0.6s,baz=103,slow=4.3,SNR=2.3						
	0.2nm,0.6s						

*NEIC **19** 16:09:10.8±2.0, 18°.6S±0°.5×176°.6W±0°.2, h385^{km}±33^{km},*
mb4.0/8, Error ellipse: s-maj=80.7km s-min=11.4km
az=193.0
*IDC **19** 16:09:29.8±3.4, 19°.38S×177°.52W, h538^{km}±49^{km}, mb3.1/4,*
mbtmp4.1/5, Error ellipse: s-maj=117.0km s-min=36.6km
az=158.0
ISC 19 16:09:11.2±1.4**, 18°.6S**±0°.4×**176°.6W**±0°.1**, h400^{km}, n15,**
σ1^{s}11/15**, mb3.9**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**6.30**	**95**		**Pn**	**16 10 46.7**	**-0.5**
AFI	**Afiamalu**	**6.57**	**45**	P	P	16 11 24.7	+34
	15nm,0.6s,baz=144,slow=3.2,SNR=4.7						
CTA	**Charters Tower**	**35.06**	**261**	P	**P**	**16 15 30.1**	**+1.5**
	2.2nm,0.4s,baz=83,slow=11,SNR=11						
	2.2nm,0.4s						
CTAO	**Charters Tower**	**35.06**	**261**	P	**P**	**16 15 30.0**	**+1.3**
CTAO				IAmb	IAmb	16 15 43.6	
	comp=Z,13nm,1.3s						
TOO	**Toolangi**	**38.10**	**232**	P	**P**	**16 15 52.2**	**-1.5**
TOO				IAmb	IAmb	16 16 27.2	
	comp=Z,9.7nm,1.3s						
STKA	**Stephens Creek**	**39.83**	**242**	P	**P**	**16 16 07.7**	**-0.3**
	comp=Z,1.9nm,0.9s,baz=90,slow=8.1,SNR=1.5						
	comp=Z,1.9nm,0.9s						
BBOO	**Buckleboo**	**44.60**	**242**	P	**P**	**16 16 44.1**	**-1.8**
WB0	**Warramunga Arr**	**46.20**	**260**	P	**P**	**16 16 58.6**	**+0.1**
WB2	**Warramunga Arr**	**46.22**	**260**	P	**P**	**16 16 58.9**	**+0.3**
WB2				IAmb	IAmb	16 17 32.4	
	comp=Z,9.8nm,1.5s						
WRA	**Warramunga Arr**	**46.23**	**260**	P	**P**	**16 16 58.7**	**0.0**
	comp=Z,0.4nm,0.4s,baz=97,slow=7.6,SNR=29						
	comp=Z,0.4nm,0.4s						
AS31	**Alice Springs**	**46.29**	**255**	P	**P**	**16 16 58.6**	**-0.5**
ASAR	**Alice Springs**	**46.29**	**255**	P	**P**	**16 16 59.0**	**-0.2**
	comp=Z,2.7nm,0.8s,baz=94,slow=7.2,SNR=33						
ASAR				PcP	**PcP**	**16 18 28.0**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=104,slow=4.1,SNR=5.2						
	comp=Z,2.7nm,0.8s						
ASAR	**Alice Springs**	**46.29**	**255**	P	**P**	**16 16 58.7**	**-0.4**
MBWA	**Marble Bar**	**59.60**	**256**	P	**P**	**16 18 34.1**	**-1.0**
QSPA	**South Pole Qui**	**71.43**	**180**	P	**P**	**16 19 50.7**	**+1.4**
QSPA				IAmb	IAmb	16 20 05.8	
	comp=Z,9.9nm,1.5s						

*JMA **19** 16:30:01.2±0.2, 24°.9N±1°.0×122°.2E±0°.5, h108^{km}±2^{km},*
MV2.4/15, TAIWAN REGION
*TAP **19** 16:30:01.4, 24°.86N×122°.23E, h111^{km}, ML3.3, C*
ISC 19 16:30:02.0±1.4**, 24°.85N**±0°.04×**122°.21E**±0°.02**, h108^{km}**±6^{km}**,**
n109, σ0^{s}67/182**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		**0.25**	**268**	P	**Pn**	**16 30 16.8**	**-0.5**
	baz=265						
TWB1	**Santiao Chiao**	**0.25**	**308**	*i* P	**Pn**	**16 30 17.1**	**-0.2**
	baz=303						
TWB1				*i* S	**Sn**	**16 30 28.9**	**+0.2**
	baz=303						
NTC	**Toucheng**	**0.34**	**270**	S	**Sn**	**16 30 28.9**	**-0.4**
	baz=268						
TIPB	**Shuangxi**	**0.36**	**289**	P	**Pn**	**16 30 17.8**	**0.0**
	baz=286						
TIPB				S	**Sn**	**16 30 29.5**	**-0.2**
	baz=286						
SXI1	**Grass Mountain**	**0.38**	**309**	*i* P	**Pn**	**16 30 18.1**	**+0.1**
	baz=305						
SXI1				*i* S	**Sn**	**16 30 30.1**	**+0.1**

	baz=305						
TWC	Suao	0.41	233	P	Pn	16 30 17.6	-0.3
	baz=233						
TWC				S	Sn	16 30 29.2	-0.8
	baz=233						
ILA	Ilan	0.43	258	*e*P	Pn	16 30 17.6	-0.5
	baz=257						
ILA				S	Sn	16 30 31.0	+0.8
	baz=257						
EOS2	EOS2	0.43	177	P	Pn	16 30 18.2	+0.2
	baz=180						
WFSB	Wu-fen Shan	0.44	299	*i* P	Pn	16 30 17.9	-0.3
	baz=296						
WFSB				*i* S	Sn	16 30 30.8	+0.4
	baz=296						
TNOU	National Taiwa	0.49	307	P	Pn	16 30 18.4	-0.1
	baz=304						
TNOU				*i* S	Sn	16 30 31.0	+0.1
	baz=304						
NDS	Dongshan	0.50	244	P	Pn	16 30 18.8	+0.2
	baz=243						
NDS				*e*S	Sn	16 30 30.2	-0.8
	baz=243						
TWE	Neicheng	0.51	255	P	Pn	16 30 18.8	+0.2
	baz=253						
TWE				S	Sn	16 30 31.0	-0.1
	baz=253						
EWUT	Wuta	0.56	224	*i* P	Pn	16 30 19.4	+0.3
	baz=224						
EWUT				*i* S	Sn	16 30 32.4	+0.6
	baz=224						
FUSB	Fushanzhiwuyua	0.57	261	*i* P	Pn	16 30 19.0	-0.2
	baz=259						
FUSB				S	Sn	16 30 31.8	-0.2
	baz=259						
EOS3	EOS3	0.57	170	P	Pn	16 30 18.4	-0.6
	baz=172						
TWA	Mucha	0.58	283	*i* P	Pn	16 30 18.9	-0.2
	baz=281						
TWA				*i* S	Sn	16 30 31.8	-0.3
	baz=281						
ENA	Nanau	0.60	225	*i* P	Pn	16 30 19.5	+0.2
	baz=225						
ENA				S	Sn	16 30 31.7	-0.6
	baz=225						
ENTT	Nioudou	0.62	250	*i* P	Pn	16 30 19.8	+0.3
	baz=249						
ENTT				S	Sn	16 30 34.2	+1.6
	baz=249						
NHDH	Xindian Distri	0.63	280	P	Pn	16 30 19.3	-0.2
	baz=278						
NHDH				S	Sn	16 30 33.7	+1.1
	baz=278						
YM01	YM01	0.65	297	*i* P	Pn	16 30 19.6	-0.1
	baz=295						
YM01				S	Sn	16 30 32.4	-0.7
	baz=295						
TATO	Taipei	0.66	281	P	Pn	16 30 19.5	-0.3
LATG	Datong	0.69	243	*i* P	Pn	16 30 20.7	+0.5
	baz=242						
LATG				*i* S	Sn	16 30 35.2	+1.3
	baz=242						
ANP	Anpu	0.70	298	*e*P	Pn	16 30 19.3	-1.0
	baz=296						
ANP				*e*S	Sn	16 30 33.0	-1.0
	baz=296						
NTST	Danshui	0.75	294	*e*S	Sn	16 30 34.8	+0.3
	baz=292						
TWS1	Kuangyinshan	0.76	289	*i* P	Pn	16 30 21.0	+0.4
	baz=287						
TWS1				*i* S	Sn	16 30 36.6	+2.0
	baz=287						
YHNB	Yeheng	0.78	257	P	Pn	16 30 20.9	0.0
YHNB	Yeheng	0.78	257	*i* P	Pn	16 30 20.9	0.0
	baz=256						
YHNB				*i* S	Sn	16 30 35.1	0.0
	baz=256						
JYNG	Yonagunijimaku	0.78	121	P	Pn	16 30 20.8	-0.1
JYNG				S	Sn	16 30 35.1	+0.1
NSK	Sanguang	0.79	257	*i* P	Pn	16 30 21.1	+0.1
	baz=256						
NSK				*i* S	Sn	16 30 34.9	-0.5
	baz=256						
YOJ	Yonaguni jima	0.83	118	P	Pn	16 30 28.7	+7.4
YOJ	Yonaguni jima	0.83	118	P	Pn	16 30 21.1	-0.1
YOJ				S	Sn	16 30 35.8	0.0
YOJ	Yonaguni jima	0.83	118	P	Pn	16 30 21.2	-0.1
	baz=119						
YOJ				S	Sn	16 30 35.9	+0.1
	baz=119						
NNSB	Datong	0.86	241	*i* P	Pn	16 30 22.1	+0.4
	baz=240						
NNSB				*i* S	Sn	16 30 37.4	+0.8
	baz=240						
NNS	Nan Shan	0.86	242	*i* P	Pn	16 30 22.2	+0.5
	baz=241						
NNS				*i* S	Sn	16 30 37.0	+0.4
	baz=241						
ETL	Fush Village	0.87	218	P	Pn	16 30 21.3	-0.5
	baz=218						
ETL				*i* S	Sn	16 30 36.3	-0.3
	baz=218						
NACB	Ninganchiao	0.88	220	P	Pn	16 30 21.5	-0.3
NACB	Ninganchiao	0.88	220	P	Pn	16 30 21.2	-0.5
	baz=220						
NACB				S	Sn	16 30 36.1	-0.5
	baz=220						
ETLH	Xiulin Townshi	0.92	226	*i* P	Pn	16 30 22.2	-0.1
	baz=226						
ETLH				*i* S	Sn	16 30 37.6	0.0
	baz=226						
NCU	National Centr	0.93	277	*i* P	Pn	16 30 22.7	+0.4
	baz=276						
NCU				*i* S	Sn	16 30 38.4	+0.8
	baz=276						
NCUH	Zhongli	0.94	277	P	Pn	16 30 22.8	+0.5
	baz=276						
NCUH				S	Sn	16 30 39.0	+1.4
	baz=276						
TWD	Chiawan	0.95	216	*i* P	Pn	16 30 22.2	-0.2
	baz=216						
TWD				S	Sn	16 30 37.4	-0.5
	baz=216						
NFF	Wufeng Townshi	1.01	258	*e*P	Pn	16 30 23.0	-0.2
	baz=257						
NFF				S	Sn	16 30 38.8	-0.4
	baz=257						
HWA	Hwalien	1.03	212	*i* P	Pn	16 30 23.7	+0.3
	baz=212						
HWA				S	Sn	16 30 40.5	+1.1
	baz=212						
LIOB	Emei	1.10	259	*i* P	Pn	16 30 24.2	+0.1
	baz=258						
LIOB				S	Sn	16 30 40.8	0.0
	baz=258						
SBCB	Hsinchu	1.11	267	P	Pn	16 30 24.7	+0.5
	baz=266						
SBCB				S	Sn	16 30 41.0	+0.1
	baz=266						
WHF	Hehuan Shan	1.11	231	*i* P	Pn	16 30 24.8	+0.2
	baz=230						
WHF				*i* S	Sn	16 30 41.5	-0.2
	baz=230						
TWT	Tachien	1.11	238	*i* P	Pn	16 30 25.3	+0.9
	baz=237						
TWT				S	Sn	16 30 42.1	+0.8
	baz=237						
NSTT	Nanjuang	1.12	259	*i* P	Pn	16 30 24.2	-0.1
	baz=258						
NSTT				*i* S	Sn	16 30 40.7	-0.4
	baz=258						
HSN	Hsinchu	1.12	268	*i* P	Pn	16 30 24.0	-0.3
	baz=268						
HSN				S	Sn	16 30 40.4	-0.8
	baz=268						
TDCB	Techi	1.13	238	P	Pn	16 30 25.1	+0.6
	baz=238						
TDCB				S	Sn	16 30 42.2	+0.7
	baz=238						
CHGB	Renai	1.23	230	*i* P	Pn	16 30 26.3	+0.6
	baz=230						
CHGB				*i* S	Sn	16 30 43.7	+0.1
	baz=230						
OWD	Renai	1.30	227	*e*P	Pn	16 30 26.8	+0.4
	baz=226						
OWD				*e*S	Sn	16 30 44.2	-0.7
	baz=226						
WUSB	Renai	1.31	229	*i* P	Pn	16 30 27.0	+0.4
	baz=229						
WUSB				S	Sn	16 30 45.0	-0.2
	baz=229						
NMLH	Miaoli	1.33	257	*e*P	Pn	16 30 26.4	-0.2
	baz=256						
NMLH				S	Sn	16 30 44.2	-1.0
	baz=256						
EGFH	Guangfu	1.38	211	P	Pn	16 30 26.2	-1.0
	baz=211						
EGFH				S	Sn	16 30 45.5	-0.8
	baz=211						
TWQ1	Liyutan	1.40	249	*i* P	Pn	16 30 27.3	-0.1
	baz=248						
TWQ1				*i* S	Sn	16 30 47.2	+0.5
	baz=248						
WCS	Beigang Elemen	1.42	236	P	Pn	16 30 28.2	+0.5
	baz=236						
WCS				S	Sn	16 30 48.4	+1.1
	baz=236						
VWDT	VWDT	1.47	222	P	Pn	16 30 28.8	+0.6
	baz=222						
VWDT				S	Sn	16 30 48.5	+0.4
	baz=222						
IRIF	Iriomote-Funau	1.48	110	P	Pn	16 30 27.9	-0.5
IRIF				S	Sn	16 30 48.1	-0.3
WDJ	Dajia District	1.51	251	P	Pn	16 30 28.9	+0.1
	baz=250						
WDJ				S	Sn	16 30 49.8	+0.6
	baz=250						
HGSD	Ruisui	1.53	208	P	Pn	16 30 28.9	-0.2
	baz=208						
HGSD				S	Sn	16 30 49.4	-0.3
	baz=208						
SMLT	Sun Moon Lake	1.54	231	*i* P	Pn	16 30 29.8	+0.6
	baz=230						
SMLT				*i* S	Sn	16 30 51.4	+1.6
	baz=230						
SSLB	Suanglung	1.56	227	P	Pn	16 30 30.2	+0.8
SSLB	Suanglung	1.56	227	*i* P	Pn	16 30 30.0	+0.6
	baz=227						
SSLB				*i* S	Sn	16 30 51.5	+1.3
	baz=227						
TCU	Taichung	1.56	244	P	Pn	16 30 29.7	+0.3
	baz=243						
TCU				*e*S	Sn	16 30 49.2	-1.0
	baz=243						
EHY	Hungye	1.57	211	*e*P	Pn	16 30 28.4	-1.1
	baz=211						
EHY				S	Sn	16 30 48.8	-1.6
	baz=211						
HATJ	Hateruma jima	1.66	118	*e*S	Sn	16 30 52.8	+0.4
YULB	Yu-li	1.68	210	P	Pn	16 30 30.8	-0.1
YULB	Yu-li	1.68	210	*e*P	Pn	16 30 29.6	-1.2
	baz=210						
WCHH	Zhanghua	1.69	243	*e*P	Pn	16 30 29.5	-1.4
	baz=242						
WCHH				*e*S	Sn	16 30 52.7	-0.3
	baz=242						
WHYT	Xinyi Township	1.69	227	P	Pn	16 30 31.8	+0.7
	baz=227						
WHYT				S	Sn	16 30 54.7	+1.6
	baz=227						
WNT	Mingjian	1.69	235	*i* P	Pn	16 30 31.5	+0.4
	baz=235						
WNT				S	Sn	16 30 54.2	+1.1
	baz=235						
WJS	Zhushan	1.70	233	P	Pn	16 30 31.7	+0.7
	baz=232						
WJS				*e*S	Sn	16 30 54.2	+1.0
	baz=232						
EYUL	Yuli	1.71	209	*e*P	Pn	16 30 31.5	+0.3
	baz=208						
EYUL				S	Sn	16 30 52.3	-1.1
	baz=208						
JKRS	Kuro-shima	1.75	110	P	Pn	16 30 31.6	-0.1
JKRS				S	Sn	16 30 54.5	+0.1
JIJ	Ishigaki jima	1.83	105	P	Pn	16 30 32.3	-0.4
JIJ				S	Sn	16 30 55.0	-1.1
FULB	Fuli	1.85	207	*e*P	Pn	16 30 32.7	-0.3
	baz=207						
FULB				*e*S	Sn	16 30 56.7	+0.1
	baz=207						
ALS	Alishan	1.85	224	P	Pn	16 30 33.8	+0.5
	baz=223						
ALS				S	Sn	16 30 58.1	+1.0
	baz=223						
CHN5	Tsauling	1.88	228	*i* P	Pn	16 30 33.9	+0.5
	baz=228						
CHN5				*i* S	Sn	16 30 58.3	+1.0
	baz=228						
CHKT	Chengkung	1.91	204	*e*P	Pn	16 30 32.2	-1.6
	baz=204						
WDLH	Douliu	1.91	233	P	Pn	16 30 34.0	+0.3
	baz=232						
WDLH				S	Sn	16 30 59.2	+1.2
	baz=232						
WRL	Guolierlin Hig	1.92	241	*e*P	Pn	16 30 33.2	-0.7
	baz=240						
WRL				*e*S	Sn	16 30 57.4	-0.8
	baz=240						
EHD	Haiduan	1.93	209	*e*P	Pn	16 30 33.9	-0.1
	baz=208						
JISG	Ishigakijimahi	1.93	97	P	Pn	16 30 33.9	0.0
JISG				S	Sn	16 30 58.0	-0.4
ELDTW	Lidau	1.98	214	P	Pn	16 30 33.5	-1.3
	baz=213						
WTCT	Ta-ch'eng	2.01	241	*i* P	Pn	16 30 34.8	-0.2
	baz=240						
WTCT				S	Sn	16 31 00.4	+0.1
	baz=240						
WCKO	Fanlu	2.03	226	P	Pn	16 30 34.5	-0.8
	baz=226						
WCKO				S	Sn	16 31 00.2	-0.5
	baz=226						
TPUB	Ta-pu	2.11	223	P	Pn	16 30 36.5	+0.1
TPUB	Ta-pu	2.11	223	*e*P	Pn	16 30 36.3	-0.1
	baz=223						
CHY	Chiayi	2.12	231	*e*P	Pn	16 30 36.6	+0.2
	baz=230						
STYH	Taoyuan	2.13	218	*e*P	Pn	16 30 37.2	+0.7
	baz=218						
WTP	Ta-pu	2.16	223	*e*P	Pn	16 30 37.0	0.0
	baz=222						
WSF	Szhu	2.18	237	P	Pn	16 30 37.1	-0.1
	baz=236						
WSF				S	Sn	16 31 04.1	0.0
	baz=236						
TWK	Hsinying	2.23	225	*e*P	Pn	16 30 37.3	-0.6
	baz=224						
CHN1	Nanshi	2.26	223	*e*P	Pn	16 30 38.2	-0.1
	baz=222						
TWGBT	Beinan	2.27	207	*e*P	Pn	16 30 38.4	-0.1
	baz=207						
JTJ	Tarama	2.28	95	P	Pn	16 30 38.5	+0.1
JTJ				*e*S	Sn	16 31 05.8	-0.6
SGST	Jiashian	2.31	220	*e*P	Pn	16 30 37.7	-1.1
	baz=220						
MATB	Ma-tsu	2.42	303	*e*P	Pn	16 30 39.3	-0.9
	baz=301						
VWUC	VWUC	2.51	274	P	Pn	16 30 40.2	-1.2
	baz=272						
SCST	Cishan	2.51	219	*e*P	Pn	16 30 42.0	+0.5
	baz=218						
ECL	Taimali	2.52	207	*e*P	Pn	16 30 41.8	+0.1
	baz=207						
SSD	Sandimen	2.55	215	*e*P	Pn	16 30 43.1	+1.1
	baz=214						
MASBT	Mashibuluo	2.66	213	P	Pn	16 30 44.0	+0.6
	baz=213						
JIRB	Irabujima	2.69	90	P	Pn	16 30 44.5	+0.6
PHUB	P'eng-hu	2.75	242	*e*P	Pn	16 30 43.1	-1.6
	baz=240						
JIKM	Ikemajima	2.76	88	P	Pn	16 30 45.6	+0.9
JIKM				S	Sn	16 31 18.5	+0.8
JMJ2	Miyako jima3	2.84	92	P	Pn	16 30 46.6	+0.8
JOGS	Gusukube	2.91	91	P	Pn	16 30 47.9	+1.2

ROM 19 17:11:08.5±0.1**, 42°.608N**±0°.003×**13°.339E**±0°.004**, h8^{km}, ML1.1**/4**, 6D, Error ellipse: s-maj=0.3km s-min=0.1km az=35.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMA1	SAN MARTINO	0.02	353	⇓P	Pg	17 11 10.1	+0.1
SMA1				S	Sg	17 11 11.2	0.0
SMA1				AML	AML		
	comp=E,1825µm,0.2s						
SMA1				AML	AML		
	comp=N,836µm,0.4s						
CAMP	Campotosto	0.09	145	P	Pg	17 11 11.1	+0.3
CAMP				S	Sg	17 11 12.8	+0.5
T1246	Crognaleto (TE	0.12	102	P	Pg	17 11 11.6	+0.5
T1246				S	Sg	17 11 13.9	+0.9
RM33	Pellescritta (	0.14	223	P	Pg	17 11 12.0	+0.5
RM33				S	Sg	17 11 14.4	+0.9
RM33				AML	AML		
	comp=E,102µm,1.4s						
RM33				AML	AML		
	comp=N,124µm,0.3s						
RM33				AML	AML		
	comp=E,102µm,0.6s						
T1218	Civita (PG)	0.18	291	⇓P	Pg	17 11 12.6	+0.4
T1214	Arquata del Tr	0.18	328	⇓P	Pg	17 11 12.9	+0.6
TERO	Teramo	0.20	86	⇓P	Pg	17 11 13.0	+0.5
TERO				S	Sg	17 11 16.4	+1.2
TERO				AML	AML		
	comp=N,126µm,0.2s						
TERO				AML	AML		
	comp=E,120µm,0.3s						
GIGS	Gran Sasso	0.23	133	⇓P	Pg	17 11 13.7	+0.6
GIGS				S	Sg	17 11 17.5	+1.2
T1241	Roccafluvione,	0.26	15	P	Pg	17 11 14.3	+0.7
T1241				S	Sb	17 11 19.0	-1.2
T1212	Cascia, Frazio	0.26	304	⇓P	Pg	17 11 14.0	+0.3
FDMO	Fiordimonte	0.47	337	P	Pg	17 11 16.8	-0.8
T1219	Muccia, Frazio	0.51	331	P	Pg	17 11 17.1	-1.2

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*IDC **19** 17:11:10.1±1.1, 2°.20S×100°.47E, h0^{km}, mb4.0/10, mbtmp4.0/10, Error ellipse: s-maj=54.5km s-min=16.7km az=54.0*

*DJA **19** 17:11:17.0±0.7, 2°S±2°×10°1E±°, h16^{km}±7^{km}, M4.4/20, mb4.6/7, mB5.4/1, MLv4.3/20, Mw(mB)4.9/1, MwMwp6.0/1, Mwp6.0/1*

*NEIC **19** 17:11:18.8±1.4, 2°.10S±0°.09×100°.53E±0°.07, h79^{km}±8^{km}, mb4.2/10, Error ellipse: s-maj=14.8km s-min=6.1km az=214.0*

ISC 19 17:11:17.1±0.5**, 2°.13S**±0°.05×**100°.57E**±0°.05**, h56^{km}, n57, σ1^{s}89**/55**, mb4.2**/15**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPSI	Pulau Pagai	0.84	222	P	Pn	17 11 34.2	+1.2
PPSI				S	Sn	17 11 47.2	+2.6
PDSI	Padang	1.22	355	P	Pn	17 11 37.7	-0.3
SDSI	Sungai Dareh	1.47	36	P	Pn	17 11 42.6	+1.3
SDSI				S	Sn	17 12 01.7	+2.2
MASI	Maura Aman, Be	1.94	121	P	Pn	17 11 49.0	+1.2
BKNI	Bangkinang	2.49	11	Pn	Pn	17 11 59.9	+4.7
KSI	Kapahiang	2.52	127	P	Pn	17 11 58.3	+2.6
PBSI	Pulau Batu	3.08	312	P	Pn	17 12 04.4	+1.0
JMBI	JAMBI	3.11	81	P	Pn	17 12 04.7	+1.0
MNAI	Manna	3.25	133		Pn	17 12 08.1	+2.4
MNAI	Manna	3.25	133	P	Pn	17 12 08.4	+2.7
MDSI	Maura Dua	4.29	123	P	Pn	17 12 22.7	+2.8
DSRI	Dabo	4.33	68	P	Pn	17 12 21.6	+1.2
LWLI	Liwa	4.51	130	P	Pn	17 12 25.5	+2.5
GSI	Gunungsitoli	4.54	319		Pn	17 12 23.2	-0.2
GSI	Gunungsitoli	4.54	319	P	Pn	17 12 23.4	0.0
TPRI	Tanjung Pinang	4.98	53	P	Pn	17 12 30.9	+1.5
RPSI	Rantau Prapat	5.07	341		Pn	17 12 32.1	+1.4
MYKOM	Kota Tinggi	5.09	40	Pn	Pn	17 12 31.5	+0.6
KASI	Kota Agung	5.17	131	P	Pn	17 12 33.9	+2.0
	89nm,0.6s,0.3nm						
BLSI	Bandar Lampung	5.66	125	P	Pn	17 12 41.0	+2.2
	53nm,0.4s,0.2nm						
KCSI	Kotacane, Aceh	6.28	334	P	Pn	17 12 48.7	+1.5
	19nm,0.6s,0.2nm						
KULM	Kulim	7.37	1	Pn	Pn	17 13 03.0	+0.7
KPJI	Karang Pucung	9.80	122	P	Pn	17 13 38.5	+3.1
CMAR	Chiang Mai Arr	20.52	356	P	P	17 15 51.9	+0.9
	0.6nm,0.6s,baz=186,slow=9.7,SNR=8.4						
	0.6nm,0.6s						
H08S2	Diego Garcia H	28.50	258	T	T	17 46 08.2	
	baz=79						
H08S3	Diego Garcia H	28.50	258	T	T	17 46 03.9	
	baz=79						
H08S1	Diego Carcia H	28.52	258	T	T	17 46 05.5	
	baz=79						
TAPN	Taplejung	31.82	338	*e*P	P	17 17 38.6	+1.5
JIRN	Jiri	32.70	336	*e*P	P	17 17 46.5	+1.7
	7.7nm,0.6s						
GUN	Gumba	33.05	336	*e*P	P	17 17 49.0	+1.2
	4.8nm,0.4s						
GKN	Gorkha	33.65	334	*e*P	P	17 17 54.6	+1.7
	2.6nm,0.4s						
DANN	Dangsing	34.34	333	*e*P	P	17 18 00.2	+1.2
	3.2nm,0.4s						
PYUN	Piuthan	34.48	332	*e*P	P	17 18 02.5	+2.3
	1.5nm,0.3s						
WRA	Warramunga Arr	37.43	121	P	P	17 18 25.0	-0.3
	1.0nm,0.6s,baz=304,slow=9.0,SNR=5.4						
	1.0nm,0.6s						
WRA	Warramunga Arr	37.43	121	P	P	17 18 21.5	-3.8
WRAB	Tennant Creek	37.44	121	P	P	17 18 24.1	-1.2
WRAB				IAmb	IAmb	17 18 40.5	
	comp=Z,6.1nm,1.2s						
AS31	Alice Springs	38.71	126	P	P	17 18 35.2	-0.8
AS31				IAmb	IAmb	17 18 37.8	
	comp=Z,1.6nm,0.6s						
ASAR	Alice Springs	38.71	126	P	P	17 18 36.9	+0.8
	comp=Z,3.5nm,0.6s,baz=306,slow=7.8,SNR=72						
	comp=Z,3.5nm,0.6s						
ASAR	Alice Springs	38.71	126	P	P	17 18 36.0	-0.1
JHS	Saijyo	47.90	37	P	P	17 19 46.7	-3.2
CTAO	Charters Tower	48.02	115	P	P	17 19 47.1	-4.1
STKA	Stephens Creek	48.64	132	P	P	17 19 57.1	+1.4
	comp=Z,1.6nm,0.6s,baz=296,slow=11,SNR=4.2						
	comp=Z,1.6nm,0.6s						
STKA	Stephens Creek	48.64	132	P	P	17 19 54.9	-0.8
SONM	Songino Array	50.02	5	P	P	17 20 06.9	+0.8
	comp=Z,0.4nm,0.5s,baz=179,slow=7.2,SNR=4.4						
	comp=Z,0.4nm,0.5s						
MK31	Makanchi Array	51.31	344	P	P	17 20 13.0	-2.7
MK31				IAmb	IAmb	17 20 17.2	
	comp=Z,2.2nm,0.9s						
MKAR	Makanchi Array	51.31	344	P	P	17 20 16.6	+0.9
	comp=Z,1.2nm,0.3s,baz=156,slow=9.1,SNR=21						
	comp=Z,1.2nm,0.3s						
MKAR	Makanchi Array	51.31	344	P	P	17 20 14.7	-1.0
KURK	Kurchatov	55.90	343	P	P	17 20 47.8	-1.3
KURK				IAmb	IAmb	17 21 13.5	
	comp=Z,1.7nm,0.9s						
ZALV	Zalesovo Beam	57.41	349	P	P	17 21 00.2	+0.5
	comp=Z,1.2nm,0.4s,baz=174,slow=4.5,SNR=15						
	comp=Z,1.2nm,0.4s						
ZALV	Zalesovo Beam	57.41	349	P	P	17 20 58.6	-1.2
ABKAR	Akbulak array	62.03	331	P	P	17 21 30.1	-1.6
ABKAR				IAmb	IAmb	17 21 32.7	
	comp=Z,2.6nm,1.1s						
KBZ	Khabaz	68.78	319	P	P	17 22 16.9	+1.5
	comp=Z,1.7nm,0.8s,baz=108,slow=6.4,SNR=3.7						
	comp=Z,1.7nm,0.8s						
BRTR	Keskin Array B	73.83	312	P	P	17 22 46.5	+0.2
	comp=Z,0.4nm,0.6s,baz=109,slow=5.2,SNR=2.5						
	comp=Z,0.4nm,0.6s						
VNDA	Vanda	81.92	169	P	P	17 23 29.8	-0.5
VNDA				IAmb	IAmb	17 24 01.9	
	comp=Z,6.6nm,1.3s						
ARCES	ARCESS Array B	86.79	340	P	P	17 23 55.0	0.0
	comp=Z,6.7nm,1.0s,baz=90,slow=5.4,SNR=3.8						
	comp=Z,6.7nm,1.0s						
TXAR	Lajitas Array	144.46	38	PKP	PKPbc	17 30 47.6	+0.9
	comp=Z,0.7nm,0.8s,baz=324,slow=0.8,SNR=9.1						
CPUP	Villa Florida	144.55	216	PKP	PKPdf	17 30 49.4	+1.2
	comp=Z,2.1nm,0.9s,baz=159,slow=7.9,SNR=4.1						

ROM 19 17:11:51.5±0.1**, 42°.875N**±0°.002×**13°.030E**±0°.004**, h10^{km}, ML1.0**/4**, Error ellipse: s-maj=0.3km s-min=0.2km az=274.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1216	Preci, Frazion	0.02	334	P	Pg	17 11 53.7	+0.3
T1216				S	Sg	17 11 54.9	+0.1
T1216				AML	AML		
	comp=N,150µm,1.0s						
T1216				AML	AML		
	comp=E,274µm,0.2s						

T1216				AML	AML		
	comp=N,150µm,1.0s						
T1245	Castelsantange	0.12	99	P	Pg	17 11 54.9	+0.4
T1245				S	Sg	17 11 57.4	+0.7
T1245				AML	AML		
	comp=E,79µm,0.6s						
T1245				AML	AML		
	comp=N,99µm,0.1s						
T1245				AML	AML		
	comp=E,80µm,0.6s						
T1245				AML	AML		
	comp=N,99µm,0.1s						
T1245				AML	AML		
	comp=E,80µm,1.4s						
MC2	Monte Cornacci	0.12	72	P	Pg	17 11 55.1	+0.5
MC2				S	Sg	17 11 57.5	+0.6
T1212	Cascia, Frazio	0.12	175	P	Pg	17 11 55.1	+0.6
T1212				S	Sg	17 11 57.5	+0.8
T1212				AML	AML		
	comp=E,98µm,0.3s						
T1212				AML	AML		
	comp=N,112µm,0.1s						
T1212				AML	AML		
	comp=N,112µm,0.1s						
FDMO	Fiordimonte	0.17	15	P	Pg	17 11 55.8	+0.6
FDMO				S	Sg	17 11 58.7	+0.9
T1214	Arquata del Tr	0.17	131	P	Pg	17 11 55.8	+0.5
T1214				S	Sg	17 11 58.8	+0.7
T1217	Poggiodomo (PG	0.18	204	P	Pg	17 11 56.0	+0.7
T1217				S	Sg	17 11 59.2	+1.1
T1256	Bolognola (MC)	0.20	48	AML	AML		
	comp=N,72µm,0.1s						
T1256				AML	AML		
	comp=E,48µm,0.1s						
T1256				AML	AML		
	comp=E,48µm,0.1s						
T1220	Camerino, Fraz	0.24	10	P	Pg	17 11 57.0	+0.6
T1220				S	Sg	17 12 01.2	+1.4
T1241	Roccafluvione,	0.30	93	P	Pg	17 11 57.9	+0.5
T1241				S	Sb	17 12 02.8	-1.1

IDC 19 17:13:19.1±13.0, 23°.60S×178°.83W, h517km±143km, mb3.3/4, mbtmp4.3/5, Error ellipse: s-maj=248.4km s-min=78.6km az=66.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	15.02	192	P	P	17 16 29.0	-0.1
	3.8nm,0.3s,baz=36,slow=2.1,SNR=8.2						
URZ				S	S	17 18 58.8	-7.0
	7.4nm,1.0s,baz=254,slow=14,SNR=2.0						
CTA	Charters Tower	32.55	269	P	P	17 19 08.0	+0.4
	4.0nm,0.3s,baz=99,slow=11,SNR=28						
	4.0nm,0.3s						
STKA	Stephens Creek	35.83	248	P	P	17 19 34.0	-1.0
	0.6nm,0.3s,baz=95,slow=9.2,SNR=6.2						
	0.6nm,0.3s						
ASAR	Alice Springs	43.15	260	P	P	17 20 34.0	0.0
	0.9nm,0.5s,baz=96,slow=7.1,SNR=14						
	0.9nm,0.5s						
WRA	Warramunga Arr	43.50	265	P	P	17 20 36.6	-0.2
	1.8nm,0.4s,baz=97,slow=8.4,SNR=25						
	1.8nm,0.4s						

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*IDC **19** 17:30:03.5±2.1, 3°.82N×126°.16E, h0km, mb3.5/4, mbtmp3.5/4, MS3.7/1, Error ellipse: s-maj=179.3km s-min=27.5km az=64.0*
*MAN **19** 17:30:19.9, 3°.84N×125°.88E, h127km, mb4.7, ML3.6, MS3.6*
*DJA **19** 17:30:20.1±0.6, 3°N±5°×12°6E±°, h86km±13km, M4.3/12, mb4.3/7, mB4.9/3, MLv4.3/12, Mw(mB)4.2/3*
ISC 19 17:30:17.2±0.9, 3°.69N±0°.05×126°.11E±0°.08, h116km, n22, σ1s.22/25, mb3.3/4, 3C-3D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	0.58	270	P	Pn	17 30 36.3	+1.1
GSPH	General Santos	2.65	334	⇓iP	Pn	17 30 58.8	-0.1
GSPH				iS	Sn	17 31 30.6	-0.4
TNTI	Ternate	3.16	156	P	Pn	17 31 06.3	+0.8
SKMP	Bagumbayan, Su	3.22	331	⇑eP	Pn	17 31 07.1	+0.8
SKMP				eS	Sn	17 31 43.5	-0.6
KCP	Kidapawan	3.45	343	⇑iP	Pn	17 31 10.9	+1.4
CTBH	Cotabato--PC H	3.97	332	⇑iP	Pn	17 31 17.0	+0.7
GTOI	Gorontalo	4.33	226	P	Pn	17 31 22.0	+0.9
GTOI				S	Sn	17 32 09.8	-1.0
BIPH	Bislig	4.47	3	⇓eP	Pn	17 31 29.1	+6.0
BIPH				eS	Sn	17 32 11.1	-3.2
LBMI	Labuha	4.52	162	P	Pn	17 31 24.5	+0.8
LBMI				S	Sn	17 32 13.8	-1.5
CGP	Cagayan de Oro	4.94	344	eP	Pn	17 31 31.4	+2.1
PAGZ	Pagadian	4.94	327	⇓eP	Pn	17 31 29.5	+0.1
MRSI	Marisa	5.24	233	P	Pn	17 31 34.8	+1.4
	171nm,0.6s,1µm0.6nm						
SANI	Sanana	5.70	181	P	Pn	17 31 37.5	-2.1
LUWI	Luwuk	5.76	215	P	Pn	17 31 40.4	0.0
	19nm,0.7s,1µm0.2nm						
SWI	Sorong	6.85	131	P	Pn	17 31 56.0	+0.8
	20nm,1.3s,0.1nm						
NLAI	Namlea	6.95	172	P	Pn	17 31 56.2	-0.3
AAI	Ambon	7.62	164	P	Pn	17 32 06.3	+0.7
	27nm,0.4s,0.1nm						
WRA	Warramunga Arr	24.84	161	P	P	17 35 28.5	-0.4
	1.0nm,0.5s,baz=342,slow=9.8,SNR=28						
	1.0nm,0.5s						
ASAR	Alice Springs	28.23	165	P	P	17 35 59.3	-0.2
	0.2nm,0.5s,baz=341,slow=7.1,SNR=8.4						
	0.2nm,0.5s						
JNU	Nakatsue	29.62	8	LR	LR	17 46 54.8	
	comp=Z,166nm,21.9s,baz=336,slow=34						
STKA	Stephens Creek	38.31	159	P	P	17 37 27.5	+0.8
	1.1nm,0.5s,baz=337,slow=9.7,SNR=4.3						
	1.1nm,0.5s						
MKAR	Makanchi Array	57.24	326	P	P	17 39 52.2	-0.3
	0.1nm,0.5s,baz=119,slow=8.4,SNR=1.9						
	0.1nm,0.5s						

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*INET **19** 17:35:17.6±0.5, 12°.36N×87°.50W, h59km±7km, MW3.1*
*SNET **19** 17:35:19.7±0.8, 12°.63N×87°.56W, h65km±14km, ML2.9*
ISC 19 17:35:16.7±2.9, 12°.5N±0°.4×87°.5W±0°.3, h71km±58km, n7, σ0s.71/12, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.48	60	eP	Pn	17 35 30.2	+0.7
CNGN	Cerro Negro	0.76	87	eP	Pn	17 35 31.8	-0.7
CNGN				eS	Sn	17 35 44.6	+0.5
CNCH	Conchagua	0.88	337	eP	Pn	17 35 34.6	+0.7
CNCH				eS	Sn	17 35 45.8	-0.9
CNCH				IAML		17 35 48.5	
	comp=Z,647nm,0.1s						
COPN	Copaltepe	0.91	108	eP	Pn	17 35 34.0	-0.1
COPN				eS	Sn	17 35 47.0	-0.2
MOMN	Momotombo	0.92	93	eP	Pn	17 35 34.8	+0.5
LCND	La Caada	0.93	334	eP	Pn	17 35 34.5	0.0
LCND				eS	Sn	17 35 47.1	-0.6
LCND				IAML		17 35 49.4	
	comp=Z,204nm,0.4s						
PACA	Pacayal	1.30	321	eP	Pn	17 35 40.0	+0.7
PACA				eS	Sn	17 35 55.5	-0.6

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*TEH **19** 17:37:01.1, 38°.31N×55°.52E, h6km±81km, ML3.0*
*AZER **19** 17:37:24.8±0.5, 36°.52N×52°.36E, h59km, Error ellipse: s-maj=22.3km s-min=7.9km az=231.0*
ISC 19 17:37:01.3±0.8, 38°.39N±0°.05×55°.50E±0°.04, h10km, n19, σ2s.44/28, 2C-2D, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRVT	Maraveh tapeh	0.86	147	Pg	Pb	17 37 17.2	-1.2
MRVT				Sg	Sb	17 37 28.9	-1.1
IMND	Minoodasht	1.13	184	Pg	Pn	17 37 22.8	-0.4
IMND				Sg	Sn	17 37 38.1	-0.6
GYA0B	ALIBECK ARRAY	2.11	102	⇑Pn	Pb	17 37 39.0	-0.7
GYA0B				⇓Sn	Sg	17 38 10.6	+1.4
IGLO	Ghaloghah	2.30	216	Pn	Pb	17 37 42.5	-0.5
SBZV	Sabzevar	2.61	139	Pn	Pb	17 37 47.4	-0.9
IPAY	Payeh	3.39	124	Pn	Pb	17 37 57.4	-4.2
IFIR	Firoozkooh	3.51	220	Pn	Pb	17 37 59.0	-4.7
KLST	Kelardasht - M	4.00	244	Pn	Pn	17 38 05.5	+2.6
IMYA	Miami	4.20	118	Pn	Pn	17 38 08.0	+2.5
TNSJ	Nastanj	4.50	168	Pn	Pn	17 38 11.9	+2.2
TKDS	Koohdasht(Taba	4.94	164	Pn	Pn	17 38 19.0	+3.3
ANAR	Anarak	5.38	196	Pn	Pn	17 38 23.3	+1.5
GLBA	Clilabad	5.62	281	P	Pn	17 38 26.9	+2.1
GLBA				S	Sn	17 39 29.7	+0.3
LRK	Lerik	5.62	275	P	Pn	17 38 25.3	+0.3
LRK				S	Pg	17 38 52.7	+3.7
YRD	Yardimli	5.71	278	P	Pn	17 38 26.5	+0.2
YRD				S	Sn	17 39 29.0	-2.9
AFRZ	Afriz	5.71	149	Pn	Pn	17 38 28.8	+2.5
XNQ	Khinaliq	6.32	298	P	Pn	17 38 37.0	+2.4
XNQ				S	Sn	17 39 46.5	-0.4
GDB	GEDABAY	7.88	290	P	Pn	17 38 57.8	+1.7
GDB				S	Sn	17 40 20.6	-4.9
AB31	Akbulak array	11.33	15	⇑Pn	Pn	17 39 40.7	-2.4
	1.2nm,0.8s,baz=190,slow=14,SNR=4.6						
AB31				⇓Sn	Sn	17 41 50.0	+0.3
	0.6nm,0.5s,baz=190,slow=25,SNR=5.9						

DDA 19 17:50:06.0±0.0, 39°.14N×26°.48E, h7km±2km, ML1.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AYVA	Ayvalik	0.23	43	P	Pg	17 50 10.6	-0.1
AYVA				S	Sg	17 50 14.9	+1.1
KOCA	Canakkale, Ayv	0.45	324	P	Pg	17 50 15.1	+0.3
KOCA				S	Sb	17 50 22.1	-1.2
BAYC	CANAKKALE_Bayr	0.60	5	P	Pb	17 50 19.0	0.0
BAYC				S	Sg	17 50 26.1	+0.6
BAYC				i AML	AML	17 50 30.0	
	comp=N,13nm,0.2s						

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*ISK **19** 17:55:02.4, 39°.54N×26°.08E, h7km, ML1.9/13*
DDA 19 17:55:02.9±0.0, 39°.55N×26°.18E, h7km±1km, ML1.2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.05	214	P	Pg	17 55 04.8	+0.4
KOCA				S	Sg	17 55 06.0	+0.5
GPNR	Gulpinar-Canak	0.10	200	Pg	Pg	17 55 04.9	-0.1
EZN	Ezine	0.30	22	Pg	Pg	17 55 09.6	+0.7
EZN				Sg	Sb	17 55 14.7	-1.2
BOZC	Bozcaada	0.31	342	Pg	Pg	17 55 09.1	+0.1
BOZC				Sg	Sg	17 55 13.4	+0.2
BOZC	Bozcaada	0.31	342	P	Pg	17 55 09.6	+0.5
BOZC				S	Sg	17 55 13.9	+0.7
BOZC				i AML	AML	17 55 15.0	
	comp=E,31nm,0.2s						
BAYC	CANAKKALE_Bayr	0.35	55	P	Pg	17 55 10.0	+0.3
BAYC				S	Sg	17 55 14.9	+0.6
BAYC				i AML	AML	17 55 15.0	
	comp=N,27nm,0.1s						
BAYC				i AML	AML	17 55 15.0	
	comp=E,33nm,0.3s						
SIGR	SIGRI	0.42	217	Pg	Pg	17 55 10.2	-0.7
AYVA	Ayvalik	0.46	121	P	Pg	17 55 12.3	+0.4
COMU	Canakkale	0.60	22	Pg	Pb	17 55 15.5	-0.3
DKL	Dikili	0.74	130	Pg	Pb	17 55 18.3	+0.2
GELI	Tayfur-Gelibol	0.88	15	Pg	Pb	17 55 20.3	-0.3
ERIK	Erikli-Kesan	1.15	13	Pn	Pb	17 55 25.3	+0.1
CHOS	Chios island	1.16	185	Pn	Pg	17 55 24.9	-0.3
ENEZ	Enez	1.19	359	Pn	Pn	17 55 26.0	0.0
KRBG	Karabiga-Canak	1.21	45	Pn	Pn	17 55 26.8	+0.6
URLA	Izmir	1.23	164	Pn	Pb	17 55 26.5	0.0
ALN	Alexandroupoli	1.35	356	Pn	Pn	17 55 27.9	-0.4
EDC	Edincik	1.52	58	Pn	Pb	17 55 31.7	+0.2

IDC 19 17:56:49.3±2.9, 32°.37S×178°.21W, h0km, mb3.6/2, mbtmp3.6/3, ML3.2/1, Error ellipse: s-maj=72.5km s-min=45.7km az=127.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.01	212	Pn	Pn	17 58 32.0	-1.2
	0.5nm,0.3s,baz=5.5,slow=14,SNR=1.6						
URZ				Sn	Sn	17 59 50.4	-3.2
	0.5nm,0.3s,baz=185,slow=19,SNR=7.1						
	3.4nm,0.8s						
ASAR	Alice Springs	42.86	269	P	P	18 04 49.6	0.0
	0.5nm,0.7s,baz=108,slow=6.8,SNR=7.4						
	0.5nm,0.7s						
WRA	Warramunga Arr	44.03	274	P	P	18 04 59.0	0.0
	0.4nm,0.4s,baz=113,slow=8.1,SNR=11						
	0.4nm,0.4s						
FINES	FINESS Array B	146.92	339	PKPbc	PKPbc	18 16 32.2	-0.7
	1.1nm,0.8s,baz=35,slow=5.1,SNR=9.4						

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*GUC **19** 17:57:01.6±0.7, 20°.43S×69°.06W, h98km±3km, ML3.4*
*IDC **19** 17:57:02.3±1.7, 20°.50S×68°.86W, h112km±17km, mb3.3/2, mbtmp3.6/5, Error ellipse: s-maj=41.1km s-min=16.4km az=102.0*
ISC 19 17:57:01.5±0.9, 20°.44S±0°.03×69°.18W±0°.08, h102km±7km, n19, σ0s.73/30, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.30	4	eP	Pn	17 57 16.1	-0.7
PB08				iS	Sn	17 57 27.4	-0.7
PB08				IAML		17 57 27.7	
	comp=N,5µm,0.3s						
PB01	IPOC Station P	0.67	206	eP	Pn	17 57 18.3	-0.6
PB01				iS	Sn	17 57 31.8	-0.1
PB01				IAML		17 57 33.7	
	comp=N,3µm,0.2s						
GO01	Chusmiza	0.77	359	eP	Pn	17 57 19.7	-0.5
GO01				iS	Sn	17 57 34.0	-0.3
PB11	IPOC Station P	0.81	326	eP	Pn	17 57 20.0	-0.3
PB11				iS	Sn	17 57 34.7	+0.2
PB11				IAML		17 57 35.5	
	comp=E,3µm,0.3s						
TA02	Huaiquique	0.91	281	eP	Pn	17 57 21.2	+0.1
TA02				iS	Sn	17 57 36.5	+0.7
TA01	Diego Aracena	0.95	262	eP	Pn	17 57 21.3	-0.2
TA01				iS	Sn	17 57 37.3	+0.7
TA01				IAML		17 57 38.4	
	comp=N,836nm,0.2s						
PB02	IPOC Station P	1.10	218	eP	Pn	17 57 23.3	0.0
PB02				iS	Sn	17 57 40.4	+0.7
PB02				IAML		17 57 41.6	
	comp=N,2µm,0.1s						
PB09	IPOC Station P	1.35	183	eP	Pn	17 57 26.2	0.0
PB09				iS	Sn	17 57 45.9	+1.0
PB09				IAML		17 57 48.0	
	comp=E,305nm,0.2s						
MNMC	Minye Minye	1.36	343	eP	Pn	17 57 26.6	+0.1
MNMC				iS	Sn	17 57 46.0	+0.7
PB07	IPOC Station P	1.44	207	iS	Sn	17 57 46.9	0.0
PB07				IAML		17 57 48.8	
	comp=N,448nm,0.3s						
PB03	IPOC Station P	1.69	199	eP	Pn	17 57 30.4	+0.1
PB03				IAML		17 57 57.4	
	comp=N,182nm,0.4s						
PB12	IPOC Station P	2.12	329	eP	Pn	17 57 35.2	-0.6
PB12				iS	Sn	17 58 01.9	0.0
PB16	IPOC Station P	2.12	351	eP	Pn	17 57 36.8	+0.6
LVC	Limon Verde	2.17	174	P	Pn	17 57 37.2	+0.5
	comp=N,15nm,0.2s,baz=354,slow=11,SNR=18						
LVC				S	Sn	17 58 03.9	+0.3
	comp=N,46nm,0.3s,baz=4.6,slow=12,SNR=5.8						
PB06	IPOC Station P	2.28	189	eP	Pn	17 57 38.1	+0.1
LPAZ	La Paz	4.25	14	P	Pn	17 58 06.5	+1.8
	comp=N,3.4nm,0.6s,baz=195,slow=8.0,SNR=14						
SIV	San Ignacio	8.88	61	P	Pn	17 59 03.2	-3.8
	comp=N,2.1nm,0.5s,baz=254,slow=12,SNR=16						
TORD	Torodi Ar. Bea	77.24	71	P	P	18 08 43.7	-1.4
	comp=N,0.3nm,0.4s,baz=250,slow=5.3,SNR=7.0						
	comp=N,0.3nm,0.4s						
YKA	Yellowknife Ar	90.11	341	P	P	18 09 49.2	-0.4
	comp=N,0.2nm,0.7s,baz=129,slow=5.6,SNR=5.2						
YKA				pP	pP	18 10 18.8	+1.7
	comp=N,0.3nm,0.8s,baz=135,slow=4.8,SNR=3.6						
	comp=N,0.2nm,0.7s						

IDC 19 18:23:26.8±13.0, 35°.98S×52°.52E, h0km, mb3.6/2, mbtmp3.6/2, MS3.7/1, Error ellipse: s-maj=765.8km s-min=67.4km az=38.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	45.52	201	LR	LR	18 48 27.7	
	comp=Z,74nm,18.0s,baz=152,slow=33						
ASAR	Alice Springs	69.83	105	P	P	18 34 39.8	+0.3
	0.3nm,0.7s,baz=236,slow=6.0,SNR=5.8						
	0.3nm,0.7s						
WRA	Warramunga Arr	72.13	102	P	P	18 34 53.4	-0.2
	1.0nm,1.0s,baz=231,slow=5.3,SNR=5.4						
	1.0nm,1.0s						
ILAR	Eielson Array	148.90	16	PKPbc	PKPbc	18 43 15.0	-0.6
	0.5nm,1.0s,baz=328,slow=3.2,SNR=3.8						

WEL 19 18:31:04.2±0.6, 42°S±2°×17°3E±°, h5km±5km, M2.4/7, ML2.6/6, MLv2.4/7, Error ellipse: s-maj=0.0km s-min=0.0km az=92.9, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.10	159	P	Pg	18 31 06.4	+0.1
KHZ				S	Sg	18 31 08.5	+0.7
BSWZ	Blackbirch Sta	0.67	26	P	Pg	18 31 17.2	+0.2
BSWZ				S	Sb	18 31 27.4	-0.5
THZ	Tophouse	0.71	322	P	Pg	18 31 18.0	+0.3
GVZ	Greta Valley S	0.73	207	P	Pg	18 31 18.4	+0.3
GVZ				S	Sb	18 31 29.7	+0.1
LTZ	Lake Taylor	1.01	243	P	Pg	18 31 22.7	-0.9
AMCZ	Amberley	1.05	216	P	Pg	18 31 23.7	-0.6
MRNZ	Matariki Terra	1.07	329	P	Pg	18 31 24.7	0.0
NNZ	Nelson	1.11	356	P	Pg	18 31 25.1	-0.2
NNZ				S	Sb	18 31 40.6	+0.1
TCW	Tory Channel	1.26	28	P	Pg	18 31 26.7	-1.5
TKNZ	Takaka Hill	1.35	343	P	Pn	18 31 29.3	-0.3
DSZ	Denniston Nort	1.38	294	P	Pn	18 31 29.6	-0.6
OXZ	Oxford	1.47	226	P	Pn	18 31 28.2	-3.1
MQZ	McQueen's Vall	1.51	204	P	Pn	18 31 28.1	-3.8
INZ	Inchbonnie	1.56	254	P	Pn	18 31 31.3	-1.3
AKCZ	Akaroa Harbour	1.61	195	P	Pn	18 31 30.0	-3.2
QRZ	Quartz Range	1.66	334	P	Pn	18 31 34.3	+0.4
RACZ	Rakaia	1.72	215	P	Pn	18 31 31.5	-3.2
MHCZ	Mount Hutt	1.86	229	P	Pn	18 31 33.5	-3.2
WACZ	Wakanui South	2.02	216	P	Pn	18 31 35.8	-3.0
WVZ	Waitaha Valley	2.16	249	P	Pn	18 31 39.3	-1.5
RPZ	Rata Peaks	2.27	231	P	Pn	18 31 39.3	-3.0
ARCZ	Arundel	2.35	225	P	Pn	18 31 40.2	-3.1
BFZ	Birch Farm	2.64	53	P	Pb	18 31 50.5	-1.4
ODZ	Otahua Downs	3.42	216	P	Pn	18 31 54.6	-3.4
OTVZ	Oturere	3.56	28	P	Pn	18 32 00.9	+0.7

IDC 19 18:35:40.7±2.6, 15°.81S×173°.47W, h0km, mb3.7/5, mbtmp3.7/6, ML3.9/1, Error ellipse: s-maj=148.4km s-min=21.1km az=146.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.50	41	Pn	Pn	18 36 22.6	-0.1
	26nm,0.3s,baz=154,slow=2.4,SNR=24						
AFI				Sn	Sn	18 36 47.6	-6.3
	105nm,0.3s,baz=58,slow=23,SNR=4.3						
	75nm,0.4s						
WRA	Warramunga Arr	49.69	257	P	P	18 44 34.5	-0.3
	0.6nm,0.9s,baz=91,slow=6.6,SNR=9.7						
	0.6nm,0.9s						
ASAR	Alice Springs	49.92	252	P	P	18 44 36.5	-0.1
	1.3nm,0.6s,baz=88,slow=8.1,SNR=34						
	1.3nm,0.6s						
NVAR	Mina Array Bea	74.68	42	P	P	18 47 21.8	-0.7
	0.6nm,0.8s,baz=225,slow=8.8,SNR=5.3						
	0.6nm,0.8s						
PDAR	Pinedale Array	82.61	42	P	P	18 48 07.0	+0.8
	0.4nm,0.8s,baz=205,slow=4.0,SNR=2.7						
	0.4nm,0.8s						
ILAR	Eielson Array	82.86	11	P	P	18 48 07.1	+0.5
	0.3nm,0.6s,baz=219,slow=5.7,SNR=5.6						
	0.3nm,0.6s						

WEL 19 18:36:01.6±0.6, 42°S±4°×17°3E±°, h6km±9km, M2.3/6, ML2.6/8, MLv2.3/6, Error ellipse: s-maj=0.0km s-min=0.0km az=109.9, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.09	152	P	Pg	18 36 03.9	+0.3
KHZ				S	Sg	18 36 06.0	+1.0
BSWZ	Blackbirch Sta	0.69	25	P	Pg	18 36 14.7	-0.1
BSWZ				S	Sb	18 36 25.1	-0.7
GVZ	Greta Valley S	0.71	208	P	Pg	18 36 15.8	+0.5
GVZ				S	Sb	18 36 27.1	+0.6
THZ	Tophouse	0.72	323	P	Pg	18 36 15.4	+0.1
CMWZ	Cape Campbell	0.80	43	P	Pn	18 36 19.4	-0.1
LTZ	Lake Taylor	1.00	243	P	Pg	18 36 20.0	-0.7
AMCZ	Amberley	1.04	216	P	Pg	18 36 21.1	-0.4
MRNZ	Matariki Terra	1.08	330	P	Pg	18 36 22.1	-0.2
NNZ	Nelson	1.12	356	P	Pg	18 36 22.5	-0.6
TCW	Tory Channel	1.27	28	P	Pn	18 36 24.8	-1.1
TKNZ	Takaka Hill	1.36	343	P	Pn	18 36 26.8	-0.3
DSZ	Denniston Nort	1.38	295	P	Pn	18 36 27.1	-0.4
MQZ	McQueen's Vall	1.50	204	P	Pn	18 36 25.6	-3.4
INZ	Inchbonnie	1.56	255	P	Pn	18 36 28.7	-1.1
QRZ	Quartz Range	1.67	334	P	Pn	18 36 31.6	+0.2
TMZ	Timaru	2.73	221	P	Pb	18 36 49.2	-1.6
PNHZ	Pukenui	3.17	41	P	Pn	18 36 55.2	+3.1

WEL 19 18:41:33.7±0.5, 42°S±3°×17°3E±°, h5km, M2.4/4, ML2.6/8, MLv2.4/4, Error ellipse: s-maj=0.0km s-min=0.0km az=67.9, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.11	122	P	Pg	18 41 36.2	+0.1
KHZ				S	Sg	18 41 38.5	+0.9
GVZ	Greta Valley S	0.67	204	P	Pg	18 41 46.6	0.0
GVZ				S	Sb	18 41 56.8	-0.7
THZ	Tophouse	0.70	327	P	Pg	18 41 47.1	-0.1
BSWZ	Blackbirch Sta	0.73	29	P	Pb	18 41 48.3	-0.5
LTZ	Lake Taylor	0.94	243	P	Pg	18 41 50.3	-1.4
AMCZ	Amberley	0.99	214	P	Pg	18 41 51.9	-0.8
TUWZ	Tuamarina	1.01	23	P	Pg	18 41 53.2	+0.2
MRNZ	Matariki Terra	1.07	333	P	Pg	18 41 54.1	-0.1
NNZ	Nelson	1.14	359	P	Pg	18 41 55.3	-0.2
TCW	Tory Channel	1.31	30	P	Pn	18 41 58.2	-0.5
DSZ	Denniston Nort	1.34	296	P	Pn	18 41 58.3	-0.9
TKNZ	Takaka Hill	1.36	346	P	Pn	18 41 59.0	-0.4
OXZ	Oxford	1.40	226	P	Pn	18 41 57.0	-2.9
MQZ	McQueen's Vall	1.46	202	P	Pn	18 41 57.2	-3.5
INZ	Inchbonnie	1.50	255	P	Pn	18 41 59.9	-1.4
AKCZ	Akaroa Harbour	1.56	193	P	Pn	18 41 58.9	-3.2
DUWZ	D'Urville Isla	1.60	14	P	Pn	18 42 03.0	+0.3
RACZ	Rakaia	1.66	214	P	Pn	18 42 00.4	-3.0
QRZ	Quartz Range	1.67	336	P	Pn	18 42 03.9	+0.4
MHCZ	Mount Hutt	1.79	228	P	Pn	18 42 02.3	-3.0
WACZ	Wakanui South	1.96	215	P	Pn	18 42 04.5	-3.1
WVZ	Waitaha Valley	2.10	249	P	Pn	18 42 08.1	-1.4
RPZ	Rata Peaks	2.20	231	P	Pn	18 42 08.1	-2.8
ARCZ	Arundel	2.28	225	P	Pn	18 42 09.0	-3.0

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*IDC **19** 18:48:57.2±1.2, 7°.98S×161°.00E, h0km, mb3.8/10, mbtmp3.9/11, ML4.3/1, Error ellipse: s-maj=37.7km s-min=16.9km az=122.0*
*NEIC **19** 18:48:58.5±1.3, 8°.0S±0°.1×161°.06E±0°.09, h10km±1km, mb4.4/16, Error ellipse: s-maj=19.3km s-min=13.8km az=18.0*
ISC 19 18:48:58.5±0.6, 7°.99S±0°.07×160°.97E±0°.08, h10km, n41, σ1s.32/37, mb4.0/16, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.75	215	Pn	Pb	18 49 31.1	+0.3
	2µm,0.3s,baz=186,slow=5.5,SNR=29						
HNR				Sn	Sg	18 49 55.3	+0.4
	9µm,0.3s,baz=52,slow=19,SNR=12						
HNR	Honiara	1.75	215	Pn	Pb	18 49 30.5	-0.3
RABL	Rabaul	9.53	293	Pn	Pn	18 51 18.5	+2.6
KRVT	Keravat (AS076	9.61	292	Pn	Pn	18 51 19.1	+2.1
	2.6nm,0.3s,baz=312,slow=20,SNR=3.7						
KRVT				Sn	Sn	18 53 02.6	-2.6
	1.0nm,0.3s,baz=149,slow=23,SNR=7.2						

	16nm,0.6s						
DZM	Mont Dzumac	14.96	160	P	Pn	18 52 32.1	+1.8
COEN	Coen	18.44	250	P	P	18 53 14.4	+0.1
CTA	Charters Tower	18.64	228	P	Pn	18 53 19.7	+2.8
	2.4nm,0.6s,baz=162,slow=4.4,SNR=1.7						
CTAO	Charters Tower	18.64	228	P	P	18 53 15.7	-0.9
CTAO				IAmb	IAmb	18 53 57.5	
	comp=Z,19nm,1.1s						
EIDS	Eidsvold	19.69	207	P	P	18 53 27.6	-0.4
EIDS				IAmb	IAmb	18 53 36.5	
	comp=Z,10nm,0.8s						
ARMA	Armidale	23.97	200	P	P	18 54 11.2	-2.1
ARMA				IAmb	IAmb	18 54 37.8	
	comp=Z,22nm,1.4s						
H11S2	WAKE ISLAND Hy	26.91	12	T	T	19 22 56.8	
	baz=193,slow=76,SNR=312						
H11S3	WAKE ISLAND Hy	26.91	12	T	T	19 22 57.2	
	baz=193,slow=76,SNR=251						
H11S1	WAKE ISLAND Hy	26.93	12	T	T	19 22 56.6	
	baz=193,slow=76,SNR=50						
H11N1	WAKE ISLAND Hy	28.14	12	T	T	19 24 23.6	
	baz=193,slow=76,SNR=349						
H11N3	WAKE ISLAND Hy	28.15	12	T	T	19 24 24.2	
	baz=193,slow=76,SNR=194						
H11N2	WAKE ISLAND Hy	28.16	12	T	T	19 24 25.5	
	baz=193,slow=76,SNR=429						
WB0	Warramunga Arr	28.28	243	P	P	18 54 52.0	-0.4
WB0				IAmb	IAmb	18 54 59.0	
	comp=Z,7.6nm,0.9s						
WRAB	Tennant Creek	28.38	242	P	P	18 54 53.0	-0.2
WRAB				IAmb	IAmb	18 55 01.4	
	comp=Z,6.8nm,0.9s						
WB2	Warramunga Arr	28.38	242	P	P	18 54 52.9	-0.4
WB2				IAmb	IAmb	18 54 59.9	
	comp=Z,6.9nm,0.8s						
WRA	Warramunga Arr	28.39	242	P	P	18 54 53.0	-0.3
	comp=Z,1.9nm,0.7s,baz=68,slow=9.2,SNR=29						
	comp=Z,1.9nm,0.7s						
WRA	Warramunga Arr	28.39	242	P	P	18 54 51.7	-1.6
CAN	Canberra	29.33	200	P	P	18 55 00.5	-1.0
STKA	Stephens Creek	29.83	215	P	P	18 55 05.9	-0.1
	comp=Z,1.2nm,0.6s,baz=320,slow=15,SNR=1.7						
	comp=Z,1.2nm,0.6s						
AS31	Alice Springs	30.25	236	P	P	18 55 09.5	-0.4
ASAR	Alice Springs	30.26	236	P	P	18 55 09.5	-0.4
	comp=Z,0.5nm,0.5s,baz=63,slow=10,SNR=26						
	comp=Z,0.5nm,0.5s						
ASAR	Alice Springs	30.26	236	P	P	18 55 09.6	-0.3
NIUE	Niue	30.32	114	P	P	18 55 08.4	-2.0
KNRA	Kununurra	32.40	253	P	P	18 55 28.6	-0.2
KNRA				IAmb	IAmb	18 56 00.8	
	comp=Z,9.6nm,1.1s						
BBOO	Buckleboo	33.80	220	P	P	18 55 39.7	-1.2
FITZ	Fitzroy Crossi	35.79	250	P	P	18 55 56.3	-1.9
TOLI2	Tolitoli	41.07	281	P	P	18 56 41.9	-0.9
TOLI2				IAmb	IAmb	18 56 47.8	
	comp=Z,11nm,1.1s						
GIRL	Giralia	47.16	247	P	P	18 57 29.1	-2.4
KSRS	Korea Array	54.75	328	P	P	18 58 28.1	-0.3
	comp=Z,0.2nm,0.3s,baz=128,slow=6.2,SNR=2.3						
	comp=Z,0.2nm,0.3s						
CMAR	Chiang Mai Arr	66.57	294	P	P	18 59 49.1	-0.3
	comp=Z,0.3nm,0.4s,baz=139,slow=5.9,SNR=2.1						
	comp=Z,0.3nm,0.4s						
SONM	Songino Array	73.45	325	P	P	19 00 32.7	+1.5
	comp=Z,0.5nm,0.7s,baz=139,slow=4.0,SNR=4.1						
	comp=Z,0.5nm,0.7s						
ILAR	Eielson Array	82.20	20	P	P	19 01 19.6	+0.1
	comp=Z,0.5nm,0.8s,baz=226,slow=4.4,SNR=4.7						
	comp=Z,0.5nm,0.8s						
MKAR	Makanchi Array	88.09	318	P	P	19 01 50.2	+0.7
	comp=Z,0.7nm,0.7s,baz=99,slow=6.6,SNR=9.3						
	comp=Z,0.7nm,0.7s						
YKA	Yellowknife Ar	94.45	28	P	P	19 02 18.4	-0.2
	comp=Z,0.2nm,0.8s,baz=253,slow=4.8,SNR=2.7						
	comp=Z,0.2nm,0.8s						
PDAR	Pinedale Array	94.98	48	P	P	19 02 22.2	+0.4
	comp=Z,0.4nm,0.8s,baz=253,slow=0.9,SNR=1.8						
	comp=Z,0.4nm,0.8s						
ESDC	Sonseca Array	145.68	339	PKPbc	PKPab	19 08 38.5	+0.2
	comp=Z,0.5nm,0.9s,baz=50,slow=3.7,SNR=3.1						
TORD	Torodi Ar. Bea	158.99	286	PKPab	PKPab	19 09 35.5	+1.2
	comp=Z,0.7nm,1.0s,baz=100,slow=2.3,SNR=2.7						

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*NEIC **19** 18:57:24.4±1.9, 4°.95S±0°.09×152°.87E±0°.05, h46^{km}±7^{km}, mb4.6/63, Error ellipse: s-maj=12.6km s-min=6.4km az=166.0*

*IDC **19** 18:57:25.0±1.8, 5°.02S×152°.76E, h49^{km}±15^{km}, mb3.9/15, mbtmp4.1/16, ML2.2/1, Error ellipse: s-maj=21.2km s-min=13.1km az=90.0*

ISC 19 18:57:23.9±0.5**, 5°.05S**±0°.06×**152°.82E**±0°.08**, h43**^{km}**, n118,** σ**1**^{s}**10**/122**, mb4.5**/55**, 1D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.07	322	Pn	Pn	18 57 42.2	-0.4
KRVT	Keravat (AS076	1.08	313	P	Pn	18 57 42.6	0.0
	2µm,0.3s,baz=327,slow=1.4,SNR=1091						
KRVT				S	Sn	18 57 56.8	+0.3
KRVT				LR	LR	18 58 06.1	
	comp=Z,422nm,21.4s,baz=259,slow=40						
PMG	Port Moresby	7.09	232	P	Pn	18 59 05.7	+0.5
	2.2nm,0.3s,baz=43,slow=16,SNR=13						
PMG				S	Sn	19 00 22.0	-2.6
	7.1nm,0.5s,baz=131,slow=22,SNR=1.0						
	11nm,0.5s						
PMG	Port Moresby	7.09	232	Pn	Pn	18 59 06.6	+1.4
DZM	Mont Dzumac	21.45	143	P	P	19 02 10.4	+1.6
	4.4nm,0.5s,baz=319,slow=11,SNR=1.6						
	4.4nm,0.5s						
MTN	Manton Dam	22.77	249	P	P	19 02 22.0	-0.9
MTN				IAmb	IAmb	19 02 43.2	
	comp=Z,42nm,1.4s						
WB0	Warramunga Arr	23.15	229	P	P	19 02 26.3	-0.4
WRAB	Tennant Creek	23.28	229	P	P	19 02 27.7	-0.4
WRAB				IAmb	IAmb	19 02 44.0	
	comp=Z,10nm,0.8s						
WB2	Warramunga Arr	23.29	229	P	P	19 02 26.9	-1.2
WRA	Warramunga Arr	23.30	229	P	P	19 02 27.6	-0.6
	comp=Z,2.7nm,0.4s,baz=53,slow=9.8,SNR=49						
	comp=Z,2.7nm,0.4s						
WRA	Warramunga Arr	23.30	229	P	P	19 02 26.9	-1.3
KNRA	Kununurra	25.88	244	P	P	19 02 50.5	-1.4
KNRA				IAmb	IAmb	19 03 22.4	
	comp=Z,15nm,0.9s						
AS31	Alice Springs	25.98	223	P	P	19 02 52.7	-0.2
ASAR	Alice Springs	25.98	223	P	P	19 02 52.9	0.0
	comp=Z,0.9nm,0.4s,baz=57,slow=9.2,SNR=29						
	comp=Z,0.9nm,0.4s						
ASAR	Alice Springs	25.98	223	P	P	19 02 53.0	+0.1
TNTI	Ternate	26.08	282	P	P	19 02 56.4	+2.6
TNTI				IAmb	IAmb	19 03 20.4	
	comp=Z,13nm,0.5s						
STKA	Stephens Creek	28.69	200	P	P	19 03 17.6	+0.6
	comp=Z,1.1nm,0.8s,baz=12,slow=14,SNR=1.2						
	comp=Z,1.1nm,0.8s						
FITZ	Fitzroy Crossi	29.56	242	P	P	19 03 23.6	-1.3
MBWA	Marble Bar	35.87	240	P	P	19 04 18.9	-1.1
MBWA				IAmb	IAmb	19 04 49.0	
	comp=Z,14nm,1.1s						
MJAR	Matsushiro Arr	43.58	343	PcP	PcP	19 07 11.8	+0.8
	comp=Z,0.5nm,0.5s,baz=162,slow=3.7,SNR=5.3						
KSRS	Korea Array	48.23	333	P	P	19 06 00.2	-0.2
	comp=Z,0.8nm,0.8s,baz=143,slow=6.6,SNR=4.2						
	comp=Z,0.8nm,0.8s						
NJ2	Nanjing	49.05	321	*e*P	P	19 06 08.0	+1.1
NJ2				pP	sP	19 06 26.8	+3.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,12µm,3.9s						
GYA	Guiyang	54.56	307	⇓P	P	19 06 49.1	+0.8
GYA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
XAN	Xi'an	56.82	317	P	P	19 07 03.8	-0.4
XAN				pP	pP	19 07 16.5	+0.5
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CM31	Chiang Mai Arr	58.00	295	P	P	19 07 12.2	-0.7
CM31				IAmb	IAmb	19 07 14.8	
	comp=Z,5.7nm,0.8s						
CMAR	Chiang Mai Arr	58.00	295	P	P	19 07 13.5	+0.7
	comp=Z,3.8nm,0.8s,baz=116,slow=5.2,SNR=38						
CMAR				PcP	PcP	19 08 04.8	+0.3
	comp=Z,0.5nm,0.6s,baz=133,slow=3.7,SNR=1.8						
	comp=Z,3.8nm,0.8s						
CMAR	Chiang Mai Arr	58.00	295	P	P	19 07 12.4	-0.4
PEA0B	Petropavlovsk-	58.09	3	P	P	19 07 10.2	-2.6
PETK	Petropavlovsk-	58.09	3	P	P	19 07 12.5	-0.2
	comp=Z,1.8nm,0.5s,baz=170,slow=7.6,SNR=10						
	comp=Z,1.8nm,0.5s						
PETK	Petropavlovsk-	58.09	3	P	P	19 07 12.1	-0.7
PZH	PanZhiHua	58.53	305	P	P	19 07 19.6	+3.0
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,90nm,6.3s						
CD2	Chengdu	58.91	311	P	P	19 07 19.1	+0.1
HHC	Hu-ho-hao-te	59.26	324	*e*P	P	19 07 24.5	+3.2
HHC				pmax	pmax		
	comp=Z,24nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,6.1s						
HEH	HeiHe	59.30	341	*e*P	P	19 07 20.8	-0.4
HEH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HEH				pmax	pmax		
	comp=Z,100nm,5.0s						
GTA	Gaotai	65.85	317	*e*P	P	19 08 06.4	+1.0
GTA				pP	pwP	19 08 20.8	+1.0
GTA				PcP	PcP	19 08 37.4	+1.3
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SONM	Songino Array	66.55	328	P	P	19 08 09.9	+0.3
	comp=Z,0.4nm,0.5s,baz=142,slow=4.9,SNR=3.2						
	comp=Z,0.4nm,0.5s						
TAPN	Taplejung	70.55	301	*e*P	P	19 08 35.1	-0.2
	comp=Z,5.0nm,0.5s						
RAMN	Ramite	71.39	300	*e*P	P	19 08 40.2	-0.1
	comp=Z,3.3nm,0.5s						
JIRN	Jiri	71.94	301	*e*P	P	19 08 43.6	-0.1
	comp=Z,4.1nm,0.4s						
GUN	Gumba	72.27	301	*e*P	P	19 08 45.8	+0.1
	comp=Z,14nm,0.5s						
PKI	Pulchoki	72.58	301	*e*P	P	19 08 47.1	-0.4
	comp=Z,1.6nm,0.4s						
PKIN	Phulchoki	72.59	301	*e*P	P	19 08 47.5	0.0
	comp=Z,5.6nm,0.5s						
GKN	Gorkha	73.35	301	*e*P	P	19 08 51.7	-0.2
DANN	Dangsing	74.19	301	*e*P	P	19 08 56.9	-0.1
	comp=Z,9.5nm,0.6s						
PYUN	Piuthan	74.78	301	*e*P	P	19 08 59.8	-0.5
	comp=Z,14nm,0.8s						
WMQ	Urumqi	75.94	317	*e*P	P	19 09 07.5	+1.0
ANM	Nome	76.00	17	P	P	19 09 05.0	-1.3
P18K	Big Mountain,	76.17	25	P	P	19 09 04.2	-3.1
P18K				IAmb	IAmb	19 09 07.9	
	comp=Z,12nm,1.3s						
KDAK	Kodiak Island	76.39	27	P	P	19 09 08.9	+0.4
	comp=Z,2.9nm,0.8s,baz=153,slow=2.3,SNR=1.2						
	comp=Z,2.9nm,0.8s						
Q19K	Cape Douglas,	76.56	25	P	P	19 09 09.7	0.0
CNPM	China Poot	77.93	26	P	P	19 09 17.3	+0.1
L19K	White Mountain	77.97	22	P	P	19 09 18.8	+1.3
L19K				IAmb	IAmb	19 09 19.9	
	comp=Z,8.3nm,0.9s						
M19K	Big River Lodg	77.98	23	P	P	19 09 19.2	+1.7
M19K				IAmb	IAmb	19 09 23.4	
	comp=Z,4.5nm,0.8s						
BRLK	Bradley Lake	78.21	25	P	P	19 09 19.1	+0.4
M20K	Styx River	78.46	23	P	P	19 09 21.3	+1.1
M20K				IAmb	IAmb	19 09 22.7	
	comp=Z,4.9nm,0.8s						
K20K	Telida	78.95	22	P	P	19 09 22.8	0.0
K20K				IAmb	IAmb	19 09 26.1	
	comp=Z,4.2nm,0.8s						
SEW	Seward	79.00	26	P	P	19 09 22.2	-0.8
O22K	Cooper Landing	79.08	25	P	P	19 09 22.8	-0.7
SKT	Skwentna	79.14	23	P	P	19 09 22.2	-1.6
SUA	Susitna One	79.17	24	P	P	19 09 24.0	-0.2
SUA				IAmb	IAmb	19 09 25.7	
	comp=Z,8.6nm,0.6s						
RDOG	Red Dog Mine	79.21	15	P	P	19 09 23.6	-0.6
RC01	Rabbit Creek A	79.39	25	P	P	19 09 25.0	-0.2
RC01				IAmb	IAmb	19 09 26.8	
	comp=Z,12nm,1.1s						
PPLA	Purkeypile	79.39	22	P	P	19 09 23.2	-2.2
PPLA				IAmb	IAmb	19 09 56.2	
	comp=Z,15nm,1.5s						
CAST	Castle Rocks	79.72	22	P	P	19 09 27.1	0.0
CAST				IAmb	IAmb	19 09 28.7	
	comp=Z,6.0nm,0.8s						
PWL	Port Wells	79.86	25	P	P	19 09 27.8	0.0
KTH	Kantishna Hill	80.23	22	P	P	19 09 29.7	-0.1
KTH				IAmb	IAmb	19 09 30.6	
	comp=Z,6.3nm,0.8s						
SML	Sawmill	80.34	24	P	P	19 09 30.0	-0.4
TRF	Thorofare Moun	80.42	22	P	P	19 09 31.1	+0.1
TRF				IAmb	IAmb	19 09 34.5	
	comp=Z,4.3nm,0.7s						
MK31	Makanchi Array	80.53	319	P	P	19 09 31.6	-0.2
MKAR	Makanchi Array	80.53	319	P	P	19 09 31.5	-0.2
	comp=Z,0.6nm,0.5s,baz=93,slow=8.1,SNR=17						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	80.53	319	P	P	19 09 31.3	-0.4
IMAR	Indian Mountai	80.61	19	P	P	19 09 32.5	+0.8
MNCI	Minicoy	80.64	279	P	P	19 09 31.4	-1.6
H21K	Melozitna Rive	80.74	20	P	P	19 09 33.4	+0.9
H21K				IAmb	IAmb	19 09 34.7	
	comp=Z,3.1nm,0.8s						
MAKZ	Makanchi	80.74	319	P	P	19 09 32.4	-0.5
I21K	Tanana	80.75	21	P	P	19 09 33.0	+0.5
I21K				IAmb	IAmb	19 09 36.2	
	comp=Z,9.4nm,1.0s						
MCK	McKinley	81.08	23	P	P	19 09 34.4	+0.1
MLY	Manley	81.11	21	P	P	19 09 34.8	+0.3
ZAA0	Zalesovo Array	81.37	326	P	P	19 09 35.1	-0.9
ZALV	Zalesovo Beam	81.37	326	P	P	19 09 35.5	-0.5
	comp=Z,1.8nm,0.4s,baz=108,slow=6.1,SNR=12						
	comp=Z,1.8nm,0.4s						
ZALV	Zalesovo Beam	81.37	326	P	P	19 09 35.4	-0.6
NEA2	Nenana	81.48	22	P	P	19 09 35.8	-0.5
NEA2				IAmb	IAmb	19 09 37.2	
	comp=Z,6.2nm,0.7s						
I23K	Minto, Yukon-K	81.66	21	P	P	19 09 36.2	-1.1
I23K				IAmb	IAmb	19 09 40.0	
	comp=Z,3.8nm,0.8s						
WRH	Wood River Hil	81.78	22	P	P	19 09 37.0	-1.0
WRH				IAmb	IAmb	19 09 38.8	
	comp=Z,12nm,1.2s						
N25K	Chitina, Valde	81.81	25	P	P	19 09 37.5	-0.8
N25K				IAmb	IAmb	19 09 51.1	
	comp=Z,11nm,1.2s						
H23K	Yukon River	81.95	21	P	P	19 09 38.8	-0.1
H23K				IAmb	IAmb	19 09 40.9	
	comp=Z,3.5nm,0.7s						
CCB	Clear Creek Bu	81.97	22	P	P	19 09 37.8	-1.2
CCB				IAmb	IAmb	19 09 39.6	
	comp=Z,4.1nm,0.8s						
VRDI	Verde Repeater	82.13	26	P	P	19 09 40.2	0.0
HDA	Harding Lake	82.18	22	P	P	19 09 38.3	-1.8
HDA				IAmb	IAmb	19 09 53.8	
	comp=Z,3.1nm,0.9s						
IL31		82.38	22	P	P	19 09 40.2	-0.9
IL31				IAmb	IAmb	19 09 41.9	
	comp=Z,4.7nm,0.8s						
ILAR	Eielson Array	82.38	22	P	P	19 09 40.9	-0.3
	comp=Z,3.9nm,0.7s,baz=244,slow=6.0,SNR=53						
	comp=Z,3.9nm,0.7s						
COLD	Coldfoot	82.48	19	P	P	19 09 40.9	-0.7
H24K	Noodor Dome	82.55	21	P	P	19 09 42.0	0.0
H24K				IAmb	IAmb	19 09 44.0	
	comp=Z,3.7nm,0.6s						
A21K	Barrow	83.04	15	P	P	19 09 44.8	+0.4
A21K				IAmb	IAmb	19 09 46.3	
	comp=Z,7.0nm,0.7s						
SCRK	Sand Creek	83.12	23	P	P	19 09 44.6	-0.6
SCRK				IAmb	IAmb	19 09 47.2	
	comp=Z,3.2nm,0.9s						
PRP	Porcupine Dome	83.24	22	P	P	19 09 44.3	-1.5
M27K	Edge Creek, AK	83.29	25	P	P	19 09 46.5	+0.5
M27K				IAmb	IAmb	19 09 48.5	
	comp=Z,8.4nm,0.8s						
FYU	Fort Yukon	83.84	21	P	P	19 09 48.9	+0.3
FYU				IAmb	IAmb	19 09 50.9	
	comp=Z,6.1nm,0.8s						
BMAR	Burnt Mountain	84.47	20	P	P	19 09 50.7	-1.2
QSPA	South Pole Qui	84.91	180	P	P	19 09 54.8	+0.6
EPYK	Eagle Plains	86.89	22		P	19 10 04.2	+0.4
EPYK	Eagle Plains	86.89	22	P	P	19 10 04.1	+0.2
EPYK				IAmb	IAmb	19 10 06.1	
	comp=Z,10nm,0.8s						
KK31	Karatay Array	87.82	313	P	P	19 10 08.1	-0.7
KKAR	Karatay Array	87.82	313	P	P	19 10 08.1	-0.8
KKAR	Karatay Array	87.82	313	P	P	19 10 08.1	-0.8
KKAR				IAmb	IAmb	19 10 42.2	
	comp=Z,2.4nm,1.4s						
INK	Inuvik	88.68	21	P	P	19 10 12.9	+0.6
	comp=Z,2.2nm,0.8s,baz=266,slow=6.6,SNR=5.0						
	comp=Z,2.2nm,0.8s						
NVAR	Mina Array Bea	92.22	52	P	P	19 10 30.8	+1.0
	comp=Z,0.3nm,0.5s,baz=256,slow=3.6,SNR=2.3						
	comp=Z,0.3nm,0.5s						
C36M	Paulatuk	92.25	21	P	P	19 10 26.4	-2.5
C36M				IAmb	IAmb	19 10 30.2	
	comp=Z,3.6nm,0.9s						
A36M	Sachs Harbour	92.27	18	P	P	19 10 25.7	-3.3
YKA	Yellowknife Ar	95.63	28	P	P	19 10 45.2	+0.6
	comp=Z,0.6nm,0.7s,baz=274,slow=4.7,SNR=8.4						
	comp=Z,0.6nm,0.7s						
FINES	FINESS Array B	111.29	336	Pdiff	Pdif	19 11 53.7	-0.8
	comp=Z,0.3nm,0.7s,baz=35,slow=3.4,SNR=3.3						
AKASG	Malin Array Be	114.71	324	PKP	PKiKP	19 15 59.4	-0.4
	comp=Z,0.4nm,0.4s,baz=43,slow=2.4,SNR=5.7						
GERES	GERESS Array B	124.28	328	PKP	PKiKP	19 16 19.2	+0.6
	comp=Z,1.0nm,0.6s,baz=116,slow=2.3,SNR=5.5						
SDV	Santo Domingo	136.72	82	PKP	PKiKP	19 16 44.4	-0.3
	comp=Z,1.9nm,0.6s,baz=277,slow=8.7,SNR=3.8						
SIV	San Ignacio	140.48	123	PKhKP	PKPpre	19 16 44.9	
	comp=Z,0.6nm,0.7s,baz=261,slow=2.0,SNR=4.1						
TORD	Torodi Ar. Bea	150.40	288	PKPbc	PKPbc	19 17 11.8	-0.1
	comp=Z,2.4nm,0.4s,baz=83,slow=2.6,SNR=42						
BDFB	Brasilia	150.88	135	PKPbc	PKiKP	19 17 14.1	+0.5
	comp=Z,4.2nm,0.5s,baz=6.3,slow=0.6,SNR=8.2						
DBIC	Dimbokro	157.74	275	PKPab	PKPab	19 17 49.4	-0.1
	comp=Z,3.0nm,0.5s,baz=116,slow=5.0,SNR=5.6						

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*IDC **19** 18:58:16.6±1.5, 17°.73S×178°.62W, h614^{km}±15^{km}, mb3.2/6, mbtmp4.2/9, Error ellipse: s-maj=81.1km s-min=15.1km az=154.0*

ISC 19 18:58:15.0±1.3**, 18°.5S**±0°.5×**178°.2W**±0°.3**, h600**^{km}**, n10,** σ**1**^{s}**33**/11**, mb4.0**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.60	281	P	P	18 59 39.9	+2.0
	74nm,0.8s,baz=157,slow=1.6,SNR=33						
AFI	Afiamalu	7.70	55	P	P	19 00 11.2	-0.4
	26nm,0.9s,baz=27,slow=24,SNR=4.7						
DZM	Mont Dzumac	14.80	253	P	P	19 01 21.2	-0.3
	7.0nm,0.9s,baz=0.1,slow=23,SNR=2.0						
CTA	Charters Tower	33.51	261	P	P	19 04 05.0	-1.6
	3.2nm,0.6s,baz=72,slow=9.1,SNR=6.6						
	3.2nm,0.6s						
STKA	Stephens Creek	38.50	242	P	P	19 04 48.5	+1.1
	2.3nm,0.4s,baz=79,slow=6.6,SNR=14						
	2.3nm,0.4s						
WRA	Warramunga Arr	44.69	260	P	P	19 05 35.0	-1.3
	1.6nm,0.3s,baz=95,slow=7.5,SNR=19						
	1.6nm,0.3s						
ASAR	Alice Springs	44.79	255	P	P	19 05 36.5	-0.6
	9.3nm,0.5s,baz=90,slow=8.3,SNR=83						
ASAR				ScP	ScP	19 10 01.8	0.0
	0.5nm,1.0s,baz=90,slow=4.1,SNR=2.5						
	9.3nm,0.5s						
NVAR	Mina Array Bea	79.73	44	P	P	19 09 21.2	-0.8
	0.3nm,0.6s,baz=221,slow=8.1,SNR=2.6						
	0.3nm,0.6s						
TXAR	Lajitas Array	86.17	58	P	P	19 09 54.5	+0.3
	0.6nm,0.7s,baz=222,slow=5.0,SNR=7.5						
	0.6nm,0.7s						
GERES	GERESS Array B	148.21	345	PKPbc	PKPdf	19 16 52.1	+1.8
	0.4nm,0.4s,baz=9.2,slow=3.1,SNR=1.9						

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*IDC **19** 19:15:36.0±8.6, 34°.95N×73°.72E, h64^{km}±72^{km}, mb3.3/3, mbtmp3.5/7, ML3.0/4, Error ellipse: s-maj=71.1km s-min=47.5km az=126.0*

ISC 19 19:15:34.3±1.1**, 34°.89N**±0°.10×**73°.8E**±0°.1**, h50**^{km}**, n14,** σ**1**^{s}**05**/14**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	7.76	4	P	Pn	19 17 26.1	+1.3
	0.2nm,0.3s,baz=186,slow=9.2,SNR=2.4						
AAK				S	Sn	19 18 50.4	-1.0
	0.9nm,0.8s,baz=16,slow=20,SNR=1.7						
	0.5nm,0.5s						
PYUN	Piuthan	10.38	128	*e*P	Pn	19 18 02.1	+1.3
DANN	Dangsing	10.73	125	*e*P	Pn	19 18 06.5	+0.9
GKN	Gorkha	11.54	123	*e*P	Pn	19 18 15.6	-1.0
PKIN	Phulchoki	12.33	123	*e*P	Pn	19 18 27.6	+0.1
PKI	Pulchoki	12.35	123	*e*P	Pn	19 18 23.9	-3.8
GUN	Gumba	12.47	121	*e*P	Pn	19 18 29.7	+0.3
TAPN	Taplejung	14.11	118	*e*P	Pn	19 18 49.9	-1.8
KURBB	Kurchatov Arra	16.11	11	P	Pn	19 19 18.4	+1.2
	baz=203,slow=11,SNR=5.1						
	0.1nm,0.4s						
BVAR	Borovoye Array	18.29	354	P	P	19 19 44.4	+0.4
	baz=152,slow=9.7,SNR=5.0						
	0.7nm,0.5s						
AKTO	Aktyubinsk	19.31	328	P	P	19 19 54.6	-0.5
	0.3nm,0.3s,baz=128,slow=10,SNR=4.2						
	0.8nm,0.4s						
ZALV	Zalesovo Beam	20.59	19	P	P	19 20 08.4	-0.5
	0.8nm,0.3s,baz=217,slow=9.6,SNR=5.6						
	0.8nm,0.3s						
FINES	FINESS Array B	40.07	327	P	P	19 23 04.6	+0.1
	0.8nm,0.9s,baz=101,slow=8.0,SNR=4.0						
	0.8nm,0.9s						
TORD	Torodi Ar. Bea	67.95	271	P	P	19 26 27.8	-0.6
	0.5nm,0.6s,baz=50,slow=5.3,SNR=5.9						
	0.5nm,0.6s						

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*TAP **19** 19:43:46.1, 24°.66N×122°.64E, h23^{km}, ML2.6, C*

*JMA **19** 19:43:46.4±0.1, 25°N±1°×122°.6E±0°.5, h16^{km}±2^{km}, MV2.0/10, NW OFF ISHIGAKIJIMA IS*

ISC 19 19:43:46.0±1.0**, 24°.65N**±0°.03×**122°.61E**±0°.02**, h18**^{km}±5^{km}**, n57,** σ**0**^{s}**44**/98**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.37	123	P	Pg	19 43 53.8	0.0
JYNG				S	Sg	19 43 59.0	+0.1
YOJ	Yonaguni jima	0.41	118	P	Pg	19 43 54.6	0.0
YOJ				S	Sg	19 44 00.4	+0.1
YOJ	Yonaguni jima	0.41	118	*i* P	Pg	19 43 54.5	0.0
	baz=118						
YOJ				*i* S	Sg	19 44 00.3	+0.1
	baz=118						
EGS		0.65	287	*i* P	Pb	19 43 58.7	-0.1
	baz=287						
TWB1	Santiao Chiao	0.67	302	*e*P	Pb	19 43 58.7	-0.4
	baz=302						
TWB1				*e*S	Sb	19 44 07.7	-0.3
	baz=302						
TWC	Suao	0.69	266	*i* P	Pb	19 43 59.4	-0.2
	baz=267						
TWC				S	Sb	19 44 08.9	0.0
	baz=267						
TIPB	Shuangxi	0.78	294	P	Pb	19 44 01.5	+0.4
	baz=294						
TIPB				S	Sb	19 44 12.0	+0.6
	baz=294						
EWUT	Wuta	0.79	255	P	Pb	19 44 01.1	0.0
	baz=255						
EWUT				*e*S	Sb	19 44 10.9	-0.6
	baz=255						
SXI1	Grass Mountain	0.80	303	P	Pb	19 44 01.7	+0.2
	baz=303						
SXI1				*e*S	Sb	19 44 11.9	-0.1
	baz=303						
NDS	Dongshan	0.81	269	*e*P	Pb	19 44 01.8	+0.1
	baz=269						
NDS				*e*S	Sg	19 44 13.0	+0.2
	baz=269						
ENA	Nanau	0.82	254	P	Pb	19 44 01.8	-0.1
	baz=254						
ENA				*e*S	Sb	19 44 11.8	-0.8
	baz=254						
WFSB	Wu-fen Shan	0.86	299	P	Pb	19 44 02.9	+0.4
	baz=299						
WFSB				S	Sb	19 44 13.9	+0.3
	baz=299						
TWE	Neicheng	0.86	275	P	Pb	19 44 02.7	+0.3

	baz=274						
TWE				S	**Sg**	**19 44 14.6**	**+0.3**
	baz=274						
FUSB	**Fushanzhiwuyua**	**0.94**	**277**	P	**Pb**	**19 44 03.8**	**0.0**
	baz=276						
FUSB				*e*S	**Sb**	**19 44 16.3**	**+0.4**
	baz=276						
ENTT	**Nioudou**	**0.95**	**269**	P	**Pb**	**19 44 04.4**	**+0.4**
	baz=269						
ENTT				S	**Sb**	**19 44 16.7**	**+0.4**
	baz=269						
TWA	**Mucha**	**0.99**	**289**	P	**Pb**	**19 44 04.8**	**+0.2**
	baz=289						
TWA				*e*S	**Sn**	**19 44 18.5**	**-0.1**
	baz=289						
LATG	**Datong**	**0.99**	**263**	P	**Pb**	**19 44 05.1**	**+0.3**
	baz=263						
LATG				S	**Sb**	**19 44 18.3**	**+0.7**
	baz=263						
NHDH	**Xindian Distri**	**1.03**	**288**	P	**Pb**	**19 44 05.7**	**+0.3**
	baz=287						
NHDH				*e*S	**Sb**	**19 44 18.8**	**+0.2**
	baz=287						
NACB	**Ninganchiao**	**1.04**	**243**	*e*P	**Pb**	**19 44 05.4**	**-0.2**
	baz=243						
NACB				*e*S	**Sb**	**19 44 18.7**	**-0.2**
	baz=243						
YM01	**YM01**	**1.06**	**298**	*e*P	**Pb**	**19 44 05.6**	**-0.4**
	baz=297						
YM01				*e*S	**Sb**	**19 44 19.5**	**-0.1**
	baz=297						
IRIF	**Iriomote-Funau**	**1.07**	**107**	P	**Pn**	**19 44 06.2**	**+0.1**
IRIF				*e*S	**Sg**	**19 44 21.3**	**+0.5**
YM08	**YM08**	**1.07**	**300**	*e*P	**Pb**	**19 44 05.6**	**-0.4**
	baz=300						
YM08				*e*S	**Sb**	**19 44 19.1**	**-0.6**
	baz=300						
ETLH	**Xiulin Townshi**	**1.12**	**247**	*e*P	**Pn**	**19 44 06.8**	**-0.2**
	baz=255						
ETLH				*e*S	**Sb**	**19 44 21.3**	**0.0**
	baz=255						
YHNB	**Yeheng**	**1.12**	**271**	P	**Pb**	**19 44 07.2**	**+0.2**
	baz=271						
YHNB				*e*S	**Sn**	**19 44 22.3**	**+0.3**
	baz=271						
NNSH	**Datong**	**1.14**	**259**	*e*P	**Pn**	**19 44 07.2**	**-0.1**
	baz=268						
NNSH				*e*S	**Sb**	**19 44 21.5**	**-0.4**
	baz=268						
NSK	**Sanguang**	**1.14**	**271**	P	**Pn**	**19 44 07.4**	**+0.2**
	baz=271						
NSK				S	**Sb**	**19 44 21.9**	**+0.1**
	baz=271						
NNSB	**Datong**	**1.14**	**259**	P	**Pn**	**19 44 07.2**	**0.0**
	baz=259						
NNSB				*e*S	**Sb**	**19 44 21.1**	**-0.7**
	baz=259						
NNS	**Nan Shan**	**1.15**	**260**	P	**Pb**	**19 44 07.7**	**+0.3**
	baz=259						
NNS				S	**Sb**	**19 44 22.0**	**0.0**
	baz=259						
ETM	**Tongmen**	**1.23**	**236**	*e*P	**Pb**	**19 44 09.4**	**+0.6**
	baz=235						
HATJ	**Hateruma jima**	**1.24**	**118**	*e*P	**Pb**	**19 44 09.4**	**+0.5**
HATJ				*e*S	**Sg**	**19 44 25.9**	**-0.4**
WHF	**Hehuan Shan**	**1.33**	**248**	*e*P	**Pb**	**19 44 11.1**	**+0.4**
	baz=247						
WHF				*e*S	**Sb**	**19 44 27.8**	**+0.2**
	baz=247						
JKRS	**Kuro-shima**	**1.34**	**108**	P	**Pn**	**19 44 09.8**	**0.0**
JKRS				S	**Sn**	**19 44 27.0**	**-0.2**
NFF	**Wufeng Townshi**	**1.36**	**269**	*e*P	**Pb**	**19 44 11.2**	**+0.1**
	baz=283						
NFF				*e*S	**Sb**	**19 44 29.1**	**+1.1**
	baz=283						
ESL	**Shilin**	**1.36**	**232**	*e*P	**Pb**	**19 44 10.8**	**-0.3**
	baz=231						
TWT	**Tachien**	**1.37**	**253**	*e*P	**Pg**	**19 44 12.5**	**+0.1**
	baz=252						
TWT				*e*S	**Sg**	**19 44 30.1**	**-0.2**
	baz=252						
JIJ	**Ishigaki jima**	**1.43**	**101**	P	**Pb**	**19 44 12.1**	**0.0**
JIJ				*e*S	**Sg**	**19 44 31.2**	**-1.0**
CHGB	**Renai**	**1.44**	**246**	*e*P	**Pb**	**19 44 13.2**	**+0.7**
	baz=229						
CHGB				*e*S	**Sb**	**19 44 31.6**	**+1.1**
	baz=229						
LIOB	**Emei**	**1.45**	**270**	*e*P	**Pb**	**19 44 13.2**	**+0.6**
	baz=269						
LIOB				*e*S	**Sg**	**19 44 32.8**	**-0.2**
	baz=269						
EGFH	**Guangfu**	**1.46**	**228**	*e*P	**Pn**	**19 44 11.6**	**+0.1**
	baz=228						
EGFH				*e*S	**Sb**	**19 44 31.7**	**+0.8**
	baz=228						
NSTT	**Nanjuang**	**1.47**	**269**	*e*P	**Pb**	**19 44 13.0**	**+0.2**
	baz=269						
NSTT				*e*S	**Sg**	**19 44 33.1**	**-0.3**
	baz=269						
OWD	**Renai**	**1.48**	**242**	*e*P	**Pb**	**19 44 13.5**	**+0.3**
	baz=227						
WUSB	**Renai**	**1.51**	**244**	*e*P	**Pb**	**19 44 13.9**	**+0.2**
	baz=229						
WUSB				*e*S	**Sb**	**19 44 33.9**	**+1.3**
	baz=229						
JISG	**Ishigakijimahi**	**1.55**	**92**	P	**Pn**	**19 44 12.9**	**+0.2**
HGSD	**Ruisui**	**1.59**	**223**	*e*P	**Pn**	**19 44 13.5**	**+0.2**
	baz=211						
VWDT	**VWDT**	**1.61**	**237**	*e*P	**Pb**	**19 44 15.3**	**0.0**
	baz=235						
EHY	**Hungye**	**1.64**	**226**	*e*P	**Pn**	**19 44 14.0**	**0.0**
	baz=225						
EHY				*e*S	**Sn**	**19 44 34.3**	**-0.4**
	baz=225						
WCS	**Beigang Elemen**	**1.66**	**249**	*e*P	**Pb**	**19 44 17.3**	**+1.2**
	baz=248						
WCS				*e*S	**Sb**	**19 44 36.7**	**0.0**
	baz=248						
YULB	**Yu-li**	**1.74**	**224**	P	**Pn**	**19 44 15.8**	**+0.4**
	baz=213						
YULB				*e*S	**Sn**	**19 44 36.5**	**-0.6**
	baz=213						
SMLT	**Sun Moon Lake**	**1.74**	**244**	*e*P	**Pb**	**19 44 17.5**	**-0.1**
	baz=228						
SSLB	**Suanglung**	**1.74**	**241**	*e*P	**Pb**	**19 44 17.2**	**-0.3**
	baz=224						
TYC	**Yuchr**	**1.77**	**245**	*e*P	**Pb**	**19 44 18.3**	**+0.4**
	baz=228						
WHYT	**Xinyi Township**	**1.87**	**240**	*e*P	**Pb**	**19 44 19.7**	**0.0**
	baz=225						
FULB	**Fuli**	**1.89**	**220**	*e*P	**Pn**	**19 44 17.3**	**-0.1**
	baz=219						
ALS	**Alishan**	**2.00**	**236**	*e*P	**Pb**	**19 44 21.5**	**-0.7**
	baz=233						
ELDTW	**Lidau**	**2.06**	**225**	*e*P	**Pn**	**19 44 19.7**	**-0.2**
	baz=224						
WCKO	**Fanlu**	**2.20**	**237**	*e*P	**Pb**	**19 44 24.8**	**-0.5**
	baz=235						
TPUB	**Ta-pu**	**2.26**	**234**	*e*P	**Pb**	**19 44 25.3**	**-1.0**
	baz=231						

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*IDC **19** 20:04:09.9±1.5, 43°.88N×105°.78W, h0^{km}, mb3.6/1, mbtmp3.4/6, ML3.6/4, MS3.2/1, Error ellipse: s-maj=44.6km s-min=9.0km az=147.0*

*NEIC **19** 20:04:10.5±2.3, 43°.77N±0°.05×105°.23W±0°.06, h0^{km}±2^{km}, ML3.2/64, Error ellipse: s-maj=9.4km s-min=6.3km az=329.0*

ISC 19 20:04:09.7±0.9**, 43°.77N**±0°.06×**105°.23W**±0°.07**, h0^{km}, n53, σ1^s.19**/51**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.94**	**67**	Pg	**Pg**	**20 04 25.9**	**-1.7**
K22A	**Casper**	**1.46**	**221**		Pn	20 04 33.1	-4.3
K22A				IAML		20 04 59.4	
	comp=E,396nm,0.3s						
PHWY	**Pilot Hill**	**2.47**	**184**		**Pn**	**20 04 50.8**	**-0.6**
PHWY				IAML		20 05 28.6	
	comp=E,77nm,0.3s						
PHWY				IAML		20 05 29.0	
	comp=E,114nm,0.4s						
RWWY	**Rawlins**	**2.54**	**216**		**Pn**	**20 04 50.9**	**-1.4**
RWWY				IAML		20 05 31.0	
	comp=E,113nm,0.4s						
N23A	**Red Feather La**	**2.92**	**191**	Pn	**Pn**	**20 04 57.5**	**-0.1**
N23A				IAML		20 05 43.5	
	comp=E,78nm,0.3s						
LAO	**LASA Array**	**3.01**	**347**		**Pn**	**20 04 59.0**	**+0.4**
RLMT	**Red Lodge**	**3.19**	**297**		**Pn**	**20 05 00.5**	**-0.8**
RLMT				IAML		20 05 52.7	
	comp=E,52nm,0.3s						
RLMT				IAML		20 05 58.0	
	comp=E,41nm,0.6s						
BW06	**Boulder Array**	**3.31**	**254**		**Pn**	**20 05 03.4**	**+0.4**
BW06				IAML		20 05 55.3	
	comp=E,47nm,0.3s						
PD31	**Pinedale Array**	**3.31**	**254**		**Pn**	**20 05 03.8**	**+0.8**
PDAR	**Pinedale Array**	**3.31**	**254**	Pn	**Pn**	**20 05 00.1**	**-2.8**
	comp=E,6.1nm,0.3s,baz=74,slow=15,SNR=133						
PDAR				Lg	Lg	20 05 43.7	
	comp=E,5.7nm,0.3s,baz=69,slow=35,SNR=1.5						
	comp=E,5.0nm,0.3s						
PDAR	**Pinedale Array**	**3.31**	**254**	Pn	**Pn**	**20 05 03.2**	**+0.3**
YMP	**Mirror Lake Pl**	**3.67**	**287**		**Pn**	**20 05 07.3**	**-0.6**
OGNE	**Ogallala**	**3.68**	**139**	Pn	**Pn**	**20 05 10.1**	**+2.1**
GCMT	**Greycliff**	**3.75**	**304**		**Pn**	**20 05 09.5**	**+0.6**
H17A	**Grant Village**	**3.90**	**281**		**Pn**	**20 05 12.9**	**+1.8**
FLWY	**Flagg Ranch**	**3.96**	**276**		**Pn**	**20 05 11.3**	**-0.6**
FLWY				IAML		20 06 19.8	
	comp=E,30nm,2.1s						
FLWY				IAML		20 06 23.4	
	comp=E,26nm,2.1s						
ISCO	**Idaho Springs**	**3.97**	**184**	Pn	**Pn**	**20 05 13.7**	**+1.6**
MOOW	**Moose Ponds**	**3.99**	**272**	Pn	**Pn**	**20 05 13.4**	**+1.1**
REDW	**Red Top Meadow**	**4.10**	**266**		**Pn**	**20 05 14.3**	**+0.4**
REDW				IAML		20 06 20.1	
	comp=E,25nm,1.1s						
REDW				IAML		20 06 25.6	
	comp=E,31nm,1.2s						
IMW	**Indian Meadow**	**4.13**	**274**	Pn	**Pn**	**20 05 16.2**	**+1.9**
IMW				IAML		20 06 25.6	
	comp=E,30nm,0.5s						
IMW				IAML		20 06 34.4	
	comp=E,18nm,0.6s						
TPAW	**Teton Pass**	**4.16**	**268**		**Pn**	**20 05 15.3**	**+0.6**
TPAW				IAML		20 06 28.7	
	comp=E,24nm,0.9s						
FXWY	**Fox Creek**	**4.20**	**270**		**Pn**	**20 05 16.6**	**+1.4**
O20A	**White River Ci**	**4.26**	**213**	Pn	**Pn**	**20 05 15.4**	**-0.7**
O20A				IAML		20 06 33.9	
	comp=N,29nm,1.4s						
AHID	**Auburn Hatcher**	**4.40**	**259**		**Pn**	**20 05 18.7**	**+0.8**
AHID				IAML		20 06 29.8	
	comp=N,21nm,0.9s						
AHID				IAML		20 06 41.0	
	comp=N,17nm,0.6s						
DGMT	**Dagmar**	**4.76**	**8**		**Pn**	**20 05 24.2**	**+1.5**
Q24A	**Divide**	**4.80**	**179**		**Pn**	**20 05 24.5**	**+1.0**
Q24A				IAML		20 06 49.0	
	comp=N,20nm,0.3s						
BOZ	**Bozeman (W)**	**4.92**	**294**		**Pn**	**20 05 25.2**	**+0.3**
BOZ				IAML		20 06 44.9	
	comp=N,11nm,1.6s						
BOZ				IAML		20 06 49.1	
	comp=N,15nm,3.4s						
KSCO	**Kaye Shedlock'**	**5.14**	**157**	Pn	**Pn**	**20 05 28.6**	**+0.6**
HWUT	**Hardware Ranch**	**5.14**	**247**		**Pn**	**20 05 27.3**	**-0.8**
HWUT				IAML		20 07 35.0	
	comp=N,17nm,4.2s						
BSUT	**Blindstream Ca**	**5.22**	**234**	Pn	**Pn**	**20 05 30.8**	**+1.4**
BSUT				IAML		20 07 04.8	
	comp=E,14nm,3.4s						
BSUT				IAML		20 07 32.5	
	comp=N,14nm,4.5s						
EGMT	**Eagleton**	**5.30**	**325**		**Pn**	**20 05 29.7**	**-0.4**
LRM	**Limekiln Ridge**	**5.53**	**294**	Pn	**Pn**	**20 05 34.7**	**+1.2**
CTU	**Camp Tracy**	**5.73**	**240**	Pn	**Pn**	**20 05 37.3**	**+1.1**
HVU	**Hansel Valley**	**5.89**	**253**	Pn	**Pn**	**20 05 38.8**	**+0.5**
PV07	**Paradox Valley**	**5.91**	**207**		**Pn**	**20 05 40.0**	**+1.4**
PV23	**Carpenter Ridg**	**6.03**	**210**	Pn	**Pn**	**20 05 41.4**	**+1.1**
PV10	**Paradox Valley**	**6.10**	**209**	Pn	**Pn**	**20 05 43.5**	**+2.2**
PV11	**David Mesa, Pa**	**6.11**	**208**	Pn	**Pn**	**20 05 42.8**	**+1.3**
SRU	**San Rafael Swe**	**6.12**	**222**		**Pn**	**20 05 41.7**	**+0.3**
PV13	**Radium Mtn., P**	**6.22**	**207**		**Pn**	**20 05 43.6**	**+0.6**
ECSD	**EROS Data Cent**	**6.24**	**87**		**Pn**	**20 05 45.1**	**+2.1**
TMUT	**Trail Mountain**	**6.33**	**227**	Pn	**Pn**	**20 05 45.0**	**+0.5**
NLU	**North Lily Min**	**6.37**	**236**	Pn	**Pn**	**20 05 44.7**	**-0.3**
Q16A	**Castle Valley**	**6.59**	**225**		**Pn**	**20 05 48.5**	**+0.5**
DUG	**Dugway, Tooele**	**6.68**	**240**		**Pn**	**20 05 49.7**	**+0.5**
MSO	**Missoula**	**6.86**	**300**	Pn	**Pn**	**20 05 52.6**	**+1.0**
MSU	**Marysvale**	**7.41**	**227**	Pn	**Pn**	**20 06 00.9**	**+1.6**
ELK	**Elko**	**8.01**	**251**	Pn	**Pn**	**20 06 06.3**	**-1.2**
	comp=N,0.2nm,0.3s,baz=56,slow=7.3,SNR=2.9						
	comp=N,0.5nm,0.3s						
ULM	**Lac du Bonnet**	**9.10**	**41**	Pn	**Pn**	**20 06 22.8**	**+0.6**
	comp=N,4.3nm,0.3s,baz=226,slow=12,SNR=27						
ULM				Lg	Lg	20 08 53.4	
	comp=N,0.5nm,0.3s,baz=133,slow=21,SNR=3.5						
	comp=N,6.5nm,0.3s						
NVAR	**Mina Array Bea**	**11.21**	**246**	Pn	**Pn**	**20 06 51.6**	**+0.4**
	comp=N,0.4nm,0.6s,baz=62,slow=11,SNR=3.0						
YKA	**Yellowknife Ar**	**19.55**	**347**	P	**P**	**20 08 37.1**	**-1.5**
	comp=N,0.1nm,0.3s,baz=158,slow=13,SNR=3.0						
	comp=N,0.2nm,0.7s						
JTS	**Las Juntas de**	**37.71**	**146**	LR	LR	20 30 47.0	
	comp=N,33nm,18.0s,baz=48,slow=42						
MKAR	**Makanchi Array**	**89.58**	**355**	P	**P**	**20 17 08.9**	**-0.1**
	comp=N,0.2nm,0.6s,baz=23,slow=5.3,SNR=2.8						
	comp=N,0.2nm,0.6s						

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*IDC **19** 20:09:58.1±2.3, 6°.79S×129°.58E, h0^{km}, mb3.2/1, mbtmp3.3/3, ML3.7/2, Error ellipse: s-maj=111.1km s-min=33.2km az=68.0*

ISC 19 20:10:13.2±1.1**, 7°.23S**±0°.09×**129°.9E**±0°.1**, h150^{km}, n12, σ3^s.61**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.59**	**118**	P	**Pn**	**20 10 44.2**	**+0.4**
FAKI	**Fak Fak**	**4.89**	**29**	P	**Pn**	**20 11 20.9**	**-4.4**
MTN	**Manton Dam**	**5.71**	**168**	P	**Pn**	**20 11 36.0**	**-0.1**
KDU	**Kakadu**	**5.99**	**155**	P	**Pn**	**20 11 40.2**	**+0.3**
SOEI	**Soe**	**6.09**	**245**	P	**Pn**	**20 11 37.2**	**-4.2**
WRA	**Warramunga Arr**	**13.36**	**162**	Pn	**Pn**	**20 13 14.7**	**-2.4**
	0.4nm,0.3s,baz=340,slow=14,SNR=39						
WRA				Sn	Sn	20 15 36.2	-8.7
	0.7nm,0.3s,baz=334,slow=23,SNR=9.3						
	0.6nm,0.5s						
QIS	**Mount Isa**	**16.25**	**146**	P	**P**	**20 13 56.8**	**+3.4**
ASAR	**Alice Springs**	**16.79**	**167**	P	**Pn**	**20 14 02.2**	**+2.5**
	0.2nm,0.3s,baz=345,slow=9.1,SNR=11						
ASAR				S	**S**	**20 16 59.4**	**-7.2**
	0.6nm,0.7s,baz=358,slow=27,SNR=3.2						
	0.3nm,0.5s						
PSA00	**Pilbara Seismi**	**17.24**	**213**	P	**Pn**	**20 14 05.3**	**+0.2**
	15nm,2.2s						
MTSU	**Mount Surprise**	**17.75**	**129**	P	**Pn**	**20 14 15.2**	**+3.9**
WRKA	**Warakurna**	**17.77**	**185**	P	**Pn**	**20 14 13.3**	**+1.9**
MKAR	**Makanchi Array**	**68.36**	**327**	P	**P**	**20 20 58.1**	**-0.3**
	0.1nm,0.4s,baz=116,slow=6.6,SNR=1.6						
	0.1nm,0.4s						

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*NNC **19** 20:11:26.8±4.5, 36°.77N×70°.41E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=36.5km s-min=26.7km az=165.0*

*IDC **19** 20:11:27.6±9.8, 36°.63N×70°.30E, h100^{km}±116^{km}, mb3.5/1, mbtmp3.6/3, ML2.9/2, Error ellipse: s-maj=180.2km s-min=40.8km az=169.0*

ISC 19 20:11:26.4±2.0**, 36°.5N**±0°.1×**70°.37E**±0°.09**, h100^{km}, n8, σ1^s.73**/14**, 6C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.23**	**23**	⇓P	**Pn**	**20 12 56.6**	**+0.5**
	0.3nm,0.3s						
AML				⇑S	**Sn**	**20 14 05.2**	**-1.0**
	4.2nm,0.5s						
KK31	**Karatay Array**	**6.65**	**1**	⇓P	**Pn**	**20 13 03.1**	**+1.6**
	2.0nm,0.3s,baz=185,slow=13,SNR=38						
KK31				⇑S	**Sn**	**20 14 17.4**	**+1.7**
	4.0nm,0.5s,baz=197,slow=15,SNR=4.4						
TKM2	**Tokmak 2**	**7.62**	**30**	⇑P	**Pn**	**20 13 15.0**	**+0.2**
	4.2nm,0.6s						
TKM2				⇓S	**Sn**	**20 14 39.7**	**+0.1**
	4.6nm,0.8s						
GEYT	**Alibeck**	**9.89**	**282**	P	**Pn**	**20 13 46.4**	**+0.9**
	0.2nm,0.3s,baz=97,slow=9.8,SNR=1.8						
GEYT				S	**Sn**	**20 15 33.3**	**-1.4**
	0.7nm,0.3s,baz=119,slow=20,SNR=2.3						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**13.63**	**37**	P	**Pn**	**20 14 34.6**	**-0.9**
	baz=223,slow=12,SNR=8.7						
	0.6nm,0.7s						
AB31	**Akbulak array**	**14.89**	**333**	⇑P	**P**	**20 14 53.0**	**-1.7**
	0.7nm,0.3s,baz=162,slow=12,SNR=80						
AB31				S	**Sn**	**20 17 36.0**	**+0.3**
	0.5nm,0.5s,baz=152,slow=23,SNR=4.0						
AKTO	**Aktyubinsk**	**16.58**	**331**	⇑P	**P**	**20 15 16.6**	**+3.2**
	3.4nm,1.4s						
AKTO				⇑S	**S**	**20 18 18.3**	**-3.1**
	1.4nm,0.8s						
ZALV	**Zalesovo Beam**	**20.18**	**25**	P	**P**	**20 15 52.6**	**-0.1**
	2.1nm,0.4s,baz=217,slow=11,SNR=13						
	2.1nm,0.4s						

IDC 19 20:16:16.7±8.9**, 19°.84S**×**178°.97W, h647^{km}**±51^{km}**, mb2.7**/2**, mbtmp3.7**/3**, Error ellipse: s-maj=256.5km s-min=94.8km az=146.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.52**	**306**	P	P	20 17 42.7	-0.2
	10nm,0.7s,baz=131,slow=9.3,SNR=4.4						
ASAR	**Alice Springs**	**43.79**	**256**	P	P	20 23 28.1	0.0
	1.4nm,0.8s,baz=95,slow=7.7,SNR=18						
	1.4nm,0.8s						
WRA	**Warramunga Arr**	**43.80**	**262**	P	P	20 23 28.3	+0.1
	0.9nm,0.7s,baz=97,slow=7.6,SNR=33						
	0.9nm,0.7s						
AKASG	**Malin Array Be**	**142.00**	**331**	PKP	PKPdf	20 34 35.7	-0.9
	0.7nm,0.5s,baz=38,slow=4.2,SNR=7.7						

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*IDC **19** 20:34:59.4±0.9, 59°.86S×150°.63E, h0^{km}, mb4.3/7, mbtmp4.3/7, MS4.6/36, Error ellipse: s-maj=55.9km s-min=20.4km az=72.0*

*NEIC **19** 20:34:59.2±1.8, 60°.06S±0°.06×150°.7E±0°.2, h10^{km}±1^{km}, mb4.9/19, Mwb5.3/8, Error ellipse: s-maj=21.6km s-min=6.9km az=65.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.29; $M_{\theta\theta}$0.81; $M_{\phi\phi}$-1.10; $M_{r\theta}$0.07; $M_{\theta\phi}$-0.70; $M_{\phi r}$-0.43; Fault plane solution: $M_0$1.29000×10^{17} NP1:ϕ_s154.14000°, δ88.52000°, λ20.14000°. NP2:ϕ_s63.60000°, δ69.87000°, λ178.43000°. Principal axes: T 1.0922, Plg15.0000°, Azm21.0000°; N 0.3288, Plg70.0000°, Azm158.0000°; P -1.4210, Plg13.0000°, Azm287.0000°;*

*NEIC **19** 20:34:59.1, 60°.04S×150°.75E, h10^{km}*

*BJI **19** 20:35:00.7±0.0, 59°.41S×150°.32E, h10^{km}, mb4.8/6, mB5.4/4, Ms5.1/4, Ms7 4.8/5*

*GCMT **19** 20:35:03.2±0.1, 59°.95S±0°.01×150°.10E±0°.02, h12^{km}, MW5.3/137, Moment Tensor Solution. s97,c154; s137,c249; Duration: 1^s.1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.06±.02; $M_{\theta\theta}$0.73±.01; $M_{\phi\phi}$-0.66±.02; $M_{r\theta}$-0.37±.04; $M_{\theta\phi}$-0.99±.01; $M_{\phi r}$0.09±.04; Best double couple: $M_0$1.26100×10^{17} NP1:ϕ_s252.00000°, δ83.00000°, λ166.00000°. NP2:ϕ_s343.00000°, δ76.00000°, λ7.00000°. Principal axes: T 1.3360, Plg15.0000°, Azm207.0000°; N -0.1510, Plg74.0000°, Azm47.0000°; P -1.1850, Plg5.0000°, Azm298.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 20:34:60.0±0.4**, 60°.03S**±0°.07×**150°.66E**±0°.09**, h10^{km}, n121, σ1^s.82**/80**, mb4.8**/18**, MS4.7**/40**, 15C-3D, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**7.14**	**43**	Pn	**Pn**	**20 36 43.6**	**-0.6**
VNDA	**Vanda**	**17.96**	**172**	P	**Pn**	**20 39 06.7**	**-2.7**
	6.5nm,0.7s,baz=343,slow=12,SNR=15						
VNDA				LR	LR	20 45 32.6	
	comp=Z,6μm,18.7s,baz=352,slow=35						
VNDA	**Vanda**	**17.96**	**172**		**Pn**	**20 39 06.8**	**-2.6**
MLZ	**Mavora Lakes**	**18.01**	**43**	Pn	**Pn**	**20 39 08.2**	**-1.9**
MLZ				IAmb	IAmb	20 39 15.5	
	comp=Z,88nm,1.4s						
RPZ	**Rata Peaks**	**20.48**	**46**	LR	LR	20 46 04.3	
	comp=Z,4μm,19.9s,baz=194,slow=33						
TOO	**Toolangi**	**22.72**	**349**	P	**P**	**20 40 04.9**	**+3.1**
TOO				IAmb	IAmb	20 40 12.6	
	comp=Z,100nm,1.8s						
URZ	**Urewera**	**27.48**	**49**	LR	LR	20 51 06.1	
	comp=Z,3μm,18.8s,baz=292,slow=35						
STKA	**Stephens Creek**	**28.80**	**344**	P	**P**	**20 40 58.4**	**+0.5**
	comp=Z,4.4nm,0.9s,baz=157,slow=12,SNR=5.3						
STKA				LR	LR	20 50 29.4	
	comp=Z,1μm,19.7s,baz=173,slow=32						
	comp=Z,4.4nm,0.9s						
QSPA	**South Pole Qui**	**30.06**	**180**	LR	LR	20 52 58.4	
	comp=Z,2μm,21.2s,baz=16,slow=36						
QSPA	**South Pole Qui**	**30.06**	**180**	P	**P**	**20 41 08.5**	**-0.6**
QSPA				IAmb	IAmb	20 41 54.8	
	comp=Z,27nm,1.1s						
FORT	**Forrest**	**32.94**	**323**	P	**P**	**20 41 31.9**	**-2.4**
FORT				IAmb	IAmb	20 41 48.8	
	comp=Z,32nm,0.9s						
H01W1	**Cape Leeuwin H**	**34.49**	**300**	T	T	21 18 08.9	
	baz=146,slow=74,SNR=135						
H01W2	**Cape Leeuwin H**	**34.49**	**300**	T	T	21 18 09.3	
	baz=146,slow=74,SNR=60						
H01W3	**Cape Leeuwin H**	**34.51**	**300**	T	T	21 18 10.1	
	baz=146,slow=74,SNR=100						
NWAO	**Narrogin (SRO)**	**34.89**	**306**	LR	LR	20 52 29.8	
	comp=Z,2μm,21.3s,baz=139,slow=30						
MAW	**Mawson**	**36.27**	**220**	LR	LR	20 56 53.0	
	comp=Z,1μm,18.1s,baz=114,slow=36						
RAO	**Raoul Island**	**37.36**	**49**	LR	LR	20 56 51.8	
	comp=Z,2μm,18.1s,baz=173,slow=35						
ASAR	**Alice Springs**	**38.19**	**335**	P	**P**	**20 42 18.7**	**-0.9**
	comp=Z,7.3nm,0.9s,baz=167,slow=9.0,SNR=43						
ASAR				LR	LR	20 55 38.8	
	comp=Z,1μm,21.1s,baz=168,slow=33						
	comp=Z,7.3nm,0.9s						
ASAR	**Alice Springs**	**38.19**	**335**	P	**P**	**20 42 17.8**	**-1.8**
AS31	**Alice Springs**	**38.19**	**335**	P	**P**	**20 42 19.1**	**-0.5**
DZM	**Mont Dzumac**	**39.53**	**23**	*e*S	**S**	**20 48 34.1**	**+0.8**
	comp=Z,328nm,25.9s						
DZM				*e*LR	LR	20 53 19.0	
	comp=Z,6μm,25.9s						
DZM	**Mont Dzumac**	**39.53**	**23**	LR	LR	20 56 32.9	
	comp=Z,2μm,18.0s,baz=205,slow=33						
CTA	**Charters Tower**	**40.02**	**354**	LR	LR	20 57 27.7	
	comp=Z,2μm,18.2s,baz=181,slow=34						
WB2	**Warramunga Arr**	**41.71**	**337**	P	**P**	**20 42 47.8**	**-1.1**
WB2				IAmb	IAmb	20 43 00.9	
	comp=Z,30nm,1.3s						
WRA	**Warramunga Arr**	**41.71**	**337**	P	**P**	**20 42 47.4**	**-1.4**
	comp=Z,7.7nm,0.9s,baz=165,slow=7.1,SNR=33						
WRA				LR	LR	20 58 03.9	
	comp=Z,831nm,21.2s,baz=160,slow=33						
	comp=Z,7.7nm,0.9s						
WRA	**Warramunga Arr**	**41.71**	**337**	P	**P**	**20 42 48.0**	**-0.8**
WRAB	**Tennant Creek**	**41.72**	**337**	P	**P**	**20 42 48.0**	**-0.9**
WRAB				IAmb	IAmb	20 43 00.9	
	comp=Z,35nm,1.4s						
WB0	**Warramunga Arr**	**41.87**	**337**	P	**P**	**20 42 48.5**	**-1.6**
WB0				IAmb	IAmb	20 42 59.5	
	comp=Z,28nm,1.4s						
BELA	**Belgrano 2**	**42.30**	**178**	P	**P**	**20 42 52.6**	**-0.5**
BELA				IAmb	IAmb	20 43 08.4	
	comp=Z,29nm,1.6s						
PSA00	**Pilbara Seismi**	**44.15**	**317**	P	**P**	**20 43 07.6**	**-1.0**
PSA00				IAmb	IAmb	20 43 17.6	
	comp=Z,41nm,1.1s						
PSA00	**Pilbara Seismi**	**44.15**	**317**	P	**P**	**20 43 07.4**	**-1.2**
PSA00				IAmb	IAmb	20 43 17.6	
	comp=Z,18nm,1.2s						
MBWA	**Marble Bar**	**44.58**	**317**	P	**P**	**20 43 10.4**	**-1.5**
MBWA				IAmb	IAmb	20 43 23.5	
	comp=Z,53nm,1.6s						
FITZ	**Fitzroy Crossi**	**45.59**	**326**	P	**P**	**20 43 19.9**	**-0.1**
TROLL	**Troll, Antarti**	**46.41**	**193**	P	**P**	**20 43 26.6**	**+0.5**
MSVF	**Nonsavu**	**46.63**	**37**	LR	LR	20 59 55.5	
	comp=Z,2μm,18.1s,baz=182,slow=32						
KNRA	**Kununurra**	**47.08**	**331**	P	**P**	**20 43 30.3**	**-1.5**
SNAA	**Sanae**	**47.29**	**191**	P	**P**	**20 43 35.0**	**+2.0**
SNAA	**Sanae**	**47.29**	**191**	LR	LR	21 03 43.7	
	comp=Z,2μm,18.9s,baz=145,slow=36						
SNAA	**Sanae**	**47.29**	**191**	P	**P**	**20 43 33.6**	**+0.7**
VNA3	**Neumayer Olymp**	**48.29**	**188**	P	**P**	**20 43 42.4**	**+1.8**
VNA2	**Neumayer--Watz**	**48.42**	**189**	P	**P**	**20 43 40.0**	**-1.6**
	baz=140,slow=5.0						

MTN	Manton Dam	49.27	335	P	P	20 43 47.2	-1.4
PMG	Port Moresby	50.59	356	LR	LR	21 01 41.6	
	comp=Z,1µm,20.7s,baz=183,slow=32						
RAR	Rarotonga	52.05	64	LR	LR	21 03 50.1	
	comp=Z,524nm,18.1s,baz=220,slow=33						
AFI	Afiamalu	53.63	47	LR	LR	21 04 51.1	
	comp=Z,396nm,21.7s,baz=179,slow=34						
KRVT	Keravat (AS076	55.59	2	LR	LR	21 07 01.4	
	comp=Z,282nm,18.8s,baz=307,slow=35						
FAKI	Fak Fak	58.70	338	P	P	20 44 57.5	-0.1
KAPI	Kappang	59.72	324	LR	LR	21 08 00.5	
	comp=Z,692nm,21.9s,baz=174,slow=33						
PPT2	Papeete2	59.94	72	*e*S	S	20 53 17.9	-0.5
	comp=Z,67nm,26.2s						
PPT2				*e*SS	SS	20 57 15.6	+1.1
	comp=Z,118nm,27.2s						
PPT2				*e*LQ	LQ	21 00 13.2	
	comp=Z,826nm,24.2s						
PPT2				*e*LR	LR	21 02 45.1	
	comp=Z,756nm,27.8s						
PPT2				*e*LR	LR	21 02 45.3	
	comp=Z,591nm,29.0s						
PPT	Papeete	59.96	72	LR	LR	21 05 41.0	
	comp=Z,224nm,20.2s,baz=212,slow=31						
DAV	Davao City (W)	69.78	333	LR	LR	21 15 17.8	
	comp=Z,146nm,19.2s,baz=152,slow=35						
TAOE	Nuku Hiva Isla	72.03	76	*e*LR	LR	21 08 20.4	
	comp=Z,313nm,23.4s						
GUMO	Guam	73.51	354	LR	LR	21 19 31.7	
	comp=Z,171nm,18.1s,baz=180,slow=36						
PLCA	Paso Flores	74.03	149	P	P	20 46 37.2	+1.5
	comp=Z,4.3nm,1.1s,baz=211,slow=4.3,SNR=6.9						
PLCA				LR	LR	21 14 08.0	
	comp=Z,259nm,18.4s,baz=204,slow=32						
	comp=Z,4.3nm,1.1s						
H08S2	Diego Garcia H	77.50	276	T	T	22 11 59.9	
	baz=149,slow=76,SNR=14						
H08S1	Diego Carcia H	77.52	276	T	T	22 12 14.9	
	baz=149,slow=76,SNR=8.6						
H08S3	Diego Garcia H	77.53	276	T	T	22 12 01.4	
	baz=149,slow=76,SNR=20						
H03S1	Juan Fernandez	77.97	140	T	T	22 13 21.4	
	baz=201,slow=74,SNR=15						
H03S2	Juan Fernandez	77.97	140	T	T	22 13 16.2	
	baz=201,slow=74,SNR=17						
H03S3	Juan Fernandez	77.99	140	T	T	22 13 17.0	
	baz=201,slow=74,SNR=16						
SUR	Sutherland	79.12	221	LR	LR	21 17 44.8	
	comp=Z,333nm,21.3s,baz=154,slow=32						
BOSA	Boshof	81.01	227	P	P	20 47 16.2	+1.3
	comp=Z,1.4nm,0.7s,baz=171,slow=7.1,SNR=4.5						
BOSA				LR	LR	21 18 46.5	
	comp=Z,288nm,20.6s,baz=170,slow=32						
	comp=Z,1.4nm,0.7s						
QIZ	Qiongzhong	85.46	322	P	P	20 47 37.5	0.0
QIZ				S	S	20 58 09.4	+0.8
QIZ				sS	ScS	20 58 16.6	-1.9
QIZ				pmax	pmax		
	comp=Z,260nm,8.0s						
QIZ				LR	LR		
	comp=Z,330nm,19.1s						
QIZ				LR	LR		
	comp=Z,280nm,22.3s						
QIZ				LR	LR		
	comp=Z,310nm,29.5s						
PALK	Pallekele	86.45	291	LR	LR	21 20 07.7	
	comp=Z,300nm,19.6s,baz=245,slow=31						
JCJ	Chichijima	87.08	352	LR	LR	21 25 44.6	
	comp=Z,94nm,19.5s,baz=135,slow=35						
JOW	Kunigami	88.48	340	LR	LR	21 24 51.1	
	comp=Z,241nm,21.8s,baz=128,slow=34						
CMAR	Chiang Mai Arr	88.68	312	P	P	20 47 53.2	+0.1
	comp=Z,0.6nm,0.9s,baz=188,slow=4.5,SNR=4.9						
CMAR				LR	LR	21 25 16.2	
	comp=Z,224nm,19.1s,baz=165,slow=34						
	comp=Z,0.6nm,0.9s						
CPUP	Villa Florida	90.94	155	P	P	20 48 05.4	+1.5
	comp=Z,1.0nm,0.8s,baz=140,slow=5.1,SNR=2.9						
	comp=Z,1.0nm,0.8s						
LVC	Limon Verde	91.55	144	LR	LR	21 21 50.7	
	comp=Z,283nm,19.0s,baz=203,slow=31						
TSUM	Tsumeb	92.37	224	LR	LR	21 26 40.5	
	comp=Z,312nm,19.8s,baz=160,slow=34						
JNU	Nakatsue	94.24	343	LR	LR	21 30 02.8	
	comp=Z,151nm,20.4s,baz=160,slow=35						
PZH	PanZhiHua	95.06	317	P	P	20 48 23.0	+0.2
PZH				S	S	20 59 41.4	+4.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,40nm,4.1s						
PZH				LR	LR		
	comp=Z,930nm,22.8s						
PZH				LR	LR		
	comp=Z,410nm,21.6s						
PZH				LR	LR		
	comp=Z,970nm,21.6s						
BRDH	Bariadhala	95.33	307	LR	LR	21 29 37.8	
	comp=Z,216nm,19.4s,baz=21,slow=34						
NJ2	Nanjing	95.42	333	*e*P	P	20 48 24.4	+0.3
NJ2				pP	sP	20 48 27.9	+0.7
NJ2				sP	pwP	20 48 29.0	-1.4
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,140nm,4.3s						
LPAZ	La Paz	97.75	143	LR	LR	21 23 13.9	
	comp=Z,339nm,21.3s,baz=160,slow=30						
NNA	Nana	98.82	133	LR	LR	21 24 10.5	
	comp=Z,217nm,18.3s,baz=194,slow=30						
KSRS	Korea Array	98.93	342	LR	LR	21 30 42.3	
	comp=Z,122nm,21.3s,baz=150,slow=34						
WMQ	Urumqi	115.56	314	*e*PKP	PKPdf	20 53 41.6	+0.3
WMQ				LR	LR		
	comp=Z,250nm,17.5s						
WMQ				LR	LR		
	comp=Z,200nm,21.9s						
TORD	Torodi Ar. Bea	127.92	220	PKP	PKPdf	20 54 06.3	+0.5
	comp=Z,0.5nm,0.7s,baz=184,slow=1.8,SNR=3.5						
ILAR	Eielson Array	132.99	31	PKP	PKiKP	20 54 16.8	+1.8
	comp=Z,0.4nm,1.0s,baz=204,slow=2.0,SNR=2.4						
KIV	Kislovodsk	135.24	283	⇑P	PKiKP	20 54 34.0	+14
YKA	Yellowknife Ar	141.74	48	PKP	PKPdf	20 54 29.4	-0.6
	comp=Z,0.3nm,0.7s,baz=237,slow=2.4,SNR=4.2						
A36M	Sachs Harbour	143.69	32	PKPdf	PKPbc	20 54 32.0	+1.2
GHRR		144.33	273	⇓P	PKPbc	20 54 34.7	+1.2
VRI	Vrincioaia	144.54	272	⇑P	PKPdf	20 54 35.9	+0.4
PLOR	Plostina	144.57	272	⇑P	PKPdf	20 54 36.0	+0.4
MLR	Muntele Rosu	144.67	271	⇑P	PKPdf	20 54 37.5	+1.5
MLR	Muntele Rosu	144.67	271	PKPdf	PKPbc	20 54 36.0	+1.1
COVR	Voineasa-Covas	144.79	272	⇑P	PKPab	20 54 35.4	+0.4
TESR	Tescani	145.03	273	⇑P	PKPbc	20 54 33.0	-2.8
VOIR		145.08	270	⇑P	PKPdf	20 54 37.9	+1.4
KEST	Kesra	145.25	243	PKPbc	PKPdf	20 54 38.6	+1.4
	comp=Z,7.1nm,0.9s,baz=237,slow=5.1,SNR=8.3						
KEST	Kesra	145.25	243		PKPbc	20 54 35.8	-1.1
SORM	Soroca	145.27	276	⇓P	PKPbc	20 54 25.1	-11
DOPR	Dopca	145.28	271	⇑P	PKPbc	20 54 35.5	-1.2
BIZ	Bicaz	145.59	273	⇑P	PKPdf	20 54 31.2	-6.1
LOT	Lotru	145.73	269	⇑P	PKPdf	20 54 37.7	-0.1
MDVR	Moldovita	146.29	266	⇑P	PKPbc	20 54 40.9	+1.0
BURAR	Bucovina Array	146.49	273	⇑P	PKPdf	20 54 27.8	-11
AKASG	Malin Array Be	146.51	281	PKPbc	PKPbc	20 54 41.1	+0.9
	comp=Z,4.0nm,1.0s,baz=100,slow=1.9,SNR=13						
AKBB	Malin Array Si	146.51	281	PKPdf	PKPbc	20 54 40.4	+0.2
SURR	Surduc	146.77	268	⇑P	PKPdf	20 54 36.7	-2.6
BZS	Buzias	146.93	267	⇑P	PKPdf	20 54 37.3	-2.3
SIRR	Siria	147.36	268	⇓P	PKPdf	20 54 34.5	-5.8
KLMR	Klimovskoe	147.43	302	*e*	PKPbc	20 54 43.1	+0.6
KLMR				AMP		20 55 03.9	
	comp=Z,69nm,1.8s						
MORH	Mrgy, Hungar	148.84	265	⇑P	PKPdf	20 54 34.9	-7.8
VYHS	Vyhne	150.28	269	*e*PKP	PKiKP	20 54 51.9	+1.0
VYHS				*e*		20 54 57.3	
VYHS				*e*		21 12 30.1	
RONA	Rosalia, Austr	151.03	265	*e*PKP	PKPbc	20 54 51.1	-0.9
	comp=Z,5.4nm,1.0s						
ARSA	Arzberg	151.11	264	*e*PKiKP	PKPbc	20 54 52.6	+0.4
	comp=Z,3.4nm,1.0s						
MORC	Moravsky Berou	151.76	270	*e*PKP	PKPab	20 54 59.9	-2.8
KRUC	Moravsky	151.87	268	*e*PKP	PKPab	20 54 59.9	-3.2
VRAC	Vranov	151.93	268	*e*PKP	PKPab	20 54 59.9	-3.5
KBA	Koelnbreinsper	152.07	262	*e*pPKP	pPKPdf	20 54 52.3	+1.9
	comp=Z,1.2nm,0.8s						
ABTA	Abfaltersbach	152.26	260	*e*pPKP	pPKPdf	20 54 52.7	+2.2
	comp=Z,4.5nm,1.4s						
WTTA	Wattenberg	153.05	260	PKiKP	PKPbc	20 54 56.9	+0.1
	comp=Z,3.4nm,1.0s						
WATA	Walderalm	153.13	260	*e*PKiKP	PKPbc	20 54 57.7	+0.8
	comp=Z,2.9nm,1.1s						
SQTA	Sankt Quirin	153.23	260	*e*PKiKP	PKiKP	20 54 58.5	+1.3
	comp=Z,2.4nm,0.9s						
MOTA	Moosalm	153.37	260	*e*PKiKP	PKiKP	20 54 58.8	+1.2
	comp=Z,3.7nm,1.0s						
RETA	Reutte	153.63	260	*e*PKiKP	PKiKP	20 54 58.9	+0.9
	comp=Z,5.7nm,1.7s						
ESDC	Sonseca Array	154.16	229	PKPbc	PKiKP	20 55 00.5	+1.2
	comp=Z,0.8nm,1.0s,baz=166,slow=0.7,SNR=3.6						
CLL	Collm	154.98	269	*e*(PKPdf)	PKPdf	20 54 55.0	+3.3
CLL				*e*PKPab	PKPab	20 55 18.0	+1.8

*OSPL **19** 20:54:57.4±0.5, 18.°04N×68.°42W, h119^{km}±11^{km}, ML2.2*
*NEIC **19** 20:54:57.9±1.7, 18.°0N±0.°1×68.°28W±0.°07, h103^{km}±7^{km}, ML2.5/26, Md3.4/28(RSPR), Error ellipse: s-maj=19.9km s-min=7.3km az=200.0*
*RSPR **19** 20:55:00.8, 18.°10N×68.°21W, h92^{km}±1^{km}, MD3.4/6*
ISC 19 20:54:58.4±1.8**, 18.°1N**±0.°1×**68.°27W**±0.°06**, h102**^{km}±11^{km}**, n48, σ0^{s}94**/56**, 8C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCDR	Punta Cana, DR	0.46	347	⇑*e*P	Pn	20 55 14.3	+0.1
PCDR	Punta Cana, DR	0.46	347	*e*S	Sn	20 55 26.0	+0.1
PCDR	Punta Cana, DR	0.46	347		Pn	20 55 13.9	-0.2
PCDR					Sn	20 55 26.1	+0.3
PCDR				IAML		20 55 30.5	
	comp=N,159nm,1.9s						
PCDR				IAML		20 55 33.6	
	comp=E,75nm,2.5s						
PCDR	Punta Cana, DR	0.46	347	*i* P	Pn	20 55 14.1	-0.1
PCDR				*e*S	Sn	20 55 26.4	+0.5
PCDR				IAML		20 55 28.6	
	comp=Z,50nm,0.9s						
IDE	Isla Desecheo	0.82	67	⇑*e*P	Pn	20 55 17.3	+0.2
IDE	Isla Desecheo	0.82	67	*e*S	Sn	20 55 30.7	-0.6
IDE	Isla Desecheo	0.82	67		Pn	20 55 17.3	+0.2
IDE					Sn	20 55 30.7	-0.6
CRPR	Cabo Rojo, PR	1.10	93	⇓*e*P	Pn	20 55 20.9	+0.8
CRPR	Cabo Rojo, PR	1.10	93	*e*S	Sn	20 55 36.4	-0.2
CRPR	Cabo Rojo, PR	1.10	93		Pn	20 55 20.3	+0.2
CRPR				IAML		20 55 30.7	
	comp=N,46nm,2.8s						
CRPR					Sn	20 55 33.1	-3.4
CRPR				IAML		20 55 49.6	
	comp=E,39nm,2.3s						
CRPR	Cabo Rojo, PR	1.10	93	*i* P	Pn	20 55 20.9	+0.8
CRPR				IAML		20 55 39.6	
	comp=Z,17nm,0.6s						
LSP	Las Mesas	1.13	84	⇓*e*P	Pn	20 55 21.4	+0.9
LSP	Las Mesas	1.13	84	*e*S	Sn	20 55 36.9	-0.2
LSP	Las Mesas	1.13	84		Pn	20 55 21.4	+0.9
LSP					Sn	20 55 36.9	-0.2
MLPR	Magueyes Islan	1.17	94	⇑*e*P	Pn	20 55 23.1	+2.3
MLPR	Magueyes Islan	1.17	94	*e*S	Sn	20 55 37.8	0.0
MLPR	Magueyes Islan	1.17	94		Pn	20 55 21.3	+0.4
MLPR	Magueyes Islan	1.17	94		Sn	20 55 37.8	0.0
AGPR	Aguadilla, PR	1.17	70	⇑*e*P	Pn	20 55 21.6	+0.7
AGPR	Aguadilla, PR	1.17	70	*e*S	Sn	20 55 37.8	-0.1
AGPR	Aguadilla, PR	1.17	70		Pn	20 55 20.5	-0.4
AGPR					Sn	20 55 37.6	-0.3
AGPR				IAML		20 55 44.8	
	comp=N,81nm,2.7s						
AGPR	Aguadilla, PR	1.17	70	*i* P	Pn	20 55 21.6	+0.7
AGPR				IAML		20 55 38.8	
	comp=Z,27nm,0.8s						
AOPR	Arecibo Observ	1.47	79	⇓*i*P	Pn	20 55 25.0	+0.6
AOPR	Arecibo Observ	1.47	79	*e*S	Sn	20 55 44.0	-0.1
AOPR	Arecibo Observ	1.47	79		Sn	20 55 44.0	-0.1
AOPR	Arecibo Observ	1.47	79		Pn	20 55 24.6	+0.1
UUPR	Utuado, UPR, P	1.48	83	⇑*e*P	Pn	20 55 26.1	+1.5
UUPR	Utuado, UPR, P	1.48	83	*e*S	Sn	20 55 44.5	0.0
UUPR	Utuado, UPR, P	1.48	83		Pn	20 55 25.8	+1.2
UUPR	Utuado, UPR, P	1.48	83		Sn	20 55 44.5	0.0
OBIP	Obispado Ponce	1.58	91	⇑*e*P	Pn	20 55 26.8	+1.0
OBIP	Obispado Ponce	1.58	91	*e*S	Sn	20 55 45.4	-1.2
OBIP	Obispado Ponce	1.58	91		Pn	20 55 26.1	+0.3
OBIP					Sn	20 55 44.6	-2.0
CELP	Cerrillos	1.61	89	⇓*e*P	Pn	20 55 26.8	+0.7
CELP	Cerrillos	1.61	89	*e*S	Sn	20 55 46.7	-0.5
CELP	Cerrillos	1.61	89		Pn	20 55 26.2	+0.1
CELP					Sn	20 55 46.1	-1.1
GCPR	Guaynabo City	2.09	83	Pn	Pn	20 55 30.0	-2.3
GCPR				IAML		20 55 52.9	
	comp=E,19nm,3.3s						
GCPR				IAML		20 56 55.3	
	comp=N,17nm,3.5s						
HUMP	Col San Antoni	2.30	88	⇑*e*P	Pn	20 55 36.3	+1.3
HUMP	Col San Antoni	2.30	88	*e*S	Sn	20 56 03.1	0.0
HUMP	Col San Antoni	2.30	88		Pn	20 55 34.3	-0.7
HUMP				IAML		20 56 04.1	
	comp=E,19nm,0.3s						
HUMP				IAML		20 56 34.5	
	comp=N,14nm,2.9s						
CBYP	Canovanas	2.30	84	⇓*e*P	Pn	20 55 35.4	+0.3
CBYP	Canovanas	2.30	84	*e*S	Sn	20 56 02.6	-0.6
CBYP	Canovanas	2.30	84		Pn	20 55 34.8	-0.3
CBYP				IAML		20 56 06.8	
	comp=E,32nm,0.2s						
MTP	Monte Pirata	2.58	89	⇑*e*P	Pn	20 55 40.1	+1.4
MTP	Monte Pirata	2.58	89	*e*S	Sn	20 56 10.0	+0.3
MTP	Monte Pirata	2.58	89		Pn	20 55 39.4	+0.7
MTP				IAML		20 56 57.3	
	comp=E,17nm,4.6s						
MTP				IAML		20 57 11.6	
	comp=N,21nm,3.3s						
SDDR	Presa de Saban	3.01	288	Pn	Pn	20 55 44.0	-0.3
SDDR				IAML		20 57 28.6	
	comp=N,16nm,2.7s						
SDDR				IAML		20 57 41.4	
	comp=N,14nm,3.4s						
GRTK	Grand Turk	4.36	322	Pn	Pn	20 56 03.2	+0.7

ROM 19 21:00:19.3±0.0**, 42.°768N**±0.°002×**13.°066E**±0.°004**,**
h11^{km}**, ML1.4**/15**, 14C-4D, Error ellipse: s-maj=0.3km s-min=0.0km az=285.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1218	Civita (PG)	0.10	160	⇓P	Pg	21 00 22.4	+0.3
T1218				S	Sg	21 00 24.7	+0.5
T1218				AML	AML		
	comp=E,652µm,0.2s						
T1218				AML	AML		
	comp=E,647µm,0.2s						
T1218				AML	AML		
	comp=N,1115µm,0.4s						
T1218				AML	AML		
	comp=E,647µm,1.8s						
T1218				AML	AML		
	comp=E,652µm,1.8s						
T1218				AML	AML		
	comp=N,1115µm,1.6s						
T1218				AML	AML		
	comp=N,1115µm,0.2s						
T1217	Poggiodomo (PG	0.11	240	⇑P	Pg	21 00 22.6	+0.4
T1245	Castelsantange	0.13	45	⇑P	Pg	21 00 22.9	+0.4
T1245				S	Sg	21 00 25.3	+0.6
T1245				AML	AML		
	comp=N,1315µm,0.7s						
T1245				AML	AML		
	comp=E,690µm,1.5s						
T1245				AML	AML		
	comp=N,1320µm,0.7s						
T1245				AML	AML		
	comp=N,1375µm,0.7s						
T1245				AML	AML		
	comp=N,1375µm,1.3s						
T1245				AML	AML		
	comp=N,1320µm,1.3s						
T1245				AML	AML		
	comp=E,690µm,0.5s						
T1245				AML	AML		
	comp=E,834µm,0.2s						
T1216	Preci, Frazion	0.13	344	⇑P	Pg	21 00 22.9	+0.5
T1216				S	Sg	21 00 25.4	+0.7
T1216				AML	AML		
	comp=N,343µm,0.9s						
T1216				AML	AML		
	comp=E,334µm,0.1s						
MC2	Monte Cornacci	0.17	32	⇑P	Pg	21 00 23.7	+0.5
MC2				S	Sg	21 00 27.1	+1.1
MMO1	Montemonaco	0.23	56	⇑P	Pg	21 00 24.6	+0.4
MMO1				S	Sg	21 00 28.5	+1.0
SMA1	SAN MARTINO	0.24	125	⇑P	Pg	21 00 25.0	+0.7
SMA1				AML	AML		
	comp=E,104µm,0.9s						
SMA1				AML	AML		
	comp=N,122µm,0.6s						
SMA1				AML	AML		
	comp=N,122µm,1.4s						
T1256	Bolognola (MC)	0.27	26	⇑P	Pg	21 00 25.2	+0.4
T1256				S	Sb	21 00 29.9	-1.0
T1256				AML	AML		
	comp=N,60µm,0.7s						
T1256				AML	AML		
	comp=E,67µm,0.3s						
FDMO	Fiordimonte	0.27	3	⇑P	Pg	21 00 25.2	+0.4
FDMO				S	Sb	21 00 29.6	-1.2
FDMO				AML	AML		
	comp=E,82µm,0.3s						
FDMO				AML	AML		
	comp=N,114µm,0.1s						
RM33	Pellescritta (	0.28	157	P	Pg	21 00 25.4	+0.4
RM33				S	Sg	21 00 30.0	+1.1
T1211	Morro Reatino	0.28	214	⇑P	Pg	21 00 25.4	+0.4
T1211				S	Sb	21 00 30.3	-0.9
T1211				AML	AML		
	comp=E,139µm,1.1s						
T1211				AML	AML		
	comp=N,118µm,0.3s						
T1211				AML	AML		
	comp=E,139µm,0.9s						
T1241	Roccafluvione,	0.28	72	⇑P	Pg	21 00 25.5	+0.4
T1241				S	Sb	21 00 30.3	-0.9
T1241				AML	AML		
	comp=E,201µm,1.3s						
T1241				AML	AML		
	comp=N,200µm,0.3s						
T1241				AML	AML		
	comp=E,201µm,0.7s						
T1241				AML	AML		
	comp=N,200µm,0.3s						
ARRO	Arrone	0.29	230	⇓P	Pg	21 00 25.7	+0.5
ARRO				AML	AML		
	comp=E,61µm,1.4s						
ARRO				AML	AML		
	comp=N,52µm,0.2s						
T1219	Muccia, Frazio	0.29	352	⇑P	Pg	21 00 25.6	+0.4
T1219				S	Sb	21 00 30.3	-1.1
GUMA	Gualdo di Mace	0.35	34	⇑P	Pb	21 00 27.1	-0.6
GUMA				AML	AML		
	comp=E,116µm,1.6s						
GUMA				AML	AML		
	comp=N,127µm,0.5s						
GUMA				AML	AML		
	comp=E,116µm,0.4s						
GUMA				AML	AML		
	comp=N,127µm,1.5s						
MOMA	Monte Martano	0.37	276	P	Pb	21 00 27.5	-0.3
MOMA				AML	AML		
	comp=N,93µm,0.9s						
MOMA				AML	AML		
	comp=E,141µm,0.2s						
MOMA				AML	AML		
	comp=N,93µm,1.1s						
T1222	Castel Sant'An	0.37	183	⇓P	Pg	21 00 27.1	+0.5
T1222				S	Sb	21 00 32.9	-0.7
T1222				AML	AML		
	comp=E,40µm,1.1s						
T1222				AML	AML		
	comp=E,40µm,1.1s						
T1222				AML	AML		
	comp=N,42µm,1.6s						
ASSB	Assisi San Ben	0.41	313	⇓P	Pg	21 00 27.8	+0.5
ASSB				AML	AML		
	comp=E,40µm,1.6s						
ASSB				AML	AML		
	comp=N,40µm,1.4s						
ASSB				AML	AML		
	comp=N,40µm,0.6s						
ASSB				AML	AML		
	comp=E,40µm,0.4s						
TERO	Teramo	0.42	110	⇑P	Pg	21 00 27.8	+0.2
TERO				AML	AML		
	comp=N,66µm,0.9s						
TERO				AML	AML		
	comp=E,56µm,0.1s						
TERO				AML	AML		
	comp=N,66µm,1.1s						
ATCC	AVT- Casa Cast	0.52	323	⇑P	Pb	21 00 30.1	-0.3
EL6	Elcito	0.56	3	S	Sb	21 00 39.8	+0.5

ROM 19 21:00:59.3±0.0**, 42.°767N**±0.°001×**13.°067E**±0.°003**,**
h11^{km}**, ML1.4**/11**, 2C, Error ellipse: s-maj=0.2km s-min=0.1km az=299.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1218	Civita (PG)	0.10	160	P	Pg	21 01 02.5	+0.3
T1218				S	Sg	21 01 04.7	+0.5
T1218				AML	AML		
	comp=E,346µm,0.2s						
T1218				AML	AML		
	comp=N,561µm,0.4s						
T1218				AML	AML		
	comp=E,330µm,0.2s						
T1218				AML	AML		
	comp=N,548µm,0.4s						
T1218				AML	AML		
	comp=E,346µm,1.8s						
T1214	Arquata del Tr	0.10	94	P	Pg	21 01 02.6	+0.4
T1214				S	Sg	21 01 04.8	+0.5
T1214				AML	AML		
	comp=E,428µm,0.2s						
T1214				AML	AML		
	comp=N,390µm,0.1s						
T1217	Poggiodomo (PG	0.11	241	P	Pg	21 01 02.7	+0.4
T1217				S	Sg	21 01 05.1	+0.7
T1245	Castelsantange	0.13	45	P	Pg	21 01 03.0	+0.4
T1245				S	Sg	21 01 05.3	+0.5
T1245				AML	AML		
	comp=N,618µm,0.7s						
T1245				AML	AML		
	comp=N,612µm,0.7s						
T1245				AML	AML		
	comp=N,619µm,0.7s						
T1245				AML	AML		
	comp=E,374µm,0.7s						
T1245				AML	AML		
	comp=N,613µm,0.7s						
T1245				AML	AML		
	comp=E,484µm,0.2s						
T1245				AML	AML		
	comp=E,374µm,1.3s						
T1245				AML	AML		
	comp=N,619µm,1.3s						
T1245				AML	AML		
	comp=N,613µm,1.3s						
T1216	Preci, Frazion	0.13	344	P	Pg	21 01 03.0	+0.5
T1216				S	Sg	21 01 05.4	+0.6
T1216				AML	AML		
	comp=E,117µm,0.1s						
T1216				AML	AML		
	comp=N,137µm,0.2s						
T1216				AML	AML		
	comp=E,117µm,0.1s						
T1216				AML	AML		
	comp=N,138µm,0.2s						
T1216				AML	AML		
	comp=E,117µm,1.9s						
MC2	Monte Cornacci	0.17	32	P	Pg	21 01 03.7	+0.5
MC2				S	Sg	21 01 07.0	+1.0
MMO1	Montemonaco	0.23	55	P	Pg	21 01 04.6	+0.4
MMO1				S	Sg	21 01 08.6	+1.0
SMA1	SAN MARTINO	0.24	124	P	Pg	21 01 05.0	+0.6
SMA1				S	Sg	21 01 09.0	+1.2
SMA1				AML	AML		
	comp=E,54µm,0.3s						
SMA1				AML	AML		
	comp=N,57µm,0.6s						
SMA1				AML	AML		
	comp=E,54µm,1.7s						
T1256	Bolognola (MC)	0.27	26	P	Pg	21 01 05.3	+0.4

T1256				S	Sb	21 01 09.9	-1.1
T1256				AML	AML		
	comp=E,33μm,1.5s						
T1256				AML	AML		
	comp=E,33μm,0.5s						
T1256				AML	AML		
	comp=N,29μm,0.3s						
FDMO	**Fiordimonte**	**0.27**	**3**	⇑P	Pg	21 01 05.3	+0.4
FDMO				AML	AML		
	comp=N,154μm,0.4s						
FDMO				AML	AML		
	comp=E,196μm,0.2s						
RM33	**Pellescritta (**	**0.28**	**157**	P	Pg	21 01 05.5	+0.4
RM33				S	Sb	21 01 10.1	-1.1
RM33				AML	AML		
	comp=N,32μm,0.5s						
RM33				AML	AML		
	comp=E,34μm,1.1s						
T1211	**Morro Reatino**	**0.28**	**214**	P	Pg	21 01 05.5	+0.4
T1211				S	Sb	21 01 10.3	-0.9
T1241	**Roccafluvione,**	**0.28**	**71**	⇑P	Pg	21 01 05.5	+0.4
T1241				AML	AML		
	comp=E,96μm,1.3s						
T1241				AML	AML		
	comp=N,79μm,0.3s						
ARRO	**Arrone**	**0.29**	**230**	P	Pg	21 01 05.7	+0.5
T1219	**Muccia, Frazio**	**0.29**	**351**	P	Pg	21 01 05.7	+0.4
T1219				AML	AML		
	comp=E,308μm,0.1s						
T1219				AML	AML		
	comp=N,516μm,0.2s						
T1219				AML	AML		
	comp=E,344μm,0.1s						
T1219				AML	AML		
	comp=N,494μm,0.2s						
T1219				AML	AML		
	comp=E,308μm,1.9s						
T1219				AML	AML		
	comp=E,344μm,1.9s						
T1219				AML	AML		
	comp=N,494μm,1.8s						
T1219				AML	AML		
	comp=N,516μm,1.8s						
ASSB	**Assisi San Ben**	**0.41**	**313**	P	Pb	21 01 08.6	-0.1
TERO	**Teramo**	**0.42**	**110**	P	Pg	21 01 07.8	+0.2
TERO				AML	AML		
	comp=E,37μm,1.1s						
TERO				AML	AML		
	comp=N,40μm,1.1s						
TERO				AML	AML		
	comp=N,40μm,0.9s						

IDC 19 21:01:01.3±2.4**, 7°.85S×159°.99E, h0^{km}, mb3.5**/4**,**
mbtmp3.5/4**, MS4.2**/7**, Error ellipse: s-maj=65.3km**
s-min=22.4km az=86.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.57**	**181**	Pn	Pn	21 01 29.7	-0.8
	640nm,0.3s,baz=303,slow=10,SNR=4.8						
HNR				Sn	Sg	21 01 53.6	+1.7
	1μm,0.3s,baz=219,slow=18,SNR=11						
H11S2	**WAKE ISLAND Hy**	**27.00**	**14**	T	T	21 35 06.4	
	baz=193,slow=76,SNR=30						
H11S3	**WAKE ISLAND Hy**	**27.00**	**14**	T	T	21 35 04.8	
	baz=193,slow=76,SNR=22						
H11S1	**WAKE ISLAND Hy**	**27.02**	**14**	T	T	21 35 09.2	
	baz=193,slow=76,SNR=31						
WRA	**Warramunga Arr**	**27.59**	**242**	P	P	21 06 51.7	+1.1
	0.5nm,0.7s,baz=67,slow=9.4,SNR=4.7						
	0.5nm,0.7s						
H11N1	**WAKE ISLAND Hy**	**28.22**	**14**	T	T	21 36 27.4	
	baz=192,slow=76,SNR=34						
H11N3	**WAKE ISLAND Hy**	**28.23**	**14**	T	T	21 36 26.9	
	baz=192,slow=76,SNR=27						
H11N2	**WAKE ISLAND Hy**	**28.24**	**14**	T	T	21 36 44.0	
	baz=192,slow=76,SNR=87						
ASAR	**Alice Springs**	**29.54**	**235**	P	P	21 07 06.9	-1.0
	0.2nm,0.7s,baz=62,slow=9.5,SNR=1.8						
	0.2nm,0.7s						
ASAJ	**Asahikawa**	**54.07**	**345**	LR	LR	21 31 43.7	
	comp=Z,215nm,20.6s,baz=171,slow=34						
USRK	**Ussuriysk Ar.**	**57.66**	**336**	LR	LR	21 34 53.2	
	comp=Z,142nm,20.0s,baz=159,slow=35						
PETK	**Petropavlovsk-**	**60.75**	**358**	LR	LR	21 33 03.5	
	comp=Z,343nm,21.9s,baz=165,slow=32						
SHEM	**Shemya Is, Ala**	**61.53**	**10**	LR	LR	21 31 30.0	
	comp=Z,281nm,21.6s,baz=174,slow=30						
KLR	**Kul'dur**	**61.98**	**339**	LR	LR	21 37 17.6	
	comp=Z,199nm,20.2s,baz=170,slow=35						
SEY	**Seymchan**	**70.82**	**356**	LR	LR	21 40 04.4	
	comp=Z,166nm,21.5s,baz=142,slow=33						
SONM	**Songino Array**	**72.79**	**325**	P	P	21 12 32.7	+0.8
	0.4nm,0.7s,baz=105,slow=4.4,SNR=3.1						
	0.4nm,0.7s						
YAK	**Yakutsk**	**73.53**	**346**	LR	LR	21 41 37.2	
	comp=Z,141nm,21.8s,baz=112,slow=33						
MKAR	**Makanchi Array**	**87.34**	**318**	P	P	21 13 49.8	-0.6
	0.4nm,0.6s,baz=95,slow=6.0,SNR=5.3						
	0.4nm,0.6s						

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*IDC **19** 21:49:53.6±2.2, 43°.40N×105°.36W, h0^{km}, mbtmp3.3/3,*
ML3.3/3, Error ellipse: s-maj=46.2km s-min=9.4km
az=153.0
*NEIC **19** 21:49:53.6±0.7, 43°.87N±0°.05×105°.45W±0°.07, h0^{km}±2^{km},*
ML3.1/65, Error ellipse: s-maj=9.4km s-min=7.9km
az=157.0
ISC 19 21:49:54.3±1.1**, 43°.83N**±0°.06×**105°.42W**±0°.06**, h0^{km}, n44,**
σ1^s.28/44**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.04**	**74**		**Pb**	**21 50 14.2**	**-1.2**
K22A	**Casper**	**1.43**	**215**		**Pn**	**21 50 19.6**	**-2.1**
K22A				IAML		21 50 43.4	
	comp=E,200nm,0.7s						
K22A				IAML		21 50 44.2	
	comp=N,192nm,0.6s						
RWWY	**Rawlins**	**2.52**	**212**	Pn	**Pn**	**21 50 36.0**	**-0.7**
PHWY	**Pilot Hill**	**2.53**	**181**		**Pn**	**21 50 36.3**	**-0.7**
PHWY				IAML		21 51 12.2	
	comp=N,76nm,0.5s						
LAO	**LASA Array**	**2.91**	**349**		**Pn**	**21 50 40.4**	**-1.6**
N23A	**Red Feather La**	**2.96**	**188**		**Pn**	**21 50 42.5**	**-0.3**
N23A				IAML		21 51 25.6	
	comp=E,65nm,0.5s						
RLMT	**Red Lodge**	**3.04**	**296**		**Pn**	**21 50 42.5**	**-1.3**
BW06	**Boulder Array**	**3.20**	**252**		**Pn**	**21 50 45.2**	**-1.0**
BW06				IAML		21 51 36.7	
	comp=E,38nm,0.7s						
PD31	**Pinedale Array**	**3.20**	**252**		**Pn**	**21 50 44.8**	**-1.3**
PDAR	**Pinedale Array**	**3.20**	**252**	Pn	**Pn**	**21 50 47.4**	**+1.3**
	comp=E,3.3nm,0.3s,baz=76,slow=15,SNR=42						
PDAR				Lg	Lg	21 51 31.6	
	comp=E,8.3nm,0.3s,baz=79,slow=34,SNR=14						
	comp=E,4.6nm,0.4s						
PDAR	**Pinedale Array**	**3.20**	**252**		**Pn**	**21 50 45.5**	**-0.7**
YMP	**Mirror Lake Pl**	**3.52**	**287**		**Pn**	**21 50 50.1**	**-0.4**
YMP				IAML		21 52 00.6	
	comp=E,42nm,0.8s						
H17A	**Grant Village**	**3.75**	**280**		**Pn**	**21 50 52.7**	**-1.0**
H17A				IAML		21 52 06.2	
	comp=N,20nm,0.7s						
FLWY	**Flagg Ranch**	**3.82**	**276**		**Pn**	**21 50 53.3**	**-1.2**
FLWY				IAML		21 52 11.4	
	comp=N,30nm,1.2s						
FLWY				IAML		21 52 14.2	
	comp=N,25nm,2.1s						
OGNE	**Ogallala**	**3.83**	**138**		**Pn**	**21 50 53.7**	**-0.9**
MOOW	**Moose Ponds**	**3.85**	**271**		**Pn**	**21 50 53.6**	**-1.5**
SNOW	**Snow King Moun**	**3.89**	**266**		**Pn**	**21 50 54.9**	**-0.7**
SNOW				IAML		21 52 15.7	
	comp=N,26nm,1.1s						
SNOW				IAML		21 52 21.0	
	comp=N,34nm,2.8s						
REDW	**Red Top Meadow**	**3.97**	**265**	Pn	**Pn**	**21 50 56.3**	**-0.4**
REDW				IAML		21 52 07.3	
	comp=N,28nm,0.8s						
IMW	**Indian Meadow**	**3.99**	**273**		**Pn**	**21 50 56.0**	**-1.0**
IMW				IAML		21 51 24.4	
	comp=N,27nm,0.6s						
IMW				IAML		21 52 15.0	
	comp=N,19nm,0.7s						
TPAW	**Teton Pass**	**4.03**	**267**	Pn	**Pn**	**21 50 56.5**	**-1.0**
TPAW				IAML		21 52 20.2	
	comp=N,15nm,0.6s						
TPAW				IAML		21 52 30.4	
	comp=N,30nm,0.8s						
ISCO	**Idaho Springs**	**4.03**	**182**		**Pn**	**21 50 57.6**	**0.0**
YMR	**Madison River**	**4.07**	**284**	Pn	**Pn**	**21 50 56.6**	**-1.4**
YMR				IAML		21 52 32.3	
	comp=E,22nm,0.9s						
YMR				IAML		21 52 36.6	
	comp=N,28nm,0.9s						
AHID	**Auburn Hatcher**	**4.28**	**258**	Pn	**Pn**	**21 51 00.6**	**-0.3**
AHID				IAML		21 52 18.1	
	comp=N,25nm,1.1s						
AHID				IAML		21 52 23.6	
	comp=N,20nm,1.1s						
E28A	**Huff**	**4.32**	**49**	Pn	**Pn**	**21 50 59.9**	**-1.4**
RDMU	**Red Mountain**	**4.49**	**225**	Pn	**Pn**	**21 51 03.2**	**-0.5**
RDMU				IAML		21 52 23.0	
	comp=E,19nm,0.8s						
RDMU				IAML		21 52 30.7	
	comp=N,17nm,1.3s						
DGMT	**Dagmar**	**4.71**	**10**	Pn	**Pn**	**21 51 05.2**	**-1.5**
BOZ	**Bozeman (W)**	**4.76**	**294**		**Pn**	**21 51 06.1**	**-1.4**
BOZ				IAML		21 53 26.6	
	comp=N,9.9nm,5.0s						
SMCO	**Snowmass**	**4.80**	**195**	Pn	**Pn**	**21 51 08.6**	**+0.4**
SMCO				IAML		21 52 29.8	
	comp=N,18nm,2.1s						
SMCO				IAML		21 53 03.5	
	comp=N,16nm,3.9s						
HWUT	**Hardware Ranch**	**5.04**	**246**	Pn	**Pn**	**21 51 10.9**	**-0.5**
BSUT	**Blindstream Ca**	**5.16**	**232**	Pn	**Pn**	**21 51 10.9**	**-2.2**
BSUT				IAML		21 52 45.0	
	comp=E,9.8nm,0.8s						
BSUT				IAML		21 52 57.4	
	comp=N,12nm,3.9s						
EGMT	**Eagleton**	**5.17**	**326**	Pn	**Pn**	**21 51 11.6**	**-1.4**
TCUT	**Toone Canyon**	**5.19**	**241**	Pn	**Pn**	**21 51 12.2**	**-1.3**
KSCO	**Kaye Shedlock'**	**5.26**	**156**	Pn	**Pn**	**21 51 13.8**	**-0.5**
SPUT	**South Promonto**	**5.77**	**246**	Pn	**Pn**	**21 51 20.2**	**-1.1**
HVU	**Hansel Valley**	**5.79**	**252**	Pn	**Pn**	**21 51 20.4**	**-1.2**
P17A	**Butcher Ranch,**	**5.90**	**224**	Pn	**Pn**	**21 51 22.2**	**-0.9**
PV07	**Paradox Valley**	**5.92**	**205**		**Pn**	**21 51 22.7**	**-0.7**
PV23	**Carpenter Ridg**	**6.02**	**208**	Pn	**Pn**	**21 51 24.7**	**-0.2**
SRU	**San Rafael Swe**	**6.08**	**221**	Pn	**Pn**	**21 51 24.5**	**-1.1**
PV11	**David Mesa, Pa**	**6.11**	**206**		**Pn**	**21 51 24.9**	**-1.2**
TMUT	**Trail Mountain**	**6.28**	**226**		**Pn**	**21 51 26.5**	**-1.9**
Q16A	**Castle Valley**	**6.54**	**223**		**Pn**	**21 51 32.2**	**+0.2**
ULM	**Lac du Bonnet**	**9.14**	**42**	Pn	**Pn**	**21 52 08.8**	**+1.4**
	comp=N,1.1nm,0.3s,baz=232,slow=14,SNR=6.4						
ULM				Lg	Lg	21 54 42.3	
	comp=N,0.3nm,0.3s,baz=143,slow=20,SNR=1.4						
	comp=N,2.7nm,0.4s						
YKA	**Yellowknife Ar**	**19.45**	**347**	P	**Pn**	**21 54 26.9**	**+3.6**
	comp=N,0.1nm,0.3s,baz=153,slow=12,SNR=3.9						
	comp=N,0.2nm,0.7s						

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*IDC **19** 22:07:48.0±3.3, 43°.45S×74°.35W, h0^{km}, mb3.4/2,*
mbtmp3.4/3, ML3.5/1, MS2.6/1, Error ellipse: s-maj=91.1km
s-min=44.5km az=162.0
*GUC **19** 22:07:51.5±0.6, 43°.28S×74°.51W, h15^{km}±6^{km}, ML3.6*
ISC 19 22:07:48.0±3.2**, 43°.37S**±0°.05×**74°.54W**±0°.09**, h2^{km}**±21^{km}**,**
n14, σ0^s.97/17**, 1C-2D, Southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO07	**Milladeo Hill,**	**0.69**	**69**	⇓*i*P	**Pb**	**22 08 03.4**	**+0.7**
GO07				*e*S	**Sb**	**22 08 12.8**	**+0.1**
GO07				IAML		22 08 14.3	
	comp=E,8μm,0.3s						
LL07	**Hotel Espejo d**	**0.95**	**56**	⇓*i*P	**Pb**	**22 08 07.6**	**+0.5**
LL07				*i* S	**Sb**	**22 08 19.6**	**-0.4**
LL07				IAML		22 08 20.6	
	comp=N,3μm,0.6s						
LL06	**Loncomilla**	**1.33**	**31**	⇑*i*P	**Pn**	**22 08 12.9**	**-0.7**
LL06				*i* S	**Sb**	**22 08 29.5**	**-1.8**
LL06				IAML		22 08 31.9	
	comp=N,2μm,0.4s						
AY01	**Puyuhuapi**	**1.73**	**128**	*e*P	**Pb**	**22 08 21.1**	**+0.7**
AY01				*i* S	**Sg**	**22 08 44.0**	**+0.6**
AY01				IAML		22 08 50.6	
	comp=E,1μm,0.4s						
LL02	**Futaleuf**	**1.98**	**86**	*e*P	**Pb**	**22 08 23.6**	**-1.0**
LL02				*i* S	**Sb**	**22 08 49.0**	**-0.6**
LL05	**Los Muermos**	**2.12**	**22**	*e*P	**Pb**	**22 08 26.9**	**-0.1**
LL05				*i* S	**Sn**	**22 08 51.4**	**+0.2**
LL05				IAML		22 09 01.5	
	comp=N,693nm,0.8s						
COYC	**Coyhaique**	**2.82**	**142**	*e*P	**Pb**	**22 08 37.8**	**-1.2**
COYC				IAML		22 09 24.9	
	comp=E,107nm,0.5s						
PLCA	**Paso Flores**	**3.97**	**50**	Pn	**Pn**	**22 08 50.9**	**+1.0**
	comp=E,0.7nm,0.3s,baz=230,slow=16,SNR=31						
PLCA				Lg	Lg	22 09 48.3	
	comp=E,1.6nm,0.3s,baz=160,slow=18,SNR=3.4						
PLCA				LR	LR	22 10 19.3	
	comp=E,81nm,20.4s,baz=312,slow=39						
	comp=E,2.8nm,0.3s						
H03S1	**Juan Fernandez**	**10.10**	**339**	T	T	22 20 23.3	
	baz=164,slow=74						
H03S2	**Juan Fernandez**	**10.11**	**339**	T	T	22 20 20.9	
	baz=164,slow=74						
H03S3	**Juan Fernandez**	**10.12**	**339**	T	T	22 20 20.8	
	baz=164,slow=74						
CPUP	**Villa Florida**	**22.03**	**45**	P	**P**	**22 12 42.7**	**-1.0**
	comp=E,2.0nm,0.6s,baz=232,slow=13,SNR=6.5						
	comp=E,2.0nm,0.6s						
TXAR	**Lajitas Array**	**77.13**	**334**	P	**P**	**22 19 44.2**	**+1.3**
	comp=E,0.1nm,0.4s,baz=148,slow=8.6,SNR=2.4						
	comp=E,0.1nm,0.4s						
MKAR	**Makanchi Array**	**163.30**	**70**	PKPab	**PKPab**	**22 28 41.9**	**-0.5**
	comp=E,0.4nm,0.9s,baz=299,slow=3.0,SNR=2.7						

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*NOU **19** 22:17:20.5, 40°.51S×176°.93E, h34^{km}, MLv3.2/5, North*
Island, New Zealand
*WEL **19** 22:17:22.5±0.7, 40˚S±3˚×17˚7E±˚, h15^{km}±5^{km}, M3.3/12,*
ML3.6/12, MLv3.3/12, Error ellipse: s-maj=0.0km
s-min=0.0km az=121.4, confirmed
ISC 19 22:17:20.5±1.2**, 40°.43S**±0°.03×**176°.80E**±0°.04**, h16^{km}**±7^{km}**,**
n72, σ0^s.88/86**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRHZ	**Porangahau**	**0.21**	**324**	P	**Pg**	**22 17 25.6**	**+0.2**
PRHZ				S	**Sg**	**22 17 28.5**	**-0.1**
PXZ	**Pawanui**	**0.41**	**7**	P	**Pb**	**22 17 30.0**	**+0.7**
PXZ				S	**Sb**	**22 17 36.5**	**+1.3**
WPHZ	**Waipukurau**	**0.46**	**323**	P	**Pb**	**22 17 30.6**	**+0.4**
BFZ	**Birch Farm**	**0.49**	**239**	P	**Pn**	**22 17 32.8**	**0.0**
BFZ	**Birch Farm**	**0.49**	**239**	P	**Pn**	**22 17 32.5**	**-0.3**
BFZ				S	**Sn**	**22 17 41.3**	**+0.3**
DVHZ	**Dannevirke**	**0.50**	**285**	P	**Pg**	**22 17 30.9**	**+0.4**
DVHZ				S	**Sg**	**22 17 37.7**	**+0.5**
PRWZ	**Pori Road**	**0.64**	**259**	P	**Pn**	**22 17 34.6**	**-0.4**
PRWZ				S	**Sn**	**22 17 45.3**	**+0.5**
KAHZ	**Kahuranaki**	**0.64**	**6**	P	**Pb**	**22 17 34.3**	**+1.0**
KAHZ				S	**Sn**	**22 17 44.6**	**-0.3**
CPWZ	**Castlepoint**	**0.66**	**223**	P	**Pn**	**22 17 36.7**	**+1.6**
CPWZ				S	**Sn**	**22 17 48.6**	**+3.5**
PNHZ	**Pukenui**	**0.69**	**318**	P	**Pg**	**22 17 33.8**	**-0.3**
PNHZ				S	**Sg**	**22 17 42.8**	**-0.4**
TSZ	**Takapari Road**	**0.74**	**300**	P	**Pb**	**22 17 34.6**	**-0.4**
TSZ				S	**Sb**	**22 17 44.4**	**-0.5**
TIWZ	**Tintock**	**0.77**	**243**	P	**Pn**	**22 17 36.7**	**-0.1**
TIWZ				S	**Sn**	**22 17 48.8**	**+0.6**
POWZ	**Post Office Ro**	**0.79**	**273**	P	**Pg**	**22 17 36.3**	**+0.5**
POWZ				S	**Sn**	**22 17 48.3**	**0.0**
CKHZ	**Cape Kidnapper**	**0.80**	**16**	P	**Pn**	**22 17 37.5**	**+0.3**
MRZ	**Mangatainoka R**	**0.95**	**256**	P	**Pb**	**22 17 38.7**	**0.0**
MRZ				S	**Sg**	**22 17 51.9**	**+0.3**
TMWZ	**Te Maipa**	**0.96**	**225**	P	**Pb**	**22 17 39.2**	**+0.3**
MCHZ	**McNeill Hill**	**0.99**	**356**	P	**Pn**	**22 17 40.0**	**+0.2**
HOWZ	**Holdsworth Sta**	**1.08**	**244**	P	**Pb**	**22 17 40.5**	**-0.3**
HOWZ				S	**Sb**	**22 17 54.9**	**+0.2**
BHHZ	**Black Hill Sta**	**1.10**	**329**	P	**Pb**	**22 17 40.6**	**-0.6**
BHHZ				S	**Sb**	**22 17 54.5**	**-0.8**
MTW	**Mount Morrison**	**1.22**	**233**	P	**Pn**	**22 17 42.2**	**-0.8**
TRWZ	**Traveller**	**1.28**	**221**	P	**Pn**	**22 17 44.0**	**+0.2**
BKZ	**Black Stump Fm**	**1.29**	**349**	P	**Pn**	**22 17 43.2**	**-0.7**
BKZ	**Black Stump Fm**	**1.29**	**349**	P	**Pn**	**22 17 43.2**	**-0.7**
OGWZ	**Otaki Gorge**	**1.29**	**252**	P	**Pn**	**22 17 43.4**	**-0.6**
MOVZ	**Moawhango**	**1.30**	**322**	P	**Pn**	**22 17 43.9**	**-0.2**
NMHZ	**Naumai**	**1.33**	**0**	P	**Pn**	**22 17 44.6**	**+0.1**
PAWZ	**Paruwai Farm**	**1.41**	**227**	P	**Pn**	**22 17 45.2**	**-0.3**
WNVZ	**Wahianoa**	**1.44**	**320**	P	**Pn**	**22 17 46.4**	**+0.3**
TUVZ	**Tukino**	**1.46**	**323**	P	**Pn**	**22 17 47.1**	**+0.7**
MTVZ	**Mangateitei**	**1.46**	**315**	P	**Pb**	**22 17 47.4**	**0.0**
CAW	**Cannon Point**	**1.48**	**242**	P	**Pn**	**22 17 45.7**	**-0.7**
WHVZ	**Whangaehu Hut**	**1.48**	**321**	P	**Pn**	**22 17 47.4**	**+0.7**
TRVZ	**Turoa**	**1.49**	**319**	P	**Pn**	**22 17 47.6**	**+0.8**
DRZ	**Dome Shelter**	**1.50**	**320**	P	**Pg**	**22 17 49.8**	**+0.4**
KIW	**Kapiti Island**	**1.50**	**253**	P	**Pn**	**22 17 46.3**	**-0.5**
FWVZ	**Far West T-bar**	**1.52**	**320**	P	**Pn**	**22 17 47.8**	**+0.6**
SNVZ	**South Ngauruho**	**1.53**	**324**	P	**Pb**	**22 17 48.6**	**0.0**
OTVZ	**Oturere**	**1.54**	**325**	P	**Pb**	**22 17 48.7**	**0.0**
ETVZ	**East Tongariro**	**1.54**	**327**	P	**Pn**	**22 17 48.4**	**+0.9**
NGZ	**Ngauruhoe**	**1.56**	**323**	P	**Pb**	**22 17 48.7**	**-0.3**
TMVZ	**Te Maari**	**1.56**	**327**	P	**Pn**	**22 17 48.6**	**+0.9**
MTHZ	**Maungataniwha**	**1.58**	**1**	P	**Pn**	**22 17 47.5**	**-0.4**
NNVZ	**North Ngauruho**	**1.59**	**325**	P	**Pb**	**22 17 49.1**	**-0.4**
NTVZ	**North Tongarir**	**1.59**	**327**	P	**Pb**	**22 17 49.1**	**-0.5**
PKVZ	**Pokaka**	**1.60**	**315**	P	**Pb**	**22 17 49.6**	**0.0**
KRVZ	**Karewarewa**	**1.61**	**326**	P	**Pb**	**22 17 49.9**	**+0.1**
WTVZ	**West Tongariro**	**1.61**	**324**	P	**Pb**	**22 17 49.6**	**-0.3**
RITZ	**Rihia Road**	**1.62**	**333**	P	**Pg**	**22 17 51.6**	**-0.1**
PLWZ	**Palliser**	**1.63**	**225**	P	**Pn**	**22 17 47.7**	**-0.9**
TWVZ	**Taurewa**	**1.72**	**322**	P	**Pn**	**22 17 50.9**	**+1.1**
RATZ	**Rangitukua**	**1.75**	**333**	P	**Pb**	**22 17 53.3**	**+1.0**
WEL	**Wellington**	**1.76**	**240**	P	**Pn**	**22 17 49.4**	**-0.9**
SNZO	**South Karori**	**1.81**	**240**	P	**Pn**	**22 17 50.1**	**-0.9**
VRZ	**Vera Road**	**2.04**	**309**	P	**Pb**	**22 17 56.0**	**-1.2**
TCW	**Tory Channel**	**2.06**	**247**	P	**Pn**	**22 17 53.3**	**-1.1**
TKGZ	**Te Karaka**	**2.15**	**23**	P	**Pn**	**22 17 57.3**	**+1.6**
MWZ	**Matawai**	**2.17**	**15**	P	**Pn**	**22 17 54.9**	**-1.1**
URZ	**Urewera**	**2.19**	**7**	P	**Pn**	**22 17 55.6**	**-0.6**
URZ	**Urewera**	**2.19**	**7**	P	**Pn**	**22 17 55.3**	**-0.8**
DUWZ	**D'Urville Isla**	**2.22**	**260**	P	**Pn**	**22 17 56.3**	**-0.4**
NEZ	**North Egmont**	**2.38**	**298**	P	**Pb**	**22 18 03.6**	**+0.5**
KHEZ	**Kahui Hut**	**2.42**	**297**	P	**Pb**	**22 18 05.3**	**+1.5**
HIZ	**Hauiti**	**2.44**	**321**	P	**Pn**	**22 17 59.8**	**+0.2**
HIZ	**Hauiti**	**2.44**	**321**	P	**Pg**	**22 18 06.2**	**-1.0**
BSWZ	**Blackbirch Sta**	**2.55**	**239**	P	**Pn**	**22 17 59.6**	**-1.6**
PUZ	**Puketiti**	**2.62**	**26**	P	**Pb**	**22 18 05.0**	**-2.0**
NNZ	**Nelson**	**2.71**	**252**	P	**Pn**	**22 18 02.6**	**-0.8**
TKNZ	**Takaka Hill**	**2.98**	**257**	P	**Pn**	**22 18 06.4**	**-0.6**
MRNZ	**Matariki Terra**	**3.21**	**251**	P	**Pn**	**22 18 09.5**	**-0.7**
THZ	**Tophouse**	**3.23**	**244**	P	**Pn**	**22 18 08.7**	**-1.8**
DSZ	**Denniston Nort**	**3.99**	**249**	P	**Pn**	**22 18 19.2**	**-1.8**
TMZ	**Timaru**	**5.83**	**225**	P	**Pn**	**22 18 44.6**	**-1.6**

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*HVO **19** 22:32:15.8±0.7, 19°.429N±0°.010×155°.63W±0°.02,*
h4^{km}±5^{km}, ML2.5/17, ML2.3/22(NEIC), Error ellipse:
s-maj=3.5km s-min=1.1km az=77.0
NEIC 19 22:32:16.6±0.5**, 19°.426N**±0°.007×**155°.60W**±0°.02**,**
h2^{km}±11^{km}**, Error ellipse: s-maj=3.4km s-min=0.8km**
az=78.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MWH	**Moku'aweowe**	**0.06**	**5**		Pg	22 32 17.9	-0.2
MWH	**Moku'aweowe**	**0.06**	**5**	IAML		22 32 19.3	
	comp=E,624nm,0.4s						
MWH				IAML		22 32 19.5	
	comp=N,2μm,0.4s						
MLOA	**Mauna Loa Obse**	**0.11**	**13**		Pg	22 32 19.0	+0.1
MLOA				IAML		22 32 21.6	
	comp=E,882nm,0.6s						
ALEP	**Alea Permanent**	**0.12**	**341**		Pg	22 32 19.1	0.0
ALEP					Sg	22 32 21.4	+0.6
AIN	**Ainahou**	**0.15**	**111**		Pg	22 32 19.9	+0.4
AIN	**Ainahou**	**0.15**	**111**	IAML		22 32 24.4	
	comp=N,2μm,0.3s						
AIN				IAML		22 32 24.7	
	comp=E,1μm,0.5s						
KHU	**Kahuku**	**0.18**	**184**		Pg	22 32 20.0	-0.2
KHU	**Kahuku**	**0.18**	**184**	IAML		22 32 24.7	
	comp=E,275nm,0.3s						
KHU				IAML		22 32 25.9	
	comp=N,355nm,0.9s						
HMH	**Humu'ula Sheep**	**0.21**	**33**		Pg	22 32 20.7	-0.1
MLH	**Mauna Loa**	**0.22**	**72**		Pg	22 32 21.2	+0.3
MLH					Sg	22 32 25.0	+1.3
MLH	**Mauna Loa**	**0.22**	**72**	IAML		22 32 25.2	
	comp=E,464nm,0.7s						
MLH				IAML		22 32 25.6	
	comp=N,507nm,0.1s						
WRMHI	**West Rim**	**0.29**	**94**		Pg	22 32 22.1	-0.1
UWE	**Uwekahuna**	**0.29**	**91**	Pg	Pg	22 32 22.3	0.0
UWE				IAML		22 32 32.1	
	comp=N,554nm,0.7s						
SDHHI	**Sand Hill**	**0.29**	**97**	Pg	Pg	22 32 21.9	-0.4
SDHHI				IAML		22 32 28.7	
	comp=E,474nm,1.1s						
SDHHI				IAML		22 32 31.8	
	comp=N,537nm,0.7s						
HLP	**Hilina Pali**	**0.31**	**115**	Pg	Pg	22 32 22.5	0.0
HLP				IAML		22 32 31.8	
	comp=N,426nm,1.3s						
KKO	**Keanakako`i**	**0.32**	**95**	Pg	Pg	22 32 22.9	+0.1
KKO				IAML		22 32 32.0	
	comp=E,316nm,1.2s						
HATHI	**Halema'uma'u T**	**0.32**	**90**	Pg	Pg	22 32 22.6	-0.3
HATHI				IAML		22 32 33.9	
	comp=N,347nm,0.5s						

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*IDC **19** 22:36:34.8±1.5, 30°.08N×47°.81E, h0^{km}, mb3.6/9,*
mbtmp3.6/12, ML3.3/3, Error ellipse: s-maj=32.9km
s-min=19.7km az=174.0
*TEH **19** 22:36:34.1, 30°.00N×47°.98E, h14^{km}±48^{km}, ML3.5*
*OMAN **19** 22:36:42.0±0.4, 29°.47N×48°.21E, h10^{km}, mb5.7/5, Error*
ellipse: s-maj=17.6km s-min=5.1km az=24.0
*DSN **19** 22:36:43.3±1.2, 29°.67N×48°.53E, h15^{km}, ML3.7/6, Error*
ellipse: s-maj=29.6km s-min=8.3km az=16.0
*ISN **19** 22:36:45.2±2.7, 30°.77N×48°.14E, h18^{km}±17^{km}, ML3.6*
ISC 19 22:36:34.2±0.6**, 29°.92N**±0°.05×**47°.99E**±0°.04**, h10^{km}, n83,**
σ2^s.22/101**, mb3.5**/9**, Eastern Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AHWZ	**Ahwaz**	**1.51**	**22**	Pg	**Pg**	**22 37 01.9**	**-1.4**
AHWZ				Sg	**Sg**	**22 37 23.1**	**+0.2**
AMIS	**Naft Sefid**	**2.07**	**32**	Pn	**Pb**	**22 37 10.0**	**-1.9**
ABEH	**Behbahan**	**2.08**	**70**	Pn	**Pb**	**22 37 11.5**	**-0.4**
RAFI	**Al-Rafai**	**2.41**	**319**	*e*Pg	**Pg**	**22 37 19.0**	**-1.4**
	baz=118						
RAFI				*e*Sg	**Sg**	**22 37 48.0**	**-3.7**
AHBU	**AHRAM**	**3.08**	**109**	Pn	**Pb**	**22 37 26.3**	**-2.7**
KLNJ	**Kolanjah**	**3.30**	**70**	Pn	**Pb**	**22 37 29.3**	**-3.8**
IBRJ	**Brojen**	**3.44**	**54**	Pn	**Pn**	**22 37 30.0**	**+1.9**
SHK1	**Shahrekord**	**3.45**	**45**	Pn	**Pn**	**22 37 29.2**	**+0.9**
IKFM	**Kafar-mosalman**	**3.59**	**358**	Pn	**Pn**	**22 37 31.8**	**+1.8**
IDOB	**Doab**	**3.86**	**2**	Pn	**Pn**	**22 37 35.7**	**+1.9**
IKOM	**Komasi**	**4.26**	**355**	Pn	**Pn**	**22 37 41.3**	**+2.0**
KCHF	**Cheshme Sefid,**	**4.41**	**350**	Pn	**Pn**	**22 37 43.0**	**+1.6**
SAKB	**Bahrain**	**4.53**	**150**	P	**Pn**	**22 37 44.6**	**+1.7**
BHD	**Baghdad**	**4.54**	**318**	*e*Pn	**Pn**	**22 37 46.0**	**+3.1**
BHD				AML	AML	22 37 50.2	
	comp=E,149nm,0.3s						
BHD				*e*Sn	**Sn**	**22 38 32.0**	**-3.8**
IGHG	**Ghaleghazi**	**4.55**	**345**	Pn	**Pn**	**22 37 44.9**	**+1.5**
SHMA	**Al-Shehemyia**	**4.83**	**146**	P	**Pn**	**22 37 48.5**	**+1.4**
JHRM	**Jahrom**	**5.09**	**105**	Pn	**Pn**	**22 37 53.5**	**+2.9**
KRSH	**Karshahi**	**5.36**	**40**	Pn	**Pn**	**22 37 56.3**	**+1.9**
IQOM	**Qom**	**5.56**	**27**	Pn	**Pn**	**22 37 58.1**	**+0.9**
ISFB	**Sefidab**	**5.70**	**38**	Pn	**Pn**	**22 38 00.6**	**+1.6**
IRAZ	**Razeghan**	**5.71**	**16**	Pn	**Pn**	**22 38 01.5**	**+2.3**
ANAR	**Anarak**	**5.88**	**55**	Pn	**Pn**	**22 38 02.6**	**+1.0**
KLST	**Kelardasht - M**	**7.06**	**21**	Pn	**Pn**	**22 38 20.0**	**+2.1**
GHWR	**Ruwais**	**7.37**	**143**	P	**Pn**	**22 38 23.8**	**+1.9**
MZWR	**Madinat Zayed**	**8.08**	**138**	P	**Pn**	**22 38 33.6**	**+1.9**
MZWR				S	**Sn**	**22 40 02.1**	**-1.1**
MZWR	**Madinat Zayed**	**8.08**	**138**	Pn	**Pn**	**22 38 35.3**	**+3.6**
UMQ	**Umm Al-Quwin**	**8.09**	**121**	P	**Pn**	**22 38 33.2**	**+1.5**
SHME	**Shamm**	**8.18**	**116**	P	**Pn**	**22 38 33.7**	**+0.8**
SHME				S	**Sn**	**22 40 01.3**	**-4.2**
SHME	**Shamm**	**8.18**	**116**	P	**Pn**	**22 38 35.1**	**+2.2**
SHME				S	**Sn**	**22 40 04.5**	**-1.0**
SHME	**Shamm**	**8.18**	**116**	Pn	**Pn**	**22 38 33.9**	**+0.9**
BANOM	**Banah**	**8.36**	**116**	P	**Pn**	**22 38 36.5**	**+0.9**

BANOM				S	Sn	22 40 06.2	-3.9
BANOM	Banah	8.36	116	P	Pn	22 38 37.0	+1.5
	SNR=16						
BANOM				S	Sn	22 40 09.5	-0.6
BANOM	Banah	8.36	116	Pn	Pn	22 38 37.6	+2.0
ASUD	Al Ashush, Dub	8.40	127	P	Pn	22 38 37.5	+1.5
ASUD	Al Ashush, Dub	8.40	127	Pn	Pn	22 38 39.4	+3.5
NAZ	Nazwa, Dubai	8.40	124	P	Pn	22 38 38.2	+2.1
NAZ	Nazwa, Dubai	8.40	124	P	Pn	22 38 39.0	+2.9
NAZ	Nazwa, Dubai	8.40	124	Pn	Pn	22 38 38.7	+2.6
FAQ	Al Faqa, Dubai	8.51	126	P	Pn	22 38 39.2	+1.8
FAQ	Al Faqa, Dubai	8.51	126	Pn	Pn	22 38 39.3	+1.8
MASF	Masafi	8.55	120	P	Pn	22 38 39.8	+1.7
MASF				S	Sn	22 40 13.7	-1.0
MSFE	Esma-Masafi	8.55	120	P	Pn	22 38 39.1	+0.9
MSFE	Esma-Masafi	8.55	120	Pn	Pn	22 38 39.9	+1.7
MDH	Madha	8.69	120	P	Pn	22 38 41.8	+1.7
MDH	Madha	8.69	120	P	Pn	22 38 42.1	+2.1
MDH				S	Sn	22 40 15.8	-2.4
MDH	Madha	8.69	120	Pn	Pn	22 38 42.3	+2.2
UOSS	Minazif	8.82	122	P	Pn	22 38 42.5	+0.6
UOSS	Minazif	8.82	122	P	Pn	22 38 43.4	+1.5
UOSS				S	Sn	22 40 17.1	-4.3
UOSS	Minazif	8.82	122	Pn	Pn	22 38 44.4	+2.5
HATD	Hatta, Dubai	8.84	123	P	Pn	22 38 44.1	+2.0
HATD	Hatta, Dubai	8.84	123	P	Pn	22 38 44.2	+2.1
HATD				S	Sn	22 40 20.8	-1.1
HATD	Hatta, Dubai	8.84	123	Pn	Pn	22 38 44.3	+2.2
ASHO	Ashiyiah	8.88	124	P	Pn	22 38 42.9	+0.3
ASHO	Ashiyiah	8.88	124	P	Pn	22 38 44.4	+1.8
ASHO				S	Sn	22 40 21.2	-1.5
ALNE	Al Ain	9.06	128	P	Pn	22 38 47.9	+2.8
ALNE				S	Sn	22 40 25.5	-1.8
SOHO	SOHO	9.55	125	P	Pn	22 38 52.7	+0.8
SOHO	SOHO	9.55	125	P	Pn	22 38 53.2	+1.4
JASK	Jask - Hormozg	9.63	112	P	Pn	22 38 55.5	+2.6
UMZA	Um Al Zommool	9.64	136	Pn	Pn	22 38 55.7	+2.7
ASF	Jabal al Asfar	9.77	286	Sn	Sn	22 40 43.2	-1.6
	comp=E,0.2nm,0.3s,baz=348,slow=20,SNR=1.7						
ARQ	Araqi	10.06	129	P	Pn	22 39 01.2	+2.3
	SNR=6.6						
HOQ	Hoqain	10.45	125	P	Pn	22 39 06.8	+2.6
BSY	Bisya	10.92	129	P	Pn	22 39 12.3	+1.6
BSY				S	Sn	22 41 09.6	-3.4
MMAI	Mount Meron Ar	11.18	289	Pn	Pn	22 39 14.7	+0.5
	comp=E,0.3nm,0.3s,baz=101,slow=15,SNR=2.0						
	comp=E,0.2nm,0.3s						
SMDO	Samad	11.31	125	P	Pn	22 39 17.5	+1.5
SMDO				S	Sn	22 41 20.2	-2.3
WSAR	Wadi Sarin	11.62	122	Pn	Pn	22 39 23.1	+2.9
	comp=E,1.0nm,0.3s,baz=319,slow=13,SNR=8.7						
WSAR				Sn	Sn	22 41 23.3	-6.7
	comp=E,0.2nm,0.3s,baz=306,slow=19,SNR=1.9						
	comp=E,5.3nm,0.5s						
WSAR	Wadi Sarin	11.62	122	P	Pn	22 39 22.5	+2.3
JMDO	Jabal Madar	11.79	127	P	Pn	22 39 24.4	+1.9
WBK	Wadi Bani Khal	12.25	124	P	Pn	22 39 30.9	+2.1
	SNR=11						
MHTO	MHTO	12.66	132	P	Pn	22 39 35.8	+1.4
	SNR=10						
MHTO				S	Sn	22 41 51.9	-3.6
WHFO	Wadi Hawf	13.06	155	P	Pn	22 39 40.4	+0.4
	SNR=6.7						
ABTO	Aybut	13.42	158	P	Pn	22 39 45.1	+0.2
DMTO	DMTO	13.71	151	P	Pn	22 39 49.5	+0.7
	SNR=6.9						
BRTR	Keskin Array B	15.29	314	Pn	Pn	22 40 10.3	0.0
	baz=121,slow=14,SNR=2.3						
	comp=E,0.3nm,0.8s						
AAK	Ala-Archa	24.74	52	P	P	22 41 59.1	+3.1
	comp=E,0.5nm,0.4s,baz=211,slow=5.9,SNR=4.2						
	comp=E,0.5nm,0.4s						
AKASG	Malin Array Be	25.07	331	P	P	22 41 59.2	+0.5
	comp=E,0.9nm,0.7s,baz=141,slow=8.0,SNR=6.8						
	comp=E,0.9nm,0.7s						
BVAR	Borovoye Array	28.31	29	P	P	22 42 29.1	+1.2
	comp=E,0.4nm,0.5s,baz=242,slow=6.1,SNR=3.4						
	comp=E,0.4nm,0.5s						
KURBB	Kurchatov Arra	30.81	39	P	P	22 42 51.5	+1.4
	comp=E,0.4nm,0.6s,baz=243,slow=9.7,SNR=7.1						
	comp=E,0.4nm,0.6s						
MKAR	Makanchi Array	31.42	48	P	P	22 42 58.9	+3.3
	comp=E,0.3nm,0.6s,baz=240,slow=7.2,SNR=4.4						
	comp=E,0.3nm,0.6s						
FINES	FINESS Array B	34.69	342	P	P	22 43 23.6	-0.1
	comp=E,0.6nm,0.5s,baz=147,slow=11,SNR=9.7						
	comp=E,0.6nm,0.5s						
ZALV	Zalesovo Beam	35.80	37	P	P	22 43 36.2	+2.7
	comp=E,0.7nm,0.4s,baz=238,slow=8.3,SNR=5.1						
	comp=E,0.7nm,0.4s						
TORD	Torodi Ar. Bea	45.85	259	P	P	22 44 58.7	+1.8
	comp=E,0.6nm,0.5s,baz=63,slow=8.4,SNR=6.8						
	comp=E,0.6nm,0.5s						
YKA	Yellowknife Ar	86.85	352	P	P	22 49 18.1	-0.6
	comp=E,0.1nm,0.3s,baz=16,slow=4.8,SNR=2.6						
	comp=E,0.1nm,0.3s						

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*IDC **19** 22:38:40.1±0.8, 27°.97N×87°.07E, h0^{km}, mb3.8/15, mbtmp3.8/16, ML3.7/1, Error ellipse: s-maj=28.7km s-min=15.5km az=46.0*

ISC 19 22:38:42.9±1.1, **28°.0N**±0°.2×**87°.1E**±0°.2, **h18**^{km}, **n16**, σ**0^{s}.76**/16, **mb3.9**/15, **Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	19.16	350	P	P	22 43 05.7	+0.5
	0.3nm,0.3s,baz=176,slow=11,SNR=16						
	0.6nm,0.5s						
KURBB	Kurchatov Arra	23.54	346	P	P	22 43 51.7	-0.2
	1.3nm,0.8s,baz=159,slow=10,SNR=8.2						
	1.3nm,0.8s						
SONM	Songino Array	24.89	32	P	P	22 44 05.2	+0.5
	0.6nm,0.6s,baz=219,slow=11,SNR=7.4						
	0.6nm,0.6s						
ZALV	Zalesovo Beam	26.00	357	P	P	22 44 13.9	-0.7
	0.6nm,0.4s,baz=160,slow=8.8,SNR=4.6						
	0.6nm,0.4s						
GEYT	Alibeck	26.16	300	P	P	22 44 17.1	+0.9
	2.3nm,0.6s,baz=124,slow=7.9,SNR=7.4						
	2.3nm,0.6s						
AKTO	Aktyubinsk	31.45	323	P	P	22 45 03.4	+0.2
	1.1nm,0.5s,baz=135,slow=5.7,SNR=2.4						
	1.1nm,0.5s						
ARU	Arti	34.94	332	P	P	22 45 33.7	+0.2
	1.2nm,0.4s,baz=122,slow=15,SNR=3.1						
	1.2nm,0.4s						
KSRS	Korea Array	35.41	64	P	P	22 45 37.3	-0.5
	0.7nm,0.5s,baz=255,slow=8.6,SNR=2.2						
	0.7nm,0.5s						
AKASG	Malin Array Be	48.75	314	P	P	22 47 25.1	-1.2
	0.1nm,0.2s,baz=73,slow=6.4,SNR=4.6						
	0.1nm,0.2s						
FINES	FINESS Array B	52.03	328	P	P	22 47 50.6	-0.4
	1.6nm,0.7s,baz=97,slow=9.9,SNR=10						
	1.6nm,0.7s						
ARCES	ARCESS Array B	54.21	338	P	P	22 48 08.7	+1.8
	2.4nm,0.8s,baz=108,slow=8.6,SNR=1.6						
	2.4nm,0.8s						
GERES	GERESS Array B	58.84	312	P	P	22 48 40.4	0.0
	0.8nm,0.8s,baz=81,slow=9.0,SNR=3.5						
	0.8nm,0.8s						
WRA	Warramunga Arr	66.02	131	P	P	22 49 28.8	+0.2
	1.1nm,0.7s,baz=323,slow=6.7,SNR=10						
	1.1nm,0.7s						
ASAR	Alice Springs	68.37	134	P	P	22 49 44.0	+0.5
	1.4nm,0.7s,baz=318,slow=6.7,SNR=14						
	1.4nm,0.7s						
ESDC	Sonseca Array	73.48	306	P	P	22 50 14.3	-0.2
	0.7nm,0.9s,baz=56,slow=4.8,SNR=4.2						
	0.7nm,0.9s						
YKA	Yellowknife Ar	88.19	10	P	P	22 51 32.0	-0.5
	0.2nm,0.8s,baz=334,slow=5.1,SNR=2.7						
	0.2nm,0.8s						

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*IDC **19** 22:39:29.4±1.3, 36°.47N×142°.83E, h0^{km}, mb3.6/8, mbtmp3.6/10, ML3.4/2, Error ellipse: s-maj=29.3km s-min=25.0km az=155.0*

*JMA **19** 22:39:31.8±0.5, 36°.6N±0°.8×14°3E±°, h38^{km}, MV3.2/17, FAR E OFF KANTO*

ISC 19 22:39:31.3±1.0, **36°.59N**±0°.08×**142°.76E**±0°.10, **h10**^{km}, **n25**, σ**0^{s}.86**/21, **mb3.6**/8, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	1.65	289	P	Pn	22 39 59.4	-1.0
JFK	Kawauchi	1.70	298	P	Pn	22 39 59.9	-1.1
JHO	Hitachi	1.76	271	P	Pn	22 40 00.8	-1.1
JOTO	OTAMA OYAMA	2.17	297	P	Pn	22 40 07.5	+0.1
JOTO				*e*S	Sn	22 40 33.9	-0.5
BSO1	Boso 1	2.41	217	*e*P	Pn	22 40 09.9	-0.4
JMK	Ichinoseki	2.66	333	*e*P	Pn	22 40 13.6	-0.5
JAG	Ashikaga	2.67	268	*e*P	Pn	22 40 13.8	-0.5
JRY	Ryogami san	3.17	261	P	Pn	22 40 20.7	-0.5
JOD2	Odawara 2	3.26	247	*e*P	Pn	22 40 22.1	-0.3
MJAR	Matsushiro Arr	3.66	271	Pn	Pn	22 40 28.4	+0.4
	0.6nm,0.3s,baz=89,slow=15,SNR=30						
	6.7nm,0.5s						
ASAJ	Asahikawa	7.52	359	Pn	Pn	22 41 20.9	-0.2
	1.4nm,0.3s,baz=197,slow=14,SNR=6.5						
ASAJ				Sn	Sn	22 42 44.7	-1.6
	0.4nm,0.3s,baz=246,slow=20,SNR=1.3						
	2.8nm,0.3s						
H11N2	WAKE ISLAND Hy	26.99	122	T	T	23 13 26.8	
	baz=314,slow=75,SNR=9.8						
H11N1	WAKE ISLAND Hy	27.00	122	T	T	23 13 33.3	
	baz=314,slow=75,SNR=8.0						
H11N3	WAKE ISLAND Hy	27.01	122	T	T	23 13 32.6	
	baz=314,slow=75,SNR=9.9						
H11S1	WAKE ISLAND Hy	27.71	124	T	T	23 14 21.0	
	baz=316,slow=76,SNR=4.2						
H11S3	WAKE ISLAND Hy	27.71	124	T	T	23 14 28.2	
	baz=316,slow=76,SNR=3.7						
H11S2	WAKE ISLAND Hy	27.73	124	T	T	23 14 21.2	
	baz=316,slow=76,SNR=3.0						
SONM	Songino Array	28.93	304	P	P	22 45 32.3	+1.7
	1.1nm,0.9s,baz=102,slow=9.1,SNR=5.7						
	1.1nm,0.9s						
ZALV	Zalesovo Beam	43.01	313	P	P	22 47 30.8	+0.1
	0.3nm,0.3s,baz=105,slow=9.1,SNR=2.2						
	0.3nm,0.3s						
MKAR	Makanchi Array	45.27	303	P	P	22 47 49.4	+0.5
	0.6nm,0.8s,baz=91,slow=8.0,SNR=4.9						
	0.6nm,0.8s						
KURBB	Kurchatov Arra	47.12	308	P	P	22 48 03.4	0.0
	1.4nm,0.8s,baz=82,slow=8.0,SNR=13						
	1.4nm,0.8s						
ILAR	Eielson Array	49.30	32	P	P	22 48 20.3	+0.3
	0.5nm,0.7s,baz=264,slow=6.2,SNR=7.8						
	0.5nm,0.7s						
WRA	Warramunga Arr	56.78	189	P	P	22 49 14.2	-1.4
	0.7nm,0.9s,baz=8.8,slow=7.2,SNR=3.5						
	0.7nm,0.9s						
YKA	Yellowknife Ar	63.65	30	P	P	22 50 02.9	+0.6
	0.4nm,0.8s,baz=298,slow=6.7,SNR=4.2						
	0.4nm,0.8s						
AKASG	Malin Array Be	75.31	323	P	P	22 51 14.7	+0.2
	0.1nm,0.4s,baz=38,slow=4.5,SNR=1.8						
	0.1nm,0.4s						

DJA 19 22:44:37.2±0.4, **1°S**±5°×**13°1E**±°, **h10**^{km}, **M3.9**/6, **mb4.6**/1, **MLv3.5**/6, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWI	Sorong	0.21	230	P	Pg	22 44 42.6	+1.1
SWI				S	Sg	22 44 46.3	+1.8
FAKI	Fak Fak	2.33	159	P	Pn	22 45 15.7	+0.1
RKPI	Ransiki, Papua	2.86	106	P	Pn	22 45 23.2	+0.2
LBMI	Labuha	3.92	271	P	Pn	22 45 37.5	0.0
GENI	Genyem	8.94	102	P	Pn	22 46 46.4	-0.1

IDC 19 23:03:50.2±2.7, **5°.79S**×**130°.67E**, **h0**^{km}, **mb4.0**/1, **mbtmp3.5**/3, **ML3.3**/2, **Error ellipse: s-maj=187.8km s-min=30.9km az=71.0**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.51	166	Pn	Pn	23 07 16.7	-0.3
	0.2nm,0.3s,baz=349,slow=13,SNR=14						
WRA				Sn	Sn	23 09 44.5	-14
	0.5nm,0.3s,baz=353,slow=24,SNR=4.5						
	0.3nm,0.5s						
ASAR	Alice Springs	18.04	170	P	Pn	23 08 02.5	-0.1
	0.1nm,0.3s,baz=349,slow=10,SNR=1.7						
	0.4nm,0.5s						
MKAR	Makanchi Array	67.59	326	P	P	23 14 48.8	+0.1
	0.7nm,0.4s,baz=120,slow=7.7,SNR=21						
	0.7nm,0.4s						

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*IDC **19** 23:34:39.0±3.3, 3°.70S×99°.32E, h0^{km}, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=123.2km s-min=28.8km az=57.0*

ISC 19 23:34:39.8±3.9, **3°.8S**±0°.5×**99°.3E**±0°.8, **h10**^{km}, **n9**, σ**0^{s}.34**/6, **mb3.7**/5, **Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	22.09	359	P	P	23 39 35.2	-0.1
	1.3nm,0.4s,baz=186,slow=9.3,SNR=15						
	1.3nm,0.4s						
H08S2	Diego Garcia H	26.91	261	T	T	00 09 53.8	
	baz=84						
H08S3	Diego Garcia H	26.92	261	T	T	00 09 58.8	
	baz=84						
H08S1	Diego Carcia H	26.93	261	T	T	00 09 52.3	
	baz=84						
WRA	Warramunga Arr	37.77	118	P	P	23 41 56.5	+0.1
	0.3nm,0.7s,baz=305,slow=8.9,SNR=1.8						
	0.3nm,0.7s						
SONM	Songino Array	51.77	6	P	P	23 43 48.0	+0.2
	0.8nm,0.8s,baz=187,slow=8.5,SNR=9.7						
	0.8nm,0.8s						
MKAR	Makanchi Array	52.54	345	P	P	23 43 53.6	+0.3
	0.4nm,0.5s,baz=150,slow=8.4,SNR=9.0						
	0.4nm,0.5s						
ZALV	Zalesovo Beam	58.77	350	P	P	23 44 37.6	-0.4
	0.6nm,0.4s,baz=141,slow=7.1,SNR=5.6						
	0.6nm,0.4s						
TXAR	Lajitas Array	146.54	38	PKPbc	PKPab	23 54 23.1	-0.2
	0.5nm,0.8s,baz=323,slow=1.9,SNR=7.6						

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*AZER **19** 23:46:41.8±0.3, 35°.58N×51°.12E, h10^{km}, Error ellipse: s-maj=10.2km s-min=4.5km az=233.0*

*TEH **19** 23:46:49.2, 35°.70N×49°.08E, h6^{km}±104^{km}, ML4.1*

*IDC **19** 23:46:50.5±1.5, 35°.57N×48°.99E, h0^{km}, mb3.6/9, mbtmp3.7/12, ML3.4/3, MS3.0/7, Error ellipse: s-maj=25.9km s-min=15.7km az=1.0*

ISC 19 23:46:51.7±0.5, **35°.67N**±0°.02×**49°.04E**±0°.04, **h8**^{km}, **n92**, σ**2^{s}.42**/105, **mb3.8**/7, **MS3.3**/3, **2C-2D**, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRAZ	Razeghan	0.77	110	Pg	Pg	23 47 05.1	-1.5
HAGD	Aghdareh	0.85	174	Pg	Pg	23 47 06.9	-1.2
IGZV	Ghazvin	1.19	53	Pg	Pg	23 47 12.6	-2.1
JIR1	Jirandeh	1.20	31	Pg	Pg	23 47 12.5	-2.4
IMHD	Mahdasht	1.32	89	Pg	Pn	23 47 15.0	-1.6
HSAM	Samen	1.50	194	Pg	Pn	23 47 18.4	-0.8
QALM	Alamut, Qazvin	1.51	59	Pg	Pn	23 47 18.2	-1.1
IHSB	Hasanabad	1.84	97	Pn	Pn	23 47 23.9	+0.2
KLST	Kelardasht - M	1.84	62	Pg	Pn	23 47 23.9	-0.1
IQOM	Qom	1.86	116	Pn	Pn	23 47 23.8	-0.3
CSN1	Caspian	1.89	1	Pn	Pn	23 47 24.6	+0.4
TEH	Tehran	1.91	87	Pn	Pn	23 47 24.9	+0.2
TEHA	Amirabad Tehra	1.91	87	Pn	Pn	23 47 24.8	+0.1
IKOM	Komasi	1.95	220	Pn	Pn	23 47 26.3	+1.0
IDOB	Doab	2.01	201	Pn	Pn	23 47 27.4	+1.2
KER	Kermanshah	2.02	231	Pn	Pn	23 47 27.2	+0.9
KCHF	Cheshme Sefid,	2.15	230	Pn	Pb	23 47 30.5	-0.6
IHSH	Hashtrud	2.17	319	Pn	Pn	23 47 28.9	+0.4
MZPU	Pul - Mazandar	2.19	69	Pn	Pn	23 47 29.4	+0.8
IVRN	Varamin	2.30	106	Pn	Pn	23 47 30.5	+0.5
IKFM	Kafar-mosalman	2.36	205	Pn	Pn	23 47 32.7	+2.0
ISRB	Sarab	2.42	333	Pn	Pn	23 47 32.3	+0.5
IGHG	Ghaleghazi	2.43	237	Pn	Pn	23 47 33.8	+1.8
IDMV	Damavand	2.44	91	Pn	Pn	23 47 32.5	+0.3
GAS1	Astara - Iran	2.71	357	Pn	Pn	23 47 35.1	-0.5
IPRN	Peran	2.73	77	Pn	Pn	23 47 36.8	+0.7
QAMS	Qamsar	2.74	134	Pn	Pn	23 47 38.0	+1.8
ASTR	Astara	2.89	356	P	Pn	23 47 38.6	+0.6
	SNR=41						
ASTR				S	Sg	23 48 22.8	-1.7
MAHB	Mahabad	2.91	293	Pn	Pn	23 47 39.8	+1.3
ISFB	Sefidab	2.94	116	Pn	Pn	23 47 39.2	+0.3
LRK	Lerik	3.02	350	P	Pn	23 47 41.7	+1.7
	SNR=189						
LRK				S	Sb	23 48 26.4	+3.5
IFIR	Firoozkooh	3.02	90	Pn	Pn	23 47 40.6	+0.4
LKRN	Lenkeran, Azer	3.04	356	P	Pn	23 47 40.1	0.0
	SNR=22						
LKRN				S	Sg	23 48 27.5	-1.9
KRSH	Karshahi	3.06	123	Pn	Pn	23 47 41.4	+0.8
IHRS	Heris	3.09	329	Pn	Pn	23 47 41.5	+0.5
ILBA	Ilam Banvizeh	3.10	230	Pn	Pn	23 47 43.0	+1.9
IAZR	Azarshahr	3.17	310	Pn	Pn	23 47 43.1	+0.9
YRD	Yardimli	3.30	349	P	Pn	23 47 47.0	+3.1
	SNR=46						
YRD				S	Sb	23 48 34.7	+3.7
TVRZ	Varzaqan	3.40	327	Pn	Pn	23 47 46.4	+1.1
GLBA	Clilabad	3.60	352	P	Pn	23 47 50.3	+2.5
	SNR=32						
GLBA				S	Sb	23 48 42.4	+2.9
SHK1	Shahrekord	3.67	155	Pn	Pn	23 47 49.5	+0.4
IGLO	Ghaloghah	3.97	77	Pn	Pn	23 47 53.6	+0.5
AMIS	Naft Sefid	4.00	177	Pn	Pn	23 47 54.8	+1.4
QRD	Qoradiz	4.02	341	P	Pn	23 47 58.3	+4.6
	SNR=9.3						
QRD				S	Sg	23 48 57.6	-3.2
ORD	Ordubad	4.06	324	P	Pb	23 48 04.0	+0.6
	SNR=21						
ORD				S	Sg	23 49 05.8	+3.8
IBRJ	Brojen	4.18	153	Pn	Pn	23 47 57.5	+1.3
BLQ	Beylaqan	4.21	344	P	Pn	23 48 00.6	+4.4
	SNR=8.2						
BLQ				S	Sb	23 48 59.4	+2.4
NAX	Nakhchivan	4.49	322	P	Pb	23 48 10.0	-0.9
	SNR=25						
NAX				S	Sg	23 49 18.7	+2.8
ANAR	Anarak	4.60	121	Pn	Pn	23 48 02.6	+0.9
SBZ	Shahbuz	4.64	324	P	Pb	23 48 11.0	-2.4
	SNR=6.7						
SBZ				S	Sg	23 49 19.9	-0.7
AGDM	Agdam	4.68	342	P	Pn	23 48 07.7	+4.9
	SNR=6.5						
AGDM				S	Sb	23 49 10.6	-0.2
BRDA	Brd	4.81	343	P	Pn	23 48 08.8	+4.3
	SNR=11						
BRDA				S	Sb	23 49 14.6	+0.3
MAKU	Maku	5.05	318	Pn	Pn	23 48 09.6	+1.7
PQL	Pirkuli	5.12	356	P	Pn	23 48 08.8	-0.1
PQL				S	Sn	23 49 12.2	+4.0
ATGJ	Altiaghaj	5.18	359	P	Pn	23 48 07.9	-1.8
ATGJ				S	Sn	23 49 13.3	+3.7
HYR	Heyderabad	5.23	322	P	Pb	23 48 20.6	-2.9
	SNR=10						
HYR				S	Sg	23 49 35.2	-4.5
QBL	Gabala	5.35	350	P	Pn	23 48 12.2	+0.3
SIZA	Siyzn	5.40	359	P	Pn	23 48 11.0	-1.6
SIZA				S	Sn	23 49 18.3	+3.4
GANJ	Ganja	5.41	337	P	Pn	23 48 17.5	+4.8
	SNR=5.0						
GANJ				S	Sb	23 49 30.2	-1.3
XNQ	Khinaliq	5.54	353	P	Pn	23 48 14.4	-0.3
XNQ				S	Sn	23 49 24.3	+5.7
GNI	Garni	5.61	324	Pn	Pn	23 48 20.6	+4.9
	0.3nm,0.3s,baz=117,slow=6.8,SNR=4.1						
GNI				Pg	Pb	23 48 34.2	+4.1
	0.6nm,0.3s,baz=145,slow=14,SNR=12						
GNI				Lg	Lg	23 49 51.0	
	0.7nm,0.3s,baz=122,slow=19,SNR=1.1						
GNI				LR	LR	23 50 26.1	
	comp=Z,85nm,18.0s,baz=123,slow=38						
	2.0nm,0.6s						
GDB	GEDABAY	5.67	334	P	Pn	23 48 23.4	+7.0
	SNR=8.0						
GDB				S	Sb	23 49 38.7	-0.4
SEKA	Sheki	5.71	346	P	Pn	23 48 18.0	+1.1
SEKA				S	Sb	23 49 33.5	-6.9
QSAR	Qusar	5.87	354	P	Pn	23 48 19.1	+0.1
QSAR				S	Sn	23 49 29.5	+3.1
MRVT	Maraveh tapeh	6.00	69	Pn	Pn	23 48 20.3	-0.6
QZX	Qazax, Azerbai	6.10	333	P	Pn	23 48 28.7	+6.4
QZX				S	Sb	23 49 49.8	-1.6
ZKTA	Zakatala	6.25	343	P	Pn	23 48 27.1	+2.9
ZKTA				S	Sn	23 49 46.6	+11
TNSJ	Nastanj	6.46	103	Pn	Pn	23 48 27.4	+0.2
TPRV	Parvadeh(Tabas	6.85	110	Pn	Pn	23 48 33.7	+1.1
TKDS	Koohdasht(Taba	6.97	105	Pn	Pn	23 48 35.5	+1.2
SBZV	Sabzevar	6.98	82	Pn	Pn	23 48 35.5	+1.0
GEYT	Alibeck	7.62	70	Pn	Pn	23 48 45.5	+2.3
	1.1nm,0.3s,baz=246,slow=14,SNR=13						
GEYT				Sn	Sn	23 50 14.9	+5.2
	baz=263,slow=25						
	4.1nm,0.5s						
ZRDN	Zarand Kerman	7.83	125	Pn	Pn	23 48 46.6	+0.4
AFRZ	Afriz	8.53	102	Pn	Pn	23 48 56.7	+1.0
SHRT	Shahrakht	9.49	99	Pn	Pn	23 49 09.2	+0.4
MMAI	Mount Meron Ar	11.58	261	LR	LR	23 54 51.4	
	comp=Z,63nm,19.2s,baz=210,slow=42						
EIL	Elat	13.29	247	LR	LR	23 56 19.6	
	comp=Z,68nm,18.0s,baz=62,slow=43						
AB31	Akbulak array	15.75	27	⇑Pn	Pn	23 50 32.4	-1.5
	1.0nm,0.6s,baz=218,slow=14,SNR=5.0						
AB31				⇓Sn	Sn	23 53 20.5	-8.0
	1.4nm,0.7s,baz=213,slow=22,SNR=6.4						
AKTO	Aktyubinsk	16.13	21	Pn	Pn	23 50 36.8	-1.9
	0.4nm,0.3s,baz=189,slow=8.9,SNR=6.1						
AKTO				Sn	Sn	23 53 27.2	-10
	0.1nm,0.3s,baz=65,slow=19,SNR=2.5						
	1.9nm,0.5s						
AKTO	Aktyubinsk	16.13	21	⇓Pn	Pn	23 50 36.4	-2.3
	4.1nm,1.3s						
AKTO				⇑Sn	Sn	23 53 26.0	-12
	2.2nm,0.8s						
BELG	Belogornoye	16.75	357	LR	LR	23 58 37.5	
	comp=Z,31nm,21.9s,baz=283,slow=42						
AKASG	Malin Array Be	20.75	323	P	P	23 51 31.8	-0.9
	1.3nm,0.7s,baz=129,slow=9.9,SNR=7.4						
	1.3nm,0.7s						
AAK	Ala-Archa	20.88	63	P	Pn	23 51 36.9	-0.1
	0.3nm,0.3s,baz=260,slow=11,SNR=1.5						
	0.3nm,0.3s						
ARU	Arti	21.75	14	P	P	23 51 43.6	+0.1
	3.8nm,0.5s,baz=180,slow=5.9,SNR=8.8						
ARU				LR	LR	00 04 03.4	
	comp=Z,30nm,19.3s,baz=164,slow=47						
	3.8nm,0.5s						
BVAR	Borovoye Array	22.96	34	P	P	23 51 56.8	+0.3
	2.2nm,0.6s,baz=230,slow=7.8,SNR=12						
	2.2nm,0.6s						
KURBB	Kurchatov Arra	25.98	46	P	P	23 52 24.8	+0.1
	0.7nm,0.8s,baz=249,slow=9.5,SNR=4.0						
	0.7nm,0.8s						
MKAR	Makanchi Array	27.17	56	P	P	23 52 36.0	+0.5
	1.0nm,0.8s,baz=246,slow=7.1,SNR=9.5						
	1.0nm,0.8s						
FINES	FINESS Array B	29.61	338	P	P	23 52 59.2	+2.1
	1.4nm,0.9s,baz=142,slow=9.6,SNR=6.8						
	1.4nm,0.9s						
HFS	Hagfors	33.38	328	LR	LR	00 07 59.1	
	comp=Z,59nm,19.2s,baz=80,slow=38						
ESDC	Sonseca Array	41.64	292	P	P	23 54 40.1	-0.5
	0.9nm,0.7s,baz=71,slow=8.4,SNR=8.9						
	0.9nm,0.7s						
TORD	Torodi Ar. Bea	48.04	254	P	P	23 55 31.4	-0.3
	0.7nm,0.9s,baz=52,slow=9.5,SNR=3.6						
	0.7nm,0.9s						
INK	Inuvik	76.32	1	LR	LR	00 41 45.8	
	comp=Z,22nm,18.2s,baz=286,slow=43						

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*IDC **19** 23:48:08.3±0.8, 24°.81N×122°.05E, h0^{km}, mb3.7/13, mbtmp3.8/14, ML3.4/1, MS3.5/14, Error ellipse: s-maj=25.6km s-min=15.6km az=64.0*

*JMA **19** 23:48:09.2±0.1, 25°N±2°×122°.2E±0°.7, h32^{km}, MV3.8/9, TAIWAN REGION*

*NEIC **19** 23:48:09.4, 24°.78N×122°.14E, h10^{km}*

*ASIES **19** 23:48:09.6, 24°.80N×121°.99E, h16^{km}, MW4.0*

*NIED **19** 23:48:09.2, 24°.91N×122°.19E, h32^{km}, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.13; M$_{\theta\theta}$0.99; M$_{\phi\phi}$-0.85; M$_{r\theta}$1.29; M$_{\theta\phi}$-0.33; M$_{\phi r}$-0.77; Fault plane solution: M$_{0}$1.73000×10^{15} NP1: φ$_{s}$312.00000°, δ86.00000°, λ-60.00000°. NP2: φ$_{s}$49.00000°, δ30.00000°, λ-172.00000°.*

*TAP **19** 23:48:09.0, 24°.80N×122°.11E, h14^{km}, ML4.5, B*

*NEIC **19** 23:48:09.4±1.9, 24°.78N±0°.03×122°.14E±0°.02, h10^{km}±1^{km}, mb4.3/11, Mwr4.1/26, Error ellipse: s-maj=4.5km s-min=2.8km az=348.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.28; M$_{\theta\theta}$1.51;*

M$_{\phi\phi}$-1.23; M$_{r\theta}$-0.02; M$_{\theta\phi}$-0.51; M$_{\phi r}$-0.37; Fault plane solution: M$_0$1.53000×10^{15} NP1:φ$_s$323.79000°,δ78.83000°, λ-13.65000°. NP2:φ$_s$56.48000°,δ76.61000°, λ-168.51000°. Principal axes: T 1.6025, Plg2.0000°, Azm10.0000°; N -0.1668, Plg72.0000°, Azm105.0000°; P -1.4357, Plg18.0000°, Azm280.0000°;

*BJI **19** 23:48:10.6±0.0, 24°.91N×121°.91E, h12^{km}, mb4.0/9, mB4.4/6, ML4.1/2, Ms4.2/5, Ms7 4.0/5*

ISC 19 23:48:09.2±0.8**, 24°.80N**±0°.02×**122°.15E**±0°.02**, h12**^{km}±4^{km}**, n210,** σ1^{s}**15**/325**, mb4.0**/24**, MS3.4**/12**, 16C-19D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS	baz=287	**0.20**	**284**	⇓*i*P	**Pg**	**23 48 13.4**	**-0.2**
EGS	baz=287			*i* S	**Sb**	**23 48 16.9**	**+0.1**
TWB1	**Santiao Chiao** baz=334	**0.26**	**325**	⇑*i*P	**Pg**	**23 48 14.6**	**0.0**
TWB1	baz=334			S	**Sg**	**23 48 18.1**	**-0.1**
NTC	**Toucheng** baz=283	**0.30**	**281**	⇓*i*P	**Pg**	**23 48 15.2**	**-0.1**
NTC	baz=283			*e*S	**Sb**	**23 48 20.6**	**-0.7**
TWC	**Suao** baz=230	**0.33**	**236**	⇑*i*P	**Pg**	**23 48 15.2**	**-0.7**
TWC	baz=230			*i* S	**Sg**	**23 48 18.9**	**-1.5**
TIPB	**Shuangxi** baz=304	**0.34**	**301**	⇓*i*P	**Pb**	**23 48 16.3**	**-0.9**
TIPB	baz=304			*i* S	**Sb**	**23 48 21.0**	**-1.7**
ILA	**Ilan** baz=264	**0.37**	**265**	⇓*i*P	**Pg**	**23 48 16.2**	**-0.3**
ILA	baz=264			*e*S	**Sb**	**23 48 22.1**	**-1.2**
EOS2	**EOS2** baz=163	**0.38**	**169**	*i* P	**Pg**	**23 48 17.1**	**+0.2**
EOS2	baz=163			S	**Sg**	**23 48 22.9**	**+0.9**
SXI1	**Grass Mountain** baz=325	**0.39**	**320**	⇑*i*P	**Pb**	**23 48 17.4**	**-0.7**
SXI1	baz=325			*e*S	**Sb**	**23 48 22.6**	**-1.4**
NDS	**Dongshan** baz=246	**0.43**	**248**	⇓P	**Pg**	**23 48 17.1**	**-0.6**
NDS	baz=246			*e*S	**Sg**	**23 48 23.3**	**-0.1**
WFSB	**Wu-fen Shan** baz=313	**0.43**	**309**	⇓P	**Pb**	**23 48 18.3**	**-0.5**
WFSB	baz=313			*e*S	**Sb**	**23 48 24.1**	**-1.2**
TWE	**Neicheng** baz=259	**0.45**	**260**	⇓*i*P	**Pg**	**23 48 17.4**	**-0.6**
TWE	baz=259			*e*S	**Sb**	**23 48 24.8**	**-0.8**
EWUT	**Wuta** baz=221	**0.49**	**224**	⇑*i*P	**Pg**	**23 48 17.9**	**-0.9**
EWUT	baz=221			*e*S	**Sg**	**23 48 23.6**	**-1.7**
TNOU	**National Taiwa** baz=319	**0.49**	**316**	*e*P	**Pb**	**23 48 19.4**	**-0.4**
TNOU	baz=319			*e*S	**Sb**	**23 48 25.7**	**-1.2**
FUSB	**Fushanzhiwuyua** baz=266	**0.51**	**266**	⇓*i*P	**Pg**	**23 48 18.8**	**-0.5**
FUSB	baz=266			*e*S	**Sg**	**23 48 25.7**	**-0.4**
ENA	**Nanau** baz=222	**0.52**	**225**	⇑*i*P	**Pg**	**23 48 18.6**	**-0.9**
ENA	baz=222			*e*S	**Sg**	**23 48 24.6**	**-1.8**
EOS3	**EOS3** baz=159	**0.53**	**163**	⇑*i*P	**Pg**	**23 48 19.7**	**+0.1**
EOS3	baz=159			S	**Sb**	**23 48 28.5**	**+0.6**
TWA	**Mucha** baz=291	**0.55**	**290**	⇓P	**Pb**	**23 48 20.1**	**-0.7**
TWA	baz=291			*e*S	**Sb**	**23 48 28.4**	**-0.2**
ENTT	**Nioudou** baz=252	**0.55**	**254**	⇓*i*P	**Pg**	**23 48 19.1**	**-0.9**
ENTT	baz=252			*e*S	**Sb**	**23 48 27.4**	**-1.3**
NHDH	**Xindian Distri** baz=287	**0.59**	**286**	*e*P	**Pb**	**23 48 21.0**	**-0.5**
NHDH	baz=287			*e*S	**Sb**	**23 48 30.0**	**+0.2**
EHP	**Heping Village** baz=214	**0.61**	**218**	*e*P	**Pg**	**23 48 20.9**	**-0.3**
EHP	baz=214			*e*S	**Sg**	**23 48 29.2**	**-0.1**
TAP1	**Taipei** baz=294	**0.62**	**293**	*e*P	**Pn**	**23 48 23.0**	**-0.7**
LATG	**Datong** baz=244	**0.62**	**245**	⇓*i*P	**Pg**	**23 48 20.6**	**-0.8**
LATG	baz=244			*e*S	**Sg**	**23 48 29.2**	**-0.5**
TATO	**Taipei**	**0.63**	**287**		**Pg**	**23 48 21.0**	**-0.4**
TATO	**Taipei**	**0.63**	**287**	P	**Pb**	**23 48 21.4**	**-0.7**
TATO	**Taipei** baz=288	**0.63**	**287**	⇓P	**Pb**	**23 48 21.6**	**-0.4**
YM01	**YM01** baz=306	**0.63**	**304**	⇓P	**Pb**	**23 48 22.2**	**0.0**
TAP	**Taipei** baz=294	**0.63**	**293**	*e*P	**Pb**	**23 48 22.2**	**0.0**
YM08	**YM08** baz=310	**0.64**	**308**	⇓*e*P	**Pb**	**23 48 22.2**	**-0.2**
BACT	**New Taipei Cit** baz=288	**0.67**	**287**	*e*P	**Pn**	**23 48 23.2**	**-1.4**
ANP	**Anpu** baz=306	**0.69**	**304**	*e*P	**Pn**	**23 48 23.9**	**-1.0**
EOS4	**EOS4** baz=164	**0.69**	**167**	*i* P	**Pg**	**23 48 22.3**	**-0.2**
EOS4	baz=164			*e*S	**Sg**	**23 48 31.9**	**+0.3**
TWY	**Chenhua** baz=316	**0.69**	**314**	⇑P	**Pn**	**23 48 23.7**	**-1.1**
TWY	baz=316			*e*S	**Sn**	**23 48 34.1**	**-1.3**
YHNB	**Yeheng**	**0.71**	**260**		**Pg**	**23 48 22.3**	**-0.8**
YHNB	**Yeheng**	**0.71**	**260**	P	**Pg**	**23 48 22.2**	**-0.9**
YHNB	**Yeheng** baz=259	**0.71**	**260**	⇓P	**Pg**	**23 48 22.3**	**-0.8**
YHNB	baz=259			*e*S	**Sg**	**23 48 31.5**	**-1.1**
NSK	**Sanguang** baz=260	**0.73**	**261**	⇓P	**Pg**	**23 48 22.5**	**-0.9**
NSK	baz=260			*e*S	**Sg**	**23 48 31.8**	**-1.2**
TWS1	**Kuangyinshan** baz=296	**0.73**	**295**	⇓P	**Pn**	**23 48 24.4**	**-1.0**
NTST	**Danshui** baz=302	**0.73**	**300**	*e*P	**Pn**	**23 48 24.5**	**-0.9**
NNSB	**Datong** baz=241	**0.79**	**242**	*e*P	**Pg**	**23 48 23.4**	**-1.1**
NNSB	baz=241			*e*S	**Sg**	**23 48 34.0**	**-0.9**
NNSH	**Datong** baz=241	**0.79**	**242**	*e*P	**Pg**	**23 48 23.5**	**-1.0**
NNSH	baz=241			*e*S	**Sg**	**23 48 33.8**	**-1.1**
NNS	**Nan Shan** baz=242	**0.79**	**243**	*e*P	**Pg**	**23 48 23.4**	**-1.2**
NNS	baz=242			*e*S	**Sg**	**23 48 33.5**	**-1.5**
ETL	**Fush Village** baz=215	**0.80**	**217**	*e*P	**Pg**	**23 48 23.6**	**-1.0**
ETL	baz=215			*e*S	**Sg**	**23 48 34.6**	**-0.4**
NTY	**Taoyuan** baz=285	**0.80**	**285**	*e*P	**Pn**	**23 48 25.8**	**-0.5**
NACB	**Ninganchiao**	**0.80**	**219**		**Pg**	**23 48 23.7**	**-1.0**
NACB				Sg	**Sg**	**23 48 34.3**	**-0.9**
NACB	**Ninganchiao**	**0.80**	**219**	P	**Pg**	**23 48 23.7**	**-1.0**
NACB	**Ninganchiao** baz=217	**0.80**	**219**	⇑*i*P	**Pg**	**23 48 23.5**	**-1.3**
NACB	baz=217			S	**Sg**	**23 48 34.5**	**-0.7**
JYNG	**Yonagunijimaku**	**0.80**	**115**	*i* P	**Pg**	**23 48 24.5**	**-0.3**
JYNG				S	**Sg**	**23 48 35.4**	**+0.1**
PCYT	**Pengchaiyu** baz=358	**0.83**	**355**	⇑*i*P	**Pb**	**23 48 25.4**	**-0.2**
ETLH	**Xiulin Townshi** baz=224	**0.84**	**226**	⇑*e*P	**Pg**	**23 48 24.4**	**-1.3**
ETLH	baz=224			*e*S	**Sg**	**23 48 35.4**	**-1.3**
YOJ	**Yonaguni jima**	**0.85**	**113**		**Pg**	**23 48 25.4**	**-0.3**
YOJ				Sg	**Sg**	**23 48 36.4**	**-0.5**
YOJ	**Yonaguni jima**	**0.85**	**113**	P	**Pg**	**23 48 25.6**	**-0.1**
YOJ	**Yonaguni jima**	**0.85**	**113**	P	**Pg**	**23 48 25.2**	**-0.6**
YOJ				S	**Sg**	**23 48 37.1**	**+0.2**
YOJ	**Yonaguni jima** baz=112	**0.85**	**113**	⇓*i*P	**Pg**	**23 48 25.1**	**-0.6**
YOJ	baz=112			S	**Sg**	**23 48 37.1**	**+0.2**
TWD	**Chiawan** baz=213	**0.87**	**215**	⇑P	**Pg**	**23 48 24.9**	**-1.2**
TWD	baz=213			*e*S	**Sg**	**23 48 36.3**	**-1.2**
NCU	**National Centr** baz=282	**0.89**	**281**	*e*P	**Pn**	**23 48 27.4**	**-0.2**
NCUH	**Zhongli** baz=282	**0.89**	**281**	⇓*e*P	**Pn**	**23 48 27.4**	**-0.2**
NCUH	baz=282			*e*S	**Sn**	**23 48 40.9**	**+0.5**
NFF	**Wufeng Townshi** baz=260	**0.95**	**260**	*e*P	**Pg**	**23 48 27.3**	**-0.4**
NFF	baz=260			*e*S	**Sn**	**23 48 40.2**	**-1.8**
HWA	**Hwalien** baz=209	**0.95**	**211**	*e*P	**Pg**	**23 48 27.7**	**0.0**
HWA	baz=209			*e*S	**Sg**	**23 48 40.3**	**+0.1**
NJD	**Zhudong** baz=266	**0.97**	**267**	*e*P	**Pn**	**23 48 28.8**	**+0.2**
ETM	**Tongmen** baz=214	**1.02**	**216**	*e*P	**Pb**	**23 48 27.5**	**-1.4**
ETM	baz=214			*e*S	**Sb**	**23 48 41.3**	**-0.9**
NHW	**Xinwu Township** baz=282	**1.02**	**282**	*e*P	**Pn**	**23 48 30.1**	**+0.7**
NHW	baz=282			*e*S	**Sn**	**23 48 45.0**	**+1.4**
HSN1	**Hsinchu** baz=269	**1.03**	**269**	*e*P	**Pn**	**23 48 30.1**	**+0.7**
HSN1	baz=269			*e*S	**Sn**	**23 48 45.1**	**+1.4**
WHF	**Hehuan Shan** baz=230	**1.03**	**231**	⇑*e*P	**Pb**	**23 48 27.9**	**-1.4**
WHF	baz=230			*e*S	**Sg**	**23 48 41.8**	**-1.0**
TWT	**Tachien** baz=238	**1.04**	**239**	*e*P	**Pb**	**23 48 28.8**	**-0.4**
TWT	baz=238			*e*S	**Sg**	**23 48 42.3**	**-0.5**
LIOB	**Emei** baz=261	**1.04**	**262**	*e*P	**Pn**	**23 48 29.5**	**-0.1**
LIOB	baz=261			*e*S	**Sn**	**23 48 45.9**	**+1.7**
TDCB	**Techi** baz=238	**1.05**	**239**	*e*P	**Pb**	**23 48 28.6**	**-0.8**
TDCB	baz=238			*e*S	**Sb**	**23 48 42.3**	**-1.0**
TEYL	**Yanliau Villag** baz=207	**1.05**	**209**	*e*P	**Pb**	**23 48 29.2**	**-0.2**
TEYL	baz=207			*e*S	**Sn**	**23 48 45.5**	**+1.2**
NSTT	**Nanjuang** baz=261	**1.06**	**261**	*e*P	**Pn**	**23 48 29.6**	**-0.2**
NSTT	baz=261			*e*S	**Sn**	**23 48 46.2**	**+1.7**
SBCB	**Hsinchu** baz=270	**1.06**	**270**	*e*P	**Pn**	**23 48 30.1**	**+0.3**
SBCB	baz=270			*e*S	**Sn**	**23 48 45.9**	**+1.4**
HSN	**Hsinchu** baz=272	**1.07**	**271**	*e*P	**Pn**	**23 48 30.3**	**+0.3**
HSN	baz=272			*e*S	**Sn**	**23 48 44.9**	**0.0**
CHGB	**Renai** baz=229	**1.15**	**231**	*e*P	**Pb**	**23 48 30.2**	**-1.0**
CHGB	baz=229			*e*S	**Sg**	**23 48 45.8**	**-0.7**
NJN	**Zhunan** baz=264	**1.17**	**265**	*e*P	**Pg**	**23 48 33.3**	**+1.6**
ESL	**Shilin** baz=212	**1.18**	**214**	*e*P	**Pn**	**23 48 30.2**	**-1.3**
ESL	baz=212			*e*S	**Sn**	**23 48 48.1**	**+0.7**
TEGC	**Jichi Village** baz=205	**1.22**	**207**	*e*P	**Pg**	**23 48 32.6**	**0.0**
TEGC	baz=205			*e*S	**Sg**	**23 48 51.6**	**+3.1**
OWD	**Renai** baz=225	**1.22**	**227**	*e*P	**Pn**	**23 48 31.2**	**-1.0**
OWD	baz=225			*e*S	**Sb**	**23 48 47.6**	**-0.5**
WUSB	**Renai** baz=228	**1.24**	**230**	*e*P	**Pn**	**23 48 31.6**	**-0.8**
WUSB	baz=228			*e*S	**Sb**	**23 48 47.8**	**-0.7**
NMLH	**Miaoli** baz=258	**1.26**	**258**	*e*P	**Pg**	**23 48 33.1**	**-0.4**
NMLH	baz=258			*e*S	**Sg**	**23 48 52.1**	**+2.2**
EGFH	**Guangfu** baz=209	**1.30**	**211**	*e*P	**Pn**	**23 48 32.9**	**-0.3**
TWQ1	**Liyutan** baz=250	**1.33**	**251**	*e*P	**Pg**	**23 48 34.6**	**-0.2**
TWQ1	baz=250			*e*S	**Sg**	**23 48 53.7**	**+1.6**
WPL	**Puli Township** baz=233	**1.34**	**235**	*e*P	**Pg**	**23 48 34.3**	**-0.6**
WPL	baz=233			*e*S	**Sb**	**23 48 50.4**	**-0.9**
WCS	**Beigang Elemen** baz=236	**1.35**	**237**	*e*P	**Pb**	**23 48 34.3**	**-0.1**
WCS	baz=236			*e*S	**Sn**	**23 48 51.4**	**-0.2**
DPDB	**Guoxing** baz=235	**1.35**	**236**	*e*P	**Pg**	**23 48 34.6**	**-0.6**
DPDB	baz=235			*e*S	**Sg**	**23 48 51.6**	**-1.1**
VWDT	**VWDT** baz=220	**1.39**	**222**	⇑*e*P	**Pn**	**23 48 34.4**	**0.0**
VWDT	baz=220			*e*S	**Sb**	**23 48 52.6**	**-0.1**
WDJ	**Dajia District** baz=252	**1.45**	**252**	*e*P	**Pg**	**23 48 37.3**	**+0.3**
WDJ	baz=252			*e*S	**Sg**	**23 48 57.4**	**+1.6**
HGSD	**Ruisui** baz=206	**1.46**	**207**	⇑*e*P	**Pn**	**23 48 35.4**	**+0.1**
HGSD	baz=206			*e*S	**Sg**	**23 48 59.3**	**+3.0**
SMLT	**Sun Moon Lake** baz=230	**1.46**	**232**	*e*P	**Pb**	**23 48 35.9**	**-0.4**
SMLT	baz=230			*e*S	**Sg**	**23 48 56.7**	**+0.5**
TYC	**Yuchr** baz=232	**1.48**	**233**	*e*P	**Pb**	**23 48 36.2**	**-0.4**
TYC	baz=232			*e*S	**Sg**	**23 48 55.8**	**-1.0**
SSLB	**Suanglung**	**1.48**	**228**		**Pb**	**23 48 36.4**	**-0.3**
SSLB					**Sb**	**23 48 55.6**	**+0.1**
SSLB	**Suanglung**	**1.48**	**228**	P	**Pb**	**23 48 36.3**	**-0.4**
SSLB	**Suanglung** baz=226	**1.48**	**228**	⇑*e*P	**Pb**	**23 48 36.1**	**-0.7**
SSLB	baz=226			*e*S	**Sb**	**23 48 54.8**	**-0.7**
TCU	**Taichung** baz=243	**1.49**	**245**	*e*P	**Pg**	**23 48 38.5**	**+0.6**
TCU	baz=243			*e*S	**Sg**	**23 48 58.7**	**+1.4**
EHY	**Hungye** baz=209	**1.49**	**211**	*e*P	**Pn**	**23 48 35.2**	**-0.6**
EHY	baz=209			*e*S	**Sg**	**23 48 56.7**	**-0.5**
IRIF	**Iriomote-Funau**	**1.51**	**107**	P	**Pn**	**23 48 34.5**	**-1.6**
YULB	**Yu-li**	**1.60**	**209**	Pn	**Pn**	**23 48 36.9**	**-0.4**
YULB	**Yu-li**	**1.60**	**209**	P	**Pn**	**23 48 37.2**	**-0.1**
YULB	**Yu-li** baz=208	**1.60**	**209**	*e*P	**Pn**	**23 48 36.7**	**-0.6**
YULB	baz=208			*e*S	**Sb**	**23 48 58.4**	**-0.5**
WHYT	**Xinyi Township** baz=226	**1.61**	**227**	*e*P	**Pb**	**23 48 39.0**	**0.0**
WHYT	baz=226			*e*S	**Sg**	**23 49 01.0**	**-0.1**
WCHH	**Zhanghua** baz=243	**1.62**	**244**	*e*P	**Pg**	**23 48 40.0**	**-0.3**
WCHH	baz=243			*e*S	**Sg**	**23 49 01.7**	**+0.4**
WJS	**Zhushan** baz=232	**1.62**	**233**	*e*P	**Pg**	**23 48 40.6**	**+0.2**
WJS	baz=232			*e*S	**Sg**	**23 49 02.2**	**+0.9**
WNT	**Mingjian** baz=235	**1.62**	**236**	*e*P	**Pg**	**23 48 40.5**	**+0.2**
WNT	baz=235			*e*S	**Sg**	**23 49 02.6**	**+1.2**
EYUL	**Yuli** baz=207	**1.63**	**208**	*e*P	**Pn**	**23 48 38.0**	**+0.3**
EYUL	baz=207			*e*S	**Sg**	**23 49 01.7**	**0.0**
TWF1	**Yuli** baz=207	**1.64**	**209**	*e*P	**Pn**	**23 48 37.7**	**-0.1**
TWF1	baz=207			*e*S	**Sb**	**23 48 59.5**	**-0.4**
HATJ	**Hateruma jima**	**1.68**	**116**	P	**Pn**	**23 48 37.6**	**-0.8**
HATJ				*e*S	**Sn**	**23 48 58.5**	**-1.4**
FULB	**Fuli** baz=205	**1.77**	**206**	*e*P	**Pn**	**23 48 39.8**	**+0.1**
FULB	baz=205			*e*S	**Sb**	**23 49 04.4**	**+0.5**
ALS	**Alishan** baz=223	**1.77**	**224**	⇑*e*P	**Pb**	**23 48 41.7**	**-0.2**
ALS	baz=223			*e*S	**Sg**	**23 49 07.0**	**+0.6**
JKRS	**Kuro-shima**	**1.78**	**108**	P	**Pn**	**23 48 39.0**	**-0.8**
JKRS				S	**Sn**	**23 49 01.5**	**-0.9**
CHN5	**Tsauling** baz=228	**1.80**	**229**	*e*P	**Pg**	**23 48 42.7**	**-1.1**
CHN5	baz=228			*e*S	**Sg**	**23 49 07.5**	**+0.4**
WGK	**Gukeng** baz=232	**1.82**	**233**	*e*P	**Pg**	**23 48 43.1**	**-1.2**
WGK	baz=232			*e*S	**Sg**	**23 49 07.6**	**-0.3**
CHKT	**Chengkung** baz=202	**1.84**	**203**	*e*P	**Pn**	**23 48 39.6**	**-0.9**
CHKT	baz=202			*e*S	**Sn**	**23 49 03.6**	**0.0**
WDLH	**Douliu** baz=232	**1.84**	**233**	*e*P	**Pb**	**23 48 43.2**	**+0.4**
WDLH	baz=232			*e*S	**Sg**	**23 49 07.8**	**-0.6**
WRL	**Guolierlin Hig** baz=241	**1.85**	**241**	*e*P	**Pb**	**23 48 42.6**	**-0.3**
WRL	baz=241			*e*S	**Sb**	**23 49 06.0**	**0.0**
EHD	**Haiduan** baz=207	**1.85**	**208**	*e*P	**Pn**	**23 48 40.8**	**0.0**
EHD	baz=207			*e*S	**Sb**	**23 49 07.3**	**+1.1**
JIJ	**Ishigaki jima**	**1.87**	**103**	P	**Pn**	**23 48 40.5**	**-0.4**
JIJ				*e*S	**Sn**	**23 49 02.7**	**-1.7**
ECS	**Chishang** baz=206	**1.90**	**207**	*e*P	**Pb**	**23 48 42.5**	**-1.2**
ECS	baz=206			*e*S	**Sg**	**23 49 09.2**	**-1.0**
ELDTW	**Lidau** baz=212	**1.91**	**213**	*e*P	**Pn**	**23 48 42.4**	**+0.7**
WCKO	**Fanlu** baz=225	**1.96**	**227**	*e*P	**Pb**	**23 48 45.1**	**+0.3**
WCKO	baz=225			*e*S	**Sg**	**23 49 11.7**	**-0.4**
EDH	**Donghe** baz=202	**1.97**	**203**	*e*P	**Pn**	**23 48 41.9**	**-0.5**
EDH	baz=202			*e*S	**Sn**	**23 49 08.1**	**+1.0**
JISG	**Ishigakijimahi**	**1.98**	**96**	P	**Pn**	**23 48 41.1**	**-1.3**
CHN2	**Minshiung** baz=230	**1.98**	**231**	*e*P	**Pg**	**23 48 46.2**	**-1.1**
CHN2	baz=230			*e*S	**Sg**	**23 49 13.2**	**+0.2**
CHN4	**Tsaushan** baz=224	**2.02**	**225**	*e*P	**Pb**	**23 48 46.2**	**+0.2**
CHN4	baz=224			*e*S	**Sg**	**23 49 14.2**	**-0.1**
TPUB	**Ta-pu**	**2.04**	**223**	Pn	**Pn**	**23 48 44.4**	**+1.0**
TPUB				Sg	**Sb**	**23 49 12.6**	**+1.1**
TPUB	**Ta-pu** baz=222	**2.04**	**223**	*e*P	**Pb**	**23 48 45.8**	**-0.4**
TPUB	baz=222			*e*S	**Sg**	**23 49 13.0**	**-1.8**
CHY	**Chiayi** baz=230	**2.04**	**231**	*e*P	**Pb**	**23 48 46.8**	**+0.6**
CHY	baz=230			*e*S	**Sg**	**23 49 13.8**	**-1.0**
STYH	**Taoyuan** baz=217	**2.05**	**218**	*e*P	**Pb**	**23 48 45.5**	**-0.9**
STYH	baz=217			*e*S	**Sb**	**23 49 10.9**	**-0.8**
STYT	**Tauyuan** baz=217	**2.07**	**218**	*e*P	**Pb**	**23 48 45.7**	**-1.0**
STYT	baz=217			*e*S	**Sb**	**23 49 11.7**	**-0.6**
WTP	**Ta-pu** baz=221	**2.09**	**223**	*e*P	**Pb**	**23 48 46.7**	**-0.3**
WTP	baz=221			*e*S	**Sg**	**23 49 15.6**	**-0.8**
LONT	**Longtian** baz=205	**2.10**	**207**	*e*P	**Pn**	**23 48 43.9**	**-0.3**
WSF	**Szhu** baz=236	**2.10**	**237**	*e*P	**Pb**	**23 48 47.8**	**+0.5**
WSF	baz=236			*e*S	**Sg**	**23 49 14.8**	**-2.1**
TWK	**Hsinying** baz=224	**2.15**	**225**	*e*P	**Pb**	**23 48 47.8**	**-0.3**
TWK	baz=224			*e*S	**Sg**	**23 49 16.7**	**-1.7**
SNST	**Tainan City** baz=223	**2.18**	**224**	*e*P	**Pb**	**23 48 48.7**	**+0.2**
SNST	baz=223			*e*S	**Sg**	**23 49 19.2**	**-0.1**
CHN1	**Nanshi** baz=222	**2.19**	**223**	*e*P	**Pb**	**23 48 48.5**	**-0.2**
CHN1	baz=222			*e*S	**Sb**	**23 49 15.4**	**-0.3**
TWGBT	**Beinan**	**2.20**	**207**	P	**Pn**	**23 48 45.5**	**-0.1**
TWGBT	**Beinan** baz=206	**2.20**	**207**	*e*P	**Pn**	**23 48 44.8**	**-0.8**
TWGBT	baz=206			*e*S	**Sn**	**23 49 13.4**	**+0.7**
TWG	**Pinlang**	**2.20**	**207**	Pn	**Pn**	**23 48 44.8**	**-0.7**
TWG	**Pinlang** baz=206	**2.20**	**207**	*e*P	**Pn**	**23 48 44.9**	**-0.7**
TWG	baz=206			*e*S	**Sn**	**23 49 13.5**	**+0.8**
LDUT	**Ludao** baz=195	**2.20**	**197**	*e*P	**Pn**	**23 48 44.5**	**-1.1**
LDUT	baz=195			*e*S	**Sn**	**23 49 11.1**	**-1.6**
ICHU	**Yijhu** baz=229	**2.23**	**230**	*e*P	**Pb**	**23 48 49.2**	**-0.2**
ICHU	baz=229			*e*S	**Sb**	**23 49 17.9**	**+1.0**
SGST	**Jiashian** baz=219	**2.23**	**220**	*e*P	**Pb**	**23 48 48.3**	**-1.1**
SGST	baz=219			*e*S	**Sb**	**23 49 17.7**	**+0.7**
SLGT	**Liugui** baz=217	**2.26**	**218**	*e*P	**Pb**	**23 48 50.2**	**+0.2**
CHN8	**Yiju** baz=230	**2.29**	**231**	*e*P	**Pb**	**23 48 49.9**	**-0.5**
CHN8	baz=230			*e*S	**Sg**	**23 49 20.6**	**-2.1**
MATB	**Ma-tsu** baz=304	**2.41**	**305**	*e*P	**Pn**	**23 48 47.4**	**-1.0**
MATB	baz=304			*e*S	**Sn**	**23 49 17.1**	**-0.6**
SCLT	**Jiali** baz=227	**2.41**	**228**	*e*P	**Pb**	**23 48 52.2**	**-0.3**
SCLT	baz=227			*e*S	**Sg**	**23 49 24.0**	**-2.7**
SCST	**Cishan** baz=218	**2.43**	**219**	*e*P	**Pb**	**23 48 52.2**	**-0.7**
SCST	baz=218			*e*S	**Sb**	**23 49 23.8**	**+1.0**
ECL	**Taimali** baz=206	**2.45**	**207**	*e*P	**Pn**	**23 48 48.1**	**-0.8**
ECL	baz=206			*e*S	**Sb**	**23 49 22.8**	**-0.5**
VWUC	**VWUC** baz=275	**2.46**	**275**	*e*P	**Pn**	**23 48 48.2**	**-0.9**
VWUC	baz=275			*e*S	**Sn**	**23 49 18.5**	**-0.6**
SSD	**Sandimen** baz=213	**2.47**	**215**	*e*P	**Pb**	**23 48 51.6**	**-2.0**

SSD				*e*S	Sb	23 49 24.2	+0.3
	baz=213						
TWM1	Shoushan	2.52	219	*e*P	Pb	23 48 54.2	-0.2
	baz=218						
MASBT	Mashibuluo	2.58	213	*e*P	Pn	23 48 52.6	+1.8
	baz=212						
MASBT				*e*S	Sb	23 49 25.8	-1.3
	baz=212						
PNG	Penghu	2.67	243	*e*P	Pn	23 48 53.0	+1.1
	baz=242						
PNG				*e*S	Sn	23 49 25.9	+1.7
	baz=242						
PHUB	P'eng-hu	2.68	242	*e*P	Pn	23 48 53.0	+0.9
	baz=241						
PHUB				*e*S	Sn	23 49 24.9	+0.4
	baz=241						
EAST	Anshuo	2.68	207	*e*P	Pn	23 48 51.3	-1.0
	baz=206						
EAST				*e*S	Sb	23 49 28.0	-2.1
	baz=206						
WDGT	Dungji	2.74	237	*e*P	Pn	23 48 54.7	+1.7
	baz=236						
WDGT				*e*S	Sn	23 49 28.1	+2.0
	baz=236						
XPSS	Dashiqiu	2.76	321	*e*P	Pn	23 48 52.8	-0.4
	baz=321						
LYJJ	Jianjiangzhen	2.77	310	*e*P	Pn	23 48 52.5	-0.9
	baz=310						
SCZT	Fangliau	2.79	210	*e*P	Pb	23 48 56.6	-2.4
	baz=209						
SCZT				*e*S	Sb	23 49 31.1	-2.1
	baz=209						
LAY	Lan-yu	2.80	191	*e*P	Pn	23 48 52.9	-1.0
	baz=190						
LAY				*e*S	Sn	23 49 25.9	-1.7
	baz=190						
LYUB	Lan-yu	2.83	191	*e*P	Pn	23 48 52.7	-1.5
	baz=190						
VCHM	Qimei	2.95	238	*e*P	Pn	23 48 55.9	+0.1
	baz=237						
VCHM				*e*S	Sn	23 49 32.8	+1.7
	baz=237						
SMST	Manzhou Townsh	3.02	204	*e*P	Pn	23 48 57.5	+0.7
	baz=203						
HEN	Hengchun	3.07	205	*e*P	Pb	23 49 00.9	-2.8
	baz=204						
TWK1	Hengchun	3.10	204	*e*P	Pn	23 48 58.0	+0.1
	baz=203						
TWK1				*e*S	Sn	23 49 36.7	+1.9
	baz=203						
TWKBT	Hengchun	3.10	204	*e*P	Pn	23 48 58.5	+0.7
	baz=203						
TWKBT				*e*S	Sn	23 49 37.3	+2.5
	baz=203						
MHZQ	Yeshan	3.10	295	*e*P	Pn	23 48 58.1	+0.1
	baz=295						
KNMB	Chin-men Tao	3.44	265	Pn	Pn	23 49 02.0	-0.6
KNMB	Chin-men Tao	3.44	265	*e*P	Pn	23 49 01.8	-0.8
	baz=264						
AXDP	Jialang	3.80	272	*e*P	Pn	23 49 07.3	-0.2
	baz=272						
JOW	Kunigami	5.88	69	Pn	Pn	23 49 39.4	+3.2
	2.0nm,0.3s,baz=225,slow=5.7,SNR=2.3						
	7.2nm,0.5s						
JOW	Kunigami	5.88	69	Pn	Pn	23 49 37.4	+1.2
JNU	Nakatsue	11.27	41	LR	LR	23 55 10.2	
	comp=Z,106nm,20.4s,baz=234,slow=37						
KSRS	Korea Array	13.55	20	Pn	P	23 51 27.5	-2.8
	0.3nm,0.3s,baz=203,slow=14,SNR=2.1						
KSRS				LR	LR	23 57 14.2	
	comp=Z,153nm,18.4s,baz=210,slow=40						
XAN	Xi'an	14.74	312	*e*P	Pn	23 51 31.6	-6.0
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
XAN				smax	smax		
	comp=N,10.0nm,1.4s						
XAN				smax	smax		
	comp=E,9.0nm,1.2s						
XAN				LR	LR		
	comp=N,360nm,13.1s						
XAN				LR	LR		
	comp=E,270nm,13.5s						
XAN				LR	LR		
	comp=Z,280nm,9.2s						
MJAR	Matsushiro Arr	18.08	46	LR	LR	00 00 18.9	
	comp=Z,92nm,18.1s,baz=225,slow=40						
USRK	Ussuriysk Ar.	20.96	20	LR	LR	00 01 52.7	
	comp=Z,85nm,18.6s,baz=175,slow=39						
TNCH	TengChong	21.43	276	*e*P	P	23 52 56.9	-0.6
TNCH				pP	pP	23 53 00.3	-0.6
TNCH				S	S	23 56 46.8	-8.5
TNCH				pmax	pmax		
	comp=Z,18nm,0.4s						
TNCH				pmax	pmax		
	comp=Z,120nm,4.3s						
TNCH				LR	LR		
	comp=Z,230nm,10.4s						
TNCH				LR	LR		
	comp=Z,230nm,8.9s						
TNCH				LR	LR		
	comp=Z,380nm,9.2s						
CMAR	Chiang Mai Arr	22.46	258	P	P	23 53 09.0	+0.6
	comp=Z,0.8nm,0.3s,baz=55,slow=11,SNR=1.4						
CMAR				LR	LR	00 02 45.8	
	comp=Z,88nm,20.5s,baz=90,slow=39						
	comp=Z,0.8nm,0.3s						
GTA	Gaotai	23.79	313	*e*P	P	23 53 23.0	+1.1
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ASAJ	Asahikawa	25.48	36	LR	LR	00 04 21.9	
	comp=Z,106nm,19.0s,baz=321,slow=38						
KLR	Kul'dur	25.52	15	P	P	23 53 38.7	+1.2
	comp=Z,1.3nm,0.7s,baz=201,slow=7.5,SNR=5.3						
KLR				LR	LR	00 04 50.1	
	comp=Z,103nm,18.3s,baz=207,slow=39						
	comp=Z,1.3nm,0.7s						
HEH	HeiHe	25.74	8	*e*P	P	23 53 43.3	+3.9
HEH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ULN	Ulaanbaatar	25.94	336	P	P	23 53 41.8	+0.3
ULN				IAmb	IAmb	23 53 43.4	
	comp=Z,2.8nm,0.6s						
SONM	Songino Array	26.16	335	P	P	23 53 44.3	+0.8
	comp=Z,1.5nm,0.7s,baz=153,slow=11,SNR=18						
SONM				LR	LR	00 05 26.8	
	comp=Z,77nm,21.7s,baz=159,slow=40						
	comp=Z,1.5nm,0.7s						
SONM	Songino Array	26.16	335	P	P	23 53 43.8	+0.3
YAK	Yakutsk	37.57	6	LR	LR	00 12 36.9	
	comp=Z,73nm,19.4s,baz=257,slow=39						
MK31	Makanchi Array	38.52	315	P	P	23 55 31.9	+0.5
MK31				IAmb	IAmb	23 55 40.3	
	comp=Z,3.1nm,1.5s						
MKAR	Makanchi Array	38.52	315	P	P	23 55 31.8	+0.4
	comp=Z,0.3nm,0.5s,baz=104,slow=10,SNR=6.6						
	comp=Z,0.3nm,0.5s						
MAKZ	Makanchi	38.73	315	P	P	23 55 32.9	-0.2
PETK	Petropavlovsk-	38.87	34	LR	LR	00 12 45.8	
	comp=Z,49nm,18.5s,baz=241,slow=38						
ZALV	Zalesovo Beam	40.22	326	P	P	23 55 45.0	-0.5
	comp=Z,0.8nm,0.6s,baz=116,slow=6.8,SNR=4.8						
	comp=Z,0.8nm,0.6s						
KURBB	Kurchatov Arra	42.22	319	P	P	23 56 01.7	-0.2
	comp=Z,0.1nm,0.5s,baz=108,slow=9.2,SNR=2.2						
	comp=Z,0.1nm,0.5s						
AAK	Ala-Archa	42.84	307	LR	LR	00 17 28.1	
	comp=Z,77nm,19.1s,baz=164,slow=41						
WB0	Warramunga Arr	45.87	164	P	P	23 56 31.0	-0.5
WB0				IAmb	IAmb	23 56 42.0	
	comp=Z,13nm,1.5s						
WRAB	Tennant Creek	46.02	164	P	P	23 56 32.4	-0.3
WRAB				IAmb	IAmb	23 56 37.7	
	comp=Z,6.5nm,1.1s						
WRA	Warramunga Arr	46.03	164	P	P	23 56 32.6	-0.2
	comp=Z,2.9nm,0.9s,baz=346,slow=8.7,SNR=13						
	comp=Z,2.9nm,0.9s						
WB2	Warramunga Arr	46.03	164	P	P	23 56 31.6	-1.2
WB2				IAmb	IAmb	23 56 37.7	
	comp=Z,5.5nm,0.9s						
BVAR	Borovoye Array	47.76	320	P	P	23 56 46.4	+0.4
	comp=Z,0.5nm,0.5s,baz=120,slow=8.5,SNR=4.3						
	comp=Z,0.5nm,0.5s						
ASAR	Alice Springs	49.51	166	P	P	23 57 01.1	+1.3
	comp=Z,1.0nm,0.7s,baz=343,slow=8.9,SNR=8.1						
	comp=Z,1.0nm,0.7s						
ABKAR	Akbulak array	53.65	314	P	P	23 57 30.5	0.0
ABKAR				IAmb	IAmb	23 57 32.3	
	comp=Z,2.9nm,1.4s						
GEYT	Alibeck	55.25	300	P	P	23 57 43.8	+1.4
	comp=Z,0.9nm,0.5s,baz=199,slow=3.1,SNR=3.7						
	comp=Z,0.9nm,0.5s						
STKA	Stephens Creek	59.34	161	P	P	23 58 13.9	+2.8
	comp=Z,1.3nm,0.7s,baz=338,slow=11,SNR=2.8						
	comp=Z,1.3nm,0.7s						
H21K	Melozitna Rive	65.66	27	P	P	23 58 51.4	-1.7
H21K				IAmb	IAmb	23 58 56.6	
	comp=Z,3.3nm,1.4s						
SKT	Skwentna	66.72	31	P	P	23 59 02.6	+2.7
SUA	Susitna One	67.18	31	P	P	23 59 05.0	+2.1
ILAR	Eielson Array	68.27	27	LR	LR	00 29 04.8	
	comp=Z,19nm,21.8s,baz=216,slow=36						
BMAR	Burnt Mountain	68.61	24	P	P	23 59 13.3	+1.5
FINES	FINESS Array B	71.36	330	P	P	23 59 26.5	-2.2
	comp=Z,1.4nm,0.8s,baz=46,slow=4.0,SNR=2.4						
FINES	FINESS Array B	71.36	330	P	P	23 59 28.1	-0.6
BRTR	Keskin Array B	73.52	306	P	P	23 59 42.5	+0.3
	comp=Z,0.9nm,0.9s,baz=46,slow=4.2,SNR=3.9						
	comp=Z,0.9nm,0.9s						
HFS	Hagfors	77.46	331	LR	LR	00 38 52.9	
	comp=Z,71nm,18.4s,baz=66,slow=39						
JMIC	Jan Mayen	78.46	345	LR	LR	00 39 00.3	
	comp=Z,37nm,18.4s,baz=20,slow=39						
YKA	Yellowknife Ar	82.06	23	P	P	00 00 29.9	+0.8
	comp=Z,0.1nm,0.4s,baz=313,slow=3.9,SNR=4.4						
	comp=Z,0.1nm,0.4s						

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*IDC **19** 23:52:45.6±1.1, 27°.52N×126°.35E, h0^{km}, mb3.6/8, mbtmp3.7/10, ML3.4/2, MS3.8/3, Error ellipse: s-maj=27.3km s-min=19.3km az=57.0*

ISC 19 23:52:50.2±0.9, 27°.5N±0°.1×126°.5E±0°.1, h35^{km}, n15, σ1^{s}26/13, mb3.6/8, 1D, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOW	Kunigami	1.73	112	Pn	Pn	23 53 17.6	-0.2
	6.9nm,0.3s,baz=321,slow=14,SNR=7.1						
JOW				Sn	Sn	23 53 37.7	-0.9
	18nm,0.3s,baz=262,slow=28,SNR=7.5						
JNU	Nakatsue	6.78	33	Pn	Pn	23 54 27.9	+0.7
	0.7nm,0.3s,baz=211,slow=7.3,SNR=4.4						
	7.5nm,0.7s						
KSRS	Korea Array	10.01	7	Pn	Pn	23 55 11.7	+0.3
	0.3nm,0.3s,baz=187,slow=14,SNR=5.9						
KSRS				Lg	Lg	23 58 03.8	
	0.2nm,0.3s,baz=189,slow=31,SNR=2.9						
	1.6nm,0.7s						
JCJ	Chichijima	13.97	88	LR	LR	00 00 31.3	
	comp=Z,73nm,20.7s,baz=124,slow=33						
BNX	BinXian	18.23	2	⇓P	Pn	23 57 00.9	+0.6
BNX				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BNX				pmax	pmax		
	comp=Z,76nm,4.3s						
KLR	Kul'dur	22.08	9	P	P	23 57 41.1	-1.0
	comp=Z,1.7nm,0.7s,baz=252,slow=7.8,SNR=5.8						
	comp=Z,1.7nm,0.7s						
SONM	Songino Array	25.66	328	P	P	23 58 14.6	-2.1
	comp=Z,1.6nm,0.7s,baz=140,slow=10,SNR=18						
	comp=Z,1.6nm,0.7s						
MKAR	Makanchi Array	39.53	311	P	P	00 00 16.0	-1.7
	comp=Z,0.6nm,0.6s,baz=98,slow=10,SNR=8.8						
	comp=Z,0.6nm,0.6s						
ZALV	Zalesovo Beam	40.30	323	P	P	00 00 25.0	+1.1
	comp=Z,0.7nm,0.6s,baz=101,slow=7.5,SNR=4.5						
	comp=Z,0.7nm,0.6s						
KURBB	Kurchatov Arra	42.87	316	P	P	00 00 44.4	-0.5
	comp=Z,0.4nm,0.6s,baz=105,slow=8.4,SNR=4.0						
	comp=Z,0.4nm,0.6s						
WRA	Warramunga Arr	47.76	170	P	P	00 01 25.4	+1.4
	comp=Z,0.2nm,0.7s,baz=354,slow=8.3,SNR=1.3						
	comp=Z,0.2nm,0.7s						
BVAR	Borovoye Array	48.30	318	P	P	00 01 28.6	+0.7
	comp=Z,0.3nm,0.4s,baz=90,slow=8.9,SNR=3.6						
	comp=Z,0.3nm,0.4s						
HNR	Honiara	48.97	134	LR	LR	00 21 47.4	
	comp=Z,443nm,18.7s,baz=283,slow=36						
FINES	FINESS Array B	71.00	330	P	P	00 04 05.5	+1.5
	comp=Z,2.9nm,1.0s,baz=62,slow=6.5,SNR=3.8						
	comp=Z,2.9nm,1.0s						
VRAC	Vranov	81.41	322	LR	LR	00 43 32.5	
	comp=Z,43nm,19.1s,baz=66,slow=38						

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*NOU **20** 00:10:14.2, 22°.18S×170°.67E, h0^{km}, MLv4.5/10, Southeast of Loyalty Islands*

*IDC **20** 00:10:24.0±2.3, 21°.66S×169°.83E, h0^{km}, mb3.8/4, mbtmp3.8/5, ML3.6/1, MS3.5/9, Error ellipse: s-maj=100.7km s-min=30.3km az=151.0*

ISC 20 00:10:27.7±1.4, 21°.9S±0°.2×169°.8E±0°.1, h25^{km}, n21, σ0^{s}86/17, mb3.7/4, MS3.5/5, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	Pines Island,	2.29	252	P	Pn	00 11 04.5	+0.6
LIFNC	LIFOU	2.65	295	P	Pn	00 11 08.6	-0.2
YATNC	Mamie plateau,	2.71	267	P	Pn	00 11 09.1	-0.6
OUENC	Ouen Island, N	2.79	259	P	Pn	00 11 09.7	-1.1
DZM	Mont Dzumac	3.12	267	Pn	Pn	00 11 15.6	+0.2
	7.1nm,0.3s,baz=132,slow=8.7,SNR=106						
DZM				Sn	Sn	00 11 51.0	-1.0
	17nm,0.3s,baz=83,slow=22,SNR=7.4						
DZM				LR	LR	00 11 56.6	
	comp=Z,184nm,20.8s,baz=197,slow=29						
	21nm,0.4s						
DZM	Mont Dzumac	3.12	267	P	Pn	00 11 15.6	+0.2
ONTNC	Ouen Toro	3.13	262	P	Pn	00 11 15.7	+0.2
NOUC	Port Laguerre	3.25	266	P	Pn	00 11 17.1	-0.1
KOUNC	Koumac, New Ca	5.33	284	P	Pn	00 11 47.5	+1.8
MSVF	Nonsavu	8.81	63	LR	LR	00 15 10.3	
	comp=Z,200nm,18.2s,baz=183,slow=33						
URZ	Urewera	17.45	161	LR	LR	00 19 51.4	
	comp=Z,189nm,19.1s,baz=42,slow=32						
AFI	Afiamalu	19.24	69	LR	LR	00 20 17.5	
	comp=Z,63nm,18.9s,baz=224,slow=31						
RPZ	Rata Peaks	21.76	178	LR	LR	00 23 30.3	
	comp=Z,116nm,18.1s,baz=252,slow=36						
CTA	Charters Tower	22.06	270	LR	LR	00 22 59.0	
	comp=Z,113nm,19.5s,baz=128,slow=34						
STKA	Stephens Creek	26.97	242	P	P	00 16 09.0	+1.6
	1.4nm,0.7s,baz=60,slow=7.3,SNR=3.7						
STKA				LR	LR	00 26 07.0	
	comp=Z,173nm,18.3s,baz=222,slow=35						
	1.4nm,0.7s						
ASAR	Alice Springs	33.09	260	P	P	00 17 02.4	+0.5
	0.7nm,0.7s,baz=83,slow=9.2,SNR=9.3						
ASAR				LR	LR	00 29 38.3	
	comp=Z,99nm,18.4s,baz=29,slow=35						
	0.7nm,0.7s						
WRA	Warramunga Arr	33.14	267	P	P	00 17 01.9	-0.4
	0.6nm,0.8s,baz=102,slow=7.6,SNR=6.6						
WRA				LR	LR	00 30 59.3	
	comp=Z,126nm,18.3s,baz=290,slow=37						
	0.6nm,0.8s						
SONM	Songino Array	89.67	323	P	P	00 23 23.2	-0.3
	0.8nm,1.1s,baz=128,slow=2.4,SNR=4.2						
	0.8nm,1.1s						
ARCES	ARCESS Array B	127.78	345	PKP	PKPdf	00 29 29.6	-0.8
	2.6nm,0.8s,baz=48,slow=1.8,SNR=6.6						
FINES	FINESS Array B	133.26	337	PKP	PKPdf	00 29 40.8	-0.1
	2.6nm,1.0s,baz=17,slow=1.5,SNR=6.0						
GERES	GERESS Array B	147.09	330	PKPbc	PKPbc	00 30 07.9	-0.6
	1.0nm,0.5s,baz=18,slow=4.4,SNR=5.4						

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*TAP **20** 00:25:40.9, 24°.61N×122°.60E, h107^{km}±1^{km}, ML2.6, C*

*JMA **20** 00:25:41.1±0.1, 25°N±2°×122°.6E±0°.4, h104^{km}±1^{km}, MV1.9/8, NW OFF ISHIGAKIJIMA IS*

ISC 20 00:25:40.8±1.7, 24°.62N±0°.06×122°.62E±0°.03, h109^{km}±10^{km}, n37, σ0^{s}68/71, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.35	120	P	Pn	00 25 56.6	-0.1
JYNG				*e*S	Sn	00 26 08.1	-0.3
YOJ	Yonaguni jima	0.40	114	P	Pn	00 25 56.8	-0.1
YOJ				S	Sn	00 26 08.6	-0.4
YOJ	Yonaguni jima	0.40	114	P	Pn	00 25 56.5	-0.3
	baz=111						
YOJ				*i* S	Sn	00 26 08.7	-0.2
	baz=111						
EOS2	EOS2	0.40	240	P	Pn	00 25 57.2	+0.5
	baz=240						
EOS2				*e*S	Sn	00 26 09.9	+1.2
	baz=240						
EOS3	EOS3	0.43	219	P	Pn	00 25 57.5	+0.6
	baz=218						
EOS3				*e*S	Sn	00 26 10.3	+1.4
	baz=218						
EOS4	EOS4	0.57	208	*i* P	Pn	00 25 57.7	+0.1
	baz=208						
EOS4				*i* S	Sn	00 26 10.5	+0.4
	baz=208						
TWB1	Santiao Chiao	0.69	304	P	Pn	00 25 59.0	0.0
	baz=305						
TWC	Suao	0.70	269	*i* P	Pn	00 25 58.9	-0.2
	baz=269						
TWC				S	Sn	00 26 11.9	-0.8
	baz=269						
TIPB	Shuangxi	0.80	296	*i* P	Pn	00 25 60.0	0.0
	baz=296						
TIPB				*i* S	Sn	00 26 13.5	-0.9
	baz=296						
SXI1	Grass Mountain	0.82	305	*i* P	Pn	00 26 00.2	0.0
	baz=305						
SXI1				S	Sn	00 26 14.9	+0.1
	baz=305						
FUSB	Fushanzhiwuyua	0.94	278	*i* P	Pn	00 26 01.5	+0.1
	baz=278						
FUSB				*e*S	Sn	00 26 15.1	-1.9
	baz=278						
ENTT	Nioudou	0.95	271	*e*P	Pn	00 26 02.2	+0.8
	baz=271						
ENTT				S	Sn	00 26 17.2	+0.1
	baz=271						
LATG	Datong	0.99	265	P	Pn	00 26 02.5	+0.6
	baz=265						
LATG				S	Sn	00 26 18.0	+0.1
	baz=265						
ETL	Fush Village	1.01	243	*e*S	Sn	00 26 17.6	-0.6
	baz=243						
NACB	Ninganchiao	1.03	245	*e*P	Pn	00 26 02.9	+0.6
	baz=244						
NACB				S	Sn	00 26 17.5	-0.9
	baz=244						
IRIF	Iriomote-Funau	1.06	106	P	Pn	00 26 02.6	+0.2
IRIF				S	Sn	00 26 18.7	-0.1
TWD	Chiawan	1.07	240	*i* P	Pn	00 26 02.9	+0.2
	baz=239						
TWD				*i* S	Sn	00 26 18.8	-0.4
	baz=239						
ETLH	Xiulin Townshi	1.11	248	*e*P	Pn	00 26 02.7	-0.5
	baz=248						
ETLH				*e*S	Sn	00 26 19.2	-0.9
	baz=248						
YHNB	Yeheng	1.13	273	*i* P	Pn	00 26 03.6	+0.3
	baz=272						
YHNB				S	Sn	00 26 20.3	-0.1
	baz=272						
NNSB	Datong	1.14	260	*e*P	Pn	00 26 04.1	+0.6
	baz=260						
NNSB				*e*S	Sn	00 26 21.0	+0.3
	baz=260						
NNSH	Datong	1.14	260	*i* P	Pn	00 26 03.8	+0.2
	baz=260						
NNSH				S	Sn	00 26 20.6	-0.1
	baz=260						
NSK	Sanguang	1.15	273	P	Pn	00 26 03.8	+0.3
	baz=273						
NSK				S	Sn	00 26 20.4	-0.3
	baz=273						
ETM	Tongmen	1.22	238	P	Pn	00 26 04.2	0.0
	baz=237						
ETM				*e*S	Sn	00 26 21.1	-0.9
	baz=237						
WHF	Hehuan Shan	1.32	249	*i* P	Pn	00 26 06.3	+0.4
	baz=248						
WHF				S	Sn	00 26 24.1	-0.7
	baz=248						
JKRS	Kuro-shima	1.33	107	P	Pn	00 26 06.0	+0.5
JKRS				S	Sn	00 26 24.5	+0.3
NFF	Wufeng Townshi	1.36	271	*i* P	Pn	00 26 06.4	+0.4
	baz=270						
NFF				*i* S	Sn	00 26 24.7	-0.4
	baz=270						
TDCB	Techi	1.38	255	S	Sn	00 26 25.3	-0.3
	baz=254						
JIJ	Ishigaki jima	1.42	100	P	Pn	00 26 06.7	+0.2
JIJ				S	Sn	00 26 25.4	-0.6
CHGB	Renai	1.43	247	P	Pn	00 26 07.5	+0.5
	baz=247						
CHGB				S	Sn	00 26 26.4	-0.4
	baz=247						
OWD	Renai	1.47	243	*i* P	Pn	00 26 07.6	+0.2
	baz=243						
OWD				*e*S	Sn	00 26 26.2	-1.3
	baz=243						
WUSB	Renai	1.50	246	P	Pn	00 26 08.0	+0.2
	baz=245						
WUSB				S	Sn	00 26 27.8	-0.3
	baz=245						
JISG	Ishigakijimahi	1.54	91	*e*P	Pn	00 26 08.4	+0.3
JISG				*e*S	Sn	00 26 28.4	-0.4
HGSD	Ruisui	1.57	224	*i* P	Pn	00 26 08.7	+0.4
	baz=224						
HGSD				S	Sn	00 26 28.9	-0.4
	baz=224						
VWDT	VWDT	1.60	238	P	Pn	00 26 09.2	+0.5
	baz=237						
VWDT				S	Sn	00 26 29.4	-0.6
	baz=237						
YULB	Yu-li	1.72	225	*e*P	Pn	00 26 09.1	-1.2
	baz=224						
YULB				*e*S	Sn	00 26 30.9	-1.7
	baz=224						
SSLB	Suanglung	1.73	242	*e*P	Pn	00 26 11.6	+1.1
	baz=241						
SSLB				*e*S	Sn	00 26 33.2	+0.3
	baz=241						
TYC	Yuchr	1.76	246	*e*P	Pn	00 26 12.0	+1.3
	baz=245						
TYC				*e*S	Sn	00 26 35.2	+1.7
	baz=245						

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*GEN **20** 00:30:53.8, 46°.06N×6°.87E, h6^{km}±2^{km}, Ml3.2*

*STR **20** 00:30:54.9±0.2, 46°N±1°×°±°, h4^{km}, MLv3.4/6, Error ellipse: s-maj=0.0km s-min=0.0km az=103.0, preliminary*

*ZUR **20** 00:30:55.0, 46°.03N×6°.90E, h4^{km}±1^{km}, MLh3.3/106, Error ellipse: s-maj=2.4km s-min=0.7km az=272.0*

*LDG **20** 00:30:55.3±0.0, 46°.04N×6°.91E, h3^{km}, Md3.5/5, Ml3.5/74, Error ellipse: s-maj=0.9km s-min=0.8km az=85.0*

*BGR **20** 00:30:55.3±0.7, 46°.04N×6°.89E, h10^{km}, ML3.3/10, Error ellipse: s-maj=6.7km s-min=5.6km az=140.0*

*ROM **20** 00:30:56.3±0.2, 45°.967N±0°.008×6°.97E±0°.01, h10^{km}, ML3.0/58, Error ellipse: s-maj=1.0km s-min=0.8km az=139.0*

*PRU **20** 00:30:57.0±0.0, 46°.05N×6°.93E, h0^{km}*

ISC 20 00:30:54.7±0.7, 46°.041N±0°.010×6°.88E±0°.01, h11^{km}±4^{km}, n344, σ1^{s}64/512, 51C-46D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEMOS	Emosson Stauma	0.05	55	⇓Pg	Pg	00 30 56.4	-0.7
SEMOS				Sg	Sg	00 30 57.4	-1.4
OGSI	Sixt	0.09	287	⇓Pg	Pg	00 30 57.1	-0.3
OGSI				Sg	Sg	00 30 58.5	-0.8
OGSI	Sixt	0.09	287	⇓Pg	Pg	00 30 57.1	-0.3
OGSI				Sg	Sg	00 30 58.5	-0.8
SMAO	Martigny, Rue	0.15	67	⇓Pg	Pg	00 30 58.1	0.0
SMAO				Sg	Sg	00 31 00.5	-0.1
SMAO	Martigny, Rue	0.15	67	⇓Pg	Pg	00 30 58.1	0.0
SMAO				Sg	Sg	00 31 00.5	-0.1
SMUK	Muraz-Klaeranl	0.25	10	⇑Pg	Pg	00 30 60.0	+0.1
GRYON	Gryon	0.26	37	⇑Pg	Pg	00 31 00.1	-0.1
GRYON				Sg	Sg	00 31 04.0	+0.1
REMY	Saint-Rhmy-en	0.28	136	P	Pg	00 31 00.8	+0.2
REMY				S	Sg	00 31 04.6	+0.2
REMY				AML	AML		
	comp=N,11000μm,0.4s						
REMY				AML	AML		
	comp=E,5480μm,1.1s						
REMY				AML	AML		
	comp=N,11000μm,1.6s						
REMY	Saint-Rhmy-en	0.28	136	P	Pg	00 31 00.7	+0.2
REMY				S	Sg	00 31 04.8	+0.4
REMY	Saint-Rhmy-en	0.28	136	⇓Pg	Pg	00 31 00.7	+0.2
REMY				Sg	Sg	00 31 04.7	+0.4
SAIG	Aigle Rue de l	0.28	12	⇑Pg	Pg	00 31 00.5	0.0
MRGE	Morge	0.30	155	⇑P	Pg	00 31 01.0	+0.2

MRGE				S	Sg	00 31 05.1	+0.3
MRGE				AML	AML		
	comp=E,23700µm,0.2s						
MRGE				AML	AML		
	comp=N,12600µm,0.2s						
MRGE	Morge	0.30	155	P	Pg	00 31 01.0	+0.2
MRGE				S	Sg	00 31 05.1	+0.3
MRGE	Morge	0.30	155	⇑Pg	Pg	00 31 00.9	+0.2
MRGE				Sg	Sg	00 31 05.2	+0.3
AIGLE	Aigle	0.30	10	⇑Pg	Pg	00 31 00.9	0.0
AIGLE	Aigle	0.30	10	Sg	Sg	00 31 05.2	+0.1
AIGLE	Aigle	0.30	10	⇑Pg	Pg	00 31 00.9	0.0
AIGLE				Sg	Sg	00 31 05.7	+0.7
DIX	Grande Dixence	0.37	84	⇓P	Pg	00 31 02.3	+0.1
DIX				AML	AML		
	comp=N,21650µm,0.2s						
DIX				AML	AML		
	comp=E,7360µm,0.4s						
DIX	Grande Dixence	0.37	84	P	Pg	00 31 02.3	+0.1
DIX				S	Sg	00 31 07.2	0.0
DIX	Grande Dixence	0.37	84	⇓Pg	Pg	00 31 02.3	+0.1
DIX	Grande Dixence	0.37	84	⇓Pg	Pg	00 31 02.3	+0.1
DIX				Sg	Sg	00 31 07.1	0.0
ESION	College des Cr	0.38	60	⇑Pg	Pg	00 31 02.3	+0.1
SIOM	Sion-Mayennets	0.39	60	Pg	Pg	00 31 02.4	+0.1
SIOV	Sion-Valere	0.39	60	⇑Pg	Pg	00 31 02.5	+0.1
RSL	Roselend	0.40	207	P	Pg	00 31 02.5	-0.1
RSL				S	Sg	00 31 08.0	+0.2
RSL	Roselend	0.40	207	⇑Pg	Pg	00 31 02.5	-0.1
RSL				Sg	Sg	00 31 07.6	-0.2
SIOO	Sion-Ophtalmol	0.40	61	⇑Pg	Pg	00 31 02.8	+0.2
SIOO				Sg	Sg	00 31 08.7	+0.8
SVEJ	Vevey Jardin d	0.42	356	Pg	Pg	00 31 03.3	+0.4
SENIN	Lac Senin/Sane	0.43	42	P	Pg	00 31 03.3	-0.1
SENIN				S	Sg	00 31 09.5	+0.3
SENIN	Lac Senin/Sane	0.43	42	⇑Pg	Pg	00 31 03.2	-0.1
SENIN				Sg	Sg	00 31 09.3	+0.2
SAYF2	Ayent-Fortunoz	0.45	56	⇑Pg	Pg	00 31 03.5	0.0
SAYF2				Sg	Sg	00 31 09.7	+0.2
SCOD	Ch¢teau-dO	0.46	22	⇑Pg	Pg	00 31 03.7	-0.1
OG02	Monnetier-Morn	0.47	284	Pg	Pg	00 31 04.3	+0.3
STSW2	Zeuzier, Staus	0.49	51	⇑Pg	Pg	00 31 04.2	-0.1
STSW2				Sg	Sg	00 31 11.1	+0.2
ELAUS	Gymnase	0.52	340	Pg	Pg	00 31 05.5	+0.6
ELAUS				Sg	Sg	00 31 13.6	+1.9
SIEB	Ecole de Borzu	0.52	61	Pg	Pg	00 31 05.0	+0.1
SIEB				Sg	Sg	00 31 12.0	+0.2
VANNI	Vissoie, Val d	0.53	71	P	Pg	00 31 05.0	0.0
VANNI				S	Sg	00 31 11.9	-0.1
VANNI	Vissoie, Val d	0.53	71	⇓Pg	Pg	00 31 05.0	0.0
VANNI				Sg	Sg	00 31 12.0	0.0
VANNI	Vissoie, Val d	0.53	71	⇓Pg	Pg	00 31 05.0	0.0
VANNI				Sg	Sg	00 31 11.9	-0.1
LPL	La Plagne	0.53	191	*e*Pg	Pg	00 31 05.1	0.0
LPL				*e*Sg	Sg	00 31 12.8	+0.6
	comp=E,482nm,0.3s						
LPL				*e*Sn	Sn	00 31 17.2	-0.4
	comp=E,281nm,0.3s						
SZEK	Zermatt, Kirch	0.60	92	Pg	Pg	00 31 06.0	-0.5
LKBD	Leukerbad	0.62	56	⇑Pg	Pg	00 31 06.6	-0.2
LKBD				Sg	Sg	00 31 15.0	-0.1
LKBD2	Leukerbad 2	0.63	58	⇑Pg	Pg	00 31 06.8	-0.2
SMOE	Moudon cole,	0.63	355	⇑Pg	Pg	00 31 07.5	+0.5
CIRO	Champorcher	0.65	132	⇓P	Pg	00 31 07.0	-0.3
CIRO				S	Sg	00 31 15.1	-0.8
CIRO				AML	AML		
	comp=N,2675µm,0.3s						
CIRO				AML	AML		
	comp=E,1458µm,0.7s						
CIRO	Champorcher	0.65	132	P	Pg	00 31 07.0	-0.3
CIRO				S	Sg	00 31 15.4	-0.6
CIRO	Champorcher	0.65	132	⇓Pg	Pg	00 31 07.0	-0.3
CIRO				Sg	Sg	00 31 15.3	-0.6
GIMEL	St. Georges /	0.65	319	Pg	Pg	00 31 07.9	+0.5
GIMEL	St. Georges /	0.65	319	Sg	Sg	00 31 16.7	+0.8
GIMEL	St. Georges /	0.65	319	Pg	Pg	00 31 07.9	+0.5
SGAK	Gampel Kirche,	0.66	65	Pg	Pg	00 31 07.3	-0.2
SGRA	Graechen Ausbl	0.68	77	Pg	Pg	00 31 07.7	-0.2
EMBD	Embd, Matterta	0.69	75	P	Pg	00 31 07.7	-0.3
EMBD				S	Sg	00 31 16.2	-0.8
EMBD	Embd, Matterta	0.69	75	Sg	Sg	00 31 16.7	-0.3
EMBD	Embd, Matterta	0.69	75	⇓Pg	Pg	00 31 07.7	-0.3
EMBD	Embd, Matterta	0.69	75	⇓Pg	Pg	00 31 07.7	-0.3
EMBD				Sg	Sg	00 31 16.2	-0.8
SATI	Passo dei Sala	0.71	103	P	Pg	00 31 07.7	-0.8
SATI	Passo dei Sala	0.71	103	P	Pg	00 31 07.7	-0.8
SATI	Passo dei Sala	0.71	103	⇓Pg	Pg	00 31 07.7	-0.8
SATI	Passo dei Sala	0.71	103	⇓Pg	Pg	00 31 07.7	-0.8
TORNY	Torny/Romont	0.73	4	Pg	Pg	00 31 09.3	+0.3
TORNY	Torny/Romont	0.73	4	Sg	Sg	00 31 19.0	+0.4
TORNY	Torny/Romont	0.73	4	⇑Pg	Pg	00 31 09.2	+0.3
TORNY				PmP		00 31 12.3	
TORNY				Sg	Sb	00 31 20.2	+0.6
TORNY				SmS		00 31 24.4	
SVIT	Visp-Terbiners	0.74	70	Pg	Pg	00 31 08.9	-0.1
SYVP	Yverdon-les-Ba	0.75	347	Pg	Pg	00 31 10.0	+0.7
SYVP				Sg	Sb	00 31 21.4	+1.3
MMK	Mattmark	0.76	89	⇓P	Pg	00 31 08.7	-0.7
MMK				AML	AML		
	comp=N,456µm,1.6s						
MMK				AML	AML		
	comp=N,456µm,0.4s						
MMK				AML	AML		
	comp=E,348µm,0.5s						
MMK	Mattmark	0.76	89	P	Pg	00 31 08.6	-0.7
MMK				S	Sg	00 31 18.3	-0.9
MMK	Mattmark	0.76	89	⇓Pg	Pg	00 31 08.6	-0.7
MMK				Sg	Sg	00 31 18.1	-1.1
SFRU	Fribourg, Univ	0.78	14	Pg	Pg	00 31 09.9	+0.2
SFRU				PmP		00 31 13.0	
CABF	La Chapelle	0.79	316	*e*Pg	Pg	00 31 10.4	+0.4
CABF	La Chapelle	0.79	316	*e*Pn	Pb	00 31 12.1	+1.6
CABF				*e*Sg	Sg	00 31 21.0	+0.6
	comp=E,133nm,0.2s						
CABF				*e*Sn	Sb	00 31 24.0	+2.7
	comp=E,421nm,0.3s						
STAF	Tafers	0.80	17	Pg	Pg	00 31 10.2	+0.1
TRAV	Traversella	0.80	131	⇓P	Pg	00 31 09.8	-0.5
TRAV				S	Sg	00 31 19.8	-0.9
TRAV				AML	AML		
	comp=N,3080µm,0.4s						
TRAV				AML	AML		
	comp=E,1425µm,0.3s						
TRAV	Traversella	0.80	131	P	Pg	00 31 09.9	-0.3
TRAV				S	Sg	00 31 19.9	-0.8
TRAV	Traversella	0.80	131	⇓Pg	Pg	00 31 09.7	-0.5
TRAV				Sg	Sg	00 31 19.9	-0.9
WIMIS	Wimmis	0.81	39	⇑Pg	Pg	00 31 10.2	-0.2
SIMPL	Simplonpass	0.82	75	P	Pg	00 31 10.1	-0.4
SIMPL				S	Sg	00 31 20.6	-0.6
SIMPL	Simplonpass	0.82	75	⇓Pg	Pg	00 31 10.1	-0.4
SIMPL				Sg	Sg	00 31 20.7	-0.5
SCOU	Cournillens	0.83	11	⇑Pg	Pg	00 31 10.8	+0.1
OGMO	Fort Saint-Gob	0.84	189	⇑Pg	Pg	00 31 10.7	-0.3
OGMO				Sg	Sg	00 31 22.0	0.0
OG35	Corcelles	0.91	271	⇓Pg	Pg	00 31 12.5	+0.3
OG35				Sg	Sg	00 31 24.8	+0.7
OG35	Corcelles	0.91	271	⇓Pg	Pg	00 31 12.5	+0.3
OG35				PmP		00 31 14.8	
OGSM	Saint Maurice	0.93	243	⇓Pg	Pg	00 31 13.1	+0.5
OGSM				Sg	Sg	00 31 25.6	+0.8
RSP	Reno Superiore	0.93	163	P	Pg	00 31 12.2	-0.4
RSP				AML	AML		
	comp=E,1022µm,0.9s						
RSP				AML	AML		
	comp=N,808µm,0.9s						
RSP				AML	AML		
	comp=N,833µm,0.9s						
RSP				AML	AML		
	comp=E,1021µm,0.9s						
RSP				AML	AML		
	comp=E,1069µm,0.9s						
RSP				AML	AML		
	comp=E,1069µm,1.1s						
RSP				AML	AML		
	comp=E,1021µm,1.1s						
RSP				AML	AML		
	comp=N,808µm,0.9s						
RSP	Reno Superiore	0.93	163	P	Pg	00 31 12.2	-0.4
RSP				S	Sg	00 31 24.8	0.0
SINS	Interlaken, Sc	0.94	46	Pg	Pg	00 31 12.8	+0.1
BRANT	Les Verrieres	0.94	343	Pg	Pg	00 31 13.6	+0.7
BRANT	Les Verrieres	0.94	343	⇑Pg	Pg	00 31 13.5	+0.7
BRANT				Sg	Sb	00 31 26.7	+1.0
FIESA	Fiescheralp	0.94	65	P	Pg	00 31 12.6	-0.2
FIESA				S	Sb	00 31 26.3	+0.6
FIESA	Fiescheralp	0.94	65	Pg	Pg	00 31 12.5	-0.4
SNES2	Neuenburg, Obs	0.96	3	Pg	Pg	00 31 13.2	0.0
RIVEL	MONT RIVEL	0.98	318	Pg	Pg	00 31 13.5	0.0
RIVEL				Sg	Sg	00 31 27.2	+1.0
RIVEL	MONT RIVEL	0.98	318	⇓Pg	Pg	00 31 13.5	0.0
GDM	Grand'Maison	0.99	213	Pg	Pg	00 31 13.2	-0.6
GDM				Sg	Sb	00 31 27.8	+0.6
BNI	Bardonecchia	1.00	188	P	Pg	00 31 13.4	-0.5
BNI				AML	AML		
	comp=E,294µm,0.4s						
BNI				AML	AML		
	comp=N,257µm,1.1s						
BNI				AML	AML		
	comp=N,257µm,0.9s						
BNI				AML	AML		
	comp=N,213µm,0.4s						
BNI				AML	AML		
	comp=E,361µm,0.4s						
BNI				AML	AML		
	comp=E,294µm,1.6s						
BNI	Bardonecchia	1.00	188	⇑Pg	Pg	00 31 13.4	-0.5
WOLEN	Wohlen bei Ber	1.01	19	⇑Pg	Pg	00 31 14.3	0.0
SLCF	La Chaux de Fo	1.04	357	⇑Pg	Pg	00 31 15.1	+0.3
RRL	Rocca Remolon	1.12	183	P	Pg	00 31 15.8	-0.5
RRL				AML	AML		
	comp=E,530µm,1.0s						
RRL				AML	AML		
	comp=N,582µm,0.5s						
SBIK	Biel, Kongress	1.12	13	Pg	Pg	00 31 16.6	+0.4
GRN	Grenoble	1.13	225	Pg	Pg	00 31 16.6	+0.2
GRN				Sg	Sg	00 31 31.7	+0.7
GRIMS	Grimsel Gerste	1.13	61	Pg	Pg	00 31 16.2	-0.3
HASLI	Hasliberg/Brie	1.14	50	⇑Pg	Pg	00 31 16.1	-0.4
MONC	Moncucco Torin	1.22	142	P	Pg	00 31 17.8	-0.2
MONC				AML	AML		
	comp=E,1130µm,1.6s						
MONC				AML	AML		
	comp=E,1130µm,0.4s						
MONC				AML	AML		
	comp=N,872µm,0.4s						
MONC	Moncucco Torin	1.22	142	P	Pn	00 31 19.5	+1.8
MONC				S	Sn	00 31 38.0	+4.0
MONC	Moncucco Torin	1.22	142	Pg	Pn	00 31 19.2	+1.6
BHB	Bricherasio	1.23	167	P	Pg	00 31 17.8	-0.5
BHB				S	Sg	00 31 32.9	-1.3
BHB				AML	AML		
	comp=E,425µm,0.5s						
BHB				AML	AML		
	comp=E,425µm,1.5s						
BHB				AML	AML		
	comp=N,718µm,1.0s						
SOLB	Solothurn Schu	1.25	20	Pg	Pg	00 31 18.8	+0.2
SOLZ	Solothurn, Zeu	1.25	21	Pg	Pg	00 31 18.9	+0.1
BOUC	Bouclans	1.28	341	Pg	Pg	00 31 19.3	0.0
BOUC				Sg	Sg	00 31 36.5	+0.5
BOUC	Bouclans	1.28	341	⇑Pg	Pg	00 31 19.2	-0.1
FUSIO	Fusio	1.30	71	⇓P	Pg	00 31 19.3	-0.5
FUSIO				AML	AML		
	comp=E,530µm,0.9s						
FUSIO				AML	AML		
	comp=N,506µm,0.4s						
FUSIO				AML	AML		
	comp=E,530µm,1.1s						
FUSIO	Fusio	1.30	71	P	Pg	00 31 19.0	-0.8
FUSIO	Fusio	1.30	71	Pg	Pg	00 31 19.0	-0.8
MBDF	Montbardon	1.32	183	*e*Pn	Pg	00 31 19.3	-0.7
MBDF				*e*Sn	Sg	00 31 35.7	-1.3
MBDF				*e*Sg	Sb	00 31 37.2	+0.8
	comp=E,499nm,0.6s						
ORIF	Oris-en-Rattie	1.32	212	*e*Pn	Pg	00 31 18.1	-2.0
ORIF				*e*Sn	Sg	00 31 36.3	-1.0
ORIF				*e*Sg	Sb	00 31 38.0	+1.4
	comp=E,442nm,0.3s						
ORIF	Oris-en-Rattie	1.32	212	⇑P	Pg	00 31 19.2	-0.9
ORIF				S	Sg	00 31 36.5	-0.8
ORIF				AML	AML		
	comp=E,764µm,1.0s						
ORIF				AML	AML		
	comp=N,915µm,0.8s						
ORIF	Oris-en-Rattie	1.32	212	P	Pg	00 31 19.2	-0.9
ORIF	Oris-en-Rattie	1.32	212	Pn	Pg	00 31 20.3	+0.2
VARE	Varese	1.33	97	P	Pg	00 31 19.3	-0.9
VARE				AML	AML		
	comp=N,486µm,0.4s						
VARE				AML	AML		
	comp=E,254µm,0.5s						
VARE	Varese	1.33	97	P	Pg	00 31 19.6	-0.6
VARE	Varese	1.33	97	Pg	Pg	00 31 19.1	-1.1
MTI03	Mont Terri (fr	1.35	8	⇑Pg	Pn	00 31 19.9	+0.5
BNALP	Bannalp	1.35	52	⇑P	Pb	00 31 21.3	+1.1
BNALP				S	Sn	00 31 40.2	+2.5
BNALP				AML	AML		
	comp=E,466µm,0.6s						
BNALP				AML	AML		
	comp=N,668µm,0.7s						
BNALP	Bannalp	1.35	52	⇑Pg	Pn	00 31 20.3	+0.6
BNALP				PmP		00 31 21.5	
MTI02	Mont Terri, (H	1.35	8	⇑Pg	Pn	00 31 19.9	+0.3
MTI02				Sg	Sb	00 31 39.1	+1.7
BOURR	Bourrignon	1.38	10	Sn	Sg	00 31 39.3	+0.4
BOURR	Bourrignon	1.38	10	P	Pn	00 31 20.2	+0.3
BOURR	Bourrignon	1.38	10	Pn	Pn	00 31 21.1	+1.2
BOURR	Bourrignon	1.38	10	⇑Pg	Pn	00 31 20.3	+0.3
NALPS	Val Nalps	1.41	66	Pg	Pn	00 31 21.2	+0.6
BALST	Balsthal	1.41	23	*e*Pg	Pn	00 31 20.6	+0.2
BALST				*e*Sg	Sn	00 31 41.2	+2.1
BALST	Balsthal	1.41	23	P	Pn	00 31 20.7	+0.2
BALST	Balsthal	1.41	23	Pn	Pn	00 31 21.2	+0.8
BALST	Balsthal	1.41	23	Sn	Sb	00 31 40.5	+1.3
BALST	Balsthal	1.41	23	⇑Pg	Pn	00 31 20.7	+0.2
DAGMA	Lutertal, Dagm	1.42	33	⇑Pg	Pn	00 31 21.1	+0.6
CREF	Crivoux	1.50	187	Pn	Pn	00 31 22.7	+1.0
CREF				Sn	Sb	00 31 41.9	+0.1
MUGIO	Muggio	1.51	94	⇓P	Pn	00 31 22.5	+0.7
MUGIO				AML	AML		
	comp=N,336µm,0.7s						
MUGIO				AML	AML		
	comp=E,335µm,0.6s						
MUGIO	Muggio	1.51	94	P	Pn	00 31 22.9	+1.1
MUGIO	Muggio	1.51	94	⇓Pg	Pn	00 31 22.5	+0.7
MUO	Muotathal	1.53	52	⇑Pg	Pb	00 31 23.7	+0.5
HAMIK	Hmikon, Dlik	1.54	38	Pn	Pn	00 31 22.8	+0.6
PZZ	Stroppo	1.54	174	P	Pn	00 31 23.1	+0.8
PZZ				AML	AML		
	comp=E,900µm,0.6s						
PZZ				AML	AML		
	comp=N,720µm,0.3s						
PZZ	Stroppo	1.54	174	⇓Pn	Pn	00 31 23.0	+0.8
SRER	Reinach, Raine	1.55	18	Pn	Pn	00 31 22.8	+0.6
SURF	Saint Ours	1.56	182	Pn	Pn	00 31 23.6	+1.1
SURF				Sn	Sn	00 31 43.9	+1.1
SFRA	Frenkendorf	1.57	21	Pn	Pn	00 31 22.9	+0.3
SBIS2	Binningen	1.58	18	Pn	Pn	00 31 23.1	+0.5
ROTM	Rocchetta Tana	1.58	138	P	Pn	00 31 23.1	+0.4
ROTM				AML	AML		
	comp=N,1205µm,0.4s						
ROTM				AML	AML		
	comp=E,862µm,0.5s						
ROTM				AML	AML		
	comp=N,1205µm,1.6s						
MATTE	Schuetzenmatte	1.58	17	Pn	Pn	00 31 22.9	+0.2
EMMET	Emmethof	1.60	29	⇑Pn	Pn	00 31 23.0	0.0
OGAG	Argentiere	1.60	189	P	Pn	00 31 18.6	-4.5
OGAG				Pg	Pb	00 31 19.0	-5.4
OGAG				Sg	Sn	00 31 36.2	-7.6
ROTHE	Rothenfluh	1.60	26	⇑Pn	Pn	00 31 23.2	+0.1
JAUF	Jausiers	1.61	183	Pn	Pn	00 31 24.5	+1.2
JAUF				Sn	Sn	00 31 45.0	+0.9
SBEG	Bettingen Gewe	1.62	19	Pn	Pn	00 31 23.4	+0.1
SULZ	Cheisacher	1.71	29	*e*Pg	Pg	00 31 27.6	+0.1
SULZ	Cheisacher	1.71	29	Pn	Pn	00 31 24.5	0.0
PANIX	Pigniu (Panix)	1.73	62	⇑Pn	Pb	00 31 27.1	+0.5
PLYF	Puligny Montra	1.74	303	Pn	Pn	00 31 25.9	+1.1
PLYF				Sn	Sn	00 31 49.0	+2.1
TUE	Stuetta	1.77	75	P	Pn	00 31 27.0	+1.6
ZUR	Degenried	1.77	41	Pn	Pn	00 31 25.8	+0.5
ZUR	Degenried	1.77	41	Sn	Sn	00 31 48.9	+1.1
ZUR	Degenried	1.77	41	Pn	Pn	00 31 25.9	+0.6
ENDD	Endenburg	1.77	19	⇑Pn	Pn	00 31 24.9	-0.5
ENDD				Pg	Pb	00 31 28.2	+1.0
ENDD				PmP		00 31 29.3	
HINF	Hinteralfeld	1.78	359	*e*Pn	Pn	00 31 24.7	-0.7
HINF	Hinteralfeld	1.78	359	*e*Pg	Pb	00 31 28.5	+1.2
HINF				*e*Sn	Sn	00 31 47.0	-1.0
	comp=N,50nm,0.3s						
HINF				*e*Sg	Sg	00 31 51.8	0.0
	comp=N,154nm,0.2s						
SSB	Saint Sauveur	1.81	246	Pn	Pn	00 31 26.5	+0.6
BOBI	Bbikon, Wasse	1.81	33	Pn	Pn	00 31 25.8	-0.1
MERA	Merate	1.81	101	P	Pn	00 31 27.4	+1.5
ACHB	Acheberg	1.81	31	Pn	Pn	00 31 26.0	+0.1
STV	Sant Anna di V	1.82	170	P	Pn	00 31 26.7	+0.6
STV				AML	AML		
	comp=E,85µm,0.5s						
STV				AML	AML		
	comp=N,74µm,0.9s						
STV				AML	AML		
	comp=N,74µm,1.1s						
SARZ	Sarezzano	1.85	129	P	Pn	00 31 27.3	+1.0
ENR	Entracque	1.85	168	P	Pn	00 31 27.2	+0.7
ENR				AML	AML		
	comp=E,120µm,0.5s						
ENR				AML	AML		
	comp=N,138µm,0.4s						
PCP	Piancastagn	1.91	141	P	Pn	00 31 28.6	+1.4
PCP				AML	AML		
	comp=E,145µm,1.0s						
PCP				AML	AML		
	comp=N,120µm,1.0s						
METMA	Mettma DE	1.92	29	*e*Pg	Pb	00 31 30.8	+1.1
METMA				*e*Sg	Sg	00 31 55.9	-0.5
METMA	Mettma DE	1.92	29	Pn	Pn	00 31 27.1	-0.3
FLACH	Flaach	1.92	37	Pn	Pn	00 31 27.7	+0.3
GBOS	Grotte di Boss	1.92	159	P	Pn	00 31 28.4	+1.0
VIVF	Saint-Julien-l	1.95	233	*e*Pn	Pn	00 31 28.3	+0.5
VIVF	Saint-Julien-l	1.95	233	*e*Pg	Pb	00 31 31.6	+1.3
VIVF				*e*Sn	Sn	00 31 51.1	-1.2
	comp=N,82nm,0.2s						
VIVF				*e*Sg	Sb	00 31 55.8	+1.1
	comp=N,612nm,0.3s						
WILA	Wila	1.96	45	*e*Pg	Pg	00 31 32.2	-0.1
WILA				*e*Sg	Sg	00 31 57.5	-0.1
WILA	Wila	1.96	45	Pn	Pn	00 31 28.9	+1.0
FELD	Feldberg im Sc	1.99	22	⇑Pn	Pn	00 31 27.9	-0.5
MDI	Monti di Nese	1.99	97	P	Pn	00 31 30.1	+1.7
MDI				AML	AML		
	comp=E,233µm,0.9s						
MDI				AML	AML		
	comp=N,204µm,0.3s						
MDI				AML	AML		
	comp=E,233µm,1.1s						
HAU	Haudompre	2.00	350	*e*Pn	Pn	00 31 29.3	+0.9
HAU	Haudompre	2.00	350	*e*Pg	Pb	00 31 32.5	+1.4
HAU				*e*Sn	Sn	00 31 52.5	-1.0
	comp=E,61nm,0.3s						
HAU				*e*Sg	Sb	00 31 58.5	+2.5
	comp=E,247nm,0.3s						
PLONS	Plons/SG	2.00	59	*e*Pg	Pg	00 31 32.9	-0.1
PLONS				*e*Sg	Sg	00 31 59.0	+0.1
PLONS	Plons/SG	2.00	59	⇓P	Pg	00 31 33.3	+0.3
PLONS				AML	AML		
	comp=E,370µm,1.2s						
PLONS				AML	AML		
	comp=N,444µm,0.7s						
PLONS				AML	AML		
	comp=E,370µm,0.8s						
PLONS	Plons/SG	2.00	59	Pn	Pn	00 31 30.1	+1.6
QLNO	Quiliano	2.00	148	P	Pn	00 31 29.7	+1.2
QLNO				AML	AML		
	comp=N,158µm,0.6s						
QLNO				AML	AML		
	comp=E,104µm,0.6s						
QLNO				AML	AML		
	comp=N,158µm,1.4s						
BERGE	Lenzkirch (DE)	2.04	25	*e*Pg	Pb	00 31 33.1	+1.4
BERGE				*e*Sg	Sg	00 32 00.0	-0.1
BERGE	Lenzkirch (DE)	2.04	25	⇑Pn	Pn	00 31 28.4	-0.6
KIZ	Kirchzarten	2.04	20	⇑Pn	Pn	00 31 28.4	-0.6
SLE	Schleitheim	2.05	32	*e*Pg	Pb	00 31 33.3	+1.4
SLE	Schleitheim	2.05	32	Pn	Pn	00 31 28.9	-0.3
CANO	Canova, Maglio	2.07	152	P	Pn	00 31 30.7	+1.3
CANO				AML	AML		
	comp=E,564µm,0.7s						
CANO				AML	AML		
	comp=N,312µm,0.3s						
WEIN	Weingarten	2.08	43	Pn	Pn	00 31 30.2	+0.7
TURF	col de Turini	2.10	170	Pn	Pn	00 31 31.4	+1.5
MGRO	Montegrosso	2.10	161	P	Pn	00 31 31.4	+1.4
MGRO				AML	AML		
	comp=E,152µm,0.5s						
MGRO				AML	AML		
	comp=N,188µm,0.6s						
SAOF	Saorge	2.11	167	Pn	Pn	00 31 30.9	+0.9
RNCA	Ronca, Sant’Ol	2.15	136	P	Pn	00 31 31.2	+0.8
SGT04	Schlatt-Haslen	2.15	52	Pn	Pn	00 31 31.5	+1.0
ECH	Echery	2.19	5	*e*Sg	Sg	00 32 04.3	-0.6
ECH	Echery	2.19	5	⇑Pn	Pn	00 31 30.7	-0.3
SMF	Signal de Mont	2.19	287	*e*Pn	Pn	00 31 31.0	0.0
SMF	Signal de Mont	2.19	287	*e*Pg	Pb	00 31 35.8	+1.5
SMF				*e*Sn	Sn	00 31 57.4	-0.8
	comp=N,38nm,0.2s						
SMF				*e*Sg	Sb	00 32 04.1	+2.6
	comp=N,73nm,0.2s						
DAVOX	Davos/Dischmat	2.20	69	⇓P	Pg	00 31 38.3	+1.4
DAVOX	Davos/Dischmat	2.20	69	Pn	Pb	00 31 34.5	-0.1
BOB	Bobbio (Coli)	2.21	124	P	Pn	00 31 32.3	+0.9
BERNI	Berninapass	2.21	79	Pn	Pb	00 31 35.6	+0.8
SBF	Sospel	2.21	170	*e*Pn	Pn	00 31 31.4	0.0
SBF	Sospel	2.21	170	*e*Pg	Pg	00 31 36.5	-0.6
SBF				*e*Sg	Sg	00 32 05.4	-0.4
	comp=N,198nm,0.4s						
GORR	Gorreto	2.23	129	P	Pn	00 31 32.6	+1.0
SMRF	Simiane la Rot	2.26	205	*e*Pn	Pn	00 31 32.7	+0.6
SMRF	Simiane la Rot	2.26	205	*e*Pg	Pg	00 31 38.0	0.0
SMRF				*e*Sg	Sg	00 32 07.1	-0.3
	comp=N,60nm,0.4s						
EMING	Emmingen-Lipti	2.29	35	*e*Pg	Pb	00 31 37.8	+1.8
EMING	Emmingen-Lipti	2.29	35	Pn	Pn	00 31 32.2	-0.3
WALHA	Wallhausen, DE	2.30	41	*e*Pg	Pg	00 31 38.1	-0.7
WALHA				*e*Sg	Sg	00 32 08.4	-0.2
BURY	Giardini Botan	2.31	168	P	Pn	00 31 34.3	+1.7
TRIGF	Trigance	2.32	188	Pn	Pn	00 31 34.6	+1.7
RUSF	Rustrel	2.32	206	Pn	Pn	00 31 34.7	+1.8
RUSF				Sn	Sn	00 32 01.8	+0.4
BSTF	la Bastide-des	2.33	203	Pn	Pn	00 31 35.3	+2.3
BSTF				Sn	Sn	00 32 03.6	+1.9
CDF	Champ du Feu	2.39	6	*e*Pn	Pn	00 31 33.3	-0.5
CDF	Champ du Feu	2.39	6	*e*Pg	Pg	00 31 40.3	-0.1
CDF				*e*Sn	Sn	00 32 01.5	-1.7
	comp=N,23nm,0.2s						
CDF				*e*Sg	Sg	00 32 11.4	0.0
	comp=N,32nm,0.2s						
DAVA	Damuels	2.41	58	*i* Pn	Pn	00 31 36.1	+1.8
	comp=N,0.4nm,0.1s						
DAVA				*e*Sn	Sg	00 32 10.7	-1.5
	comp=N,70nm,0.3s						
FUORN	Ofenpass-Fuorn	2.42	75	Pn	Pb	00 31 38.1	-0.2
LOR	Lormes	2.42	302	*e*Pn	Pn	00 31 34.3	+0.1
	baz=123						
LOR	Lormes	2.42	302	*e*Pg	Pb	00 31 40.1	+1.9
	baz=123						
LOR				*e*Sn	Sn	00 32 02.4	-1.3
	comp=N,29nm,0.2s,baz=113						
LOR				*e*Sg	Sb	00 32 10.7	+2.7
	comp=N,101nm,0.3s,baz=122						
LOR	Lormes	2.42	302	Pn	Pn	00 31 35.1	+1.0
BFO	Black Forest	2.50	23	*e*Pn	Pn	00 31 34.3	-0.9
BFO				*e*Sg	Sg	00 32 14.5	-0.3
BFO	Black Forest	2.50	23	⇑Pn	Pn	00 31 34.3	-0.9
SFTF	Sexfontaines	2.50	331	*e*Pn	Pn	00 31 36.3	+0.9
	baz=149						
SFTF	Sexfontaines	2.50	331	*e*Pg	Pg	00 31 43.3	+0.6
	baz=145						
SFTF				*e*Sn	Sn	00 32 04.7	-1.2
	comp=N,25nm,0.2s,baz=149						
SFTF				*e*Sg	Sb	00 32 14.0	+3.5
	comp=N,106nm,0.3s,baz=140						
MSSA	Maissana	2.54	132	AML	AML		
	comp=N,110µm,1.6s						
MSSA				AML	AML		
	comp=E,83µm,0.5s						
MSSA				AML	AML		
	comp=E,83µm,1.5s						

MSSA				AML	AML		
	comp=N,110µm,0.4s						
GUT	Gutenstein	2.54	36	⇑Pn	Pn	00 31 35.3	-0.6
SSF	Saint Saulge	2.54	295	ePn	Pn	00 31 35.7	-0.2
SSF	Saint Saulge	2.54	295	ePg	Pg	00 31 42.8	-0.6
SSF				eSn	Sn	00 32 05.0	-1.8
	comp=N,13nm,0.2s						
SSF				eSg	Sb	00 32 13.9	+2.3
	comp=N,62nm,0.3s						
AVF	Avril sur Loir	2.55	288	ePn	Pn	00 31 36.2	+0.2
AVF	Avril sur Loir	2.55	288	ePg	Pb	00 31 42.5	+2.0
AVF				eSn	Sn	00 32 05.3	-1.8
	comp=N,22nm,0.3s						
AVF				eSg	Sg	00 32 15.8	-0.9
	comp=N,59nm,0.3s						
ARTF	Artigues	2.57	198	Pn	Pn	00 31 37.6	+1.3
PAGF	Fort de Pagny	2.64	343	ePn	Pn	00 31 37.7	+0.5
PAGF	Fort de Pagny	2.64	343	ePg	Pg	00 31 44.6	-0.6
PAGF				eSn	Sn	00 32 06.1	-3.0
	comp=N,54nm,0.3s,baz=157						
PAGF				eSg	Sg	00 32 18.6	-0.7
	comp=N,91nm,0.3s,baz=164						
CFF	Clermont-Ferra	2.65	265	Pn	Pn	00 31 39.0	+1.7
LBL	Lubilhac	2.67	254	Pn	Pn	00 31 38.4	+0.6
FLAF	Flassans-sur-I	2.69	190	Pn	Pn	00 31 39.3	+1.3
OBER	Oberstdorf	2.72	59	ePg	Pg	00 31 47.0	+0.3
LMR	La Mourre	2.72	186	ePn	Pn	00 31 38.8	+0.5
LMR	La Mourre	2.72	186	ePg	Pg	00 31 45.7	-1.1
LMR				eSn	Sn	00 32 09.8	-1.4
	comp=N,35nm,0.4s						
LMR				eSg	Sg	00 32 20.4	-1.6
	comp=N,24nm,0.3s						
PYM	Petit Puy Mans	2.72	265	Pn	Pn	00 31 39.5	+1.2
UBR	Ueberruh	2.76	52	ePg	Pg	00 31 47.2	-0.3
UBR				eSg	Sg	00 32 22.4	-0.8
MEZF	Maizieres J'vi	2.76	334	ePn	Pn	00 31 39.3	+0.5
MEZF	Maizieres J'vi	2.76	334	ePg	Pg	00 31 46.7	-0.8
	baz=156						
MEZF				eSn	Sn	00 32 10.8	-1.3
	comp=N,37nm,0.3s						
MEZF				eSg	Sg	00 32 22.2	-1.1
	comp=N,60nm,0.2s,baz=152						
CIEL	Dossenheim-sur	2.81	7	Pn	Pn	00 31 40.4	+0.8
CIEL				Sn	Sn	00 32 12.8	-0.7
FETA	Feichten	2.83	68	i Pn	Pn	00 31 43.0	+3.0
	comp=N,0.2nm,0.1s,SNR=7.3						
FETA				eSg	Sg	00 32 26.9	+1.3
	comp=N,79nm,1.0s						
FETA	Feichten	2.83	68	Pn	Pn	00 31 43.0	+3.0
SAVF	Savonnieres en	2.84	336	ePn	Pn	00 31 40.3	+0.4
SAVF	Savonnieres en	2.84	336	ePg	Pg	00 31 48.3	-0.8
SAVF				eSn	Sn	00 32 12.6	-1.5
	comp=N,32nm,0.3s,baz=157						
SAVF				eSg	Sg	00 32 24.6	-1.2
	comp=N,65nm,0.3s,baz=154						
BGF	Bois d'Agland	2.84	282	ePn	Pn	00 31 40.2	+0.2
BGF	Bois d'Agland	2.84	282	ePg	Pb	00 31 47.8	+2.4
BGF				eSn	Sn	00 32 12.0	-2.3
	comp=N,24nm,0.2s						
BGF				eSg	Sg	00 32 24.9	-1.1
	comp=N,106nm,0.3s						
LASF	Ste Croix	2.91	229	ePn	Pn	00 31 41.2	+0.3
LASF	Ste Croix	2.91	229	ePg	Pg	00 31 49.5	-0.9
LASF				eSn	Sn	00 32 14.0	-1.8
	comp=N,32nm,0.3s						
LASF				eSg	Sb	00 32 25.2	+3.1
	comp=N,98nm,0.3s						
RETA	Reutte	3.04	60	i Pn	Pn	00 31 44.5	+1.8
	comp=N,2.2nm,0.2s,SNR=5.8						
RETA				i Sn	Sn	00 32 19.6	+0.5
	comp=N,15nm,0.4s						
HYF	Humbligny	3.17	294	ePn	Pn	00 31 45.5	+1.0
HYF	Humbligny	3.17	294	ePg	Pb	00 31 54.0	+3.0
HYF				eSn	Sn	00 32 20.7	-1.6
HYF				eSg	Sg	00 32 36.2	-0.2
MOTA	Moosalm	3.19	64	i Pn	Pn	00 31 47.1	+2.2
	comp=N,1.9nm,0.2s,SNR=10.0						
MOTA				i Sn	Sn	00 32 27.7	+4.8
	comp=N,22nm,0.4s						
SQTA	Sankt Quirin	3.21	67	ePn	Pn	00 31 47.9	+2.7
	comp=N,1.1nm,0.2s						
SQTA				i Sn	Sn	00 32 24.9	+1.5
	comp=N,14nm,0.4s						
TCF	Toulx Ste Croi	3.25	276	ePn	Pn	00 31 46.6	+0.9
TCF	Toulx Ste Croi	3.25	276	ePg	Pg	00 31 56.1	-0.9
TCF				eSn	Sn	00 32 22.7	-1.7
	comp=N,11nm,0.2s						
TCF				eSg	Sg	00 32 37.8	-1.4
	comp=N,34nm,0.2s						
PII	Pisa	3.48	131	P	Pn	00 31 50.2	+1.5
WATA	Walderalm	3.48	66	i Pn	Pn	00 31 51.1	+2.1
	comp=N,1.7nm,0.2s,SNR=12						
WATA				i Sn	Sn	00 32 32.3	+2.1
	comp=N,6.5nm,0.4s						
WTTA	Wattenberg	3.50	68	i Pn	Pn	00 31 51.9	+2.8
	comp=N,1.4nm,0.1s,SNR=9.4						
WTTA				eSn	Sg	00 32 44.4	-2.5
	comp=N,17nm,0.4s						
CAF	Calviac	3.57	254	ePn	Pn	00 31 50.0	0.0
CAF	Calviac	3.57	254	ePg	Pg	00 32 01.2	-1.8
CAF				eSn	Sn	00 32 30.0	-2.1
	comp=N,14nm,0.3s						
CAF				eSg	Sg	00 32 47.1	-2.1
	comp=N,43nm,0.3s						
RISI	Rein	3.70	74	⇑P	Pn	00 31 55.7	+3.7
RISI				AML	AML		
	comp=E,79µm,0.5s						
RISI				AML	AML		
	comp=N,150µm,0.5s						
RISI				AML	AML		
	comp=N,150µm,1.5s						
PGF	Pioggiola	3.81	156	eP	Pn	00 31 55.5	+2.1
PGF				eSn	Sn	00 32 36.0	-2.2
	comp=N,6.1nm,0.3s						
RJF	Les Rejaudoux	3.83	261	ePn	Pn	00 31 54.5	+0.9
RJF	Les Rejaudoux	3.83	261	ePg	Pg	00 32 06.0	-2.0
RJF				eSg	Sg	00 32 55.4	-2.3
	comp=N,76nm,0.3s						
ABTA	Abfaltersbach	3.96	78	i Pn	Pn	00 31 59.8	+4.3
	comp=N,0.5nm,0.3s						
ABTA				i Sn	Sb	00 32 48.7	-3.7
	comp=N,5.9nm,0.6s						
MILB	Miltenberg	4.12	22	ePn	Pn	00 31 55.9	-1.6
RCHB	Rochefort	4.26	346	dP	Pn	00 32 00.6	+1.1
RCHB				dS	Sn	00 32 46.6	-2.7
MTLF	Montolieu	4.28	233	ePn	Pn	00 32 00.4	+0.6
MTLF				eSn	Sn	00 32 46.7	-3.0
	comp=N,14nm,0.4s						
MTLF				eSg	Sg	00 33 08.4	-3.7
	comp=N,84nm,0.5s						
GIVF	Givet	4.29	342	ePn	Pn	00 32 01.4	+1.5
GIVF				eSn	Sn	00 32 47.4	-2.5
	comp=N,17nm,0.3s						
GIVF				eSg	Sg	00 33 10.2	-2.2
	comp=N,19nm,0.3s						
TNS	Taunus Mts	4.31	14	ePn	Pn	00 32 00.1	-0.1
DOU	Dourbes	4.34	340	dP	Pn	00 32 02.2	+1.7
DOU				dS	Sn	00 32 51.0	-0.1
BHOU	Houvegnez	4.36	353	dP	Pn	00 32 01.6	+0.8
BAIF	Baives	4.40	337	ePn	Pn	00 32 02.2	+0.8
BAIF				eSn	Sn	00 32 49.9	-2.7
	comp=N,6.0nm,0.3s						
BAIF				eSg	Sg	00 33 13.5	-2.4
	comp=N,9.1nm,0.3s						
LFF	La Frestale	4.46	258	ePn	Pn	00 32 02.2	+0.1
LFF	La Frestale	4.46	258	ePg	Pg	00 32 18.7	-1.3
LFF				eSg	Sg	00 33 14.7	-3.0
	comp=N,97nm,0.5s						
BMRD	Maredsous	4.49	342	dP	Pn	00 32 04.3	+1.6
BMRD				dS	Sn	00 32 54.1	-0.7
AHRW	Bad Neuenahr-A	4.51	2	ePn	Pn	00 32 04.3	+1.5
BCLA	Clavier	4.51	347	dS	Sn	00 32 53.5	-1.7
BGES	Gesves	4.51	345	dP	Pn	00 32 03.9	+1.0
BGES				dS	Sn	00 32 54.6	-0.7
KBA	Koelnbreinsper	4.58	75	i Pn	Pn	00 32 07.1	+3.1
	comp=N,0.8nm,0.3s						
KBA				i Sn	Sn	00 33 03.5	+6.2
	comp=N,4.0nm,0.5s						
MEM	Membach	4.61	353	dP	Pn	00 32 05.4	+1.1
MEM				dS	Sn	00 32 56.4	-1.3
MYKA	Terra Mystica	4.72	80	i Pn	Pn	00 32 10.4	+4.6
	comp=N,0.7nm,0.2s						
MYKA				eSn	Sb	00 33 09.8	-4.5
	comp=N,1.5nm,0.3s						
TRI	Trieste	4.82	91	⇓P	Pg	00 32 29.6	+2.7
MFF	Saint Martin d	4.90	279	ePn	Pn	00 32 08.4	+0.1
MFF				eSn	Sn	00 33 01.5	-3.4
	comp=N,7.9nm,0.3s						
MFF				eSg	Sg	00 33 28.2	-3.7
	comp=N,13nm,0.3s						
BIOA	Bad Ischl, Aus	4.92	68	ePn	Pn	00 32 10.1	+1.5
	comp=N,1.9nm,0.3s						
SENI	Senigallia	5.08	115	P	Pb	00 32 19.9	-3.7
EL6	Elcito	5.20	119	P	Pn	00 32 13.5	+1.1
OBKA	Obir	5.34	82	i Pn	Pn	00 32 17.7	+3.3
	comp=N,0.2nm,0.2s						
OBKA				eSn	Sn	00 33 22.1	+6.2
	comp=N,2.0nm,0.5s						
MOA	Molln	5.37	68	i Pn	Pn	00 32 16.3	+1.6
	comp=N,1.5nm,0.4s						
MOA				i Sn	Sn	00 33 12.7	-3.9
	comp=N,2.4nm,0.3s						
LDF	La Druitiere	5.40	301	ePn	Pn	00 32 15.7	+0.5
LDF				eSn	Sn	00 33 13.8	-3.5
	comp=N,4.6nm,0.3s						
LDF				eSg	Sg	00 33 44.7	-3.3
	comp=N,13nm,0.4s						
T1216	Preci, Frazion	5.41	123	⇓P	Pn	00 32 21.5	+6.2
T1217	Poggiodomo (PG	5.47	125	⇑P	Pn	00 32 22.8	+6.6
KHC	Kasperske Hory	5.49	53	ePN	Pn	00 32 16.4	+0.1
KHC				ePG	Pg	00 32 35.7	-4.0
KHC				x	x	00 33 17.0	
KHC				eSG	Sg	00 33 48.8	-1.9
	comp=N,32nm,1.0s						
T1212	Cascia, Frazio	5.51	124	⇑P	Pn	00 32 21.6	+4.9
T1245	Castelsantange	5.52	123	⇑P	Pn	00 32 21.6	+4.7
EPF	Esparros	5.56	240	ePn	Pn	00 32 17.2	-0.2
EPF	Esparros	5.56	240	ePg	Pg	00 32 38.2	-2.9
EPF				eSn	Sn	00 33 17.3	-4.0
	comp=N,4.7nm,0.3s						
EPF				eSg	Sg	00 33 49.3	-3.8
	comp=N,21nm,0.3s						
T1214	Arquata del Tr	5.60	124	P	Pb	00 32 35.2	+2.8
NKC	Novy Kostel	5.61	40	ePG	Pg	00 32 39.4	-2.7
SOKA	Soboth	5.68	81	ePn	Pn	00 32 09.4	-10
	comp=N,1.1nm,0.1s						
FLN	La Foliniere	5.69	301	ePn	Pn	00 32 20.2	+1.1
	baz=125						
FLN	La Foliniere	5.69	301	ePg	Pg	00 32 40.7	-2.9
FLN				eSn	Sn	00 33 20.2	-4.2
	comp=N,14nm,0.4s,baz=128						
FLN				eSg	Sg	00 33 54.0	-3.3
	comp=N,9.5nm,0.3s						
CKRC	Cesky Krumlov	5.76	58	ePN	Pn	00 32 20.6	+0.6
CKRC				ePG	Pg	00 32 41.6	-3.3
CKRC				eSG	Sg	00 33 58.2	-1.2
	comp=N,6.3nm,0.6s						
GRR	Gorron	5.77	297	ePn	Pn	00 32 20.8	+0.6
GRR	Gorron	5.77	297	ePg	Pg	00 32 41.8	-3.3
GRR				eSn	Sn	00 33 22.1	-4.3
	comp=N,23nm,0.4s						
GRR				eSg	Sg	00 33 56.0	-3.8
	comp=N,8.6nm,0.4s						
ARSA	Arzberg	6.07	75	i Pn	Pn	00 32 25.2	+0.8
	comp=N,1.6nm,0.3s						
ARSA				i Sn	Sn	00 33 35.5	+1.7
	comp=N,0.4nm,0.4s						
ETSF	Etsaut	6.18	242	ePn	Pn	00 32 25.5	-0.4
ETSF	Etsaut	6.18	242	eP	Pn	00 32 29.7	+3.8
ETSF				eSn	Sn	00 33 32.5	-4.1
	comp=N,3.6nm,0.3s						
ETSF				eSg	Sg	00 34 07.9	-5.1
	comp=N,11nm,0.3s						
CONA	Conrad Observa	6.43	70	i Pn	Pn	00 32 29.5	+0.2
	comp=N,0.6nm,0.4s						
CONA				i Sn	Sn	00 33 38.7	-4.0
	comp=N,2.0nm,0.4s						
PRU	Pruhonice	6.48	50	ePG	Pg	00 32 54.7	-4.0
PRU				eSG	Sg	00 34 21.0	-1.6
	comp=N,6.7nm,0.5s						
SJPF	Ste Jean	6.49	246	ePn	Pn	00 32 29.2	-0.9
SJPF	Ste Jean	6.49	246	eP	Pn	00 32 34.2	+4.1
SJPF				eSn	Sn	00 33 40.3	-3.7
	comp=N,1.5nm,0.3s						
SJPF				eSg	Sg	00 34 17.5	-5.3
	comp=N,10nm,0.4s						
LPEL	Lama dei Pelig	6.61	125	P	Pn	00 32 34.8	+3.1
CLL	Collm	6.65	35	ex	x	00 32 55.0	
CLL				ePg	Pg	00 33 01.0	-0.9
CLL				eSn	Sn	00 33 37.0	-11
CLL				ex	x	00 34 24.0	
CLL				eSg	Sg	00 34 27.0	-0.9
	comp=Z,12nm,0.7s						
RONA	Rosalia, Austr	6.67	72	ePn	Pn	00 32 33.9	+1.4
	comp=Z,0.4nm,0.2s						
BRG	Berggiesshubel	6.74	42	eP	Pg	00 33 01.7	-2.0
BRG				Amp		00 33 08.3	
	comp=Z,3.9nm,0.7s						
BRG				S	Sg	00 34 30.1	-0.8
BRG				Amp		00 34 37.4	
	comp=Z,7.9nm,1.0s						
SGMF	Saint Gilles	6.81	292	ePn	Pn	00 32 34.0	-0.4
SGMF				eSn	Sn	00 33 46.7	-5.1
	comp=Z,4.0nm,0.3s						
SGMF				eSg	Sg	00 34 29.1	-3.9
	comp=Z,1.5nm,0.2s						
PVCC	Panska Ves	6.82	46	eSG	Sg	00 34 31.1	-2.2
	comp=Z,11nm,0.6s						
KRUC	Moravsky	7.11	61	ePN	Pn	00 32 38.2	-0.4
KRUC	Moravsky	7.11	61	eSG	Sg	00 34 45.3	+2.5
QUIF	Quistinic	7.12	289	ePn	Pn	00 32 38.2	-0.6
QUIF				eSn	Sn	00 33 54.7	-5.0
	comp=Z,2.0nm,0.2s						
QUIF				eSg	Sg	00 34 39.1	-4.1
	comp=Z,1.8nm,0.3s						
ROSF	Rostrenen	7.29	292	ePn	Pn	00 32 40.7	-0.3
ROSF				eSn	Sn	00 33 58.4	-5.3
	comp=Z,1.1nm,0.2s						
ROSF				eSg	Sg	00 34 43.7	-4.8
	comp=Z,0.5nm,0.2s						
VRAC	Vranov	7.33	60	ePN	Pn	00 32 42.2	+0.6
VRAC	Vranov	7.33	60	eSG	Sg	00 34 49.6	-0.1
UPC	Upice	7.55	50	eSG	Sg	00 34 54.4	-2.6
	comp=Z,13nm,1.0s						
CHVC	Chvalec	7.62	50	eSG	Sg	00 34 59.3	+0.2
DPC	Dobruska-Polom	7.64	52	eSG	Sg	00 34 56.7	-3.0
OSTC	Ostas	7.69	51	eSG	Sg	00 35 00.7	-0.6
MORC	Moravsky Berou	8.08	59	eSG	Sg	00 35 15.0	+1.2
MAUC	Maruska	8.10	62	eSG	Sg	00 35 13.1	-1.3

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*NOU **20** 00:33:42.5, 21.°76S×169.°79E, h0^{km}, MLv4.5/10, Southeast of Loyalty Islands*

*IDC **20** 00:33:48.8±2.4, 21.°69S×169.°59E, h42^{km}±21^{km}, mb3.9/7, mbtmp4.1/10, ML3.6/2, MS3.6/14, Error ellipse: s-maj=27.6km s-min=15.8km az=175.0*

ISC 20 00:33:45.2±0.7**, 21.°69S**±0.°09×**169.°71E**±0.°09**, h21**^{km}**, n51,** σ**0**^{s}**97**/40**, mb3.9**/8**, MS3.6**/12**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	Pines Island,	2.29	246	P	Pn	00 34 21.8	+0.1
LIFNC	LIFOU	2.47	291	P	Pn	00 34 24.8	+0.5
YATNC	Mamie plateau,	2.64	261	P	Pn	00 34 26.8	+0.2
OUENC	Ouen Island, N	2.76	254	P	Pn	00 34 28.7	+0.5
DZM	Mont Dzumac	3.06	262	ePn	Pn	00 34 32.0	-0.4
	228nm,0.9s						
DZM				eLR	LR	00 35 09.9	
	comp=Z,1µm,24.1s						
DZM	Mont Dzumac	3.06	262	P	Pn	00 34 32.9	+0.5
	7.6nm,0.3s,baz=97,slow=20,SNR=119						
DZM				S	Sn	00 35 07.4	-1.0
	131nm,0.4s,baz=312,slow=23,SNR=16						
DZM				LR	LR	00 35 24.0	
	comp=Z,366nm,18.5s,baz=191,slow=32						
	29nm,0.4s						
DZM	Mont Dzumac	3.06	262	P	Pn	00 34 33.4	+1.0
ONTNC	Ouen Toro	3.08	258	P	Pn	00 34 33.5	+0.9
NOUC	Port Laguerre	3.19	262	P	Pn	00 34 34.5	+0.4
DVP	Devils Point	4.19	340	P	Pn	00 34 49.6	+1.7
KOUNC	Koumac, New Ca	5.19	282	P	Pn	00 35 03.2	+1.6
MSVF	Nonsavu	8.79	65	P	Pn	00 35 55.5	+4.4
	13nm,0.7s,baz=230,slow=12,SNR=6.4						
HNR	Honiara	15.38	321	LR	LR	00 41 50.5	
	comp=Z,3µm,18.9s,baz=155,slow=32						
URZ	Urewera	17.70	161	P	P	00 37 53.9	+2.7
	0.3nm,0.3s,baz=68,slow=17,SNR=3.9						
URZ				LR	LR	00 43 38.1	
	comp=Z,296nm,18.1s,baz=62,slow=33						
	15nm,1.0s						
AFI	Afiamalu	19.24	69	LR	LR	00 44 32.2	
	comp=Z,51nm,19.2s,baz=48,slow=33						
CTA	Charters Tower	21.97	270	LR	LR	00 46 38.4	
	comp=Z,160nm,18.7s,baz=82,slow=35						
RPZ	Rata Peaks	22.00	177	LR	LR	00 46 00.5	
	comp=Z,300nm,18.3s,baz=284,slow=33						
PMG	Port Moresby	24.88	296	LR	LR	00 47 11.7	
	comp=Z,154nm,19.5s,baz=144,slow=32						
STKA	Stephens Creek	27.00	242	P	P	00 39 26.6	+0.9
	2.3nm,0.8s,baz=87,slow=14,SNR=3.5						
STKA				LR	LR	00 49 48.9	
	comp=Z,116nm,18.4s,baz=74,slow=36						
	2.3nm,0.8s						
RAR	Rarotonga	28.39	95	LR	LR	00 50 51.2	
	comp=Z,46nm,19.0s,baz=274,slow=36						
ASAR	Alice Springs	33.04	260	P	P	00 40 20.0	+0.6
	1.0nm,0.7s,baz=83,slow=9.1,SNR=9.1						
ASAR				LR	LR	00 52 42.6	
	comp=Z,146nm,20.2s,baz=100,slow=34						
	1.0nm,0.7s						
WRA	Warramunga Arr	33.06	266	P	P	00 40 19.6	-0.1
	0.7nm,0.8s,baz=98,slow=7.7,SNR=5.9						
WRA				LR	LR	00 54 07.4	
	comp=Z,190nm,18.8s,baz=141,slow=37						
	0.7nm,0.8s						
PPT2	Papeete2	38.49	91	eS	S	00 47 08.4	+7.5
	29nm,22.8s						
PPT2				eLR	LR	00 51 42.0	
	comp=Z,80nm,25.0s						
GUMO	Guam	42.70	323	LR	LR	00 58 42.7	
	comp=Z,43nm,18.3s,baz=96,slow=35						
QSPA	South Pole Qui	68.38	180	P	P	00 44 45.3	+0.2
	6.8nm,1.1s,baz=12,slow=3.9,SNR=7.5						
	6.8nm,1.1s						
PETK	Petropavlovsk-	75.21	353	LR	LR	01 12 55.6	
	comp=Z,40nm,20.3s,baz=156,slow=31						
CMAR	Chiang Mai Arr	79.91	294	P	P	00 45 54.5	+1.5
	1.2nm,0.3s,baz=121,slow=3.5,SNR=7.0						
	1.2nm,0.3s						
PFO	Pinyon Flats O	89.22	53	LR	LR	01 25 16.5	
	comp=Z,28nm,18.1s,baz=224,slow=35						
SONM	Songino Array	89.43	323	P	P	00 46 40.6	+0.1
	1.5nm,1.0s,baz=141,slow=4.7,SNR=8.6						
	1.5nm,1.0s						
NVAR	Mina Array Bea	90.09	48	P	P	00 46 43.7	-0.3
	0.4nm,0.7s,baz=228,slow=9.5,SNR=3.1						
	0.4nm,0.7s						
ILAR	Eielson Array	92.43	17	P	P	00 46 51.6	-2.3
	0.3nm,0.9s,baz=218,slow=5.4,SNR=2.6						
TXAR	Lajitas Array	97.54	62	LR	LR	01 22 04.8	
	comp=Z,37nm,22.0s,baz=290,slow=30						
ARCES	ARCESS Array B	127.53	345	PKP	PKPdf	00 52 47.1	-0.8
	4.3nm,1.1s,baz=5.2,slow=2.7,SNR=3.6						
RONA	Rosalia, Austr	146.38	327	ePKP	PKPab	00 53 25.6	+0.2
	5.0nm,1.2s						
CONA	Conrad Observa	146.45	328	i PKP	PKPab	00 53 25.2	-0.4
	5.2nm,1.1s						
GERES	GERESS Array B	146.84	331	PKPbc	PKPbc	00 53 25.8	-0.1
	3.1nm,0.9s,baz=46,slow=3.9,SNR=6.5						
ARSA	Arzberg	147.07	327	ePKP	PKPab	00 53 27.2	-0.8
	5.3nm,1.0s						
MOA	Molln	147.28	329	i PKP	PKPbc	00 53 26.9	-0.1
	5.5nm,1.4s						
BIOA	Bad Ischl, Aus	147.69	329	ePKP	PKPbc	00 53 27.6	-0.6
	4.7nm,1.2s						
SOKA	Soboth	147.70	327	i PKP	PKPbc	00 53 28.1	-0.2
	1.6nm,0.5s						
OBKA	Obir	148.06	327	i PKP	PKPbc	00 53 28.1	-1.2
	5.5nm,1.8s						
KBA	Koelnbreinsper	148.27	329	i PKP	PKPbc	00 53 29.5	-0.5
	4.2nm,1.1s						
MYKA	Terra Mystica	148.44	328	ePKP	PKPdf	00 53 25.0	-1.7
	2.0nm,0.7s						
ABTA	Abfaltersbach	148.91	329	i PKP	PKPbc	00 53 30.4	-1.1
	3.5nm,0.9s,SNR=4.4						
WATA	Walderalm	148.91	331	ePKP	PKPbc	00 53 31.0	-0.6
	4.5nm,1.4s						
WTTA	Wattenberg	148.94	330	ePKP	PKPbc	00 53 31.1	-0.5
	9.4nm,1.3s						
MOTA	Moosalm	149.12	331	ePKP	PKPbc	00 53 31.3	-0.8
	6.6nm,1.0s,SNR=5.0						
RETA	Reutte	149.17	332	ePKP	PKPbc	00 53 31.7	-0.4
	3.7nm,1.1s						
SQTA	Sankt Quirin	149.17	331	i PKP	PKPbc	00 53 31.6	-0.6
	8.3nm,1.2s,SNR=5.0						
FETA	Feichten	149.53	331	ePKP	PKPbc	00 53 32.6	-0.5
	8.2nm,1.1s						
DAVA	Damuels	149.71	332	i PKP	PKPbc	00 53 33.4	-0.2
	6.4nm,1.0s						

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*SJA **20** 00:39:21.0±0.9, 28.°79S×70.°87W, h79^{km}±3^{km}, ML4.7, MW4.4, Hypocentre not reviewed by the ISC*

*NEIC **20** 00:39:22.0±2.6, 28.°77S±0.°04×71.°11W±0.°06, h60^{km}±6^{km}, mb4.0/6, Mwr4.3/10, Mwr4.7(GUC), Error ellipse: s-maj=8.8km s-min=4.3km az=114.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.02; M$_{\theta\theta}$1.39; M$_{\phi\phi}$-3.41; M$_{r\theta}$1.54; M$_{\theta\phi}$-1.40; M$_{\phi r}$-0.88; Fault plane solution: M$_{0}$3.73000×10^{15} NP1:φ$_{s}$161.05000°, δ62.61000°, λ40.69000°. NP2:φ$_{s}$49.46000°, δ54.63000°, λ145.65000°. Principal axes: T 3.6269, Plg47.0000°, Azm19.0000°; N 0.1986, Plg42.0000°, Azm189.0000°; P -3.8255, Plg5.0000°, Azm284.0000°;*

*NEIC **20** 00:39:22.1, 28.°77S×71.°07W, h65^{km}*

*IDC **20** 00:39:23.6±0.8, 28.°67S×70.°67W, h68^{km}±6^{km}, mb3.7/7, mbtmp4.0/9, MS3.1/5, Error ellipse: s-maj=22.0km s-min=9.9km az=71.0*

*GUC **20** 00:39:23.0±0.7, 28.°81S×70.°88W, h74^{km}±3^{km}, ML4.4*

*VAO **20** 00:39:28.5±0.5, 28.°35S×70.°26W, h10^{km}, mb4.1*

ISC 20 00:39:22.1±0.5**, 28.°81S**±0.°03×**71.°02W**±0.°05**, h66**^{km}±5^{km}**, n124,** σ**1**^{s}**95**/146**, mb4.0**/8**, 8C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	0.35	126		Pn	00 39 34.3	+0.7
LCO				Sn	Sn	00 39 42.6	+0.7
LCO	Las Campanas	0.35	126	⇓iP	Pn	00 39 34.3	+0.7
LCO				i S	Sn	00 39 42.5	+0.6
LCO	Las Campanas	0.35	126	eP		00 39 34.3	
LCO				eS		00 39 43.0	
LCO				IAML		00 39 44.2	
	comp=Z,41µm,0.5s						
AC04	Llanos de Chal	0.60	356		Pn	00 39 37.5	+1.8
AC04				Sn	Sn	00 39 46.6	+1.0
AC04	Llanos de Chal	0.60	356	⇓iP	Pn	00 39 37.5	+1.8
AC04				i S	Sn	00 39 47.8	+2.2
AC04				IAML		00 39 49.5	
	comp=E,26µm,0.2s						
AC04	Llanos de Chal	0.60	356	eP		00 39 36.0	
AC04				eS		00 39 48.6	
AC05	El Transito	0.66	93		Pn	00 39 36.5	+0.1
AC05				Sn	Sn	00 39 46.5	-0.4
AC05	El Transito	0.66	93	⇓iP	Pn	00 39 36.4	0.0
AC05				i S	Sn	00 39 46.4	-0.5
AC05				IAML		00 39 46.7	
	comp=N,17µm,0.3s						
AC05	El Transito	0.66	93	eP		00 39 36.3	
CO05	La Serena	1.12	190		Pn	00 39 43.5	+1.5
CO05				Sn	Sn	00 39 58.0	+1.3
CO05	La Serena	1.12	190	i P	Pn	00 39 43.3	+1.3
CO05				i S	Sn	00 39 59.2	+2.4
CO05				IAML		00 40 03.2	
	comp=E,11µm,0.2s						
GO04	Tololo Observa	1.37	172		Pn	00 39 46.6	+1.1
GO04				Sn	Sn	00 40 05.0	+1.9
GO04	Tololo Observa	1.37	172	⇑iP	Pn	00 39 46.8	+1.2
GO04				i S	Sn	00 40 04.8	+1.8
GO04	Tololo Observa	1.37	172	eP		00 39 46.0	
GO04				eS		00 40 05.6	
GO03	Copiap	1.40	30	Pn	Pn	00 39 46.0	+0.3
GO03				Sn	Sn	00 40 03.1	-0.2
GO03	Copiap	1.40	30	⇑iP	Pn	00 39 45.9	+0.2
GO03				i S	Sn	00 40 03.5	+0.2
GO03				IAML		00 40 04.8	
	comp=N,20µm,0.5s						
GO03	Copiap	1.40	30	eP		00 39 45.0	
GO03				eS		00 40 03.6	
CO01	Juntas del Tor	1.42	145		Pn	00 39 46.8	+0.7
CO01				Sn	Sn	00 40 04.6	+0.5
CO01	Juntas del Tor	1.42	145	⇓iP	Pn	00 39 46.7	+0.6
CO01				i S	Sn	00 40 04.2	+0.1
CO01				IAML		00 40 07.7	

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      comp=E,3µm,0.3s
CO01  Juntas del Tor      1.42 145 eP                00 39 46.0
CO01                               eP                00 39 46.8
CO01                               eS                00 40 04.5
CO06  Fray Jorge          1.93 196         Pn        00 39 54.0 +1.3
CO06  Fray Jorge          1.93 196⇑iP      Pn        00 39 53.9 +1.1
CO06                                IAML             00 40 30.5
      comp=E,2µm,0.3s
CO03  El Pedregal         2.04 172         Pn        00 39 55.7 +1.4
CO03  El Pedregal         2.04 172⇑iP      Pn        00 39 55.8 +1.4
CO03                                IAML             00 40 25.1
      comp=N,4µm,0.5s
CO03  El Pedregal         2.04 172 eP                00 39 55.0
CO03                               eS                00 40 22.4
CO02  Combarbal           2.39 180         Pn        00 40 00.3 +1.3
CO02  Combarbal           2.39 180⇑iP      Pn        00 40 00.3 +1.3
CO02                               i S     Sn        00 40 29.2 +2.0
CO02  Combarbal           2.39 180 eP                00 40 00.3
CO02                               eS                00 40 30.3
CO02                                IAML             00 40 33.0
      comp=Z,4µm,1.1s
AC02  Maricunga           2.58  41         Pn        00 40 02.8 +0.7
AC01  Pan de Azucar       2.68   8         Pn        00 40 02.8 -0.1
AC01  Pan de Azucar       2.68   8⇑iP      Pn        00 40 02.7 -0.1
AC01                                IAML             00 40 46.0
      comp=E,3µm,0.2s
AC01  Pan de Azucar       2.68   8 eP                00 40 02.0
AC01                               eS                00 40 34.2
ZON   Zonda               3.40 144         Pn        00 40 14.8 +2.1
ZON   Zonda               3.40 144 eP                00 40 14.0
ZON                                eS                00 40 51.7
CFA   Coronel Fontan      3.68 140  P      Pn        00 40 18.4 +1.8
      comp=E,183nm,0.3s,baz=325,slow=12,SNR=352
CFA                                 S      Sn        00 40 59.3 +0.5
      comp=E,308nm,0.3s,baz=54,slow=23,SNR=10
CFA                                 LR     LR        00 41 59.1
      comp=E,236nm,20.9s,baz=249,slow=43
CFA   Coronel Fontan      3.68 140 eP                00 40 17.0
CFA                                eP                00 40 18.2
CFA                                eS                00 41 00.2
VA06  Catapilco           3.75 184  Pn     Pn        00 40 18.1 +0.7
VA06  Catapilco           3.75 184 i P     Pn        00 40 18.1 +0.7
GO02  Mina Guanaco        3.85  20  Pn     Pn        00 40 18.9 -0.3
GO02  Mina Guanaco        3.85  20⇑iP      Pn        00 40 18.8 -0.4
GO02                               i S     Sn        00 41 02.1 -1.2
GO02  Mina Guanaco        3.85  20 eP                00 40 18.7
GO02                               eS                00 41 11.7
VA03  San Esteban         3.96 174         Pn        00 40 21.6 +1.0
VA03  San Esteban         3.96 174⇑iP      Pn        00 40 22.1 +1.6
VA03  San Esteban         3.96 174 eP                00 40 21.0
VA03                               eS                00 41 07.7
VA03                                IAML             00 41 29.8
      comp=Z,918nm,0.5s
ROCH  El Roble            4.15 180 i P     Pn        00 40 23.7 +0.5
ROC1  El Roble            4.15 180         Pn        00 40 23.0 -0.2
PB14  IPOC Station P      4.20   8  Pn     Pn        00 40 22.9 -1.1
PB14  IPOC Station P      4.20   8 eP                00 40 22.8
PB14                               eS                00 41 09.5
PB14                                IAML             00 41 33.5
      comp=Z,1µm,0.6s
ASAL  Salagasta           4.21 154 eP                00 40 26.0
ASAL                               eS                00 41 24.4
VA01  Torpederas          4.24 187         Pn        00 40 23.8 -0.3
VA01  Torpederas          4.24 187 eP                00 40 18.2
VA01                               eP                00 40 23.0
VA01                               eS                00 41 19.2
VA01                                IAML             00 41 29.6
      comp=Z,590nm,0.8s
PEL   Peldehue            4.33 176         Pn        00 40 26.5 +1.0
PEL   Peldehue            4.33 176 eP      Pn        00 40 26.5 +1.0
PEL                                eS      Sn        00 41 16.5 +1.8
MT02  Curacav             4.44 181         Pn        00 40 27.3 +0.4
MT02  Curacav             4.44 181 eP      Pn        00 40 27.0 +0.1
MT02  Curacav             4.44 181 eP                00 40 26.0
MT02                               eP                00 40 27.1
MT02                               eS                00 41 18.2
MT02                                IAML             00 41 35.0
      comp=Z,1µm,0.6s
MT10  Hacienda Santa      4.47 175 eP      Pn        00 40 28.6 +1.2
FCH   Farellones          4.55 172 eP      Pn        00 40 30.2 +1.5
MT05  Renca               4.58 177  Pn     Pn        00 40 29.8 +1.0
MT05  Renca               4.58 177 eP      Pn        00 40 29.8 +1.0
MT05  Renca               4.58 177 eP                00 40 29.7
MT05                               eS                00 41 32.2
MT05                                IAML             00 41 41.2
      comp=Z,796nm,1.4s
CYA   Choya               4.60  87 eP                00 40 29.4
CYA                                eS                00 41 15.7
CYA                                 IAML             00 41 24.8
      comp=Z,555nm,0.5s
MT03  Universidad Ad      4.69 175         Pn        00 40 32.1 +1.6
MT03  Universidad Ad      4.69 175 eP      Pn        00 40 31.7 +1.2
MT08  Bocatoma Ro         4.70 170         Pn        00 40 33.7 +3.0
MT08  Bocatoma Ro         4.70 170 eP      Pn        00 40 33.7 +3.0
VA05  Santo Domingo       4.86 186         Pn        00 40 32.5 -0.2
MT09  Talagante           4.95 180         Pn        00 40 34.5 +0.4
MT13  San Alfonso         4.96 173  Pn     Pn        00 40 35.7 +1.6
MT13  San Alfonso         4.96 173 eP      Pn        00 40 35.9 +1.7
MT01  Popeta              5.04 182         Pn        00 40 35.3 +0.1
LMEL  Las Melosas         5.07 172         Pn        00 40 37.6 +1.9
PB10  IPOC Station P      5.29   5  Pn     Pn        00 40 36.3 -2.3
BO01  Tunca               5.57 181         Pn        00 40 42.2 -0.1
PB15  IPOC Station P      5.75  14         Pn        00 40 44.2 -0.9
BO02  Sierra Bellavi      5.97 178         Pn        00 40 48.0 +0.1
PB06  IPOC Station P      6.22  12         Pn        00 40 49.1 -2.3
LVC   Limon Verde         6.46  18  P      Pn        00 40 53.5 -1.5
      comp=Z,12nm,0.3s,baz=159,slow=10,SNR=56
LVC                                 S      Sn        00 42 03.8 -3.6
      comp=Z,58nm,0.4s,baz=187,slow=6.9,SNR=1.7
LVC   Limon Verde         6.46  18 eP      Pn        00 40 55.4 +0.5
PB04  IPOC Station P      6.50   7  Pn     Pn        00 40 52.8 -2.4
PB03  IPOC Station P      6.83  10         Pn        00 40 56.9 -2.9
PB07  IPOC Station P      7.13   9         Pn        00 41 00.8 -3.1
PB09  IPOC Station P      7.17  13         Pn        00 41 02.2 -2.2
PB02  IPOC Station P      7.53   8         Pn        00 41 06.4 -2.9
PB01  IPOC Station P      7.86  11         Pn        00 41 10.8 -3.0
BI05  Punta Hualpn        8.12 192  Pn     Pn        00 41 15.5 -1.8
H03N1 Juan Fernandez      8.19 234  P      Pn        00 41 18.8 +0.9
      baz=112,slow=18,SNR=40
H03N1                               S      Sn        00 42 44.2 -4.7
      baz=216,slow=78,SNR=6.6
H03N2 Juan Fernandez      8.20 234  P      Pn        00 41 19.3 +1.2
      baz=112,slow=18,SNR=42
H03N2                               S      Sn        00 42 44.4 -4.8
      baz=216,slow=78,SNR=4.7
H03N3 Juan Fernandez      8.21 234  P      Pn        00 41 19.0 +0.8
      baz=112,slow=18,SNR=56
H03N3                               S      Sn        00 42 44.0 -5.3
      baz=216,slow=78,SNR=5.0
VA04  Juan Fernndez       8.24 232         Pn        00 41 18.5 -0.4
H03S3 Juan Fernandez      8.40 231  S      Sn        00 42 48.6 -5.4
      baz=313,slow=76,SNR=3.9
H03S1 Juan Fernandez      8.40 231  S      Sn        00 42 48.6 -5.5
      baz=313,slow=76,SNR=5.2
H03S2 Juan Fernandez      8.41 231  S      Sn        00 42 48.6 -5.8
      baz=313,slow=76,SNR=4.1
PB08  IPOC Station P      8.79  12  Pn     Pn        00 41 24.7 -2.2
PB11  IPOC Station P      9.09   8         Pn        00 41 29.9 -0.9
VACA  Villa Angela C      9.18  85 eP      Pn        00 41 29.3 -2.4
MNMC  Minye Minye         9.72   8  Pn     Pn        00 41 37.7 -1.7
PB12  IPOC Station P     10.17   4  Pn     Pn        00 41 44.5 -0.9
GO06  Curarrehue         10.76 182  Pn     Pn        00 41 52.0 -1.3
PLCA  Paso Flores        11.90 178  P      Pn        00 42 09.7 +0.7
      comp=Z,1.1nm,0.8s,baz=8.6,slow=11,SNR=3.7
PLCA  Paso Flores        11.90 178  Pn     Pn        00 42 08.8 -0.2
PLCA  Paso Flores        11.90 178 eP      Pn        00 42 22.4 +13
TRQA  Tornquist          11.91 143         Pn        00 42 07.5 -1.6
CPUP  Villa Florida      12.39  82  LR     LR        00 47 23.6
      comp=Z,68nm,21.3s,baz=242,slow=40
ITQB  Itaqui             12.60  97         Pn        00 42 16.6 -1.9
LPAZ  La Paz             12.74  13  P      Pn        00 42 18.2 -2.9
      comp=Z,1.1nm,0.4s,baz=201,slow=6.7,SNR=9.6
LPAZ                                LR     LR        00 47 25.2
      comp=Z,72nm,21.2s,baz=157,slow=38
LPAZ  La Paz             12.74  13         Pn        00 42 18.4 -2.7
LPAZ  La Paz             12.74  13 eP      Pn        00 42 20.7 -0.3
MURT  Porto Murtinho     14.06  63 eP      Pn        00 42 35.5 -2.6
BBSD  Serra de San D     15.01  42 eP      Pn        00 42 47.9 -2.6
CRSM  Crissiumal (Br     15.04  89 eP      Pn        00 42 51.7 +0.9
PLTB  Pedras Altas       15.33 105  Pn     Pn        00 42 51.8 -2.7
PLTB                                IAmb   IAmb      00 43 17.0
      comp=Z,8.1nm,0.7s
BDQN  Bodoquena, MS      15.41  60 eP      Pn        00 42 52.8 -2.8
AMBA  Amambai (Brazi     15.57  72 eP      Pn        00 42 56.8 -0.9
SIV   San Ignacio        15.71  38  P      Pn        00 42 54.8 -4.7
      comp=Z,2.2nm,0.5s,baz=244,slow=6.3,SNR=14
ALGR  Alto Alegre (B     15.78  94 eP      Pn        00 43 00.9 +0.6
ITAB  Concordia          16.76  89 eP      P         00 43 14.4 +0.7
PTLB  Pontes e Lacer     17.24  42  P      P         00 43 18.7 -0.4
PTLB                                IAmb   IAmb      00 43 20.5
      comp=Z,5.7nm,0.8s
PTGB  Pitanga            17.41  81 eP      P         00 43 21.8 +0.7
NNA   Nana               17.60 341  LR     LR        00 49 48.4
      comp=Z,43nm,18.1s,baz=166,slow=36
CNLB  Canela             17.64  97 eP      P         00 43 25.3 +1.7
PP1B  Ponte de Pedra     18.54  57 eP      P         00 43 33.1 -0.3
VILB  Vilhena            18.72  35 eP      Pn        00 43 35.7 -0.8
C2SB  Chapadao do Su     19.39  63 eP      Pn        00 43 44.4  0.0
ETMB  Extrema            19.43  14         Pn        00 43 44.4 -0.5
ETMB  Extrema            19.43  14 eP      Pn        00 43 48.2 +3.3
GO08  Villa O'Higgin     19.66 183  Pn     Pn        00 43 47.4 -0.1
GO08                                IAmb   IAmb      00 44 19.2
      comp=Z,16nm,1.1s
SAML  Samuel             21.09  22  P      P         00 44 00.7 -0.4
SAML                                IAmb   IAmb      00 44 29.0
      comp=Z,6.7nm,0.9s
SAML  Samuel             21.09  22 eP      P         00 44 04.7 +3.6
VAO   Valinhos           22.38  81 eP      P         00 44 17.0 +2.0
BDFB  Brasilia           24.95  63  P      P         00 44 38.4 -1.1
      comp=Z,2.7nm,0.6s,baz=246,slow=6.3,SNR=5.2
      comp=Z,2.7nm,0.6s
RUSC  La Rusia           34.56 356  P      P         00 46 06.5 +1.5
MDP   Montagnes des      38.07  31  LR     LR        01 03 30.4
      comp=Z,71nm,19.4s,baz=196,slow=38
SNAA  Sanae              56.09 159  P      P         00 48 54.8 +0.7
      comp=Z,1.8nm,0.5s,baz=292,slow=11,SNR=3.9
      comp=Z,1.8nm,0.5s
QSPA  South Pole Qui     61.41 180  P      P         00 49 32.6 +1.4
      comp=Z,2.6nm,0.7s,baz=105,slow=2.8,SNR=5.6
QSPA                                pP     pP        00 49 51.5 +2.4
      comp=Z,2.2nm,0.9s,baz=227,slow=4.0,SNR=3.4
      comp=Z,2.6nm,0.7s
TXAR  Lajitas Array      65.70 329  P      P         00 50 01.8 +2.1
      comp=Z,0.6nm,0.7s,baz=152,slow=7.4,SNR=9.1
TXAR                                pP     pP        00 50 20.1 +2.7
      comp=Z,0.2nm,0.5s,baz=148,slow=7.4,SNR=3.7
      comp=Z,0.6nm,0.7s
PDAR  Pinedale Array     79.56 332  P      P         00 51 23.8 +1.8
      comp=Z,0.2nm,0.6s,baz=129,slow=7.1,SNR=2.6
      comp=Z,0.2nm,0.6s
TORD  Torodi Ar. Bea     81.62  70  P      P         00 51 33.2 -0.2
      comp=Z,1.1nm,0.9s,baz=272,slow=5.6,SNR=4.5
TORD                                pP     pP        00 51 50.6 -1.2
      comp=Z,1.3nm,0.6s,baz=264,slow=5.0,SNR=5.2
      comp=Z,1.1nm,0.9s
BOSA  Boshof             81.72 118  P      P         00 51 33.3 -0.6
      comp=Z,2.5nm,0.9s,baz=254,slow=7.4,SNR=3.7
      comp=Z,2.5nm,0.9s
ZALV  Zalesovo Beam     149.32  28  PKPbc  PKiKP     00 59 04.0  0.0
      comp=Z,1.4nm,0.8s,baz=290,slow=4.0,SNR=7.8
KSH   Kashi             150.82  60  PKPbc  PKPdf     00 58 56.8 -4.7
MKAR  Makanchi Array    152.51  42  PKPbc  PKiKP     00 59 11.2 +0.3
      comp=Z,0.3nm,0.6s,baz=357,slow=2.4,SNR=4.7
MKAR                                pPKPbc pPKPbc    00 59 30.5 +0.4
      comp=Z,0.3nm,0.6s,baz=291,slow=2.2,SNR=3.3
PZH   PanZhiHua         173.18 108  PKP    PKPdf     00 59 21.5 -2.8
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SOME ***20*** *00:43:01.9, 39°.87N×75°.30E, h10^{km}*
KRNET ***20*** *00:43:01.7±0.1, 39°.83N×75°.18E, mb3.0*
NNC ***20*** *00:43:04.2±0.6, 39°.97N×75°.32E, h0^{km}, mb3.9, mpv3.6,*
Error ellipse: s-maj=4.4km s-min=3.0km az=158.0
ISC 20 00:43:03.0±3.1**, 39°.82N**±0°.07×**75°.26E**±0°.04**, h1**^{km}±23^{km}**,**
n63, σ0ˢ.96/76**, 19C-20D, Southern Xinjiang**

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Code  Station Name          Δ°  AZ°     Phase ID               Time     Res
                                       Op     ISC              h  m  s   ISC
OHH   Osh                 2.02 291⇑iP      Pn        00 43 38.2 -0.1
      baz=92
OHH                               ⇑iS      Sn        00 44 05.0 +0.8
      baz=92
ARLS  Aral                2.16 341⇑iP      Pn        00 43 40.6 +0.4
      baz=43
ARLS                              ⇑iS      Sb        00 44 08.9 -1.3
      baz=43
UCH   Uchtor              2.47 347  P      Pn        00 43 46.2 +1.5
      SNR=17
ULHL  Ulahol              2.53  17  P      Pb        00 43 48.0 -1.3
      SNR=12
ULHL  Ulahol              2.53  17⇑eP      Pn        00 43 46.4 +1.0
      baz=18
ULHL                              ⇑eS      Sb        00 44 19.0 -2.0
      baz=18
AML   Almayashu           2.59 333  P      Pb        00 43 50.4 -0.1
      SNR=19
AML   Almayashu           2.59 333 ⇑Pn     Pn        00 43 47.2 +0.8
AML                                ⇓Lg     Lg        00 44 23.9
      2.9nm,0.7s
AML   Almayashu           2.59 333⇑iP      Pn        00 43 46.7 +0.3
      baz=34
AML                               ⇑iS      Sn        00 44 19.5 +0.7
      baz=34
DRK   Karamyk             2.69 264⇓iP      Pn        00 43 47.7  0.0
      baz=64
DRK                               ⇓iS      Sn        00 44 21.3 +0.2
      baz=64
TARG  Taragay, Kyrgy      2.71  45⇓eP      Pn        00 43 49.2 +1.2
      baz=45
TARG                              ⇓eS      Sb        00 44 23.9 -2.5
      baz=45
KDJ   Kajisay             2.72  32⇓eP      Pn        00 43 49.2 +1.2
      baz=33
KDJ                               ⇓eS      Sb        00 44 23.9 -2.6
      baz=33
KBK   Karagaybulak        2.84 355  P      Pb        00 43 54.7 +0.1
      SNR=36
KBK   Karagaybulak        2.84 355⇓iP      Pn        00 43 50.7 +1.1
      baz=56
KBK                               ⇓eS      Sn        00 44 26.1 +1.6
      baz=56
AAK   Ala-Archa           2.87 349  P      Pn        00 43 51.9 +1.9
      SNR=10
AAK   Ala-Archa           2.87 349⇓eP      Pn        00 43 51.0 +1.0
      baz=50
AAK                               ⇓iS      Sn        00 44 26.6 +1.3
      baz=50
FRU1  Bishkek             3.02 351⇑iP      Pn        00 43 53.0 +1.0
      baz=52
FRU1                              ⇑iS      Sn        00 44 30.1 +1.2
      baz=52
EKS2  Erkin-Say           3.05 339⇓eP      Pn        00 43 53.1 +0.7
      baz=40
EKS2                              ⇓eS      Sn        00 44 30.5 +0.9
      baz=40
TKM2  Tokmak 2            3.10   5  P      Pb        00 43 58.9 -0.2
      SNR=7.8
TKM2  Tokmak 2            3.10   5 ⇓Pn     Pn        00 43 53.5 +0.3
TKM2                               ⇑Lg     Lg        00 44 38.8
      11nm,0.6s
ARK   Arkit               3.19 309⇓iP      Pn        00 43 54.4 +0.1
      baz=10.0
ARK                               ⇓iS      Sn        00 44 33.0  0.0
      baz=10.0
CHMS  Chumysh             3.20 353  P      Pb        00 44 00.5  0.0
      SNR=5.1
KST   Kastek              3.26   9  Pg     Pb        00 44 01.5 -0.2
      11nm,0.2s
KST                                 Lg     Lg        00 44 44.5
      25nm,0.6s
KST   Kastek              3.26   9 ePg     Pb        00 44 01.5 -0.2
      11nm,0.2s
KST                                eLg     Lg        00 44 44.5
      25nm,0.6s
MRKS  Merke               3.30 333  Pg     Pb        00 44 01.6 -0.7
      3.1nm,0.3s
MRKS                                Lg     Lg        00 44 44.6
      6.5nm,0.2s
MRKS  Merke               3.30 333 ePg     Pb        00 44 01.6 -0.7
      3.1nm,0.3s
MRKS                               eLg     Lg        00 44 44.6
      6.5nm,0.2s
IZV   Izvestkoviy         3.37  17  Pg     Pb        00 44 03.3 -0.2
      9.8nm,0.3s
IZV                                 Lg     Lg        00 44 47.6
      30nm,0.5s
IZV   Izvestkoviy         3.37  17 ePg     Pb        00 44 03.3 -0.2
      9.8nm,0.3s
IZV                                eLg     Lg        00 44 47.6
      30nm,0.5s
MNAS  Manas               3.38 323⇑iP      Pn        00 43 57.3 +0.3
      baz=24
MNAS                              ⇑iS      Sn        00 44 38.3 +0.5
      baz=24
MTBS  Maitube             3.42  14  Pg     Pb        00 44 03.7 -0.6
      5.3nm,0.5s
MTBS                                Lg     Lg        00 44 48.1
      13nm,0.2s
MTBS  Maitube             3.42  14 ePg     Pb        00 44 03.7 -0.6
      5.3nm,0.5s
MTBS                               eLg     Lg        00 44 48.1
      13nm,0.2s
BTK   Batken              3.42 275⇓iP      Pn        00 43 57.6  0.0
      baz=75
BTK                               ⇓iS      Sn        00 44 38.9 +0.1
      baz=75
DGS   Degeres             3.44   6  Pg     Pb        00 44 04.4 -0.3
      6.7nm,0.3s
DGS                                 Lg     Lg        00 44 49.3
      9.4nm,0.6s
DGS   Degeres             3.44   6 ePg     Pb        00 44 04.4 -0.3
      6.7nm,0.3s
DGS                                eLg     Lg        00 44 49.3
      9.4nm,0.6s
TNSS  Tian-Shan           3.45  21  Pg     Pb        00 44 04.5 -0.7
      10nm,0.3s
TNSS                                Lg     Lg        00 44 49.5
      8.8nm,0.3s
TNSS  Tian-Shan           3.45  21⇓iPg     Pb        00 44 04.5 -0.7
      10nm,0.3s
TNSS                               eLg     Lg        00 44 49.5
      8.8nm,0.3s
USP   Ospenovka           3.49 351  P      Pb        00 44 05.9 +0.4
      SNR=7.3
TRKS  Terek-Say           3.57 300⇑iP      Pn        00 43 59.0 -0.6
      baz=99
TRKS                              ⇑iS      Sn        00 44 40.7 -1.8
      baz=99
MDOK  Medeo               3.60  21  Pg     Pb        00 44 06.6 -0.8
MDOK                                Pg     Pg        00 44 06.8 -5.1
      7.3nm,0.5s
MDOK                                Lg     Lg        00 44 53.0
      16nm,0.8s
MDOK                                Lg     Lg        00 44 53.7
      14nm,0.4s
MDOK  Medeo               3.60  21 ePg     Pb        00 44 06.8 -0.6
      7.3nm,0.5s
MDOK                               eLg     Lg        00 44 53.7
      14nm,0.4s
KNDC  Almaty              3.62  20 ⇑Lg     Lg        00 44 54.2
      58nm,0.7s
SGDS  Sogindy             3.66 353  Pg     Pb        00 44 08.7 +0.3
      3.9nm,0.2s
SGDS                                Lg     Lg        00 44 56.7
      4.2nm,0.3s
KOTS  Kotyrbulak          3.68  22  Pg     Pb        00 44 08.4 -0.4
      5.3nm,0.6s
KOTS                                Lg     Lg        00 44 56.2
      53nm,0.3s
KOTS  Kotyrbulak          3.68  22 ePg     Pb        00 44 08.4 -0.4
      5.3nm,0.6s
KOTS                               eLg     Lg        00 44 56.2
      53nm,0.3s
KRBS  Karabastau          3.88   4  Pg     Pb        00 44 12.5 +0.2
      6.0nm,0.2s
KRBS                                Lg     Lg        00 45 03.3
      8.0nm,0.6s
KRBS  Karabastau          3.88   4 ePg     Pb        00 44 12.5 +0.2
      6.0nm,0.2s
KRBS                               eLg     Lg        00 45 03.3
      8.0nm,0.6s
SATY  Saty                4.00  35  Pg     Pb        00 44 14.5 +0.1
      4.9nm,0.5s
SATY                                Lg     Lg        00 45 06.8
      9.3nm,0.4s
SATY  Saty                4.00  35 ePg     Pb        00 44 14.5 +0.1
      4.9nm,0.5s
SATY                               eLg     Lg        00 45 06.8
      9.3nm,0.4s
KTBS  Karatobe            4.03  15  Pg     Pb        00 44 15.0 +0.3
      4.8nm,0.5s
KTBS                                Lg     Lg        00 45 07.8
      16nm,0.6s
KTBS  Karatobe            4.03  15 ePg     Pb        00 44 15.0 +0.3
      4.8nm,0.5s
KTBS                               eLg     Lg        00 45 07.8
      16nm,0.6s
KUU   Kurty               4.14  11  Pg     Pb        00 44 16.7  0.0
      2.2nm,0.3s
KUU                                 Lg     Lg        00 45 10.6
      13nm,0.3s
KUU   Kurty               4.14  11⇓iPg     Pb        00 44 16.7  0.0
      2.2nm,0.3s
KUU                                eLg     Lg        00 45 10.6
      13nm,0.3s
CHKK  Chushkaly           4.23  17  Pg     Pb        00 44 18.6 +0.4
      3.7nm,0.2s
CHKK                                Lg     Lg        00 45 13.8
      19nm,0.4s
CHKK  Chushkaly           4.23  17 ePg     Pb        00 44 18.6 +0.4
      3.7nm,0.2s
CHKK                              ⇑iLg     Lg        00 45 13.8
      19nm,0.4s
KURS  Kuram               4.26  30  Pg     Pb        00 44 18.7  0.0
      3.3nm,0.3s
KURS                                Lg     Lg        00 45 14.0
      5.3nm,0.5s
KURS  Kuram               4.26  30 ePg     Pb        00 44 18.7  0.0
      3.3nm,0.3s
KURS                               eLg     Lg        00 45 14.0
      5.3nm,0.5s
KPKS  Kokpek              4.45  34  Pg     Pb        00 44 22.0 +0.1
      2.3nm,0.2s
KPKS                                Lg     Lg        00 45 19.9
      15nm,0.5s
KPKS  Kokpek              4.45  34 ePg     Pb        00 44 22.1 +0.1
      2.3nm,0.2s
KPKS                               eLg     Lg        00 45 19.9
      15nm,0.5s
IUG   Iuzhnay             4.59 302  Pg     Pb        00 44 26.4 +2.0
      3.8nm,0.2s
IUG                                 Lg     Lg        00 45 27.2
      9.5nm,0.6s
IUG   Iuzhnay             4.59 302 ePg     Pb        00 44 26.4 +2.0
      3.8nm,0.2s
IUG                                eLg     Lg        00 45 27.2
      9.5nm,0.6s
PDGK  Podgornoye          4.72  41  Pg     Pb        00 44 27.8 +1.2
      0.7nm,0.2s
PDGK                                Lg     Lg        00 45 29.7
      3.8nm,0.5s
ARXS  Arharly             4.78  23  Pg     Pb        00 44 29.1 +1.5
      9.8nm,0.4s
ARXS                                Lg     Lg        00 45 32.0
      4.1nm,0.2s
ARXS  Arharly             4.78  23 ePg     Pb        00 44 29.1 +1.5
      9.8nm,0.4s
ARXS                               eLg     Lg        00 45 32.0
      4.1nm,0.2s
KK31  Karatay Array       4.85 314 ⇑Lg     Lg        00 45 36.2
      1.4nm,0.2s,baz=61,slow=41,SNR=4.0
```

ROM 20 00:44:11.4±0.1**, 42°.895N**±0°.002×**13°.169E**±0°.004**,**
h14^{km}**, ML1.2**/8**, 3C-7D, Error ellipse: s-maj=0.3km**
s-min=0.0km az=271.0, Central Italy

```
Code  Station Name          Δ°  AZ°     Phase ID               Time     Res
                                       Op     ISC              h  m  s   ISC
MC2   Monte Cornacci      0.02  41  P      Pg        00 44 14.2  0.0
MC2                                 S      Sg        00 44 16.2 +0.2
T1245 Castelsantange      0.04 160 ⇓P      Pg        00 44 14.2 +0.1
T1245                               S      Sg        00 44 16.2 +0.2
T1245                               AML    AML
      comp=E,825µm,0.7s
T1245                               AML    AML
      comp=N,895µm,0.6s
T1245                               AML    AML
      comp=N,762µm,0.6s
T1245                               AML    AML
      comp=E,824µm,0.7s
T1245                               AML    AML
      comp=N,892µm,0.6s
T1245                               AML    AML
      comp=E,868µm,0.3s
T1216 Preci, Frazion      0.11 268  P      Pg        00 44 14.9 +0.2
T1216                               S      Sb        00 44 17.5 -0.5
T1216                               AML    AML
```

	comp=E,181µm,0.2s						
T1216				AML	AML		
	comp=N,276µm,0.1s						
MMO1	**Montemonaco**	0.12	88	⇓P	Pg	00 44 14.8	+0.1
MMO1				S	Sg	00 44 17.3	+0.2
T1256	**Bolognola (MC)**	0.12	20	⇓P	Pg	00 44 15.0	+0.1
T1256				S	Sg	00 44 17.6	+0.3
T1256				AML	AML		
	comp=N,96µm,0.2s						
T1256				AML	AML		
	comp=E,95µm,1.2s						
T1256				AML	AML		
	comp=N,96µm,0.2s						
T1256				AML	AML		
	comp=E,95µm,0.8s						
T1214	**Arquata del Tr**	0.14	168	P	Pg	00 44 15.4	+0.3
FDMO	**Fiordimonte**	0.15	337	⇓P	Pg	00 44 15.5	+0.2
FDMO				S	Sg	00 44 18.4	+0.5
FDMO				AML	AML		
	comp=E,74µm,0.2s						
FDMO				AML	AML		
	comp=E,74µm,0.2s						
FDMO				AML	AML		
	comp=N,62µm,0.1s						
T1212	**Cascia, Frazio**	0.17	213	⇑P	Pg	00 44 15.9	+0.4
T1241	**Roccafluvione,**	0.20	101	P	Pg	00 44 16.0	+0.1
T1219	**Muccia, Frazio**	0.20	324	P	Pg	00 44 16.3	+0.3
T1219				S	Sg	00 44 19.9	+0.8
GUMA	**Gualdo di Mace**	0.21	36	P	Pg	00 44 16.5	+0.4
GUMA				S	Sb	00 44 20.7	-0.1
GUMA				AML	AML		
	comp=E,179µm,0.3s						
GUMA				AML	AML		
	comp=N,259µm,0.4s						
GUMA				AML	AML		
	comp=E,179µm,1.7s						
CESI	**CESI - Serrava**	0.22	300	P	Pg	00 44 16.7	+0.3
CESI				AML	AML		
	comp=N,114µm,0.2s						
CESI				AML	AML		
	comp=E,58µm,1.0s						
T1220	**Camerino, Fraz**	0.22	345	P	Pg	00 44 16.6	+0.3
T1218	**Civita (PG)**	0.23	190	P	Pg	00 44 16.7	+0.3
T1217	**Poggiodomo (PG**	0.25	224	P	Pg	00 44 17.2	+0.3
SMA1	**SAN MARTINO**	0.29	155	P	Pg	00 44 17.8	+0.3
SMA1				AML	AML		
	comp=E,34µm,1.4s						
SMA1				AML	AML		
	comp=N,30µm,1.5s						
SMA1				AML	AML		
	comp=E,34µm,0.6s						
SMA1				AML	AML		
	comp=N,30µm,0.5s						
RM33	**Pellescritta (**	0.39	175	⇓P	Pg	00 44 19.4	+0.2
RM33				AML	AML		
	comp=E,24µm,1.4s						
RM33				AML	AML		
	comp=N,26µm,1.2s						
RM33				AML	AML		
	comp=E,24µm,0.6s						
SNTG	**Esanatoglia**	0.40	335	⇑P	Pb	00 44 20.3	0.0
TERO	**Teramo**	0.42	130	⇑P	Pg	00 44 19.8	0.0
T1211	**Morro Reatino**	0.43	213	S	Sb	00 44 27.5	+0.3
EL6	**Elcito**	0.44	354	S	Sb	00 44 27.8	+0.3
CING	**Cingoli**	0.48	2	⇓P	Pb	00 44 21.5	-0.2
ATCC	**AVT- Casa Cast**	0.48	307	⇓P	Pb	00 44 21.8	0.0

ROM 20 00:44:35.3±0.0**, 42.°954N**±0.°002×**13.°129E**±0.°003**,**
h10^{km}**, ML1.2**/5**, 3C-1D, Error ellipse: s-maj=0.2km**
s-min=0.2km az=46.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FEMA	**Monte Fema**	0.06	278	P	Pg	00 44 37.6	+0.1
MC2	**Monte Cornacci**	0.06	133	P	Pg	00 44 37.5	-0.1
FDMO	**Fiordimonte**	0.09	339	P	Pg	00 44 37.9	+0.2
FDMO				S	Sg	00 44 39.9	+0.4
FDMO				AML	AML		
	comp=E,188µm,1.4s						
FDMO				AML	AML		
	comp=N,206µm,0.2s						
FDMO				AML	AML		
	comp=E,188µm,0.6s						
T1256	**Bolognola (MC)**	0.09	54	⇓P	Pg	00 44 38.0	+0.2
T1256				S	Sg	00 44 39.9	+0.2
T1256				AML	AML		
	comp=E,301µm,0.2s						
T1256				AML	AML		
	comp=N,404µm,0.6s						
T1256				AML	AML		
	comp=E,334µm,0.7s						
T1256				AML	AML		
	comp=E,300µm,0.2s						
T1256				AML	AML		
	comp=N,320µm,0.3s						
T1256				AML	AML		
	comp=E,334µm,0.7s						
T1256				AML	AML		
	comp=N,404µm,0.7s						
T1216	**Preci, Frazion**	0.10	232	P	Pg	00 44 38.2	+0.3
T1245	**Castelsantange**	0.11	156	P	Pg	00 44 38.4	+0.3
T1245				S	Sg	00 44 40.8	+0.8
T1219	**Muccia, Frazio**	0.14	319	P	Pg	00 44 38.9	+0.5
T1219				S	Sg	00 44 41.5	+0.9
MMO1	**Montemonaco**	0.15	111	P	Pg	00 44 39.1	+0.4
MMO1				S	Sg	00 44 42.1	+1.0
T1220	**Camerino, Fraz**	0.16	349	P	Pg	00 44 39.3	+0.6
CESI	**CESI - Serrava**	0.17	287	P	Pg	00 44 39.7	+0.7
GUMA	**Gualdo di Mace**	0.19	54	P	Pg	00 44 40.1	+0.9
T1214	**Arquata del Tr**	0.20	163	P	Pg	00 44 40.2	+0.6
T1212	**Cascia, Frazio**	0.21	197	P	Pg	00 44 40.4	+0.7
T1241	**Roccafluvione,**	0.24	114	⇑P	Pg	00 44 40.9	+0.6
T1217	**Poggiodomo (PG**	0.28	211	P	Pg	00 44 41.6	+0.6
T1218	**Civita (PG)**	0.28	182	P	Pg	00 44 41.7	+0.6
SNTG	**Esanatoglia**	0.33	335	P	Pb	00 44 42.8	-0.6
SNTG				AML	AML		
	comp=E,26µm,0.9s						
SNTG				AML	AML		
	comp=N,24µm,1.5s						
SNTG				AML	AML		
	comp=E,26µm,1.1s						
SNTG				AML	AML		
	comp=N,24µm,0.5s						
ASSB	**Assisi San Ben**	0.36	285	P	Pg	00 44 42.9	+0.5
SMA1	**SAN MARTINO**	0.36	155	P	Pg	00 44 42.9	+0.5
EL6	**Elcito**	0.38	357	S	Sg	00 44 43.4	-4.3
EL6				AML	AML		
	comp=N,57µm,0.4s						
EL6				AML	AML		
	comp=E,68µm,0.7s						
CING	**Cingoli**	0.42	7	S	Sg	00 44 44.5	-4.7
ATCC	**AVT- Casa Cast**	0.43	303	S	Sg	00 44 44.6	-4.7
T1211	**Morro Reatino**	0.47	206	S	Sb	00 44 52.5	-0.2
T1211				AML	AML		
	comp=E,27µm,1.4s						
T1211				AML	AML		
	comp=N,33µm,1.6s						
TERO	**Teramo**	0.48	133	⇑P	Pg	00 44 44.9	+0.3
MURB	**Monte Urbino**	0.54	305	⇑P	Pb	00 44 46.4	-0.5

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*JMA **20** 00:44:41.5±0.3, 23.°1N±1.°0×12°2E±°, h22*^{km}*±4*^{km}*,*
MV3.7/11, TAIWAN REGION
*TAP **20** 00:44:42.7, 23.°14N×121.°40E, h38*^{km}*, ML3.7, B*
ISC 20 00:44:42.6±0.9**, 23.°10N**±0.°02×**121.°49E**±0.°02**, h31**^{km}±7^{km}**,**
n121, **σ1^{s}20**/224**, 8C-21D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHKT	**Chengkung**	0.11	269	⇓iP	Pn	00 44 48.7	+0.5
	baz=214						
CHKT				iS	Sb	00 44 53.3	+1.4
	baz=214						
FULB	**Fuli**	0.20	299	⇓iP	Pn	00 44 49.1	-0.5
	baz=301						
FULB				eS	Sn	00 44 55.0	+1.1
	baz=301						
EDH	**Donghe**	0.21	233	⇓iP	Pn	00 44 49.5	-0.1
	baz=209						
EDH				iS	Sn	00 44 54.8	+0.7
	baz=209						
ECBN	**Changbin**	0.22	351	⇑iP	Pn	00 44 49.6	-0.1
	baz=14						
ECBN				iS	Sn	00 44 54.8	+0.5
	baz=14						
ECS	**Chishang**	0.25	269	eP	Pn	00 44 49.9	-0.2
	baz=256						
ECS				eS	Sn	00 44 55.6	+0.6
	baz=256						
EHD	**Haiduan**	0.26	281	⇓iP	Pn	00 44 49.3	-1.1
	baz=274						
EHD				eS	Sn	00 44 54.1	-1.2
	baz=274						
EYUL	**Yuli**	0.29	328	i P	Pn	00 44 49.9	-0.8
	baz=340						
EYUL				eS	Sn	00 44 55.7	-0.4
	baz=340						
TWF1	**Yuli**	0.31	325	⇓iP	Pb	00 44 49.9	-0.4
	baz=337						
TWF1				eS	Sn	00 44 55.5	-0.9
	baz=337						
YULB	**Yu-li**	0.34	329	⇓iP	Pb	00 44 50.1	-0.6
	baz=339						
YULB				eS	Sn	00 44 55.2	-2.0
	baz=339						
LONT	**Longtian**	0.38	240	⇓P	Pb	00 44 51.0	-0.3
	baz=227						
LONT				eS	Sn	00 44 57.3	-1.0
	baz=227						
HGSD	**Ruisui**	0.39	352	⇑iP	Pb	00 44 51.1	-0.3
	baz=3.0						
HGSD				eS	Sb	00 44 59.1	+1.6
	baz=3.0						
LDUT	**Ludao**	0.42	182	⇑iP	Pb	00 44 52.0	+0.1
	baz=172						
LDUT				i S	Sb	00 44 59.7	+1.5
	baz=172						
EHY	**Hungye**	0.43	339	P	Pb	00 44 51.1	-1.0
	baz=350						
EHY				eS	Sb	00 44 57.1	-1.4
	baz=350						
ELDTW	**Lidau**	0.44	282	⇓iP	Pb	00 44 51.4	-0.9
	baz=278						
ELDTW				i S	Sb	00 44 57.4	-1.5
	baz=278						
TTN	**Taitung**	0.47	222	P	Pb	00 44 52.9	+0.4
	baz=211						
TTN				eS	Sb	00 45 01.4	+2.1
	baz=211						
TWGBT	**Beinan**	0.47	233	⇓iP	Pb	00 44 52.0	-0.6
	baz=223						
TWGBT				eS	Sb	00 44 58.8	-0.7
	baz=223						
TWG	**Pinlang**	0.47	234	⇓iP	Pb	00 44 51.9	-0.7
	baz=223						
TWG				eS	Sb	00 44 58.8	-0.7
	baz=223						
EGFH	**Guangfu**	0.57	354	P	Pn	00 44 53.2	-1.3
	baz=3.0						
EGFH				eS	Sn	00 45 03.3	+0.4
	baz=3.0						
TEGC	**Jichi Village**	0.61	5	eP	Pn	00 44 54.5	-0.6
	baz=13						
TEGC				eS	Sn	00 45 04.6	+0.8
	baz=13						
STYH	**Taoyuan**	0.66	276	eP	Pn	00 44 54.9	-0.9
	baz=274						
STYH				eS	Sn	00 45 03.7	-1.4
	baz=274						
STYT	**Tauyuan**	0.68	275	⇓eP	Pn	00 44 55.2	-0.9
	baz=272						
STYT				eS	Sn	00 45 04.5	-1.1
	baz=272						
ECL	**Taimali**	0.70	225	eP	Pn	00 44 54.7	-1.6
	baz=217						
ECL				eS	Sn	00 45 03.7	-2.4
	baz=217						
ESL	**Shilin**	0.71	356	eP	Pn	00 44 55.6	-0.9
	baz=3.0						
ESL				eS	Sn	00 45 04.9	-1.5
	baz=3.0						
VWDT	**VWDT**	0.72	334	⇑iP	Pn	00 44 55.8	-0.9
	baz=339						
VWDT				eS	Sn	00 45 04.5	-2.2
	baz=339						
ALS	**Alishan**	0.75	303	⇓iP	Pn	00 44 56.9	-0.3
	baz=304						
ALS				S	Sn	00 45 06.8	-1.0
	baz=304						
TEYL	**Yanliau Villag**	0.77	8	eP	Pn	00 44 57.5	+0.1
	baz=14						
TEYL				eS	Sn	00 45 10.2	+2.3
	baz=14						
SLGT	**Liugui**	0.78	262	eP	Pn	00 44 58.0	+0.6
	baz=258						
SLGT				eS	Sn	00 45 08.7	+0.5
	baz=258						
TPUB	**Ta-pu**	0.81	284	⇓P	Pn	00 44 58.0	+0.1
	baz=283						
TPUB				eS	Sn	00 45 09.3	+0.3
	baz=283						
WTP	**Ta-pu**	0.82	280	⇓P	Pn	00 44 58.1	+0.1
	baz=278						
WTP				eS	Sn	00 45 09.7	+0.7
	baz=278						
WHYT	**Xinyi Township**	0.83	316	⇓P	Pn	00 44 58.1	-0.1
	baz=318						
WHYT				eS	Sn	00 45 08.4	-1.1
	baz=318						
SGST	**Jiashian**	0.83	269	⇓eP	Pn	00 44 57.5	-0.7
	baz=266						
SGST				eS	Sn	00 45 09.1	-0.3
	baz=266						
SSLB	**Suanglung**	0.84	325	eP	Pn	00 44 57.6	-0.7
	baz=328						
SSLB				eS	Sn	00 45 08.2	-1.5
	baz=328						
CHN4	**Tsaushan**	0.86	287	⇓P	Pn	00 44 58.9	+0.3
	baz=286						
CHN4				eS	Sn	00 45 10.7	+0.6
	baz=286						
ETM	**Tongmen**	0.86	0	eP	Pn	00 44 57.3	-1.3
	baz=6.0						
ETM				eS	Sn	00 45 09.2	-0.9
	baz=6.0						
SSD	**Sandimen**	0.86	246	eP	Pn	00 44 58.0	-0.6
	baz=241						
SSD				eS	Sn	00 45 08.3	-1.8
	baz=241						
WCKO	**Fanlu**	0.88	293	⇓eP	Pn	00 44 59.2	+0.4
	baz=292						
WCKO				eS	Sn	00 45 11.0	+0.4
	baz=292						
HWA	**Hwalien**	0.88	7	eP	Pn	00 44 58.4	-0.4
	baz=13						
CHN1	**Nanshi**	0.89	276	⇓eP	Pn	00 44 59.6	+0.6
	baz=273						
CHN1				eS	Sn	00 45 12.0	+1.2
	baz=273						
CHN5	**Tsauling**	0.89	304	eP	Pn	00 44 59.4	+0.3
	baz=304						
CHN5				eS	Sn	00 45 11.3	+0.3
	baz=304						
OWD	**Renai**	0.90	342	eP	Pn	00 44 58.0	-1.2
	baz=346						
OWD				eS	Sn	00 45 08.6	-2.6
	baz=346						
SNST	**Tainan City**	0.92	278	eP	Pn	00 45 01.5	+2.2
	baz=276						
TAW	**Tawu**	0.92	217	eP	Pn	00 44 58.3	-1.1
	baz=211						
EAST	**Anshuo**	0.93	220	eP	Pn	00 44 58.3	-1.2
	baz=214						
MASBT	**Mashibuluo**	0.93	238	⇓eP	Pn	00 44 59.0	-0.5
	baz=234						
MASBT				eS	Sn	00 45 10.6	-1.1
	baz=234						
TWK	**Hsinying**	0.93	280	⇓eP	Pn	00 45 00.0	+0.4
	baz=279						
TWK				eS	Sn	00 45 12.5	+0.5
	baz=279						
TAWH	**Dawu Township**	0.94	216	eP	Pn	00 44 58.5	-1.1
	baz=211						
TAWH				eS	Sn	00 45 10.2	-1.7
	baz=211						
SCST	**Cishan**	0.94	257	eP	Pn	00 45 00.6	+0.9
	baz=253						
SCST				eS	Sn	00 45 14.3	+2.3
	baz=253						
SMLT	**Sun Moon Lake**	0.95	325	P	Pn	00 44 59.7	-0.2
	baz=329						
SMLT				eS	Sn	00 45 11.2	-1.2
	baz=329						
WUSB	**Renai**	0.95	339	⇑eP	Pn	00 44 59.1	-0.9
	baz=343						
WUSB				eS	Sn	00 45 10.1	-2.4
	baz=343						
TWD	**Chiawan**	0.98	6	eP	Pn	00 44 59.0	-1.2
	baz=11						
TWD				eS	Sn	00 45 13.0	0.0
	baz=11						
TYC	**Yuchr**	0.99	324	eP	Pn	00 45 00.4	+0.1
	baz=327						
TYC				eS	Sn	00 45 12.3	-0.9
	baz=327						
SGLT	**Jiouru**	0.99	248	eP	Pn	00 45 02.4	+2.1
	baz=244						
CHGB	**Renai**	1.00	343	⇑eP	Pn	00 44 59.8	-0.9
	baz=347						
CHGB				eS	Sn	00 45 11.7	-2.1
	baz=347						
WJS	**Zhushan**	1.00	316	eP	Pn	00 45 01.3	+0.8
	baz=318						
WJS				eS	Sn	00 45 13.8	+0.2
	baz=318						
TWM1	**Shoushan**	1.02	255	eP	Pn	00 45 02.8	+2.1
	baz=251						
TWM1				eS	Sb	00 45 18.5	+3.7
	baz=251						
CHN2	**Minshiung**	1.02	295	eP	Pn	00 45 01.5	+0.7
	baz=295						
CHN2				eS	Sn	00 45 16.0	+1.8
	baz=295						
WGK	**Gukeng**	1.03	305	eP	Pn	00 45 02.1	+1.2
	baz=305						
WGK				eS	Sn	00 45 15.9	+1.7
	baz=305						
CHN3	**Shinhua**	1.03	269	eP	Pn	00 45 03.0	+2.1
	baz=266						
CHN3				eS	Sb	00 45 18.6	+3.4
	baz=266						
WDLH	**Douliu**	1.05	304	eP	Pn	00 45 02.2	+1.0
	baz=305						
WDLH				eS	Sn	00 45 16.1	+1.3
	baz=305						
SHHT	**Tainan City**	1.05	266	eP	Pn	00 45 03.6	+2.5
	baz=263						
CHY	**Chiayi**	1.05	292	eP	Pn	00 45 01.9	+0.7
	baz=292						
CHY				eS	Sn	00 45 15.5	+0.7
	baz=292						
LAY	**Lan-yu**	1.06	177	⇑iP	Pn	00 45 00.4	-0.9
	baz=173						
LAY				eS	Sn	00 45 14.8	-0.2
	baz=173						
WHF	**Hehuan Shan**	1.06	349	eP	Pn	00 45 00.3	-1.4
	baz=353						
WHF				eS	Sn	00 45 13.7	-1.9
	baz=353						
ETL	**Fush Village**	1.06	7	eP	Pn	00 44 59.9	-1.5
	baz=11						
ETL				eS	Sn	00 45 14.6	-0.5
	baz=11						
DPDB	**Guoxing**	1.06	331	eP	Pn	00 45 01.5	+0.1
	baz=334						
DPDB				eS	Sn	00 45 14.4	-0.8
	baz=334						
WNT	**Mingjian**	1.07	317	eP	Pn	00 45 02.2	+0.8
	baz=318						
WNT				eS	Sn	00 45 16.0	+0.8
	baz=318						
NACB	**Ninganchiao**	1.07	5	eP	Pn	00 44 59.8	-1.7
	baz=10.0						
NACB				eS	Sn	00 45 13.7	-1.7
	baz=10.0						
SCZT	**Fangliau**	1.08	228	eP	Pn	00 45 01.7	+0.1
	baz=223						
SCZT				eS	Sn	00 45 17.1	+1.6
	baz=223						
WCS	**Beigang Elemen**	1.09	331	eP	Pn	00 45 01.8	+0.1
	baz=334						
WCS				eS	Sn	00 45 15.6	-0.1
	baz=334						
LYUB	**Lan-yu**	1.10	175	eP	Pn	00 45 00.4	-1.4
	baz=172						
LYUB				eS	Sn	00 45 14.0	-1.9
	baz=172						
ETLH	**Xiulin Townshi**	1.10	360	eP	Pn	00 45 00.2	-1.8
	baz=4.0						
ETLH				eS	Sn	00 45 15.3	-0.9
	baz=4.0						
ICHU	**Yijhu**	1.14	283	eP	Pn	00 45 02.8	+0.4
	baz=282						
TWT	**Tachien**	1.18	346	eP	Pn	00 45 02.8	-0.4
	baz=349						
TWT				eS	Sn	00 45 16.8	-1.5
	baz=349						
TDCB	**Techi**	1.19	345	⇑eP	Pn	00 45 02.9	-0.3
	baz=349						
SMST	**Manzhou Townsh**	1.23	209	eP	Pn	00 45 02.8	-0.9
	baz=205						
SMST				eS	Sn	00 45 18.6	-0.6
	baz=205						
EOS4	**EOS4**	1.27	37	i P	Pn	00 45 03.7	-0.1
	baz=41						
EOS4				S	Sn	00 45 19.4	-0.3
	baz=41						
TCU	**Taichung**	1.28	325	eP	Pn	00 45 06.1	+1.8
	baz=327						
TCU				eS	Sn	00 45 22.5	+2.1
	baz=327						
WRL	**Guolierlin Hig**	1.29	308	eP	Pn	00 45 04.9	+0.4
	baz=309						
WRL				eS	Sn	00 45 21.1	+0.3
	baz=309						
WCHH	**Zhanghua**	1.29	319	eP	Pn	00 45 05.6	+1.0
	baz=320						
WCHH				eS	Sn	00 45 22.4	+1.6
	baz=320						
TWKBT	**Hengchun**	1.31	209	eP	Pn	00 45 04.2	-0.5
	baz=205						
TWKBT				eS	Sn	00 45 21.3	+0.1
	baz=205						
TWK1	**Hengchun**	1.31	209	eP	Pn	00 45 04.3	-0.4
	baz=205						
TWK1				eS	Sn	00 45 20.9	-0.3
	baz=205						
NNSB	**Datong**	1.32	356	eP	Pn	00 45 04.5	-0.6
	baz=359						
NNSH	**Datong**	1.32	356	eP	Pn	00 45 04.6	-0.5
	baz=359						
NNS	**Nan Shan**	1.34	356	eP	Pn	00 45 04.8	-0.5
	baz=359						
ENA	**Nanau**	1.34	10	eP	Pn	00 45 04.2	-1.0
	baz=14						
ENA				eS	Sn	00 45 22.1	+0.2
	baz=14						
EWUT	**Wuta**	1.36	11	eP	Pn	00 45 05.2	-0.3
	baz=15						
EWUT				eS	Sn	00 45 22.3	-0.3
	baz=15						
TWQ1	**Liyutan**	1.40	332	eP	Pn	00 45 07.2	+1.2
	baz=335						
TWQ1				eS	Sn	00 45 25.3	+1.7
	baz=335						
EOS3	**EOS3**	1.41	33	P	Pn	00 45 06.1	+0.2
	baz=36						
EOS3				eS	Sn	00 45 23.5	+0.2
	baz=36						
LATG	**Datong**	1.43	1	eP	Pn	00 45 05.7	-0.8
	baz=5.0						
LATG				eS	Sn	00 45 24.1	-0.2
	baz=5.0						
NSY	**Sanyi**	1.47	333	eP	Pn	00 45 08.4	+1.4
	baz=335						
NSY				eS	Sn	00 45 27.6	+2.5
	baz=335						
EOS2	**EOS2**	1.48	27	eP	Pn	00 45 07.7	+0.8
	baz=31						
EOS2				eS	Sn	00 45 26.7	+1.5
	baz=31						
ENTT	**Nioudou**	1.53	3	eP	Pn	00 45 07.3	-0.6
	baz=6.0						
ENTT				eS	Sn	00 45 27.6	+0.8
	baz=6.0						
TWC	**Suao**	1.54	12	eP	Pn	00 45 08.4	+0.5
	baz=16						
TWC				eS	Sn	00 45 27.4	+0.6
	baz=16						
NDS	**Dongshan**	1.54	8	eP	Pn	00 45 07.6	-0.3
	baz=11						

NFF	**Wufeng Townshi**	1.56	348	*e*P	Pn	00 45 09.6	+1.3
	baz=350						
NFF				*e*S	Sn	00 45 29.2	+1.7
	baz=350						
NMLH	**Miaoli**	1.57	336	*e*P	Pn	00 45 09.3	+1.0
	baz=338						
NMLH				*e*S	Sn	00 45 28.8	+1.3
	baz=338						
YHNB	**Yeheng**	1.57	356	*e*P	Pn	00 45 08.2	-0.1
	baz=359						
YHNB				*e*S	Sn	00 45 27.0	-0.6
	baz=359						
NSK	**Sanguang**	1.57	356	*e*P	Pn	00 45 08.4	0.0
	baz=359						
NSK				*e*S	Sn	00 45 24.3	-3.5
	baz=359						
LIOB	**Emei**	1.60	344	*e*P	Pn	00 45 09.8	+1.1
	baz=347						
LIOB				*e*S	Sn	00 45 29.4	+1.0
	baz=347						
TWE	**Neicheng**	1.62	6	*e*P	Pn	00 45 09.4	+0.4
	baz=9.0						
FUSB	**Fushanzhiwuyua**	1.65	3	*e*P	Pn	00 45 09.2	-0.3
	baz=6.0						
FUSB				*e*S	Sn	00 45 29.3	-0.5
	baz=6.0						
WDGT	**Dungji**	1.69	276	*e*P	Pn	00 45 09.2	-0.8
	baz=274						
PHUB	**P'eng-hu**	1.81	284	*e*P	Pn	00 45 11.5	-0.1
	baz=283						
PHUB				*e*S	Sn	00 45 32.2	-1.2
	baz=283						
TIPB	**Shuangxi**	1.89	9	*e*P	Pn	00 45 13.4	+0.7
	baz=12						
TIPB				*e*S	Sn	00 45 37.9	+2.4
	baz=12						
JYNG	**Yonagunijimaku**	1.90	45	P	Pn	00 45 13.3	+0.5
JYNG				S	Sn	00 45 36.2	+0.5
VCHM	**Qimei**	1.90	274	*e*P	Pn	00 45 12.9	+0.1
	baz=272						
YOJ	**Yonaguni jima**	1.95	46	P	Pn	00 45 14.0	+0.5
YOJ				S	Sn	00 45 37.2	+0.3
YOJ	**Yonaguni jima**	1.95	46	*e*P	Pn	00 45 14.1	+0.7
	baz=48						
YOJ				*e*S	Sn	00 45 37.2	+0.3
	baz=48						
TWB1	**Santiao Chiao**	1.95	13	*e*P	Pn	00 45 14.8	+1.2
	baz=16						
WFSB	**Wu-fen Shan**	1.98	8	*e*P	Pn	00 45 14.8	+0.8
	baz=10.0						
SXI1	**Grass Mountain**	2.02	10	*e*P	Pn	00 45 15.8	+1.3
	baz=13						
HATJ	**Hateruma jima**	2.33	65	P	Pn	00 45 19.1	+0.4
HATJ				S	Sn	00 45 46.5	+0.1
IRIF	**Iriomote-Funau**	2.40	59	P	Pn	00 45 20.1	+0.5
IRIF				S	Sn	00 45 48.7	+0.8
JKRS	**Kuro-shima**	2.58	63	*e*P	Pn	00 45 22.8	+0.7
JKRS				S	Sn	00 45 52.9	+0.5
VWUC	**VWUC**	2.65	316	*e*P	Pn	00 45 22.6	-0.5
	baz=316						
VWUC				*e*S	Sn	00 45 51.8	-2.5
	baz=316						
JIJ	**Ishigaki jima**	2.74	62	P	Pn	00 45 24.6	+0.2
JIJ				S	Sn	00 45 55.4	-1.1
JISG	**Ishigakijimahi**	2.98	60	*e*P	Pn	00 45 27.6	-0.1
JISG				S	Sn	00 46 01.4	-1.0
KNMB	**Chin-men Tao**	3.15	296	*e*P	Pn	00 45 29.4	-0.6
	baz=296						
KNMB				*e*S	Sn	00 46 03.2	-3.3
	baz=296						
JTJ	**Tarama**	3.32	62	P	Pn	00 45 32.6	+0.3
JTJ				S	Sn	00 46 11.2	+0.4
MATB	**Ma-tsu**	3.35	336	*e*P	Pn	00 45 32.0	-0.7
	baz=336						
MATB				*e*S	Sn	00 46 08.8	-2.7
	baz=336						
AXDP	**Jialang**	3.68	300	*e*P	Pn	00 45 36.9	-0.5
	baz=299						
AXDP				*e*S	Sn	00 46 16.6	-3.1
	baz=299						

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*IDC **20** 01:15:03.4±2.2, 37°.33N×36°.06E, h0^{km}, mb3.4/2,*
mbtmp3.4/6, ML3.3/4, Error ellipse: s-maj=46.7km
s-min=18.9km az=79.0
*GII **20** 01:15:04.4±0.0, 37°.30N×36°.01E, h8^{km}, Mm3.0/1*
*ISK **20** 01:15:05.7, 37°.26N×36°.03E, h11^{km}, ML3.0/19*
*DDA **20** 01:15:06.3±0.0, 37°.30N×36°.01E, h8^{km}±1^{km}, ML3.0*
ISC 20 01:15:05.7±0.9, **37°.28N**±0°.02×**36°.01E**±0°.02, **h18**^{km}±7^{km},
n62, σ1ˢ46/83, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	0.24	325	Pg	Pg	01 15 11.9	+0.5
KOZT				Sg	Sg	01 15 15.9	+0.6
CEYT	**Ceyhan**	0.34	217	Pg	Pg	01 15 12.9	-0.1
AKO	**Adana**	0.48	292	P	Pg	01 15 15.9	+0.4
AKO				S	Sg	01 15 21.4	-0.6
KAMA	**Osmaniye**	0.54	100	P	Pg	01 15 16.1	-0.5
KAMA				S	Sb	01 15 24.4	+0.4
YURE	**YUREGIR**	0.54	213	P	Pg	01 15 17.0	+0.3
SAIM	**ADANA**	0.70	5	P	Pg	01 15 18.1	-1.4
SAIM				*i* AML	AML	01 15 34.0	
	comp=N,882nm,0.3s						
KMRS	**Kahramanmaras**	0.75	72	Pg	Pb	01 15 20.2	0.0
KMRS				Sg	Sb	01 15 30.9	+0.8
KARA	**Karaisali**	0.76	269	Pg	Pg	01 15 20.1	-0.5
KAHM	**Kahramanmaras,**	0.82	73	P	Pg	01 15 21.3	-0.4
KAHM				S	Sg	01 15 31.3	-1.3
KAHM				*i* AML	AML	01 15 34.0	
	comp=N,512nm,0.5s						
YAHY	**KAYSERI_Yahyal**	0.96	328	P	Pg	01 15 23.5	-0.9
YAHY				S	Sg	01 15 35.1	-1.9
GAZ	**Gaziantep**	0.97	96	Pg	Pg	01 15 24.2	-0.4
GAZ				Sg	Sb	01 15 37.8	+1.3
KUZU	**Kuzuini**	0.99	120	P	Pb	01 15 25.5	+1.0
KUZU				S	Sb	01 15 38.3	+1.1
KUZU				*i* AML	AML	01 15 40.0	
	comp=N,815nm,0.4s						
KUZU				*i* AML	AML	01 15 43.0	
	comp=E,995nm,0.5s						
ASUZ	**Hatay-Arsuz**	1.00	190	P	Pg	01 15 24.6	-0.6
ASUZ				S	Sg	01 15 37.9	-0.5
ASUZ				*i* AML	AML	01 15 43.0	
	comp=N,340nm,0.3s						
DED	**Mersin**	1.01	252	P	Pg	01 15 24.0	-1.4
DED				S	Sg	01 15 35.2	-3.6
RHAN	**Hatay/Reyhanl**	1.13	155	P	Pg	01 15 26.4	-1.2
RHAN				S	Sg	01 15 39.5	-2.9
RHAN				*i* AML	AML	01 15 44.0	
	comp=E,278nm,0.5s						
RHAN				*i* AML	AML	01 15 45.0	
	comp=N,331nm,0.5s						
SARI	**SarD1z-Kayseri**	1.17	16	Pn	Pn	01 15 28.7	+1.3
NIDE	**Nigde/Merkez-G**	1.21	307	P	Pg	01 15 27.6	-1.6
NIDE				*i* AML	AML	01 15 48.0	
	comp=N,247nm,0.4s						
NIDE				*i* AML	AML	01 15 48.0	
	comp=E,329nm,0.3s						
GZT	**Gaziantep**	1.25	86	P	Pn	01 15 30.0	+1.7
GZT				S	Sb	01 15 45.4	+0.9
AKCA	**Adyaman/G¶l**	1.43	69	P	Pg	01 15 32.7	-0.7
AKCA				S	Sg	01 15 52.4	+0.3
KERG	**Konya-Eregli**	1.50	276	P	Pn	01 15 32.2	+0.3
BNN	**Bunyan**	1.57	355	Pn	Pb	01 15 34.5	+0.1
GUNE	**Kayseri**	1.65	350	P	Pb	01 15 36.0	+0.4
KIZK	**Mersin**	1.69	242	Pn	Pn	01 15 35.4	+1.0
KIZK	**Mersin**	1.69	242	P	Pn	01 15 34.3	0.0
DARE	**Darende-Malaty**	1.74	42	Pn	Pn	01 15 36.6	+1.5
CUGUR	**Gurin_SVAS**	1.75	34	P	Pg	01 15 39.6	+0.1
CUGUR				S	Sg	01 16 00.5	-1.9
GULA	**Gulagac**	1.76	308	Pn	Pn	01 15 37.1	+1.7
AVNS	**Nevsehir-Avano**	1.78	329	P	Pn	01 15 37.0	+1.3
AVNS				*i* AML	AML	01 16 08.0	
	comp=N,126nm,0.6s						
AKCD	**Akcadag**	1.83	56	P	Pb	01 15 39.5	+0.8
AKCD				S	Sb	01 16 01.9	+0.6
YESY	**Yesilyurt**	1.87	286	Pn	Pn	01 15 38.9	+2.0
SILI	**Silifke-Mersin**	1.90	242	Pn	Pn	01 15 39.4	+2.2
CUAYA	**Sivas-Altinyay**	2.06	16	P	Pb	01 15 42.6	-0.2
KOZK	**Kozakli-Nevseh**	2.12	335	Pn	Pn	01 15 42.8	+2.4
IKL	**Isikli**	2.13	242	Pn	Pn	01 15 42.6	+2.2
CUSAR	**Sarkisla-SIVAS**	2.14	5	P	Pn	01 15 42.5	+1.8
SULT	**Sultanhani-AKS**	2.17	296	Pn	Pn	01 15 42.9	+1.8
MAYA	**Malatya/Merkez**	2.18	61	P	Pn	01 15 37.9	-3.3
KRMN	**Karaman**	2.19	268	Pn	Pn	01 15 43.5	+2.2
MCUR	**KIREHR**	2.21	329	P	Pn	01 15 42.4	+0.9
TEVE	**Tevekalti-Mers**	2.22	248	Pn	Pn	01 15 43.9	+2.2
AKSY	**AKSARAY - Alti**	2.24	308	P	Pn	01 15 43.3	+1.3
NARI	**Adyaman-Kaht**	2.27	74	P	Pn	01 15 44.0	+1.6
NARI				S	Sg	01 16 17.1	-1.7
NARI				*i* AML	AML	01 16 20.0	
	comp=E,66nm,0.6s						
NARI				*i* AML	AML	01 16 23.0	
	comp=N,128nm,0.5s						
SANL	**SANLIURFA_Merk**	2.38	92	P	Pn	01 15 44.9	+1.0
SANL				S	Sb	01 16 18.8	+1.6
SANL				*i* AML	AML	01 16 27.0	
	comp=N,187nm,0.5s						
SANL				*i* AML	AML	01 16 30.0	
	comp=E,190nm,0.4s						
YAYX	**Yaylak**	2.39	314	Pn	Pn	01 15 45.6	+1.5
YOZ	**Yozgat**	2.42	347	Pn	Pn	01 15 46.6	+2.1
KKBE	**Karaman, Kazim**	2.45	269	P	Pn	01 15 46.4	+1.6
KIRS	**Kirsehir-Merke**	2.47	319	P	Pn	01 15 45.6	+0.4
CKRK	**Yozgat, Cekere**	2.82	352	P	Pn	01 15 52.5	+2.5
BRTR	**Keskin Array B**	3.06	323	Pn	Pn	01 15 55.4	+2.0
	1.6nm,0.3s,baz=152,slow=14,SNR=51						
BRTR				Sn	Sn	01 16 27.1	-2.6
	0.6nm,0.3s,baz=77,slow=19,SNR=5.2						
	4.4nm,0.4s						
KKUL	**Konya-Kulu**	3.08	309	P	Pn	01 15 55.4	+1.9
GAZI	**Gazipasa**	3.14	252	P	Pn	01 15 56.2	+1.9
DELI	**KIRIKKALE**	3.17	330	P	Pn	01 15 56.4	+1.7
CSS	**Mathiatis**	3.17	224	Pn	Pn	01 15 54.2	-0.5
NATI	**Neve Ativ**	4.02	183	Pn	Pn	01 16 06.7	+0.4
GEM	**Giv'at Ha'Em**	4.07	184	Pn	Pn	01 16 06.5	-0.6
GEM				Sn	Sn	01 16 54.6	+0.3
MMA0B	**Mount Meron ar**	4.29	187	Pn	Pn	01 16 10.9	+0.8
MMA0B				Sn	Sn	01 17 00.6	+1.0
MMAI	**Mount Meron Ar**	4.29	187	Pn	Pn	01 16 11.4	+1.3
	2.5nm,0.3s,baz=8.5,slow=14,SNR=11						
MMAI				Sn	Sn	01 17 01.5	+1.9
	2.4nm,0.3s,baz=8.6,slow=23,SNR=5.3						
	1.4nm,0.3s						
HMDT	**Nahal Hemdat**	5.03	185	Pn	Pn	01 16 20.4	+0.1
ASF	**Jabal al Asfar**	5.15	172	Pn	Pn	01 16 23.8	+1.8
	0.4nm,0.3s,baz=352,slow=16,SNR=2.1						
ASF				Lg	Lg	01 17 44.0	
	0.2nm,0.3s,baz=350,slow=17,SNR=1.6						
	2.4nm,0.5s						
IDI	**Anoyia**	9.19	261	Pn	Pn	01 17 17.4	0.0
	0.8nm,0.3s,baz=66,slow=10.0,SNR=6.2						
	6.7nm,0.7s						
FINES	**FINESS Array B**	24.98	349	P	P	01 20 27.0	-0.9
	0.7nm,0.7s,baz=154,slow=11,SNR=4.5						
	0.7nm,0.7s						
TORD	**Torodi Ar. Bea**	38.91	241	P	P	01 22 30.3	-0.1
	0.4nm,0.8s,baz=28,slow=6.5,SNR=2.1						
	0.4nm,0.8s						

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*IDC **20** 01:19:15.7±1.0, 27°.57N×126°.38E, h0^{km}, mb3.8/12,*
mbtmp3.8/15, ML3.4/3, MS3.3/11, Error ellipse:
s-maj=23.4km s-min=18.5km az=52.0
ISC 20 01:19:20.4±0.8, **27°.6N**±0°.1×**126°.5E**±0°.1, **h35**^{km}, **n23,**
σ1ˢ18/17, **mb3.8**/12, **MS3.2**/8, **Northwest of Ryukyu**
Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	1.74	114	Pn	Pn	01 19 47.9	-0.3
	14nm,0.3s,baz=310,slow=15,SNR=42						
JOW				Sn	Sn	01 20 08.4	-0.8
	29nm,0.3s,baz=137,slow=29,SNR=6.1						
JOW				LR	LR	01 20 37.6	
	comp=Z,129nm,20.1s,baz=299,slow=44						
JNU	**Nakatsue**	6.72	33	Pn	Pn	01 20 56.9	+0.2
	0.8nm,0.3s,baz=222,slow=5.5,SNR=6.2						
	17nm,0.9s						
KSRS	**Korea Array**	9.95	7	Pn	Pn	01 21 38.4	-2.5
	0.4nm,0.3s,baz=186,slow=14,SNR=11						
KSRS				Lg	Lg	01 24 32.5	
	0.2nm,0.3s,baz=202,slow=32,SNR=2.5						
KSRS				LR	LR	01 25 29.7	
	comp=Z,118nm,21.5s,baz=195,slow=38						
	2.4nm,0.8s						
JCJ	**Chichijima**	13.96	88	LR	LR	01 26 59.5	
	comp=Z,71nm,20.6s,baz=354,slow=33						
USRK	**Ussuriysk Ar.**	17.19	13	P	Pn	01 23 17.9	+0.2
	0.1nm,0.3s,baz=194,slow=11,SNR=4.1						
USRK				LR	LR	01 29 25.2	
	comp=Z,67nm,21.1s,baz=217,slow=35						
	2.5nm,0.7s						
DAV	**Davao City (W)**	20.39	183	LR	LR	01 31 57.8	
	comp=Z,83nm,20.6s,baz=319,slow=37						
KLR	**Kul'dur**	22.02	9	P	P	01 24 12.1	+0.4
	2.7nm,0.8s,baz=235,slow=6.4,SNR=9.5						
KLR				LR	LR	01 32 01.8	
	comp=Z,56nm,19.7s,baz=208,slow=35						
	2.7nm,0.8s						
SONM	**Songino Array**	25.61	328	P	P	01 24 46.3	-0.2
	2.1nm,0.7s,baz=143,slow=11,SNR=21						
SONM				LR	LR	01 35 54.4	
	comp=Z,39nm,20.6s,baz=176,slow=39						
	2.1nm,0.7s						
CMAR	**Chiang Mai Arr**	26.88	256	LR	LR	01 37 04.5	
	comp=Z,71nm,19.1s,baz=190,slow=40						
KAPI	**Kappang**	33.02	192	LR	LR	01 40 05.0	
	comp=Z,196nm,18.8s,baz=264,slow=38						
YAK	**Yakutsk**	34.54	3	LR	LR	01 40 36.0	
	comp=Z,68nm,18.2s,baz=268,slow=37						
MA2	**Magadan**	36.10	21	LR	LR	01 42 50.5	
	comp=Z,31nm,19.1s,slow=39						
MKAR	**Makanchi Array**	39.50	311	P	P	01 26 46.1	-1.6
	1.3nm,0.7s,baz=98,slow=10,SNR=15						
	1.3nm,0.7s						
ZALV	**Zalesovo Beam**	40.26	323	P	P	01 26 54.0	+0.2
	1.4nm,0.7s,baz=111,slow=8.1,SNR=6.6						
	1.4nm,0.7s						
KURBB	**Kurchatov Arra**	42.83	316	P	P	01 27 15.1	+0.3
	0.4nm,0.4s,baz=105,slow=9.3,SNR=5.7						
	0.4nm,0.4s						
AAK	**Ala-Archa**	44.45	304	LR	LR	01 47 57.2	
	comp=Z,77nm,18.5s,baz=174,slow=39						
WRA	**Warramunga Arr**	47.82	170	P	P	01 27 56.2	+1.5
	0.4nm,1.0s,baz=243,slow=1.4,SNR=1.8						
	0.4nm,1.0s						
BVAR	**Borovoye Array**	48.26	318	P	P	01 27 58.2	+0.4
	1.1nm,0.8s,baz=79,slow=11,SNR=6.1						
	1.1nm,0.8s						
KBZ	**Khabaz**	67.12	309	P	P	01 30 12.2	+1.6
	2.3nm,0.9s,baz=75,slow=1.9,SNR=7.1						
	2.3nm,0.9s						
FINES	**FINESS Array B**	70.95	330	P	P	01 30 33.0	-1.0
	2.0nm,0.8s,baz=108,slow=6.2,SNR=4.9						
	2.0nm,0.8s						
AKASG	**Malin Array Be**	73.52	319	P	P	01 30 48.2	-1.3
	0.7nm,0.6s,baz=42,slow=5.5,SNR=6.8						
	0.7nm,0.6s						
BRTR	**Keskin Array B**	75.00	307	P	P	01 30 58.9	+0.3
	1.0nm,0.8s,baz=98,slow=4.3,SNR=4.8						
	1.0nm,0.8s						
YKA	**Yellowknife Ar**	77.98	25	P	P	01 31 16.2	+1.5
	0.2nm,0.7s,baz=301,slow=5.6,SNR=2.8						
	0.2nm,0.7s						

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*ISK **20** 01:27:42.1, 36°.73N×22°.61E, h13^{km}, ML3.5/11*
*ATH **20** 01:27:43.5, 36°.70N×22°.56E, h4^{km}±1^{km}, ML3.3/10, Error*
ellipse: s-maj=1.8km s-min=0.8km az=139.0
*THE **20** 01:27:43.5, 36°.71N×22°.60E, h2^{km}, ML3.3/21, Error*
ellipse: s-maj=0.5km s-min=0.2km az=194.0
*IDC **20** 01:27:48.5±1.7, 36°.67N×22°.60E, h55^{km}±21^{km}, mb3.3/10,*
mbtmp3.6/16, ML3.1/6, MS2.7/4, Error ellipse:
s-maj=19.1km s-min=13.1km az=30.0
ISC 20 01:27:43.5±1.0, **36°.70N**±0°.02×**22°.59E**±0°.02, **h10**^{km}±7^{km},
n87, σ0ˢ79/126, **mb3.6**/10, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLI	**Veliai**	0.28	86	P	Pg	01 27 48.9	-0.2
VLI				S	Sg	01 27 53.0	+0.1
	15μm,0.6s						
VLI	**Veliai**	0.28	86	P	Pg	01 27 49.2	+0.1
VLI				S	Sg	01 27 53.5	+0.6
VLI				AML	AML	01 27 54.3	
	comp=E,40260μm,0.6s						
VLI				AML	AML	01 27 57.3	
	comp=N,19818μm,0.6s						
MNVA	**Monemvasia**	0.36	92	P	Pb	01 27 51.5	-0.4
MNVA				S	Sb	01 27 56.9	-0.7
KTHA	**Kythira Island**	0.58	139	P	Pg	01 27 54.4	-0.4
KTHA				S	Sg	01 28 03.1	+0.6
	comp=N,2μm,0.5s						
KTHA	**Kythira Island**	0.58	139	Pg	Pg	01 27 54.8	0.0
KTHA				Sg	Sg	01 28 02.7	+0.2
KTHA	**Kythira Island**	0.58	139	P	Pg	01 27 54.8	0.0
KTHA				S	Sg	01 28 03.2	+0.6
PYL	**PYLOS**	0.71	286	P	Pg	01 27 56.8	-0.4
PYL				S	Sb	01 28 07.6	-0.1
	comp=N,2μm,0.5s						
PYL	**PYLOS**	0.71	286	P	Pg	01 27 56.7	-0.5
PYL				S	Sg	01 28 05.4	-1.0
PYL				AML	AML	01 28 11.8	
	comp=N,3246μm,0.6s						
PYL				AML	AML	01 28 12.5	
	comp=E,4023μm,0.5s						
ITM	**Ithomi**	0.71	312	P	Pg	01 27 56.8	-0.5
ITM				S	Sb	01 28 07.7	-0.2
	comp=E,2μm,0.4s						
ITM	**Ithomi**	0.71	312	Pg	Pg	01 27 56.6	-0.7
ITM				Sg	Sg	01 28 06.3	-0.3
ITM	**Ithomi**	0.71	312	P	Pg	01 27 56.8	-0.5
ITM				S	Sg	01 28 06.4	-0.3
ITM				AML	AML	01 28 08.7	
	comp=N,4110μm,0.6s						
ITM				AML	AML	01 28 09.5	
	comp=E,3138μm,0.4s						
KRND	**KRANIDI**	0.82	33	P	Pg	01 27 58.7	-0.5
KRND				S	Sb	01 28 10.4	-0.4
	comp=E,1μm,0.4s						
KRND	**KRANIDI**	0.82	33	P	Pg	01 27 58.9	-0.3
KRND				S	Sg	01 28 09.6	-0.2
KRND				AML	AML	01 28 14.9	
	comp=E,2953μm,0.5s						
KRND				AML	AML	01 28 16.4	
	comp=N,2577μm,0.4s						
YDRA	**Hydra**	0.95	47	P	Pg	01 28 01.4	-0.5
YDRA				S	Sb	01 28 15.4	+0.6
YDRA				AML	AML	01 28 18.6	
	comp=E,4811μm,0.6s						
YDRA				AML	AML	01 28 19.1	
	comp=N,3888μm,0.3s						
EPID	**Epidavros**	1.00	25	P	Pg	01 28 02.3	-0.6
EPID				S	Sb	01 28 16.8	+0.5
	comp=N,2μm,0.4s						
EPID	**Epidavros**	1.00	25	P	Pg	01 28 02.2	-0.6
EPID				S	Sb	01 28 16.5	+0.2
ANKY	**Antikythira Is**	1.01	145	P	Pg	01 28 02.1	-0.8
ANKY				S	Sb	01 28 17.1	+0.7
	comp=N,1μm,0.7s						
ANKY	**Antikythira Is**	1.01	145	P	Pg	01 28 02.6	-0.3
ANKY				S	Sg	01 28 15.4	-0.7
GUR	**Goura**	1.25	351	P	Pn	01 28 06.8	-0.3
GUR				S	Sn	01 28 24.5	+0.5
	comp=N,2μm,0.4s						
GUR	**Goura**	1.25	351	P	Pn	01 28 05.9	-1.2
GUR				S	Sb	01 28 23.5	+0.1
GUR				AML	AML	01 28 31.4	
	comp=N,4257μm,0.4s						
GUR				AML	AML	01 28 34.7	
	comp=E,3067μm,0.4s						
LOUT	**Loutraki**	1.32	13	P	Pb	01 28 08.4	0.0
LOUT				S	Sn	01 28 25.8	+0.2
LOUT				AML	AML	01 28 31.3	
	comp=N,437μm,0.8s						
LOUT				AML	AML	01 28 32.2	
	comp=E,374μm,0.4s						
THAL	**Thalero**	1.34	2	P	Pn	01 28 08.2	0.0
THAL				S	Sg	01 28 27.3	+0.8
THAL	**Thalero**	1.34	2	P	Pn	01 28 08.1	0.0
THAL				S	Sb	01 28 25.3	-0.5
THAL				AML	AML	01 28 34.0	
	comp=N,4625μm,0.3s						
THAL				AML	AML	01 28 38.5	
	comp=E,4255μm,0.4s						
KLV	**Kalavryta, Ach**	1.39	346	P	Pn	01 28 08.8	-0.1
KLV				S	Sg	01 28 28.5	+0.4
	comp=E,492nm,0.5s						
KLV	**Kalavryta, Ach**	1.39	346	P	Pn	01 28 08.3	-0.6
KLV				S	Sn	01 28 27.6	+0.3
DRO	**Drossia**	1.43	331	P	Pn	01 28 09.7	+0.2
DRO				S	Sg	01 28 29.9	+0.3
	comp=E,1μm,0.6s						
DRO	**Drossia**	1.43	331	P	Pn	01 28 09.5	-0.1
DRO				S	Sb	01 28 29.0	+0.4
DRO				AML	AML	01 28 40.4	
	comp=E,2197μm,0.5s						
DRO				AML	AML	01 28 42.7	
	comp=N,2378μm,0.4s						
RODP	**Rodopos**	1.48	140	Pn	Pn	01 28 09.4	-0.7
VLY	**Voula,Athens**	1.50	40	P	Pn	01 28 10.5	+0.1
VLY				S	Sg	01 28 31.1	-0.6
	comp=N,905nm,0.5s						
ATH	**Athens Observa**	1.56	35	P	Pn	01 28 11.3	+0.1
ATH				S	Sb	01 28 32.5	+0.4
	comp=N,612nm,0.5s						
VILL	**Villia**	1.57	21	P	Pn	01 28 11.3	-0.1
VILL				S	Sb	01 28 33.2	+0.6
	comp=N,970nm,0.7s						
ATHU	**Athens Univers**	1.58	37	P	Pn	01 28 11.5	-0.1
ATHU				S	Sb	01 28 33.1	+0.2
ALIK	**Aliki, Aigiali**	1.60	346	P	Pn	01 28 12.3	+0.5
LAKA	**Lakka**	1.61	343	P	Pn	01 28 12.2	+0.2
LAKA				S	Sb	01 28 34.3	+0.6
	comp=N,1μm,0.8s						
LAKA	**Lakka**	1.61	343	P	Pn	01 28 11.8	-0.2
LAKA				S	Sn	01 28 32.5	-0.3
LAKA				AML	AML	01 28 47.6	
	comp=E,637μm,0.6s						
LAKA				AML	AML	01 28 50.2	
	comp=N,720μm,0.7s						
RLS	**Riolos of Patr**	1.62	327	P	Pn	01 28 12.4	+0.3
RLS				S	Sb	01 28 34.6	+0.6
	comp=N,475nm,0.7s						
CHAN	**Chania**	1.67	135	P	Pn	01 28 12.0	-0.7
IMMV	**Iera Moni Meta**	1.67	137	P	Pn	01 28 13.2	+0.4
IMMV	**Iera Moni Meta**	1.67	137	Pn	Pn	01 28 11.8	-1.0
IMMV	**Iera Moni Meta**	1.67	137	P	Pn	01 28 13.2	+0.4
PTL	**Penteli**	1.69	37	P	Pn	01 28 13.3	+0.3
PTL				S	Sb	01 28 35.8	-0.1
	comp=N,472nm,0.5s						
LTHK	**Lithakia**	1.72	306	P	Pn	01 28 14.0	+0.5
LTHK				S	Sb	01 28 37.8	+0.9
	comp=N,570nm,0.6s						
DION	**Dionisos Attik**	1.74	37	P	Pn	01 28 14.2	+0.4
DION				S	Sb	01 28 37.6	+0.1
	comp=N,978nm,0.6s						
SERG	**Sergoula**	1.76	346	P	Pn	01 28 14.3	+0.2
EFP	**Efpalio**	1.81	343	P	Pn	01 28 15.1	+0.5
EFP				S	Sb	01 28 39.1	-0.2
	comp=N,375nm,0.8s						
ANX	**Ano Chora**	1.96	345	P	Pn	01 28 17.0	+0.1
ANX				S	Sb	01 28 42.8	-1.1
	comp=N,692nm,0.5s						
ATAL	**Atalanti**	2.02	10	P	Pn	01 28 17.8	+0.2
EREA	**Eretria**	2.02	31	P	Pn	01 28 17.4	-0.2
AXAR	**Agios Charalam**	2.06	2	P	Pn	01 28 18.4	+0.2
AXAR				S	Sb	01 28 45.6	-1.1
	comp=N,785nm,0.6s						
PVO	**Paravola**	2.09	337	P	Pn	01 28 18.7	+0.2
GVD	**Gavdhos**	2.22	146	Pn	Pn	01 28 19.8	-0.5
KYMI	**Kymi, Euboea I**	2.27	31	P	Pn	01 28 20.8	-0.2
EVR	**Evrytania**	2.30	345	P	Pn	01 28 22.1	+0.6
AGG	**Agios Georgios**	2.33	355	P	Pn	01 28 22.3	+0.5
SANT	**Santorini**	2.33	97	Pn	Pn	01 28 21.0	-0.9
MAKR	**Makrakomi, Fth**	2.34	351	P	Pn	01 28 22.4	+0.4
IDI	**Anoyia**	2.34	126	P	Pn	01 28 22.6	+0.6
	comp=N,2.0nm,0.3s,baz=267,slow=9.9,SNR=41						
IDI				S	Sn	01 28 52.5	+1.7
	comp=N,42nm,0.4s,baz=45,slow=19,SNR=6.7						
IDI				LR	LR	01 29 09.2	
	comp=N,26nm,20.3s,baz=82,slow=35						
	comp=N,11nm,0.4s						
IDI	**Anoyia**	2.34	126	Pn	Pn	01 28 21.7	-0.3
EVGI	**Lefkada island**	2.46	322	P	Pn	01 28 24.4	+0.8
HRKL	**Herakleio**	2.46	123	Pn	Pn	01 28 23.1	-0.5
NYDR	**Nydri-Lefkada**	2.51	324	P	Pn	01 28 24.5	+0.3
CHOS	**Chios island**	3.23	58	Pn	Pn	01 28 33.8	-0.4
ZKR	**Zakros**	3.34	117	Pn	Pn	01 28 35.2	-0.6
BODT	**Bodrum**	3.80	83	Pn	Pn	01 28 41.7	-0.4
KARP	**Karpathos**	3.88	106	Pn	Pn	01 28 42.9	-0.2
DAT	**Datca**	4.01	88	Pn	Pn	01 28 44.6	-0.4

OHR	Ohrid	4.62	343	*i* Pn	Pn	01 28 59.0	+5.6
STIP	Stip	5.00	357	*i* Pn	Pn	01 29 00.8	+2.3
VAE	Valguarnera	6.58	279	P	Pn	01 29 23.4	+3.1
	comp=N,0.4nm,0.3s,baz=117,slow=17,SNR=1.6						
VAE				S	Sn	01 30 35.5	+0.1
	comp=N,9.4nm,0.9s,baz=92,slow=20,SNR=2.1						
	comp=N,8.7nm,1.0s						
MLR	Muntele Rosu	9.14	15	P	Pn	01 30 00.1	+4.6
	comp=N,0.2nm,0.3s,baz=212,slow=15,SNR=2.3						
	comp=N,1.7nm,0.8s						
BRTR	Keskin Array B	9.21	68	P	Pn	01 29 59.0	+2.6
	baz=240,slow=12,SNR=3.5						
	comp=N,1.0nm,0.9s						
VRAC	Vranov	13.34	343	LR	LR	01 37 42.8	
	comp=N,47nm,18.3s,baz=113,slow=44						
KHC	Kasperske Hory	14.05	335	*e*P	P	01 31 09.5	-0.9
AKASG	Malin Array Be	14.79	17	P	Pn	01 31 13.3	+0.8
	comp=N,0.4nm,0.3s,baz=205,slow=9.5,SNR=1.5						
	comp=N,0.2nm,0.2s						
KBZ	Khabaz	17.00	59	P	P	01 31 43.7	+0.6
	comp=N,0.1nm,0.3s,baz=248,slow=12,SNR=7.3						
	comp=N,2.2nm,0.8s						
ESDC	Sonseca Array	21.06	286	P	P	01 32 28.3	+0.6
	comp=N,0.8nm,1.0s,baz=78,slow=11,SNR=3.8						
	comp=N,0.8nm,1.0s						
HFS	Hagfors	24.14	349	P	P	01 32 59.2	-0.1
	comp=N,3.2nm,0.9s,baz=161,slow=9.4,SNR=4.1						
	comp=N,3.2nm,0.9s						
FINES	FINESS Array B	24.86	4	P	P	01 33 05.0	-0.9
	comp=N,1.3nm,0.9s,baz=182,slow=11,SNR=2.1						
	comp=N,1.3nm,0.9s						
NB2	NORSAR Subarra	25.41	347	P	P	01 33 10.8	-0.1
	comp=Z,0.7nm,0.6s,baz=150,slow=9.3						
NOA	NORSAR Array B	25.41	347	P	P	01 33 10.9	0.0
	comp=Z,0.4nm,0.6s,baz=157,slow=9.9,SNR=4.4						
NOA				LR	LR	01 46 27.5	
	comp=Z,16nm,18.6s,baz=355,slow=44						
	comp=Z,0.4nm,0.6s						
EKA	Eskdalemuir Ar	25.58	325	P	P	01 33 12.3	-0.2
	comp=Z,1.0nm,0.7s,baz=125,slow=10,SNR=2.7						
	comp=Z,1.0nm,0.7s						
TORD	Torodi Ar. Bea	30.02	224	P	P	01 33 52.3	-0.2
	comp=Z,0.4nm,0.9s,baz=32,slow=9.7,SNR=2.1						
	comp=Z,0.4nm,0.9s						
KURBB	Kurchatov Arra	41.80	52	P	P	01 35 32.8	-0.3
	comp=Z,0.6nm,0.4s,baz=280,slow=8.6,SNR=5.5						
	comp=Z,0.6nm,0.4s						
MKAR	Makanchi Array	44.69	58	P	P	01 35 55.6	-0.9
	comp=Z,0.7nm,0.4s,baz=268,slow=8.0,SNR=17						
	comp=Z,0.7nm,0.4s						
ZALV	Zalesovo Beam	45.47	47	P	P	01 36 01.6	-0.9
	comp=Z,1.2nm,0.4s,baz=273,slow=9.4,SNR=6.3						
	comp=Z,1.2nm,0.4s						
RES	Resolute Bay	61.64	344	LR	LR	02 06 41.6	
	comp=Z,32nm,18.0s,baz=3.0,slow=38						
YKA	Yellowknife Ar	75.33	341	P	P	01 39 26.2	-0.3
	comp=Z,0.1nm,0.5s,baz=37,slow=5.2,SNR=1.7						
	comp=Z,0.1nm,0.5s						

DDA 20 01:27:56.4±0.0, 39°.09N×29°.02E, h7^{km}±2^{km}, ML1.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEMI	Demirci	0.24	258	P	Pg	01 28 02.1	+1.0
DEMI				S	Sg	01 28 05.7	+1.3
DEMI				*i* AML	AML	01 28 07.0	
	comp=N,82nm,0.1s						
GDZ	Gediz	0.36	91	P	Pg	01 28 03.4	-0.1
GDZ				S	Sg	01 28 07.9	-0.4
USAK	Uak-Merkez	0.38	180	P	Pb	01 28 04.9	-0.6
USAK				S	Sg	01 28 10.1	+1.3
USAK				*i* AML	AML	01 28 11.0	
	comp=N,67nm,0.9s						
USAK				*i* AML	AML	01 28 11.0	
	comp=E,115nm,0.9s						
DURS	Dursunbey	0.66	320	P	Pg	01 28 09.2	+0.2
DURS				S	Sg	01 28 17.0	-0.7
MANT	Manisa	0.70	211	P	Pb	01 28 10.5	-0.6
MANT				S	Sg	01 28 19.5	+0.4
ANDZ	Kutahya, Merke	0.80	59	P	Pg	01 28 11.8	0.0
ANDZ				*i* AML	AML	01 28 43.0	
	comp=N,33nm,1.3s						
PASA	Karahalli, USA	0.83	154	P	Pg	01 28 12.7	+0.3
PASA				S	Sg	01 28 23.1	-0.1
AKHS	Akhisar	0.96	257	P	Pg	01 28 14.0	-0.9
AKHS				S	Sg	01 28 27.8	+0.4
STEP	BALIKESIR_Sava	1.05	286	P	Pb	01 28 17.0	+0.1
STEP				S	Sb	01 28 31.4	+0.6
BKES	Balkesir-Mer	1.06	308	P	Pg	01 28 16.5	-0.1
BALY	Balya	1.26	301	P	Pn	01 28 19.8	-0.7
BALY				S	Sb	01 28 36.9	0.0
BALY				*i* AML	AML	01 28 39.0	
	comp=E,13nm,0.5s						
BALY				*i* AML	AML	01 28 40.0	
	comp=N,14nm,0.7s						

ROM 20 01:35:53.0±0.1, 42°.837N±0°.006×11°.569E±0°.005, h8^{km}, ML1.3/4, 1D, Error ellipse: s-maj=0.7km s-min=0.4km az=187.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SF01	Poggio Pratacc	0.03	189	P	Pg	01 35 54.8	+0.2
SF01				S	Sg	01 35 55.6	0.0
SF01				AML	AML		
	comp=E,3615µm,0.1s						
SF01				AML	AML		
	comp=N,4985µm,0.2s						
SF13	Bagnolo	0.04	117	P	Pg	01 35 55.1	+0.4
SF13				S	Sg	01 35 56.1	+0.3
SF04	Casetta	0.07	91	P	Pg	01 35 55.5	+0.6
SF04				S	Sg	01 35 56.7	+0.4
SF04				AML	AML		
	comp=E,1130µm,0.3s						
SF04				AML	AML		
	comp=N,1285µm,1.1s						
ARCI	Arcidosso	0.07	282	P	Pg	01 35 55.3	+0.3
ARCI				S	Sg	01 35 56.5	0.0
ARCI				AML	AML		
	comp=E,305µm,0.3s						
ARCI				AML	AML		
	comp=N,320µm,0.1s						
SF14	Selvena	0.09	158	P	Pg	01 35 55.8	+0.6
SF14				S	Sg	01 35 57.1	+0.3
SF03	Valle Cupa	0.09	112	P	Pg	01 35 56.0	+0.7
SF03				S	Sg	01 35 57.4	+0.5
MCIV	Monte Civitell	0.10	126	⇓P	Pg	01 35 56.0	+0.6
MCIV				S	Sg	01 35 57.5	+0.4
MCIV				AML	AML		
	comp=E,428µm,0.3s						
MCIV				AML	AML		
	comp=N,294µm,0.3s						
MCIV				AML	AML		
	comp=N,294µm,0.3s						
MCIV				AML	AML		
	comp=E,428µm,0.3s						
SACS	San Casciano d	0.25	87	P	Pg	01 35 58.8	+0.7
SACS				S	Sg	01 36 02.6	+1.2
LATE	Laterza	0.28	142	P	Pg	01 35 59.4	+0.8
MGAB	Montegabbione	0.41	79	P	Pg	01 36 01.7	+0.8
FROS	Frosini	0.48	321	P	Pg	01 36 02.9	+0.6
CASP	Castiglione de	0.52	265	P	Pb	01 36 03.9	-0.6
MAON	Monte Argentar	0.52	218	P	Pg	01 36 03.5	+0.5
TRIF	Trifonti	0.56	300	P	Pb	01 36 04.8	-0.3
CAFI	Castiglion Fio	0.57	31	P	Pg	01 36 04.4	+0.4
CSNT	Castellina Chi	0.67	342	P	Pg	01 36 06.0	+0.1
FDMO	Fiordimonte	1.13	79	S	Sn	01 36 32.5	+1.5
FDMO				AML	AML		
	comp=E,124µm,0.2s						
FDMO				AML	AML		
	comp=N,62µm,0.6s						
FDMO				AML	AML		
	comp=N,62µm,1.4s						

ROM 20 01:36:33.2±0.0, 42°.943N±0°.003×13°.043E±0°.004, h11^{km}, ML1.1/7, 2C-1D, Error ellipse: s-maj=0.3km s-min=0.2km az=226.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FEMA	Monte Fema	0.02	14	P	Pg	01 36 35.6	+0.2
FEMA				S	Sg	01 36 37.2	+0.3
T1216	Preci, Frazion	0.06	199	P	Pg	01 36 35.8	+0.3
T1216				S	Sg	01 36 37.5	+0.3
T1216				AML	AML		
	comp=N,240µm,0.3s						
T1216				AML	AML		
	comp=E,277µm,0.3s						
T1216				AML	AML		
	comp=N,240µm,0.3s						
FDMO	Fiordimonte	0.10	19	P	Pg	01 36 36.3	+0.3
MC2	Monte Cornacci	0.11	106	P	Pg	01 36 36.7	+0.4
T1219	Muccia, Frazio	0.12	347	P	Pg	01 36 36.6	+0.4
T1219				S	Sg	01 36 38.9	+0.4
T1219				AML	AML		
	comp=E,107µm,0.5s						
T1219				AML	AML		
	comp=N,86µm,0.1s						
T1219				AML	AML		
	comp=N,86µm,0.1s						
T1219				AML	AML		
	comp=E,107µm,0.5s						
CESI	CESI - Serrava	0.12	301	⇑P	Pg	01 36 36.7	+0.5
CESI				S	Sg	01 36 39.3	+0.8
CESI				AML	AML		
	comp=E,90µm,0.3s						
CESI				AML	AML		
	comp=N,202µm,0.2s						
T1245	Castelsantange	0.14	129	P	Pg	01 36 37.0	+0.4
T1245				S	Sg	01 36 39.7	+0.6
T1245				AML	AML		
	comp=N,154µm,0.7s						
T1245				AML	AML		
	comp=E,113µm,0.3s						
T1245				AML	AML		
	comp=N,154µm,1.3s						
T1256	Bolognola (MC)	0.15	65	P	Pg	01 36 37.2	+0.4
T1256				AML	AML		
	comp=E,56µm,0.3s						
T1256				AML	AML		
	comp=N,53µm,1.4s						
T1256				AML	AML		
	comp=N,53µm,0.6s						
T1256				AML	AML		
	comp=E,56µm,0.3s						
T1220	Camerino, Fraz	0.17	11	P	Pg	01 36 37.4	+0.4
T1212	Cascia, Frazio	0.19	180	P	Pg	01 36 37.8	+0.4
MMO1	Montemonaco	0.21	102	P	Pg	01 36 38.2	+0.4
T1241	Roccafluvione,	0.30	107	P	Pg	01 36 39.6	+0.3
T1241				AML	AML		
	comp=E,65µm,0.2s						
T1241				AML	AML		
	comp=N,33µm,0.6s						
T1241				AML	AML		
	comp=E,65µm,0.2s						
ASSB	Assisi San Ben	0.30	290	⇑P	Pg	01 36 39.5	+0.2
ASSB				AML	AML		
	comp=E,30µm,0.4s						
ASSB				AML	AML		
	comp=N,43µm,0.1s						
ATCC	AVT- Casa Cast	0.38	309	⇓P	Pg	01 36 41.1	+0.3

IDC 20 01:39:42.2±4.1, 49°.11N×151°.00E, h0^{km}, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=125.8km s-min=42.1km az=8.0, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	44.63	294	P	P	01 47 56.0	-0.2
	0.2nm,0.7s,baz=66,slow=8.3,SNR=2.5						
	0.2nm,0.7s						
FINES	FINESS Array B	61.30	333	P	P	01 49 59.5	+0.6
	0.4nm,0.4s,baz=32,slow=11,SNR=7.2						
	0.4nm,0.4s						
NOA	NORSAR Array B	65.53	340	P	P	01 50 26.1	-0.8
	0.3nm,0.6s,baz=27,slow=6.4,SNR=1.6						
	0.3nm,0.6s						
TXAR	Lajitas Array	77.55	60	P	P	01 51 40.1	+0.1
	0.2nm,0.6s,baz=308,slow=4.4,SNR=3.4						
	0.2nm,0.6s						

*NNC **20** 01:40:02.1±6.3, 36°.89N×70°.91E, h0^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=60.0km s-min=45.4km az=125.0*

ISC 20 01:40:06.1±3.5, 36°.8N±0°.2×71°.2E±0°.2, h200^{km}, n8, σ0^{s}.36/10, 1C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.62	19	P	Pn	01 41 28.7	-0.1
	SNR=28						
AML	Almayashu	5.62	19	⇓P	Pn	01 41 28.4	-0.4
	1.5nm,0.6s						
AML				S	Sn	01 42 34.3	+0.1
	2.9nm,0.7s						
UCH	Uchtor	5.96	24	P	Pn	01 41 32.9	-0.2
	SNR=6.3						
EKS2	Erkin-Say	6.14	18	P	Pn	01 41 35.5	+0.3
	SNR=6.5						
KK31	Karatay Array	6.27	355	⇑P	Pn	01 41 36.3	-0.5
	1.4nm,0.3s,baz=174,slow=12,SNR=31						
KK31				⇓S	Sn	01 42 48.8	0.0
	0.6nm,0.3s,baz=178,slow=22,SNR=4.3						
AAK	Ala-Archa	6.32	23	P	Pn	01 41 37.6	0.0
	SNR=6.8						
TKM2	Tokmak 2	6.95	28	P	Pn	01 41 45.3	-0.4
	SNR=5.8						
AB31	Akbulak array	14.86	330	P	P	01 43 27.5	+0.3
	0.4nm,0.6s,baz=151,slow=11,SNR=7.1						

*IDC **20** 01:43:17.9±0.5, 8°.14S×161°.00E, h0^{km}, mb4.4/21, mbtmp4.4/24, ML3.5/3, MS3.7/28, Error ellipse: s-maj=17.7km s-min=12.4km az=125.0*

*NEIC **20** 01:43:17.9±1.6, 8°.21S±0°.09×161°.3E±0°.1, h10^{km}±1^{km}, mb4.7/51, Error ellipse: s-maj=18.0km s-min=14.6km az=101.0*

*NOU **20** 01:44:14.7, 10°.17S×159°.33E, h382^{km}, mb4.2/10, Solomon Islands*

ISC 20 01:43:22.3±0.4, 8°.15S±0°.06×161°.03E±0°.07, h35^{km}, n135, σ1^{s}.26/119, mb4.6/51, MS3.8/25, 2D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.67	220	Pn	Pn	01 43 49.9	+0.8
	3µm,0.3s,baz=194,slow=9.8,SNR=40						
HNR				Sn	Sn	01 44 12.7	+3.5
	3µm,0.3s,baz=229,slow=23,SNR=6.5						
HNR	Honiara	1.67	220		Pn	01 43 49.2	+0.2
RABL	Rabaul	9.65	294	Pn	Pn	01 45 40.6	+1.8
PMG	Port Moresby	13.77	264	Pn	Pn	01 46 35.6	+0.4
	1.1nm,0.3s,baz=78,slow=9.5,SNR=4.5						
PMG				LR	LR	01 51 41.5	
	comp=Z,461nm,18.9s,baz=151,slow=37						
	3.7nm,0.3s						
PMG	Port Moresby	13.77	264	Pn	Pn	01 46 32.8	-2.3
PMG	Port Moresby	13.77	264	P	P	01 46 55.3	+12
	24nm,1.1s						
DZM	Mont Dzumac	14.79	160	Pn	Pn	01 46 49.5	+0.3
	0.2nm,0.3s,baz=336,slow=12,SNR=2.1						
	7.8nm,0.9s						
PATS	Pohnpei	15.13	350	Pn	Pn	01 46 48.4	-5.2
TV1H	Townsville Har	17.68	230	P	P	01 47 29.5	+2.9
COEN	Coen	18.44	250		P	01 47 34.0	-1.1
CTA	Charters Tower	18.59	229	P	Pn	01 47 36.7	-0.4
	0.8nm,0.3s,baz=48,slow=10,SNR=14						
CTA				LR	LR	01 53 48.8	
	comp=Z,244nm,21.6s,baz=66,slow=34						
	12nm,0.7s						
CTAO	Charters Tower	18.59	229	P	P	01 47 35.4	-1.2
CTAO	Charters Tower	18.59	229	P	Pn	01 47 39.4	+2.3
MTSU	Mount Surprise	19.05	237	P	Pn	01 47 44.2	+1.5
MSVF	Nonsavu	19.11	122	LR	LR	01 53 39.0	
	comp=Z,167nm,18.0s,baz=168,slow=32						
EIDS	Eidsvold	19.58	208	P	P	01 47 47.1	-0.3
EIDS				IAmb	IAmb	01 47 50.7	
	comp=Z,57nm,1.0s						
EIDS	Eidsvold	19.58	208	P	Pn	01 47 49.2	+0.3
RMQ	Roma	21.64	211	P	P	01 48 11.3	+1.5
ARMA	Armidale	23.84	200	P	P	01 48 30.1	-2.5
ARMA				IAmb	IAmb	01 48 34.2	
	comp=Z,18nm,0.8s						
ARMA	Armidale	23.84	200	P	P	01 48 33.0	+0.5
QIS	Mount Isa	24.11	237	P	P	01 48 34.7	-0.3
QLP	Quilpie	24.30	219	P	P	01 48 36.6	-0.1
AFI	Afiamalu	27.28	105	P	P	01 49 04.7	+0.8
	comp=Z,10nm,0.2s,baz=207,slow=4.5,SNR=6.2						
AFI				LR	LR	01 57 59.4	
	comp=Z,51nm,18.4s,baz=303,slow=32						
	comp=Z,10nm,0.2s						
WB0	Warramunga Arr	28.26	243	P	P	01 49 10.5	-2.1
WB0				IAmb	IAmb	01 49 13.4	
	comp=Z,14nm,1.1s						
H11N1	WAKE ISLAND Hy	28.28	12	T	T	02 19 08.5	
	baz=192,slow=76,SNR=726						
H11N3	WAKE ISLAND Hy	28.29	12	T	T	02 19 09.0	
	baz=192,slow=76,SNR=498						
H11N2	WAKE ISLAND Hy	28.30	12	T	T	02 18 49.4	
	baz=192,slow=76,SNR=627						
WRAB	Tennant Creek	28.36	243	P	P	01 49 11.7	-1.7
WRAB				IAmb	IAmb	01 49 38.6	
	comp=Z,16nm,1.2s						
WB2	Warramunga Arr	28.36	243	P	P	01 49 12.9	-0.6
WB2				IAmb	IAmb	01 49 26.4	
	comp=Z,14nm,1.1s						
WRA	Warramunga Arr	28.37	243	P	P	01 49 12.7	-0.8
	comp=Z,4.5nm,0.8s,baz=70,slow=9.0,SNR=20						
WRA				PcP	PcP	01 52 26.8	+1.0
	comp=Z,1.3nm,0.9s,baz=74,slow=2.8,SNR=5.5						
WRA				LR	LR	02 00 02.5	
	comp=Z,297nm,19.9s,baz=36,slow=36						
	comp=Z,4.5nm,0.8s						
WRA	Warramunga Arr	28.37	243	P	P	01 49 11.9	-1.6
STKA	Stephens Creek	29.74	215	P	P	01 49 24.8	-0.8
	comp=Z,1.9nm,0.4s,baz=29,slow=14,SNR=5.9						
STKA				LR	LR	02 01 29.5	
	comp=Z,194nm,18.6s,baz=31,slow=37						
	comp=Z,1.9nm,0.4s						
STKA	Stephens Creek	29.74	215	P	P	01 49 23.8	-1.7
AS31	Alice Springs	30.22	236	P	P	01 49 28.2	-1.7
ASAR	Alice Springs	30.22	236	P	P	01 49 29.0	-1.0
	comp=Z,1.9nm,0.9s,baz=63,slow=9.6,SNR=12						
ASAR				PcP	PcP	01 52 31.4	+1.0
	comp=Z,0.7nm,0.8s,baz=76,slow=0.3,SNR=4.7						
ASAR				LR	LR	02 01 21.3	
	comp=Z,211nm,18.4s,baz=74,slow=36						
	comp=Z,1.9nm,0.9s						
ASAR	Alice Springs	30.22	236	P	P	01 49 28.0	-1.9
BBOO	Buckleboo	33.72	220	P	P	01 49 58.8	-1.7
BKZ	Black Stump Fm	33.87	158	P	P	01 49 57.9	-3.8
BKZ				IAmb	IAmb	01 50 02.2	
	comp=Z,16nm,1.3s						
FORT	Forrest	38.14	229		P	01 50 36.4	-2.0
FORT				IAmb	IAmb	01 50 44.2	
	comp=Z,17nm,0.8s						
DAV	Davao City (W)	38.44	292	LR	LR	02 06 06.1	
	comp=Z,73nm,19.6s,baz=74,slow=36						
KAPI	Kappang	41.11	272	LR	LR	02 09 37.7	
	comp=Z,114nm,19.1s,baz=281,slow=38						
NWAO	Narrogin (SRO)	47.38	232	LR	LR	02 11 41.3	
	comp=Z,203nm,18.5s,baz=330,slow=36						
PPT	Papeete	48.93	106	LR	LR	02 09 42.2	
	comp=Z,45nm,18.1s,baz=278,slow=32						
MJAR	Matsushiro Arr	49.35	336	P	P	01 52 07.8	-0.6
	comp=Z,2.0nm,0.8s,baz=167,slow=7.6,SNR=4.8						
	comp=Z,2.0nm,0.8s						
KSM	Kuching	51.47	278	P	P	01 52 24.4	-0.3
ASAJ	Asahikawa	54.63	344	LR	LR	02 13 18.4	
	comp=Z,63nm,21.3s,baz=116,slow=33						
KSRS	Korea Array	54.92	328	P	P	01 52 50.6	+0.9
	comp=Z,2.7nm,0.8s,baz=144,slow=7.9,SNR=12						
	comp=Z,2.7nm,0.8s						
KSAR	Wonju Array Be	54.93	328	P	P	01 52 50.0	+0.1
USA0B	Ussuriysk Arra	58.35	336	P	P	01 53 14.2	+0.2
USRK	Ussuriysk Ar.	58.35	336	P	P	01 53 15.1	+1.1
	comp=Z,5.0nm,0.8s,baz=138,slow=7.9,SNR=10						
	comp=Z,5.0nm,0.8s						
USRK	Ussuriysk Ar.	58.35	336	P	P	01 53 14.3	+0.3
MDJ	Mudanjiang	59.69	334	P	P	01 53 23.6	+0.3
MDJ				IAmb	IAmb	01 53 36.2	
	comp=Z,9.3nm,1.1s						
SDSI	Sungai Dareh	59.79	274	P	P	01 53 24.6	0.0
BKNI	Bangkinang	60.37	275	P	P	01 53 28.0	-0.6
CN2	Changchun	60.93	331	P	P	01 53 33.3	+1.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PETK	Petropavlovsk-	61.08	358	P	P	01 53 34.9	+2.2
	comp=Z,8.2nm,1.0s,baz=153,slow=10.0,SNR=5.4						
PETK				LR	LR	02 15 10.1	
	comp=Z,44nm,20.9s,baz=165,slow=31						
	comp=Z,8.2nm,1.0s						
PETK	Petropavlovsk-	61.08	358	P	P	01 53 32.0	-0.6
BNX	BinXian	61.52	334	⇓P	P	01 53 36.3	+0.5
BNX				pmax	pmax		
	comp=Z,11nm,1.0s						
BNX				pmax	pmax		
	comp=Z,61nm,4.3s						
HEH	HeiHe	65.08	337	*e*P	P	01 53 59.0	-0.3
HEH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HEH				pmax	pmax		
	comp=Z,150nm,5.1s						
PHRA	Phrae	65.55	294	P	P	01 54 01.7	-1.2
XLT	XiLinHaoTe	65.84	326	⇓*i*P	P	01 54 05.9	+1.5
XLT				pmax	pmax		
	comp=Z,68nm,4.7s						
XLT				pmax	pmax		
	comp=Z,18nm,1.0s						
CRAI	Chiangrai	65.97	296	P	P	01 54 05.4	-0.2
CRAI				IAmb	IAmb	01 54 07.8	
	comp=Z,7.2nm,1.1s						
CM31	Chiang Mai Arr	66.70	294	P	P	01 54 10.8	+0.5
CMAR	Chiang Mai Arr	66.70	294	P	P	01 54 11.9	+1.6
	comp=Z,2.6nm,0.8s,baz=112,slow=4.6,SNR=13						
	comp=Z,2.6nm,0.8s						
CMAR	Chiang Mai Arr	66.70	294	P	P	01 54 09.3	-1.0
CHTO	Chiang Mai	66.80	294	P	P	01 54 10.2	-0.8
VNDA	Vanda	69.34	180	P	P	01 54 27.1	+1.2
	comp=Z,2.7nm,0.9s,baz=192,slow=2.2,SNR=4.5						
	comp=Z,2.7nm,0.9s						
VNDA	Vanda	69.34	180	P	P	01 54 25.2	-0.7
VNDA				IAmb	IAmb	01 54 41.9	
	comp=Z,6.8nm,1.2s						
ULN	Ulaanbaatar	73.26	325	P	P	01 54 49.9	-0.3
ULN				IAmb	IAmb	01 54 54.2	
	comp=Z,5.6nm,0.9s						
SONM	Songino Array	73.62	325	P	P	01 54 53.8	+1.4
	comp=Z,3.6nm,0.9s,baz=138,slow=4.5,SNR=21						
	comp=Z,3.6nm,0.9s						
SONM	Songino Array	73.62	325	P	P	01 54 53.0	+0.7
GTA	Gaotai	73.72	315	*e*P	P	01 54 54.6	+1.5
GTA				pP	sP	01 55 07.0	0.0
GTA				sP	PcP	01 55 12.1	+3.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
YAK	Yakutsk	74.07	345	LR	LR	02 24 37.0	
	comp=Z,40nm,21.2s,baz=262,slow=34						
YAK	Yakutsk	74.07	345	P	P	01 54 54.7	+0.3
SHL	Shillong	75.06	299	P	P	01 55 00.2	-1.0
KDAK	Kodiak Island	75.70	24	LR	LR	02 24 38.0	
	comp=Z,41nm,19.4s,baz=231,slow=33						
BILL	Bilibino	76.09	2	P	P	01 55 05.6	-0.4
BILL				IAmb	IAmb	01 55 09.1	
	comp=Z,7.5nm,1.0s						
LSA	Lhasa	76.89	303	P	P	01 55 10.9	-1.0
LSA				IAmb	IAmb	01 55 26.6	
	comp=Z,7.1nm,1.0s						
SVW2	Sparrevohn	76.91	20	P	P	01 55 09.8	-1.0
TNA	Tin City	77.00	13	P	P	01 55 09.9	-1.3
M19K	Big River Lodg	77.89	20	P	P	01 55 15.5	-0.7
M19K				IAmb	IAmb	01 55 20.3	
	comp=Z,6.8nm,0.8s						
L19K	White Mountain	77.93	20	P	P	01 55 16.1	-0.4
L19K				IAmb	IAmb	01 55 19.3	
	comp=Z,11nm,1.1s						
SUA	Susitna One	78.86	21	P	P	01 55 22.2	+0.5
SUA				IAmb	IAmb	01 55 32.7	
	comp=Z,6.0nm,1.0s						
TAPN	Taplejung	79.14	300	*e*Pg	P	01 55 25.7	+1.4
JIRN	Jiri	80.52	300	*e*Pg	P	01 55 33.3	+1.4
GUN	Gumba	80.85	300	*e*Pg	P	01 55 34.4	+0.8
	comp=Z,32nm,0.9s						
I21K	Tanana	80.94	18	P	P	01 55 31.4	-1.3
IMAR	Indian Mountai	80.97	17	P	P	01 55 33.2	+0.3
MCK	McKinley	80.97	20	P	P	01 55 32.8	-0.2
MCK				IAmb	IAmb	01 55 35.9	
	comp=Z,9.5nm,0.9s						
PKI	Pulchoki	81.17	300	*e*Pg	P	01 55 35.8	+0.5
PKIN	Phulchoki	81.19	300	*e*Pg	P	01 55 35.8	+0.5
	comp=Z,7.0nm,0.5s						
MLY	Manley	81.23	19	P	P	01 55 33.8	-0.6
NEA2	Nenana	81.48	19	P	P	01 55 35.4	-0.3

PALK	**Pallekele**	**81.53**	**279**	LR	LR	02 35 19.3	
	comp=Z,60nm,19.9s,baz=224,slow=38						
WRH	**Wood River Hil**	**81.73**	**20**	P	**P**	**01 55 36.4**	**-0.6**
QSPA	**South Pole Qui**	**81.84**	**180**	P	**P**	**01 55 36.8**	**-1.0**
QSPA				IAmb	IAmb	01 55 48.8	
	comp=Z,6.7nm,1.1s						
CCB	**Clear Creek Bu**	**81.94**	**20**	P	**P**	**01 55 36.9**	**-1.1**
CCB				IAmb	IAmb	01 55 53.2	
	comp=Z,9.9nm,1.4s						
GKN	**Gorkha**	**81.94**	**300**	*e*Pg	**P**	**01 55 39.0**	**-0.1**
	comp=Z,54nm,0.9s						
MDM	**Murphy Dome**	**82.00**	**19**	P	**P**	**01 55 37.8**	**-0.6**
MDM				IAmb	IAmb	01 55 40.2	
	comp=Z,5.9nm,1.0s						
TCOL	**CIGO, UAF Yank**	**82.06**	**20**	P	**P**	**01 55 38.2**	**-0.5**
COLA	**College**	**82.07**	**20**	P	**P**	**01 55 37.6**	**-1.1**
H23K	**Yukon River**	**82.13**	**18**	P	**P**	**01 55 38.4**	**-0.7**
H23K				IAmb	IAmb	01 55 42.8	
	comp=Z,5.6nm,0.9s						
IL31		**82.33**	**20**	P	**P**	**01 55 39.9**	**-0.1**
IL31				IAmb	IAmb	01 55 42.9	
	comp=Z,4.4nm,1.0s						
ILAR	**Eielson Array**	**82.33**	**20**	P	**P**	**01 55 40.3**	**+0.2**
	comp=Z,2.6nm,0.9s,baz=267,slow=4.7,SNR=20						
ILAR				LR	LR	02 30 02.6	
	comp=Z,21nm,18.6s,baz=238,slow=34						
	comp=Z,2.6nm,0.9s						
ILAR	**Eielson Array**	**82.33**	**20**	P	**P**	**01 55 39.6**	**-0.5**
DANN	**Dangsing**	**82.77**	**300**	*e*Pg	**P**	**01 55 44.1**	**+0.4**
	comp=Z,13nm,0.8s						
I26K	**Coal Creek Min**	**83.92**	**20**	P	**P**	**01 55 48.1**	**-0.3**
I26K				IAmb	IAmb	01 55 59.2	
	comp=Z,7.5nm,1.4s						
EGAK	**Eagle**	**84.33**	**21**	P	**P**	**01 55 49.5**	**-1.0**
EGAK				IAmb	IAmb	01 55 54.1	
	comp=Z,5.8nm,0.9s						
BMAR	**Burnt Mountain**	**84.68**	**18**	P	**P**	**01 55 52.3**	**0.0**
BBB	**Bella Bella**	**84.90**	**36**	P	**P**	**01 55 53.2**	**-0.3**
	comp=Z,19nm,1.0s,baz=240,slow=2.3,SNR=3.1						
BBB				LR	LR	02 26 46.0	
	comp=Z,42nm,19.9s,baz=286,slow=31						
	comp=Z,19nm,1.0s						
YBH	**Yreka Blue Hor**	**85.26**	**47**	P	**P**	**01 55 57.6**	**+1.8**
	comp=Z,2.4nm,0.9s,baz=33,slow=2.9,SNR=4.8						
YBH				LR	LR	02 25 28.4	
	comp=Z,28nm,21.0s,baz=298,slow=30						
	comp=Z,2.4nm,0.9s						
MAW	**Mawson**	**85.63**	**202**	LR	LR	02 30 14.7	
	comp=Z,74nm,19.0s,baz=76,slow=33						
M31M	**Drury Creek, Y**	**85.71**	**25**	P	**P**	**01 55 57.2**	**-0.3**
M31M				IAmb	IAmb	01 56 00.3	
	comp=Z,7.3nm,1.1s						
DLBC	**Dease Lake**	**86.14**	**29**	P	**P**	**01 56 01.2**	**+1.5**
	comp=Z,3.0nm,1.1s,baz=246,slow=2.9,SNR=3.2						
	comp=Z,3.0nm,1.1s						
NVAR	**Mina Array Bea**	**87.77**	**51**	P	**P**	**01 56 10.3**	**+2.0**
	comp=Z,0.4nm,0.6s,baz=230,slow=7.0,SNR=2.9						
NVAR				LR	LR	02 27 57.2	
	comp=Z,41nm,21.4s,baz=240,slow=30						
	comp=Z,0.4nm,0.6s						
MK31	**Makanchi Array**	**88.25**	**318**	P	**P**	**01 56 10.4**	**+0.3**
MK31				IAmb	IAmb	01 56 13.0	
	comp=Z,2.8nm,0.8s						
MKAR	**Makanchi Array**	**88.25**	**318**	P	**P**	**01 56 10.8**	**+0.6**
	comp=Z,3.7nm,0.8s,baz=94,slow=5.5,SNR=27						
	comp=Z,3.7nm,0.8s						
MKAR	**Makanchi Array**	**88.25**	**318**	P	**P**	**01 56 10.2**	**0.0**
PFO	**Pinyon Flats O**	**88.27**	**56**	LR	LR	02 30 15.4	
	comp=Z,107nm,18.3s,baz=228,slow=32						
ZALV	**Zalesovo Beam**	**88.52**	**325**	P	**P**	**01 56 10.6**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=22,slow=1.6,SNR=3.6						
	comp=Z,0.7nm,0.7s						
INK	**Inuvik**	**88.72**	**20**	P	**P**	**01 56 11.6**	**-0.3**
	comp=Z,1.5nm,1.0s,baz=204,slow=6.2,SNR=3.9						
INK				LR	LR	02 32 05.3	
	comp=Z,39nm,19.8s,baz=290,slow=33						
	comp=Z,1.5nm,1.0s						
NEW	**Newport**	**90.63**	**41**	LR	LR	02 28 21.7	
	comp=Z,51nm,21.4s,baz=296,slow=30						
KURBB	**Kurchatov Arra**	**91.50**	**321**	LR	LR	02 37 46.9	
	comp=Z,54nm,21.0s,baz=76,slow=36						
LPIG	**La Paz**	**92.07**	**66**	LR	LR	02 31 52.3	
	comp=Z,58nm,18.9s,baz=216,slow=32						
A36M	**Sachs Harbour**	**92.72**	**17**	P	**P**	**01 56 29.8**	**-0.6**
A36M				IAmb	IAmb	01 56 34.5	
	comp=Z,3.6nm,0.8s						
YKA	**Yellowknife Ar**	**94.56**	**28**	P	**P**	**01 56 39.8**	**+0.8**
	comp=Z,1.7nm,0.9s,baz=255,slow=4.4,SNR=20						
	comp=Z,1.7nm,0.9s						
PDAR	**Pinedale Array**	**95.04**	**48**	P	**P**	**01 56 43.5**	**+1.4**
	comp=Z,1.4nm,0.8s,baz=217,slow=1.3,SNR=10						
	comp=Z,1.4nm,0.8s						
ANMO	**Albuquerque**	**96.66**	**56**	LR	LR	02 32 56.8	
	comp=Z,51nm,20.8s,baz=17,slow=31						
TXAR	**Lajitas Array**	**98.54**	**62**	LR	LR	02 40 02.5	
	comp=Z,32nm,18.1s,baz=302,slow=34						
BRTR	**Keskin Array B**	**123.59**	**313**	PKP	**PKiKP**	**02 02 18.1**	**+1.1**
	comp=Z,0.5nm,0.9s,baz=343,slow=4.5,SNR=1.9						
LPAZ	**La Paz**	**125.63**	**117**	PKP	**PKiKP**	**02 02 23.4**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=358,slow=12,SNR=3.6						
SDV	**Santo Domingo**	**128.94**	**85**	PKP	**PKiKP**	**02 02 29.1**	**+0.7**
	comp=Z,3.0nm,0.9s,baz=209,slow=6.8,SNR=5.4						
BDFB	**Brasilia**	**142.77**	**129**	PKP	**PKPdf**	**02 02 53.9**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=166,slow=4.2,SNR=2.2						
ESDC	**Sonseca Array**	**145.85**	**339**	PKPbc	**PKPab**	**02 02 59.6**	**+0.8**
	comp=Z,2.4nm,1.0s,baz=20,slow=4.3,SNR=10						
TORD	**Torodi Ar. Bea**	**159.10**	**286**	PKP	**PKPdf**	**02 03 18.5**	**+0.6**
	comp=Z,0.9nm,1.0s,baz=122,slow=1.9,SNR=3.0						
TORD				PKPab	**PKPab**	**02 03 54.4**	**-0.3**
	comp=Z,2.8nm,0.9s,baz=71,slow=3.0,SNR=9.4						

ISK ***20*** *01:44:52.8, 37°.38N×26°.98E, h7^{km}, ML2.5/15*
DDA ***20*** *01:44:53.1±0.0, 37°.36N×26°.99E, h7^{km}±2^{km}, ML2.6*
ISC 20 01:44:53.4±1.0**, 37°.37N**±0°.02×**26°.99E**±0°.03**, h12**^{km}±8^{km}**,**
n27, σ0^{s}.56/42**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DDIM	**Aydin, Didim**	**0.22**	**67**	P	**Pg**	**01 44 57.9**	**-0.1**
DDIM				S	**Sg**	**01 45 01.6**	**+0.4**
DDIM				*i* AML	AML	01 45 02.0	
	comp=E,862nm,0.5s						
GCAM	**G?zelcaml?**	**0.38**	**30**	Pg	**Pg**	**01 45 01.1**	**0.0**
GCAM				Sg	**Sb**	**01 45 07.2**	**-0.8**
GCAM	**G?zelcaml?**	**0.38**	**30**	P	**Pg**	**01 45 01.0**	**0.0**
GCAM				S	**Sg**	**01 45 06.7**	**+0.5**
GCAM				*i* AML	AML	01 45 07.0	
	comp=N,535nm,0.2s						
GCAM				*i* AML	AML	01 45 08.0	
	comp=E,589nm,0.2s						
BODT	**Bodrum**	**0.40**	**140**	Pg	**Pg**	**01 45 01.4**	**0.0**
BODT				Sg	**Sb**	**01 45 07.7**	**-0.8**
BDRM	**Kayabasi**	**0.47**	**130**	P	**Pg**	**01 45 02.5**	**-0.3**
BDRM				S	**Sg**	**01 45 09.1**	**0.0**
KOSK	**Kos Island**	**0.62**	**181**	Pg	**Pg**	**01 45 05.3**	**-0.1**
KOSK				Sg	**Sb**	**01 45 14.9**	**+0.2**
MLSB	**Milas**	**0.63**	**97**	Pg	**Pg**	**01 45 05.4**	**-0.3**
DGB	**zmir**	**0.69**	**353**	P	**Pg**	**01 45 06.0**	**-0.7**
DGB				S	**Sg**	**01 45 16.0**	**+0.3**
AYDN	**Tasoluk**	**0.76**	**67**	P	**Pg**	**01 45 07.4**	**-0.8**
AYDN				S	**Sg**	**01 45 17.4**	**-0.8**
DAT	**Datca**	**0.79**	**144**	Pg	**Pb**	**01 45 08.8**	**-0.4**
DAT				Sg	**Sb**	**01 45 20.2**	**+0.2**
DAT	**Datca**	**0.79**	**144**	P	**Pg**	**01 45 08.7**	**-0.1**
DAT				S	**Sb**	**01 45 19.5**	**-0.5**
ZEYE	**Izmir, Urla-Ze**	**0.95**	**336**	P	**Pb**	**01 45 11.6**	**-0.2**
ZEYE				S	**Sb**	**01 45 25.4**	**+1.1**
ZEYE				*i* AML	AML	01 45 30.0	
	comp=N,137nm,0.5s						
BLCB	**Balcova**	**1.01**	**2**	Pg	**Pg**	**01 45 12.4**	**-0.6**
BLCB				Sg	**Sb**	**01 45 26.6**	**+0.4**
URLA	**Izmir**	**1.04**	**343**	Pg	**Pg**	**01 45 12.9**	**-0.5**
URLA				Sg	**Sb**	**01 45 27.4**	**+0.5**
URLA	**Izmir**	**1.04**	**343**	P	**Pb**	**01 45 13.2**	**-0.1**
URLA				S	**Sn**	**01 45 27.9**	**-0.3**
URLA				*i* AML	AML	01 45 32.0	
	comp=E,121nm,0.7s						
YER	**Yerkesik**	**1.06**	**103**	Pg	**Pb**	**01 45 13.9**	**+0.2**
TURN	**Turunc**	**1.17**	**120**	Pn	**Pn**	**01 45 15.7**	**+0.2**
TURN	**Turunc**	**1.17**	**120**	P	**Pg**	**01 45 15.3**	**-0.5**
TURN				S	**Sn**	**01 45 32.1**	**+0.8**
KARB	**zmir-Karabur**	**1.37**	**341**	P	**Pn**	**01 45 17.4**	**-0.9**
TAVA	**DENIZLI_Tavas**	**1.53**	**86**	P	**Pb**	**01 45 22.0**	**+0.2**
SANT	**Santorini**	**1.58**	**231**	Pn	**Pn**	**01 45 21.7**	**+0.4**
DNIZ	**Denizli-Tavas-**	**1.65**	**81**	P	**Pn**	**01 45 21.9**	**-0.4**
DKL	**Dikili**	**1.70**	**358**	Pn	**Pn**	**01 45 23.4**	**+0.6**
KULA	**Kula-Manisa**	**1.75**	**49**	Pn	**Pn**	**01 45 24.3**	**+0.7**
FETY	**Fethiye**	**1.83**	**113**	Pn	**Pb**	**01 45 25.9**	**-0.9**
APMY	**Acipayam-Deniz**	**1.84**	**86**	Pn	**Pn**	**01 45 25.9**	**+1.0**
CAME	**Cameli-Denizli**	**1.90**	**102**	Pn	**Pn**	**01 45 26.6**	**+0.9**

ROM 20 01:45:30.9±0.1**, 42°.798N**±0°.004×**12°.889E**±0°.006**,**
h11^{km}**, ML1.0**/1**, 3D, Error ellipse: s-maj=0.5km**
s-min=0.4km az=107.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
T1217	**Poggiodomo (PG**	**0.09**	**160**	P	Pg	01 45 34.0	+0.5
T1217				S	Sg	01 45 36.0	+0.5
T1217				AML	AML		
	comp=E,119µm,0.2s						
T1217				AML	AML		
	comp=N,112µm,0.9s						
T1217				AML	AML		
	comp=N,112µm,0.9s						
T1217				AML	AML		
	comp=E,119µm,0.2s						
T1212	**Cascia, Frazio**	**0.12**	**112**	⇓P	Pg	01 45 34.5	+0.5
T1212				S	Sg	01 45 36.8	+0.6
T1216	**Preci, Frazion**	**0.13**	**46**	P	Pg	01 45 34.7	+0.6
T1216				AML	AML		
	comp=E,200µm,0.1s						
T1216				AML	AML		
	comp=E,201µm,0.1s						
T1216				AML	AML		
	comp=N,293µm,0.5s						
CESI	**CESI - Serrava**	**0.21**	**3**	P	Pg	01 45 35.9	+0.6
T1218	**Civita (PG)**	**0.21**	**127**	P	Pg	01 45 35.9	+0.5
MOMA	**Monte Martano**	**0.23**	**271**	P	Pg	01 45 36.1	+0.3
ARRO	**Arrone**	**0.24**	**203**	⇓P	Pb	01 45 36.5	-0.7
T1214	**Arquata del Tr**	**0.24**	**99**	⇓P	Pg	01 45 36.4	+0.5
T1211	**Morro Reatino**	**0.27**	**185**	P	Pb	01 45 37.1	-0.6
T1219	**Muccia, Frazio**	**0.27**	**19**	P	Pg	01 45 36.9	+0.4
T1219				AML	AML		
	comp=E,940µm,0.6s						
T1219				AML	AML		
	comp=N,1545µm,0.2s						
T1219				AML	AML		
	comp=E,1016µm,0.2s						
T1219				AML	AML		
	comp=N,1560µm,0.2s						
T1219				AML	AML		
	comp=E,940µm,1.4s						
ASSB	**Assisi San Ben**	**0.30**	**325**	P	Pg	01 45 37.4	+0.4

ROM 20 01:45:46.6±0.1**, 43°.021N**±0°.003×**13°.094E**±0°.004**,**
h9^{km}**, ML1.4**/22**, 10C-9D, Error ellipse: s-maj=0.3km**
s-min=0.2km az=222.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.02**	**343**	P	Pg	01 45 47.8	-0.5
FDMO				S	Sg	01 45 48.3	-1.2
FDMO				AML	AML		
	comp=E,4080µm,0.2s						
FDMO				AML	AML		
	comp=N,8750µm,0.2s						
T1219	**Muccia, Frazio**	**0.07**	**299**	⇓P	Pg	01 45 48.9	+0.1
T1219				S	Sg	01 45 50.4	0.0
T1219				AML	AML		
	comp=N,1565µm,0.2s						
T1219				AML	AML		
	comp=E,1016µm,0.2s						
T1219				AML	AML		
	comp=E,940µm,0.6s						
T1219				AML	AML		
	comp=N,1560µm,0.2s						
T1219				AML	AML		
	comp=N,1545µm,0.2s						
T1219				AML	AML		
	comp=E,940µm,1.4s						
T1220	**Camerino, Fraz**	**0.09**	**358**	⇑P	Pg	01 45 49.2	+0.3
T1220				S	Sg	01 45 51.2	+0.5
T1220				AML	AML		
	comp=N,4145µm,0.6s						
T1220				AML	AML		
	comp=E,4560µm,1.2s						
T1220				AML	AML		
	comp=E,4560µm,1.2s						
T1220				AML	AML		
	comp=N,4140µm,0.6s						
T1256	**Bolognola (MC)**	**0.10**	**99**	⇓P	Pg	01 45 49.4	+0.2
T1256				S	Sg	01 45 51.2	+0.2
T1256				AML	AML		
	comp=E,452µm,0.5s						
T1256				AML	AML		
	comp=N,536µm,0.3s						
MC2	**Monte Cornacci**	**0.13**	**147**	P	Pg	01 45 49.9	+0.3
MC2				S	Sg	01 45 52.7	+0.9
CESI	**CESI - Serrava**	**0.14**	**263**	P	Pg	01 45 50.3	+0.6
CESI				S	Sg	01 45 53.1	+1.2
CESI				AML	AML		
	comp=E,296µm,0.4s						
CESI				AML	AML		
	comp=N,356µm,0.3s						
CESI				AML	AML		
	comp=E,296µm,1.6s						
T1216	**Preci, Frazion**	**0.14**	**203**	⇑P	Pg	01 45 50.2	+0.5
T1216				S	Sg	01 45 53.1	+1.2
T1245	**Castelsantange**	**0.18**	**157**	⇓P	Pg	01 45 50.8	+0.4
T1245				S	Sg	01 45 54.2	+1.2
T1245				AML	AML		
	comp=E,304µm,0.6s						
T1245				AML	AML		
	comp=E,314µm,1.2s						
T1245				AML	AML		
	comp=N,396µm,0.8s						
T1245				AML	AML		
	comp=N,348µm,0.8s						
T1245				AML	AML		
	comp=E,314µm,0.8s						
GUMA	**Gualdo di Mace**	**0.18**	**77**	P	Pg	01 45 51.2	+0.8
GUMA				S	Sg	01 45 54.8	+1.8
GUMA				AML	AML		
	comp=N,639µm,0.4s						
GUMA				AML	AML		
	comp=E,888µm,0.3s						
MMO1	**Montemonaco**	**0.21**	**125**	⇓P	Pg	01 45 51.4	+0.4
MMO1				S	Sg	01 45 55.1	+1.2
SNTG	**Esanatoglia**	**0.26**	**334**	P	Pg	01 45 52.5	+0.7
SNTG				S	Sb	01 45 57.1	-1.0
SNTG				AML	AML		
	comp=N,51µm,0.3s						
SNTG				AML	AML		
	comp=E,58µm,0.7s						
SNTG				AML	AML		
	comp=N,51µm,1.7s						
SNTG				AML	AML		
	comp=E,58µm,1.3s						
T1212	**Cascia, Frazio**	**0.27**	**188**	⇓P	Pg	01 45 52.8	+0.7
T1212				AML	AML		
	comp=E,240µm,0.8s						
T1212				AML	AML		
	comp=N,266µm,1.0s						
T1212				AML	AML		
	comp=E,246µm,0.3s						
T1212				AML	AML		
	comp=N,240µm,0.3s						
T1212				AML	AML		
	comp=E,240µm,1.2s						
T1212				AML	AML		
	comp=N,266µm,1.0s						
T1214	**Arquata del Tr**	**0.28**	**162**	P	Pg	01 45 52.6	+0.5
T1214				AML	AML		
	comp=E,113µm,0.3s						
T1214				AML	AML		
	comp=N,96µm,1.1s						
T1214				AML	AML		
	comp=E,112µm,0.3s						
T1241	**Roccafluvione,**	**0.30**	**123**	⇓P	Pg	01 45 53.0	+0.4
T1241				S	Sb	01 45 58.2	-0.9
T1241				AML	AML		
	comp=N,58µm,0.7s						
T1241				AML	AML		
	comp=E,86µm,0.6s						
EL6	**Elcito**	**0.31**	**1**	P	Pg	01 45 53.3	+0.6
EL6				S	Sb	01 45 58.7	-0.8
ASSB	**Assisi San Ben**	**0.32**	**274**	⇑P	Pg	01 45 53.6	+0.6
ASSB				AML	AML		
	comp=E,88µm,1.3s						
ASSB				AML	AML		
	comp=N,113µm,1.4s						
ASSB				AML	AML		
	comp=N,113µm,0.6s						
ASSB				AML	AML		
	comp=E,88µm,0.7s						
T1218	**Civita (PG)**	**0.35**	**177**	⇑P	Pg	01 45 54.0	+0.5
T1218				AML	AML		
	comp=N,89µm,0.8s						
T1218				AML	AML		
	comp=E,62µm,0.4s						
T1218				AML	AML		
	comp=N,89µm,0.8s						
CING	**Cingoli**	**0.36**	**12**	⇑P	Pg	01 45 54.3	+0.6
CING				S	Sb	01 46 00.5	-0.6
CING				AML	AML		
	comp=N,51µm,0.9s						
CING				AML	AML		
	comp=E,56µm,0.5s						
FOSV	**Fossato di Vic**	**0.37**	**318**	⇑P	Pb	01 45 54.6	-0.7
FOSV				AML	AML		
	comp=E,58µm,0.9s						
FOSV				AML	AML		
	comp=N,94µm,0.3s						
FOSV				AML	AML		
	comp=E,58µm,1.1s						
ATCC	**AVT- Casa Cast**	**0.37**	**296**	P	Pb	01 45 54.6	-0.7
ATCC				AML	AML		
	comp=E,129µm,0.3s						
ATCC				AML	AML		
	comp=N,82µm,0.5s						
OFFI	**Offida**	**0.44**	**101**	⇓P	Pb	01 45 56.7	+0.1
OFFI				AML	AML		
	comp=E,66µm,1.6s						
OFFI				AML	AML		
	comp=N,87µm,0.7s						
OFFI				AML	AML		
	comp=E,66µm,0.4s						
MURB	**Monte Urbino**	**0.48**	**300**	P	Pb	01 45 56.7	-0.6
MURB				AML	AML		
	comp=N,56µm,1.4s						
MURB				AML	AML		
	comp=E,80µm,0.3s						
MURB				AML	AML		
	comp=N,56µm,0.6s						
ARVD	**Arcevia**	**0.49**	**347**	⇓P	Pb	01 45 57.1	-0.3
ARVD				S	Sb	01 46 05.1	+0.5
ARVD				AML	AML		
	comp=N,29µm,0.8s						
ARVD				AML	AML		
	comp=E,39µm,0.8s						
ARVD				AML	AML		
	comp=N,29µm,1.2s						
ARVD				AML	AML		
	comp=E,39µm,1.2s						
ARRO	**Arrone**	**0.50**	**209**	⇓P	Pb	01 45 57.0	-0.5
ATFO	**Monte Foce - G**	**0.52**	**312**	⇑P	Pb	01 45 57.4	-0.5
RM33	**Pellescritta (**	**0.52**	**170**	⇑P	Pg	01 45 57.2	+0.5
RM33				AML	AML		
	comp=E,36µm,1.3s						
RM33				AML	AML		
	comp=E,35µm,1.3s						
RM33				AML	AML		
	comp=E,35µm,0.7s						
RM33				AML	AML		
	comp=N,28µm,0.3s						
T1211	**Morro Reatino**	**0.52**	**200**	⇑P	Pb	01 45 57.6	-0.3
TERO	**Teramo**	**0.55**	**137**	⇑P	Pg	01 45 57.2	+0.1
TERO				AML	AML		
	comp=N,31µm,0.5s						
TERO				AML	AML		
	comp=E,34µm,1.2s						
TERO				AML	AML		
	comp=E,34µm,0.8s						
PIEI	**Pieia**	**0.66**	**322**	P	Pg	01 45 59.6	+0.4
PIEI				S	Sb	01 46 10.5	+1.0
PIEI				AML	AML		
	comp=E,16µm,0.9s						
PIEI				AML	AML		
	comp=N,13µm,1.6s						
PIEI				AML	AML		
	comp=N,13µm,0.4s						

IDC ***20*** *02:02:52.8±1.9, 30°.48S×178°.10W, h131^{km}±11^{km}, mb3.6/3,*
mbtmp4.0/4, Error ellipse: s-maj=50.3km s-min=17.4km
az=110.0
ISC 20 02:02:51.2±2.5**, 30°.5S**±0°.1×**177°.7W**±0°.4**, h150**^{km}**, n6,**
σ1^{s}.82/8**, mb3.9**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.30**	**350**	P	**Pn**	**02 03 18.9**	**+0.1**
	376nm,0.2s,baz=150,slow=23,SNR=8.3						
RAO				S	**Sn**	**02 03 37.3**	**-2.6**
	964nm,0.3s,baz=254,slow=23,SNR=9.2						
URZ	**Urewera**	**8.83**	**208**	P	**Pn**	**02 04 54.3**	**-1.2**
	6.4nm,1.0s,baz=60,slow=14,SNR=1.6						
URZ				S	**Sn**	**02 06 32.7**	**-0.8**
	4.9nm,0.3s,baz=305,slow=6.2,SNR=12						
STKA	**Stephens Creek**	**34.73**	**257**	P	**P**	**02 09 29.1**	**+2.1**
	0.9nm,0.3s,baz=84,slow=9.2,SNR=3.7						
	0.9nm,0.3s						
ASAR	**Alice Springs**	**43.40**	**267**	P	**P**	**02 10 39.0**	**-0.1**
	0.4nm,0.4s,baz=102,slow=6.7,SNR=6.2						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**44.40**	**272**	P	**P**	**02 10 46.8**	**-0.3**
	1.1nm,0.3s,baz=111,slow=8.2,SNR=35						
	1.1nm,0.3s						
FINES	**FINESS Array B**	**145.38**	**340**	PKPbc	**PKPab**	**02 22 12.9**	**+1.8**
	1.3nm,0.4s,baz=52,slow=4.1,SNR=21						

NEIC ***20*** *02:14:06.1±1.5, 13°.9S±0°.1×167°.39E±0°.09, h165^{km}±5^{km},*
mb4.5/34, Error ellipse: s-maj=15.9km s-min=11.1km
az=150.0
IDC ***20*** *02:14:12.1±2.0, 13°.97S×167°.24E, h217^{km}±19^{km},*
mb3.8/17, mbtmp4.3/19, Error ellipse: s-maj=15.7km
s-min=11.8km az=133.0
ISC 20 02:14:08.8±1.6**, 13°.96S**±0°.09×**167°.31E**±0°.07**,**
h192^{km}±15^{km}**, n82, σ1^{s}.28**/95**, mb4.3**/35**, 1D, Vanuatu**
Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**6.78**	**181**	Pn	**Pn**	**02 15 43.5**	**-2.6**
LIFNC				Sn	Sn	02 16 50.6	-13
KOUNC	**Koumac, New Ca**	**7.16**	**203**	Pn	**Pn**	**02 15 49.0**	**-2.1**
DZM	**Mont Dzumac**	**8.11**	**186**	P	**Pn**	**02 16 07.2**	**+3.6**
	10nm,0.9s,baz=126,slow=15,SNR=9.0						
DZM				S	**Sn**	**02 17 37.5**	**+2.6**
	7.6nm,0.9s,baz=15,slow=14,SNR=1.6						
DZM	**Mont Dzumac**	**8.11**	**186**	Pn	**Pn**	**02 16 00.8**	**-2.8**
ONTNC	**Ouen Toro**	**8.35**	**185**	Pn	**Pn**	**02 16 02.7**	**-3.8**
MSVF	**Nonsavu**	**11.00**	**111**	P	**Pn**	**02 16 44.0**	**+2.8**
	1.8nm,0.3s,baz=245,slow=22,SNR=5.3						
MSVF				S	**S**	**02 18 45.2**	**+1.0**
	4.2nm,0.5s,baz=286,slow=23,SNR=1.7						
MSVF	**Nonsavu**	**11.00**	**111**	Pn	**Pn**	**02 16 39.2**	**-2.0**
EIDS	**Eidsvold**	**19.01**	**231**	P	**P**	**02 18 16.6**	**+0.5**
EIDS				IAmb	IAmb	02 18 20.0	
	comp=Z,9.8nm,0.6s						
CTA	**Charters Tower**	**21.02**	**250**	P	**P**	**02 18 38.8**	**+1.0**
	comp=Z,3.0nm,0.5s,baz=65,slow=12,SNR=4.5						
	comp=Z,3.0nm,0.5s						
CTAO	**Charters Tower**	**21.02**	**250**	P	**P**	**02 18 37.6**	**-0.1**
CTAO				IAmb	IAmb	02 18 41.4	
	comp=Z,15nm,1.4s						
ARMA	**Armidale**	**21.84**	**219**	P	**P**	**02 18 47.8**	**+1.5**
ARMA				IAmb	IAmb	02 18 49.7	
	comp=Z,16nm,1.0s						
URZ	**Urewera**	**25.72**	**162**	P	**P**	**02 19 22.7**	**+1.3**
	comp=Z,8.9nm,0.8s,baz=315,slow=5.7,SNR=3.2						
	comp=Z,8.9nm,0.8s						
MRZ	**Mangatainoka R**	**27.57**	**166**	P	**P**	**02 19 38.8**	**+0.9**
STKA	**Stephens Creek**	**29.52**	**229**	P	**P**	**02 19 56.8**	**+1.4**
	comp=Z,15nm,0.5s,baz=51,slow=8.6,SNR=34						
STKA				PcP	**PcP**	**02 22 55.8**	**+0.1**
	comp=Z,2.3nm,0.7s,baz=297,slow=2.3,SNR=3.7						
	comp=Z,15nm,0.5s						
STKA	**Stephens Creek**	**29.52**	**229**	P	**P**	**02 19 57.0**	**+1.6**
STKA				PcP	**PcP**	**02 22 55.9**	**+0.1**
TOO	**Toolangi**	**30.49**	**216**	P	**P**	**02 20 04.1**	**+0.2**
TOO				IAmb	IAmb	02 20 06.5	
	comp=Z,5.1nm,0.8s						

WB0	Warramunga Arr	31.99	255	P	P	02 20 16.4	-0.8
WB0				IAmb	IAmb	02 20 17.4	
	comp=Z,5.9nm,0.7s						
WB2	Warramunga Arr	32.04	255	P	P	02 20 15.4	-2.2
WB2				IAmb	IAmb	02 20 18.0	
	comp=Z,7.9nm,1.2s						
WRAB	Tennant Creek	32.04	255	P	P	02 20 15.1	-2.5
WRAB				IAmb	IAmb	02 20 16.3	
	comp=Z,5.0nm,0.9s						
WRA	Warramunga Arr	32.05	255	P	P	02 20 17.1	-0.7
	comp=Z,2.5nm,0.6s,baz=86,slow=9.2,SNR=35						
WRA				PcP	PcP	02 23 02.8	+0.1
	comp=Z,0.4nm,0.8s,baz=83,slow=3.3,SNR=4.6						
	comp=Z,2.5nm,0.6s						
WRA	Warramunga Arr	32.05	255	P	P	02 20 16.2	-1.5
WRA				PcP	PcP	02 23 02.6	-0.1
AS31	Alice Springs	32.98	248	P	P	02 20 25.2	-0.7
AS31				IAmb	IAmb	02 20 26.5	
	comp=Z,2.9nm,0.5s						
ASAR	Alice Springs	32.99	248	P	P	02 20 25.4	-0.5
	comp=Z,5.2nm,0.5s,baz=73,slow=9.4,SNR=72						
ASAR				PcP	PcP	02 23 05.3	0.0
	comp=Z,0.9nm,0.6s,baz=66,slow=3.5,SNR=4.4						
ASAR				S	S	02 25 27.2	-2.9
	comp=Z,0.6nm,0.8s,baz=77,slow=17,SNR=4.5						
	comp=Z,5.2nm,0.5s						
ASAR	Alice Springs	32.99	248	P	P	02 20 25.6	-0.3
ASAR				PcP	PcP	02 23 04.8	-0.5
BBOO	Buckleboo	34.08	231	P	P	02 20 35.9	+0.8
BBOO				IAmb	IAmb	02 20 48.0	
	comp=Z,29nm,1.3s						
MTN	Manton Dam	35.19	267	P	P	02 20 44.7	-0.1
MTN				PcP	PcP	02 23 11.7	0.0
KNRA	Kununurra	37.27	262	P	P	02 21 01.8	-0.7
FORT	Forrest	39.72	238	P	P	02 21 22.8	+0.1
FORT				PcP	PcP	02 23 23.3	-2.1
PSA00	Pilbara Seismi	45.69	253	P	P	02 22 09.8	-1.1
MBWA	Marble Bar	45.78	254	P	P	02 22 11.2	-0.4
NWAO	Narrogin (SRO)	49.18	238	P	P	02 22 37.1	-0.5
MORW	Morawa	49.64	244	P	P	02 22 40.4	-0.7
MORW				IAmb	IAmb	02 22 42.0	
	comp=Z,10nm,0.8s						
TAOE	Nuku Hiva Isla	51.68	90	P	P	02 22 54.1	-2.6
JGF	Kuroka	56.86	331	P	P	02 23 33.1	-0.5
JGF				IAmb	IAmb	02 23 59.7	
	comp=Z,14nm,1.3s						
MJAR	Matsushiro Arr	57.24	332	P	P	02 23 35.2	-1.0
	comp=Z,1.0nm,0.4s,baz=173,slow=8.6,SNR=4.4						
	comp=Z,1.0nm,0.4s						
MAJO	Matsushiro	57.24	332	P	P	02 23 35.3	-0.9
MAJO				IAmb	IAmb	02 23 55.3	
	comp=Z,18nm,1.4s						
MJB9	Matsu-Tunnel	57.25	332	P	P	02 23 35.8	-0.4
MJB9				IAmb	IAmb	02 23 55.3	
	comp=Z,20nm,1.4s						
JHS	Saijyo	58.50	327	P	P	02 23 44.4	-0.6
JHS				IAmb	IAmb	02 24 12.0	
	comp=Z,18nm,1.3s						
SSLB	Suanglung	58.82	309	P	P	02 23 46.8	-0.6
JKA	Kamikawa-asahi	62.03	340	P	P	02 24 09.0	+0.3
KSRS	Korea Array	63.12	326	P	P	02 24 16.5	+0.4
	comp=Z,1.1nm,0.8s,baz=148,slow=7.2,SNR=2.3						
	comp=Z,1.1nm,0.8s						
VNDA	Vanda	63.63	181	P	P	02 24 19.6	+0.8
	comp=Z,2.4nm,0.8s,baz=358,slow=8.0,SNR=5.1						
	comp=Z,2.4nm,0.8s						
VNDA	Vanda	63.63	181	P	P	02 24 19.5	+0.7
VNDA				IAmb	IAmb	02 24 39.6	
	comp=Z,10nm,1.4s						
USRK	Ussuriysk Ar.	66.22	333	P	P	02 24 37.9	+1.9
	comp=Z,1.3nm,0.6s,baz=90,slow=6.3,SNR=5.3						
	comp=Z,1.3nm,0.6s						
PETK	Petropavlovsk-	67.30	354	P	P	02 24 43.1	+0.5
	comp=Z,4.9nm,1.0s,baz=184,slow=9.8,SNR=3.2						
	comp=Z,4.9nm,1.0s						
CN2	Changchun	69.01	329	P	P	02 24 54.3	+0.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BNX	BinXian	69.48	331	⇓P	P	02 24 56.9	+0.6
BNX				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BNX				pmax	pmax		
	comp=Z,84nm,5.2s						
CRAI	Chiangrai	74.05	296	P	P	02 25 24.9	+0.7
CRAI				IAmb	IAmb	02 25 26.1	
	comp=Z,4.7nm,0.8s						
CM31	Chiang Mai Arr	74.67	294	P	P	02 25 29.3	+1.6
CM31				IAmb	IAmb	02 25 30.0	
	comp=Z,5.6nm,0.7s						
CMAR	Chiang Mai Arr	74.67	294	P	P	02 25 29.4	+1.7
	comp=Z,2.6nm,0.5s,baz=137,slow=4.3,SNR=16						
	comp=Z,2.6nm,0.5s						
CMAR	Chiang Mai Arr	74.67	294	P	P	02 25 29.0	+1.3
CHTO	Chiang Mai	74.79	294	P	P	02 25 28.7	+0.3
QSPA	South Pole Qui	76.07	180	P	P	02 25 35.5	+0.5
QSPA				IAmb	IAmb	02 25 37.5	
	comp=Z,15nm,1.4s						
BILL	Bilibino	81.78	360	P	P	02 26 06.0	+0.4
SONM	Songino Array	81.90	324	P	P	02 26 07.1	+0.2
	comp=Z,0.5nm,0.4s,baz=144,slow=6.7,SNR=8.5						
	comp=Z,0.5nm,0.4s						
SONM	Songino Array	81.90	324	P	P	02 26 06.8	-0.1
GTA	Gaotai	82.16	314	eP	P	02 26 10.0	+1.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CAST	Castle Rocks	83.25	17	P	P	02 26 13.2	-0.2
IMAR	Indian Mountai	84.81	15	P	P	02 26 21.7	+0.5
ILAR	Eielson Array	85.78	18	P	P	02 26 25.1	-1.0
	comp=Z,0.5nm,0.6s,baz=234,slow=5.5,SNR=10.0						
	comp=Z,0.5nm,0.6s						
TXAR	Lajitas Array	95.88	61	P	P	02 27 13.8	-0.3
	comp=Z,0.2nm,0.7s,baz=205,slow=4.0,SNR=2.2						
	comp=Z,0.2nm,0.7s						
MKAR	Makanchi Array	96.67	316	P	P	02 27 17.7	+0.5
	comp=Z,2.4nm,0.7s,baz=94,slow=6.3,SNR=26						
	comp=Z,2.4nm,0.7s						
ZALV	Zalesovo Beam	96.79	324	P	P	02 27 16.9	-0.5
	comp=Z,1.1nm,0.6s,baz=106,slow=4.8,SNR=6.3						
	comp=Z,1.1nm,0.6s						
YKA	Yellowknife Ar	96.85	27	P	P	02 27 16.2	-1.3
	comp=Z,0.2nm,0.5s,baz=252,slow=4.9,SNR=2.7						
	comp=Z,0.2nm,0.5s						
ARCES	ARCESS Array B	119.52	346	PKP	PKPdf	02 32 34.7	-0.3
	comp=Z,3.4nm,0.6s,baz=66,slow=1.8,SNR=32						
FINES	FINESS Array B	125.02	338	PKP	PKPdf	02 32 45.7	0.0
	comp=Z,2.6nm,0.8s,baz=87,slow=1.6,SNR=18						
NOA	NORSAR Array B	129.89	345	PKP	PKPdf	02 32 55.4	+0.3
	comp=Z,0.7nm,0.8s,baz=33,slow=2.0,SNR=3.2						
AKASG	Malin Array Be	130.12	326	PKP	PKPdf	02 32 55.9	+0.2
	comp=Z,0.5nm,0.4s,baz=33,slow=2.2,SNR=6.6						
BRTR	Keskin Array B	132.03	311	PKP	PKPdf	02 33 00.2	+0.3
	comp=Z,0.4nm,0.6s,baz=149,slow=3.5,SNR=5.7						
CONA	Conrad Observa	138.67	331	ePKiKP	PKiKP	02 33 14.7	+0.5
	comp=Z,2.0nm,0.6s						
GERES	GERESS Array B	138.97	333	PKP	PKiKP	02 33 14.2	-0.6
	comp=Z,0.6nm,0.5s,baz=42,slow=3.1,SNR=2.1						
KBA	Koelnbreinsper	140.46	332	i PKP	PKiKP	02 33 17.9	-0.1
	comp=Z,1.2nm,0.6s						
WATA	Walderalm	141.05	334	i PKiKP	PKiKP	02 33 19.2	0.0
	comp=Z,1.1nm,0.4s						
WTTA	Wattenberg	141.08	333	i PKiKP	PKiKP	02 33 19.5	+0.2
	comp=Z,1.3nm,0.2s						
ABTA	Abfaltersbach	141.08	332	i PKP	PKiKP	02 33 18.9	-0.3
	comp=Z,1.6nm,0.5s						
MOTA	Moosalm	141.24	334	i PKiKP	PKiKP	02 33 19.6	0.0
	comp=Z,1.2nm,0.4s						
RETA	Reutte	141.28	334	i PKiKP	PKiKP	02 33 20.0	+0.5
	comp=Z,0.8nm,0.4s						
SQTA	Sankt Quirin	141.29	334	i PKiKP	PKiKP	02 33 19.9	+0.3
	comp=Z,1.3nm,0.4s						
FETA	Feichten	141.66	334	ePKiKP	PKiKP	02 33 23.0	+2.6
	comp=Z,0.7nm,0.5s						
KEST	Kesra	150.63	321	PKPbc	PKiKP	02 33 39.5	+0.4
	comp=Z,9.0nm,0.6s,baz=154,slow=0.9,SNR=12						
ESDC	Sonseca Array	153.25	345	PKPbc	PKiKP	02 33 44.8	+0.4
	comp=Z,0.8nm,0.8s,baz=10,slow=3.2,SNR=7.1						
ESDC				PKPab	PKPab	02 33 57.6	+0.9
	comp=Z,0.6nm,0.8s,baz=14,slow=5.0,SNR=3.5						
TORD	Torodi Ar. Bea	165.99	268	PKP	PKPdf	02 33 51.7	+0.1
	comp=Z,0.7nm,0.7s,baz=49,slow=2.2,SNR=4.6						
TORD				PKPab	PKPab	02 34 53.2	+0.2
	baz=79,slow=2.4						

IDC 20 02:17:33.2±3.4, 7°.48S×148°.22E, h0km, mb3.2/1, mbtmp3.5/3, ML3.1/2, Error ellipse: s-maj=104.4km s-min=40.3km az=114.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.18	209	Pn	Pb	02 18 12.3	-1.3
	50nm,0.3s,baz=23,slow=13,SNR=38						
PMG				Sn	Sn	02 18 35.5	-3.0
	82nm,0.3s,baz=20,slow=17,SNR=42						
	111nm,0.3s						
WRA	Warramunga Arr	18.29	226	P	Pn	02 21 48.0	-0.6
	0.3nm,0.3s,baz=54,slow=12,SNR=6.6						
	0.4nm,0.4s						
ASAR	Alice Springs	21.16	219	P	P	02 22 19.4	-0.8
	0.6nm,0.5s,baz=51,slow=9.0,SNR=3.6						
	0.6nm,0.5s						
TORD	Torodi Ar. Bea	146.61	282	PKPbc	PKPdf	02 37 16.9	+0.6
	0.3nm,0.8s,baz=95,slow=3.4,SNR=1.6						

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*SKHL **20** 02:32:52.2±0.3, 46°.20N×153°.60E, h60km±4km, mb4.5/5*

*IDC **20** 02:32:58.0±2.5, 47°.10N×152°.64E, h99km±21km, mb3.4/16, mbtmp3.8/22, Error ellipse: s-maj=21.3km s-min=12.7km az=147.0*

*NEIC **20** 02:32:57.9±1.2, 47°.2N±0°.2×152°.5E±0°.2, h96km±10km, mb4.4/43, Error ellipse: s-maj=26.6km s-min=14.9km az=143.0*

ISC 20 02:32:57.1±0.6, 46°.99N±0°.10×152°.61E±0°.08, h100km, n93, σ1s.07/90, mb4.2/38, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.74	244	eP	Pn	02 33 53.4	+0.7
KUR				AMB	AMB	02 33 54.9	
	70nm,0.7s						
KUR				eS	Sn	02 34 39.4	+3.7
KUR				A	A	02 34 55.0	
	160nm,0.6s						
KUR				A	A	02 34 55.0	
	70nm,0.6s						
SHO	Shikotan	5.13	235	eP	Pn	02 34 10.2	-1.2
SHO				AMB	AMB	02 34 11.4	
	30nm,0.7s						
SHO				eS	Sn	02 35 08.9	-0.4
SHO				A	A	02 35 23.4	
	60nm,0.5s						
SHO				A	A	02 35 23.4	
	40nm,0.5s						
YUK	Yuzh-Kuril'sk	5.59	241	eP	Pn	02 34 15.3	-2.4
YUK				AMB	AMB	02 34 19.0	
	60nm,0.6s						
NMR	Nemuro--Hokkai	6.06	236	eP	Pn	02 34 22.0	-2.1
NMR				AMB	AMB	02 34 23.1	
	10.0nm,0.2s						
NMR				eS	Sn	02 35 29.3	-2.8
NMR				A	A	02 35 47.8	
	40nm,0.3s						
NMR				A	A	02 35 47.8	
	20nm,0.3s						
AKK	Akkeshi	6.79	237	eP	Pn	02 34 32.3	-1.7
AKK				eS	Sn	02 35 47.4	-2.4
PEA0B	Petropavlovsk-	6.95	26	Pn	Pn	02 34 34.8	-1.3
PETK	Petropavlovsk-	6.95	26	P	Pn	02 34 33.9	-2.2
	2.2nm,0.5s,baz=196,slow=13,SNR=3.8						
PETK	Petropavlovsk-	6.95	26	Pn	Pn	02 34 34.2	-1.9
JKA	Kamikawa-asahi	7.59	251	Pn	Pn	02 34 46.2	+1.2
ASAJ	Asahikawa	7.59	251	P	Pn	02 34 47.0	+2.1
	9.1nm,0.6s,baz=66,slow=14,SNR=6.8						
ERM	Erimo	8.39	237	Pn	Pn	02 34 55.5	-0.2
JTM	Tenmabayashi	10.38	238	Pn	Pn	02 35 23.1	+0.2
MA2	Magadan	12.66	356	P	Pn	02 35 52.0	-1.2
	11nm,0.6s,baz=192,slow=16,SNR=2.4						
MA2	Magadan	12.66	356	Pn	Pn	02 35 50.4	-2.9
KLR	Kul'dur	14.12	287	P	Pn	02 36 13.2	+0.8
	0.3nm,0.4s,baz=78,slow=7.9,SNR=1.6						
USRK	Ussuriysk Ar.	14.70	267	P	P	02 36 22.5	-0.8
	1.1nm,0.5s,baz=76,slow=13,SNR=2.1						
SEY	Seymchan	15.98	360	P	P	02 36 36.9	-0.5
	0.8nm,0.3s,baz=177,slow=15,SNR=5.2						
KSRS	Korea Array	20.54	251	P	Pn	02 37 31.0	+0.5
	0.9nm,0.4s,baz=55,slow=10,SNR=2.2						
	0.9nm,0.4s						
ANM	Nome	28.71	37	P	P	02 38 44.6	+0.2
H11N2	WAKE ISLAND Hy	29.59	152	T	T	03 10 31.6	
	baz=341,slow=76,SNR=348						
H11N1	WAKE ISLAND Hy	29.60	152	T	T	03 10 32.7	
	baz=341,slow=76,SNR=321						
H11N3	WAKE ISLAND Hy	29.60	152	T	T	03 10 32.8	
	baz=341,slow=76,SNR=340						
H11S1	WAKE ISLAND Hy	30.67	153	T	T	03 11 52.3	
	baz=341,slow=76,SNR=545						
H11S3	WAKE ISLAND Hy	30.68	153	T	T	03 11 52.9	
	baz=341,slow=76,SNR=544						
H11S2	WAKE ISLAND Hy	30.69	153	T	T	03 11 44.7	
	baz=341,slow=76,SNR=375						
P18K	Big Mountain,	32.74	48	P	P	02 39 19.6	-0.3
P18K				IAmb	IAmb	02 39 48.4	
	comp=Z,5.2nm,1.1s						
ILSW	Iliamna Southw	33.78	47	P	P	02 39 28.9	-0.1
ILSW				IAmb	IAmb	02 39 29.3	
	comp=Z,18nm,1.5s						
IMAR	Indian Mountai	33.78	36	P	P	02 39 29.0	+0.1
H21K	Melozitna Rive	34.13	37	P	P	02 39 32.1	+0.2
H21K				IAmb	IAmb	02 39 52.9	
	comp=Z,4.0nm,1.3s						
PPLA	Purkeypile	34.22	42	P	P	02 39 33.0	+0.1
PPLA				IAmb	IAmb	02 39 52.8	
	comp=Z,14nm,1.5s						
CAST	Castle Rocks	34.28	41	P	P	02 39 34.1	+0.8
I21K	Tanana	34.43	38	P	P	02 39 34.1	-0.4
I21K				IAmb	IAmb	02 39 54.2	
	comp=Z,5.5nm,1.4s						
SKT	Skwentna	34.52	44	P	P	02 39 35.8	+0.5
SKT				IAmb	IAmb	02 39 37.2	
	comp=Z,7.8nm,1.3s						
SUA	Susitna One	34.90	45	P	P	02 39 39.6	+0.8
SUA				IAmb	IAmb	02 39 52.9	
	comp=Z,6.6nm,1.2s						
BRLK	Bradley Lake	34.93	47	P	P	02 39 38.0	-0.9
TRF	Thorofare Moun	35.09	41	P	P	02 39 40.1	-0.3
TRF				IAmb	IAmb	02 39 56.5	
	comp=Z,7.3nm,1.4s						
COLD	Coldfoot	35.33	34	P	P	02 39 42.5	+0.2
H23K	Yukon River	35.48	37	P	P	02 39 43.7	+0.1
H23K				IAmb	IAmb	02 40 15.0	
	comp=Z,6.5nm,1.5s						
SML	Sawmill	36.04	44	P	P	02 39 47.6	-0.8
SML				IAmb	IAmb	02 40 15.2	
	comp=Z,9.3nm,1.2s						
WRH	Wood River Hil	36.06	39	P	P	02 39 47.8	-0.7
WRH				IAmb	IAmb	02 40 12.9	
	comp=Z,7.0nm,1.5s						
H24K	Noodor Dome	36.17	37	P	P	02 39 50.4	+0.9
H24K				IAmb	IAmb	02 40 06.8	
	comp=Z,5.1nm,1.4s						
CCB	Clear Creek Bu	36.18	39	P	P	02 39 48.9	-0.6
POKR	Poker Plat Res	36.34	38	P	P	02 39 51.8	+0.8
HDA	Harding Lake	36.56	39	P	P	02 39 52.7	0.0
HDA				IAmb	IAmb	02 40 33.2	
	comp=Z,5.3nm,1.4s						
ILAR	Eielson Array	36.58	39	P	P	02 39 52.5	-0.4
	comp=Z,0.5nm,0.8s,baz=264,slow=6.7,SNR=7.8						
	comp=Z,0.5nm,0.8s						
M24K	Tolsona, Glenn	37.03	43	P	P	02 39 57.4	+0.6
BMAR	Burnt Mountain	37.52	34	P	P	02 40 01.2	+0.4
N25K	Chitina, Valde	37.83	44	P	P	02 40 03.5	-0.1
SCRK	Sand Creek	37.87	40	P	P	02 40 03.7	-0.3
SCRK				IAmb	IAmb	02 40 45.6	
	comp=Z,4.8nm,1.4s						
VRDI	Verde Repeater	38.42	44	P	P	02 40 09.2	+0.5
M26K	Nabesna, AK	38.48	42	P	P	02 40 10.1	+1.1
M26K				IAmb	IAmb	02 40 23.5	
	comp=Z,7.7nm,1.4s						
K27K	Chicken	38.71	40	P	P	02 40 10.6	-0.2
K27K				IAmb	IAmb	02 40 27.1	
	comp=Z,5.7nm,1.5s						
L27K	Beaver Creek,	38.93	41	P	P	02 40 12.9	+0.1
BCAR	Beaver Creek A	38.95	41	P	P	02 40 13.6	+0.7
EGAK	Eagle	39.03	39	P	P	02 40 13.3	-0.2
BARN	Barnard Glacie	39.31	44	P	P	02 40 16.1	0.0
BARN				IAmb	IAmb	02 40 33.7	
	comp=Z,14nm,1.2s						
CTGM	Chitina Glacie	39.48	45	P	P	02 40 16.5	-1.0
LOGN	Logan Glacier	39.66	45	P	P	02 40 19.4	+0.4
INK	Inuvik	41.63	33	P	P	02 40 34.8	0.0
	comp=Z,0.8nm,0.5s,baz=295,slow=5.6,SNR=2.4						
	comp=Z,0.8nm,0.5s						
ZALV	Zalesovo Beam	42.20	305	P	P	02 40 40.6	+0.9
	comp=Z,0.6nm,0.3s,baz=64,slow=11,SNR=1.9						
ZALV				PcP	PcP	02 42 33.3	+1.4
	comp=Z,0.6nm,0.5s,baz=41,slow=2.7,SNR=1.8						
	comp=Z,0.6nm,0.3s						
M31M	Drury Creek, Y	42.46	42	P	P	02 40 42.8	+1.0
M31M				IAmb	IAmb	02 41 26.1	
	comp=Z,4.6nm,1.3s						
A36M	Sachs Harbour	43.79	26	P	P	02 40 52.7	+0.4
A36M				IAmb	IAmb	02 40 54.5	
	comp=Z,5.5nm,0.8s						
C36M	Paulatuk	44.78	30	P	P	02 41 00.4	+0.2
C36M				IAmb	IAmb	02 41 01.3	
	comp=Z,3.2nm,0.6s						
MKAR	Makanchi Array	46.53	297	P	P	02 41 14.7	+0.4
	comp=Z,0.2nm,0.6s,baz=61,slow=9.2,SNR=2.7						
MKAR				PcP	PcP	02 42 48.4	+1.4
	comp=Z,0.3nm,0.3s,baz=70,slow=0.6,SNR=8.1						
	comp=Z,0.2nm,0.6s						
YKA	Yellowknife Ar	50.94	37	P	P	02 41 48.1	+0.4
	comp=Z,0.2nm,0.5s,baz=294,slow=7.0,SNR=5.4						
YKA				PcP	PcP	02 43 01.9	-0.7
	comp=Z,0.1nm,0.5s,baz=299,slow=2.7,SNR=3.2						
	comp=Z,0.2nm,0.5s						
CMAR	Chiang Mai Arr	52.09	256	P	P	02 41 57.4	+0.5
	comp=Z,1.2nm,0.3s,baz=24,slow=4.8,SNR=1.6						
	comp=Z,1.2nm,0.3s						
ABKAR	Akbulak array	58.01	309	P	P	02 42 37.4	-1.7
FCC	Fort Churchill	61.25	33	P	P	02 43 00.4	-0.7
BOZ	Bozeman (W)	61.91	52	P	P	02 43 06.3	+0.2
NVAR	Mina Array Bea	62.63	62	P	P	02 43 12.3	+1.3
	comp=Z,0.6nm,0.7s,baz=290,slow=7.2,SNR=5.5						
	comp=Z,0.6nm,0.7s						
FIA1	FINESS Array S	63.68	334	P	P	02 43 17.4	+0.1
FINES	FINESS Array B	63.68	334	P	P	02 43 17.4	+0.1
	comp=Z,0.8nm,0.3s,baz=39,slow=7.6,SNR=16						
	comp=Z,0.8nm,0.3s						
FINES	FINESS Array B	63.68	334	P	P	02 43 16.4	-0.8
PDAR	Pinedale Array	64.88	54	P	P	02 43 26.6	+0.8
	comp=Z,0.4nm,0.6s,baz=296,slow=2.4,SNR=6.0						
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	64.88	54	P	P	02 43 25.6	-0.2
NB201	NORSAR Array S	67.87	341	P	P	02 43 43.8	-0.4
NOA	NORSAR Array B	67.89	341	P	P	02 43 44.2	-0.2
	comp=Z,0.3nm,0.5s,baz=30,slow=6.7,SNR=6.2						
	comp=Z,0.3nm,0.5s						
WRA	Warramunga Arr	68.63	198	P	P	02 43 49.6	+0.2
	comp=Z,0.2nm,0.8s,baz=14,slow=6.2,SNR=1.2						
	comp=Z,0.2nm,0.8s						
AKASG	Malin Array Be	71.16	326	P	P	02 44 04.8	+0.3
	comp=Z,0.5nm,0.3s,baz=36,slow=5.9,SNR=7.2						
	comp=Z,0.5nm,0.3s						
AKASG	Malin Array Be	71.16	326	P	P	02 44 04.4	-0.1
ASAR	Alice Springs	72.33	198	P	P	02 44 13.5	+1.7
	comp=Z,0.5nm,0.8s,baz=12,slow=4.8,SNR=3.1						
	comp=Z,0.5nm,0.8s						
SCHQ	Schefferville	73.22	23	P	P	02 44 17.0	+0.2
	comp=Z,0.7nm,0.4s,baz=297,slow=9.0,SNR=1.6						
	comp=Z,0.7nm,0.4s						
BUR08	Bucovina Ar. S	75.18	326	P	P	02 44 28.8	+0.3
BUR08				IAmb	IAmb	02 44 42.9	
	comp=Z,5.7nm,1.5s						
BURAR	Bucovina Array	75.20	326	P	P	02 44 28.3	-0.2
TX31	Lajitas Ar. Si	77.67	60	P	P	02 44 43.6	+0.8
TX31				IAmb	IAmb	02 45 02.6	
	comp=Z,4.3nm,0.9s						
TX32	Lajitas Array	77.67	60	P	P	02 44 43.8	+1.0
TXAR	Lajitas Array	77.67	60	P	P	02 44 43.9	+1.1
	comp=Z,1.6nm,0.5s,baz=298,slow=4.7,SNR=38						
	comp=Z,1.6nm,0.5s						
TXAR	Lajitas Array	77.67	60	P	P	02 44 43.8	+1.0
PDG	Podgorica	81.84	327	P	P	02 45 05.0	+0.1
PDG				IAmb	IAmb	02 45 30.6	
	comp=Z,9.5nm,1.3s						
TORD	Torodi Ar. Bea	114.71	329	PKiKP	PKiKP	02 51 26.2	+0.2
	comp=Z,0.1nm,0.3s,baz=6.8,slow=1.5,SNR=1.3						
H03N2	Juan Fernandez	139.09	90	T	T	05 27 37.1	
	baz=308,slow=77,SNR=11						
H03N1	Juan Fernandez	139.11	90	T	T	05 27 38.5	
	baz=308,slow=77,SNR=12						
H03N3	Juan Fernandez	139.11	90	T	T	05 27 16.9	
	baz=308,slow=77,SNR=12						

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*NEIC **20** 03:01:05.2±0.8, 23°.95S±0°.05×66°.9W±0°.1, h247km±22km, mb4.0/1, ML4.3(GUC), Error ellipse: s-maj=19.2km s-min=7.0km az=81.0*

*SJA **20** 03:01:06.3±0.7, 23°.91S×66°.85W, h214km±5km, ML3.9, MW3.7, Hypocentre not reviewed by the ISC*

*IDC **20** 03:01:06.2±1.1, 23°.92S×66°.64W, h182km±12km, mb2.8/2, mbtmp3.4/9, Error ellipse: s-maj=18.0km s-min=15.4km az=52.0*

*GUC **20** 03:01:08.3±0.7, 23°.92S×67°.25W, h241km±9km, ML4.3*

ISC 20 03:01:05.0±0.8, 23°.95S±0°.05×66°.84W±0°.08, h215km±11km, n55, σ1s.57/71, 7C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.45	122	eP		03 01 41.0	
HJA	Humahuaca	1.51	61	eP		03 01 42.5	
HJA				eS		03 02 09.4	
YJA	Yavi	2.15	35	eP		03 01 48.6	
YJA				eS		03 02 19.6	
LVC	Limon Verde	2.32	305	P	Pn	03 01 50.1	+1.8
	34nm,0.3s,baz=116,slow=7.4,SNR=158						
LVC				S	S	03 02 22.2	+0.5
	59nm,0.3s,baz=273,slow=19,SNR=26						
LVC	Limon Verde	2.32	305		Pn	03 01 50.0	+1.7
LVC	Limon Verde	2.32	305	⇑iP	Pn	03 01 50.0	+1.7
LVC				i S	S	03 02 22.0	+0.2
LVC	Limon Verde	2.32	305	eP		03 01 50.0	
LVC				eS		03 02 22.6	
PB15	IPOC Station P	2.52	286		Pn	03 01 52.0	+1.8
PB15				Sn	S	03 02 25.0	-0.2
PB15	IPOC Station P	2.52	286	⇑iP	Pn	03 01 52.1	+1.8
PB15				i S	S	03 02 25.1	-0.2
PB15	IPOC Station P	2.52	286	eP		03 01 52.1	
PB15				eS		03 02 25.4	
PB15				IAML		03 02 26.7	
	comp=Z,2µm,0.2s						
GO02	Mina Guanaco	2.78	244		Pn	03 01 55.0	+1.9
GO02				Sn	S	03 02 31.3	+0.8
GO02	Mina Guanaco	2.78	244	⇑iP	Pn	03 01 55.1	+1.9
GO02				i S	S	03 02 30.9	+0.4
GO02				IAML		03 02 31.9	
	comp=N,560nm,0.3s						
GO02	Mina Guanaco	2.78	244	eP		03 01 55.1	
GO02				eS		03 02 31.6	
PB06	IPOC Station P	2.79	296		Pn	03 01 54.7	+1.4
PB06	IPOC Station P	2.79	296	⇑iP	Pn	03 01 55.1	+1.8
PB06				i S	S	03 02 29.9	-0.7
PB06				IAML		03 02 32.0	
	comp=E,459nm,0.3s						
PB06	IPOC Station P	2.79	296	eP		03 01 55.0	
PB06				eS		03 02 30.6	
PB06				IAML		03 02 31.9	
	comp=Z,195nm,0.1s						
PB09	IPOC Station P	3.08	314		Pn	03 01 58.1	+1.6
PB09	IPOC Station P	3.08	314	i P	Pn	03 01 58.5	+2.0
PB09				eS	S	03 02 36.9	+0.3
PB03	IPOC Station P	3.28	305		Pn	03 02 00.3	+1.4
PB03	IPOC Station P	3.28	305	⇑iP	Pn	03 02 00.3	+1.4
PB03				i S	S	03 02 39.2	-1.5
PB03	IPOC Station P	3.28	305	eP		03 02 00.3	
PB03				eS		03 02 40.0	
PB03				IAML		03 02 41.6	
	comp=Z,214nm,0.2s						
PB14	IPOC Station P	3.32	258		Pn	03 02 00.7	+1.2
PB14	IPOC Station P	3.32	258	⇓iP	Pn	03 02 00.5	+1.1
PB14				i S	S	03 02 39.9	-1.9
PB14	IPOC Station P	3.32	258	eP		03 02 01.1	
PB14				eS		03 02 41.5	
PB14				IAML		03 02 43.9	
	comp=Z,143nm,0.3s						
PB10	IPOC Station P	3.43	276	Pn	Pn	03 02 01.4	+0.9
PB10	IPOC Station P	3.43	276	i S	S	03 02 41.6	-2.0
PB10	IPOC Station P	3.43	276	eP		03 02 02.1	
PB10				eP		03 02 02.2	
PB10				eS		03 02 42.8	
PB10				eS		03 02 43.8	
PB10				IAML		03 02 45.8	
	comp=Z,100nm,0.2s						
PB04	IPOC Station P	3.44	297	Pn	Pn	03 02 01.4	+0.6
PB04	IPOC Station P	3.44	297	⇑iP	Pn	03 02 02.1	+1.3

PB04				*i* S	**S**	**03 02 42.3**	**-1.9**
PB04	**IPOC Station P**	**3.44**	**297**	*e*P		03 02 02.2	
PB04				*e*S		03 02 43.8	
PB04				IAML		03 02 46.1	
	comp=Z,190nm,0.2s						
AC02	**Maricunga**	**3.54**	**215**	Pn	**Pn**	**03 02 03.7**	**+1.4**
PB07	**IPOC Station P**	**3.57**	**308**		**Pn**	**03 02 03.1**	**+0.8**
PB07	**IPOC Station P**	**3.57**	**308**	⇑*i*P	**Pn**	**03 02 03.6**	**+1.2**
PB07				*i* S	**S**	**03 02 44.9**	**-2.1**
PB07	**IPOC Station P**	**3.57**	**308**	*e*P		03 02 03.7	
PB07				*e*S		03 02 46.1	
PB07				IAML		03 02 49.7	
	comp=Z,166nm,0.2s						
PB01	**IPOC Station P**	**3.79**	**319**		**Pn**	**03 02 06.0**	**+1.2**
PB01	**IPOC Station P**	**3.79**	**319**	*i* P	**Pn**	**03 02 05.9**	**+1.0**
PB01				*i* S	**S**	**03 02 50.0**	**-1.6**
PB01	**IPOC Station P**	**3.79**	**319**	*e*P		03 02 06.2	
PB01				*e*S		03 02 50.9	
PB02	**IPOC Station P**	**3.84**	**312**	*e*P		03 02 06.7	
PB02				*e*S		03 02 51.2	
PB02	**IPOC Station P**	**3.85**	**312**		**Pn**	**03 02 06.5**	**+0.9**
PB02	**IPOC Station P**	**3.85**	**312**	*i* P	**Pn**	**03 02 06.5**	**+0.9**
PB02				*i* S	**S**	**03 02 50.3**	**-2.6**
AC01	**Pan de Azucar**	**4.05**	**236**	Pn	**Pn**	**03 02 08.4**	**+0.5**
AC01	**Pan de Azucar**	**4.05**	**236**	*i* P	**Pn**	**03 02 08.2**	**+0.3**
AC01				*i* S	**S**	**03 02 54.9**	**-2.3**
PB08	**IPOC Station P**	**4.35**	**330**	Pn	**Pn**	**03 02 13.3**	**+1.2**
PB08	**IPOC Station P**	**4.35**	**330**	*e*P	**Pn**	**03 02 13.6**	**+1.5**
PB08				*e*S	**S**	**03 03 04.3**	**-0.3**
PB08	**IPOC Station P**	**4.35**	**330**	*e*P		03 02 13.6	
PB08				*e*S		03 03 05.2	
TA01	**Diego Aracena**	**4.57**	**317**	Pn	**Pn**	**03 02 14.6**	**+0.2**
GO03	**Copiap**	**4.75**	**219**	Pn	**Pn**	**03 02 17.1**	**+0.5**
GO01	**Chusmiza**	**4.79**	**332**	Pn	**Pn**	**03 02 18.2**	**+0.6**
PB11	**IPOC Station P**	**4.92**	**327**		**Pn**	**03 02 19.2**	**+0.2**
MNMC	**Minye Minye**	**5.43**	**331**	Pn	**Pn**	**03 02 26.1**	**+0.5**
AC04	**Llanos de Chal**	**5.70**	**221**	Pn	**Pn**	**03 02 28.5**	**-0.1**
AC05	**El Transito**	**5.76**	**212**	Pn	**Pn**	**03 02 30.3**	**+0.8**
PB16	**IPOC Station P**	**6.11**	**336**	Pn	**Pn**	**03 02 34.1**	**-0.4**
PB12	**IPOC Station P**	**6.22**	**328**	Pn	**Pn**	**03 02 35.4**	**-0.1**
CO03	**El Pedregal**	**7.67**	**206**	Pn	**Pn**	**03 02 52.6**	**-1.4**
LPAZ	**La Paz**	**7.72**	**351**	P	**Pn**	**03 02 57.3**	**+2.1**
	comp=Z,0.6nm,0.3s,baz=183,slow=12,SNR=7.3						
LPAZ				S	**S**	**03 04 23.0**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=315,slow=14,SNR=4.8						
LPAZ	**La Paz**	**7.72**	**351**	Pn	**Pn**	**03 02 54.0**	**-1.2**
CFA	**Coronel Fontan**	**7.73**	**189**	P	**Pn**	**03 02 55.8**	**+1.1**
	comp=Z,0.6nm,0.2s,baz=231,slow=23,SNR=8.8						
CFA				S	**S**	**03 04 18.0**	**-4.3**
	comp=Z,2.5nm,0.2s,baz=218,slow=14,SNR=13						
CPUP	**Villa Florida**	**8.94**	**107**	P	**Pn**	**03 03 09.0**	**-1.4**
	comp=Z,1.1nm,0.5s,baz=286,slow=11,SNR=5.2						
CPUP	**Villa Florida**	**8.94**	**107**	Pn	**Pn**	**03 03 10.4**	**0.0**
SIV	**San Ignacio**	**9.60**	**35**	P	**Pn**	**03 03 17.6**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=246,slow=14,SNR=1.9						
ITAB	**Concordia**	**13.67**	**107**		**Pn**	**03 04 10.6**	**+0.2**
PLCA	**Paso Flores**	**17.02**	**190**	P	**Pn**	**03 04 53.6**	**+2.8**
	comp=Z,1.4nm,1.0s,baz=22,slow=16,SNR=2.6						
BDFB	**Brasilia**	**19.53**	**68**	P	**Pn**	**03 05 19.2**	**-1.4**
	comp=Z,2.8nm,0.7s,baz=242,slow=10,SNR=7.3						
BDFB	**Brasilia**	**19.53**	**68**	P	**P**	**03 05 14.7**	**-2.0**
BDFB				IAmb	IAmb	03 05 20.7	
	comp=Z,3.7nm,0.8s						
TXAR	**Lajitas Array**	**63.72**	**324**	P	P	03 11 18.6	+4.6
	comp=Z,0.1nm,0.3s,baz=157,slow=7.6,SNR=1.7						
	comp=Z,0.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**76.42**	**69**	P	P	03 12 34.6	+3.2
	comp=Z,0.2nm,0.3s,baz=230,slow=3.6,SNR=2.2						
	comp=Z,0.2nm,0.3s						
WRA	**Warramunga Arr**	**131.74**	**207**	PKP	**PKiKP**	**03 19 57.8**	**+3.6**
	comp=Z,0.2nm,0.4s,baz=153,slow=1.8,SNR=5.3						
MKAR	**Makanchi Array**	**146.39**	**40**	PKPbc	**PKiKP**	**03 20 25.2**	**+1.9**
	comp=Z,0.5nm,0.5s,baz=323,slow=2.4,SNR=8.5						
PZH	**PanZhiHua**	**169.36**	**74**	PKP	**PKPdf**	**03 20 43.8**	**-3.4**

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*NEIC **20** 03:34:44±1.9, 18°.2S±0°.1×177°.75W±0°.09, h585^{km}±7^{km}, mb4.6/98, Error ellipse: s-maj=15.2km s-min=11.9km az=181.0*

*BGR **20** 03:34:46.8, 18°.43S×177°.91W, h600^{km}*

*NOU **20** 03:34:47.3, 18°.15S×177°.96W, h605^{km}, mb4.7/24, Fiji Islands Region*

*IDC **20** 03:34:47.5±0.7, 18°.22S×178°.01W, h607^{km}±8^{km}, mb3.7/24, mbtmp4.7/28, Error ellipse: s-maj=11.4km s-min=9.3km az=154.0*

ISC 20 03:34:45.9±0.5**, 18°.24S**±0°.07×**177°.87W**±0°.06**, h604**^{km}±5^{km}**, n478,** σ1^{s}**14**/495**, mb4.5**/79**, 50C-13D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**0.90**	**270**	P	**P**	**03 35 59.2**	**+1.9**
TAVE	**Taveuni**	**2.47**	**308**	P	**P**	**03 36 03.7**	**+1.0**
FUTU	**Fugatoga**	**3.92**	**356**	P	**P**	**03 36 11.3**	**+0.1**
MSVF	**Nonsavu**	**3.92**	**277**	P	**P**	**03 36 12.1**	**+0.9**
	724nm,0.7s,baz=134,slow=5.0,SNR=314						
MSVF				S	**S**	**03 37 22.9**	**+2.2**
	70nm,1.1s,baz=145,slow=22,SNR=10						
MSVF	**Nonsavu**	**3.92**	**277**	P	**P**	**03 36 10.7**	**-0.5**
MSVF	**Nonsavu**	**3.92**	**277**	P	**P**	**03 36 12.5**	**+1.3**
YSA	**Yasawairara**	**4.61**	**289**	P	**P**	**03 36 15.9**	**-0.2**
AFI	**Afiamalu**	**7.27**	**55**	P	**P**	**03 36 39.8**	**+1.1**
	38nm,0.4s,baz=190,slow=1.4,SNR=9.5						
AFI				S	**S**	**03 38 09.4**	**-1.6**
	16nm,0.3s,baz=224,slow=24,SNR=5.7						
AFI	**Afiamalu**	**7.27**	**55**	P	**P**	**03 36 36.0**	**-2.7**
NIUE	**Niue**	**7.57**	**98**	P	**P**	**03 36 39.2**	**-2.1**
FUNA	**Funafuti**	**10.07**	**343**	P	**P**	**03 37 03.2**	**-2.4**
LIFNC	**LIFOU**	**14.27**	**257**	P	**P**	**03 37 45.4**	**-1.9**
PINNC	**Pines Island,**	**14.44**	**250**	P	**P**	**03 37 47.5**	**-1.3**
OUENC	**Ouen Island, N**	**14.93**	**251**	P	**P**	**03 37 51.8**	**-1.5**
OUENC				IAmb	IAmb	03 37 54.7	
	comp=Z,47nm,1.2s						
DZM	**Mont Dzumac**	**15.21**	**253**	P	**P**	**03 37 55.3**	**-0.8**
	comp=Z,6.3nm,0.4s,baz=116,slow=13,SNR=10						
DZM	**Mont Dzumac**	**15.21**	**253**	P	**P**	**03 37 55.2**	**-0.8**
DZM				IAmb	IAmb	03 38 02.6	
	comp=Z,19nm,0.9s						
KOUNC	**Koumac, New Ca**	**16.99**	**259**	P	**P**	**03 38 10.9**	**-1.3**
KOUNC				IAmb	IAmb	03 38 14.3	
	comp=Z,28nm,0.8s						
RAR	**Rarotonga**	**17.29**	**103**	P	**P**	**03 38 16.0**	**+1.1**
	comp=Z,24nm,0.8s,baz=215,slow=7.6,SNR=5.0						
URZ	**Urewera**	**20.42**	**191**	P	**P**	**03 38 43.0**	**-0.1**
	comp=Z,12nm,0.7s,baz=70,slow=6.1,SNR=7.3						
	comp=Z,12nm,0.7s						
BKZ	**Black Stump Fm**	**21.42**	**192**	P	**P**	**03 38 52.2**	**+0.1**
BKZ				IAmb	IAmb	03 38 54.2	
	comp=Z,28nm,1.4s						
BFZ	**Birch Farm**	**22.93**	**192**	P	**P**	**03 39 03.8**	**-1.7**
THZ	**Tophouse**	**24.74**	**197**	P	**P**	**03 39 21.1**	**-0.4**
THZ				IAmb	IAmb	03 39 24.6	
	comp=Z,16nm,0.9s						
KHZ	**Kahutara**	**25.18**	**195**	P	**P**	**03 39 24.5**	**-0.8**
GVZ	**Greta Valley S**	**25.83**	**195**	P	**P**	**03 39 30.7**	**-0.3**
PPT	**Papeete**	**26.92**	**93**	P	**P**	**03 39 43.9**	**+3.0**
	comp=Z,25nm,0.5s,baz=143,slow=1.6,SNR=8.5						
	comp=Z,25nm,0.5s						
RPZ	**Rata Peaks**	**27.06**	**198**	P	**P**	**03 39 41.9**	**+0.1**
	comp=Z,6.1nm,0.7s,baz=27,slow=2.3,SNR=2.0						
	comp=Z,6.1nm,0.7s						
FOZ	**Fox Glacier**	**27.28**	**200**	P	**P**	**03 39 43.2**	**-0.5**
LBZ	**Lake Benmore**	**27.93**	**198**	P	**P**	**03 39 48.6**	**-0.8**
MLZ	**Mavora Lakes**	**29.46**	**200**	P	**P**	**03 40 02.4**	**-0.2**
EIDS	**Eidsvold**	**29.64**	**251**	P	**P**	**03 40 03.7**	**-0.7**
EIDS				IAmb	IAmb	03 40 04.6	
	comp=Z,11nm,1.0s						
ARMA	**Armidale**	**30.22**	**241**	P	**P**	**03 40 10.1**	**+0.6**
ARMA				IAmb	IAmb	03 40 12.8	
	comp=Z,25nm,1.5s						
CTA	**Charters Tower**	**33.90**	**261**	P	**P**	**03 40 40.5**	**-0.2**
	comp=Z,7.6nm,0.6s,baz=97,slow=9.6,SNR=14						
	comp=Z,7.6nm,0.6s						
CTAO	**Charters Tower**	**33.90**	**261**	P	**P**	**03 40 39.8**	**-0.8**
CTAO				IAmb	IAmb	03 40 41.4	
	comp=Z,9.5nm,0.7s						
CAN	**Canberra**	**33.91**	**233**	P	**P**	**03 40 41.2**	**+0.7**
PMG	**Port Moresby**	**35.02**	**280**	P	**P**	**03 40 50.2**	**+0.2**
	comp=Z,40nm,0.9s,baz=91,slow=6.8,SNR=11						
	comp=Z,40nm,0.9s						
PMG	**Port Moresby**	**35.02**	**280**	P	**P**	**03 40 49.0**	**-0.9**
PMG	**Port Moresby**	**35.02**	**280**	P	**P**	**03 40 51.1**	**+1.1**
	comp=Z,49nm,0.9s						
CMSA	**Cobar Meteorol**	**35.44**	**241**	P	**P**	**03 40 54.1**	**+0.9**
QLP	**Quilpie**	**35.90**	**250**	P	**P**	**03 40 57.4**	**+0.3**
TOO	**Toolangi**	**37.36**	**231**	P	**P**	**03 41 08.8**	**-0.1**
TOO				IAmb	IAmb	03 41 11.1	
	comp=Z,10nm,0.9s						
TOO	**Toolangi**	**37.36**	**231**	P	**P**	**03 41 10.5**	**+1.6**
COEN	**Coen**	**37.62**	**271**	P	**P**	**03 41 11.0**	**-0.3**
COEN	**Coen**	**37.62**	**271**	P	**P**	**03 41 11.7**	**+0.4**
TAOE	**Nuku Hiva Isla**	**37.77**	**81**	P	**P**	**03 41 11.4**	**-1.2**
STKA	**Stephens Creek**	**38.92**	**242**	P	**P**	**03 41 22.7**	**+1.1**
	comp=Z,5.3nm,0.5s,baz=101,slow=7.4,SNR=15						
	comp=Z,5.3nm,0.5s						
STKA	**Stephens Creek**	**38.92**	**242**	P	**P**	**03 41 21.6**	**0.0**
WAKE	**Wake Island**	**40.27**	**337**	P	**P**	**03 41 31.2**	**-1.1**
BBOO	**Buckleboo**	**43.70**	**241**	P	**P**	**03 41 59.7**	**+0.6**
WB0	**Warramunga Arr**	**45.05**	**260**	P	**P**	**03 42 09.3**	**-0.4**
WB0				IAmb	IAmb	03 42 09.9	
	comp=Z,12nm,0.5s						
WB2	**Warramunga Arr**	**45.07**	**260**	P	**P**	**03 42 09.6**	**-0.3**
WB2				IAmb	IAmb	03 42 09.8	
	comp=Z,9.4nm,0.6s						
WB2				PcP	**PcP**	**03 43 37.0**	**-0.5**
WRAB	**Tennant Creek**	**45.07**	**260**	P	**P**	**03 42 09.2**	**-0.7**
WRAB				IAmb	IAmb	03 42 09.7	
	comp=Z,10.0nm,0.7s						
WRAB	**Tennant Creek**	**45.07**	**260**	P	**P**	**03 42 09.7**	**-0.1**
WB1	**Warramunga Ar.**	**45.07**	**260**	P	**P**	**03 42 09.7**	**-0.2**
WRA	**Warramunga Arr**	**45.08**	**260**	P	**P**	**03 42 09.7**	**-0.3**
	comp=Z,8.9nm,0.6s,baz=95,slow=7.0,SNR=78						
WRA				PcP	**PcP**	**03 43 38.2**	**+0.8**
	comp=Z,2.1nm,0.5s,baz=93,slow=4.0,SNR=7.1						
WRA				S	**S**	**03 48 01.0**	**-5.5**
	comp=Z,2.6nm,0.8s,baz=98,slow=13,SNR=8.7						
	comp=Z,8.9nm,0.6s						
WRA	**Warramunga Arr**	**45.08**	**260**	P	**P**	**03 42 09.5**	**-0.4**
WRA				PcP	**PcP**	**03 43 37.7**	**+0.2**
AS01	**Alice Springs**	**45.16**	**255**	P	**P**	**03 42 10.8**	**+0.3**
AS31	**Alice Springs**	**45.20**	**255**	P	**P**	**03 42 11.0**	**+0.2**
AS31				IAmb	IAmb	03 42 12.1	
	comp=Z,8.0nm,0.5s						
AS31				PcP	**PcP**	**03 43 38.7**	**+0.9**
ASAR	**Alice Springs**	**45.20**	**255**	P	**P**	**03 42 11.0**	**+0.2**
	comp=Z,11nm,0.4s,baz=86,slow=8.6,SNR=127						
ASAR				PcP	**PcP**	**03 43 38.7**	**+0.8**
	comp=Z,2.9nm,0.5s,baz=101,slow=4.1,SNR=9.7						
ASAR				S	**S**	**03 48 05.3**	**-2.8**
	comp=Z,6.0nm,1.0s,baz=88,slow=15,SNR=24						
	comp=Z,11nm,0.4s						
ASAR	**Alice Springs**	**45.20**	**255**	P	**P**	**03 42 11.0**	**+0.2**
ASAR				PcP	**PcP**	**03 43 37.9**	**0.0**
WRKA	**Warakurna**	**50.23**	**252**	P	**P**	**03 42 48.6**	**+0.3**
FORT	**Forrest**	**50.33**	**245**	P	**P**	**03 42 48.3**	**-0.5**
FORT				IAmb	IAmb	03 43 07.1	
	comp=Z,34nm,1.1s						
KNRA	**Kununurra**	**50.97**	**264**	P	**P**	**03 42 53.1**	**-0.5**
KNRA				IAmb	IAmb	03 42 54.0	
	comp=Z,17nm,0.8s						
FAKI	**Fak Fak**	**51.15**	**281**	P	**P**	**03 42 53.9**	**-1.0**
FAKI				IAmb	IAmb	03 43 18.9	
	comp=Z,22nm,1.1s						
FITZ	**Fitzroy Crossi**	**53.48**	**261**	P	**P**	**03 43 11.3**	**-0.3**
SANI	**Sanana**	**57.30**	**280**	P	**P**	**03 43 38.7**	**+0.7**
PSA00	**Pilbara Seismi**	**58.32**	**256**	P	**P**	**03 43 44.6**	**-0.2**
PSA00				IAmb	IAmb	03 43 49.3	
	comp=Z,30nm,1.4s						
MBWA	**Marble Bar**	**58.49**	**256**	P	**P**	**03 43 45.6**	**-0.3**
GIRL	**Giralia**	**63.29**	**253**	P	**P**	**03 44 17.5**	**+0.1**
JHJ2	**Mitsune**	**65.12**	**321**	P	**P**	**03 44 28.3**	**-0.3**
JGF	**Kuroka**	**68.31**	**322**	P	**P**	**03 44 48.3**	**+0.1**
JGF				IAmb	IAmb	03 45 29.1	
	comp=Z,32nm,1.5s						
MJAR	**Matsushiro Arr**	**68.48**	**323**	P	**P**	**03 44 48.8**	**-0.3**
	comp=Z,9.5nm,0.6s,baz=163,slow=5.8,SNR=25						
	comp=Z,9.5nm,0.6s						
MAJO	**Matsushiro**	**68.48**	**323**	P	**P**	**03 44 49.0**	**-0.1**
MAJO				IAmb	IAmb	03 44 49.5	
	comp=Z,14nm,0.5s						
MAJO	**Matsushiro**	**68.48**	**323**	P	**P**	**03 44 49.3**	**+0.2**
MJB9	**Matsu-Tunnel**	**68.48**	**323**	P	**P**	**03 44 49.0**	**-0.2**
MJB9				IAmb	IAmb	03 44 49.5	
	comp=Z,13nm,0.5s						
JSD	**Sado**	**69.51**	**324**	P	**P**	**03 44 54.8**	**-0.4**
JSD				IAmb	IAmb	03 45 01.9	
	comp=Z,34nm,1.1s						
KIWB	**Kanaga Island**	**69.79**	**0**	P	**P**	**03 44 56.2**	**-0.4**
ADK	**Adak**	**69.83**	**1**	P	**P**	**03 44 56.7**	**-0.1**
JTM	**Tenmabayashi**	**70.02**	**328**	P	**P**	**03 44 57.5**	**-0.6**
GSTR	**Great Sitkin T**	**70.05**	**1**	P	**P**	**03 44 57.8**	**-0.3**
UGM	**Wanagama**	**70.15**	**268**	P	**P**	**03 44 59.5**	**-0.1**
JHS	**Saijyo**	**70.48**	**319**	P	**P**	**03 45 00.5**	**-0.6**
JHS	**Saijyo**	**70.48**	**319**	P	**P**	**03 45 01.9**	**+0.8**
JNU	**Nakatsue**	**70.73**	**316**	P	**P**	**03 45 02.3**	**-0.3**
	comp=Z,5.7nm,0.8s,baz=102,slow=5.4,SNR=2.3						
	comp=Z,5.7nm,0.8s						
JNU	**Nakatsue**	**70.73**	**316**	P	**P**	**03 45 01.4**	**-1.2**
JNU				IAmb	IAmb	03 45 38.5	
	comp=Z,48nm,1.5s						
SMY	**Shemya**	**71.01**	**355**	P	**P**	**03 45 02.9**	**-0.8**
YOJ	**Yonaguni jima**	**71.56**	**304**	P	**P**	**03 45 07.5**	**-0.1**
ASAJ	**Asahikawa**	**71.81**	**331**	P	**P**	**03 45 10.0**	**+1.4**
	comp=Z,6.8nm,0.6s,baz=218,slow=6.0,SNR=9.2						
	comp=Z,6.8nm,0.6s						
QSPA	**South Pole Qui**	**71.82**	**180**	P	**P**	**03 45 11.2**	**+2.7**
	comp=Z,4.5nm,0.9s,baz=97,slow=4.4,SNR=15						
	comp=Z,4.5nm,0.9s						
QSPA	**South Pole Qui**	**71.82**	**180**	P	**P**	**03 45 10.6**	**+2.1**
UNV	**Unalaska Valle**	**72.45**	**7**	P	**P**	**03 45 11.9**	**-0.1**
UNV				IAmb	IAmb	03 45 12.9	
	comp=Z,37nm,1.3s						
UNV	**Unalaska Valle**	**72.45**	**7**	P	**P**	**03 45 11.7**	**-0.3**
	baz=192						
AKUT	**Akutan**	**72.82**	**7**	P	**P**	**03 45 13.8**	**-0.3**
SSLB	**Suanglung**	**72.85**	**303**	P	**P**	**03 45 13.8**	**-1.2**
TPUB	**Ta-pu**	**72.87**	**302**	P	**P**	**03 45 14.2**	**-1.0**
KSM	**Kuching**	**73.24**	**277**	P	**P**	**03 45 18.9**	**+1.4**
PETK	**Petropavlovsk-**	**74.13**	**345**	P	**P**	**03 45 22.0**	**+0.4**
	comp=Z,16nm,0.8s,baz=141,slow=8.0,SNR=12						
	comp=Z,16nm,0.8s						
PETK	**Petropavlovsk-**	**74.13**	**345**	P	**P**	**03 45 19.1**	**-2.5**
S12K	**Black Hills**	**74.86**	**9**	P	**P**	**03 45 25.7**	**+0.1**
	baz=196						
KSRS	**Korea Array**	**75.29**	**318**	P	**P**	**03 45 29.6**	**+1.2**
	comp=Z,2.4nm,0.7s,baz=130,slow=6.4,SNR=10						
	comp=Z,2.4nm,0.7s						
KSAR	**Wonju Array Be**	**75.31**	**318**	P	**P**	**03 45 28.1**	**-0.5**
USA0B	**Ussuriysk Arra**	**77.18**	**326**	P	**P**	**03 45 38.3**	**-0.3**
USRK	**Ussuriysk Ar.**	**77.18**	**326**	P	**P**	**03 45 40.2**	**+1.6**
	comp=Z,2.0nm,0.5s,baz=96,slow=3.8,SNR=7.8						
	comp=Z,2.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**77.18**	**326**	P	**P**	**03 45 37.9**	**-0.8**
EDW2	**Edwards Air Fo**	**77.58**	**47**	P	**P**	**03 45 41.7**	**+0.5**
	baz=237						
R17K	**Ugashik Creek**	**77.68**	**12**	P	**P**	**03 45 41.8**	**+0.8**
	baz=201						
Q17K	**Contact Creek**	**78.36**	**12**	P	**P**	**03 45 45.5**	**+0.7**
	baz=201						
YBH	**Yreka Blue Hor**	**78.46**	**39**	P	**P**	**03 45 48.6**	**+2.9**
	comp=Z,1.3nm,0.5s,baz=199,slow=5.2,SNR=5.2						
	comp=Z,1.3nm,0.5s						
NJ2	**Nanjing**	**78.55**	**309**	*e*P	**P**	**03 45 48.3**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KDAK	**Kodiak Island**	**78.60**	**13**	P	**P**	**03 45 45.4**	**-0.5**
KDAK				IAmb	IAmb	03 46 07.1	
	comp=Z,44nm,1.4s						
KDAK	**Kodiak Island**	**78.60**	**13**	P	**P**	**03 45 46.5**	**+0.6**
	baz=205						
Q16K	**King Salmon**	**78.61**	**11**	P	**P**	**03 45 46.6**	**+0.7**
	baz=201						
P16K	**Nushagak River**	**78.70**	**10**	P	**P**	**03 45 47.0**	**+0.6**
	baz=199						
MDJ	**Mudanjiang**	**78.75**	**325**	P	**P**	**03 45 48.3**	**+1.3**
MDJ				PcP	**PcP**	**03 45 54.3**	**+1.1**
MDJ				pP	pwP	03 47 54.1	+1.3
MDJ				sP	PP	03 48 55.6	-1.5
MDJ				ScS	**S**	**03 55 02.6**	**+6.4**
MDJ				pmax	pmax		
	comp=Z,22nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,100nm,4.6s						
MDJ	**Mudanjiang**	**78.75**	**325**	P	**P**	**03 45 46.8**	**-0.2**
MDJ				IAmb	IAmb	03 45 49.5	
	comp=Z,17nm,0.9s						
Q18K	**Katmai Hardscr**	**78.89**	**12**	P	**P**	**03 45 46.9**	**-0.7**
	baz=202						
O16K	**Kokwok River B**	**79.22**	**10**	P	**P**	**03 45 48.9**	**-0.3**
	baz=199						
NVAR	**Mina Array Bea**	**79.31**	**44**	P	**P**	**03 45 53.1**	**+2.7**
	comp=Z,0.8nm,0.6s,baz=224,slow=8.4,SNR=8.1						
	comp=Z,0.8nm,0.6s						
NVAR	**Mina Array Bea**	**79.31**	**44**	P	**P**	**03 45 49.1**	**-1.3**
P18K	**Big Mountain,**	**79.54**	**12**	P	**P**	**03 45 51.0**	**+0.1**
P18K				IAmb	IAmb	03 45 52.2	
	comp=Z,17nm,0.8s						
P18K	**Big Mountain,**	**79.54**	**12**	P	**P**	**03 45 50.3**	**-0.6**
	baz=202						
O17K	**Koliganek Bris**	**79.56**	**11**	P	**P**	**03 45 50.6**	**-0.3**
	baz=200						
N16K	**Nishlik Lake**	**79.95**	**9**	P	**P**	**03 45 52.8**	**-0.2**
	baz=199						
O18K	**Koktuh Hills**	**79.97**	**11**	P	**P**	**03 45 53.4**	**+0.2**
O18K				IAmb	IAmb	03 45 54.8	
	comp=Z,29nm,0.9s						
O18K	**Koktuh Hills**	**79.97**	**11**	P	**P**	**03 45 52.6**	**-0.6**
	baz=202						
MOD	**Modoc Plateau**	**80.01**	**40**	P	**P**	**03 45 52.1**	**-1.9**
P19K	**Oil Pt**	**80.17**	**12**	P	**P**	**03 45 54.3**	**+0.1**
P19K				IAmb	IAmb	03 46 31.1	
	comp=Z,29nm,1.1s						
P19K	**Oil Pt**	**80.17**	**12**	P	**P**	**03 45 54.3**	**+0.1**
	baz=204						
O19K	**Port Alsworth**	**80.46**	**12**	P	**P**	**03 45 55.3**	**-0.3**
O19K				IAmb	IAmb	03 45 57.1	
	comp=Z,22nm,0.7s						
O19K	**Port Alsworth**	**80.46**	**12**	P	**P**	**03 45 55.5**	**0.0**
	baz=203						
ILSW	**Iliamna Southw**	**80.50**	**12**	P	**P**	**03 45 53.2**	**-2.8**
ILSW				IAmb	IAmb	03 45 57.2	
	comp=Z,18nm,0.7s						
H04A	**Detroit Lake**	**80.55**	**37**	P	**P**	**03 45 53.9**	**-2.6**
CN2	**Changchun**	**80.60**	**322**	P	**P**	**03 45 57.9**	**+1.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BNX	**BinXian**	**80.66**	**325**	⇑P	**P**	**03 45 57.9**	**+0.9**
BNX				pmax	pmax		
	comp=Z,15nm,0.8s						
BNX				pmax	pmax		
	comp=Z,61nm,3.7s						
O20K	**Slope Mountain**	**80.69**	**13**	P	**P**	**03 45 57.0**	**+0.1**
	baz=204						
PINE	**Pine Mountain**	**80.73**	**38**	P	**P**	**03 45 54.3**	**-3.4**
BRSE	**Bradley Lake S**	**80.79**	**14**	P	**P**	**03 45 57.2**	**-0.1**
	baz=206						
N19K	**Bonanza Creek**	**81.00**	**11**	P	**P**	**03 45 58.5**	**-0.1**
N19K	**Bonanza Creek**	**81.00**	**11**	P	**P**	**03 45 58.6**	**+0.1**
	baz=203						
RSO	**Redoubt South**	**81.02**	**12**	P	**P**	**03 45 58.8**	**+0.1**
SVW2	**Sparrevohn**	**81.07**	**11**	P	**P**	**03 45 58.3**	**-0.5**
WHN	**Wuhan**	**81.22**	**306**	P	**P**	**03 46 01.8**	**+1.6**
WHN				pP	**pP**	**03 48 08.3**	**+1.1**
WVOR	**Wild Horse Val**	**81.33**	**40**	P	**P**	**03 45 58.7**	**-2.0**
SEW	**Seward**	**81.40**	**14**	P	**P**	**03 46 00.4**	**-0.1**
	baz=207						
O22K	**Cooper Landing**	**81.68**	**14**	P	**P**	**03 46 00.9**	**-0.9**
O22K				IAmb	IAmb	03 46 02.9	
	comp=Z,33nm,1.2s						
O22K	**Cooper Landing**	**81.68**	**14**	P	**P**	**03 46 01.8**	**-0.1**
	baz=207						
SPCR	**Spurr Chakacha**	**81.80**	**12**	P	**P**	**03 46 02.5**	**-0.1**
	baz=205						
M19K	**Big River Lodg**	**82.03**	**11**	P	**P**	**03 46 04.0**	**+0.3**
M19K	**Big River Lodg**	**82.03**	**11**	P	**P**	**03 46 03.6**	**0.0**
	baz=203						
L19K	**White Mountain**	**82.20**	**11**	P	**P**	**03 46 03.7**	**-0.8**
L19K	**White Mountain**	**82.20**	**11**	P	**P**	**03 46 04.6**	**+0.1**
	baz=202						
RC01	**Rabbit Creek A**	**82.22**	**13**	P	**P**	**03 46 03.9**	**-0.7**
RC01				IAmb	IAmb	03 46 06.3	
	comp=Z,13nm,1.1s						
RC01	**Rabbit Creek A**	**82.22**	**13**	P	**P**	**03 46 04.9**	**+0.3**
	baz=207						
M20K	**Styx River**	**82.24**	**12**	P	**P**	**03 46 03.2**	**-1.6**
M20K	**Styx River**	**82.24**	**12**	P	**P**	**03 46 05.2**	**+0.4**
	baz=204						
PWL	**Port Wells**	**82.33**	**14**	P	**P**	**03 46 05.0**	**-0.2**
PWL				IAmb	IAmb	03 46 23.8	
	comp=Z,24nm,1.2s						
PWL	**Port Wells**	**82.33**	**14**	P	**P**	**03 46 05.4**	**+0.2**
	baz=208						
SUA	**Susitna One**	**82.34**	**13**	P	**P**	**03 46 05.5**	**+0.2**
SUA				IAmb	IAmb	03 46 06.7	
	comp=Z,10nm,0.6s						
SUA	**Susitna One**	**82.34**	**13**	P	**P**	**03 46 05.5**	**+0.2**
	baz=206						
ELK	**Elko**	**82.55**	**43**	P	**P**	**03 46 09.5**	**+2.5**
	comp=Z,1.1nm,0.8s,baz=302,slow=8.2,SNR=4.5						
	comp=Z,1.1nm,0.8s						
SKT	**Skwentna**	**82.65**	**12**	P	**P**	**03 46 06.7**	**0.0**
SKT	**Skwentna**	**82.65**	**12**	P	**P**	**03 46 07.0**	**+0.3**
	baz=205						
L20K	**Farewell, AK**	**82.66**	**11**	P	**P**	**03 46 07.0**	**+0.2**
	baz=203						
TTA	**Tatalina**	**82.71**	**10**	P	**P**	**03 46 05.8**	**-1.3**
TTA	**Tatalina**	**82.71**	**10**	P	**P**	**03 46 08.6**	**+1.5**
TTA	**Tatalina**	**82.71**	**10**	P	**P**	**03 46 07.3**	**+0.2**
	baz=201						
M22K	**Willow**	**82.73**	**13**	P	**P**	**03 46 07.6**	**+0.5**
	baz=207						
KNK	**Knik Glacier**	**82.79**	**14**	P	**P**	**03 46 07.5**	**+0.1**
	baz=208						
PMR	**Palmer**	**82.80**	**13**	P	**P**	**03 46 05.1**	**-2.4**
PMR				IAmb	IAmb	03 46 08.5	
	comp=Z,8.7nm,0.6s						
PMR	**Palmer**	**82.80**	**13**	P	**P**	**03 46 07.6**	**+0.1**
	baz=208						
GHO	**Glory Hole Cre**	**83.01**	**13**	P	**P**	**03 46 08.0**	**-0.6**
GHO				IAmb	IAmb	03 46 10.3	
	comp=Z,18nm,0.7s						
ANM	**Nome**	**83.10**	**5**	P	**P**	**03 46 07.2**	**-1.8**
ANM	**Nome**	**83.10**	**5**	P	**P**	**03 46 09.7**	**+0.8**
	baz=192						
SML	**Sawmill**	**83.17**	**14**	P	**P**	**03 46 07.7**	**-1.7**
SML				IAmb	IAmb	03 46 18.4	
	comp=Z,36nm,1.4s						
CUT	**Chulitna**	**83.29**	**13**	P	**P**	**03 46 10.0**	**+0.1**
	baz=206						
M23K	**Glacier View**	**83.30**	**14**	P	**P**	**03 46 09.8**	**-0.2**
	baz=209						
PPLA	**Purkeypile**	**83.35**	**12**	P	**P**	**03 46 09.9**	**-0.5**
PPLA	**Purkeypile**	**83.35**	**12**	P	**P**	**03 46 10.3**	**-0.1**
	baz=205						
SCM	**Sheep Creek Mo**	**83.42**	**14**	P	**P**	**03 46 10.6**	**0.0**
	baz=209						
K20K	**Telida**	**83.43**	**11**	P	**P**	**03 46 11.0**	**+0.4**
	baz=203						
KLU	**Klutina**	**83.46**	**15**	P	**P**	**03 46 08.3**	**-2.5**
KLU				IAmb	IAmb	03 46 13.1	
	comp=Z,19nm,1.4s						
TGL	**Tana Glacier**	**83.62**	**16**	P	**P**	**03 46 08.8**	**-2.9**
TGL				IAmb	IAmb	03 46 45.7	
	comp=Z,22nm,1.2s						
CAST	**Castle Rocks**	**83.85**	**11**	P	**P**	**03 46 11.7**	**-1.0**
CAST				IAmb	IAmb	03 46 13.6	
	comp=Z,14nm,0.7s						
CAST	**Castle Rocks**	**83.85**	**11**	P	**P**	**03 46 11.8**	**-0.9**
	baz=205,SNR=15						
N25K	**Chitina, Valde**	**83.88**	**15**	P	**P**	**03 46 11.7**	**-1.3**
N25K				IAmb	IAmb	03 46 14.9	
	comp=Z,17nm,0.8s						
N25K	**Chitina, Valde**	**83.88**	**15**	P	**P**	**03 46 12.8**	**-0.2**
	baz=212						
TNA	**Tin City**	**83.88**	**4**	P	**P**	**03 46 09.9**	**-2.8**
TNA	**Tin City**	**83.88**	**4**	P	**P**	**03 46 12.2**	**-0.5**
	baz=190						
M24K	**Tolsona, Glenn**	**83.93**	**14**	P	**P**	**03 46 12.4**	**-0.7**
M24K				IAmb	IAmb	03 46 15.2	
	comp=Z,30nm,1.1s						
M24K	**Tolsona, Glenn**	**83.93**	**14**	P	**P**	**03 46 12.2**	**-0.9**
	baz=210						
MCARA	**McCarthy VSAT**	**84.10**	**16**	P	**P**	**03 46 12.0**	**-1.9**
MCARA				IAmb	IAmb	03 46 36.4	
	comp=Z,32nm,1.3s						
HNS	**HongShan**	**84.12**	**312**	⇑P	**P**	**03 46 16.0**	**+1.4**
HNS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KTH	**Kantishna Hill**	**84.19**	**12**	P	**P**	**03 46 12.5**	**-1.9**
KTH				IAmb	IAmb	03 46 15.1	
	comp=Z,8.9nm,0.9s						
CTG	**Chitna Glacier**	**84.20**	**17**	P	**P**	**03 46 14.9**	**+0.3**
	baz=215						
SEY	**Seymchan**	**84.21**	**347**	P	**P**	**03 46 14.9**	**+0.5**

	comp=Z,9.5nm,0.5s,baz=152,slow=5.9,SNR=29						
	comp=Z,9.5nm,0.5s						
TRF	Thorofare Moun	84.22	12	P	P	03 46 13.5	-1.2
TRF	Thorofare Moun	84.22	12	P	P	03 46 14.2	-0.5
	baz=206						
CHUM	Lake Minchumin	84.23	11	P	P	03 46 13.7	-0.8
	baz=204,SNR=8.7						
GCSA	Galena City Sc	84.28	9	P	P	03 46 15.1	+0.5
	baz=200						
O28M	Mount Upton	84.37	18	P	P	03 46 15.3	-0.3
	baz=216						
BJI	Beijing	84.38	315	P	P	03 46 17.1	+1.3
HARP	HAARP	84.42	15	P	P	03 46 16.1	+0.6
	baz=211						
PSI	Prapat	84.42	275	P	P	03 46 17.1	+0.3
LYN	LuoYang	84.44	309	⇑iP	P	03 46 17.9	+1.7
LYN				pmax	pmax		
	comp=Z,21nm,0.8s						
O29M	Mount Kennedy	84.47	18	P	P	03 46 15.7	-0.3
	baz=217						
RND	Reindeer	84.48	13	P	P	03 46 14.3	-1.5
RND				IAmb	IAmb	03 46 17.5	
	comp=Z,14nm,0.7s						
PLBC	Pleasant Camp	84.49	20	P	P	03 46 16.8	+0.9
	baz=219						
HLID	Hailey	84.54	41	P	P	03 46 17.3	+0.5
	baz=239						
BPAW	Bear Paw Mtn.	84.67	12	P	P	03 46 17.3	+0.6
	baz=206						
MCK	McKinley	84.75	12	P	P	03 46 15.4	-1.7
MCK				IAmb	IAmb	03 46 18.5	
	comp=Z,18nm,1.2s						
MCK	McKinley	84.75	12	P	P	03 46 17.5	+0.5
	baz=208						
P30M	Million Dollar	84.82	19	P	P	03 46 17.9	+0.4
	baz=219						
SKAG	Skagway	84.83	20	P	P	03 46 17.8	+0.3
	baz=220						
PAX	Paxson	84.84	14	P	P	03 46 17.8	+0.1
	baz=211						
YUK8	Steele Glacier	84.91	17	P	P	03 46 18.5	+0.2
	baz=216						
M26K	Nabesna, AK	84.96	16	P	P	03 46 18.4	+0.2
	baz=213						
YUK6	Outpost Mounta	85.04	18	P	P	03 46 19.3	+0.5
	baz=218						
YUK3	Moose Creek	85.11	17	P	P	03 46 19.3	+0.2
	baz=216						
S34M	Telegraph Cree	85.15	23	P	P	03 46 20.0	+0.9
	baz=224						
HYT	Haines Junctio	85.20	19	P	P	03 46 19.8	+0.3
	baz=218						
M27K	Edge Creek, AK	85.21	16	P	P	03 46 20.0	+0.5
	baz=214						
YUK4	Talbot Arm	85.28	18	P	P	03 46 20.7	+0.8
	baz=217						
L26K	Log Cabin Wild	85.40	15	P	P	03 46 21.1	+0.9
	baz=213						
P32M	Atlin	85.47	21	P	P	03 46 21.2	+0.6
	baz=222						
I21K	Tanana	85.48	11	P	P	03 46 18.7	-1.8
I21K				IAmb	IAmb	03 46 22.3	
	comp=Z,12nm,1.4s						
I21K	Tanana	85.48	11	P	P	03 46 21.3	+0.8
	baz=205						
NEA2	Nenana	85.49	12	P	P	03 46 21.3	+0.7
	baz=208						
K24K	Donnelly Dome	85.49	14	P	P	03 46 20.6	0.0
	baz=211						
Q32M	Nakina River	85.50	22	P	P	03 46 22.1	+1.1
	baz=223						
BVCY	Beaver Creek	85.53	16	P	P	03 46 21.5	+0.6
	baz=215						
MLY	Manley	85.56	11	P	P	03 46 21.6	+0.6
	baz=206						
WRH	Wood River Hil	85.58	12	P	P	03 46 19.2	-1.8
WRH				IAmb	IAmb	03 46 22.6	
	comp=Z,24nm,1.3s						
O30N	Mendenhall	85.59	19	P	P	03 46 21.3	0.0
	baz=220						
RIDG	Independent Ri	85.65	14	P	P	03 46 21.4	-0.1
	baz=211						
DOT	Dot Lake	85.75	14	P	P	03 46 21.3	-0.7
HDA	Harding Lake	85.76	13	P	P	03 46 21.8	-0.1
	baz=210						
H21K	Melozitna Rive	85.77	10	P	P	03 46 21.7	-0.2
	baz=204						
CCB	Clear Creek Bu	85.79	12	P	P	03 46 19.1	-2.9
CCB				IAmb	IAmb	03 46 23.0	
	comp=Z,16nm,1.2s						
L27K	Beaver Creek,	85.81	16	P	P	03 46 22.5	+0.3
	baz=214						
IMAR	Indian Mountai	85.92	10	P	P	03 46 20.8	-1.8
I23K	Minto, Yukon-K	85.93	12	P	P	03 46 22.5	-0.1
	baz=207						
TCOL	CIGO, UAF Yank	85.98	12	P	P	03 46 22.7	-0.2
	baz=209						
MDM	Murphy Dome	85.98	12	P	P	03 46 21.0	-2.0
COLA	College	85.98	12	P	P	03 46 23.7	+0.8
COLA	College	85.98	12	P	P	03 46 22.5	-0.4
	baz=209						
SCRK	Sand Creek	86.05	14	P	P	03 46 23.6	+0.2
	baz=212						
IL31		86.09	13	P	P	03 46 21.6	-1.7
IL31				IAmb	IAmb	03 46 24.7	
	comp=Z,5.4nm,0.6s						
ILAR	Eielson Array	86.09	13	P	P	03 46 23.6	+0.2
	comp=Z,3.0nm,0.4s,baz=220,slow=4.9,SNR=109						
	comp=Z,3.0nm,0.4s						
ILAR	Eielson Array	86.09	13	P	P	03 46 23.8	+0.3
M29M	Somme Creek	86.21	17	P	P	03 46 24.1	-0.1
	baz=217						
H22K	Ishtalitna Cre	86.23	11	P	P	03 46 24.1	0.0
	baz=205						
P33M	Teslin, Yukon	86.23	21	P	P	03 46 24.8	+0.5
	baz=222						
N31M	Braeburn, Yuko	86.25	19	P	P	03 46 25.1	+0.8
	baz=220						
POKR	Poker Plat Res	86.28	12	P	P	03 46 24.3	0.0
	baz=209						
G21K	Allakaket	86.45	10	P	P	03 46 25.1	0.0
	baz=203						
H23K	Yukon River	86.50	11	P	P	03 46 25.1	-0.3
	baz=207						
MSO	Missoula	86.52	38	P	P	03 46 26.4	+0.3
	baz=239						
K27K	Chicken	86.55	15	P	P	03 46 26.2	+0.6
	baz=214						
RDOG	Red Dog Mine	86.74	6	P	P	03 46 27.0	+0.5
	baz=194						
M30M	Minto, Yukon	86.79	18	P	P	03 46 27.3	+0.5
	baz=219						
BILL	Bilibino	86.81	354	P	P	03 46 24.8	-2.0
H24K	Noodor Dome	86.83	12	P	P	03 46 27.3	+0.4
	baz=209						
L29M	L29M	86.83	17	P	P	03 46 28.0	+0.9
	baz=218						
S22A	4UR Ranch, Cre	86.84	49	P	P	03 46 27.8	-0.2
	baz=244						
N32M	Quiet Lake	86.84	20	P	P	03 46 27.6	+0.4
	baz=222						
XAN	Xi'an	86.87	307	⇑iP	P	03 46 29.4	+1.5
XAN				pP	pP	03 48 39.8	+2.6
XAN				pmax	pmax		
	comp=Z,16nm,1.2s						
PRP	Porcupine Dome	87.03	13	P	P	03 46 28.4	+0.4
	baz=211						
F21K	Alatna River	87.11	9	P	P	03 46 28.8	+0.6
	baz=203						
G23K	Bananza Creek	87.21	11	P	P	03 46 27.9	-0.8
	baz=206						
M31M	Drury Creek, Y	87.22	19	P	P	03 46 29.1	+0.3
	baz=221						
BW06	Boulder Array	87.24	43	P	P	03 46 29.5	-0.2
	baz=242						
PDAR	Pinedale Array	87.24	43	P	P	03 46 31.9	+2.2
	comp=Z,1.0nm,0.7s,baz=220,slow=2.8,SNR=10						
	comp=Z,1.0nm,0.7s						
DAWY	Dawson	87.26	16	P	P	03 46 29.6	+0.6
	baz=216						
BOZ	Bozeman (W)	87.29	40	P	P	03 46 30.2	+0.5
	baz=241						
H17A	Grant Village	87.36	41	P	P	03 46 30.5	+0.3
	baz=242						
I26K	Coal Creek Min	87.37	14	P	P	03 46 29.9	+0.4
	baz=213						
EGAK	Eagle	87.40	15	P	P	03 46 29.6	0.0
	baz=215						
FARO	Faro, Yukon	87.56	19	P	P	03 46 30.6	+0.1
	baz=222						
F22K	John River	87.57	10	P	P	03 46 30.2	-0.2
	baz=204						
K29M	Barlow Dome	87.58	17	P	P	03 46 30.2	-0.4
	baz=218						
COLD	Coldfoot	87.64	10	P	P	03 46 29.7	-0.9
	baz=206						
G24K	Hadweenzic Riv	87.67	12	P	P	03 46 30.7	-0.2
	baz=209						
MAYO	Mayo, Yukon	87.84	17	P	P	03 46 30.8	-0.9
MAYO	Mayo, Yukon	87.84	17	P	P	03 46 31.3	-0.4
	baz=220						
HHC	Hu-ho-hao-te	87.87	314	eP	P	03 46 34.6	+2.1
HHC				pmax	pmax		
	comp=Z,26nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,5.4s						
I27K	Kandik River	87.97	14	P	P	03 46 31.9	-0.5
	baz=214						
G25K	Bearman Lake	87.99	12	P	P	03 46 30.1	-2.2
	baz=210						
LIRD	Liard River Hi	88.08	24	P	P	03 46 32.8	-0.1
	baz=228						
E22K	Anaktuvuk Pass	88.20	9	P	P	03 46 33.4	+0.1
	baz=205						
F24K	Squaw Lake	88.31	11	P	P	03 46 33.4	-0.4
	baz=208						
E23K	Chandalar	88.49	10	P	P	03 46 34.7	0.0
	baz=207						
MMPY	Sheldon Lake,	88.51	20	P	P	03 46 34.9	0.0
	baz=224						
H27K	Steamboat Moun	88.52	14	P	P	03 46 34.7	-0.1
	baz=214						
RLMT	Red Lodge	88.52	41	P	P	03 46 35.1	-0.5
	baz=242						
ISCO	Idaho Springs	88.58	47	P	P	03 46 35.2	-0.9
	baz=245						
I29M	Ogilvie Camp,	88.58	15	P	P	03 46 34.7	-0.4
	baz=217						
G26K	Porcupine Rive	88.63	13	P	P	03 46 35.2	0.0
	baz=212						
E24K	Your Creek	88.70	11	P	P	03 46 35.7	0.0
	baz=208						
F25K	Christian Rive	88.80	12	P	P	03 46 36.0	-0.1
	baz=211						
BTO	Baotou	88.82	314	eP	P	03 46 39.8	+2.9
BTO				pP	pP	03 48 48.8	+1.9
BTO				pmax	pmax		
	comp=Z,31nm,0.5s						
BTO				pmax	pmax		
	comp=Z,360nm,5.4s						
G27K	Doyon Strip	88.97	14	P	P	03 46 36.3	-0.6
	baz=214						
D23K	Nanushuk River	89.14	9	P	P	03 46 37.3	-0.2
	baz=206						
F26K	Sheenjek River	89.19	12	P	P	03 46 37.8	-0.1
	baz=212						
E25K	Arctic Village	89.27	12	P	P	03 46 38.5	+0.2
	baz=211						
KOTAN	Kotaneelee Air	89.34	24	P	P	03 46 38.6	-0.1
	baz=230						
CMAR	Chiang Mai Arr	89.48	290	P	P	03 46 42.4	+2.0
	comp=Z,1.8nm,0.4s,baz=114,slow=3.0,SNR=18						
	comp=Z,1.8nm,0.4s						
CMAR	Chiang Mai Arr	89.48	290	P	P	03 46 40.5	+0.2
D24K	Happy Valley	89.60	10	P	P	03 46 40.4	+0.6
	baz=208						
PZH	PanZhiHua	89.77	298	P	P	03 46 40.4	-1.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,70nm,4.7s						
EPYK	Eagle Plains	89.78	15	P	P	03 46 40.0	-0.7
	baz=219						
E27K	Coleen River	90.12	13	P	P	03 46 42.4	+0.2
	baz=214						
C24K	Franklin Bluff	90.13	10	P	P	03 46 42.1	0.0
	baz=208						
D25K	Kavik River	90.17	11	P	P	03 46 42.1	-0.3
	baz=210						
G30M	tAoh Zraii Nji	90.39	15	P	P	03 46 43.5	0.0
	baz=219						
C27K	Jago River	90.92	11	P	P	03 46 45.9	+0.1
	baz=212						
C26K	Camden Bay	90.94	11	P	P	03 46 46.5	+0.6
	baz=211						
LAO	LASA Array	91.12	41	P	P	03 46 47.5	+0.2
	baz=245						
F31M	Tsiigehtchic	91.36	16	P	P	03 46 48.1	+0.3
	baz=222						
LZH	Lanzhou	91.50	307	eP	P	03 46 50.8	+1.3
LZH				pP	pP	03 48 59.5	-0.6
LZH				sP	sP	03 49 59.8	-0.3
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
INK	Inuvik	92.07	15	P	P	03 46 51.9	+0.8
	comp=Z,2.9nm,0.7s,baz=231,slow=4.9,SNR=17						
	comp=Z,2.9nm,0.7s						
INK	Inuvik	92.07	15	P	P	03 46 50.3	-0.8
	baz=222						
YKA	Yellowknife Ar	94.42	25	P	P	03 47 03.0	+1.0
	comp=Z,1.1nm,0.7s,baz=239,slow=4.4,SNR=18						
	comp=Z,1.1nm,0.7s						
GTA	Gaotai	95.64	310	eP	P	03 47 16.0	+7.8
GTA				sP	PcP	03 47 22.4	+14
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
A36M	Sachs Harbour	96.67	14	P	P	03 47 11.9	0.0
	baz=230						
P49A	Miami Univ. Ec	103.75	53	P	Pdif	03 47 43.7	-0.5
	baz=258						
DWPF	Disney Wildern	103.88	65	P	Pdif	03 47 44.4	-0.6
	baz=257						
M53A	WI Miller and	107.13	51	P	PKiKP	03 52 03.1	-1.4
	baz=261						
MKAR	Makanchi Array	109.73	314	PKiKP	PKiKP	03 52 09.2	-0.1
	comp=Z,0.7nm,0.5s,baz=155,slow=1.2,SNR=14						
ARCES	ARCESS Array B	126.73	350	PKP	PKPdf	03 52 41.5	+0.3
	comp=Z,1.3nm,0.5s,baz=77,slow=1.0,SNR=15						
KLMR	Klimovskoe	129.86	337	ePKPdf	PKPdf	03 52 44.6	-2.7
KLMR				AMP		03 52 49.5	
	comp=Z,18nm,1.5s						
KLMR				e		03 55 14.9	
FINES	FINESS Array B	133.65	344	PKhKP	PKPpre	03 52 49.0	
	comp=Z,0.5nm,0.4s,baz=29,slow=4.4,SNR=6.3						
FINES				PKP	PKPdf	03 52 54.7	+0.3
	comp=Z,1.9nm,0.7s,baz=48,slow=2.1,SNR=3.1						
NOA	NORSAR Array B	136.76	354	PKP	PKPdf	03 53 01.8	+1.5
	comp=Z,0.4nm,0.5s,baz=15,slow=3.8,SNR=2.0						
AKASG	Malin Array Be	141.09	333	PKhKP	PKPpre	03 53 03.2	
	comp=Z,0.8nm,0.4s,baz=34,slow=4.3,SNR=15						
AKASG				PKP	PKiKP	03 53 11.0	-0.3
	comp=Z,1.2nm,0.4s,baz=30,slow=2.8,SNR=8.2						
SORM	Soroca	143.33	330	⇓P	PKPbc	03 53 11.4	+0.3
BSEG	Bad Segeberg	143.81	352	ePKPbc	PKPdf	03 53 13.4	+0.3
	baz=14,slow=2.6						
MILM	Milestii Mici	143.96	328	⇓iPKP	PKPbc	03 53 12.0	-1.1
	comp=Z,40nm,0.7s						
HPK	Haverah Park	144.23	4	eP	PKPab	03 53 14.4	+0.2
RUE	Ruedersdorf	144.63	348	ePKPbc	PKPbc	03 53 15.4	+0.5
	baz=14,slow=2.6						
WLF1	Llynfaes	144.65	7	eP	PKPdf	03 53 15.1	+0.5
VASR	Vaslui	144.66	329	⇓P	PKPab	03 53 16.7	+0.6
VLDR	Vladesti	145.07	328	⇓P	PKPab	03 53 18.2	+0.5
OJC	Ojcow	145.10	340	ePKP	PKPab	03 53 17.6	-0.1
RETH	Rethem/Aller,	145.11	352	ePKPbc	PKPbc	03 53 16.8	+0.4
	baz=14,slow=2.6						
TLCR		145.13	326	⇑P	PKPab	03 53 18.0	+0.1
BURAR	Bucovina Array	145.15	332	⇑P	PKPab	03 53 18.5	+0.4
FOEL	Foel Wylfa	145.17	6	eP	PKPbc	03 53 17.0	+0.4
SCTR	Scanteiesti	145.23	328	⇓P	PKPab	03 53 18.8	+0.5
FLTG	Flechtingen	145.24	350	ePKPbc	PKPbc	03 53 17.5	+0.8
	baz=14,slow=2.6						
GHRR		145.25	329	⇑P	PKPab	03 53 19.3	+0.9
TESR	Tescani	145.30	330	⇑P	PKPab	03 53 18.2	-0.4
JURR	Jurilovca	145.38	326	⇑P	PKPdf	03 53 16.9	+0.9
BR131	Keskin Array S	145.38	315		PKPdf	03 53 12.8	-3.7
BRTR	Keskin Array B	145.38	315	PKPbc	PKPbc	03 53 18.4	+0.5
	comp=Z,4.3nm,0.5s,baz=126,slow=4.3,SNR=40						
BRTR	Keskin Array B	145.38	315	PKPdf	PKPdf	03 53 14.1	-2.4
SLCR	Slobozia Conac	145.40	328	⇑P	PKPab	03 53 19.3	+0.3
IZVR	Izvoarele	145.43	328	⇑P	PKPab	03 53 19.4	+0.3
CWF	Charnwood Fore	145.47	4	eP	PKPbc	03 53 17.9	+0.5
CFR	Carcaliu	145.49	327	⇑P	PKPab	03 53 19.0	-0.4
ASSE	Asse, Remlinge	145.52	351	ePKPbc	PKPab	03 53 18.7	-0.4
	baz=14,slow=2.6						
TPGR	Topolog	145.56	326	⇑P	PKPab	03 53 19.6	-0.1
HLM1	Long Mynd	145.57	5	eP	PKPbc	03 53 18.0	+0.2
KSP	Ksiaz	145.57	344	ePKP	PKPab	03 53 19.5	0.0
NIE	Niedzica	145.62	339	ePKP	PKPab	03 53 20.5	+0.7
VRI	Vrincioaia	145.73	329	⇑P	PKPab	03 53 19.7	-0.6
PLOR	Plostina	145.78	329	⇑P	PKPdf	03 53 17.7	+0.9
BMR	Baia Mare	145.84	334	⇑P	PKPab	03 53 20.2	-0.5
CLZ	Clausthal	145.84	351	ePKPbc	PKPab	03 53 20.0	-0.6
	baz=14,slow=2.6						
OSTC	Ostas	145.85	344	⇑ePKP	PKPab	03 53 20.4	-0.3
TRPA	Tarpa	145.86	335	⇑P	PKPbc	03 53 19.7	+1.0
CHVC	Chvalec	145.86	344	⇑ePKP	PKPab	03 53 20.1	-0.6
CLL	Collm	145.90	348	PKPdf	PKPdf	03 53 12.7	-4.1
CLL	Collm	145.90	348	⇓iPKPbc	PKPbc	03 53 19.7	+1.0
	comp=Z,28nm,0.9s						
CLL				eSKPdf	SKPdf	03 55 54.0	-0.5
CLL	Collm	145.90	348	ePKPbc	PKPbc	03 53 19.8	+1.1
	baz=14,slow=2.6						
ARCR	ARCALIA	145.93	333	⇑P	PKPab	03 53 20.9	-0.2
HARR	Harsova	145.93	326	⇑P	PKPab	03 53 20.5	-0.6
UPC	Upice	145.95	344	⇑ePKP	PKPab	03 53 20.4	-0.6
COVR	Voineasa-Covas	146.00	329	⇑P	PKPbc	03 53 19.9	+0.6
DPC	Dobruska-Polom	146.01	344	⇑ePKP	PKPab	03 53 20.8	-0.5
MCH1	Michaelchurch	146.07	6	eP	PKPbc	03 53 19.1	-0.1
BRG	Berggiesshubel	146.11	347	ePKPbc	PKPbc	03 53 20.6	+1.3
	baz=14,slow=2.6						
LANS	Liptovska Anna	146.13	339	ePKP	PKPab	03 53 21.6	-0.2
MORC	Moravsky Berou	146.19	342	ePKP	PKPbc	03 53 21.0	+1.3
FBE	Freiberg	146.19	347	ePKPbc	PKPab	03 53 21.2	-0.7
	baz=14,slow=2.6						
GTTG	Gottingen	146.19	351	ePKPbc	PKPbc	03 53 20.9	+1.4
	baz=14,slow=2.6						
NEUB	Neuenburg	146.22	349	ePKPbc	PKPbc	03 53 20.9	+1.3
	baz=14,slow=2.6						
NEHR	Nehoiu	146.25	329	⇑P	PKPbc	03 53 20.6	+0.7
PVCC	Panska Ves	146.29	346	⇑ePKP	PKPab	03 53 21.6	-0.8
DOPR	Dopca	146.30	330	⇑P	PKPab	03 53 22.1	-0.5
ISR	Istrita	146.35	328	⇑P	PKPbc	03 53 21.5	+1.3
MLR	Muntele Rosu	146.38	329	⇑P	PKPbc	03 53 21.5	+1.0
MLR	Muntele Rosu	146.38	329	PKPdf	PKPdf	03 53 15.6	-2.3
MAUC	Maruska	146.47	341	⇑ePKP	PKiKP	03 53 22.1	-0.4
CJR	Cluj-Napoca	146.54	333	⇑P	PKiKP	03 53 22.5	-0.3
BUG	Bochum--Univer	146.62	354	ePKPbc	PKPbc	03 53 21.5	+0.8
	baz=14,slow=2.6						
KASTN	Kahler Asten	146.73	353	ePKPbc	PKPbc	03 53 22.3	+1.2
	baz=14,slow=2.6						
MARR	Marisel-Cluj	146.78	333	⇑P	PKPbc	03 53 22.5	+1.1
MOX	Moxa	146.79	349	ePKPbc	PKPbc	03 53 22.5	+1.2
	baz=14,slow=2.6						
PRU	Pruhonice	146.80	345	⇑ePKP	PKPbc	03 53 22.6	+1.4
PRU				ePKPAB	PKPab	03 53 25.6	+1.2
PLN	Plauen	146.84	348	ePKPbc	PKPbc	03 53 22.7	+1.3
	baz=14,slow=2.6						
VOIR		146.85	330	⇑P	PKPbc	03 53 22.6	+0.9
TANN	Tannenbergstha	146.85	348	ePKPbc	PKPbc	03 53 22.7	+1.2
	baz=14,slow=2.6						
WERD	Werda	146.85	348	ePKPbc	PKPbc	03 53 22.8	+1.4
	baz=14,slow=2.6						
DRGR		146.86	334	⇑P	PKPbc	03 53 21.3	-0.3
VRAC	Vranov	146.88	343	⇑P	PKiKP	03 53 23.2	-0.2
VRAC	Vranov	146.88	343	ePKP	PKiKP	03 53 23.0	-0.3
VYHS	Vyhne	146.91	340	ePKP	PKiKP	03 53 23.1	-0.3
VYHS				e		03 53 26.3	
GUNZ	Gunzen	146.93	348	ePKPbc	PKiKP	03 53 23.1	-0.3
	baz=14,slow=2.6						
WERN	Wernitzgruen	146.99	348	ePKPbc	PKiKP	03 53 23.4	-0.2
	baz=14,slow=2.6						
NKC	Novy Kostel	147.03	348	⇑ePKP	PKiKP	03 53 23.5	-0.1
ARR	Arges	147.10	330	⇑P	PKiKP	03 53 24.4	+0.4
KRUC	Moravsky	147.16	343	ePKP	PKPbc	03 53 23.3	+1.1
MANZ	Manzenberg	147.33	348	ePKPbc	PKiKP	03 53 24.2	-0.1
	baz=14,slow=2.6						
MODS	Modra-Piesok	147.51	341	ePKP	PKiKP	03 53 25.2	+0.5
ROTZ	Rotzenmuhle	147.52	348	ePKPbc	PKiKP	03 53 24.7	0.0
	baz=14,slow=2.6						
AHRW	Bad Neuenahr-A	147.53	354	ePKPbc	PKiKP	03 53 24.8	+0.2
	baz=14,slow=2.6						
MEM	Membach	147.56	355	dPKP	PKPbc	03 53 23.5	+0.3
BSTI	Sart Tilman	147.61	356	dPKP	PKiKP	03 53 24.6	-0.1
TNS	Taunus Mts	147.69	352	ePKPbc	PKiKP	03 53 24.8	-0.2
	baz=14,slow=2.6						
SNF	Seneffe	147.76	357	dPKP	PKiKP	03 53 25.3	+0.3
GRF	Grafenberg Arr	147.78	349	ePKPbc	PKiKP	03 53 25.3	+0.1
	baz=14,slow=2.6						
KHC	Kasperske Hory	147.82	346	⇑ePKP	PKiKP	03 53 25.5	+0.2
KHC				ePKPAB	PKPab	03 53 30.3	+1.6
GZR	Gura Zlata	147.93	332	⇑P	PKPbc	03 53 25.4	+1.0
SURR	Surduc	147.93	333	⇑P	PKPbc	03 53 25.4	+1.1
CKRC	Cesky Krumlov	147.94	345	⇑ePKP	PKiKP	03 53 25.7	+0.1
CKRC				ePKPAB	PKPab	03 53 30.5	+1.4
BMRD	Maredsous	147.94	357	dPKP	PKiKP	03 53 25.7	+0.3
GEC2	GERESS Array S	148.06	345	ePKPbc	PKPbc	03 53 25.7	+1.1
	baz=14,slow=2.6						
GERES	GERESS Array B	148.06	345	PKPbc	PKPbc	03 53 25.5	+0.9
	comp=Z,5.0nm,0.6s,baz=29,slow=3.0,SNR=20						
GERES	GERESS Array B	148.06	345		PKPdf	03 53 22.2	+1.6
DOU	Dourbes	148.16	357	dPKPdf	PKPdf	03 53 21.4	+0.9
DOU				dPKP	PKPbc	03 53 25.3	+0.6
BZS	Buzias	148.26	334	⇑P	PKiKP	03 53 26.3	+0.1
CONA	Conrad Observa	148.34	342	i PKiKP	PKiKP	03 53 27.0	+0.5
	comp=Z,13nm,1.2s,SNR=7.2						
RONA	Rosalia, Austr	148.41	342	i PKiKP	PKiKP	03 53 27.1	+0.5
	comp=Z,8.4nm,0.8s						
WLF	Walferdange	148.48	355	dPKP	PKiKP	03 53 27.2	+0.6
WLF	Walferdange	148.48	355	ePKPbc	PKiKP	03 53 27.5	+0.8
	baz=14,slow=2.6						
HERR	Herculane	148.49	332	⇑P	PKiKP	03 53 26.9	+0.1
MOA	Molln	148.84	344	ePKiKP	PKiKP	03 53 27.6	+0.1
	comp=Z,7.8nm,1.2s						
MDVR	Moldovita	148.88	332	⇑P	PKPbc	03 53 27.2	+0.4
JSA	Saint Aubin	148.93	5	eP	PKPbc	03 53 27.1	+0.5
MORH	Mrgy, Hungar	148.93	338	⇑P	PKPdf	03 53 23.8	+1.9
ARSA	Arzberg	149.05	342	i PKiKP	PKiKP	03 53 29.1	+1.2
	comp=Z,4.1nm,1.0s						
BIOA	Bad Ischl, Aus	149.15	345	i PKP	PKPab	03 53 35.6	+1.4
	comp=Z,8.3nm,0.7s						
FUR	Furstenfeldbru	149.23	348	ePKPbc	PKPbc	03 53 28.2	+0.8
	baz=14,slow=2.6						
RJOB	Jochberg	149.31	346	ePKPbc	PKiKP	03 53 28.7	+0.2
	baz=14,slow=2.6						
FRGS	Fruska Gora	149.38	335	⇑P	PKiKP	03 53 29.0	+0.4
ELL	Elmali	149.40	313	PKPdf	PKPdf	03 53 18.8	-4.3
ELL				PKPbc	PKPbc	03 53 26.6	-1.7
BFO	Black Forest	149.56	352	ePKPbc	PKiKP	03 53 29.4	+0.5
	baz=14,slow=2.6						
SOKA	Soboth	149.71	342	ePKP	PKPbc	03 53 29.5	+0.8
	comp=Z,8.3nm,0.9s						
BOVS	Bovan	149.78	331	⇑P	PKPbc	03 53 29.0	+0.2
KBA	Koelnbreinsper	149.79	345	i PKP	PKPbc	03 53 29.6	+0.6
	comp=Z,6.6nm,0.6s						
VTS	Vitosha	149.81	328	⇑P	PKPab	03 53 34.5	-2.8
UBR	Ueberruh	149.92	349	ePKPbc	PKPbc	03 53 29.9	+0.8
	baz=14,slow=2.6						
WATA	Walderalm	149.96	347	i PKP	PKiKP	03 53 30.2	+0.2
	comp=Z,6.5nm,0.5s						
RETA	Reutte	149.98	348	i PKP	PKiKP	03 53 30.2	+0.3
	comp=Z,3.9nm,0.7s						
OBKA	Obir	150.00	343	i PKP	PKPbc	03 53 29.7	+0.3
	comp=Z,5.0nm,1.4s						
WTTA	Wattenberg	150.02	347	i PKiKP	PKiKP	03 53 30.6	+0.5
	comp=Z,15nm,0.6s,SNR=9.2						
MOTA	Moosalm	150.05	348	i PKP	PKPbc	03 53 30.3	+0.8
	comp=Z,10nm,1.0s						
MYKA	Terra Mystica	150.13	344	ePKP	PKPbc	03 53 30.0	+0.3
	comp=Z,6.7nm,0.5s,SNR=6.0						
SQTA	Sankt Quirin	150.15	348	i PKiKP	PKiKP	03 53 31.0	+0.7
	comp=Z,10nm,0.6s						
DIVS	Divibare	150.17	334	PKPbc	PKPdf	03 53 26.2	+2.2
PDKS	Podkum	150.28	342	i PKPbc	PKPbc	03 53 30.7	+0.7
ABTA	Abfaltersbach	150.31	346	i PKP	PKPbc	03 53 30.6	+0.5
	comp=Z,14nm,0.6s,SNR=9.5						
PRED	Cave del Predi	150.33	344	PKPdf	PKPdf	03 53 21.4	-2.8
DAVA	Damuels	150.34	349	i PKiKP	PKiKP	03 53 32.1	+1.4
	comp=Z,6.9nm,0.6s						
FETA	Feichten	150.44	348	i PKiKP	PKiKP	03 53 31.8	+0.9
	comp=Z,8.6nm,0.8s,SNR=5.3						
CRNS	Crni Vrh	150.47	343	i PKPbc	PKPbc	03 53 31.0	+0.5
CLUD	Cludinico	150.49	345	PKPdf	PKPdf	03 53 20.8	-3.6
CLUD				PKPbc	PKPbc	03 53 27.1	-3.3
BOJS	Bojanci	150.70	341	i PKPbc	PKiKP	03 53 32.1	+0.8
STAL	STALIGIAL	150.72	345	PKPdf	PKPdf	03 53 22.1	-2.6
STAL				PKPbc	PKPbc	03 53 30.2	-0.8

CIMO	**Cimolais**	**150.74**	**345**	PKPbc	**PKPbc**	**03 53 29.0**	**-2.0**
SABO	**M.te Sabotino**	**150.75**	**344**	PKPbc	**PKPbc**	**03 53 29.3**	**-1.8**
FUORN	**Ofenpass-Fuorn**	**150.91**	**348**	PKPbc	**PKPbc**	**03 53 31.4**	**-0.3**
TRI	**Trieste**	**150.95**	**343**	PKPbc	**PKPbc**	**03 53 29.9**	**-1.6**
CTI	**Castel Tesino**	**151.17**	**346**	PKPbc	**PKPbc**	**03 53 29.8**	**-2.3**
PDG	**Podgorica**	**151.83**	**333**	⇑P	**PKiKP**	**03 53 34.4**	**+0.7**
FNA	**Florina**	**152.10**	**328**	PKPbc	**PKPbc**	**03 53 32.9**	**-1.4**
FDMO	**Fiordimonte**	**153.59**	**342**	PKPab	**PKPab**	**03 53 53.2**	**+0.1**
ESDC	**Sonseca Array**	**158.00**	**13**	PKPab	**PKPab**	**03 54 12.7**	**+0.5**
	comp=Z,1.3nm,0.9s,baz=324,slow=3.7,SNR=7.0						
KEST	**Kesra**	**161.44**	**341**	PKPab	**PKPab**	**03 54 28.2**	**+0.8**
	comp=Z,3.1nm,0.7s,baz=342,slow=2.2,SNR=7.8						
TORD	**Torodi Ar. Bea**	**174.92**	**175**	PKP	**PKPdf**	**03 53 48.8**	**+0.5**
	comp=Z,0.9nm,1.0s,baz=238,slow=0.2,SNR=3.0						

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*IDC **20** 03:35:23.8±3.1, 6°.13S×155°.60E, h0^{km}, mb4.0/2, mbtmp4.1/4, ML2.1/1, Error ellipse: s-maj=53.0km s-min=40.0km az=58.0*

ISC 20 03:35:26.0±1.7**, 6°.3S**±0°.1×**155°.4E**±0°.1**, h10^{km}, n9,** σ**3^{s}62**/9**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.92**	**300**	Pn	**Pn**	**03 36 27.0**	**+0.7**
	60nm,0.7s,baz=1.3,slow=20,SNR=2.3						
KRVT				Sn	**Sn**	**03 37 14.2**	**+1.8**
	24nm,0.3s,baz=222,slow=21,SNR=4.7						
PMG	**Port Moresby**	**8.73**	**249**	Pn	**Pn**	**03 37 36.0**	**+3.5**
	1.0nm,0.3s,baz=39,slow=12,SNR=4.2						
PMG				Sn	**Sn**	**03 39 06.0**	**-5.1**
	2.3nm,0.3s,baz=163,slow=24,SNR=8.2						
	9.8nm,0.6s						
WRA	**Warramunga Arr**	**24.55**	**235**	P	**P**	**03 40 47.9**	**+1.7**
	3.2nm,0.9s,baz=60,slow=9.6,SNR=18						
	3.2nm,0.9s						
ASAR	**Alice Springs**	**26.93**	**228**	P	**P**	**03 41 09.0**	**+1.2**
	1.1nm,0.5s,baz=56,slow=9.3,SNR=14						
	1.1nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**27.05**	**24**	T	T	04 09 39.0	
	baz=209,slow=74						
H11S2	**WAKE ISLAND Hy**	**27.05**	**24**	T	T	04 09 23.7	
	baz=209,slow=74						
H11S1	**WAKE ISLAND Hy**	**27.06**	**24**	T	T	04 09 39.5	
	baz=209						
LZH	**Lanzhou**	**64.13**	**315**	*e*P	**P**	**03 45 56.3**	**-4.7**
LZH				pP	**sP**	**03 46 08.8**	**+3.2**
LZH				sP	pP	03 46 14.3	+10
TORD	**Torodi Ar. Bea**	**153.24**	**287**	PKPbc	**PKiKP**	**03 55 25.2**	**-0.4**
	0.3nm,0.8s,baz=53,slow=1.9,SNR=2.2						

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*DJA **20** 03:36:52.8±1.8, 9°S±5°×11°9E±°, h28^{km}±19^{km}, M4.3/13, mb4.4/4, mB5.5/2, MLv4.2/13, Mw(mB)5.0/2*

*IDC **20** 03:36:54.6±7.0, 8°.94S×119°.01E, h122^{km}±60^{km}, mb3.3/4, mbtmp3.6/6, Error ellipse: s-maj=98.4km s-min=16.8km az=65.0*

ISC 20 03:36:52.2±0.9**, 9°.11S**±0°.07×**118°.93E**±0°.05**, h102^{km}, n18,** σ**1^{s}06**/20**, mb3.7**/3**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.17**	**284**	P	**Pn**	**03 37 14.2**	**-0.4**
BASI	**Baing, Sumba**	**1.97**	**124**	P	**Pn**	**03 37 24.2**	**-0.2**
TWSI	**Taliwang, Sumb**	**2.05**	**280**	P	**Pn**	**03 37 25.8**	**+0.3**
TWSI				S	**Sn**	**03 37 51.3**	**+0.3**
BSSI	**Bau Bau, Buton**	**3.33**	**28**	P	**Pn**	**03 37 43.1**	**+0.6**
DNP	**Denpasar**	**3.70**	**276**	P	**Pn**	**03 37 48.9**	**+1.6**
IGBI	**Denpasar**	**3.75**	**274**	P	**Pn**	**03 37 48.2**	**+0.2**
SRBI	**Singaraja**	**3.81**	**285**	P	**Pn**	**03 37 48.8**	**-0.1**
BKSI	**Bulukumba**	**3.95**	**18**	P	**Pn**	**03 37 51.6**	**+0.9**
KAPI	**Kappang**	**4.15**	**11**	P	**Pn**	**03 37 54.5**	**+1.0**
	6.3nm,0.3s,baz=159,slow=14,SNR=6.6						
KAPI				S	**Sn**	**03 38 39.8**	**-1.2**
	30nm,0.3s,baz=290,slow=20,SNR=22						
ABJI	**Asem Bagus**	**4.82**	**285**	P	**Pn**	**03 38 04.2**	**+1.7**
SPSI	**Sidrap Palu**	**5.18**	**9**	P	**Pn**	**03 38 07.8**	**+0.4**
	15nm,0.8s,1µm0.1nm						
SOEI	**Soe**	**5.31**	**97**	P	**Pn**	**03 38 10.1**	**+0.9**
	31nm,0.9s,0.2nm						
BLJI	**Banyuglugur**	**5.45**	**284**	P	**Pn**	**03 38 12.2**	**+1.2**
	33nm,0.4s,20µm1.3nm						
WRA	**Warramunga Arr**	**18.38**	**128**	P	**Pn**	**03 41 00.3**	**-0.2**
	0.7nm,0.9s,baz=295,slow=11,SNR=6.2						
WRA				S	S	03 44 11.3	-13
	0.8nm,0.8s,baz=304,slow=25,SNR=3.1						
ASAR	**Alice Springs**	**20.36**	**137**	P	**P**	**03 41 22.5**	**+1.7**
	0.7nm,0.6s,baz=318,slow=11,SNR=9.5						
	0.7nm,0.6s						
SONM	**Songino Array**	**57.77**	**350**	P	**P**	**03 46 32.9**	**+0.2**
	0.8nm,0.4s,baz=163,slow=7.2,SNR=7.7						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	**64.52**	**333**	P	**P**	**03 47 17.4**	**-0.8**
	0.6nm,0.6s,baz=141,slow=7.8,SNR=7.4						
	0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**69.12**	**339**	P	**P**	**03 47 45.2**	**-1.9**
	0.5nm,0.4s,baz=132,slow=8.0,SNR=2.3						
	0.5nm,0.4s						

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*IDC **20** 03:41:31.3±3.2, 16°.60N×98°.99W, h0^{km}, mb3.9/6, mbtmp3.8/10, ML3.2/4, MS3.3/10, Error ellipse: s-maj=64.9km s-min=17.2km az=15.0*

*NEIC **20** 03:41:34.8±1.9, 16°.59N±0°.04×98°.91W±0°.04, h24^{km}±6^{km}, mb4.1/72, Md4.6/155(MEX), Error ellipse: s-maj=6.6km s-min=5.0km az=211.0*

*MEX **20** 03:41:35.5±0.8, 16°.56N×99°.06W, h16^{km}±6^{km}, MD4.6*

ISC 20 03:41:31.4±1.1**, 16°.56N**±0°.03×**99°.02W**±0°.02**, h10^{km}**±8^{km}**, n214,** σ**1^{s}82**/295**, mb4.1**/25**, MS3.4**/7**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAIG	**Los Arroyos**	**0.76**	**308**	*i* P	**Pg**	**03 41 46.7**	**+0.7**
DAIG				*e*S	**Sg**	**03 41 56.7**	**+0.7**
MGIG	**Malinaltepec**	**0.77**	**29**		**Pn**	**03 41 47.8**	**-0.7**
MGIG					**Sb**	**03 41 57.6**	**0.0**
MGIG	**Malinaltepec**	**0.77**	**29**	*i* P	**Pn**	**03 41 47.8**	**-0.7**
MGIG				*i* S	**Sb**	**03 41 57.6**	**0.0**
VNTA	**La Mica**	**0.84**	**295**	*e*P	**Pg**	**03 41 48.2**	**+0.6**
VNTA				*e*S	**Sg**	**03 41 57.3**	**-1.3**
PNIG	**Pinotepa**	**0.87**	**101**	*e*P	**Pb**	**03 41 49.2**	**+0.5**
PNIG				*e*S	**Sb**	**03 42 00.2**	**-0.3**
ACP2	**Acapulco**	**0.89**	**291**	*e*P	**Pg**	**03 41 48.4**	**0.0**
ACP2				*e*S	**Sg**	**03 41 58.6**	**-1.4**
TLIG	**Tlapa**	**1.09**	**23**		**Pn**	**03 41 52.8**	**-0.1**
TLIG					**Sb**	**03 42 06.8**	**0.0**
TLIG	**Tlapa**	**1.09**	**23**	*e*P	**Pn**	**03 41 53.2**	**+0.3**
TLIG				*i* S	**Sg**	**03 42 05.3**	**-1.3**
CAIG	**El Cayaco**	**1.29**	**292**	*e*P	**Pn**	**03 41 54.6**	**-0.9**
CAIG				*e*S	**Sb**	**03 42 09.2**	**-3.2**
TXIG	**Tlaxiaco**	**1.39**	**60**		**Pb**	**03 41 57.6**	**+0.1**
TXIG					**Sg**	**03 42 14.2**	**-1.8**
TXIG	**Tlaxiaco**	**1.39**	**60**	*e*P	**Pb**	**03 41 57.6**	**+0.1**
TXIG				*e*S	**Sg**	**03 42 14.2**	**-1.8**
YOIG	**Yosondua**	**1.45**	**78**		**Pn**	**03 41 58.3**	**+0.4**
YOIG					**Sb**	**03 42 15.4**	**-1.8**
YOIG	**Yosondua**	**1.45**	**78**	*e*P	**Pn**	**03 41 58.3**	**+0.4**
YOIG				*e*S	**Sb**	**03 42 15.4**	**-1.8**
MEIG	**Mezcala**	**1.48**	**337**		**Pn**	**03 41 58.8**	**+0.6**
MEIG	**Mezcala**	**1.48**	**337**	*e*P	**Pn**	**03 41 58.8**	**+0.6**
MEIG				*e*S	**Sb**	**03 42 14.4**	**-3.5**
ATYC	**Atoyac**	**1.50**	**296**	*e*P	**Pn**	**03 41 57.7**	**-0.7**
ATYC				*e*S	**Sn**	**03 42 15.0**	**-3.1**
FTIG	**Fresnillo de T**	**1.59**	**32**		**Pb**	**03 42 00.6**	**-0.3**
FTIG					**Sn**	**03 42 18.8**	**-1.6**
FTIG	**Fresnillo de T**	**1.59**	**32**	*e*P	**Pb**	**03 42 00.6**	**-0.3**
FTIG				*e*S	**Sn**	**03 42 18.8**	**-1.6**
HLIG	**Huajuapan de L**	**1.72**	**42**		**Pb**	**03 42 02.4**	**-0.9**
HLIG					**Sn**	**03 42 22.0**	**-1.8**
HLIG	**Huajuapan de L**	**1.72**	**42**	*e*P	**Pb**	**03 42 02.4**	**-0.9**
HLIG				*e*S	**Sn**	**03 42 22.0**	**-1.8**
PLIG	**Platanillo**	**1.88**	**346**		**Pn**	**03 42 05.0**	**+1.2**
PLIG					**Sn**	**03 42 27.7**	**0.0**
PLIG	**Platanillo**	**1.88**	**346**	*e*P	**Pn**	**03 42 05.0**	**+1.2**
PLIG				*e*S	**Sn**	**03 42 27.7**	**0.0**
PEIG	**Puerto Escondi**	**1.88**	**107**		**Pn**	**03 42 03.9**	**+0.2**
PEIG					**Sn**	**03 42 24.9**	**-2.7**
PEIG	**Puerto Escondi**	**1.88**	**107**	*e*P	**Pn**	**03 42 03.9**	**+0.2**
PEIG				*e*S	**Sn**	**03 42 24.9**	**-2.7**
ARIG	**Puente Sto Nin**	**2.13**	**324**		**Pn**	**03 42 08.2**	**+1.1**
ARIG					**Sn**	**03 42 34.1**	**+0.4**
ARIG	**Puente Sto Nin**	**2.13**	**324**	*e*P	**Pn**	**03 42 08.2**	**+1.1**
ARIG				*e*S	**Sn**	**03 42 34.1**	**+0.4**
OXIG	**Oaxaca**	**2.25**	**77**		**Pn**	**03 42 09.8**	**+0.9**
OXIG					**Sn**	**03 42 35.5**	**-1.4**
VHO	**Vista Hermosa**	**2.25**	**77**	*e*P	**Pn**	**03 42 09.8**	**+0.9**
VHO				*e*S	**Sn**	**03 42 35.5**	**-1.4**
OXBJ	**Oaxaca**	**2.26**	**77**		**Pn**	**03 42 09.0**	**0.0**
OXBJ					**Sn**	**03 42 37.0**	**-0.1**
OXBJ	**Oaxaca**	**2.26**	**77**	*e*P	**Pn**	**03 42 09.0**	**0.0**
OXBJ				*e*S	**Sn**	**03 42 37.0**	**-0.1**
YAIG	**Yautepec**	**2.29**	**359**		**Pb**	**03 42 11.6**	**-1.4**
YAIG					**Sn**	**03 42 36.4**	**-1.5**
YAIG	**Yautepec**	**2.29**	**359**	*e*P	**Pb**	**03 42 11.6**	**-1.4**
YAIG				*e*S	**Sn**	**03 42 36.4**	**-1.5**
PET2	**Petatlan**	**2.35**	**295**	*e*P	**Pb**	**03 42 13.6**	**-0.4**
PET2				*e*S	**Sn**	**03 42 35.8**	**-3.4**
TOIG	**Toxpalan**	**2.42**	**50**		**Pn**	**03 42 12.0**	**+0.9**
TOIG					**Sn**	**03 42 39.8**	**-1.1**
TOIG	**Toxpalan**	**2.42**	**50**	*e*P	**Pn**	**03 42 12.0**	**+0.9**
TOIG				*e*S	**Sn**	**03 42 39.8**	**-1.1**
MAVM	**Malinalco, Edo**	**2.43**	**349**	*e*P	Pg	03 42 23.7	+5.7
MAVM				*e*S	**Sg**	**03 42 51.5**	**+2.0**
TPIG	**Tehuac#an**	**2.44**	**40**		**Pn**	**03 42 12.1**	**+0.6**
TPIG					**Sn**	**03 42 41.3**	**-0.2**
TPIG	**Tehuac#an**	**2.44**	**40**	*e*P	**Pn**	**03 42 12.1**	**+0.6**
TPIG				*e*S	**Sn**	**03 42 41.3**	**-0.2**
ZIIG	**Zihuatanejo**	**2.56**	**294**		**Pn**	**03 42 15.1**	**+2.1**
ZIIG	**Zihuatanejo**	**2.56**	**294**	*e*P	**Pn**	**03 42 15.1**	**+2.1**
ZIIG				*e*S	**Sn**	**03 42 40.5**	**-3.7**
AMVM	**AMECAMECA**	**2.57**	**5**		**Pn**	**03 42 14.5**	**+1.0**
AMVM	**AMECAMECA**	**2.57**	**5**	*e*P	**Pn**	**03 42 14.5**	**+1.0**
AMVM				*e*S	**Sn**	**03 42 41.2**	**-3.7**
TEJU	**Tejupilco**	**2.57**	**335**	*e*P	**Pb**	**03 42 16.5**	**-1.3**
TEJU				*e*S	**Sn**	**03 42 42.5**	**-2.3**
PHPU	**Puebla**	**2.60**	**18**		**Pn**	**03 42 14.0**	**+0.1**
PHPU	**Puebla**	**2.60**	**18**	*e*P	**Pn**	**03 42 14.0**	**+0.1**
PHPU				*i* S	**Sb**	**03 42 48.7**	**-1.9**
MPVM	**San Francisco**	**2.63**	**0**	*e*P	**Pb**	**03 42 18.0**	**-0.8**
MPVM				*i* S	**Sn**	**03 42 45.4**	**-1.0**
TLVM	**San Miguel Top**	**2.64**	**357**	*e*P	**Pb**	**03 42 17.3**	**-1.8**
TLVM				*e*S	**Sn**	**03 42 46.8**	**0.0**
XCVM	**Xochimilco**	**2.68**	**358**	*e*P	**Pb**	**03 42 17.9**	**-1.8**
XCVM				*e*S	**Sn**	**03 42 45.6**	**-2.1**
AOVM	**Tlapan**	**2.71**	**354**	*e*P	**Pn**	**03 42 17.6**	**+2.1**
AOVM				*e*S	**Sn**	**03 42 47.1**	**-1.5**
THVM	**De Xico**	**2.74**	**1**	*e*P	**Pb**	**03 42 18.6**	**-2.1**
THVM				*e*S	**Sn**	**03 42 47.9**	**-1.2**
INVM	**La Marquesa**	**2.74**	**353**	*e*P	**Pb**	**03 42 19.5**	**-1.2**
INVM				*e*S	**Sn**	**03 42 47.9**	**-1.4**
UNM	**Universidad Na**	**2.76**	**357**	Pn	**Pn**	**03 42 18.7**	**+2.7**
UNM	**Universidad Na**	**2.76**	**357**	*e*P	**Pn**	**03 42 13.7**	**-2.4**
UNM				*e*P	**Pb**	**03 42 18.5**	**-2.5**
UNM				*e*S	**Sn**	**03 42 47.2**	**-2.4**
UNM				*e*S	**Sb**	**03 42 51.4**	**-3.7**
CUIG	**Ciudad Univers**	**2.76**	**357**		**Pn**	**03 42 18.5**	**+2.5**
CUIG					**Sn**	**03 42 51.4**	**+1.8**
CUP5	**Mexico City**	**2.76**	**357**	*e*P	**Pb**	**03 42 20.2**	**-0.9**
CUP5				*i* S	**Sn**	**03 42 50.7**	**+1.1**
TOVM	**TOLUCA**	**2.78**	**347**		**Pb**	**03 42 19.6**	**-1.8**
TOVM					**Sn**	**03 42 48.3**	**-1.9**
TOVM	**TOLUCA**	**2.78**	**347**	*e*P	**Pb**	**03 42 19.6**	**-1.8**
TOVM				*e*S	**Sn**	**03 42 48.3**	**-1.9**
CJVM	**Cuajimalpa**	**2.80**	**355**	*e*P	**Pn**	**03 42 15.2**	**-1.4**
CJVM				*e*S	**Sn**	**03 42 50.1**	**-0.5**
BJVM	**Benito Juarez**	**2.81**	**357**	*e*P	**Pn**	**03 42 16.3**	**-0.4**
BJVM				*e*S	**Sn**	**03 42 48.5**	**-2.3**
MHVM	**Bosque de Chap**	**2.84**	**356**	*e*P	**Pb**	**03 42 20.9**	**-1.5**
MHVM				*e*S	**Sn**	**03 42 53.2**	**+1.6**
TXVM	**Universitario**	**2.86**	**2**	*e*P	**Pn**	**03 42 16.6**	**-0.8**
TXVM				*e*S	**Sn**	**03 42 49.3**	**-2.9**
PBVM	**Pinon**	**2.87**	**359**		**Pb**	**03 42 21.3**	**-1.4**
PBVM					**Sn**	**03 42 52.1**	**+0.3**
PBVM	**Pinon**	**2.87**	**359**	*e*P	**Pb**	**03 42 21.3**	**-1.4**
PBVM				*e*S	**Sn**	**03 42 52.1**	**+0.3**
HUIG	**Huatulco**	**2.91**	**105**		**Pn**	**03 42 18.3**	**+0.5**
HUIG					**Sn**	**03 42 48.8**	**-4.0**
HUIG	**Huatulco**	**2.91**	**105**	*e*P	**Pn**	**03 42 18.3**	**+0.5**
HUIG				*e*S	**Sn**	**03 42 48.8**	**-4.0**
GMVM	**Gustavo A Made**	**2.92**	**358**	*e*P	**Pn**	**03 42 20.4**	**+2.2**
GMVM				*e*S	**Sn**	**03 42 54.0**	**+0.4**
OZST	**Orizaba**	**2.94**	**38**	*e*P	**Pn**	**03 42 19.6**	**+1.3**
OZST				*e*S	**Sn**	**03 42 53.3**	**-0.5**
UON	**La Union**	**3.02**	**298**	*e*S	**Sn**	**03 42 55.2**	**-0.3**
PTVM	**Pico Tres Padr**	**3.02**	**358**		**Pb**	**03 42 23.0**	**-2.4**
PTVM	**Pico Tres Padr**	**3.02**	**358**	*e*P	**Pb**	**03 42 23.0**	**-2.4**
PTVM				*e*S	**Sn**	**03 42 52.6**	**-3.4**
VTVM	**Tizayuca**	**3.20**	**4**		**Sn**	**03 43 02.7**	**+2.1**
VTVM	**Tizayuca**	**3.20**	**4**	*e*P	**Pb**	**03 42 27.6**	**-1.1**
VTVM				*e*S	**Sn**	**03 43 02.7**	**+2.1**
ZUVM	**ZUMPANGO**	**3.25**	**359**		**Sn**	**03 43 00.7**	**-1.0**
ZUVM	**ZUMPANGO**	**3.25**	**359**	*e*P	**Pb**	**03 42 28.1**	**-1.4**
ZUVM				*e*S	**Sn**	**03 43 00.7**	**-1.0**
ATVM	**ATLACOMULCO**	**3.28**	**346**		**Pb**	**03 42 27.9**	**-2.0**
ATVM					**Sn**	**03 43 02.1**	**-0.4**
ATVM	**ATLACOMULCO**	**3.28**	**346**	*e*P	**Pb**	**03 42 27.9**	**-2.0**
ATVM				*e*S	**Sn**	**03 43 02.1**	**-0.4**
NEUV	**Arroyo Zacate**	**3.29**	**69**	*e*P	**Pn**	**03 42 23.9**	**+1.0**
NEUV				*e*S	**Sn**	**03 43 03.0**	**+0.8**
ACIG	**Acambay**	**3.50**	**347**		**Sn**	**03 43 08.2**	**+0.5**
ACIG	**Acambay**	**3.50**	**347**	*e*P	**Pb**	**03 42 34.1**	**+0.5**
ACIG				*e*S	**Sn**	**03 43 08.2**	**+0.5**
JAUV	**Jalcomulco**	**3.50**	**37**	*e*P	**Pn**	**03 42 25.6**	**-0.4**
JAUV				*e*S	**Sb**	**03 43 13.0**	**-3.2**
DHIG	**Demacu**	**3.72**	**360**		**Pn**	**03 42 33.0**	**+3.7**
DHIG					**Sn**	**03 43 12.1**	**-1.2**
DEIG	**Demacu**	**3.72**	**360**	*e*P	**Pn**	**03 42 33.0**	**+3.7**
DEIG				*e*S	**Sn**	**03 43 12.1**	**-1.2**
MOIG	**Morelia**	**3.73**	**327**	Pn	**Pn**	**03 42 31.9**	**+2.7**
MOIG					**Sn**	**03 43 15.2**	**+1.9**
MOIG	**Morelia**	**3.73**	**327**	*e*P	**Pn**	**03 42 30.5**	**+1.3**
MOIG				*e*S	**Sn**	**03 43 06.8**	**-6.6**
CXUV	**Coxquihui**	**3.84**	**20**	*e*P	**Pn**	**03 42 30.4**	**-0.3**
CXUV				*e*S	**Sn**	**03 43 15.8**	**-0.2**
CMIG	**Matias Romero**	**4.00**	**82**	Pn	**Pn**	**03 42 33.1**	**+0.2**
	2.5nm,0.3s,baz=255,slow=13,SNR=43						
CMIG				Pg	**Pb**	**03 42 44.3**	**+2.3**
	6.6nm,0.3s,baz=271,slow=15,SNR=13						
CMIG				Sn	**Sn**	**03 43 16.7**	**-3.1**
	17nm,0.3s,baz=236,slow=16,SNR=5.1						
CMIG				Lg	Lg	03 43 39.3	
	61nm,0.3s,baz=45,slow=9.0,SNR=18						
	7.4nm,0.3s						
CMIG	**Matias Romero**	**4.00**	**82**	*e*P	**Pn**	**03 42 33.0**	**+0.2**
CMIG				*e*S	**Sn**	**03 43 20.2**	**+0.4**
LVIG	**Laguna Verde**	**4.01**	**38**	*e*P	**Pn**	**03 42 31.1**	**-1.8**
LVIG				*i* S	**Sn**	**03 43 16.7**	**-3.2**
PMUV	**Sontecomapan**	**4.21**	**61**	*e*P	**Pn**	**03 42 32.2**	**-3.6**
PMUV				*e*S	**Sn**	**03 43 24.2**	**-0.9**
JRQG	**Juriquilla Cam**	**4.34**	**342**	*e*P	**Pb**	**03 42 48.1**	**+0.2**
JRQG				*e*S	**Sn**	**03 43 33.0**	**+4.5**
MMIG	**Aquila**	**4.47**	**293**		**Pn**	**03 42 40.8**	**+1.5**
MMIG	**Aquila**	**4.47**	**293**	*e*P	**Pn**	**03 42 40.8**	**+1.5**
MMIG				*e*S	**Sn**	**03 43 26.2**	**-5.2**
CTUV	**Llano Grande**	**4.93**	**7**	*e*P	Pn	03 42 51.2	+5.6
CTUV				*e*S	**Sb**	**03 43 51.2**	**-6.0**
COIG	**Colima**	**5.15**	**301**	*e*P	**Pn**	**03 42 51.6**	**+2.8**
COIG				*e*S	**Sn**	**03 43 48.8**	**+0.3**
JUBC	**Volcan de Coli**	**5.23**	**305**	*e*P	Pn	03 42 55.4	+5.3
JUBC				*i* S	**Sn**	**03 43 44.7**	**-5.9**
EZ5V		**5.24**	**304**		**Pn**	**03 42 51.3**	**+1.2**
EZ5V		**5.24**	**304**	*e*P	**Pn**	**03 42 51.3**	**+1.2**
EZ5V				*e*S	**Sn**	**03 43 46.9**	**-3.8**
MNGA	**Volcan de Coli**	**5.25**	**304**	*e*P	**Pn**	**03 42 53.5**	**+3.4**
MNGA				*e*S	**Sn**	**03 43 47.0**	**-3.9**
INCO	**Volcan de Coli**	**5.26**	**305**	*e*P	**Pn**	**03 42 54.3**	**+3.7**
INCO				*e*S	**Sn**	**03 43 51.4**	**-0.2**
SOMAC	**Volcano de Col**	**5.28**	**305**	*e*P	**Pn**	**03 42 55.3**	**+4.5**
SOMAC				*e*S	**Sn**	**03 43 51.6**	**-0.5**
CDAR	**Ciudad de Arme**	**5.31**	**297**	*e*P	**Pn**	**03 42 51.8**	**+1.0**
CDAR				*e*S	**Sn**	**03 43 51.2**	**-1.0**
RPIG	**Rio Verde**	**5.38**	**350**		**Sn**	**03 43 51.8**	**-2.2**
RPIG	**Rio Verde**	**5.38**	**350**	*e*P	Pb	03 42 60.0	-5.6
RPIG				*e*S	**Sn**	**03 43 51.8**	**-2.2**
R15V		**5.39**	**300**		**Pn**	**03 42 55.3**	**+3.3**
R15V		**5.39**	**300**	*e*P	**Pn**	**03 42 55.3**	**+3.3**
R15V				*e*S	**Sn**	**03 43 55.0**	**+0.7**
TGIG		**5.66**	**87**	*e*P	Pn	03 42 50.9	-4.8
TGIG				*e*S	**Sn**	**03 44 00.6**	**-0.2**
CIHU	**Emiliano Zapat**	**6.07**	**297**	*e*P	**Pn**	**03 43 03.5**	**+2.2**
CIHU				*e*S	**Sn**	**03 44 09.3**	**-1.6**
CJM	**Chamela**	**6.43**	**298**	*e*P	**Pn**	**03 43 06.6**	**+0.3**
CJM				*e*S	**Sn**	**03 44 22.0**	**+2.2**
GTIG	**Gomez Farias**	**6.48**	**359**	*e*P	Pn	03 43 02.4	-4.5
GTIG				*e*S	**Sn**	**03 44 21.7**	**+0.8**
CCIG	**Comitan**	**6.61**	**91**	Pn	**Pn**	**03 43 08.3**	**-0.6**
ANIG	**Ahuacatlan**	**6.86**	**312**	*e*S	**Sn**	**03 44 38.3**	**+7.7**
ZAIG	**Zacatecas**	**7.02**	**332**	Pn	**Pn**	**03 43 15.0**	**+0.4**
LPIG	**La Paz**	**12.97**	**307**	LR	LR	03 49 36.3	
	comp=Z,73nm,19.5s,baz=16,slow=37						
TX31	**Lajitas Ar. Si**	**13.41**	**342**	Pn	**Pn**	**03 44 43.0**	**+1.0**
TX32	**Lajitas Array**	**13.41**	**342**		**Pn**	**03 44 44.3**	**+2.2**
TXAR	**Lajitas Array**	**13.41**	**342**	Pn	**Pn**	**03 44 45.4**	**+3.4**
	baz=164,slow=15,SNR=6.2						
TXAR				LR	LR	03 50 47.1	
	comp=Z,71nm,18.4s,baz=182,slow=42						
	0.6nm,0.9s						
TXAR	**Lajitas Array**	**13.41**	**342**		**Pn**	**03 44 44.0**	**+2.0**
JCT	**Junction City**	**13.88**	**357**	Pn	**Pn**	**03 44 49.9**	**+1.6**
435B	**Jarrell**	**14.22**	**5**	Pn	**Pn**	**03 44 53.7**	**+0.7**
ESPN	**Las Esperanzas**	**14.90**	**105**	Pn	**Pn**	**03 45 01.2**	**-1.2**
JTS	**Las Juntas de**	**15.03**	**113**	Pn	**Pn**	**03 45 04.4**	**+0.3**
	baz=298,slow=19,SNR=1.1						
	1.9nm,0.6s						
WHTX	**Lake Whitney,**	**15.43**	**5**	P	**P**	**03 45 14.0**	**+0.1**
NATX	**Nacogdoches**	**15.65**	**14**	P	**P**	**03 45 15.6**	**-0.6**
NATX				IAmb	IAmb	03 45 43.4	
	comp=Z,12nm,0.8s						
237A	**Washetta, Mont**	**15.65**	**10**	P	**P**	**03 45 16.6**	**+0.3**
237A				IAmb	IAmb	03 45 32.9	
	comp=Z,15nm,0.9s						
FW13	**Cleburne**	**15.79**	**5**	Pn	**Pn**	**03 45 14.2**	**+0.2**
FW13				IAmb	IAmb	03 45 20.5	
	comp=Z,22nm,1.1s						
ODSA	**Odessa**	**15.82**	**349**	Pn	**Pn**	**03 45 15.4**	**+1.0**
ODSA				IAmb	IAmb	03 45 22.2	
	comp=Z,7.0nm,0.7s						
FW14	**Alvarado**	**15.86**	**6**	Pn	**Pn**	**03 45 14.9**	**0.0**
FW14				IAmb	IAmb	03 45 20.3	
	comp=Z,9.0nm,0.6s						
342A	**Flagon Creek P**	**15.96**	**21**	Pn	**Pn**	**03 45 15.6**	**-0.5**
ABTX	**Abilene, Hawle**	**16.01**	**358**	Pn	**Pn**	**03 45 18.5**	**+1.8**
CLNB	**Carlsbad**	**16.25**	**345**	P	**P**	**03 45 24.3**	**+1.3**
GDL2	**Guadalupe Moun**	**16.31**	**344**	Pn	**Pn**	**03 45 22.7**	**+2.0**
PEZE	**Perez Zeledon,**	**16.56**	**114**	Pn	**Pn**	**03 45 23.0**	**-0.9**
PEZE				IAmb	IAmb	03 46 04.1	
	comp=Z,12nm,1.0s						
HSIG		**16.56**	**321**	Pn	**P**	**03 45 26.3**	**-0.1**
POST	**Post**	**16.59**	**353**	Pn	**Pn**	**03 45 25.5**	**+1.2**
POST				IAmb	IAmb	03 45 36.2	
	comp=Z,9.4nm,0.6s						
Z38A	**Mt. Pleasant**	**17.03**	**12**		**Pn**	**03 45 30.9**	**+1.3**
Z38A				IAmb	IAmb	03 45 33.2	
	comp=Z,12nm,0.8s						
VBMS	**Vicksburg**	**17.40**	**25**		**Pn**	**03 45 34.6**	**+0.3**
VBMS				IAmb	IAmb	03 46 05.3	
	comp=Z,20nm,1.1s						
319A	**Douglas**	**17.46**	**329**		**P**	**03 45 37.5**	**+1.0**
Z41A	**Richland Creek**	**17.55**	**18**	Pn	**Pn**	**03 45 36.2**	**0.0**
MSTX	**Muleshoe**	**17.66**	**350**	Pn	**Pn**	**03 45 38.1**	**+0.3**
MSTX				IAmb	IAmb	03 45 41.4	
	comp=Z,21nm,1.2s						
BRU2	**Volcan**	**17.69**	**114**	Pn	**Pn**	**03 45 36.4**	**-1.9**
BRU2				IAmb	IAmb	03 45 43.8	
	comp=Z,18nm,1.2s						
X37A	**Clayton**	**18.25**	**10**		**Pn**	**03 45 44.8**	**-0.1**
AMTX	**Amarillo**	**18.41**	**353**		**Pn**	**03 45 46.7**	**-0.1**
AMTX				IAmb	IAmb	03 45 49.3	
	comp=Z,9.8nm,0.9s						
MIAR	**Mount Ida**	**18.57**	**14**	P	**P**	**03 45 47.2**	**-1.3**
OK030	**Cody Creek RV**	**19.40**	**5**	P	**P**	**03 45 56.9**	**-0.7**
OK052	**Battle Ridge R**	**19.46**	**5**	P	**P**	**03 45 57.6**	**-0.7**
OK052				IAmb	IAmb	03 45 59.8	
	comp=Z,14nm,1.1s						
ANMO	**Albuquerque**	**19.48**	**341**	P	**P**	**03 45 59.1**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=231,slow=12,SNR=7.9						
ANMO				LR	LR	03 54 06.4	
	comp=Z,147nm,21.6s,baz=248,slow=39						
	comp=Z,1.9nm,0.8s						
ANMO	**Albuquerque**	**19.48**	**341**	P	**Pn**	**03 46 00.4**	**+0.3**
TUL1	**Leonard**	**19.49**	**8**	P	**P**	**03 45 58.5**	**-0.2**
OK033	**Mehan**	**19.50**	**5**	P	**P**	**03 45 58.1**	**-0.6**
QUOK	**Quay**	**19.64**	**6**	P	**P**	**03 46 00.3**	**-0.1**
QUOK				IAmb	IAmb	03 46 41.9	
	comp=Z,13nm,1.0s						
BLOK	**Blackwell**	**20.19**	**4**	P	**P**	**03 46 06.4**	**+0.2**
FCAR	**Ozark Folk Cen**	**20.21**	**16**	P	**P**	**03 46 06.9**	**+0.4**
FCAR				IAmb	IAmb	03 46 13.1	
	comp=Z,11nm,1.2s						
T35A	**Sooner Cattle**	**20.40**	**6**	P	**P**	**03 46 07.8**	**-0.8**
X18A	**Snowflake**	**20.41**	**333**	P	**P**	**03 46 10.4**	**+1.6**
113A	**Mohawk Valley,**	**20.94**	**323**	P	Pn	03 46 16.7	-0.3
X16A	**Lo Mia Camp, P**	**20.99**	**330**	P	Pn	03 46 17.4	-0.3
X16A				IAmb	IAmb	03 46 22.8	
	comp=Z,7.4nm,0.9s						
T25A	**Trinidad**	**21.05**	**348**	P	**P**	**03 46 15.8**	**0.0**
T25A				IAmb	IAmb	03 46 22.8	
	comp=Z,7.6nm,0.9s						
R32A	**Long Quarter,**	**21.79**	**1**	P	**P**	**03 46 24.2**	**+0.7**
R32A				IAmb	IAmb	03 46 28.2	
	comp=Z,9.4nm,1.1s						
WUAZ	**Wupatki**	**21.86**	**332**	P	**P**	**03 46 26.7**	**+2.2**
YUH	**Yuha Desert**	**22.15**	**319**	P	**P**	**03 46 29.8**	**+2.4**
YUH				IAmb	IAmb	03 46 40.5	
	comp=Z,7.0nm,1.4s						
S22A	**4UR Ranch, Cre**	**22.20**	**343**	P	**P**	**03 46 30.2**	**+1.9**
MVCO	**Mesa Verde**	**22.21**	**340**	P	**P**	**03 46 30.4**	**+2.0**
MVCO				IAmb	IAmb	03 46 40.6	
	comp=Z,7.2nm,0.8s						
R40A	**Maddies Statio**	**22.45**	**14**	P	**P**	**03 46 30.7**	**+0.1**
R40A				IAmb	IAmb	03 46 34.1	
	comp=Z,5.7nm,0.9s						
KSCO	**Kaye Shedlock’**	**22.59**	**353**	P	**P**	**03 46 32.9**	**+0.6**
S44A	**Carbondale**	**22.75**	**20**	P	**P**	**03 46 33.5**	**-0.4**
S44A				IAmb	IAmb	03 46 43.2	
	comp=Z,6.4nm,0.8s						
W13A	**Hualapai Mount**	**22.75**	**327**	P	**P**	**03 46 36.0**	**+1.9**
U15A	**North Rim**	**23.03**	**332**	P	**P**	**03 46 38.5**	**+1.3**
PMD	**Palm Desert**	**23.11**	**321**	P	**P**	**03 46 40.0**	**+2.5**
PFO	**Pinyon Flats O**	**23.13**	**320**	P	**P**	**03 46 39.8**	**+1.9**
PV13	**Radium Mtn., P**	**23.18**	**340**	P	**P**	**03 46 39.0**	**+0.4**
PV13				IAmb	IAmb	03 46 42.0	
	comp=Z,4.3nm,1.0s						
SMCO	**Snowmass**	**23.59**	**344**	P	**P**	**03 46 43.2**	**+0.4**
SMCO				IAmb	IAmb	03 46 48.7	
	comp=Z,7.9nm,1.3s						
KNB	**Kanab**	**23.76**	**332**	P	**P**	**03 46 44.7**	**+0.5**
ISCO	**Idaho Springs**	**23.86**	**347**	P	**P**	**03 46 45.4**	**0.0**
WCI	**Wyandotte Cave**	**24.32**	**25**	P	**P**	**03 46 49.0**	**-0.3**
SRU	**San Rafael Swe**	**24.62**	**338**	P	**P**	**03 46 53.2**	**+0.9**
Q16A	**Castle Valley**	**24.69**	**337**	P	**P**	**03 46 54.4**	**+1.5**
Q16A				IAmb	IAmb	03 46 57.0	
	comp=Z,5.4nm,0.8s						
MSU	**Marysvale**	**24.73**	**335**	P	**P**	**03 46 55.0**	**+1.7**
MVU	**Marysvale**	**24.74**	**335**	P	**P**	**03 46 54.3**	**+0.9**
N23A	**Red Feather La**	**24.98**	**348**	P	**P**	**03 46 55.7**	**+0.1**
N23A				IAmb	IAmb	03 46 59.6	
	comp=Z,3.6nm,0.8s						
QSM	**Queen of Sheba**	**25.02**	**324**	P	**P**	**03 46 56.9**	**+1.3**
QSM				IAmb	IAmb	03 47 01.1	
	comp=Z,4.1nm,1.1s						
P17A	**Butcher Ranch,**	**25.02**	**338**	P	**P**	**03 46 57.3**	**+1.5**
P17A				IAmb	IAmb	03 47 00.5	
	comp=Z,3.7nm,0.9s						
TPNV	**Topopah Spring**	**25.40**	**326**	P	**P**	**03 47 01.3**	**+2.0**
TPNV				IAmb	IAmb	03 47 05.1	
	comp=Z,5.8nm,1.2s						
WCT	**Wildcat Mounta**	**25.48**	**326**	P	**P**	**03 47 01.4**	**+1.4**
RDMU	**Red Mountain**	**25.62**	**341**	P	**P**	**03 47 01.7**	**+0.4**
RDMU				IAmb	IAmb	03 47 11.9	
	comp=Z,3.9nm,0.9s						
S11A	**Rachel**	**25.67**	**328**	P	**P**	**03 47 02.2**	**+0.5**
S11A				IAmb	IAmb	03 47 07.6	
	comp=Z,3.5nm,0.8s						
NLU	**North Lily Min**	**25.93**	**337**	P	**P**	**03 47 05.6**	**+1.4**
NLU				IAmb	IAmb	03 47 14.2	
	comp=Z,5.1nm,1.2s						
BSUT	**Blindstream Ca**	**25.97**	**339**	P	**P**	**03 47 05.8**	**+1.1**
BSUT				IAmb	IAmb	03 47 15.0	
	comp=Z,5.3nm,1.0s						
P49A	**Miami Univ. Ec**	**26.07**	**26**	P	**P**	**03 47 04.2**	**-1.0**
P51A	**Williamsport**	**26.75**	**28**	P	**P**	**03 47 10.7**	**-0.6**
N47A	**Urbana**	**26.84**	**23**	P	**P**	**03 47 11.7**	**-0.4**
NVAR	**Mina Array Bea**	**27.59**	**326**	P	**P**	**03 47 21.8**	**+2.7**
	comp=Z,0.8nm,0.7s,baz=155,slow=12,SNR=4.6						

	comp=Z,0.8nm,0.7s						
BW06	Boulder Array	27.63	343	P	P	03 47 19.6	+0.1
BW06				IAmb	IAmb	03 47 29.3	
	comp=Z,4.7nm,1.1s						
PD31	Pinedale Array	27.63	343	P	P	03 47 19.7	+0.2
PD31				IAmb	IAmb	03 47 29.3	
	comp=Z,4.7nm,1.2s						
PDAR	Pinedale Array	27.63	343	P	P	03 47 21.0	+1.5
	comp=Z,2.2nm,1.0s,baz=134,slow=8.5,SNR=9.8						
PDAR				LR	LR	03 57 24.0	
	comp=Z,42nm,19.5s,baz=156,slow=34						
	comp=Z,2.2nm,1.0s						
PDAR	Pinedale Array	27.63	343	P	P	03 47 20.4	+0.9
ELK	Elko	27.89	333	LR	LR	04 00 06.9	
	comp=Z,118nm,18.1s,baz=154,slow=40						
RLMT	Red Lodge	29.75	345	P	P	03 47 39.1	+0.8
MCMT	McKenzie Canyo	30.50	340	P	P	03 47 46.5	+1.5
LRM	Limekiln Ridge	31.27	342	P	P	03 47 53.2	+1.5
HRY	Holter Researc	31.89	343	P	P	03 47 58.1	+1.0
SADO	Sadowa	32.73	27	LR	LR	04 03 06.5	
	comp=Z,40nm,18.3s,baz=103,slow=40						
NEW	Newport	34.93	339	LR	LR	04 04 10.4	
	comp=Z,76nm,20.8s,baz=238,slow=39						
SCHQ	Schefferville	45.52	26	P	P	03 49 50.9	-0.2
	comp=Z,3.0nm,0.6s,baz=229,slow=6.7,SNR=11						
SCHQ				LR	LR	04 11 37.7	
	comp=Z,39nm,19.6s,baz=94,slow=40						
	comp=Z,3.0nm,0.6s						
MDP	Montagnes des	46.84	99	LR	LR	04 11 45.4	
	comp=Z,55nm,18.4s,baz=182,slow=39						
YKA	Yellowknife Ar	47.17	350	P	P	03 50 04.6	+0.7
	comp=Z,1.1nm,0.8s,baz=159,slow=7.5,SNR=12						
	comp=Z,1.1nm,0.8s						
H03N2	Juan Fernandez	53.29	159	T	T	04 47 58.7	
	baz=338,slow=77,SNR=25						
H03N1	Juan Fernandez	53.30	159	T	T	04 48 13.8	
	baz=338,slow=77,SNR=36						
H03N3	Juan Fernandez	53.30	159	T	T	04 47 58.9	
	baz=338,slow=77,SNR=31						
INK	Inuvik	56.17	345	P	P	03 51 12.1	+1.0
	comp=Z,1.1nm,0.7s,baz=107,slow=6.5,SNR=5.2						
	comp=Z,1.1nm,0.7s						
IL31		57.88	338	P	P	03 51 23.8	+0.5
IL31				IAmb	IAmb	03 51 28.3	
	comp=Z,2.7nm,1.4s						
ILAR	Eielson Array	57.88	338	P	P	03 51 25.1	+1.9
	comp=Z,1.0nm,1.1s,baz=150,slow=4.3,SNR=5.3						
	comp=Z,1.0nm,1.1s						
ILAR	Eielson Array	57.88	338	P	P	03 51 23.8	+0.5
SFJD	Kangerlussuaq	59.29	20	LR	LR	04 17 49.7	
	comp=Z,40nm,20.3s,baz=209,slow=37						
PZH	PanZhiHua	132.68	334	PKP	PKPdf	04 00 48.0	+0.5

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*SOF **20** 04:21:33.3, 39°.52N×26°.16E, h10^{km}, MD3.2*
*ISK **20** 04:21:34.0, 39°.54N×26°.16E, h5^{km}, ML3.5/43*
*ATH **20** 04:21:34.9, 39°.52N×26°.17E, h12^{km}±1^{km}, ML3.2/9, Error ellipse: s-maj=2.5km s-min=1.1km az=245.0*
*DDA **20** 04:21:34.1±0.0, 39°.55N×26°.20E, h5^{km}±2^{km}, MW3.5*
*THE **20** 04:21:34.6, 39°.52N×26°.16E, h10^{km}, ML3.2/9, Error ellipse: s-maj=0.4km s-min=0.2km az=236.0*
ISC 20 04:21:34.2±0.8**, 39°.52N**±0°.01×**26°.17E**±0°.02**, h11**^{km}±5^{km}**, n115, σ0^{s}.96**/161**, 13C-2D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.03	230	P	Pg	04 21 36.1	-0.2
KOCA				S	Sg	04 21 37.2	-0.6
GPNR	Gulpinar-Canak	0.07	203	Pg	Pg	04 21 36.5	-0.1
PRK	Paraskevi	0.29	164	P	Pg	04 21 40.5	+0.5
PRK				S	Sg	04 21 44.8	+0.9
	8μm,0.2s						
PRK	Paraskevi	0.29	164	P	Pg	04 21 40.6	+0.6
PRK				S	Sg	04 21 44.3	+0.4
PRK				AML	AML	04 21 46.3	
	comp=N,15910μm,0.2s						
PRK				AML	AML	04 21 46.4	
	comp=E,17448μm,0.2s						
EZN	Ezine	0.33	22	P	Pg	04 21 40.8	0.0
EZN				S	Sg	04 21 46.1	+1.0
	comp=E,4μm,0.2s						
EZN	Ezine	0.33	22	Pg	Pg	04 21 40.8	0.0
EZN				Sg	Sg	04 21 45.7	+0.6
BOZC	Bozcaada	0.33	344	Pg	Pg	04 21 40.9	+0.1
BOZC				Sg	Sg	04 21 45.8	+0.5
BOZC	Bozcaada	0.33	344	P	Pg	04 21 41.0	+0.1
BOZC				P	Pg	04 21 41.0	+0.1
BOZC				S	Sg	04 21 44.8	-0.5
BAYC	CANAKKALE_Bayr	0.36	53	P	Pg	04 21 41.2	-0.3
BAYC				S	Sg	04 21 44.8	-1.6
SIGR	SIGRI	0.40	218	P	Pg	04 21 42.4	+0.4
SIGR				S	Sb	04 21 48.2	-1.0
	comp=E,3μm,0.4s						
SIGR	SIGRI	0.40	218	Pg	Pg	04 21 42.4	+0.4
SIGR				Sg	Sb	04 21 48.4	-0.8
SIGR	SIGRI	0.40	218	P	Pg	04 21 42.4	+0.4
SIGR				S	Sg	04 21 48.1	+0.9
SIGR				AML	AML	04 21 50.5	
	comp=E,6202μm,0.2s						
SIGR				AML	AML	04 21 51.8	
	comp=N,5270μm,0.2s						
AYVA	Ayvalik	0.46	118	P	Pg	04 21 43.4	+0.2
ECEA	Canakkale, Ece	0.52	0	P	Pg	04 21 44.7	+0.3
ECEA				S	Sg	04 21 50.8	-0.4
COMU	Canakkale	0.62	22	Pg	Pg	04 21 46.4	+0.1
COMU				Sg	Sb	04 21 55.3	-0.5
GOKA	anakkale-Gk	0.70	343	SPECP		04 21 47.0	
GOKA				P	Pg	04 21 47.5	-0.2
GADA	Gvkgeada	0.70	343	Pg	Pg	04 21 47.7	0.0
BUHA	Balikesir, Bur	0.70	91	P	Pg	04 21 47.6	-0.1
DKL	Dikili	0.73	128	Pg	Pb	04 21 48.9	+0.1
CANM	Can-anakkale	0.84	54	Pg	Pg	04 21 50.5	+0.1
LIA	Limnos Island	0.85	297	P	Pb	04 21 50.7	-0.2
LIA				S	Sb	04 22 02.9	+0.6
	comp=N,3μm,0.3s						
LIA	Limnos Island	0.85	297	P	Pb	04 21 51.1	+0.2
LIA				S	Sb	04 22 02.4	+0.1
LIA				AML	AML	04 22 04.2	
	comp=E,5934μm,0.4s						
LIA				AML	AML	04 22 05.7	
	comp=N,6563μm,0.3s						
KARB	zmir-Karabur	0.88	168	SPECP		04 21 51.0	
KARB				P	Pb	04 21 51.3	-0.1
KARB				S	Sb	04 22 03.1	0.0
ZEDA	zmir-Bergama	0.90	128	P	Pb	04 21 51.7	0.0
ZEDA				S	Sg	04 22 03.1	-0.1
GELI	Tayfur-Gelibol	0.91	15	Pg	Pg	04 21 51.6	0.0
LPK	Lapseki	0.96	28	Pg	Pg	04 21 52.5	-0.2
SMTH	Samothraki Isl	1.07	333	P	Pg	04 21 54.2	-0.5
SMTH				S	Sn	04 22 09.6	-0.3
	comp=N,710nm,0.3s						
PSRA	Psara	1.09	206	P	Pn	04 21 55.7	+0.4
PSRA				S	Sn	04 22 09.9	-0.3
PSRA				AML	AML	04 22 15.0	
	comp=E,6337μm,0.4s						
PSRA				AML	AML	04 22 15.3	
	comp=N,6592μm,0.2s						
CHOS	Chios island	1.14	185	P	Pb	04 21 55.7	-0.2
CHOS				S	Sn	04 22 11.6	-0.1
CHOS	Chios island	1.14	185	P	Pb	04 21 55.9	+0.1
BALY	Balya	1.14	79	P	Pb	04 21 55.9	0.0
BALY				S	Sb	04 22 10.2	-0.6
CAVK	Edirne/Enez-Ca	1.17	360	SPECP		04 21 56.0	
CAVK				P	Pb	04 21 56.1	-0.2
CAVK				S	Sg	04 22 11.6	-0.2
ERIK	Erikli-Kesan	1.18	13	Pn	Pb	04 21 56.1	-0.4
URLA	Izmir	1.21	164	Pn	Pb	04 21 56.9	-0.1
URLA	Izmir	1.21	164	P	Pb	04 21 56.4	-0.7
URLA				S	Sb	04 22 12.2	-0.5
STEP	BALIKESIR_Sava	1.21	96	P	Pn	04 21 56.9	-0.1
STEP				S	Sb	04 22 11.8	-0.8
ENEZ	Enez	1.21	359	P	Pn	04 21 56.7	-0.3
ENEZ				S	Sn	04 22 13.6	+0.2
ENEZ	Enez	1.21	359	Pn	Pg	04 21 57.3	-0.2
KRBG	Karabiga-Canak	1.23	45	Pn	Pb	04 21 57.5	+0.1
GONE	Gonen-Balikesi	1.28	65	Pn	Pg	04 21 58.7	-0.1
KNL	Balıkesir	1.28	54	SPECP		04 21 57.0	
KNL				P	Pn	04 21 57.3	-0.7
ZEYE	Izmir, Urla-Ze	1.31	168	SPECP		04 21 58.0	
ZEYE				P	Pn	04 21 58.0	-0.3
ZEYE				S	Sb	04 22 14.0	-1.5
BLCB	Balcova	1.32	149	P	Pn	04 21 57.9	-0.6
BLCB				S	Sb	04 22 16.2	+0.3
BLCB	Balcova	1.32	149	Pn	Pg	04 21 59.6	0.0
BALB	Balikesir	1.33	84	Pn	Pb	04 21 59.3	+0.3
BKES	Balkesir-Mer	1.38	81	SPECP		04 21 59.0	
BKES				P	Pb	04 21 59.8	-0.1
BKES				S	Sb	04 22 16.4	-1.1
ALN	Alexandroupoli	1.38	356	P	Pn	04 21 58.7	-0.6
ALN				S	Sb	04 22 17.3	-0.2
	comp=N,1μm,0.4s						
ALN	Alexandroupoli	1.38	356	Pn	Pb	04 21 59.9	0.0
ALN	Alexandroupoli	1.38	356	P	Pn	04 21 59.4	+0.1
ALN				S	Sb	04 22 16.0	-1.5
ALN				AML	AML	04 22 18.9	
	comp=E,2802μm,0.4s						
ALN				AML	AML	04 22 19.8	
	comp=N,1708μm,0.5s						
RKY	Sarkoy-Tekirda	1.40	33	Pn	Pn	04 21 59.9	+0.3
AKS	Akhisar	1.43	116	Pn	Pb	04 22 01.0	+0.2
AKHS	Akhisar	1.43	116	P	Pn	04 22 00.1	0.0
AKHS				S	Sn	04 22 17.0	-1.8
EDC	Edincik	1.54	57	Pn	Pb	04 22 02.4	-0.3
THAS	Thassos island	1.55	315	P	Pn	04 22 01.2	-0.4
THAS				S	Sn	04 22 21.7	-0.1
THAS	Thassos island	1.55	315	P	Pn	04 22 01.3	-0.4
THAS				S	Sn	04 22 20.5	-1.3
THAS				AML	AML	04 22 21.4	
	comp=N,559μm,0.4s						
THAS				AML	AML	04 22 27.4	
	comp=E,251μm,0.3s						
DGB	zmir	1.57	159	P	Pn	04 22 01.4	-0.5
DGB				S	Sn	04 22 19.9	-2.3
UKOP	Uzunkopru-Edir	1.64	12	Pn	Pb	04 22 03.8	-0.6
RDO	Rodhopi	1.69	344	P	Pn	04 22 03.1	-0.5
RDO				S	Sn	04 22 25.5	+0.3
RDO	Rodhopi	1.69	344	Pn	Pb	04 22 04.5	-0.8
RDO	Rodhopi	1.69	344	P	Pn	04 22 04.0	+0.4
RDO				S	Sn	04 22 25.0	-0.3
RDO				AML	AML	04 22 31.4	
	comp=E,428μm,0.2s						
RDO				AML	AML	04 22 31.5	
	comp=N,280μm,0.2s						
BAND	Balkesir-Ban	1.70	60	SPECP		04 22 04.0	
BAND				P	Pn	04 22 04.1	+0.3
DURS	Dursunbey	1.78	87	P	Pn	04 22 05.5	+0.6
DURS				S	Sn	04 22 27.0	-0.6
TKR	Tekirdag	1.80	35	Pn	Pb	04 22 06.2	-0.9
KCTX	Karacabey (Bur	1.84	66	Pn	Pn	04 22 06.6	+0.9
KYMI	Kymi, Euboea I	1.84	242	P	Pn	04 22 05.1	-0.6
KYMI				S	Sn	04 22 29.5	+0.6
KYMI				AML	AML	04 22 36.8	
	comp=N,572μm,0.7s						
KYMI				AML	AML	04 22 37.4	
	comp=E,442μm,0.5s						
SMG	Samos	1.89	164	P	Pn	04 22 05.9	-0.4
SMG				S	Sn	04 22 30.6	+0.6
	comp=E,760nm,0.5s						
SMG	Samos	1.89	164	P	Pn	04 22 05.4	-0.9
SMG				S	Sn	04 22 29.9	-0.2
SMG				AML	AML	04 22 38.1	
	comp=E,1572μm,0.5s						
SMG				AML	AML	04 22 39.0	
	comp=N,1458μm,0.4s						
DST	Dursunbey	1.90	87	Pn	Pn	04 22 07.6	+1.1
KAVA	Kavala	1.94	320	P	Pn	04 22 06.8	-0.3
GCAM	G?zelcaml?	2.00	155	Pn	Pb	04 22 09.5	-1.0
GCAM	G?zelcaml?	2.00	155	SPECP		04 22 11.0	
GCAM				P	Pb	04 22 11.3	+0.8
CRLT	Corlu	2.00	36	Pn	Pb	04 22 09.5	-1.1
DEMI	Demirci	2.03	103	P	Pn	04 22 09.0	+0.6
EREA	Eretria	2.06	238	P	Pn	04 22 08.2	-0.5
EREA				S	Sn	04 22 34.8	+0.4
	comp=N,205nm,0.4s						
KOKK	Kokkinochori,	2.11	309	P	Pn	04 22 09.0	-0.3
KOKK				S	Sn	04 22 35.3	-0.2
MANT	Manisa	2.13	118	P	Pn	04 22 10.0	+0.2
ORLT	Orhaneli	2.17	75	Pn	Pn	04 22 11.5	+1.3
KULA	Kula-Manisa	2.19	117	P	Pn	04 22 10.4	-0.1
KULA				S	Sn	04 22 37.8	+0.2
KULA	Kula-Manisa	2.19	117	Pn	Pn	04 22 11.1	+0.6
KDZ	Kurdzhali	2.20	345	Pn	Pn	04 22 11.6	+1.0
KDZ	Kurdzhali	2.20	345	*i* P	Pn	04 22 11.2	+0.6
SIMA	Simav-Kutahya	2.23	100	Pn	Pn	04 22 12.8	+1.8
MDNY	Mudanya-Bursa	2.25	67	Pn	Pn	04 22 12.7	+1.4
SLVT	Silivri	2.31	42	Pn	Pn	04 22 13.8	+1.7
ARMT	Armutlu	2.31	62	Pn	Pn	04 22 13.9	+1.7
EDRB	Edirne	2.36	10	P	Pn	04 22 13.0	+0.2
EDRB				S	Sn	04 22 42.1	+0.3
	comp=N,228nm,0.4s						
EDRB	Edirne	2.36	10	Pn	Pn	04 22 14.2	+1.4
CTKS	Kestanelik-??a	2.47	45	Pn	Pn	04 22 15.9	+1.6
GEMT	Gemlik	2.49	68	Pn	Pn	04 22 16.3	+1.7
APE	Apeiranthos	2.50	192	Pn	Pn	04 22 16.7	+1.9
CTYL	Yalikoy Yolu	2.53	39	Pn	Pn	04 22 16.7	+1.5
KIYI	Yalıkoy-Catalc	2.54	39	Pn	Pn	04 22 16.9	+1.6
TVSB	Tavsanli	2.55	91	Pn	Pn	04 22 16.8	+1.3
GEDZ	Gediz	2.56	100	Pn	Pn	04 22 17.3	+1.7
BGKT	Bogazkoy	2.59	49	Pn	Pn	04 22 17.5	+1.6
BODT	Bodrum	2.62	160	Pn	Pn	04 22 17.5	+1.2
MMB	Musomiste	2.78	319	*i* P	Pn	04 22 19.1	+0.5
KKB	Krupnik	3.31	316	*i* P	Pn	04 22 28.5	+2.5
STIP	Stip	3.73	307	*i* Pn	Pn	04 22 31.1	-0.5
VTS	Vitosha	3.81	325	⇑P	Pn	04 22 32.7	-0.1
VTS				⇑S	Sb	04 23 31.2	+3.6
VTS	Vitosha	3.81	325	*i* P	Pn	04 22 34.7	+1.9
PLVB	Pleven	4.03	344	⇓S	Sg	04 23 40.6	-3.1
RAZG	Razgrad	4.05	3	⇑P	Pn	04 22 38.1	+2.1
TIRR	Tirgusor	5.21	18	⇑P	Pn	04 22 52.6	+0.7
TPGR	Topolog	5.59	17	P	Pn	04 22 57.5	+0.4
CFR	Carcaliu	5.84	14	⇑P	Pn	04 23 01.7	+1.2
MLR	Muntele Rosu	5.97	358	⇑P	Pn	04 23 04.5	+2.0
VOIR		5.97	352	⇑P	Pn	04 23 04.6	+2.2
HERR	Herculane	6.04	334	⇑P	Pn	04 23 03.8	+0.5
MDVR	Moldovita	6.21	329	⇑P	Pn	04 23 05.9	+0.1
PLOR	Plostina	6.33	3	⇓P	Pn	04 23 10.1	+2.6
VRI	Vrincioaia	6.35	4	⇑P	Pn	04 23 10.1	+2.4
GZR	Gura Zlata	6.38	338	⇑P	Pn	04 23 08.4	+0.3
DOPR	Dopca	6.47	355	⇑P	Pn	04 23 10.8	+1.6
BZS	Buzias	6.96	333	⇑P	Pn	04 23 16.2	+0.3

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*IDC **20** 04:24:29.7±0.5, 8°.14S×161°.04E, h0^{km}, mb4.8/19, mbtmp4.8/24, ML4.6/4, MS4.3/53, Error ellipse: s-maj=15.9km s-min=12.3km az=116.0*
*GCMT **20** 04:24:31.6±0.2, 8°.14S±0°.01×161°.14E±0°.01, h12^{km}, MW5.1/130, Moment Tensor Solution. s58,c72; s130,c179; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.20±.08; M$_{\theta\theta}$-1.99±.08; M$_{\phi\phi}$-2.22±.09; M$_{r\theta}$0.08±.26; M$_{\theta\phi}$1.98±.07; M$_{\phi r}$2.67±.28; Best double couple: M$_0$4.89200×10^{16} NP1:ϕ$_s$337.00000°,δ61.00000°, λ110.00000°. NP2:ϕ$_s$120.00000°,δ35.00000°,λ59.00000°. Principal axes: T 5.2470, Plg68.0000°, Azm287.0000°; N -0.7180, Plg17.0000°, Azm147.0000°; P -4.5380, Plg13.0000°, Azm52.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **20** 04:24:31.6±1.7, 8°.11S±0°.07×161°.00E±0°.04, h10^{km}±1^{km}, mb5.2/249 Error ellipse: s-maj=11.7km s-min=5.4km az=160.0*
*MOS **20** 04:24:32.7±0.9, 8°.11S×160°.91E, h31^{km}, mb5.3/62, Error ellipse: s-maj=7.4km s-min=6.0km az=78.9*
*BJI **20** 04:24:37.0±0.0, 8°.30S×160°.90E, h61^{km}, mb4.8/62, mB5.1/36, Ms4.8/27, Ms7 4.4/32*
ISC 20 04:24:31.2±0.3**, 8°.14S**±0°.04×**161°.01E**±0°.04**, h10**^{km}**, n766, σ1^{s}.18**/739**, mb5.2**/189**, MS4.4**/67**, 17C-9D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.66	219	Pn	Pg	04 25 01.9	-1.1
	6μm,0.3s,baz=189,slow=2.3,SNR=38						
HNR				Sn	Sg	04 25 25.0	+0.4
	6μm,0.3s,baz=258,slow=1.4,SNR=9.8						
RABL	Rabaul	9.63	294	Pn	Pn	04 26 49.0	-0.9
RABL	Rabaul	9.63	294	P	Pn	04 26 58.8	+8.8
KRVT	Keravat (AS076	9.71	293	Pn	Pn	04 26 51.2	+0.2
	4.7nm,0.3s,baz=21,slow=21,SNR=1.9						
	25nm,0.4s						
KOUNC	Koumac, New Ca	12.74	166	Pn	Pn	04 27 31.8	-0.8
KOUNC	Koumac, New Ca	12.74	166	P	Pn	04 27 40.1	+7.6
PMG	Port Moresby	13.74	264	Pn	Pn	04 27 46.4	+0.1
	5.6nm,0.3s,baz=199,slow=12,SNR=1.4						
PMG				LR	LR	04 32 53.4	
	comp=Z,2μm,20.0s,baz=104,slow=37						
PMG	Port Moresby	13.74	264	Pn	Pn	04 27 46.3	0.0
PMG	Port Moresby	13.74	264	P	P	04 27 51.6	-3.4
PMG	Port Moresby	13.74	264	P	P	04 27 51.8	-3.2
PMG	Port Moresby	13.74	264	*ce*P	Pn	04 27 48.8	+2.5
PMG				pmax	pmax		
	comp=Z,18nm,1.9s						
DZM	Mont Dzumac	14.81	160	*e*Pn	Pn	04 28 01.0	+0.1
	comp=Z,83nm,1.2s						
DZM				*e*LR	LR	04 31 27.6	
	comp=Z,1μm,20.6s						
DZM	Mont Dzumac	14.81	160	Pn	Pn	04 28 01.7	+0.8
	comp=Z,0.4nm,0.3s,baz=347,slow=16,SNR=2.8						
DZM				LR	LR	04 33 30.8	
	comp=Z,1μm,18.6s,baz=11,slow=37						
	comp=Z,15nm,1.1s						
DZM	Mont Dzumac	14.81	160	Pn	Pn	04 28 02.0	+1.1
PATS	Pohnpei	15.12	350	P	P	04 28 09.0	-1.3
	baz=15						
PATS	Pohnpei	15.12	350	Pn	Pn	04 28 02.5	-2.5
PATS				IAmb	IAmb	04 28 03.1	
	comp=Z,190nm,1.2s						
PATS	Pohnpei	15.12	350	P	P	04 28 14.6	+4.3
TARA	Tarawa	15.17	52	Pn	Pn	04 28 04.4	-1.4
TARA				IAmb	IAmb	04 28 12.4	
	comp=Z,78nm,0.7s						
TARA	Tarawa	15.17	52	P	P	04 28 13.2	+2.4
KWAJ	Kwajalein Atol	18.07	22		Pn	04 28 42.4	-0.2
KWAJ				IAmb	IAmb	04 28 51.6	
	comp=Z,143nm,0.8s						
KWAJ	Kwajalein Atol	18.07	22	P	Pn	04 28 42.4	-0.2
KWAJ				pmax	pmax		
	comp=Z,143nm,0.9s						
GD1S	Gladstone Soft	18.24	210	P	P	04 28 47.8	+3.0
COEN	Coen	18.43	250	P	P	04 28 48.6	+1.7
	baz=18,SNR=18						
COEN	Coen	18.43	250		Pn	04 28 45.3	-1.7
COEN	Coen	18.43	250	P	P	04 28 49.9	+3.0
CTA	Charters Tower	18.57	229	P	Pn	04 28 49.2	+0.5
	comp=Z,0.8nm,0.3s,baz=48,slow=12,SNR=7.7						
CTA				LR	LR	04 35 21.7	
	comp=Z,1μm,19.6s,baz=55,slow=35						
	comp=Z,18nm,0.8s						
CTA	Charters Tower	18.57	229	P	Pn	04 28 51.2	+2.4
CTAO	Charters Tower	18.57	229	P	Pn	04 28 48.5	-0.2
CTAO	Charters Tower	18.57	229	P	Pn	04 28 51.2	+2.4
CTAO	Charters Tower	18.57	229	P	Pn	04 28 48.6	-0.2
CTAO				pmax	pmax		
	comp=Z,53nm,1.0s						
MTSU	Mount Surprise	19.03	237	P	Pn	04 28 54.9	+0.6
	baz=19,SNR=39						
MTSU	Mount Surprise	19.03	237	P	Pn	04 28 56.1	+1.8
MSVF	Nonsavu	19.14	122	P	P	04 28 54.8	0.0
	comp=Z,0.3nm,0.3s,baz=195,slow=20,SNR=4.0						
MSVF				LR	LR	04 34 31.7	
	comp=Z,750nm,20.9s,baz=339,slow=32						
	comp=Z,40nm,1.2s						
MSVF	Nonsavu	19.14	122		P	04 28 55.0	+0.2
MSVF	Nonsavu	19.14	122	P	Pn	04 28 58.1	+2.5
MSVF	Nonsavu	19.14	122	⇑*e*P	Pn	04 28 57.9	+2.3
MSVF				pmax	pmax		
	comp=Z,75nm,1.6s						
EIDS	Eidsvold	19.57	208	P	Pn	04 29 00.8	0.0
	baz=20,SNR=7.7						
EIDS	Eidsvold	19.57	208	P	P	04 28 59.4	-0.1
EIDS				IAmb	IAmb	04 29 05.7	
	comp=Z,93nm,0.9s						
EIDS	Eidsvold	19.57	208	P	Pn	04 29 01.5	+0.7
AUWSH	Wavell State H	20.59	201	P	Pn	04 29 12.4	-0.3
GC1S	Gold Coast 1 S	21.14	199	P	P	04 29 18.8	+2.4
GENI	Genyem	21.46	284	P	P	04 29 22.4	+2.4
GENI	Genyem	21.46	284	P	P	04 29 22.5	+2.4
	comp=Z,94nm,1.4s,comp=Z,6μm						
RMQ	Roma	21.64	211	P	P	04 29 23.1	+1.2
	baz=22,SNR=19						
RMQ	Roma	21.64	211	P	P	04 29 23.9	+2.0
SMPI	Sarmi	23.02	284	P	P	04 29 39.3	+2.6
	comp=Z,145nm,1.8s						
LHI	Lord Howe Isla	23.33	184	P	P	04 29 40.6	+0.9
	baz=23						
LHI	Lord Howe Isla	23.33	184	P	P	04 29 39.5	-0.1
ARMA	Armidale	23.84	200	P	P	04 29 45.4	+0.6
	baz=24,SNR=22						
ARMA	Armidale	23.84	200	P	P	04 29 44.5	-0.3
ARMA				IAmb	IAmb	04 29 50.5	
	comp=Z,46nm,0.8s						
ARMA	Armidale	23.84	200	P	P	04 29 46.3	+1.5
QIS	Mount Isa	24.09	237	P	P	04 29 47.5	+0.2
	baz=24,SNR=5.9						
QIS	Mount Isa	24.09	237	P	P	04 29 48.0	+0.8
QLP	Quilpie	24.29	219	P	P	04 29 49.0	0.0
	baz=24,SNR=4.1						
AULRC	Lightning Ridg	24.46	208	P	P	04 29 50.5	0.0
AUPHS	Peel High Scho	24.72	201	P	P	04 29 53.6	+0.8
AUDCS	Dubbo College	26.59	204	P	P	04 30 11.3	+1.6
GUMO	Guam	26.89	323	LR	LR	04 40 41.1	
	comp=Z,409nm,19.8s,baz=138,slow=36						
H11S2	WAKE ISLAND Hy	27.05	12	T	T	04 58 35.1	
	baz=193,slow=76,SNR=624						
H11S3	WAKE ISLAND Hy	27.05	12	T	T	04 58 25.2	
	baz=193,slow=76,SNR=400						
H11S1	WAKE ISLAND Hy	27.07	12	T	T	04 58 45.9	
	baz=193,slow=76,SNR=163						
CMSA	Cobar Meteorol	27.31	209	P	P	04 30 16.4	+0.2
	baz=27,SNR=11						
CMSA	Cobar Meteorol	27.31	209	P	P	04 30 16.0	-0.2
AFI	Afiamalu	27.31	105	P	P	04 30 15.9	-0.6
	comp=Z,7.8nm,0.4s,baz=292,slow=11,SNR=1.9						
AFI				LR	LR	04 40 12.5	
	comp=Z,542nm,18.0s,baz=291,slow=35						
	comp=Z,7.8nm,0.4s						
INKA	Innaminka	27.33	222	P	P	04 30 16.5	+0.1
WB0	Warramunga Arr	28.25	243	P	P	04 30 23.0	-1.8
H11N1	WAKE ISLAND Hy	28.28	12	T	T	05 00 15.0	
	baz=193,slow=76,SNR=1271						
H11N3	WAKE ISLAND Hy	28.29	12	T	T	05 00 22.3	
	baz=193,slow=76,SNR=380						
H11N2	WAKE ISLAND Hy	28.30	12	T	T	05 00 10.0	
	baz=193,slow=76,SNR=1440						
WRAB	Tennant Creek	28.34	243	P	P	04 30 24.2	-1.4
WRAB	Tennant Creek	28.34	243	P	P	04 30 25.2	-0.4
WRAB	Tennant Creek	28.34	243	*ce*P	P	04 30 24.3	-1.3
WRAB				pmax	pmax		
	comp=Z,19nm,1.1s						
WB2	Warramunga Arr	28.34	243	P	P	04 30 23.7	-1.9
WB2				IAmb	IAmb	04 30 41.7	
	comp=Z,45nm,1.1s						
WRA	Warramunga Arr	28.35	243	P	P	04 30 25.0	-0.7
	comp=Z,16nm,1.0s,baz=68,slow=9.2,SNR=39						
WRA				PcP	PcP	04 33 38.8	+0.2
	comp=Z,4.5nm,1.1s,baz=71,slow=2.7,SNR=7.0						
WRA				LR	LR	04 41 14.5	
	comp=Z,1μm,19.7s,baz=66,slow=35						
	comp=Z,16nm,1.0s						
WRA	Warramunga Arr	28.35	243	P	P	04 30 24.7	-1.1
WRA	Warramunga Arr	28.35	243	*i* P	P	04 30 24.2	-1.5
WRA				pmax	pmax		
	comp=Z,16nm,1.0s						
CNB	Canberra Magne	29.08	200	P	P	04 30 33.0	+1.0
	baz=29						
CNB	Canberra Magne	29.08	200	P	P	04 30 33.3	+1.3
CAN	Canberra	29.20	200	P	P	04 30 32.8	-0.4
CAN	Canberra	29.20	200	P	P	04 30 34.1	+0.9
CAN	Canberra	29.20	200	P	P	04 30 32.8	-0.4
CAN				pmax	pmax		
	comp=Z,25nm,1.0s						
STKA	Stephens Creek	29.73	215	P	P	04 30 37.0	-0.8
	comp=Z,4.9nm,0.4s,baz=48,slow=14,SNR=21						
STKA				LR	LR	04 42 52.5	
	comp=Z,1μm,18.3s,baz=40,slow=37						
	comp=Z,4.9nm,0.4s						
STKA	Stephens Creek	29.73	215	P	P	04 30 38.1	+0.3
	baz=30,SNR=18						
STKA	Stephens Creek	29.73	215	P	P	04 30 36.6	-1.2
STKA	Stephens Creek	29.73	215	P	P	04 30 37.8	0.0
STKA	Stephens Creek	29.73	215	*de*P	P	04 30 37.4	-0.4
AS01	Alice Springs	30.16	236	P	P	04 30 42.4	+0.6
AS31	Alice Springs	30.20	236	P	P	04 30 40.6	-1.5
ASAR	Alice Springs	30.20	236	P	P	04 30 41.3	-0.8
	comp=Z,3.0nm,0.8s,baz=64,slow=9.3,SNR=19						
ASAR				PcP	PcP	04 33 43.1	-0.1
	comp=Z,2.8nm,0.8s,baz=57,slow=2.6,SNR=5.8						
ASAR				ScP	ScP	04 37 26.6	+0.7
	comp=Z,0.2nm,0.3s,baz=67,slow=4.2,SNR=4.1						

ASAR				LR	LR	04 42 24.1	
	comp=Z,1µm,19.7s,baz=71,slow=36						
	comp=Z,3.0nm,0.8s						
ASAR	**Alice Springs**	**30.20**	**236**	P	**P**	**04 30 41.1**	**-1.1**
MILA	**Mila**	**30.73**	**199**	P	**P**	**04 30 47.2**	**+0.5**
	baz=31,SNR=4.5						
LCRK	**Leigh Creek**	**30.78**	**221**	P	**P**	**04 30 46.5**	**-0.6**
KNRA	**Kununurra**	**32.39**	**254**	P	**P**	**04 30 58.6**	**-2.8**
KNRA	**Kununurra**	**32.39**	**254**	P	**P**	**04 31 01.2**	**-0.3**
HTT	**Hallett**	**32.40**	**216**	P	**P**	**04 31 00.8**	**-0.6**
	baz=32,SNR=11						
HTT	**Hallett**	**32.40**	**216**	P	**P**	**04 31 01.0**	**-0.4**
TOO	**Toolangi**	**32.50**	**203**	P	**P**	**04 31 03.1**	**+1.0**
	baz=32,SNR=4.7						
TOO	**Toolangi**	**32.50**	**203**	P	**P**	**04 31 01.9**	**-0.2**
TOO	**Toolangi**	**32.50**	**203**	P	**P**	**04 31 03.4**	**+1.2**
TOO	**Toolangi**	**32.50**	**203**	P	**P**	**04 31 02.0**	**-0.2**
TOO				pmax	pmax		
	comp=Z,12nm,0.9s						
WHYH	**Whyalla**	**32.92**	**218**	P	**P**	**04 31 06.3**	**+0.4**
BRAT	**Ballarat**	**33.12**	**205**	P	**P**	**04 31 09.4**	**+1.9**
URZ	**Urewera**	**33.33**	**157**	LR	LR	04 42 14.8	
	comp=Z,316nm,21.9s,baz=48,slow=32						
ARPS	**Mount Arapiles**	**33.41**	**209**	P	**P**	**04 31 10.3**	**+0.2**
MULG	**Mulgathing**	**33.49**	**225**	P	**P**	**04 31 09.9**	**-1.0**
RTZ	**Ruatahuna**	**33.58**	**157**	P	**P**	**04 31 11.1**	**-0.6**
BBOO	**Buckleboo**	**33.71**	**220**	P	**P**	**04 31 12.6**	**-0.3**
	baz=34,SNR=19						
BBOO	**Buckleboo**	**33.71**	**220**	P	**P**	**04 31 11.8**	**-1.1**
BBOO	**Buckleboo**	**33.71**	**220**	P	**P**	**04 31 12.4**	**-0.5**
BKZ	**Black Stump Fm**	**33.88**	**158**	P	**P**	**04 31 14.1**	**-0.2**
BKZ				IAmb	IAmb	04 31 44.8	
	comp=Z,25nm,1.1s						
MRZ	**Mangatainoka R**	**34.89**	**160**	P	**P**	**04 31 22.1**	**-0.8**
MRZ				IAmb	IAmb	04 31 41.3	
	comp=Z,54nm,1.4s						
TCW	**Tory Channel**	**34.98**	**162**	P	**P**	**04 31 22.9**	**-0.8**
TUWZ	**Tuamarina**	**35.08**	**163**	P	**P**	**04 31 24.0**	**-0.6**
THZ	**Tophouse**	**35.10**	**164**	P	**P**	**04 31 24.0**	**-0.8**
THZ				IAmb	IAmb	04 32 04.8	
	comp=Z,77nm,1.6s						
SANI	**Sanana**	**35.38**	**278**	P	**P**	**04 31 29.7**	**+2.2**
SANI	**Sanana**	**35.38**	**278**	P	**P**	**04 31 26.6**	**-0.9**
	comp=Z,28nm,1.1s,comp=Z,914nm						
WRKA	**Warakurna**	**35.42**	**238**	P	**P**	**04 31 26.3**	**-1.5**
	baz=35,SNR=16						
WRKA	**Warakurna**	**35.42**	**238**	P	**P**	**04 31 26.9**	**-0.9**
FITZ	**Fitzroy Crossi**	**35.77**	**250**	P	**P**	**04 31 29.4**	**-1.5**
RPZ	**Rata Peaks**	**36.51**	**168**	LR	LR	04 45 50.8	
	comp=Z,575nm,18.2s,baz=340,slow=35						
MQZ	**McQueen's Vall**	**36.86**	**166**	P	**P**	**04 31 40.0**	**+0.3**
FORT	**Forrest**	**38.12**	**229**	P	**P**	**04 31 49.0**	**-1.7**
FORT				IAmb	IAmb	04 32 15.2	
	comp=Z,41nm,1.0s						
DAV	**Davao City (W)**	**38.42**	**292**	LR	LR	04 48 03.7	
	comp=Z,173nm,18.1s,baz=12,slow=37						
LUWI	**Luwuk**	**38.73**	**279**	P	**P**	**04 31 55.6**	**-0.4**
LUWI				IAmb	IAmb	04 31 59.4	
	comp=Z,73nm,1.1s						
LUWI	**Luwuk**	**38.73**	**279**	P	**P**	**04 31 58.8**	**+2.8**
LUWI	**Luwuk**	**38.73**	**279**	P	**P**	**04 31 57.2**	**+1.2**
	comp=Z,55nm,1.1s,comp=Z,6µm						
JCJ	**Chichijima**	**39.49**	**333**	LR	LR	04 45 39.8	
	comp=Z,243nm,20.4s,baz=110,slow=32						
MRSI	**Marisa**	**39.87**	**281**	P	P	04 32 19.2	+14
RAR	**Rarotonga**	**39.98**	**113**	LR	LR	04 44 33.7	
	comp=Z,311nm,20.6s,baz=282,slow=30						
KAPI	**Kappang**	**41.09**	**272**	LR	LR	04 51 46.3	
	comp=Z,177nm,18.1s,baz=112,slow=40						
TOLI2	**Tolitoli**	**41.14**	**281**	P	**P**	**04 32 14.5**	**-1.5**
TOLI2	**Tolitoli**	**41.14**	**281**	P	**P**	**04 32 16.9**	**+0.8**
PSA00	**Pilbara Seismi**	**41.82**	**247**	P	**P**	**04 32 20.4**	**-1.1**
PSA00	**Pilbara Seismi**	**41.82**	**247**	P	**P**	**04 32 21.1**	**-0.5**
KMBL	**Kambalda**	**43.12**	**232**	P	**P**	**04 32 31.5**	**-0.6**
	baz=43						
KMBL	**Kambalda**	**43.12**	**232**	P	**P**	**04 32 32.1**	**0.0**
MEEK	**Meekatharra**	**44.18**	**240**	P	**P**	**04 32 39.5**	**-1.1**
	baz=44,SNR=8.5						
MEEK	**Meekatharra**	**44.18**	**240**	P	**P**	**04 32 40.2**	**-0.4**
MYLDM	**Lahad Datu**	**44.41**	**286**	P	**P**	**04 32 42.4**	**-0.3**
BKB	**Balikpapan**	**44.46**	**277**	P	**P**	**04 32 43.0**	**0.0**
KKM	**Kota Kinabalu**	**46.84**	**286**	P	**P**	**04 33 01.1**	**-0.8**
KKM	**Kota Kinabalu**	**46.84**	**286**	P	**P**	**04 33 03.2**	**+1.2**
MORW	**Morawa**	**47.06**	**238**	P	**P**	**04 33 02.3**	**-1.1**
MORW	**Morawa**	**47.06**	**238**	P	**P**	**04 33 04.4**	**+1.0**
NWAO	**Narrogin (SRO)**	**47.36**	**232**	LR	LR	04 52 53.2	
	comp=Z,684nm,19.6s,baz=56,slow=36						
NWAO	**Narrogin (SRO)**	**47.36**	**232**	P	**P**	**04 33 05.2**	**-0.5**
NWAO	**Narrogin (SRO)**	**47.36**	**232**	P	**P**	**04 33 05.2**	**-0.5**
NWAO				pmax	pmax		
	comp=Z,91nm,1.8s						
INU	**Inuyama**	**48.82**	**334**	P	**P**	**04 33 16.8**	**0.0**
INU				IAmb	IAmb	04 33 20.0	
	comp=Z,31nm,1.0s						
INU	**Inuyama**	**48.82**	**334**	P	**P**	**04 33 18.9**	**+2.1**
JGF	**Kuroka**	**48.89**	**334**	P	**P**	**04 33 16.7**	**-0.7**
JGF				IAmb	IAmb	04 33 20.4	
	comp=Z,24nm,1.1s						
JGF	**Kuroka**	**48.89**	**334**	P	**P**	**04 33 19.2**	**+1.8**
PPT	**Papeete**	**48.96**	**106**	LR	LR	04 48 25.7	
	comp=Z,131nm,21.4s,baz=280,slow=29						
PPT2	**Papeete2**	**48.96**	**106**	*e*S	**S**	**04 40 20.1**	**-2.8**
	comp=Z,231nm,25.5s						
PPT2				*e*SS	**SS**	**04 43 53.3**	**-0.6**
	comp=Z,87nm,26.5s						
PPT2				*e*LQ	LQ	04 45 18.3	
	comp=Z,612nm,25.2s						
PPT2				*e*LR	LR	04 47 22.4	
	comp=Z,448nm,24.8s						
PPT2				*e*LR	LR	04 47 22.5	
	comp=Z,394nm,26.2s						
JMN	**Monobe**	**48.96**	**330**	P	**P**	**04 33 17.7**	**-0.3**
JMN	**Monobe**	**48.96**	**330**	P	**P**	**04 33 19.7**	**+1.7**
MJAR	**Matsushiro Arr**	**49.34**	**336**	P	**P**	**04 33 19.9**	**-0.9**
	comp=Z,11nm,1.1s,baz=164,slow=8.8,SNR=12						
	comp=Z,11nm,1.1s						
MAJO	**Matsushiro**	**49.34**	**336**	P	**P**	**04 33 20.9**	**+0.1**
MAJO	**Matsushiro**	**49.34**	**336**	P	**P**	**04 33 22.4**	**+1.6**
MAJO	**Matsushiro**	**49.34**	**336**	*d i*P	**P**	**04 33 21.9**	**+1.1**
MAJO				pmax	pmax		
	comp=Z,16nm,1.1s						
MJB9	**Matsu-Tunnel**	**49.34**	**336**	P	**P**	**04 33 21.0**	**+0.2**
JMM	**Marumori**	**49.51**	**339**	P	**P**	**04 33 21.3**	**-0.7**
SBUM	**Sibu**	**49.78**	**280**	P	**P**	**04 33 24.2**	**-0.3**
SBUM				IAmb	IAmb	04 33 28.7	
	comp=Z,30nm,1.2s						
JNU	**Nakatsue**	**50.05**	**327**	LR	LR	04 55 03.7	
	comp=Z,54nm,18.2s,baz=132,slow=37						
JHS	**Saijyo**	**50.35**	**330**	P	**P**	**04 33 30.6**	**+2.0**
JSD	**Sado**	**50.61**	**337**	P	**P**	**04 33 30.2**	**-0.2**
KSM	**Kuching**	**51.44**	**278**	P	**P**	**04 33 35.8**	**-1.4**
KSM	**Kuching**	**51.44**	**278**	P	**P**	**04 33 39.2**	**+2.1**
JTM	**Tenmabayashi**	**52.04**	**341**	P	**P**	**04 33 44.3**	**+3.2**
ERM	**Erimo**	**52.52**	**343**	*ce*P	**P**	**04 33 45.0**	**+0.4**
ERM				pmax	pmax		
	comp=Z,23nm,0.8s						
TJN	**Taejon**	**54.40**	**327**	P	**P**	**04 34 00.1**	**+1.5**
TJN	**Taejon**	**54.40**	**327**	⇑*e*P	**P**	**04 34 00.0**	**+1.5**
JKA	**Kamikawa-asahi**	**54.62**	**344**	P	**P**	**04 33 59.5**	**-0.5**
ASAJ	**Asahikawa**	**54.62**	**344**	LR	LR	04 54 41.4	
	comp=Z,575nm,21.2s,baz=116,slow=33						
ASAJ	**Asahikawa**	**54.62**	**344**	P	**P**	**04 33 59.5**	**-0.5**
ASAJ				pmax	pmax		
	comp=Z,50nm,1.1s						
KSRS	**Korea Array**	**54.90**	**328**	P	**P**	**04 34 02.6**	**+0.5**
	comp=Z,8.2nm,0.9s,baz=142,slow=6.9,SNR=25						
KSRS				LR	LR	04 56 05.4	
	comp=Z,157nm,18.7s,baz=125,slow=34						
	comp=Z,8.2nm,0.9s						
KSAR	**Wonju Array Be**	**54.91**	**328**	P	**P**	**04 34 01.7**	**-0.6**
KSAR	**Wonju Array Be**	**54.91**	**328**	P	**P**	**04 34 01.7**	**-0.6**
KS19	**Wonju Array Si**	**54.97**	**328**	P	**P**	**04 34 02.1**	**-0.6**
INCN	**Inchon**	**55.61**	**327**	P	**P**	**04 34 07.3**	**0.0**
INCN				IAmb	IAmb	04 34 10.7	
	comp=Z,41nm,1.2s						
INCN	**Inchon**	**55.61**	**327**	P	**P**	**04 34 07.3**	**0.0**
INCN				pmax	pmax		
	comp=Z,41nm,1.2s						
NJ2	**Nanjing**	**56.70**	**317**	*e*P	**P**	**04 34 18.3**	**+3.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
QIZ	**Qiongzhong**	**57.20**	**299**	P	**P**	**04 34 22.4**	**+3.4**
QIZ				S	**S**	**04 42 11.8**	**-3.2**
QIZ				pmax	pmax		
	comp=Z,270nm,5.6s						
QIZ				LR	LR		
	comp=Z,270nm,17.5s						
QIZ				LR	LR		
	comp=Z,260nm,22.3s						
QIZ				LR	LR		
	comp=Z,270nm,23.9s						
YSS	**Yuzh-Sakhalins**	**57.21**	**345**	P	**P**	**04 34 18.6**	**+0.1**
YSS				IAmb	IAmb	04 34 22.6	
	comp=Z,32nm,1.1s						
YSS	**Yuzh-Sakhalins**	**57.21**	**345**	P	**P**	**04 34 20.0**	**+1.5**
YSS	**Yuzh-Sakhalins**	**57.21**	**345**	*e*P	**P**	**04 34 19.8**	**+1.3**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
TAOE	**Nuku Hiva Isla**	**58.15**	**95**	*e*S	**S**	**04 42 24.6**	**-3.3**
	comp=Z,139nm,25.6s						
TAOE				*e*SS	**SS**	**04 46 18.6**	**-1.0**
	comp=Z,73nm,27.0s						
TAOE				*e*LR	LR	04 51 38.4	
	comp=Z,429nm,23.3s						
TAOE	**Nuku Hiva Isla**	**58.15**	**95**	*e*T	T	05 37 26.2	
	comp=Z,22nm,0.3s						
USA0B	**Ussuriysk Arra**	**58.33**	**336**	P	**P**	**04 34 25.9**	**-0.5**
USA0B	**Ussuriysk Arra**	**58.33**	**336**	*c i*P	**P**	**04 34 26.7**	**+0.2**
USRK	**Ussuriysk Ar.**	**58.33**	**336**	P	**P**	**04 34 27.1**	**+0.7**
	comp=Z,21nm,0.9s,baz=120,slow=6.8,SNR=31						
USRK				LR	LR	04 59 45.5	
	comp=Z,87nm,19.6s,baz=143,slow=36						
	comp=Z,21nm,0.9s						
USRK	**Ussuriysk Ar.**	**58.33**	**336**	P	**P**	**04 34 26.5**	**0.0**
WHN	**Wuhan**	**58.99**	**313**	P	**P**	**04 34 31.0**	**-0.3**
GULI	**GuiLin**	**59.43**	**306**	⇓P	P	04 34 42.6	+8.1
GULI				S	S	04 43 16.3	+32
GULI				pmax	pmax		
	comp=Z,20nm,1.3s						
GULI				LR	LR		
	comp=N,160nm,17.4s						
GULI				LR	LR		
	comp=E,140nm,20.6s						
GULI				LR	LR		
	comp=Z,270nm,20.6s						
MDJ	**Mudanjiang**	**59.67**	**334**	P	**P**	**04 34 35.3**	**-0.5**
MDJ				sP	pwP	04 34 59.8	+19
MDJ				PP	**PP**	**04 36 50.6**	**+2.9**
MDJ				S	**S**	**04 42 50.3**	**+3.9**
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,240nm,4.5s						
MDJ				LR	LR		
	comp=Z,310nm,14.6s						
MDJ				LR	LR		
	comp=Z,170nm,11.4s						
MDJ				LR	LR		
	comp=Z,230nm,24.0s						
MDJ	**Mudanjiang**	**59.67**	**334**	P	**P**	**04 34 34.8**	**-1.0**
BKNI	**Bangkinang**	**60.35**	**275**	P	**P**	**04 34 41.0**	**-0.1**
BKNI	**Bangkinang**	**60.35**	**275**	P	**P**	**04 34 42.1**	**+1.0**
TYV	**Tymovskoe**	**60.88**	**347**	*e*P	**P**	**04 34 44.5**	**+0.6**
TYV				pmax	pmax		
	comp=Z,15nm,1.3s						
TYV				pmax	pmax		
	comp=Z,200nm,6.4s						
CN2	**Changchun**	**60.91**	**331**	P	**P**	**04 34 44.8**	**+0.5**
CN2				pmax	pmax		
	comp=Z,30nm,1.2s						
CN2				LR	LR		
	comp=Z,200nm,17.0s						
CN2				LR	LR		
	comp=Z,200nm,17.0s						
CN2				LR	LR		
	comp=Z,200nm,17.0s						
PET	**Petropavlovsk**	**60.96**	**358**	P	**P**	**04 34 44.5**	**+0.1**
PET	**Petropavlovsk**	**60.96**	**358**	*e*P	**P**	**04 34 43.9**	**-0.5**
PET				*e*S	**S**	**04 42 59.9**	**-2.6**
PET				*e*SS	**SS**	**04 46 59.1**	**-3.2**
PEA0B	**Petropavlovsk-**	**61.08**	**358**	P	**P**	**04 34 44.7**	**-0.5**
PEA0B	**Petropavlovsk-**	**61.08**	**358**	P	**P**	**04 34 44.7**	**-0.5**
PEA0B				pmax	pmax		
	comp=Z,83nm,1.3s						
PETK	**Petropavlovsk-**	**61.08**	**358**	P	**P**	**04 34 45.8**	**+0.6**
	comp=Z,28nm,1.0s,baz=176,slow=8.3,SNR=16						
PETK				LR	LR	04 56 34.6	
	comp=Z,307nm,22.0s,baz=161,slow=32						
	comp=Z,28nm,1.0s						
PETK	**Petropavlovsk-**	**61.08**	**358**	P	**P**	**04 34 44.9**	**-0.3**
IPM	**Ipoh**	**61.12**	**280**	P	**P**	**04 34 45.3**	**-1.1**
IPM	**Ipoh**	**61.12**	**280**	P	**P**	**04 34 46.8**	**+0.4**
BNX	**BinXian**	**61.51**	**334**	⇑P	**P**	**04 34 47.6**	**-0.7**
BNX				pmax	pmax		
	comp=Z,15nm,1.3s						
BNX				pmax	pmax		
	comp=Z,130nm,4.9s						
SHEM	**Shemya Is, Ala**	**61.66**	**9**	LR	LR	04 59 25.0	
	comp=Z,172nm,18.3s,baz=134,slow=34						
KULM	**Kulim**	**61.66**	**280**	P	**P**	**04 34 47.7**	**-2.2**
KULM				IAmb	IAmb	04 34 53.0	
	comp=Z,31nm,1.2s						
ENH	**Enshi**	**62.46**	**310**	P	**P**	**04 34 54.5**	**-0.5**
LYN	**LuoYang**	**62.51**	**316**	⇓P	**P**	**04 34 55.6**	**+0.4**
LYN				pP	pwP	04 35 11.9	+12
LYN				sP	PcP	04 35 18.8	-16
LYN				S	**S**	**04 43 25.8**	**+2.9**
LYN				pmax	pmax		
	comp=Z,120nm,4.3s						
LYN				LR	LR		
	comp=Z,200nm,14.3s						
LYN				LR	LR		
	comp=Z,160nm,16.6s						
LYN				LR	LR		
	comp=Z,210nm,20.4s						
KLR	**Kul'dur**	**62.61**	**339**	LR	LR	05 00 06.4	
	comp=Z,169nm,19.9s,baz=146,slow=34						
KLR	**Kul'dur**	**62.61**	**339**	*c i*P	**P**	**04 34 55.6**	**0.0**
KLR				pmax	pmax		
	comp=Z,34nm,1.3s						
HNS	**HongShan**	**62.63**	**320**	⇑P	**P**	**04 34 56.1**	**+0.1**
HNS				pP	pwP	04 35 14.8	+14
HNS				pmax	pmax		
	comp=Z,20nm,1.1s						
RPSI	**Rantau Prapat**	**62.84**	**277**	P	**P**	**04 34 56.1**	**-1.7**
RPSI				IAmb	IAmb	04 35 01.1	
	comp=Z,25nm,1.3s						
PSI	**Prapat**	**62.86**	**277**	P	**P**	**04 34 57.7**	**-0.5**
PSI	**Prapat**	**62.86**	**277**	P	**P**	**04 34 56.1**	**-2.1**
PSI				pmax	pmax		
	comp=Z,25nm,1.3s						
GYA	**Guiyang**	**62.93**	**305**	P	**P**	**04 34 59.6**	**+1.2**
GYA				pmax	pmax		
	comp=Z,27nm,1.7s						
GSTR	**Great Sitkin T**	**63.14**	**16**	P	**P**	**04 34 59.4**	**+0.3**
BJT	**Baijiatuau**	**63.32**	**323**	P	**P**	**04 35 00.6**	**+0.1**
BJT				IAmb	IAmb	04 35 03.5	
	comp=Z,28nm,1.6s						
BJT	**Baijiatuau**	**63.32**	**323**	P	**P**	**04 35 00.6**	**+0.1**
BJT				pmax	pmax		
	comp=Z,28nm,1.6s						
BJI	**Beijing**	**63.33**	**323**	P	**P**	**04 35 02.6**	**+2.0**
SRIT	**Nakonsritamara**	**63.40**	**284**	P	**P**	**04 35 01.3**	**-0.3**
GSI	**Gunungsitoli**	**63.93**	**275**	P	**P**	**04 35 03.6**	**-1.5**
GSI	**Gunungsitoli**	**63.93**	**275**	P	**P**	**04 35 05.0**	**-0.1**
GSI	**Gunungsitoli**	**63.93**	**275**	P	**P**	**04 35 04.7**	**-0.4**
XAN	**Xi'an**	**64.73**	**314**	P	**P**	**04 35 10.1**	**+0.1**
XAN				pP	pwP	04 35 26.5	+12
XAN				pmax	pmax		
	comp=Z,11nm,1.5s						
XAN				LR	LR		
	comp=Z,150nm,15.1s						
XAN				LR	LR		
	comp=Z,180nm,16.5s						
XAN				LR	LR		
	comp=Z,260nm,18.5s						
HEH	**HeiHe**	**65.07**	**337**	*e*P	**P**	**04 35 11.8**	**0.0**
HEH				pmax	pmax		
	comp=Z,32nm,1.1s						
HEH				pmax	pmax		
	comp=Z,170nm,5.0s						
HEH				LR	LR		
	comp=Z,220nm,14.7s						
HEH				LR	LR		
	comp=Z,320nm,14.8s						
HEH				LR	LR		
	comp=Z,200nm,17.5s						
LHMI	**Lhok Sumawe**	**65.26**	**280**	P	**P**	**04 35 12.0**	**-1.7**
PHRA	**Phrae**	**65.52**	**294**	P	**P**	**04 35 15.5**	**+0.1**
KMI	**Kunming**	**65.63**	**302**	⇑P	**P**	**04 35 16.3**	**0.0**
KMI				pP	pwP	04 35 33.3	+12
KMI				pmax	pmax		
	comp=Z,22nm,1.5s						
KMI				LR	LR		
	comp=Z,140nm,16.4s						
KMI				LR	LR		
	comp=Z,150nm,16.7s						
XLT	**XiLinHaoTe**	**65.83**	**326**	⇑*i*P	**P**	**04 35 17.3**	**+0.3**
XLT				pP	pwP	04 35 33.3	+11
XLT				pmax	pmax		
	comp=Z,72nm,1.1s						
XLT				pmax	pmax		
	comp=Z,260nm,5.4s						
XLT				LR	LR		
	comp=Z,290nm,16.3s						
XLT				LR	LR		
	comp=Z,180nm,14.9s						
CRAI	**Chiangrai**	**65.95**	**296**	P	**P**	**04 35 18.4**	**+0.2**
CRAI				IAmb	IAmb	04 35 22.6	
	comp=Z,25nm,1.1s						
NIKH	**Nikolski High**	**66.06**	**19**	P	**P**	**04 35 19.1**	**+0.9**
	baz=213						
HHC	**Hu-ho-hao-te**	**66.63**	**321**	*e*P	**P**	**04 35 25.0**	**+2.8**
HHC				pmax	pmax		
	comp=Z,25nm,0.8s						
HHC				pmax	pmax		
	comp=Z,280nm,5.0s						
HHC				LR	LR		
	comp=Z,330nm,17.2s						
HHC				LR	LR		
	comp=Z,360nm,17.7s						
HHC				LR	LR		
	comp=Z,340nm,16.1s						
CM31	**Chiang Mai Arr**	**66.67**	**294**	P	**P**	**04 35 22.0**	**-0.8**
CM31				IAmb	IAmb	04 35 26.7	
	comp=Z,18nm,1.1s						
CMAR	**Chiang Mai Arr**	**66.67**	**294**	P	**P**	**04 35 24.1**	**+1.3**
	comp=Z,7.3nm,1.0s,baz=122,slow=4.5,SNR=17						
CMAR				LR	LR	05 03 43.8	
	comp=Z,68nm,20.3s,baz=130,slow=35						
	comp=Z,7.3nm,1.0s						
CMAR	**Chiang Mai Arr**	**66.67**	**294**	P	**P**	**04 35 22.6**	**-0.2**
CMAR	**Chiang Mai Arr**	**66.67**	**294**	P	**P**	**04 35 22.6**	**-0.2**
CHTO	**Chiang Mai**	**66.78**	**294**	P	**P**	**04 35 22.9**	**-0.6**
CHTO	**Chiang Mai**	**66.78**	**294**	P	**P**	**04 35 22.9**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,1.0nm,1.2s						
PZH	**PanZhiHua**	**66.98**	**303**	P	**P**	**04 35 24.8**	**0.0**
PZH				S	**S**	**04 44 15.0**	**-3.7**
PZH				pmax	pmax		
	comp=Z,20nm,1.2s						
PZH				pmax	pmax		
	comp=Z,120nm,5.5s						
PZH				LR	LR		
	comp=Z,490nm,20.8s						
PZH				LR	LR		
	comp=Z,520nm,22.2s						
PZH				LR	LR		
	comp=Z,470nm,20.8s						
CD2	**Chengdu**	**67.14**	**308**	P	**P**	**04 35 25.5**	**-0.1**
CD2				S	**S**	**04 44 19.9**	**-0.4**
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
CD2				pmax	pmax		
	comp=Z,90nm,5.5s						
BTO	**Baotou**	**67.46**	**320**	*e*P	**P**	**04 35 29.3**	**+1.8**
BTO				pP	PcP	04 35 45.4	-10
BTO				sP	pwP	04 35 52.4	+20
BTO				S	**S**	**04 44 21.3**	**-2.6**
BTO				sS	sS	04 44 48.4	+20
BTO				pmax	pmax		
	comp=Z,35nm,1.5s						
BTO				pmax	pmax		
	comp=Z,490nm,9.5s						
BTO				LR	LR		
	comp=Z,880nm,16.8s						
BTO				LR	LR		
	comp=Z,560nm,10.4s						
BTO				LR	LR		
	comp=Z,540nm,13.1s						
UNV	**Unalaska Valle**	**67.57**	**20**	P	**P**	**04 35 28.3**	**+0.5**
	baz=215						
HIA	**Hailar**	**67.59**	**332**	P	**P**	**04 35 28.3**	**+0.3**
HIA				IAmb	IAmb	04 35 31.4	
	comp=Z,26nm,1.1s						
HIA	**Hailar**	**67.59**	**332**	P	**P**	**04 35 28.3**	**+0.3**
HIA				pmax	pmax		
	comp=Z,26nm,1.1s						
ZEA	**Zeya**	**67.92**	**339**	*e*P	**P**	**04 35 30.9**	**+0.9**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=N,30nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,100nm,3.9s						
ZEA				MLR	MLR		
	comp=Z,200nm,21.0s						
MA2	**Magadan**	**67.99**	**354**	LR	LR	05 01 10.3	
	comp=Z,175nm,21.9s,baz=136,slow=32						
TNCH	**TengChong**	**69.16**	**301**	*e*P	**P**	**04 35 39.8**	**+1.2**
TNCH				pP	PcP	04 35 54.8	-7.7
SPIA	**Saint Paul Isl**	**69.22**	**16**	P	**P**	**04 35 38.5**	**+0.5**
	baz=211						
VNDA	**Vanda**	**69.35**	**180**	P	**P**	**04 35 39.1**	**+0.5**
	comp=Z,4.3nm,0.8s,baz=338,slow=5.8,SNR=8.2						
VNDA				LR	LR	05 00 37.5	
	comp=Z,176nm,21.8s,baz=344,slow=31						
	comp=Z,4.3nm,0.8s						
VNDA	**Vanda**	**69.35**	**180**	P	**P**	**04 35 38.8**	**+0.2**
VNDA				IAmb	IAmb	04 35 40.0	
	comp=Z,21nm,1.2s						
LZH	**Lanzhou**	**69.37**	**313**	*e*P	**P**	**04 35 40.8**	**+1.2**
LZH				pP	PcP	04 35 57.8	-5.3
LZH				sP	pwP	04 36 04.1	+20
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
S12K	**Black Hills**	**70.61**	**21**	P	**P**	**04 35 46.7**	**+0.1**
	baz=219						
SDPT	**Sand Point**	**70.92**	**22**	P	**P**	**04 35 49.2**	**+0.8**
	baz=221						
SEY	**Seymchan**	**71.17**	**356**	⇓*e*P	**P**	**04 35 50.0**	**+0.1**
SEY				pmax	pmax		
	comp=Z,15nm,1.3s						
ULN	**Ulaanbaatar**	**73.25**	**325**	P	**P**	**04 36 03.3**	**+0.5**
ULN	**Ulaanbaatar**	**73.25**	**325**	*c i*P	**P**	**04 36 03.4**	**+0.6**
ULN				pmax	pmax		
	comp=Z,43nm,1.3s						
SONM	**Songino Array**	**73.60**	**325**	P	**P**	**04 36 05.7**	**+0.8**
	comp=Z,15nm,1.0s,baz=138,slow=5.8,SNR=44						
SONM				LR	LR	05 09 04.9	
	comp=Z,94nm,18.7s,baz=140,slow=36						
	comp=Z,15nm,1.0s						
SONM	**Songino Array**	**73.60**	**325**	P	**P**	**04 36 05.1**	**+0.2**
SONM				IAmb	IAmb	04 36 08.7	
	comp=Z,30nm,1.2s						
SONM	**Songino Array**	**73.60**	**325**	P	**P**	**04 36 05.1**	**+0.2**
SONM				pmax	pmax		
	comp=Z,30nm,1.2s						
R16K	**Pilot Point**	**73.65**	**22**	P	**P**	**04 36 04.9**	**+0.2**
	baz=223						
GTA	**Gaotai**	**73.70**	**315**	⇑P	**P**	**04 36 06.5**	**+0.8**
GTA				pP	PcP	04 36 18.6	-2.8
GTA				pmax	pmax		
	comp=Z,18nm,1.2s						
GTA				pmax	pmax		
	comp=Z,140nm,5.2s						
GTA				LR	LR		
	comp=Z,130nm,18.2s						
GTA				LR	LR		
	comp=Z,140nm,17.3s						
GTA				LR	LR		
	comp=Z,190nm,18.5s						
YAK	**Yakutsk**	**74.06**	**345**	LR	LR	05 05 38.6	
	comp=Z,261nm,21.7s,baz=101,slow=33						
YAK	**Yakutsk**	**74.06**	**345**	P	**P**	**04 36 07.0**	**-0.1**
YAK	**Yakutsk**	**74.06**	**345**	*e*P	**P**	**04 36 06.9**	**-0.1**
YAK				*e*		04 36 16.9	
YAK				*e**PP	**PcP**	**04 36 25.4**	**+3.2**
YAK				*e*S	**SKiKP**	**04 45 34.5**	**-1.1**
YAK				*e**SS	ScS	04 46 30.0	+13
YAK				*e*SS	**SS**	**04 50 23.3**	**-1.4**
YAK				*e*SSS	SSS	04 53 39.9	
YAK				pmax	pmax		

	comp=Z,57nm,0.9s						
YAK				pmax	pmax		
	comp=N,15nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				smax	smax		
	comp=N,54nm,3.0s						
YAK				smax	smax		
	comp=E,29nm,3.0s						
R17K	**Ugashik Creek**	**74.14**	**22**	P	**P**	**04 36 08.4**	**+0.7**
	baz=224						
P16K	**Nushagak River**	**74.58**	**21**	P	**P**	**04 36 10.5**	**+0.4**
	baz=222						
Q17K	**Contact Creek**	**74.77**	**22**	P	**P**	**04 36 12.3**	**+0.9**
	baz=224						
Q16K	**King Salmon**	**74.79**	**21**	P	**P**	**04 36 12.1**	**+0.7**
	baz=224						
O16K	**Kokwok River B**	**74.96**	**20**	P	**P**	**04 36 13.0**	**+0.6**
	baz=222						
SHL	**Shillong**	**75.03**	**299**	P	**P**	**04 36 13.6**	**-0.2**
SHL	**Shillong**	**75.03**	**299**	P	**P**	**04 36 13.6**	**-0.2**
SHL				pmax	pmax		
	comp=Z,69nm,1.3s						
OHAK	**Old Harbor**	**75.05**	**24**	P	**P**	**04 36 13.6**	**+0.7**
	baz=227						
Q18K	**Katmai Hardscr**	**75.37**	**22**	P	**P**	**04 36 15.7**	**+0.7**
	baz=225						
N16K	**Nishlik Lake**	**75.39**	**19**	P	**P**	**04 36 15.9**	**+1.0**
	baz=221						
O17K	**Koliganek Bris**	**75.43**	**20**	P	**P**	**04 36 15.3**	**+0.2**
	baz=223						
KDAK	**Kodiak Island**	**75.71**	**24**	LR	LR	05 06 43.0	
	comp=Z,216nm,18.0s,baz=245,slow=34						
KDAK	**Kodiak Island**	**75.71**	**24**	P	**P**	**04 36 17.6**	**+1.0**
	baz=228						
P18K	**Big Mountain,**	**75.82**	**21**	P	**P**	**04 36 17.0**	**-0.4**
P18K				IAmb	IAmb	04 36 20.4	
	comp=Z,29nm,1.1s						
P18K	**Big Mountain,**	**75.82**	**21**	P	**P**	**04 36 17.4**	**0.0**
	baz=225						
BOD	**Bodaibo**	**75.97**	**336**	*e*P	**P**	**04 36 18.0**	**-0.2**
BOD				pmax	pmax		
	comp=Z,25nm,1.3s						
Q19K	**Cape Douglas,**	**76.08**	**22**	P	**P**	**04 36 19.1**	**+0.2**
	baz=226						
GOMU	**GeErMu**	**76.08**	**310**	P	**P**	**04 36 21.1**	**+1.3**
GOMU				pP	PcP	04 36 38.8	+6.8
GOMU				sP	sP	04 36 44.8	+21
GOMU				pmax	pmax		
	comp=Z,7.0nm,1.5s						
GOMU				pmax	pmax		
	comp=Z,140nm,5.2s						
BILL	**Bilibino**	**76.08**	**2**	P	**P**	**04 36 18.6**	**-0.1**
BILL	**Bilibino**	**76.08**	**2**	*c i*P	**P**	**04 36 18.1**	**-0.6**
BILL				*i*		04 36 28.9	
BILL						04 39 17.0	
BILL				pmax	pmax		
	comp=Z,48nm,1.3s						
BILL				MLR	MLR		
	comp=Z,118nm,17.0s						
O18K	**Koktuh Hills**	**76.15**	**21**	P	**P**	**04 36 19.5**	**+0.3**
	baz=225						
ZAK	**Zakamensk**	**76.68**	**326**	*e*P	**P**	**04 36 22.6**	**0.0**
ZAK				pmax	pmax		
	comp=Z,16nm,1.3s						
O19K	**Port Alsworth**	**76.71**	**21**	P	**P**	**04 36 23.3**	**+1.0**
	baz=226						
ANM	**Nome**	**76.75**	**14**	P	**P**	**04 36 22.9**	**+0.4**
ANM				IAmb	IAmb	04 36 26.3	
	comp=Z,23nm,1.2s						
ANM	**Nome**	**76.75**	**14**	P	**P**	**04 36 22.9**	**+0.4**
ANM				pmax	pmax		
	comp=Z,23nm,1.2s						
ANM	**Nome**	**76.75**	**14**	P	**P**	**04 36 23.6**	**+1.1**
	baz=214,SNR=23						
LSA	**Lhasa**	**76.86**	**303**	P	**P**	**04 36 26.5**	**+2.0**
LSA				pmax	pmax		
	comp=Z,21nm,2.0s						
LSA	**Lhasa**	**76.86**	**303**	P	**P**	**04 36 22.4**	**-2.1**
LSA				IAmb	IAmb	04 36 29.4	
	comp=Z,33nm,1.4s						
LSA	**Lhasa**	**76.86**	**303**	P	**P**	**04 36 22.4**	**-2.1**
LSA				pmax	pmax		
	comp=Z,33nm,1.4s						
SVW2	**Sparrevohn**	**76.91**	**20**	P	**P**	**04 36 23.2**	**-0.3**
SVW2	**Sparrevohn**	**76.91**	**20**	P	**P**	**04 36 25.0**	**+1.5**
ILSW	**Iliamna Southw**	**76.99**	**22**	P	**P**	**04 36 23.9**	**-0.2**
ILSW				IAmb	IAmb	04 36 26.5	
	comp=Z,38nm,1.2s						
TNA	**Tin City**	**77.00**	**13**	P	**P**	**04 36 23.7**	**-0.1**
TNA	**Tin City**	**77.00**	**13**	P	**P**	**04 36 24.4**	**+0.6**
	baz=212,SNR=17						
N19K	**Bonanza Creek**	**77.09**	**21**	P	**P**	**04 36 25.2**	**+0.6**
N19K				IAmb	IAmb	04 37 42.0	
	comp=Z,35nm,1.6s						
N19K	**Bonanza Creek**	**77.09**	**21**	P	**P**	**04 36 24.7**	**+0.1**
	baz=225						
IRK	**Irkutsk**	**77.12**	**328**	*e*P	**P**	**04 36 22.8**	**-2.1**
IRK				pmax	pmax		
	comp=Z,32nm,2.6s						
O20K	**Slope Mountain**	**77.25**	**22**	P	**P**	**04 36 26.0**	**+0.5**
	baz=227						
RSO	**Redoubt South**	**77.46**	**22**	P	**P**	**04 36 26.4**	**-0.4**
BRSE	**Bradley Lake S**	**77.73**	**23**	P	**P**	**04 36 28.7**	**+0.6**
	baz=229						
M19K	**Big River Lodg**	**77.89**	**20**	P	**P**	**04 36 29.5**	**+0.5**
M19K	**Big River Lodg**	**77.89**	**20**	P	**P**	**04 36 30.4**	**+1.4**
	baz=225,SNR=22						
L19K	**White Mountain**	**77.93**	**20**	P	**P**	**04 36 28.8**	**-0.4**
L19K				IAmb	IAmb	04 36 33.1	
	comp=Z,35nm,1.1s						
L19K	**White Mountain**	**77.93**	**20**	P	**P**	**04 36 30.4**	**+1.2**
	baz=225,SNR=20						
TTA	**Tatalina**	**78.10**	**19**	P	**P**	**04 36 30.3**	**+0.1**
TTA				IAmb	IAmb	04 36 33.8	
	comp=Z,17nm,1.1s						
TTA	**Tatalina**	**78.10**	**19**	P	**P**	**04 36 31.5**	**+1.3**
TTA	**Tatalina**	**78.10**	**19**	P	**P**	**04 36 30.3**	**+0.1**
TTA				pmax	pmax		
	comp=Z,17nm,1.1s						
TTA	**Tatalina**	**78.10**	**19**	P	**P**	**04 36 31.3**	**+1.1**
	baz=224,SNR=13						
SPCR	**Spurr Chakacha**	**78.16**	**21**	P	**P**	**04 36 31.7**	**+1.1**
	baz=228						
SPU	**Mount Spurr**	**78.20**	**21**	P	**P**	**04 36 30.3**	**-0.5**
CAPN	**Captain Cook N**	**78.25**	**22**	P	**P**	**04 36 32.3**	**+1.3**
	baz=229						
M20K	**Styx River**	**78.30**	**20**	P	**P**	**04 36 31.3**	**-0.1**
M20K	**Styx River**	**78.30**	**20**	P	**P**	**04 36 32.8**	**+1.4**
	baz=226						
SEW	**Seward**	**78.46**	**23**	P	**P**	**04 36 32.3**	**+0.2**
SEW				IAmb	IAmb	04 36 51.7	
	comp=Z,41nm,1.2s						
SEW	**Seward**	**78.46**	**23**	P	**P**	**04 36 33.7**	**+1.6**
	baz=230						
L20K	**Farewell, AK**	**78.47**	**20**	P	**P**	**04 36 33.6**	**+1.4**
	baz=226						
MOY	**Mondy**	**78.57**	**327**	*e*P	**P**	**04 36 33.6**	**+0.5**
MOY				pmax	pmax		
	comp=Z,27nm,1.9s						
O22K	**Cooper Landing**	**78.60**	**23**	P	**P**	**04 36 32.1**	**-0.8**
	baz=230						
FIS	**Fire Island**	**78.84**	**22**	P	**P**	**04 36 34.9**	**+0.7**
SUA	**Susitna One**	**78.86**	**21**	P	**P**	**04 36 34.7**	**+0.2**
	baz=229						
SKT	**Skwentna**	**78.92**	**21**	P	**P**	**04 36 35.4**	**+0.7**
SKT				IAmb	IAmb	04 38 11.1	
	comp=Z,32nm,1.7s						
SKT	**Skwentna**	**78.92**	**21**	P	**P**	**04 36 33.6**	**-1.1**
	baz=228						
RC01	**Rabbit Creek A**	**78.99**	**22**	P	**P**	**04 36 35.0**	**0.0**
RC01				IAmb	IAmb	04 36 38.2	
	comp=Z,26nm,1.1s						
RC01	**Rabbit Creek A**	**78.99**	**22**	P	**P**	**04 36 35.4**	**+0.3**
	baz=230						
K20K	**Telida**	**79.02**	**19**	P	**P**	**04 36 36.0**	**+0.8**
K20K	**Telida**	**79.02**	**19**	P	**P**	**04 36 36.5**	**+1.2**
	baz=225,SNR=13						
TAPN	**Taplejung**	**79.12**	**300**	*e*P	**P**	**04 36 37.9**	**+1.0**
GCSA	**Galena City Sc**	**79.17**	**17**	P	**P**	**04 36 36.4**	**+0.5**
	baz=223						
PPLA	**Purkeypile**	**79.32**	**20**	P	**P**	**04 36 36.9**	**-0.2**
PPLA				IAmb	IAmb	04 36 44.4	
	comp=Z,32nm,1.4s						
PPLA	**Purkeypile**	**79.32**	**20**	P	**P**	**04 36 37.5**	**+0.5**
	baz=227						
PWL	**Port Wells**	**79.37**	**23**	P	**P**	**04 36 37.9**	**+0.8**
PWL				IAmb	IAmb	04 36 40.4	
	comp=Z,32nm,1.0s						
PWL	**Port Wells**	**79.37**	**23**	P	**P**	**04 36 38.0**	**+0.8**
	baz=231						
PMR	**Palmer**	**79.53**	**22**	P	**P**	**04 36 37.7**	**-0.3**
PMR				IAmb	IAmb	04 36 41.0	
	comp=Z,27nm,1.1s						
PMR	**Palmer**	**79.53**	**22**	P	**P**	**04 36 38.8**	**+0.8**
PMR	**Palmer**	**79.53**	**22**	P	**P**	**04 36 37.7**	**-0.3**
PMR				pmax	pmax		
	comp=Z,27nm,1.1s						
PMR	**Palmer**	**79.53**	**22**	P	**P**	**04 36 37.5**	**-0.5**
	baz=230						
CUT	**Chulitna**	**79.65**	**21**	P	**P**	**04 36 38.1**	**-0.5**
	baz=229						
KNK	**Knik Glacier**	**79.67**	**22**	P	**P**	**04 36 39.1**	**+0.3**
	baz=231						
CAST	**Castle Rocks**	**79.71**	**20**	P	**P**	**04 36 38.3**	**-0.7**
CAST	**Castle Rocks**	**79.71**	**20**	P	**P**	**04 36 39.4**	**+0.4**
	baz=227,SNR=12						
CHUM	**Lake Minchumin**	**79.95**	**19**	P	**P**	**04 36 40.9**	**+0.7**
	baz=227,SNR=13						
SML	**Sawmill**	**79.97**	**22**	P	**P**	**04 36 40.2**	**-0.2**
SML				IAmb	IAmb	04 36 43.8	
	comp=Z,35nm,1.2s						
SML	**Sawmill**	**79.97**	**22**	P	**P**	**04 36 41.5**	**+1.1**
	baz=231						
RAMN	**Ramite**	**79.97**	**299**	*e*P	**P**	**04 36 41.4**	**-0.1**
M23K	**Glacier View**	**80.18**	**22**	P	**P**	**04 36 42.7**	**+1.1**
	baz=232						
KTH	**Kantishna Hill**	**80.19**	**20**	P	**P**	**04 36 40.7**	**-0.9**
RDOG	**Red Dog Mine**	**80.19**	**13**	P	**P**	**04 36 41.7**	**+0.3**
RDOG	**Red Dog Mine**	**80.19**	**13**	P	**P**	**04 36 42.7**	**+1.3**
	baz=216						
TRF	**Thorofare Moun**	**80.33**	**20**	P	**P**	**04 36 43.2**	**+0.7**
	baz=229						
SCM	**Sheep Creek Mo**	**80.36**	**22**	P	**P**	**04 36 43.3**	**+0.7**
	baz=232						
JIRN	**Jiri**	**80.50**	**300**	*e*P	**P**	**04 36 44.7**	**+0.2**
	comp=Z,7.8nm,0.2s						
BPAW	**Bear Paw Mtn.**	**80.53**	**19**	P	**P**	**04 36 43.7**	**+0.3**
	baz=228						
KLU	**Klutina**	**80.68**	**23**	P	**P**	**04 36 43.8**	**-0.5**
	baz=233						
RND	**Reindeer**	**80.80**	**20**	P	**P**	**04 36 44.3**	**-0.6**
RND	**Reindeer**	**80.80**	**20**	P	**P**	**04 36 44.3**	**-0.6**
RND				pmax	pmax		
	comp=Z,14nm,1.0s						
GUN	**Gumba**	**80.83**	**300**	*e*P	**P**	**04 36 46.5**	**+0.3**
	comp=Z,64nm,1.1s						
I21K	**Tanana**	**80.94**	**18**	P	**P**	**04 36 45.6**	**+0.1**
I21K	**Tanana**	**80.94**	**18**	P	**P**	**04 36 47.0**	**+1.5**
	baz=227						
M24K	**Tolsona, Glenn**	**80.95**	**22**	P	**P**	**04 36 47.4**	**+1.6**
	baz=233						
IMAR	**Indian Mountai**	**80.97**	**17**	P	**P**	**04 36 45.1**	**-0.6**
MCK	**McKinley**	**80.98**	**20**	P	**P**	**04 36 45.6**	**-0.1**
MCK	**McKinley**	**80.98**	**20**	P	**P**	**04 36 45.7**	**-0.1**
MCK				pmax	pmax		
	comp=Z,46nm,1.0s						
MCK	**McKinley**	**80.98**	**20**	P	**P**	**04 36 45.6**	**-0.1**
	baz=230,SNR=30						
H21K	**Melozitna Rive**	**81.02**	**18**	P	**P**	**04 36 46.5**	**+0.6**
	baz=226						
BWN	**Browne**	**81.08**	**20**	P	**P**	**04 36 46.1**	**-0.2**
PKI	**Pulchoki**	**81.15**	**300**	*e*P	**P**	**04 36 47.8**	**-0.1**
PKIN	**Phulchoki**	**81.16**	**300**	*e*P	**P**	**04 36 47.8**	**-0.1**
MLY	**Manley**	**81.23**	**19**	P	**P**	**04 36 47.3**	**+0.1**
MLY	**Manley**	**81.23**	**19**	P	**P**	**04 36 47.3**	**+0.1**
	baz=228,SNR=16						
G21K	**Allakaket**	**81.42**	**17**	P	**P**	**04 36 49.2**	**+1.2**
	baz=226						
DMN	**Daman**	**81.42**	**299**	*e*P	**P**	**04 36 50.1**	**+0.8**
NEA2	**Nenana**	**81.48**	**19**	P	**P**	**04 36 47.8**	**-0.6**
NEA2				IAmb	IAmb	04 36 50.7	
	comp=Z,22nm,1.0s						
NEA2	**Nenana**	**81.48**	**19**	P	**P**	**04 36 48.1**	**-0.4**
	baz=230,SNR=19						
H22K	**Ishtalitna Cre**	**81.61**	**18**	P	**P**	**04 36 50.2**	**+1.1**
	baz=228						
WRH	**Wood River Hil**	**81.73**	**20**	P	**P**	**04 36 48.6**	**-1.2**
WRH				IAmb	IAmb	04 36 52.0	
	comp=Z,17nm,1.0s						
I23K	**Minto, Yukon-K**	**81.75**	**19**	P	**P**	**04 36 50.4**	**+0.6**
	baz=230						
MCARA	**McCarthy VSAT**	**81.75**	**24**	P	**P**	**04 36 50.7**	**+0.7**
	baz=236						
QSPA	**South Pole Qui**	**81.84**	**180**	LR	LR	05 10 42.5	
	comp=Z,172nm,18.9s,baz=358,slow=34						
QSPA	**South Pole Qui**	**81.84**	**180**	P	**P**	**04 36 49.6**	**-0.9**
GKN	**Gorkha**	**81.92**	**300**	*e*P	**P**	**04 36 52.3**	**+0.5**
F21K	**Alatna River**	**81.92**	**16**	P	**P**	**04 36 50.9**	**+0.2**
	baz=226						
CCB	**Clear Creek Bu**	**81.94**	**20**	P	**P**	**04 36 50.1**	**-0.8**
MDM	**Murphy Dome**	**82.00**	**19**	P	**P**	**04 36 50.1**	**-1.1**
MDM				IAmb	IAmb	04 36 53.5	
	comp=Z,27nm,1.1s						
TCOL	**CIGO, UAF Yank**	**82.06**	**20**	P	**P**	**04 36 50.3**	**-1.1**
TCOL	**CIGO, UAF Yank**	**82.06**	**20**	P	**P**	**04 36 53.0**	**+1.6**
	baz=231,SNR=6.5						
COLA	**College**	**82.07**	**20**	P	**P**	**04 36 50.7**	**-0.7**
COLA	**College**	**82.07**	**20**	P	**P**	**04 36 52.0**	**+0.5**
COLA	**College**	**82.07**	**20**	*d i*P	**P**	**04 36 51.0**	**-0.5**
COLA				pmax	pmax		
	comp=Z,32nm,1.1s						
COLA	**College**	**82.07**	**20**	P	**P**	**04 36 52.9**	**+1.4**
	baz=231						
HDA	**Harding Lake**	**82.08**	**20**	P	**P**	**04 36 50.5**	**-1.1**
HDA				IAmb	IAmb	04 36 54.3	
	comp=Z,40nm,1.2s						
HDA	**Harding Lake**	**82.08**	**20**	P	**P**	**04 36 51.6**	**0.0**
	baz=232,SNR=20						
K24K	**Donnelly Dome**	**82.12**	**21**	P	**P**	**04 36 53.0**	**+1.2**
	baz=233,SNR=5.9						
H23K	**Yukon River**	**82.13**	**18**	P	**P**	**04 36 52.5**	**+0.6**
H23K				IAmb	IAmb	04 36 55.2	
	comp=Z,22nm,1.0s						
H23K	**Yukon River**	**82.13**	**18**	P	**P**	**04 36 53.5**	**+1.7**
	baz=229						
CTG	**Chitna Glacier**	**82.21**	**25**	P	**P**	**04 36 53.3**	**+0.8**
	baz=238						
G22K	**Bettles**	**82.27**	**17**	P	**P**	**04 36 54.8**	**+2.3**
	baz=228						
IL31		**82.33**	**20**	P	**P**	**04 36 52.0**	**-0.8**
IL31				IAmb	IAmb	04 36 55.8	
	comp=Z,25nm,1.1s						
ILAR	**Eielson Array**	**82.33**	**20**	P	**P**	**04 36 52.2**	**-0.6**
	comp=Z,14nm,1.0s,baz=253,slow=4.5,SNR=47						
ILAR				LR	LR	05 07 51.5	
	comp=Z,143nm,20.1s,baz=245,slow=32						
	comp=Z,14nm,1.0s						
ILAR	**Eielson Array**	**82.33**	**20**	P	**P**	**04 36 51.8**	**-1.1**
M26K	**Nabesna, AK**	**82.34**	**23**	P	**P**	**04 36 53.8**	**+0.7**
M26K	**Nabesna, AK**	**82.34**	**23**	P	**P**	**04 36 54.6**	**+1.5**
	baz=236						
POKR	**Poker Plat Res**	**82.36**	**20**	P	**P**	**04 36 52.7**	**-0.4**
POKR				IAmb	IAmb	04 36 55.2	
	comp=Z,16nm,1.0s						
POKR	**Poker Plat Res**	**82.36**	**20**	P	**P**	**04 36 53.8**	**+0.8**
	baz=232,SNR=5.3						
TIXI	**Tiksi**	**82.41**	**350**	LR	LR	05 15 48.1	
	comp=Z,93nm,18.4s,baz=1.0,slow=37						
TIXI	**Tiksi**	**82.41**	**350**	P	**P**	**04 36 52.0**	**-1.1**
TIXI				IAmb	IAmb	04 36 56.5	
	comp=Z,24nm,1.2s						
TIXI	**Tiksi**	**82.41**	**350**	*de*P	**P**	**04 36 53.1**	**0.0**
TIXI				pmax	pmax		
	comp=Z,26nm,1.3s						
RIDG	**Independent Ri**	**82.42**	**21**	P	**P**	**04 36 53.8**	**+0.4**
RIDG				IAmb	IAmb	04 36 56.7	
	comp=Z,32nm,1.2s						
RIDG	**Independent Ri**	**82.42**	**21**	P	**P**	**04 36 55.9**	**+2.5**
	baz=234,SNR=11						
F22K	**John River**	**82.48**	**16**	P	**P**	**04 36 55.3**	**+1.7**
	baz=227						
L26K	**Log Cabin Wild**	**82.56**	**22**	P	**P**	**04 36 56.3**	**+2.2**
	baz=236						
G23K	**Bananza Creek**	**82.57**	**18**	P	**P**	**04 36 55.1**	**+0.9**
	baz=229,SNR=9.0						
O28M	**Mount Upton**	**82.58**	**25**	P	**P**	**04 36 57.3**	**+2.7**
	baz=239						
DOT	**Dot Lake**	**82.65**	**22**	P	**P**	**04 36 54.6**	**0.0**
DOT				IAmb	IAmb	04 36 57.9	
	comp=Z,16nm,1.0s						
H24K	**Noodor Dome**	**82.67**	**19**	P	**P**	**04 36 55.6**	**+0.9**
	baz=231,SNR=8.5						
M27K	**Edge Creek, AK**	**82.75**	**23**	P	**P**	**04 36 56.1**	**+0.8**
M27K				IAmb	IAmb	04 36 59.3	
	comp=Z,29nm,1.1s						
M27K	**Edge Creek, AK**	**82.75**	**23**	P	**P**	**04 36 57.6**	**+2.3**
	baz=237						
DANN	**Dangsing**	**82.75**	**300**	*e*P	**P**	**04 36 55.7**	**-0.6**
	comp=Z,24nm,0.7s						
COLD	**Coldfoot**	**82.86**	**17**	P	**P**	**04 36 56.1**	**+0.5**
COLD	**Coldfoot**	**82.86**	**17**	P	**P**	**04 36 56.4**	**+0.8**
	baz=229						
SCRK	**Sand Creek**	**82.87**	**21**	P	**P**	**04 36 56.0**	**+0.1**
SCRK				IAmb	IAmb	04 36 59.2	
	comp=Z,20nm,1.0s						
SCRK	**Sand Creek**	**82.87**	**21**	P	**P**	**04 36 56.5**	**+0.7**
	baz=235,SNR=16						
S31K	**Pelican**	**82.96**	**29**	P	**P**	**04 36 59.5**	**+3.3**
	baz=242						
YUK3	**Moose Creek**	**83.00**	**24**	P	**P**	**04 36 58.6**	**+1.8**
	baz=238						
E22K	**Anaktuvuk Pass**	**83.01**	**16**	P	**P**	**04 36 58.3**	**+1.9**
	baz=227						
YUK8	**Steele Glacier**	**83.03**	**25**	P	**P**	**04 36 58.7**	**+1.8**
	baz=239						
L27K	**Beaver Creek,**	**83.15**	**23**	P	**P**	**04 36 58.2**	**+0.9**
L27K	**Beaver Creek,**	**83.15**	**23**	P	**P**	**04 36 59.6**	**+2.4**
	baz=237						
BCAR	**Beaver Creek A**	**83.17**	**23**	P	**P**	**04 36 57.8**	**+0.5**
BVCY	**Beaver Creek**	**83.18**	**23**	P	**P**	**04 36 59.8**	**+2.4**
	baz=238						
PRP	**Porcupine Dome**	**83.24**	**20**	P	**P**	**04 36 57.4**	**-0.4**
PRP	**Porcupine Dome**	**83.24**	**20**	P	**P**	**04 36 59.2**	**+1.4**
	baz=233						
G24K	**Hadweenzic Riv**	**83.34**	**18**	P	**P**	**04 37 00.0**	**+1.9**
	baz=231						
PYUN	**Piuthan**	**83.36**	**300**	*e*P	**P**	**04 36 58.6**	**-0.7**
	comp=Z,61nm,1.1s						
YUK6	**Outpost Mounta**	**83.44**	**25**	P	**P**	**04 37 00.5**	**+1.5**
	baz=240						
YUK4	**Talbot Arm**	**83.52**	**25**	P	**P**	**04 37 02.2**	**+2.8**
	baz=240						
S32K	**Killisnoo**	**83.53**	**29**	P	**P**	**04 37 01.0**	**+1.7**
	baz=244						
E23K	**Chandalar**	**83.58**	**17**	P	**P**	**04 37 02.1**	**+2.7**
	baz=229						
K27K	**Chicken**	**83.59**	**22**	P	**P**	**04 36 59.6**	**+0.2**
K27K				IAmb	IAmb	04 37 03.9	
	comp=Z,24nm,1.3s						
K27K	**Chicken**	**83.59**	**22**	P	**P**	**04 37 01.6**	**+2.1**
	baz=237						
PLBC	**Pleasant Camp**	**83.60**	**27**	P	**P**	**04 37 01.6**	**+2.0**
	baz=242						
U33K	**Whale Pass**	**83.68**	**31**	P	**P**	**04 37 01.1**	**+1.1**
	baz=245						
F24K	**Squaw Lake**	**83.73**	**18**	P	**P**	**04 37 02.3**	**+2.1**
	baz=231,SNR=11						
HYT	**Haines Junctio**	**83.75**	**26**	P	**P**	**04 37 00.7**	**+0.2**
HYT				IAmb	IAmb	04 37 04.5	
	comp=Z,11nm,0.9s						
HYT	**Haines Junctio**	**83.75**	**26**	P	**P**	**04 37 01.8**	**+1.3**
	baz=241						
WMQ	**Urumqi**	**83.76**	**316**	⇑P	**P**	**04 37 02.1**	**+1.2**
WMQ				pP	PcP	04 37 18.1	+13
WMQ				sP	sP	04 37 25.1	+20
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
WMQ				LR	LR		
	comp=Z,120nm,23.1s						
G25K	**Bearman Lake**	**83.81**	**19**	P	**P**	**04 37 02.4**	**+1.9**
	baz=233						
D23K	**Nanushuk River**	**83.89**	**16**	P	**P**	**04 37 01.0**	**+0.1**
	baz=228,SNR=17						
E24K	**Your Creek**	**83.91**	**17**	P	**P**	**04 37 02.3**	**+1.2**
	baz=230						
I26K	**Coal Creek Min**	**83.92**	**20**	P	**P**	**04 37 01.2**	**+0.1**
I26K				IAmb	IAmb	04 37 04.1	
	comp=Z,24nm,1.2s						
I26K	**Coal Creek Min**	**83.92**	**20**	P	**P**	**04 37 02.4**	**+1.3**
	baz=236						
FYU	**Fort Yukon**	**83.97**	**19**	P	**P**	**04 37 01.8**	**+0.5**
FYU				IAmb	IAmb	04 37 04.9	
	comp=Z,16nm,1.2s						
SKAG	**Skagway**	**84.07**	**27**	P	**P**	**04 37 02.3**	**+0.4**
SKAG	**Skagway**	**84.07**	**27**	P	**P**	**04 37 02.2**	**+0.3**
SKAG	**Skagway**	**84.07**	**27**	P	**P**	**04 37 03.4**	**+1.4**
	baz=243						
KCPM	**Cahto Peak**	**84.09**	**49**	P	**P**	**04 37 02.8**	**+0.1**
KCPM				IAmb	IAmb	04 37 07.1	
	comp=Z,20nm,1.0s						
A21K	**Barrow**	**84.12**	**13**	P	**P**	**04 37 01.3**	**-0.6**
A21K	**Barrow**	**84.12**	**13**	P	**P**	**04 37 02.4**	**+0.5**
	baz=222						
KMRM	**Mail Ridge**	**84.14**	**48**	P	**P**	**04 37 02.8**	**-0.1**
M29M	**Somme Creek**	**84.15**	**24**	P	**P**	**04 37 05.0**	**+2.5**
	baz=240,SNR=6.1						
N30M	**Aishikik Lake**	**84.23**	**25**	P	**P**	**04 37 03.9**	**+1.0**
	baz=241						
KHMM	**Horse Mountain**	**84.30**	**47**	P	**P**	**04 37 03.5**	**-0.3**
KHMM				IAmb	IAmb	04 37 08.5	
	comp=Z,14nm,1.0s						
O30N	**Mendenhall**	**84.33**	**26**	P	**P**	**04 37 04.7**	**+1.3**
	baz=242						
EGAK	**Eagle**	**84.33**	**21**	P	**P**	**04 37 04.3**	**+1.1**
EGAK				IAmb	IAmb	04 37 07.0	
	comp=Z,17nm,1.0s						
EGAK	**Eagle**	**84.33**	**21**	P	**P**	**04 37 04.4**	**+1.2**
	baz=237,SNR=10						
F25K	**Christian Rive**	**84.45**	**18**	P	**P**	**04 37 05.6**	**+1.8**
	baz=233						
DAWY	**Dawson**	**84.61**	**22**	P	**P**	**04 37 04.4**	**-0.3**
DAWY	**Dawson**	**84.61**	**22**	P	**P**	**04 37 05.5**	**+0.8**
	baz=239						
L29M	**L29M**	**84.61**	**24**	P	**P**	**04 37 04.9**	**+0.2**
	baz=240,SNR=7.4						
I27K	**Kandik River**	**84.62**	**21**	P	**P**	**04 37 05.9**	**+1.1**
	baz=237						
G26K	**Porcupine Rive**	**84.66**	**19**	P	**P**	**04 37 04.5**	**-0.2**
	baz=235,SNR=30						
BMAR	**Burnt Mountain**	**84.69**	**18**	P	**P**	**04 37 06.3**	**+1.3**
E25K	**Arctic Village**	**84.80**	**18**	P	**P**	**04 37 05.5**	**0.0**
	baz=233,SNR=7.0						
N31M	**Braeburn, Yuko**	**84.80**	**25**	P	**P**	**04 37 06.1**	**+0.5**
N31M	**Braeburn, Yuko**	**84.80**	**25**	P	**P**	**04 37 08.5**	**+2.8**
	baz=243,SNR=11						
K02D	**Willamette Mer**	**84.85**	**46**	P	**P**	**04 37 06.8**	**+0.3**
P32M	**Atlin**	**84.86**	**28**	P	**P**	**04 37 05.6**	**-0.5**
	baz=244						
M30M	**Minto, Yukon**	**84.89**	**24**	P	**P**	**04 37 06.6**	**+0.5**
M30M				IAmb	IAmb	04 37 11.2	
	comp=Z,41nm,1.9s						
M30M	**Minto, Yukon**	**84.89**	**24**	P	**P**	**04 37 06.0**	**-0.1**
	baz=242						
BBB	**Bella Bella**	**84.91**	**36**	LR	LR	05 09 24.7	
	comp=Z,153nm,18.6s,baz=239,slow=32						
C24K	**Franklin Bluff**	**84.91**	**16**	P	**P**	**04 37 06.1**	**+0.1**
	baz=230						
SAO	**San Andreas Ge**	**84.97**	**52**	P	**P**	**04 37 06.4**	**-0.7**
SAO				IAmb	IAmb	04 37 12.0	
	comp=Z,14nm,1.2s						
SAO	**San Andreas Ge**	**84.97**	**52**	P	**P**	**04 37 06.4**	**-0.7**
SAO				pmax	pmax		
	comp=Z,14nm,1.2s						
F26K	**Sheenjek River**	**84.98**	**18**	P	**P**	**04 37 07.3**	**+0.9**
	baz=234						
H27K	**Steamboat Moun**	**85.00**	**20**	P	**P**	**04 37 06.8**	**+0.2**
	baz=237,SNR=11						
K29M	**Barlow Dome**	**85.21**	**23**	P	**P**	**04 37 08.2**	**+0.4**
	baz=241						
BBGB	**Big Mountain B**	**85.25**	**52**	P	**P**	**04 37 08.6**	**0.0**
J29M	**Klondike Camp**	**85.25**	**22**	P	**P**	**04 37 09.5**	**+1.6**
J29M	**Klondike Camp**	**85.25**	**22**	P	**P**	**04 37 09.0**	**+1.0**
	baz=240,SNR=8.8						
G27K	**Doyon Strip**	**85.27**	**20**	P	**P**	**04 37 08.5**	**+0.5**
	baz=237,SNR=8.5						
YBH	**Yreka Blue Hor**	**85.27**	**47**	LR	LR	05 07 04.9	
	comp=Z,182nm,21.9s,baz=272,slow=30						
YBH	**Yreka Blue Hor**	**85.27**	**47**	P	**P**	**04 37 09.7**	**+1.1**
YBH				IAmb	IAmb	04 37 13.6	
	comp=Z,24nm,1.1s						
YBH	**Yreka Blue Hor**	**85.27**	**47**	P	**P**	**04 37 09.7**	**+1.1**
YBH				pmax	pmax		
	comp=Z,24nm,1.2s						
Q32M	**Nakina River**	**85.27**	**29**	P	**P**	**04 37 09.1**	**+0.7**
	baz=246						
HYB	**Hyderabad**	**85.28**	**288**	*e*P	**P**	**04 37 08.4**	**-0.7**
D25K	**Kavik River**	**85.30**	**16**	P	**P**	**04 37 08.6**	**+0.6**
	baz=232,SNR=8.4						

HUMO	Hull Mountain	85.33	46	P	P	04 37 09.9	+1.1
HUMO				IAmb	IAmb	04 37 13.9	
	comp=Z,24nm,1.1s						
I03D	Drain, OR	85.34	45	P	P	04 37 09.7	+1.0
I03D				IAmb	IAmb	04 37 12.5	
	comp=Z,30nm,1.2s						
S34M	Telegraph Cree	85.40	30	P	P	04 37 11.2	+2.5
	baz=247						
T35M	Bob Quinn	85.48	31	P	P	04 37 09.5	+0.3
	baz=248						
P33M	Teslin, Yukon	85.54	27	P	P	04 37 09.4	0.0
P33M	Teslin, Yukon	85.54	27	P	P	04 37 10.7	+1.2
	baz=245						
MAW	Mawson	85.63	202	LR	LR	05 10 42.1	
	comp=Z,207nm,21.3s,baz=93,slow=32						
I29M	Ogilvie Camp,	85.67	22	P	P	04 37 09.6	-0.4
I29M				IAmb	IAmb	04 37 13.5	
	comp=Z,16nm,1.1s						
I29M	Ogilvie Camp,	85.67	22	P	P	04 37 10.6	+0.6
	baz=240,SNR=12						
L04D	Klamath Falls	85.69	46	P	P	04 37 11.0	+0.2
SNCC	San Nicolas Is	85.71	56	P	P	04 37 10.3	-0.5
	baz=257						
M31M	Drury Creek, Y	85.71	25	P	P	04 37 09.7	-0.5
M31M	Drury Creek, Y	85.71	25	P	P	04 37 10.8	+0.6
	baz=244,SNR=20						
DGZ	Jazzator, Alta	85.71	321	*c i*P	P	04 37 10.1	-0.6
DGZ				pmax	pmax		
	comp=Z,13nm,1.2s						
BUCK	Buck Mountain	85.73	44	P	P	04 37 09.8	-1.0
MAYO	Mayo, Yukon	85.73	24	P	P	04 37 12.8	+2.5
	baz=242						
SCZ2	Santa Cruz Isl	85.78	55	P	P	04 37 12.2	+1.0
	baz=257						
SMMC	Simmler	85.78	54	P	P	04 37 12.5	+1.3
	baz=257						
N32M	Quiet Lake	85.82	26	P	P	04 37 12.0	+1.2
	baz=245						
PKM	Mcpherson Peak	85.83	54	P	P	04 37 13.0	+1.4
	baz=257						
E03A	Lebam	85.98	42	P	P	04 37 12.6	+0.7
I04A	Tendick Farm,	86.02	45	P	P	04 37 12.8	+0.6
RPN	Rapa Nui	86.04	117	LR	LR	05 06 47.1	
	comp=Z,107nm,21.3s,baz=290,slow=30						
E27K	Coleen River	86.05	18	P	P	04 37 13.2	+1.4
	baz=237						
C26K	Camden Bay	86.07	16	P	P	04 37 12.4	+0.6
	baz=234						
J04A	Umpqua Nationa	86.09	46	P	P	04 37 13.2	+0.5
CMB	Columbia Colle	86.09	51	P	P	04 37 12.6	-0.1
CMB	Columbia Colle	86.09	51	P	P	04 37 12.6	-0.1
CMB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DLBC	Dease Lake	86.14	29	LR	LR	05 11 47.3	
	comp=Z,151nm,18.2s,baz=266,slow=33						
DLBC	Dease Lake	86.14	29	P	P	04 37 12.6	+0.1
DLBC				IAmb	IAmb	04 37 27.0	
	comp=Z,30nm,1.6s						
DLBC	Dease Lake	86.14	29	P	P	04 37 13.0	+0.5
	baz=248						
FARO	Faro, Yukon	86.16	25	P	P	04 37 13.7	+1.3
	baz=245,SNR=10						
BCW	Bitter Crk WRg	86.16	54	P	P	04 37 12.5	-0.7
BCW				IAmb	IAmb	04 37 17.8	
	comp=Z,25nm,1.1s						
C27K	Jago River	86.23	17	P	P	04 37 13.8	+1.1
	baz=235						
H04A	Detroit Lake	86.41	44	P	P	04 37 14.5	+0.4
H04A				IAmb	IAmb	04 37 17.2	
	comp=Z,21nm,1.4s						
VOG	Valley Oaks Go	86.49	53	P	P	04 37 14.5	-0.1
	baz=257						
VES	Vestal, Richgr	86.62	53	P	P	04 37 17.2	+1.9
	baz=257						
CIS	Catalina Islan	86.65	56	P	P	04 37 17.0	+1.5
	baz=258						
OSI	Osito Audit: C	86.65	55	P	P	04 37 14.9	-0.6
	baz=258						
ARVC	Arvin	86.67	54	P	P	04 37 17.4	+1.9
	baz=258,SNR=6.2						
J05D	Fort Rock, OR	86.72	46	P	P	04 37 15.7	-0.2
EPYK	Eagle Plains	86.74	21	P	P	04 37 15.8	+0.5
EPYK				IAmb	IAmb	04 37 19.0	
	comp=Z,21nm,0.9s						
EPYK	Eagle Plains	86.74	21	P	P	04 37 16.4	+1.2
	baz=241,SNR=15						
K05A	Summer Lake	86.83	46	P	P	04 37 17.4	+1.0
I05D	Terrebonne, OR	86.91	45	P	P	04 37 17.0	+0.4
I05D				IAmb	IAmb	04 37 20.7	
	comp=Z,20nm,1.0s						
WAKR	Walker	86.93	51	P	P	04 37 17.8	+0.7
WAKR				IAmb	IAmb	04 37 21.4	
	comp=Z,24nm,1.8s						
PASC	Pasadena Art C	86.99	55	P	P	04 37 17.5	+0.3
PASC				IAmb	IAmb	04 37 21.0	
	comp=Z,17nm,1.1s						
MDPB	Devils Postpil	87.01	52	P	P	04 37 17.1	-0.5
MDPB				IAmb	IAmb	04 37 21.4	
	comp=Z,15nm,1.3s						
PINE	Pine Mountain	87.05	45	P	P	04 37 18.0	+0.5
MOD	Modoc Plateau	87.06	47	P	P	04 37 16.9	-0.6
MOD				IAmb	IAmb	04 37 21.5	
	comp=Z,16nm,1.1s						
ISA	Isabella, Lake	87.07	54	P	P	04 37 18.4	+0.8
ISA	Isabella, Lake	87.07	54	P	P	04 37 18.4	+0.8
ISA				pmax	pmax		
	comp=Z,11nm,1.2s						
ISA	Isabella, Lake	87.07	54	P	P	04 37 18.5	+0.8
	baz=258						
OMMB	Old Mammoth Mi	87.07	52	P	P	04 37 17.5	-0.4
G30M	tAoh Zraii Nji	87.20	20	P	P	04 37 19.0	+1.6
	baz=242						
MMPY	Sheldon Lake,	87.21	25	P	P	04 37 19.8	+2.2
	baz=246,SNR=13						
PAHR	Pah Rah Range	87.23	49	P	P	04 37 18.8	+0.4
PAHR				IAmb	IAmb	04 37 22.4	
	comp=Z,13nm,1.1s						
EDW2	Edwards Air Fo	87.29	54	P	P	04 37 20.2	+1.6
	baz=258,SNR=21						
WTLY	Watson Lake, Y	87.35	28	P	P	04 37 19.7	+1.4
BFSC	Mount Baldy Ra	87.43	55	P	P	04 37 20.6	+1.1
	baz=258,SNR=11						
CWC	Cottonwood Cre	87.54	53	P	P	04 37 21.0	+1.0
	baz=258						
109C	Camp Elliot, M	87.62	56	P	P	04 37 22.2	+2.0
	baz=259						
LRMC	Laurel Mtn Rad	87.66	54	P	P	04 37 23.1	+2.5
	baz=258						
MURC	Murrieta	87.69	56	P	P	04 37 22.8	+2.3
	baz=259						
NVAR	Mina Array Bea	87.78	51	P	P	04 37 20.7	-0.4
	comp=Z,4.5nm,0.9s,baz=244,slow=6.2,SNR=26						
NVAR				LR	LR	05 09 19.9	
	comp=Z,261nm,20.5s,baz=250,slow=31						
	comp=Z,4.5nm,0.9s						
NVAR	Mina Array Bea	87.78	51	P	P	04 37 21.6	+0.4
DSP	Deep Springs	87.82	52	P	P	04 37 22.0	+1.0
DSP				IAmb	IAmb	04 37 25.4	
	comp=Z,15nm,1.2s						
NV11	Mina Array Sit	87.89	51	P	P	04 37 22.4	+0.8
NV11				IAmb	IAmb	04 37 25.6	
	comp=Z,16nm,1.2s						
MPMC	Manual Prospec	87.93	53	P	P	04 37 25.3	+3.4
	baz=258,SNR=7.6						
BBRC	Big Bear Solar	88.04	55	P	P	04 37 24.5	+2.0
	baz=259						
LCH	Last Change Ra	88.05	52	P	P	04 37 22.2	-0.2
KVN	Kaiserville	88.07	50	P	P	04 37 22.9	+0.5
KVN				IAmb	IAmb	04 37 26.4	
	comp=Z,11nm,1.2s						
KVN	Kaiserville	88.07	50	P	P	04 37 22.9	+0.5
KVN				pmax	pmax		
	comp=Z,11nm,1.2s						
I07A	Izee	88.13	45	P	P	04 37 23.5	+1.0
I07A				IAmb	IAmb	04 37 26.8	
	comp=Z,14nm,1.0s						
MONP2	Monument Peak	88.19	57	P	P	04 37 26.6	+3.4
	baz=259,SNR=10						
MK31	Makanchi Array	88.23	318	P	P	04 37 21.9	-0.9
MK31				IAmb	IAmb	04 37 25.7	
	comp=Z,11nm,1.0s						
MK31	Makanchi Array	88.23	318	P	P	04 37 21.9	-0.9
MK31				pmax	pmax		
	comp=Z,11nm,1.0s						
MKAR	Makanchi Array	88.23	318	P	P	04 37 22.4	-0.4
	comp=Z,15nm,1.1s,baz=96,slow=6.0,SNR=46						
MKAR				LR	LR	05 16 45.1	
	comp=Z,71nm,21.1s,baz=127,slow=36						
	comp=Z,15nm,1.1s						
MKAR	Makanchi Array	88.23	318	P	P	04 37 21.9	-0.9
F31M	Tsiigehtchic	88.27	21	P	P	04 37 22.9	+0.4
	baz=244,SNR=8.1						
PFO	Pinyon Flats O	88.29	56	LR	LR	05 09 23.2	
	comp=Z,641nm,20.2s,baz=280,slow=30						
PFO	Pinyon Flats O	88.29	56	P	P	04 37 25.7	+2.1
	baz=259						
TPFO	Pinon Flats	88.29	56	P	P	04 37 25.7	+2.1
	baz=259						
GSC	Goldstone, Bar	88.33	54	P	P	04 37 23.4	-0.3
GSC	Goldstone, Bar	88.33	54	P	P	04 37 23.4	-0.3
GSC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GSC	Goldstone, Bar	88.33	54	P	P	04 37 21.5	-2.2
	baz=259						
WVOR	Wild Horse Val	88.38	47	P	P	04 37 24.2	+0.4
WVOR				IAmb	IAmb	04 37 28.1	
	comp=Z,20nm,1.1s						
WVOR	Wild Horse Val	88.38	47	P	P	04 37 24.2	+0.4
WVOR				pmax	pmax		
	comp=Z,20nm,1.2s						
LIRD	Liard River Hi	88.39	29	P	P	04 37 24.8	+1.5
	baz=251,SNR=5.3						
IKP	In-Ko-Pah, Jac	88.40	57	P	P	04 37 25.3	+1.3
	baz=259						
QSM	Queen of Sheba	88.41	54	P	P	04 37 24.7	+0.8
MAKZ	Makanchi	88.44	318	P	P	04 37 23.2	-0.6
MAKZ				IAmb	IAmb	04 37 26.8	
	comp=Z,18nm,1.1s						
MAKZ	Makanchi	88.44	318	P	P	04 37 23.2	-0.6
MAKZ				pmax	pmax		
	comp=Z,18nm,1.1s						
ZAA0	Zalesovo Array	88.50	325	P	P	04 37 21.9	-1.9
ZAA0				IAmb	IAmb	04 37 26.6	
	comp=Z,15nm,1.6s						
ZALV	Zalesovo Beam	88.50	325	P	P	04 37 22.9	-1.0
	comp=Z,2.9nm,0.7s,baz=92,slow=5.0,SNR=12						
ZALV				LR	LR	05 14 06.7	
	comp=Z,53nm,21.5s,baz=98,slow=34						
	comp=Z,2.9nm,0.7s						
ZALV	Zalesovo Beam	88.50	325	P	P	04 37 22.5	-1.4
FURC	Furnace Creek,	88.51	53	P	P	04 37 25.6	+1.3
	baz=259						
TPH	Tonopah	88.54	51	P	P	04 37 24.1	-0.6
TPH	Tonopah	88.54	51	P	P	04 37 24.1	-0.6
TPH				pmax	pmax		
	comp=Z,21nm,0.9s						
YUH	Yuha Desert	88.55	57	P	P	04 37 23.1	-1.6
HEC	Hector,Ludlow	88.62	55	P	P	04 37 26.9	+1.9
	baz=259						
J08A	Circle Bar Ran	88.70	46	P	P	04 37 25.1	-0.1
J08A				IAmb	IAmb	04 37 29.4	
	comp=Z,14nm,1.1s						
SWSC	Sam W. Stewart	88.71	57	P	P	04 37 27.3	+2.0
	baz=259						
INK	Inuvik	88.73	20	LR	LR	05 13 38.0	
	comp=Z,221nm,20.0s,baz=244,slow=33						
INK	Inuvik	88.73	20	P	P	04 37 25.7	+1.1
	baz=244,SNR=9.1						
BELC	Belle Mtn. Jos	88.74	56	P	P	04 37 27.9	+2.2
	baz=259,SNR=8.2						
WCT	Wildcat Mounta	88.76	53	P	P	04 37 25.8	+0.2
G08A	Pilot Rock	88.78	44	P	P	04 37 25.5	-0.1
G08A				IAmb	IAmb	04 37 30.3	
	comp=Z,12nm,1.2s						
SHOC	Shoshone, Teco	88.87	54	P	P	04 37 26.3	+0.3
	baz=259						
BMN	Battle Mountai	89.01	49	P	P	04 37 26.3	-0.5
BMN				IAmb	IAmb	04 37 31.1	
	comp=Z,8.9nm,0.9s						
BMN	Battle Mountai	89.01	49	P	P	04 37 26.3	-0.5
BMN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TUQ	Turquoise Moun	89.06	54	P	P	04 37 28.4	+1.3
	baz=259						
TPNV	Topopah Spring	89.08	53	P	P	04 37 26.5	-0.8
	baz=259						
BC3	Big Chuckawall	89.12	56	P	P	04 37 28.1	+0.6
	baz=260,SNR=12						
GMRC	Granite Mounta	89.16	55	P	P	04 37 27.4	-0.2
	baz=259						
SFX	San Felipe	89.17	59	P	P	04 37 27.3	-0.3
IRM	Iron Mountain	89.46	56	P	P	04 37 29.4	+0.4
	baz=260,SNR=8.4						
GLA	Glamis	89.53	57	P	P	04 37 28.8	-0.5
	baz=260						
KOTAN	Kotaneelee Air	89.60	29	P	P	04 37 29.4	+0.4
	baz=253						
BMO	Blue Mountains	89.83	45	P	P	04 37 30.7	+0.2
BMO				IAmb	IAmb	04 37 45.2	
	comp=Z,30nm,1.8s						
BMO	Blue Mountains	89.83	45	P	P	04 37 30.7	+0.2
BMO				pmax	pmax		
	comp=Z,30nm,1.8s						
SHPR	Sheep Range	89.86	53	P	P	04 37 30.4	-0.5
BLYC	Blythe	89.90	56	P	P	04 37 31.3	+0.3
FLDN	Fort Liard	89.91	29	P	P	04 37 32.0	+1.6
	baz=254						
V12A	Nelson	89.97	54	P	P	04 37 31.2	-0.2
NEE2	Needles Airpor	90.00	55	P	P	04 37 31.3	-0.1
	baz=260						
PRN	Pahroc Range	90.11	52	P	P	04 37 31.6	-0.5
PRN				IAmb	IAmb	04 37 36.6	
	comp=Z,18nm,1.2s						
PDMCI	Parker Dam,Lak	90.31	56	P	P	04 37 33.9	+1.1
	baz=260,SNR=7.2						
113A	Mohawk Valley,	90.36	57	P	P	04 37 32.5	-0.6
PIX	Pinacate	90.43	58	P	P	04 37 33.5	0.0
ELK	Elko	90.55	49	LR	LR	05 12 41.8	
	comp=Z,79nm,18.6s,baz=239,slow=32						
ELK	Elko	90.55	49	P	P	04 37 33.5	-0.6
ELK	Elko	90.55	49	P	P	04 37 33.5	-0.6
ELK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
Q12A	Willow Creek R	90.56	51	P	P	04 37 34.3	+0.2
Q12A				IAmb	IAmb	04 37 44.1	
	comp=Z,24nm,1.2s						
MFID	Camas Ranch	90.60	46	P	P	04 37 33.6	-0.6
NEW	Newport	90.64	41	LR	LR	05 09 57.0	
	comp=Z,226nm,21.6s,baz=260,slow=30						
NEW	Newport	90.64	41	P	P	04 37 34.0	-0.1
NEW	Newport	90.64	41	P	P	04 37 34.0	-0.1
NEW				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NEW	Newport	90.64	41	P	P	04 37 35.6	+1.5
	baz=258						
W13A	Hualapai Mount	90.65	55	P	P	04 37 34.5	-0.2
W13A				IAmb	IAmb	04 37 39.2	
	comp=Z,20nm,1.0s						
PLID	Pearl Lake	90.79	45	P	P	04 37 34.6	-0.5
PLID				IAmb	IAmb	04 37 38.4	
	comp=Z,13nm,1.0s						
KDJ	Kajisay	90.85	312	P	P	04 37 34.7	-0.8
KDJ				IAmb	IAmb	04 37 38.6	
	comp=Z,14nm,0.9s						
KDJ	Kajisay	90.85	312	P	P	04 37 34.7	-0.8
KDJ				pmax	pmax		
	comp=Z,14nm,0.9s						
SPR3	Spring Creek 3	90.94	51	P	P	04 37 36.5	+0.4
SPR3				IAmb	IAmb	04 37 40.5	
	comp=Z,17nm,1.2s						
214A	Organ Pipe Nat	91.03	58	P	P	04 37 36.8	+0.4
214A				IAmb	IAmb	04 37 58.1	
	comp=Z,15nm,1.4s						
214A	Organ Pipe Nat	91.03	58	P	P	04 37 36.9	+0.6
	baz=261,SNR=6.4						
KURK	Kurchatov	91.44	321	P	P	04 37 37.2	-0.5
KURK				IAmb	IAmb	04 37 40.8	
	comp=Z,18nm,1.5s						
KURK	Kurchatov	91.44	321	*de*P	P	04 37 37.0	-0.7
KURK				pmax	pmax		
	comp=Z,12nm,1.3s						
CCUT	Cedar City	91.46	52	P	P	04 37 38.7	+0.2
CCUT				IAmb	IAmb	04 37 43.3	
	comp=Z,17nm,1.0s						
LCMT	Little Creek M	91.47	53	P	P	04 37 38.6	+0.2
LCMT				IAmb	IAmb	04 37 43.0	
	comp=Z,14nm,1.1s						
HLID	Hailey	91.64	46	P	P	04 37 40.5	+1.4
	baz=260,SNR=16						
SZCU	Shurtz Canyon	91.68	52	P	P	04 37 40.2	+0.8
SZCU				IAmb	IAmb	04 37 44.1	
	comp=Z,15nm,1.0s						
KNB	Kanab	91.80	53	P	P	04 37 40.1	+0.1
KNB	Kanab	91.80	53	P	P	04 37 40.1	+0.1
KNB				pmax	pmax		
	comp=Z,32nm,1.3s						
NRIK	Noril'sk	91.80	340	P	P	04 37 38.3	-0.6
	comp=Z,1.5nm,0.3s,baz=105,slow=4.1,SNR=4.9						
NRIK				LR	LR	05 18 02.0	
	comp=Z,268nm,21.0s,baz=116,slow=35						
	comp=Z,1.5nm,0.3s						
NRIK	Noril'sk	91.80	340	*de*P	P	04 37 38.1	-0.9
NRIK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BOOM	Boomskoye usch	91.82	312	P	P	04 37 38.9	-1.0
BOOM				IAmb	IAmb	04 37 50.3	
	comp=Z,15nm,1.2s						
BOOM	Boomskoye usch	91.82	312	P	P	04 37 38.9	-1.0
BOOM				pmax	pmax		
	comp=Z,15nm,1.2s						
LPIG	La Paz	92.08	66	LR	LR	05 13 24.3	
	comp=Z,232nm,18.8s,baz=224,slow=32						
U15A	North Rim	92.13	54	P	P	04 37 42.2	+0.5
U15A				IAmb	IAmb	04 37 46.5	
	comp=Z,17nm,1.1s						
BGU	Big Grassy Mou	92.23	49	P	P	04 37 40.8	-1.0
BGU				IAmb	IAmb	04 37 46.2	
	comp=Z,12nm,1.1s						
PKCU	Pink Cliffs	92.27	53	P	P	04 37 41.3	-1.0
DUG	Dugway, Tooele	92.29	50	P	P	04 37 42.1	0.0
DUG				IAmb	IAmb	04 37 58.3	
	comp=Z,14nm,1.4s						
DUG	Dugway, Tooele	92.29	50	P	P	04 37 42.1	0.0
DUG				pmax	pmax		
	comp=Z,14nm,1.4s						
DUG	Dugway, Tooele	92.29	50	P	P	04 37 42.8	+0.7
	baz=261,SNR=6.1						
C36M	Paulatuk	92.30	20	P	P	04 37 42.2	+1.0
C36M	Paulatuk	92.30	20	P	P	04 37 43.6	+2.3
	baz=253						
MTPU	Mount Pierson	92.45	52	P	P	04 37 42.0	-1.1
MTPU				IAmb	IAmb	04 37 48.5	
	comp=Z,16nm,1.0s						
MVU	Marysvale	92.50	52	P	P	04 37 44.0	+0.8
MSU	Marysvale	92.53	52	P	P	04 37 42.1	-1.3
MSU	Marysvale	92.53	52	P	P	04 37 42.1	-1.3
X16A	Lo Mia Camp, P	92.53	56	P	P	04 37 42.5	-0.9
X16A				IAmb	IAmb	04 37 48.2	
	comp=Z,8.8nm,1.2s						
HVU	Hansel Valley	92.55	48	P	P	04 37 41.9	-1.4
HVU	Hansel Valley	92.55	48	P	P	04 37 41.9	-1.4
HVU				pmax	pmax		
	comp=Z,27nm,1.0s						
A36M	Sachs Harbour	92.72	17	P	P	04 37 42.9	-0.2
A36M	Sachs Harbour	92.72	17	P	P	04 37 44.6	+1.4
	baz=252						
SPUT	South Promonto	92.73	49	P	P	04 37 44.3	+0.2
SPUT				IAmb	IAmb	04 37 48.4	
	comp=Z,7.3nm,0.9s						
WUAZ	Wupatki	92.74	55	P	P	04 37 43.1	-1.2
WUAZ				IAmb	IAmb	04 37 49.2	
	comp=Z,17nm,1.4s						
WUAZ	Wupatki	92.74	55	P	P	04 37 44.8	+0.5
	baz=262						
TUC	Tucson	92.79	58	P	P	04 37 44.9	+0.4
TUC	Tucson	92.79	58	P	P	04 37 44.9	+0.4
TUC				pmax	pmax		
	comp=Z,5.0nm,1.3s						
TUC	Tucson	92.79	58	P	P	04 37 43.8	-0.7
	baz=262						
NLU	North Lily Min	92.81	50	P	P	04 37 43.9	-0.7
NLU				IAmb	IAmb	04 37 49.1	
	comp=Z,14nm,1.1s						
WALA	Waterton Lakes	92.87	41	P	P	04 37 43.1	-1.5
WALA				IAmb	IAmb	04 37 51.7	
	comp=Z,12nm,1.3s						
MCMT	McKenzie Canyo	92.95	45	P	P	04 37 44.8	-0.4
MPU	Maple Canyon	93.16	50	P	P	04 37 47.2	+1.0
MPU				IAmb	IAmb	04 37 51.5	
	comp=Z,14nm,1.2s						
CTU	Camp Tracy	93.16	50	P	P	04 37 46.1	0.0
CTU				IAmb	IAmb	04 37 50.3	
	comp=Z,13nm,1.0s						
DLMT	Dillon	93.20	45	P	P	04 37 47.1	+0.9
DLMT				IAmb	IAmb	04 37 50.4	
	comp=Z,16nm,1.1s						
LRM	Limekiln Ridge	93.37	44	P	P	04 37 46.8	-0.3
BELA	Belgrano 2	93.67	177	P	P	04 37 47.4	-0.2
BELA				IAmb	IAmb	04 37 51.6	
	comp=Z,14nm,1.1s						
P17A	Butcher Ranch,	93.77	51		P	04 37 48.6	-0.4
P17A				IAmb	IAmb	04 37 53.6	
	comp=Z,22nm,1.7s						
SRU	San Rafael Swe	93.89	51	P	P	04 37 48.8	-0.8
SRU	San Rafael Swe	93.89	51	P	P	04 37 48.8	-0.8
SRU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BOZ	Bozeman (W)	93.91	45	P	P	04 37 49.0	-0.4
BOZ	Bozeman (W)	93.91	45	P	P	04 37 49.1	-0.4
BOZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BOZ	Bozeman (W)	93.91	45	P	P	04 37 49.7	+0.2
	baz=262,SNR=10						
HRY	Holter Researc	93.92	44	P	P	04 37 47.2	-2.3
W18A	Petrified Fore	94.02	55	P	P	04 37 49.5	-0.8
	baz=263						
FXWY	Fox Creek	94.08	47	P	P	04 37 48.3	-2.1
TPAW	Teton Pass	94.12	47	P	P	04 37 50.5	-0.1
TPAW				IAmb	IAmb	04 37 55.7	
	comp=Z,26nm,1.8s						
REDW	Red Top Meadow	94.18	47	P	P	04 37 50.7	-0.1
REDW				IAmb	IAmb	04 40 14.5	
	comp=Z,31nm,2.0s						
IMW	Indian Meadow	94.18	46	P	P	04 37 49.9	-1.1
YMR	Madison River	94.26	46	P	P	04 37 51.8	+0.6
YMR				IAmb	IAmb	04 38 42.0	
	comp=Z,34nm,2.0s						
MOOW	Moose Ponds	94.30	47	P	P	04 37 51.8	+0.4
FLWY	Flagg Ranch	94.38	46	P	P	04 37 50.2	-1.5
FLWY				IAmb	IAmb	04 38 07.1	
	comp=Z,20nm,1.6s						
H17A	Grant Village	94.50	46	P	P	04 37 51.5	-0.9
H17A	Grant Village	94.50	46	P	P	04 37 52.9	+0.6
	baz=263						
YKA	Yellowknife Ar	94.57	28	P	P	04 37 52.0	+0.1
	comp=Z,7.0nm,0.9s,baz=255,slow=4.6,SNR=47						
YKA				PP	PP	04 41 38.7	-1.0
	comp=Z,0.9nm,1.1s,baz=262,slow=7.2,SNR=5.6						
YKA				LR	LR	05 14 21.5	
	comp=Z,235nm,20.4s,baz=290,slow=32						
	comp=Z,7.0nm,0.9s						
YKA	Yellowknife Ar	94.57	28	P	P	04 37 51.1	-0.7
YKA	Yellowknife Ar	94.57	28	P	P	04 37 52.0	+0.1
RDMU	Red Mountain	94.79	50	P	P	04 37 53.4	-0.4
RDMU				IAmb	IAmb	04 37 58.0	
	comp=Z,11nm,1.0s						
BW06	Boulder Array	95.05	48	P	P	04 37 54.4	-0.5
BW06				IAmb	IAmb	04 37 58.2	
	comp=Z,8.0nm,0.9s						
BW06	Boulder Array	95.05	48	P	P	04 37 55.8	+0.9
	baz=264,SNR=11						
PD31	Pinedale Array	95.05	48	P	P	04 37 54.8	-0.1
PD31				IAmb	IAmb	04 37 58.2	
	comp=Z,7.2nm,0.9s						
PDAR	Pinedale Array	95.05	48	P	P	04 37 55.5	+0.7
	comp=Z,5.0nm,0.8s,baz=241,slow=2.3,SNR=32						
PDAR				LR	LR	05 15 19.6	
	comp=Z,122nm,19.5s,baz=298,slow=32						
	comp=Z,5.0nm,0.8s						
PDAR	Pinedale Array	95.05	48	P	P	04 37 54.7	-0.2
EGMT	Eagleton	95.48	42	P	P	04 37 58.0	+1.5
	baz=264						
RLMT	Red Lodge	95.51	45	P	P	04 37 59.0	+2.1
	baz=264						
O20A	White River Ci	95.75	50	P	P	04 37 59.2	+1.1
	baz=264						
KK31	Karatay Array	95.86	313	P	P	04 37 57.3	-0.9
KK31	Karatay Array	95.86	313	P	P	04 37 57.3	-0.9
KK31				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KKAR	Karatay Array	95.86	313	P	P	04 37 56.7	-1.6
KKAR	Karatay Array	95.86	313	P	P	04 37 57.3	-0.9
KKAR				IAmb	IAmb	04 38 00.8	
	comp=Z,5.9nm,1.2s						
KKAR	Karatay Array	95.86	313	P	P	04 37 57.3	-0.9
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.2s						

S22A	4UR Ranch, Cre	96.63	53	P	P	04 38 03.9	+1.7
	baz=265						
ANMO	Albuquerque	96.67	56	LR	LR	05 13 59.6	
	comp=Z,241nm,21.3s,baz=14,slow=31						
ANMO	Albuquerque	96.67	56	P	P	04 38 01.6	-0.8
ANMO				IAmb	IAmb	04 38 39.1	
	comp=Z,12nm,1.9s						
ANMO	Albuquerque	96.67	56	⇑eP	P	04 38 01.3	-1.1
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.2s						
ANMO	Albuquerque	96.67	56	P	P	04 38 03.8	+1.4
	baz=265						
BVAR	Borovoye Array	96.81	323	LR	LR	05 25 11.0	
	comp=Z,55nm,18.7s,baz=86,slow=38						
BRVK	Borovoye	96.88	323	P	P	04 38 01.4	-1.2
BRVK				IAmb	IAmb	04 38 04.4	
	comp=Z,5.8nm,0.9s						
BRVK	Borovoye	96.88	323	P	P	04 38 01.4	-1.2
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
K22A	Casper	97.26	48	P	Pdif	04 38 05.9	+1.0
	baz=266						
MNTX	Cornudas Mount	97.28	59	P	Pdif	04 38 06.2	+1.1
	baz=265						
N23A	Red Feather La	97.57	50	P	P	04 38 05.5	-0.9
N23A	Red Feather La	97.57	50	P	Pdif	04 38 07.9	+1.4
	baz=266						
LAO	LASA Array	97.76	44	P	P	04 38 06.7	-0.1
LAO	LASA Array	97.76	44	P	Pdif	04 38 10.2	+3.2
	baz=266,SNR=6.4						
TXAR	Lajitas Array	98.56	62	P	P	04 38 11.0	+0.1
	comp=Z,0.2nm,0.7s,baz=243,slow=4.0,SNR=2.6						
TXAR				LR	LR	05 14 45.4	
	comp=Z,184nm,21.2s,baz=270,slow=31						
	comp=Z,0.2nm,0.7s						
TXAR	Lajitas Array	98.56	62	P	P	04 38 11.0	+0.1
RSSD	Black Hills	99.16	47	P	Pdif	04 38 14.6	+1.2
	baz=268						
DGMT	Dagmar	99.21	42	P	Pdif	04 38 14.9	+1.6
	baz=268						
SNAA	Sanae	99.64	185	LR	LR	05 19 07.5	
	comp=Z,219nm,21.9s,baz=168,slow=33						
KIV	Kislovodsk	115.88	315	*i* PKIKP	PKiKP	04 43 10.4	-4.2
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
LONY	Lake Ozonia	119.87	43	P	PKPdf	04 43 20.8	-1.3
	baz=290						
AKASG	Malin Array Be	121.88	326	PKP	PKPdf	04 43 25.9	+0.1
	comp=Z,1.2nm,0.8s,baz=43,slow=1.6,SNR=4.5						
BOSA	Boshof	123.81	228	PKP	PKPdf	04 43 29.3	-1.1
	comp=Z,2.1nm,0.7s,baz=132,slow=20,SNR=3.7						
LPAZ	La Paz	125.65	117	PKP	PKPdf	04 43 35.0	+0.2
	comp=Z,4.5nm,1.1s,baz=232,slow=1.2,SNR=7.7						
BRG	Berggiesshubel	129.44	334	*e*PKP	PKiKP	04 43 43.0	+2.0
BRG				Amp		04 43 44.7	
	comp=Z,6.6nm,1.3s						
BRG	Berggiesshubel	129.44	334	*e*PKIKP	PKiKP	04 43 43.0	+2.0
BRG				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BRG				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GERES	GERESS Array B	131.00	332	PKP	PKiKP	04 43 44.1	-0.2
	comp=Z,0.8nm,0.8s,baz=72,slow=3.2,SNR=3.6						
PBRG	Braganca	144.76	344	*e*PKP	PKPdf	04 44 09.7	+0.9
PCAB	Cabril	145.19	346	*e*PKP	PKPbc	04 44 09.3	+0.2
MVO	Moncorvo	145.44	344	*e*PKP	PKPab	04 44 10.5	+0.4
POLO	Lamas de Olo	145.44	345	*e*PKP	PKPab	04 44 11.3	+1.1
PVRL	Vila Real	145.52	345	*e*PKP	PKPab	04 44 10.9	+0.5
ESDC	Sonseca Array	145.84	339	PKPbc	PKPab	04 44 12.0	+0.4
	comp=Z,15nm,1.1s,baz=14,slow=2.9,SNR=29						
ESDC	Sonseca Array	145.84	339	PKPdf	PKPdf	04 44 09.4	-1.3
PAB	San Pablo	146.09	339	PKPdf	PKPdf	04 44 10.2	-1.0
PAB	San Pablo	146.09	339	PKP2	PKPdf	04 44 10.2	-1.0
PCBR	Castelo Branco	146.79	344	*e*PKP	PKPdf	04 44 11.6	-0.7
PMRV	Marv??o	147.15	343	*e*PKP	PKPab	04 44 16.6	0.0
TORD	Torodi Ar. Bea	159.07	286	PKP	PKPdf	04 44 30.6	-0.2
	comp=Z,3.0nm,1.1s,baz=22,slow=1.1,SNR=9.6						
TORD				PKPab	PKPab	04 45 07.5	+0.1
	comp=Z,9.7nm,1.1s,baz=76,slow=3.5,SNR=12						

ROM 20 04:32:38.6±0.1, 42°.997N±0°.004×13°.034E±0°.004, h9^{km}, ML1.7/25, 11C-3D, Error ellipse: s-maj=0.5km s-min=0.3km az=359.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FEMA	Monte Fema	0.04	162	⇑P	Pg	04 32 40.5	-0.1
FEMA				S	Sg	04 32 41.4	-0.4
FDMO	Fiordimonte	0.06	44	P	Pg	04 32 40.4	-0.2
FDMO				AML	AML		
	comp=E,2330μm,0.3s						
FDMO				AML	AML		
	comp=N,2415μm,0.5s						
FDMO				AML	AML		
	comp=N,2415μm,1.5s						
T1219	Muccia, Frazio	0.06	342	P	Pg	04 32 40.7	0.0
T1219				AML	AML		
	comp=E,1175μm,0.1s						
T1219				AML	AML		
	comp=N,1645μm,1.4s						
T1219				AML	AML		
	comp=N,1615μm,1.4s						
T1219				AML	AML		
	comp=E,1115μm,0.1s						
T1219				AML	AML		
	comp=N,1615μm,1.5s						
T1219				AML	AML		
	comp=N,1645μm,1.5s						
CESI	CESI - Serrava	0.10	275	⇑P	Pg	04 32 41.6	+0.5
CESI				S	Sg	04 32 43.5	+0.7
CESI				AML	AML		
	comp=N,882μm,0.5s						
CESI				AML	AML		
	comp=E,900μm,0.4s						
T1216	Preci, Frazion	0.11	186	P	Pg	04 32 41.8	+0.6
T1216				S	Sg	04 32 43.7	+0.7
T1216				AML	AML		
	comp=E,898μm,0.3s						
T1216				AML	AML		
	comp=N,746μm,0.8s						
T1216				AML	AML		
	comp=E,898μm,1.7s						
T1216				AML	AML		
	comp=N,746μm,1.2s						
T1220	Camerino, Fraz	0.12	19	⇑P	Pg	04 32 41.9	+0.5
T1220				AML	AML		
	comp=E,2745μm,0.4s						
T1220				AML	AML		
	comp=N,1850μm,1.1s						
T1220				AML	AML		
	comp=E,2745μm,0.4s						
T1256	Bolognola (MC)	0.14	86	⇑P	Pg	04 32 42.4	+0.5
T1256				S	Sg	04 32 44.9	+0.8
T1256				AML	AML		
	comp=N,393μm,0.2s						
T1256				AML	AML		
	comp=E,308μm,0.6s						
T1256				AML	AML		
	comp=N,394μm,0.2s						
T1256				AML	AML		
	comp=E,308μm,1.4s						
MC2	Monte Cornacci	0.14	126	⇑P	Pg	04 32 42.5	+0.6
MC2				S	Sg	04 32 45.2	+1.0
T1245	Castelsantange	0.18	141	P	Pg	04 32 43.0	+0.5
T1245				S	Sg	04 32 46.7	+1.6
T1245				AML	AML		
	comp=E,354μm,1.4s						
T1245				AML	AML		
	comp=N,500μm,1.2s						
T1245				AML	AML		
	comp=N,500μm,0.8s						
T1245				AML	AML		
	comp=E,354μm,0.6s						
GUMA	Gualdo di Mace	0.23	73	⇑P	Pg	04 32 44.3	+1.0
GUMA				AML	AML		
	comp=E,566μm,0.4s						
GUMA				AML	AML		
	comp=N,544μm,0.2s						
GUMA				AML	AML		
	comp=E,650μm,0.2s						
GUMA				AML	AML		
	comp=N,690μm,0.2s						
GUMA				AML	AML		
	comp=E,566μm,0.5s						
GUMA				AML	AML		
	comp=N,543μm,0.2s						
GUMA				AML	AML		
	comp=N,690μm,1.8s						
GUMA				AML	AML		
	comp=E,566μm,1.5s						
MMO1	Montemonaco	0.24	114	P	Pg	04 32 44.1	+0.7
MMO1				S	Sg	04 32 48.1	+1.4
T1212	Cascia, Frazio	0.24	178	P	Pg	04 32 44.3	+0.7
T1212				S	Sg	04 32 48.7	+1.8
T1212				AML	AML		
	comp=E,327μm,0.3s						
T1212				AML	AML		
	comp=N,500μm,1.0s						
T1212				AML	AML		
	comp=N,521μm,1.0s						
T1212				AML	AML		
	comp=E,327μm,0.3s						
T1212				AML	AML		
	comp=E,291μm,0.3s						
T1212				AML	AML		
	comp=N,500μm,1.0s						
T1212				AML	AML		
	comp=N,520μm,1.0s						
T1212				AML	AML		
	comp=N,520μm,1.0s						
T1212				AML	AML		
	comp=N,500μm,1.0s						
SNTG	Esanatoglia	0.27	345	⇑P	Pg	04 32 44.7	+0.7
SNTG				AML	AML		
	comp=E,95μm,0.6s						
SNTG				AML	AML		
	comp=N,84μm,1.0s						
T1214	Arquata del Tr	0.27	152	P	Pg	04 32 44.6	+0.6
T1214				S	Sb	04 32 49.2	-1.2
T1214				AML	AML		
	comp=E,150μm,0.4s						
T1214				AML	AML		
	comp=N,128μm,0.8s						
T1214				AML	AML		
	comp=E,150μm,0.4s						
T1214				AML	AML		
	comp=N,128μm,0.8s						
ASSB	Assisi San Ben	0.28	280	⇑P	Pg	04 32 44.9	+0.7
ASSB				AML	AML		
	comp=N,541μm,0.2s						
ASSB				AML	AML		
	comp=E,480μm,1.1s						
ASSB				AML	AML		
	comp=E,480μm,0.9s						
T1217	Poggiodomo (PG	0.29	195	P	Pg	04 32 45.2	+0.7
T1217				S	Sb	04 32 50.3	-0.7
T1217				AML	AML		
	comp=E,172μm,0.1s						
T1217				AML	AML		
	comp=N,225μm,0.4s						
T1241	Roccafluvione,	0.32	116	P	Pg	04 32 45.7	+0.7
T1241				S	Sb	04 32 51.3	-0.6
T1241				AML	AML		
	comp=E,154μm,0.2s						
T1241				AML	AML		
	comp=N,134μm,0.5s						
T1218	Civita (PG)	0.33	170	P	Pg	04 32 45.8	+0.6
T1218				S	Sb	04 32 51.6	-0.6
T1218				AML	AML		
	comp=E,106μm,1.4s						
T1218				AML	AML		
	comp=E,106μm,1.3s						
T1218				AML	AML		
	comp=N,180μm,1.5s						
T1218				AML	AML		
	comp=E,106μm,0.7s						
EL6	Elcito	0.34	8	⇑P	Pg	04 32 45.9	+0.6
EL6				AML	AML		
	comp=N,274μm,0.2s						
EL6				AML	AML		
	comp=E,204μm,1.2s						
EL6				AML	AML		
	comp=E,204μm,0.8s						
ATCC	AVT- Casa Cast	0.34	303	P	Pb	04 32 46.2	-0.7
ATCC				AML	AML		
	comp=N,126μm,0.9s						
ATCC				AML	AML		
	comp=E,128μm,0.2s						
ATCC				AML	AML		
	comp=N,126μm,1.1s						
FOSV	Fossato di Vic	0.36	326	⇓P	Pg	04 32 46.3	+0.6
FOSV				AML	AML		
	comp=N,76μm,0.3s						
FOSV				AML	AML		
	comp=E,49μm,0.2s						
CING	Cingoli	0.40	17	⇑P	Pg	04 32 47.0	+0.6
CING				AML	AML		
	comp=E,113μm,1.3s						
CING				AML	AML		
	comp=N,96μm,0.4s						
CING				AML	AML		
	comp=E,113μm,0.7s						
MURB	Monte Urbino	0.46	306	P	Pg	04 32 48.2	+0.7
MURB				AML	AML		
	comp=N,176μm,0.3s						
MURB				AML	AML		
	comp=E,152μm,0.4s						
SSFR	Montelago di S	0.48	337	⇓P	Pb	04 32 49.3	+0.1
SSFR				AML	AML		
	comp=E,134μm,0.2s						
SSFR				AML	AML		
	comp=N,114μm,0.2s						
ARVD	Arcevia	0.51	352	P	Pg	04 32 48.9	+0.5
ARVD				AML	AML		
	comp=N,36μm,0.4s						
ARVD				AML	AML		
	comp=E,42μm,0.7s						
ATVO	AVT- Monte Val	0.60	310	⇓P	Pb	04 32 50.9	-0.4
PIEI	Pieia	0.65	326	⇑P	Pb	04 32 52.1	-0.1
PIEI				AML	AML		
	comp=E,23μm,0.3s						
PIEI				AML	AML		
	comp=N,22μm,0.2s						
NARO	Abbazia di Nar	0.70	332	P	Pb	04 32 52.8	-0.1

ROM 20 04:33:28.2±0.0, 42°.906N±0°.002×13°.058E±0°.003, h11^{km}, ML1.5/13, 5C-3D, Error ellipse: s-maj=0.2km s-min=0.2km az=236.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1216	Preci, Frazion	0.03	243	⇓P	Pg	04 33 30.6	+0.3
T1216				S	Sg	04 33 32.0	+0.2
T1216				AML	AML		
	comp=N,1320μm,0.3s						
T1216				AML	AML		
	comp=E,1340μm,0.3s						
FEMA	Monte Fema	0.06	354	P	Pg	04 33 30.9	+0.3
MC2	Monte Cornacci	0.10	86	⇑P	Pg	04 33 31.4	+0.3
MC2				S	Sg	04 33 33.6	+0.4
T1245	Castelsantange	0.11	117	⇑P	Pg	04 33 31.5	+0.3
T1245				S	Sg	04 33 33.7	+0.4
T1245				AML	AML		
	comp=E,810μm,1.3s						
T1245				AML	AML		
	comp=N,881μm,0.3s						
T1245				AML	AML		
	comp=E,810μm,0.7s						
FDMO	Fiordimonte	0.13	9	P	Pg	04 33 31.9	+0.5
FDMO				S	Sg	04 33 34.4	+0.7
FDMO				AML	AML		
	comp=N,152μm,0.2s						
FDMO				AML	AML		
	comp=E,133μm,0.4s						
FDMO				AML	AML		
	comp=N,152μm,1.8s						
CESI	CESI - Serrava	0.15	311	P	Pg	04 33 32.3	+0.6
CESI				S	Sg	04 33 35.1	+0.9
CESI				AML	AML		
	comp=E,419μm,0.1s						
CESI				AML	AML		
	comp=N,851μm,0.1s						
T1212	Cascia, Frazio	0.15	184	P	Pg	04 33 32.3	+0.5
T1212				S	Sg	04 33 35.1	+0.9
T1219	Muccia, Frazio	0.15	346	P	Pg	04 33 32.3	+0.5
T1219				S	Sg	04 33 35.0	+0.7
T1219				AML	AML		
	comp=E,198μm,0.2s						
T1219				AML	AML		
	comp=N,237μm,0.7s						
T1219				AML	AML		
	comp=E,200μm,1.1s						
T1219				AML	AML		
	comp=N,222μm,0.3s						
T1256	Bolognola (MC)	0.16	51	P	Pg	04 33 32.3	+0.4
T1256				S	Sg	04 33 35.4	+0.8
T1256				AML	AML		
	comp=E,194μm,0.4s						
T1256				AML	AML		
	comp=N,192μm,0.3s						
T1214	Arquata del Tr	0.18	143	P	Pg	04 33 32.7	+0.4
T1214				S	Sg	04 33 35.8	+0.7
T1214				AML	AML		
	comp=E,130μm,0.8s						
T1214				AML	AML		
	comp=N,98μm,0.2s						
T1214				AML	AML		
	comp=N,98μm,1.8s						
T1214				AML	AML		
	comp=E,130μm,1.2s						
MMO1	Montemonaco	0.20	92	⇑P	Pg	04 33 32.9	+0.4
T1220	Camerino, Fraz	0.21	6	P	Pg	04 33 33.2	+0.6
CSP1	Cessapalombo	0.21	30	P	Pg	04 33 33.2	+0.4
T1217	Poggiodomo (PG	0.21	206	P	Pg	04 33 33.3	+0.6
T1218	Civita (PG)	0.24	170	P	Pg	04 33 33.4	+0.2
GUMA	Gualdo di Mace	0.26	52	⇑P	Pb	04 33 34.2	-0.6
GUMA				AML	AML		
	comp=E,195μm,0.4s						
GUMA				AML	AML		
	comp=N,136μm,0.6s						
T1241	Roccafluvione,	0.28	100	P	Pg	04 33 34.3	+0.4
T1241				AML	AML		
	comp=N,50μm,0.3s						
T1241				AML	AML		
	comp=E,65μm,0.2s						
ASSB	Assisi San Ben	0.32	295	⇑P	Pg	04 33 35.1	+0.4
ASSB				AML	AML		
	comp=N,91μm,0.3s						
ASSB				AML	AML		
	comp=E,80μm,0.3s						
SNTG	Esanatoglia	0.36	346	P	Pb	04 33 36.1	-0.5
MOMA	Monte Martano	0.37	254	⇓P	Pb	04 33 36.5	-0.3
ARRO	Arrone	0.39	214	P	Pb	04 33 37.4	+0.3
T1211	Morro Reatino	0.40	202	P	Pb	04 33 36.9	-0.5
ATCC	AVT- Casa Cast	0.41	312	P	Pg	04 33 36.8	+0.5
TERO	Teramo	0.49	125	P	Pg	04 33 37.8	0.0
TERO				AML	AML		
	comp=N,38μm,1.3s						
TERO				AML	AML		
	comp=N,38μm,0.7s						
TERO				AML	AML		
	comp=E,41μm,0.8s						
MURB	Monte Urbino	0.53	313	⇓P	Pg	04 33 39.0	+0.4
MURB				AML	AML		
	comp=N,60μm,1.6s						
MURB				AML	AML		
	comp=E,66μm,1.4s						
MURB				AML	AML		
	comp=N,60μm,0.4s						
TOLF	Tolfa	1.15	223	S	Sn	04 34 06.2	+0.3
SAMA	S.Maria delle	1.18	197	P	Pg	04 33 52.1	+1.3
LIK	San Giovanni I	1.45	165	S	Sg	04 34 14.6	-0.2
LIK				AML	AML		
	comp=E,118μm,1.6s						
LIK				AML	AML		
	comp=N,138μm,1.6s						
LIK				AML	AML		
	comp=N,138μm,0.4s						
LIK				AML	AML		
	comp=E,118μm,0.4s						

ISK 20 04:36:56.9, 38°.70N×40°.15E, h5^{km}, ML3.4/17

DDA 20 04:36:57.3±0.0, 38°.68N×40°.15E, h12^{km}±1^{km}, MW3.6

ISC 20 04:36:57.4±1.0, 38°.70N±0°.02×40°.15E±0°.02, h11^{km}±9^{km}, n51, σ0^{s}.85/76, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOVA	Elazig, Kovanc	0.26	272	SPECP		04 37 03.0	
KOVA				P	Pb	04 37 03.4	-0.8
KOVA				S	Sb	04 37 07.7	-1.1
HANI	Diyarbakir_Han	0.34	145	SPECP		04 37 04.0	
HANI				P	Pg	04 37 04.4	+0.1
HANI				S	Sg	04 37 09.5	+0.6
BNGB	Bingl	0.51	54	Pg	Pb	04 37 07.7	-0.7
BNGB				Sg	Sb	04 37 16.5	+0.6
TNCL	Tunceli-Merkez	0.63	312	P	Pg	04 37 09.6	-0.1
TNCL				S	Sb	04 37 18.7	-0.7
SLHN	Bingol, Solhan	0.73	69	SPECP		04 37 12.0	
SLHN				P	Pb	04 37 12.2	-0.1
SLHN				S	Sb	04 37 22.0	-0.3
DYBB	Diyarbakir	0.74	180	Pg	Pn	04 37 13.1	-0.8
DYBB				Sg	Sn	04 37 24.1	-1.0
DIYA	Diyarbakir	0.77	182	P	Pn	04 37 14.3	0.0
DIYA				S	Sb	04 37 24.4	+1.1
YEDI	Yedisu-Bingol	0.80	23	Pg	Pg	04 37 12.9	-0.1
ELZG	Elazig	0.93	258	P	Pg	04 37 14.9	-0.5
ELZG				S	Sn	04 37 31.1	+1.1
ERZN	Erzincan	0.95	340	Pg	Pg	04 37 15.5	-0.3
ERZN				Sg	Sn	04 37 30.2	-0.2
SVAN	Silvan-Diyarba	0.99	123	Pg	Pn	04 37 16.9	-0.3
SVAN				Sg	Sn	04 37 31.8	+0.6
SVAN	Silvan-Diyarba	0.99	123	P	Pg	04 37 16.1	-0.3
SVAN				S	Sb	04 37 29.4	-0.2
MUSM	Mu-Merkez	1.07	88	P	Pb	04 37 17.9	0.0
MUSM				S	Sb	04 37 32.6	+0.6
EUZM	Uzumlu	1.07	341	P	Pb	04 37 18.0	0.0
EUZM				S	Sg	04 37 31.6	-0.3
ECAT	Cat-ERZURUM	1.11	35	P	Pb	04 37 18.8	0.0
VRTB	Varto-Mus	1.12	65	Pn	Pn	04 37 19.1	-0.1
VRTB	Varto-Mus	1.12	65	SPECP		04 37 18.0	
VRTB				P	Pb	04 37 18.9	0.0
VRTB				S	Sb	04 37 33.8	+0.2
BTMN	Batman	1.19	132	P	Pn	04 37 20.8	+0.7
BTMN				S	Sg	04 37 35.3	-0.6
MAZI	Mazidag	1.26	169	Pn	Pg	04 37 21.4	-0.2
KOPT	Kop Dagi	1.35	11	SPECP		04 37 23.0	
KOPT				P	Pg	04 37 23.5	+0.1
KOPT				S	Sn	04 37 41.0	+0.6
NARI	Adyaman-Kaht	1.36	234	P	Pg	04 37 24.0	+0.5
NARI				S	Sn	04 37 40.6	+0.2
MAYA	Malatya/Merkez	1.40	255	P	Pb	04 37 23.3	-0.3
MAYA				S	Sg	04 37 44.8	+2.3
KEMA	Kemaliye	1.41	294	P	Pn	04 37 22.8	-0.3
KEMA				S	Sg	04 37 42.8	0.0
ARPR	Arapgir-MALATY	1.47	286	Pn	Pg	04 37 25.5	-0.1
ARPR				Sn	Sg	04 37 46.9	+2.2
EMRE	Erzurum,Aziziy	1.48	25	P	Pg	04 37 26.2	+0.3
GURO	Guroymak-BITLI	1.48	95	Pn	Pg	04 37 25.6	-0.3
HANM	anlurfa/Hi	1.50	222	SPECP		04 37 24.0	
HANM				P	Pb	04 37 24.9	-0.3
HANM				S	Sg	04 37 45.5	0.0
EKAR	Karacoban	1.59	69	P	Pg	04 37 28.3	+0.3
KELT	Kelkit	1.61	335	SPECP		04 37 27.0	
KELT				P	Pg	04 37 27.9	-0.4
KELT				S	Sb	04 37 47.4	-0.2
MIDY	Mardin/Midyat-	1.62	142	SPECP		04 37 27.0	
MIDY				P	Pb	04 37 27.6	+0.2
URFA	Urfa	1.63	220	Pn	Pb	04 37 27.7	+0.1
BAYT	Aydıntepe-Bayb	1.70	360	Pn	Pg	04 37 29.5	-0.5
KRIK	Erzurum-spir	1.75	20	SPECP		04 37 30.0	
KRIK				P	Pg	04 37 30.6	-0.4
AKCD	Akcadag	1.79	258	SPECP		04 37 30.0	
AKCD				P	Pb	04 37 30.1	-0.2
AKCD				S	Sg	04 37 56.6	+1.6
KOPR	Koprukoy-ERZUR	1.85	45	Pn	Pb	04 37 31.6	+0.2
ALUC	Giresun/Alucra	1.96	328	P	Pg	04 37 34.7	-0.4
ADCV	BITLIS_Adilcev	2.02	86	P	Pg	04 37 35.6	-0.5
PERV	Siirt/Pervari-	2.03	111	P	Pn	04 37 32.8	+1.2
PERV				S	Sb	04 38 00.5	+0.9
IZDR	Rize	2.11	9	P	Pn	04 37 34.2	+1.5
SUSE	Susehri	2.13	316	P	Pb	04 37 36.7	+0.5
AKCA	Adyaman/G¶l	2.13	246	P	Pb	04 37 35.0	-1.2
AKCA				S	Sg	04 38 04.6	-1.4
CUKAN	kangal_SIVAS	2.18	287	P	Pb	04 37 36.9	0.0
AKDM	Akdamar-Van	2.25	98	Pn	Pb	04 37 37.1	-1.1
KTUT	Trabzon	2.31	353	Pn	Pb	04 37 37.7	-1.3
AGRB	Hanur-Agry	2.38	67	Pn	Pb	04 37 39.3	-1.1
GZT	Gaziantep	2.44	238	P	Pn	04 37 38.2	+0.9
CHOM	Cayeli-Rize	2.44	11	Pn	Pb	04 37 39.6	-1.8
SENK	Senkaya-Erzuru	2.52	42	Pn	Pb	04 37 40.9	-1.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
VANB	**Van**	**2.54**	**91**	Pn	**Pb**	**04 37 41.5**	**-1.6**
NZIP	**Nizip/Gaziante**	**2.56**	**231**	P	**Pb**	**04 37 41.1**	**-2.2**
VYHS	**Vyhne**	**18.23**	**309**	*e*PN	**Pn**	**04 41 10.0**	**-0.2**

PRU ***20*** *05:02:41.9±0.0, 42°.64N×13°.35E, h0^{km}, M4.1*
NEIC ***20*** *05:02:42.0±2.2, 42°.60N±0°.03×13°.29E±0°.05, h10^{km}±1^{km}, mb4.1/8, Error ellipse: s-maj=7.4km s-min=3.0km az=230.0*
LDG ***20*** *05:02:41.0±0.1, 42°.54N×13°.32E, h10^{km}, Ml3.3/24, Error ellipse: s-maj=3.6km s-min=2.3km az=45.0*
PDG ***20*** *05:02:41.9±0.5, 42°.57N×13°.31E, h8^{km}, ML3.6/13, Error ellipse: s-maj=0.4km s-min=0.4km az=0.0*
ROM ***20*** *05:02:41.2±0.0, 42°.564N±0°.002×13°.323E±0°.002, h9^{km}, ML3.6/338, Mw3.5, Error ellipse: s-maj=0.2km s-min=0.1km az=72.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.01; $M_{\theta\theta}$-2.00; $M_{\phi\phi}$2.01; $M_{r\theta}$-0.05; $M_{\theta\phi}$-0.94; $M_{\phi r}$0.14; Fault plane solution: $M_0$2.21983×10^{14} NP1:ϕ_s33.00000°, δ87.00000°, λ2.00000°. NP2:ϕ_s302.00000°, δ88.00000°, λ177.00000°.*
IDC ***20*** *05:02:43.0±1.2, 42°.73N×13°.46E, h0^{km}, mb3.3/5, mbtmp3.4/9, ML3.4/3, MS3.1/3 Error ellipse: s-maj=27.2km s-min=12.5km az=99.0*
BEO ***20*** *05:02:44.0±2.3, 42°.49N×13°.01E, h69^{km}±5^{km}, ML3.2/8*
ISC 20 05:02:41.7±0.7, **42°.57N**±0°.01×**13°.31E**±0°.01, **h10**^{km}±4^{km}, **n375, σ1^{s}.97**/472, **mb3.6**/5, **34C-36D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	**0.07**	**18**	⇓P	**Pg**	**05 02 43.7**	**-0.3**
SMA1				S	**Sg**	**05 02 45.3**	**-0.4**
SMA1				AML	AML		
SMA1				AML	AML		
CAMP	**Campotosto**	**0.08**	**113**	Pg	**Pg**	**05 02 43.7**	**-0.5**
CAMP				Sg	**Sg**	**05 02 45.1**	**-0.9**
CAMP	**Campotosto**	**0.08**	**113**	⇓P	**Pg**	**05 02 43.7**	**-0.5**
CAMP				S	**Sg**	**05 02 45.0**	**-0.9**
CAMP				AML	AML		
CAMP				AML	AML		
RM33	**Pellescritta (**	**0.09**	**230**	⇑P	**Pg**	**05 02 44.5**	**+0.2**
RM33				S	**Sg**	**05 02 46.4**	**+0.3**
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
T1204	**Amatrice, Fraz**	**0.11**	**3**	⇓P	**Pg**	**05 02 44.4**	**-0.2**
T1204				S	**Sg**	**05 02 46.5**	**-0.1**
T1247	**Pizzolo (AQ)**	**0.13**	**183**	⇓P	**Pg**	**05 02 44.9**	**+0.1**
T1247				S	**Sg**	**05 02 47.4**	**+0.5**
T1247				AML	AML		
T1247				AML	AML		
T1247				AML	AML		
T1246	**Crognaleto (TE**	**0.14**	**83**	⇑P	**Pg**	**05 02 44.6**	**-0.3**
T1246				S	**Sg**	**05 02 46.8**	**-0.4**
T1218	**Civita (PG)**	**0.17**	**306**	⇑P	**Pg**	**05 02 45.8**	**+0.3**
T1218				S	**Sg**	**05 02 49.0**	**+0.8**
T1218				AML	AML		
	comp=E,40600µm,0.3s						
T1218				AML	AML		
	comp=E,37700µm,0.3s						
T1218				AML	AML		
T1218				AML	AML		
T1218				AML	AML		
T1218				AML	AML		
	comp=E,37700µm,0.3s						
T1244	**Arquata del Tr**	**0.19**	**358**	⇓P	**Pg**	**05 02 45.9**	**+0.1**
T1244				S	**Sg**	**05 02 49.2**	**+0.6**
T1214	**Arquata del Tr**	**0.20**	**339**	⇓P	**Pg**	**05 02 46.4**	**+0.3**
T1214				S	**Sg**	**05 02 50.8**	**+1.7**
T1214				AML	AML		
	comp=E,57900µm,0.4s						
T1214				AML	AML		
	comp=N,30700µm,0.5s						
T1214				AML	AML		
	comp=E,56000µm,0.4s						
T1214				AML	AML		
	comp=N,30700µm,0.5s						
T1214				AML	AML		
	comp=E,56000µm,0.4s						
T1214				AML	AML		
	comp=N,31850µm,0.5s						
T1214				AML	AML		
	comp=E,57900µm,0.4s						
T1213	**Norcia, Frazio**	**0.21**	**319**	⇓P	**Pg**	**05 02 46.4**	**+0.3**
T1213				S	**Sg**	**05 02 50.0**	**+0.9**
AQU	**L'Aquila**	**0.23**	**162**	Pg	**Pg**	**05 02 46.0**	**-0.4**
AQU				Sg	**Sg**	**05 02 50.2**	**+0.7**
AQU	**L'Aquila**	**0.23**	**162**	⇓P	**Pg**	**05 02 46.5**	**+0.1**
AQU				S	**Sg**	**05 02 51.1**	**+1.6**
AQU				AML	AML		
	comp=N,32350µm,0.5s						
AQU				AML	AML		
	comp=E,48050µm,0.5s						
AQU				AML	AML		
	comp=E,46900µm,0.5s						
AQU				AML	AML		
	comp=N,30550µm,0.6s						
AQU				AML	AML		
	comp=N,30550µm,1.4s						
TERO	**Teramo**	**0.23**	**76**	⇑P	**Pg**	**05 02 46.0**	**-0.3**
TERO				S	**Sg**	**05 02 49.5**	**0.0**
TERO				AML	AML		
	comp=E,49800µm,0.3s						
TERO				AML	AML		
	comp=N,55250µm,0.3s						
TERO				AML	AML		
	comp=E,54200µm,0.3s						
TERO				AML	AML		
	comp=N,57800µm,0.3s						
TERO				AML	AML		
	comp=E,49800µm,1.7s						
TERO				AML	AML		
	comp=E,54200µm,1.7s						
GIGS	**Gran Sasso**	**0.23**	**121**	P	**Pg**	**05 02 46.0**	**-0.4**
GIGS				S	**Sg**	**05 02 49.3**	**-0.3**
GIGS				AML	AML		
	comp=E,16050µm,0.4s						
GIGS				AML	AML		
	comp=N,7145µm,0.3s						
T1222	**Castel Sant'An**	**0.26**	**230**	⇑P	**Pg**	**05 02 47.3**	**+0.3**
T1222				S	**Sg**	**05 02 51.8**	**+1.2**
T1222				AML	AML		
	comp=E,32500µm,0.4s						
T1222				AML	AML		
	comp=N,33200µm,0.4s						
T1222				AML	AML		
	comp=E,30700µm,0.4s						
T1222				AML	AML		
	comp=N,32750µm,0.4s						
T1222				AML	AML		
	comp=N,33200µm,0.4s						
T1222				AML	AML		
	comp=N,32800µm,0.4s						
T1222				AML	AML		
	comp=E,32500µm,0.4s						
T1222				AML	AML		
	comp=E,30700µm,0.4s						
T1222				AML	AML		
	comp=N,33200µm,0.4s						
T1212	**Cascia, Frazio**	**0.27**	**313**	P	**Pg**	**05 02 47.4**	**+0.2**
T1212				S	**Sg**	**05 02 52.0**	**+1.2**
T1212				AML	AML		
	comp=E,25050µm,0.6s						
T1212				AML	AML		
	comp=E,24650µm,0.6s						
T1212				AML	AML		
	comp=N,30650µm,0.6s						
T1212				AML	AML		
	comp=N,29950µm,0.5s						
T1212				AML	AML		
	comp=N,30650µm,0.6s						
T1212				AML	AML		
	comp=E,24650µm,0.6s						
T1212				AML	AML		
	comp=N,29950µm,1.5s						
T1212				AML	AML		
	comp=E,25050µm,0.6s						
T1241	**Roccafluvione,**	**0.30**	**17**	⇓P	**Pg**	**05 02 47.6**	**-0.2**
T1241				S	**Sg**	**05 02 52.4**	**+0.5**
T1241				AML	AML		
	comp=E,27000µm,0.9s						
T1241				AML	AML		
	comp=N,27200µm,0.9s						
T1241				AML	AML		
	comp=N,27900µm,0.9s						
T1241				AML	AML		
	comp=E,27000µm,0.9s						
T1241				AML	AML		
	comp=E,26750µm,0.9s						
T1241				AML	AML		
	comp=E,27000µm,1.1s						
T1241				AML	AML		
	comp=E,26750µm,1.1s						
T1245	**Castelsantange**	**0.30**	**343**	⇓P	**Pg**	**05 02 48.0**	**+0.1**
T1245				S	**Sg**	**05 02 53.5**	**+1.5**
T1245				AML	AML		
	comp=E,29150µm,0.8s						
T1245				AML	AML		
	comp=N,56500µm,1.1s						
T1245				AML	AML		
	comp=N,53100µm,0.3s						
T1245				AML	AML		
	comp=N,53100µm,1.7s						
T1245				AML	AML		
	comp=E,32800µm,0.8s						
T1245				AML	AML		
	comp=N,56500µm,0.9s						
T1217	**Poggiodomo (PG**	**0.31**	**297**	⇑P	**Pg**	**05 02 48.2**	**+0.2**
T1217				S	**Sg**	**05 02 53.5**	**+1.3**
T1217				AML	AML		
	comp=N,12500µm,0.4s						
T1217				AML	AML		
	comp=E,11335µm,0.5s						
T1217				AML	AML		
	comp=N,13600µm,0.7s						
T1217				AML	AML		
	comp=E,12375µm,0.5s						
T1217				AML	AML		
	comp=E,11380µm,0.5s						
T1217				AML	AML		
	comp=N,13550µm,0.7s						
T1217				AML	AML		
	comp=N,13550µm,1.3s						
T1217				AML	AML		
	comp=E,12375µm,1.5s						
T1217				AML	AML		
	comp=E,11380µm,1.5s						
FIAM	**Fiamignano**	**0.33**	**205**	⇑P	**Pg**	**05 02 48.5**	**+0.2**
FIAM				S	**Sg**	**05 02 53.7**	**+0.9**
FIAM				AML	AML		
	comp=E,45450µm,0.6s						
FIAM				AML	AML		
	comp=N,15300µm,0.9s						
FIAM				AML	AML		
	comp=N,15300µm,1.1s						
MMO1	**Montemonaco**	**0.33**	**2**	⇓P	**Pg**	**05 02 48.3**	**-0.1**
MMO1				S	**Sg**	**05 02 53.6**	**+0.8**
T1211	**Morro Reatino**	**0.34**	**264**	⇑P	**Pg**	**05 02 48.7**	**+0.2**
T1211				S	**Sg**	**05 02 54.3**	**+1.3**
T1211				AML	AML		
	comp=E,11200µm,0.5s						
T1211				AML	AML		
	comp=E,11025µm,0.5s						
T1211				AML	AML		
	comp=E,11035µm,0.5s						
T1211				AML	AML		
	comp=N,16200µm,0.8s						
T1211				AML	AML		
	comp=E,11200µm,0.5s						
T1211				AML	AML		
	comp=E,11030µm,0.5s						
T1211				AML	AML		
	comp=N,16350µm,0.8s						
T1211				AML	AML		
	comp=N,16150µm,0.8s						
T1211				AML	AML		
	comp=E,11200µm,1.5s						
T1211				AML	AML		
	comp=E,11030µm,1.5s						
MC2	**Monte Cornacci**	**0.35**	**346**	⇓P	**Pg**	**05 02 48.9**	**+0.1**
MC2				S	**Sb**	**05 02 55.3**	**-0.7**
FAGN	**Fagnano**	**0.36**	**146**	⇓P	**Pg**	**05 02 48.6**	**-0.3**
FAGN				S	**Sb**	**05 02 55.2**	**-0.9**
FAGN				AML	AML		
	comp=E,43650µm,0.6s						
FAGN				AML	AML		
	comp=N,26800µm,0.4s						
FAGN				AML	AML		
	comp=N,26800µm,1.6s						
T1216	**Preci, Frazion**	**0.39**	**327**	⇓P	**Pg**	**05 02 49.4**	**0.0**
T1216				S	**Sg**	**05 02 56.0**	**+1.5**
T1216				AML	AML		
	comp=E,26350µm,0.9s						
T1216				AML	AML		
	comp=N,28650µm,1.6s						
T1216				AML	AML		
	comp=N,28650µm,1.6s						
T1216				AML	AML		
	comp=E,26350µm,1.1s						
T1216				AML	AML		
	comp=N,28650µm,0.4s						
ARRO	**Arrone**	**0.40**	**272**	⇑P	**Pg**	**05 02 49.8**	**+0.2**
ARRO				S	**Sg**	**05 02 55.6**	**+0.7**
ARRO				AML	AML		
	comp=N,6940µm,1.1s						
ARRO				AML	AML		
	comp=E,7310µm,0.5s						
VCEL	**Villa Celiera**	**0.43**	**114**	P	**Pg**	**05 02 50.2**	**0.0**
VCEL				S	**Sb**	**05 02 57.7**	**-0.4**
VCEL				AML	AML		
	comp=E,25450µm,0.6s						
VCEL				AML	AML		
	comp=N,36400µm,0.7s						
VCEL				AML	AML		
	comp=E,25450µm,1.4s						
FEMA	**Monte Fema**	**0.44**	**334**	P	**Pg**	**05 02 50.4**	**0.0**
FEMA				S	**Sg**	**05 02 57.5**	**+1.3**
FEMA				AML	AML		
	comp=E,32100µm,0.5s						
FEMA				AML	AML		
	comp=N,15800µm,0.5s						
FEMA				AML	AML		
	comp=E,32100µm,0.5s						
FEMA				AML	AML		
	comp=N,15850µm,0.5s						
T1256	**Bolognola (MC)**	**0.44**	**352**	⇓P	**Pg**	**05 02 50.3**	**-0.2**
T1256				S	**Sg**	**05 02 57.4**	**+1.1**
T1256				AML	AML		
	comp=N,8900µm,1.3s						
T1256				AML	AML		
	comp=E,9610µm,0.4s						
T1256				AML	AML		
	comp=N,8595µm,1.2s						
T1256				AML	AML		
	comp=N,8900µm,1.2s						
T1256				AML	AML		
	comp=E,9815µm,0.7s						
T1256				AML	AML		
	comp=E,9610µm,1.6s						
T1221	**Campello sul C**	**0.45**	**311**	P	**Pg**	**05 02 50.6**	**+0.1**
T1221				S	**Sg**	**05 02 57.8**	**+1.3**
OFFI	**Offida**	**0.46**	**37**	⇑P	**Pg**	**05 02 51.4**	**+0.6**
OFFI				S	**Sb**	**05 02 59.6**	**+0.8**
OFFI				AML	AML		
	comp=E,36900µm,0.5s						
OFFI				AML	AML		
	comp=N,56050µm,0.9s						
OFFI				AML	AML		
	comp=N,56050µm,1.1s						
T0110	**Collepietro**	**0.49**	**134**	P	**Pg**	**05 02 50.7**	**-0.5**
T0110				S	**Sb**	**05 02 59.4**	**-0.3**
T0110				AML	AML		
	comp=E,17700µm,1.2s						
T0110				AML	AML		
	comp=N,15150µm,0.5s						
T0110				AML	AML		
	comp=E,17700µm,0.8s						
GUMA	**Gualdo di Mace**	**0.49**	**2**		**Pg**	**05 02 51.5**	**+0.1**
GUMA				Sg	**Sb**	**05 02 59.8**	**-0.1**
GUMA	**Gualdo di Mace**	**0.49**	**2**	⇓P	**Pg**	**05 02 51.5**	**+0.1**
GUMA				S	**Sb**	**05 02 59.9**	**0.0**
GUMA				AML	AML		
	comp=N,34050µm,0.6s						
GUMA				AML	AML		
	comp=E,29100µm,1.2s						
GUMA				AML	AML		
	comp=E,35150µm,0.4s						
GUMA				AML	AML		
	comp=E,29100µm,0.8s						
GUMA				AML	AML		
	comp=N,34050µm,1.4s						
GUMA				AML	AML		
	comp=N,39500µm,0.4s						
FDMO	**Fiordimonte**	**0.50**	**341**		**Pg**	**05 02 50.8**	**-0.6**
FDMO				Sg	**Sg**	**05 02 59.2**	**+1.2**
FDMO	**Fiordimonte**	**0.50**	**341**	⇓P	**Pg**	**05 02 51.2**	**-0.1**
FDMO				S	**Sb**	**05 02 59.4**	**-0.5**
FDMO				AML	AML		
	comp=N,9410µm,1.2s						
FDMO				AML	AML		
	comp=N,9410µm,0.8s						
FDMO				AML	AML		
	comp=E,7930µm,0.5s						
CESI	**CESI - Serrava**	**0.53**	**326**	⇓P	**Pg**	**05 02 52.0**	**-0.1**
CESI				S	**Sb**	**05 03 00.6**	**-0.3**
CESI				AML	AML		
	comp=N,15150µm,0.4s						
CESI				AML	AML		
	comp=E,10375µm,0.5s						
T1219	**Muccia, Frazio**	**0.54**	**336**	⇓P	**Pg**	**05 02 52.0**	**-0.2**
T1219				S	**Sg**	**05 03 00.5**	**+1.3**
T1219				AML	AML		
	comp=N,9685µm,0.4s						
T1219				AML	AML		
	comp=E,11400µm,0.4s						
T1219				AML	AML		
	comp=E,10690µm,0.4s						
T1219				AML	AML		
	comp=N,9690µm,0.4s						
T1219				AML	AML		
	comp=N,10780µm,0.3s						
CESX	**Cesi**	**0.54**	**275**		**Pg**	**05 02 52.0**	**-0.2**
CESX				Sg	**Sg**	**05 02 59.6**	**+0.2**
CESX	**Cesi**	**0.54**	**275**	⇑P	**Pg**	**05 02 52.0**	**-0.2**
CESX				S	**Sg**	**05 03 00.3**	**+1.0**
CESX				AML	AML		
	comp=E,5200µm,1.1s						
CESX				AML	AML		
	comp=N,5790µm,0.4s						
CESX				AML	AML		
	comp=E,5200µm,0.9s						
PTQR	**Pietraquaria**	**0.55**	**173**	⇓P	**Pg**	**05 02 51.8**	**-0.6**
PTQR				AML	AML		
	comp=N,2280µm,0.7s						
PTQR				AML	AML		
	comp=E,2990µm,0.6s						
PTQR				AML	AML		
	comp=N,2280µm,1.3s						
PTQR				AML	AML		
	comp=E,2990µm,1.4s						
T1220	**Camerino, Fraz**	**0.57**	**343**	⇓P	**Pg**	**05 02 52.5**	**-0.2**
T1220				S	**Sb**	**05 03 01.7**	**-0.2**
T1220				AML	AML		
	comp=E,44500µm,0.8s						
T1220				AML	AML		
	comp=N,29100µm,0.5s						
MOMA	**Monte Martano**	**0.59**	**294**	⇑P	**Pg**	**05 02 53.1**	**-0.2**
MOMA				S	**Sb**	**05 03 03.0**	**+0.2**
MOMA				AML	AML		
	comp=E,9345µm,0.3s						
MOMA				AML	AML		
	comp=N,9020µm,0.5s						
MOMA				AML	AML		
	comp=N,9020µm,0.5s						
MOMA				AML	AML		
	comp=N,9060µm,0.5s						
MOMA				AML	AML		
	comp=E,9670µm,0.3s						
MOMA				AML	AML		
	comp=E,9345µm,0.3s						
SEF1	**Sefro**	**0.64**	**335**	P	**Pg**	**05 02 53.8**	**-0.3**
SEF1				AML	AML		
	comp=E,15600µm,0.3s						
SEF1				AML	AML		
	comp=N,9990µm,0.3s						
SEF1				AML	AML		
	comp=N,10035µm,0.3s						
CERT	**Cerreto**	**0.66**	**202**	P	**Pg**	**05 02 54.0**	**-0.5**
CERT				AML	AML		
	comp=E,6445µm,0.6s						
CERT				AML	AML		
	comp=N,3730µm,1.1s						
CERT				AML	AML		
	comp=N,3730µm,0.9s						
ASSB	**Assisi San Ben**	**0.67**	**315**	AML	AML		
	comp=E,6325µm,1.5s						
ASSB				AML	AML		
	comp=N,7445µm,0.5s						
ASSB				AML	AML		
	comp=E,6325µm,0.5s						
SRES	**S.Oreste - Sor**	**0.68**	**241**	⇑P	**Pg**	**05 02 54.3**	**-0.5**
SRES				AML	AML		
	comp=E,2220µm,0.7s						
SRES				AML	AML		
	comp=N,2045µm,1.2s						
SRES				AML	AML		
	comp=E,2220µm,1.3s						
MTCE	**Montecelio**	**0.69**	**218**	P	**Pg**	**05 02 54.3**	**-0.7**
MTCE				AML	AML		
	comp=N,3980µm,0.6s						
MTCE				AML	AML		
	comp=E,4460µm,0.4s						
GAG1	**Gagliole**	**0.69**	**345**	P	**Pg**	**05 02 54.9**	**-0.3**
GAG1				AML	AML		
GAG1				AML	AML		
CADA	**Capodarco di F**	**0.71**	**28**	P	**Pb**	**05 02 56.4**	**+0.2**
CADA				AML	AML		
	comp=N,9805µm,1.2s						
CADA				AML	AML		
	comp=E,15800µm,0.5s						
INTR	**Introdacqua**	**0.71**	**141**	Pg	**Pg**	**05 02 54.5**	**-0.9**
INTR				Sg	**Sb**	**05 03 05.8**	**-0.3**
INTR	**Introdacqua**	**0.71**	**141**	⇓P	**Pg**	**05 02 54.5**	**-0.9**
INTR				S	**Sg**	**05 03 05.3**	**+0.6**
INTR				AML	AML		
	comp=N,5µm,0.6s						
INTR				AML	AML		
	comp=E,4155µm,0.7s						
INTR				AML	AML		
	comp=N,5µm,0.6s						
INTR				AML	AML		
	comp=E,4µm,0.7s						
INTR				AML	AML		
	comp=N,7375µm,0.6s						
VVLD	**Villa Vallelon**	**0.73**	**161**	P	**Pg**	**05 02 54.8**	**-1.1**
VVLD				AML	AML		
	comp=E,3845µm,1.0s						
VVLD				AML	AML		
	comp=E,3845µm,1.0s						
VVLD				AML	AML		
	comp=N,6045µm,0.6s						
SNTG	**Esanatoglia**	**0.74**	**339**	⇓P	**Pg**	**05 02 55.5**	**-0.5**
SNTG				S	**Sb**	**05 03 07.6**	**+0.7**
SNTG				AML	AML		
	comp=E,2920µm,0.6s						
SNTG				AML	AML		
	comp=E,2920µm,0.5s						
SNTG				AML	AML		
	comp=E,2635µm,0.5s						
SNTG				AML	AML		
	comp=N,3570µm,0.8s						
SNTG				AML	AML		
	comp=E,2635µm,1.5s						
SNTG				AML	AML		
	comp=N,3460µm,0.8s						
SNTG				AML	AML		
	comp=E,2920µm,1.5s						
RCAV	**Rocca di Cave**	**0.77**	**201**	P	**Pg**	**05 02 56.9**	**+0.4**
GUAR	**Guarcino**	**0.77**	**180**	P	**Pg**	**05 02 56.2**	**-0.4**
GUAR				AML	AML		
	comp=E,3385µm,0.4s						
GUAR				AML	AML		
	comp=N,4295µm,0.5s						
EL6	**Elcito**	**0.78**	**349**	⇓P	**Pg**	**05 02 56.2**	**-0.6**
EL6				AML	AML		
	comp=N,8200µm,0.6s						
EL6				AML	AML		
	comp=E,6120µm,0.5s						
EL6				AML	AML		

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      comp=N,8205µm,0.6s
ATCC  AVT- Casa Cast    0.79 322  P     Pg    05 02 56.5 -0.5
ATCC                              AML   AML
      comp=E,7675µm,0.5s
ATCC                              AML   AML
      comp=E,7675µm,1.5s
ATCC                              AML   AML
      comp=N,7935µm,1.3s
CING  Cingoli           0.81 354 ⇓P     Pg    05 02 56.7 -0.6
CING                              S     Sb    05 03 10.1 +1.1
CING                              AML   AML
      comp=E,6450µm,0.4s
CING                              AML   AML
      comp=E,6450µm,1.6s
CING                              AML   AML
      comp=N,3580µm,0.7s
FOSV  Fossato di Vic    0.83 331 ⇓P     Pg    05 02 57.1 -0.6
FOSV                              S     Sb    05 03 10.4 +0.9
FOSV                              AML   AML
      comp=E,3050µm,1.2s
FOSV                              AML   AML
      comp=N,3610µm,0.9s
FOSV                              AML   AML
      comp=E,3050µm,0.8s
LPEL  Lama dei Pelig    0.83 128  P     Pg    05 02 56.7 -1.1
LPEL                              S     Sg    05 03 09.0 +0.4
LPEL                              AML   AML
      comp=N,2665µm,0.6s
LPEL                              AML   AML
      comp=E,4155µm,0.5s
PP3   Marolino          0.84  15  P     Pg    05 02 58.2 +0.3
PP3                               AML   AML
      comp=N,8380µm,0.9s
PP3                               AML   AML
      comp=E,10275µm,0.7s
PP3                               AML   AML
      comp=N,8240µm,0.9s
PP3                               AML   AML
      comp=E,10800µm,0.7s
POFI  Posta Fibreno     0.90 160  P     Pg    05 02 58.2 -0.9
POFI                              AML   AML
      comp=E,2525µm,0.9s
POFI                              AML   AML
      comp=N,1465µm,1.6s
POFI                              AML   AML
      comp=N,1465µm,0.4s
POFI                              AML   AML
      comp=E,2575µm,0.9s
POFI                              AML   AML
      comp=N,1400µm,0.6s
MURB  Monte Urbino      0.90 321        Pg    05 02 58.1 -1.0
MURB                              Sg    Sg    05 03 07.5 -3.3
MURB  Monte Urbino      0.90 321  P     Pg    05 02 58.8 -0.3
MURB                              AML   AML
      comp=N,13450µm,0.9s
MURB                              AML   AML
      comp=E,15900µm,0.3s
MURB                              AML   AML
      comp=N,13800µm,1.0s
MURB                              AML   AML
      comp=N,13800µm,1.0s
MURB                              AML   AML
      comp=E,16650µm,0.3s
MURB                              AML   AML
      comp=N,13450µm,1.1s
MMUR  Monte Murano      0.90 345  AML   AML
      comp=E,9900µm,1.5s
MMUR                              AML   AML
      comp=E,9900µm,0.5s
MMUR                              AML   AML
      comp=N,7450µm,0.4s
RDP   Rocca di Papa     0.92 209  P     Pb    05 03 00.2 +0.4
MA9   Marino            0.93 211  P     Pb    05 03 00.7 +0.7
LRP   Arpino            0.94 167  P     Pg    05 02 58.5 -1.4
LRP                               AML   AML
      comp=E,1204µm,0.9s
LRP                               AML   AML
      comp=N,1880µm,0.9s
MGAB  Montegabbione     0.95 292  P     Pg    05 02 59.3 -0.7
MGAB                              AML   AML
      comp=E,4510µm,0.5s
MGAB                              AML   AML
      comp=N,7160µm,1.1s
MGAB                              AML   AML
      comp=E,4390µm,0.5s
MGAB                              AML   AML
      comp=N,7015µm,1.1s
SSFR  Montelago di S    0.95 336  P     Pg    05 02 59.2 -0.8
SSFR                              AML   AML
      comp=E,5550µm,0.7s
SSFR                              AML   AML
      comp=E,4925µm,0.2s
SSFR                              AML   AML
      comp=N,4830µm,0.2s
SSFR                              AML   AML
      comp=N,4060µm,0.2s
SSFR                              AML   AML
      comp=E,4925µm,1.8s
SSFR                              AML   AML
      comp=E,5550µm,1.3s
ATFO  Monte Foce - G    0.96 326  P     Pg    05 02 59.6 -0.7
ATFO                              AML   AML
      comp=N,3090µm,1.6s
ATFO                              AML   AML
      comp=E,3365µm,1.0s
ATFO                              AML   AML
      comp=N,3090µm,0.4s
ARVD  Arcevia           0.97 344  P     Pg    05 02 59.5 -0.8
ARVD                              AML   AML
      comp=N,2595µm,0.9s
ARVD                              AML   AML
      comp=N,2595µm,1.1s
ARVD                              AML   AML
      comp=E,2475µm,0.5s
ATLO  AVT- Montelove    1.00 319  P     Pg    05 03 00.4 -0.5
AOI   Ancona            1.00  12  P     Pg    05 03 00.5 -0.6
AOI                               AML   AML
      comp=N,2315µm,1.0s
AOI                               AML   AML
      comp=N,2315µm,1.0s
AOI                               AML   AML
      comp=E,3610µm,0.9s
GIUL  Giuliano Di Ro    1.01 182  P     Pg    05 03 00.5 -0.6
GIUL                              AML   AML
      comp=E,2070µm,0.7s
GIUL                              AML   AML
      comp=E,2070µm,1.3s
GIUL                              AML   AML
      comp=N,1790µm,0.5s
ATVA  AVT- Monte Val    1.03 314  P     Pg    05 03 01.2 -0.4
TB02  Pietralunga       1.04 321  P     Pg    05 03 01.0 -0.7
FRON  Frontone          1.04 336 ⇓P     Pg    05 03 00.7 -1.0
FRON                              AML   AML
      comp=N,4140µm,1.6s
FRON                              AML   AML
      comp=N,4140µm,0.4s
FRON                              AML   AML
      comp=E,5830µm,0.6s
ATVO  AVT- Monte Val    1.05 321  P     Pg    05 03 01.1 -0.8
ATVO                              AML   AML
      comp=E,2745µm,0.9s
ATVO                              AML   AML
      comp=N,2855µm,0.7s
ATBU  Serra di Buran    1.06 329  P     Pg    05 03 01.5 -0.7
RNI2  Rionero Sannit    1.07 144  P     Pg    05 03 01.0 -1.2
RNI2                              AML   AML
      comp=E,2795µm,0.8s
RNI2                              AML   AML
      comp=N,4230µm,1.1s
RNI2                              AML   AML
      comp=E,2795µm,0.7s
RNI2                              AML   AML
      comp=N,4240µm,1.1s
RNI2                              AML   AML
      comp=E,2795µm,1.2s
RNI2                              AML   AML
      comp=E,2795µm,1.3s
SACS  San Casciano d    1.07 286  P     Pg    05 03 01.7 -0.6
SACS                              AML   AML
      comp=E,1915µm,0.6s
SACS                              AML   AML
      comp=N,2065µm,0.8s
SACS                              AML   AML
      comp=N,2085µm,0.8s
SACS                              AML   AML
      comp=N,2065µm,1.2s
SACS                              AML   AML
      comp=E,1965µm,1.0s
SACS                              AML   AML
      comp=N,2085µm,1.2s
ATMI  Monte Miggiano    1.08 315  P     Pg    05 03 02.5  0.0
ATMI                              AML   AML
      comp=E,8715µm,0.7s
ATMI                              AML   AML
      comp=N,6725µm,0.9s
ATMI                              AML   AML
      comp=N,6725µm,1.1s
ATMI                              AML   AML
      comp=E,8715µm,1.3s
COR1  Corinaldo         1.09 348  P     Pg    05 03 02.5 -0.1
COR1                              AML   AML
      comp=E,3365µm,0.8s
COR1                              AML   AML
      comp=N,6310µm,0.7s
COR1                              AML   AML
      comp=E,3365µm,1.2s
TOLF  Tolfa             1.09 243  P     Pg    05 03 01.6 -1.1
TOLF                              AML   AML
      comp=N,1080µm,0.4s
TOLF                              AML   AML
      comp=E,1410µm,1.1s
CERA  Filignano         1.10 151  P     Pg    05 03 01.2 -1.7
CERA                              AML   AML
      comp=N,2875µm,1.1s
CERA                              AML   AML
      comp=E,3070µm,1.0s
CERA                              AML   AML
      comp=E,3025µm,1.0s
CERA                              AML   AML
      comp=N,2950µm,1.1s
LATB  Latina            1.10 194  P     Pg    05 03 02.0 -0.9
ATPI  Pietralunga -     1.10 323  P     Pg    05 03 02.4 -0.5
ATPI                              AML   AML
      comp=N,3425µm,0.6s
ATPI                              AML   AML
      comp=E,2640µm,0.7s
ATPC  Poggio Castell    1.11 326  P     Pg    05 03 02.1 -0.8
LATE  Laterza           1.11 273        Pg    05 03 02.5 -0.6
LATE  Laterza           1.11 273  P     Pg    05 03 02.4 -0.7
PIEI  Pieia             1.12 330  P     Pg    05 03 02.1 -1.2
PIEI                              AML   AML
      comp=E,1785µm,1.1s
PIEI                              AML   AML
      comp=N,1805µm,0.5s
PIEI                              AML   AML
      comp=N,1805µm,1.5s
PIEI                              AML   AML
      comp=E,1785µm,0.9s
MPAG  Monte Paganucc    1.13 339 ⇓P     Pg    05 03 02.5 -1.0
MPAG                              AML   AML
      comp=N,3415µm,0.6s
MPAG                              AML   AML
      comp=N,2775µm,0.6s
MPAG                              AML   AML
      comp=E,3075µm,0.5s
MPAG                              AML   AML
      comp=E,3510µm,0.5s
SENI  Senigallia        1.14 357  P     Pb    05 03 03.8 +0.3
SENI                              AML   AML
      comp=E,9730µm,1.6s
SENI                              AML   AML
      comp=E,2875µm,0.9s
SENI                              AML   AML
      comp=N,2610µm,0.8s
SENI                              AML   AML
      comp=E,2875µm,1.1s
SENI                              AML   AML
      comp=N,13400µm,0.5s
SENI                              AML   AML
      comp=E,9730µm,0.4s
MIDA  Miranda           1.16 142  P     Pb    05 03 02.0 -1.9
MIDA                              AML   AML
      comp=E,2220µm,0.9s
MIDA                              AML   AML
      comp=N,1276µm,0.6s
MIDA                              AML   AML
      comp=E,2230µm,0.9s
MIDA                              AML   AML
      comp=N,1260µm,0.5s
MIDA                              AML   AML
      comp=E,2220µm,1.1s
MIDA                              AML   AML
      comp=N,1276µm,1.4s
MIDA                              AML   AML
      comp=E,2230µm,1.1s
FRES  Fresagrandinar    1.17 120  P     Pb    05 03 04.0 -0.1
FRES                              AML   AML
      comp=E,1135µm,0.5s
FRES                              AML   AML
      comp=N,972µm,1.1s
APEC  Apecchio          1.19 327  P     Pb    05 03 04.0 -0.4
APEC                              AML   AML
      comp=N,4385µm,0.5s
APEC                              AML   AML
      comp=N,3250µm,1.6s
APEC                              AML   AML
      comp=E,4485µm,0.5s
APEC                              AML   AML
      comp=N,3250µm,0.4s
APEC                              AML   AML
      comp=E,3360µm,1.5s
FSSB  Fossombrone       1.19 341  P     Pb    05 03 03.5 -0.9
FSSB                              AML   AML
      comp=E,8130µm,0.5s
FSSB                              AML   AML
      comp=N,9660µm,0.4s
ATMC  Monte Cedrone     1.20 317  P     Pb    05 03 04.9 +0.3
SF03  Valle Cupa        1.22 282  P     Pn    05 03 04.7 -0.2
MCIV  Monte Civitell    1.22 280  P     Pn    05 03 04.5 -0.4
MCIV                              AML   AML
      comp=E,768µm,1.2s
MCIV                              AML   AML
      comp=N,732µm,1.0s
TRIV  Trivento          1.22 131  P     Pn    05 03 05.1 +0.2
BADI  Badiali           1.22 321  P     Pn    05 03 04.7 -0.2
BADI                              AML   AML
      comp=N,1635µm,0.8s
BADI                              AML   AML
      comp=E,162µm,0.9s
SF11  Podere del Sol    1.24 285  P     Pb    05 03 05.7 +0.4
SF04  Casetta           1.24 283  P     Pn    05 03 05.5 +0.3
SF04                              AML   AML
      comp=N,747µm,1.5s
SF04                              AML   AML
      comp=N,747µm,0.5s
SF04                              AML   AML
      comp=E,878µm,0.5s
CAFI  Castiglion Fio    1.25 308  P     Pn    05 03 05.1 -0.1
CAFI                              AML   AML
      comp=E,1315µm,1.6s
CAFI                              AML   AML
      comp=N,1295µm,0.8s
CAFI                              AML   AML
      comp=E,1350µm,1.6s
CAFI                              AML   AML
      comp=N,1340µm,0.8s
CAFI                              AML   AML
      comp=E,1315µm,0.4s
CAFI                              AML   AML
      comp=E,1350µm,0.4s
SF14  Selvena           1.26 279  P     Pn    05 03 05.4  0.0
SF13  Bagnolo           1.27 282  P     Pn    05 03 05.6  0.0
PE3   Peglio            1.27 332  P     Pn    05 03 05.4 -0.2
PE3                               AML   AML
      comp=N,11µm,0.5s
PE3                               AML   AML
      comp=E,8075µm,0.5s
SF01  Poggio Pratacc    1.31 281  P     Pn    05 03 06.5 +0.4
SF01                              AML   AML
      comp=N,1415µm,0.6s
SF01                              AML   AML
      comp=E,1550µm,1.1s
SSP9  Sansepolcro       1.32 320  P     Pn    05 03 06.8 +0.6
PARC  Parchiule         1.33 324  P     Pn    05 03 06.5  0.0
PARC                              AML   AML
      comp=E,2940µm,0.7s
PARC                              AML   AML
      comp=N,1775µm,1.6s
PARC                              AML   AML
      comp=N,1775µm,0.4s
VAGA  Valle Agricola    1.34 149  P     Pn    05 03 05.9 -0.7
ARCI  Arcidosso         1.38 282  P     Pb    05 03 07.9 +0.2
ARCI                              AML   AML
      comp=E,429µm,0.7s
ARCI                              AML   AML
      comp=N,310µm,1.0s
ARCI                              AML   AML
      comp=N,310µm,1.0s
ARCI                              AML   AML
      comp=E,429µm,1.3s
BSSO  Busso             1.40 136  P     Pn    05 03 06.8 -0.6
SGG   Gregorio Mates    1.43 146  P     Pn    05 03 07.3 -0.4
CPGN  Carpegna, Ital    1.43 330  P     Pb    05 03 08.9 +0.3
CPGN                              AML   AML
      comp=E,3640µm,0.7s
CPGN                              AML   AML
      comp=E,3455µm,0.7s
CPGN                              AML   AML
      comp=N,3920µm,0.7s
CPGN                              AML   AML
      comp=N,3920µm,1.3s
CPGN                              AML   AML
      comp=N,3395µm,0.9s
CRE   Caprese Michel    1.45 317  P     Pn    05 03 07.8 -0.3
CRE                               AML   AML
      comp=N,1340µm,0.6s
CRE                               AML   AML
      comp=E,880µm,0.5s
CRE                               AML   AML
      comp=N,1340µm,1.4s
MODR  Mondragone        1.48 163  P     Pb    05 03 09.3  0.0
MODR                              AML   AML
      comp=N,579µm,1.4s
MODR                              AML   AML
      comp=E,486µm,1.4s
MODR                              AML   AML
      comp=N,579µm,0.6s
CIGN  Sant’Elia a Pi    1.50 127  P     Pg    05 03 10.8 +0.3
RSM   Repubblica di     1.50 336  P     Pb    05 03 10.4 +0.7
PTRJ  Pietraroja        1.51 142  P     Pg    05 03 10.7  0.0
PIGN  Pignataro Magg    1.51 154  P     Pg    05 03 10.6 -0.2
SACR  S. Croce Del S    1.57 138  P     Pg    05 03 11.9 +0.2
GATE  Gambatesa         1.59 131  P     Pg    05 03 12.1 -0.1
MELA  Melanico ??? S    1.60 122  P     Pn    05 03 10.5 +0.4
MELA                              AML   AML
      comp=E,1735µm,0.7s
MELA                              AML   AML
      comp=E,1755µm,1.3s
MELA                              AML   AML
      comp=N,2050µm,0.7s
MELA                              AML   AML
      comp=N,2025µm,0.7s
MELA                              AML   AML
      comp=E,1755µm,0.7s
MELA                              AML   AML
      comp=E,1735µm,1.3s
MAON  Monte Argentar    1.62 266 ⇑P     Pn    05 03 10.3  0.0
MAON                              AML   AML
      comp=N,220µm,1.1s
MAON                              AML   AML
      comp=E,296µm,0.5s
ASQU  Asqua             1.66 318  P     Pn    05 03 11.1 +0.2
ASQU                              AML   AML
      comp=E,694µm,0.9s
ASQU                              AML   AML
      comp=N,952µm,0.7s
ASQU                              AML   AML
      comp=E,694µm,1.1s
TREM  Isole Tremiti     1.69 104  P     Pb    05 03 12.6 -0.3
TREM                              AML   AML
      comp=E,1355µm,0.6s
TREM                              AML   AML
      comp=N,10710µm,0.8s
TREM                              AML   AML
      comp=N,10710µm,1.2s
VITU  Vitulano (BN)     1.70 144  P     Pb    05 03 13.0 -0.1
FROS  Frosini           1.71 293  P     Pn    05 03 12.2 +0.7
CSNT  Castellina Chi    1.73 302  P     Pn    05 03 12.7 +0.8
CSNT                              AML   AML
      comp=E,556µm,1.2s
CSNT                              AML   AML
      comp=N,394µm,0.7s
CSNT                              AML   AML
      comp=N,394µm,1.3s
CSNT                              AML   AML
      comp=E,556µm,0.8s
VENT  Ventotene         1.77 177  P     Pn    05 03 11.6 -0.9
OSSC  Osservatorio P    1.79 303  Pn    Pn    05 03 12.4 -0.3
OSSC  Osservatorio P    1.79 303  P     Pn    05 03 13.7 +1.0
OSSC                              AML   AML
      comp=N,440µm,1.2s
OSSC                              AML   AML
      comp=E,374µm,1.2s
OSSC                              AML   AML
      comp=E,416µm,1.1s
OSSC                              AML   AML
      comp=N,412µm,1.1s
PAOL  Paolisi           1.80 148        Pb    05 03 14.6 -0.2
PAOL  Paolisi           1.80 148  P     Pn    05 03 11.3 -1.6
CASP  Castiglione de    1.81 278  Pn    Pn    05 03 13.3 +0.2
CASP  Castiglione de    1.81 278  P     Pn    05 03 13.3 +0.2
CASP                              AML   AML
      comp=N,164µm,0.8s
CASP                              AML   AML
      comp=E,124µm,1.0s
RUFI  Rufina            1.83 315  P     Pn    05 03 13.8 +0.6
RUFI                              AML   AML
      comp=E,790µm,0.7s
RUFI                              AML   AML
      comp=N,808µm,0.7s
RUFI                              AML   AML
      comp=E,790µm,1.3s
APRC  Apricena          1.85 115  P     Pb    05 03 14.8 -0.8
APRC                              AML   AML
      comp=E,650µm,0.4s
APRC                              AML   AML
      comp=N,1235µm,1.2s
APRC                              AML   AML
      comp=N,1235µm,0.8s
APRC                              AML   AML
      comp=E,650µm,1.6s
TRIF  Trifonti          1.85 288 ⇑P     Pn    05 03 14.2 +0.6
TRIF                              AML   AML
      comp=E,284µm,0.6s
TRIF                              AML   AML
      comp=N,373µm,0.8s
TRIF                              AML   AML
      comp=E,284µm,1.4s
TRIF                              AML   AML
      comp=N,373µm,1.2s
LMD   Lutirano          1.91 323  P     Pn    05 03 15.1 +0.8
LMD                               AML   AML
      comp=N,672µm,0.8s
LMD                               AML   AML
      comp=E,783µm,0.8s
LMD                               AML   AML
      comp=N,672µm,1.2s
SGRT  San Giovanni R    1.98 113  Pn    Pb    05 03 16.9 -1.1
SGRT  San Giovanni R    1.98 113  P     Pn    05 03 16.8 +1.3
SGRT                              AML   AML
      comp=E,780µm,0.7s
SGRT                              AML   AML
      comp=N,648µm,1.1s
BRIS  BRISIGHELLA       2.05 321  P     Pb    05 03 18.1 -1.0
SEI   Scarperia         2.06 317  P     Pn    05 03 17.9 +1.5
SEI                               AML   AML
      comp=E,748µm,0.8s
SEI                               AML   AML
      comp=N,1058µm,0.5s
SEI                               AML   AML
      comp=E,748µm,1.2s
CRMI  Carmignano        2.10 306  P     Pn    05 03 18.2 +1.3
CRMI                              AML   AML
      comp=N,217µm,0.7s
CRMI                              AML   AML
      comp=E,246µm,0.6s
CRMI                              AML   AML
      comp=E,246µm,0.6s
CRMI                              AML   AML
      comp=N,204µm,0.7s
MSAG  Monte S. Angel    2.12 113  P     Pn    05 03 18.7 +1.5
MPPT  Montemurlo        2.13 311  P     Pn    05 03 18.1 +0.6
MTCR  Monte La Croce    2.23 312  P     Pn    05 03 19.5 +0.6
BRJN  Brijuni           2.36   8  P     Pn    05 03 21.2 +0.7
HVAR  Hvar              2.39  74  P     Pn    05 03 21.4 +0.5
MRLC  Muro Lucano       2.44 137  P     Pb    05 03 24.0 -1.7
ZCCA  Zocca             2.46 317  Pn    Pn    05 03 21.8 -0.2
CARD  Cardoso           2.53 306  P     Pn    05 03 23.9 +1.1
CARD                              AML   AML
      comp=N,307µm,0.6s
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CARD				AML	AML		
	comp=N,307µm,1.4s						
CARD				AML	AML		
	comp=E,242µm,0.7s						
VLC	**Villacollemand**	2.66	308	P	Pn	05 03 25.1	+0.5
VLC				AML	AML		
	comp=E,56850µm,0.9s						
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
	comp=N,53200µm,1.4s						
SARO	**Sassorosso**	2.67	308	P	Pn	05 03 25.1	+0.3
SARO				AML	AML		
	comp=N,645µm,0.6s						
SARO				AML	AML		
	comp=E,416µm,0.7s						
EQUI	**Equi**	2.80	306	P	Pn	05 03 27.6	+1.0
EQUI				AML	AML		
	comp=E,134µm,0.7s						
EQUI				AML	AML		
	comp=N,129µm,0.8s						
EQUI				AML	AML		
	comp=N,129µm,1.2s						
RIY	**Rijeka**	2.88	17	*e*Pn	Pn	05 03 28.6	+0.9
SKDS	**Skadanscina**	3.02	9	*e*Pn	Pn	05 03 30.4	+0.8
SKDS	**Skadanscina**	3.02	9	*e*Pn	Pn	05 03 29.3	-0.3
SMPL	**Sampolo**	3.02	262	P	Pn	05 03 30.1	+0.5
TEOL	**Teolo**	3.03	338	Pn	Pn	05 03 29.5	-0.3
GRAM	**Graiana**	3.04	310	P	Pn	05 03 31.6	+1.7
GRAM				AML	AML		
	comp=E,301µm,0.4s						
GRAM				AML	AML		
	comp=N,320µm,0.5s						
GRAM				AML	AML		
	comp=E,301µm,1.6s						
TRI	**Trieste**	3.16	6		Pn	05 03 31.0	-0.4
PGF	**Pioggiola**	3.18	271	*e*P	Pn	05 03 32.8	+0.9
PGF				*e*Sn	Sn	05 04 06.2	-3.8
	comp=E,19nm,0.7s						
MATE	**Matera**	3.19	126	⇑P	Pn	05 03 33.8	+1.9
MATE				⇑S	Sn	05 04 12.2	+2.3
CUC	**Castrocucco**	3.19	143	Pn	Pn	05 03 32.3	+0.3
STON	**Ston**	3.25	83	AML	AML		
	comp=N,93µm,1.1s						
STON				AML	AML		
	comp=E,96µm,0.6s						
STON				AML	AML		
	comp=N,93µm,0.9s						
STON				AML	AML		
	comp=E,96µm,1.4s						
STON	**Ston**	3.25	83	*e*Pn	Pn	05 03 33.5	+0.8
STON				*e*Sn	Sn	05 04 09.8	-1.6
STON	**Ston**	3.25	83	*e*Pn	Pn	05 03 32.8	+0.1
BOJS	**Bojanci**	3.25	25	AML	AML		
	comp=E,576µm,0.8s						
BOJS				AML	AML		
	comp=N,438µm,0.5s						
BOJS	**Bojanci**	3.25	25	*e*Pn	Pn	05 03 33.9	+1.2
BOJS	**Bojanci**	3.25	25	*e*Pn	Pn	05 03 34.0	+1.2
MSSA	**Maissana**	3.27	304		Pn	05 03 31.9	-1.1
CEY	**Cerknica**	3.27	14	*e*Pn	Pn	05 03 34.2	+1.1
LTRZ	**Laterza**	3.28	126	P	Pn	05 03 35.1	+1.9
MGRS	**Mrkonjic Grad**	3.31	55	*e*Pn	Pn	05 03 35.3	+1.7
SABO	**M.te Sabotino**	3.42	3		Pn	05 03 34.8	-0.3
SABO	**M.te Sabotino**	3.42	3	P	Pn	05 03 35.1	+0.1
SABO				AML	AML		
	comp=N,372µm,0.5s						
SABO				AML	AML		
	comp=N,1460µm,0.5s						
SABO				AML	AML		
	comp=E,499µm,0.5s						
SABO				AML	AML		
	comp=E,2015µm,0.5s						
ROVR	**Rover Verones**	3.47	333	P	Pn	05 03 37.4	+1.4
ROVR				AML	AML		
	comp=E,392µm,1.6s						
ROVR				AML	AML		
	comp=N,316µm,0.8s						
ROVR				AML	AML		
	comp=E,104µm,0.7s						
ROVR				AML	AML		
	comp=N,121µm,0.7s						
ROVR				AML	AML		
	comp=E,392µm,0.4s						
ROVR				AML	AML		
	comp=E,104µm,1.3s						
CGRP	**Cima Grappa**	3.48	342	P	Pn	05 03 37.2	+1.0
CGRP				AML	AML		
	comp=E,477µm,0.3s						
CGRP				AML	AML		
	comp=N,498µm,0.5s						
CGRP				AML	AML		
	comp=N,508µm,0.5s						
CGRP				AML	AML		
	comp=E,516µm,0.6s						
CGRP				AML	AML		
	comp=E,477µm,1.7s						
CGRP				AML	AML		
	comp=N,498µm,1.5s						
CGRP				AML	AML		
	comp=N,508µm,1.5s						
VARN	**Col Varnada, M**	3.53	346	P	Pn	05 03 37.3	+0.6
VARN				AML	AML		
	comp=N,379µm,0.9s						
VARN				AML	AML		
	comp=N,376µm,1.3s						
VARN				AML	AML		
	comp=E,576µm,0.5s						
VARN				AML	AML		
	comp=N,376µm,0.7s						
VARN				AML	AML		
	comp=E,570µm,0.4s						
BLY	**Banja Luka**	3.56	51	*e*Pn	Pn	05 03 38.7	+1.7
BLY	**Banja Luka**	3.56	51	*e*Pn	Pn	05 03 38.3	+1.3
A051A	**Mrakovica**	3.57	46	*e*Pn	Pn	05 03 38.4	+1.2
CRES	**Cresnjev**	3.60	25	*e*Pn	Pn	05 03 38.4	+0.8
DOSS	**Dosso del Somm**	3.65	336	P	Pn	05 03 39.8	+1.4
DOSS				AML	AML		
	comp=E,188µm,0.7s						
DOSS				AML	AML		
	comp=N,176µm,0.5s						
SALO	**Salr**	3.65	328	Pn	Pn	05 03 38.4	+0.1
SALO	**Salr**	3.65	328	P	Pn	05 03 40.1	+1.8
SALO				AML	AML		
	comp=N,280µm,0.6s						
SALO				AML	AML		
	comp=E,234µm,1.5s						
SALO				AML	AML		
	comp=E,234µm,0.5s						
SALO				AML	AML		
	comp=E,245µm,1.0s						
SALO				AML	AML		
	comp=N,284µm,0.6s						
CTI	**Castel Tesino**	3.68	342		Pn	05 03 38.8	+0.1
CTI	**Castel Tesino**	3.68	342	P	Pn	05 03 40.0	+1.2
MPRI	**Monte Prat**	3.68	357	P	Pn	05 03 39.2	+0.5
MPRI				AML	AML		
	comp=N,455µm,0.4s						
MPRI				AML	AML		
	comp=E,302µm,0.5s						
MPRI				AML	AML		
	comp=E,234µm,0.6s						
MPRI				AML	AML		
	comp=N,598µm,0.4s						
VINO	**Villanova**	3.69	360	P	Pn	05 03 38.8	0.0
VINO				AML	AML		
	comp=N,202µm,1.4s						
VINO				AML	AML		
	comp=N,202µm,0.6s						
VINO				AML	AML		
	comp=E,118µm,0.7s						
GEPF	**Gemona**	3.71	358	P	Pn	05 03 39.4	+0.3
GEPF				AML	AML		
	comp=E,150µm,0.6s						
GEPF				AML	AML		
	comp=N,152µm,0.6s						
STAL	**STALIGIAL**	3.72	354		Pn	05 03 39.4	+0.2
STAL	**STALIGIAL**	3.72	354	P	Pn	05 03 39.6	+0.4
STAL				AML	AML		
	comp=E,323µm,1.3s						
STAL				AML	AML		
	comp=N,441µm,0.7s						
STAL				AML	AML		
	comp=E,406µm,1.3s						
STAL				AML	AML		
	comp=E,323µm,0.7s						
STAL				AML	AML		
	comp=E,406µm,0.7s						
STAL				AML	AML		
	comp=N,258µm,0.3s						
TREB	**Trebinje**	3.72	86	*e*Pn	Pn	05 03 40.8	+1.6
TREB	**Trebinje**	3.72	86	*e*Pn	Pn	05 03 39.9	+0.7
MAGA	**Magasa**	3.74	330	P	Pn	05 03 40.7	+1.1
MAGA				AML	AML		
	comp=N,452µm,0.4s						
MAGA				AML	AML		
	comp=E,668µm,0.7s						
LUSI	**Trento, Gardas**	3.79	334	P	Pn	05 03 41.7	+1.4
LUSI				AML	AML		
	comp=N,291µm,1.4s						
LUSI				AML	AML		
	comp=N,291µm,0.6s						
LUSI				AML	AML		
	comp=E,183µm,0.6s						
CIMO	**Cimolais**	3.79	351	Pn	Pn	05 03 40.2	-0.1
CIMO	**Cimolais**	3.79	351	P	Pn	05 03 40.5	+0.2
CIMO				AML	AML		
	comp=N,60µm,1.3s						
CIMO				AML	AML		
	comp=N,66µm,0.5s						
CIMO				AML	AML		
	comp=E,74µm,0.3s						
CIMO				AML	AML		
	comp=N,66µm,1.5s						
CIMO				AML	AML		
	comp=N,60µm,0.7s						
CIMO				AML	AML		
	comp=E,80µm,1.1s						
HCY	**Herceg Novi**	3.84	90	*e*Pn	Pn	05 03 41.6	+0.8
HCY	**Herceg Novi**	3.84	90	⇑*i*Pn	Pn	05 03 42.0	+1.2
HCY				*i* Sn	Sn	05 04 28.4	+2.5
BRY	**Bratogost**	3.87	83	*e*Pn	Pn	05 03 42.7	+1.3
BRY	**Bratogost**	3.87	83	⇓*i*Pn	Pn	05 03 42.5	+1.1
BRY				*i* Sn	Sn	05 04 29.0	+2.1
PRED	**Cave del Predi**	3.88	3	Pn	Pn	05 03 42.1	+0.7
GAGG	**Gaggia**	3.90	335	P	Pn	05 03 43.2	+1.4
GAGG				AML	AML		
	comp=N,196µm,0.4s						
GAGG				AML	AML		
	comp=E,154µm,1.0s						
GAGG				AML	AML		
	comp=N,133µm,0.6s						
GAGG				AML	AML		
	comp=E,212µm,0.4s						
CLUD	**Cludinico**	3.90	356		Pn	05 03 41.8	+0.1
ACOM	**Acomizza, Ital**	3.98	2	P	Pn	05 03 43.8	+0.8
ACOM				AML	AML		
	comp=N,232µm,0.6s						
ACOM				AML	AML		
	comp=N,224µm,0.6s						
ACOM				AML	AML		
	comp=E,273µm,0.5s						
ACOM				AML	AML		
	comp=E,278µm,0.5s						
ZOU	**Zoufplan**	4.00	357	P	Pn	05 03 43.5	+0.3
ZOU				AML	AML		
	comp=N,126µm,1.2s						
ZOU				AML	AML		
	comp=E,154µm,0.4s						
ZOU				AML	AML		
	comp=E,142µm,0.4s						
ZOU				AML	AML		
	comp=N,131µm,0.4s						
ZOU				AML	AML		
	comp=N,126µm,0.8s						
MABI	**Malga Bissina**	4.02	331	P	Pn	05 03 45.0	+1.4
MABI				AML	AML		
	comp=E,63µm,0.7s						
MABI				AML	AML		
	comp=N,76µm,0.7s						
OBKA	**Obir**	4.04	12	*i* Pn	Pn	05 03 45.3	+1.6
	comp=N,1.4nm,0.2s						
OBKA				*e*Sn	Sn	05 04 30.4	-0.7
	comp=N,32nm,0.5s						
OBKA	**Obir**	4.04	12	*e*Pn	Pn	05 03 44.4	+0.7
FVI	**Forni Avoltri**	4.05	355	P	Pn	05 03 44.3	+0.6
FVI				AML	AML		
	comp=E,110µm,1.0s						
FVI				AML	AML		
	comp=N,138µm,0.5s						
MYKA	**Terra Mystica**	4.07	3	*i* Pn	Pn	05 03 45.4	+1.3
	comp=N,2.4nm,0.3s,SNR=6.3						
MYKA				*e*Sn	Sn	05 04 32.4	+0.6
	comp=N,36nm,0.5s						
MDI	**Monti di Nese**	4.12	322	P	Pn	05 03 46.4	+1.6
MDI				AML	AML		
	comp=E,103µm,0.4s						
MDI				AML	AML		
	comp=N,95µm,1.0s						
BUM	**Brajici-Budva**	4.14	92	⇓*i*Pn	Pn	05 03 46.6	+1.5
BUM				*i* Sn	Sn	05 04 36.2	+2.6
CEME	**Cevo**	4.14	88	⇑*i*Pn	Pn	05 03 46.3	+1.2
CEME				*i* Sn	Sn	05 04 35.6	+2.0
UPM	**Unac-Piva**	4.16	79	*e*Pn	Pn	05 03 47.2	+1.7
UPM	**Unac-Piva**	4.16	79	⇑*i*Pn	Pn	05 03 47.1	+1.6
UPM				*i* Sn	Sn	05 04 36.8	+2.6
NKME	**Niksic**	4.17	85	⇑*i*Pn	Pn	05 03 46.8	+1.4
NKME				*i* Sn	Sn	05 04 36.9	+2.7
APPI	**Appiano**	4.18	340	P	Pn	05 03 47.0	+1.3
APPI				AML	AML		
	comp=N,152µm,1.4s						
APPI				AML	AML		
	comp=E,186µm,0.6s						
ABTA	**Abfaltersbach**	4.22	353	*i* Pn	Pn	05 03 47.3	+1.1
	comp=E,5.8nm,0.3s,SNR=33						
ABTA				*e*Sn	Sn	05 04 36.8	+1.3
	comp=E,39nm,0.5s						
VSL	**Villasalto**	4.27	225	P	Pn	05 03 47.7	+0.9
VSL				AML	AML		
	comp=N,39µm,0.8s						
VSL				AML	AML		
	comp=E,32µm,0.3s						
SOKA	**Soboth**	4.29	16	*i* Pn	Pn	05 03 50.5	+3.4
	comp=E,0.7nm,0.2s						
SOKA				*e*Sn	Sn	05 04 37.2	-0.1
	comp=E,8.0nm,0.7s						
DRME	**Dracevica, Mon**	4.37	93	*e*Pn	Pn	05 03 49.6	+1.5
DRME	**Dracevica, Mon**	4.37	93	⇑*i*Pn	Pn	05 03 49.7	+1.6
DRME				*i* Sn	Sn	05 04 41.6	+2.5
HAPS	**Han Pijesak,Bl**	4.39	68	*e*Pn	Pn	05 03 50.6	+2.1
HAPS	**Han Pijesak,Bl**	4.39	68	*e*Pn	Pn	05 03 49.6	+1.1
PDG	**Podgorica**	4.40	90	⇑P	Pn	05 03 48.6	+0.1
PDG	**Podgorica**	4.40	90	Pn	Pn	05 03 50.3	+1.8
PDG	**Podgorica**	4.40	90	*e*Pn	Pn	05 03 50.3	+1.8
PDG				*e*Sn	Sn	05 04 37.2	-2.6
PDG	**Podgorica**	4.40	90	⇓*i*Pn	Pn	05 03 50.1	+1.6
PDG				*i* Sn	Sn	05 04 42.4	+2.6
BRMO	**Bormio**	4.43	333	P	Pn	05 03 51.6	+2.4
ULC	**Ulcinj**	4.45	96	⇓*i*Pn	Pn	05 03 50.4	+1.2
ULC				*i* Sn	Sn	05 04 43.5	+2.5
RISI	**Rein**	4.47	349	P	Pn	05 03 51.1	+1.5
SBF	**Sospel**	4.48	289	*e*P	Pn	05 03 50.4	+0.6
SBF				*e*Sn	Sn	05 04 36.8	-5.2
	comp=E,17nm,0.4s						
MOSI	**Grossmontoni**	4.50	335	P	Pn	05 03 53.0	+2.8
KBA	**Koelnbreinsper**	4.51	0	*i* Pn	Pn	05 03 51.8	+1.6
	comp=E,11nm,0.4s,SNR=11						
KBA				*i* Sn	Sn	05 04 42.4	-0.4
	comp=E,26nm,0.5s						
PLE	**Pljevlja**	4.53	78	⇑*i*Pn	Pn	05 03 52.8	+2.4
PLE				*i* Sn	Sn	05 04 41.9	-1.3
RUDO	**Rudo**	4.56	75	*e*Pn	Pn	05 03 52.9	+2.1
RUDO	**Rudo**	4.56	75	*e*Pn	Pn	05 03 52.2	+1.4
ROSI	**Rosskopf**	4.56	343	P	Pn	05 03 52.6	+1.6
ROSI				AML	AML		
	comp=E,264µm,0.4s						
ROSI				AML	AML		
	comp=N,305µm,0.3s						
ROSI				AML	AML		
	comp=N,305µm,1.7s						
ROSI				AML	AML		
	comp=E,264µm,1.6s						
KOME	**Kolasin**	4.58	84	⇓*i*Pn	Pn	05 03 52.5	+1.3
KOME				*i* Sn	Sn	05 04 46.7	+2.2
FUORN	**Ofenpass-Fuorn**	4.60	333	Pn	Pn	05 03 51.4	-0.2
SCTE	**Santa Cesarea**	4.62	121	Pn	Pn	05 03 53.4	+1.8
BBLS	**Lazići**	4.64	72	*e*Pn	Pn	05 03 53.8	+1.9
BBLS	**Lazići**	4.64	72	*e*Pn	Pn	05 03 53.3	+1.4
FETA	**Feichten**	4.82	338	*i* Pn	Pn	05 03 56.6	+2.2
	comp=E,5.6nm,0.4s						
FETA				*e*Sn	Sn	05 04 51.9	+1.5
	comp=E,11nm,0.6s						
TUE	**Stuetta**	4.82	325	Pn	Pn	05 03 53.2	-1.4
WTTA	**Wattenberg**	4.84	346	*i* Pn	Pn	05 03 57.2	+2.4
	comp=E,3.7nm,0.2s						
WTTA				*i* Sn	Sn	05 04 52.8	+1.8
	comp=E,71nm,0.9s						
WTTA	**Wattenberg**	4.84	346	P	Pn	05 03 56.9	+2.1
IVA	**Berane**	4.86	84	⇑*i*Pn	Pn	05 03 56.9	+1.9
IVA				*i* Sn	Sn	05 04 53.7	+2.4
DAVOX	**Davos/Dischmat**	4.87	331	Pn	Pn	05 03 57.8	+2.6
	comp=E,13nm,0.3s						
DAVOX				Sn	Sn	05 04 55.2	+3.5
SQTA	**Sankt Quirin**	4.88	343	*i* Pn	Pn	05 03 57.9	+2.6
	comp=E,2.9nm,0.2s						
SQTA				*e*Sn	Sn	05 04 53.6	+1.6
	comp=E,28nm,0.4s						
PVY	**Plav**	4.91	87	⇑*i*Pn	Pn	05 03 58.2	+2.5
PVY				*i* Sn	Sn	05 04 49.8	-2.8
WATA	**Walderalm**	4.92	346	*i* Pn	Pn	05 03 58.4	+2.5
	comp=E,2.9nm,0.2s						
WATA				*i* Sn	Sn	05 04 54.8	+1.9
	comp=E,8.1nm,0.2s						
ARSA	**Arzberg**	4.94	18	*i* Pn	Pn	05 03 56.5	+0.5
	comp=E,3.4nm,0.4s						
ARSA				*i* Sn	Sn	05 04 51.3	-1.9
	comp=E,5.2nm,0.4s						
SJES	**Sjenica**	4.94	80	*e*Pn	Pn	05 03 58.2	+2.1
SJES	**Sjenica**	4.94	80	*e*Pn	Pn	05 03 58.1	+2.0
MOTA	**Moosalm**	5.03	343	*i* Pn	Pn	05 03 60.0	+2.7
	comp=E,1.4nm,0.3s						
MOTA				*i* Sn	Sn	05 04 57.6	+2.1
	comp=E,18nm,0.5s						
TIR	**Tirane**	5.04	102	Pn	Pn	05 03 58.6	+1.3
TIR	**Tirane**	5.04	102	*e*Pn	Pn	05 03 58.7	+1.3
LMR	**La Mourre**	5.05	281	*e*P	Pn	05 03 57.7	+0.2
LMR				*e*Sn	Sn	05 04 49.9	-5.9
	comp=E,0.9nm,0.3s						
VLO	**Vlora**	5.10	112		Pn	05 03 60.0	+1.9
DIVS	**Divibare**	5.11	70		Pn	05 03 59.3	+0.9
DIVS	**Divibare**	5.11	70	*e*Pn	Pn	05 04 00.2	+1.8
DIVS	**Divibare**	5.11	70	*e*Pn	Pn	05 03 56.8	-1.6
IVAS	**Ivanjica**	5.11	76	*e*Pn	Pn	05 04 00.0	+1.6
BIOA	**Bad Ischl, Aus**	5.13	2	*i* Pn	Pn	05 03 59.9	+1.3
	comp=E,2.5nm,0.3s						
BIOA				*i* Sn	Sn	05 05 00.1	+2.3
	comp=E,20nm,0.4s						
MBDF	**Montbardon**	5.21	297	*e*P	Pn	05 04 02.0	+2.2
MBDF				*e*Sn	Sn	05 04 54.5	-5.6
	comp=E,18nm,0.7s						
RETA	**Reutte**	5.24	341	*i* Pn	Pn	05 04 03.0	+2.9
	comp=E,1.4nm,0.2s						
RETA				*i* Sn	Sn	05 05 00.8	+0.2
	comp=E,4.5nm,0.4s						
MORH	**Mrgy, Hungar**	5.28	45	⇑P	Pn	05 03 58.5	-2.2
DAVA	**Damuels**	5.31	334	*i* Pn	Pn	05 04 03.8	+2.7
	comp=E,5.6nm,0.3s						
DAVA				*i* Sn	Sn	05 05 04.6	+2.1
	comp=E,16nm,0.5s						
MOA	**Molln**	5.33	7	*e*Pn	Pn	05 04 03.6	+2.4
	comp=E,3.1nm,0.3s						
MOA				*i* Sn	Sn	05 05 02.8	+0.1
	comp=E,14nm,0.4s						
FRGS	**Fruska Gora**	5.37	59	⇓P	Pn	05 03 59.6	-2.2
FRGS	**Fruska Gora**	5.37	59	*e*Pn	Pn	05 04 07.9	+6.1
BNI	**Bardonecchia**	5.40	300		Pn	05 03 59.8	-2.6
TRUS	**Trudelj**	5.43	70	*e*Pn	Pn	05 04 05.3	+2.6
RONA	**Rosalia, Austr**	5.55	21	*e*Pn	Pn	05 04 05.0	+0.6
	comp=E,1.2nm,0.2s						
RONA				*i* Sn	Sn	05 05 07.2	-1.0
	comp=E,2.9nm,0.4s						
GRUS	**Gruza**	5.57	74	*e*Pn	Pn	05 04 06.0	+1.4
LPL	**La Plagne**	5.58	304	*e*P	Pn	05 04 07.3	+2.3
LPL				*e*Sn	Sn	05 05 03.7	-5.6
	comp=E,8.8nm,0.5s						
CONA	**Conrad Observa**	5.66	18	*i* Pn	Pn	05 04 06.5	+0.6
	comp=E,0.8nm,0.3s						
CONA				*e*Sn	Sn	05 05 09.0	-1.8
KEK	**Kerkira**	5.67	118	Pn	Pn	05 04 07.4	+1.4
SENIN	**Lac Senin/Sane**	5.73	313	Pn	Pn	05 04 06.7	-0.4
SELS	**Selova**	5.78	81	*e*Pn	Pn	05 04 09.1	+1.6
OHR	**Ohrid**	5.78	102	*i* Pn	Pn	05 04 09.7	+2.1
SMRF	**Simiane la Rot**	5.82	287	*e*P	Pn	05 04 10.0	+1.9
SMRF				*e*Sn	Sn	05 05 08.8	-6.1
	comp=E,7.4nm,0.7s						
ORIF	**Oris-en-Rattie**	5.87	296	*e*P	Pn	05 04 12.8	+3.9
ORIF				*e*Sn	Sn	05 05 10.3	-5.9
	comp=E,8.6nm,0.6s						
KBN	**Korca**	5.93	107		Pn	05 04 09.1	-0.6
BOVS	**Bovan**	6.24	77	⇑P	Pn	05 04 12.3	-1.5
BOVS	**Bovan**	6.24	77	*e*Pn	Pn	05 04 14.5	+0.7
BARS	**Barje**	6.27	85	*e*Pn	Pn	05 04 16.1	+1.8
GEC2	**GERESS Array S**	6.28	2	Pn	Pn	05 04 13.4	-1.1
GERES	**GERESS Array B**	6.28	2	Pn	Pn	05 04 14.8	+0.3
	comp=E,0.6nm,0.3s,baz=168,slow=12,SNR=9.4						
GERES				Sn	Sn	05 05 25.7	-0.7
	comp=E,2.4nm,0.3s,baz=169,slow=22,SNR=10						
	comp=E,0.8nm,0.3s						
GERES	**GERESS Array B**	6.28	2	Pn	Pn	05 04 14.2	-0.3
CKRC	**Cesky Krumlov**	6.29	6	*e*PN	Pn	05 04 14.5	-0.1
CKRC				*e*SN	Sn	05 05 22.7	-3.8
FNA	**Florina**	6.30	104	Pn	Pn	05 04 15.1	+0.4
MODS	**Modra-Piesok**	6.44	24	*e*PN	Pn	05 04 20.4	+3.8
PRVS	**Prvonek**	6.48	88	*e*Pn	Pn	05 04 18.5	+1.4
MDVR	**Moldovita**	6.48	67	⇑P	Pn	05 04 15.2	-2.0
CABF	**La Chapelle**	6.55	311	*e*P	Pn	05 04 20.2	+2.0
CABF				*e*Sn	Sn	05 05 26.8	-6.1
	comp=E,10.0nm,0.8s						
KHC	**Kasperske Hory**	6.57	2	Pn	Pn	05 04 19.2	+0.8
KHC	**Kasperske Hory**	6.57	2	*e*PN	Pn	05 04 18.8	+0.5
KHC				*e*x	x	05 04 31.0	
KHC				*e*SN	Sn	05 05 29.3	-4.0
ZAGS	**Zajecar**	6.64	76	*e*Pn	Pn	05 04 20.4	+1.1
STIP	**Stip**	6.66	95	*i* Pn	Pn	05 04 22.9	+3.4
VIVF	**Saint-Julien-l**	6.66	293	*e*P	Pn	05 04 22.3	+2.6
VIVF				*e*Sn	Sn	05 05 28.8	-6.8
	comp=E,0.6nm,0.3s						
BZS	**Buzias**	6.71	60	⇑P	Pn	05 04 18.4	-1.9
BFO	**Black Forest**	6.74	330	Pn	Pn	05 04 20.1	-0.6
HINF	**Hinteralfeld**	6.95	321	*e*P	Pn	05 04 24.5	+0.9
HINF				*e*Sn	Sn	05 05 36.9	-5.8
	comp=E,12nm,0.5s						
HERR	**Herculane**	6.99	68	⇑P	Pn	05 04 22.8	-1.4
LASF	**Ste Croix**	7.06	286	*e*P	Pn	05 04 26.4	+1.3
VYHS	**Vyhne**	7.08	31	*e*PN	Pn	05 04 33.6	+8.2
ECH	**Echery**	7.11	325	Pn	Pn	05 04 26.8	+0.9
VRAC	**Vranov**	7.12	18	Pn	Pn	05 04 26.5	+0.6
	comp=E,0.2nm,0.3s,baz=188,slow=7.1,SNR=1.7						
VRAC				Sn	Sn	05 05 44.5	-2.3
	comp=E,0.2nm,0.3s,baz=270,slow=14,SNR=1.7						
	comp=E,1.4nm,0.4s						
CDF	**Champ du Feu**	7.22	326	*e*P	Pn	05 04 27.5	+0.2
CDF				*e*Sn	Sn	05 05 42.5	-6.9
	comp=E,13nm,0.5s						
GRFO	**Grafenberg**	7.27	349	Pn	Pn	05 04 26.9	-1.1
GRA1	**Grafenberg Arr**	7.27	349	Pn	Pn	05 04 26.9	-1.1
HAU	**Haudompre**	7.32	320	*e*P	Pn	05 04 29.4	+0.7
HAU				*e*Sn	Sn	05 05 45.0	-6.9
	comp=E,20nm,0.5s						
VTS	**Vitosha**	7.33	86	⇓P	Pn	05 04 27.6	-1.3
VTS	**Vitosha**	7.33	86	Pn	Pn	05 04 29.4	+0.5
LIT	**Litokhoron**	7.34	107	Pn	Pn	05 04 30.1	+1.2
GZR	**Gura Zlata**	7.39	64	⇑P	Pn	05 04 27.3	-2.3
PRU	**Pruhonice**	7.47	6	*e*SN	Sn	05 05 51.7	-3.7
KEST	**Kesra**	7.49	206	Pn	Pn	05 04 36.8	+5.7
	comp=E,0.3nm,0.3s,baz=358,slow=9.7,SNR=6.4						
KEST				Sn	Sn	05 05 59.3	+3.2
	baz=22,slow=11,SNR=1.2						
	comp=E,1.9nm,0.5s						
KEST	**Kesra**	7.49	206	Pn	Pn	05 04 33.9	+2.8
NKC	**Novy Kostel**	7.69	356	*e*SN	Sn	05 05 57.0	-3.9
AGG	**Agios Georgios**	7.71	114	Pn	Pn	05 04 35.1	+1.1
MORC	**Moravsky Berou**	7.79	21	Pn	Pn	05 04 34.1	-0.9
SMF	**Signal de Mont**	7.89	304	*e*P	Pn	05 04 38.0	+1.5
SMF				*e*Sn	Sn	05 05 58.2	-7.6
	comp=E,7.2nm,0.6s						
DRGR		7.92	55	⇑P	Pn	05 04 33.9	-3.0
PAGF	**Fort de Pagny**	8.01	321	*e*P	Pn	05 04 40.0	+1.9
PAGF				*e*Sn	Sn	05 06 01.1	-7.5
	comp=E,20nm,0.6s						
DPC	**Dobruska-Polom**	8.06	14	*e*SN	Sn	05 06 06.3	-3.6
SFTF	**Sexfontaines**	8.10	317	*e*P	Pn	05 04 41.1	+1.8
SFTF				*e*Sn	Sn	05 06 03.8	-7.1
	comp=E,5.9nm,0.5s						

UPC	**Upice**	8.16	12	*e*SN	Sn	05 06 07.2	-5.1
MTLF	**Montolieu**	8.17	279	*e*P	Pn	05 04 44.0	+3.6
LOR	**Lormes**	8.19	308	*e*P	Pn	05 04 42.5	+2.0
LOR				*e*Sn	Sn	05 06 06.3	-6.8
	comp=E,5.8nm,0.5s						
AVF	**Avril sur Loir**	8.25	304	*e*P	Pn	05 04 42.4	+1.0
AVF				*e*Sn	Sn	05 06 07.0	-7.7
	comp=E,7.0nm,0.8s						
SSF	**Saint Saulge**	8.29	306	*e*P	Pn	05 04 43.0	+1.1
SSF				*e*Sn	Sn	05 06 08.0	-7.6
	comp=E,3.3nm,0.5s						
MEZF	**Maizieres J'vi**	8.29	319	*e*P	Pn	05 04 43.6	+1.7
MEZF				*e*Sn	Sn	05 06 07.4	-8.2
	comp=E,3.9nm,0.4s						
BRG	**Berggiesshubel**	8.32	3	*e*S	Sn	05 06 03.2	-13
BRG				Amp		05 06 33.6	
	comp=Z,7.2nm,1.1s						
BRG				r		05 07 26.2	
BRG				Amp		05 07 38.9	
	comp=Z,9.6nm,1.3s						
BRG				Amp		05 45 32.0	
	comp=Z,0.3nm,18.0s						
BGF	**Bois d'Agland**	8.47	302	*e*P	Pn	05 04 46.2	+1.8
BGF				*e*Sn	Sn	05 06 12.9	-7.1
	comp=Z,8.2nm,0.6s						
CAF	**Calviac**	8.47	290	*e*P	Pn	05 04 46.8	+2.3
ARR	**Arges**	8.63	67	⇑P	Pn	05 04 44.2	-2.6
TCF	**Toulx Ste Croi**	8.77	299	*e*P	Pn	05 04 50.8	+2.3
TCF				*e*Sn	Sn	05 06 19.0	-8.4
	comp=Z,0.6nm,0.3s						
VOIR		8.94	67	⇓P	Pn	05 04 48.2	-2.6
RJF	**Les Rejaudoux**	8.94	292	*e*Sn	Sn	05 06 23.0	-8.6
	comp=Z,0.9nm,0.2s						
RDO	**Rodhopi**	9.24	95	Pn	Pn	05 04 56.0	+1.1
MLR	**Muntele Rosu**	9.56	68	LR	LR	05 09 21.9	
	comp=Z,104nm,20.8s,baz=259,slow=42						
BURAR	**Bucovina Array**	9.81	55	Pn	Pn	05 05 01.9	-1.0
BUR08	**Bucovina Ar. S**	9.82	55	Pn	Pn	05 05 01.6	-1.4
SANT	**Santorini**	11.24	119	Pn	Pn	05 05 23.0	+0.6
BR131	**Keskin Array S**	15.57	94	Pn	Pn	05 06 21.6	+0.2
BRTR	**Keskin Array B**	15.57	94	Pn	Pn	05 06 21.7	+0.2
NC602	**NORSAR Array S**	18.23	357	Pn	Pn	05 06 52.7	-1.8
NAO01	**NORSAR Array S**	18.36	356	Pn	Pn	05 06 54.0	-2.2
NAO01				IAmb	IAmb	05 07 17.2	
	comp=Z,18nm,1.1s						
NOA	**NORSAR Array B**	18.54	357	LR	LR	05 14 19.2	
	comp=Z,18nm,20.1s,baz=5.0,slow=38						
NC204	**NORSAR Array S**	18.80	356	P	P	05 06 59.2	-2.0
FIA0	**FINESS Array S**	20.40	18	P	P	05 07 17.8	-0.7
FINES	**FINESS Array B**	20.40	18	P	Pn	05 07 20.8	+0.2
	comp=Z,2.0nm,0.9s,baz=195,slow=10,SNR=2.3						
	comp=Z,2.0nm,0.9s						
FINES	**FINESS Array B**	20.40	18	P	P	05 07 17.6	-1.0
KBZ	**Khabaz**	21.57	77	P	P	05 07 33.5	+2.2
	comp=Z,2.1nm,0.8s,baz=270,slow=8.1,SNR=3.7						
	comp=Z,2.1nm,0.8s						
TOA0	**Torodi Ar. Sit**	30.99	202	P	P	05 08 59.2	-0.2
TORD	**Torodi Ar. Bea**	30.99	202	P	P	05 09 03.5	+4.2
	comp=Z,0.3nm,0.5s,baz=15,slow=9.3,SNR=5.6						
	comp=Z,0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	30.99	202	P	P	05 08 59.2	-0.2
TORD				IAmb	IAmb	05 09 18.1	
	comp=Z,3.2nm,1.4s						
AKTO	**Aktyubinsk**	31.36	60	LR	LR	05 24 43.5	
	comp=Z,99nm,18.9s,baz=277,slow=42						
GEYT	**Alibeck**	34.21	82	P	P	05 09 27.8	+0.3
GEYT				IAmb	IAmb	05 09 34.8	
	comp=Z,1.9nm,0.9s						
KKAR	**Karatay Array**	41.24	69	P	P	05 10 25.3	-1.5
MKAR	**Makanchi Array**	47.80	60	P	P	05 11 20.6	+1.4
	comp=Z,0.1nm,0.4s,baz=282,slow=7.2,SNR=2.4						
	comp=Z,0.1nm,0.4s						
YKA	**Yellowknife Ar**	67.28	337	P	P	05 13 37.8	+1.7
	comp=Z,0.2nm,0.7s,baz=42,slow=5.2,SNR=4.5						
	comp=Z,0.2nm,0.7s						

*IDC **20** 05:35:29.9±1.0, 27°.66N×65°.93E, h0^{km}, mb3.7/9, mbtmp3.7/10, ML3.7/1, MS3.7/3, Error ellipse: s-maj=24.9km s-min=22.6km az=103.0*

ISC 20 05:35:30.2±0.7, **27°.6N**±0°.1×**65°.96E**±0°.09, **h10^{km}, n17,** σ**2^{s}.13**/16, **mb3.6**/9, **Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THW	**Thamme Wali**	7.21	43	P	Pn	05 37 11.6	-4.1
WSAR	**Wadi Sarin**	7.92	238	Pn	Pn	05 37 26.1	+0.7
	1.0nm,0.3s,baz=244,slow=3.6,SNR=2.0						
WSAR				Sn	Sn	05 38 51.2	-3.9
	0.6nm,0.3s,baz=339,slow=24,SNR=2.0						
WSAR				LR	LR	05 41 40.7	
	comp=Z,84nm,18.5s,baz=116,slow=47						
	2.4nm,0.3s						
PYUN	**Piuthan**	15.07	84	*e*P	P	05 39 07.3	-1.6
	8.8nm,0.3s						
GUN	**Gumba**	17.64	84	*e*P	P	05 39 37.9	+0.4
	20nm,0.6s						
JIRN	**Jiri**	17.93	85	*e*P	P	05 39 41.0	+0.3
	5.1nm,0.4s						
RAMN	**Ramite**	18.36	87	*e*P	Pn	05 39 44.2	-1.1
	12nm,0.6s						
MKAR	**Makanchi Array**	23.08	30	P	P	05 40 34.9	-1.1
	0.5nm,0.4s,baz=219,slow=11,SNR=7.7						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	24.91	19	P	P	05 40 53.0	-0.3
	1.1nm,0.6s,baz=212,slow=8.8,SNR=10						
	1.1nm,0.6s						
BVAR	**Borovoye Array**	25.62	6	P	P	05 41 00.2	+0.5
	0.5nm,0.5s,baz=195,slow=10,SNR=2.7						
	0.5nm,0.5s						
SONM	**Songino Array**	37.29	46	P	P	05 42 44.9	+2.4
	0.3nm,0.6s,baz=256,slow=5.8,SNR=1.5						
	0.3nm,0.6s						
FINES	**FINESS Array B**	43.01	333	P	P	05 43 32.1	+2.5
	1.0nm,0.7s,baz=118,slow=11,SNR=7.1						
	1.0nm,0.7s						
ARCES	**ARCESS Array B**	48.03	342	P	P	05 44 10.1	+0.9
	5.2nm,1.0s,baz=107,slow=8.6,SNR=5.5						
	5.2nm,1.0s						
JOW	**Kunigami**	54.88	75	LR	LR	06 12 36.4	
	comp=Z,191nm,18.4s,baz=244,slow=41						
TORD	**Torodi Ar. Bea**	61.35	270	P	P	05 45 46.3	-0.3
	0.5nm,0.6s,baz=68,slow=5.5,SNR=3.5						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	81.29	118	P	P	05 47 48.8	+1.7
	0.6nm,0.9s,baz=316,slow=4.2,SNR=10.0						
	0.6nm,0.9s						
ASAR	**Alice Springs**	83.01	121	P	P	05 47 58.2	+2.2
	0.5nm,0.5s,baz=304,slow=5.2,SNR=6.6						
	0.5nm,0.5s						
SCHQ	**Schefferville**	88.46	335	LR	LR	06 29 33.3	
	comp=Z,66nm,20.8s,baz=68,slow=37						

*NNC **20** 05:43:47.8±1.5, 44°.66N×79°.63E, h4^{km}±10^{km}, mb3.0, mpv2.9, Error ellipse: s-maj=10.2km s-min=9.4km az=31.0*

*SOME **20** 05:43:49.2, 44°.67N×79°.63E, h15^{km}*

ISC 20 05:43:45.3±1.3, **44°.71N**±0°.04×**79°.73E**±0°.03, **h8^{km}**±10^{km}, **n43,** σ**1^{s}.82**/68, **5C-6D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	**Jarkent**	0.38	173	*e*P	Pg	05 43 50.1	-2.6
	5.2nm,0.2s						
DJR				*e*S	Sg	05 43 55.3	-2.5
	10nm,0.3s						
DJR	**Jarkent**	0.38	173	*e*P	Pb	05 43 56.3	+1.9
	17nm,0.2s						
DJR				*e*S	Sb	05 44 01.2	+0.8
	56nm,0.2s						
BLB	**Baldybastay**	1.09	236	P	Pg	05 44 02.3	-3.9
	1.7nm,0.1s						
BLB				P	Pn	05 44 08.2	+1.3
	8.5nm,0.1s						
BLB				S	Sg	05 44 16.1	-4.2
	5.3nm,0.1s						
BLB				S	Sn	05 44 21.8	-0.4
	15nm,0.1s						
PDGK	**Podgornoye**	1.39	187	P	Pn	05 44 07.9	-3.2
	0.5nm,0.1s						
PDGK				P	Pg	05 44 14.2	+2.2
	2.6nm,0.2s						
PDGK				S	Sg	05 44 25.7	-4.4
	0.9nm,0.2s						
PDGK				S	Sn	05 44 32.1	+2.4
	2.4nm,0.1s						
PDGK	**Podgornoye**	1.39	187	⇑P	Pg	05 44 14.1	+2.1
	1.5nm,0.4s						
PDGK				⇑S	Sn	05 44 31.3	+1.5
	5.6nm,0.5s						
ARXS	**Arharly**	1.45	251	P	Pg	05 44 14.9	+1.8
	3.6nm,0.1s						
ARXS				S	Sg	05 44 33.3	+1.4
	19nm,0.2s						
ARXS	**Arharly**	1.45	251	*e*P	Pn	05 44 08.8	-3.1
	1.7nm,0.3s						
ARXS				*e*S	Sb	05 44 27.5	-3.7
	2.4nm,0.3s						
ARXS	**Arharly**	1.45	251	*e*P	Pg	05 44 14.9	+1.8
	3.6nm,0.1s						
ARXS				*e*S	Sg	05 44 33.3	+1.4
	19nm,0.2s						
UZB	**Uzynbulak**	1.65	198	P	Pn	05 44 12.9	-1.7
	4.3nm,0.2s						
UZB				P	Pg	05 44 18.9	+2.1
	8.8nm,0.2s						
UZB				S	Sn	05 44 34.4	-1.6
	6.7nm,0.2s						
UZB				S	Sg	05 44 40.1	+2.0
	29nm,0.2s						
UZB	**Uzynbulak**	1.65	198	*e*P	Pn	05 44 12.9	-1.7
	4.3nm,0.2s						
UZB				*e*S	Sn	05 44 34.4	-1.6
	6.7nm,0.2s						
UZB	**Uzynbulak**	1.65	198	*e*P	Pg	05 44 18.9	+2.1
	8.8nm,0.2s						
UZB				*e*S	Sg	05 44 40.1	+2.0
	29nm,0.2s						
KURS	**Kuram**	1.66	223	P	Pn	05 44 12.9	-1.8
	2.0nm,0.2s						
KURS				P	Pg	05 44 19.0	+1.9
	4.2nm,0.2s						
KURS				S	Sn	05 44 34.3	-2.0
	3.1nm,0.2s						
KURS				S	Sg	05 44 40.3	+1.7
	16nm,0.4s						
KURS	**Kuram**	1.66	223	*e*P	Pn	05 44 12.9	-1.8
	2.0nm,0.2s						
KURS				*e*S	Sn	05 44 34.3	-2.0
	3.1nm,0.2s						
KURS	**Kuram**	1.66	223	*e*P	Pg	05 44 19.0	+1.9
	4.2nm,0.2s						
KURS				⇓*e*S	Sg	05 44 40.3	+1.7
	16nm,0.4s						
SATY	**Saty**	1.91	211	P	Pg	05 44 23.4	+1.6
	4.7nm,0.1s						
SATY				S	Sg	05 44 48.1	+1.5
	21nm,0.1s						
SATY	**Saty**	1.91	211	*e*P	Pn	05 44 17.0	-1.2
	1.0nm,0.1s						
SATY				*e*S	Sn	05 44 41.5	-1.0
	7.1nm,0.3s						
SATY	**Saty**	1.91	211	*e*P	Pg	05 44 23.4	+1.6
	4.7nm,0.1s						
SATY				*e*S	Sg	05 44 48.1	+1.5
	21nm,0.1s						
CHKK	**Chushkaly**	2.15	247	Pg	Pg	05 44 26.9	+0.5
	2.3nm,0.1s						
CHKK				Lg	Lg	05 44 54.0	
	9.8nm,0.2s						
CHKK	**Chushkaly**	2.15	247	*e*Pg	Pg	05 44 26.9	+0.5
	2.3nm,0.1s						
CHKK				⇓*i*Lg	Lg	05 44 54.0	
	9.8nm,0.2s						
KOTS	**Kotyrbulak**	2.40	233	Pg	Pg	05 44 32.3	+1.1
	3.5nm,0.3s						
KOTS				Lg	Lg	05 45 03.1	
	15nm,0.1s						
KOTS	**Kotyrbulak**	2.40	233	*e*Pg	Pg	05 44 32.3	+1.1
	3.5nm,0.3s						
KOTS				*e*Lg	Lg	05 45 03.1	
	15nm,0.1s						
KTBS	**Karatobe**	2.41	247	Pg	Pg	05 44 32.0	+0.6
	1.7nm,0.3s						
KTBS				Lg	Lg	05 45 02.5	
	23nm,0.3s						
KTBS	**Karatobe**	2.41	247	*e*Pg	Pn	05 44 26.2	+1.2
	1.6nm,0.5s						
KTBS				*e*Lg	Lg	05 44 57.0	
	7.2nm,0.3s						
KTBS	**Karatobe**	2.41	247	*e*Pg	Pg	05 44 32.0	+0.6
	1.7nm,0.3s						
KTBS				*e*Lg	Lg	05 45 02.5	
	23nm,0.3s						
MDOK	**Medeo**	2.48	232	Pg	Pg	05 44 31.9	-0.9
	1.6nm,0.5s						
MDOK				Pg	Pg	05 44 33.4	+0.7
	2.6nm,0.3s						
MDOK				Lg	Lg	05 45 05.0	
	6.2nm,0.5s						
MDOK				Lg	Lg	05 45 05.1	
	9.3nm,0.3s						
MDOK	**Medeo**	2.48	232	*e*Pg	Pn	05 44 27.2	+1.1
	0.6nm,0.2s						
MDOK				*e*Lg	Lg	05 44 58.6	
	1.6nm,0.1s						
MDOK	**Medeo**	2.48	232	*e*Pg	Pg	05 44 33.4	+0.7
	2.6nm,0.3s						
MDOK				*e*Lg	Lg	05 45 05.1	
	9.3nm,0.3s						
KUU	**Kurty**	2.57	253	Pg	Pg	05 44 34.6	+0.1
	2.3nm,0.3s						
KUU				Lg	Lg	05 45 06.8	
	10.0nm,0.4s						
KUU	**Kurty**	2.57	253	*e*Pg	Pg	05 44 34.6	+0.1
	2.3nm,0.3s						
KUU				*e*Lg	Lg	05 45 06.8	
	10.0nm,0.4s						
TNSS	**Tian-Shan**	2.62	231	Pg	Pg	05 44 35.9	+0.4
	1.3nm,0.1s						
TNSS				Lg	Lg	05 45 09.2	
	2.8nm,0.2s						
TNSS	**Tian-Shan**	2.62	231	*e*Pg	Pg	05 44 35.9	+0.4
	1.3nm,0.1s						
TNSS				*e*Lg	Lg	05 45 09.2	
	2.8nm,0.2s						
MAKZ	**Makanchi**	2.62	36	⇑Pg	Pg	05 44 36.1	+0.6
	0.6nm,0.5s						
MAKZ				⇑Lg	Lg	05 45 12.4	
	1.2nm,0.3s						
MK31	**Makanchi Array**	2.75	40	⇓Pg	Pg	05 44 38.4	+0.5
	0.1nm,0.2s,baz=214,slow=15,SNR=11						
MK31				⇑Lg	Lg	05 45 15.1	
	0.6nm,0.3s,baz=218,slow=24,SNR=13						
IZV	**Izvestkoviy**	2.81	234	Pg	Pg	05 44 39.3	+0.3
	0.7nm,0.2s						
IZV				Lg	Lg	05 45 14.9	
	4.8nm,0.2s						
IZV	**Izvestkoviy**	2.81	234	*e*Pg	Pg	05 44 39.4	+0.3
	0.7nm,0.2s						
IZV				*e*Lg	Lg	05 45 14.9	
	4.8nm,0.2s						
MTBS	**Maitube**	2.86	238	Pg	Pg	05 44 40.1	0.0
	1.9nm,0.1s						
MTBS				Lg	Lg	05 45 16.4	
	18nm,0.3s						
MTBS	**Maitube**	2.86	238	*e*Pg	Pg	05 44 40.1	0.0
	1.9nm,0.1s						
MTBS				*e*Lg	Lg	05 45 16.4	
	18nm,0.3s						
KST	**Kastek**	3.19	240	Pg	Pg	05 44 46.4	-0.1
	1.6nm,0.3s						
KST				Lg	Lg	05 45 27.1	
	4.7nm,0.6s						
KST	**Kastek**	3.19	240	*e*Pg	Pg	05 44 46.4	-0.1
	1.6nm,0.3s						
KST				*e*Lg	Lg	05 45 27.1	
	4.7nm,0.6s						
DGS	**Degeres**	3.21	244	Pg	Pg	05 44 46.1	-0.7
	1.4nm,0.2s						
DGS				Lg	Lg	05 45 26.4	
	5.7nm,0.3s						
DGS	**Degeres**	3.21	244	*e*Pg	Pg	05 44 46.1	-0.7
	1.4nm,0.2s						
DGS				*e*Lg	Lg	05 45 26.4	
	5.7nm,0.3s						
TKM2	**Tokmak 2**	3.49	241	⇓Pg	Pb	05 44 49.4	+2.0
	2.0nm,0.9s						
TKM2				⇓Lg	Lg	05 45 35.5	
	3.4nm,0.8s						
KURK	**Kurchatov**	6.05	353	⇓Lg	Lg	05 46 58.8	
	1.8nm,1.0s						

*NNC **20** 05:54:31.5±1.5, 54°.55N×87°.10E, h0^{km}, mb3.4, mpv3.2, Error ellipse: s-maj=16.4km s-min=9.0km az=169.0, Suspected Mining explosion.*

*IDC **20** 05:54:38.0±2.4, 54°.36N×86°.66E, h0^{km}, mbtmp3.4/3, ML3.0/3, Error ellipse: s-maj=20.2km s-min=12.4km az=56.0*

ISC 20 05:54:33.3±4.0, **54°.5N**±0°.2×**86°.8E**±0°.2, **h0^{km}, n10,** σ**2^{s}.04**/17, **10C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	1.32	244	I	I	06 01 36.4	
	0.1nm,0.8s,baz=64,slow=336,SNR=109						
ZAA0	**Zalesovo Array**	1.32	244	⇑P	Pg	05 54 58.3	-0.4
	0.4nm,0.3s						
ZAA0				⇑S	Sn	05 55 18.9	+1.5
	5.0nm,0.6s						
ZALV	**Zalesovo Beam**	1.32	244	Pg	Pb	05 54 58.5	-0.6
	3.7nm,0.3s,baz=68,slow=16,SNR=33						
ZALV				Lg	Lg	05 55 17.5	
	4.7nm,0.3s,baz=71,slow=31,SNR=7.5						
KURK	**Kurchatov**	6.30	236	⇑Pn	Pn	05 56 06.9	-0.5
	1.5nm,0.6s						
KURK				⇑Sn	Sn	05 57 21.0	+1.0
	2.8nm,0.9s						
KURK				⇑Lg	Lg	05 57 56.0	
	17nm,1.5s						
KURBB	**Kurchatov Arra**	6.40	236	Pn	Pn	05 56 11.2	+2.4
	0.2nm,0.3s,baz=53,slow=14,SNR=14						
KURBB				Sn	Sn	05 57 22.5	-0.1
	0.1nm,0.3s,baz=40,slow=20,SNR=1.4						
KURBB				Lg	Lg	05 57 54.0	
	0.1nm,0.3s,baz=45,slow=26,SNR=3.5						
	2.0nm,0.5s						
KURBB	**Kurchatov Arra**	6.40	236	⇑Pn	Pn	05 56 09.4	+0.6
	2.4nm,0.5s						
KURBB				⇑Sn	Sn	05 57 24.0	+1.4
	3.3nm,0.6s						
KURBB				⇑Lg	Lg	05 57 59.5	
	11nm,0.8s						
MK31	**Makanchi Array**	8.28	202	Pn	Pn	05 56 35.1	+0.5
	0.9nm,0.3s,baz=26,slow=13,SNR=23						
MK31				⇑Sn	Sn	05 58 09.9	+1.1
	1.2nm,0.6s,baz=35,slow=26,SNR=4.0						
MK31				⇓Lg	Lg	05 58 56.6	
	2.3nm,1.0s,baz=26,slow=29,SNR=3.6						
MKAR	**Makanchi Array**	8.28	202	Pn	Pn	05 56 36.9	+2.3
	0.7nm,0.3s,baz=23,slow=12,SNR=24						
MKAR				Sn	Sn	05 58 07.6	-1.1
	0.2nm,0.3s,baz=25,slow=27,SNR=5.0						
MKAR				Lg	Lg	05 58 53.2	
	baz=23,slow=22						
	1.0nm,0.3s						
MAKZ	**Makanchi**	8.34	204	⇓Pn	Pn	05 56 35.1	-0.2
	0.6nm,0.4s						
MAKZ				⇓Sn	Sn	05 58 09.9	-0.2
	2.8nm,1.1s						
MAKZ				⇑Lg	Lg	05 59 00.8	
	12nm,1.4s						
BVAR	**Borovoye Array**	9.85	268	Pn	Pn	05 57 00.2	+4.1
	baz=72,slow=15,SNR=4.9						
BVAR				Sn	Sn	05 58 42.8	-4.6
	baz=75,slow=23,SNR=3.6						
	0.6nm,0.4s						

*IDC **20** 05:55:18.4±2.0, 0°.96S×127°.15E, h0^{km}, mb3.5/3, mbtmp3.6/3, Error ellipse: s-maj=160.9km s-min=25.2km az=66.0*

*DJA **20** 05:55:23.1±0.3, 1°S±3°×12°6E±°, h10^{km}, M4.0/13, mb4.4/3, mB5.2/1, MLv3.8/13, Mw(mB)4.6/1*

ISC 20 05:55:24.9±1.1, **1°.31S**±0°.06×**126°.24E**±0°.07, **h35^{km}, n12,** σ**1^{s}.24**/14, **Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANI	**Sanana**	0.78	199	P	Pn	05 55 38.7	-0.7
SANI				S	Sn	05 55 50.2	+0.3
LBMI	**Labuha**	1.42	62	P	Pn	05 55 48.4	+0.1
LBMI				S	Sn	05 56 06.8	+1.0
NLAI	**Namlea**	2.10	156	P	Pn	05 55 57.5	-0.1
TNTI	**Ternate**	2.35	29	P	Pn	05 56 00.9	-0.2
AAI	**Ambon**	3.06	140	P	Pn	05 56 13.1	+2.2
MSAI	**Masohi**	3.36	127	P	Pn	05 56 15.4	+0.4
LUWI	**Luwuk**	3.48	274	P	Pn	05 56 16.9	+0.3
FAKI	**Fak Fak**	6.21	105	P	Pn	05 56 53.0	-1.2
	15nm,1.1s,0.1nm						
SPSI	**Sidrap Palu**	6.98	248	P	Pn	05 57 07.0	+2.2
WRA	**Warramunga Arr**	20.14	157	P	P	05 59 54.7	-1.5
	1.5nm,0.7s,baz=339,slow=12,SNR=15						
	1.5nm,0.7s						
ASAR	**Alice Springs**	23.43	162	P	P	06 00 30.0	-1.2
	2.0nm,0.8s,baz=342,slow=12,SNR=16						
	2.0nm,0.8s						
MKAR	**Makanchi Array**	61.44	327	P	P	06 05 38.1	+0.1
	0.2nm,0.3s,baz=126,slow=7.4,SNR=7.0						
	0.2nm,0.3s						

*IDC **20** 05:58:22.9±2.3, 5°.89S×154°.85E, h160^{km}±18^{km}, mb3.4/7, mbtmp3.9/11, Error ellipse: s-maj=24.3km s-min=14.7km az=85.0*

ISC 20 05:58:21.4±0.9, **5°.92S**±0°.09×**155°.0E**±0°.1, **h150^{km}, n15,** σ**0^{s}.94**/16, **mb3.6**/7, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	3.36	298	P	Pn	05 59 13.9	+0.6
	40nm,0.4s,baz=3.4,slow=20,SNR=1.7						
KRVT				S	Sn	05 59 52.6	-1.1
	80nm,0.5s,baz=140,slow=23,SNR=7.8						
PMG	**Port Moresby**	8.50	245	P	Pn	06 00 22.8	+1.3
	4.5nm,0.4s,baz=74,slow=7.4,SNR=1.3						
PMG				S	Sn	06 01 54.7	-1.4
	4.2nm,0.3s,baz=49,slow=20,SNR=1.4						
CTA	**Charters Tower**	16.45	210	P	P	06 02 05.0	+1.3
	3.1nm,0.8s,baz=27,slow=6.8,SNR=2.4						
DZM	**Mont Dzumac**	19.51	147	P	Pn	06 02 39.1	-0.9
	6.1nm,0.5s,baz=338,slow=19,SNR=9.1						
WRA	**Warramunga Arr**	24.44	233	P	P	06 03 26.4	-0.1
	0.6nm,0.3s,baz=57,slow=9.6,SNR=26						
WRA				PcP	PcP	06 07 00.7	-0.8
	0.7nm,1.1s,baz=134,slow=1.6,SNR=2.2						
	0.6nm,0.3s						
H11S3	**WAKE ISLAND Hy**	26.86	25	T	T	06 32 40.0	
	baz=202,slow=76,SNR=5.4						
H11S2	**WAKE ISLAND Hy**	26.86	25	T	T	06 32 28.7	
	baz=202,slow=76,SNR=5.5						
H11S1	**WAKE ISLAND Hy**	26.88	25	T	T	06 32 37.4	
	baz=202,slow=76,SNR=3.7						
ASAR	**Alice Springs**	26.89	227	P	P	06 03 47.7	-0.9
	0.2nm,0.3s,baz=56,slow=9.5,SNR=1.7						
ASAR				PcP	PcP	06 07 06.8	-0.3
	0.2nm,0.5s,baz=88,slow=3.0,SNR=1.5						
	0.2nm,0.3s						
STKA	**Stephens Creek**	28.71	204	P	P	06 04 04.8	+0.2
	3.7nm,1.0s,baz=45,slow=20,SNR=3.0						
	3.7nm,1.0s						
SONM	**Songino Array**	68.43	327	P	P	06 09 08.2	+0.9
	0.4nm,0.4s,baz=144,slow=7.8,SNR=4.5						
	0.4nm,0.4s						
ILAR	**Eielson Array**	82.38	22	P	P	06 10 26.4	+0.1
	0.2nm,0.4s,baz=236,slow=5.2,SNR=6.1						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	82.60	319	P	P	06 10 28.3	+0.5
	1.2nm,0.6s,baz=107,slow=5.1,SNR=5.7						
	1.2nm,0.6s						
ZALV	**Zalesovo Beam**	83.29	326	P	P	06 10 30.7	-0.5
	0.7nm,0.5s,baz=130,slow=6.2,SNR=3.6						
	0.7nm,0.5s						
TORD	**Torodi Ar. Bea**	152.72	287	PKPbc	PKPbc	06 18 00.6	-1.0
	0.6nm,0.8s,baz=97,slow=3.7,SNR=2.3						

IDC 20 06:02:00.8±2.9, **54°.53N**×**87°.12E, h0^{km}, mbtmp2.9**/3, **ML2.3**/3, **Error ellipse: s-maj=24.3km s-min=20.4km az=54.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	1.47	248	I	I	06 11 45.9	
	0.1nm,0.7s,baz=69,slow=335,SNR=19						
ZALV	**Zalesovo Beam**	1.47	247	Pg	Pn	06 02 26.9	-1.6
	1.0nm,0.3s,baz=67,slow=19,SNR=6.8						
ZALV				Lg	Lg	06 02 47.7	
	1.1nm,0.3s,baz=65,slow=25,SNR=5.9						
KURBB	**Kurchatov Arra**	6.54	237	Pn	Pn	06 03 39.8	+1.7
	0.1nm,0.3s,baz=54,slow=14,SNR=6.4						

KURBB				Sn	Sn	06 04 52.4	-0.9
	baz=31,slow=25,SNR=1.5						
KURBB				Lg	Lg	06 05 27.9	
	baz=59,slow=33,SNR=1.6						
	0.8nm,0.2s						
MKAR	Makanchi Array	8.33	204	Pn	Pn	06 04 03.9	+1.1
	baz=21,slow=9.6,SNR=1.7						
	0.1nm,0.4s						
BVAR	Borovoye Array	10.02	268	Pn	Pn	06 04 23.1	-2.7
	baz=103,slow=6.2,SNR=1.8						
	0.3nm,0.4s						

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*IDC **20** 06:11:35.8±2.0, 0°.18S×125°.20E, h0km, mb3.4/3, mbtmp3.5/3, Error ellipse: s-maj=185.3km s-min=27.5km az=64.0*

*DJA **20** 06:11:38.3±1.1, 0°N±4°×12°7E±°, h18km±12km, M4.0/8, mb4.8/1, mB5.3/1, MLv3.7/8, Mw(mB)4.7/1*

ISC 20 06:11:39.1±1.2**, 0°.52N**±0°.07×**126°.7E**±0°.1**, h35km, n10, σ0s.99**/10**, mb3.4**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.71	69	P	Pn	06 11 51.9	-0.8
LBMI	Labuha	1.40	145	P	Pn	06 12 01.9	-0.2
LBMI				S	Sn	06 12 18.8	-0.6
SANI	Sanana	2.65	196	P	Pn	06 12 18.3	-1.1
SGSI	Sangihe	3.36	340	P	Pn	06 12 30.3	+1.2
GTOI	Gorontalo	3.69	272	P	Pn	06 12 38.2	+4.5
NLAI	Namlea	3.75	174	P	Pn	06 12 34.4	-0.2
SPSI	Sidrap Palu	8.24	237	P	Pn	06 13 37.8	+1.6
WRA	Warramunga Arr	21.67	160	P	P	06 16 26.3	-0.6
	0.6nm,0.4s,baz=334,slow=11,SNR=26						
	0.6nm,0.4s						
ASAR	Alice Springs	25.04	164	P	P	06 17 00.9	+0.7
	0.6nm,0.5s,baz=340,slow=9.8,SNR=13						
	0.6nm,0.5s						
MKAR	Makanchi Array	60.18	326	P	P	06 21 43.7	+0.2
	0.2nm,0.5s,baz=119,slow=7.4,SNR=3.4						
	0.2nm,0.5s						

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*MOS **20** 06:33:34.6±0.8, 5°.16S×143°.64E, h84km, mb5.2/47, Error ellipse: s-maj=8.9km s-min=5.0km az=110.3*

*BJI **20** 06:33:35.4±0.0, 5°.23S×144°.21E, h116km, mb5.2/67, mB5.0/33*

*NEIC **20** 06:33:36.8±1.9, 5°.29S±0°.07×143°.62E±0°.07, h90km±1km, mb5.3/184, Error ellipse: s-maj=10.2km s-min=10.0km az=178.0*

*IDC **20** 06:33:36.4±1.8, 5°.21S×143°.73E, h93km±17km, mb4.7/34, mbtmp5.1/39, MS3.6/8, Error ellipse: s-maj=13.4km s-min=8.0km az=84.0*

*GCMT **20** 06:33:38.8±0.3, 5°.20S±0°.03×143°.54E±0°.03, h114km±5km, MW4.8/71, Moment Tensor Solution. s20,c20; s71,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.03±.09; $M_{\theta\theta}$0.64±.17; $M_{\phi\phi}$1.40±.17; $M_{r\theta}$-0.88±.09; $M_{\theta\phi}$-1.15±.12; $M_{\phi r}$0.29±.10; Best double couple: $M_0$2.32800×10^{16} NP1:ϕ_s130.00000°, δ56.00000°, λ-107.00000°. NP2: ϕ_s338.00000°, δ37.00000°, λ-67.00000°. Principal axes: T 2.3610, Plg10.0000°, Azm232.0000°; N -0.0600, Plg14.0000°, Azm140.0000°; P -2.2950, Plg73.0000°, Azm357.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **20** 06:33:38.4±0.3, 5°S±3°×14°4E±°, h103km±4km, M4.9/38, mB5.3/19, mb5.0/38, MLv5.4/3, Mw(mB)4.8/19*

ISC 20 06:33:37.7±0.5**, 5°.27S**±0°.04×**143°.66E**±0°.04**, h105km**±4km**, h106km:pP-P, n802, σ1s.13**/799**, mb5.2**/168**, 9C-18D, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	Genyem	4.38	307	P	Pn	06 34 43.7	+1.5
GENI	Genyem	4.38	307	P	Pn	06 34 42.6	+0.4
MANU	Manus Island	4.89	49	Pn	Pn	06 34 49.5	+0.4
PMG	Port Moresby	5.38	140	P	Pn	06 34 55.1	-0.6
	135nm,0.4s,baz=328,slow=7.9,SNR=63						
PMG				S	Sn	06 35 54.9	-1.5
	143nm,0.4s,baz=296,slow=23,SNR=12						
PMG				LR	LR	06 37 16.6	
	comp=Z,763nm,18.2s,baz=18,slow=41						
PMG	Port Moresby	5.38	140	Pn	Pn	06 34 55.9	+0.2
PMG	Port Moresby	5.38	140	P	Pn	06 34 56.9	+1.2
PMG	Port Moresby	5.38	140	P	Pn	06 34 56.8	+1.1
PMG	Port Moresby	5.38	140	P	Pn	06 34 55.9	+0.2
SMPI	Sarmi	5.92	303	P	Pn	06 35 03.5	+0.6
	320nm,0.8s,5µm2.4nm						
SRPI	Serui, Papua	8.14	294	P	Pn	06 35 32.4	-0.7
	176nm,0.7s						
KRVT	Keravat (AS076	8.39	84	P	Pn	06 35 35.4	-1.2
	93nm,0.7s,baz=201,slow=17,SNR=2.2						
RABL	Rabaul	8.54	83	Pn	Pn	06 35 40.3	+1.6
COEN	Coen	8.65	183	Pn	Pn	06 35 40.9	+0.8
COEN	Coen	8.65	183	P	Pn	06 35 42.8	+2.7
RKPI	Ransiki, Papua	10.17	291	P	Pn	06 35 59.9	-0.9
	165nm,0.8s,30µm						
FAKI	Fak Fak	11.62	281		Pn	06 36 18.5	-1.8
FAKI	Fak Fak	11.62	281	P	Pn	06 36 19.4	-0.9
SAUI	Saumlaki	12.57	257	Pn	Pn	06 36 30.8	-2.1
KDU	Kakadu	13.28	236	P	Pn	06 36 41.4	-0.8
BNDI	Bandanaira	13.72	272	P	Pn	06 36 45.7	-2.3
	136nm,0.7s						
TV1H	Townsville Har	14.24	168	P	P	06 36 58.0	-0.7
MTN	Manton Dam	14.47	238	Pn	Pn	06 36 56.7	-1.0
MTN	Manton Dam	14.47	238	P	Pn	06 36 56.8	-0.9
MSAI	Masohi	14.81	277	P	Pn	06 37 02.4	+0.4
	19nm,0.7s,693nm						
CTA	Charters Tower	14.95	170	P	Pn	06 37 04.1	+0.4
	7.6nm,0.9s,baz=343,slow=13,SNR=6.0						
CTA				S	Sn	06 39 49.2	+0.4
	3.7nm,0.6s,baz=242,slow=15,SNR=1.5						
CTAO	Charters Tower	14.95	170		Pn	06 37 05.5	+1.8
CTAO	Charters Tower	14.95	170	P	Pn	06 37 05.5	+1.8
AAI	Ambon	15.50	275	P	Pn	06 37 10.9	+0.3
	50nm,0.6s						
QIS	Mount Isa	15.70	194	P	Pn	06 37 12.6	-0.5
NLAI	Namlea	16.63	276	P	P	06 37 25.6	+0.2
	33nm,0.8s						
HNR	Honiara	16.67	105	P	Pn	06 37 25.7	+0.5
	2µm,0.4s,baz=319,slow=2.8,SNR=7.3						
HNR				S	Sn	06 40 28.1	-2.4
	745nm,0.4s,baz=299,slow=10,SNR=1.2						
HNR	Honiara	16.67	105		P	06 37 27.2	+1.4
LBMI	Labuha	16.77	285	P	Pn	06 37 25.5	-1.0
	95nm,1.1s,3µm						
WB0	Warramunga Arr	17.00	211	P	Pn	06 37 28.1	-1.1
WRAB	Tennant Creek	17.16	211	P	Pn	06 37 30.2	-1.0
WRAB	Tennant Creek	17.16	211	P	Pn	06 37 30.4	-0.8
WRAB	Tennant Creek	17.16	211	*c i*P	Pn	06 37 30.1	-1.0
WB2	Warramunga Arr	17.17	211	P	Pn	06 37 30.0	-1.3
WRA	Warramunga Arr	17.18	211	P	Pn	06 37 30.5	-0.9
	34nm,0.5s,baz=34,slow=12,SNR=74						
WRA				S	Sn	06 40 41.6	-0.9
	5.6nm,0.5s,baz=39,slow=24,SNR=3.7						
WRA	Warramunga Arr	17.18	211		Pn	06 37 28.8	-2.5
TNTI	Ternate	17.34	290	P	P	06 37 32.5	-0.7
KNRA	Kununurra	17.91	234		P	06 37 39.2	-0.2
SANI	Sanana	17.92	280	P	P	06 37 39.4	-0.1
	30nm,0.9s,1µm						
GUMO	Guam	18.77	4	P	P	06 37 46.6	-2.3
	193nm,0.9s,baz=137,slow=2.1,SNR=6.2						
GUMO				LR	LR	06 44 28.9	
	comp=Z,68nm,20.4s,baz=162,slow=35						
GUMO	Guam	18.77	4	P	P	06 37 50.0	+1.2
GUMO	Guam	18.77	4	P	P	06 37 50.0	+1.2
SOEI	Soe	19.73	256	P	P	06 37 59.6	+0.1
SOEI	Soe	19.73	256	P	Pn	06 38 00.8	-1.1
SOEI	Soe	19.73	256	P	P	06 37 59.7	+0.3
	270nm,0.9s,2µm						
AS01	Alice Springs	20.54	206	P	P	06 38 08.4	+0.4
AS31	Alice Springs	20.56	206	P	P	06 38 08.8	+0.5
ASAR	Alice Springs	20.57	206	P	P	06 38 08.3	+0.1
	84nm,1.1s,baz=34,slow=9.5,SNR=100						
ASAR				S	S	06 41 54.3	+1.7
	2.7nm,0.8s,baz=43,slow=22,SNR=1.4						
	84nm,1.1s						
ASAR	Alice Springs	20.57	206	P	P	06 38 08.0	-0.3
QLP	Quilpie	21.20	179	P	P	06 38 16.2	+1.2
EIDS	Eidsvold	21.22	161	P	P	06 38 17.0	+1.8
EIDS	Eidsvold	21.22	161	P	P	06 38 17.0	+1.8
GTOI	Gorontalo	21.44	285	P	P	06 38 20.2	+2.5
	75nm,0.8s,562nm						
RMQ	Roma	21.66	168	P	P	06 38 23.9	+4.0
FITZ	Fitzroy Crossi	21.74	233	P	P	06 38 20.8	0.0
MRSI	Marisa	22.43	284	P	P	06 38 27.5	-0.6
	68nm,1.0s						
INKA	Innaminka	22.52	187	P	P	06 38 30.0	+1.1
OOD	Oodnadatta	23.65	198	P	P	06 38 40.3	+0.7
TOLI2	Tolitoli	23.71	285	P	P	06 38 40.0	-0.4
TOLI2	Tolitoli	23.71	285	P	P	06 38 40.1	-0.3
KAPI	Kappang	23.81	270	P	P	06 38 42.1	+0.9
	19nm,0.8s,baz=102,slow=5.2,SNR=5.7						
KAPI				LR	LR	06 48 58.3	
	comp=Z,169nm,20.3s,baz=238,slow=39						
	19nm,0.8s						
MPSI	Mapaga	24.37	282	P	P	06 38 46.0	-0.3
	17nm,0.9s						
WRKA	Warakurna	24.57	215	P	P	06 38 48.1	0.0
LCRK	Leigh Creek	25.57	191	P	P	06 38 57.7	+0.7
PLAI	Plampang	25.92	261	P	P	06 38 58.5	-1.9
CMSA	Cobar Meteorol	26.20	176	P	P	06 39 04.2	+1.5
MULG	Mulgathing	26.48	199	P	P	06 39 05.3	+0.1
STKA	Stephens Creek	26.54	184	P	P	06 39 05.2	-0.6
	8.9nm,0.6s,baz=351,slow=9.4,SNR=18						
STKA				LR	LR	06 51 10.1	
	comp=Z,254nm,19.0s,baz=13,slow=40						
	8.9nm,0.6s						
STKA	Stephens Creek	26.54	184	P	P	06 39 05.5	-0.2
STKA	Stephens Creek	26.54	184	P	P	06 39 06.3	+0.5
STKA	Stephens Creek	26.54	184	*e*P	P	06 39 06.4	+0.6
MYLDM	Lahad Datu	27.18	292	P	P	06 39 10.1	-1.6
LIFNC	LIFOU	27.60	126	P	P	06 39 14.4	-1.0
DZM	Mont Dzumac	27.66	129	P	P	06 39 15.4	-0.6
	21nm,1.0s,baz=268,slow=9.0,SNR=7.4						
	21nm,1.0s						
DZM	Mont Dzumac	27.66	129	P	P	06 39 14.3	-1.7
DZM	Mont Dzumac	27.66	129	P	P	06 39 16.1	+0.1
ONTNC	Ouen Toro	27.80	130	P	P	06 39 15.8	-1.3
ONTNC				IAmb	IAmb	06 39 18.4	
	comp=Z,134nm,1.6s						
MBWA	Marble Bar	28.07	234	P	P	06 39 18.6	-1.0
MBWA				IAmb	IAmb	06 40 16.4	
	comp=Z,98nm,1.8s						
OUENC	Ouen Island, N	28.16	129	P	P	06 39 18.1	-2.3
OUENC				IAmb	IAmb	06 39 22.7	
	comp=Z,131nm,1.6s						
PSA00	Pilbara Seismi	28.19	233	P	P	06 39 18.3	-2.4
PSA00				IAmb	IAmb	06 39 54.8	
	comp=Z,140nm,1.9s						
HTT	Hallett	28.36	188	P	P	06 39 23.3	+1.2
PINNC	Pines Island,	28.73	129	P	P	06 39 24.3	-1.2
FORT	Forrest	29.32	208	P	P	06 39 29.7	-0.8
CAN	Canberra	30.31	171	P	P	06 39 40.4	+1.1
ARPS	Mount Arapiles	31.40	183	P	P	06 39 51.2	+2.4
MEEK	Meekatharra	31.98	226	P	P	06 39 54.0	-0.1
TOO	Toolangi	32.20	177	P	P	06 39 55.9	+0.1
TOO	Toolangi	32.20	177	P	P	06 39 55.9	+0.1
TOO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
JCJ	Chichijima	32.20	358	P	P	06 39 53.4	-2.5
	comp=Z,27nm,0.5s,baz=217,slow=18,SNR=5.2						
	comp=Z,27nm,0.5s						
JCJ	Chichijima	32.20	358	P	P	06 39 53.4	-2.5
MLBS	Spotswood, Mel	32.43	178	P	P	06 40 00.1	+2.3
GIRL	Giralia	33.26	236	P	P	06 40 06.2	+1.0
BLDU	Ballidu	35.76	222	P	P	06 40 26.7	0.0
YULB	Yu-li	35.89	323	P	P	06 40 26.9	-1.0
YULB				IAmb	IAmb	06 40 57.5	
	comp=Z,91nm,2.0s						
TPUB	Ta-pu	36.22	323	P	P	06 40 31.2	+0.4
NACB	Ninganchiao	36.31	325	P	P	06 40 30.4	-1.1
NACB				IAmb	IAmb	06 40 34.0	
	comp=Z,28nm,0.8s						
SSLB	Suanglung	36.39	323	P	P	06 40 30.6	-1.6
YHNB	Yeheng	36.82	325	P	P	06 40 35.8	-0.1
YHNB				IAmb	IAmb	06 40 46.9	
	comp=Z,74nm,1.5s						
TATO	Taipei	37.00	325	P	P	06 40 36.8	-0.5
JHJ2	Mitsune	38.34	355	P	P	06 40 48.4	-0.1
KNMB	Chin-men Tao	38.46	321	P	P	06 40 48.7	-0.9
KNMB				IAmb	IAmb	06 42 00.3	
	comp=Z,43nm,0.8s						
JNU	Nakatsue	40.06	343	P	P	06 41 02.1	-0.8
	comp=Z,23nm,0.8s,baz=121,slow=3.4,SNR=12						
JNU				PcP	PcP	06 43 05.8	0.0
	comp=Z,8.3nm,0.9s,baz=47,slow=4.4,SNR=3.8						
	comp=Z,23nm,0.8s						
JNU	Nakatsue	40.06	343	P	P	06 41 02.0	-0.8
JNU				IAmb	IAmb	06 41 03.4	
	comp=Z,25nm,0.8s						
JGF	Kuroka	41.08	352	P	P	06 41 10.0	-1.2
JGF	Kuroka	41.08	352	P	P	06 41 10.2	-1.0
JHS	Saijyo	41.27	347	P	P	06 41 12.3	-0.4
JHS				IAmb	IAmb	06 41 13.3	
	comp=Z,33nm,0.9s						
JHS	Saijyo	41.27	347	P	P	06 41 12.2	-0.5
MJAR	Matsushiro Arr	41.90	353	P	P	06 41 16.1	-1.8
	comp=Z,4.4nm,0.5s,baz=181,slow=9.6,SNR=12						
MJAR				PcP	PcP	06 43 12.2	+0.5
	comp=Z,8.1nm,0.8s,baz=174,slow=3.1,SNR=11						
	comp=Z,4.4nm,0.5s						
MAJO	Matsushiro	41.90	353	P	P	06 41 16.2	-1.7
MAJO	Matsushiro	41.90	353	*c i*P	P	06 41 16.4	-1.5
MAJO				pmax	pmax		
	comp=Z,15nm,1.0s						
MAJO	Matsushiro	41.90	353	P	P	06 41 16.6	-1.3
MAJO				pP	pP	06 41 33.5	-8.7
MAJO				PcP	PcP	06 43 11.1	-0.6
MJB9	Matsu-Tunnel	41.91	353	P	P	06 41 15.8	-2.1
SDSI	Sungai Dareh	42.38	274	P	P	06 41 22.3	+0.2
	comp=Z,15nm,0.9s						
JSD	Sado	43.38	354	P	P	06 41 28.4	-1.3
JSD				IAmb	IAmb	06 42 10.2	
	comp=Z,57nm,1.4s						
NJ2	Nanjing	43.99	329	*e*P	P	06 41 36.1	+1.3
NJ2				pmax	pmax		
	comp=Z,30nm,0.7s						
NJ2				LR	LR		
	comp=Z,610nm,9.9s						
NJ2				LR	LR		
	comp=Z,1µm,9.5s						
NJ2				LR	LR		
	comp=Z,520nm,12.7s						
MRNZ	Matariki Terra	44.38	148	P	P	06 41 36.0	-1.9
JCZ	Jackson Bay	44.51	154	P	P	06 41 40.7	+1.8
AFI	Afiamalu	44.70	104	LR	LR	06 57 34.1	
	comp=Z,99nm,18.5s,baz=264,slow=32						
URZ	Urewera	44.74	142	P	P	06 41 42.2	+1.5
	comp=Z,5.0nm,0.8s,baz=340,slow=6.4,SNR=1.5						
URZ				LR	LR	06 59 50.7	
	comp=Z,104nm,18.2s,baz=32,slow=35						
	comp=Z,5.0nm,0.8s						
RTZ	Ruatahuna	44.88	142	P	P	06 41 41.2	-0.7
KSRS	Korea Array	44.96	342	P	P	06 41 42.7	+0.3
	comp=Z,14nm,0.8s,baz=161,slow=9.3,SNR=53						
KSRS				PcP	PcP	06 43 22.3	+0.3
	comp=Z,5.8nm,0.8s,baz=159,slow=4.4,SNR=10						
	comp=Z,14nm,0.8s						
KSAR	Wonju Array Be	44.96	342	P	P	06 41 42.4	0.0
KSAR	Wonju Array Be	44.96	342	P	P	06 41 42.4	0.0
KS19	Wonju Array Si	45.02	342	P	P	06 41 43.0	+0.1
TUWZ	Tuamarina	45.03	148	P	P	06 41 43.5	+0.6
TCW	Tory Channel	45.05	147	P	P	06 41 43.9	+0.7
BSWZ	Blackbirch Sta	45.19	148	P	P	06 41 44.6	+0.4
RPZ	Rata Peaks	45.26	152	P	P	06 41 45.5	+0.7
	comp=Z,6.7nm,0.6s,baz=334,slow=4.1,SNR=3.2						
	comp=Z,6.7nm,0.6s						
WHN	Wuhan	45.33	324	P	P	06 41 47.3	+1.9
WHN				pmax	pmax		
	comp=Z,50nm,0.7s						
RPSI	Rantau Prapat	45.38	279	P	P	06 41 45.6	-0.5
PSI	Prapat	45.40	279	P	P	06 41 45.7	-0.8
PSI				pmax	pmax		
	comp=Z,18nm,1.0s						
SRIT	Nakonsritamara	46.04	287	P	P	06 41 50.6	-0.7
NIUE	Niue	47.24	111	P	P	06 42 02.7	+2.1
GYA	Guiyang	47.73	313	⇑*i*P	P	06 42 06.8	+2.3
GYA				pP	pP	06 42 31.5	+2.0
GYA				pmax	pmax		
	comp=Z,51nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
ENH	Enshi	48.16	319	P	P	06 42 07.7	+0.1
ENH				IAmb	IAmb	06 42 09.3	
	comp=Z,48nm,1.4s						
ENH				PcP	PcP	06 43 33.5	0.0
PHRA	Phrae	48.89	300	P	P	06 42 14.9	+1.6
ASAJ	Asahikawa	49.17	359	P	P	06 42 14.7	-0.3
	comp=Z,3.3nm,0.6s,baz=194,slow=16,SNR=2.2						
	comp=Z,3.3nm,0.6s						
LYN	LuoYang	49.33	326	⇓*i*P	P	06 42 16.8	+0.4
LYN				pmax	pmax		
	comp=Z,24nm,0.7s						
CRAI	Chiangrai	49.50	302	P	P	06 42 19.6	+1.6
CRAI				IAmb	IAmb	06 42 20.7	
	comp=Z,43nm,1.2s						
KMI	Kunming	49.94	309	⇓P	P	06 42 23.5	+2.0
KMI				pmax	pmax		
	comp=Z,36nm,1.2s						
CM31	Chiang Mai Arr	49.98	299	P	P	06 42 23.6	+1.9
CMAR	Chiang Mai Arr	49.98	299	P	P	06 42 22.7	+1.0
	comp=Z,27nm,0.7s,baz=122,slow=6.0,SNR=112						
	comp=Z,27nm,0.7s						
CMAR	Chiang Mai Arr	49.98	299	P	P	06 42 22.9	+1.3
CMAR	Chiang Mai Arr	49.98	299	*ce*P	P	06 42 23.2	+1.5
CMAR				pmax	pmax		
	comp=Z,31nm,0.7s						
CHTO	Chiang Mai	50.13	300	P	P	06 42 23.6	+0.9
CHTO	Chiang Mai	50.13	300	P	P	06 42 23.6	+0.9
CHTO				pmax	pmax		
	comp=Z,1.0nm,0.8s						
HNS	HongShan	50.30	330	⇓P	P	06 42 23.8	+0.1
HNS				PcP	PcP	06 43 42.5	+1.4
HNS				pmax	pmax		
	comp=Z,44nm,0.7s						
USA0B	Ussuriysk Arra	50.35	349	P	P	06 42 24.1	+0.2
USA0B				IAmb	IAmb	06 42 24.9	
	comp=Z,28nm,0.8s						
USA0B	Ussuriysk Arra	50.35	349	*d i*P	P	06 42 23.9	-0.1
USRK	Ussuriysk Ar.	50.35	349	P	P	06 42 23.9	0.0
	comp=Z,23nm,0.7s,baz=177,slow=7.2,SNR=62						
	comp=Z,23nm,0.7s						
USRK	Ussuriysk Ar.	50.35	349	P	P	06 42 23.7	-0.2
XAN	Xi'an	51.04	323	⇓*i*P	P	06 42 29.8	+0.4
XAN				pP	pP	06 42 55.8	+1.2
XAN				pmax	pmax		
	comp=Z,25nm,1.0s						
XAN	Xi'an	51.04	323	P	P	06 42 29.6	+0.2
MDJ	Mudanjiang	51.24	347	P	P	06 42 30.8	+0.2
MDJ				sP	sP	06 43 09.3	+1.8
MDJ				PcP	PcP	06 43 41.6	-2.8
MDJ				S	S	06 49 45.3	+4.0
MDJ				pmax	pmax		
	comp=Z,23nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,59nm,3.6s						
MDJ				LR	LR		
	comp=Z,190nm,16.8s						
MDJ				LR	LR		
	comp=Z,300nm,13.6s						
MDJ				LR	LR		
	comp=Z,290nm,16.7s						
MDJ	Mudanjiang	51.24	347	P	P	06 42 30.6	-0.1
MDJ				IAmb	IAmb	06 42 31.4	
	comp=Z,24nm,1.1s						
MDJ	Mudanjiang	51.24	347	P	P	06 42 30.5	-0.1
PZH	PanZhiHua	51.42	310	P	P	06 42 33.8	+1.3
PZH				pmax	pmax		
	comp=Z,20nm,0.9s						
PZH				pmax	pmax		
	comp=Z,170nm,5.9s						
CN2	Changchun	51.54	343	P	P	06 42 33.3	+0.4
CN2				PcP	PcP	06 43 45.8	+0.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BJT	Baijiatuau	51.68	333	P	P	06 42 34.3	+0.2
BJT				IAmb	IAmb	06 42 35.1	
	comp=Z,26nm,0.7s						
BJT	Baijiatuau	51.68	333	P	P	06 42 34.3	+0.2
BJT				pmax	pmax		
	comp=Z,26nm,0.7s						
BJT	Baijiatuau	51.68	333	P	P	06 42 34.2	+0.2
BJT				pP	pP	06 42 52.0	-7.4
BJI	Beijing	51.70	333	P	P	06 42 34.3	+0.2
BJI				S	S	06 49 48.3	+0.6
BJI				pmax	pmax		
	comp=Z,23nm,0.8s						
YSS	Yuzh-Sakhalins	52.00	359	*c i*P	P	06 42 36.2	0.0
YSS				pmax	pmax		
	comp=Z,24nm,1.2s						
CD2	Chengdu	52.41	316	P	P	06 42 40.8	+1.1
CD2				pP	pP	06 43 05.8	+0.7
CD2				pmax	pmax		
	comp=Z,50nm,0.5s						
BNX	BinXian	52.81	346	⇓P	P	06 42 41.8	-0.5
BNX				pmax	pmax		
	comp=Z,69nm,0.9s						
BNX				pmax	pmax		
	comp=Z,94nm,3.9s						
TNCH	TengChong	53.21	307	*e*P	P	06 42 47.3	+1.5
TNCH				pP	pP	06 43 13.5	+2.0
HHC	Hu-ho-hao-te	54.51	330	*e*P	P	06 42 55.9	+1.0
HHC				pmax	pmax		
	comp=Z,55nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,5.7s						
BTO	Baotou	55.10	329	*e*P	P	06 43 01.3	+2.1
BTO				pP	pP	06 43 27.9	+3.2
BTO				sP	sP	06 43 40.5	+4.1
BTO				S	S	06 50 34.3	+0.3
BTO				pmax	pmax		
	comp=Z,90nm,0.7s						
BTO				pmax	pmax		
	comp=Z,280nm,6.2s						
KLR	Kul'dur	55.26	351	P	P	06 42 59.8	-0.2
	comp=Z,12nm,0.6s,baz=170,slow=4.8,SNR=50						
KLR				PcP	PcP	06 43 59.3	-0.3
	comp=Z,5.0nm,0.6s,baz=193,slow=4.4,SNR=5.0						
	comp=Z,12nm,0.6s						
LZH	Lanzhou	55.52	321	*e*P	P	06 43 03.9	+1.5
LZH				pP	pP	06 43 31.0	+2.9
LZH				sP	sP	06 43 47.3	+7.4
LZH				pmax	pmax		
	comp=Z,65nm,1.1s						
RAR	Rarotonga	56.99	112	P	P	06 43 11.8	-1.1
RAR				pP	pP	06 43 29.4	-9.4
RAR				sP	sP	06 43 37.0	-14
HIA	Hailar	58.17	342	P	P	06 43 20.6	0.0
HIA				IAmb	IAmb	06 43 21.8	
	comp=Z,25nm,1.5s						
HIA	Hailar	58.17	342	P	P	06 43 20.6	0.0
HIA				pmax	pmax		
	comp=Z,25nm,1.5s						
SHL	Shillong	58.84	304	P	P	06 43 26.8	+0.8
SHL	Shillong	58.84	304	P	P	06 43 26.8	+0.8
SHL				pmax	pmax		
	comp=Z,71nm,0.7s						
PEA0B	Petropavlovsk-	59.36	10	P	P	06 43 28.9	+0.2
PEA0B				IAmb	IAmb	06 43 29.8	
	comp=Z,30nm,1.0s						
PEA0B	Petropavlovsk-	59.36	10	*d i*P	P	06 43 28.6	-0.1
PEA0B						06 44 15.5	
PETK	Petropavlovsk-	59.36	10	P	P	06 43 29.0	+0.2
	comp=Z,20nm,0.9s,baz=177,slow=8.0,SNR=15						
PETK				PcP	PcP	06 44 15.5	-0.1
	comp=Z,8.9nm,0.7s,baz=190,slow=6.0,SNR=5.3						
	comp=Z,20nm,0.9s						
PETK	Petropavlovsk-	59.36	10	P	P	06 43 28.5	-0.2
PETK	Petropavlovsk-	59.36	10	P	P	06 43 28.5	-0.2
GTA	Gaotai	60.08	322	⇓P	P	06 43 35.3	+1.1
GTA				sP	sP	06 44 15.3	+3.5
GTA				pmax	pmax		
	comp=Z,21nm,1.2s						
GTA				LR	LR		
	comp=Z,150nm,18.5s						
GTA				LR	LR		
	comp=Z,83nm,18.9s						
GTA				LR	LR		
	comp=Z,110nm,18.5s						
ZEA	Zeya	60.39	349	*e*P	P	06 43 35.9	+0.1
ZEA				pmax	pmax		
	comp=N,20nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.2s						
LSA	Lhasa	61.16	308	P	P	06 43 44.0	+1.9
LSA	Lhasa	61.16	308	P	P	06 43 44.0	+1.9
LSA				pmax	pmax		
	comp=Z,43nm,0.9s						
LSA	Lhasa	61.16	308	P	P	06 43 44.2	+2.1
LSA				pP	pP	06 44 01.9	-6.3
DRV	Dumont d'Urvil	61.34	182	P	P	06 43 42.5	+0.5

GOMU	**GeErMu**	**61.54**	**316**	P	**P**	**06 43 46.0**	**+1.6**
GOMU				pP	pP	06 44 12.8	+2.3
GOMU				sP	PcP	06 44 25.1	-0.2
GOMU				pmax	pmax		
	comp=Z,18nm,0.9s						
KEKH	**Kekaha**	**61.68**	**62**	P	**P**	**06 43 46.2**	**+1.1**
ULN	**Ulaanbaatar**	**61.91**	**333**	P	**P**	**06 43 47.3**	**+0.9**
ULN				IAmb	IAmb	06 43 48.4	
	comp=Z,16nm,0.8s						
ULN	**Ulaanbaatar**	**61.91**	**333**	P	**P**	**06 43 47.3**	**+0.9**
ULN				pmax	pmax		
	comp=Z,16nm,0.8s						
ULN	**Ulaanbaatar**	**61.91**	**333**	P	**P**	**06 43 47.4**	**+0.9**
SONM	**Songino Array**	**62.19**	**333**	P	**P**	**06 43 49.0**	**+0.7**
	comp=Z,5.3nm,0.6s,baz=156,slow=7.4,SNR=27						
	comp=Z,5.3nm,0.6s						
SONM	**Songino Array**	**62.19**	**333**	P	**P**	**06 43 48.9**	**+0.7**
SONM				IAmb	IAmb	06 43 50.1	
	comp=Z,30nm,1.5s						
TAPN	**Taplejung**	**62.98**	**304**	*e*P	**P**	**06 43 55.3**	**+1.2**
	comp=Z,166nm,1.0s						
ODAN	**Odare**	**63.06**	**304**	*e*P	**P**	**06 43 55.9**	**+1.3**
	comp=Z,15nm,0.9s						
SHEM	**Shemya Is, Ala**	**63.27**	**20**	LR	LR	07 12 04.8	
	comp=Z,10nm,18.1s,baz=109,slow=36						
RAMN	**Ramite**	**63.75**	**303**	*e*P	**P**	**06 44 00.2**	**+1.1**
	comp=Z,115nm,1.0s						
JIRN	**Jiri**	**64.35**	**304**	*e*P	**P**	**06 44 04.3**	**+1.1**
	comp=Z,57nm,0.7s						
GUN	**Gumba**	**64.70**	**304**	*e*P	**P**	**06 44 06.7**	**+1.3**
	comp=Z,189nm,0.8s						
MA2	**Magadan**	**64.89**	**4**	P	**P**	**06 44 05.3**	**-0.3**
	comp=Z,11nm,0.7s,baz=151,slow=10,SNR=4.5						
	comp=Z,11nm,0.7s						
MA2	**Magadan**	**64.89**	**4**	P	**P**	**06 44 05.8**	**+0.2**
MA2	**Magadan**	**64.89**	**4**	P	**P**	**06 44 05.8**	**+0.2**
MA2				pmax	pmax		
	comp=Z,89nm,1.5s						
MA2	**Magadan**	**64.89**	**4**	P	**P**	**06 44 05.5**	**-0.1**
PKI	**Pulchoki**	**64.96**	**304**	*e*P	**P**	**06 44 07.9**	**+0.8**
	comp=Z,114nm,1.0s						
PKIN	**Phulchoki**	**64.98**	**304**	*e*P	**P**	**06 44 08.0**	**+0.9**
	comp=Z,75nm,0.9s						
KKN	**Kakani**	**65.15**	**304**	*e*P	**P**	**06 44 09.4**	**+1.2**
	comp=Z,18nm,0.8s						
DMN	**Daman**	**65.23**	**304**	*e*P	**P**	**06 44 09.9**	**+1.1**
	comp=Z,300nm,1.0s						
ZAK	**Zakamensk**	**65.44**	**333**	*e*P	**P**	**06 44 09.0**	**-0.5**
ZAK				*e*		06 44 27.8	
ZAK				pmax	pmax		
	comp=Z,40nm,0.9s						
ZAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GKN	**Gorkha**	**65.75**	**304**	*e*P	**P**	**06 44 13.1**	**+1.1**
	comp=Z,208nm,0.9s						
KOLN	**Koldanda**	**66.54**	**303**	*e*P	**P**	**06 44 18.2**	**+1.1**
	comp=Z,26nm,1.1s						
DANN	**Dangsing**	**66.60**	**304**	*e*P	**P**	**06 44 18.4**	**+0.8**
	comp=Z,139nm,0.7s						
PYUN	**Piuthan**	**67.16**	**303**	*e*P	**P**	**06 44 21.8**	**+0.8**
	comp=Z,173nm,0.9s						
BOD	**Bodaibo**	**67.29**	**343**	*e*P	**P**	**06 44 20.6**	**-0.3**
BOD				pmax	pmax		
	comp=Z,20nm,1.1s						
MOY	**Mondy**	**67.38**	**333**	*e*P	**P**	**06 44 22.9**	**+1.1**
MOY				pmax	pmax		
	comp=Z,29nm,1.9s						
YAK	**Yakutsk**	**67.97**	**353**	P	**P**	**06 44 25.1**	**0.0**
	comp=Z,12nm,0.5s,baz=77,slow=1.2,SNR=4.1						
	comp=Z,12nm,0.5s						
YAK	**Yakutsk**	**67.97**	**353**	*e*P	**P**	**06 44 25.4**	**+0.3**
YAK				pmax	pmax		
	comp=Z,17nm,0.7s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.8s						
HYB	**Hyderabad**	**68.09**	**291**	*e*P	**P**	**06 44 26.4**	**-0.5**
SEY	**Seymchan**	**68.33**	**4**	P	**P**	**06 44 26.9**	**-0.6**
	comp=N,7.6nm,0.6s,baz=171,slow=6.1,SNR=26						
	comp=N,7.6nm,0.6s						
SEY	**Seymchan**	**68.33**	**4**	*d i*P	**P**	**06 44 27.4**	**0.0**
SEY				pmax	pmax		
	comp=Z,21nm,1.6s						
WMQ	**Urumqi**	**70.09**	**320**	*e*P	**P**	**06 44 39.9**	**+1.1**
WMQ				PcP	**PcP**	**06 45 02.1**	**+1.9**
WMQ				pP	pP	06 45 07.1	+1.5
WMQ				S	**S**	**06 53 43.3**	**+1.8**
WMQ				pmax	pmax		
	comp=Z,47nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.3s						
NIKH	**Nikolski High**	**70.47**	**28**	P	**P**	**06 44 40.2**	**-0.6**
	baz=231						
CCD	**Concordia, Ant**	**70.76**	**185**	P	**P**	**06 44 43.3**	**+0.7**
UNV	**Unalaska Valle**	**72.11**	**28**	P	**P**	**06 44 50.7**	**0.0**
UNV				IAmb	IAmb	06 44 53.3	
	comp=Z,44nm,1.2s						
UNV	**Unalaska Valle**	**72.11**	**28**	P	**P**	**06 44 50.5**	**-0.1**
	baz=233						
SPIA	**Saint Paul Isl**	**72.57**	**24**	P	**P**	**06 44 54.5**	**+1.3**
SPIA	**Saint Paul Isl**	**72.57**	**24**	P	**P**	**06 44 53.5**	**+0.3**
	baz=229						
AKUT	**Akutan**	**72.64**	**28**	P	**P**	**06 44 54.0**	**+0.3**
VNDA	**Vanda**	**72.85**	**176**	P	**P**	**06 44 55.0**	**+0.3**
	comp=Z,6.8nm,0.6s,baz=331,slow=7.1,SNR=30						
	comp=Z,6.8nm,0.6s						
VNDA	**Vanda**	**72.85**	**176**	P	**P**	**06 44 55.2**	**+0.5**
VNDA	**Vanda**	**72.85**	**176**	P	**P**	**06 44 55.2**	**+0.5**
VNDA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
DGZ	**Jazzator, Alta**	**73.14**	**326**	*d i*P	**P**	**06 44 57.7**	**+0.7**
DGZ				pmax	pmax		
	comp=Z,25nm,0.9s						
ZSN	**Zaisan**	**73.55**	**323**	*e*P	**P**	**06 44 59.8**	**+0.5**
	baz=323						
ZSN	**Zaisan**	**73.55**	**323**	*e*P	**P**	**06 44 59.8**	**+0.5**
MK31	**Makanchi Array**	**74.84**	**321**	P	**P**	**06 45 07.7**	**+0.9**
MK31	**Makanchi Array**	**74.84**	**321**	*d i*P	**P**	**06 45 07.4**	**+0.6**
MKAR	**Makanchi Array**	**74.84**	**321**	P	**P**	**06 45 07.6**	**+0.8**
	comp=Z,21nm,0.7s,baz=106,slow=7.3,SNR=252						
	comp=Z,21nm,0.7s						
MKAR	**Makanchi Array**	**74.84**	**321**	P	**P**	**06 45 07.8**	**+1.0**
MKAR	**Makanchi Array**	**74.84**	**321**	P	**P**	**06 45 07.8**	**+1.0**
BILL	**Bilibino**	**74.86**	**9**	P	**P**	**06 45 06.5**	**0.0**
BILL	**Bilibino**	**74.86**	**9**	*de*P	**P**	**06 45 06.0**	**-0.4**
BILL						06 45 18.0	
BILL				e*PP	**pP**	**06 45 38.0**	**+4.6**
BILL				*i*		06 55 40.5	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,21nm,14.0s						
MAKZ	**Makanchi**	**75.04**	**321**	P	**P**	**06 45 08.8**	**+0.8**
MAKZ				IAmb	IAmb	06 45 09.7	
	comp=Z,46nm,1.1s						
MAKZ	**Makanchi**	**75.04**	**321**	P	**P**	**06 45 08.8**	**+0.8**
MAKZ				pmax	pmax		
	comp=Z,46nm,1.1s						
SHLS	**Shalkode**	**75.22**	**317**	*e*P	**P**	**06 45 08.2**	**-1.1**
	comp=Z,22nm,0.9s,baz=317						
SHLS	**Shalkode**	**75.22**	**317**	*e*P	**P**	**06 45 08.1**	**-1.1**
SHLS				pmax	pmax		
	comp=Z,22nm,0.9s						
S12K	**Black Hills**	**75.29**	**28**	P	**P**	**06 45 09.6**	**+0.4**
	baz=237						
UZB	**Uzynbulak**	**75.52**	**317**	*e*P	**P**	**06 45 11.2**	**+0.2**
	comp=Z,22nm,0.7s,baz=317						
UZB	**Uzynbulak**	**75.52**	**317**	*e*P	**P**	**06 45 11.2**	**+0.2**
UZB				pmax	pmax		
	comp=Z,22nm,0.7s						
TARG	**Taragay, Kyrgy**	**75.85**	**315**	P	**P**	**06 45 14.8**	**+1.5**
TARG	**Taragay, Kyrgy**	**75.85**	**315**	P	**P**	**06 45 14.8**	**+1.5**
TARG				pmax	pmax		
	comp=Z,20nm,1.0s						
SDPT	**Sand Point**	**75.86**	**29**	P	**P**	**06 45 12.4**	**0.0**
	baz=238						
SATY	**Saty**	**75.91**	**317**	*e*P	**P**	**06 45 13.5**	**+0.3**
	comp=Z,14nm,0.7s,baz=317						
SATY	**Saty**	**75.91**	**317**	*e*P	**P**	**06 45 13.5**	**+0.3**
SATY				pmax	pmax		
	comp=Z,14nm,0.7s						
ZHN	**Zhinishke**	**75.93**	**317**	*e*P	**P**	**06 45 13.8**	**+0.5**
	baz=317						
ZHN	**Zhinishke**	**75.93**	**317**	*e*P	**P**	**06 45 13.8**	**+0.5**
KDJ	**Kajisay**	**76.43**	**315**	P	**P**	**06 45 16.9**	**+0.7**
KDJ				IAmb	IAmb	06 45 18.4	
	comp=Z,31nm,0.9s						
KDJ	**Kajisay**	**76.43**	**315**	P	**P**	**06 45 16.9**	**+0.7**
KDJ				pmax	pmax		
	comp=Z,31nm,0.9s						
KSH	**Kashi**	**76.43**	**313**	P	**P**	**06 45 18.3**	**+2.1**
KSH				pmax	pmax		
	comp=Z,26nm,0.8s						
TDK	**Taldyqorghan**	**76.62**	**319**	*e*P	**P**	**06 45 17.8**	**+0.8**
	baz=318						
TDK	**Taldyqorghan**	**76.62**	**319**	*e*P	**P**	**06 45 17.8**	**+0.8**
ZAA0	**Zalesovo Array**	**76.64**	**329**	P	**P**	**06 45 16.5**	**-0.4**
ZAA0				IAmb	IAmb	06 45 17.5	
	comp=Z,22nm,0.7s						
ZALV	**Zalesovo Beam**	**76.64**	**329**	P	**P**	**06 45 16.5**	**-0.4**
	comp=Z,21nm,0.6s,baz=111,slow=5.5,SNR=96						
	comp=Z,21nm,0.6s						
ZALV	**Zalesovo Beam**	**76.64**	**329**	P	**P**	**06 45 16.6**	**-0.3**
ZALV	**Zalesovo Beam**	**76.64**	**329**	P	**P**	**06 45 16.6**	**-0.3**
NIL	**Nilore**	**76.81**	**306**	P	**P**	**06 45 19.2**	**+0.8**
NIL	**Nilore**	**76.81**	**306**	P	**P**	**06 45 19.2**	**+0.8**
NIL				pmax	pmax		
	comp=Z,106nm,0.7s						
MDOK	**Medeo**	**76.87**	**316**	*e*P	**P**	**06 45 19.2**	**+0.5**
	baz=316						
MDOK	**Medeo**	**76.87**	**316**	*e*P	**P**	**06 45 19.1**	**+0.5**
TNSS	**Tian-Shan**	**76.90**	**316**	*e*P	**P**	**06 45 20.1**	**+0.9**
	baz=316						
TNSS	**Tian-Shan**	**76.90**	**316**	*e*P	**P**	**06 45 20.0**	**+0.9**
AAA	**Alma-Ata**	**76.98**	**316**	*e*P	**P**	**06 45 19.8**	**+0.6**
	baz=316						
AAA	**Alma-Ata**	**76.98**	**316**	*e*P	**P**	**06 45 19.8**	**+0.6**
CHKK	**Chushkaly**	**77.15**	**317**	*e*P	**P**	**06 45 20.2**	**+0.1**
	baz=317						
CHKK	**Chushkaly**	**77.15**	**317**	*e*P	**P**	**06 45 20.1**	**+0.1**
CHGN	**Chignik**	**77.35**	**29**	P	**P**	**06 45 20.9**	**+0.1**
	baz=240						
TIXI	**Tiksi**	**77.38**	**355**	P	**P**	**06 45 19.4**	**-1.2**
	comp=Z,8.1nm,0.4s,baz=270,slow=23,SNR=20						
	comp=Z,8.1nm,0.4s						
TIXI	**Tiksi**	**77.38**	**355**	P	**P**	**06 45 19.7**	**-0.9**
TIXI	**Tiksi**	**77.38**	**355**	P	**P**	**06 45 19.7**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,11nm,0.6s						
KUU	**Kurty**	**77.61**	**317**	*e*P	**P**	**06 45 22.4**	**-0.3**
	baz=317						
KUU	**Kurty**	**77.61**	**317**	*e*P	**P**	**06 45 22.3**	**-0.3**
TKM2	**Tokmak 2**	**77.80**	**316**	P	**P**	**06 45 24.8**	**+0.9**
	SNR=29						
KBK	**Karagaybulak**	**78.16**	**315**	P	**P**	**06 45 26.7**	**+0.8**
	SNR=6.1						
UCH	**Uchtor**	**78.33**	**315**	P	**P**	**06 45 28.6**	**+1.4**
	SNR=38						
R16K	**Pilot Point**	**78.38**	**28**	P	**P**	**06 45 26.9**	**+0.4**
	baz=240						
CHMS	**Chumysh**	**78.41**	**316**	P	**P**	**06 45 27.7**	**+0.7**
	SNR=13						
AAK	**Ala-Archa**	**78.47**	**315**	P	**P**	**06 45 28.6**	**+1.0**
	SNR=14						
AAK	**Ala-Archa**	**78.47**	**315**	P	**P**	**06 45 28.0**	**+0.4**
	comp=Z,12nm,0.7s,baz=133,slow=5.4,SNR=38						
	comp=Z,12nm,0.7s						
AAK	**Ala-Archa**	**78.47**	**315**	P	**P**	**06 45 28.3**	**+0.7**
AAK	**Ala-Archa**	**78.47**	**315**	P	**P**	**06 45 28.3**	**+0.7**
AAK				pmax	pmax		
	comp=Z,17nm,0.9s						
SGDS	**Sogindy**	**78.64**	**316**	*e*P	**P**	**06 45 28.4**	**0.0**
	baz=316						
SGDS	**Sogindy**	**78.64**	**316**	*e*P	**P**	**06 45 28.3**	**0.0**
KURK	**Kurchatov**	**78.65**	**324**	P	**P**	**06 45 28.5**	**+0.3**
KURK				IAmb	IAmb	06 45 29.6	
	comp=Z,34nm,1.1s						
KURK	**Kurchatov**	**78.65**	**324**	*d i*P	**P**	**06 45 28.4**	**+0.3**
KURK				pmax	pmax		
	comp=Z,38nm,1.3s						
USP	**Ospenovka**	**78.67**	**316**	P	**P**	**06 45 29.4**	**+1.0**
	SNR=29						
KURBB	**Kurchatov Arra**	**78.67**	**324**	P	**P**	**06 45 28.6**	**+0.3**
	comp=Z,11nm,0.8s,baz=112,slow=4.8,SNR=55						
	comp=Z,11nm,0.8s						
AML	**Almayashu**	**78.88**	**315**	P	**P**	**06 45 31.5**	**+1.4**
	SNR=50						
P16K	**Nushagak River**	**78.92**	**27**	P	**P**	**06 45 29.9**	**+0.5**
	baz=240,SNR=7.6						
TNA	**Tin City**	**78.93**	**18**	P	**P**	**06 45 29.9**	**+0.5**
TNA	**Tin City**	**78.93**	**18**	P	**P**	**06 45 29.7**	**+0.4**
	baz=229						
R17K	**Ugashik Creek**	**78.97**	**28**	P	**P**	**06 45 29.9**	**+0.1**
	baz=241						
EKS2	**Erkin-Say**	**78.98**	**315**	P	**P**	**06 45 31.6**	**+1.3**
	SNR=25						
ANM	**Nome**	**79.13**	**20**	P	**P**	**06 45 31.2**	**+0.8**
ANM	**Nome**	**79.13**	**20**	P	**P**	**06 45 31.3**	**+0.8**
ANM				pmax	pmax		
	comp=Z,11nm,0.8s						
ANM	**Nome**	**79.13**	**20**	P	**P**	**06 45 31.2**	**+0.8**
	baz=232						
O16K	**Kokwok River B**	**79.16**	**26**	P	**P**	**06 45 31.3**	**+0.6**
	baz=240,SNR=18						
N16K	**Nishlik Lake**	**79.32**	**25**	P	**P**	**06 45 33.0**	**+1.4**
	baz=239						
Q16K	**King Salmon**	**79.35**	**27**	P	**P**	**06 45 31.2**	**-0.6**
	baz=241						
DRK	**Karamyk**	**79.50**	**312**	P	**P**	**06 45 29.7**	**-3.7**
Q17K	**Contact Creek**	**79.51**	**28**	P	**P**	**06 45 32.4**	**-0.4**
	baz=242						
BTLS	**Baital**	**79.53**	**317**	*e*P	**P**	**06 45 33.5**	**+0.4**
	comp=Z,14nm,0.6s,baz=318						
BTLS	**Baital**	**79.53**	**317**	*e*P	**P**	**06 45 33.5**	**+0.4**
BTLS				pmax	pmax		
	comp=Z,14nm,0.6s						
O17K	**Koliganek Bris**	**79.69**	**26**	P	**P**	**06 45 34.5**	**+0.9**
	baz=240,SNR=41						
Q18K	**Katmai Hardscr**	**80.09**	**28**	P	**P**	**06 45 35.7**	**-0.3**
	baz=242						
OHAK	**Old Harbor**	**80.28**	**29**	P	**P**	**06 45 37.4**	**+0.6**
OHAK				IAmb	IAmb	06 45 38.2	
	comp=Z,24nm,0.8s						
OHAK	**Old Harbor**	**80.28**	**29**	P	**P**	**06 45 37.0**	**+0.2**
	baz=244						
P18K	**Big Mountain,**	**80.34**	**27**	P	**P**	**06 45 36.7**	**-0.5**
P18K	**Big Mountain,**	**80.34**	**27**	P	**P**	**06 45 36.6**	**-0.6**
	baz=242						
BTK	**Batken**	**80.38**	**312**	P	**P**	**06 45 38.8**	**+0.9**
BTK	**Batken**	**80.38**	**312**	P	**P**	**06 45 38.8**	**+0.9**
BTK				pmax	pmax		
	comp=Z,13nm,0.9s						
KBL	**Kabul**	**80.41**	**306**	P	**P**	**06 45 38.1**	**-0.2**
KBL	**Kabul**	**80.41**	**306**	P	**P**	**06 45 38.1**	**-0.2**
KBL				pmax	pmax		
	comp=Z,15nm,0.8s						
GAR	**Garm**	**80.49**	**311**	P	**P**	**06 45 38.4**	**-0.1**
GAR				IAmb	IAmb	06 45 39.9	
	comp=Z,50nm,1.1s						
O18K	**Koktuh Hills**	**80.57**	**27**	P	**P**	**06 45 38.8**	**+0.4**
O18K				IAmb	IAmb	06 46 46.5	
	comp=Z,87nm,2.0s						
O18K	**Koktuh Hills**	**80.57**	**27**	P	**P**	**06 45 38.4**	**0.0**
	baz=242						
DZA	**Taraz**	**80.77**	**315**	*e*P	**P**	**06 45 40.0**	**0.0**
	comp=Z,16nm,0.6s,baz=315						
DZA	**Taraz**	**80.77**	**315**	*e*P	**P**	**06 45 39.9**	**0.0**
DZA				pmax	pmax		
	comp=Z,16nm,0.6s						
Q19K	**Cape Douglas,**	**80.86**	**28**	P	**P**	**06 45 39.5**	**-0.4**
	baz=244						
KDAK	**Kodiak Island**	**80.86**	**29**	P	**P**	**06 45 40.2**	**+0.3**
KDAK				IAmb	IAmb	06 45 41.4	
	comp=Z,55nm,1.1s						
KDAK	**Kodiak Island**	**80.86**	**29**	P	**P**	**06 45 40.2**	**+0.3**
KDAK				pmax	pmax		
	comp=Z,55nm,1.1s						
KDAK	**Kodiak Island**	**80.86**	**29**	P	**P**	**06 45 40.0**	**+0.1**
	baz=245						
SVW2	**Sparrevohn**	**80.99**	**25**	P	**P**	**06 45 41.8**	**+1.2**
SVW2				IAmb	IAmb	06 45 42.7	
	comp=Z,32nm,0.9s						
O19K	**Port Alsworth**	**81.12**	**27**	P	**P**	**06 45 41.2**	**0.0**
O19K				IAmb	IAmb	06 45 43.1	
	comp=Z,55nm,1.8s						
O19K	**Port Alsworth**	**81.12**	**27**	P	**P**	**06 45 41.1**	**-0.2**
	baz=243						
CHGR	**Chuyangaron**	**81.28**	**310**	P	**P**	**06 45 43.3**	**+0.6**
CHGR	**Chuyangaron**	**81.28**	**310**	P	**P**	**06 45 43.3**	**+0.6**
CHGR				pmax	pmax		
	comp=Z,70nm,0.7s						
Q20K	**Shuyak Island**	**81.30**	**28**	P	**P**	**06 45 41.8**	**-0.5**
	baz=245						
N19K	**Bonanza Creek**	**81.33**	**26**	P	**P**	**06 45 43.4**	**+0.9**
N19K				IAmb	IAmb	06 45 44.1	
	comp=Z,42nm,0.9s						
N19K	**Bonanza Creek**	**81.33**	**26**	P	**P**	**06 45 42.7**	**+0.2**
	baz=243,SNR=18						
P19K	**Oil Pt**	**81.37**	**27**	P	**P**	**06 45 42.2**	**-0.4**
P19K	**Oil Pt**	**81.37**	**27**	P	**P**	**06 45 42.4**	**-0.2**
	baz=244						
KK31	**Karatay Array**	**81.41**	**315**	P	**P**	**06 45 43.6**	**+0.4**
KK31				IAmb	IAmb	06 45 44.2	
	comp=Z,19nm,0.6s						
KK31	**Karatay Array**	**81.41**	**315**	P	**P**	**06 45 43.6**	**+0.4**
KK31				pmax	pmax		
	comp=Z,19nm,0.6s						
KKAR	**Karatay Array**	**81.41**	**315**	P	**P**	**06 45 43.8**	**+0.6**
KKAR				IAmb	IAmb	06 45 44.2	
	comp=Z,19nm,0.6s						
KKAR	**Karatay Array**	**81.41**	**315**	P	**P**	**06 45 43.8**	**+0.6**
KKAR				pmax	pmax		
	comp=Z,19nm,0.6s						
IUG	**Iuzhnay**	**81.50**	**314**	*e*P	**P**	**06 45 44.5**	**+0.6**
	comp=Z,18nm,0.9s,baz=314						
IUG	**Iuzhnay**	**81.50**	**314**	*e*P	**P**	**06 45 44.4**	**+0.6**
IUG				pmax	pmax		
	comp=Z,18nm,0.9s						
TTA	**Tatalina**	**81.70**	**24**	P	**P**	**06 45 45.2**	**+0.8**
TTA	**Tatalina**	**81.70**	**24**	P	**P**	**06 45 45.2**	**+0.8**
TTA				pmax	pmax		
	comp=Z,15nm,0.9s						
TTA	**Tatalina**	**81.70**	**24**	P	**P**	**06 45 44.9**	**+0.5**
	baz=241,SNR=13						
L19K	**White Mountain**	**81.81**	**25**	P	**P**	**06 45 45.8**	**+0.8**
L19K				IAmb	IAmb	06 45 46.8	
	comp=Z,32nm,0.8s						
L19K	**White Mountain**	**81.81**	**25**	P	**P**	**06 45 45.5**	**+0.6**
	baz=242,SNR=19						
O20K	**Slope Mountain**	**81.83**	**27**	P	**P**	**06 45 45.1**	**0.0**
	baz=244						
CHM	**Chimkent**	**81.85**	**314**	*e*P	**P**	**06 45 46.3**	**+0.7**
	baz=314						
CHM	**Chimkent**	**81.85**	**314**	*e*P	**P**	**06 45 46.2**	**+0.7**
M19K	**Big River Lodg**	**81.87**	**25**	P	**P**	**06 45 46.3**	**+1.1**
M19K	**Big River Lodg**	**81.87**	**25**	P	**P**	**06 45 46.1**	**+0.9**
	baz=243						
RSO	**Redoubt South**	**81.94**	**27**	P	**P**	**06 45 45.8**	**-0.1**
BRZS	**Berezniki**	**81.96**	**322**	*e*P	**P**	**06 45 46.0**	**+0.1**
	baz=322						
BRZS	**Berezniki**	**81.96**	**322**	*e*P	**P**	**06 45 46.0**	**+0.1**
RDOG	**Red Dog Mine**	**82.04**	**18**	P	**P**	**06 45 46.9**	**+1.0**
RDOG				IAmb	IAmb	06 45 47.7	
	comp=Z,43nm,0.8s						
RDOG	**Red Dog Mine**	**82.04**	**18**	P	**P**	**06 45 46.7**	**+0.8**
	baz=234						
HOM	**Homer**	**82.10**	**28**	P	**P**	**06 45 47.1**	**+0.7**
	baz=245						
CNPM	**China Poot**	**82.23**	**28**	P	**P**	**06 45 47.7**	**+0.5**
CNPM				IAmb	IAmb	06 45 48.1	
	comp=Z,41nm,0.8s						
GCSA	**Galena City Sc**	**82.26**	**22**	P	**P**	**06 45 47.6**	**+0.5**
	baz=240						
L20K	**Farewell, AK**	**82.35**	**25**	P	**P**	**06 45 48.3**	**+0.6**
	baz=243,SNR=17						
M20K	**Styx River**	**82.40**	**25**	P	**P**	**06 45 48.6**	**+0.5**
M20K				IAmb	IAmb	06 45 49.6	
	comp=Z,29nm,0.8s						
M20K	**Styx River**	**82.40**	**25**	P	**P**	**06 45 48.4**	**+0.4**
	baz=244						
SPCR	**Spurr Chakacha**	**82.50**	**26**	P	**P**	**06 45 48.9**	**+0.3**
	baz=245						
BRSE	**Bradley Lake S**	**82.55**	**28**	P	**P**	**06 45 48.7**	**-0.1**
	baz=246						
K20K	**Telida**	**82.68**	**24**	P	**P**	**06 45 50.2**	**+0.8**
K20K				IAmb	IAmb	06 45 51.3	
	comp=Z,33nm,0.9s						
K20K	**Telida**	**82.68**	**24**	P	**P**	**06 45 49.0**	**-0.4**
	baz=243,SNR=32						
CAPN	**Captain Cook N**	**82.78**	**27**	P	**P**	**06 45 49.2**	**-0.7**
	baz=246						
SKT	**Skwentna**	**83.12**	**25**	P	**P**	**06 45 50.4**	**-1.3**
	baz=245						
PPLA	**Purkeypile**	**83.24**	**25**	P	**P**	**06 45 52.5**	**0.0**
PPLA				IAmb	IAmb	06 45 53.2	
	comp=Z,51nm,1.5s						
PPLA	**Purkeypile**	**83.24**	**25**	P	**P**	**06 45 52.1**	**-0.4**
	baz=244						
SUA	**Susitna One**	**83.25**	**26**	P	**P**	**06 45 52.0**	**-0.5**
SUA	**Susitna One**	**83.25**	**26**	P	**P**	**06 45 51.6**	**-0.9**
	baz=246,SNR=10						
SEW	**Seward**	**83.29**	**28**	P	**P**	**06 45 52.8**	**+0.3**
SEW				IAmb	IAmb	06 45 53.5	
	comp=Z,31nm,1.0s						
SEW	**Seward**	**83.29**	**28**	P	**P**	**06 45 52.3**	**-0.3**
	baz=247						
O22K	**Cooper Landing**	**83.31**	**27**	P	**P**	**06 45 52.8**	**+0.2**
O22K	**Cooper Landing**	**83.31**	**27**	P	**P**	**06 45 52.2**	**-0.5**
	baz=247,SNR=6.8						
FIS	**Fire Island**	**83.35**	**27**	P	**P**	**06 45 53.2**	**+0.4**
CAST	**Castle Rocks**	**83.50**	**24**	IAmb	IAmb	06 45 54.5	
	comp=Z,29nm,0.9s						
CAST	**Castle Rocks**	**83.50**	**24**	P	**P**	**06 45 53.4**	**-0.3**
	baz=245,SNR=31						
RC01	**Rabbit Creek A**	**83.55**	**27**	P	**P**	**06 45 53.3**	**-0.6**
	baz=247,SNR=15						
NRIK	**Noril'sk**	**83.58**	**343**	P	**P**	**06 45 53.9**	**+0.1**
	comp=Z,16nm,0.5s,baz=117,slow=5.0,SNR=36						
	comp=Z,16nm,0.5s						
NRIK	**Noril'sk**	**83.58**	**343**	*d i*P	**P**	**06 45 54.0**	**+0.1**
NRIK				pmax	pmax		
	comp=Z,60nm,1.1s						
CHUM	**Lake Minchumin**	**83.61**	**24**	P	**P**	**06 45 54.9**	**+0.7**
	baz=244,SNR=77						
CUT	**Chulitna**	**83.84**	**25**	P	**P**	**06 45 54.4**	**-0.9**
	baz=246,SNR=9.2						
IMAR	**Indian Mountai**	**84.01**	**21**	P	**P**	**06 45 56.6**	**+0.5**
PMR	**Palmer**	**84.01**	**26**	P	**P**	**06 45 55.7**	**-0.5**
PMR				IAmb	IAmb	06 45 56.7	
	comp=Z,31nm,1.0s						
PMR	**Palmer**	**84.01**	**26**	P	**P**	**06 45 55.7**	**-0.5**
PMR				pmax	pmax		
	comp=Z,31nm,1.0s						
PMR	**Palmer**	**84.01**	**26**	P	**P**	**06 45 55.7**	**-0.5**
	baz=247,SNR=12						
KTH	**Kantishna Hill**	**84.03**	**24**	IAmb	IAmb	06 45 57.2	
	comp=Z,33nm,0.9s						
PWL	**Port Wells**	**84.09**	**27**	P	**P**	**06 45 56.6**	**-0.1**
	baz=248,SNR=7.3						
GHO	**Glory Hole Cre**	**84.17**	**26**	IAmb	IAmb	06 45 57.8	
	comp=Z,22nm,0.8s						
H21K	**Melozitna Rive**	**84.21**	**22**	P	**P**	**06 45 57.4**	**+0.2**
	baz=244						
BVAR	**Borovoye Array**	**84.23**	**324**	P	**P**	**06 45 58.0**	**+0.5**
	comp=Z,95nm,0.8s,baz=104,slow=6.3,SNR=357						
	comp=Z,95nm,0.8s						
BPAW	**Bear Paw Mtn.**	**84.24**	**24**	IAmb	IAmb	06 45 58.0	
	comp=Z,20nm,0.8s						
BPAW	**Bear Paw Mtn.**	**84.24**	**24**	P	**P**	**06 45 57.0**	**-0.4**
	baz=246,SNR=16						
KNK	**Knik Glacier**	**84.24**	**27**	IAmb	IAmb	06 45 58.5	
	comp=Z,37nm,0.9s						
KNK	**Knik Glacier**	**84.24**	**27**	P	**P**	**06 45 57.4**	**-0.1**
	baz=248,SNR=8.2						
TRF	**Thorofare Moun**	**84.25**	**24**	IAmb	IAmb	06 45 59.7	
	comp=Z,19nm,0.8s						
TRF	**Thorofare Moun**	**84.25**	**24**	P	**P**	**06 45 56.7**	**-0.9**
	baz=246,SNR=14						
BRVK	**Borovoye**	**84.30**	**324**	P	**P**	**06 45 58.4**	**+0.5**
BRVK	**Borovoye**	**84.30**	**324**	*d i*P	**P**	**06 45 58.2**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,64nm,0.8s						
I21K	**Tanana**	**84.31**	**22**	P	**P**	**06 45 58.2**	**+0.6**
I21K				IAmb	IAmb	06 45 59.5	
	comp=Z,26nm,1.0s						
I21K	**Tanana**	**84.31**	**22**	P	**P**	**06 45 58.2**	**+0.6**
	baz=244						
G21K	**Allakaket**	**84.34**	**21**	P	**P**	**06 45 57.9**	**+0.1**
	baz=243						
SML	**Sawmill**	**84.44**	**26**	P	**P**	**06 45 58.3**	**-0.1**
SML	**Sawmill**	**84.44**	**26**	P	**P**	**06 45 58.4**	**-0.1**
	baz=248,SNR=14						
F21K	**Alatna River**	**84.67**	**20**	P	**P**	**06 45 59.8**	**+0.3**
	baz=243						
QSPA	**South Pole Qui**	**84.69**	**180**	P	**P**	**06 45 59.3**	**-0.5**
QSPA				IAmb	IAmb	06 46 00.3	
	comp=Z,26nm,0.7s						
M23K	**Glacier View**	**84.71**	**26**	P	**P**	**06 45 59.5**	**-0.3**
	baz=249,SNR=7.4						
MLY	**Manley**	**84.72**	**23**	P	**P**	**06 45 59.9**	**+0.1**

MLY				IAmb	IAmb	06 46 01.1	
	comp=Z,36nm,0.9s						
MLY	**Manley**	**84.72**	**23**	P	**P**	**06 45 59.9**	**+0.1**
	baz=246,SNR=42						
RND	**Reindeer**	**84.83**	**25**	P	**P**	**06 45 60.0**	**-0.4**
RND	**Reindeer**	**84.83**	**25**	P	**P**	**06 46 00.0**	**-0.4**
RND				pmax	pmax		
	comp=Z,45nm,0.8s						
H22K	**Ishtalitna Cre**	**84.84**	**22**	P	**P**	**06 46 00.9**	**+0.6**
	baz=245						
BWN	**Browne**	**84.88**	**24**	P	**P**	**06 46 00.7**	**+0.1**
SCM	**Sheep Creek Mo**	**84.90**	**26**	P	**P**	**06 46 01.1**	**+0.3**
SCM	**Sheep Creek Mo**	**84.90**	**26**	P	**P**	**06 46 01.1**	**+0.3**
SCM				pmax	pmax		
	comp=Z,51nm,0.9s						
SCM	**Sheep Creek Mo**	**84.90**	**26**	P	**P**	**06 46 01.0**	**+0.1**
	baz=249,SNR=14						
MCK	**McKinley**	**84.92**	**24**	P	**P**	**06 46 00.4**	**-0.4**
MCK	**McKinley**	**84.92**	**24**	P	**P**	**06 46 00.4**	**-0.4**
MCK				pmax	pmax		
	comp=Z,50nm,0.8s						
MCK	**McKinley**	**84.92**	**24**	P	**P**	**06 46 00.0**	**-0.8**
	baz=247,SNR=24						
EYAK	**Cordova Ski Ar**	**85.17**	**28**	P	**P**	**06 46 02.0**	**-0.1**
	baz=250						
NEA2	**Nenana**	**85.20**	**24**	P	**P**	**06 46 01.9**	**-0.3**
NEA2				IAmb	IAmb	06 46 02.5	
	comp=Z,18nm,0.7s						
NEA2	**Nenana**	**85.20**	**24**	P	**P**	**06 46 01.5**	**-0.7**
	baz=247,SNR=16						
G22K	**Bettles**	**85.23**	**21**	P	**P**	**06 46 02.6**	**+0.3**
	baz=245						
F22K	**John River**	**85.25**	**20**	P	**P**	**06 46 02.9**	**+0.6**
	baz=244						
I23K	**Minto, Yukon-K**	**85.30**	**23**	P	**P**	**06 46 02.1**	**-0.5**
I23K	**Minto, Yukon-K**	**85.30**	**23**	P	**P**	**06 46 02.5**	**-0.1**
	baz=247,SNR=16						
DIV	**Divide**	**85.35**	**27**	P	**P**	**06 46 03.4**	**+0.4**
KLU	**Klutina**	**85.41**	**27**	P	**P**	**06 46 04.1**	**+0.7**
KLU				IAmb	IAmb	06 46 04.7	
	comp=Z,26nm,0.9s						
KLU	**Klutina**	**85.41**	**27**	P	**P**	**06 46 03.7**	**+0.3**
	baz=250,SNR=7.8						
H23K	**Yukon River**	**85.50**	**22**	P	**P**	**06 46 04.2**	**+0.5**
H23K				IAmb	IAmb	06 46 05.1	
	comp=Z,22nm,0.7s						
H23K	**Yukon River**	**85.50**	**22**	P	**P**	**06 46 04.0**	**+0.3**
	baz=247						
M24K	**Tolsona, Glenn**	**85.50**	**26**	P	**P**	**06 46 04.5**	**+0.7**
M24K	**Tolsona, Glenn**	**85.50**	**26**	P	**P**	**06 46 04.0**	**+0.2**
	baz=250,SNR=7.0						
WRH	**Wood River Hil**	**85.55**	**24**	P	**P**	**06 46 03.0**	**-0.8**
WRH				IAmb	IAmb	06 46 04.0	
	comp=Z,33nm,1.0s						
E22K	**Anaktuvuk Pass**	**85.65**	**20**	P	**P**	**06 46 05.2**	**+0.8**
	baz=244						
A21K	**Barrow**	**85.67**	**16**	P	**P**	**06 46 04.6**	**+0.3**
	baz=240						
G23K	**Bananza Creek**	**85.68**	**21**	P	**P**	**06 46 04.9**	**+0.4**
	baz=246,SNR=44						
CCB	**Clear Creek Bu**	**85.72**	**24**	P	**P**	**06 46 03.7**	**-1.0**
TCOL	**CIGO, UAF Yank**	**85.79**	**23**	IAmb	IAmb	06 46 05.1	
	comp=Z,25nm,0.8s						
TCOL	**CIGO, UAF Yank**	**85.79**	**23**	P	**P**	**06 46 03.9**	**-1.1**
	baz=248,SNR=8.4						
COLA	**College**	**85.79**	**23**	P	**P**	**06 46 04.5**	**-0.5**
COLA				IAmb	IAmb	06 46 05.1	
	comp=Z,24nm,0.7s						
COLA	**College**	**85.79**	**23**	P	**P**	**06 46 04.5**	**-0.5**
COLA				pmax	pmax		
	comp=Z,24nm,0.7s						
COLA	**College**	**85.79**	**23**	P	**P**	**06 46 04.3**	**-0.7**
	baz=248						
COLD	**Coldfoot**	**85.83**	**21**	IAmb	IAmb	06 46 07.1	
	comp=Z,24nm,0.8s						
COLD	**Coldfoot**	**85.83**	**21**	P	**P**	**06 46 05.9**	**+0.7**
	baz=246						
HDA	**Harding Lake**	**85.98**	**24**	P	**P**	**06 46 04.8**	**-1.3**
	baz=249,SNR=11						
N25K	**Chitina, Valde**	**86.04**	**27**	P	**P**	**06 46 07.1**	**+0.5**
N25K	**Chitina, Valde**	**86.04**	**27**	P	**P**	**06 46 06.8**	**+0.3**
	baz=252,SNR=5.4						
POKR	**Poker Plat Res**	**86.05**	**23**	P	**P**	**06 46 05.6**	**-0.8**
	baz=249						
HARP	**HAARP**	**86.05**	**26**	P	**P**	**06 46 06.6**	**+0.1**
	baz=251						
PAX	**Paxson**	**86.10**	**26**	P	**P**	**06 46 06.6**	**-0.2**
PAX				IAmb	IAmb	06 46 07.9	
	comp=Z,43nm,1.5s						
PAX	**Paxson**	**86.10**	**26**	P	**P**	**06 46 06.6**	**-0.2**
PAX				pmax	pmax		
	comp=Z,43nm,1.5s						
PAX	**Paxson**	**86.10**	**26**	P	**P**	**06 46 06.6**	**-0.2**
	baz=251,SNR=9.6						
IL31		**86.14**	**24**	P	**P**	**06 46 05.6**	**-1.1**
IL31				IAmb	IAmb	06 46 06.4	
	comp=Z,29nm,0.8s						
ILAR	**Eielson Array**	**86.14**	**24**	P	**P**	**06 46 05.3**	**-1.5**
	comp=Z,22nm,0.7s,baz=257,slow=4.9,SNR=239						
	comp=Z,22nm,0.7s						
ILAR	**Eielson Array**	**86.14**	**24**	P	**P**	**06 46 05.7**	**-1.1**
ILAR	**Eielson Array**	**86.14**	**24**	P	**P**	**06 46 05.7**	**-1.1**
H24K	**Noodor Dome**	**86.14**	**23**	P	**P**	**06 46 06.9**	**0.0**
H24K				IAmb	IAmb	06 46 08.1	
	comp=Z,20nm,0.7s						
H24K	**Noodor Dome**	**86.14**	**23**	P	**P**	**06 46 07.3**	**+0.4**
	baz=248						
K24K	**Donnelly Dome**	**86.25**	**25**	P	**P**	**06 46 07.4**	**-0.1**
	baz=250,SNR=7.0						
GLB	**Gilahina Butte**	**86.35**	**27**	P	**P**	**06 46 08.3**	**+0.3**
GLB				IAmb	IAmb	06 46 09.2	
	comp=Z,26nm,0.8s						
E23K	**Chandalar**	**86.37**	**20**	P	**P**	**06 46 08.8**	**+0.9**
	baz=246						
D23K	**Nanushuk River**	**86.38**	**19**	P	**P**	**06 46 09.6**	**+1.6**
	baz=245						
VRDI	**Verde Repeater**	**86.45**	**28**	IAmb	IAmb	06 46 10.3	
	comp=Z,44nm,1.6s						
TGL	**Tana Glacier**	**86.60**	**28**	IAmb	IAmb	06 46 10.7	
	comp=Z,36nm,1.0s						
G24K	**Hadweenzic Riv**	**86.61**	**22**	P	**P**	**06 46 09.5**	**+0.4**
	baz=249						
RIDG	**Independent Ri**	**86.62**	**25**	P	**P**	**06 46 09.2**	**0.0**
	baz=251,SNR=16						
MCARA	**McCarthy VSAT**	**86.69**	**28**	P	**P**	**06 46 09.9**	**+0.3**
MCARA				IAmb	IAmb	06 46 11.6	
	comp=Z,35nm,1.1s						
MCARA	**McCarthy VSAT**	**86.69**	**28**	P	**P**	**06 46 10.1**	**+0.5**
	baz=253						
E24K	**Your Creek**	**86.76**	**20**	P	**P**	**06 46 10.2**	**+0.3**
	baz=248						
F24K	**Squaw Lake**	**86.76**	**21**	P	**P**	**06 46 11.0**	**+1.1**
	baz=248						
DOT	**Dot Lake**	**86.92**	**25**	P	**P**	**06 46 10.7**	**0.0**
DOT				IAmb	IAmb	06 46 11.8	
	comp=Z,32nm,0.9s						
PRP	**Porcupine Dome**	**86.94**	**23**	P	**P**	**06 46 10.7**	**-0.1**
	baz=250						
M26K	**Nabesna, AK**	**87.01**	**27**	P	**P**	**06 46 11.6**	**+0.4**
	baz=253						
L26K	**Log Cabin Wild**	**87.04**	**26**	IAmb	IAmb	06 46 12.5	
	comp=Z,20nm,0.7s						
L26K	**Log Cabin Wild**	**87.04**	**26**	P	**P**	**06 46 11.5**	**+0.2**
	baz=252,SNR=24						
SCRK	**Sand Creek**	**87.06**	**25**	P	**P**	**06 46 11.7**	**+0.2**
SCRK	**Sand Creek**	**87.06**	**25**	P	**P**	**06 46 11.2**	**-0.3**
	baz=252,SNR=8.1						
G25K	**Bearman Lake**	**87.14**	**22**	P	**P**	**06 46 12.1**	**+0.5**
	baz=250						
BARN	**Barnard Glacie**	**87.23**	**28**	P	**P**	**06 46 13.1**	**+0.6**
C24K	**Franklin Bluff**	**87.33**	**19**	P	**P**	**06 46 13.5**	**+1.0**
	baz=247,SNR=31						
CTG	**Chitna Glacier**	**87.36**	**28**	P	**P**	**06 46 13.6**	**+0.6**
	baz=254,SNR=7.7						
CTGM	**Chitina Glacie**	**87.36**	**28**	P	**P**	**06 46 13.0**	**0.0**
FYU	**Fort Yukon**	**87.40**	**22**	IAmb	IAmb	06 46 14.7	
	comp=Z,33nm,0.9s						
LOGN	**Logan Glacier**	**87.48**	**28**	P	**P**	**06 46 14.0**	**+0.4**
LOGN				IAmb	IAmb	06 46 15.1	
	comp=Z,27nm,0.9s						
M27K	**Edge Creek, AK**	**87.49**	**27**	P	**P**	**06 46 14.4**	**+0.8**
	baz=254						
F25K	**Christian Rive**	**87.60**	**21**	P	**P**	**06 46 14.9**	**+1.0**
	baz=250						
PCA	**Pinnacle**	**87.65**	**29**	P	**P**	**06 46 14.0**	**-0.3**
PINM	**Pinnacle**	**87.65**	**29**	P	**P**	**06 46 14.5**	**+0.2**
	baz=255						
L27K	**Beaver Creek,**	**87.71**	**26**	IAmb	IAmb	06 46 16.1	
	comp=Z,16nm,0.8s						
L27K	**Beaver Creek,**	**87.71**	**26**	P	**P**	**06 46 15.1**	**+0.6**
	baz=254						
BCAR	**Beaver Creek A**	**87.73**	**26**	P	**P**	**06 46 15.0**	**+0.4**
E25K	**Arctic Village**	**87.80**	**21**	P	**P**	**06 46 16.0**	**+1.1**
	baz=250,SNR=31						
I26K	**Coal Creek Min**	**87.81**	**24**	P	**P**	**06 46 14.7**	**-0.1**
	baz=253,SNR=7.0						
O28M	**Mount Upton**	**87.85**	**28**	P	**P**	**06 46 16.2**	**+0.7**
	baz=255						
K27K	**Chicken**	**87.88**	**25**	P	**P**	**06 46 16.4**	**+1.1**
	baz=254						
BMAR	**Burnt Mountain**	**87.93**	**22**	P	**P**	**06 46 16.6**	**+1.2**
D25K	**Kavik River**	**87.94**	**20**	P	**P**	**06 46 16.1**	**+0.7**
	baz=250,SNR=56						
PNL	**Peninsula**	**87.96**	**30**	P	**P**	**06 46 16.4**	**+0.7**
	baz=256						
BVCY	**Beaver Creek**	**87.97**	**27**	P	**P**	**06 46 16.3**	**+0.6**
	baz=255,SNR=14						
YUK3	**Moose Creek**	**87.98**	**27**	P	**P**	**06 46 16.7**	**+0.7**
	baz=255,SNR=15						
G26K	**Porcupine Rive**	**88.07**	**22**	P	**P**	**06 46 17.5**	**+1.4**
	baz=252						
F26K	**Sheenjek River**	**88.17**	**21**	P	**P**	**06 46 17.7**	**+1.1**
	baz=252						
YUK8	**Steele Glacier**	**88.18**	**28**	P	**P**	**06 46 17.6**	**+0.5**
	baz=256						
EGAK	**Eagle**	**88.47**	**24**	P	**P**	**06 46 18.4**	**+0.4**
EGAK				IAmb	IAmb	06 46 19.3	
	comp=Z,22nm,0.9s						
EGAK	**Eagle**	**88.47**	**24**	P	**P**	**06 46 18.3**	**+0.3**
	baz=254,SNR=17						
I27K	**Kandik River**	**88.51**	**24**	P	**P**	**06 46 18.8**	**+0.5**
	baz=254						
O29M	**Mount Kennedy**	**88.51**	**29**	P	**P**	**06 46 18.8**	**+0.3**
	baz=257						
C26K	**Camden Bay**	**88.63**	**19**	P	**P**	**06 46 19.7**	**+1.0**
	baz=251						
YUK4	**Talbot Arm**	**88.72**	**28**	P	**P**	**06 46 20.6**	**+1.1**
	baz=257,SNR=11						
H27K	**Steamboat Moun**	**88.72**	**23**	P	**P**	**06 46 20.2**	**+0.9**
	baz=254,SNR=60						
YUK6	**Outpost Mounta**	**88.76**	**29**	P	**P**	**06 46 20.4**	**+0.6**
	baz=257						
G27K	**Doyon Strip**	**88.83**	**22**	P	**P**	**06 46 20.7**	**+1.0**
	baz=254,SNR=28						
C27K	**Jago River**	**88.93**	**20**	P	**P**	**06 46 21.0**	**+0.9**
	baz=252						
DAWY	**Dawson**	**89.03**	**25**	P	**P**	**06 46 21.3**	**+0.6**
DAWY				IAmb	IAmb	06 46 22.4	
	comp=Z,24nm,0.8s						
DAWY	**Dawson**	**89.03**	**25**	P	**P**	**06 46 21.4**	**+0.6**
	baz=256						
M29M	**Somme Creek**	**89.06**	**27**	P	**P**	**06 46 21.7**	**+0.8**
	baz=257						
HYT	**Haines Junctio**	**89.14**	**29**	P	**P**	**06 46 22.2**	**+0.7**
HYT				IAmb	IAmb	06 46 23.1	
	comp=Z,18nm,0.8s						
HYT	**Haines Junctio**	**89.14**	**29**	P	**P**	**06 46 22.1**	**+0.7**
	baz=258,SNR=7.2						
E27K	**Coleen River**	**89.24**	**21**	P	**P**	**06 46 22.6**	**+1.0**
	baz=254						
P30M	**Million Dollar**	**89.26**	**29**	P	**P**	**06 46 22.8**	**+0.9**
	baz=258						
L29M	**L29M**	**89.36**	**26**	P	**P**	**06 46 23.1**	**+0.9**
	baz=257,SNR=34						
PLBC	**Pleasant Camp**	**89.42**	**30**	P	**P**	**06 46 23.0**	**+0.4**
	baz=259						
N30M	**Aishikik Lake**	**89.47**	**28**	P	**P**	**06 46 23.7**	**+0.8**
	baz=258						
SIT	**Sitka**	**89.51**	**33**	P	**P**	**06 46 23.5**	**+0.5**
	baz=260						
J29M	**Klondike Camp**	**89.62**	**25**	IAmb	IAmb	06 46 25.6	
	comp=Z,15nm,0.9s						
J29M	**Klondike Camp**	**89.62**	**25**	P	**P**	**06 46 24.5**	**+1.0**
	baz=257						
GEYT	**Alibeck**	**89.69**	**308**	P	**P**	**06 46 24.2**	**-0.2**
	comp=Z,5.5nm,0.7s,baz=172,slow=2.2,SNR=9.4						
	comp=Z,5.5nm,0.7s						
GEYT	**Alibeck**	**89.69**	**308**	P	**P**	**06 46 24.7**	**+0.3**
GEYT	**Alibeck**	**89.69**	**308**	P	**P**	**06 46 24.7**	**+0.3**
GEYT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
K29M	**Barlow Dome**	**89.78**	**26**	P	**P**	**06 46 25.2**	**+0.8**
	baz=258						
I29M	**Ogilvie Camp,**	**89.79**	**24**	P	**P**	**06 46 24.6**	**+0.3**
I29M				IAmb	IAmb	06 46 25.6	
	comp=Z,25nm,1.2s						
I29M	**Ogilvie Camp,**	**89.79**	**24**	P	**P**	**06 46 24.4**	**+0.3**
	baz=257,SNR=13						
O30N	**Mendenhall**	**89.81**	**29**	P	**P**	**06 46 24.7**	**+0.3**
	baz=259,SNR=7.9						
M30M	**Minto, Yukon**	**89.84**	**27**	P	**P**	**06 46 25.0**	**+0.4**
M30M	**Minto, Yukon**	**89.84**	**27**	P	**P**	**06 46 24.9**	**+0.4**
	baz=258,SNR=8.0						
ABKAR	**Akbulak array**	**89.86**	**319**	P	**P**	**06 46 24.0**	**-0.8**
SKAG	**Skagway**	**89.94**	**30**	P	**P**	**06 46 26.1**	**+1.1**
SKAG				IAmb	IAmb	06 46 26.7	
	comp=Z,18nm,1.0s						
SKAG	**Skagway**	**89.94**	**30**	P	**P**	**06 46 25.6**	**+0.6**
	baz=260						
S32K	**Killisnoo**	**89.98**	**32**	P	**P**	**06 46 25.3**	**+0.1**
	baz=260						
BESE	**Bessie Mountai**	**90.03**	**31**	P	**P**	**06 46 26.6**	**+1.1**
BESE				IAmb	IAmb	06 46 26.8	
	comp=Z,18nm,0.9s						
N31M	**Braeburn, Yuko**	**90.10**	**28**	IAmb	IAmb	06 46 27.3	
	comp=Z,18nm,0.7s						
N31M	**Braeburn, Yuko**	**90.10**	**28**	P	**P**	**06 46 26.6**	**+0.8**
	baz=259,SNR=5.1						
MAYO	**Mayo, Yukon**	**90.44**	**26**	P	**P**	**06 46 28.5**	**+1.2**
MAYO	**Mayo, Yukon**	**90.44**	**26**	P	**P**	**06 46 28.1**	**+0.8**
	baz=259						
EPYK	**Eagle Plains**	**90.64**	**23**	P	**P**	**06 46 28.5**	**+0.3**
EPYK	**Eagle Plains**	**90.64**	**23**	P	**P**	**06 46 28.4**	**+0.2**
	baz=258,SNR=18						
T33K	**Petersburg**	**90.75**	**33**	P	**P**	**06 46 29.2**	**+0.4**
	baz=262						
P32M	**Atlin**	**90.78**	**30**	P	**P**	**06 46 29.4**	**+0.4**
	baz=261						
M31M	**Drury Creek, Y**	**90.87**	**28**	P	**P**	**06 46 29.5**	**+0.2**
M31M	**Drury Creek, Y**	**90.87**	**28**	P	**P**	**06 46 29.2**	**-0.1**
	baz=260						
G30M	**tAoh Zraii Nji**	**90.95**	**23**	P	**P**	**06 46 29.9**	**+0.3**
	baz=259						
WRAK	**Wrangell Islan**	**91.03**	**34**	P	**P**	**06 46 30.4**	**+0.3**
	baz=262						
AKTO	**Aktyubinsk**	**91.25**	**320**	P	**P**	**06 46 30.5**	**-0.8**
	comp=Z,6.5nm,0.5s,baz=105,slow=4.6,SNR=17						
	comp=Z,6.5nm,0.5s						
V35K	**Ketchikan**	**91.29**	**35**	P	**P**	**06 46 32.4**	**+1.1**
	baz=263						
P33M	**Teslin, Yukon**	**91.31**	**30**	P	**P**	**06 46 31.6**	**+0.1**
	baz=262						
N32M	**Quiet Lake**	**91.32**	**29**	P	**P**	**06 46 32.0**	**+0.5**
	baz=262						
FARO	**Faro, Yukon**	**91.36**	**28**	IAmb	IAmb	06 46 32.6	
	comp=Z,9.8nm,0.9s						
FARO	**Faro, Yukon**	**91.36**	**28**	P	**P**	**06 46 31.7**	**+0.1**
	baz=261,SNR=8.9						
Q32M	**Nakina River**	**91.42**	**31**	P	**P**	**06 46 32.4**	**+0.3**
	baz=262						
ARU	**Arti**	**91.64**	**326**	P	**P**	**06 46 31.6**	**-1.4**
	comp=Z,9.1nm,0.5s,baz=81,slow=5.8,SNR=13						
	comp=Z,9.1nm,0.5s						
ARU	**Arti**	**91.64**	**326**	P	**P**	**06 46 31.7**	**-1.2**
ARU				IAmb	IAmb	06 46 32.6	
	comp=Z,21nm,1.1s						
S34M	**Telegraph Cree**	**91.88**	**32**	P	**P**	**06 46 34.7**	**+0.6**
	baz=263						
F31M	**Tsiigehtchic**	**91.99**	**23**	P	**P**	**06 46 34.2**	**-0.1**
	baz=261,SNR=12						
INK	**Inuvik**	**92.20**	**22**	P	**P**	**06 46 34.8**	**-0.5**
	comp=Z,7.5nm,0.9s,baz=247,slow=8.3,SNR=25						
	comp=Z,7.5nm,0.9s						
INK	**Inuvik**	**92.20**	**22**	P	**P**	**06 46 35.0**	**-0.2**
INK				IAmb	IAmb	06 46 36.4	
	comp=Z,8.0nm,0.9s						
INK	**Inuvik**	**92.20**	**22**	P	**P**	**06 46 35.0**	**-0.2**
INK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
INK	**Inuvik**	**92.20**	**22**	P	**P**	**06 46 35.0**	**-0.2**
	baz=261,SNR=16						
T35M	**Bob Quinn**	**92.25**	**33**	P	**P**	**06 46 36.2**	**+0.4**
	baz=264						
MMPY	**Sheldon Lake,**	**92.37**	**27**	P	**P**	**06 46 36.8**	**+0.5**
	baz=263						
DLBC	**Dease Lake**	**92.52**	**32**	P	**P**	**06 46 37.5**	**+0.4**
	baz=264						
BBB	**Bella Bella**	**93.03**	**38**	LR	LR	07 22 38.2	
	comp=Z,27nm,19.0s,baz=134,slow=32						
WTLY	**Watson Lake, Y**	**93.30**	**30**	P	**P**	**06 46 41.1**	**+0.5**
	baz=265,SNR=13						
LIRD	**Liard River Hi**	**94.62**	**31**	P	**P**	**06 46 47.0**	**+0.4**
	baz=268,SNR=6.9						
A36M	**Sachs Harbour**	**95.31**	**18**	IAmb	IAmb	06 46 50.9	
	comp=Z,6.5nm,0.8s						
A36M	**Sachs Harbour**	**95.31**	**18**	P	**P**	**06 46 48.8**	**-0.7**
	baz=270						
KOTAN	**Kotaneelee Air**	**95.67**	**30**	P	**P**	**06 46 51.6**	**+0.2**
	baz=269,SNR=6.0						
HUMO	**Hull Mountain**	**96.02**	**48**	P	**P**	**06 46 53.9**	**+0.4**
HUMO				IAmb	IAmb	06 46 55.4	
	comp=Z,5.7nm,0.8s						
YBH	**Yreka Blue Hor**	**96.18**	**49**	P	**P**	**06 46 55.2**	**+0.9**
YBH	**Yreka Blue Hor**	**96.18**	**49**	P	**P**	**06 46 55.2**	**+0.9**
YBH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KIRV	**Kirov**	**96.68**	**328***ce*	P	**P**	**06 46 55.0**	**-1.0**
K05A	**Summer Lake**	**97.55**	**48**	P	**P**	**06 47 01.5**	**+0.9**
K05A				IAmb	IAmb	06 47 02.2	
	comp=Z,12nm,0.9s						
BELG	**Belogornoye**	**97.83**	**322**	P	**P**	**06 47 00.3**	**-0.9**
	comp=Z,45nm,0.8s,baz=162,slow=15,SNR=12						
BELG	**Belogornoye**	**97.83**	**322***di*	P	**P**	**06 47 00.1**	**-1.2**
BELG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MOD	**Modoc Plateau**	**97.98**	**49**	IAmb	IAmb	06 47 03.9	
	comp=Z,6.3nm,0.9s						
SMMC	**Simmler**	**98.19**	**55**	P	**P**	**06 47 04.0**	**+0.5**
	baz=269						
PKM	**Mcpherson Peak**	**98.34**	**56**	P	**P**	**06 47 04.4**	**+0.1**
	baz=269						
I07A	**Izee**	**98.55**	**46**	P	**P**	**06 47 05.1**	**+0.1**
BCW	**Bitter Crk WRg**	**98.67**	**56**	P	**P**	**06 47 04.0**	**-1.7**
BCW				IAmb	IAmb	06 47 07.6	
	comp=Z,11nm,1.0s						
YERR	**Yerington**	**98.81**	**52**	P	**P**	**06 47 05.4**	**-0.9**
VES	**Vestal, Richgr**	**98.94**	**55**	P	**Pdif**	**06 47 06.7**	**0.0**
	baz=270						
MDPB	**Devils Postpil**	**98.94**	**53**	P	**Pdif**	**06 47 04.7**	**-2.3**
WVOR	**Wild Horse Val**	**99.22**	**48**	P	**Pdif**	**06 47 08.1**	**+0.1**
WVOR				IAmb	IAmb	06 47 09.5	
	comp=Z,6.3nm,0.8s						
WVOR	**Wild Horse Val**	**99.22**	**48**	P	**Pdif**	**06 47 08.1**	**+0.1**
WVOR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CIS	**Catalina Islan**	**99.49**	**57**	P	**Pdif**	**06 47 09.4**	**+0.1**
	baz=270						
NVAR	**Mina Array Bea**	**99.55**	**52**	P	**Pdif**	**06 47 09.5**	**-0.2**
	comp=Z,2.3nm,0.7s,baz=261,slow=5.6,SNR=17						
	comp=Z,2.3nm,0.7s						
CWC	**Cottonwood Cre**	**99.75**	**54**	P	**Pdif**	**06 47 10.7**	**+0.1**
	baz=271						
NEW	**Newport**	**100.05**	**42**	P	**Pdif**	**06 47 11.8**	**+0.4**
	baz=273						
YKA	**Yellowknife Ar**	**100.07**	**27**	P	**Pdif**	**06 47 10.6**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=279,slow=4.6,SNR=25						
YKA				PKiKP	**PKiKP**	**06 51 38.0**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=287,slow=1.4,SNR=8.1						
	comp=Z,1.3nm,0.7s						
YKA	**Yellowknife Ar**	**100.07**	**27***ce*	P	**Pdif**	**06 47 10.8**	**-0.3**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GNI	**Garni**	**100.19**	**310***ce*	P	**Pdif**	**06 47 13.4**	**+1.0**
GNI				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MPMC	**Manual Prospec**	**100.23**	**54**	P	**Pdif**	**06 47 13.4**	**+0.6**
	baz=271,SNR=6.7						
MURC	**Murrieta**	**100.51**	**57**	P	**Pdif**	**06 47 14.5**	**+0.7**
	baz=271,SNR=5.8						
109C	**Camp Elliot, M**	**100.59**	**58**	P	**Pdif**	**06 47 14.5**	**+0.4**
	baz=271						
FURC	**Furnace Creek,**	**100.73**	**54**	P	**Pdif**	**06 47 15.7**	**+1.1**
	baz=271						
PFO	**Pinyon Flats O**	**101.12**	**57**	P	**Pdif**	**06 47 17.0**	**+0.4**
	baz=271						
TPFO	**Pinon Flats**	**101.13**	**57**	P	**Pdif**	**06 47 17.0**	**+0.4**
	baz=271						
MONP2	**Monument Peak**	**101.17**	**58**	P	**Pdif**	**06 47 17.4**	**+0.4**
	baz=271						
HEC	**Hector,Ludlow**	**101.20**	**56**	P	**Pdif**	**06 47 17.4**	**+0.5**
	baz=271						
TPNV	**Topopah Spring**	**101.21**	**54**	P	**Pdif**	**06 47 17.6**	**+0.6**
	baz=272						
SHOC	**Shoshone, Teco**	**101.22**	**55**	P	**Pdif**	**06 47 17.3**	**+0.4**
	baz=272						
BELC	**Belle Mtn. Jos**	**101.50**	**57**	P	**Pdif**	**06 47 18.8**	**+0.4**
	baz=271						
TUQ	**Turquoise Moun**	**101.52**	**55**	P	**Pdif**	**06 47 18.8**	**+0.4**
	baz=272						
GMRC	**Granite Mounta**	**101.75**	**56**	P	**Pdif**	**06 47 19.9**	**+0.4**
	baz=272						
BC3	**Big Chuckawall**	**101.96**	**57**	P	**Pdif**	**06 47 20.7**	**+0.3**
	baz=272						
IRM	**Iron Mountain**	**102.20**	**56**	P	**Pdif**	**06 47 22.1**	**+0.8**
	baz=272						
HLID	**Hailey**	**102.25**	**47**	P	**Pdif**	**06 47 22.3**	**+0.8**
	baz=274						
MSO	**Missoula**	**102.31**	**43**	P	**Pdif**	**06 47 22.3**	**+0.7**
	baz=276						
BOZ	**Bozeman (W)**	**104.03**	**44**	P	**Pdif**	**06 47 30.3**	**+0.9**
	baz=277						
ARCES	**ARCESS Array B**	**104.52**	**341**	Pdiff	**Pdif**	**06 47 29.8**	**-0.9**
	comp=Z,5.0nm,0.7s,baz=76,slow=5.5,SNR=13						
EGMT	**Eagleton**	**104.98**	**42**	P	**PKiKP**	**06 51 48.6**	**+0.8**
	baz=279						
WUAZ	**Wupatki**	**105.22**	**55**	P	**PKiKP**	**06 51 48.6**	**-0.2**
	baz=274						
PDAR	**Pinedale Array**	**105.87**	**47**	Pdiff	**Pdif**	**06 47 37.8**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=228,slow=2.7,SNR=10.0						
PDAR				PKiKP	**PKiKP**	**06 51 50.0**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=193,slow=1.6,SNR=8.2						
O20A	**White River Ci**	**107.20**	**50**	P	**PKiKP**	**06 51 52.0**	**-0.3**
	baz=278						
FINES	**FINESS Array B**	**107.55**	**333**	Pdiff	**Pdif**	**06 47 43.5**	**-0.9**
	comp=Z,3.4nm,0.7s,baz=90,slow=4.0,SNR=9.3						
FINES				PKiKP	**PKiKP**	**06 51 51.9**	**-0.1**
	comp=Z,1.7nm,1.0s,baz=104,slow=4.4,SNR=4.4						
LAO	**LASA Array**	**107.58**	**43**	P	**PKiKP**	**06 51 52.6**	**-0.1**
	baz=281						
S22A	**4UR Ranch, Cre**	**108.62**	**52**	P	**PKiKP**	**06 51 54.9**	**-0.3**
	baz=278						
N23A	**Red Feather La**	**108.82**	**49**	P	**PKiKP**	**06 51 54.9**	**-0.5**
	baz=280						
ISCO	**Idaho Springs**	**109.25**	**50**	P	**PKiKP**	**06 51 56.1**	**-0.2**
	baz=280						
ANMO	**Albuquerque**	**109.28**	**55**	P	**PKiKP**	**06 51 56.7**	**+0.4**
	baz=277						
NACGM	**Naroch**	**109.54**	**327**	*e*Pdif	**Pdif**	**06 47 55.9**	**+2.5**
	comp=Z,9.0nm,0.8s,baz=71						
RSSD	**Black Hills**	**109.60**	**45**	P	**PKiKP**	**06 51 56.3**	**-0.4**
	baz=282						
SDCO	**Great Sand Dun**	**109.66**	**52**	P	**PKiKP**	**06 51 56.9**	**-0.3**
	baz=279						
MNTX	**Cornudas Mount**	**110.57**	**58**	P	**PKiKP**	**06 51 58.9**	**+0.3**
	baz=277						
TXAR	**Lajitas Array**	**112.31**	**61**	PKiKP	**PKiKP**	**06 52 01.9**	**-0.3**
	comp=Z,1.4nm,1.0s,baz=189,slow=1.8,SNR=12						
ULM	**Lac du Bonnet**	**113.21**	**37**	PKiKP	**PKiKP**	**06 52 02.0**	**-1.0**
	comp=Z,1.9nm,0.5s,baz=257,slow=1.7,SNR=4.4						
CBKS	**Cedar Bluff**	**113.91**	**50**	P	**PKiKP**	**06 52 05.0**	**+0.2**
	baz=283						
BGNE	**Belgrade**	**114.45**	**47**	P	PKPdf	06 52 05.7	-0.1
	baz=286						
ECSD	**EROS Data Cent**	**114.88**	**44**	P	**PKiKP**	**06 52 06.2**	**-0.3**
	baz=288						
ABTX	**Abilene, Hawle**	**115.25**	**56**	P	**PKiKP**	**06 52 07.1**	**-0.4**
	baz=280						
JCT	**Junction City**	**115.48**	**59**		**PKPdf**	**06 52 07.4**	**-0.7**
JCT	**Junction City**	**115.48**	**59**	PKIKP	**PKPdf**	**06 52 07.4**	**-0.7**
JCT	**Junction City**	**115.48**	**59**	P	**PKPdf**	**06 52 07.7**	**-0.4**
	baz=279						
WMOK	**Wichita Mounta**	**115.54**	**54**		**PKPdf**	**06 52 06.6**	**-1.5**
WMOK	**Wichita Mounta**	**115.54**	**54**	PKIKP	**PKPdf**	**06 52 06.6**	**-1.5**
WMOK	**Wichita Mounta**	**115.54**	**54**	P	**PKPdf**	**06 52 08.0**	**-0.1**
	baz=282						
833A	**Chaparral WMA,**	**116.16**	**61**	P	**PKPdf**	**06 52 09.0**	**-0.4**
	baz=279						
KSU1	**Kansas State U**	**116.20**	**49**	P	**PKPdf**	**06 52 09.1**	**0.0**
	baz=286						
EYMN	**Ely**	**116.75**	**38**	P	**PKPdf**	**06 52 09.9**	**-0.1**
	baz=294						
T35A	**Sooner Cattle**	**116.84**	**51**	PKPdf	**PKPdf**	**06 52 10.3**	**-0.1**

SPMN	Marine on St.	116.96	41	P	PKPdf	06 52 10.2	-0.2
	baz=292						
DIVS	Divibare	117.45	317	PKPdf	PKPdf	06 52 11.1	-0.5
FNA	Florina	117.59	314		PKPdf	06 52 11.6	-0.3
FNA	Florina	117.59	314	PKIKP	PKPdf	06 52 11.6	-0.3
TUL1	Leonard	117.66	52	P	PKPdf	06 52 11.5	-0.6
	baz=285						
BRG	Berggiesshubel	118.28	326	*e*PKP	PKPdf	06 52 13.3	+0.5
BRG				Amp		06 52 14.1	
	comp=Z,7.8nm,1.1s						
BRG	Berggiesshubel	118.28	326	*e*PKIKP	PKPdf	06 52 13.3	+0.5
BRG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CONA	Conrad Observa	118.55	323	*i* PKiKP	PKPdf	06 52 13.7	+0.2
	comp=Z,2.2nm,0.7s						
CLL	Collm	118.57	327	*e*PKPdf	PKPdf	06 52 14.0	+0.7
CLL	Collm	118.57	327	*e*PKIKP	PKPdf	06 52 14.0	+0.7
HHAR	Hobbs	119.01	51	PKPdf	PKPdf	06 52 12.8	-1.9
ARSA	Arzberg	119.06	322	*i* PKiKP	PKPdf	06 52 14.9	+0.4
	comp=Z,4.1nm,0.8s						
S39A	Bolivar	119.08	50		PKPdf	06 52 12.9	-1.9
KHC	Kasperske Hory	119.34	325	*e*PKP	PKPdf	06 52 14.5	-0.4
KHC	Kasperske Hory	119.34	325	*e*PKIKP	PKPdf	06 52 14.5	-0.4
GERES	GERESS Array B	119.40	324	PKP	PKPdf	06 52 14.9	-0.2
	comp=Z,0.6nm,0.6s,baz=40,slow=2.3,SNR=3.7						
JFWS	Jewell Farm	119.53	43	P	PKPdf	06 52 14.8	-0.7
	baz=292						
MOA	Molln	119.54	323	*i* PKP	PKPdf	06 52 15.1	-0.3
	comp=Z,3.7nm,0.9s						
NATX	Nacogdoches	119.56	56	P	PKPdf	06 52 15.2	-0.6
	baz=283						
SOKA	Soboth	119.61	322	*i* PKiKP	PKPdf	06 52 15.6	0.0
	comp=Z,3.8nm,0.8s						
R40A	Maddies Statio	119.69	49		PKPdf	06 52 14.3	-1.6
MIAR	Mount Ida	119.76	53		PKPdf	06 52 16.1	-0.1
MIAR	Mount Ida	119.76	53	PKIKP	PKPdf	06 52 16.1	-0.1
MIAR	Mount Ida	119.76	53	P	PKPdf	06 52 16.1	-0.1
	baz=285						
WLAR	White Oak Lake	120.36	54		PKPdf	06 52 16.9	-0.4
KBA	Koelnbreinsper	120.46	323	*i* PKP	PKPdf	06 52 16.8	-0.6
	comp=Z,3.8nm,0.8s						
MYKA	Terra Mystica	120.49	322	*i* PKiKP	PKPdf	06 52 17.4	+0.1
	comp=Z,2.1nm,0.4s						
CCM	Cathedral Cave	120.53	49	PKPdf	PKPdf	06 52 15.9	-1.6
CCM	Cathedral Cave	120.53	49	PKIKP	PKPdf	06 52 15.9	-1.6
CCM	Cathedral Cave	120.53	49	P	PKPdf	06 52 17.4	-0.1
	baz=289						
HDIL	Hopedale	121.08	45	P	PKPdf	06 52 18.1	-0.4
	baz=292						
ABTA	Abfaltersbach	121.12	323	*i* PKP	PKPdf	06 52 18.2	-0.3
	comp=Z,6.4nm,0.9s						
FVM	French Village	121.16	48		PKPdf	06 52 17.6	-1.1
FVM	French Village	121.16	48	PKIKP	PKPdf	06 52 17.6	-1.1
LCAR	Lake Charles	121.22	51		PKPdf	06 52 17.8	-1.1
CIMO	Cimolais	121.37	322	PKPdf	PKPdf	06 52 18.4	-0.5
WATA	Walderalm	121.39	324	*i* PKiKP	PKPdf	06 52 19.1	0.0
	comp=Z,1.5nm,0.4s						
WTTA	Wattenberg	121.39	324	*i* PKiKP	PKPdf	06 52 19.4	+0.3
	comp=Z,8.6nm,0.8s						
L44A	Lake County Fo	121.41	43	P	PKPdf	06 52 19.0	-0.1
	baz=294						
MOTA	Moosalm	121.66	324	*i* PKiKP	PKPdf	06 52 19.4	-0.2
	comp=Z,9.5nm,0.9s						
SQTA	Sankt Quirin	121.66	324	*i* PKiKP	PKPdf	06 52 19.8	+0.2
	comp=Z,11nm,1.0s						
RETA	Reutte	121.79	324	*i* PKiKP	PKPdf	06 52 19.8	+0.1
	comp=Z,1.9nm,0.7s						
E46A	Sault Ste Mari	121.84	37		PKPdf	06 52 19.7	-0.1
CGM3	Cape Girardeau	121.97	49		PKPdf	06 52 19.8	-0.5
FETA	Feichten	122.04	324	*i* PKiKP	PKPdf	06 52 20.8	+0.5
	comp=Z,9.2nm,1.1s						
S44A	Carbondale	122.13	48	PKPdf	PKPdf	06 52 20.5	-0.1
DAVA	Damuels	122.40	324	*i* PKiKP	PKPdf	06 52 21.2	+0.1
	comp=Z,9.9nm,0.7s						
OLIL	Olney	122.61	47	PKPdf	PKPdf	06 52 21.0	-0.4
SFIN	Lafayette	122.69	45	P	PKPdf	06 52 21.5	-0.1
	baz=294						
VBMS	Vicksburg	122.85	55	P	PKPdf	06 52 21.8	-0.3
	baz=286						
BLO	Bloomington	123.58	46		PKPdf	06 52 23.4	+0.1
BLO	Bloomington	123.58	46	PKIKP	PKPdf	06 52 23.4	+0.1
WVT	Waverly	123.75	50	P	PKPdf	06 52 23.1	-0.6
	baz=290						
L48A	N Adams	123.85	42		PKPdf	06 52 23.6	-0.2
O48B	Farmland	124.09	44	P	PKPdf	06 52 23.8	-0.5
	baz=295						
WCI	Wyandotte Cave	124.11	47	PKPdf	PKPdf	06 52 24.2	-0.2
WCI	Wyandotte Cave	124.11	47	PKIKP	PKPdf	06 52 24.2	-0.2
WCI	Wyandotte Cave	124.11	47	P	PKPdf	06 52 24.2	-0.2
	baz=293						
AAM	Ann Arbor	124.20	41	P	PKPdf	06 52 24.0	-0.5
	baz=298						
P48A	Milroy	124.24	45		PKPdf	06 52 24.4	-0.2
N49A	Columbus Grove	124.47	43	PKPdf	PKPdf	06 52 24.6	-0.4
PLCA	Paso Flores	124.51	149	PKP	PKPdf	06 52 25.5	+0.3
	comp=Z,2.7nm,0.6s,baz=232,slow=4.0,SNR=18						
P49A	Miami Univ. Ec	124.71	45	P	PKPdf	06 52 25.1	-0.4
	baz=295						
SCHQ	Schefferville	124.81	21	PKP	PKPdf	06 52 24.6	-0.7
	comp=Z,6.7nm,0.7s,baz=334,slow=2.0,SNR=20						
CLTN	Cedars of Leba	124.89	49		PKPdf	06 52 25.1	-0.8
LRAL	Lakeview Retre	125.44	53	P	PKPdf	06 52 26.6	-0.5
	baz=289						
ACSO	Alum Creek Sta	125.60	43		PKPdf	06 52 26.9	-0.3
ACSO	Alum Creek Sta	125.60	43	P	PKPdf	06 52 26.9	-0.3
	baz=297						
T50A	Nancy	125.65	48		PKPdf	06 52 26.8	-0.6
N51A	Ashland	125.69	42	PKPdf	PKPdf	06 52 27.2	-0.2
BRAL	Brewton	125.98	55	P	PKPdf	06 52 28.1	-0.1
	baz=288						
P52A	Corning	126.45	43	P	PKPdf	06 52 28.3	-0.5
	baz=298						
CPCT	Cooper Cave	126.50	49		PKPdf	06 52 28.4	-0.7
M53A	WI Miller and	126.56	41	P	PKPdf	06 52 28.6	-0.4
	baz=300						
ERPA	Erie	126.66	40	P	PKPdf	06 52 28.8	-0.4
	baz=301						
O53A	New Philadelph	126.79	42	P	PKPdf	06 52 29.3	-0.2
	baz=299						
TZTN	Tazewell	126.79	48	P	PKPdf	06 52 29.7	+0.1
	baz=294						
W52A	Murphy	127.08	49		PKPdf	06 52 29.9	-0.3
MCWV	Mont Chateau	127.99	42	P	PKPdf	06 52 31.8	0.0
	baz=300						
KEST	Kesra	128.25	312	PKP	PKPdf	06 52 33.5	+1.0
	comp=Z,4.3nm,0.7s,baz=90,slow=2.0,SNR=5.5						
LONY	Lake Ozonia	128.49	34	P	PKPdf	06 52 32.6	0.0
	baz=308						
TIGA	Tifton	128.69	54	P	PKPdf	06 52 33.4	+0.1
	baz=291						
BLA	Blacksburg	128.76	45	P	PKPdf	06 52 33.4	0.0
	baz=298						
SSPA	Standing Stone	128.78	40	P	PKPdf	06 52 33.2	-0.1
	baz=302						
KMSC	Kings Mountain	129.01	48	P	PKPdf	06 52 34.0	+0.1
	baz=295						
BINY	Binghamton	129.11	38	P	PKPdf	06 52 33.9	0.0
	baz=305						
PAL	Palisades	131.07	38	P	PKPdf	06 52 37.5	0.0
	baz=306						
ESDC	Sonseca Array	135.00	324	PKP	PKPdf	06 52 45.1	0.0
	comp=Z,0.7nm,0.7s,baz=15,slow=1.8,SNR=5.1						
TA02	Huaiquique	138.21	128		PKPdf	06 52 50.0	-1.5
YOTC	Yotoco, Valle	140.11	90	*e*P	PKPdf	06 52 49.1	-6.2
CBOC	Ciudad Bolivar	140.52	87	*e*P	PKPdf	06 52 49.1	-7.0
GUY2C	Guyana, Caldas	141.15	88	*e*P	PKPdf	06 52 51.4	-6.3
ZARC	Zaragoza, Cauc	141.67	85	*e*P	PKPdf	06 52 51.5	-6.4
TOA0	Torodi Ar. Sit	141.69	284	PKPdf	PKPdf	06 52 54.8	-3.2
TORD	Torodi Ar. Bea	141.69	284	PKhKP	PKPpre	06 52 51.2	
	comp=Z,2.4nm,0.7s,baz=78,slow=3.5,SNR=10						
TORD				PKP	PKPdf	06 52 59.6	+1.7
	comp=Z,5.9nm,0.7s,baz=79,slow=1.8,SNR=15						
LPAZ	La Paz	141.95	125	PKhKP	PKPpre	06 52 54.6	
	comp=Z,1.5nm,0.5s,baz=172,slow=1.2,SNR=9.3						
ROSC	El Rosal	142.17	89	PKhKP	PKPpre	06 52 54.8	
	comp=Z,13nm,0.5s,baz=202,slow=6.3,SNR=10						
ROSC	El Rosal	142.17	89		PKPdf	06 52 55.4	-4.0
ROSC	El Rosal	142.17	89	PKIKP	PKPdf	06 52 55.4	-4.0
SPBC	San Pablo de B	142.44	88	*e*P	PKPdf	06 52 55.6	-3.9
MACC	Macarena, Meta	142.45	93	*e*P	PKPdf	06 52 55.2	-4.2
CPUP	Villa Florida	142.58	148	PKhKP	PKPpre	06 52 55.0	
	comp=Z,2.6nm,0.9s,baz=238,slow=3.3,SNR=5.9						
CPUP				PKP	PKPdf	06 52 59.6	+0.3
	comp=Z,3.8nm,0.8s,baz=247,slow=5.2,SNR=8.2						
CHIC	Chingaza	142.75	89	*e*P	PKPdf	06 52 55.9	-4.5
BRRC	Barranca, Sant	142.81	85	*e*P	PKPdf	06 52 58.1	-1.9
SDDR	Presa de Saban	143.31	65		PKPab	06 52 57.8	+0.8
BARC	Barichara	143.34	86	*e*P	PKPab	06 52 58.9	+1.5
CRJC	Cerrejon, Guaj	143.40	79	*e*P	PKPab	06 52 58.1	+0.6
RUSC	La Rusia	143.43	87	PKPdf	PKPab	06 52 58.9	+0.8
RUSC	La Rusia	143.43	87	*e*P	PKPab	06 52 58.9	+0.8
SC01	Santiago de lo	143.68	64		PKPbc	06 53 00.4	+1.3
GUVC	San Jose del G	143.70	93	*e*P	PKPab	06 52 58.9	+0.3
PAMC	Pamplona, Colo	143.81	85	*e*P	PKPab	06 52 59.7	+0.1
URIC	Uribia, Colomb	144.19	77	*e*P	PKPab	06 53 01.3	+1.0
PTGC	Puerto Gaitan,	144.32	90	*e*P	PKPab	06 53 00.4	-0.5
SDV	Santo Domingo	145.79	82	PKPbc	PKPdf	06 53 05.1	-0.4
ETMB	Extrema	146.68	117		PKPdf	06 53 08.1	+1.5
CRPR	Cabo Rojo, PR	147.38	65		PKPdf	06 53 09.2	+1.5
MLPR	Magueyes Islan	147.46	65		PKPdf	06 53 08.7	+0.8
AOPR	Arecibo Observ	147.59	64	PKPdf	PKPdf	06 53 07.5	-0.6
UUPR	Utuado, UPR, P	147.65	64		PKPdf	06 53 10.3	+2.1
EMPR	Esperanza - Ma	147.75	63	PKPbc	PKPdf	06 53 09.8	+1.5
OBIP	Obispado Ponce	147.82	64		PKPdf	06 53 10.0	+1.6
GCPR	Guaynabo City	148.20	63		PKPdf	06 53 11.7	+2.7
SJG	San Juan	148.21	64		PKPdf	06 53 11.7	+2.6
SJG	San Juan	148.21	64	PKP2	PKPdf	06 53 11.7	+2.6
CBYP	Canovanas	148.42	63		PKPbc	06 53 12.6	-0.5
HUMP	Col San Antoni	148.47	64	PKPbc	PKPbc	06 53 12.9	-0.2
KIC	Kosan Boka	148.54	274	⇑*e*P	PKPbc	06 53 13.2	-0.3
	comp=Z,22nm,0.7s						
DBIC	Dimbokro	148.66	274	PKPbc	PKPbc	06 53 13.8	0.0
	comp=Z,17nm,0.5s,baz=92,slow=2.3,SNR=40						
DBIC	Dimbokro	148.66	274	PKPbc	PKPbc	06 53 13.1	-0.7
MTP	Monte Pirata	148.75	63	PKPbc	PKPdf	06 53 13.0	+3.0
TIC	Toumodi	148.82	274	⇓*i*P	PKPbc	06 53 14.6	+0.3
	comp=Z,55nm,0.6s						
LIC	Lamto	148.83	273	⇓*i*P	PKPbc	06 53 14.7	+0.4
	comp=Z,129nm,0.8s						
PTLB	Pontes e Lacer	149.45	133		PKPbc	06 53 15.7	0.0
CDVI	St. Croix	149.57	64	PKPbc	PKPbc	06 53 15.9	0.0
SAML	Samuel	149.74	118	PKPbc	PKPbc	06 53 16.3	-0.2
SAML	Samuel	149.74	118	PKP2	PKPbc	06 53 16.3	-0.2
VILB	Vilhena	150.18	128	PKPbc	PKPbc	06 53 17.5	-0.1
SMRT	St. Maarten	150.96	62	PKPdf	PKPdf	06 53 09.9	-3.5
SMRT					PKPbc	06 53 18.9	-0.4
SMRT				PKPab	PKPab	06 53 26.7	-0.3
GDHS	Morne Mazeau,	152.78	64	PKPdf	PKPdf	06 53 13.3	-3.0
CBE	Ff, Capester	152.99	65	PKPdf	PKPdf	06 53 12.5	-4.0
CBE				PKPab	PKPab	06 53 34.5	-1.1
BDFB	Brasilia	156.23	151	PKPbc	PKPbc	06 53 30.7	
	comp=Z,3.9nm,0.8s,baz=162,slow=3.8,SNR=5.9						

IDC 20 06:35:52.2±2.7**, 54°.22N**×**86°.36E, h0**^{km}**, mbtmp2.8**/2**, ML2.1**/2**, Error ellipse: s-maj=20.2km s-min=11.9km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.95	254	I	I	06 41 18.1	
	0.2nm,0.8s,baz=73,slow=336,SNR=50						
ZALV	Zalesovo Beam	0.95	254	Pg	Pg	06 36 09.8	-0.5
	0.9nm,0.3s,baz=73,slow=17,SNR=12						
ZALV				Lg	Lg	06 36 24.2	
	2.0nm,0.3s,baz=76,slow=40,SNR=22						
KURBB	Kurchatov Arra	5.99	236	Pn	Pn	06 37 20.9	-1.2
	baz=52,slow=13,SNR=1.5						
KURBB				Lg	Lg	06 39 01.2	
	0.1nm,0.3s,baz=52,slow=28,SNR=1.7						
	0.6nm,0.3s						
MKAR	Makanchi Array	7.88	201	Pn	Pn	06 37 49.7	+1.8
	0.1nm,0.3s,baz=20,slow=13,SNR=7.1						
MKAR				Sn	Sn	06 39 18.3	+0.6
	baz=16,slow=32,SNR=2.5						
MKAR				Lg	Lg	06 40 02.9	
	baz=25,slow=28,SNR=8.0						
	0.1nm,0.4s						

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*IDC **20** 06:51:01.3±3.1, 53°.78N×88°.22E, h0^{km}, mbtmp2.9/3, ML2.3/3, Error ellipse: s-maj=24.7km s-min=17.7km az=62.0*

*NNC **20** 06:51:02.3±2.4, 53°.59N×88°.14E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=18.6km s-min=9.2km az=55.0, Suspected Mining explosion.*

ISC 20 06:51:00.6±3.6**, 53°.8N**±0°.1×**88°.2E**±0°.2**, h0**^{km}**, n8,** σ**1^{s}.32**/11**, 4C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	2.01	276	I	I	07 02 00.0	
	baz=91,slow=334,SNR=3.0						
ZAA0	Zalesovo Array	2.01	276	⇓P	Pn	06 51 36.5	+0.7
	1.1nm,0.6s						
ZAA0				⇑S	Sb	06 52 04.3	+0.7
	12nm,1.0s						
ZALV	Zalesovo Beam	2.01	276	Pn	Pb	06 51 36.8	-1.3
	1.7nm,0.3s,baz=95,slow=13,SNR=36						
ZALV				Lg	Lg	06 52 04.4	
	4.4nm,0.3s,baz=96,slow=25,SNR=18						
	7.7nm,0.5s						
KURK	Kurchatov	6.64	246	⇓Lg	Lg	06 54 29.5	
	6.5nm,1.3s						
KURBB	Kurchatov Arra	6.74	246	Pn	Pn	06 52 41.9	+1.1
	0.1nm,0.3s,baz=62,slow=14,SNR=4.0						
KURBB				Sn	Sn	06 53 58.9	+0.7
	0.1nm,0.3s,baz=72,slow=24,SNR=4.4						
KURBB				Lg	Lg	06 54 35.1	
	baz=65,slow=33,SNR=7.9						
	0.9nm,0.3s						
KURBB	Kurchatov Arra	6.74	246	⇓Pn	Pn	06 52 41.9	+1.1
	1.1nm,0.3s						
KURBB				⇑Sn	Sn	06 53 56.7	-1.4
	4.5nm,0.7s						
KURBB				⇑Lg	Lg	06 54 32.2	
	12nm,1.6s						
MK31	Makanchi Array	7.96	211	⇓Pn	Pn	06 52 57.2	-0.4
	0.2nm,0.6s,baz=25,slow=13,SNR=6.6						
MK31				⇓Sn	Sn	06 54 26.6	-1.7
	1.1nm,0.9s,baz=259,slow=21,SNR=2.5						
MK31				⇑Lg	Lg	06 55 10.4	
	1.5nm,0.8s,baz=18,slow=36,SNR=4.3						
MKAR	Makanchi Array	7.96	211	Pn	Pn	06 52 58.9	+1.3
	baz=32,slow=15,SNR=2.4						
MKAR				Sn	Sn	06 54 29.5	+1.2
	0.1nm,0.3s,baz=30,slow=24,SNR=2.4						
MKAR				Lg	Lg	06 55 12.1	
	baz=26,slow=30,SNR=2.5						
	0.1nm,0.4s						

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*IDC **20** 06:51:08.4±2.0, 51°.96N×178°.37E, h109^{km}±17^{km}, mb3.4/14, mbtmp3.8/16, MS3.6/1, Error ellipse: s-maj=25.4km s-min=11.5km az=169.0*

*NEIC **20** 06:51:09.7±1.2, 51°.9N±0°.1×178°.3E±0°.1, h110^{km}±12^{km}, mb4.0/91, ML3.4(AEIC), Error ellipse: s-maj=22.3km s-min=2.4km az=204.0*

*AEIC **20** 06:51:10.2±1.6, 51°.9N±0°.1×178°.3E±0°.1, h116^{km}±7^{km}, Error ellipse: s-maj=19.5km s-min=8.3km az=195.0*

ISC 20 06:51:09.2±0.7**, 51°.93N**±0°.10×**178°.31E**±0°.05**, h113**^{km}**, n128,** σ**0^{s}.84**/125**, mb3.9**/43**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMKA	Amchitka	0.83	132		Pn	06 51 29.3	+0.4
AMKA				Sn	Sn	06 51 43.9	+0.1
SHEM	Shemya Is, Ala	2.71	289	P	Pn	06 51 51.4	+0.1
	71nm,0.3s,baz=148,slow=3.5,SNR=16						
SHEM				S	Sn	06 52 23.9	+0.2
	152nm,0.3s,baz=270,slow=20,SNR=29						
SMY	Shemya	2.71	289	Pn	Pn	06 51 51.5	+0.2
SMY				Sn	Sn	06 52 23.8	+0.1
KIWB	Kanaga Island	2.81	90	Pn	Pn	06 51 51.4	-1.3
ADK	Adak	3.10	89	Pn	Pn	06 51 56.4	-0.1
GSTR	Great Sitkin T	3.48	85	Pn	Pn	06 52 00.8	-0.8
NIKH	Nikolski High	7.91	77	Pn	Pn	06 53 02.3	+1.0
SPIA	Saint Paul Isl	8.47	47	Pn	Pn	06 53 09.2	+0.4
UNV	Unalaska Valle	9.38	72	Pn	Pn	06 53 21.4	+0.3
CHGN	Chignik	14.30	63	Pn	Pn	06 54 26.6	+0.4
TNA	Tin City	15.36	22	Pn	Pn	06 54 40.0	+0.5
P18K	Big Mountain,	16.60	53		P	06 54 56.1	+0.6
P18K				IAmb	IAmb	06 54 59.3	
	comp=Z,7.9nm,1.1s						
O18K	Koktuh Hills	16.74	51		P	06 54 58.1	+1.2
O18K				IAmb	IAmb	06 55 01.0	
	comp=Z,8.7nm,0.7s						
SVW2	Sparrevohn	16.97	47	P	P	06 55 02.5	+3.0
SVW2				IAmb	IAmb	06 55 07.2	
	comp=Z,4.8nm,0.8s						
O19K	Port Alsworth	17.26	51	P	Pn	06 55 04.5	+1.6
Q19K	Cape Douglas,	17.29	55	P	P	06 55 03.8	+0.8
N19K	Bonanza Creek	17.37	49	P	P	06 55 04.0	0.0
N19K				IAmb	IAmb	06 55 09.4	
	comp=Z,8.0nm,0.8s						
TTA	Tatalina	17.53	41	P	Pn	06 55 06.8	+0.6
P19K	Oil Pt	17.65	53	P	Pn	06 55 08.7	+1.0
KDAK	Kodiak Island	17.66	59	P	P	06 55 04.6	-2.4
	comp=Z,3.0nm,0.3s,baz=171,slow=2.1,SNR=38						
L19K	White Mountain	17.70	44	P	P	06 55 08.4	+0.9
ILSW	Iliamna Southw	17.78	52	P	Pn	06 55 09.9	+0.6
M19K	Big River Lodg	17.79	45	P	Pn	06 55 10.0	+0.7
RSO	Redoubt South	18.09	51	P	P	06 55 12.6	+0.7
M20K	Styx River	18.34	46	P	P	06 55 15.3	+0.7
M20K				IAmb	IAmb	06 55 22.5	
	comp=Z,7.5nm,0.8s						
HOM	Homer	18.44	53	P	Pn	06 55 17.1	+0.1
K20K	Telida	18.51	41	P	P	06 55 17.5	+1.2
SPU	Mount Spurr	18.61	49	P	P	06 55 18.2	+0.7
CNPM	China Poot	18.62	54	P	P	06 55 17.8	+0.2
BRLK	Bradley Lake	18.84	53	P	P	06 55 19.6	-0.3
SUA	Susitna One	19.30	48	P	P	06 55 26.0	+0.9
SUA				IAmb	IAmb	06 55 29.4	
	comp=Z,5.9nm,1.1s						
CAST	Castle Rocks	19.35	42	P	P	06 55 26.3	+0.8
O22K	Cooper Landing	19.55	52	P	P	06 55 27.6	0.0
SEW	Seward	19.61	53	P	P	06 55 27.5	-0.8
RC01	Rabbit Creek A	19.68	50	P	P	06 55 29.8	+0.8
RC01				IAmb	IAmb	06 55 32.8	
	comp=Z,9.6nm,1.1s						
IMAR	Indian Mountai	19.89	34	P	Pn	06 55 33.3	-0.6
H21K	Melozitna Rive	20.06	36	P	P	06 55 34.6	+1.5
I21K	Tanana	20.14	37	P	P	06 55 34.7	+0.8
I21K				IAmb	IAmb	06 55 39.1	
	comp=Z,5.2nm,1.1s						
GHO	Glory Hole Cre	20.22	48	P	P	06 55 35.2	+0.3
GHO				IAmb	IAmb	06 56 00.2	
	comp=Z,16nm,1.4s						
PWL	Port Wells	20.30	51	P	P	06 55 35.1	-0.6
KNK	Knik Glacier	20.35	49	P	P	06 55 35.6	-0.7
KNK				IAmb	IAmb	06 55 41.6	
	comp=Z,13nm,1.3s						
SML	Sawmill	20.50	48	P	P	06 55 36.6	-1.3
SML				IAmb	IAmb	06 55 40.1	
	comp=Z,12nm,1.1s						
MLY	Manley	20.54	38	P	P	06 55 38.6	+0.2
MCK	McKinley	20.78	43	P	P	06 55 42.1	+1.2
MCK				IAmb	IAmb	06 55 47.5	
	comp=Z,12nm,1.5s						
SCM	Sheep Creek Mo	20.97	48	P	P	06 55 42.9	-0.1
SCM				IAmb	IAmb	06 55 53.3	
	comp=Z,16nm,1.1s						
NEA2	Nenana	21.03	40	P	P	06 55 44.0	+0.5
NEA2				IAmb	IAmb	06 55 44.4	
	comp=Z,12nm,1.4s						
I23K	Minto, Yukon-K	21.12	39	P	P	06 55 45.0	+0.5
H23K	Yukon River	21.33	37	P	P	06 55 48.6	+1.8
H23K				IAmb	IAmb	06 55 50.0	
	comp=Z,6.9nm,1.2s						
WRH	Wood River Hil	21.38	41	P	P	06 55 48.0	+0.7
MDM	Murphy Dome	21.50	40	P	P	06 55 48.2	-0.3
MDM				IAmb	IAmb	06 55 50.6	
	comp=Z,3.7nm,0.8s						
CCB	Clear Creek Bu	21.55	41	P	P	06 55 48.7	-0.4
HDA	Harding Lake	21.83	42	P	P	06 55 52.3	+0.3
H24K	Noodor Dome	21.96	38	P	P	06 55 53.7	+0.2
IL31		21.97	41	P	P	06 55 53.6	+0.2
ILAR	Eielson Array	21.97	41	P	P	06 55 52.4	-1.1
	comp=Z,0.3nm,0.5s,baz=249,slow=7.6,SNR=11						
	comp=Z,0.3nm,0.5s						
ILAR	Eielson Array	21.97	41	P	P	06 55 53.2	-0.3
PAX	Paxson	22.07	46	P	P	06 55 55.0	+0.4
PAX				IAmb	IAmb	06 55 59.4	
	comp=Z,11nm,1.5s						
N25K	Chitina, Valde	22.21	50	P	P	06 55 55.8	-0.3
RIDG	Independent Ri	22.52	44	P	P	06 55 58.5	-0.8
RIDG				IAmb	IAmb	06 56 00.0	
	comp=Z,8.1nm,1.3s						
GLB	Gilahina Butte	22.56	50	P	P	06 55 58.1	-1.6
GLB				IAmb	IAmb	06 56 02.3	
	comp=Z,5.4nm,0.9s						
VRDI	Verde Repeater	22.70	51	P	P	06 56 01.7	+0.5
PRP	Porcupine Dome	22.76	39	P	P	06 56 01.3	-0.4
DOT	Dot Lake	22.84	45	P	P	06 56 00.9	-1.5
MENT	Mentasta	22.84	46	P	P	06 56 03.4	+0.9
MCARA	McCarthy VSAT	22.92	51	P	P	06 56 04.8	+1.6
SCRK	Sand Creek	22.95	44	P	P	06 56 02.3	-1.3
TGL	Tana Glacier	22.95	52	P	P	06 56 03.9	+0.4
L26K	Log Cabin Wild	23.03	46	P	P	06 56 04.4	+0.3
M26K	Nabesna, AK	23.08	48	P	P	06 56 03.9	-0.8
M26K				IAmb	IAmb	06 56 10.4	
	comp=Z,8.2nm,1.2s						
BARN	Barnard Glacie	23.55	52	P	P	06 56 10.5	+1.3
BARN				IAmb	IAmb	06 56 10.5	
	comp=Z,12nm,1.1s						
M27K	Edge Creek, AK	23.59	48	P	P	06 56 10.7	+1.2
M27K				IAmb	IAmb	06 56 14.9	
	comp=Z,5.2nm,1.1s						
I26K	Coal Creek Min	23.64	41	P	P	06 56 10.4	+0.6
I26K				IAmb	IAmb	06 56 14.1	
	comp=Z,7.1nm,1.4s						
CTGM	Chitina Glacie	23.70	52	P	P	06 56 11.1	+0.6
L27K	Beaver Creek,	23.71	47	P	P	06 56 11.1	+0.6
L27K				IAmb	IAmb	06 56 12.3	
	comp=Z,4.3nm,0.7s						
BCAR	Beaver Creek A	23.73	47	P	P	06 56 11.1	+0.4
K27K	Chicken	23.78	44	P	P	06 56 11.2	+0.2
K27K				IAmb	IAmb	06 56 13.7	
	comp=Z,4.1nm,1.0s						
BMAR	Burnt Mountain	23.79	35	P	P	06 56 11.7	+0.5
LOGN	Logan Glacier	23.85	52	P	P	06 56 12.4	+0.6
PCA	Pinnacle	24.19	54	P	P	06 56 15.5	+0.7
EGAK	Eagle	24.33	43	P	P	06 56 15.2	-0.8
EGAK				IAmb	IAmb	06 56 16.8	
	comp=Z,6.1nm,0.8s						
DAWY	Dawson	24.95	45	P	P	06 56 22.0	+0.3
DAWY				IAmb	IAmb	06 56 24.3	
	comp=Z,4.0nm,0.8s						
INK	Inuvik	28.05	36	P	P	06 56 49.3	0.0
	comp=Z,0.8nm,0.5s,baz=266,slow=6.8,SNR=9.3						
	comp=Z,0.8nm,0.5s						
INK	Inuvik	28.05	36	P	P	06 56 49.8	+0.4
INK				IAmb	IAmb	06 56 52.4	
	comp=Z,3.9nm,1.3s						
KLR	Kul'dur	29.30	283	P	P	06 57 00.7	0.0
	comp=Z,0.8nm,0.4s,baz=88,slow=11,SNR=4.0						
	comp=Z,0.8nm,0.4s						
A36M	Sachs Harbour	31.48	30	P	P	06 57 20.8	+1.2
C36M	Paulatuk	31.59	35	P	P	06 57 21.6	+1.1
C36M				IAmb	IAmb	06 57 49.5	
	comp=Z,1.1nm,0.6s						
H11N2	WAKE ISLAND Hy	33.36	200	T	T	07 33 01.7	
	baz=11,slow=76,SNR=9.5						
H11N3	WAKE ISLAND Hy	33.37	200	T	T	07 33 04.5	
	baz=11,slow=76,SNR=9.1						
H11N1	WAKE ISLAND Hy	33.38	200	T	T	07 33 05.7	
	baz=11,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	34.59	200	T	T	07 34 37.1	
	baz=10						
H11S3	WAKE ISLAND Hy	34.60	200	T	T	07 34 30.9	
	baz=10						
H11S2	WAKE ISLAND Hy	34.60	200	T	T	07 34 27.4	
	baz=10						
YKA	Yellowknife Ar	36.15	46	P	P	06 57 59.7	-0.4
	comp=Z,0.7nm,0.6s,baz=281,slow=8.2,SNR=12						
	comp=Z,0.7nm,0.6s						
KMPM	Mount Pierce	40.48	83	P	P	06 58 37.4	+0.8
YBH	Yreka Blue Hor	40.57	80	P	P	06 58 38.7	+1.3
YBH				IAmb	IAmb	06 58 59.3	
	comp=Z,4.5nm,1.3s						
J05D	Fort Rock, OR	40.59	78	P	P	06 58 38.9	+1.3
WALA	Waterton Lakes	41.80	66	P	P	06 58 47.7	+0.3
WALA				IAmb	IAmb	06 59 13.3	
	comp=Z,6.2nm,1.4s						
MOD	Modoc Plateau	41.94	79	P	P	06 58 49.5	+0.8
MOD				IAmb	IAmb	06 58 50.4	
	comp=Z,1.8nm,0.7s						
HOPS	Hopland Field	41.98	84	P	P	06 58 49.9	+1.1
WVOR	Wild Horse Val	42.64	77	P	P	06 58 54.3	0.0
PAHR	Pah Rah Range	43.81	81	P	P	06 59 04.0	+0.2
PAHR				IAmb	IAmb	06 59 27.7	
	comp=Z,4.5nm,1.5s						
YERR	Yerington	44.34	81	P	P	06 59 08.5	+0.4
YERR				IAmb	IAmb	06 59 10.6	

	comp=Z,2.2nm,1.0s						
MCMT	McKenzie Canyo	44.70	71	P	P	06 59 10.1	-0.9
SONM	Songino Array	44.78	295	P	P	06 59 11.8	+0.3
	comp=Z,0.4nm,0.5s,baz=48,slow=8.6,SNR=2.3						
	comp=Z,0.4nm,0.5s						
KVN	Kaiserville	44.99	81	P	P	06 59 13.3	+0.1
NVAR	Mina Array Bea	45.26	81	P	P	06 59 15.3	-0.1
	comp=Z,0.8nm,0.5s,baz=295,slow=7.7,SNR=9.5						
	comp=Z,0.8nm,0.5s						
NVAR	Mina Array Bea	45.26	81	P	P	06 59 16.1	+0.7
NV11	Mina Array Sit	45.35	81	P	P	06 59 16.5	+0.5
NV11				IAmb	IAmb	06 59 28.9	
	comp=Z,2.7nm,1.4s						
ELK	Elko	45.69	77	P	P	06 59 18.8	0.0
ELK				IAmb	IAmb	06 59 19.2	
	comp=Z,1.3nm,0.8s						
SPR3	Spring Creek 3	47.32	78	P	P	06 59 32.0	+0.4
TPNV	Topopah Spring	47.45	81	P	P	06 59 32.9	+0.4
TPNV				IAmb	IAmb	06 59 33.7	
	comp=Z,2.8nm,0.9s						
DUG	Dugway, Tooele	47.49	76	P	P	06 59 32.7	0.0
DUG				IAmb	IAmb	06 59 33.6	
	comp=Z,2.1nm,1.1s						
BW06	Boulder Array	47.84	71	P	P	06 59 34.7	-0.8
BW06				IAmb	IAmb	06 59 52.3	
	comp=Z,3.0nm,1.4s						
PD31	Pinedale Array	47.84	71	P	P	06 59 34.6	-0.9
PD31				IAmb	IAmb	06 59 52.3	
	comp=Z,2.6nm,1.4s						
PDAR	Pinedale Array	47.84	71	P	P	06 59 33.7	-1.9
	comp=Z,0.9nm,0.7s,baz=315,slow=3.4,SNR=9.8						
	comp=Z,0.9nm,0.7s						
PDAR	Pinedale Array	47.84	71	P	P	06 59 34.5	-0.9
GSC	Goldstone, Bar	48.19	84	P	P	06 59 38.5	+0.4
GSC				IAmb	IAmb	06 59 38.5	
	comp=Z,2.6nm,0.6s						
KNB	Kanab	49.50	79	P	P	06 59 48.5	+0.3
KNB				IAmb	IAmb	06 59 48.5	
	comp=Z,1.0nm,0.6s						
SRU	San Rafael Swe	49.54	75	P	P	06 59 48.8	+0.3
SRU				IAmb	IAmb	07 00 15.0	
	comp=Z,2.4nm,1.0s						
U15A	North Rim	50.21	79	P	P	06 59 54.0	+0.3
U15A				IAmb	IAmb	06 59 54.0	
	comp=Z,1.9nm,0.6s						
PV13	Radium Mtn., P	51.18	75	P	P	07 00 00.3	-0.5
KURBB	Kurchatov Arra	57.43	312	P	P	07 00 44.9	-0.8
	comp=Z,0.4nm,0.5s,baz=44,slow=6.5,SNR=5.0						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	58.27	307	P	P	07 00 50.6	-1.0
	comp=Z,0.3nm,0.5s,baz=40,slow=6.8,SNR=2.8						
MKAR				LR	LR	07 26 04.3	
	comp=Z,53nm,20.0s,baz=211,slow=36						
	comp=Z,0.3nm,0.5s						
BVAR	Borovoye Array	59.29	318	P	P	07 00 58.3	-0.3
	comp=Z,0.8nm,0.5s,baz=55,slow=6.9,SNR=4.6						
	comp=Z,0.8nm,0.5s						
TXAR	Lajitas Array	60.33	79	P	P	07 01 05.5	-0.6
	comp=Z,0.6nm,0.5s,baz=305,slow=5.5,SNR=17						
	comp=Z,0.6nm,0.5s						
SCHQ	Schefferville	60.66	37	P	P	07 01 07.1	-0.8
	comp=Z,1.0nm,0.6s,baz=315,slow=20,SNR=1.8						
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	81.20	221	P	P	07 03 11.7	-0.5
	comp=Z,0.7nm,0.5s,baz=31,slow=6.2,SNR=9.3						
	comp=Z,0.7nm,0.5s						
ASAR	Alice Springs	84.72	220	P	P	07 03 30.9	+0.6
	comp=Z,0.3nm,0.3s,baz=17,slow=5.5,SNR=4.3						
	comp=Z,0.3nm,0.3s						

*NNC **20** 06:55:21.7±2.3, 54°.43N×86°.56E, h0^{km}, mb2.8, mpv2.7, Error ellipse: s-maj=46.2km s-min=12.8km az=161.0, Suspected Mining explosion.*

*IDC **20** 06:55:24.4±2.5, 54°.13N×86°.50E, h0^{km}, mbtmp3.3/2, ML3.1/2, Error ellipse: s-maj=19.9km s-min=11.7km az=61.0*

ISC 20 06:55:28.9±3.6, **54°.3N**±0°.2×**83°.79E**±0°.08, **h0^{km}, n7, σ1^{s}.39**/10, **6D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.71	121	I	I	07 01 06.3	
	baz=80,slow=336,SNR=38						
ZAA0	Zalesovo Array	0.71	121	⇓P	Pb	06 55 43.0	-1.1
	0.3nm,0.2s						
ZAA0				⇓S	Sn	06 55 58.9	+1.2
	0.7nm,0.3s						
ZALV	Zalesovo Beam	0.71	121	Pg	Pg	06 55 42.8	+0.4
	3.2nm,0.3s,baz=80,slow=17,SNR=35						
ZALV				Lg	Lg	06 55 58.3	
	3.5nm,0.3s,baz=76,slow=31,SNR=9.1						
KURBB	Kurchatov Arra	4.90	223	Pn	Pb	06 56 55.2	-0.4
	0.2nm,0.3s,baz=54,slow=13,SNR=12						
KURBB				Sn	Sg	06 58 03.4	-2.8
	0.1nm,0.3s,baz=54,slow=25,SNR=3.1						
	0.9nm,0.3s						
KURBB	Kurchatov Arra	4.90	223	⇓Pn	Pb	06 56 55.9	+0.4
	0.7nm,0.2s						
KURBB				⇓Sn	Sg	06 58 07.7	+1.4
	7.4nm,0.6s						
MK31	Makanchi Array	7.59	188	⇓Pn	Pn	06 57 21.0	+0.3
	0.2nm,0.3s,baz=25,slow=13,SNR=49						
MK31				⇓Lg	Lg	06 59 35.7	
	1.1nm,0.6s,baz=7.1,slow=27,SNR=3.8						
MKAR	Makanchi Array	7.59	188	Pn	Pn	06 57 20.6	-0.2
	0.6nm,0.3s,baz=23,slow=13,SNR=31						
MKAR				Sn	Sn	06 58 48.0	+0.5
	0.1nm,0.3s,baz=25,slow=29,SNR=2.9						
MKAR				Lg	Lg	06 59 30.0	
	0.1nm,0.3s,baz=16,slow=28,SNR=5.1						
	0.8nm,0.3s						

*IDC **20** 06:57:17.4±0.8, 9°.69N×40°.55W, h0^{km}, mb3.9/10, mbtmp4.0/11, ML4.2/1, MS3.6/31, Error ellipse: s-maj=24.4km s-min=18.3km az=146.0*

*NEIC **20** 06:57:20.6±1.9, 9°.54N±0°.05×40°.6W±0°.1, h10^{km}±1^{km}, mb4.6/24, Error ellipse: s-maj=17.9km s-min=6.5km az=105.0*

ISC 20 06:57:19.5±0.5, **9°.57N**±0°.09×**40°.54W**±0°.08, **h10^{km}, n88, σ1^{s}.02**/60, **mb4.4**/20, **MS3.6**/30, **Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDP	Montagnes des	12.79	251	Pn	Pn	07 00 20.6	-1.0
	1.5nm,0.3s,baz=64,slow=10,SNR=28						
MDP				Sn	Sn	07 02 27.3	-17
	0.6nm,0.3s,baz=140,slow=18,SNR=7.4						
MDP				LR	LR	07 04 39.4	
	comp=Z,140nm,21.4s,baz=54,slow=34						
	7.8nm,0.5s						
MCPB	Macapa, AP	15.12	230	eP	Pn	07 00 51.5	-1.9
MALB	Monte Alegre	17.76	231	eP	P	07 01 28.1	+0.2
SMTB	Santa Maria do	19.61	201	eP	Pn	07 01 50.4	+0.9
ITTB	Itaituba	20.51	228	eP	P	07 01 58.2	+0.1
ILAM	Ilet Lapin Mar	20.53	287	P	P	07 01 58.5	+0.3
BOAV	Boa Vista	21.10	252	P	P	07 02 04.5	0.0
BOAV				IAmb	IAmb	07 02 07.0	
	comp=Z,27nm,1.1s						
BOAV	Boa Vista	21.10	252	eP	P	07 02 04.6	+0.2
NPGB	Novo Progresso	22.14	222	eP	P	07 02 14.2	-1.4
SNDB	Serra Nova Dou	23.92	207	eP	P	07 02 34.3	+0.5
BBTS	Babate	24.00	75	LR	LR	07 09 45.1	
	comp=Z,226nm,20.7s,baz=244,slow=31						
MTP	Monte Pirata	25.70	292	P	P	07 02 50.2	+0.1
MTP				IAmb	IAmb	07 02 58.5	
	comp=Z,26nm,1.3s						
HUMP	Col San Antoni	25.98	292	P	P	07 02 51.7	-1.0
HUMP				IAmb	IAmb	07 03 03.8	
	comp=Z,28nm,1.2s						
BDFB	Brasilia	26.12	197	P	P	07 02 53.5	-0.4
	comp=Z,2.2nm,0.7s,baz=36,slow=8.3,SNR=2.9						
	comp=Z,2.2nm,0.7s						
BDFB	Brasilia	26.12	197	P	P	07 02 54.9	+0.9
SJG	San Juan	26.25	292	LR	LR	07 11 16.3	
	comp=Z,107nm,21.8s,baz=97,slow=32						
PDRB	Porto dos Gac	26.49	218	eP	P	07 02 57.1	-0.2
CELP	Cerrillos	26.63	291	P	P	07 02 57.9	-0.6
CELP				IAmb	IAmb	07 03 01.6	
	comp=Z,15nm,0.9s						
OBIP	Obispado Ponce	26.65	291	P	P	07 02 58.1	-0.6
OBIP				IAmb	IAmb	07 03 03.4	
	comp=Z,18nm,1.1s						
UUPR	Utuado, UPR, P	26.81	292	P	P	07 03 00.5	+0.3
TEFE	Tefe	27.30	243	eP	P	07 03 05.0	+0.4
ARAG	Araguaiana, MT	27.48	204	eP	P	07 03 06.0	-0.2
SGCB	S£o Gabriel d	28.07	251	eP	P	07 03 12.4	+0.9
SAML	Samuel	29.09	231	P	P	07 03 21.2	+0.6
SAML				IAmb	IAmb	07 03 23.5	
	comp=Z,11nm,1.2s						
SAML	Samuel	29.09	231	eP	P	07 03 21.8	+1.2
MACI	Morro de la Ar	29.26	47	P	P	07 03 22.8	+0.6
SALV	Santo Antonio	29.42	211	eP	P	07 03 23.9	+0.5
SDV	Santo Domingo	29.71	271	LR	LR	07 15 01.6	
	comp=Z,68nm,21.9s,baz=80,slow=36						
H10N3	ASCENSION HYDR	31.17	123	T	T	07 36 17.8	
	baz=303,slow=75,SNR=38						
H10N2	ASCENSION HYDR	31.18	123	T	T	07 36 18.2	
	baz=303,slow=75,SNR=52						
SDDR	Presa de Saban	31.18	291	P	P	07 03 39.0	-0.2
H10N1	ASCENSION HYDR	31.19	123	T	T	07 36 20.1	
	baz=303,slow=75,SNR=44						
ASCN	Ascension	31.34	123	P	P	07 03 39.5	-1.0
RVDE	Rio Verde (Bra	31.76	207	eP	P	07 03 45.1	+0.9
BBSR	BB Station	31.84	319	P	P	07 03 46.3	+1.6
ETMB	Extrema	31.99	234	P	P	07 03 46.1	-0.2
ETMB				IAmb	IAmb	07 03 49.1	
	comp=Z,5.0nm,1.0s						
ETMB	Extrema	31.99	234	eP	P	07 03 45.6	-0.6
SIV	San Ignacio	32.53	219	P	P	07 03 51.1	+0.2
	comp=Z,2.5nm,1.0s,baz=41,slow=7.4,SNR=6.0						
SIV				LR	LR	07 16 43.5	
	comp=Z,105nm,18.8s,baz=102,slow=36						
	comp=Z,2.5nm,1.0s						
VAO	Valinhos	32.97	191	eP	P	07 03 59.4	+4.6
BBSD	Serra de San D	33.17	217	eP	P	07 03 57.1	+0.6
AQDB	Aquidauana	33.37	206	eP	P	07 03 58.2	0.0
BDQN	Bodoquena, MS	33.82	208	eP	P	07 04 03.0	+0.9
ROSC	El Rosal	33.83	264	LR	LR	07 18 22.7	
	comp=Z,171nm,18.5s,baz=96,slow=37						
MURT	Porto Murtinho	35.27	208	eP	P	07 04 15.6	+1.0
DBIC	Dimbokro	35.43	92	P	P	07 04 15.7	-0.5
	comp=Z,10nm,0.8s,baz=291,slow=8.8,SNR=11						
DBIC				LR	LR	07 16 21.5	
	comp=Z,99nm,18.4s,baz=275,slow=32						
	comp=Z,10nm,0.8s						
DBIC	Dimbokro	35.43	92	P	P	07 04 15.5	-0.7
DBIC				IAmb	IAmb	07 04 16.3	
	comp=Z,10nm,0.8s						
CZSB	Cruzeiro do Su	36.35	243	P	P	07 04 24.6	+0.5
CZSB	Cruzeiro do Su	36.35	243	eP	P	07 04 23.4	-0.7
LPAZ	La Paz	37.49	227	P	P	07 04 34.8	+0.3
	comp=Z,2.3nm,0.9s,baz=31,slow=5.9,SNR=6.9						
	comp=Z,2.3nm,0.9s						
LPAZ	La Paz	37.49	227	P	P	07 04 33.8	-0.6
LPAZ	La Paz	37.49	227	eP	P	07 04 34.9	+0.5
OTAV	Otavalo	38.85	258	P	P	07 04 44.8	-1.0
OTAV	Otavalo	38.85	258	eP	P	07 04 47.0	+1.2
CPUP	Villa Florida	39.24	204	P	P	07 04 48.8	+0.5
	comp=Z,0.7nm,0.5s,baz=319,slow=6.4,SNR=3.7						
CPUP				LR	LR	07 20 56.6	
	comp=Z,100nm,18.1s,baz=56,slow=36						
	comp=Z,0.7nm,0.5s						
MDT	Midelt	40.40	50	LR	LR	07 19 57.7	
	comp=Z,59nm,18.3s,baz=222,slow=34						
PB08	IPOC Station P	40.80	224	P	P	07 05 00.9	-0.9
PB08				IAmb	IAmb	07 05 34.5	
	comp=Z,12nm,1.3s						
ATAH	Atahualpa	41.20	248	LR	LR	07 21 05.9	
	comp=Z,84nm,21.9s,baz=77,slow=35						
TOA0	Torodi Ar. Sit	41.53	81	P	P	07 05 08.0	+0.4
TOA0				IAmb	IAmb	07 05 08.2	
	comp=Z,8.3nm,0.9s						
TORD	Torodi Ar. Bea	41.53	81	P	P	07 05 06.9	-0.6
	comp=Z,5.8nm,0.8s,baz=274,slow=8.0,SNR=24						
TORD				LR	LR	07 20 44.1	
	comp=Z,120nm,19.1s,baz=274,slow=34						
	comp=Z,5.8nm,0.8s						
TORD	Torodi Ar. Bea	41.53	81	P	P	07 05 07.8	+0.3
MCRA	Macar, Loja	41.64	252	P	P	07 05 08.8	+0.3
NNA	Nana	41.95	240	LR	LR	07 21 49.3	
	comp=Z,82nm,21.6s,baz=28,slow=35						
LVC	Limon Verde	42.37	221	LR	LR	07 22 31.1	
	comp=Z,43nm,19.1s,baz=58,slow=36						
JTS	Las Juntas de	43.73	275	LR	LR	07 25 11.2	
	comp=Z,33nm,18.3s,baz=93,slow=38						
ESDC	Sonseca Array	44.25	41	LR	LR	07 22 16.8	
	comp=Z,54nm,18.2s,baz=214,slow=34						
VAE	Valguarnera	56.59	51	LR	LR	07 30 50.4	
	comp=Z,60nm,19.0s,baz=326,slow=36						
ULM	Lac du Bonnet	60.87	323	LR	LR	07 29 43.7	
	comp=Z,44nm,21.2s,baz=165,slow=32						
VRAC	Vranov	61.63	39	LR	LR	07 31 46.8	
	comp=Z,28nm,20.1s,baz=11,slow=34						
TXAR	Lajitas Array	61.98	298	P	P	07 07 40.1	-0.2
	comp=Z,0.3nm,0.8s,baz=101,slow=9.3,SNR=2.7						
TXAR				LR	LR	07 32 53.3	
	comp=Z,39nm,21.4s,baz=174,slow=34						
	comp=Z,0.3nm,0.8s						
NOA	NORSAR Array B	63.81	25	LR	LR	07 31 57.1	
	comp=Z,18nm,19.4s,baz=270,slow=33						
TSUM	Tsumeb	64.01	117	LR	LR	07 30 04.8	
	comp=Z,60nm,19.3s,baz=330,slow=31						
IDI	Anoyia	64.50	56	LR	LR	07 35 05.4	
	comp=Z,26nm,21.6s,baz=109,slow=35						
ANMO	Albuquerque	64.86	304	LR	LR	07 33 08.2	
	comp=Z,54nm,20.8s,baz=190,slow=33						
FFC	Flin Flon	65.92	326	P	P	07 08 05.3	-0.3
FFC				IAmb	IAmb	07 08 19.4	
	comp=Z,6.4nm,1.2s						
PDAR	Pinedale Array	68.17	312	LR	LR	07 34 18.8	
	comp=Z,60nm,21.9s,baz=124,slow=33						
AKASG	Malin Array Be	69.86	39	LR	LR	07 37 30.3	
	comp=Z,28nm,18.7s,baz=178,slow=35						
ELK	Elko	72.23	310	LR	LR	07 38 44.0	
	comp=Z,35nm,20.0s,baz=159,slow=34						
EIL	Elat	72.76	62	LR	LR	07 42 05.4	
	comp=Z,31nm,19.2s,baz=68,slow=37						
LBTB	Lobatse	72.99	120	LR	LR	07 34 49.8	
	comp=Z,72nm,18.6s,baz=188,slow=31						
BOSA	Boshof	73.93	123	LR	LR	07 34 35.8	
	comp=Z,77nm,20.0s,baz=202,slow=30						
YKA	Yellowknife Ar	74.22	332	P	P	07 08 55.2	-1.2
	comp=Z,0.4nm,0.8s,baz=104,slow=6.2,SNR=5.1						
	comp=Z,0.4nm,0.8s						
A36M	Sachs Harbour	79.33	342	P	P	07 09 25.5	+0.4
BELG	Belogornoye	81.38	38	LR	LR	07 45 09.5	
	comp=Z,29nm,18.3s,baz=179,slow=35						
INK	Inuvik	82.29	338	P	P	07 09 39.3	-1.7
	comp=Z,0.9nm,0.9s,baz=64,slow=3.4,SNR=4.0						
	comp=Z,0.9nm,0.9s						
BMAR	Burnt Mountain	86.56	338	P	P	07 10 04.5	+1.7
BCAR	Beaver Creek A	86.59	333	P	P	07 10 04.3	+1.3
ILAR	Eielson Array	88.27	336	P	P	07 10 10.0	-1.0
	comp=Z,0.2nm,0.8s,baz=46,slow=5.2,SNR=2.8						
	comp=Z,0.2nm,0.8s						
WSAR	Wadi Sarin	94.58	66	LR	LR	07 55 25.5	
	comp=Z,45nm,19.1s,baz=182,slow=37						

*IDC **20** 07:00:17.6±0.8, 39°.50N×26°.03E, h0^{km}, mb3.6/10, mbtmp3.7/15, ML3.7/5, MS3.0/14, Error ellipse: s-maj=15.4km s-min=11.3km az=88.0*

*ISK **20** 07:00:17.9, 39°.55N×26°.11E, h4^{km}, ML4.2/64*

*DDA **20** 07:00:18.4±0.0, 39°.55N×26°.18E, h5^{km}±1^{km}, MW4.3*

*THE **20** 07:00:18.6, 39°.56N×26°.14E, h4^{km}, ML3.6/12, Error ellipse: s-maj=0.4km s-min=0.2km az=94.0*

*BEO **20** 07:00:18.8±0.9, 39°.56N×26°.36E, h3^{km}±3^{km}, ML3.7/12*

*SOF **20** 07:00:18.1, 39°.54N×26°.15E, h10^{km}, MD3.6*

*ATH **20** 07:00:19.3, 39°.53N×26°.12E, h13^{km}±1^{km}, ML3.7/8, Error ellipse: s-maj=1.5km s-min=0.7km az=247.0*

ISC 20 07:00:18.6±0.8, **39°.54N**±0°.01×**26°.15E**±0°.02, **h9^{km}**±5^{km}, **n224, σ1^{s}.13**/287, **mb3.6**/10, **MS3.0**/5, **18C-7D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	Canakkale, Ayv	0.04	189	P	Pg	07 00 20.0	-0.4
KOCA				S	Sg	07 00 21.4	-0.2
GPNR	Gulpinar-Canak	0.09	187	Pg	Pg	07 00 20.6	-0.3
BOZC	Bozcaada	0.31	346	Pg	Pg	07 00 24.6	-0.2
BOZC				Sg	Sg	07 00 29.5	+0.6
BOZC	Bozcaada	0.31	346	P	Pg	07 00 24.9	+0.1
BOZC				S	Sg	07 00 29.2	+0.3
PRK	Paraskevi	0.31	162	P	Pg	07 00 25.1	+0.3
PRK				S	Sg	07 00 29.6	+0.7
	62µm,0.7s						
PRK	Paraskevi	0.31	162	P	Pg	07 00 25.1	+0.3
PRK				S	Sg	07 00 29.7	+0.7
PRK				AML	AML	07 00 30.9	
PRK				AML	AML	07 00 31.2	
EZN	Ezine	0.32	26	P	Pg	07 00 24.6	-0.3
EZN				S	Sg	07 00 29.1	0.0
EZN	Ezine	0.32	26	Pg	Pg	07 00 24.7	-0.2
BAYC	CANAKKALE_Bayr	0.37	57	P	Pg	07 00 25.5	-0.4
BAYC				S	Sg	07 00 30.6	-0.1
SIGR	SIGRI	0.40	214	P	Pg	07 00 26.6	+0.2
SIGR				S	Sg	07 00 32.7	+1.0
	16µm,0.6s						
SIGR	SIGRI	0.40	214	Pg	Pg	07 00 26.1	-0.3
SIGR				Sg	Sg	07 00 32.2	+0.5
SIGR	SIGRI	0.40	214	P	Pg	07 00 26.7	+0.2
SIGR				S	Sg	07 00 32.6	+0.8
SIGR				AML	AML	07 00 33.6	
	comp=E,19848µm,0.6s						
SIGR				AML	AML	07 00 33.9	
	comp=N,43201µm,0.7s						
AYVA	Ayvalik	0.48	119	P	Pg	07 00 27.9	0.0
AYVA				S	Sg	07 00 35.0	+0.7
ECEA	Canakkale, Ece	0.50	2	SPECP		07 00 28.0	
ECEA				P	Pg	07 00 28.6	+0.2
ECEA				S	Sb	07 00 36.0	-1.1
COMU	Canakkale	0.61	24	Pg	Pg	07 00 30.4	0.0
COMU				Sg	Sb	07 00 39.6	-0.7
GOKA	anakkale-Gk	0.67	344	SPECP		07 00 31.0	
GOKA				P	Pg	07 00 31.5	-0.1
GOKA				S	Sb	07 00 41.2	-0.9
GADA	Gvkgeada	0.68	344	Pg	Pg	07 00 31.4	-0.3
GADA				Sg	Sb	07 00 41.2	-0.9
BUHA	Balikesir, Bur	0.72	93	P	Pg	07 00 32.2	-0.4
BUHA				S	Sg	07 00 41.8	-0.1
DKL	Dikili	0.75	128	Pg	Pb	07 00 33.6	-0.3
DKL				Sg	Sb	07 00 44.9	+0.6
LIA	Limnos Island	0.82	296	P	Pg	07 00 34.1	-0.4
LIA				S	Sb	07 00 45.8	-0.5
	comp=N,10µm,0.6s						
LIA	Limnos Island	0.82	296	P	Pb	07 00 35.0	-0.1
LIA				S	Sg	07 00 45.5	+0.3
LIA				AML	AML	07 00 52.4	
	comp=N,25972µm,0.5s						
LIA				AML	AML	07 00 54.3	
	comp=E,13653µm,0.5s						
CANM	Can-anakkale	0.84	56	Pg	Pb	07 00 35.2	-0.2
GELI	Tayfur-Gelibol	0.89	16	Pg	Pg	07 00 35.4	-0.4
GELI				Sg	Sb	07 00 48.4	+0.1
KARB	zmir-Karabur	0.90	167	P	Pg	07 00 35.9	0.0
KARB				S	Sb	07 00 48.4	-0.2
ZEDA	zmir-Bergama	0.92	128	P	Pg	07 00 36.1	-0.3
ZEDA				S	Sb	07 00 49.0	-0.2
LPK	Lapseki	0.95	29	Pg	Pg	07 00 36.4	-0.6
SMTH	Samothraki Isl	1.04	333	P	Pg	07 00 37.8	-0.8
SMTH				S	Sb	07 00 52.8	+0.1
	comp=E,2µm,0.6s						
SMTH	Samothraki Isl	1.04	333	P	Pg	07 00 38.4	-0.2
SMTH				S	Sb	07 00 52.4	-0.2
SMTH				AML	AML	07 00 57.2	
	comp=N,5599µm,0.6s						
SMTH				AML	AML	07 00 58.7	
	comp=E,3556µm,0.6s						
CAVK	Edirne/Enez-Ca	1.15	1	SPECP		07 00 39.0	
CAVK				P	Pg	07 00 40.0	-0.7
CAVK				S	Sb	07 00 55.8	+0.1
BALY	Balya	1.15	80	SPECP		07 00 40.0	
BALY				P	Pg	07 00 40.1	-0.7
BALY				S	Sg	07 00 55.3	-0.5
CHOS	Chios island	1.16	184	P	Pg	07 00 40.7	-0.1
CHOS	Chios island	1.16	184	P	Pg	07 00 40.3	-0.6
CHOS				S	Sg	07 00 55.5	-0.3
ERIK	Erikli-Kesan	1.16	14	Pn	Pg	07 00 39.9	-1.0
ENEZ	Enez	1.19	0	P	Pg	07 00 40.4	-1.1
ENEZ				S	Sb	07 00 57.3	+0.3
ENEZ	Enez	1.19	0	Pn	Pg	07 00 40.9	-0.6
KRBG	Karabiga-Canak	1.23	46	Pn	Pg	07 00 41.6	-0.6
STEP	BALIKESIR_Sava	1.23	97	P	Pg	07 00 41.8	-0.4
STEP				S	Sb	07 00 58.4	+0.3
URLA	Izmir	1.23	163	Pn	Pg	07 00 41.6	-0.6
URLA	Izmir	1.23	163	P	Pg	07 00 41.7	-0.6
URLA				S	Sb	07 00 58.8	+0.7
KNL	Balıkesir	1.29	55	P	Pg	07 00 41.7	-1.6
KNL				SPECP		07 00 42.0	
KNL				S	Sb	07 01 00.1	+0.4
GONE	Gonen-Balikesi	1.29	67	Pn	Pg	07 00 42.5	-0.9
ZEYE	Izmir, Urla-Ze	1.33	168	P	Pn	07 00 43.0	-0.4
ZEYE				S	Sg	07 01 00.1	-1.3
BALB	Balikesir	1.34	85	Pn	Pn	07 00 43.4	-0.2
BLCB	Balcova	1.35	149	P	Pn	07 00 43.2	-0.5
BLCB				S	Sn	07 01 02.5	+0.8
BLCB	Balcova	1.35	149	Pn	Pb	07 00 44.2	+0.1
ALN	Alexandroupoli	1.35	357	P	Pn	07 00 43.0	-0.8
ALN				S	Sg	07 01 01.6	-0.6
	comp=E,4µm,0.7s						
ALN	Alexandroupoli	1.35	357	Pn	Pn	07 00 43.9	+0.1
ALN	Alexandroupoli	1.35	357	P	Pn	07 00 43.6	-0.1
ALN				AML	AML	07 01 03.6	
	comp=E,8726µm,0.5s						
ALN				AML	AML	07 01 03.9	
	comp=N,8628µm,0.9s						
BKES	Balkesir-Mer	1.39	82	P	Pn	07 00 43.8	-0.4
BKES				S	Sb	07 01 02.3	-0.4
RKY	Sarkoy-Tekirda	1.39	34	Pn	Pn	07 00 44.2	-0.1
AKS	Akhisar	1.45	117	Pn	Pn	07 00 45.1	0.0
AKHS	Akhisar	1.46	117	P	Pn	07 00 45.1	-0.1
AKHS				S	Sb	07 01 02.9	-1.7
THAS	Thassos island	1.53	315	P	Pn	07 00 45.4	-0.7
THAS				S	Sn	07 01 06.2	+0.1
	comp=N,620nm,0.6s						
THAS	Thassos island	1.53	315	P	Pn	07 00 45.1	-1.0
THAS				S	Sn	07 01 04.3	-1.8
THAS				AML	AML	07 01 09.7	
	comp=N,1394µm,0.6s						
THAS				AML	AML	07 01 15.7	
	comp=E,685µm,0.3s						
EDC	Edincik	1.54	58	Pn	Pn	07 00 47.1	+0.7
DGB	zmir	1.59	159	P	Pn	07 00 46.5	-0.6
GOMA	Golmarmara-Man	1.61	121	Pn	Pn	07 00 48.1	+0.8
UKOP	Uzunkopru-Edir	1.63	13	Pn	Pn	07 00 48.3	+0.8
RDO	Rodhopi	1.67	344	P	Pn	07 00 47.6	-0.5
RDO				S	Sn	07 01 09.8	+0.2
	comp=E,675nm,0.6s						
RDO	Rodhopi	1.67	344	Pn	Pn	07 00 48.7	+0.6
RDO	Rodhopi	1.67	344	P	Pn	07 00 48.6	+0.6
RDO				AML	AML	07 01 11.5	
	comp=E,1141µm,0.6s						
RDO				AML	AML	07 01 12.4	
	comp=N,1688µm,0.7s						
BAND	Balkesir-Ban	1.71	61	P	Pn	07 00 48.4	-0.2
BAND				S	Sn	07 01 10.9	+0.3
TKR	Tekirdag	1.79	36	Pn	Pn	07 00 50.8	+1.0
DURS	Dursunbey	1.80	87	P	Pn	07 00 49.8	-0.2
KYMI	Kymi, Euboea I	1.83	241	P	Pn	07 00 49.6	-0.7
KYMI				S	Sn	07 01 14.2	+0.5
	comp=N,762nm,0.7s						
KYMI	Kymi, Euboea I	1.83	241	P	Pn	07 00 49.3	-1.0
KYMI				S	Sn	07 01 11.1	-2.6
OUR	Ouranopolis	1.84	296	P	Pn	07 00 50.5	+0.1
OUR	Ouranopolis	1.84	296	Pn	Pn	07 00 50.6	+0.1
OUR	Ouranopolis	1.84	296	P	Pn	07 00 50.5	+0.1
KCTX	Karacabey (Bur	1.85	66	Pn	Pn	07 00 51.3	+0.7
SMG	Samos	1.91	163	P	Pn	07 00 51.1	-0.3
SMG				S	Sn	07 01 16.5	+0.9
	comp=N,3µm,0.7s						
SMG	Samos	1.91	163	P	Pn	07 00 50.5	-0.9
SMG				AML	AML	07 01 23.2	
	comp=E,6642µm,0.7s						
SMG				AML	AML	07 01 26.3	
	comp=N,5810µm,0.5s						
DST	Dursunbey	1.91	87	Pn	Pn	07 00 52.5	+1.0
KAVA	Kavala	1.92	320	P	Pn	07 00 51.1	-0.4
KAVA				S	Sn	07 01 16.0	+0.3
KAVA	Kavala	1.92	320	P	Pn	07 00 51.9	+0.4
CRLT	Corlu	2.00	37	Pn	Pn	07 00 53.1	+0.5
GCAM	G?zelcaml?	2.03	155	Pn	Pn	07 00 53.9	+0.9
EREA	Eretria	2.06	238	P	Pn	07 00 52.7	-0.8
EREA				S	Sn	07 01 19.5	+0.2
EREA	Eretria	2.06	238	P	Pn	07 00 52.3	-1.1
KOKK	Kokkinochori,	2.08	308	P	Pn	07 00 53.5	-0.3
KOKK				S	Sn	07 01 19.8	0.0
KOKK	Kokkinochori,	2.08	308	P	Pn	07 00 53.5	-0.3
MANT	Manisa	2.15	118	P	Pn	07 00 55.1	+0.2
MANT				S	Sb	07 01 24.3	-0.5
KDZ	Kurdzhali	2.18	345	Pn	Pn	07 00 55.6	+0.5
KDZ	Kurdzhali	2.18	345	iP	Pn	07 00 55.6	+0.5

ORLT	Orhaneli	2.18	76	Pn	Pn	07 00 56.3	+1.2
KULA	Kula-Manisa	2.21	117	P	Pn	07 00 55.7	+0.1
KULA				S	Sn	07 01 23.8	+0.7
KULA	Kula-Manisa	2.21	117	Pn	Pn	07 00 56.1	+0.5
SMAA	Simav-Kutahya	2.24	100	Pn	Pn	07 00 57.2	+1.2
SIMA	Simav-Kutahya	2.25	101	Pn	Pn	07 00 56.5	+0.4
MDNY	Mudanya-Bursa	2.26	68	Pn	Pn	07 00 57.4	+1.2
DION	Dionisos Attik	2.27	230	P	Pn	07 00 56.5	+0.2
DION				S	Sn	07 01 25.0	+0.6
	comp=N,1μm,0.6s						
DION	Dionisos Attik	2.27	230	P	Pn	07 00 56.1	-0.2
NEO	Neokhori	2.28	265	P	Pn	07 00 55.8	-0.7
XOR	Xorichti	2.29	267	P	Pn	07 00 56.4	-0.3
XOR				S	Sn	07 01 25.6	+0.5
XOR	Xorichti	2.29	267	P	Pn	07 00 56.0	-0.7
SLVT	Silivri	2.31	42	Pn	Pn	07 00 58.2	+1.3
ARMT	Armutlu	2.32	63	Pn	Pn	07 00 58.3	+1.2
PHSR	Pinarhisar	2.33	26	Pn	Pn	07 00 58.4	+1.2
EDRB	Edirne	2.35	11	P	Pn	07 00 57.1	-0.3
EDRB				S	Sn	07 01 26.7	+0.3
EDRB	Edirne	2.35	11	Pn	Pn	07 00 57.9	+0.5
ELBA	Catalca	2.37	47	P	Pn	07 00 59.5	+1.8
ELBA				S	Sb	07 01 29.8	-1.0
YKBL	Yakuplu-Istanb	2.41	52	Pn	Pn	07 00 59.5	+1.2
ATHU	Athens Univers	2.43	230	P	Pn	07 00 57.6	-0.9
AVCI	Avcilar-stanb	2.45	53	Pn	Pn	07 01 00.0	+1.2
CTKS	Kestanelik-??a	2.47	46	Pn	Pn	07 01 00.2	+1.1
SOH	Sokhos	2.49	302	P	Pn	07 00 59.1	-0.3
SOH				S	Sn	07 01 30.4	+0.4
	comp=N,382nm,0.6s						
SOH	Sokhos	2.49	302	P	Pn	07 00 59.5	0.0
VLY	Voula,Athens	2.50	228	P	Pn	07 00 59.0	-0.5
VLY				S	Sn	07 01 30.5	+0.4
VLY	Voula,Athens	2.50	228	P	Pn	07 00 58.7	-0.7
GEMT	Gemlik	2.50	68	Pn	Pn	07 01 01.4	+1.9
SRS	Serrai	2.51	310	P	Pn	07 00 59.2	-0.4
SRS				S	Sn	07 01 30.9	+0.5
	comp=N,280nm,0.7s						
SRS	Serrai	2.51	310	*e*Pn	Pn	07 01 00.3	+0.7
SRS				*e*Sn	Sn	07 01 32.8	+2.4
SRS				*e*Lg	Lg	07 01 38.6	
SRS	Serrai	2.51	310	P	Pn	07 00 59.4	-0.2
HVHR	Bakirkoy-Istan	2.51	55	Pn	Pn	07 01 00.8	+1.2
NVR	Nevrokopi	2.51	317	P	Pn	07 00 59.3	-0.4
NVR	Nevrokopi	2.51	317	P	Pn	07 01 00.4	+0.7
ARMN	Kirklareli, Me	2.52	22	P	Pn	07 00 59.9	+0.2
ARMN				S	Sb	07 01 35.3	+0.3
APE	Apeiranthos	2.52	191	⇑P	Pn	07 00 58.1	-1.7
APE				⇓S	Sn	07 01 29.8	-0.8
APE	Apeiranthos	2.52	191	Pn	Pn	07 01 00.5	+0.7
CTYL	Yalikoy Yolu	2.53	40	Pn	Pn	07 01 01.1	+1.2
KIYI	Yalıkoy-Catalc	2.54	40	Pn	Pn	07 01 01.3	+1.2
TVSB	Tavsanli	2.57	91	Pn	Pn	07 01 01.7	+1.2
ATAL	Atalanti	2.58	252	P	Pn	07 01 00.3	-0.2
ATAL				S	Sn	07 01 32.5	+0.5
GEDZ	Gediz	2.58	100	Pn	Pn	07 01 01.9	+1.2
MLSB	Milas	2.58	150	Pn	Pn	07 01 01.7	+1.0
BGKT	Bogazkoy	2.59	50	Pn	Pn	07 01 02.1	+1.4
BRGA	Burgazada-Ista	2.61	58	Pn	Pn	07 01 02.4	+1.5
VILL	Villia	2.61	239	P	Pn	07 01 00.9	-0.1
VILL				S	Sn	07 01 33.5	+0.7
VIL2	Platees	2.61	240	P	Pn	07 01 00.2	-0.8
BODT	Bodrum	2.64	159	P	Pn	07 01 01.0	-0.5
BODT				S	Sn	07 01 34.7	+1.1
BODT	Bodrum	2.64	159	Pn	Pn	07 01 02.0	+0.5
BUYA	Buyukada-Istan	2.64	59	Pn	Pn	07 01 02.5	+1.1
YLV	Yalova	2.68	67	Pn	Pn	07 01 03.6	+1.6
ISK	Istanbul-Kandi	2.70	55	P	Pn	07 01 02.1	-0.1
ISK				S	Sn	07 01 35.8	+0.8
ISK	Istanbul-Kandi	2.70	55	Pn	Pn	07 01 03.4	+1.2
KAVV	Kandilli-Istan	2.70	55	Pn	Pn	07 01 03.6	+1.4
TUZL	Tuzla-Istanbul	2.71	61	Pn	Pn	07 01 03.7	+1.4
YLVH	Yalova	2.73	64	Pn	Pn	07 01 04.2	+1.6
MMB	Musomiste	2.75	319	*i* P	Pn	07 01 03.6	+0.6
PLD	Plovdiv	2.78	337	Pn	Pn	07 01 04.3	+0.9
PLD	Plovdiv	2.78	337	*e*Pn	Pn	07 01 04.6	+1.2
PLD				*e*Lg	Lg	07 01 46.4	
KLYT	Kilyos	2.79	51	Pn	Pn	07 01 05.1	+1.6
KOSK	Kos Island	2.86	166	Pn	Pn	07 01 05.6	+1.1
YER	Yerkesik	2.93	144	P	Pn	07 01 05.5	0.0
YER				S	Sn	07 01 42.2	+1.3
YER	Yerkesik	2.93	144	Pn	Pn	07 01 06.8	+1.3
KNT	Kendrikon	2.96	304	P	Pn	07 01 05.8	-0.1
AGG	Agios Georgios	3.01	261	P	Pn	07 01 06.5	0.0
THR8	Santorini-Mono	3.17	190	P	Pn	07 01 07.8	-1.0
SANT	Santorini	3.21	190	⇓P	Pn	07 01 08.6	-0.8
SANT	Santorini	3.21	190	P	Pn	07 01 08.3	-1.1
PGB	Panagyurishte	3.36	334	*i* P	Pn	07 01 12.0	+0.6
ANX	Ano Chora	3.42	255	P	Pn	07 01 12.6	+0.3
ANX				S	Sn	07 01 53.8	+0.7
KLV	Kalavryta, Ach	3.46	246	P	Pn	07 01 12.8	-0.1
STIP	Stip	3.70	307	*i* Pn	Pn	07 01 15.3	-0.7
SZH	Strazhica	3.72	358	*i* P	Pn	07 01 18.4	+2.1
VTS	Vitosha	3.78	325	*e*Pn	Pn	07 01 19.3	+2.1
VTS				*e*Lg	Lg	07 02 18.4	
VTS	Vitosha	3.78	325	*i* P	Pn	07 01 19.1	+1.9
VLI	Veliai	3.79	223	P	Pn	07 01 16.1	-1.1
FNA	Florina	3.86	290	*e*Pn	Pn	07 01 20.4	+2.1
PLVB	Pleven	4.01	344	⇑P	Pn	07 01 21.7	+1.4
PRVS	Prvonek	4.27	315	*e*Pn	Pn	07 01 25.5	+1.6
IDI	Anoyia	4.36	194	Pn	Pn	07 01 24.2	-1.0
	comp=N,1.0nm,0.3s,baz=338,slow=18,SNR=1.9						
IDI				Sn	Sn	07 02 16.0	-0.2
	comp=N,1.9nm,0.3s,baz=301,slow=20,SNR=1.4						
IDI				LR	LR	07 03 19.7	
	comp=N,222nm,21.8s,baz=44,slow=42						
	comp=N,5.5nm,0.5s						
OHR	Ohrid	4.38	293	*e*Pn	Pn	07 01 27.5	+2.1
OHR	Ohrid	4.38	293	*i* Pn	Pn	07 01 27.4	+2.1
IGT	Igoumenitsa	4.50	272	*e*Pn	Pn	07 01 30.6	+3.7
ZAPS	Zavoj	4.57	326	*e*Sn	Sn	07 02 23.4	+2.2
ZAPS				*e*Lg	Lg	07 02 46.9	
BARS	Barje	4.62	316	*e*Pn	Pn	07 01 30.4	+1.7
BARS				*e*Lg	Lg	07 02 47.4	
ZAGS	Zajecar	5.17	327	*e*Pn	Pn	07 01 37.2	+0.9
ZAGS				*e*Lg	Lg	07 03 02.7	
TIRR	Tirgusor	5.19	18	⇑P	Pn	07 01 37.2	+0.7
SELS	Selova	5.27	316	*e*Pn	Pn	07 01 39.1	+1.5
BOVS	Bovan	5.27	322	*e*Pn	Pn	07 01 38.1	+0.5
BOVS				*e*Sn	Sn	07 02 40.1	+1.6
BOVS				*e*Lg	Lg	07 03 08.9	
HARR	Harsova	5.31	14	⇑P	Pn	07 01 39.4	+1.2
TPGR	Topolog	5.57	17	⇓P	Pn	07 01 42.3	+0.6
MTUR	Matau	5.74	352	⇑P	Pn	07 01 46.4	+2.3
DJES	Djerdap	5.79	333	⇓P	Pn	07 01 46.3	+1.7
BRTR	Keskin Array B	5.79	86	Pn	Pn	07 01 46.2	+1.4
	comp=N,4.0nm,0.3s,baz=254,slow=12,SNR=43						
BRTR				Sn	Sn	07 02 49.3	-2.2
	comp=N,0.9nm,0.3s,baz=266,slow=20,SNR=3.6						
BRTR				Lg	Lg	07 03 25.2	
	comp=N,0.9nm,0.3s,baz=268,slow=25,SNR=5.7						
BRTR				LR	LR	07 04 28.5	
	comp=N,128nm,19.4s,baz=294,slow=43						
	comp=N,8.6nm,0.4s						
CFR	Carcaliu	5.82	14	⇓P	Pn	07 01 45.7	+0.6
NEHR	Nehoiu	5.88	1	⇑P	Pn	07 01 48.3	+2.3
GRUS	Gruza	5.95	319	*e*Pn	Pn	07 01 49.7	+2.8
GRUS				*e*Lg	Lg	07 03 30.9	
MLR	Muntele Rosu	5.95	359	⇑P	Pn	07 01 49.8	+2.8
MLR	Muntele Rosu	5.95	359	Pn	Pn	07 01 48.4	+1.5
	comp=N,1.6nm,0.3s,baz=224,slow=1.8,SNR=25						
MLR				Sn	Sn	07 02 54.5	-0.8
	comp=N,0.9nm,0.3s,baz=207,slow=9.9,SNR=1.6						
MLR				Lg	Lg	07 03 29.6	
	comp=N,2.8nm,0.3s,baz=113,slow=17,SNR=3.1						
MLR				LR	LR	07 03 54.9	
	comp=N,94nm,19.7s,baz=136,slow=36						
	comp=N,16nm,0.6s						
VOIR		5.95	353	⇑P	Pn	07 01 48.7	+1.8
PDG	Podgorica	5.96	301	⇑P	Pn	07 01 48.8	+1.8
HERR	Herculane	6.01	334	⇓P	Pn	07 01 49.0	+1.3
BISRR	Bisoca	6.02	4	⇓P	Pn	07 01 49.7	+1.9
IVAS	Ivanjica	6.04	314	*e*Pn	Pn	07 01 49.7	+1.5
MDVR	Moldovita	6.18	329	⇑P	Pn	07 01 51.5	+1.3
MDVR	Moldovita	6.18	329	*e*Pn	Pn	07 01 51.2	+1.0
MDVR				*e*Lg	Lg	07 03 34.4	
PLOR	Plostina	6.32	3	⇑P	Pn	07 01 54.7	+2.7
VRI	Vrincioaia	6.33	4	⇑P	Pn	07 01 53.6	+1.4
TRUS	Trudelj	6.34	319	*e*Pn	Pn	07 01 51.7	-0.6
GZR	Gura Zlata	6.36	338	⇑P	Pn	07 01 54.4	+1.9
GZR	Gura Zlata	6.36	338	*e*Pn	Pn	07 01 54.1	+1.6
GZR				*e*Sn	Sn	07 03 04.4	-0.9
DIVS	Divibare	6.47	317	*e*Pn	Pn	07 01 56.2	+2.1
DIVS				*e*Lg	Lg	07 03 43.8	
OZUR		6.55	358	⇑P	Pn	07 01 57.3	+2.0
SURR	Surduc	6.88	336	⇑P	Pn	07 02 00.7	+1.1
BZS	Buzias	6.93	333	⇑P	Pn	07 02 02.0	+1.7
BZS	Buzias	6.93	333	*e*Pn	Pn	07 02 01.3	+1.0
BZS				*e*Lg	Lg	07 03 57.3	
TESR	Tescani	6.98	3	⇑P	Pn	07 02 02.8	+1.8
SIM	Simferopol'	8.01	45	*e*S	Sn	07 03 40.5	-5.3
SIM				Sm		07 03 44.8	
	comp=E,8.0nm,0.4s						
BURAR	Bucovina Array	8.10	356	⇑P	Pn	07 02 19.2	+2.7
SUDU	Sudak	8.47	48	*e*S	Sn	07 03 52.9	-4.2
SUDU				Sm		07 04 00.7	
	comp=N,26nm,0.4s						
SUDU				Sm		07 04 00.7	
	comp=E,8.0nm,0.5s						
MMAI	Mount Meron Ar	9.91	128	Pn	Pn	07 02 40.2	-1.2
	comp=E,1.9nm,0.3s,baz=316,slow=14,SNR=2.9						
MMAI				LR	LR	07 07 49.3	
	comp=E,58nm,19.1s,baz=94,slow=45						
	comp=E,1.0nm,0.3s						
AKASG	Malin Array Be	11.37	10	Pn	Pn	07 03 01.7	+0.6
	comp=E,0.3nm,0.3s,baz=183,slow=19,SNR=2.2						
AKASG				Sn	Sn	07 05 06.9	-1.3
	comp=E,0.3nm,0.3s,baz=132,slow=13,SNR=1.4						
AKASG				LR	LR	07 07 54.1	
	comp=E,107nm,18.2s,baz=170,slow=40						
	comp=E,0.1nm,0.3s						
GERES	GERESS Array B	12.88	320	LR	LR	07 08 59.9	
	comp=E,36nm,19.6s,baz=328,slow=41						
KBZ	Khabaz	13.21	66	LR	LR	07 09 18.9	
	comp=E,28nm,18.1s,baz=228,slow=41						
GNI	Garni	14.30	82	LR	LR	07 09 17.5	
	comp=E,77nm,18.3s,baz=268,slow=38						
NACGM	Naroch	15.38	1	*e*P	Pn	07 03 52.5	-3.1
	comp=Z,12nm,0.8s,baz=182						
BELG	Belogornoye	19.60	42	LR	LR	07 12 42.1	
	comp=Z,47nm,18.7s,baz=47,slow=38						
FINES	FINESS Array B	21.93	360	P	P	07 05 12.3	+0.3
	comp=Z,1.8nm,0.7s,baz=167,slow=9.2,SNR=4.2						
FINES				LR	LR	07 13 37.1	
	comp=Z,67nm,18.8s,baz=181,slow=36						
	comp=Z,1.8nm,0.7s						
HFS	Hagfors	22.05	343	P	P	07 05 13.7	+0.3
	comp=Z,2.4nm,0.9s,baz=265,slow=9.7,SNR=1.9						
	comp=Z,2.4nm,0.9s						
ESDC	Sonseca Array	23.15	280	P	P	07 05 24.4	-1.0
	comp=Z,0.9nm,0.9s,baz=70,slow=12,SNR=3.3						
	comp=Z,0.9nm,0.9s						
NB2	NORSAR Subarra	23.43	342	P	P	07 05 27.8	-0.1
	comp=Z,3.5nm,0.8s,baz=145,slow=9.3						
NOA	NORSAR Array B	23.43	342	P	P	07 05 27.8	-0.1
	comp=Z,1.4nm,1.0s,baz=146,slow=9.2,SNR=6.1						
NOA				LR	LR	07 15 57.3	
	comp=Z,50nm,18.0s,baz=260,slow=40						
	comp=Z,1.4nm,1.0s						
KIRV	Kirov	24.18	30	LR	LR	07 14 57.8	
	comp=Z,35nm,20.5s,baz=250,slow=36						
GEYT	Alibeck	24.93	83	P	P	07 05 43.8	+1.6
	comp=Z,3.1nm,0.8s,baz=262,slow=10,SNR=5.3						
	comp=Z,3.1nm,0.8s						
EKA	Eskdalemuir Ar	25.09	319	P	P	07 05 44.0	+0.7
	comp=Z,2.6nm,0.7s,baz=114,slow=10,SNR=5.9						
	comp=Z,2.6nm,0.7s						
ARU	Arti	27.14	41	LR	LR	07 17 38.1	
	comp=Z,33nm,20.4s,baz=148,slow=38						
TORD	Torodi Ar. Bea	34.00	226	P	P	07 07 03.3	+0.4
	comp=Z,1.0nm,0.6s,baz=36,slow=9.7,SNR=4.7						
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	40.83	61	P	P	07 08 03.4	+3.0
	comp=Z,0.8nm,0.8s,baz=282,slow=5.8,SNR=6.1						
	comp=Z,0.8nm,0.8s						
YKA	Yellowknife Ar	73.53	342	P	P	07 11 51.5	+0.1
	comp=Z,0.4nm,0.7s,baz=39,slow=5.5,SNR=8.3						
	comp=Z,0.4nm,0.7s						
ILAR	Eielson Array	75.88	357	P	P	07 12 06.2	+1.1
	comp=Z,0.3nm,0.8s,baz=0.0,slow=4.5,SNR=2.7						
	comp=Z,0.3nm,0.8s						
PETK	Petropavlovsk-	78.66	27	LR	LR	07 49 05.9	
	comp=Z,41nm,18.3s,baz=251,slow=37						
ASAR	Alice Springs	117.99	99	PKP	PKPdf	07 19 04.9	-1.2
	comp=Z,0.2nm,0.3s,baz=303,slow=4.1,SNR=1.6						

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*TAP **20** 07:04:04.2,24.°79N×122.°11E,h10^{km},ML4.5,B*

*NIED **20** 07:04:04.1,24.°76N×122.°10E,h50^{km},MW4.3,Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}0.09; $M_{\theta\theta}$0.77; $M_{\phi\phi}$-0.85; $M_{r\theta}$2.61; $M_{\theta\phi}$-0.24; $M_{\phi r}$-1.17; Fault plane solution: $M_0$2.91000×10^{15} NP1: ϕ_s298.00000°,δ88.00000°,λ-80.00000°. NP2:ϕ_s41.00000°, δ11.00000°,λ-167.00000°.*

*JMA **20** 07:04:04.1±0.1,24.°8N±0.°3×122.°1E±0.°2,h50^{km}±2^{km}, MV3.7/9,TAIWAN REGION*

*IDC **20** 07:04:23.1±5.0,24.°89N×122.°07E,h186^{km}±52^{km}, mb3.2/11,mbtmp3.7/13,MS3.3/8,Error ellipse: s-maj=20.4km s-min=13.8km az=71.0*

ISC 20 07:04:02.9±1.0**,24.°83N**±0.°02×**122.°19E**±0.°02**,h7**^{km}±7^{km}**, n166,**σ**1**.^{s}**09**/274**,mb3.8**/10**,MS3.3**/5**,13C-22D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		0.24	274	⇓*i*P	Pg	07 04 08.5	+0.8
	baz=290						
EGS				*e*S	Sg	07 04 12.0	+1.2
	baz=290						
TWB1	Santiao Chiao	0.26	314	⇑*i*P	Pg	07 04 09.8	+1.7
	baz=335						
TWB1				S	Sg	07 04 13.3	+1.8
	baz=335						
NTC	Toucheng	0.33	274	⇓*e*P	Pb	07 04 10.5	-0.6
	baz=285						
TIPB	Shuangxi	0.36	293	⇓*i*P	Pb	07 04 11.3	-0.4
	baz=306						
TIPB				*i* S	Sb	07 04 16.1	-1.5
	baz=306						
TWC	Suao	0.38	235	⇑*i*P	Pg	07 04 10.2	-0.2
	baz=231						
TWC				S	Sg	07 04 13.9	-1.5
	baz=231						
SXI1	Grass Mountain	0.39	313	⇓*i*P	Pn	07 04 12.4	-2.6
	baz=325						
SXI1				*e*S	Sb	07 04 17.7	-0.7
	baz=325						
ILA	Ilan	0.41	261	⇓P	Pb	07 04 11.5	-1.0
	baz=266						
ILA				*e*S	Sb	07 04 16.6	-2.2
	baz=266						
EOS2	EOS2	0.41	175	*i* P	Pb	07 04 12.1	-0.3
	baz=163						
EOS2				S	Sb	07 04 18.1	-0.7
	baz=163						
WFSB	Wu-fen Shan	0.44	303	⇓*i*P	Pn	07 04 13.3	-2.4
	baz=314						
WFSB				*e*S	Sb	07 04 19.1	-0.8
	baz=314						
NDS	Dongshan	0.47	246	⇓P	Pb	07 04 12.2	-1.4
	baz=247						
NDS				*e*S	Sg	07 04 17.4	-1.0
	baz=247						
TWE	Neicheng	0.49	257	⇓*i*P	Pb	07 04 12.5	-1.3
	baz=260						
TWE				*e*S	Sb	07 04 19.2	-2.0
	baz=260						
TNOU	National Taiwa	0.50	310	*e*P	Pn	07 04 14.5	-1.9
	baz=320						
TNOU				*e*S	Sb	07 04 20.9	-0.5
	baz=320						
EWUT	Wuta	0.54	225	⇑*i*P	Pg	07 04 12.9	-0.4
	baz=221						
EWUT				*e*S	Sg	07 04 18.5	-1.8
	baz=221						
EOS3	EOS3	0.55	168	*i* P	Pb	07 04 14.8	0.0
	baz=159						
EOS3				*e*S	Sb	07 04 23.9	+1.0
	baz=159						
FUSB	Fushanzhiwuyua	0.55	263	⇓*i*P	Pb	07 04 13.8	-1.1
	baz=267						
FUSB				*e*S	Sb	07 04 21.1	-2.0
	baz=267						
TWA	Mucha	0.57	285	⇓*i*P	Pn	07 04 15.1	-2.4
	baz=292						
ENA	Nanau	0.57	226	⇑*i*P	Pg	07 04 13.7	-0.3
	baz=222						
ENA				*e*S	Sg	07 04 20.0	-1.5
	baz=222						
ENTT	Nioudou	0.60	252	⇓*i*P	Pb	07 04 14.2	-1.5
	baz=253						
ENTT				*e*S	Sg	07 04 22.3	0.0
	baz=253						
NWRT	Kuosheng	0.61	308	*e*P	Pn	07 04 16.6	-1.3
	baz=316						
NHDH	Xindian Distri	0.62	283	*e*P	Pn	07 04 16.1	-2.0
	baz=288						
NHDH				*e*S	Sb	07 04 23.7	-1.2
	baz=288						
NWLT	Wulai	0.63	265	⇓P	Pb	07 04 15.1	-1.1
	baz=269						
NWLT				*e*S	Sg	07 04 22.9	-0.3
	baz=269						
TAP1	Taipei	0.64	289	*e*P	Pn	07 04 18.3	-0.1
	baz=295						
YM01	YM01	0.65	299	⇓*e*P	Pn	07 04 17.2	-1.3
	baz=306						
YM01				*e*S	Sn	07 04 25.9	-3.1
	baz=306						
YM08	YM08	0.65	303	⇓*e*P	Pn	07 04 17.2	-1.4
	baz=310						
TATO	Taipei	0.65	283	P	Pn	07 04 16.7	-1.9
TATO	Taipei	0.65	283	⇓P	Pn	07 04 16.6	-1.9
	baz=288						
TATO				*e*S	Sb	07 04 25.1	-0.9
	baz=288						
TAP	Taipei	0.66	289	*e*P	Pn	07 04 17.0	-1.6
	baz=295						
EHP	Heping Village	0.66	218	*e*P	Pg	07 04 15.4	-0.2
	baz=214						
EHP				*e*S	Sg	07 04 24.9	+0.6
	baz=214						
LATG	Datong	0.67	244	⇓*i*P	Pb	07 04 15.6	-1.4
	baz=244						
LATG				*e*S	Sg	07 04 24.3	-0.4
	baz=244						
TWY	Chenhua	0.70	310	⇓*e*P	Pn	07 04 18.6	-0.6
	baz=317						
TWY				*e*S	Sn	07 04 30.2	0.0
	baz=317						
BACT	New Taipei Cit	0.70	284	*e*P	Pn	07 04 18.2	-1.0
	baz=289						
ANP	Anpu	0.70	300	*e*P	Pn	07 04 18.1	-1.3
	baz=307						
EOS4	EOS4	0.71	171	*i* P	Pb	07 04 17.4	-0.1
	baz=164						
EOS4				*e*S	Sb	07 04 27.3	0.0
	baz=164						
NTST	Danshui	0.75	297	*e*P	Pn	07 04 19.5	-0.4
	baz=302						
TWS1	Kuangyinshan	0.75	291	*e*P	Pn	07 04 19.6	-0.4
	baz=297						
YHNB	Yeheng	0.76	258	P	Pb	07 04 17.4	-1.1
YHNB	Yeheng	0.76	258	⇓*e*P	Pb	07 04 17.3	-1.2
	baz=260						
YHNB				*e*S	Sg	07 04 26.6	-0.9
	baz=260						
NSK	Sanguang	0.77	259	⇓P	Pb	07 04 17.5	-1.2
	baz=260						
NSK				*e*S	Sg	07 04 26.8	-1.1
	baz=260						
JYNG	Yonagunijimaku	0.78	119	P	Pn	07 04 19.6	-0.8
JYNG				*e*S	Sn	07 04 30.8	-1.5
PCYT	Pengchaiyu	0.80	352	⇑*i*P	Pn	07 04 20.6	0.0
	baz=358						
YOJ	Yonaguni jima	0.83	116	P	Pn	07 04 20.7	-0.3
YOJ	Yonaguni jima	0.83	116	P	Pn	07 04 20.3	-0.7
YOJ				S	Sn	07 04 32.1	-1.4
YOJ	Yonaguni jima	0.83	116	⇓*i*P	Pn	07 04 20.4	-0.7
	baz=111						
YOJ				S	Sn	07 04 32.2	-1.2
	baz=111						
NNSB	Datong	0.84	242	*e*P	Pg	07 04 18.4	-0.6
	baz=241						
NNSB				*e*S	Sg	07 04 29.4	-0.6
	baz=241						
NNSH	Datong	0.84	242	*e*P	Pb	07 04 18.9	-1.0
	baz=241						
NNSH				*e*S	Sg	07 04 29.4	-0.6
	baz=241						
NNS	Nan Shan	0.84	243	*e*P	Pb	07 04 18.6	-1.3
	baz=242						
NNS				*e*S	Sg	07 04 28.6	-1.4
	baz=242						
ETL	Fush Village	0.84	218	*e*P	Pg	07 04 18.6	-0.5
	baz=215						
ETL				*e*S	Sg	07 04 30.0	-0.1
	baz=215						
NACB	Ninganchiao	0.85	220	P	Pg	07 04 18.8	-0.5
NACB	Ninganchiao	0.85	220	⇑*i*P	Pg	07 04 18.4	-0.8
	baz=217						
NACB				*e*S	Sg	07 04 29.6	-0.7
	baz=217						
ETLH	Xiulin Townshi	0.90	226	⇑P	Pg	07 04 19.4	-0.8
	baz=224						
ETLH				*e*S	Sg	07 04 30.4	-1.4
	baz=224						
NCU	National Centr	0.92	279	*e*P	Pn	07 04 22.4	+0.2
	baz=282						
NCU				*e*S	Sn	07 04 35.5	-0.2
	baz=282						
TWD	Chiawan	0.92	216	⇑*e*P	Pg	07 04 19.9	-0.7
	baz=213						
TWD				*e*S	Sg	07 04 32.4	-0.2
	baz=213						
NCUH	Zhongli	0.92	279	⇓*e*P	Pn	07 04 22.3	0.0
	baz=282						
NCUH				*e*S	Sn	07 04 35.5	-0.3
	baz=282						
NFF	Wufeng Townshi	0.99	259	*e*P	Pn	07 04 22.1	-1.2
	baz=260						
NFF				*e*S	Sn	07 04 36.4	-1.2
	baz=260						
HWA	Hwalien	1.00	212	*e*P	Pn	07 04 22.5	-0.9
	baz=209						
HWA				*e*S	Sn	07 04 40.0	+2.3
	baz=209						
NJD	Zhudong	1.01	265	*e*P	Pn	07 04 23.4	-0.1
	baz=267						
FUSS	Fushou	1.04	236	*e*P	Pb	07 04 22.3	-1.0
	baz=236						
FUSS				*e*S	Sg	07 04 35.8	-0.7
	baz=236						
HSN1	Hsinchu	1.07	267	*e*P	Pn	07 04 25.1	+0.8
	baz=269						
HSN1				*e*S	Sn	07 04 40.1	+0.8
	baz=269						
WHF	Hehuan Shan	1.08	231	⇑*e*P	Pg	07 04 22.9	-0.9
	baz=230						
WHF				*e*S	Sg	07 04 36.8	-1.2
	baz=230						
TWT	Tachien	1.09	238	*e*P	Pn	07 04 24.0	-0.7
	baz=238						
TWT				*e*S	Sb	07 04 38.3	-0.3
	baz=238						
SBCB	Hsinchu	1.10	268	*e*P	Pn	07 04 25.1	+0.4
	baz=270						
SBCB				*e*S	Sn	07 04 40.9	+0.9
	baz=270						
NSTT	Nanjuang	1.10	260	*e*P	Pb	07 04 23.4	-0.8
	baz=261						
NSTT				*e*S	Sn	07 04 38.8	-1.3
	baz=261						
TDCB	Techi	1.10	239	*e*P	Pn	07 04 23.9	-1.0
	baz=238						
TDCB				*e*S	Sg	07 04 37.4	-1.0
	baz=238						
HSN	Hsinchu	1.11	269	*e*P	Pn	07 04 25.4	+0.6
	baz=272						
HSN				*e*S	Sn	07 04 39.7	-0.7
	baz=272						
CHGB	Renai	1.20	231	*e*P	Pn	07 04 25.7	-0.7
	baz=230						
CHGB				*e*S	Sg	07 04 41.4	-0.3
	baz=230						
ESL	Shilin	1.23	215	*e*P	Pg	07 04 25.2	-1.2
	baz=212						
ESL				*e*S	Sn	07 04 43.1	-0.1
	baz=212						
WHP	Taichung City	1.26	244	*e*P	Pn	07 04 26.9	-0.1
	baz=244						
WHP				*e*S	Sb	07 04 43.1	-0.4
	baz=244						
OWD	Renai	1.27	227	*e*P	Pg	07 04 26.3	-1.0
	baz=226						

OWD	baz=226			eS	Sg	07 04 43.0	-0.9
WUSB	**Renai** baz=229	**1.28**	**230**	⇑eP	**Pg**	**07 04 26.7**	**-0.9**
WUSB	baz=229			eS	Sg	07 04 43.0	-1.3
NMLH	**Miaoli** baz=258	**1.31**	**257**	eP	**Pg**	**07 04 28.8**	**+0.8**
NMLH	baz=258			eS	Sn	07 04 47.0	+1.8
EGFH	**Guangfu** baz=209	**1.35**	**211**	eP	**Pn**	**07 04 27.7**	**-0.4**
EGFH	baz=209			eS	Sn	07 04 46.5	+0.2
NSY	**Sanyi** baz=253	**1.36**	**253**	eP	**Pg**	**07 04 29.8**	**+0.6**
NSY	baz=253			eS	Sn	07 04 49.0	+2.3
TWQ1	**Liyutan** baz=250	**1.38**	**250**	eP	**Pg**	**07 04 30.4**	**+1.1**
TWQ1	baz=250			eS	Sn	07 04 49.1	+2.1
WCS	**Beigang Elemen** baz=236	**1.40**	**237**	eP	**Pg**	**07 04 29.5**	**-0.2**
WCS	baz=236			eS	Sg	07 04 47.2	-0.7
DPDB	**Guoxing** baz=235	**1.40**	**236**	eP	**Pg**	**07 04 29.4**	**-0.4**
DPDB	baz=235			eS	Sn	07 04 48.0	+0.4
VWDT	**VWDT** baz=221	**1.44**	**222**	⇑eP	**Pb**	**07 04 29.4**	**-0.6**
VWDT	baz=221			eS	Sg	07 04 49.2	+0.1
IRIF	**Iriomote-Funau**	**1.48**	**109**	P	**Pn**	**07 04 29.5**	**-0.5**
IRIF				eS	Sn	07 04 49.1	-0.5
WDJ	**Dajia District** baz=252	**1.49**	**252**	eP	**Pg**	**07 04 31.5**	**-0.1**
WDJ	baz=252			eS	Sg	07 04 51.6	+0.7
HGSD	**Ruisui** baz=206	**1.50**	**208**	⇑eP	**Pb**	**07 04 30.4**	**-0.7**
HGSD	baz=206			eS	Sg	07 04 54.0	+2.7
SMLT	**Sun Moon Lake** baz=230	**1.51**	**232**	eP	**Pg**	**07 04 31.0**	**-0.9**
SMLT	baz=230			eS	Sg	07 04 51.4	-0.1
TYC	**Yuchr** baz=232	**1.53**	**233**	eP	**Pg**	**07 04 31.2**	**-1.0**
TYC	baz=232			eS	Sn	07 04 50.2	-0.4
SSLB	**Suanglung**	**1.53**	**228**	P	**Pg**	**07 04 31.5**	**-0.8**
SSLB	**Suanglung** baz=227	**1.53**	**228**	⇑eP	**Pb**	**07 04 31.0**	**-0.7**
SSLB	baz=227			eS	Sn	07 04 50.8	-0.1
TCU	**Taichung** baz=244	**1.54**	**244**	eP	**Pg**	**07 04 33.6**	**+1.1**
TCU	baz=244			eS	Sg	07 04 53.1	+0.7
YULB	**Yu-li**	**1.65**	**210**	P	**Pn**	**07 04 32.2**	**-0.1**
YULB	**Yu-li** baz=208	**1.65**	**210**	eP	**Pn**	**07 04 31.8**	**-0.5**
YULB	baz=208			eS	Sb	07 04 54.8	+0.2
ECBN	**Changbin** baz=202	**1.65**	**204**	eP	**Pb**	**07 04 32.5**	**-1.1**
ECBN	baz=202			eS	Sn	07 04 53.9	+0.1
HATJ	**Hateruma jima**	**1.66**	**117**	P	**Pb**	**07 04 32.6**	**-1.3**
HATJ				eS	Sn	07 04 53.6	-0.4
WHYT	**Xinyi Township** baz=226	**1.66**	**228**	eP	**Pg**	**07 04 33.7**	**-1.1**
WHYT	baz=226			eS	Sg	07 04 56.6	+0.2
WCHH	**Zhanghua** baz=243	**1.66**	**244**	eP	**Pg**	**07 04 35.3**	**+0.4**
WCHH	baz=243			eS	Sg	07 04 56.1	-0.3
WJS	**Zhushan** baz=233	**1.67**	**233**	eP	**Pg**	**07 04 35.4**	**+0.4**
WJS	baz=233			eS	Sg	07 04 57.5	+0.9
WNT	**Mingjian** baz=235	**1.67**	**236**	eP	**Pg**	**07 04 35.6**	**+0.6**
WNT	baz=235			eS	Sg	07 04 57.6	+1.0
EYUL	**Yuli** baz=207	**1.68**	**209**	eP	**Pn**	**07 04 32.8**	**+0.1**
EYUL	baz=207			eS	Sb	07 04 55.9	+0.5
TWF1	**Yuli** baz=207	**1.68**	**209**	eP	**Pn**	**07 04 32.5**	**-0.3**
TWF1	baz=207			eS	Sb	07 04 55.7	+0.1
YUS	**Yu-Shan** baz=219	**1.75**	**221**	eP	**Pg**	**07 04 35.4**	**-1.1**
YUS	baz=219			eS	Sb	07 04 57.8	-0.2
JKRS	**Kuro-shima**	**1.76**	**109**	P	**Pb**	**07 04 34.0**	**-1.5**
JKRS				eS	Sn	07 04 56.4	0.0
FULB	**Fuli** baz=205	**1.82**	**207**	eP	**Pn**	**07 04 35.0**	**+0.3**
FULB	baz=205			eS	Sb	07 04 59.1	-0.4
ALS	**Alishan** baz=223	**1.82**	**224**	eP	**Pg**	**07 04 36.7**	**-1.2**
ALS	baz=223			eS	Sg	07 05 02.0	+0.4
JIJ	**Ishigaki jima**	**1.84**	**104**	P	**Pn**	**07 04 34.5**	**-0.3**
JIJ				S	Sn	07 04 58.2	-0.1
CHN5	**Tsauling** baz=228	**1.85**	**229**	eP	**Pg**	**07 04 37.5**	**-0.8**
CHN5	baz=228			eS	Sg	07 05 02.3	-0.1
WGK	**Gukeng** baz=232	**1.87**	**233**	eP	**Pg**	**07 04 38.6**	**-0.3**
WGK	baz=232			eS	Sg	07 05 04.5	+1.3
CHKT	**Chengkung** baz=202	**1.88**	**204**	eP	**Pn**	**07 04 34.7**	**-0.7**
CHKT	baz=202			eS	Sn	07 04 59.5	+0.1
WDLH	**Douliu** baz=233	**1.89**	**233**	eP	**Pg**	**07 04 38.5**	**-0.7**
WDLH	baz=233			eS	Sg	07 05 03.2	-0.4
WRL	**Guolierlin Hig** baz=241	**1.89**	**241**	eP	**Pb**	**07 04 37.4**	**-0.5**
WRL	baz=241			eS	Sb	07 05 01.0	-0.7
EHD	**Haiduan** baz=207	**1.90**	**208**	eP	**Pn**	**07 04 35.9**	**+0.2**
EHD	baz=207			eS	Sb	07 05 02.4	+0.6
ELDTW	**Lidau** baz=212	**1.95**	**214**	eP	**Pn**	**07 04 37.1**	**+0.6**
WTK	**Tuku** baz=235	**2.00**	**236**	eP	**Pg**	**07 04 40.0**	**-1.3**
WTK	baz=235			eS	Sg	07 05 06.0	-1.3
WCKO	**Fanlu** baz=226	**2.00**	**227**	eP	**Pg**	**07 04 40.3**	**-1.1**
WCKO	baz=226			eS	Sg	07 05 06.4	-1.0
EDH	**Donghe** baz=202	**2.02**	**204**	eP	**Pn**	**07 04 37.0**	**-0.3**
EDH	baz=202			eS	Sn	07 05 02.8	0.0
CHN2	**Minshiung** baz=230	**2.03**	**231**	eP	**Pg**	**07 04 42.0**	**+0.1**
CHN2	baz=230			eS	Sg	07 05 08.3	+0.1
CHN4	**Tsaushan** baz=224	**2.07**	**225**	eP	**Pb**	**07 04 40.8**	**-0.1**
CHN4	baz=224			eS	Sg	07 05 09.4	-0.1
TPUB	**Ta-pu** baz=222	**2.09**	**223**	eP	**Pb**	**07 04 41.1**	**0.0**
TPUB	baz=222			eS	Sb	07 05 08.0	+0.8
CHY	**Chiayi** baz=230	**2.09**	**231**	eP	**Pg**	**07 04 41.3**	**-1.7**
CHY	baz=230			eS	Sg	07 05 09.0	-1.1
STYH	**Taoyuan** baz=217	**2.10**	**218**	eP	**Pb**	**07 04 40.1**	**-1.2**
STYH	baz=217			eS	Sb	07 05 06.6	-0.9
STYT	**Tauyuan** baz=217	**2.12**	**219**	eP	**Pb**	**07 04 41.0**	**-0.6**
WTP	**Ta-pu** baz=221	**2.14**	**223**	eP	**Pb**	**07 04 42.0**	**0.0**
WTP	baz=221			eS	Sg	07 05 11.0	-0.6
LONT	**Longtian** baz=206	**2.15**	**207**	eP	**Pn**	**07 04 39.2**	**0.0**
LONT	baz=206			eS	Sn	07 05 06.1	+0.1
TWK	**Hsinying** baz=224	**2.20**	**225**	eP	**Pb**	**07 04 42.4**	**-0.7**
TWK	baz=224			eS	Sb	07 05 11.5	+0.9
WSL	**Shuilin Townsh** baz=234	**2.21**	**234**	eP	**Pb**	**07 04 42.6**	**-0.7**
WSL	baz=234			eS	Sb	07 05 09.8	-1.1
CHN1	**Nanshi** baz=222	**2.23**	**223**	eP	**Pb**	**07 04 43.3**	**-0.3**
CHN1	baz=222			eS	Sg	07 05 13.3	-1.5
LDUT	**Ludao** baz=195	**2.25**	**197**	eP	**Pn**	**07 04 39.5**	**-0.9**
LDUT	baz=195			eS	Sn	07 05 07.5	-0.9
TWGBT	**Beinan**	**2.25**	**207**	P	**Pn**	**07 04 40.5**	**0.0**
TWGBT	**Beinan** baz=206	**2.25**	**207**	eP	**Pn**	**07 04 40.4**	**-0.1**
TWG	**Pinlang** baz=206	**2.25**	**207**	eP	**Pn**	**07 04 40.6**	**+0.1**
TWG	baz=206			eS	Sn	07 05 08.9	+0.5
TTN	**Taitung** baz=203	**2.28**	**205**	eP	**Pn**	**07 04 41.2**	**+0.3**
ICHU	**Yijhu** baz=230	**2.28**	**230**	eP	**Pb**	**07 04 44.4**	**0.0**
ICHU	baz=230			eS	Sb	07 05 13.6	+0.9
SGST	**Jiashian** baz=219	**2.28**	**221**	eP	**Pb**	**07 04 42.7**	**-1.6**
SGST	baz=219			eS	Sb	07 05 12.6	-0.1
CHN8	**Yiju** baz=230	**2.33**	**231**	eP	**Pb**	**07 04 45.4**	**0.0**
CHN8	baz=230			eS	Sb	07 05 15.7	+1.3
MATB	**Ma-tsu** baz=304	**2.42**	**303**	eP	**Pn**	**07 04 42.4**	**-0.5**
SCST	**Cishan** baz=218	**2.48**	**219**	eP	**Pb**	**07 04 47.2**	**-0.6**
VWUC	**VWUC** baz=275	**2.50**	**274**	eP	**Pn**	**07 04 43.4**	**-0.5**
SSD	**Sandimen** baz=213	**2.52**	**215**	eP	**Pb**	**07 04 46.9**	**-1.5**
TWM1	**Shoushan** baz=218	**2.57**	**219**	eP	**Pb**	**07 04 50.0**	**+0.6**
TWM1	baz=218			eS	Sg	07 05 25.7	+0.1
MASBT	**Mashibuluo** baz=212	**2.63**	**213**	eP	**Pb**	**07 04 47.7**	**-2.7**
MASBT	baz=212			eS	Sn	07 05 19.3	+1.4
PNG	**Penghu** baz=242	**2.71**	**243**	eP	**Pn**	**07 04 48.2**	**+1.2**
PNG	baz=242			eS	Sn	07 05 20.9	+0.9
EAST	**Anshuo** baz=206	**2.73**	**207**	eP	**Pn**	**07 04 47.0**	**-0.1**
EAST	baz=206			eS	Sb	07 05 24.8	-1.0
TAWH	**Dawu Township** baz=205	**2.75**	**206**	eP	**Pn**	**07 04 48.0**	**+0.6**
TAWH	baz=205			eS	Sn	07 05 23.7	+2.8
XPSS	**Dashiqiu** baz=321	**2.76**	**320**	eP	**Pn**	**07 04 48.0**	**+0.5**
XPSS	baz=321			eS	Sn	07 05 20.2	-0.9
LYJJ	**Jianjiangzhen** baz=310	**2.78**	**309**	eP	**Pn**	**07 04 47.6**	**-0.3**
WDGT	**Dungji** baz=236	**2.79**	**236**	eP	**Pb**	**07 04 49.9**	**-3.3**
WDGT	baz=236			eS	Sn	07 05 23.0	+1.1
LAY	**Lan-yu** baz=190	**2.84**	**192**	eP	**Pn**	**07 04 48.0**	**-0.7**
LAY	baz=190			eS	Sn	07 05 20.5	-2.6
SCZT	**Fangliau** baz=209	**2.84**	**211**	eP	**Pb**	**07 04 51.7**	**-2.2**
VCHM	**Qimei** baz=237	**3.00**	**238**	eP	**Pn**	**07 04 52.2**	**+1.4**
SMST	**Manzhou Townsh** baz=203	**3.06**	**204**	eP	**Pn**	**07 04 52.5**	**+0.8**
SMST	baz=203			eS	Sn	07 05 28.1	-0.5
TWK1	**Hengchun** baz=203	**3.14**	**204**	eP	**Pn**	**07 04 51.8**	**-1.0**
KNM	**Kinmen** baz=264	**3.44**	**264**	eP	**Pn**	**07 04 58.8**	**+1.8**
KNMB	**Chin-men Tao** baz=265	**3.48**	**265**	eP	**Pn**	**07 04 57.6**	**+0.1**
AXDP	**Jialang** baz=272	**3.83**	**272**	eP	**Pn**	**07 05 02.5**	**+0.2**
AXDP	baz=272			eS	Sn	07 05 45.8	-1.8
CVP	**Callao Caves**	**7.10**	**183**	⇓eP	**Pn**	**07 05 48.0**	**+0.8**
JNU	**Nakatsue** comp=Z,83nm,20.6s,baz=226,slow=37	**11.22**	**41**	LR	LR	07 11 15.1	
KSRS	**Korea Array** 1.6nm,0.7s,baz=198,slow=12,SNR=6.9	**13.50**	**20**	P	P	07 07 27.7	+3.5
KSRS	comp=Z,133nm,19.0s,baz=200,slow=39			LR	LR	07 13 10.3	
MJAR	**Matsushiro Arr** 0.7nm,0.6s,baz=223,slow=8.2,SNR=1.8	**18.03**	**46**	P	P	07 08 21.0	+6.5
MJAR	comp=Z,50nm,18.0s,baz=210,slow=41			LR	LR	07 16 46.2	
USRK	**Ussuriysk Ar.** 1.4nm,0.8s,baz=206,slow=12,SNR=3.0 1.4nm,0.8s	**20.91**	**20**	P	Pn	07 08 49.8	+1.4
CMAR	**Chiang Mai Arr** 1.3nm,0.3s,baz=56,slow=6.6,SNR=21	**22.50**	**258**	P	**P**	**07 09 06.6**	**+3.4**
CMAR	comp=Z,92nm,20.2s,baz=80,slow=38 1.3nm,0.3s			LR	LR	07 18 40.2	
ASAJ	**Asahikawa** comp=Z,93nm,18.3s,baz=121,slow=37	**25.43**	**36**	LR	LR	07 19 58.0	
KLR	**Kul'dur** 0.8nm,0.7s,baz=208,slow=8.0,SNR=2.6	**25.48**	**15**	P	**P**	**07 09 33.5**	**+2.0**
KLR	comp=Z,95nm,18.0s,baz=212,slow=38 0.8nm,0.7s			LR	LR	07 20 24.9	
SONM	**Songino Array** 1.3nm,0.7s,baz=155,slow=10,SNR=8.4 1.3nm,0.7s	**26.15**	**335**	P	**P**	**07 09 39.2**	**+1.3**
YAK	**Yakutsk** comp=Z,47nm,18.6s,baz=259,slow=40	**37.53**	**6**	LR	LR	07 29 07.8	
MKAR	**Makanchi Array** 0.4nm,0.7s,baz=98,slow=8.8,SNR=3.8 0.4nm,0.7s	**38.52**	**315**	P	**P**	**07 11 26.8**	**+0.9**
ZALV	**Zalesovo Beam** 0.4nm,0.4s,baz=119,slow=8.9,SNR=2.0 0.4nm,0.4s	**40.21**	**326**	P	**P**	**07 11 40.2**	**+0.3**
WRA	**Warramunga Arr** 2.1nm,0.8s,baz=346,slow=8.6,SNR=13 2.1nm,0.8s	**46.05**	**164**	P	**P**	**07 12 27.7**	**+0.3**
TIXI	**Tiksi** comp=Z,74nm,19.7s,baz=0.0,slow=39	**47.00**	**3**	LR	LR	07 34 46.5	
BVAR	**Borovoye Array** 0.5nm,0.6s,baz=143,slow=5.0,SNR=1.9 0.5nm,0.6s	**47.76**	**320**	P	**P**	**07 12 40.7**	**+0.1**
ASAR	**Alice Springs** 0.9nm,0.8s,baz=344,slow=9.6,SNR=8.9 0.9nm,0.8s	**49.53**	**166**	P	**P**	**07 12 56.9**	**+2.5**
GEYT	**Alibeck** 1.1nm,0.5s,baz=59,slow=5.6,SNR=1.8 1.1nm,0.5s	**55.27**	**300**	P	**P**	**07 13 35.0**	**-2.1**
YKA	**Yellowknife Ar** 0.1nm,0.7s,baz=313,slow=4.6,SNR=2.5 0.1nm,0.7s	**82.02**	**23**	P	**P**	**07 16 22.2**	**-1.3**

IDC 20 07:05:00.2±2.4**, 30°.25S**×**177°.58W, h0**^{km}**, mb3.7**/2**,**
mbtmp3.7/2**, Error ellipse: s-maj=42.5km s-min=24.3km**
az=106.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island** 119nm,0.3s,baz=75,slow=14,SNR=11	**1.04**	**344**	Pn	Pn	07 05 21.8	-0.2
RAO	660nm,0.3s,baz=166,slow=23,SNR=7.6			Sn	Sn	07 05 38.6	+1.3
ASAR	**Alice Springs** 0.3nm,0.4s,baz=109,slow=7.6,SNR=2.1 0.3nm,0.4s	**43.48**	**267**	P	P	07 13 05.2	-0.3
WRA	**Warramunga Arr** 0.8nm,0.3s,baz=110,slow=8.1,SNR=28 0.8nm,0.3s	**44.45**	**272**	P	P	07 13 13.4	+0.2
FINES	**FINESS Array B** 1.8nm,0.7s,baz=29,slow=3.2,SNR=4.9	**145.13**	**340**	PKPbc	PKPbc	07 24 37.4	-1.1

NNC ***20*** *07:05:55.3±2.4, 54°.66N×86°.62E, h0^{km}, mb2.7, mpv2.6,*
Error ellipse: s-maj=15.4km s-min=9.1km az=56.0,
Suspected Mining explosion.

IDC 20 07:05:57.8±3.2**, 54°.58N**×**86°.42E, h0**^{km}**, mbtmp2.8**/2**,**
ML2.4/2**, 5C-3D, Error ellipse: s-maj=26.3km**
s-min=15.5km az=49.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** 0.1nm,0.8s,baz=56,slow=336,SNR=42	**1.13**	**237**	I	I	07 12 40.0	
ZAA0	**Zalesovo Array** 0.1nm,0.4s,baz=57,slow=17	**1.13**	**237**	⇓P	Pg	07 06 18.6	-0.8
ZAA0	3.7nm,1.1s,baz=55,slow=28			⇑S	Sn	07 06 36.6	-0.5
ZALV	**Zalesovo Beam** 0.5nm,0.3s,baz=56,slow=18,SNR=6.0	**1.13**	**237**	Pg	Pg	07 06 18.6	-0.9
ZALV	1.0nm,0.3s,baz=54,slow=29,SNR=12			Lg	Lg	07 06 35.5	
KURK	**Kurchatov** 1.8nm,0.8s	**6.12**	**234**	⇑Pn	Pn	07 07 30.8	+1.4
KURK	2.0nm,1.1s			⇓Sn	Sn	07 08 43.4	+3.3
KURK	8.4nm,1.2s			⇑Lg	Lg	07 09 14.6	
KURBB	**Kurchatov Arra** baz=52,slow=14,SNR=17 1.1nm,0.5s	**6.23**	**234**	Pn	Pn	07 07 31.4	+0.6
KURBB	**Kurchatov Arra** 2.0nm,0.7s	**6.23**	**234**	⇑Pn	Pn	07 07 31.6	+0.7
KURBB	3.8nm,0.8s			⇑Sn	Sn	07 08 45.5	+2.8
KURBB	6.3nm,0.9s			⇓Lg	Lg	07 09 17.2	
MK31	**Makanchi Array** 0.2nm,0.2s,baz=176,slow=16,SNR=18	**8.22**	**200**	P	Pg	07 08 36.8	+1.6
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=20,slow=13,SNR=5.5	**8.22**	**200**	Pn	Pn	07 07 59.2	+0.9
MKAR	baz=26,slow=27,SNR=1.8 0.2nm,0.5s			Lg	Lg	07 10 17.0	

NIC ***20*** *07:14:19.5±0.0, 35°.95N×31°.63E, h6^{km}±1^{km}, Ml2.9/4*
DDA ***20*** *07:14:20.2±0.0, 35°.83N×31°.47E, h24^{km}±2^{km}, ML2.6*
ISK ***20*** *07:14:22.9, 36°.04N×31°.57E, h19^{km}, ML2.7/22*

ISC 20 07:14:20.1±1.0**, 35°.91N**±0°.03×**31°.56E**±0°.02**, h17**^{km}±10^{km}**,**
n40, σ**1**^{s}**.25**/58**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZI	**Gazipasa**	**0.70**	**62**	Pg	**Pn**	**07 14 36.0**	**+0.7**
GAZI				Sg	**Sn**	**07 14 45.4**	**-0.3**
GAZI	**Gazipasa**	**0.70**	**62**	P	**Pn**	**07 14 36.2**	**+0.9**
GAZI				S	**Sn**	**07 14 47.2**	**+1.5**
KEPZ	**Antalya-Kepez**	**0.99**	**2**	P	**Pg**	**07 14 39.9**	**+0.5**
KEPZ				S	**Sn**	**07 14 52.5**	**-0.6**
KEPZ	comp=N,118nm,0.6s			i AML	AML	07 14 59.0	
AKUM	**Antalya-Kumluc**	**1.06**	**293**	P	**Pb**	**07 14 39.5**	**-0.6**
AKUM				S	**Sg**	**07 14 55.5**	**+0.8**
AKUM	comp=N,140nm,0.5s			i AML	AML	07 14 56.0	
AKUM	comp=E,193nm,0.6s			i AML	AML	07 15 00.0	
AKMS	**Akamas**	**1.09**	**144**	P	**Pn**	**07 14 39.9**	**-0.8**
AKMS				S	**Sg**	**07 14 56.6**	**+1.0**
AKMS	1.4nm,0.3s			AML	AML	07 15 01.9	
AKMS	1.4nm,0.3s			AML	AML	07 15 01.9	
AKMS	1.4nm,0.5s			AML	AML	07 15 03.7	
AKMS	1.4nm,0.5s			AML	AML	07 15 03.7	
ALFC	**Alefka**	**1.14**	**131**	P	**Pn**	**07 14 40.1**	**-1.3**
ALFC				S	**Sg**	**07 14 57.3**	**+0.4**
ALFC	1.0nm,0.4s			AML	AML	07 15 06.7	
ALFC	1.0nm,0.4s			AML	AML	07 15 06.7	
ALFC	0.9nm,0.4s			AML	AML	07 15 06.9	
ALFC	0.9nm,0.4s			AML	AML	07 15 06.9	
ANTB	**Antalya**	**1.23**	**324**	Pn	**Pg**	**07 14 44.4**	**+0.5**
ANTB				Sn	**Sg**	**07 15 00.2**	**+0.3**
HDMB	**Hadim**	**1.29**	**35**	Pn	**Pg**	**07 14 45.2**	**0.0**
HDMB				Sn	**Sg**	**07 15 01.1**	**-1.0**
LEF	**Lefka**	**1.34**	**125**	P	**Pg**	**07 14 45.8**	**-0.2**
LEF				S	**Sg**	**07 15 03.5**	**-0.1**
NATA	**Nata**	**1.40**	**143**	P	**Pb**	**07 14 45.9**	**+0.1**
NATA	3.9nm,0.7s			AML	AML	07 15 15.7	
NATA	3.0nm,0.6s			AML	AML	07 15 17.3	
BERE	**Bereket-Mersin**	**1.42**	**72**	Pn	**Pg**	**07 14 47.9**	**+0.4**
BERE				Sn	**Sg**	**07 15 05.9**	**-0.1**
TROD	**Troodos**	**1.44**	**131**	P	**Pn**	**07 14 45.4**	**-0.2**
TROD				S	**Sb**	**07 15 05.7**	**+1.0**
TROD	0.3nm,0.5s			AML	AML	07 15 12.0	
TROD	0.3nm,0.5s			AML	AML	07 15 12.0	
TROD	0.3nm,0.4s			AML	AML	07 15 16.1	
TROD	0.3nm,0.4s			AML	AML	07 15 16.1	
KORT	**Korkueli**	**1.46**	**319**	Pn	**Pg**	**07 14 47.9**	**-0.4**
KORT	**Korkueli**	**1.46**	**319**	P	**Pb**	**07 14 46.7**	**-0.3**
KORT				S	**Sg**	**07 15 10.2**	**+2.8**
KORT	comp=N,79nm,0.7s			i AML	AML	07 15 17.0	
KORT	comp=E,88nm,0.7s			i AML	AML	07 15 20.0	
SEYD	**Seydisehir-KON**	**1.51**	**9**	Pn	**Pg**	**07 14 47.9**	**-1.4**
SEDI	**Konya, Seydise**	**1.55**	**6**	P	**Pg**	**07 14 49.1**	**-0.9**
SEDI				S	**Sg**	**07 15 09.5**	**-0.7**
SEDI	comp=E,82nm,0.4s			i AML	AML	07 15 14.0	
SEDI	comp=N,84nm,0.5s			i AML	AML	07 15 17.0	
ELL	**Elmali**	**1.57**	**303**	Pn	**Pg**	**07 14 49.9**	**-0.5**
ELL	**Elmali**	**1.57**	**303**	P	**Pb**	**07 14 48.2**	**-0.6**
SZAC	**Souni**	**1.58**	**136**	S	**Sb**	**07 15 09.4**	**+0.7**
AKAS	**Kas**	**1.61**	**282**	Pn	**Pg**	**07 14 51.1**	**-0.1**
TEVE	**Tevekalti-Mers**	**1.62**	**70**	Pn	**Pg**	**07 14 50.6**	**-0.6**
BUCA	**Burdur, Bucak-**	**1.63**	**331**	P	**Pg**	**07 14 51.3**	**-0.2**
BUCA				S	**Sg**	**07 15 12.9**	**+0.3**
BUCA	comp=E,54nm,0.7s			i AML	AML	07 15 27.0	
BUCA	comp=N,53nm,0.7s			i AML	AML	07 15 28.0	
SUTC	**Sutluce-Ispart**	**1.63**	**344**	Pn	**Pb**	**07 14 49.7**	**-0.1**
KKBE	**Karaman, Kazim**	**1.72**	**40**	P	**Pg**	**07 14 53.3**	**0.0**
KKBE				S	**Sg**	**07 15 20.4**	**+4.8**
KKBE	comp=E,60nm,0.4s			i AML	AML	07 15 25.0	
KKBE	comp=N,60nm,0.5s			i AML	AML	07 15 30.0	
CSS	**Mathiatis**	**1.73**	**123**	P	**Pn**	**07 14 49.6**	**+0.1**
BCK	**Bucak**	**1.73**	**334**	Pn	**Pb**	**07 14 51.4**	**-0.2**
KRMN	**Karaman**	**1.87**	**47**	Pn	**Pb**	**07 14 53.5**	**-0.4**
MVOU	**Mavrovouni**	**1.92**	**117**	P	**Pn**	**07 14 52.0**	**0.0**
KMER	**Konya-Meram**	**1.97**	**19**	P	**Pg**	**07 14 56.8**	**-1.2**
KMER				S	**Sg**	**07 15 22.6**	**-0.9**
KMER	comp=N,50nm,0.7s			i AML	AML	07 15 27.0	
KMER				i AML	AML	07 15 27.0	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=E,49nm,0.6s						
ISP	**Isparta**	**2.08**	**337**	Pn	**Pb**	**07 14 56.1**	**-1.5**
CAME	**Cameli-Denizli**	**2.09**	**300**	Pn	**Pb**	**07 14 57.2**	**-0.5**
FETY	**Fethiye**	**2.12**	**291**	Pn	**Pb**	**07 14 58.2**	**0.0**
KONT	**Konya--Tatoy**	**2.13**	**17**	Pn	**Pb**	**07 14 56.9**	**-1.5**
KIZK	**Mersin**	**2.17**	**74**	P	**Pb**	**07 14 59.7**	**+0.8**
KIZK				S	**Sg**	**07 15 28.2**	**-1.8**
KIZK				*i* AML	AML	07 15 33.0	
	comp=E,36nm,0.7s						
KIZK				*i* AML	AML	07 15 38.0	
	comp=N,37nm,0.7s						
LADK	**Ladik-KONYA**	**2.38**	**16**	Pn	**Pb**	**07 15 00.5**	**-2.1**
APMY	**Acipayam-Deniz**	**2.39**	**311**	Pn	**Pb**	**07 15 01.2**	**-1.6**
DALY	**Dalyan (Mula)**	**2.51**	**292**	Pn	**Pb**	**07 15 03.6**	**-1.2**
KERG	**Konya-Eregli**	**2.56**	**53**	P	**Pb**	**07 15 05.8**	**+0.2**
KERG				S	**Sg**	**07 15 39.7**	**-2.6**
KERG				*i* AML	AML	07 16 39.0	
	comp=N,25nm,2.6s						
YER	**Yerkesik**	**2.91**	**296**	Pn	**Pb**	**07 15 08.9**	**-2.7**
KIZT	**Kizilcal**	**2.98**	**5**	Pn	**Pn**	**07 15 08.8**	**+2.0**

NNC ***20*** *07:16:55.3±0.2, 50°.01N×78°.73E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=3.6km s-min=1.2km az=78.0, Suspected Mining explosion.*

IDC ***20*** *07:16:56.4±1.0, 50°.06N×78°.70E, h0^{km}, mbtmp2.8/2, ML2.3/2, Error ellipse: s-maj=15.7km s-min=6.1km az=67.0*

ISC 20 07:16:50.5±0.9**, 49°.96N**±0°.04×**77°.76E**±0°.05**, h0^{km}, n20, σ0^{s}.81**/33**, 22C-8D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.79**	**38**	⇑P	**Pb**	**07 17 06.8**	**-0.4**
KUR07				⇓S	**Sg**	**07 17 16.0**	**0.0**
KUR06	**Kurchatov Arra**	**0.81**	**37**	⇑P	**Pb**	**07 17 07.1**	**-0.4**
KUR06				⇑S	**Sg**	**07 17 16.4**	**-0.2**
KUR17	**Kurchatov Arra**	**0.81**	**34**	⇑P	**Pb**	**07 17 07.7**	**+0.2**
KUR17				⇓S	**Sg**	**07 17 16.6**	**-0.1**
KUR16	**Kurchatov Arra**	**0.82**	**35**	⇑P	**Pb**	**07 17 07.6**	**-0.1**
KUR16				⇑S	**Sg**	**07 17 16.4**	**-0.5**
KURBB	**Kurchatov Arra**	**0.83**	**37**	Pg	**Pg**	**07 17 06.8**	**+0.3**
	1.8nm,0.3s,baz=167,slow=18,SNR=39						
KURBB				Lg	Lg	07 17 16.7	
	3.5nm,0.3s,baz=165,slow=34,SNR=12						
KURBB	**Kurchatov Arra**	**0.83**	**37**	⇑P	**Pb**	**07 17 07.6**	**-0.3**
	9.9nm,0.3s						
KURBB				⇑S	**Sg**	**07 17 16.6**	**-0.6**
	138nm,0.8s						
KUR15	**Kurchatov Arra**	**0.84**	**38**	⇑P	**Pb**	**07 17 07.3**	**-0.6**
KUR15				⇑S	**Sg**	**07 17 16.1**	**-1.3**
KUR05	**Kurchatov Arra**	**0.85**	**36**	⇑P	**Pb**	**07 17 07.7**	**-0.4**
KUR05				⇑S	**Sg**	**07 17 16.9**	**-0.8**
KUR14	**Kurchatov Arra**	**0.85**	**39**	⇑P	**Pg**	**07 17 07.1**	**+0.3**
KUR14				⇑S	**Sg**	**07 17 16.0**	**-1.8**
KUR04	**Kurchatov Arra**	**0.87**	**35**	⇑P	**Pb**	**07 17 08.1**	**-0.3**
KUR04				⇓S	**Sg**	**07 17 17.3**	**-1.0**
KURK	**Kurchatov**	**0.94**	**36**	⇑P	**Pg**	**07 17 08.9**	**+0.4**
	4.6nm,0.3s						
KURK				⇓S	**Sg**	**07 17 18.8**	**-1.8**
	28nm,0.5s						
OTUK	**Ortayu**	**3.95**	**246**	⇓Pn	**Pg**	**07 18 05.8**	**-0.5**
	0.6nm,0.2s						
OTUK				⇓Lg	Lg	07 19 20.0	
	3.2nm,0.5s						
MAKZ	**Makanchi**	**4.23**	**137**	⇑Pn	**Pn**	**07 17 56.1**	**-0.1**
	0.2nm,0.2s						
MAKZ				⇓Pg	**Pb**	**07 18 06.4**	**+0.7**
	1.6nm,0.7s						
MAKZ				⇑Lg	Lg	07 18 57.5	
	5.6nm,0.5s						
MK31	**Makanchi Array**	**4.38**	**135**	⇑Pn	**Pn**	**07 17 58.5**	**+0.2**
	0.1nm,0.2s,baz=200,slow=21,SNR=43						
MK31				⇓Pg	**Pb**	**07 18 08.5**	**+0.2**
	0.5nm,0.3s,baz=322,slow=14,SNR=24						
MK31				Lg	Lg	07 19 03.1	
	6.3nm,0.5s,baz=339,slow=27,SNR=16						
MKAR	**Makanchi Array**	**4.38**	**135**	Pn	**Pn**	**07 17 59.9**	**+1.6**
	0.2nm,0.3s,baz=323,slow=10,SNR=32						
MKAR				Pg	**Pb**	**07 18 07.3**	**-1.0**
	0.5nm,0.3s,baz=325,slow=19,SNR=16						
MKAR				Sn	**Sn**	**07 18 49.5**	**-0.5**
	0.4nm,0.3s,baz=334,slow=20,SNR=5.1						
MKAR				Lg	Lg	07 19 00.8	
	0.7nm,0.3s,baz=326,slow=30,SNR=5.5						
	0.3nm,0.4s						
BVA0	**Borovoye Array**	**5.53**	**307**	Sn	**Sb**	**07 19 36.2**	**+1.5**
	2.3nm,0.8s,baz=110,slow=21,SNR=6.6						
BVA0				⇑Lg	Lg	07 20 05.9	
	0.2nm,0.4s,baz=117,slow=27,SNR=2.8						
BVAR	**Borovoye Array**	**5.53**	**307**	Sn	**Sb**	**07 19 34.4**	**-0.3**
	0.1nm,0.3s,baz=113,slow=22,SNR=8.0						
BVAR				Lg	Lg	07 20 05.4	
	0.1nm,0.3s,baz=118,slow=29,SNR=1.8						
BRVK	**Borovoye**	**5.60**	**306**	⇑Sn	**Sb**	**07 19 37.2**	**+0.4**
	1.7nm,0.5s						
BRVK				⇑Lg	Lg	07 20 08.2	
	2.3nm,0.7s						
ZALV	**Zalesovo Beam**	**5.92**	**45**	Pn	**Pn**	**07 18 20.2**	**+0.9**
	0.5nm,0.3s,baz=231,slow=14,SNR=6.1						
ZALV				Lg	Lg	07 19 48.1	
	0.1nm,0.3s,baz=234,slow=24,SNR=1.6						
	1.3nm,0.2s						
I46RU	**ZALESOVO INFRA**	**5.92**	**45**	I	I	07 51 52.4	
	baz=223,slow=330,SNR=5.3						

IDC 20 07:21:20.8±2.7**, 53°.75N**×**86°.94E, h0^{km}, mbtmp2.7**/2**, ML1.9**/1**, Error ellipse: s-maj=23.9km s-min=13.7km az=70.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.27**	**280**	I	I	07 28 00.0	
	baz=99,slow=337,SNR=18						
ZALV	**Zalesovo Beam**	**1.27**	**280**	Pg	Pg	07 21 44.1	-1.1
	0.6nm,0.3s,baz=97,slow=14,SNR=17						
ZALV				Lg	Lg	07 22 02.4	
	0.8nm,0.3s,baz=97,slow=26,SNR=14						
KURBB	**Kurchatov Arra**	**6.05**	**242**	Pn	Pn	07 22 52.3	+0.9
	baz=58,slow=14,SNR=4.1						
KURBB				Lg	Lg	07 24 31.3	
	baz=66,slow=32,SNR=2.1						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**7.58**	**205**	Pn	Pn	07 23 13.8	+1.4
	0.2nm,0.5s,baz=25,slow=13,SNR=7.1						
MKAR				Sn	Sn	07 24 39.0	+0.1
	0.1nm,0.3s,baz=28,slow=26,SNR=1.7						
MKAR				Lg	Lg	07 25 20.0	
	0.1nm,0.3s,baz=27,slow=32,SNR=1.8						

NEIC ***20*** *07:24:39.5±2.2, 36°.1S±0°.1×100°.5W±0°.1, h10^{km}±1^{km}, mb4.7/61, Error ellipse: s-maj=20.4km s-min=17.1km az=231.0*

IDC ***20*** *07:24:40.3±1.1, 36°.14S×100°.37W, h0^{km}, mb3.9/8, mbtmp3.9/8, MS4.1/39, Error ellipse: s-maj=35.6km s-min=22.7km az=49.0*

GCMT ***20*** *07:24:44.5±0.2, 36°.19S±0°.01×100°.47W±0°.01, h17^{km}±1^{km}, MW5.1/127, Moment Tensor Solution. s56,c70; s127,c186; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.61±.13; $M_{\theta\theta}$-0.83±.11; $M_{\phi\phi}$1.44±.11; $M_{r\theta}$1.52±.30; $M_{\theta\phi}$-4.55±.10; $M_{\phi r}$-0.12±.26; Best double couple: $M_0$4.94200×10^{16} NP1:ϕ_s278.00000°, δ86.00000°, λ-161.00000°. NP2:ϕ_s187.00000°, δ71.00000°, λ-4.00000°. Principal axes: T 5.1810, Plg10.0000°, Azm51.0000°; N -0.4760, Plg71.0000°, Azm289.0000°; P -4.7020, Plg16.0000°, Azm144.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 07:24:40.6±0.6**, 36°.10S**±0°.09×**100°.4W**±0°.1**, h16^{km}, n118, σ1^{s}.45**/73**, mb4.7**/35**, MS4.2**/40**, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**11.74**	**317**	LR	LR	07 30 39.5	
	comp=Z,2μm,19.7s,baz=136,slow=30						
RPN	**Rapa Nui**	**11.74**	**317**	Pn	**Pn**	**07 27 24.6**	**-2.9**
VA02	**Isla de Pascua**	**11.77**	**317**	Pn	**Pn**	**07 27 24.6**	**-3.3**
H03S2	**Juan Fernandez**	**17.74**	**89**	T	T	07 47 25.7	
	baz=254,slow=75,SNR=11						
H03S1	**Juan Fernandez**	**17.76**	**89**	T	T	07 47 24.0	
	baz=254,slow=75,SNR=4.1						
H03S3	**Juan Fernandez**	**17.76**	**89**	T	T	07 47 22.0	
	baz=254,slow=75,SNR=6.1						
H03N2	**Juan Fernandez**	**17.83**	**88**	T	T	07 47 27.5	
	baz=255,slow=72						
H03N3	**Juan Fernandez**	**17.84**	**88**	T	T	07 47 31.4	
	baz=255,slow=72						
H03N1	**Juan Fernandez**	**17.85**	**88**	T	T	07 47 31.7	
	baz=255,slow=72						
VA04	**Juan Fernndez**	**17.87**	**88**	Pn	**Pn**	**07 28 46.8**	**-1.7**
VA04				IAmb	IAmb	07 28 52.8	
	comp=Z,109nm,1.1s						
LL04	**Puerto Octay**	**22.38**	**111**	P	**P**	**07 29 37.1**	**-1.0**
LL04				IAmb	IAmb	07 29 59.0	
	comp=Z,28nm,1.5s						
LR03	**Panguipulli**	**22.39**	**108**	P	**P**	**07 29 38.1**	**-0.1**
LR03				IAmb	IAmb	07 30 03.7	
	comp=Z,24nm,1.1s						
AY01	**Puyuhuapi**	**22.67**	**120**	P	**P**	**07 29 39.6**	**-1.5**
AY02	**Valle Explorad**	**22.82**	**125**	P	**P**	**07 29 43.4**	**+0.6**
LL02	**Futaleuf**	**23.02**	**117**	P	**P**	**07 29 44.4**	**-0.5**
GO06	**Curarrehue**	**23.06**	**107**	P	**P**	**07 29 44.8**	**-0.7**
COYC	**Coyhaique**	**23.32**	**123**	P	**P**	**07 29 47.3**	**-0.5**
VA05	**Santo Domingo**	**23.70**	**93**	P	**P**	**07 29 50.1**	**-1.7**
VA05				IAmb	IAmb	07 30 16.1	
	comp=Z,29nm,0.9s						
PLCA	**Paso Flores**	**23.78**	**110**	P	**P**	**07 29 55.1**	**+2.6**
	comp=Z,3.8nm,0.8s,baz=282,slow=9.4,SNR=12						
PLCA				LR	LR	07 35 47.8	
	comp=Z,174nm,19.6s,baz=273,slow=28						
	comp=Z,3.8nm,0.8s						
PLCA	**Paso Flores**	**23.78**	**110**	P	**P**	**07 29 52.3**	**-0.3**
GO08	**Villa O'Higgin**	**23.88**	**130**	P	**P**	**07 29 52.4**	**-0.8**
GO08				IAmb	IAmb	07 30 08.0	
	comp=Z,26nm,1.4s						
MT01	**Popeta**	**23.95**	**93**	P	**P**	**07 29 55.0**	**+0.9**
BO01	**Tunca**	**23.96**	**95**	P	**P**	**07 29 52.9**	**-1.4**
BO02	**Sierra Bellavi**	**24.12**	**96**	P	**P**	**07 29 52.6**	**-3.2**
MT09	**Talagante**	**24.18**	**93**	P	**P**	**07 29 54.2**	**-2.2**
VA06	**Catapilco**	**24.25**	**90**	P	**P**	**07 29 57.2**	**+0.3**
VA06				IAmb	IAmb	07 29 59.7	
	comp=Z,27nm,1.1s						
MT05	**Renca**	**24.48**	**92**	P	**P**	**07 30 01.7**	**+2.6**
MT05				IAmb	IAmb	07 30 29.2	
	comp=Z,36nm,1.2s						
CO06	**Fray Jorge**	**24.57**	**86**	P	**P**	**07 29 58.8**	**-1.1**
CO06				IAmb	IAmb	07 30 07.9	
	comp=Z,52nm,1.4s						
PEL	**Peldehue**	**24.59**	**92**	P	**P**	**07 29 58.1**	**-2.0**
PEL				IAmb	IAmb	07 30 11.9	
	comp=Z,36nm,1.4s						
MT13	**San Alfonso**	**24.76**	**93**	P	**P**	**07 29 59.6**	**-2.1**
MT13				IAmb	IAmb	07 30 27.1	
	comp=Z,14nm,0.9s						
VA03	**San Esteban**	**24.80**	**91**	P	**P**	**07 30 01.4**	**-0.7**
VA03				IAmb	IAmb	07 30 29.2	
	comp=Z,20nm,1.1s						
LMEL	**Las Melosas**	**24.80**	**94**	P	**P**	**07 30 00.4**	**-1.8**
LMEL				IAmb	IAmb	07 30 07.7	
	comp=Z,29nm,1.0s						
MT08	**Bocatoma Ro**	**25.05**	**93**	P	**P**	**07 30 01.0**	**-3.5**
MT08				IAmb	IAmb	07 30 09.9	
	comp=Z,15nm,0.9s						
GO09	**Cerro Castillo**	**25.13**	**136**	P	**P**	**07 30 03.9**	**-0.8**
GO09				IAmb	IAmb	07 30 26.8	
	comp=Z,46nm,1.4s						
CO05	**La Serena**	**25.16**	**84**	P	**P**	**07 30 04.1**	**-1.1**
CO05				IAmb	IAmb	07 30 17.2	
	comp=Z,31nm,0.9s						
MG05	**Puerto Natales**	**25.22**	**137**	P	**P**	**07 30 04.8**	**-0.7**
CO03	**El Pedregal**	**25.28**	**87**	P	**P**	**07 30 05.1**	**-1.3**
CO03				IAmb	IAmb	07 30 09.6	
	comp=Z,23nm,1.4s						
AC04	**Llanos de Chal**	**25.98**	**81**	P	**P**	**07 30 13.5**	**+0.8**
AC04				IAmb	IAmb	07 30 19.6	
	comp=Z,35nm,1.4s						
MG04	**Isla Riesco**	**26.28**	**139**	P	**P**	**07 30 14.3**	**-0.7**
CFA	**Coronel Fontan**	**27.01**	**90**	P	**P**	**07 30 23.8**	**+1.8**
	comp=Z,3.0nm,1.1s,baz=52,slow=1.2,SNR=3.7						
CFA				LR	LR	07 38 23.0	
	comp=Z,383nm,20.0s,baz=258,slow=30						
	comp=Z,3.0nm,1.1s						
MG03	**Isla Dawson**	**27.33**	**140**	P	**P**	**07 30 24.2**	**-0.3**
LVC	**Limon Verde**	**30.41**	**72**	LR	LR	07 40 01.7	
	comp=Z,528nm,19.2s,baz=246,slow=30						
TRQA	**Tornquist**	**30.57**	**105**	P	**P**	**07 30 53.7**	**+0.1**
TRQA				IAmb	IAmb	07 31 12.8	
	comp=Z,9.7nm,1.2s						
GO01	**Chusmiza**	**31.89**	**68**	P	**P**	**07 31 05.3**	**-0.6**
GO01				IAmb	IAmb	07 31 11.6	
	comp=Z,17nm,1.5s						
MNMC	**Minye Minye**	**31.92**	**66**	P	**P**	**07 31 05.8**	**-0.1**
MNMC				IAmb	IAmb	07 31 11.3	
	comp=Z,14nm,1.0s						
NNA	**Nana**	**32.06**	**47**	LR	LR	07 41 11.4	
	comp=Z,537nm,19.6s,baz=224,slow=31						
ATAH	**Atahualpa**	**35.16**	**40**	LR	LR	07 42 26.4	
	comp=Z,668nm,20.9s,baz=223,slow=30						
PMSA	**Palmer Station**	**35.95**	**154**	LR	LR	07 42 17.0	
	comp=Z,575nm,20.7s,baz=302,slow=29						
MCRA	**Macar, Loja**	**36.77**	**36**	P	**P**	**07 31 48.7**	**+1.0**
ITQB	**Itaqui**	**37.08**	**93**	P	**P**	**07 31 49.8**	**-0.4**
ITQB				IAmb	IAmb	07 32 08.9	
	comp=Z,23nm,1.2s						
CPUP	**Villa Florida**	**37.84**	**87**	LR	LR	07 45 15.2	
	comp=Z,167nm,18.5s,baz=247,slow=33						
ESPZ	**Base Esperanza**	**37.94**	**150**	P	**P**	**07 31 57.0**	**0.0**
PLTB	**Pedras Altas**	**38.78**	**98**	P	**P**	**07 32 05.5**	**+0.9**
PLTB				IAmb	IAmb	07 32 15.5	
	comp=Z,23nm,1.4s						
SIV	**San Ignacio**	**40.26**	**71**	P	**P**	**07 32 18.4**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=234,slow=5.5,SNR=5.6						
SIV				LR	LR	07 46 46.3	
	comp=Z,304nm,21.5s,baz=264,slow=33						
	comp=Z,0.8nm,0.6s						
ETMB	**Extrema**	**40.57**	**58**	P	**P**	**07 32 18.0**	**-1.5**
PULU	**Pululahua**	**41.30**	**34**	P	**P**	**07 32 24.7**	**-1.3**
OTAV	**Otavalo**	**41.52**	**34**	P	**P**	**07 32 27.8**	**0.0**
AQDB	**Aquidauana**	**41.95**	**81**	P	**P**	**07 32 30.8**	**-0.1**
AQDB				IAmb	IAmb	07 32 49.7	
	comp=Z,15nm,1.4s						
PTLB	**Pontes e Lacer**	**42.07**	**72**	P	**P**	**07 32 31.3**	**-0.6**
TULM	**Tulcn-Chalpat**	**42.24**	**35**	P	**P**	**07 32 33.0**	**-0.9**
TULM				IAmb	IAmb	07 32 39.5	
	comp=Z,17nm,0.8s						
TBTG	**Tabatinga, AM**	**42.39**	**49**	P	**P**	**07 32 35.4**	**+0.9**
SAML	**Samuel**	**43.29**	**61**	P	**P**	**07 32 40.3**	**-1.5**
TAOE	**Nuku Hiva Isla**	**45.17**	**297**	*e*S	S	07 39 15.6	-21
	comp=Z,160nm,25.8s						
TAOE				*e*LR	LR	07 44 49.6	
	comp=Z,245nm,25.6s						
HOPE	**Hope Point**	**46.84**	**134**	P	**P**	**07 33 08.1**	**-1.5**
PPT2	**Papeete2**	**47.06**	**280**	*e*S	S	07 39 43.6	-20
	comp=Z,83nm,25.2s						
PPT2				*e*LR	LR	07 45 05.4	
	comp=Z,125nm,23.2s						
ROSC	**El Rosal**	**47.49**	**36**	P	**P**	**07 33 15.7**	**+0.2**
JTS	**Las Juntas de**	**48.38**	**21**	LR	LR	07 48 42.6	
	comp=Z,391nm,21.3s,baz=194,slow=30						
RUSC	**La Rusia**	**49.00**	**37**	P	**P**	**07 33 26.6**	**-0.6**
RUSC				IAmb	IAmb	07 33 41.3	
	comp=Z,20nm,1.5s						
MACA	**Manacapuru-AM**	**49.14**	**58**	P	**P**	**07 33 27.8**	**-0.1**
BELA	**Belgrano 2**	**49.94**	**165**	P	**P**	**07 33 34.0**	**+0.8**
BELA				IAmb	IAmb	07 33 37.4	
	comp=Z,7.7nm,1.2s						
BDFB	**Brasilia**	**50.70**	**80**	LR	LR	07 53 08.3	
	comp=Z,239nm,21.1s,baz=307,slow=34						
SDV	**Santo Domingo**	**52.79**	**38**	LR	LR	07 55 03.6	
	comp=Z,164nm,18.9s,baz=210,slow=34						
SDV	**Santo Domingo**	**52.79**	**38**	P	**P**	**07 33 55.6**	**+0.1**
CMIG	**Matias Romero**	**53.16**	**7**	LR	LR	07 50 48.4	
	comp=Z,252nm,20.1s,baz=181,slow=30						
BOAV	**Boa Vista**	**53.37**	**53**	P	**P**	**07 33 59.2**	**-0.4**
BOAV				IAmb	IAmb	07 34 09.9	
	comp=Z,16nm,1.5s						
QSPA	**South Pole Qui**	**54.12**	**180**	P	**P**	**07 34 05.9**	**+1.3**
	comp=Z,2.6nm,0.9s,baz=147,slow=5.1,SNR=4.6						
QSPA				LR	LR	07 54 11.4	
	comp=Z,219nm,18.1s,baz=121,slow=33						
	comp=Z,2.6nm,0.9s						
QSPA	**South Pole Qui**	**54.12**	**180**	P	**P**	**07 34 05.0**	**+0.4**
QSPA				IAmb	IAmb	07 34 08.2	
	comp=Z,5.7nm,1.1s						
VNDA	**Vanda**	**56.72**	**195**	LR	LR	07 54 10.6	
	comp=Z,149nm,18.2s,baz=110,slow=31						
SNAA	**Sanae**	**58.48**	**158**	LR	LR	07 55 26.8	
	comp=Z,328nm,20.7s,baz=276,slow=32						
SNAA	**Sanae**	**58.48**	**158**	P	**P**	**07 34 35.2**	**-0.4**
SNAA				IAmb	IAmb	07 34 38.4	
	comp=Z,8.0nm,1.2s						
MDP	**Montagnes des**	**60.62**	**58**	LR	LR	07 58 31.8	
	comp=Z,427nm,20.1s,baz=212,slow=34						
CRPR	**Cabo Rojo, PR**	**62.35**	**36**	P	**P**	**07 35 03.5**	**+1.0**
MLPR	**Magueyes Islan**	**62.35**	**36**	P	**P**	**07 35 03.3**	**+0.9**
HUMP	**Col San Antoni**	**63.08**	**37**	P	**P**	**07 35 07.9**	**+0.6**
GCPR	**Guaynabo City**	**63.11**	**37**	P	**P**	**07 35 08.8**	**+1.3**
URZ	**Urewera**	**63.57**	**241**	LR	LR	07 55 14.2	
	comp=Z,193nm,21.8s,baz=206,slow=29						
TX31	**Lajitas Ar. Si**	**65.16**	**357**	P	**P**	**07 35 20.2**	**-0.7**
TX32	**Lajitas Array**	**65.16**	**357**	P	**P**	**07 35 21.0**	**+0.1**
TX32				IAmb	IAmb	07 35 46.8	
	comp=Z,7.1nm,1.4s						
TXAR	**Lajitas Array**	**65.16**	**357**	P	**P**	**07 35 22.6**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=170,slow=7.6,SNR=5.7						
TXAR				LR	LR	07 59 14.8	
	comp=Z,23nm,22.0s,baz=170,slow=32						
	comp=Z,0.4nm,0.7s						
TXAR	**Lajitas Array**	**65.16**	**357**	P	**P**	**07 35 20.8**	**-0.1**
RPZ	**Rata Peaks**	**65.24**	**233**	LR	LR	07 56 22.1	
	comp=Z,293nm,21.3s,baz=104,slow=29						
AFI	**Afiamalu**	**66.97**	**269**	LR	LR	07 56 39.5	
	comp=Z,107nm,18.6s,baz=120,slow=29						
ANMO	**Albuquerque**	**70.91**	**355**	LR	LR	08 03 48.3	
	comp=Z,56nm,19.4s,baz=264,slow=33						
PFO	**Pinyon Flats O**	**70.96**	**346**	LR	LR	08 00 03.3	
	comp=Z,77nm,18.8s,baz=222,slow=30						
TKL	**Tuckaleechee C**	**73.05**	**14**	LR	LR	08 05 43.9	
	comp=Z,60nm,18.1s,baz=179,slow=34						
MAW	**Mawson**	**75.84**	**173**	LR	LR	08 07 13.0	
	comp=Z,130nm,20.7s,baz=200,slow=34						
NVAR	**Mina Array Bea**	**75.98**	**346**	P	**P**	**07 36 30.1**	**+3.1**
	comp=Z,0.8nm,0.8s,baz=180,slow=8.1,SNR=6.4						
NVAR				LR	LR	08 03 09.0	
	comp=Z,59nm,20.6s,baz=208,slow=30						
	comp=Z,0.8nm,0.8s						
ELK	**Elko**	**77.68**	**349**	LR	LR	08 05 38.8	
	comp=Z,86nm,18.2s,baz=178,slow=32						
PDAR	**Pinedale Array**	**78.93**	**353**	P	**P**	**07 36 45.9**	**+2.6**
	comp=Z,0.7nm,0.6s,baz=152,slow=6.3,SNR=10						
	comp=Z,0.7nm,0.6s						
DZM	**Mont Dzumac**	**79.76**	**250**	*e*LR	LR	08 01 03.4	
	comp=Z,462nm,25.9s						
DZM	**Mont Dzumac**	**79.76**	**250**	LR	LR	08 10 04.2	
	comp=Z,129nm,18.3s,baz=210,slow=34						
YBH	**Yreka Blue Hor**	**80.11**	**343**	LR	LR	08 04 24.2	
	comp=Z,59nm,19.3s,baz=166,slow=30						
SADO	**Sadowa**	**82.77**	**15**	LR	LR	08 11 07.0	
	comp=Z,128nm,18.2s,baz=154,slow=34						
NEW	**Newport**	**85.31**	**349**	LR	LR	08 08 08.7	
	comp=Z,79nm,21.8s,baz=142,slow=31						
STKA	**Stephens Creek**	**90.88**	**229**	LR	LR	08 09 49.2	
	comp=Z,155nm,21.6s,baz=166,slow=30						
SUR	**Sutherland**	**92.43**	**134**	LR	LR	08 13 46.0	
	comp=Z,101nm,18.7s,baz=188,slow=32						
BBTS	**Babate**	**93.66**	**75**	LR	LR	08 16 53.4	
	comp=Z,83nm,19.3s,baz=234,slow=34						
SCHQ	**Schefferville**	**95.05**	**19**	LR	LR	08 16 51.7	
	comp=Z,159nm,20.4s,baz=213,slow=33						
CTA	**Charters Tower**	**95.82**	**240**	LR	LR	08 14 06.2	
	comp=Z,143nm,20.5s,baz=126,slow=31						
BOSA	**Boshof**	**97.79**	**134**	LR	LR	08 15 22.8	
	comp=Z,50nm,18.0s,baz=198,slow=31						
DBIC	**Dimbokro**	**98.36**	**88**	LR	LR	08 19 12.0	
	comp=Z,86nm,19.8s,baz=244,slow=33						
YKA	**Yellowknife Ar**	**98.92**	**353**	P	**Pdif**	**07 38 22.2**	**+2.9**
	comp=Z,0.1nm,0.7s,baz=165,slow=4.4,SNR=2.5						
	comp=Z,0.1nm,0.7s						
TSUM	**Tsumeb**	**99.63**	**122**	LR	LR	08 15 23.0	
	comp=Z,38nm,21.3s,baz=333,slow=31						
H01W1	**Cape Leeuwin H**	**102.37**	**209**	T	T	09 33 51.7	
	baz=154						
H01W2	**Cape Leeuwin H**	**102.38**	**208**	T	T	09 33 46.6	
	baz=154						
H01W3	**Cape Leeuwin H**	**102.39**	**209**	T	T	09 33 48.5	
	baz=154						
NRIK	**Noril'sk**	**146.42**	**355**	PKPbc	**PKiKP**	**07 44 22.5**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=24,slow=1.7,SNR=5.3						
KBZ	**Khabaz**	**151.02**	**63**	PKPbc	**PKiKP**	**07 44 34.1**	**+1.2**
	comp=Z,3.7nm,1.0s,baz=265,slow=3.1,SNR=4.6						

IDC ***20*** *07:44:01.6±2.7, 20°.79S×177°.00W, h266^{km}±28^{km}, mb3.5/10, mbtmp4.2/12, Error ellipse: s-maj=18.5km s-min=11.4km az=124.0*

NOU ***20*** *07:44:07.0, 20°.55S×176°.71W, h340^{km}, mb4.4/14, Fiji Islands Region*

ISC 20 07:44:09.0±0.7**, 20°.7S**±0°.1×**177°.00W**±0°.09**, h350^{km}, n22, σ1^{s}.90**/22**, mb3.5**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**3.00**	**325**	P	**Pn**	**07 45 05.7**	**-2.7**
TAVE	**Taveuni**	**4.84**	**325**	P	**Pn**	**07 45 25.0**	**-2.0**
NIUE	**Niue**	**6.85**	**78**	P	**Pn**	**07 45 45.0**	**-4.7**
AFI	**Afiamalu**	**8.40**	**37**	P	Pn	07 46 00.7	-7.5
	14nm,0.3s,baz=140,slow=4.0,SNR=7.8						
AFI				S	S	07 47 27.7	-18
	39nm,0.5s,baz=50,slow=23,SNR=10						
YATNC	**Mamie plateau,**	**15.06**	**262**	P	**Pn**	**07 47 26.6**	**-0.1**
OUENC	**Ouen Island, N**	**15.13**	**261**	P	**Pn**	**07 47 27.2**	**-0.2**
DZM	**Mont Dzumac**	**15.48**	**262**	P	**P**	**07 47 30.2**	**+1.1**
	17nm,0.7s,baz=74,slow=23,SNR=17						
DZM	**Mont Dzumac**	**15.48**	**262**	P	**Pn**	**07 47 30.9**	**-0.7**
MXZ	**Matakaoa Point**	**17.28**	**193**	P	**P**	**07 47 49.1**	**+0.9**
URZ	**Urewera**	**18.22**	**195**	P	**P**	**07 47 54.3**	**-3.9**
	9.5nm,0.4s,baz=15,slow=1.9,SNR=20						
URZ				S	**S**	**07 51 08.8**	**+0.6**
	12nm,0.5s,baz=121,slow=24,SNR=17						
BKZ	**Black Stump Fm**	**19.23**	**196**	P	**P**	**07 48 09.4**	**+0.4**
QRZ	**Quartz Range**	**21.95**	**202**	P	**P**	**07 48 34.9**	**+0.3**
CTA	**Charters Tower**	**34.40**	**264**	P	**P**	**07 50 24.4**	**-0.3**
	8.4nm,0.6s,baz=88,slow=10,SNR=19						
	8.4nm,0.6s						
PMG	**Port Moresby**	**36.30**	**283**	P	**P**	**07 50 41.0**	**+0.3**
	8.3nm,0.6s,baz=15,slow=4.7,SNR=4.9						
	8.3nm,0.6s						
STKA	**Stephens Creek**	**38.54**	**245**	P	**P**	**07 50 59.4**	**+0.2**
	1.1nm,0.4s,baz=103,slow=12,SNR=5.9						
	1.1nm,0.4s						
ASAR	**Alice Springs**	**45.38**	**257**	P	**P**	**07 51 53.9**	**-0.3**
	4.1nm,0.7s,baz=97,slow=8.5,SNR=36						
	4.1nm,0.7s						
WRA	**Warramunga Arr**	**45.50**	**262**	P	**P**	**07 51 54.0**	**-1.1**
	2.4nm,0.8s,baz=95,slow=7.5,SNR=27						
	2.4nm,0.8s						
NVAR	**Mina Array Bea**	**80.54**	**43**	P	**P**	**07 55 44.8**	**+1.4**
	0.6nm,0.8s,baz=218,slow=9.3,SNR=2.9						
	0.6nm,0.8s						
TXAR	**Lajitas Array**	**86.38**	**57**	P	**P**	**07 56 15.7**	**+2.7**
	0.5nm,0.7s,baz=224,slow=7.4,SNR=9.3						
	0.5nm,0.7s						
ILAR	**Eielson Array**	**88.31**	**12**	P	**P**	**07 56 21.1**	**+0.1**
	0.4nm,0.8s,baz=216,slow=6.9,SNR=3.0						
	0.4nm,0.8s						
PDAR	**Pinedale Array**	**88.47**	**43**	P	**P**	**07 56 24.9**	**+2.2**
	0.2nm,0.8s,baz=219,slow=12,SNR=1.7						
	0.2nm,0.8s						
YKA	**Yellowknife Ar**	**96.31**	**24**	P	**P**	**07 56 58.9**	**+1.0**
	0.2nm,0.8s,baz=244,slow=4.4,SNR=3.4						
	0.2nm,0.8s						

IDC ***20*** *07:46:00.8±1.6, 1°.57S×120°.19E, h0^{km}, mb3.4/3, mbtmp3.4/4, ML3.3/1, Error ellipse: s-maj=60.5km s-min=24.5km az=71.0*

DJA ***20*** *07:46:01.9±1.3, 1°S±3°×12°0E±°, h24^{km}±13^{km}, M4.1/12, mb4.2/3, mB5.2/2, MLv4.0/12, Mw(mB)4.6/2*

ISC 20 07:45:59.4±1.2**, 1°.35S**±0°.06×**119°.9E**±0°.1**, h10^{km}, n12, σ0^{s}.70**/14**, mb3.5**/3**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPSI	**Mapaga**	**1.67**	**1**	P	**Pb**	**07 46 30.8**	**+0.5**
SPSI	**Sidrap Palu**	**2.60**	**182**	P	**Pn**	**07 46 42.1**	**+0.6**
SPSI				S	**Sn**	**07 47 12.7**	**-0.5**
MRSI	**Marisa**	**2.76**	**49**	P	**Pn**	**07 46 43.4**	**-0.3**
MRSI				S	**Sn**	**07 47 17.6**	**+0.6**
LUWI	**Luwuk**	**2.92**	**84**	P	**Pn**	**07 46 46.4**	**+0.4**
KAPI	**Kappang**	**3.64**	**182**	Pn	**Pn**	**07 46 55.3**	**-0.6**
	3.1nm,0.3s,baz=347,slow=8.3,SNR=7.2						
KAPI				Sn	**Sn**	**07 47 39.8**	**+0.9**
	1.4nm,0.3s,baz=95,slow=17,SNR=1.7						

	13nm,0.4s						
GTOI	Gorontalo	3.71	58	P	Pn	07 46 56.0	-0.8
BKSI	Bulukumba	3.96	176	P	Pn	07 47 00.3	+0.1
SANI	Sanana	6.16	97	P	Pn	07 47 30.8	+0.3
	7.1nm,0.4s,0.1nm						
LBMI	Labuha	7.67	85	P	Pn	07 47 51.2	0.0
	27nm,0.7s,1µm0.2nm						
WRA	Warramunga Arr	23.28	143	P	P	07 51 06.0	-1.5
	1.1nm,0.8s,baz=317,slow=11,SNR=5.8						
	1.1nm,0.8s						
ASAR	Alice Springs	26.03	150	P	P	07 51 33.0	+0.1
	0.3nm,0.3s,baz=334,slow=10,SNR=4.0						
	0.3nm,0.3s						
MKAR	Makanchi Array	58.17	330	P	P	07 55 59.1	+5.5
	0.3nm,0.7s,baz=136,slow=6.4,SNR=3.8						
	0.3nm,0.7s						

ISK ***20*** *08:01:50.8, 39°.56N×26°.13E, h4^{km}, ML3.6/51*
SOF ***20*** *08:01:50.1, 39°.55N×26°.16E, h6^{km}, MD3.2*
DDA ***20*** *08:01:51.0±0.0, 39°.57N×26°.18E, h1^{km}, ML3.5*
THE ***20*** *08:01:51.6, 39°.55N×26°.16E, h6^{km}, ML3.2/7, Error ellipse: s-maj=0.5km s-min=0.2km az=251.0*
ATH ***20*** *08:01:52.1, 39°.56N×26°.14E, h7^{km}±2^{km}, ML3.0/9, Error ellipse: s-maj=2.3km s-min=0.9km az=182.0*
ISC 20 08:01:51.4±0.9, **39°.56N**±0°.01×**26°.14E**±0°.02, **h9**^{km}±6^{km}, **n97**, σ**0^s.74**/136, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.06	179	P	Pg	08 01 52.9	-0.3
GPNR	Gulpinar-Canak	0.10	182	Pg	Pg	08 01 53.4	-0.4
BOZC	Bozcaada	0.29	347	Pg	Pg	08 01 57.3	+0.2
BOZC				Sg	Sg	08 02 02.0	+1.0
EZN	Ezine	0.30	29	P	Pg	08 01 57.5	+0.1
EZN				S	Sg	08 02 02.0	+0.6
	6µm,0.3s						
EZN	Ezine	0.30	29	Pg	Pg	08 01 57.4	+0.1
EZN				Sg	Sg	08 02 02.2	+0.8
PRK	Paraskevi	0.33	162	P	Pg	08 01 58.0	+0.2
PRK				S	Sg	08 02 02.6	+0.3
	11µm,0.6s						
PRK	Paraskevi	0.33	162	P	Pg	08 01 58.1	+0.2
PRK				S	Sg	08 02 02.9	+0.7
PRK				AML	AML	08 02 05.5	
	comp=N,17810µm,0.5s						
PRK				AML	AML	08 02 05.8	
	comp=E,28050µm,0.7s						
BAYC	CANAKKALE_Bayr	0.36	60	P	Pg	08 01 58.1	-0.4
BAYC				S	Sg	08 02 03.3	-0.1
SIGR	SIGRI	0.41	212	P	Pg	08 01 59.6	+0.2
SIGR				S	Sg	08 02 05.8	+1.0
	comp=E,3µm,0.4s						
SIGR	SIGRI	0.41	212	Pg	Pg	08 01 59.6	+0.2
SIGR				Sg	Sg	08 02 05.9	+1.1
SIGR	SIGRI	0.41	212	P	Pg	08 01 59.7	+0.3
SIGR				S	Sg	08 02 05.6	+0.8
SIGR				AML	AML	08 02 11.3	
	comp=N,6312µm,0.4s						
SIGR				AML	AML	08 02 11.6	
	comp=E,6314µm,0.5s						
ECEA	Canakkale, Ece	0.48	3	P	Pg	08 02 00.6	-0.2
ECEA				S	Sb	08 02 08.6	-0.7
COMU	Canakkale	0.60	26	Pg	Pb	08 02 03.2	-0.8
COMU				Sg	Sb	08 02 12.2	-0.4
GOKA	anakkale-Gk	0.65	344	P	Pg	08 02 03.8	-0.2
GOKA				S	Sb	08 02 13.8	-0.4
GADA	Gvkgeada	0.66	344	Pg	Pg	08 02 04.2	+0.2
GADA				Sg	Sb	08 02 13.6	-0.7
BUHA	Balikesir, Bur	0.73	94	P	Pb	08 02 05.4	-0.9
BUHA				S	Sb	08 02 14.9	-1.4
DKL	Dikili	0.77	129	Pg	Pb	08 02 06.4	-0.5
DKL				Sg	Sb	08 02 17.9	+0.4
LIA	Limnos Island	0.81	295	P	Pb	08 02 07.4	-0.2
LIA				S	Sb	08 02 19.5	+0.8
	comp=E,2µm,0.5s						
LIA	Limnos Island	0.81	295	P	Pb	08 02 07.7	+0.1
LIA				S	Sb	08 02 19.1	+0.5
LIA				AML	AML	08 02 23.0	
	comp=N,4177µm,0.4s						
LIA				AML	AML	08 02 25.8	
	comp=E,4773µm,0.5s						
CANM	Can-anakkale	0.84	57	Pg	Pb	08 02 07.8	-0.3
GELI	Tayfur-Gelibol	0.88	17	Pg	Pb	08 02 08.5	-0.3
GELI				Sg	Sb	08 02 21.1	+0.5
KARB	zmir-Karabur	0.92	166	P	Pb	08 02 09.5	0.0
KARB				S	Sn	08 02 23.5	-0.4
KARB				i AML	AML	08 02 26.0	
	comp=E,1µm,0.3s						
ZEDA	zmir-Bergama	0.94	129	P	Pg	08 02 09.0	-0.4
ZEDA				S	Sb	08 02 22.4	0.0
LPK	Lapseki	0.94	30	Pg	Pb	08 02 09.6	-0.3
SMTH	Samothraki Isl	1.02	333	P	Pb	08 02 11.2	-0.1
SMTH				S	Sn	08 02 26.0	-0.4
SMTH	Samothraki Isl	1.02	333	P	Pg	08 02 11.0	0.0
SMTH				S	Sb	08 02 25.1	+0.3
SMTH				AML	AML	08 02 28.0	
	comp=N,954µm,0.5s						
SMTH				AML	AML	08 02 31.3	
	comp=E,771µm,0.4s						
PSRA	Psara	1.11	204	P	Pn	08 02 13.5	+0.4
PSRA				S	Sb	08 02 27.8	+0.5
PSRA				AML	AML	08 02 31.9	
	comp=E,5392µm,0.3s						
PSRA				AML	AML	08 02 34.4	
	comp=N,4956µm,0.2s						
CAVK	Edirne/Enez-Ca	1.13	1	P	Pn	08 02 13.5	+0.1
CAVK				S	Sn	08 02 29.4	+0.3
CAVK				i AML	AML	08 02 31.0	
	comp=N,1µm,0.6s						
CAVK				i AML	AML	08 02 32.0	
	comp=N,617nm,0.4s						
ERIK	Erikli-Kesan	1.15	14	Pn	Pn	08 02 13.4	-0.2
ENEZ	Enez	1.17	1	P	Pg	08 02 13.5	-0.4
ENEZ				S	Sn	08 02 30.6	+0.5
ENEZ	Enez	1.17	1	Pn	Pb	08 02 13.8	0.0
KRBG	Karabiga-Canak	1.22	47	Pn	Pn	08 02 14.9	+0.3
STEP	BALIKESIR_Sava	1.24	98	P	Pn	08 02 14.7	-0.2
STEP				S	Sn	08 02 32.6	+0.9
STEP				i AML	AML	08 02 35.0	
	comp=N,776nm,0.5s						
STEP				i AML	AML	08 02 35.0	
	comp=N,779nm,0.5s						
URLA	Izmir	1.25	163	Pn	Pg	08 02 14.8	-0.6
KNL	Balıkesir	1.28	56	P	Pg	08 02 15.5	-0.4
KNL				S	Sn	08 02 33.6	+0.8
KNL				i AML	AML	08 02 35.0	
	comp=N,2µm,0.7s						
KNL				i AML	AML	08 02 35.0	
	comp=N,2µm,0.8s						
GONE	Gonen-Balikesi	1.29	67	Pn	Pg	08 02 15.9	-0.2
ALN	Alexandroupoli	1.34	357	P	Pn	08 02 15.8	-0.4
ALN				S	Sg	08 02 34.2	-0.2
	comp=N,598nm,0.5s						
ALN	Alexandroupoli	1.34	357	Pn	Pg	08 02 16.7	-0.3
ALN	Alexandroupoli	1.34	357	P	Pb	08 02 16.5	-0.1
ALN				AML	AML	08 02 36.3	
	comp=E,1246µm,0.7s						
ALN				AML	AML	08 02 36.6	
	comp=N,1212µm,0.6s						
BLCB	Balcova	1.37	149	P	Pn	08 02 16.1	-0.6
BLCB				S	Sn	08 02 34.9	0.0
BLCB	Balcova	1.37	149	Pn	Pg	08 02 17.3	-0.3
RKY	Sarkoy-Tekirda	1.38	35	Pn	Pn	08 02 16.6	-0.3
BKES	Balkesir-Mer	1.40	82	P	Pg	08 02 17.8	-0.4
BKES				S	Sn	08 02 36.3	+0.7
BKES				i AML	AML	08 02 38.0	
	comp=N,780nm,0.4s						
AKS	Akhisar	1.47	117	Pn	Pn	08 02 18.1	0.0
THAS	Thassos island	1.51	314	P	Pn	08 02 18.3	-0.3
THAS				S	Sn	08 02 38.0	-0.4
THAS				AML	AML	08 02 44.2	
	comp=N,328µm,0.7s						
THAS				AML	AML	08 02 48.0	
	comp=E,218µm,0.7s						
EDC	Edincik	1.54	59	Pn	Pb	08 02 19.8	-0.3
UKOP	Uzunkopru-Edir	1.61	13	Pn	Pb	08 02 20.8	-0.5
GOMA	Golmarmara-Man	1.63	121	Pn	Pb	08 02 21.1	-0.4
RDO	Rodhopi	1.65	344	P	Pn	08 02 20.3	-0.2
RDO				S	Sn	08 02 42.2	+0.3
RDO	Rodhopi	1.65	344	Pn	Pb	08 02 21.3	-0.6
RDO	Rodhopi	1.65	344	P	Pb	08 02 21.3	-0.6
RDO				S	Sn	08 02 41.7	-0.2
RDO				AML	AML	08 02 45.1	
	comp=N,386µm,0.5s						
RDO				AML	AML	08 02 47.4	
	comp=E,344µm,0.6s						
BAND	Balkesir-Ban	1.70	62	P	Pb	08 02 21.8	-1.0
BAND				S	Sb	08 02 44.4	0.0
BAND				i AML	AML	08 02 47.0	
	comp=E,551nm,0.2s						
BAND				i AML	AML	08 02 50.0	
	comp=E,340nm,0.2s						
TKR	Tekirdag	1.78	36	Pn	Pb	08 02 23.4	-0.8
OUR	Ouranopolis	1.83	296	P	Pn	08 02 23.0	0.0
OUR	Ouranopolis	1.83	296	Pn	Pn	08 02 23.6	+0.6
OUR	Ouranopolis	1.83	296	P	Pn	08 02 23.6	+0.6
KYMI	Kymi, Euboea I	1.84	240	P	Pn	08 02 22.9	-0.2
KYMI				S	Sn	08 02 47.0	+0.5
KYMI	Kymi, Euboea I	1.84	240	P	Pn	08 02 23.0	-0.1
KYMI				S	Sn	08 02 46.2	-0.3
KYMI				AML	AML	08 02 52.7	
	comp=N,207µm,0.7s						
KYMI				AML	AML	08 02 54.4	
	comp=E,332µm,0.6s						
KCTX	Karacabey (Bur	1.85	67	Pn	Pb	08 02 24.1	-1.2
KAVA	Kavala	1.90	320	P	Pn	08 02 24.2	+0.2
DST	Dursunbey	1.92	88	Pn	Pb	08 02 25.2	-1.4
CRLT	Corlu	1.99	37	Pn	Pn	08 02 26.0	+0.8
GCAM	G?zelcaml?	2.05	155	Pn	Pn	08 02 26.7	+0.7
KOKK	Kokkinochori,	2.06	308	P	Pn	08 02 26.2	0.0
KDZ	Kurdzhali	2.16	346	Pn	Pn	08 02 28.3	+0.7
KDZ	Kurdzhali	2.16	346	i P	Pn	08 02 28.6	+1.0
ORLT	Orhaneli	2.18	76	Pn	Pn	08 02 28.9	+1.0
KULA	Kula-Manisa	2.23	117	P	Pn	08 02 28.2	-0.3
KULA				S	Sn	08 02 55.9	-0.3
KULA	Kula-Manisa	2.23	117	Pn	Pn	08 02 29.1	+0.6
SMAA	Simav-Kutahya	2.25	101	Pn	Pn	08 02 30.1	+1.2
SIMA	Simav-Kutahya	2.26	101	Pn	Pn	08 02 30.2	+1.2
MDNY	Mudanya-Bursa	2.26	68	Pn	Pn	08 02 30.0	+1.1
DION	Dionisos Attik	2.27	230	P	Pb	08 02 30.9	-1.6
XOR	Xorichti	2.29	266	P	Pn	08 02 29.4	0.0
SLVT	Silivri	2.30	43	Pn	Pn	08 02 30.4	+0.9
ARMT	Armutlu	2.32	63	Pn	Pn	08 02 30.9	+1.1
PHSR	Pinarhisar	2.32	27	Pn	Pn	08 02 30.9	+1.1
EDRB	Edirne	2.33	11	P	Pn	08 02 30.0	+0.1
EDRB				S	Sn	08 02 59.1	+0.4
	comp=E,232nm,0.5s						
EDRB	Edirne	2.33	11	Pn	Pn	08 02 30.9	+1.0
RZN	Rozhen	2.38	333	i P	Pn	08 02 32.2	+1.4
AVCI	Avcilar-stanb	2.44	53	Pn	Pn	08 02 32.6	+1.2
CTKS	Kestanelik-??a	2.46	46	Pn	Pn	08 02 32.9	+1.2
NVR	Nevrokopi	2.49	317	P	Pn	08 02 33.5	+1.3
GEMT	Gemlik	2.50	69	Pn	Pn	08 02 33.7	+1.4
HVHR	Bakirkoy-Istan	2.50	55	Pn	Pn	08 02 33.4	+1.1
CTYL	Yalikoy Yolu	2.52	40	Pn	Pn	08 02 33.8	+1.3
KIYI	Yalıkoy-Catalc	2.53	40	Pn	Pn	08 02 33.9	+1.2
APE	Apeiranthos	2.53	191	Pn	Pn	08 02 32.9	+0.2
TVSB	Tavsanli	2.57	91	Pn	Pn	08 02 34.2	+0.8
BGKT	Bogazkoy	2.58	50	Pn	Pn	08 02 34.6	+1.2
GEDZ	Gediz	2.59	100	Pn	Pn	08 02 34.8	+1.2
BRGA	Burgazada-Ista	2.60	59	Pn	Pn	08 02 34.8	+1.2
MLSB	Milas	2.60	150	Pn	Pn	08 02 34.9	+1.2
ISK	Istanbul-Kandi	2.69	55	P	Pn	08 02 34.7	-0.2
ISK				S	Sn	08 03 08.0	+0.4
	comp=E,202nm,0.3s						
MMB	Musomiste	2.73	319	i P	Pn	08 02 35.9	+0.4
KKB	Krupnik	3.27	316	i P	Pb	08 02 46.4	-3.2
PGB	Panagyurishte	3.34	334	i P	Pn	08 02 42.9	-0.9

NEIC ***20*** *08:17:25.9±2.3, 27°.09S±0°.05×66°.39W±0°.07, h165^{km}±6^{km}, mb4.6/183, Error ellipse: s-maj=9.7km s-min=7.4km az=83.0*
SJA ***20*** *08:17:26.2±0.7, 27°.06S×66°.46W, h186^{km}±5^{km}, ML5.1, MW4.8, Hypocentre not reviewed by the ISC*
VAO ***20*** *08:17:26.1±0.3, 27°.06S×66°.54W, h169^{km}, mb5.1*
IDC ***20*** *08:17:28.6±0.5, 26°.98S×66°.25W, h184^{km}±3^{km}, mb4.3/21, mbtmp4.8/24, MS3.6/7, Error ellipse: s-maj=13.6km s-min=10.0km az=48.0*
GUC ***20*** *08:17:29.3±0.4, 27°.07S×67°.01W, h231^{km}±20^{km}, ML5.6*
GCMT ***20*** *08:17:30.9±0.3, 27°.20S±0°.02×66°.35W±0°.02, h187^{km}±3^{km}, MW5.0/96, Moment Tensor Solution. s24,c29; s96,c129; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.32±.14; $M_{\theta\theta}$1.58±.18; $M_{\phi\phi}$-0.25±.20; $M_{r\theta}$0.59±.11; $M_{\theta\phi}$-3.19±.14; $M_{\phi r}$2.72±.13; Best double couple: $M_0$4.46800×10^{16} NP1:ϕ_s167.00000°, δ74.00000°, λ-39.00000°. NP2: ϕ_s269.00000°, δ53.00000°, λ-160.00000°. Principal axes: T 4.2720, Plg14.0000°, Azm222.0000°; N 0.3990, Plg48.0000°, Azm328.0000°; P -4.6640, Plg38.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 20 08:17:27.0±0.4, **27°.05S**±0°.03×**66°.48W**±0°.05, **h180**^{km}±4^{km}, **h180**^{km}**:pP-P**, **n456**, σ**1^s.48**/463, **mb4.7**/136, **8C-24D, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TINO	Tinogasta	1.40	224	eP		08 17 58.8	
TINO				eS		08 18 22.2	
CYA	Choya	1.51	157	eP		08 17 59.9	
CYA				eS		08 18 23.3	
AC02	Maricunga	2.38	275		Pn	08 18 10.6	+1.8
AC02				Sn	Sn	08 18 43.4	+2.2
ACLC	CERRO LA CRUZ	2.40	190	eP		08 18 09.1	
ACLC				eS		08 18 40.2	
ACLC				IAML		08 18 41.7	
	comp=Z,4µm,0.5s						
SLA	San Lorenzo	2.48	21	eP		08 18 10.0	
APLL	PUNTA DE LOS L	3.33	181	eP		08 18 19.9	
APLL				eS		08 18 59.5	
GO02	Mina Guanaco	3.37	303		Pn	08 18 21.4	+0.8
GO02				Sn	Sn	08 19 01.8	-0.5
GO02	Mina Guanaco	3.37	303	⇓eP	Pn	08 18 21.4	+0.8
GO02				eS	Sn	08 19 01.3	-1.0
GO02				IAML		08 19 03.4	
	comp=N,4µm,0.6s						
GO02	Mina Guanaco	3.37	303	eP		08 18 21.1	
GO02				eS		08 19 02.6	
GO03	Copiap	3.38	260		Pn	08 18 20.4	0.0
GO03				Sn	Sn	08 19 00.3	-1.8
GO03	Copiap	3.38	260	⇓eP	Pn	08 18 20.4	0.0
GO03				eS	Sn	08 18 58.4	-3.7
GO03				IAML		08 19 01.7	
	comp=N,10µm,0.4s						
GO03	Copiap	3.38	260	eP		08 18 20.3	
GO03				eS		08 19 00.7	
AC01	Pan de Azucar	3.80	283		Pn	08 18 25.4	-0.2
AC01	Pan de Azucar	3.80	283	⇓eP	Pn	08 18 25.4	-0.2
AC01				eS	Sn	08 19 07.4	-3.9
AC01	Pan de Azucar	3.80	283	eP		08 18 25.5	
AC01				eS		08 19 05.4	
AC05	El Transito	3.80	241		Pn	08 18 25.7	0.0
AC05				Sn	Sn	08 19 10.8	-0.8
AC05	El Transito	3.80	241	⇑eP	Pn	08 18 25.7	0.0
AC05				eS	Sn	08 19 08.5	-3.1
AC05	El Transito	3.80	241	eP		08 18 25.7	
AC05				eS		08 19 05.4	
AC05				eS		08 19 10.8	
AC05				IAML		08 19 11.7	
	comp=Z,7µm,0.8s						
HJA	Humahuaca	3.95	14	eP		08 18 29.4	
LCO	Las Campanas	4.21	241		Pn	08 18 30.3	-0.8
LCO	Las Campanas	4.21	241	⇑eP	Pn	08 18 30.3	-0.8
LCO				eS	Sn	08 19 17.0	-4.2
LCO	Las Campanas	4.21	241	eP		08 18 30.2	
LCO				eS		08 19 18.6	
AC04	Llanos de Chal	4.24	253		Pn	08 18 30.0	-1.1
AC04				Sn	Sn	08 19 18.2	-3.1
AC04	Llanos de Chal	4.24	253	⇑eP	Pn	08 18 30.0	-1.1
AC04				eS	Sn	08 19 16.7	-4.6
AC04	Llanos de Chal	4.24	253	eP		08 18 30.1	
AC04				eS		08 19 18.6	
AC04				IAML		08 19 23.1	
	comp=Z,2µm,0.6s						
PB14	IPOC Station P	4.29	303		Pn	08 18 31.5	-0.6
PB14				Sn	Sn	08 19 21.1	-1.9
PB14	IPOC Station P	4.29	303	⇑eP	Pn	08 18 31.9	-0.2
PB14				eS	Sn	08 19 20.1	-2.9
PB14	IPOC Station P	4.29	303	eP		08 18 31.6	
PB14				eS		08 19 21.9	
CO01	Juntas del Tor	4.31	227		Pn	08 18 33.0	+0.6
CO01				Sn	Sn	08 19 23.9	+0.4
CO01	Juntas del Tor	4.31	227	⇑eP	Pn	08 18 32.9	+0.6
CO01				eS	Sn	08 19 20.9	-2.6
CO01	Juntas del Tor	4.31	227	eP		08 18 32.9	
CO01				eS		08 19 25.1	
CO01				IAML		08 19 27.4	
	comp=Z,2µm,0.6s						
PB15	IPOC Station P	4.69	324	Pn	Pn	08 18 37.1	-0.2
PB15				Sn	Sn	08 19 30.4	-1.9
PB15	IPOC Station P	4.69	324	eP	Pn	08 18 37.2	-0.1
PB15				eS	Sn	08 19 30.4	-1.9
CFA	Coronel Fontan	4.79	198	P	Pn	08 18 37.3	-0.9
	comp=Z,2µm,0.4s,baz=10,slow=13,SNR=3839						
CFA				S	Sn	08 19 30.0	-4.2
	comp=Z,1µm,0.3s,baz=5.0,slow=13,SNR=5.6						
SJA	San Juan	4.81	202	eP		08 18 37.8	
SJA				eS		08 19 32.5	
SJA				IAML		08 19 34.0	
	comp=Z,887nm,0.2s						
ZON	Zonda	4.87	203		Pn	08 18 38.5	-0.8
ZON				Sn	Sn	08 19 33.1	-3.1
ZON	Zonda	4.87	203	eP		08 18 38.5	
ZON				eS		08 19 34.7	
ZON				IAML		08 19 41.7	
	comp=Z,546nm,0.6s						
GO04	Tololo Observa	4.91	230		Pn	08 18 38.8	-1.2
GO04				Sn	Sn	08 19 35.5	-1.7
GO04	Tololo Observa	4.91	230	⇑eP	Pn	08 18 38.7	-1.2
GO04				eS	Sn	08 19 32.7	-4.6
GO04	Tololo Observa	4.91	230	eP		08 18 38.7	
GO04				eS		08 19 28.9	
YJA	Yavi	4.94	10	eP		08 18 42.7	
LVC	Limon Verde	4.95	333	P	Pn	08 18 41.2	+0.5
	comp=Z,777nm,0.6s,baz=161,slow=8.4,SNR=531						
LVC				S	Sn	08 19 35.2	-3.2
	comp=Z,524nm,0.5s,baz=53,slow=22,SNR=18						
CO05	La Serena	5.07	235		Pn	08 18 39.9	-2.0
CO05	La Serena	5.07	235	⇑eP	Pn	08 18 39.8	-2.0
CO05				eS	Sn	08 19 36.1	-4.6
PB10	IPOC Station P	5.10	313		Pn	08 18 42.0	-0.4
PB10	IPOC Station P	5.10	313	⇓eP	Pn	08 18 42.0	-0.4
PB10				eS	Sn	08 19 36.6	-4.9
PB10	IPOC Station P	5.10	313	eP		08 18 42.0	
PB10				eS		08 19 39.4	
PB10				IAML		08 19 44.6	
	comp=Z,619nm,0.6s						
PB06	IPOC Station P	5.16	326		Pn	08 18 42.9	-0.4
PB06	IPOC Station P	5.16	326	eS		08 19 40.5	
PB06				IAML		08 19 49.8	
	comp=Z,666nm,0.9s						
VACA	Villa Angela C	5.17	98	eP	Pn	08 18 42.9	-0.3
CO03	El Pedregal	5.28	223		Pn	08 18 43.5	-1.1
CO03	El Pedregal	5.28	223	⇑eP	Pn	08 18 43.5	-1.1
CO03				eS	Sn	08 19 42.1	-3.5
CO02	Combarbal	5.72	223		Pn	08 18 48.5	-1.9
PB04	IPOC Station P	5.76	324		Pn	08 18 50.2	-1.0
CO06	Fray Jorge	5.78	230		Pn	08 18 48.1	-3.0
PB03	IPOC Station P	5.81	328		Pn	08 18 51.0	-0.8
PB09	IPOC Station P	5.81	334		Pn	08 18 51.7	-0.1
PB07	IPOC Station P	6.15	329		Pn	08 18 54.9	-1.3
PB02	IPOC Station P	6.50	331		Pn	08 18 59.4	-1.4
PB01	IPOC Station P	6.58	335	Pn	Pn	08 19 00.5	-1.4
VA03	San Esteban	6.70	211		Pn	08 19 02.1	-1.2
VA06	Catapilco	6.90	216	Pn	Pn	08 19 02.5	-3.3
MT08	Bocatoma Ro	7.07	205		Pn	08 19 07.6	-0.6
PEL	Peldehue	7.08	210		Pn	08 19 05.8	-2.4
ROC1	El Roble	7.09	213		Pn	08 19 05.5	-3.0
TA01	Diego Aracena	7.29	332	Pn	Pn	08 19 08.6	-2.4
MT03	Universidad Ad	7.30	208		Pn	08 19 09.5	-1.7
PB08	IPOC Station P	7.30	340		Pn	08 19 10.2	-1.4
MT05	Renca	7.31	209	Pn	Pn	08 19 08.8	-2.4
MT02	Curacav	7.38	212		Pn	08 19 09.6	-2.6
MT13	San Alfonso	7.43	205	Pn	Pn	08 19 11.5	-1.4
VA01	Torpederas	7.45	216		Pn	08 19 09.3	-3.6
ESFA	Espinillo Form	7.49	76	eP	Pn	08 19 13.1	-0.5
LMEL	Las Melosas	7.50	204		Pn	08 19 12.7	-1.1
MECA	Mercedes	7.66	109	eP	Pn	08 19 15.1	-0.7
MT09	Talagante	7.75	209		Pn	08 19 13.9	-3.2
GO01	Chusmiza	7.76	341		Pn	08 19 16.5	-1.2
PB11	IPOC Station P	7.82	337		Pn	08 19 16.2	-2.0
VA05	Santo Domingo	7.94	213		Pn	08 19 16.0	-3.4
MT01	Popeta	7.94	210	Pn	Pn	08 19 16.1	-3.4
CPUP	Villa Florida	8.21	87	P	Pn	08 19 21.6	-1.5
	comp=Z,14nm,0.7s,baz=265,slow=12,SNR=36						
CPUP	Villa Florida	8.21	87	Pn	Pn	08 19 21.1	-2.1
CPUP	Villa Florida	8.21	87	eP	Pn	08 19 21.5	-1.7
BO01	Tunca	8.32	207	Pn	Pn	08 19 21.4	-3.0
MNMC	Minye Minye	8.39	339		Pn	08 19 23.4	-2.4
BO02	Sierra Bellavi	8.55	205	Pn	Pn	08 19 25.3	-2.3
ITQB	Itaqui	9.06	109	Pn	Pn	08 19 32.1	-2.1
ITQB	Itaqui	9.06	109	eP	Pn	08 19 32.8	-1.5
PB16	IPOC Station P	9.12	342	Pn	Pn	08 19 33.7	-1.9
PB12	IPOC Station P	9.12	336	Pn	Pn	08 19 32.2	-3.0
AZCA	Azaras, Argent	9.37	99	eP	Pn	08 19 37.2	-1.1
MURT	Porto Murtinho	9.70	58	eP	Pn	08 19 41.4	-1.4
PB18	Visviri	9.82	343		Pn	08 19 44.9	+0.1
RODS	Rosario do Sul	10.43	111	eP	Pn	08 19 50.6	-1.6
BDQN	Bodoquena, MS	11.07	56	eP	Pn	08 19 58.8	-1.8
CRSM	Crissiumal (Br	11.07	95	eP	Pn	08 19 59.6	-0.9
BI05	Punta Hualpn	11.22	209	Pn	Pn	08 19 58.4	-3.9
BBSD	Serra de San D	11.22	30	eP	Pn	08 20 01.8	-0.7
TRQA	Tornquist	11.61	162	Pn	Pn	08 20 05.2	-2.1
AQDB	Aquidauana	11.84	59	Pn	Pn	08 20 09.8	-0.7
AQDB	Aquidauana	11.84	59	eP	Pn	08 20 10.0	-0.5
CPSB	Cacapava Do Su	11.92	109	eP	Pn	08 20 09.8	-1.6
ALGR	Alto Alegre (B	12.02	101	eP	Pn	08 20 11.7	-1.1
FRBT	Francisco Belt	12.06	88	eP	Pn	08 20 13.1	-0.3
SIV	San Ignacio	12.10	26	P	Pn	08 20 12.7	-1.1
	comp=Z,68nm,0.8s,baz=211,slow=13,SNR=153						
SIV				LR	LR	08 25 39.1	
	comp=Z,183nm,21.6s,baz=210,slow=41						
PANT	Pantanal (Braz	12.11	51	eP	Pn	08 20 12.8	-1.2
PLTB	Pedras Altas	12.16	116	Pn	Pn	08 20 13.0	-1.5
PLTB	Pedras Altas	12.16	116	eP	Pn	08 20 12.7	-1.9
VA04	Juan Fernndez	12.52	235	Pn	Pn	08 20 19.7	+0.7
ITAB	Concordia	12.78	94	Pn	Pn	08 20 20.6	-1.8
ITAB	Concordia	12.78	94	eP	Pn	08 20 21.6	-0.7
GO06	Curarrehue	13.17	197	Pn	Pn	08 20 25.9	-1.5
PTGB	Pitanga	13.18	83	eP	Pn	08 20 27.9	+0.3
RVDE	Rio Verde (Bra	13.28	55	eP	Pn	08 20 27.4	-1.5
PTLB	Pontes e Lacer	13.42	32	Pn	Pn	08 20 30.0	-0.5
PTLB	Pontes e Lacer	13.42	32	eP	Pn	08 20 30.1	-0.4
LR03	Panguipulli	13.46	200		Pn	08 20 29.8	-1.1
CNLB	Canela	13.96	103	eP	Pn	08 20 35.6	-1.8
LR04	Corral	14.04	203	Pn	Pn	08 20 34.2	-3.9
PLCA	Paso Flores	14.05	193	P	Pn	08 20 37.5	-0.9
	comp=Z,24nm,1.0s,baz=11,slow=12,SNR=35						
PLCA				S	Sn	08 23 16.9	+2.0
	comp=Z,3.6nm,0.9s,baz=306,slow=16,SNR=0.9						
PLCA	Paso Flores	14.05	193	Pn	Pn	08 20 37.6	-0.7
PLCA	Paso Flores	14.05	193	eP	Pn	08 20 37.5	-0.9
PP1B	Ponte de Pedra	14.26	51	eP	Pn	08 20 40.4	-0.7
LL04	Puerto Octay	14.66	198	Pn	Pn	08 20 43.2	-2.6
LL03	Petrohue	14.88	198		Pn	08 20 46.5	-2.0
PCMB	Pacaembu	14.89	72	eP	Pn	08 20 48.9	+0.1
SALV	Santo Antonio	14.95	44	eP	Pn	08 20 48.8	-0.8
C2SB	Chapadao do Su	15.02	60	eP	Pn	08 20 50.9	+0.5
VILB	Vilhena	15.21	24		Pn	08 20 51.6	-1.2
VILB	Vilhena	15.21	24	eP	Pn	08 20 52.0	-0.8
LL05	Los Muermos	15.43	200		Pn	08 20 53.6	-1.7
FRTB	Fartura	15.75	80	eP	P	08 20 58.5	-1.1
TIJ01	Guaruva-PR	15.78	88	eP	P	08 20 57.9	-2.2
LL06	Loncomilla	16.22	199	P	P	08 21 02.8	-1.7
LL06				IAmb	IAmb	08 21 25.0	
	comp=Z,160nm,1.4s						
ITRB	Iturama	16.50	67	eP	P	08 21 08.4	+0.6
LL02	Futaleuf	16.68	194		Pn	08 21 10.9	+0.5
LL07	Hotel Espejo d	16.74	198	P	P	08 21 10.0	-0.2
GO07	Milladeo Hill,	17.06	198	P	P	08 21 13.4	-0.3
ETMB	Extrema	17.15	1	P	P	08 21 14.2	-0.8
ETMB	Extrema	17.15	1	eP	P	08 21 14.7	-0.3
BB19B	Bebedouro	17.44	74	eP	P	08 21 18.0	-0.2
PET01	Itanhaem-SP	17.53	85	eP	P	08 21 19.4	+0.3
SPB	Sao Paulo	17.56	83	P	P	08 21 18.2	-1.3
SPB	Sao Paulo	17.56	83	eP	P	08 21 19.9	+0.5
ARAG	Araguaiana, MT	17.70	53	eP	P	08 21 19.8	-1.3
RCLB	Rio Claro- Sao	17.82	79	eP	P	08 21 22.1	-0.2
PDRB	Porto dos Gac	17.89	33	eP	P	08 21 22.3	-0.8
AY01	Puyuhuapi	18.03	194	P	P	08 21 24.2	-0.1
VAO	Valinhos	18.13	81	eP	P	08 21 26.1	+0.3

SAML	Samuel	18.28	10	P	P	08 21 26.9	-0.4
SAML				IAmb	IAmb	08 21 30.3	
	comp=Z,31nm,0.8s						
SAML	Samuel	18.28	10	*e*P	P	08 21 26.6	-0.7
CLDB	Colider	18.98	34	*e*P	P	08 21 34.1	-0.9
COYC	Coyhaique	19.02	192	P	P	08 21 35.7	+0.7
IPMB	Ipameri, GO	19.12	66	*e*P	P	08 21 36.2	-0.3
PARB	Paraibuna	19.23	84	*e*P	P	08 21 37.3	-0.4
CZSB	Cruzeiro do Su	20.11	342	P	P	08 21 47.3	+0.2
CZSB	Cruzeiro do Su	20.11	342	*e*P	P	08 21 46.9	-0.2
AY02	Valle Explorad	20.11	194	P	P	08 21 47.1	+0.4
PMNB	Patos De Minas	20.31	70	*e*P	P	08 21 48.9	-0.5
BDFB	Brasilia	20.58	60	P	P	08 21 51.5	-0.7
	comp=Z,85nm,0.8s,baz=233,slow=9.3,SNR=94						
BDFB				S	S	08 25 28.0	-4.6
	comp=Z,17nm,1.1s,baz=157,slow=25,SNR=2.6						
	comp=Z,85nm,0.8s						
BDFB	Brasilia	20.58	60	P	P	08 21 52.0	-0.3
BDFB	Brasilia	20.58	60	*e*P	P	08 21 51.9	-0.3
SNDB	Serra Nova Dou	20.70	46	*e*P	P	08 21 51.8	-1.6
BSCB	Bom Sucesso	20.71	78	*e*P	P	08 21 53.8	+0.2
VAS01	Vassouras-RJ	21.46	82	*e*P	P	08 22 01.4	-0.1
GO08	Villa O'Higgin	21.89	191	P	P	08 22 07.6	+1.9
DUB01	Friburgo-RJ	22.46	83	*e*P	P	08 22 10.5	-0.9
TBTG	Tabatinga, AM	22.98	351	P	P	08 22 16.6	+0.6
TBTG	Tabatinga, AM	22.98	351	*e*P	P	08 22 16.8	+0.8
TEFE	Tefe	23.48	5	*e*P	P	08 22 20.6	0.0
JANB	Januaria	23.84	64	*e*P	P	08 22 22.8	-1.2
ALF01	Guarapari-ES	24.39	80	*e*P	P	08 22 28.0	-0.8
MACA	Manacapuru-AM	24.40	14	P	P	08 22 28.4	-0.5
MACA	Manacapuru-AM	24.40	14	*e*P	P	08 22 29.4	+0.5
GO09	Cerro Castillo	24.59	189	P	P	08 22 30.6	+0.3
GO09				IAmb	IAmb	08 23 13.2	
	comp=Z,35nm,0.9s						
SJMB	Sao Joao De Ma	24.71	76	*e*P	P	08 22 31.4	-0.4
ITTB	Itaituba	24.79	26	*e*P	P	08 22 31.2	-1.2
SDBA	SAO DESIDERIO	24.93	58	*e*P	P	08 22 32.7	-1.2
MG05	Puerto Natales	25.01	189	P	P	08 22 33.2	-0.9
EFI	East Falkland	25.40	168	P	P	08 22 37.2	-0.4
SMTB	Santa Maria do	25.43	48	*e*P	P	08 22 37.5	-0.9
MCRA	Macar, Loja	25.97	328	P	P	08 22 42.1	-1.1
MCRA				IAmb	IAmb	08 23 18.7	
	comp=Z,7.9nm,0.9s						
SGCB	S£o Gabriel d	26.78	359	*e*P	P	08 22 50.1	-0.3
GUA01	Guaratinga, BA	26.81	73	*e*P	P	08 22 50.3	-0.4
ABR01	Abrolhos, BA	27.16	76	*e*P	P	08 22 52.9	-0.9
MALB	Monte Alegre	27.66	27	*e*P	P	08 22 56.3	-1.9
MG01	Puerto William	27.86	181	P	P	08 22 59.0	-0.6
OTAV	Otavalo	29.48	335	P	P	08 23 14.8	0.0
OTAV	Otavalo	29.48	335	*e*P	P	08 23 14.9	0.0
TULM	Tulcn-Chalpat	29.68	337	P	P	08 23 16.8	+0.2
TULM				IAmb	IAmb	08 23 17.2	
	comp=Z,19nm,0.8s						
FLOC	Florencia	29.81	341	*e*P	P	08 23 17.9	+0.6
BOAV	Boa Vista	29.84	12	P	P	08 23 18.1	+0.6
BOAV	Boa Vista	29.84	12	*e*P	P	08 23 17.9	+0.4
BOAV	Boa Vista	29.84	12	*e*P	P	08 23 17.5	0.0
MCPB	Macapa, AP	29.94	30	*e*P	P	08 23 17.6	-0.8
GCUF	Volcan Galeras	30.00	338	*e*P	P	08 23 22.0	+2.4
TMAB	Tom-Au,PA,Br	30.21	39	*e*P	P	08 23 20.4	-0.4
GARC	Garzon, Huila	30.34	342	*e*P	P	08 23 22.8	+0.5
BBAC	Balboa, Cauca	30.72	339	*e*P	P	08 23 27.7	+2.2
POPC	Popayan, Colom	31.02	340	*e*P	P	08 23 30.6	+2.4
PRAC	Prado	31.65	344	*e*P	P	08 23 32.6	-0.9
JAMC	Jamundi, Valle	31.66	340	*e*P	P	08 23 34.2	+0.5
ORTC	Ortega, Tolima	31.93	343	*e*P	P	08 23 35.0	-0.8
ROSB	Rosrio	32.17	46	*e*P	P	08 23 37.6	-0.4
CHIC	Chingaza	32.27	346	*e*P	P	08 23 38.3	-1.0
GUY2C	Guyana, Caldas	33.22	344	*e*P	P	08 23 48.9	+1.3
SPBC	San Pablo de B	33.33	346	*e*P	P	08 23 47.3	-0.9
CBOC	Ciudad Bolivar	34.00	343	*e*P	P	08 23 53.9	-0.2
PTBC	PUERTO BERRIO,	34.28	346	*e*P	P	08 23 53.0	-3.2
MDP	Montagnes des	34.66	25	LR	LR	08 39 47.6	
	comp=Z,76nm,20.7s,baz=176,slow=39						
PAMC	Pamplona, Colo	34.72	349	*e*P	P	08 24 00.4	-0.1
HOPE	Hope Point	34.98	149	P	P	08 24 01.4	-0.3
ZARC	Zaragoza, Cauc	35.29	346	*e*P	P	08 24 02.8	-2.1
RCBR	Riachuelo	35.95	60	*e*P	P	08 24 11.0	+0.4
SDV	Santo Domingo	35.95	353	LR	LR	08 39 59.7	
	comp=Z,108nm,20.7s,baz=241,slow=38						
SDV	Santo Domingo	35.95	353	P	P	08 24 09.8	-1.0
SDV	Santo Domingo	35.95	353	*e*P	P	08 24 09.8	-1.0
ARGC	Ariguani, Magd	37.46	347	*e*P	P	08 24 21.6	-1.6
RPN	Rapa Nui	38.02	260	LR	LR	08 37 25.8	
	comp=Z,123nm,18.0s,baz=96,slow=31						
TOSP	Speyside	38.56	9	P	P	08 24 32.8	+0.3
CDITO	Canoas	38.82	334	P	P	08 24 33.7	-1.0
CDITO				IAmb	IAmb	08 24 51.6	
	comp=Z,22nm,1.3s						
FDF	Fort de France	41.86	8	P	P	08 24 59.1	-0.5
SVN	Savane Anatole	41.96	8	P	P	08 25 00.3	-0.1
MLPR	Magueyes Islan	44.76	359	P	P	08 25 22.9	+0.2
MLPR				IAmb	IAmb	08 25 29.6	
	comp=Z,16nm,0.8s						
CRPR	Cabo Rojo, PR	44.80	359	P	P	08 25 21.5	-1.5
CRPR				IAmb	IAmb	08 25 29.2	
	comp=Z,38nm,1.4s						
OBIP	Obispado Ponce	44.83	360	P	P	08 25 20.8	-2.5
OBIP				IAmb	IAmb	08 25 28.8	
	comp=Z,12nm,0.6s						
CELP	Cerrillos	44.86	360	P	P	08 25 22.0	-1.5
CELP				IAmb	IAmb	08 25 29.7	
	comp=Z,16nm,0.5s						
MTP	Monte Pirata	44.89	1	P	P	08 25 21.9	-1.9
MTP				IAmb	IAmb	08 25 45.8	
	comp=Z,11nm,0.9s						
UUPR	Utuado, UPR, P	45.04	360	P	P	08 25 23.3	-1.6
CBYP	Canovanas	45.06	1	P	P	08 25 23.1	-2.0
CBYP				IAmb	IAmb	08 25 27.1	
	comp=Z,26nm,1.4s						
GCPR	Guaynabo City	45.09	1	P	P	08 25 25.2	-0.1
GCPR				IAmb	IAmb	08 25 55.4	
	comp=Z,19nm,1.2s						
CUPR	Culebra, Puert	45.11	2	P	P	08 25 22.6	-2.8
CUPR				IAmb	IAmb	08 25 26.2	
	comp=Z,7.8nm,0.7s						
BELA	Belgrano 2	52.96	172	P	P	08 26 24.9	+0.5
BELA				IAmb	IAmb	08 26 26.4	
	comp=Z,19nm,0.8s						
VNA3	Neumayer Olymp	54.12	160	P	P	08 26 33.9	+0.9
TLIG	Tlapa	54.19	321	P	P	08 26 34.8	+0.6
TLIG				IAmb	IAmb	08 26 39.1	
	comp=Z,11nm,1.4s						
VNA1	Neumayer--Stat	54.33	160	P	P	08 26 35.8	+1.4
VNA2	Neumayer--Watz	54.70	160	P	P	08 26 38.1	+1.0
	baz=306,slow=8.0						
SNAA	Sanae	56.33	160	P	P	08 26 49.7	+0.9
SNAA	Sanae	56.33	160	P	P	08 26 49.7	+0.9
	comp=Z,37nm,1.0s,baz=281,slow=5.3,SNR=32						
	comp=Z,37nm,1.0s						
SNAA	Sanae	56.33	160	P	P	08 26 49.6	+0.8
SNAA	Sanae	56.33	160	*e*P	P	08 26 49.0	+0.2
TROLL	Troll, Antarti	58.04	160	P	P	08 27 02.0	+1.1
146A	Union	63.13	339	P	P	08 27 35.2	-0.3
146A				IAmb	IAmb	08 27 55.8	
	comp=Z,16nm,0.8s						
QSPA	South Pole Qui	63.16	180	P	P	08 27 36.4	+0.8
X48A	Hartselle	64.20	341	IAmb	IAmb	08 27 44.2	
	comp=Z,13nm,1.1s						
TKL	Tuckaleechee C	64.48	344	P	P	08 27 45.3	+1.0
	comp=Z,4.6nm,0.8s,baz=154,slow=6.5,SNR=3.8						
	comp=Z,4.6nm,0.8s						
SWET	Sewanee	64.61	342	IAmb	IAmb	08 27 45.8	
	comp=Z,11nm,1.0s						
OXF	Oxford	64.97	339	P	P	08 27 46.9	-0.6
V48A	Smith Brothers	65.34	342	IAmb	IAmb	08 27 50.9	
	comp=Z,8.8nm,0.8s						
JCT	Junction City	65.48	329	IAmb	IAmb	08 27 53.0	
	comp=Z,6.9nm,1.0s						
WVT	Waverly	65.99	341	P	P	08 27 54.0	0.0
WVT				IAmb	IAmb	08 27 54.8	
	comp=Z,16nm,0.8s						
S54A	Dingess, Beckl	66.00	347	P	P	08 27 53.4	-0.7
S54A				IAmb	IAmb	08 28 34.4	
	comp=Z,24nm,1.4s						
TXAR	Lajitas Array	66.43	325	P	P	08 27 58.1	+1.0
	comp=Z,0.6nm,0.8s,baz=153,slow=8.0,SNR=8.0						
TXAR				pP	pP	08 28 41.8	+0.7
	comp=Z,1.6nm,0.8s,baz=145,slow=9.2,SNR=5.9						
TX31	Lajitas Ar. Si	66.43	325	P	P	08 27 57.9	+0.8
TX31				IAmb	IAmb	08 28 39.3	
	comp=Z,12nm,1.5s						
FW07	Weatherford	66.47	331	P	P	08 27 58.4	+1.2
FW07				IAmb	IAmb	08 28 02.7	
	comp=Z,7.6nm,1.1s						
UTMT	University of	66.50	340	P	P	08 27 57.5	+0.4
T47A	Sharon Grove	66.59	342	P	P	08 27 57.0	-0.8
T47A				IAmb	IAmb	08 27 58.5	
	comp=Z,13nm,1.1s						
Z35A	Perchaven, San	66.79	332	P	P	08 27 58.6	-0.6
Z35A				IAmb	IAmb	08 28 01.9	
	comp=Z,17nm,0.8s						
PARMO	Parma	67.06	340	P	P	08 28 01.8	+1.1
FCAR	Ozark Folk Cen	67.12	338	P	P	08 28 01.7	+0.5
FCAR				IAmb	IAmb	08 28 02.2	
	comp=Z,8.7nm,1.2s						
WTFS	Witchita Falls	67.68	332	P	P	08 28 06.1	+1.3
WTFS				IAmb	IAmb	08 28 06.6	
	comp=Z,12nm,0.8s						
HHAR	Hobbs	68.11	336	P	P	08 28 07.3	-0.1
HHAR				IAmb	IAmb	08 28 09.5	
	comp=Z,10nm,1.1s						
DBIC	Dimbokro	68.36	70	P	P	08 28 08.2	-1.2
	comp=Z,14nm,0.6s,baz=243,slow=6.5,SNR=27						
	comp=Z,14nm,0.6s						
DBIC	Dimbokro	68.36	70	P	P	08 28 07.2	-2.2
DBIC				IAmb	IAmb	08 28 09.0	
	comp=Z,16nm,0.7s						
TUL1	Leonard	68.46	335	P	P	08 28 09.9	+0.4
TUL1				IAmb	IAmb	08 28 11.9	
	comp=Z,10nm,1.1s						
FVM	French Village	68.48	340	P	P	08 28 09.7	0.0
FVM				IAmb	IAmb	08 28 10.9	
	comp=Z,9.8nm,0.8s						
WMOK	Wichita Mounta	68.64	332	P	P	08 28 11.1	+0.3
DEOK	Depew	68.68	334	P	P	08 28 11.9	+1.0
CCM	Cathedral Cave	68.81	339	P	P	08 28 12.3	+0.7
CCM				IAmb	IAmb	08 28 12.9	
	comp=Z,11nm,0.8s						
OK030	Cody Creek RV	68.86	334	IAmb	IAmb	08 28 13.6	
	comp=Z,17nm,0.9s						
OK052	Battle Ridge R	68.93	334	IAmb	IAmb	08 28 14.1	
	comp=Z,19nm,0.9s						
OK029	Liberty Lake	69.01	333	IAmb	IAmb	08 28 14.5	
	comp=Z,12nm,0.7s						
R40A	Maddies Statio	69.35	339	P	P	08 28 15.2	+0.2
R40A				IAmb	IAmb	08 28 17.4	
	comp=Z,14nm,1.1s						
OK048	Pawnee Station	69.35	334	P	P	08 28 16.3	+1.3
N49A	Columbus Grove	69.60	346	IAmb	IAmb	08 28 17.4	
	comp=Z,14nm,0.9s						
MSTX	Muleshoe	69.77	328	P	P	08 28 18.3	+0.4
MSTX				IAmb	IAmb	08 28 19.7	
	comp=Z,16nm,1.1s						
N47A	Urbana	69.91	345	P	P	08 28 17.9	-0.5
N47A				IAmb	IAmb	08 28 19.5	
	comp=Z,29nm,1.2s						
O44A	Mansfield	69.93	342	P	P	08 28 18.1	-0.3
O44A				IAmb	IAmb	08 28 21.4	
	comp=Z,9.8nm,0.9s						
P40A	Paris	70.41	339	IAmb	IAmb	08 28 23.3	
	comp=Z,25nm,1.4s						
KAN08	Anthony NE Sta	70.46	334	P	P	08 28 22.6	+0.8
KAN08				IAmb	IAmb	08 28 24.4	
	comp=Z,23nm,1.2s						
319A	Douglas	71.02	322	IAmb	IAmb	08 28 28.6	
	comp=Z,5.1nm,0.9s						
121A	Cookes Peak, D	71.11	324	P	P	08 28 25.6	-0.4
121A				IAmb	IAmb	08 28 29.8	
	comp=Z,6.9nm,1.1s						
VNDA	Vanda	71.78	190	P	P	08 28 31.7	+2.5
	comp=Z,4.1nm,0.9s,baz=124,slow=3.6,SNR=6.6						
	comp=Z,4.1nm,0.9s						
R32A	Long Quarter,	71.79	334	IAmb	IAmb	08 28 32.4	
	comp=Z,14nm,1.1s						
ANMO	Albuquerque	72.34	326	P	P	08 28 35.2	+1.9
	comp=Z,2.7nm,0.8s,baz=239,slow=7.8,SNR=16						
ANMO				pP	pP	08 29 19.0	+1.1
	comp=Z,4.6nm,1.0s,baz=223,slow=19,SNR=5.2						
	comp=Z,2.7nm,0.8s						
ANMO	Albuquerque	72.34	326	P	P	08 28 33.7	+0.3
CER	Ceres	72.38	119	*e*P	P	08 28 34.3	+0.7
CER				IAmb	IAmb	08 28 35.4	
	comp=Z,27nm,0.8s						
L40A	Anamosa	72.47	341	P	P	08 28 33.8	+0.1
L40A				IAmb	IAmb	08 28 35.3	
	comp=Z,21nm,0.9s						
CBKS	Cedar Bluff	72.53	333	P	P	08 28 33.1	-1.1
CBKS				IAmb	IAmb	08 28 37.2	
	comp=Z,22nm,1.2s						
N35A	Tabor	72.79	337	IAmb	IAmb	08 28 37.3	
	comp=Z,19nm,0.9s						
T25A	Trinidad	73.14	329	P	P	08 28 37.2	-0.8
MATJ	Matjiesfontein	73.42	119	*e*P	P	08 28 40.5	+0.7
CVNA	Calvinia	73.44	117	⇓*i*P	P	08 28 40.5	+0.5
CVNA				IAmb	IAmb	08 28 41.5	
	comp=Z,51nm,0.8s						
SUR	Sutherland	73.93	118	P	P	08 28 43.1	+0.1
SUR	Sutherland	73.93	118	⇓*i*P	P	08 28 44.1	+1.1
SUR				IAmb	IAmb	08 28 44.6	
	comp=Z,48nm,0.8s						
W18A	Petrified Fore	74.14	324	P	P	08 28 43.3	-0.6
W18A				IAmb	IAmb	08 28 46.9	
	comp=Z,6.6nm,0.9s						
BGNE	Belgrade	74.17	336	P	P	08 28 43.0	-0.7
MERW	Merweville	74.38	119	*e*P	P	08 28 46.3	+0.8
MERW				IAmb	IAmb	08 28 46.6	
	comp=Z,55nm,0.8s						
FRAZ	Fraserburg	74.57	118	⇓*i*P	P	08 28 47.4	+0.8
FRAZ				IAmb	IAmb	08 28 48.1	
	comp=Z,73nm,0.8s						
WIN	Windhoek	74.64	108	P	P	08 28 46.7	-0.6
WIN				IAmb	IAmb	08 28 47.6	
	comp=Z,11nm,0.9s						
Q24A	Divide	74.96	330	IAmb	IAmb	08 28 51.6	
	comp=Z,8.3nm,0.8s						
GRAN	Grantham	75.03	119	*e*P	P	08 28 49.9	+0.8
GRAN				IAmb	IAmb	08 28 50.6	
	comp=Z,53nm,0.6s						
MVCO	Mesa Verde	75.14	326	P	P	08 28 48.7	-0.9
WUAZ	Wupatki	75.30	323	P	P	08 28 52.9	+2.3
WUAZ				IAmb	IAmb	08 28 57.8	
	comp=Z,6.2nm,1.0s						
ECSD	EROS Data Cent	75.67	338	IAmb	IAmb	08 28 53.8	
	comp=Z,10nm,0.9s						
BRAK	Brakfontein	75.79	119	*e*P	P	08 28 54.0	+0.4
BRAK				IAmb	IAmb	08 28 54.2	
	comp=Z,28nm,0.9s						
UPI	Upington	75.82	115	⇓*i*P	P	08 28 54.2	+0.5
UPI				IAmb	IAmb	08 28 54.9	
	comp=Z,65nm,0.9s						
SMCO	Snowmass	75.97	329	IAmb	IAmb	08 29 00.3	
	comp=Z,12nm,1.2s						
ROOI	Rooidraai Farm	76.03	119	⇓*i*P	P	08 28 55.2	+0.4
ROOI				IAmb	IAmb	08 28 56.2	
	comp=Z,34nm,0.8s						
ROSN	Rosenhof	76.15	121	*e*P	P	08 28 55.7	+0.3
KROM	Kromhout	76.20	121	*e*P	P	08 28 56.2	+0.5
TSUM	Tsumeb	76.40	105	P	P	08 28 57.0	-0.2
TSUM	Tsumeb	76.40	105	⇓*i*P	P	08 28 57.3	+0.1
BFON	Badsfontein, M	76.41	119	*e*P	P	08 28 57.5	+0.5
BFON				IAmb	IAmb	08 28 58.0	
	comp=Z,22nm,0.7s						
PFO	Pinyon Flats O	76.74	319	P	P	08 29 00.1	+1.5
	comp=Z,2.1nm,0.7s,baz=106,slow=3.1,SNR=5.1						
	comp=Z,2.1nm,0.7s						
GRAF	Camdeboo Natio	76.84	120	*e*P	P	08 29 00.2	+0.8
GRAF				IAmb	IAmb	08 29 00.5	
	comp=Z,25nm,1.0s						
KNB	Kanab	77.20	324	P	P	08 29 03.5	+2.2
KNB				IAmb	IAmb	08 29 04.8	
	comp=Z,9.4nm,0.9s						
TOA0	Torodi Ar. Sit	77.25	68	P	P	08 29 00.8	-0.9
TOA0				IAmb	IAmb	08 29 02.5	
	comp=Z,19nm,0.7s						
TORD	Torodi Ar. Bea	77.25	68	P	P	08 29 00.7	-1.0
	comp=Z,16nm,0.6s,baz=258,slow=5.4,SNR=121						
TORD				pP	pP	08 29 45.6	-0.6
	comp=Z,6.2nm,0.8s,baz=253,slow=5.0,SNR=2.6						
TORD				LR	LR	09 01 16.0	
	comp=Z,37nm,19.5s,baz=184,slow=34						
	comp=Z,16nm,0.6s						
O20A	White River Ci	77.32	328	IAmb	IAmb	08 29 13.6	
	comp=Z,6.5nm,0.9s						
ELS	Elsinore Mount	77.34	318	P	P	08 29 03.7	+1.7
V12A	Nelson	77.35	321	P	P	08 29 04.2	+2.3
LCMT	Little Creek M	77.42	323	P	P	08 29 04.8	+2.4
SOE	Somerset East	77.49	120	P	P	08 29 03.1	+0.1
SOE	Somerset East	77.49	120	*e*P	P	08 29 03.4	+0.4
SOE				IAmb	IAmb	08 29 04.4	
	comp=Z,32nm,0.7s						
SRU	San Rafael Swe	77.61	326	IAmb	IAmb	08 29 06.1	
	comp=Z,5.7nm,0.8s						
MTPU	Mount Pierson	77.64	325	IAmb	IAmb	08 29 18.4	
	comp=Z,6.1nm,1.0s						
Q16A	Castle Valley	77.79	326	P	P	08 29 05.3	+0.9
CCUT	Cedar City	77.89	324	IAmb	IAmb	08 29 08.8	
	comp=Z,5.7nm,0.9s						
GRHM	Grahamstown, E	77.89	121	P	P	08 29 04.5	-0.6
GRHM	Grahamstown, E	77.89	121	*e*P	P	08 29 06.2	+1.0
GRHM				IAmb	IAmb	08 29 06.5	
	comp=Z,60nm,0.8s						
MVU	Marysvale	78.00	325	IAmb	IAmb	08 29 09.0	
	comp=Z,16nm,0.8s						
P17A	Butcher Ranch,	78.00	326	P	P	08 29 05.4	-0.2
P17A				IAmb	IAmb	08 29 08.5	
	comp=Z,9.5nm,1.2s						
SHPR	Sheep Range	78.09	322	P	P	08 29 07.4	+1.3
RWWY	Rawlins	78.09	330	IAmb	IAmb	08 29 09.0	
	comp=Z,11nm,0.9s						
GSC	Goldstone, Bar	78.15	320	P	P	08 29 08.9	+2.5
RDMU	Red Mountain	78.29	328	P	P	08 29 09.1	+1.9
RDMU				IAmb	IAmb	08 29 09.9	
	comp=Z,7.2nm,0.8s						
HVD	Gariep Dam	78.31	118	⇓*i*P	P	08 29 08.5	+0.8
HVD				IAmb	IAmb	08 29 09.1	
	comp=Z,62nm,0.8s						
MAW	Mawson	78.39	162	P	P	08 29 08.7	+1.6
	comp=Z,47nm,0.9s,baz=207,slow=6.8,SNR=2.7						
	comp=Z,47nm,0.9s						
RSSD	Black Hills	78.74	333	P	P	08 29 08.7	-0.9
BSUT	Blindstream Ca	78.83	327	P	P	08 29 12.0	+1.6
BSUT				IAmb	IAmb	08 29 14.0	
	comp=Z,10nm,1.3s						
MPU	Maple Canyon	78.86	326	P	P	08 29 11.6	+1.3
BOSA	Boshof	78.94	116	P	P	08 29 11.1	0.0
	comp=Z,49nm,0.7s,baz=248,slow=4.5,SNR=79						
	comp=Z,49nm,0.7s						
BOSA	Boshof	78.94	116	P	P	08 29 10.8	-0.3
BOSA	Boshof	78.94	116	⇓*i*P	P	08 29 11.4	+0.3
BOSA				IAmb	IAmb	08 29 11.5	
	comp=Z,54nm,0.8s						
B35A	Bob, Littlefor	78.95	342	IAmb	IAmb	08 29 11.8	
	comp=Z,6.9nm,0.9s						
WCT	Wildcat Mounta	79.11	321	P	P	08 29 11.1	-0.5
SPR3	Spring Creek 3	79.47	324	P	P	08 29 14.0	+0.2
AGMN	Agassiz Nation	79.51	341	P	P	08 29 13.4	0.0
AGMN				IAmb	IAmb	08 29 15.0	
	comp=Z,5.9nm,0.9s						
E28A	Huff	79.56	337	P	P	08 29 15.3	+1.6
E28A				IAmb	IAmb	08 29 16.0	
	comp=Z,14nm,0.8s						
DUG	Dugway, Tooele	79.58	326	P	P	08 29 15.5	+1.4
TCUT	Toone Canyon	79.59	327	P	P	08 29 14.3	0.0
TCUT				IAmb	IAmb	08 29 17.8	
	comp=Z,5.0nm,0.6s						
SWZ	Schweizer	79.60	115	*e*P	P	08 29 14.1	-0.6
SWZ				IAmb	IAmb	08 29 15.2	
	comp=Z,44nm,0.7s						
LCH	Last Change Ra	79.99	321	P	P	08 29 15.3	-1.1
PD31	Pinedale Array	80.00	329	P	P	08 29 16.9	+0.4
PDAR	Pinedale Array	80.00	329	P	P	08 29 17.6	+1.1
	comp=Z,2.6nm,0.8s,baz=122,slow=6.7,SNR=20						
PDAR				pP	pP	08 30 03.0	+1.4
	comp=Z,1.1nm,0.8s,baz=123,slow=5.5,SNR=3.0						
PDAR				LR	LR	09 07 04.6	
	comp=Z,28nm,19.5s,baz=110,slow=37						
	comp=Z,2.6nm,0.8s						
PDAR	Pinedale Array	80.00	329	P	P	08 29 17.4	+0.9
BW06	Boulder Array	80.00	329	P	P	08 29 17.5	+1.0
HWUT	Hardware Ranch	80.04	327	P	P	08 29 15.0	-1.7
HWUT				IAmb	IAmb	08 29 19.1	
	comp=Z,5.4nm,0.9s						
BGU	Big Grassy Mou	80.24	326	P	P	08 29 16.2	-1.5
TPH	Tonopah	80.36	322	P	P	08 29 20.3	+1.9
TPH				IAmb	IAmb	08 29 21.4	
	comp=Z,17nm,1.2s						
AHID	Auburn Hatcher	80.71	328	P	P	08 29 21.2	+0.9
AHID				IAmb	IAmb	08 29 22.7	
	comp=Z,8.3nm,1.1s						
LBTB	Lobatse	80.74	113	P	P	08 29 20.3	-0.5
LBTB	Lobatse	80.74	113	⇓*i*P	P	08 29 21.2	+0.4
LBTB				IAmb	IAmb	08 29 21.7	
	comp=Z,66nm,0.7s						
HVU	Hansel Valley	80.76	327	IAmb	IAmb	08 29 22.7	
	comp=Z,5.7nm,0.8s						
OUZM	OUZ	81.07	49	P	P	08 29 24.1	+1.8
SNKL	Senekal, Frees	81.09	117	⇓*i*P	P	08 29 23.0	+0.3
SNKL				IAmb	IAmb	08 29 23.4	
	comp=Z,54nm,0.7s						
NVAR	Mina Array Bea	81.21	321	P	P	08 29 24.8	+1.9
	comp=Z,0.7nm,0.8s,baz=155,slow=6.7,SNR=7.9						
NVAR				pP	pP	08 30 10.2	+1.9
	comp=Z,1.3nm,0.9s,baz=92,slow=31,SNR=1.9						
	comp=Z,0.7nm,0.8s						
ELK	Elko	81.23	325	P	P	08 29 24.5	+1.4
	comp=Z,2.8nm,0.9s,baz=137,slow=4.4,SNR=8.6						
	comp=Z,2.8nm,0.9s						
ELK	Elko	81.23	325	P	P	08 29 23.6	+0.5
ULM	Lac du Bonnet	81.26	341	P	P	08 29 22.8	+0.1
	comp=Z,4.6nm,0.7s,baz=145,slow=5.4,SNR=7.7						
ULM				pP	pP	08 30 08.4	+0.5
	comp=Z,4.5nm,0.8s,baz=215,slow=1.8,SNR=3.5						
	comp=Z,4.6nm,0.7s						
KSTD	Kokstad	81.27	120	*e*P	P	08 29 23.9	+0.3
PRYS	Parys	81.34	116	⇓*i*P	P	08 29 24.0	-0.1
PRYS				IAmb	IAmb	08 29 24.6	
	comp=Z,24nm,0.7s						
ZGR	Zagora	81.35	50	P	P	08 29 26.0	+2.2
KSR	Koster	81.44	115	*e*P	P	08 29 24.8	+0.2
KSR				IAmb	IAmb	08 29 25.5	
	comp=Z,49nm,1.0s						
IMW	Indian Meadow	81.52	329	IAmb	IAmb	08 29 27.2	
	comp=Z,5.8nm,0.9s						
FLWY	Flagg Ranch	81.55	329	P	P	08 29 26.7	+2.1
FLWY				IAmb	IAmb	08 29 27.5	
	comp=Z,16nm,1.5s						
SCHQ	Schefferville	81.55	360	P	P	08 29 24.2	+0.1
	comp=Z,6.8nm,0.9s,baz=181,slow=4.6,SNR=7.2						
	comp=Z,6.8nm,0.9s						
LAO	LASA Array	81.73	334	P	P	08 29 25.8	+0.5
LAO				IAmb	IAmb	08 29 27.3	
	comp=Z,6.7nm,0.9s						
RLMT	Red Lodge	81.73	331	P	P	08 29 26.6	+1.1
TZRR	Tazzarine	81.79	49	P	P	08 29 28.0	+2.0
HRAO	HartRAO	82.06	115	⇓*i*P	P	08 29 28.0	+0.2
HRAO				IAmb	IAmb	08 29 28.2	
	comp=Z,35nm,0.8s						
YMR	Madison River	82.12	330	IAmb	IAmb	08 29 30.8	
	comp=Z,9.1nm,0.9s						
DGMT	Dagmar	82.43	336	P	P	08 29 30.5	+1.7
DGMT				IAmb	IAmb	08 29 31.3	
	comp=Z,11nm,0.8s						
GCMT	Greycliff	82.43	331	P	P	08 29 30.7	+1.6
SLR	Silverton	82.61	115	⇓*i*P	P	08 29 30.6	0.0
SLR				IAmb	IAmb	08 29 31.0	
	comp=Z,42nm,0.7s						
PAHR	Pah Rah Range	82.70	322	IAmb	IAmb	08 29 33.6	
	comp=Z,6.9nm,1.3s						
HLID	Hailey	82.90	327	IAmb	IAmb	08 29 34.6	
	comp=Z,6.9nm,0.9s						
NWCL	Newcastle	83.01	117	⇓*i*P	P	08 29 32.7	0.0
NWCL				IAmb	IAmb	08 29 33.5	
	comp=Z,47nm,0.8s						
LEPH	Lephalale, Lim	83.05	113	⇓*i*P	P	08 29 32.9	0.0
LEPH				IAmb	IAmb	08 29 33.9	
	comp=Z,43nm,0.6s						
MDT	Midelt	83.68	48	P	P	08 29 37.5	+1.7
	comp=Z,8.0nm,0.7s,baz=282,slow=3.9,SNR=14						
	comp=Z,8.0nm,0.7s						
MDT	Midelt	83.68	48	P	P	08 29 38.0	+2.2
LRM	Limekiln Ridge	83.68	330	P	P	08 29 34.9	-0.7
CRLN	Carolina, Mapu	83.89	116	⇓*i*P	P	08 29 37.7	+0.4
CRLN				IAmb	IAmb	08 29 38.0	
	comp=Z,15nm,0.8s						
PCVE	Castro Verde	84.52	43	*e*P	P	08 29 41.3	+1.6
PNCL	Nicolau / Gran	84.53	42	*e*P	P	08 29 40.8	+1.0
MESJ	Messejana	84.54	43	*e*P	P	08 29 41.3	+1.5
MESJ				A	A	08 29 43.2	
	comp=Z,36nm,1.5s						
MESJ	Messejana	84.54	43	*e*P	P	08 29 40.1	+0.2
MESJ				IAmb	IAmb	08 29 42.2	
	comp=Z,23nm,0.9s						
PVAQ	Vaqueiros	84.57	43	*e*P	P	08 29 39.8	-0.2
PVAQ				A	A	08 29 43.5	

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             comp=Z,76nm,2.2s
CHEFC  Chefchaouen        84.61  46   P       P        08 29 43.0 +2.6
HAGI   HAGI               84.77 117  eP       P        08 29 41.9 +0.3
HAGI                                  IAmb    IAmb     08 29 43.0
             comp=Z,36nm,1.0s
J08A   Circle Bar Ran     84.78 325   P       P        08 29 42.4 +1.4
J08A                                  IAmb    IAmb     08 29 43.8
             comp=Z,22nm,1.5s
PLID   Pearl Lake         84.79 327   IAmb    IAmb     08 29 43.7
             comp=Z,4.5nm,0.9s
PBEJ   Beja               84.88  43  eP       P        08 29 42.6 +1.1
PBEJ                                  A       A        08 29 45.0
             comp=Z,38nm,1.3s
PILG   Pilgrimsrest,      84.93 115⇓iP       P        08 29 43.3 +0.8
PILG                                  IAmb    IAmb     08 29 44.3
             comp=Z,82nm,0.9s
PSBE   So Bento           85.29  41  eP       P        08 29 45.1 +1.5
PMTG   Montargil          85.34  42  eP       P        08 29 44.5 +0.7
PMTG                                  A       A        08 29 46.4
             comp=Z,80nm,1.1s
HOED   Hoedspruit, Li     85.35 115⇓iP       P        08 29 44.7 +0.3
HOED                                  IAmb    IAmb     08 29 46.0
             comp=Z,64nm,1.0s
TAM    Tamanrasset        85.41  62   IAmb    IAmb     08 29 47.3
             comp=Z,10nm,1.0s
MUSN   Musina, Limpop     85.44 113⇓iP       P        08 29 46.1 +1.2
MUSN                                  IAmb    IAmb     08 29 46.5
             comp=Z,36nm,0.7s
PBAR   Barrancos          85.47  43  eP       P        08 29 45.2 +0.7
PBAR                                  A       A        08 29 47.5
             comp=Z,34nm,1.3s
FIGM   Figuig             85.54  51   P       P        08 29 48.0 +2.8
TDRA   Tendrara           85.55  49   P       P        08 29 48.0 +2.7
PESTR  Estremoz           85.58  42   P       P        08 29 46.5 +1.5
PESTR                                 IAmb    IAmb     08 29 47.6
             comp=Z,24nm,1.0s
PESTR  Estremoz           85.58  42   P       P        08 29 46.7 +1.7
PESTR  Estremoz           85.58  42  eP       P        08 29 46.0 +1.0
PESTR                                 A       A        08 29 47.7
             comp=Z,55nm,1.1s
PCAS   Casmilo, Conde     85.81  41  eP       P        08 29 47.7 +1.6
YBH    Yreka Blue Hor     85.93 321   P       P        08 29 47.4 +0.6
             comp=Z,1.5nm,0.8s,baz=122,slow=9.5,SNR=4.4
             comp=Z,1.5nm,0.8s
JBK    JBK                85.95  48   P       P        08 29 49.0 +1.8
COI    Coimbra            85.97  41  eP       P        08 29 49.4 +2.6
COI                                   A       A        08 29 49.9
             comp=Z,85nm,1.3s
PMRV   Marv??o            86.06  42  eP       P        08 29 47.9 +0.5
PMRV                                  A       A        08 29 49.7
             comp=Z,42nm,1.3s
MOPA   Mopani             86.14 114⇓iP       P        08 29 49.0 +0.8
PCBR   Castelo Branco     86.28  41  eP       P        08 29 48.9 +0.5
PCBR                                  A       A        08 29 50.9
             comp=Z,42nm,1.2s
PINE   Pine Mountain      86.37 324   P       P        08 29 50.5 +1.5
PINE                                  IAmb    IAmb     08 29 51.9
             comp=Z,8.9nm,0.8s
MTE    Manteigas          86.60  41   P       P        08 29 48.7 -1.3
MTE    Manteigas          86.60  41  eP       P        08 29 50.7 +0.7
MTE                                   A       A        08 29 52.7
             comp=Z,48nm,1.3s
PVIS   Viseu              86.60  41  eP       P        08 29 50.9 +0.9
PVRL   Vila Real          87.06  40  eP       P        08 29 53.6 +1.4
PVRL                                  A       A        08 29 55.0
             comp=Z,42nm,1.1s
MVO    Moncorvo           87.39  41   A       A        08 29 56.0
             comp=Z,35nm,1.4s
MVO    Moncorvo           87.39  41  eP       P        08 29 56.3 +2.5
PBRG   Braganca           87.96  40  eP       P        08 29 58.3 +1.8
PAB    San Pablo          87.97  43   P       P        08 29 56.4 -0.2
PAB                                   IAmb    IAmb     08 29 59.6
             comp=Z,9.4nm,0.9s
PAB    San Pablo          87.97  43   P       P        08 29 58.0 +1.4
ESDC   Sonseca Array      88.28  43   P       P        08 29 59.0 +0.9
             comp=Z,3.8nm,0.8s,baz=240,slow=4.6,SNR=27
             comp=Z,3.8nm,0.8s
FRB    Frobisher Bay      90.51 359   P       P        08 30 08.2 +0.5
             comp=Z,2.1nm,0.8s,baz=156,slow=2.7,SNR=5.3
             comp=Z,2.1nm,0.8s
WAPA   Wapiti River       93.51 333   P       P        08 30 23.1 +1.1
WAPA                                  IAmb    IAmb     08 30 23.5
             comp=Z,8.3nm,0.9s
KEST   Kesra              94.90  52   P       P        08 30 30.4 +1.6
             comp=Z,6.5nm,0.9s,baz=268,slow=2.2,SNR=6.0
             comp=Z,6.5nm,0.9s
AFI    Afiamalu           96.92 251   LR      LR       09 03 01.0
             comp=Z,49nm,20.9s,baz=9.0,slow=28
YKA    Yellowknife Ar     97.14 340   P       Pdif     08 30 38.6 +0.3
             comp=Z,1.3nm,0.9s,baz=134,slow=4.5,SNR=18
YKA                                   pP      pP       08 31 25.4 +1.0
             comp=Z,1.1nm,0.8s,baz=134,slow=4.7,SNR=6.4
             comp=Z,1.3nm,0.9s
AKASG  Malin Array Be    113.92  44   PKiKP   PKiKP    08 35 44.0 -0.1
             comp=Z,1.2nm,0.6s,baz=264,slow=3.0,SNR=8.1
KLMR   Klimovskoe        120.98  33  e        PKiKP    08 35 57.4 -0.1
KLMR                                  AMP              08 35 59.1
             comp=Z,24nm,1.1s
KBZ    Khabaz            121.74  54   PKP     PKiKP    08 36 00.9 +1.4
             comp=Z,3.8nm,0.9s,baz=282,slow=9.3,SNR=4.2
BELG   Belogornoye       125.50  43   PKP     PKiKP    08 36 07.5 +0.8
             comp=Z,10nm,0.8s,baz=307,slow=20,SNR=4.4
ASAR   Alice Springs     125.87 203   PKP     PKiKP    08 36 08.4 -0.1
             comp=Z,6.5nm,0.7s,baz=136,slow=1.8,SNR=40
ASAR                                  pPKP    pPKPdf   08 36 55.7 -0.3
             comp=Z,2.1nm,0.9s,baz=149,slow=2.3,SNR=3.7
ASAR                                  SKP              08 39 26.9
             comp=Z,1.4nm,1.0s,baz=177,slow=1.9,SNR=4.7
WRA    Warramunga Arr    129.11 206   PKP     PKiKP    08 36 14.8 -0.3
             comp=Z,7.1nm,0.7s,baz=171,slow=1.6,SNR=42
WRA                                   pPKP    pPKPdf   08 37 02.3 +0.1
             comp=Z,3.3nm,0.9s,baz=173,slow=1.5,SNR=5.1
ARU    Arti              131.35  37   PKP     PKiKP    08 36 19.3 +1.0
             comp=Z,3.1nm,0.2s,baz=236,slow=3.6,SNR=8.3
AKTO   Aktyubinsk        132.13  45   PKP     PKiKP    08 36 20.1  0.0
             comp=Z,3.1nm,1.0s,baz=250,slow=3.7,SNR=5.3
GEYT   Alibeck           132.64  62   PKP     PKiKP    08 36 21.1 -0.5
             comp=Z,1.6nm,0.4s,baz=263,slow=10,SNR=4.2
SEY    Seymchan          136.05 336   PKP     PKiKP    08 36 27.9 +0.3
             comp=Z,5.0nm,0.8s,baz=72,slow=15,SNR=10
BVAR   Borovoye Array    138.91  39   PKP     PKiKP    08 36 33.5 -0.3
             comp=Z,5.1nm,0.7s,baz=311,slow=3.2,SNR=21
PALK   Pallekele         143.17 116   PKP     PKiKP    08 36 42.1 -1.6
             comp=Z,7.2nm,0.8s,baz=221,slow=11,SNR=4.0
EKS2   Erkin-Say         144.22  54   P       PKPdf    08 36 41.9 +0.4
             SNR=7.3
AML    Almayashu         144.27  55   P       PKPdf    08 36 42.3 +0.3
             SNR=18
KURBB  Kurchatov Arra    144.50  39   PKP     PKPdf    08 36 42.1 +0.5
             comp=Z,35nm,0.8s,baz=299,slow=3.6,SNR=224
USP    Ospenovka         144.59  53   P       PKPdf    08 36 42.9 +0.8
             SNR=6.8
AAK    Ala-Archa         144.74  54   P       PKiKP    08 36 43.8 -2.5
             SNR=45
AAK    Ala-Archa         144.74  54   PKP     PKPdf    08 36 43.7 +1.2
             comp=Z,35nm,0.8s,baz=249,slow=3.1,SNR=77
CHMS   Chumysh           144.84  53   P       PKPdf    08 36 43.6 +1.1
             SNR=18
UCH    Uchtor            144.85  54   P       PKPdf    08 36 44.1 +1.0
             SNR=62
KBK    Karagaybulak      145.06  53   P       PKiKP    08 36 44.8 -2.2
             SNR=55
TKM2   Tokmak 2          145.46  53   P       PKPab    08 36 45.6 +1.0
             SNR=56
ZALV   Zalesovo Beam     145.82  30   PKPbc   PKPab    08 36 45.2 -0.2
             comp=Z,47nm,0.7s,baz=292,slow=3.5,SNR=78
ZALV                                  pPKPbc  pPKPdf   08 37 32.6 +0.9
             comp=Z,8.6nm,0.7s,baz=302,slow=3.3,SNR=2.1
ULHL   Ulahol            146.09  54   P       PKiKP    08 36 47.8 -1.4
             SNR=42
KSH    Kashi             146.48  59   PKPbc   PKPab    08 36 47.4 -1.2
KAPI   Kappang           147.56 192   PKPbc   PKiKP    08 36 51.2 -1.6
             comp=Z,39nm,0.8s,baz=151,slow=4.4,SNR=7.2
MKAR   Makanchi Array    148.50  43   PKPbc   PKPbc    08 36 50.0 -2.3
             comp=Z,23nm,0.8s,baz=292,slow=2.0,SNR=95
MKAR                                  pPKPbc  pPKPdf   08 37 40.2 +3.7
             comp=Z,6.8nm,0.7s,baz=299,slow=3.0,SNR=3.0
WMQ    Urumqi            153.28  45  eP       PKPdf    08 36 55.8 -0.2
HEH    HeiHe             154.51 339  eP       PKiKP    08 37 06.3 +0.3
HEH                                   pmax    pmax
             comp=Z,7.0nm,0.9s
HEH                                   pmax    pmax
             comp=Z,140nm,3.7s
SONM   Songino Array     158.52  13   PKP     PKPdf    08 37 04.2 +1.3
             comp=Z,4.8nm,1.0s,baz=357,slow=2.3,SNR=22
SONM                                  PKPab   PKPab    08 37 40.1 +1.5
             comp=Z,3.9nm,0.8s,baz=324,slow=4.2,SNR=11
GOMU   GeErMu            161.67  56   PKP     PKPdf    08 37 09.3 +2.2
GOMU                                  PKPab   PKPab    08 37 55.5 +2.3
GOMU                                  AMB     AMB
             comp=Z,73nm,4.8s
GTA    Gaotai            163.19  39  ePKPbc   PKPdf    08 37 10.1 +1.9
GTA                                   PKPab   pPKPdf   08 38 00.9 +4.7
KSRS   Korea Array       164.02 314   PKP     PKPdf    08 37 10.3 +1.6
             comp=Z,3.0nm,0.9s,baz=69,slow=1.0,SNR=9.3
KSRS                                  PKPab   PKPab    08 38 02.7 -0.3
             comp=Z,0.5nm,0.4s,baz=269,slow=38,SNR=2.2
CMAR   Chiang Mai Arr    164.07 119   PKP     PKPdf    08 37 10.2 +0.8
             comp=Z,1.2nm,0.2s,baz=270,slow=2.1,SNR=12
CMAR                                  PKPab   PKPab    08 38 03.2 -0.5
             comp=Z,2.5nm,0.3s,baz=245,slow=4.7,SNR=20
CMAR                                  PP      PP       08 41 50.4 +0.5
             comp=Z,0.6nm,0.3s,baz=248,slow=7.1,SNR=4.9
HHC    Hu-ho-hao-te      166.15   6  eP       PKPdf    08 37 11.8 +1.2
PZH    PanZhiHua         169.46  90   PKP     PKPdf    08 37 11.8 -1.6
NJ2    Nanjing           173.19 318  eP       PKPdf    08 37 16.3 +1.4
NJ2                                   pmax    pmax
             comp=Z,10.0nm,0.5s
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MOS **20** *08:22:27.4±0.9, 44.°10N×139.°02E, h257^{km}, mb4.5/43, Error ellipse: s-maj=5.9km s-min=4.6km az=101.6*

SKHL **20** *08:22:27.3±0.7, 44.°00N×139.°00E, h250^{km}±8^{km}, mb5.0/15, mbv4.9/3, msh5.1/4, msha5.2/13*

BJI **20** *08:22:27.0±0.0, 44.°20N×139.°10E, h262^{km}, mb4.5/37, mB4.5/20*

JMA **20** *08:22:28.1±0.3, 44˚N±1˚×13˚9E±˚, h268^{km}±2^{km}, MD4.3/38, MV4.3/38, NW OFF SHAKOTAN PEN*

NEIC **20** *08:22:28.7±1.7, 44.°09N±0.°07×139.°00E±0.°09, h253^{km}±6^{km}, mb4.3/160, Error ellipse: s-maj=10.4km s-min=9.2km az=134.0*

IDC **20** *08:22:28.4±0.6, 44.°18N×139.°00E, h247^{km}±5^{km}, mb4.1/42, mbtmp4.7/53, Error ellipse: s-maj=6.9km s-min=6.2km az=167.0*

NIED **20** *08:22:28.1, 44.°03N×139.°13E, h268^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-3.82; $M_{\theta\theta}$4.54; $M_{\phi\phi}$-0.72; $M_{r\theta}$-2.27; $M_{\theta\phi}$-2.86; $M_{\phi r}$-1.08; Fault plane solution: $M_0$5.64000×10^{15} NP1: ϕ_s88.00000°, δ61.00000°, λ-124.00000°. NP2: ϕ_s322.00000°, δ44.00000°, λ-44.00000°.*

ISC 20 08:22:28.0±0.4**, 44.°07N**±0.°03×**139.°01E**±0.°03**, h253**^{km}±3^{km}**, h252**^{km}**:pP-P, n650, σ1^{s}26**/711**, mb4.4**/174**, 46C-32D, Eastern Sea of Japan**

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Code   Station Name        Δ°   AZ°   Phase ID           Time      Res
                                      Op      ISC       h  m  s    ISC
JSK    Shakotan            1.28 124⇓iP      Pn       08 23 06.0 +1.0
JSH    Shimam              1.61 152 ⇓P      Pn       08 23 08.3 +0.8
JSH                                ⇓eS      S        08 23 39.1 +0.5
JYG    Yagishiri           1.77  78 ⇓P      Pn       08 23 09.2 +0.6
JYG                                ⇓eS      S        08 23 41.2 +0.5
TEY    Ternei              1.97 300⇑ePN     Pn       08 23 10.6 +0.2
TEY                                   pmax    pmax
             comp=Z,100nm,0.6s
TEY                                   pmax    pmax
             comp=N,10.0nm,0.5s
TEY                                   pmax    pmax
             comp=E,50nm,0.5s
TEY                                   pmax    pmax
             comp=Z,100nm,0.5s
TEY    Ternei              1.97 300  i P      Pn       08 23 10.6 +0.2
TEY                                   AMB     AMB      08 23 11.1
             comp=Z,100nm,0.6s
TEY                                   AMB     AMB      08 23 11.5
             comp=Z,40nm,0.3s
TEY                                  eS       S        08 23 43.5 -0.4
TEY                                   A       A        08 23 44.5
             comp=Z,90nm,0.5s
TEY                                   A       A        08 23 44.5
             comp=Z,70nm,0.5s
JHR    Hokuryu             1.99  99⇓iP      Pn       08 23 11.7 +1.2
JRBN   Rebuntou            1.99  47⇓iP      Pn       08 23 11.2 +0.7
JRBN                               ⇓eS      S        08 23 43.1 -1.0
JOSM   Okushiri--Mats      2.02 170⇓iP      Pn       08 23 12.2 +1.3
JOSM                               ⇓eS      S        08 23 45.8 +1.1
JSS    Shosan              2.07  80⇓iP      Pn       08 23 12.7 +1.4
JEW    Eniwo               2.16 124   P       Pn       08 23 13.5 +1.3
JWK2   Keihoku             2.41  58 ⇓P      Pn       08 23 16.1 +1.7
JWK2                               ⇓eS      S        08 23 52.7 +1.5
JWK2   Keihoku             2.41  58   A       A        08 23 16.1
             comp=Z,2.0nm,4.3s,comp=Z,4.0nm,2.5s
ASAJ   Asahikawa           2.58  88   P       Pn       08 23 17.1 +0.8
             comp=Z,83nm,0.4s,baz=295,slow=6.4,SNR=215
ASAJ                                  S       S        08 23 54.9 +0.5
             comp=Z,79nm,0.8s,baz=124,slow=27,SNR=13
ASAJ   Asahikawa           2.58  88   PN      Pn       08 23 16.9 +0.6
JKA    Kamikawa-asahi      2.59  88   Pn      Pn       08 23 16.9 +0.6
JKA    Kamikawa-asahi      2.59  88  eP       Pn       08 23 16.9 +0.6
JOMM   Oshimamatsumae      2.65 164 ⇓P      Pn       08 23 17.9 +0.9
JOMM                               ⇓eS      S        08 23 56.3 +0.6
JKK2   Kamakawa 2          2.71  93⇓iP      Pn       08 23 18.5 +1.0
JKK2                               ⇓eS      S        08 23 57.9 +1.2
JSE    Soyaes              2.71  70  eP       Pn       08 23 18.7 +1.2
JSE                                  eS       S        08 23 58.0 +1.4
JSE    Soyaes              2.71  70   A       A        08 23 18.7
             comp=Z,4.0nm,1.5s,comp=Z,8.0nm,4.0s
JOT    Ohata               3.08 150  eP       Pn       08 23 21.4 -0.2
JNBK   Urakawa-nobuka      3.27 122  eP       Pn       08 23 23.1 -0.5
JCH    Churui              3.49 113  eP       Pn       08 23 24.9 -1.2
JCH                                  eS       S        08 24 08.8 -3.4
JTKR   Abashiri--Toko      3.53  90   P       Pn       08 23 27.2 +0.7
JTKR                                 eS       S        08 24 12.7 -0.2
JAR    Ashorobuto          3.54 101⇓eP      Pn       08 23 27.1 +0.5
JAR                                ⇓eS      S        08 24 13.6 +0.6
JTM    Tenmabayashi        3.62 154   Pn      Pn       08 23 27.3 -0.3
JTM    Tenmabayashi        3.62 154   P       Pn       08 23 27.0 -0.6
JEM    Erimo               3.67 123   P       Pn       08 23 29.1 +1.0
ERM    Erimo               3.67 123           Pn       08 23 28.9 +0.8
ERM    Erimo               3.67 123   P       Pn       08 23 29.0 +0.9
ERM    Erimo               3.67 123ce PN      Pn       08 23 29.0 +0.9
ERM                                   pmax    pmax
             comp=Z,363nm,1.7s
YSS    Yuzh-Sakhalins      3.90  41           Pn       08 23 31.2 +0.5
YSS    Yuzh-Sakhalins      3.90  41α iPN     Pn       08 23 31.5 +0.8
YSS                                  eS       S        08 24 20.1 -0.4
YSS                                   pmax    pmax
             comp=Z,720nm,1.1s
YSS                                   pmax    pmax
             comp=Z,400nm,4.0s
YSS                                   smax    smax
             comp=N,140nm,0.8s
YSS                                   smax    smax
             comp=E,90nm,1.0s
YSS                                   smax    smax
             comp=N,500nm,4.9s
YSS    Yuzh-Sakhalins      3.90  41  i P      Pn       08 23 31.5 +0.8
YSS                                  i P      Pn       08 23 31.5 +0.8
YSS                                   AMB     AMB      08 23 32.6
             comp=N,700nm,0.5s
YSS                                   AMB     AMB      08 23 33.9
             comp=N,400nm,4.0s
YSS                                  eS       S        08 24 20.5  0.0
YSS                                   A       A        08 24 23.4
             comp=N,100nm,0.3s
YSS                                   A       A        08 24 23.4
             comp=N,40nm,0.3s
YSS                                   A       A        08 24 23.5
             comp=N,500nm,4.9s
YSS                                   A       A        08 24 23.5
             comp=N,300nm,4.9s
JANG   Nango               4.14 152   P       Pn       08 23 32.5 -1.1
JANG                                 eS       S        08 24 21.2 -4.5
JAK    Akkeshi             4.27 103  eP       Pn       08 23 34.2 -0.8
JAK                                  eS       S        08 24 24.5 -3.9
AKK    Akkeshi             4.37 102  eP       Pn       08 23 35.2 -1.0
AKK                                  eS       S        08 24 28.8 -1.7
RUSJ   Misakicho           4.49  87⇓iPN     Pn       08 23 39.3 +1.6
RUSJ                                 eS       S        08 24 35.9 +2.7
NMR    Nemuro--Hokkai      4.92  96⇓iPN     Pn       08 23 41.2 -1.6
NMR                                  eS       S        08 24 36.9 -5.6
NMR    Nemuro--Hokkai      4.92  96  i P      Pn       08 23 41.4 -1.4
NEM2   Nemuro 2            4.93  96   P       Pn       08 23 41.3 -1.7
NEM2                                 eS       S        08 24 37.1 -5.6
YUK    Yuzh-Kuril'sk       4.94  88d iPN     Pn       08 23 43.7 +0.6
YUK                                  i S      S        08 24 42.8 -0.1
YUK                                   pmax    pmax
             comp=Z,219nm,0.6s
YUK                                   pmax    pmax
             comp=N,43nm,0.5s
YUK                                   pmax    pmax
             comp=E,67nm,0.5s
YUK                                   smax    smax
             comp=E,395nm,0.7s
YUK                                   smax    smax
             comp=N,226nm,0.4s
YUK    Yuzh-Kuril'sk       4.94  88  i P      Pn       08 23 43.7 +0.6
YUK                                   AMB     AMB      08 23 44.3
             comp=N,40nm,0.6s
YUK                                   AMB     AMB      08 23 44.3
             comp=N,70nm,0.6s
YUK                                   AMB     AMB      08 23 44.3
             comp=N,220nm,0.6s
YUK                                  i S      S        08 24 43.0 +0.1
YUK                                   A       A        08 24 49.0
             comp=N,3μm,2.0s
YUK                                   A       A        08 24 49.0
             comp=N,2μm,2.0s
YUK                                   A       A        08 24 54.5
             comp=N,230nm,0.5s
YUK                                   A       A        08 24 54.5
             comp=N,400nm,0.5s
GRTR   Gornotajezhnoj      4.97 268  eP       Pn       08 23 43.6 +0.1
GRTR                                  AMB     AMB      08 23 45.5
             comp=N,30nm,0.5s
GRTR                                 eS       S        08 24 42.7 -0.9
GRTR                                  A       A        08 24 46.3
             comp=N,400nm,2.0s
GRTR                                  A       A        08 24 46.3
             comp=N,200nm,2.0s
GRTR                                  A       A        08 24 47.4
             comp=N,40nm,0.6s
GRTR                                  A       A        08 24 47.4
             comp=N,40nm,0.6s
USA0B  Ussuriysk Arra      5.06 274   Pn      Pn       08 23 45.2 +0.7
USA0B  Ussuriysk Arra      5.06 274c iPN     Pn       08 23 45.1 +0.6
USRK   Ussuriysk Ar.       5.06 274   P       Pn       08 23 45.2 +0.6
             comp=N,10nm,0.5s,baz=89,slow=13,SNR=28
USRK                                  S       S        08 24 46.6 +1.1
             comp=N,3.4nm,0.6s,baz=262,slow=26,SNR=2.0
KHBR   Khabarovsk          5.19 329  eP       Pn       08 23 46.2 +0.2
KHBR                                  AMB     AMB      08 23 47.3
             comp=N,40nm,0.5s
VLA    Vladivostok         5.26 262  eP       Pn       08 23 47.8 +0.8
JMK    Ichinoseki          5.38 161  eP       Pn       08 23 47.6 -0.9
JMK                                  eS       S        08 24 48.0 -4.8
UGL    Uglegorsk           5.43  22⇑iPN     Pn       08 23 49.8 +0.8
UGL                                   S       S        08 24 52.9 -0.9
UGL                                   pmax    pmax
             comp=Z,183nm,1.1s
UGL    Uglegorsk           5.43  22  i P      Pn       08 23 49.8 +0.8
UGL                                   AMB     AMB      08 23 50.6
             comp=Z,180nm,0.8s
UGL                                  eS       S        08 24 52.9 -0.9
SHO    Shikotan            5.65  89  ePN      Pn       08 23 50.1 -1.7
SHO                                  eS       S        08 24 52.5 -6.2
SHO                                   pmax    pmax
             comp=Z,37nm,0.6s
SHO                                   pmax    pmax
             comp=N,14nm,0.3s
SHO                                   pmax    pmax
             comp=E,18nm,0.3s
SHO                                   smax    smax
             comp=E,222nm,0.2s
SHO                                   smax    smax
             comp=N,397nm,0.4s
SHO    Shikotan            5.65  89  i P      Pn       08 23 50.9 -0.9
SHO                                   AMB     AMB      08 23 59.2
             comp=N,500nm,2.5s
SHO                                   AMB     AMB      08 24 01.4
             comp=N,40nm,0.5s
SHO                                  eS       S        08 24 53.3 -5.4
SHO                                   A       A        08 24 56.0
             comp=N,400nm,0.4s
SHO                                   A       A        08 24 56.0
             comp=N,220nm,0.4s
JSD    Sado                6.05 186   Pn      Pn       08 23 57.9 +0.9
JSD    Sado                6.05 186   P       Pn       08 23 58.0 +1.1
             comp=N,144nm,1.0s
JMM    Marumori            6.34 167           Pn       08 23 59.7 -0.9
JMM    Marumori            6.34 167   P       Pn       08 23 59.8 -0.7
             comp=N,137nm,0.5s
KUR    Kuril'sk            6.42  76  ePN      Pn       08 24 02.1 +0.7
KUR                                   S       S        08 25 16.0 -0.2
KUR                                   pmax    pmax
             comp=Z,57nm,0.8s
KUR                                   pmax    pmax
             comp=N,26nm,0.7s
KUR                                   smax    smax
             comp=E,76nm,0.5s
KUR                                   smax    smax
             comp=N,38nm,0.3s
KUR    Kuril'sk            6.42  76  i P      Pn       08 24 02.1 +0.7
KUR                                   AMB     AMB      08 24 04.3
             comp=N,140nm,0.7s
KUR                                  eS       S        08 25 16.0 -0.2
KUR                                   A       A        08 25 18.0
             comp=N,1μm,3.0s
KUR                                   A       A        08 25 18.0
             comp=N,900nm,3.0s
KUR                                   A       A        08 25 37.3
             comp=N,40nm,0.4s
KUR                                   A       A        08 25 37.3
             comp=N,80nm,0.4s
MDJ    Mudanjiang          6.78 278   P       Pn       08 24 06.8 +0.9
MDJ                                   S       S        08 25 25.3 +1.0
MDJ    Mudanjiang          6.78 278   Pn      Pn       08 24 06.5 +0.6
GRNR   Gornyy              6.93 346⇑iPN     Pn       08 24 07.9 +0.2
GRNR                                 eS       S        08 25 28.1 +0.4
GRNR                                  pmax    pmax
             comp=E,8.0nm,0.6s
GRNR                                  pmax    pmax
             comp=N,20nm,0.8s
GRNR                                  pmax    pmax
             comp=Z,20nm,0.6s
GRNR                                  smax    smax
             comp=E,2.0nm,0.7s
GRNR   Gornyy              6.93 346  i P      Pn       08 24 07.9 +0.2
GRNR                                  AMB     AMB      08 24 08.3
             comp=E,10.0nm,0.6s
GRNR                                  AMB     AMB      08 24 08.3
             comp=E,20nm,0.6s
GRNR                                 eS       S        08 25 28.1 +0.4
KLR    Kul'dur             7.18 318   P       Pn       08 24 10.9 +0.1
             comp=E,22nm,0.7s,baz=129,slow=12,SNR=92
KLR                                   S       S        08 25 31.4 -2.1
             comp=E,2.9nm,0.7s,baz=149,slow=22,SNR=0.9
KLR    Kul'dur             7.18 318d iPN     Pn       08 24 10.5 -0.4
KLR                                   pmax    pmax
             comp=Z,36nm,0.9s
KLR    Kul'dur             7.18 318  i P      Pn       08 24 10.5 -0.4
KLR                                   AMB     AMB      08 24 13.0
             comp=Z,40nm,0.9s
TYV    Tymovskoe           7.23  19  ePN      Pn       08 24 12.3 +0.9
TYV                                  eS       S        08 25 35.3 +0.7
TYV                                   pmax    pmax
             comp=Z,44nm,0.7s
TYV                                   pmax    pmax
             comp=Z,200nm,2.1s
TYV                                   smax    smax
             comp=N,12nm,1.3s
TYV                                   smax    smax
             comp=E,8.0nm,1.3s
TYV                                   smax    smax
             comp=N,100nm,2.4s
TYV                                   smax    smax
             comp=E,100nm,2.4s
TYV    Tymovskoe           7.23  19  i P      Pn       08 24 12.6 +1.2
TYV                                   AMB     AMB      08 24 13.2
             comp=E,200nm,2.1s
TYV                                   AMB     AMB      08 24 13.2
             comp=E,30nm,0.3s
TYV                                  eS       S        08 25 33.4 -1.2
TYV                                   A       A        08 25 43.3
             comp=E,30nm,0.4s
TYV                                   A       A        08 25 43.3
             comp=E,20nm,0.4s
MJB9   Matsu-Tunnel        7.54 185   Pn      Pn       08 24 15.8 +0.1
MAJO   Matsushiro          7.54 185   Pn      Pn       08 24 15.8 +0.2
MAJO   Matsushiro          7.54 185   P       Pn       08 24 15.8 +0.2
             comp=E,48nm,1.0s
MAJO   Matsushiro          7.54 185c iPN     Pn       08 24 15.6 -0.1
MAJO                                  pmax    pmax
             comp=Z,49nm,1.0s
MJAR   Matsushiro Arr      7.54 185   P       Pn       08 24 16.0 +0.4
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	comp=Z,26nm,0.5s,baz=1.1,slow=13,SNR=71						
MJAR				S	S	08 25 39.7	-2.6
	comp=Z,4.0nm,0.6s,baz=1.0,slow=27,SNR=1.9						
BNX	**BinXian**	8.41	285	⇓P	Pn	08 24 26.8	+0.4
BNX				pmax	pmax		
	comp=Z,110nm,0.8s						
BNX				pmax	pmax		
	comp=Z,120nm,4.3s						
JGF	**Kuroka**	8.55	189	Pn	Pn	08 24 28.5	+0.1
JGF	**Kuroka**	8.55	189	P	Pn	08 24 28.2	-0.2
	comp=Z,154nm,0.8s						
INU	**Inuyama**	8.85	191	Pn	Pn	08 24 32.1	+0.1
INU	**Inuyama**	8.85	191	P	Pn	08 24 32.2	+0.2
	comp=Z,231nm,0.8s						
CN2	**Changchun**	9.79	273	P	Pn	08 24 44.3	+0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
OKH	**Okha**	9.83	14	eP	Pn	08 24 46.4	+2.2
HEH	**HeiHe**	10.03	312	eP	Pn	08 24 45.9	-0.8
HEH				pmax	pmax		
	comp=Z,19nm,0.9s						
HEH				pmax	pmax		
	comp=Z,130nm,3.9s						
JHS	**Saijyo**	10.14	209		Pn	08 24 49.0	+0.7
JHS	**Saijyo**	10.14	209	P	Pn	08 24 49.3	+1.0
	comp=Z,33nm,0.9s						
KSRS	**Korea Array**	10.69	236	P	Pn	08 24 56.5	+1.2
	comp=Z,12nm,0.8s,baz=51,slow=12,SNR=36						
KS19	**Wonju Array Si**	10.69	236		Pn	08 24 56.8	+1.6
KSAR	**Wonju Array Be**	10.72	236	Pn	Pn	08 24 56.2	+0.6
KSAR	**Wonju Array Be**	10.72	236	PN	Pn	08 24 56.2	+0.6
KSAR	**Wonju Array Be**	10.72	236	eP	Pn	08 24 56.2	+0.6
JHJ2	**Mitsune**	10.96	176	Pn	Pn	08 24 58.2	-0.4
JMN	**Monobe**	11.07	203	Pn	Pn	08 25 00.7	+0.6
JMN	**Monobe**	11.07	203	P	Pn	08 25 01.4	+1.3
	comp=Z,31nm,1.3s						
TJN	**Taejon**	11.75	233		Pn	08 25 08.2	-0.2
TJN	**Taejon**	11.75	233	i PN	Pn	08 25 09.0	+0.6
ZEA	**Zeya**	12.37	326	ePN	Pn	08 25 15.4	-0.5
ZEA				pmax	pmax		
	comp=E,20nm,0.7s						
ZEA				pmax	pmax		
	comp=N,30nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,60nm,0.6s						
ZEA	**Zeya**	12.37	326	eP	Pn	08 25 15.6	-0.3
ZEA				AMB	AMB	08 25 19.8	
	comp=Z,80nm,0.5s						
JNU	**Nakatsue**	12.64	213	P	P	08 25 21.1	-0.5
	comp=Z,39nm,0.8s,baz=12,slow=20,SNR=18						
JNU	**Nakatsue**	12.64	213		P	08 25 20.7	-1.0
JNU	**Nakatsue**	12.64	213	P	P	08 25 21.4	-0.2
	comp=Z,52nm,0.9s						
KROS	**Kirovskiy**	12.99	327	eP	P	08 25 25.0	-0.3
SKR	**Severo-Kuril's**	13.33	54	cePN	P	08 25 28.6	-0.5
SKR	**Severo-Kuril's**	13.33	54	eP	P	08 25 28.5	-0.5
SKR				AMB	AMB	08 25 30.8	
	comp=Z,160nm,0.7s						
PAU	**Pauzhetka**	14.05	52	i P	P	08 25 37.1	+0.1
PAU				AMB	AMB	08 25 38.3	
	comp=Z,30nm,0.4s						
HIA	**Hailar**	14.20	298		Pn	08 25 38.5	+0.2
HIA	**Hailar**	14.20	298	P	Pn	08 25 38.6	+0.2
JSU	**Suzuyama**	14.24	211		Pn	08 25 39.1	+0.1
PEA0B	**Petropavlovsk-**	15.28	47	Pn	Pn	08 25 52.8	+1.5
PEA0B	**Petropavlovsk-**	15.28	47	ceP	P	08 25 50.3	-0.2
PETK	**Petropavlovsk-**	15.28	47	P	P	08 25 49.8	-0.8
	comp=Z,4.3nm,0.6s,baz=229,slow=5.4,SNR=9.1						
PET	**Petropavlovsk**	15.75	48	eP	Pn	08 25 57.4	+0.6
XLT	**XiLinHaoTe**	16.50	277	⇓iP	P	08 26 04.3	+0.2
XLT				pmax	pmax		
	comp=Z,14nm,0.7s						
XLT				pmax	pmax		
	comp=Z,73nm,3.6s						
MA2	**Magadan**	17.10	21	P	P	08 26 10.0	-0.4
	comp=Z,45nm,0.6s,baz=206,slow=10.0,SNR=25						
MA2	**Magadan**	17.10	21	P	P	08 26 10.0	-0.4
MA2	**Magadan**	17.10	21	eP	P	08 26 10.0	-0.4
JCJ	**Chichijima**	17.13	170	P	Pn	08 26 12.4	-0.9
	comp=Z,32nm,0.5s,baz=294,slow=23,SNR=8.6						
JCJ				S	S	08 29 14.8	-1.6
	comp=Z,39nm,0.5s,baz=280,slow=23,SNR=6.5						
JCJ	**Chichijima**	17.13	170	P	Pn	08 26 12.7	-0.6
YAK	**Yakutsk**	18.81	346	P	P	08 26 26.9	-1.9
	comp=Z,14nm,0.4s,baz=160,slow=1.8,SNR=7.3						
YAK				S	S	08 29 44.3	-4.5
	comp=Z,8.5nm,0.5s,baz=263,slow=22,SNR=13						
YAK	**Yakutsk**	18.81	346	P	P	08 26 27.0	-1.9
YAK	**Yakutsk**	18.81	346	eP	P	08 26 24.8	-4.0
YAK				eS	S	08 29 42.6	-6.2
YAK				pmax	pmax		
	comp=Z,41nm,0.8s						
YAK				pmax	pmax		
	comp=N,11nm,0.8s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.8s						
YAK				smax	smax		
	comp=E,63nm,1.3s						
YAK				smax	smax		
	comp=N,184nm,1.4s						
JOW	**Kunigami**	19.27	210	P	P	08 26 36.1	+2.1
	comp=N,17nm,0.5s,baz=31,slow=18,SNR=6.5						
SEY	**Seymchan**	20.42	18	P	P	08 26 44.9	-1.1
	comp=N,4.5nm,0.6s,baz=209,slow=8.7,SNR=12						
	comp=N,4.5nm,0.6s						
SEY	**Seymchan**	20.42	18	ceP	P	08 26 43.6	-2.4
SEY				pmax	pmax		
	comp=Z,14nm,1.7s						
SEY	**Seymchan**	20.42	18	eP	P	08 26 43.6	-2.4
HHC	**Hu-ho-hao-te**	20.47	270	eP	P	08 26 46.6	-0.3
HHC				pmax	pmax		
	comp=Z,24nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,5.4s						
BOD	**Bodaibo**	20.75	320	eP	P	08 26 46.7	-2.9
BOD				pmax	pmax		
	comp=Z,14nm,1.6s						
ULN	**Ulaanbaatar**	22.45	291	P	P	08 27 04.8	-1.0
ULN	**Ulaanbaatar**	22.45	291	ceP	P	08 27 04.1	-1.8
ULN				pmax	pmax		
	comp=Z,11nm,0.6s						
ULN	**Ulaanbaatar**	22.45	291	eP	P	08 27 04.1	-1.8
SONM	**Songino Array**	22.89	291	P	P	08 27 09.3	-0.5
	comp=Z,17nm,0.7s,baz=90,slow=8.6,SNR=79						
SONM				ScP	ScP	08 34 06.9	+1.6
	comp=Z,0.6nm,0.5s,baz=123,slow=3.1,SNR=5.2						
	comp=Z,17nm,0.7s						
SONM	**Songino Array**	22.89	291	P	P	08 27 09.4	-0.5
YOJ	**Yonaguni jima**	23.53	219	P	P	08 27 14.6	-1.1
YOJ	**Yonaguni jima**	23.53	219	P	P	08 27 14.6	-1.1
YOJ				pmax	pmax		
	comp=Z,225nm,1.4s						
TATO	**Taipei**	23.81	223	P	P	08 27 17.4	-0.9
YHNB	**Yeheng**	24.12	222	P	P	08 27 19.4	-1.8
NACB	**Ninganchiao**	24.44	221	P	P	08 27 22.2	-1.7
NACB				IAmb	IAmb	08 27 47.5	
	comp=Z,16nm,0.9s						
ZAK	**Zakamensk**	24.90	297	eP	P	08 27 26.9	-1.1
ZAK				pmax	pmax		
	comp=Z,13nm,1.0s						
XAN	**Xi'an**	25.30	257	eP	P	08 27 32.4	+0.7
XAN				pP	pP	08 28 22.0	+2.6
XAN				pmax	pmax		
	comp=Z,6.0nm,1.6s						
MOY	**Mondy**	26.37	300	eP	P	08 27 41.2	0.0
MOY				pmax	pmax		
	comp=Z,18nm,1.4s						
MOY	**Mondy**	26.37	300	eP	P	08 27 41.2	0.0
BILL	**Bilibino**	27.96	22	⇑eP	P	08 27 57.0	+2.0
BILL				e*PP	pP	08 28 47.5	+3.4
BILL				e*SP	sP	08 29 17.3	+3.9
BILL				pmax	pmax		
	comp=Z,9.0nm,1.9s						
BILL	**Bilibino**	27.96	22	eP	P	08 27 57.0	+2.0
GTA	**Gaotai**	29.42	275	eP	P	08 28 09.3	+1.0
GTA				pmax	pmax		
	comp=Z,11nm,0.8s						
GUMO	**Guam**	30.79	169	P	P	08 28 22.3	+1.9
	comp=Z,27nm,0.4s,baz=280,slow=16,SNR=1.4						
	comp=Z,27nm,0.4s						
GOMU	**GeErMu**	34.35	272	P	P	08 28 52.3	+0.7
GOMU				pP	pP	08 29 45.5	+3.5
GOMU				sP	sP	08 30 12.4	+1.5
GOMU				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,95nm,4.7s						
PZH	**PanZhiHua**	34.75	252	P	P	08 28 55.4	+0.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,6.3s						
DGZ	**Jazzator, Alta**	35.12	298	d iP	P	08 28 58.9	+1.3
DGZ				pmax	pmax		
	comp=Z,50nm,1.1s						
TNA	**Tin City**	35.85	35	P	P	08 29 03.1	-0.3
TNA	**Tin City**	35.85	35	P	P	08 29 02.4	-1.0
	baz=260,SNR=5.7						
ZAA0	**Zalesovo Array**	36.06	305	P	P	08 29 05.1	-0.3
ZALV	**Zalesovo Beam**	36.06	305	P	P	08 29 05.2	-0.2
	comp=Z,30nm,0.6s,baz=90,slow=8.5,SNR=109						
ZALV				PcP	PcP	08 31 25.9	+0.4
	comp=Z,2.7nm,0.5s,baz=89,slow=2.8,SNR=5.9						
	comp=Z,30nm,0.6s						
NRIK	**Noril'sk**	36.16	332	P	P	08 29 04.5	-1.6
	comp=Z,5.4nm,0.5s,baz=112,slow=6.9,SNR=11						
	comp=Z,5.4nm,0.5s						
NRIK	**Noril'sk**	36.16	332	P	P	08 29 04.4	-1.6
NRIK				IAmb	IAmb	08 29 05.2	
	comp=Z,6.7nm,0.5s						
NRIK	**Noril'sk**	36.16	332	ceP	P	08 29 03.5	-2.5
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
UNV	**Unalaska Valle**	36.25	55	P	P	08 29 06.7	-0.2
WMQ	**Urumqi**	36.45	288	eP	P	08 29 09.3	+0.4
WMQ				pP	pP	08 30 02.8	+2.9
WMQ				pmax	pmax		
	comp=Z,32nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,240nm,4.3s						
ANM	**Nome**	36.78	37	P	P	08 29 10.9	-0.3
ANM				IAmb	IAmb	08 29 12.9	
	comp=Z,7.5nm,1.3s						
ANM	**Nome**	36.78	37	P	P	08 29 11.0	-0.3
ANM				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ANM	**Nome**	36.78	37	P	P	08 29 10.5	-0.8
	baz=264						
RDOG	**Red Dog Mine**	38.23	31	P	P	08 29 22.6	-0.8
	baz=261						
S12K	**Black Hills**	38.56	51	P	P	08 29 25.6	-0.6
	baz=278						
MK31	**Makanchi Array**	39.16	295	P	P	08 29 32.0	+0.5
MK31	**Makanchi Array**	39.16	295	d iP	P	08 29 31.8	+0.4
MKAR	**Makanchi Array**	39.16	295	P	P	08 29 31.8	+0.4
	comp=Z,22nm,0.8s,baz=80,slow=9.4,SNR=154						
MKAR				ScP	ScP	08 35 00.9	+1.8
	comp=Z,0.4nm,0.6s,baz=59,slow=4.0,SNR=3.6						
	comp=Z,22nm,0.8s						
MKAR	**Makanchi Array**	39.16	295	P	P	08 29 31.3	-0.1
MKAR	**Makanchi Array**	39.16	295	i P	P	08 29 31.7	+0.3
MKAR				pmax	pmax		
	comp=Z,22nm,0.8s						
MKAR	**Makanchi Array**	39.16	295	eP	P	08 29 31.7	+0.3
MAKZ	**Makanchi**	39.36	295	P	P	08 29 33.5	+0.4
MAKZ	**Makanchi**	39.36	295	P	P	08 29 33.5	+0.4
MAKZ				pmax	pmax		
	comp=Z,33nm,0.8s						
SDPT	**Sand Point**	39.50	51	P	P	08 29 33.4	-0.6
	baz=280						
N16K	**Nishlik Lake**	39.78	43	P	P	08 29 35.4	-0.9
	baz=275						
CRAI	**Chiangrai**	39.92	246	P	P	08 29 38.4	+0.5
O16K	**Kokwok River B**	40.20	45	P	P	08 29 38.1	-1.5
	baz=276						
P16K	**Nushagak River**	40.31	45	P	P	08 29 39.3	-1.3
	baz=277						
LSA	**Lhasa**	40.32	266	P	P	08 29 43.2	+1.5
LSA				IAmb	IAmb	08 29 44.4	
	comp=Z,13nm,0.6s						
LSA	**Lhasa**	40.32	266	P	P	08 29 43.2	+1.5
LSA				pmax	pmax		
	comp=Z,13nm,0.6s						
KURK	**Kurchatov**	40.41	302	P	P	08 29 42.0	+0.5
KURK	**Kurchatov**	40.41	302	ceP	P	08 29 41.8	+0.3
KURK				pmax	pmax		
	comp=Z,81nm,0.7s						
KURK	**Kurchatov**	40.41	302	eP	P	08 29 41.8	+0.3
GCSA	**Galena City Sc**	40.44	37	P	P	08 29 40.9	-0.6
	baz=271						
KURBB	**Kurchatov Arra**	40.49	301	P	P	08 29 42.6	+0.5
	comp=Z,108nm,0.6s,baz=75,slow=8.8,SNR=432						
O17K	**Koliganek Bris**	40.68	44	P	P	08 29 41.9	-1.7
	baz=277,SNR=12						
R16K	**Pilot Point**	40.74	48	P	P	08 29 43.0	-1.1
	baz=279						
A21K	**Barrow**	40.83	26	P	P	08 29 43.5	-1.2
A21K				IAmb	IAmb	08 29 45.0	
	comp=Z,8.6nm,0.9s						
A21K	**Barrow**	40.83	26	P	P	08 29 43.8	-0.9
	baz=264						
TTA	**Tatalina**	40.90	39	P	P	08 29 44.2	-1.3
TTA	**Tatalina**	40.90	39	P	P	08 29 44.2	-1.3
TTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TTA	**Tatalina**	40.90	39	P	P	08 29 44.8	-0.7
	baz=274						
Q16K	**King Salmon**	41.05	46	P	P	08 29 46.0	-0.6
	baz=278						
PHRA	**Phrae**	41.25	244	P	P	08 29 48.1	-0.6
SVW2	**Sparrevohn**	41.27	42	P	P	08 29 49.5	+1.1
SVW2				IAmb	IAmb	08 29 50.5	
	comp=Z,7.3nm,0.9s						
R17K	**Ugashik Creek**	41.35	47	P	P	08 29 48.9	-0.2
	baz=280						
L19K	**White Mountain**	41.50	40	P	P	08 29 50.4	+0.1
L19K	**White Mountain**	41.50	40	P	P	08 29 49.7	-0.6
	baz=276						
Q17K	**Contact Creek**	41.51	46	P	P	08 29 49.4	-1.2
	baz=280						
O18K	**Koktuh Hills**	41.62	44	P	P	08 29 51.9	+0.7
O18K				IAmb	IAmb	08 29 53.5	
	comp=Z,16nm,0.9s						
O18K	**Koktuh Hills**	41.62	44	P	P	08 29 50.6	-0.6
	baz=278						
P18K	**Big Mountain,**	41.67	45	P	P	08 29 52.8	+1.1
P18K				IAmb	IAmb	08 29 53.8	
	comp=Z,12nm,0.8s						
P18K	**Big Mountain,**	41.67	45	P	P	08 29 50.4	-1.3
	baz=279						
IMAR	**Indian Mountai**	41.71	35	P	P	08 29 51.0	-0.9
K20K	**Telida**	41.75	39	P	P	08 29 52.7	+0.5
K20K				IAmb	IAmb	08 29 53.6	
	comp=Z,5.0nm,0.7s						
K20K	**Telida**	41.75	39	P	P	08 29 51.4	-0.8
	baz=275,SNR=5.2						
M19K	**Big River Lodg**	41.75	41	P	P	08 29 52.7	+0.5
M19K	**Big River Lodg**	41.75	41	P	P	08 29 50.3	-2.0
	baz=277						
F21K	**Alatna River**	41.77	33	P	P	08 29 50.6	-1.8
	baz=271						
G21K	**Allakaket**	41.78	34	P	P	08 29 51.0	-1.5
	baz=272						
N19K	**Bonanza Creek**	41.84	42	P	P	08 29 54.3	+1.2
N19K				IAmb	IAmb	08 29 55.2	
	comp=Z,7.6nm,0.7s						
N19K	**Bonanza Creek**	41.84	42	P	P	08 29 52.7	-0.5
	baz=278						
CHTO	**Chiang Mai**	41.87	246	P	P	08 29 54.5	+0.8
CHTO	**Chiang Mai**	41.87	246	P	P	08 29 54.5	+0.8
Q18K	**Katmai Hardscr**	41.91	46	P	P	08 29 53.3	-0.4
	baz=280,SNR=5.1						
L20K	**Farewell, AK**	41.92	40	P	P	08 29 53.9	+0.2
	baz=276						
O19K	**Port Alsworth**	42.01	43	P	P	08 29 56.1	+1.7
O19K	**Port Alsworth**	42.01	43	P	P	08 29 53.9	-0.4
	baz=279						
H21K	**Melozitna Rive**	42.11	35	P	P	08 29 57.3	+2.1
H21K	**Melozitna Rive**	42.11	35	P	P	08 29 53.9	-1.3
	baz=274						
CMAR	**Chiang Mai Arr**	42.12	246	P	P	08 29 58.5	+2.7
	comp=Z,1.1nm,0.3s,baz=40,slow=7.1,SNR=4.7						
	comp=Z,1.1nm,0.3s						
CMAR	**Chiang Mai Arr**	42.12	246	P	P	08 29 55.2	-0.6
CMAR	**Chiang Mai Arr**	42.12	246	P	P	08 29 55.2	-0.6
SHL	**Shillong**	42.23	260	P	P	08 29 57.5	+0.6
SHL				IAmb	IAmb	08 29 58.1	
	comp=Z,21nm,0.9s						
SHL	**Shillong**	42.23	260	P	P	08 29 57.5	+0.6
SHL				pmax	pmax		
	comp=Z,21nm,0.9s						
F22K	**John River**	42.27	32	P	P	08 29 56.2	-0.1
	baz=272						
M20K	**Styx River**	42.34	41	P	P	08 29 58.5	+1.3
M20K				IAmb	IAmb	08 29 59.3	
	comp=Z,11nm,0.7s						
M20K	**Styx River**	42.34	41	P	P	08 29 56.9	-0.3
	baz=278						
E22K	**Anaktuvuk Pass**	42.38	31	P	P	08 29 56.4	-1.0
	baz=272						
CHUM	**Lake Minchumin**	42.48	38	P	P	08 29 57.7	-0.3
	baz=276						
I21K	**Tanana**	42.49	36	P	P	08 29 58.0	-0.2
I21K	**Tanana**	42.49	36	P	P	08 29 58.0	-0.2
	baz=275						
CAST	**Castle Rocks**	42.63	38	P	P	08 30 00.2	+0.9
CAST				IAmb	IAmb	08 30 00.8	
	comp=Z,8.4nm,0.7s						
CAST	**Castle Rocks**	42.63	38	P	P	08 29 59.1	-0.3
	baz=277,SNR=8.5						
PPLA	**Purkeypile**	42.65	39	P	P	08 30 00.1	+0.4
PPLA				IAmb	IAmb	08 30 19.4	
	comp=Z,6.3nm,0.8s						
PPLA	**Purkeypile**	42.65	39	P	P	08 29 58.9	-0.8
	baz=277						
H22K	**Ishtalitna Cre**	42.68	35	P	P	08 29 59.0	-0.7
	baz=275						
D23K	**Nanushuk River**	42.77	30	P	P	08 29 59.6	-0.8
	baz=272						
SPCR	**Spurr Chakacha**	42.88	42	P	P	08 30 00.7	-0.7
	baz=279						
SPU	**Mount Spurr**	42.96	42	P	P	08 30 02.7	+0.7
MLY	**Manley**	43.03	36	P	P	08 30 03.3	+0.7
MLY	**Manley**	43.03	36	P	P	08 30 02.6	0.0
	baz=276						
BPAW	**Bear Paw Mtn.**	43.03	37	P	P	08 30 02.8	+0.2
BPAW	**Bear Paw Mtn.**	43.03	37	P	P	08 30 01.8	-0.8
	baz=277						
COLD	**Coldfoot**	43.05	33	P	P	08 30 02.9	+0.2
COLD	**Coldfoot**	43.05	33	P	P	08 30 01.9	-0.7
	baz=274						
SKT	**Skwentna**	43.08	40	P	P	08 30 02.7	-0.3
	baz=279						
OHAK	**Old Harbor**	43.08	47	P	P	08 30 03.7	+0.8
OHAK				IAmb	IAmb	08 30 44.7	
	comp=Z,30nm,1.3s						
OHAK	**Old Harbor**	43.08	47	P	P	08 30 02.4	-0.6
	baz=283						
KTH	**Kantishna Hill**	43.13	38	P	P	08 30 04.4	+0.9
KTH				IAmb	IAmb	08 30 05.4	
	comp=Z,14nm,1.0s						
G23K	**Bananza Creek**	43.16	33	P	P	08 30 02.9	-0.7
	baz=275						
E23K	**Chandalar**	43.21	31	P	P	08 30 03.4	-0.6
	baz=274						
KDAK	**Kodiak Island**	43.33	47	P	P	08 30 05.5	+0.5
	comp=Z,6.0nm,0.7s,baz=306,slow=8.3,SNR=17						
	comp=Z,6.0nm,0.7s						
TRF	**Thorofare Moun**	43.43	38	P	P	08 30 04.7	-1.2
	baz=278						
C24K	**Franklin Bluff**	43.44	29	P	P	08 30 05.1	-0.5
	baz=273						
H23K	**Yukon River**	43.44	35	P	P	08 30 04.7	-1.1
	baz=276						
SUA	**Susitna One**	43.53	41	P	P	08 30 07.0	+0.3
SUA	**Susitna One**	43.53	41	P	P	08 30 05.6	-1.1
	baz=280						
I23K	**Minto, Yukon-K**	43.60	36	P	P	08 30 07.9	+0.9
I23K	**Minto, Yukon-K**	43.60	36	P	P	08 30 06.1	-0.9
	baz=277						
E24K	**Your Creek**	43.63	31	P	P	08 30 06.3	-1.0
	baz=275						
BRLK	**Bradley Lake**	43.78	43	P	P	08 30 09.2	+0.7
BRLK				IAmb	IAmb	08 30 12.3	
	comp=Z,26nm,1.3s						
NEA2	**Nenana**	43.80	36	P	P	08 30 08.9	+0.3
NEA2	**Nenana**	43.80	36	P	P	08 30 07.6	-1.0
	baz=278						
BRSE	**Bradley Lake S**	43.86	43	P	P	08 30 08.6	-0.5
	baz=282						
F24K	**Squaw Lake**	43.91	32	P	P	08 30 08.9	-0.7
	baz=276						
MCK	**McKinley**	43.98	38	P	P	08 30 11.2	+1.1
MCK	**McKinley**	43.98	38	P	P	08 30 11.2	+1.1
MCK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MCK	**McKinley**	43.98	38	P	P	08 30 10.2	+0.1
	baz=279						
TARG	**Taragay, Kyrgy**	43.99	289	P	P	08 30 12.5	+1.5
TARG				IAmb	IAmb	08 30 14.4	
	comp=Z,7.8nm,0.6s						
TARG	**Taragay, Kyrgy**	43.99	289	P	P	08 30 12.5	+1.5
TARG				pmax	pmax		
	comp=Z,8.0nm,0.6s						
RC01	**Rabbit Creek A**	44.08	41	P	P	08 30 10.5	-0.4
	baz=281						
MDM	**Murphy Dome**	44.10	36	P	P	08 30 11.6	+0.5
H24K	**Noodor Dome**	44.12	34	P	P	08 30 12.1	+0.9
H24K	**Noodor Dome**	44.12	34	P	P	08 30 10.6	-0.6
	baz=278						
TAPN	**Taplejung**	44.14	265	eP	P	08 30 13.1	+0.9
G24K	**Hadweenzic Riv**	44.17	33	P	P	08 30 10.8	-0.8
	baz=277						
WRH	**Wood River Hil**	44.23	36	P	P	08 30 11.9	-0.1
KDJ	**Kajisay**	44.25	290	P	P	08 30 13.6	+0.9
KDJ				IAmb	IAmb	08 30 15.1	
	comp=Z,11nm,0.6s						
KDJ	**Kajisay**	44.25	290	P	P	08 30 13.6	+0.9
KDJ				pmax	pmax		
	comp=Z,11nm,0.6s						
PMR	**Palmer**	44.27	41	P	P	08 30 13.0	+0.6
PMR				IAmb	IAmb	08 30 22.1	
	comp=Z,10nm,1.2s						
PMR	**Palmer**	44.27	41	P	P	08 30 13.0	+0.6
PMR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PMR	**Palmer**	44.27	41	P	P	08 30 12.1	-0.3
	baz=281						
COLA	**College**	44.27	36	i P	P	08 30 12.2	-0.1
COLA				pmax	pmax		
	comp=Z,12nm,1.6s						
D25K	**Kavik River**	44.29	29	P	P	08 30 11.2	-1.2
	baz=276						
CCB	**Clear Creek Bu**	44.33	36	P	P	08 30 12.8	0.0
GHO	**Glory Hole Cre**	44.33	40	P	P	08 30 13.8	+0.9
POKR	**Poker Plat Res**	44.41	35	P	P	08 30 12.2	-1.2
	baz=279						
SEW	**Seward**	44.42	43	P	P	08 30 12.2	-1.3
	baz=282						
SML	**Sawmill**	44.60	40	P	P	08 30 15.8	+0.8
SML				IAmb	IAmb	08 30 17.1	
	comp=Z,12nm,0.8s						
SML	**Sawmill**	44.60	40	P	P	08 30 14.1	-0.9
	baz=282						
KNK	**Knik Glacier**	44.62	41	P	P	08 30 15.5	+0.3
KNK				IAmb	IAmb	08 30 17.1	
	comp=Z,10nm,0.7s						
KNK	**Knik Glacier**	44.62	41	P	P	08 30 14.2	-1.0
	baz=282						
BVAR	**Borovoye Array**	44.68	307	P	P	08 30 16.4	+0.6
	comp=Z,43nm,0.4s,baz=76,slow=9.3,SNR=272						
	comp=Z,43nm,0.4s						
IL31		44.69	36	P	P	08 30 16.1	+0.4
ILAR	**Eielson Array**	44.69	36	P	P	08 30 15.5	-0.2
	comp=Z,1.4nm,0.6s,baz=285,slow=9.7,SNR=29						
	comp=Z,1.4nm,0.6s						
ILAR	**Eielson Array**	44.69	36	P	P	08 30 15.2	-0.5
G25K	**Bearman Lake**	44.70	33	P	P	08 30 15.0	-0.7
	baz=278						
E25K	**Arctic Village**	44.72	31	P	P	08 30 15.3	-0.6
	baz=278						
BRVK	**Borovoye**	44.73	307	P	P	08 30 17.0	+0.9
BRVK	**Borovoye**	44.73	307	ceP	P	08 30 16.7	+0.6
BRVK				pmax	pmax		
	comp=Z,37nm,0.8s						
BRVK	**Borovoye**	44.73	307	eP	P	08 30 16.7	+0.6
HDA	**Harding Lake**	44.73	36	P	P	08 30 16.3	+0.3
HDA				IAmb	IAmb	08 30 19.1	
	comp=Z,14nm,1.4s						
HDA	**Harding Lake**	44.73	36	P	P	08 30 15.3	-0.6
	baz=280						
C26K	**Camden Bay**	44.73	28	P	P	08 30 14.9	-1.0
	baz=276						
F25K	**Christian Rive**	44.76	32	P	P	08 30 15.6	-0.6
	baz=278						
PWL	**Port Wells**	44.80	42	P	P	08 30 16.1	-0.4
	baz=282						

M23K	Glacier View	44.88	40	P	P	08 30 16.8	-0.5
	baz=282						
TKM2	Tokmak 2	44.99	292	P	P	08 30 19.9	+1.3
	SNR=49						
JIRN	Jiri	45.05	267	eP	P	08 30 20.6	+1.1
SCM	Sheep Creek Mo	45.06	40	P	P	08 30 19.9	+1.2
SCM				IAmb	IAmb	08 30 35.3	
	comp=Z,24nm,1.2s						
SCM	Sheep Creek Mo	45.06	40	P	P	08 30 19.9	+1.2
SCM				pmax	pmax		
	comp=Z,24nm,1.2s						
SCM	Sheep Creek Mo	45.06	40	P	P	08 30 18.7	0.0
	baz=282						
FYU	Fort Yukon	45.07	33	P	P	08 30 19.8	+1.2
GUN	Gumba	45.13	267	eP	P	08 30 21.1	+1.0
PRP	Porcupine Dome	45.13	35	P	P	08 30 20.0	+0.7
PRP	Porcupine Dome	45.13	35	P	P	08 30 18.5	-0.8
	baz=280						
RAMN	Ramite	45.18	266	eP	P	08 30 21.3	+1.0
	comp=Z,68nm,0.6s						
C27K	Jago River	45.18	29	P	P	08 30 19.0	-0.5
	baz=278						
BMAR	Burnt Mountain	45.19	32	P	P	08 30 20.2	+0.7
F26K	Sheenjek River	45.31	32	P	P	08 30 20.3	-0.2
	baz=279						
K24K	Donnelly Dome	45.35	37	P	P	08 30 21.0	+0.1
	baz=282						
KBK	Karagaybulak	45.53	292	P	P	08 30 24.1	+1.3
	SNR=24						
M24K	Tolsona, Glenn	45.53	39	P	P	08 30 24.1	+1.7
M24K				IAmb	IAmb	08 30 52.6	
	comp=Z,27nm,1.4s						
M24K	Tolsona, Glenn	45.53	39	P	P	08 30 22.1	-0.3
	baz=283						
G26K	Porcupine Rive	45.57	33	P	P	08 30 22.2	-0.3
	baz=280,SNR=6.5						
USP	Ospenovka	45.58	293	P	P	08 30 24.0	+1.0
	SNR=7.9						
PAX	Paxson	45.66	38	P	P	08 30 23.1	-0.3
PAX	Paxson	45.66	38	P	P	08 30 23.1	-0.3
PAX				pmax	pmax		
	comp=Z,7.0nm,1.4s						
PAX	Paxson	45.66	38	P	P	08 30 22.7	-0.7
	baz=283						
PKI	Pulchoki	45.67	267	eP	P	08 30 25.1	+0.9
PKIN	Phulchoki	45.67	267	eP	P	08 30 25.1	+0.9
TOLI2	Tolitoli	45.74	206	P	P	08 30 22.9	-1.6
RIDG	Independent Ri	45.77	37	P	P	08 30 24.3	+0.1
RIDG	Independent Ri	45.77	37	P	P	08 30 24.0	-0.2
	baz=282						
KLU	Klutina	45.79	40	P	P	08 30 25.3	+0.9
KLU				IAmb	IAmb	08 30 26.1	
	comp=Z,13nm,1.0s						
KLU	Klutina	45.79	40	P	P	08 30 23.6	-0.8
	baz=284						
AAK	Ala-Archa	45.84	292	P	P	08 30 26.1	+0.8
	SNR=7.2						
AAK	Ala-Archa	45.84	292	P	P	08 30 26.0	+0.8
	comp=Z,8.7nm,0.5s,baz=26,slow=4.4,SNR=26						
	comp=Z,8.7nm,0.5s						
AAK	Ala-Archa	45.84	292	P	P	08 30 26.0	+0.8
AAK				IAmb	IAmb	08 30 27.4	
	comp=Z,8.9nm,0.5s						
HARP	HAARP	45.93	39	P	P	08 30 24.7	-0.7
	baz=284						
DIV	Divide	45.95	41	P	P	08 30 25.9	+0.2
DIV				IAmb	IAmb	08 30 36.8	
	comp=Z,16nm,1.1s						
GKN	Gorkha	45.97	268	eP	P	08 30 27.1	+0.7
	comp=Z,36nm,0.5s						
SCRK	Sand Creek	46.09	37	P	P	08 30 26.3	-0.5
SCRK				IAmb	IAmb	08 30 27.2	
	comp=Z,6.7nm,0.6s						
SCRK	Sand Creek	46.09	37	P	P	08 30 25.6	-1.2
	baz=283,SNR=8.3						
DOT	Dot Lake	46.13	37	P	P	08 30 26.5	-0.4
I26K	Coal Creek Min	46.15	35	P	P	08 30 26.7	-0.3
	baz=282						
E27K	Coleen River	46.17	31	P	P	08 30 25.6	-1.6
	baz=281						
KSH	Kashi	46.21	287	P	P	08 30 31.9	+3.9
KSH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
EKS2	Erkin-Say	46.31	292	P	P	08 30 29.6	+0.8
	SNR=18						
N25K	Chitina, Valde	46.38	40	P	P	08 30 27.8	-1.1
	baz=285						
DANN	Dangsing	46.41	269	eP	P	08 30 31.4	+1.5
G27K	Doyon Strip	46.43	32	P	P	08 30 27.9	-1.3
	baz=282						
MENT	Mentasta	46.45	38	P	P	08 30 29.9	+0.5
MENT				IAmb	IAmb	08 30 31.8	
	comp=Z,5.6nm,0.6s						
L26K	Log Cabin Wild	46.59	38	P	P	08 30 31.1	+0.6
L26K				IAmb	IAmb	08 30 32.3	
	comp=Z,11nm,1.3s						
L26K	Log Cabin Wild	46.59	38	P	P	08 30 29.0	-1.5
	baz=284						
AML	Almayashu	46.59	292	P	P	08 30 32.6	+1.3
	SNR=14						
H27K	Steamboat Moun	46.60	33	P	P	08 30 29.9	-0.7
	baz=283						
I27K	Kandik River	46.71	34	P	P	08 30 30.5	-1.0
	baz=283						
GLB	Gilahina Butte	46.79	40	P	P	08 30 33.2	+1.1
GLB				IAmb	IAmb	08 30 50.9	
	comp=Z,25nm,1.5s						
K27K	Chicken	46.89	36	P	P	08 30 33.3	+0.5
K27K				IAmb	IAmb	08 30 34.4	
	comp=Z,6.4nm,0.7s						
K27K	Chicken	46.89	36	P	P	08 30 32.5	-0.3
	baz=284						
M26K	Nabesna, AK	46.91	39	P	P	08 30 33.6	+0.6
M26K				IAmb	IAmb	08 30 35.8	
	comp=Z,8.1nm,0.9s						
M26K	Nabesna, AK	46.91	39	P	P	08 30 31.9	-1.1
	baz=285						
VRDI	Verde Repeater	47.01	40	P	P	08 30 34.8	+0.8
VRDI				IAmb	IAmb	08 30 36.0	
	comp=Z,12nm,1.0s						
EGAK	Eagle	47.09	35	P	P	08 30 34.4	+0.1
EGAK				IAmb	IAmb	08 30 35.6	
	comp=Z,25nm,1.5s						
EGAK	Eagle	47.09	35	P	P	08 30 33.8	-0.6
	baz=284,SNR=6.3						
PYUN	Piuthan	47.10	270	eP	P	08 30 36.7	+1.5
	comp=Z,35nm,0.4s						
MCARA	McCarthy VSAT	47.17	40	P	P	08 30 35.7	+0.8
MCARA	McCarthy VSAT	47.17	40	P	P	08 30 34.4	-0.6
	baz=286						
FAKI	Fak Fak	47.17	189	P	P	08 30 36.1	+0.6
FAKI				IAmb	IAmb	08 30 37.5	
	comp=Z,14nm,0.9s						
L27K	Beaver Creek,	47.25	38	P	P	08 30 36.4	+0.7
L27K				IAmb	IAmb	08 30 38.3	
	comp=Z,9.8nm,1.0s						
L27K	Beaver Creek,	47.25	38	P	P	08 30 35.1	-0.5
	baz=286,SNR=8.2						
BCAR	Beaver Creek A	47.27	38	P	P	08 30 35.8	0.0
M27K	Edge Creek, AK	47.42	38	P	P	08 30 38.2	+1.2
M27K				IAmb	IAmb	08 30 39.3	
	comp=Z,8.9nm,0.9s						
M27K	Edge Creek, AK	47.42	38	P	P	08 30 36.2	-0.9
	baz=286						
BVCY	Beaver Creek	47.86	38	P	P	08 30 37.3	-3.0
	baz=287						
DAWY	Dawson	48.02	36	P	P	08 30 40.0	-1.6
	baz=286						
CTG	Chitna Glacier	48.07	40	P	P	08 30 40.4	-1.7
	baz=288						
CTGM	Chitina Glacie	48.07	40	P	P	08 30 42.2	+0.2
CTGM				IAmb	IAmb	08 30 44.2	
	comp=Z,19nm,0.8s						
I29M	Ogilvie Camp,	48.10	34	P	P	08 30 40.2	-1.9
	baz=286						
YUK3	Moose Creek	48.23	39	P	P	08 30 40.8	-2.5
	baz=288						
KK31	Karatay Array	48.29	294	P	P	08 30 44.4	+0.6
KK31				IAmb	IAmb	08 30 45.7	
	comp=Z,14nm,0.9s						
KK31	Karatay Array	48.29	294	P	P	08 30 44.4	+0.6
KK31				pmax	pmax		
	comp=Z,15nm,1.0s						
KKAR	Karatay Array	48.29	294	P	P	08 30 44.4	+0.6
KKAR	Karatay Array	48.29	294	P	P	08 30 44.4	+0.6
J29M	Klondike Camp	48.40	35	P	P	08 30 44.3	-0.1
J29M				IAmb	IAmb	08 30 55.1	
	comp=Z,9.5nm,0.5s						
EPYK	Eagle Plains	48.45	32	P	P	08 30 44.6	-0.1
EPYK				IAmb	IAmb	08 30 46.9	
	comp=Z,21nm,1.4s						
EPYK	Eagle Plains	48.45	32	P	P	08 30 43.2	-1.6
	baz=287						
G30M	tAoh Zraii Nji	48.46	32	P	P	08 30 43.6	-1.2
	baz=286						
SVE	Sverdlovsk	48.79	314	ceP	P	08 30 48.4	+1.0
SVE				pmax	pmax		
	comp=Z,49nm,0.9s						
SVE	Sverdlovsk	48.79	314	eP	P	08 30 48.4	+1.0
L29M	L29M	48.85	37	P	P	08 30 46.6	-1.2
	baz=288						
K29M	Barlow Dome	48.88	36	P	P	08 30 47.3	-0.8
	baz=288						
M29M	Somme Creek	48.91	38	P	P	08 30 47.6	-0.8
	baz=289						
INK	Inuvik	49.06	29	P	P	08 30 49.4	+0.2
	comp=Z,2.5nm,0.3s,baz=295,slow=9.4,SNR=19						
	comp=Z,2.5nm,0.3s						
INK	Inuvik	49.06	29	P	P	08 30 49.6	+0.5
INK	Inuvik	49.06	29	P	P	08 30 49.7	+0.5
INK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
INK	Inuvik	49.06	29	P	P	08 30 46.7	-2.5
	baz=288						
F31M	Tsiigehtchic	49.25	31	P	P	08 30 48.8	-1.8
	baz=288						
BTK	Batken	49.47	290	P	P	08 30 53.5	+0.6
BTK				IAmb	IAmb	08 30 55.9	
	comp=Z,9.1nm,0.8s						
BTK	Batken	49.47	290	P	P	08 30 53.5	+0.6
BTK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
M30M	Minto, Yukon	49.60	37	P	P	08 30 55.6	+2.1
M30M				IAmb	IAmb	08 30 56.4	
	comp=Z,6.3nm,0.8s						
M30M	Minto, Yukon	49.60	37	P	P	08 30 52.3	-1.2
	baz=290,SNR=5.0						
MAYO	Mayo, Yukon	49.64	36	P	P	08 30 53.7	0.0
MAYO				IAmb	IAmb	08 30 59.1	
	comp=Z,13nm,0.7s						
MAYO	Mayo, Yukon	49.64	36	P	P	08 30 51.9	-1.9
	baz=290						
N30M	Aishikik Lake	49.85	39	P	P	08 30 53.8	-1.6
	baz=290						
HYT	Haines Junctio	49.89	40	P	P	08 30 55.7	0.0
HYT				IAmb	IAmb	08 30 59.0	
	comp=Z,17nm,0.9s						
HYT	Haines Junctio	49.89	40	P	P	08 30 55.5	-0.3
	baz=291,SNR=6.4						
ARU	Arti	50.00	314	P	P	08 30 56.8	+0.3
	comp=Z,13nm,0.5s,baz=51,slow=4.7,SNR=20						
	comp=Z,13nm,0.5s						
ARU	Arti	50.00	314	P	P	08 30 56.9	+0.4
ARU	Arti	50.00	314	c iP	P	08 30 56.9	+0.4
ARU				*PP	pP	08 31 49.2	-1.2
ARU						08 32 07.0	
ARU				S	S	08 37 49.6	+2.5
ARU				SS	SS	08 41 19.2	-3.7
ARU				pmax	pmax		
	comp=Z,31nm,1.1s						
ARU	Arti	50.00	314	eP	P	08 30 56.9	+0.4
GAR	Garm	50.32	289	P	P	08 30 59.7	+0.4
GAR				IAmb	IAmb	08 31 01.3	
	comp=Z,22nm,1.0s						
P30M	Million Dollar	50.39	40	P	P	08 30 58.9	-0.6
	baz=292						
N31M	Braeburn, Yuko	50.43	38	P	P	08 31 01.2	+1.5
N31M				IAmb	IAmb	08 31 03.2	
	comp=Z,11nm,0.8s						
N31M	Braeburn, Yuko	50.43	38	P	P	08 30 58.5	-1.2
	baz=291						
A36M	Sachs Harbour	50.48	24	P	P	08 31 00.8	+1.0
A36M	Sachs Harbour	50.48	24	P	P	08 31 00.9	+1.0
	baz=292						
O30N	Mendenhall	50.55	39	P	P	08 31 00.9	+0.2
	baz=292						
M31M	Drury Creek, Y	50.78	37	P	P	08 31 02.9	+0.6
M31M				IAmb	IAmb	08 31 15.8	
	comp=Z,8.7nm,1.4s						
M31M	Drury Creek, Y	50.78	37	P	P	08 31 02.6	+0.3
	baz=292						
NIL	Nilore	51.01	282	P	P	08 31 05.5	+1.1
NIL				IAmb	IAmb	08 31 06.3	
	comp=Z,13nm,1.1s						
NIL	Nilore	51.01	282	P	P	08 31 05.5	+1.1
NIL				pmax	pmax		
	comp=Z,13nm,1.1s						
FARO	Faro, Yukon	51.22	37	P	P	08 31 07.4	+1.8
FARO	Faro, Yukon	51.22	37	P	P	08 31 05.0	-0.5
	baz=293						
CHGR	Chuyangaron	51.28	290	P	P	08 31 06.8	+0.4
CHGR	Chuyangaron	51.28	290	P	P	08 31 06.8	+0.4
CHGR				pmax	pmax		
	comp=Z,48nm,0.7s						
KAPI	Kappang	51.85	205	P	P	08 31 11.6	+0.9
	comp=Z,17nm,1.0s,baz=24,slow=6.9,SNR=2.7						
	comp=Z,17nm,1.0s						
C36M	Paulatuk	51.88	27	P	P	08 31 10.4	+0.2
C36M	Paulatuk	51.88	27	P	P	08 31 09.8	-0.4
	baz=295						
MMPY	Sheldon Lake,	51.96	36	P	P	08 31 10.5	-0.6
	baz=294						
ABKAR	Akbulak array	52.18	305	P	P	08 31 13.1	+0.4
P33M	Teslin, Yukon	52.26	39	P	P	08 31 14.2	+0.8
P33M				IAmb	IAmb	08 31 16.4	
	comp=Z,16nm,1.5s						
P33M	Teslin, Yukon	52.26	39	P	P	08 31 13.6	+0.3
	baz=294						
AKTO	Aktyubinsk	52.77	308	P	P	08 31 17.6	+0.5
	comp=Z,8.9nm,0.7s,baz=62,slow=10,SNR=15						
	comp=Z,8.9nm,0.7s						
HOPEN	Hopen	52.78	344	eP	P	08 31 16.4	-0.3
SPA0	Spitsbergen Ar	53.27	347	eP	P	08 31 19.9	-0.4
KBL	Kabul	53.48	285	P	P	08 31 21.5	-1.3
KBL				IAmb	IAmb	08 31 23.1	
	comp=Z,7.3nm,0.7s						
KBL	Kabul	53.48	285	P	P	08 31 21.5	-1.3
KBL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KIRV	Kirov	53.62	319	P	P	08 31 23.5	+0.5
	comp=Z,43nm,0.6s,baz=63,slow=3.4,SNR=12						
	comp=Z,43nm,0.6s						
KIRV	Kirov	53.62	319	ceP	P	08 31 23.1	0.0
DLBC	Dease Lake	54.33	40	P	P	08 31 30.4	+2.1
	comp=Z,1.8nm,0.7s,baz=294,slow=7.7,SNR=5.4						
	comp=Z,1.8nm,0.7s						
VADS	Vadso	55.36	337	eP	P	08 31 35.2	-0.1
RES	Resolute Bay	56.26	15	P	P	08 31 41.2	-0.5
	comp=Z,1.0nm,0.6s,baz=330,slow=4.7,SNR=7.5						
	comp=Z,1.0nm,0.6s						
ARA0	ARCESS Array S	56.79	337	eP	P	08 31 45.5	0.0
ARCES	ARCESS Array B	56.79	337	P	P	08 31 45.2	-0.3
	comp=Z,2.1nm,0.6s,baz=47,slow=7.5,SNR=18						
	comp=Z,2.1nm,0.6s						
KLMR	Klimovskoe	56.89	325	eP	P	08 31 44.3	-2.0
KLMR				AMP		08 31 47.9	
	comp=Z,28nm,1.3s						
KLMR	Klimovskoe	56.89	325	eP	P	08 31 44.3	-2.0
KLMR				pmax	pmax		
	comp=Z,28nm,1.3s						
BELG	Belogornoye	57.52	313	P	P	08 31 51.5	+0.7
	comp=Z,46nm,0.8s,baz=120,slow=1.2,SNR=18						
	comp=Z,46nm,0.8s						
BELG	Belogornoye	57.52	313	c iP	P	08 31 51.0	+0.2
BELG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KTK1	Kautokeino	57.75	337	eP	P	08 31 52.2	+0.1
KTK1				IAmb	IAmb	08 32 00.7	
	comp=Z,324nm,2.5s						
TULEG	Thule	58.37	7	eP	P	08 31 55.6	-0.7
TULEG				IAmb	IAmb	08 31 56.9	
	comp=Z,4.7nm,0.6s						
TRO	Tromso	58.48	339	eP	P	08 31 57.2	0.0
NEEM	North Greenlan	58.60	3	eP	P	08 31 58.1	-0.2
NEEM				IAmb	IAmb	08 31 59.7	
	comp=Z,4.6nm,0.5s						
YKA	Yellowknife Ar	58.70	31	P	P	08 31 59.3	+0.5
	comp=Z,1.3nm,0.7s,baz=306,slow=6.4,SNR=29						
	comp=Z,1.3nm,0.7s						
YKA	Yellowknife Ar	58.70	31	i P	P	08 31 59.2	+0.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GEYT	Alibeck	59.04	294	P	P	08 32 02.1	+0.5
	comp=Z,6.9nm,0.5s,baz=33,slow=3.4,SNR=15						
	comp=Z,6.9nm,0.5s						
GEYT	Alibeck	59.04	294	P	P	08 32 02.1	+0.5
GEYT				IAmb	IAmb	08 32 02.9	
	comp=Z,7.8nm,0.7s						
GYA0B	ALIBECK ARRAY	59.04	294	P	P	08 32 02.4	+0.8
GYA0B				IAmb	IAmb	08 32 02.9	
	comp=Z,6.3nm,0.6s						
FAUS	Fauske	61.03	338	eP	P	08 32 14.5	0.0
FAUS				IAmb	IAmb	08 32 16.0	
	comp=Z,121nm,1.8s						
OBN	Obninsk	61.44	320	P	P	08 32 17.7	+0.2
	comp=Z,7.1nm,0.4s,baz=57,slow=18,SNR=4.4						
	comp=Z,7.1nm,0.4s						
OBN	Obninsk	61.44	320	⇑iP	P	08 32 16.7	-0.7
OBN						08 32 58.0	
OBN				*PP	pwP	08 33 18.0	+2.3
OBN				e*SP	sP	08 33 38.5	-2.1
OBN				S	S	08 40 12.0	-5.7
OBN				pmax	pmax		
	comp=Z,44nm,1.7s						
OBN	Obninsk	61.44	320	i P	P	08 32 16.7	-0.7
FIA1	FINESS Array S	61.78	330	P	P	08 32 19.5	-0.1
FINES	FINESS Array B	61.78	330	P	P	08 32 19.4	-0.2
	comp=Z,20nm,0.5s,baz=56,slow=7.6,SNR=128						
	comp=Z,20nm,0.5s						
FINES	FINESS Array B	61.78	330	P	P	08 32 19.6	0.0
FINES	FINESS Array B	61.78	330	P	P	08 32 19.6	0.0
MOR8	Moi Rana	62.15	338	eP	P	08 32 20.8	-1.2
MOR8				IAmb	IAmb	08 32 21.0	
	comp=Z,22nm,0.7s						
KONS	Konsvik	62.26	338	eP	P	08 32 23.1	+0.4
MEF	Metsahovi	63.21	329	eP	P	08 32 28.9	-0.1
VSU	Vasula	63.51	327	eP	P	08 32 31.4	+0.4
RAF	Rauma	63.60	331	eP	P	08 32 31.4	-0.1
SUMG	Summit	63.64	359	i P	P	08 32 32.0	-0.2
SUMG				IAmb	IAmb	08 32 34.1	
	comp=Z,14nm,0.6s						
FUNA	Funafuti	63.73	135	P	P	08 32 32.4	-0.6
WRAB	Tennant Creek	63.83	185	P	P	08 32 33.0	-0.5
WRAB				IAmb	IAmb	08 32 42.7	
	comp=Z,15nm,1.5s						
WRAB	Tennant Creek	63.83	185	P	P	08 32 33.1	-0.5
WRAB				pmax	pmax		
	comp=Z,15nm,1.5s						
WB2	Warramunga Arr	63.84	185	P	P	08 32 34.4	+0.7
WB2				IAmb	IAmb	08 33 12.8	
	comp=Z,7.2nm,1.2s						
WRA	Warramunga Arr	63.84	185	P	P	08 32 34.0	+0.3
	comp=Z,1.2nm,0.5s,baz=0.9,slow=7.0,SNR=42						
	comp=Z,1.2nm,0.5s						
WRA	Warramunga Arr	63.84	185	P	P	08 32 34.0	+0.3
MTSE	Matsula	64.46	328	eP	P	08 32 37.7	+0.5
AAL	Aland	64.81	331	eP	P	08 32 39.5	0.0
SCO	Scoresbysund	64.92	353	P	P	08 32 40.9	+0.9
SCO				IAmb	IAmb	08 33 11.6	
	comp=Z,10nm,1.4s						
SCO	Scoresbysund	64.92	353	P	P	08 32 40.9	+0.9
SCO				pmax	pmax		
	comp=Z,10.0nm,1.4s						
SCO	Scoresbysund	64.92	353	eP	P	08 32 40.9	+0.9
KVAR	Kislovodsk Arr	65.03	308	P	P	08 32 43.3	+2.0
	comp=Z,13nm,0.8s,baz=73,slow=19,SNR=2.9						
	comp=Z,13nm,0.8s						
KIV	Kislovodsk	65.03	308	P	P	08 32 43.3	+1.9
KIV	Kislovodsk	65.03	308	eP	P	08 32 43.0	+1.7
KIV				pmax	pmax		
	comp=Z,43nm,1.0s						
ZEI	Tsey	65.05	306	eP	P	08 32 41.1	-0.5
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KBZ	Khabaz	65.05	307	P	P	08 32 42.8	+1.5
	comp=Z,12nm,0.7s,baz=44,slow=6.5,SNR=20						
	comp=Z,12nm,0.7s						
KBZ	Khabaz	65.05	307	ceP	P	08 32 42.4	+1.1
KBZ				pmax	pmax		
	comp=Z,11nm,0.7s						
SHA1	Shidzhatmaz	65.19	307	d iP	P	08 32 43.8	+1.3
ONI	Oni	65.43	306	P	P	08 32 43.2	-0.6
ONI	Oni	65.43	306	P	P	08 32 43.2	-0.6
ONI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NEY	Neytrino	65.45	307	i P	P	08 32 44.1	0.0
NEY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MNK	Minsk	65.70	323	i P	P	08 32 46.6	+1.3
	comp=E,3.0nm,0.9s						
MNK				i P	P	08 32 46.6	+1.3
	comp=N,35nm,0.8s						
MNK				i P	P	08 32 46.6	+1.3
	comp=Z,45nm,0.8s,baz=48						
MNK				i pP	pP	08 33 39.3	-2.6
MNK				i PP	PP	08 35 14.0	+1.3
MNK				i PPP	PPP	08 36 51.6	
MNK				i S	S	08 41 13.8	+3.5
MNK				i sS	sS	08 42 52.9	+1.9
MNK				i SS	SS	08 45 32.6	+3.9
MNK				i SSS	SSS	08 48 47.2	
MNK	Minsk	65.70	323	i P	P	08 32 46.6	+1.3
MNK				i		08 35 14.0	
MNK				i PPP	PPP	08 36 51.5	
MNK				i S	S	08 41 13.7	+3.5
MNK				i SS	SS	08 45 32.5	+3.9
MNK				pmax	pmax		
	comp=Z,45nm,0.8s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,35nm,0.7s						
ISAL	Salakas	65.72	325	eP	P	08 32 47.5	+2.2
UPP	Uppsala	65.86	332	eP	P	08 32 45.8	-0.4
NACGM	Naroch	65.90	324	eP	P	08 32 47.4	+0.9
	comp=Z,51nm,0.8s,baz=47						
AKH	Akhalkalaki	66.14	305	P	P	08 32 47.3	-1.2
AKH	Akhalkalaki	66.14	305	P	P	08 32 47.3	-1.2
AKH				pmax	pmax		
	comp=Z,15nm,0.8s						
GNI	Garni	66.17	303	i P	P	08 32 49.0	+0.3
GNI				pmax	pmax		
	comp=Z,18nm,1.7s						
PABE	Paberze	66.64	326	P	P	08 32 51.6	+0.5
PABE	Paberze	66.64	326	eP	P	08 32 51.5	+0.3
ILULI	Ilulissat	66.79	4	P	P	08 32 51.6	-0.3
ILULI				IAmb	IAmb	08 32 52.9	
	comp=Z,7.7nm,0.7s						
ILULI	Ilulissat	66.79	4	P	P	08 32 51.6	-0.3
ILULI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NC405	NORSAR Array S	66.81	335	P	P	08 32 52.2	0.0
NC303	NORSAR Array S	66.82	335	P	P	08 32 51.8	-0.5
DOMB	Dombas	66.85	337	eP	P	08 32 52.5	0.0
HFS	Hagfors	66.95	334	P	P	08 32 52.7	-0.4
	comp=Z,13nm,0.6s,baz=39,slow=5.7,SNR=57						
	comp=Z,13nm,0.6s						
NC204	NORSAR Array S	66.96	336	P	P	08 32 53.2	0.0
NB201	NORSAR Array S	66.98	335	P	P	08 32 53.2	-0.1
NB2	NORSAR Subarra	67.02	335	P	P	08 32 53.6	+0.1
	comp=Z,5.6nm,0.6s,baz=36,slow=6.5						
NB2	NORSAR Subarra	67.02	335	P	P	08 32 53.6	+0.1
	slow=6.5						
NOA	NORSAR Array B	67.02	335	P	P	08 32 53.3	-0.2
	comp=Z,7.7nm,0.7s,baz=38,slow=6.3,SNR=27						
	comp=Z,7.7nm,0.7s						
PBUR	Paburge	67.09	327	eP	P	08 32 54.6	+0.6
NBO00	NORSAR Array S	67.15	335	P	P	08 32 54.3	-0.1
ICESG	Greenland Ices	67.16	359	eP	P	08 32 55.8	+1.1
ICESG				IAmb	IAmb	08 32 56.3	
	comp=Z,14nm,0.4s						
NC602	NORSAR Array S	67.16	335	eP	P	08 32 54.2	-0.2
VIKU	Vikbolandet	67.19	331	eP	P	08 32 54.6	0.0
ANN	Anapa	67.43	311	eP	P	08 32 54.1	-2.2
ANN				e*PP	pP	08 33 49.4	-3.9
ANN				pmax	pmax		
	comp=Z,68nm,1.0s						
AS31	Alice Springs	67.56	185	P	P	08 32 57.9	+0.5
ASAR	Alice Springs	67.57	185	P	P	08 32 58.6	+1.3
	comp=Z,1.4nm,0.7s,baz=360,slow=4.8,SNR=19						
	comp=Z,1.4nm,0.7s						
ASAR	Alice Springs	67.57	185	P	P	08 32 58.8	+1.5
ASAR	Alice Springs	67.57	185	P	P	08 32 58.8	+1.5
AKASG	Malin Array Be	67.68	320	P	P	08 32 58.0	+0.2
	comp=Z,8.2nm,0.4s,baz=42,slow=6.5,SNR=56						
	comp=Z,8.2nm,0.4s						
AKASG	Malin Array Be	67.68	320	P	P	08 32 58.0	+0.2

AKBB	Malin Array Si	67.68	320	P	P	08 32 57.8	0.0
AKBB	Malin Array Si	67.68	320	ceP	P	08 32 56.9	-0.9
AKBB				pmax	pmax		
	comp=Z,88nm,3.8s						
SKAR	Skarslia	68.16	336	eP	P	08 33 01.0	+0.3
HYA	Hoyanger	68.36	338	eP	P	08 33 02.0	+0.2
FFC	Flin Flon	68.79	33	P	P	08 33 03.2	-1.4
FFC	Flin Flon	68.79	33	P	P	08 33 03.2	-1.4
FFC				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GURO	Guroymak-BITLI	68.81	303	P	P	08 33 06.9	+1.7
GURO				IAmb	IAmb	08 33 07.6	
	comp=Z,11nm,0.9s						
ODD1	Odda	69.27	337	eP	P	08 33 07.9	+0.4
DY2G	Dye2	69.71	2	eP	P	08 33 11.1	+0.7
DY2G				IAmb	IAmb	08 33 12.1	
	comp=Z,18nm,1.0s						
BLS5	Blasjo	69.73	336	eP	P	08 33 11.1	+0.8
DEL	Delary	69.74	331	eP	P	08 33 09.9	-0.4
SORM	Soroca	69.86	318	⇑P	P	08 33 11.6	+0.3
SORM	Soroca	69.86	318	⇑P	P	08 33 11.6	+0.3
HOMB	Homborsund	70.06	335	eP	P	08 33 12.4	+0.1
EGMT	Eagleton	70.22	42	P	P	08 33 14.0	+0.4
EGMT				IAmb	IAmb	08 33 16.2	
	comp=Z,10nm,1.4s						
FRB	Frobisher Bay	70.33	13	P	P	08 33 14.0	+0.2
	comp=Z,4.3nm,0.5s,baz=344,slow=6.5,SNR=22						
	comp=Z,4.3nm,0.5s						
FRB	Frobisher Bay	70.33	13	P	P	08 33 14.0	+0.2
BSD	Bornholm Skovb	70.42	330	eP	P	08 33 14.3	-0.2
BSD	Bornholm Skovb	70.42	330	eP	P	08 33 14.6	+0.1
BSD				IAmb	IAmb	08 33 15.1	
	comp=Z,16nm,0.5s						
BUR08	Bucovina Ar. S	71.71	319	P	P	08 33 23.3	+0.8
BUR08				IAmb	IAmb	08 33 24.2	
	comp=Z,6.1nm,0.7s						
BURAR	Bucovina Array	71.72	319	⇑P	P	08 33 23.7	+1.1
BURAR	Bucovina Array	71.72	319	P	P	08 33 23.6	+1.1
BURAR				IAmb	IAmb	08 33 24.5	
	comp=Z,6.9nm,0.7s						
BURAR	Bucovina Array	71.72	319	⇑P	P	08 33 23.7	+1.1
TESR	Tescani	71.83	318	⇑P	P	08 33 24.1	+1.0
KVN	Kaiserville	71.96	53	P	P	08 33 25.6	+1.3
KVN	Kaiserville	71.96	53	P	P	08 33 25.6	+1.3
KVN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CFR	Carcaliu	72.04	316	⇑P	P	08 33 25.9	+1.5
CFR	Carcaliu	72.04	316	⇑P	P	08 33 25.9	+1.5
TPGR	Topolog	72.13	316	⇓P	P	08 33 25.9	+1.0
OJC	Ojcow	72.23	324	P	P	08 33 26.7	+1.3
OJC	Ojcow	72.23	324	P	P	08 33 26.7	+1.3
BNN	Bunyan	72.25	307	P	P	08 33 27.5	+1.6
NVAR	Mina Array Bea	72.26	54	P	P	08 33 27.8	+1.7
	comp=Z,0.8nm,0.6s,baz=306,slow=6.6,SNR=6.1						
	comp=Z,0.8nm,0.6s						
NVAR	Mina Array Bea	72.26	54	P	P	08 33 27.2	+1.1
PLOR	Plostina	72.30	317	⇑P	P	08 33 27.3	+1.3
PLOR	Plostina	72.30	317	⇑P	P	08 33 27.3	+1.3
NV11	Mina Array Sit	72.34	53	P	P	08 33 26.4	0.0
RLMT	Red Lodge	72.50	44	P	P	08 33 27.6	+0.2
OZUR		72.54	318	⇑P	P	08 33 27.8	+0.4
TRPA	Tarpa	72.58	321	⇑P	P	08 33 29.0	+1.5
DOPR	Dopca	72.83	318	⇑P	P	08 33 31.0	+1.9
MLR	Muntele Rosu	72.90	317	P	P	08 33 31.1	+1.4
	comp=Z,2.5nm,0.5s,baz=154,slow=19,SNR=2.5						
	comp=Z,2.5nm,0.5s						
BR131	Keskin Array S	72.91	309	P	P	08 33 30.6	+0.8
BR131				IAmb	IAmb	08 33 56.8	
	comp=Z,9.4nm,1.1s						
BR131	Keskin Array S	72.91	309	P	P	08 33 30.6	+0.8
BR131				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BRTR	Keskin Array B	72.91	309	P	P	08 33 30.6	+0.8
	comp=Z,3.6nm,0.8s,baz=61,slow=3.8,SNR=6.8						
	comp=Z,3.6nm,0.8s						
BRTR	Keskin Array B	72.91	309	P	P	08 33 30.7	+0.8
BRTR	Keskin Array B	72.91	309	iP	P	08 33 29.8	0.0
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ICOR	Ion Corvin	72.96	315	⇑P	P	08 33 31.5	+1.7
LANS	Liptovska Anna	73.18	323	eP	P	08 33 33.0	+2.0
LANS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LANS	Liptovska Anna	73.18	323	eP	P	08 33 33.0	+2.0
VOIR		73.38	318	⇑P	P	08 33 33.8	+1.5
VOIR		73.38	318	⇑P	P	08 33 33.8	+1.5
CHVC	Chvalec	73.50	326	eP	P	08 33 34.0	+1.1
CHVC	Chvalec	73.50	326	eP	P	08 33 34.0	+1.1
MORC	Moravsky Berou	73.51	325	⇑P	P	08 33 34.4	+1.4
MORC	Moravsky Berou	73.51	325	P	P	08 33 34.0	+1.0
MORC				IAmb	IAmb	08 33 35.1	
	comp=Z,7.0nm,0.7s						
MORC	Moravsky Berou	73.51	325	eP	P	08 33 34.0	+1.0
MORC	Moravsky Berou	73.51	325	⇑P	P	08 33 34.4	+1.4
DPC	Dobruska-Polom	73.57	326	eP	P	08 33 34.7	+1.4
DPC	Dobruska-Polom	73.57	326	eP	P	08 33 34.7	+1.4
ARR	Arges	73.63	318	⇑P	P	08 33 35.8	+2.1
VYHS	Vyhne	73.95	323	eP	P	08 33 36.8	+1.3
VYHS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VYHS	Vyhne	73.95	323	eP	P	08 33 36.8	+1.3
VYHS	Vyhne	73.95	323	eSG	S	08 42 43.6	-2.6
BW06	Boulder Array	74.04	45	P	P	08 33 37.1	+0.7
PD31	Pinedale Array	74.04	45	P	P	08 33 37.0	+0.6
PDAR	Pinedale Array	74.04	45	P	P	08 33 37.5	+1.0
	comp=Z,0.8nm,0.6s,baz=310,slow=2.3,SNR=9.2						
	comp=Z,0.8nm,0.6s						
PDAR	Pinedale Array	74.04	45	P	P	08 33 36.9	+0.5
CLL	Collm	74.12	328	P	P	08 33 36.7	+0.3
CLL	Collm	74.12	328	⇓iP	P	08 33 36.9	+0.5
	comp=Z,15nm,0.8s						
CLL				ePP	PP	08 36 24.0	-0.9
CLL	Collm	74.12	328	⇓iP	P	08 33 36.9	+0.5
CLL				pmax	pmax		
	comp=Z,15nm,0.8s						
JAVC	Velka Javorina	74.17	324	eP	P	08 33 39.1	+2.3
VRAC	Vranov	74.27	325	P	P	08 33 38.4	+1.1
	comp=Z,2.7nm,0.5s,baz=25,slow=3.5,SNR=6.7						
	comp=Z,2.7nm,0.5s						
VRAC	Vranov	74.27	325	eP	P	08 33 38.6	+1.3
GZR	Gura Zlata	74.50	319	⇑P	P	08 33 39.8	+1.0
GZR	Gura Zlata	74.50	319	⇑P	P	08 33 39.8	+1.0
KRUC	Moravsky	74.54	325	eP	P	08 33 40.2	+1.3
PRU	Pruhonice	74.57	326	eP	P	08 33 40.4	+1.4
PRU	Pruhonice	74.57	326	eP	P	08 33 40.4	+1.4
ULM	Lac du Bonnet	74.62	33	P	P	08 33 39.6	+0.3
	comp=Z,1.2nm,0.4s,baz=342,slow=5.7,SNR=1.9						
	comp=Z,1.2nm,0.4s						
QSM	Queen of Sheba	74.77	55	P	P	08 33 39.6	-0.8
QSM				IAmb	IAmb	08 33 43.1	
	comp=Z,7.9nm,0.7s						
MDVR	Moldovita	75.45	319	⇑P	P	08 33 44.9	+0.7
STKA	Stephens Creek	75.62	178	P	P	08 33 47.0	+2.0
	comp=Z,1.7nm,0.9s,baz=331,slow=19,SNR=3.5						
	comp=Z,1.7nm,0.9s						
STKA	Stephens Creek	75.62	178	P	P	08 33 45.8	+0.8
KHC	Kasperske Hory	75.63	326	P	P	08 33 45.9	+0.7
KHC				IAmb	IAmb	08 33 47.2	
	comp=Z,6.7nm,0.9s						
KHC	Kasperske Hory	75.63	326	eP	P	08 33 46.4	+1.3
KHC	Kasperske Hory	75.63	326	eP	P	08 33 46.4	+1.3
RONA	Rosalia, Austr	75.64	324	iP	P	08 33 46.7	+1.5
	comp=Z,4.5nm,0.6s						
CONA	Conrad Observa	75.65	324	iP	P	08 33 46.8	+1.5
	comp=Z,3.5nm,0.6s						
GEC2	GERESS Array S	75.81	326	P	P	08 33 44.9	-1.4
GERES	GERESS Array B	75.81	326	P	P	08 33 46.5	+0.2
	comp=Z,1.4nm,0.5s,baz=39,slow=7.2,SNR=6.8						
	comp=Z,1.4nm,0.5s						
GRF	Grafenberg Arr	76.10	328	eP	P	08 33 48.7	+1.0
	comp=Z,16nm,1.1s,baz=36,slow=4.7						
RDO	Rodhopi	76.26	315	P	P	08 33 47.9	-0.8
BOVS	Bovan	76.32	318	⇓P	P	08 33 49.0	0.0
VTS	Vitosha	76.34	317	⇑P	P	08 33 55.5	+6.1
VTS	Vitosha	76.34	317	⇑P	P	08 33 55.5	+6.1
RAYN	Ar Rayn	76.43	290	P	P	08 33 49.0	-1.1
RAYN				IAmb	IAmb	08 33 50.7	
	comp=Z,4.9nm,0.7s						
RAYN	Ar Rayn	76.43	290	P	P	08 33 49.0	-1.1
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BIOA	Bad Ischl, Aus	76.75	326	iP	P	08 33 52.9	+1.4
	comp=Z,4.4nm,0.5s						
DIVS	Divibare	76.78	320	P	P	08 33 50.9	-0.8
DIVS				IAmb	IAmb	08 33 52.7	
	comp=Z,3.4nm,0.8s						
B35A	Bob, Littlefor	76.97	33	P	P	08 33 53.0	+0.4
B35A				IAmb	IAmb	08 34 27.1	
	comp=Z,12nm,1.4s						
SOKA	Soboth	76.98	324	iP	P	08 33 53.7	+0.9
	comp=Z,6.8nm,1.0s						
OBKA	Obir	77.32	324	iP	P	08 33 55.8	+1.1
	comp=Z,2.4nm,0.5s						
KBA	Koelnbreinsper	77.36	325	iP	P	08 33 56.2	+1.2
	comp=Z,5.2nm,0.5s						
MYKA	Terra Mystica	77.60	325	iP	P	08 33 56.7	+0.5
	comp=Z,4.6nm,0.8s						
PRED	Cave del Predi	77.78	325	P	P	08 33 56.5	-0.7
PRED				IAmb	IAmb	08 33 57.1	
	comp=Z,2.8nm,0.6s						
WATA	Walderalm	77.87	326	iP	P	08 33 59.0	+1.2
	comp=Z,3.6nm,0.5s						
WTTA	Wattenberg	77.91	326	iP	P	08 33 59.2	+1.1
	comp=Z,5.3nm,0.5s						
MOTA	Moosalm	78.05	327	iP	P	08 33 59.6	+0.8
	comp=Z,19nm,1.2s						
RETA	Reutte	78.07	327	iP	P	08 33 59.8	+1.0
	comp=Z,5.9nm,0.9s						
SQTA	Sankt Quirin	78.11	327	iP	P	08 34 00.3	+1.2
	comp=Z,6.5nm,0.8s						
STAL	STALIGIAL	78.28	325	P	P	08 33 59.6	-0.3
STAL				IAmb	IAmb	08 34 00.2	
	comp=Z,4.6nm,0.7s						
CIMO	Cimolais	78.35	325	P	P	08 34 01.1	+0.8
CIMO				IAmb	IAmb	08 34 36.2	
	comp=Z,4.9nm,1.3s						
FETA	Feichten	78.47	327	iP	P	08 34 01.8	+0.7
	comp=Z,6.0nm,0.9s						
DAVA	Damuels	78.58	327	iP	P	08 34 02.4	+0.7
	comp=Z,8.6nm,0.6s						
ECH	Echery	78.83	329	P	P	08 34 02.5	-0.4
ECH				IAmb	IAmb	08 34 04.2	
	comp=Z,6.6nm,1.0s						
ECH	Echery	78.83	329	P	P	08 34 02.5	-0.4
ECH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
FUORN	Ofenpass-Fuorn	78.98	327	P	P	08 34 04.6	+0.7
SCHQ	Schefferville	79.05	15	P	P	08 34 04.2	+0.3
	comp=Z,2.2nm,0.8s,baz=333,slow=9.0,SNR=2.9						
	comp=Z,2.2nm,0.8s						
IDI	Anoyia	80.93	311	P	P	08 34 14.8	+0.5
	comp=Z,6.4nm,0.6s,baz=68,slow=5.4,SNR=2.1						
	comp=Z,6.4nm,0.6s						
IDI	Anoyia	80.93	311	P	P	08 34 14.4	+0.1
CAMP	Campotosto	80.98	323	P	P	08 34 13.2	-1.4
CAMP				IAmb	IAmb	08 34 16.3	
	comp=Z,7.2nm,0.9s						
ITM	Ithomi	81.09	314	P	P	08 34 14.4	-0.6
OSSC	Osservatorio P	81.11	324	P	P	08 34 14.8	-0.3
OSSC				IAmb	IAmb	08 34 15.8	
	comp=Z,8.7nm,1.2s						
TXAR	Lajitas Array	87.19	51	P	P	08 34 47.0	+1.0
	comp=Z,0.1nm,0.4s,baz=293,slow=4.6,SNR=4.0						
TXAR	Lajitas Array	87.19	51	P	P	08 34 47.0	+1.0
BDFB	Brasilia	151.04	14	PKPbc	PKiKP	08 41 51.8	0.0
	comp=Z,0.7nm,0.3s,baz=254,slow=7.5,SNR=3.6						

JMA 20 08:23:53.8±0.1, 35°.3N±0°.2×133°.7E±0°.2, h8^{km}±1^{km}, MV-0.1/6, EASTERN TOTTORI PREF, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKR	Kurayoshi	0.12	66	S	Sg	08 23 58.6	+0.3

*NNC **20** 08:54:38.8±0.9, 54°.54N×85°.93E, h0^{km}, mb3.6, mpv2.7, Error ellipse: s-maj=33.4km s-min=5.1km az=139.0, Suspected Mining explosion.*

*IDC **20** 08:54:41.8±2.4, 54°.26N×86°.03E, h0^{km}, mbtmp3.1/2, ML3.0/2, Error ellipse: s-maj=18.0km s-min=11.4km az=50.0*

ISC 20 08:54:40.2±1.5, 53°.30N±0°.08×84°.7E±0°.2, h0^{km}, n8, σ1^{s}.04/8, 6C-1D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	0.65	5	⇑P	Pn	08 54 55.7	-1.0
	0.1nm,0.2s						
ZAA0				⇑S	Sn	08 55 08.0	+0.4
	1.3nm,0.3s						
ZALV	Zalesovo Beam	0.65	5	Pg	Pb	08 54 55.2	+0.7
	1.3nm,0.3s,baz=63,slow=17,SNR=11						
ZALV				Lg	Lg	08 55 08.1	
	7.7nm,0.3s,baz=68,slow=28,SNR=28						
I46RU	ZALESOVO INFRA	0.65	5	I	I	08 59 27.8	
	0.1nm,0.9s,baz=66,slow=336,SNR=48						
KURK	Kurchatov	4.57	238	⇑Pn	Pg	08 56 07.1	-0.7
	2.3nm,1.1s						
KURK				⇑Lg	Lg	08 57 46.5	
	3.9nm,1.2s						
KURBB	Kurchatov Arra	4.67	237	Pn	Pg	08 56 11.2	+1.5
	0.2nm,0.3s,baz=54,slow=14,SNR=6.6						
KURBB				Lg	Lg	08 57 49.2	
	baz=49,slow=32,SNR=2.0						
	0.6nm,0.4s						
KURBB	Kurchatov Arra	4.67	237	⇑Pn	Pg	08 56 09.0	-0.8
	1.4nm,0.6s						
KURBB				⇓Lg	Lg	08 57 49.0	
	3.4nm,0.6s						
MK31	Makanchi Array	6.70	194	Pn	Pb	08 56 38.0	+0.5
	0.4nm,0.2s,baz=25,slow=13,SNR=19						
MK31				⇑Lg	Lg	08 58 55.4	
	0.4nm,0.3s,baz=29,slow=13,SNR=9.2						
MKAR	Makanchi Array	6.70	194	Pn	Pb	08 56 37.9	+0.4
	0.4nm,0.3s,baz=23,slow=12,SNR=14						
	0.5nm,0.3s						

*IDC **20** 08:54:41.2±2.8, 37°.57N×141°.72E, h40^{km}±26^{km}, mb3.4/10, mbtmp3.6/14, ML3.3/4, MS3.6/2, Error ellipse: s-maj=23.7km s-min=16.4km az=98.0*

*JMA **20** 08:54:42.1±0.1, 37°.6N±0°.2×141°.7E±0°.5, h47^{km}±1^{km}, MD3.6/39, MV4.0/39, E OFF FUKUSHIMA PREF*

JMA Felt I J1 at E OFF FUKUSHIMA PREF .

ISC 20 08:54:41.2±1.2, 37°.60N±0°.05×141°.84E±0°.07, h40^{km}±12^{km}, n48, σ1^{s}.14/46, mb3.7/10, 16D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.77	337	⇓iP	Pn	08 54 56.2	+0.6
JIKH				⇓S	Sn	08 55 05.9	0.0
JMST	Minamisoumatoc	0.77	280	⇓iP	Pn	08 54 55.6	0.0
JMST				⇓S	Sn	08 55 05.2	-0.8
JMST	Minamisoumatoc	0.77	280	A	A	08 54 55.6	
	comp=E,5.0nm,0.9s,comp=E,6.0nm,0.3s						
JFK	Kawauchi	0.81	253	⇓iP	Pn	08 54 56.2	+0.1
JFK				⇓S	Sn	08 55 06.2	-0.7
JFK	Kawauchi	0.81	253	A	A	08 54 56.2	
	comp=E,2.0nm,0.9s,comp=E,2.0nm,1.0s						
JMM	Marumori	0.87	288	P	Pn	08 54 57.3	+0.3
JMM	Marumori	0.87	288	iP	Pn	08 54 57.1	+0.1
JMM				S	Sn	08 55 08.1	-0.4
JMM	Marumori	0.87	288	A	A	08 54 57.1	
	comp=E,4.0nm,0.9s,comp=E,3.0nm,1.3s						
JIO	Ouri	0.94	336	⇓iP	Pn	08 54 58.5	+0.6
JIO				⇓S	Sn	08 55 09.9	-0.2
ONAJ	Iwakimizuishiy	0.97	239	⇓iP	Pn	08 54 58.5	+0.1
ONAJ				⇓S	Sn	08 55 10.2	-0.8
ONAJ	Iwakimizuishiy	0.97	239	A	A	08 54 58.5	
	comp=E,13nm,0.3s,comp=E,5.0nm,6.4s						
JOTO	OTAMA OYAMA	1.20	268	iP	Pn	08 55 02.3	+0.8
JOTO				S	Sn	08 55 16.9	+0.3
JOTO	OTAMA OYAMA	1.20	268	A	A	08 55 02.3	
	comp=E,6.0nm,0.4s,comp=E,11nm,0.4s						
JOU	Okura	1.20	310	⇓iP	Pn	08 55 01.9	+0.4
JOU				⇓S	Sn	08 55 17.1	+0.3
JKMT	Kesennumamotoy	1.24	347	⇓iP	Pn	08 55 02.9	+0.8
JKMT				⇓eS	Sn	08 55 18.2	+0.6
JMK	Ichinoseki	1.44	340	S	Sn	08 55 23.2	+0.8
JYS	Shirataka	1.54	294	eS	Sn	08 55 26.2	+1.4
JFY	Yanaizu	1.71	264	⇓iP	Pn	08 55 09.1	+0.5
JYK	Kaneyama	1.76	319	⇓iP	Pn	08 55 09.9	+0.8
JSD	Sado	2.87	280	P	Pn	08 55 24.9	+0.5
MJAR	Matsushiro Arr	3.09	251	Pn	Pn	08 55 27.1	-0.4
	0.5nm,0.3s,baz=77,slow=16,SNR=11						
MJAR				Sn	Sn	08 56 06.3	+3.1
	0.7nm,0.3s,baz=65,slow=43,SNR=2.9						
	2.6nm,0.3s						
MAJO	Matsushiro	3.09	251	P	Pn	08 55 29.6	+2.1
JTM	Tenmabayashi	3.24	350	P	Pn	08 55 30.5	+1.0
JGF	Kuroka	4.12	242	P	Pn	08 55 44.4	+2.7
INU	Inuyama	4.49	241	P	Pn	08 55 49.6	+2.9
ERM	Erimo	4.52	13	P	Pn	08 55 48.5	+1.4
JEM	Erimo	4.52	13	P	Pn	08 55 48.4	+1.3
ASAJ	Asahikawa	6.53	5	Pn	Pn	08 56 13.8	-0.9
	0.9nm,0.3s,baz=207,slow=13,SNR=11						
ASAJ				Sn	Sn	08 57 26.4	-1.5
	0.4nm,0.3s,baz=144,slow=25,SNR=1.2						
	6.5nm,1.1s						
USRK	Ussuriysk Ar.	9.95	315	Pn	Pn	08 57 00.2	-1.3
	0.5nm,0.3s,baz=121,slow=16,SNR=6.7						
	0.7nm,0.3s						
JCJ	Chichijima	10.48	178	Pn	Pn	08 57 08.0	-0.9
	0.8nm,0.3s,baz=17,slow=19,SNR=1.4						
JCJ				Sn	Sn	08 58 55.6	-9.4
	1.3nm,0.3s,baz=235,slow=20,SNR=2.4						
	35nm,0.8s						
SONM	Songino Array	27.76	303	P	P	09 00 26.6	+0.5
	0.2nm,0.5s,baz=111,slow=8.0,SNR=2.3						
	0.2nm,0.5s						
H11N2	WAKE ISLAND Hy	28.15	122	T	T	09 30 51.7	
	baz=315,slow=75,SNR=129						
H11N1	WAKE ISLAND Hy	28.16	122	T	T	09 30 52.6	
	baz=315,slow=75,SNR=64						
H11N3	WAKE ISLAND Hy	28.17	122	T	T	09 30 52.9	
	baz=315,slow=75,SNR=101						
H11S1	WAKE ISLAND Hy	28.89	124	T	T	09 31 42.9	
	baz=316,slow=75,SNR=41						
H11S3	WAKE ISLAND Hy	28.89	124	T	T	09 31 43.0	
	baz=316,slow=75,SNR=49						
H11S2	WAKE ISLAND Hy	28.91	124	T	T	09 31 51.6	
	baz=316,slow=75,SNR=23						
MKAR	Makanchi Array	44.11	302	P	P	09 02 44.5	-1.0
	0.3nm,0.5s,baz=89,slow=7.6,SNR=4.6						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	45.92	308	P	P	09 02 58.7	-1.1
	0.5nm,0.4s,baz=82,slow=8.4,SNR=6.8						
	0.5nm,0.4s						
ILAR	Eielson Array	48.83	33	P	P	09 03 22.9	+0.7
	0.5nm,0.7s,baz=264,slow=7.0,SNR=7.2						
	0.5nm,0.7s						
INK	Inuvik	53.73	27	P	P	09 04 00.1	+1.4
	0.6nm,0.6s,baz=342,slow=20,SNR=3.7						
	0.6nm,0.6s						
WRA	Warramunga Arr	57.67	188	P	P	09 04 26.7	-0.9
	0.7nm,0.5s,baz=5.1,slow=7.2,SNR=23						
	0.7nm,0.5s						
AKTO	Aktyubinsk	58.55	312	LR	LR	09 29 27.9	
	comp=Z,42nm,20.3s,baz=226,slow=36						
KIRV	Kirov	60.00	323	LR	LR	09 33 31.1	
	comp=Z,60nm,18.6s,baz=210,slow=39						
ASAR	Alice Springs	61.40	188	P	P	09 04 52.9	-0.3
	0.5nm,0.7s,baz=10,slow=6.2,SNR=4.9						
	0.5nm,0.7s						
YKA	Yellowknife Ar	63.15	30	P	P	09 05 04.8	+0.2
	0.1nm,0.5s,baz=304,slow=6.8,SNR=4.3						
	0.1nm,0.5s						
FINES	FINESS Array B	68.47	332	P	P	09 05 38.0	-0.8
	1.6nm,0.9s,baz=70,slow=5.3,SNR=1.4						
	1.6nm,0.9s						
TXAR	Lajitas Array	89.50	53	P	P	09 07 35.0	+0.5
	0.1nm,0.5s,baz=296,slow=3.5,SNR=3.8						
	0.1nm,0.5s						

*NNC **20** 09:02:22.7±1.1, 53°.69N×87°.00E, h0^{km}, mb2.8, mpv2.6, Error ellipse: s-maj=13.6km s-min=5.6km az=29.0, Suspected Mining explosion.*

*IDC **20** 09:02:24.9±2.4, 53°.61N×86°.79E, h0^{km}, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=21.9km s-min=12.1km az=73.0*

ISC 20 09:02:19.0±3.0, 52°.88N±0°.06×86°.5E±0°.2, h0^{km}, n8, σ1^{s}.28/8, 6C-1D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.47	318	⇑P	Pb	09 02 47.2	0.0
	0.5nm,0.7s						
ZAA0				⇑S	Sg	09 03 05.5	-0.7
	1.7nm,0.5s						
ZALV	Zalesovo Beam	1.47	318	Pg	Pg	09 02 47.4	+0.2
	1.0nm,0.3s,baz=104,slow=16,SNR=15						
ZALV				Lg	Lg	09 03 04.3	
	3.0nm,0.3s,baz=108,slow=31,SNR=17						
I46RU	ZALESOVO INFRA	1.47	318	I	I	09 09 28.5	
	baz=105,slow=338,SNR=5.6						
KURK	Kurchatov	5.34	249	⇑Lg	Lg	09 05 30.7	
	5.1nm,1.4s						
KURBB	Kurchatov Arra	5.44	249	Pn	Pb	09 03 55.0	+0.2
	baz=60,slow=14,SNR=2.9						
KURBB				Lg	Lg	09 05 34.9	
	baz=60,slow=28,SNR=4.3						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	5.44	249	⇑Pn	Pb	09 03 53.4	-1.4
	1.1nm,0.3s						
KURBB				⇓Lg	Lg	09 05 35.7	
	6.3nm,0.8s						
MK31	Makanchi Array	6.67	206	⇑Pn	Pb	09 04 14.3	-1.5
	0.2nm,0.4s,baz=28,slow=14,SNR=13						
MK31				⇑Lg	Lg	09 06 19.5	
	0.9nm,0.7s,baz=184,slow=22,SNR=3.5						
MKAR	Makanchi Array	6.67	206	Pn	Pb	09 04 15.6	-0.1
	0.2nm,0.3s,baz=28,slow=14,SNR=10						
MKAR				Sn	Sb	09 05 37.8	+1.8
	0.1nm,0.3s,baz=25,slow=25,SNR=3.9						
MKAR				Lg	Lg	09 06 20.6	
	0.1nm,0.3s,baz=16,slow=27,SNR=6.8						
	0.3nm,0.3s						

*TEH **20** 09:17:12.7, 36°.60N×53°.16E, h7^{km}±42^{km}, ML4.1*

*IDC **20** 09:17:14.4±1.9, 36°.73N×53°.06E, h0^{km}, mb3.8/8, mbtmp4.0/13, ML3.9/5, MS3.6/1, Error ellipse: s-maj=31.1km s-min=14.0km az=179.0*

*NNC **20** 09:17:18.2±1.7, 37°.29N×53°.11E, h0^{km}, mb3.7, Error ellipse: s-maj=15.6km s-min=7.5km az=30.0*

*AZER **20** 09:17:20.7±0.7, 36°.91N×52°.77E, h10^{km}, Error ellipse: s-maj=8.3km s-min=5.2km az=47.0*

ISC 20 09:17:14.1±0.6, 36°.70N±0°.04×53°.15E±0°.03, h10^{km}, n90, σ2^{s}.21/125, mb3.6/6, 4C-3D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGLO	Ghaloghah	0.58	109	Pg	Pg	09 17 24.5	-0.9
IPRN	Peran	0.79	235	Pg	Pg	09 17 28.0	-1.4
IPRN				Sg	Sg	09 17 40.5	+0.7
ISHM	Shahmirzad	0.90	172	Pg	Pg	09 17 28.8	-2.6
IFIR	Firoozkooh	1.10	197	Pg	Pg	09 17 33.4	-1.8
MZPU	Pul - Mazandar	1.30	259	Pg	Pn	09 17 38.3	-0.2
MZPU				Sg	Sn	09 17 58.2	+2.3
ILAS	Lasjerd	1.32	187	Pg	Pn	09 17 36.6	-2.2
IANJ	Anjilo	1.38	153	Pg	Pn	09 17 38.3	-1.3
IDMV	Damavand	1.44	219	Pg	Pn	09 17 39.9	-0.5
IDMV				Sg	Sb	09 17 59.1	-0.5
KLST	Kelardasht - M	1.69	265	Pg	Pn	09 17 45.2	+1.3
TEH	Tehran	1.72	237	Pg	Pn	09 17 44.8	+0.6
IMND	Minoodasht	1.90	72	Pn	Pn	09 17 47.3	+0.8
IHSB	Hasanabad	1.97	231	Pn	Pn	09 17 49.2	+1.6
QALM	Alamut, Qazvin	2.03	263	Pn	Pn	09 17 50.6	+2.0
IVRN	Varamin	2.05	215	Pn	Pn	09 17 49.9	+1.2
IMHD	Mahdasht	2.25	244	Pn	Pn	09 17 53.7	+2.3
IGZV	Ghazvin	2.38	263	Pn	Pn	09 17 55.8	+2.4
ISFB	Sefidab	2.45	198	Pn	Pn	09 17 55.0	+0.7
IQOM	Qom	2.50	223	Pn	Pn	09 17 56.3	+1.2
MRVT	Maraveh tapeh	2.54	67	Pn	Pn	09 17 56.7	+1.2
JIR1	Jirandeh	2.69	271	Pn	Pn	09 17 59.2	+1.6
KRSH	Karshahi	2.84	197	Pn	Pn	09 18 00.8	+1.1
IRAZ	Razeghan	2.91	245	Pn	Pn	09 18 02.4	+1.8
QAMS	Qamsar	3.28	206	Pn	Pn	09 18 06.5	+0.7
CSN1	Caspian	3.35	286	Pn	Pn	09 18 07.8	+1.3
ANAR	Anarak	3.53	172	Pn	Pn	09 18 09.5	+0.4
SBZV	Sabzevar	3.61	94	Pn	Pn	09 18 12.4	+2.1
HAGD	Aghdareh	3.76	241	Pn	Pn	09 18 14.5	+2.2
GAS1	Astara - Iran	3.81	298	Pn	Pn	09 18 14.7	+1.8
ASTR	Astara	3.93	300	P	Pn	09 18 15.3	+0.9
	SNR=7.2						
ASTR				S	Sn	09 18 58.6	-1.9
TNSJ	Nastanj	3.93	133	Pn	Pn	09 18 15.9	+1.3
LKRN	Lenkeran, Azer	4.00	301	P	Pn	09 18 16.4	+0.9
	SNR=8.2						
LKRN				S	Sn	09 18 59.8	-2.6
GEYT	Alibeck	4.15	71	Pn	Pn	09 18 19.6	+2.1

	3.4nm,0.3s,baz=238,slow=20,SNR=15						
GEYT				Sn	**Sn**	**09 19 09.8**	**+3.6**
	8.1nm,0.3s,baz=251,slow=26,SNR=6.3						
GEYT				Lg	Lg	09 19 27.9	
	7.5nm,0.3s,baz=103,slow=26,SNR=2.9						
	7.1nm,0.4s						
GYA0B	**ALIBECK ARRAY**	**4.15**	**71**	⇓Pn	**Pn**	**09 18 21.4**	**+3.8**
GYA0B				⇑Sn	**Sn**	**09 19 10.3**	**+4.2**
GYA0B				⇓Lg	Lg	09 19 25.2	
LRK	**Lerik**	**4.28**	**298**	P	**Pn**	**09 18 20.2**	**+0.7**
	SNR=12						
LRK				S	**Sn**	**09 19 06.3**	**-3.2**
HSAM	**Samen**	**4.46**	**238**	Pn	**Pn**	**09 18 23.3**	**+1.3**
YRD	**Yardimli**	**4.47**	**301**	P	**Pn**	**09 18 23.0**	**+0.9**
	SNR=17						
YRD				S	**Sn**	**09 19 11.5**	**-2.8**
TKDS	**Koohdasht(Taba**	**4.48**	**132**	Pn	**Pn**	**09 18 23.7**	**+1.6**
GLBA	**Clilabad**	**4.54**	**306**	P	**Pn**	**09 18 24.0**	**+1.3**
	SNR=6.9						
GLBA				S	**Sn**	**09 19 13.9**	**-1.6**
NDR	**Nardaran**	**4.60**	**328**	S	**Sn**	**09 19 19.8**	**+2.7**
ALIB	**Äli-Bayra**	**4.60**	**316**	P	**Pn**	**09 18 26.6**	**+2.9**
	SNR=5.2						
ALIB				S	**Sn**	**09 19 17.4**	**+0.2**
TPRV	**Parvadeh(Tabas**	**4.67**	**140**	Pn	**Pn**	**09 18 26.6**	**+1.8**
IBRJ	**Brojen**	**5.03**	**199**	Pn	**Pn**	**09 18 31.5**	**+1.7**
GBS	**Qobustan**	**5.05**	**321**	P	**Pn**	**09 18 32.8**	**+2.8**
GBS				S	**Sn**	**09 19 28.8**	**+0.4**
IKOM	**Komasi**	**5.24**	**243**	Pn	**Pn**	**09 18 35.2**	**+2.5**
ATGJ	**Altiaghaj**	**5.30**	**323**	P	**Pn**	**09 18 35.7**	**+2.3**
ATGJ				S	**Sn**	**09 19 35.0**	**+0.4**
BLQ	**Beylaqan**	**5.34**	**306**	P	**Pn**	**09 18 35.0**	**+1.2**
BLQ				S	**Sn**	**09 19 33.4**	**-1.9**
QRD	**Qoradiz**	**5.36**	**303**	P	**Pn**	**09 18 37.0**	**+2.9**
QRD				S	**Sn**	**09 19 34.5**	**-1.5**
IKFM	**Kafar-mosalman**	**5.37**	**235**	Pn	**Pn**	**09 18 37.2**	**+3.0**
PQL	**Pirkuli**	**5.42**	**320**	P	**Pn**	**09 18 38.0**	**+3.0**
	SNR=17						
PQL				S	**Sn**	**09 19 37.0**	**-0.6**
SIZA	**Siyzn**	**5.49**	**324**	P	**Pn**	**09 18 38.3**	**+2.4**
SIZA				S	**Sn**	**09 19 37.6**	**-1.5**
ZRD	**Zardab**	**5.58**	**312**	P	**Pn**	**09 18 40.1**	**+3.0**
ZRD				S	**Sn**	**09 19 40.8**	**-0.5**
IMYA	**Miami**	**5.61**	**92**	Pn	**Pn**	**09 18 39.9**	**+2.1**
IAZR	**Azarshahr**	**5.80**	**282**	Pn	**Pn**	**09 18 43.1**	**+2.6**
AFRZ	**Afriz**	**5.81**	**122**	Pn	**Pn**	**09 18 42.2**	**+1.7**
AGDM	**Agdam**	**5.84**	**308**	P	**Pn**	**09 18 42.3**	**+1.6**
	SNR=5.9						
AGDM				S	**Sn**	**09 19 46.5**	**-1.2**
IDHR	**Dehrash**	**5.85**	**252**	Pn	**Pn**	**09 18 43.3**	**+2.2**
JRKH	**Jarkhoshk**	**5.87**	**96**	Pn	**Pn**	**09 18 43.4**	**+2.2**
BRDA	**Brd**	**5.88**	**309**	P	**Pn**	**09 18 42.9**	**+1.6**
BRDA				S	**Sn**	**09 19 49.0**	**+0.3**
QUBA	**Quba, Azerbaij**	**5.89**	**324**	P	**Pn**	**09 18 43.6**	**+2.1**
	SNR=5.2						
QUBA				S	**Sn**	**09 19 47.8**	**-1.4**
QBL	**Gabala**	**5.93**	**317**	P	**Pn**	**09 18 43.2**	**+1.2**
	SNR=6.7						
QBL				S	**Sn**	**09 19 47.8**	**-2.3**
XNQ	**Khinaliq**	**5.93**	**320**	P	**Pn**	**09 18 44.0**	**+1.8**
	SNR=18						
XNQ				S	**Sn**	**09 19 48.2**	**-2.1**
AMIS	**Naft Sefid**	**5.95**	**214**	Pn	**Pn**	**09 18 44.3**	**+2.0**
ORD	**Ordubad**	**6.08**	**294**	P	**Pn**	**09 18 47.1**	**+2.9**
	SNR=11						
ORD				S	**Sn**	**09 19 53.3**	**-0.6**
QSAR	**Qusar**	**6.13**	**323**	P	**Pn**	**09 18 46.2**	**+1.5**
QSAR				S	**Sn**	**09 19 53.1**	**-1.7**
MNGR	**Mingechevir, A**	**6.25**	**313**	S	**Sn**	**09 19 58.0**	**+0.3**
SEKA	**Sheki**	**6.46**	**316**	P	**Pn**	**09 18 50.6**	**+1.3**
SEKA				S	**Sn**	**09 20 02.2**	**-0.9**
NAX	**Nakhchivan**	**6.53**	**295**	P	**Pn**	**09 18 52.1**	**+1.8**
NAX				S	**Sn**	**09 20 03.5**	**-1.4**
SBZ	**Shahbuz**	**6.57**	**297**	P	**Pn**	**09 18 53.2**	**+2.3**
	SNR=6.2						
SBZ				S	**Sn**	**09 20 03.2**	**-2.7**
SHRT	**Shahrakht**	**6.59**	**115**	Pn	**Pn**	**09 18 52.7**	**+1.5**
GANJ	**Ganja**	**6.64**	**309**	P	**Pn**	**09 18 52.2**	**+0.6**
	SNR=7.3						
GANJ				S	**Sn**	**09 20 04.1**	**-3.2**
BSRN	**Basiran**	**6.83**	**132**	Pn	**Pn**	**09 18 55.4**	**+0.9**
GDB	**GEDABAY**	**7.04**	**307**	P	**Pn**	**09 18 59.0**	**+1.7**
	SNR=53						
GDB				S	**Sn**	**09 20 13.9**	**-3.6**
ZKTA	**Zakatala**	**7.07**	**316**	P	**Pn**	**09 18 60.0**	**+2.3**
	SNR=11						
ZKTA				S	**Sn**	**09 20 15.8**	**-2.3**
MAKU	**Maku**	**7.19**	**294**	Pn	**Pn**	**09 19 02.5**	**+3.1**
GNI	**Garni**	**7.44**	**300**	Pn	Pn	09 19 07.9	+5.1
	2.0nm,0.3s,baz=314,slow=11,SNR=1.5						
GNI				Sn	**Sn**	**09 20 31.7**	**+4.3**
	1.5nm,0.3s,baz=339,slow=18,SNR=1.1						
	5.8nm,0.3s						
QZX	**Qazax, Azerbai**	**7.46**	**308**	P	**Pn**	**09 19 04.4**	**+1.3**
	SNR=24						
QZX				S	**Sn**	**09 20 25.5**	**-2.3**
KBZ	**Khabaz**	**10.52**	**315**	Pn	**Pn**	**09 19 46.0**	**+1.2**
	0.2nm,0.3s,baz=0.2,slow=10,SNR=2.6						
KBZ				Sn	**Sn**	**09 21 38.6**	**-4.0**
	0.3nm,0.3s,baz=110,slow=19,SNR=1.3						
	1.7nm,1.0s						
AB31	**Akbulak array**	**13.49**	**19**	⇑Pn	**Pn**	**09 20 22.5**	**-3.0**
	0.4nm,0.5s,baz=202,slow=12,SNR=16						
AB31				⇑Sn	**Sn**	**09 22 49.6**	**-5.8**
	0.5nm,0.3s,baz=202,slow=23,SNR=6.4						
AKTO	**Aktyubinsk**	**14.18**	**13**	Pn	**Pn**	**09 20 34.1**	**-0.7**
	0.7nm,0.3s,baz=200,slow=7.1,SNR=12						
AKTO				Sn	Sn	09 23 04.2	-7.8
	0.4nm,0.3s,baz=221,slow=22,SNR=2.5						
	1.9nm,0.2s						
AKTO	**Aktyubinsk**	**14.18**	**13**	⇓Pn	**Pn**	**09 20 32.0**	**-2.8**
	0.8nm,0.4s						
AKTO				⇑Sn	**Sn**	**09 23 06.3**	**-5.7**
	3.5nm,1.1s						
BELG	**Belogornoye**	**16.17**	**348**	Pn	**Pn**	**09 21 00.5**	**-0.8**
	1.6nm,0.3s,baz=82,slow=9.5,SNR=5.0						
BELG				Sn	**Sn**	**09 23 54.3**	**-6.2**
	0.5nm,0.3s,baz=135,slow=23,SNR=1.4						
	7.0nm,0.5s						
ARU	**Arti**	**20.07**	**9**	P	**P**	**09 21 49.4**	**+2.0**
	7.1nm,0.4s,baz=179,slow=7.0,SNR=13						
	7.1nm,0.4s						
BVAR	**Borovoye Array**	**20.31**	**31**	P	**P**	**09 21 52.0**	**+2.0**
	4.0nm,0.5s,baz=215,slow=8.9,SNR=22						
	4.0nm,0.5s						
KIRV	**Kirov**	**22.04**	**355**	P	**P**	**09 22 10.6**	**+2.1**
	16nm,0.6s,baz=157,slow=9.2,SNR=5.7						
	16nm,0.6s						
KURBB	**Kurchatov Arra**	**22.90**	**45**	P	**P**	**09 22 21.0**	**+3.2**
	0.8nm,0.3s,baz=242,slow=11,SNR=5.7						
	0.8nm,0.3s						
MKAR	**Makanchi Array**	**23.85**	**56**	P	**P**	**09 22 29.9**	**+2.5**
	0.7nm,0.7s,baz=244,slow=8.6,SNR=9.3						
	0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**27.84**	**42**	P	**P**	**09 23 04.3**	**+0.8**
	0.8nm,0.6s,baz=249,slow=10,SNR=2.3						
	0.8nm,0.6s						
SONM	**Songino Array**	**40.21**	**57**	LR	LR	09 41 46.0	
	comp=Z,67nm,18.1s,baz=210,slow=37						
ESDC	**Sonseca Array**	**44.34**	**292**	P	**P**	**09 25 25.5**	**+1.1**
	0.3nm,0.5s,baz=74,slow=8.2,SNR=2.0						
	0.3nm,0.5s						
YKA	**Yellowknife Ar**	**80.66**	**354**	P	**P**	**09 29 28.3**	**+1.5**
	0.2nm,0.7s,baz=1.1,slow=6.2,SNR=5.1						
	0.2nm,0.7s						

IDC 20 09:19:48.9±3.2, 53°.57N×87°.75E, h0$^{\text{km}}$, mbtmp2.8/2, ML2.7/2, Error ellipse: s-maj=30.9km s-min=17.9km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**1.78**	**283**	Pn	Pn	09 20 20.3	-0.7
	0.7nm,0.3s,baz=101,slow=15,SNR=6.5						
ZALV				Lg	Lg	09 20 45.9	
	2.0nm,0.3s,baz=105,slow=27,SNR=11						
I46RU	**ZALESOVO INFRA**	**1.78**	**283**	I	I	09 29 50.0	
	baz=99,slow=335,SNR=7.2						
KURBB	**Kurchatov Arra**	**6.40**	**246**	Pn	Pn	09 21 24.6	+0.2
	0.2nm,0.3s,baz=62,slow=14,SNR=4.7						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**7.63**	**209**	Pn	Pn	09 21 42.9	+1.6
	0.1nm,0.3s,baz=29,slow=12,SNR=4.3						
	0.1nm,0.3s						

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*IDC **20** 09:22:39.9±3.2, 53°.54N×87°.80E, h0$^{\text{km}}$, mbtmp2.8/2, ML2.1/2, Error ellipse: s-maj=26.5km s-min=15.0km az=66.0*

*NNC **20** 09:22:40.2±3.7, 53°.48N×87°.78E, h0$^{\text{km}}$, mb3.0, mpv2.6, Error ellipse: s-maj=32.1km s-min=23.9km az=62.0, Suspected Mining explosion.*

ISC 20 09:22:40.1±3.4, 53°.6N±0°.1×87°.7E±0°.2, h0$^{\text{km}}$, n8, σ1§23/9, 5C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.77**	**283**	I	I	09 33 00.0	
	baz=99,slow=335,SNR=2.5						
ZAA0	**Zalesovo Array**	**1.77**	**283**	⇑Pn	**Pn**	**09 23 12.1**	**+0.2**
	0.7nm,0.7s						
ZAA0				⇓Sn	**Sg**	**09 23 38.4**	**+1.5**
	3.8nm,0.8s						
ZALV	**Zalesovo Beam**	**1.77**	**283**	Pg	**Pb**	**09 23 12.4**	**-0.9**
	0.9nm,0.3s,baz=102,slow=14,SNR=14						
ZALV				Lg	Lg	09 23 38.1	
	5.0nm,0.3s,baz=104,slow=25,SNR=26						
KURK	**Kurchatov**	**6.31**	**246**	⇑Lg	Lg	09 25 59.2	
	7.0nm,1.4s						
KURBB	**Kurchatov Arra**	**6.40**	**246**	Pn	**Pn**	**09 24 16.4**	**+0.7**
	baz=62,slow=14,SNR=4.4						
KURBB				Lg	Lg	09 26 02.2	
	baz=62,slow=32,SNR=4.7						
	0.8nm,0.5s						
KURBB	**Kurchatov Arra**	**6.40**	**246**	⇓Pn	**Pn**	**09 24 16.3**	**+0.7**
	2.1nm,0.7s						
KURBB				⇑Sn	**Sn**	**09 25 28.2**	**-1.1**
	5.6nm,0.6s						
KURBB				⇓Lg	Lg	09 26 04.4	
	6.5nm,0.6s						
MK31	**Makanchi Array**	**7.65**	**209**	⇑Pn	**Pn**	**09 24 33.9**	**+1.2**
MK31				⇑Lg	Lg	09 26 40.0	
	1.1nm,0.7s,baz=35,slow=32,SNR=3.7						
MKAR	**Makanchi Array**	**7.65**	**209**	Pn	**Pn**	**09 24 33.5**	**+0.8**
	baz=31,slow=20,SNR=2.2						
MKAR				Sn	**Sn**	**09 25 58.8**	**-1.3**
	0.1nm,0.3s,baz=27,slow=29,SNR=3.9						
MKAR				Lg	Lg	09 26 41.1	
	0.1nm,0.3s,baz=28,slow=31,SNR=5.9						
	0.4nm,0.8s						

ROM 20 09:31:40.9±0.1, 42°.563N±0°.004×13°.343E±0°.004, h9$^{\text{km}}$, ML1.6/16, 1C, Error ellipse: s-maj=0.4km s-min=0.2km az=192.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.06**	**119**	P	Pg	09 31 43.3	+0.3
CAMP				S	Sg	09 31 44.8	+0.3
CAMP				AML	AML		
	comp=E,142µm,1.1s						
CAMP				AML	AML		
	comp=N,165µm,0.3s						
SMA1	**SAN MARTINO**	**0.07**	**355**	P	Pg	09 31 43.4	+0.3
SMA1				S	Sg	09 31 45.0	+0.4
SMA1				AML	AML		
	comp=E,608µm,0.8s						
SMA1				AML	AML		
	comp=N,508µm,0.3s						
RM33	**Pellescritta (**	**0.11**	**241**	P	Pg	09 31 44.0	+0.4
RM33				S	Sg	09 31 45.8	+0.4
RM33				AML	AML		
	comp=E,440µm,1.3s						
RM33				AML	AML		
	comp=N,538µm,0.3s						
RM33				AML	AML		
	comp=E,465µm,1.3s						
RM33				AML	AML		
	comp=E,430µm,0.9s						
RM33				AML	AML		
	comp=N,538µm,0.3s						
RM33				AML	AML		
	comp=E,459µm,0.9s						
RM33				AML	AML		
	comp=E,459µm,1.1s						
RM33				AML	AML		
	comp=E,430µm,1.1s						
RM33				AML	AML		
	comp=N,532µm,0.3s						
T1247	**Pizzolo (AQ)**	**0.12**	**195**	P	Pg	09 31 44.4	+0.6
T1247				AML	AML		
	comp=E,259µm,0.1s						
T1247				AML	AML		
	comp=N,254µm,0.7s						
T1247				AML	AML		
	comp=N,254µm,1.3s						
GIGS	**Gran Sasso**	**0.20**	**124**	P	Pg	09 31 45.6	+0.6
GIGS				S	Sg	09 31 49.0	+1.1
GIGS				AML	AML		
	comp=E,41µm,0.2s						
GIGS				AML	AML		
	comp=N,24µm,1.0s						
TERO	**Teramo**	**0.20**	**73**	P	Pg	09 31 45.6	+0.6
TERO				S	Sg	09 31 49.1	+1.2
TERO				AML	AML		
	comp=N,188µm,0.3s						
TERO				AML	AML		
	comp=E,138µm,0.1s						
AQU	**L'Aquila**	**0.21**	**168**	⇑P	Pg	09 31 44.1	-1.1
T1214	**Arquata del Tr**	**0.22**	**333**	AML	AML		
	comp=N,822µm,0.6s						
T1214				AML	AML		
	comp=E,1050µm,0.3s						
T1214				AML	AML		
	comp=N,821µm,0.6s						
T1214				AML	AML		
	comp=N,821µm,1.4s						
T1222	**Castel Sant'An**	**0.28**	**235**	AML	AML		
	comp=N,120µm,0.3s						
T1222				AML	AML		
	comp=E,170µm,0.3s						
T1212	**Cascia, Frazio**	**0.29**	**311**	AML	AML		
	comp=E,487µm,0.9s						
T1212				AML	AML		
	comp=E,488µm,0.9s						
T1212				AML	AML		
	comp=N,705µm,0.2s						
T1241	**Roccafluvione,**	**0.30**	**12**	AML	AML		
	comp=E,79µm,1.0s						
T1241				AML	AML		
	comp=E,79µm,1.0s						
T1241				AML	AML		
	comp=E,79µm,1.0s						
T1241				AML	AML		
	comp=N,64µm,0.3s						
T1245	**Castelsantange**	**0.32**	**339**	AML	AML		
	comp=E,648µm,0.3s						
T1245				AML	AML		
	comp=N,558µm,0.1s						
T1245				AML	AML		
	comp=N,558µm,0.1s						
T1217	**Poggiodomo (PG**	**0.34**	**296**	AML	AML		
	comp=E,2245µm,0.1s						
T1217				AML	AML		
	comp=N,1885µm,0.2s						
T1211	**Morro Reatino**	**0.36**	**265**	AML	AML		
	comp=N,480µm,1.0s						
T1211				AML	AML		
	comp=E,326µm,0.4s						
T1211				AML	AML		
	comp=N,480µm,1.0s						
T1211				AML	AML		
	comp=E,326µm,0.3s						
T1211				AML	AML		
	comp=N,480µm,1.0s						
T1216	**Preci, Frazion**	**0.41**	**324**	AML	AML		
	comp=E,1225µm,0.5s						
T1216				AML	AML		
	comp=N,1275µm,1.1s						
T1216				AML	AML		
	comp=N,1270µm,1.1s						
OFFI	**Offida**	**0.45**	**34**	AML	AML		
	comp=E,89µm,0.4s						
OFFI				AML	AML		
	comp=E,89µm,1.6s						
OFFI				AML	AML		
	comp=N,96µm,1.3s						
OFFI				AML	AML		
	comp=N,96µm,0.7s						
T0110	**Collepietro**	**0.47**	**136**	AML	AML		
	comp=E,45µm,0.5s						
T0110				AML	AML		
	comp=N,47µm,0.4s						
GUMA	**Gualdo di Mace**	**0.50**	**359**	AML	AML		
	comp=N,250µm,0.6s						
GUMA				AML	AML		
	comp=E,278µm,0.2s						
GUMA				AML	AML		
	comp=N,250µm,1.4s						
FDMO	**Fiordimonte**	**0.51**	**338**	AML	AML		
	comp=N,30µm,0.4s						
FDMO				AML	AML		
	comp=E,44µm,0.6s						
FDMO				AML	AML		
	comp=E,44µm,0.6s						
FDMO				AML	AML		
	comp=N,33µm,1.3s						
FDMO				AML	AML		
	comp=N,33µm,0.7s						
CSP1	**Cessapalombo**	**0.54**	**349**	AML	AML		
	comp=E,69µm,1.2s						
CSP1				AML	AML		
	comp=N,48µm,0.4s						

ROM 20 09:32:16.0±0.0, 42°.709N±0°.002×12°.849E±0°.002, h11$^{\text{km}}$, ML1.7/14, 2C-3D, Error ellipse: s-maj=0.2km s-min=0.2km az=134.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1217	**Poggiodomo (PG**	**0.06**	**87**	P	Pg	09 32 18.7	+0.4
T1217				S	Sg	09 32 20.4	+0.3
T1217				AML	AML		
	comp=E,2245µm,0.1s						
T1217				AML	AML		
	comp=N,1885µm,0.2s						
T1217				AML	AML		
	comp=N,1600µm,0.1s						
T1217				AML	AML		
	comp=E,2301µm,0.2s						
T1217				AML	AML		
	comp=N,1603µm,0.1s						
T1217				AML	AML		
	comp=E,2247µm,0.1s						
ARRO	**Arrone**	**0.14**	**205**	⇑P	Pg	09 32 20.0	+0.7
ARRO				S	Sg	09 32 22.6	+0.9
ARRO				AML	AML		
	comp=E,339µm,0.7s						
ARRO				AML	AML		
	comp=N,423µm,0.2s						
ARRO				AML	AML		
	comp=E,330µm,0.2s						
ARRO				AML	AML		
	comp=N,423µm,0.2s						
T1212	**Cascia, Frazio**	**0.15**	**73**	P	Pg	09 32 20.0	+0.5
T1212				S	Sg	09 32 22.7	+0.7
T1212				AML	AML		
	comp=E,161µm,0.7s						
T1212				AML	AML		
	comp=N,106µm,0.1s						
T1212				AML	AML		
	comp=E,487µm,0.9s						
T1212				AML	AML		
	comp=N,705µm,0.2s						
T1212				AML	AML		
	comp=N,705µm,0.2s						
T1212				AML	AML		
	comp=N,693µm,0.2s						
T1212				AML	AML		
	comp=E,488µm,0.3s						
T1212				AML	AML		
	comp=E,471µm,0.2s						
T1211	**Morro Reatino**	**0.18**	**178**	⇑P	Pg	09 32 20.5	+0.6
T1211				S	Sg	09 32 23.7	+1.1
T1211				AML	AML		
	comp=E,326µm,0.4s						
T1211				AML	AML		
	comp=N,480µm,1.0s						
T1211				AML	AML		
	comp=E,288µm,0.1s						
T1211				AML	AML		
	comp=N,450µm,0.2s						
T1211				AML	AML		
	comp=N,463µm,0.2s						
T1211				AML	AML		
	comp=E,291µm,0.1s						
T1218	**Civita (PG)**	**0.20**	**101**	P	Pg	09 32 20.7	+0.4
T1218				S	Sg	09 32 24.1	+0.8
CESX	**Cesi**	**0.22**	**244**	⇓P	Pg	09 32 21.1	+0.5
CESX				S	Sg	09 32 24.8	+1.0
CESX				AML	AML		
	comp=E,144µm,0.5s						
CESX				AML	AML		
	comp=N,172µm,0.3s						
CESX				AML	AML		
	comp=N,172µm,0.3s						
CESX				AML	AML		
	comp=E,119µm,0.2s						
T1216	**Preci, Frazion**	**0.22**	**35**	P	Pg	09 32 21.2	+0.6
T1216				S	Sg	09 32 24.8	+0.9
T1216				AML	AML		
	comp=E,1225µm,0.5s						
T1216				AML	AML		
	comp=N,1270µm,1.1s						
T1216				AML	AML		
	comp=E,1064µm,0.1s						
T1216				AML	AML		
	comp=N,1199µm,0.2s						
MOMA	**Monte Martano**	**0.23**	**295**	⇓P	Pg	09 32 21.3	+0.6
MOMA				S	Sg	09 32 25.1	+1.1
MOMA				AML	AML		
	comp=E,352µm,0.3s						
MOMA				AML	AML		
	comp=N,312µm,1.2s						
MOMA				AML	AML		
	comp=E,309µm,0.2s						
MOMA				AML	AML		
	comp=N,281µm,0.2s						
MOMA				AML	AML		
	comp=E,308µm,0.2s						
MOMA				AML	AML		
	comp=N,274µm,0.2s						
T1245	**Castelsantange**	**0.29**	**59**	AML	AML		
	comp=N,558µm,0.1s						
T1245				AML	AML		
	comp=E,648µm,0.3s						
CESI	**CESI - Serrava**	**0.30**	**8**	P	Pg	09 32 22.5	+0.4
CESI				S	Sb	09 32 27.3	-1.1
CESI				AML	AML		
	comp=E,202µm,0.5s						
CESI				AML	AML		
	comp=N,315µm,1.3s						
CESI				AML	AML		
	comp=E,160µm,0.2s						
CESI				AML	AML		
	comp=N,252µm,0.1s						
MC2	**Monte Cornacci**	**0.32**	**51**	P	Pg	09 32 22.8	+0.2
MC2				S	Sb	09 32 28.2	-1.0
RM33	**Pellescritta (**	**0.34**	**126**	P	Pb	09 32 23.4	-0.6
RM33				S	Sb	09 32 28.4	-1.1
ASSB	**Assisi San Ben**	**0.36**	**337**	⇓P	Pg	09 32 23.5	+0.2
ASSB				S	Sb	09 32 29.3	-0.9
T1219	**Muccia, Frazio**	**0.37**	**19**	P	Pg	09 32 23.8	+0.5
T1219				S	Sg	09 32 29.2	+1.0
T1219				AML	AML		
	comp=E,214µm,0.2s						
T1219				AML	AML		
	comp=N,158µm,1.1s						
T1219				AML	AML		
	comp=N,106µm,0.1s						
T1219				AML	AML		
	comp=E,214µm,0.2s						
T1219				AML	AML		
	comp=N,117µm,0.1s						
T1219				AML	AML		
	comp=E,220µm,0.2s						
FDMO	**Fiordimonte**	**0.37**	**28**	P	Pg	09 32 23.9	+0.5
FDMO				S	Sb	09 32 29.4	-1.0
FDMO				AML	AML		
	comp=E,173µm,0.5s						
FDMO				AML	AML		
	comp=N,187µm,0.3s						
FDMO				AML	AML		
	comp=N,156µm,0.2s						
FDMO				AML	AML		
	comp=E,152µm,0.2s						
T1256	**Bolognola (MC)**	**0.41**	**43**	P	Pg	09 32 24.4	+0.3

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T1256                                S         Sb          09 32 30.6  -1.0
T1256                                AML       AML
       comp=N,83µm,0.3s
T1220  Camerino, Fraz     0.44  24   AML       AML
       comp=E,461µm,0.2s
T1220                                AML       AML
       comp=N,452µm,0.2s
T1220                                AML       AML
       comp=N,7257µm,1.0s
T1241  Roccafluvione,     0.45  71   AML       AML
       comp=E,25000µm,1.6s
T1241                                AML       AML
       comp=N,18000µm,1.6s
CSP1   Cessapalombo       0.46  34   P         Pg          09 32 25.4  +0.3
CSP1                                 S         Sb          09 32 32.6  -0.6
CSP1                                 AML       AML
       comp=E,69µm,1.2s
CSP1                                 AML       AML
       comp=N,125µm,0.4s
CSP1                                 AML       AML
       comp=N,126µm,0.4s
CSP1                                 AML       AML
       comp=E,120µm,0.4s
SNTG   Esanatoglia        0.55   7   P         Pg          09 32 26.6  -0.1
SNTG                                 S         Sb          09 32 34.9  -0.8
SNTG                                 AML       AML
       comp=E,44µm,0.4s
SNTG                                 AML       AML
       comp=N,38µm,1.2s
SNTG                                 AML       AML
       comp=N,38µm,0.2s
TERO   Teramo             0.56  99   AML       AML
       comp=E,40µm,0.6s
TERO                                 AML       AML
       comp=N,62µm,0.5s
EL6    Elcito             0.65  17   P         Pg          09 32 28.5  -0.1
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*INET **20** 09:36:35.7±0.5, 13°.00N×89°.20W, h23km±8km, MW3.5*
*SNET **20** 09:36:36.0±0.9, 13°.09N×89°.16W, h56km, ML3.7*
ISC 20 09:36:35.5±1.9**, 13°.01N**±0°.09×**89°.20W**±0°.05**, h30**km±14km**,**
n41, σ0s.40/51**, 2D, El Salvador**

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Code   Station Name        Δ°  AZ°     Phase ID           Time      Res
                                      Op        ISC      h  m  s    ISC
SJTE   Alcalda de S       0.63  17   eP        Pb       09 36 47.9  -0.1
TECO   Alcaldia de Te     0.66  38   eP        Pb       09 36 48.2  -0.4
ITCA   Escuela Especi     0.66 353   eP        Pb       09 36 48.8  +0.1
SNET   Serv Nac Est T     0.67 357   eP        Pb       09 36 48.8   0.0
SNET   Serv Nac Est T     0.67 357   eP        Pb       09 36 48.8   0.0
COEG   Centro de Oper     0.68  27 ⇓iP        Pb       09 36 48.7  -0.3
JAYA   Jayaque - finc     0.68 339   eP        Pb       09 36 49.2  +0.1
JAYA                                 eS        Sb       09 36 58.5  +0.2
UTEC   Universidad Te     0.69 360   eP        Pb       09 36 49.0   0.0
ALJI   Alcalda de J       0.69  63   eP        Pb       09 36 49.1  +0.1
ALJI                                 eS        Sb       09 36 58.8  +0.6
SEMO   Seminario San      0.69 358   eP        Pb       09 36 48.9  -0.2
IGN    Direccin Gen       0.70   2   eP        Pb       09 36 49.2  -0.1
UDBS   Universidad Do     0.70   3   eP        Pb       09 36 49.2   0.0
UEES   Universidad Ev     0.70 357   eP        Pb       09 36 49.2  -0.1
PMON   Piamonte           0.71 351   eP        Pb       09 36 49.3  -0.1
PMON                                 eS        Sb       09 36 60.0  +1.1
BOQS   Boqueron           0.72 354   eP        Pb       09 36 49.7  -0.1
LFU    La Fuente          0.74   6   eP        Pb       09 36 49.8  -0.1
UESV   Universidad de     0.74  33   eP        Pb       09 36 49.4  -0.5
PAVA   Las Pavas          0.74  20   eP        Pb       09 36 49.7  -0.3
CEDA   San Andres         0.81 346   eP        Pb       09 36 50.7  -0.4
CEDA                                 eS        Sb       09 37 02.1  +0.3
COEB   Comit de Eme       0.81  53   eP        Pb       09 36 50.7  -0.5
COEB                                 eS        Sb       09 37 01.9  +0.1
SCLA   Alcaldia de Sa     0.82  34   eP        Pb       09 36 50.9  -0.5
TECA   Tecapa             0.83  55   eP        Pb       09 36 51.0  -0.5
PQSS   Presa 15 de Se     0.87  45   eP        Pb       09 36 51.3  -0.7
PQSS                                 eS        Sb       09 37 03.7  +0.3
CEVE   Cerro Verde        0.91 333   eP        Pb       09 36 52.6  -0.3
PACA   Pacayal            0.97  62   eP        Pb       09 36 53.3  -0.4
PACA                                 eS        Sb       09 37 06.6  +0.3
PACA   Pacayal            0.97  62   eP        Pb       09 36 53.5  -0.3
LCY    Lacayo             0.97  65   eP        Pb       09 36 53.3  -0.6
RTR    El Retiro          0.98 334   eP        Pb       09 36 53.7  -0.4
VSM    San Miguel         0.99  65   eP        Pb       09 36 53.7  -0.6
UNIC   Universidad Ca     1.02 341   eP        Pn       09 36 53.8  -0.1
NUBE   Las Nubes          1.05 327   eP        Pn       09 36 54.1  -0.1
NUBE                                 eS        Sb       09 37 07.8  -0.9
P5NO   Presa 5 de nov     1.06  24 ⇓iP        Pn       09 36 53.8  -0.5
CNRM   Centro Naciona     1.10  65   eS        Sb       09 37 09.8  -0.1
SLOZ   Alcaldia de Sa     1.16 331   eP        Pn       09 36 55.7   0.0
LCND   La Caada           1.31  77   eP        Pn       09 36 57.6   0.0
LCND                                 eS        Sn       09 37 14.7  +0.5
LCND                                 eS        Sn       09 37 14.7  +0.5
CNCH   Conchagua          1.35  79   eP        Pn       09 36 58.3  -0.1
MTO3   Montecristo        1.39 353   eP        Pn       09 36 58.6  -0.4
ESQI   Esquipulas         1.55 355   eP        Pn       09 37 01.0   0.0
CRIN   San Cristobal      2.12  98   eP        Pn       09 37 09.3  +0.4
TGUH   Tegucigalpa,Un     2.14  61   eP        Pn       09 37 08.9  -0.4
COPN   Copaltepe          2.67 108   eP        Pn       09 37 16.3  -0.2
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*NNC **20** 09:41:07.0±1.3, 54°.51N×87°.05E, h0km, mb3.0, mpv2.8,*
Error ellipse: s-maj=23.4km s-min=7.2km az=164.0,
Suspected Mining explosion.
*IDC **20** 09:41:08.4±2.8, 54°.23N×87°.14E, h0km, mbtmp3.0/2,*
ML2.6/2, Error ellipse: s-maj=25.0km s-min=16.5km
az=63.0
ISC 20 09:41:09.7±4.3**, 54°.2N**±0°.2×**86°.9E**±0°.2**, h0**km**, n8, σ1s.39**/9**,**
6C-1D, Southwestern Siberia

```
Code   Station Name        Δ°  AZ°     Phase ID           Time      Res
                                      Op        ISC      h  m  s    ISC
I46RU  ZALESOVO INFRA     1.27 258   I         I        09 48 35.6
       baz=77,slow=336,SNR=22
ZAA0   Zalesovo Array     1.27 258  ⇑P         Pb       09 41 33.1  -1.4
       0.5nm,0.6s
ZAA0                                ⇑S         Sb       09 41 53.0  +1.6
       1.9nm,0.8s
ZALV   Zalesovo Beam      1.27 258   Pg        Pg       09 41 33.6  -0.5
       1.0nm,0.3s,baz=73,slow=16,SNR=12
ZALV                                 Lg        Lg       09 41 53.1
       1.4nm,0.3s,baz=77,slow=21,SNR=7.4
KURK   Kurchatov          6.17 239  ⇑Pn        Pn       09 42 43.1  +1.0
       2.1nm,1.2s
KURK                                ⇑Lg        Lg       09 44 30.1
       5.2nm,1.8s
KURBB  Kurchatov Arra     6.28 238   Pn        Pn       09 42 44.5  +1.0
       0.1nm,0.3s,baz=56,slow=14,SNR=8.7
KURBB                                Lg        Lg       09 44 31.6
       baz=61,slow=34,SNR=2.6
       1.2nm,0.6s
KURBB  Kurchatov Arra     6.28 238  ⇑Pn        Pn       09 42 44.5  +1.0
       1.3nm,0.6s
KURBB                               ⇑Lg        Lg       09 44 31.8
       4.1nm,0.9s
MK31   Makanchi Array     8.01 203   Pn        Pn       09 43 08.5  +1.2
       0.3nm,0.5s,baz=29,slow=14,SNR=6.3
MK31                                ⇓Lg        Lg       09 45 28.8
       1.0nm,0.8s,baz=175,slow=29,SNR=3.7
MKAR   Makanchi Array     8.01 203   Pn        Pn       09 43 08.1  +0.9
       0.1nm,0.3s,baz=28,slow=13,SNR=7.8
MKAR                                 Sn        Sn       09 44 37.3  -1.2
       0.1nm,0.3s,baz=28,slow=26,SNR=4.0
MKAR                                 Lg        Lg       09 45 24.8
       0.1nm,0.3s,baz=24,slow=30,SNR=2.4
       0.3nm,0.4s
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*IDC **20** 10:18:01.5±2.8, 54°.19N×86°.88E, h0km, mbtmp3.2/2,*
ML2.8/2, Error ellipse: s-maj=23.1km s-min=15.6km
az=58.0
*NNC **20** 10:18:01.6±2.1, 54°.20N×86°.92E, h0km, mb3.1, mpv2.9,*
Error ellipse: s-maj=17.0km s-min=10.7km az=73.0,
Suspected Mining explosion.
ISC 20 10:18:03.0±4.2**, 54°.2N**±0°.2×**86°.8E**±0°.2**, h0**km**, n10,**
σ1s.16/15**, 9C-4D, Southwestern Siberia**

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Code   Station Name        Δ°  AZ°     Phase ID           Time      Res
                                      Op        ISC      h  m  s    ISC
I46RU  ZALESOVO INFRA     1.20 261   I         I        10 25 25.6
       0.1nm,0.8s,baz=77,slow=336,SNR=28
ZAA0   Zalesovo Array     1.20 261  ⇑P         Pg       10 18 25.0  -1.0
       0.6nm,0.5s
ZAA0                                ⇑S         Sn       10 18 44.2  +0.1
       2.9nm,0.7s
ZALV   Zalesovo Beam      1.20 261   Pg        Pg       10 18 24.8  -1.3
       2.6nm,0.3s,baz=74,slow=17,SNR=24
ZALV                                 Lg        Lg       10 18 41.2
       1.7nm,0.3s,baz=62,slow=25,SNR=6.6
KURK   Kurchatov          6.08 239  ⇑Pn        Pn       10 19 35.4  +1.2
       3.7nm,1.2s
KURK                                ⇑Sn        Sn       10 20 47.0  +2.5
       0.7nm,0.5s
KURK                                ⇑Lg        Lg       10 21 20.4
       3.8nm,1.0s
KURBB  Kurchatov Arra     6.19 239   Pn        Pn       10 19 36.0  +0.4
       0.2nm,0.3s,baz=54,slow=14,SNR=14
KURBB                                Sn        Sn       10 20 45.8  -1.1
       baz=170,slow=16,SNR=1.2
KURBB                                Lg        Lg       10 21 19.5
       baz=332,slow=34,SNR=2.0
       1.4nm,0.4s
KURBB  Kurchatov Arra     6.19 239  ⇑Pn        Pn       10 19 35.4  -0.2
       1.4nm,0.4s
KURBB                               ⇑Sn        Sn       10 20 47.2  +0.3
       2.9nm,0.7s
KURBB                               ⇑Lg        Lg       10 21 21.2
       4.0nm,0.8s
MK31   Makanchi Array     7.91 203  ⇑Pn        Pn       10 19 59.3   0.0
       0.3nm,0.5s,baz=28,slow=14,SNR=6.0
MK31                                ⇓Sn        Sn       10 21 30.5  +1.1
       0.4nm,0.5s,baz=26,slow=25,SNR=4.1
MK31                                ⇓Lg        Lg       10 22 15.2
       1.5nm,0.9s
MKAR   Makanchi Array     7.91 203   Pn        Pn       10 19 58.8  -0.5
       0.2nm,0.3s,baz=27,slow=15,SNR=7.1
MKAR                                 Sn        Sn       10 21 28.7  -0.8
       0.1nm,0.3s,baz=16,slow=26,SNR=4.7
MKAR                                 Lg        Lg       10 22 13.1
       baz=38,slow=30,SNR=1.6
       0.4nm,0.4s
MAKZ   Makanchi           7.97 205  ⇓Sn        Sn       10 21 31.5  +0.5
       1.9nm,0.7s
MAKZ                                ⇓Lg        Lg       10 22 17.7
       1.0nm,0.6s
BVAR   Borovoye Array     9.84 270   Pn        Pn       10 20 27.0  +1.3
       baz=69,slow=16,SNR=4.2
BVAR                                 Sn        Sn       10 22 07.3   -10
       baz=75,slow=24,SNR=1.9
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*MOS **20** 10:19:29.3±0.8, 42°.96N×147°.12E, h55km, mb4.2/1, Error*
ellipse: s-maj=27.1km s-min=14.3km az=121.7
*SKHL **20** 10:19:31.3±0.3, 43°.00N×147°.00E, h64km±4km, mb4.7/3*
*JMA **20** 10:19:32.8±0.2, 43°.1N±0°.8×14°7E±°, h57km±3km,*
MV3.5/35, E OFF HOKKAIDO
*IDC **20** 10:19:35.4±6.7, 43°.40N×146°.99E, h65km±44km, mb3.0/4,*
mbtmp3.3/5, ML3.3/1, Error ellipse: s-maj=138.0km
s-min=30.6km az=179.0
ISC 20 10:19:31.9±1.9**, 43°.09N**±0°.09×**147°.00E**±0°.07**, h42**km±17km**,**
n37, σ0s.88/49**, mb3.2**/4**, 4D, Kuril Islands**

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Code   Station Name        Δ°  AZ°     Phase ID           Time      Res
                                      Op        ISC      h  m  s    ISC
SHO    Shikotan           0.79 351 d iPN       Pn       10 19 46.9  +0.3
SHO                                  eS        Sn       10 19 56.8  -0.5
SHO                                  pmax      pmax
       comp=Z,457nm,0.3s
SHO                                  pmax      pmax
       comp=N,220nm,0.2s
SHO                                  pmax      pmax
       comp=E,96nm,0.2s
SHO                                  smax      smax
       comp=N,2µm,0.2s
SHO                                  smax      smax
       comp=E,2µm,0.2s
SHO    Shikotan           0.79 351   i P       Pn       10 19 46.9  +0.3
SHO                                  AMB       AMB      10 19 47.0
       comp=E,460nm,0.3s
SHO                                  i S       Sn       10 19 57.2  -0.1
SHO                                  A         A        10 19 59.9
       comp=E,2µm,0.3s
SHO                                  A         A        10 19 59.9
       comp=E,2µm,0.3s
NEM2   Nemuro 2           0.96 287   P         Pn       10 19 49.2  +0.3
NEM2                                 eS        Sn       10 20 01.3  -0.2
NMR    Nemuro--Hokkai     0.97 287 ⇓iPN       Pn       10 19 49.2  +0.1
NMR                                  eS        Sn       10 20 00.9  -0.8
NMR    Nemuro--Hokkai     0.97 287   i P       Pn       10 19 49.2  +0.1
NMR                                  eS        Sn       10 20 00.9  -0.8
YUK    Yuzh-Kuril'sk      1.26 319 d iPN       Pn       10 19 52.8  -0.2
YUK                                  eS        Sn       10 20 07.2  -1.5
YUK                                  pmax      pmax
       comp=Z,2µm,0.2s
YUK                                  pmax      pmax
       comp=N,270nm,0.2s
YUK                                  pmax      pmax
       comp=E,262nm,0.2s
YUK                                  smax      smax
       comp=N,628nm,0.5s
YUK                                  smax      smax
       comp=E,1µm,0.6s
YUK    Yuzh-Kuril'sk      1.26 319   i P       Pn       10 19 52.9  -0.1
YUK                                  AMB       AMB      10 19 53.3
       comp=E,930nm,0.3s
YUK                                  eS        Sn       10 20 07.9  -0.8
YUK                                  A         A        10 20 10.6
       comp=E,810nm,0.4s
YUK                                  A         A        10 20 10.6
       comp=E,1µm,0.4s
JKHN   Kushirohamanak     1.35 270   i P       Pn       10 19 55.0  +0.7
JKHN                                 eS        Sn       10 20 11.4  +0.4
AKK    Akkeshi            1.59 268   eP        Pn       10 19 56.8  -0.7
AKK                                  eS        Sn       10 20 15.9  -0.9
JNSB   Nemuroshibetsu     1.61 296   P         Pn       10 19 58.0  +0.1
JNSB                                 eS        Sn       10 20 17.4   0.0
JRA    Rausu              1.61 302   P         Pn       10 19 58.2  +0.4
JRA                                  eS        Sn       10 20 17.1  -0.3
RUSJ   Misakicho          1.63 309 ⇓iPN       Pn       10 19 58.6  +0.5
RUSJ                                 eS        Sn       10 20 18.6  +0.7
JAK    Akkeshi            1.69 268   P         Pn       10 19 59.5  +0.5
JAK                                  eS        Sn       10 20 18.9  -0.5
JNK    Nakash             1.74 287   i P       Pn       10 19 59.5  -0.1
JNK                                  eS        Sn       10 20 19.0  -1.6
KUR    Kuril'sk           2.23  16   ePN       Pn       10 20 07.1  +0.7
KUR                                  eS        Sn       10 20 32.3  -0.4
KUR                                  pmax      pmax
       comp=Z,22nm,0.4s
KUR                                  smax      smax
       comp=N,217nm,0.3s
KUR                                  smax      smax
       comp=E,201nm,0.2s
KUR    Kuril'sk           2.23  16   eP        Pn       10 20 07.1  +0.7
KUR                                  AMB       AMB      10 20 10.6
       comp=E,30nm,0.3s
KUR                                  eS        Sn       10 20 33.0  +0.3
KUR                                  A         A        10 20 35.4
       comp=E,220nm,0.3s
KUR                                  A         A        10 20 35.4
       comp=E,320nm,0.3s
JOB    Onbets             2.33 267   eP        Pn       10 20 08.5  +0.7
JAR    Ashorobuto         2.38 276   eP        Pn       10 20 09.0  +0.6
JAR                                  eS        Sn       10 20 35.9  -0.3
JTKR   Abashiri--Toko     2.42 292   eP        Pn       10 20 09.9  +0.9
JCH    Churui             2.72 261   eP        Pn       10 20 13.7  +0.6
JMP    Maruseppu          2.80 290   eP        Pn       10 20 15.4  +1.1
JKK2   Kamakawa 2         3.19 286   eP        Pn       10 20 21.1  +1.5
JFR    Furan              3.23 273   eP        Pn       10 20 21.4  +1.3
JNBK   Urakawa-nobuka     3.24 257   eP        Pn       10 20 20.9  +0.7
JKA    Kamikawa-asahi     3.36 289   eP        Pn       10 20 23.2  +1.3
ASAJ   Asahikawa          3.36 289   P         Pn       10 20 23.1  +1.2
       comp=E,2.6nm,0.3s,baz=162,slow=8.0,SNR=23
ASAJ                                 S         Sn       10 21 03.0  +2.4
       comp=E,6.5nm,0.6s,baz=132,slow=12,SNR=2.1
       comp=E,9.6nm,0.4s
YSS    Yuzh-Sakhalins     4.90 324   eP        Pn       10 20 44.7  +1.7
SONM   Songino Array     28.63 294   P         P        10 25 24.6  +0.2
       comp=E,0.5nm,0.7s,baz=90,slow=7.2,SNR=3.0
       comp=E,0.5nm,0.7s
H11N2  WAKE ISLAND Hy    28.68 138   T         T        10 56 23.4
       baz=329,slow=75,SNR=27
H11N1  WAKE ISLAND Hy    28.69 138   T         T        10 56 18.3
       baz=329,slow=75,SNR=20
H11N3  WAKE ISLAND Hy    28.69 138   T         T        10 56 26.7
       baz=329,slow=75,SNR=20
H11S1  WAKE ISLAND Hy    29.63 140   T         T        10 57 31.2
       baz=330,slow=76,SNR=43
H11S3  WAKE ISLAND Hy    29.63 140   T         T        10 57 25.2
       baz=330,slow=76,SNR=24
H11S2  WAKE ISLAND Hy    29.65 140   T         T        10 57 27.8
       baz=330,slow=76,SNR=23
MKAR   Makanchi Array    44.80 298   P         P        10 27 40.9  -0.5
       comp=E,0.2nm,0.5s,baz=85,slow=8.8,SNR=2.3
       comp=E,0.2nm,0.5s
YKA    Yellowknife Ar    56.41  33   P         P        10 29 07.2  -1.4
       comp=E,0.1nm,0.6s,baz=304,slow=5.8,SNR=2.5
       comp=E,0.1nm,0.6s
NVAR   Mina Array Bea    68.02  58   P         P        10 30 27.9  +0.8
       comp=E,0.5nm,0.7s,baz=306,slow=6.2,SNR=4.2
       comp=E,0.5nm,0.7s
```

ROM 20 10:20:35.4±0.1**, 42°.927N**±0°.003×**13°.226E**±0°.004**,**
h8km**, ML0.9**/8**, Error ellipse: s-maj=0.3km s-min=0.1km**
az=48.0, Central Italy

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Code   Station Name        Δ°  AZ°     Phase ID           Time      Res
                                      Op        ISC      h  m  s    ISC
MC2    Monte Cornacci     0.03 242   P         Pg       10 20 36.8  -0.3
MC2                                  S         Sg       10 20 37.8  -0.5
T1245  Castelsantange     0.08 202   P         Pg       10 20 37.7  +0.2
T1245                                S         Sg       10 20 39.1  +0.1
T1245                                AML       AML
       comp=N,710µm,0.9s
T1245                                AML       AML
       comp=N,598µm,0.2s
T1245                                AML       AML
       comp=E,630µm,0.2s
T1245                                AML       AML
       comp=N,710µm,0.9s
T1245                                AML       AML
       comp=E,530µm,0.2s
T1245                                AML       AML
       comp=E,630µm,0.2s
T1245                                AML       AML
       comp=N,554µm,0.3s
T1245                                AML       AML
       comp=N,451µm,0.2s
T1245                                AML       AML
       comp=E,531µm,0.2s
MMO1   Montemonaco        0.08 110   P         Pg       10 20 37.7  +0.3
MMO1                                 S         Sg       10 20 39.3  +0.3
T1256  Bolognola (MC)     0.08 360   P         Pg       10 20 37.8  +0.2
T1256                                S         Sg       10 20 39.4  +0.2
T1256                                AML       AML
       comp=E,111µm,0.5s
T1256                                AML       AML
       comp=N,136µm,0.6s
T1256                                AML       AML
       comp=E,110µm,0.5s
T1256                                AML       AML
       comp=N,136µm,0.6s
T1256                                AML       AML
       comp=E,126µm,0.2s
T1256                                AML       AML
       comp=N,90µm,0.3s
T1256                                AML       AML
       comp=E,93µm,0.3s
T1256                                AML       AML
       comp=N,153µm,0.4s
FEMA   Monte Fema         0.13 285   P         Pg       10 20 38.9  +0.5
FEMA                                 S         Sg       10 20 41.6  +1.2
FDMO   Fiordimonte        0.15 317   P         Pg       10 20 39.0  +0.5
FDMO                                 S         Sg       10 20 41.8  +1.0
FDMO                                 AML       AML
       comp=E,38µm,0.2s
FDMO                                 AML       AML
       comp=N,44µm,0.6s
FDMO                                 AML       AML
       comp=N,38µm,0.2s
FDMO                                 AML       AML
       comp=E,38µm,0.2s
T1241  Roccafluvione,     0.17 115   P         Pg       10 20 39.5  +0.7
T1241                                S         Sg       10 20 42.5  +1.3
T1241                                AML       AML
       comp=E,71µm,0.4s
T1241                                AML       AML
       comp=N,64µm,0.8s
T1241                                AML       AML
       comp=E,71µm,0.4s
T1241                                AML       AML
       comp=E,124µm,0.6s
T1241                                AML       AML
       comp=N,43µm,0.1s
T1214  Arquata del Tr     0.17 184   P         Pg       10 20 39.5  +0.6
T1214                                S         Sg       10 20 42.6  +1.3
T1214                                AML       AML
       comp=E,45µm,0.2s
T1214                                AML       AML
       comp=N,56µm,0.3s
T1214                                AML       AML
       comp=E,68µm,0.6s
T1214                                AML       AML
       comp=N,67µm,0.3s
T1219  Muccia, Frazio     0.21 309   P         Pg       10 20 40.1  +0.5
T1219                                S         Sg       10 20 43.8  +1.4
T1219                                AML       AML
       comp=N,40µm,0.1s
T1219                                AML       AML
       comp=E,29µm,0.2s
T1219                                AML       AML
       comp=E,74µm,0.8s
T1220  Camerino, Fraz     0.21 331   P         Pg       10 20 40.2  +0.6
T1220                                AML       AML
       comp=E,170µm,0.2s
T1212  Cascia, Frazio     0.22 217   P         Pg       10 20 40.4  +0.6
T1212                                S         Sg       10 20 44.2  +1.4
T1212                                AML       AML
       comp=N,36µm,0.1s
T1212                                AML       AML
       comp=E,27µm,0.1s
TERO   Teramo             0.41 137   P         Pg       10 20 43.9  +0.5
TERO                                 S         Sb       10 20 50.5  -0.8
TERO                                 AML       AML
       comp=E,44µm,0.2s
TERO                                 AML       AML
       comp=N,33µm,0.9s
TERO                                 AML       AML
       comp=E,99µm,0.2s
TERO                                 AML       AML
       comp=N,74µm,0.6s
```

ROM 20 10:20:59.6±0.1**, 42°.524N**±0°.004×**13°.397E**±0°.005**,**
h10km**, ML1.2**/8**, 3C-1D, Error ellipse: s-maj=0.4km**
s-min=0.3km az=177.0, Central Italy

```
Code   Station Name        Δ°  AZ°     Phase ID           Time      Res
                                      Op        ISC      h  m  s    ISC
CAMP   Campotosto         0.01  37   P         Pg       10 21 01.5   0.0
CAMP                                 S         Sg       10 21 02.4  -0.4
T1247  Pizzolo (AQ)       0.11 222  ⇑P         Pg       10 21 02.9  +0.5
T1247                                S         Sg       10 21 04.9  +0.6
T1247                                AML       AML
       comp=N,784µm,0.9s
T1247                                AML       AML
       comp=E,704µm,0.9s
SMA1   SAN MARTINO        0.12 337   P         Pg       10 21 02.9  +0.4
SMA1                                 S         Sg       10 21 05.3  +0.8
SMA1                                 AML       AML
       comp=E,178µm,0.4s
SMA1                                 AML       AML
       comp=N,172µm,1.5s
SMA1                                 AML       AML
       comp=N,172µm,0.5s
RM33   Pellescritta (     0.14 264   P         Pg       10 21 03.2  +0.4
RM33                                 S         Sg       10 21 05.5  +0.6
RM33                                 AML       AML
       comp=E,288µm,0.4s
RM33                                 AML       AML
       comp=N,144µm,1.2s
GIGS   Gran Sasso         0.15 120   P         Pg       10 21 03.5  +0.6
GIGS                                 S         Sg       10 21 06.0  +0.7
GIGS                                 AML       AML
       comp=E,89µm,0.3s
GIGS                                 AML       AML
       comp=N,74µm,0.2s
GIGS                                 AML       AML
       comp=E,89µm,0.3s
TERO   Teramo             0.18  57   P         Pg       10 21 04.1  +0.6
TERO                                 S         Sg       10 21 07.2  +1.0
TERO                                 AML       AML
       comp=E,186µm,0.1s
TERO                                 AML       AML
       comp=N,183µm,0.2s
T1241  Roccafluvione,     0.33   4   P         Pg       10 21 06.5  +0.2
T1212  Cascia, Frazio     0.34 311   P         Pg       10 21 07.0  +0.5
```

T1212				S	Sg	10 21 12.2	+1.1
VCEL	**Villa Celiera**	**0.35**	**111**	⇓P	Pb	10 21 08.1	0.0
VCEL				AML	AML		
	comp=E,90µm,0.5s						
VCEL				AML	AML		
	comp=N,61µm,0.4s						
VCEL				AML	AML		
	comp=E,90µm,0.5s						
VCEL				AML	AML		
	comp=N,61µm,0.4s						
VCEL				AML	AML		
	comp=N,61µm,1.6s						
T1245	**Castelsantange**	**0.37**	**335**	P	Pb	10 21 08.1	-0.3
MMO1	**Montemonaco**	**0.38**	**352**	⇑P	Pb	10 21 08.2	-0.4
T1211	**Morro Reatino**	**0.40**	**271**	⇑P	Pg	10 21 08.1	+0.5
T0110	**Collepietro**	**0.41**	**136**	AML	AML		
	comp=E,49µm,0.4s						
T0110				AML	AML		
	comp=N,49µm,0.3s						
T1216	**Preci, Frazion**	**0.46**	**323**	AML	AML		
	comp=N,86µm,0.1s						
T1216				AML	AML		
	comp=E,94µm,0.1s						
T1216				AML	AML		
	comp=E,94µm,0.1s						
T1216				AML	AML		
	comp=N,86µm,0.1s						

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*IDC **20** 10:41:42.9±2.5, 26°.11S×29°.17E, h0^{km}, mb3.8/1, mbtmp3.7/5, ML2.9/4, Error ellipse: s-maj=25.8km s-min=20.2km az=114.0*

*BUL **20** 10:41:44.8±1.2, 26°.35S×29°.39E, h10^{km}, MD3.8*

ISC 20 10:41:41.9±1.1, **26°.20S**±0°.09×**29°.27E**±0°.08, **h10**^{km}, **n9**, σ**2ˢ.04**/14, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOPA	**Mopani**	**3.30**	**36**	*i* P	**Pn**	**10 42 34.4**	**+0.8**
MOPA				*i* S	**Sn**	**10 43 12.6**	**-0.3**
LBTB	**Lobatse**	**3.52**	**289**	Pn	**Pn**	**10 42 39.4**	**+2.7**
	3.9nm,0.3s,baz=104,slow=11,SNR=28						
LBTB				Pg	**Pb**	**10 42 46.2**	**+1.9**
	16nm,0.3s,baz=101,slow=17,SNR=30						
LBTB				Lg	Lg	10 43 30.8	
	39nm,0.3s,baz=16,slow=22,SNR=19						
	7.5nm,0.3s						
LBTB	**Lobatse**	**3.52**	**289**	*i* P	**Pb**	**10 42 41.1**	**-3.3**
BOSA	**Boshof**	**4.30**	**235**	Pn	**Pn**	**10 42 49.5**	**+2.0**
	0.6nm,0.3s,baz=55,slow=12,SNR=17						
BOSA				Pg	**Pg**	**10 43 01.7**	**-2.7**
	2.5nm,0.3s,baz=52,slow=17,SNR=8.9						
BOSA				Sn	**Sn**	**10 43 38.3**	**+0.4**
	3.2nm,0.3s,baz=319,slow=22,SNR=4.8						
BOSA				Lg	Lg	10 43 57.7	
	24nm,0.3s,baz=130,slow=21,SNR=21						
	1.3nm,0.3s						
BOSA	**Boshof**	**4.30**	**235**	*i* P	**Pn**	**10 42 49.4**	**+1.9**
BOSA				*i* S	**Sn**	**10 43 38.4**	**+0.6**
I47ZA	**BOSHOF INFRASO**	**4.32**	**235**	I	I	11 09 34.6	
	0.2nm,1.5s,baz=56,slow=344,SNR=3.5						
SUR	**Sutherland**	**9.61**	**228**	Pn	**Pn**	**10 44 02.9**	**+2.4**
	0.4nm,0.3s,baz=69,slow=14,SNR=25						
SUR				Sn	**Sn**	**10 45 48.6**	**-0.1**
	1.1nm,0.3s,baz=143,slow=19,SNR=6.4						
SUR				Lg	Lg	10 46 47.5	
	3.5nm,0.3s,baz=338,slow=23,SNR=9.9						
	1.4nm,0.3s						
TSUM	**Tsumeb**	**12.83**	**300**	Pn	**Pn**	**10 44 43.4**	**-1.2**
	0.4nm,0.3s,baz=90,slow=20,SNR=2.6						
TSUM				Lg	Lg	10 48 25.4	
	0.3nm,0.3s,baz=78,slow=14,SNR=5.0						
	1.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**47.43**	**322**	P	**P**	**10 50 18.0**	**+1.2**
	0.8nm,0.5s,baz=135,slow=6.2,SNR=12						
	0.8nm,0.5s						

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*IDC **20** 10:58:29.8±1.5, 1°.48S×120°.57E, h0^{km}, mb3.6/3, mbtmp3.7/4, ML4.0/1, MS3.2/3, Error ellipse: s-maj=53.9km s-min=23.4km az=70.0*

*DJA **20** 10:58:34.6±0.5, 2°S±3°×12°0E±°, h64^{km}±43^{km}, M4.3/12, mb4.4/4, MLv4.3/12*

ISC 20 10:58:33.9±1.2, **1°.55S**±0°.08×**120°.4E**±0°.1, **h23**^{km}, **n14**, σ**1ˢ.07**/12, **mb3.7**/3, **Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**2.42**	**78**	P	**Pn**	**10 59 12.6**	**+0.5**
SPSI	**Sidrap Palu**	**2.48**	**195**	P	**Pn**	**10 59 12.6**	**-0.3**
MRSI	**Marisa**	**2.54**	**37**	P	**Pn**	**10 59 14.0**	**+0.4**
GTOI	**Gorontalo**	**3.40**	**50**	P	**Pn**	**10 59 25.8**	**+0.3**
KAPI	**Kappang**	**3.50**	**191**	Pn	**Pn**	**10 59 27.3**	**+0.3**
	13nm,0.3s,baz=0.7,slow=3.1,SNR=5.6						
KAPI				Sn	**Sn**	**11 00 10.1**	**+2.4**
	3.3nm,0.3s,baz=30,slow=20,SNR=4.0						
	32nm,0.4s						
BKSI	**Bulukumba**	**3.76**	**184**	P	**Pn**	**10 59 30.2**	**-0.3**
SANI	**Sanana**	**5.61**	**95**	P	**Pn**	**10 59 55.2**	**-0.7**
	13nm,0.7s,0.1nm						
LBMI	**Labuha**	**7.16**	**83**	P	**Pn**	**11 00 17.9**	**+0.7**
	43nm,0.7s,0.2nm						
DAV	**Davao City (W)**	**10.00**	**31**	LR	LR	11 05 48.8	
	comp=Z,71nm,19.0s,baz=154,slow=44						
WRA	**Warramunga Arr**	**22.80**	**144**	P	**P**	**11 03 33.7**	**-1.5**
	2.5nm,1.0s,baz=323,slow=11,SNR=16						
	2.5nm,1.0s						
ASAR	**Alice Springs**	**25.59**	**150**	P	**P**	**11 04 00.9**	**-0.6**
	0.6nm,0.7s,baz=334,slow=8.9,SNR=7.9						
	0.6nm,0.7s						
CMAR	**Chiang Mai Arr**	**29.00**	**314**	LR	LR	11 17 20.0	
	comp=Z,54nm,19.2s,baz=170,slow=39						
MKAR	**Makanchi Array**	**58.61**	**330**	P	**P**	**11 08 28.8**	**-0.4**
	0.9nm,0.7s,baz=130,slow=8.2,SNR=5.4						
	0.9nm,0.7s						
GNI	**Garni**	**80.07**	**311**	LR	LR	11 53 12.1	
	comp=Z,24nm,18.0s,baz=240,slow=41						

JMA 20 11:02:32.6±0.1, **24°.1N**±0°.7×**122°.9E**±0°.3, **h24**^{km}±1^{km}, **MV2.0**/9, **NW OFF ISHIGAKIJIMA IS, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.31**	**11**	P	Pb	11 02 39.6	-0.2
JYNG				*e*S	Sb	11 02 44.5	-0.1
YOJ	**Yonaguni jima**	**0.34**	**21**	P	Pb	11 02 40.1	-0.1
YOJ				S	Sb	11 02 45.2	-0.1
IRIF	**Iriomote-Funau**	**0.80**	**76**	P	Pb	11 02 47.5	-0.3
HATJ	**Hateruma jima**	**0.85**	**96**	P	Pb	11 02 48.2	-0.5
HATJ				*e*S	Sb	11 02 59.6	-0.1
JKRS	**Kuro-shima**	**1.03**	**85**	P	Pn	11 02 51.8	+0.1
JKRS				S	Sn	11 03 05.5	0.0
JIJ	**Ishigaki jima**	**1.17**	**79**	P	Pn	11 02 53.5	-0.1
JIJ				S	Sb	11 03 09.1	+0.1
JISG	**Ishigakijimahi**	**1.38**	**71**	P	Pn	11 02 56.5	+0.1
JISG				*e*S	Sn	11 03 13.8	-0.1

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*JMA **20** 11:03:00.1±0.3, 24°N±1°×12°2E±°, h1^{km}, TAIWAN REGION*

*TAP **20** 11:03:01.5, 24°.10N×121°.68E, h9^{km}, ML3.2, C*

ISC 20 11:03:01.4±0.8, **24°.08N**±0°.01×**121°.70E**±0°.02, **h9**^{km}±5^{km}, **n103**, σ**1ˢ.09**/176, **17D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.09**	**267**	⇓*i*P	**Pg**	**11 03 03.8**	**0.0**
	baz=252						
TWD				*i* S	**Sg**	**11 03 05.3**	**-0.1**
	baz=252						
ETL	**Fush Village**	**0.10**	**318**	⇓*i*P	**Pg**	**11 03 04.0**	**0.0**
	baz=318						
ETL				S	**Sg**	**11 03 05.6**	**-0.2**
	baz=318						
NACB	**Ninganchiao**	**0.13**	**314**	⇓*i*P	**Pg**	**11 03 04.3**	**-0.1**
	baz=313						
NACB				*i* S	**Sg**	**11 03 06.1**	**-0.3**
	baz=313						
HWA	**Hwalien**	**0.14**	**218**	*e*P	**Pg**	**11 03 05.2**	**+0.8**
	baz=207						
HWA				S	**Sg**	**11 03 08.0**	**+1.5**
	baz=207						
ETM	**Tongmen**	**0.22**	**238**	*i* P	**Pg**	**11 03 06.1**	**+0.2**
	baz=227						
ETM				S	**Sg**	**11 03 09.2**	**+0.2**
	baz=227						
EHP	**Heping Village**	**0.23**	**10**	*e*P	**Pg**	**11 03 06.2**	**+0.1**
	baz=14						
EHP				*e*S	**Sg**	**11 03 09.6**	**+0.4**
	baz=14						
ETLH	**Xiulin Townshi**	**0.23**	**302**	⇓*i*P	**Pg**	**11 03 06.2**	**0.0**
	baz=300						
ETLH				*i* S	**Sg**	**11 03 09.4**	**+0.1**
	baz=300						
TEYL	**Yanliau Villag**	**0.23**	**203**	P	**Pg**	**11 03 07.0**	**+0.9**
	baz=213						
TEYL				S	**Sg**	**11 03 11.3**	**+2.0**
	baz=213						
ENA	**Nanau**	**0.34**	**7**	⇓*i*P	**Pg**	**11 03 08.3**	**+0.1**
	baz=9.0						
ENA				*i* S	**Sg**	**11 03 13.0**	**+0.2**
	baz=9.0						
ESL	**Shilin**	**0.36**	**222**	P	**Pb**	**11 03 08.7**	**-1.3**
	baz=225						
ESL				*e*S	**Sb**	**11 03 13.2**	**-2.5**
	baz=225						
EWUT	**Wuta**	**0.37**	**12**	P	**Pg**	**11 03 08.8**	**+0.1**
	baz=12						
EWUT				S	**Sg**	**11 03 13.7**	**+0.1**
	baz=12						
WHF	**Hehuan Shan**	**0.40**	**279**	⇓*i*P	**Pb**	**11 03 09.4**	**-1.5**
	baz=276						
WHF				*i* S	**Sb**	**11 03 14.8**	**-2.4**
	baz=276						
TEGC	**Jichi Village**	**0.40**	**201**	*e*P	**Pb**	**11 03 10.8**	**+0.2**
	baz=201						
TEGC				*e*S	**Sb**	**11 03 19.2**	**+2.4**
	baz=201						
FUSS	**Fushou**	**0.44**	**292**	P	**Pb**	**11 03 10.5**	**-1.0**
	baz=289						
FUSS				S	**Sb**	**11 03 16.6**	**-1.7**
	baz=289						
NNSB	**Datong**	**0.45**	**320**	⇓*i*P	**Pb**	**11 03 10.4**	**-1.1**
	baz=320						
NNSB				*i* S	**Sg**	**11 03 16.2**	**+0.2**
	baz=320						
NNSH	**Datong**	**0.45**	**320**	P	**Pg**	**11 03 10.3**	**+0.2**
	baz=319						
NNSH				S	**Sg**	**11 03 16.2**	**+0.1**
	baz=319						
NNS	**Nan Shan**	**0.46**	**320**	⇓*i*P	**Pg**	**11 03 10.6**	**+0.2**
	baz=320						
NNS				*i* S	**Sg**	**11 03 16.8**	**+0.3**
	baz=320						
LATG	**Datong**	**0.47**	**341**	⇓*i*P	**Pg**	**11 03 10.8**	**+0.1**
	baz=341						
LATG				S	**Sg**	**11 03 16.6**	**-0.3**
	baz=341						
CHGB	**Renai**	**0.48**	**267**	⇓*i*P	**Pb**	**11 03 11.1**	**-1.0**
	baz=256						
CHGB				S	**Sb**	**11 03 17.2**	**-2.1**
	baz=256						
EGFH	**Guangfu**	**0.48**	**211**	*e*P	**Pb**	**11 03 11.3**	**-0.7**
	baz=218						
EGFH				*e*S	**Sb**	**11 03 19.2**	**0.0**
	baz=218						
OWD	**Renai**	**0.49**	**255**	*e*P	**Pb**	**11 03 11.3**	**-1.0**
	baz=252						
OWD				*e*S	**Sb**	**11 03 17.4**	**-2.3**
	baz=252						
TWT	**Tachien**	**0.50**	**290**	*e*P	**Pb**	**11 03 11.9**	**-0.7**
	baz=286						
TWT				*e*S	**Sb**	**11 03 18.9**	**-1.1**
	baz=286						
TDCB	**Techi**	**0.52**	**289**	P	**Pb**	**11 03 12.1**	**-0.7**
	baz=287						
TDCB				S	**Sb**	**11 03 18.7**	**-1.7**
	baz=287						
WUSB	**Renai**	**0.54**	**260**	⇓*i*P	**Pb**	**11 03 12.2**	**-0.8**
	baz=257						
WUSB				S	**Sb**	**11 03 19.2**	**-1.7**
	baz=257						
TWC	**Suao**	**0.54**	**15**	P	**Pg**	**11 03 12.3**	**+0.4**
	baz=7.0						
TWC				S	**Sg**	**11 03 19.5**	**+0.4**
	baz=7.0						
NDS	**Dongshan**	**0.55**	**2**	P	**Pg**	**11 03 12.3**	**+0.3**
	baz=2.0						
NDS				S	**Sg**	**11 03 19.6**	**+0.3**
	baz=2.0						
ENTT	**Nioudou**	**0.57**	**348**	⇓*i*P	**Pg**	**11 03 12.7**	**+0.3**
	baz=349						
ENTT				S	**Sg**	**11 03 20.1**	**+0.3**
	baz=349						
VWDT	**VWDT**	**0.60**	**237**	P	**Pb**	**11 03 13.5**	**-0.6**
	baz=228						
VWDT				*e*S	**Sb**	**11 03 21.4**	**-1.3**
	baz=228						
TWE	**Neicheng**	**0.63**	**358**	⇓*i*P	**Pg**	**11 03 14.0**	**+0.3**
	baz=359						
TWE				S	**Sg**	**11 03 22.3**	**+0.3**
	baz=359						
HGSD	**Ruisui**	**0.64**	**203**	*e*P	**Pn**	**11 03 15.1**	**-1.6**
	baz=193						
YHNB	**Yeheng**	**0.65**	**333**	⇓*i*P	**Pb**	**11 03 14.5**	**-0.5**
	baz=333						
YHNB				S	**Sg**	**11 03 22.5**	**-0.1**
	baz=333						
NSK	**Sanguang**	**0.67**	**332**	⇓*i*P	**Pb**	**11 03 14.7**	**-0.5**
	baz=333						
NSK				S	**Sg**	**11 03 22.8**	**-0.2**
	baz=333						
EHY	**Hungye**	**0.67**	**211**	P	**Pb**	**11 03 14.6**	**-0.6**
	baz=217						
EHY				*e*S	**Sb**	**11 03 24.1**	**-0.6**
	baz=217						
FUSB	**Fushanzhiwuyua**	**0.68**	**352**	P	**Pg**	**11 03 14.9**	**+0.3**
	baz=351						
FUSB				*e*S	**Sg**	**11 03 23.7**	**+0.2**
	baz=351						
ILA	**Ilan**	**0.68**	**4**	*e*S	**Sb**	**11 03 24.8**	**-0.1**
	baz=4.0						
WHP	**Taichung City**	**0.71**	**286**	P	**Pb**	**11 03 15.9**	**-0.1**
	baz=284						
WHP				*e*S	**Sb**	**11 03 25.6**	**-0.3**
	baz=284						
NWLT	**Wulai**	**0.71**	**346**	P	**Pb**	**11 03 15.5**	**-0.5**
	baz=333						
NWLT				S	**Sg**	**11 03 24.3**	**-0.2**
	baz=333						
WCS	**Beigang Elemen**	**0.72**	**268**	P	**Pb**	**11 03 15.9**	**-0.2**
	baz=257						
WCS				S	**Sb**	**11 03 25.6**	**-0.4**
	baz=257						
SSLB	**Suanglung**	**0.74**	**247**	⇓*i*P	**Pb**	**11 03 15.8**	**-0.6**
	baz=255						
SSLB				S	**Sb**	**11 03 25.3**	**-1.4**
	baz=255						
SMLT	**Sun Moon Lake**	**0.76**	**255**	⇓*i*P	**Pb**	**11 03 16.2**	**-0.5**
	baz=253						
SMLT				*i* S	**Sb**	**11 03 26.2**	**-1.0**
	baz=253						
NFF	**Wufeng Townshi**	**0.76**	**316**	P	**Pb**	**11 03 16.5**	**-0.3**
	baz=315						
NFF				S	**Sb**	**11 03 26.1**	**-1.1**
	baz=315						
YULB	**Yu-li**	**0.78**	**208**	P	**Pb**	**11 03 16.0**	**-1.1**
	baz=220						
YULB				*e*S	**Sb**	**11 03 26.2**	**-1.6**
	baz=220						
EGS		**0.79**	**16**	*e*P	**Pb**	**11 03 17.6**	**+0.4**
	baz=22						
TYC	**Yuchr**	**0.79**	**257**	*e*P	**Pb**	**11 03 16.4**	**-0.9**
	baz=255						
TYC				*e*S	**Sb**	**11 03 27.0**	**-1.0**
	baz=255						
EYUL	**Yuli**	**0.81**	**205**	*e*P	**Pn**	**11 03 18.4**	**-0.6**
	baz=220						
LIOB	**Emei**	**0.83**	**312**	*e*P	**Pb**	**11 03 18.3**	**+0.2**
	baz=311						
LIOB				*e*S	**Sb**	**11 03 29.6**	**+0.2**
	baz=311						
NSTT	**Nanjuang**	**0.83**	**311**	*e*P	**Pb**	**11 03 17.9**	**-0.2**
	baz=310						
NSTT				*e*S	**Sb**	**11 03 28.6**	**-0.8**
	baz=310						
WHYT	**Xinyi Township**	**0.86**	**244**	P	**Pn**	**11 03 19.1**	**-0.6**
	baz=249						
WHYT				*e*S	**Sb**	**11 03 30.5**	**+0.2**
	baz=249						
TWQ1	**Liyutan**	**0.88**	**287**	P	**Pn**	**11 03 20.0**	**0.0**
	baz=287						
NHDH	**Xindian Distri**	**0.89**	**350**	*e*P	**Pg**	**11 03 18.2**	**-0.3**
	baz=339						
NHDH				*i* S	**Sg**	**11 03 30.4**	**+0.3**
	baz=339						
TIPB	**Shuangxi**	**0.89**	**8**	*e*P	**Pb**	**11 03 18.9**	**-0.2**
	baz=358						
TIPB				*e*S	**Sg**	**11 03 29.6**	**-0.6**
	baz=358						
TWA	**Mucha**	**0.90**	**353**	*e*P	**Pg**	**11 03 18.3**	**-0.4**
	baz=353						
TWA				S	**Sg**	**11 03 30.6**	**+0.2**
	baz=353						
YUS	**Yu-Shan**	**0.90**	**229**	*e*P	**Pb**	**11 03 19.3**	**-0.2**
	baz=228						
YUS				*e*S	**Sb**	**11 03 31.6**	**-0.2**
	baz=228						
NSY	**Sanyi**	**0.92**	**291**	*e*P	**Pb**	**11 03 18.6**	**-0.8**
	baz=291						
WJS	**Zhushan**	**0.92**	**254**	*e*P	**Pn**	**11 03 20.3**	**-0.2**
	baz=252						
WJS				S	**Sn**	**11 03 34.2**	**+0.3**
	baz=252						
TCU	**Taichung**	**0.93**	**274**	*e*P	**Pn**	**11 03 20.6**	**0.0**
	baz=267						
TCU				*e*S	**Sn**	**11 03 35.0**	**+0.9**
	baz=267						
NMLH	**Miaoli**	**0.94**	**299**	*e*P	**Pn**	**11 03 21.9**	**+1.1**
	baz=298						
WNT	**Mingjian**	**0.95**	**258**	*e*P	**Pn**	**11 03 21.4**	**+0.5**
	baz=251						
WNT				*e*S	**Sn**	**11 03 34.5**	**0.0**
	baz=251						
FULB	**Fuli**	**0.96**	**203**	*e*P	**Pn**	**11 03 20.6**	**-0.4**
	baz=221						
FULB				*e*S	**Sn**	**11 03 37.1**	**+2.4**
	baz=221						
SBCB	**Hsinchu**	**0.96**	**318**	*e*P	**Pb**	**11 03 20.3**	**+0.1**
	baz=316						
SBCB				*e*S	**Sn**	**11 03 36.6**	**+1.9**
	baz=316						
TWB1	**Santiao Chiao**	**0.96**	**16**	*e*P	**Pg**	**11 03 19.9**	**+0.1**
	baz=6.0						
TWB1				*e*S	**Sg**	**11 03 32.4**	**+0.1**
	baz=6.0						
ALS	**Alishan**	**1.00**	**235**	P	**Pn**	**11 03 21.2**	**-0.6**
	baz=235						
WDJ	**Dajia District**	**1.00**	**285**	*e*P	**Pn**	**11 03 23.9**	**+2.3**
	baz=293						
WDJ				*e*S	**Sn**	**11 03 37.4**	**+1.6**
	baz=293						
SXI1	**Grass Mountain**	**1.02**	**9**	*e*P	**Pb**	**11 03 21.4**	**+0.2**
	baz=355						
CHKT	**Chengkung**	**1.03**	**197**	*e*P	**Pb**	**11 03 20.6**	**-0.7**
	baz=191						
CHKT				*e*S	**Sn**	**11 03 36.7**	**+0.3**
	baz=191						
EHD	**Haiduan**	**1.03**	**206**	*e*P	**Pn**	**11 03 21.7**	**-0.4**
	baz=217						
EHD				*e*S	**Sn**	**11 03 36.4**	**-0.2**
	baz=217						
TWS1	**Kuangyinshan**	**1.04**	**346**	*e*P	**Pn**	**11 03 22.4**	**+0.2**
	baz=346						
TWS1				*e*S	**Sn**	**11 03 37.1**	**+0.3**
	baz=346						
YM01	**YM01**	**1.06**	**354**	*e*P	**Pb**	**11 03 22.3**	**+0.3**
	baz=2.0						
ELDTW	**Lidau**	**1.09**	**215**	*e*P	**Pn**	**11 03 22.2**	**-0.7**
	baz=207						
NTST	**Danshui**	**1.10**	**348**	*e*P	**Pn**	**11 03 23.6**	**+0.7**
	baz=356						
NTST				*e*S	**Sn**	**11 03 38.8**	**+0.6**
	baz=356						
ANP	**Anpu**	**1.11**	**352**	*e*P	**Pn**	**11 03 23.4**	**+0.3**
	baz=351						
WDLH	**Douliu**	**1.13**	**250**	*e*P	**Pn**	**11 03 24.6**	**+1.2**
	baz=249						
EDH	**Donghe**	**1.16**	**198**	*e*P	**Pg**	**11 03 22.1**	**-1.7**
	baz=188						
WCKO	**Fanlu**	**1.19**	**237**	*e*P	**Pn**	**11 03 25.2**	**+1.0**
	baz=237						
WCKO				*e*S	**Sn**	**11 03 41.4**	**+1.0**
	baz=237						
WRL	**Guolierlin Hig**	**1.22**	**262**	*e*P	**Pn**	**11 03 25.4**	**+0.8**
	baz=260						
WRL				*e*S	**Sn**	**11 03 42.1**	**+0.9**
	baz=260						
STYH	**Taoyuan**	**1.24**	**223**	*e*P	**Pn**	**11 03 25.0**	**+0.1**
	baz=223						
STYH				*e*S	**Sn**	**11 03 42.3**	**+0.5**
	baz=223						
CHN4	**Tsaushan**	**1.25**	**234**	P	**Pn**	**11 03 26.4**	**+1.4**
	baz=221						
CHN4				S	**Sn**	**11 03 44.3**	**+2.4**
	baz=221						
TPUB	**Ta-pu**	**1.25**	**232**	P	**Pn**	**11 03 26.1**	**+1.0**
	baz=220						
TPUB				S	**Sn**	**11 03 44.1**	**+2.1**
	baz=220						
YOJ	**Yonaguni jima**	**1.26**	**72**	P	**Pn**	**11 03 25.4**	**+0.2**
YOJ	**Yonaguni jima**	**1.26**	**72**	*e*P	**Pn**	**11 03 24.6**	**-0.6**
	baz=83						
WTK	**Tuku**	**1.26**	**252**	*e*P	**Pn**	**11 03 24.6**	**-0.6**
	baz=252						
WTP	**Ta-pu**	**1.30**	**230**	P	**Pn**	**11 03 27.0**	**+1.3**
	baz=230						
WTP				*e*S	**Sn**	**11 03 46.9**	**+3.7**
	baz=230						
TWK	**Hsinying**	**1.37**	**234**	P	**Pg**	**11 03 28.3**	**+0.5**
	baz=235						
TWK				S	**Sn**	**11 03 48.6**	**+3.5**
	baz=235						
TWG	**Pinlang**	**1.38**	**205**	*e*P	**Pn**	**11 03 24.9**	**-1.9**
	baz=208						
TWGBT	**Beinan**	**1.38**	**204**	*e*P	**Pn**	**11 03 24.9**	**-1.9**
	baz=208						
CHN1	**Nanshi**	**1.40**	**230**	P	**Pg**	**11 03 28.8**	**+0.6**
	baz=231						
CHN1				S	**Sn**	**11 03 49.0**	**+3.4**
	baz=231						
LDUT	**Ludao**	**1.42**	**188**	*e*P	**Pn**	**11 03 25.1**	**-2.2**
	baz=179						
SGST	**Jiashian**	**1.43**	**226**	*e*P	**Pg**	**11 03 28.5**	**-0.3**
	baz=226						
SGST				*e*S	**Sn**	**11 03 49.7**	**+3.3**
	baz=226						
SLGT	**Liugui**	**1.45**	**222**	*e*P	**Pg**	**11 03 30.1**	**+0.8**
	baz=225						
WSL	**Shuilin Townsh**	**1.46**	**248**	*e*P	**Pg**	**11 03 29.8**	**+0.4**
	baz=246						
WSL				*e*S	**Sg**	**11 03 50.6**	**+2.4**
	baz=246						
SCST	**Cishan**	**1.62**	**223**	*e*P	**Pg**	**11 03 32.8**	**+0.2**
	baz=226						
ECL	**Taimali**	**1.63**	**205**	*e*P	**Pg**	**11 03 32.4**	**-0.3**
	baz=192						
SSD	**Sandimen**	**1.65**	**216**	*e*P	**Pg**	**11 03 32.4**	**-0.7**
	baz=212						
MASBT	**Mashibuluo**	**1.76**	**214**	*e*P	**Pb**	**11 03 32.7**	**-1.2**
	baz=210						
IRIF	**Iriomote-Funau**	**1.87**	**82**	*e*P	**Pn**	**11 03 33.4**	**-0.2**
PHUB	**P'eng-hu**	**2.03**	**254**	*e*P	**Pb**	**11 03 37.5**	**-0.8**
	baz=254						
PHUB				*e*S	**Sb**	**11 04 02.8**	**-0.9**
	baz=254						
PNG	**Penghu**	**2.03**	**256**	*e*P	**Pb**	**11 03 36.9**	**-1.5**
	baz=256						
PNG				*e*S	**Sb**	**11 04 03.2**	**-0.5**
	baz=256						
WDGT	**Dungji**	**2.04**	**247**	*e*P	**Pb**	**11 03 36.7**	**-1.9**
	baz=248						
JKRS	**Kuro-shima**	**2.12**	**85**	P	**Pn**	**11 03 37.3**	**+0.3**
SMST	**Manzhou Townsh**	**2.20**	**201**	*e*P	**Pb**	**11 03 40.5**	**-0.9**
	baz=190						
VWUC	**VWUC**	**2.24**	**294**	*e*P	**Pn**	**11 03 38.5**	**-0.1**
	baz=293						
VWUC				*e*S	**Sn**	**11 04 04.9**	**-1.4**
	baz=293						
JISG	**Ishigakijimahi**	**2.44**	**78**	*e*P	**Pn**	**11 03 41.6**	**+0.3**
JISG				*e*S	**Sn**	**11 04 11.3**	**0.0**
MATB	**Ma-tsu**	**2.60**	**323**	*e*P	**Pn**	**11 03 43.9**	**+0.3**
	baz=321						

TAP 20 11:03:27.4, 24°.10N×121°.67E, h10^{km}, ML2.8, 1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.07**	**258**	P	Pg	11 03 30.0	+0.3
	baz=257						

TWD				S	Sg	11 03 31.5	+0.1
	baz=257						
ETL	**Fush Village**	**0.08**	**324**	⇓iP	Pg	11 03 30.2	+0.3
	baz=322						
ETL				S	Sg	11 03 31.7	+0.1
	baz=322						
NACB	**Ninganchiao**	**0.11**	**318**	P	Pg	11 03 30.5	+0.3
	baz=316						
NACB				S	Sg	11 03 32.3	+0.2
	baz=316						
HWA	**Hwalien**	**0.13**	**208**	eP	Pb	11 03 31.5	-0.5
	baz=207						
ETLH	**Xiulin Townshi**	**0.21**	**303**	P	Pg	11 03 32.4	+0.6
	baz=302						
ETLH				S	Sg	11 03 35.4	+0.6
	baz=302						
ETM	**Tongmen**	**0.21**	**232**	P	Pg	11 03 32.3	+0.4
	baz=228						
ETM				S	Sg	11 03 35.2	+0.4
	baz=228						
TEYL	**Yanliau Villag**	**0.24**	**197**	eP	Pb	11 03 33.2	-0.6
	baz=208						
ENA	**Nanau**	**0.34**	**11**	iP	Pg	11 03 34.5	+0.3
	baz=9.0						
ENA				iS	Sg	11 03 39.1	+0.4
	baz=9.0						
ESL	**Shilin**	**0.36**	**218**	eP	Pg	11 03 35.1	+0.5
	baz=226						
EWUT	**Wuta**	**0.36**	**15**	P	Pg	11 03 34.8	+0.1
	baz=13						
EWUT				S	Sg	11 03 39.6	+0.1
	baz=13						
WHF	**Hehuan Shan**	**0.38**	**278**	eP	Pg	11 03 35.7	+0.6
	baz=277						
WHF				S	Sg	11 03 40.8	+0.7
	baz=277						
FUSS	**Fushou**	**0.42**	**291**	eS	Sb	11 03 42.8	-0.8
	baz=291						
NNSB	**Datong**	**0.42**	**321**	P	Pb	11 03 36.5	-0.6
	baz=320						
NNSB				S	Sg	11 03 42.4	+0.8
	baz=320						
NNSH	**Datong**	**0.42**	**321**	P	Pb	11 03 36.5	-0.6
	baz=320						
NNSH				S	Sg	11 03 42.4	+0.9
	baz=320						
NNS	**Nan Shan**	**0.44**	**322**	P	Pb	11 03 36.8	-0.6
	baz=321						
NNS				S	Sg	11 03 43.0	+1.0
	baz=321						
CHGB	**Renai**	**0.46**	**266**	eS	Sb	11 03 44.1	-0.6
	baz=257						
LATG	**Datong**	**0.46**	**343**	eP	Pb	11 03 37.6	-0.1
	baz=342						
LATG				S	Sg	11 03 43.4	+0.8
	baz=342						
TWT	**Tachien**	**0.48**	**289**	eS	Sb	11 03 45.2	-0.1
	baz=288						
TDCB	**Techi**	**0.50**	**289**	eP	Pb	11 03 37.8	-0.5
	baz=288						
TDCB				eS	Sb	11 03 44.7	-1.0
	baz=288						
WUSB	**Renai**	**0.52**	**259**	eP	Pb	11 03 39.0	+0.3
	baz=258						
WUSB				eS	Sg	11 03 45.4	+0.9
	baz=258						
TWC	**Suao**	**0.54**	**17**	eP	Pb	11 03 38.8	-0.1
	baz=8.0						
TWC				eS	Sg	11 03 45.6	+0.6
	baz=8.0						
NDS	**Dongshan**	**0.54**	**4**	P	Pb	11 03 38.8	-0.2
	baz=2.0						
NDS				S	Sb	11 03 46.0	-0.8
	baz=2.0						
ENTT	**Nioudou**	**0.55**	**350**	P	Pb	11 03 38.9	-0.4
	baz=349						
ENTT				S	Sg	11 03 45.9	+0.4
	baz=349						
TWE	**Neicheng**	**0.62**	**359**	eP	Pb	11 03 41.2	+0.7
	baz=359						
TWE				S	Sg	11 03 48.5	+0.7
	baz=359						
YHNB	**Yeheng**	**0.63**	**335**	P	Pb	11 03 40.5	-0.1
	baz=334						
YHNB				S	Sg	11 03 48.7	+0.6
	baz=334						
NSK	**Sanguang**	**0.65**	**334**	eP	Pb	11 03 40.9	+0.1
	baz=333						
NSK				eS	Sg	11 03 48.9	+0.4
	baz=333						
FUSB	**Fushanzhiwuyua**	**0.67**	**353**	eP	Pb	11 03 41.2	0.0
	baz=352						
FUSB				eS	Sb	11 03 49.9	-0.6
	baz=352						
NWLT	**Wulai**	**0.70**	**347**	eP	Pb	11 03 41.8	0.0
	baz=352						
NWLT				eS	Sg	11 03 50.1	0.0
	baz=352						
LIOB	**Emei**	**0.81**	**313**	eS	Sb	11 03 55.5	+0.8
	baz=312						

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*IDC **20** 11:10:17.5±1.9, 51°.70N×82°.95E, h0^{km}, mbtmp2.7/1, ML2.5/1, Error ellipse: s-maj=50.6km s-min=13.1km az=108.0*

*NNC **20** 11:10:29.1±2.8, 50°.95N×82°.32E, h0^{km}, mb2.8, mpv2.4, Error ellipse: s-maj=32.9km s-min=13.1km az=27.0, Suspected Mining explosion.*

ISC 20 11:10:17.7±1.4, **51°.7N**±0°.1×**82°.8E**±0°.1, **h0^{km}, n6, σ0ˢ30**/7, **3C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**2.52**	**28**	I	I	11 26 20.0	
	0.1nm,0.9s,baz=207,slow=324,SNR=7.0						
ZALV	**Zalesovo Beam**	**2.52**	**28**	Pg	**Pb**	**11 11 03.7**	**-0.1**
	0.6nm,0.3s,baz=212,slow=15,SNR=9.0						
ZALV				Lg	Lg	11 11 37.4	
	0.3nm,0.3s,baz=227,slow=26,SNR=5.5						
KURK	**Kurchatov**	**2.84**	**250**	⇑Pn	**Pb**	**11 11 09.4**	**+0.2**
	1.9nm,1.0s						
KURK				⇓Sn	**Sn**	**11 11 39.2**	**+0.2**
	7.7nm,0.9s						
KURBB	**Kurchatov Arra**	**2.93**	**249**	⇑Pn	**Pb**	**11 11 10.3**	**-0.5**
	1.7nm,1.0s						
KURBB				⇓Sn	**Sn**	**11 11 41.4**	**+0.1**
	14nm,0.8s						
MK31	**Makanchi Array**	**4.97**	**184**	⇑Pn	**Pn**	**11 11 33.4**	**-0.2**
	0.9nm,0.6s,baz=9.3,slow=11,SNR=12						
MK31				⇓Lg	Lg	11 12 43.2	
	0.9nm,0.6s,baz=12,slow=27,SNR=4.9						
MKAR	**Makanchi Array**	**4.97**	**184**	Pn	**Pn**	**11 11 33.8**	**+0.2**
	0.2nm,0.3s,baz=7.4,slow=12,SNR=13						
MKAR				Lg	Lg	11 12 48.4	
	0.3nm,0.3s,baz=11,slow=26,SNR=12						
	1.0nm,0.7s						

JMA 20 11:31:18.9±0.1, **32°.4N**±0°.2×**131°.8E**±0°.3, **h16^{km}, MV1.0**/25, **HYUGANADA REGION, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHHC	**Hyugahichiya**	**0.11**	**272**	P	Pg	11 31 22.4	0.0
JHHC				S	Sg	11 31 24.6	-0.1
JTSN	**Tsuno**	**0.29**	**229**	P	Pg	11 31 25.1	-0.1
JTSN				eS	Sg	11 31 29.3	-0.1
JKIT	**Kitakata**	**0.32**	**305**	P	Pg	11 31 25.8	+0.2
JKIT				eS	Sg	11 31 30.5	+0.2
JSKE	**Saikikamae**	**0.38**	**18**	P	Pg	11 31 26.5	-0.1
JSKE				S	Sg	11 31 31.8	-0.2
JUS	**Usuki**	**0.62**	**359**	eS	Sg	11 31 39.2	-0.4
JTO	**Tosashimizu**	**0.97**	**64**	eS	Sb	11 31 49.2	-0.8

ROM 20 11:32:20.0±0.2, **43°.324N**±0°.009×**13°.20E**±0°.02, **h0^{km}, ML1.3**/28, **1C, Error ellipse: s-maj=1.3km s-min=0.9km az=253.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CING	**Cingoli**	**0.05**	**355**	P	Pg	11 32 21.4	+0.4
CING				AML	AML		
	comp=N,1850μm,1.0s						
CING				AML	AML		
	comp=N,1850μm,1.0s						
CING				AML	AML		
	comp=E,1575μm,0.1s						
EL6	**Elcito**	**0.07**	**274**	⇑P	Pg	11 32 22.6	+1.2
EL6				AML	AML		
	comp=E,788μm,0.9s						
EL6				AML	AML		
	comp=N,827μm,0.4s						
EL6				AML	AML		
	comp=N,828μm,0.4s						
MDAR	**Monte D'Aria**	**0.14**	**198**	P	Pg	11 32 23.8	+1.2
MMUR	**Monte Murano**	**0.19**	**308**	P	Pg	11 32 24.7	+1.1
SNTG	**Esanatoglia**	**0.20**	**250**	P	Pg	11 32 25.1	+1.2
SNTG				AML	AML		
	comp=N,155μm,0.1s						
SNTG				AML	AML		
	comp=E,90μm,0.2s						
T1220	**Camerino, Fraz**	**0.23**	**201**	P	Pg	11 32 25.5	+1.2
T1220				AML	AML		
	comp=E,446μm,0.2s						
T1220				AML	AML		
	comp=N,400μm,0.3s						
T1220				AML	AML		
	comp=E,446μm,1.8s						
ARVD	**Arcevia**	**0.26**	**313**	P	Pg	11 32 25.6	+0.7
ARVD				AML	AML		
	comp=E,63μm,0.6s						
ARVD				AML	AML		
	comp=N,46μm,0.3s						
GUMA	**Gualdo di Mace**	**0.28**	**159**	P	Pb	11 32 26.7	-1.1
GUMA				AML	AML		
	comp=N,94μm,0.3s						
GUMA				AML	AML		
	comp=E,123μm,0.7s						
FDMO	**Fiordimonte**	**0.30**	**196**	P	Pg	11 32 26.6	+0.9
FDMO				AML	AML		
	comp=E,65μm,0.1s						
FDMO				AML	AML		
	comp=N,49μm,1.1s						
FDMO				AML	AML		
	comp=N,49μm,1.1s						
FDMO				AML	AML		
	comp=N,49μm,0.9s						
FDMO				AML	AML		
	comp=N,49μm,0.9s						
PP3	**Marolino**	**0.30**	**80**	P	Pb	11 32 27.6	-0.6
T1219	**Muccia, Frazio**	**0.30**	**208**	P	Pg	11 32 26.9	+1.1
T1219				AML	AML		
	comp=E,95μm,0.9s						
T1219				AML	AML		
	comp=N,100μm,0.4s						
T1256	**Bolognola (MC)**	**0.32**	**177**	P	Pg	11 32 27.0	+1.0
T1256				AML	AML		
	comp=E,85μm,1.1s						
T1256				AML	AML		
	comp=N,84μm,0.1s						
T1256				AML	AML		
	comp=E,85μm,0.9s						
FOSV	**Fossato di Vic**	**0.32**	**265**	P	Pg	11 32 27.2	+1.1
FOSV				AML	AML		
	comp=E,61μm,0.2s						
FOSV				AML	AML		
	comp=N,110μm,0.3s						
FOSV				AML	AML		
	comp=N,110μm,0.3s						
AOI	**Ancona**	**0.37**	**52**	P	Pg	11 32 27.8	+0.8
MMO1	**Montemonaco**	**0.43**	**168**	P	Pg	11 32 29.0	+0.7
MPAG	**Monte Paganucc**	**0.44**	**314**	P	Pg	11 32 29.1	+0.6
MPAG				AML	AML		
	comp=N,23μm,0.1s						
MPAG				AML	AML		
	comp=E,28μm,0.3s						
MPAG				AML	AML		
	comp=E,28μm,0.3s						
T1245	**Castelsantange**	**0.47**	**181**	P	Pg	11 32 29.6	+0.8
T1245				AML	AML		
	comp=N,85μm,0.2s						
T1245				AML	AML		
	comp=E,94μm,0.2s						
FSSB	**Fossombrone**	**0.48**	**320**	P	Pg	11 32 30.0	+0.9
FSSB				AML	AML		
	comp=E,77μm,0.7s						
FSSB				AML	AML		
	comp=N,94μm,1.2s						
FSSB				AML	AML		
	comp=E,77μm,1.3s						
T1241	**Roccafluvione,**	**0.50**	**160**	AML	AML		
	comp=N,33μm,0.2s						
T1241				AML	AML		
	comp=E,33μm,0.4s						
T1241				AML	AML		
	comp=N,33μm,0.2s						
T1241				AML	AML		
	comp=E,33μm,0.4s						
MURB	**Monte Urbino**	**0.50**	**263**	P	Pb	11 32 30.7	-0.9
MURB				AML	AML		
	comp=E,152μm,0.3s						
MURB				AML	AML		
	comp=N,166μm,0.2s						
PIEI	**Pieia**	**0.53**	**294**	P	Pg	11 32 30.8	+0.7
PIEI				AML	AML		
	comp=N,36μm,1.0s						
PIEI				AML	AML		
	comp=E,43μm,1.4s						
T1214	**Arquata del Tr**	**0.56**	**179**	P	Pg	11 32 31.3	+0.6
ATVO	**AVT- Monte Val**	**0.58**	**276**	P	Pg	11 32 31.6	+0.5
ATVO				AML	AML		
	comp=N,25μm,0.2s						
ATVO				AML	AML		
	comp=E,38μm,1.2s						
T1212	**Cascia, Frazio**	**0.58**	**191**	P	Pg	11 32 31.8	+0.6

ROM 20 11:32:55.4±0.0, **43°.006N**±0°.003×**13°.063E**±0°.004, **h10^{km}, ML1.5**/9, **1D, Error ellipse: s-maj=0.4km s-min=0.2km az=45.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDMO	**Fiordimonte**	**0.04**	**31**	P	Pg	11 32 57.5	+0.2
FDMO				S	Sg	11 32 58.7	0.0
FDMO				AML	AML		
	comp=E,908μm,0.1s						
FDMO				AML	AML		
	comp=N,955μm,0.2s						
T1219	**Muccia, Frazio**	**0.06**	**321**	P	Pg	11 32 57.9	+0.3
T1219				S	Sg	11 32 59.4	+0.2
T1219				AML	AML		
	comp=E,493μm,0.8s						
T1219				AML	AML		
	comp=N,620μm,0.1s						
T1219				AML	AML		
	comp=E,493μm,1.2s						
T1220	**Camerino, Fraz**	**0.11**	**11**	P	Pg	11 32 58.5	+0.4
T1220				S	Sg	11 33 00.7	+0.7
T1220				AML	AML		
	comp=E,728μm,0.2s						
T1220				AML	AML		
	comp=N,502μm,0.8s						
T1220				AML	AML		
	comp=N,502μm,1.2s						
CESI	**CESI - Serrava**	**0.12**	**270**	P	Pg	11 32 58.8	+0.5
CESI				S	Sg	11 33 01.1	+0.8
CESI				AML	AML		
	comp=N,268μm,0.2s						
CESI				AML	AML		
	comp=E,162μm,0.1s						
T1216	**Preci, Frazion**	**0.12**	**196**	⇓P	Pg	11 32 58.7	+0.4
T1216				AML	AML		
	comp=E,178μm,1.4s						
T1216				AML	AML		
	comp=E,178μm,0.6s						
T1216				AML	AML		
	comp=N,256μm,0.2s						
T1256	**Bolognola (MC)**	**0.12**	**90**	P	Pg	11 32 58.8	+0.4
T1256				S	Sg	11 33 01.1	+0.7
T1256				AML	AML		
	comp=E,364μm,0.2s						
T1256				AML	AML		
	comp=N,809μm,0.2s						
T1256				AML	AML		
	comp=N,810μm,0.2s						
MC2	**Monte Cornacci**	**0.13**	**135**	P	Pg	11 32 59.0	+0.5
MC2				S	Sg	11 33 01.7	+0.8
T1245	**Castelsantange**	**0.18**	**148**	P	Pg	11 32 59.8	+0.6
T1245				S	Sg	11 33 02.8	+0.9
T1245				AML	AML		
	comp=E,116μm,0.5s						
T1245				AML	AML		
	comp=N,143μm,0.3s						
T1245				AML	AML		
	comp=E,116μm,1.5s						
GUMA	**Gualdo di Mace**	**0.21**	**74**	P	Pg	11 33 00.6	+0.8
GUMA				S	Sg	11 33 04.5	+1.8
GUMA				AML	AML		
	comp=N,282μm,0.3s						
GUMA				AML	AML		
	comp=E,311μm,0.2s						
MMO1	**Montemonaco**	**0.22**	**119**	P	Pg	11 33 00.4	+0.4
MMO1				S	Sg	11 33 04.2	+1.1
T1212	**Cascia, Frazio**	**0.26**	**183**	P	Pg	11 33 01.0	+0.5
T1212				S	Sb	11 33 05.4	-1.2
SNTG	**Esanatoglia**	**0.26**	**340**	P	Pb	11 33 01.5	-0.8
SNTG				S	Sb	11 33 05.8	-1.2
T1214	**Arquata del Tr**	**0.27**	**156**	P	Pg	11 33 00.6	-0.3
ASSB	**Assisi San Ben**	**0.30**	**277**	P	Pg	11 33 01.8	+0.4
ASSB				S	Sg	11 33 06.6	+1.2
ASSB				AML	AML		
	comp=E,108μm,0.1s						
ASSB				AML	AML		
	comp=N,132μm,0.4s						
EL6	**Elcito**	**0.32**	**5**	P	Pg	11 33 02.4	+0.5
EL6				S	Sb	11 33 07.9	-0.8
ATCC	**AVT- Casa Cast**	**0.36**	**300**	P	Pg	11 33 02.9	+0.4
ATCC				S	Sb	11 33 08.9	-0.7
FOSV	**Fossato di Vic**	**0.36**	**323**	S	Sb	11 33 09.2	-0.6
CING	**Cingoli**	**0.38**	**15**	P	Pg	11 33 03.1	+0.2
MOMA	**Monte Martano**	**0.41**	**241**	P	Pb	11 33 04.6	-0.3
MOMA				S	Sb	11 33 10.7	-0.5
MOMA				AML	AML		
	comp=E,77μm,0.2s						
MOMA				AML	AML		
	comp=N,55μm,0.7s						
TERO	**Teramo**	**0.55**	**134**	P	Pg	11 33 06.2	+0.1
TERO				S	Sb	11 33 14.8	-0.4

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*WEL **20** 11:47:58.7±0.3, 40°S±2°×17°5E±°, h5^{km}±4^{km}, M3.7/49, ML4.0/49, MLv3.7/49, Error ellipse: s-maj=0.0km s-min=0.0km az=78.5, confirmed*

*NOU **20** 11:47:59.4, 40°.11S×174°.56E, h12^{km}, MLv4.0/13, Cook Strait, New Zealand*

ISC 20 11:47:58.6±1.2, **40°.14S**±0°.02×**174°.58E**±0°.02, **h6^{km}**±12^{km}, **n152, σ0ˢ84**/159, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WAZ	**Wanganui**	**0.49**	**39**	P	**Pg**	**11 48 08.7**	**+0.6**
WAZ				S	**Sg**	**11 48 15.5**	**+1.0**
LREZ	**Lake Rotokare**	**0.69**	**349**	P	**Pb**	**11 48 13.0**	**+0.1**
LREZ				S	**Sb**	**11 48 24.1**	**+1.3**
KIW	**Kapiti Island**	**0.77**	**161**	P	**Pg**	**11 48 13.0**	**-0.2**
KIW				S	**Sg**	**11 48 22.5**	**-0.7**
OGWZ	**Otaki Gorge**	**0.81**	**146**	P	**Pg**	**11 48 14.3**	**+0.1**
OGWZ				S	**Sg**	**11 48 24.5**	**-0.3**
DUWZ	**D'Urville Isla**	**0.83**	**217**	P	**Pg**	**11 48 14.2**	**-0.3**
PREZ	**Palmer Road**	**0.86**	**338**	P	**Pb**	**11 48 16.1**	**+0.2**
NMEZ	**Namu Road**	**0.90**	**323**	P	**Pb**	**11 48 16.7**	**+0.1**
NMEZ				S	**Sb**	**11 48 29.5**	**+0.6**
MRZ	**Mangatainoka R**	**0.93**	**125**	P	**Pg**	**11 48 16.5**	**+0.2**
NEZ	**North Egmont**	**0.94**	**337**	P	**Pb**	**11 48 17.3**	**-0.1**
POWZ	**Post Office Ro**	**0.95**	**106**	P	**Pg**	**11 48 16.8**	**+0.1**
KHEZ	**Kahui Hut**	**0.95**	**333**	P	**Pg**	**11 48 17.3**	**+0.6**
KHEZ	**Kahui Hut**	**0.95**	**333**	P	**Pg**	**11 48 17.4**	**+0.6**
KHEZ				S	**Sn**	**11 48 31.5**	**-0.9**
DREZ	**Durham Road**	**0.99**	**343**	P	**Pg**	**11 48 18.0**	**+0.5**
DREZ				S	**Sb**	**11 48 32.0**	**+0.6**
MTVZ	**Mangateitei**	**1.02**	**43**	P	**Pg**	**11 48 17.4**	**-0.8**
VRZ	**Vera Road**	**1.02**	**8**	P	**Pg**	**11 48 18.1**	**0.0**
VRZ				S	**Sb**	**11 48 32.9**	**+0.6**
NBEZ	**Newall Road No**	**1.03**	**328**	P	**Pg**	**11 48 18.6**	**+0.4**
PKVZ	**Pokaka**	**1.03**	**35**	P	**Pg**	**11 48 17.3**	**-1.1**
CAW	**Cannon Point**	**1.04**	**159**	P	**Pg**	**11 48 18.2**	**-0.2**
HOWZ	**Holdsworth Sta**	**1.04**	**137**	P	**Pg**	**11 48 18.6**	**+0.1**
PKE	**Pukeiti**	**1.05**	**334**	P	**Pg**	**11 48 19.1**	**+0.4**
TSZ	**Takapari Road**	**1.06**	**86**	P	**Pg**	**11 48 18.8**	**-0.2**
MHEZ	**Mangahewa**	**1.08**	**349**	P	**Pg**	**11 48 19.3**	**+0.1**
TCW	**Tory Channel**	**1.09**	**192**	P	**Pg**	**11 48 18.4**	**-1.2**
TRVZ	**Turoa**	**1.12**	**42**	P	**Pg**	**11 48 18.8**	**-1.3**
WNVZ	**Wahianoa**	**1.13**	**44**	P	**Pg**	**11 48 19.0**	**-1.2**
PRWZ	**Pori Road**	**1.14**	**112**	P	**Pg**	**11 48 20.9**	**+0.4**
DRZ	**Dome Shelter**	**1.15**	**42**	P	**Pg**	**11 48 19.8**	**-0.9**
WEL	**Wellington**	**1.15**	**173**	P	**Pb**	**11 48 20.3**	**-0.6**
WHVZ	**Whangaehu Hut**	**1.16**	**43**	P	**Pg**	**11 48 19.5**	**-1.2**
FWVZ	**Far West T-bar**	**1.16**	**41**	P	**Pg**	**11 48 19.5**	**-1.3**
MOVZ	**Moawhango**	**1.16**	**51**	P	**Pg**	**11 48 19.5**	**-1.4**
SNZO	**South Karori**	**1.18**	**175**	P	**Pb**	**11 48 20.8**	**-0.5**
TIWZ	**Tintock**	**1.18**	**123**	P	**Pb**	**11 48 21.7**	**+0.3**
TUVZ	**Tukino**	**1.20**	**44**	P	**Pb**	**11 48 20.4**	**-1.4**
DVHZ	**Dannevirke**	**1.23**	**98**	P	**Pb**	**11 48 22.3**	**+0.2**
MTW	**Mount Morrison**	**1.24**	**146**	P	**Pn**	**11 48 22.4**	**0.0**
NGZ	**Ngauruhoe**	**1.25**	**40**	P	**Pb**	**11 48 20.9**	**-1.7**
SNVZ	**South Ngauruho**	**1.26**	**41**	P	**Pn**	**11 48 21.2**	**-1.6**
TWVZ	**Taurewa**	**1.26**	**32**	P	**Pn**	**11 48 20.9**	**-1.9**
PNHZ	**Pukenui**	**1.27**	**80**	P	**Pn**	**11 48 22.3**	**-0.6**
NNVZ	**North Ngauruho**	**1.29**	**39**	P	**Pn**	**11 48 21.6**	**-1.7**
OTVZ	**Oturere**	**1.29**	**41**	P	**Pn**	**11 48 21.9**	**-1.3**
WTVZ	**West Tongariro**	**1.29**	**38**	P	**Pn**	**11 48 21.5**	**-1.7**
BHHZ	**Black Hill Sta**	**1.31**	**61**	P	**Pn**	**11 48 22.1**	**-1.4**
KRVZ	**Karewarewa**	**1.33**	**39**	P	**Pn**	**11 48 22.5**	**-1.2**
ETVZ	**East Tongariro**	**1.33**	**42**	P	**Pn**	**11 48 22.4**	**-1.3**
NTVZ	**North Tongarir**	**1.34**	**40**	P	**Pn**	**11 48 22.5**	**-1.4**
TMVZ	**Te Maari**	**1.34**	**41**	P	**Pn**	**11 48 22.5**	**-1.4**
TUWZ	**Tuamarina**	**1.38**	**200**	P	**Pn**	**11 48 23.3**	**-1.0**
BFZ	**Birch Farm**	**1.39**	**114**	P	**Pn**	**11 48 24.5**	**0.0**
BFZ	**Birch Farm**	**1.39**	**114**	P	**Pn**	**11 48 24.4**	**0.0**
TMWZ	**Te Maipa**	**1.39**	**134**	P	**Pn**	**11 48 24.7**	**+0.2**
PAWZ	**Paruwai Farm**	**1.40**	**153**	P	**Pn**	**11 48 24.8**	**+0.2**
NNZ	**Nelson**	**1.41**	**220**	P	**Pn**	**11 48 24.2**	**-0.5**
WPHZ	**Waipukurau**	**1.43**	**88**	P	**Pg**	**11 48 26.2**	**+0.2**
KATZ	**Kakaramea**	**1.45**	**37**	P	**Pn**	**11 48 24.7**	**-0.7**
CPWZ	**Castlepoint**	**1.46**	**122**	P	**Pb**	**11 48 26.7**	**+0.6**
TRWZ	**Traveller**	**1.52**	**147**	P	**Pn**	**11 48 26.9**	**+0.6**
PLWZ	**Palliser**	**1.52**	**160**	P	**Pn**	**11 48 26.3**	**0.0**
TKNZ	**Takaka Hill**	**1.52**	**233**	P	**Pn**	**11 48 26.2**	**-0.1**
RITZ	**Rihia Road**	**1.52**	**41**	P	**Pn**	**11 48 26.2**	**-0.2**
RATZ	**Rangitukua**	**1.57**	**36**	P	**Pn**	**11 48 26.8**	**-0.3**
PRHZ	**Porangahau**	**1.58**	**95**	P	**Pb**	**11 48 28.8**	**+0.6**
KWHZ	**Kaweka Forest**	**1.59**	**64**	P	**Pn**	**11 48 27.7**	**+0.4**
CMWZ	**Cape Campbell**	**1.63**	**190**	P	**Pb**	**11 48 29.8**	**+0.7**
HIZ	**Hauiti**	**1.64**	**8**	P	**Pn**	**11 48 27.8**	**-0.1**
HIZ	**Hauiti**	**1.64**	**8**	P	**Pn**	**11 48 27.7**	**-0.2**
BSWZ	**Blackbirch Sta**	**1.66**	**198**	P	**Pn**	**11 48 28.3**	**+0.1**
WATZ	**Wairara**	**1.69**	**32**	P	**Pn**	**11 48 28.2**	**-0.4**
QRZ	**Quartz Range**	**1.71**	**246**	P	**Pn**	**11 48 28.5**	**-0.3**
QRZ	**Quartz Range**	**1.71**	**246**	P	**Pn**	**11 48 28.3**	**-0.6**
PXZ	**Pawanui**	**1.76**	**87**	P	**Pb**	**11 48 31.0**	**-0.2**
BKZ	**Black Stump Fm**	**1.77**	**57**	P	**Pn**	**11 48 30.6**	**+0.8**
BKZ	**Black Stump Fm**	**1.77**	**57**	P	**Pn**	**11 48 29.5**	**-0.3**
MCHZ	**McNeill Hill**	**1.77**	**68**	P	**Pg**	**11 48 32.5**	**-0.1**
KAHZ	**Kahuranaki**	**1.80**	**80**	P	**Pn**	**11 48 30.8**	**+0.6**
WHTZ	**Whakaora**	**1.82**	**36**	P	**Pg**	**11 48 33.4**	**0.0**
MRNZ	**Matariki Terra**	**1.87**	**227**	P	**Pn**	**11 48 31.5**	**+0.4**
KUTZ	**Kaahu Road**	**1.91**	**31**	P	**Pn**	**11 48 31.7**	**0.0**
MRHZ	**Matea Rd**	**1.93**	**48**	P	**Pn**	**11 48 32.3**	**+0.3**
TLZ	**Tolley Road**	**1.96**	**23**	P	**Pn**	**11 48 31.5**	**-0.8**
CKHZ	**Cape Kidnapper**	**1.98**	**77**	P	**Pg**	**11 48 36.7**	**+0.1**
NMHZ	**Naumai**	**2.01**	**60**	P	**Pb**	**11 48 34.5**	**-1.1**
WPRZ	**Whakapapatarin**	**2.03**	**38**	P	**Pb**	**11 48 34.8**	**-1.1**
THZ	**Tophouse**	**2.06**	**217**	P	**Pn**	**11 48 34.5**	**+0.7**
ARHZ	**Aropaoanui**	**2.06**	**66**	P	**Pb**	**11 48 37.4**	**+1.1**
ALRZ	**Allen Road**	**2.09**	**42**	P	**Pb**	**11 48 35.9**	**-0.9**
GRRZ	**Galatos Road**	**2.15**	**34**	P	**Pb**	**11 48 37.4**	**-0.4**
PRRZ	**Plateau Road**	**2.16**	**41**	P	**Pb**	**11 48 37.3**	**-0.7**
MTHZ	**Maungataniwha**	**2.17**	**54**	P	**Pn**	**11 48 35.5**	**+0.2**
HRRZ	**Handcock Road**	**2.19**	**38**	P	**Pb**	**11 48 38.8**	**+0.2**
HSRZ	**Hossack Road**	**2.24**	**36**	P	**Pb**	**11 48 39.4**	**0.0**
RAHZ	**Arahi**	**2.29**	**59**	P	**Pb**	**11 48 38.8**	**-1.5**
WHHZ	**Waihua**	**2.31**	**64**	P	**Pg**	**11 48 43.2**	**+0.4**
UTU	**Utuhina**	**2.33**	**33**	P	**Pb**	**11 48 41.4**	**+0.5**
HLRZ	**Highlands Stat**	**2.33**	**37**	P	**Pb**	**11 48 40.9**	**-0.2**
RRRZ	**Republican Roa**	**2.34**	**41**	P	**Pb**	**11 48 39.8**	**-1.4**
RTZ	**Ruatahuna**	**2.41**	**52**	P	**Pn**	**11 48 39.7**	**+1.2**
KHZ	**Kahutara**	**2.41**	**199**	P	**Pn**	**11 48 39.0**	**+0.5**
OMRZ	**Omania**	**2.46**	**35**	P	**Pb**	**11 48 41.7**	**-1.5**
TOZ	**Tahuroa Road**	**2.51**	**17**	P	**Pn**	**11 48 39.1**	**-0.8**
SNGZ	**Shannon Statio**	**2.53**	**59**	P	**Pb**	**11 48 44.1**	**-0.3**
EDRZ	**Edgecumbe**	**2.63**	**40**	P	**Pb**	**11 48 47.3**	**+1.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KNZ	Kokohu	2.64	66	P	Pn	11 48 43.0	+1.4
DSZ	Denniston Nort	2.64	232	P	Pn	11 48 41.6	-0.1
MARZ	Manawahe	2.70	38	P	Pn	11 48 44.9	+2.3
URZ	Urewera	2.72	47	P	Pn	11 48 42.2	-0.6
URZ	Urewera	2.72	47	P	Pn	11 48 42.4	-0.4
TGRZ	Tauranga	2.74	29	P	Pb	11 48 46.6	-1.3
RAGZ	Rawiri	2.75	54	P	Pb	11 48 48.7	+0.6
MHGZ	Mahia Peninsul	2.75	70	P	Pn	11 48 44.0	+0.7
RIGZ	Rimuhau	2.85	61	P	Pn	11 48 45.4	+0.8
MWZ	Matawai	2.92	53	P	Pn	11 48 45.9	+0.4
TKGZ	Te Karaka	3.05	57	P	Pn	11 48 47.6	+0.2
GVZ	Greta Valley S	3.05	202	P	Pn	11 48 47.1	-0.3
AWAZ	Awhitu Peninsu	3.07	1	P	Pn	11 48 47.7	+0.1
LTZ	Lake Taylor	3.16	213	P	Pn	11 48 49.1	+0.2
ETAZ	East Tamaki Re	3.19	5	P	Pn	11 48 49.4	+0.2
WTAZ	Waiatarua	3.20	360	P	Pn	11 48 49.8	+0.4
RUGZ	Raukumara Rang	3.25	49	P	Pn	11 48 50.1	0.0
EPAZ	Eden Park BICE	3.26	2	P	Pn	11 48 50.8	+0.6
HBAZ	Herne Bay Bore	3.29	2	P	Pn	11 48 50.2	-0.4
TWGZ	Tauwhareparae	3.29	55	P	Pn	11 48 51.0	+0.3
AMCZ	Amberley	3.36	205	P	Pb	11 48 56.7	-1.8
RVAZ	Riverhead Bore	3.36	0	P	Pn	11 48 51.7	+0.1
WIAZ	Waiheke Island	3.37	8	P	Pn	11 48 51.6	-0.1
MBAZ	Motutapu North	3.37	4	P	Pn	11 48 51.7	-0.1
HAZ	Te Kaha	3.45	47	P	Pn	11 48 52.3	-0.5
INZ	Inchbonnie	3.50	221	P	Pn	11 48 53.9	+0.4
KUZ	Kuaotunu	3.50	15	P	Pn	11 48 52.4	-1.2
KUZ	Kuaotunu	3.50	15	P	Pn	11 48 52.4	-1.2
PUZ	Puketiti	3.53	55	P	Pn	11 48 53.4	-0.5
PKGZ	Pakihiroa	3.53	52	P	Pn	11 48 53.8	-0.2
OXZ	Oxford	3.71	210	P	Pn	11 48 55.1	-1.3
WMGZ	Waiomatatini S	3.78	53	P	Pn	11 48 56.6	-0.7
MQZ	McQueen's Vall	3.84	201	P	Pn	11 48 56.9	-1.3
MXZ	Matakaoa Point	3.88	50	P	Pn	11 48 59.1	+0.3
MHCZ	Mount Hutt	4.07	213	P	Pn	11 49 02.4	+1.0
WVZ	Waitaha Valley	4.11	223	P	Pn	11 49 02.9	+1.0
WCZ	Waipu Caves	4.20	357	P	Pn	11 49 03.0	-0.1
RPZ	Rata Peaks	4.44	215	P	Pn	11 49 07.3	+0.9
RPZ	Rata Peaks	4.44	215	P	Pn	11 49 11.3	+4.9
GCSZ	Gaunt Creek Bo	4.49	224	P	Pn	11 49 07.7	+0.5
FOZ	Fox Glacier	4.91	225	P	Pn	11 49 12.8	-0.1
OUZ	Omahuta	4.97	351	P	Pn	11 49 13.4	-0.3
OUZ	Omahuta	4.97	351	P	Pn	11 49 13.8	+0.1
TMZ	Timaru	5.00	211	P	Pn	11 49 13.6	-0.6
ODZ	Otahua Downs	5.70	209	P	Pn	11 49 24.2	+0.5
ODZ	Otahua Downs	5.70	209	P	Pn	11 49 22.8	-0.9
JCZ	Jackson Bay	5.83	226	P	Pn	11 49 25.4	-0.2
JCZ	Jackson Bay	5.83	226	P	Pn	11 49 25.3	-0.3
WKZ	Wanaka	6.23	219	P	Pn	11 49 34.2	+3.1

ROM 20 11:56:01.6±0.1**, 42°.975N**±0°.003×**13°.134E**±0°.004**,**
h9^{km}, ML1.2/9**, Error ellipse: s-maj=0.3km s-min=0.2km**
az=71.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FDMO	Fiordimonte	0.07	331	P	Pg	11 56 03.9	+0.2
FDMO				S	Sg	11 56 05.3	+0.1
FDMO				AML	AML		
	comp=E,192μm,0.3s						
FDMO				AML	AML		
	comp=N,311μm,0.1s						
FDMO				AML	AML		
	comp=N,312μm,0.1s						
MC2	Monte Cornacci	0.07	146	P	Pg	11 56 04.1	+0.1
MC2				S	Sg	11 56 05.7	+0.1
T1256	Bolognola (MC)	0.07	65	P	Pg	11 56 04.1	+0.2
T1256				S	Sg	11 56 05.8	+0.3
T1256				AML	AML		
	comp=E,259μm,0.8s						
T1256				AML	AML		
	comp=N,345μm,0.8s						
T1256				AML	AML		
	comp=N,345μm,1.2s						
T1256				AML	AML		
	comp=E,259μm,1.2s						
T1219	Muccia, Frazio	0.12	311	P	Pg	11 56 04.8	+0.4
T1219				S	Sg	11 56 07.1	+0.6
T1219				AML	AML		
	comp=E,146μm,0.1s						
T1219				AML	AML		
	comp=N,192μm,0.3s						
T1219				AML	AML		
	comp=E,145μm,0.1s						
T1219				AML	AML		
	comp=N,192μm,0.3s						
T1245	Castelsantange	0.12	161	P	Pg	11 56 05.0	+0.4
T1245				S	Sg	11 56 07.5	+0.8
T1245				AML	AML		
	comp=E,832μm,0.6s						
T1245				AML	AML		
	comp=N,934μm,0.1s						
T1245				AML	AML		
	comp=E,736μm,0.6s						
T1245				AML	AML		
	comp=N,972μm,0.1s						
T1245				AML	AML		
	comp=E,832μm,1.4s						
T1245				AML	AML		
	comp=E,736μm,1.4s						
T1245				AML	AML		
	comp=N,972μm,1.9s						
T1245				AML	AML		
	comp=N,934μm,1.9s						
T1220	Camerino, Fraz	0.14	346	P	Pg	11 56 05.4	+0.7
T1220				S	Sg	11 56 08.0	+1.2
MMO1	Montemonaco	0.16	118	P	Pg	11 56 05.6	+0.5
MMO1				S	Sg	11 56 08.6	+1.1
CESI	CESI - Serrava	0.17	280	P	Pg	11 56 06.0	+0.7
CESI				S	Sg	11 56 09.0	+1.2
CESI				AML	AML		
	comp=E,258μm,0.4s						
CESI				AML	AML		
	comp=N,328μm,0.2s						
T1214	Arquata del Tr	0.22	166	P	Pg	11 56 07.0	+0.8
T1214				S	Sg	11 56 10.6	+1.3
T1212	Cascia, Frazio	0.23	196	P	Pg	11 56 07.0	+0.6
T1212				S	Sg	11 56 10.9	+1.4
T1241	Roccafluvione,	0.25	118	P	Pg	11 56 07.3	+0.7
T1241				AML	AML		
	comp=E,56μm,1.6s						
T1241				AML	AML		
	comp=N,42μm,1.3s						
T1241				AML	AML		
	comp=E,56μm,1.6s						
T1241				AML	AML		
	comp=N,42μm,1.3s						
T1241				AML	AML		
	comp=N,42μm,0.7s						
T1241				AML	AML		
	comp=E,56μm,0.4s						
T1217	Poggiodomo (PG	0.30	210	P	Pg	11 56 08.1	+0.5
T1217				S	Sb	11 56 13.2	-1.1
SNTG	Esanatoglia	0.31	333	P	Pg	11 56 08.3	+0.5
SNTG				S	Sb	11 56 13.7	-0.9
SNTG				AML	AML		
	comp=N,32μm,1.3s						
SNTG				AML	AML		
	comp=E,32μm,1.2s						
SNTG				AML	AML		
	comp=E,32μm,0.8s						
ASSB	Assisi San Ben	0.35	281	P	Pg	11 56 09.1	+0.5
ASSB				S	Sb	11 56 14.9	-0.9
ASSB				AML	AML		
	comp=N,42μm,0.3s						
ASSB				AML	AML		
	comp=N,42μm,1.7s						
ASSB				AML	AML		
	comp=E,44μm,0.4s						
EL6	Elcito	0.35	356	P	Pg	11 56 09.2	+0.5
EL6				S	Sb	11 56 15.3	-0.6
EL6				AML	AML		
	comp=E,158μm,0.2s						
EL6				AML	AML		
	comp=N,137μm,0.7s						
MOMA	Monte Martano	0.45	248	P	Pb	11 56 11.2	-0.5
MOMA				S	Sb	11 56 18.6	+0.1
MOMA				AML	AML		
	comp=E,30μm,1.0s						
MOMA				AML	AML		
	comp=N,22μm,1.0s						
MOMA				AML	AML		
	comp=E,30μm,1.0s						
TERO	Teramo	0.49	135	P	Pg	11 56 11.5	+0.3

ROM 20 11:56:47.5±0.1**, 42°.464N**±0°.007×**13°.288E**±0°.007**,**
h7^{km}±1^{km}**, ML1.2**/8**, 1D, Error ellipse: s-maj=0.8km**
s-min=0.4km az=177.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1247	Pizzolo (AQ)	0.02	162	AML	AML		
	comp=E,1053μm,0.6s						
T1247				AML	AML		
	comp=E,1053μm,1.4s						
T1247				AML	AML		
	comp=N,909μm,0.1s						
T1222	Castel Sant'An	0.20	252	P	Pg	11 56 52.3	+0.7
T1222				S	Sg	11 56 56.1	+1.8
T1222				AML	AML		
	comp=E,83μm,0.2s						
T1222				AML	AML		
	comp=N,66μm,0.7s						
T1222				AML	AML		
	comp=E,83μm,0.2s						
T1222				AML	AML		
	comp=N,66μm,0.7s						
GIGS	Gran Sasso	0.21	94	P	Pg	11 56 52.5	+0.8
GIGS				S	Sg	11 56 56.0	+1.4
GIGS				AML	AML		
	comp=E,45μm,0.5s						
GIGS				AML	AML		
	comp=N,53μm,0.2s						
FIAM	Fiamignano	0.23	213	P	Pg	11 56 52.8	+0.5
FIAM				S	Sg	11 56 56.1	+0.8
FIAM				AML	AML		
	comp=E,76μm,0.7s						
FIAM				AML	AML		
	comp=N,99μm,0.5s						
FIAM				AML	AML		
	comp=E,76μm,1.3s						
T1218	Civita (PG)	0.24	328	P	Pg	11 56 52.8	+0.4
T1218				S	Sg	11 56 58.3	+2.6
TERO	Teramo	0.28	56	P	Pg	11 56 53.8	+0.6
TERO				S	Sg	11 56 58.4	+1.5
TERO				AML	AML		
	comp=N,56μm,0.5s						
TERO				AML	AML		
	comp=E,65μm,0.4s						
FAGN	Fagnano	0.29	132	P	Pb	11 56 54.9	-0.3
FAGN				AML	AML		
	comp=N,184μm,0.3s						
FAGN				AML	AML		
	comp=E,141μm,1.1s						
T1211	Morro Reatino	0.33	282	P	Pg	11 56 54.7	+0.6
T1211				S	Sb	11 57 00.6	-0.7
T1245	Castelsantange	0.40	349	S	Sb	11 57 03.3	-0.1
VCEL	Villa Celiera	0.41	99	P	Pg	11 56 56.5	+0.8
VCEL				S	Sb	11 57 03.4	-0.4
VCEL				AML	AML		
	comp=E,88μm,0.4s						
VCEL				AML	AML		
	comp=N,86μm,0.4s						
T0110	Collepietro	0.43	123	P	Pg	11 56 56.7	+0.7
T0110				AML	AML		
	comp=E,100μm,0.3s						
T0110				AML	AML		
	comp=N,91μm,0.4s						
T1219	Muccia, Frazio	0.63	341	S	Sb	11 57 10.7	+0.9
RMP	Rome, Mte Porz	0.79	214	S	Sg	11 57 12.2	-0.6
RMP				AML	AML		
	comp=N,257μm,1.5s						
RMP				AML	AML		
	comp=N,257μm,0.5s						
RMP				AML	AML		
	comp=E,278μm,0.1s						
PIEI	Pieia	1.21	333	S	Sn	11 57 28.4	+1.0
BLLA	Bellaria	1.78	341	⇓P	Pn	11 57 16.8	-1.8
LMD	Lutirano	1.98	325	S	Sg	11 57 53.2	+1.9

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*IDC **20** 12:01:59.5±2.2, 23°.54S×179°.33E, h519^{km}±22^{km}, mb3.3/7,*
mbtmp4.3/9, Error ellipse: s-maj=33.1km s-min=15.7km
az=153.0
*NEIC **20** 12:02:01.8±1.4, 23°.6S±0°.2×179°.3E±0°.2, h541^{km}±20^{km},*
mb4.3/20, Error ellipse: s-maj=26.6km s-min=24.8km
az=224.0
ISC 20 12:02:01.2±0.5**, 23°.52S**±0°.09×**179°.39E**±0°.09**, h548^{km}, n58,**
σ**1^{s}.65**/62**, mb4.2**/15**, 1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	10.89	68	P	P	12 04 29.7	+1.4
AFI	Afiamalu	12.69	43	P	P	12 04 44.7	-2.4
	26nm,0.6s,baz=72,slow=1.0,SNR=8.4						
AFI				S	S	12 06 57.3	-6.3
	8.0nm,0.6s,baz=180,slow=23,SNR=1.7						
TOZ	Tahuroa Road	14.56	192	P	P	12 05 08.0	+2.1
URZ	Urewera	14.83	187	P	P	12 05 06.3	-2.4
	36nm,0.8s,baz=136,slow=2.4,SNR=15						
URZ				S	S	12 07 38.8	-4.4
	9.5nm,0.9s,baz=267,slow=22,SNR=2.7						
RTZ	Ruatahuna	15.19	187	P	P	12 05 09.3	-3.2
RTZ				IAmb	IAmb	12 05 27.4	
	comp=Z,15nm,1.1s						
BKZ	Black Stump Fm	15.80	188	P	P	12 05 17.3	-1.4
BKZ				IAmb	IAmb	12 05 23.6	
	comp=Z,8.3nm,0.7s						
PNHZ	Pukenui	16.57	189	P	P	12 05 41.3	+15
HOWZ	Holdsworth Sta	17.64	190	P	P	12 05 37.8	+2.2
TCW	Tory Channel	18.16	192	P	P	12 05 40.3	-0.1
TCW	Tory Channel	18.16	192	P	P	12 05 41.3	+1.0
QRZ	Quartz Range	18.20	197	P	P	12 05 41.4	+0.6
QRZ	Quartz Range	18.20	197	P	P	12 05 41.7	+1.0
TKNZ	Takaka Hill	18.29	196	P	P	12 05 41.8	+0.2
NNZ	Nelson	18.36	195	P	P	12 05 41.8	-0.4
TUWZ	Tuamarina	18.44	193	P	P	12 05 43.0	+0.1
TUWZ	Tuamarina	18.44	193	P	P	12 05 43.3	+0.4
MRNZ	Matariki Terra	18.68	196	P	P	12 05 45.6	+0.4
THZ	Tophouse	18.99	195	P	P	12 05 48.1	+0.1
DSZ	Denniston Nort	19.25	197	P	P	12 05 51.0	+0.5
DSZ	Denniston Nort	19.25	197	P	P	12 05 50.9	+0.5
KHZ	Kahutara	19.47	193	P	P	12 05 51.3	-0.9
LTZ	Lake Taylor	20.10	195	P	P	12 05 54.8	-3.3
INZ	Inchbonnie	20.26	197	P	P	12 05 58.5	-1.0
OXZ	Oxford	20.67	195	P	P	12 06 02.9	-0.3
MLZ	Mavora Lakes	23.65	200	P	P	12 06 31.4	+1.5
CTAO	Charters Tower	30.92	270	P	P	12 07 34.1	+0.3
CTAO				IAmb	IAmb	12 07 34.9	
	comp=Z,11nm,0.5s						
STKA	Stephens Creek	34.35	248	P	P	12 08 03.1	+0.3
	comp=Z,2.3nm,0.6s,baz=71,slow=7.5,SNR=6.2						
	comp=Z,2.3nm,0.6s						
STKA	Stephens Creek	34.35	248	P	P	12 08 03.4	+0.6
COEN	Coen	35.51	279	P	P	12 08 12.4	-0.1
BBOO	Buckleboo	39.09	246	P	P	12 08 40.7	-0.9
AS31	Alice Springs	41.55	260	P	P	12 09 01.1	-0.3
ASAR	Alice Springs	41.55	260	P	P	12 09 01.1	-0.3
	comp=Z,4.0nm,0.8s,baz=100,slow=6.7,SNR=41						
ASAR				PcP	PcP	12 10 45.5	-0.3
	comp=Z,1.0nm,0.7s,baz=101,slow=3.9,SNR=6.3						
ASAR				ScP	ScP	12 13 47.0	+3.0
	comp=Z,0.3nm,0.8s,baz=103,slow=4.1,SNR=4.1						
ASAR				S	S	12 14 35.5	-2.7
	comp=Z,0.4nm,0.7s,baz=92,slow=15,SNR=4.4						
	comp=Z,4.0nm,0.8s						
ASAR	Alice Springs	41.55	260	P	P	12 09 00.3	-1.1
WB2	Warramunga Arr	41.87	266	P	P	12 09 03.3	-0.7
WB2				IAmb	IAmb	12 09 03.5	
	comp=Z,5.6nm,0.7s						
WB0	Warramunga Arr	41.87	266	P	P	12 09 03.1	-0.9
WB0				IAmb	IAmb	12 09 03.9	
	comp=Z,5.8nm,0.7s						
WRAB	Tennant Creek	41.87	266	P	P	12 09 02.8	-1.2
WRAB				IAmb	IAmb	12 09 03.4	
	comp=Z,4.2nm,0.6s						
WRA	Warramunga Arr	41.88	266	P	P	12 09 03.3	-0.8
	comp=Z,4.4nm,0.6s,baz=90,slow=5.8,SNR=193						
WRA				PcP	PcP	12 10 47.4	+0.5
	comp=Z,1.0nm,0.8s,baz=101,slow=2.9,SNR=5.1						
	comp=Z,4.4nm,0.6s						
WRA	Warramunga Arr	41.88	266	P	P	12 09 03.0	-1.1
FORT	Forrest	45.92	249	P	P	12 09 33.8	-1.4
MTN	Manton Dam	46.87	274	P	P	12 09 41.0	-1.5
MTN				IAmb	IAmb	12 09 58.4	
	comp=Z,12nm,1.2s						
KNRA	Kununurra	48.13	270	P	P	12 09 51.5	-0.4
KNRA				IAmb	IAmb	12 10 27.8	
	comp=Z,10nm,0.8s						
FITZ	Fitzroy Crossi	50.30	266	P	P	12 10 07.7	-0.2
MORW	Morawa	56.48	250	P	P	12 10 51.1	-0.6
MORW				IAmb	IAmb	12 10 51.8	
	comp=Z,11nm,1.0s						
QSPA	South Pole Qui	66.57	180	P	P	12 11 58.7	+1.8
QSPA				IAmb	IAmb	12 12 00.1	
	comp=Z,18nm,1.3s						
NVAR	Mina Array Bea	84.86	44	P	P	12 13 40.0	+1.4
	comp=Z,0.5nm,0.7s,baz=198,slow=8.9,SNR=5.4						
	comp=Z,0.5nm,0.7s						
CMAR	Chiang Mai Arr	88.87	291	P	P	12 13 59.5	+1.8
	comp=Z,0.4nm,0.3s,baz=132,slow=4.2,SNR=5.7						
	comp=Z,0.4nm,0.3s						
TXAR	Lajitas Array	90.70	58	P	P	12 14 08.6	+2.5
	comp=Z,0.9nm,0.8s,baz=212,slow=7.1,SNR=12						
	comp=Z,0.9nm,0.8s						
ILAR	Eielson Array	91.79	14	P	P	12 14 11.7	+1.5
	comp=Z,0.3nm,0.6s,baz=225,slow=5.2,SNR=5.9						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	111.48	313	PKiKP	PKiKP	12 19 33.0	-0.3
	comp=Z,0.2nm,0.4s,baz=185,slow=1.5,SNR=4.6						
BVAR	Borovoye Array	119.78	319	PKP	PKPdf	12 19 49.0	+0.1
	comp=Z,0.8nm,0.4s,baz=110,slow=1.3,SNR=5.8						
ARCES	ARCESS Array B	131.40	348	PKP	PKPdf	12 20 10.7	0.0
	comp=Z,4.1nm,0.8s,baz=35,slow=3.3,SNR=6.8						
HFS	Hagfors	142.06	348	PKhKP	PKPpre	12 20 27.1	
	comp=Z,3.8nm,0.4s,baz=67,slow=5.0,SNR=31						
AKASG	Malin Array Be	144.35	327	PKP	PKPbc	12 20 34.7	0.0
	comp=Z,70nm,0.3s,baz=46,slow=4.2,SNR=1.9						
BRTR	Keskin Array B	146.90	307	PKPbc	PKiKP	12 20 43.7	-0.8
	comp=Z,1.3nm,0.5s,baz=64,slow=3.4,SNR=3.1						
EKA	Eskdalemuir Ar	148.16	3	PKPbc	PKPbc	12 20 45.5	+0.3
	comp=Z,0.9nm,0.5s,baz=322,slow=1.9,SNR=6.1						
CLL	Collm	150.32	343	⇓iPKPbc	PKiKP	12 20 51.4	+0.4
	comp=Z,10.0nm,0.7s						
GERES	GERESS Array B	152.30	339	PKPbc	PKiKP	12 20 56.4	+1.0
	comp=Z,0.2nm,0.3s,baz=29,slow=2.2,SNR=1.9						
TORD	Torodi Ar. Bea	169.46	192	PKP	PKPdf	12 21 06.5	-0.2
	comp=Z,0.9nm,0.9s,baz=357,slow=1.5,SNR=4.0						
TORD				PKPab	PKPab	12 22 24.0	+0.6
	comp=Z,1.5nm,0.8s,baz=161,slow=4.5,SNR=6.8						

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*IDC **20** 12:38:23.6±1.4, 7°.03S×128°.53E, h0^{km}, mb3.9/4,*
mbtmp3.9/6, ML4.0/2, Error ellipse: s-maj=74.5km
s-min=28.3km az=70.0
*DJA **20** 12:38:38.5±0.4, 7°S±4°×12°9E±°, h195^{km}±15^{km}, M4.3/7,*
mb3.9/5, mB5.0/3, MLv4.4/7, Mw(mB)4.3/3
ISC 20 12:38:39.5±0.7**, 7°.36S**±0°.06×**128°.73E**±0°.08**, h150^{km}, n24,**
σ**2^{s}.68**/26**, mb3.8**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.63	104	P	Pn	12 39 23.7	+1.5
SOEI	Soe	5.01	241	P	Pn	12 39 53.1	-0.1
SOEI	Soe	5.01	241	P	Pn	12 39 52.9	-0.3
FAKI	Fak Fak	5.63	39	P	Pn	12 40 01.2	-0.2
	13nm,0.7s,0.2nm						
FAKI				S	Sn	12 41 02.9	-2.5
	13nm,0.7s,0.2nm						
MTN	Manton Dam	5.94	157	P	Pn	12 40 04.4	-1.1
KDU	Kakadu	6.45	145	P	Pn	12 40 11.4	-0.9
RKPI	Ransiki, Papua	7.95	43	P	Pn	12 40 30.4	-1.9
	40nm,0.6s,2μm						
KNRA	Kununurra	8.27	180	P	Pn	12 40 34.3	-2.2
FITZ	Fitzroy Crossi	11.09	195	P	Pn	12 41 10.9	-3.0
WRA	Warramunga Arr	13.64	157	Pn	Pn	12 41 42.9	-4.1
	0.9nm,0.3s,baz=322,slow=12,SNR=57						
WRA				Sn	Sn	12 44 05.2	-13
	2.1nm,0.3s,baz=328,slow=23,SNR=14						
	1.1nm,0.5s						
MBWA	Marble Bar	16.24	211	P	Pn	12 42 19.8	+0.5
QIS	Mount Isa	16.83	142	P	Pn	12 42 29.4	+3.0
ASAR	Alice Springs	16.96	164	P	P	12 42 28.2	+0.7
	0.3nm,0.3s,baz=336,slow=9.8,SNR=28						
ASAR				Sn	S	12 45 29.2	-7.4
	0.6nm,0.3s,baz=319,slow=22,SNR=5.3						
	1.2nm,0.7s						
AS01	Alice Springs	16.97	163	P	P	12 42 28.2	+0.6
WRKA	Warakurna	17.59	181	P	P	12 42 35.2	+0.9
MTSU	Mount Surprise	18.58	127	P	Pn	12 42 52.4	+5.1
OOD	Oodnadatta	21.37	163	P	P	12 43 16.7	+1.6
MEEK	Meekatharra	21.45	205	P	P	12 43 16.2	+0.1
INKA	Innaminka	23.25	152	P	P	12 43 38.1	+4.5
MORW	Morawa	24.69	207	P	P	12 43 48.0	+1.4
SONM	Songino Array	58.39	343	P	P	12 48 19.9	+0.7
	0.6nm,0.7s,baz=172,slow=5.7,SNR=4.0						
	0.6nm,0.7s						
PETK	Petropavlovsk-	65.06	19	P	P	12 49 04.0	+0.4
	1.3nm,0.6s,baz=180,slow=5.9,SNR=4.5						
	1.3nm,0.6s						
MKAR	Makanchi Array	67.84	327	P	P	12 49 21.7	+0.2
	0.7nm,0.5s,baz=115,slow=7.8,SNR=15						
	0.7nm,0.5s						
ZALV	Zalesovo Beam	71.35	334	P	P	12 49 41.0	-1.8
	0.8nm,0.5s,baz=140,slow=4.4,SNR=4.8						
	0.8nm,0.5s						

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*THE **20** 12:51:59.6, 35°.13N×22°.90E, h0^{km}±3^{km}, ML3.2/6, Error*
ellipse: s-maj=4.0km s-min=1.0km az=237.0
*IDC **20** 12:52:00.1±1.6, 34°.53N×23°.79E, h0^{km}, mb3.7/3,*
mbtmp3.6/4, ML3.7/1, Error ellipse: s-maj=52.6km
s-min=28.0km az=139.0
*ATH **20** 12:52:00.9, 35°.15N×22°.98E, h12^{km}±2^{km}, ML3.2/9, Error*
ellipse: s-maj=5.4km s-min=1.5km az=66.0
ISC 20 12:52:00.4±1.8**, 35°.15N**±0°.05×**22°.98E**±0°.06**, h6^{km}**±10^{km}**,**
n24, σ**0^{s}.77**/32**, mb3.5**/3**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.58	81	P	Pg	12 52 10.4	-1.2
KNDR				S	Sg	12 52 20.1	+0.9
	2μm,0.3s						
KNDR	Palaiochora Ch	0.58	81	P	Pg	12 52 11.4	-0.2
KNDR				S	Sg	12 52 18.9	-0.3
KNDR				AML	AML	12 52 23.9	
	comp=E,12645μm,0.3s						
KNDR				AML	AML	12 52 23.9	
	comp=N,14871μm,0.3s						
RODP	Rodopos	0.76	57	P	Pb	12 52 16.3	+0.3
RODP				S	Sb	12 52 27.6	+1.1
ANKY	Antikythira Is	0.76	20	P	Pg	12 52 15.0	-0.1
ANKY				S	Sb	12 52 27.7	+1.0
	comp=N,2μm,0.6s						
ANKY	Antikythira Is	0.76	20	P	Pg	12 52 15.1	0.0
ANKY				S	Sg	12 52 25.9	+0.9
ANKY				AML	AML	12 52 29.5	
	comp=N,3033μm,0.4s						
ANKY				AML	AML	12 52 30.4	
	comp=E,3890μm,0.7s						
IMMV	Iera Moni Meta	0.87	69	P	Pg	12 52 17.4	+0.2
IMMV				S	Sb	12 52 30.9	+0.9
	comp=E,2μm,0.7s						
IMMV	Iera Moni Meta	0.87	69	P	Pg	12 52 17.3	+0.1
IMMV				AML	AML	12 52 39.5	
	comp=N,4080μm,0.5s						
IMMV				AML	AML	12 52 40.6	
	comp=E,3473μm,1.0s						
CHAN	Chania	0.94	67	P	Pb	12 52 19.3	+0.1
CHAN				AML	AML	12 52 42.4	
	comp=N,4456μm,1.0s						
CHAN				AML	AML	12 52 42.8	
	comp=E,2818μm,0.7s						
GVD	Gavdhos	0.96	109	P	Pg	12 52 18.4	-0.4
GVD				S	Sn	12 52 34.6	+0.2
	comp=E,3μm,0.3s						
GVD	Gavdhos	0.96	109	P	Pg	12 52 18.5	-0.4
GVD				AML	AML	12 52 40.9	
	comp=E,5311μm,0.4s						
GVD				AML	AML	12 52 42.6	
	comp=N,4604μm,0.3s						
GVDS	Gavdos	0.96	108	P	Pg	12 52 18.4	-0.4
GVDS				S	Sb	12 52 33.3	+0.9
	comp=N,1μm,0.4s						
KTHA	Kythira Island	1.11	3	P	Pg	12 52 20.9	-0.8
KTHA				S	Sb	12 52 37.1	+0.4
	comp=N,2μm,0.6s						
KTHA	Kythira Island	1.11	3	P	Pg	12 52 21.4	-0.3
KTHA				S	Sg	12 52 36.0	0.0
KTHA				AML	AML	12 52 47.2	
	comp=E,4415μm,0.7s						

KTHA				AML	AML	12 52 51.0	
	comp=N,1395µm,0.6s						
PRNS	Prines Rethymn	1.26	80	P	Pg	12 52 23.4	-1.2
VLI	Veliai	1.57	359	P	Pn	12 52 28.5	-0.3
VLI	Veliai	1.57	359	P	Pn	12 52 28.5	-0.3
VLI				S	Sn	12 52 48.0	-1.5
VLI				AML	AML	12 52 58.6	
	comp=E,984µm,0.6s						
VLI				AML	AML	12 53 03.2	
	comp=N,928µm,0.8s						
IDI	Anoyia	1.57	84	LR	LR	12 52 35.2	
	comp=N,14nm,20.5s,baz=272,slow=30						
IDI	Anoyia	1.57	84	P	Pn	12 52 28.5	-0.4
IDI	Anoyia	1.57	84	P	Pn	12 52 27.7	-1.2
IDI				AML	AML	12 53 02.2	
	comp=N,718µm,0.7s						
IDI				AML	AML	12 53 05.7	
	comp=E,454µm,0.7s						
KRND	KRANIDI	2.23	3	AML	AML	12 53 21.3	
	comp=E,337µm,0.5s						
KRND				AML	AML	12 53 23.1	
	comp=N,434µm,0.9s						
GERES	GERESS Array B	15.31	336	Pn	P	12 55 50.5	+8.5
	comp=N,0.1nm,0.3s,baz=153,slow=13,SNR=2.4						
	comp=N,0.3nm,0.3s						
TORD	Torodi Ar. Bea	29.15	227	P	P	12 58 03.7	+1.2
	comp=N,0.4nm,0.5s,baz=27,slow=9.2,SNR=4.1						
	comp=N,0.4nm,0.5s						
MKAR	Makanchi Array	45.27	56	P	P	13 00 18.4	-0.3
	comp=N,0.3nm,0.5s,baz=269,slow=7.5,SNR=6.9						
	comp=N,0.3nm,0.5s						
ZALV	Zalesovo Beam	46.30	46	P	P	13 00 25.7	-1.0
	comp=N,0.6nm,0.4s,baz=271,slow=7.2,SNR=4.6						
	comp=N,0.6nm,0.4s						

ISC 20 12:53:22.7±0.9,61°.31N±0°.02×139°.21W±0°.02,h10^{km},n18, σ0^{s}.51/33,Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK8	Steele Glacier	0.27	264	P	Pg	12 53 28.4	+0.2
	baz=85,SNR=205						
YUK8				S	Sg	12 53 31.3	-0.7
	baz=85						
YUK4	Talbot Arm	0.28	83	P	Pb	12 53 30.1	+0.3
	baz=249,SNR=52						
YUK6	Outpost Mounta	0.55	132	P	Pg	12 53 33.2	-0.2
	baz=311,SNR=59						
YUK6				S	Sg	12 53 40.7	-0.1
	baz=311						
O28M	Mount Upton	0.72	222	P	Pg	12 53 36.2	-0.4
	baz=41,SNR=16						
O28M				S	Sg	12 53 45.9	-0.1
	baz=41						
YUK3	Moose Creek	0.76	308	P	Pg	12 53 36.5	-0.8
	baz=128,SNR=18						
YUK3				S	Sg	12 53 46.6	-0.6
	baz=128						
HYT	Haines Junctio	0.96	120	P	Pg	12 53 41.0	-0.2
	baz=301,SNR=31						
HYT				S	Sg	12 53 53.3	-0.4
	baz=301						
N30M	Aishikik Lake	1.03	81	P	Pg	12 53 42.3	-0.2
	baz=262,SNR=91						
N30M				S	Sg	12 53 55.4	-0.5
	baz=262						
O29M	Mount Kennedy	1.06	163	P	Pg	12 53 42.3	-0.7
	baz=343,SNR=12						
O29M				S	Sg	12 53 55.9	-0.9
	baz=343						
CTG	Chitna Glacier	1.09	252	P	Pg	12 53 42.9	-0.7
	baz=70,SNR=20						
CTG				S	Sg	12 53 57.5	-0.2
	baz=70						
M29M	Somme Creek	1.19	17	P	Pn	12 53 45.4	-0.1
	baz=198						
M29M				S	Sg	12 54 01.0	0.0
	baz=198						
PINM	Pinnacle	1.32	203	P	Pg	12 53 47.9	-0.1
	baz=22,SNR=23						
PINM				S	Sg	12 54 05.5	+0.3
	baz=22						
BVCY	Beaver Creek	1.35	325	P	Pn	12 53 47.8	+0.1
	baz=145,SNR=18						
BVCY				S	Sg	12 54 06.2	0.0
	baz=145						
O30N	Mendenhall	1.61	108	P	Pn	12 53 51.5	+0.3
	baz=291,SNR=16						
M27K	Edge Creek, AK	1.64	311	Pg	Pb	12 53 53.3	+0.2
	baz=129						
M27K				Sb	Sg	12 54 15.1	-0.4
	baz=129						
N31M	Braeburn, Yuko	1.66	82	Pg	Pg	12 53 53.9	-0.6
	baz=265						
N31M				Sb	Sg	12 54 15.9	-0.1
	baz=265						
M30M	Minto, Yukon	1.71	41	Pg	Pg	12 53 55.0	-0.4
	baz=223						
M30M				Sb	Sg	12 54 17.4	-0.1
	baz=223						
L29M	L29M	1.87	15	Pg	Pg	12 53 58.1	-0.5
	baz=196						
L29M				Sb	Sg	12 54 22.3	-0.6
	baz=196						
L27K	Beaver Creek,	2.14	326	Sb	Sb	12 54 29.6	+1.4
	baz=144						

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*BJI **20** 12:57:06.9±0.0,33°.15N×135°.89E,h429^{km},mb4.7/57, mB4.5/26*

*MOS **20** 12:57:08.3±0.8,33°.14N×135°.91E,h447^{km},mb4.3/16, Error ellipse: s-maj=10.2km s-min=5.9km az=107.8*

*NIED **20** 12:57:09.7,33°.21N×135°.89E,h439^{km},MW4.3,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.37; M$_{\theta\theta}$1.82; M$_{\phi\phi}$-2.19; M$_{r\theta}$-1.09; M$_{\theta\phi}$0.97; M$_{\phi r}$-2.12; Fault plane solution: M$_{0}$3.27000×10^{15} NP1: ϕ_s209.00000°,δ86.00000°,λ132.00000°. NP2: ϕ_s303.00000°,δ43.00000°,λ6.00000°.*

*IDC **20** 12:57:09.4±0.7,33°.16N×135°.92E,h441^{km}±6^{km},mb3.7/16, mbtmp4.5/23 Error ellipse: s-maj=11.0km s-min=7.8km az=82.0*

*JMA **20** 12:57:09.7±0.2,33°.2N±0°.9×135°.9E±0°.7,h439^{km}±1^{km}, MV3.9/32,S OFF KII PENINSULA*

*NEIC **20** 12:57:09.6±2.0,33°.08N±0°.09×135°.92E±0°.08, h440^{km}±10^{km},mb4.4/39,Error ellipse: s-maj=13.9km s-min=7.7km az=210.0*

ISC 20 12:57:09.1±0.5,33°.12N±0°.04×135°.89E±0°.05,h439^{km}±4^{km}, n228,σ1^{s}.27/264,mb4.2/47,13C-13D,Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWKM	Wakayamakushim	0.35	342	eP	P	12 58 03.7	+1.0
JWKM				eS	S	12 58 46.5	+0.2
JTNC	Tanabenakahech	0.73	342	P	P	12 58 04.6	+1.2
JTNC				eS	S	12 58 46.5	-1.1
TTO1	TONANKAI O.B.S	0.90	56	eP	P	12 58 05.2	+1.7
JWY	Kouya	1.12	348	eP	P	12 58 05.7	+1.2
JWY				eS	S	12 58 49.3	-0.3
JAI	Aioi	1.38	300	P	P	12 58 06.5	+1.0
JAI				eS	S	12 58 51.0	-0.2
JIE	Ise	1.44	28	⇓P	P	12 58 06.7	+1.0
JIE				⇓eS	S	12 58 51.7	0.0
TK02	Tokai 2	1.77	62	⇓eP	P	12 58 08.3	+1.3
TK02				⇓eX		12 58 57.0	
JMN	Monobe	1.79	290	P	P	12 58 08.8	+1.3
JMN	Monobe	1.79	290	P	P	12 58 08.7	+1.3
JMN	Monobe	1.79	290	P	P	12 58 08.6	+1.2
JMN	Monobe	1.79	290	eP	P	12 58 08.7	+1.2
JWT	Wachi	2.19	350	eP	P	12 58 10.3	+0.7
JWT				eS	S	12 58 57.7	-1.1
INU	Inuyama	2.41	23	P	P	12 58 11.9	+0.9
INU	Inuyama	2.41	23	P	P	12 58 11.9	+0.9
INU	Inuyama	2.41	23	P	P	12 58 11.8	+0.8
JSG	Sagara	2.46	50	P	P	12 58 12.4	+1.1
JSG	Sagara	2.46	50	P	P	12 58 12.6	+1.3
JSG	Sagara	2.46	50	P	P	12 58 12.9	+1.6
JYTA	Yamagatataniai	2.57	16	P	P	12 58 12.8	+0.8
JYTA				eS	S	12 59 02.2	-0.9
JTO	Tosashimizu	2.60	265	P	P	12 58 13.5	+1.2
JTO				eS	S	12 59 04.1	+0.4
JGF	Kuroka	2.76	26	P	P	12 58 13.9	+0.6
JGF	Kuroka	2.76	26	P	P	12 58 14.0	+0.6
JNA	Nagahama	2.89	280	P	P	12 58 15.7	+1.3
JNA				eS	S	12 59 07.7	+0.3
JHS	Saijyo	2.97	310	P	P	12 58 15.9	+1.0
JHS	Saijyo	2.97	310	P	P	12 58 15.4	+0.5
JHS	Saijyo	2.97	310	P	P	12 58 15.5	+0.5
JHS	Saijyo	2.97	310	P	P	12 58 15.7	+0.7
JHS				eS	S	12 59 08.0	-0.5
JKG	Kaga	3.17	7	P	P	12 58 16.8	+0.4
JKG				eS	S	12 59 09.6	-1.7
JYN	Shimob	3.24	42	⇓eP	P	12 58 17.3	+0.3
JHT	Toyohira	3.27	299	P	P	12 58 18.0	+0.7
JHJ2	Mitsune	3.30	89	P	P	12 58 18.6	+1.1
JHJ2	Mitsune	3.30	89	P	P	12 58 18.8	+1.2
JHJ2	Mitsune	3.30	89	P	P	12 58 18.7	+1.2
JHJ2	Mitsune	3.30	89	⇓eP	P	12 58 18.7	+1.1
JAOM	Aogashimamukai	3.33	100	eP	P	12 58 19.2	+1.4
JOD2	Odawara 2	3.41	50	eP	P	12 58 18.7	+0.3
MAJO	Matsushiro	3.91	29	P	P	12 58 23.4	+0.8
MAJO	Matsushiro	3.91	29	P	P	12 58 23.5	+0.8
MAJO	Matsushiro	3.91	29	P	P	12 58 23.3	+0.7
MAJO	Matsushiro	3.91	29	c iP	P	12 58 22.2	-0.4
MJAR	Matsushiro Arr	3.91	29	P	P	12 58 23.1	+0.5
	74nm,0.5s,baz=188,slow=9.5,SNR=236						
MJAR				S	S	12 59 22.6	0.0
	40nm,0.7s,baz=182,slow=17,SNR=13						
MJAR	Matsushiro Arr	3.91	29	P	P	12 58 23.1	+0.5
MJAR				S	S	12 59 22.6	0.0
MJB9	Matsu-Tunnel	3.91	28		P	12 58 22.9	+0.2
JNU	Nakatsue	4.20	271	P	P	12 58 26.4	+1.1
	30nm,0.4s,baz=42,slow=2.8,SNR=74						
JNU				S	S	12 59 28.3	+0.8
	37nm,0.9s,baz=260,slow=14,SNR=4.7						
JNU	Nakatsue	4.20	271		P	12 58 26.5	+1.1
JNU	Nakatsue	4.20	271	P	P	12 58 26.4	+1.1
JSU	Suzuyama	4.87	252	P	P	12 58 32.6	+0.9
JSU	Suzuyama	4.87	252	P	P	12 58 32.9	+1.2
JSD	Sado	5.28	21	P	P	12 58 35.4	0.0
JSD	Sado	5.28	21	P	P	12 58 35.2	-0.2
JTU	Tsushima	5.58	286	P	P	12 58 38.9	+0.3
JTU	Tsushima	5.58	286	P	P	12 58 39.2	+0.6
JMM	Marumori	6.20	39	P	P	12 58 44.5	-0.4
JMM	Marumori	6.20	39	P	P	12 58 44.6	-0.3
TJN	Taejon	7.73	297		P	12 59 03.1	+1.7
TJN	Taejon	7.73	297	P	P	12 59 03.7	+2.3
TJN	Taejon	7.73	297	P	P	12 59 03.1	+1.7
KSRS	Korea Array	7.81	306	P	P	12 59 03.2	+0.9
	14nm,0.7s,baz=122,slow=11,SNR=57						
KSRS				S	S	13 00 36.5	+1.4
	10nm,1.0s,baz=116,slow=20,SNR=13						
KSRS	Korea Array	7.81	306	P	P	12 59 03.2	+0.9
KSRS				S	S	13 00 36.5	+1.4
KSAR	Wonju Array Be	7.83	306	P	P	12 59 03.5	+1.0
KSAR	Wonju Array Be	7.83	306	P	P	12 59 03.5	+1.0
KS19	Wonju Array Si	7.88	306	P	P	12 59 03.5	+0.5
JCJ	Chichijima	8.11	136	P	P	12 59 03.8	-1.9
	69nm,0.5s,baz=300,slow=21,SNR=17						
JCJ				S	S	13 00 36.0	-5.2
	220nm,0.5s,baz=42,slow=20,SNR=19						
JCJ	Chichijima	8.11	136	P	P	12 59 04.1	-1.6
JCJ	Chichijima	8.11	136	P	P	12 59 04.0	-1.6
JTM	Tenmabayashi	8.70	27	P	P	12 59 11.0	-0.8
JTM	Tenmabayashi	8.70	27	P	P	12 59 13.0	+1.2
INCN	Inchon	8.73	303		P	12 59 13.7	+1.5
INCN	Inchon	8.73	303	P	P	12 59 13.7	+1.5
JOW	Kunigami	9.10	228	P	P	12 59 18.3	+1.9
	66nm,0.7s,baz=54,slow=9.4,SNR=9.1						
JOW	Kunigami	9.10	228	P	P	12 59 17.7	+1.3
JOW	Kunigami	9.10	228	P	P	12 59 18.4	+1.9
ERM	Erimo	10.59	31	P	P	12 59 33.4	+1.0
ERM	Erimo	10.59	31	P	P	12 59 33.1	+0.7
ERM	Erimo	10.59	31	i P	P	12 59 32.0	-0.4
JEM	Erimo	10.59	31	P	P	12 59 33.1	+0.7
USA0B	Ussuriysk Arra	11.47	346	P	P	12 59 42.3	+0.2
USA0B	Ussuriysk Arra	11.47	346	c iP	P	12 59 42.0	-0.1
USRK	Ussuriysk Ar.	11.47	346	P	P	12 59 42.2	+0.1
	26nm,0.7s,baz=169,slow=11,SNR=74						
USRK	Ussuriysk Ar.	11.47	346	P	P	12 59 42.2	+0.1
USRK	Ussuriysk Ar.	11.47	346	P	P	12 59 42.2	+0.1
ASAJ	Asahikawa	12.16	24	P	P	12 59 49.5	-0.2
	13nm,0.4s,baz=225,slow=8.7,SNR=45						
ASAJ				S	S	13 01 58.6	-3.6
	22nm,0.7s,baz=73,slow=31,SNR=9.6						
ASAJ	Asahikawa	12.16	24	P	P	12 59 49.5	-0.2
ASAJ				S	S	13 01 58.6	-3.6
JKA	Kamikawa-asahi	12.16	24	P	P	12 59 49.7	0.0
JMJ	Miyako jima 2	12.42	231	P	P	12 59 54.0	+1.3
MDJ	Mudanjiang	12.48	339	P	P	12 59 53.0	-0.1
NMR	Nemuro--Hokkai	12.82	34	eP	P	12 59 59.4	+2.7
NMR				eS	S	13 02 15.4	+0.2
RUSJ	Misakicho	13.18	31	eP	P	13 00 05.3	+4.7
RUSJ				eS	S	13 02 26.9	+4.6
YUK	Yuzh-Kuril'sk	13.39	33	eP	P	13 00 07.1	+4.1
YUK				eS	S	13 02 29.9	+3.3
YUK				pmax	pmax		
	comp=Z,54nm,0.7s						
YUK				pmax	pmax		
	comp=E,36nm,0.6s						
YUK				pmax	pmax		
	comp=N,33nm,0.7s						
CN2	Changchun	13.43	326	P	P	13 00 04.8	+1.4
CN2				pmax	pmax		
	comp=N,10.0nm,0.6s						
SHO	Shikotan	13.72	35	eP	P	13 00 12.0	+5.5
SHO				eS	S	13 02 36.5	+3.3
SHO				pmax	pmax		
	comp=N,6.0nm,0.5s						
SHO				pmax	pmax		
	comp=E,6.0nm,0.5s						
SHO				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BNX	BinXian	14.19	335	⇑P	P	13 00 11.6	0.0
BNX				pmax	pmax		
	comp=Z,65nm,0.6s						
BNX				pmax	pmax		
	comp=Z,140nm,4.0s						
YOJ	Yonaguni jima	14.20	236	P	P	13 00 10.6	-1.3
YSS	Yuzh-Sakhalins	14.78	19	P	P	13 00 18.8	+0.9
YSS	Yuzh-Sakhalins	14.78	19	P	P	13 00 18.9	+1.1
YSS	Yuzh-Sakhalins	14.78	19	⇓eP	P	13 00 18.7	+0.9
YSS				eS	S	13 02 53.8	0.0
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				smax	smax		
	comp=N,20nm,1.0s						
KUR	Kuril'sk	15.23	34	P	P	13 00 27.1	+4.4
YHNB	Yeheng	15.23	240	P	P	13 00 22.3	-0.8
YHNB				IAmb	IAmb	13 00 27.3	
	comp=Z,21nm,0.9s						
YHNB	Yeheng	15.23	240	P	P	13 00 21.8	-1.3
NACB	Ninganchiao	15.38	238	P	P	13 00 22.9	-1.7
NACB	Ninganchiao	15.38	238	P	P	13 00 22.3	-2.3
TIA	Tai'an	15.74	287	eP	P	13 00 28.3	-0.1
TIA				pmax	pmax		
	comp=Z,13nm,1.2s						
SSLB	Suanglung	16.07	238	P	P	13 00 30.0	-2.1
SSLB	Suanglung	16.07	238	P	P	13 00 30.2	-1.9
YULB	Yu-li	16.08	237	P	P	13 00 30.3	-1.9
YULB	Yu-li	16.08	237	P	P	13 00 30.7	-1.4
KLR	Kul'dur	16.39	350	P	P	13 00 33.9	-1.1
	comp=Z,5.4nm,0.4s,baz=165,slow=12,SNR=33						
KLR	Kul'dur	16.39	350	d iP	P	13 00 34.0	-1.1
TWGBT	Beinan	16.61	236	P	P	13 00 36.4	-1.3
TWG	Pinlang	16.61	236	P	P	13 00 36.2	-1.5
TWG				IAmb	IAmb	13 00 47.7	
	comp=Z,30nm,1.0s						
TPUB	Ta-pu	16.61	238	P	P	13 00 36.3	-1.4
TPUB	Ta-pu	16.61	238	P	P	13 00 35.9	-1.8
BJT	Baijiatuau	17.25	299	P	P	13 00 43.5	-0.8
BJT				IAmb	IAmb	13 00 46.9	
	comp=Z,18nm,1.1s						
BJT	Baijiatuau	17.25	299	P	P	13 00 43.5	-0.8
BJT				pmax	pmax		
	comp=Z,18nm,1.1s						
GRNR	Gornyy	17.64	1	⇑iP	P	13 00 48.6	+0.3
GRNR				pmax	pmax		
	comp=N,20nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,20nm,0.9s						
GRNR				MLR	MLR		
	comp=E,50nm,16.0s						
GRNR				MLR	MLR		
	comp=N,50nm,20.0s						
GRNR				MLR	MLR		
	comp=Z,100nm,16.0s						
HEH	HeiHe	18.23	342	eP	P	13 00 51.9	-2.4
HEH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HEH				pmax	pmax		
	comp=Z,70nm,4.8s						
WHN	Wuhan	18.48	268	⇓iP	P	13 00 56.8	-0.2
WHN				S	S	13 04 00.0	-3.7
WHN				pmax	pmax		
	comp=Z,790nm,4.1s						
LYN	LuoYang	19.50	281	⇑P	P	13 01 06.3	-0.3
LYN				pmax	pmax		
	comp=Z,24nm,0.9s						
HHC	Hu-ho-hao-te	20.86	299	eP	P	13 01 19.0	0.0
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,6.7s						
GUMO	Guam	21.10	155	P	P	13 01 21.4	+0.1
	comp=Z,38nm,0.4s,baz=159,slow=22,SNR=9.8						
	comp=Z,38nm,0.4s						
GUMO	Guam	21.10	155	P	P	13 01 21.4	+0.1
ZEA	Zeya	21.51	346	eP	P	13 01 25.7	+1.1
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	22.46	280	⇓iP	P	13 01 33.3	-0.3
XAN				pmax	pmax		
	comp=Z,36nm,0.8s						
ENH	Enshi	22.62	270	P	P	13 01 34.4	-0.6
ULN	Ulaanbaatar	26.22	313	P	P	13 02 07.9	+0.8
ULN				IAmb	IAmb	13 02 09.0	
	comp=Z,9.9nm,1.0s						
ULN	Ulaanbaatar	26.22	313	ceP	P	13 02 07.7	+0.6
ULN				pmax	pmax		
	comp=Z,13nm,1.3s						
SONM	Songino Array	26.62	312	P	P	13 02 11.3	+0.8
	comp=Z,3.8nm,0.8s,baz=120,slow=8.3,SNR=26						
SONM				ScP	ScP	13 08 18.7	+0.1
	comp=Z,0.2nm,0.5s,baz=177,slow=3.0,SNR=4.3						
	comp=Z,3.8nm,0.8s						
SONM	Songino Array	26.62	312	P	P	13 02 10.9	+0.4
SONM	Songino Array	26.62	312	P	P	13 02 11.3	+0.8
GTA	Gaotai	29.62	293	eP	P	13 02 36.9	-0.1
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KMI	Kunming	29.94	263	⇑P	P	13 02 39.8	-0.3
KMI				pmax	pmax		
	comp=Z,23nm,0.7s						
PZH	PanZhiHua	30.26	266	P	P	13 02 42.3	-0.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,130nm,6.4s						
GOMU	GeErMu	33.75	287	P	P	13 03 13.3	+0.5
GOMU				pmax	pmax		
	comp=Z,26nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,110nm,5.4s						
PHRA	Phrae	35.06	254	P	P	13 03 24.3	+0.6
CHTO	Chiang Mai	35.94	256	P	P	13 03 31.3	+0.2
CHTO	Chiang Mai	35.94	256	P	P	13 03 31.3	+0.2
FAKI	Fak Fak	36.01	186	P	P	13 03 32.3	+0.7
CM31	Chiang Mai Arr	36.12	255	P	P	13 03 33.2	+0.7
CM31				IAmb	IAmb	13 03 33.7	
	comp=Z,10nm,0.6s						
CMAR	Chiang Mai Arr	36.12	255	P	P	13 03 33.0	+0.4
	comp=Z,4.9nm,0.5s,baz=47,slow=7.9,SNR=39						
	comp=Z,4.9nm,0.5s						
CMAR	Chiang Mai Arr	36.12	255	P	P	13 03 32.4	-0.2
CMAR	Chiang Mai Arr	36.12	255	P	P	13 03 33.0	+0.4
WMQ	Urumqi	38.72	300	eP	P	13 03 54.8	+1.0
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
TIXI	Tiksi	38.77	356	i P	P	13 03 50.9	-2.8
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BILL	Bilibino	39.09	18	P	P	13 03 57.5	+1.2
BILL				IAmb	IAmb	13 03 58.4	
	comp=Z,4.6nm,0.5s						
BILL	Bilibino	39.09	18	⇑eP	P	13 03 56.6	+0.3
BILL				*PP	pP	13 05 18.0	+0.2
BILL						13 05 43.0	
BILL						13 05 54.1	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.5s						
DGZ	Jazzator, Alta	39.20	310	d iP	P	13 03 58.3	+0.6
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZAA0	Zalesovo Array	41.38	316	P	P	13 04 14.0	-1.0
ZALV	Zalesovo Beam	41.38	316	P	P	13 04 15.1	+0.1
	comp=Z,1.8nm,0.4s,baz=95,slow=7.3,SNR=14						
ZALV				PcP	PcP	13 06 03.1	-0.1
	comp=Z,1.2nm,0.5s,baz=93,slow=2.3,SNR=7.2						
ZALV				ScP	ScP	13 09 10.2	-0.6
	comp=Z,0.5nm,0.5s,baz=130,slow=4.6,SNR=3.9						
	comp=Z,1.8nm,0.4s						
ZALV	Zalesovo Beam	41.38	316	P	P	13 04 14.7	-0.3
ZALV	Zalesovo Beam	41.38	316	P	P	13 04 15.1	+0.1
ZALV						13 06 03.2	
TAPN	Taplejung	41.73	275	eP	P	13 04 18.9	+0.3
	comp=Z,13nm,0.4s						
MK31	Makanchi Array	42.50	305	P	P	13 04 23.9	-0.2
MK31				IAmb	IAmb	13 04 25.7	
	comp=Z,7.1nm,0.8s						
MK31	Makanchi Array	42.50	305	d iP	P	13 04 24.2	+0.1
MKAR	Makanchi Array	42.50	305	P	P	13 04 24.3	+0.2
	comp=Z,8.0nm,0.8s,baz=90,slow=9.8,SNR=85						
MKAR				PcP	PcP	13 06 07.0	-0.2
	comp=Z,1.2nm,0.8s,baz=79,slow=3.6,SNR=4.3						
MKAR				ScP	ScP	13 09 15.0	-0.5
	comp=Z,0.7nm,0.5s,baz=75,slow=5.9,SNR=9.0						
	comp=Z,8.0nm,0.8s						
MKAR	Makanchi Array	42.50	305	P	P	13 04 24.1	+0.1
MKAR	Makanchi Array	42.50	305	i P	P	13 04 24.2	+0.2
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MAKZ	Makanchi	42.71	305	P	P	13 04 26.1	+0.4
MAKZ	Makanchi	42.71	305	P	P	13 04 26.1	+0.4
MAKZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
RAMN	Ramite	42.80	275	eP	P	13 04 26.8	-0.2
JIRN	Jiri	42.89	276	eP	P	13 04 28.2	+0.3
	comp=Z,72nm,0.4s						
GUN	Gumba	43.07	277	eP	P	13 04 29.4	+0.2
	comp=Z,29nm,0.6s						
PKI	Pulchoki	43.58	277	eP	P	13 04 32.4	-0.8
	comp=Z,12nm,0.5s						
PKIN	Phulchoki	43.58	277	eP	P	13 04 32.5	-0.7
	comp=Z,15nm,0.5s						
DANN	Dangsing	44.68	278	eP	P	13 04 42.2	+0.4
	comp=Z,50nm,0.5s						
KURK	Kurchatov	44.91	311	P	P	13 04 42.5	-0.3
KURK				IAmb	IAmb	13 04 43.3	
	comp=Z,8.4nm,0.8s						
KURK	Kurchatov	44.91	311	ceP	P	13 04 42.3	-0.5
KURK				pmax	pmax		
	comp=Z,14nm,1.3s						
PYUN	Piuthan	45.41	278	eP	P	13 04 47.6	+0.3
	comp=Z,42nm,0.4s						
MTN	Manton Dam	45.93	186	P	P	13 04 51.2	+0.1
COEN	Coen	47.33	170	P	P	13 04 56.7	-5.0
COEN				IAmb	IAmb	13 05 03.9	
	comp=Z,13nm,0.8s						
GSI	Gunungsitoli	47.88	237	P	P	13 05 06.4	+0.3
KSH	Kashi	47.93	296	P	P	13 05 10.1	+3.9
KSH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
AAK	Ala-Archa	48.43	300	P	P	13 05 09.7	-0.3
AAK				IAmb	IAmb	13 05 11.0	
	comp=Z,5.3nm,0.6s						
AAK	Ala-Archa	48.43	300	P	P	13 05 09.7	-0.3
AAK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KNRA	Kununurra	48.99	189	P	P	13 05 14.3	+0.1
KNRA				IAmb	IAmb	13 05 15.3	
	comp=Z,11nm,0.5s						
BRVK	Borovoye	50.00	314	P	P	13 05 21.5	+0.1
BRVK	Borovoye	50.00	314	ceP	P	13 05 21.4	+0.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KK31	Karatay Array	51.22	301	P	P	13 05 30.6	+0.2
KK31				IAmb	IAmb	13 05 31.4	
	comp=Z,11nm,0.7s						
KK31	Karatay Array	51.22	301	P	P	13 05 30.6	+0.2
KK31				pmax	pmax		
	comp=Z,11nm,0.7s						

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KKAR  Karatay Array     51.22 301   P      P        13 05 30.6 +0.2
KKAR                                IAmb   IAmb     13 05 31.4
      comp=Z,11nm,0.7s
KKAR  Karatay Array     51.22 301   P      P        13 05 30.4  0.0
KKAR  Karatay Array     51.22 301   P      P        13 05 30.6 +0.2
KKAR                                pmax   pmax
      comp=Z,11nm,0.7s
NIL   Nilore            51.56 289   P      P        13 05 32.8 -0.3
NIL                                 IAmb   IAmb     13 05 34.6
      comp=Z,19nm,0.8s
NIL   Nilore            51.56 289   P      P        13 05 32.8 -0.3
NIL                                 pmax   pmax
      comp=Z,19nm,0.8s
IMAR  Indian Mountai    52.30  29   P      P        13 05 38.8 +1.0
GAR   Garm              52.32 296   P      P        13 05 39.1 +0.4
GAR                                 IAmb   IAmb     13 05 39.6
      comp=Z,28nm,1.2s
WB0   Warramunga Arr    52.61 182   P      P        13 05 41.2 +0.5
WB0                                 IAmb   IAmb     13 05 41.8
      comp=Z,16nm,1.0s
WRAB  Tennant Creek     52.77 182   P      P        13 05 42.4 +0.5
WRAB                                IAmb   IAmb     13 05 43.6
      comp=Z,24nm,1.4s
WRAB  Tennant Creek     52.77 182ceP       P        13 05 42.1 +0.2
WRAB                                pmax   pmax
      comp=Z,28nm,2.5s
WB2   Warramunga Arr    52.78 182   P      P        13 05 42.5 +0.5
WRA   Warramunga Arr    52.78 182   P      P        13 05 42.3 +0.3
      comp=Z,5.0nm,0.4s,baz=355,slow=7.8,SNR=160
WRA                                 S      S        13 12 36.7 +0.3
      comp=Z,0.5nm,0.7s,baz=359,slow=13,SNR=4.7
      comp=Z,5.0nm,0.4s
WRA   Warramunga Arr    52.78 182   P      P        13 05 42.5 +0.5
WRA   Warramunga Arr    52.78 182   P      P        13 05 42.5 +0.5
WRA                                 pmax   pmax
      comp=Z,1.0nm,1.1s
CHGR  Chuyangaron       53.28 296   P      P        13 05 45.8 +0.2
CHGR                                IAmb   IAmb     13 05 46.5
      comp=Z,48nm,1.1s
CHGR  Chuyangaron       53.28 296   P      P        13 05 45.8 +0.2
CHGR                                pmax   pmax
      comp=Z,48nm,1.1s
CTAO  Charters Tower    53.83 168   P      P        13 05 49.9 +0.5
CTAO                                IAmb   IAmb     13 06 01.9
      comp=Z,14nm,1.4s
CTAO  Charters Tower    53.83 168   P      P        13 05 49.9 +0.5
CTAO                                pmax   pmax
      comp=Z,14nm,1.4s
BMAR  Burnt Mountain    55.91  27   P      P        13 06 05.4 +1.8
ARU   Arti              56.33 319d iP      P        13 06 05.8 -0.8
ARU                                 *PP    pP       13 07 33.5 -2.5
ARU                                                 13 08 15.9
ARU                                 S      S        13 13 22.9 +0.7
ARU                                 SS     SS       13 17 14.3 -2.4
ARU                                 pmax   pmax
      comp=Z,4.0nm,0.5s
AS31  Alice Springs     56.50 182   P      P        13 06 08.8 +0.6
ASAR  Alice Springs     56.50 182   P      P        13 06 08.8 +0.6
      comp=Z,3.5nm,0.7s,baz=12,slow=12,SNR=77
ASAR                                PcP    PcP      13 06 54.7 -4.2
      comp=Z,0.6nm,0.6s,baz=8.3,slow=13,SNR=4.3
ASAR                                S      S        13 13 24.9 -0.3
      comp=Z,0.6nm,0.9s,baz=16,slow=21,SNR=4.1
      comp=Z,3.5nm,0.7s
ASAR  Alice Springs     56.50 182   P      P        13 06 08.9 +0.7
ASAR  Alice Springs     56.50 182   P      P        13 06 08.8 +0.6
ASAR                                S      S        13 13 24.9 -0.3
PALK  Pallekele         57.06 256   P      P        13 06 12.6 +0.2
      comp=Z,4.1nm,0.4s,baz=195,slow=8.3,SNR=4.7
      comp=Z,4.1nm,0.4s
PALK  Pallekele         57.06 256   P      P        13 06 12.4  0.0
PALK                                IAmb   IAmb     13 06 14.0
      comp=Z,19nm,1.1s
PALK  Pallekele         57.06 256   P      P        13 06 12.6 +0.2
INK   Inuvik            59.89  25   P      P        13 06 31.5 +0.8
      comp=Z,0.5nm,0.5s,baz=6.1,slow=6.8,SNR=5.2
      comp=Z,0.5nm,0.5s
INK   Inuvik            59.89  25   P      P        13 06 31.5 +0.8
A36M  Sachs Harbour     61.54  20   P      P        13 06 43.2 +1.7
GEYT  Alibeck           61.74 299   P      P        13 06 43.5  0.0
      comp=Z,3.2nm,0.7s,baz=337,slow=2.3,SNR=5.2
      comp=Z,3.2nm,0.7s
GEYT  Alibeck           61.74 299   P      P        13 06 43.6  0.0
STKA  Stephens Creek    64.87 175   P      P        13 07 04.7 +1.1
      comp=Z,3.4nm,0.7s,baz=336,slow=7.2,SNR=8.2
      comp=Z,3.4nm,0.7s
STKA  Stephens Creek    64.87 175   P      P        13 07 04.7 +1.1
ARCES ARCESS Array B    66.03 339   P      P        13 07 10.1 -0.4
      comp=Z,1.1nm,0.5s,baz=57,slow=8.8,SNR=12
      comp=Z,1.1nm,0.5s
ARCES ARCESS Array B    66.03 339   P      P        13 07 10.1 -0.4
YKA   Yellowknife Ar    69.42  28   P      P        13 07 31.2 -0.2
      comp=Z,0.1nm,0.4s,baz=297,slow=6.9,SNR=3.0
YKA   Yellowknife Ar    69.42  28   P      P        13 07 31.2 -0.2
KBZ   Khabaz            69.95 310   P      P        13 07 35.0 +0.1
      comp=Z,8.3nm,0.8s,baz=82,slow=4.2,SNR=11
      comp=Z,8.3nm,0.8s
KBZ   Khabaz            69.95 310ceP       P        13 07 33.8 -1.1
KBZ                                 pmax   pmax
      comp=Z,9.0nm,0.8s
FINES FINESS Array B    70.11 331   P      P        13 07 35.5 -0.1
      comp=Z,1.3nm,0.4s,baz=74,slow=5.1,SNR=16
      comp=Z,1.3nm,0.4s
FINES FINESS Array B    70.11 331   P      P        13 07 35.5 -0.1
NB2   NORSAR Subarra    75.95 336   P      P        13 08 09.2 -0.2
      comp=Z,1.0nm,0.6s,baz=46,slow=5.3
NOA   NORSAR Array B    75.95 336   P      P        13 08 08.1 -1.3
      comp=Z,1.9nm,0.7s,baz=45,slow=5.5,SNR=6.3
      comp=Z,1.9nm,0.7s
NOA   NORSAR Array B    75.95 336   P      P        13 08 08.1 -1.3
BRTR  Keskin Array B    77.94 310   P      P        13 08 20.4 -0.5
      comp=Z,4.3nm,1.0s,baz=108,slow=4.0,SNR=6.6
      comp=Z,4.3nm,1.0s
BRTR  Keskin Array B    77.94 310   P      P        13 08 20.7 -0.1
BRTR  Keskin Array B    77.94 310ceP       P        13 08 20.3 -0.5
BRTR                                pmax   pmax
      comp=Z,4.0nm,0.9s
CLL   Collm             82.11 328  i P     P        13 08 42.3  0.0
      comp=Z,5.0nm,0.7s
CLL   Collm             82.11 328  i P     P        13 08 42.3  0.0
CLL                                 pmax   pmax
      comp=Z,5.0nm,0.7s
```

NEIC ***20*** *13:01:45.2±2.2, 17.°89N±0.°03×100.°35W±0.°04, h58km±7km, mb4.3/139, Md4.7/144(MEX), Error ellipse: s-maj=5.3km s-min=4.6km az=126.0*

MEX ***20*** *13:01:46.6±0.7, 17.°93N×100.°37W, h52km±5km, MD4.7*

IDC ***20*** *13:01:49.3±1.2, 18.°17N×100.°04W, h88km±6km, mb3.8/11, mbtmp4.1/14, MS3.3/17, Error ellipse: s-maj=26.8km s-min=12.8km az=27.0*

ISC 20 13:01:44.7±0.5**, 17.°95N**±0.°02×**100.°35W**±0.°02**, h56**km±3km**, n439,** σ1**§76**/527**, mb4.3**/58**, MS3.5**/13**, Guerrero**

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Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                    Op     ISC       h  m  s    ISC
ARIG  Puente Sto Nin     0.33    0         Pn        13 01 54.5 -0.3
ARIG                                       Sn        13 02 01.5 -0.6
ARIG  Puente Sto Nin     0.33    0 i P     Pn        13 01 54.5 -0.3
ARIG                               i S     Sn        13 02 01.5 -0.6
MEIG  Mezcala            0.69   91         Pn        13 01 58.7 -0.1
MEIG                                       Sn        13 02 08.9 -0.1
MEIG  Mezcala            0.69   91 eP      Pn        13 01 58.7 -0.1
MEIG                               i S     Sn        13 02 08.9 -0.1
ATYC  Atoyac             0.73  186 eP      Pn        13 01 58.6 -0.6
ATYC                               i S     Sn        13 02 09.6 -0.1
CAIG  El Cayaco          0.90  175         Pn        13 02 00.8 -0.5
CAIG                                       Sn        13 02 12.5 -0.9
CAIG  El Cayaco          0.90  175 eP      Pn        13 02 00.8 -0.5
CAIG                               eS      Sn        13 02 12.5 -0.9
PLIG  Platanillo         0.92   61         Pn        13 02 01.9 +0.2
PLIG                                       Sn        13 02 14.2  0.0
PLIG  Platanillo         0.92   61 i P     Pn        13 02 01.9 +0.2
PLIG                               i S     Sn        13 02 14.2  0.0
PET2  Petatlan           0.96  245 i P     Pn        13 02 01.5 -0.6
PET2                               eS      Sn        13 02 14.4 -0.6
TEJU  Tejupilco          0.97   11 i P     Pn        13 02 02.5  0.0
TEJU                               i S     Sn        13 02 15.5  0.0
ZIIG  Zihuatanejo        1.11  253         Pn        13 02 03.5 -0.7
ZIIG                                       Sn        13 02 17.2 -1.4
ZIIG  Zihuatanejo        1.11  253 eP      Pn        13 02 03.5 -0.7
ZIIG                               eS      Sn        13 02 17.2 -1.4
DAIG  Los Arroyos        1.14  144         Pn        13 02 04.2 -0.2
DAIG                                       Sn        13 02 18.4 -0.7
DAIG  Los Arroyos        1.14 144 eP       Pn        13 02 04.2 -0.2
DAIG                              i S      Sn        13 02 18.4 -0.7
VNTA  La Mica            1.14 154 i P      Pn        13 02 04.5 -0.1
VNTA                              i S      Sn        13 02 19.2  0.0
ACP2  Acapulco           1.15 157          Pn        13 02 04.4 -0.3
ACP2                                       Sn        13 02 19.3 -0.2
ACP2  Acapulco           1.15 157 i P      Pn        13 02 04.4 -0.3
ACP2                              i S      Sn        13 02 19.3 -0.2
UON   La Union           1.40 271 i P      Pn        13 02 09.2 +1.2
UON                               i S      Sn        13 02 23.4 -1.9
TOVM  TOLUCA             1.48  25          Pn        13 02 10.0 +0.6
TOVM                                       Sn        13 02 28.0 +0.2
TOVM  TOLUCA             1.48  25 i P      Pn        13 02 10.0 +0.6
TOVM                              i S      Sn        13 02 28.0 +0.2
YAIG  Yautepec           1.52  53          Pn        13 02 09.8  0.0
YAIG                                       Sn        13 02 28.3 -0.3
YAIG  Yautepec           1.52  53 i P      Pn        13 02 09.8  0.0
YAIG                              i S      Sn        13 02 28.3 -0.3
AOVM  Tlapan             1.64  36 i P      Pn        13 02 12.1 +0.4
AOVM                              eS       Sn        13 02 28.2 -3.7
TLVM  San Miguel Top     1.69  42 eP       Pn        13 02 13.0 +0.7
TLVM                              e                  13 02 34.5
CJVM  Cuajimalpa         1.73  35 i P      Pn        13 02 14.0 +1.3
CJVM                              eS       Sn        13 02 32.5 -1.4
TLIG  Tlapa              1.74 102   Pn     Pn        13 02 11.9 -0.9
TLIG                                Sn     Sn        13 02 27.9 -6.0
TLIG  Tlapa              1.74 102 eP       Pn        13 02 13.7 +0.9
TLIG                              i S      Sn        13 02 33.9  0.0
XCVM  Xochimilco         1.75  42 i P      Pn        13 02 13.8 +0.8
XCVM                              eS       Sn        13 02 34.9 +0.5
CNCY  Coyoacan           1.76  39 i P      Pn        13 02 13.9 +0.8
CNCY                              i S      Sn        13 02 30.7 -3.9
CUP5  Mexico City        1.77  39 i P      Pn        13 02 14.2 +0.9
CUP5                              i S      Sn        13 02 37.0 +2.2
CUIG  Ciudad Univers     1.77  39          Pn        13 02 14.4 +1.1
CUIG                                       Sn        13 02 36.4 +1.5
UNM   Universidad Na     1.77  39          Pn        13 02 12.7 -0.5
UNM   Universidad Na     1.77  39 eP       Pn        13 02 14.0 +0.7
UNM                               eP       Pn        13 02 14.4 +1.1
UNM                               eS       Sn        13 02 36.4 +1.5
UNM                               eS       Sn        13 02 36.8 +1.9
MPVM  San Francisco      1.78  45 i P      Pn        13 02 14.0 +0.6
MPVM                              eS       Sn        13 02 35.5 +0.4
MGIG  Malinaltepec       1.78 113          Pn        13 02 14.2 +0.8
MGIG                                       Sn        13 02 37.3 +2.3
MGIG  Malinaltepec       1.78 113 i P      Pn        13 02 14.2 +0.8
MGIG                              i S      Sn        13 02 37.3 +2.3
COVM  Coyoacan           1.80  39 eS       Sn        13 02 38.3 +2.8
BJVM  Benito Juarez      1.81  38 i P      Pn        13 02 14.9 +1.1
BJVM                              eS       Sn        13 02 30.9 -4.9
MHVM  Bosque de Chap     1.81  36 i P      Pn        13 02 14.9 +1.1
MHVM                              i S      Sn        13 02 36.5 +0.6
ATVM  ATLACOMULCO        1.87  15          Pn        13 02 15.0 +0.3
ATVM  ATLACOMULCO        1.87  15 eP       Pn        13 02 15.0 +0.3
ATVM                              eS       Sn        13 02 32.2 -5.2
VRVM  Mexico City        1.88  38 eS       Sn        13 02 40.6 +3.2
THVM  De Xico            1.88  44 i P      Pn        13 02 15.7 +0.9
THVM                              e                  13 02 35.3
AMVM  AMECAMECA          1.90  51          Pn        13 02 15.5 +0.5
AMVM  AMECAMECA          1.90  51 i P      Pn        13 02 15.5 +0.5
AMVM                              eS       Sn        13 02 33.2 -4.7
MOIG  Morelia            1.90 335   Pn     Pn        13 02 16.4 +1.4
MOIG  Morelia            1.90 335 eP       Pn        13 02 16.4 +1.4
MOIG                              eS       Sn        13 02 39.6 +1.6
PBVM  Pinon              1.91  39          Pn        13 02 15.4 +0.5
PBVM                                       Sn        13 02 38.1 +0.2
PBVM  Pinon              1.91  39 eP       Pn        13 02 15.4 +0.5
PBVM                              i S      Sn        13 02 38.1 +0.2
GMVM  Gustavo A Made     1.94  37 i P      Pn        13 02 16.2 +0.7
GMVM                              eS       Sn        13 02 33.9 -5.1
PTVM  Pico Tres Padr     2.02  35          Pn        13 02 16.9 +0.3
PTVM  Pico Tres Padr     2.02  35 eP       Pn        13 02 16.9 +0.3
PTVM                              e                  13 02 33.9
ACIG  Acambay            2.07  12          Pn        13 02 17.7 +0.3
ACIG  Acambay            2.07  12 eP       Pn        13 02 17.7 +0.3
ACIG                              eS       Sn        13 02 35.1 -7.0
FTIG  Fresnillo de T     2.11  91          Pn        13 02 18.8 +1.0
FTIG                                       Sn        13 02 42.1 -0.9
FTIG  Fresnillo de T     2.11  91 eP       Pn        13 02 18.8 +1.0
FTIG                              i S      Sn        13 02 42.1 -0.9
ACAM  Acambaro           2.12 351 eS       Sn        13 02 36.5 -6.8
URUA  Uruapan            2.20 312          Pn        13 02 20.5 +1.4
URUA                                       Sn        13 02 43.9 -1.3
URUA  Uruapan            2.20 312 i P      Pn        13 02 20.5 +1.4
URUA                              i S      Sn        13 02 43.9 -1.3
ZUVM  ZUMPANGO           2.23  33          Pn        13 02 19.9 +0.4
ZUVM  ZUMPANGO           2.23  33 eP       Pn        13 02 19.9 +0.4
ZUVM                              eS       Sn        13 02 38.0 -8.0
PHPU  Puebla             2.34  62          Pn        13 02 21.8 +0.7
PHPU                                       Sn        13 02 48.0 -0.8
PHPU  Puebla             2.34  62 i P      Pn        13 02 21.8 +0.7
PHPU                              e                  13 02 48.0
VTVM  Tizayuca           2.35  39          Pn        13 02 21.2 -0.1
VTVM  Tizayuca           2.35  39 eP       Pn        13 02 21.2 -0.1
VTVM                              eS       Sn        13 02 53.1 +4.0
HLIG  Huajuapan de L     2.43  92          Pn        13 02 23.5 +1.3
HLIG                                       Sn        13 02 50.0 -0.8
HLIG  Huajuapan de L     2.43  92 eP       Pn        13 02 23.5 +1.3
HLIG                              eS       Sn        13 02 50.0 -0.8
TXIG  Tlaxiaco           2.56 105          Pn        13 02 25.4 +1.4
TXIG                                       Sn        13 02 53.8 -0.3
TXIG  Tlaxiaco           2.56 105 eP       Pn        13 02 25.4 +1.4
TXIG                              eS       Sn        13 02 53.8 -0.3
PNIG  Pinotepa           2.63 126          Pn        13 02 25.8 +1.0
PNIG                                       Sn        13 02 57.9 +2.4
PNIG  Pinotepa           2.63 126 eP       Pn        13 02 25.8 +1.0
PNIG                              eS       Sn        13 02 57.9 +2.4
DHIG  Demacu             2.65  28          Pn        13 02 25.1 -0.2
DHIG                                       Sn        13 02 57.1 +0.7
DEIG  Demacu             2.65  28 i P      Pn        13 02 25.1 -0.2
DEIG                              i S      Sn        13 02 57.1 +0.6
JRQG  Juriquilla Cam     2.75 358 i P      Pn        13 02 33.9 +7.3
JRQG                              i S      Sn        13 03 01.1 +2.4
MMIG  Aquila             2.87 277          Pn        13 02 27.9 -0.1
MMIG                                       Sn        13 02 58.8 -2.6
MMIG  Aquila             2.87 277 eP       Pn        13 02 27.9 -0.1
MMIG                              i S      Sn        13 02 58.8 -2.6
TPIG  Tehuac#an          2.88  80          Pn        13 02 29.6 +1.2
TPIG                                       Sn        13 03 01.5 -0.4
TPIG  Tehuac#an          2.88  80 eP       Pn        13 02 29.6 +1.2
TPIG                              eS       Sn        13 03 01.5 -0.4
YOIG  Yosondua           2.89 112          Pn        13 02 30.1 +1.5
YOIG                                       Sn        13 03 07.2 +4.9
YOIG  Yosondua           2.89 112 eP       Pn        13 02 30.1 +1.5
YOIG                              i S      Sn        13 03 07.2 +4.9
IGIG  Irapuato, Guan     2.94 342          Pn        13 02 31.6 +2.4
IGIG  Irapuato, Guan     2.94 342 eP       Pn        13 02 31.6 +2.4
IGIG                              eS       Sn        13 03 00.2 -3.3
TOIG  Toxpalan           3.13  87          Pn        13 02 33.0 +1.3
TOIG                                       Sn        13 03 05.9 -2.0
TOIG  Toxpalan           3.13  87 eP       Pn        13 02 33.0 +1.3
TOIG                              eS       Sn        13 03 05.9 -2.0
OZST  Orizaba            3.22  73 i P      Pn        13 02 33.1 +0.1
OZST                              eS       Sn        13 03 09.5 -0.8
COIG  Colima             3.40 292 eP       Pn        13 02 36.6 +1.3
COIG                              eS       Sn        13 03 15.3 +0.8
CXUV  Coxquihui          3.42  49 i P      Pn        13 02 36.0 +0.3
CXUV                              eS       Sn        13 03 18.6 +3.5
JUBC  Volcan de Coli     3.43 298 eP       Pn        13 02 38.3 +2.3
JUBC                              eS       Sn        13 03 24.1 +8.6
EZ5V                     3.44 297 eP       Pn        13 02 38.4 +2.3
EZ5V                              eS       Sn        13 03 21.9 +6.1
MNGA  Volcan de Coli     3.45 297 eP       Pn        13 02 38.3 +2.1
MNGA                              eS       Sn        13 03 22.2 +6.2
INCO  Volcan de Coli     3.46 298 eP       Pn        13 02 39.1 +2.6
INCO                              eS       Sn        13 03 22.8 +6.3
SOMAC Volcano de Col     3.48 297 eP       Pn        13 02 39.0 +2.2
SOMAC                             eS       Sn        13 03 24.4 +7.4
COMA  Comala             3.51 294 eS       Sn        13 03 22.8 +5.5
OXIG  Oaxaca             3.56 104          Pn        13 02 39.7 +2.0
OXIG                                       Sn        13 03 17.9 -0.7
VHO   Vista Hermosa      3.56 104 eP       Pn        13 02 39.7 +2.0
VHO                               eS       Sn        13 03 17.9 -0.7
OXBJ  Oaxaca             3.57 104          Pn        13 02 41.0 +3.2
OXBJ  Oaxaca             3.57 104 i P      Pn        13 02 41.0 +3.2
OXBJ                              e                  13 03 09.9
CDAR  Ciudad de Arme     3.61 286 eP       Pn        13 02 39.5 +1.3
CDAR                              eS       Sn        13 03 24.4 +4.7
PEIG  Puerto Escondi     3.62 122          Pn        13 02 39.6 +1.2
PEIG                                       Sn        13 03 17.7 -2.3
PEIG  Puerto Escondi     3.62 122 eP       Pn        13 02 39.6 +1.2
PEIG                              eS       Sn        13 03 17.7 -2.3
JAUV  Jalcomulco         3.65  67 eP       Pn        13 02 39.3 +0.5
JAUV                              i S      Sn        13 03 24.2 +3.6
R15V                     3.66 290 eP       Pn        13 02 40.1 +1.2
R15V                              eS       Sn        13 03 27.4 +6.6
RPIG  Rio Verde          3.94   5 eP       Pn        13 02 47.9 +5.1
RPIG                              eS       Sn        13 03 34.0 +6.2
CTUV  Llano Grande       3.98  28 i P      Pn        13 02 43.6 +0.3
CTUV                              i S      Sn        13 03 31.3 +2.6
LVIG  Laguna Verde       4.12  64 eP       Pn        13 02 47.6 +2.4
LVIG                              i S      Sn        13 03 32.7 +0.5
NEUV  Arroyo Zacate      4.34  92 eP       Pn        13 02 49.0 +0.9
NEUV                              eS       Sn        13 03 34.7 -2.7
CIHU  Emiliano Zapat     4.36 288 i P      Pn        13 02 49.6 +1.1
CIHU                              eS       Sn        13 03 36.2 -1.9
HUIG  Huatulco           4.60 117          Pn        13 02 52.5 +0.6
HUIG                                       Sn        13 03 41.6 -2.3
HUIG  Huatulco           4.60 117 eP       Pn        13 02 52.5 +0.6
HUIG                              i S      Sn        13 03 41.6 -2.3
CJM   Chamela            4.71 290 i P      Pn        13 02 54.9 +1.6
CJM                               eS       Sn        13 03 46.9 +0.3
PMUV  Sontecomapan       5.00  82 eP       Pn        13 02 56.6 -0.8
PMUV                              eS       Sn        13 03 51.9 -2.1
ANIG  Ahuacatlan         5.00 309 e        Pn        13 02 58.2 +0.8
ANIG                              e                  13 03 53.0
GTIG  Gomez Farias       5.21  12          Pn        13 03 00.3  0.0
GTIG  Gomez Farias       5.21  12 eP       Pn        13 03 00.3  0.0
GTIG                              eS       Sn        13 03 58.5 -0.6
ZAIG  Zacatecas          5.23 337   Pn     Pn        13 03 00.1 -0.6
ZAIG  Zacatecas          5.23 337 eP       Pn        13 03 03.1 +2.4
ZAIG                              eS       Sn        13 03 55.6 -4.3
CMIG  Matias Romero      5.28  98   P      Pn        13 03 02.6 +1.5
      9.8nm,0.3s,baz=272,slow=13,SNR=26
CMIG                                S      Sn        13 03 59.8 -1.0
      40nm,0.4s,baz=80,slow=17,SNR=5.6
CMIG                                LR     LR        13 05 15.0
      comp=Z,115nm,21.3s,baz=263,slow=41
CMIG  Matias Romero      5.28  98          Pn        13 03 02.7 +1.5
CMIG                                       Sn        13 03 58.7 -2.1
CMIG  Matias Romero      5.28  98 eP       Pn        13 03 02.7 +1.5
CMIG                              i S      Sn        13 03 58.7 -2.1
LNIG  Linares            6.97   7 eP       Pn        13 03 24.3 +0.1
LNIG                              eS       Sn        13 04 41.8 -0.4
TGIG                     7.00  98          Pn        13 03 27.9 +3.2
TGIG                                       Sn        13 04 40.7 -2.3
TGIG                     7.00  98 eP       Pn        13 03 27.9 +3.2
TGIG                              eS       Sn        13 04 40.7 -2.3
PCIG                     7.18 107          Pn        13 03 30.5 +3.4
PCIG                                       Sn        13 04 46.8 -0.6
PCIG                     7.18 107 i P      Pn        13 03 30.5 +3.4
PCIG                              i S      Sn        13 04 46.8 -0.6
MNIG  Monterrey          7.63   0 e        sPb       13 04 01.4 -8.3
CCIG  Comitan            8.03 101 eS       Sn        13 05 08.1 -0.3
PATR  El Naranjo         8.28 109 eP       Pn        13 03 45.5 +3.1
PATR                              eS       Sn        13 05 13.2 -1.4
PAVE  Pavencul           8.30 108 eP       Pn        13 03 46.5 +3.7
PAVE                              eS       Sn        13 05 09.2 -6.0
CHUJ  Union Juarez       8.40 109 eP       Pn        13 03 47.3 +3.3
CHUJ                              eS       Sn        13 05 14.6 -3.0
LPIG  La Paz            11.13 305   LR     LR        13 08 01.0
      comp=Z,59nm,20.9s,baz=196,slow=33
TX31  Lajitas Ar. Si    11.74 346          Pn        13 04 32.2 +2.6
TX32  Lajitas Array     11.74 346   Pn     Pn        13 04 32.2 +2.6
TXAR  Lajitas Array     11.74 346   P      Pn        13 04 33.1 +3.6
      0.4nm,0.6s,baz=159,slow=13,SNR=15
TXAR                                LR     LR        13 09 23.8
      comp=Z,64nm,20.5s,baz=154,slow=39
TXAR  Lajitas Array     11.74 346   Pn     Pn        13 04 31.4 +1.9
WHTX  Lake Whitney,     14.23  10   P      P         13 05 08.3 -0.7
      baz=190
MNTX  Cornudas Mount    14.43 343   P      P         13 05 11.8 +0.4
      baz=160,SNR=7.4
ABTX  Abilene, Hawle    14.63   2   P      P         13 05 13.8 +0.3
GDL2  Guadalupe Moun    14.65 346   Pn     Pn        13 05 11.1 +2.2
HSIG                    14.69 321   P      P         13 05 15.7 +1.5
545A  Edgard            15.03  35   Pn     Pn        13 05 12.6 -1.1
POST  Post              15.09 356   P      P         13 05 19.6 +0.8
POST                                IAmb   IAmb      13 05 21.6
      comp=Z,28nm,1.4s
319A  Douglas           15.63 330   Pn     P         13 05 23.3 -1.5
319A                                IAmb   IAmb      13 05 28.2
      comp=Z,17nm,0.7s
121A  Cookes Peak, D    16.00 337   P      P         13 05 31.4 +2.4
121A  Cookes Peak, D    16.00 337   P      P         13 05 30.7 +1.8
      baz=153,SNR=9.9
MSTX  Muleshoe          16.11 353          Pn        13 05 28.2 +0.5
MSTX                                IAmb   IAmb      13 05 32.2
      comp=Z,28nm,1.2s
MSTX  Muleshoe          16.11 353   P      P         13 05 29.0 -1.1
      baz=171
DUN6  Lazy B Ranch      16.54 333   P      P         13 05 36.5 +1.6
DUN6                                IAmb   IAmb      13 05 38.7
      comp=Z,27nm,1.1s
X34A  Smith Ranch, M    16.74   7   Pn     Pn        13 05 35.5  0.0
X34A                                IAmb   IAmb      13 05 55.9
      comp=Z,13nm,0.7s
WMOK  Wichita Mounta    16.78   4   Pn     Pn        13 05 36.1 +0.1
WMOK  Wichita Mounta    16.78   4   P      P         13 05 37.5  0.0
      baz=184
AMTX  Amarillo          16.91 356   P      P         13 05 39.0 +0.1
AMTX                                IAmb   IAmb      13 05 39.8
      comp=Z,12nm,0.6s
AMTX  Amarillo          16.91 356   P      P         13 05 38.6 -0.3
      baz=175
TUC   Tucson            17.12 329          P         13 05 42.0 +0.7
TUC   Tucson            17.12 329   P      P         13 05 43.1 +1.8
      baz=144
LENM  Lemitar           17.21 341   P      P         13 05 43.3 +1.0
W35A  Tecumseh          17.42  10   P      P         13 05 44.7 +0.3
W35A                                IAmb   IAmb      13 05 46.2
      comp=Z,10.0nm,0.7s
MIAR  Mount Ida         17.60  19   P      P         13 05 46.6 +0.1
MIAR  Mount Ida         17.60  19   P      P         13 05 46.9 +0.4
      baz=201
ANMO  Albuquerque       17.79 343   P      P         13 05 50.0 +1.3
      comp=Z,4.1nm,0.7s,baz=247,slow=12,SNR=15
ANMO                                LR     LR        13 13 09.0
      comp=Z,49nm,18.4s,baz=253,slow=38
ANMO  Albuquerque       17.79 343   P      P         13 05 50.3 +1.5
ANMO  Albuquerque       17.79 343   P      P         13 05 50.2 +1.5
      baz=160
214A  Organ Pipe Nat    17.93 323   P      Pn        13 05 52.1 +1.9
214A  Organ Pipe Nat    17.93 323   P      Pn        13 05 53.1 +2.9
      baz=138
TUL1  Leonard           18.35  12   P      P         13 05 54.6 -0.1
TUL1                                IAmb   IAmb      13 05 55.4
      comp=Z,13nm,0.7s
TUL1  Leonard           18.35  12   P      P         13 05 54.7  0.0
      baz=193
CROK  Carrier           18.61   6   P      P         13 05 57.5  0.0
CROK                                IAmb   IAmb      13 05 59.4
      comp=Z,32nm,1.2s
X18A  Snowflake         18.61 334   P      Pn        13 05 59.4 +0.8
X18A                                IAmb   IAmb      13 06 02.1
      comp=Z,7.9nm,0.7s
OK046 Pawnee Station    18.63   9   P      P         13 05 57.4 -0.4
OK046                               IAmb   IAmb      13 05 59.6
      comp=Z,11nm,1.0s
OK048 Pawnee Station    18.64   9   P      P         13 05 57.5 -0.4
OK048                               IAmb   IAmb      13 06 22.5
      comp=Z,34nm,1.5s
WHAR  Wooly Hollow      18.70  21   P      P         13 05 58.3 -0.3
WHAR                                IAmb   IAmb      13 06 05.4
      comp=Z,12nm,0.9s
OK035 E0210 Rd and N    18.75   4   P      P         13 05 59.3 +0.3
OK035                               IAmb   IAmb      13 06 00.7
      comp=Z,11nm,0.8s
W18A  Petrified Fore    19.04 336   P      Pn        13 06 04.4 +0.7
W18A                                IAmb   IAmb      13 06 10.6
      comp=Z,10nm,0.8s
W18A  Petrified Fore    19.04 336   P      Pn        13 06 05.1 +1.4
      baz=151
113A  Mohawk Valley,    19.07 323   P      Pn        13 06 03.8 -0.1
U38A  Gravette          19.16  15   P      P         13 06 03.2 -0.4
X16A  Lo Mia Camp, P    19.16 331   P      Pn        13 06 05.8 +0.6
T35A  Sooner Cattle     19.20   9   P      P         13 06 03.3 -0.7
T35A                                IAmb   IAmb      13 06 24.5
      comp=Z,14nm,0.9s
KAN05 Bluff City Nor    19.22   6   P      P         13 06 04.9 +0.7
LRAL  Lakeview Retre    19.23  36   P      P         13 06 03.5 -0.9
LRAL                                IAmb   IAmb      13 06 22.1
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       comp=Z,14nm,1.2s
LRAL   Lakeview Retre    19.23  36  P      P      13 06 03.5 -0.9
       baz=221
FCAR   Ozark Folk Cen    19.30  21  P      P      13 06 05.2 +0.1
FCAR                                IAmb   IAmb   13 06 24.6
       comp=Z,12nm,0.7s
KAN06  Argonia West S    19.36   6  P      P      13 06 06.1 +0.3
T25A   Trinidad          19.45 350  P      Pn     13 06 08.3 -0.3
T25A   Trinidad          19.45 350  P      Pn     13 06 08.6 -0.1
       baz=168
GLA    Glamis            19.89 322  P      Pn     13 06 13.0 -0.7
GLA                                 IAmb   IAmb   13 06 15.7
       comp=Z,5.4nm,0.6s
GLA    Glamis            19.89 322  P      Pn     13 06 13.9 +0.2
       baz=135
WUAZ   Wupatki           20.05 333  P      Pn     13 06 15.8 +0.1
WUAZ   Wupatki           20.05 333  P      Pn     13 06 16.0 +0.3
       baz=147,SNR=26
DWPF   Disney Wildern    20.11  56  P      P      13 06 11.6 -2.4
       baz=243
Y49A   Blount Mountai    20.17  36  P      P      13 06 13.3 -1.3
PLAL   Pickwick Lake     20.18  30  P      P      13 06 13.8 -1.0
PLAL                                IAmb   IAmb   13 06 18.1
       comp=Z,9.4nm,0.7s
BLYC   Blythe            20.22 324  P      Pn     13 06 17.3 -0.3
BLYC                                IAmb   IAmb   13 06 18.4
       comp=Z,18nm,0.8s
SDCO   Great Sand Dun    20.24 348  P      P      13 06 16.5 +0.9
SDCO   Great Sand Dun    20.24 348  P      P      13 06 16.8 +1.2
       baz=165,SNR=14
IKP    In-Ko-Pah, Jac    20.39 319  P      Pn     13 06 19.4 -0.2
       baz=132
SWSC   Sam W. Stewart    20.40 320  P      Pn     13 06 19.8 +0.2
       baz=133
PDMCI  Parker Dam,Lak    20.43 326  P      Pn     13 06 19.9  0.0
       baz=139
MVCO   Mesa Verde        20.49 341  P      P      13 06 19.4 +1.1
MVCO                                IAmb   IAmb   13 06 20.5
       comp=Z,11nm,0.8s
MVCO   Mesa Verde        20.49 341  P      P      13 06 19.6 +1.3
       baz=157,SNR=10.0
S22A   4UR Ranch, Cre    20.53 345  P      Pn     13 06 20.4 -1.1
S22A   4UR Ranch, Cre    20.53 345  P      Pn     13 06 20.6 -0.9
       baz=162,SNR=10
BC3    Big Chuckawall    20.69 322  P      Pn     13 06 22.4 -0.7
       baz=135,SNR=6.1
MONP2  Monument Peak     20.75 319  P      Pn     13 06 23.3 -0.7
       baz=132
CBKS   Cedar Bluff       20.80   1  P      Pn     13 06 23.1 -1.3
       baz=181
IRM    Iron Mountain     20.87 324  P      Pn     13 06 24.6 -0.6
       baz=136,SNR=16
NEE2   Needles Airpor    21.03 326  P      P      13 06 26.0 +2.1
       baz=139
KSCO   Kaye Shedlock'    21.08 355  P      P      13 06 24.9 +0.3
KSCO   Kaye Shedlock'    21.08 355  P      P      13 06 25.4 +0.9
       baz=173
109C   Camp Elliot, M    21.18 318  P      P      13 06 28.0 +2.5
       baz=130
U15A   North Rim         21.22 333  P      P      13 06 28.2 +2.0
U15A                                IAmb   IAmb   13 06 48.7
       comp=Z,8.0nm,1.0s
WVT    Waverly           21.23  29  P      P      13 06 25.5 -0.6
WVT                                 IAmb   IAmb   13 06 27.5
       comp=Z,11nm,0.6s
WVT    Waverly           21.23  29  P      P      13 06 26.2 +0.1
       baz=214
PMD    Palm Desert       21.23 321  P      P      13 06 27.7 +1.6
TPFO   Pinon Flats       21.25 320  P      P      13 06 28.9 +2.4
       baz=133
BELC   Belle Mtn. Jos    21.25 322  P      P      13 06 28.5 +2.1
       baz=134
PFO    Pinyon Flats O    21.26 320  P      P      13 06 28.0 +1.6
       comp=Z,2.7nm,0.8s,baz=112,slow=8.0,SNR=6.9
PFO                                 LR     LR     13 15 28.2
       comp=Z,38nm,19.5s,baz=209,slow=38
       comp=Z,2.7nm,0.8s
PFO    Pinyon Flats O    21.26 320  P      P      13 06 27.7 +1.2
PFO    Pinyon Flats O    21.26 320  P      P      13 06 29.3 +2.8
       baz=133
KSU1   Kansas State U    21.33   8  P      P      13 06 25.8 -1.3
KSU1                                IAmb   IAmb   13 06 27.6
       comp=Z,15nm,0.8s
KSU1   Kansas State U    21.33   8  P      P      13 06 27.6 +0.5
       baz=189
PV13   Radium Mtn., P    21.46 341  P      P      13 06 29.6 +0.8
PV13                                IAmb   IAmb   13 06 30.5
       comp=Z,5.9nm,0.8s
R40A   Maddies Statio    21.47  18  P      P      13 06 27.7 -0.8
R40A                                IAmb   IAmb   13 06 49.7
       comp=Z,7.6nm,0.6s
PV15   Paradox Valley    21.53 342  P      P      13 06 30.8 +1.3
PV15                                IAmb   IAmb   13 06 31.9
       comp=Z,11nm,0.9s
CCM    Cathedral Cave    21.57  20  P      P      13 06 29.6  0.0
       baz=204
PV11   David Mesa, Pa    21.61 342  P      P      13 06 30.6 +0.3
PV11                                IAmb   IAmb   13 06 44.1
       comp=Z,5.9nm,0.8s
GMRC   Granite Mounta    21.62 324  P      P      13 06 32.9 +2.5
       baz=137
PV07   Paradox Valley    21.67 342  P      P      13 06 32.1 +1.2
PV07                                IAmb   IAmb   13 06 33.1
       comp=Z,7.4nm,1.0s
MURC   Murrieta          21.70 319  P      P      13 06 33.3 +2.2
       baz=131
PV10   Paradox Valley    21.73 341  P      P      13 06 32.5 +0.9
PV10                                IAmb   IAmb   13 06 51.9
       comp=Z,12nm,1.0s
FVM    French Village    21.77  22  P      P      13 06 30.3 -1.5
FVM                                 IAmb   IAmb   13 06 33.9
       comp=Z,7.6nm,0.7s
PV23   Carpenter Ridg    21.79 341  P      P      13 06 33.1 +0.8
PV23                                IAmb   IAmb   13 06 34.0
       comp=Z,7.3nm,0.9s
V12A   Nelson            21.89 327  P      P      13 06 34.1 +0.9
KNB    Kanab             21.95 332  P      P      13 06 35.3 +1.4
KNB                                 IAmb   IAmb   13 06 37.3
       comp=Z,5.5nm,0.8s
S44A   Carbondale        21.95  24  P      P      13 06 33.6  0.0
S44A                                IAmb   IAmb   13 06 35.0
       comp=Z,15nm,0.8s
HEC    Hector,Ludlow     22.04 323  P      P      13 06 36.6 +1.8
       baz=135
PKCU   Pink Cliffs       22.09 334  P      P      13 06 37.0 +1.4
PKCU                                IAmb   IAmb   13 06 39.4
       comp=Z,13nm,1.1s
LCMT   Little Creek M    22.13 332  P      P      13 06 37.1 +1.3
TUQ    Turquoise Moun    22.24 325  P      P      13 06 38.8 +1.7
       baz=137
ISCO   Idaho Springs     22.25 349  P      P      13 06 37.4 +0.1
ISCO                                IAmb   IAmb   13 06 38.8
       comp=Z,7.1nm,0.7s
ISCO   Idaho Springs     22.25 349  P      P      13 06 37.9 +0.6
       baz=166,SNR=14
CIS    Catalina Islan    22.35 317  P      P      13 06 40.3 +2.2
       baz=129
CPCT   Cooper Cave       22.39  36  P      P      13 06 37.9 -0.7
CPCT                                IAmb   IAmb   13 06 38.7
       comp=Z,6.1nm,0.5s
P38A   Dawn              22.40  14  P      P      13 06 38.1 -0.4
P38A                                IAmb   IAmb   13 06 39.1
       comp=Z,8.5nm,0.7s
MTPU   Mount Pierson     22.55 335  P      P      13 06 42.0 +1.5
MTPU                                IAmb   IAmb   13 06 44.2
       comp=Z,23nm,1.3s
GSC    Goldstone, Bar    22.64 323  P      P      13 06 42.8 +1.5
       baz=135
SHPR   Sheep Range       22.65 328  P      P      13 06 42.6 +1.2
SRU    San Rafael Swe    22.87 339  P      P      13 06 43.9 +0.1
SRU                                 IAmb   IAmb   13 06 45.0
       comp=Z,6.2nm,0.8s
Q16A   Castle Valley     22.93 338  P      P      13 06 45.1 +0.8
Q16A                                IAmb   IAmb   13 06 46.5
       comp=Z,4.4nm,0.6s
MSU    Marysvale         22.95 336  P      P      13 06 44.8 +0.2
MVU    Marysvale         22.95 336  P      P      13 06 45.3 +0.6
MVU                                 IAmb   IAmb   13 06 48.3
       comp=Z,21nm,1.1s
TKL    Tuckaleechee C    22.96  37  P      P      13 06 42.1 -2.4
       comp=Z,3.2nm,0.6s,baz=197,slow=11,SNR=5.3
       comp=Z,3.2nm,0.6s
OGNE   Ogallala          22.97 357  P      P      13 06 45.9 +1.3
OGNE                                IAmb   IAmb   13 06 48.3
       comp=Z,7.9nm,0.7s
OGNE   Ogallala          22.97 357  P      P      13 06 45.4 +0.8
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       baz=175
EDW2   Edwards Air Fo    23.05 320  P      P      13 06 47.4 +1.9
       baz=132
Q44A   Meyer Farm, Va    23.10  23  P      P      13 06 44.5 -1.3
Q44A                                IAmb   IAmb   13 06 45.5
       comp=Z,12nm,0.8s
O20A   White River Ci    23.14 344  P      P      13 06 47.3 +0.8
O20A   White River Ci    23.14 344  P      P      13 06 47.7 +1.2
       baz=160,SNR=8.5
P17A   Butcher Ranch,    23.27 339  P      P      13 06 48.5 +0.8
P17A                                IAmb   IAmb   13 06 49.9
       comp=Z,8.0nm,1.2s
TMUT   Trail Mountain    23.27 338  P      P      13 06 48.6 +0.8
TMUT                                IAmb   IAmb   13 06 50.0
       comp=Z,8.2nm,0.5s
PRN    Pahroc Range      23.30 329  P      P      13 06 49.1 +1.3
N23A   Red Feather La    23.37 349  P      P      13 06 49.0 +0.3
N23A   Red Feather La    23.37 349  P      P      13 06 49.3 +0.6
       baz=166,SNR=12
TPNV   Topopah Spring    23.55 327  P      P      13 06 51.6 +1.3
TPNV   Topopah Spring    23.55 327  P      P      13 06 52.4 +2.1
       baz=139
MPMC   Manual Prospec    23.57 323  P      P      13 06 52.3 +1.8
       baz=135,SNR=6.3
N38A   Joes South For    23.58  14  P      P      13 06 49.3 -1.1
WCT    Wildcat Mounta    23.63 326  P      P      13 06 52.4 +1.4
PHWY   Pilot Hill        23.69 350  P      P      13 06 51.9 +0.2
PHWY                                IAmb   IAmb   13 06 52.6
       comp=Z,8.5nm,0.6s
TZTN   Tazewell          23.73  35  P      P      13 06 50.7 -1.1
       baz=222
RDMU   Red Mountain      23.91 342  P      P      13 06 53.6  0.0
RDMU                                IAmb   IAmb   13 06 55.7
       comp=Z,11nm,0.9s
KMSC   Kings Mountain    24.07  41  P      P      13 06 53.6 -1.3
       baz=229
NLU    North Lily Min    24.17 338  P      P      13 06 56.8 +0.8
BSUT   Blindstream Ca    24.24 340  P      P      13 06 56.6 -0.2
BSUT                                IAmb   IAmb   13 06 59.5
       comp=Z,7.4nm,0.9s
VES    Vestal, Richgr    24.36 321  P      P      13 06 59.4 +1.9
       baz=132
RWWY   Rawlins           24.38 347  P      P      13 06 58.2 +0.2
O44A   Mansfield         24.40  22  P      P      13 06 56.5 -1.3
HDIL   Hopedale          24.47  21  P      P      13 06 57.0 -1.4
HDIL   Hopedale          24.47  21  P      P      13 06 58.1 -0.3
       baz=206
LCH    Last Change Ra    24.50 325  P      P      13 07 00.1 +1.1
Q12A   Willow Creek R    24.51 332  P      P      13 07 00.1 +1.0
S51A   Beattyville       24.52  33  P      P      13 06 57.2 -1.8
S51A                                IAmb   IAmb   13 07 27.4
       comp=Z,12nm,1.0s
SCIA   State Center      24.65  13  P      P      13 07 00.6 +0.5
       baz=196
DUG    Dugway, Tooele    24.65 337  P      P      13 07 00.7 +0.4
DUG                                 IAmb   IAmb   13 07 04.1
       comp=Z,5.8nm,0.8s
DUG    Dugway, Tooele    24.65 337  P      P      13 07 02.1 +1.7
       baz=150,SNR=6.6
U54A   Nelsons Funny     24.70  38  P      P      13 06 58.4 -2.2
U54A                                IAmb   IAmb   13 07 09.3
       comp=Z,11nm,0.8s
W57A   Gilead            24.92  43  P      P      13 07 02.2 -0.4
K22A   Casper            25.18 349  P      P      13 07 06.1 +1.0
K22A                                IAmb   IAmb   13 07 08.6
       comp=Z,13nm,0.8s
K22A   Casper            25.18 349  P      P      13 07 06.2 +1.1
       baz=166,SNR=6.9
P49A   Miami Univ. Ec    25.43  29  P      P      13 07 06.6 -0.6
       baz=216
HWUT   Hardware Ranch    25.47 340  P      P      13 07 08.8 +1.1
HWUT                                IAmb   IAmb   13 07 11.7
       comp=Z,6.2nm,0.9s
NV11   Mina Array Sit    25.66 326  P      P      13 07 09.7 +0.2
NVAR   Mina Array Bea    25.73 326  P      P      13 07 12.4 +2.2
       comp=Z,3.7nm,0.7s,baz=145,slow=9.7,SNR=30
NVAR                                pP     sP     13 07 32.3 +1.3
       comp=Z,2.2nm,0.6s,baz=149,slow=11,SNR=6.9
NVAR                                LR     LR     13 17 59.2
       comp=Z,53nm,18.6s,baz=214,slow=38
       comp=Z,3.7nm,0.7s
NVAR   Mina Array Bea    25.73 326  P      P      13 07 11.7 +1.4
O48B   Farmland          25.82  27  P      P      13 07 09.5 -1.3
       baz=214
R53A   Hurricane         25.90  35  P      P      13 07 09.8 -1.7
ECSD   EROS Data Cent    25.90   6  P      P      13 07 11.4 -0.1
       baz=188,SNR=9.5
BW06   Boulder Array     25.95 344  P      P      13 07 12.1 -0.1
BW06                                IAmb   IAmb   13 07 14.5
       comp=Z,11nm,1.4s
BW06   Boulder Array     25.95 344  P      P      13 07 12.5 +0.3
       baz=159,SNR=7.4
PD31   Pinedale Array    25.95 344  P      P      13 07 11.8 -0.4
PD31                                IAmb   IAmb   13 07 14.6
       comp=Z,9.6nm,1.4s
PDAR   Pinedale Array    25.95 344  P      P      13 07 12.2 +0.1
       comp=Z,2.8nm,0.6s,baz=140,slow=12,SNR=22
PDAR                                pP     sP     13 07 33.2 +0.2
       comp=Z,3.1nm,0.9s,baz=143,slow=12,SNR=5.0
PDAR                                LR     LR     13 18 26.1
       comp=Z,56nm,20.3s,baz=166,slow=39
       comp=Z,2.8nm,0.6s
PDAR   Pinedale Array    25.95 344  P      P      13 07 12.1 -0.1
BLA    Blacksburg        25.99  38  P      P      13 07 10.6 -1.8
       baz=227
HVU    Hansel Valley     26.03 338  P      P      13 07 13.5 +0.7
ELK    Elko              26.09 334  LR     LR     13 18 58.7
       comp=Z,75nm,18.3s,baz=160,slow=40
N47A   Urbana            26.11  26  P      P      13 07 11.6 -1.7
O49A   Covington         26.13  29  P      P      13 07 11.6 -1.9
O49A                                IAmb   IAmb   13 07 32.5
       comp=Z,8.6nm,0.8s
P52A   Corning           26.77  32  P      P      13 07 18.4 -0.9
       baz=221
REDW   Red Top Meadow    26.85 343  P      P      13 07 20.5 +0.2
TPAW   Teton Pass        27.00 343  P      P      13 07 21.9 +0.2
TPAW                                IAmb   IAmb   13 07 26.7
       comp=Z,4.7nm,0.8s
FXWY   Fox Creek         27.16 343  P      P      13 07 23.1 +0.1
MOOW   Moose Ponds       27.18 343  P      P      13 07 23.1 -0.2
RLMT   Red Lodge         28.11 347  P      P      13 07 31.2 -0.2
RLMT   Red Lodge         28.11 347  P      P      13 07 31.9 +0.4
       baz=161
HLID   Hailey            28.17 338  P      P      13 07 33.1 +1.1
       baz=150
MCMT   McKenzie Canyo    28.78 341  P      P      13 07 38.4 +0.9
BOZ    Bozeman (W)       29.13 344  P      P      13 07 41.6 +1.1
       baz=157
LRM    Limekiln Ridge    29.56 343  P      P      13 07 44.9 +0.5
SDV    Santo Domingo     30.23 103  LR     LR     13 21 05.4
       comp=Z,70nm,18.0s,baz=266,slow=38
AGMN   Agassiz Nation    30.50   6  P      P      13 07 51.4 -0.9
AGMN                                IAmb   IAmb   13 07 52.8
       comp=Z,7.3nm,0.9s
AGMN   Agassiz Nation    30.50   6  P      P      13 07 52.1 -0.3
       baz=188
D41A   Chassel           30.62  16  P      P      13 07 52.5 -0.9
MSO    Missoula          30.91 342  P      P      13 07 57.4 +1.2
       baz=154
SADO   Sadowa            32.10  29  P      P      13 08 04.2 -2.4
ULM    Lac du Bonnet     32.43   5  P      P      13 08 07.6 -1.7
       comp=Z,6.5nm,0.9s,baz=188,slow=8.4,SNR=8.5
       comp=Z,6.5nm,0.9s
FFC    Flin Flon         36.73 358  P      P      13 08 45.4 -1.1
FFC                                 IAmb   IAmb   13 08 56.1
       comp=Z,3.9nm,1.1s
D62A   Allapoint, All    38.79  35  P      P      13 09 02.9 -1.1
SCHQ   Schefferville     44.85  27  P      P      13 09 52.0 -1.3
       comp=Z,1.3nm,0.4s,baz=235,slow=8.9,SNR=10
       comp=Z,1.3nm,0.4s
SCHQ   Schefferville     44.85  27  P      P      13 09 51.7 -1.6
YKA    Yellowknife Ar    45.60 351  P      P      13 09 58.0 -1.1
       comp=Z,2.3nm,0.8s,baz=159,slow=7.6,SNR=25
YKA                                 PcP    PcP    13 11 37.1 +0.5
       comp=Z,0.4nm,0.7s,baz=155,slow=3.6,SNR=4.8
       comp=Z,2.3nm,0.8s
RPN    Rapa Nui          45.64 191  LR     LR     13 24 43.5
       comp=Z,52nm,19.5s,baz=172,slow=30
DLBC   Dease Lake        45.93 339  LR     LR     13 31 07.2
       comp=Z,62nm,19.8s,baz=80,slow=38
WTLY   Watson Lake, Y    46.82 341  P      P      13 10 09.4 +0.6
       baz=141
MMPY   Sheldon Lake,     49.52 342  P      P      13 10 30.9 +1.3
       baz=140
P30M   Million Dollar    49.63 337  P      P      13 10 31.2 +0.7
       baz=132
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FRB    Frobisher Bay     50.65  18  LR     LR     13 34 44.6
       comp=Z,40nm,18.1s,baz=72,slow=39
M29M   Somme Creek       51.73 339  P      P      13 10 46.4 +0.1
       baz=131
L29M   L29M              52.06 339  P      P      13 10 49.3 +0.6
       baz=132
K29M   Barlow Dome       52.36 340  P      P      13 10 51.6 +0.7
       baz=133
GLB    Gilahina Butte    53.09 336  P      P      13 10 57.4 +1.1
BCAR   Beaver Creek A    53.30 338  P      P      13 10 58.5 +0.7
EPYK   Eagle Plains      53.90 343  P      P      13 11 01.9 -0.2
       baz=135
F31M   Tsiigehtchic      53.90 345  P      P      13 11 02.0 -0.1
       baz=139
K27K   Chicken           54.00 339  P      P      13 11 03.4 +0.5
       baz=128
EGAK   Eagle             54.17 340  P      P      13 11 04.6 +0.5
EGAK                                IAmb   IAmb   13 11 06.1
       comp=Z,4.1nm,0.9s
EGAK   Eagle             54.17 340  P      P      13 11 04.6 +0.5
       baz=130
M24K   Tolsona, Glenn    54.39 335  P      P      13 11 06.5 +0.7
       baz=123
INK    Inuvik            54.51 346  P      P      13 11 06.5  0.0
       comp=Z,4.2nm,0.9s,baz=125,slow=6.6,SNR=16
       comp=Z,4.2nm,0.9s
INK    Inuvik            54.51 346  P      P      13 11 06.3 -0.2
INK    Inuvik            54.51 346  P      P      13 11 06.8 +0.4
       baz=140,SNR=6.3
RIDG   Independent Ri    54.81 338  P      P      13 11 10.0 +1.2
RIDG   Independent Ri    54.81 338  P      P      13 11 09.5 +0.7
       baz=125
I27K   Kandik River      54.85 340  P      P      13 11 09.8 +0.8
       baz=130
O22K   Cooper Landing    55.04 333  P      P      13 11 11.0 +0.6
       baz=118
I26K   Coal Creek Min    55.16 340  P      P      13 11 12.2 +0.9
I26K                                IAmb   IAmb   13 11 40.9
       comp=Z,6.0nm,1.3s
I26K   Coal Creek Min    55.16 340  P      P      13 11 11.6 +0.4
       baz=128
KDAK   Kodiak Island     55.19 329  LR     LR     13 32 53.4
       comp=Z,62nm,18.6s,baz=166,slow=34
PMR    Palmer            55.33 334  P      P      13 11 13.5 +1.0
GHO    Glory Hole Cre    55.33 334  P      P      13 11 13.0 +0.4
G27K   Doyon Strip       55.64 342  P      P      13 11 15.5 +0.7
       baz=130
SUA    Susitna One       55.94 333  P      P      13 11 18.0 +0.9
SUA    Susitna One       55.94 333  P      P      13 11 18.1 +1.0
       baz=118
HDA    Harding Lake      55.95 338  P      P      13 11 17.8 +0.9
HDA                                 IAmb   IAmb   13 11 46.1
       comp=Z,1.9nm,0.8s
HDA    Harding Lake      55.95 338  P      P      13 11 17.2 +0.2
       baz=123
A36M   Sachs Harbour     55.97 351  P      P      13 11 15.9 -1.0
A36M                                IAmb   IAmb   13 11 17.1
       comp=Z,4.1nm,0.8s
A36M   Sachs Harbour     55.97 351  P      P      13 11 16.4 -0.5
       baz=151
PRP    Porcupine Dome    56.08 339  P      P      13 11 19.1 +1.1
PRP                                 IAmb   IAmb   13 11 46.1
       comp=Z,4.8nm,1.1s
PRP    Porcupine Dome    56.08 339  P      P      13 11 18.4 +0.4
       baz=125
IL31                     56.13 338  P      P      13 11 19.3 +1.1
ILAR   Eielson Array     56.13 338  P      P      13 11 18.4 +0.2
       comp=Z,0.8nm,0.9s,baz=134,slow=4.3,SNR=7.5
ILAR                                pP     sP     13 11 40.2 +0.3
       comp=Z,1.3nm,0.8s,baz=144,slow=5.1,SNR=8.5
       comp=Z,0.8nm,0.9s
ILAR   Eielson Array     56.13 338  P      P      13 11 19.3 +1.1
MCK    McKinley          56.33 336  P      P      13 11 20.3 +0.6
SPU    Mount Spurr       56.38 333  P      P      13 11 21.0 +0.9
G26K   Porcupine Rive    56.38 341  P      P      13 11 21.0 +1.0
       baz=128
SPCR   Spurr Chakacha    56.45 333  P      P      13 11 21.8 +1.1
       baz=116
SKT    Skwentna          56.51 334  P      P      13 11 21.6 +0.5
SKT                                 IAmb   IAmb   13 11 46.2
       comp=Z,2.5nm,0.8s
SKT    Skwentna          56.51 334  P      P      13 11 21.9 +0.9
       baz=117
E27K   Coleen River      56.53 343  P      P      13 11 21.2 +0.1
       baz=131
Q18K   Katmai Hardscr    56.71 329  P      P      13 11 23.4 +0.8
       baz=112
TRF    Thorofare Moun    56.71 336  P      P      13 11 23.4 +0.8
TRF    Thorofare Moun    56.71 336  P      P      13 11 23.4 +0.8
       baz=119
MDM    Murphy Dome       56.71 338  P      P      13 11 22.7 +0.3
MDM                                 IAmb   IAmb   13 12 02.3
       comp=Z,6.1nm,1.4s
NEA2   Nenana            56.82 337  P      P      13 11 24.3 +1.1
       baz=121
RES    Resolute Bay      56.83   2  P      P      13 11 22.1 -0.9
RES                                 IAmb   IAmb   13 11 22.4
       comp=Z,2.4nm,1.0s
BMAR   Burnt Mountain    56.92 341  P      P      13 11 24.3 +0.4
F26K   Sheenjek River    56.95 342  P      P      13 11 24.1 +0.1
       baz=128
Q17K   Contact Creek     57.00 329  P      P      13 11 25.2 +0.6
       baz=110
G25K   Bearman Lake      57.00 340  P      P      13 11 25.7 +1.4
       baz=125
H24K   Noodor Dome       57.07 339  P      P      13 11 25.9 +0.9
       baz=123
P18K   Big Mountain,     57.09 330  P      P      13 11 25.1 -0.1
P18K   Big Mountain,     57.09 330  P      P      13 11 25.2 -0.1
       baz=112
M20K   Styx River        57.15 333  P      P      13 11 26.2 +0.6
       baz=115
PPLA   Purkeypile        57.21 335  P      P      13 11 27.0 +0.9
I23K   Minto, Yukon-K    57.22 338  P      P      13 11 26.7 +0.8
I23K   Minto, Yukon-K    57.22 338  P      P      13 11 27.3 +1.4
       baz=121
N19K   Bonanza Creek     57.30 332  P      P      13 11 27.4 +0.7
       baz=113
BPAW   Bear Paw Mtn.     57.30 336  P      P      13 11 26.7 +0.1
BPAW   Bear Paw Mtn.     57.30 336  P      P      13 11 27.1 +0.5
       baz=119
F25K   Christian Rive    57.35 341  P      P      13 11 27.2 +0.3
       baz=126
CAST   Castle Rocks      57.40 335  P      P      13 11 27.3  0.0
CAST   Castle Rocks      57.40 335  P      P      13 11 28.2 +0.9
       baz=117
G24K   Hadweenzic Riv    57.41 340  P      P      13 11 28.0 +0.7
       baz=124
Q16K   King Salmon       57.52 329  P      P      13 11 29.1 +1.0
       baz=110
H23K   Yukon River       57.64 338  P      P      13 11 29.4 +0.5
       baz=121
MLY    Manley            57.66 337  P      P      13 11 29.7 +0.6
MLY                                 IAmb   IAmb   13 11 54.1
       comp=Z,2.8nm,1.0s
MLY    Manley            57.66 337  P      P      13 11 30.1 +0.9
       baz=120
M19K   Big River Lodg    57.70 333  P      P      13 11 30.2 +0.8
       baz=114
CHUM   Lake Minchumin    57.71 336  P      P      13 11 30.1 +0.7
       baz=117
L20K   Farewell, AK      57.72 334  P      P      13 11 30.2 +0.6
       baz=115
F24K   Squaw Lake        58.01 340  P      P      13 11 31.5  0.0
       baz=124
L19K   White Mountain    58.01 333  P      P      13 11 32.2 +0.6
       baz=114
C27K   Jago River        58.05 344  P      P      13 11 31.7  0.0
       baz=129
K20K   Telida            58.18 335  P      P      13 11 33.6 +0.9
       baz=115
I21K   Tanana            58.20 337  P      P      13 11 33.0 +0.2
       baz=118
G23K   Bananza Creek     58.27 339  P      P      13 11 34.1 +0.8
       baz=121
P16K   Nushagak River    58.29 329  P      P      13 11 34.0 +0.5
       baz=109
H22K   Ishtalitna Cre    58.32 338  P      P      13 11 34.2 +0.5
       baz=119
SFJD   Kangerlussuaq     58.44  21  LR     LR     13 39 22.4
       comp=Z,46nm,19.1s,baz=184,slow=39
O16K   Kokwok River B    58.53 330  P      P      13 11 36.0 +0.8
       baz=109
C26K   Camden Bay        58.56 343  P      P      13 11 36.2 +1.0
       baz=128
D25K   Kavik River       58.60 343  P      P      13 11 36.3 +0.7
       baz=126
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COLD	Coldfoot	58.60	340	P	P	13 11 36.5	+0.9
	baz=121						
H21K	Melozitna Rive	58.73	337	P	P	13 11 37.3	+0.8
	baz=118						
TTA	Tatalina	58.80	334	P	P	13 11 37.4	+0.3
	baz=113						
N16K	Nishlik Lake	59.14	331	P	P	13 11 40.8	+1.3
	baz=109						
IMAR	Indian Mountai	59.22	338	P	P	13 11 39.3	-0.7
G21K	Allakaket	59.38	338	P	P	13 11 41.6	+0.6
	baz=118						
D23K	Nanushuk River	59.67	341	P	P	13 11 44.2	+1.2
	baz=122						
F21K	Alatna River	59.70	339	P	P	13 11 44.4	+1.1
	baz=118						
TNA	Tin City	64.56	335	P	P	13 12 16.7	+0.9
	baz=103						
BBTS	Babate	79.85	78	LR	LR	13 47 01.1	
	comp=Z,74nm,19.2s,baz=125,slow=34						
NB2	NORSAR Subarra	84.42	27	P	sP	13 14 33.1	-0.3
	comp=Z,4.7nm,1.0s,baz=294,slow=4.8						
NOA	NORSAR Array B	84.42	27	P	P	13 14 11.6	+0.5
	comp=Z,0.7nm,0.7s,baz=299,slow=4.9,SNR=3.1						
NOA				pP	sP	13 14 33.4	-0.1
	comp=Z,2.3nm,0.9s,baz=294,slow=4.7,SNR=4.7						
NOA				LR	LR	13 52 23.5	
	comp=Z,14nm,18.4s,baz=325,slow=36						
	comp=Z,0.7nm,0.7s						
TIXI	Tiksi	84.64	346	P	P	13 14 12.1	+0.2
ARCES	ARCESS Array B	84.80	17	P	P	13 14 13.7	+0.9
	comp=Z,4.0nm,0.9s,baz=298,slow=3.8,SNR=6.0						
ARCES				pP	sP	13 14 35.1	-0.1
	comp=Z,4.4nm,0.7s,baz=300,slow=2.4,SNR=3.9						
	comp=Z,4.0nm,0.9s						
HFS	Hagfors	85.93	27	LR	LR	13 56 06.0	
	comp=Z,29nm,20.2s,baz=285,slow=38						
WRA	Warramunga Arr	128.43	258	PKP	PKiKP	13 20 46.6	-0.1
	comp=Z,1.1nm,0.8s,baz=84,slow=2.2,SNR=11						
ASAR	Alice Springs	129.21	254	PKP	PKPdf	13 20 47.8	+0.3
	comp=Z,1.0nm,0.9s,baz=129,slow=1.5,SNR=6.8						
PZH	PanZhiHua	130.88	334	PKP	PKPdf	13 20 49.1	-1.7

AAE 20 13:02:27.0±1.1, 8°.99N×38°.80E, h37km±11km, ML2.4, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAE	Adis Abeba	0.06	319	*e*P	Pn	13 02 32.3	-1.3
AAE				*e*S	Sn	13 02 37.9	-0.2
AAE				IAML		13 02 50.4	
	comp=E,246nm,0.7s						
AAE	Adis Abeba	0.06	319	*e*P	Pn	13 02 32.4	-1.2
AAE				*e*S	Sn	13 02 38.0	-0.1
AAE				IAML		13 02 41.5	
	comp=E,200nm,0.6s						
FURI	Furi	0.15	234	*e*P	Pn	13 02 33.8	-4.6
FURI				*e*S	Sn	13 02 38.0	-11
FURI				IAML		13 02 42.8	
	comp=E,540nm,0.5s						
FURI	Furi	0.15	234	*e*P	Pn	13 02 33.9	-4.5
FURI				*e*S	Sn	13 02 39.4	-10
FURI				IAML		13 02 43.1	
	comp=E,540nm,0.5s						

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*IDC **20** 13:17:35.5±4.5, 15°.57S×174°.14W, h111km±23km, mb3.6/3, mbtmp4.0/4, Error ellipse: s-maj=260.9km s-min=19.2km az=151.0*

*NEIC **20** 13:17:35.5±1.8, 15°.8S±0°.1×174°.1W±0°.1, h103km±5km, mb4.5/8, Error ellipse: s-maj=20.8km s-min=15.6km az=101.0*

ISC 20 13:17:34.7±0.8, 15°.8S±0°.1×174°.1W±0°.1, h100km, n16, σ1s.25/18, mb4.4/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.93	50	P	Pn	13 18 21.3	+1.7
	152nm,0.5s,baz=201,slow=0.7,SNR=90						
AFI				S	Sn	13 18 53.2	-1.1
	157nm,0.3s,baz=348,slow=14,SNR=12						
AFI	Afiamalu	2.93	50	Pn	Pn	13 18 21.1	+1.5
NIUE	Niue	5.13	130	Pn	Pn	13 18 49.3	+0.1
RTZ	Ruatahuna	24.03	197	P	P	13 22 42.6	+2.1
RTZ				IAmb	IAmb	13 23 14.5	
	comp=Z,19nm,1.4s						
HIZ	Hauiti	24.61	201	P	P	13 22 47.8	+2.2
LTZ	Lake Taylor	29.31	201	P	P	13 23 28.5	+0.8
LTZ				IAmb	IAmb	13 23 47.3	
	comp=Z,35nm,1.5s						
OXZ	Oxford	29.87	201	P	P	13 23 33.9	+1.2
STKA	Stephens Creek	43.25	240	P	P	13 25 26.1	-0.3
WB0	Warramunga Arr	49.06	257	P	P	13 26 11.8	-0.3
WB0				IAmb	IAmb	13 26 49.5	
	comp=Z,9.9nm,1.5s						
WRAB	Tennant Creek	49.09	257	P	P	13 26 11.8	-0.5
WRAB				IAmb	IAmb	13 26 47.5	
	comp=Z,7.5nm,1.5s						
WRA	Warramunga Arr	49.10	257	P	P	13 26 12.3	-0.2
	comp=Z,0.5nm,0.4s,baz=95,slow=6.7,SNR=24						
	comp=Z,0.5nm,0.4s						
AS31	Alice Springs	49.35	252	P	P	13 26 13.6	-0.7
ASAR	Alice Springs	49.35	252	P	P	13 26 13.6	-0.7
	comp=Z,3.4nm,0.8s,baz=85,slow=7.6,SNR=44						
ASAR				ScP	ScP	13 31 21.1	-0.9
	comp=Z,0.2nm,0.5s,baz=86,slow=8.8,SNR=7.1						
	comp=Z,3.4nm,0.8s						
ASAR	Alice Springs	49.35	252	P	P	13 26 13.9	-0.4
PDAR	Pinedale Array	83.02	42	P	P	13 29 47.9	-1.4
	comp=Z,0.5nm,0.7s,baz=231,slow=3.7,SNR=6.1						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	83.02	42	P	P	13 29 48.0	-1.3

IDC 20 13:34:40.1±1.0, 20°.73N×145°.01E, h0km, mb3.6/6, mbtmp3.6/6, MS3.2/1, Error ellipse: s-maj=48.0km s-min=21.7km az=106.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	20.54	92	T	T	14 00 40.7	
	baz=280,slow=75,SNR=73						
H11S1	WAKE ISLAND Hy	20.55	92	T	T	14 00 42.2	
	baz=280,slow=75,SNR=63						
H11N1	WAKE ISLAND Hy	20.55	89	T	T	14 00 45.2	
	baz=276,slow=75,SNR=119						
H11S2	WAKE ISLAND Hy	20.55	92	T	T	14 00 42.8	
	baz=280,slow=75,SNR=62						
H11N2	WAKE ISLAND Hy	20.56	89	T	T	14 00 45.6	
	baz=276,slow=75,SNR=121						
H11N3	WAKE ISLAND Hy	20.57	89	T	T	14 00 46.4	
	baz=276,slow=75,SNR=119						
KSRS	Korea Array	22.32	322	P	P	13 39 40.0	+0.7
	1.2nm,0.9s,baz=148,slow=10.0,SNR=1.8						
	1.2nm,0.9s						
DAV	Davao City (W)	23.20	237	LR	LR	13 50 17.9	
	comp=Z,49nm,18.6s,baz=238,slow=40						
WRA	Warramunga Arr	41.75	195	P	P	13 42 30.9	-0.3
	0.7nm,0.7s,baz=16,slow=8.6,SNR=6.5						
	0.7nm,0.7s						
ASAR	Alice Springs	45.44	194	P	P	13 43 00.8	-0.2
	0.4nm,0.7s,baz=17,slow=8.6,SNR=6.2						
	0.4nm,0.7s						
ILAR	Eielson Array	62.12	27	P	P	13 45 01.5	-1.2
	0.6nm,0.9s,baz=268,slow=6.0,SNR=6.2						
	0.6nm,0.9s						
YKA	Yellowknife Ar	76.51	28	P	P	13 46 31.7	0.0
	0.7nm,0.8s,baz=289,slow=5.5,SNR=9.5						
	0.7nm,0.8s						
NVAR	Mina Array Bea	82.40	52	P	P	13 47 06.1	+1.4
	0.7nm,0.8s,baz=268,slow=4.0,SNR=5.3						
	0.7nm,0.8s						

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*ISK **20** 13:56:38.3, 39°.13N×28°.21E, h5km, ML2.9/37*

*DDA **20** 13:56:38.9±0.0, 39°.13N×28°.28E, h9km±4km, ML2.6*

ISC 20 13:56:38.8±1.2, 39°.12N±0°.03×28°.25E±0°.02, h9km±13km, n48, σ0s.64/58, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STEP	BALIKESIR_Sava	0.48	302	P	Pb	13 56 49.0	-0.5
STEP				S	Sb	13 56 56.6	-0.2
SIMA	Simav-Kutahya	0.57	94	Pg	Pb	13 56 50.5	-0.5
BALB	Balikesir	0.59	331	Pg	Pb	13 56 50.9	-0.4
BALB				Sg	Sb	13 56 59.9	+0.1
BKES	Balkesir-Mer	0.66	338	P	Pg	13 56 51.6	+0.1
BKES				S	Sg	13 57 00.6	+0.5
BKES				*i* AML	AML	13 57 01.0	
	comp=E,188nm,0.1s						
MANT	Manisa	0.68	159	P	Pb	13 56 53.0	+0.2
MANT				S	Sb	13 57 01.8	-0.6
MANT				*i* AML	AML	13 57 02.0	
	comp=N,277nm,0.1s						
KULA	Kula-Manisa	0.69	152	Pg	Pb	13 56 52.9	-0.1
USAK	Uak-Merkez	0.72	124	P	Pb	13 56 53.5	-0.1
USAK				S	Sg	13 57 02.8	+0.6
GEDZ	Gediz	0.91	95	Pg	Pn	13 56 57.6	-0.2
ZEDA	zmir-Bergama	0.93	261	P	Pn	13 56 57.6	-0.3
ZEDA				S	Sb	13 57 10.4	+1.0
TVSB	Tavsanli	0.99	70	Pg	Pb	13 56 58.7	+0.5
DKL	Dikili	1.05	268	Pg	Pb	13 56 59.0	-0.1
KCTX	Karacabey (Bur	1.14	4	Pn	Pb	13 57 00.7	0.0
BLCB	Balcova	1.20	232	Pn	Pn	13 57 01.9	+0.2
EDC	Edincik	1.26	346	Pn	Pg	13 57 02.7	-0.2
ANDZ	Kutahya, Merke	1.33	73	P	Pn	13 57 03.4	-0.3
ANDZ				S	Sg	13 57 21.8	0.0
ANDZ				*i* AML	AML	13 57 24.0	
	comp=N,129nm,0.5s						
MDNY	Mudanya-Bursa	1.34	21	Pn	Pg	13 57 04.2	-0.2
KRBG	Karabiga-Canak	1.47	330	Pn	Pn	13 57 05.6	+0.2
GEMT	Gemlik	1.50	29	Pn	Pg	13 57 07.8	+0.3
URLA	Izmir	1.50	240	Pn	Pb	13 57 06.5	-0.3
ARMT	Armutlu	1.52	18	Pn	Pg	13 57 07.7	-0.2
IZI	Iznik	1.54	37	Pn	Pg	13 57 08.2	0.0
BILE	Bilecik/Merkez	1.63	50	P	Pb	13 57 08.6	-0.4
BILE				*i* AML	AML	13 57 30.0	
	comp=N,74nm,0.9s						
BILE				S	Sg	13 57 30.9	-0.2
CAVI	Cavuskoy	1.63	48	Pn	Pg	13 57 09.6	-0.5
EZN	Ezine	1.65	296	Pn	Pb	13 57 09.0	-0.3
YLV	Yalova	1.68	31	Pn	Pb	13 57 10.3	+0.4
COMU	Canakkale	1.68	306	Pn	Pb	13 57 09.5	-0.4
LPK	Lapseki	1.70	318	Pn	Pn	13 57 09.0	+0.4
TAVA	DENIZLI_Tavas	1.73	162	P	Pn	13 57 08.6	-0.6
ADVT	Abdulvahap	1.74	41	Pn	Pb	13 57 11.1	+0.2
RKY	Sarkoy-Tekirda	1.77	332	Pn	Pb	13 57 11.3	-0.1
BOZC	Bozcaada	1.85	294	Pn	Pn	13 57 11.3	+0.7
HISA	Bilecik-Osmane	1.86	43	P	Pn	13 57 10.9	+0.1
HISA				S	Sb	13 57 37.3	+1.0
HISA				*i* AML	AML	13 57 45.0	
	comp=N,54nm,0.4s						
SIGR	SIGRI	1.86	273	Pn	Pb	13 57 11.9	-1.1
GELI	Tayfur-Gelibol	1.87	313	Pn	Pb	13 57 12.3	-0.8
HRT	Hereke	2.02	32	Pn	Pb	13 57 14.9	-0.7
KAVV	Kandilli-Istan	2.04	17	Pn	Pb	13 57 15.5	-0.4
ISK	Istanbul-Kandi	2.04	17	Pn	Pb	13 57 15.3	-0.6
ERIK	Erikli-Kesan	2.04	320	Pn	Pb	13 57 15.0	-1.1
SGAZ	Eskisehir, Sey	2.05	78	P	Pb	13 57 16.8	+0.6
SGAZ				S	Sg	13 57 44.9	+0.3
SRCK	Saricakaya, Es	2.05	63	Pn	Pb	13 57 16.2	0.0
BGKT	Bogazkoy	2.09	11	Pn	Pb	13 57 16.3	-0.6
CTKS	Kestanelik-??a	2.12	5	Pn	Pb	13 57 16.8	-0.5
GULT	Gulveren	2.18	52	Pn	Pb	13 57 17.4	-1.0
KLYT	Kilyos	2.21	16	Pn	Pb	13 57 17.8	-1.1
SAUV	Serdivan-Sakar	2.27	44	Pn	Pb	13 57 19.0	-0.9
SILT	Sile	2.29	27	Pn	Pb	13 57 19.3	-1.0
CTYL	Yalikoy Yolu	2.35	1	Pn	Pb	13 57 19.6	-1.7
ALN	Alexandroupoli	2.45	317	Pn	Pn	13 57 20.8	+1.9

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*IDC **20** 14:00:31.2±0.9, 2°.23N×127°.54E, h0km, mb4.0/7, mbtmp4.0/7, Error ellipse: s-maj=49.2km s-min=15.9km az=69.0*

*NEIC **20** 14:00:41.3±2.0, 2°.22N±0°.09×127°.5E±0°.1, h74km±9km, mb4.4/30, Error ellipse: s-maj=16.8km s-min=13.0km az=78.0*

*DJA **20** 14:00:41.2±0.7, 2°N±4°×12°7E±°, h31km±9km, M4.1/11, mb4.2/5, mB5.4/1, MLv4.0/11, Mw(mB)4.8/1*

ISC 20 14:00:40.5±0.5, 2°.26N±0°.05×127°.41E±0°.09, h75km, n55, σ1s.33/59, mb4.3/21, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.48	182		Pn	14 01 05.8	+0.4
TNTI	Ternate	1.48	182	P	Pn	14 01 06.5	+1.1
TNTI				S	Sn	14 01 25.6	+1.5
SGSI	Sangihe	2.36	307	P	Pn	14 01 16.7	-0.4
SGSI				S	Sn	14 01 43.7	-1.4
LBMI	Labuha	2.88	178	P	Pn	14 01 25.6	+1.4
SANI	Sanana	4.51	198	P	Pn	14 01 45.6	-0.8
SANI				S	Sn	14 02 36.5	-1.1
GTOI	Gorontalo	4.69	250	P	Pn	14 01 51.2	+2.4
KCP	Kidapawan	5.26	334	⇑*e*P	Pn	14 01 58.4	+1.7
KCP				*i* S	Sn	14 02 55.4	-0.6
NLAI	Namlea	5.47	183	P	Pn	14 02 00.8	+1.3
	19nm,0.9s,3µm0.1nm						
LUWI	Luwuk	5.68	235	Pn	Pn	14 02 04.7	+2.3
MRSI	Marisa	5.75	252	P	Pn	14 02 04.9	+1.6
MSAI	Masohi	5.77	165	P	Pn	14 02 09.1	+5.5
TOLI2	Tolitoli	6.72	260	Pn	Pn	14 02 17.0	+0.3
FAKI	Fak Fak	7.06	137	Pn	Pn	14 02 23.1	+1.8
MTN	Manton Dam	15.45	166	Pn	Pn	14 04 11.7	-2.5
KNRA	Kununurra	17.87	176	P	P	14 04 41.4	-2.6
KNRA				IAmb	IAmb	14 05 10.4	
	comp=Z,22nm,1.4s						
FITZ	Fitzroy Crossi	20.30	185	P	P	14 05 10.4	-0.1
TWG	Pinlang	21.35	344	P	P	14 05 19.9	-1.8
TWG				IAmb	IAmb	14 05 21.1	
	comp=Z,15nm,0.8s						
YULB	Yu-li	21.83	345	P	P	14 05 25.4	-1.5
YULB				IAmb	IAmb	14 06 00.8	
	comp=Z,19nm,1.3s						
TPUB	Ta-pu	21.93	343	P	P	14 05 26.7	-1.2
TPUB				IAmb	IAmb	14 05 41.4	
	comp=Z,24nm,1.1s						
WB0	Warramunga Arr	22.94	163	P	P	14 05 36.7	-2.0
YHNB	Yeheng	23.03	346	P	P	14 05 40.5	+0.9
YHNB				IAmb	IAmb	14 05 48.1	
	comp=Z,41nm,1.4s						
WRAB	Tennant Creek	23.08	163	P	P	14 05 38.3	-1.8
WRAB				IAmb	IAmb	14 05 42.0	
	comp=Z,4.7nm,0.6s						
WRA	Warramunga Arr	23.09	163	P	P	14 05 38.4	-1.7
	comp=Z,1.6nm,0.3s,baz=334,slow=11,SNR=61						
	comp=Z,1.6nm,0.3s						
WB2	Warramunga Arr	23.09	163	P	P	14 05 38.4	-1.8
MBWA	Marble Bar	24.46	198	P	P	14 05 52.0	-0.5
MBWA				IAmb	IAmb	14 06 33.4	
	comp=Z,16nm,1.4s						
PSA00	Pilbara Seismi	24.81	197	P	P	14 05 55.3	-0.5
PSA00				IAmb	IAmb	14 06 17.6	
	comp=Z,11nm,1.3s						
AS31	Alice Springs	26.53	167	P	P	14 06 09.9	-1.5
ASAR	Alice Springs	26.53	167	P	P	14 06 10.1	-1.4
	comp=Z,1.0nm,0.5s,baz=346,slow=7.5,SNR=40						
ASAR				PcP	PcP	14 09 34.2	-0.3
	comp=Z,0.4nm,0.5s,baz=354,slow=2.1,SNR=5.0						
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	26.53	167	P	P	14 06 09.8	-1.6
GIRL	Giralia	27.89	207	P	P	14 06 24.3	+0.8
CMAR	Chiang Mai Arr	32.21	302	P	P	14 07 02.1	+0.3
	comp=Z,1.1nm,0.9s,baz=123,slow=7.0,SNR=7.5						
	comp=Z,1.1nm,0.9s						
MORW	Morawa	33.00	198	P	P	14 07 08.1	-0.5
MORW				IAmb	IAmb	14 07 49.4	
	comp=Z,23nm,1.5s						
MJAR	Matsushiro Arr	35.54	15	P	P	14 07 29.6	-0.9
	comp=Z,1.1nm,0.5s,baz=198,slow=9.1,SNR=4.2						
	comp=Z,1.1nm,0.5s						
BBOO	Buckleboo	35.83	168	P	P	14 07 31.4	-1.5
NWAO	Narrogin (SRO)	36.29	195	P	P	14 07 36.3	-0.7
STKA	Stephens Creek	36.52	159	P	P	14 07 38.5	-0.5
	comp=Z,0.9nm,0.3s,baz=336,slow=8.7,SNR=13						
	comp=Z,0.9nm,0.3s						
STKA	Stephens Creek	36.52	159	P	P	14 07 38.4	-0.5
JSD	Sado	36.97	14	P	P	14 07 42.1	-0.6
JMM	Marumori	37.51	18	P	P	14 07 47.2	+0.1
ULN	Ulaanbaatar	48.72	342	P	P	14 09 18.7	+1.0
ULN				IAmb	IAmb	14 09 24.2	
	comp=Z,2.5nm,0.8s						
SONM	Songino Array	48.90	341	P	P	14 09 20.2	+1.2
	comp=Z,0.9nm,0.6s,baz=154,slow=8.1,SNR=7.2						
	comp=Z,0.9nm,0.6s						
SONM	Songino Array	48.90	341	P	P	14 09 20.4	+1.4
MK31	Makanchi Array	59.15	325	P	P	14 10 34.5	+1.0
MK31				IAmb	IAmb	14 10 35.5	
	comp=Z,4.3nm,0.7s						
MKAR	Makanchi Array	59.15	325	P	P	14 10 34.7	+1.2
	comp=Z,5.3nm,0.5s,baz=117,slow=8.2,SNR=98						
	comp=Z,5.3nm,0.5s						
MKAR	Makanchi Array	59.15	325	P	P	14 10 34.5	+1.0
MAKZ	Makanchi	59.33	325	P	P	14 10 35.9	+1.1
KDJ	Kajisay	59.89	319	P	P	14 10 40.7	+1.7
AAK	Ala-Archa	61.90	318	P	P	14 10 54.0	+1.5
AAK				IAmb	IAmb	14 10 57.0	
	comp=Z,4.7nm,1.4s						
KBL	Kabul	62.95	308	P	P	14 11 01.7	+1.9
KBL				IAmb	IAmb	14 11 44.8	
	comp=Z,2.4nm,0.6s						
KURK	Kurchatov	63.34	328	P	P	14 11 02.4	+0.7
KURK				IAmb	IAmb	14 11 03.3	
	comp=Z,4.7nm,0.8s						
GAR	Garm	63.42	313	P	P	14 11 02.7	+0.1
GAR				IAmb	IAmb	14 11 04.8	
	comp=Z,8.3nm,1.1s						
KKAR	Karatay Array	64.77	317	P	P	14 11 11.7	+0.4
ABKAR	Akbulak array	73.71	321	P	P	14 12 06.6	+0.2
IMAR	Indian Mountai	83.40	24	P	P	14 13 00.9	+1.6
BMAR	Burnt Mountain	87.16	23	P	P	14 13 18.8	+0.6

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*MAN **20** 14:35:23.4, 5°.52N×125°.29E, h32km, mb4.2, ML3.0, MS2.7*

*IDC **20** 14:35:27.3±2.9, 5°.65N×125°.01E, h81km±26km, mb3.1/4, mbtmp3.4/4, Error ellipse: s-maj=42.5km s-min=18.6km az=79.0*

ISC 20 14:35:24.5±1.7, 5°.5N±0°.1×125°.1E±0°.1, h48km±16km, n11, σ2s.08/17, mb3.4/5, 3C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	0.58	344	⇑*i*P	Pn	14 35 35.8	-0.9
GSPH				*i* S	Sn	14 35 44.2	-1.3
KCP	Kidapawan	1.47	359	⇓*i*P	Pn	14 35 48.8	+0.1
KCP				*i* S	Sn	14 36 06.2	-0.6
DAV	Davao City (W)	1.60	17	P	Pn	14 35 52.2	+1.7
	178nm,0.4s,baz=222,slow=5.3,SNR=2.2						
DAV				S	Sn	14 36 12.3	+2.4
	227nm,0.4s,baz=295,slow=23,SNR=7.9						
CTBH	Cotabato--PC H	1.89	333	⇑*i*P	Pn	14 35 55.0	+0.7
CTBH				*i* S	Sn	14 36 19.4	+2.5
BIPH	Bislig	2.92	25	⇑*i*P	Pn	14 36 05.7	-2.8
CGP	Cagayan de Oro	2.94	352	⇓*e*P	Pn	14 36 06.9	-1.9
CGP				*e*S	Sn	14 36 46.5	+3.7
WRA	Warramunga Arr	26.89	161	P	P	14 41 01.8	+0.6
	0.3nm,0.5s,baz=338,slow=11,SNR=15						
	0.3nm,0.5s						
KRVT	Keravat (AS076	28.60	109	P	P	14 41 18.4	+1.9
	25nm,0.5s,baz=352,slow=5.4,SNR=4.5						
ASAR	Alice Springs	30.26	164	P	P	14 41 32.4	+1.2
	0.3nm,0.4s,baz=342,slow=6.9,SNR=19						
ASAR				PcP	PcP	14 44 30.1	-0.9
	0.2nm,0.9s,baz=348,slow=2.9,SNR=1.5						
	0.3nm,0.4s						
MKAR	Makanchi Array	55.17	325	P	P	14 44 51.5	-0.8
	0.1nm,0.5s,baz=132,slow=7.4,SNR=2.8						
	0.1nm,0.5s						
ILAR	Eielson Array	84.19	26	P	P	14 47 48.0	-2.4
	0.2nm,0.5s,baz=251,slow=5.4,SNR=6.5						
	0.2nm,0.5s						

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*AZER **20** 14:39:42.7±0.6, 38°.73N×39°.89E, h3km, Error ellipse: s-maj=20.8km s-min=6.3km az=10.0*

*IDC **20** 14:39:44.4±0.8, 38°.69N×39°.78E, h0km, mb3.6/6, mbtmp3.6/13, ML3.4/7, MS3.1/11, Error ellipse: s-maj=16.9km s-min=8.9km az=158.0*

*DDA **20** 14:39:44.6±0.0, 38°.62N×39°.79E, h17km, MW4.0*

*ISK **20** 14:39:44.6, 38°.65N×39°.80E, h6km, ML4.0/18*

*NEIC **20** 14:39:46.4±1.0, 38°.52N±0°.09×39°.79E±0°.05, h9km±8km, mb4.5/4, Error ellipse: s-maj=14.3km s-min=3.2km az=159.0*

ISC 20 14:39:45.9±0.9, 38°.63N±0°.02×39°.78E±0°.02, h8km±6km, n103, σ1s.40/144, mb4.6/13, MS3.1/7, 1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOVA	Elazig, Kovanc	0.08	21	SPECP		14 39 48.0	
KOVA				P	Pg	14 39 48.2	+0.1
KOVA				S	Sg	14 39 50.8	+1.1
TNCL	Tunceli-Merkez	0.52	340	P	Pg	14 39 55.0	-1.0
TNCL				S	Sb	14 40 02.7	-2.4
HANI	Diyarbakir_Han	0.53	113	SPECP		14 39 54.0	
HANI				P	Pg	14 39 55.1	-1.1
HANI				S	Sg	14 40 01.8	-1.4
ELZG	Elazig	0.63	259	P	Pg	14 39 56.8	-1.3
ELZG				S	Sb	14 40 08.0	-0.3
DYBB	Diyarbakir	0.73	157	Pg	Pb	14 39 59.7	-1.2
DYBB				Sg	Sb	14 40 10.5	-0.6
DIYA	Diyarbakir	0.75	159	P	Pb	14 40 00.1	-1.1
DIYA				S	Sb	14 40 10.9	-0.9
BNGB	Bingl	0.80	62	Pg	Pg	14 39 59.7	-1.5
BNGB				Sg	Sb	14 40 10.6	-2.4
ERZN	Erzincan	0.96	358	Pg	Pg	14 40 02.5	-1.8
ERZN				Sg	Sb	14 40 16.5	-1.3
YEDI	Yedisu-Bingol	1.01	36	Pg	Pg	14 40 03.6	-1.7
YEDI				Sg	Sb	14 40 17.7	-1.5
SLHN	Bingol, Solhan	1.03	71	SPECP		14 40 03.0	
SLHN				P	Pg	14 40 03.8	-1.8
SLHN				S	Sn	14 40 22.2	+0.7
EUZM	Uzumlu	1.08	357	P	Pg	14 40 05.0	-1.7
EUZM				SPECP		14 40 05.0	
EUZM				S	Sn	14 40 21.5	-1.2
NARI	Adyaman-Kaht	1.09	227	P	Pb	14 40 06.4	-0.6
NARI				S	Sn	14 40 22.1	-0.8
MAYA	Malatya/Merkez	1.10	255	SPECP		14 40 05.0	
MAYA				P	Pg	14 40 05.4	-1.7
MAYA				S	Sn	14 40 24.0	+0.8
KEMA	Kemaliye	1.19	303	P	Pg	14 40 06.3	-2.4
KEMA				S	Sn	14 40 24.3	-1.0
SVAN	Silvan-Diyarba	1.22	113	Pn	Pg	14 40 07.6	-1.6
SVAN	Silvan-Diyarba	1.22	113	SPECP		14 40 07.0	
SVAN				P	Pg	14 40 07.5	-1.6
SVAN				S	Sb	14 40 24.2	-0.8
HANM	anlurfa/Hi	1.26	214	P	Pb	14 40 09.3	-0.6
HANM				S	Sb	14 40 26.4	0.0
ECAT	Cat-ERZURUM	1.35	43	P	Pn	14 40 09.6	-1.7
ECAT				S	Sn	14 40 31.2	+1.7
MUSM	Mu-Merkez	1.36	85	P	Pn	14 40 09.6	-1.7
MUSM				S	Sn	14 40 28.8	-0.9
BTMN	Batman	1.39	122	P	Pn	14 40 10.4	-1.2
BTMN				S	Sn	14 40 29.6	-0.6
URFA	Urfa	1.40	213	Pn	Pn	14 40 11.3	-0.5
VRTB	Varto-Mus	1.42	67	Pn	Pb	14 40 11.1	-1.5
VRTB	Varto-Mus	1.42	67	SPECP		14 40 10.0	
VRTB				P	Pn	14 40 10.9	-1.2
VRTB				S	Sn	14 40 34.6	+3.6
AKCD	Akcadag	1.49	258	P	Pn	14 40 12.1	-1.0
AKCD				S	Sg	14 40 35.1	+1.3
KOPT	Kop Dagi	1.50	22	Pn	Pg	14 40 13.5	-1.1
KOPT	Kop Dagi	1.50	22	P	Pg	14 40 12.7	-2.0
KOPT				S	Sg	14 40 38.7	+4.6
KELT	Kelkit	1.57	345	P	Pb	14 40 13.7	-1.6
KELT				S	Sg	14 40 35.5	-1.0
SANL	SANLIURFA_Merk	1.58	203	P	Pn	14 40 13.6	-0.6
SANL				S	Sb	14 40 35.3	-0.2
EMRE	Erzurum,Aziziy	1.68	33	P	Pb	14 40 15.4	-1.9
EMRE				S	Sg	14 40 44.6	+4.6
MIDY	Mardin/Midyat-	1.77	133	P	Pn	14 40 15.6	-1.2
MIDY				S	Sb	14 40 40.0	-1.0
GURO	Guroymak-BITLI	1.77	92	Pn	Pn	14 40 16.3	-0.7
GURO	Guroymak-BITLI	1.77	92	Pn	Pb	14 40 16.9	-1.8
BAYT	Aydıntepe-Bayb	1.79	9	Pn	Pb	14 40 16.7	-2.3
DARE	Darende-Malaty	1.80	269	Pn	Pn	14 40 17.3	0.0
AKCA	Adyaman/G¶l	1.84	244	P	Pn	14 40 17.5	-0.4
AKCA				S	Sg	14 40 46.2	+1.1
BLIS	Bitlis-Merkez	1.85	96	SPECP		14 40 16.0	
BLIS				P	Pn	14 40 16.9	-1.1
BLIS				S	Sb	14 40 41.9	-1.5
ALUC	Giresun/Alucra	1.88	336	P	Pb	14 40 18.9	-1.8
ALUC				S	Sg	14 40 45.5	-0.9
CUKAN	kangal_SIVAS	1.93	292	P	Pn	14 40 18.9	-0.2
CUKAN				S	Sg	14 40 49.4	+1.6
KRIK	Erzurum-spir	1.93	27	P	Pb	14 40 19.0	-2.4
KRIK				S	Sg	14 40 50.8	+2.9
CUGUR	Gurin_SVAS	1.96	274	P	Pn	14 40 19.5	-0.1
CUGUR				S	Sg	14 40 52.4	+3.5
SURC	SANLIURFA_SURC	1.97	208	P	Pn	14 40 19.1	-0.6
SURC				S	Sg	14 40 48.5	-0.8
SUSE	Susehri	2.00	323	P	Pn	14 40 20.0	-0.1

SUSE				S	Sg	14 40 50.8	+0.8
ELBS	KAHRAMANMARAS	2.10	263	P	Pn	14 40 21.5	+0.1
ELBS				S	Sg	14 40 57.2	+4.0
GZT	Gaziantep	2.16	235	P	Pn	14 40 21.4	-0.9
GZT				S	Sg	14 40 55.1	-0.2
MLAZ	Malazgirt-MUS	2.23	76	Pn	Pn	14 40 22.8	-0.4
IZDR	Rize	2.24	15	P	Pb	14 40 23.6	-3.1
IZDR				S	Sn	14 40 49.4	-1.8
PERV	Siirt/Pervari-	2.28	106	P	Pn	14 40 23.0	-0.9
PERV				S	Sb	14 40 55.2	-0.6
NZIP	Nizip/Gaziante	2.29	227	P	Pn	14 40 23.3	-0.8
NZIP				S	Sg	14 40 58.3	-1.3
KTUT	Trabzon	2.36	360	Pn	Pn	14 40 24.9	0.0
GAZ	Gaziantep	2.49	235	Pn	Pn	14 40 27.3	+0.5
GAZ	Gaziantep	2.49	235		Pn	14 40 25.9	-0.9
SVSK	Karacayir	2.51	302	Pn	Pn	14 40 27.3	+0.3
KMRS	Kahramanmaras	2.53	245	Pn	Pn	14 40 27.7	+0.4
AKDM	Akdamar-Van	2.53	96	Pn	Pn	14 40 27.4	-0.1
GEVA	Gevas	2.60	96		Pn	14 40 28.4	0.0
SARI	SarD1z-Kayseri	2.64	266	Pn	Pn	14 40 28.8	-0.2
AGRB	Hanur-Agry	2.68	68	Pn	Pn	14 40 29.0	-0.5
VANB	Van	2.83	90	Pn	Pn	14 40 31.4	-0.1
BNN	Bunyan	3.08	275	Pn	Pn	14 40 35.5	+0.5
KARS	Kars	3.24	51	Pn	Pn	14 40 38.0	+0.8
CUKT	Cukurca	3.33	113	Pn	Pn	14 40 38.6	+0.2
AKH	Akhalkalaki	3.98	45		Pb	14 40 57.3	+0.9
HYR	Heyderabad	4.09	73	P	Pn	14 40 48.3	-0.5
	SNR=10						
HYR				S	Sn	14 41 37.3	+0.3
GNI	Garni	4.14	67	Pn	Pn	14 40 50.6	+1.1
	1.7nm,0.3s,baz=318,slow=5.3,SNR=3.6						
GNI				Pg	Pb	14 40 59.9	+0.9
	2.0nm,0.3s,baz=252,slow=19,SNR=7.3						
GNI				Lg	Lg	14 41 52.1	
	baz=340,slow=20						
	5.8nm,0.5s						
GNI	Garni	4.14	67	Pn	Pn	14 40 50.2	+0.7
NAX	Nakhchivan	4.50	81	P	Pn	14 40 53.6	-0.8
	SNR=6.3						
NAX				S	Sn	14 41 47.4	+0.5
SBZ	Shahbuz	4.57	78	P	Pn	14 40 54.8	-0.6
	SNR=12						
SBZ				S	Sn	14 41 49.0	+0.3
ONI	Oni	4.85	34	Pn	Pn	14 41 00.6	+1.4
ORD	Ordubad	4.87	85	P	Pn	14 40 58.9	-0.7
	SNR=12						
ORD				S	Sn	14 41 56.9	+0.8
BR131	Keskin Array S	4.89	285	Pn	Pn	14 41 00.7	+0.8
BRTR	Keskin Array B	4.89	285	Pn	Pn	14 41 00.6	+0.8
	1.5nm,0.3s,baz=111,slow=15,SNR=32						
BRTR				Lg	Lg	14 42 21.4	
	baz=120,slow=28						
BRTR				LR	LR	14 43 15.1	
	comp=Z,238nm,18.4s,baz=96,slow=43						
	4.7nm,0.4s						
BRTR	Keskin Array B	4.89	285	Pn	Pn	14 41 00.8	+0.9
QZX	Qazax, Azerbai	4.95	59	P	Pn	14 40 59.9	-0.6
	SNR=4.1						
QZX				S	Sn	14 41 58.3	+0.5
GDB	GEDABAY	5.07	64	P	Pn	14 41 01.7	-0.6
GDB				S	Sn	14 42 02.0	+0.9
KBZ	Khabaz	5.62	24	Pn	Pn	14 41 09.5	-0.1
	0.1nm,0.3s,baz=243,slow=21,SNR=1.5						
KBZ				LR	LR	14 43 42.5	
	comp=Z,70nm,19.2s,baz=208,slow=43						
	1.9nm,1.0s						
MMAI	Mount Meron Ar	6.63	214	Pn	Pn	14 41 24.4	+0.7
	4.5nm,0.3s,baz=56,slow=12,SNR=8.0						
MMAI				Lg	Lg	14 43 14.1	
	3.3nm,0.3s,baz=30,slow=27,SNR=2.2						
	4.3nm,0.5s						
ASF	Jabal al Asfar	6.86	201	Pn	Pn	14 41 27.4	+0.6
	1.4nm,0.3s,baz=9.6,slow=23,SNR=16						
ASF				Lg	Lg	14 43 22.7	
	2.8nm,0.3s,baz=24,slow=20,SNR=3.7						
	7.9nm,0.6s						
EIL	Elat	9.79	206	Pn	Pn	14 42 07.3	+0.4
	0.2nm,0.3s,baz=348,slow=10,SNR=2.0						
EIL				LR	LR	14 45 37.7	
	comp=Z,58nm,20.7s,baz=44,slow=36						
	1.9nm,0.7s						
IDI	Anoyia	12.36	259	LR	LR	14 47 28.9	
	comp=Z,37nm,20.8s,baz=95,slow=38						
AKTO	Aktyubinsk	17.51	42	P	P	14 43 51.0	-0.4
	0.1nm,0.3s,baz=281,slow=8.7,SNR=2.2						
	0.8nm,0.5s						
ABKAR	Akbulak array	17.94	47	P	P	14 43 57.2	+1.1
ARU	Arti	21.74	29	P	P	14 44 35.8	-1.7
	1.4nm,0.3s,baz=225,slow=5.7,SNR=5.6						
ARU				LR	LR	14 55 01.9	
	comp=Z,60nm,19.7s,baz=164,slow=42						
	1.4nm,0.3s						
WSAR	Wadi Sarin	22.22	128	LR	LR	14 54 26.8	
	comp=Z,100nm,21.2s,baz=254,slow=40						
GRA1	Grafenberg Arr	23.14	308	P	P	14 44 52.8	+0.3
GRFO	Grafenberg	23.14	308	P	P	14 44 52.8	+0.3
GRFO				IAmb	IAmb	14 45 25.9	
	comp=Z,14nm,0.7s						
KKAR	Karatay Array	23.60	69	P	P	14 44 57.5	+0.4
KEST	Kesra	24.36	273	P	P	14 45 04.9	+0.4
	comp=Z,8.4nm,1.1s,baz=56,slow=3.6,SNR=4.9						
	comp=Z,8.4nm,1.1s						
KEST	Kesra	24.36	273	P	P	14 45 05.6	+1.2
KEST				IAmb	IAmb	14 45 07.6	
	comp=Z,13nm,1.2s						
FINES	FINESS Array B	24.37	344	P	P	14 45 03.6	-0.6
	comp=Z,0.6nm,0.5s,baz=134,slow=12,SNR=1.4						
FINES				LR	LR	14 56 19.2	
	comp=Z,63nm,18.3s,baz=115,slow=41						
	comp=Z,0.6nm,0.5s						
BVAR	Borovoye Array	25.49	46	P	P	14 45 14.2	-0.2
	comp=Z,0.4nm,0.6s,baz=282,slow=7.0,SNR=4.1						
BVAR				LR	LR	14 56 34.5	
	comp=Z,52nm,18.5s,baz=249,slow=40						
	comp=Z,0.4nm,0.6s						
NOA	NORSAR Array B	28.61	331	LR	LR	14 58 55.0	
	comp=Z,23nm,19.0s,baz=135,slow=40						
MK31	Makanchi Array	31.96	61	P	P	14 46 13.3	+1.1
MKAR	Makanchi Array	31.96	61	P	P	14 46 12.7	+0.5
	comp=Z,0.6nm,0.7s,baz=278,slow=6.6,SNR=8.3						
	comp=Z,0.6nm,0.7s						
MKAR	Makanchi Array	31.96	61	P	P	14 46 13.4	+1.2
ZALV	Zalesovo Beam	34.05	48	LR	LR	15 01 25.2	
	comp=Z,36nm,19.6s,baz=228,slow=38						
WMQ	Urumqi	36.01	66	*e*P	P	14 46 50.8	+3.4
WMQ				PP	PP	14 48 11.3	+2.2
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
LZH	Lanzhou	50.06	72	*e*P	P	14 48 35.5	-5.8
LZH				pP	pP	14 48 40.9	-3.3
LZH				sP	sP	14 48 43.8	-1.5
LZH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PZH	PanZhiHua	52.71	84	P	P	14 49 02.4	+1.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,130nm,5.3s						
HHC	Hu-ho-hao-te	53.79	63	*e*P	P	14 49 08.3	-0.7
HHC				pmax	pmax		
	comp=Z,36nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,6.7s						
KMI	Kunming	54.18	85	⇓P	P	14 49 13.1	+0.9
KMI				pmax	pmax		
	comp=Z,10.0nm,0.4s						
YAK	Yakutsk	56.71	34	LR	LR	15 15 36.3	
	comp=Z,30nm,19.1s,baz=260,slow=38						
NJ2	Nanjing	62.98	69	*e*P	P	14 50 13.3	+0.1
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
YKA	Yellowknife Ar	77.13	348	P	P	14 51 38.9	-0.6
	comp=Z,0.3nm,0.8s,baz=28,slow=5.8,SNR=3.8						
	comp=Z,0.3nm,0.8s						

IDC 20 14:42:30.0±6.1**, 3°.13S**×**141°.47E, h0**^{km}**, mb3.2**/2**,**
mbtmp3.2/3**, ML3.0**/1**, Error ellipse: s-maj=226.7km**
s-min=29.9km az=90.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.11	202	P	P	14 46 43.5	-0.2
	0.1nm,0.3s,baz=22,slow=12,SNR=5.9						
	0.1nm,0.4s						
ASAR	Alice Springs	21.69	199	P	P	14 47 22.6	-0.2
	0.2nm,0.6s,baz=27,slow=11,SNR=6.6						
	0.2nm,0.6s						
MKAR	Makanchi Array	71.81	322	P	P	14 53 54.7	0.0
	0.3nm,0.3s,baz=96,slow=8.0,SNR=12						
	0.3nm,0.3s						

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*IDC **20** 14:45:43.2±1.0, 10°.51S×123°.54E, h0^{km}, mb4.1/7,*
mbtmp4.1/9, ML4.0/2, MS3.7/1, Error ellipse: s-maj=59.7km
s-min=19.7km az=56.0
*NEIC **20** 14:45:47.0±1.5, 10°.65S±0°.06×123°.51E±0°.07, h35^{km}±2^{km},*
mb4.2/9, Error ellipse: s-maj=11.8km s-min=10.2km
az=106.0
*DJA **20** 14:45:49.2±0.3, 11°S±3°×12°4E±°, h75^{km}±13^{km}, M4.5/7,*
mb4.7/4, MLv4.4/7
ISC 20 14:45:47.6±0.5**, 10°.59S**±0°.05×**123°.58E**±0°.05**, h29**^{km}**, n58,**
σ**2^{s}.32**/62**, mb4.3**/10**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	1.07	39		Pn	14 46 07.3	+0.4
SOEI	Soe	1.07	39	P	Pn	14 46 07.9	+1.1
SOEI	Soe	1.07	39	P	Pn	14 46 07.7	+0.9
SOEI				S	Sb	14 46 24.4	+3.1
MMRI	Maumere	2.35	326		Pn	14 46 23.4	-0.9
MMRI	Maumere	2.35	326	P	Pn	14 46 25.9	+1.6
MMRI	Maumere	2.35	326	P	Pn	14 46 24.8	+0.5
MMRI				S	Sn	14 46 54.0	+1.9
BASI	Baing, Sumba	2.97	277	P	Pn	14 46 34.4	+1.5
PLAI	Plampang	5.98	287	P	Pn	14 47 15.6	+1.3
	56nm,0.6s,0.4nm						
PLAI				S	Sn	14 48 22.2	+0.4
	56nm,0.6s,0.4nm						
TWSI	Taliwang, Sumb	6.85	285	P	Pn	14 47 26.2	0.0
	48nm,0.6s,0.2nm						
TWSI				S	Sn	14 48 43.3	0.0
	48nm,0.6s,0.2nm						
KNRA	Kununurra	7.15	136		Pn	14 47 28.5	-1.8
KNRA	Kununurra	7.15	136	P	Pn	14 47 32.4	+2.1
FITZ	Fitzroy Crossi	7.73	165	Pn	Pn	14 47 39.4	+1.1
MTN	Manton Dam	7.73	108		Pn	14 47 37.6	-0.7
MTN	Manton Dam	7.73	108	P	Pn	14 47 40.1	+1.8
KDU	Kakadu	8.96	104	P	Pn	14 47 57.8	+2.6
MBWA	Marble Bar	11.14	199	Pn	Pn	14 48 24.2	-0.9
MBWA	Marble Bar	11.14	199	P	Pn	14 48 29.0	+3.9
FAKI	Fak Fak	11.49	49	Pn	Pn	14 48 27.8	-2.1
FAKI	Fak Fak	11.49	49	P	Pn	14 48 29.7	-0.2
WB0	Warramunga Arr	13.86	132	Pn	Pn	14 49 00.4	-1.9
WRA	Warramunga Arr	13.93	133	Pn	Pn	14 49 01.4	-1.9
	0.7nm,0.3s,baz=307,slow=15,SNR=33						
WRA				Sn	Sn	14 51 31.1	-6.0
	1.0nm,0.3s,baz=306,slow=23,SNR=8.8						
	2.8nm,0.7s						
WRAB	Tennant Creek	13.93	133		Pn	14 49 01.6	-1.6
WB2	Warramunga Arr	13.94	133		Pn	14 49 01.6	-1.8
GIRL	Giralia	14.95	216	P	Pn	14 49 19.9	+2.8
WRKA	Warakurna	15.05	163	P	Pn	14 49 18.9	+0.4
AS31	Alice Springs	16.31	144	P	Pn	14 49 35.5	+0.7
ASAR	Alice Springs	16.31	144	Pn	Pn	14 49 35.0	+0.2
	1.0nm,0.3s,baz=316,slow=12,SNR=70						
ASAR				Sn	Sn	14 52 27.8	-7.3
	0.4nm,0.3s,baz=313,slow=24,SNR=11						
	3.6nm,0.4s						
ASAR	Alice Springs	16.31	144	P	Pn	14 49 35.3	+0.5
AS01	Alice Springs	16.34	144	P	Pn	14 49 35.5	+0.4
MEEK	Meekatharra	16.64	196	P	P	14 49 43.1	+2.0
KKM	Kota Kinabalu	18.08	336	P	Pn	14 49 53.4	-3.5
KKM				IAmb	IAmb	14 49 56.7	
	comp=Z,18nm,1.1s						
KKM	Kota Kinabalu	18.08	336	P	P	14 49 58.2	+1.1
COEN	Coen	19.44	102	P	P	14 50 09.8	-2.2
MORW	Morawa	19.69	200	P	Pn	14 50 19.2	+3.0
PMBI	Palembang	20.15	291	P	Pn	14 50 25.8	+4.0
FORT	Forrest	20.52	169	P	Pn	14 50 27.5	+1.6
MTSU	Mount Surprise	21.43	113	P	P	14 50 37.8	+4.1
MULG	Mulgathing	21.89	155	P	P	14 50 42.2	+3.8
INKA	Innaminka	23.49	139	P	P	14 50 59.3	+4.2
BBOO	Buckleboo	24.93	154	P	P	14 51 12.3	+3.9
STKA	Stephens Creek	26.95	145	P	P	14 51 27.2	+0.5
	comp=Z,2.0nm,0.7s,baz=314,slow=10,SNR=6.4						
STKA				LR	LR	15 04 29.0	
	comp=Z,137nm,18.2s,baz=204,slow=42						
	comp=Z,2.0nm,0.7s						
STKA	Stephens Creek	26.95	145	P	P	14 51 30.1	+3.4
TOO	Toolangi	33.32	147	P	P	14 52 19.8	-3.3
CMAR	Chiang Mai Arr	37.73	320	P	P	14 52 59.8	-1.4
	comp=Z,0.6nm,0.6s,baz=135,slow=6.3,SNR=5.7						
CMAR				PcP	PcP	14 55 19.1	+1.1
	comp=Z,0.8nm,0.3s,baz=174,slow=2.6,SNR=4.9						
	comp=Z,0.6nm,0.6s						
ULN	Ulaanbaatar	60.02	347	P	P	14 55 48.2	-3.6
SONM	Songino Array	60.13	347	P	P	14 55 52.6	0.0
	comp=Z,0.8nm,0.9s,baz=165,slow=11,SNR=5.0						
	comp=Z,0.8nm,0.9s						
MK31	Makanchi Array	67.98	331	P	P	14 56 43.0	-1.0
MK31				IAmb	IAmb	14 56 44.2	
	comp=Z,1.8nm,0.8s						
MKAR	Makanchi Array	67.98	331	P	P	14 56 43.5	-0.5
	comp=Z,2.0nm,0.5s,baz=138,slow=6.9,SNR=49						
	comp=Z,2.0nm,0.5s						
MKAR	Makanchi Array	67.98	331	P	P	14 56 43.1	-1.0
MAKZ	Makanchi	68.14	331	P	P	14 56 43.9	-1.1
MAKZ				IAmb	IAmb	14 56 51.9	
	comp=Z,1.4nm,0.9s						
AAK	Ala-Archa	69.39	323	P	P	14 56 53.0	-0.1
	comp=Z,1.5nm,0.6s,baz=170,slow=6.1,SNR=4.8						
	comp=Z,1.5nm,0.6s						
AAK	Ala-Archa	69.39	323	P	P	14 56 51.5	-1.6
AAK				IAmb	IAmb	14 56 53.1	
	comp=Z,1.8nm,0.8s						
PETK	Petropavlovsk-	69.81	21	P	P	14 56 55.5	+0.2
	comp=Z,3.7nm,1.0s,baz=243,slow=1.7,SNR=4.9						
	comp=Z,3.7nm,1.0s						
ZAA0	Zalesovo Array	72.19	337	P	P	14 57 06.9	-2.7
ZAA0				IAmb	IAmb	14 57 09.2	
	comp=Z,2.9nm,0.9s						
ZALV	Zalesovo Beam	72.19	337	P	P	14 57 08.4	-1.2
	comp=Z,1.5nm,0.5s,baz=132,slow=4.4,SNR=8.8						
	comp=Z,1.5nm,0.5s						
ZALV	Zalesovo Beam	72.19	337	P	P	14 57 07.6	-2.0
ABKAR	Akbulak array	81.48	324	P	P	14 58 01.3	-0.9
TORD	Torodi Ar. Bea	123.17	279	PKP	PKPdf	15 04 43.3	+0.7
	comp=Z,0.3nm,0.6s,baz=88,slow=1.7,SNR=2.2						

IDC 20 14:59:46.4±2.1**, 1°.68N**×**125°.76E, h0**^{km}**, mb3.1**/3**,**
mbtmp3.1/3**, Error ellipse: s-maj=176.5km**
s-min=28.0km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.08	159	P	P	15 04 53.9	0.0
	0.2nm,0.3s,baz=338,slow=11,SNR=8.6						
	0.2nm,0.3s						
ASAR	Alice Springs	26.41	163	P	P	15 05 24.9	-0.1
	0.2nm,0.7s,baz=343,slow=7.8,SNR=5.5						
	0.2nm,0.7s						
MKAR	Makanchi Array	58.69	326	P	P	15 09 45.9	0.0
	0.1nm,0.4s,baz=122,slow=7.3,SNR=1.7						
	0.1nm,0.4s						

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*JMA **20** 14:59:57.8±0.2, 43°.1N±0°.6×146°.1E±0°.8, h50^{km}, MV2.6/38,*
OFF NEMURO PENINSULA
*SKHL **20** 14:59:58.6±0.1, 43°.20N×146°.20E, h40^{km}±3^{km}, mb3.8/4*
ISC 20 14:59:57.5±1.8**, 43°.13N**±0°.09×**146°.18E**±0°.06**, h45**^{km}±14^{km}**,**
n14, σ**0^{s}.55**/27**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	0.40	307	*i* P	Pn	15 00 07.6	+0.3
NEM2				*e*S	Sn	15 00 14.4	+0.2
NMR	Nemuro--Hokkai	0.41	306	*i* P	Pn	15 00 07.6	+0.2
NMR				AMB	AMB	15 00 07.8	
	120nm,0.3s						
NMR				*e*S	Sn	15 00 14.4	0.0
NMR				A	A	15 00 14.9	
	1μm,0.3s						
NMR				A	A	15 00 14.9	
	260nm,0.3s						
JKHN	Kushirohamanak	0.75	267	P	Pn	15 00 11.9	+0.2
JKHN				*e*S	Sn	15 00 22.1	+0.1
SHO	Shikotan	0.88	32	*e*P	Pn	15 00 13.5	0.0
SHO				AMB	AMB	15 00 14.1	
	20nm,0.3s						
SHO				*i* S	Sn	15 00 24.7	-0.5
SHO				A	A	15 00 25.1	
	50nm,0.2s						
SHO				A	A	15 00 25.1	
	120nm,0.2s						
YUK	Yuzh-Kuril'sk	0.94	346	*i* P	Pn	15 00 13.9	-0.4
YUK				AMB	AMB	15 00 14.4	
	90nm,0.4s						
YUK				*i* S	Sn	15 00 25.3	-1.3
YUK				A	A	15 00 26.8	
	130nm,0.2s						
YUK				A	A	15 00 26.8	
	80nm,0.2s						
AKK	Akkeshi	0.99	264	*i* P	Pn	15 00 14.9	-0.1
AKK				*i* S	Sn	15 00 27.1	-0.7
JNSB	Nemuroshibetsu	1.07	308	*i* P	Pn	15 00 16.1	-0.1
JNSB				*e*S	Sn	15 00 30.0	+0.1
JAK	Akkeshi	1.10	264	P	Pn	15 00 16.3	-0.2
JAK				*e*S	Sn	15 00 29.9	-0.5
JRA	Rausu	1.12	317	P	Pn	15 00 17.0	+0.3
JRA				*e*S	Sn	15 00 31.1	+0.2
JNK	Nakash	1.16	294	*e*P	Pn	15 00 16.9	-0.5
JNK				*e*S	Sn	15 00 31.0	-1.1
JOB	Onbets	1.74	263	*e*P	Pn	15 00 25.3	+0.1
JAR	Ashorobuto	1.77	276	*e*P	Pn	15 00 26.0	+0.3
JAR				*e*S	Sn	15 00 46.9	-0.1
JTKR	Abashiri--Toko	1.86	298	P	Pn	15 00 27.7	+0.9
JTKR				*e*S	Sn	15 00 50.1	+1.0
KUR	Kuril'sk	2.43	29	*e*P	Pn	15 00 35.5	+0.8
KUR				AMB	AMB	15 00 36.0	
	20nm,0.4s						
KUR				*e*S	Sn	15 01 03.0	-0.2
KUR				A	A	15 01 09.8	
	40nm,0.3s						
KUR				A	A	15 01 09.8	
	20nm,0.3s						

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*IDC **20** 15:09:57.0±2.0, 21°.64N×143°.17E, h305^{km}±19^{km}, mb2.9/9,*
mbtmp3.6/11, Error ellipse: s-maj=30.1km s-min=13.8km
az=95.0
ISC 20 15:09:57.7±0.9**, 21°.7N**±0°.1×**143°.1E**±0°.2**, h311**^{km}**, n11,**
σ**0^{s}.90**/12**, mb3.2**/8**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	5.48	351	P	Pn	15 11 22.2	+1.1
	38nm,0.7s,baz=280,slow=23,SNR=5.8						
JCJ				S	S	15 12 26.5	-1.9
	51nm,0.8s,baz=8.7,slow=22,SNR=3.5						
MJAR	Matsushiro Arr	15.44	345	P	P	15 13 19.3	+0.4
	1.1nm,0.7s,baz=120,slow=18,SNR=2.3						
KSRS	Korea Array	20.52	323	P	P	15 14 13.4	+0.4
	0.5nm,0.6s,baz=132,slow=20,SNR=2.2						
	0.5nm,0.6s						
WRA	Warramunga Arr	42.23	192	P	P	15 17 20.9	-0.4
	0.3nm,0.5s,baz=13,slow=9.1,SNR=13						
	0.3nm,0.5s						
ASAR	Alice Springs	45.94	192	P	P	15 17 50.0	-0.5
	0.1nm,0.3s,baz=14,slow=6.5,SNR=6.4						
	0.1nm,0.3s						
MKAR	Makanchi Array	54.69	313	P	P	15 18 55.8	+0.5
	0.2nm,0.5s,baz=92,slow=9.1,SNR=4.4						
	0.2nm,0.5s						
ILAR	Eielson Array	62.09	27	P	P	15 19 45.5	-0.4
	0.4nm,0.8s,baz=257,slow=5.5,SNR=4.7						
	0.4nm,0.8s						
YKA	Yellowknife Ar	76.51	28	P	P	15 21 13.6	0.0
	0.4nm,0.5s,baz=294,slow=5.5,SNR=7.8						
	0.4nm,0.5s						
ARCES	ARCESS Array B	78.94	341	P	P	15 21 27.2	+0.4
	2.4nm,0.9s,baz=46,slow=3.5,SNR=4.0						
	2.4nm,0.9s						
FINES	FINESS Array B	83.19	334	P	P	15 21 48.2	-1.0
	0.7nm,0.5s,baz=59,slow=4.9,SNR=5.5						
	0.7nm,0.5s						
NVAR	Mina Array Bea	83.20	51	P	P	15 21 50.5	+0.4
	0.3nm,0.6s,baz=303,slow=6.3,SNR=2.5						
	0.3nm,0.6s						

ROM 20 15:18:39.8±0.2**, 43°.023N**±0°.004×**13°.037E**±0°.006**,**
h6^{km}±1^{km}**, ML1.1**/7**, 3C-3D, Error ellipse: s-maj=0.5km**
s-min=0.2km az=230.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDMO	Fiordimonte	0.04	70	P	Pg	15 18 41.3	+0.1
FDMO				S	Sg	15 18 42.3	+0.2
FDMO				AML	AML		
	comp=E,496μm,0.1s						
FDMO				AML	AML		
	comp=N,286μm,0.2s						
T1219	Muccia, Frazio	0.04	326	P	Pg	15 18 41.2	0.0
T1219				S	Sg	15 18 42.2	0.0
T1219				AML	AML		
	comp=E,512μm,0.5s						
T1219				AML	AML		
	comp=N,662μm,0.3s						
T1219				AML	AML		
	comp=E,525μm,0.5s						
T1219				AML	AML		
	comp=N,648μm,0.1s						
FEMA	Monte Fema	0.06	171	P	Pg	15 18 41.7	+0.1
FEMA				S	Sg	15 18 42.9	+0.2
T1220	Camerino, Fraz	0.10	24	P	Pg	15 18 42.4	+0.5
T1220				AML	AML		
	comp=E,628μm,1.0s						
T1220				AML	AML		
	comp=N,330μm,0.3s						
T1220				AML	AML		
	comp=E,628μm,1.0s						
T1220				AML	AML		
	comp=N,330μm,0.3s						
CESI	CESI - Serrava	0.10	259	⇑P	Pg	15 18 42.4	+0.4
CESI				S	Sg	15 18 44.3	+0.8
CESI				AML	AML		
	comp=E,141μm,0.5s						
CESI				AML	AML		
	comp=N,270μm,0.2s						
T1216	Preci, Frazion	0.13	186	⇓P	Pg	15 18 43.0	+0.4
T1216				AML	AML		
	comp=E,110μm,1.3s						
T1216				AML	AML		
	comp=N,130μm,0.2s						
T1216				AML	AML		
	comp=E,110μm,0.7s						
MC2	Monte Cornacci	0.16	134	⇑P	Pg	15 18 43.5	+0.5
MC2				S	Sg	15 18 47.0	+1.7
T1245	Castelsantange	0.20	146	P	Pg	15 18 44.2	+0.4
T1245				S	Sg	15 18 48.2	+1.6
T1245				AML	AML		
	comp=E,96μm,0.6s						
T1245				AML	AML		
	comp=E,96μm,0.6s						
T1245				AML	AML		
	comp=N,152μm,1.3s						
T1245				AML	AML		
	comp=E,96μm,1.4s						
T1245				AML	AML		
	comp=N,152μm,0.7s						
MMO1	Montemonaco	0.25	120	⇓P	Pg	15 18 45.1	+0.4
MMO1				S	Sg	15 18 49.2	+1.3
ASSB	Assisi San Ben	0.28	274	⇑P	Pg	15 18 45.6	+0.3
ASSB				AML	AML		
	comp=E,28μm,1.3s						
ASSB				AML	AML		
	comp=N,30μm,0.2s						
ASSB				AML	AML		
	comp=E,28μm,0.7s						
T1214	Arquata del Tr	0.29	154	P	Pg	15 18 46.3	+0.7
T1214				S	Sg	15 18 50.8	+1.4
EL6	Elcito	0.31	9	⇓P	Pb	15 18 46.9	-0.9
AQU	L'Aquila	0.72	158	P	Pg	15 18 53.9	+0.2

ROM 20 15:19:28.3±0.0**, 42°.902N**±0°.002×**13°.030E**±0°.004**,**
h11^{km}**, ML1.1**/3**, 1C, Error ellipse: s-maj=0.3km**
s-min=0.2km az=78.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1216	Preci, Frazion	0.01	214	P	Pg	15 19 30.6	+0.3
T1216				S	Sg	15 19 31.9	+0.3
T1216				AML	AML		
	comp=E,306μm,0.3s						

T1216				AML	AML		
	comp=N,396µm,0.3s						
T1216				AML	AML		
	comp=N,396µm,0.3s						
T1245	**Castelsantange**	**0.12**	**111**	P	Pg	15 19 31.9	+0.5
T1245				S	Sg	15 19 34.3	+0.6
T1245				AML	AML		
	comp=E,101µm,1.3s						
T1245				AML	AML		
	comp=N,99µm,0.3s						
T1245				AML	AML		
	comp=E,101µm,0.7s						
FDMO	**Fiordimonte**	**0.14**	**17**	⇑P	Pg	15 19 32.2	+0.6
FDMO				S	Sg	15 19 34.8	+0.8
FDMO				AML	AML		
	comp=E,89µm,0.2s						
FDMO				AML	AML		
	comp=N,80µm,0.2s						
T1212	**Cascia, Frazio**	**0.15**	**176**	P	Pg	15 19 32.3	+0.6
T1212				S	Sg	15 19 35.1	+0.9
T1219	**Muccia, Frazio**	**0.15**	**354**	P	Pg	15 19 32.4	+0.5
T1219				S	Sg	15 19 35.2	+0.8
T1217	**Poggiodomo (PG**	**0.20**	**201**	P	Pg	15 19 33.3	+0.6
T1217				S	Sg	15 19 36.8	+1.1
T1220	**Camerino, Fraz**	**0.21**	**12**	P	Pb	15 19 33.7	-0.6
MMO1	**Montemonaco**	**0.22**	**91**	P	Pg	15 19 33.5	+0.5
MMO1				S	Sg	15 19 37.2	+1.1
ASSB	**Assisi San Ben**	**0.31**	**297**	P	Pg	15 19 35.0	+0.4
ASSB				S	Sb	15 19 39.9	-1.1

*ROM **20** 15:20:12.2±0.1, 42°.817N±0°.004×13°.259E±0°.005, h15^{km}, Md1.1/2, Error ellipse: s-maj=0.4km s-min=0.3km az=136.0*

ISC 20 15:20:12.2±1.4, **42°.82N**±0°.06×**13°.26E**±0°.04, **h16**^{km}±7^{km}, **n7, σ0^{s}.19**/12, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1245	**Castelsantange**	**0.06**	**310**	P	**Pg**	**15 20 15.4**	**-0.1**
T1245				S	**Sg**	**15 20 17.6**	**-0.1**
T1245				AML	AML		
	comp=E,105µm,1.2s						
T1245				AML	AML		
	comp=N,118µm,0.3s						
T1214	**Arquata del Tr**	**0.07**	**211**	P	**Pg**	**15 20 15.5**	**+0.1**
T1214				S	**Sg**	**15 20 17.8**	**+0.2**
T1214				END			
MMO1	**Montemonaco**	**0.10**	**32**	P	**Pg**	**15 20 15.7**	**0.0**
MMO1				S	**Sg**	**15 20 18.1**	**0.0**
T1241	**Roccafluvione,**	**0.14**	**72**	P	**Pg**	**15 20 16.2**	**+0.1**
T1241				S	**Sb**	**15 20 19.0**	**-0.2**
T1241				END			
T1212	**Cascia, Frazio**	**0.17**	**248**	P	**Pg**	**15 20 16.6**	**+0.1**
T1212				S	**Sb**	**15 20 19.9**	**-0.2**
T1212				END			
FDMO	**Fiordimonte**	**0.25**	**331**	P	**Pg**	**15 20 18.1**	**+0.3**
TERO	**Teramo**	**0.32**	**127**	P	**Pg**	**15 20 19.1**	**+0.1**

*BJI **20** 15:55:53.4±0.0, 7°.95S×128°.48E, h123^{km}, mb4.8/63, mB4.9/28*

*IDC **20** 15:55:54.5±3.4, 7°.54S×128°.10E, h84^{km}±30^{km}, mb4.4/19, mbtmp4.8/21, MS3.5/9, Error ellipse: s-maj=18.6km s-min=9.1km az=69.0*

*MOS **20** 15:55:54.8±0.8, 7°.58S×128°.14E, h106^{km}, mb4.9/27, Error ellipse: s-maj=12.7km s-min=6.5km az=111.9*

*NEIC **20** 15:55:57.2±1.8, 7°.61S±0°.07×128°.19E±0°.06, h105^{km}±5^{km}, mb5.0/72, Error ellipse: s-maj=10.4km s-min=9.2km az=196.0*

*DJA **20** 15:55:57.0±0.2, 8°S±2°×12°8E±°, h113^{km}±6^{km}, M5.0/22, mB5.5/16, mb5.1/22, MLv5.2/16, Mw(mB)4.9/16*

ISC 20 15:55:57.2±0.4, **7°.69S**±0°.03×**128°.15E**±0°.04, **h112**^{km}±3^{km}, **h113**^{km}**:pP-P, n482, σ1^{s}.54**/500, **mb4.9**/91, **15C-1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**3.13**	**95**		**Pn**	**15 56 44.2**	**-0.9**
SAUI	**Saumlaki**	**3.13**	**95**	P	**Pn**	**15 56 45.4**	**+0.3**
SAUI	**Saumlaki**	**3.13**	**95**	P	**Pn**	**15 56 45.1**	**0.0**
SAUI				S	**Sn**	**15 57 22.5**	**+0.5**
BNDI	**Bandanaira**	**3.60**	**29**	P	**Pn**	**15 56 51.6**	**+0.3**
BNDI	**Bandanaira**	**3.60**	**29**	P	**Pn**	**15 56 51.7**	**+0.4**
BNDI				S	**Sn**	**15 57 32.4**	**-0.7**
AAI	**Ambon**	**3.98**	**1**	P	**Pn**	**15 56 57.6**	**+1.2**
AAI				S	**Sn**	**15 57 47.7**	**+5.4**
SOEI	**Soe**	**4.35**	**242**	Pn	**Pn**	**15 57 01.9**	**+0.4**
SOEI	**Soe**	**4.35**	**242**	P	**Pn**	**15 57 02.1**	**+0.6**
SOEI	**Soe**	**4.35**	**242**	P	**Pn**	**15 57 02.2**	**+0.7**
SOEI				S	**Sn**	**15 57 50.6**	**-0.8**
MSAI	**Masohi**	**4.39**	**10**	P	**Pn**	**15 57 03.2**	**+1.3**
NLAI	**Namlea**	**4.55**	**347**	P	**Pn**	**15 57 07.3**	**+3.3**
MTN	**Manton Dam**	**5.90**	**150**	P	**Pn**	**15 57 20.3**	**-1.9**
	baz=5.9,SNR=228						
MTN	**Manton Dam**	**5.90**	**150**	Pn	**Pn**	**15 57 20.4**	**-1.9**
MTN	**Manton Dam**	**5.90**	**150**	P	**Pn**	**15 57 20.4**	**-1.9**
MMRI	**Maumere**	**5.93**	**260**	Pn	**Pn**	**15 57 23.1**	**+0.4**
MMRI	**Maumere**	**5.93**	**260**	P	**Pn**	**15 57 23.4**	**+0.7**
MMRI	**Maumere**	**5.93**	**260**	P	**Pn**	**15 57 23.5**	**+0.7**
	594nm,0.7s,8µm2.3nm						
MMRI				S	**Sn**	**15 58 31.6**	**+2.2**
	594nm,0.7s,8µm2.3nm						
SANI	**Sanana**	**6.01**	**339**	P	**Pn**	**15 57 27.3**	**+3.6**
SANI	**Sanana**	**6.01**	**339**	P	**Pn**	**15 57 27.0**	**+3.3**
	49nm,0.6s,690nm0.2nm						
FAKI	**Fak Fak**	**6.25**	**41**	Pn	**Pn**	**15 57 26.2**	**-0.9**
FAKI	**Fak Fak**	**6.25**	**41**	P	**Pn**	**15 57 26.6**	**-0.5**
FAKI	**Fak Fak**	**6.25**	**41**	P	**Pn**	**15 57 26.6**	**-0.5**
	523nm,0.6s,5µm2.0nm						
KDU	**Kakadu**	**6.54**	**140**	P	**Pn**	**15 57 29.0**	**-1.9**
	baz=6.5,SNR=1000						
KDU	**Kakadu**	**6.54**	**140**	P	**Pn**	**15 57 29.5**	**-1.4**
LBMI	**Labuha**	**7.04**	**355**	P	**Pn**	**15 57 41.7**	**+4.0**
	94nm,0.6s,1µm0.4nm						
BSSI	**Bau Bau, Buton**	**7.76**	**281**	P	**Pn**	**15 57 49.8**	**+2.3**
	214nm,0.6s,2µm0.9nm						
BASI	**Baing, Sumba**	**7.89**	**251**	P	**Pn**	**15 57 48.8**	**-0.5**
	1µm,0.5s,17µm5.8nm						
BASI				S	**Sn**	**15 59 15.3**	**-1.7**
	1µm,0.5s,17µm5.8nm						
KNRA	**Kununurra**	**7.96**	**176**	P	**Pn**	**15 57 48.1**	**-2.1**
	baz=7.9,SNR=170						
KNRA	**Kununurra**	**7.96**	**176**	Pn	**Pn**	**15 57 48.2**	**-2.0**
KNRA	**Kununurra**	**7.96**	**176**	P	**Pn**	**15 57 48.3**	**-1.9**
BKSI	**Bulukumba**	**8.32**	**286**	P	**Pn**	**15 57 56.6**	**+1.5**
	378nm,0.7s,4µm						
TNTI	**Ternate**	**8.45**	**355**	Pn	**Pn**	**15 57 58.5**	**+1.7**
LUWI	**Luwuk**	**8.51**	**321**	Pn	**Pn**	**15 57 57.3**	**-0.4**
LUWI	**Luwuk**	**8.51**	**321**	P	**Pn**	**15 58 01.7**	**+4.0**
LUWI	**Luwuk**	**8.51**	**321**	P	**Pn**	**15 58 00.9**	**+3.2**
	102nm,0.9s						
RKPI	**Ransiki, Papua**	**8.59**	**45**	P	**Pn**	**15 57 58.1**	**-0.7**
	549nm,0.5s,8µm						
KAPI	**Kappang**	**8.76**	**287**	P	**Pn**	**15 58 02.8**	**+1.7**
	67nm,0.6s,baz=139,slow=9.9,SNR=29						
KAPI				S	**Sn**	**15 59 32.7**	**-5.5**
	7.0nm,0.2s,baz=188,slow=18,SNR=0.8						
KAPI				LR	LR	16 02 26.4	
	comp=Z,73nm,19.0s,baz=126,slow=45						
KAPI	**Kappang**	**8.76**	**287**	Pn	**Pn**	**15 58 00.8**	**-0.3**
KAPI	**Kappang**	**8.76**	**287**	P	**Pn**	**15 58 00.8**	**-0.3**
SPSI	**Sidrap Palu**	**9.12**	**293**	P	**Pn**	**15 58 08.2**	**+2.2**
	118nm,0.9s,1µm						
GTOI	**Gorontalo**	**9.73**	**328**	P	Pn	15 58 20.4	+6.1
	21nm,0.8s						
SRPI	**Serui, Papua**	**9.92**	**55**	P	**Pn**	**15 58 15.4**	**-1.4**
	59nm,0.7s						
MRSI	**Marisa**	**10.21**	**322**	P	**Pn**	**15 58 24.1**	**+3.4**
	31nm,1.2s						
PLAI	**Plampang**	**10.33**	**263**	P	**Pn**	**15 58 21.3**	**-1.1**
PLAI	**Plampang**	**10.33**	**263**	P	**Pn**	**15 58 21.0**	**-1.4**
	239nm,0.5s,5µm						
TWSI	**Taliwang, Sumb**	**11.20**	**264**	P	**Pn**	**15 58 31.9**	**-2.3**
	58nm,0.5s						
MPSI	**Mapaga**	**11.46**	**314**	P	**Pn**	**15 58 40.4**	**+2.8**
	146nm,0.5s,10µm						
GENI	**Genyem**	**12.99**	**68**	P	**Pn**	**15 58 56.4**	**-1.3**
	93nm,0.5s						
WB0	**Warramunga Arr**	**13.44**	**154**	Pn	**Pn**	**15 58 59.3**	**-4.3**
WRAB	**Tennant Creek**	**13.57**	**154**	Pn	**Pn**	**15 59 01.4**	**-3.8**
WRAB	**Tennant Creek**	**13.57**	**154**	P	**Pn**	**15 59 01.8**	**-3.5**
WRAB	**Tennant Creek**	**13.57**	**154**	*i* P	**Pn**	**15 59 01.7**	**-3.5**
WRA	**Warramunga Arr**	**13.57**	**154**	P	**Pn**	**15 59 01.1**	**-4.2**
	13nm,0.4s,baz=321,slow=15,SNR=142						
WRA				S	Sn	16 01 21.9	-13
	110nm,0.6s,baz=320,slow=25,SNR=11						
WRA	**Warramunga Arr**	**13.57**	**154**	Pn	Pn	15 59 00.3	-5.0
WRA	**Warramunga Arr**	**13.57**	**154**	P	Pn	15 59 00.3	-5.0
WB2	**Warramunga Arr**	**13.58**	**154**	Pn	**Pn**	**15 59 01.4**	**-4.0**
JAGI	**Jajag, Banyuwa**	**13.88**	**266**	P	**Pn**	**15 59 10.7**	**+1.4**
	60nm,1.4s						
BBKI	**Banjar Baru**	**13.90**	**287**	P	**P**	**15 59 12.2**	**-1.8**
	58nm,1.0s,19µm						
MBWA	**Marble Bar**	**15.67**	**210**	Pn	**Pn**	**15 59 29.4**	**-2.4**
MBWA	**Marble Bar**	**15.67**	**210**	P	**Pn**	**15 59 30.5**	**-1.3**
PSA00	**Pilbara Seismi**	**15.96**	**209**	Pn	**Pn**	**15 59 33.6**	**-1.8**
PSA00	**Pilbara Seismi**	**15.96**	**209**	P	**Pn**	**15 59 33.7**	**-1.8**
COEN	**Coen**	**16.01**	**114**	P	**Pn**	**15 59 33.6**	**-2.6**
	baz=16,SNR=111						
COEN	**Coen**	**16.01**	**114**	Pn	**Pn**	**15 59 33.6**	**-2.6**
COEN	**Coen**	**16.01**	**114**	P	**Pn**	**15 59 33.7**	**-2.4**
AS31	**Alice Springs**	**16.81**	**161**		**Pn**	**15 59 44.0**	**-2.0**
ASAR	**Alice Springs**	**16.82**	**161**	P	**Pn**	**15 59 45.0**	**-1.1**
	58nm,0.7s,baz=335,slow=9.5,SNR=246						
ASAR				S	Sn	16 02 41.8	-11
	18nm,0.5s,baz=312,slow=18,SNR=7.9						
ASAR	**Alice Springs**	**16.82**	**161**		**Pn**	**15 59 44.4**	**-1.6**
ASAR	**Alice Springs**	**16.82**	**161**	P	**Pn**	**15 59 44.4**	**-1.6**
AS01	**Alice Springs**	**16.83**	**161**	P	**Pn**	**15 59 44.0**	**-2.2**
QIS	**Mount Isa**	**16.92**	**140**	P	**Pn**	**15 59 44.9**	**-2.4**
	baz=17,SNR=115						
QIS	**Mount Isa**	**16.92**	**140**	P	**Pn**	**15 59 45.5**	**-1.9**
WRKA	**Warakurna**	**17.25**	**180**	P	**P**	**15 59 49.6**	**-1.5**
	baz=17,SNR=139						
WRKA	**Warakurna**	**17.25**	**180**	P	**P**	**15 59 49.4**	**-1.7**
KKM	**Kota Kinabalu**	**18.11**	**319**	P	**Pn**	**16 00 04.8**	**+3.0**
MTSU	**Mount Surprise**	**18.85**	**125**	P	**Pn**	**16 00 09.7**	**-0.8**
	baz=19,SNR=319						
MTSU	**Mount Surprise**	**18.85**	**125**	P	**Pn**	**16 00 09.9**	**-0.6**
PMG	**Port Moresby**	**18.87**	**97**	P	**P**	**16 00 07.6**	**-1.3**
	35nm,0.9s,baz=283,slow=6.8,SNR=34						
PMG				S	**S**	**16 03 30.5**	**-7.2**
	6.6nm,0.7s,baz=4.9,slow=22,SNR=1.5						
PMG				LR	LR	16 08 33.6	
	comp=Z,164nm,21.1s,baz=272,slow=40						
PMG	**Port Moresby**	**18.87**	**97**	P	**P**	**16 00 07.8**	**-1.2**
PMG	**Port Moresby**	**18.87**	**97**	P	**Pn**	**16 00 10.3**	**-0.5**
PMG	**Port Moresby**	**18.87**	**97**	*ce*P	**P**	**16 00 08.3**	**-0.6**
PMG				pmax	pmax		
	comp=Z,234nm,1.3s						
GIRL	**Giralia**	**20.01**	**221**	P	**P**	**16 00 21.0**	**-0.1**
	baz=20,SNR=6.5						
GIRL	**Giralia**	**20.01**	**221**	P	Pn	16 00 24.1	+0.2
BBJI	**Bungbulang**	**20.32**	**269**	P	Pn	16 00 28.3	+0.5
	comp=Z,36nm,0.9s						
MEEK	**Meekatharra**	**20.91**	**205**	P	**P**	**16 00 30.6**	**-0.3**
	baz=21,SNR=78						
MEEK	**Meekatharra**	**20.91**	**205**	P	**P**	**16 00 31.4**	**+0.5**
OOD	**Oodnadatta**	**21.23**	**161**	P	**P**	**16 00 34.7**	**+0.5**
CTA	**Charters Tower**	**21.43**	**127**	P	**P**	**16 00 37.0**	**+0.5**
	comp=Z,4.0nm,0.6s,baz=314,slow=10,SNR=12						
CTA				S	**S**	**16 04 27.1**	**-0.8**
	comp=Z,5.2nm,0.6s,baz=248,slow=20,SNR=1.7						
CTA				LR	LR	16 09 42.7	
	comp=Z,229nm,20.2s,baz=295,slow=38						
	comp=Z,4.0nm,0.6s						
CTA	**Charters Tower**	**21.43**	**127**	P	**P**	**16 00 38.1**	**+1.5**
CTAO	**Charters Tower**	**21.43**	**127**	P	**P**	**16 00 36.6**	**+0.1**
CTAO	**Charters Tower**	**21.43**	**127**	P	**P**	**16 00 38.0**	**+1.5**
CTAO	**Charters Tower**	**21.43**	**127**	P	**P**	**16 00 36.6**	**+0.1**
TV1H	**Townsville Har**	**21.44**	**124**	P	**P**	**16 00 38.3**	**+1.7**
FORT	**Forrest**	**22.97**	**180**	P	**P**	**16 00 53.2**	**+1.1**
	baz=23,SNR=40						
FORT	**Forrest**	**22.97**	**180**	P	**P**	**16 00 52.8**	**+0.6**
FORT	**Forrest**	**22.97**	**180**	P	**P**	**16 00 53.0**	**+0.9**
MULG	**Mulgathing**	**23.14**	**167**	P	**P**	**16 00 54.9**	**+1.1**
INKA	**Innaminka**	**23.23**	**151**	P	**P**	**16 00 56.2**	**+1.6**
MORW	**Morawa**	**24.13**	**207**	P	**P**	**16 01 03.0**	**+0.2**
	baz=24,SNR=15						
MORW	**Morawa**	**24.13**	**207**	P	**P**	**16 01 03.6**	**+0.8**
MORW	**Morawa**	**24.13**	**207**	P	**P**	**16 01 03.9**	**+1.1**
QLP	**Quilpie**	**24.22**	**143**	P	**P**	**16 01 05.1**	**+1.5**
	baz=24,SNR=39						
QLP	**Quilpie**	**24.22**	**143**	P	**P**	**16 01 05.1**	**+1.5**
KMBL	**Kambalda**	**24.27**	**193**	P	**P**	**16 01 04.0**	**-0.1**
	baz=24,SNR=16						
KMBL	**Kambalda**	**24.27**	**193**	P	**P**	**16 01 05.4**	**+1.4**
LCRK	**Leigh Creek**	**24.52**	**159**	P	**P**	**16 01 07.4**	**+1.1**
BLDU	**Ballidu**	**25.20**	**204**	P	**P**	**16 01 13.4**	**+0.9**
	baz=25,SNR=37						
BLDU	**Ballidu**	**25.20**	**204**	P	**P**	**16 01 13.2**	**+0.7**
KLBR	**Kellerberrin**	**25.68**	**201**	P	**P**	**16 01 18.4**	**+1.6**
	baz=26,SNR=16						
KLBR	**Kellerberrin**	**25.68**	**201**	P	**P**	**16 01 18.5**	**+1.7**
BBOO	**Buckleboo**	**26.05**	**165**	P	**P**	**16 01 21.2**	**+1.0**
	baz=26,SNR=45						
BBOO	**Buckleboo**	**26.05**	**165**	P	**P**	**16 01 21.1**	**+1.0**
BBOO				IAmb	IAmb	16 01 22.0	
	comp=Z,36nm,0.7s						
BBOO	**Buckleboo**	**26.05**	**165**	P	**P**	**16 01 21.1**	**+1.0**
MUN	**Mundaring**	**26.60**	**203**	P	**P**	**16 01 26.2**	**+1.1**
	baz=27,SNR=13						
MUN	**Mundaring**	**26.60**	**203**	P	**P**	**16 01 26.2**	**+1.1**
WHYH	**Whyalla**	**26.69**	**162**	P	**P**	**16 01 27.1**	**+1.3**
RMQ	**Roma**	**27.07**	**136**	P	**P**	**16 01 30.7**	**+1.3**
	baz=27,SNR=11						
RMQ	**Roma**	**27.07**	**136**	P	**P**	**16 01 30.6**	**+1.2**
NWAO	**Narrogin (SRO)**	**27.08**	**200**	P	**P**	**16 01 30.5**	**+1.1**
	comp=Z,20nm,0.4s,baz=21,slow=7.7,SNR=45						
	comp=Z,20nm,0.4s						
NWAO	**Narrogin (SRO)**	**27.08**	**200**	P	**P**	**16 01 31.1**	**+1.7**
	baz=27,SNR=35						
NWAO				P	**P**	**16 01 31.1**	**+1.7**
	baz=27,SNR=35						
NWAO	**Narrogin (SRO)**	**27.08**	**200**	P	**P**	**16 01 30.8**	**+1.4**
STKA	**Stephens Creek**	**27.13**	**154**	P	**P**	**16 01 30.9**	**+1.1**
	comp=Z,16nm,0.5s,baz=328,slow=9.0,SNR=62						
STKA				PcP	**PcP**	**16 04 48.3**	**+0.4**
	comp=Z,4.8nm,0.4s,baz=340,slow=2.9,SNR=4.3						
	comp=Z,16nm,0.5s						
STKA	**Stephens Creek**	**27.13**	**154**	P	**P**	**16 01 31.1**	**+1.3**
	baz=27,SNR=60						
STKA	**Stephens Creek**	**27.13**	**154**	P	**P**	**16 01 30.7**	**+0.9**
STKA	**Stephens Creek**	**27.13**	**154**	P	**P**	**16 01 30.8**	**+0.9**
STKA	**Stephens Creek**	**27.13**	**154**	⇓*i*P	**P**	**16 01 30.3**	**+0.5**
HTT	**Hallett**	**27.48**	**160**	P	**P**	**16 01 34.2**	**+1.2**
	baz=28,SNR=6.0						
HTT	**Hallett**	**27.48**	**160**	P	**P**	**16 01 34.1**	**+1.0**
RKGY	**Rocky Gully**	**28.70**	**199**	P	**P**	**16 01 44.3**	**+0.5**
	baz=29,SNR=6.9						
RKGY	**Rocky Gully**	**28.70**	**199**	P	**P**	**16 01 46.2**	**+2.4**
CMSA	**Cobar Meteorol**	**28.82**	**148**	P	**P**	**16 01 46.6**	**+1.6**
	baz=29,SNR=99						
CMSA	**Cobar Meteorol**	**28.82**	**148**	P	**P**	**16 01 46.5**	**+1.6**
IPM	**Ipoh**	**29.64**	**293**	P	**P**	**16 01 52.0**	**-0.4**
KULM	**Kulim**	**30.32**	**294**	P	**P**	**16 01 58.0**	**-0.4**
RPSI	**Rantau Prapat**	**30.93**	**288**	P	**P**	**16 02 03.3**	**-0.5**
RPSI				IAmb	IAmb	16 02 04.5	
	comp=Z,18nm,0.7s						
PSI	**Prapat**	**30.97**	**289**	P	**P**	**16 02 03.3**	**-0.9**
PSI				pmax	pmax		
	comp=Z,18nm,0.7s						
HNR	**Honiara**	**31.48**	**95**	LR	LR	16 14 30.4	
	comp=Z,1µm,18.5s,baz=16,slow=35						
ARPS	**Mount Arapiles**	**31.52**	**159**	P	**P**	**16 02 10.8**	**+2.2**
	baz=32,SNR=39						
ARPS	**Mount Arapiles**	**31.52**	**159**	P	**P**	**16 02 10.8**	**+2.2**
ARMA	**Armidale**	**31.54**	**139**	P	**P**	**16 02 11.2**	**+2.1**
	baz=32,SNR=8.4						
ARMA	**Armidale**	**31.54**	**139**	P	**P**	**16 02 11.2**	**+2.1**
TPUB	**Ta-pu**	**31.67**	**347**	P	**P**	**16 02 08.5**	**-1.6**
GSI	**Gunungsitoli**	**31.78**	**285**	P	**P**	**16 02 09.9**	**-1.3**
GSI				IAmb	IAmb	16 02 56.2	
	comp=Z,24nm,1.1s						
QIZ	**Qiongzhong**	**32.11**	**326**	P	**P**	**16 02 13.3**	**-0.7**
QIZ				S	**S**	**16 07 23.9**	**+5.6**
QIZ				pmax	pmax		
	comp=Z,20nm,1.6s						
QIZ				LR	LR		
	comp=Z,210nm,22.3s						
QIZ				LR	LR		
	comp=Z,170nm,19.1s						
QIZ				LR	LR		
	comp=Z,180nm,23.9s						
YOJ	**Yonaguni jima**	**32.35**	**351**	P	**P**	**16 02 15.0**	**-1.0**
YOJ	**Yonaguni jima**	**32.35**	**351**	P	**P**	**16 02 15.0**	**-1.0**
YOJ				pmax	pmax		
	comp=Z,110nm,1.2s						
BRAT	**Ballarat**	**32.99**	**157**	P	**P**	**16 02 24.2**	**+2.7**
KNMB	**Chin-men Tao**	**33.35**	**344**	P	**P**	**16 02 24.7**	**0.0**
CAN	**Canberra**	**33.49**	**148**	P	**P**	**16 02 28.0**	**+2.0**
CAN				IAmb	IAmb	16 02 29.9	
	comp=Z,38nm,0.8s						
CAN	**Canberra**	**33.49**	**148**	P	**P**	**16 02 28.9**	**+2.9**
CAN	**Canberra**	**33.49**	**148**	P	**P**	**16 02 28.0**	**+2.0**
CAN				pmax	pmax		
	comp=Z,38nm,0.8s						
CAN	**Canberra**	**33.49**	**148**	P	**P**	**16 02 28.6**	**+2.6**
TOO	**Toolangi**	**33.65**	**155**	P	**P**	**16 02 27.4**	**+0.1**
	baz=34,SNR=18						
TOO	**Toolangi**	**33.65**	**155**	P	**P**	**16 02 30.1**	**+2.8**
TOO				IAmb	IAmb	16 02 31.3	
	comp=Z,43nm,1.3s						
TOO	**Toolangi**	**33.65**	**155**	P	**P**	**16 02 30.4**	**+3.1**
TOO	**Toolangi**	**33.65**	**155**	P	**P**	**16 02 30.1**	**+2.8**
TOO				pmax	pmax		
	comp=Z,43nm,1.3s						
CNB	**Canberra Magne**	**33.68**	**148**	P	**P**	**16 02 30.1**	**+2.5**
JOW	**Kunigami**	**34.32**	**0**	P	**P**	**16 02 33.5**	**+0.4**
MILA	**Mila**	**34.91**	**150**	P	**P**	**16 02 39.7**	**+1.4**
	baz=35,SNR=10.0						
MILA	**Mila**	**34.91**	**150**	P	**P**	**16 02 41.0**	**+2.7**
JCJ	**Chichijima**	**37.16**	**21**	P	**P**	**16 02 56.2**	**-1.2**
GLAD	**Gladstone**	**37.57**	**155**	P	**P**	**16 03 03.4**	**+2.7**
CORO	**Coronation Par**	**37.61**	**156**	P	**P**	**16 03 03.7**	**+2.7**
	comp=Z,18nm,1.0s						
MOO	**Moorlands**	**38.47**	**157**	P	**P**	**16 03 09.1**	**+0.8**
	baz=38,SNR=3.6						
MOO	**Moorlands**	**38.47**	**157**	P	**P**	**16 03 11.2**	**+2.9**
CMAR	**Chiang Mai Arr**	**38.80**	**312**	P	**P**	**16 03 10.0**	**-1.4**
	comp=Z,2.4nm,0.7s,baz=142,slow=7.1,SNR=20						
CMAR				PcP	**PcP**	**16 05 21.0**	**+0.4**
	comp=Z,2.1nm,0.6s,baz=167,slow=2.9,SNR=9.6						
	comp=Z,2.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**38.80**	**312**	P	**P**	**16 03 11.3**	**0.0**
CMAR	**Chiang Mai Arr**	**38.80**	**312**	*i* P	**P**	**16 03 13.1**	**+1.7**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TAU	**Tasmania Unive**	**38.92**	**157**	P	**P**	**16 03 14.9**	**+2.9**
CHTO	**Chiang Mai**	**39.03**	**313**		**P**	**16 03 12.2**	**-1.0**
CHTO	**Chiang Mai**	**39.03**	**313**	P	**P**	**16 03 12.2**	**-1.0**
JSU	**Suzuyama**	**39.04**	**3**	P	**P**	**16 03 13.0**	**-0.1**
NOUC	**Port Laguerre**	**39.41**	**116**	P	**P**	**16 03 18.0**	**+1.6**
DZM	**Mont Dzumac**	**39.53**	**115**	P	**P**	**16 03 19.3**	**+1.8**
	comp=Z,2.4nm,0.5s,baz=292,slow=16,SNR=7.3						
DZM				LR	LR	16 19 55.0	
	comp=Z,70nm,18.2s,baz=252,slow=36						
	comp=Z,2.4nm,0.5s						
GYA	**Guiyang**	**39.84**	**329**	P	**P**	**16 03 20.4**	**+0.4**
GYA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WHN	**Wuhan**	**40.26**	**341**	P	**P**	**16 03 23.8**	**+0.6**
WHN				pmax	pmax		
	comp=Z,96nm,0.8s						
NJ2	**Nanjing**	**40.51**	**348**	*e*P	**P**	**16 03 25.5**	**+0.3**
NJ2				pP	**pP**	**16 03 51.4**	**+1.8**
NJ2				sP	**sP**	**16 04 03.8**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,15nm,0.7s						
JNU	**Nakatsue**	**40.67**	**4**	LR	LR	16 22 45.2	
	comp=Z,25nm,18.4s,baz=218,slow=40						
JNU	**Nakatsue**	**40.67**	**4**	P	**P**	**16 03 26.4**	**-0.3**
KMI	**Kunming**	**40.94**	**324**	⇑P	**P**	**16 03 29.9**	**+0.7**
KMI				pmax	pmax		
	comp=Z,11nm,0.9s						
JMN	**Monobe**	**41.55**	**7**	P	**P**	**16 03 33.8**	**-0.1**
JMN				IAmb	IAmb	16 04 39.3	
	comp=Z,44nm,1.2s						
ENH	**Enshi**	**41.79**	**335**	P	**P**	**16 03 34.7**	**-1.1**
ENH	**Enshi**	**41.79**	**335**	P	**P**	**16 03 35.3**	**-0.5**
ENH				pP	**pP**	**16 04 01.6**	**+1.6**
ENH				sP	**sP**	**16 04 13.5**	**+1.4**
PZH	**PanZhiHua**	**42.57**	**324**	P	**P**	**16 03 42.3**	**-0.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,60nm,4.8s						
JHS	**Saijyo**	**42.72**	**6**	P	**P**	**16 03 43.5**	**+0.2**
JHS				IAmb	IAmb	16 04 56.8	
	comp=Z,96nm,1.7s						
TNCH	**TengChong**	**43.48**	**319**	*e*P	**P**	**16 03 50.5**	**+0.7**
TNCH				pP	pwP	16 04 18.9	-1.7
TNCH				pmax	pmax		
	comp=Z,11nm,0.8s						
INU	**Inuyama**	**43.62**	**11**	P	**P**	**16 03 49.4**	**-1.0**
TJN	**Taejon**	**43.84**	**359**	P	**P**	**16 03 51.4**	**-0.8**
TJN	**Taejon**	**43.84**	**359**	*ce*P	**P**	**16 03 52.3**	**+0.1**
JGF	**Kuroka**	**43.93**	**11**	P	**P**	**16 03 52.7**	**-0.3**
JGF				IAmb	IAmb	16 04 19.2	
	comp=Z,39nm,1.6s						
KSAR	**Wonju Array Be**	**44.90**	**360**		**P**	**16 04 00.3**	**-0.3**
KSAR	**Wonju Array Be**	**44.90**	**360**	P	**P**	**16 04 00.3**	**-0.3**
KSRS	**Korea Array**	**44.91**	**360**	P	**P**	**16 04 00.8**	**+0.1**
	comp=Z,11nm,0.6s,baz=178,slow=9.3,SNR=85						
KSRS				PcP	**PcP**	**16 05 39.9**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=182,slow=2.7,SNR=4.5						
	comp=Z,11nm,0.6s						
KS19	**Wonju Array Si**	**44.96**	**360**	P	**P**	**16 04 00.9**	**-0.2**
KS19				IAmb	IAmb	16 04 01.9	
	comp=Z,16nm,0.8s						
MJAR	**Matsushiro Arr**	**45.00**	**11**	P	**P**	**16 03 59.9**	**-1.6**
	comp=Z,8.6nm,0.6s,baz=180,slow=8.9,SNR=21						
	comp=Z,8.6nm,0.6s						
MAJO	**Matsushiro**	**45.00**	**11**		**P**	**16 03 59.9**	**-1.6**
MAJO				IAmb	IAmb	16 04 01.1	
	comp=Z,16nm,0.9s						
MAJO	**Matsushiro**	**45.00**	**11**	*i* P	**P**	**16 04 00.1**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,15nm,0.9s						
MAJO	**Matsushiro**	**45.00**	**11**	P	**P**	**16 03 60.0**	**-1.6**
MJB9	**Matsu-Tunnel**	**45.01**	**11**	P	**P**	**16 04 00.1**	**-1.5**
MJB9				IAmb	IAmb	16 04 01.1	
	comp=Z,15nm,0.9s						
XAN	**Xi'an**	**45.33**	**337**	⇑*i*P	**P**	**16 04 03.4**	**-0.8**
XAN				pmax	pmax		
	comp=Z,23nm,0.9s						
XAN	**Xi'an**	**45.33**	**337**	P	**P**	**16 04 03.1**	**-1.1**
JSD	**Sado**	**46.46**	**11**	P	**P**	**16 04 11.7**	**-1.2**
JSD				IAmb	IAmb	16 04 13.2	
	comp=Z,48nm,1.5s						
HNS	**HongShan**	**46.59**	**345**	⇑P	**P**	**16 04 13.5**	**-0.4**
HNS				pmax	pmax		
	comp=Z,49nm,0.8s						
JMM	**Marumori**	**46.83**	**14**	P	**P**	**16 04 14.9**	**-1.0**
JMM				IAmb	IAmb	16 04 19.2	
	comp=Z,84nm,1.6s						
BJT	**Baijiatuau**	**48.75**	**348**	P	**P**	**16 04 29.8**	**-0.8**
BJT				IAmb	IAmb	16 04 31.0	
	comp=Z,20nm,0.9s						
BJT	**Baijiatuau**	**48.75**	**348**	P	**P**	**16 04 29.8**	**-0.8**
BJT				pmax	pmax		
	comp=Z,20nm,0.9s						
BJT	**Baijiatuau**	**48.75**	**348**	P	**P**	**16 04 30.1**	**-0.4**
BJT				pP	**pP**	**16 04 56.6**	**+1.2**
BJI	**Beijing**	**48.77**	**348**	P	**P**	**16 04 30.3**	**-0.4**
BJI				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH	**Lanzhou**	**49.18**	**334**	*e*P	**P**	**16 04 35.3**	**+1.1**
LZH				pP	pP	16 05 00.3	+1.1
LZH				sP	sP	16 05 12.3	+1.0
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
PALK	**Pallekele**	**49.59**	**286**	LR	LR	16 25 49.1	
	comp=Z,76nm,18.8s,baz=232,slow=36						
JTM	**Tenmabayashi**	**49.69**	**13**	P	**P**	**16 04 37.5**	**-0.2**
JTM				IAmb	IAmb	16 04 38.2	
	comp=Z,21nm,0.7s						
OUZ	**Omahuta**	**49.78**	**130**	P	**P**	**16 04 41.5**	**+2.9**
JCZ	**Jackson Bay**	**50.63**	**143**	P	**P**	**16 04 47.5**	**+2.5**
HHC	**Hu-ho-hao-te**	**50.66**	**344**	*e*P	**P**	**16 04 45.4**	**+0.2**
HHC				pmax	pmax		
	comp=Z,26nm,0.9s						
MLZ	**Mavora Lakes**	**50.96**	**144**	P	**P**	**16 04 49.0**	**+1.6**
CN2	**Changchun**	**51.31**	**357**	P	**P**	**16 04 49.6**	**-0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ERM	**Erimo**	**51.34**	**14**	P	**P**	**16 04 51.0**	**+1.0**
ERM				IAmb	IAmb	16 06 12.9	
	comp=Z,30nm,1.1s						
ERM	**Erimo**	**51.34**	**14**	P	**P**	**16 04 51.1**	**+1.0**
ERM				pmax	pmax		

	comp=Z,30nm,1.1s						
QRZ	Quartz Range	51.38	137	P	P	16 04 52.2	+1.6
QRZ	Quartz Range	51.38	137	P	P	16 04 53.2	+2.7
LSA	Lhasa	51.46	318	P	P	16 04 51.5	-0.3
LSA				IAmb	IAmb	16 04 53.8	
	comp=Z,13nm,0.7s						
LSA	Lhasa	51.46	318	P	P	16 04 51.5	-0.3
LSA				pmax	pmax		
	comp=Z,13nm,0.7s						
LSA	Lhasa	51.46	318	P	P	16 04 52.6	+0.8
LSA				pP	pwP	16 05 20.3	-3.0
INZ	Inchbonnie	51.58	140	P	P	16 04 53.3	+1.3
LBZ	Lake Benmore	51.65	142	P	P	16 04 53.4	+0.9
USA0B	Ussuriysk Arra	51.77	4	P	P	16 04 53.1	-0.2
USA0B				IAmb	IAmb	16 04 54.0	
	comp=Z,9.7nm,0.6s						
USA0B	Ussuriysk Arra	51.77	4	P	P	16 04 53.1	-0.2
USA0B				pmax	pmax		
	comp=Z,10.0nm,0.6s						
USRK	Ussuriysk Ar.	51.77	4	P	P	16 04 52.4	-0.8
	comp=Z,9.2nm,0.5s,baz=188,slow=7.2,SNR=35						
	comp=Z,9.2nm,0.5s						
USRK	Ussuriysk Ar.	51.77	4	P	P	16 04 53.1	-0.2
USRK	Ussuriysk Ar.	51.77	4	P	P	16 04 53.1	-0.2
RPZ	Rata Peaks	51.83	141	P	P	16 04 56.3	+2.4
	comp=Z,204nm,1.1s,baz=252,slow=2.5,SNR=67						
RPZ	Rata Peaks	51.83	141	P	P	16 04 56.1	+2.2
KUZ	Kuaotunu	51.95	131	P	P	16 04 57.1	+2.3
HIZ	Hauiti	52.00	134	P	P	16 04 57.8	+2.6
MDJ	Mudanjiang	52.08	1	P	P	16 04 55.3	-0.3
MDJ				pP	pP	16 05 20.6	-0.4
MDJ				PcP	PcP	16 06 01.6	-4.5
MDJ				PcS	PcS	16 10 01.0	-3.3
MDJ				S	S	16 12 18.5	+7.6
MDJ				sS	sS	16 13 04.1	+8.2
MDJ				pmax	pmax		
	comp=Z,17nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,140nm,5.3s						
OXZ	Oxford	52.25	140	P	P	16 04 58.1	+1.1
ODZ	Otahua Downs	52.27	143	P	P	16 04 58.6	+1.5
XLT	XiLinHaoTe	52.50	349	⇑*i*P	P	16 04 58.5	-0.3
XLT				pmax	pmax		
	comp=Z,35nm,1.0s						
XLT				pmax	pmax		
	comp=Z,80nm,6.0s						
WAZ	Wanganui	52.60	135	P	P	16 05 02.7	+3.1
PKVZ	Pokaka	52.66	134	P	P	16 05 02.4	+2.2
BSWZ	Blackbirch Sta	52.69	138	P	P	16 05 00.7	+0.5
KHZ	Kahutara	52.78	139	P	P	16 05 02.7	+1.8
NNVZ	North Ngauruho	52.79	134	P	P	16 05 04.7	+3.4
NGZ	Ngauruhoe	52.80	134	P	P	16 05 04.0	+2.7
TRVZ	Turoa	52.81	134	P	P	16 05 03.8	+2.3
OTVZ	Oturere	52.84	134	P	P	16 05 04.7	+3.1
TMVZ	Te Maari	52.85	134	P	P	16 05 04.7	+3.1
WNVZ	Wahianoa	52.86	134	P	P	16 05 04.2	+2.5
ETVZ	East Tongariro	52.86	134	P	P	16 05 04.5	+2.8
RAMN	Ramite	52.98	312	*e*P	P	16 05 02.7	-0.2
	comp=Z,60nm,0.6s						
MOVZ	Moawhango	53.00	134	P	P	16 05 04.3	+1.7
SNZO	South Karori	53.06	137	P	P	16 05 04.2	+1.2
OGWZ	Otaki Gorge	53.17	136	P	P	16 05 05.0	+1.2
ASAJ	Asahikawa	53.20	13	P	P	16 05 03.4	-0.4
ASAJ				pmax	pmax		
	comp=Z,43nm,1.6s						
JKA	Kamikawa-asahi	53.20	13	P	P	16 05 03.4	-0.4
JKA				IAmb	IAmb	16 05 52.9	
	comp=Z,43nm,1.6s						
CAW	Cannon Point	53.22	136	P	P	16 05 05.0	+0.9
BHHZ	Black Hill Sta	53.25	134	P	P	16 05 05.9	+1.4
MRZ	Mangatainoka R	53.39	136	P	P	16 05 06.7	+1.3
TSZ	Takapari Road	53.41	135	P	P	16 05 06.9	+1.3
BKZ	Black Stump Fm	53.43	134	P	P	16 05 06.3	+0.5
BKZ				IAmb	IAmb	16 05 07.4	
	comp=Z,18nm,0.6s						
BKZ	Black Stump Fm	53.43	134	P	P	16 05 07.0	+1.2
BKZ	Black Stump Fm	53.43	134	P	P	16 05 07.1	+1.2
HOWZ	Holdsworth Sta	53.44	136	P	P	16 05 06.8	+0.9
PNHZ	Pukenui	53.52	135	P	P	16 05 07.7	+1.3
URZ	Urewera	53.54	132	P	P	16 05 07.3	+0.9
	comp=Z,7.0nm,0.5s,baz=346,slow=4.4,SNR=8.2						
	comp=Z,7.0nm,0.5s						
URZ	Urewera	53.54	132	P	P	16 05 07.4	+0.9
URZ	Urewera	53.54	132	P	P	16 05 07.5	+1.0
MTW	Mount Morrison	53.54	136	P	P	16 05 07.3	+0.8
MTHZ	Maungataniwha	53.56	133	P	P	16 05 08.2	+1.4
RTZ	Ruatahuna	53.57	133	P	P	16 05 07.7	+0.8
RTZ				IAmb	IAmb	16 05 08.8	
	comp=Z,14nm,0.7s						
PRWZ	Pori Road	53.62	135	P	P	16 05 08.2	+1.1
NMHZ	Naumai	53.63	133	P	P	16 05 09.4	+2.1
DVHZ	Dannevirke	53.65	135	P	P	16 05 08.3	+1.0
JIRN	Jiri	53.68	313	*e*P	P	16 05 07.6	-0.5
	comp=Z,24nm,0.6s						
MCHZ	McNeill Hill	53.68	134	P	P	16 05 01.0	-6.6
GTA	Gaotai	53.72	333	*e*P	P	16 05 07.8	-0.1
GTA				pP	pP	16 05 32.8	-0.5
GTA				pmax	pmax		
	comp=Z,11nm,0.8s						
GOMU	GeErMu	53.73	327	P	P	16 05 09.3	+0.9
GOMU				pP	pwP	16 05 41.8	+1.8
GOMU				sP	sP	16 05 56.4	+11
RAHZ	Arahi	53.76	133	P	P	16 05 09.9	+1.7
TRWZ	Traveller	53.77	137	P	P	16 05 09.6	+1.4
TMWZ	Te Maipa	53.79	136	P	P	16 05 09.7	+1.3
ARHZ	Aropaoanui	53.83	134	P	P	16 05 10.5	+1.9
RAGZ	Rawiri	53.85	133	P	P	16 05 10.5	+1.6
BFZ	Birch Farm	53.86	136	P	P	16 05 10.4	+1.6
BFZ	Birch Farm	53.86	136	P	P	16 05 10.5	+1.6
SNGZ	Shannon Statio	53.90	133	P	P	16 05 10.7	+1.5
PXZ	Pawanui	54.03	135	P	P	16 05 10.2	+0.1
GUN	Gumba	54.05	313	*e*P	P	16 05 10.3	-0.5
	comp=Z,52nm,0.5s						
TKGZ	Te Karaka	54.14	132	P	P	16 05 12.5	+1.6
MXZ	Matakaoa Point	54.17	131	P	P	16 05 12.8	+1.7
RIGZ	Rimuhau	54.18	133	P	P	16 05 12.6	+1.4
PKI	Pulchoki	54.20	312	*e*P	P	16 05 10.8	-1.1
	comp=Z,23nm,0.5s						
PKIN	Phulchoki	54.22	312	*e*P	P	16 05 11.7	-0.2
	comp=Z,22nm,0.5s						
PUZ	Puketiti	54.31	132	P	P	16 05 13.7	+1.5
CNGZ	Carnagh Statio	54.42	132	P	P	16 05 15.0	+2.1
DMN	Daman	54.45	312	*e*P	P	16 05 13.3	-0.3
	comp=Z,26nm,0.7s						
GKN	Gorkha	55.01	312	*e*P	P	16 05 16.7	-0.8
	comp=Z,49nm,0.4s						
DANN	Dangsing	55.85	312	*e*P	P	16 05 22.4	-1.3
	comp=Z,16nm,0.5s						
YSS	Yuzh-Sakhalins	55.93	12	P	P	16 05 23.2	-0.3
YSS				IAmb	IAmb	16 05 23.9	
	comp=Z,8.5nm,0.8s						
YSS	Yuzh-Sakhalins	55.93	12	*e*P	P	16 05 23.3	-0.3
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PYUN	Piuthan	56.28	311	*e*P	P	16 05 26.3	-0.4
KLR	Kul'dur	56.77	3	*ce*P	P	16 05 28.6	-0.8
KLR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HEH	HeiHe	57.71	359	*e*P	P	16 05 35.4	-0.6
HEH				pmax	pmax		
	comp=Z,13nm,1.1s						
HEH				pmax	pmax		
	comp=Z,97nm,5.8s						
ULN	Ulaanbaatar	58.38	343	P	P	16 05 41.0	0.0
ULN				IAmb	IAmb	16 05 43.0	
	comp=Z,12nm,0.8s						
ULN	Ulaanbaatar	58.38	343	P	P	16 05 41.0	0.0
ULN				pmax	pmax		
	comp=Z,12nm,0.8s						
ULN	Ulaanbaatar	58.38	343	P	P	16 05 41.4	+0.4
ULN				pP	pP	16 06 07.0	+0.2
SONM	Songino Array	58.54	343	P	P	16 05 42.3	+0.2
	comp=Z,8.4nm,0.7s,baz=171,slow=7.5,SNR=51						
SONM				PcP	PcP	16 06 31.0	-0.3
	comp=Z,1.5nm,0.5s,baz=154,slow=5.5,SNR=4.5						
	comp=Z,8.4nm,0.7s						
SONM	Songino Array	58.54	343		P	16 05 41.8	-0.2
SONM				IAmb	IAmb	16 05 44.0	
	comp=Z,10.0nm,0.8s						
SONM	Songino Array	58.54	343	P	P	16 05 41.8	-0.2
SONM				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AFI	Afiamalu	59.21	102	LR	LR	16 30 03.5	
	comp=Z,52nm,18.1s,baz=282,slow=35						
DRV	Dumont d'Urvil	59.45	175	⇑P	P	16 05 49.8	+2.0
CASY	Casey	59.75	188	P	P	16 05 51.7	+1.7
ZEA	Zeya	61.20	359	*e*P	P	16 05 59.9	0.0
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZAK	Zakamensk	61.74	342	*e*P	P	16 06 03.0	-0.8
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
WMQ	Urumqi	62.99	328	*e*P	P	16 06 12.9	+0.7
WMQ				PcP	PcP	16 06 49.4	+0.2
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
MOY	Mondy	63.57	341	*e*P	P	16 06 16.4	+0.5
MOY				pmax	pmax		
	comp=Z,21nm,1.3s						
PEA0B	Petropavlovsk-	65.56	19	P	P	16 06 28.7	0.0
PEA0B	Petropavlovsk-	65.56	19	P	P	16 06 28.7	0.0
PEA0B				pmax	pmax		
	comp=Z,102nm,1.7s						
PETK	Petropavlovsk-	65.56	19	P	P	16 06 27.9	-0.8
	comp=Z,2.4nm,0.5s,baz=158,slow=4.2,SNR=33						
	comp=Z,2.4nm,0.5s						
PETK	Petropavlovsk-	65.56	19	P	P	16 06 28.3	-0.4
PETK	Petropavlovsk-	65.56	19	P	P	16 06 28.3	-0.4
NIL	Nilore	66.30	312	P	P	16 06 32.8	-1.1
NIL				IAmb	IAmb	16 06 33.8	
	comp=Z,8.8nm,0.6s						
NIL	Nilore	66.30	312	P	P	16 06 32.8	-1.1
NIL				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NIL	Nilore	66.30	312	P	P	16 06 33.1	-0.8
DGZ	Jazzator, Alta	67.26	333	*i* P	P	16 06 39.4	-0.4
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSH	Kashi	67.30	319	P	P	16 06 40.8	+0.5
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,190nm,5.1s						
CCD	Concordia, Ant	67.43	181	⇑P	P	16 06 43.2	+2.4
MK31	Makanchi Array	67.81	328	P	P	16 06 42.4	-0.8
MK31	Makanchi Array	67.81	328	P	P	16 06 42.4	-0.8
MK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MKAR	Makanchi Array	67.81	328	P	P	16 06 42.4	-0.8
	comp=Z,4.1nm,0.5s,baz=124,slow=8.0,SNR=141						
	comp=Z,4.1nm,0.5s						
MKAR	Makanchi Array	67.81	328	P	P	16 06 42.5	-0.7
MKAR	Makanchi Array	67.81	328	*i* P	P	16 06 42.7	-0.5
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
MAKZ	Makanchi	67.99	328	P	P	16 06 43.5	-0.8
MAKZ	Makanchi	67.99	328	P	P	16 06 43.5	-0.8
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MAKZ	Makanchi	67.99	328	P	P	16 06 43.6	-0.7
MAKZ				pP	pP	16 07 11.2	+0.3
YAK	Yakutsk	69.52	1	P	P	16 06 52.3	-1.1
YAK	Yakutsk	69.52	1	*e*P	P	16 06 52.5	-0.9
YAK				pmax	pmax		
	comp=Z,20nm,0.7s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.6s						
YAK	Yakutsk	69.52	1	P	P	16 06 52.6	-0.8
YAK				pP	pP	16 07 20.6	+0.4
KBL	Kabul	69.82	311	P	P	16 06 55.5	-0.6
KBL	Kabul	69.82	311	P	P	16 06 55.5	-0.6
KBL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AAK	Ala-Archa	69.90	321	P	P	16 06 56.6	+0.2
	comp=Z,2.8nm,0.5s,baz=159,slow=3.9,SNR=9.5						
AAK				LR	LR	16 39 38.9	
	comp=Z,65nm,19.2s,baz=188,slow=38						
	comp=Z,2.8nm,0.5s						
AAK	Ala-Archa	69.90	321	P	P	16 06 57.1	+0.7
GAR	Garm	70.87	316	P	P	16 07 01.3	-1.1
ZAA0	Zalesovo Array	71.41	335	P	P	16 07 03.5	-1.5
ZAA0				IAmb	IAmb	16 07 05.1	
	comp=Z,15nm,0.9s						
ZALV	Zalesovo Beam	71.41	335	P	P	16 07 03.7	-1.3
	comp=Z,8.9nm,0.5s,baz=125,slow=4.8,SNR=58						
	comp=Z,8.9nm,0.5s						
ZALV	Zalesovo Beam	71.41	335	P	P	16 07 03.5	-1.5
ZALV	Zalesovo Beam	71.41	335	*i* P	P	16 07 04.0	-1.0
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CHGR	Chuyangaron	71.52	315	P	P	16 07 05.3	-0.9
CHGR				IAmb	IAmb	16 07 06.5	
	comp=Z,22nm,1.3s						
CHGR	Chuyangaron	71.52	315	P	P	16 07 05.3	-0.9
CHGR				pmax	pmax		
	comp=Z,22nm,1.3s						
VNDA	Vanda	71.99	173	P	P	16 07 09.8	+1.5
	comp=Z,5.6nm,0.4s,baz=321,slow=6.7,SNR=47						
	comp=Z,5.6nm,0.4s						
KURK	Kurchatov	72.17	329	P	P	16 07 09.0	-0.7
KURK				IAmb	IAmb	16 07 11.0	
	comp=Z,25nm,1.3s						
KURK	Kurchatov	72.17	329	*ce*P	P	16 07 09.3	-0.4
KURK				pmax	pmax		
	comp=Z,20nm,1.3s						
KK31	Karatay Array	72.66	320	P	P	16 07 12.2	-0.7
KK31	Karatay Array	72.66	320	P	P	16 07 12.2	-0.7
KK31				pmax	pmax		
	comp=Z,12nm,1.8s						
KKAR	Karatay Array	72.66	320	P	P	16 07 11.8	-1.0
KKAR	Karatay Array	72.66	320	P	P	16 07 12.0	-0.9
KKAR				IAmb	IAmb	16 07 18.1	
	comp=Z,12nm,1.8s						
KKAR	Karatay Array	72.66	320	P	P	16 07 11.8	-1.0
KKAR				pmax	pmax		
	comp=Z,12nm,1.8s						
SEY	Seymchan	72.83	11	*ce*P	P	16 07 13.0	-0.3
SEY				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AMKA	Amchitka	73.38	31	P	P	16 07 16.2	-0.6
KIWB	Kanaga Island	75.47	32	P	P	16 07 28.8	-0.1
BRVK	Borovoye	77.75	328	P	P	16 07 40.9	-0.8
BRVK	Borovoye	77.75	328	*ce*P	P	16 07 41.2	-0.6
BRVK				pmax	pmax		
	comp=Z,11nm,1.3s						
TIXI	Tiksi	79.18	0	P	P	16 07 47.9	-1.4
TIXI				IAmb	IAmb	16 07 49.0	
	comp=Z,16nm,0.5s						
TIXI	Tiksi	79.18	0	*ce*P	P	16 07 47.8	-1.4
TIXI				pmax	pmax		
	comp=Z,11nm,0.6s						
VOI	Vohitsoka	79.19	249	P	P	16 07 50.3	-0.3
VOI				IAmb	IAmb	16 09 25.8	
	comp=Z,37nm,1.6s						
GEYT	Alibeck	79.27	311	P	P	16 07 49.9	-0.7
	comp=Z,1.9nm,0.6s,baz=127,slow=3.8,SNR=5.7						
	comp=Z,1.9nm,0.6s						
NRIK	Noril'sk	81.79	347	P	P	16 08 03.0	-0.2
	comp=Z,9.0nm,0.6s,baz=140,slow=4.9,SNR=24						
	comp=Z,9.0nm,0.6s						
NRIK	Noril'sk	81.79	347	P	P	16 08 02.6	-0.6
NRIK				IAmb	IAmb	16 08 04.5	
	comp=Z,10nm,0.7s						
NRIK	Noril'sk	81.79	347	*ce*P	P	16 08 02.8	-0.4
NRIK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ABKAR	Akbulak array	81.92	322	P	P	16 08 03.1	-1.2
UNV	Unalaska Valle	82.07	33	P	P	16 08 04.5	-0.5
UNV				IAmb	IAmb	16 10 01.1	
	comp=Z,79nm,1.5s						
QSPA	South Pole Qui	82.29	180	P	P	16 08 07.0	+0.9
	comp=Z,12nm,0.8s,baz=298,slow=1.2,SNR=62						
	comp=Z,12nm,0.8s						
AKUT	Akutan	82.59	33	P	P	16 08 07.1	-0.5
GAMB	Gambell	84.26	23	P	P	16 08 16.4	+0.4
	baz=240						
ARU	Arti	85.33	329	P	P	16 08 20.2	-1.4
ARU	Arti	85.33	329	*ce*P	P	16 08 20.5	-1.1
ARU				pmax	pmax		
	comp=Z,13nm,1.7s						
SDPT	Sand Point	85.89	33	P	P	16 08 23.7	-0.7
RAYN	Ar Rayn	86.35	294	P	P	16 08 26.2	-1.3
RAYN				IAmb	IAmb	16 08 36.1	
	comp=Z,27nm,1.9s						
RAYN	Ar Rayn	86.35	294	P	P	16 08 26.2	-1.3
RAYN				pmax	pmax		
	comp=Z,27nm,1.9s						
TNA	Tin City	86.54	22	P	P	16 08 26.4	-1.0
ANM	Nome	87.08	23	P	P	16 08 29.7	-0.3
ANM	Nome	87.08	23	P	P	16 08 29.7	-0.3
ANM				pmax	pmax		
	comp=Z,7.0nm,1.6s						
P16K	Nushagak River	88.36	30	P	P	16 08 36.8	+0.7
	baz=252						
N16K	Nishlik Lake	88.43	28	P	P	16 08 38.0	+1.5
	baz=252						
O16K	Kokwok River B	88.48	29	P	P	16 08 37.3	+0.6
	baz=252						
N19K	Bonanza Creek	90.55	29	P	P	16 08 47.7	+1.2
	baz=255						
L19K	White Mountain	90.73	27	P	P	16 08 47.5	+0.2
	baz=255						
M20K	Styx River	91.45	28	P	P	16 08 50.4	-0.3
	baz=256						
GURO	Guroymak-BITLI	91.72	308	P	P	16 08 52.2	-0.3
SKT	Skwentna	92.20	28	P	P	16 08 52.5	-1.6
	baz=258						
TROLL	Troll, Antarti	93.04	195	P	P	16 09 00.1	+2.1
MLY	Manley	93.17	25	P	P	16 08 58.6	+0.1
MLY				IAmb	IAmb	16 09 03.3	
	comp=Z,18nm,2.0s						
MLY	Manley	93.17	25	P	P	16 08 57.3	-1.2
	baz=259						
SML	Sawmill	93.66	28	P	P	16 08 59.7	-1.2
	baz=261						
WAT1	Susitna Watana	93.73	27	P	P	16 08 59.9	-1.3
	baz=260						
I23K	Minto, Yukon-K	93.77	25	P	P	16 09 00.5	-0.7
	baz=260						
G23K	Bananza Creek	93.78	23	P	P	16 09 01.0	-0.3
	baz=260						
COLD	Coldfoot	93.81	23	P	P	16 09 00.9	-0.5
	baz=259						
BELA	Belgrano 2	94.02	184	P	P	16 09 02.8	+0.5
BELA				IAmb	IAmb	16 09 03.5	
	comp=Z,6.8nm,0.5s						
E23K	Chandalar	94.18	22	P	P	16 09 02.8	-0.4
	baz=260						
SNAA	Sanae	94.56	194	P	P	16 09 06.6	+1.7
ILAR	Eielson Array	94.75	25	P	P	16 09 04.0	-1.7
	comp=Z,0.5nm,0.5s,baz=265,slow=4.2,SNR=8.5						
ILAR				PKKPbc	PKKPdf	16 26 03.2	-1.3
	comp=Z,0.6nm,0.7s,baz=34,slow=2.5,SNR=7.1						
	comp=Z,0.5nm,0.5s						
PAX	Paxson	95.14	27	P	P	16 09 07.4	-0.2
	baz=263						
F25K	Christian Rive	95.61	23	P	P	16 09 09.3	-0.4
	baz=264						
E25K	Arctic Village	95.69	22	P	P	16 09 10.0	0.0
	baz=264						
L27K	Beaver Creek,	96.81	27	P	P	16 09 14.9	-0.3
	baz=266						
I27K	Kandik River	97.04	25	P	P	16 09 15.7	-0.6
	baz=267						
MBAR	Mbarara	97.27	268	LR	LR	16 52 54.9	
	comp=Z,43nm,18.3s,baz=86,slow=35						
ARCES	ARCESS Array B	101.58	339	P	Pdif	16 09 35.0	-1.4
	comp=Z,2.0nm,0.6s,baz=70,slow=7.1,SNR=8.5						
FINES	FINESS Array B	102.49	331	P	Pdif	16 09 38.2	-2.3
	comp=Z,8.9nm,1.2s,baz=77,slow=3.1,SNR=1.6						
YKA	Yellowknife Ar	109.17	26	PKKPbc	PKKPbc	16 25 20.8	-2.2
	comp=Z,0.6nm,0.5s,baz=115,slow=3.5,SNR=11						
YKA				PKKPab	PKKPab	16 25 33.1	+0.2
	comp=Z,0.4nm,0.6s,baz=112,slow=4.9,SNR=6.1						
ABTA	Abfaltersbach	113.05	318	*i* PKiKP	PKiKP	16 14 20.9	-0.6
	comp=Z,1.6nm,0.6s						
WTTA	Wattenberg	113.50	318	*i* PKiKP	PKiKP	16 14 22.5	0.0
	comp=Z,12nm,0.7s						
SQTA	Sankt Quirin	113.79	318	*i* PKP	PKiKP	16 14 22.9	-0.1
	comp=Z,6.1nm,1.3s						
MOTA	Moosalm	113.83	319	*i* PKiKP	PKiKP	16 14 22.8	-0.3
	comp=Z,2.7nm,0.5s						
FETA	Feichten	114.16	318	*i* PKP	PKPdf	16 14 23.7	-0.1
	comp=Z,1.9nm,0.8s						
DAVA	Damuels	114.64	319	*i* PKP	PKPdf	16 14 24.7	0.0
	comp=Z,4.1nm,0.5s						
HLID	Hailey	115.04	45	P	PKPdf	16 14 27.0	+1.4
	baz=284						
PFO	Pinyon Flats O	115.33	57	P	PKiKP	16 14 28.4	+2.0
	baz=278						
BELC	Belle Mtn. Jos	115.66	56	P	PKiKP	16 14 28.7	+1.7
	baz=278						
MCMT	McKenzie Canyo	115.81	44		PKPdf	16 14 26.8	-0.4
GMRC	Granite Mounta	115.82	55	P	PKiKP	16 14 29.1	+1.8
	baz=279						
EGMT	Eagleton	116.88	40	P	PKiKP	16 14 29.3	+0.4
	baz=290						
DUG	Dugway, Tooele	117.00	49	P	PKiKP	16 14 30.6	+1.1
	baz=284						
IMW	Indian Meadow	117.38	44		PKPdf	16 14 30.2	0.0
FXWY	Fox Creek	117.39	45		PKiKP	16 14 30.6	+0.4
REDW	Red Top Meadow	117.59	45		PKiKP	16 14 30.7	+0.1
BW06	Boulder Array	118.68	45		PKPdf	16 14 32.0	-0.7
BW06	Boulder Array	118.68	45	P	PKiKP	16 14 33.1	+0.3
	baz=287						
PD31	Pinedale Array	118.68	45		PKPdf	16 14 32.4	-0.2
PDAR	Pinedale Array	118.68	45	PKP	PKPdf	16 14 32.5	-0.2
	comp=Z,1.6nm,0.6s,baz=7.0,slow=0.5,SNR=19						
PDAR				PKKPbc	PKKPbc	16 24 49.1	-1.2
	comp=Z,0.4nm,0.6s,baz=101,slow=4.7,SNR=4.7						
PDAR	Pinedale Array	118.68	45		PKPdf	16 14 32.2	-0.5
DGMT	Dagmar	120.14	38	P	PKiKP	16 14 36.4	+1.2
	baz=295						
O20A	White River Ci	120.39	48		PKPdf	16 14 35.8	-0.3
O20A	White River Ci	120.39	48	P	PKiKP	16 14 37.0	+0.9
	baz=287						
PV13	Radium Mtn., P	120.51	50		PKPdf	16 14 36.0	-0.3
K22A	Casper	120.83	45	P	PKiKP	16 14 37.1	+0.2
	baz=290						
MVCO	Mesa Verde	121.00	51	P	PKiKP	16 14 38.6	+1.2
	baz=285						
319A	Douglas	121.68	58		PKPdf	16 14 37.6	-1.1
RSSD	Black Hills	122.00	42		PKPdf	16 14 37.7	-1.3
RSSD	Black Hills	122.00	42	PKIKP	PKPdf	16 14 37.7	-1.3
RSSD	Black Hills	122.00	42	P	PKiKP	16 14 39.1	-0.1
	baz=293						
S22A	4UR Ranch, Cre	122.14	50	P	PKiKP	16 14 41.0	+1.3
	baz=287						
LENM	Lemitar	122.97	54	PKPdf	PKPdf	16 14 41.1	-0.1
SDCO	Great Sand Dun	123.14	50	P	PKiKP	16 14 42.7	+1.0
	baz=288						
ULM	Lac du Bonnet	124.02	33	PKP	PKPdf	16 14 41.6	-0.8
	comp=Z,2.9nm,0.6s,baz=262,slow=3.2,SNR=5.0						
MNTX	Cornudas Mount	124.86	57	P	PKiKP	16 14 45.3	+0.3
	baz=284						
ESDC	Sonseca Array	126.69	314	PKP	PKPdf	16 14 47.0	-0.9
	comp=Z,0.5nm,0.4s,baz=4.7,slow=4.4,SNR=4.9						
TX31	Lajitas Ar. Si	126.85	59		PKPdf	16 14 47.9	-0.7
TXAR	Lajitas Array	126.85	59	PKP	PKPdf	16 14 48.5	-0.1
	comp=Z,0.9nm,0.7s,baz=188,slow=1.7,SNR=12						
TORD	Torodi Ar. Bea	127.14	281	PKP	PKPdf	16 14 49.1	-0.2
	comp=Z,2.5nm,0.7s,baz=62,slow=2.1,SNR=12						
TORD	Torodi Ar. Bea	127.14	281		PKPdf	16 14 48.5	-0.9
PLCA	Paso Flores	128.83	162	PKP	PKPdf	16 14 52.4	+0.3
	comp=Z,2.8nm,0.7s,baz=225,slow=1.3,SNR=12						
JCT	Junction City	129.80	57	PKPdf	PKPdf	16 14 54.3	+0.2
JCT	Junction City	129.80	57	PKIKP	PKPdf	16 14 54.3	+0.2
JCT	Junction City	129.80	57	P	PKiKP	16 14 55.1	+0.1
	baz=287						
P38A	Dawn	131.01	43		PKPdf	16 14 55.1	-0.9
SCHQ	Schefferville	131.48	12	PKP	PKiKP	16 14 57.2	-0.3
	comp=Z,1.3nm,0.4s,baz=7.4,slow=2.9,SNR=5.4						
S39A	Bolivar	132.07	45		PKPdf	16 14 57.4	-0.7
R40A	Maddies Statio	132.52	44		PKPdf	16 14 58.7	-0.3
CCM	Cathedral Cave	133.33	44	P	PKiKP	16 15 01.5	-0.2
	baz=300						
WVT	Waverly	136.66	44	P	PKiKP	16 15 08.1	-0.4
	baz=302						
GO02	Mina Guanaco	143.05	153		PKPbc	16 15 16.8	+0.6
CPUP	Villa Florida	145.76	171	PKPbc	PKPab	16 15 24.6	+0.2
	comp=Z,7.4nm,0.6s,baz=179,slow=2.7,SNR=20						
CPUP	Villa Florida	145.76	171	PKPbc	PKPbc	16 15 24.1	+0.1
CPUP	Villa Florida	145.76	171	PKP2	PKPbc	16 15 24.1	+0.1
PB01	IPOC Station P	146.60	149		PKPab	16 15 27.9	0.0
PB08	IPOC Station P	147.52	149	PKPbc	PKPbc	16 15 28.9	-0.7
PB11	IPOC Station P	147.57	148		PKPbc	16 15 30.6	+1.0
PTGB	Pitanga	147.79	180	*e*P	PKiKP	16 15 31.2	-0.6
GO01	Chusmiza	147.89	148		PKPbc	16 15 31.7	+0.9
MNMC	Minye Minye	148.12	147	PKPbc	PKPbc	16 15 29.9	-1.3
NNA	Nana	148.38	128		PKiKP	16 15 32.8	-0.5
NNA	Nana	148.38	128	PKP2	PKiKP	16 15 32.8	-0.5
PARB	Paraibuna	148.56	191	*e*P	PKiKP	16 15 33.4	-0.1
PB16	IPOC Station P	148.81	146	PKPab	PKiKP	16 15 34.7	0.0
DUB01	Friburgo-RJ	148.99	197	*e*P	PKiKP	16 15 34.9	+0.6
FRTB	Fartura	149.07	184	*e*P	PKiKP	16 15 34.7	+0.2

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VAS01 Vassouras-RJ    149.09 195 eP      PKiKP   16 15 35.0 +0.5
VAO   Valinhos        149.12 189 eP      PKiKP   16 15 34.7  0.0
MURT  Porto Murtinho  150.29 169 eP      PKPbc   16 15 36.5 +0.3
LPAZ  La Paz          151.23 146  PKP    PKPdf   16 15 34.6 +1.3
      comp=Z,9.8nm,0.5s,baz=319,slow=5.9,SNR=3.5
LPAZ                              PKPbc  PKiKP   16 15 40.6 +0.8
      comp=Z,10.0nm,0.4s,baz=48,slow=2.7,SNR=48
LPAZ                              PKPab  PKPab   16 15 49.6 +2.2
      comp=Z,15nm,0.6s,baz=160,slow=5.2,SNR=18
AQDB  Aquidauana      151.75 172         PKPbc   16 15 39.8 +0.2
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IDC ***20*** *16:25:27.6±0.8, 34.°10N×25.°21E, h0^{km}, mb4.0/20, mbtmp4.0/27, ML3.9/7, Error ellipse: s-maj=17.9km s-min=13.3km az=16.0*

NEIC ***20*** *16:25:28.9±1.2, 33.°90N±0.°04×25.°10E±0.°08, h10^{km}±1^{km}, mb4.4/44, Error ellipse: s-maj=11.9km s-min=7.3km az=77.0*

ISK ***20*** *16:25:28.8, 34.°02N×25.°31E, h6^{km}, ML3.7/26*

THE ***20*** *16:25:31.9, 34.°06N×25.°24E, h4^{km}±2^{km}, ML3.4/4, Error ellipse: s-maj=2.8km s-min=0.9km az=185.0*

ATH ***20*** *16:25:31.9, 34.°05N×25.°20E, h6^{km}±2^{km}, ML3.5/9, Error ellipse: s-maj=4.0km s-min=2.2km az=21.0*

ISC 20 16:25:29.6±1.7**, 33.°97N**±0.°06×**25.°26E**±0.°04**, h13**^{km}±9^{km}**, n170, σ1^{s}37**/180**, mb4.3**/41**, Eastern Mediterranean Sea**

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Code  Station Name     Δ°  AZ°   Phase ID          Time     Res
                                 Op     ISC      h  m  s    ISC
FRMA  Ierapetra Chan  1.11  20   P      Pg      16 25 52.3 +1.3
FRMA  Ierapetra Chan  1.11  20   P      Pb      16 25 52.9 +2.2
FRMA                             AML    AML     16 26 17.5
      comp=N,3603µm,0.6s
FRMA                             AML    AML     16 26 24.4
      comp=E,3798µm,0.6s
TMBK  Timbaki Herakl  1.17 340   P      Pg      16 25 51.6 -0.6
TMBK                             S      Sb      16 26 07.7 +0.9
      comp=E,2µm,0.5s
TMBK  Timbaki Herakl  1.17 340   P      Pb      16 25 53.0 +1.3
TMBK                             S      Sg      16 26 06.2 -1.3
TMBK                             AML    AML     16 26 19.2
      comp=N,11428µm,0.6s
TMBK                             AML    AML     16 26 20.4
      comp=E,8497µm,0.7s
GVD   Gavdhos         1.30 312   P      Pg      16 25 54.1 -0.5
GVD                              S      Sn      16 26 12.4 +1.7
      comp=E,4µm,0.5s
GVD   Gavdhos         1.30 312   Pn     Pg      16 25 54.2 -0.5
GVD   Gavdhos         1.30 312   P      Pg      16 25 54.2 -0.5
GVD                              S      Sb      16 26 11.2 +0.7
GVD                              AML    AML     16 26 29.1
      comp=N,7341µm,0.5s
GVD                              AML    AML     16 26 30.7
      comp=E,6558µm,0.5s
GVDS  Gavdos          1.30 312   P      Pg      16 25 54.4 -0.2
GVDS  Gavdos          1.30 312   Pn     Pg      16 25 53.8 -0.8
GVDS                             Sn     Sn      16 26 12.9 +2.2
KSTL  Kastelli Herak  1.34 353   P      Pn      16 25 54.0 +0.1
KSTL                             S      Sg      16 26 08.6 -4.2
KSTL                             AML    AML     16 26 21.4
      comp=N,3827µm,0.8s
KSTL                             AML    AML     16 26 23.5
      comp=E,1974µm,0.7s
IACM  Heraklion       1.34 353   P      Pn      16 25 55.1 +1.1
IACM  Heraklion       1.34 353   P      Pn      16 25 55.6 +1.6
HRKL  Herakleio       1.34 354   P      Pn      16 25 54.6 +0.5
HRKL  Herakleio       1.34 354   Pn     Pn      16 25 54.1  0.0
IDI   Anoyia          1.35 347   Pn     Pg      16 25 53.8 -1.7
      comp=E,64nm,0.3s,baz=171,slow=15,SNR=141
IDI                              Sn     Sg      16 26 12.0 -1.1
      comp=E,83nm,0.3s,baz=186,slow=18,SNR=8.1
IDI   Anoyia          1.35 347   P      Pg      16 25 54.5 -1.1
IDI                              S      Sb      16 26 12.9 +0.9
      comp=E,1µm,0.5s
IDI   Anoyia          1.35 347   Pn     Pg      16 25 54.3 -1.2
IDI                              Sn     Sg      16 26 12.6 -0.5
IDI   Anoyia          1.35 347          Pg      16 25 54.0 -1.5
IDI   Anoyia          1.35 347   P      Pg      16 25 54.6 -0.9
IDI                              S      Sb      16 26 12.8 +0.8
IDI                              AML    AML     16 26 22.1
      comp=N,1497µm,0.6s
IDI                              AML    AML     16 26 27.5
      comp=E,2495µm,0.5s
ZKR   Zakros          1.39  34   P      Pn      16 25 56.4 +1.7
ZKR   Zakros          1.39  34   Pn     Pn      16 25 54.4 -0.3
ZKR   Zakros          1.39  34   P      Pn      16 25 55.8 +1.2
ZKR                              AML    AML     16 26 35.3
      comp=N,823µm,0.6s
ZKR                              AML    AML     16 26 37.5
      comp=E,3058µm,0.7s
STIA  Sitia Lasithi   1.41  29   P      Pn      16 25 56.2 +1.3
STIA                             S      Sb      16 26 14.1 +0.6
STIA  Sitia Lasithi   1.41  29   P      Pn      16 25 56.8 +1.9
STIA                             AML    AML     16 26 28.7
      comp=E,3699µm,0.7s
STIA                             AML    AML     16 26 39.1
      comp=N,3153µm,0.7s
PRNS  Prines Rethymn  1.52 336   P      Pn      16 25 57.4 +0.9
PRNS                             S      Sb      16 26 17.3 +0.4
      comp=N,832nm,0.9s
KNDR  Palaiochora Ch  1.81 315   P      Pn      16 26 01.9 +1.4
KNDR  Palaiochora Ch  1.81 315   Pn     Pn      16 26 01.8 +1.3
KNDR  Palaiochora Ch  1.81 315   P      Pn      16 26 02.2 +1.8
KNDR                             AML    AML     16 26 45.7
      comp=N,2219µm,1.2s
KNDR                             AML    AML     16 26 47.0
      comp=E,1970µm,1.0s
IMMV  Iera Moni Meta  1.82 325   P      Pn      16 26 01.5 +0.9
IMMV  Iera Moni Meta  1.82 325   Pn     Pn      16 26 01.2 +0.6
IMMV  Iera Moni Meta  1.82 325   P      Pn      16 26 01.6 +1.0
IMMV                             AML    AML     16 26 47.8
      comp=E,3904µm,0.6s
IMMV                             AML    AML     16 26 49.1
      comp=N,2502µm,0.9s
CHAN  Chania          1.84 327   P      Pn      16 26 01.8 +0.9
RODP  Rodopos         2.01 322   Pn     Pn      16 26 04.2 +0.9
SANT  Santorini       2.40   4   Pn     Pn      16 26 08.9 +0.2
SANT  Santorini       2.40   4          Pn      16 26 08.8 +0.2
THR3  Thira Island,   2.43   3   P      Pn      16 26 09.5 +0.4
THR8  Santorini-Mono  2.44   4   P      Pn      16 26 09.5 +0.4
SAP3  Santorini-Thir  2.46   2   P      Pn      16 26 10.3 +0.9
ANKY  Antikythira Is  2.48 320   P      Pn      16 26 11.2 +1.4
KTHA  Kythira Island  2.91 322   P      Pn      16 26 16.6 +1.0
KTHA  Kythira Island  2.91 322   Pn     Pn      16 26 17.0 +1.4
KTHA  Kythira Island  2.91 322   P      Pn      16 26 16.5 +1.0
APE   Apeiranthos     3.10   4   Pn     Pn      16 26 18.1 -0.1
ARG   Arkhangelos     3.25  46   Pn     Pn      16 26 21.1 +0.9
ARG   Arkhangelos     3.25  46          Pn      16 26 22.0 +1.8
DAT   Datca           3.34  34   P      Pn      16 26 22.5 +0.9
DAT   Datca           3.34  34   Pn     Pn      16 26 22.2 +0.6
BODT  Bodrum          3.51  28   P      Pn      16 26 24.8 +1.0
BODT  Bodrum          3.51  28   Pn     Pn      16 26 24.8 +1.0
TURN  Turunc          3.71  40   Pn     Pn      16 26 27.5 +0.9
DALY  Dalyan (Mula)   3.97  43   Pn     Pn      16 26 31.2 +1.1
YER   Yerkesik        4.00  37   P      Pn      16 26 32.0 +1.3
YER   Yerkesik        4.00  37   Pn     Pn      16 26 31.9 +1.3
FETY  Fethiye         4.10  49   Pn     Pn      16 26 33.1 +1.1
ITM   Ithomi          4.20 321   Pn     Pn      16 26 35.2 +1.9
ITM   Ithomi          4.20 321          Pn      16 26 33.0 -0.3
AKAS  Kas             4.21  56   Pn     Pn      16 26 36.0 +2.3
PTL   Penteli         4.22 345   P      Pn      16 26 34.5 +0.8
DION  Dionisos Attik  4.24 346   P      Pn      16 26 34.7 +0.8
CHOS  Chios island    4.45   8   P      Pn      16 26 37.6 +0.7
URLA  Izmir           4.51  13   Pn     Pn      16 26 38.6 +1.0
ELL   Elmali          4.70  53          Pn      16 26 42.5 +2.1
AGG   Agios Georgios  5.56 336   Pn     Pn      16 26 52.5 +0.4
AGG   Agios Georgios  5.56 336          Pn      16 26 52.3 +0.2
XOR   Xorichti        5.63 343   P      Pn      16 26 54.2 +1.1
LIT   Litokhoron      6.51 341   Pn     Pn      16 27 04.7 -0.4
CSS   Mathiatis       6.74  79   Pn     Pn      16 27 09.2 +0.9
ALN   Alexandroupoli  6.94   5   Pn     Pn      16 27 11.3 +0.4
RDO   Rodhopi         7.17   2   Pn     Pn      16 27 15.4 +1.4
KEK   Kerkira         7.21 324   Pn     Pn      16 27 14.5 -0.2
FNA   Florina         7.47 337   Pn     Pn      16 27 18.1 -0.2
SCTE  Santa Cesarea   8.16 320   Pn     Pn      16 27 26.6 -1.1
MMAI  Mount Meron Ar  8.53  94   Pn     Pn      16 27 34.3 +1.5
      comp=N,1.6nm,0.3s,baz=262,slow=12,SNR=11
MMAI                             Sn     Sn      16 29 07.4 -1.5
      comp=N,1.9nm,0.3s,baz=229,slow=15,SNR=1.4
      comp=N,0.9nm,0.2s
TIP   Timpagrande     8.59 310          Pn      16 27 32.6 -1.0
EIL   Elat            9.29 115   Pn     Pn      16 27 44.1 +0.8
      comp=N,0.8nm,0.3s,baz=15,slow=6.1,SNR=8.8
EIL                              Sn     Sn      16 29 24.6 -3.1
      comp=N,0.4nm,0.3s,baz=319,slow=21,SNR=1.3
      comp=N,2.0nm,0.3s
RAFF  Raffo Rosso      9.45 293         Pn      16 27 44.0 -1.4
VAE   Valguarnera      9.49 295  Pn     Pn      16 27 45.7 -0.3
      comp=N,0.7nm,0.3s,baz=183,slow=15,SNR=1.9
      comp=N,6.4nm,0.6s
CUC   Castrocucco      9.65 311  Pn     Pn      16 27 47.6 -0.7
SGRT  San Giovanni R  10.81 319  Pn     Pn      16 28 02.9 -1.2
RONA  Rosalia, Austr  15.28 336 i Pn    Pn      16 29 09.4 +4.4
      comp=N,3.4nm,0.6s
PRED  Cave del Predi  15.31 328         Pn      16 29 08.7 +3.3
STAL  STALIGIAL       15.56 326  P      Pn      16 29 12.0 +3.4
CLUD  Cludinico       15.62 327  P      Pn      16 29 12.7 +3.2
CLUD                             IAmb   IAmb    16 29 17.0
      comp=Z,15nm,0.8s
CIMO  Cimolais        15.72 325  P      Pn      16 29 14.0 +3.3
CIMO                             IAmb   IAmb    16 29 23.1
      comp=Z,4.7nm,0.7s
KBA   Koelnbreinsper  15.89 329 i Pn    Pn      16 29 16.8 +3.7
      comp=Z,7.9nm,0.7s
CTI   Castel Tesino   15.91 323  P      Pn      16 29 16.3 +3.0
ABTA  Abfaltersbach   16.01 327 i Pn    Pn      16 29 18.2 +3.6
      comp=Z,13nm,0.7s
MAUC  Maruska         16.34 343 eP      P       16 29 23.1 +1.6
VRAC  Vranov          16.62 340  Pn     Pn      16 29 21.9 -0.3
      comp=Z,0.3nm,0.3s,baz=131,slow=9.6,SNR=7.2
      comp=Z,7.2nm,0.8s
WTTA  Wattenberg      16.80 326 i Pn    P       16 29 28.1 +1.3
      comp=Z,6.7nm,0.7s
KVAR  Kislovodsk Arr  16.80  48  Pn     Pn      16 29 28.3 +3.7
      baz=185,slow=17
      comp=Z,5.5nm,0.6s
KBZ   Khabaz          16.81  49  Pn     Pn      16 29 27.6 +3.0
      comp=Z,0.1nm,0.3s,baz=244,slow=6.2,SNR=5.2
      comp=Z,2.9nm,0.8s
CKRC  Cesky Krumlov   16.93 334 eP      Pn      16 29 28.7 +2.6
AKASG Malin Array Be  16.97   9  Pn     Pn      16 29 25.4 -1.2
      comp=Z,58nm,0.3s,baz=205,slow=10,SNR=1.5
FETA  Feichten        17.05 324 i Pn    Pn      16 29 30.4 +2.6
      comp=Z,2.7nm,0.7s
MOTA  Moosalm         17.10 326 i Pn    Pn      16 29 31.0 +2.6
      comp=Z,1.3nm,0.3s
GEC2  GERESS Array S  17.17 333  P      Pn      16 29 30.0 +0.8
GERES GERESS Array B  17.17 333  P      Pn      16 29 27.8 -1.5
      comp=Z,0.6nm,0.3s,baz=141,slow=13,SNR=25
      comp=Z,6.5nm,0.7s
GERES GERESS Array B  17.17 333  P      Pn      16 29 30.0 +0.8
KRLC  Kraliky         17.26 341 eP      Pn      16 29 31.1 +0.8
KHC   Kasperske Hory  17.45 334  P      Pn      16 29 33.7 +1.0
KHC   Kasperske Hory  17.45 334 eP      Pn      16 29 34.3 +1.6
DPC   Dobruska-Polom  17.63 341 eP      Pn      16 29 35.3 +0.4
PRU   Pruhonice       17.85 337 eP      Pn      16 29 37.4 -0.1
GRA1  Grafenberg Arr  18.82 331  P      P       16 29 48.5 -0.4
CLL   Collm           19.48 336 eP      P       16 29 56.0 -0.1
      comp=Z,5.0nm,0.9s
ESDC  Sonseca Array   24.02 292  P      P       16 30 43.9 -0.3
      comp=Z,1.9nm,0.6s,baz=82,slow=9.2,SNR=19
      comp=Z,1.9nm,0.6s
HFS   Hagfors         27.25 347  P      P       16 31 11.5 -1.7
      comp=Z,2.9nm,0.7s,baz=153,slow=13,SNR=5.2
      comp=Z,2.9nm,0.7s
FINES FINESS Array B  27.49   1  P      P       16 31 12.9 -2.4
      comp=Z,1.1nm,0.6s,baz=164,slow=9.9,SNR=4.8
      comp=Z,1.1nm,0.6s
NC602 NORSAR Array S  28.22 346  P      P       16 31 19.5 -2.4
NC602                            IAmb   IAmb    16 31 42.5
      comp=Z,9.3nm,1.0s
NB201 NORSAR Array S  28.56 346  P      P       16 31 23.6 -1.4
NB2   NORSAR Subarra  28.57 346  P      P       16 31 23.1 -1.9
      comp=Z,0.5nm,0.6s,baz=156,slow=9.3
NOA   NORSAR Array B  28.57 346  P      P       16 31 23.3 -1.7
      comp=Z,0.9nm,0.6s,baz=153,slow=9.2,SNR=6.0
      comp=Z,0.9nm,0.6s
NBO00 NORSAR Array S  28.65 345  P      P       16 31 23.5 -2.2
EKA   Eskdalemuir Ar  29.06 326  P      P       16 31 27.9 -1.6
      comp=Z,3.3nm,0.8s,baz=131,slow=10,SNR=5.7
      comp=Z,3.3nm,0.8s
TORD  Torodi Ar. Bea  29.80 232  P      P       16 31 37.9 +1.5
      comp=Z,1.4nm,0.7s,baz=35,slow=9.2,SNR=9.6
      comp=Z,1.4nm,0.7s
ARCES ARCESS Array B  35.62   0  P      P       16 32 24.2 -2.4
      comp=Z,1.8nm,0.7s,baz=172,slow=7.3,SNR=5.3
      comp=Z,1.8nm,0.7s
BVAR  Borovoye Array  37.11  45  P      P       16 32 40.0 +0.4
      comp=Z,0.2nm,0.5s,baz=251,slow=4.4,SNR=2.4
      comp=Z,0.2nm,0.5s
KURBB Kurchatov Arra  41.81  50  P      P       16 33 19.0 +0.2
      comp=Z,1.2nm,0.8s,baz=278,slow=8.7,SNR=14
      comp=Z,1.2nm,0.8s
MAKZ  Makanchi        44.15  56  P      P       16 33 38.3 +0.4
MK31  Makanchi Array  44.37  56  P      P       16 33 40.0 +0.4
MKAR  Makanchi Array  44.37  56  P      P       16 33 40.0 +0.4
      comp=Z,1.7nm,0.6s,baz=282,slow=6.1,SNR=28
      comp=Z,1.7nm,0.6s
MKAR  Makanchi Array  44.37  56  P      P       16 33 40.0 +0.4
ZAA0  Zalesovo Array  45.77  45  P      P       16 33 50.0 -0.6
ZAA0                             IAmb   IAmb    16 33 51.7
      comp=Z,2.0nm,0.7s
ZALV  Zalesovo Beam   45.77  45  P      P       16 33 49.5 -1.1
      comp=Z,1.7nm,0.6s,baz=264,slow=8.8,SNR=7.5
      comp=Z,1.7nm,0.6s
ZALV  Zalesovo Beam   45.77  45  P      P       16 33 49.9 -0.7
NRIK  Noril'sk        48.92  25  P      P       16 34 13.8 -1.2
      comp=Z,0.9nm,0.3s,baz=237,slow=5.0,SNR=4.2
      comp=Z,0.9nm,0.3s
SVZ   Severnaya Zeml  54.34  13 eP      P       16 34 54.0 -1.3
SONM  Songino Array   60.18  50  P      P       16 35 37.7 +0.6
      comp=Z,1.6nm,0.8s,baz=285,slow=8.6,SNR=6.8
      comp=Z,1.6nm,0.8s
FRB   Frobisher Bay   61.73 330  P      P       16 35 46.6 -0.7
      comp=Z,1.8nm,0.7s,baz=77,slow=6.9,SNR=4.6
      comp=Z,1.8nm,0.7s
RER   Riviere de l'E  62.04 148  P      P       16 35 47.5 -2.4
SCHQ  Schefferville   64.14 320  P      P       16 36 02.6 -0.9
      comp=Z,3.0nm,0.6s,baz=68,slow=5.8,SNR=8.4
      comp=Z,3.0nm,0.6s
SCHQ  Schefferville   64.14 320  P      P       16 36 03.0 -0.5
CMAR  Chiang Mai Arr  66.63  83  P      P       16 36 19.5 -0.7
      comp=Z,0.3nm,0.3s,baz=289,slow=5.5,SNR=2.7
      comp=Z,0.3nm,0.3s
INK   Inuvik          76.80 352  P      P       16 37 19.4 -1.1
INK                              IAmb   IAmb    16 37 48.2
      comp=Z,4.5nm,1.5s
USRK  Ussuriysk Ar.   77.62  45  P      P       16 37 25.1 -0.5
      comp=Z,1.4nm,0.6s,baz=276,slow=4.2,SNR=5.4
      comp=Z,1.4nm,0.6s
YKA   Yellowknife Ar  78.60 342  P      P       16 37 29.5 -1.2
      comp=Z,0.4nm,0.5s,baz=33,slow=5.3,SNR=8.4
      comp=Z,0.4nm,0.5s
BMAR  Burnt Mountain  78.62 356  P      P       16 37 31.4 +0.6
KSRS  Korea Array     78.94  52  P      P       16 37 32.2 -0.8
      comp=Z,0.7nm,0.7s,baz=316,slow=5.1,SNR=2.1
      comp=Z,0.7nm,0.7s
COLD  Coldfoot        79.06 358  P      P       16 37 33.3 +0.1
IMAR  Indian Mountai  80.36 360  P      P       16 37 40.6 +0.4
H24K  Noodor Dome     80.37 357  P      P       16 37 40.9 +0.6
H24K                             IAmb   IAmb    16 38 08.6
      comp=Z,5.1nm,1.5s
H23K  Yukon River     80.44 358  P      P       16 37 41.3 +0.6
H23K                             IAmb   IAmb    16 37 42.6
      comp=Z,3.0nm,0.8s
I26K  Coal Creek Min  80.63 355  P      P       16 37 41.4 -0.3
I26K                             IAmb   IAmb    16 38 05.9
      comp=Z,4.6nm,1.4s
H21K  Melozitna Rive  80.68 359  P      P       16 37 42.9 +0.9
H21K                             IAmb   IAmb    16 37 43.8
      comp=Z,3.0nm,0.8s
EGAK  Eagle           81.00 354  P      P       16 37 44.2 +0.6
EGAK                             IAmb   IAmb    16 38 15.4
      comp=Z,7.6nm,1.5s
I23K  Minto, Yukon-K  81.11 358  P      P       16 37 45.0 +0.7
I21K  Tanana          81.15 359  P      P       16 37 45.0 +0.6
I21K                             IAmb   IAmb    16 37 46.5
      comp=Z,4.0nm,1.1s
MDM   Murphy Dome     81.26 357  P      P       16 37 45.3 +0.2
MDM                              IAmb   IAmb    16 37 46.2
      comp=Z,3.5nm,0.8s
MLY   Manley          81.27 358  P      P       16 37 45.7 +0.5
MLY                              IAmb   IAmb    16 37 46.1
      comp=Z,2.0nm,0.8s
IL31                  81.39 357  P      P       16 37 45.2 -0.4
IL31                             IAmb   IAmb    16 38 00.4
      comp=Z,6.6nm,1.5s
ILAR  Eielson Array   81.39 357  P      P       16 37 45.2 -0.5
      comp=Z,0.6nm,0.8s,baz=6.3,slow=4.1,SNR=8.7
      comp=Z,0.6nm,0.8s
ILAR  Eielson Array   81.39 357  P      P       16 37 45.6 -0.1
ANM   Nome            81.43   5  P      P       16 37 45.4 -0.5
ANM                              IAmb   IAmb    16 37 47.1
      comp=Z,4.7nm,1.3s
DAWY  Dawson          81.54 353  P      P       16 37 46.7 +0.1
DAWY                             IAmb   IAmb    16 38 05.7
      comp=Z,2.9nm,1.1s
WRH   Wood River Hil  81.74 357  P      P       16 37 47.5 -0.1
WRH                              IAmb   IAmb    16 37 48.5
      comp=Z,4.2nm,0.7s
HDA   Harding Lake    81.75 357  P      P       16 37 47.4 -0.3
HDA                              IAmb   IAmb    16 37 48.2
      comp=Z,3.8nm,0.7s
K27K  Chicken         81.81 354  P      P       16 37 47.8 -0.2
K27K                             IAmb   IAmb    16 37 58.9
      comp=Z,5.4nm,1.2s
BPAW  Bear Paw Mtn.   82.21 358  P      P       16 37 49.6 -0.5
BPAW                             IAmb   IAmb    16 37 50.5
      comp=Z,2.6nm,0.8s
DOT   Dot Lake        82.34 355  P      P       16 37 50.8  0.0
DOT                              IAmb   IAmb    16 37 52.0
      comp=Z,2.9nm,0.9s
BCAR  Beaver Creek A  82.74 354  P      P       16 37 53.4 +0.5
L27K  Beaver Creek,   82.75 354  P      P       16 37 53.6 +0.7
L27K                             IAmb   IAmb    16 38 18.5
      comp=Z,7.0nm,1.5s
TRF   Thorofare Moun  82.84 358  P      P       16 37 53.3 -0.3
K20K  Telida          83.00 360  P      P       16 37 54.2  0.0
K20K                             IAmb   IAmb    16 38 13.1
      comp=Z,4.8nm,1.2s
PPLA  Purkeypile      83.44 359  P      P       16 37 56.6 -0.1
L19K  White Mountain  84.18   0  P      P       16 38 00.2 -0.1
SKT   Skwentna        84.35 358  P      P       16 38 00.3 -0.8
RC01  Rabbit Creek A  85.19 358  P      P       16 38 05.4 +0.1
SVW2  Sparrevohn      85.27   0  P      P       16 38 06.1 +0.3
N19K  Bonanza Creek   85.56 360  P      P       16 38 07.2 -0.1
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IDC ***20*** *16:25:34.5±3.5, 22.°02N×143.°67E, h131^{km}±31^{km}, mb3.1/10, mbtmp3.6/11, Error ellipse: s-maj=25.9km s-min=15.4km az=91.0*

ISC 20 16:25:36.6±0.7**, 22.°13N**±0.°10×**143.°7E**±0.°2**, h150**^{km}**, n20, σ1^{s}12**/16**, mb3.4**/10**, Volcano Islands region**

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Code  Station Name      Δ°  AZ°   Phase ID          Time     Res
                                  Op     ISC      h  m  s    ISC
JCJ   Chichijima       5.12 345   P      Pn      16 26 52.0 +0.3
      42nm,0.7s,baz=253,slow=17,SNR=1.4
JCJ                               S      Sn      16 27 48.0 -2.3
      56nm,0.6s,baz=217,slow=20,SNR=8.1
KSRS  Korea Array     20.44 322   P      P       16 30 02.3 +0.1
      0.6nm,0.6s,baz=156,slow=15,SNR=2.1
      0.6nm,0.6s
H11N1 WAKE ISLAND Hy  21.82  92   T      T       16 53 13.9
      baz=283
H11N2 WAKE ISLAND Hy  21.83  92   T      T       16 53 04.1
      baz=283
H11N3 WAKE ISLAND Hy  21.84  92   T      T       16 52 59.7
      baz=283
H11S3 WAKE ISLAND Hy  21.89  95   T      T       16 53 05.0
      baz=286
H11S1 WAKE ISLAND Hy  21.90  95   T      T       16 53 04.8
      baz=286
H11S2 WAKE ISLAND Hy  21.91  95   T      T       16 53 05.0
      baz=286
CMAR  Chiang Mai Arr  41.99 273   P      P       16 33 14.1 +0.7
      0.3nm,0.7s,baz=85,slow=6.0,SNR=2.6
      0.3nm,0.7s
WRA   Warramunga Arr  42.80 193   P      P       16 33 18.0 -1.7
      0.4nm,0.4s,baz=13,slow=8.7,SNR=15
WRA                               PcP    PcP     16 35 08.3  0.0
      0.2nm,0.8s,baz=15,slow=3.8,SNR=1.8
      0.4nm,0.4s
ASAR  Alice Springs   46.50 192   P      P       16 33 47.4 -1.6
      0.4nm,0.6s,baz=9.0,slow=6.5,SNR=13
      0.4nm,0.6s
KURBB Kurchatov Arra  57.52 317   P      P       16 35 09.9 -0.2
      0.6nm,0.7s,baz=97,slow=7.7,SNR=4.3
      0.6nm,0.7s
ILAR  Eielson Array   61.45  27   P      P       16 35 36.0 -0.9
      0.2nm,0.7s,baz=308,slow=2.2,SNR=2.3
      0.2nm,0.7s
BVAR  Borovoye Array  62.63 319   P      P       16 35 45.6 +0.6
      0.3nm,0.3s,baz=97,slow=7.0,SNR=4.2
      0.3nm,0.3s
YKA   Yellowknife Ar  75.86  28   P      P       16 37 06.8 +0.6
      0.3nm,0.4s,baz=292,slow=5.7,SNR=4.4
      0.3nm,0.4s
KVAR  Kislovodsk Arr  82.44 314   P      P       16 37 44.1 +1.7
      9.7nm,0.6s,baz=342,slow=6.4,SNR=3.3
NVAR  Mina Array Bea  82.53  52   P      P       16 37 43.9 +0.8
      0.3nm,0.6s,baz=316,slow=3.8,SNR=2.5
      0.3nm,0.6s
FINES FINESS Array B  82.98 335   P      P       16 37 44.3 -0.4
      0.3nm,0.3s,baz=100,slow=7.9,SNR=5.3
      0.3nm,0.3s
PLCA  Paso Flores    145.70 131   PKPbc  PKPbc   16 44 58.4 +0.2
      0.6nm,0.5s,baz=262,slow=4.7,SNR=4.7
LPAZ  La Paz         149.46  85   PKPbc  PKiKP   16 45 10.7  0.0
      0.6nm,0.5s,baz=252,slow=3.6,SNR=2.6
```

IDC ***20*** *16:26:16.8±1.0, 34.°07N×25.°17E, h0^{km}, mb4.0/19, mbtmp4.0/27, ML3.9/8, MS3.1/6, Error ellipse: s-maj=20.2km s-min=14.1km az=15.0*

NEIC ***20*** *16:26:16.9±1.2, 33.°71N±0.°08×25.°0E±0.°1, h10^{km}±1^{km}, mb4.4/41, Error ellipse: s-maj=16.7km s-min=11.2km az=223.0*

ISC 20 16:26:17.3±0.6**, 33.°90N**±0.°07×**25.°30E**±0.°06**, h10**^{km}**, n91, σ1^{s}50**/94**, mb4.3**/40**, Eastern Mediterranean Sea**

```
Code  Station Name      Δ°  AZ°   Phase ID          Time     Res
                                  Op     ISC      h  m  s    ISC
IDI   Anoyia           1.43 347   Pn     Pn      16 26 42.1 -1.3
      22nm,0.3s,baz=180,slow=17,SNR=1.0
IDI                               Sn     Sn      16 27 00.5 -1.8
      22nm,0.3s,baz=167,slow=20,SNR=0.8
IDI   Anoyia           1.43 347   Pn     Pg      16 26 46.4 +1.6
ARG   Arkhangelos      3.28  44   Pn     Pn      16 27 11.7 +2.9
ISP   Isparta          5.78  46   Pn     Pn      16 27 46.4 +3.2
LIT   Litokhoron       6.59 341   Pn     Pn      16 27 54.6 +0.3
CSS   Mathiatis        6.72  79   Pn     Pn      16 27 59.3 +3.2
FNA   Florina          7.55 337   Pn     Pn      16 28 08.3 +0.9
SCTE  Santa Cesarea    8.23 320   Pn     Pn      16 28 17.6 +0.8
MMAI  Mount Meron Ar   8.49  93   Pn     Pn      16 28 23.3 +2.8
      1.9nm,0.3s,baz=262,slow=12,SNR=5.2
MMAI                              Sn     Sn      16 29 52.3 -4.1
      6.7nm,0.3s,baz=235,slow=16,SNR=6.5
      1.1nm,0.3s
BRTR  Keskin Array B   8.86  47   Pn     Pn      16 28 27.7 +2.1
      0.2nm,0.3s,baz=313,slow=14,SNR=1.5
BRTR                              Sn     Sn      16 30 00.5 -5.2
      0.3nm,0.3s,baz=190,slow=7.3,SNR=1.8
BRTR                              LR     LR      16 32 52.6
      comp=Z,105nm,21.7s,baz=238,slow=45
      1.0nm,0.6s
EIL   Elat             9.23 115   Pn     Pn      16 28 33.5 +2.9
      1.6nm,0.3s,baz=259,slow=8.2,SNR=5.3
EIL                               Sn     Sn      16 30 11.3 -3.3
      1.7nm,0.3s,baz=6.0,slow=19,SNR=2.0
      5.7nm,0.4s
ASF   Jabal al Asfar   9.89  97   Pn     Pn      16 28 41.1 +1.5
      0.5nm,0.3s,baz=11,slow=12,SNR=2.3
ASF                               Sn     Sn      16 30 27.8 -3.1
      0.6nm,0.3s,baz=325,slow=7.9,SNR=1.7
      4.1nm,0.8s
MLR   Muntele Rosu    11.59   2   LR     LR      16 34 26.8
      comp=Z,98nm,18.2s,baz=134,slow=43
KEST  Kesra           13.23 282   LR     LR      16 34 50.1
      comp=Z,78nm,21.5s,baz=264,slow=39
STAL  STALIGIAL       15.63 326   P      P       16 30 01.4 -0.5
CLUD  Cludinico       15.70 327   P      P       16 30 02.5 -0.2
CIMO  Cimolais        15.80 325   P      P       16 30 03.8  0.0
CIMO                              IAmb   IAmb    16 30 12.2
      comp=Z,3.5nm,0.8s
KBA   Koelnbreinsper  15.97 329  eP      P       16 30 06.1 +0.3
      comp=Z,2.1nm,0.6s
ABTA  Abfaltersbach   16.09 327  i P     P       16 30 07.7 +0.7
      comp=Z,8.4nm,0.7s
VRAC  Vranov          16.70 340   Pn     Pn      16 30 12.4 +1.1
      comp=Z,0.4nm,0.3s,baz=144,slow=6.9,SNR=3.9
VRAC                              LR     LR      16 36 34.9
      comp=Z,23nm,21.0s,baz=150,slow=38
      comp=Z,4.6nm,0.7s
GNI   Garni           16.72  62   Pn     P       16 30 17.0 +2.8
      comp=Z,0.7nm,0.3s,baz=343,slow=13,SNR=2.6
      comp=Z,4.9nm,0.5s
```

KBZ	Khabaz	16.84	49	Pn	P	16 30 17.1	+1.9
	comp=Z,0.2nm,0.3s,baz=244,slow=13,SNR=1.4						
	comp=Z,2.8nm,0.8s						
AKASG	Malin Array Be	17.04	9	Pn	Pn	16 30 15.1	-0.5
	comp=Z,58nm,0.3s,baz=204,slow=10,SNR=1.6						
GEC2	GERESS Array S	17.25	333	P	P	16 30 19.4	-0.5
GERES	GERESS Array B	17.25	333	P	Pn	16 30 18.4	0.0
	comp=Z,0.3nm,0.3s,baz=146,slow=12,SNR=8.7						
GERES				LR	LR	16 38 44.0	
	comp=Z,60nm,20.8s,baz=64,slow=44						
	comp=Z,4.5nm,0.7s						
GERES	GERESS Array B	17.25	333	P	P	16 30 19.2	-0.7
KHC	Kasperske Hory	17.54	334	P	P	16 30 23.0	+0.1
KHC	Kasperske Hory	17.54	334	x	P	16 30 23.0	+0.1
SENIN	Lac Senin/Sane	18.50	318	P	P	16 30 33.1	-0.7
SENIN				IAmb	IAmb	16 30 40.7	
	comp=Z,34nm,1.3s						
CLL	Collm	19.56	336	*e*P	P	16 30 45.0	-0.2
ESDC	Sonseca Array	24.07	292	P	P	16 31 32.5	-0.4
	comp=Z,0.6nm,0.6s,baz=85,slow=8.8,SNR=4.6						
	comp=Z,0.6nm,0.6s						
GYA0B	ALIBECK ARRAY	26.81	72	P	P	16 31 58.5	+0.7
HFS	Hagfors	27.33	347	P	P	16 32 00.9	-1.3
	comp=Z,1.5nm,0.7s,baz=170,slow=11,SNR=1.8						
	comp=Z,1.5nm,0.7s						
FINES	FINESS Array B	27.57	1	P	P	16 32 01.9	-2.3
	comp=Z,3.2nm,0.9s,baz=169,slow=11,SNR=2.2						
	comp=Z,3.2nm,0.9s						
NC602	NORSAR Array S	28.30	346	P	P	16 32 08.7	-2.1
NOA	NORSAR Array B	28.65	346	P	P	16 32 12.7	-1.3
	comp=Z,0.7nm,0.5s,baz=152,slow=8.6,SNR=3.3						
	comp=Z,0.7nm,0.5s						
AKTO	Aktyubinsk	29.04	45	P	P	16 32 17.3	-0.2
	comp=Z,1.4nm,0.5s,baz=247,slow=11,SNR=2.8						
	comp=Z,1.4nm,0.5s						
EKA	Eskdalemuir Ar	29.14	326	P	P	16 32 17.5	-0.8
	comp=Z,2.5nm,0.8s,baz=56,slow=13,SNR=4.0						
	comp=Z,2.5nm,0.8s						
TORD	Torodi Ar. Bea	29.78	232	P	P	16 32 26.3	+2.0
	comp=Z,1.0nm,0.7s,baz=34,slow=8.5,SNR=1.7						
	comp=Z,1.0nm,0.7s						
BVAR	Borovoye Array	37.15	45	P	P	16 33 29.9	+1.7
	comp=Z,0.8nm,0.7s,baz=251,slow=4.5,SNR=2.7						
	comp=Z,0.8nm,0.7s						
KURBB	Kurchatov Arra	41.84	50	P	P	16 34 07.9	+0.7
	comp=Z,1.5nm,0.7s,baz=271,slow=8.5,SNR=5.6						
	comp=Z,1.5nm,0.7s						
MAKZ	Makanchi	44.17	55	P	P	16 34 27.3	+1.0
MK31	Makanchi Array	44.39	55	P	P	16 34 29.3	+1.3
MK31				IAmb	IAmb	16 34 30.0	
	comp=Z,2.1nm,0.6s						
MKAR	Makanchi Array	44.39	55	P	P	16 34 28.9	+0.9
	comp=Z,2.6nm,0.6s,baz=271,slow=7.3,SNR=9.3						
	comp=Z,2.6nm,0.6s						
MKAR	Makanchi Array	44.39	55	P	P	16 34 29.2	+1.3
ZAA0	Zalesovo Array	45.80	45	P	P	16 34 39.0	-0.1
ZAA0				IAmb	IAmb	16 34 40.3	
	comp=Z,4.6nm,1.2s						
ZALV	Zalesovo Beam	45.80	45	P	P	16 34 39.3	+0.2
	comp=Z,2.4nm,0.4s,baz=266,slow=8.4,SNR=7.5						
	comp=Z,2.4nm,0.4s						
ZALV	Zalesovo Beam	45.80	45	P	P	16 34 39.0	-0.1
NRIK	Noril'sk	48.98	25	P	P	16 35 03.2	-0.3
	comp=Z,1.1nm,0.3s,baz=187,slow=3.3,SNR=2.2						
	comp=Z,1.1nm,0.3s						
SVZ	Severnaya Zeml	54.41	13	*e*S	P	16 35 43.3	-0.7
	comp=Z,2.7nm,0.6s						
SONM	Songino Array	60.20	50	P	P	16 36 26.8	+1.2
	comp=Z,1.4nm,0.5s,baz=282,slow=8.6,SNR=6.1						
	comp=Z,1.4nm,0.5s						
SONM	Songino Array	60.20	50	P	P	16 36 26.7	+1.2
FRB	Frobisher Bay	61.81	330	P	P	16 36 35.8	-0.2
	comp=Z,2.0nm,1.0s,baz=102,slow=4.5,SNR=3.1						
FRB				LR	LR	17 05 03.7	
	comp=Z,34nm,18.0s,baz=163,slow=38						
	comp=Z,2.0nm,1.0s						
BOSA	Boshof	62.17	180	P	P	16 36 35.8	-3.2
SCHQ	Schefferville	64.22	320	P	P	16 36 51.9	-0.4
	comp=Z,3.0nm,0.7s,baz=81,slow=5.5,SNR=4.6						
	comp=Z,3.0nm,0.7s						
SCHQ	Schefferville	64.22	320	P	P	16 36 52.1	-0.1
RES	Resolute Bay	64.91	345	P	P	16 36 56.2	-0.2
RES				IAmb	IAmb	16 37 00.6	
	comp=Z,2.8nm,1.5s						
INK	Inuvik	76.88	352	P	P	16 38 08.6	-0.6
INK				IAmb	IAmb	16 38 22.2	
	comp=Z,4.2nm,1.5s						
USRK	Ussuriysk Ar.	77.65	45	P	P	16 38 14.6	+0.6
	comp=Z,1.5nm,0.5s,baz=282,slow=3.4,SNR=3.9						
	comp=Z,1.5nm,0.5s						
YKA	Yellowknife Ar	78.68	342	P	P	16 38 18.4	-0.9
	comp=Z,0.4nm,0.6s,baz=33,slow=5.2,SNR=5.6						
	comp=Z,0.4nm,0.6s						
BMAR	Burnt Mountain	78.70	356	P	P	16 38 20.8	+1.3
KSRS	Korea Array	78.96	52	P	P	16 38 22.4	+1.1
	comp=Z,0.8nm,0.7s,baz=289,slow=3.9,SNR=2.5						
	comp=Z,0.8nm,0.7s						
IMAR	Indian Mountai	80.44	360	P	P	16 38 29.8	+0.9
H24K	Noodor Dome	80.45	357	P	P	16 38 29.9	+0.9
H24K				IAmb	IAmb	16 38 30.3	
	comp=Z,4.0nm,1.3s						
H23K	Yukon River	80.52	358	P	P	16 38 30.8	+1.4
H23K				IAmb	IAmb	16 38 31.7	
	comp=Z,2.1nm,0.7s						
I26K	Coal Creek Min	80.71	355	P	P	16 38 31.1	+0.8
H21K	Melozitna Rive	80.76	359	P	P	16 38 31.9	+1.3
H21K				IAmb	IAmb	16 38 32.9	
	comp=Z,3.2nm,0.8s						
EGAK	Eagle	81.08	354	P	P	16 38 33.3	+1.0
EGAK				IAmb	IAmb	16 38 38.6	
	comp=Z,7.2nm,1.4s						
I21K	Tanana	81.22	359	P	P	16 38 34.3	+1.3
I21K				IAmb	IAmb	16 38 36.0	
	comp=Z,3.8nm,1.1s						
Q52A	Bidwell	81.26	311	P	P	16 38 32.0	-1.8
MDM	Murphy Dome	81.34	357	P	P	16 38 34.3	+0.5
MDM				IAmb	IAmb	16 38 35.3	
	comp=Z,2.3nm,0.6s						
MLY	Manley	81.35	358	P	P	16 38 34.1	+0.3
MLY				IAmb	IAmb	16 38 35.5	
	comp=Z,2.3nm,0.8s						
ILAR	Eielson Array	81.47	357	P	P	16 38 34.7	+0.3
	comp=Z,0.6nm,0.7s,baz=352,slow=2.7,SNR=5.8						
	comp=Z,0.6nm,0.7s						
ILAR	Eielson Array	81.47	357	P	P	16 38 34.6	+0.2
ANM	Nome	81.51	5	P	P	16 38 34.9	+0.3
ANM				IAmb	IAmb	16 39 03.6	
	comp=Z,4.7nm,1.4s						
DAWY	Dawson	81.62	353	P	P	16 38 36.1	+0.8
DAWY				IAmb	IAmb	16 38 41.0	
	comp=Z,3.1nm,1.0s						
CCB	Clear Creek Bu	81.63	357	P	P	16 38 35.5	+0.3
WRH	Wood River Hil	81.82	357	P	P	16 38 36.6	+0.3
K27K	Chicken	81.89	354	P	P	16 38 37.6	+1.0
K27K				IAmb	IAmb	16 38 38.9	
	comp=Z,5.6nm,1.4s						
BPAW	Bear Paw Mtn.	82.29	358	P	P	16 38 38.9	+0.2
BPAW				IAmb	IAmb	16 38 43.8	
	comp=Z,2.9nm,1.2s						
BCAR	Beaver Creek A	82.82	354	P	P	16 38 42.6	+1.1
L27K	Beaver Creek,	82.83	354	P	P	16 38 41.7	+0.1
L27K				IAmb	IAmb	16 38 43.7	
	comp=Z,3.9nm,1.0s						
TRF	Thorofare Moun	82.92	358	P	P	16 38 42.8	+0.5
TRF				IAmb	IAmb	16 38 49.9	
	comp=Z,6.1nm,1.3s						
K20K	Telida	83.08	360	P	P	16 38 43.4	+0.5
K20K				IAmb	IAmb	16 39 02.4	
	comp=Z,6.2nm,1.5s						
PPLA	Purkeypile	83.52	359	P	P	16 38 45.8	+0.5
L19K	White Mountain	84.26	0	P	P	16 38 50.0	+1.1
L19K				IAmb	IAmb	16 39 30.9	
	comp=Z,4.1nm,1.2s						
SCM	Sheep Creek Mo	84.42	356	P	P	16 38 50.5	+0.6
SKT	Skwentna	84.43	358	P	P	16 38 49.7	-0.1
SKT				IAmb	IAmb	16 38 51.6	
	comp=Z,3.1nm,0.6s						
N25K	Chitina, Valde	84.48	355	P	P	16 38 50.0	-0.2
SUA	Susitna One	84.92	358	P	P	16 38 53.0	+0.6
SVW2	Sparrevohn	85.34	0		P	16 38 55.8	+1.3

ROM 20 16:37:51.4±0.0**, 42°.734N**±0°.004×**13°.036E**±0°.002**,
h11^{km}, ML1.3**/9**, 2C-3D, Error ellipse: s-maj=0.4km
s-min=0.2km az=164.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1217	Poggiodomo (PG	0.08	254	P	Pg	16 37 54.3	+0.3
T1217				S	Sg	16 37 56.3	+0.4
T1217				AML	AML		
	comp=E,378µm,0.3s						
T1217				AML	AML		
	comp=N,218µm,0.4s						
T1218	Civita (PG)	0.09	138	P	Pg	16 37 54.4	+0.3
T1218				S	Sg	16 37 56.5	+0.4
T1218				AML	AML		
	comp=E,355µm,0.4s						
T1218				AML	AML		
	comp=N,722µm,0.4s						
T1218				AML	AML		
	comp=N,706µm,0.4s						
T1218				AML	AML		
	comp=N,722µm,0.5s						
T1218				AML	AML		
	comp=E,297µm,0.2s						
T1218				AML	AML		
	comp=N,706µm,0.5s						
T1214	Arquata del Tr	0.13	79	P	Pg	16 37 55.1	+0.4
T1214				S	Sg	16 37 57.8	+0.7
T1216	Preci, Frazion	0.16	355	P	Pg	16 37 55.6	+0.6
T1216				AML	AML		
	comp=E,119µm,1.5s						
T1216				AML	AML		
	comp=N,188µm,0.8s						
T1216				AML	AML		
	comp=N,188µm,1.2s						
T1216				AML	AML		
	comp=E,119µm,0.5s						
T1245	Castelsantange	0.17	42	⇓P	Pg	16 37 55.6	+0.3
T1245				S	Sg	16 37 58.6	+0.6
T1245				AML	AML		
	comp=E,287µm,0.4s						
T1245				AML	AML		
	comp=N,366µm,0.3s						
T1245				AML	AML		
	comp=N,366µm,1.7s						
T1245				AML	AML		
	comp=E,287µm,1.6s						
MC2	Monte Cornacci	0.21	32	P	Pg	16 37 56.5	+0.5
T1211	Morro Reatino	0.24	214	P	Pg	16 37 56.9	+0.4
T1211				AML	AML		
	comp=E,141µm,0.6s						
T1211				AML	AML		
	comp=N,206µm,0.2s						
T1211				AML	AML		
	comp=E,141µm,0.6s						
SMA1	SAN MARTINO	0.24	115	⇑P	Pg	16 37 57.2	+0.7
SMA1				AML	AML		
	comp=N,398µm,0.2s						
SMA1				AML	AML		
	comp=E,474µm,0.3s						
ARRO	Arrone	0.25	232	P	Pg	16 37 57.1	+0.5
ARRO				AML	AML		
	comp=E,44µm,1.3s						
ARRO				AML	AML		
	comp=N,53µm,0.3s						
ARRO				AML	AML		
	comp=E,44µm,1.3s						
ARRO				AML	AML		
	comp=N,53µm,0.3s						
ARRO				AML	AML		
	comp=E,44µm,0.7s						
ARRO				AML	AML		
	comp=N,53µm,1.7s						
RM33	Pellescritta (	0.26	150	P	Pg	16 37 57.3	+0.4
RM33				AML	AML		
	comp=E,44µm,0.3s						
RM33				AML	AML		
	comp=N,44µm,1.5s						
RM33				AML	AML		
	comp=N,44µm,0.5s						
MMO1	Montemonaco	0.27	52	⇓P	Pg	16 37 57.4	+0.4
FDMO	Fiordimonte	0.30	7	P	Pg	16 37 58.1	+0.4
T1222	Castel Sant'An	0.33	180	P	Pb	16 37 58.8	-0.6
ASSB	Assisi San Ben	0.41	318	⇑P	Pb	16 38 00.4	-0.4
TERO	Teramo	0.43	105	⇓P	Pg	16 38 00.2	+0.2
TERO				AML	AML		
	comp=N,49µm,0.3s						
TERO				AML	AML		
	comp=E,46µm,0.3s						

ROM 20 16:38:40.3±0.1**, 43°.022N**±0°.004×**13°.085E**±0°.006**,
h7^{km}**±1^{km}**, ML1.2**/7**, 2D, Error ellipse: s-maj=0.6km
s-min=0.1km az=240.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FDMO	Fiordimonte	0.01	8	P	Pg	16 38 41.3	-0.2
FDMO				S	Sg	16 38 42.0	-0.5
FDMO				AML	AML		
	comp=E,818µm,0.1s						
FDMO				AML	AML		
	comp=N,544µm,0.6s						
T1220	Camerino, Fraz	0.09	2	P	Pg	16 38 42.9	+0.6
T1220				S	Sg	16 38 45.1	+1.2
T1220				AML	AML		
	comp=E,1650µm,0.3s						
T1220				AML	AML		
	comp=N,1565µm,0.8s						
T1220				AML	AML		
	comp=E,1645µm,0.3s						
T1220				AML	AML		
	comp=N,1570µm,0.8s						
T1220				AML	AML		
	comp=N,1565µm,0.9s						
T1220				AML	AML		
	comp=N,1565µm,1.1s						
T1256	Bolognola (MC)	0.10	99	⇓P	Pg	16 38 43.0	+0.3
CESI	CESI - Serrava	0.13	263	P	Pg	16 38 43.7	+0.6
CESI				S	Sg	16 38 46.3	+1.3
CESI				AML	AML		
	comp=E,153µm,0.5s						
CESI				AML	AML		
	comp=N,154µm,0.1s						
MC2	Monte Cornacci	0.13	145	P	Pg	16 38 43.5	+0.3
T1216	Preci, Frazion	0.14	200	⇓P	Pg	16 38 43.5	+0.4
T1216				S	Sg	16 38 46.2	+1.0
T1216				AML	AML		
	comp=E,108µm,0.2s						
T1216				AML	AML		
	comp=N,122µm,0.3s						
T1245	Castelsantange	0.18	155	P	Pg	16 38 44.3	+0.3
T1245				S	Sg	16 38 48.4	+1.9
T1245				AML	AML		
	comp=E,111µm,1.4s						
T1245				AML	AML		
	comp=N,190µm,0.3s						
T1245				AML	AML		
	comp=E,111µm,0.6s						
MMO1	Montemonaco	0.22	125	P	Pg	16 38 44.9	+0.3
MMO1				S	Sg	16 38 48.9	+1.4
SNTG	Esanatoglia	0.26	336	P	Pg	16 38 46.1	+0.8
SNTG				S	Sb	16 38 50.6	-1.4
SNTG				AML	AML		
	comp=N,30µm,0.8s						
SNTG				AML	AML		
	comp=E,35µm,0.4s						
T1214	Arquata del Tr	0.28	161	P	Pg	16 38 46.1	+0.4
T1214				S	Sb	16 38 51.8	-0.9
EL6	Elcito	0.31	2	P	Pg	16 38 47.0	+0.7
EL6				S	Sb	16 38 52.4	-1.1
ASSB	Assisi San Ben	0.31	274	P	Pg	16 38 47.0	+0.5
ASSB				S	Sb	16 38 52.3	-1.3
ASSB				AML	AML		
	comp=E,37µm,1.5s						
ASSB				AML	AML		
	comp=N,57µm,0.2s						
ASSB				AML	AML		
	comp=E,37µm,0.5s						
ATCC	AVT- Casa Cast	0.36	297	P	Pg	16 38 48.1	+0.8
ATCC				S	Sb	16 38 54.6	-0.5
ATCC				AML	AML		
	comp=N,29µm,1.2s						
ATCC				AML	AML		
	comp=N,29µm,1.2s						
ATCC				AML	AML		
	comp=E,52µm,0.5s						
ATCC				AML	AML		
	comp=N,29µm,0.8s						
SSFR	Montelago di S	0.47	332	P	Pg	16 38 49.3	0.0
SSFR				AML	AML		
	comp=E,66µm,0.1s						
SSFR				AML	AML		
	comp=N,80µm,0.4s						
SSFR				AML	AML		
	comp=N,80µm,1.6s						
TERO	Teramo	0.55	136	P	Pg	16 38 51.3	+0.4

**MAN 20 16:47:37.5, 13°.87N×120°.57E, h8^{km}, mb3.6, ML2.3, MS1.7,
Mindoro**

*IDC **20** 16:54:38.1±1.1, 38°.04N×120°.75E, h0^{km}, mb3.6/6,
mbtmp3.6/10, ML3.5/4, MS3.4/2, Error ellipse:
s-maj=27.7km s-min=16.5km az=22.0*
*KEA **20** 16:54:43.8, 38°.33N×121°.04E, h16^{km}, ML4.0/4*
ISC 20 16:54:40.9±0.8**, 38°.25N**±0°.08×**120°.92E**±0°.05**, h10^{km}, n22,
σ2^{s}16**/28**, mb3.6**/7**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUJ	Sinuiju	3.34	55	Pn	Pn	16 55 33.9	+0.7
SUJ				Pg	Pg	16 55 43.8	-1.1
SUJ				Sg	Sg	16 56 26.4	-1.8
SUJ				AML	AML		
	comp=N,736nm,0.6s						
SUJ				AML	AML		
	comp=E,561nm,0.7s						
SUJ				AML	AML		
	comp=Z,352nm,0.8s						
HJU	Haeju	3.80	92	Pg	Pg	16 55 53.2	-0.4
HJU				Sg	Sg	16 56 41.6	-1.2
HJU				AML	AML		
	comp=N,428nm,0.6s						
HJU				AML	AML		
	comp=E,231nm,0.8s						
HJU				AML	AML		
	comp=Z,272nm,0.6s						
PYAG	Pyongyang	3.88	77	Pn	Pn	16 55 40.9	+0.4
PYAG				Pg	Pg	16 55 54.2	-0.9
PYAG				Sg	Sg	16 56 43.3	-2.0
PYAG				AML	AML		
	comp=N,414nm,0.8s						
PYAG				AML	AML		
	comp=E,304nm,0.6s						
PYAG				AML	AML		
	comp=Z,258nm,0.8s						
PYS	Pyongsong	3.99	74	Pn	Pn	16 55 42.7	+0.6
PYS				Pg	Pg	16 55 56.7	-0.6
PYS				Sg	Sg	16 56 47.6	-1.4
PYS				AML	AML		
	comp=N,656nm,0.3s						
PYS				AML	AML		
	comp=E,505nm,0.5s						
PYS				AML	AML		
	comp=Z,268nm,0.6s						
KGE	Kanggye	5.16	57	Sg	Sg	16 57 23.8	-2.7
WOSN	Wonsan	5.17	78	Sg	Sg	16 57 27.2	+0.3
HHU	Hamhung	5.41	70	Sg	Sg	16 57 31.8	-2.8
KSRS	Korea Array	5.60	96	Pn	Pn	16 56 04.0	-0.2
	comp=Z,1.2nm,0.3s,baz=279,slow=14,SNR=20						
KSRS				Pg	Pb	16 56 23.3	+4.6
	comp=Z,2.7nm,0.3s,baz=274,slow=17,SNR=16						
KSRS				Sn	Sn	16 57 05.0	-3.7
	comp=Z,3.8nm,0.3s,baz=274,slow=24,SNR=4.3						
KSRS				Lg	Lg	16 57 37.5	
	comp=Z,9.1nm,0.3s,baz=282,slow=30,SNR=8.5						
	comp=Z,4.3nm,0.5s						
JNU	Nakatsue	9.58	119	Pn	Pn	16 56 58.7	-0.1
	comp=Z,0.7nm,0.3s,baz=282,slow=8.3,SNR=8.3						
JNU				Lg	Lg	16 59 40.1	
	comp=Z,0.2nm,0.3s,baz=273,slow=20,SNR=1.9						
	comp=Z,1.7nm,0.4s						
USRK	Ussuriysk Ar.	10.24	51	Pn	Pn	16 57 11.2	+3.4
	comp=Z,0.2nm,0.3s,baz=233,slow=14,SNR=5.3						
USRK				Lg	Lg	17 00 04.0	
	comp=Z,0.5nm,0.3s,baz=243,slow=24,SNR=12						
	comp=Z,0.7nm,0.5s						
KLR	Kul'dur	13.47	32	Lg	Lg	17 01 46.5	
	comp=Z,0.1nm,0.3s,baz=301,slow=23,SNR=2.2						
MJAR	Matsushiro Arr	13.86	92	Pn	Pn	16 57 55.4	-2.0
	baz=313,slow=9.0						
SONM	Songino Array	14.28	317	Pn	Pn	16 58 00.6	-2.6
	comp=Z,0.2nm,0.3s,baz=133,slow=10,SNR=3.1						
SONM				Lg	Lg	17 02 10.9	
	comp=Z,0.1nm,0.3s,baz=137,slow=22,SNR=1.3						
	comp=Z,1.2nm,0.9s						
CMAR	Chiang Mai Arr	27.49	230	LR	LR	17 11 22.1	
	comp=Z,42nm,18.2s,baz=200,slow=37						
ZALV	Zalesovo Beam	29.15	314	P	P	17 00 41.4	-0.5
	comp=Z,0.4nm,0.4s,baz=113,slow=11,SNR=2.1						
	comp=Z,0.4nm,0.4s						
MKAR	Makanchi Array	29.48	299	P	P	17 00 44.6	-0.4
	comp=Z,0.6nm,0.6s,baz=94,slow=11,SNR=9.4						
	comp=Z,0.6nm,0.6s						
TIXI	Tiksi	33.72	5	P	P	17 01 22.4	+0.5
	comp=Z,0.6nm,0.2s,baz=270,slow=24,SNR=3.1						
	comp=Z,0.6nm,0.2s						
AAK	Ala-Archa	35.26	292	LR	LR	17 17 19.6	
	comp=Z,77nm,18.3s,baz=155,slow=39						
ILAR	Eielson Array	57.04	31	P	P	17 04 28.0	+1.4
	comp=Z,0.2nm,0.6s,baz=281,slow=6.7,SNR=2.8						
	comp=Z,0.2nm,0.6s						
WRA	Warramunga Arr	59.24	165	P	P	17 04 39.7	-2.7
	comp=Z,0.7nm,0.8s,baz=355,slow=7.4,SNR=4.8						
	comp=Z,0.7nm,0.8s						
YKA	Yellowknife Ar	70.18	24	P	P	17 05 52.2	-1.2
	comp=Z,0.3nm,0.7s,baz=318,slow=5.3,SNR=6.5						
	comp=Z,0.3nm,0.7s						
NVAR	Mina Array Bea	86.27	43	P	P	17 07 27.4	+4.2
	comp=Z,0.1nm,0.4s,baz=322,slow=2.6,SNR=2.6						

*IDC **20** 17:02:41.6±1.5, 35°.61N×9°.19W, h0^{km}, mb3.4/2,
mbtmp3.5/3, ML4.2/2, Error ellipse: s-maj=44.3km
s-min=30.0km az=54.0*
*CNRM **20** 17:02:47.2, 35°.51N×8°.90W, h90^{km}*
*MDD **20** 17:02:47.8±0.4, 35°.64N×9°.06W, h40^{km}±22^{km},
mb_Lg3.8/29, Error ellipse: s-maj=3.0km s-min=2.6km
az=69.0*
*LDG **20** 17:02:48.8±0.1, 35°.67N×9°.00W, h30^{km}, Ml4.0/5, Error
ellipse: s-maj=2.5km s-min=2.2km az=40.0*
*SFS **20** 17:02:48.1, 35°.66N×9°.03W, h52^{km}, ML4.0/19, ML4.1/14,
MLv3.9/19*
*INMG **20** 17:02:49.5±1.9, 35°.68N×8°.98W, h31^{km}±7^{km}, ML3.6, Error
ellipse: s-maj=3.2km s-min=2.4km az=89.0*
*IGIL **20** 17:02:49.1, 35°.64N×9°.06W, h31^{km}, ML4.0*
ISC 20 17:02:46.2±0.9**, 35°.67N**±0°.04×**8°.94W**±0°.04**, h51^{km}**±15^{km}**,
n143, σ2^{s}32**/246**, 1C-14D, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	1.46	4	P	Pn	17 03 11.3	+1.1
PFVI				S	Sn	17 03 35.9	+7.7
PFVI	Vila Bisbo	1.46	4	S	Sn	17 03 29.5	+1.3
PFVI				P	Pn	17 03 11.9	+1.7
PFVI	Vila Bisbo	1.46	4	⇓*i*P	Pn	17 03 11.9	+1.7
PFVI				*e*S	Sn	17 03 28.8	+0.6
PFVI				A	A	17 03 33.9	
	656nm,0.5s						
MORF	Marmelete	1.65	8	⇓*i*P	Pn	17 03 14.5	+1.7
MORF				*e*S	Sn	17 03 34.1	+1.3
MORF				A	A	17 03 34.8	
	629nm,0.3s						
MORF	Marmelete	1.65	8	*e*P	Pn	17 03 14.5	+1.7
MORF				*e*S	Sn	17 03 33.2	+0.3
MORF				IAML		17 03 34.9	
	comp=E,1µm,0.3s						
PBDV	Barranco-do-Ve	1.77	27	⇓*i*P	Pn	17 03 16.5	+2.1
PBDV				*e*S	Sn	17 03 37.0	+1.2
PBDV				A	A	17 03 48.1	
	comp=E,251nm,0.4s						
PTEO	Sao Teotonio	1.88	5	⇓*i*P	Pn	17 03 17.7	+1.8
PTEO				*e*S	Sn	17 03 38.9	+0.5
PTEO				A	A	17 03 39.9	
	comp=E,494nm,0.2s						
PVAQ	Vaqueiros	1.99	29	P	Pn	17 03 19.0	+1.6
PVAQ				S	Sn	17 03 45.5	+4.3
PVAQ	Vaqueiros	1.99	29	⇓*i*P	Pn	17 03 19.4	+2.0
PVAQ				*e*S	Sn	17 03 42.1	+0.9
PVAQ				A	A	17 03 50.5	
	comp=E,185nm,0.3s						
PCVE	Castro Verde	2.09	20	⇓*e*P	Pn	17 03 20.9	+2.2

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PCVE                           eS      Sn      17 03 44.2 +0.6
PCVE                            A      A       17 03 45.7
       comp=E,248nm,0.5s
EGRO  El Granado       2.20  32 S      Sn      17 03 46.7 +0.4
EGRO                            P      Pn      17 03 22.5 +2.2
EGRO  El Granado       2.20  32 Pn     Pn      17 03 22.5 +2.2
EGRO                            Sn     Sn      17 03 46.6 +0.4
EGRO                          i Vmb_Lg         17 03 48.3
MESJ  Messejana        2.24  15⇓eP     Pn      17 03 22.8 +2.0
MESJ                           eS      Sn      17 03 47.9 +0.6
MESJ                            A      A       17 04 02.5
       comp=E,257nm,0.5s
MESJ  Messejana        2.24  15 eP     Pn      17 03 22.8 +2.0
MESJ                           eS      Sn      17 03 47.6 +0.3
MESJ                            IAML           17 03 49.5
       comp=N,449nm,0.2s
PNCL  Nicolau / Gran   2.46   8⇓eP     Pn      17 03 25.4 +1.6
PNCL                           eS      Sn      17 03 52.6  0.0
PNCL                            A      A       17 04 01.4
       comp=N,239nm,0.3s
PBEJ  Beja             2.51  20⇑eP     Pn      17 03 26.4 +2.0
PBEJ                           eS      Sn      17 03 54.1 +0.3
PBEJ                            A      A       17 03 54.5
       comp=N,133nm,0.2s
AVE   Averroes         2.68 151 P      Pn      17 03 28.8 +2.0
AVE                             S      Sn      17 03 58.3 +0.2
AVE   Averroes         2.68 151 P      Pn      17 03 28.8 +2.0
AVE                             S      Sn      17 03 57.1 -1.0
ESPR  Espera           2.77  63 P      Pn      17 03 30.2 +2.2
ESPR  Espera           2.77  63 Pn     Pn      17 03 30.2 +2.2
ESPR                            Sn     Sn      17 04 00.6 +0.5
ESPR                          i Vmb_Lg         17 04 04.2
EMIN  Mina Concepcio   2.78  40 P      Pn      17 03 30.0 +1.9
EMIN  Mina Concepcio   2.78  40 Pn     Pn      17 03 30.0 +1.9
EMIN                            Sn     Sn      17 03 59.8 -0.6
EMIN                          i Vmb_Lg         17 04 03.5
SMIR  Smir Dam         2.90  89 P      Pn      17 03 33.0 +3.2
SMIR                            S      Sn      17 04 08.0 +4.6
CEU   Ceuta            2.91  84 P      Pn      17 03 33.6 +3.6
ZHG   ZHG              2.92 139 P      Pn      17 03 32.0 +1.8
ZHG                             S      Sn      17 04 08.2 +4.2
PBAR  Barrancos        2.93  31 P      Pn      17 03 32.1 +1.9
PBAR  Barrancos        2.93  31⇓eP     Pn      17 03 32.1 +1.9
PBAR                           eS      Sn      17 04 05.0 +0.8
PBAR                            A      A       17 04 07.0
       comp=N,94nm,0.1s
EVO   Evora            2.95  14 P      Pn      17 03 32.2 +1.6
EVO                             S      Sn      17 04 03.8 -1.0
EVO   Evora            2.95  14⇓eP     Pn      17 03 32.2 +1.6
EVO                            eS      Sn      17 04 04.4 -0.4
EVO                             A      A       17 04 05.9
       comp=N,247nm,0.3s
CHEFC Chefchaouen      3.00 100 P      Pn      17 03 33.4 +2.1
CHEFC                           S      Sn      17 04 07.6 +1.7
LIS   Lisbon           3.05 357 eS     Sn      17 04 06.2 -0.8
LIS                             IAML           17 04 09.4
       comp=E,604nm,0.2s
PMAFR Mafra            3.29 355 P      Pn      17 03 37.2 +2.1
PMAFR                           S      Sn      17 04 11.8 -1.3
PMAFR Mafra            3.29 355 eP     Pn      17 03 37.3 +2.1
PMAFR                          eS      Sn      17 04 12.5 -0.6
PMAFR                           A      A       17 04 14.7
       comp=E,373nm,0.2s
SRHM  Skhour des Reh   3.31 165 P      Pn      17 03 36.8 +1.3
SICH  Sidi Chahed      3.36 117 P      Pn      17 03 37.6 +1.4
PESTR Estremoz         3.37  18 P      Pn      17 03 37.6 +1.3
PESTR Estremoz         3.37  18 P      Pn      17 03 37.7 +1.4
PESTR                           S      Sn      17 04 14.1 -1.0
PESTR Estremoz         3.37  18 eP     Pn      17 03 37.7 +1.4
PESTR                          eS      Sn      17 04 14.6 -0.4
PESTR                           A      A       17 04 30.1
       comp=E,58nm,0.6s
PMTG  Montargil        3.44   9⇓eP     Pn      17 03 39.0 +1.7
PMTG                           eS      Sn      17 04 15.5 -1.3
PMTG                            A      A       17 04 19.1
       comp=E,71nm,0.3s
EBAD  Badajoz          3.44  26 P      Pn      17 03 38.9 +1.6
EBAD  Badajoz          3.44  26 Pn     Pn      17 03 38.9 +1.6
EBAD                            Sn     Sn      17 04 16.9  0.0
EBAD                          i Vmb_Lg         17 04 19.8
EMIJ  Mijas            3.49  74 P      Pn      17 03 39.7 +1.8
EMIJ                            S      Sn      17 04 18.3 +0.2
EMIJ  Mijas            3.49  74 Pn     Pn      17 03 39.8 +1.8
EMIJ                            Sn     Sn      17 04 18.4 +0.3
EMIJ                          i Vmb_Lg         17 04 19.5
ECAB  El Cabril        3.71  49 P      Pn      17 03 42.6 +1.7
ECAB                            S      Sn      17 04 22.9 -0.5
ECAB  El Cabril        3.71  49 Pn     Pn      17 03 42.9 +1.9
ECAB                            Sn     Sn      17 04 22.9 -0.5
ECAB                          i Vmb_Lg         17 04 25.4
IFR   Ifrane           3.81 123 P      Pn      17 03 43.6 +1.2
PSBE  So Bento         3.84   2 eP     Pn      17 03 45.0 +2.2
PSBE                           eS      Sn      17 04 26.5 -0.1
PSBE                            A      A       17 04 29.1
       comp=E,90nm,1.0s
LCRM  LCR              3.90 119 P      Pn      17 03 45.4 +1.7
PMRV  Marv??o          3.95  18⇓eP     Pn      17 03 46.0 +1.8
PMRV                           eS      Sn      17 04 28.1 -1.2
PMRV                            A      A       17 04 31.3
       comp=E,123nm,0.3s
PALE  Palemas          4.11  95 P      Pn      17 03 48.6 +2.1
EGOR  Sierra Gorda,    4.16  68 P      Pn      17 03 50.1 +2.9
EGOR                            S      Sn      17 04 34.5  0.0
EGOR  Sierra Gorda,    4.16  68 Pn     Pn      17 03 50.0 +2.9
EGOR                            Sn     Sn      17 04 35.3 +0.8
EGOR                          i Vmb_Lg         17 04 40.1
EADA  Adamuz           4.29  53 P      Pn      17 03 51.1 +2.1
EADA  Adamuz           4.29  53 Pn     Pn      17 03 51.0 +2.1
EADA                            Sn     Sn      17 04 37.4 -0.4
EADA                          i Vmb_Lg         17 04 39.5
AKLM  AKL              4.32 104 P      Pn      17 03 52.2 +2.8
AKLM                            S      Sn      17 04 32.4 -6.2
PCBR  Castelo Branco   4.32  15 eP     Pn      17 03 51.2 +1.9
PCBR                           eS      Sn      17 04 36.7 -1.7
PCBR                            A      A       17 04 39.5
       comp=E,260nm,0.4s
PCAS  Casmilo, Conde   4.39   4⇓eP     Pn      17 03 52.3 +2.0
PCAS                           eS      Sn      17 04 39.1 -1.0
PCAS                            A      A       17 04 41.6
       comp=E,87nm,0.3s
MD31  MD31             4.45 128 P      Pn      17 03 52.6 +1.4
MD31                            S      Sn      17 04 36.7 -5.0
ELGU  Los Guajares,    4.46  73 P      Pn      17 03 53.3 +2.0
ELGU  Los Guajares,    4.46  73 Pn     Pn      17 03 52.6 +1.4
ELGU                            Sn     Sn      17 04 43.2 +1.3
ELGU                          i Vmb_Lg         17 04 46.9
OUK   Oukaimeden       4.54 168 P      Pn      17 03 54.0 +1.4
OUK                             S      Sn      17 04 40.1 -4.2
COI   Coimbra          4.55   5 eP     Pn      17 03 54.7 +2.2
COI                            eS      Sn      17 04 41.8 -2.2
COI                             A      A       17 04 45.5
       comp=E,58nm,0.2s
MDT   Midelt           4.58 127 Pn     Pn      17 03 54.6 +1.6
       comp=E,52nm,0.3s,baz=302,slow=13,SNR=1003
MDT                             Sn     Sn      17 04 42.7 -2.3
       comp=E,42nm,0.3s,baz=157,slow=12,SNR=22
MDT   Midelt           4.58 127 P      Pn      17 03 54.8 +1.8
MDT                             S      Sn      17 04 42.1 -2.9
EQUE  Quentar          4.69  69 Pn     Pn      17 03 56.8 +2.2
EQUE                            Sn     Sn      17 04 48.6 +0.9
EQUE                          i Vmb_Lg         17 04 55.2
MTE   Manteigas        4.85  13 eP     Pn      17 03 58.3 +1.7
MTE                            eS      Sn      17 04 50.0 -1.5
MTE                             A      A       17 04 52.6
       comp=E,67nm,0.3s
GOG   Mont Gurugu      4.87  94 P      Pn      17 03 58.5 +1.5
EPLA  Plasencia        4.94  26 Pn     Pn      17 03 59.4 +1.6
EPLA                            Sn     Sn      17 04 51.5 -2.1
EPLA                          i Vmb_Lg         17 04 55.1
EBER  Berja            5.04  74 P      Pn      17 04 01.9 +2.6
EBER  Berja            5.04  74 Pn     Pn      17 04 01.6 +2.2
EBER                            Sn     Sn      17 04 56.2 -0.1
EBER                          i Vmb_Lg         17 05 02.9
OUZM  OUZ              5.09 158 P      Pn      17 04 00.2 +0.2
OUZM                            S      Sn      17 04 54.4 -3.0
PVIS  Viseu            5.11   9 eP     Pn      17 04 01.9 +1.8
PVIS                           eS      Sn      17 04 56.5 -1.3
PVIS                            A      A       17 04 59.1
       comp=E,43nm,0.3s
TTIG  Tnine Tigouga,   5.12 175 P      Pn      17 03 58.1 -2.4
GOLM  Goulmima         5.17 139 P      Pn      17 04 01.2 +0.1
GOLM                            S      Sn      17 04 57.8 -1.6
EQES  Quesada          5.17  64 Pn     Pn      17 04 03.3 +2.2
EQES                            Sn     Sn      17 04 59.0 -0.5
EQES                          i Vmb_Lg         17 05 03.5
PSIM  Granatula de C   5.20  51 Pn     Pn      17 04 03.6 +2.2
PSIM                            Sn     Sn      17 04 58.5 -1.5
PAB   San Pablo        5.32  42 P      Pn      17 04 05.0 +1.9
PAB   San Pablo        5.32  42 Pn     Pn      17 04 05.0 +1.9
PAB                             Sn     Sn      17 04 59.8 -3.2
PAB                           i Vmb_Lg         17 05 01.7
JBK   JBK              5.40 102 P      Pn      17 04 04.7 +0.4
JBK                             S      Sn      17 05 00.7 -4.5
TAF   Taforalt         5.41  97 P      Pn      17 04 04.4 +0.1
TAF                             S      Sn      17 05 03.3 -2.0
PTO   Porto            5.47   3 eP     Pn      17 04 06.6 +1.6
PTO                            eS      Sn      17 05 03.9 -2.7
PTO                             A      A       17 05 05.8
       comp=E,86nm,0.4s
ESDC  Sonseca Array    5.62  43 Pn     Pn      17 04 08.6 +1.4
       comp=E,1.1nm,0.3s,baz=232,slow=13,SNR=25
ESDC                            Sn     Sn      17 05 08.2 -2.2
       comp=E,3.1nm,0.3s,baz=237,slow=23,SNR=12
       comp=E,2.6nm,0.3s
ESDC  Sonseca Array    5.62  43 Pn     Pn      17 04 09.1 +2.0
ESDC                            Sn     Sn      17 05 07.1 -3.4
TZRR  Tazzarine        5.63 149 P      Pn      17 04 08.2 +0.8
TZRR                            S      Sn      17 05 07.8 -3.0
PVRL  Vila Real        5.68   9 eP     Pn      17 04 09.7 +1.7
PVRL                           eS      Sn      17 05 09.5 -2.4
PVRL                            A      A       17 05 13.6
       comp=E,64nm,0.1s
MVO   Moncorvo         5.69  15⇓eP     Pn      17 04 09.6 +1.5
MVO                            eS      Sn      17 05 09.9 -2.2
MVO                             A      A       17 05 14.3
       comp=E,36nm,0.3s
POLO  Lamas de Olo     5.77   9 eP     Pn      17 04 10.8 +1.6
POLO                           eS      Sn      17 05 12.6 -1.5
POLO                            A      A       17 05 14.8
       comp=E,23nm,0.5s
ARF   Arif             5.78 136 P      Pn      17 04 09.6 +0.2
ARF                             S      Sn      17 05 12.8 -1.6
EJUZ  Juzbado, Salam   5.92  23 Pn     Pn      17 04 12.7 +1.5
EJUZ                            Sn     Sn      17 05 15.8 -1.9
PCAB  Cabril           6.08   6 eP     Pn      17 04 14.9 +1.5
PCAB                           eS      Sn      17 05 19.8 -1.8
PCAB                            A      A       17 05 21.6
       comp=E,35nm,0.4s
ZGR   Zagora           6.20 152 P      Pn      17 04 15.2  0.0
ZGR                             S      Sn      17 05 21.2 -3.6
EZAR  Zarzadilla de    6.22  67 Pn     Pn      17 04 17.8 +2.4
EZAR                            Sn     Sn      17 05 23.2 -2.1
EZAR                          i Vmb_Lg         17 05 27.5
ELOB  Lobios           6.23   6 Pn     Pn      17 04 16.5 +0.9
ELOB                            Sn     Sn      17 05 21.7 -3.7
ELOB                          i Vmb_Lg         17 05 26.3
GUD   Guadarrama       6.24  36 Pn     Pn      17 04 17.4 +1.7
GUD                             Sn     Sn      17 05 23.5 -2.2
GUD                           i Vmb_Lg         17 05 26.3
PGAV  Gavieira, Arco   6.31   5 eP     Pn      17 04 18.1 +1.4
PGAV                           eS      Sn      17 05 24.5 -2.9
PGAV                            A      A       17 05 29.4
       comp=E,40nm,0.5s
PBRG  Braganca         6.36  15 eP     Pn      17 04 19.1 +1.7
PBRG                           eS      Sn      17 05 25.9 -2.8
PBRG                            A      A       17 05 28.7
       comp=E,38nm,0.3s
SFNM  Sidi Ifni        6.40 190 P      Pn      17 04 15.1 -2.8
ECAL  Calabor          6.50  15 Pn     Pn      17 04 20.9 +1.7
ECAL                            Sn     Sn      17 05 29.8 -2.2
ECAL                          i Vmb_Lg         17 05 33.1
EMUR  La Murta         6.55  68 Pn     Pn      17 04 22.9 +2.9
EMUR                            Sn     Sn      17 05 30.7 -2.7
EMUR                          i Vmb_Lg         17 05 33.7
ETOB  Tobarra          6.61  61 P      Pn      17 04 22.0 +1.3
ETOB                            S      Sn      17 05 32.4 -2.4
ETOB  Tobarra          6.61  61 Pn     Pn      17 04 22.1 +1.3
ETOB                            Sn     Sn      17 05 31.5 -3.3
ETOB                          i Vmb_Lg         17 05 34.5
PMPST Porto Santo, M   6.63 249 eP     Pn      17 04 22.8 +1.7
PMPST                          eS      Sn      17 05 29.4 -5.9
EAGO  Agolada(Pontev   7.16   5 Pn     Pn      17 04 29.4 +1.3
EAGO                            Sn     Sn      17 05 44.9 -3.2
EVIV  Cofrentes, Val   7.18  58 Pn     Pn      17 04 30.1 +1.5
EVIV                            Sn     Sn      17 05 45.9 -2.9
EVIV                          i Vmb_Lg         17 05 48.2
PMAR  Madeira          7.23 248 P      Pn      17 04 28.6 -0.8
PMAR  Madeira          7.23 248 eS     Sn      17 05 46.2 -4.0
EMAZ  Mazaricos        7.27 360 Pn     Pn      17 04 30.4 +0.6
EMAZ                            Sn     Sn      17 05 46.2 -4.7
EMAZ                          i Vmb_Lg         17 05 50.4
FIGM  Figuig           7.29 117 P      Pn      17 04 31.8 +1.6
FIGM                            S      Sn      17 05 49.3 -2.4
AFON  Font Roja        7.34  63 Pn     Pn      17 04 33.8 +3.0
AFON                            Sn     Sn      17 05 50.0 -2.9
AFON                          i Vmb_Lg         17 05 54.4
PMOZ  Porto Moniz, M   7.40 250 P      Pn      17 04 32.4 +0.8
ECHE  Chera            7.44  56 Pn     Pn      17 04 34.6 +2.5
ECHE                            Sn     Sn      17 05 52.4 -2.8
ETOR  Torete           7.47  44 Pn     Pn      17 04 34.7 +2.2
ETOR                            Sn     Sn      17 05 51.5 -4.4
TANT  Tantan           7.50 196 P      Pn      17 04 31.3 -1.6
EFAM  Famara           7.59 212 Pn     Pn      17 04 32.4 -1.7
EFAM                            Sn     Sn      17 05 51.3 -7.5
EFAM                          i Vmb_Lg         17 05 55.0
EBEN2 Beniarda presa   7.60  64 Pn     Pn      17 04 36.9 +2.6
EBEN2                           Sn     Sn      17 05 55.5 -3.6
EBEN2                         i Vmb_Lg         17 05 59.1
EPON  Pontenova        7.77  10 Pn     Pn      17 04 38.7 +2.1
EPON                            Sn     Sn      17 06 00.6 -2.6
EPON                          i Vmb_Lg         17 06 05.5
EARI  Arriondas        8.15  20 Pn     Pn      17 04 43.5 +1.6
EARI                            Sn     Sn      17 06 09.6 -2.9
EMOS  Mosqueruela      8.16  52 Pn     Pn      17 04 45.1 +2.9
EMOS                            Sn     Sn      17 06 10.3 -2.8
EMOS                          i Vmb_Lg         17 06 18.4
CFUE  Fuerteventura    8.18 213 Pn     Pn      17 04 43.0 +0.7
CFUE                            Sn     Sn      17 06 06.5 -6.9
CFUE                          i Vmb_Lg         17 06 10.5
ELAN  Lanestosa        8.67  28 Pn     Pn      17 04 50.5 +1.6
ELAN                            Sn     Sn      17 06 20.5 -4.7
ESAC  San Caprasio     8.96  45 Pn     Pn      17 04 55.8 +2.8
ESAC                            Sn     Sn      17 06 30.1 -2.4
EORO  Oroz-Betelu      9.33  37 Pn     Pn      17 05 00.1 +2.2
EORO                            Sn     Sn      17 06 38.1 -3.3
EALK  Alkurruntz       9.48  35 Pn     Pn      17 05 01.7 +1.7
EALK                            Sn     Sn      17 06 41.8 -3.4
SJPF  Ste Jean         9.53  36 ePn    Pn      17 05 02.4 +1.7
SJPF                           eSn     Sn      17 06 42.7 -3.7
       comp=E,9.6nm,0.3s
ETSF  Etsaut           9.71  39 ePn    Pn      17 05 04.8 +1.6
ETSF                           eSn     Sn      17 06 47.2 -3.6
       comp=E,10nm,0.4s
ECHI  Chisagues Biel   9.95  43 Pn     Pn      17 05 08.9 +2.3
ECHI                            Sn     Sn      17 06 52.9 -4.0
EPF   Esparros        10.28  42 ePn    Pn      17 05 12.6 +1.7
EPF                            eSn     Sn      17 07 00.3 -4.3
       comp=E,7.9nm,0.4s
MTLF  Montolieu       11.53  45 ePn    Pn      17 05 29.4 +1.5
MTLF                           eSn     Sn      17 07 30.2 -4.9
       comp=E,2.2nm,0.4s
LFF   La Frestale     11.84  36 ePn    Pn      17 05 33.4 +1.2
RJF   Les Rejaudoux   12.48  36 ePn    Pn      17 05 42.6 +1.7
RJF                            eSn     Sn      17 07 50.4 -8.0
CAF   Calviac         12.48  39 ePn    Pn      17 05 42.5 +1.5
CAF                            eSn     Sn      17 07 52.3 -6.2
       comp=E,5.3nm,0.5s
MFF   Saint Martin d  12.77  28 ePn    Pn      17 05 46.1 +1.3
LASF  Ste Croix       12.92  46 ePn    Pn      17 05 48.1 +1.2
QUIF  Quistinic       12.97  18 ePn    Pn      17 05 47.9 +0.3
ROSF  Rostrenen       13.34  17 ePn    Pn      17 05 54.5 +1.9
SGMF  Saint Gilles    13.44  19 ePn    Pn      17 05 54.6 +0.6
TCF   Toulx Ste Croi  13.53  35 ePn    Pn      17 05 55.7 +0.4
BGF   Bois d'Agland   14.03  36 ePn    Pn      17 06 03.5 +1.5
GRR   Gorron          14.05  23 ePn    Pn      17 06 03.1 +0.9
LOR   Lormes          15.02  36 ePn    Pn      17 06 16.3 +1.2
TORD  Torodi Ar. Bea  24.39 154 P      P       17 08 01.6 +1.8
       comp=E,0.5nm,0.6s,baz=341,slow=10,SNR=3.6
       comp=E,0.5nm,0.6s
PDAR  Pinedale Array  73.60 311 P      P       17 14 16.6 +2.2
       comp=E,0.3nm,0.5s,baz=62,slow=6.4,SNR=2.1
       comp=E,0.3nm,0.5s
ASAR  Alice Springs  145.77  80 PKPbc  PKiKP   17 22 22.9 -0.6
       comp=E,1.1nm,0.8s,baz=322,slow=2.6,SNR=8.1
```

NEIC ***20*** *17:12:28.0±1.7, 23.°8S±0.°1×179.°7W±0.°1, h544km±13km, mb4.7/40, Error ellipse: s-maj=20.1km s-min=18.2km az=121.0*

IDC ***20*** *17:12:29.8±1.6, 23.°69S×179.°90E, h539km±17km, mb3.5/13, mbtmp4.4/15, Error ellipse: s-maj=19.8km s-min=14.4km az=165.0*

ISC 20 17:12:29.7±0.6**, 23.°93S**±0.°08×**179.°99W**±0.°08**, h550**km**,**
n66, σ1§21/70**, mb4.5**/26**, South of Fiji Islands**

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Code  Station Name      Δ°  AZ°  Phase ID         Time       Res
                                 Op     ISC       h  m  s    ISC
RAO   Raoul Island     5.62 161 P      P       17 14 02.1 -2.6
NIUE  Niue            10.54  65 P      P       17 14 47.4 -5.8
NIUE                            S      S       17 16 53.0 +1.9
AFI   Afiamalu        12.63  39 P      P       17 15 08.1 -6.8
DZM   Mont Dzumac     12.63 276 P      P       17 15 14.5 -0.4
       5.9nm,0.7s,baz=108,slow=20,SNR=2.0
DZM   Mont Dzumac     12.63 276 P      P       17 15 16.8 +1.9
URZ   Urewera         14.50 189 P      P       17 15 35.0 +1.2
       7.5nm,0.7s,baz=356,slow=1.6,SNR=8.5
URZ                             S      S       17 18 04.5 -1.0
       3.9nm,0.5s,baz=53,slow=23,SNR=8.4
BKZ   Black Stump Fm  15.48 190 P      P       17 15 41.9 -2.1
BKZ                             IAmb   IAmb    17 16 18.2
       comp=Z,20nm,1.3s
BFZ   Birch Farm      17.01 190 P      P       17 15 57.5 -0.7
BFZ                             IAmb   IAmb    17 16 24.4
       comp=Z,38nm,1.1s
MRZ   Mangatainoka R  17.10 192 P      P       17 15 57.1 -2.0
TCW   Tory Channel    17.89 194 P      P       17 16 06.6 +0.2
QRZ   Quartz Range    17.98 199 P      P       17 16 07.9 +0.7
PLWZ  Palliser        18.04 192 P      P       17 16 08.7 +0.9
TKNZ  Takaka Hill     18.05 197 P      P       17 16 09.0 +1.1
NNZ   Nelson          18.11 196 P      P       17 16 10.0 +1.6
MRNZ  Matariki Terra  18.45 197 P      P       17 16 12.9 +1.4
THZ   Tophouse        18.75 197 P      P       17 16 15.3 +1.1
DSZ   Denniston Nort  19.04 199 P      P       17 16 18.8 +1.9
DSZ                             IAmb   IAmb    17 16 41.5
       comp=Z,56nm,1.4s
KHZ   Kahutara        19.21 195 P      P       17 16 19.6 +1.2
GVZ   Greta Valley S  19.85 195 P      P       17 16 25.3 +1.1
LTZ   Lake Taylor     19.87 197 P      P       17 16 25.2 +0.8
LTZ                             IAmb   IAmb    17 17 01.3
       comp=Z,41nm,1.5s
INZ   Inchbonnie      20.05 199 P      P       17 16 26.8 +0.8
INZ                             IAmb   IAmb    17 16 38.1
       comp=Z,56nm,1.5s
OXZ   Oxford          20.44 197 P      P       17 16 30.8 +1.3
RPZ   Rata Peaks      21.07 198 P      P       17 16 38.1 +2.9
       comp=Z,11nm,0.9s,baz=18,slow=3.2,SNR=2.2
       comp=Z,11nm,0.9s
RPZ   Rata Peaks      21.07 198 P      P       17 16 36.1 +0.9
RPZ                             IAmb   IAmb    17 17 16.9
       comp=Z,49nm,1.4s
FOZ   Fox Glacier     21.28 201 P      P       17 16 37.7 +0.6
WHZ   Wether Hill Ro  23.99 201 P      P       17 17 03.3 +2.1
WHZ                             IAmb   IAmb    17 17 45.1
       comp=Z,33nm,1.2s
EIDS  Eidsvold        26.31 261 P      P       17 17 23.0 +0.9
EIDS                            IAmb   IAmb    17 18 04.3
       comp=Z,18nm,1.4s
CTA   Charters Tower  31.48 270 P      P       17 18 07.6 +0.5
       comp=Z,21nm,0.4s,baz=94,slow=11,SNR=140
       comp=Z,21nm,0.4s
CTAO  Charters Tower  31.48 270 P      P       17 18 07.8 +0.7
TOO   Toolangi        32.44 237 P      P       17 18 16.3 +1.3
TOO                             IAmb   IAmb    17 18 42.8
       comp=Z,27nm,1.5s
PMG   Port Moresby    34.51 289 P      P       17 18 32.0 -0.5
       comp=Z,15nm,0.7s,baz=135,slow=7.1,SNR=8.5
       comp=Z,15nm,0.7s
PMG   Port Moresby    34.51 289 P      P       17 18 32.1 -0.5
PMG                             IAmb   IAmb    17 18 33.0
       comp=Z,15nm,0.9s
STKA  Stephens Creek  34.72 248 P      P       17 18 34.8 +0.6
       comp=Z,2.1nm,0.4s,baz=92,slow=11,SNR=7.8
       comp=Z,2.1nm,0.4s
STKA  Stephens Creek  34.72 248 P      P       17 18 35.3 +1.1
COEN  Coen            36.13 279 P      P       17 18 45.5 -0.6
BBOO  Buckleboo       39.44 247 P      P       17 19 13.2 +0.3
BBOO                            IAmb   IAmb    17 19 15.7
       comp=Z,34nm,1.4s
AS31  Alice Springs   42.04 261 P      P       17 19 33.8 +0.2
ASAR  Alice Springs   42.04 261 P      P       17 19 34.0 +0.3
       comp=Z,5.8nm,0.5s,baz=95,slow=7.5,SNR=198
ASAR                            PcP    pwP     17 21 15.6 -0.4
       comp=Z,0.4nm,0.6s,baz=103,slow=6.4,SNR=1.8
ASAR                            ScP    ScP     17 24 16.5 +2.4
       comp=Z,1.3nm,0.8s,baz=109,slow=4.3,SNR=12
ASAR                            S      S       17 25 14.2 +0.7
       comp=Z,0.3nm,0.8s,baz=96,slow=18,SNR=2.2
       comp=Z,5.8nm,0.5s
ASAR  Alice Springs   42.04 261 P      P       17 19 33.4 -0.3
WB2   Warramunga Arr  42.40 266 P      P       17 19 36.3 -0.2
WB2                             IAmb   IAmb    17 19 36.9
       comp=Z,16nm,0.9s
WRAB  Tennant Creek   42.41 266 P      P       17 19 36.1 -0.5
WRAB                            IAmb   IAmb    17 19 36.9
       comp=Z,12nm,0.8s
WB0   Warramunga Arr  42.41 266 P      P       17 19 36.2 -0.4
WB0                             IAmb   IAmb    17 19 36.8
       comp=Z,16nm,0.7s
WRA   Warramunga Arr  42.41 266 P      P       17 19 36.2 -0.5
       comp=Z,11nm,0.5s,baz=90,slow=5.9,SNR=465
WRA                             ScP    ScP     17 24 18.2 +2.6
       comp=Z,0.9nm,0.9s,baz=97,slow=3.7,SNR=4.8
WRA                             S      S       17 25 17.3 -1.6
       comp=Z,0.5nm,0.8s,baz=98,slow=13,SNR=3.2
       comp=Z,11nm,0.5s
WRA   Warramunga Arr  42.41 266 P      P       17 19 36.6  0.0
FORT  Forrest         46.31 250 P      P       17 20 06.5 +0.1
FORT                            IAmb   IAmb    17 20 15.8
       comp=Z,19nm,0.8s
MTN   Manton Dam      47.47 274 P      P       17 20 14.2 -1.2
KNRA  Kununurra       48.70 270 P      P       17 20 24.5  0.0
KNRA                            IAmb   IAmb    17 20 25.3
       comp=Z,29nm,1.3s
FAKI  Fak Fak         50.60 287 P      P       17 20 37.9 -0.7
SOEI  Soe             54.86 275 P      P       17 21 08.4 -0.6
SOEI                            IAmb   IAmb    17 21 26.0
       comp=Z,32nm,0.9s
PSA00 Pilbara Seismi  55.17 260 P      P       17 21 10.7 -0.3
PSA00 Pilbara Seismi  55.17 260 P      P       17 21 10.7 -0.3
PSA00                           IAmb   IAmb    17 21 36.3
       comp=Z,22nm,1.5s
MBWA  Marble Bar      55.38 260 P      P       17 21 12.3 -0.2
MORW  Morawa          56.88 250 P      P       17 21 22.9 +0.2
MORW                            IAmb   IAmb    17 21 50.4
       comp=Z,34nm,1.5s
GIRL  Giralia         59.92 257 P      P       17 21 45.0 +1.7
TOLI2 Tolitoli        62.59 285 P      P       17 21 60.0 -0.9
TOLI2                           IAmb   IAmb    17 22 02.0
       comp=Z,9.5nm,0.7s
QSPA  South Pole Qui  66.16 180 P      P       17 22 24.6 +1.8
       comp=Z,0.6nm,0.7s,baz=55,slow=15,SNR=1.4
       comp=Z,0.6nm,0.7s
QSPA  South Pole Qui  66.16 180 P      P       17 22 22.9 +0.1
KKM   Kota Kinabalu   68.92 287 P      P       17 22 40.1 -0.3
KKM                             IAmb   IAmb    17 23 19.0
       comp=Z,28nm,1.4s
KSRS  Korea Array     78.27 320 P      P       17 23 32.9 -0.1
       comp=Z,1.0nm,0.7s,baz=136,slow=4.5,SNR=3.1
       comp=Z,1.0nm,0.7s
PETK  Petropavlovsk-  79.13 347 P      P       17 23 36.1 -1.1
       comp=Z,2.0nm,0.8s,baz=158,slow=1.6,SNR=2.0
       comp=Z,2.0nm,0.8s
USRK  Ussuriysk Ar.   80.79 327 P      P       17 23 45.1 -0.9
       comp=Z,2.3nm,0.8s,baz=148,slow=4.4,SNR=3.0
       comp=Z,2.3nm,0.8s
CMAR  Chiang Mai Arr  89.54 290 P      P       17 24 30.1 +0.9
       comp=Z,0.9nm,0.8s,baz=131,slow=2.8,SNR=7.4
       comp=Z,0.9nm,0.8s
TXAR  Lajitas Array   90.44  58 P      P       17 24 33.8 +0.6
       comp=Z,0.7nm,0.7s,baz=218,slow=5.6,SNR=8.4
       comp=Z,0.7nm,0.7s
PDAR  Pinedale Array  92.70  44 P      P       17 24 43.0 -0.5
       comp=Z,0.3nm,0.6s,baz=266,slow=7.1,SNR=3.0
       comp=Z,0.3nm,0.6s
HFS   Hagfors        142.57 349 PKhKP  PKPpre  17 30 55.3
       comp=Z,1.3nm,0.3s,baz=58,slow=4.5,SNR=2.5
BRTR  Keskin Array B 147.60 307 PKPbc  PKPab   17 31 14.7 -2.2
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Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,1.4nm,0.6s,baz=97,slow=3.3,SNR=3.2						

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*JMA **20** 17:50:48.0±0.1, 39°.1N±0°.3×142°.4E±0°.7, h31km±1km, MV3.3/40, E OFF IWATE PREF*

*IDC **20** 17:50:56.1±1.3, 39°.78N×139°.95E, h135km±15km, mb2.9/2, mbtmp3.2/4, MS2.3/1, Error ellipse: s-maj=62.0km s-min=10.7km az=113.0*

ISC 20 17:50:48.6±1.7**, 39°.01N**±0°.04×**142°.28E**±0°.08**, h31**km±11km**, n16, σ1s25**/28**, 10D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.48	278	⇓*i*P	Pb	17 50 59.1	+0.3
OFUJ				⇓*i*S	Sb	17 51 06.8	+0.9
JKMT	Kesennumamotoy	0.66	253	*i* P	Pn	17 51 01.8	0.0
JKMT				S	Sn	17 51 11.4	+0.2
MIYJ	Miyakonagasawa	0.67	328	⇓*i*P	Pb	17 51 00.7	-1.2
MIYJ				⇓S	Sb	17 51 09.4	-1.5
JMK	Ichinoseki	0.83	266	⇓*i*P	Pn	17 51 04.5	+0.4
JMK				⇓S	Sn	17 51 16.4	+1.0
JOM	Ohasama	0.90	301	⇓*i*P	Pn	17 51 05.1	+0.1
JOM				⇓S	Sb	17 51 17.6	+0.3
JIO	Ouri	0.92	233	*i* P	Pb	17 51 05.2	-0.8
JIO				S	Sn	17 51 17.1	-0.3
JTH	Tanohata	0.98	341	P	Pn	17 51 05.1	-1.1
JTH				S	Sn	17 51 18.5	-0.6
JKZ	Kuzumaki	1.22	323	⇓*i*P	Pn	17 51 09.7	+0.1
JKZ				⇓S	Sn	17 51 25.3	+0.3
JRG	Rokugo	1.34	287	P	Pb	17 51 12.7	-0.4
JRG				S	Sb	17 51 30.4	+0.6
JOU	Okura	1.42	243	P	Pb	17 51 13.7	-0.8
JOU				S	Sb	17 51 32.6	+0.3
JANG	Nango	1.48	337	P	Pn	17 51 13.1	0.0
JANG				S	Sn	17 51 32.5	+1.1
MJAR	Matsushiro Arr	4.06	234	P	Pn	17 51 51.0	+2.3
	1.9nm,0.4s,baz=35,slow=13,SNR=17						
MJAR				S	Sn	17 52 31.6	-3.5
	0.7nm,0.4s,baz=20,slow=33,SNR=1.4						
ASAJ	Asahikawa	5.11	3	P	Pn	17 52 05.5	+2.6
	1.9nm,0.4s,baz=224,slow=11,SNR=9.8						
ASAJ				S	Sn	17 53 00.2	-0.5
	3.8nm,0.8s,baz=210,slow=20,SNR=1.8						
KSRS	Korea Array	11.40	267	LR	LR	17 56 42.3	
	comp=Z,17nm,18.2s,baz=235,slow=36						
ILAR	Eielson Array	47.46	33	P	P	17 59 20.8	+0.7
	0.2nm,0.6s,baz=268,slow=6.1,SNR=4.3						
	0.2nm,0.6s						
WRA	Warramunga Arr	59.12	189	P	P	18 00 45.2	-0.9
	0.2nm,0.5s,baz=5.8,slow=7.0,SNR=9.5						
	0.2nm,0.5s						

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*IDC **20** 17:55:01.3±3.7, 47°.56N×152°.22E, h40km±34km, mb3.3/6, mbtmp3.6/8, ML3.2/1, Error ellipse: s-maj=31.7km s-min=19.2km az=128.0*

ISC 20 17:55:00.7±1.1**, 47°.5N**±0°.2×**152°.3E**±0°.2**, h35km, n17, σ1s15**/8**, mb3.6**/6**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	6.56	30	P	Pn	17 56 34.5	-0.1
	11nm,1.3s,baz=250,slow=30,SNR=1.9						
ASAJ	Asahikawa	7.59	247	P	Pn	17 56 49.3	+0.6
	0.4nm,0.3s,baz=52,slow=17,SNR=6.0						
	3.9nm,0.8s						
H11N2	WAKE ISLAND Hy	30.17	152	T	T	18 32 34.1	
	baz=341,slow=76,SNR=45						
H11N1	WAKE ISLAND Hy	30.18	152	T	T	18 32 43.6	
	baz=341,slow=76,SNR=63						
H11N3	WAKE ISLAND Hy	30.19	152	T	T	18 32 36.0	
	baz=341,slow=76,SNR=38						
H11S1	WAKE ISLAND Hy	31.26	153	T	T	18 33 58.3	
	baz=341,slow=76,SNR=84						
H11S3	WAKE ISLAND Hy	31.26	153	T	T	18 33 55.0	
	baz=341,slow=76,SNR=59						
H11S2	WAKE ISLAND Hy	31.27	153	T	T	18 33 55.8	
	baz=341,slow=76,SNR=59						
ILAR	Eielson Array	36.29	39	P	P	18 02 00.0	-0.3
	0.7nm,1.0s,baz=283,slow=7.7,SNR=4.9						
	0.7nm,1.0s						
ZALV	Zalesovo Beam	41.71	305	P	P	18 02 46.6	+0.9
	0.3nm,0.4s,baz=64,slow=5.9,SNR=1.8						
	0.3nm,0.4s						
MKAR	Makanchi Array	46.09	296	P	P	18 03 19.2	-1.9
	0.3nm,0.5s,baz=74,slow=8.2,SNR=6.5						
	0.3nm,0.5s						
YKA	Yellowknife Ar	50.63	37	P	P	18 03 56.4	+0.7
	0.4nm,0.6s,baz=300,slow=7.2,SNR=5.2						
	0.4nm,0.6s						
WRA	Warramunga Arr	69.08	198	P	P	18 06 02.0	-0.9
	0.5nm,0.6s,baz=13,slow=6.6,SNR=5.5						
	0.5nm,0.6s						
ASAR	Alice Springs	72.78	198	P	P	18 06 26.0	+0.6
	0.5nm,0.5s,baz=11,slow=5.6,SNR=23						
	0.5nm,0.5s						
H03N2	Juan Fernandez	139.30	89	T	T	20 49 17.3	
	baz=308,slow=77,SNR=8.0						
H03N1	Juan Fernandez	139.31	89	T	T	20 49 38.1	
	baz=308,slow=77,SNR=10						
H03N3	Juan Fernandez	139.31	89	T	T	20 49 17.7	
	baz=308,slow=77,SNR=9.6						

MAN 20 18:07:32.5, 16°.62N×120°.75E, h31km, mb3.7, ML2.5, MS2.0, Luzon

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DDA 20 18:16:35.9±0.0**, 38°.46N×25°.86E, h7km**±2km**, ML2.1, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KARB	zmir-Karabur	0.48	64	P	Pg	18 16 45.4	+0.1
KARB				S	Sg	18 16 52.2	+0.7
ZEYE	Izmir, Urla-Ze	0.55	113	P	Pg	18 16 46.6	+0.1
ZEYE				S	Sb	18 16 54.9	-1.1
ZEYE				*i* AML	AML	18 16 58.0	
	comp=E,8.9nm,0.5s						
ZEYE				*i* AML	AML	18 16 59.0	
	comp=N,5.2nm,0.3s						
URLA	Izmir	0.59	99	P	Pg	18 16 47.7	+0.4
URLA				S	Sb	18 16 56.1	-1.0
URLA				*i* AML	AML	18 16 59.0	
	comp=E,15nm,0.4s						
URLA				*i* AML	AML	18 17 00.0	
	comp=N,5.4nm,0.4s						

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*IDC **20** 18:16:52.5±1.3, 23°.16S×66°.61W, h194km±22km, mb3.0/1, mbtmp3.6/7, Error ellipse: s-maj=28.4km s-min=16.1km az=108.0*

*SJA **20** 18:16:53.8±1.4, 23°.18S×66°.79W, h200km, ML3.5, MW3.5, Hypocentre not reviewed by the ISC*

*GUC **20** 18:16:54.1±0.6, 23°.13S×67°.14W, h254km±8km, ML3.9*

ISC 20 18:16:52.7±1.0**, 23°.19S**±0°.05×**66°.9W**±0°.1**, h228**km±15km**, n26, σ1s53**/47**, 12C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YJA	Yavi	1.64	52	*i* P		18 17 29.3	
YJA				*i* S		18 17 56.9	
YJA				IAML		18 17 57.1	
	comp=Z,10nm,0.4s						
LVC	Limon Verde	1.93	287	P	Pn	18 17 34.1	+1.0
	comp=Z,54nm,0.4s,baz=96,slow=6.6,SNR=129						
LVC				S	S	18 18 04.3	-0.2
	comp=Z,23nm,0.3s,baz=90,slow=20,SNR=16						
LVC	Limon Verde	1.93	287	*e*P	Pn	18 17 34.1	+1.0
LVC				*i* S	S	18 18 04.9	+0.3
LVC	Limon Verde	1.93	287	*i* P		18 17 34.1	
LVC				*i* S		18 18 05.6	
LVC				IAML		18 18 06.7	
	comp=Z,54nm,4.3s						
PB15	IPOC Station P	2.35	269	⇑*i*P	Pn	18 17 38.4	+1.3
PB15				*i* S	S	18 18 12.6	+0.8
PB15	IPOC Station P	2.35	269	*i* P		18 17 38.4	
PB15				*i* S		18 18 12.6	
PB15				IAML		18 18 16.2	
	comp=Z,743nm,0.2s						
PB06	IPOC Station P	2.50	281	⇑*i*P	Pn	18 17 39.8	+1.2
PB06				*i* S	S	18 18 14.2	-0.2
PB06				IAML		18 18 16.4	
	comp=E,255nm,0.1s						
PB06	IPOC Station P	2.50	281	*i* P		18 17 39.8	
PB06				*i* S		18 18 13.8	
PB06				IAML		18 18 16.6	
	comp=Z,131nm,0.1s						
PB09	IPOC Station P	2.56	302	⇑*i*P	Pn	18 17 40.8	+1.5
PB09				*i* S	S	18 18 16.4	+0.8
PB09				IAML		18 18 20.3	
	comp=N,94nm,0.4s						
PB09	IPOC Station P	2.56	302	*i* P		18 17 40.8	
PB09				*i* S		18 18 15.7	
PB09				IAML		18 18 20.5	
	comp=Z,122nm,0.2s						
PB03	IPOC Station P	2.86	293	⇑*i*P	Pn	18 17 43.4	+0.9
PB03				*i* S	S	18 18 20.5	-0.9
PB03				IAML		18 18 22.7	
	comp=E,393nm,0.0s						
PB03	IPOC Station P	2.86	293	*i* P		18 17 43.4	
PB03				*i* S		18 18 20.4	
PB03				IAML		18 18 23.2	
	comp=Z,298nm,0.3s						
PB04	IPOC Station P	3.10	285	⇑*i*P	Pn	18 17 46.3	+1.1
PB04				*i* S	S	18 18 25.3	-1.1
PB04	IPOC Station P	3.10	285	*i* P		18 17 46.4	
PB04				*e*S		18 18 25.7	
PB04				IAML		18 18 28.4	
	comp=Z,210nm,0.2s						
PB07	IPOC Station P	3.11	297	⇑*i*P	Pn	18 17 46.3	+1.0
PB07				*i* S	S	18 18 25.1	-1.4
PB07	IPOC Station P	3.11	297	*i* P		18 17 46.4	
PB07				*e*S		18 18 25.3	
PB07				IAML		18 18 26.8	
	comp=Z,178nm,0.1s						
GO02	Mina Guanaco	3.14	231	⇑*i*P	Pn	18 17 47.2	+1.4
GO02				*i* S	S	18 18 28.7	+1.4
GO02	Mina Guanaco	3.14	231	*i* P		18 17 47.2	
PB01	IPOC Station P	3.20	311	⇑*i*P	Pn	18 17 47.0	+0.7
PB01				*i* S	S	18 18 27.2	-1.1
PB01	IPOC Station P	3.20	311	*i* P		18 17 47.2	
PB01				*i* S		18 18 27.8	
PB01				IAML		18 18 30.4	
	comp=Z,112nm,0.2s						
PB02	IPOC Station P	3.33	303	⇑*i*P	Pn	18 17 48.4	+0.6
PB02				*i* S	S	18 18 29.2	-1.8
PB02	IPOC Station P	3.33	303	*i* P		18 17 48.6	
PB02				IAML		18 18 33.4	
	comp=Z,218nm,0.2s						
PB10	IPOC Station P	3.36	264	⇑*i*P	Pn	18 17 49.6	+1.6
PB10				*i* S	S	18 18 30.3	-1.1
PB10	IPOC Station P	3.36	264	*i* P		18 17 49.6	
PB10				IAML		18 18 36.2	
	comp=Z,33nm,0.8s						
PB14	IPOC Station P	3.50	245	*i* P		18 17 51.2	
PB14				IAML		18 18 37.6	
	comp=Z,49nm,0.1s						
PB08	IPOC Station P	3.68	325	⇑*i*P	Pn	18 17 53.6	+1.4
PB08				*i* S	S	18 18 38.9	+0.1
PB08	IPOC Station P	3.68	325	*i* P		18 17 53.5	
PB08				IAML		18 18 42.7	
	comp=Z,41nm,0.2s						
TA01	Diego Aracena	4.00	310	*e*P	Pn	18 17 56.2	+0.6
TA01				*i* S	S	18 18 42.5	-2.6
GO01	Chusmiza	4.09	328	*e*P	Pn	18 17 58.1	+0.9
GO01				*i* S	S	18 18 47.7	-0.4
GO01	Chusmiza	4.09	328	*i* P		18 17 58.4	
PB11	IPOC Station P	4.26	323	⇑*i*P	Pn	18 17 58.8	-0.1
PB11				*i* S	S	18 18 48.4	-2.7
PB11	IPOC Station P	4.26	323	*i* P		18 17 58.9	
PB11				IAML		18 18 52.4	
	comp=Z,66nm,0.4s						
AC01	Pan de Azucar	4.46	228	*e*P	Pn	18 18 01.6	+0.4
AC01				*i* S	S	18 18 54.0	-1.4
AC01	Pan de Azucar	4.46	228	*i* P		18 18 01.5	
AC01				IAML		18 18 58.3	
	comp=Z,19nm,0.3s						
MNMC	Minye Minye	4.75	328	*e*P	Pn	18 18 05.6	+0.5
MNMC				*i* S	S	18 18 59.6	-2.6
MNMCX	Minye Minye	4.75	328	*i* P		18 18 05.6	
MNMCX				IAML		18 19 03.6	
	comp=Z,92nm,0.5s						
GO03	Copiap	5.32	214	*e*P	Pn	18 18 11.9	0.0
GO03				*i* S	S	18 19 12.8	-1.8
GO03	Copiap	5.32	214	*i* P		18 18 12.0	
LPAZ	La Paz	6.96	350	P	Pn	18 18 34.1	+0.8
	comp=Z,0.7nm,0.3s,baz=150,slow=8.1,SNR=1.3						
LPAZ				S	S	18 19 52.5	-1.0
	comp=Z,0.8nm,0.4s,baz=131,slow=20,SNR=3.7						
CFA	Coronel Fontan	8.47	188	P	Pn	18 18 51.9	-0.1
	comp=Z,1.2nm,0.3s,baz=17,slow=17,SNR=7.5						
CFA				S	S	18 20 22.4	-5.4
	comp=Z,2.0nm,0.4s,baz=8.1,slow=7.1,SNR=9.0						
SIV	San Ignacio	9.03	39	P	Pn	18 18 56.2	-3.1
	comp=Z,1.6nm,0.4s,baz=250,slow=10,SNR=8.1						
PLCA	Paso Flores	17.76	189	P	Pn	18 20 47.4	+0.9
	comp=Z,0.4nm,0.5s,baz=1.0,slow=11,SNR=4.4						
BDFB	Brasilia	19.33	71	P	P	18 21 01.3	0.0
	comp=Z,4.2nm,0.6s,baz=243,slow=9.1,SNR=5.0						
TORD	Torodi Ar. Bea	76.21	69	P	P	18 28 17.5	+1.1
	comp=Z,0.2nm,0.4s,baz=256,slow=6.3,SNR=4.7						
	comp=Z,0.2nm,0.4s						
MKAR	Makanchi Array	145.85	39	PKPbc	PKiKP	18 36 08.3	0.0
	comp=Z,0.1nm,0.7s,baz=321,slow=2.0,SNR=1.7						

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*DDA **20** 18:17:18.7±0.0, 36°.96N×28°.10E, h7km±3km, ML1.6*

*ISK **20** 18:17:18.7, 36°.95N×28°.09E, h9km±2km, ML1.9/9*

ISC 20 18:17:19.1±0.9**, 36°.96N**±0°.02×**28°.10E**±0°.02**, h14**km±7km**, n23, σ0s34**/43**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TURN	Turunc	0.22	148	Pg	Pg	18 17 23.5	-0.3
TURN				Sg	Sg	18 17 27.1	0.0
TURN	Turunc	0.22	148	P	Pg	18 17 23.6	-0.2
TURN				S	Sg	18 17 27.2	+0.1
TURN				*i* AML	AML	18 17 28.0	
	comp=N,273nm,0.2s						
TURN				*i* AML	AML	18 17 29.0	
	comp=E,237nm,0.5s						
TURN	Turunc	0.22	148	P	Pg	18 17 23.6	-0.3
TURN				S	Sg	18 17 26.9	-0.2
TURN				*i* AML	AML	18 17 28.0	
	comp=N,273nm,0.2s						
TURN				*i* AML	AML	18 17 29.0	
	comp=E,238nm,0.5s						
YER	Yerkesik	0.23	40	Pg	Pg	18 17 23.9	-0.3
YER				Sg	Sg	18 17 27.9	+0.3
MULA	Mugla, Merkez-	0.35	31	P	Pg	18 17 26.2	0.0
MULA				S	Sg	18 17 31.2	+0.2
MULA				*i* AML	AML	18 17 33.0	
	comp=N,53nm,0.2s						
MULA				*i* AML	AML	18 17 35.0	
	comp=E,74nm,0.5s						
MULA	Mugla, Merkez-	0.35	31	P	Pg	18 17 25.8	-0.4
MULA				S	Sg	18 17 31.3	+0.3
MULA				*i* AML	AML	18 17 33.0	
	comp=N,53nm,0.2s						
MULA				*i* AML	AML	18 17 34.0	
	comp=E,65nm,0.2s						
MLSB	Milas	0.42	323	Pg	Pg	18 17 27.5	-0.1
MLSB				Sg	Sg	18 17 33.5	+0.1
DALY	Dalyan (Mula)	0.47	107	Pg	Pg	18 17 28.4	+0.1
DALY				Sg	Sb	18 17 35.2	-0.5
DAT	Datca	0.48	242	Pg	Pg	18 17 28.4	-0.2
DAT				Sg	Sg	18 17 35.3	+0.3
DAT	Datca	0.48	242	P	Pg	18 17 28.0	-0.6
DAT				S	Sb	18 17 36.1	-0.1
DAT				*i* AML	AML	18 17 37.0	
	comp=N,77nm,0.4s						
DAT				*i* AML	AML	18 17 37.0	
	comp=E,73nm,0.2s						
DAT	Datca	0.48	242	P	Pg	18 17 27.9	-0.6
DAT				S	Sb	18 17 36.1	-0.1
DAT				*i* AML	AML	18 17 37.0	
	comp=E,74nm,0.2s						
DAT				*i* AML	AML	18 17 37.0	
	comp=N,77nm,0.4s						
BDRM	Kayabasi	0.54	282	P	Pg	18 17 29.2	-0.4
BDRM				S	Sb	18 17 37.6	-0.2
BDRM				*i* AML	AML	18 17 39.0	
	comp=E,22nm,0.3s						
BDRM	Kayabasi	0.54	282	P	Pb	18 17 30.9	+0.7
BDRM				S	Sb	18 17 37.7	-0.1
BDRM				*i* AML	AML	18 17 39.0	
	comp=E,22nm,0.3s						
BODT	Bodrum	0.64	280	Pg	Pg	18 17 31.5	-0.1
BODT				Sg	Sb	18 17 40.9	+0.1
AYDN	Tasoluk	0.72	346	P	Pg	18 17 32.9	-0.3
AYDN				S	Sg	18 17 42.5	-0.3
AYDN				*i* AML	AML	18 17 43.0	
	comp=E,87nm,0.4s						
AYDN				*i* AML	AML	18 17 44.0	
	comp=N,39nm,0.3s						
AYDN	Tasoluk	0.72	346	P	Pg	18 17 33.0	-0.2
AYDN				S	Sg	18 17 42.3	-0.4
AYDN				*i* AML	AML	18 17 43.0	
	comp=E,88nm,0.4s						
AYDN				*i* AML	AML	18 17 44.0	
	comp=N,40nm,0.3s						
TAVA	DENIZLI_Tavas	0.82	52	P	Pb	18 17 35.5	+0.3
TAVA				S	Sg	18 17 45.6	-0.3
TAVA				*i* AML	AML	18 17 53.0	
	comp=N,10nm,0.3s						
TAVA				*i* AML	AML	18 17 53.0	
	comp=E,12nm,0.4s						
TAVA	DENIZLI_Tavas	0.82	52	P	Pb	18 17 35.2	0.0
TAVA				S	Sg	18 17 45.6	-0.3
TAVA				*i* AML	AML	18 17 53.0	
	comp=N,10nm,0.3s						
TAVA				*i* AML	AML	18 17 53.0	
	comp=E,12nm,0.4s						
DDIM	Aydin, Didim	0.85	306	P	Pg	18 17 35.0	-0.5
DDIM				S	Sn	18 17 48.4	-0.3
DDIM				*i* AML	AML	18 17 52.0	
	comp=E,22nm,0.5s						
DDIM				*i* AML	AML	18 17 54.0	
	comp=N,28nm,0.5s						
FETY	Fethiye	0.85	112	Pg	Pg	18 17 35.3	-0.3
GCAM	G?zelcaml?	1.01	317	Pg	Pb	18 17 38.6	+0.2
GCAM	G?zelcaml?	1.01	317	P	Pn	18 17 39.2	+0.4
GCAM				S	Sg	18 17 51.2	-0.6
GCAM				*i* AML	AML	18 17 58.0	
	comp=E,22nm,0.3s						
GCAM				*i* AML	AML	18 17 59.0	
	comp=N,33nm,0.6s						
APMY	Acipayam-Deniz	1.09	62	Pn	Pb	18 17 40.1	+0.4

MAN 20 18:25:47.5, 13°.78N×120°.90E, h30km, mb3.8, ML2.5, MS2.1, 2C-3D, Mindoro

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.28	170	⇓*i*P	Pb	18 25 51.4	-3.3
PGP				*e*S	Sb	18 25 54.1	-5.4
TGY	Tagaytay City	0.33	6	⇑*e*P	Pn	18 25 57.1	+0.9
TGY				*i* S	Sn	18 26 03.9	+1.8
MACP	Maragondon, Ca	0.52	340	⇓*e*P	Pn	18 25 59.5	+0.7
MACP				*e*S	Sn	18 26 08.5	+1.9
LUBP	Lubang	0.64	266	⇑*e*P	Pb	18 26 00.2	0.0
LUBP				*e*S	Sn	18 26 10.8	+1.2
LQP	Lukban	0.70	61	⇓*e*P	Pn	18 26 01.8	+0.2
LQP				*e*S	Sn	18 26 12.7	+1.2

ROM 20 18:39:45.6±0.1**, 42°.938N**±0°.002×**13°.192E**±0°.003**, h16**km**, ML1.1**/2**, 6C-2D, Error ellipse: s-maj=0.2km s-min=0.0km az=272.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MC2	Monte Cornacci	0.03	182	⇑P	Pg	18 39 48.6	+0.1
MC2				S	Sg	18 39 50.7	+0.1
T1256	Bolognola (MC)	0.07	20	⇓P	Pg	18 39 48.9	0.0
T1256				S	Sg	18 39 51.2	+0.1
T1256				AML	AML		
	comp=E,67µm,0.3s						
T1256				AML	AML		
	comp=N,68µm,0.3s						
T1245	Castelsantange	0.08	182	P	Pg	18 39 48.9	0.0
T1245				S	Sg	18 39 51.4	+0.3
T1245				AML	AML		
	comp=N,199µm,1.4s						
T1245				AML	AML		
	comp=E,254µm,0.7s						
T1245				AML	AML		
	comp=N,199µm,0.6s						
MMO1	Montemonaco	0.11	111	P	Pg	18 39 49.1	0.0
MMO1				S	Sb	18 39 51.6	-0.2
FDMO	Fiordimonte	0.12	322	⇑P	Pg	18 39 49.4	+0.1
T1216	Preci, Frazion	0.14	250	⇑P	Pg	18 39 49.5	+0.2
CSP1	Cessapalombo	0.15	4	P	Pg	18 39 49.9	+0.2
CSP1				S	Sb	18 39 53.0	-0.3
T1214	Arquata del Tr	0.18	176	⇓P	Pg	18 39 50.3	+0.2
T1219	Muccia, Frazio	0.18	311	⇑P	Pg	18 39 50.2	+0.2
T1219				S	Sb	18 39 53.6	-0.4
T1220	Camerino, Fraz	0.19	336	⇑P	Pg	18 39 50.4	+0.3
T1241	Roccafluvione,	0.19	115	P	Pg	18 39 50.4	+0.1
T1241				S	Sb	18 39 54.2	-0.2
T1241				AML	AML		
	comp=E,26500µm,1.6s						
T1241				AML	AML		
	comp=N,19500µm,1.6s						
T1241				AML	AML		
	comp=E,26500µm,1.6s						
T1241				AML	AML		
	comp=N,19500µm,1.6s						
T1241				AML	AML		
	comp=E,26500µm,0.4s						
T1241				AML	AML		
	comp=N,19500µm,0.4s						
T1212	Cascia, Frazio	0.21	210	⇑P	Pg	18 39 50.8	+0.2
T1212				S	Sb	18 39 54.6	-0.3
TERO	Teramo	0.44	136	P	Pg	18 39 54.4	+0.1

ROM 20 18:40:33.6±0.1**, 42°.943N**±0°.002×**13°.192E**±0°.003**, h16**km**, ML1.0**/5**, 6C-2D, Error ellipse: s-maj=0.2km s-min=0.1km az=227.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MC2	Monte Cornacci	0.03	182	⇑P	Pg	18 40 36.8	+0.1
MC2				S	Sg	18 40 38.8	+0.1
T1256	Bolognola (MC)	0.07	21	⇓P	Pg	18 40 37.0	+0.1
T1256				S	Sg	18 40 39.2	+0.2
T1256				AML	AML		
	comp=E,106µm,0.3s						
T1256				AML	AML		
	comp=N,106µm,0.3s						
T1256				AML	AML		
	comp=E,106µm,0.3s						
T1245	Castelsantange	0.09	182	⇑P	Pg	18 40 37.1	0.0
T1245				S	Sg	18 40 39.4	+0.2
T1245				AML	AML		
	comp=E,298µm,0.7s						
T1245				AML	AML		
	comp=N,238µm,0.1s						
T1245				AML	AML		
	comp=E,298µm,1.3s						
MMO1	Montemonaco	0.11	113	P	Pg	18 40 37.2	0.0
MMO1				S	Sb	18 40 39.8	-0.2
FDMO	Fiordimonte	0.12	321	⇑P	Pb	18 40 37.5	-0.2
FDMO				S	Sb	18 40 40.1	-0.2
FDMO				AML	AML		
	comp=E,52µm,0.4s						
FDMO				AML	AML		
	comp=E,52µm,0.4s						
FDMO				AML	AML		
	comp=N,93µm,0.2s						
T1216	Preci, Frazion	0.14	248	⇑P	Pg	18 40 37.7	+0.2
T1216				S	Sb	18 40 40.5	-0.2
T1219	Muccia, Frazio	0.18	310	⇑P	Pg	18 40 38.3	+0.3
T1219				S	Sb	18 40 41.6	-0.3
T1219				AML	AML		
	comp=E,50µm,0.5s						
T1219				AML	AML		
	comp=N,74µm,0.3s						
T1219				AML	AML		
	comp=E,50µm,1.5s						
T1219				AML	AML		
	comp=N,74µm,1.7s						
T1214	Arquata del Tr	0.18	176	⇓P	Pg	18 40 38.4	+0.2
T1214				S	Sb	18 40 42.0	-0.2
T1220	Camerino, Fraz	0.18	336	P	Pg	18 40 38.4	+0.3
T1241	Roccafluvione,	0.20	116	P	Pg	18 40 38.5	+0.1
T1241				S	Sb	18 40 42.3	-0.2
T1241				AML	AML		
	comp=N,36µm,0.5s						
T1241				AML	AML		

	comp=N,36µm,0.5s						
T1241	comp=E,35µm,0.6s			AML	AML		
T1212	Cascia, Frazio	0.22	210	⇑P	Pg	18 40 38.9	+0.2
T1212				S	Sb	18 40 42.8	-0.4

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*JMA **20** 18:50:05.7±0.1, 24°.6N±0°.2×121°.6E±0°.4, h74^{km}, MV3.5/15, TAIWAN REGION*
*TAP **20** 18:50:05.8, 24°.63N×121°.55E, h77^{km}, ML4.0, B*
*IDC **20** 18:50:15.9±13.0, 24°.64N×121°.50E, h182^{km}±137^{km}, mb3.1/4, mbtmp3.6/4, MS3.1/1, Error ellipse: s-maj=122.1km s-min=24.0km az=65.0*
ISC 20 18:50:05.5±0.8**, 24°.66N**±0°.02×**121°.55E**±0°.02**, h79**^{km}±4^{km}**, n190, σ0^{s}73**/293**, mb3.5**/4**, 42C-41D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENTT	Nioudou baz=79	0.03	142	⇑iP	Pn	18 50 17.3	+0.4
ENTT	baz=79			iS	Sn	18 50 25.3	+0.1
FUSB	Fushanzhiwuyua baz=1.0	0.11	19	⇑iP	Pn	18 50 17.2	+0.1
FUSB	baz=1.0			iS	Sn	18 50 24.6	-0.9
TWE	Neicheng baz=55	0.12	60	⇑iP	Pn	18 50 17.4	+0.5
TWE	baz=55			iS	Sn	18 50 25.6	+0.2
LATG	Datong baz=194	0.12	189	⇑iP	Pn	18 50 17.7	+0.5
LATG	baz=194			iS	Sn	18 50 26.0	+0.4
NWLT	Wulai baz=350	0.12	340	⇑iP	Pn	18 50 17.1	0.0
NWLT	baz=350			S	Sn	18 50 24.6	-0.9
NDS	Dongshan baz=98	0.15	100	⇑iP	Pn	18 50 17.5	+0.4
NDS	baz=98			eS	Sn	18 50 25.4	-0.2
YHNB	Yeheng	0.16	274	P	Pn	18 50 17.2	0.0
YHNB	Yeheng baz=290	0.16	274	⇑iP	Pn	18 50 17.1	0.0
YHNB	baz=290			S	Sn	18 50 25.3	-0.5
NSK	Sanguang baz=283	0.17	275	⇑iP	Pn	18 50 17.2	0.0
NSK	baz=283			eS	Sn	18 50 25.0	-0.8
ILA	Ilan baz=61	0.21	60	eP	Pn	18 50 17.7	+0.5
ILA	baz=61			eS	Sn	18 50 26.3	+0.4
NNS	Nan Shan baz=219	0.27	216	⇑iP	Pn	18 50 18.3	+0.5
NNS	baz=219			S	Sn	18 50 26.7	0.0
NNSH	Datong baz=219	0.28	213	⇑iP	Pn	18 50 18.3	+0.5
NNSH	baz=219			eS	Sn	18 50 26.5	-0.2
NNSB	Datong baz=217	0.28	213	⇑iP	Pn	18 50 18.2	+0.5
NNSB	baz=217			S	Sn	18 50 26.6	-0.1
TWC	Suao baz=95	0.28	100	⇑iP	Pn	18 50 17.9	+0.3
TWC	baz=95			S	Sn	18 50 26.7	+0.2
ENA	Nanau baz=144	0.29	143	⇑iP	Pn	18 50 17.5	-0.2
EWUT	Wuta baz=137	0.30	136	⇑P	Pn	18 50 17.6	-0.1
NHDH	Xindian Distri baz=355	0.30	356	⇑iP	Pn	18 50 17.9	+0.2
NHDH	baz=355			iS	Sn	18 50 26.6	-0.2
TATO	Taipei baz=357	0.32	350	P	Pn	18 50 17.9	0.0
TATO	baz=357			S	Sn	18 50 26.3	-0.7
NTC	Toucheng baz=42	0.32	53	eP	Pn	18 50 18.5	+0.7
TWA	Mucha baz=2.0	0.32	6	⇑iP	Pn	18 50 18.1	+0.2
TWA	baz=2.0			S	Sn	18 50 26.7	-0.3
BACT	New Taipei Cit baz=348	0.35	344	⇑P	Pn	18 50 18.3	+0.3
BACT	baz=348			eS	Sn	18 50 27.6	+0.3
NHY	Taipei baz=354	0.38	3	eP	Pn	18 50 18.5	+0.2
NHY	baz=354			eS	Sn	18 50 27.6	0.0
TAP1	Taipei baz=359	0.38	356	eP	Pn	18 50 19.4	+1.2
TAP1	baz=359			eS	Sn	18 50 28.0	+0.4
TAP	Taipei baz=359	0.38	354	⇑iP	Pn	18 50 18.5	+0.2
TAP	baz=359			S	Sn	18 50 27.4	-0.2
EGS	baz=53	0.39	62	P	Pn	18 50 19.1	+0.8
NFF	Wufeng Townshi baz=276	0.39	266	⇑P	Pn	18 50 18.5	+0.1
NFF	baz=276			eS	Sn	18 50 27.3	-0.6
TIPB	Shuangxi baz=31	0.40	39	⇓P	Pn	18 50 18.8	+0.3
TIPB	baz=31			eS	Sn	18 50 27.3	-0.7
NTY	Taoyuan baz=332	0.41	326	⇑P	Pn	18 50 18.9	+0.4
NJD	Zhudong baz=290	0.43	280	⇑P	Pn	18 50 19.2	+0.6
NJD	baz=290			eS	Sn	18 50 28.6	+0.3
NCU	National Centr baz=310	0.45	313	⇑iP	Pn	18 50 19.2	+0.4
NCU	baz=310			S	Sn	18 50 28.8	+0.2
NCUH	Zhongli baz=307	0.45	313	⇑eP	Pn	18 50 19.2	+0.4
ETLH	Xiulin Townshi baz=182	0.46	188	⇑iP	Pn	18 50 19.1	+0.1
ETLH	baz=182			eS	Sn	18 50 29.0	+0.1
TWS1	Kuangyinshan baz=338	0.46	345	⇑iP	Pn	18 50 19.3	+0.5
TWS1	baz=338			iS	Sn	18 50 29.0	+0.3
WFSB	Wu-fen Shan baz=20	0.46	27	⇓iP	Pn	18 50 19.2	+0.3
WFSB	baz=20			S	Sn	18 50 28.5	-0.2
NACB	Ninganchiao	0.48	175	P	Pn	18 50 18.5	-0.6
NACB	Ninganchiao baz=167	0.48	175	⇑iP	Pn	18 50 18.4	-0.6
NACB	baz=167			S	Sn	18 50 28.1	-1.0
YM01	YM01 baz=2.0	0.48	2	⇓iP	Pn	18 50 19.3	+0.2
YM01	baz=2.0			iS	Sn	18 50 28.8	-0.4
LIOB	Emei baz=271	0.49	268	⇑iP	Pn	18 50 19.5	+0.4
LIOB	baz=271			eS	Sn	18 50 29.0	-0.1
FUSS	Fushou baz=213	0.50	214	⇑iP	Pn	18 50 20.3	+0.8
FUSS	baz=213			eS	Sn	18 50 30.0	+0.3
HSN1	Hsinchu baz=293	0.50	284	P	Pn	18 50 19.6	+0.5
HSN1	baz=293			eS	Sn	18 50 29.6	+0.3
NSTT	Nanjuang baz=269	0.50	267	⇑iP	Pn	18 50 19.5	+0.3
NSTT	baz=269			iS	Sn	18 50 29.1	-0.2
ETL	Fush Village baz=164	0.50	172	⇑P	Pn	18 50 18.6	-0.7
NTST	Danshui baz=343	0.51	350	eP	Pn	18 50 19.6	+0.3
NTST	baz=343			eS	Sn	18 50 29.8	+0.4
SXI1	Grass Mountain baz=28	0.52	34	⇓iP	Pn	18 50 19.7	+0.2
SXI1	baz=28			iS	Sn	18 50 28.8	-1.1
ANP	Anpu baz=5.0	0.53	357	P	Pn	18 50 19.5	0.0
YM08	YM08 baz=358	0.53	4	eP	Pn	18 50 19.3	-0.2
YM08	baz=358			eS	Sn	18 50 28.7	-1.1
SBCB	Hsinchu baz=293	0.53	285	⇑P	Pn	18 50 19.9	+0.4
SBCB	baz=293			S	Sn	18 50 30.0	+0.2
TNOU	National Taiwa baz=22	0.53	23	⇓iP	Pn	18 50 19.6	+0.2
TNOU	baz=22			iS	Sn	18 50 29.3	-0.4
TWB1	Santiao Chiao baz=46	0.53	49	⇓iP	Pn	18 50 19.9	+0.5
TWB1	baz=46			iS	Sn	18 50 29.3	-0.4
TWT	Tachien baz=229	0.53	220	P	Pn	18 50 20.5	+0.8
TWT	baz=229			S	Sn	18 50 31.0	+0.9
TDCB	Techi baz=230	0.54	221	⇑eP	Pn	18 50 20.5	+0.8
TDCB	baz=230			S	Sn	18 50 30.3	+0.1
HSN	Hsinchu baz=298	0.55	285	⇑P	Pn	18 50 19.8	+0.2
HSN	baz=298			S	Sn	18 50 29.9	-0.1
NWRT	Kuosheng baz=3.0	0.55	11	eP	Pn	18 50 19.5	-0.1
NWRT	baz=3.0			S	Sn	18 50 29.4	-0.7
NHW	Xinwu Township baz=302	0.57	307	P	Pn	18 50 20.3	+0.5
NHW	baz=302			S	Sn	18 50 30.8	+0.3
WHF	Hehuan Shan baz=202	0.57	207	⇑iP	Pn	18 50 21.1	+0.7
WHF	baz=202			eS	Sn	18 50 31.8	+0.5
TWD	Chiawan baz=166	0.58	176	⇑iP	Pn	18 50 19.2	-0.7
TWD	baz=166			S	Sn	18 50 29.5	-1.1
TWY	Chenhua baz=4.0	0.61	4	⇓iP	Pn	18 50 20.6	+0.4
TWY	baz=4.0			S	Sn	18 50 31.3	+0.1
NJN	Zhunan baz=274	0.62	272	P	Pn	18 50 20.8	+0.6
NJN	baz=274			eS	Sn	18 50 31.1	-0.2
EOS2	EOS2 baz=122	0.67	111	eP	Pn	18 50 22.4	+1.8
WHP	Taichung City baz=244	0.67	235	⇓iP	Pn	18 50 21.6	+0.7
WHP	baz=244			eS	Sn	18 50 32.2	-0.1
HWA	Hwalien baz=175	0.68	176	⇑P	Pn	18 50 20.5	-0.4
CHGB	Renai baz=211	0.69	210	⇑P	Pn	18 50 22.1	+0.9
CHGB	baz=211			S	Sn	18 50 33.3	+0.4
ETM	Tongmen baz=176	0.69	184	⇑iP	Pn	18 50 20.3	-0.8
ETM	baz=176			S	Sn	18 50 31.6	-1.0
NMLH	Miaoli baz=261	0.70	260	⇓P	Pn	18 50 21.6	+0.5
NMLH	baz=261			eS	Sn	18 50 32.7	0.0
NSY	Sanyi baz=252	0.76	251	⇓iP	Pn	18 50 22.5	+0.7
NSY	baz=252			S	Sn	18 50 34.5	+0.6
TWQ1	Liyutan baz=247	0.77	246	⇓P	Pn	18 50 22.4	+0.5
TWQ1	baz=247			S	Sn	18 50 33.9	-0.2
WUSB	Renai baz=211	0.77	211	eP	Pn	18 50 22.7	+0.6
WUSB	baz=211			S	Sn	18 50 34.6	+0.3
OWD	Renai baz=214	0.78	206	eP	Pn	18 50 22.8	+0.6
TEYL	Yanliau Villag baz=176	0.79	177	eP	Pn	18 50 21.3	-0.8
EOS3	EOS3 baz=119	0.79	118	eP	Pn	18 50 23.1	+1.2
WCS	Beigang Elemen baz=231	0.83	224	⇓P	Pn	18 50 23.3	+0.7
WCS	baz=231			eS	Sn	18 50 35.7	+0.4
WPL	Puli Township baz=228	0.84	220	eP	Pn	18 50 23.2	+0.6
DPDB	Guoxing baz=231	0.84	222	⇓P	Pn	18 50 23.5	+0.7
ESL	Shilin baz=180	0.85	187	⇑iP	Pn	18 50 21.7	-1.1
ESL	baz=180			eS	Sn	18 50 33.9	-1.7
EOS4	EOS4 baz=126	0.88	127	eP	Pn	18 50 23.1	+0.3
WDJ	Dajia District baz=246	0.88	250	P	Pn	18 50 23.9	+0.7
WDJ	baz=246			S	Sn	18 50 37.0	+0.7
TCU	Taichung baz=238	0.94	238	⇓eP	Pn	18 50 24.5	+0.6
TCU	baz=238			eS	Sn	18 50 37.9	+0.3
TEGC	Jichi Village baz=180	0.95	181	eP	Pn	18 50 23.3	-0.6
SMLT	Sun Moon Lake baz=217	0.97	218	⇓iP	Pn	18 50 25.0	+0.7
SMLT	baz=217			eS	Sn	18 50 39.3	+0.9
VWDT	VWDT baz=208	0.98	203	⇑iP	Pn	18 50 25.3	+1.1
VWDT	baz=208			S	Sn	18 50 38.4	+0.2
TYC	Yuchr baz=220	0.98	220	⇓iP	Pn	18 50 25.0	+0.7
TYC	baz=220			S	Sn	18 50 39.0	+0.7
EGFH	Guangfu baz=179	0.99	186	eP	Pn	18 50 23.1	-1.3
SSLB	Suanglung	1.02	212	P	Pn	18 50 25.5	+0.6
SSLB	Suanglung baz=212	1.02	212	⇓iP	Pn	18 50 25.5	+0.6
SSLB	baz=212			S	Sn	18 50 39.6	+0.3
WCHH	Zhanghua baz=238	1.07	238	⇓eP	Pn	18 50 25.8	+0.5
WCHH	baz=238			eS	Sn	18 50 40.8	+0.6
PCYT	Pengchaiyu baz=32	1.07	26	⇓P	Pn	18 50 25.6	+0.1
PCYT	baz=32			eS	Sn	18 50 39.8	-0.5
WNT1	Nantou City baz=227	1.09	227	eP	Pn	18 50 26.3	+0.7
WNT	Mingjian baz=234	1.11	226	⇓P	Pn	18 50 26.6	+0.7
WNT	baz=234			S	Sn	18 50 41.9	+0.8
WJS	Zhushan baz=231	1.12	222	⇓P	Pn	18 50 26.7	+0.7
WJS	baz=231			eS	Sn	18 50 42.2	+0.8
WYL	Yuanlin Townsh baz=240	1.12	232	⇓P	Pn	18 50 26.6	+0.6
WYL	baz=240			eS	Sn	18 50 41.9	+0.5
WHYT	Xinyi Township baz=214	1.15	214	⇓eP	Pn	18 50 27.2	+0.8
WHYT	baz=214			eS	Sn	18 50 43.2	+1.1
EHY	Hungye baz=183	1.17	190	eP	Pn	18 50 25.1	-1.5
HGSD	Ruisui baz=185	1.17	186	eP	Pn	18 50 25.7	-0.9
HGSD	baz=185			eS	Sn	18 50 41.9	-0.5
YULB	Yu-li	1.28	190	P	Pn	18 50 27.2	-0.8
YULB	Yu-li baz=183	1.28	190	eP	Pn	18 50 26.5	-1.5
YUS	Yu-Shan baz=215	1.29	205	eP	Pn	18 50 29.4	+0.9
YUS	baz=215			eS	Sn	18 50 45.7	0.0
JYNG	Yonagunijimaku	1.29	99	iP	Pn	18 50 28.3	+0.2
JYNG				S	Sn	18 50 45.3	+0.3
WRL	Guolierlin Hig baz=235	1.31	235	eP	Pn	18 50 28.6	+0.3
WRL	baz=235			eS	Sn	18 50 45.8	+0.3
TWF1	Yuli baz=183	1.32	190	⇑eP	Pn	18 50 27.0	-1.5
EYUL	Yuli baz=183	1.32	189	eP	Pn	18 50 27.4	-1.2
CHN5	Tsauling baz=217	1.32	217	⇓iP	Pn	18 50 29.2	+0.6
CHN5	baz=217			S	Sn	18 50 46.5	+0.5
WGK	Gukeng baz=223	1.32	223	⇓P	Pn	18 50 29.3	+0.8
WGK	baz=223			S	Sn	18 50 46.8	+1.0
ALS	Alishan baz=218	1.33	211	⇓iP	Pn	18 50 29.7	+0.8
ALS	baz=218			S	Sn	18 50 46.8	+0.3
WDLH	Douliu baz=224	1.34	224	eP	Pn	18 50 29.3	+0.6
WDLH	baz=224			eS	Sn	18 50 47.5	+1.4
ECBN	Changbin baz=183	1.34	184	eP	Pn	18 50 28.3	-0.5
ECBN	baz=183			eS	Sn	18 50 45.8	-0.4
YOJ	Yonaguni jima	1.35	98	P	Pn	18 50 28.6	-0.2
YOJ	Yonaguni jima	1.35	98	P	Pn	18 50 29.1	+0.3
YOJ				eS	Sn	18 50 46.5	+0.2
YOJ	Yonaguni jima baz=98	1.35	98	P	Pn	18 50 28.7	-0.1
YOJ	baz=98			eS	Sn	18 50 45.9	-0.5
WTCT	Ta-ch'eng baz=235	1.40	236	eP	Pn	18 50 29.6	+0.1
WTCT	baz=235			eS	Sn	18 50 47.4	-0.2
WTK	Tuku baz=228	1.44	228	⇓P	Pn	18 50 30.3	+0.4
WTK	baz=228			eS	Sn	18 50 49.3	+0.9
FULB	Fuli baz=184	1.47	189	eP	Pn	18 50 29.8	-0.7
CHN2	Minshiung baz=229	1.49	221	eP	Pn	18 50 31.5	+0.8
CHN2	baz=229			eS	Sn	18 50 51.0	+1.4
WCKO	Fanlu baz=225	1.49	216	⇓eP	Pn	18 50 31.5	+0.8
WCKO	baz=225			eS	Sn	18 50 50.3	+0.6
EHD	Haiduan baz=185	1.54	192	eP	Pn	18 50 30.1	-1.2
ELDTW	Lidau baz=189	1.54	199	⇑eP	Pn	18 50 31.2	-0.3
CHY	Chiayi baz=229	1.55	222	⇓eP	Pn	18 50 31.9	+0.5
CHY	baz=229			eS	Sn	18 50 52.1	+1.1
CHKT	Chengkung baz=185	1.56	186	eP	Pn	18 50 30.8	-0.8
CHKT	baz=185			S	Sn	18 50 50.4	-0.9
CHN4	Tsaushan baz=213	1.57	214	⇓P	Pn	18 50 32.4	+0.7
WSF	Szhu baz=222	1.58	230	eP	Pn	18 50 32.0	+0.1
WSF	baz=222			eS	Sn	18 50 51.9	+0.1
ECS	Chishang baz=185	1.59	191	eP	Pn	18 50 30.9	-1.0
TPUB	Ta-pu	1.59	212	P	Pn	18 50 32.7	+0.6
TPUB	Ta-pu baz=212	1.59	212	⇓iP	Pn	18 50 32.5	+0.4
TPUB	baz=212			S	Sn	18 50 52.6	+0.5
STYH	Taoyuan baz=205	1.64	206	eP	Pn	18 50 33.3	+0.6
WTP	Ta-pu baz=210	1.65	211	⇓P	Pn	18 50 33.2	+0.4
WSL	Shuilin Townsh baz=227	1.66	227	eP	Pn	18 50 33.1	+0.3
WSL	baz=227			eS	Sn	18 50 54.4	+0.9
STYT	Tauyuan baz=205	1.66	206	⇓P	Pn	18 50 33.7	+0.8
TWK	Hsinying baz=214	1.69	215	⇓iP	Pn	18 50 33.8	+0.4
EDH	Donghe baz=187	1.69	188	eP	Pn	18 50 31.9	-1.5
SNST	Tainan City baz=213	1.73	214	eP	Pn	18 50 35.2	+1.4
ICHU	Yijhu baz=231	1.74	222	eP	Pn	18 50 34.4	+0.5
ICHU	baz=231			eS	Sn	18 50 56.5	+1.1
CHN1	Nanshi baz=212	1.74	213	⇓P	Pn	18 50 34.4	+0.4
CHN1	baz=212			eS	Sn	18 50 55.7	+0.1
LONT	Longtian baz=183	1.79	192	eP	Pn	18 50 33.0	-1.6
CHN8	Yiju baz=231	1.79	223	eP	Pn	18 50 34.9	+0.2
CHN8	baz=231			eS	Sn	18 50 57.6	+0.9
SGST	Jiashian baz=209	1.80	210	P	Pn	18 50 34.4	-0.4
SGST	baz=209			eS	Sn	18 50 57.0	0.0
SLGT	Liugui baz=206	1.85	207	eP	Pn	18 50 36.8	+1.4
TWG	Pinlang baz=183	1.88	194	eP	Pn	18 50 34.2	-1.6
TWGBT	Beinan	1.88	193	P	Pn	18 50 34.6	-1.3
TWGBT	Beinan baz=183	1.88	193	eP	Pn	18 50 34.3	-1.6
SSHA	Shanhua baz=225	1.91	218	eP	Pn	18 50 36.4	+0.3
CHN3	Shinhua baz=214	1.91	215	eP	Pn	18 50 37.1	+0.9
SCLT	Jiali baz=231	1.93	220	eP	Pn	18 50 37.1	+0.6
SCLT	baz=231			eS	Sn	18 51 01.2	+1.3
VWUC	VWUC baz=280	1.94	280	⇓eP	Pn	18 50 36.0	-0.5
SHHT	Tainan City baz=213	1.97	214	eP	Pn	18 50 38.0	+1.1
LDUT	Ludao baz=188	1.98	182	eP	Pn	18 50 35.8	-1.3
LDUT	baz=188			eS	Sn	18 50 60.0	-1.2
IRIF	Iriomote-Funau	2.01	99	iP	Pn	18 50 37.7	+0.1
IRIF				S	Sn	18 51 01.8	-0.2
TSCK	Chigu Township baz=230	2.02	222	eP	Pn	18 50 37.9	+0.3
MATB	Ma-tsu baz=315	2.08	316	eP	Pn	18 50 37.6	-0.7
SSD	Sandimen baz=211	2.08	204	eP	Pn	18 50 39.2	+0.7
TWM1	Shoushan baz=208	2.10	210	eP	Pn	18 50 37.8	-1.0
TSMG	Majia baz=211	2.12	203	eP	Pn	18 50 40.1	+1.1
PNG	Penghu baz=238	2.12	240	⇓P	Pn	18 50 38.3	-0.7
ECL	Taimali baz=185	2.12	195	eP	Pn	18 50 37.8	-1.2
PHUB	P'eng-hu baz=237	2.14	238	⇓P	Pn	18 50 38.4	-0.8

HATJ	Hateruma jima	2.14	106	P	Pn	18 50 40.2	+0.9
HATJ				S	Sn	18 51 06.2	+1.1
MASBT	Mashibuluo	2.21	203	eP	Pn	18 50 40.8	+0.7
	baz=212						
MASBT				eS	Sn	18 51 07.1	+0.5
	baz=212						
WDGT	Dungji	2.22	232	eP	Pn	18 50 39.5	-0.8
	baz=221						
JKRS	Kuro-shima	2.28	100	P	Pn	18 50 41.7	+0.6
JKRS				S	Sn	18 51 08.6	+0.2
EAST	Anshuo	2.36	196	eP	Pn	18 50 41.3	-0.9
	baz=185						
JIJ	Ishigaki jima	2.38	97	iP	Pn	18 50 42.7	+0.2
JIJ				S	Sn	18 51 09.8	-0.9
TAWH	Dawu Township	2.39	195	eP	Pn	18 50 44.0	+1.4
	baz=186						
VCHM	Qimei	2.42	234	eP	Pn	18 50 42.2	-0.8
	baz=224						
VCHM				S	Sn	18 51 10.0	-1.7
	baz=224						
SCZT	Fangliau	2.43	201	eP	Pn	18 50 43.9	+0.7
	baz=209						
LYJJ	Jianjiangzhen	2.48	320	eP	Pn	18 50 44.1	+0.3
	baz=319						
JISG	Ishigakijimahi	2.51	91	iP	Pn	18 50 44.7	+0.5
JISG				eS	Sn	18 51 14.2	+0.2
XPSS	Dashiqiu	2.57	332	eP	Pn	18 50 43.9	-1.1
	baz=332						
LAY	Lan-yu	2.61	180	eP	Pn	18 50 44.8	-0.8
	baz=174						
LYUB	Lan-yu	2.65	179	eP	Pn	18 50 44.6	-1.4
	baz=173						
MHZQ	Yeshan	2.69	303	eP	Pn	18 50 45.7	-0.9
	baz=302						
SMST	Manzhou Townsh	2.71	194	eP	Pn	18 50 46.6	-0.3
	baz=193						
HEN	Hengchun	2.75	196	eP	Pn	18 50 48.0	+0.7
	baz=194						
TWK1	Hengchun	2.79	194	eP	Pn	18 50 48.7	+0.7
	baz=193						
TWKBT	Hengchun	2.79	194	eP	Pn	18 50 48.1	+0.1
	baz=193						
KNM	Kinmen	2.85	266	eP	Pn	18 50 49.7	+1.0
	baz=265						
JTJ	Tarama	2.87	90	P	Pn	18 50 49.9	+0.8
JTJ				S	Sn	18 51 23.4	+0.8
KNMB	Chin-men Tao	2.88	267	eP	Pn	18 50 48.5	-0.8
	baz=266						
AXDP	Jialang	3.26	275	⇓eP	Pn	18 50 54.1	-0.3
	baz=274						
JIRB	Irabujima	3.30	86	P	Pn	18 50 56.1	+1.2
JIKM	Ikemajima	3.37	85	P	Pn	18 50 57.8	+1.9
JMJ	Miyako jima 2	3.41	87	eP	Pn	18 50 58.1	+1.8
	baz=95						
JMJ				eS	Sn	18 51 36.9	+1.2
	baz=95						
JMJ2	Miyako jima3	3.44	88	P	Pn	18 50 58.1	+1.4
JOGS	Gusukube	3.51	88	P	Pn	18 50 59.2	+1.5
ZPLA	Ao Xicun	3.54	259	⇓eP	Pn	18 50 57.7	-0.5
	baz=257						
DSXP	Dongshan	3.88	257	⇓eP	Pn	18 51 02.4	-0.5
	baz=255						
SXFK	Yanhouchang	3.93	297	eP	Pn	18 51 02.7	-0.8
	baz=296						
JOW	Kunigami	6.44	69	LR	LR	18 54 13.2	
	comp=Z,158nm,21.1s,baz=46,slow=37						
JOW	Kunigami	6.44	69	eP	Pn	18 51 36.9	-0.8
	baz=72						
SONM	Songino Array	26.06	336	P	P	18 55 32.4	+0.8
	0.7nm,0.8s,baz=162,slow=8.3,SNR=3.9						
	0.7nm,0.8s						
MKAR	Makanchi Array	38.23	315	P	P	18 57 18.1	+0.4
	0.5nm,0.7s,baz=109,slow=7.8,SNR=6.3						
	0.5nm,0.7s						
WRA	Warramunga Arr	46.05	163	P	P	18 58 21.4	0.0
	0.5nm,1.0s,baz=343,slow=8.7,SNR=2.3						
	0.5nm,1.0s						
FINES	FINESS Array B	71.20	330	P	P	19 01 14.5	-1.1
	2.4nm,0.8s,baz=56,slow=7.5,SNR=6.9						
	2.4nm,0.8s						

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*IDC **20** 18:53:47.6±2.0, 43°.28N×105°.34W, h0^{km}, mb2.6/1, mbtmp3.0/4, ML3.1/3, Error ellipse: s-maj=37.8km s-min=10.0km az=152.0*

*NEIC **20** 18:53:50.7±1.3, 43°.58N±0°.03×105°.31W±0°.04, h0^{km}±2^{km}, ML3.4/77, Error ellipse: s-maj=7.4km s-min=3.0km az=42.0*

ISC 20 18:53:50.2±0.8, 43°.56N±0°.04×105°.38W±0°.04, h0^{km}, n69, σ0^{s}.94/67, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.12	59	Pg	Pg	18 54 11.6	-0.2
K22A	Casper	1.23	223		Pg	18 54 13.2	-0.7
PHWY	Pilot Hill	2.25	182		Pn	18 54 29.8	+0.7
RWWY	Rawlins	2.31	217		Pn	18 54 30.9	+1.1
RWWY				IAML		18 55 04.8	
	204nm,1.6s						
RWWY				IAML		18 55 09.5	
	288nm,1.1s						
N23A	Red Feather La	2.69	189		Pn	18 54 36.4	+1.3
N23A				IAML		18 55 23.0	
	comp=E,118nm,1.7s						
N23A				IAML		18 55 24.8	
	comp=N,123nm,0.7s						
BRIGG	Briggsdale	3.08	165	Pn	Pn	18 54 39.5	-0.7
BW06	Boulder Array	3.16	257		Pn	18 54 42.2	+0.8
PD31	Pinedale Array	3.16	257		Pn	18 54 42.0	+0.6
PDAR	Pinedale Array	3.16	257	Pn	Pn	18 54 40.7	-0.8
	comp=N,1.5nm,0.3s,baz=81,slow=16,SNR=35						
PDAR				Lg	Lg	18 55 25.5	
	comp=N,11nm,0.3s,baz=89,slow=28,SNR=12						
	comp=N,2.1nm,0.4s						
PDAR	Pinedale Array	3.16	257	Pn	Pn	18 54 42.0	+0.6
LAO	LASA Array	3.19	349		Pn	18 54 40.5	-1.1
RLMT	Red Lodge	3.20	301		Pn	18 54 43.1	+1.2
RLMT				IAML		18 55 42.2	
	comp=N,74nm,0.9s						
RLMT				IAML		18 55 44.7	
	comp=N,74nm,0.9s						
OGNE	Ogallala	3.60	135	Pn	Pn	18 54 48.4	+1.0
YMP	Mirror Lake Pl	3.64	291		Pn	18 54 49.0	+0.9
ISCO	Idaho Springs	3.76	183	Pn	Pn	18 54 50.0	+0.3
GCMT	Greycliff	3.79	308		Pn	18 54 50.6	+0.6
H17A	Grant Village	3.84	284		Pn	18 54 52.1	+1.2
H17A				IAML		18 55 57.1	
	comp=E,51nm,1.9s						
H17A				IAML		18 55 58.7	
	comp=N,61nm,2.1s						
FLWY	Flagg Ranch	3.89	280		Pn	18 54 53.6	+2.2
FLWY				IAML		18 55 59.6	
	comp=N,74nm,2.2s						
MOOW	Moose Ponds	3.90	275		Pn	18 54 52.6	+1.0
SNOW	Snow King Moun	3.91	270		Pn	18 54 52.5	+0.7
SNOW				IAML		18 56 22.9	
	comp=N,76nm,2.0s						
YNR	Norris Junctio	3.99	289		Pb	18 55 02.6	+1.1
YNR				IAML		18 56 17.4	
	comp=E,29nm,2.0s						
REDW	Red Top Meadow	3.99	269		Pb	18 55 00.6	-0.9
O20A	White River Ci	4.03	213		Pn	18 54 53.1	-0.4
IMW	Indian Meadow	4.04	277		Pn	18 54 53.3	-0.4
IMW				IAML		18 56 07.4	
	comp=E,33nm,1.6s						
IMW				IAML		18 56 17.7	
	comp=E,36nm,0.7s						
TPAW	Teton Pass	4.05	271		Pn	18 54 53.5	-0.2
TPAW				IAML		18 56 18.0	
	comp=E,58nm,1.6s						
TPAW				IAML		18 56 25.9	
	comp=E,44nm,1.9s						
FXWY	Fox Creek	4.10	273		Pn	18 54 55.1	+0.7
FXWY				IAML		18 56 15.6	
	comp=E,28nm,2.4s						
YMR	Madison River	4.17	287	Pn	Pn	18 54 54.9	-0.5
YMR				IAML		18 56 37.3	
	comp=E,61nm,1.0s						
AHID	Auburn Hatcher	4.26	261		Pn	18 54 56.5	0.0
AHID				IAML		18 56 17.7	
	comp=E,54nm,1.4s						
AHID				IAML		18 56 26.6	
	comp=E,33nm,1.1s						
RDMU	Red Mountain	4.32	228		Pb	18 55 07.9	+0.8
RDMU				IAML		18 56 15.1	
	comp=E,47nm,1.1s						
RDMU				IAML		18 56 24.1	
	comp=N,46nm,1.7s						
E28A	Huff	4.49	46		Pn	18 54 59.7	+0.2
QLMT	Earthquake Lak	4.53	288		Pb	18 55 12.9	+2.1
SMCO	Snowmass	4.54	196		Pn	18 55 00.8	+0.2
SMCO				IAML		18 56 24.9	
	comp=N,38nm,1.5s						
SMCO				IAML		18 56 26.8	
	comp=N,35nm,1.6s						
Q24A	Divide	4.59	178		Pb	18 55 13.2	+1.4
Q24A				IAML		18 56 20.0	
	comp=N,31nm,2.1s						
Q24A				IAML		18 56 28.0	
	comp=E,32nm,0.8s						
BOZ	Bozeman (W)	4.91	297		Pb	18 55 17.4	+0.3
BOZ				IAML		18 56 36.3	
	comp=E,24nm,1.8s						
BOZ				IAML		18 56 36.3	
	comp=E,21nm,1.1s						
HWUT	Hardware Ranch	4.97	249		Pn	18 55 05.0	-1.2
HWUT				IAML		18 56 36.3	
	comp=E,37nm,1.5s						
HWUT				IAML		18 56 53.7	
	comp=E,33nm,1.3s						
DGMT	Dagmar	4.98	9		Pb	18 55 18.3	0.0
KSCO	Kaye Shedlock'	4.99	155		Pb	18 55 19.9	+1.3
BSUT	Blindstream Ca	5.02	235	Pn	Pn	18 55 06.8	-0.3
BSUT				IAML		18 56 42.9	
	comp=N,24nm,1.5s						
BSUT				IAML		18 56 48.2	
	comp=E,23nm,2.4s						
TCUT	Toone Canyon	5.09	243		Pn	18 55 07.1	-0.9
EGMT	Eagleton	5.41	327		Pn	18 55 13.2	+1.0
MCMT	McKenzie Canyo	5.52	286		Pn	18 55 14.6	+0.7
LRM	Limekiln Ridge	5.53	297		Pn	18 55 13.6	-0.4
HRY	Holter Researc	5.55	307		Pn	18 55 14.6	+0.5
PV07	Paradox Valley	5.68	207		Pn	18 55 16.3	+0.2
SPUT	South Promonto	5.69	249		Pn	18 55 15.2	-1.0
PV15	Paradox Valley	5.71	205		Pn	18 55 16.1	-0.4
P17A	Butcher Ranch,	5.73	226		Pn	18 55 17.0	+0.3
HVU	Hansel Valley	5.74	254		Pn	18 55 16.1	-0.6
SDCO	Great Sand Dun	5.81	181		Pn	18 55 17.1	-0.8
MPU	Maple Canyon	5.86	235	Pn	Pn	18 55 19.4	+0.8
PV10	Paradox Valley	5.87	209	Pn	Pn	18 55 19.2	+0.5
PV11	David Mesa, Pa	5.88	208		Pn	18 55 19.9	+1.0
SRU	San Rafael Swe	5.89	223		Pn	18 55 19.9	+1.0
MDND	Maddock	5.90	41		Pn	18 55 18.5	-0.3
PV13	Radium Mtn., P	5.99	207		Pn	18 55 20.5	+0.2
TMUT	Trail Mountain	6.11	228		Pn	18 55 22.4	+0.4
BGU	Big Grassy Mou	6.26	248		Pn	18 55 24.2	+0.3
Q16A	Castle Valley	6.37	225		Pn	18 55 25.6	+0.1
CBKS	Cedar Bluff	6.37	136		Pb	18 55 43.7	+1.8
T25A	Trinidad	6.45	173		Pn	18 55 25.9	-0.8
DUG	Dugway, Tooele	6.49	241	Pn	Pn	18 55 26.8	-0.3
HLID	Hailey	6.56	273	Pn	Pn	18 55 27.8	-0.3
F33A	5 Mile Ranch,	6.87	67	Pn	Pn	18 55 30.2	-1.9
AGMN	Agassiz Nation	8.15	51	Pn	Pn	18 55 48.6	-1.1
I10CA	LAC DU BONNET	9.22	41	I	I	19 49 00.0	
	baz=220,slow=317,SNR=4.7						
ULM	Lac du Bonnet	9.33	41	Pn	Pn	18 56 03.5	-2.4
	comp=E,0.5nm,0.3s,baz=228,slow=12,SNR=2.6						
ULM				Lg	Lg	18 58 41.3	
	comp=E,0.2nm,0.3s,baz=330,slow=16,SNR=3.4						
	comp=E,1.3nm,0.3s						
NEW	Newport	9.44	304	Lg	Lg	18 58 48.8	
	comp=E,0.2nm,0.3s,baz=86,slow=14,SNR=2.0						
NVAR	Mina Array Bea	11.03	247	Pn	Pn	18 56 29.9	+0.5
	comp=E,0.1nm,0.3s,baz=65,slow=15,SNR=1.8						
	comp=E,0.2nm,0.5s						
YKA	Yellowknife Ar	19.73	347	P	Pn	18 58 22.4	-0.1
	comp=E,0.1nm,0.4s,baz=151,slow=13,SNR=4.9						
YKA				Lg	Lg	19 04 17.9	
	baz=163,slow=27						
	comp=E,0.1nm,0.4s						

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*IDC **20** 18:55:04.5±0.6, 32°.48N×130°.98E, h162^{km}±4^{km}, mb3.3/8, mbtmp3.7/10, Error ellipse: s-maj=17.9km s-min=12.3km az=72.0*

*JMA **20** 18:55:05.8±0.1, 32°.5N±0°.5×131°.1E±0°.7, h159^{km}±1^{km}, MV3.5/38, NORTHERN MIYAZAKI PREF*

ISC 20 18:55:04.8±0.7, 32°.48N±0°.06×130°.99E±0°.05, h162^{km}±5^{km}, n23, σ1^{s}.32/31, mb3.5/8, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIU3	Izumi3	0.17	296	iP	Pn	18 55 27.4	+0.9
JIU3				S	Sn	18 55 43.8	+0.7
JTZ	Takazaki	0.58	172	iP	Pn	18 55 28.7	+0.7
JTZ				S	Sn	18 55 45.9	+0.2
JNU	Nakatsue	0.65	351	P	Pn	18 55 29.1	+0.7
	211nm,0.3s,baz=183,slow=18,SNR=1531						
JNU				S	Sn	18 55 46.8	+0.1
	56nm,0.5s,baz=232,slow=22,SNR=8.6						
JNU	Nakatsue	0.65	351	P	Pn	18 55 29.3	+0.9
JSU	Suzuyama	1.07	205	P	Pn	18 55 32.4	+1.0
JSJ	Shimokoshiki	1.34	234	P	Pn	18 55 34.6	+0.8
JSJ				S	Sn	18 55 57.1	+1.0
JTO	Tosashimizu	1.57	75	iP	Pn	18 55 35.4	-0.6
JTO				S	Sn	18 55 58.1	-2.0
JNA	Nagahama	1.65	49	iP	Pn	18 55 36.3	-0.5
JTU	Tsushima	2.44	327	P	Pn	18 55 46.8	+1.0
JMN	Monobe	2.73	62	P	Pn	18 55 49.7	+0.4
JHS	Saijyo	3.08	35	P	Pn	18 55 53.5	-0.1
KSRS	Korea Array	5.57	334	P	Pn	18 56 26.8	+0.9
	2.9nm,0.6s,baz=152,slow=14,SNR=9.7						
KSRS				S	Sn	18 57 29.2	-0.2
	0.6nm,0.6s,baz=143,slow=39,SNR=1.3						
INU	Inuyama	5.77	59	P	Pn	18 56 32.8	+4.3
JGF	Kuroka	6.13	58	P	Pn	18 56 36.9	+3.5
MJAR	Matsushiro Arr	7.21	54	P	Pn	18 56 48.4	+0.8
	0.8nm,0.3s,baz=239,slow=13,SNR=4.3						
MJAR				S	Sn	18 58 09.4	+1.0
	0.3nm,0.4s,baz=233,slow=44,SNR=1.3						
SONM	Songino Array	24.12	317	P	P	19 00 05.7	0.0
	0.6nm,0.8s,baz=130,slow=10,SNR=4.2						
	0.6nm,0.8s						
CMAR	Chiang Mai Arr	31.99	252	P	P	19 01 16.3	+0.5
	0.4nm,0.5s,baz=56,slow=7.2,SNR=4.4						
	0.4nm,0.5s						
MKAR	Makanchi Array	39.51	306	P	P	19 02 19.3	-0.3
	0.5nm,0.6s,baz=93,slow=11,SNR=10						
MKAR				PcP	PcP	19 04 23.2	-0.7
	0.2nm,0.7s,baz=87,slow=3.0,SNR=1.9						
	0.5nm,0.6s						
WRA	Warramunga Arr	52.22	176	P	P	19 03 58.5	-0.8
	0.6nm,0.6s,baz=354,slow=7.8,SNR=13						
	0.6nm,0.6s						
ASAR	Alice Springs	55.90	177	P	P	19 04 25.7	-0.2
	0.6nm,0.7s,baz=10,slow=14,SNR=20						
	0.6nm,0.7s						
FINES	FINESS Array B	68.65	330	P	P	19 05 49.0	-1.2
	1.1nm,0.4s,baz=61,slow=5.5,SNR=16						
	1.1nm,0.4s						
RES	Resolute Bay	68.97	12	P	P	19 05 52.0	+0.1
	1.2nm,0.6s,baz=331,slow=3.4,SNR=7.5						
	1.2nm,0.6s						
AKASG	Malin Array Be	72.38	319	P	P	19 06 12.5	-0.4
	0.3nm,0.3s,baz=54,slow=6.0,SNR=3.2						
	0.3nm,0.3s						

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*IDC **20** 19:01:47.9±0.6, 11°.23N×60°.98W, h43^{km}±5^{km}, mb4.2/29, mbtmp4.4/32, ML3.9/2, MS3.6/33, Error ellipse: s-maj=11.4km s-min=9.8km az=106.0*

*NEIC **20** 19:01:48.0±2.4, 11°.16N±0°.06×60°.80W±0°.06, h39^{km}±5^{km}, mb4.8/85, Error ellipse: s-maj=9.4km s-min=7.5km az=128.0*

*TRN **20** 19:01:48.1, 11°.25N×60°.83W, h36^{km}, MD4.9*

*BGR **20** 19:01:55.0, 12°.90N×60°.85W, h33^{km}, mb4.9*

ISC 20 19:01:47.4±0.3, 11°.23N±0°.03×60°.89W±0°.03, h35^{km}±1^{km}, h36^{km}:pP-P, n454, σ1^{s}.29/466, mb4.7/89, MS3.6/31, 23C-7D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPR	Prospect	0.12	111	⇓iP	Pn	19 01 55.3	-1.3
BOT	Bacolet	0.18	110	⇓iP	Pn	19 01 55.4	-0.2
TOSP	Speyside	0.36	79		Pn	19 01 56.4	+0.4
TOSP				Sn	Sn	19 02 01.7	-0.6
TOSP	Speyside	0.36	79	⇓iP	Pn	19 01 56.6	+0.7
TOSP				eS	Sn	19 02 03.8	+1.5
TBH	Brigand Hill	0.76	193	⇑iP	Pn	19 02 03.9	+2.3
TRN	Trinidad (W)	0.77	221	⇑iP	Pn	19 02 04.1	+2.4
TRN				eS	Sn	19 02 15.8	+3.8
TPP	Pointe-a-Pierr	1.06	211	eP	Pn	19 02 08.3	+2.6
GRGR	Grenville	1.17	320	Pn	Pn	19 02 09.2	+1.9
GRGR	Grenville	1.17	320	eP	Pn	19 02 09.0	+1.8
GRGR				eS	Sn	19 02 26.0	+4.0
GRSS	Sisters	1.27	326	eP	Pn	19 02 10.8	+2.1
GCMP	Grenada, Carri	1.35	337	⇑iP	Pn	19 02 11.6	+1.8
GCMP				eS	Sn	19 02 29.0	+2.5
SVOC	Richmond Hill,	1.94	350	eP	Pn	19 02 20.0	+2.2
SVOC				eS	Sn	19 02 42.8	+1.8
SVB	Belmont	2.06	350	Pn	Pn	19 02 21.3	+1.7
SVB	Belmont	2.06	350	eP	Pn	19 02 21.6	+2.0
SVB				eS	Sn	19 02 46.9	+2.9
BHS	Barnard House	2.07	354	eP	Pn	19 02 22.3	+2.6
SVV	Soufriere Volc	2.10	351	eP	Pn	19 02 23.1	+3.1
SVV				eS	Sn	19 02 46.8	+1.8
SSV	Crater Summit	2.10	352	eP	Pn	19 02 22.9	+2.6
BCHC	Barbados, Cave	2.26	33	eP	Pn	19 02 22.5	+0.2
BBGH	Gun Hill	2.31	34	Pn	Pn	19 02 22.9	0.0
BBGH	Gun Hill	2.31	34	eP	Pn	19 02 24.9	+2.0
BBSP	Saint Philip	2.33	37	eP	Pn	19 02 25.8	+2.6
BBSP				eS	Sn	19 02 52.4	+1.7
MCLT	Moule a Chique	2.46	359	Pn	Pn	19 02 26.8	+1.7
MCLT	Moule a Chique	2.46	359	eP	Pn	19 02 26.4	+1.3
MCLT				eS	Sn	19 02 55.2	+1.2
SLDE	Delcer	2.56	356	eP	Pn	19 02 29.6	+3.1
SLB	Belfond	2.59	357	eP	Pn	19 02 29.4	+2.6
SLCP	Castries, St.	2.76	358	eP	Pn	19 02 31.0	+1.8
SLCP				eS	Sn	19 03 03.6	+2.3
SLBI	Saint Lucia, B	2.78	358	eP	Pn	19 02 30.9	+1.5
SLBI				eS	Sn	19 03 02.3	+0.6
MPOM	Morne Pois Mar	3.20	1	Pn	Pn	19 02 36.7	+1.6
MPOM	Morne Pois Mar	3.20	1	eP	Pn	19 02 36.9	+1.7
MPOM				eS	Sn	19 03 12.8	+0.8
BIM	Bigot	3.27	357	Pn	Pn	19 02 38.6	+2.3
BIM	Bigot	3.27	357	eP	Pn	19 02 38.4	+2.1
BIM				eS	Sn	19 03 15.7	+1.7
TRMF	Trois Ilets	3.29	357	eP	Pn	19 02 38.9	+2.5
MVM	Montagne Vaucl	3.31	360	eP	Pn	19 02 38.4	+1.7
LPMF	Morne Lapointe	3.33	359	eP	Pn	19 02 38.8	+1.9
ZAM	Aeronautique	3.33	358	eP	Pn	19 02 39.5	+2.5
FDF	Fort de France	3.49	356	Pn	Pn	19 02 41.1	+1.8
FDF	Fort de France	3.49	356	eP	Pn	19 02 40.9	+1.6
FDF				eS	Sn	19 03 20.6	+1.2
ILAM	Ilet Lapin Mar	3.52	0	Pn	Pn	19 02 40.4	+0.7
ILAM	Ilet Lapin Mar	3.52	0	eP	Pn	19 02 41.4	+1.8
ILAM				eS	Sn	19 03 20.9	+0.8
PML	Morne Lenard	3.54	355	eP	Pn	19 02 43.3	+3.4
GBMF	Grand Be	3.56	356	eP	Pn	19 02 42.5	+2.3
CXM	Morne La Croix	3.57	356	eP	Pn	19 02 43.2	+2.8
BAMF	Morne Balai	3.57	356	eP	Pn	19 02 42.7	+2.3
PCM	Pelee Case Pet	3.58	355	eP	Pn	19 02 42.4	+1.9
PCM	Pelee Case Pet	3.58	355	eP	Pn	19 02 43.4	+3.0
SVN	Savane Anatole	3.60	356	Pn	Pn	19 02 42.7	+1.9
SVN	Savane Anatole	3.60	356	eP	Pn	19 02 43.0	+2.2
PCRV	Puerto La Cruz	3.83	254	P	Pn	19 02 43.3	-0.6
	6.2nm,0.3s,baz=87,slow=1.8,SNR=23						
	9.3nm,0.4s						
DLPL	La Plaine	4.09	355	Pn	Pn	19 02 48.9	+1.4
DLPL	La Plaine	4.09	355	eP	Pn	19 02 50.3	+2.7
DLPL				eS	Sn	19 03 35.1	+0.9
TBG	Guadaloupe-3	4.65	351	eP	Pn	19 02 58.9	+3.7
MAGL	Barre de l'ile	4.71	355	Pn	Pn	19 02 58.3	+2.3
MAGL	Barre de l'ile	4.71	355	eP	Pn	19 02 57.9	+2.0
MAGL	Barre de l'ile	4.71	355	eS	Sn	19 03 50.2	+0.9
CBE	Ff, Capester	4.86	352	Pn	Pn	19 03 00.6	+2.6
CBE	Ff, Capester	4.86	352	eP	Pn	19 03 00.0	+1.9
CBE	Ff, Capester	4.86	352	eS	Sn	19 03 53.5	+0.3
GDHS	Morne Mazeau,	5.08	350	Pn	Pn	19 03 04.0	+2.8
ABD	La Joyeuse, An	5.25	354	Pn	Pn	19 03 04.9	+1.6
ABD	La Joyeuse, An	5.25	354	eP	Pn	19 03 06.3	+3.0
ABD	La Joyeuse, An	5.25	354	eS	Sn	19 04 02.4	-0.2
BIRV	Birongo	5.34	262	Pn	Pn	19 03 06.4	+1.8
MLYT	Lee's Yard	5.60	347	eP	Pn	19 03 10.8	+2.5
MLYT	Lee's Yard	5.60	347	eS	Sn	19 04 10.6	-0.9
MBFL	Flemmings, Mon	5.63	347	eP	Pn	19 03 13.3	+4.6
MBFL	Flemmings, Mon	5.63	347	eS	Sn	19 04 12.4	+0.2
ANBD	Bethesda, Anti	5.85	352	eP	Pn	19 03 14.6	+3.0
ANBD	Bethesda, Anti	5.85	352	eS	Sn	19 04 16.7	-0.7
ANWB	Willy Bob	6.46	352	Pn	Pn	19 03 22.6	+2.5
ANWB	Willy Bob	6.46	352	eP	Pn	19 03 23.5	+3.5
ANWB	Willy Bob	6.46	352	eS	Sn	19 04 32.6	+0.1
SEUS	St. Eustatius	6.55	342	Pn	Pn	19 03 24.9	+3.7
SABA	Saba	6.75	341	Pn	Pn	19 03 24.9	+0.8
SABA	Saba	6.75	341	eP	Pn	19 03 27.5	+3.5
SMRT	St. Maarten	7.10	343	Pn	Pn	19 03 30.4	+1.6
SMRT	St. Maarten	7.10	343	eP	Pn	19 03 32.1	+3.3
BAUV	El Baul	7.40	253	Pn	Pn	19 03 33.2	+0.2
CDVI	St. Croix	7.49	330	Pn	Pn	19 03 36.1	+2.0
CDVI	St. Croix	7.49	330	eP	Pn	19 03 37.7	+3.5
MTP	Monte Pirata	8.18	327	Pn	Pn	19 03 44.4	+0.8
CUPR	Culebra, Puert	8.22	329	Pn	Pn	19 03 46.2	+2.1
HUMP	Col San Antoni	8.38	326	Pn	Pn	19 03 47.2	+0.8
CBYP	Canovanas	8.49	326	Pn	Pn	19 03 49.8	+1.8
SJG	San Juan	8.53	324	P	Pn	19 03 49.8	+1.4
	2.8nm,0.3s,baz=301,slow=18,SNR=2.9						
SJG				S	Sn	19 05 13.8	-10
	14nm,0.6s,baz=310,slow=16,SNR=1.0						
SJG				LR	LR	19 07 48.2	
	comp=Z,264nm,19.0s,baz=162,slow=42						
	13nm,0.4s						
SJG	San Juan	8.53	324	Pn	Pn	19 03 50.1	+1.7
GCPR	Guaynabo City	8.64	325	Pn	Pn	19 03 51.6	+1.6
CELP	Cerrillos	8.75	322	Pn	Pn	19 03 54.7	+3.2
BOAV	Boa Vista	8.79	178	Pn	Pn	19 03 49.8	-2.2
UUPR	Utuado, UPR, P	8.97	322	Pn	Pn	19 03 57.0	+2.5
AOPR	Arecibo Observ	9.06	322	Pn	Pn	19 03 59.1	+3.3
AOPR	Arecibo Observ	9.06	322	eP	Pn	19 03 58.8	+3.0
SDV	Santo Domingo	9.87	257	P	Pn	19 04 05.6	-1.4
	1.5nm,0.4s,baz=102,slow=19,SNR=1.9						
SDV				S	Sn	19 05 54.0	-2.8
	11nm,0.4s,baz=44,slow=21,SNR=1.9						
SDV				LR	LR	19 08 49.6	
	comp=Z,368nm,21.1s,baz=76,slow=43						
SDV	Santo Domingo	9.87	257	Pn	Pn	19 04 09.1	+2.0
MDP	Montagnes des	10.18	126	P	Pn	19 04 06.3	-4.9
	27nm,0.4s,baz=316,slow=14,SNR=5.6						
MDP				S	Sn	19 05 49.4	-15
	157nm,0.4s,baz=42,slow=20,SNR=20						
SC01	Santiago de lo	12.50	312	Pn	Pn	19 04 46.6	+3.7
SDDR	Presa de Saban	12.65	309	Pn	Pn	19 04 48.1	+3.1
PAPH	Port-au-Prince	13.19	305	Pn	Pn	19 04 55.6	+3.3
MACA	Manacapuru-AM	14.30	179	Pn	Pn	19 05 02.8	-4.6
ROSC	El Rosal	14.73	246	P	P	19 05 20.4	+1.0
	22nm,0.7s,baz=41,slow=20,SNR=9.5						
ROSC				LR	LR	19 12 16.4	
	comp=Z,853nm,21.9s,baz=76,slow=43						
ROSC	El Rosal	14.73	246	Pn	Pn	19 05 16.0	+2.4
TULM	Tulcn-Chalpat	19.77	239	P	P	19 06 14.2	-0.9
SAML	Samuel	20.18	187	P	P	19 06 18.4	-0.6
PRPB	Parauapebas	20.50	147	eP	P	19 06 23.0	+0.4
OTAV	Otavalo	20.58	239	P	P	19 06 23.6	-0.4
OTAV	Otavalo	20.58	239	eP	Pn	19 06 26.2	-0.2
SLOR	San Lorenzo -	21.15	237	P	P	19 06 27.6	-2.5
SLOR				IAmb	IAmb	19 06 48.4	
	comp=Z,52nm,0.9s						
ETMB	Extrema	21.57	194	P	P	19 06 34.2	+0.2
ETMB	Extrema	21.57	194	eP	P	19 06 36.9	+2.9
PORT	Chimborazo Vol	21.80	236	P	P	19 06 38.6	+1.5
CHSH	Refugio Sur-Vo	21.89	236	P	P	19 06 38.7	+0.5
CZSB	Cruzeiro do Su	22.20	212	P	P	19 06 41.1	+0.2
CZSB				IAmb	IAmb	19 07 01.6	
	comp=Z,41nm,0.9s						
CZSB	Cruzeiro do Su	22.20	212	eP	P	19 06 42.9	+2.0
PDRB	Porto dos Gac	23.07	170	eP	P	19 06 52.0	+2.0
JTS	Las Juntas de	23.66	270	LR	LR	19 17 12.9	
	comp=Z,72nm,21.7s,baz=64,slow=39						
SMTB	Santa Maria do	23.95	146	eP	P	19 06 58.8	+0.2
VILB	Vilhena	24.04	178	P	P	19 06 57.4	-1.9
VILB				IAmb	IAmb	19 07 11.5	
	comp=Z,41nm,0.9s						
MCRA	Macar, Loja	24.50	232	P	P	19 07 03.4	-0.2
SNDB	Serra Nova Dou	24.95	157	eP	P	19 07 08.5	+0.9
ATAH	Atahualpa	25.22	224	P	P	19 07 11.1	+0.5
	comp=Z,8.0nm,0.6s,baz=27,slow=8.4,SNR=4.7						
ATAH				LR	LR	19 18 23.8	
	comp=Z,199nm,21.9s,baz=34,slow=40						
	comp=Z,8.0nm,0.6s						
PTLB	Pontes e Lacer	26.56	176	P	P	19 07 21.9	-0.3
SIV	San Ignacio	27.05	180	P	P	19 07 25.6	-1.0

	comp=Z,1.7nm,0.6s,baz=349,slow=8.3,SNR=8.2						
SIV				LR	LR	19 18 16.2	
	comp=Z,123nm,21.9s,baz=334,slow=36						
	comp=Z,1.7nm,0.6s						
NNA	Nana	27.98	215	LR	LR	19 19 42.1	
	comp=Z,222nm,21.6s,baz=12,slow=38						
BBSD	Serra de San D	28.24	179	eP	P	19 07 37.7	+0.4
LPAZ	La Paz	28.26	195	P	P	19 07 38.7	+0.5
	comp=Z,1.1nm,0.7s,baz=27,slow=9.5,SNR=5.1						
LPAZ				LR	LR	19 20 32.8	
	comp=Z,179nm,20.3s,baz=11,slow=40						
	comp=Z,1.1nm,0.7s						
LPAZ	La Paz	28.26	195	eP	P	19 07 39.7	+1.5
BDFB	Brasilia	29.59	154	P	P	19 07 49.4	0.0
	comp=Z,2.7nm,0.6s,baz=326,slow=6.8,SNR=4.3						
	comp=Z,2.7nm,0.6s						
MURT	Porto Murtinho	32.84	174	eP	P	19 08 18.6	+0.8
GBN	Guysborough	34.06	359	P	P	19 08 28.1	-0.1
L56A	Greenwood	34.06	338	P	P	19 08 28.9	+0.4
GGN	Saint George	34.15	352	P	P	19 08 31.1	+2.1
BB19B	Bebedouro	34.32	159	eP	P	19 08 30.9	+0.1
AMBA	Amambai (Brazi	34.43	170	eP	P	19 08 31.8	0.0
LVC	Limon Verde	34.54	193	LR	LR	19 23 14.1	
	comp=Z,158nm,20.7s,baz=354,slow=37						
LVC	Limon Verde	34.54	193	eP	P	19 08 34.8	+1.7
ESFA	Espinillo Form	36.04	176	eP	P	19 08 45.7	+0.2
PTGB	Pitanga	36.75	167	eP	P	19 08 51.8	+0.1
SADO	Sadowa	36.92	338	P	P	19 08 51.5	-1.4
	comp=Z,1.9nm,0.6s,baz=173,slow=8.1,SNR=1.7						
SADO				LR	LR	19 22 23.1	
	comp=Z,74nm,20.6s,baz=128,slow=34						
	comp=Z,1.9nm,0.6s						
GO02	Mina Guanaco	37.15	193	P	P	19 08 55.4	0.0
GO02				IAmb	IAmb	19 09 08.1	
	comp=Z,12nm,0.8s						
CPUP	Villa Florida	37.49	175	P	P	19 08 56.8	-1.1
	comp=Z,3.8nm,0.8s,baz=355,slow=7.1,SNR=6.5						
CPUP				LR	LR	19 24 30.9	
	comp=Z,86nm,21.4s,baz=18,slow=36						
	comp=Z,3.8nm,0.8s						
CPUP	Villa Florida	37.49	175	P	P	19 08 55.5	-2.3
CPUP	Villa Florida	37.49	175	eP	P	19 08 58.8	+0.9
CPUP	Villa Florida	37.49	175	P	P	19 08 56.8	-1.1
CPUP				pP	pP	19 09 10.4	+2.2
CPUP				PcP	PcP	19 11 15.7	-0.1
PET01	Itanhaem-SP	37.73	159	eP	P	19 08 59.3	-0.6
DRLN	Deer Lake	38.01	4	P	P	19 09 01.7	-0.4
CCM	Cathedral Cave	38.08	320	P	P	19 09 03.0	+0.2
CCM	Cathedral Cave	38.08	320	P	P	19 09 03.2	+0.3
CCM				pP	sP	19 09 16.1	-0.9
CCM				sP	pP	19 09 22.2	+9.1
CCM				PcP	PcP	19 11 17.2	-0.3
ITAB	Concordia	39.17	168	P	P	19 09 12.0	0.0
ITAB	Concordia	39.17	168	eP	P	19 09 12.4	+0.4
S39A	Bolivar	39.22	318	P	P	19 09 12.3	-0.1
P40A	Paris	39.47	321	P	P	19 09 14.7	+0.3
P40A				IAmb	IAmb	19 09 30.1	
	comp=Z,7.9nm,0.6s						
E46A	Sault Ste Mari	40.27	335	P	P	19 09 20.4	-0.6
AC05	El Transito	40.85	193	P	P	19 09 25.6	-0.5
AC05				IAmb	IAmb	19 09 40.1	
	comp=Z,23nm,1.1s						
ITQB	Itaqui	40.87	174	eP	P	19 09 25.7	-0.3
CFA	Coronel Fontan	43.17	189	P	P	19 09 44.0	-0.8
	comp=Z,2.9nm,0.6s,baz=348,slow=6.9,SNR=6.6						
CFA				LR	LR	19 28 01.5	
	comp=Z,99nm,19.6s,baz=70,slow=36						
	comp=Z,2.9nm,0.6s						
TXAR	Lajitas Array	43.69	301	P	P	19 09 47.3	-1.9
	comp=Z,0.4nm,0.5s,baz=122,slow=9.5,SNR=10						
TXAR				PcP	PcP	19 11 36.4	+0.3
	comp=Z,4.3nm,0.6s,baz=121,slow=5.9,SNR=22						
TXAR				ScP	ScP	19 15 23.5	-1.6
	comp=Z,0.8nm,0.8s,baz=120,slow=5.5,SNR=5.6						
	comp=Z,0.4nm,0.5s						
TXAR	Lajitas Array	43.69	301	P	P	19 09 48.3	-1.0
TX31	Lajitas Ar. Si	43.69	301	P	P	19 09 47.6	-1.7
SCHQ	Schefferville	43.75	355	P	P	19 09 48.9	-0.4
	comp=Z,5.6nm,0.9s,baz=164,slow=7.1,SNR=7.3						
SCHQ				LR	LR	19 25 44.7	
	comp=Z,58nm,20.2s,baz=54,slow=33						
	comp=Z,5.6nm,0.9s						
SCHQ	Schefferville	43.75	355	P	P	19 09 49.2	0.0
SCHQ				IAmb	IAmb	19 10 34.7	
	comp=Z,20nm,1.4s						
VA03	San Esteban	44.71	192	P	P	19 09 56.9	-0.4
VA03				IAmb	IAmb	19 09 57.8	
	comp=Z,21nm,0.9s						
ECSD	EROS Data Cent	44.71	323	P	P	19 09 55.9	-1.2
	baz=126						
MNTX	Cornudas Mount	45.75	303	P	P	19 10 03.8	-1.8
	baz=106						
BO02	Sierra Bellavi	46.72	191	P	P	19 10 11.9	-1.2
ANMO	Albuquerque	47.58	307	LR	LR	19 33 39.9	
	comp=Z,48nm,18.3s,baz=189,slow=40						
SDCO	Great Sand Dun	47.81	311	P	P	19 10 22.4	+0.5
	baz=112						
121A	Cookes Peak, D	47.94	304	P	P	19 10 23.3	+0.4
	baz=105						
ULM	Lac du Bonnet	48.36	330	P	P	19 10 23.9	-1.8
	comp=Z,2.7nm,0.4s,baz=125,slow=9.3,SNR=5.5						
	comp=Z,2.7nm,0.4s						
ULM	Lac du Bonnet	48.36	330	P	P	19 10 24.5	-1.1
H10N3	ASCENSION HYDR	49.89	110	T	T	20 04 00.3	
	baz=291,slow=75,SNR=142						
H10N2	ASCENSION HYDR	49.90	110	T	T	20 04 01.0	
	baz=291,slow=75,SNR=149						
H10N1	ASCENSION HYDR	49.91	110	T	T	20 04 02.0	
	baz=291,slow=75,SNR=136						
H10S3	ASCENSION HYDR	50.16	112	T	T	20 04 23.6	
	baz=288,slow=74,SNR=106						
H10S2	ASCENSION HYDR	50.18	112	T	T	20 04 22.3	
	baz=292,slow=74,SNR=44						
PLCA	Paso Flores	52.47	189	P	P	19 10 56.5	-0.3
	comp=Z,2.3nm,0.8s,baz=18,slow=6.5,SNR=7.9						
	comp=Z,2.3nm,0.8s						
PLCA	Paso Flores	52.47	189	P	P	19 10 55.8	-1.0
PLCA				IAmb	IAmb	19 12 18.2	
	comp=Z,25nm,1.9s						
PLCA	Paso Flores	52.47	189	eP	P	19 10 56.9	+0.1
PLCA	Paso Flores	52.47	189	P	P	19 10 56.1	-0.7
PLCA				pP	pP	19 11 09.1	+1.6
PD31	Pinedale Array	52.55	316	P	P	19 10 55.0	-2.7
PDAR	Pinedale Array	52.55	316	P	P	19 10 56.8	-1.0
	comp=Z,1.1nm,0.7s,baz=112,slow=9.0,SNR=7.1						
PDAR				PcP	PcP	19 12 06.7	-1.1
	comp=Z,1.2nm,0.7s,baz=113,slow=6.1,SNR=1.9						
PDAR				LR	LR	19 33 47.8	
	comp=Z,74nm,19.2s,baz=82,slow=37						
	comp=Z,1.1nm,0.7s						
FRB	Frobisher Bay	52.72	356	P	P	19 10 57.6	-0.7
	comp=Z,3.1nm,0.7s,baz=164,slow=9.2,SNR=5.0						
FRB				LR	LR	19 35 14.5	
	comp=Z,37nm,18.0s,baz=198,slow=38						
	comp=Z,3.1nm,0.7s						
FCC	Fort Churchill	53.63	339	P	P	19 11 03.8	-1.2
FCC				IAmb	IAmb	19 11 24.9	
	comp=Z,5.4nm,0.8s						
PCAS	Casmilo, Conde	54.30	48	eP	P	19 11 10.8	+0.5
PBAR	Barrancos	54.89	51	eP	P	19 11 15.0	+0.4
PVIS	Viseu	54.93	48	eP	P	19 11 14.7	-0.3
PVIS				A	A	19 11 16.1	
	comp=Z,31nm,1.5s						
PCBR	Castelo Branco	54.99	49	eP	P	19 11 15.8	+0.5
MTE	Manteigas	55.10	48	eP	P	19 11 16.5	+0.3
POLO	Lamas de Olo	55.20	47	eP	P	19 11 17.7	+0.8
PVRL	Vila Real	55.22	47	eP	P	19 11 17.5	+0.5
DBIC	Dimbokro	55.47	90	P	P	19 11 18.4	-0.8
	comp=Z,4.2nm,0.4s,baz=288,slow=6.5,SNR=12						
	comp=Z,4.2nm,0.4s						
DBIC	Dimbokro	55.47	90	P	P	19 11 18.4	-0.8
DBIC				IAmb	IAmb	19 11 43.1	
	comp=Z,16nm,1.3s						
DBIC	Dimbokro	55.47	90	P	P	19 11 18.5	-0.8
DBIC				sP	sP	19 11 37.1	+3.2
MVO	Moncorvo	55.69	48	eP	P	19 11 21.7	+1.3
MDT	Midelt	55.74	58	LR	LR	19 31 25.1	
	comp=Z,30nm,19.8s,baz=137,slow=32						
ELK	Elko	55.92	312	LR	LR	19 39 08.7	
	comp=Z,49nm,18.2s,baz=76,slow=40						
DY2G	Dye2	56.06	7	eP	P	19 11 23.5	+0.6
DY2G				IAmb	IAmb	19 11 23.9	
	comp=Z,118nm,1.8s						
SFJD	Kangerlussuaq	56.13	5	LR	LR	19 34 10.3	
	comp=Z,26nm,21.2s,baz=186,slow=35						
DSP	Deep Springs	57.20	307	P	P	19 11 32.4	+1.3
PAB	San Pablo	57.25	50	P	P	19 11 31.8	+0.2
PAB				IAmb	IAmb	19 11 33.6	
	comp=Z,9.8nm,1.1s						
PAB	San Pablo	57.25	50	P	P	19 11 31.9	+0.3
PAB				pP	sP	19 11 45.4	-0.9
ESDC	Sonseca Array	57.57	50	P	P	19 11 34.9	+1.1
	comp=Z,7.6nm,0.7s,baz=262,slow=7.5,SNR=52						
	comp=Z,7.6nm,0.7s						
ESDC	Sonseca Array	57.57	50	P	P	19 11 33.1	-0.7
ESDC				IAmb	IAmb	19 11 36.0	
	comp=Z,11nm,1.1s						
ESBB	Sonseca Array	57.57	50	P	P	19 11 34.4	+0.5
ESBB				IAmb	IAmb	19 11 35.9	
	comp=Z,10nm,0.9s						
NVAR	Mina Array Bea	57.67	308	P	P	19 11 34.9	+0.1
	comp=Z,0.1nm,0.4s,baz=111,slow=4.9,SNR=1.8						
NVAR				PcP	PcP	19 12 27.7	+0.1
	comp=Z,0.9nm,0.7s,baz=80,slow=25,SNR=4.8						
NVAR				LR	LR	19 40 16.9	
	comp=Z,33nm,18.7s,baz=132,slow=40						
NEW	Newport	59.45	320	LR	LR	19 41 12.2	
	comp=Z,52nm,18.3s,baz=107,slow=40						
NEW	Newport	59.45	320	P	P	19 11 45.8	-0.9
	baz=109						
BORG	Borgarnes	60.05	18	LR	LR	19 35 08.6	
	comp=Z,14nm,18.9s,baz=218,slow=33						
TOA0	Torodi Ar. Sit	61.07	81	P	P	19 11 57.1	-1.3
TOA0				IAmb	IAmb	19 11 58.4	
	comp=Z,7.7nm,0.8s						
TORD	Torodi Ar. Bea	61.07	81	P	P	19 11 57.4	-0.9
	comp=Z,6.1nm,0.7s,baz=281,slow=5.8,SNR=31						
	comp=Z,6.1nm,0.7s						
TORD	Torodi Ar. Bea	61.07	81	P	P	19 11 56.9	-1.4
TORD				IAmb	IAmb	19 11 58.3	
	comp=Z,7.0nm,0.8s						
YBH	Yreka Blue Hor	61.63	311	LR	LR	19 42 36.1	
	comp=Z,66nm,18.4s,baz=73,slow=40						
SUMG	Summit	62.76	7	i P	P	19 12 09.0	-0.2
SUMG				IAmb	IAmb	19 12 10.6	
	comp=Z,19nm,1.1s						
YKA	Yellowknife Ar	63.84	335	P	P	19 12 14.4	-1.6
	comp=Z,3.0nm,0.6s,baz=109,slow=7.6,SNR=54						
YKA				pP	pP	19 12 28.4	+1.7
	comp=Z,2.6nm,0.5s,baz=110,slow=7.5,SNR=7.4						
YKA				LR	LR	19 38 43.7	
	comp=Z,52nm,21.5s,baz=275,slow=35						
	comp=Z,3.0nm,0.6s						
CLF	Chambon-Foret	63.84	42	P	P	19 12 17.5	+1.2
RES	Resolute Bay	66.25	351	P	P	19 12 30.8	-0.7
	comp=Z,2.0nm,0.9s,baz=160,slow=8.4,SNR=5.2						
	comp=Z,2.0nm,0.9s						
KOTAN	Kotaneelee Air	67.09	331	P	P	19 12 37.1	-0.1
	baz=108						
ECH	Echery	67.10	42	P	P	19 12 37.7	+0.3
ECH				IAmb	IAmb	19 12 38.5	
	comp=Z,12nm,0.9s						
ECH	Echery	67.10	42	P	P	19 12 37.6	+0.2
ECH				pP	sP	19 12 50.8	-1.5
DBG	Daneborg	67.13	11	eP	P	19 12 38.0	+0.9
DBG				IAmb	IAmb	19 12 38.8	
	comp=Z,7.4nm,1.0s						
KEST	Kesra	67.52	56	P	P	19 12 41.3	+0.9
	comp=Z,11nm,0.9s,baz=273,slow=8.6,SNR=14						
	comp=Z,11nm,0.9s						
KEST	Kesra	67.52	56	P	P	19 12 39.8	-0.6
DAVA	Damuels	68.80	44	eP	P	19 12 49.2	+1.0
	comp=Z,17nm,0.8s,SNR=5.4						
FUORN	Ofenpass-Fuorn	68.98	44	P	P	19 12 48.2	-1.4
DAG	Danmarks Havn	69.17	10	eP	P	19 12 49.8	0.0
DAG				IAmb	IAmb	19 12 51.2	
	comp=Z,6.7nm,1.3s						
FETA	Feichten	69.34	44	i P	P	19 12 52.4	+0.7
	comp=Z,14nm,1.0s						
RETA	Reutte	69.41	43	i P	P	19 12 52.5	+0.5
	comp=Z,10nm,1.0s						
DLBC	Dease Lake	69.61	328	LR	LR	19 45 26.9	
	comp=Z,60nm,18.5s,baz=120,slow=38						
MOTA	Moosalm	69.63	44	eP	P	19 12 53.8	+0.4
	comp=Z,9.1nm,0.8s,SNR=6.2						
SQTA	Sankt Quirin	69.69	44	i P	P	19 12 54.4	+0.6
	comp=Z,20nm,1.3s,SNR=6.1						
CTI	Castel Tesino	69.89	45	P	P	19 12 54.1	-0.8
CTI				IAmb	IAmb	19 12 55.6	
	comp=Z,8.7nm,0.8s						
WATA	Walderalm	69.95	44	i P	P	19 12 55.6	+0.2
	comp=Z,6.0nm,1.1s						
GRF	Grafenberg Arr	69.95	41	eP	P	19 12 55.2	+0.1
	comp=Z,7.1nm,0.9s,baz=260,slow=6.8						
WTTA	Wattenberg	69.98	44	eP	P	19 12 56.0	+0.3
	comp=Z,5.3nm,0.8s						
ABTA	Abfaltersbach	70.54	44	i P	P	19 12 59.1	+0.1
	comp=Z,8.0nm,1.2s,SNR=5.3						
KBA	Koelnbreinsper	71.13	44	i P	P	19 13 02.9	+0.3
	comp=Z,9.7nm,0.8s						
PRED	Cave del Predi	71.24	45	P	P	19 13 03.1	-0.1
PRED				IAmb	IAmb	19 13 04.3	
	comp=Z,16nm,1.2s						
CLL	Collm	71.25	40	eP	P	19 13 03.0	0.0
	comp=Z,9.0nm,0.9s						
CLL				ex	x	19 13 08.0	
CLL				e(pP)	sP	19 13 17.0	-1.0
MYKA	Terra Mystica	71.31	45	i P	P	19 13 03.9	+0.4
	comp=Z,4.9nm,0.9s						
BIOA	Bad Ischl, Aus	71.37	43	i P	P	19 13 04.1	+0.2
	comp=Z,5.3nm,0.7s						
KHC	Kasperske Hory	71.43	42	eP	P	19 13 04.6	+0.4
GEC2	GERESS Array S	71.49	42	P	P	19 13 04.4	-0.3
GEC2				IAmb	IAmb	19 13 05.6	
	comp=Z,7.2nm,0.9s						
GERES	GERESS Array B	71.49	42	P	P	19 13 04.7	0.0
	comp=Z,4.6nm,0.8s,baz=258,slow=5.2,SNR=31						
	comp=Z,4.6nm,0.8s						
GERES	GERESS Array B	71.49	42	P	P	19 13 04.0	-0.7
NB2	NORSAR Subarra	71.59	29	P	P	19 13 06.2	+1.2
	comp=Z,1.9nm,0.7s,baz=260,slow=6.5						
NOA	NORSAR Array B	71.59	29	P	P	19 13 05.5	+0.6
	comp=Z,4.4nm,0.9s,baz=262,slow=6.3,SNR=9.1						
NOA				pP	pP	19 13 17.4	+1.4
	comp=Z,3.3nm,0.9s,baz=260,slow=5.8,SNR=6.6						
NOA				LR	LR	19 41 15.3	
	comp=Z,10nm,18.9s,baz=260,slow=33						
	comp=Z,4.4nm,0.9s						
BRG	Berggiesshubel	71.80	40	eP	P	19 13 06.9	+0.6
BRG				Amp		19 13 07.7	
	comp=Z,7.7nm,1.0s						
MOA	Molln	71.80	43	eP	P	19 13 06.8	+0.3
	comp=Z,8.5nm,1.0s						
CKRC	Cesky Krumlov	71.89	42	eP	P	19 13 07.1	+0.1
OBKA	Obir	71.92	45	eP	P	19 13 07.8	+0.5
	comp=Z,7.1nm,0.8s,SNR=6.0						
FARO	Faro, Yukon	71.97	332	P	P	19 13 06.5	-0.7
	baz=100						
PRU	Pruhonice	72.12	41	eP	P	19 13 09.1	+0.8
SOKA	Soboth	72.27	45	i P	P	19 13 09.2	-0.1
	comp=Z,3.3nm,0.9s						
M31M	Drury Creek, Y	72.45	332	P	P	19 13 10.1	0.0
M31M				IAmb	IAmb	19 13 30.5	
	comp=Z,12nm,1.1s						
M31M	Drury Creek, Y	72.45	332	P	P	19 13 10.2	+0.1
	baz=99						
ARSA	Arzberg	72.62	44	i P	P	19 13 11.5	+0.1
	comp=Z,3.4nm,0.7s						
S31K	Pelican	72.78	327	P	P	19 13 12.1	+0.1
	baz=96						
CONA	Conrad Observa	72.88	43	i P	P	19 13 13.4	+0.4
	comp=Z,6.6nm,1.3s						
O30N	Mendenhall	73.05	330	P	P	19 13 13.8	+0.1
	baz=97						
UPC	Upice	73.09	41	eP	P	19 13 14.8	+0.7
RONA	Rosalia, Austr	73.16	43	eP	P	19 13 14.9	+0.3
	comp=Z,3.7nm,0.8s						
OSTC	Ostas	73.22	40	eP	P	19 13 15.5	+0.6
INK	Inuvik	73.23	338	P	P	19 13 13.8	-0.6
	comp=Z,5.3nm,0.6s,baz=77,slow=3.7,SNR=21						
INK				LR	LR	19 46 17.2	
	comp=Z,32nm,19.6s,baz=136,slow=36						
	comp=Z,5.3nm,0.6s						
INK	Inuvik	73.23	338	P	P	19 13 13.4	-1.1
INK				IAmb	IAmb	19 13 28.4	
	comp=Z,8.1nm,1.0s						
INK	Inuvik	73.23	338	P	P	19 13 13.9	-0.6
	baz=102						
KRUC	Moravsky	73.28	42	eP	P	19 13 15.4	+0.2
DPC	Dobruska-Polom	73.28	41	eP	P	19 13 15.9	+0.6
P30M	Million Dollar	73.40	330	P	P	19 13 15.5	-0.2
	baz=96						
VRAC	Vranov	73.42	42	⇓P	P	19 13 16.7	+0.6
VRAC	Vranov	73.42	42	LR	LR	19 42 12.8	
	comp=Z,25nm,18.8s,baz=244,slow=33						
VRAC	Vranov	73.42	42	eP	P	19 13 16.3	+0.3
KRLC	Kraliky	73.56	41	eP	P	19 13 17.9	+1.0
N30M	Aishikik Lake	73.61	331	P	P	19 13 17.0	0.0
	baz=97						
MODS	Modra-Piesok	73.84	43	eP	P	19 13 19.2	+0.6
G30M	tAoh Zraii Nji	74.00	337	P	P	19 13 18.7	-0.5
	baz=99						
MORC	Moravsky Berou	74.05	41	⇑P	P	19 13 19.6	-0.1
MORC	Moravsky Berou	74.05	41	P	P	19 13 18.7	-1.0
MORC	Moravsky Berou	74.05	41	eP	P	19 13 20.0	+0.2
K29M	Barlow Dome	74.10	333	P	P	19 13 19.5	-0.4
	baz=97						
EPYK	Eagle Plains	74.10	336	P	P	19 13 20.1	+0.3
	baz=98						
JAVC	Velka Javorina	74.11	42	eP	P	19 13 21.4	+1.2
L29M	L29M	74.28	333	P	P	19 13 21.5	+0.6
	baz=96						
M29M	Somme Creek	74.37	332	P	P	19 13 21.4	-0.1
	baz=96						
I29M	Ogilvie Camp,	74.62	335	P	P	19 13 21.8	-1.0
I29M				IAmb	IAmb	19 13 43.8	
	comp=Z,9.0nm,1.1s						
I29M	Ogilvie Camp,	74.62	335	P	P	19 13 22.5	-0.3
	baz=97						
VYHS	Vyhne	74.88	43	eP	P	19 13 24.7	+0.1
DAWY	Dawson	74.94	333	P	P	19 13 24.1	-0.6
DAWY				IAmb	IAmb	19 13 41.1	
	comp=Z,23nm,1.7s						
DAWY	Dawson	74.94	333	P	P	19 13 25.1	+0.4
	baz=95						
OJC	Ojcow	75.51	41	P	P	19 13 28.3	+0.2
OJC				IAmb	IAmb	19 13 29.5	
	comp=Z,5.4nm,0.8s						
PSZ	Piszkesteto	75.59	43	P	P	19 13 29.1	+0.3
DIVS	Divibare	75.75	47	P	P	19 13 28.8	-1.0
DIVS				IAmb	IAmb	19 13 32.5	
	comp=Z,15nm,1.5s						
EGAK	Eagle	75.77	334	P	P	19 13 29.1	-0.3
EGAK				IAmb	IAmb	19 13 44.1	
	comp=Z,6.9nm,0.7s						
EGAK	Eagle	75.77	334	P	P	19 13 29.3	0.0
	baz=94,SNR=6.5						
BCAR	Beaver Creek A	75.94	332	P	P	19 13 29.8	-0.6
M27K	Edge Creek, AK	75.95	332	P	P	19 13 30.2	-0.4
	baz=93						
L27K	Beaver Creek,	75.96	332	P	P	19 13 29.8	-0.8
L27K	Beaver Creek,	75.96	332	P	P	19 13 30.5	0.0
	baz=93						
I27K	Kandik River	76.01	335	P	P	19 13 30.6	-0.3
	baz=94						
H27K	Steamboat Moun	76.02	336	P	P	19 13 30.6	-0.2
	baz=94						
G27K	Doyon Strip	76.11	336	P	P	19 13 30.5	-0.8
	baz=94						
K27K	Chicken	76.12	333	P	P	19 13 31.4	0.0
	baz=93						
E27K	Coleen River	76.19	338	P	P	19 13 31.3	-0.4
	baz=94,SNR=6.5						
I26K	Coal Creek Min	76.64	335	P	P	19 13 33.9	-0.4
	baz=92						
MENT	Mentasta	76.81	332	P	P	19 13 34.8	-0.6
MENT				IAmb	IAmb	19 13 36.2	
	comp=Z,5.0nm,0.6s						
BZS	Buzias	76.84	46	P	P	19 13 37.0	+1.2
SIRR	Siria	76.84	45	⇑P	P	19 13 36.9	+1.0
FNA	Florina	76.93	51	P	P	19 13 35.0	-1.5
MDVR	Moldovita	76.95	46	⇓P	P	19 13 37.1	+0.6
SCRK	Sand Creek	76.96	333	P	P	19 13 35.0	-1.3
SCRK				IAmb	IAmb	19 13 36.8	
	comp=Z,4.2nm,0.7s						
SCRK	Sand Creek	76.96	333	P	P	19 13 35.5	-0.7
	baz=91,SNR=5.1						
G26K	Porcupine Rive	76.96	336	P	P	19 13 36.1	+0.1
	baz=92						
C27K	Jago River	77.05	339	P	P	19 13 36.3	-0.2
	baz=93,SNR=9.9						
F26K	Sheenjek River	77.12	337	P	P	19 13 36.4	-0.6
	baz=92						
SURR	Surduc	77.19	45	⇑P	P	19 13 38.7	+0.9
N25K	Chitina, Valde	77.21	331	P	P	19 13 37.9	+0.2
	baz=90						
BMAR	Burnt Mountain	77.28	337	P	P	19 13 37.7	-0.3
RIDG	Independent Ri	77.33	333	P	P	19 13 38.3	0.0
	baz=90						
TRPA	Tarpa	77.36	43	⇑P	P	19 13 39.6	+1.0
C26K	Camden Bay	77.47	339	P	P	19 13 38.7	-0.2
	baz=92						
FYU	Fort Yukon	77.52	336	P	P	19 13 39.0	-0.2
FYU				IAmb	IAmb	19 13 39.8	
	comp=Z,12nm,1.1s						
DJES	Djerdap	77.53	47	P	P	19 13 39.0	-0.7
PAX	Paxson	77.62	332	P	P	19 13 39.4	-0.5
	baz=90						
PRP	Porcupine Dome	77.64	335	P	P	19 13 39.1	-1.0
PRP	Porcupine Dome	77.64	335	P	P	19 13 39.5	-0.5
	baz=90,SNR=6.3						
GZR	Gura Zlata	77.67	46	⇓P	P	19 13 40.1	-0.4
E25K	Arctic Village	77.67	338	P	P	19 13 39.7	-0.4
	baz=91,SNR=7.4						
F25K	Christian Rive	77.69	337	P	P	19 13 40.2	-0.1
	baz=90						
K24K	Donnelly Dome	77.75	333	P	P	19 13 40.3	-0.3
	baz=90						
MARR	Marisel-Cluj	77.83	44	⇑P	P	19 13 42.4	+0.9
KLU	Klutina	77.85	331	P	P	19 13 40.9	-0.3
	baz=89						
G25K	Bearman Lake	77.87	336	P	P	19 13 41.4	+0.2
	baz=90						
PABE	Paberze	77.93	35	P	P	19 13 42.0	+0.4
M24K	Tolsona, Glenn	77.95	331	P	P	19 13 41.8	0.0
	baz=89						
D25K	Kavik River	77.98	339	P	P	19 13 41.7	-0.1
	baz=90,SNR=19						
IL31		78.22	334	P	P	19 13 41.8	-1.3
ILAR	Eielson Array	78.22	334	P	P	19 13 42.2	-0.9
	comp=Z,2.1nm,0.5s,baz=91,slow=4.7,SNR=49						
ILAR				LR	LR	19 51 06.2	
	comp=Z,41nm,18.6s,baz=136,slow=38						
	comp=Z,2.1nm,0.5s						
ILAR	Eielson Array	78.22	334	P	P	19 13 42.1	-1.1
HDA	Harding Lake	78.25	334	P	P	19 13 42.8	-0.5
	baz=89						
ARCES	ARCESS Array B	78.30	21	P	P	19 13 43.6	+0.1
	comp=Z,3.3nm,0.7s,baz=266,slow=1.8,SNR=8.1						
	comp=Z,3.3nm,0.7s						
G24K	Hadweenzic Riv	78.42	336	P	P	19 13 44.5	+0.3
	baz=89						
POKR	Poker Plat Res	78.44	334	P	P	19 13 44.1	-0.3
	baz=88						
SCM	Sheep Creek Mo	78.51	331	P	P	19 13 43.9	-1.0
	baz=88						
F24K	Squaw Lake	78.56	337	P	P	19 13 44.6	-0.4
	baz=88,SNR=5.6						
H24K	Noodor Dome	78.61	335	P	P	19 13 44.5	-0.8
	baz=88						
ARCR	ARCALIA	78.65	44	⇑P	P	19 13 46.8	+0.9
WRH	Wood River Hil	78.75	334	P	P	19 13 45.5	-0.6
E24K	Your Creek	78.77	338	P	P	19 13 45.3	-0.9
	baz=88						
FINES	FINESS Array B	78.78	29	P	P	19 13 46.5	+0.2
	comp=Z,5.0nm,0.8s,baz=250,slow=2.8,SNR=11						
FINES				pP	sP	19 13 59.3	-2.0
	comp=Z,5.6nm,0.9s,baz=264,slow=5.7,SNR=4.9						
FINES				LR	LR	19 45 13.1	
	comp=Z,22nm,18.0s,baz=258,slow=33						
	comp=Z,5.0nm,0.8s						
MDM	Murphy Dome	78.79	334	P	P	19 13 45.6	-0.7
MDM				IAmb	IAmb	19 13 46.6	
	comp=Z,9.2nm,1.0s						
C24K	Franklin Bluff	78.79	339	P	P	19 13 46.2	0.0
	baz=88						
WAT1	Susitna Watana	79.03	332	P	P	19 13 47.3	-0.4
	baz=87						
MCK	McKinley	79.15	333	P	P	19 13 48.4	+0.1
	baz=87						
NEA2	Nenana	79.16	334	P	P	19 13 47.8	-0.5
NEA2				IAmb	IAmb	19 13 48.6	
	comp=Z,7.5nm,0.7s						
NEA2	Nenana	79.16	334	P	P	19 13 47.9	-0.4
	baz=87,SNR=10						
BUR08	Bucovina Ar. S	79.18	43	P	P	19 13 50.1	+1.2
BUR08				IAmb	IAmb	19 13 51.2	
	comp=Z,12nm,0.8s						
BURAR	Bucovina Array	79.19	43	⇓P	P	19 13 50.4	+1.4

BURAR	Bucovina Array	79.19	43	P	P	19 13 50.4	+1.4
E23K	Chandalar	79.19	338	P	P	19 13 48.7	+0.2
	baz=87						
I23K	Minto, Yukon-K	79.25	335	P	P	19 13 48.3	-0.5
I23K				IAmb	IAmb	19 13 49.2	
	comp=Z,8.5nm,1.2s						
I23K	Minto, Yukon-K	79.25	335	P	P	19 13 47.9	-0.8
	baz=87						
VOIR		79.26	46	⇑P	P	19 13 49.4	0.0
H23K	Yukon River	79.29	335	P	P	19 13 47.8	-1.2
	baz=86						
G23K	Bananza Creek	79.43	336	P	P	19 13 49.3	-0.5
	baz=86						
DOPR	Dopca	79.45	45	⇑P	P	19 13 51.1	+0.8
COLD	Coldfoot	79.47	337	P	P	19 13 49.8	-0.2
	baz=86						
D23K	Nanushuk River	79.53	338	P	P	19 13 50.1	-0.2
	baz=86						
NACGM	Naroch	79.58	36	*e*P	P	19 13 52.0	+1.2
	comp=Z,26nm,0.8s,baz=275						
OZUR		79.72	45	⇑P	P	19 13 52.6	+0.9
TRF	Thorofare Moun	79.78	333	P	P	19 13 51.7	-0.3
TRF				IAmb	IAmb	19 13 52.7	
	comp=Z,9.3nm,0.6s						
TRF	Thorofare Moun	79.78	333	P	P	19 13 51.5	-0.5
	baz=85,SNR=5.2						
MLY	Manley	79.85	334	P	P	19 13 51.3	-0.8
MLY	Manley	79.85	334	P	P	19 13 51.7	-0.4
	baz=85						
MLR	Muntele Rosu	79.89	46	⇑P	P	19 13 53.8	+0.9
MLR	Muntele Rosu	79.89	46	P	P	19 13 53.8	+0.9
MLR				IAmb	IAmb	19 13 54.7	
	comp=Z,15nm,0.9s						
G22K	Bettles	80.00	336	P	P	19 13 52.6	-0.2
	baz=85						
E22K	Anaktuvuk Pass	80.01	338	P	P	19 13 52.8	-0.1
	baz=85,SNR=7.2						
BPAW	Bear Paw Mtn.	80.03	334	P	P	19 13 53.2	+0.1
	baz=85						
COVR	Voineasa-Covas	80.03	45	⇑P	P	19 13 54.4	+0.9
H22K	Ishtalitna Cre	80.04	335	P	P	19 13 53.2	+0.1
	baz=85						
RDO	Rodhopi	80.04	50	P	P	19 13 54.3	+0.7
RDO				IAmb	IAmb	19 13 55.2	
	comp=Z,10nm,1.0s						
IDI	Anoyia	80.19	56	⇑P	P	19 13 55.0	+0.4
IDI	Anoyia	80.19	56	P	P	19 13 54.0	-0.6
F22K	John River	80.21	337	P	P	19 13 54.2	+0.2
	baz=84						
TESR	Tescani	80.27	44	⇑P	P	19 13 54.6	-0.1
PLOR	Plostina	80.34	45	⇑P	P	19 13 55.6	+0.4
I21K	Tanana	80.36	335	P	P	19 13 54.9	+0.1
	baz=84						
VRI	Vrincioaia	80.39	45	⇑P	P	19 13 55.7	+0.2
ALN	Alexandroupoli	80.45	50	P	P	19 13 55.4	-0.4
ALN				IAmb	IAmb	19 13 57.3	
	comp=Z,6.5nm,0.8s						
SKT	Skwentna	80.48	331	P	P	19 13 55.1	-0.4
	baz=84						
CAST	Castle Rocks	80.58	333	P	P	19 13 55.9	-0.2
	baz=84						
CHUM	Lake Minchumin	80.64	333	P	P	19 13 55.9	-0.4
	baz=84						
H21K	Melozitna Rive	80.65	335	P	P	19 13 56.4	0.0
H21K	Melozitna Rive	80.65	335	P	P	19 13 56.4	0.0
	baz=84						
PPLA	Purkeypile	80.69	332	P	P	19 13 55.9	-0.9
	baz=84						
F21K	Alatna River	80.74	337	P	P	19 13 56.2	-0.6
	baz=83						
G21K	Allakaket	80.83	336	P	P	19 13 57.3	0.0
	baz=83						
SPCR	Spurr Chakacha	80.89	331	P	P	19 13 57.1	-0.8
	baz=83						
IMAR	Indian Mountai	81.00	336	P	P	19 13 58.0	-0.2
O20K	Slope Mountain	81.22	330	P	P	19 13 59.0	-0.7
	baz=83						
SORM	Soroca	81.24	43	⇑P	P	19 13 59.6	-0.2
M20K	Styx River	81.24	331	P	P	19 13 58.9	-0.8
	baz=83						
Q20K	Shuyak Island	81.29	328	P	P	19 13 59.3	-0.6
	baz=83						
ICOR	Ion Corvin	81.35	47	⇑P	P	19 14 01.3	+0.7
HARR	Harsova	81.37	46	⇑P	P	19 14 00.5	-0.1
TLBR	Topalu	81.47	46	⇑P	P	19 14 01.4	+0.2
K20K	Telida	81.48	333	P	P	19 13 59.8	-1.1
K20K				IAmb	IAmb	19 14 14.9	
	comp=Z,28nm,1.9s						
K20K	Telida	81.48	333	P	P	19 14 00.7	-0.1
	baz=82						
AKASG	Malin Array Be	81.48	40	P	P	19 14 00.8	-0.3
	comp=Z,1.8nm,0.7s,baz=271,slow=4.7,SNR=12						
	comp=Z,1.8nm,0.7s						
AKBB	Malin Array Si	81.48	40	P	P	19 14 00.6	-0.5
KDAK	Kodiak Island	81.50	327	LR	LR	19 53 28.4	
	comp=Z,49nm,18.3s,baz=100,slow=38						
KDAK	Kodiak Island	81.50	327	P	P	19 14 01.3	+0.3
	baz=82						
L20K	Farewell, AK	81.51	332	P	P	19 14 01.0	0.0
	baz=82						
P19K	Oil Pt	81.58	329	P	P	19 14 01.4	-0.1
	baz=82						
TPGR	Topolog	81.70	46	⇑P	P	19 14 02.3	-0.1
M19K	Big River Lodg	81.83	331	P	P	19 14 02.7	0.0
	baz=82						
L19K	White Mountain	82.01	332	P	P	19 14 04.0	+0.3
	baz=81						
N19K	Bonanza Creek	82.04	330	P	P	19 14 03.9	0.0
	baz=81						
O19K	Port Alsworth	82.05	330	P	P	19 14 03.3	-0.6
	baz=81						
TTA	Tatalina	82.42	333	P	P	19 14 06.0	+0.1
	baz=80						
O18K	Koktuh Hills	82.54	329	P	P	19 14 05.9	-0.7
	baz=81						
P18K	Big Mountain,	82.63	329	P	P	19 14 07.0	0.0
	baz=80						
Q18K	Katmai Hardscr	82.64	328	P	P	19 14 07.0	-0.1
	baz=81						
TSUM	Tsumeb	82.99	111	LR	LR	19 49 52.5	
	comp=Z,73nm,18.5s,baz=152,slow=35						
Q17K	Contact Creek	83.16	328	P	P	19 14 09.8	0.0
	baz=80						
O17K	Koliganek Bris	83.50	330	P	P	19 14 11.2	-0.2
	baz=79						
BORA	Eskisehir	83.92	51	P	P	19 14 13.8	-0.3
BORA				IAmb	IAmb	19 14 15.3	
	comp=Z,7.8nm,0.9s						
O16K	Kokwok River B	84.03	330	P	P	19 14 13.6	-0.5
	baz=78						
RDOG	Red Dog Mine	84.12	338	P	P	19 14 14.2	-0.3
RDOG				IAmb	IAmb	19 14 15.5	
	comp=Z,7.3nm,0.8s						
RDOG	Red Dog Mine	84.12	338	P	P	19 14 13.8	-0.6
	baz=75						
OBN	Obninsk	85.11	35	P	P	19 14 20.0	+0.4
ANTO	Ankara	85.70	50	P	P	19 14 23.7	+0.7
ANM	Nome	86.07	335	P	P	19 14 24.1	-0.2
	baz=72						
BRTR	Keskin Array B	86.36	50	P	P	19 14 26.5	0.0
	comp=Z,4.4nm,0.8s,baz=258,slow=5.0,SNR=10						
BRTR				pP	sP	19 14 39.9	-1.8
	comp=Z,3.2nm,0.8s,baz=254,slow=4.5,SNR=5.0						
	comp=Z,4.4nm,0.8s						
BRTR	Keskin Array B	86.36	50	P	P	19 14 26.3	-0.1
TNA	Tin City	86.77	337	P	P	19 14 27.9	+0.2
TNA				IAmb	IAmb	19 14 29.4	
	comp=Z,5.6nm,0.9s						
TNA	Tin City	86.77	337	P	P	19 14 27.5	-0.1
	baz=70						
BNN	Bunyan	88.22	51	P	P	19 14 34.9	-0.6
GAMB	Gambell	88.94	335	P	P	19 14 38.4	+0.3
	baz=66						
EIL	Elat	89.52	60	LR	LR	19 58 12.3	
	comp=Z,47nm,18.2s,baz=246,slow=38						
SPIA	Saint Paul Isl	90.85	329	P	P	19 14 46.6	-0.5
	baz=68						
BOSA	Boshof	91.96	119	P	P	19 14 52.9	-0.1
	comp=Z,2.4nm,0.9s,baz=256,slow=4.2,SNR=2.2						
	comp=Z,2.4nm,0.9s						
KBZ	Khabaz	92.08	45	P	P	19 14 53.9	+0.8
	comp=Z,2.8nm,1.0s,baz=284,slow=4.2,SNR=2.3						
	comp=Z,2.8nm,1.0s						
KARS	Kars	93.14	48	P	P	19 14 56.9	-1.4
SONM	Songino Array	120.12	10	PKP	PKPdf	19 20 34.4	-0.4
	comp=Z,0.7nm,0.6s,baz=29,slow=0.3,SNR=6.2						
GOMU	GeErMu	127.56	25	PKP	PKiKP	19 20 50.3	0.0
GOMU				pPKP	sPKPdf	19 21 11.1	+5.8
GOMU				LR	LR		
	comp=N,160nm,17.5s						
GOMU				LR	LR		
	comp=E,110nm,18.8s						
GOMU				LR	LR		
	comp=Z,180nm,19.9s						
MJAR	Matsushiro Arr	129.19	340	PKP	PKPdf	19 20 52.1	-0.3
	comp=Z,2.3nm,0.7s,baz=104,slow=0.5,SNR=7.2						
PZH	PanZhiHua	138.87	24	PKP	PKPdf	19 21 10.3	-0.7
CHTO	Chiang Mai	144.13	34	PKPdf	PKPbc	19 21 18.2	-0.2
CM31	Chiang Mai Arr	144.42	34	PKPdf	PKPab	19 21 18.6	-0.5
CMAR	Chiang Mai Arr	144.42	34	PKP	PKPab	19 21 19.0	-0.1
	comp=Z,4.8nm,0.8s,baz=319,slow=4.8,SNR=24						
CMAR	Chiang Mai Arr	144.42	34	PKPdf	PKPab	19 21 18.0	-1.0
TOO	Toolangi	144.67	218	PKPdf	PKPbc	19 21 19.9	+0.2
SSLB	Suanglung	145.15	357	PKPbc	PKPbc	19 21 20.7	-0.9
STKA	Stephens Creek	150.80	222	PKP	PKPdf	19 21 31.1	0.0
	comp=Z,2.5nm,0.8s,baz=157,slow=13,SNR=3.7						
ASAR	Alice Springs	161.26	227	PKP	PKPdf	19 21 44.7	-0.4
	comp=Z,1.1nm,0.8s,baz=90,slow=2.5,SNR=11						
ASAR				pPKP	pPKPdf	19 21 56.2	-0.6
	comp=Z,0.6nm,1.0s,baz=194,slow=21,SNR=1.7						
ASAR				PKPab	PKPab	19 22 28.3	-0.5
	comp=Z,1.0nm,0.7s,baz=128,slow=3.6,SNR=9.2						
WRA	Warramunga Arr	162.97	238	PKP	PKPdf	19 21 46.2	-0.7
	comp=Z,2.6nm,1.0s,baz=82,slow=0.7,SNR=14						
WRA				PKPab	PKPab	19 22 34.4	-2.1
	comp=Z,0.6nm,0.6s,baz=105,slow=4.3,SNR=8.2						

IDC 20 19:27:11.9±3.3**, 2°.32S×134°.40E, h0**^{km}**, mb3.0**/2**,**
mbtmp3.0/3**, ML2.6**/1**, Error ellipse: s-maj=156.5km**
s-min=30.5km az=77.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.52	180	P	Pn	19 31 17.8	0.0
	baz=359,slow=12,SNR=2.0						
	0.3nm,0.8s						
ASAR	Alice Springs	21.23	181	P	P	19 31 59.6	0.0
	0.2nm,0.6s,baz=5.4,slow=10,SNR=4.6						
	0.2nm,0.6s						
MKAR	Makanchi Array	66.89	324	P	P	19 38 06.0	0.0
	0.3nm,0.7s,baz=134,slow=8.2,SNR=4.6						
	0.3nm,0.7s						

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*IDC **20** 19:28:58.9±3.2, 15°.65N×93°.13W, h0^{km}, mb3.3/2,*
mbtmp3.6/5, ML3.6/3, MS2.1/1, Error ellipse:
s-maj=122.2km s-min=27.1km az=36.0
*MEX **20** 19:28:59.6±0.7, 15°.00N×93°.39W, h89^{km}±20^{km}, MD4.3*
ISC 20 19:28:55.2±1.7**, 14°.83N**±0°.06×**93°.52W**±0°.04**, h11**^{km}±12^{km}**,**
n35, σ2^{s}.**22**/46**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.92	18	*i* P	Pb	19 29 14.2	+1.1
PCIG				*e*S	Sn	19 29 27.2	+0.1
THIG		1.21	86	*e*P	Pb	19 29 19.1	+0.9
THIG				*i* S	Sg	19 29 33.3	-1.1
PATR	El Naranjo	1.27	77	*e*P	Pg	19 29 19.3	-0.5
PATR				*e*S	Sg	19 29 34.5	-1.9
PAVE	Pavencul	1.35	74	*e*P	Pb	19 29 20.6	0.0
PAVE				*i* S	Sb	19 29 36.3	-1.6
CHUJ	Union Juarez	1.39	79	*e*P	Pn	19 29 21.2	+0.4
CHUJ				*i* S	Sb	19 29 37.6	-1.6
CCIG	Comitan	1.96	43	*e*P	Pb	19 29 31.9	+0.8
CCIG				*e*S	Sg	19 29 57.4	-1.1
TGIG		1.97	11	*e*P	Pn	19 29 30.5	+1.9
TGIG				*e*S	Sb	19 29 55.5	-0.3
TGBT	Tuxtla Gutierr	1.98	12	*i* P	Pn	19 29 30.6	+1.9
TGBT				*i* S	Sb	19 29 55.2	-0.7
NILT	Santiago Nilte	2.02	329	*i* P	Pn	19 29 29.8	+0.5
NILT				*i* S	Sn	19 29 51.5	-3.0
CMIG	Matias Romero	2.60	330	Pn	Pn	19 29 36.4	-0.8
	17nm,0.3s,baz=146,slow=12,SNR=67						
CMIG				LR	LR	19 30 04.2	
	comp=Z,49nm,21.9s,baz=181,slow=30						
CMIG				Sn	Sn	19 30 05.1	-3.7
	28nm,0.3s,baz=159,slow=12,SNR=8.2						
	52nm,0.3s						
CMIG	Matias Romero	2.60	330	*e*P	Pn	19 29 36.4	-0.8
CMIG				*e*S	Sn	19 30 05.8	-3.1
HUIG	Huatulco	2.67	291	*e*P	Pn	19 29 35.8	-2.4
HUIG				*e*S	Sn	19 30 02.7	-7.7
NEUV	Arroyo Zacate	3.61	323	*e*P	Pn	19 29 49.5	-1.5
NEUV				*i* S	Sn	19 30 27.2	-6.5
PEIG	Puerto Escondi	3.69	289	*i* P	Pn	19 29 50.3	-1.8
PEIG				*i* S	Sn	19 30 27.3	-8.3
VHO	Vista Hermosa	3.81	306	*e*P	Pn	19 29 54.5	+0.5
VHO				*e*S	Sn	19 30 36.2	-2.8
PMUV	Sontecomapan	4.00	338	*e*P	Pn	19 29 59.7	+3.2
PMUV				*e*S	Sn	19 30 39.9	-3.5
YOIG	Yosondua	4.37	298	*e*P	Pn	19 30 02.8	+1.0
YOIG				*e*S	Sn	19 30 52.4	-0.4
SCIG	Sabancuy	4.68	28	*i* P	Pn	19 30 10.0	+4.2
SCIG				*e*S	Sn	19 30 58.0	-2.1
TOIG	Toxpalan	4.70	314	*e*P	Pn	19 30 07.0	+0.7
TOIG				*i* S	Sn	19 30 59.3	-1.6
PNIG	Pinotepa	4.70	290	*i* P	Pn	19 30 05.0	-1.2
PNIG				*e*S	Sn	19 30 51.7	-9.0
TXIG	Tlaxiaco	4.74	301	*e*P	Pn	19 30 09.4	+2.4
TXIG				*e*S	Sn	19 30 58.9	-3.2
HLIG	Huajuapan de L	5.08	307	*e*P	Pn	19 30 15.4	+3.9
HLIG				*i* S	Sn	19 31 08.5	-1.9
TPIG	Tehuac#an	5.13	315	*e*	Sn	19 31 17.1	+44
FTIG	Fresnillo de T	5.38	305	*e*P	Pn	19 30 19.6	+4.0
FTIG				*e*S	Sn	19 31 17.9	+0.2
MGIG	Malinaltepec	5.47	297	*i* P	Pn	19 30 16.3	-0.5
MGIG				*i* S	Sn	19 31 13.8	-6.0
TLIG	Tlapa	5.56	300	*i* S	Sn	19 31 19.3	-2.7
LVIG	Laguna Verde	5.60	331	*e*P	Pn	19 30 15.0	-3.4
LVIG				*e*S	Sn	19 31 15.1	-7.7
DAIG	Los Arroyos	6.29	291	*e*	Sn	19 31 29.9	-10
CXUV	Coxquihui	6.58	324	*i* P	Pn	19 30 31.3	-0.7
CXUV				*i* S	Sn	19 31 43.7	-3.4
YAIG	Yautepec	6.65	308	*e*	Sn	19 31 41.1	+38
TEIG	Tepich	7.33	42	*e*P	Pn	19 30 43.5	+1.2
TEIG				*e*S	Sn	19 32 01.9	-3.6
JTS	Las Juntas de	9.50	117	Pn	Pn	19 31 18.2	+6.1
	0.6nm,0.3s,baz=300,slow=20,SNR=1.6						
	3.6nm,0.4s						
TXAR	Lajitas Array	17.21	329	Pn	Pn	19 32 57.7	+1.9
	0.1nm,0.3s,baz=148,slow=13,SNR=10						
	1.2nm,0.8s						
NVAR	Mina Array Bea	32.11	322	P	P	19 35 25.1	+2.3
	0.1nm,0.3s,baz=137,slow=11,SNR=2.6						
	0.1nm,0.3s						
YKA	Yellowknife Ar	49.89	347	P	P	19 37 48.0	-0.4
	0.3nm,0.5s,baz=149,slow=7.6,SNR=5.9						
	0.3nm,0.5s						

IDC 20 19:29:22.9±2.9**, 32°.17S×178°.28W, h0**^{km}**, mb3.6**/2**,**
mbtmp3.7/3**, ML3.5**/1**, Error ellipse: s-maj=70.4km**
s-min=45.5km az=125.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.15	211	Pn	Pn	19 31 07.0	-1.8
	0.8nm,0.3s,baz=321,slow=18,SNR=1.2						
URZ				Sn	Sn	19 32 23.3	-7.5
	0.9nm,0.3s,baz=238,slow=23,SNR=5.5						
	2.0nm,0.3s						
ASAR	Alice Springs	42.81	269	P	P	19 37 22.8	+0.1
	0.5nm,0.7s,baz=103,slow=7.5,SNR=6.5						
	0.5nm,0.7s						
WRA	Warramunga Arr	43.96	274	P	P	19 37 31.9	-0.1
	0.5nm,0.4s,baz=114,slow=8.0,SNR=14						
	0.5nm,0.4s						
FINES	FINESS Array B	146.71	339	PKPbc	PKPbc	19 49 05.4	-0.6
	0.7nm,0.5s,baz=46,slow=4.2,SNR=8.7						

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*NEIC **20** 19:33:53.0±0.9, 43°.86N±0°.09×105°.3W±0°.1, h0^{km}±2^{km},*
ML3.5/78, Error ellipse: s-maj=19.2km s-min=5.7km
az=323.0
*IDC **20** 19:33:54.3±2.0, 43°.37N×105°.18W, h0^{km}, mbtmp3.2/4,*
ML2.8/3, Error ellipse: s-maj=38.5km s-min=10.4km
az=150.0
ISC 20 19:33:55.3±0.9**, 43°.59N**±0°.05×**105°.17W**±0°.05**, h0**^{km}**, n67,**
σ1^{s}.**93**/63**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.98	56	Pn	Pg	19 34 14.2	+0.2
K22A	Casper	1.36	227	Pn	Pg	19 34 20.6	-0.8
PHWY	Pilot Hill	2.29	186		Pn	19 34 35.7	+1.0
PHWY				IAML		19 36 11.4	
	204nm,3.4s						
RWWY	Rawlins	2.42	219		Pn	19 34 36.5	+0.1
RWWY				IAML		19 35 17.3	
	294nm,0.9s						
RWWY				IAML		19 35 18.7	
	275nm,0.9s						
N23A	Red Feather La	2.75	192		Pn	19 34 41.9	+0.9
N23A				Sn	Sb	19 35 19.8	-0.1
N23A				IAML		19 35 27.7	
	comp=N,178nm,0.5s						
N23A				IAML		19 36 31.2	
	comp=E,184nm,3.5s						
BRIGG	Briggsdale	3.07	168		Pn	19 34 46.4	+1.2
LAO	LASA Array	3.19	347		Pn	19 34 45.9	-0.9
LAO				IAML		19 35 49.9	
	comp=E,180nm,0.7s						
LAO				IAML		19 35 54.0	
	comp=E,199nm,1.0s						
BW06	Boulder Array	3.32	257		Pn	19 34 48.9	+0.3
PD31	Pinedale Array	3.32	257		Pn	19 34 49.2	+0.6
PDAR	Pinedale Array	3.32	257	Pn	Pn	19 34 49.5	+0.9
	comp=E,8.0nm,0.3s,baz=75,slow=17,SNR=61						
PDAR				Lg	Lg	19 35 36.3	
	comp=E,18nm,0.3s,baz=86,slow=14,SNR=5.1						
PDAR	Pinedale Array	3.32	257	Pn	Pn	19 34 48.6	-0.1
RLMT	Red Lodge	3.32	299		Pn	19 34 49.2	+0.5
RLMT				IAML		19 35 52.5	
	comp=E,121nm,0.4s						
OGNE	Ogallala	3.52	138		Pn	19 34 52.5	+1.2
YMP	Mirror Lake Pl	3.77	290		Pn	19 34 56.7	+1.7
YMP				IAML		19 36 05.5	
	comp=E,122nm,0.9s						
YMP				IAML		19 36 19.1	
	comp=N,97nm,1.0s						
ISCO	Idaho Springs	3.80	185	Pn	Pn	19 34 56.0	+0.7
GCMT	Greycliff	3.90	306		Pn	19 34 57.5	+1.0
LKWY	Lake	3.90	286		Pn	19 34 52.7	-4.0
LKWY				IAML		19 35 16.4	
	comp=N,81nm,0.6s						
H17A	Grant Village	3.99	284		Pn	19 35 00.8	+2.9
H17A				IAML		19 36 05.5	
	comp=E,55nm,2.3s						
H17A				IAML		19 36 10.4	
	comp=N,59nm,2.2s						
FLWY	Flagg Ranch	4.04	279		Pn	19 35 02.4	+3.9
FLWY				IAML		19 36 27.2	
	comp=N,101nm,2.9s						
MOOW	Moose Ponds	4.05	274	Pn	Pn	19 35 00.6	+1.9
SNOW	Snow King Moun	4.07	270		Pn	19 35 02.1	+3.1
O20A	White River Ci	4.14	215	Pn	Pn	19 34 58.9	-1.1
REDW	Red Top Meadow	4.14	269	Pn	Pn	19 34 58.9	-1.1
REDW				IAML		19 36 43.4	
	comp=N,87nm,2.1s						
IMW	Indian Meadow	4.20	276	Pn	Pn	19 35 02.6	+1.8
IMW				IAML		19 35 30.6	
	comp=N,43nm,0.5s						
IMW				IAML		19 36 13.4	
	comp=N,54nm,2.3s						
TPAW	Teton Pass	4.21	271		Pn	19 35 00.6	-0.4
TPAW				IAML		19 36 30.8	
	comp=N,74nm,2.1s						
TPAW				IAML		19 36 31.7	
	comp=N,48nm,1.9s						
FXWY	Fox Creek	4.26	273		Pn	19 35 02.5	+0.9
YMR	Madison River	4.31	287		Pn	19 35 05.3	+2.9
YMR				IAML		19 36 35.9	
	comp=E,70nm,1.2s						
YMR				IAML		19 37 32.2	
	comp=N,78nm,5.0s						
E28A	Huff	4.36	45		Pn	19 35 07.3	+4.6
AHID	Auburn Hatcher	4.42	261		Pn	19 35 06.4	+2.6
AHID				IAML		19 36 25.6	
	comp=N,54nm,1.1s						
AHID				IAML		19 36 54.2	
	comp=N,46nm,2.0s						
RDMU	Red Mountain	4.45	229		Pn	19 35 07.2	+3.0
RDMU				IAML		19 36 35.0	
	comp=N,55nm,0.9s						
RDMU				IAML		19 37 01.1	
	comp=E,54nm,1.8s						
SUSD	Miller	4.56	77		Pb	19 35 13.1	-3.1
Q24A	Divide	4.62	180		Pn	19 35 07.4	+0.8
Q24A				IAML		19 37 39.6	
	comp=N,40nm,3.6s						
QLMT	Earthquake Lak	4.67	288		Pn	19 35 11.6	+4.3
KSCO	Kaye Shedlock’	4.95	156		Pn	19 35 13.1	+2.1
BOZ	Bozeman (W)	5.04	296		Pn	19 35 14.0	+1.8
BOZ				IAML		19 37 48.4	
	comp=N,31nm,2.6s						
BOZ				IAML		19 38 08.9	
	comp=N,28nm,4.5s						
HWUT	Hardware Ranch	5.12	249	Pn	Pn	19 35 16.0	+2.6
BSUT	Blindstream Ca	5.16	236	Pn	Pn	19 35 15.2	+1.0
BSUT				IAML		19 36 57.6	
	comp=N,29nm,1.8s						
BSUT				IAML		19 36 58.1	
	comp=E,36nm,2.1s						
EGMT	Eagleton	5.48	326		Pn	19 35 19.7	+1.5
LRM	Limekiln Ridge	5.65	296		Pn	19 35 22.0	+1.2
HRY	Holter Researc	5.66	306		Pn	19 35 21.9	+1.1
MCMT	McKenzie Canyo	5.66	285		Pn	19 35 23.2	+2.3
PV07	Paradox Valley	5.78	208		Pn	19 35 23.6	+1.2
SDCO	Great Sand Dun	5.84	183		Pn	19 35 25.7	+2.3
SPUT	South Promonto	5.85	250	Pn	Pn	19 35 23.9	+0.5
P17A	Butcher Ranch,	5.86	227		Pn	19 35 26.1	+2.5
HVU	Hansel Valley	5.89	255		Pn	19 35 25.0	+1.0
S22A	4UR Ranch, Cre	5.97	193	Pn	Pn	19 35 26.2	+1.0
PV10	Paradox Valley	5.97	211	Pn	Pn	19 35 28.2	+3.1
PV11	David Mesa, Pa	5.98	209	Pn	Pn	19 35 26.6	+1.4
SRU	San Rafael Swe	6.02	224		Pn	19 35 26.7	+0.9
PV13	Radium Mtn., P	6.09	208		Pn	19 35 27.7	+0.9
ECSD	EROS Data Cent	6.21	86		Pn	19 35 35.4	+7.2
TMUT	Trail Mountain	6.24	229		Pn	19 35 32.1	+3.2
CBKS	Cedar Bluff	6.28	138		Pn	19 35 33.5	+4.3
BGU	Big Grassy Mou	6.41	248		Pn	19 35 33.3	+2.1
T25A	Trinidad	6.46	175	Pn	Pn	19 35 34.0	+2.0
Q16A	Castle Valley	6.50	226		Pn	19 35 33.0	+0.6
DUG	Dugway, Tooele	6.64	242		Pn	19 35 34.4	+0.2
F33A	5 Mile Ranch,	6.71	67		Pn	19 35 43.5	+8.5
HLID	Hailey	6.72	273		Pn	19 35 36.8	+1.4
MSU	Marysvale	7.33	229	Pn	Pn	19 35 44.2	+0.4
U15A	North Rim	9.00	220	Pn	Pn	19 36 07.2	+0.5
I10CA	LAC DU BONNET	9.10	40	I	I	20 26 20.0	
	baz=221,slow=322,SNR=1.8						
ULM	Lac du Bonnet	9.21	40	Pn	Pn	19 36 08.7	-0.6
	comp=E,0.4nm,0.3s,baz=225,slow=13,SNR=1.9						
ULM				Lg	Lg	19 38 41.4	
	comp=E,1.0nm,0.3s,baz=306,slow=16,SNR=2.5						
	comp=E,1.5nm,0.3s						
NVAR	Mina Array Bea	11.18	247	Pn	Pn	19 36 37.4	+0.8
	comp=E,0.1nm,0.3s,baz=52,slow=12,SNR=1.8						
	comp=E,0.1nm,0.3s						
TXAR	Lajitas Array	14.27	175	Lg	Lg	19 41 15.2	
	comp=E,0.1nm,0.3s,baz=360,slow=24,SNR=1.8						
YKA	Yellowknife Ar	19.73	347	Pn	Pn	19 38 28.0	+0.4
	comp=E,0.1nm,0.3s,baz=155,slow=12,SNR=2.4						
YKA				Lg	Lg	19 44 18.2	
	baz=158,slow=28						
	comp=E,0.2nm,0.3s						

ROM 20 19:34:08.3±0.1**, 42°.998N**±0°.004×**13°.027E**±0°.004**,**
h8^{km}**, ML1.1**/7**, 5C-4D, Error ellipse: s-maj=0.4km**
s-min=0.1km az=182.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	Muccia, Frazio	0.06	346	⇓P	Pg	19 34 10.1	0.0
T1219				S	Sg	19 34 11.3	-0.2
T1219				AML	AML		
	comp=N,283µm,1.4s						
T1219				AML	AML		
	comp=E,292µm,1.1s						
T1219				AML	AML		
	comp=N,268µm,1.4s						
T1219				AML	AML		
	comp=E,292µm,0.9s						
T1219				AML	AML		
	comp=E,292µm,0.6s						

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T1219                             AML       AML
       comp=N,268µm,0.6s
T1219                             AML       AML
       comp=N,283µm,0.6s
CESI   CESI - Serrava     0.09 274  P       Pg         19 34 11.0 +0.5
CESI                                S       Sg         19 34 13.1 +1.0
CESI                                AML     AML
       comp=E,112µm,0.2s
CESI                                AML     AML
       comp=N,157µm,0.3s
T1216  Preci, Frazion     0.11 183 ⇑P       Pg         19 34 11.2 +0.4
T1216                               AML     AML
       comp=E,127µm,0.6s
T1216                               AML     AML
       comp=N,108µm,1.4s
T1216                               AML     AML
       comp=N,108µm,1.4s
T1216                               AML     AML
       comp=E,126µm,0.6s
T1216                               AML     AML
       comp=N,108µm,0.6s
T1220  Camerino, Fraz     0.12  22  P       Pg         19 34 11.4 +0.4
T1220                               S       Sg         19 34 13.9 +1.0
T1220                               AML     AML
       comp=N,382µm,1.1s
T1220                               AML     AML
       comp=N,380µm,1.1s
T1220                               AML     AML
       comp=N,380µm,0.9s
T1220                               AML     AML
       comp=E,386µm,0.3s
T1256  Bolognola (MC)     0.15  87 ⇑P       Pg         19 34 11.8 +0.3
T1256                               S       Sg         19 34 14.5 +0.8
T1256                               AML     AML
       comp=E,58µm,0.5s
T1256                               AML     AML
       comp=N,72µm,0.7s
T1256                               AML     AML
       comp=N,72µm,0.7s
T1256                               AML     AML
       comp=E,58µm,0.5s
MC2    Monte Cornacci     0.15 125  P       Pg         19 34 12.1 +0.5
T1245  Castelsantange     0.18 140 ⇓P       Pg         19 34 13.6 +1.4
T1245                               AML     AML
       comp=E,61µm,1.2s
T1245                               AML     AML
       comp=E,61µm,0.8s
T1245                               AML     AML
       comp=N,78µm,0.3s
GUMA   Gualdo di Mace     0.23  74 ⇓P       Pg         19 34 13.8 +0.7
GUMA                                S       Sg         19 34 18.1 +1.9
GUMA                                AML     AML
       comp=N,117µm,0.2s
GUMA                                AML     AML
       comp=E,124µm,0.2s
T1212  Cascia, Frazio     0.25 177 ⇑P       Pg         19 34 13.8 +0.5
T1212                               S       Sg         19 34 18.2 +1.6
SNTG   Esanatoglia        0.26 346  P       Pg         19 34 14.4 +0.8
ASSB   Assisi San Ben     0.27 279 ⇑P       Pg         19 34 14.3 +0.6
ASSB                                S       Sb         19 34 19.1  -1.3
ASSB                                AML     AML
       comp=E,79µm,1.1s
ASSB                                AML     AML
       comp=N,85µm,0.5s
T1214  Arquata del Tr     0.27 151 ⇑P       Pg         19 34 14.1 +0.3
EL6    Elcito             0.34   9 ⇓P       Pg         19 34 15.4 +0.4
ATCC   AVT- Casa Cast     0.34 304  P       Pg         19 34 15.8 +0.7
ATCC                                S       Sb         19 34 21.9  -0.4
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ROM 20 19:34:47.9±0.1**, 42°.707N**±0°.004×**13°.242E**±0°.005**,**
h12^{km}, ML1.5/11**, 6C-5D, Error ellipse: s-maj=0.5km**
s-min=0.2km az=83.0, Central Italy

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Code   Station Name        Δ°  AZ°    Phase ID             Time      Res
                                    Op      ISC         h  m  s     ISC
T1214  Arquata del Tr     0.06 335  P       Pg         19 34 50.8 +0.3
T1214                               S       Sg         19 34 52.5 +0.1
T1214                               AML     AML
       comp=E,342µm,0.2s
T1214                               AML     AML
       comp=N,152µm,0.6s
T1214                               AML     AML
       comp=E,343µm,0.2s
T1214                               AML     AML
       comp=N,151µm,0.6s
T1214                               AML     AML
       comp=N,151µm,1.4s
T1218  Civita (PG)        0.10 248 ⇑P       Pg         19 34 51.2 +0.4
T1218                               S       Sg         19 34 53.4 +0.3
T1218                               AML     AML
       comp=E,486µm,0.3s
T1218                               AML     AML
       comp=E,481µm,0.1s
T1218                               AML     AML
       comp=N,688µm,0.2s
T1218                               AML     AML
       comp=N,700µm,0.2s
T1218                               AML     AML
       comp=N,688µm,0.2s
SMA1   SAN MARTINO        0.10 138 ⇓P       Pg         19 34 51.1 +0.3
SMA1                                S       Sg         19 34 53.2 +0.1
SMA1                                AML     AML
       comp=N,225µm,1.5s
SMA1                                AML     AML
       comp=E,258µm,0.3s
SMA1                                AML     AML
       comp=N,225µm,0.5s
T1212  Cascia, Frazio     0.15 287 ⇓P       Pg         19 34 52.0 +0.5
T1212                               S       Sg         19 34 54.8 +0.6
T1212                               AML     AML
       comp=E,76µm,0.2s
T1212                               AML     AML
       comp=N,95µm,0.9s
T1212                               AML     AML
       comp=E,75µm,0.2s
T1212                               AML     AML
       comp=N,95µm,0.9s
T1212                               AML     AML
       comp=N,95µm,1.1s
T1212                               AML     AML
       comp=E,75µm,1.8s
T1245  Castelsantange     0.15 345  P       Pg         19 34 52.1 +0.5
T1245                               AML     AML
       comp=E,186µm,0.1s
T1245                               AML     AML
       comp=N,237µm,0.2s
RM33   Pellescritta (     0.20 186 ⇑P       Pg         19 34 52.7 +0.4
RM33                                S       Sg         19 34 56.2 +0.8
RM33                                AML     AML
       comp=N,158µm,0.1s
RM33                                AML     AML
       comp=E,194µm,0.4s
T1241  Roccafluvione,     0.20  43 ⇑P       Pg         19 34 52.7 +0.4
T1241                               S       Sg         19 34 56.0 +0.6
T1241                               AML     AML
       comp=E,87µm,0.8s
T1241                               AML     AML
       comp=N,70µm,0.6s
T1241                               AML     AML
       comp=N,70µm,0.6s
MC2    Monte Cornacci     0.21 350  P       Pb         19 34 53.3  -0.5
T1217  Poggiodomo (PG     0.23 271 ⇓P       Pg         19 34 53.3 +0.5
T1217                               S       Sg         19 34 57.2 +1.0
T1216  Preci, Frazion     0.25 318 ⇑P       Pg         19 34 53.6 +0.5
T1247  Pizzolo (AQ)       0.27 171  S       Sg         19 34 58.1 +0.8
T1247                               AML     AML
       comp=E,110µm,1.6s
T1247                               AML     AML
       comp=N,122µm,0.5s
T1247                               AML     AML
       comp=N,122µm,1.5s
T1247                               AML     AML
       comp=E,110µm,0.4s
TERO   Teramo             0.28 107  P       Pg         19 34 53.8 +0.1
TERO                                AML     AML
       comp=E,49µm,1.5s
TERO                                AML     AML
       comp=E,49µm,0.5s
TERO                                AML     AML
       comp=N,66µm,0.1s
T1256  Bolognola (MC)     0.30 358  P       Pg         19 34 54.6 +0.5
T1256                               S       Sb         19 34 59.4  -0.9
T1256                               AML     AML
       comp=E,38µm,0.8s
T1256                               AML     AML
       comp=N,46µm,1.3s
T1256                               AML     AML
       comp=N,46µm,0.7s
T1211  Morro Reatino      0.33 239 ⇓P       Pg         19 34 55.1 +0.4
T1211                               AML     AML
       comp=E,179µm,1.6s
T1211                               AML     AML
       comp=N,232µm,1.6s
T1211                               AML     AML
       comp=E,114µm,0.1s
T1211                               AML     AML
       comp=N,103µm,0.4s
T1211                               AML     AML
       comp=N,103µm,1.6s
T1211                               AML     AML
       comp=E,179µm,0.4s
T1211                               AML     AML
       comp=N,232µm,0.4s
T1222  Castel Sant'An     0.34 206 ⇑P       Pg         19 34 55.0 +0.3
GIGS   Gran Sasso         0.35 137  P       Pg         19 34 55.0  0.0
GUMA   Gualdo di Mace     0.36  11 ⇑P       Pb         19 34 55.9  -0.4
GUMA                                S       Sb         19 35 02.2 +0.2
GUMA                                AML     AML
       comp=E,178µm,0.3s
GUMA                                AML     AML
       comp=N,136µm,0.4s
T1219  Muccia, Frazio     0.39 334  P       Pg         19 34 55.4  -0.3
T1219                               AML     AML
       comp=E,262µm,0.3s
T1219                               AML     AML
       comp=E,254µm,0.3s
T1219                               AML     AML
       comp=N,324µm,0.1s
T1219                               AML     AML
       comp=N,320µm,0.1s
T1220  Camerino, Fraz     0.42 344 ⇓P       Pg         19 34 56.6 +0.4
EL6    Elcito             0.63 351  S       Sb         19 35 10.6 +0.8
PP3    Marolino           0.72  22  S       Sb         19 35 12.6 +0.3
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*IDC **20** 19:41:58.1±0.8, 10°.47N×123°.79E, h0^{km}, mb4.0/10,*
mbtmp4.0/10, MS3.5/12, Error ellipse: s-maj=47.4km
s-min=14.6km az=65.0
*MAN **20** 19:41:58.8, 10°.54N×123°.68E, h1^{km}, mb4.7, ML3.6, MS3.6*
MAN INTENSITY IV - ASTURIAS AND BUSAY CEBU; CEBU
CITY; INTENSITY III - MANDAUE CITY; INTENSITY II -
LAPU-LAPU CITY.
*NEIC **20** 19:42:04.9±1.5, 10°.43N±0°.07×123°.75E±0°.09, h51^{km}±8^{km},*
mb4.3/37, Error ellipse: s-maj=12.2km s-min=10.7km
az=85.0

ISC 20 19:42:00.7±1.0**, 10°.45N**±0°.02×**123°.73E**±0°.03**, h20**^{km}±5^{km}**,**
n110, σ1^{s}58/121**, mb4.3**/31**, MS3.7**/16**, 17C-17D, Cebu**

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Code   Station Name        Δ°  AZ°    Phase ID             Time      Res
                                    Op      ISC         h  m  s     ISC
LLP    Lapu-Lapu          0.27 119⇓iP       Pg         19 42 06.3  -0.6
LLP                                iS       Sg         19 42 12.2 +1.1
TABP   Talibon, Bohol     0.69 121⇓iP       Pb         19 42 13.6  -0.5
TABP                               iS       Sn         19 42 24.3  -1.2
TBP    Tagbilaran         0.76 170⇓eP       Pn         19 42 15.6  -0.9
TBP                                eS       Sn         19 42 28.2 +0.8
GHBP   Garcia Hernand     1.00 144⇓iP       Pg         19 42 19.8  -0.4
GUIM   Jordan             1.13 279⇑eP       Pn         19 42 18.9  -2.6
GUIM                               eS       Sb         19 42 34.8  -1.3
MSLP   Maasin             1.16 106⇑iP       Pn         19 42 20.9  -0.9
MSLP                               iS       Sg         19 42 39.0 +0.7
SNPH   Sibulan            1.20 204⇓iP       Pb         19 42 22.8  -0.1
SNPH                               iS       Sg         19 42 41.2 +1.4
CNOP   Candoni, Negro     1.24 240⇓iP       Pn         19 42 22.1  -0.8
CNOP                               iS       Sg         19 42 40.8  -0.2
LSIP   Lazi, Siquijor     1.31 184⇓iP       Pb         19 42 24.2  -0.5
LSIP                               iS       Sb         19 42 41.4 +0.2
RCP    Roxas              1.47 319⇑eP       Pn         19 42 23.8  -2.3
RCP                                eS       Sn         19 42 43.0  -1.7
KALP   Kalibo             1.83 312⇑eP       Pn         19 42 29.8  -1.3
SCPH   Surigao            1.86 111⇑eP       Pn         19 42 23.3  -8.2
DCPH   Dipolog City       1.89 191⇑eP       Pb         19 42 33.1  -1.5
DCPH                               eS       Sg         19 42 59.8  -2.0
MMPH   Masbate            1.90 357⇑iP       Pn         19 42 31.6  -0.5
MMPH                               iS       Sn         19 42 56.4 +0.9
IBAJ   Ibajay, Aklan      2.05 312⇑iP       Pn         19 42 33.7  -0.4
CGP    Cagayan de Oro     2.20 154⇓iP       Pb         19 42 37.6  -2.3
CGP                                eS       Sg         19 43 11.4  -0.2
CNP    Catarman           2.24  24⇓eP       Pn         19 42 35.9  -0.9
CNP                                eS       Sg         19 43 12.6  -0.5
BUTP   Butuan             2.38 128⇓eP       Pn         19 42 39.2 +0.6
GLSP   General Luna,      2.45 105⇓eP       Pn         19 42 33.8  -5.8
GLSP                               eS       Sg         19 43 17.7  -2.0
OTRP   Odiongan           2.53 319⇑eP       Pn         19 42 40.4  -0.4
OTRP                               eS       Sn         19 43 12.8 +1.7
PAGZ   Pagadian           2.61 188⇓eP       Pb         19 42 43.8  -3.0
PAGZ                               eS       Sg         19 43 20.8  -3.9
TASP   Talacogon, Agu     2.85 134⇑eP       Pb         19 42 49.2  -1.8
PVCP   Virac              3.15   8⇑eP       Pn         19 42 49.0  -0.3
CTBH   Cotabato--PC H     3.25 171⇓iP       Pn         19 42 53.5 +2.8
BIPH   Bislig             3.44 131⇑iP       Pn         19 42 54.5 +1.3
BIPH                               eS       Sn         19 43 34.9 +1.5
KCP    Kidapawan          3.67 158⇑eP       Pn         19 42 60.0 +3.4
CDOP   Cateel, Davao      3.76 134⇓iP       Pn         19 43 00.9 +3.2
CDOP                               eS       Sn         19 43 42.5 +1.0
BUSP   Coron              3.79 294⇑eP       Pn         19 42 58.8 +0.7
DAV    Davao City (W)     3.82 151  Pn      Pn         19 43 01.3 +2.8
JCNP   Jose Panganiba     3.95 345⇓eP       Pn         19 43 00.9 +0.7
LQP    Lukban             4.22 330⇓eP       Pn         19 43 04.5 +0.3
ENPP   El Nido            4.29 280⇑eP       Pn         19 43 05.3 +0.3
LUBP   Lubang             4.72 314⇑eP       Pn         19 43 12.3 +1.4
PPR    Puerto Princes     4.97 263⇓eP       Pn         19 43 16.7 +2.4
PCPH   Palayan            5.69 333⇑eP       Pn         19 43 28.3 +4.1
MYLDM  Lahad Datu         7.36 225  Pn      Pn         19 43 49.9 +2.7
MYLDM                               Sn      Sn         19 45 10.2  -0.1
KKM    Kota Kinabalu      8.63 240  Pn      Pn         19 44 08.2 +3.5
I39PW  PALAU INFRASON11.07 104      I       I          20 53 50.0
       baz=289,slow=303,SNR=0.9
TWG    Pinlang           12.56 349  Pn      Pn         19 45 02.5 +4.0
NACB   Ninganchiao       13.80 352  Pn      Pn         19 45 17.3 +1.9
SBUM   Sibu              13.92 236  Pn      Pn         19 45 15.0  -2.1
FAKI   Fak Fak           15.76 147  Pn      Pn         19 45 41.2  -0.5
QIZ    Qiongzhong        15.90 304  P       Pn         19 45 44.5 +1.0
QIZ                                 sP      sP         19 46 04.3 +9.1
QIZ                                 S       Sn         19 48 42.8 +3.4
QIZ                                 sS      sS         19 49 10.6 +8.5
QIZ                                 LR      LR
       comp=N,260nm,10.4s
QIZ                                 LR      LR
       comp=E,240nm,14.3s
QIZ                                 LR      LR
       comp=Z,280nm,13.5s
JOW    Kunigami          16.85  14  Pn      Pn         19 45 55.1  -0.5
GUMO   Guam              20.91  79  LR      LR         19 54 04.4
       comp=Z,67nm,21.6s,baz=250,slow=35
MTN    Manton Dam        24.28 162  P       P          19 47 15.6  -1.3
MTN                                 IAmb    IAmb       19 47 19.8
       comp=Z,16nm,1.3s
CMAR   Chiang Mai Arr    25.26 291  P       P          19 47 28.2 +2.3
       comp=Z,0.6nm,0.6s,baz=96,slow=8.3,SNR=1.3
CMAR                                LR      LR         19 57 50.5
       comp=Z,99nm,18.5s,baz=115,slow=38
       comp=Z,0.6nm,0.6s
CMAR   Chiang Mai Arr    25.26 291  P       P          19 47 25.1  -0.8
RPSI   Rantau Prapat     25.80 254  P       P          19 47 30.9 +0.1
RPSI                                IAmb    IAmb       19 47 40.2
       comp=Z,5.3nm,0.8s
PZH    PanZhiHua         26.19 311  P       P          19 47 36.8 +2.4
PZH                                 S       S          19 52 02.5  -3.2
PZH                                 pmax    pmax
       comp=Z,10.0nm,0.5s
PZH                                 pmax    pmax
       comp=Z,110nm,6.5s
PZH                                 LR      LR
       comp=N,380nm,21.0s
PZH                                 LR      LR
       comp=E,310nm,20.8s
PZH                                 LR      LR
       comp=Z,600nm,22.5s
KSRS   Korea Array       27.15   7  P       P          19 47 43.1 +0.3
       comp=Z,0.9nm,0.6s,baz=185,slow=9.0,SNR=4.0
KSRS                                LR      LR         19 57 46.5
       comp=Z,52nm,19.8s,baz=195,slow=35
       comp=Z,0.9nm,0.6s
TNCH   TengChong         27.97 305 eP       P          19 47 53.6 +3.1
TNCH                                pP      sP         19 48 05.3 +6.3
TNCH                                pmax    pmax
       comp=Z,3.0nm,0.5s
PMG    Port Moresby      30.54 129  LR      LR         20 02 07.1
       comp=Z,74nm,18.7s,baz=324,slow=40
COEN   Coen              30.98 141  P       P          19 48 15.0  -2.0
COEN                                IAmb    IAmb       19 48 22.2
       comp=Z,8.5nm,1.2s
WB0    Warramunga Arr    31.81 161  P       P          19 48 23.2  -1.1
WB0                                 IAmb    IAmb       19 48 28.5
       comp=Z,2.7nm,0.8s
WRAB   Tennant Creek     31.95 161  P       P          19 48 24.4  -1.1
WRAB                                IAmb    IAmb       19 48 41.3
       comp=Z,4.3nm,1.1s
WRA    Warramunga Arr    31.96 161  P       P          19 48 24.9  -0.6
       comp=Z,1.5nm,0.7s,baz=341,slow=9.2,SNR=19
WRA                                 PcP     PcP        19 51 16.3 +0.6
       comp=Z,0.3nm,0.7s,baz=344,slow=2.7,SNR=1.5
       comp=Z,1.5nm,0.7s
WRA    Warramunga Arr    31.96 161  P       P          19 48 24.7  -0.9
WB2    Warramunga Arr    31.96 161  P       P          19 48 25.4  -0.2
WB2                                 IAmb    IAmb       19 48 41.3
       comp=Z,11nm,1.4s
HHC    Hu-ho-hao-te      32.13 343 eP       P          19 48 29.0 +2.0
HHC                                 pmax    pmax
       comp=Z,30nm,0.8s
HHC                                 pmax    pmax
       comp=Z,210nm,4.9s
BRDH   Bariadhala        32.99 296  LR      LR         20 01 35.7
       comp=Z,169nm,20.0s,baz=89,slow=36
MDJ    Mudanjiang        34.42   7  P       P          19 48 46.3  -0.5
MDJ                                 IAmb    IAmb       19 48 50.0
       comp=Z,7.5nm,1.1s
AS31   Alice Springs     35.34 164  P       P          19 48 54.9  -0.1
AS31                                IAmb    IAmb       19 48 59.9
       comp=Z,2.5nm,0.7s
ASAR   Alice Springs     35.34 164  P       P          19 48 55.5 +0.6
       comp=Z,4.7nm,0.7s,baz=337,slow=6.7,SNR=100
       comp=Z,4.7nm,0.7s
ASAR   Alice Springs     35.34 164  P       P          19 48 54.1  -0.9
GTA    Gaotai            35.85 328 eP       P          19 48 59.6 +0.2
GTA                                 pP      pP         19 49 06.3 +0.8
GTA                                 PP      PP         19 50 50.5  +29
GTA                                 pmax    pmax
       comp=Z,1.0nm,1.1s
GTA                                 LR      LR
       comp=N,130nm,17.4s
GTA                                 LR      LR
       comp=E,170nm,18.2s
GTA                                 LR      LR
       comp=Z,230nm,18.5s
CTA    Charters Tower    37.58 144  LR      LR         20 04 59.5
       comp=Z,54nm,20.0s,baz=287,slow=37
CTAO   Charters Tower    37.58 144  P       P          19 49 12.2  -2.0
SONM   Songino Array     40.02 342  P       P          19 49 35.0 +0.4
       comp=Z,0.7nm,0.8s,baz=165,slow=11,SNR=3.8
SONM                                LR      LR         20 07 36.0
       comp=Z,101nm,19.3s,baz=180,slow=38
       comp=Z,0.7nm,0.8s
SONM   Songino Array     40.02 342  P       P          19 49 35.1 +0.6
HNR    Honiara           41.09 118  LR      LR         20 07 38.0
       comp=Z,830nm,18.1s,baz=56,slow=38
FORT   Forrest           41.20 174  P       P          19 49 44.7 +0.5
PALK   Pallekele         42.61 269  LR      LR         20 08 07.8
       comp=Z,138nm,18.1s,baz=197,slow=37
BBOO   Buckleboo         44.60 165  P       P          19 50 12.1 +0.3
STKA   Stephens Creek    45.43 159  P       P          19 50 18.4 +0.1
       comp=Z,2.6nm,0.8s,baz=316,slow=15,SNR=5.2
STKA                                LR      LR         20 11 12.3
       comp=Z,65nm,18.1s,baz=14,slow=39
       comp=Z,2.6nm,0.8s
STKA   Stephens Creek    45.43 159  P       P          19 50 17.7  -0.7
WMQ    Urumqi            45.57 323 eP       P          19 50 21.5 +2.0
WMQ                                 LR      LR
       comp=N,250nm,16.9s
WMQ                                 LR      LR
       comp=Z,220nm,19.9s
MK31   Makanchi Array    50.39 324  P       P          19 50 56.8 +0.1
MKAR   Makanchi Array    50.39 324  P       P          19 50 56.9 +0.2
       comp=Z,1.1nm,0.6s,baz=122,slow=8.7,SNR=16
MKAR                                PcP     PcP        19 52 17.4 +2.3
       comp=Z,0.9nm,0.7s,baz=119,slow=4.3,SNR=6.6
       comp=Z,1.1nm,0.6s
MKAR   Makanchi Array    50.39 324  P       P          19 50 56.6  -0.1
PETK   Petropavlovsk-    50.54  26  LR      LR         20 13 23.2
       comp=Z,17nm,19.0s,baz=96,slow=37
MAKZ   Makanchi          50.58 324  P       P          19 50 58.2 +0.1
MAKZ                                IAmb    IAmb       19 51 25.4
       comp=Z,3.2nm,1.5s
NIL    Nilore            51.57 305  P       P          19 51 03.7  -2.1
NIL                                 IAmb    IAmb       19 51 11.9
       comp=Z,3.9nm,0.7s
YAK    Yakutsk           51.67   4  P       P          19 51 06.4 +0.4
ZAA0   Zalesovo Array    53.29 332  P       P          19 51 17.9  -0.3
ZAA0                                IAmb    IAmb       19 51 34.9
       comp=Z,1.9nm,1.0s
ZALV   Zalesovo Beam     53.29 332  P       P          19 51 18.6 +0.4
       comp=Z,1.0nm,0.7s,baz=141,slow=7.1,SNR=4.7
       comp=Z,1.0nm,0.7s
ZALV   Zalesovo Beam     53.29 332  P       P          19 51 19.3 +1.1
DRK    Karamyk           54.30 311  P       P          19 51 25.3  -1.0
DRK                                 IAmb    IAmb       19 51 39.2
       comp=Z,1.9nm,0.8s
KURK   Kurchatov         54.52 326  P       P          19 51 27.2  -0.1
KURBB  Kurchatov Arra    54.52 326  P       P          19 51 26.7  -0.5
       comp=Z,3.0nm,0.6s,baz=127,slow=6.6,SNR=16
       comp=Z,3.0nm,0.6s
KBL    Kabul             55.17 305  P       P          19 51 30.6  -2.0
KBL                                 IAmb    IAmb       19 51 44.1
       comp=Z,5.1nm,1.4s
GAR    Garm              55.27 310  P       P          19 51 31.2  -1.8
GAR                                 IAmb    IAmb       19 51 37.5
       comp=Z,3.7nm,0.6s
KK31   Karatay Array     56.35 315  P       P          19 51 41.8 +1.1
KKAR   Karatay Array     56.35 315  P       P          19 51 41.6 +1.0
KKAR   Karatay Array     56.35 315  P       P          19 51 37.9  -2.7
KKAR                                IAmb    IAmb       19 51 53.4
       comp=Z,1.4nm,0.8s
BRVK   Borovoye          60.18 326  P       P          19 52 07.2 +0.1
BRVK                                IAmb    IAmb       19 52 20.2
       comp=Z,2.9nm,0.7s
TIXI   Tiksi             61.23   2  P       P          19 52 12.5  -1.5
TIXI                                IAmb    IAmb       19 52 17.2
       comp=Z,1.9nm,0.8s
GEYT   Alibeck           64.44 307  P       P          19 52 35.6  -0.4
       comp=Z,1.1nm,0.6s,baz=99,slow=7.4,SNR=3.6
       comp=Z,1.1nm,0.6s
GEYT   Alibeck           64.44 307  P       P          19 52 35.8  -0.3
GEYT                                IAmb    IAmb       19 52 41.8
       comp=Z,1.8nm,0.8s
GYA0B  ALIBECK ARRAY     64.44 307  P       P          19 52 35.9  -0.2
GYA0B                               IAmb    IAmb       19 52 41.8
       comp=Z,3.1nm,0.7s
ABKAR  Akbulak array     65.11 320  P       P          19 52 40.4 +0.2
ABKAR  Akbulak array     65.11 320  P       P          19 52 39.4  -0.7
AFI    Afiamalu          68.39 109  LR      LR         20 20 42.7
       comp=Z,38nm,18.3s,baz=301,slow=34
BELG   Belogornoye       73.31 322  LR      LR         20 27 33.0
       comp=Z,56nm,19.3s,baz=343,slow=37
CHGN   Chignik           74.64  34  P       P          19 53 38.3  -0.2
IMAR   Indian Mountai    77.48  25  P       P          19 53 54.5  -0.1
Q23K   Middleton Isla    81.05  31  P       P          19 54 14.6 +0.4
MID    Middleton Isla    81.06  31  P       P          19 54 14.3 +0.1
BMAR   Burnt Mountain    81.08  23  P       P          19 54 14.9 +0.5
PLCA   Paso Flores      147.30 160  PKPbc   PKPab      20 01 44.3  -0.8
       comp=Z,0.9nm,0.7s,baz=254,slow=7.4,SNR=3.4
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*IDC **20** 19:43:41.5±1.1, 10°.45N×123°.72E, h0^{km}, mb3.8/7,*
mbtmp3.8/7, MS3.4/2, Error ellipse: s-maj=73.1km
s-min=18.4km az=64.0
*MAN **20** 19:43:43.3, 10°.54N×123°.72E, h2^{km}, mb4.6, ML3.4, MS3.3*
MAN INTENSITY III - ASTURIAS CEBU; CEBU CITY;
INTENSITY II - LAPU-LAPU CITY.
*NEIC **20** 19:43:48.3±1.8, 10°.6N±0°.1×124°.0E±0°.1, h51^{km}±7^{km},*
mb4.2/10, Error ellipse: s-maj=19.3km s-min=16.2km
az=199.0

ISC 20 19:43:44.1±1.0**, 10°.52N**±0°.03×**123°.71E**±0°.03**, h24**^{km}±8^{km}**,**
n50, σ1^{s}62/66**, mb4.0**/11**, 5C-12D, Cebu**

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Code   Station Name        Δ°  AZ°    Phase ID             Time      Res
                                    Op      ISC         h  m  s     ISC
LLP    Lapu-Lapu          0.32 128⇓iP       Pb         19 43 50.5  -0.9
LLP                                eS       Sb         19 43 56.3  0.0
TABP   Talibon, Bohol     0.75 125⇓iP       Pb         19 43 57.8  -0.6
TABP                               iS       Sn         19 44 08.5  -1.1
TBP    Tagbilaran         0.84 170 eP       Pn         19 44 00.2  -0.2
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TBP				*i* S	**Sn**	**19 44 12.7**	**+0.8**
GUIM	**Jordan**	1.11	276	⇑*e*P	**Pn**	**19 44 03.4**	**-0.7**
GUIM				*e*S	**Sb**	**19 44 18.8**	**+0.2**
MSLP	**Maasin**	1.20	109	⇓*i*P	**Pb**	**19 44 06.7**	**+0.7**
MSLP				*i* S	**Sn**	**19 44 22.9**	**+2.1**
CNOP	**Candoni, Negro**	1.26	237	⇓*i*P	**Pn**	**19 44 07.0**	**+0.8**
CNOP				*i* S	**Sb**	**19 44 23.9**	**+1.1**
SNPH	**Sibulan**	1.26	202	⇓*i*P	**Pb**	**19 44 07.5**	**+0.3**
SNPH				*i* S	**Sb**	**19 44 25.9**	**+3.0**
LSIP	**Lazi, Siquijor**	1.38	183	⇓*i*P	**Pb**	**19 44 09.3**	**+0.1**
LSIP				*i* S	**Sb**	**19 44 28.2**	**+1.8**
RCP	**Roxas**	1.40	318	⇑*i*P	**Pn**	**19 44 08.0**	**-0.1**
RCP				*e*S	**Sb**	**19 44 26.8**	**-0.2**
KALP	**Kalibo**	1.77	311	⇓*e*P	**Pn**	**19 44 13.0**	**-0.2**
MMPH	**Masbate**	1.83	357	⇑*i*P	**Pb**	**19 44 15.9**	**-1.0**
MMPH				*i* S	**Sb**	**19 44 40.2**	**+0.9**
IBAJ	**Ibajay, Aklan**	1.99	311	*e*P	**Pb**	**19 44 18.1**	**-1.4**
CNP	**Catarman**	2.19	25	⇓*e*P	**Pn**	**19 44 19.7**	**+0.7**
CNP				*e*S	**Sb**	**19 44 54.7**	**+5.0**
CGP	**Cagayan de Oro**	2.27	155	⇓*e*P	**Pn**	**19 44 21.2**	**+1.1**
CGP				*e*S	**Sb**	**19 44 52.1**	**+0.1**
BUTP	**Butuan**	2.43	129	⇓*e*P	**Pb**	**19 44 25.1**	**-2.1**
BUTP				*e*S	**Sb**	**19 44 55.7**	**-1.1**
OTRP	**Odiongan**	2.47	318	⇑*e*P	**Pb**	**19 44 25.1**	**-2.7**
OTRP				*e*S	**Sb**	**19 44 56.3**	**-1.5**
GLSP	**General Luna,**	2.49	107	⇓*e*P	**Pb**	**19 44 25.5**	**-2.7**
GLSP				*e*S	**Sb**	**19 44 59.5**	**+1.1**
PAGZ	**Pagadian**	2.67	187	⇓*e*P	**Pb**	**19 44 28.7**	**-2.5**
PAGZ				*e*S	**Sb**	**19 45 02.5**	**-1.1**
ENPP	**El Nido**	4.26	280	⇑*e*P	**Pn**	**19 44 49.5**	**+2.0**
ENPP				*e*S	**Sn**	**19 45 37.2**	**+0.7**
JNU	**Nakatsue**	23.44	15	LR	LR	19 58 42.2	
	comp=Z,78nm,19.5s,baz=221,slow=38						
MTN	**Manton Dam**	24.35	162	P	**P**	**19 49 01.2**	**+0.8**
MTN				IAmb	IAmb	19 49 11.2	
	comp=Z,20nm,1.4s						
CMAR	**Chiang Mai Arr**	25.22	291	P	**P**	**19 49 09.5**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=116,slow=10,SNR=2.0						
	comp=Z,0.7nm,0.3s						
WB0	**Warramunga Arr**	31.88	161	P	**P**	**19 50 07.5**	**-0.1**
WB0				IAmb	IAmb	19 50 31.3	
	comp=Z,3.9nm,1.0s						
WRAB	**Tennant Creek**	32.02	161	P	**P**	**19 50 05.9**	**-3.0**
WRA	**Warramunga Arr**	32.03	161	P	**P**	**19 50 09.0**	**0.0**
	comp=Z,0.7nm,0.6s,baz=342,slow=9.1,SNR=5.5						
WRA				PcP	**PcP**	**19 52 57.7**	**-0.9**
	comp=Z,0.4nm,0.8s,baz=351,slow=3.5,SNR=2.4						
	comp=Z,0.7nm,0.6s						
AS31	**Alice Springs**	35.41	164	P	**P**	**19 50 39.0**	**+0.7**
AS31				IAmb	IAmb	19 50 40.5	
	comp=Z,2.0nm,0.6s						
ASAR	**Alice Springs**	35.41	164	P	**P**	**19 50 39.8**	**+1.4**
	comp=Z,4.3nm,0.6s,baz=341,slow=6.8,SNR=18						
	comp=Z,4.3nm,0.6s						
ASAR	**Alice Springs**	35.41	164	P	**P**	**19 50 38.8**	**+0.4**
SONM	**Songino Array**	39.95	342	P	**P**	**19 51 19.5**	**+2.8**
	comp=Z,0.6nm,0.8s,baz=148,slow=8.5,SNR=3.0						
	comp=Z,0.6nm,0.8s						
BBOO	**Buckleboo**	44.67	165	P	**P**	**19 51 55.4**	**+0.3**
STKA	**Stephens Creek**	45.50	159	P	**P**	**19 52 00.3**	**-1.4**
MK31	**Makanchi Array**	50.32	324	P	**P**	**19 52 38.8**	**-0.2**
MK31				IAmb	IAmb	19 52 49.2	
	comp=Z,2.4nm,1.4s						
MKAR	**Makanchi Array**	50.32	324	P	**P**	**19 52 41.0**	**+2.1**
	comp=Z,0.3nm,0.7s,baz=131,slow=8.9,SNR=1.7						
MKAR				PcP	**PcP**	**19 53 58.3**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=124,slow=4.1,SNR=4.0						
	comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	50.32	324	P	**P**	**19 52 38.8**	**-0.2**
PETK	**Petropavlovsk-**	50.48	26	P	**P**	**19 52 39.2**	**-0.9**
YAK	**Yakutsk**	51.61	4	LR	LR	20 14 51.5	
	comp=Z,46nm,19.0s,baz=264,slow=36						
ZALV	**Zalesovo Beam**	53.22	332	P	**P**	**19 53 01.0**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=126,slow=7.3,SNR=2.1						
	comp=Z,0.4nm,0.5s						
ZALV	**Zalesovo Beam**	53.22	332	P	**P**	**19 53 01.8**	**+1.4**
KURK	**Kurchatov**	54.45	326	P	**P**	**19 53 11.2**	**+1.7**
KURBB	**Kurchatov Arra**	54.45	326	P	**P**	**19 53 10.9**	**+1.4**
	comp=Z,1.2nm,0.6s,baz=128,slow=6.9,SNR=5.1						
	comp=Z,1.2nm,0.6s						
KKAR	**Karatay Array**	56.29	315	P	**P**	**19 53 24.8**	**+1.9**
ABKAR	**Akbulak array**	65.05	320	P	**P**	**19 54 22.4**	**-0.1**
PPTF	**Pamatai, Papee**	90.05	108	P	**P**	**19 56 38.4**	**-4.3**
VNDA	**Vanda**	90.50	172	P	**P**	**19 56 42.7**	**-0.7**
N47A	**Urbana**	122.10	26		**PKPdf**	**20 02 36.3**	**-0.8**
O52A	**Adamsville**	124.33	24		PKPpre	20 02 33.2	
O52A				PKPdf	**PKPdf**	**20 02 38.5**	**-3.0**
O53A	**New Philadelph**	124.46	23		**PKPdf**	**20 02 40.7**	**-1.0**
V51A	**Loudon**	126.86	29		**PKPdf**	**20 02 44.2**	**-2.2**
S57A	**Dark Hollow, R**	127.49	23	PKPpre	PKPpre	20 02 36.5	
RPN	**Rapa Nui**	127.53	116		**PKPdf**	**20 02 47.6**	**-0.2**

ISK ***20*** *19:48:48.3, 37°.29N×22°.13E, h5*^{km}*, ML3.8/20*
THE ***20*** *19:48:50.8, 37°.22N×22°.12E, h0*^{km}*±1*^{km}*, ML3.7/19, Error*
ellipse: s-maj=1.8km s-min=0.6km az=217.0
DDA ***20*** *19:48:50.0±0.0, 37°.21N×22°.38E, h18*^{km}*±60*^{km}*, MW3.9*
BEO ***20*** *19:48:50.6±4.3, 36°.76N×21°.59E, h73*^{km}*, ML3.5/9*
ATH ***20*** *19:48:51.2, 37°.24N×22°.11E, h4*^{km}*, ML3.6/27, Error*
ellipse: s-maj=1.0km s-min=0.5km az=258.0
IDC ***20*** *19:48:55.9±1.3, 37°.29N×22°.14E, h54*^{km}*±14*^{km}*, mb3.6/16,*
mbtmp3.8/24, ML3.5/8, MS2.8/1, Error ellipse:
s-maj=14.8km s-min=9.3km az=25.0
ISC 20 19:48:50.8±0.8**, 37°.25N**±0°.02×**22°.10E**±0°.02**, h12**^{km}±5^{km}**,**
n180, σ1^{s}**.71**/239**, mb4.1**/15**, 15C-3D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	**Ithomi**	0.15	244	P	**Pg**	**19 48 54.3**	**-0.1**
ITM				S	**Sg**	**19 48 56.5**	**-0.4**
	86μm,0.3s						
ITM	**Ithomi**	0.15	244	Pg	**Pg**	**19 48 52.8**	**-1.6**
ITM				Sg	**Sg**	**19 48 56.4**	**-0.4**
ITM	**Ithomi**	0.15	244	P	**Pg**	**19 48 54.4**	**-0.1**
ITM				S	**Sg**	**19 48 56.6**	**-0.4**
ITM				AML	AML	19 48 56.8	
ITM				AML	AML	19 48 56.9	
PYL	**PYLOS**	0.45	219	P	**Pg**	**19 48 59.1**	**-0.6**
PYL				S	**Sg**	**19 49 05.8**	**+0.1**
	12μm,0.5s						
PYL	**PYLOS**	0.45	219	P	**Pg**	**19 48 59.5**	**-0.2**
PYL				S	**Sg**	**19 49 05.7**	**-0.1**
PYL				AML	AML	19 49 06.5	
	comp=E,24181μm,0.3s						
PYL				AML	AML	19 49 06.6	
	comp=N,22104μm,0.5s						
GUR	**Goura**	0.71	16	P	**Pg**	**19 49 04.2**	**-0.4**
GUR				S	**Sb**	**19 49 14.9**	**-0.2**
	comp=N,11μm,0.4s						
GUR	**Goura**	0.71	16	P	**Pg**	**19 49 04.4**	**-0.2**
GUR				S	**Sb**	**19 49 14.7**	**-0.4**
GUR				AML	AML	19 49 18.6	
	comp=N,25433μm,0.4s						
GUR				AML	AML	19 49 22.1	
	comp=E,17204μm,0.3s						
DRO	**Drossia**	0.77	336	P	**Pb**	**19 49 05.7**	**-0.4**
DRO				S	**Sn**	**19 49 18.2**	**-0.8**
	comp=E,9μm,0.3s						
DRO	**Drossia**	0.77	336	P	**Pb**	**19 49 05.7**	**-0.4**
DRO				S	**Sb**	**19 49 16.5**	**-0.1**
DRO				AML	AML	19 49 22.1	
	comp=E,21295μm,0.2s						
DRO				AML	AML	19 49 26.4	
	comp=N,17370μm,0.3s						
KLV	**Kalavryta, Ach**	0.80	3	P	**Pg**	**19 49 05.7**	**-0.5**
KLV				S	**Sb**	**19 49 18.0**	**+0.6**
	comp=N,5μm,0.3s						
KLV	**Kalavryta, Ach**	0.80	3	P	**Pg**	**19 49 06.0**	**-0.2**
KLV				S	**Sb**	**19 49 17.3**	**-0.1**
KLV				AML	AML	19 49 22.6	
	comp=E,12818μm,0.3s						
KLV				AML	AML	19 49 24.1	
	comp=N,6552μm,0.4s						
KRND	**KRANIDI**	0.85	81	P	**Pg**	**19 49 07.2**	**+0.1**
KRND				S	**Sb**	**19 49 19.5**	**+0.7**
	comp=N,4μm,0.4s						
KRND	**KRANIDI**	0.85	81	P	**Pg**	**19 49 07.2**	**+0.1**
KRND				S	**Sg**	**19 49 18.7**	**+0.5**
KRND				AML	AML	19 49 22.3	
	comp=N,8989μm,0.4s						
KRND				AML	AML	19 49 23.6	
	comp=E,8707μm,0.4s						
VLI	**Veliai**	0.85	128	P	**Pg**	**19 49 06.6**	**-0.7**
VLI				S	**Sg**	**19 49 17.9**	**-0.5**
	comp=E,5μm,0.8s						
VLI	**Veliai**	0.85	128	P	**Pg**	**19 49 07.0**	**-0.3**
VLI				S	**Sg**	**19 49 18.8**	**+0.4**
VLI				AML	AML	19 49 25.1	
	comp=N,7138μm,0.7s						
VLI				AML	AML	19 49 28.6	
	comp=E,5965μm,0.8s						
EPID	**Epidavros**	0.89	65	P	**Pg**	**19 49 07.8**	**-0.1**
EPID				S	**Sb**	**19 49 21.4**	**+1.4**
	comp=E,4μm,0.5s						
EPID	**Epidavros**	0.89	65	P	**Pg**	**19 49 07.9**	**-0.1**
THAL	**Thalero**	0.91	29	P	**Pg**	**19 49 07.7**	**-0.6**
THAL				S	**Sn**	**19 49 21.9**	**-0.5**
	comp=E,8μm,0.4s						
THAL	**Thalero**	0.91	29	P	**Pg**	**19 49 08.1**	**-0.2**
THAL				S	**Sb**	**19 49 20.6**	**+0.1**
MNVA	**Monemvasia**	0.94	126	P	**Pg**	**19 49 08.8**	**0.0**
MNVA				S	**Sg**	**19 49 21.2**	**+0.2**
MNVA				AML	AML	19 49 31.2	
	comp=N,3290μm,0.5s						
MNVA				AML	AML	19 49 34.9	
	comp=E,6899μm,0.5s						
LAKA	**Lakka**	0.99	354	P	**Pg**	**19 49 09.4**	**-0.5**
LAKA				S	**Sn**	**19 49 24.0**	**-0.7**
LAKA				AML	AML	19 49 26.8	
	comp=N,6339μm,0.4s						
LAKA				AML	AML	19 49 27.3	
	comp=E,7628μm,0.3s						
LOUT	**Loutraki**	1.01	43	P	**Pg**	**19 49 09.8**	**-0.5**
LOUT				S	**Sn**	**19 49 25.3**	**+0.2**
	comp=E,5μm,1.0s						
LOUT	**Loutraki**	1.01	43	P	**Pg**	**19 49 10.0**	**-0.3**
LOUT				S	**Sb**	**19 49 24.3**	**+0.7**
LOUT				AML	AML	19 49 33.0	
	comp=E,1876μm,0.4s						
LOUT				AML	AML	19 49 33.8	
	comp=N,1582μm,0.9s						
UPR	**University Cam**	1.06	347	P	**Pn**	**19 49 11.3**	**-0.2**
UPR				S	**Sn**	**19 49 28.5**	**+2.2**
YDRA	**Hydra**	1.09	84	P	**Pb**	**19 49 11.7**	**+0.1**
YDRA				S	**Sb**	**19 49 26.3**	**+0.5**
YDRA				AML	AML	19 49 31.4	
	comp=E,9977μm,0.5s						
YDRA				AML	AML	19 49 32.6	
	comp=N,6937μm,0.7s						
LTHK	**Lithakia**	1.11	295	P	**Pg**	**19 49 11.9**	**-0.2**
LTHK				S	**Sn**	**19 49 29.2**	**+1.9**
	comp=N,7μm,0.4s						
LTHK	**Lithakia**	1.11	295	P	**Pg**	**19 49 11.8**	**-0.2**
LTHK				S	**Sn**	**19 49 27.3**	**0.0**
LTHK				AML	AML	19 49 39.7	
	comp=E,12603μm,0.4s						
LTHK				AML	AML	19 49 40.8	
	comp=N,12881μm,0.4s						
SERG	**Sergoula**	1.16	358	P	**Pb**	**19 49 12.4**	**-0.5**
SERG				S	**Sn**	**19 49 30.9**	**+2.1**
	comp=N,4μm,0.3s						
SERG	**Sergoula**	1.16	358	P	**Pb**	**19 49 12.7**	**-0.2**
SERG				S	**Sn**	**19 49 29.4**	**+0.6**
SERG				AML	AML	19 49 33.7	
	comp=E,10683μm,0.2s						
SERG				AML	AML	19 49 34.6	
	comp=N,7090μm,0.3s						
EFP	**Efpalio**	1.19	353	P	**Pb**	**19 49 12.6**	**-0.6**
EFP				S	**Sn**	**19 49 32.2**	**+2.9**
	comp=N,3μm,0.4s						
EFP	**Efpalio**	1.19	353	P	**Pn**	**19 49 13.2**	**0.0**
EFP				S	**Sn**	**19 49 29.9**	**+0.6**
EFP				AML	AML	19 49 34.3	
	comp=N,5514μm,0.3s						
EFP				AML	AML	19 49 35.8	
	comp=E,4430μm,0.5s						
KTHA	**Kythira Island**	1.25	142	P	**Pn**	**19 49 14.3**	**+0.1**
KTHA				S	**Sb**	**19 49 31.2**	**+0.7**
	comp=E,3μm,0.7s						
KTHA	**Kythira Island**	1.25	142	Pn	**Pn**	**19 49 13.7**	**-0.5**
KTHA	**Kythira Island**	1.25	142	P	**Pn**	**19 49 14.0**	**-0.1**
KTHA				S	**Sb**	**19 49 30.8**	**+0.3**
KTHA				AML	AML	19 49 38.0	
	comp=E,7435μm,0.7s						
KTHA				AML	AML	19 49 43.4	
	comp=N,5899μm,0.7s						
DLFA	**Delphi**	1.27	14	P	**Pb**	**19 49 14.6**	**0.0**
DLFA				S	**Sn**	**19 49 31.6**	**+0.2**
DLFA				AML	AML	19 49 39.1	
	comp=E,2202μm,0.4s						
DLFA				AML	AML	19 49 42.1	
	comp=N,3385μm,0.5s						
VILL	**Villia**	1.33	46	P	**Pn**	**19 49 15.2**	**0.0**
VILL				S	**Sg**	**19 49 33.6**	**+0.1**
	comp=N,2μm,0.6s						
VIL2	**Platees**	1.33	44	P	**Pn**	**19 49 15.5**	**+0.2**
VIL2				S	**Sn**	**19 49 33.4**	**+0.3**
VIL2				AML	AML	19 49 38.8	
	comp=E,6830μm,0.6s						
VIL2				AML	AML	19 49 43.0	
	comp=N,4426μm,0.7s						
ANX	**Ano Chora**	1.35	354	P	**Pb**	**19 49 15.8**	**-0.3**
ANX				S	**Sg**	**19 49 34.2**	**-0.1**
ANX				AML	AML	19 49 39.8	
	comp=N,8770μm,0.5s						
ANX				AML	AML	19 49 40.7	
	comp=E,7436μm,0.4s						
PVO	**Paravola**	1.44	342	P	**Pb**	**19 49 17.2**	**-0.3**
ATH	**Athens Observa**	1.47	60	P	**Pn**	**19 49 17.7**	**+0.5**
ATH				S	**Sg**	**19 49 38.2**	**0.0**
	comp=E,2μm,0.7s						
ATH	**Athens Observa**	1.47	60	P	**Pn**	**19 49 17.9**	**+0.7**
ATH				S	**Sn**	**19 49 36.8**	**+0.5**
ATH				AML	AML	19 49 43.6	
	comp=N,3599μm,0.5s						
ATH				AML	AML	19 49 45.9	
	comp=E,2783μm,1.1s						
VLY	**Voula,Athens**	1.48	65	P	**Pn**	**19 49 17.7**	**+0.5**
VLY				S	**Sb**	**19 49 37.2**	**+0.3**
VLY				AML	AML	19 49 43.9	
	comp=E,5251μm,0.4s						
VLY				AML	AML	19 49 44.3	
	comp=N,3528μm,0.8s						
PSDA	**Pessada-Kefalo**	1.48	306	P	**Pb**	**19 49 18.0**	**-0.3**
VLS	**Valsamata**	1.52	308	P	**Pn**	**19 49 18.2**	**+0.4**
VLS				S	**Sg**	**19 49 38.3**	**-1.3**
VLS				AML	AML	19 49 48.1	
	comp=E,1906μm,0.6s						
VLS				AML	AML	19 49 48.2	
	comp=N,1796μm,0.6s						
ATHU	**Athens Univers**	1.52	61	P	**Pn**	**19 49 18.4**	**+0.6**
ATHU				S	**Sn**	**19 49 37.7**	**+0.2**
ATHU				AML	AML	19 49 45.0	
	comp=N,1396μm,0.7s						
ATHU				AML	AML	19 49 49.5	
	comp=E,685μm,0.8s						
LKR	**Lokris**	1.57	27	P	**Pb**	**19 49 19.3**	**-0.5**
LKR				S	**Sb**	**19 49 39.8**	**+0.2**
LKR				AML	AML	19 49 48.4	
	comp=N,2053μm,0.5s						
LKR				AML	AML	19 49 49.3	
	comp=E,4114μm,0.8s						
AXAR	**Agios Charalam**	1.58	16	P	**Pb**	**19 49 19.6**	**-0.3**
AXAR				S	**Sb**	**19 49 39.2**	**-0.7**
AXAR				AML	AML	19 49 46.6	
	comp=E,8163μm,0.5s						
AXAR				AML	AML	19 49 50.2	
	comp=N,6997μm,0.6s						
ATAL	**Atalanti**	1.61	26	P	**Pb**	**19 49 20.2**	**-0.4**
ATAL				S	**Sb**	**19 49 40.5**	**-0.4**
ATAL				AML	AML	19 49 45.5	
	comp=E,1722μm,0.8s						
ATAL				AML	AML	19 49 48.1	
	comp=N,1700μm,0.5s						
KEF4	**Livadi, Kephal**	1.67	308	P	**Pb**	**19 49 20.7**	**-0.7**
EVR	**Evrytania**	1.68	352	P	**Pg**	**19 49 22.9**	**-0.1**
ANKY	**Antikythira Is**	1.68	145	P	**Pn**	**19 49 21.5**	**+1.5**
ANKY				S	**Sn**	**19 49 42.8**	**+1.3**
	comp=N,2μm,0.9s						
ANKY	**Antikythira Is**	1.68	145	P	**Pn**	**19 49 20.2**	**+0.2**
ANKY				S	**Sn**	**19 49 41.1**	**-0.4**
ANKY				AML	AML	19 49 52.7	
	comp=E,3316μm,1.0s						
ANKY				AML	AML	19 49 54.3	
	comp=N,3262μm,0.8s						
FSK	**Fiskardo**	1.72	315	P	**Pn**	**19 49 20.8**	**+0.3**
FSK				S	**Sg**	**19 49 46.6**	**+0.6**
	comp=N,740nm,0.9s						
FSK	**Fiskardo**	1.72	315	P	**Pb**	**19 49 22.2**	**-0.1**
FSK				S	**Sn**	**19 49 42.6**	**+0.2**
FSK				AML	AML	19 49 58.5	
	comp=N,1966μm,0.9s						
FSK				AML	AML	19 49 59.3	
	comp=E,1706μm,0.3s						
AGG	**Agios Georgios**	1.78	6	P	**Pb**	**19 49 22.8**	**-0.6**
AGG				S	**Sg**	**19 49 48.1**	**0.0**
	comp=E,278nm,0.4s						
AGG	**Agios Georgios**	1.78	6	Pn	**Pn**	**19 49 20.7**	**-0.7**
AGG	**Agios Georgios**	1.78	6	P	**Pg**	**19 49 24.1**	**-0.8**
AGG				S	**Sg**	**19 49 49.8**	**+1.7**
AGG				*i* AML	AML	19 49 58.0	
	comp=E,136nm,0.4s						
EVGI	**Lefkada island**	1.78	321	P	**Pb**	**19 49 23.2**	**-0.3**
RODP	**Rodopos**	2.15	141	Pn	**Pn**	**19 49 27.2**	**+0.7**
CHAN	**Chania**	2.33	137	P	**Pn**	**19 49 30.9**	**+1.9**
IMMV	**Iera Moni Meta**	2.34	139	Pn	**Pn**	**19 49 29.8**	**+0.7**
IMMV	**Iera Moni Meta**	2.34	139	P	**Pn**	**19 49 29.9**	**+0.8**
KNDR	**Palaiochora Ch**	2.38	147	Pn	**Pn**	**19 49 30.1**	**+0.4**
SANT	**Santorini**	2.83	107	⇑P	**Pn**	**19 49 37.5**	**+1.6**
SANT	**Santorini**	2.83	107	Pn	**Pn**	**19 49 36.5**	**+0.6**
LIT	**Litokhoron**	2.87	6	SPECP		19 49 38.0	
LIT				P	**Pn**	**19 49 38.9**	**+2.6**
GVDS	**Gavdos**	2.89	146	Pn	**Pn**	**19 49 37.6**	**+0.9**
GVD	**Gavdhos**	2.89	146	Pn	**Pn**	**19 49 37.8**	**+1.1**
IDI	**Anoyia**	2.98	130	⇑P	**Pn**	**19 49 39.3**	**+1.3**
IDI	**Anoyia**	2.98	130	P	**Pn**	**19 49 39.1**	**+1.1**
	comp=E,3.3nm,0.3s,baz=316,slow=17,SNR=31						
IDI				S	**Sn**	**19 50 16.7**	**+3.0**
	comp=E,25nm,0.4s,baz=45,slow=16,SNR=4.2						
	comp=E,16nm,0.4s						
IDI	**Anoyia**	2.98	130	Pn	**Pn**	**19 49 38.8**	**+0.8**
HRKL	**Herakleio**	3.10	128	Pn	**Pn**	**19 49 40.5**	**+1.0**
OUR	**Ouranopolis**	3.41	25	Pn	**Pn**	**19 49 44.4**	**+0.6**
SIGR	**SIGRI**	3.55	55	Pn	**Pn**	**19 49 45.9**	**+0.2**
FNA	**Florina**	3.58	351	SPECP		19 49 47.0	
FNA				P	**Pn**	**19 49 47.7**	**+1.6**
FNA	**Florina**	3.58	351	*e*Pn	**Pn**	**19 49 49.4**	**+3.3**
FNA				*e*Sn	**Sn**	**19 50 27.8**	**-0.6**
ZEYE	**Izmir, Urla-Ze**	3.63	73	P	**Pn**	**19 49 45.5**	**-1.3**
KARB	**zmir-Karabur**	3.69	66	SPECP		19 49 46.0	
KARB				P	**Pn**	**19 49 46.6**	**-1.0**
GRG	**Griva**	3.71	4	Pn	**Pn**	**19 49 48.5**	**+0.5**
URLA	**Izmir**	3.73	71	SPECP		19 49 48.0	
URLA				P	**Pn**	**19 49 48.8**	**+0.6**
DGB	**zmir**	3.88	77	P	**Pn**	**19 49 49.9**	**-0.3**
KOCA	**Canakkale, Ayv**	3.89	53	P	**Pn**	**19 49 50.1**	**-0.3**
KOSK	**Kos Island**	3.94	96	Pn	**Pn**	**19 49 52.2**	**+1.2**
ZKR	**Zakros**	3.95	121	Pn	**Pn**	**19 49 52.5**	**+1.2**
KNT	**Kendrikon**	3.96	9	Pn	**Pn**	**19 49 52.0**	**+0.7**
OHR	**Ohrid**	3.99	346	*e*Pn	**Pn**	**19 49 55.8**	**+4.0**
SRS	**Serrai**	4.03	16	*e*Pn	**Pn**	**19 49 55.7**	**+3.3**
BOZC	**Bozcaada**	4.04	49	SPECP		19 49 50.0	
BOZC				P	**Pn**	**19 49 50.9**	**-1.6**
BLCB	**Balcova**	4.07	72	SPECP		19 49 52.0	
BLCB				P	**Pn**	**19 49 52.6**	**-0.3**
VAY	**Valandovo**	4.08	5	*e*Pn	**Pn**	**19 49 56.8**	**+3.8**
VAY				*e*Sn	**Sn**	**19 50 44.0**	**+3.2**
GOKA	**anakkale-Gk**	4.18	44	SPECP		19 49 54.0	
GOKA				P	**Pn**	**19 49 54.3**	**-0.1**
DKL	**Dikili**	4.20	63	P	**Pn**	**19 49 51.0**	**-3.7**
ZEDA	**zmir-Bergama**	4.28	65	P	**Pn**	**19 49 56.5**	**+0.7**
BAYC	**CANAKKALE_Bayr**	4.29	53	SPECP		19 49 55.0	
BAYC				P	**Pn**	**19 49 55.4**	**-0.5**
CNKL	**anakkale-Mer**	4.38	49	SPECP		19 49 55.0	
CNKL				P	**Pn**	**19 49 55.9**	**-1.2**
STIP	**Stip**	4.44	1	*e*Pn	**Pn**	**19 50 02.2**	**+4.2**
COMU	**Canakkale**	4.45	49	Pn	**Pn**	**19 49 58.7**	**+0.6**
TIP	**Timpagrande**	4.63	296	⇓P	**Pn**	**19 50 02.3**	**+1.7**
TIP				⇑S	**Sn**	**19 50 57.7**	**+3.4**
RDO	**Rodhopi**	4.72	33	Pn	**Pn**	**19 50 02.1**	**+0.3**
ALN	**Alexandroupoli**	4.76	39	Pn	**Pn**	**19 50 02.7**	**+0.3**
ERIK	**Erikli-Kesan**	4.85	44	P	**Pn**	**19 49 59.8**	**-3.8**
KDZ	**Kurdzhali**	5.09	29	Pn	**Pn**	**19 50 07.5**	**+0.6**
PLD	**Plovdiv**	5.25	22	Pn	**Pn**	**19 50 10.7**	**+1.6**
PLD	**Plovdiv**	5.25	22	*e*Pn	**Pn**	**19 50 13.4**	**+4.3**
PRVS	**Prvonek**	5.25	360	*e*Pn	**Pn**	**19 50 11.3**	**+2.1**
MATE	**Matera**	5.41	311	⇑P	**Pn**	**19 50 12.2**	**+1.0**
DRME	**Dracevica, Mon**	5.42	336	*e*Pn	**Pn**	**19 50 12.6**	**+1.2**
VTS	**Vitosha**	5.43	9	*e*Pn	**Pn**	**19 50 14.2**	**+2.4**
VTS				*e*Sn	**Sn**	**19 51 16.0**	**+1.7**
BARS	**Barje**	5.57	358	*e*Pn	**Pn**	**19 50 16.6**	**+3.2**
HCY	**Herceg Novi**	5.89	333	*e*Pn	**Pn**	**19 50 18.6**	**+0.8**
SELS	**Selova**	6.01	353	*e*Pn	**Pn**	**19 50 21.6**	**+2.0**
ZAPS	**Zavoj**	6.03	4	*e*Pn	**Pn**	**19 50 22.6**	**+2.7**
VAE	**Valguarnera**	6.13	274	P	**Pn**	**19 50 23.8**	**+2.5**
	comp=E,2.5nm,0.3s,baz=86,slow=9.0,SNR=5.4						
VAE				S	**Sn**	**19 51 37.0**	**+5.7**
	comp=E,28nm,0.8s,baz=190,slow=15,SNR=4.2						
	comp=E,7.8nm,0.4s						
TREB	**Trebinje**	6.17	333	*e*Pn	**Pn**	**19 50 21.0**	**-0.8**
SJES	**Sjenica**	6.22	346	*e*Pn	**Pn**	**19 50 24.8**	**+2.3**
SJES				*e*Sn	**Sn**	**19 51 28.8**	**-4.9**
SJES	**Sjenica**	6.22	346	*e*Pn	**Pn**	**19 50 24.3**	**+1.8**
BRY	**Bratogost**	6.27	335	*e*Pn	**Pn**	**19 50 23.8**	**+0.5**
BOVS	**Bovan**	6.39	357	*e*Pn	**Pn**	**19 50 26.8**	**+2.1**
UPM	**Unac-Piva**	6.43	339	*e*Pn	**Pn**	**19 50 28.2**	**+2.7**
STON	**Ston**	6.55	330	*e*Pn	**Pn**	**19 50 26.8**	**-0.1**
ZAGS	**Zajecar**	6.56	1	*e*Pn	**Pn**	**19 50 29.7**	**+2.7**
GRUS	**Gruza**	6.72	351	*e*Pn	**Pn**	**19 50 31.1**	**+1.9**
BBLS	**Lazići**	6.92	344	*e*Pn	**Pn**	**19 50 32.7**	**+0.6**
BBLS				*e*Sn	**Sn**	**19 51 47.3**	**-3.5**
BBLS	**Lazići**	6.92	344	*e*Pn	**Pn**	**19 50 30.9**	**-1.2**
DIVS	**Divibare**	7.03	347	*e*Pn	**Pn**	**19 50 34.4**	**+0.8**
DIVS				*e*Sn	**Sn**	**19 51 49.6**	**-3.8**
DIVS	**Divibare**	7.03	347	*e*Pn	**Pn**	**19 50 33.7**	**+0.1**
TRUS	**Trudelj**	7.09	350	*e*Pn	**Pn**	**19 50 35.4**	**+1.1**
HAPS	**Han Pijesak,BI**	7.24	342	*e*Pn	**Pn**	**19 50 36.7**	**+0.2**
MDVR	**Moldovita**	7.53	358	⇑P	**Pn**	**19 50 42.4**	**+2.0**
TEKS	**Tekeris**	7.55	346	*e*Pn	Pn	19 50 33.1	-7.6
HERR	**Herculane**	7.63	2	⇑P	**Pn**	**19 50 44.7**	**+2.9**
SRKY	**Kupres RS**	7.78	333	*e*Pn	**Pn**	**19 50 44.1**	**+0.2**
FRGS	**Fruska Gora**	8.09	348	*e*Pn	**Pn**	**19 50 45.1**	**-3.0**
MGRS	**Mrkonjic Grad**	8.11	334	*e*Pn	**Pn**	**19 50 47.4**	**-0.9**
GZR	**Gura Zlata**	8.15	3	⇓P	**Pn**	**19 50 52.7**	**+3.7**
BLY	**Banja Luka**	8.36	335	*e*Pn	**Pn**	**19 50 50.1**	**-1.7**
A050A	**Klekovaca**	8.37	331	*e*Pn	**Pn**	**19 50 52.1**	**+0.2**
BZS	**Buzias**	8.37	358	⇑P	**Pn**	**19 50 53.2**	**+1.4**
VOIR		8.48	14	⇑P	**Pn**	**19 50 56.4**	**+3.0**
HARR	**Harsova**	8.64	29	⇑P	**Pn**	**19 50 59.2**	**+3.6**
TIRR	**Tirgusor**	8.64	32	⇑P	**Pn**	**19 50 57.9**	**+2.3**
A051A	**Mrakovica**	8.69	335	*e*Pn	**Pn**	**19 50 55.7**	**-0.6**
MLR	**Muntele Rosu**	8.73	18	⇑P	**Pn**	**19 51 00.4**	**+3.5**
MLR	**Muntele Rosu**	8.73	18	P	**Pn**	**19 50 59.3**	**+2.4**
	comp=E,0.2nm,0.3s,baz=210,slow=18,SNR=2.2						
	comp=E,1.0nm,0.5s						
TPGR	**Topolog**	8.97	30	⇑P	**Pn**	**19 51 03.6**	**+3.4**
COVR	**Voineasa-Covas**	9.12	18	⇑P	**Pn**	**19 51 06.4**	**+4.1**
AMBH	**Ambrzfalva**	9.15	354	⇓P	**Pn**	**19 51 03.4**	**+0.8**
PLOR	**Plostina**	9.24	20	⇑P	**Pn**	**19 51 08.6**	**+4.7**
VRI	**Vrincioaia**	9.28	20	⇑P	**Pn**	**19 51 08.9**	**+4.5**
BRTR	**Keskin Array B**	9.38	71	P	**Pn**	**19 51 09.3**	**+3.4**
	comp=E,0.7nm,0.3s,baz=253,slow=13,SNR=5.3						
BRTR				LR	LR	19 54 55.9	
	comp=E,60nm,20.5s,baz=311,slow=39						
	comp=E,2.5nm,0.5s						
BOJS	**Bojanci**	9.72	330	*e*Pn	**Pn**	**19 51 10.0**	**-0.4**
CRES	**Cresnjev**	9.91	332	*e*Pn	**Pn**	**19 51 12.6**	**-0.4**
CEY	**Cerknica**	10.25	328	*e*Pn	**Pn**	**19 51 18.5**	**+0.9**
SKDS	**Skadanscina**	10.27	326	*e*Pn	**Pn**	**19 51 18.4**	**+0.4**
KEST	**Kesra**	10.38	265	P	**Pn**	**19 51 21.6**	**+2.1**
	comp=E,0.3nm,0.3s,baz=54,slow=12,SNR=5.8						
	comp=E,2.8nm,0.7s						
VYHS	**Vyhne**	11.49	349	*e*PN	**Pn**	**19 51 38.8**	**+4.2**
VYHS	**Vyhne**	11.49	349	*e*SN	**Sn**	**19 53 48.3**	**+5.4**
MMAI	**Mount Meron Ar**	11.68	107	P	**Pn**	**19 51 39.7**	**+2.3**
	comp=E,1.8nm,0.3s,baz=283,slow=12,SNR=8.2						
	comp=E,1.1nm,0.3s						
GERES	**GERESS Array B**	13.11	335	P	**Pn**	**19 51 59.3**	**+2.6**
	comp=E,0.1nm,0.3s,baz=157,slow=14,SNR=2.4						
	comp=E,0.3nm,0.5s						
EIL	**Elat**	13.12	121	S	**Sn**	**19 54 16.4**	**-6.3**
	comp=E,2.4nm,0.5s,baz=57,slow=23,SNR=3.1						
AKASG	**Malin Array Be**	14.38	19	P	**Pn**	**19 52 15.6**	**+1.5**
	comp=E,0.5nm,0.3s,baz=211,slow=13,SNR=5.2						
	comp=E,0.3nm,0.4s						
ESDC	**Sonseca Array**	20.53	285	P	**P**	**19 53 30.3**	**+1.2**
	comp=E,1.0nm,0.9s,baz=78,slow=12,SNR=7.7						
	comp=E,1.0nm,0.9s						
BELG	**Belogornoye**	23.43	42	P	**P**	**19 53 59.1**	**-0.5**
	comp=E,2.6nm,0.4s,baz=239,slow=17,SNR=7.6						

	comp=E,2.6nm,0.4s						
HFS	**Hagfors**	23.53	349	P	**P**	19 54 00.2	-0.4
	comp=E,5.5nm,0.6s,baz=139,slow=9.8,SNR=14						
	comp=E,5.5nm,0.6s						
FINES	**FINESS Array B**	24.35	5	P	**P**	19 54 07.4	-0.9
	comp=E,0.9nm,0.4s,baz=159,slow=7.4,SNR=7.9						
	comp=E,0.9nm,0.4s						
NB2	**NORSAR Subarra**	24.79	347	P	**P**	19 54 12.0	-0.3
	comp=Z,1.4nm,0.6s,baz=159,slow=9.3						
NOA	**NORSAR Array B**	24.79	347	P	**P**	19 54 12.0	-0.3
	comp=Z,0.9nm,0.6s,baz=156,slow=8.9,SNR=8.9						
	comp=Z,0.9nm,0.6s						
EKA	**Eskdalemuir Ar**	24.91	325	P	**P**	19 54 13.8	+0.4
	comp=Z,3.3nm,0.7s,baz=129,slow=7.9,SNR=5.3						
	comp=Z,3.3nm,0.7s						
TORD	**Torodi Ar. Bea**	30.14	223	P	**P**	19 55 00.5	-0.2
	comp=Z,0.7nm,0.5s,baz=33,slow=9.0,SNR=5.2						
	comp=Z,0.7nm,0.5s						
ARCES	**ARCESS Array B**	32.40	2	P	**P**	19 55 19.8	-0.3
	comp=Z,3.9nm,1.0s,baz=189,slow=11,SNR=6.2						
	comp=Z,3.9nm,1.0s						
MKAR	**Makanchi Array**	44.73	58	P	**P**	19 57 03.0	-0.9
	comp=Z,0.6nm,0.5s,baz=270,slow=7.4,SNR=16						
MKAR				PcP	**PcP**	19 58 46.0	-0.1
	comp=Z,0.5nm,0.5s,baz=266,slow=3.7,SNR=3.6						
	comp=Z,0.6nm,0.5s						
ZALV	**Zalesovo Beam**	45.39	48	P	**P**	19 57 08.0	-0.9
	comp=Z,1.2nm,0.4s,baz=266,slow=8.9,SNR=8.2						
	comp=Z,1.2nm,0.4s						
SCHQ	**Schefferville**	59.99	318	P	**P**	19 58 56.3	-0.7
	comp=Z,1.7nm,0.7s,baz=63,slow=4.5,SNR=2.0						
	comp=Z,1.7nm,0.7s						
SONM	**Songino Array**	60.08	51	P	**P**	19 58 57.6	-0.2
	comp=Z,0.3nm,0.8s,baz=282,slow=7.2,SNR=2.2						
	comp=Z,0.3nm,0.8s						
CMAR	**Chiang Mai Arr**	68.77	83	P	**P**	19 59 54.5	-0.6
	comp=Z,0.4nm,0.3s,baz=144,slow=38,SNR=3.2						
	comp=Z,0.4nm,0.3s						
YKA	**Yellowknife Ar**	74.69	341	P	**P**	20 00 29.1	-0.7
	comp=Z,0.3nm,0.4s,baz=36,slow=5.2,SNR=5.9						
	comp=Z,0.3nm,0.4s						
ULM	**Lac du Bonnet**	77.19	324	P	**P**	20 00 44.9	+0.5
	comp=Z,1.9nm,0.6s,baz=90,slow=3.7,SNR=3.6						
	comp=Z,1.9nm,0.6s						
KSRS	**Korea Array**	78.94	51	P	**P**	20 00 54.0	-0.3
	comp=Z,0.5nm,0.4s,baz=316,slow=4.7,SNR=2.3						
	comp=Z,0.5nm,0.4s						
WRA	**Warramunga Arr**	119.24	94	PKP	**PKPdf**	20 07 38.7	-1.6
	comp=Z,0.7nm,1.1s,baz=319,slow=1.9,SNR=1.5						
ASAR	**Alice Springs**	120.82	98	PKP	**PKPdf**	20 07 41.6	-1.6
	comp=Z,0.2nm,0.3s,baz=297,slow=2.0,SNR=4.6						

NOU ***20*** *19:50:34.4, 40°.16S×177°.19E, h0^{km}, MLv3.5/6, Off E. Coast of N. Island, N.Z.*

WEL ***20*** *19:50:36.9±0.4, 40°S±3°×17°7E±°, h18^{km}±3^{km}, M3.2/18, ML3.5/18, MLv3.2/18, Error ellipse: s-maj=0.0km s-min=0.0km az=128.3, confirmed*

ISC 20 19:50:37.1±1.0, **40°.16S**±0°.03×**176°.65E**±0°.03, **h26**^{km}±6^{km}, **n82**, σ**0^{s}86**/88, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRHZ	**Porangahau**	0.11	187	P	**Pb**	19 50 41.9	0.0
PRHZ				S	**Sb**	19 50 46.2	+1.0
WPHZ	**Waipukurau**	0.19	300	P	**Pb**	19 50 41.9	-0.8
WPHZ				S	**Sb**	19 50 46.3	-0.2
PXZ	**Pawanui**	0.21	52	P	**Pb**	19 50 42.7	-0.1
PXZ				S	**Sb**	19 50 48.5	+1.7
DVHZ	**Dannevirke**	0.40	249	P	**Pb**	19 50 45.7	+0.1
DVHZ				S	**Sb**	19 50 52.4	+0.9
KAHZ	**Kahuranaki**	0.40	25	P	**Pb**	19 50 46.1	+0.4
KAHZ				S	**Sn**	19 50 54.0	0.0
PNHZ	**Pukenui**	0.42	305	P	**Pb**	19 50 45.5	-0.6
TSZ	**Takapari Road**	0.54	280	P	**Pb**	19 50 47.5	-0.5
TSZ				S	**Sb**	19 50 55.5	+0.1
CKHZ	**Cape Kidnapper**	0.60	33	P	**Pb**	19 50 49.1	+0.2
BFZ	**Birch Farm**	0.61	211	P	**Pb**	19 50 49.8	+0.7
BFZ	**Birch Farm**	0.61	211	P	**Pb**	19 50 49.6	+0.5
PRWZ	**Pori Road**	0.65	233	P	**Pn**	19 50 51.0	+0.3
MCHZ	**McNeill Hill**	0.71	3	P	**Pb**	19 50 51.4	+0.5
POWZ	**Post Office Ro**	0.71	251	P	**Pn**	19 50 51.5	0.0
KWHZ	**Kaweka Forest**	0.76	346	P	**Pb**	19 50 51.6	-0.1
BHHZ	**Black Hill Sta**	0.81	326	P	**Pb**	19 50 52.0	-0.5
CPWZ	**Castlepoint**	0.82	204	P	**Pb**	19 50 53.0	+0.3
TIWZ	**Tintock**	0.85	223	P	**Pb**	19 50 53.2	0.0
ARHZ	**Aropaoanui**	0.93	17	P	**Pb**	19 50 54.5	-0.1
MRZ	**Mangatainoka R**	0.96	238	P	**Pb**	19 50 54.8	-0.2
BKZ	**Black Stump Fm**	1.00	353	P	**Pb**	19 50 55.2	-0.6
BKZ	**Black Stump Fm**	1.00	353	P	**Pb**	19 50 55.1	-0.7
MOVZ	**Moawhango**	1.02	317	P	**Pb**	19 50 55.9	-0.3
NMHZ	**Naumai**	1.07	6	P	**Pn**	19 50 56.6	+0.2
TMWZ	**Te Maipa**	1.11	211	P	**Pn**	19 50 56.2	-0.8
HOWZ	**Holdsworth Sta**	1.14	229	P	**Pn**	19 50 56.7	-0.7
WNVZ	**Wahianoa**	1.16	315	P	**Pb**	19 50 58.8	+0.2
TUVZ	**Tukino**	1.18	319	P	**Pb**	19 50 59.1	+0.3
MTVZ	**Mangateitei**	1.19	310	P	**Pb**	19 50 59.4	+0.3
WHVZ	**Whangaehu Hut**	1.20	317	P	**Pb**	19 50 59.4	+0.2
TRVZ	**Turoa**	1.21	315	P	**Pb**	19 50 59.8	+0.4
DRZ	**Dome Shelter**	1.22	316	P	**Pb**	19 50 59.9	+0.3
FWVZ	**Far West T-bar**	1.24	316	P	**Pb**	19 50 59.8	-0.2
SNVZ	**South Ngauruho**	1.25	321	P	**Pb**	19 51 00.1	0.0
OTVZ	**Oturere**	1.25	322	P	**Pb**	19 50 59.9	-0.2
ETVZ	**East Tongariro**	1.25	324	P	**Pb**	19 51 00.2	+0.1
NGZ	**Ngauruhoe**	1.27	320	P	**Pb**	19 51 00.4	-0.1
TMVZ	**Te Maari**	1.27	325	P	**Pb**	19 51 00.4	-0.1
RAHZ	**Arahi**	1.28	15	P	**Pn**	19 50 59.3	-0.1
NTVZ	**North Tongarir**	1.30	324	P	**Pb**	19 51 00.9	0.0
NNVZ	**North Ngauruho**	1.30	322	P	**Pb**	19 51 00.8	-0.1
OGWZ	**Otaki Gorge**	1.31	239	P	**Pn**	19 50 59.6	-0.1
MTHZ	**Maungataniwha**	1.31	6	P	**Pn**	19 50 59.5	-0.3
KRVZ	**Karewarewa**	1.32	323	P	**Pb**	19 51 01.3	+0.1
WTVZ	**West Tongariro**	1.33	321	P	**Pb**	19 51 01.4	+0.1
MTW	**Mount Morrison**	1.33	221	P	**Pn**	19 50 58.9	-1.0
PKVZ	**Pokaka**	1.33	310	P	**Pb**	19 51 01.5	+0.1
RITZ	**Rihia Road**	1.33	332	P	**Pb**	19 51 01.9	+0.5
MRHZ	**Matea Rd**	1.34	352	P	**Pn**	19 51 00.5	+0.4
WAZ	**Wanganui**	1.34	287	P	**Pb**	19 51 02.2	+0.7
KATZ	**Kakaramea**	1.40	328	P	**Pb**	19 51 02.9	+0.3
TWVZ	**Taurewa**	1.44	319	P	**Pb**	19 51 02.9	-0.3
TRWZ	**Traveller**	1.44	210	P	**Pn**	19 51 00.1	-1.4
RATZ	**Rangitukua**	1.46	332	P	**Pb**	19 51 04.9	+1.3
SNGZ	**Shannon Statio**	1.48	21	P	**Pn**	19 51 01.6	-0.4
KIW	**Kapiti Island**	1.50	242	P	**Pn**	19 51 02.3	0.0
CAW	**Cannon Point**	1.53	231	P	**Pn**	19 51 02.1	-0.7
PAWZ	**Paruwai Farm**	1.54	217	P	**Pn**	19 51 01.7	-1.2
RTZ	**Ruatahuna**	1.56	9	P	**Pn**	19 51 03.1	-0.1
PLWZ	**Palliser**	1.76	216	P	**Pn**	19 51 04.1	-1.8
VRZ	**Vera Road**	1.79	305	P	**Pb**	19 51 08.4	-0.7
LREZ	**Lake Rotokare**	1.87	291	P	**Pb**	19 51 10.6	+0.1
SNZO	**South Karori**	1.87	231	P	**Pb**	19 51 13.8	+3.2
URZ	**Urewera**	1.93	11	P	**Pn**	19 51 07.4	-0.8
URZ	**Urewera**	1.93	11	P	**Pn**	19 51 07.3	-0.8
MWZ	**Matawai**	1.94	21	P	**Pn**	19 51 07.2	-1.3
TLZ	**Tolley Road**	2.02	334	P	**Pb**	19 51 12.5	-0.6
TCW	**Tory Channel**	2.09	239	P	**Pn**	19 51 09.9	-0.5
HIZ	**Hauiti**	2.15	319	P	**Pb**	19 51 17.3	+2.0
NEZ	**North Egmont**	2.16	293	P	**Pb**	19 51 15.7	+0.2
DUWZ	**D'Urville Isla**	2.18	252	P	**Pb**	19 51 14.3	-1.5
KHEZ	**Kahui Hut**	2.21	292	P	**Pb**	19 51 18.2	+1.8
KHEZ	**Kahui Hut**	2.21	292	P	**Pb**	19 51 17.0	+0.6
RUGZ	**Raukumara Rang**	2.33	20	P	**Pn**	19 51 12.7	-1.1
TUWZ	**Tuamarina**	2.42	237	P	**Pn**	19 51 13.6	-1.3
PKGZ	**Pakihiroa**	2.52	27	P	**Pn**	19 51 15.0	-1.4
HAZ	**Te Kaha**	2.56	21	P	**Pn**	19 51 16.0	-0.8
WMGZ	**Waiomatatini S**	2.71	31	P	**Pn**	19 51 18.5	-0.4
MRNZ	**Matariki Terra**	3.21	246	P	**Pn**	19 51 26.0	+0.3
QRZ	**Quartz Range**	3.21	257	P	**Pb**	19 51 31.4	-2.0
QRZ	**Quartz Range**	3.21	257	P	**Pn**	19 51 27.7	+1.9
LTZ	**Lake Taylor**	4.21	230	P	**Pn**	19 51 37.8	-1.8
CTZ	**Chatham Island**	6.16	128	P	**Pn**	19 52 06.0	-0.4

IDC ***20*** *20:05:12.2±1.9, 34°.78N×138°.32E, h0^{km}, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=64.0km s-min=21.7km az=86.0*

JMA ***20*** *20:05:15.1±0.2, 35°.6N±0°.6×140°.1E±0°.8, h68^{km}±2^{km}, MV3.2/39, CENTRAL CHIBA PREF*

JMA Felt I J1 at CENTRAL CHIBA PREF .

ISC 20 20:05:15.2±1.0, **35°.58N**±0°.04×**140°.09E**±0°.04, **h71**^{km}±7^{km}, **n29**, σ**1^{s}15**/35, **mb3.5**/3, **7D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCN	**Nagara**	0.18	151	⇓P	**Pn**	20 05 26.3	+0.4
JCN				⇓S	**Sn**	20 05 35.0	+1.3
TOK	**Tokyo**	0.29	291	P	**Pn**	20 05 26.6	+0.2
JSMT	**Sammumatsuo**	0.30	78	P	**Pn**	20 05 26.8	+0.3
BSO3	**Boso 3**	0.85	156	P	**Pn**	20 05 31.6	-0.1
BSO3				*e*S	**Sn**	20 05 44.8	+1.0
JOD2	**Odawara 2**	0.88	249	⇓P	**Pn**	20 05 31.6	-0.7
JOD2				⇓S	**Sn**	20 05 43.4	-1.6
JAG	**Ashikaga**	0.99	329	P	**Pn**	20 05 33.0	-0.7
JIM2	**Oshima 3**	1.02	212	P	**Pn**	20 05 33.0	-1.0
JIM2				*e*S	**Sn**	20 05 46.8	-1.3
JRY	**Ryogami san**	1.06	295	P	**Pn**	20 05 34.5	-0.1
BSO1	**Boso 1**	1.18	142	P	**Pn**	20 05 35.2	-0.3
BSO1				S	**Sn**	20 05 51.2	+0.5
JFNN	**Fujinakano**	1.21	252	P	**Pn**	20 05 36.1	-0.3
JFNN				S	**Sn**	20 05 51.6	-0.8
JYN	**Shimob**	1.26	267	⇓*i*P	**Pn**	20 05 36.8	-0.4
JIZS	**Izushimoda**	1.31	229	⇓*i*P	**Pn**	20 05 37.3	-0.5
JIZS				⇓S	**Sn**	20 05 53.7	-1.0
JKT	**Katashina**	1.37	330	*i* P	**Pn**	20 05 37.9	-0.7
JKT				S	**Sn**	20 05 55.0	-1.1
MJAR	**Matsushiro Arr**	1.80	303	Pn	**Pn**	20 05 43.4	-0.8
	1.3nm,0.3s,baz=155,slow=14,SNR=52						
MJAR				Sn	**Sn**	20 06 08.1	+1.8
	2.9nm,0.3s,baz=144,slow=15,SNR=9.2						
MAJO	**Matsushiro**	1.80	303	P	**Pn**	20 05 44.6	+0.3
JGF	**Kuroka**	2.23	271	P	**Pn**	20 05 52.0	+2.0
JHJ2	**Mitsune**	2.47	185	P	**Pn**	20 05 54.7	+1.4
INU	**Inuyama**	2.52	266	P	**Pn**	20 05 56.9	+3.0
JSD	**Sado**	2.86	330	P	**Pn**	20 05 58.4	-0.1
JTM	**Tenmabayashi**	5.25	8	P	**Pn**	20 06 31.6	+0.4
JHS	**Saijyo**	5.73	266	P	**Pn**	20 06 40.0	+2.2
ERM	**Erimo**	6.86	20	P	**Pn**	20 06 51.8	-1.2
JEM	**Erimo**	6.86	20	P	**Pn**	20 06 51.9	-1.1
H11N2	**WAKE ISLAND Hy**	28.39	117	T	T	20 40 44.7	
	baz=308,slow=75,SNR=13						
H11N1	**WAKE ISLAND Hy**	28.39	117	T	T	20 40 46.1	
	baz=308,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy**	28.41	117	T	T	20 40 47.5	
	baz=308,slow=75,SNR=9.6						
MKAR	**Makanchi Array**	44.00	303	P	**P**	20 13 15.6	+0.1
	0.1nm,0.4s,baz=87,slow=8.2,SNR=2.7						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	46.07	309	P	**P**	20 13 32.4	+0.7
	0.3nm,0.4s,baz=85,slow=8.1,SNR=4.7						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	55.49	187	P	**P**	20 14 42.0	-0.8
	0.2nm,0.4s,baz=0.7,slow=7.4,SNR=7.3						
	0.2nm,0.4s						

IDC ***20*** *21:02:54.9±0.8, 17°.00S×69°.37W, h186^{km}±6^{km}, mb3.9/11, mbtmp4.4/15, MS3.3/1, Error ellipse: s-maj=15.2km s-min=10.3km az=86.0*

NEIC ***20*** *21:02:54.2±1.8, 16°.93S±0°.06×69°.47W±0°.07, h186^{km}±3^{km}, mb4.4/43, ML4.5(GUC), Error ellipse: s-maj=10.6km s-min=8.0km az=109.0*

VAO ***20*** *21:02:55.8±0.4, 16°.89S×69°.44W, h189^{km}, mb4.4*

GUC ***20*** *21:02:55.5±0.5, 17°.00S×69°.70W, h195^{km}±3^{km}, ML4.5*

ISC 20 21:02:54.1±0.5, **16°.96S**±0°.04×**69°.52W**±0°.05, **h187**^{km}±5^{km}, **n180**, σ**1^{s}18**/200, **mb4.2**/26, **3C-4D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB18	**Visviri**	0.63	177	Pn	**Pn**	21 03 22.6	+1.6
PB18				Sn	**Sn**	21 03 42.8	+1.0
PB18	**Visviri**	0.63	177	⇓*i*P	**Pn**	21 03 22.8	+1.8
PB16	**IPOC Station P**	1.37	180	Pn	**Pn**	21 03 27.5	+1.3
PB16				Sn	**Sn**	21 03 52.2	+1.1
PB16	**IPOC Station P**	1.37	180	⇓*i*P	**Pn**	21 03 28.0	+1.8
PB16				*i* S	**Sn**	21 03 53.2	+2.2
LPAZ	**La Paz**	1.49	63	P	**Pn**	21 03 28.1	+0.8
	2µm,0.4s,baz=259,slow=6.0,SNR=5811						
LPAZ				LR	LR	21 03 35.0	
	comp=Z,81nm,21.5s,baz=200,slow=29						
LPAZ				S	**Sn**	21 03 51.8	-1.0
	712nm,0.5s,baz=135,slow=23,SNR=13						
LPAZ	**La Paz**	1.49	63	Pn	**Pn**	21 03 27.9	+0.6
LPAZ				Sn	**Sn**	21 03 51.3	-1.6
LPAZ	**La Paz**	1.49	63	*e*P	**Pn**	21 03 28.3	+1.0
AP01	**Chacalluta**	1.61	209	Pn	**Pn**	21 03 27.8	+0.2
AP01				Sn	**Sn**	21 03 52.7	-1.1
AP01	**Chacalluta**	1.61	209	⇑*i*P	**Pn**	21 03 27.9	+0.2
AP01				*i* S	**Sn**	21 03 53.0	-0.8
AP01				IAML		21 03 54.1	
	comp=E,7µm,0.4s						
PB12	**IPOC Station P**	1.82	205	Pn	**Pn**	21 03 29.6	-0.2
PB12	**IPOC Station P**	1.82	205	⇑*i*P	**Pn**	21 03 29.8	0.0
PB12				*i* S	**Sn**	21 03 56.3	-1.4
PB12				IAML		21 03 58.5	
	comp=E,3µm,0.2s						
MNMC	**Minye Minye**	2.16	182	Pn	**Pn**	21 03 34.5	+0.8
MNMC				Sn	**Sn**	21 04 04.3	-0.3
MNMC	**Minye Minye**	2.16	182	⇓*i*P	**Pn**	21 03 34.9	+1.1
MNMC				*i* S	**Sn**	21 04 05.2	+0.6
MNMC				IAML		21 04 11.4	
	comp=N,2µm,0.1s						
GO01	**Chusmiza**	2.71	174	Pn	**Pn**	21 03 41.6	+1.4
GO01				Sn	**Sn**	21 04 16.2	+0.1
GO01	**Chusmiza**	2.71	174	⇑*i*P	**Pn**	21 03 41.8	+1.6
GO01				*i* S	**Sn**	21 04 16.8	+0.7
GO01				IAML		21 04 20.5	
	comp=N,909nm,0.1s						
PB11	**IPOC Station P**	2.79	183	Pn	**Pn**	21 03 41.1	+0.3
PB11	**IPOC Station P**	2.79	183	⇓*i*P	**Pn**	21 03 41.4	+0.7
PB11				*i* S	**Sn**	21 04 16.3	-1.0
PB11				IAML		21 04 19.1	
	comp=E,959nm,0.6s						
PB08	**IPOC Station P**	3.18	174	Pn	**Pn**	21 03 46.5	+0.8
PB08	**IPOC Station P**	3.18	174	*e*P	**Pn**	21 03 47.1	+1.4
PB08				*i* S	**Sn**	21 04 25.9	-0.1
TA02	**Huaiquique**	3.34	190	Pn	**Pn**	21 03 47.3	0.0
TA01	**Diego Aracena**	3.64	190	Pn	**Pn**	21 03 50.6	-0.3
TA01	**Diego Aracena**	3.64	190	*e*P	**Pn**	21 03 50.6	-0.3
TA01				*i* S	**Sn**	21 04 32.0	-3.5
PB01	**IPOC Station P**	4.06	180	Pn	**Pn**	21 03 56.2	-0.1
PB01	**IPOC Station P**	4.06	180	*e*P	**Pn**	21 03 56.7	+0.4
PB01				*i* S	**Sn**	21 04 42.0	-3.2
PB02	**IPOC Station P**	4.35	185	Pn	**Pn**	21 04 00.4	+0.4
PB02	**IPOC Station P**	4.35	185	*e*P	**Pn**	21 04 00.4	+0.4
PB02				*i* S	**Sn**	21 04 49.1	-2.7
PB07	**IPOC Station P**	4.75	184	Pn	**Pn**	21 04 05.3	+0.1
PB07	**IPOC Station P**	4.75	184	*i* P	**Pn**	21 04 05.6	+0.3
PB09	**IPOC Station P**	4.82	177	Pn	**Pn**	21 04 06.6	+0.6
PB09	**IPOC Station P**	4.82	177	*i* P	**Pn**	21 04 06.8	+0.7
PB03	**IPOC Station P**	5.07	182	Pn	**Pn**	21 04 09.2	0.0
PB03	**IPOC Station P**	5.07	182	*e*P	**Pn**	21 04 09.4	+0.2
PB03				*i* S	**Sn**	21 05 03.4	-5.0
PB04	**IPOC Station P**	5.38	186	Pn	**Pn**	21 04 12.8	-0.5
PB04	**IPOC Station P**	5.38	186	*e*P	**Pn**	21 04 12.9	-0.3
LVC	**Limon Verde**	5.65	174	P	**Pn**	21 04 17.7	+0.8
	comp=E,14nm,0.3s,baz=7.0,slow=9.1,SNR=89						
LVC				S	**Sn**	21 05 17.4	-4.9
	comp=E,19nm,0.3s,baz=347,slow=7.0,SNR=5.2						
LVC	**Limon Verde**	5.65	174	Pn	**Pn**	21 04 17.9	+0.9
LVC	**Limon Verde**	5.65	174	*e*P	**Pn**	21 04 17.9	+0.9
PB06	**IPOC Station P**	5.71	181	Pn	**Pn**	21 04 17.2	-0.4
PB06	**IPOC Station P**	5.71	181	*i* P	**Pn**	21 04 17.3	-0.4
PB15	**IPOC Station P**	6.21	180	Pn	**Pn**	21 04 24.0	-0.2
PB10	**IPOC Station P**	6.59	188	Pn	**Pn**	21 04 28.3	-0.6
PB14	**IPOC Station P**	7.67	186	Pn	**Pn**	21 04 42.2	-1.2
ETMB	**Extrema**	7.79	25	Pn	**Pn**	21 04 43.0	-1.8
ETMB	**Extrema**	7.79	25	*e*P	**Pn**	21 04 44.0	-0.8
SIV	**San Ignacio**	8.16	84	P	**Pn**	21 04 47.3	-2.3
	comp=E,30nm,0.4s,baz=271,slow=12,SNR=64						
SIV				S	Sn	21 06 07.8	-13
	comp=E,7.0nm,0.5s,baz=258,slow=17,SNR=1.4						
GO02	**Mina Guanaco**	8.16	180	Pn	**Pn**	21 04 49.3	-0.5
BBSD	**Serra de San D**	8.52	93	*e*P	**Pn**	21 04 52.7	-1.6
NNA	**Nana**	8.65	304	P	**Pn**	21 04 55.3	-0.7
	comp=E,69nm,0.3s,baz=138,slow=12,SNR=20						
NNA				S	**Sn**	21 06 28.0	-4.9
	comp=E,18nm,0.3s,baz=218,slow=20,SNR=3.2						
NNA	**Nana**	8.65	304	Pn	**Pn**	21 04 55.5	-0.5
CZSB	**Cruzeiro do Su**	9.69	341	*e*P	**Pn**	21 05 08.8	-0.8
AC02	**Maricunga**	9.83	178	Pn	**Pn**	21 05 11.1	-0.7
VILB	**Vilhena**	9.85	67	Pn	**Pn**	21 05 09.6	-2.1
VILB	**Vilhena**	9.85	67	*e*P	**Pn**	21 05 10.4	-1.3
SAML	**Samuel**	10.07	39	Pn	**Pn**	21 05 13.1	-1.6
SAML	**Samuel**	10.07	39	*e*P	**Pn**	21 05 13.9	-0.7
PTLB	**Pontes e Lacer**	10.09	83	Pn	**Pn**	21 05 12.9	-1.8
PTLB	**Pontes e Lacer**	10.09	83	*e*P	**Pn**	21 05 12.7	-2.0
GO03	**Copiap**	10.60	183	Pn	**Pn**	21 05 20.3	-1.1
AC05	**El Transito**	11.84	183	Pn	**Pn**	21 05 36.5	-0.9
LCO	**Las Campanas**	12.04	185	Pn	**Pn**	21 05 39.3	-0.9
MURT	**Porto Murtinho**	12.17	114	*e*P	**Pn**	21 05 40.4	-1.2
BDQN	**Bodoquena, MS**	12.59	108	*e*P	**Pn**	21 05 45.4	-1.4
TBTG	**Tabatinga, AM**	12.70	358	*e*P	**Pn**	21 05 47.4	-1.0
ESFA	**Espinillo Form**	13.01	130	*e*P	**Pn**	21 05 53.3	+1.1
ATAH	**Atahualpa**	13.06	317	P	**Pn**	21 05 53.1	-0.2
	comp=E,6.0nm,0.8s,baz=130,slow=5.9,SNR=3.0						
GO04	**Tololo Observa**	13.20	185	Pn	**Pn**	21 05 53.9	-1.0
SALV	**Santo Antonio**	13.31	87	*e*P	**Pn**	21 05 56.5	+0.5
PDRB	**Porto dos Gac**	13.48	68	*e*P	**Pn**	21 05 57.9	-0.3
AQDB	**Aquidauana**	13.55	107	Pn	**Pn**	21 05 57.6	-1.4
AQDB	**Aquidauana**	13.55	107	*e*P	**Pn**	21 05 59.2	+0.2
CO03	**El Pedregal**	13.86	184	Pn	**Pn**	21 06 02.2	-0.6
PP1B	**Ponte de Pedra**	14.00	95	*e*P	**Pn**	21 06 04.7	+0.1
CFA	**Coronel Fontan**	14.62	176	P	**P**	21 06 14.1	+0.4
	comp=E,2.9nm,0.5s,baz=343,slow=13,SNR=5.6						
CFA				S	Sn	21 08 45.6	-10
	comp=E,2.5nm,0.4s,baz=224,slow=16,SNR=1.7						
CPUP	**Villa Florida**	14.66	132	P	**Pn**	21 06 11.1	-1.7
	comp=E,2.8nm,0.5s,baz=316,slow=7.7,SNR=1.9						
CPUP	**Villa Florida**	14.66	132	Pn	**Pn**	21 06 12.2	-0.6
CPUP	**Villa Florida**	14.66	132	*e*P	**Pn**	21 06 12.2	-0.6
AMBA	**Amambai (Brazi**	14.89	116	*e*P	**P**	21 06 15.9	-0.8
MECA	**Mercedes**	16.10	142	*e*P	**Pn**	21 06 31.9	+1.7
MCRA	**Macar, Loja**	16.17	320	P	**P**	21 06 30.9	0.0
MACA	**Manacapuru-AM**	16.23	33	*e*P	**Pn**	21 06 32.0	0.0
MCR1	**Marechal Candi**	16.28	120	*e*P	**Pn**	21 06 33.1	+0.6
MT02	**Curacav**	16.29	185	P	**P**	21 06 31.4	-0.7
AZCA	**Azaras, Argent**	16.68	134	*e*P	**Pn**	21 06 37.6	+0.3
SGCB	**S£o Gabriel d**	16.91	9	*e*P	**Pn**	21 06 39.1	-1.0
NPGB	**Novo Progresso**	16.98	56	*e*P	**Pn**	21 06 39.6	-1.5
ARAG	**Araguaiana, MT**	17.04	88	*e*P	**Pn**	21 06 41.0	-0.7
ITQB	**Itaqui**	17.31	139	P	**P**	21 06 42.3	-1.0
ITQB	**Itaqui**	17.31	139	*e*P	**Pn**	21 06 45.1	+0.4
CRSM	**Crissiumal (Br**	17.73	129	*e*P	**Pn**	21 06 48.9	-0.9
FRBT	**Francisco Belt**	17.73	123	*e*P	**Pn**	21 06 48.9	-0.9
BO02	**Sierra Bellavi**	17.79	183	Pn	**Pn**	21 06 51.1	+0.6
BO02				IAmb	IAmb	21 06 55.3	
	comp=Z,10nm,0.6s						
PCMB	**Pacaembu**	17.84	108	*e*P	**Pn**	21 06 50.1	-1.0
PTGB	**Pitanga**	18.03	118	*e*P	**Pn**	21 06 52.3	-1.1
SNDB	**Serra Nova Dou**	18.32	77	*e*P	**Pn**	21 06 54.9	-1.9
ITRB	**Iturama**	18.39	101	*e*P	**Pn**	21 06 56.6	-1.0
ITTB	**Itaituba**	18.42	49	*e*P	**P**	21 06 55.5	-0.1
RODS	**Rosario do Sul**	18.67	138	*e*P	**Pn**	21 06 59.6	-1.1
ITAB	**Concordia**	19.06	125	P	**P**	21 07 02.4	+0.1
ITAB				IAmb	IAmb	21 07 05.6	
	comp=Z,18nm,1.0s						
ITAB	**Concordia**	19.06	125	*e*P	**P**	21 07 03.1	+0.7
ALGR	**Alto Alegre (B**	19.20	131	*e*P	**P**	21 07 04.1	+0.2
FRTB	**Fartura**	19.77	112	*e*P	**P**	21 07 10.2	+0.2
CPSB	**Cacapava Do Su**	19.86	135	*e*P	**P**	21 07 11.5	+0.6
BB19B	**Bebedouro**	20.26	105	*e*P	**P**	21 07 15.6	+0.2
IPMB	**Ipameri, GO**	20.35	96	*e*P	**P**	21 07 16.3	-0.1
PLTB	**Pedras Altas**	20.63	138	P	**P**	21 07 18.9	-0.3
PLTB				IAmb	IAmb	21 07 22.4	
	comp=Z,23nm,1.2s						
PLTB	**Pedras Altas**	20.63	138	*e*P	**P**	21 07 18.9	-0.3
BDFB	**Brasilia**	20.68	89	P	**P**	21 07 19.4	-0.6
	comp=Z,13nm,0.6s,baz=256,slow=9.7,SNR=14						
	comp=Z,13nm,0.6s						
BDFB	**Brasilia**	20.68	89	P	**P**	21 07 19.1	-0.9
BDFB	**Brasilia**	20.68	89	*e*P	**P**	21 07 19.3	-0.6
CNLB	**Canela**	21.08	129	*e*P	**P**	21 07 23.6	-0.4
BOAV	**Boa Vista**	21.18	26	P	**P**	21 07 24.7	-0.5
BOAV	**Boa Vista**	21.18	26	*e*P	**P**	21 07 25.5	+0.3
MALB	**Monte Alegre**	21.23	47	*e*P	**P**	21 07 25.3	-0.3
RCLB	**Rio Claro- Sao**	21.39	108	*e*P	**P**	21 07 27.8	+0.4
SPB	**Sao Paulo**	21.73	111	*e*P	**P**	21 07 31.1	+0.3
VAO	**Valinhos**	22.02	109	*e*P	**P**	21 07 34.2	+0.4
TRQA	**Tornquist**	22.04	164	P	**P**	21 07 34.5	+0.8
PMNB	**Patos De Minas**	22.04	98	*e*P	**P**	21 07 33.7	-0.3
PET01	**Itanhaem-SP**	22.04	113	*e*P	**P**	21 07 35.0	+1.2
PRPB	**Parauapebas**	22.05	63	*e*P	**P**	21 07 33.4	-0.7
GO06	**Curarrehue**	22.61	184	P	**P**	21 07 39.9	+0.8
GO06				IAmb	IAmb	21 07 42.5	
	comp=Z,12nm,1.3s						
SMTB	**Santa Maria do**	22.82	72	*e*P	**P**	21 07 40.9	-0.3
PARB	**Paraibuna**	23.30	110	*e*P	**P**	21 07 45.4	0.0
PLCA	**Paso Flores**	23.70	182	P	**P**	21 07 51.2	+2.2
	comp=Z,10nm,0.8s,baz=358,slow=11,SNR=33						
	comp=Z,10nm,0.8s						
PLCA	**Paso Flores**	23.70	182	P	**P**	21 07 50.7	+1.7
PLCA				IAmb	IAmb	21 07 53.6	
	comp=Z,12nm,0.8s						
PLCA	**Paso Flores**	23.70	182	*e*P	**P**	21 07 51.3	+2.3
MCPB	**Macapa, AP**	23.83	48	*e*P	**P**	21 07 50.9	+0.5
SDBA	**SAO DESIDERIO**	24.23	83	*e*P	**P**	21 07 53.2	-0.8
JANB	**Januaria**	24.30	89	*e*P	**P**	21 07 54.5	-0.2
VAS01	**Vassouras-RJ**	25.11	106	*e*P	**P**	21 08 02.3	+0.4
SDV	**Santo Domingo**	25.71	357	P	**P**	21 08 07.7	+0.2
	comp=Z,1.6nm,0.6s,baz=328,slow=8.2,SNR=4.1						
SDV				LR	LR	21 20 18.9	
	comp=Z,74nm,20.1s,baz=119,slow=41						
	comp=Z,1.6nm,0.6s						
BAUV	**El Baul**	25.78	3	P	**P**	21 08 07.1	-0.8
BIRV	**Birongo**	27.45	7	P	**P**	21 08 22.8	0.0
BIRV				IAmb	IAmb	21 08 42.4	
	comp=Z,15nm,1.3s						
TEIG	**Tepich**	41.29	333	P	**P**	21 10 22.0	+0.6
CMIG	**Matias Romero**	42.07	322	P	**P**	21 10 29.4	+1.6
	comp=Z,3.2nm,0.7s,baz=150,slow=8.1,SNR=3.9						
	comp=Z,3.2nm,0.7s						
TX31	**Lajitas Ar. Si**	56.62	324	P	**P**	21 12 16.9	-0.9
TX31				IAmb	IAmb	21 12 44.0	
	comp=Z,4.5nm,1.1s						
TX32	**Lajitas Array**	56.62	324	P	**P**	21 12 18.3	+0.5
TXAR	**Lajitas Array**	56.62	324	P	**P**	21 12 18.9	+1.0
	comp=Z,0.7nm,0.5s,baz=154,slow=9.0,SNR=6.9						
TXAR				PcP	**PcP**	21 13 13.8	+1.8
	comp=Z,0.5nm,0.5s,baz=143,slow=5.3,SNR=4.2						
	comp=Z,0.7nm,0.5s						
TXAR	**Lajitas Array**	56.62	324	P	**P**	21 12 16.6	-1.2
WTFS	**Witchita Falls**	57.50	331	P	**P**	21 12 23.5	-0.3
WTFS				IAmb	IAmb	21 12 25.9	
	comp=Z,21nm,0.7s						
FVM	**French Village**	58.08	341	P	**P**	21 12 27.6	-0.2
FVM				IAmb	IAmb	21 12 29.0	
	comp=Z,5.5nm,0.7s						
M57A	**Sunshine Farm,**	58.43	353	P	**P**	21 12 30.4	+0.3
WMOK	**Wichita Mounta**	58.46	332	P	**P**	21 12 30.4	-0.1
WMOK				IAmb	IAmb	21 12 32.3	
	comp=Z,3.8nm,0.8s						
OK052	**Battle Ridge R**	58.66	334	P	**P**	21 12 32.1	+0.3
S39A	**Bolivar**	58.79	338	P	**P**	21 12 32.0	-0.8
S39A				IAmb	IAmb	21 12 33.5	
	comp=Z,4.6nm,0.8s						
AMTX	**Amarillo**	59.94	330	P	**P**	21 12 40.6	-0.1
AMTX				IAmb	IAmb	21 12 42.8	
	comp=Z,4.8nm,0.6s						
P40A	**Paris**	60.01	340	P	**P**	21 12 40.5	-0.5
P40A				IAmb	IAmb	21 12 41.4	
	comp=Z,3.0nm,0.7s						
KAN05	**Bluff City Nor**	60.06	334	P	**P**	21 12 41.9	+0.5
ANMO	**Albuquerque**	62.41	326	P	**P**	21 12 57.8	+0.2
BELA	**Belgrano 2**	63.30	172	P	**P**	21 13 03.6	+1.1
D62A	**Allapoint, All**	63.75	0	P	**P**	21 13 04.9	-0.9
SDCO	**Great Sand Dun**	64.08	329	P	**P**	21 13 09.4	+0.9
SDCO				IAmb	IAmb	21 13 11.1	
	comp=Z,11nm,1.4s						
ECSD	**EROS Data Cent**	65.30	339	P	**P**	21 13 15.7	-0.3
ECSD				IAmb	IAmb	21 13 16.8	
	comp=Z,13nm,1.5s						
F36A	**Milaca**	66.20	342	P	**P**	21 13 20.2	-1.4
F36A				IAmb	IAmb	21 13 45.7	
	comp=Z,8.8nm,1.5s						
SNAA	**Sanae**	66.74	162	P	**P**	21 13 25.9	+1.0
SNAA				IAmb	IAmb	21 13 27.9	
	comp=Z,4.0nm,0.8s						
SRU	**San Rafael Swe**	67.68	327	P	**P**	21 13 31.4	0.0
SRU				IAmb	IAmb	21 13 33.9	
	comp=Z,3.9nm,0.8s						
DBIC	**Dimbokro**	68.08	75	P	**P**	21 13 34.0	-0.1
	comp=Z,3.8nm,0.5s,baz=250,slow=5.0,SNR=8.3						
	comp=Z,3.8nm,0.5s						
DBIC	**Dimbokro**	68.08	75	P	**P**	21 13 32.8	-1.3
DBIC				IAmb	IAmb	21 13 36.4	

	comp=Z,4.3nm,0.6s						
BW06	Boulder Array	69.92	330	P	P	21 13 45.6	+0.4
BW06				IAmb	IAmb	21 13 47.8	
	comp=Z,6.4nm,1.3s						
PD31	Pinedale Array	69.92	330	P	P	21 13 45.4	+0.3
PDAR	Pinedale Array	69.92	330	P	P	21 13 46.4	+1.2
	comp=Z,1.2nm,0.4s,baz=124,slow=8.7,SNR=11						
	comp=Z,1.2nm,0.4s						
PDAR	Pinedale Array	69.92	330	P	P	21 13 44.6	-0.6
HWUT	Hardware Ranch	70.05	328	P	P	21 13 46.6	+0.6
ULM	Lac du Bonnet	70.84	342	P	P	21 13 50.1	-0.1
	comp=Z,4.5nm,0.4s,baz=164,slow=7.4,SNR=7.5						
	comp=Z,4.5nm,0.4s						
ULM	Lac du Bonnet	70.84	342	P	P	21 13 50.0	-0.2
ULM				IAmb	IAmb	21 13 51.1	
	comp=Z,4.2nm,0.7s						
REDW	Red Top Meadow	70.99	329	P	P	21 13 51.5	-0.1
REDW				IAmb	IAmb	21 14 12.2	
	comp=Z,6.2nm,1.4s						
FLWY	Flagg Ranch	71.45	330	P	P	21 13 53.5	-0.9
FLWY				IAmb	IAmb	21 13 57.5	
	comp=Z,6.6nm,1.1s						
NVAR	Mina Array Bea	71.59	321	P	P	21 13 57.3	+1.9
	comp=Z,1.7nm,0.8s,baz=139,slow=7.4,SNR=7.6						
	comp=Z,1.7nm,0.8s						
GCMT	Greycliff	72.26	332	P	P	21 13 58.7	-0.4
TOA0	Torodi Ar. Sit	76.42	72	P	P	21 14 21.7	-1.8
TORD	Torodi Ar. Bea	76.42	72	P	P	21 14 23.6	0.0
	comp=Z,3.3nm,0.7s,baz=260,slow=5.5,SNR=19						
	comp=Z,3.3nm,0.7s						
TORD	Torodi Ar. Bea	76.42	72	P	P	21 14 22.6	-1.0
YKA	Yellowknife Ar	86.74	341	P	P	21 15 17.8	+1.3
	comp=Z,5.6nm,0.7s,baz=134,slow=5.0,SNR=79						
	comp=Z,5.6nm,0.7s						
ASAR	Alice Springs	133.59	210	PKP	PKPdf	21 21 50.4	+1.2
	comp=Z,0.7nm,0.5s,baz=120,slow=1.8,SNR=10						
WRA	Warramunga Arr	136.48	214	PKhKP	PKPpre	21 21 44.0	
	comp=Z,0.3nm,1.0s,baz=145,slow=3.0,SNR=4.9						
WRA				PKP	PKPdf	21 21 55.9	+1.3
	comp=Z,1.1nm,0.4s,baz=139,slow=1.7,SNR=34						
ZALV	Zalesovo Beam	138.05	23	PKP	PKPdf	21 21 56.7	+0.3
	comp=Z,4.4nm,0.8s,baz=297,slow=2.7,SNR=16						
MKAR	Makanchi Array	142.21	32	PKhKP	PKPpre	21 22 00.1	
	comp=Z,0.5nm,0.6s,baz=312,slow=2.4,SNR=8.6						
USRK	Ussuriysk Ar.	147.34	331	PKPbc	PKPbc	21 22 17.1	+1.4
	comp=Z,5.2nm,0.7s,baz=11,slow=0.9,SNR=6.7						
MJAR	Matsushiro Arr	148.66	314	PKPbc	PKiKP	21 22 21.0	+0.2
	comp=Z,3.1nm,0.7s,baz=92,slow=0.5,SNR=9.2						
SONM	Songino Array	149.03	5	PKPbc	PKiKP	21 22 22.1	+0.7
	comp=Z,8.1nm,0.6s,baz=310,slow=1.8,SNR=60						

IDC ***20*** *21:03:13.8±0.4, 6°.16S×150°.77E, h0^{km}, mb4.5/18, mbtmp4.5/19, ML3.9/1, MS3.7/25, Error ellipse: s-maj=14.7km s-min=10.2km az=109.0*

BJI ***20*** *21:03:13.6±0.0, 6°.29S×150°.57E, h7^{km}, mb4.4/36, mB5.0/20, Ms4.5/4, Ms7 4.3/6*

NEIC ***20*** *21:03:14.4±1.7, 6°.17S±0°.05×150°.71E±0°.08, h10^{km}±1^{km}, mb5.0/83, Error ellipse: s-maj=13.3km s-min=9.0km az=279.0*

MOS ***20*** *21:03:17.0±1.5, 6°.08S×150°.81E, h30^{km}, mb4.8/18, Error ellipse: s-maj=11.0km s-min=7.6km az=90.9*

DJA ***20*** *21:03:18.2±0.5, 6°S±4°×15°1E±°, h23^{km}±4^{km}, M5.1/18, mB5.4/7, mb5.2/18, MLv5.3/2, Mw(mB)4.9/7*

ISC 20 21:03:15.2±0.3, **6°.11S**±0°.04×**150°.85E**±0°.05, **h10^{km}, n383, σ1^{s}30**/379, **mb4.8**/91, **MS3.8**/26, **17C-14D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	2.13	33	Pn	Pg	21 03 55.4	-0.8
	220nm,0.3s,baz=312,slow=1.0,SNR=44						
KRVT				Sn	Sb	21 04 22.0	+1.4
	383nm,0.3s,baz=112,slow=17,SNR=7.7						
RABL	Rabaul	2.31	35	Pn	Pb	21 03 56.7	-0.2
RABL	Rabaul	2.31	35	P	Pg	21 03 59.0	-0.5
PMG	Port Moresby	4.91	228	Pn	Pn	21 04 30.9	+1.7
	42nm,0.3s,baz=58,slow=7.5,SNR=72						
PMG				Sn	Sn	21 05 24.6	-1.6
	32nm,0.3s,baz=81,slow=22,SNR=12						
PMG				LR	LR	21 06 28.3	
	comp=Z,510nm,19.0s,baz=64,slow=40						
PMG	Port Moresby	4.91	228	Pn	Pn	21 04 28.2	-1.0
PMG	Port Moresby	4.91	228	P	Pn	21 04 32.5	+3.3
PMG	Port Moresby	4.91	228	P	Pn	21 04 32.3	+3.1
PMG	Port Moresby	4.91	228	P	Pn	21 04 28.2	-1.0
HNR	Honiara	9.60	111	Pn	Pn	21 05 33.7	+0.2
	161nm,0.3s,baz=207,slow=14,SNR=1.6						
HNR				LR	LR	21 08 38.0	
	comp=Z,7µm,21.9s,baz=265,slow=34						
COEN	Coen	10.86	224	P	Pn	21 05 52.6	+1.7
	baz=11,SNR=7.0						
COEN	Coen	10.86	224	Pn	Pn	21 05 48.8	-2.1
COEN	Coen	10.86	224	P	Pn	21 05 53.2	+2.3
GENI	Genyem	11.21	288	P	Pn	21 06 05.0	+9.3
SMPI	Sarmi	12.78	288	P	Pn	21 06 09.5	-7.7
MTSU	Mount Surprise	13.55	208	P	Pn	21 06 29.0	+1.3
	baz=14,SNR=10						
MTSU	Mount Surprise	13.55	208	P	Pn	21 06 28.9	+1.3
CTA	Charters Tower	14.60	197	Pn	Pn	21 06 42.8	+0.8
	0.4nm,0.3s,baz=17,slow=12,SNR=6.6						
CTA				LR	LR	21 11 44.2	
	comp=Z,197nm,18.6s,baz=8.5,slow=35						
	2.7nm,0.5s						
CTAO	Charters Tower	14.60	197	Pn	Pn	21 06 39.2	-2.8
CTAO	Charters Tower	14.60	197	P	Pn	21 06 43.8	+1.8
CTAO	Charters Tower	14.60	197	P	Pn	21 06 39.2	-2.8
PATS	Pohnpei	14.86	30	Pn	Pn	21 06 45.3	-0.2
QIS	Mount Isa	18.04	216	P	P	21 07 27.2	+0.5
	baz=18,SNR=17						
QIS	Mount Isa	18.04	216	P	P	21 07 27.4	+0.7
FAKI	Fak Fak	18.81	279	P	P	21 07 32.0	-3.2
FAKI	Fak Fak	18.81	279	P	Pn	21 07 38.5	+2.8
FAKI	Fak Fak	18.81	279	P	Pn	21 07 36.4	+0.7
	11nm,1.4s						
EIDS	Eidsvold	19.16	179	P	P	21 07 39.0	+0.1
	baz=19,SNR=10						
EIDS	Eidsvold	19.16	179	P	P	21 07 37.1	-1.7
EIDS				IAmb	IAmb	21 07 52.1	
	comp=Z,89nm,1.8s						
EIDS	Eidsvold	19.16	179	P	Pn	21 07 39.9	+0.2
KDU	Kakadu	19.27	249	P	Pn	21 07 41.0	-0.2
	baz=19,SNR=81						
KDU	Kakadu	19.27	249	P	Pn	21 07 41.3	+0.1
SAUI	Saumlaki	19.50	263	P	P	21 07 40.2	-2.5
SAUI				IAmb	IAmb	21 07 55.8	
	comp=Z,86nm,0.6s						
RMQ	Roma	20.36	185	P	P	21 07 53.4	+1.3
	baz=20,SNR=33						
RMQ	Roma	20.36	185	P	Pn	21 07 53.6	-0.5
GUMO	Guam	20.45	343	LR	LR	21 16 24.0	
	comp=Z,122nm,18.3s,baz=150,slow=39						
MTN	Manton Dam	20.56	250	P	P	21 07 55.4	+1.1
	baz=21,SNR=32						
MTN	Manton Dam	20.56	250	P	P	21 07 51.6	-2.7
MTN				IAmb	IAmb	21 08 10.1	
	comp=Z,51nm,0.6s						
MTN	Manton Dam	20.56	250	P	P	21 07 55.5	+1.2
BNDI	Bandanaira	20.92	273	P	P	21 07 59.6	+1.4
	comp=Z,134nm,0.7s						
WB0	Warramunga Arr	20.99	228	P	P	21 07 56.5	-2.4
WC3	Warramunga Arr	21.12	228	P	P	21 08 00.7	+0.4
	baz=21						
WRAB	Tennant Creek	21.12	228	P	P	21 07 59.1	-1.3
WRAB	Tennant Creek	21.12	228	P	P	21 08 01.0	+0.6
WRAB	Tennant Creek	21.12	228	⇓*i*P	P	21 07 59.9	-0.5
WRAB				pmax	pmax		
	comp=Z,58nm,0.6s						
WB2	Warramunga Arr	21.13	228	P	P	21 07 58.8	-1.6
WRA	Warramunga Arr	21.14	228	P	P	21 08 01.1	+0.6
	comp=Z,64nm,0.5s,baz=53,slow=11,SNR=397						
WRA				S	S	21 11 52.7	-3.1
	comp=Z,5.8nm,1.1s,baz=58,slow=19,SNR=5.8						
WRA				PcP	PcP	21 12 07.2	+0.6
	comp=Z,2.2nm,0.5s,baz=33,slow=1.8,SNR=9.3						
WRA				ScP	ScP	21 15 45.2	+1.3
	comp=Z,4.7nm,1.0s,baz=46,slow=2.6,SNR=10.0						
WRA				LR	LR	21 16 39.3	
	comp=Z,176nm,18.2s,baz=15,slow=38						
WRA	Warramunga Arr	21.14	228	P	P	21 07 58.9	-1.6
QLP	Quilpie	21.32	196	P	P	21 08 03.4	+1.0
	baz=21,SNR=10						
QLP	Quilpie	21.32	196	P	P	21 08 03.8	+1.4
DZM	Mont Dzumac	21.88	138	*e*Pn	P	21 08 08.8	+0.2
	comp=Z,126nm,1.0s						
DZM				*e*LR	LR	21 13 23.5	
	comp=Z,537nm,22.2s						
DZM	Mont Dzumac	21.88	138	P	P	21 08 08.9	+0.3
	comp=Z,44nm,0.7s,baz=294,slow=8.1,SNR=32						
DZM				LR	LR	21 15 18.2	
	comp=Z,422nm,20.5s,baz=14,slow=33						
	comp=Z,44nm,0.7s						
DZM	Mont Dzumac	21.88	138	P	P	21 08 08.2	-0.5
DZM				IAmb	IAmb	21 08 10.1	
	comp=Z,46nm,0.7s						
DZM	Mont Dzumac	21.88	138	P	P	21 08 09.2	+0.6
YATNC	Mamie plateau,	22.18	137	P	P	21 08 12.9	+1.2
OUENC	Ouen Island, N	22.39	138	P	P	21 08 15.1	+1.2
AAI	Ambon	22.70	275	P	P	21 08 19.4	+2.0
	comp=Z,46nm,0.7s						
INKA	Innaminka	23.56	203	P	P	21 08 26.5	+0.5
KNRA	Kununurra	23.66	245	P	P	21 08 27.3	+0.2
	baz=24,SNR=27						
KNRA	Kununurra	23.66	245	P	P	21 08 25.9	-1.2
AS01	Alice Springs	23.86	221	P	P	21 08 30.4	+1.4
AS31	Alice Springs	23.89	221	P	P	21 08 27.5	-1.8
ASAR	Alice Springs	23.89	221	P	P	21 08 29.8	+0.5
	comp=Z,13nm,0.4s,baz=57,slow=8.7,SNR=265						
ASAR				PcP	PcP	21 12 13.3	+1.1
	comp=Z,0.9nm,0.6s,baz=54,slow=2.4,SNR=2.1						
ASAR				S	S	21 12 47.1	+1.4
	comp=Z,5.3nm,1.1s,baz=36,slow=21,SNR=8.6						
ASAR				ScP	ScP	21 15 52.0	+1.0
	comp=Z,2.4nm,0.8s,baz=42,slow=4.1,SNR=9.5						
ASAR				LR	LR	21 17 06.1	
	comp=Z,123nm,20.3s,baz=349,slow=35						
	comp=Z,13nm,0.4s						
ASAR	Alice Springs	23.89	221	P	P	21 08 28.6	-0.7
ARMA	Armidale	24.20	178	P	P	21 08 30.2	-2.0
ARMA				IAmb	IAmb	21 08 46.1	
	comp=Z,75nm,1.9s						
CMSA	Cobar Meteorol	25.76	190	P	P	21 08 45.5	-0.7
	baz=26,SNR=12						
CMSA	Cobar Meteorol	25.76	190	P	P	21 08 46.0	-0.2
OOD	Oodnadatta	25.94	212	P	P	21 08 48.3	+0.5
SOEI	Soe	26.57	260	P	P	21 08 51.1	-2.9
SOEI	Soe	26.57	260	P	P	21 09 04.9	+11
LCRK	Leigh Creek	26.97	205	P	P	21 08 58.1	+0.9
STKA	Stephens Creek	27.06	198	P	P	21 08 57.2	-0.7
	comp=Z,16nm,0.7s,baz=358,slow=9.8,SNR=26						
	comp=Z,16nm,0.7s						
STKA	Stephens Creek	27.06	198	P	P	21 08 57.5	-0.4
	baz=27,SNR=20						
STKA	Stephens Creek	27.06	198	P	P	21 08 56.3	-1.6
STKA	Stephens Creek	27.06	198	P	P	21 09 00.3	+2.3
STKA	Stephens Creek	27.06	198	*i* P	P	21 08 56.4	-1.6
FITZ	Fitzroy Crossi	27.34	242	P	P	21 09 00.8	+0.2
	baz=27						
FITZ	Fitzroy Crossi	27.34	242	P	P	21 08 59.6	-1.0
FITZ	Fitzroy Crossi	27.34	242	P	P	21 09 01.2	+0.6
DAV	Davao City (W)	28.41	297	LR	LR	21 21 03.6	
	comp=Z,64nm,18.1s,baz=135,slow=38						
MMRI	Maumere	28.49	263	P	P	21 09 08.2	-2.8
WRKA	Warakurna	28.66	227	P	P	21 09 12.8	+0.4
	baz=29,SNR=30						
WRKA	Warakurna	28.66	227	P	P	21 09 12.8	+0.4
MULG	Mulgathing	28.78	211	P	P	21 09 13.0	-0.3
HTT	Hallett	29.36	201	P	P	21 09 18.3	-0.3
	baz=29,SNR=5.4						
HTT	Hallett	29.36	201	P	P	21 09 18.7	+0.1
KAPI	Kappang	30.97	270	LR	LR	21 23 11.1	
	comp=Z,267nm,19.9s,baz=66,slow=39						
FORT	Forrest	32.56	218	P	P	21 09 44.1	-2.6
FORT	Forrest	32.56	218	P	P	21 09 47.1	+0.3
PLAI	Plampang	32.90	263	P	P	21 09 49.5	-0.5
MBWA	Marble Bar	33.65	241	P	P	21 09 57.2	+0.8
PSA00	Pilbara Seismi	33.70	240	P	P	21 09 54.5	-2.3
TWSI	Taliwang, Sumb	33.78	263	P	P	21 09 56.6	-1.0
	comp=Z,47nm,0.7s						
JAGI	Jajag, Banyuwa	36.47	264	P	P	21 10 19.2	-1.7
JAGI	Jajag, Banyuwa	36.47	264	P	P	21 10 19.8	-1.1
MEEK	Meekatharra	36.88	233	P	P	21 10 22.6	-1.6
	baz=37,SNR=13						
MEEK	Meekatharra	36.88	233	P	P	21 10 24.9	+0.7
KMBL	Kambalda	36.98	224	P	P	21 10 25.9	+0.9
	baz=37						
AFI	Afiamalu	37.57	105	LR	LR	21 23 34.4	
	comp=Z,154nm,19.3s,baz=274,slow=32						
PWJI	Pagerwojo	38.79	265	P	P	21 10 34.9	-5.6
URZ	Urewera	39.90	147	P	P	21 10 49.6	+0.2
	comp=Z,11nm,0.5s,baz=337,slow=5.9,SNR=13						
URZ				LR	LR	21 24 15.5	
	comp=Z,193nm,19.9s,baz=14,slow=32						
	comp=Z,11nm,0.5s						
URZ	Urewera	39.90	147	P	P	21 10 49.7	+0.3
KLBR	Kellerberrin	40.01	226	P	P	21 10 51.4	+0.9
	baz=40,SNR=8.7						
KLBR	Kellerberrin	40.01	226	P	P	21 10 50.9	+0.4
UGM	Wanagama	40.06	265	P	P	21 10 53.9	+2.8
	comp=Z,250nm,2.1s						
RPZ	Rata Peaks	41.46	158	P	P	21 11 02.4	+0.1
	comp=Z,10.0nm,0.6s,baz=300,slow=20,SNR=5.6						
RPZ				LR	LR	21 26 38.4	
	comp=Z,239nm,18.4s,baz=300,slow=34						
	comp=Z,10.0nm,0.6s						
RPZ	Rata Peaks	41.46	158	P	P	21 11 04.0	+1.8
KPJI	Karang Pucung	41.64	266	P	P	21 11 05.7	+1.5
	comp=Z,102nm,0.6s,comp=Z,3µm						
MLZ	Mavora Lakes	41.90	162	P	P	21 11 04.3	-1.6
MLZ				IAmb	IAmb	21 11 08.9	
	comp=Z,31nm,1.2s						
JMN	Monobe	42.76	339	P	P	21 11 15.2	+2.2
BBJI	Bungbulang	42.91	266	P	P	21 11 15.3	+0.7
JNU	Nakatsue	43.38	335	LR	LR	21 27 30.1	
	comp=Z,31nm,18.2s,baz=181,slow=34						
CNJI	Cibinong	43.43	266	P	P	21 11 19.0	+0.3
	comp=Z,84nm,1.0s						
MJAR	Matsushiro Arr	44.05	345	P	P	21 11 23.9	+0.5
	comp=Z,0.7nm,0.5s,baz=166,slow=11,SNR=1.9						
MJAR				ScP	ScP	21 17 00.3	-0.6
	comp=Z,0.6nm,0.6s,baz=163,slow=4.0,SNR=4.9						
	comp=Z,0.7nm,0.5s						
MAJO	Matsushiro	44.05	345	P	P	21 11 21.6	-1.7
MAJO				IAmb	IAmb	21 11 23.9	
	comp=Z,29nm,1.9s						
MAJO	Matsushiro	44.05	345	P	P	21 11 21.6	-1.7
MAJO				pmax	pmax		
	comp=Z,29nm,2.0s						
MJB9	Matsu-Tunnel	44.05	345	P	P	21 11 22.3	-1.1
MJB9				IAmb	IAmb	21 11 24.9	
	comp=Z,28nm,1.9s						
JHS	Saijyo	44.17	339	P	P	21 11 26.7	+2.3
CTZ	Chatham Island	47.12	148	P	P	21 11 47.2	-0.4
KSRS	Korea Array	48.33	335	P	P	21 11 59.0	+2.1
	comp=Z,1.7nm,0.5s,baz=151,slow=8.8,SNR=6.0						
	comp=Z,1.7nm,0.5s						
NJ2	Nanjing	48.68	323	*e*P	P	21 11 58.6	-1.2
NJ2				pmax	pmax		
	comp=Z,11nm,1.1s						
JKA	Kamikawa-asahi	50.54	352	P	P	21 12 13.8	0.0
JKA				IAmb	IAmb	21 12 16.0	
	comp=Z,52nm,2.0s						
ASAJ	Asahikawa	50.54	352	P	P	21 12 13.8	0.0
ASAJ				pmax	pmax		
	comp=Z,52nm,2.0s						
USA0B	Ussuriysk Arra	52.89	343	P	P	21 12 29.4	-1.9
USA0B	Ussuriysk Arra	52.89	343	P	P	21 12 29.4	-1.9
USA0B				pmax	pmax		
	comp=Z,8.0nm,1.0s						
USRK	Ussuriysk Ar.	52.89	343	P	P	21 12 29.5	-1.8
USRK	Ussuriysk Ar.	52.89	343	P	P	21 12 29.5	-1.8
MDJ	Mudanjiang	53.99	341	P	P	21 12 39.8	+0.3
MDJ				pP	pP	21 12 42.8	+0.1
MDJ				PcP	PcP	21 13 44.9	+0.3
MDJ				PcS	PcS	21 17 45.0	+1.3
MDJ				S	S	21 20 15.5	+0.2
MDJ				SS	SS	21 24 00.0	+3.0
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,170nm,4.5s						
CN2	Changchun	54.73	338	P	P	21 12 50.4	+5.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BNX	BinXian	55.70	340	⇓P	P	21 12 52.6	+0.8
BNX				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BNX				pmax	pmax		
	comp=Z,98nm,4.2s						
XAN	Xi'an	56.26	318	*e*P	P	21 12 56.9	+0.8
XAN				pP	sP	21 13 01.8	+1.2
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CMAR	Chiang Mai Arr	56.70	297	P	P	21 13 00.9	+1.5
	comp=Z,0.4nm,0.5s,baz=107,slow=4.4,SNR=4.4						
CMAR				LR	LR	21 38 38.4	
	comp=Z,34nm,18.1s,baz=180,slow=38						
	comp=Z,0.4nm,0.5s						
CMAR	Chiang Mai Arr	56.70	297	P	P	21 12 56.4	-3.1
PZH	PanZhiHua	57.56	307	P	P	21 13 05.8	+0.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,5.4s						
KLR	Kul'dur	57.58	345	*i* P	P	21 13 05.6	+0.5
KLR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CD2	Chengdu	58.14	312	*e*P	P	21 13 08.3	-1.2
HHC	Hu-ho-hao-te	59.00	326	*e*P	P	21 13 16.0	+0.6
HHC				pmax	pmax		
	comp=Z,20nm,0.7s						
HHC				pmax	pmax		
	comp=Z,190nm,6.4s						
PPT2	Papeete2	59.19	107	*e*LR	LR	21 30 38.5	
	comp=Z,63nm,26.8s						
PEA0B	Petropavlovsk-	59.27	5	P	P	21 13 16.2	-0.7
PEA0B	Petropavlovsk-	59.27	5	P	P	21 13 16.2	-0.7
PEA0B				pmax	pmax		
	comp=Z,43nm,1.4s						
PETK	Petropavlovsk-	59.27	5	P	P	21 13 16.2	-0.7
	comp=Z,2.6nm,0.6s,baz=149,slow=5.8,SNR=4.6						
PETK				LR	LR	21 37 42.4	
	comp=Z,36nm,19.2s,baz=189,slow=35						
	comp=Z,2.6nm,0.6s						
TNCH	TengChong	59.55	304	*e*P	P	21 13 20.0	+0.4
TNCH				pP	pP	21 13 23.3	+0.8
TNCH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HEH	HeiHe	59.69	343	*e*P	P	21 13 21.1	+1.3
HEH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HEH				pmax	pmax		
	comp=Z,160nm,5.0s						
LZH	Lanzhou	60.84	317	*e*P	P	21 13 29.4	+1.2
LZH				pP	sP	21 13 33.8	+1.1
LZH				sP	pP	21 13 37.0	+5.6
LZH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GTA	Gaotai	65.32	318	*e*P	P	21 13 59.3	+1.4
GTA				pP	sP	21 14 04.3	+1.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MA2	Magadan	65.47	360	LR	LR	21 38 50.5	
	comp=Z,39nm,21.6s,baz=143,slow=33						
ULN	Ulaanbaatar	66.10	329	*i* P	P	21 14 03.1	+0.3
ULN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SONM	Songino Array	66.41	329	P	P	21 14 05.8	+1.1
	comp=Z,1.2nm,0.6s,baz=145,slow=5.5,SNR=12						
SONM				LR	LR	21 44 08.7	
	comp=Z,53nm,18.7s,baz=168,slow=37						
	comp=Z,1.2nm,0.6s						
SONM	Songino Array	66.41	329	P	P	21 14 03.8	-1.0
ZAK	Zakamensk	69.61	330	*e*P	P	21 14 24.5	-0.3
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
YAK	Yakutsk	69.88	350	LR	LR	21 43 06.5	
	comp=Z,27nm,21.9s,baz=246,slow=34						
YAK	Yakutsk	69.88	350	*i* P	P	21 14 26.0	0.0
YAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VNDA	Vanda	71.61	177	P	P	21 14 36.6	+0.2
	comp=Z,11nm,0.8s,baz=324,slow=6.9,SNR=12						
	comp=Z,11nm,0.8s						
BILL	Bilibino	74.77	6	P	P	21 14 55.7	+0.5
BILL	Bilibino	74.77	6	⇑*e*P	P	21 14 55.8	+0.7
BILL						21 15 09.0	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,28nm,14.0s						
WMQ	Urumqi	75.40	318	*e*P	P	21 14 59.9	+0.5
WMQ				PcP	PcP	21 15 11.8	-0.8
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WMQ				LR	LR		
	comp=Z,96nm,20.5s						
R17K	Ugashik Creek	76.43	26	P	P	21 15 06.5	+1.7
	baz=234						
O16K	Kokwok River B	76.88	24	P	P	21 15 09.0	+1.7
	baz=233						
Q17K	Contact Creek	77.01	26	P	P	21 15 09.5	+1.2
	baz=235						
N16K	Nishlik Lake	77.15	23	P	P	21 15 10.8	+1.9
	baz=232						
O17K	Koliganek Bris	77.39	24	P	P	21 15 11.4	+1.2
	baz=234						
TNA	Tin City	77.58	16	P	P	21 15 10.1	-1.0
ANM	Nome	77.60	18	P	P	21 15 10.9	-0.4
ANM	Nome	77.60	18	P	P	21 15 10.9	-0.4
ANM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
Q18K	Katmai Hardscr	77.61	26	P	P	21 15 12.3	+0.7
	baz=236						
P18K	Big Mountain,	77.94	25	P	P	21 15 11.9	-1.5
P18K				IAmb	IAmb	21 15 14.6	
	comp=Z,38nm,2.0s						
DGZ	Jazzator, Alta	77.96	324	*i* P	P	21 15 13.2	-0.7
DGZ				pmax	pmax		
	comp=Z,9.0nm,2.9s						
KDAK	Kodiak Island	78.21	27	P	P	21 15 15.3	+0.5
KDAK	Kodiak Island	78.21	27	P	P	21 15 15.3	+0.5
KDAK				pmax	pmax		
	comp=Z,49nm,1.5s						
O18K	Koktuh Hills	78.22	25	P	P	21 15 15.0	+0.1
O18K				IAmb	IAmb	21 15 17.9	
	comp=Z,32nm,1.6s						
Q19K	Cape Douglas,	78.36	26	P	P	21 15 15.4	-0.3
Q19K	Cape Douglas,	78.36	26	P	P	21 15 16.8	+1.1
	baz=237						
SVW2	Sparrevohn	78.78	23	P	P	21 15 17.8	-0.2
SVW2				IAmb	IAmb	21 15 22.5	
	comp=Z,15nm,1.4s						
L19K	White Mountain	79.69	23	P	P	21 15 22.6	-0.3
L19K	White Mountain	79.69	23	P	P	21 15 24.4	+1.5
	baz=235						
M19K	Big River Lodg	79.71	23	P	P	21 15 24.7	+1.7
	baz=236						
CNPM	China Poot	79.73	26	P	P	21 15 23.4	+0.3
CNPM				IAmb	IAmb	21 15 26.2	
	comp=Z,29nm,1.0s						
BRLK	Bradley Lake	80.00	26	P	P	21 15 23.6	-1.1
MK31	Makanchi Array	80.04	320	P	P	21 15 23.6	-1.5
MK31	Makanchi Array	80.04	320	*i* P	P	21 15 25.2	0.0
MKAR	Makanchi Array	80.04	320	P	P	21 15 25.3	+0.1
	comp=Z,1.1nm,0.7s,baz=107,slow=6.5,SNR=11						
	comp=Z,1.1nm,0.7s						
MKAR	Makanchi Array	80.04	320	P	P	21 15 23.4	-1.8
MKAR	Makanchi Array	80.04	320	*i* P	P	21 15 25.5	+0.3
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
M20K	Styx River	80.20	23	P	P	21 15 27.4	+1.7
	baz=237						
L20K	Farewell, AK	80.23	23	P	P	21 15 28.6	+2.8
	baz=236						
MAKZ	Makanchi	80.25	319	P	P	21 15 24.1	-2.2
MAKZ	Makanchi	80.25	319	P	P	21 15 24.1	-2.2
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
K20K	Telida	80.66	22	P	P	21 15 29.5	+1.4
	baz=236						
SKT	Skwentna	80.89	24	P	P	21 15 27.2	-2.2
SKT				IAmb	IAmb	21 15 29.6	
	comp=Z,27nm,2.0s						
SUA	Susitna One	80.94	24	P	P	21 15 27.9	-1.8
SUA				IAmb	IAmb	21 15 48.2	
	comp=Z,33nm,2.0s						
SUA	Susitna One	80.94	24	P	P	21 15 30.7	+1.0
	baz=239						
PPLA	Purkeypile	81.12	23	P	P	21 15 30.9	+0.2
PPLA				IAmb	IAmb	21 15 33.6	
	comp=Z,26nm,1.7s						
RC01	Rabbit Creek A	81.17	25	P	P	21 15 29.8	-1.1
RC01				IAmb	IAmb	21 15 32.7	
	comp=Z,8.4nm,1.0s						

ZALV	Zalesovo Beam	81.17	327	P	P	21 15 29.9	-1.1
	comp=Z,1.4nm,0.6s,baz=126,slow=5.5,SNR=6.0						
ZALV				LR	LR	21 51 21.9	
	comp=Z,60nm,20.1s,baz=106,slow=36						
	comp=Z,1.4nm,0.6s						
ZALV	Zalesovo Beam	81.17	327	P	P	21 15 29.1	-1.9
ZALV	Zalesovo Beam	81.17	327	i P	P	21 15 33.0	+2.0
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CAST	Castle Rocks	81.44	22	P	P	21 15 31.7	-0.5
CAST				IAmb	IAmb	21 15 34.9	
	comp=Z,6.7nm,0.9s						
CAST	Castle Rocks	81.44	22	P	P	21 15 32.3	0.0
	baz=238						
PWL	Port Wells	81.65	26	P	P	21 15 33.6	+0.1
PWL				IAmb	IAmb	21 15 36.3	
	comp=Z,16nm,0.8s						
PWL	Port Wells	81.65	26	P	P	21 15 34.2	+0.8
	baz=241						
GHO	Glory Hole Cre	81.84	25	P	P	21 15 33.6	-0.9
GHO				IAmb	IAmb	21 15 46.2	
	comp=Z,14nm,1.2s						
KNK	Knik Glacier	81.86	25	P	P	21 15 33.0	-1.5
KNK				IAmb	IAmb	21 15 43.9	
	comp=Z,26nm,1.5s						
KTH	Kantishna Hill	81.95	23	P	P	21 15 34.3	-0.8
KTH				IAmb	IAmb	21 15 36.6	
	comp=Z,10nm,1.0s						
SML	Sawmill	82.11	25	P	P	21 15 35.1	-0.7
SML	Sawmill	82.11	25	P	P	21 15 37.2	+1.3
	baz=241						
TRF	Thorofare Moun	82.14	23	P	P	21 15 35.7	-0.4
BPAW	Bear Paw Mtn.	82.21	22	P	P	21 15 35.5	-0.8
IMAR	Indian Mountai	82.26	20	P	P	21 15 36.5	0.0
I21K	Tanana	82.43	21	P	P	21 15 39.8	+2.4
	baz=238						
WAT1	Susitna Watana	82.52	24	P	P	21 15 38.8	+0.8
	baz=241						
RND	Reindeer	82.68	23	P	P	21 15 37.5	-1.3
RND				IAmb	IAmb	21 15 40.6	
	comp=Z,9.6nm,1.0s						
RND	Reindeer	82.68	23	P	P	21 15 37.6	-1.3
RND				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MLY	Manley	82.79	21	P	P	21 15 39.1	-0.3
MLY				IAmb	IAmb	21 15 41.3	
	comp=Z,4.8nm,0.8s						
MLY	Manley	82.79	21	P	P	21 15 39.6	+0.2
	baz=239						
MCK	McKinley	82.81	23	P	P	21 15 38.8	-0.7
MCK				IAmb	IAmb	21 15 41.7	
	comp=Z,13nm,0.9s						
MCK	McKinley	82.81	23	P	P	21 15 38.8	-0.7
MCK				pmax	pmax		
	comp=Z,13nm,0.9s						
MCK	McKinley	82.81	23	P	P	21 15 39.5	+0.1
	baz=240						
KLU	Klutina	82.98	26	P	P	21 15 40.2	-0.2
KLU				IAmb	IAmb	21 15 43.9	
	comp=Z,13nm,1.0s						
KLU	Klutina	82.98	26	P	P	21 15 42.3	+1.9
	baz=244						
NIL	Nilore	83.12	305	P	P	21 15 39.9	-1.9
NIL				IAmb	IAmb	21 15 50.8	
	comp=Z,6.1nm,0.5s						
NIL	Nilore	83.12	305	P	P	21 15 39.9	-1.9
NIL				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NEA2	Nenana	83.19	22	P	P	21 15 40.2	-1.2
NEA2				IAmb	IAmb	21 15 42.5	
	comp=Z,5.2nm,0.8s						
NEA2	Nenana	83.19	22	P	P	21 15 40.9	-0.5
	baz=240						
I23K	Minto, Yukon-K	83.36	22	P	P	21 15 43.4	+1.2
	baz=240						
WRH	Wood River Hil	83.49	22	P	P	21 15 41.8	-1.2
WRH				IAmb	IAmb	21 15 44.6	
	comp=Z,9.5nm,1.2s						
KURK	Kurchatov	83.61	322	P	P	21 15 42.9	-0.9
KURK	Kurchatov	83.61	322	i P	P	21 15 42.7	-1.1
KURK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
H23K	Yukon River	83.63	21	P	P	21 15 44.5	+0.9
	baz=240						
CCB	Clear Creek Bu	83.69	22	P	P	21 15 42.4	-1.6
CCB				IAmb	IAmb	21 15 44.8	
	comp=Z,5.3nm,0.8s						
COLA	College	83.78	22	P	P	21 15 43.5	-0.9
COLA				IAmb	IAmb	21 15 45.8	
	comp=Z,16nm,1.2s						
COLA	College	83.78	22	P	P	21 15 43.5	-0.9
COLA				pmax	pmax		
	comp=Z,16nm,1.3s						
QSPA	South Pole Qui	83.86	180	P	P	21 15 44.5	-0.6
HDA	Harding Lake	83.90	23	P	P	21 15 44.1	-0.9
HDA				IAmb	IAmb	21 15 45.9	
	comp=Z,3.3nm,0.7s						
HDA	Harding Lake	83.90	23	P	P	21 15 44.9	-0.1
	baz=242						
G23K	Bananza Creek	83.92	20	P	P	21 15 46.2	+1.1
	baz=239						
E22K	Anaktuvuk Pass	84.08	18	P	P	21 15 47.6	+1.6
	baz=237						
IL31		84.09	22	P	P	21 15 44.6	-1.4
IL31				IAmb	IAmb	21 15 47.1	
	comp=Z,6.8nm,0.9s						
ILAR	Eielson Array	84.09	22	P	P	21 15 44.9	-1.1
	comp=Z,4.4nm,0.8s,baz=249,slow=5.1,SNR=38						
	comp=Z,4.4nm,0.8s						
ILAR	Eielson Array	84.09	22	P	P	21 15 44.3	-1.7
COLD	Coldfoot	84.12	20	P	P	21 15 47.5	+1.4
	baz=239						
AAK	Ala-Archa	84.16	314	P	P	21 15 46.9	-0.2
	comp=Z,1.3nm,0.7s,baz=168,slow=3.0,SNR=7.5						
AAK				LR	LR	21 53 07.8	
	comp=Z,92nm,20.8s,baz=143,slow=36						
	comp=Z,1.3nm,0.7s						
H24K	Noodor Dome	84.23	21	P	P	21 15 47.6	+0.9
	baz=241						
RIDG	Independent Ri	84.42	24	P	P	21 15 48.4	+0.6
	baz=244						
DOT	Dot Lake	84.70	24	P	P	21 15 48.4	-0.7
DOT				IAmb	IAmb	21 15 51.6	
	comp=Z,7.3nm,0.8s						
L26K	Log Cabin Wild	84.73	25	P	P	21 15 48.6	-0.7
L26K				IAmb	IAmb	21 15 50.5	
	comp=Z,3.9nm,0.5s						
L26K	Log Cabin Wild	84.73	25	P	P	21 15 50.1	+0.7
	baz=246						
E23K	Chandalar	84.75	19	P	P	21 15 51.4	+2.1
	baz=239						
G24K	Hadweenzic Riv	84.79	21	P	P	21 15 51.4	+1.8
	baz=242						
SCRK	Sand Creek	84.87	24	P	P	21 15 48.8	-1.3
SCRK	Sand Creek	84.87	24	P	P	21 15 50.8	+0.6
	baz=245						
D23K	Nanushuk River	84.88	18	P	P	21 15 51.5	+1.6
	baz=238						
F24K	Squaw Lake	85.05	20	P	P	21 15 51.9	+1.1
	baz=241						
M27K	Edge Creek, AK	85.08	26	P	P	21 15 51.3	+0.1
M27K				IAmb	IAmb	21 15 54.6	
	comp=Z,10nm,0.8s						
M27K	Edge Creek, AK	85.08	26	P	P	21 15 52.6	+1.4
	baz=247						
G25K	Bearman Lake	85.31	21	P	P	21 15 54.1	+2.0
	baz=243						
L27K	Beaver Creek,	85.38	25	P	P	21 15 53.9	+1.3
	baz=247						
FYU	Fort Yukon	85.53	21	P	P	21 15 52.2	-0.9
FYU				IAmb	IAmb	21 15 55.6	
	comp=Z,5.9nm,0.7s						
YUK8	Steele Glacier	85.61	27	P	P	21 15 55.7	+1.7
	baz=249						
K27K	Chicken	85.66	24	P	P	21 15 55.9	+1.9
	baz=247						
F25K	Christian Rive	85.84	20	P	P	21 15 56.6	+1.8
	baz=243						
BMAR	Burnt Mountain	86.14	20	P	P	21 15 55.1	-1.2
G26K	Porcupine Rive	86.21	21	P	P	21 15 58.0	+1.4
	baz=245						
EGAK	Eagle	86.32	23	P	P	21 15 57.3	+0.1
EGAK				IAmb	IAmb	21 16 00.1	
	comp=Z,10nm,1.0s						
EGAK	Eagle	86.32	23	P	P	21 15 58.3	+1.2
	baz=248						
D25K	Kavik River	86.40	18	P	P	21 15 58.2	+0.7
	baz=242						
F26K	Sheenjek River	86.40	20	P	P	21 15 59.2	+1.6
	baz=245						
I27K	Kandik River	86.46	23	P	P	21 15 59.3	+1.4
	baz=247						
HYT	Haines Junctio	86.48	28	P	P	21 15 57.7	-0.5
HYT				IAmb	IAmb	21 16 01.7	
	comp=Z,16nm,1.0s						
HYT	Haines Junctio	86.48	28	P	P	21 16 00.1	+1.9
	baz=251						
NRIK	Noril'sk	86.57	341	P	P	21 15 58.3	0.0
	comp=Z,1.2nm,0.4s,baz=79,slow=5.0,SNR=1.8						
NRIK				LR	LR	21 51 00.3	
	comp=Z,39nm,21.6s,baz=136,slow=33						
	comp=Z,1.2nm,0.4s						
M29M	Somme Creek	86.59	26	P	P	21 16 00.4	+1.7
	baz=250						
H27K	Steamboat Moun	86.74	22	P	P	21 16 00.5	+1.2
	baz=247						
DAWY	Dawson	86.77	24	P	P	21 16 00.6	+1.2
	baz=249						
G27K	Doyon Strip	86.92	21	P	P	21 16 01.1	+0.9
	baz=247						
L29M	L29M	86.96	26	P	P	21 16 01.7	+1.2
	baz=250						
KK31	Karatay Array	87.12	314	P	P	21 16 00.6	-1.0
KK31	Karatay Array	87.12	314	P	P	21 16 00.6	-1.0
KK31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KKAR	Karatay Array	87.12	314	P	P	21 15 59.9	-1.7
KKAR	Karatay Array	87.12	314	P	P	21 15 59.9	-1.7
KKAR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
O30N	Mendenhall	87.12	28	P	P	21 16 03.3	+2.0
	baz=252						
C26K	Camden Bay	87.13	18	P	P	21 16 03.7	+2.7
	baz=244						
M30M	Minto, Yukon	87.37	26	P	P	21 16 03.5	+1.1
	baz=252						
C27K	Jago River	87.38	19	P	P	21 16 03.4	+1.2
	baz=245						
K29M	Barlow Dome	87.47	25	P	P	21 16 04.3	+1.4
	baz=251						
E27K	Coleen River	87.48	20	P	P	21 16 04.1	+1.3
	baz=247						
N31M	Braeburn, Yuko	87.48	27	P	P	21 16 01.2	-1.7
EPYK	Eagle Plains	88.61	23	P	P	21 16 08.5	+0.3
EPYK				IAmb	IAmb	21 16 10.3	
	comp=Z,6.1nm,0.7s						
EPYK	Eagle Plains	88.61	23	P	P	21 16 08.9	+0.7
	baz=252						
N32M	Quiet Lake	88.64	28	P	P	21 16 09.7	+1.2
	baz=255						
FARO	Faro, Yukon	88.80	27	P	P	21 16 10.6	+1.4
	baz=255						
S34M	Telegraph Cree	88.80	31	P	P	21 16 12.1	+2.8
	baz=257						
BVAR	Borovoye Array	89.12	323	LR	LR	21 57 44.4	
	comp=Z,29nm,18.1s,baz=106,slow=37						
INK	Inuvik	90.36	21	P	P	21 16 16.7	+0.4
	baz=254						
BCW	Bitter Crk WRg	93.23	55	P	P	21 16 29.8	-0.7
NVAR	Mina Array Bea	94.41	52	P	P	21 16 37.5	+1.5
	comp=Z,2.6nm,0.8s,baz=254,slow=6.1,SNR=14						
NVAR				LR	LR	21 56 30.4	
	comp=Z,56nm,18.0s,baz=253,slow=34						
	comp=Z,2.6nm,0.8s						
NVAR	Mina Array Bea	94.41	52	P	P	21 16 34.4	-1.6
NV11	Mina Array Sit	94.53	52	P	P	21 16 34.5	-2.0
NV11				IAmb	IAmb	21 16 52.5	
	comp=Z,4.2nm,0.9s						
DSP	Deep Springs	94.60	53	P	P	21 16 36.9	+0.3
DSP				IAmb	IAmb	21 16 40.4	
	comp=Z,11nm,1.4s						
KVN	Kaiserville	94.61	51	P	P	21 16 35.5	-1.4
KVN	Kaiserville	94.61	51	P	P	21 16 35.5	-1.4
KVN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WAPA	Wapiti River	94.90	35	P	P	21 16 37.0	-0.7
QSM	Queen of Sheba	95.39	55	P	P	21 16 37.4	-2.9
QSM				IAmb	IAmb	21 16 43.6	
	comp=Z,12nm,1.3s						
PFO	Pinyon Flats O	95.57	57	LR	LR	21 53 05.4	
	comp=Z,59nm,19.7s,baz=226,slow=31						
AKTO	Aktyubinsk	96.47	320	LR	LR	22 00 21.5	
	comp=Z,72nm,20.5s,baz=5.5,slow=36						
ELK	Elko	96.90	50	LR	LR	21 55 29.6	
	comp=Z,53nm,19.0s,baz=254,slow=32						
YKA	Yellowknife Ar	97.48	28	P	P	21 16 49.2	+0.1
	comp=Z,1.3nm,0.7s,baz=266,slow=4.6,SNR=13						
	comp=Z,1.3nm,0.7s						
PIX	Pinacate	98.00	59	P	P	21 16 49.9	-2.3
PDAR	Pinedale Array	101.16	48	P	Pdif	21 17 06.3	-0.1
	comp=Z,1.2nm,0.9s,baz=254,slow=2.6,SNR=7.3						
AKASG	Malin Array Be	114.40	324	PKP	PKPdf	21 21 54.8	-0.7
	comp=Z,1.2nm,0.5s,baz=48,slow=1.8,SNR=8.9						
SORM	Soroca	115.87	321	⇓P	PKiKP	21 21 57.2	-1.1
SORM	Soroca	115.87	321	⇓PKIKP	PKiKP	21 21 57.2	-1.1
HFS	Hagfors	117.16	338	PKP	PKPdf	21 22 00.4	-0.1
	comp=Z,1.5nm,0.7s,baz=114,slow=3.6,SNR=4.5						
TLBR	Topalu	117.33	317	⇑P	PKiKP	21 22 01.6	+0.3
NB2	NORSAR Subarra	117.46	339	PKPdf	PKPdf	21 21 59.9	-1.2
	comp=Z,2.5nm,1.0s,baz=44,slow=1.9						
NOA	NORSAR Array B	117.46	339	PKP	PKPdf	21 22 00.4	-0.7
	comp=Z,1.4nm,0.8s,baz=49,slow=2.0,SNR=5.9						
VRI	Vrincioaia	117.74	319	⇑P	PKPdf	21 22 01.9	-0.1
VRI	Vrincioaia	117.74	319	⇑PKIKP	PKPdf	21 22 01.9	-0.1
BURAR	Bucovina Array	118.02	321	⇓P	PKiKP	21 22 04.0	+1.3
BURAR	Bucovina Array	118.02	321	⇓PKIKP	PKiKP	21 22 04.0	+1.3
MLR	Muntele Rosu	118.39	319	⇑P	PKPdf	21 22 02.6	-0.9
MLR	Muntele Rosu	118.39	319	PKP	PKPdf	21 22 02.6	-0.9
	comp=Z,1.1nm,0.5s,baz=135,slow=4.3,SNR=4.5						
DOPR	Dopca	118.56	320	⇑P	PKPdf	21 22 00.9	-2.8
STFAR	Stefanesti-Arg	119.27	319	⇓P	PKiKP	21 22 11.3	+6.3
ARR	Arges	119.28	319	⇓P	PKPdf	21 22 05.2	+0.1
HUMR	Humele	119.38	318	⇓P	PKPdf	21 22 04.7	-0.5
LOT	Lotru	119.81	320	⇑P	PKPdf	21 22 05.5	-0.6
PLCA	Paso Flores	119.88	145	PKP	PKPdf	21 22 05.8	-0.6
	comp=Z,1.6nm,0.7s,baz=180,slow=14,SNR=8.1						
DRGR		119.92	321	⇑P	PKPdf	21 22 04.6	-1.7
DRGR		119.92	321	⇑PKIKP	PKPdf	21 22 04.6	-1.7
PLVB	Pleven	120.05	317	⇓P	PKiKP	21 22 07.0	+0.4
GZR	Gura Zlata	120.47	320	⇑P	PKPdf	21 22 07.0	-0.4
SURR	Surduc	120.73	321	⇑P	PKPdf	21 22 07.3	-0.4
LANS	Liptovska Anna	120.75	325	ePKIKP	PKiKP	21 22 08.7	+0.8
LANS	Liptovska Anna	120.75	325	ePKP	PKiKP	21 22 08.7	+0.8
SIRR	Siria	120.80	321	⇑P	PKiKP	21 22 08.7	+0.7
HERR	Herculane	120.92	320	⇓P	PKPdf	21 22 07.0	-1.2
BZS	Buzias	121.11	321	⇑P	PKPdf	21 22 08.5	0.0
BZS	Buzias	121.11	321	⇑PKIKP	PKPdf	21 22 08.5	0.0
MDVR	Moldovita	121.41	320	⇑P	PKPdf	21 22 09.2	+0.1
VYHS	Vyhne	121.44	325	ePKIKP	PKPdf	21 22 09.2	+0.1
VYHS	Vyhne	121.44	325	ePKP	PKPdf	21 22 09.2	+0.1
MORC	Moravsky Berou	121.51	326	⇓P	PKiKP	21 22 10.1	+0.7
MORC	Moravsky Berou	121.51	326	⇓PKIKP	PKiKP	21 22 10.1	+0.7
MAUC	Maruska	121.57	326	ePKP	PKiKP	21 22 10.7	+1.2
KRLC	Kraliky	121.77	327	ePKP	PKiKP	21 22 10.4	+0.5
KRLC				ePKP	PKPdf	21 22 10.6	+0.9
KRLC	Kraliky	121.77	327	ePKIKP	PKiKP	21 22 10.4	+0.5
OSTC	Ostas	121.81	328	ePKP	PKiKP	21 22 10.6	+0.7
OSTC	Ostas	121.81	328	ePKIKP	PKiKP	21 22 10.6	+0.7
BOVS	Bovan	121.90	318	⇑P	PKPdf	21 22 08.7	-1.4
FRGS	Fruska Gora	122.46	321	⇑P	PKPdf	21 22 09.3	-1.8
IDI	Anoyia	122.58	308	PKP	PKPdf	21 22 11.6	-0.2
	comp=Z,7.8nm,0.9s,baz=16,slow=7.4,SNR=2.6						
MORH	Mrgy, Hungar	122.68	322	⇓P	PKiKP	21 22 12.0	+0.4
SCHQ	Schefferville	122.78	25	PKP	PKPdf	21 22 11.2	-0.3
	comp=Z,5.8nm,0.9s,baz=272,slow=7.5,SNR=4.8						
PRU	Pruhonice	123.01	328	ePKP	PKiKP	21 22 12.7	+0.5
PRU	Pruhonice	123.01	328	ePKIKP	PKiKP	21 22 12.7	+0.5
RONA	Rosalia, Austr	123.31	325	i PKiKP	PKiKP	21 22 13.2	+0.2
	comp=Z,2.5nm,0.7s						
CONA	Conrad Observa	123.44	325	ePKiKP	PKiKP	21 22 13.5	+0.3
	comp=Z,3.1nm,0.6s,SNR=4.9						
CKRC	Cesky Krumlov	123.81	327	ePKP	PKiKP	21 22 14.3	+0.4
CKRC	Cesky Krumlov	123.81	327	ePKIKP	PKiKP	21 22 14.3	+0.4
KHC	Kasperske Hory	124.02	327	ePKP	PKiKP	21 22 14.7	+0.4
KHC	Kasperske Hory	124.02	327	ePKIKP	PKiKP	21 22 14.7	+0.4
GERES	GERESS Array B	124.12	327	PKP	PKPdf	21 22 14.6	+0.3
	comp=Z,3.0nm,0.6s,baz=90,slow=1.3,SNR=22						
GROS	Grobnik	124.43	324	i PKPdf	PKPdf	21 22 14.8	-0.1
PERS	Pernice	124.56	324	i PKPdf	PKPdf	21 22 15.1	-0.1
SOKA	Soboth	124.59	324	i PKiKP	PKPdf	21 22 15.1	-0.2
	comp=Z,3.4nm,0.8s						
KBA	Koelnbreinsper	125.33	326	i PKiKP	PKPdf	21 22 16.3	-0.5
	comp=Z,1.5nm,0.6s						
CRNS	Crni Vrh	125.36	324	i PKPdf	PKPdf	21 22 16.8	+0.1
VOJS	Vojsko	125.61	324	i PKPdf	PKPdf	21 22 17.3	0.0
ABTA	Abfaltersbach	125.99	326	i PKiKP	PKPdf	21 22 17.7	-0.2
	comp=Z,3.6nm,0.7s,SNR=5.5						
WATA	Walderalm	126.16	327	i PKiKP	PKPdf	21 22 18.3	0.0
	comp=Z,7.5nm,1.3s						
WTTA	Wattenberg	126.17	327	i PKiKP	PKPdf	21 22 18.8	+0.4
	comp=Z,9.3nm,0.9s,SNR=6.9						
MOTA	Moosalm	126.41	327	ePKiKP	PKPdf	21 22 19.1	+0.2
	comp=Z,5.9nm,0.6s,SNR=5.6						
SQTA	Sankt Quirin	126.43	327	ePKiKP	PKPdf	21 22 19.1	+0.2
	comp=Z,6.5nm,0.8s						
RETA	Reutte	126.51	327	i PKiKP	PKPdf	21 22 19.3	+0.4
	comp=Z,1.3nm,0.7s						
FETA	Feichten	126.81	327	ePKiKP	PKPdf	21 22 20.0	+0.4
	comp=Z,5.6nm,0.8s,SNR=7.3						
DAVA	Damuels	127.11	327	i PKiKP	PKPdf	21 22 20.5	+0.3
	comp=Z,4.5nm,0.7s						
KEST	Kesra	134.00	315	PKP	PKiKP	21 22 34.8	0.0
	comp=Z,4.6nm,0.9s,baz=311,slow=2.0,SNR=4.2						
LPAZ	La Paz	135.47	121	PKP	PKPdf	21 22 38.2	+0.8
	comp=Z,1.0nm,0.5s,baz=60,slow=7.6,SNR=4.4						
CPUP	Villa Florida	137.73	141	PKP	PKPdf	21 22 41.5	+0.9
	comp=Z,1.8nm,0.3s,baz=34,slow=3.6,SNR=3.8						
ESDC	Sonseca Array	139.62	330	PKP	PKiKP	21 22 45.9	-0.2
	comp=Z,0.7nm,0.8s,baz=64,slow=3.0,SNR=3.0						
MDT	Midelt	144.96	322	PKP	PKPdf	21 22 53.7	+0.2
	comp=Z,2.7nm,0.8s,baz=334,slow=2.0,SNR=4.6						
TORD	Torodi Ar. Bea	148.82	285	PKPbc	PKPbc	21 23 04.1	-0.1
	comp=Z,6.2nm,0.6s,baz=37,slow=2.9,SNR=56						
BDFB	Brasilia	151.43	139	PKPbc	PKPbc	21 23 10.4	-0.3
	comp=Z,22nm,0.7s,baz=207,slow=1.8,SNR=24						
DBIC	Dimbokro	155.85	273	PKPab	PKPab	21 23 37.9	+0.3
	comp=Z,3.1nm,0.6s,baz=129,slow=5.1,SNR=3.3						

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*WEL **20** 21:10:24.7±0.2, 40°S±2°×17°5E±°, h5^{km}±2^{km}, M3.7/54,*
ML3.9/54, MLv3.7/54, Error ellipse: s-maj=0.0km
s-min=0.0km az=87.9, confirmed

ISC 20 21:10:24.5±1.3, **40.°14S**±0.°02×**174.°59E**±0.°02, **h2**^{km}±14^{km},
n123, σ**0.ˢ95**/129, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WAZ	Wanganui	0.49	38	P	Pg	21 10 34.8	+0.9
WAZ				S	Sg	21 10 41.8	+1.5
LREZ	Lake Rotokare	0.69	348	P	Pb	21 10 39.3	0.0
LREZ				S	Sb	21 10 49.9	+0.6
KIW	Kapiti Island	0.76	161	P	Pg	21 10 39.1	0.0
KIW				S	Sg	21 10 48.0	-0.9
OGWZ	Otaki Gorge	0.81	147	P	Pg	21 10 40.3	+0.3
DUWZ	D'Urville Isla	0.83	218	P	Pg	21 10 40.2	-0.3
NMEZ	Namu Road	0.91	323	P	Pg	21 10 42.7	+0.7
NMEZ				S	Sb	21 10 55.7	+0.2
MRZ	Mangatainoka R	0.92	125	P	Pg	21 10 42.5	+0.5
POWZ	Post Office Ro	0.93	106	P	Pg	21 10 42.9	+0.5
NEZ	North Egmont	0.95	336	P	Pg	21 10 43.3	+0.6
KHEZ	Kahui Hut	0.96	332	P	Pb	21 10 43.6	-0.2
KHEZ	Kahui Hut	0.96	332	P	Pg	21 10 43.4	+0.6
KHEZ				S	Sb	21 10 57.5	+0.6
DREZ	Durham Road	1.00	342	P	Pb	21 10 44.3	-0.2
DREZ				S	Sb	21 10 58.5	+0.5
MTVZ	Mangateitei	1.01	42	P	Pg	21 10 43.3	-0.7
VRZ	Vera Road	1.02	7	P	Pg	21 10 44.3	+0.2
CAW	Cannon Point	1.03	160	P	Pg	21 10 44.3	0.0
PKVZ	Pokaka	1.03	35	P	Pg	21 10 43.4	-0.9
HOWZ	Holdsworth Sta	1.03	137	P	Pg	21 10 44.7	+0.4
NBEZ	Newall Road No	1.04	327	P	Pg	21 10 44.7	+0.4
TSZ	Takapari Road	1.05	86	P	Pg	21 10 44.8	+0.1
PKE	Pukeiti	1.05	334	P	Pg	21 10 45.1	+0.4
MHEZ	Mangahewa	1.08	349	P	Pn	21 10 47.2	+0.6
TCW	Tory Channel	1.09	193	P	Pg	21 10 44.4	-1.1
TRVZ	Turoa	1.12	42	P	Pg	21 10 44.9	-1.0
WNVZ	Wahianoa	1.12	44	P	Pg	21 10 45.0	-1.0
PRWZ	Pori Road	1.13	112	P	Pn	21 10 47.0	-0.3
DRZ	Dome Shelter	1.15	41	P	Pg	21 10 45.6	-0.8
WEL	Wellington	1.15	173	P	Pg	21 10 46.4	-0.2
WHVZ	Whangaehu Hut	1.15	42	P	Pg	21 10 45.7	-0.9
FWVZ	Far West T-bar	1.16	40	P	Pg	21 10 45.4	-1.2
MOVZ	Moawhango	1.16	51	P	Pg	21 10 45.6	-1.1
TIWZ	Tintock	1.17	123	P	Pn	21 10 47.7	-0.3
TUVZ	Tukino	1.20	44	P	Pg	21 10 46.5	-1.0
DVHZ	Dannevirke	1.22	98	P	Pn	21 10 48.4	-0.1
MTW	Mount Morrison	1.23	146	P	Pn	21 10 48.5	-0.2
NGZ	Ngauruhoe	1.24	39	P	Pg	21 10 46.9	-1.3
SNVZ	South Ngauruho	1.25	41	P	Pg	21 10 47.3	-1.2
TWVZ	Taurewa	1.25	32	P	Pg	21 10 46.9	-1.6
PNHZ	Pukenui	1.26	80	P	Pg	21 10 48.3	-0.2
NNVZ	North Ngauruho	1.28	38	P	Pg	21 10 47.6	-1.4
OTVZ	Oturere	1.28	41	P	Pg	21 10 47.7	-1.3
WTVZ	West Tongariro	1.28	37	P	Pg	21 10 47.6	-1.5
BHHZ	Black Hill Sta	1.31	61	P	Pg	21 10 48.3	-1.3
KRVZ	Karewarewa	1.32	38	P	Pn	21 10 48.2	-1.9
ETVZ	East Tongariro	1.32	41	P	Pn	21 10 48.6	-1.5
NTVZ	North Tongarir	1.34	39	P	Pn	21 10 48.6	-1.7
TMVZ	Te Maari	1.34	40	P	Pn	21 10 48.6	-1.7
BFZ	Birch Farm	1.37	114	P	Pn	21 10 50.4	-0.3
TUWZ	Tuamarina	1.38	201	P	Pn	21 10 49.3	-1.4
TMWZ	Te Maipa	1.38	135	P	Pn	21 10 50.8	0.0
PAWZ	Paruwai Farm	1.39	153	P	Pn	21 10 50.7	-0.2
NNZ	Nelson	1.42	220	P	Pn	21 10 50.3	-0.9
WPHZ	Waipukurau	1.42	87	P	Pg	21 10 52.4	+0.7
KATZ	Kakaramea	1.44	37	P	Pn	21 10 50.3	-1.4
CPWZ	Castlepoint	1.45	123	P	Pb	21 10 52.2	0.0
TRWZ	Traveller	1.51	147	P	Pb	21 10 52.8	-0.4
PLWZ	Palliser	1.51	161	P	Pn	21 10 52.1	-0.5
RITZ	Rihia Road	1.52	41	P	Pn	21 10 52.3	-0.4
TKNZ	Takaka Hill	1.53	234	P	Pn	21 10 52.2	-0.6
RATZ	Rangitukua	1.57	36	P	Pn	21 10 52.6	-0.8
PRHZ	Porangahau	1.57	95	P	Pg	21 10 54.8	+0.2
KWHZ	Kaweka Forest	1.58	64	P	Pn	21 10 53.5	0.0
CMWZ	Cape Campbell	1.63	190	P	Pg	21 10 55.7	-0.1
HIZ	Hauiti	1.64	7	P	Pn	21 10 53.7	-0.5
BSWZ	Blackbirch Sta	1.66	199	P	Pn	21 10 54.2	-0.4
WATZ	Wairara	1.68	32	P	Pn	21 10 54.2	-0.8
QRZ	Quartz Range	1.71	246	P	Pn	21 10 54.1	-1.3
PXZ	Pawanui	1.75	87	P	Pg	21 10 59.3	+1.4
BKZ	Black Stump Fm	1.76	57	P	Pb	21 10 56.9	-0.6
BKZ	Black Stump Fm	1.76	57	P	Pn	21 10 55.6	-0.4
MCHZ	McNeill Hill	1.77	67	P	Pg	21 10 58.1	-0.2
KAHZ	Kahuranaki	1.79	80	P	Pn	21 10 56.9	+0.5
WHTZ	Whakaora	1.81	36	P	Pg	21 10 59.4	+0.1
MRNZ	Matariki Terra	1.88	227	P	Pn	21 10 57.5	0.0
KUTZ	Kaahu Road	1.91	30	P	Pn	21 10 57.7	-0.3
MRHZ	Matea Rd	1.92	48	P	Pn	21 10 59.1	+0.8
TLZ	Tolley Road	1.95	22	P	Pn	21 10 57.6	-1.0
CKHZ	Cape Kidnapper	1.97	77	P	Pg	21 11 02.8	+0.5
NMHZ	Naumai	2.00	59	P	Pb	21 11 00.6	-1.1
WPRZ	Whakapapatarin	2.03	37	P	Pb	21 11 02.1	+0.1
THZ	Tophouse	2.06	218	P	Pn	21 11 00.5	+0.3
ALRZ	Allen Road	2.08	41	P	Pb	21 11 02.0	-1.0
GRRZ	Galatos Road	2.14	34	P	Pb	21 11 03.7	-0.3
PRRZ	Plateau Road	2.15	41	P	Pb	21 11 03.3	-0.9
MTHZ	Maungataniwha	2.17	54	P	Pb	21 11 03.0	-1.4
HRRZ	Handcock Road	2.19	37	P	Pb	21 11 04.8	+0.1
RAHZ	Arahi	2.28	58	P	Pb	21 11 06.9	+0.5
WHHZ	Waihua	2.30	63	P	Pg	21 11 09.3	+0.7
UTU	Utuhina	2.32	33	P	Pb	21 11 07.5	+0.4
RRRZ	Republican Roa	2.34	40	P	Pb	21 11 05.8	-1.5
MUGZ	Murupara	2.37	46	P	Pn	21 11 05.6	+1.3
NGRZ	Ngongotaha	2.38	32	P	Pb	21 11 07.7	-0.4
RTZ	Ruatahuna	2.40	51	P	Pn	21 11 06.4	+1.6
KHZ	Kahutara	2.41	199	P	Pn	21 11 05.3	+0.5
KHZ	Kahutara	2.41	199	P	Pn	21 11 04.9	+0.1
TARZ	Mount Tarawera	2.42	39	P	Pb	21 11 07.4	-1.3
OMRZ	Omania	2.46	35	P	Pb	21 11 07.9	-1.5
TOZ	Tahuroa Road	2.51	17	P	Pn	21 11 05.4	-0.8
SNGZ	Shannon Statio	2.52	58	P	Pb	21 11 10.3	-0.2
DSZ	Denniston Nort	2.65	232	P	Pn	21 11 07.7	-0.5
URZ	Urewera	2.71	47	P	Pn	21 11 09.5	+0.5
MWZ	Matawai	2.91	53	P	Pn	21 11 12.4	+0.6
TKGZ	Te Karaka	3.05	57	P	Pn	21 11 16.1	+2.5
GVZ	Greta Valley S	3.06	202	P	Pn	21 11 13.8	0.0
AWAZ	Awhitu Peninsu	3.07	1	P	Pn	21 11 13.8	-0.2
LTZ	Lake Taylor	3.16	213	P	Pn	21 11 14.9	-0.4
ETAZ	East Tamaki Re	3.19	5	P	Pn	21 11 15.3	-0.3
WTAZ	Waiatarua	3.20	360	P	Pn	21 11 16.3	+0.5
RUGZ	Raukumara Rang	3.24	49	P	Pn	21 11 16.2	-0.2
TWGZ	Tauwhareparae	3.28	54	P	Pn	21 11 18.1	+1.2

WIAZ	Waiheke Island	3.37	7	P	Pn	21 11 17.9	-0.1
MBAZ	Motutapu North	3.38	4	P	Pn	21 11 18.0	-0.2
HAZ	Te Kaha	3.44	47	P	Pn	21 11 19.5	+0.4
INZ	Inchbonnie	3.50	221	P	Pn	21 11 20.0	+0.1
PUZ	Puketiti	3.52	55	P	Pb	21 11 25.5	-2.0
OXZ	Oxford	3.71	210	P	Pn	21 11 23.4	+0.6
MQZ	McQueen's Vall	3.84	201	P	Pn	21 11 23.3	-1.2
WVZ	Waitaha Valley	4.12	223	P	Pn	21 11 30.0	+1.6
WCZ	Waipu Caves	4.20	357	P	Pn	21 11 29.1	-0.4
RPZ	Rata Peaks	4.44	215	P	Pn	21 11 37.3	+4.5
GCSZ	Gaunt Creek Bo	4.50	224	P	Pn	21 11 33.6	0.0
FOZ	Fox Glacier	4.92	225	P	Pn	21 11 38.9	-0.4
TMZ	Timaru	5.00	211	P	Pn	21 11 39.5	-1.0
JCZ	Jackson Bay	5.84	226	P	Pn	21 11 51.3	-0.8

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*IDC **20** 21:17:40.0±0.9, 23°.80N×124°.97E, h0^{km}, mb3.8/10, mbtmp3.8/10, Error ellipse: s-maj=41.6km s-min=20.3km az=65.0*

*NEIC **20** 21:17:39.1±1.6, 23°.5N±0°.1×125°.08E±0°.08, h7^{km}±7^{km}, mb4.3/12, Error ellipse: s-maj=20.3km s-min=8.2km az=160.0*

*NIED **20** 21:17:44.5, 23°.81N×124°.93E, h58^{km}, MW4.0, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.01; $M_{\theta\theta}$0.39; $M_{\phi\phi}$-0.38; $M_{r\theta}$0.38; $M_{\theta\phi}$0.86; $M_{\phi r}$-0.08; Fault plane solution: $M_0$1.02000×10^{15} NP1: ϕ_s282.00000°, δ90.00000°, λ-22.00000°. NP2:ϕ_s12.00000°, δ68.00000°, λ-180.00000°.*

*JMA **20** 21:17:44.5±0.2, 23°.8N±0°.7×124°.9E±0°.4, h58^{km}, MV3.7/13, NEAR ISHIGAKIJIMA ISLAND*

ISC 20 21:17:41.1±1.5**, 23°.68N**±0°.04×**124°.95E**±0°.04**, h13**^{km}±9^{km}**, n69, σ1^{s}32**/80**, mb4.2**/16**, 5C-3D, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTJ	Tarama	0.98	347	i P	Pn	21 18 01.0	+0.4
JTJ				S	Sg	21 18 12.9	-0.1
JIJ	Ishigaki jima	1.00	313	i P	Pn	21 18 01.4	+0.5
JIJ				S	Sb	21 18 13.7	+0.2
JKRS	Kuro-shima	1.02	303	i P	Pn	21 18 02.2	+1.0
JKRS				S	Sb	21 18 14.8	+0.7
JISG	Ishigakijimahi	1.08	327	i P	Pn	21 18 02.1	+0.2
JISG				eS	Sb	21 18 14.3	-1.2
JMJ2	Miyako jima3	1.11	18	P	Pn	21 18 02.5	+0.1
JMJ2				S	Sb	21 18 15.7	-0.9
HATJ	Hateruma jima	1.11	290	P	Pn	21 18 03.3	+0.9
HATJ				S	Sg	21 18 17.1	0.0
JOGS	Gusukube	1.15	21	P	Pg	21 18 03.3	-0.1
JOGS				S	Sb	21 18 17.5	-0.3
JIRB	Irabujima	1.16	10	P	Pn	21 18 03.1	0.0
JIRB				S	Sb	21 18 16.9	-1.2
JMJ	Miyako jima 2	1.17	15	P	Pb	21 18 02.6	-0.7
JIKM	Ikemajima	1.27	12	P	Pb	21 18 04.8	-0.1
JIKM				S	Sb	21 18 19.6	-1.5
IRIF	Iriomote-Funau	1.29	301	i P	Pg	21 18 05.9	-0.2
IRIF				S	Sb	21 18 21.4	-0.4
YOJ	Yonaguni jima	1.94	294	Pn	Pn	21 18 14.3	+0.6
YOJ	Yonaguni jima	1.94	294	P	Pb	21 18 15.0	-1.3
YOJ	Yonaguni jima	1.94	294	P	Pn	21 18 14.9	+1.2
YOJ				S	Sn	21 18 36.1	-1.8
JYNG	Yonagunijimaku	1.99	293	i P	Pn	21 18 15.7	+1.3
JYNG				S	Sn	21 18 37.5	-1.7
NACB	Ninganchiao	3.11	280	Pn	Pn	21 18 30.0	+0.2
NACB	Ninganchiao	3.11	280	P	Pn	21 18 30.5	+0.6
YULB	Yu-li	3.37	266	Pn	Pn	21 18 33.4	0.0
YULB	Yu-li	3.37	266	P	Pn	21 18 33.6	+0.2
YHNB	Yeheng	3.41	288	Pn	Pn	21 18 35.4	+1.3
YHNB	Yeheng	3.41	288	P	Pn	21 18 36.0	+1.9
TATO	Taipei	3.41	293	Pn	Pn	21 18 34.9	+0.9
TWGBT	Beinan	3.66	257	P	Pn	21 18 37.3	-0.2
SSLB	Suanglung	3.66	272	Pn	Pn	21 18 38.1	+0.6
SSLB	Suanglung	3.66	272	P	Pn	21 18 39.6	+2.1
TWG	Pinlang	3.67	257	Pn	Pn	21 18 36.6	-1.0
TPUB	Ta-pu	3.98	265	Pn	Pn	21 18 43.4	+1.4
TPUB	Ta-pu	3.98	265	P	Pn	21 18 44.4	+2.5
BBP	Basco	4.25	221	⇓eP	Pn	21 18 45.3	-0.3
BBP				eS	Sn	21 19 31.1	-3.9
JOW	Kunigami	4.35	43	Pn	Pn	21 18 45.9	-1.0
JOW	Kunigami	4.35	43	P	Pn	21 18 47.1	+0.2
CICP	Calayan Island	5.45	217	⇓iP	Pn	21 19 02.3	+0.2
CICP				eS	Sn	21 19 50.6	-14
JMZ	Minamidaito 2	6.08	68	Pn	Pn	21 19 08.6	-2.2
JMZ	Minamidaito 2	6.08	68	P	Pn	21 19 10.6	-0.2
PACPP	Pamplona Cagay	6.19	214	⇑eP	Pn	21 19 12.9	+0.7
CVP	Callao Caves	6.63	207	⇑iP	Pn	21 19 19.0	+0.8
PALP	Palanan	7.00	200	⇓eP	Pn	21 19 25.2	+1.9
PALP				eS	Sn	21 20 38.1	-4.7
CAUP	Cauayan	7.32	204	⇑eP	Pn	21 19 33.0	+5.3
SAMP	Sagada Mountai	7.58	211	⇑eP	Pn	21 19 35.0	+3.6
BALP	Baler	8.51	203	⇑eP	Pn	21 19 47.5	+3.4
CN2	Changchun	20.07	1	P	Pn	21 22 16.8	+0.8
HHC	Hu-ho-hao-te	20.48	330	eP	Pn	21 22 29.4	+8.5
SONM	Songino Array	28.27	333	P	P	21 23 33.4	-0.9
	0.7nm,0.8s,baz=146,slow=11,SNR=2.8						
	0.7nm,0.8s						
MK31	Makanchi Array	41.12	315	P	P	21 25 25.5	+0.7
MKAR	Makanchi Array	41.12	315	P	P	21 25 25.2	+0.4
	3.3nm,0.5s,baz=100,slow=10,SNR=76						
	3.3nm,0.5s						
MKAR	Makanchi Array	41.12	315	P	P	21 25 25.0	+0.2
MAKZ	Makanchi	41.32	315	P	P	21 25 27.2	+0.7
ZAA0	Zalesovo Array	42.57	326	P	P	21 25 36.2	-0.3
ZALV	Zalesovo Beam	42.57	326	P	P	21 25 36.2	-0.4
	2.3nm,0.4s,baz=112,slow=8.2,SNR=11						
	2.3nm,0.4s						
ZALV	Zalesovo Beam	42.57	326	P	P	21 25 36.0	-0.6
WRA	Warramunga Arr	44.31	167	P	P	21 25 51.8	+0.8
	0.6nm,0.9s,baz=347,slow=8.7,SNR=5.3						
	0.6nm,0.9s						
KURK	Kurchatov	44.71	319	P	P	21 25 53.2	-0.6
KURK				IAmb	IAmb	21 25 54.9	
	comp=Z,2.4nm,0.8s						
ASAR	Alice Springs	47.86	169	P	P	21 26 21.2	+2.3
	comp=Z,0.2nm,0.4s,baz=353,slow=8.7,SNR=2.4						
	comp=Z,0.2nm,0.4s						
GAR	Garm	48.41	302	P	P	21 26 22.9	-0.4
GAR				IAmb	IAmb	21 26 25.8	
	comp=Z,3.9nm,0.8s						
KK31	Karatay Array	48.52	307	P	P	21 26 23.4	-0.4
KKAR	Karatay Array	48.52	307	P	P	21 26 24.4	+0.6
CHGR	Chuyangaron	49.31	301	P	P	21 26 29.1	-1.0
KBL	Kabul	49.49	296	P	P	21 26 32.0	+0.3
KBL				IAmb	IAmb	21 26 48.2	
	comp=Z,3.8nm,1.1s						
BRVK	Borovoye	50.33	320	P	P	21 26 38.3	+0.8
BRVK				IAmb	IAmb	21 26 39.6	
	comp=Z,2.5nm,0.7s						
ABKAR	Akbulak array	56.26	314	P	P	21 27 21.6	+0.4
ABKAR				IAmb	IAmb	21 27 23.9	
	comp=Z,2.3nm,0.8s						
ARU	Arti	57.58	323	P	P	21 27 30.3	-0.2
ARU				IAmb	IAmb	21 27 31.9	
	comp=Z,4.7nm,1.1s						
GEYT	Alibeck	58.02	301	P	P	21 27 36.0	+2.1
	comp=Z,1.4nm,0.7s,baz=18,slow=11,SNR=5.0						
	comp=Z,1.4nm,0.7s						
ILAR	Eielson Array	68.07	28	P	P	21 28 41.2	+1.0
	comp=Z,0.1nm,0.5s,baz=262,slow=5.2,SNR=2.1						
	comp=Z,0.1nm,0.5s						
BMAR	Burnt Mountain	68.56	25	P	P	21 28 44.1	+0.8
FIA1	FINESS Array S	73.60	330	P	P	21 29 12.8	-1.0
FINES	FINESS Array B	73.60	330	P	P	21 29 14.3	+0.4
	comp=Z,0.7nm,0.4s,baz=51,slow=5.5,SNR=7.9						
	comp=Z,0.7nm,0.4s						
FINES	FINESS Array B	73.60	330	P	P	21 29 13.1	-0.7
NOA	NORSAR Array B	80.25	333	P	P	21 29 50.7	-0.7
	comp=Z,1.1nm,0.8s,baz=53,slow=5.7,SNR=4.5						
	comp=Z,1.1nm,0.8s						
YKA	Yellowknife Ar	82.07	24	P	P	21 30 01.9	+1.0
	comp=Z,0.3nm,0.6s,baz=300,slow=5.7,SNR=4.5						
	comp=Z,0.3nm,0.6s						

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*IDC **20** 21:20:31.0±2.0, 4°.09S×151°.60E, h0^{km}, mb3.5/5, mbtmp3.5/5, MS3.9/1, Error ellipse: s-maj=67.7km s-min=29.6km az=116.0*

ISC 20 21:20:34.3±1.9**, 4°.1S**±0°.3×**151°.6E**±0°.4**, h21**^{km}**, n7, σ0^{s}45**/6**, mb3.4**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	9.83	123	LR	LR	21 26 35.4	
	comp=Z,758nm,20.1s,baz=209,slow=37						
WRA	Warramunga Arr	23.03	226	P	P	21 25 38.4	+0.2
	1.2nm,1.0s,baz=49,slow=10.0,SNR=5.7						
	1.2nm,1.0s						
ASAR	Alice Springs	25.87	220	P	P	21 26 04.4	-0.4
	0.8nm,1.0s,baz=55,slow=8.2,SNR=3.1						
	0.8nm,1.0s						
CMAR	Chiang Mai Arr	56.50	295	P	P	21 30 15.4	+0.1
	0.8nm,0.9s,baz=124,slow=4.7,SNR=5.5						
	0.8nm,0.9s						
MKAR	Makanchi Array	79.02	319	P	P	21 32 36.6	-0.3
	0.2nm,0.5s,baz=91,slow=7.2,SNR=3.9						
	0.2nm,0.5s						
ILAR	Eielson Array	81.98	22	P	P	21 32 52.4	0.0
	0.3nm,0.7s,baz=251,slow=5.6,SNR=2.8						
	0.3nm,0.7s						
TORD	Torodi Ar. Bea	148.95	289	PKPbc	PKPbc	21 40 22.3	+0.5
	0.9nm,0.9s,baz=64,slow=3.4,SNR=3.6						

IDC 20 21:29:41.9±23.0**, 24°.48S×179°.16E, h682**^{km}±241^{km}**, mb2.9**/4**, mbtmp4.1**/4**, Error ellipse: s-maj=185.0km s-min=101.2km az=88.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	30.72	272	P	P	21 35 06.2	+0.1
	3.0nm,0.4s,baz=78,slow=9.5,SNR=6.7						
	3.0nm,0.4s						
STKA	Stephens Creek	33.80	249	P	P	21 35 31.5	-0.2
	0.8nm,0.3s,baz=79,slow=10,SNR=3.4						
	0.8nm,0.3s						
ASAR	Alice Springs	41.19	261	P	P	21 36 31.4	+0.1
	0.4nm,0.3s,baz=92,slow=7.1,SNR=10						
	0.4nm,0.3s						
WRA	Warramunga Arr	41.61	267	P	P	21 36 34.5	0.0
	1.5nm,0.5s,baz=104,slow=8.1,SNR=48						
	1.5nm,0.5s						
HFS	Hagfors	142.96	348	PKP	PKPdf	21 47 59.3	-0.6
	1.4nm,0.5s,baz=46,slow=4.2,SNR=7.7						

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*IDC **20** 21:34:57.9±1.0, 42°.42N×48°.13E, h0^{km}, mb3.3/4, mbtmp3.4/11, ML2.9/7, MS3.5/1, Error ellipse: s-maj=14.7km s-min=8.6km az=157.0*

*MOS **20** 21:34:58.0±0.0, 42°.19N×48°.12E, h10^{km}, MPVA4.0*

*AZER **20** 21:34:58.6±0.1, 42°.10N×48°.07E, h4^{km}, Error ellipse: s-maj=1.0km s-min=0.6km az=12.0*

*DRS **20** 21:34:59.4±0.0, 42°.19N×48°.25E, h18^{km}*

*NNC **20** 21:35:00.7±2.9, 42°.29N×48°.99E, h0^{km}, mb3.4, Error ellipse: s-maj=42.6km s-min=20.9km az=112.0*

ISC 20 21:34:58.0±1.0**, 42°.31N**±0°.02×**48°.27E**±0°.02**, h10**^{km}±7^{km}**, n105, σ1^{s}60**/186**, mb3.3**/4**, 3C-7D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRN	Derbent	0.29	172	i Pg	Pg	21 35 04.1	+0.4
DRN				eSg	Sg	21 35 08.4	+0.8
DRN	Derbent	0.29	172	⇑iPG	Pg	21 35 04.1	+0.4
DRN				i S	Sg	21 35 08.9	+1.3
DRN				pmax	pmax		
	comp=Z,754nm,0.4s						
DRN				smax	smax		
	comp=N,7μm,0.4s						
DRN				smax	smax		
	comp=E,6μm,0.4s						
DRN				smax	smax		
	comp=N,7μm,0.4s						
SGKR	Sergokala	0.48	288	i Pg	Pb	21 35 08.5	0.0
	comp=N,2.0nm,0.1s						
SGKR				eSg	Sb	21 35 15.2	-0.5
	comp=N,127nm,0.1s						
SGKR	Sergokala	0.48	288	ePG	Pb	21 35 08.5	0.0
SGKR				i S	Sb	21 35 15.4	-0.3
SGKR				pmax	pmax		
	comp=Z,2.0nm,0.1s						
SGKR				smax	smax		
	comp=E,963nm,0.3s						
URKR	Urkarakh	0.50	253	i Pg	Pg	21 35 06.9	-0.8
URKR				eSg	Sg	21 35 13.3	-1.0
URKR	Urkarakh	0.50	253	⇓iPG	Pg	21 35 06.9	-0.8
URKR				pmax	pmax		
	comp=Z,608nm,0.2s						
KSMR	Kasumkent	0.72	189	ePg	Pg	21 35 11.4	-0.5
	comp=Z,8.0nm,0.1s						
KSMR				eSg	Sg	21 35 19.9	-1.4
	comp=Z,268nm,0.4s						
KSMR	Kasumkent	0.72	189	ePG	Pg	21 35 11.0	-0.9
KSMR				i S	Sg	21 35 19.5	-1.8
KSMR				pmax	pmax		
	comp=Z,8.0nm,0.1s						
KSMR				smax	smax		
	comp=E,1μm,0.4s						
QSAR	Qusar	0.80	181	P	Pg	21 35 12.9	-0.4
	SNR=24						
QSAR				S	Sg	21 35 23.3	-0.5
MAK	Makhachkala	0.86	319	ePg	Pn	21 35 17.0	+0.9
MAK				eSg	Sn	21 35 31.1	+2.3
MAK	Makhachkala	0.86	319	⇓iPG	Pn	21 35 17.0	+0.9
MAK				e		21 35 29.8	
MAK				pmax	pmax		
	comp=Z,110nm,0.3s						
MAK				smax	smax		
	comp=N,500nm,0.4s						
MAK				smax	smax		
	comp=N,648nm,0.4s						
KMKR	Kumukh	0.89	259	i Pg	Pg	21 35 14.5	-0.7
	comp=N,247nm,0.3s						
KMKR				eSg	Sg	21 35 26.4	-0.5
	comp=N,32nm,0.2s						
KMKR	Kumukh	0.89	259	⇓iPG	Pg	21 35 14.5	-0.7
KMKR				pmax	pmax		
	comp=Z,256nm,0.6s						
AKT	Akhty	0.93	206	i Pg	Pg	21 35 14.3	-1.5
	comp=Z,386nm,0.1s						
AKT				eSg	Sg	21 35 25.7	-2.2
	comp=Z,2μm,0.3s						
AKT	Akhty	0.93	206	⇓iPG	Pg	21 35 14.1	-1.7
AKT				e		21 35 25.7	
AKT				pmax	pmax		
	comp=Z,361nm,0.3s						
AKT				smax	smax		
	comp=N,2μm,0.2s						
AKT				smax	smax		
	comp=E,2μm,0.2s						
AKT				smax	smax		
	comp=E,2μm,0.2s						
QUBA	Quba, Azerbaij	0.97	170	P	Pg	21 35 16.4	-0.2
	SNR=20						
QUBA				S	Sg	21 35 29.9	+0.6
GNBR	Gunib	0.97	275	i Pg	Pg	21 35 16.6	-0.1
	comp=E,127nm,0.1s						
GNBR				eSg	Sg	21 35 29.7	+0.3
	comp=E,367nm,0.3s						
GNBR	Gunib	0.97	275	ePG	Pg	21 35 16.4	-0.3
GNBR				i S	Sb	21 35 29.8	-0.1
GNBR				pmax	pmax		
	comp=Z,127nm,0.1s						
GNBR				smax	smax		
	comp=E,986nm,0.3s						
ARKR	Arakani	0.99	287	ePg	Pb	21 35 17.5	+0.3
	comp=E,1.0nm,0.3s						
ARKR				eSg	Sb	21 35 31.5	+1.1
	comp=E,289nm,0.4s						
ARKR	Arakani	0.99	287	ePG	Pb	21 35 17.5	+0.3
ARKR				eS	Sn	21 35 32.1	0.0
ARKR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARKR				smax	smax		
	comp=N,314nm,0.4s						
BUJR	Buynaksk	1.00	301	ePg	Pn	21 35 18.1	0.0
	comp=N,50nm,0.6s						
BUJR				eSg	Sn	21 35 32.8	+0.4
	comp=N,7.0nm,0.6s						
BUJR	Buynaksk	1.00	301	ePG	Pn	21 35 18.0	-0.1
BUJR				i S	Sn	21 35 32.4	+0.1
BUJR				pmax	pmax		
	comp=Z,140nm,0.3s						
BUJR				smax	smax		
	comp=N,288nm,0.7s						
KANR	Karaman	1.05	327	ePg	Pn	21 35 20.4	+1.5
	comp=N,268nm,0.4s						
KANR	Karaman	1.05	327	ePG	Pn	21 35 20.3	+1.5
KANR				eS	Sn	21 35 36.5	+2.9
KANR				pmax	pmax		
	comp=Z,269nm,0.4s						
KANR				smax	smax		
	comp=N,197nm,0.7s						
XNQ	Khinaliq	1.15	185	P	Pg	21 35 18.8	-1.2
	SNR=956						
XNQ				S	Sg	21 35 33.3	-1.6
UNCR	Uncukul	1.17	291	ePg	Pn	21 35 20.7	+0.3
	comp=N,52nm,0.2s						
UNCR				eSg	Sn	21 35 37.3	+0.9
	comp=N,755nm,0.4s						
UNCR	Uncukul	1.17	291	ePG	Pb	21 35 20.4	+0.2
UNCR				i S	Sn	21 35 37.0	+0.6
UNCR				pmax	pmax		
	comp=Z,51nm,0.2s						
UNCR				smax	smax		
	comp=N,223nm,0.3s						
HNZR	Khunzah	1.18	282	ePG	Pb	21 35 20.4	-0.1
HNZR				i S	Sb	21 35 36.8	+0.9
HNZR				pmax	pmax		
	comp=Z,71nm,0.2s						
HNZR				smax	smax		
	comp=N,243nm,0.6s						
XNZR	Khunzakh	1.18	282	i Pg	Pg	21 35 20.4	-0.3
	comp=N,71nm,0.2s						
XNZR				eSg	Sb	21 35 36.6	+0.5
	comp=N,300nm,0.5s						
SIZA	Siyzn	1.32	159	P	Pg	21 35 22.3	-1.1
	SNR=12						
SIZA				S	Sg	21 35 40.7	+0.2
SEKA	Sheki	1.37	216	P	Pn	21 35 21.7	-1.6
	SNR=94						
SEKA				S	Sg	21 35 38.7	-3.3
SEKA	Sheki	1.37	216	PG	Pn	21 35 21.6	-1.6
ZKTA	Zakatala	1.41	242	P	Pn	21 35 22.4	-1.2
	SNR=36						
ZKTA				S	Sg	21 35 41.2	-2.0
QBL	Gabala	1.41	194	P	Pn	21 35 23.0	-0.7
	SNR=16						
QBL				S	Sg	21 35 40.5	-2.7
DLMR	Dylym	1.43	302	ePg	Pg	21 35 25.2	-0.1
	comp=N,74nm,0.4s						
DLMR	Dylym	1.43	302	ePG	Pg	21 35 25.2	-0.1
DLMR				eS	Sn	21 35 45.7	+2.8
DLMR				pmax	pmax		
	comp=Z,74nm,0.4s						
DLMR				smax	smax		
	comp=E,773nm,0.4s						
IML	Ismayilli	1.52	183	P	Pn	21 35 25.3	-0.1
	SNR=13						
IML				S	Sn	21 35 45.6	+0.3
ATGJ	Altiaghaj	1.54	161	P	Pn	21 35 26.1	+0.6
	SNR=12						
ATGJ				S	Sg	21 35 47.3	0.0
PQL	Pirkuli	1.54	171	P	Pn	21 35 26.0	+0.3
	SNR=8.0						
PQL				S	Sn	21 35 47.0	+1.2
BTLR	Botlikh	1.56	284	ePg	Pb	21 35 26.9	-0.1
	comp=E,32nm,0.2s						
BTLR				eSg	Sg	21 35 47.7	-0.3
	comp=E,146nm,0.2s						
BTLR	Botlikh	1.56	284	ePN	Pn	21 35 26.5	+0.7
BTLR				pmax	pmax		
	comp=Z,69nm,0.4s						
LGD	Lagodekhi	1.59	253	ePg	Pn	21 35 25.7	-0.4
LGD				eSg	Sn	21 35 44.3	-2.4
LGD	Lagodekhi	1.59	253	PN	Pn	21 35 25.7	-0.4
LGD	Lagodekhi	1.59	253	P	Pn	21 35 25.7	-0.4
LGD				S	Sn	21 35 44.3	-2.4
MNGR	Mingechevir, A	1.78	210	P	Pn	21 35 30.0	+1.2
MNGR				S	Sb	21 35 54.5	+1.5
MNGR	Mingechevir, A	1.78	210	PN	Pn	21 35 30.0	+1.2
DDFL	Dedoflistskaro	1.83	242	PN	Pg	21 35 32.4	-0.6
DDFL				S	Sg	21 35 59.3	+2.5
DDFL	Dedoflistskaro	1.83	242	P	Pg	21 35 32.4	-0.6
DDFL				S	Sg	21 35 59.3	+2.5
GBS	Qobustan	1.85	164	P	Pb	21 35 32.6	+0.7
	SNR=15						
GBS				S	Sg	21 35 57.8	+0.5
KDMR	Kurdemir	1.94	182	P	Pn	21 35 32.3	+1.3
KDMR				S	Sn	21 35 57.4	+2.0
GROC	Groznyy	2.03	297	ePg	Pg	21 35 36.3	-0.5
GROC				eSg	Sg	21 36 03.8	+0.6
GROC	Groznyy	2.03	297	ePN	Pg	21 35 36.4	-0.5
GROC				eS	Sb	21 36 00.0	-0.2
GROC				smax	smax		
	comp=N,108nm,0.6s						
GROC				smax	smax		
	comp=E,90nm,0.6s						
ZRD	Zardab	2.08	193	P	Pn	21 35 34.2	+1.3
ZRD				S	Sb	21 36 02.0	+0.2
BRDA	Brd	2.21	202	P	Pn	21 35 35.1	+0.4
BRDA				S	Sn	21 36 03.9	+1.8
GANJ	Ganja	2.22	222	P	Pn	21 35 35.7	+0.7
	SNR=45						
GANJ				S	Sn	21 36 04.2	+1.7
GANJ	Ganja	2.22	222	PN	Pn	21 35 35.6	+0.7
DGRG	David-gareji	2.33	249	ePg	Pb	21 35 40.3	+0.2
DGRG				eSg	Sn	21 36 07.9	+2.7
DGRG	David-gareji	2.33	249	PN	Pb	21 35 40.3	+0.2
DGRG				S	Sn	21 36 07.9	+2.7
DGRG	David-gareji	2.33	249	P	Pb	21 35 40.3	+0.2
DGRG				S	Sn	21 36 07.9	+2.7
SHTL	Shatili	2.33	279	ePn	Pb	21 35 40.4	+0.2
SHTL				eSn	Sb	21 36 09.3	+0.2
SHTL	Shatili	2.33	279	PN	Pb	21 35 40.4	+0.2
SHTL				S	Sb	21 36 09.4	+0.2
SHTL	Shatili	2.33	279	P	Pb	21 35 40.4	+0.2
SHTL				S	Sb	21 36 09.3	+0.2
AGDM	Agdam	2.37	202	P	Pn	21 35 38.0	+1.0
	SNR=15						
AGDM				S	Sn	21 36 08.1	+1.9
GDB	GEDABAY	2.47	231	P	Pn	21 35 39.3	+0.8
	SNR=15						
GDB				S	Sn	21 36 09.7	+0.9
QZX	Qazax, Azerbai	2.51	241	P	Pn	21 35 40.9	+2.0
	SNR=13						
QZX				S	Sn	21 36 11.4	+1.8
KMGR	Komgaron	2.62	288	ePn	Pb	21 35 44.6	-0.5
KMGR				eSn	Sb	21 36 19.2	+1.9
BLQ	Beylaqan	2.65	192	P	Pb	21 35 44.6	-0.9
BLQ				S	Sn	21 36 16.0	+3.1
GUDG	Gudauri	2.82	274	ePn	Pb	21 35 48.7	+0.2
GUDG				eSn	Sb	21 36 24.7	+1.6
GUDG	Gudauri	2.82	274	PN	Pb	21 35 48.7	+0.2
GUDG				S	Sb	21 36 24.7	+1.6
GUDG	Gudauri	2.82	274	P	Pb	21 35 48.7	+0.2
GUDG				S	Sb	21 36 24.7	+1.6
QRD	Qoradiz	2.94	195	P	Pn	21 35 47.0	+2.3
QRD				S	Sn	21 36 20.0	-0.1
BTKR	Batakoyurt	2.94	292	ePn	Pn	21 35 47.6	+2.7
BTKR				eSn	Sb	21 36 24.5	-2.0
LACR	Lac	2.98	281	ePn	Pn	21 35 48.0	+2.5
LACR				eSn	Sn	21 36 24.9	+3.5
DMNI	Dmanisi	3.21	253	ePn	Pn	21 35 50.3	+1.7
DMNI				eSn	Sn	21 36 27.7	+0.8
DMNI	Dmanisi	3.21	253	PN	Pn	21 35 50.3	+1.7
DMNI				S	Sn	21 36 27.7	+0.8
DMNI	Dmanisi	3.21	253	P	Pn	21 35 50.3	+1.7
DMNI				S	Sn	21 36 27.7	+0.8
ZEI	Tsey	3.27	280	ePn	Pn	21 35 52.4	+3.0
ZEI				eSn	Sn	21 36 31.6	+3.1
STDR	Stavd-Durt	3.27	290	ePn	Pn	21 35 52.1	+2.8
STDR				eSn	Sn	21 36 30.5	+2.2
YRD	Yardimli	3.40	180	P	Pn	21 35 54.2	+3.0
YRD				S	Sn	21 36 35.6	+4.0
GNI	Garni	3.43	232	Pn	Pn	21 35 55.3	+3.6
	comp=E,0.6nm,0.3s,baz=195,slow=17,SNR=2.9						
GNI				Sn	Sn	21 36 37.7	+5.2
	comp=E,0.9nm,0.3s,baz=242,slow=23,SNR=1.5						
	comp=E,4.5nm,0.5s						
GNI	Garni	3.43	232	ePn	Pn	21 35 52.2	+0.5
GNI				eSn	Sn	21 36 31.8	-0.7
DIGR	Digorskoe uzhe	3.51	281	ePn	Pn	21 35 55.5	+2.7
DIGR				eSn	Sn	21 36 34.7	+0.1
SBZ	Shahbuz	3.57	216	P	Pn	21 35 55.7	+2.2
SBZ				S	Sn	21 36 35.9	0.0
LRK	Lerik	3.67	179	P	Pn	21 35 55.6	+0.7
LRK				S	Sn	21 36 39.1	+0.8
KBZ	Khabaz	4.19	292	Pn	Pn	21 36 03.4	+1.5
	comp=E,0.3nm,0.3s,baz=118,slow=10,SNR=14						
KBZ				Sn	Sn	21 36 49.6	-1.2

	comp=E,0.4nm,0.3s,baz=120,slow=17,SNR=1.5						
	comp=E,0.9nm,0.3s						
KBZ	Khabaz	4.19	292	*e*Pn	Pn	21 36 03.7	+1.8
KBZ				*e*Sn	Sn	21 36 52.0	+1.2
BEYR	Belyy Ugol+	4.34	295	*e*Pn	Pn	21 36 02.7	-1.3
BEYR				*e*Sn	Sn	21 36 53.2	-1.5
SHA1	Shidzhatmaz	4.36	291	*e*Pn	Pn	21 36 05.3	+0.9
SHA1				*e*Sn	Sn	21 36 53.7	-1.7
KVAR	Kislovodsk Arr	4.40	294	Pn	Pn	21 36 06.4	+1.5
	baz=166,slow=2.8						
KVAR				Sn	Sn	21 36 55.5	-0.8
	baz=224,slow=5.4						
	comp=E,4.7nm,0.4s						
GEYT	Alibeck	8.72	117	Pn	Pn	21 37 06.4	+2.2
	comp=E,0.3nm,0.3s,baz=302,slow=16,SNR=2.2						
	comp=E,1.0nm,0.3s						
AKTO	Aktyubinsk	10.54	36	Pn	Pn	21 37 27.9	-1.2
	comp=E,0.1nm,0.3s,baz=263,slow=8.1,SNR=1.9						
AKTO				Sn	Sn	21 39 21.4	-5.7
	comp=E,0.1nm,0.3s,baz=85,slow=18,SNR=1.6						
	comp=E,1.1nm,0.4s						
AKTO	Aktyubinsk	10.54	36	⇑Pn	Pn	21 37 28.5	-0.5
	comp=E,0.8nm,0.7s						
AKTO				⇓Sn	Sn	21 39 26.4	-0.7
	comp=E,2.0nm,1.0s						
AB31	Akbulak array	10.70	46	⇓Pn	Pn	21 37 30.4	-0.8
	comp=E,0.1nm,0.2s,baz=225,slow=12,SNR=7.9						
AB31				⇓Sn	Sn	21 39 27.6	-3.3
	comp=E,0.6nm,0.5s,baz=197,slow=25,SNR=4.0						
AB31	Akbulak array	10.70	46	P	Pn	21 37 30.4	-0.8
AB31				S	Sn	21 39 27.6	-3.3
ARU	Arti	15.61	22	Pn	Pn	21 38 35.4	-2.5
	baz=207,slow=9.0,SNR=4.4						
ARU				Sn	Sn	21 41 19.2	-12
	baz=300,slow=23,SNR=1.9						
	comp=E,1.2nm,0.3s						
KK31	Karatay Array	16.36	80	⇑P	Pn	21 38 45.2	-2.5
	comp=E,0.5nm,0.6s,baz=275,slow=14,SNR=3.8						
KK31	Karatay Array	16.36	80	P	Pn	21 38 45.2	-2.5
AAK	Ala-Archa	19.32	80	P	Pn	21 39 26.5	+2.0
	comp=E,0.1nm,0.3s,baz=329,slow=5.9,SNR=2.1						
	comp=E,0.4nm,0.4s						
KURBB	Kurchatov Arra	22.31	58	P	P	21 39 57.0	+1.6
	comp=E,0.4nm,0.5s,baz=263,slow=11,SNR=4.5						
	comp=E,0.4nm,0.5s						
KURK	Kurchatov	22.38	58	P	P	21 39 57.0	+0.8
FINES	FINESS Array B	23.34	333	P	P	21 40 06.7	+0.7
	comp=E,1.5nm,0.9s,baz=137,slow=10,SNR=5.3						
	comp=E,1.5nm,0.9s						
MKAR	Makanchi Array	24.53	68	P	P	21 40 19.0	+1.4
	comp=E,0.1nm,0.6s,baz=267,slow=11,SNR=1.9						
	comp=E,0.1nm,0.6s						
MKAR	Makanchi Array	24.53	68	P	P	21 40 19.0	+1.4
HFS	Hagfors	27.59	322	P	P	21 40 45.1	+0.1
	comp=E,1.4nm,0.8s,baz=116,slow=10,SNR=7.1						
	comp=E,1.4nm,0.8s						
SFJD	Kangerlussuaq	55.13	332	LR	LR	22 06 11.0	
	comp=E,38nm,18.3s,baz=318,slow=34						

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*NEIC **20** 21:36:24.7±1.9, 21°.4S±0°.1×178°.7W±0°.1, h560^{km}±6^{km}, mb4.9/117, Error ellipse: s-maj=17.2km s-min=14.4km az=130.0*

*IDC **20** 21:36:27.7±0.7, 21°.33S×178°.85W, h584^{km}±8^{km}, mb4.0/26, mbtmp4.9/29, Error ellipse: s-maj=12.2km s-min=8.7km az=143.0*

*BGR **20** 21:36:28.9, 21°.55S×178°.86W, h600^{km}*

*NOU **20** 21:36:38.1, 21°.33S×179°.63W, h659^{km}, mb4.8/18, Fiji Islands Region*

ISC 20 21:36:25.8±0.5**, 21°.37S**±0°.05×**178°.68W**±0°.05**,
h572^{km}**±5^{km}**, h573^{km}:pP-P, n644,** σ**1^{s}.28**/719**, mb4.8**/101**,
21C-55D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	7.88	175	S	S	21 39 57.4	-1.6
	241nm,0.5s,baz=112,slow=23,SNR=2.8						
GLKZ	Green Lake	7.89	175	P	P	21 38 21.9	-1.1
GLKZ				S	S	21 40 03.2	+4.1
NIUE	Niue	8.53	76	P	P	21 38 30.3	+1.0
AFI	Afiamalu	9.91	43	P	P	21 38 41.8	-1.6
	14nm,0.3s,baz=246,slow=20,SNR=6.0						
AFI				S	S	21 40 29.2	-7.0
	64nm,0.7s,baz=78,slow=23,SNR=7.3						
PINNC	Pines Island,	12.93	262	P	P	21 39 14.7	+0.7
LIFNC	LIFOU	13.16	270	P	P	21 39 14.9	-1.4
DZM	Mont Dzumac	13.85	264	*e*S	S	21 41 47.8	-1.7
	324nm,24.9s						
DZM	Mont Dzumac	13.85	264	P	P	21 39 22.8	-0.7
	5.0nm,0.4s,baz=90,slow=19,SNR=13						
DZM	Mont Dzumac	13.85	264	P	P	21 39 22.3	-1.3
KOUNC	Koumac, New Ca	15.94	270	P	P	21 39 43.9	0.0
KUZ	Kuaotunu	16.08	196	P	P	21 39 47.3	+2.4
MXZ	Matakaoa Point	16.35	189	P	P	21 39 46.7	-0.7
MXZ	Matakaoa Point	16.35	189	P	P	21 39 46.8	-0.7
WMGZ	Waiomatatini S	16.59	188	P	P	21 39 50.2	+0.7
PKGZ	Pakihiroa	16.70	189	P	P	21 39 50.5	-0.2
PUZ	Puketiti	16.86	188	P	P	21 39 52.5	+0.5
TWGZ	Tauwhareparae	17.00	189	P	P	21 39 54.7	+1.4
TOZ	Tahuroa Road	17.07	196	P	P	21 39 55.1	+1.2
TOZ	Tahuroa Road	17.07	196	P	P	21 39 56.4	+2.5
URZ	Urewera	17.22	191	P	P	21 39 55.1	-0.2
	14nm,0.4s,baz=14,slow=3.7,SNR=14						
URZ				S	S	21 42 41.0	-4.9
	12nm,0.8s,baz=294,slow=22,SNR=7.3						
URZ	Urewera	17.22	191	P	P	21 39 50.3	-5.0
URZ				S	S	21 42 42.6	-3.3
MWZ	Matawai	17.22	190	P	P	21 39 55.4	+0.1
MWZ				S	S	21 42 41.9	-4.2
CNGZ	Carnagh Statio	17.27	188	P	P	21 39 55.7	0.0
RTZ	Ruatahuna	17.59	191	P	P	21 39 57.2	-1.6
RAR	Rarotonga	17.62	93	P	P	21 40 00.8	+1.6
	21nm,0.7s,baz=243,slow=14,SNR=4.8						
BKZ	Black Stump Fm	18.22	192	P	P	21 40 03.3	-1.1
BFZ	Birch Farm	19.73	191	P	P	21 40 16.4	-1.8
TCW	Tory Channel	20.66	195	P	P	21 40 25.7	-0.8
PLWZ	Palliser	20.78	193	P	P	21 40 27.4	-0.3
NNZ	Nelson	20.90	197	P	P	21 40 28.2	-0.5
KHZ	Kahutara	21.98	196	P	P	21 40 37.5	-0.9
INZ	Inchbonnie	22.85	199	P	P	21 40 45.1	-1.0
RPZ	Rata Peaks	23.87	199	P	P	21 40 57.3	+2.1
	9.1nm,0.7s,baz=23,slow=3.1,SNR=6.6						
	9.1nm,0.7s						
LBZ	Lake Benmore	24.74	199	P	P	21 41 01.1	-1.8
WKZ	Wanaka	25.51	201	P	P	21 41 09.1	-0.6
WHZ	Wether Hill Ro	26.80	201	P	P	21 41 21.4	+0.4
PPT2	Papeete2	27.67	87	*e*sS	sS	21 48 20.9	-2.6
	127nm,25.8s						
PPT2				*e*sS	SS	21 48 21.2	-15
	144nm,31.8s						
EIDS	Eidsvold	28.01	256	P	P	21 41 31.5	-0.4
EIDS	Eidsvold	28.01	256	P	P	21 41 32.9	+1.0
ARMA	Armidale	28.12	245	P	P	21 41 31.6	-1.4
ARMA	Armidale	28.12	245	P	P	21 41 35.1	+2.2
SYDH	Sydney Hard Ro	29.67	239	P	P	21 41 48.4	+2.3
RMQ	Roma	30.15	254	P	P	21 41 52.2	+1.8
TV1H	Townsville Har	32.41	267	P	P	21 42 10.4	+0.7
CTA	Charters Tower	32.78	266	P	P	21 42 13.7	+0.8
CTAO	Charters Tower	32.78	266	P	P	21 42 10.5	-2.4
CTAO				PcP	PcP	21 44 41.4	+0.6
CTAO	Charters Tower	32.78	266	P	P	21 42 13.6	+0.7
CTAO	Charters Tower	32.78	266	⇓P	P	21 42 13.8	+0.8
CTAO				PcP	PcP	21 44 40.9	+0.1
CMSA	Cobar Meteorol	33.34	245	P	P	21 42 18.7	+1.3
QLP	Quilpie	34.20	254	P	P	21 42 25.6	+0.9
TOO	Toolangi	34.88	234	P	P	21 42 29.3	-0.9
MTSU	Mount Surprise	34.93	269	P	P	21 42 31.6	+0.7
PMG	Port Moresby	34.93	285	P	P	21 42 29.1	-1.8
PMG	Port Moresby	34.93	285	P	P	21 42 31.8	+0.8
PMG	Port Moresby	34.93	285	P	P	21 42 31.7	+0.8
PMG	Port Moresby	34.93	285	P	P	21 42 31.5	+0.6
TAU	Tasmania Unive	35.56	225	P	P	21 42 35.3	-0.4
STKA	Stephens Creek	36.84	245	P	P	21 42 47.5	+0.9
	14nm,0.6s,baz=95,slow=10,SNR=32						
	14nm,0.6s						
STKA	Stephens Creek	36.84	245	P	P	21 42 46.1	-0.4
STKA	Stephens Creek	36.84	245	P	P	21 42 47.8	+1.3
COEN	Coen	37.02	275	P	P	21 42 47.4	-0.7
COEN				IAmb	IAmb	21 42 50.1	
	comp=Z,28nm,0.8s						
COEN	Coen	37.02	275	P	P	21 42 49.3	+1.2
INKA	Innaminka	37.32	252	P	P	21 42 52.3	+1.8
QIS	Mount Isa	38.88	263	P	P	21 43 03.4	+0.2
HTT	Hallett	39.27	243	P	P	21 43 07.4	+1.2
LCRK	Leigh Creek	39.62	248	P	P	21 43 10.1	+1.1
BBOO	Buckleboo	41.60	244	P	P	21 43 24.3	-0.4
BBOO				IAmb	IAmb	21 43 26.1	
	comp=Z,49nm,1.1s						
AS31	Alice Springs	43.71	258	P	P	21 43 41.3	0.0
ASAR	Alice Springs	43.71	258	P	P	21 43 41.9	+0.5
	comp=Z,37nm,0.6s,baz=94,slow=7.7,SNR=466						
ASAR				PcP	PcP	21 45 15.9	+0.5
	comp=Z,5.5nm,0.6s,baz=107,slow=3.7,SNR=9.2						
ASAR				ScP	ScP	21 48 14.6	+1.5
	comp=Z,1.3nm,0.6s,baz=113,slow=4.3,SNR=5.5						
ASAR				S	S	21 49 28.4	-2.4
	comp=Z,4.0nm,0.8s,baz=95,slow=15,SNR=17						
	comp=Z,37nm,0.6s						
ASAR	Alice Springs	43.71	258	P	P	21 43 41.0	-0.3
ASAR				PcP	PcP	21 45 14.9	-0.6
WB0	Warramunga Arr	43.84	263	P	P	21 43 41.0	-1.4
WB2	Warramunga Arr	43.85	263	P	P	21 43 41.7	-0.7
WB2				IAmb	IAmb	21 43 43.2	
	comp=Z,53nm,0.8s						
WRAB	Tennant Creek	43.85	263	P	P	21 43 41.7	-0.8
WRAB				IAmb	IAmb	21 43 43.2	
	comp=Z,46nm,0.9s						
WRAB	Tennant Creek	43.85	263	⇓P	P	21 43 42.3	-0.2
WRA	Warramunga Arr	43.86	263	P	P	21 43 42.4	-0.2
	comp=Z,33nm,0.6s,baz=97,slow=7.7,SNR=998						
WRA				PcP	PcP	21 45 16.4	+0.4
	comp=Z,2.8nm,0.6s,baz=101,slow=2.8,SNR=4.1						
WRA				ScP	ScP	21 48 15.3	+1.6
	comp=Z,2.0nm,0.9s,baz=94,slow=4.5,SNR=7.0						
WRA				S	S	21 49 27.5	-5.4
	comp=Z,1.6nm,0.9s,baz=97,slow=13,SNR=8.4						
	comp=Z,33nm,0.6s						
WRA	Warramunga Arr	43.86	263	P	P	21 43 41.0	-1.5
GENI	Genyem	44.16	289	P	P	21 43 45.8	+0.9
	comp=Z,87nm,0.9s						
FORT	Forrest	48.37	247	P	P	21 44 14.7	-1.8
MTN	Manton Dam	48.55	272	P	P	21 44 15.7	-2.3
KNRA	Kununurra	49.98	267	P	P	21 44 26.7	-1.8
KNRA				IAmb	IAmb	21 44 29.2	
	comp=Z,31nm,0.6s						
FAKI	Fak Fak	51.09	284	P	P	21 44 34.2	-2.4
FAKI				IAmb	IAmb	21 44 37.5	
	comp=Z,39nm,1.1s						
FAKI	Fak Fak	51.09	284	P	P	21 44 36.8	+0.2
	comp=Z,37nm,1.1s						
FITZ	Fitzroy Crossi	52.29	263	P	P	21 44 45.4	+0.2
DRV	Dumont d’Urvil	52.33	199	P	P	21 44 46.0	+1.4
AAI	Ambon	54.46	281	P	P	21 45 00.8	+0.2
	comp=Z,91nm,0.7s,comp=Z,1µm						
NLAI	Namlea	55.64	281	P	P	21 45 09.2	+0.4
	comp=Z,39nm,0.7s,comp=Z,4µm						
SOEI	Soe	55.90	273	P	P	21 45 11.7	+0.9
SOEI	Soe	55.90	273	P	P	21 45 11.3	+0.5
	comp=Z,210nm,0.8s,comp=Z,2µm						
LBMI	Labuha	56.35	284	P	P	21 45 14.3	+0.6
	comp=Z,101nm,1.0s,comp=Z,1µm						
PSA00	Pilbara Seismi	56.86	258	P	P	21 45 16.1	-1.0
PSA00				IAmb	IAmb	21 45 18.0	
	comp=Z,54nm,0.9s						
PSA00				PcP	PcP	21 46 04.9	+0.3
PSA00	Pilbara Seismi	56.86	258	P	P	21 45 16.1	-1.0
PSA00				PcP	PcP	21 46 04.6	0.0
VNDA	Vanda	56.99	185	P	P	21 45 19.2	+2.2
	comp=Z,2.2nm,0.6s,baz=5.0,slow=6.1,SNR=6.3						
	comp=Z,2.2nm,0.6s						
VNDA	Vanda	56.99	185	P	P	21 45 15.4	-1.6
VNDA				IAmb	IAmb	21 45 33.6	
	comp=Z,101nm,2.0s						
MBWA	Marble Bar	57.05	258	P	P	21 45 17.2	-1.2
MBWA				IAmb	IAmb	21 45 19.3	
	comp=Z,52nm,0.8s						
MBWA				PcP	PcP	21 46 05.5	+0.2
MBWA	Marble Bar	57.05	258	⇓P	P	21 45 18.5	0.0
TNTI	Ternate	57.07	286	P	P	21 45 17.8	-0.9
TNTI				IAmb	IAmb	21 45 20.0	
	comp=Z,64nm,0.9s						
TNTI	Ternate	57.07	286	P	P	21 45 19.0	+0.3
	comp=Z,84nm,0.9s						
SANI	Sanana	57.13	282	P	P	21 45 18.7	-0.4
NWAO	Narrogin (SRO)	57.42	244	P	P	21 45 20.6	-0.1
NWAO				IAmb	IAmb	21 47 07.0	
	comp=Z,51nm,1.4s						
MORW	Morawa	58.92	248	P	P	21 45 30.9	0.0
MORW				IAmb	IAmb	21 45 32.1	
	comp=Z,48nm,1.2s						
JCJ	Chichijima	61.29	320	P	P	21 45 46.4	-0.1
	comp=Z,44nm,0.5s,baz=212,slow=19,SNR=1.9						
	comp=Z,44nm,0.5s						
JCJ	Chichijima	61.29	320	P	P	21 45 46.5	0.0
CCD	Concordia, Ant	61.47	194	P	P	21 45 49.3	+1.8
CCD				pP	pwP	21 47 46.4	+4.0
GIRL	Giralia	61.71	255	P	P	21 45 50.6	+1.2
KAPI	Kappang	61.74	276	P	P	21 45 50.0	+0.3
KAPI				IAmb	IAmb	21 46 45.9	
	comp=Z,43nm,1.4s						
TOLI2	Tolitoli	63.17	283	P	P	21 45 58.6	-0.3
TOLI2				IAmb	IAmb	21 45 59.8	
	comp=Z,26nm,0.9s						
JAGI	Jajag, Banyuwa	65.75	270	P	P	21 46 14.3	-1.0
QSPA	South Pole Qui	68.70	180	P	P	21 46 34.2	+1.6
QSPA	South Pole Qui	68.70	180	P	P	21 46 34.2	+1.6
QSPA				pP	pP	21 48 33.6	+5.4
UGM	Wanagama	69.32	269	P	P	21 46 36.0	-1.1
KKM	Kota Kinabalu	69.37	285	P	P	21 46 35.7	-1.7
KKM				IAmb	IAmb	21 46 38.6	
	comp=Z,22nm,0.5s						
JMM	Marumori	70.17	327	P	P	21 46 40.5	-1.0
JMM				IAmb	IAmb	21 46 43.1	
	comp=Z,34nm,1.1s						
JGF	Kuroka	70.32	323	P	P	21 46 39.7	-2.9
JGF				IAmb	IAmb	21 46 43.6	
	comp=Z,16nm,0.7s						
INU	Inuyama	70.33	323	P	P	21 46 43.5	+0.9
MJAR	Matsushiro Arr	70.54	324	P	P	21 46 43.8	0.0
	comp=Z,15nm,0.7s,baz=156,slow=5.8,SNR=41						
	comp=Z,15nm,0.7s						
MAJO	Matsushiro	70.54	324	P	P	21 46 42.2	-1.6
MAJO				IAmb	IAmb	21 46 44.8	
	comp=Z,22nm,0.8s						
MAJO	Matsushiro	70.54	324	P	P	21 46 43.8	0.0
MJB9	Matsu-Tunnel	70.54	324	P	P	21 46 42.6	-1.2
MJB9				IAmb	IAmb	21 46 45.8	
	comp=Z,22nm,0.8s						
JMN	Monobe	71.03	320	P	P	21 46 43.6	-3.1
SBUM	Sibu	71.53	280	P	P	21 46 49.9	-0.2
JSD	Sado	71.61	325	P	P	21 46 50.1	+0.1
JSD				IAmb	IAmb	21 46 52.3	
	comp=Z,29nm,0.7s						
JSU	Suzuyama	71.69	316	P	P	21 46 49.7	-0.9
ERM	Erimo	72.27	331	P	P	21 46 53.0	-0.7
ERM				IAmb	IAmb	21 48 45.7	
	comp=Z,36nm,1.1s						
JTM	Tenmabayashi	72.28	329	P	P	21 46 54.0	+0.3
JTM				IAmb	IAmb	21 46 55.5	
	comp=Z,22nm,0.7s						
JHS	Saijyo	72.35	320	P	P	21 46 55.1	+0.7
JHS				IAmb	IAmb	21 46 56.4	
	comp=Z,40nm,0.7s						
JNU	Nakatsue	72.47	317	P	P	21 46 54.9	-0.3
	comp=Z,16nm,0.9s,baz=128,slow=2.7,SNR=5.2						
	comp=Z,16nm,0.9s						
JNU	Nakatsue	72.47	317	P	P	21 46 54.4	-0.7
JNU				IAmb	IAmb	21 46 57.2	
	comp=Z,45nm,1.1s						
YOJ	Yonaguni jima	72.72	306	P	P	21 46 57.0	+0.3
KSM	Kuching	72.91	279	P	P	21 46 58.8	+0.8
KIWB	Kanaga Island	72.92	1	P	P	21 46 56.8	-0.4
ADK	Adak	72.96	1	P	P	21 46 57.0	-0.3
GSTR	Great Sitkin T	73.18	2	P	P	21 46 58.5	-0.3
YULB	Yu-li	73.45	304	P	P	21 46 59.9	-1.0
YULB				IAmb	IAmb	21 47 04.6	
	comp=Z,104nm,1.9s						
NACB	Ninganchiao	73.64	305	P	P	21 47 01.3	-0.7
NACB				IAmb	IAmb	21 47 02.6	
	comp=Z,40nm,0.8s						
TPUB	Ta-pu	73.92	303	P	P	21 47 02.3	-1.3
SSLB	Suanglung	73.93	304	P	P	21 47 02.9	-0.8
SSLB				IAmb	IAmb	21 47 04.1	
	comp=Z,34nm,0.8s						
YHNB	Yeheng	74.08	305	P	P	21 47 04.3	-0.2
YHNB				IAmb	IAmb	21 47 05.6	
	comp=Z,30nm,0.9s						
TATO	Taipei	74.16	305	P	P	21 47 05.7	+0.8
JKA	Kamikawa-asahi	74.19	332	P	P	21 47 06.3	+1.7
JKA				IAmb	IAmb	21 47 07.6	
	comp=Z,26nm,0.9s						
ASAJ	Asahikawa	74.19	332	P	P	21 47 06.2	+1.6
	comp=Z,21nm,0.8s,baz=168,slow=8.2,SNR=18						
	comp=Z,21nm,0.8s						
NIKH	Nikolski High	74.52	6	P	P	21 47 05.2	-1.0
NIKH	Nikolski High	74.52	6	P	P	21 47 05.8	-0.4
	baz=189						
UNV	Unalaska Valle	75.64	7	P	P	21 47 11.8	-0.6
UNV				IAmb	IAmb	21 49 26.2	
	comp=Z,77nm,1.6s						
UNV	Unalaska Valle	75.64	7	P	P	21 47 11.8	-0.6
	baz=192						
AKUT	Akutan	76.01	8	P	P	21 47 14.2	-0.3
PEA0B	Petropavlovsk-	76.95	346	P	P	21 47 19.7	0.0
PEA0B				IAmb	IAmb	21 47 21.1	
	comp=Z,109nm,1.6s						
PETK	Petropavlovsk-	76.95	346	P	P	21 47 19.7	0.0
	comp=Z,18nm,0.7s,baz=124,slow=7.4,SNR=23						
	comp=Z,18nm,0.7s						
PETK	Petropavlovsk-	76.95	346	P	P	21 47 19.4	-0.3
KSRS	Korea Array	77.12	319	P	P	21 47 22.1	+1.2
	comp=Z,3.1nm,0.7s,baz=142,slow=7.1,SNR=6.8						
	comp=Z,3.1nm,0.7s						
SDPT	Sand Point	77.97	11	P	P	21 47 25.1	0.0
SDPT				IAmb	IAmb	21 47 36.3	
	comp=Z,64nm,1.1s						
SDPT	Sand Point	77.97	11	P	P	21 47 25.0	-0.1
	baz=197						
S12K	Black Hills	78.06	10	P	P	21 47 25.5	-0.1
	baz=196						
SNCC	San Nicolas Is	78.30	47	P	P	21 47 28.2	+0.7
	baz=235						
SPIA	Saint Paul Isl	78.56	5	P	P	21 47 31.0	+2.8
	baz=188						
SCZ2	Santa Cruz Isl	78.65	47	P	P	21 47 30.7	+1.3
	baz=234						
BELA	Belgrano 2	78.78	173	P	P	21 47 29.3	-0.1
CIS	Catalina Islan	79.15	48	P	P	21 47 32.7	+0.7
	baz=235						
CHGN	Chignik	79.24	11	P	P	21 47 33.0	+1.2
	baz=199						
USA0B	Ussuriysk Arra	79.33	326	P	P	21 47 33.6	+1.0
USA0B				IAmb	IAmb	21 47 35.0	
	comp=Z,27nm,0.9s						
USRK	Ussuriysk Ar.	79.33	326	P	P	21 47 34.4	+1.8
	comp=Z,25nm,0.8s,baz=104,slow=3.6,SNR=20						
	comp=Z,25nm,0.8s						
USRK	Ussuriysk Ar.	79.33	326	P	P	21 47 33.9	+1.2
KMRM	Mail Ridge	79.82	40	P	P	21 47 34.8	-0.6
KMRM				IAmb	IAmb	21 47 39.4	
	comp=Z,32nm,0.9s						
NJ2	Nanjing	79.95	310	⇑*i*P	P	21 47 37.8	+1.6
NJ2				pmax	pmax		
	comp=Z,23nm,1.0s						
MONP2	Monument Peak	80.25	49	P	P	21 47 39.3	+1.3
	baz=237						
EDW2	Edwards Air Fo	80.27	47	P	P	21 47 39.6	+1.7
	baz=235						
R16K	Pilot Point	80.59	11	P	P	21 47 39.8	+0.9
	baz=200						
PFO	Pinyon Flats O	80.62	48	P	P	21 47 40.7	+0.9
	baz=236						
TPFO	Pinon Flats	80.62	48	P	P	21 47 40.6	+0.7
	baz=236						
MDJ	Mudanjiang	80.87	325	P	P	21 47 42.1	+1.5
MDJ				PP	PP	21 50 58.1	+2.0
MDJ				S	S	21 57 10.9	+8.5
MDJ				ScS	ScS	21 57 21.8	+5.6
MDJ	Mudanjiang	80.87	325	sS	sS	22 00 43.0	+4.5
MDJ				pmax	pmax		
	comp=Z,29nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,180nm,7.0s						
MDJ	Mudanjiang	80.87	325	P	P	21 47 40.6	-0.1
MDJ				IAmb	IAmb	21 47 43.0	
	comp=Z,19nm,0.8s						
R17K	Ugashik Creek	80.88	12	P	P	21 47 40.9	+0.5
	baz=201						
CWC	Cottonwood Cre	81.10	45	P	P	21 47 42.2	-0.1
	baz=235						
OHAK	Old Harbor	81.14	14	P	P	21 47 43.4	+1.7
	baz=204						
BELC	Belle Mtn. Jos	81.16	48	P	P	21 47 42.7	+0.2
	baz=237						
MPMC	Manual Prospec	81.27	46	P	P	21 47 43.9	+0.7
	baz=236						
GSC	Goldstone, Bar	81.31	47	P	P	21 47 44.6	+1.3
	baz=236						
TIN	Tinemaha, Big	81.35	45	P	P	21 47 44.5	+1.0
	baz=235						
YBH	Yreka Blue Hor	81.36	39	P	P	21 47 44.1	+0.8
HEC	Hector,Ludlow	81.38	47	P	P	21 47 44.5	+0.8
	baz=236						
Q17K	Contact Creek	81.56	12	P	P	21 47 44.1	+0.1
	baz=201,SNR=8.6						
DSP	Deep Springs	81.70	45	P	P	21 47 46.3	+1.3
KDAK	Kodiak Island	81.81	14	P	P	21 47 47.0	+1.9
	comp=Z,4.8nm,0.6s,baz=211,slow=19,SNR=2.7						
	comp=Z,4.8nm,0.6s						
Q16K	King Salmon	81.81	11	P	P	21 47 45.7	+0.6
	baz=200						
GMRC	Granite Mounta	81.81	48	P	P	21 47 46.3	+0.4
	baz=237						
IRM	Iron Mountain	81.83	49	P	P	21 47 46.4	+0.5
	baz=237						
P16K	Nushagak River	81.90	11	P	P	21 47 45.7	+0.2
	baz=199,SNR=10						
SHOC	Shoshone, Teco	82.00	47	P	P	21 47 47.6	+0.8
	baz=236						
NVAR	Mina Array Bea	82.09	44	P	P	21 47 48.6	+1.3
	comp=Z,4.1nm,0.7s,baz=223,slow=8.2,SNR=15						
	comp=Z,4.1nm,0.7s						
NVAR	Mina Array Bea	82.09	44	P	P	21 47 47.0	-0.3
Q18K	Katmai Hardscr	82.09	12	P	P	21 47 46.7	0.0
	baz=202,SNR=9.6						
NV11	Mina Array Sit	82.18	44	P	P	21 47 47.8	0.0
P17K	Kvichak River	82.33	11	P	P	21 47 48.3	+0.6
	baz=201						
O16K	Kokwok River B	82.42	10	P	P	21 47 47.8	-0.4
	baz=199,SNR=10						
KVN	Kaiserville	82.57	43	P	P	21 47 50.2	+0.5
TPNV	Topopah Spring	82.60	46	P	P	21 47 49.9	0.0
	baz=236						
CN2	Changchun	82.60	323	P	P	21 47 50.3	+0.8
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
PDMCI	Parker Dam,Lak	82.61	49	P	P	21 47 50.2	+0.4
	baz=238						
IPM	Ipoh	82.62	278	P	P	21 47 50.9	+0.6
Q19K	Cape Douglas,	82.63	13	P	P	21 47 49.4	+0.1
Q19K	Cape Douglas,	82.63	13	P	P	21 47 49.3	+0.1
	baz=203						
P18K	Big Mountain,	82.74	12	P	P	21 47 49.6	-0.3
P18K	Big Mountain,	82.74	12	P	P	21 47 49.7	-0.3
	baz=202,SNR=7.0						
O17K	Koliganek Bris	82.76	11	P	P	21 47 50.0	+0.2
	baz=200						
BNX	BinXian	82.77	325	⇑P	P	21 47 51.0	+0.7
BNX				pmax	pmax		
	comp=Z,28nm,0.8s						
BNX				pmax	pmax		
	comp=Z,70nm,4.8s						
KLR	Kul'dur	82.95	330	P	P	21 47 52.3	+1.2
	comp=Z,8.5nm,0.8s,baz=110,slow=4.3,SNR=34						
	comp=Z,8.5nm,0.8s						
HEBO	Mount Hebo	82.97	36	P	P	21 47 52.0	+0.6
N16K	Nishlik Lake	83.14	10	P	P	21 47 53.1	+1.2
	baz=198						
O18K	Koktuh Hills	83.18	12	P	P	21 47 51.8	-0.1
O18K				IAmb	IAmb	21 47 53.2	
	comp=Z,33nm,0.8s						
O18K	Koktuh Hills	83.18	12	P	P	21 47 51.9	-0.1
	baz=202,SNR=9.7						
KULM	Kulim	83.27	278	P	P	21 47 53.7	+0.2
KULM				IAmb	IAmb	21 47 55.6	
	comp=Z,18nm,0.8s						
P19K	Oil Pt	83.38	13	P	P	21 47 53.2	+0.1
	baz=204						
H04A	Detroit Lake	83.50	37	P	P	21 47 54.4	+0.4
O19K	Port Alsworth	83.66	12	P	P	21 47 54.2	-0.1
O19K				IAmb	IAmb	21 47 55.3	
	comp=Z,56nm,1.1s						
O19K	Port Alsworth	83.66	12	P	P	21 47 54.4	0.0
	baz=203,SNR=18						
CNPM	China Poot	83.69	14	P	P	21 47 54.9	+0.3

ILSW	Iliamna Southw	83.70	13	P	P	21 47 54.6	-0.2
ILSW				IAmb	IAmb	21 47 55.6	
	comp=Z,32nm,0.7s						
HOM	Homer	83.72	13	P	P	21 47 54.8	+0.2
	baz=205						
N18K	Kilae Creek	83.82	11	P	P	21 47 54.8	-0.4
	baz=201						
O20K	Slope Mountain	83.90	13	P	P	21 47 55.4	-0.3
	baz=204						
BRLK	Bradley Lake	83.98	14	P	P	21 47 56.0	0.0
BRLK				IAmb	IAmb	21 47 57.3	
	comp=Z,26nm,0.9s						
BRSE	Bradley Lake S	83.99	14	P	P	21 47 56.7	+0.7
	baz=206						
N19K	Bonanza Creek	84.20	12	P	P	21 47 56.4	-0.7
N19K	Bonanza Creek	84.20	12	P	P	21 47 57.2	+0.1
	baz=202						
SVW2	Sparrevohn	84.27	11	P	P	21 47 57.2	-0.1
MA2	Magadan	84.45	345	P	P	21 47 58.4	+0.1
	comp=Z,3.7nm,0.4s,baz=153,slow=18,SNR=1.7						
	comp=Z,3.7nm,0.4s						
SEW	Seward	84.61	14	P	P	21 47 59.3	+0.3
	baz=207						
GSI	Gunungsitoli	84.65	273	P	P	21 48 01.9	+1.5
SPCR	Spurr Chakacha	85.00	13	P	P	21 48 00.8	-0.2
	baz=204						
GAMB	Gambell	85.04	3	P	P	21 48 01.9	+1.0
	baz=186						
M19K	Big River Lodg	85.23	11	P	P	21 48 02.1	0.0
	baz=202						
L19K	White Mountain	85.41	11	P	P	21 48 02.9	0.0
L19K				IAmb	IAmb	21 48 04.7	
	comp=Z,15nm,0.9s						
L19K	White Mountain	85.41	11	P	P	21 48 03.3	+0.5
	baz=202						
RC01	Rabbit Creek A	85.42	14	P	P	21 48 03.1	+0.1
RC01				IAmb	IAmb	21 48 04.2	
	comp=Z,15nm,0.9s						
RC01	Rabbit Creek A	85.42	14	P	P	21 48 03.0	+0.1
	baz=207						
M20K	Styx River	85.45	12	P	P	21 48 03.1	-0.1
	baz=204						
PWL	Port Wells	85.54	14	P	P	21 48 03.7	+0.1
	baz=208						
SUA	Susitna One	85.54	13	P	P	21 48 03.7	0.0
SUA				IAmb	IAmb	21 48 04.5	
	comp=Z,20nm,0.6s						
SUA	Susitna One	85.54	13	P	P	21 48 03.8	+0.1
	baz=206,SNR=16						
HNS	HongShan	85.67	313	⇓P	P	21 48 05.9	+1.2
HNS				pmax	pmax		
	comp=Z,17nm,1.0s						
G08A	Pilot Rock	85.69	38	P	P	21 48 05.2	+0.4
HEH	HeiHe	85.72	329	⇓P	P	21 48 05.3	+0.7
HEH				pmax	pmax		
	comp=Z,28nm,0.6s						
HEH				pmax	pmax		
	comp=Z,130nm,4.0s						
CRAG	Craig	85.76	24	P	P	21 48 05.7	+1.0
	baz=222						
SKT	Skwentna	85.85	12	P	P	21 48 03.8	-1.2
SKT				IAmb	IAmb	21 49 08.8	
	comp=Z,28nm,2.0s						
SKT	Skwentna	85.85	12	P	P	21 48 04.5	-0.5
	baz=205						
L20K	Farewell, AK	85.86	11	P	P	21 48 04.8	-0.3
	baz=203						
TTA	Tatalina	85.91	10	P	P	21 48 06.2	+0.8
	baz=201						
KNK	Knik Glacier	86.00	14	P	P	21 48 05.7	0.0
KNK				IAmb	IAmb	21 48 07.0	
	comp=Z,14nm,0.7s						
KNK	Knik Glacier	86.00	14	P	P	21 48 06.0	+0.2
	baz=208						
PMR	Palmer	86.01	14	P	P	21 48 06.1	+0.5
	baz=207						
BJI	Beijing	86.06	316	P	P	21 48 07.8	+1.3
BJI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GHO	Glory Hole Cre	86.21	14	P	P	21 48 07.0	+0.2
V35K	Ketchikan	86.24	25	P	P	21 48 06.9	0.0
	baz=223						
U33K	Whale Pass	86.25	24	P	P	21 48 07.0	0.0
	baz=222						
ANM	Nome	86.27	6	P	P	21 48 07.5	+0.6
ANM	Nome	86.27	6	P	P	21 48 07.5	+0.6
	baz=192						
SML	Sawmill	86.38	14	P	P	21 48 07.7	+0.2
	baz=208						
CUT	Chulitna	86.49	13	P	P	21 48 08.5	+0.6
	baz=206						
M23K	Glacier View	86.50	14	P	P	21 48 08.3	+0.2
	baz=209						
GYA	Guiyang	86.53	300	⇑*i*P	P	21 48 10.6	+1.4
GYA				pmax	pmax		
	comp=Z,11nm,1.0s						
PPLA	Purkeypile	86.56	12	P	P	21 48 08.8	+0.4
	baz=204						
SCM	Sheep Creek Mo	86.63	14	P	P	21 48 09.2	+0.5
SCM	Sheep Creek Mo	86.63	14	P	P	21 48 08.9	+0.2
	baz=209,SNR=12						
K20K	Telida	86.63	11	P	P	21 48 07.4	-1.3
K20K	Telida	86.63	11	P	P	21 48 09.1	+0.4
	baz=203,SNR=11						
KLU	Klutina	86.66	15	P	P	21 48 09.1	+0.2
KLU	Klutina	86.66	15	P	P	21 48 09.4	+0.5
	baz=210						
PNL	Peninsula	86.90	19	P	P	21 48 10.4	+0.4
	baz=216						
PINM	Pinnacle	87.00	18	P	P	21 48 10.8	+0.3
	baz=215						
TNA	Tin City	87.04	4	P	P	21 48 10.8	+0.3
TNA	Tin City	87.04	4	P	P	21 48 10.9	+0.5
	baz=190,SNR=7.2						
CAST	Castle Rocks	87.05	12	P	P	21 48 09.6	-1.1
CAST				IAmb	IAmb	21 48 11.0	
	comp=Z,19nm,0.6s						
CAST	Castle Rocks	87.05	12	P	P	21 48 09.8	-0.8
	baz=204,SNR=25						
SEY	Seymchan	87.08	347	P	P	21 48 11.1	+0.4
	comp=Z,12nm,0.7s,baz=150,slow=5.4,SNR=29						
	comp=Z,12nm,0.7s						
N25K	Chitina, Valde	87.08	16	P	P	21 48 11.3	+0.4
	baz=211,SNR=8.0						
M24K	Tolsona, Glenn	87.13	15	P	P	21 48 11.2	0.0
	baz=210						
TMUT	Trail Mountain	87.21	46	P	P	21 48 12.8	+0.4
WAT1	Susitna Watana	87.23	13	P	P	21 48 11.5	0.0
	baz=208						
MCARA	McCarthy VSAT	87.30	16	P	P	21 48 12.4	+0.5
	baz=213						
LOGN	Logan Glacier	87.38	17	P	P	21 48 13.0	+0.6
LOGN				IAmb	IAmb	21 48 14.1	
	comp=Z,15nm,0.8s						
HLID	Hailey	87.39	41	P	P	21 48 14.0	+1.1
	baz=237						
KTH	Kantishna Hill	87.40	12	P	P	21 48 11.3	-1.0
KTH				IAmb	IAmb	21 48 12.9	
	comp=Z,16nm,0.9s						
CTG	Chitna Glacier	87.40	17	P	P	21 48 13.3	+0.8
	baz=214,SNR=6.0						
TRF	Thorofare Moun	87.43	12	P	P	21 48 12.0	-0.6
TRF	Thorofare Moun	87.43	12	P	P	21 48 12.1	-0.6
	baz=206,SNR=35						
CHUM	Lake Minchumin	87.43	11	P	P	21 48 12.1	-0.2
	baz=204						
O28M	Mount Upton	87.57	18	P	P	21 48 13.2	-0.2
	baz=215						
HARP	HAARP	87.63	15	P	P	21 48 14.1	+0.8
	baz=211						
PLBC	Pleasant Camp	87.67	20	P	P	21 48 14.0	+0.4
	baz=219						
MNTX	Cornudas Mount	87.77	55	P	P	21 48 16.1	+1.3
	baz=243						
BPAW	Bear Paw Mtn.	87.88	12	P	P	21 48 14.3	-0.2
	baz=206						
MCK	McKinley	87.95	13	P	P	21 48 14.3	-0.5
MCK				IAmb	IAmb	21 48 17.1	
	comp=Z,23nm,1.0s						
MCK	McKinley	87.95	13	P	P	21 48 14.7	-0.2
	baz=207,SNR=16						
T35M	Bob Quinn	87.97	24	P	P	21 48 15.3	+0.2
	baz=224						
P30M	Million Dollar	88.01	19	P	P	21 48 15.7	+0.5
	baz=218						
PAX	Paxson	88.05	14	P	P	21 48 15.6	+0.2
	baz=211						
TXAR	Lajitas Array	88.06	58	P	P	21 48 17.7	+1.4
	comp=Z,1.9nm,0.8s,baz=217,slow=5.8,SNR=19						
TXAR				pP	pwP	21 50 25.1	+2.6
	comp=Z,0.6nm,1.0s,baz=205,slow=5.5,SNR=3.5						
	comp=Z,1.9nm,0.8s						
YUK8	Steele Glacier	88.11	18	P	P	21 48 16.2	+0.3
	baz=216,SNR=7.9						
XAN	Xi'an	88.16	308	⇓*i*P	P	21 48 17.9	+1.3
XAN				sP	sP	21 51 10.4	-6.3
XAN				pmax	pmax		
	comp=Z,25nm,0.9s						
M26K	Nabesna, AK	88.16	16	P	P	21 48 16.0	0.0
M26K				IAmb	IAmb	21 48 18.2	
	comp=Z,9.3nm,0.8s						
M26K	Nabesna, AK	88.16	16	P	P	21 48 16.7	+0.8
	baz=213,SNR=6.8						
XLT	XiLinHaoTe	88.17	319	⇑*i*P	P	21 48 17.3	+0.8
XLT				pmax	pmax		
	comp=Z,84nm,4.6s						
XLT				pmax	pmax		
	comp=Z,11nm,0.7s						
YUK6	Outpost Mounta	88.23	18	P	P	21 48 16.5	0.0
	baz=217						
S34M	Telegraph Cree	88.31	23	P	P	21 48 18.1	+1.5
	baz=223						
YUK3	Moose Creek	88.31	17	P	P	21 48 17.4	+0.6
	baz=215,SNR=14						
HYT	Haines Junctio	88.40	19	P	P	21 48 17.7	+0.6
	baz=218						
M27K	Edge Creek, AK	88.42	16	P	P	21 48 18.3	+1.1
	baz=214						
ANMO	Albuquerque	88.44	51	P	P	21 48 18.8	+0.8
	baz=242						
YUK4	Talbot Arm	88.47	18	P	P	21 48 18.9	+1.3
	baz=217						
L26K	Log Cabin Wild	88.60	15	P	P	21 48 18.4	+0.5
	baz=212,SNR=6.8						
P32M	Atlin	88.65	21	P	P	21 48 19.3	+1.1
	baz=221						
Q32M	Nakina River	88.67	22	P	P	21 48 20.0	+1.4
	baz=222						
I21K	Tanana	88.68	11	P	P	21 48 18.5	+0.3
	baz=205						
NEA2	Nenana	88.69	12	P	P	21 48 17.2	-1.0
NEA2	Nenana	88.69	12	P	P	21 48 17.6	-0.6
	baz=207,SNR=9.4						
K24K	Donnelly Dome	88.70	14	P	P	21 48 18.5	+0.2
	baz=210,SNR=9.7						
BVCY	Beaver Creek	88.73	17	P	P	21 48 19.4	+0.8
	baz=215,SNR=8.1						
MLY	Manley	88.77	11	P	P	21 48 18.1	-0.5
MLY				IAmb	IAmb	21 48 18.9	
	comp=Z,7.5nm,0.6s						
MLY	Manley	88.77	11	P	P	21 48 18.2	-0.5
	baz=206,SNR=17						
WRH	Wood River Hil	88.78	13	P	P	21 48 18.6	0.0
WRH				IAmb	IAmb	21 48 19.5	
	comp=Z,17nm,0.7s						
O30N	Mendenhall	88.78	19	P	P	21 48 19.8	+0.9
	baz=219						
RIDG	Independent Ri	88.85	14	P	P	21 48 18.8	-0.3
RIDG				IAmb	IAmb	21 48 20.5	
	comp=Z,10nm,1.0s						
RIDG	Independent Ri	88.85	14	P	P	21 48 18.9	-0.2
	baz=211						
DOT	Dot Lake	88.96	15	P	P	21 48 20.0	+0.4
DOT				IAmb	IAmb	21 48 20.9	
	comp=Z,9.5nm,0.7s						
HDA	Harding Lake	88.97	13	P	P	21 48 19.6	+0.1
	baz=209,SNR=15						
H21K	Melozitna Rive	88.97	10	P	P	21 48 20.0	+0.4
	baz=204						
CCB	Clear Creek Bu	89.00	13	P	P	21 48 19.6	0.0
CCB				IAmb	IAmb	21 48 20.2	
	comp=Z,16nm,0.8s						
L27K	Beaver Creek,	89.01	16	P	P	21 48 18.9	-0.9
L27K	Beaver Creek,	89.01	16	P	P	21 48 20.6	+0.7
	baz=214,SNR=5.6						
N30M	Aishikik Lake	89.02	19	P	P	21 48 20.5	+0.6
	baz=218						
IMAR	Indian Mountai	89.12	10	P	P	21 48 20.4	+0.3
I23K	Minto, Yukon-K	89.13	12	P	P	21 48 20.1	-0.1
I23K				IAmb	IAmb	21 48 20.9	
	comp=Z,5.2nm,0.6s						
I23K	Minto, Yukon-K	89.13	12	P	P	21 48 20.2	-0.1
	baz=207,SNR=7.4						
PLCA	Paso Flores	89.14	134	P	P	21 48 22.8	+1.6
	comp=Z,1.2nm,0.7s,baz=254,slow=6.3,SNR=5.7						
	comp=Z,1.2nm,0.7s						
KMI	Kunming	89.18	297	⇑P	P	21 48 24.0	+2.3
KMI				pmax	pmax		
	comp=Z,13nm,0.8s						
TCOL	CIGO, UAF Yank	89.19	13	P	P	21 48 20.8	+0.3
	baz=208						
MDM	Murphy Dome	89.19	12	P	P	21 48 20.2	-0.4
MDM				IAmb	IAmb	21 48 21.1	
	comp=Z,13nm,0.8s						
COLA	College	89.19	13	P	P	21 48 20.8	+0.3
	baz=208						
SCRK	Sand Creek	89.26	15	P	P	21 48 21.2	+0.2
SCRK	Sand Creek	89.26	15	P	P	21 48 21.6	+0.6
	baz=212,SNR=8.1						
IL31		89.30	13	P	P	21 48 20.9	-0.1
IL31				IAmb	IAmb	21 48 22.9	
	comp=Z,37nm,1.8s						
ILAR	Eielson Array	89.30	13	P	P	21 48 20.8	-0.3
	comp=Z,4.8nm,0.6s,baz=218,slow=5.3,SNR=48						
ILAR				pP	pP	21 50 29.1	+3.9
	comp=Z,1.8nm,1.2s,baz=231,slow=5.7,SNR=3.7						
	comp=Z,4.8nm,0.6s						
M29M	Somme Creek	89.41	17	P	P	21 48 22.7	+0.9
	baz=217						
P33M	Teslin, Yukon	89.41	21	P	P	21 48 22.5	+0.7
	baz=222						
H22K	Ishtalitna Cre	89.43	11	P	P	21 48 21.8	+0.2
	baz=205						
POKR	Poker Plat Res	89.49	13	P	P	21 48 21.5	-0.4
	baz=209						
HHC	Hu-ho-hao-te	89.51	315	*e*P	P	21 48 24.1	+1.4
HHC				pmax	pmax		
	comp=Z,28nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.9s						
G21K	Allakaket	89.65	10	P	P	21 48 23.2	+0.5
	baz=203						
H23K	Yukon River	89.70	12	P	P	21 48 23.1	+0.1
	baz=207						
CMAR	Chiang Mai Arr	89.81	290	P	P	21 48 26.5	+2.0
	comp=Z,12nm,0.9s,baz=129,slow=3.1,SNR=69						
CMAR				PP	PP	21 52 08.5	+0.7
	comp=Z,0.4nm,0.5s,baz=133,slow=7.5,SNR=4.2						
	comp=Z,12nm,0.9s						
CMAR	Chiang Mai Arr	89.81	290	P	P	21 48 25.3	+0.8
RDOG	Red Dog Mine	89.91	6	P	P	21 48 24.4	+0.5
	baz=194						
CHTO	Chiang Mai	89.94	290	P	P	21 48 25.6	+0.4
M30M	Minto, Yukon	89.99	18	P	P	21 48 25.2	+0.8
	baz=218,SNR=7.5						
BW06	Boulder Array	90.03	43	P	P	21 48 25.8	+0.5
BW06	Boulder Array	90.03	43	P	P	21 48 25.8	+0.5
	baz=240,SNR=5.6						
PD31	Pinedale Array	90.03	43	P	P	21 48 25.9	+0.6
PDAR	Pinedale Array	90.03	43	P	P	21 48 26.3	+1.0
	comp=Z,3.1nm,0.7s,baz=214,slow=3.1,SNR=31						
	comp=Z,3.1nm,0.7s						
PDAR	Pinedale Array	90.03	43	P	P	21 48 25.8	+0.5
H24K	Noodor Dome	90.03	12	P	P	21 48 26.5	+2.0
	baz=208						
L29M	L29M	90.03	17	P	P	21 48 25.5	+1.0
	baz=217						
BOZ	Bozeman (W)	90.16	40	P	P	21 48 26.1	+0.4
BOZ	Bozeman (W)	90.16	40	P	P	21 48 26.9	+1.2
	baz=239						
H17A	Grant Village	90.19	42	P	P	21 48 28.2	+2.1
	baz=240						
PRP	Porcupine Dome	90.23	13	P	P	21 48 26.2	+0.6
	baz=210						
F21K	Alatna River	90.30	10	P	P	21 48 26.0	+0.3
	baz=203						
G22K	Bettles	90.34	10	P	P	21 48 26.5	+0.7
	baz=205						
SDCO	Great Sand Dun	90.40	49	P	P	21 48 26.9	-0.3
	baz=243						
G23K	Bananza Creek	90.41	11	P	P	21 48 27.2	+1.0
	baz=206						
M31M	Drury Creek, Y	90.41	19	P	P	21 48 26.9	+0.6
	baz=220						
DAWY	Dawson	90.47	16	P	P	21 48 27.1	+0.6
	baz=216,SNR=7.9						
PZH	PanZhiHua	90.56	298	P	P	21 48 28.9	+0.9
PZH				pmax	pmax		
	comp=Z,20nm,0.7s						
PZH				pmax	pmax		
	comp=Z,110nm,5.3s						
I26K	Coal Creek Min	90.58	14	P	P	21 48 27.5	+0.5
	baz=213						
EGAK	Eagle	90.60	15	P	P	21 48 27.2	+0.1
EGAK				IAmb	IAmb	21 48 28.5	
	comp=Z,8.4nm,0.7s						
EGAK	Eagle	90.60	15	P	P	21 48 27.6	+0.5
	baz=214,SNR=9.8						
F22K	John River	90.77	10	P	P	21 48 28.4	+0.6
	baz=204						
K29M	Barlow Dome	90.78	17	P	P	21 48 29.0	+0.9
	baz=218						
G24K	Hadweenzic Riv	90.87	12	P	P	21 48 29.1	+0.8
	baz=209						
T25A	Trinidad	90.91	50	P	P	21 48 29.9	+0.4
	baz=244						
J29M	Klondike Camp	91.08	16	P	P	21 48 30.3	+0.9
J29M	Klondike Camp	91.08	16	P	P	21 48 30.4	+0.9
	baz=217						
I27K	Kandik River	91.18	14	P	P	21 48 30.9	+1.1
	baz=214						
Q24A	Divide	91.19	48	P	P	21 48 31.1	+0.3
	baz=243						
LIRD	Liard River Hi	91.24	24	P	P	21 48 31.4	+1.2
	baz=228						
RLMT	Red Lodge	91.36	42	P	P	21 48 32.2	+0.8
	baz=241						
E22K	Anaktuvuk Pass	91.40	10	P	P	21 48 31.7	+0.9
	baz=205						
F24K	Squaw Lake	91.52	11	P	P	21 48 32.5	+1.2
	baz=208						
N23A	Red Feather La	91.52	46	P	P	21 48 33.2	+1.0
	baz=243						
E23K	Chandalar	91.69	11	P	P	21 48 33.1	+0.9
	baz=207						
MMPY	Sheldon Lake,	91.69	20	P	P	21 48 33.5	+1.3
	baz=223						
H27K	Steamboat Moun	91.72	14	P	P	21 48 33.2	+0.9
	baz=214						
I29M	Ogilvie Camp,	91.79	16	P	P	21 48 33.2	+0.6
	baz=217						
G26K	Porcupine Rive	91.83	13	P	P	21 48 34.0	+1.4
	baz=212						
E24K	Your Creek	91.90	11	P	P	21 48 33.7	+0.6
	baz=208						
F25K	Christian Rive	92.01	12	P	P	21 48 34.6	+1.0
	baz=210						
G27K	Doyon Strip	92.17	14	P	P	21 48 35.4	+1.0
	baz=214						
D23K	Nanushuk River	92.33	10	P	P	21 48 36.0	+1.0
	baz=206						
F26K	Sheenjek River	92.39	13	P	P	21 48 36.5	+1.2
	baz=212						
E25K	Arctic Village	92.48	12	P	P	21 48 36.9	+1.2
	baz=210						
EGMT	Eagleton	92.49	39	P	P	21 48 36.1	-0.2
	baz=240						
YAK	Yakutsk	92.68	338	P	P	21 48 36.4	-0.3
	comp=Z,9.3nm,0.6s,baz=21,slow=0.4,SNR=6.5						
	comp=Z,9.3nm,0.6s						
LZH	Lanzhou	92.79	308	*e*P	P	21 48 39.0	+0.9
LZH				pP	pP	21 50 36.5	-5.5
LZH				sP	sP	21 51 22.3	-16
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
KSCO	Kaye Shedlock’	92.98	49	P	P	21 48 38.7	-0.1
	baz=245						
EPYK	Eagle Plains	92.99	16	P	P	21 48 38.6	+0.5
	baz=218						
C24K	Franklin Bluff	93.33	10	P	P	21 48 40.0	+0.6
	baz=208						
E27K	Coleen River	93.33	13	P	P	21 48 40.9	+1.3
	baz=214						
D25K	Kavik River	93.37	11	P	P	21 48 40.1	+0.3
	baz=210						
G30M	tAoh Zraii Nji	93.59	15	P	P	21 48 41.1	+0.2
	baz=219						
C27K	Jago River	94.12	12	P	P	21 48 44.0	+0.9
	baz=212						
C26K	Camden Bay	94.15	11	P	P	21 48 44.2	+1.0
	baz=211						
F31M	Tsiigehtchic	94.57	16	P	P	21 48 45.8	+0.6
	baz=221						
INK	Inuvik	95.27	15	P	P	21 48 48.1	-0.2
	comp=Z,1.5nm,0.7s,baz=218,slow=3.2,SNR=5.7						
	comp=Z,1.5nm,0.7s						
INK	Inuvik	95.27	15	P	P	21 48 48.4	0.0
	baz=221						
SONM	Songino Array	95.99	319	P	P	21 48 51.1	-1.2
	comp=Z,0.5nm,0.4s,baz=124,slow=3.8,SNR=11						
	comp=Z,0.5nm,0.4s						
GTA	Gaotai	97.03	309	*e*P	Pdif	21 48 57.9	+0.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
YKA	Yellowknife Ar	97.56	25	P	Pdif	21 48 58.6	-0.2
	comp=Z,0.5nm,0.8s,baz=242,slow=4.5,SNR=7.8						
	comp=Z,0.5nm,0.8s						
ACSO	Alum Creek Sta	107.69	53	P	PKiKP	21 53 47.8	-0.7
	baz=257						
ZALV	Zalesovo Beam	110.77	321	PKiKP	PKiKP	21 53 52.9	-1.0
	comp=Z,1.6nm,0.6s,baz=126,slow=0.5,SNR=10						
MKAR	Makanchi Array	111.33	313	Pdiff	Pdif	21 50 02.6	+2.2
	comp=Z,0.3nm,0.5s,baz=98,slow=5.0,SNR=5.6						
MKAR				PKiKP	PKiKP	21 53 54.2	-1.0
	comp=Z,0.6nm,0.4s,baz=91,slow=1.0,SNR=20						
GAR	Garm	119.17	304	PKPdf	PKPdf	21 54 09.0	-1.6
KK31	Karatay Array	119.29	308	PKPdf	PKPdf	21 54 09.7	-0.9
KKAR	Karatay Array	119.29	308	PKPdf	PKPdf	21 54 08.6	-2.0
BRVK	Borovoye	119.39	320	PKPdf	PKPdf	21 54 08.3	-2.1
KBL	Kabul	119.75	298	PKPdf	PKPdf	21 54 10.1	-2.0
CHGR	Chuyangaron	120.04	303	PKPdf	PKPdf	21 54 10.7	-1.6
SPA0	Spitsbergen Ar	122.69	356	*e*PKPdf	PKPdf	21 54 16.0	-0.2
SPITS	Spitsbergen Ar	122.69	356	PKP	PKPdf	21 54 15.7	-0.4
	comp=Z,12nm,0.7s,baz=59,slow=3.7,SNR=21						
SPB2	Spitsbergen Ar	122.69	356	PKPdf	PKPdf	21 54 15.3	-0.8
HOPEN	Hopen	123.54	354	*e*PKPdf	PKPdf	21 54 17.7	-0.1
ARU	Arti	125.55	325	PKPdf	PKPdf	21 54 20.9	-1.2
ABKAR	Akbulak array	126.27	316	PKPdf	PKPdf	21 54 23.3	-0.5
GEYT	Alibeck	128.71	302	PKP	PKPdf	21 54 29.1	+0.3
	comp=Z,2.8nm,0.6s,baz=202,slow=1.6,SNR=9.9						
GEYT				pPKP	PP	21 56 43.0	-1.5
	comp=Z,1.9nm,1.0s,baz=209,slow=2.7,SNR=2.6						
HAMF	Hammerfest	128.97	351	*e*PKPdf	PKPdf	21 54 27.8	-0.5
ARA0	ARCESS Array S	129.65	349	*e*PKPdf	PKPdf	21 54 29.6	-0.1
ARCES	ARCESS Array B	129.65	349	PKP	PKPdf	21 54 29.3	-0.3
	comp=Z,5.1nm,0.5s,baz=9.3,slow=1.4,SNR=40						
KTK1	Kautokeino	130.50	350	*e*PKPdf	PKPdf	21 54 30.8	-0.5
TRO	Tromso	130.57	352	*e*PKPdf	PKPdf	21 54 30.8	-0.5
STOK	Stokkvaagen	134.42	353	*e*PKPdf	PKPdf	21 54 38.9	+0.2
FINES	FINESS Array B	136.42	343	PKhKP	PKPpre	21 54 29.2	
	comp=Z,1.3nm,0.7s,baz=38,slow=2.5,SNR=7.5						
FINES				PKP	PKPdf	21 54 42.0	-0.5
	comp=Z,3.4nm,0.6s,baz=56,slow=3.5,SNR=11						
FINES				SKPbc	SKPbc	21 57 21.9	+0.3
	comp=Z,6.3nm,0.9s,baz=20,slow=4.4,SNR=7.3						
DOMB	Dombas	139.00	354	*e*	PKPdf	21 54 39.5	-7.8
NB2	NORSAR Subarra	139.76	353	PKP	PKPpre	21 54 41.4	
	comp=Z,0.9nm,0.5s,baz=10,slow=3.2						
NOA	NORSAR Array B	139.76	353	PKhKP	PKPpre	21 54 41.2	
	comp=Z,0.8nm,0.5s,baz=16,slow=1.6,SNR=15						
NOA				PKP	PKPdf	21 54 48.9	+0.2
	comp=Z,1.1nm,0.5s,baz=14,slow=3.9,SNR=4.4						
NC602	NORSAR Array S	140.01	352	*e*	PKPdf	21 54 42.4	-6.7
MNK	Minsk	141.31	335	*i* PKP	PKPdf	21 54 47.5	-4.1
	comp=E,2.0nm,1.1s						
MNK				*i* PKP	PKPdf	21 54 47.5	-4.1
	comp=N,24nm,0.7s						
MNK				*i* PKP	PKPdf	21 54 47.5	-4.1
	comp=Z,9.0nm,0.8s,baz=42						
MNK				*i* pPKP	pPKPdf	21 56 56.2	-8.2
MNK				*i* PP	PP	21 57 49.7	-12
MNK				*i* PPP	PPP	22 01 25.8	
MNK				*i* SKKS		22 10 32.8	
MNK				*i* SS	SS	22 15 30.7	-15
ODD1	Odda	141.31	356	*e*PKPdf	PKPdf	21 54 47.0	-4.6
NACGM	Naroch	141.42	337	*e*PKP	PKPdf	21 54 46.8	-5.0
	comp=Z,15nm,0.8s,baz=40						
KOPT	Kop Dagi	141.90	308	PKPdf	PKPdf	21 54 50.3	-3.2
LODK	Lodwar	142.42	246	PKPdf	PKPdf	21 54 52.4	-2.6
HOMB	Homborsund	142.77	354	*e*PKPdf	PKPdf	21 54 52.2	-1.9
SNART	Snartemo	142.82	355	*e*PKPdf	PKPdf	21 54 52.3	-1.9

MLA1	Latheron	142.95	4	eP	PKPdf	21 54 52.1	-2.3
AKASG	Malin Array Be	143.45	330	PKP	PKPab	21 54 53.5	-0.6
	comp=Z,32nm,0.6s,baz=36,slow=4.2,SNR=185						
AKASG				SKPbc	SKPbc	21 57 40.3	-0.2
	comp=Z,0.3nm,0.3s,baz=48,slow=2.6,SNR=5.4						
AKBB	Malin Array Si	143.45	330	PKPdf	PKPab	21 54 52.9	-1.2
KPL	Plockton	143.71	6	eP	PKPbc	21 54 52.6	-2.2
DRUM	Mains of Drumt	144.39	4	eP	PKPbc	21 54 56.3	-0.6
INVG	Invergeldie, C	144.76	5	eP	PKPdf	21 54 57.7	0.0
LAWE	Loch Awe, Argy	144.80	7	eP	PKPdf	21 54 57.6	-0.1
SORM	Soroca	145.60	327	⇓P	PKPbc	21 55 00.5	-0.4
GKP	Gorka Klasztor	145.89	343	ePKP	PKPbc	21 55 01.9	+0.4
EKA	Eskdalemuir Ar	145.92	5	PKPbc	PKPbc	21 55 01.2	-0.3
	comp=Z,13nm,0.7s,baz=354,slow=3.2,SNR=31						
BEL	Belsk	146.03	338	ePKP	PKPbc	21 55 02.6	+0.6
NEWG	New Galloway	146.04	6	eP	PKPdf	21 55 00.5	+0.7
MILM	Milestii Mici	146.15	325	ePKP	PKPdf	21 55 01.0	+0.7
	comp=Z,40nm,0.6s						
GAL1	Galloway	146.24	6	eP	PKPbc	21 55 02.2	-0.2
ILGA	Ilgaz	146.33	313	PKPbc	PKPdf	21 55 01.0	-0.1
DRBR	Darabani	146.41	329	⇓P	PKPbc	21 55 02.7	-0.4
EDMD	Edmundbyers	146.50	3	eP	PKPbc	21 55 02.2	-0.9
KESW	Keswick, Cumbr	146.66	5	eP	PKPbc	21 55 03.0	-0.6
BSEG	Bad Segeberg	146.77	350	ePKPbc	PKPbc	21 55 04.3	+0.5
	baz=18,slow=2.4						
HLG	Helgoland	146.86	353	ePKPbc	PKPbc	21 55 04.9	+0.8
	baz=18,slow=2.4						
VASR	Vaslui	146.87	326	⇓P	PKPbc	21 55 04.9	+0.5
ILTH	Belurgan, Co L	146.88	8	eP	PKPbc	21 55 03.7	-0.4
BR131	Keskin Array S	146.94	311	PKPbc	PKPbc	21 55 03.6	-1.4
BRTR	Keskin Array B	146.94	311	PKPbc	PKPbc	21 55 04.8	-0.2
	comp=Z,8.4nm,0.6s,baz=136,slow=4.4,SNR=19						
BRTR	Keskin Array B	146.94	311	PKPdf	PKPdf	21 55 00.9	-1.1
BRTR				PKPbc	PKPbc	21 55 04.6	-0.4
WIM	Isle of Man	146.96	6	eP	PKPbc	21 55 03.7	-0.7
PRAR	RASCA	147.18	328	⇓P	PKPab	21 55 13.3	+4.5
HPK	Haverah Park	147.39	3	eP	PKPbc	21 55 05.5	0.0
JURR	Jurilovca	147.45	322	⇓P	PKPbc	21 55 06.3	+0.3
ANTO	Ankara	147.47	312	⇓P	PKPbc	21 55 06.6	+0.3
RUE	Ruedersdorf	147.48	346	ePKPbc	PKPbc	21 55 06.2	+0.4
	baz=18,slow=2.4						
BURAR	Bucovina Array	147.49	329	⇓P	PKiKP	21 55 07.5	-0.2
BURAR	Bucovina Array	147.49	329	PKPbc	PKPbc	21 55 04.8	-1.4
TESR	Tescani	147.55	327	⇓P	PKPbc	21 55 06.2	0.0
TPGR	Topolog	147.65	323	⇓P	PKPbc	21 55 07.0	+0.5
WLF1	Llynfaes	147.83	6	eP	PKPbc	21 55 06.3	-0.4
STHS	Stebnicka Huta	147.85	335	ePKP	PKPbc	21 55 06.9	0.0
TIRR	Tirgusor	147.90	322	⇓P	PKiKP	21 55 08.3	-0.2
TIRR	Tirgusor	147.90	322	PKPbc	PKPbc	21 55 06.8	-0.3
HARR	Harsova	148.03	323	⇓P	PKPbc	21 55 07.3	-0.2
TLBR	Topalu	148.05	323	⇑P	PKiKP	21 55 08.3	-0.5
RETH	Rethem/Aller,	148.08	351	ePKPbc	PKPbc	21 55 07.6	+0.3
	baz=18,slow=2.4						
FLTG	Flechtingen	148.15	348	ePKPbc	PKPbc	21 55 07.7	+0.2
	baz=18,slow=2.4						
NRDL	Niedersach Rie	148.19	350	ePKPbc	PKPbc	21 55 08.2	+0.7
	baz=18,slow=2.4						
NIE	Niedzica	148.21	336	ePKP	PKiKP	21 55 09.5	+0.4
BMR	Baia Mare	148.25	331	⇑P	PKPbc	21 55 08.5	+0.6
ARCR	ARCALIA	148.28	329	⇓P	PKiKP	21 55 08.9	-0.3
MDUB	Mudurnu	148.30	314		PKPbc	21 55 08.4	0.0
KSP	Ksiaz	148.32	342	ePKP	PKiKP	21 55 08.8	-0.4
TRPA	Tarpa	148.32	333	⇓P	PKPbc	21 55 08.0	0.0
FOEL	Foel Wylfa	148.34	5	eP	PKPbc	21 55 07.6	-0.4
ICOR	Ion Corvin	148.45	322	⇓P	PKPbc	21 55 09.0	+0.5
MLR	Muntele Rosu	148.59	326	PKPbc	PKPbc	21 55 07.4	-1.6
OSTC	Ostas	148.60	342	⇑ePKP	PKiKP	21 55 09.8	0.0
CHVC	Chvalec	148.62	342	⇑ePKP	PKiKP	21 55 09.7	-0.1
CHVC				ePKPAB	PKPab	21 55 15.8	+1.2
OKC	Ostrava-Krasne	148.62	339	⇑ePKP	PKPab	21 55 15.3	+0.7
UPC	Upice	148.70	342	⇑ePKP	PKiKP	21 55 09.9	-0.1
IBBN	Ibbenburen	148.72	352	ePKPbc	PKiKP	21 55 09.5	-0.4
	baz=18,slow=2.4						
LANS	Liptovska Anna	148.74	337	ePKP	PKiKP	21 55 10.7	+0.6
LANS				e		21 55 16.6	
HLM1	Long Mynd	148.74	5	eP	PKPbc	21 55 08.4	-0.5
DPC	Dobruska-Polom	148.75	341	⇑ePKP	PKiKP	21 55 10.0	-0.1
DPC				ePKPAB	PKPab	21 55 16.4	+1.2
CLL	Collm	148.75	346	PKPbc	PKPbc	21 55 07.0	-2.0
CLL	Collm	148.75	346	ePKPbc	PKPbc	21 55 09.0	0.0
	comp=Z,31nm,1.0s						
CLL				i PKPab	PKPab	21 55 14.9	-0.2
	comp=Z,15nm,0.8s						
CLL	Collm	148.75	346	ePKPbc	PKPbc	21 55 09.2	+0.2
	baz=18,slow=2.4						
CLZ	Clausthal	148.78	349	ePKPbc	PKiKP	21 55 09.9	-0.2
	baz=18,slow=2.4						
SECR		148.83	325	⇓P	PKPbc	21 55 09.8	+0.3
KRLC	Kraliky	148.85	341	⇑ePKP	PKiKP	21 55 10.3	-0.1
KRLC				ePKPAB	PKPab	21 55 16.6	+0.9
MORC	Moravsky Berou	148.87	339	⇓P	PKPbc	21 55 09.8	+0.3
MORC	Moravsky Berou	148.87	339	ePKP	PKiKP	21 55 10.2	-0.2
MORC				e		21 55 16.5	
CBBR	Cluj-Babes-Bol	148.89	330	⇓P	PKPbc	21 55 09.8	+0.3
CJR	Cluj-Napoca	148.91	330	⇓P	PKPbc	21 55 09.3	-0.4
BRG	Berggiesshubel	148.93	344	i PKP	PKiKP	21 55 10.1	-0.4
BRG				Amp		21 55 10.7	
	comp=Z,16nm,0.8s						
BRG	Berggiesshubel	148.93	344	P	PKPab	21 55 16.6	+0.7
BRG				Amp		21 55 17.6	
	comp=Z,7.9nm,0.9s						
BRG	Berggiesshubel	148.93	344	ePKPbc	PKiKP	21 55 10.0	-0.4
	baz=18,slow=2.4						
MDB	Medias	148.94	328	⇓P	PKPbc	21 55 09.8	+0.1
FBE	Freiberg	149.03	345	ePKPbc	PKiKP	21 55 10.6	0.0
	baz=18,slow=2.4						
BORA	Eskisehir	149.08	313	PKPbc	PKPbc	21 55 09.2	-1.2
PVCC	Panska Ves	149.09	343	⇑ePKP	PKiKP	21 55 10.9	+0.2
NEUB	Neuenburg	149.11	347	ePKPbc	PKiKP	21 55 10.7	0.0
	baz=18,slow=2.4						
MAUC	Maruska	149.13	339	⇑ePKP	PKiKP	21 55 10.9	0.0
GTTG	Gottingen	149.13	349	ePKPbc	PKiKP	21 55 10.7	-0.1
	baz=18,slow=2.4						
MARR	Marisel-Cluj	149.16	330	⇓P	PKiKP	21 55 11.3	+0.1
MCH1	Michaelchurch	149.24	5	eP	PKPbc	21 55 10.0	-0.2
DRGR		149.26	331	⇓P	PKPbc	21 55 10.8	+0.3
VYHS	Vyhne	149.51	337	ePKP	PKiKP	21 55 11.5	-0.2
VYHS				e		21 55 19.5	
RAZG	Razgrad	149.53	322	⇓P	PKPbc	21 55 11.4	+0.3
GOPC	GO Pecny, Ondr	149.58	343	⇑ePKP	PKiKP	21 55 11.8	0.0
PRU	Pruhonice	149.58	343	⇑ePKP	PKiKP	21 55 11.8	0.0
PSZ	Piszkesteto	149.58	335	⇓P	PKPbc	21 55 11.4	+0.2
PSZ	Piszkesteto	149.58	335	PKPbc	PKPbc	21 55 10.0	-1.2
VRAC	Vranov	149.59	340	⇓P	PKiKP	21 55 11.8	0.0
VRAC	Vranov	149.59	340	ePKP	PKiKP	21 55 11.6	-0.2
VRAC				e		21 55 19.7	
JAVC	Velka Javorina	149.62	338	ePKP	PKiKP	21 55 13.0	+1.0
JAVC				e		21 55 20.7	
BUG	Bochum--Univer	149.63	353	ePKPbc	PKiKP	21 55 11.8	0.0
	baz=18,slow=2.4						
MOX	Moxa	149.68	347	ePKPbc	PKiKP	21 55 11.7	-0.3
	baz=18,slow=2.4						
MOX				ePKPab	PKPab	21 55 19.0	0.0
KASTN	Kahler Asten	149.71	351	ePKPbc	PKiKP	21 55 12.0	-0.1
	baz=18,slow=2.4						
TANN	Tannenbergstha	149.71	346	ePKPbc	PKiKP	21 55 12.0	-0.1
	baz=18,slow=2.4						
PLN	Plauen	149.71	346	ePKPbc	PKiKP	21 55 12.0	-0.1
	baz=18,slow=2.4						
WERD	Werda	149.72	346	ePKPbc	PKPbc	21 55 11.8	+0.3
	baz=18,slow=2.4						
HUMR	Humele	149.75	325	⇓P	PKPbc	21 55 12.0	+0.4
GUNZ	Gunzen	149.79	346	ePKPbc	PKPbc	21 55 12.0	+0.4
	baz=18,slow=2.4						
DEV	Deva	149.84	329	⇓P	PKiKP	21 55 12.3	-0.2
WERN	Wernitzgruen	149.85	346	ePKPbc	PKiKP	21 55 12.9	+0.5
	baz=18,slow=2.4						
WERN				ePKPab	PKPab	21 55 20.4	+0.7
KRUC	Moravsky	149.87	340	ePKP	PKiKP	21 55 12.2	-0.2
KRUC				e		21 55 20.6	
COPA	Copaceanca	149.88	324	⇓P	PKPbc	21 55 11.2	-0.8
NKC	Novy Kostel	149.88	346	ePKPDF	PKPdf	21 55 08.3	+2.0
NKC				⇑ePKP	PKiKP	21 55 12.5	+0.1
BSZH	Besenyszg	149.93	334	⇓P	PKiKP	21 55 12.5	0.0
TREC	Trest	149.94	341	⇑ePKP	PKiKP	21 55 12.4	-0.2
WOL	Wolverton	150.05	3	eP	PKPbc	21 55 12.1	0.0
SIRR	Siria	150.13	331	⇓P	PKiKP	21 55 13.0	-0.1
MODS	Modra-Piesok	150.17	338	ePKP	PKiKP	21 55 13.4	+0.3
MODS				e		21 55 22.5	
MANZ	Manzenberg	150.19	346	ePKPbc	PKPbc	21 55 12.7	+0.1
	baz=18,slow=2.4						
SRO	Srobarova	150.28	337	ePKP	PKiKP	21 55 13.2	-0.1
SRO				e		21 55 22.8	
SURR	Surduc	150.31	330	⇓P	PKPbc	21 55 12.8	-0.1
ROTZ	Rotzenmuhle	150.38	346	ePKPbc	PKiKP	21 55 13.4	-0.1
	baz=18,slow=2.4						
ROTZ				ePKPab	PKPab	21 55 22.2	+0.3
VLAD	Vladila	150.41	325	⇓P	PKiKP	21 55 13.5	-0.1
SBD	Saint Breward	150.48	8	eP	PKPbc	21 55 12.4	-0.8
AHRW	Bad Neuenahr-A	150.53	353	ePKPbc	PKPbc	21 55 13.4	+0.1
	baz=18,slow=2.4						
AHRW				ePKPab	PKPab	21 55 23.1	+0.5
SRE	Strehaia	150.57	327	⇓P	PKiKP	21 55 14.0	0.0
MEM	Membach	150.59	354	dPKiKP	PKiKP	21 55 13.8	0.0
KHC	Kasperske Hory	150.62	343	ePKPDF	PKPdf	21 55 08.0	+0.5
KHC				⇑ePKP	PKiKP	21 55 14.1	+0.1
KHC				ePKPAB	PKPab	21 55 24.0	+1.0
BZS	Buzias	150.65	330	⇓P	PKiKP	21 55 14.5	+0.4
BSTI	Sart Tilman	150.65	354	dPKiKP	PKiKP	21 55 13.9	0.0
TNS	Taunus Mts	150.66	351	ePKPbc	PKiKP	21 55 14.2	+0.1
	baz=18,slow=2.4						
GRF	Grafenberg Arr	150.66	347	ePKPbc	PKiKP	21 55 13.9	-0.1
	baz=18,slow=2.4						
GRF				ePKPab	PKPab	21 55 24.2	+1.1
PLVB	Pleven	150.70	324	⇓P	PKPbc	21 55 13.3	-0.6
CKRC	Cesky Krumlov	150.71	342	ePKPDF	PKPdf	21 55 08.4	+0.8
CKRC				⇑ePKP	PKiKP	21 55 14.3	+0.1
CKRC				ePKPAB	PKPab	21 55 19.4	-4.0
ELL	Elmali	150.83	308	PKPbc	PKPbc	21 55 13.1	-1.5
BCLA	Clavier	150.84	355	dPKPab	PKPab	21 55 23.3	-0.5
BHOU	Houvegnez	150.84	354	dPKiKP	PKiKP	21 55 14.8	+0.4
BHOU				dPKSab	PKPab	21 55 24.1	+0.2
GEC2	GERESS Array S	150.85	343	ePKPbc	PKiKP	21 55 14.5	-0.1
	baz=18,slow=2.4						
GERES	GERESS Array B	150.85	343	PKPbc	PKPbc	21 55 14.0	-0.2
	comp=Z,7.9nm,0.7s,baz=10,slow=1.9,SNR=31						
BGES	Gesves	150.89	355	dPKP	PKPbc	21 55 14.1	0.0
BMRD	Maredsous	151.00	355	dPKiKP	PKPbc	21 55 14.6	+0.2
CONA	Conrad Observa	151.03	340	i PKiKP	PKiKP	21 55 15.1	+0.1
	comp=Z,16nm,0.7s,SNR=12						
CONA				i PKP	PKPab	21 55 26.1	+1.2
	comp=Z,12nm,0.9s						
MANT	Manisa	151.03	312	PKPbc	PKPbc	21 55 12.6	-2.5
BANR	Banloc	151.04	330	⇓P	PKiKP	21 55 15.6	+0.6
RONA	Rosalia, Austr	151.09	339	i PKiKP	PKiKP	21 55 15.2	+0.1
	comp=Z,22nm,0.5s,SNR=14						
RONA				i PKP	PKPab	21 55 26.4	+1.4
	comp=Z,13nm,0.9s						
RCHB	Rochefort	151.11	355	dPKiKP	PKPbc	21 55 14.8	+0.2
MPEP	Malo Peshtene	151.20	325	i P	PKiKP	21 55 15.4	+0.1
DOU	Dourbes	151.22	356	dPKiKP	PKPbc	21 55 14.6	-0.3
MORH	Mrgy, Hungar	151.47	334	⇓P	PKPbc	21 55 15.6	+0.1
WLF	Walferdange	151.50	353	PKPbc	PKPbc	21 55 14.8	-0.7
WLF	Walferdange	151.50	353	dPKiKP	PKiKP	21 55 15.9	+0.1
WLF	Walferdange	151.50	353	ePKPbc	PKiKP	21 55 16.6	+0.8
	baz=18,slow=2.4						
RDO	Rodhopi	151.57	319		PKPbc	21 55 15.2	-0.7
MOA	Molln	151.59	342	i PKP	PKPbc	21 55 15.8	0.0
	comp=Z,6.0nm,0.6s						
FRGS	Fruska Gora	151.82	332	⇓P	PKiKP	21 55 16.6	0.0
BIOA	Bad Ischl, Aus	151.92	342	i PKP	PKPbc	21 55 16.1	-0.4
	comp=Z,5.8nm,0.7s						
BIOA				i PKP	PKPab	21 55 29.6	+1.1
	comp=Z,24nm,1.4s						
STU	Stuttgart	151.94	349	ePKPbc	PKiKP	21 55 16.7	0.0
	baz=18,slow=2.4						
STU				ePKPab	PKPab	21 55 28.7	+0.1
VTS	Vitosha	151.97	324	⇓P	PKPab	21 55 30.4	+1.2
VTS	Vitosha	151.97	324	PKPab	PKPab	21 55 29.8	+0.7
VTS	Vitosha	151.97	324	i P	PKPab	21 55 31.0	+1.9
BOVS	Bovan	152.06	327	⇓P	PKPbc	21 55 16.3	-0.6
FUR	Furstenfeldbru	152.09	346	ePKPbc	PKiKP	21 55 17.2	+0.1
	baz=18,slow=2.4						
FUR				ePKPab	PKPab	21 55 30.1	+0.8
RJOB	Jochberg	152.11	343	ePKPbc	PKPbc	21 55 17.0	0.0
	baz=18,slow=2.4						
RJOB				ePKPab	PKPab	21 55 30.5	+1.1
MMB	Musomiste	152.37	322	i P	PKPab	21 55 31.5	+0.8
SOKA	Soboth	152.40	339	i PKP	PKPbc	21 55 17.3	-0.4
	comp=Z,8.6nm,1.1s,SNR=5.6						
SOKA				i PKP	PKPab	21 55 31.1	+0.4
	comp=Z,8.4nm,1.2s						
BFO	Black Forest	152.52	350	PKPbc	PKPdf	21 55 13.2	+2.9
BFO				PKPab	PKPab	21 55 30.0	-1.1
BFO	Black Forest	152.52	350	ePKPbc	PKPbc	21 55 17.9	+0.1
	baz=18,slow=2.4						
BFO				ePKPab	PKPab	21 55 30.9	-0.1
DIVS	Divibare	152.55	330	PKPdf	PKPdf	21 55 08.7	-1.8
DIVS				PKPbc	PKPbc	21 55 18.2	+0.1
KKB	Krupnik	152.55	323	P	PKPab	21 55 33.3	+1.9
KBA	Koelnbreinsper	152.56	342	i PKP	PKPdf	21 55 09.4	-1.2
	comp=Z,4.0nm,1.6s						
KBA				i PKP	PKPbc	21 55 17.4	-0.7
	comp=Z,7.7nm,0.9s						
KBA				i PKP	PKPab	21 55 33.0	+1.6
	comp=Z,3.5nm,0.7s						
OBKA	Obir	152.70	340	i PKP	PKPbc	21 55 17.9	-0.5
	comp=Z,3.2nm,0.8s						
OBKA				i PKP	PKPab	21 55 32.3	+0.3
	comp=Z,4.3nm,0.9s						
WATA	Walderalm	152.80	345	i PKP	PKPdf	21 55 10.6	-0.3
	comp=Z,1.1nm,0.6s						
WATA				i PKP	PKPbc	21 55 18.3	-0.3
	comp=Z,3.5nm,0.5s						
WATA				i PKP	PKPab	21 55 32.9	+0.5
	comp=Z,7.5nm,0.9s						
RETA	Reutte	152.85	346	i PKP	PKPdf	21 55 10.6	-0.3
	comp=Z,3.3nm,1.3s						
RETA				i PKP	PKPbc	21 55 18.4	-0.2
	comp=Z,5.1nm,1.0s						
RETA				i PKP	PKPab	21 55 33.1	+0.6
	comp=Z,5.4nm,0.6s						
WTTA	Wattenberg	152.85	345	i PKP	PKPdf	21 55 10.8	-0.2
	comp=Z,3.5nm,1.0s						
WTTA				i PKiKP	PKPbc	21 55 18.8	0.0
	comp=Z,5.2nm,0.4s						
WTTA				i PKP	PKPab	21 55 33.5	+0.8
	comp=Z,9.3nm,0.7s						
MYKA	Terra Mystica	152.88	341	i PKP	PKPbc	21 55 18.0	-0.7
	comp=Z,5.6nm,0.8s						
MYKA				i PKP	PKPab	21 55 32.5	-0.2
	comp=Z,5.8nm,0.8s						
MOTA	Moosalm	152.90	345	i PKP	PKPdf	21 55 10.7	-0.3
	comp=Z,3.1nm,0.9s						
MOTA				i PKP	PKPbc	21 55 18.6	-0.2
	comp=Z,9.7nm,1.0s						
MOTA				i PKP	PKPab	21 55 33.4	+0.6
	comp=Z,10nm,0.9s						
SQTA	Sankt Quirin	152.99	345	i PKP	PKPdf	21 55 11.2	0.0
	comp=Z,1.7nm,0.6s						
SQTA				i PKiKP	PKPbc	21 55 19.0	0.0
	comp=Z,8.2nm,1.0s						
SQTA				i PKP	PKPab	21 55 33.7	+0.5
	comp=Z,5.0nm,0.8s						
VNDS	Vrh nad Dolski	153.01	339	i PKPbc	PKPbc	21 55 18.8	-0.2
PRED	Cave del Predi	153.07	341	PKPbc	PKPbc	21 55 17.2	-1.9
PRED				PKPab	PKPab	21 55 33.1	-0.4
ABTA	Abfaltersbach	153.10	343	i PKP	PKPdf	21 55 10.7	-0.6
	comp=Z,4.9nm,1.0s						
ABTA				i PKP	PKPbc	21 55 18.8	-0.4
	comp=Z,9.5nm,0.7s,SNR=5.1						
ABTA				i PKP	PKPab	21 55 33.6	0.0
	comp=Z,5.9nm,0.7s						
CRNS	Crni Vrh	153.18	340	i PKPbc	PKPbc	21 55 18.9	-0.5
DAVA	Damuels	153.23	347	i PKiKP	PKiKP	21 55 19.7	+0.1
	comp=Z,14nm,1.2s						
DAVA				i PKP	PKPab	21 55 34.8	+0.5
	comp=Z,10nm,0.8s						
FETA	Feichten	153.29	346	i PKP	PKPdf	21 55 11.8	+0.1
	comp=Z,4.9nm,0.8s						
FETA				i PKiKP	PKiKP	21 55 19.9	+0.1
	comp=Z,6.8nm,0.9s						
FETA				i PKP	PKPab	21 55 35.2	+0.6
	comp=Z,7.1nm,1.4s						
BOJS	Bojanci	153.35	338	i PKPbc	PKiKP	21 55 19.9	+0.2
SABO	M.te Sabotino	153.47	341	PKPbc	PKPbc	21 55 17.9	-2.1
STAL	STALIGIAL	153.49	342	PKPbc	PKPbc	21 55 18.0	-2.0
CIMO	Cimolais	153.52	343	PKPdf	PKPdf	21 55 09.7	-2.1
CIMO				PKPbc	PKPbc	21 55 18.7	-1.3
FUORN	Ofenpass-Fuorn	153.78	346	PKPbc	PKPbc	21 55 19.9	-1.0
CTI	Castel Tesino	153.97	343	PKPbc	PKPbc	21 55 20.2	-0.9
CTI					PKPab	21 55 36.6	-0.8
FNA	Florina	154.23	323	PKPbc	PKiKP	21 55 20.5	-1.2
FNA				PKPab	PKPab	21 55 37.8	-0.9
SENIN	Lac Senin/Sane	154.59	350	PKPab	PKPab	21 55 39.2	-1.0
BNI	Bardonecchia	155.97	351	PKPdf	PKPdf	21 55 15.8	+0.5
BNI				PKPab	PKPab	21 55 45.7	-0.4
CAMP	Campotosto	156.58	337	PKPab	PKPab	21 55 47.1	-1.7
AQU	L'Aquila	156.75	337	PKPdf	PKPdf	21 55 13.0	-3.3
AQU				PKPab	PKPab	21 55 48.8	-0.6
INTR	Introdacqua	156.85	336	PKPab	PKPab	21 55 49.2	-0.7
TIP	Timpagrande	157.86	327		PKPdf	21 55 16.8	-1.0
TIP				PKPab	PKPab	21 55 53.5	-0.9
ESDC	Sonseca Array	161.20	13	PKPab	PKPab	21 56 08.7	-0.2
	comp=Z,3.0nm,1.0s,baz=337,slow=3.2,SNR=12						
ESDC	Sonseca Array	161.20	13	PKPab	PKPab	21 56 08.5	-0.4
KEST	Kesra	164.06	336	PKPab	PKPab	21 56 21.7	0.0
	comp=Z,8.1nm,0.8s,baz=301,slow=2.0,SNR=12						
KEST	Kesra	164.06	336	PKPab	PKPab	21 56 21.5	-0.2
TORD	Torodi Ar. Bea	171.82	183	PKP	PKPdf	21 55 29.0	-1.1
	comp=Z,2.0nm,0.9s,baz=338,slow=0.7,SNR=9.6						

JMA ***20*** *21:52:04.5±0.1, 36°.4N±0°.3×141°.0E±0°.8, h44^{km}±1^{km}, MV3.4/40, E OFF IBARAKI PREF*

IDC ***20*** *21:52:05.2±3.0, 36°.44N×141°.11E, h45^{km}±27^{km}, mb3.2/5, mbtmp3.4/7, ML3.2/2, Error ellipse: s-maj=28.7km s-min=16.0km az=138.0*

ISC 20 21:52:04.1±1.3**, 36°.42N**±0°.04×**141°.11E**±0°.06**, h34**^{km}±3^{km}**, n25,** σ**0^{s}.69**/31**, mb3.4**/5**, 9D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	0.43	260	⇓iP	Pn	21 52 14.0	+0.1
JHYU				⇓eS	Sb	21 52 20.4	+0.1
JHO	Hitachi	0.48	294	⇓P	Pb	21 52 14.4	0.0
JIHU	Itakohorinouch	0.65	227	P	Pb	21 52 17.4	+0.2
JIHU				eS	Sb	21 52 26.5	+0.3
ONAJ	Iwakimizuishiy	0.73	340	P	Pn	21 52 17.9	-0.1
ONAJ				S	Sn	21 52 27.4	-0.6
JYT	Yasato	0.77	256	⇓P	Pn	21 52 18.1	-0.3
JYT				⇓S	Sn	21 52 27.3	-1.4
JSMT	Sammumatsuo	0.94	215	P	Pn	21 52 21.2	+0.3
JSMT				S	Sn	21 52 33.1	0.0
JFK	Kawauchi	0.96	349	⇓iP	Pn	21 52 21.2	0.0
JFK				⇓S	Sn	21 52 32.9	-0.9
JOTO	OTAMA OYAMA	1.30	332	i P	Pb	21 52 27.2	-0.8
JOTO				S	Sn	21 52 43.2	+1.2
JAG	Ashikaga	1.34	271	⇓iP	Pn	21 52 26.4	0.0
JAG				⇓S	Sn	21 52 41.9	-1.0
JMM	Marumori	1.47	350	P	Pn	21 52 29.0	+0.8
JMM				S	Sn	21 52 46.5	+0.3
JFY	Yanaizu	1.50	312	P	Pn	21 52 29.6	+1.0
JKT	Katashina	1.54	284	i P	Pn	21 52 29.9	+0.7
JKT				S	Sn	21 52 48.8	+0.7
MJAR	Matsushiro Arr	2.34	274	P	Pn	21 52 40.9	+0.7
	1.1nm,0.3s,baz=105,slow=9.0,SNR=53						
MJAR				S	Sn	21 53 08.8	+1.1
	8.9nm,0.5s,baz=80,slow=15,SNR=6.8						
	12nm,0.7s						
ASAJ	Asahikawa	7.77	8	P	Pn	21 53 54.6	-0.1
	0.7nm,0.3s,baz=223,slow=11,SNR=5.9						
ASAJ				S	Sn	21 55 21.9	+0.5
	3.8nm,0.7s,baz=293,slow=4.3,SNR=1.4						
	1.8nm,0.3s						
SONM	Songino Array	27.93	305	P	P	21 57 50.7	-0.5
	0.4nm,0.7s,baz=105,slow=10.0,SNR=3.3						
	0.4nm,0.7s						
H11N2	WAKE ISLAND Hy	28.05	119	T	T	22 27 22.6	
	baz=312,slow=75,SNR=13						
H11N1	WAKE ISLAND Hy	28.06	119	T	T	22 27 21.7	
	baz=312,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	28.07	119	T	T	22 27 23.5	
	baz=312,slow=75,SNR=9.3						
H11S1	WAKE ISLAND Hy	28.74	122	T	T	22 28 14.1	
	baz=314,slow=76,SNR=30						
H11S3	WAKE ISLAND Hy	28.74	122	T	T	22 28 12.3	
	baz=314,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	28.75	122	T	T	22 28 10.5	
	baz=314,slow=76,SNR=15						
ZALV	Zalesovo Beam	42.15	313	P	P	21 59 52.5	-0.6
	0.8nm,0.6s,baz=96,slow=6.4,SNR=4.4						
	0.8nm,0.6s						
MKAR	Makanchi Array	44.24	303	P	P	22 00 09.8	-0.3
	0.3nm,0.8s,baz=82,slow=10,SNR=2.3						
	0.3nm,0.8s						
ILAR	Eielson Array	50.14	32	P	P	22 00 56.7	+1.0
	0.3nm,0.8s,baz=264,slow=8.0,SNR=2.3						
	0.3nm,0.8s						
WRA	Warramunga Arr	56.42	188	P	P	22 01 42.0	-0.3
	0.4nm,0.8s,baz=5.1,slow=7.4,SNR=5.5						
	0.4nm,0.8s						

SOME ***20*** *22:02:26.7, 49°.25N×85°.05E, h0^{km}*

NNC ***20*** *22:02:26.8±1.9, 49°.39N×85°.06E, h0^{km}, mb2.9, mpv2.5, Error ellipse: s-maj=16.2km s-min=8.1km az=82.0*

ISC 20 22:02:25.3±3.1**, 49°.6N**±0°.1×**85°.0E**±0°.2**, h10**^{km}**, n5,** σ**0^{s}.56**/10**, 6C-5D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	Zaisan	2.18	183	eP	Pn	22 03 01.7	0.0
	0.8nm,0.1s						
ZSN				eS	Sn	22 03 28.9	+0.2
	18nm,0.5s						
MK31	Makanchi Array	3.38	214	Pn	Pn	22 03 18.0	-0.1
	baz=62,slow=35,SNR=17						
MK31				⇑Pg	Pb	22 03 24.3	-0.9
	0.2nm,0.3s,baz=54,slow=16,SNR=8.8						
MK31				⇓Sn	Sn	22 03 59.1	+0.8
	0.6nm,0.5s,baz=34,slow=17,SNR=7.8						
MK31				⇑Lg	Lg	22 04 08.8	
	2.6nm,0.6s,baz=33,slow=29,SNR=4.7						
MAKZ	Makanchi	3.48	217	⇑Pn	Pn	22 03 19.5	-0.1
	0.3nm,0.3s						
MAKZ				⇓Pg	Pb	22 03 27.6	+0.5
	0.4nm,0.3s						
MAKZ				⇑Sn	Sn	22 04 00.3	-0.6
	1.6nm,0.6s						
MAKZ				⇑Lg	Lg	22 04 10.3	
	2.1nm,0.7s						
KURK	Kurchatov	4.27	287	⇓Pg	Pg	22 03 47.0	+0.1
	2.3nm,0.7s						
KURK				⇓Lg	Lg	22 04 43.8	
	5.8nm,0.6s						
KURBB	Kurchatov Arra	4.30	286	⇑Pg	Pg	22 03 47.7	0.0
	1.3nm,0.6s						
KURBB				⇓Lg	Lg	22 04 44.6	
	12nm,0.7s						

IDC ***20*** *22:05:06.0±3.9, 1°.56S×100°.33E, h0^{km}, mb3.4/5, mbtmp3.4/5, Error ellipse: s-maj=173.5km s-min=23.2km az=56.0*

DJA ***20*** *22:05:07.8±1.1, 2°S±4°×10°0E±°, h19^{km}±15^{km}, M3.9/9, mB5.6/1, MLv3.9/9, Mw(mB)5.1/1*

ISC 20 22:05:08.4±1.0**, 2°.04S**±0°.06×**99°.58E**±0°.07**, h35**^{km}**, n21,** σ**1^{s}.23**/16**, mb3.4**/5**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	0.83	149	P	Pn	22 05 23.4	-0.3
SISI	Saibi	0.86	325	P	Pn	22 05 25.1	+1.0
PDSI	Padang	1.43	38	P	Pn	22 05 32.0	+0.1
PDSI				S	Sn	22 05 49.1	-0.3
SDSI	Sungai Dareh	2.15	59	P	Pn	22 05 43.1	+1.3
BKNI	Bangkinang	2.77	32	P	Pn	22 05 51.4	+1.1
MASI	Maura Aman, Be	2.87	112	P	Pn	22 05 54.7	+2.9
GSI	Gunungsitoli	3.88	329	P	Pn	22 06 06.2	+0.6
MNAI	Manna	4.08	124	P	Pn	22 06 08.7	+0.3
TPRI	Tanjung Pinang	5.75	59	P	Pn	22 06 30.2	-1.2
H08S2	Diego Garcia H	27.55	257	T	T	22 39 27.8	
	baz=80,slow=75,SNR=71						
H08S3	Diego Garcia H	27.55	257	T	T	22 39 28.3	
	baz=80,slow=75,SNR=63						
H08S1	Diego Carcia H	27.57	257	T	T	22 39 29.3	
	baz=80,slow=75,SNR=20						
H01W3	Cape Leeuwin H	35.38	159	T	T	22 49 14.1	
	baz=339						
H01W2	Cape Leeuwin H	35.39	159	T	T	22 49 10.3	
	baz=339						
H01W1	Cape Leeuwin H	35.39	159	T	T	22 49 15.1	
	baz=339						
WRA	Warramunga Arr	38.33	120	P	P	22 12 25.6	-0.6
	0.4nm,0.8s,baz=303,slow=9.1,SNR=9.2						
	0.4nm,0.8s						
ASAR	Alice Springs	39.57	126	P	P	22 12 36.5	-0.1
	0.2nm,0.3s,baz=305,slow=8.0,SNR=2.0						
	0.2nm,0.3s						
SONM	Songino Array	50.03	6	P	P	22 13 57.9	-1.7
	0.3nm,0.8s,baz=192,slow=10,SNR=2.4						

	0.3nm,0.8s						
MKAR	Makanchi Array	50.96	345	P	P	22 14 07.5	+1.0
	0.2nm,0.4s,baz=147,slow=8.6,SNR=6.6						
	0.2nm,0.4s						
ZALV	Zalesovo Beam	57.13	350	P	P	22 14 52.3	+0.9
	0.5nm,0.4s,baz=160,slow=4.6,SNR=2.6						
	0.5nm,0.4s						
TXAR	Lajitas Array	144.99	37	PKP	PKPdf	22 24 43.1	+0.2
	0.2nm,0.5s,baz=261,slow=1.0,SNR=4.4						

IDC 20 22:22:22.2±2.8, **20°.02S**×**177°.50W**, **h0**^{km}, **mb3.9**/3, **mbtmp3.9**/3, **MS4.2**/2, **Error ellipse: s-maj=280.3km s-min=33.3km az=160.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	45.09	256	P	P	22 30 40.5	0.0
	2.4nm,0.6s,baz=97,slow=7.5,SNR=25						
	2.4nm,0.6s						
WRA	Warramunga Arr	45.13	261	P	P	22 30 40.6	-0.3
	1.1nm,0.5s,baz=97,slow=7.8,SNR=34						
WRA				LR	LR	22 46 47.2	
	comp=Z,70nm,18.8s,baz=304,slow=32						
	1.1nm,0.5s						
GUMO	Guam	49.86	309	LR	LR	22 52 36.2	
	comp=Z,11nm,18.1s,baz=96,slow=36						
USHA	Ushuaia	84.27	147	LR	LR	23 08 42.0	
	comp=Z,495nm,18.5s,baz=255,slow=33						
TXAR	Lajitas Array	86.40	57	P	P	22 35 07.0	0.0
	0.3nm,0.7s,baz=202,slow=6.8,SNR=4.5						
	0.3nm,0.7s						

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*IDC **20** 22:41:08.5±0.6, 14°.83N×93°.97W, h0^{km}, mb4.5/30, mbtmp4.5/34, ML4.4/4, MS3.9/46, Error ellipse: s-maj=22.2km s-min=10.3km az=45.0*

*GCMT **20** 22:41:11.9±0.6, 14°.90N±0°.03×94°.48W±0°.05, h21^{km}±1^{km}, MW4.8/70, Moment Tensor Solution. s24,c25; s70,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.01±.14; M$_{\theta\theta}$-1.14±.09; M$_{\phi\phi}$-0.87±.09; M$_{r\theta}$0.65±.14; M$_{\theta\phi}$0.48±.06; M$_{\phi r}$-0.73±.20; Best double couple: M$_0$2.00700×10^{16} NP1:ϕ_s132.00000°, δ59.00000°, λ94.00000°. NP2: ϕ_s305.00000°, δ31.00000°, λ84.00000°. Principal axes: T 2.2660, Plg75.0000°, Azm52.0000°; N -0.5230, Plg3.0000°, Azm310.0000°; P -1.7480, Plg14.0000°, Azm219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MEX **20** 22:41:11.0±0.7, 14°.59N×94°.32W, h15^{km}±13^{km}, MD4.7*

*NEIC **20** 22:41:11.9±2.4, 14°.87N±0°.06×94°.22W±0°.04, h20^{km}±5^{km}, mb4.8/345, Md4.6/86(MEX), Error ellipse: s-maj=9.1km s-min=5.8km az=193.0*

*GCG **20** 22:41:15.5±1.9, 15°.09N×93°.97W, h41^{km}, MD4.9*

ISC 20 22:41:11.7±0.9, **14°.77N**±0°.04×**94°.29W**±0°.03, **h23**^{km}±6^{km}, **n802**, σ**1^{s}74**/763, **mb4.8**/199, **MS4.0**/45, **1C-9D**, **Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.39	48		Pn	22 41 34.2	-1.5
PCIG					Sn	22 41 52.3	-0.9
PCIG		1.39	48	*i* P	Pn	22 41 34.2	-1.5
PCIG				*e*S	Sn	22 41 52.3	-0.9
NILT	Santiago Nilte	1.81	350	*e*P	Pn	22 41 40.3	-1.3
NILT				*i* S	Sn	22 42 04.4	+0.6
THIG		1.96	86		Pn	22 41 41.4	-2.1
THIG					Sn	22 42 03.5	-3.9
THIG		1.96	86	*e*P	Pn	22 41 41.4	-2.1
THIG				*e*S	Sn	22 42 03.5	-3.9
PATR	El Naranjo	2.01	80	*e*P	Pn	22 41 42.0	-2.5
PATR				*i* S	Sn	22 42 07.6	-1.5
HUIG	Huatulco	2.02	300		Pn	22 41 43.3	-1.1
HUIG	Huatulco	2.02	300	*e*P	Pn	22 41 43.3	-1.1
HUIG				*e*S	Sn	22 42 04.7	-4.3
PAVE	Pavencul	2.08	78	*e*P	Pn	22 41 43.6	-1.9
PAVE				*i* S	Sn	22 42 08.5	-2.3
CHUJ	Union Juarez	2.13	81	*e*P	Pn	22 41 43.8	-2.3
CHUJ				*i* S	Sn	22 42 07.4	-4.5
TGIG		2.29	29		Pn	22 41 48.5	+0.3
TGIG		2.29	29	*e*P	Pn	22 41 48.5	+0.3
TGIG				*e*S	Sb	22 42 18.8	-1.4
PANG	Puerto Angel	2.29	293	*i* S	Sn	22 42 09.4	-6.2
TGBT	Tuxtla Gutierr	2.30	30		Pn	22 41 48.5	+0.2
TGBT	Tuxtla Gutierr	2.30	30	*e*P	Pn	22 41 48.5	+0.2
TGBT				*i* S	Sn	22 42 17.5	+1.6
CMIG	Matias Romero	2.38	346	Pn	Pn	22 41 48.7	-0.6
	100nm,0.3s,baz=170,slow=11,SNR=634						
CMIG				Sn	Sn	22 42 18.2	+0.3
	505nm,0.3s,baz=37,slow=12,SNR=17						
	534nm,0.6s						
CMIG	Matias Romero	2.38	346		Pn	22 41 49.0	-0.3
CMIG					Sn	22 42 18.1	+0.3
CMIG	Matias Romero	2.38	346	*i* P	Pn	22 41 49.0	-0.3
CMIG				*e*S	Sn	22 42 18.1	+0.3
RTAL	Retalhuleu	2.52	95	Pn	Pn	22 41 49.9	-1.3
CCIG	Comitan	2.56	54	Pn	Pn	22 41 51.8	-0.2
CCIG	Comitan	2.56	54	*e*P	Pn	22 41 53.7	+1.8
CCIG				*i* S	Sn	22 42 23.9	+1.4
STG3	Santiaguito 3,	2.63	91	*e*P	Pn	22 41 51.4	-1.5
SULM	Suchitepequez,	2.67	100	*e*P	Pn	22 41 54.7	+1.3
HUEH	Huehuetenango	2.74	78	Pn	Pn	22 41 54.2	-0.3
PEIG	Puerto Escondi	3.02	294		Pn	22 41 58.3	+0.1
PEIG	Puerto Escondi	3.02	294	*e*P	Pn	22 41 58.3	+0.1
PEIG				*e*S	Sn	22 42 28.8	-4.9
MIHL	Minatitlan	3.21	356	*e*	Pn	22 41 53.9	-6.8
TUIG	Tuzandepetl	3.25	358	*e*P	Pn	22 42 01.9	+0.6
TUIG				*e*S	Sn	22 42 40.6	+1.4
NEUV	Arroyo Zacate	3.27	334	*e*P	Pn	22 42 01.3	-0.3
NEUV				*i* S	Sb	22 42 48.0	-0.4
OXBJ	Oaxaca	3.27	315		Sn	22 42 40.0	-0.2
OXBJ	Oaxaca	3.27	315	*i* S	Sn	22 42 40.0	-0.2
OXIG	Oaxaca	3.28	314		Pn	22 42 03.5	+1.5
OXIG					Sn	22 42 40.0	-0.4
VHO	Vista Hermosa	3.28	314	*i* P	Pn	22 42 03.5	+1.5
VHO				*e*S	Sn	22 42 40.0	-0.4
FUG	Fuego 3	3.35	95	*e*P	Pn	22 42 02.3	-0.5
PCG	Pacaya	3.58	96	*e*P	Pn	22 42 05.4	-0.7
YOIG	Yosondua	3.76	304		Pn	22 42 11.1	+2.5
YOIG	Yosondua	3.76	304	*e*P	Pn	22 42 11.1	+2.5
YOIG				*e*S	Sn	22 42 48.5	-3.9
NBG	Las Nubes	3.81	92	*e*P	Pn	22 42 10.6	+1.3
PMUV	Sontecomapan	3.84	348	*e*P	Pn	22 42 08.9	-0.6
PMUV				*e*S	Sn	22 42 46.4	-7.5
PNIG	Pinotepa	4.04	294		Pn	22 42 12.2	0.0
PNIG	Pinotepa	4.04	294	*e*P	Pn	22 42 12.2	0.0
PNIG				*e*S	Sn	22 42 53.3	-5.5
TXIG	Tlaxiaco	4.16	307		Pn	22 42 16.1	+2.0
TXIG					Sn	22 43 00.3	-1.9
TXIG	Tlaxiaco	4.16	307	*e*P	Pn	22 42 16.1	+2.0
TXIG				*i* S	Sn	22 43 00.3	-1.9
TOIG	Toxpalan	4.25	321		Pn	22 42 17.9	+2.7
TOIG	Toxpalan	4.25	321	*e*P	Pn	22 42 17.9	+2.7
TOIG				*e*S	Sn	22 42 59.7	-4.4
HLIG	Huajuapan de L	4.55	312		Pn	22 42 21.6	+2.3
HLIG					Sn	22 43 13.4	+1.8
HLIG	Huajuapan de L	4.55	312	*e*P	Pn	22 42 21.6	+2.3
HLIG				*i* S	Sn	22 43 13.4	+1.8
TPIG	Tehuac#an	4.68	321	*e*P	Pn	22 42 24.4	+3.3
TPIG				*i* S	Sn	22 43 18.6	+3.8
PETF	Flores	4.76	63	Pn	Pn	22 42 21.7	-0.3
ESQI	Esquipulas	4.79	92	Pn	Pn	22 42 23.6	+1.0
FTIG	Fresnillo de T	4.83	311		Pn	22 42 26.1	+2.9
FTIG					Sn	22 43 16.9	-1.7
FTIG	Fresnillo de T	4.83	311	*e*P	Pn	22 42 26.1	+2.9
FTIG				*i* S	Sn	22 43 16.9	-1.7
MGIG	Malinaltepec	4.85	301		Pn	22 42 25.2	+1.7
MGIG	Malinaltepec	4.85	301	*i* P	Pn	22 42 25.2	+1.7
MGIG				*i* S	Sn	22 43 14.5	-4.5
TLIG	Tlapa	4.96	305	Pn	Pn	22 42 26.4	+1.4
TLIG	Tlapa	4.96	305	*e*P	Pn	22 42 27.5	+2.5
TLIG				*e*S	Sn	22 43 17.3	-4.5
SNET	Serv Nac Est T	5.02	102	Pn	Pn	22 42 25.6	-0.1
SCIG	Sabancuy	5.12	35	*e*P	Pn	22 42 26.7	-0.3
SCIG				*i* S	Sn	22 43 25.9	+0.4
JAUV	Jalcomulco	5.17	333	*e*P	Pn	22 42 27.9	+0.2
JAUV				*i* S	Sn	22 43 26.0	-0.6
LVIG	Laguna Verde	5.33	338	*e*P	Pn	22 42 31.5	+1.6
LVIG				*e*S	Sn	22 43 27.8	-2.8
DAIG	Los Arroyos	5.63	294		Pn	22 42 35.4	+1.3
DAIG	Los Arroyos	5.63	294	*e*P	Pn	22 42 35.4	+1.3
DAIG				*i* S	Sn	22 43 31.3	-6.7
MEIG	Mezcala	6.00	302		Pn	22 42 41.7	+2.4
MEIG	Mezcala	6.00	302	*i* P	Pn	22 42 41.7	+2.4
MEIG				*i* S	Sn	22 43 43.0	-4.5
YAIG	Yautepec	6.12	312		Pn	22 42 44.0	+3.0
YAIG					Sn	22 43 47.7	-2.8
YAIG	Yautepec	6.12	312	*e*P	Pn	22 42 44.0	+3.0
YAIG				*e*S	Sn	22 43 47.7	-2.8
PLIG	Platanillo	6.16	306	*e*P	Pn	22 42 44.7	+3.2
PLIG				*e*S	Sn	22 43 46.2	-5.2
CAIG	El Cayaco	6.18	292		Pn	22 42 42.6	+1.0
CAIG	El Cayaco	6.18	292	*e*S	Pn	22 42 42.6	+1.0
CAIG				*e*S	Sn	22 43 40.8	-11
CXUV	Coxquihui	6.23	330	*e*P	Pn	22 42 43.6	+1.3
CXUV				*i* S	Sn	22 43 56.1	+3.2
AOVM	Tlapan	6.57	314	*i* P	Pn	22 42 51.9	+4.4
AOVM				*i* S	Sn	22 44 03.5	+1.6
ARIG	Puente Sto Nin	6.78	302		Pn	22 42 53.1	+3.2
ARIG	Puente Sto Nin	6.78	302	*i* P	Pn	22 42 53.1	+3.2
ARIG				*e*S	Sn	22 43 58.8	-7.7
TGUH	Tegucigalpa,Un	6.83	95	Pn	Pn	22 42 50.7	0.0
TOVM	TOLUCA	6.84	312	*e*	Pn	22 42 54.9	+3.9
DEIG	Demacu	7.12	321	*e*	Pn	22 42 46.1	-8.7
CRIN	San Cristobal	7.33	105	Pn	Pn	22 42 57.8	+0.4
MYIG	Mrida	7.52	34	*i* P	Pn	22 43 01.8	+1.7
MYIG				*i* S	Sn	22 44 27.4	+2.7
CNGN	Cerro Negro	7.71	106	Pn	Pn	22 43 00.2	-2.6
TEIG	Tepich	7.89	46	Pn	Pn	22 43 02.7	-2.4
TEIG	Tepich	7.89	46	*e*P	Pn	22 43 02.6	-2.5
TEIG				*e*S	Sn	22 44 31.8	-1.9
MOIG	Morelia	8.20	307	Pn	Pn	22 43 09.4	-0.2
MOIG	Morelia	8.20	307	*e*	Pn	22 43 02.6	-7.0
MATN	Matagalpa	8.32	102	Pn	Pn	22 43 10.0	-1.2
BOAB	BOACO BROADBAN	8.69	104	Pn	Pn	22 43 17.2	+1.1
ACON	Acoyapa	9.29	106	Pn	Pn	22 43 25.3	+1.0
GTIG	Gomez Farias	9.46	331	*e*P	Pn	22 43 29.8	+3.1
GTIG				*e*S	Sn	22 45 06.3	-6.0
ORTG	Ortega, Santa	9.66	116	Pn	Pn	22 43 30.6	+1.1
DUNO	Dulce Nombre,	9.77	118	Pn	Pn	22 43 32.9	+1.9
ESPN	Las Esperanzas	10.04	104	Pn	Pn	22 43 34.9	+0.3
JTS	Las Juntas de	10.14	115	Pn	Pn	22 43 33.2	-2.8
	0.5nm,0.3s,baz=251,slow=20,SNR=1.4						
JTS				Sn	Sn	22 45 29.8	+0.7
	0.6nm,0.3s,baz=276,slow=16,SNR=0.9						
	2.3nm,0.4s						
JTS	Las Juntas de	10.14	115	Pn	Pn	22 43 37.8	+1.7
COVE	Coope Vega, Sa	10.45	112	Pn	Pn	22 43 40.9	+0.7
HDC	Heredia	11.01	114	Pn	Pn	22 43 47.4	-0.6
ZAIG	Zacatecas	11.17	317	Pn	Pn	22 43 52.2	+1.8
LNIG	Linares	11.19	335	*e*P	Pn	22 43 50.2	-0.1
LNIG				*e*S	Sn	22 46 00.3	+5.5
RIMA	Rio Macho	11.33	115	Pn	Pn	22 43 52.5	0.0
PEZE	Perez Zeledon,	11.67	116	Pn	Pn	22 43 57.3	+0.2
SRBA	San Rafael, Bu	12.02	116	Pn	Pn	22 44 01.6	-0.3
BRU2	Volcan	12.81	116	Pn	Pn	22 44 13.0	+0.3
SOR	Soroa	13.32	52	Pn	Pn	22 44 18.0	-1.6
833A	Chaparral WMA,	14.29	341	Pn	Pn	22 44 32.0	-0.8
833A	Chaparral WMA,	14.29	341	P	Pn	22 44 34.4	+1.6
	baz=159,SNR=9.9						
735A	Kenedy	14.39	347	Pn	Pn	22 44 31.8	-2.3
HKT	Hockley	15.17	355	Pn	Pn	22 44 42.6	-1.9
441A	DeRidder	15.94	3	Pn	Pn	22 44 52.6	-2.0
441A				IAmb	IAmb	22 44 59.8	
	comp=Z,157nm,1.4s						
HPIG		16.10	321	Pn	Pn	22 44 56.0	-0.9
435B	Jarrell	16.22	350	Pn	Pn	22 44 56.0	-2.2
435B				IAmb	IAmb	22 45 03.8	
	comp=Z,61nm,0.8s						
435B	Jarrell	16.22	350	P	Pn	22 44 59.3	+1.1
	baz=168						
JCT	Junction City	16.44	343	Pn	Pn	22 44 59.3	-1.7
JCT	Junction City	16.44	343	P	Pn	22 45 02.6	+1.6
	baz=161,SNR=13						
342A	Flagon Creek P	16.62	6		Pn	22 45 03.3	0.0
061Z	Ochoppi	16.69	47	Pn	Pn	22 45 01.3	-2.9
061Z				IAmb	IAmb	22 45 05.7	
	comp=Z,72nm,0.7s						
TXAR	Lajitas Array	16.89	331	Pn	P	22 45 08.8	+0.1
	comp=Z,0.3nm,0.3s,baz=153,slow=14,SNR=26						
TXAR				LR	LR	22 51 20.4	
	comp=Z,127nm,20.7s,baz=150,slow=36						
	comp=Z,7.4nm,0.8s						
TXAR	Lajitas Array	16.89	331	Pn	Pn	22 45 06.1	-0.7
TX31	Lajitas Ar. Si	16.89	331	Pn	Pn	22 45 06.2	-0.6
TX31				IAmb	IAmb	22 45 14.0	
	comp=Z,224nm,2.0s						
TX32	Lajitas Array	16.89	331		Pn	22 45 07.9	+1.1
NATX	Nacogdoches	16.91	359	Pn	Pn	22 45 05.0	-2.0
NATX	Nacogdoches	16.91	359	P	Pn	22 45 07.1	+0.2
	baz=178						
344A	Westbrook Farm	16.92	10	Pn	Pn	22 45 04.2	-2.9
346A	Big Creek Wild	17.12	14	Pn	Pn	22 45 05.3	-4.2
237A	Washetta, Mont	17.21	356	Pn	Pn	22 45 09.5	-1.2
WHTX	Lake Whitney,	17.39	351	Pn	Pn	22 45 10.1	-2.8
WHTX	Lake Whitney,	17.39	351	P	Pn	22 45 13.8	+0.9
	baz=170						
BRAL	Brewton	17.62	21	Pn	Pn	22 45 12.4	-3.3
BRAL	Brewton	17.62	21	P	Pn	22 45 15.3	-0.4
	baz=204						
VBMS	Vicksburg	17.70	11	Pn	Pn	22 45 12.7	-4.1
LPIG	La Paz	17.72	304	P	P	22 45 20.7	+2.9
	comp=Z,4.1nm,0.3s,baz=80,slow=6.1,SNR=1.5						
LPIG				LR	LR	22 51 00.5	
	comp=Z,183nm,18.9s,baz=126,slow=33						
	comp=Z,12nm,0.3s						
FW13	Cleburne	17.73	351	Pn	Pn	22 45 14.8	-2.5
FW13				IAmb	IAmb	22 45 20.4	
	comp=Z,43nm,0.8s						
FW14	Alvarado	17.75	352	Pn	Pn	22 45 13.8	-3.6
FW14				IAmb	IAmb	22 45 20.6	
	comp=Z,36nm,0.6s						
FW16	Waxahatchie	17.79	353		Pn	22 45 16.6	-1.3
FW16				IAmb	IAmb	22 45 21.0	
	comp=Z,32nm,0.6s						
DWPF	Disney Wildern	17.85	40	Pn	Pn	22 45 16.1	-2.5
DWPF				IAmb	IAmb	22 45 25.9	
	comp=Z,130nm,1.4s						
143A	Socs Landing,	18.04	8		Pn	22 45 18.9	-2.0
FW07	Weatherford	18.13	350		Pn	22 45 19.9	-2.3
FW07				IAmb	IAmb	22 45 25.5	
	comp=Z,50nm,0.6s						
FW06	Azle	18.36	351	P	P	22 45 22.6	-2.2
FW06				IAmb	IAmb	22 45 28.4	
	comp=Z,38nm,0.7s						
146A	Union	18.41	14	P	P	22 45 23.1	-2.2
Z38A	Mt. Pleasant	18.42	358	P	P	22 45 23.1	-2.3
ABTX	Abilene, Hawle	18.43	346	P	P	22 45 24.5	-1.1
ABTX				IAmb	IAmb	22 45 28.0	
	comp=Z,65nm,0.8s						
ABTX	Abilene, Hawle	18.43	346	P	Pn	22 45 26.7	+0.9
	baz=163,SNR=19						
Z41A	Richland Creek	18.45	4	P	P	22 45 23.9	-1.9
250A	Grady	18.63	22	P	P	22 45 24.8	-3.0
250A				IAmb	IAmb	22 45 33.7	
	comp=Z,72nm,1.4s						
Z35A	Perchaven, San	18.67	352	P	P	22 45 26.8	-1.4
352A	Blakely	18.71	26	P	P	22 45 25.7	-3.0
352A				IAmb	IAmb	22 45 33.7	
	comp=Z,126nm,1.5s						
ODSA	Odessa	18.85	338	P	P	22 45 29.3	-1.0
ODSA				IAmb	IAmb	22 45 34.9	
	comp=Z,101nm,1.0s						
WLAR	White Oak Lake	18.86	3	P	P	22 45 28.2	-2.1
GTBY	Guantanamo Bay	19.00	72	P	P	22 45 31.0	-1.0
GTBY				IAmb	IAmb	22 45 40.6	
	comp=Z,74nm,1.1s						
GTBY	Guantanamo Bay	19.00	72	*e*P	Pn	22 45 33.7	+0.9
Z47A	Carrollton	19.20	16	P	P	22 45 31.7	-2.2
Z47A				IAmb	IAmb	22 45 35.6	
	comp=Z,62nm,0.9s						
CCAR	Cane Creek	19.20	6	P	P	22 45 31.9	-2.0
CCAR				IAmb	IAmb	22 45 46.0	
	comp=Z,41nm,0.8s						
TIGA	Tifton	19.27	29	P	P	22 45 32.4	-2.4
TIGA				IAmb	IAmb	22 45 37.4	
	comp=Z,48nm,1.1s						
TIGA	Tifton	19.27	29	P	P	22 45 33.3	-1.4
	baz=213						
WTFS	Witchita Falls	19.29	349	P	P	22 45 33.0	-2.0
WTFS				IAmb	IAmb	22 45 39.3	
	comp=Z,35nm,0.8s						
LOOK	Love County	19.32	353	P	P	22 45 33.6	-1.7
LOOK				IAmb	IAmb	22 45 46.2	
	comp=Z,32nm,0.7s						
DBBC	Dabeiba	19.34	112	*e*P	P	22 45 35.7	-0.1
LRAL	Lakeview Retre	19.35	19	P	P	22 45 33.2	-2.5
LRAL	Lakeview Retre	19.35	19	P	P	22 45 34.9	-0.8
	baz=202						
POST	Post	19.36	341	P	P	22 45 35.2	-0.7
POST				IAmb	IAmb	22 45 39.7	
	comp=Z,76nm,1.2s						
CLNB	Carlsbad	19.49	335	P	P	22 45 38.1	+0.8
Y45A	Yeager Farm, C	19.49	12	P	P	22 45 34.2	-3.0
Y45A				IAmb	IAmb	22 45 44.0	
	comp=Z,40nm,0.8s						
HTMS	Hat Mesa	19.57	336	P	P	22 45 39.0	+0.7
GDL2	Guadalupe Moun	19.64	334	P	P	22 45 40.0	+1.1
UREC	San Jos de Ur	19.66	109	*e*P	Pn	22 45 40.8	+0.1
MNTX	Cornudas Mount	19.67	331	P	Pn	22 45 41.1	+0.4
	baz=146,SNR=14						
X40A	Basin Creek Fa	19.68	4	P	P	22 45 38.0	-1.2
MIAR	Mount Ida	19.70	2	P	P	22 45 38.1	-1.3
MIAR				IAmb	IAmb	22 45 45.9	
	comp=Z,62nm,1.0s						
MIAR	Mount Ida	19.70	2	P	P	22 45 39.3	-0.2
	baz=182,SNR=36						
X37A	Clayton	19.76	357	P	P	22 45 40.2	+0.1
152A	Waverly Hall	19.83	24	P	P	22 45 39.2	-1.7
UALR	University of	20.00	5	P	P	22 45 40.5	-2.2
UALR				IAmb	IAmb	22 45 48.6	
	comp=Z,36nm,0.8s						
X34A	Smith Ranch, M	20.00	351	P	P	22 45 40.9	-1.9
X34A				IAmb	IAmb	22 45 54.9	
	comp=Z,64nm,0.9s						
CBOC	Ciudad Bolivar	20.02	114	*e*P	P	22 45 43.9	+0.6
OXF	Oxford	20.14	12	P	P	22 45 42.0	-2.3
OXF				IAmb	IAmb	22 45 49.7	
	comp=Z,74nm,1.2s						
OXF	Oxford	20.14	12	P	P	22 45 44.1	-0.1
	baz=194						
CPRX	Cap Rock	20.16	336	P	P	22 45 44.9	+0.2
255A	Hazlehurst	20.20	30	P	P	22 45 42.4	-2.6
255A				IAmb	IAmb	22 45 52.5	
	comp=Z,42nm,1.0s						
Z51A	Franklin	20.23	23	P	P	22 45 43.0	-2.3
WMOK	Wichita Mounta	20.29	349	P	P	22 45 44.4	-1.6
Y49A	Blount Mountai	20.30	19	P	P	22 45 43.6	-2.4
ZARC	Zaragoza, Cauc	20.38	109⇑	*e*P	P	22 45 42.9	-4.1
W35A	Tecumseh	20.43	354	P	P	22 45 46.2	-1.2
154A	Montrose	20.47	28	P	P	22 45 45.9	-2.0
154A				IAmb	IAmb	22 45 52.4	
	comp=Z,40nm,0.7s						
WHAR	Wooly Hollow	20.51	5	P	P	22 45 47.1	-1.1
FNO	Franklin	20.59	353	P	P	22 45 48.7	-0.5
MSTX	Muleshoe	20.60	340	P	P	22 45 48.9	-0.5
MSTX				IAmb	IAmb	22 45 55.9	
	comp=Z,62nm,0.8s						
MSTX	Muleshoe	20.60	340	P	P	22 45 50.6	+1.2
	baz=156,SNR=24						
X48A	Hartselle	20.66	17	P	P	22 45 47.0	-2.9
YOTC	Yotoco, Valle	20.67	119	*e*P	Pn	22 45 52.1	-0.6
OKCSW	OKLAHOMA CITY	20.74	353	P	P	22 45 48.7	-2.1
W45A	Hickory Valley	20.81	12	P	P	22 45 49.1	-2.4
JAMC	Jamundi, Valle	20.82	122	*e*P	P	22 45 52.1	0.0
SRIG	Santa Rosalia	20.86	310	P	P	22 45 51.2	-1.0
SRIG				IAmb	IAmb	22 45 59.1	
	comp=Z,25nm,0.8s						
PLAL	Pickwick Lake	20.89	14	P	P	22 45 50.9	-1.5
GUY2C	Guyana, Caldas	20.89	115	*e*P	P	22 45 53.1	0.0
HSIG		20.94	315	P	P	22 45 52.9	-0.2
ARMEC	Armenia, Quind	20.96	117	*e*P	Pn	22 45 57.2	+1.1
BBAC	Balboa, Cauca	21.06	125	*e*P	P	22 45 57.2	+2.6
DEOK	Depew	21.08	355	P	P	22 45 53.2	-1.2
DEOK				IAmb	IAmb	22 45 58.3	
	comp=Z,39nm,0.8s						
TUL1	Leonard	21.09	357	IAmb	IAmb	22 45 58.9	
	comp=Z,44nm,0.8s						
TUL1	Leonard	21.09	357	P	P	22 45 55.9	+1.3
	baz=176,SNR=8.3						
AMTX	Amarillo	21.11	343	P	P	22 45 56.5	+1.7
	baz=160						
PTBC	PUERTO BERRIO,	21.12	111	*e*P	P	22 45 54.1	-0.9
FCAR	Ozark Folk Cen	21.12	5	IAmb	IAmb	22 45 59.2	
	comp=Z,43nm,0.8s						
OK029	Liberty Lake	21.13	353	P	P	22 45 54.5	-0.5
Y52A	Lilburn	21.14	24	P	P	22 45 52.5	-2.7
Y52A				IAmb	IAmb	22 46 11.2	
	comp=Z,30nm,0.9s						
CSTR	Hydro, Custer	21.16	350	P	P	22 45 54.3	-1.1
NORC	Norcasia	21.17	114	*e*P	P	22 45 57.2	+1.5
FPAL	Fort Paine	21.18	20	P	P	22 45 54.1	-1.5
OK030	Cody Creek RV	21.19	354	P	P	22 45 53.7	-1.9
OK030				IAmb	IAmb	22 45 59.5	
	comp=Z,54nm,0.9s						
POPC	Popayan, Colom	21.20	123	*e*P	P	22 45 57.2	+1.0
ANIL	Santa Ana	21.21	117	*e*P	P	22 45 59.2	+2.9
OK052	Battle Ridge R	21.25	354	IAmb	IAmb	22 46 01.3	
	comp=Z,71nm,1.2s						
OTAV	Otavalo	21.30	131	*e*P	P	22 45 58.8	+1.4
RLO	Rose Lookout	21.32	358	P	P	22 45 55.4	-1.6
RLO				IAmb	IAmb	22 46 00.7	
	comp=Z,24nm,0.5s						
OK033	Mehan	21.32	354	IAmb	IAmb	22 46 00.3	
	comp=Z,55nm,1.1s						
PULU	Pululahua	21.41	132	P	P	22 45 59.3	+0.7
QUOK	Quay	21.42	355	P	P	22 45 56.3	-1.8
QUOK				IAmb	IAmb	22 46 01.0	
	comp=Z,41nm,0.8s						
HHAR	Hobbs	21.42	1	P	P	22 45 57.0	-1.1
GNAR	Gosnell	21.45	10	P	P	22 45 56.6	-1.8
IMBA	Imbabura, San	21.46	131	P	P	22 46 00.7	+1.6
X51A	Calhoun	21.47	22	P	P	22 45 57.2	-1.4
X51A				IAmb	IAmb	22 46 14.5	
	comp=Z,53nm,1.1s						
TULM	Tulcn-Chalpat	21.47	129	P	P	22 46 01.7	+2.4
319A	Douglas	21.49	323	P	P	22 45 58.6	-0.4
319A				IAmb	IAmb	22 46 03.4	
	comp=Z,32nm,0.9s						
121A	Cookes Peak, D	21.54	328	P	P	22 46 03.0	+3.4
	baz=142,SNR=51						
U38A	Gravette	21.58	360	IAmb	IAmb	22 46 02.3	
	comp=Z,24nm,0.7s						
ORTC	Ortega, Tolima	21.64	118	*e*P	P	22 46 02.3	+1.6
OK048	Pawnee Station	21.69	354	P	P	22 46 00.1	-0.8
OK048				IAmb	IAmb	22 46 15.0	
	comp=Z,36nm,0.8s						
SPBC	San Pablo de B	21.84	112	*e*P	P	22 46 03.3	+0.4
W50A	Signal Mountai	21.89	20	IAmb	IAmb	22 46 13.1	
	comp=Z,56nm,1.1s						
U32A	Winter Ranch,	21.93	350	P	P	22 46 02.8	-0.8
U32A				IAmb	IAmb	22 46 08.6	
	comp=Z,51nm,0.8s						
V48A	Smith Brothers	21.93	16	P	P	22 46 00.4	-3.2
V48A				IAmb	IAmb	22 46 10.3	
	comp=Z,29nm,0.6s						
SLOR	San Lorenzo -	21.94	133	P	P	22 46 04.4	+0.1
OK038	West end E0370	21.98	350	P	P	22 46 03.4	-0.8
OK038				IAmb	IAmb	22 46 10.0	
	comp=Z,52nm,0.8s						
ROSC	El Rosal	21.99	115	P	P	22 46 04.0	-0.8
	comp=Z,12nm,0.9s,baz=119,slow=3.2,SNR=10.0						
	comp=Z,12nm,0.9s						
ROSC	El Rosal	21.99	115	P	P	22 46 05.7	+0.9
ROSC				IAmb	IAmb	22 46 17.2	
	comp=Z,32nm,0.9s						
ROSC	El Rosal	21.99	115	*e*P	P	22 46 07.4	+2.6
PRAC	Prado	22.05	118	*e*P	P	22 46 06.4	+1.3
BLOK	Blackwell	22.05	354	P	P	22 46 02.7	-2.2
BLOK				IAmb	IAmb	22 46 16.9	
	comp=Z,59nm,1.0s						
T35A	Sooner Cattle	22.14	355	P	P	22 46 04.2	-1.7
T35A				IAmb	IAmb	22 46 06.0	
	comp=Z,46nm,0.9s						
CRNM	Carthage	22.17	332	P	P	22 46 07.1	+0.6
OK035	E0210 Rd and N	22.20	351	P	P	22 46 06.1	-0.4
HODGE	Hodges	22.21	27	P	P	22 46 04.6	-2.0
GC02	Grant County #	22.22	352	P	P	22 46 05.4	-1.3
OK032	Salt Plains WL	22.22	352	P	P	22 46 04.3	-2.4
CHSH	Refugio Sur-Vo	22.23	135	P	P	22 46 09.4	+1.8
DUN6	Lazy B Ranch	22.25	325	P	P	22 46 06.5	-0.7
BARC	Barichara	22.25	109	*e*P	P	22 46 08.4	+0.9
PORT	Chimborazo Vol	22.27	135	P	P	22 46 09.2	+1.2
W52A	Murphy	22.28	23	P	P	22 46 04.8	-2.6
BNM	Barren Site	22.29	332	P	P	22 46 07.6	-0.1
KAN14	Manchester OK	22.34	352	P	P	22 46 05.8	-2.2
KAN14				IAmb	IAmb	22 46 09.8	

	comp=Z,29nm,0.7s						
T42A	**Van Buren**	**22.35**	**7**	P	**P**	**22 46 05.0**	**-3.1**
Y22D	**IRIS PASSCAL I**	**22.36**	**331**	P	**P**	**22 46 08.9**	**+0.5**
Y22D				IAmb	IAmb	22 46 18.6	
	comp=Z,37nm,0.6s						
CPCT	**Cooper Cave**	**22.38**	**21**	P	**P**	**22 46 06.4**	**-2.0**
CLTN	**Cedars of Leba**	**22.39**	**17**	P	**P**	**22 46 06.0**	**-2.5**
CLTN				IAmb	IAmb	22 46 09.3	
	comp=Z,21nm,0.8s						
SDDR	**Presa de Saban**	**22.39**	**76**	P	**P**	**22 46 07.0**	**-1.8**
SDDR				IAmb	IAmb	22 46 20.9	
	comp=Z,30nm,1.1s						
SDDR	**Presa de Saban**	**22.39**	**76**	*e*P	**P**	**22 46 07.4**	**-1.4**
KAN17	**Caldwell West**	**22.40**	**353**	P	**P**	**22 46 06.3**	**-2.3**
PAMC	**Pamplona, Colo**	**22.42**	**107**	*e*P	**P**	**22 46 08.4**	**-1.1**
LENM	**Lemitar**	**22.46**	**332**	P	**P**	**22 46 09.9**	**+0.4**
KAN05	**Bluff City Nor**	**22.48**	**352**	P	**P**	**22 46 08.0**	**-1.5**
BG3	**Lake Jocassee**	**22.58**	**25**	P	**P**	**22 46 08.2**	**-2.4**
BG3				IAmb	IAmb	22 46 27.7	
	comp=Z,38nm,1.2s						
KAN08	**Anthony NE Sta**	**22.60**	**352**	P	**P**	**22 46 08.8**	**-2.0**
KAN12	**Harper NE Stat**	**22.68**	**352**	P	**P**	**22 46 10.2**	**-1.4**
JSC	**Jenkinsville**	**22.71**	**29**	P	**P**	**22 46 09.4**	**-2.5**
V51A	**Loudon**	**22.76**	**21**	P	**P**	**22 46 10.2**	**-2.3**
V51A				IAmb	IAmb	22 46 12.3	
	comp=Z,30nm,0.8s						
TKL	**Tuckaleechee C**	**22.84**	**23**	P	**P**	**22 46 11.4**	**-1.9**
	comp=Z,15nm,0.9s,baz=193,slow=12,SNR=14						
TKL				LR	LR	22 55 28.3	
	comp=Z,150nm,21.6s,baz=192,slow=38						
	comp=Z,15nm,0.9s						
TKL	**Tuckaleechee C**	**22.84**	**23**	IAmb	IAmb	22 46 31.3	
	comp=Z,34nm,1.1s						
ANMO	**Albuquerque**	**22.88**	**334**	P	**P**	**22 46 15.9**	**+1.8**
	comp=Z,7.8nm,0.8s,baz=235,slow=12,SNR=26						
	comp=Z,7.8nm,0.8s						
ANMO	**Albuquerque**	**22.88**	**334**	P	**P**	**22 46 13.4**	**-0.6**
ANMO	**Albuquerque**	**22.88**	**334**	P	**P**	**22 46 15.8**	**+1.8**
	baz=148						
Y57A	**Sumter**	**22.91**	**31**	P	**P**	**22 46 11.1**	**-3.0**
Y57A				IAmb	IAmb	22 46 32.2	
	comp=Z,54nm,1.4s						
U49A	**Red Boiling Sp**	**22.95**	**18**	IAmb	IAmb	22 46 24.4	
	comp=Z,48nm,1.1s						
T47A	**Sharon Grove**	**23.03**	**15**	P	**P**	**22 46 12.4**	**-2.8**
T47A				IAmb	IAmb	22 46 15.6	
	comp=Z,36nm,0.7s						
TUC	**Tucson**	**23.05**	**322**	P	**P**	**22 46 17.0**	**+1.4**
TUC				IAmb	IAmb	22 46 20.0	
	comp=Z,70nm,1.9s						
TUC	**Tucson**	**23.05**	**322**	P	**P**	**22 46 18.2**	**+2.6**
	baz=135						
V52A	**Sevierville**	**23.07**	**23**	IAmb	IAmb	22 46 36.2	
	comp=Z,27nm,1.1s						
S44A	**Carbondale**	**23.26**	**10**	P	**P**	**22 46 15.4**	**-2.2**
S44A				IAmb	IAmb	22 46 32.1	
	comp=Z,34nm,0.8s						
CCM	**Cathedral Cave**	**23.35**	**6**	P	**P**	**22 46 15.3**	**-3.2**
CCM				IAmb	IAmb	22 46 18.3	
	comp=Z,39nm,0.7s						
CCM	**Cathedral Cave**	**23.35**	**6**	P	**P**	**22 46 16.9**	**-1.6**
	baz=187						
KMSC	**Kings Mountain**	**23.39**	**28**	P	**P**	**22 46 16.5**	**-2.5**
KMSC	**Kings Mountain**	**23.39**	**28**	P	**P**	**22 46 18.0**	**-0.9**
	baz=213						
TZTN	**Tazewell**	**23.71**	**22**	P	**P**	**22 46 20.0**	**-2.0**
TZTN				IAmb	IAmb	22 46 22.0	
	comp=Z,27nm,1.1s						
TZTN	**Tazewell**	**23.71**	**22**	P	**P**	**22 46 20.6**	**-1.4**
	baz=206,SNR=5.7						
USIN	**University of**	**23.84**	**13**	P	**P**	**22 46 21.3**	**-1.8**
SDV	**Santo Domingo**	**23.86**	**102**	P	**P**	**22 46 22.3**	**-1.6**
	comp=Z,6.9nm,0.7s,baz=283,slow=5.7,SNR=12						
SDV				LR	LR	22 57 17.5	
	comp=Z,220nm,18.8s,baz=292,slow=41						
	comp=Z,6.9nm,0.7s						
SDV	**Santo Domingo**	**23.86**	**102**	P	**P**	**22 46 20.0**	**-4.0**
SDV	**Santo Domingo**	**23.86**	**102**	*e*P	**P**	**22 46 22.6**	**-1.3**
T25A	**Trinidad**	**24.03**	**340**	P	**P**	**22 46 25.6**	**+0.3**
T25A				IAmb	IAmb	22 46 29.1	
	comp=Z,47nm,1.1s						
T25A	**Trinidad**	**24.03**	**340**	P	**P**	**22 46 26.8**	**+1.5**
	baz=155,SNR=26						
V55A	**Taylorsville**	**24.04**	**27**	P	**P**	**22 46 23.6**	**-1.6**
V55A				IAmb	IAmb	22 46 49.1	
	comp=Z,27nm,1.3s						
214A	**Organ Pipe Nat**	**24.06**	**319**	P	**P**	**22 46 25.1**	**-0.3**
214A	**Organ Pipe Nat**	**24.06**	**319**	P	**P**	**22 46 27.7**	**+2.3**
	baz=131						
X18A	**Snowflake**	**24.22**	**327**	P	**P**	**22 46 27.5**	**+0.4**
PIX	**Pinacate**	**24.22**	**317**	P	**P**	**22 46 27.1**	**+0.2**
KSU1	**Kansas State U**	**24.32**	**356**	P	**P**	**22 46 27.2**	**-0.5**
	baz=174,SNR=10						
U54A	**Nelsons Funny**	**24.35**	**25**	P	**P**	**22 46 25.3**	**-2.8**
U54A				IAmb	IAmb	22 46 51.9	
	comp=Z,24nm,1.0s						
WCI	**Wyandotte Cave**	**24.41**	**15**	P	**P**	**22 46 26.1**	**-2.4**
WCI				IAmb	IAmb	22 46 29.4	
	comp=Z,31nm,0.8s						
WCI	**Wyandotte Cave**	**24.41**	**15**	P	**P**	**22 46 27.3**	**-1.2**
	baz=199						
CBKS	**Cedar Bluff**	**24.43**	**350**	P	**P**	**22 46 28.2**	**-0.5**
CBKS	**Cedar Bluff**	**24.43**	**350**	P	**P**	**22 46 29.3**	**+0.6**
	baz=167,SNR=11						
Q44A	**Meyer Farm, Va**	**24.48**	**10**	IAmb	IAmb	22 46 49.7	
	comp=Z,28nm,1.0s						
OLIL	**Olney**	**24.49**	**12**	IAmb	IAmb	22 46 38.7	
	comp=Z,43nm,0.9s						
W18A	**Petrified Fore**	**24.57**	**328**	P	**P**	**22 46 30.6**	**+0.4**
W18A	**Petrified Fore**	**24.57**	**328**	P	**P**	**22 46 32.2**	**+2.0**
	baz=142						
S51A	**Beattyville**	**24.68**	**21**	P	**P**	**22 46 28.5**	**-2.4**
S51A				IAmb	IAmb	22 46 49.6	
	comp=Z,18nm,0.9s						
P38A	**Dawn**	**24.77**	**1**	IAmb	IAmb	22 46 31.4	
	comp=Z,32nm,0.8s						
R49A	**Shelbyville**	**24.78**	**17**	IAmb	IAmb	22 46 31.2	
	comp=Z,24nm,0.8s						
U56A	**King**	**24.82**	**28**	IAmb	IAmb	22 46 32.7	
	comp=Z,21nm,0.8s						
X16A	**Lo Mia Camp, P**	**24.95**	**325**	P	**P**	**22 46 33.7**	**0.0**
X16A				IAmb	IAmb	22 46 39.0	
	comp=Z,18nm,0.9s						
SDCO	**Great Sand Dun**	**24.95**	**339**	P	**P**	**22 46 33.3**	**-0.5**
SDCO	**Great Sand Dun**	**24.95**	**339**	P	**P**	**22 46 35.2**	**+1.4**
	baz=153,SNR=6.0						
R50A	**Paris**	**25.02**	**19**	IAmb	IAmb	22 46 49.9	
	comp=Z,26nm,1.1s						
P43A	**Skaggs, Pawnee**	**25.13**	**9**	P	**P**	**22 46 32.5**	**-2.4**
P43A				IAmb	IAmb	22 46 35.7	
	comp=Z,21nm,0.7s						
113A	**Mohawk Valley,**	**25.20**	**319**	P	**P**	**22 46 36.4**	**+0.7**
KSCO	**Kaye Shedlock'**	**25.24**	**345**	P	**P**	**22 46 35.8**	**-0.3**
KSCO				IAmb	IAmb	22 46 42.6	
	comp=Z,19nm,0.8s						
KSCO	**Kaye Shedlock'**	**25.24**	**345**	P	**P**	**22 46 38.1**	**+1.9**
	baz=161						
BLO	**Bloomington**	**25.25**	**14**	IAmb	IAmb	22 46 35.7	
	comp=Z,35nm,0.9s						
S22A	**4UR Ranch, Cre**	**25.45**	**336**	P	**P**	**22 46 38.5**	**+0.2**
S22A				IAmb	IAmb	22 47 05.0	
	comp=Z,37nm,1.9s						
S22A	**4UR Ranch, Cre**	**25.45**	**336**	P	**P**	**22 46 40.1**	**+1.9**
	baz=151						
Y14A	**Wickenburg**	**25.51**	**322**	P	**P**	**22 46 38.6**	**0.0**
MVCO	**Mesa Verde**	**25.68**	**333**	P	**P**	**22 46 39.7**	**-0.6**
MVCO				IAmb	IAmb	22 46 43.7	
	comp=Z,21nm,0.9s						
MVCO	**Mesa Verde**	**25.68**	**333**	P	**P**	**22 46 42.6**	**+2.3**
	baz=147,SNR=12						
WUAZ	**Wupatki**	**25.73**	**326**	P	**P**	**22 46 43.3**	**+2.6**
	baz=139,SNR=12						
R53A	**Hurricane**	**25.88**	**23**	IAmb	IAmb	22 46 43.4	
	comp=Z,18nm,0.8s						
Q24A	**Divide**	**25.93**	**340**	P	**P**	**22 46 44.7**	**+2.1**
	baz=155						
N38A	**Joes South For**	**25.94**	**2**	P	**P**	**22 46 41.2**	**-1.2**
N35A	**Tabor**	**26.02**	**358**	P	**P**	**22 46 41.8**	**-1.3**
HDIL	**Hopedale**	**26.06**	**9**	P	**P**	**22 46 42.2**	**-1.2**
	baz=191,SNR=7.2						
P49A	**Miami Univ. Ec**	**26.06**	**17**	IAmb	IAmb	22 46 42.3	
	comp=Z,17nm,0.8s						
P49A	**Miami Univ. Ec**	**26.06**	**17**	P	**P**	**22 46 41.5**	**-1.9**
	baz=201,SNR=5.2						
GLA	**Glamis**	**26.06**	**318**	P	**P**	**22 46 43.7**	**0.0**
GLA	**Glamis**	**26.06**	**318**	P	**P**	**22 46 45.9**	**+2.3**
	baz=129						
SFIN	**Lafayette**	**26.27**	**12**	P	**P**	**22 46 43.3**	**-2.0**
	baz=196,SNR=5.7						
BAUV	**El Baul**	**26.31**	**100**	P	**P**	**22 46 45.0**	**-1.0**
BAUV				IAmb	IAmb	22 46 47.2	
	comp=Z,20nm,0.8s						
Q52A	**Bidwell**	**26.32**	**21**	IAmb	IAmb	22 46 47.7	
	comp=Z,26nm,0.9s						
PDMCI	**Parker Dam,Lak**	**26.45**	**321**	P	**P**	**22 46 48.7**	**+1.7**
	baz=132						
P51A	**Williamsport**	**26.52**	**20**	IAmb	IAmb	22 47 19.6	
	comp=Z,14nm,0.8s						
YUH	**Yuha Desert**	**26.54**	**316**	P	**P**	**22 46 49.2**	**+1.4**
PV13	**Radium Mtn., P**	**26.61**	**334**	P	**P**	**22 46 49.0**	**+0.2**
PV13				IAmb	IAmb	22 46 52.1	
	comp=Z,20nm,0.9s						
O48B	**Farmland**	**26.62**	**16**	P	**P**	**22 46 46.5**	**-1.9**
	baz=200,SNR=11						
PV15	**Paradox Valley**	**26.62**	**335**	P	**P**	**22 46 49.2**	**+0.4**
PV15				IAmb	IAmb	22 46 55.7	
	comp=Z,17nm,0.8s						
SWSC	**Sam W. Stewart**	**26.64**	**317**	P	**P**	**22 46 51.9**	**+3.1**
	baz=128						
IKP	**In-Ko-Pah, Jac**	**26.67**	**316**	P	**P**	**22 46 52.1**	**+2.9**
	baz=127						
PV11	**David Mesa, Pa**	**26.75**	**334**	P	**P**	**22 46 50.7**	**+0.7**
PV11				IAmb	IAmb	22 47 04.6	
	comp=Z,20nm,0.9s						
BGNE	**Belgrade**	**26.75**	**354**	P	**P**	**22 46 51.2**	**+1.5**
	baz=172						
ISCO	**Idaho Springs**	**26.84**	**340**	P	**P**	**22 46 52.7**	**+1.9**
	baz=155,SNR=13						
BC3	**Big Chuckawall**	**26.85**	**318**	P	**P**	**22 46 53.0**	**+2.2**
	baz=129,SNR=10.0						
ATAH	**Atahualpa**	**26.87**	**143**	LR	LR	22 54 27.3	
	comp=Z,150nm,20.4s,baz=311,slow=30						
PV10	**Paradox Valley**	**26.89**	**334**	P	**P**	**22 46 49.7**	**-1.5**
PV10				IAmb	IAmb	22 46 53.7	
	comp=Z,18nm,0.9s						
OGNE	**Ogallala**	**26.94**	**347**	P	**P**	**22 46 52.9**	**+1.4**
	baz=163						
P52A	**Corning**	**26.97**	**21**	P	**P**	**22 46 50.9**	**-0.8**
	baz=206						
IRM	**Iron Mountain**	**26.98**	**319**	P	**P**	**22 46 53.3**	**+1.5**
	baz=130						
MONP2	**Monument Peak**	**27.02**	**316**	P	**P**	**22 46 53.8**	**+1.3**
	baz=126						
SCIA	**State Center**	**27.05**	**2**	P	**P**	**22 46 50.8**	**-1.6**
SCIA	**State Center**	**27.05**	**2**	P	**P**	**22 46 51.8**	**-0.6**
	baz=182,SNR=7.4						
M44A	**Midewin, Midew**	**27.07**	**10**	P	**P**	**22 46 50.1**	**-2.5**
M44A				IAmb	IAmb	22 46 52.0	
	comp=Z,25nm,1.1s						
L34A	**Svendsen Farm,**	**27.16**	**357**	P	**P**	**22 46 51.4**	**-2.0**
SJG	**San Juan**	**27.18**	**79**	P	**P**	**22 46 51.5**	**-2.2**
	comp=Z,2.6nm,0.3s,baz=319,slow=19,SNR=3.6						
	comp=Z,2.6nm,0.3s						
ACSO	**Alum Creek Sta**	**27.22**	**19**	IAmb	IAmb	22 47 25.4	
	comp=Z,18nm,0.8s						
ACSO	**Alum Creek Sta**	**27.22**	**19**	P	**P**	**22 46 52.2**	**-1.7**
	baz=204						
L40A	**Anamosa**	**27.32**	**5**	P	**P**	**22 46 52.3**	**-2.5**
BELC	**Belle Mtn. Jos**	**27.42**	**318**	P	**P**	**22 46 58.4**	**+2.4**
	baz=129						
TPFO	**Pinon Flats**	**27.47**	**317**	P	**P**	**22 46 59.0**	**+2.6**
	baz=128						
PFO	**Pinyon Flats O**	**27.48**	**317**	P	**P**	**22 46 59.2**	**+2.7**
	comp=Z,4.0nm,0.9s,baz=110,slow=3.4,SNR=6.7						
PFO				LR	LR	22 58 20.6	
	comp=Z,242nm,20.3s,baz=180,slow=37						
	comp=Z,4.0nm,0.9s						
PFO	**Pinyon Flats O**	**27.48**	**317**	P	**P**	**22 46 57.3**	**+0.8**
PFO	**Pinyon Flats O**	**27.48**	**317**	P	**P**	**22 46 59.2**	**+2.7**
	baz=128						
O52A	**Adamsville**	**27.50**	**21**	IAmb	IAmb	22 46 55.4	
	comp=Z,14nm,0.9s						
KNB	**Kanab**	**27.63**	**327**	P	**P**	**22 46 58.4**	**+0.6**
KNB				IAmb	IAmb	22 47 11.7	
	comp=Z,29nm,1.7s						
GMRC	**Granite Mounta**	**27.70**	**320**	P	**P**	**22 47 00.4**	**+1.9**
	baz=131,SNR=6.3						
O53A	**New Philadelph**	**27.84**	**22**	P	**P**	**22 46 58.8**	**-0.6**
	baz=208						
V12A	**Nelson**	**27.84**	**322**	P	**P**	**22 47 00.7**	**+1.0**
L44A	**Lake County Fo**	**27.86**	**10**	P	**P**	**22 46 59.6**	**0.0**
	baz=193						
N23A	**Red Feather La**	**27.94**	**341**	P	**P**	**22 47 00.9**	**+0.2**
N23A	**Red Feather La**	**27.94**	**341**	P	**P**	**22 47 02.7**	**+2.0**
	baz=155						
MURC	**Murrieta**	**27.96**	**316**	P	**P**	**22 47 03.7**	**+3.0**
	baz=126						
K31A	**O'Neill**	**28.02**	**353**	P	**P**	**22 46 59.5**	**-1.6**
O20A	**White River Ci**	**28.06**	**337**	P	**P**	**22 47 03.7**	**+2.0**
	baz=150						
MTPU	**Mount Pierson**	**28.08**	**329**	P	**P**	**22 47 02.4**	**+0.4**
SRU	**San Rafael Swe**	**28.14**	**333**	P	**P**	**22 47 01.7**	**-0.8**
HEC	**Hector,Ludlow**	**28.16**	**319**	P	**P**	**22 47 04.7**	**+2.2**
	baz=130,SNR=5.7						
JFWS	**Jewell Farm**	**28.26**	**6**	P	**P**	**22 47 02.0**	**-1.2**
	baz=188,SNR=7.7						
TUQ	**Turquoise Moun**	**28.29**	**321**	P	**P**	**22 47 06.2**	**+2.4**
	baz=131						
CCUT	**Cedar City**	**28.31**	**327**	P	**P**	**22 47 03.8**	**-0.2**
L48A	**N Adams**	**28.39**	**16**	IAmb	IAmb	22 47 03.7	
	comp=Z,23nm,0.8s						
TMUT	**Trail Mountain**	**28.60**	**332**	P	**P**	**22 47 07.3**	**+0.6**
BFSC	**Mount Baldy Ra**	**28.65**	**317**	P	**P**	**22 47 09.9**	**+3.0**
	baz=127						
CIS	**Catalina Islan**	**28.68**	**315**	P	**P**	**22 47 09.8**	**+2.7**
	baz=124						
GSC	**Goldstone, Bar**	**28.76**	**319**	P	**P**	**22 47 10.4**	**+2.5**
	baz=130						
AAM	**Ann Arbor**	**28.93**	**16**	P	**P**	**22 47 09.0**	**-0.1**
	baz=202						
ECSD	**EROS Data Cent**	**28.93**	**357**	IAmb	IAmb	22 47 09.8	
	comp=Z,20nm,0.7s						
ECSD	**EROS Data Cent**	**28.93**	**357**	P	**P**	**22 47 08.7**	**-0.5**
	baz=175,SNR=19						
M53A	**WI Miller and**	**29.08**	**21**	P	**P**	**22 47 09.7**	**-0.8**
	baz=208						
I37A	**Lemond, Waseca**	**29.16**	**1**	IAmb	IAmb	22 47 29.7	
	comp=Z,21nm,0.8s						
I40A	**Norwalk**	**29.19**	**5**	IAmb	IAmb	22 47 12.6	
	comp=Z,35nm,1.2s						
EDW2	**Edwards Air Fo**	**29.26**	**317**	P	**P**	**22 47 14.2**	**+2.0**
	baz=127						
I42A	**Draeger Farm,**	**29.38**	**8**	P	**P**	**22 47 11.7**	**-1.5**
I42A				IAmb	IAmb	22 47 13.7	
	comp=Z,14nm,0.8s						
BSUT	**Blindstream Ca**	**29.42**	**334**	P	**P**	**22 47 13.0**	**-1.0**
SSPA	**Standing Stone**	**29.47**	**26**	P	**P**	**22 47 13.1**	**-0.9**
	baz=214						
TPNV	**Topopah Spring**	**29.50**	**323**	P	**P**	**22 47 16.7**	**+2.2**
	baz=133						
FURC	**Furnace Creek,**	**29.55**	**321**	P	**P**	**22 47 17.2**	**+2.5**
	baz=131						
OSI	**Osito Audit: C**	**29.58**	**316**	P	**P**	**22 47 17.6**	**+2.5**
	baz=126						
MPMC	**Manual Prospec**	**29.67**	**320**	P	**P**	**22 47 18.2**	**+2.2**
	baz=130,SNR=8.4						
K22A	**Casper**	**29.71**	**342**	IAmb	IAmb	22 47 19.1	
	comp=Z,11nm,0.9s						
K22A	**Casper**	**29.71**	**342**	P	**P**	**22 47 17.2**	**+0.9**
	baz=156						
ERPA	**Erie**	**29.92**	**22**	P	**P**	**22 47 18.6**	**+0.7**
	baz=208						
CTU	**Camp Tracy**	**29.98**	**333**	P	**P**	**22 47 19.4**	**+0.7**
CTU				IAmb	IAmb	22 47 22.0	
	comp=Z,12nm,1.2s						
DUG	**Dugway, Tooele**	**30.07**	**331**	P	**P**	**22 47 21.0**	**+1.5**
	baz=142						
R11B	**Troy Canyon, C**	**30.09**	**325**	P	**P**	**22 47 21.8**	**+2.1**
	baz=135						
SPMN	**Marine on St.**	**30.38**	**2**	P	**P**	**22 47 20.8**	**-1.2**
	baz=183,SNR=24						
RSSD	**Black Hills**	**30.41**	**346**	P	**P**	**22 47 24.0**	**+1.5**
	baz=161						
PKM	**Mcpherson Peak**	**30.47**	**316**	P	**P**	**22 47 26.3**	**+3.2**
	baz=125						
VES	**Vestal, Richgr**	**30.55**	**318**	P	**P**	**22 47 25.8**	**+2.3**
	baz=127						
HWUT	**Hardware Ranch**	**30.65**	**334**	P	**P**	**22 47 25.2**	**+0.6**
SGCB	**S£o Gabriel d**	**30.75**	**116**	*e*P	**P**	**22 47 24.9**	**-0.7**
DSP	**Deep Springs**	**30.81**	**321**	P	**P**	**22 47 26.3**	**+0.5**
BW06	**Boulder Array**	**30.84**	**338**	P	**P**	**22 47 26.9**	**+0.6**
BW06	**Boulder Array**	**30.84**	**338**	P	**P**	**22 47 27.7**	**+1.4**
	baz=150,SNR=5.7						
PD31	**Pinedale Array**	**30.84**	**338**	P	**P**	**22 47 26.5**	**+0.2**
PDAR	**Pinedale Array**	**30.84**	**338**	P	**P**	**22 47 27.4**	**+1.0**
	comp=Z,2.9nm,0.8s,baz=140,slow=8.6,SNR=27						
PDAR				PcP	**PcP**	**22 50 22.9**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=129,slow=7.1,SNR=2.1						
PDAR				LR	LR	23 01 26.2	
	comp=Z,183nm,18.4s,baz=150,slow=39						
	comp=Z,2.9nm,0.8s						
PDAR	**Pinedale Array**	**30.84**	**338**	P	**P**	**22 47 26.7**	**+0.3**
F33A	**5 Mile Ranch,**	**31.02**	**357**	IAmb	IAmb	22 47 26.9	
	comp=Z,8.6nm,0.8s						
GLMI	**Grayling**	**31.06**	**13**	P	**P**	**22 47 25.9**	**-2.1**
	baz=198						
AHID	**Auburn Hatcher**	**31.42**	**336**	IAmb	IAmb	22 47 44.1	
	comp=Z,11nm,0.9s						
ELK	**Elko**	**31.67**	**329**	P	**P**	**22 47 36.5**	**+2.8**
	comp=Z,7.6nm,0.8s,baz=146,slow=6.3,SNR=32						
ELK				PcP	**PcP**	**22 50 26.2**	**+0.9**
	comp=Z,1.6nm,0.8s,baz=135,slow=1.4,SNR=3.6						
ELK				LR	LR	23 02 21.7	
	comp=Z,309nm,18.4s,baz=156,slow=40						
	comp=Z,7.6nm,0.8s						
ELK	**Elko**	**31.67**	**329**	P	**P**	**22 47 33.9**	**+0.3**
ELK				IAmb	IAmb	22 47 37.5	
	comp=Z,9.9nm,0.9s						
NVAR	**Mina Array Bea**	**31.70**	**323**	P	**P**	**22 47 37.2**	**+3.2**
	comp=Z,9.2nm,0.9s,baz=140,slow=8.6,SNR=39						
NVAR				PcP	**PcP**	**22 50 26.6**	**+1.1**
	comp=Z,1.4nm,0.7s,baz=114,slow=4.4,SNR=5.3						
NVAR				LR	LR	23 00 03.6	
	comp=Z,286nm,20.6s,baz=151,slow=36						
	comp=Z,9.2nm,0.9s						
NNA	**Nana**	**31.71**	**146**	LR	LR	22 57 49.3	
	comp=Z,139nm,20.7s,baz=336,slow=32						
SNOW	**Snow King Moun**	**31.88**	**337**	P	**P**	**22 47 35.0**	**-0.5**
KVN	**Kaiserville**	**32.00**	**324**	P	**P**	**22 47 36.9**	**+0.4**
E43A	**Lone Tree Farm**	**32.09**	**10**	IAmb	IAmb	22 47 36.1	
	comp=Z,12nm,0.6s						
FLWY	**Flagg Ranch**	**32.39**	**338**	IAmb	IAmb	22 47 53.0	
	comp=Z,9.3nm,0.8s						
SADO	**Sadowa**	**32.55**	**20**	P	**P**	**22 47 39.5**	**-1.5**
	comp=Z,6.1nm,0.7s,baz=221,slow=9.1,SNR=7.8						
SADO				LR	LR	23 02 44.6	
	comp=Z,205nm,19.9s,baz=201,slow=40						
	comp=Z,6.1nm,0.7s						
H17A	**Grant Village**	**32.62**	**338**	P	**P**	**22 47 42.2**	**+0.3**
YMP	**Mirror Lake Pl**	**32.77**	**339**	P	**P**	**22 47 42.7**	**-0.7**
YMP				IAmb	IAmb	22 48 02.0	
	comp=Z,14nm,1.1s						
RLMT	**Red Lodge**	**32.80**	**340**	P	**P**	**22 47 43.5**	**0.0**
	baz=152,SNR=12						
YMR	**Madison River**	**32.99**	**338**	P	**P**	**22 47 44.9**	**-0.4**
YMR				IAmb	IAmb	22 48 00.0	
	comp=Z,8.7nm,0.8s						
EYMN	**Ely**	**33.16**	**3**	IAmb	IAmb	22 47 45.8	
	comp=Z,8.4nm,0.8s						
EYMN	**Ely**	**33.16**	**3**	P	**P**	**22 47 44.5**	**-1.9**
	baz=185						
MDND	**Maddock**	**33.27**	**353**	P	**P**	**22 47 47.3**	**-0.1**
	baz=170						
LAO	**LASA Array**	**33.35**	**345**	P	**P**	**22 47 48.4**	**+0.2**
	baz=159						
AGMN	**Agassiz Nation**	**33.45**	**358**	P	**P**	**22 47 47.7**	**-1.2**
AGMN	**Agassiz Nation**	**33.45**	**358**	P	**P**	**22 47 48.4**	**-0.6**
	baz=177,SNR=10						
HLID	**Hailey**	**33.46**	**333**	P	**P**	**22 47 50.8**	**+1.5**
	baz=143,SNR=12						
BOZ	**Bozeman (W)**	**34.03**	**338**	IAmb	IAmb	22 47 57.5	
	comp=Z,21nm,1.8s						
BOZ	**Bozeman (W)**	**34.03**	**338**	P	**P**	**22 47 55.3**	**+1.1**
	baz=149						
LONY	**Lake Ozonia**	**34.13**	**25**	P	**P**	**22 47 54.0**	**-0.9**
	baz=215						
DLMT	**Dillon**	**34.19**	**337**	P	**P**	**22 47 55.4**	**-0.2**
LRM	**Limekiln Ridge**	**34.53**	**337**	P	**P**	**22 47 58.9**	**+0.3**
DGMT	**Dagmar**	**34.59**	**348**	P	**P**	**22 47 58.0**	**-0.8**
DGMT	**Dagmar**	**34.59**	**348**	P	**P**	**22 47 59.9**	**+1.1**
	baz=163						
WVOR	**Wild Horse Val**	**34.64**	**328**	P	**P**	**22 48 01.1**	**+1.6**
WVOR				IAmb	IAmb	22 48 02.9	
	comp=Z,14nm,0.9s						
HRY	**Holter Researc**	**35.06**	**339**	P	**P**	**22 48 03.7**	**+0.6**
J08A	**Circle Bar Ran**	**35.22**	**329**	P	**P**	**22 48 04.6**	**+0.1**
PLID	**Pearl Lake**	**35.37**	**333**	P	**P**	**22 48 06.1**	**+0.2**
PLID				IAmb	IAmb	22 48 08.5	
	comp=Z,16nm,0.9s						
ULM	**Lac du Bonnet**	**35.41**	**358**	P	**P**	**22 48 04.6**	**-1.2**
	comp=Z,15nm,0.8s,baz=178,slow=9.2,SNR=18						
	comp=Z,15nm,0.8s						
ULM	**Lac du Bonnet**	**35.41**	**358**	IAmb	IAmb	22 48 05.1	
	comp=Z,16nm,0.7s						
BOAV	**Boa Vista**	**35.51**	**107**	*e*P	**P**	**22 48 06.4**	**-0.7**
EGMT	**Eagleton**	**35.55**	**342**	IAmb	IAmb	22 48 09.8	
	comp=Z,17nm,1.1s						
EGMT	**Eagleton**	**35.55**	**342**	P	**P**	**22 48 08.0**	**+0.9**
	baz=154,SNR=5.7						
MSO	**Missoula**	**35.93**	**337**	IAmb	IAmb	22 48 13.1	
	comp=Z,11nm,1.1s						
MSO	**Missoula**	**35.93**	**337**	P	**P**	**22 48 11.4**	**+0.9**
	baz=146,SNR=8.5						
YBH	**Yreka Blue Hor**	**36.41**	**323**	P	**P**	**22 48 14.8**	**+0.1**
	comp=Z,3.0nm,0.7s,baz=103,slow=4.5,SNR=6.9						
	comp=Z,3.0nm,0.7s						
PKME	**Peaks-Kenny Pk**	**37.01**	**30**	P	**P**	**22 48 19.9**	**+0.4**
	baz=223						
MACA	**Manacapuru-AM**	**37.75**	**116**	*e*P	**P**	**22 48 25.6**	**-0.7**
H04A	**Detroit Lake**	**38.05**	**327**	IAmb	IAmb	22 48 31.2	
	comp=Z,13nm,0.9s						
HOOD	**Mount Hood Mea**	**38.22**	**328**	P	**P**	**22 48 28.7**	**-1.3**
HOOD				IAmb	IAmb	22 48 37.3	
	comp=Z,24nm,0.8s						
NEW	**Newport**	**38.35**	**335**	P	**P**	**22 48 32.1**	**+1.1**
	comp=Z,5.9nm,0.7s,baz=124,slow=8.9,SNR=7.3						
	comp=Z,5.9nm,0.7s						
NEW	**Newport**	**38.35**	**335**	P	**P**	**22 48 31.9**	**+0.9**
	baz=143						
C09A	**Chrisman Ranch**	**38.47**	**334**	IAmb	IAmb	22 48 34.4	
	comp=Z,12nm,0.9s						
SAML	**Samuel**	**38.81**	**125**	*e*P	**P**	**22 48 37.8**	**+2.6**
LON	**Longmire**	**39.30**	**330**	P	**P**	**22 48 39.8**	**+0.8**
LPAZ	**La Paz**	**40.24**	**139**	P	**P**	**22 48 47.0**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=329,slow=14,SNR=5.2						
	comp=Z,1.2nm,0.7s						
FFC	**Flin Flon**	**40.32**	**353**	P	**P**	**22 48 45.9**	**-1.3**
FFC				IAmb	IAmb	22 48 48.6	
	comp=Z,34nm,1.7s						
MDP	**Montagnes des**	**42.06**	**99**	LR	LR	23 06 54.8	
	comp=Z,269nm,21.1s,baz=299,slow=37						
LLLB	**Lillooet**	**42.14**	**334**	P	**P**	**22 49 01.8**	**-0.5**
MALB	**Monte Alegre**	**42.92**	**109**	*e*P	**P**	**22 49 08.6**	**-0.4**
FCC	**Fort Churchill**	**43.91**	**0**	P	**P**	**22 49 15.1**	**-1.3**
FCC				IAmb	IAmb	22 49 16.7	
	comp=Z,14nm,0.9s						
RPN	**Rapa Nui**	**44.14**	**199**	LR	LR	23 02 56.6	
	comp=Z,134nm,19.9s,baz=52,slow=30						
LVC	**Limon Verde**	**44.70**	**146**	LR	LR	23 04 45.3	
	comp=Z,68nm,19.5s,baz=288,slow=32						
WAPA	**Wapiti River**	**44.72**	**340**	IAmb	IAmb	22 49 24.8	
	comp=Z,19nm,0.9s						
SIV	**San Ignacio**	**44.84**	**132**	LR	LR	23 08 00.7	
	comp=Z,188nm,18.9s,baz=324,slow=36						
SCHQ	**Schefferville**	**45.31**	**22**	P	**P**	**22 49 25.5**	**-2.2**
	comp=Z,6.1nm,1.0s,baz=193,slow=3.0,SNR=4.8						
SCHQ				LR	LR	23 10 06.6	
	comp=Z,289nm,18.8s,baz=236,slow=38						
	comp=Z,6.1nm,1.0s						
BBB	**Bella Bella**	**46.02**	**332**	LR	LR	23 10 14.0	
	comp=Z,137nm,19.2s,baz=154,slow=38						
HILA	**High Level**	**46.88**	**344**	P	**P**	**22 49 39.7**	**-0.3**
YKA	**Yellowknife Ar**	**49.79**	**348**	P	**P**	**22 50 02.7**	**+0.3**
	comp=Z,9.3nm,0.9s,baz=152,slow=7.6,SNR=91						
YKA				PcP	**PcP**	**22 51 22.8**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=149,slow=3.5,SNR=5.9						
YKA				LR	LR	23 16 11.6	
	comp=Z,107nm,18.1s,baz=212,slow=42						
	comp=Z,9.3nm,0.9s						
SNDB	**Serra Nova Dou**	**50.20**	**120**	*e*P	**P**	**22 50 05.5**	**-0.6**
KOTAN	**Kotaneelee Air**	**50.23**	**341**	P	**P**	**22 50 07.4**	**+1.6**
	baz=141,SNR=6.0						
LIRD	**Liard River Hi**	**50.35**	**340**	P	**P**	**22 50 08.1**	**+1.4**
	baz=138						
CRAG	**Craig**	**50.41**	**332**	P	**P**	**22 50 08.7**	**+1.6**
	baz=128						
WRAK	**Wrangell Islan**	**50.66**	**334**	P	**P**	**22 50 10.6**	**+1.5**
	baz=130						
U33K	**Whale Pass**	**50.81**	**333**	P	**P**	**22 50 11.8**	**+1.7**
	baz=128						

DLBC	Dease Lake	51.06	337	LR	LR	23 15 46.8	
	comp=Z,174nm,19.9s,baz=123,slow=41						
DLBC	Dease Lake	51.06	337	P	P	22 50 13.7	+1.5
	baz=133						
S34M	Telegraph Cree	51.14	336	P	P	22 50 14.2	+1.5
	baz=132						
SMTB	Santa Maria do	51.91	114	*e*P	P	22 50 18.3	-0.8
FRB	Frobisher Bay	52.09	14	LR	LR	23 15 16.8	
	comp=Z,163nm,18.7s,baz=198,slow=39						
Q32M	Nakina River	52.28	336	P	P	22 50 23.0	+1.6
	baz=131						
P32M	Atlin	53.26	336	P	P	22 50 29.4	+1.0
	baz=130						
S31K	Pelican	53.28	334	P	P	22 50 29.7	+1.2
	baz=126						
P33M	Teslin, Yukon	53.32	337	P	P	22 50 29.5	+0.6
	baz=131						
SKAG	Skagway	53.81	335	P	P	22 50 34.8	+2.4
	baz=128						
N32M	Quiet Lake	54.04	338	P	P	22 50 35.5	+1.3
	baz=131						
PLBC	Pleasant Camp	54.23	335	P	P	22 50 38.0	+2.5
	baz=127						
CPUP	Villa Florida	54.41	138	P	P	22 50 35.4	-1.8
	comp=Z,0.9nm,0.5s,baz=306,slow=11,SNR=3.2						
CPUP				LR	LR	23 13 25.2	
	comp=Z,101nm,19.0s,baz=357,slow=36						
	comp=Z,0.9nm,0.5s						
MMPY	Sheldon Lake,	54.41	340	P	P	22 50 38.2	+1.4
	baz=134,SNR=8.4						
BDFB	Brasilia	54.80	122	P	P	22 50 39.4	-1.1
	comp=Z,6.6nm,0.8s,baz=277,slow=7.8,SNR=12						
	comp=Z,6.6nm,0.8s						
FARO	Faro, Yukon	54.85	339	P	P	22 50 40.9	+0.8
	baz=132						
O30N	Mendenhall	54.92	336	P	P	22 50 42.2	+1.6
	baz=128						
M31M	Drury Creek, Y	55.20	338	P	P	22 50 44.6	+2.0
	baz=131						
N31M	Braeburn, Yuko	55.25	337	P	P	22 50 44.2	+1.2
	baz=129						
HYT	Haines Junctio	55.51	336	P	P	22 50 45.4	+0.5
	baz=126						
PNL	Peninsula	55.61	334	P	P	22 50 46.2	+0.6
	baz=124						
O29M	Mount Kennedy	55.63	335	P	P	22 50 46.9	+1.1
	baz=125						
N30M	Aishikik Lake	55.73	337	P	P	22 50 48.0	+1.5
	baz=127						
SDBA	SAO DESIDERIO	55.86	116	*e*P	P	22 50 49.8	+1.7
YUK6	Outpost Mounta	55.92	336	P	P	22 50 49.1	+1.1
	baz=126						
MECA	Mercedes	55.99	142	*e*P	P	22 50 52.3	+3.7
PINM	Pinnacle	56.21	334	P	P	22 50 51.1	+1.3
	baz=123						
YUK4	Talbot Arm	56.27	336	P	P	22 50 51.2	+0.8
	baz=126						
M30M	Minto, Yukon	56.31	338	IAmb	IAmb	22 52 42.7	
	comp=Z,30nm,1.9s						
M30M	Minto, Yukon	56.31	338	P	P	22 50 51.2	+0.7
	baz=128						
O28M	Mount Upton	56.56	335	P	P	22 50 53.3	+0.7
	baz=124						
MAYO	Mayo, Yukon	56.63	339	P	P	22 50 54.1	+1.3
	baz=130						
YUK8	Steele Glacier	56.67	336	P	P	22 50 54.5	+1.1
	baz=124,SNR=5.4						
M29M	Somme Creek	56.84	337	P	P	22 50 55.5	+1.1
	baz=126,SNR=10.0						
L29M	L29M	57.12	338	P	P	22 50 57.2	+1.0
	baz=127						
CTG	Chitna Glacier	57.13	335	P	P	22 50 57.2	+0.7
	baz=122						
YUK3	Moose Creek	57.22	336	P	P	22 50 58.2	+0.9
	baz=124						
BB19B	Bebedouro	57.33	127	*e*P	P	22 51 00.4	+2.0
JANB	Januaria	57.61	119	*e*P	P	22 51 02.0	+1.6
C36M	Paulatuk	57.67	348	P	P	22 51 01.2	+1.2
	baz=145						
BVCY	Beaver Creek	57.74	336	P	P	22 51 01.8	+1.1
	baz=124						
MCARA	McCarthy VSAT	58.05	335	P	P	22 51 03.7	+0.9
	baz=121						
M27K	Edge Creek, AK	58.10	336	P	P	22 51 03.7	+0.3
	baz=123						
DAWY	Dawson	58.14	338	P	P	22 51 03.5	+0.1
DAWY	Dawson	58.14	338	P	P	22 51 03.9	+0.4
	baz=126						
GLB	Gilahina Butte	58.40	335	P	P	22 51 06.2	+0.9
GLB				IAmb	IAmb	22 51 08.4	
	comp=Z,8.6nm,0.8s						
BCAR	Beaver Creek A	58.45	337	P	P	22 51 06.2	+0.6
L27K	Beaver Creek,	58.47	337	IAmb	IAmb	22 51 08.4	
	comp=Z,18nm,1.4s						
L27K	Beaver Creek,	58.47	337	P	P	22 51 06.4	+0.7
	baz=123,SNR=6.2						
F31M	Tsiigehtchic	58.54	343	P	P	22 51 06.7	+0.6
	baz=134						
Q23K	Middleton Isla	58.55	332	P	P	22 51 07.2	+1.0
	baz=116						
I29M	Ogilvie Camp,	58.56	340	P	P	22 51 07.1	+0.8
	baz=128						
M26K	Nabesna, AK	58.57	336	P	P	22 51 07.0	+0.6
	baz=122						
EPYK	Eagle Plains	58.69	341	P	P	22 51 07.1	-0.1
	baz=130						
EYAK	Cordova Ski Ar	58.80	333	P	P	22 51 08.7	+0.7
	baz=118						
N25K	Chitina, Valde	58.81	335	IAmb	IAmb	22 51 11.4	
	comp=Z,10nm,0.8s						
N25K	Chitina, Valde	58.81	335	P	P	22 51 09.1	+0.9
	baz=120,SNR=5.8						
G30M	tAoh Zraii Nji	58.94	342	P	P	22 51 09.5	+0.5
	baz=131						
L26K	Log Cabin Wild	59.03	336	P	P	22 51 10.7	+1.0
	baz=122						
INK	Inuvik	59.09	344	P	P	22 51 10.5	+0.6
	comp=Z,6.9nm,0.8s,baz=125,slow=7.6,SNR=30						
INK				LR	LR	23 18 34.2	
	comp=Z,117nm,18.2s,baz=345,slow=38						
	comp=Z,6.9nm,0.8s						
INK	Inuvik	59.09	344	P	P	22 51 10.0	+0.2
INK				IAmb	IAmb	22 51 11.6	
	comp=Z,11nm,1.0s						
INK	Inuvik	59.09	344	P	P	22 51 10.6	+0.7
	baz=134,SNR=11						
K27K	Chicken	59.09	338	IAmb	IAmb	22 51 23.8	
	comp=Z,9.7nm,1.1s						
K27K	Chicken	59.09	338	P	P	22 51 11.2	+1.2
	baz=123						
EGAK	Eagle	59.18	339	IAmb	IAmb	22 51 22.4	
	comp=Z,26nm,1.9s						
EGAK	Eagle	59.18	339	P	P	22 51 11.4	+0.8
	baz=125						
P23K	Montague Islan	59.28	332	P	P	22 51 12.2	+0.9
	baz=116						
KLU	Klutina	59.31	334	IAmb	IAmb	22 51 14.5	
	comp=Z,10nm,0.8s						
KLU	Klutina	59.31	334	P	P	22 51 12.5	+0.8
	baz=118						
HARP	HAARP	59.43	335	P	P	22 51 13.0	+0.6
	baz=119						
PLCA	Paso Flores	59.45	159	P	P	22 51 16.8	+3.9
	comp=Z,3.0nm,1.0s,baz=288,slow=5.8,SNR=4.4						
PLCA				LR	LR	23 11 32.4	
	comp=Z,74nm,18.8s,baz=196,slow=31						
PLCA	Paso Flores	59.45	159	*e*P	P	22 51 17.8	+5.0
SFJD	Kangerlussuaq	59.47	18	P	P	22 51 11.5	-1.0
	comp=Z,13nm,0.8s,baz=240,slow=5.5,SNR=6.3						
SFJD				LR	LR	23 20 47.1	
	comp=Z,98nm,19.6s,baz=224,slow=40						
	comp=Z,13nm,0.8s						
SFJD	Kangerlussuaq	59.47	18	*e*P	P	22 51 11.4	-1.1
SFJD				IAmb	IAmb	22 51 12.6	
	comp=Z,17nm,1.0s						
DOT	Dot Lake	59.63	337	P	P	22 51 14.7	+0.9
DOT				IAmb	IAmb	22 51 16.4	
	comp=Z,13nm,0.9s						
M24K	Tolsona, Glenn	59.71	335	P	P	22 51 15.4	+1.0
	baz=118						
SCRK	Sand Creek	59.78	337	P	P	22 51 15.9	+1.0
SCRK				IAmb	IAmb	22 51 17.5	
	comp=Z,8.4nm,1.0s						
SCRK	Sand Creek	59.78	337	P	P	22 51 15.1	+0.2
	baz=121,SNR=7.3						
I27K	Kandik River	59.81	339	P	P	22 51 15.9	+0.8
	baz=125						
PAX	Paxson	59.84	336	P	P	22 51 15.6	+0.3
PAX				IAmb	IAmb	22 51 17.5	
	comp=Z,8.6nm,0.9s						
PAX	Paxson	59.84	336	P	P	22 51 15.4	+0.1
	baz=119,SNR=7.0						
RES	Resolute Bay	59.91	360	LR	LR	23 19 08.9	
	comp=Z,64nm,18.7s,baz=15,slow=38						
RES	Resolute Bay	59.91	360	IAmb	IAmb	22 51 16.1	
	comp=Z,10nm,0.8s						
RIDG	Independent Ri	59.98	337	IAmb	IAmb	22 51 18.8	
	comp=Z,14nm,1.0s						
RIDG	Independent Ri	59.98	337	P	P	22 51 16.6	+0.4
	baz=120,SNR=6.7						
SCM	Sheep Creek Mo	60.07	334	P	P	22 51 17.8	+0.9
	baz=117						
A36M	Sachs Harbour	60.08	349	P	P	22 51 16.4	-0.2
	baz=145,SNR=9.5						
H27K	Steamboat Moun	60.14	340	P	P	22 51 19.0	+1.7
	baz=125,SNR=9.4						
I26K	Coal Creek Min	60.18	339	P	P	22 51 18.5	+1.0
I26K				IAmb	IAmb	22 51 19.5	
	comp=Z,21nm,1.8s						
I26K	Coal Creek Min	60.18	339	P	P	22 51 18.0	+0.5
	baz=123						
M23K	Glacier View	60.22	334	P	P	22 51 19.7	+1.9
	baz=116						
SEW	Seward	60.26	332	P	P	22 51 19.8	+1.7
	baz=114						
KNK	Knik Glacier	60.37	333	P	P	22 51 20.0	+1.1
	baz=116						
K24K	Donnelly Dome	60.37	336	P	P	22 51 20.6	+1.8
	baz=119,SNR=7.0						
SML	Sawmill	60.48	334	P	P	22 51 21.1	+1.4
	baz=116						
G27K	Doyon Strip	60.52	340	P	P	22 51 20.5	+0.7
	baz=125						
DY2G	Dye2	60.54	20	*i* P	P	22 51 19.2	-1.0
DY2G				IAmb	IAmb	22 51 19.8	
	comp=Z,21nm,0.9s						
GHO	Glory Hole Cre	60.72	334	P	P	22 51 22.3	+1.0
PMR	Palmer	60.73	333	P	P	22 51 22.1	+0.9
	baz=115						
ILULI	Ilulissat	60.76	16	*e*P	P	22 51 20.5	-0.8
ILULI				IAmb	IAmb	22 51 21.6	
	comp=Z,14nm,1.0s						
RC01	Rabbit Creek A	60.79	333	IAmb	IAmb	22 51 24.8	
	comp=Z,12nm,0.9s						
RC01	Rabbit Creek A	60.79	333	P	P	22 51 23.2	+1.5
	baz=114						
PARB	Paraibuna	60.83	128	*e*P	P	22 51 23.9	+1.3
KDAK	Kodiak Island	60.91	329	LR	LR	23 17 17.5	
	comp=Z,123nm,18.3s,baz=143,slow=36						
WAT1	Susitna Watana	61.02	335	P	P	22 51 24.3	+1.0
	baz=116						
HDA	Harding Lake	61.12	337	IAmb	IAmb	22 51 25.6	
	comp=Z,8.6nm,0.8s						
HDA	Harding Lake	61.12	337	P	P	22 51 24.8	+0.9
	baz=118,SNR=8.0						
PRP	Porcupine Dome	61.14	338	P	P	22 51 25.0	+0.9
	baz=120,SNR=20						
IL31		61.27	337	IAmb	IAmb	22 51 26.8	
	comp=Z,12nm,0.9s						
ILAR	Eielson Array	61.27	337	P	P	22 51 25.5	+0.6
	comp=Z,7.3nm,0.9s,baz=142,slow=4.2,SNR=67						
ILAR				PP	PP	22 53 43.7	+3.9
	comp=Z,1.0nm,0.9s,baz=109,slow=6.9,SNR=3.8						
ILAR				LR	LR	23 20 00.3	
	comp=Z,111nm,18.2s,baz=106,slow=38						
	comp=Z,7.3nm,0.9s						
G26K	Porcupine Rive	61.30	340	P	P	22 51 26.2	+1.2
	baz=123,SNR=6.5						
CAPN	Captain Cook N	61.30	332	P	P	22 51 26.5	+1.4
	baz=112						
E27K	Coleen River	61.30	342	P	P	22 51 26.1	+0.9
	baz=126						
SUA	Susitna One	61.39	333	P	P	22 51 27.0	+1.1
SUA	Susitna One	61.39	333	P	P	22 51 27.5	+1.6
	baz=113,SNR=11						
CCB	Clear Creek Bu	61.56	337	IAmb	IAmb	22 51 37.7	
	comp=Z,6.4nm,1.0s						
CUT	Chulitna	61.56	334	P	P	22 51 28.5	+1.6
	baz=114						
MCK	McKinley	61.58	336	P	P	22 51 27.7	+0.7
MCK				IAmb	IAmb	22 51 29.1	
	comp=Z,9.2nm,0.8s						
MCK	McKinley	61.58	336	P	P	22 51 27.1	0.0
	baz=116,SNR=6.7						
WRH	Wood River Hil	61.58	337	IAmb	IAmb	22 51 28.3	
	comp=Z,5.6nm,0.9s						
POKR	Poker Plat Res	61.64	337	IAmb	IAmb	22 51 29.2	
	comp=Z,7.7nm,0.9s						
POKR	Poker Plat Res	61.64	337	P	P	22 51 28.5	+1.0
	baz=118						
COLA	College	61.68	337	P	P	22 51 28.5	+0.9
	baz=118						
TCOL	CIGO, UAF Yank	61.68	337	P	P	22 51 28.4	+0.8
	baz=118						
O20K	Slope Mountain	61.72	331	P	P	22 51 28.4	+0.3
	baz=111						
NUUG	Nuugaatsiaq	61.81	14	*e*P	P	22 51 28.5	+0.1
NUUG				IAmb	IAmb	22 51 29.3	
	comp=Z,18nm,0.9s						
Q19K	Cape Douglas,	61.81	330	P	P	22 51 29.7	+1.0
	baz=109						
BMAR	Burnt Mountain	61.82	340	P	P	22 51 29.1	+0.5
F26K	Sheenjek River	61.82	341	P	P	22 51 29.7	+1.1
	baz=123						
SPU	Mount Spurr	61.86	332	P	P	22 51 29.7	+0.7
MDM	Murphy Dome	61.86	337	IAmb	IAmb	22 51 29.9	
	comp=Z,3.9nm,0.7s						
RSO	Redoubt South	61.92	331	P	P	22 51 30.4	+0.9
SKT	Skwentna	61.93	333	IAmb	IAmb	22 51 31.6	
	comp=Z,9.6nm,0.8s						
SKT	Skwentna	61.93	333	P	P	22 51 30.7	+1.2
	baz=113,SNR=6.4						
SPCR	Spurr Chakacha	61.94	332	P	P	22 51 30.7	+1.1
	baz=112						
G25K	Bearman Lake	61.98	339	P	P	22 51 30.7	+1.1
	baz=120						
BWN	Browne	61.98	336	P	P	22 51 30.1	+0.3
TRF	Thorofare Moun	62.01	335	P	P	22 51 31.4	+1.3
	baz=115,SNR=9.1						
NEA2	Nenana	62.02	336	P	P	22 51 30.0	0.0
NEA2				IAmb	IAmb	22 51 41.9	
	comp=Z,4.7nm,0.8s						
NEA2	Nenana	62.02	336	P	P	22 51 30.5	+0.5
	baz=116						
UPNV	Upernavik	62.07	12	*i* P	P	22 51 30.6	+0.5
UPNV				IAmb	IAmb	22 51 30.7	
	comp=Z,16nm,1.0s						
H24K	Noodor Dome	62.15	338	P	P	22 51 32.0	+1.1
	baz=118						
GUA01	Guaratinga, BA	62.16	118	*e*P	P	22 51 33.5	+1.9
F25K	Christian Rive	62.25	340	P	P	22 51 32.1	+0.6
	baz=121						
KTH	Kantishna Hill	62.31	335	P	P	22 51 32.0	0.0
KTH				IAmb	IAmb	22 51 34.9	
	comp=Z,11nm,0.8s						
I23K	Minto, Yukon-K	62.38	337	P	P	22 51 33.5	+1.2
	baz=116,SNR=17						
Q18K	Katmai Hardscr	62.40	329	P	P	22 51 33.3	+0.6
	baz=108						
G24K	Hadweenzic Riv	62.42	339	P	P	22 51 33.4	+0.8
	baz=119						
E25K	Arctic Village	62.51	341	P	P	22 51 34.8	+1.5
	baz=122,SNR=6.3						
BPAW	Bear Paw Mtn.	62.56	336	P	P	22 51 33.6	0.0
BPAW				IAmb	IAmb	22 51 35.2	
	comp=Z,9.0nm,0.8s						
BPAW	Bear Paw Mtn.	62.56	336	P	P	22 51 33.8	+0.2
	baz=114,SNR=12						
O19K	Port Alsworth	62.56	331	P	P	22 51 34.5	+0.9
	baz=109						
PPLA	Purkeypile	62.57	334	P	P	22 51 34.1	+0.3
	baz=112						
M20K	Styx River	62.60	333	IAmb	IAmb	22 51 36.2	
	comp=Z,6.5nm,0.8s						
M20K	Styx River	62.60	333	P	P	22 51 34.8	+0.8
	baz=111						
ISOG	Isortoq, Green	62.64	23	*i* P	P	22 51 33.2	-0.8
ISOG				IAmb	IAmb	22 51 34.7	
	comp=Z,49nm,1.1s						
Q17K	Contact Creek	62.73	328	P	P	22 51 35.3	+0.4
	baz=107						
CAST	Castle Rocks	62.73	335	IAmb	IAmb	22 51 36.1	
	comp=Z,12nm,0.9s						
CAST	Castle Rocks	62.73	335	P	P	22 51 35.0	+0.2
	baz=113,SNR=14						
P18K	Big Mountain,	62.74	330	P	P	22 51 35.1	+0.2
	baz=108						
H23K	Yukon River	62.75	338	P	P	22 51 35.2	+0.3
	baz=116						
C27K	Jago River	62.76	343	P	P	22 51 35.8	+1.0
	baz=124						
R17K	Ugashik Creek	62.80	328	P	P	22 51 36.0	+0.6
	baz=106						
N19K	Bonanza Creek	62.84	331	P	P	22 51 36.6	+1.0
	baz=109						
MLY	Manley	62.85	337	P	P	22 51 35.8	+0.2
	baz=115,SNR=25						
O18K	Koktuh Hills	62.87	330	P	P	22 51 36.7	+1.0
	baz=108						
F24K	Squaw Lake	62.96	340	P	P	22 51 36.8	+0.5
	baz=119						
CHUM	Lake Minchumin	63.01	335	P	P	22 51 37.5	+0.9
	baz=113						
L20K	Farewell, AK	63.14	333	P	P	22 51 37.5	0.0
	baz=111						
M19K	Big River Lodg	63.16	333	IAmb	IAmb	22 51 39.2	
	comp=Z,6.7nm,0.8s						
M19K	Big River Lodg	63.16	333	P	P	22 51 38.6	+0.9
	baz=110						
ANGG	Ammassalik, Gr	63.17	23	*i* P	P	22 51 36.4	-1.2
TULEG	Thule	63.20	6	*i* P	P	22 51 37.7	+0.1
TULEG				IAmb	IAmb	22 51 38.5	
	comp=Z,11nm,1.0s						
KULLO	Kullorsuaq	63.21	10	*i* P	P	22 51 37.7	-0.1
KULLO				IAmb	IAmb	22 51 38.3	
	comp=Z,29nm,1.1s						
P17K	Kvichak River	63.27	329	P	P	22 51 39.1	+0.7
	baz=107						
C26K	Camden Bay	63.27	343	P	P	22 51 38.6	+0.4
	baz=123						
PPT	Papeete	63.29	241	LR	LR	23 10 57.6	
	comp=Z,77nm,20.8s,baz=357,slow=28						
G23K	Bananza Creek	63.32	338	P	P	22 51 39.1	+0.4
	baz=116						
D25K	Kavik River	63.39	342	P	P	22 51 40.0	+0.9
	baz=121						
I21K	Tanana	63.39	336	IAmb	IAmb	22 51 40.8	
	comp=Z,7.8nm,1.0s						
I21K	Tanana	63.39	336	P	P	22 51 40.1	+1.0
	baz=114						
R16K	Pilot Point	63.40	327	P	P	22 51 40.7	+1.5
	baz=105						
E24K	Your Creek	63.43	340	P	P	22 51 40.0	+0.6
	baz=119,SNR=6.8						
L19K	White Mountain	63.47	333	P	P	22 51 40.1	+0.5
	baz=110						
CHGN	Chignik	63.54	326	P	P	22 51 40.3	+0.2
	baz=103						
K20K	Telida	63.54	334	P	P	22 51 39.9	-0.2
K20K				IAmb	IAmb	22 51 41.6	
	comp=Z,10nm,0.8s						
K20K	Telida	63.54	334	P	P	22 51 40.3	+0.2
	baz=111,SNR=14						
COLD	Coldfoot	63.61	339	P	P	22 51 41.6	+1.1
COLD				IAmb	IAmb	22 51 43.3	
	comp=Z,7.5nm,1.0s						
COLD	Coldfoot	63.61	339	P	P	22 51 41.6	+1.1
	baz=116						
O17K	Koliganek Bris	63.76	330	P	P	22 51 42.1	+0.5
	baz=106						
E23K	Chandalar	63.79	340	P	P	22 51 42.2	+0.3
	baz=118						
H21K	Melozitna Rive	63.90	337	IAmb	IAmb	22 51 43.7	
	comp=Z,4.9nm,0.8s						
H21K	Melozitna Rive	63.90	337	P	P	22 51 42.7	+0.3
	baz=113						
G22K	Bettles	63.94	338	P	P	22 51 43.4	+0.7
	baz=115						
P16K	Nushagak River	63.99	329	P	P	22 51 44.2	+1.1
	baz=105						
ICESG	Greenland Ices	64.06	19	*i* P	P	22 51 43.4	-0.4
ICESG				IAmb	IAmb	22 51 43.9	
	comp=Z,50nm,0.8s						
O16K	Kokwok River B	64.19	330	P	P	22 51 45.4	+0.9
	baz=105,SNR=6.4						
TTA	Tatalina	64.22	333	IAmb	IAmb	22 51 45.4	
	comp=Z,5.9nm,0.9s						
TTA	Tatalina	64.22	333	P	P	22 51 45.4	+0.7
	baz=109						
C24K	Franklin Bluff	64.30	342	P	P	22 51 46.1	+1.1
	baz=119						
IMAR	Indian Mountai	64.38	337	P	P	22 51 45.2	-0.4
F22K	John River	64.43	339	P	P	22 51 47.4	+1.5
	baz=115						
G21K	Allakaket	64.50	338	P	P	22 51 47.3	+0.9
	baz=113						
D23K	Nanushuk River	64.56	341	P	P	22 51 48.3	+1.6
	baz=117						
E22K	Anaktuvuk Pass	64.57	340	P	P	22 51 47.8	+1.0
	baz=115						
N16K	Nishlik Lake	64.75	330	P	P	22 51 49.3	+1.1
	baz=105						
F21K	Alatna River	64.77	338	P	P	22 51 49.1	+0.9
	baz=113						
SUMG	Summit	66.09	16	*i* P	P	22 51 56.9	-0.1
SUMG				IAmb	IAmb	22 51 58.0	
	comp=Z,18nm,1.0s						
NEEM	North Greenlan	66.33	9	*i* P	P	22 51 58.5	+0.1
NEEM				IAmb	IAmb	22 51 59.3	
	comp=Z,24nm,1.0s						
RDOG	Red Dog Mine	68.45	338	P	P	22 52 12.7	+1.1
	baz=104						
ANM	Nome	68.66	334	P	P	22 52 13.3	+0.4
ANM				IAmb	IAmb	22 52 24.8	
	comp=Z,18nm,1.8s						
ANM	Nome	68.66	334	P	P	22 52 14.5	+1.5
	baz=101						
BORG	Borgarnes	69.48	26	LR	LR	23 21 43.6	
	comp=Z,73nm,18.7s,baz=267,slow=35						
TNA	Tin City	69.89	335	P	P	22 52 22.2	+1.6
	baz=99,SNR=5.6						
SCO	Scoresbysund	70.29	20	*i* P	P	22 52 23.5	+0.6
DBG	Daneborg	71.57	16	*i* P	P	22 52 30.8	+0.1
DBG				IAmb	IAmb	22 52 32.3	
	comp=Z,4.8nm,0.6s						
DAG	Danmarks Havn	72.43	14	*i* P	P	22 52 35.0	-0.8
DAG				IAmb	IAmb	22 52 36.7	
	comp=Z,15nm,0.6s						
USHA	Ushuaia	72.72	165	LR	LR	23 20 33.9	
	comp=Z,485nm,18.4s,baz=234,slow=32						
NOR	Nord	73.67	9	*i* P	P	22 52 43.3	+0.2
NOR				IAmb	IAmb	22 52 44.0	
	comp=Z,9.6nm,1.0s						
EKA	Eskdalemuir Ar	78.63	36	LR	LR	23 24 56.2	
	comp=Z,79nm,21.8s,baz=294,slow=34						
SPITS	Spitsbergen Ar	79.77	11	LR	LR	23 32 51.2	
	comp=Z,180nm,18.0s,baz=232,slow=39						
BILL	Bilibino	79.92	338	P	P	22 53 18.7	+0.2
BILL				IAmb	IAmb	22 53 20.5	
	comp=Z,9.8nm,0.7s						
PAB	San Pablo	80.71	52	P	P	22 53 22.8	-0.6
ESDC	Sonseca Array	80.97	51	P	P	22 53 22.9	-1.9
	comp=Z,3.8nm,0.9s,baz=290,slow=5.3,SNR=18						
ESDC				LR	LR	23 27 51.0	
	comp=Z,106nm,18.1s,baz=282,slow=35						
	comp=Z,3.8nm,0.9s						
MDT	Midelt	81.88	58	LR	LR	23 25 08.6	
	comp=Z,61nm,19.1s,baz=166,slow=32						
DOU	Dourbes	84.40	40	*d*P	P	22 53 42.7	+0.3
DOU				*d*PcP	PcP	22 53 46.2	+0.2
BMRD	Maredsous	84.44	40	*d*P	P	22 53 42.1	-0.4
NB2	NORSAR Subarra	84.52	28	P	P	22 53 43.5	+0.7
	comp=Z,40nm,1.7s,baz=291,slow=5.3						
NB2	NORSAR Subarra	84.52	28	P	P	22 53 43.5	+0.7
	baz=291,slow=5.3						
NOA	NORSAR Array B	84.52	28	P	P	22 53 43.9	+1.1
	comp=Z,3.9nm,0.7s,baz=291,slow=5.2,SNR=21						
NOA				LR	LR	23 30 28.4	
	comp=Z,64nm,19.6s,baz=275,slow=35						
	comp=Z,3.9nm,0.7s						
BGES	Gesves	84.62	39	*d*P	P	22 53 41.9	-1.6
NC405	NORSAR Array S	84.72	28	P	P	22 53 44.1	+0.4
BCLA	Clavier	84.74	39	*d*P	P	22 53 43.6	-0.5
	comp=Z,8.8nm,1.5s						
RCHB	Rochefort	84.77	40	*d*P	P	22 53 43.5	-0.8
MEM	Membach	85.11	39	*d*P	P	22 53 46.0	+0.1
BHOU	Houvegnez	85.19	39	*d*P	P	22 53 46.1	-0.2
WLF	Walferdange	85.48	40	P	P	22 53 47.9	0.0
WLF	Walferdange	85.48	40	*d*P	P	22 53 48.7	+0.9
WLF	Walferdange	85.48	40	*e*P	P	22 53 47.8	0.0
	comp=Z,27nm,1.1s,baz=291,slow=5.1						
IBBN	Ibbenburen	85.64	37	*e*P	P	22 53 49.2	+0.7

	comp=Z,37nm,1.0s,baz=291,slow=5.1						
AHRW	Bad Neuenahr-A	85.78	39	*e*P	P	22 53 49.7	+0.5
	comp=Z,33nm,1.0s,baz=291,slow=5.1						
HFS	Hagfors	85.99	29	LR	LR	23 31 39.8	
	comp=Z,104nm,18.1s,baz=285,slow=35						
ARCES	ARCESS Array B	86.09	18	P	P	22 53 50.0	-0.5
	comp=Z,3.9nm,0.7s,baz=296,slow=3.9,SNR=10						
ARCES				LR	LR	23 33 39.0	
	comp=Z,105nm,18.6s,baz=278,slow=37						
	comp=Z,3.9nm,0.7s						
KASTN	Kahler Asten	86.38	38	*e*P	P	22 53 52.6	+0.4
	comp=Z,14nm,1.0s,baz=291,slow=5.1						
RETH	Rethem/Aller,	86.42	36	*e*P	P	22 53 53.7	+1.3
	comp=Z,31nm,0.9s,baz=291,slow=5.1						
BSEG	Bad Segeberg	86.55	35	*e*P	P	22 53 54.2	+1.3
	comp=Z,24nm,1.0s,baz=291,slow=5.1						
TNS	Taunus Mts	86.72	39	*e*P	P	22 53 54.2	+0.2
	comp=Z,32nm,0.8s,baz=291,slow=5.1						
NRDL	Niedersach Rie	86.93	36	*e*P	P	22 53 55.9	+1.2
	comp=Z,18nm,0.9s,baz=291,slow=5.1						
GTTG	Gottingen	87.18	37	*e*P	P	22 53 57.3	+1.2
	comp=Z,30nm,1.1s,baz=291,slow=5.1						
BFO	Black Forest	87.27	41	*e*P	P	22 53 56.9	+0.2
	comp=Z,11nm,1.1s,baz=291,slow=5.1						
CLZ	Clausthal	87.31	37	*e*P	P	22 53 57.7	+0.8
	comp=Z,16nm,1.0s,baz=291,slow=5.1						
STU	Stuttgart	87.66	40	*e*P	P	22 53 58.7	+0.2
	baz=291,slow=5.1						
DBIC	Dimbokro	87.78	84	P	P	22 53 59.3	-0.4
	comp=Z,4.8nm,0.9s,baz=261,slow=8.4,SNR=4.7						
DBIC				LR	LR	23 31 19.5	
	comp=Z,34nm,20.0s,baz=240,slow=34						
	comp=Z,4.8nm,0.9s						
DAVA	Damuels	88.60	41	*i* PcP	P	22 54 03.6	+0.4
	comp=Z,10nm,0.9s						
UBR	Ueberruh	88.61	41	*e*P	P	22 54 03.7	+0.6
	baz=291,slow=5.1						
CLL	Collm	89.04	37	*e*P	P	22 54 05.0	+0.1
	comp=Z,4.0nm,0.7s						
CLL				*e*sP	sP	22 54 15.0	+1.1
CLL				AMS	AMS	23 33 00.0	
	comp=Z,100nm,18.8s						
TIXI	Tiksi	89.04	347	LR	LR	23 40 56.5	
	comp=Z,64nm,18.2s,baz=180,slow=40						
FUORN	Ofenpass-Fuorn	89.08	42	IAmb	IAmb	22 54 17.4	
	comp=Z,8.5nm,1.1s						
RETA	Reutte	89.09	41	*e*P	P	22 54 05.6	+0.2
	comp=Z,11nm,1.2s						
NKC	Novy Kostel	89.12	38	*e*P	P	22 54 05.7	+0.3
FETA	Feichten	89.24	41	*i* PcP	P	22 54 07.2	+1.0
	comp=Z,4.2nm,0.8s						
MOTA	Moosalm	89.36	41	*e*PcP	P	22 54 07.4	+0.6
	comp=Z,4.4nm,0.9s						
WATA	Walderalm	89.66	41	*i* PcP	P	22 54 08.8	+0.7
	comp=Z,4.4nm,1.3s						
BRG	Berggiesshubel	89.75	37	*e*P	P	22 54 08.1	-0.2
BRG				Amp		22 54 09.1	
	comp=Z,3.4nm,0.9s						
BRG	Berggiesshubel	89.75	37	P	P	22 54 15.3	+7.0
BRG				Amp		22 54 19.7	
	comp=Z,7.1nm,1.0s						
BRG				Amp		23 34 00.0	
	comp=Z,0.2nm,24.3s						
CTI	Castel Tesino	90.18	42	IAmb	IAmb	22 54 21.6	
	comp=Z,6.3nm,0.9s						
KHC	Kasperske Hory	90.22	39	P	P	22 54 10.2	-0.4
KHC				IAmb	IAmb	22 54 20.5	
	comp=Z,5.6nm,1.0s						
KHC	Kasperske Hory	90.22	39	*e*P	P	22 54 11.5	+0.9
GEC2	GERESS Array S	90.41	39	P	P	22 54 11.8	+0.3
GEC2				IAmb	IAmb	22 54 21.7	
	comp=Z,7.9nm,1.2s						
GERES	GERESS Array B	90.41	39	P	P	22 54 11.5	-0.1
	comp=Z,2.4nm,0.9s,baz=289,slow=4.1,SNR=8.9						
GERES				LR	LR	23 31 39.5	
	comp=Z,119nm,19.2s,baz=268,slow=34						
	comp=Z,2.4nm,0.9s						
ABTA	Abfaltersbach	90.47	41	*e*PcP	P	22 54 12.6	+0.7
	comp=Z,5.5nm,1.0s						
CIMO	Cimolais	90.59	42	P	P	22 54 11.5	-0.9
CIMO				IAmb	IAmb	22 54 22.5	
	comp=Z,9.0nm,1.1s						
FINES	FINESS Array B	90.73	24	P	P	22 54 13.3	+0.7
	comp=Z,2.1nm,0.7s,baz=323,slow=2.1,SNR=9.5						
FINES				LR	LR	23 34 31.3	
	comp=Z,58nm,20.0s,baz=302,slow=35						
	comp=Z,2.1nm,0.7s						
STAL	STALIGIAL	90.79	42	IAmb	IAmb	22 54 22.9	
	comp=Z,8.6nm,1.0s						
BIOA	Bad Ischl, Aus	90.82	40	*i* PcP	P	22 54 14.1	+0.6
	comp=Z,1.2nm,0.5s						
OSSC	Osservatorio P	90.83	44	P	P	22 54 11.4	-2.1
OSSC				IAmb	IAmb	22 54 22.2	
	comp=Z,9.6nm,1.2s						
KBA	Koelnbreinsper	90.88	41	*e*PcP	P	22 54 14.5	+0.7
	comp=Z,5.0nm,1.2s						
MOA	Molln	91.15	40	*e*PcP	P	22 54 15.6	+0.7
	comp=Z,4.5nm,1.0s						
OSTC	Ostas	91.20	37	*e*P	P	22 54 15.5	+0.4
DPC	Dobruska-Polom	91.35	37	*e*P	P	22 54 16.2	+0.4
MURB	Monte Urbino	91.80	44	IAmb	IAmb	22 54 26.9	
	comp=Z,7.8nm,1.0s						
OBKA	Obir	91.86	41	*i* PcP	PcP	22 54 19.1	-0.1
	comp=Z,8.3nm,1.3s						
KRUC	Moravsky	91.94	38	*e*P	P	22 54 14.7	-3.8
VRAC	Vranov	91.95	38	LR	LR	23 37 02.4	
	comp=Z,77nm,18.1s,baz=310,slow=37						
VRAC	Vranov	91.95	38	*e*P	P	22 54 15.2	-3.4
CONA	Conrad Observa	92.10	39	*e*PcP	PcP	22 54 20.6	+0.4
	comp=Z,11nm,1.4s						
SOKA	Soboth	92.10	41	*e*PcP	P	22 54 19.9	+0.5
	comp=Z,4.1nm,1.0s						
KEST	Kesra	92.19	52	P	P	22 54 19.9	-0.2
	comp=Z,4.4nm,0.9s,baz=292,slow=3.9,SNR=6.5						
	comp=Z,4.4nm,0.9s						
MORC	Moravsky Berou	92.31	37	*e*P	P	22 54 17.4	-2.9
TORD	Torodi Ar. Bea	92.34	76	P	P	22 54 18.6	-2.5
	comp=Z,0.8nm,0.8s,baz=304,slow=4.8,SNR=4.8						
	comp=Z,0.8nm,0.8s						
RONA	Rosalia, Austr	92.46	39	*e*PcP	PcP	22 54 22.2	+0.4
	comp=Z,4.4nm,0.9s						
TAM	Tamanrasset	93.12	66	P	P	22 54 24.6	-0.2
TAM				IAmb	IAmb	22 54 36.9	
	comp=Z,4.6nm,1.2s						
VYHS	Vyhne	93.64	38	*e*P	P	22 54 27.6	+1.2
YAK	Yakutsk	96.02	341	LR	LR	23 46 07.4	
	comp=Z,53nm,18.0s,baz=322,slow=41						
NRIK	Noril'sk	96.10	359	LR	LR	23 46 00.3	
	comp=Z,20nm,18.8s,baz=352,slow=40						
DIVS	Divibare	96.36	41	P	P	22 54 38.1	-1.0
DIVS				IAmb	IAmb	22 54 50.5	
	comp=Z,5.9nm,1.0s						
AKASG	Malin Array Be	98.28	32	P	P	22 54 46.4	-1.0
	comp=Z,0.3nm,0.4s,baz=295,slow=4.5,SNR=1.2						
AKASG				LR	LR	23 41 05.6	
	comp=Z,74nm,18.4s,baz=336,slow=37						
	comp=Z,0.3nm,0.4s						
MLR	Muntele Rosu	99.35	38	LR	LR	23 40 20.5	
	comp=Z,90nm,18.1s,baz=322,slow=36						
KURBB	Kurchatov Arra	114.58	5	PKP	PKiKP	22 59 49.8	-0.3
	comp=Z,0.5nm,0.3s,baz=356,slow=2.1,SNR=5.4						
SONM	Songino Array	115.00	345	PKP	PKiKP	22 59 50.8	-0.3
	comp=Z,0.3nm,0.7s,baz=150,slow=3.2,SNR=2.6						
MKAR	Makanchi Array	118.64	3	PKP	PKPdf	22 59 57.2	-0.9
	comp=Z,0.7nm,0.7s,baz=17,slow=2.3,SNR=9.1						
MKAR				PP	PP	23 01 12.0	-2.5
	comp=Z,0.5nm,0.8s,baz=36,slow=5.4,SNR=4.2						
HHC	Hu-ho-hao-te	119.69	338	*e*P	PKiKP	23 00 07.3	+6.8
WMQ	Urumqi	121.67	358	*e*P	PKiKP	23 00 07.4	+3.2
AAK	Ala-Archa	121.95	10	PKP	PKPdf	23 00 04.8	+0.1
	comp=Z,0.5nm,0.5s,baz=332,slow=3.1,SNR=4.6						
BOSA	Boshof	122.69	115	PKP	PKPdf	23 00 06.2	-0.2
	comp=Z,2.1nm,0.7s,baz=312,slow=4.8,SNR=4.7						
NJ2	Nanjing	123.64	326	*e*P	PKiKP	23 00 10.9	+2.6
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
XAN	Xi'an	126.67	336	*e*PKP	PKiKP	23 00 27.9	+14
XAN				sPKP		23 00 42.3	
WRA	Warramunga Arr	133.43	256	PKP	PKPdf	23 00 27.3	+0.3
	comp=Z,0.9nm,0.7s,baz=75,slow=1.2,SNR=17						
ASAR	Alice Springs	133.82	251	PKP	PKPdf	23 00 27.1	-0.6
	comp=Z,0.2nm,0.3s,baz=91,slow=1.9,SNR=4.5						
PZH	PanZhiHua	136.11	339	PKP	PKiKP	23 00 34.5	+0.8
CMAR	Chiang Mai Arr	144.50	338	PKP	PKPab	23 00 45.9	+0.4
	comp=Z,3.1nm,0.5s,baz=342,slow=3.7,SNR=26						

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*SOME **20** 22:41:32.5, 39°.27N×75°.68E, h10^{km}*
*KRNET **20** 22:41:33.9±0.1, 39°.37N×75°.79E, mb3.2*
*NNC **20** 22:41:33.9±1.3, 39°.34N×75°.63E, h2^{km}±9^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=9.4km s-min=6.8km az=154.0*
ISC 20 22:41:37.7±1.8**, 39°.38N**±0°.10×**75°.73E**±0°.05**, h10**^{km}**, n47, σ0^{s}.95**/62**, 19C-13D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	2.06	6	⇑*e*P	Pn	22 42 11.9	-0.8
	baz=4.0						
NRN				⇑*e*S	Sn	22 42 39.5	+0.9
	baz=4.0						
OHH	Osh	2.54	298	⇑*i*P	Pn	22 42 19.1	+0.1
	baz=97						
OHH				⇑*i*S	Sn	22 42 52.1	+2.0
	baz=97						
ARLS	Aral	2.70	337	⇓*e*P	Pn	22 42 20.6	-0.7
	baz=36						
ARLS				⇓*i*S	Sn	22 42 55.2	+1.0
	baz=36						
ULHL	Ulahol	2.89	8	⇑*e*P	Pn	22 42 23.7	-0.3
	baz=7.0						
ULHL				⇑*e*S	Sn	22 42 59.6	+0.7
	baz=7.0						
KDJ	Kajisay	2.96	21	⇑*e*P	Pn	22 42 24.5	-0.4
	baz=21						
KDJ				⇑*e*S	Sn	22 43 01.2	+0.7
	baz=21						
UCH	Uchtor	2.99	342	⇑*e*P	Pn	22 42 25.2	-0.4
	baz=42						
UCH				⇑*e*S	Sn	22 43 02.7	+1.0
	baz=42						
DRK	Karamyk	3.05	273	⇑*i*P	Pn	22 42 26.0	-0.3
	baz=73						
DRK				⇑*i*S	Sn	22 43 04.5	+1.5
	baz=73						
BOOM	Boomskoye usch	3.11	3	⇑*i*P	Pn	22 42 26.3	-0.7
	baz=2.0						
BOOM				⇑*i*S	Sn	22 43 05.1	+0.8
	baz=2.0						
AML	Almayashu	3.15	331	⇓*i*P	Pn	22 42 27.6	-0.2
	baz=31						
AML				⇓*i*S	Sn	22 43 06.6	+0.9
	baz=31						
KBK	Karagaybulak	3.32	350	⇑*e*P	Pn	22 42 29.7	-0.3
	baz=49						
KBK				⇑*e*S	Sn	22 43 10.4	+0.8
	baz=49						
AAK	Ala-Archa	3.38	344	⇓*e*P	Pn	22 42 30.7	-0.1
	baz=44						
AAK				⇓*e*S	Sn	22 43 11.9	+0.8
	baz=44						
KST	Kastek	3.66	3	Pg	Pb	22 42 42.3	-0.3
	5.4nm,0.6s						
KST				Lg	Lg	22 43 32.7	
	11nm,0.8s						
KST	Kastek	3.66	3	*e*Pg	Pb	22 42 42.3	-0.3
	5.4nm,0.6s						
KST				*e*Lg	Lg	22 43 32.7	
	11nm,0.8s						
ANVS	Anan'yevo	3.70	23	⇑*i*P	Pn	22 42 34.3	-0.8
	baz=22						
ANVS				⇑*i*S	Sn	22 43 18.7	-0.1
	baz=22						
IZV	Izvestkoviy	3.71	10	Pg	Pb	22 42 43.4	-0.1
	2.3nm,0.4s						
IZV				Lg	Lg	22 43 34.6	
	12nm,0.3s						
IZV	Izvestkoviy	3.71	10	*e*Pg	Pb	22 42 43.4	-0.1
	2.3nm,0.4s						
IZV				*e*Lg	Lg	22 43 34.6	
	12nm,0.3s						
TNSS	Tian-Shan	3.76	14	Pg	Pb	22 42 44.0	-0.5
	4.2nm,0.3s						
TNSS				Lg	Lg	22 43 35.6	
	4.2nm,1.1s						
TNSS	Tian-Shan	3.76	14	*e*Pg	Pb	22 42 44.0	-0.5
	4.2nm,0.3s						
TNSS				*e*Lg	Lg	22 43 35.6	
	4.2nm,1.1s						
MTBS	Maitube	3.78	8	Pg	Pb	22 42 43.5	-1.0
	2.9nm,0.5s						
MTBS				Lg	Lg	22 43 34.7	
	8.3nm,0.4s						
MTBS	Maitube	3.78	8	*e*Pg	Pb	22 42 43.5	-1.0
	2.9nm,0.5s						
MTBS				*e*Lg	Lg	22 43 34.7	
	8.3nm,0.4s						
DGS	Degeres	3.86	0	Pg	Pb	22 42 46.6	+0.7
	5.0nm,1.0s						
DGS				Lg	Lg	22 43 39.9	
	7.1nm,0.5s						
DGS	Degeres	3.86	0	*e*Pg	Pb	22 42 46.6	+0.7
	5.0nm,1.0s						
DGS				*e*Lg	Lg	22 43 39.9	
	7.1nm,0.5s						
MRKS	Merke	3.86	331	Pg	Pb	22 42 44.1	-1.8
	1.1nm,0.3s						
MRKS				Lg	Lg	22 43 35.7	
	7.5nm,0.5s						
MRKS	Merke	3.86	331	*e*Pg	Pb	22 42 44.1	-1.8
	1.1nm,0.3s						
MRKS				*e*Lg	Lg	22 43 35.7	
	7.5nm,0.5s						
MDOK	Medeo	3.91	14	⇓Pg	Pb	22 42 45.8	-1.0
	3.4nm,0.5s						
MDOK				Pg	Pg	22 42 46.1	-6.5
	3.4nm,0.5s						
MDOK				⇓Lg	Lg	22 43 38.3	
	12nm,0.6s						
MDOK				Lg	Lg	22 43 39.2	
	11nm,0.7s						
MDOK	Medeo	3.91	14	*e*Pg	Pb	22 42 46.1	-0.7
	3.4nm,0.5s						
MDOK				*e*Lg	Lg	22 43 39.2	
	11nm,0.7s						
MNAS	Manas	3.95	323	⇓*i*P	Pn	22 42 39.0	+0.5
	baz=22						
MNAS				⇓*i*S	Sn	22 43 26.0	+1.0
	baz=22						
KOTS	Kotyrbulak	3.98	15	Pg	Pb	22 42 48.4	+0.2
	2.2nm,0.3s						
KOTS				Lg	Lg	22 43 43.1	
	31nm,0.5s						
KOTS	Kotyrbulak	3.98	15	*e*Pg	Pb	22 42 48.4	+0.2
	2.2nm,0.3s						
KOTS				*e*Lg	Lg	22 43 43.1	
	31nm,0.5s						
SATY	Saty	4.19	28	*e*Pg	Pb	22 42 51.3	-0.2
	2.9nm,0.6s						
SATY				*e*Lg	Lg	22 43 47.7	
	17nm,1.4s						
KRBS	Karabastau	4.31	359	Pg	Pb	22 42 55.4	+1.8
	1.9nm,0.3s						
KRBS				Lg	Lg	22 43 55.1	
	6.0nm,0.9s						
KRBS	Karabastau	4.31	359	*e*Pg	Pb	22 42 55.4	+1.8
	1.9nm,0.3s						
KRBS				*e*Lg	Lg	22 43 55.1	
	6.0nm,0.9s						
KTBS	Karatobe	4.38	9	Pg	Pb	22 42 54.9	+0.1
	2.5nm,0.6s						
KTBS				Lg	Lg	22 43 54.2	
	10nm,0.5s						
KTBS	Karatobe	4.38	9	*e*Pg	Pb	22 42 54.9	+0.1
	2.5nm,0.6s						
KTBS				*e*Lg	Lg	22 43 54.2	
	10nm,0.5s						
KURS	Kuram	4.49	23	Pg	Pb	22 42 57.0	+0.3
	2.0nm,0.0s						
KURS				Lg	Lg	22 43 57.9	
	7.4nm,0.7s						
KURS	Kuram	4.49	23	*e*Pg	Pb	22 42 57.0	+0.3
	2.0nm,0.0s						
KURS				*e*Lg	Lg	22 43 57.9	
	7.4nm,0.7s						
UZB	Uzynbulak	4.50	32	Pg	Pb	22 42 56.9	0.0
	2.7nm,0.3s						
UZB				Lg	Lg	22 43 57.8	
	6.8nm,0.2s						
UZB	Uzynbulak	4.50	32	*e*Pg	Pb	22 42 56.9	0.0
	2.7nm,0.3s						
UZB				*e*Lg	Lg	22 43 57.8	
	6.8nm,0.2s						
KUU	Kurty	4.53	6	Pg	Pb	22 42 58.1	+0.8
	1.0nm,0.3s						
KUU				Lg	Lg	22 43 59.8	
	9.0nm,0.5s						
KUU	Kurty	4.53	6	*e*Pg	Pb	22 42 58.1	+0.8
	1.0nm,0.3s						
KUU				*e*Lg	Lg	22 43 59.8	
	9.0nm,0.5s						
CHKK	Chushkaly	4.57	11	Pg	Pb	22 42 58.3	+0.4
	0.9nm,0.1s						
CHKK				Lg	Lg	22 44 00.1	
	6.2nm,0.4s						
CHKK	Chushkaly	4.57	11	*e*Pg	Pb	22 42 58.3	+0.4
	0.9nm,0.1s						
CHKK				*e*Lg	Lg	22 44 00.1	
	6.2nm,0.4s						
DZA	Taraz	4.83	318	Pg	Pb	22 43 02.0	-0.4
	12nm,0.1s						
DZA				Lg	Lg	22 44 06.3	
	30nm,0.8s						
DZA	Taraz	4.83	318	*e*Pg	Pb	22 43 02.0	-0.4
	12nm,0.1s						
DZA				*e*Lg	Lg	22 44 06.3	
	30nm,0.8s						
PDGK	Podgornoye	4.85	34	Pg	Pb	22 43 02.9	+0.1
	0.5nm,0.3s						
PDGK				Lg	Lg	22 44 08.2	
	4.3nm,1.1s						
ARXS	Arharly	5.07	17	*e*Pg	Pb	22 43 07.7	+1.1
	1.7nm,0.5s						
ARXS				*e*Lg	Lg	22 44 15.9	
	3.1nm,0.6s						
KK31	Karatay Array	5.41	315	⇓Pn	Pn	22 42 55.3	-3.2
	0.1nm,0.3s,baz=127,slow=12,SNR=5.0						
KK31				⇑Pg	Pb	22 43 13.4	+1.1
	0.7nm,0.5s,baz=139,slow=16,SNR=4.1						
KK31				⇓Sn	Sn	22 43 59.3	-1.6
	0.8nm,0.5s,baz=116,slow=11,SNR=4.3						
KK31				⇓Lg	Lg	22 44 25.2	
	5.0nm,0.9s						

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*IDC **20** 22:43:47.7±1.4, 28°.90N×58°.22E, h0^{km}, mb3.5/11, mbtmp3.5/13, ML2.9/2, MS2.9/1, Error ellipse: s-maj=29.8km s-min=22.8km az=164.0*
*DSN **20** 22:43:47.0±1.9, 29°.57N×58°.22E, h15^{km}, ML3.6/10, Error ellipse: s-maj=28.7km s-min=17.3km az=107.0*
*TEH **20** 22:43:49.1, 29°.15N×58°.42E, h12^{km}±12^{km}, ML4.3*
*OMAN **20** 22:43:53.1±0.3, 29°.11N×58°.58E, h10^{km}±12^{km}, mb4.5/8, ml4.0/8, Error ellipse: s-maj=5.9km s-min=3.1km az=233.0*
ISC 20 22:43:50.0±0.8**, 29°.15N**±0°.04×**58°.43E**±0°.05**, h8**^{km}±5^{km}**, n91, σ1^{s}.87**/116**, mb3.6**/11**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBAM	BAM	0.03	123	Pg	Pg	22 43 51.3	-0.3
KBAM				Sg	Sg	22 43 53.4	+0.7
CHMN	Cheshme madani	1.05	313	Pg	Pb	22 44 07.9	-2.8
CHMN				Sg	Sb	22 44 21.7	-3.1
KHNJ	Kahnooj	1.36	208	Pg	Pn	22 44 13.2	-2.1
NGRK	Negar Kerman	1.56	289	Pg	Pn	22 44 16.9	-1.6
NGRK				Sg	Sn	22 44 36.9	-2.2
TVBK	TV Kerman	1.67	300	Pg	Pn	22 44 19.4	-0.6
KHGB	Koh Gabri	2.09	306	Pn	Pn	22 44 26.6	+1.0
ZHDN	Zahedan	2.10	83	Pn	Pn	22 44 27.2	+1.6
ZRDN	Zarand Kerman	2.44	318	Pn	Pn	22 44 31.6	+1.1
NHDN	Nehbandan	2.64	32	Pn	Pn	22 44 34.6	+1.5
GENO	Geno	2.65	229	Pn	Pn	22 44 35.0	+1.9
BSRN	Basiran	2.87	12	Pn	Pn	22 44 37.6	+1.3
IKOO	Kooshah	3.30	8	Pn	Pn	22 44 43.1	+0.8
JASK	Jask - Hormozg	3.31	189	P	Pn	22 44 43.6	+1.4
	SNR=112						
JASK				S	Sn	22 45 23.3	+1.6
JASK	Jask - Hormozg	3.31	189	Pn	Pn	22 44 43.4	+1.2
IBAF	Bafgh	3.47	315	Pn	Pn	22 44 46.0	+1.5
SHME	Shamm	3.69	214	P	Pn	22 44 49.1	+1.7
SHME				S	Sn	22 45 34.9	+3.7
SHME	Shamm	3.69	214	P	Pn	22 44 50.8	+3.4
	SNR=15						
BANOM	Banah	3.73	211	P	Pn	22 44 49.6	+1.7
BANOM				S	Sn	22 45 35.2	+3.1
BANOM	Banah	3.73	211	P	Pn	22 44 50.3	+2.3
	SNR=29						
BANOM				S	Sn	22 45 37.7	+5.6
ITEG	Tejag	3.75	4	Pn	Pn	22 44 49.4	+1.0
IDAH	Dahanechah	3.79	19	Pn	Pn	22 44 50.2	+1.3
LAR1	LAR	3.86	249	Pn	Pn	22 44 51.4	+1.6
SRVN	Saravan	3.91	115	Pn	Pn	22 44 53.1	+2.5
CHBR	Chabahar	3.98	152	Pn	Pn	22 44 51.1	-0.4
TPRV	Parvadeh(Tabas	4.14	339	Pn	Pn	22 44 54.6	+0.8
IMON	Monand	4.17	14	Pn	Pn	22 44 56.6	+2.4
MASF	Masafi	4.27	209	P	Pn	22 44 58.2	+2.8
MASF				S	Sn	22 45 48.6	+3.0
MDH	Madha	4.28	207	P	Pn	22 44 55.1	-0.3
MDH	Madha	4.28	207	P	Pn	22 44 55.8	+0.3
MDH				S	Sn	22 45 44.7	-0.9
MSFE	Esma-Masafi	4.28	209	P	Pn	22 44 56.0	+0.4
AFRZ	Afriz	4.29	7	Pn	Pn	22 44 56.5	+0.7
JHRM	Jahrom	4.30	263	Pn	Pn	22 44 57.2	+1.3
NGCH	Negor - Chabah	4.48	147	P	Pn	22 44 58.1	-0.1
	SNR=29						
NGCH				S	Sn	22 45 45.3	-5.3
NGCH	Negor - Chabah	4.48	147	Pn	Pn	22 44 58.2	-0.1
TKDS	Koohdasht(Taba	4.59	346	Pn	Pn	22 45 00.7	+0.8
UOSS	Minazif	4.63	206	P	Pn	22 44 59.1	-1.3
UOSS	Minazif	4.63	206	P	Pn	22 45 02.1	+1.8
UOSS				S	Sn	22 45 56.4	+1.9
SHRT	Shahrakht	4.76	19	Pn	Pn	22 45 03.7	+1.6
HATD	Hatta, Dubai	4.77	206	P	Pn	22 45 01.5	-0.8
QIR1	Qir	4.77	263	Pn	Pn	22 45 03.5	+1.2
ASHO	Ashiyiah	4.92	206	P	Pn	22 45 06.3	+1.9
ASHO	Ashiyiah	4.92	206	P	Pn	22 45 07.6	+3.1
ASHO				S	Sn	22 46 04.3	+2.6
LMD1	Lamerd	4.98	250	Pn	Pn	22 45 07.3	+2.2
TNSJ	Nastanj	5.04	343	Pn	Pn	22 45 06.9	+0.8
FAQ	Al Faqa, Dubai	5.06	211	P	Pn	22 45 07.7	+1.4
FAQ	Al Faqa, Dubai	5.06	211	P	Pn	22 45 08.2	+1.9
SOHO	SOHO	5.28	199	P	Pn	22 45 08.7	-0.5
SOHO	SOHO	5.28	199	P	Pn	22 45 09.1	-0.1
SOHO				S	Sn	22 46 10.6	+0.4
ASUD	Al Ashush, Dub	5.29	212	P	Pn	22 45 12.1	+2.8
ASUD				S	Sn	22 46 13.1	+2.6
ALNE	Al Ain	5.61	206	P	Pn	22 45 15.4	+1.6
ALNE	Al Ain	5.61	206	P	Pn	22 45 16.3	+2.5
ALNE				S	Sn	22 46 20.5	+2.0
BIDO	Bidbid	5.61	183	P	Pn	22 45 12.9	-0.9
BIDO				S	Sn	22 46 16.8	-1.8
HOQ	Hoqain	5.63	190	P	Pn	22 45 13.2	-1.0
HOQ				S	Sn	22 46 16.8	-2.3
ANAR	Anarak	5.70	316	Pn	Pn	22 45 16.3	+1.2
WSAR	Wadi Sarin	5.89	178	Pn	Pn	22 45 17.4	-0.2
	5.9nm,0.3s,baz=9.9,slow=15,SNR=104						
WSAR				Sn	Sn	22 46 22.3	-3.1
	5.6nm,0.3s,baz=355,slow=1.7,SNR=7.6						
WSAR	Wadi Sarin	5.89	178	P	Pn	22 45 18.2	+0.6
WSAR				S	Sn	22 46 23.3	-2.1
ARQ	Araqi	6.04	197	P	Pn	22 45 21.7	+2.0
ARQ				S	Sn	22 46 31.2	+2.1
SMDO	Samad	6.08	183	P	Pn	22 45 20.2	-0.1
SMDO				S	Sn	22 46 28.7	-1.4
KLNJ	Kolanjah	6.21	289	Pn	Pn	22 45 23.8	+1.5
AHBU	AHRAM	6.25	269	Pn	Pn	22 45 24.0	+1.4
DSBU	Dashti - Bushe	6.34	265	Pn	Pn	22 45 24.6	+0.7
BSY	Bisya	6.47	190	P	Pn	22 45 27.7	+2.0
BSY				S	Sn	22 46 41.4	+1.6
WBK	Wadi Bani Khal	6.53	176	P	Pn	22 45 25.7	-0.8
WBK				S	Sn	22 46 38.6	-2.6
JMDO	Jabal Madar	6.76	183	P	Pn	22 45 30.4	+0.8
JMDO				S	Sn	22 46 45.8	-1.0
UMZA	Um Al Zommool	7.05	205	P	Pn	22 45 33.8	+0.2
UMZA				S	Sn	22 46 51.9	-2.1
GHWR	Ruwais	7.17	225	P	Pn	22 45 36.0	+0.9
KRSH	Karshahi	7.20	313	Pn	Pn	22 45 37.5	+1.7
SBZV	Sabzevar	7.25	355	Pn	Pn	22 45 38.5	+2.0
SHMA	Al-Shehemyia	7.39	245	P	Pn	22 45 39.7	+1.4
MZR	Muzera	7.57	217	S	Sn	22 47 06.8	+0.1
SAKB	Bahrain	7.68	248	P	Pn	22 45 42.9	+0.7
SAKB				S	Sn	22 47 08.2	-1.3
MHTO	MHTO	8.14	183	P	Pn	22 45 48.5	0.0
MHTO				S	Sn	22 47 19.9	-0.8
AMIS	Naft Sefid	8.28	290	Pn	Pn	22 45 52.1	+1.6
GEYT	Alibeck	8.76	358	Pn	Pn	22 45 59.4	+2.3
	0.4nm,0.3s,baz=185,slow=16,SNR=5.3						
	1.6nm,0.6s						
WHFO	Wadi Hawf	11.96	202	P	Pn	22 46 42.4	+1.4

RAYN	Ar Rayn	12.87	247	P	Pn	22 46 48.6	-4.8
RAYN	Ar Rayn	12.87	247	P	Pn	22 46 50.5	-2.9
AAK	Ala-Archa	18.68	40	P	Pn	22 48 11.9	+2.8
	baz=237,slow=17,SNR=1.3						
	0.1nm,0.3s						
ASF	Jabal al Asfar	18.76	285	P	P	22 48 10.4	+0.7
	1.0nm,0.3s,baz=101,slow=7.8,SNR=2.3						
AKTO	Aktyubinsk	21.26	359	P	P	22 48 37.4	+0.8
	1.7nm,0.8s,baz=5.7,slow=22,SNR=4.8						
	1.7nm,0.8s						
BRTR	Keskin Array B	22.94	304	LR	LR	22 58 03.9	
	comp=Z,36nm,21.9s,baz=146,slow=37						
BVAR	Borovoye Array	25.43	17	P	P	22 49 18.4	+0.3
	1.6nm,0.6s,baz=198,slow=8.5,SNR=7.0						
	1.6nm,0.6s						
MKAR	Makanchi Array	25.61	40	P	P	22 49 21.7	+1.9
	0.3nm,0.9s,baz=224,slow=8.1,SNR=2.8						
	0.3nm,0.9s						
AKASG	Malin Array Be	30.73	323	P	P	22 50 05.6	0.0
	0.2nm,0.2s,baz=128,slow=8.7,SNR=5.4						
	0.2nm,0.2s						
ZALV	Zalesovo Beam	31.34	30	P	P	22 50 12.7	+1.9
	0.3nm,0.3s,baz=220,slow=13,SNR=2.2						
	0.3nm,0.3s						
FINES	FINESS Array B	38.73	336	P	P	22 51 14.5	+0.1
	1.4nm,0.8s,baz=160,slow=8.7,SNR=1.8						
	1.4nm,0.8s						
GERES	GERESS Array B	39.25	313	P	P	22 51 18.5	-0.6
	0.3nm,0.6s,baz=125,slow=8.6,SNR=4.1						
	0.3nm,0.6s						
SONM	Songino Array	41.17	49	P	P	22 51 37.7	+2.6
	0.1nm,0.3s,baz=250,slow=8.6,SNR=2.4						
	0.1nm,0.3s						
TORD	Torodi Ar. Bea	54.77	266	P	P	22 53 18.3	-2.3
	0.6nm,0.6s,baz=58,slow=7.1,SNR=4.8						
	0.6nm,0.6s						
WRA	Warramunga Arr	87.94	114	P	P	22 56 39.6	-1.2
	0.5nm,0.8s,baz=316,slow=4.1,SNR=4.9						
	0.5nm,0.8s						
YKA	Yellowknife Ar	88.51	357	P	P	22 56 41.4	-1.5
	0.1nm,0.4s,baz=345,slow=4.0,SNR=2.7						
	0.1nm,0.4s						

IDC ***20*** *22:55:53.3±1.3, 9°.33N×126°.07E, h0^{km}, mb3.6/5, mbtmp3.6/5, MS3.8/3, Error ellipse: s-maj=89.3km s-min=24.8km az=69.0*

MAN ***20*** *22:55:56.7, 9°.33N×125°.54E, h19^{km}, mb4.8, ML3.7, MS3.7*

ISC 20 22:55:55.9±1.3**, 9°.27N**±0°.02×**125°.55E**±0°.04**, h13**^{km}±9^{km}**, n34, σ1^{s}.83**/40**, mb3.6**/5**, MS3.9**/3**, 9C-9D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	Butuan	0.31	168	⇑ eP	Pb	22 56 03.0	-0.3
BUTP				eS	Sn	22 56 11.0	-1.6
SCPH	Surigao	0.51	353	⇓ eP	Pb	22 56 07.1	+0.3
SCPH				eS	Sn	22 56 17.7	+0.1
GLSP	General Luna,	0.76	48	⇑ eP	Pg	22 56 11.5	+0.8
GLSP				eS	Sn	22 56 23.1	-0.7
TASP	Talacogon, Agu	0.85	163	⇑ eP	Pn	22 56 13.3	-0.4
TASP				eS	Sn	22 56 33.8	+7.8
MSLP	Maasin	1.10	321	⇓ eP	Pb	22 56 15.1	-1.7
MSLP				eS	Sb	22 56 31.1	+0.1
MSLP	Maasin	1.10	321	⇓ eP	Pg	22 56 27.5	+10
CGP	Cagayan de Oro	1.18	226	⇑ iP	Pn	22 56 17.1	-1.0
CGP				i S	Sb	22 56 32.4	-0.9
GHBP	Garcia Hernand	1.27	286	⇓ iP	Pn	22 56 18.1	-1.3
BIPH	Bislig	1.34	144	⇓ iP	Pn	22 56 19.8	-0.6
BIPH				i S	Sg	22 56 39.7	+0.4
TABP	Talibon, Bohol	1.46	304	⇓ iP	Pn	22 56 20.6	-1.3
TABP				i S	Sg	22 56 56.4	+14
CDOP	Cateel, Davao	1.72	149	⇑ iP	Pb	22 56 27.0	-0.4
CDOP				i S	Sg	22 56 50.0	-1.3
TBP	Tagbilaran	1.72	284	⇓ eP	Pn	22 56 25.0	-0.6
TBP				i S	Sn	22 56 48.0	+0.5
LLP	Lapu-Lapu	1.88	304	eP	Pn	22 56 27.6	-0.2
LLP				eS	Pn	22 56 27.6	-0.2
DCPH	Dipolog City	2.28	253	⇓ iP	Pn	22 56 33.5	+0.1
DCPH				i S	Sb	22 57 04.1	-1.1
SNPH	Sibulan	2.29	272	eP	Pn	22 56 35.1	+1.6
SNPH				eS	Sb	22 57 04.2	-1.3
KCP	Kidapawan	2.29	192	⇑ iP	Pb	22 56 35.6	-1.7
KCP				i S	Sb	22 57 04.5	-1.0
CTBH	Cotabato--PC H	2.41	213	⇑ eP	Pb	22 56 39.3	0.0
CTBH				i S	Sg	22 57 14.8	+1.2
PAGZ	Pagadian	2.57	237	⇑ eP	Pn	22 56 38.5	+1.1
PAGZ				eS	Sn	22 57 10.7	+2.2
CNP	Catarman	3.34	345	⇓ eP	Pb	22 56 53.5	-1.5
CNP				eS	Sb	22 57 37.4	+1.9
RCP	Roxas	3.58	310	⇑ iP	Pn	22 56 54.9	+3.7
WRA	Warramunga Arr	30.29	163	P	P	23 02 05.7	-1.4
	0.3nm,0.7s,baz=350,slow=9.9,SNR=2.0						
	0.3nm,0.7s						
ASAR	Alice Springs	33.74	166	P	P	23 02 35.9	-1.5
	0.4nm,0.6s,baz=350,slow=8.7,SNR=2.4						
	0.4nm,0.6s						
BRDH	Bariadhala	35.12	296	LR	LR	23 17 36.6	
	comp=Z,267nm,18.1s,baz=302,slow=37						
H11S3	WAKE ISLAND Hy	40.89	72	T	T	23 46 44.0	
	baz=261						
H11S1	WAKE ISLAND Hy	40.90	72	T	T	23 46 42.6	
	baz=261						
H11S2	WAKE ISLAND Hy	40.90	73	T	T	23 46 43.7	
	baz=261						
H11N1	WAKE ISLAND Hy	41.24	71	T	T	23 47 18.8	
	baz=257						
H11N2	WAKE ISLAND Hy	41.25	71	T	T	23 47 15.0	
	baz=257						
H11N3	WAKE ISLAND Hy	41.26	71	T	T	23 47 11.1	
	baz=257						
MKAR	Makanchi Array	52.40	324	P	P	23 05 08.1	+0.1
	0.6nm,0.8s,baz=126,slow=7.3,SNR=4.6						
	0.6nm,0.8s						
KURBB	Kurchatov Arra	56.49	326	P	P	23 05 39.5	+1.8
	0.3nm,0.5s,baz=126,slow=7.1,SNR=1.1						
	0.3nm,0.5s						
ARU	Arti	69.67	327	LR	LR	23 37 22.4	
	comp=Z,46nm,21.6s,baz=350,slow=36						
GNI	Garni	77.08	309	LR	LR	23 48 44.5	
	comp=Z,54nm,18.3s,baz=312,slow=41						
YKA	Yellowknife Ar	94.95	24	P	P	23 09 17.2	-0.7
	0.2nm,0.5s,baz=289,slow=3.9,SNR=3.7						
	0.2nm,0.5s						

JMA ***20*** *23:14:54.4±0.1, 24°.7N±0°.2×121°.8E±0°.3, h68^{km}±1^{km}, MV2.6/10, TAIWAN REGION*

TAP ***20*** *23:14:54.7, 24°.64N×121°.84E, h65^{km}, ML3.3, B*

ISC 20 23:14:55.6±1.3**, 24°.66N**±0°.03×**121°.88E**±0°.02**, h62**^{km}±5^{km}**, n85, σ0^{s}.80**/148**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	Suao	0.06	213	i P	Pn	23 15 04.9	+0.1
	baz=152						
TWC				eS	Sn	23 15 11.6	+0.2
	baz=152						
NDS	Dongshan	0.15	261	P	Pn	23 15 05.3	+0.2
	baz=265						
NDS				S	Sn	23 15 12.7	+0.7
	baz=265						
ILA	Ilan	0.16	312	eP	Pn	23 15 05.6	+0.4
	baz=328						
ILA				eS	Sn	23 15 13.5	+1.5
	baz=328						
EGS		0.19	14	P	Pn	23 15 05.7	+0.4
	baz=26						
NTC	Toucheng	0.20	346	eP	Pn	23 15 05.4	+0.1
	baz=357						
NTC				eS	Sn	23 15 13.5	+1.2
	baz=357						
TWE	Neicheng	0.21	288	i P	Pn	23 15 05.4	+0.1
	baz=290						
TWE				eS	Sn	23 15 13.4	+1.1
	baz=290						
EWUT	Wuta	0.23	204	P	Pn	23 15 05.4	-0.1
	baz=196						
EWUT				eS	Sn	23 15 12.9	+0.3
	baz=196						
ENA	Nanau	0.26	209	i P	Pn	23 15 05.5	-0.2
	baz=201						
ENA				S	Sn	23 15 13.8	+0.9
	baz=201						
FUSB	Fushanzhiwuyua	0.29	291	P	Pn	23 15 05.8	-0.2
	baz=297						
FUSB				eS	Sn	23 15 13.1	-0.4
	baz=297						
ENTT	Nioudou	0.29	267	P	Pn	23 15 05.8	-0.1
	baz=269						
ENTT				eS	Sn	23 15 13.6	+0.3
	baz=269						
TIPB	Shuangxi	0.32	351	P	Pn	23 15 06.1	0.0
	baz=348						
TIPB				S	Sn	23 15 13.8	0.0
	baz=348						
LATG	Datong	0.35	250	i P	Pn	23 15 06.1	-0.3
	baz=257						
LATG				S	Sn	23 15 14.5	+0.3
	baz=257						
TWB1	Santiao Chiao	0.36	15	P	Pn	23 15 06.2	-0.2
	baz=30						
TWB1				S	Sn	23 15 14.2	-0.1
	baz=30						
NWLT	Wulai	0.37	289	P	Pn	23 15 06.3	-0.2
	baz=293						
NWLT				eS	Sn	23 15 13.9	-0.5
	baz=293						
TWA	Mucha	0.42	320	P	Pn	23 15 06.8	-0.2
	baz=332						
TWA				S	Sn	23 15 15.2	-0.1
	baz=332						
SXI1	Grass Mountain	0.44	359	P	Pn	23 15 06.9	-0.3
	baz=4.0						
SXI1				eS	Sn	23 15 15.1	-0.5
	baz=4.0						
NHDH	Xindian Distri	0.45	313	P	Pn	23 15 07.0	-0.2
	baz=309						
NHDH				S	Sn	23 15 15.6	-0.1
	baz=309						
YHNB	Yeheng	0.46	272	P	Pn	23 15 07.1	-0.4
YHNB	Yeheng	0.46	272	P	Pn	23 15 07.1	-0.4
	baz=274						
YHNB				eS	Sn	23 15 15.5	-0.5
	baz=274						
NSK	Sanguang	0.48	272	P	Pn	23 15 07.1	-0.5
	baz=274						
NSK				eS	Sn	23 15 15.7	-0.6
	baz=274						
TATO	Taipei	0.48	312	P	Pn	23 15 07.1	-0.4
NNSB	Datong	0.51	244	i P	Pn	23 15 07.6	-0.4
	baz=249						
NNSB				eS	Sn	23 15 15.8	-1.1
	baz=249						
NNSH	Datong	0.51	244	P	Pn	23 15 07.8	-0.2
	baz=249						
NNSH				eS	Sn	23 15 16.9	-0.1
	baz=249						
NNS	Nan Shan	0.51	245	P	Pn	23 15 07.7	-0.3
	baz=250						
NNS				S	Sn	23 15 16.2	-0.8
	baz=250						
TAP	Taipei	0.51	318	eP	Pn	23 15 06.7	-1.2
	baz=315						
NACB	Ninganchiao	0.55	209	P	Pn	23 15 07.4	-0.9
NACB	Ninganchiao	0.55	209	P	Pn	23 15 07.1	-1.1
	baz=215						
NACB				eS	Sn	23 15 17.3	-0.1
	baz=215						
ETL	Fush Village	0.55	206	eP	Pn	23 15 07.8	-0.6
	baz=202						
YM01	YM01	0.56	330	P	Pn	23 15 08.0	-0.5
	baz=341						
YM01				eS	Sn	23 15 17.5	-0.3
	baz=341						
ETLH	Xiulin Townshi	0.58	219	P	Pn	23 15 08.2	-0.5
	baz=224						
ETLH				eS	Sn	23 15 17.8	-0.4
	baz=224						
TWS1	Kuangyinshan	0.61	316	i P	Pn	23 15 08.6	-0.3
	baz=313						
TWS1				S	Sn	23 15 19.0	+0.3
	baz=313						
ANP	Anpu	0.62	328	eP	Pn	23 15 08.7	-0.5
	baz=332						
TWD	Chiawan	0.63	205	eP	Pn	23 15 08.3	-0.8
	baz=210						
TWD				eS	Sn	23 15 18.8	-0.3
	baz=210						
NTST	Danshui	0.64	322	eP	Pn	23 15 09.1	-0.2
	baz=333						
NTST				eS	Sn	23 15 19.7	+0.4
	baz=333						
TWY	Chenhua	0.67	337	P	Pn	23 15 09.3	-0.3
	baz=341						
TWY				eS	Sn	23 15 20.4	+0.6
	baz=341						
NFF	Wufeng Townshi	0.70	268	eP	Pn	23 15 09.4	-0.6
	baz=273						
NFF				eS	Sn	23 15 19.9	-0.6
	baz=273						
NCU	National Centr	0.70	296	eP	Pn	23 15 09.6	-0.5
	baz=298						
NCU				eS	Sn	23 15 20.9	+0.2
	baz=298						
NCUH	Zhongli	0.70	296	eP	Pn	23 15 09.6	-0.4
	baz=298						
NCUH				eS	Sn	23 15 20.6	-0.1
	baz=298						
TWT	Tachien	0.76	238	P	Pn	23 15 11.0	+0.1
	baz=230						
TWT				eS	Sn	23 15 22.9	+0.8
	baz=230						
WHF	Hehuan Shan	0.76	228	P	Pn	23 15 10.6	-0.6
	baz=221						
WHF				eS	Sn	23 15 22.4	-0.1
	baz=221						
TDCB	Techi	0.77	239	eP	Pn	23 15 10.6	-0.4
	baz=237						
LIOB	Emei	0.79	269	P	Pn	23 15 10.5	-0.6
	baz=269						
LIOB				eS	Sn	23 15 21.3	-1.2
	baz=269						
NSTT	Nanjuang	0.80	268	P	Pn	23 15 10.6	-0.7
	baz=268						
NSTT				S	Sn	23 15 22.1	-0.6
	baz=268						
SBCB	Hsinchu	0.83	280	eP	Pn	23 15 11.1	-0.5
	baz=280						
SBCB				eS	Sn	23 15 23.1	-0.2
	baz=280						
HSN	Hsinchu	0.84	280	eP	Pn	23 15 10.7	-1.0
	baz=283						
HSN				eS	Sn	23 15 21.6	-2.0
	baz=283						
CHGB	Renai	0.88	228	P	Pn	23 15 12.2	-0.2
	baz=226						
CHGB				eS	Sn	23 15 24.2	-0.5
	baz=226						
WHP	Taichung City	0.93	246	P	Pn	23 15 13.2	+0.3
	baz=255						
WHP				eS	Sn	23 15 26.1	+0.3
	baz=255						
ESL	Shilin	0.93	206	eP	Pn	23 15 11.5	-1.4
	baz=203						
ESL				eS	Sn	23 15 23.7	-2.0
	baz=203						
OWD	Renai	0.95	223	eP	Pn	23 15 13.0	-0.2
	baz=214						
WUSB	Renai	0.96	227	P	Pn	23 15 13.1	-0.2
	baz=225						
WUSB				eS	Sn	23 15 26.3	-0.2
	baz=225						
JYNG	Yonagunijimaku	0.99	102	P	Pn	23 15 13.3	-0.3
JYNG				eS	Sn	23 15 27.0	+0.1
NMLH	Miaoli	1.00	263	eP	Pn	23 15 13.3	-0.4
	baz=263						
NMLH				eS	Sn	23 15 26.5	-0.7
	baz=263						
YOJ	Yonaguni jima	1.05	100	P	Pn	23 15 14.4	+0.1
YOJ	Yonaguni jima	1.05	100	P	Pn	23 15 14.2	-0.2
YOJ				eS	Sn	23 15 28.2	0.0
YOJ	Yonaguni jima	1.05	100	eP	Pn	23 15 14.0	-0.3
	baz=100						
YOJ				eS	Sn	23 15 27.4	-0.8
	baz=100						
NSY	Sanyi	1.05	257	P	Pn	23 15 14.2	-0.2
	baz=256						
NSY				eS	Sn	23 15 28.5	+0.2
	baz=256						
TWQ1	Liyutan	1.06	253	eP	Pn	23 15 14.0	-0.5
	baz=252						
TWQ1				eS	Sn	23 15 28.2	-0.3
	baz=252						
EGFH	Guangfu	1.07	203	eP	Pn	23 15 14.3	-0.3
	baz=206						
EGFH				eS	Sn	23 15 27.0	-1.7
	baz=206						
WCS	Beigang Elemen	1.07	236	P	Pn	23 15 14.9	+0.3
	baz=244						
WCS				eS	Sn	23 15 28.6	-0.1
	baz=244						
VWDT	VWDT	1.12	217	P	Pn	23 15 15.2	-0.1
	baz=209						
VWDT				eS	Sn	23 15 29.8	-0.2
	baz=209						
SMLT	Sun Moon Lake	1.18	230	eP	Pn	23 15 16.7	+0.5
	baz=219						
TYC	Yuchr	1.20	232	eP	Pn	23 15 17.6	+1.2
	baz=223						
TYC				eS	Sn	23 15 33.8	+2.0
	baz=223						
SSLB	Suanglung	1.21	225	P	Pn	23 15 17.2	+0.6
SSLB	Suanglung	1.21	225	P	Pn	23 15 17.0	+0.4
	baz=223						
SSLB				eS	Sn	23 15 32.7	+0.5
	baz=223						
HGSD	Ruisui	1.23	200	eP	Pn	23 15 16.4	-0.4
	baz=206						
HGSD				eS	Sn	23 15 32.7	+0.1
	baz=206						
EHY	Hungye	1.25	204	eP	Pn	23 15 15.3	-1.9
	baz=202						
EHY				eS	Sn	23 15 30.8	-2.4
	baz=202						
WHYT	Xinyi Township	1.34	225	eP	Pn	23 15 18.9	+0.6
	baz=223						
WHYT				eS	Sn	23 15 36.8	+1.6
	baz=223						
YULB	Yu-li	1.37	203	P	Pn	23 15 18.7	+0.1
YULB	Yu-li	1.37	203	eP	Pn	23 15 17.4	-1.2
	baz=201						
ALS	Alishan	1.51	221	eP	Pn	23 15 21.7	+1.0
	baz=229						
ALS				eS	Sn	23 15 41.2	+1.6
	baz=229						
CHN5	Tsauling	1.52	226	eP	Pn	23 15 21.1	+0.3
	baz=235						
CHN5				eS	Sn	23 15 41.8	+2.1
	baz=235						
FULB	Fuli	1.55	200	eP	Pn	23 15 21.2	+0.2
	baz=205						
FULB				eS	Sn	23 15 39.8	-0.4
	baz=205						
EHD	Haiduan	1.62	203	eP	Pn	23 15 20.5	-1.5
	baz=200						
IRIF	Iriomote-Funau	1.71	100	P	Pn	23 15 23.0	-0.3
IRIF				eS	Sn	23 15 44.1	-0.1
CHN4	Tsaushan	1.75	222	eP	Pn	23 15 25.4	+1.5
	baz=221						
CHN4				eS	Sn	23 15 48.0	+2.8
	baz=221						
EDH	Donghe	1.76	198	eP	Pn	23 15 22.6	-1.2
	baz=195						
TPUB	Ta-pu	1.77	221	eP	Pn	23 15 25.3	+1.2
	baz=230						
STYH	Taoyuan	1.79	215	eP	Pn	23 15 25.1	+0.8
	baz=205						
WTP	Ta-pu	1.82	220	eP	Pn	23 15 25.9	+1.1
	baz=229						
HATJ	Hateruma jima	1.85	108	P	Pn	23 15 25.3	+0.2
TWK	Hsinying	1.88	223	eP	Pn	23 15 26.8	+1.2
	baz=220						
CHN1	Nanshi	1.92	221	eP	Pn	23 15 27.8	+1.7
	baz=230						
JKRS	Kuro-shima	1.98	102	P	Pn	23 15 27.0	+0.1
JKRS				S	Sn	23 15 51.2	+0.6
JIJ	Ishigaki jima	2.08	98	P	Pn	23 15 27.8	-0.4
JIJ				eS	Sn	23 15 52.3	-0.7
JISG	Ishigakijimahi	2.21	91	P	Pn	23 15 29.9	-0.1
JISG				eS	Sn	23 15 56.9	+0.6

IDC 20 23:27:53.6±312.0**, 37°.43N**×**137°.66E, h0**^{km}**, Error ellipse: s-maj=147.2km s-min=63.1km az=134.0, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I30JP	ISUMI INFRASON	3.01	134	I	I	23 46 20.0	
	0.1nm,0.7s,baz=314,slow=326,SNR=1.6						
I45RU	USSURIYSK INFR	8.02	329	i		00 17 10.0	
	baz=140,slow=338,SNR=0.9						
I44RU	PETROPAVLOVSK	20.98	35	i		01 37 10.0	
	baz=234,slow=331,SNR=2.7						

IDC ***20*** *23:42:36.6±0.7, 32°.17S×178°.29W, h0^{km}, mb4.2/6, mbtmp4.2/9, ML4.0/3, MS3.8/19, Error ellipse: s-maj=25.8km s-min=21.4km az=125.0*

NEIC ***20*** *23:42:37.5±2.7, 32°.27S±0°.07×178°.0W±0°.2, h10^{km}±1^{km}, mb4.5/18, Error ellipse: s-maj=25.5km s-min=10.6km az=99.0*

WEL ***20*** *23:42:39.1±0.7, 32°S±10°×17°9W±2°7, h33^{km}, M4.5/18, mB4.9/11, ML5.3/20, MLv5.0/18, Mw(mB)4.2/11, Error ellipse: s-maj=0.0km s-min=0.0km az=109.4, confirmed*

ISC 20 23:42:37.7±0.5**, 32°.25S**±0°.05×**178°.3W**±0°.1**, h10**^{km}**, n117, σ1^{s}.97**/117**, mb4.4**/15**, MS3.9**/19**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.99	6	P	Pn	23 43 22.7	-2.4
GLKZ				S	Sn	23 43 56.4	-4.6
RAO	Raoul Island	3.00	6	Pn	Pn	23 43 24.5	-0.7
	47nm,0.3s,baz=11,slow=22,SNR=5.3						
RAO				Sn	Sn	23 43 57.6	-3.7
	174nm,0.3s,baz=282,slow=22,SNR=3.3						
	233nm,0.3s						
RAO	Raoul Island	3.00	6	Pn	Pn	23 43 24.0	-1.3
RAO				Sn	Sn	23 44 01.0	-0.3
RIZ	Raoul Island	3.01	6	P	Pn	23 43 23.8	-1.5
RIZ				S	Sn	23 43 55.9	-5.6
MXZ	Matakaoa Point	6.00	207	Pn	Pn	23 44 07.3	+0.9
MXZ	Matakaoa Point	6.00	207	P	Pn	23 44 04.0	-2.5
MXZ				S	Sn	23 45 14.1	-1.1
WMGZ	Waiomatatini S	6.18	205	P	Pn	23 44 08.1	-1.0
WMGZ				S	Sn	23 45 19.3	-0.6
PKGZ	Pakihiroa	6.37	207	P	Pn	23 44 09.3	-2.3
PKGZ				S	Sn	23 45 22.7	-1.8
HAZ	Te Kaha	6.38	209	P	Pn	23 44 10.2	-1.4
HAZ				S	Sn	23 45 24.7	+0.2
PUZ	Puketiti	6.47	205	P	Pn	23 44 14.4	+1.4
PUZ				S	Sn	23 45 24.4	-2.3
RUGZ	Raukumara Rang	6.60	209	P	Pn	23 44 14.0	-0.8
RUGZ				S	Sn	23 45 30.1	0.0
TWGZ	Tauwhareparae	6.66	206	P	Pn	23 44 14.0	-1.6
TWGZ				S	Sn	23 45 29.0	-2.6
CNGZ	Carnagh Statio	6.85	204	P	Pn	23 44 16.1	-2.1
TKGZ	Te Karaka	6.94	206	P	Pn	23 44 19.3	-0.1
TKGZ				S	Sn	23 45 35.9	-2.5
MWZ	Matawai	6.97	208	P	Pn	23 44 18.9	-1.0
MWZ				S	Sn	23 45 38.2	-1.1
URZ	Urewera	7.08	211	Pn	Pn	23 44 20.6	-0.8
	3.7nm,0.3s,baz=337,slow=5.0,SNR=19						
URZ				Sn	Sn	23 45 40.1	-1.8
	8.9nm,0.3s,baz=300,slow=1.5,SNR=23						
	12nm,0.4s						
URZ	Urewera	7.08	211	P	Pn	23 44 21.0	-0.4
URZ				S	Sn	23 45 39.3	-2.7
RIGZ	Rimuhau	7.21	205	P	Pn	23 44 22.9	-0.2
SNGZ	Shannon Statio	7.43	207	P	Pn	23 44 26.4	+0.1
SNGZ				S	Sn	23 45 48.9	-1.7
RTZ	Ruatahuna	7.44	210	Pn	Pn	23 44 25.8	-0.5
RTZ	Ruatahuna	7.44	210	P	Pn	23 44 25.6	-0.8
RTZ				S	Sn	23 45 48.2	-2.6
RAHZ	Arahi	7.65	208	P	Pn	23 44 29.7	+0.5
RAHZ				S	Sn	23 45 53.4	-2.6
RAHZ	Arahi	7.65	208	P	Sn	23 45 55.0	-0.9
MTHZ	Maungataniwha	7.70	210	P	Pn	23 44 29.8	0.0
MTHZ				S	Sn	23 45 54.6	-2.5
MTHZ	Maungataniwha	7.70	210	P	Sn	23 45 55.9	-1.2
WHHZ	Waihua	7.73	207	P	Sn	23 45 55.7	-2.2
NMHZ	Naumai	7.92	209	P	Pn	23 44 32.9	0.0
NMHZ				S	Sn	23 46 00.9	-1.7
NMHZ	Naumai	7.92	209	P	Sn	23 45 59.9	-2.7
ARHZ	Aropaoanui	7.98	207	P	Sn	23 46 01.7	-2.4
BKZ	Black Stump Fm	8.11	210	Pn	Pn	23 44 34.8	-0.7
BKZ	Black Stump Fm	8.11	210	P	Pn	23 44 34.9	-0.6

BKZ				S	Sn	23 46 05.1	-2.1
BKZ	Black Stump Fm	8.11	210	P	Sn	23 46 02.8	-4.4
MCHZ	McNeill Hill	8.26	208	P	Pn	23 44 36.7	-0.8
MCHZ				S	Sn	23 46 08.5	-2.4
MCHZ	McNeill Hill	8.26	208	P	Sn	23 46 08.4	-2.4
CKHZ	Cape Kidnapper	8.30	206	P	Sn	23 46 07.8	-4.0
KWHZ	Kaweka Forest	8.35	209	P	Pn	23 44 38.3	-0.6
KWHZ	Kaweka Forest	8.35	209	P	Sn	23 46 09.7	-3.5
NTVZ	North Tongarir	8.42	214	P	Pn	23 44 40.6	+0.7
TMVZ	Te Maari	8.42	214	P	Pn	23 44 40.2	+0.4
OTVZ	Oturere	8.47	214	P	Pn	23 44 40.6	-0.1
KAHZ	Kahuranaki	8.49	206	P	Sn	23 46 11.9	-4.7
BHHZ	Black Hill Sta	8.56	211	P	Pn	23 44 41.4	-0.3
MOVZ	Moawhango	8.63	212	P	Sn	23 46 15.1	-5.0
WNVZ	Wahianoa	8.64	213	P	Sn	23 46 18.5	-1.9
PXZ	Pawanui	8.70	205	P	Sn	23 46 14.1	-7.7
BFZ	Birch Farm	9.50	206	Pn	Pn	23 44 52.8	-1.7
BFZ	Birch Farm	9.50	206	P	Pn	23 44 52.1	-2.4
MRNZ	Matariki Terra	11.61	216	Pn	Pn	23 45 21.7	-1.7
GVZ	Greta Valley S	12.72	210	Pn	Pn	23 45 36.8	-1.8
MQZ	McQueen's Vall	13.48	209	Pn	Pn	23 45 47.6	-1.3
RPZ	Rata Peaks	14.19	213	Pn	Pn	23 45 52.2	-6.5
	0.4nm,0.3s,baz=43,slow=19,SNR=1.4						
RPZ				Sn	Sn	23 48 20.1	-16
	0.8nm,0.3s,baz=98,slow=16,SNR=2.0						
FOZ	Fox Glacier	14.65	216		Pn	23 46 06.3	+1.3
ODZ	Otahua Downs	15.41	211		Pn	23 46 14.8	-0.3
ODZ				IAmb	IAmb	23 46 26.5	
	comp=Z,12nm,1.0s						
WKZ	Wanaka	15.99	215	P	P	23 46 26.3	+0.1
MLZ	Mavora Lakes	16.82	215		Pn	23 46 32.0	-1.2
DZM	Mont Dzumac	16.93	303	*e*LR	LR	23 50 48.2	
	comp=Z,480nm,22.4s						
DZM	Mont Dzumac	16.93	303	Pn	Pn	23 46 33.1	-1.8
	comp=Z,0.1nm,0.3s,baz=138,slow=14,SNR=1.6						
DZM				LR	LR	23 52 12.6	
	comp=Z,690nm,18.6s,baz=206,slow=34						
	comp=Z,5.9nm,0.9s						
RAR	Rarotonga	19.82	61	LR	LR	23 55 19.2	
	comp=Z,223nm,18.4s,baz=232,slow=38						
EIDS	Eidsvold	27.64	276	P	P	23 48 28.0	+2.4
EIDS				IAmb	IAmb	23 48 31.0	
	comp=Z,7.1nm,0.8s						
PPT2	Papeete2	29.73	68	*e*LR	LR	23 56 10.7	
	comp=Z,139nm,23.2s						
PPT2				*e*LR	LR	23 56 12.9	
	comp=Z,110nm,21.0s						
PPT	Papeete	29.74	67	LR	LR	00 00 05.4	
	comp=Z,170nm,18.4s,baz=188,slow=35						
STKA	Stephens Creek	33.87	260	P	P	23 49 20.0	-0.5
	comp=Z,3.4nm,1.0s,baz=129,slow=8.4,SNR=3.2						
STKA				LR	LR	00 03 06.4	
	comp=Z,278nm,18.0s,baz=49,slow=36						
	comp=Z,3.4nm,1.0s						
CTA	Charters Tower	33.90	282	LR	LR	00 01 38.0	
	comp=Z,157nm,18.1s,baz=100,slow=34						
CTAO	Charters Tower	33.90	282	P	P	23 49 24.1	+3.2
CTAO				IAmb	IAmb	23 49 25.7	
	comp=Z,9.4nm,0.9s						
BBOO	Buckleboo	38.27	257	P	P	23 49 59.2	+1.0
BBOO				IAmb	IAmb	23 50 04.5	
	comp=Z,6.3nm,0.9s						
PMG	Port Moresby	39.21	298	LR	LR	00 03 50.6	
	comp=Z,156nm,18.4s,baz=49,slow=32						
COEN	Coen	39.58	288	P	P	23 50 11.1	+1.8
COEN				IAmb	IAmb	23 50 28.2	
	comp=Z,7.2nm,1.1s						
TAOE	Nuku Hiva Isla	42.28	65	*e*LR	LR	00 02 00.1	
	comp=Z,77nm,22.5s						
AS31	Alice Springs	42.80	269	P	P	23 50 35.9	+0.1
ASAR	Alice Springs	42.80	269	P	P	23 50 37.2	+1.4
	comp=Z,7.1nm,0.8s,baz=113,slow=7.9,SNR=35						
ASAR				LR	LR	00 06 06.2	
	comp=Z,83nm,18.2s,baz=83,slow=33						
	comp=Z,7.1nm,0.8s						
ASAR	Alice Springs	42.80	269	P	P	23 50 37.0	+1.2
WB2	Warramunga Arr	43.95	274	P	P	23 50 46.7	+1.6
WB2				IAmb	IAmb	23 50 60.0	
	comp=Z,12nm,0.9s						
WRA	Warramunga Arr	43.96	274	P	P	23 50 46.5	+1.3
	comp=Z,4.1nm,0.4s,baz=112,slow=8.0,SNR=80						
WRA				LR	LR	00 08 55.6	
	comp=Z,138nm,18.2s,baz=152,slow=36						
	comp=Z,4.1nm,0.4s						
WRA	Warramunga Arr	43.96	274	P	P	23 50 46.6	+1.4
WB0	Warramunga Arr	43.99	274	P	P	23 50 47.0	+1.6
FORT	Forrest	45.37	257	P	P	23 50 57.2	+0.9
SBA	Scott Base	46.19	184	P	P	23 51 00.6	-1.5
VNDA	Vanda	46.24	186	P	P	23 51 02.9	+0.3
VNDA				IAmb	IAmb	23 51 04.6	
	comp=Z,4.5nm,1.1s						
MTN	Manton Dam	50.05	281	P	P	23 51 34.0	+1.1
MTN				IAmb	IAmb	23 51 39.3	
	comp=Z,7.5nm,0.8s						
KNRA	Kununurra	50.63	276	P	P	23 51 37.7	+0.5
KNRA				IAmb	IAmb	23 51 41.0	
	comp=Z,8.1nm,0.9s						
QSPA	South Pole Qui	57.87	180	P	P	23 52 31.0	+1.5
	comp=Z,1.4nm,0.7s,baz=56,slow=1.3,SNR=7.0						
QSPA				LR	LR	00 14 58.5	
	comp=Z,158nm,18.8s,baz=343,slow=34						
	comp=Z,1.4nm,0.7s						
QSPA	South Pole Qui	57.87	180	P	P	23 52 31.6	+2.1
RPN	Rapa Nui	59.20	104	LR	LR	00 13 52.4	
	comp=Z,78nm,18.7s,baz=50,slow=32						
BELA	Belgrano 2	68.00	172	P	P	23 53 35.8	-0.7
BELA				IAmb	IAmb	23 53 54.9	
	comp=Z,3.6nm,0.8s						
SNAA	Sanae	76.32	179	P	P	23 54 28.4	+2.0
VNA3	Neumayer Olymp	76.49	176	P	P	23 54 27.7	+0.4
VNA2	Neumayer--Watz	76.92	177	P	P	23 54 31.0	+1.2
	baz=196,slow=5.0						
H03N3	Juan Fernandez	79.86	123	T	T	01 22 05.7	
	baz=239						
H03N2	Juan Fernandez	79.86	123	T	T	01 22 12.9	
	baz=239						
H03N1	Juan Fernandez	79.87	123	T	T	01 22 08.4	
	baz=239						
ASAJ	Asahikawa	83.96	333	LR	LR	00 30 56.3	
	comp=Z,40nm,18.0s,baz=165,slow=35						
KSRS	Korea Array	85.59	320	LR	LR	00 30 54.0	
	comp=Z,27nm,19.4s,baz=100,slow=34						
YBH	Yreka Blue Hor	89.63	38	LR	LR	00 27 46.8	
	comp=Z,52nm,20.5s,baz=202,slow=30						
NVAR	Mina Array Bea	89.75	43	P	P	23 55 37.5	+1.1
	comp=Z,0.5nm,0.6s,baz=202,slow=10,SNR=3.1						
	comp=Z,0.5nm,0.6s						
KLR	Kul'dur	92.50	330	LR	LR	00 33 25.4	
	comp=Z,31nm,19.6s,baz=236,slow=33						
NNA	Nana	93.15	106	LR	LR	00 30 29.3	
	comp=Z,67nm,18.0s,baz=242,slow=31						
LVC	Limon Verde	93.26	119	LR	LR	00 31 11.7	
	comp=Z,43nm,18.3s,baz=202,slow=31						
TXAR	Lajitas Array	93.58	58	P	P	23 55 55.0	+0.7
	comp=Z,0.4nm,1.0s,baz=213,slow=8.1,SNR=3.9						
	comp=Z,0.4nm,1.0s						
BBB	Bella Bella	94.83	28	LR	LR	00 34 22.6	
	comp=Z,40nm,18.2s,baz=237,slow=33						
MA2	Magadan	95.00	345	LR	LR	00 37 05.8	
	comp=Z,26nm,18.2s,baz=90,slow=34						
PDAR	Pinedale Array	97.63	44	LR	LR	00 33 49.7	
	comp=Z,35nm,18.7s,baz=276,slow=32						
MKAR	Makanchi Array	118.76	309	PKP	PKPdf	00 01 25.1	-0.7
	comp=Z,0.6nm,0.9s,baz=64,slow=2.8,SNR=5.5						
KURBB	Kurchatov Arra	122.17	313	PKP	PKPdf	00 01 31.2	-1.1
	comp=Z,1.4nm,1.0s,baz=109,slow=2.0,SNR=10						
AAK	Ala-Archa	122.92	303	PKP	PKPdf	00 01 34.1	-0.1
	comp=Z,0.5nm,0.6s,baz=252,slow=7.0,SNR=1.9						
BVAR	Borovoye Array	127.54	315	PKP	PKPdf	00 01 42.8	+0.3
	comp=Z,0.8nm,0.4s,baz=74,slow=1.6,SNR=4.5						
AKTO	Aktyubinsk	135.14	311	PKP	PKPdf	00 01 57.6	+0.7
	comp=Z,1.2nm,0.8s,baz=209,slow=4.5,SNR=4.6						
ARCES	ARCESS Array B	140.33	347	PKhKP	PKPpre	00 02 02.2	
	comp=Z,4.1nm,0.9s,baz=67,slow=2.3,SNR=2.0						
KBZ	Khabaz	145.90	302	PKPbc	PKPbc	00 02 17.6	+0.5
	comp=Z,4.8nm,0.9s,baz=164,slow=7.4,SNR=6.7						
FINES	FINESS Array B	146.78	339	PKPbc	PKPbc	00 02 20.0	+0.8
	comp=Z,8.1nm,0.8s,baz=47,slow=4.6,SNR=20						
NB2	NORSAR Subarra	150.53	351	PKP	PKiKP	00 02 30.7	+1.0
	comp=Z,15nm,2.0s,baz=17,slow=2.6						
NOA	NORSAR Array B	150.53	351	PKPbc	PKPbc	00 02 28.3	-0.7
	comp=Z,1.3nm,0.8s,baz=15,slow=4.1,SNR=4.1						
EIL	Elat	151.44	274	PKPbc	PKiKP	00 02 32.6	0.0
	comp=Z,11nm,0.9s,baz=75,slow=2.0,SNR=9.5						
MMAI	Mount Meron Ar	151.69	281	PKPbc	PKiKP	00 02 33.9	+0.8
	comp=Z,13nm,0.9s,baz=66,slow=3.6,SNR=7.9						
AKASG	Malin Array Be	152.59	320	PKPbc	PKPbc	00 02 33.8	-0.2
	comp=Z,1.1nm,0.6s,baz=44,slow=1.9,SNR=7.2						
BRTR	Keskin Array B	153.21	295	PKPbc	PKPbc	00 02 36.0	+0.1
	comp=Z,1.5nm,0.7s,baz=172,slow=2.5,SNR=7.1						
TORD	Torodi Ar. Bea	160.99	180	PKPab	PKPab	00 03 22.4	+1.0
	comp=Z,1.3nm,1.1s,baz=165,slow=4.0,SNR=7.6						
GERES	GERESS Array B	161.12	335	PKPab	PKPab	00 03 20.6	-0.8
	comp=Z,0.5nm,0.5s,baz=51,slow=7.7,SNR=3.0						

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*MOS **20** 23:44:54.7±1.1, 32°.38N×47°.88E, h10^{km}, mb4.3/23, Error ellipse: s-maj=7.3km s-min=5.1km az=100.7*

*IDC **20** 23:44:55.4±1.2, 32°.49N×47°.88E, h0^{km}, mb3.8/15, mbtmp3.9/22, ML3.8/7, MS3.3/3, Error ellipse: s-maj=27.3km s-min=13.2km az=165.0*

*NEIC **20** 23:44:57.0±1.7, 32°.34N±0°.08×47°.9E±0°.1, h10^{km}±2^{km}, mb4.0/37, Error ellipse: s-maj=19.8km s-min=13.2km az=87.0*

*TEH **20** 23:44:57.0, 32°.47N×47°.89E, h14^{km}±26^{km}, ML3.9*

*ISN **20** 23:44:57.4±1.5, 32°.43N×47°.96E, h14^{km}±8^{km}, ML3.9*

ISC 20 23:44:56.6±0.4, **32°.35N**±0°.04×**47°.85E**±0°.03, **h10^{km}, n189,** σ1^{s}**50**/204, **mb4.2**/46, **MS3.4**/5, **34C-7D, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKFM	Kafar-mosalman	1.17	360	Pg	Pb	23 45 18.2	-0.7
AHWZ	Ahwaz	1.22	146	Pg	Pg	23 45 22.8	+2.8
AHWZ				Sg	Sn	23 45 41.7	+5.4
AMIS	Naft Sefid	1.40	119	Pg	Pg	23 45 24.9	+1.4
IDOB	Doab	1.46	11	Pg	Pn	23 45 23.0	-0.2
RAFI	Al-Rafai	1.60	247	*e*Pg	Pg	23 45 28.5	+1.2
RAFI				*e*Sg	Sg	23 45 52.0	+4.0
RAFI				AML	AML	23 45 55.2	
	comp=N,2µm,0.4s						
RAFI				AML	AML	23 46 00.8	
	comp=E,2µm,0.6s						
IBDR	Badra	1.79	296	*e*Pg	Pb	23 45 29.8	+0.4
IBDR				*e*Sg	Sg	23 45 55.0	+1.0
IBDR				AML	AML	23 46 04.5	
	comp=N,876nm,0.5s						
IBDR				AML	AML	23 46 19.3	
	comp=E,1µm,0.6s						
IKOM	Komasi	1.84	351	Pg	Pn	23 45 29.8	+1.4
HSAM	Samen	1.96	19	Pn	Pn	23 45 31.7	+1.6
KCHF	Cheshme Sefid,	2.04	341	Pn	Pn	23 45 32.2	+1.1
IBZA	Bozab	2.11	0	Pn	Pn	23 45 33.6	+1.4
KER	Kermanshah	2.12	344	Pn	Pn	23 45 34.0	+1.8
IGHG	Ghaleghazi	2.25	332	Pn	Pn	23 45 35.6	+1.6
SHK1	Shahrekord	2.57	90	Pn	Pn	23 45 40.5	+2.0
IPIR	Pirpir	2.59	82	Pn	Pb	23 45 42.0	-1.3
IDHR	Dehrash	2.64	333	Pn	Pn	23 45 40.9	+1.4
HAGD	Aghdareh	2.69	23	Pn	Pn	23 45 42.1	+2.0
IBRJ	Brojen	2.93	98	Pn	Pn	23 45 45.7	+2.3
BHD	Baghdad	3.06	288	*e*Pn	Pb	23 45 49.0	-2.1
BHD				*e*Sn	Sn	23 46 25.0	+3.3
BHD				AML	AML	23 46 48.7	
	comp=E,542nm,0.0s						
QAMS	Qamsar	3.29	64	Pn	Pn	23 45 49.9	+1.6
KLNJ	Kolanjah	3.46	112	Pn	Pn	23 45 53.2	+2.3
IRAZ	Razeghan	3.50	29	Pn	Pn	23 45 53.3	+2.0
IQOM	Qom	3.66	46	Pn	Pn	23 45 54.7	+1.2
KRSH	Karshahi	3.94	65	Pn	Pn	23 45 59.0	+1.7
IMHD	Mahdasht	4.07	34	Pn	Pn	23 46 01.3	+2.3
IVRN	Varamin	4.17	50	Pn	Pn	23 46 01.8	+1.4
ISFB	Sefidab	4.18	60	Pn	Pn	23 46 01.7	+1.2
IHSB	Hasanabad	4.20	42	Pn	Pn	23 46 01.6	+0.9
IKRK	Kirkuk	4.21	317	*e*Pn	Pn	23 46 03.0	+2.1
IKRK				*e*Sn	Sn	23 46 52.0	+1.8
IGZV	Ghazvin	4.48	25	Pn	Pn	23 46 06.9	+2.2
TEHA	Amirabad Tehra	4.48	40	Pn	Pn	23 46 06.5	+1.8
JIR1	Jirandeh	4.64	20	Pn	Pn	23 46 08.4	+1.5
QALM	Alamut, Qazvin	4.68	29	Pn	Pn	23 46 09.6	+2.1
MAHB	Mahabad	4.75	339	Pn	Pn	23 46 09.0	+0.6
SHI	Shiraz	4.83	123	Pn	Pn	23 46 12.2	+2.7
KLST	Kelardasht - M	4.93	32	Pn	Pn	23 46 13.4	+2.4
DSBU	Dashti - Bushe	4.95	143	Pn	Pn	23 46 14.7	+3.6
ANAR	Anarak	5.02	79	Pn	Pn	23 46 13.9	+1.8
MZPU	Pul - Mazandar	5.11	36	Pn	Pn	23 46 14.7	+1.3
ILAS	Lasjerd	5.22	53	Pn	Pn	23 46 15.8	+0.9
IFIR	Firoozkooh	5.23	50	Pn	Pn	23 46 16.0	+0.9
IPRN	Peran	5.37	43	Pn	Pn	23 46 19.0	+2.1
LKRN	Lenkeran, Azer	6.39	7	P	Pn	23 46 30.1	-0.7
IGLO	Ghaloghah	6.45	48	Pn	Pn	23 46 33.9	+2.1
NAX	Nakhchivan	7.07	345	P	Pn	23 46 39.8	-0.4
MAKU	Maku	7.45	341	Pn	Pn	23 46 47.4	+1.9
GURO	Guroymak-BITLI	7.79	324	Pn	Pn	23 46 50.2	0.0
GNI	Garni	8.18	343	Pn	Pn	23 46 57.3	+1.8
GNI	Garni	8.18	343	P	Pn	23 46 57.3	+1.8
GANJ	Ganja	8.37	352	P	Pn	23 46 57.5	-0.5
MNGR	Mingechevir, A	8.43	356	P	Pn	23 46 58.2	-0.5
RAYN	Ar Rayn	9.04	194	Pn	Pn	23 47 07.5	+0.3
RAYN				Sn	Sn	23 48 44.1	-4.9
RAYN	Ar Rayn	9.04	194	P	Pn	23 47 07.5	+0.3
RAYN						23 48 44.1	
ASF	Jabal al Asfar	9.28	272	Pn	Pn	23 47 11.0	+0.5
	comp=E,0.9nm,0.3s,baz=96,slow=7.9,SNR=8.4						
ASF				Sn	Sn	23 48 49.4	-5.6
	comp=E,0.7nm,0.3s,baz=25,slow=23,SNR=1.3						
ASF				Lg	Lg	23 49 52.9	
	comp=E,0.8nm,0.3s,baz=294,slow=21,SNR=2.4						
	comp=E,2.1nm,0.4s						
ASF	Jabal al Asfar	9.28	272	P	Pn	23 47 11.0	+0.5
MMAI	Mount Meron Ar	10.51	277	Pn	Pn	23 47 28.3	+0.9
	comp=E,0.3nm,0.3s,baz=78,slow=16,SNR=2.0						
	comp=E,0.3nm,0.3s						
EIL	Elat	11.38	260	Pn	Pn	23 47 40.2	+0.9
	comp=E,0.2nm,0.3s,baz=29,slow=19,SNR=1.8						
EIL				Lg	Lg	23 51 04.9	
	comp=E,0.6nm,0.3s,baz=188,slow=21,SNR=3.2						
	comp=E,1.0nm,0.5s						
SOC	Sochi	12.91	333	*e*P	Pn	23 47 55.5	-4.6
SOC				*e*		23 50 21.7	
SOC				MLR	MLR		
	comp=Z,94nm,14.0s						
WSAR	Wadi Sarin	13.16	131	Pn	Pn	23 48 06.1	+2.5
	comp=Z,0.9nm,0.3s,baz=333,slow=4.5,SNR=1.5						
WSAR				Sn	Sn	23 50 24.2	-5.9
	comp=Z,0.3nm,0.3s,baz=139,slow=15,SNR=2.3						
	comp=Z,3.3nm,0.5s						
ELL	Elmali	15.42	291		Pn	23 48 35.7	+1.4
ELL	Elmali	15.42	291	P	Pn	23 48 35.7	+1.4
ELL				pmax	pmax		
	comp=Z,52nm,1.2s						
BORA	Eskisehir	15.92	303		P	23 48 44.9	+0.4
MANT	Manisa	16.86	297		Pn	23 48 53.6	+0.7
MANT				IAmb	IAmb	23 48 58.1	
	comp=Z,22nm,1.3s						
KBL	Kabul	17.82	77		Pn	23 49 04.9	0.0
KBL	Kabul	17.82	77	P	Pn	23 49 04.9	0.0
KBL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CHGR	Chuyangaron	18.44	64	P	P	23 49 11.0	-1.3
CHGR				IAmb	IAmb	23 49 16.3	
	comp=Z,14nm,1.4s						
CHGR	Chuyangaron	18.44	64	P	P	23 49 11.0	-1.3
CHGR				pmax	pmax		
	comp=Z,14nm,1.4s						
ABKAR	Akbulak array	19.17	25	P	P	23 49 19.4	-0.7
ABKAR	Akbulak array	19.17	25	P	P	23 49 19.0	-1.1
IDI	Anoyia	19.29	285	P	Pn	23 49 23.7	+1.0
	comp=Z,0.8nm,0.3s,baz=295,slow=18,SNR=8.5						
	comp=Z,9.8nm,0.8s						
IDI	Anoyia	19.29	285	P	P	23 49 22.5	+0.9
IDI				IAmb	IAmb	23 49 28.8	
	comp=Z,12nm,0.9s						
GAR	Garm	19.40	64	P	P	23 49 21.9	-0.9
ALN	Alexandroupoli	19.43	302	P	P	23 49 23.3	+0.2
ALN				IAmb	IAmb	23 49 25.1	
	comp=Z,11nm,1.4s						
ALN	Alexandroupoli	19.43	302	P	P	23 49 23.3	+0.2
ALN				pmax	pmax		
	comp=Z,11nm,1.4s						
AKTO	Aktyubinsk	19.58	20	P	P	23 49 23.6	-1.0
	comp=Z,0.3nm,0.3s,baz=196,slow=6.8,SNR=4.2						
	comp=Z,1.3nm,0.4s						
TPGR	Topolog	19.60	315	⇑P	P	23 49 25.5	+0.6
RDO	Rodhopi	19.88	303	P	P	23 49 28.8	+0.9
RDO				IAmb	IAmb	23 49 34.8	
	comp=Z,7.7nm,1.0s						
CFR	Carcaliu	19.94	316	⇑P	P	23 49 29.0	+0.4
CFR	Carcaliu	19.94	316	⇑P	P	23 49 29.0	+0.4
BELG	Belogornoye	20.03	360	P	P	23 49 29.0	-0.5
	comp=Z,0.9nm,0.3s,baz=222,slow=0.8,SNR=4.8						
	comp=Z,29nm,1.0s						
RAZG	Razgrad	20.15	310	⇑P	P	23 49 32.2	+1.3
KK31	Karatay Array	20.83	53	P	P	23 49 38.3	0.0
KK31				IAmb	IAmb	23 49 42.1	
	comp=Z,6.2nm,0.9s						
KK31	Karatay Array	20.83	53	P	P	23 49 38.3	0.0
KK31				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KKAR	Karatay Array	20.83	53	P	P	23 49 38.4	+0.1
KKAR	Karatay Array	20.83	53	P	P	23 49 38.6	+0.3
KKAR				IAmb	IAmb	23 49 42.2	
	comp=Z,6.2nm,0.9s						
KKAR	Karatay Array	20.83	53	P	P	23 49 38.4	+0.1
VRI	Vrincioaia	21.15	316	⇑P	P	23 49 42.0	+0.3
VRI	Vrincioaia	21.15	316	⇑P	P	23 49 42.0	+0.3
PLOR	Plostina	21.18	316	⇑P	P	23 49 42.7	+0.5
PLOR	Plostina	21.18	316	⇑P	P	23 49 42.7	+0.5
NIL	Nilore	21.33	80	P	P	23 49 43.6	-0.2
NIL				IAmb	IAmb	23 49 47.5	
	comp=Z,7.7nm,1.1s						
NIL	Nilore	21.33	80	P	P	23 49 43.6	-0.2
NIL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MLR	Muntele Rosu	21.42	314	⇓P	P	23 49 46.7	+1.9
MLR	Muntele Rosu	21.42	314	P	P	23 49 45.6	+0.8
	comp=Z,1.9nm,0.7s,baz=107,slow=14,SNR=6.3						
	comp=Z,1.9nm,0.7s						
MLR	Muntele Rosu	21.42	314	P	P	23 49 45.8	+1.0
MLR				IAmb	IAmb	23 49 55.9	
	comp=Z,8.9nm,0.8s						
MLR	Muntele Rosu	21.42	314	⇓P	P	23 49 46.7	+1.9
COVR	Voineasa-Covas	21.45	315	⇑P	P	23 49 45.8	+0.9
TESR	Tescani	21.54	317	⇑P	P	23 49 45.5	-0.4
SORM	Soroca	21.59	323	⇓P	P	23 49 45.2	-1.1
SORM	Soroca	21.59	323	⇓P	P	23 49 45.2	-1.1
AGG	Agios Georgios	21.73	295	P	P	23 49 47.7	-0.3
AGG	Agios Georgios	21.73	295	P	P	23 49 47.7	-0.3
AGG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LIT	Litokhoron	21.82	298	P	P	23 49 47.1	-1.8
LIT				IAmb	IAmb	23 49 56.3	
	comp=Z,7.6nm,1.4s						
LIT	Litokhoron	21.82	298	P	P	23 49 47.2	-1.8
LIT				pmax	pmax		
	comp=Z,8.0nm,1.4s						
OZUR		21.83	315	⇓P	P	23 49 49.7	+0.7
VOIR		21.95	313	⇑P	P	23 49 51.6	+1.3
VOIR		21.95	313	⇑P	P	23 49 51.6	+1.3
DOPR	Dopca	22.00	315	⇓P	P	23 49 51.3	+0.5
ARR	Arges	22.17	313	⇑P	P	23 49 53.3	+0.5
LOT	Lotru	22.75	312	⇑P	P	23 49 58.7	-0.3
AKASG	Malin Array Be	22.92	329	P	P	23 49 58.4	-2.2
	comp=Z,0.3nm,0.3s,baz=137,slow=9.2,SNR=7.3						
	comp=Z,0.3nm,0.3s						
AKASG	Malin Array Be	22.92	329	P	P	23 49 59.0	-1.6
AKBB	Malin Array Si	22.92	329	P	P	23 49 59.6	-1.0
AKBB				IAmb	IAmb	23 50 05.0	
	comp=Z,3.9nm,0.8s						
AKBB	Malin Array Si	22.92	329	P	P	23 49 59.6	-1.0
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BURAR	Bucovina Array	22.97	318	⇑P	P	23 50 01.8	+0.5
BURAR	Bucovina Array	22.97	318	P	P	23 50 01.4	+0.1
BURAR	Bucovina Array	22.97	318	⇑P	P	23 50 01.8	+0.5
BUR08	Bucovina Ar. S	23.00	318	P	P	23 50 01.1	-0.4
BUR08				IAmb	IAmb	23 50 07.4	
	comp=Z,6.0nm,1.4s						
KBN	Korca	23.20	298	P	P	23 50 04.2	+0.5
KBN	Korca	23.20	298	P	P	23 50 04.2	+0.5
KBN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GZR	Gura Zlata	23.35	311	⇑P	P	23 50 04.5	-0.6
HERR	Herculane	23.37	310	⇑P	P	23 50 05.3	+0.1
BOVS	Bovan	23.38	306	⇑P	P	23 50 06.0	+0.6
MDVR	Moldovita	23.80	309	⇑P	P	23 50 09.3	-0.2
DRGR		24.02	314	⇑P	P	23 50 11.0	-0.6
DRGR		24.02	314	⇑P	P	23 50 11.0	-0.6
OBN	Obninsk	24.11	344	⇑*e*P	P	23 50 11.1	-1.1
OBN				*SP	pP	23 50 16.0	+0.7
OBN				*e*PPP	PPP	23 50 50.2	
OBN				*e*S	S	23 54 27.5	-2.2
OBN				SSS	SSS	23 55 22.0	
OBN				pmax	pmax		
	comp=Z,30nm,1.8s						
OBN				MLR	MLR		
	comp=Z,42nm,16.0s						
SIRR	Siria	24.43	312	⇑P	P	23 50 15.1	-0.3
DIVS	Divibare	24.71	306	P	P	23 50 18.8	+0.8
PDG	Podgorica	24.74	302	⇓P	P	23 50 19.0	+0.8
PDG	Podgorica	24.74	302	P	P	23 50 18.2	0.0
PDG				IAmb	IAmb	23 50 21.1	
	comp=Z,3.1nm,1.0s						
ARU	Arti	25.20	14	P	P	23 50 21.8	-0.4
	comp=Z,7.1nm,1.0s,baz=209,slow=9.0,SNR=7.9						
	comp=Z,7.1nm,1.0s						
ARU	Arti	25.20	14	P	P	23 50 22.6	+0.5
ARU	Arti	25.20	14	*c i*P	P	23 50 23.0	+0.8
ARU						23 53 50.0	
ARU				S	S	23 54 50.6	+3.3
ARU				SS	SnSn	23 55 37.5	0.0
ARU				pmax	pmax		
	comp=Z,13nm,1.2s						
TARG	Taragay, Kyrgy	25.57	60	P	P	23 50 26.9	+0.7
TARG	Taragay, Kyrgy	25.57	60	P	P	23 50 26.9	+0.7
TARG				pmax	pmax		
	comp=Z,5.0nm,0.5s						
TIP	Timpagrande	26.05	294	P	P	23 50 29.0	-1.1
TIP				IAmb	IAmb	23 50 32.8	
	comp=Z,4.2nm,0.8s						
PSZ	Piszkesteto	26.24	315	P	P	23 50 31.9	+0.2
PSZ	Piszkesteto	26.24	315	P	P	23 50 32.0	+0.2
PSZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KIRV	Kirov	26.26	2	*ce*P	P	23 50 31.3	-0.4
BRVK	Borovoye	26.26	31	P	P	23 50 30.3	-1.5
BRVK				IAmb	IAmb	23 50 33.5	
	comp=Z,5.6nm,1.1s						
BRVK	Borovoye	26.26	31	*ce*P	P	23 50 31.8	0.0
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BVAR	Borovoye Array	26.28	32	P	P	23 50 31.1	-0.9
	comp=Z,4.1nm,0.9s,baz=226,slow=7.9,SNR=12						
	comp=Z,4.1nm,0.9s						
MNK	Minsk	26.29	333	*i* P	P	23 50 32.6	+0.6
	comp=E,3.0nm,1.3s						
MNK				*i* LR	LR	00 00 55.2	
MNK				*i* P	P	23 50 32.6	+0.6
	comp=N,20nm,0.7s						
MNK				*i* P	P	23 50 32.6	+0.6
	comp=Z,19nm,0.9s,baz=139						
MNK				*i* PP	PnPn	23 51 12.2	+1.2
MNK				*i* S	S	23 55 07.0	+2.6
MNK				*i* SS	SnSn	23 56 08.9	+4.9
MNK				*i* LQ	LQ	23 58 37.2	
MNK	Minsk	26.29	333	*e*P	P	23 50 32.6	+0.6
MORH	Mrgy, Hungar	26.33	310	⇑P	P	23 50 33.0	+0.5
CUC	Castrocucco	26.86	296	P	P	23 50 38.2	+0.8
VYHS	Vyhne	27.13	315	*e*P	P	23 50 41.8	+2.1
VYHS	Vyhne	27.13	315	*e*P	P	23 50 41.8	+2.1
OJC	Ojcow	27.38	319	P	P	23 50 42.9	+0.9
OJC	Ojcow	27.38	319	P	P	23 50 42.9	+0.9
OJC				pmax	pmax		
	comp=Z,11nm,1.1s						
KURBB	Kurchatov Arra	29.05	42	P	P	23 50 56.8	0.0
	comp=Z,2.1nm,1.0s,baz=246,slow=9.5,SNR=9.8						
	comp=Z,2.1nm,1.0s						
KURK	Kurchatov	29.14	42	P	P	23 50 57.4	-0.2
KURK				IAmb	IAmb	23 50 59.1	
	comp=Z,3.3nm,1.0s						
KURK	Kurchatov	29.14	42	*ce*P	P	23 50 58.6	+1.0
KURK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
TRI	Trieste	29.41	307	P	P	23 51 00.2	+0.2
TRI	Trieste	29.41	307	P	P	23 51 00.3	+0.2
TRI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MOA	Molln	29.71	311	*e*P	P	23 51 01.4	-1.4
	comp=Z,5.1nm,1.3s						
MK31	Makanchi Array	29.94	51	P	P	23 51 04.6	-0.2
MK31	Makanchi Array	29.94	51	*i* P	P	23 51 04.9	+0.1
MKAR	Makanchi Array	29.94	51	P	P	23 51 04.7	-0.2
	comp=Z,1.6nm,0.8s,baz=246,slow=7.0,SNR=15						

	comp=Z,1.6nm,0.8s						
MKAR	**Makanchi Array**	**29.94**	**51**	*i* P	**P**	**23 51 05.3**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GERES	**GERESS Array B**	**30.40**	**313**	P	**P**	**23 51 07.8**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=139,slow=6.1,SNR=1.9						
GERES				LR	LR	00 04 20.6	
	comp=Z,23nm,18.8s,baz=253,slow=38						
	comp=Z,0.2nm,0.3s						
WTTA	**Wattenberg**	**31.23**	**309**	*i* P	**P**	**23 51 15.6**	**-0.8**
	comp=Z,2.9nm,1.0s						
WATA	**Walderalm**	**31.29**	**309**	*e*P	**P**	**23 51 16.0**	**-0.9**
	comp=Z,4.5nm,1.0s						
MOTA	**Moosalm**	**31.61**	**309**	*i* P	**P**	**23 51 20.0**	**+0.4**
	comp=Z,3.3nm,0.9s						
FETA	**Feichten**	**31.77**	**308**	*e*P	**P**	**23 51 21.2**	**+0.1**
	comp=Z,4.3nm,1.0s						
FINES	**FINESS Array B**	**32.36**	**341**	P	**P**	**23 51 24.8**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=145,slow=12,SNR=9.6						
	comp=Z,0.6nm,0.4s						
FINES	**FINESS Array B**	**32.36**	**341**	*i* P	**P**	**23 51 25.0**	**-0.9**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WMQ	**Urumqi**	**33.09**	**58**	*e*P	**P**	**23 51 33.3**	**+0.7**
WMQ				pP	pP	23 51 36.8	+1.1
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ZAA0	**Zalesovo Array**	**33.98**	**40**	P	**P**	**23 51 39.5**	**-0.6**
ZAA0				IAmb	IAmb	23 51 40.4	
	comp=Z,2.3nm,0.8s						
ZALV	**Zalesovo Beam**	**33.98**	**40**	P	**P**	**23 51 39.3**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=245,slow=9.6,SNR=7.2						
	comp=Z,0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**33.98**	**40**	P	**P**	**23 51 39.4**	**-0.7**
DGZ	**Jazzator, Alta**	**34.05**	**48**	*i* P	**P**	**23 51 40.5**	**-0.5**
DGZ				pmax	pmax		
	comp=Z,7.0nm,3.2s						
ECH	**Echery**	**34.40**	**309**	P	**P**	**23 51 43.0**	**-0.9**
ECH	**Echery**	**34.40**	**309**	P	**P**	**23 51 43.0**	**-0.9**
ECH				pmax	pmax		
	comp=Z,14nm,1.5s						
ARCES	**ARCESS Array B**	**39.30**	**348**	P	**P**	**23 52 25.1**	**-0.2**
	comp=Z,6.9nm,1.2s,baz=158,slow=9.7,SNR=2.0						
ARCES				LR	LR	00 09 57.3	
	comp=Z,48nm,18.4s,baz=136,slow=38						
	comp=Z,6.9nm,1.2s						
ESDC	**Sonseca Array**	**42.05**	**295**	P	**P**	**23 52 48.6**	**+0.1**
	comp=Z,0.8nm,1.0s,baz=76,slow=8.0,SNR=5.2						
	comp=Z,0.8nm,1.0s						
NRIK	**Noril'sk**	**43.20**	**19**	P	**P**	**23 52 56.0**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=208,slow=11,SNR=1.9						
	comp=Z,0.5nm,0.4s						
TORD	**Torodi Ar. Bea**	**46.25**	**257**	P	**P**	**23 53 22.2**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=65,slow=7.4,SNR=7.4						
	comp=Z,0.3nm,0.3s						
SONM	**Songino Array**	**46.28**	**53**	P	**P**	**23 53 21.5**	**-0.9**
	comp=Z,0.3nm,0.9s,baz=263,slow=8.6,SNR=2.2						
	comp=Z,0.3nm,0.9s						
ULN	**Ulaanbaatar**	**46.73**	**53**	*ce*P	**P**	**23 53 27.0**	**+1.1**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PZH	**PanZhiHua**	**46.90**	**83**	P	**P**	**23 53 27.3**	**-0.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,60nm,4.0s						
HHC	**Hu-ho-hao-te**	**50.85**	**61**	*e*P	**P**	**23 53 57.4**	**-0.3**
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,5.3s						
TIXI	**Tiksi**	**56.84**	**22**	*ce*P	**P**	**23 54 39.9**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KLR	**Kul'dur**	**62.54**	**47**	*ce*P	**P**	**23 55 18.9**	**-1.6**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.7s						
SFJD	**Kangerlussuaq**	**63.85**	**334**	LR	LR	00 25 51.4	
	comp=Z,34nm,19.1s,baz=107,slow=38						
SEY	**Seymchan**	**67.89**	**29**	*ce*P	**P**	**23 55 55.8**	**+0.9**
SEY				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BILL	**Bilibino**	**70.01**	**21**	⇑*e*P	**P**	**23 56 07.8**	**-0.2**
BILL				*e*		23 56 12.8	
BILL						23 56 34.0	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BILL				MLR	MLR		
	comp=Z,45nm,18.0s						
YKA	**Yellowknife Ar**	**84.44**	**352**	P	**P**	**23 57 27.0**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=18,slow=5.6,SNR=4.5						
	comp=Z,0.2nm,0.3s						
YKA	**Yellowknife Ar**	**84.44**	**352**	*i* P	**P**	**23 57 29.5**	**+0.5**

ROM 20 23:48:46.1±0.0**, 42°.975N**±0°.001×**13°.105E**±0°.003**, h11**^{km}**,**
ML1.7/11**, 9C-5D, Error ellipse: s-maj=0.7km**
s-min=0.2km az=356.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FEMA	**Monte Fema**	**0.04**	**253**	P	Pg	23 48 48.8	+0.4
FEMA				S	Sg	23 48 50.5	+0.5
T1256	**Bolognola (MC)**	**0.09**	**70**	P	Pg	23 48 49.3	+0.3
T1256				S	Sg	23 48 51.4	+0.4
T1256				AML	AML		
	comp=N,685µm,0.3s						
T1256				AML	AML		
	comp=E,586µm,0.5s						
T1256				AML	AML		
	comp=E,586µm,1.5s						
T1216	**Preci, Frazion**	**0.10**	**217**	P	Pg	23 48 49.5	+0.5
T1216				S	Sg	23 48 51.7	+0.7
T1216				AML	AML		
	comp=E,856µm,0.4s						
T1216				AML	AML		
	comp=N,530µm,0.3s						
T1216				AML	AML		
	comp=E,856µm,0.4s						
T1216				AML	AML		
	comp=E,856µm,1.6s						
T1216				AML	AML		
	comp=N,530µm,0.3s						
T1219	**Muccia, Frazio**	**0.11**	**319**	P	Pg	23 48 49.4	+0.4
T1219				S	Sg	23 48 51.6	+0.5
T1219				AML	AML		
	comp=E,776µm,0.3s						
T1219				AML	AML		
	comp=E,722µm,0.3s						
T1219				AML	AML		
	comp=E,722µm,0.3s						
T1219				AML	AML		
	comp=N,974µm,0.2s						
T1219				AML	AML		
	comp=N,940µm,0.3s						
T1245	**Castelsantange**	**0.13**	**153**	P	Pg	23 48 50.0	+0.5
T1245				S	Sg	23 48 52.6	+0.8
T1245				AML	AML		
	comp=N,512µm,0.9s						
T1245				AML	AML		
	comp=E,376µm,0.2s						
T1245				AML	AML		
	comp=N,512µm,0.9s						
T1245				AML	AML		
	comp=E,380µm,0.2s						
T1245				AML	AML		
	comp=N,475µm,0.7s						
T1245				AML	AML		
	comp=E,376µm,0.2s						
T1245				AML	AML		
	comp=N,512µm,0.9s						
T1220	**Camerino, Fraz**	**0.14**	**355**	⇓P	Pg	23 48 49.8	+0.4
T1220				S	Sg	23 48 52.4	+0.6
T1220				AML	AML		
	comp=E,578µm,0.6s						
T1220				AML	AML		
	comp=E,578µm,0.7s						
T1220				AML	AML		
	comp=N,837µm,0.2s						
CESI	**CESI - Serrava**	**0.15**	**282**	⇑P	Pg	23 48 50.2	+0.5
CESI				S	Sg	23 48 53.0	+0.9
CESI				AML	AML		
	comp=E,266µm,0.2s						
CESI				AML	AML		
	comp=N,414µm,0.4s						
MMO1	**Montemonaco**	**0.18**	**115**	P	Pg	23 48 50.5	+0.4
MMO1				S	Sg	23 48 53.5	+0.6
GUMA	**Gualdo di Mace**	**0.19**	**62**	⇑P	Pg	23 48 51.0	+0.7
GUMA				S	Sg	23 48 54.4	+1.3
GUMA				AML	AML		
	comp=E,683µm,0.2s						
GUMA				AML	AML		
	comp=N,646µm,0.3s						
T1214	**Arquata del Tr**	**0.23**	**160**	⇑P	Pg	23 48 51.5	+0.5
T1214				AML	AML		
	comp=E,93µm,1.5s						
T1214				AML	AML		
	comp=N,119µm,0.2s						
T1214				AML	AML		
	comp=E,93µm,1.5s						
T1214				AML	AML		
	comp=N,119µm,0.2s						
T1214				AML	AML		
	comp=E,93µm,1.5s						
T1241	**Roccafluvione,**	**0.27**	**116**	⇑P	Pg	23 48 52.0	+0.4
T1241				S	Sb	23 48 56.6	-1.0
T1241				AML	AML		
	comp=E,256µm,0.2s						
T1241				AML	AML		
	comp=N,380µm,0.2s						
T1217	**Poggiodomo (PG**	**0.29**	**206**	P	Pg	23 48 52.6	+0.5
T1217				S	Sg	23 48 57.1	+1.0
SNTG	**Esanatoglia**	**0.30**	**337**	P	Pg	23 48 52.5	+0.2
SNTG				S	Sg	23 48 57.5	+1.0
SNTG				AML	AML		
	comp=N,50µm,0.1s						
SNTG				AML	AML		
	comp=E,60µm,1.1s						
T1218	**Civita (PG)**	**0.30**	**179**	P	Pg	23 48 52.9	+0.6
T1218				S	Sg	23 48 57.5	+1.0
ASSB	**Assisi San Ben**	**0.33**	**282**	⇑P	Pg	23 48 53.1	+0.2
ASSB				AML	AML		
	comp=E,73µm,0.3s						
ASSB				AML	AML		
	comp=N,71µm,0.2s						
ASSB				AML	AML		
	comp=N,71µm,1.8s						
EL6	**Elcito**	**0.35**	**360**	P	Pg	23 48 53.7	+0.4
EL6				S	Sb	23 48 59.4	-0.7
EL6				AML	AML		
	comp=N,72µm,0.9s						
EL6				AML	AML		
	comp=E,70µm,0.5s						
EL6				AML	AML		
	comp=N,73µm,0.9s						
EL6				AML	AML		
	comp=E,70µm,1.5s						
EL6				AML	AML		
	comp=N,73µm,1.1s						
SMA1	**SAN MARTINO**	**0.38**	**154**	S	Sb	23 49 00.1	-0.8
ATCC	**AVT- Casa Cast**	**0.40**	**302**	⇑P	Pg	23 48 54.4	+0.3
ATCC				AML	AML		
	comp=E,58µm,0.1s						
ATCC				AML	AML		
	comp=N,61µm,0.4s						
CING	**Cingoli**	**0.41**	**9**	P	Pg	23 48 54.5	+0.3
CING				AML	AML		
	comp=E,34µm,0.1s						
CING				AML	AML		
	comp=N,23µm,1.3s						
MOMA	**Monte Martano**	**0.43**	**247**	⇓P	Pg	23 48 55.1	+0.5
MOMA				AML	AML		
	comp=N,34µm,1.2s						
MOMA				AML	AML		
	comp=E,38µm,1.6s						
MOMA				AML	AML		
	comp=E,38µm,0.4s						
MOMA				AML	AML		
	comp=N,34µm,0.8s						
OFFI	**Offida**	**0.43**	**95**	⇑P	Pb	23 48 55.8	+0.1
RM33	**Pellescritta (**	**0.47**	**170**	P	Pg	23 48 55.8	+0.4
RM33				AML	AML		
	comp=N,88µm,0.3s						
RM33				AML	AML		
	comp=E,162µm,0.2s						
TERO	**Teramo**	**0.51**	**134**	⇓P	Pg	23 48 56.1	0.0
MURB	**Monte Urbino**	**0.51**	**304**	⇓P	Pg	23 48 56.4	+0.2
MURB				AML	AML		
	comp=E,53µm,1.5s						
MURB				AML	AML		
	comp=N,66µm,0.3s						
MURB				AML	AML		
	comp=E,53µm,0.5s						
SSFR	**Montelago di S**	**0.52**	**333**	⇓P	Pg	23 48 56.7	+0.5
SSFR				AML	AML		
	comp=E,59µm,0.6s						
SSFR				AML	AML		
	comp=N,67µm,0.1s						
ARVD	**Arcevia**	**0.54**	**347**	⇑P	Pb	23 48 57.1	-0.5
ARVD				S	Sb	23 49 05.7	+0.4
T1222	**Castel Sant'An**	**0.57**	**185**	S	Sb	23 49 07.2	+0.8
FRON	**Frontone**	**0.61**	**333**	P	Pg	23 48 58.2	+0.2
FRON				AML	AML		
	comp=E,20µm,1.3s						
FRON				AML	AML		
	comp=N,26µm,1.5s						
FRON				AML	AML		
	comp=N,26µm,0.5s						
PIEI	**Pieia**	**0.70**	**324**	⇑P	Pg	23 48 59.9	+0.2
PIEI				S	Sb	23 49 10.5	+0.5

RSNC 20 23:50:45.0±1.1**, 6°.77N**×**73°.13W, h143**^{km}±4^{km}**, ML3.2,**
Mw3.6, 5C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.19**	**197**	⇑*i*P	Pn	23 51 04.3	-0.4
BARC				*e*S	Sn	23 51 18.8	-0.8
BARC				*i*		23 51 20.2	
	comp=Z,458nm,0.2s						
BRRC	**Barranca, Sant**	**0.67**	**300**	⇓*i*P	Pn	23 51 06.2	-0.3
BRRC				*e*S	Sn	23 51 22.7	-0.2
BRRC				*i*		23 51 26.0	
	comp=Z,239nm,0.2s						
PAMC	**Pamplona, Colo**	**0.70**	**37**	⇑*i*P	Pn	23 51 07.2	-0.1
PAMC				*e*S	Sn	23 51 24.1	-0.2
PAMC				*i*		23 51 26.3	
	comp=Z,721nm,0.5s						
PTBC	**PUERTO BERRIO,**	**1.34**	**260**	*e*P	Pn	23 51 11.2	-1.1
PTBC				*e*S	Sn	23 51 32.1	-1.1
PTBC				*i*		23 51 35.4	
	comp=Z,196nm,0.2s						
SPBC	**San Pablo de B**	**1.46**	**220**	⇑*e*P	Pn	23 51 13.5	-0.1
SPBC				*e*S	Sn	23 51 34.7	-0.8
SPBC				*i*		23 51 39.1	
	comp=Z,177nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.86**	**293**	*e*P	Pn	23 51 17.4	-0.7
ZARC				*e*S	Sn	23 51 42.8	-0.6
ZARC				*i*		23 51 46.6	
	comp=Z,205nm,0.3s						
NORC	**Norcasia**	**2.11**	**235**	*e*P	Pn	23 51 21.0	-0.1
NORC				*e*S	Sn	23 51 48.0	-0.7
NORC				*i*		23 51 50.3	
	comp=Z,79nm,0.2s						
CHIC	**Chingaza**	**2.21**	**196**	*e*P	Pn	23 51 22.6	-0.1
CHIC				*e*S	Sn	23 51 49.3	-2.3
CHIC				*i*		23 51 56.1	
	comp=Z,63nm,0.5s						
ROSC	**El Rosal**	**2.26**	**212**	*e*P	Pn	23 51 24.2	+1.0
ROSC				*e*S	Sn	23 51 53.2	+0.7
ROSC				*i*		23 51 59.0	
	comp=Z,120nm,0.7s						
UREC	**San Jos de Ur**	**2.58**	**292**	*e*P	Pn	23 51 24.7	-2.1
UREC				*e*S	Sn	23 51 55.7	-3.2
UREC				*i*		23 52 09.2	
	comp=Z,144nm,0.3s						
VILC	**Villavicencio,**	**2.70**	**192**	*e*P	Pn	23 51 28.5	0.0
VILC				*e*S	Sn	23 52 01.8	-0.2
VILC				*i*		23 52 11.6	
	comp=Z,72nm,0.4s						
GUY2C	**Guyana, Caldas**	**2.71**	**235**	*e*P	Pn	23 51 28.9	+0.1
GUY2C				*e*S	Sn	23 52 03.5	+1.0
GUY2C				IAML		23 52 11.9	
	comp=Z,96nm,0.6s						
PTGC	**Puerto Gaitan,**	**2.74**	**159**	⇓*i*P	Pn	23 51 27.5	-1.3
PTGC				*e*S	Sn	23 51 59.5	-3.2
PTGC				*i*		23 52 03.2	
	comp=Z,127nm,0.4s						
LL1C	**La Loma 1 Cana**	**2.78**	**351**	*e*P	Pn	23 51 29.8	+0.4
LL1C				*e*S	Sn	23 52 03.3	-0.3
CBOC	**Ciudad Bolivar**	**3.01**	**253**	⇑*i*P	Pn	23 51 32.5	+0.1
CBOC				*e*S	Sn	23 52 05.4	-3.5
CBOC				*i*		23 52 14.9	
	comp=Z,28nm,0.2s						
LL5C	**La Loma 5 El P**	**3.02**	**349**	*e*P	Pn	23 51 31.3	-1.0
LL5C				*e*S	Sn	23 52 07.4	-1.5
LL5C				*i*		23 52 12.1	
	comp=Z,66nm,0.3s						
DBBC	**Dabeiba**	**3.07**	**275**	⇓*e*P	Pn	23 51 32.6	-0.5
DBBC				*e*S	Sn	23 52 07.8	-2.4
DBBC				*i*		23 52 11.9	
	comp=Z,64nm,0.3s						
ANIL	**Santa Ana**	**3.21**	**225**	*e*P	Pn	23 51 35.9	+0.9
ANIL				*e*S	Sn	23 52 04.2	-9.4
ANIL				*i*		23 52 20.4	
	comp=Z,186nm,0.3s						
ARGC	**Ariguani, Magd**	**3.26**	**340**	*e*P	Pn	23 51 35.2	-0.3
ARGC				*e*S	Sn	23 52 13.9	-0.6
ARGC				*i*		23 52 21.6	
	comp=Z,30nm,0.3s						
ORTC	**Ortega, Tolima**	**3.54**	**217**	*e*P	Pn	23 51 39.0	-0.1
ORTC				*e*S	Sn	23 52 21.3	+0.2
ORTC				*i*		23 52 29.2	
	comp=Z,37nm,0.5s						
APAC	**Apartado, Choc**	**3.60**	**288**	*e*P	Pn	23 51 38.9	-1.0
APAC				*e*S	Sn	23 52 20.0	-2.4
APAC				*i*		23 52 23.7	
	comp=Z,51nm,0.4s						
SJCC	**San Jacinto, C**	**3.71**	**327**	*e*P	Pn	23 51 38.7	-2.6
SJCC				*e*S	Sn	23 52 20.0	-5.1
SJCC				*i*		23 52 24.1	
	comp=Z,61nm,0.5s						
LCBC	**Los crdobas,**	**3.82**	**303**	*e*P	Pn	23 51 52.2	+9.4
LCBC				*e*S	Sn	23 52 27.5	-0.1
LCBC				*i*		23 52 31.1	
	comp=Z,39nm,0.2s						
CRJC	**Cerrejon, Guaj**	**4.23**	**3**	⇑*e*P	Pn	23 51 45.2	-3.0
CRJC				*e*S	Sn	23 52 30.8	-6.5
CRJC				*i*		23 52 38.8	
	comp=Z,22nm,0.5s						
GUVC	**San Jose del G**	**4.23**	**173**	*e*P	Pn	23 51 47.3	-0.9
GUVC				*e*S	Sn	23 52 35.4	-1.8
GUVC				*i*		23 52 39.2	
	comp=Z,29nm,0.2s						
YOTC	**Yotoco, Valle**	**4.24**	**229**	*e*P	Pn	23 51 47.9	-0.5
YOTC				*e*S	Sn	23 52 36.5	-1.0
YOTC				*i*		23 52 44.7	
	comp=Z,9.6nm,0.5s						
SMRC	**Santa Marta, M**	**4.50**	**346**	*e*P	Pn	23 51 49.3	-2.3
SMRC				*e*S	Sn	23 52 38.5	-5.0
SMRC				*i*		23 52 41.4	
	comp=Z,17nm,0.2s						
MACC	**Macarena, Meta**	**4.65**	**189**	*e*P	Pn	23 51 51.6	-2.1
MACC				*e*S	Sn	23 52 44.2	-3.1
MACC				*i*		23 52 50.6	
	comp=Z,14nm,0.7s						
BETC	**Betania**	**4.67**	**210**	*e*P	Pn	23 51 53.1	-1.0
BETC				*e*S	Sn	23 52 41.4	-6.4
BETC				*i*		23 52 55.7	
	comp=Z,11nm,0.6s						
MALC	**Bahia Malaga**	**5.01**	**237**	*e*P	Pn	23 51 60.0	+1.6
MALC				*e*S	Sn	23 52 57.9	+2.3
URIC	**Uribia, Colomb**	**5.02**	**13**	*e*P	Pn	23 51 55.3	-3.4
URIC				*e*S	Sn	23 52 51.2	-4.8
URIC				*i*		23 52 58.2	
	comp=Z,5.8nm,0.5s						
GARC	**Garzon, Huila**	**5.13**	**207**	*e*P	Pn	23 51 59.0	-1.3
GARC				*e*S	Sn	23 52 53.5	-5.4
GARC				*i*		23 52 59.4	
	comp=Z,29nm,0.3s						
FLOC	**Florencia**	**5.74**	**206**	*e*P	Pn	23 52 07.6	-0.7
FLOC				*e*S	Sn	23 53 10.5	-2.7
FLOC				*i*		23 53 19.1	
	comp=Z,10nm,0.9s						
BBAC	**Balboa, Cauca**	**6.26**	**221**	*e*P	Pn	23 52 16.0	+0.6
BBAC				*e*S	Sn	23 53 22.6	-3.3
BBAC				*i*		23 53 30.6	
	comp=Z,5.8nm,0.4s						

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*ISK **20** 23:56:47.7, 37°.28N×36°.02E, h11^{km}, ML2.8/14*
*DDA **20** 23:56:48.1±0.0, 37°.21N×36°.01E, h7^{km}±6^{km}, ML2.8*
ISC 20 23:56:48.1±1.0**, 37°.24N**±0°.03×**35°.99E**±0°.02**, h12**^{km}±10^{km}**,**
n21, σ1^{s}07/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.27**	**331**	Pg	**Pg**	**23 56 54.1**	**+0.3**
CEYT	**Ceyhan**	**0.30**	**220**	Pg	**Pb**	**23 56 55.4**	**-0.1**
CEYT				Sg	**Sb**	**23 57 00.4**	**-0.1**
AKO	**Adana**	**0.49**	**297**	P	**Pg**	**23 56 57.5**	**-0.3**
YURE	**YUREGIR**	**0.51**	**215**	P	**Pb**	**23 56 58.8**	**-0.2**
KAMA	**Osmaniye**	**0.54**	**96**	P	**Pg**	**23 56 58.3**	**-0.5**
KAMA				S	**Sg**	**23 57 05.6**	**-0.3**
KAMA				*i* AML	AML	23 57 08.0	
	comp=E,596nm,0.5s						
KAMA				*i* AML	AML	23 57 09.0	
	comp=N,301nm,0.5s						
SAIM	**ADANA**	**0.74**	**6**	P	**Pg**	**23 56 59.5**	**-2.9**
SAIM				*i* AML	AML	23 57 15.0	
	comp=E,472nm,0.2s						
SAIM				S	**S**	**23 57 15.0**	**+2.9**
KARA	**Karaisali**	**0.75**	**272**	Pg	**Pg**	**23 57 02.5**	**-0.1**
KMRS	**Kahramanmaras**	**0.77**	**70**	Pg	**Pg**	**23 57 02.2**	**-0.9**
KMRS				Sg	**Sg**	**23 57 12.9**	**-0.2**
GAZ	**Gaziantep**	**0.98**	**94**	Pg	**Pg**	**23 57 06.5**	**-0.5**
GAZ				Sg	**Sb**	**23 57 20.3**	**+0.3**
KUZU	**Kuzuini**	**0.98**	**118**	P	**Pb**	**23 57 07.3**	**+0.1**
KUZU				S	**Sb**	**23 57 20.7**	**+0.5**
KUZU				*i* AML	AML	23 57 21.0	
	comp=E,868nm,0.4s						
KUZU				*i* AML	AML	23 57 25.0	
	comp=N,789nm,0.8s						
DED	**Mersin**	**0.99**	**254**	P	**Pg**	**23 57 06.1**	**-1.2**
DED				S	**Sg**	**23 57 18.1**	**-2.1**
DED				*i* AML	AML	23 57 19.0	
	comp=E,114nm,0.4s						
RHAN	**Hatay/Reyhanl**	**1.09**	**153**	P	**Pg**	**23 57 07.9**	**-1.3**
RHAN				S	**Sb**	**23 57 24.4**	**+1.1**
RHAN				*i* AML	AML	23 57 26.0	
	comp=E,449nm,0.6s						
RHAN				*i* AML	AML	23 57 31.0	
	comp=N,279nm,0.6s						
SARI	**SarD1z-Kayseri**	**1.21**	**16**	Pn	**Pg**	**23 57 10.4**	**-1.1**
SARI				Sn	**Sg**	**23 57 27.1**	**-0.2**
BNN	**Bunyan**	**1.61**	**356**	Pn	**Pn**	**23 57 16.3**	**-0.3**
BNN				Sn	**Sn**	**23 57 37.2**	**-0.2**
KIZK	**Mersin**	**1.67**	**243**	Pn	**Pn**	**23 57 17.4**	**+0.2**
DARE	**Darende-Malaty**	**1.78**	**41**	Pn	**Pn**	**23 57 18.5**	**-0.3**
YESY	**Yesilyurt**	**1.87**	**287**	Pn	**Pn**	**23 57 20.6**	**+0.5**
IKL	**Isikli**	**2.11**	**242**	Pn	**Pn**	**23 57 24.2**	**+1.0**
SULT	**Sultanhani-AKS**	**2.18**	**297**	Pn	**Pn**	**23 57 25.1**	**+0.7**
URFA	**Urfa**	**2.26**	**84**	Pn	**Pn**	**23 57 25.8**	**+0.3**
YAYX	**Yaylak**	**2.42**	**315**	Pn	**Pn**	**23 57 28.0**	**+0.4**

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*IDC **20** 23:57:51.8±1.0, 13°.89N×121°.04E, h0^{km}, mb3.7/6,*
mbtmp3.7/6, Error ellipse: s-maj=135.3km s-min=20.0km
az=68.0
*MAN **20** 23:58:06.3, 13°.79N×120°.53E, h92^{km}, mb4.1, ML2.8,*
MS2.5
ISC 20 23:58:05.4±0.8**, 13°.74N**±0°.05×**120°.48E**±0°.07**, h111**^{km}±6^{km}**,**
n18, σ1^{s}13/27**, mb3.8**/7**, 7C-4D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.23**	**268**	⇑*i*P	**Pn**	**23 58 21.8**	**+0.8**
LUBP				*i* S	**Sn**	**23 58 33.0**	**+0.2**
PGP	**Puerto Galera**	**0.52**	**117**	⇑*i*P	**Pn**	**23 58 22.3**	**-0.3**
PGP				*e*S	**Sn**	**23 58 33.8**	**-1.7**
MACP	**Maragondon, Ca**	**0.57**	**24**	⇓*e*P	**Pn**	**23 58 22.6**	**-0.3**
MACP				*e*S	**Sn**	**23 58 34.6**	**-1.4**
TGY	**Tagaytay City**	**0.57**	**51**	⇑*e*P	**Pn**	**23 58 25.6**	**+2.6**
TGY				*i* S	**Sn**	**23 58 36.1**	**-0.1**
LQP	**Lukban**	**1.09**	**70**	⇓*e*P	**Pn**	**23 58 28.1**	**+0.2**
LQP				*i* S	**Sn**	**23 58 45.1**	**+0.2**
BOAC	**Boac**	**1.36**	**102**	⇓*e*P	**Pn**	**23 58 32.4**	**+1.7**
BOAC				*e*S	**Sn**	**23 58 49.6**	**-0.2**
SJMP	**San Jose**	**1.42**	**154**	⇑*e*P	**Pn**	**23 58 32.2**	**+0.9**
SJMP				*e*S	**Sn**	**23 58 51.3**	**+0.3**
BUSP	**Coron**	**1.75**	**189**	⇑*e*P	**Pn**	**23 58 36.2**	**+0.8**
BUSP				*e*S	**Sn**	**23 58 58.8**	**+0.6**
PCPH	**Palayan**	**1.91**	**18**	⇑*e*P	**Pn**	**23 58 36.8**	**-0.5**

JCNP	Jose Panganiba	2.22	76	⇓eP	Pn	23 58 42.1	+0.8
BALP	Baler	2.25	28	⇑eP	Pn	23 58 42.7	+1.0
BALP				eS	Sn	23 59 10.3	+0.8
SONM	Songino Array	35.96	344	P	P	00 04 56.3	+0.8
	0.5nm,0.3s,baz=166,slow=10,SNR=4.6						
	0.5nm,0.3s						
WRA	Warramunga Arr	36.15	158	P	P	00 04 55.4	-1.8
	0.3nm,0.6s,baz=334,slow=9.6,SNR=5.5						
	0.3nm,0.6s						
ASAR	Alice Springs	39.43	160	P	P	00 05 23.6	-1.2
	0.1nm,0.4s,baz=342,slow=6.8,SNR=1.7						
	0.1nm,0.4s						
MKAR	Makanchi Array	45.87	324	P	P	00 06 18.1	+1.5
	0.3nm,0.3s,baz=111,slow=8.1,SNR=12						
	0.3nm,0.3s						
ZALV	Zalesovo Beam	48.92	333	P	P	00 06 38.8	-1.2
	0.6nm,0.3s,baz=124,slow=7.1,SNR=4.3						
	0.6nm,0.3s						
ARCES	ARCESS Array B	78.97	339	P	P	00 09 56.4	-0.1
	2.4nm,0.8s,baz=69,slow=4.9,SNR=1.5						
	2.4nm,0.8s						
SPITS	Spitsbergen Ar	79.50	348	P	P	00 09 59.4	+0.1
	8.3nm,1.0s,baz=101,slow=7.5,SNR=5.5						

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*IDC **21** 00:02:43.7±3.1, 9°.10N×73°.34W, h89^{km}±32^{km}, mb3.2/2, mbtmp3.5/4, Error ellipse: s-maj=42.3km s-min=22.3km az=158.0*

*RSNC **21** 00:02:48.0±1.0, 8°.44N×72°.90W, h180^{km}±5^{km}, ML3.0, Mw3.4*

ISC 21 00:02:48.0±1.0, **8°.46N**±0°.03×**72°.87W**±0°.05, **h177**^{km}±8^{km}, **n28,** σ**1^{s}.74**/51, **3C-3D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	1.12	171	⇓eP	Pn	00 03 17.1	+0.2
PAMC				eS	Sn	00 03 39.1	-0.1
PAMC				i		00 03 41.1	
	comp=Z,190nm,0.3s						
LL1C	La Loma 1 Cana	1.27	328	⇑iP	Pn	00 03 19.0	+1.4
LL1C				eS	Sn	00 03 41.6	+1.1
LL1C				i		00 03 44.2	
	comp=Z,502nm,0.2s						
LL5C	La Loma 5 El P	1.54	327	⇑eP	Pn	00 03 20.7	+0.7
LL5C				eS	Sn	00 03 45.1	+0.2
LL5C				i		00 03 47.6	
	comp=Z,108nm,0.5s						
BRRC	Barranca, Sant	1.58	212	⇓eP	Pn	00 03 20.4	-0.1
BRRC				eS	Sn	00 03 45.0	-0.7
BRRC				i		00 03 50.6	
	comp=Z,61nm,0.4s						
BARC	Barichara	1.88	190	⇓iP	Pn	00 03 23.5	-0.3
BARC				eS	Sn	00 03 50.6	-1.0
BARC				i		00 03 52.3	
	comp=Z,101nm,0.3s						
ARGC	Ariguani, Magd	1.94	316	eP	Pn	00 03 26.0	+1.7
ARGC				eS	Sn	00 03 54.1	+1.7
ARGC				i		00 03 56.0	
	comp=Z,37nm,0.2s						
ZARC	Zaragoza, Cauc	2.19	244	eP	Pn	00 03 26.7	-0.2
ZARC				eS	Sn	00 03 56.1	-1.1
ZARC				i		00 04 01.4	
	comp=Z,152nm,0.5s						
SDV	Santo Domingo	2.25	79	P	Pn	00 03 27.1	-0.8
	comp=Z,3.9nm,0.4s,baz=248,slow=5.4,SNR=9.1						
SDV				S	Sn	00 03 57.0	-1.7
	comp=Z,19nm,0.5s,baz=36,slow=15,SNR=22						
PTBC	PUERTO BERRIO,	2.47	220	eP	Pn	00 03 29.4	-0.8
PTBC				eS	Sn	00 04 01.4	-1.7
PTBC				i		00 04 04.5	
	comp=Z,36nm,0.4s						
CRJC	Cerrejon, Guaj	2.55	360	⇑iP	Pn	00 03 30.7	-0.4
CRJC				eS	Sn	00 04 02.4	-2.5
CRJC				i		00 04 04.5	
	comp=Z,220nm,0.2s						
SJCC	San Jacinto, C	2.69	302	eP	Pn	00 03 32.6	-0.2
SJCC				eS	Sn	00 04 07.6	-0.1
SJCC				i		00 04 09.9	
	comp=Z,36nm,0.4s						
UREC	San Jos de Ur	2.73	255	eP	Pn	00 03 31.8	-1.4
UREC				eS	Sn	00 04 05.8	-2.6
UREC				i		00 04 07.3	
	comp=Z,127nm,0.3s						
SMRC	Santa Marta, M	3.00	334	eP	Pn	00 03 35.9	-0.7
SMRC				eS	Sn	00 04 11.2	-3.3
SMRC				i		00 04 13.3	
	comp=Z,53nm,0.3s						
SPBC	San Pablo de B	3.03	203	eP	Pn	00 03 36.7	-0.3
SPBC				eS	Sn	00 04 15.1	-0.1
SPBC				i		00 04 16.2	
	comp=Z,28nm,0.3s						
URIC	Uribia, Colomb	3.34	15	eP	Pn	00 03 39.6	-1.0
URIC				eS	Sn	00 04 18.1	-3.8
URIC				i		00 04 20.9	
	comp=Z,37nm,0.3s						
NORC	Norcasia	3.49	215	eP	Pn	00 03 42.9	+0.2
NORC				eS	Sn	00 04 21.6	-3.8
NORC				i		00 04 36.9	
	comp=Z,16nm,0.4s						
DBBC	Dabeiba	3.61	247	eP	Pn	00 03 43.5	-0.6
DBBC				eS	Sn	00 04 24.7	-3.2
DBBC				i		00 04 28.8	
	comp=Z,29nm,0.3s						
APAC	Apartado, Choc	3.71	262	eP	Pn	00 03 45.1	-0.3
APAC				eS	Sn	00 04 28.8	-1.4
APAC				i		00 04 34.5	
	comp=Z,40nm,0.5s						
ROSC	El Rosal	3.87	202	P	Pn	00 03 47.7	-0.1
	comp=Z,8.4nm,0.3s,baz=35,slow=22,SNR=2.8						
ROSC				S	Sn	00 04 33.9	-0.6
	comp=Z,13nm,0.4s,baz=70,slow=23,SNR=4.1						
CHIC	Chingaza	3.90	193	eP	Pn	00 03 48.1	-0.1
CHIC				eS	Sn	00 04 36.3	+1.1
CHIC				i		00 04 40.5	
	comp=Z,6.6nm,0.4s						
CBOC	Ciudad Bolivar	4.04	231	eP	Pn	00 03 50.3	+0.5
CBOC				eS	Sn	00 04 29.5	-8.6
CBOC				i		00 04 39.4	
	comp=Z,14nm,0.4s						
GUY2C	Guyana, Caldas	4.06	218	eP	Pn	00 03 50.4	+0.2
GUY2C				eS	Sn	00 04 36.5	-2.4
GUY2C				i		00 04 52.8	
	comp=Z,22nm,0.6s						
ANIL	Santa Ana	4.68	213	eP	Pn	00 03 58.9	+0.9
ANIL				eS	Sn	00 04 49.0	-3.9
ANIL				i		00 05 09.9	
	comp=Z,18nm,0.4s						
ORTC	Ortega, Tolima	5.10	208	eP	Pn	00 04 03.0	-0.3
ORTC				eS	Sn	00 05 02.4	0.0
ORTC				i		00 05 16.9	
	comp=Z,5.2nm,0.5s						
YOTC	Yotoco, Valle	5.63	218	eP	Pn	00 04 09.7	-0.5
YOTC				eS	Sn	00 05 12.6	-2.4
YOTC				i		00 05 17.9	
	comp=Z,2.0nm,0.5s						
YKA	Yellowknife Ar	61.83	339	P	P	00 12 47.6	-0.2
	comp=Z,0.3nm,0.6s,baz=130,slow=7.1,SNR=6.0						
	comp=Z,0.3nm,0.6s						
TORD	Torodi Ar. Bea	73.17	79	P	P	00 14 08.4	+8.5
	comp=Z,0.8nm,1.0s,baz=269,slow=7.2,SNR=1.3						
	comp=Z,0.8nm,1.0s						
WRA	Warramunga Arr	151.31	244	PKPbc	PKiKP	00 22 26.9	+4.9
	comp=Z,0.2nm,0.5s,baz=109,slow=2.6,SNR=4.6						

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*DDA **21** 00:18:55.1±0.0, 40°.64N×33°.00E, h7^{km}±3^{km}, ML2.6*

*ISK **21** 00:18:55.5, 40°.62N×33°.04E, h6^{km}, ML2.6/16*

ISC 21 00:18:55.6±1.1, **40°.64N**±0°.03×**33°.02E**±0°.02, **h7**^{km}±11^{km}, **n24,** σ**0^{s}.79**/36, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DERS	Karabk-Eskip	0.41	301	P	Pg	00 19 03.9	+0.2
DERS				S	Sb	00 19 10.4	-1.4
DERS				i AML	AML	00 19 11.0	
	comp=E,633nm,0.2s						
DERS				i AML	AML	00 19 11.0	
	comp=N,2μm,0.2s						
CMDR	Camlidere-ANKA	0.44	251	P	Pg	00 19 04.1	-0.1
CMDR				S	Sg	00 19 09.9	0.0
CMDR				i AML	AML	00 19 11.0	
	comp=E,573nm,0.2s						
CMDR				i AML	AML	00 19 11.0	
	comp=N,812nm,0.2s						
CANT	Cankiri	0.46	94	Pg	Pg	00 19 04.7	+0.1
CANT				Sg	Sb	00 19 11.8	-1.3
KBUK	KARABUK-Merkez	0.67	334	P	Pg	00 19 08.1	-0.3
KBUK				S	Sg	00 19 17.2	+0.1
KBUK				i AML	AML	00 19 18.0	
	comp=N,226nm,0.3s						
KBUK				i AML	AML	00 19 18.0	
	comp=E,256nm,0.5s						
ILGA	Ilgaz	0.67	52	P	Pg	00 19 08.2	-0.4
ILGA				S	Sg	00 19 17.6	+0.2
PELI	Kastamonı-Ara	0.70	19	P	Pg	00 19 08.9	-0.2
PELI				S	Sg	00 19 17.8	-0.4
PELI				i AML	AML	00 19 19.0	
	comp=N,219nm,0.2s						
PELI				i AML	AML	00 19 19.0	
	comp=E,139nm,0.4s						
BCAM	Yenicaga	0.74	284	P	Pg	00 19 09.8	-0.2
BCAM				S	Sg	00 19 20.0	+0.3
BCAM				i AML	AML	00 19 20.0	
	comp=E,391nm,0.2s						
BCAM				i AML	AML	00 19 20.0	
	comp=N,232nm,0.2s						
KIBS	BOLU	0.91	256	P	Pg	00 19 12.4	-0.8
BOLU	Bolu-Merkez-Mu	1.03	278	P	Pg	00 19 14.6	-0.8
AFSR	Afar-Bala (An	1.19	178	Pn	Pb	00 19 18.2	-0.4
AFSR				Sn	Sn	00 19 35.3	0.0
CORM	Corum	1.32	110	Pn	Pg	00 19 20.5	-0.4
CORM				Sn	Sn	00 19 39.5	+1.1
KDZE	Karadeniz Ereo	1.37	300	Pn	Pb	00 19 21.2	-0.3
KDZE				Sn	Sg	00 19 41.9	+2.3
KAMT	Kaman	1.38	157	Pn	Pn	00 19 21.0	-0.3
KAMT				Sn	Sn	00 19 40.4	+0.5
MDUB	Mudurnu	1.40	264	Pn	Pg	00 19 22.4	0.0
MDUB				Sn	Sg	00 19 42.3	+1.8
KULU	Kulu	1.60	180	Pn	Pn	00 19 24.4	+0.1
SVRH	Sivrihisar-ESK	1.65	224	Pn	Pb	00 19 26.1	-0.4
SERE	Sereflikochisa	1.74	166	Pn	Pn	00 19 26.4	0.0
YAYX	Yaylak	1.81	160	Pn	Pn	00 19 27.3	+0.1
KIZT	Kizilcal	1.96	207	Pn	Pn	00 19 29.5	+0.1
DIKM	Dikmen	1.97	58	Pn	Pn	00 19 29.3	-0.1
YOZ	Yozgat	2.03	119	Pn	Pn	00 19 31.1	+0.8
CHBY	Cihanbeyli	2.06	183	Pn	Pn	00 19 31.3	+0.6
KVT	Kavak	2.34	78	Pn	Pn	00 19 35.3	+0.8
TOKT	Tokat	2.71	96	Pn	Pn	00 19 41.1	+1.5

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*DJA **21** 00:27:20.9±0.4, 8°S±6°×11°9E±°, h10^{km}, M3.5/6, MLv3.5/6*

*IDC **21** 00:27:37.2±7.6, 7°.68S×119°.64E, h173^{km}±66^{km}, mb3.0/2, mbtmp3.4/4, Error ellipse: s-maj=217.0km s-min=20.3km az=58.0*

ISC 21 00:27:20.2±1.0, **7°.79S**±0°.07×**119°.00E**±0°.07, **h10**^{km}, **n9,** σ**1^{s}.09**/11, **Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	1.59	230	P	Pn	00 27 49.2	+0.8
PLAI				S	Sn	00 28 07.9	-1.1
BSSI	Bau Bau, Buton	2.21	42	P	Pn	00 27 57.5	+0.6
BSSI				S	Sn	00 28 22.8	-1.5
TWSI	Taliwang, Sumb	2.30	246	P	Pn	00 27 59.2	+1.0
BKSI	Bulukumba	2.70	24	P	Pn	00 28 04.4	+0.8
KAPI	Kappang	2.86	15	P	Pg	00 28 21.3	+6.2
	15nm,0.4s,baz=168,slow=14,SNR=2.4						
KAPI				S	Sb	00 28 47.5	+1.1
	12nm,0.3s,baz=88,slow=23,SNR=3.5						
MMRI	Maumere	3.31	105	P	Pn	00 28 13.3	+1.2
WRA	Warramunga Arr	19.15	131	P	P	00 31 43.2	-0.7
	0.8nm,1.0s,baz=309,slow=12,SNR=9.3						
ASAR	Alice Springs	21.29	140	P	P	00 32 07.0	-0.1
	1.6nm,0.6s,baz=314,slow=9.0,SNR=16						
	1.6nm,0.6s						
MKAR	Makanchi Array	63.39	333	P	P	00 37 49.4	-0.5
	0.2nm,0.5s,baz=134,slow=6.2,SNR=2.7						
	0.2nm,0.5s						

HEL 21 00:41:04.4±0.3, **67°.77N**×**20°.13E, h0**^{km}**, ML1.4, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANU	Lannavaara	0.76	67	PG	Pg	00 41 18.3	-0.6
LANU				SG	Sg	00 41 27.9	-0.9
KIF	Kilpisjarvi	1.27	11	eP	Pg	00 41 28.0	-0.7
KIF	Kilpisjarvi	1.27	11	PG	Pg	00 41 28.0	-0.7
KIF				MSG		00 41 43.8	
	comp=Z,7.0nm,0.2s						
KIF				SG	Sg	00 41 44.1	-1.0
PAJU	Pajala	1.37	121	PN	Pg	00 41 30.1	-0.6
	baz=304						
PAJU				SN	Sb	00 41 48.8	-0.2
ERTU	Ertsjaerv	1.46	146	PN	Pg	00 41 32.3	-0.1
ERTU				SN	Sn	00 41 53.3	+1.5
HEF	Hetta	1.47	62	eP	Pn	00 41 31.0	-1.2
HEF	Hetta	1.47	62	PG	Pn	00 41 31.0	-1.2
HEF				MSG		00 41 48.7	
	comp=Z,3.8nm,0.2s						
HEF				SN	Sg	00 41 50.6	-1.1
KLF	Kolari	1.57	108	PN	Pn	00 41 33.5	+0.1
KLF				MSG		00 41 51.3	
	comp=Z,1.8nm,0.2s						
KLF				SN	Sg	00 41 55.6	+0.9
KTK1	Kautokeino	1.70	41	PG	Pn	00 41 35.9	+0.6
KTK1				SG	Sn	00 41 57.8	+0.1
TRO	Tromso	1.93	347	PG	Pn	00 41 39.0	+0.7
TRO				SG	Sn	00 42 03.7	+0.5
KALU	Kalix	2.30	145	PG	Pb	00 41 45.3	-1.4
	baz=330						
TOF	Tornio	2.37	134	PG	Pb	00 41 46.8	-1.0
TOF				MSG		00 42 14.4	
	comp=Z,1.3nm,0.2s						
SGF	Sodankyl	2.47	95	PG	Pb	00 41 48.8	-0.8
SGF				SG	Sb	00 42 20.6	0.0
RNF	Rovaniemi	2.57	114	PG	Pb	00 41 49.7	-1.6
RNF				SG	Sb	00 42 23.6	+0.2
ARA0	ARCESS Array S	2.65	45	PB	Pn	00 41 49.6	+1.3
ARA0				SB	Sb	00 42 23.6	-2.1
KEV	Kevo	3.20	48	SN	Sn	00 42 34.8	+0.2
VRF	Varrio	3.61	86	SG	Sb	00 42 53.3	+0.1
KU6	Riekki	4.22	110	SG	Sb	00 43 13.9	+3.0

UPP 21 00:41:58.2±0.4, **67°.86N**×**20°.19E, h0**^{km}±3^{km}**, ML2.3, Suspected explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.11	30	P	Pg	00 42 00.4	+0.1
KUA				S	Sg	00 42 02.1	+0.4
RATU	Laukkuluspa	0.23	261	P	Pg	00 42 02.7	+0.1
KOVU	Salmi	0.36	358	P	Pg	00 42 05.2	+0.1
KOVU				S	Sg	00 42 10.3	+0.4
NIKU	Nikkaluokta	0.44	271	P	Pg	00 42 06.6	0.0
LANU	Lannavaara	0.71	74	P	Pg	00 42 11.5	-0.2
MASU	Masugnsbyn	0.80	120	P	Pg	00 42 13.2	-0.3
SALU	Saltoluokta	0.81	234	P	Pg	00 42 13.2	-0.4
KIF	Kilpisjarvi	1.17	11	eP	Pg	00 42 20.7	+0.1
PAJU	Pajala	1.41	125	P	Pn	00 42 23.8	-1.2
HEF	Hetta	1.41	65	eP	Pn	00 42 23.6	-1.5
ERTU	Ertsjaerv	1.53	148	P	Pn	00 42 26.6	0.0

DJA 21 00:54:29.3±0.5, **7°S**±9°×**10°7E**±°, **h103**^{km}±6^{km}, **M4.3**/15, **mb4.9**/2, **MLv4.0**/15, **MwMwp5.8**/1, **Mwp5.9**/1, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKJI	Sukabumi	0.42	276	P	Pn	00 54 45.9	+1.0
SBJI	Serang	1.25	318	P	Pn	00 54 53.4	+0.6
CGJI	Cibinong	1.35	289	P	Pn	00 54 54.7	+0.8
CGJI				S	Sn	00 55 13.8	+1.3
JCJI	Jatiwangi	1.40	67	P	Pn	00 54 53.4	-1.1
CMJI	Cimerak	1.63	117	P	Pn	00 54 57.6	+0.3
CMJI				S	Sn	00 55 19.0	+0.4
KPJI	Karang Pucung	1.96	98	P	Pn	00 55 01.7	+0.3
KASI	Kota Agung	2.90	301	P	Pn	00 55 13.2	-0.6
SMRI	Semarang	3.44	90	P	Pn	00 55 21.2	+0.2
UGM	Wanagama	3.62	104	P	Pn	00 55 23.5	+0.1
UWJI	Ujung Watu	3.99	81	P	Pn	00 55 28.3	-0.1
MNAI	Manna	4.81	303	P	Pn	00 55 38.9	-0.7
PWJI	Pagerwojo	4.88	102	P	Pn	00 55 40.6	+0.2
GMJI	Gumukmas	6.52	101	P	Pn	00 56 02.8	+0.1
	57nm,0.9s,57μm0.6nm						
ABJI	Asem Bagus	7.23	96	P	Pn	00 56 13.0	+0.6
	271nm,0.9s,1.0nm						
JAGI	Jajag, Banyuwa	7.25	102	P	Pn	00 56 12.7	+0.1

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*IDC **21** 01:02:12.9±3.6, 2°.56S×139°.32E, h0^{km}, mb3.6/2, mbtmp3.8/3, ML4.3/1, MS3.5/2, Error ellipse: s-maj=131.0km s-min=19.5km az=91.0*

*DJA **21** 01:02:12.5±1.8, 2°S±14°×13°9E±°, h14^{km}±7^{km}, M4.0/3, mb3.9/1, MLv4.1/3*

ISC 21 01:02:11.7±0.9, **2°.29S**±0°.06×**138°.74E**±0°.05, **h10**^{km}, **n11,** σ**3^{s}.03**/11, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.30	354	P	Pb	01 02 18.0	-1.2
SMPI				S	Sb	01 02 23.1	-1.1
GENI	Genyem	1.46	102	P	Pn	01 02 37.2	-0.9
GENI				S	Sg	01 03 01.9	+3.3
SRPI	Serui, Papua	2.53	279	P	Pn	01 02 54.1	+1.2
SRPI				S	Sn	01 03 24.3	+0.4
FAKI	Fak Fak	6.51	264	P	Pn	01 03 48.3	+0.6
WRA	Warramunga Arr	18.07	193	P	Pn	01 06 23.6	+0.6
	0.9nm,0.3s,baz=17,slow=12,SNR=37						
WRA				S	Sn	01 09 37.6	-7.1
	1.9nm,0.8s,baz=7.8,slow=22,SNR=6.0						
	2.0nm,0.4s						
ASAR	Alice Springs	21.76	192	P	P	01 07 05.3	+1.6
	2.7nm,0.7s,baz=23,slow=9.8,SNR=22						
ASAR				S	S	01 11 06.6	+1.9
	0.7nm,0.7s,baz=16,slow=23,SNR=4.3						
	2.7nm,0.7s						
H11N1	WAKE ISLAND Hy	35.24	50	T	T	01 46 02.0	
	baz=232						
H11N2	WAKE ISLAND Hy	35.26	50	T	T	01 46 08.3	
	baz=232						
H11N3	WAKE ISLAND Hy	35.26	50	T	T	01 46 07.3	
	baz=232						
PETK	Petropavlovsk-	57.45	13	LR	LR	01 33 42.8	
	comp=Z,47nm,21.9s,baz=225,slow=33						
MKAR	Makanchi Array	69.48	322	P	P	01 13 26.8	+6.3
	0.5nm,0.8s,baz=99,slow=7.4,SNR=5.0						
MKAR				LR	LR	01 47 06.7	
	comp=Z,28nm,18.0s,baz=314,slow=38						
	0.5nm,0.8s						

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*FUNV **21** 01:14:19.1, 10°.72N×61°.78W, h15^{km}, MW3.2*

*TRN **21** 01:14:19.1, 10°.56N×61°.89W, h4^{km}, MD3.2*

ISC 21 01:14:17.9±1.5, **10°.54N**±0°.07×**61°.89W**±0°.04, **h17**^{km}±11^{km}, **n9,** σ**1^{s}.62**/15, **Trinidad**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.49	78	eP	Pb	01 14 28.9	+0.7
TRN				eS	Sb	01 14 35.3	+0.3
CRUV	Carupano	1.33	276	eP	Pg	01 14 43.6	0.0
CRUV				eS	Sg	01 15 01.6	+0.6
TOSP	Speyside	1.53	60	eP	Pg	01 14 47.4	0.0
TOSP				eS	Sg	01 15 08.0	+0.7
GRGR	Grenville	1.60	8	eP	Pb	01 14 47.5	+0.6
GRGR				eS	Sg	01 15 09.0	-0.5
GRSS	Sisters	1.77	9	eS	Sg	01 15 13.6	-1.3
GCMP	Grenada, Carri	1.98	13	eP	Pb	01 14 54.2	+0.6
GCMP				eS	Sg	01 15 19.9	-1.9
PCRV	Puerto La Cruz	2.73	263	eP	Pn	01 15 03.1	+2.2
CACV	CAICARA DEL OR	5.46	238	eP	Pn	01 15 35.1	-3.4
CACV				eS	Sn	01 16 31.9	-9.2
BAUV	El Baul	6.27	256	eP	Pn	01 15 51.3	+1.7
BAUV				eS	Sn	01 16 59.6	-1.4

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*IDC **21** 01:38:33.6±0.9, 17°.92S×173°.76W, h0^{km}, mb4.0/9, mbtmp4.1/10, ML3.8/1, MS3.4/6, Error ellipse: s-maj=45.6km s-min=19.0km az=139.0*

*NEIC **21** 01:38:37.1±0.4, 18°.1S±0°.1×173°.2W±0°.1, h43^{km}±19^{km}, mb4.5/7, Error ellipse: s-maj=22.4km s-min=14.3km az=57.0*

ISC 21 01:38:38.9±0.7, **18°.1S**±0°.1×**173°.7W**±0°.2, **h37**^{km}, **n56,** σ**0^{s}.77**/42, **mb4.3**/14, **MS3.7**/3, **8C-2D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	3.74	106	Pn	Pn	01 39 26.7	-7.4
NIUE				Sn	Sn	01 40 02.8	-14
AFI	Afiamalu	4.52	25	Pn	Pn	01 39 40.4	-4.5
	5.0nm,0.3s,baz=353,slow=9.3,SNR=2.4						
AFI				Sn	Sn	01 40 24.8	-11
	55nm,0.3s,baz=82,slow=16,SNR=12						
AFI				LR	LR	01 41 17.9	
	comp=Z,169nm,18.6s,baz=252,slow=37						
	15nm,0.3s						
AFI	Afiamalu	4.52	25	Pn	Pn	01 39 40.5	-4.4
RAR	Rarotonga	13.51	106	LR	LR	01 45 52.4	
	comp=Z,69nm,18.4s,baz=220,slow=32						
RAR	Rarotonga	13.51	106	Pn	Pn	01 41 39.8	-8.4
DZM	Mont Dzumac	19.06	255	LR	LR	01 48 52.6	
	comp=Z,155nm,18.7s,baz=46,slow=32						
URZ	Urewera	21.68	200	P	P	01 43 27.1	+0.7
	4.5nm,0.3s,baz=212,slow=15,SNR=3.2						
URZ				S	S	01 47 25.5	+1.2
	2.3nm,0.5s,baz=298,slow=22,SNR=1.4						
	4.5nm,0.3s						
RTZ	Ruatahuna	22.04	200	P	P	01 43 29.1	-1.3
RTZ				IAmb	IAmb	01 43 45.7	
	comp=Z,11nm,1.2s						
MRZ	Mangatainoka R	24.35	200	P	P	01 43 51.9	-1.5
CTA	Charters Tower	37.82	260	LR	LR	02 01 14.0	
	comp=Z,124nm,18.1s,baz=162,slow=36						
CTAO	Charters Tower	37.82	260	P	P	01 45 51.5	-0.7
CTAO				IAmb	IAmb	01 46 23.7	
	comp=Z,8.2nm,1.3s						
H11N3	WAKE ISLAND Hy	42.07	332	T	T	02 31 33.9	
	baz=151						
H11N1	WAKE ISLAND Hy	42.08	332	T	T	02 31 35.1	
	baz=151						
H11N2	WAKE ISLAND Hy	42.09	332	T	T	02 31 36.2	
	baz=151						
WB0	Warramunga Arr	48.96	259	P	P	01 47 22.2	+0.1
WB0				IAmb	IAmb	01 47 58.3	
	comp=Z,8.8nm,1.4s						
WB2	Warramunga Arr	48.98	259	P	P	01 47 22.2	0.0
WB2				IAmb	IAmb	01 47 30.9	
	comp=Z,6.2nm,1.2s						
WRAB	Tennant Creek	48.98	259	P	P	01 47 23.1	+0.9
WRAB				IAmb	IAmb	01 48 01.6	
	comp=Z,6.9nm,1.3s						
WRA	Warramunga Arr	48.99	259	P	P	01 47 21.9	-0.3
	comp=Z,0.8nm,0.4s,baz=98,slow=7.4,SNR=34						
	comp=Z,0.8nm,0.4s						
WRA	Warramunga Arr	48.99	259	P	P	01 47 22.5	+0.2
ASAR	Alice Springs	49.05	254	P	P	01 47 22.5	-0.2
	comp=Z,2.8nm,0.5s,baz=87,slow=8.7,SNR=27						
	comp=Z,2.8nm,0.5s						
ASAR	Alice Springs	49.05	254	P	P	01 47 24.3	+1.6
MJAR	Matsushiro Arr	70.77	321	LR	LR	02 14 37.8	
	comp=Z,16nm,20.9s,baz=170,slow=31						
PETK	Petropavlovsk-	75.05	343	P	P	01 50 17.0	+0.5
	comp=Z,2.6nm,0.8s,baz=125,slow=7.2,SNR=2.9						
	comp=Z,2.6nm,0.8s						
YBH	Yreka Blue Hor	75.89	37	LR	LR	02 15 19.2	
	comp=Z,34nm,19.4s,baz=284,slow=29						
NVAR	Mina Array Bea	76.50	42	P	P	01 50 25.8	+0.4
	comp=Z,1.2nm,0.7s,baz=222,slow=9.4,SNR=9.4						
	comp=Z,1.2nm,0.7s						
TXAR	Lajitas Array	82.34	56	P	P	01 50 57.6	+0.3
	comp=Z,0.2nm,0.8s,baz=202,slow=6.8,SNR=1.8						
	comp=Z,0.2nm,0.8s						
H03S2	Juan Fernandez	84.00	123	T	T	03 23 29.2	
	baz=250,slow=75,SNR=7.1						
H03S1	Juan Fernandez	84.02	124	T	T	03 23 31.9	
	baz=250,slow=75,SNR=6.8						
H03S3	Juan Fernandez	84.02	123	T	T	03 23 27.1	
	baz=250,slow=75,SNR=5.8						
PDAR	Pinedale Array	84.43	42	P	P	01 51 07.7	-0.3
	comp=Z,1.6nm,0.7s,baz=214,slow=3.2,SNR=19						
	comp=Z,1.6nm,0.7s						
ILAR	Eielson Array	85.09	11	P	P	01 51 10.2	-0.2
	comp=Z,0.7nm,0.7s,baz=229,slow=6.4,SNR=20						
	comp=Z,0.7nm,0.7s						
YKA	Yellowknife Ar	92.64	24	P	P	01 51 46.0	-0.4
	comp=Z,0.2nm,0.6s,baz=234,slow=4.9,SNR=5.3						
	comp=Z,0.2nm,0.6s						
MKAR	Makanchi Array	112.44	314	PKiKP	PKiKP	01 57 11.4	+0.3
	comp=Z,0.3nm,0.6s,baz=112,slow=1.3,SNR=4.2						
DPC	Dobruska-Polom	146.78	348	ePKP	PKPab	01 58 18.4	+0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLDR	Vladesti	146.90	332	⇑P	PKPbc	01 58 18.2	+0.8
GHRR		147.03	333	⇑P	PKPab	01 58 19.6	+0.3
TRPA	Tarpa	147.19	340	⇓P	PKPbc	01 58 19.0	+0.9
CFR	Carcaliu	147.38	331	⇑P	PKPab	01 58 20.6	-0.1
MAUC	Maruska	147.39	346	*e*PKP	PKPab	01 58 20.8	+0.1
PRU	Pruhonice	147.45	350	*e*PKP	PKPbc	01 58 19.3	+0.5
TPGR	Topolog	147.48	330	⇓P	PKiKP	01 58 20.5	-0.8
HARR	Harsova	147.84	330	⇑P	PKiKP	01 58 21.6	-0.4
DOPR	Dopca	147.96	335	⇑P	PKiKP	01 58 22.1	-0.1
MARR	Marisel-Cluj	148.25	338	⇑P	PKiKP	01 58 22.7	-0.3
DRGR		148.29	338	⇑P	PKiKP	01 58 22.9	-0.1
KHC	Kasperske Hory	148.44	351	*e*PKP	PKPdf	01 58 15.6	-2.4
GERES	GERESS Array B	148.69	351	PKPbc	PKPbc	01 58 23.1	+0.8
	comp=Z,0.5nm,0.5s,baz=5.2,slow=4.3,SNR=3.7						
ARR	Arges	148.76	335	⇑P	PKiKP	01 58 25.1	+1.2
RONA	Rosalia, Austr	149.31	347	*i* PKiKP	PKiKP	01 58 25.4	+0.4
	comp=Z,3.2nm,0.7s						
MOA	Molln	149.56	349	*e*PKiKP	PKiKP	01 58 25.9	+0.4
	comp=Z,4.4nm,1.2s						
RETA	Reutte	150.41	354	*i* PKiKP	PKiKP	01 58 27.4	+0.1
	comp=Z,4.0nm,1.1s						
MOTA	Moosalm	150.51	353	*i* PKiKP	PKiKP	01 58 27.7	+0.1
	comp=Z,6.6nm,1.0s						
WTTA	Wattenberg	150.53	353	*i* PKiKP	PKiKP	01 58 28.1	+0.4
	comp=Z,3.2nm,0.8s						
SQTA	Sankt Quirin	150.62	353	*i* PKiKP	PKiKP	01 58 28.2	+0.3
	comp=Z,5.2nm,1.1s						
DAVA	Damuels	150.69	355	*i* PKiKP	PKiKP	01 58 28.8	+0.8
	comp=Z,4.2nm,1.1s						
ABTA	Abfaltersbach	150.92	351	*i* PKiKP	PKPbc	01 58 28.2	+0.4
	comp=Z,4.5nm,0.8s						

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*VIE **21** 01:40:28.3, 50°.26N×18°.67E, h0^{km}, mb2.4/9, ml2.6/9, ms3.7/5 22 km W of Katowice Suspected Mining induced.*
*IPEC **21** 01:40:28.7±0.2, 50°.21N×18°.71E, h1^{km}, ML2.6/4, Error ellipse: s-maj=2.1km s-min=1.1km az=166.0*
*PRU **21** 01:40:29.3±0.0, 50°.22N×18°.61E, h0^{km}*
*IDC **21** 01:40:32.5±1.6, 50°.46N×18°.19E, h0^{km}, mbtmp3.6/2, ML2.3/3, Error ellipse: s-maj=28.0km s-min=11.4km az=134.0*
ISC 21 01:40:28.0±0.7**, 50°.26N**±0°.03×**18°.70E**±0°.02**, h0^{km}, n57, σ1^{s}.45**/94**, 7C-4D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.56	220	*e*PG	Pg	01 40 38.4	-0.2
OKC				*e*SG	Sg	01 40 44.9	-0.9
	comp=Z,132nm,0.7s						
OJC	Ojcow	0.70	93	*e*Pg	Pg	01 40 42.1	+0.6
OJC				*e*Sg	Sg	01 40 52.0	+1.4
MORC	Moravsky Berou	0.89	238	⇑P	Pg	01 40 45.7	+0.6
MORC				⇑S	Sg	01 40 57.3	+0.7
MORC	Moravsky Berou	0.89	238	*e*Pg	Pg	01 40 45.4	+0.3
	baz=60						
MORC				*e*Sg	Sg	01 40 56.2	-0.4
	82nm,0.4s,baz=60						
MAUC	Maruska	1.06	213	*e*PG	Pg	01 40 48.0	-0.3
MAUC				*e*SG	Sg	01 41 01.1	-0.9
	comp=Z,121nm,0.6s						
LANS	Liptovska Anna	1.22	156	*e*PG	Pb	01 40 51.7	-0.2
LANS				*e*SG	Sb	01 41 08.0	-0.2
LANS				*e*LG	Lg	01 41 10.3	
KRLC	Kraliky	1.25	262	*e*PG	Pg	01 40 51.5	-0.4
KRLC				*e*SG	Sg	01 41 07.6	-0.5
	comp=Z,82nm,0.6s						
NIE	Niedzica	1.33	129	*e*Pg	Pb	01 40 54.0	+0.1
NIE				*e*Sg	Sn	01 41 12.6	+0.2
DPC	Dobruska-Polom	1.53	274	*e*PG	Pn	01 40 56.9	+0.3
DPC				*e*SG	Sg	01 41 17.2	+0.1
	comp=Z,62nm,0.6s						
JAVC	Velka Javorina	1.56	206	*e*Pg	Pn	01 40 56.1	-0.9
	baz=26						
OSTC	Ostas	1.62	281	*e*PG	Pn	01 40 57.8	0.0
OSTC				*e*SG	Sb	01 41 19.9	+0.2
	comp=Z,30nm,0.5s						
KSP	Ksiaz	1.64	292	*e*Pn	Pn	01 40 57.8	-0.3
KSP				*e*Pg	Pg	01 41 00.2	+0.7
KSP				*e*Sg	Sg	01 41 22.5	+1.7
VRAC	Vranov	1.67	236	⇑P	Pb	01 40 59.2	-0.4
VRAC				⇑S	Sn	01 41 20.5	-0.1
VRAC	Vranov	1.67	236	*e*Pn	Pn	01 40 58.9	+0.4
	baz=56						
VRAC				*e*Sg	Sn	01 41 20.0	-0.6
	44nm,0.3s,baz=56						
CHVC	Chvalec	1.73	282	*e*PG	Pn	01 40 59.5	+0.2
CHVC				*e*SG	Sb	01 41 23.2	+0.4
	comp=Z,27nm,0.6s						
UPC	Upice	1.74	279	*e*PG	Pb	01 41 01.0	+0.2
UPC				*e*SG	Sn	01 41 22.6	+0.2
	comp=Z,38nm,0.6s						
VYHS	Vyhne	1.77	177	*e*PN	Pn	01 40 59.2	-0.7
VYHS				*e*SN	Sn	01 41 21.2	-1.9
STHS	Stebnicka Huta	1.85	116	*e*PN	Pn	01 41 02.1	+1.1
STHS				*e*SN	Sg	01 41 27.9	+0.6
STHS				*e*LG	Lg	01 41 36.1	
KRUC	Moravsky	1.92	232	*e*Pn	Pn	01 41 02.4	+0.5
	baz=52						
KRUC				*e*Sg	Sb	01 41 27.9	-0.5
	40nm,0.6s,baz=52						
MODS	Modra-Piesok	2.11	207	*e*SN	Sn	01 41 31.0	-0.4
KECS	Kecovo	2.13	146	*e*PN	Pn	01 41 05.0	+0.2
KECS				*e*SN	Sb	01 41 33.9	-0.4
KECS				*e*LG	Lg	01 41 42.1	
TREC	Trest	2.30	246	*e*PN	Pn	01 41 06.9	-0.2
TREC				*e*SG	Sb	01 41 39.3	0.0
	comp=Z,28nm,0.5s						
SRO	Srobarova	2.46	186	*e*SG	Sg	01 41 46.6	-0.5
SRO				*e*LG	Lg	01 41 59.9	
GOPC	GO Pecny, Ondr	2.55	264	*e*PN	Pn	01 41 10.7	+0.1
GOPC				*e*SG	Sb	01 41 47.6	+1.2
	comp=Z,24nm,0.6s						
PVCC	Panska Ves	2.66	277	*e*PG	Pb	01 41 16.4	-0.1
PVCC				*e*SG	Sg	01 41 53.1	-0.3
	comp=Z,33nm,0.4s						
PRU	Pruhonice	2.69	266	*e*PG	Pb	01 41 16.6	-0.4
PRU				*e*SG	Sb	01 41 52.2	+1.6
	comp=Z,26nm,0.9s						
CONA	Conrad Observa	2.99	220	*i* Pn	Pn	01 41 16.6	-0.1
	0.5nm,0.3s						
CONA				*e*Sn	Sn	01 41 52.6	-0.7
	7.8nm,0.3s						
RONA	Rosalia, Austr	3.01	213	*e*Pn	Pn	01 41 17.3	+0.3
	0.5nm,0.2s						
RONA				*e*Sn	Sn	01 41 51.4	-2.5
	4.7nm,0.4s						
BRG	Berggiesshubel	3.10	283	Pg	Pg	01 41 27.7	+0.4
BRG				Sg	Sg	01 42 07.6	+0.2
BRG				Amp		01 42 12.6	
	comp=Z,9.9nm,0.5s						
CKRC	Cesky Krumlov	3.21	245	*e*PN	Pn	01 41 19.6	0.0
CKRC				*e*PG	Pb	01 41 26.2	+0.4
CKRC				*e*SG	Sb	01 42 07.5	+2.2
KHC	Kasperske Hory	3.51	253	*e*PN	Pn	01 41 24.0	+0.1
KHC				*e*PG	Pb	01 41 31.9	+0.8
KHC				*e*SN	Sn	01 42 04.5	-1.7
KHC				*e*SG	Sg	01 42 17.9	-2.9
	comp=Z,23nm,0.6s						
GERES	GERESS Array B	3.55	248	Pn	Pn	01 41 25.3	+0.8
	comp=Z,0.2nm,0.3s,baz=61,slow=13,SNR=5.8						
GERES				Pg	Pb	01 41 33.8	+2.1
	comp=Z,0.5nm,0.3s,baz=60,slow=18,SNR=11						
GERES				Lg	Lg	01 42 18.1	
	comp=Z,3.3nm,0.3s,baz=60,slow=28,SNR=6.7						
ARSA	Arzberg	3.67	216	*i* Pg	Pg	01 41 38.6	+0.2
	comp=Z,0.8nm,0.3s						
ARSA				*e*Sg	Sg	01 42 29.2	+3.2
	comp=Z,2.5nm,0.6s						
CLL	Collm	3.77	288	*e*Sg	Sg	01 42 29.0	+0.1
	comp=Z,14nm,0.6s						
MOA	Molln	3.79	232	*i* Pn	Pn	01 41 29.4	+1.8
	comp=Z,0.7nm,0.2s						
MOA				*i* Sg	Sg	01 42 26.0	-3.5
	comp=Z,9.9nm,0.6s						
NKC	Novy Kostel	4.01	272	*e*SG	Sg	01 42 35.5	-1.4
	comp=Z,13nm,0.5s						
MORH	Mrgy, Hungar	4.05	181	⇓P	Pn	01 41 31.0	-0.2
BIOA	Bad Ischl, Aus	4.21	234	*e*Pn	Pn	01 41 35.8	+2.4
	comp=Z,0.6nm,0.1s						
BIOA				*e*Sg	Sg	01 42 44.2	+0.9
	comp=Z,13nm,0.5s						
DRGR		4.38	141	⇓P	Pn	01 41 36.2	+0.5
MARR	Marisel-Cluj	4.64	139	⇓P	Pn	01 41 39.8	+0.5
OBKA	Obir	4.66	218	*e*Sg	Sg	01 43 03.3	+5.6
	comp=Z,2.4nm,0.5s						
KBA	Koelnbreinsper	4.77	230	*e*Pn	Pn	01 41 38.7	-2.5
	comp=Z,0.3nm,0.3s						
KBA				*e*Sg	Sg	01 43 03.3	+2.1
	comp=Z,4.8nm,0.5s						
BZS	Buzias	5.04	156	⇑P	Pn	01 41 45.2	+0.4
BURAR	Bucovina Array	5.04	119	⇑P	Pn	01 41 45.0	+0.1
SURR	Surduc	5.06	152	⇓P	Pn	01 41 44.6	-0.5
ABTA	Abfaltersbach	5.41	232	*e*Sg	Sg	01 43 22.5	+0.8
	comp=Z,3.6nm,0.6s						
WATA	Walderalm	5.54	241	*e*Sg	Sg	01 43 30.7	+4.7
	comp=Z,4.0nm,0.5s						
WTTA	Wattenberg	5.55	240	*e*Sg	Sg	01 43 28.1	+1.8
GZR	Gura Zlata	5.59	149	⇑P	Pn	01 41 53.5	+1.1
MOTA	Moosalm	5.81	243	*e*Sg	Sg	01 43 33.8	-0.6
	comp=Z,1.5nm,0.3s						
SQTA	Sankt Quirin	5.82	241	*e*Sg	Sg	01 43 36.2	+1.5
	comp=Z,4.2nm,0.4s						
RETA	Reutte	5.93	245	*e*Sg	Sg	01 43 40.3	+2.0
	comp=Z,4.8nm,0.4s						
FETA	Feichten	6.20	242	*e*Sg	Sg	01 43 50.4	+3.4
	comp=Z,2.3nm,0.6s						
DAVA	Damuels	6.55	246	*e*Sg	Sg	01 43 57.6	-0.5
	comp=Z,2.3nm,0.4s						
AKASG	Malin Array Be	6.73	82	Pg	Pg	01 42 34.1	-2.7
	comp=Z,0.4nm,0.3s,baz=276,slow=15,SNR=4.2						
AKASG				Sn	Sn	01 43 28.0	+2.7
	comp=Z,0.6nm,0.3s,baz=269,slow=23,SNR=1.6						
AKASG				Lg	Lg	01 44 06.4	
	comp=Z,0.4nm,0.3s,baz=263,slow=22,SNR=2.3						
NOA	NORSAR Array B	11.59	342	Pn	Pn	01 43 10.3	-4.3
	baz=155,slow=12,SNR=1.9						
	comp=Z,0.9nm,1.0s						
FINES	FINESS Array B	11.94	17	Pn	Pn	01 43 17.3	-1.9
	comp=Z,0.1nm,0.3s,baz=206,slow=12,SNR=3.8						
	comp=Z,3.3nm,1.0s						

TRN 21 02:04:36.1, 11°.24N×60°.80W, h44^{km}, MD3.6, 3D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPR	Prospect	0.06	158	⇓*i*P	Pn	02 04 44.8	+1.7
BOT	Bacolet	0.10	132	⇓*i*P	Pn	02 04 44.8	+1.6
TOSP	Speyside	0.27	77	⇓*i*P	Pn	02 04 45.1	+0.8
TOSP				*e*S	Sn	02 04 51.2	+1.1
TBH	Brigand Hill	0.79	199	*e*P	Pn	02 04 52.0	+1.1
TBH				*e*S	Sn	02 05 04.2	+2.5
TRN	Trinidad (W)	0.83	225	*e*P	Pn	02 04 52.6	+1.1
TRN				*e*S	Sn	02 05 03.8	+1.2
GRGR	Grenville	1.22	317	*e*P	Pn	02 04 58.0	+1.2
GRGR				*e*S	Sn	02 05 14.1	+2.0
GRHS	Sauteurs	1.28	320	*e*P	Pn	02 04 57.4	-0.2
GRHS				*e*S	Sn	02 05 15.8	+2.2
GRSS	Sisters	1.32	323	*e*P	Pn	02 04 58.6	+0.5
GRSS				*e*S	Sn	02 05 16.5	+2.0
GCMP	Grenada, Carri	1.39	334	*e*P	Pn	02 05 00.1	+1.1
GCMP				*e*S	Sn	02 05 18.2	+2.1
SVOC	Richmond Hill,	1.95	348	*e*P	Pn	02 05 08.1	+1.4
SVOC				*e*S	Sn	02 05 31.7	+1.8
SVB	Belmont	2.07	348	*e*P	Pn	02 05 10.2	+1.8
SVB				*e*S	Sn	02 05 35.2	+2.2
SVV	Soufriere Volc	2.11	349	*e*P	Pn	02 05 11.8	+2.9
SVV				*e*S	Sn	02 05 36.3	+2.4
SSV	Crater Summit	2.11	350	*e*P	Pn	02 05 10.7	+1.6
MCLT	Moule a Chique	2.46	357	*e*P	Pn	02 05 17.6	+3.8
MCLT				*e*S	Sn	02 05 43.0	+0.4
SLBI	Saint Lucia, B	2.77	356	*e*P	Pn	02 05 19.7	+1.7
SLBI				*e*S	Sn	02 05 51.3	+1.0
MPOM	Morne Pois Mar	3.19	359	*e*P	Pn	02 05 25.3	+1.6
MPOM				*e*S	Sn	02 06 00.9	+0.4
BIM	Bigot	3.27	355	*e*P	Pn	02 05 26.9	+1.9
BIM				*e*S	Sn	02 06 01.1	-1.5
ANBD	Bethesda, Anti	5.85	351	*e*P	Pn	02 06 02.8	+2.5

IDC 21 02:42:04.3±5.6**, 56°.85S×150°.78W, h0^{km}, mb3.5**/2**, mbtmp3.5**/2**, Error ellipse: s-maj=498.7km s-min=65.3km az=165.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	52.73	96	T	T	03 48 16.5	
	baz=219,slow=74,SNR=5.6						
H03S1	Juan Fernandez	52.74	96	T	T	03 48 16.5	
	baz=219,slow=74,SNR=6.4						
H03S3	Juan Fernandez	52.75	96	T	T	03 48 20.4	
	baz=219,slow=74,SNR=4.6						
H03N3	Juan Fernandez	53.02	96	T	T	03 48 33.2	
	baz=221,slow=74						
H03N2	Juan Fernandez	53.03	96	T	T	03 48 31.2	
	baz=221,slow=74						
H03N1	Juan Fernandez	53.04	96	T	T	03 48 31.9	
	baz=221						
ASAR	Alice Springs	62.54	268	P	P	02 52 28.9	-0.8
	0.3nm,0.5s,baz=140,slow=7.2,SNR=4.4						
	0.3nm,0.5s						
WRA	Warramunga Arr	65.29	271	P	P	02 52 48.7	+0.9
	0.4nm,0.9s,baz=145,slow=5.9,SNR=2.1						
	0.4nm,0.9s						
ILAR	Eielson Array	121.33	2	PKP	PKPdf	03 00 57.2	-0.4
	0.3nm,0.7s,baz=209,slow=1.7,SNR=2.7						
MKAR	Makanchi Array	146.50	276	PKPbc	PKPbc	03 01 45.8	-0.6
	0.9nm,0.7s,baz=119,slow=4.1,SNR=12						

IDC 21 02:45:16.8±2.1**, 0°.54N×126°.32E, h0^{km}, mb3.1**/3**, mbtmp3.1**/3**, Error ellipse: s-maj=169.5km s-min=27.9km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.82	159	P	P	02 50 09.9	-1.0
	0.2nm,0.4s,baz=338,slow=11,SNR=5.9						
	0.2nm,0.4s						
ASAR	Alice Springs	25.17	163	P	P	02 50 45.0	+1.0
	0.1nm,0.3s,baz=347,slow=11,SNR=1.5						
	0.1nm,0.3s						
MKAR	Makanchi Array	59.95	327	P	P	02 55 24.8	-0.1
	0.1nm,0.4s,baz=130,slow=5.8,SNR=4.4						
	0.1nm,0.4s						

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*UCR **21** 02:48:54.8±1.3, 11°.30N×86°.19W, h74^{km}±6^{km}, MW4.3*
*INET **21** 02:48:55.5±0.8, 11°.33N×86°.17W, h64^{km}±6^{km}, MW3.8*
*IDC **21** 02:48:56.2±1.4, 11°.01N×85°.89W, h126^{km}±13^{km}, mb3.3/7, mbtmp3.7/7, MS3.0/1, Error ellipse: s-maj=41.9km s-min=17.7km az=68.0*
*UPA **21** 02:48:57.1±1.1, 11°.54N×85°.68W, h10^{km}±98^{km}, MW4.2*
*SNET **21** 02:48:59.1±1.2, 11°.32N×86°.63W, h34^{km}±999^{km}, ML4.1*
ISC 21 02:48:54.0±0.8**, 11°.31N**±0°.04×**86°.21W**±0°.04**, h83^{km}**±7^{km}**, n108, σ1^{s}.13**/134**, mb3.8**/7**, 1C-13D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCRUZ	La Cruz	0.62	112	*e*P	Pn	02 49 09.8	+0.7
LCRUZ				*e*S	Sn	02 49 20.3	-0.1
CONN	Concepcion	0.63	67	*e*P	Pn	02 49 08.4	-0.8
MASN	Masaya	0.67	5	*e*P	Pn	02 49 10.1	+0.4
TISN	Laguna Tiscapa	0.82	356	*e*P	Pn	02 49 11.3	0.0
MGAN	Managua	0.83	358	*e*P	Pn	02 49 11.1	-0.2
WILN	Americas 2	0.84	2	*e*P	Pn	02 49 11.1	-0.3
HZTE	Horizontes, Gu	0.85	134	*e*P	Pn	02 49 11.9	+0.3
HZTE				*e*S	Sn	02 49 24.9	+0.2
ELI1	Hacienda Flor	0.93	136	*e*P	Pn	02 49 12.8	+0.3
COPN	Copaltepe	0.94	337	*e*P	Pn	02 49 11.9	-0.7
GB1A	Borinquen Arri	0.94	122	*e*P	Pn	02 49 12.1	-0.6
GB1A				*e*S	Sn	02 49 26.2	-0.4
ALIBA	Liberia Airpor	0.97	137	*e*P	Pn	02 49 13.6	+0.6
VRLE	La Escondida,	0.98	122	*e*P	Pn	02 49 12.8	-0.3
VORI	VORI	0.98	120	*e*P	Pn	02 49 12.7	-0.6
GPS2	Hotel Rincn d	1.01	123	⇓*e*P	Pn	02 49 13.2	-0.3
GPS2				*e*S	Sn	02 49 28.3	+0.2
ERIA	Liberia	1.02	132	*e*P	Pn	02 49 14.2	+0.7
HUEN		1.02	2	*e*P	Pn	02 49 13.6	+0.1
HUEN				*e*S	Sn	02 49 28.2	+0.2
DELF	Filadelfia	1.08	143	*e*P	Pn	02 49 14.7	+0.5
HATIL	Hatillo	1.13	153	*e*P	Pn	02 49 14.8	0.0
HATIL				*e*S	Sn	02 49 28.9	-1.5
MOMN	Momotombo	1.13	344	*e*P	Pn	02 49 15.1	+0.1
MOMN				*e*S	Sn	02 49 30.0	-0.6
GUAB	Guayabo de Bag	1.14	122	⇓*e*P	Pn	02 49 15.1	+0.1
GUAB				*e*S	Sn	02 49 31.8	+1.0
CLARA	Aguas Claras	1.15	117	⇓*e*P	Pn	02 49 14.9	-0.2
CLARA				*e*S	Sn	02 49 31.4	+0.5
CAMAV	Centro de Prod	1.17	121	⇑*i*P	Pn	02 49 15.7	+0.3
CAMAV				*e*S	Sn	02 49 32.5	+1.0
COLC	Colonia	1.18	123	⇓*e*P	Pn	02 49 15.6	+0.1
COLC				*e*S	Sn	02 49 31.0	-0.6
VMAR	Armenia, Volca	1.19	115	⇓*i*P	Pn	02 49 15.3	-0.3
VMAR				*e*P	Pn	02 49 15.4	-0.3
VMAR				*e*S	Sn	02 49 31.4	-0.4
ORTG	Ortega, Santa	1.20	142	*e*P	Pn	02 49 16.1	+0.3
ACON	Acoyapa	1.21	57	*e*P	Pn	02 49 15.2	-0.6
ACON				*e*S	Sn	02 49 31.1	-1.0
ACON	Acoyapa	1.21	57	*e*P	Pn	02 49 15.5	-0.3
SACU	Santa Cruz	1.21	149	*e*P	Pn	02 49 16.1	+0.2
BAGA	Bagaces	1.22	130	*e*P	Pn	02 49 17.3	+1.3
CUI	Cuipilapa	1.22	122	⇓*e*P	Pn	02 49 16.2	+0.2
CUI				*e*S	Sn	02 49 32.8	+0.4
CANAL	Canalete	1.23	113	⇓*i*P	Pn	02 49 15.7	-0.4
CANAL				*e*S	Sn	02 49 32.6	-0.1
BOAB	BOACO BROADBAN	1.25	25	*e*P	Pn	02 49 16.1	-0.2
CNGN	Cerro Negro	1.27	338	*e*P	Pn	02 49 17.0	+0.4
CNGN				*e*S	Sn	02 49 33.5	-0.1
MOTZ	Rio Naranjo	1.28	119	⇓*i*P	Pn	02 49 16.9	+0.1
SAJU	San Juanillo,	1.33	158	*e*P	Pn	02 49 17.2	-0.2
SAJU				*e*S	Sn	02 49 33.3	-1.6
ACAL	Aguas Claras	1.34	120	⇓*i*P	Pn	02 49 17.7	+0.2
ACAL				*e*S	Sn	02 49 37.7	+2.5
NICO	Nicoya	1.39	147	*e*P	Pn	02 49 18.3	+0.1
VERA	Finca Concepci	1.40	109	*e*P	Pn	02 49 18.0	-0.2
VERA				*e*S	Sn	02 49 37.1	+0.7
BRAN	Las Pilas	1.40	355	*e*P	Pn	02 49 11.3	-7.0
DUNO	Dulce Nombre,	1.42	150	*e*P	Pn	02 49 18.5	+0.1
NARJA	Naranjal	1.49	154	*e*P	Pn	02 49 19.3	-0.1
CMARA	Lajas Hojancha	1.50	149	*e*P	Pn	02 49 19.7	+0.1
POPE	POPE, Guanacas	1.56	143	*e*P	Pn	02 49 20.6	+0.5
INDI	Punta indio, G	1.60	154	*e*P	Pn	02 49 20.7	-0.1
CRIN	San Cristobal	1.60	329	*e*P	Pn	02 49 21.7	+0.8
CRIN				*e*S	Sn	02 49 41.7	+0.5
CRIN	San Cristobal	1.60	329	*e*P	Pn	02 49 21.8	+0.8
JTS	Las Juntas de	1.60	129	P	Pn	02 49 20.7	-0.2
	386nm,0.3s,baz=307,slow=16,SNR=453						
JTS				S	Sn	02 49 38.8	-2.3
	141nm,0.3s,baz=5.7,slow=20,SNR=6.3						
JTS				LR	LR	02 49 43.7	
	comp=Z,67nm,19.4s,baz=359,slow=41						
JTS	Las Juntas de	1.60	129	⇓*i*P	Pn	02 49 20.6	-0.2
JTS				*i* S	Sn	02 49 41.4	+0.2
JTS	Las Juntas de	1.60	129	*e*P	Pn	02 49 20.7	-0.2
JUNT	Juntas	1.60	130	*e*P	Pn	02 49 20.8	-0.1
NYURE	Nandayure	1.61	144	*e*P	Pn	02 49 21.1	+0.1
MATN	Matagalpa	1.63	10	*e*P	Pn	02 49 21.6	+0.3
TABAC	Tabacon	1.64	120	*e*P	Pn	02 49 21.5	+0.1
SGBR	La Fortuna	1.65	120	*e*P	Pn	02 49 21.7	+0.2
CASO	Castillo	1.70	121	*e*P	Pn	02 49 22.5	+0.4
CEDE	Laguna Cedeo	1.70	119	⇓*e*P	Pn	02 49 22.4	+0.3
VACR	Volcan Arenal	1.73	119	*e*P	Pn	02 49 22.7	+0.2
FORC	Fortuna	1.73	119	⇓*e*P	Pn	02 49 22.8	+0.2
SOCE	Pocosol	1.82	120	*e*P	Pn	02 49 23.7	0.0
COVE	Coope Vega, Sa	1.87	108	*e*P	Pn	02 49 23.9	-0.5
LAFE	Finca La Fe, P	1.97	139	*e*P	Pn	02 49 25.8	+0.1
CBL1	Cabuya	2.04	147	*e*P	Pn	02 49 27.1	+0.5
ESPN	Las Esperanzas	2.07	65	*e*P	Pn	02 49 27.6	+0.6
ESPN	Las Esperanzas	2.07	65	*e*P	Pn	02 49 27.5	+0.6
CPMI	Catarata Coope	2.07	120	*e*P	Pn	02 49 27.4	+0.2
POA5	Crater Von Fra	2.24	119	*e*P	Pn	02 49 29.8	+0.3
CRPO	Crater poas	2.25	119	*e*P	Pn	02 49 30.5	+0.9
VPTE	Poasito	2.28	120	*e*P	Pn	02 49 30.8	+0.7
HDC	Heredia	2.44	122	⇓*i*P	Pn	02 49 32.8	+0.8
HDC	Heredia	2.44	122	*e*P	Pn	02 49 33.0	+0.9
HDC3	Heredia 3	2.44	122	*e*P	Pn	02 49 33.0	+0.9
CNCH	Conchagua	2.51	321	*e*P	Pn	02 49 34.1	+1.1
CNCH				*e*S	Sn	02 50 02.8	-0.1
ACOS	Acosta	2.52	127	*e*P	Pn	02 49 34.0	+0.9
TRT1	Tortuguero	2.57	106	*e*P	Pn	02 49 33.4	-0.2
LCND	La Caada	2.57	321	*e*P	Pn	02 49 34.8	+1.1
LCND				*e*S	Sn	02 50 03.1	-1.0
CVIMO	Finca Echandi	2.57	120	*e*P	Pn	02 49 34.6	+0.7
OCM	Ochomogo	2.63	122	*e*P	Pn	02 49 35.3	+0.7
ABE2	San Pablo	2.66	127	*e*P	Pn	02 49 35.7	+0.6
LCR2	La Lucha 2	2.68	126	*e*P	Pn	02 49 35.8	+0.5
RIMA	Rio Macho	2.78	123	*e*P	Pn	02 49 37.5	+0.9
RVLA	Villa Bonita	2.84	115	*e*P	Pn	02 49 38.7	+1.3
PACA	Pacayal	2.97	316	*e*P	Pn	02 49 41.0	+1.8
PACA	Pacayal	2.97	316	*e*P	Pn	02 49 40.8	+1.6
CDM	Cerro de Muert	2.98	126	*e*P	Pn	02 49 40.6	+1.0
BATAN	Batan	3.04	113	*e*P	Pn	02 49 40.9	+0.9
EDDO	Dominical	3.09	131	*e*P	Pn	02 49 40.2	-0.5
MRVA	Moravia de Chi	3.10	118	*e*P	Pn	02 49 41.9	+1.0
PAVA	Las Pavas	3.57	312	*e*P	Pn	02 49 49.6	+2.3
PLAN	Los Planes de	3.62	136	*e*P	Pn	02 49 50.0	+2.0
EDP2	Potrero Grande	3.76	127	*e*P	Pn	02 49 51.7	+1.9
EDP2				*e*S	Sn	02 50 34.0	+1.0
JAYA	Jayaque - finc	3.92	307	*e*P	Pn	02 49 53.0	+0.9
JAYA				*e*S	Sn	02 50 34.2	-2.9
EDAD	Golfito	4.00	131	*e*P	Pn	02 49 54.4	+1.3
CEVE	Cerro Verde	4.16	307	*e*P	Pn	02 49 56.4	+0.9
CEVE				IAML		02 50 51.8	
	comp=Z,283nm,0.4s						
MLIR3	Monte Lirio, C	4.17	127	*e*P	Pn	02 49 57.8	+2.3
BRU2	Volcan	4.28	126	*e*P	Pn	02 49 58.5	+1.5
BRU2				*i* S	Sn	02 50 45.4	-0.4
BRU2				*e*		02 50 45.6	
BC3P	Paso Ancho	4.33	125	*e*P	Pn	02 49 59.5	+1.8
BCO2	Palmira	4.45	125	*e*P	Pn	02 50 00.7	+1.4
BCO2				*e*S	Sn	02 50 47.0	-3.1
CMIG	Matias Romero	10.18	305	P	Pn	02 51 19.9	+2.6
	comp=Z,5.1nm,0.4s,baz=130,slow=9.4,SNR=18						
CMIG				S	Sn	02 53 10.6	+0.8
	comp=Z,0.9nm,0.4s,baz=306,slow=17,SNR=1.1						
SJG	San Juan	20.54	68	LR	LR	03 00 46.6	
	comp=Z,39nm,18.5s,baz=262,slow=35						
TXAR	Lajitas Array	24.22	320	P	P	02 54 05.6	+2.4
	comp=Z,1.0nm,0.8s,baz=139,slow=9.9,SNR=10						
	comp=Z,1.0nm,0.8s						
TKL	Tuckaleechee C	24.34	5	P	P	02 54 06.1	+2.0
	comp=Z,2.0nm,0.6s,baz=118,slow=11,SNR=5.0						
	comp=Z,2.0nm,0.6s						
PDAR	Pinedale Array	37.34	331	P	P	02 55 59.8	+1.0
	comp=Z,0.1nm,0.5s,baz=133,slow=8.8,SNR=1.8						
	comp=Z,0.1nm,0.5s						
SCHQ	Schefferville	46.03	15	P	P	02 57 08.2	-1.1
	comp=Z,1.3nm,0.3s,baz=228,slow=8.7,SNR=9.6						
	comp=Z,1.3nm,0.3s						
CPUP	Villa Florida	46.79	144	P	P	02 57 09.6	-5.9
	comp=Z,1.0nm,0.7s,baz=342,slow=6.4,SNR=3.0						
	comp=Z,1.0nm,0.7s						
PLCA	Paso Flores	53.77	165	P	P	02 58 03.5	-4.6
	comp=Z,1.0nm,0.8s,baz=270,slow=11,SNR=2.8						
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	55.02	344	P	P	02 58 16.4	-0.3
	comp=Z,0.1nm,0.4s,baz=138,slow=7.5,SNR=2.3						
	comp=Z,0.1nm,0.4s						
ASAR	Alice Springs	139.95	247	PKP	PKPdf	03 08 10.2	-3.5
	comp=Z,0.4nm,0.8s,baz=107,slow=3.2,SNR=1.9						
WRA	Warramunga Arr	140.10	252	PKP	PKPdf	03 08 08.4	-5.6
	comp=Z,0.4nm,0.8s,baz=94,slow=3.2,SNR=6.5						

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*SJA **21** 03:05:55.3±0.6, 31°.17S×69°.56W, h112^{km}±3^{km}, ML3.7, MW3.7, Hypocentre not reviewed by the ISC*
*IDC **21** 03:05:55.6±2.2, 31°.26S×69°.61W, h114^{km}±20^{km}, mb3.1/2, mbtmp3.7/5, Error ellipse: s-maj=36.4km s-min=27.2km az=105.0*
*GUC **21** 03:05:55.7±0.7, 31°.22S×69°.97W, h143^{km}±6^{km}, ML3.9*
ISC 21 03:05:55.3±0.8**, 31°.16S**±0°.05×**69°.59W**±0°.06**, h116^{km}**±7^{km}**, n26, σ1^{s}.23**/42**, 10C-3D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	Leoncito	0.68	158	*e*P		03 06 14.9	
RTLS				*e*S		03 06 29.5	
RTLS				*e*S		03 06 29.7	
RTLS				IAML		03 06 30.6	
	comp=Z,5μm,0.8s						
ZON	Zonda	0.87	116	*e*P		03 06 15.9	
ZON				*e*S		03 06 30.7	
ZON				IAML		03 06 34.2	
	comp=Z,609nm,0.2s						
RTLL	Cerro Villicun	0.97	100	*e*P		03 06 16.7	
RTLL				*e*S		03 06 33.0	

CO03	**El Pedregal**	**1.00**	**289**	⇓*i*P	**Pn**	**03 06 18.2**	**+1.2**
CO03				*i* S	**Sn**	**03 06 35.2**	**+1.8**
CO03				IAML		03 06 35.9	
	comp=N,3μm,0.2s						
CFA	**Coronel Fontan**	**1.24**	**111**	P	**Pn**	**03 06 19.6**	**+0.1**
	comp=N,978nm,0.3s,baz=251,slow=8.1,SNR=4302						
CFA				S	**Sn**	**03 06 37.5**	**-0.4**
	comp=N,860nm,0.3s,baz=47,slow=22,SNR=91						
CFA	**Coronel Fontan**	**1.24**	**111**	*e*P		03 06 19.8	
CFA				*e*S		03 06 38.0	
CFA				IAML		03 06 39.5	
	comp=Z,15μm,0.6s						
GO04	**Tololo Observa**	**1.44**	**313**	*e*P		03 06 22.9	
GO04				*e*S		03 06 43.6	
ASAL	**Salagasta**	**1.56**	**156**	*e*P		03 06 24.1	
ASAL				*e*S		03 06 43.6	
ASAL				IAML		03 06 46.3	
	comp=Z,827nm,0.3s						
ARCO	**CERRO ARCO**	**1.76**	**162**	*e*P		03 06 26.7	
ARCO				*e*S		03 06 50.3	
ARCO				IAML		03 06 53.4	
	comp=Z,21nm,0.9s						
VA03	**San Esteban**	**1.79**	**207**	⇑*i*P	**Pn**	**03 06 26.8**	**+0.7**
VA03				*i* S	**Sn**	**03 06 50.9**	**+1.4**
VA03				IAML		03 06 52.1	
	comp=E,2μm,0.3s						
CO05	**La Serena**	**1.89**	**311**	⇑*i*P	**Pn**	**03 06 27.7**	**+0.6**
CO05				*i* S	**Sn**	**03 06 51.4**	**0.0**
CO05				IAML		03 06 53.5	
	comp=N,2μm,0.3s						
VA06	**Catapilco**	**2.01**	**226**	*e*P	**Pn**	**03 06 28.2**	**-0.5**
VA06				*i* S	**Sn**	**03 06 53.0**	**-1.2**
VA06				IAML		03 06 57.8	
	comp=E,860nm,0.4s						
AAGR	**Agrelo**	**2.02**	**162**	*e*P		03 06 29.5	
AAGR				*e*P		03 06 29.7	
AAGR				*e*S		03 06 55.3	
AAGR				IAML		03 07 02.7	
	comp=Z,262nm,0.3s						
ROCH	**El Roble**	**2.17**	**213**	⇑*i*P	**Pn**	**03 06 30.8**	**-0.1**
ROCH				*e*S	**Sn**	**03 06 57.5**	**-0.7**
ROCH				IAML		03 06 59.7	
	comp=N,944nm,0.6s						
PEL	**Peldehue**	**2.18**	**205**	⇑*i*P	**Pn**	**03 06 30.9**	**+0.1**
PEL				*i* S	**Sn**	**03 06 58.7**	**+0.6**
PEL				IAML		03 07 00.2	
	comp=E,374nm,0.2s						
MT10	**Hacienda Santa**	**2.25**	**201**	⇑*i*P	**Pn**	**03 06 32.6**	**+0.8**
MT10				*i* S	**Sn**	**03 07 00.7**	**+0.9**
MT10				IAML		03 07 03.6	
	comp=N,2μm,0.3s						
MT04	**Ro Olivares**	**2.28**	**192**	⇑*i*P	**Pn**	**03 06 33.6**	**+1.2**
MT04				*e*S	**Sn**	**03 07 03.1**	**+2.4**
MT04				IAML		03 07 11.5	
	comp=E,170nm,0.5s						
MT08	**Bocatoma Ro**	**2.30**	**189**	⇑*i*P	**Pn**	**03 06 34.0**	**+1.4**
MT08				IAML		03 07 15.2	
	comp=N,120nm,0.4s						
MT05	**Renca**	**2.42**	**203**	*e*P	**Pn**	**03 06 34.2**	**+0.2**
MT05				*i* S	**Sn**	**03 07 04.6**	**+0.9**
MT05				IAML		03 07 05.8	
	comp=E,2μm,0.3s						
MT03	**Universidad Ad**	**2.45**	**198**	⇑*i*P	**Pn**	**03 06 34.9**	**+0.5**
MT03				*i* S	**Sn**	**03 07 05.6**	**+1.2**
MT03				IAML		03 07 07.8	
	comp=E,928nm,0.3s						
MT02	**Curacav**	**2.47**	**212**	*e*P	**Pn**	**03 06 33.6**	**-0.8**
MT02				*i* S	**Sn**	**03 07 03.3**	**-1.3**
MT02				IAML		03 07 05.6	
	comp=N,245nm,0.6s						
VA01	**Torpederas**	**2.55**	**223**	⇓*i*P	**Pn**	**03 06 34.6**	**-0.9**
VA01				*i* S	**Sn**	**03 07 05.0**	**-1.4**
VA01				IAML		03 07 08.4	
	comp=E,389nm,0.2s						
MT13	**San Alfonso**	**2.64**	**193**	⇑*i*P	**Pn**	**03 06 37.6**	**+0.8**
MT13				IAML		03 07 16.0	
	comp=N,322nm,0.2s						
MT12	**Pirque**	**2.69**	**197**	⇑*i*P	**Pn**	**03 06 37.5**	**+0.1**
MT12				*i* S	**Sn**	**03 07 10.3**	**+0.5**
MT12				IAML		03 07 12.1	
	comp=N,607nm,0.3s						
ACLC	**CERRO LA CRUZ**	**2.87**	**53**	*e*P		03 06 40.0	
ACLC				*e*S		03 07 14.7	
ACLC				*e*S		03 07 14.9	
ACLC				IAML		03 07 17.5	
	comp=Z,281nm,0.4s						
VA05	**Santo Domingo**	**3.02**	**214**	⇓*i*P	**Pn**	**03 06 40.1**	**-1.5**
VA05				*e*S	**Sn**	**03 07 14.5**	**-2.9**
VA05				IAML		03 07 20.6	
	comp=E,600nm,0.3s						
MRA	**San Martin**	**3.53**	**112**	*e*P		03 06 48.3	
MRA				*e*S		03 07 28.7	
MRA				IAML		03 07 46.0	
	comp=Z,310nm,0.5s						
LVC	**Limon Verde**	**8.54**	**4**	P	**Pn**	**03 07 53.7**	**-2.8**
	comp=Z,2.6nm,0.4s,baz=198,slow=9.6,SNR=7.4						
PLCA	**Paso Flores**	**9.58**	**184**	P	**Pn**	**03 08 08.1**	**-2.0**
	comp=Z,0.9nm,0.7s,baz=356,slow=12,SNR=7.2						
LPAZ	**La Paz**	**14.87**	**5**	P	**Pn**	**03 09 21.4**	**+1.2**
	comp=Z,3.2nm,0.9s,baz=170,slow=9.8,SNR=13						
SIV	**San Ignacio**	**16.99**	**29**	P	**Pn**	**03 09 45.4**	**-0.6**
	comp=Z,2.7nm,0.7s,baz=215,slow=9.7,SNR=14						
TXAR	**Lajitas Array**	**68.35**	**328**	P	**P**	**03 16 45.7**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=147,slow=8.5,SNR=3.2						
	comp=Z,0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**81.28**	**69**	P	**P**	**03 17 59.5**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=220,slow=5.6,SNR=2.9						
TORD				pP	**pP**	**03 18 29.2**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=255,slow=5.5,SNR=1.5						
	comp=Z,0.5nm,0.7s						
WRA	**Warramunga Arr**	**124.23**	**207**	PKP	**PKPdf**	**03 24 40.4**	**-0.6**
	comp=Z,0.1nm,0.4s,baz=158,slow=1.8,SNR=1.3						
ZALV	**Zalesovo Beam**	**150.73**	**31**	PKPbc	**PKPbc**	**03 25 34.5**	**+1.1**
	comp=Z,1.8nm,0.5s,baz=303,slow=3.4,SNR=7.4						
MKAR	**Makanchi Array**	**153.33**	**46**	PKPbc	**PKPbc**	**03 25 40.4**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=302,slow=3.3,SNR=2.6						

TAP ***21*** *03:13:49.7, 21°.25N×121°.99E, h169^{km}, ML4.6, C*
MAN ***21*** *03:13:50.0, 21°.06N×121°.88E, h148^{km}, mb4.4, ML3.2, MS3.0*
IDC ***21*** *03:13:51.5±5.0, 21°.06N×122°.19E, h196^{km}±49^{km}, mb3.5/15, mbtmp4.0/16, Error ellipse: s-maj=22.1km s-min=10.5km az=68.0*
ISC 21 03:13:48.8±0.7**, 21°.14N**±0°.04×**122°.04E**±0°.08**, h165**^{km}±5^{km}**, n87, σ1^{s}.16**/108**, mb3.8**/15**, 4C-3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	**Basco**	**0.70**	**186**	⇑*e*P	**Pn**	**03 14 12.9**	**0.0**
BBP				*i* S	**Sn**	**03 14 29.9**	**-1.6**
BBP	**Basco**	**0.70**	**186**	⇓*e*P	**Pn**	**03 14 13.0**	**0.0**
BBP				*e*S	**Sn**	**03 14 30.3**	**-1.2**
LYUB	**Lan-yu**	**0.95**	**334**	*e*P	**Pn**	**03 14 15.4**	**+0.8**
	baz=333						
LYUB				*e*S	**Sn**	**03 14 35.2**	**+0.6**
	baz=333						
LAY	**Lan-yu**	**1.00**	**333**	*e*P	**Pn**	**03 14 15.3**	**+0.3**
	baz=332						
TSEB	**Hengchuen, Pin**	**1.30**	**306**	*e*P	**Pn**	**03 14 19.1**	**+1.6**
	baz=297						
TSEB				*e*S	**Sn**	**03 14 40.8**	**+1.0**
	baz=297						
TWKBT	**Hengchun**	**1.39**	**305**	P	**Pn**	**03 14 19.3**	**+0.9**
	baz=300						
TWKBT				S	**Sn**	**03 14 40.8**	**-0.6**
	baz=300						
TWK1	**Hengchun**	**1.40**	**305**	*e*P	**Pn**	**03 14 19.4**	**+0.9**
	baz=299						
TWK1				*e*S	**Sn**	**03 14 40.9**	**-0.6**
	baz=299						
SMST	**Manzhou Townsh**	**1.42**	**308**	*i* P	**Pn**	**03 14 19.2**	**+0.5**
	baz=309						
SMST				S	**Sn**	**03 14 41.0**	**-0.8**
	baz=309						
HEN	**Hengchun**	**1.49**	**306**	*e*P	**Pn**	**03 14 20.4**	**+1.0**
	baz=297						
HEN				*e*S	**Sn**	**03 14 42.3**	**-0.6**
	baz=297						
TAWH	**Dawu Township**	**1.60**	**318**	P	**Pn**	**03 14 20.5**	**-0.1**
	baz=317						
TAWH				*e*S	**Sn**	**03 14 43.0**	**-2.1**
	baz=317						
TAW	**Tawu**	**1.61**	**319**	*e*P	**Pn**	**03 14 20.7**	**+0.1**
	baz=320						
TAW				*e*S	**Sn**	**03 14 43.3**	**-1.9**
	baz=320						
LDUT	**Ludao**	**1.61**	**341**	*e*P	**Pn**	**03 14 20.4**	**-0.2**
	baz=346						
EAST	**Anshuo**	**1.66**	**318**	*e*P	**Pn**	**03 14 21.3**	**+0.1**
	baz=319						
ECL	**Taimali**	**1.77**	**325**	*e*P	**Pn**	**03 14 21.8**	**-0.4**
	baz=320						
ECL				*e*S	**Sn**	**03 14 45.3**	**-2.9**
	baz=320						
SCZT	**Fangliau**	**1.80**	**313**	P	**Pn**	**03 14 22.9**	**+0.2**
	baz=316						
SCZT				*e*S	**Sn**	**03 14 47.3**	**-1.6**
	baz=316						
TWGBT	**Beinan**	**1.89**	**332**	*e*P	**Pn**	**03 14 23.4**	**-0.2**
	baz=325						
TWGBT				*e*S	**Sn**	**03 14 48.5**	**-2.1**
	baz=325						
TWG	**Pinlang**	**1.90**	**332**	*e*P	**Pn**	**03 14 23.5**	**-0.2**
	baz=325						
TWG				*e*S	**Sn**	**03 14 48.5**	**-2.3**
	baz=325						
CICP	**Calayan Island**	**1.94**	**196**	⇑*i*P	**Pn**	**03 14 23.9**	**-0.3**
EDH	**Donghe**	**1.95**	**340**	*e*P	**Pn**	**03 14 24.4**	**+0.2**
	baz=343						
LONT	**Longtian**	**1.95**	**334**	*e*P	**Pn**	**03 14 24.2**	**-0.1**
	baz=328						
MASBT	**Mashibuluo**	**1.96**	**318**	P	**Pn**	**03 14 24.6**	**+0.2**
	baz=322						
MASBT				*e*S	**Sn**	**03 14 49.8**	**-2.2**
	baz=322						
TSMG	**Majia**	**2.02**	**320**	*e*P	**Pn**	**03 14 25.5**	**+0.4**
	baz=324						
CHKT	**Chengkung**	**2.05**	**342**	*e*P	**Pn**	**03 14 25.4**	**0.0**
	baz=346						
EHD	**Haiduan**	**2.14**	**339**	*e*P	**Pn**	**03 14 25.9**	**-0.5**
	baz=333						
SLGT	**Liugui**	**2.25**	**325**	*e*P	**Pn**	**03 14 28.9**	**+1.2**
	baz=324						
SCST	**Cishan**	**2.25**	**321**	*e*P	**Pn**	**03 14 28.3**	**+0.6**
	baz=326						
SCST				*e*S	**Sn**	**03 14 56.6**	**-1.3**
	baz=326						
STYH	**Taoyuan**	**2.33**	**330**	*e*P	**Pn**	**03 14 29.1**	**+0.5**
	baz=323						
STYH				*e*S	**Sn**	**03 14 58.0**	**-1.6**
	baz=323						
YULB	**Yu-li**	**2.34**	**343**	*e*P	**Pn**	**03 14 28.8**	**0.0**
	baz=343						
SGST	**Jiashian**	**2.36**	**325**	*e*P	**Pn**	**03 14 28.5**	**-0.4**
	baz=325						
EHY	**Hungye**	**2.44**	**344**	*e*P	**Pn**	**03 14 30.1**	**+0.1**
	baz=339						
CHN1	**Nanshi**	**2.47**	**326**	*e*P	**Pn**	**03 14 30.6**	**+0.2**
	baz=325						
WTP	**Ta-pu**	**2.48**	**328**	*e*P	**Pn**	**03 14 30.5**	**+0.1**
	baz=327						
TPUB	**Ta-pu**	**2.52**	**329**	*e*P	**Pn**	**03 14 30.9**	**0.0**
	baz=322						
TPUB				*e*S	**Sn**	**03 15 00.6**	**-3.0**
	baz=322						
YUS	**Yu-Shan**	**2.54**	**337**	*e*P	**Pn**	**03 14 32.1**	**+0.5**
	baz=337						
TWK	**Hsinying**	**2.56**	**326**	*e*P	**Pn**	**03 14 31.4**	**0.0**
	baz=325						
CHN4	**Tsaushan**	**2.58**	**329**	*e*P	**Pn**	**03 14 31.7**	**+0.2**
	baz=323						
ALS	**Alishan**	**2.62**	**334**	*e*P	**Pn**	**03 14 32.6**	**+0.2**
	baz=326						
SCLT	**Jiali**	**2.65**	**320**	*e*S	**Sn**	**03 15 05.2**	**-1.2**
	baz=324						
TSCK	**Chigu Township**	**2.70**	**318**	*e*P	**Pn**	**03 14 33.1**	**+0.2**
	baz=310						
TSCK				*e*S	**Sn**	**03 15 05.3**	**-2.0**
	baz=310						
VWDT	**VWDT**	**2.73**	**342**	*e*P	**Pn**	**03 14 34.5**	**+1.1**
	baz=346						
ICHU	**Yijhu**	**2.75**	**324**	*e*P	**Pn**	**03 14 33.5**	**-0.1**
	baz=323						
PACPP	**Pamplona Cagay**	**2.75**	**194**	⇓*i*P	**Pn**	**03 14 33.6**	**-0.1**
CHN5	**Tsauling**	**2.75**	**333**	*e*P	**Pn**	**03 14 33.6**	**-0.1**
	baz=332						
WHYT	**Xinyi Township**	**2.77**	**337**	*e*P	**Pn**	**03 14 33.9**	**-0.1**
	baz=337						
SSLB	**Suanglung**	**2.82**	**339**	*e*P	**Pn**	**03 14 34.5**	**0.0**
	baz=331						
SSLB				*e*S	**Sn**	**03 15 08.0**	**-2.2**
	baz=331						
SGCP	**Gonzaga**	**2.89**	**180**	⇑*e*P	**Pn**	**03 14 35.5**	**+0.1**
SGCP				*e*S	**Sn**	**03 15 11.0**	**-0.6**
WSL	**Shuilin Townsh**	**2.90**	**325**	*e*P	**Pn**	**03 14 35.1**	**-0.4**
	baz=324						
WSL				*e*S	**Sn**	**03 15 09.0**	**-3.0**
	baz=324						
OWD	**Renai**	**2.91**	**344**	*e*P	**Pn**	**03 14 36.5**	**+0.7**
	baz=344						
SMLT	**Sun Moon Lake**	**2.92**	**339**	*e*P	**Pn**	**03 14 35.9**	**0.0**
	baz=332						
TYC	**Yuchr**	**2.96**	**338**	*e*P	**Pn**	**03 14 36.5**	**+0.3**
	baz=332						
WTK	**Tuku**	**2.96**	**329**	*e*P	**Pn**	**03 14 35.8**	**-0.5**
	baz=335						
WUSB	**Renai**	**2.96**	**343**	*e*P	**Pn**	**03 14 37.0**	**+0.6**
	baz=343						
WNT	**Mingjian**	**3.00**	**335**	*e*P	**Pn**	**03 14 36.8**	**0.0**
	baz=335						
CHGB	**Renai**	**3.01**	**345**	*e*P	**Pn**	**03 14 38.1**	**+1.0**
	baz=345						
WDGT	**Dungji**	**3.05**	**314**	*e*P	**Pn**	**03 14 37.1**	**-0.3**
	baz=313						
WHF	**Hehuan Shan**	**3.07**	**347**	*e*P	**Pn**	**03 14 38.9**	**+0.8**
	baz=352						
WCS	**Beigang Elemen**	**3.08**	**340**	*e*P	**Pn**	**03 14 37.9**	**+0.1**
	baz=333						
ETLH	**Xiulin Townshi**	**3.09**	**350**	*e*P	**Pn**	**03 14 38.2**	**+0.2**
	baz=345						
VCHM	**Qimei**	**3.18**	**311**	*e*P	**Pn**	**03 14 38.4**	**-0.6**
	baz=310						
VCHM				*e*S	**Sn**	**03 15 15.2**	**-2.8**
	baz=310						
WCHH	**Zhanghua**	**3.23**	**335**	*e*P	**Pn**	**03 14 39.5**	**-0.1**
	baz=335						
WHP	**Taichung City**	**3.28**	**342**	*e*P	**Pn**	**03 14 40.8**	**+0.5**
	baz=335						
PHUB	**P'eng-hu**	**3.29**	**316**	*e*P	**Pn**	**03 14 39.7**	**-0.6**
	baz=321						
PHUB				*e*S	**Sn**	**03 15 17.0**	**-3.4**
	baz=321						
PNG	**Penghu**	**3.33**	**317**	*e*P	**Pn**	**03 14 40.4**	**-0.5**
	baz=316						
APYP	**Conner**	**3.35**	**193**	⇑*i*P	**Pn**	**03 14 41.6**	**+0.4**
APYP				*i* S	**Sn**	**03 15 19.8**	**-2.2**
CVP	**Callao Caves**	**3.43**	**184**	⇓*e*P	**Pn**	**03 14 42.3**	**+0.1**
KSRS	**Korea Array**	**17.04**	**16**	P	**Pn**	**03 17 38.4**	**+1.2**
	1.5nm,0.5s,baz=199,slow=12,SNR=2.9						
CMAR	**Chiang Mai Arr**	**21.89**	**267**	P	**P**	**03 18 31.5**	**+2.6**
	1.3nm,0.2s,baz=88,slow=10.0,SNR=2.0						
	1.3nm,0.2s						
KLR	**Kul'dur**	**29.08**	**13**	P	**P**	**03 19 34.9**	**+1.3**
	0.8nm,0.5s,baz=221,slow=9.3,SNR=4.6						
	0.8nm,0.5s						
SONM	**Songino Array**	**29.47**	**338**	P	**P**	**03 19 37.6**	**+0.3**
	1.5nm,0.7s,baz=157,slow=10,SNR=9.0						
	1.5nm,0.7s						
MKAR	**Makanchi Array**	**41.09**	**318**	P	**P**	**03 21 17.4**	**+1.1**
	1.9nm,0.4s,baz=112,slow=9.6,SNR=43						
	1.9nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**41.95**	**84**	T	T	04 07 11.2	
	baz=282						
H11N2	**WAKE ISLAND Hy**	**41.95**	**84**	T	T	04 07 18.0	
	baz=282						
H11N3	**WAKE ISLAND Hy**	**41.97**	**84**	T	T	04 07 18.3	
	baz=282						
H11S3	**WAKE ISLAND Hy**	**41.98**	**86**	T	T	04 06 51.3	
	baz=282						
H11S1	**WAKE ISLAND Hy**	**41.99**	**85**	T	T	04 06 54.0	
	baz=282						
H11S2	**WAKE ISLAND Hy**	**42.00**	**86**	T	T	04 06 54.9	
	baz=282						
WRA	**Warramunga Arr**	**42.57**	**163**	P	**P**	**03 21 26.6**	**-1.9**
	0.8nm,0.5s,baz=344,slow=9.0,SNR=28						
WRA				PcP	**PcP**	**03 23 17.1**	**-0.8**
	0.2nm,0.6s,baz=337,slow=2.5,SNR=1.6						
	0.8nm,0.5s						
ZALV	**Zalesovo Beam**	**43.23**	**329**	P	**P**	**03 21 33.5**	**+0.1**
	1.2nm,0.5s,baz=124,slow=7.4,SNR=5.3						
	1.2nm,0.5s						
KURBB	**Kurchatov Arra**	**44.95**	**322**	P	**P**	**03 21 47.9**	**+0.6**
	2.8nm,0.8s,baz=113,slow=7.9,SNR=16						
KURBB				PcP	**PcP**	**03 23 24.6**	**-1.0**
	0.3nm,0.6s,baz=115,slow=3.6,SNR=2.6						
	2.8nm,0.8s						
AAK	**Ala-Archa**	**45.01**	**310**	P	**P**	**03 21 49.6**	**+1.6**
	0.7nm,0.5s,baz=151,slow=13,SNR=3.6						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**46.01**	**165**	P	**P**	**03 21 54.5**	**-1.4**
	1.0nm,0.8s,baz=346,slow=9.5,SNR=12						
	1.0nm,0.8s						
STKA	**Stephens Creek**	**55.95**	**160**	P	**P**	**03 23 09.0**	**-0.8**
	1.1nm,0.5s,baz=336,slow=6.5,SNR=4.7						
	1.1nm,0.5s						
GEYT	**Alibeck**	**57.05**	**302**	P	**P**	**03 23 19.8**	**+2.0**
	1.2nm,0.6s,baz=46,slow=6.2,SNR=2.2						
	1.2nm,0.6s						
ILAR	**Eielson Array**	**71.55**	**27**	P	**P**	**03 24 51.1**	**-0.3**
	0.3nm,0.6s,baz=282,slow=5.3,SNR=5.0						
	0.3nm,0.6s						
FINES	**FINESS Array B**	**74.46**	**330**	P	**P**	**03 25 08.5**	**-0.1**
	0.5nm,0.4s,baz=84,slow=5.7,SNR=5.6						
	0.5nm,0.4s						
NOA	**NORSAR Array B**	**81.27**	**333**	P	**P**	**03 25 45.2**	**-1.1**
	2.5nm,1.1s,baz=61,slow=5.2,SNR=3.7						
	2.5nm,1.1s						
YKA	**Yellowknife Ar**	**85.45**	**23**	P	**P**	**03 26 07.5**	**0.0**
	0.9nm,0.8s,baz=312,slow=4.6,SNR=17						
	0.9nm,0.8s						

KRSC ***21*** *03:27:14.7±0.8, 56°.10N×161°.24E, h103^{km}±7^{km}, Ml3.6*
IDC ***21*** *03:27:18.1±4.3, 56°.38N×160°.35E, h132^{km}±34^{km}, mb3.0/5, mbtmp3.4/5, Error ellipse: s-maj=129.3km s-min=24.9km az=133.0*
ISC 21 03:27:16.3±0.8**, 56°.11N**±0°.04×**161°.25E**±0°.04**, h98**^{km}±5^{km}**, n36, σ0^{s}.93**/58**, mb3.2**/5**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CIRR	**Tsirk**	**0.28**	**271**	*e*P	**Pn**	**03 27 30.4**	**-0.3**
BZGR	**Bezymyannyi-Gr**	**0.35**	**242**	*e*P	**Pn**	**03 27 30.8**	**-0.3**
BZGR				*e*S	**Sn**	**03 27 42.9**	**+0.9**
KLY	**Klyuchi**	**0.39**	**302**	*e*P	**Pn**	**03 27 30.4**	**-0.7**
KLY				*e*S	**Sn**	**03 27 41.9**	**-0.3**
BZP	**Bezymyannyi-Pe**	**0.45**	**244**	*e*P	**Pn**	**03 27 31.0**	**-0.6**
BZP				*e*S	**Sn**	**03 27 42.6**	**-0.5**
BZWR	**Bezymyannyi-We**	**0.45**	**251**	*e*P	**Pn**	**03 27 31.4**	**-0.3**
BZWR				*e*S	**Sn**	**03 27 44.2**	**+1.0**
BZMR	**Bezymyannaya**	**0.46**	**248**	*e*P	**Pn**	**03 27 31.3**	**-0.4**
BZMR				*e*S	**Sn**	**03 27 43.6**	**+0.2**
SMKR	**Semkarok**	**0.49**	**14**	*e*P	**Pn**	**03 27 32.0**	**+0.2**
SMKR				*e*S	**Sn**	**03 27 45.1**	**+1.6**
KIRR	**Kirishev**	**0.53**	**253**	*e*P	**Pn**	**03 27 31.6**	**-0.7**
KIRR				*e*S	**Sn**	**03 27 43.5**	**-0.8**
SRKR	**Sorokina**	**0.55**	**355**	*e*P	**Pn**	**03 27 32.4**	**+0.1**
SRKR				*e*S	**Sn**	**03 27 45.5**	**+1.2**
KPT	**Kopyto**	**0.60**	**256**	*e*P	**Pn**	**03 27 31.7**	**-1.0**
KPT				*e*S	**Sn**	**03 27 44.6**	**-0.4**
KMNR	**Kamenistaya**	**0.67**	**239**	*e*P	**Pn**	**03 27 32.8**	**-0.6**
KMNR				*e*S	**Sn**	**03 27 45.8**	**-0.4**
KOZ	**Kozyrevsk**	**0.78**	**267**	*e*P	**Pn**	**03 27 33.7**	**-0.5**
KOZ				*e*S	**Sn**	**03 27 48.1**	**+0.5**
KBG	**Krutoberegovo**	**0.82**	**79**	*e*P	**Pn**	**03 27 34.6**	**0.0**
KBG				*e*S	**Sn**	**03 27 49.2**	**+0.7**
KBTR	**Krutoberegovo**	**0.88**	**83**	*e*P	**Pn**	**03 27 35.3**	**+0.1**
KBTR				*e*S	**Sn**	**03 27 50.6**	**+1.1**
SRDR	**Sredinnyy**	**0.88**	**284**	*e*P	**Pn**	**03 27 34.6**	**-0.7**
SRDR				*e*S	**Sn**	**03 27 49.5**	**-0.2**
TUMD	**Tumrok D**	**1.03**	**208**	*e*P	**Pn**	**03 27 36.4**	**-0.5**
TUMD				*e*S	**Sn**	**03 27 51.9**	**-0.4**
TUMR	**Tumrok**	**1.04**	**218**	*e*P	**Pn**	**03 27 36.9**	**-0.1**
TUMR				*e*S	**Sn**	**03 27 53.3**	**+0.6**
ESO	**Esso**	**1.45**	**264**	*e*P	**Pn**	**03 27 42.8**	**+1.1**
ESO				*e*S	**Sn**	**03 28 02.0**	**+1.0**
TIGL	**Tigil**	**2.18**	**321**	*e*P	**Pn**	**03 27 50.3**	**-0.7**
TIGL				*e*S	**Sn**	**03 28 17.3**	**-0.3**
BKI	**Bering**	**2.82**	**107**	*e*P	**Pn**	**03 27 58.9**	**-0.6**
BKI				*e*S	**Sn**	**03 28 30.9**	**-1.9**
GNL	**Ganaly**	**3.08**	**220**	*e*P	**Pn**	**03 28 03.6**	**+0.5**
SPN	**Mys Shipunski**	**3.10**	**194**	*e*P	**Pn**	**03 28 03.1**	**-0.1**
SPN				*e*S	**Sn**	**03 28 38.9**	**-0.6**
KRX	**Arik**	**3.14**	**210**	*e*P	**Pn**	**03 28 05.0**	**+1.1**
NLC	**Nalytchevo**	**3.15**	**201**	*e*P	**Pn**	**03 28 04.4**	**+0.6**
NLC				*e*S	**Sn**	**03 28 42.1**	**+1.6**
SMAR	**Somma**	**3.19**	**208**	*e*P	**Pn**	**03 28 04.8**	**+0.2**
AVH	**Avacha**	**3.20**	**208**	*e*P	**Pn**	**03 28 05.3**	**+0.6**
KOK	**Koryaka**	**3.21**	**209**	*e*P	**Pn**	**03 28 05.3**	**+0.6**
UGLR	**Uglovaya**	**3.23**	**207**	*e*P	**Pn**	**03 28 06.0**	**+0.9**
PETK	**Petropavlovsk-**	**3.65**	**216**	P	**Pn**	**03 28 12.8**	**+2.2**
	1.7nm,0.5s,baz=69,slow=15,SNR=3.6						
PETK				S	**Sn**	**03 28 50.3**	**-2.4**
	3.0nm,0.5s,baz=78,slow=19,SNR=2.0						
GRL	**Gorelyy**	**4.02**	**209**	*e*P	**Pn**	**03 28 17.3**	**+1.6**
MTVR	**Mutnovka**	**4.05**	**208**	*e*P	**Pn**	**03 28 17.5**	**+1.3**
YKA	**Yellowknife Ar**	**40.52**	**45**	P	**P**	**03 34 44.9**	**-0.2**
	0.2nm,0.6s,baz=300,slow=7.8,SNR=4.5						
	0.2nm,0.6s						
NVAR	**Mina Array Bea**	**54.14**	**73**	P	**P**	**03 36 32.5**	**+1.3**
	0.5nm,0.7s,baz=302,slow=5.2,SNR=2.9						
	0.5nm,0.7s						
PDAR	**Pinedale Array**	**55.51**	**63**	P	**P**	**03 36 41.5**	**+0.4**
	0.3nm,0.6s,baz=322,slow=2.8,SNR=3.8						
	0.3nm,0.6s						
TXAR	**Lajitas Array**	**68.87**	**69**	P	**P**	**03 38 10.7**	**+0.4**
	0.2nm,0.6s,baz=292,slow=4.8,SNR=4.6						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**79.10**	**206**	P	**P**	**03 39 07.9**	**-1.7**
	0.4nm,1.0s,baz=21,slow=6.1,SNR=4.6						
	0.4nm,1.0s						

IDC 21 03:36:30.8±1.4**, 29°.86S**×**179°.07W, h338**^{km}±15^{km}**, mb2.6**/1**, mbtmp3.8**/2**, Error ellipse: s-maj=41.6km s-min=25.6km az=109.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.17**	**59**	P	Pn	03 37 16.2	+0.2
	195nm,0.3s,baz=270,slow=20,SNR=11						
RAO				S	S	03 37 49.0	-3.2
	147nm,0.3s,baz=266,slow=19,SNR=2.6						
URZ	**Urewera**	**8.96**	**200**	P	Pn	03 38 35.4	-0.6
	4.8nm,0.3s,baz=339,slow=6.3,SNR=29						
URZ				S	S	03 40 18.1	-0.4
	3.5nm,0.3s,baz=110,slow=19,SNR=2.0						
WRA	**Warramunga Arr**	**43.15**	**272**	P	P	03 43 59.5	+0.1
	0.2nm,0.5s,baz=110,slow=7.5,SNR=6.7						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**144.32**	**340**	PKP	PKPab	03 55 23.7	-1.6
	2.4nm,1.0s,baz=46,slow=4.0,SNR=4.2						
TORD	**Torodi Ar. Bea**	**163.35**	**183**	PKPab	PKPab	03 56 47.4	+0.8
	0.5nm,1.0s,baz=179,slow=4.4,SNR=2.3						

IDC ***21*** *03:37:44.4±2.1, 32°.21S×178°.22W, h0^{km}, mb3.9/2, mbtmp3.9/3, ML3.7/1, Error ellipse: s-maj=47.4km s-min=46.4km az=72.0*
ISC 21 03:37:46.7±1.9**, 32°.4S**±0°.2×**178°.3W**±0°.3**, h10**^{km}**, n6, σ0^{s}.39**/6**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.13**	**6**	Sn	Sn	03 39 05.9	-7.7
	24nm,0.3s,baz=172,slow=23,SNR=1.2						
URZ	**Urewera**	**6.96**	**211**	Pn	**Pn**	**03 39 28.9**	**+0.3**
	1.4nm,0.3s,baz=341,slow=4.8,SNR=1.5						
URZ				Sn	**Sn**	**03 40 47.6**	**-0.2**
	2.5nm,0.3s,baz=290,slow=23,SNR=5.8						
	3.3nm,0.3s						
ASAR	**Alice Springs**	**42.77**	**269**	P	**P**	**03 45 45.0**	**+0.3**
	0.6nm,0.5s,baz=111,slow=7.8,SNR=6.8						
	0.6nm,0.5s						
WRA	**Warramunga Arr**	**43.93**	**274**	P	**P**	**03 45 53.7**	**-0.4**
	0.8nm,0.3s,baz=113,slow=8.0,SNR=36						
	0.8nm,0.3s						
FINES	**FINESS Array B**	**146.89**	**339**	PKPbc	**PKPdf**	**03 57 26.8**	**+0.1**
	1.0nm,0.8s,baz=42,slow=2.3,SNR=6.0						
TORD	**Torodi Ar. Bea**	**160.86**	**180**	PKPab	**PKPab**	**03 58 29.6**	**-0.3**
	0.3nm,0.9s,baz=181,slow=2.5,SNR=1.5						

IDC ***21*** *03:41:25.8±2.1, 24°.49N×122°.10E, h0^{km}, mb3.7/3, mbtmp3.7/3, MS2.9/1, Error ellipse: s-maj=349.9km s-min=26.0km az=70.0*

*TAP **21** 03:41:27.8, 24°.65N×122°.61E, h10^{km}±1^{km}, ML4.0, C*
*JMA **21** 03:41:27.6±0.1, 25°N±1°×122°.6E±0°.4, h22^{km}±1^{km}, MV3.2/10, NW OFF ISHIGAKIJIMA IS*
ISC 21 03:41:27.3±0.9**, 24°.66N**±0°.03×**122°.62E**±0°.02**, h17**^{km}±7^{km}**, n65, σ0^{s}66**/88**, mb3.7**/3**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	0.36	125	*i* P	Pg	03 41 34.9	+0.2
JYNG				S	Sg	03 41 40.2	+0.4
YOJ	**Yonaguni jima**	0.41	119	*i* P	Pg	03 41 35.7	+0.2
YOJ				S	Sg	03 41 41.5	+0.3
YOJ	**Yonaguni jima**	0.41	119	P	Pg	03 41 35.7	+0.2
	baz=117						
YOJ				S	Sg	03 41 41.3	+0.2
	baz=117						
EOS2	**EOS2**	0.43	236	*e*P	Pg	03 41 35.9	0.0
	baz=235						
EOS2				*e*S	Sb	03 41 42.3	-0.2
	baz=235						
EOS3	**EOS3**	0.46	217	*e*P	Pg	03 41 36.4	-0.1
	baz=216						
EOS4	**EOS4**	0.60	207	*e*P	Pg	03 41 38.8	-0.3
	baz=206						
EGS		0.65	287	*e*P	Pg	03 41 39.8	-0.3
	baz=287						
TWB1	**Santiao Chiao**	0.67	301	*e*P	Pg	03 41 40.5	0.0
	baz=302						
TWB1				*e*S	Sg	03 41 48.8	-0.7
	baz=302						
TWC	**Suao**	0.70	266	*e*P	Pg	03 41 40.0	-1.1
	baz=266						
TWC				*e*S	Sg	03 41 50.6	+0.1
	baz=266						
TIPB	**Shuangxi**	0.79	293	P	Pg	03 41 42.6	0.0
	baz=293						
TIPB				*e*S	Sg	03 41 53.1	0.0
	baz=293						
EWUT	**Wuta**	0.80	255	*e*P	Pg	03 41 42.5	-0.3
	baz=254						
ILA	**Ilan**	0.80	278	*e*P	Pg	03 41 43.1	+0.2
	baz=278						
SXI1	**Grass Mountain**	0.81	303	P	Pg	03 41 43.0	0.0
	baz=303						
SXI1				*e*S	Sg	03 41 54.0	+0.3
	baz=303						
NDS	**Dongshan**	0.82	268	*e*P	Pg	03 41 43.3	-0.1
	baz=268						
ENA	**Nanau**	0.83	254	*e*P	Pg	03 41 43.0	-0.5
	baz=253						
TWE	**Neicheng**	0.87	274	*e*P	Pg	03 41 43.3	-0.9
	baz=274						
TWE				*e*S	Sg	03 41 55.6	-0.1
	baz=274						
FUSB	**Fushanzhiwuyua**	0.95	276	*e*P	Pg	03 41 44.9	-0.8
	baz=276						
FUSB				*e*S	Sg	03 41 57.5	-0.6
	baz=276						
ENTT	**Nioudou**	0.96	269	*e*P	Pg	03 41 45.4	-0.5
	baz=269						
TWA	**Mucha**	1.00	289	*e*P	Pg	03 41 46.2	-0.4
	baz=289						
TWA				*e*S	Sg	03 41 58.6	-1.0
	baz=289						
LATG	**Datong**	1.00	263	P	Pg	03 41 46.2	-0.6
	baz=263						
NWLT	**Wulai**	1.02	277	*e*P	Pg	03 41 46.8	-0.3
	baz=276						
NWLT				*e*S	Sg	03 41 59.8	-0.7
	baz=276						
ETL	**Fush Village**	1.04	242	*e*P	Pg	03 41 46.8	-0.5
	baz=241						
NHDH	**Xindian Distri**	1.04	287	*e*P	Pg	03 41 47.1	-0.3
	baz=287						
NHDH				*e*S	Sg	03 42 00.3	-0.8
	baz=287						
NACB	**Ninganchiao**	1.05	243	P	Pg	03 41 46.7	-1.0
	baz=242						
NACB				*e*S	Sg	03 42 00.1	-1.4
	baz=242						
IRIF	**Iriomote-Funau**	1.06	108	P	Pg	03 41 46.8	-1.0
IRIF				S	Sg	03 42 01.2	-0.5
YM01	**YM01**	1.07	297	*e*P	Pg	03 41 47.1	-0.9
	baz=297						
YM01				*e*S	Sg	03 42 01.0	-1.1
	baz=297						
TAP	**Taipei**	1.08	291	*e*S	Sg	03 42 01.1	-1.3
	baz=290						
TWD	**Chiawan**	1.10	239	*e*P	Pb	03 41 47.8	0.0
	baz=238						
TWD				*e*S	Sg	03 42 02.1	-0.8
	baz=238						
TWY	**Chenhua**	1.11	304	*e*S	Sb	03 42 02.5	+0.2
	baz=304						
ETLH	**Xiulin Townshi**	1.13	247	*e*P	Pb	03 41 47.8	-0.7
	baz=246						
YHNB	**Yeheng**	1.13	271	P	Pb	03 41 48.4	-0.1
	baz=270						
YHNB				*e*S	Sg	03 42 03.0	-1.1
	baz=270						
NSK	**Sanguang**	1.15	271	P	Pb	03 41 48.8	0.0
	baz=270						
NSK				*e*S	Sb	03 42 03.1	-0.3
	baz=270						
NNSB	**Datong**	1.15	259	P	Pb	03 41 48.5	-0.3
	baz=258						
NNS	**Nan Shan**	1.16	259	P	Pb	03 41 48.9	0.0
	baz=259						
NNS				*e*S	Sb	03 42 03.5	-0.3
	baz=259						
NTST	**Danshui**	1.18	296	*e*S	Sb	03 42 04.2	0.0
	baz=295						
TWS1	**Kuangyinshan**	1.18	292	*e*P	Pb	03 41 48.9	-0.3
	baz=292						
TWS1				*e*S	Sb	03 42 04.4	+0.2
	baz=292						
HATJ	**Hateruma jima**	1.23	119	P	Pn	03 41 50.0	+0.3
HATJ				S	Sb	03 42 05.8	0.0
JKRS	**Kuro-shima**	1.33	108	P	Pn	03 41 50.9	-0.2
JKRS				*e*S	Sb	03 42 07.6	-1.0
WHF	**Hehuan Shan**	1.34	248	*e*P	Pn	03 41 51.9	+0.3
	baz=247						
NFF	**Wufeng Townshi**	1.37	269	*e*P	Pn	03 41 52.3	+0.6
	baz=269						
TWT	**Tachien**	1.38	253	*e*P	Pb	03 41 53.2	+0.5
	baz=253						
TDCB	**Techi**	1.39	253	*e*P	Pb	03 41 53.3	+0.4
	baz=253						
JIJ	**Ishigaki jima**	1.42	102	P	Pn	03 41 51.7	-0.5
JIJ				*e*S	Sn	03 42 09.1	-1.5
CHGB	**Renai**	1.45	246	*e*P	Pb	03 41 54.2	+0.3
	baz=245						
LIOB	**Emei**	1.46	270	*e*P	Pb	03 41 54.8	+0.8
	baz=269						
NSTT	**Nanjuang**	1.48	269	*e*P	Pb	03 41 55.0	+0.8
	baz=269						
OWD	**Renai**	1.49	242	*e*P	Pn	03 41 54.1	+0.7
	baz=242						
SBCB	**Hsinchu**	1.49	275	*e*P	Pg	03 41 56.7	+0.6
	baz=275						
WUSB	**Renai**	1.52	244	*e*P	Pb	03 41 55.3	+0.1
	baz=244						
JISG	**Ishigakijimahi**	1.54	92	P	Pn	03 41 53.9	-0.1
WHP	**Taichung City**	1.57	256	*e*P	Pb	03 41 57.0	+1.0
	baz=256						
HGSD	**Ruisui**	1.60	224	*e*P	Pn	03 41 54.7	-0.1
	baz=223						
VWDT	**VWDT**	1.62	237	*e*P	Pn	03 41 56.0	+0.9
	baz=236						
EHY	**Hungye**	1.65	226	*e*P	Pn	03 41 55.7	+0.2
	baz=225						
YULB	**Yu-li**	1.75	224	*e*P	Pn	03 41 56.7	-0.1
	baz=223						
SMLT	**Sun Moon Lake**	1.75	244	*e*P	Pn	03 41 58.6	+1.6
	baz=243						
SSLB	**Suanglung**	1.75	241	*e*P	Pn	03 41 58.0	+1.0
	baz=240						
TYC	**Yuchr**	1.78	245	*e*P	Pb	03 41 59.0	-0.4
	baz=244						
YUS	**Yu-Shan**	1.92	233	*e*P	Pn	03 42 00.7	+1.0
	baz=232						
ALS	**Alishan**	2.02	236	*e*P	Pn	03 42 02.3	+1.5
	baz=235						
EDH	**Donghe**	2.07	216	*e*P	Pn	03 42 00.7	-0.6
	baz=215						
KSRS	**Korea Array**	13.54	18	LR	LR	03 51 16.2	
	comp=Z,44nm,18.1s,baz=180,slow=43						
SONM	**Songino Array**	26.47	335	P	P	03 47 04.3	+0.7
	1.5nm,0.8s,baz=149,slow=10,SNR=7.7						
	1.5nm,0.8s						
WRA	**Warramunga Arr**	45.78	165	P	P	03 49 48.5	+0.4
	1.0nm,0.7s,baz=345,slow=8.8,SNR=9.0						
	1.0nm,0.7s						
ASAR	**Alice Springs**	49.27	166	P	P	03 50 16.6	+1.3
	0.2nm,0.3s,baz=348,slow=8.5,SNR=4.6						
	0.2nm,0.3s						

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*TAP **21** 03:55:34.7, 24°.67N×122°.65E, h24^{km}±1^{km}, ML2.9, C*
*JMA **21** 03:55:35.2±0.1, 24°.6N±0°.8×122°.6E±0°.3, h24^{km}±1^{km}, MV2.2/10, NW OFF ISHIGAKIJIMA IS*
ISC 21 03:55:35.0±1.0**, 24°.64N**±0°.06×**122°.63E**±0°.02**, h24**^{km}±12^{km}**, n26, σ0^{s}29**/39**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	0.34	123	P	Pb	03 55 42.5	0.0
JYNG				S	Sb	03 55 47.8	+0.1
YOJ	**Yonaguni jima**	0.39	117	P	Pb	03 55 43.3	0.0
YOJ				S	Sb	03 55 49.1	+0.1
YOJ	**Yonaguni jima**	0.39	117	*e*P	Pb	03 55 43.3	0.0
	baz=115						
YOJ				*e*S	Sb	03 55 48.9	-0.1
	baz=115						
TWB1	**Santiao Chiao**	0.69	302	*e*P	Pb	03 55 47.9	-0.4
	baz=300						
TWB1				*e*S	Sb	03 55 56.6	-0.7
	baz=300						
TWC	**Suao**	0.71	268	*e*P	Pb	03 55 48.1	-0.5
	baz=266						
TWC				*e*S	Sb	03 55 58.0	-0.1
	baz=266						
EWUT	**Wuta**	0.80	256	*e*P	Pb	03 55 49.9	-0.3
	baz=254						
TIPB	**Shuangxi**	0.80	294	*e*P	Pb	03 55 50.2	-0.1
	baz=304						
TIPB				*e*S	Sb	03 56 00.8	+0.1
	baz=304						
SXI1	**Grass Mountain**	0.82	304	P	Pb	03 55 50.5	-0.1
	baz=301						
SXI1				*e*S	Sb	03 56 01.5	+0.2
	baz=301						
NDS	**Dongshan**	0.83	270	*e*P	Pb	03 55 50.7	0.0
	baz=259						
NDS				*e*S	Sb	03 56 02.0	+0.5
	baz=259						
ENA	**Nanau**	0.83	255	*e*P	Pb	03 55 50.6	-0.3
	baz=254						
TWE	**Neicheng**	0.88	275	P	Pb	03 55 51.6	0.0
	baz=274						
TWE				*e*S	Sb	03 56 03.2	+0.4
	baz=274						
FUSB	**Fushanzhiwuyua**	0.95	277	*e*P	Pb	03 55 52.9	0.0
	baz=276						
ENTT	**Nioudou**	0.97	270	P	Pn	03 55 53.1	0.0
	baz=269						
LATG	**Datong**	1.01	264	P	Pb	03 55 53.9	+0.1
	baz=263						
NWLT	**Wulai**	1.03	278	*e*P	Pb	03 55 54.3	+0.1
	baz=276						
IRIF	**Iriomote-Funau**	1.05	107	P	Pn	03 55 54.1	-0.1
NACB	**Ninganchiao**	1.05	244	P	Pn	03 55 54.2	0.0
	baz=250						
NACB				*e*S	Sb	03 56 07.4	-0.4
	baz=250						
ETLH	**Xiulin Townshi**	1.13	248	*e*P	Pn	03 55 55.5	+0.1
	baz=247						
YHNB	**Yeheng**	1.14	272	P	Pb	03 55 56.1	0.0
	baz=270						
NNSB	**Datong**	1.15	260	*e*P	Pn	03 55 56.0	+0.2
	baz=259						
NNSB				*e*S	Sb	03 56 11.4	+0.5
	baz=259						
NSK	**Sanguang**	1.16	272	*e*P	Pb	03 55 56.3	0.0
	baz=271						
NNS	**Nan Shan**	1.16	260	*e*P	Pb	03 55 56.5	+0.1
	baz=259						
HATJ	**Hateruma jima**	1.22	118	*e*S	Sb	03 56 12.5	-0.2
JKRS	**Kuro-shima**	1.32	107	*e*P	Pb	03 55 58.7	-0.4
JKRS				*e*S	Sb	03 56 15.9	+0.3
JIJ	**Ishigaki jima**	1.41	101	P	Pn	03 55 59.5	+0.4
JIJ				*e*S	Sn	03 56 16.7	-0.3
JISG	**Ishigakijimahi**	1.53	92	P	Pn	03 56 01.4	+0.5

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*GRAL **21** 03:56:58.5±0.2, 34°.31N×36°.33E, h6^{km}±10^{km}, MD3.8*
*GII **21** 03:56:59.1±0.0, 34°.33N×36°.26E, h1^{km}, MD2.8/6, Mm2.9/5*
ISC 21 03:56:58.1±1.6**, 34°.30N**±0°.03×**36°.31E**±0°.08**, h1**^{km}±11^{km}**, n22, σ0^{s}99**/38**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BEIL	**Beino**	0.26	337	*e*P	Pg	03 57 03.2	+0.1
BEIL				*e*S	Sg	03 57 06.8	+0.2
HWQ	**Hawqa**	0.30	266	*e*P	Pg	03 57 04.3	+0.4
HWQ				*e*S	Sg	03 57 08.6	+0.8
ZAHL	**Zahle**	0.57	219	*e*P	Pg	03 57 09.0	0.0
ZAHL				*e*S	Sg	03 57 16.7	+0.5
BHL	**Bhannes**	0.67	234	*e*P	Pg	03 57 10.9	-0.1
BHL				*e*S	Sg	03 57 20.2	+0.5
DQRL	**Deir Qamar**	0.85	226	*e*P	Pg	03 57 14.1	-0.3
DQRL				*e*S	Sg	03 57 25.7	+0.1
RCY	**Rachaya**	0.90	206	*e*P	Pg	03 57 14.9	-0.4
RCY				*e*S	Sg	03 57 27.0	+0.2
QRWL	**Qaraoun**	0.92	215	*e*P	Pg	03 57 15.3	-0.3
GEM	**Giv'at Ha'Em**	1.21	207	Pg	Pn	03 57 21.0	-1.2
GEM				Sg	Sn	03 57 39.7	+0.4
MMA0B	**Mount Meron ar**	1.49	211	Pn	Pn	03 57 26.0	0.0
MMA0B				Sn	Sg	03 57 47.1	+1.2
HNTI	**Hanita**	1.54	218	Pn	Pn	03 57 26.6	-0.1
HNTI				Sn	Sg	03 57 48.9	+1.3
BLGI	**Bet Lehem HaGe**	1.82	211	Pn	Pb	03 57 31.7	-0.5
BLGI				Sn	Sg	03 57 57.4	+0.8
MMLI	**Mount Malkishu**	2.00	202	Pn	Pb	03 57 34.3	-1.0
MMLI				Sn	Sb	03 58 01.3	+0.6
OFRI	**`Ofer**	2.01	214	Pn	Pb	03 57 34.1	-1.3
OFRI				Sn	Sb	03 58 00.5	-0.4
HMDT	**Nahal Hemdat**	2.15	198	Pn	Pb	03 57 36.4	-1.3
HMDT				Sn	Sb	03 58 05.0	+0.2
SLTI	**Sal'it**	2.31	208	Pn	Pn	03 57 38.6	+1.3
SLTI				Sn	Sb	03 58 08.4	-1.3
SALP	**Salfit**	2.42	203	Pn	Pn	03 57 39.8	+1.1
SALP				Sn	Sb	03 58 11.2	-1.5
UJAP	**Al Uja**	2.45	197	Pn	Pb	03 57 41.0	-1.8
CSS	**Mathiatis**	2.54	286	Pn	Pn	03 57 40.5	0.0
CSS				Sn	Sn	03 58 12.6	+0.5
DSI	**Dead Sea**	2.83	196	Pn	Pn	03 57 46.2	+1.7
MDBI	**Mazsada**	3.09	195	Pn	Pn	03 57 49.1	+1.2
YTIR	**Yattir**	3.10	199	Pn	Pn	03 57 49.7	+1.5
PRNI	**Paran**	4.09	196	Pn	Pn	03 58 03.8	+2.0

IDC 21 04:03:54.3±7.4**, 19°.74S**×**178°.10W, h0**^{km}**, mb3.4**/2**, mbtmp3.4**/2**, Error ellipse: s-maj=327.1km s-min=115.1km az=154.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	44.61	256	P	P	04 12 08.2	-0.6
	0.7nm,0.7s,baz=89,slow=8.0,SNR=7.8						
	0.7nm,0.7s						
WRA	**Warramunga Arr**	44.62	261	P	P	04 12 09.2	+0.3
	0.2nm,0.4s,baz=96,slow=8.2,SNR=8.6						
	0.2nm,0.4s						
AKASG	**Malin Array Be**	142.31	331	PKP	PKPdf	04 23 28.2	-0.5
	0.1nm,0.3s,baz=33,slow=4.6,SNR=5.2						

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*IDC **21** 04:18:48.1±1.9, 34°.60N×139°.39E, h0^{km}, mb3.3/2, mbtmp3.3/3, ML3.0/1, Error ellipse: s-maj=51.4km s-min=22.6km az=73.0*
*JMA **21** 04:18:52.9±0.2, 35°.1N±0°.6×140°.0E±0°.6, h67^{km}±1^{km}, MV3.0/40, SOUTHERN BOSO PENINSULA*
ISC 21 04:18:53.3±1.0**, 35°.07N**±0°.04×**140°.03E**±0°.05**, h65**^{km}±6^{km}**, n26, σ0^{s}53**/34**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TATJ	**Tateyama 2**	0.12	251	*e*P	Pn	04 19 03.3	+0.3
TATJ				S	Sn	04 19 10.1	+0.1
JKUC	**kamogawauchiur**	0.17	58	P	Pn	04 19 02.8	-0.4
JKUC				S	Sn	04 19 10.3	0.0
KTR	**Katsuura**	0.25	72	P	Pn	04 19 03.5	-0.1
KTR				S	Sn	04 19 10.8	-0.3
BSO4	**Boso 4**	0.27	108	P	Pn	04 19 04.0	+0.4
BSO4				X		04 19 12.3	
JYO	**Yokosk**	0.33	297	P	Pn	04 19 04.4	+0.2
JYO				S	Sn	04 19 12.8	+0.7
BSO3	**Boso 3**	0.48	124	P	Pn	04 19 05.3	+0.2
BSO3				X		04 19 14.7	
JIM2	**Oshima 3**	0.60	234	P	Pn	04 19 06.3	-0.5
JIM2				S	Sn	04 19 15.8	-0.9
JOD2	**Odawara 2**	0.79	284	P	Pn	04 19 08.4	-0.6
JOD2				S	Sn	04 19 19.4	-1.2
BSO1	**Boso 1**	0.89	118	P	Pn	04 19 09.1	-0.5
BSO1				X		04 19 21.6	
JIZS	**Izushimoda**	1.01	250	P	Pn	04 19 11.4	-0.2
JIZS				S	Sn	04 19 24.8	-0.5
JMYK	**Miyake Tsubota**	1.08	202	S	Sn	04 19 27.0	0.0
JFNN	**Fujinakano**	1.11	277	P	Pn	04 19 13.0	0.0
JFNN				S	Sn	04 19 27.4	-0.1
JMKN	**Mikurajimanish**	1.23	197	P	Pn	04 19 14.7	+0.1
JMKN				S	Sn	04 19 30.2	-0.2
JYN	**Shimob**	1.29	290	P	Pn	04 19 15.0	-0.3
JYN				S	Sn	04 19 31.5	-0.4
JRY	**Ryogami san**	1.32	316	P	Pn	04 19 15.4	-0.4
JRY				*e*S	Sn	04 19 32.2	-0.3
JAG	**Ashikaga**	1.43	341	P	Pn	04 19 16.5	-0.7
JAG				S	Sn	04 19 34.6	-0.5
SHZ3	**Shizuoka 3**	1.49	270	P	Pn	04 19 18.7	+0.7
SHZ3				*e*S	Sn	04 19 37.0	+0.3
MJAR	**Matsushiro Arr**	2.08	315	Pn	Pn	04 19 26.3	+0.3
	4.2nm,0.3s,baz=162,slow=14,SNR=88						
MJAR				Sn	Sn	04 19 51.5	+0.6
	5.8nm,0.3s,baz=152,slow=25,SNR=6.9						
	29nm,0.3s						
H11N2	**WAKE ISLAND Hy**	28.21	116	T	T	04 54 04.6	
	baz=309,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hy**	28.22	116	T	T	04 54 05.8	
	baz=309,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy**	28.23	116	T	T	04 54 05.3	
	baz=309,slow=75,SNR=12						
H11S3	**WAKE ISLAND Hy**	28.84	118	T	T	04 55 00.3	
	baz=307						
H11S1	**WAKE ISLAND Hy**	28.84	118	T	T	04 54 52.7	
	baz=307,slow=74						
H11S2	**WAKE ISLAND Hy**	28.85	118	T	T	04 54 57.4	
	baz=307,slow=74						
MKAR	**Makanchi Array**	44.24	304	P	P	04 26 57.2	+1.1
	0.1nm,0.4s,baz=78,slow=8.3,SNR=2.0						
	0.1nm,0.4s						
WRA	**Warramunga Arr**	54.98	187	P	P	04 28 17.2	-0.7
	0.6nm,0.7s,baz=2.9,slow=7.7,SNR=14						
	0.6nm,0.7s						

IDC 21 04:23:22.1±50.0**, 16°.05S**×**179°.03W, h0**^{km}**, mb4.0**/3**, mbtmp4.0**/3**, Error ellipse: s-maj=907.3km s-min=156.6km az=76.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	39.04	239	P	P	04 30 50.4	-0.4
	1.5nm,0.5s,baz=105,slow=12,SNR=3.4						
	1.5nm,0.5s						
WRA	**Warramunga Arr**	44.42	258	P	P	04 31 35.0	0.0
	0.5nm,0.8s,baz=91,slow=7.7,SNR=15						
	0.5nm,0.8s						
ASAR	**Alice Springs**	44.76	252	P	P	04 31 37.7	-0.1
	3.6nm,0.6s,baz=86,slow=8.3,SNR=32						
	3.6nm,0.6s						

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*NEIC **21** 04:29:10.9±1.7, 3°.68S±0°.06×80°.92W±0°.07, h24^{km}±4^{km}, mb4.8/188, Mwr4.9/11, Error ellipse: s-maj=11.0km s-min=7.9km az=54.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.25; $M_{\theta\theta}$-0.35; $M_{\phi\phi}$0.60; $M_{r\theta}$-0.57; $M_{\theta\phi}$-1.88; $M_{\phi r}$-1.61; Fault plane solution: $M_0$2.60000×10^{16} NP1:ϕ_s5.80000°, δ84.05000°, λ-40.33000°. NP2:ϕ_s100.83000°, δ49.93000°, λ-172.22000°. Principal axes: T 2.4508, Plg22.0000°, Azm60.0000°; N 0.2710, Plg49.0000°, Azm179.0000°; P -2.7218, Plg32.0000°, Azm315.0000°;*
*NEIC **21** 04:29:10.8, 3°.69S×80°.91W, h23^{km}*
*VAO **21** 04:29:11.8±0.6, 3°.63S×80°.94W, h28^{km}, mb5.0*
*GCMT **21** 04:29:13.9±0.3, 3°.70S±0°.02×81°.29W±0°.03, h36^{km}±1^{km}, MW5.0/75, Moment Tensor Solution. s33,c35; s75,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.64±.21; $M_{\theta\theta}$0.62±.13; $M_{\phi\phi}$-3.26±.14; $M_{r\theta}$0.09±.12; $M_{\theta\phi}$-0.58±.10; $M_{\phi r}$-2.16±.17; Best double couple: $M_0$3.69900×10^{16} NP1:ϕ_s181.00000°, δ63.00000°, λ82.00000°. NP2: ϕ_s18.00000°, δ28.00000°, λ106.00000°. Principal axes: T 3.3720, Plg71.0000°, Azm73.0000°; N 0.6540, Plg7.0000°, Azm184.0000°; P -4.0260, Plg18.0000°, Azm277.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **21** 04:29:14.6±2.3, 3°.59S×80°.80W, h50^{km}±21^{km}, mb4.1/18, mbtmp4.4/23, ML3.8/4, MS4.3/46 Error ellipse: s-maj=20.4km s-min=11.2km az=68.0*
ISC 21 04:29:12.5±0.3**, 3°.61S**±0°.05×**80°.89W**±0°.06**, h38**^{km}**, n316, σ1^{s}03**/252**, mb4.8**/100**, MS4.2**/44**, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCRA	**Macar, Loja**	1.20	129		Pn	04 29 31.6	-1.3
MCRA				Sn	Sn	04 29 47.3	-0.7
SALI	**Salinas**	1.42	356	Pn	Pn	04 29 34.9	-0.8
CHSH	**Refugio Sur-Vo**	2.92	44	Pn	Pn	04 29 56.9	0.0
PORT	**Chimborazo Vol**	3.00	45	Pn	Pn	04 29 59.4	+1.3
SLOR	**San Lorenzo -**	3.73	40	Pn	Pn	04 30 08.9	+0.9
ATAH	**Atahualpa**	4.30	145	P	Pn	04 30 17.1	+1.4
	8.2nm,0.3s,baz=2.5,slow=7.6,SNR=56						
ATAH				S	Sn	04 31 07.5	+2.7
	358nm,0.6s,baz=319,slow=19,SNR=5.8						
ATAH				LR	LR	04 32 04.7	
	comp=Z,6μm,19.5s,baz=311,slow=40						
	120nm,0.6s						
PULU	**Pululahua**	4.33	34	Pn	Pn	04 30 17.6	+1.5
PAC1	**Pacto, Paraso**	4.38	29	*e*P	Pn	04 30 16.5	-0.2
OTAV	**Otavalo**	4.53	33	Pn	Pn	04 30 19.8	+0.8
OTAV	**Otavalo**	4.53	33	*e*P	Pn	04 30 20.1	+1.0
CUSE	**Cuicocha Este**	4.62	33	*e*P	Pn	04 30 22.0	+1.8
IMBA	**Imbabura, San**	4.71	35	Pn	Pn	04 30 23.2	+1.9
BONI	**La Bonita**	5.25	40	*e*P	Pn	04 30 31.0	+2.3
TULM	**Tulcn-Chalpat**	5.30	36	Pn	Pn	04 30 30.5	+0.9
TULM	**Tulcn-Chalpat**	5.30	36	*e*P	Pn	04 30 32.2	+2.7
TUMC	**Tumaco**	5.81	22	Pn	Pn	04 30 35.4	-0.8
GCUF	**Volcan Galeras**	5.97	37	*e*P	Pn	04 30 40.7	+1.9
CRUC	**La Cruz**	6.48	38	*e*P	Pn	04 30 50.4	+4.7
BBAC	**Balboa, Cauca**	6.68	33	*e*P	Pn	04 30 48.9	+0.7
FLOC	**Florencia**	7.35	46	*e*P	Pn	04 30 55.6	-1.8
POPC	**Popayan, Colom**	7.42	35	*e*P	Pn	04 30 59.2	+0.7
GARC	**Garzon, Huila**	7.89	43	*e*P	Pn	04 31 05.8	+0.8
MALC	**Bahia Malaga**	8.37	25	*e*P	Pn	04 31 11.7	+0.4
YOTC	**Yotoco, Valle**	8.81	31	*e*P	Pn	04 31 14.3	-3.1
CZSB	**Cruzeiro do Su**	9.12	117	Pn	Pn	04 31 20.0	-1.6
CZSB	**Cruzeiro do Su**	9.12	117	*e*P	Pn	04 31 21.3	-0.3
NNA	**Nana**	9.24	154	P	Pn	04 31 24.9	+1.6
	2.3nm,0.3s,baz=332,slow=12,SNR=3.4						
NNA				S	Sn	04 33 09.4	+3.3
	14nm,0.3s,baz=350,slow=23,SNR=1.3						
	14nm,0.5s						
NNA	**Nana**	9.24	154	Pn	Pn	04 31 21.7	-1.6
PAYG	**Puerto Ayora**	9.83	287	Pn	Pn	04 31 31.6	+0.3
GUY2C	**Guyana, Caldas**	10.37	32	*e*P	Pn	04 31 40.2	+1.1
CBOC	**Ciudad Bolivar**	10.60	27	*e*P	Pn	04 31 42.6	+0.5
ROSC	**El Rosal**	10.66	38	P	Pn	04 31 42.5	-0.5
	2.5nm,0.5s,baz=204,slow=20,SNR=2.1						
ROSC				Lg	Lg	04 34 50.7	
	1.0nm,0.3s,baz=170,slow=21,SNR=1.3						
ROSC				LR	LR	04 36 42.0	
	comp=Z,7μm,18.1s,baz=222,slow=42						
ROSC	**El Rosal**	10.66	38	Pn	Pn	04 31 42.6	-0.4
TBTG	**Tabatinga, AM**	10.97	93	Pn	Pn	04 31 45.8	-1.3
TBTG	**Tabatinga, AM**	10.97	93	*e*P	Pn	04 31 47.1	0.0
DBBC	**Dabeiba**	11.54	24	*e*P	Pn	04 32 00.1	+5.1
PTBC	**PUERTO BERRIO,**	11.96	33	*e*P	Pn	04 31 58.9	-1.6
APAC	**Apartado, Choc**	12.22	21	*e*P	Pn	04 32 09.2	+5.2
BRU2	**Volcan**	12.45	352	Pn	Pn	04 32 08.4	+1.0
UREC	**San Jos de Ur**	12.49	25	*e*P	Pn	04 32 11.1	+3.3

ZARC	Zaragoza, Cauc	12.56	29	*e*P	Pn	04 32 11.4	+2.6
PAMC	Pamplona, Colo	13.61	37	*e*P	Pn	04 32 24.9	+1.4
JTS	Las Juntas de	14.39	344	LR	LR	04 37 20.3	
	comp=Z,766nm,21.4s,baz=144,slow=34						
ARGC	Ariguani, Magd	14.93	26	*e*P	Pn	04 32 40.5	-0.4
ETMB	Extrema	15.82	114	Pn	Pn	04 32 50.0	-2.7
SDV	Santo Domingo	16.08	39	P	Pn	04 32 54.8	-1.3
	0.6nm,0.3s,baz=228,slow=9.8,SNR=22						
SDV				LR	LR	04 40 13.6	
	comp=Z,3µm,21.1s,baz=222,slow=41						
	16nm,1.0s						
SDV	Santo Domingo	16.08	39	Pn	Pn	04 32 53.9	-2.3
SDV				IAmb	IAmb	04 33 01.2	
	comp=Z,78nm,0.9s						
SDV	Santo Domingo	16.08	39	*e*P	Pn	04 32 55.5	-0.6
TEFE	Tefe	16.23	90	*e*P	Pn	04 32 58.6	+0.8
URIC	Uribia, Colomb	17.60	30		Pn	04 33 15.2	+0.2
LPAZ	La Paz	17.78	136	P	P	04 33 18.1	-0.2
	comp=Z,0.3nm,0.3s,baz=336,slow=16,SNR=19						
LPAZ				LR	LR	04 41 27.1	
	comp=Z,3µm,19.5s,baz=298,slow=41						
	comp=Z,9.4nm,1.0s						
LPAZ	La Paz	17.78	136		Pn	04 33 16.6	-1.2
LPAZ	La Paz	17.78	136	*e*P	Pn	04 33 17.7	-0.1
BAUV	El Baul	17.88	46	Pn	Pn	04 33 16.9	-1.5
SAML	Samuel	18.38	108	P	P	04 33 22.4	-1.9
SAML	Samuel	18.38	108	*e*P	P	04 33 24.2	-0.1
PB16	IPOC Station P	18.40	144	P	P	04 33 23.3	-1.7
MNMC	Minye Minye	18.97	145	P	P	04 33 30.1	-1.0
PB11	IPOC Station P	19.44	147	P	P	04 33 33.9	-2.2
MACA	Manacapuru-AM	20.18	89	P	P	04 33 43.7	-0.3
MACA				IAmb	IAmb	04 33 46.1	
	comp=Z,60nm,0.9s						
MACA	Manacapuru-AM	20.18	89	*e*P	P	04 33 43.8	-0.2
BIRV	Birongo	20.19	46	P	P	04 33 43.4	-0.7
BIRV				IAmb	IAmb	04 33 53.4	
	comp=Z,47nm,1.2s						
PB07	IPOC Station P	20.94	150	P	P	04 33 50.9	-1.5
PB07				IAmb	IAmb	04 34 07.2	
	comp=Z,33nm,1.0s						
PCRV	Puerto La Cruz	21.21	50	P	P	04 33 55.6	+0.4
	comp=Z,15nm,0.8s,baz=132,slow=3.9,SNR=2.8						
PCRV				LR	LR	04 43 16.3	
	comp=Z,2µm,19.4s,slow=40						
	comp=Z,15nm,0.8s						
BOAV	Boa Vista	21.22	74	P	P	04 33 54.6	-0.7
BOAV	Boa Vista	21.22	74	*e*P	P	04 33 55.5	+0.2
PB03	IPOC Station P	21.28	150	P	P	04 33 55.0	-1.0
PB03				IAmb	IAmb	04 33 58.3	
	comp=Z,46nm,1.3s						
MTDJ	Mount Denham	21.95	9	P	P	04 34 04.4	+1.3
LVC	Limon Verde	22.17	149	P	P	04 34 06.5	+0.8
	comp=Z,21nm,1.0s,baz=321,slow=8.3,SNR=12						
LVC				LR	LR	04 43 24.2	
	comp=Z,844nm,18.2s,baz=316,slow=38						
	comp=Z,21nm,1.0s						
LVC	Limon Verde	22.17	149	P	P	04 34 06.6	+0.8
LVC				IAmb	IAmb	04 34 20.0	
	comp=Z,45nm,1.1s						
LVC	Limon Verde	22.17	149	*e*P	P	04 34 06.0	+0.2
VILB	Vilhena	22.46	116	P	P	04 34 08.6	-0.1
VILB	Vilhena	22.46	116	*e*P	P	04 34 08.6	-0.1
SIV	San Ignacio	23.05	124	P	P	04 34 14.0	-0.8
	comp=Z,15nm,1.1s,baz=296,slow=9.9,SNR=30						
SIV				LR	LR	04 43 37.7	
	comp=Z,493nm,19.2s,baz=294,slow=38						
	comp=Z,15nm,1.1s						
PB14	IPOC Station P	23.21	155	P	P	04 34 17.1	+0.5
GO02	Mina Guanaco	24.03	154	P	P	04 34 23.1	-1.3
BBSD	Serra de San D	24.05	126	*e*P	P	04 34 24.6	+0.3
PTLB	Pontes e Lacer	24.43	120	P	P	04 34 27.8	-0.1
PTLB	Pontes e Lacer	24.43	120	*e*P	P	04 34 28.4	+0.5
CMIG	Matias Romero	24.78	327	LR	LR	04 42 22.1	
	comp=Z,524nm,21.6s,baz=166,slow=32						
SC01	Santiago de lo	24.98	23	P	P	04 34 34.8	+2.0
TOSP	Speyside	25.09	54	P	P	04 34 34.5	+0.8
ITTB	Itaituba	25.11	93	*e*P	P	04 34 34.6	+0.6
PDRB	Porto dos Gac	25.22	110	*e*P	P	04 34 34.7	-0.3
CRPR	Cabo Rojo, PR	25.42	32	IAmb	IAmb	04 34 51.1	
	comp=Z,33nm,1.1s						
MLPR	Magueyes Islan	25.42	32	P	P	04 34 37.3	+0.5
MLPR				IAmb	IAmb	04 34 40.3	
	comp=Z,26nm,0.9s						
NPGB	Novo Progresso	25.65	99	*e*P	P	04 34 38.9	0.0
OBIP	Obispado Ponce	25.72	33	IAmb	IAmb	04 34 52.2	
	comp=Z,26nm,0.9s						
CELP	Cerrillos	25.76	33	IAmb	IAmb	04 34 55.3	
	comp=Z,46nm,1.2s						
CLDB	Colider	25.91	108	*e*P	P	04 34 41.7	+0.4
SJG	San Juan	26.02	33	P	P	04 34 43.8	+1.6
	comp=Z,38nm,0.9s,baz=220,slow=5.9,SNR=18						
SJG				LR	LR	04 46 37.2	
	comp=Z,777nm,20.7s,baz=206,slow=40						
	comp=Z,38nm,0.9s						
SJG	San Juan	26.02	33	P	P	04 34 42.7	+0.5
SJG	San Juan	26.02	33	*e*P	P	04 34 52.2	+10
HUMP	Col San Antoni	26.21	34	IAmb	IAmb	04 34 49.4	
	comp=Z,29nm,0.9s						
GCPR	Guaynabo City	26.22	33	IAmb	IAmb	04 34 48.8	
	comp=Z,36nm,0.9s						
CBYP	Canovanas	26.31	34	P	P	04 34 45.2	+0.3
SLBI	Saint Lucia, B	26.41	48	*e*P	P	04 34 46.8	+1.1
MALB	Monte Alegre	26.66	87	*e*P	P	04 34 48.7	+0.7
CUPR	Culebra, Puert	26.66	35	P	P	04 34 48.5	+0.5
CUPR				IAmb	IAmb	04 34 53.5	
	comp=Z,21nm,0.8s						
FDF	Fort de France	26.74	47	*e*P	P	04 34 38.0	-11
SALV	Santo Antonio	27.63	118	*e*P	P	04 34 57.4	+0.6
ANWB	Willy Bob	28.33	41	P	P	04 35 03.0	+0.1
BDQN	Bodoquena, MS	28.87	127	*e*P	P	04 35 07.5	-0.2
MURT	Porto Murtinho	28.87	130	*e*P	P	04 35 07.7	0.0
MCPB	Macapa, AP	29.00	84	*e*P	P	04 35 09.5	+0.5
PP1B	Ponte de Pedra	29.04	120	*e*P	P	04 35 10.0	+0.6
MDP	Montagnes des	29.52	73	P	P	04 35 14.1	+0.5
	comp=Z,24nm,0.9s,baz=257,slow=8.3,SNR=9.6						
MDP				LR	LR	04 47 36.0	
	comp=Z,2µm,19.9s,baz=258,slow=37						
	comp=Z,24nm,0.9s						
AQDB	Aquidauana	29.72	126	*e*P	P	04 35 15.5	+0.3
ESFA	Espinillo Form	30.26	137	*e*P	P	04 35 20.9	+1.0
CFA	Coronel Fontan	30.29	158	LR	LR	04 46 41.3	
	comp=Z,446nm,19.3s,baz=330,slow=35						
SNDB	Serra Nova Dou	30.45	108	*e*P	P	04 35 22.0	+0.2
ARAG	Araguaiana, MT	31.03	115	*e*P	P	04 35 26.7	-0.3
PRPB	Parauapebas	31.07	96	*e*P	P	04 35 27.3	-0.1
C2SB	Chapadao do Su	31.30	121	*e*P	P	04 35 29.7	+0.5
MT08	Bocatoma Ro	31.38	162	P	P	04 35 29.4	-0.6
MT08				IAmb	IAmb	04 35 32.9	
	comp=Z,14nm,0.9s						
AMBA	Amambai (Brazi	31.58	130	*e*P	P	04 35 31.3	-0.4
CPUP	Villa Florida	31.94	137	P	P	04 35 34.8	0.0
	comp=Z,5.6nm,0.8s,baz=310,slow=9.2,SNR=16						
CPUP				LR	LR	04 50 30.3	
	comp=Z,794nm,20.7s,baz=318,slow=40						
	comp=Z,5.6nm,0.8s						
CPUP	Villa Florida	31.94	137	P	P	04 35 34.1	-0.8
CPUP	Villa Florida	31.94	137	*e*P	P	04 35 35.0	+0.2
TMAB	Tom-Au,PA,Br	32.77	89	*e*P	P	04 35 43.5	+1.2
MCR1	Marechal Candi	33.16	131	*e*P	P	04 35 45.9	+0.3
MECA	Mercedes	33.43	142	*e*P	P	04 35 48.8	+0.9
SMTB	Santa Maria do	33.50	101	*e*P	P	04 35 48.9	+0.2
ITRB	Iturama	33.81	121	*e*P	P	04 35 51.3	0.0
PCMB	Pacaembu	33.88	124	*e*P	P	04 35 51.5	-0.4
AZCA	Azaras, Argent	33.99	138	*e*P	P	04 35 53.6	+0.8
BDFB	Brasilia	34.48	113	P	P	04 35 57.5	+0.2
	comp=Z,5.2nm,0.8s,baz=266,slow=12,SNR=11						
BDFB				LR	LR	04 51 51.9	
	comp=Z,1µm,18.0s,baz=300,slow=40						
	comp=Z,5.2nm,0.8s						
BDFB	Brasilia	34.48	113	P	P	04 35 56.7	-0.6
BDFB				IAmb	IAmb	04 35 58.1	
	comp=Z,10nm,1.0s						
BDFB	Brasilia	34.48	113	*e*P	P	04 35 57.8	+0.5
ITQB	Itaqui	34.65	141	P	P	04 35 58.1	-0.3
ITQB	Itaqui	34.65	141	*e*P	P	04 35 59.4	+1.0
FRBT	Francisco Belt	34.74	132	*e*P	P	04 35 59.3	-0.1
PTGB	Pitanga	34.80	130	*e*P	P	04 35 59.9	0.0
CRSM	Crissiumal (Br	34.94	136	*e*P	P	04 36 00.7	-0.3
IPMB	Ipameri, GO	35.05	116	*e*P	P	04 36 02.0	-0.1
250A	Grady	35.76	352	P	P	04 36 08.2	+0.4
RPN	Rapa Nui	35.85	226	LR	LR	04 47 30.1	
	comp=Z,587nm,18.5s,baz=73,slow=30						
BB19B	Bebedouro	35.94	122	*e*P	P	04 36 09.3	-0.4
RODS	Rosario do Sul	36.02	140	*e*P	P	04 36 10.9	+0.8
ITAB	Concordia	36.15	133	*e*P	P	04 36 11.6	+0.3
152A	Waverly Hall	36.26	355	IAmb	IAmb	04 36 24.2	
	comp=Z,17nm,1.1s						
ALGR	Alto Alegre (B	36.45	136	*e*P	P	04 36 13.5	-0.5
SDBA	SAO DESIDERIO	36.65	106	*e*P	P	04 36 15.8	-0.1
GO06	Curarrehue	36.82	168	P	P	04 36 15.5	-1.5
PMNB	Patos De Minas	36.82	116	*e*P	P	04 36 17.2	0.0
LRAL	Lakeview Retre	36.90	351	P	P	04 36 18.6	+1.0
LRAL				IAmb	IAmb	04 36 29.8	
	comp=Z,20nm,0.9s						
Z51A	Franklin	36.95	354	P	P	04 36 18.6	+0.6
Z51A				IAmb	IAmb	04 36 30.2	
	comp=Z,12nm,0.8s						
CPSB	Cacapava Do Su	37.19	139	*e*P	P	04 36 20.4	+0.2
Z47A	Carrollton	37.23	350	P	P	04 36 20.0	-0.4
Z47A				IAmb	IAmb	04 36 32.7	
	comp=Z,22nm,0.9s						
RCLB	Rio Claro- Sao	37.34	123	*e*P	P	04 36 21.4	-0.3
Y49A	Blount Mountai	37.63	352	P	P	04 36 24.1	+0.3
HODGE	Hodges	37.66	358	P	P	04 36 24.5	+0.5
JSC	Jenkinsville	37.69	360	P	P	04 36 24.0	-0.3
JSC				IAmb	IAmb	04 36 37.3	
	comp=Z,14nm,1.1s						
JANB	Januaria	37.78	110	*e*P	P	04 36 25.2	-0.2
LL04	Puerto Octay	37.91	170	P	P	04 36 24.8	-1.3
LL04				IAmb	IAmb	04 36 27.2	
	comp=Z,13nm,0.9s						
SPB	Sao Paulo	37.93	125	*e*P	P	04 36 26.2	-0.4
PLTB	Pedras Altas	37.98	141	*e*P	P	04 36 27.2	+0.4
VAO	Valinhos	38.06	123	*e*P	P	04 36 27.6	-0.2
PLCA	Paso Flores	38.12	167	P	P	04 36 28.1	+0.2
	comp=Z,2.7nm,0.9s,baz=347,slow=8.1,SNR=5.2						
PLCA				LR	LR	04 51 11.8	
	comp=Z,231nm,19.0s,baz=4.0,slow=35						
	comp=Z,2.7nm,0.9s						
PLCA	Paso Flores	38.12	167	*e*P	P	04 36 28.6	+0.6
Y45A	Yeager Farm, C	38.16	348	P	P	04 36 29.3	+1.1
FPAL	Fort Paine	38.20	354	P	P	04 36 28.1	-0.6
FPAL				IAmb	IAmb	04 36 40.8	
	comp=Z,16nm,0.9s						
PAULI	Pauline	38.23	359	P	P	04 36 28.7	-0.2
X48A	Hartselle	38.30	352	P	P	04 36 28.9	-0.6
JCT	Junction City	38.41	333	P	P	04 36 29.0	-1.5
JCT				IAmb	IAmb	04 36 46.9	
	comp=Z,30nm,1.4s						
BG3	Lake Jocassee	38.45	357	P	P	04 36 31.0	+0.3
BG3				IAmb	IAmb	04 36 42.3	
	comp=Z,36nm,1.4s						
KMSC	Kings Mountain	38.55	359	P	P	04 36 31.4	-0.1
KMSC				IAmb	IAmb	04 36 43.6	
	comp=Z,24nm,1.1s						
W57A	Gilead	38.57	1	P	P	04 36 31.5	-0.2
W52A	Murphy	38.60	356	P	P	04 36 32.1	+0.1
W52A				IAmb	IAmb	04 36 47.7	
	comp=Z,20nm,1.3s						
WHTX	Lake Whitney,	38.75	337	P	P	04 36 34.2	+1.0
WHTX				IAmb	IAmb	04 36 47.1	
	comp=Z,21nm,0.9s						
W50A	Signal Mountai	38.83	354	P	P	04 36 33.1	-0.8
WLAR	White Oak Lake	38.85	344	P	P	04 36 33.1	-1.0
SWET	Sewanee	38.91	353	P	P	04 36 34.4	-0.2
PLAL	Pickwick Lake	38.98	351	P	P	04 36 34.4	-0.7
CPCT	Cooper Cave	39.00	355	P	P	04 36 35.2	-0.1
CPCT				IAmb	IAmb	04 36 47.9	
	comp=Z,25nm,1.2s						
V53A	Saluda	39.11	358	P	P	04 36 36.0	-0.3
TKL	Tuckaleechee C	39.15	356	P	P	04 36 36.2	-0.4
TKL				IAmb	IAmb	04 36 49.5	
	comp=Z,25nm,1.2s						
V58A	Windy Hill, Pi	39.23	2	P	P	04 36 37.1	-0.1
V55A	Taylorsville	39.26	360	P	P	04 36 37.6	+0.2
V52A	Sevierville	39.33	357	P	P	04 36 38.7	+0.7
V52A				IAmb	IAmb	04 36 50.4	
	comp=Z,27nm,1.1s						
V51A	Loudon	39.34	356	P	P	04 36 38.4	+0.2
V51A				IAmb	IAmb	04 36 49.5	
	comp=Z,32nm,1.4s						
TXAR	Lajitas Array	39.37	328	P	P	04 36 41.1	+2.5
	comp=Z,0.5nm,0.8s,baz=144,slow=8.8,SNR=4.8						
TXAR				PcP	PcP	04 38 48.0	+1.4
	comp=Z,0.6nm,0.8s,baz=130,slow=3.6,SNR=3.2						
TXAR				LR	LR	04 51 31.2	
	comp=Z,161nm,21.0s,baz=143,slow=34						
	comp=Z,0.5nm,0.8s						
V48A	Smith Brothers	39.53	352	P	P	04 36 39.9	+0.1
V48A				IAmb	IAmb	04 36 51.1	
	comp=Z,16nm,1.0s						
UALR	University of	39.67	345	P	P	04 36 39.8	-1.1
UALR				IAmb	IAmb	04 36 53.9	
	comp=Z,30nm,1.4s						
U56A	King	39.75	1	P	P	04 36 41.1	-0.5
U56A				IAmb	IAmb	04 36 53.8	
	comp=Z,22nm,1.1s						
MIAR	Mount Ida	39.79	344	P	P	04 36 41.9	+0.1
CLTN	Cedars of Leba	39.82	353	P	P	04 36 42.0	-0.2
U54A	Nelsons Funny	39.93	359	P	P	04 36 42.6	-0.5
U54A				IAmb	IAmb	04 36 55.0	
	comp=Z,21nm,1.1s						
TZTN	Tazewell	40.02	357	P	P	04 36 43.0	-0.9
TZTN				IAmb	IAmb	04 36 56.1	
	comp=Z,24nm,1.1s						
WHAR	Wooly Hollow	40.15	345	P	P	04 36 44.4	-0.5
U49A	Red Boiling Sp	40.17	354	P	P	04 36 44.2	-0.8
ABTX	Abilene, Hawle	40.18	335	P	P	04 36 45.0	-0.3
ABTX				IAmb	IAmb	04 36 58.6	
	comp=Z,18nm,1.0s						
LL02	Futaleuf	40.23	170	P	P	04 36 43.7	-1.7
T57A	Hurt	40.43	2	P	P	04 36 47.6	+0.5
T57A				IAmb	IAmb	04 36 59.0	
	comp=Z,19nm,1.0s						
LCAR	Lake Charles	40.62	347	P	P	04 36 48.4	-0.4
LCAR				IAmb	IAmb	04 37 01.1	
	comp=Z,28nm,1.0s						
FCAR	Ozark Folk Cen	40.68	346	P	P	04 36 48.8	-0.4
FCAR				IAmb	IAmb	04 37 01.8	
	comp=Z,18nm,1.0s						
T45A	Paducah	41.06	351	P	P	04 36 52.2	-0.2
S51A	Beattyville	41.12	357	P	P	04 36 53.3	+0.5
S51A				IAmb	IAmb	04 37 04.9	
	comp=Z,20nm,0.9s						
POST	Post	41.37	333	P	P	04 36 55.5	+0.4
POST				IAmb	IAmb	04 37 08.6	
	comp=Z,16nm,0.8s						
W35A	Tecumseh	41.38	340		P	04 36 55.1	0.0
W35A				IAmb	IAmb	04 37 10.4	
	comp=Z,32nm,1.5s						
R58B	Mineral	41.46	4	P	P	04 36 54.8	-0.8
CGM3	Cape Girardeau	41.51	349	P	P	04 36 55.9	-0.1
CGM3				IAmb	IAmb	04 37 08.0	
	comp=Z,25nm,1.1s						
HHAR	Hobbs	41.52	344	IAmb	IAmb	04 37 09.4	
	comp=Z,23nm,1.1s						
SJMB	Sao Joao De Ma	41.61	114	*e*P	P	04 36 56.7	-0.5
R55A	Marlinton	41.69	1	P	P	04 36 58.0	+0.4
U38A	Gravette	41.79	344	IAmb	IAmb	04 37 11.7	
	comp=Z,27nm,1.1s						
S44A	Carbondale	41.82	350	P	P	04 36 58.2	-0.4
S44A				IAmb	IAmb	04 37 10.4	
	comp=Z,19nm,0.9s						
R49A	Shelbyville	41.88	355	IAmb	IAmb	04 37 10.3	
	comp=Z,17nm,1.1s						
WCI	Wyandotte Cave	41.93	354	P	P	04 36 59.2	-0.3
OK030	Cody Creek RV	42.05	341	P	P	04 37 01.6	+1.1
OK030				IAmb	IAmb	04 37 13.5	
	comp=Z,22nm,1.0s						
OK029	Liberty Lake	42.16	340	P	P	04 37 02.2	+0.8
FVM	French Village	42.32	349	IAmb	IAmb	04 37 14.6	
	comp=Z,17nm,1.1s						
Q52A	Bidwell	42.38	358	P	P	04 37 02.4	-0.7
Q52A				IAmb	IAmb	04 37 14.7	
	comp=Z,35nm,1.3s						
CCM	Cathedral Cave	42.55	348	P	P	04 37 04.6	0.0
CCM				IAmb	IAmb	04 37 06.4	
	comp=Z,24nm,1.4s						
OLIL	Olney	42.66	352	P	P	04 37 04.4	-0.9
OLIL				IAmb	IAmb	04 37 16.7	
	comp=Z,24nm,1.0s						
S39A	Bolivar	42.68	345	IAmb	IAmb	04 37 18.5	
	comp=Z,19nm,0.9s						
MSTX	Muleshoe	42.70	333	IAmb	IAmb	04 37 19.1	
	comp=Z,21nm,1.0s						
T35A	Sooner Cattle	42.87	342	IAmb	IAmb	04 37 20.9	
	comp=Z,21nm,1.1s						
P51A	Williamsport	42.92	358	IAmb	IAmb	04 37 18.7	
	comp=Z,22nm,1.2s						
Q44A	Meyer Farm, Va	42.96	351	IAmb	IAmb	04 37 08.9	
	comp=Z,20nm,0.9s						
R40A	Maddies Statio	43.00	347	IAmb	IAmb	04 37 21.4	
	comp=Z,22nm,1.2s						
P52A	Corning	43.05	359	IAmb	IAmb	04 37 20.3	
	comp=Z,25nm,1.1s						
P48A	Milroy	43.06	355	IAmb	IAmb	04 37 19.3	
	comp=Z,19nm,1.0s						
P49A	Miami Univ. Ec	43.07	356	IAmb	IAmb	04 37 19.3	
	comp=Z,18nm,1.1s						
ELIS	Ellis County	43.11	338	P	P	04 37 10.6	+1.4
ELIS				IAmb	IAmb	04 37 26.3	
	comp=Z,26nm,1.0s						
O52A	Adamsville	43.52	359	IAmb	IAmb	04 37 24.5	
	comp=Z,17nm,1.1s						
N51A	Ashland	44.33	358	P	P	04 37 17.9	-1.0
N47A	Urbana	44.49	355	IAmb	IAmb	04 37 30.6	
	comp=Z,15nm,1.1s						
P38A	Dawn	44.57	346	IAmb	IAmb	04 37 34.4	
	comp=Z,20nm,1.3s						
ANMO	Albuquerque	45.25	330	LR	LR	04 56 14.5	
	comp=Z,109nm,18.6s,baz=236,slow=36						
ANMO	Albuquerque	45.25	330	P	P	04 37 28.2	+1.6
ANMO				IAmb	IAmb	04 37 40.3	
	comp=Z,9.9nm,0.9s						
N38A	Joes South For	45.61	347	P	P	04 37 30.0	+1.0
T25A	Trinidad	46.07	334	IAmb	IAmb	04 37 47.0	
	comp=Z,16nm,1.3s						
K50A	Casco	46.19	358	P	P	04 37 33.1	-0.5
SCIA	State Center	46.67	347	P	P	04 37 37.3	0.0
ECSD	EROS Data Cent	49.21	345	IAmb	IAmb	04 38 11.2	
	comp=Z,14nm,1.4s						
PFO	Pinyon Flats O	49.98	321	LR	LR	04 56 35.6	
	comp=Z,150nm,21.6s,baz=114,slow=33						
E43A	Lone Tree Farm	50.06	354	IAmb	IAmb	04 38 14.7	
	comp=Z,14nm,0.9s						
D62A	Allapoint, All	51.55	10	P	P	04 38 15.0	+0.4
RSSD	Black Hills	51.86	339	P	P	04 38 16.4	-0.9
PDAR	Pinedale Array	52.95	334	P	P	04 38 26.4	+1.0
	comp=Z,1.8nm,0.8s,baz=128,slow=8.2,SNR=15						
PDAR				LR	LR	05 00 57.2	
	comp=Z,186nm,18.8s,baz=160,slow=36						
	comp=Z,1.8nm,0.8s						
HWUT	Hardware Ranch	52.96	331	IAmb	IAmb	04 38 35.4	
	comp=Z,9.4nm,0.9s						
REDW	Red Top Meadow	53.99	333	IAmb	IAmb	04 38 55.8	
	comp=Z,11nm,1.2s						
ELK	Elko	54.17	328	LR	LR	05 00 58.9	
	comp=Z,308nm,18.6s,baz=157,slow=35						
ELK	Elko	54.17	328	P	P	04 38 35.0	+0.6
NVAR	Mina Array Bea	54.27	324	P	P	04 38 37.4	+2.2
	comp=Z,0.8nm,0.7s,baz=149,slow=6.9,SNR=5.1						
NVAR				LR	LR	04 59 47.3	
	comp=Z,144nm,21.8s,baz=138,slow=34						
	comp=Z,0.8nm,0.7s						
FLWY	Flagg Ranch	54.50	334	IAmb	IAmb	04 39 04.5	
	comp=Z,22nm,1.6s						
RLMT	Red Lodge	54.72	336	IAmb	IAmb	04 39 29.7	
	comp=Z,27nm,2.0s						
ULM	Lac du Bonnet	55.18	348	P	P	04 38 41.7	+0.4
	comp=Z,6.3nm,0.7s,baz=168,slow=7.2,SNR=10						
	comp=Z,6.3nm,0.7s						
WVOR	Wild Horse Val	57.16	327	IAmb	IAmb	04 39 08.9	
	comp=Z,16nm,1.2s						
MSO	Missoula	58.06	334	IAmb	IAmb	04 39 15.2	
	comp=Z,9.1nm,1.1s						
YBH	Yreka Blue Hor	58.98	324	LR	LR	05 02 07.4	
	comp=Z,183nm,21.7s,baz=137,slow=33						
TAOE	Nuku Hiva Isla	59.08	262	*e*S	S	04 47 15.0	+0.4
	comp=Z,246nm,27.2s						
TAOE				*e*LR	LR	04 56 33.9	
	comp=Z,144nm,27.0s						
SCHQ	Schefferville	59.39	9	P	P	04 39 10.6	-0.4
	comp=Z,4.4nm,0.9s,baz=161,slow=2.2,SNR=4.9						
SCHQ				LR	LR	05 07 10.7	
	comp=Z,71nm,18.6s,baz=211,slow=38						
	comp=Z,4.4nm,0.9s						
FCC	Fort Churchill	63.06	352	IAmb	IAmb	04 39 37.1	
	comp=Z,11nm,1.2s						
BBTS	Babate	66.28	72	LR	LR	05 06 42.8	
	comp=Z,708nm,21.3s,baz=238,slow=34						
BBB	Bella Bella	68.40	331	LR	LR	05 10 16.6	
	comp=Z,98nm,18.1s,baz=112,slow=36						
PPT	Papeete	68.60	253	LR	LR	05 03 26.6	
	comp=Z,116nm,18.1s,baz=120,slow=30						
PPT2	Papeete2	68.60	253	*e*S	S	04 49 12.7	0.0
	comp=Z,65nm,22.0s						
PPT2	Papeete2	68.60	253	*e*LR	LR	05 00 57.1	
	comp=Z,172nm,32.5s						
PPT2				*e*LR	LR	05 00 57.2	
	comp=Z,248nm,26.8s						
YKA	Yellowknife Ar	70.73	344	P	P	04 40 24.3	0.0
	comp=Z,0.7nm,0.7s,baz=140,slow=6.0,SNR=18						
	comp=Z,0.7nm,0.7s						
DLBC	Dease Lake	73.12	335	LR	LR	05 13 54.1	
	comp=Z,136nm,19.9s,baz=118,slow=37						
SFJD	Kangerlussuaq	73.66	12	LR	LR	05 12 17.9	
	comp=Z,55nm,21.9s,baz=204,slow=35						
DBIC	Dimbokro	76.59	82	P	P	04 41 00.3	+0.6
	comp=Z,11nm,0.9s,baz=249,slow=4.5,SNR=8.4						
DBIC				LR	LR	05 14 11.6	
	comp=Z,361nm,18.5s,baz=271,slow=35						
	comp=Z,11nm,0.9s						
BELA	Belgrano 2	78.06	171	P	P	04 41 06.3	-0.5
BELA				IAmb	IAmb	04 41 08.6	
	comp=Z,14nm,1.4s						
RAR	Rarotonga	78.34	249	LR	LR	05 07 44.8	
	comp=Z,241nm,19.2s,baz=92,slow=30						
INK	Inuvik	80.38	343	LR	LR	05 17 42.9	
	comp=Z,103nm,21.8s,baz=120,slow=36						
BCAR	Beaver Creek A	80.48	336	P	P	04 41 21.0	+0.7
A36M	Sachs Harbour	80.64	347	P	P	04 41 21.1	+0.2
SUMG	Summit	80.66	12	*i* P	P	04 41 21.0	-0.5
BORG	Borgarnes	80.77	22	LR	LR	05 14 20.8	
	comp=Z,86nm,21.3s,baz=219,slow=34						
EGAK	Eagle	81.05	338	IAmb	IAmb	04 41 35.4	
	comp=Z,8.1nm,1.1s						
SCRK	Sand Creek	81.77	337	P	P	04 41 26.5	-0.7
SCRK				IAmb	IAmb	04 42 18.4	
	comp=Z,22nm,1.9s						
ESDC	Sonseca Array	82.28	49	P	P	04 41 31.7	+1.4
	comp=Z,1.8nm,0.9s,baz=274,slow=4.6,SNR=8.0						
ESDC				LR	LR	05 17 16.2	
	comp=Z,70nm,18.9s,baz=250,slow=35						
	comp=Z,1.8nm,0.9s						
ESDC	Sonseca Array	82.28	49	P	P	04 41 30.7	+0.4
ESDC				IAmb	IAmb	04 41 33.1	
	comp=Z,21nm,1.9s						
SNAA	Sanae	82.84	162	P	P	04 41 31.5	-1.2
SNAA				IAmb	IAmb	04 41 33.9	
	comp=Z,10nm,0.9s						
ILAR	Eielson Array	83.25	337	P	P	04 41 34.9	+0.1
	comp=Z,0.8nm,0.9s,baz=153,slow=4.1,SNR=7.1						
	comp=Z,0.8nm,0.9s						
TORD	Torodi Ar. Bea	83.61	76	P	P	04 41 37.8	+0.1
	comp=Z,3.8nm,1.1s,baz=266,slow=3.4,SNR=9.6						
	comp=Z,3.8nm,1.1s						
TORD	Torodi Ar. Bea	83.61	76	P	P	04 41 37.4	-0.3
TORD				IAmb	IAmb	04 41 38.6	
	comp=Z,8.9nm,1.4s						
MDM	Murphy Dome	83.85	337	IAmb	IAmb	04 41 50.2	
	comp=Z,6.8nm,1.0s						
NEA2	Nenana	84.05	336	IAmb	IAmb	04 41 51.1	
	comp=Z,7.8nm,1.0s						
I23K	Minto, Yukon-K	84.37	337	IAmb	IAmb	04 41 54.9	
	comp=Z,5.3nm,1.1s						
BPAW	Bear Paw Mtn.	84.66	335	P	P	04 41 40.8	-1.2
BPAW				IAmb	IAmb	04 41 54.1	
	comp=Z,7.2nm,1.0s						
CAST	Castle Rocks	84.90	335	P	P	04 41 42.0	-1.2
CAST				IAmb	IAmb	04 41 54.6	
	comp=Z,5.2nm,1.0s						
EKA	Eskdalemuir Ar	86.00	34	LR	LR	05 19 03.0	
	comp=Z,73nm,18.1s,baz=182,slow=35						
TAM	Tamanrasset	88.08	67	P	P	04 41 59.6	-0.3
TAM				IAmb	IAmb	04 42 13.4	
	comp=Z,4.5nm,1.0s						
AFI	Afiamalu	90.00	256	LR	LR	05 13 50.6	
	comp=Z,121nm,19.0s,baz=94,slow=30						
VNDA	Vanda	92.20	191	LR	LR	05 19 59.9	
	comp=Z,174nm,18.8s,baz=198,slow=33						
KEST	Kesra	92.28	55	LR	LR	05 21 36.5	
	comp=Z,100nm,21.4s,baz=246,slow=34						
NOA	NORSAR Array B	94.16	29	LR	LR	05 24 54.9	
	comp=Z,34nm,18.9s,baz=265,slow=36						
CLL	Collm	95.23	39	*e*P	P	04 42 34.0	+1.8
	comp=Z,7.0nm,1.1s						
CLL				*e*(sP)	pP	04 42 45.0	+0.9

HFS	**Hagfors**	**95.40**	**30**	LR	LR	05 20 47.3	
	comp=Z,105nm,19.9s,baz=268,slow=32						
GERES	**GERESS Array B**	**95.73**	**41**	LR	LR	05 23 50.9	
	comp=Z,47nm,19.9s,baz=256,slow=34						
VAE	**Valguarnera**	**96.39**	**53**	LR	LR	05 25 48.7	
	comp=Z,107nm,18.6s,baz=306,slow=35						
TSUM	**Tsumeb**	**96.81**	**110**	LR	LR	05 27 08.2	
	comp=Z,329nm,18.1s,baz=328,slow=36						
URZ	**Urewera**	**97.17**	**231**	LR	LR	05 19 04.1	
	comp=Z,396nm,18.3s,baz=244,slow=31						
VRAC	**Vranov**	**97.61**	**41**	LR	LR	05 23 24.7	
	comp=Z,37nm,20.6s,baz=276,slow=33						
SUR	**Sutherland**	**97.93**	**123**	LR	LR	05 24 31.3	
	comp=Z,128nm,18.9s,baz=238,slow=34						
ZALV	**Zalesovo Beam**	**128.47**	**11**	PKP	**PKPdf**	**04 48 15.2**	**0.0**
	comp=Z,3.0nm,0.8s,baz=270,slow=1.5,SNR=15						
ZALV	**Zalesovo Beam**	**128.47**	**11**	PKPdf	**PKiKP**	**04 48 15.6**	**-0.3**
KURK	**Kurchatov**	**129.99**	**17**	PKPdf	**PKPdf**	**04 48 18.4**	**+0.2**
MKAR	**Makanchi Array**	**134.57**	**16**	PKP	**PKPdf**	**04 48 26.8**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=347,slow=2.4,SNR=10						
AAK	**Ala-Archa**	**135.38**	**26**	PKPdf	**PKPdf**	**04 48 28.4**	**-0.5**
SONM	**Songino Array**	**135.50**	**353**	PKP	**PKiKP**	**04 48 29.8**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=7.4,slow=3.4,SNR=5.4						
ASAR	**Alice Springs**	**136.59**	**230**	PKP	**PKPdf**	**04 48 31.6**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=110,slow=2.6,SNR=4.8						
WRA	**Warramunga Arr**	**138.22**	**235**	PKP	**PKPdf**	**04 48 34.3**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=113,slow=2.4,SNR=10						
KSH	**Kashi**	**138.55**	**27**	PKP	**PKPdf**	**04 48 33.8**	**-1.0**
KSH				sPKP		04 48 49.5	
WMQ	**Urumqi**	**138.70**	**13**	*e*P	**PKPdf**	**04 48 35.8**	**+0.9**
WMQ				LR	LR		
	comp=Z,99nm,22.7s						
HHC	**Hu-ho-hao-te**	**141.26**	**345**	*e*P	**PKPdf**	**04 48 37.0**	**-2.7**
BTO	**Baotou**	**141.88**	**346**	*e*P	**PKiKP**	**04 48 43.5**	**-0.2**
BTO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BTO				pmax	pmax		
	comp=Z,330nm,4.9s						
NJ2	**Nanjing**	**146.17**	**329**	*e*P	**PKPbc**	**04 48 49.6**	**+0.3**
NJ2	**Nanjing**	**146.17**	**329**	pmax	pmax		
	comp=Z,5.0nm,0.5s						
GOMU	**GeErMu**	**147.33**	**6**	PKPbc	**PKPbc**	**04 48 52.8**	**-0.2**
GOMU				pPKP	PKiKP	04 48 57.4	+2.0
GOMU				sPKP		04 49 04.5	
GOMU				AMB	AMB		
	comp=Z,110nm,5.6s						
LZH	**Lanzhou**	**147.39**	**353**	*e*PKPbc	**PKPab**	**04 48 54.0**	**-0.8**
LZH				PKPbc	**pPKPdf**	**04 49 01.1**	**-1.7**
LZH				pPKP	pPKPbc	04 49 04.8	-0.3
LZH				sPKP		04 49 09.6	
PZH	**PanZhiHua**	**157.09**	**354**	PKP	**PKPdf**	**04 49 04.5**	**-0.6**
CMAR	**Chiang Mai Arr**	**165.24**	**1**	PKP	**PKPdf**	**04 49 13.9**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=338,slow=1.9,SNR=5.0						

OMAN 21 04:37:26.7±2.6, 21°.96N×62°.02E, h15^{km}, mb4.9/2, ml3.4/6, Error ellipse: s-maj=17.4km s-min=7.5km az=109.0, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JLN	**Jalan Bani Buh**	**2.42**	**275**	P	Pn	04 38 07.6	+1.8
JLN				S	Sn	04 38 34.1	-1.2
WBK	**Wadi Bani Khal**	**2.90**	**283**	P	Pn	04 38 14.0	+1.7
	SNR=26						
WBK				S	Sn	04 38 49.3	+2.3
WSAR	**Wadi Sarin**	**3.38**	**293**	P	Pn	04 38 19.4	+0.5
	SNR=20						
WSAR				S	Sn	04 38 59.0	+0.2
JMDO	**Jabal Madar**	**3.65**	**277**	P	Pn	04 38 24.0	+1.3
	SNR=15						
JMDO				S	Sn	04 39 07.6	+2.1
SMDO	**Samad**	**3.83**	**287**	P	Pn	04 38 26.9	+1.6
SMDO				S	Sn	04 39 11.3	+1.3
MHTO	**MHTO**	**3.89**	**256**	P	Pn	04 38 26.0	-0.1
	SNR=30						
MHTO				S	Sn	04 39 10.5	-1.1
BIDO	**Bidbid**	**3.91**	**294**	P	Pn	04 38 26.1	-0.2
BIDO				S	Sn	04 39 14.1	+2.1
BSY	**Bisya**	**4.53**	**281**	P	Pn	04 38 35.9	+1.2
BSY				S	Sn	04 39 26.1	-1.1
HOQ	**Hoqain**	**4.63**	**291**	P	Pn	04 38 37.6	+1.4
DQM	**DQM**	**4.65**	**245**	P	Pn	04 38 37.2	+0.8
DQM				S	Sn	04 39 28.4	-1.8
ARQ	**Araqi**	**5.26**	**286**	P	Pn	04 38 47.4	+2.6
JASK	**Jask - Hormozg**	**5.43**	**316**	P	Pn	04 38 49.0	+1.8
JASK				S	Sn	04 39 50.4	+0.8
ASHO	**Ashiyiah**	**6.11**	**297**	P	Pn	04 38 55.5	-1.1
BANOM	**Banah**	**6.55**	**308**	P	Pn	04 39 03.5	+0.9
SHME	**Shamm**	**6.74**	**308**	P	Pn	04 39 02.8	-2.4
SHME				S	Sn	04 40 20.5	-1.1

OMAN 21 04:39:43.8±1.1, 21°.88N×61°.93E, h10^{km}±43^{km}, ml3.5/11, 1C, Error ellipse: s-maj=9.7km s-min=6.4km az=120.0, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JLN	**Jalan Bani Buh**	**2.35**	**277**	P	Pn	04 40 19.5	-3.0
JLN				S	Sn	04 40 47.0	-4.5
WBK	**Wadi Bani Khal**	**2.84**	**285**	P	Pn	04 40 26.0	-3.2
	SNR=34						
WBK				S	Sn	04 41 01.4	-2.1
WSAR	**Wadi Sarin**	**3.34**	**295**	P	Pn	04 40 31.8	-4.3
	SNR=28						
WSAR				S	Sn	04 41 12.6	-3.2
NGCH	**Negor - Chabah**	**3.54**	**348**	P	Pn	04 40 39.7	+0.8
NGCH				S	Sn	04 41 17.5	-3.4
JMDO	**Jabal Madar**	**3.58**	**279**	P	Pn	04 40 36.5	-2.9
	SNR=37						
JMDO				S	Sn	04 41 20.0	-1.8
	SNR=14						
SMDO	**Samad**	**3.78**	**289**	P	Pn	04 40 39.2	-3.0
	SNR=23						
SMDO				S	Sn	04 41 24.4	-2.4
MHTO	**MHTO**	**3.79**	**257**	P	Pn	04 40 38.7	-3.6
	SNR=23						
MHTO				S	Sn	04 41 21.8	-5.3
BIDO	**Bidbid**	**3.87**	**296**	P	Pn	04 40 40.6	-2.8
BIDO				S	Sn	04 41 26.0	-3.0
BSY	**Bisya**	**4.46**	**282**	P	Pn	04 40 48.9	-2.7
BSY				S	Sn	04 41 40.2	-3.5
DQM	**DQM**	**4.54**	**246**	P	Pn	04 40 48.4	-4.2
HOQ	**Hoqain**	**4.59**	**293**	⇑P	Pn	04 40 50.6	-2.7
HOQ				S	Sn	04 41 45.1	-1.6
ARQ	**Araqi**	**5.20**	**287**	P	Pn	04 40 59.3	-2.4
JASK	**Jask - Hormozg**	**5.44**	**318**	P	Pn	04 41 01.5	-3.5
SOHO	**SOHO**	**5.46**	**295**	P	Pn	04 41 02.5	-2.7
ASHO	**Ashiyiah**	**6.08**	**299**	P	Pn	04 41 11.8	-2.0
ASHO				S	Sn	04 42 21.6	-1.9
UOSS	**Minazif**	**6.08**	**301**	P	Pn	04 41 11.6	-2.3
HATD	**Hatta, Dubai**	**6.08**	**300**	P	Pn	04 41 13.3	-0.5
MDH	**Madha**	**6.19**	**305**	P	Pn	04 41 13.0	-2.3
FAQ	**Al Faqa, Dubai**	**6.49**	**297**	P	Pn	04 41 17.1	-2.2
FAQ				S	Sn	04 42 31.4	-2.1
BANOM	**Banah**	**6.54**	**309**	P	Pn	04 41 15.8	-4.3
SHME	**Shamm**	**6.73**	**309**	P	Pn	04 41 19.9	-2.8
SHME				S	Sn	04 42 33.1	-6.4

IDC 21 04:45:21.3±4.8, 27°.92N×141°.20E, h0^{km}, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=335.3km s-min=30.3km az=84.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H11N2	**WAKE ISLAND Hy**	**24.84**	**104**	T	T	05 16 20.8	
	baz=292						
H11N1	**WAKE ISLAND Hy**	**24.84**	**104**	T	T	05 16 15.0	
	baz=292						
H11N3	**WAKE ISLAND Hy**	**24.86**	**104**	T	T	05 16 23.2	
	baz=292						
H11S3	**WAKE ISLAND Hy**	**25.19**	**106**	T	T	05 16 17.4	
	baz=297,slow=74,SNR=8.6						
H11S1	**WAKE ISLAND Hy**	**25.19**	**106**	T	T	05 16 07.3	
	baz=297,slow=74,SNR=5.8						
H11S2	**WAKE ISLAND Hy**	**25.20**	**106**	T	T	05 16 14.3	
	baz=297,slow=74,SNR=8.7						
WRA	**Warramunga Arr**	**48.04**	**189**	P	P	04 54 03.0	+0.4
	0.6nm,0.7s,baz=9.4,slow=8.4,SNR=12						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**51.77**	**189**	P	P	04 54 29.9	-0.9
	0.3nm,0.8s,baz=9.2,slow=6.9,SNR=2.6						
	0.3nm,0.8s						
FINES	**FINESS Array B**	**76.83**	**333**	P	P	04 57 14.8	0.0
	3.6nm,1.1s,baz=57,slow=7.0,SNR=7.9						
	3.6nm,1.1s						

SJA ***21*** *05:02:39.3±0.7, 32°.17S×72°.05W, h13^{km}±2^{km}, ML4.0, MW4.0, Hypocentre not reviewed by the ISC*

IDC ***21*** *05:02:39.3±0.9, 32°.14S×71°.77W, h0^{km}, mb4.0/5, mbtmp3.9/8, ML3.9/3, Error ellipse: s-maj=24.0km s-min=18.7km az=160.0*

NEIC ***21*** *05:02:41.4±1.4, 32°.17S±0°.04×72°.1W±0°.1, h18^{km}±11^{km}, ML4.0(GUC), Error ellipse: s-maj=12.7km s-min=6.2km az=91.0*

GUC ***21*** *05:02:42.8±0.7, 32°.16S×71°.91W, h29^{km}±4^{km}, ML4.0*

ISC 21 05:02:41.5±1.6, 32°.16S±0°.03×71°.90W±0°.06, h15^{km}±9^{km}, n75, σ0^{s}98/78, mb4.0/5, 9C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	**Catapilco**	**0.64**	**128**		**Pn**	**05 02 55.3**	**-1.0**
VA06	**Catapilco**	**0.64**	**128**	⇓*i*P	**Pn**	**05 02 55.2**	**-1.0**
VA06				*i* S	**Sg**	**05 03 04.0**	**+1.2**
VA06				IAML		05 03 06.5	
	comp=N,16µm,0.4s						
VA01	**Torpederas**	**0.88**	**166**		**Pn**	**05 02 58.9**	**-0.5**
VA01	**Torpederas**	**0.88**	**166**	*e*P	**Pn**	**05 02 59.2**	**-0.3**
VA01				*i* S	**Sn**	**05 03 11.5**	**-0.6**
VA01	**Torpederas**	**0.88**	**166**	*e*P		05 03 06.9	
VA01				*e*S		05 03 10.4	
ROC1	**El Roble**	**1.10**	**138**		**Pn**	**05 03 02.2**	**-0.5**
ROC1	**El Roble**	**1.10**	**138**	*e*P		05 03 03.7	
ROC1				*e*S		05 03 17.9	
ROCH	**El Roble**	**1.10**	**137**	⇓*i*P	**Pg**	**05 03 02.7**	**-0.1**
ROCH				IAML		05 03 19.5	
	comp=N,10µm,0.5s						
CO02	**Combarbal**	**1.23**	**39**		**Pb**	**05 03 04.4**	**-0.1**
CO02	**Combarbal**	**1.23**	**39**	⇓*i*P	**Pb**	**05 03 04.5**	**0.0**
CO02				*i* S	**Sg**	**05 03 20.9**	**-0.3**
CO02				IAML		05 03 30.1	
	comp=E,5µm,0.5s						
CO02	**Combarbal**	**1.23**	**39**	*e*P		05 03 04.6	
CO02				*e*S		05 03 23.6	
CO02				IAML		05 03 26.2	
	comp=Z,2µm,0.6s						
MT02	**Curacav**	**1.27**	**150**		**Pb**	**05 03 05.2**	**+0.1**
MT02	**Curacav**	**1.27**	**150**	⇑*i*P	**Pb**	**05 03 05.2**	**+0.1**
MT02				*e*S	**Sn**	**05 03 21.4**	**-0.2**
MT02	**Curacav**	**1.27**	**150**	*e*P		05 03 04.5	
MT02				*e*S		05 03 21.9	
MT02				IAML		05 03 25.2	
	comp=Z,1µm,0.3s						
VA03	**San Esteban**	**1.29**	**118**		**Pb**	**05 03 05.6**	**0.0**
VA03	**San Esteban**	**1.29**	**118**	⇓*i*P	**Pb**	**05 03 05.6**	**0.0**
VA03				*e*S	**Sg**	**05 03 22.6**	**-0.5**
VA03				IAML		05 03 24.9	
	comp=N,11µm,0.5s						
VA03	**San Esteban**	**1.29**	**118**	*e*P		05 03 04.5	
VA03				*e*P		05 03 05.7	
VA03				*e*S		05 03 23.6	
VA03				IAML		05 03 26.7	
	comp=Z,4µm,0.6s						
PEL	**Peldehue**	**1.41**	**134**		**Pb**	**05 03 07.7**	**0.0**
PEL	**Peldehue**	**1.41**	**134**	⇓*i*P	**Pb**	**05 03 07.7**	**0.0**
PEL				*i* S	**Sb**	**05 03 26.3**	**+0.7**
PEL				IAML		05 03 28.1	
	comp=E,4µm,0.3s						
PEL	**Peldehue**	**1.41**	**134**	*e*P		05 03 04.5	
PEL				*e*P		05 03 07.7	
PEL				*e*S		05 03 27.5	
CO06	**Fray Jorge**	**1.50**	**9**		**Pn**	**05 03 07.7**	**-0.3**
CO06	**Fray Jorge**	**1.50**	**9**	⇑*i*P	**Pn**	**05 03 07.8**	**-0.3**
CO06				IAML		05 03 35.2	
	comp=N,1µm,0.3s						
VA05	**Santo Domingo**	**1.51**	**171**		**Pn**	**05 03 08.1**	**0.0**
VA05	**Santo Domingo**	**1.51**	**171**	*i* P	**Pn**	**05 03 08.1**	**0.0**
VA05				IAML		05 03 35.6	
	comp=E,4µm,0.2s						
MT05	**Renca**	**1.57**	**142**		**Pb**	**05 03 10.0**	**-0.4**
MT05	**Renca**	**1.57**	**142**	⇑*i*P	**Pb**	**05 03 09.9**	**-0.4**
MT05				*i* S	**Sb**	**05 03 30.7**	**+0.7**
MT05				IAML		05 03 35.1	
	comp=E,4µm,0.2s						
MT05	**Renca**	**1.57**	**142**	*e*P		05 03 04.5	
MT05				*e*P		05 03 09.9	
MT05				*e*S		05 03 32.6	
MT05				IAML		05 03 34.4	
	comp=Z,1µm,0.8s						
MT10	**Hacienda Santa**	**1.59**	**134**	⇓*i*P	**Pb**	**05 03 10.5**	**-0.3**
MT10				*i* S	**Sb**	**05 03 31.7**	**+0.8**
MT10				IAML		05 03 33.0	
	comp=E,7µm,0.3s						
CO03	**El Pedregal**	**1.68**	**38**	Pn	**Pb**	**05 03 11.6**	**-0.6**
CO03	**El Pedregal**	**1.68**	**38**	⇑*i*P	**Pb**	**05 03 11.5**	**-0.6**
CO03				*i* S	**Sb**	**05 03 33.5**	**+0.3**
CO03				IAML		05 03 39.6	
	comp=N,1µm,0.3s						
CO03	**El Pedregal**	**1.68**	**38**	*e*P		05 03 11.8	
CO03				*e*S		05 03 30.0	
CO03				IAML		05 03 37.8	
	comp=Z,862nm,0.6s						
CO03				*e*S		05 03 38.9	
MT03	**Universidad Ad**	**1.77**	**139**		**Pb**	**05 03 12.8**	**-1.0**
MT03	**Universidad Ad**	**1.77**	**139**	⇑*i*P	**Pb**	**05 03 13.0**	**-0.8**
MT03				*i* S	**Sb**	**05 03 36.0**	**+0.2**
MT03				IAML		05 03 38.2	
	comp=E,5µm,0.2s						
MT03	**Universidad Ad**	**1.77**	**139**	*e*P		05 03 07.5	
MT03				*e*P		05 03 13.0	
MT03				*e*S		05 03 38.4	
MT03				IAML		05 03 39.1	
	comp=Z,2µm,0.3s						
MT01	**Popeta**	**1.78**	**162**	Pn	**Pn**	**05 03 12.4**	**+0.6**
MT01	**Popeta**	**1.78**	**162**	⇑*i*P	**Pn**	**05 03 12.2**	**+0.4**
MT01				IAML		05 03 46.1	
	comp=E,2µm,0.6s						
MT01	**Popeta**	**1.78**	**162**	*e*P		05 03 12.2	
MT01				*e*S		05 03 36.8	
MT01				IAML		05 03 42.7	
	comp=Z,1µm,0.5s						
MT09	**Talagante**	**1.78**	**155**	Pn	**Pb**	**05 03 13.3**	**-0.7**
MT09	**Talagante**	**1.78**	**155**	*e*P	**Pb**	**05 03 13.0**	**-1.0**
MT09				IAML		05 03 41.2	
	comp=N,2µm,0.4s						
FCH	**Farellones**	**1.78**	**131**	⇑*i*P	**Pb**	**05 03 13.4**	**-0.8**
FCH				*i* S	**Sb**	**05 03 37.0**	**+0.4**
FCH				IAML		05 03 37.9	
	comp=E,1µm,0.2s						
MT04	**Ro Olivares**	**1.93**	**130**	*e*P	**Pb**	**05 03 15.6**	**-1.1**
MT04				IAML		05 03 42.0	
	comp=E,926nm,0.6s						
MT12	**Pirque**	**1.93**	**144**	⇑*i*P	**Pb**	**05 03 15.4**	**-1.1**
MT12				*i* S	**Sb**	**05 03 40.7**	**+0.2**
MT12				IAML		05 03 48.7	
	comp=N,4µm,0.4s						
MT08	**Bocatoma Ro**	**2.04**	**129**	IAML		05 03 46.8	
	comp=E,747nm,0.4s						
MT13	**San Alfonso**	**2.08**	**140**		**Pb**	**05 03 17.6**	**-1.5**
MT13	**San Alfonso**	**2.08**	**140**	*e*P	**Pb**	**05 03 17.6**	**-1.5**
MT13				*i* S	**Sb**	**05 03 44.6**	**-0.2**
MT13				IAML		05 03 52.9	
	comp=E,2µm,0.4s						
GO04	**Tololo Observa**	**2.20**	**26**		**Pn**	**05 03 18.4**	**+0.6**
GO04	**Tololo Observa**	**2.20**	**26**	*e*P		05 03 18.5	
GO04				*e*S		05 03 46.0	
LMEL	**Las Melosas**	**2.20**	**140**		**Pb**	**05 03 19.4**	**-1.8**
LMEL	**Las Melosas**	**2.20**	**140**	⇑*i*P	**Pb**	**05 03 19.6**	**-1.6**
LMEL				*i* S	**Sb**	**05 03 46.3**	**-2.0**
LMEL				IAML		05 03 55.1	
	comp=N,1µm,0.3s						
RTLS	**Leoncito**	**2.24**	**81**	*e*P		05 03 21.0	
RTLS				*e*S		05 03 49.0	
RTLS				*e*S		05 03 53.8	
RTLS				IAML		05 03 55.9	
	comp=Z,2µm,0.5s						
CO05	**La Serena**	**2.31**	**14**		**Pn**	**05 03 19.4**	**+0.3**
BO01	**Tunca**	**2.32**	**163**	Pn	**Pn**	**05 03 19.4**	**+0.1**
BO01	**Tunca**	**2.32**	**163**	*e*P		05 03 15.0	
BO01				*e*P		05 03 19.0	
BO01				*e*S		05 03 49.0	
BO01				IAML		05 03 57.6	
	comp=Z,525nm,0.4s						
ARCO	**CERRO ARCO**	**2.59**	**106**	*e*P		05 03 24.5	
ARCO				*e*S		05 03 58.5	
ASAL	**Salagasta**	**2.63**	**100**	*e*P		05 03 23.0	
ASAL				*e*P		05 03 28.0	
ASAL				*e*S		05 04 02.5	
CO01	**Juntas del Tor**	**2.67**	**36**		**Pn**	**05 03 26.0**	**+1.6**
CO01	**Juntas del Tor**	**2.67**	**36**	*e*P		05 03 21.0	
CO01				*e*P		05 03 26.2	
CO01				*e*S		05 03 58.5	
CO01				*e*S		05 04 03.0	
CO01				IAML		05 04 06.8	
	comp=Z,274nm,0.7s						
AAGR	**Agrelo**	**2.75**	**110**	*e*P		05 03 29.0	
AAGR				*e*S		05 04 10.4	
BO02	**Sierra Bellavi**	**2.78**	**161**		**Pn**	**05 03 27.2**	**+1.5**
BO02	**Sierra Bellavi**	**2.78**	**161**	*e*P		05 03 26.0	
BO02				*e*S		05 04 02.0	
BO02				IAML		05 04 13.7	
	comp=Z,804nm,0.3s						
ZON	**Zonda**	**2.81**	**78**	Pn	**Pb**	**05 03 29.5**	**-2.0**
ZON	**Zonda**	**2.81**	**78**	*e*P		05 03 30.0	
ZON				*e*S		05 04 07.5	
ZON				IAML		05 04 12.8	
	comp=Z,305nm,0.6s						
RTLL	**Cerro Villicun**	**3.03**	**75**	*e*P		05 03 28.0	
RTLL				*e*P		05 03 33.0	
RTLL				*e*S		05 04 12.5	
CFA	**Coronel Fontan**	**3.16**	**81**	Pg	**Pb**	**05 03 34.1**	**-3.4**
	comp=Z,15nm,0.3s,baz=245,slow=14,SNR=120						
CFA				Lg	Lg	05 04 16.8	
	comp=Z,22nm,0.3s,baz=151,slow=19,SNR=8.6						
CFA	**Coronel Fontan**	**3.16**	**81**	*e*P		05 03 33.0	
CFA				*e*P		05 03 34.3	
CFA				*e*S		05 04 15.0	
LCO	**Las Campanas**	**3.31**	**18**	Pn	**Pn**	**05 03 33.1**	**0.0**
LCO	**Las Campanas**	**3.31**	**18**	*e*P		05 03 33.8	
LCO				*e*S		05 04 15.0	
LCO				*e*S		05 04 15.5	
LCO				IAML		05 04 31.6	
	comp=Z,215nm,0.6s						
AC05	**El Transito**	**3.60**	**23**	Pn	**Pn**	**05 03 38.4**	**+1.4**
AC05	**El Transito**	**3.60**	**23**	*e*P		05 03 38.3	
AC05				*e*S		05 04 23.0	
AC05				IAML		05 04 41.6	
	comp=Z,292nm,0.7s						
AC04	**Llanos de Chal**	**4.01**	**10**	Pn	**Pn**	**05 03 42.0**	**-0.6**
AC04	**Llanos de Chal**	**4.01**	**10**	*e*P		05 03 42.0	
GO03	**Copiap**	**4.78**	**18**	Pn	**Pn**	**05 03 53.4**	**+0.2**
H03N1	**Juan Fernandez**	**6.04**	**256**	T	T	05 10 51.9	
	baz=85,slow=73						
H03N3	**Juan Fernandez**	**6.05**	**256**	T	T	05 10 48.8	
	baz=85,slow=73						
H03N2	**Juan Fernandez**	**6.06**	**256**	T	T	05 10 48.5	
	baz=85,slow=73						
H03S3	**Juan Fernandez**	**6.12**	**252**	T	T	05 10 53.5	
	baz=82,slow=74						
H03S1	**Juan Fernandez**	**6.12**	**252**	T	T	05 10 45.7	
	baz=82,slow=74						
H03S2	**Juan Fernandez**	**6.14**	**252**	T	T	05 10 52.4	
	baz=82,slow=74						
PLCA	**Paso Flores**	**8.62**	**173**	Pn	**Pn**	**05 04 46.9**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=335,slow=12,SNR=23						
	comp=Z,1.3nm,0.4s						
PLCA	**Paso Flores**	**8.62**	**173**	Pn	**Pn**	**05 04 46.5**	**+0.6**
LL04	**Puerto Octay**	**8.74**	**183**	Pn	**Pn**	**05 04 46.6**	**-0.8**
CPUP	**Villa Florida**	**13.98**	**69**	Pn	**Pn**	**05 06 02.0**	**+2.8**
	comp=Z,0.1nm,0.3s,baz=227,slow=13,SNR=1.5						
CPUP				Sn	**Sn**	**05 08 35.5**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=324,slow=19,SNR=1.5						
LPAZ	**La Paz**	**16.17**	**13**	Pn	**Pn**	**05 06 29.6**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=182,slow=7.8,SNR=9.4						
	comp=Z,2.6nm,0.7s						
LPAZ	**La Paz**	**16.17**	**13**	P	**Pn**	**05 06 29.1**	**+0.1**
SIV	**San Ignacio**	**18.87**	**34**	P	**P**	**05 07 00.9**	**-0.6**
	baz=226,slow=7.9,SNR=6.5						
	comp=Z,1.2nm,0.6s						
BDFB	**Brasilia**	**27.24**	**58**	P	**P**	**05 08 24.0**	**-1.4**
	comp=Z,2.9nm,0.9s,baz=221,slow=9.3,SNR=3.8						
	comp=Z,2.9nm,0.9s						
SNAA	**Sanae**	**53.24**	**158**	P	**P**	**05 11 59.5**	**+0.3**
	comp=Z,1.5nm,0.9s,baz=297,slow=11,SNR=1.5						
	comp=Z,1.5nm,0.9s						
TXAR	**Lajitas Array**	**68.20**	**330**	P	**P**	**05 13 42.3**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=146,slow=6.6,SNR=2.4						
	comp=Z,0.2nm,0.7s						
BOSA	**Boshof**	**80.82**	**118**	P	**P**	**05 14 54.9**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=230,slow=8.2,SNR=3.7						
	comp=Z,2.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**83.48**	**70**	P	**P**	**05 15 08.8**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=261,slow=4.5,SNR=6.5						
	comp=Z,1.4nm,0.8s						
WRA	**Warramunga Arr**	**122.42**	**210**	PKP	**PKPdf**	**05 21 35.9**	**-1.0**
	comp=Z,0.4nm,0.9s,baz=154,slow=1.5,SNR=5.3						
H11S2	**WAKE ISLAND Hy**	**125.90**	**270**	T	T	07 40 49.2	
	baz=118,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	**125.91**	**270**	T	T	07 40 51.0	
	baz=118,slow=75						
H11S3	**WAKE ISLAND Hy**	**125.91**	**270**	T	T	07 40 50.9	
	baz=118,slow=75,SNR=8.1						
H11N3	**WAKE ISLAND Hy**	**126.26**	**272**	T	T	07 41 08.6	
	baz=117						
H11N1	**WAKE ISLAND Hy**	**126.28**	**272**	T	T	07 41 16.2	
	baz=117						
H11N2	**WAKE ISLAND Hy**	**126.28**	**272**	T	T	07 41 14.7	
	baz=117						
ZALV	**Zalesovo Beam**	**152.60**	**31**	PKPbc	**PKiKP**	**05 22 37.2**	**0.0**
	comp=Z,0.9nm,0.4s,baz=308,slow=3.3,SNR=3.9						
ZALV				PKPab	**PKPab**	**05 22 46.6**	**-1.0**
	comp=Z,1.1nm,0.5s,baz=295,slow=3.3,SNR=5.0						
MKAR	**Makanchi Array**	**155.44**	**46**	PKPab	**PKPab**	**05 22 59.4**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=301,slow=3.6,SNR=4.8						

NEIC ***21*** *05:04:46.8±2.6, 52°.40N±0°.07×169°.95W±0°.09, h13^{km}±10^{km}, ML3.4(AEIC), Error ellipse: s-maj=11.2km s-min=5.3km az=145.0*

AEIC ***21*** *05:04:48.7±3.5, 52°.51N±0°.09×170°.03W±0°.10, h14^{km}±7^{km}, Error ellipse: s-maj=15.5km s-min=4.6km az=149.0*

IDC ***21*** *05:04:59.3±7.4, 52°.32N×167°.08W, h0^{km}, mb3.3/3, mbtmp3.4/5, ML3.0/2, Error ellipse: s-maj=131.3km s-min=38.8km az=86.0*

ISC 21 05:04:47.0±1.1, 52°.4N±0°.1×169°.95W±0°.08, h10^{km}, n27, σ1^{s}48/22, mb3.2/3, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLES	**Cleveland East**	**0.40**	**4**	Pg	**Pb**	**05 04 55.3**	**-0.8**
NIKH	**Nikolski High**	**0.86**	**50**		**Pg**	**05 05 02.8**	**-0.7**
NIKH	**Nikolski High**	**0.86**	**50**		**Sg**	**05 05 13.9**	**-0.7**
UNV	**Unalaska Valle**	**2.51**	**54**		**Pn**	**05 05 27.2**	**-0.6**
UNV					**Sn**	**05 05 56.8**	**-1.6**
AKUT	**Akutan**	**3.03**	**54**	Pn	**Pn**	**05 05 35.5**	**+0.5**
GSTR	**Great Sitkin T**	**3.77**	**267**	Pn	**Pn**	**05 05 44.4**	**-0.7**
ADK	**Adak**	**4.19**	**265**	Pn	**Pn**	**05 05 48.7**	**-2.1**
KIWB	**Kanaga Island**	**4.48**	**265**	Pn	**Pn**	**05 05 53.6**	**-1.2**
SPIA	**Saint Paul Isl**	**4.76**	**358**	Pn	**Pn**	**05 05 58.3**	**-0.4**
O18K	**Koktuh Hills**	**11.07**	**42**	Pn	**Pn**	**05 07 27.2**	**+2.1**
KDAK	**Kodiak Island**	**11.28**	**55**	Pn	**Pn**	**05 07 26.3**	**-1.8**
	0.2nm,0.3s,baz=194,slow=12,SNR=9.3						
	5.1nm,0.9s						
N18K	**Kilae Creek**	**11.31**	**38**	Pn	**Pn**	**05 07 28.5**	**0.0**
SVW2	**Sparrevohn**	**11.70**	**36**	Pn	**Pn**	**05 07 34.1**	**+0.3**
M19K	**Big River Lodg**	**12.66**	**35**	Pn	**Pn**	**05 07 48.5**	**+1.5**
L19K	**White Mountain**	**12.69**	**34**	Pn	**Pn**	**05 07 47.6**	**+0.2**
M20K	**Styx River**	**13.11**	**37**	Pn	**Pn**	**05 07 54.4**	**+1.3**
SUA	**Susitna One**	**13.79**	**41**	Pn	**Pn**	**05 08 03.5**	**+1.1**
ILAR	**Eielson Array**	**17.10**	**35**	Pn	**P**	**05 08 48.5**	**+1.0**
	0.1nm,0.3s,baz=234,slow=14,SNR=6.8						
	0.4nm,0.8s						
INK	**Inuvik**	**23.49**	**34**	P	**P**	**05 10 00.4**	**+4.0**
	0.3nm,0.4s,baz=232,slow=12,SNR=2.0						
	0.3nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**37.28**	**218**	T	T	05 51 31.8	
	baz=23,slow=76,SNR=16						
H11N3	**WAKE ISLAND Hy**	**37.29**	**218**	T	T	05 51 27.5	
	baz=23,slow=76,SNR=20						
H11N1	**WAKE ISLAND Hy**	**37.30**	**218**	T	T	05 51 29.0	
	baz=23,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	**38.47**	**217**	T	T	05 52 59.5	
	baz=22,slow=76,SNR=511						
H11S2	**WAKE ISLAND Hy**	**38.49**	**217**	T	T	05 53 02.3	
	baz=22,slow=76,SNR=809						
H11S3	**WAKE ISLAND Hy**	**38.49**	**217**	T	T	05 53 02.5	
	baz=22,slow=76,SNR=422						
PDAR	**Pinedale Array**	**40.74**	**79**	P	**P**	**05 12 28.5**	**+0.4**

	0.2nm,0.5s,baz=309,slow=3.0,SNR=6.8						
	0.2nm,0.5s						
TXAR	Lajitas Array	53.10	89	P	P	05 14 04.7	+0.1
	0.6nm,0.8s,baz=293,slow=4.6,SNR=8.1						
	0.6nm,0.8s						

SJA ***21*** *05:08:36.7±0.7, 32°.14S×72°.11W, h13^{km}, ML4.2, MW4.1, Hypocentre not reviewed by the ISC*

IDC ***21*** *05:08:37.4±0.9, 32°.12S×71°.79W, h0^{km}, mb4.2/7, mbtmp4.1/11, ML3.8/4, MS3.3/5, Error ellipse: s-maj=21.4km s-min=18.4km az=157.0*

NEIC ***21*** *05:08:38.7±1.2, 32°.16S±0°.04×72°.06W±0°.04, h10^{km}±1^{km}, mb4.0/2, ML4.0(GUC), Error ellipse: s-maj=8.3km s-min=4.9km az=219.0*

GUC ***21*** *05:08:41.3±0.8, 32°.17S×71°.88W, h32^{km}±3^{km}, ML4.0*

ISC 21 05:08:38.7±1.3**, 32°.12S**±0°.02×**71°.91W**±0°.05**, h10**^{km}±8^{km}**, n81, σ1^{s}.16**/86**, mb4.2**/8**, 10C-7D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	Catapilco	0.68	131	Pg	Pb	05 08 53.4	+0.7
VA06	Catapilco	0.68	131	⇓iP	Pb	05 08 53.4	+0.7
VA06				iS	Sb	05 09 01.6	-0.6
VA06				IAML		05 09 04.2	
	comp=N,13µm,0.5s						
VA01	Torpederas	0.93	166		Pb	05 08 57.2	+0.4
VA01	Torpederas	0.93	166	eP	Pb	05 08 57.4	+0.5
VA01				iS	Sg	05 09 08.6	0.0
VA01	Torpederas	0.93	166	eP		05 08 54.8	
VA01				eS		05 09 10.4	
ROCH	El Roble	1.14	138	⇓iP	Pb	05 09 00.8	+0.2
ROCH				iS	Sg	05 09 15.3	-0.2
ROCH				IAML		05 09 19.2	
	comp=N,8µm,0.5s						
ROC1	El Roble	1.14	139		Pg	05 09 00.2	-0.4
CO02	Combarbal	1.20	41		Pn	05 09 02.7	+1.1
CO02	Combarbal	1.20	41	⇓iP	Pn	05 09 02.7	+1.1
CO02				iS	Sn	05 09 19.3	+1.2
CO02	Combarbal	1.20	41	eP		05 09 01.0	
CO02				eS		05 09 20.0	
CO02				IAML		05 09 24.4	
	comp=Z,7µm,0.3s						
MT02	Curacav	1.31	150		Pg	05 09 03.2	-0.7
MT02	Curacav	1.31	150	⇓iP	Pg	05 09 02.9	-1.0
MT02				iS	Sg	05 09 20.3	-0.6
MT02	Curacav	1.31	150	eP		05 09 02.0	
MT02				eP		05 09 03.3	
MT02				eS		05 09 19.8	
MT02				eS		05 09 20.2	
VA03	San Esteban	1.31	120		Pb	05 09 03.8	+0.2
VA03	San Esteban	1.31	120	⇓iP	Pb	05 09 03.8	+0.2
VA03				iS	Sg	05 09 20.5	-0.6
VA03				IAML		05 09 23.2	
	comp=N,10µm,0.4s						
VA03	San Esteban	1.31	120	eP		05 09 03.8	
VA03				eS		05 09 22.2	
VA03				IAML		05 09 24.6	
	comp=Z,4µm,0.7s						
PEL	Peldehue	1.45	135		Pb	05 09 05.8	-0.1
PEL	Peldehue	1.45	135	⇓iP	Pb	05 09 05.8	-0.1
PEL				iS	Sb	05 09 24.1	-0.3
PEL				IAML		05 09 26.3	
	comp=E,3µm,0.4s						
CO06	Fray Jorge	1.46	9		Pn	05 09 05.9	+0.8
CO06	Fray Jorge	1.46	9	⇑iP	Pn	05 09 05.9	+0.8
CO06				iS	Sb	05 09 24.1	-0.5
CO06				IAML		05 09 33.3	
	comp=N,4µm,0.4s						
VA05	Santo Domingo	1.55	171		Pn	05 09 06.3	-0.1
VA05	Santo Domingo	1.55	171	⇑iP	Pn	05 09 06.3	-0.1
VA05				IAML		05 09 36.1	
	comp=N,3µm,0.5s						
MT05	Renca	1.61	142		Pn	05 09 07.7	+0.5
MT05	Renca	1.61	142	IAML		05 09 32.5	
	comp=E,3µm,0.3s						
MT05	Renca	1.61	142	eP		05 09 08.3	
MT05				eS		05 09 32.5	
MT05				IAML		05 09 42.8	
	comp=Z,1µm,0.9s						
MT10	Hacienda Santa	1.63	135	⇓iP	Pb	05 09 08.7	-0.3
MT10				iS	Sb	05 09 29.8	+0.1
MT10				IAML		05 09 31.2	
	comp=E,6µm,0.4s						
CO03	El Pedregal	1.65	40	Pn	Pg	05 09 09.9	-0.5
CO03	El Pedregal	1.65	40	⇑iP	Pb	05 09 09.7	+0.5
CO03				iS	Sg	05 09 31.9	+0.1
CO03				IAML		05 09 39.0	
	comp=N,4µm,0.4s						
CO03	El Pedregal	1.65	40	eP		05 09 09.0	
CO03				eS		05 09 32.6	
CO03				IAML		05 09 35.9	
	comp=Z,3µm,0.5s						
MT03	Universidad Ad	1.81	140		Pn	05 09 10.7	+0.7
MT03	Universidad Ad	1.81	140	⇑iP	Pn	05 09 11.2	+1.1
MT03				iS	Sb	05 09 34.4	-0.3
MT03				IAML		05 09 43.0	
	comp=E,3µm,0.2s						
MT03	Universidad Ad	1.81	140	eP		05 09 11.2	
MT03				eS		05 09 37.8	
MT03				IAML		05 09 39.0	
	comp=Z,1µm,0.3s						
FCH	Farellones	1.82	132	⇑iP	Pn	05 09 11.5	+1.1
FCH				iS	Sb	05 09 35.2	-0.1
FCH				IAML		05 09 36.1	
	comp=E,1µm,0.4s						
MT09	Talagante	1.82	155	Pn	Pn	05 09 11.0	+0.7
MT09	Talagante	1.82	155	eP	Pn	05 09 11.4	+1.1
MT09				iS	Sn	05 09 33.7	+0.1
MT09				IAML		05 09 46.6	
	comp=E,1µm,0.5s						
MT01	Popeta	1.82	163	Pn	Pn	05 09 09.9	-0.3
MT01	Popeta	1.82	163	⇑iP	Pn	05 09 10.4	+0.2
MT01				IAML		05 09 44.3	
	comp=E,1µm,0.3s						
MT01	Popeta	1.82	163	eP		05 09 09.0	
MT01				eP		05 09 10.4	
MT01				eS		05 09 37.3	
MT04	Ro Olivares	1.97	131	eP	Pn	05 09 13.7	+1.3
MT04				iS	Sb	05 09 39.3	-0.2
MT04				IAML		05 09 49.4	
	comp=N,1µm,0.8s						
MT12	Pirque	1.97	145	⇑iP	Pn	05 09 13.5	+1.2
MT12				iS	Sn	05 09 38.1	+0.9
MT12				IAML		05 09 48.3	
	comp=N,3µm,0.7s						
MT08	Bocatoma Ro	2.07	130	IAML		05 09 51.1	
	comp=N,806nm,0.3s						
MT13	San Alfonso	2.12	140		Pn	05 09 15.0	+0.7
MT13	San Alfonso	2.12	140	⇑iP	Pn	05 09 15.8	+1.5
MT13				iS	Sb	05 09 42.8	-0.9
MT13				IAML		05 09 51.1	
	comp=E,1µm,0.2s						
GO04	Tololo Observa	2.16	26		Pn	05 09 16.6	+1.5
GO04	Tololo Observa	2.16	26	⇑iP	Pn	05 09 16.5	+1.4
GO04	Tololo Observa	2.16	26	eP		05 09 16.5	
GO04				eS		05 09 48.0	
LMEL	Las Melosas	2.24	141		Pn	05 09 17.2	+1.2
LMEL	Las Melosas	2.24	141	⇑iP	Pn	05 09 17.7	+1.6
LMEL				iS	Sn	05 09 44.9	+1.1
LMEL				IAML		05 09 57.9	
	comp=N,1µm,0.2s						
RTLS	Leoncito	2.24	82	eP		05 09 19.0	
RTLS				eS		05 09 51.8	
RTLS				IAML		05 09 54.0	
	comp=Z,5µm,0.6s						
CO05	La Serena	2.27	15		Pn	05 09 17.2	+0.9
BO01	Tunca	2.37	163	Pn	Pn	05 09 17.1	-0.6
BO01	Tunca	2.37	163	eP	Pn	05 09 18.2	+0.5
BO01	Tunca	2.37	163	eP		05 09 18.1	
BO01				eS		05 09 53.5	
BO01				IAML		05 09 59.5	
	comp=Z,568nm,0.7s						
ASAL	Salagasta	2.64	101	eP		05 09 26.0	
ASAL				eS		05 09 58.8	
ASAL				IAML		05 10 08.7	
	comp=Z,813nm,0.8s						
CO01	Juntas del Tor	2.64	37		Pn	05 09 23.7	+2.0
CO01	Juntas del Tor	2.64	37	eP	Pn	05 09 24.1	+2.5
CO01				IAML		05 10 05.2	
	comp=E,2µm,0.3s						
CO01	Juntas del Tor	2.64	37	eP		05 09 23.5	
CO01				eS		05 09 56.3	
CO01				IAML		05 10 05.0	
	comp=Z,1µm,0.5s						
AAGR	Agrelo	2.77	111	eP		05 09 27.0	
AAGR				eS		05 10 08.3	
ZON	Zonda	2.81	79	eP		05 09 28.0	
ZON				eS		05 10 03.3	
ZON				IAML		05 10 11.0	
	comp=Z,622nm,0.7s						
BO02	Sierra Bellavi	2.83	161		Pn	05 09 25.0	+1.0
BO02	Sierra Bellavi	2.83	161	eP	Pn	05 09 24.8	+0.8
BO02				IAML		05 10 10.5	
	comp=N,840nm,0.5s						
BO02	Sierra Bellavi	2.83	161	eP		05 09 24.9	
BO02				eS		05 09 58.8	
BO02				eS		05 10 00.3	
BO02				IAML		05 10 06.5	
	comp=Z,592nm,0.6s						
CFA	Coronel Fontan	3.17	82	Pg	Pb	05 09 32.4	-2.7
	comp=Z,20nm,0.3s,baz=249,slow=15,SNR=67						
CFA				Lg	Lg	05 10 14.7	
	comp=Z,80nm,0.3s,baz=270,slow=19,SNR=10						
CFA				LR	LR	05 10 43.2	
	comp=Z,232nm,19.6s,baz=306,slow=41						
CFA	Coronel Fontan	3.17	82	eP		05 09 32.0	
LCO	Las Campanas	3.27	19	Pn	Pn	05 09 31.1	+0.8
LCO	Las Campanas	3.27	19	eP		05 09 31.5	
LCO				eS		05 10 12.8	
AC05	El Transito	3.56	24	Pn	Pn	05 09 36.4	+2.1
AC05	El Transito	3.56	24	eP		05 09 36.2	
AC05				eS		05 10 19.8	
AC05				IAML		05 10 35.4	
	comp=Z,848nm,0.8s						
AC04	Llanos de Chal	3.97	11	Pn	Pn	05 09 39.7	0.0
H03N1	Juan Fernandez	6.04	256	T	T	05 16 46.1	
	baz=84,slow=73,SNR=2078						
H03N3	Juan Fernandez	6.06	255	T	T	05 16 49.5	
	baz=84,slow=73,SNR=2216						
H03N2	Juan Fernandez	6.06	256	T	T	05 16 48.2	
	baz=84,slow=73,SNR=1960						
H03S3	Juan Fernandez	6.12	252	T	T	05 16 49.8	
	baz=84,slow=75,SNR=6.1						
H03S1	Juan Fernandez	6.13	252	T	T	05 17 02.5	
	baz=84,slow=75,SNR=6.9						
H03S2	Juan Fernandez	6.14	252	T	T	05 17 04.1	
	baz=84,slow=75,SNR=7.3						
PLCA	Paso Flores	8.66	173	Pn	Pn	05 10 44.9	+0.7
	comp=Z,0.4nm,0.3s,baz=336,slow=12,SNR=16						
PLCA				Lg	Lg	05 13 08.9	
	baz=73,slow=20,SNR=1.4						
PLCA				LR	LR	05 14 20.8	
	comp=Z,119nm,21.9s,baz=326,slow=40						
	comp=Z,1.2nm,0.4s						
LVC	Limon Verde	9.84	16	Pn	Pn	05 10 59.4	-1.2
	comp=Z,0.4nm,0.3s,baz=186,slow=10,SNR=2.1						
LVC				LR	LR	05 14 44.6	
	comp=Z,207nm,20.0s,baz=226,slow=37						
	comp=Z,1.0nm,0.3s						
TRQA	Tornquist	10.06	129	Pn	Pn	05 11 05.0	+1.7
CPUP	Villa Florida	13.97	69	Pn	Pn	05 11 59.4	+2.5
	comp=Z,0.2nm,0.3s,baz=276,slow=12,SNR=1.2						
CPUP				Sn	Sn	05 14 27.1	-4.9
	comp=Z,0.1nm,0.3s,baz=270,slow=20,SNR=1.4						
LPAZ	La Paz	16.13	13	Pn	Pn	05 12 27.1	+0.9
	comp=Z,0.2nm,0.3s,baz=193,slow=8.2,SNR=12						
	comp=Z,2.8nm,0.7s						
LPAZ	La Paz	16.13	13		Pn	05 12 26.5	+0.3
LPAZ				IAmb	IAmb	05 12 32.8	
	comp=Z,5.7nm,0.7s						
SIV	San Ignacio	18.84	34	P	P	05 12 59.3	+0.4
	baz=212,slow=10,SNR=12						
SIV				LR	LR	05 21 40.1	
	comp=Z,144nm,18.2s,baz=250,slow=42						
	comp=Z,2.4nm,0.6s						
ETMB	Extrema	22.81	15	P	P	05 13 43.1	+1.3
ETMB				IAmb	IAmb	05 13 44.6	
	comp=Z,6.7nm,1.0s						
BDFB	Brasilia	27.22	59	P	P	05 14 23.0	-0.2
	comp=Z,2.5nm,0.6s,baz=268,slow=8.9,SNR=4.3						
BDFB				LR	LR	05 26 43.0	
	comp=Z,193nm,19.1s,baz=0.3,slow=40						
	comp=Z,2.5nm,0.6s						
SNAA	Sanae	53.28	158	P	P	05 17 57.9	+0.6
	comp=Z,3.3nm,1.0s,baz=280,slow=11,SNR=2.9						
	comp=Z,3.3nm,1.0s						
TXAR	Lajitas Array	68.16	330	P	P	05 19 40.4	+1.2
	comp=Z,0.2nm,0.6s,baz=156,slow=8.3,SNR=3.8						
	comp=Z,0.2nm,0.6s						
DBIC	Dimbokro	74.48	72	P	P	05 20 17.8	+0.1
	comp=Z,2.5nm,0.6s,baz=214,slow=6.4,SNR=4.0						
	comp=Z,2.5nm,0.6s						
SUR	Sutherland	75.64	119	P	P	05 20 24.7	+0.2
	comp=Z,1.9nm,0.7s,baz=238,slow=9.5,SNR=1.0						
	comp=Z,1.9nm,0.7s						
BOSA	Boshof	80.85	118	P	P	05 20 53.5	+0.2
	comp=Z,2.0nm,0.8s,baz=230,slow=7.9,SNR=3.4						
	comp=Z,2.0nm,0.8s						
TORD	Torodi Ar. Bea	83.47	70	P	P	05 21 07.0	+0.1
	comp=Z,2.7nm,0.8s,baz=256,slow=4.7,SNR=12						
	comp=Z,2.7nm,0.8s						
WRA	Warramunga Arr	122.45	210	PKP	PKPdf	05 27 33.6	-1.3
	comp=Z,0.9nm,1.1s,baz=157,slow=1.7,SNR=5.9						
H11S2	WAKE ISLAND Hy	125.89	270	T	T	07 46 45.2	
	baz=117,slow=75,SNR=24						
H11S1	WAKE ISLAND Hy	125.90	270	T	T	07 46 40.5	
	baz=117,slow=75,SNR=18						
H11S3	WAKE ISLAND Hy	125.91	270	T	T	07 46 46.7	
	baz=117,slow=75,SNR=17						
H11N3	WAKE ISLAND Hy	126.25	272	T	T	07 47 07.5	
	baz=116,slow=76,SNR=12						
H11N1	WAKE ISLAND Hy	126.27	272	T	T	07 47 08.2	
	baz=116,slow=76,SNR=5.8						
H11N2	WAKE ISLAND Hy	126.27	272	T	T	07 47 12.7	
	baz=116,slow=76,SNR=35						
ZALV	Zalesovo Beam	152.57	30	PKPbc	PKPbc	05 28 35.4	+0.5
	comp=Z,1.2nm,0.4s,baz=307,slow=3.9,SNR=6.7						
ZALV				PKPab	PKPab	05 28 44.1	-1.3
	comp=Z,1.8nm,0.6s,baz=295,slow=3.0,SNR=6.9						
KSH	Kashi	153.03	65	PKPbc	PKPdf	05 28 26.5	-2.8
KSH				pPKP	PKPbc	05 28 37.4	+0.8
KSH				sPKP		05 28 41.9	
MKAR	Makanchi Array	155.42	46	PKPab	PKPab	05 28 57.1	-0.7
	comp=Z,0.9nm,0.7s,baz=300,slow=4.4,SNR=7.5						

WEL 21 05:27:12.7±1.0**, 45°S**±4°×**16°7E**±°**, h5**^{km}**, M3.3**/6**, ML3.5**/6**, MLv3.3**/6**, Error ellipse: s-maj=0.0km s-min=0.0km az=115.8, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSZ	Milford Sound	0.40	59	P	Pg	05 27 21.0	+0.7
MSZ				S	Sg	05 27 26.0	+0.5
DCZ	Deep Cove	0.62	200	P	Pg	05 27 25.1	+0.4
DCZ				S	Sg	05 27 33.5	+0.8
MLZ	Mavora Lakes	0.68	136	P	Pb	05 27 26.5	-0.5
MLZ				S	Sb	05 27 36.0	-0.8
WHZ	Wether Hill Ro	1.07	161	P	Pg	05 27 33.2	-0.1
WHZ				S	Sb	05 27 47.7	-0.3
WKZ	Wanaka	1.12	88	P	Pg	05 27 34.1	0.0
WKZ				P	Pg	05 27 34.1	0.0
JCZ	Jackson Bay	1.25	50	P	Pg	05 27 35.8	-0.8
EAZ	Earnscleugh	1.36	106	P	Pn	05 27 38.2	-0.2
EAZ				S	Sb	05 27 54.5	-1.9
PYZ	Puysegur Point	1.40	203	P	Pn	05 27 36.3	-2.6
TUZ	Tuapeka	1.87	126	P	Pn	05 27 46.2	+0.8
APZ	The Paps	1.99	169	P	Pn	05 27 47.5	+0.5
LBZ	Lake Benmore	2.01	77	P	Pn	05 27 48.3	+1.0
SYZ	Scrubby Hill	2.04	145	P	Pn	05 27 48.1	+0.5
FOZ	Fox Glacier	2.17	52	P	Pn	05 27 49.5	+0.1
ODZ	Otahua Downs	2.27	95	P	Pn	05 27 51.8	+0.9
HHSZ	Highcliff Hill	2.44	115	P	Pb	05 27 56.0	-0.9
TMZ	Timaru	2.59	80	P	Pn	05 27 55.7	+0.5
GCSZ	Gaunt Creek Bo	2.59	54	P	Pb	05 27 59.7	+0.1
ARCZ	Arundel	2.83	72	P	Pn	05 27 59.1	+0.5
RPZ	Rata Peaks	2.84	67	P	Pn	05 27 59.5	+0.9
INZ	Inchbonnie	3.60	55	P	Pn	05 28 09.8	+0.6
LTZ	Lake Taylor	4.07	61	P	Pn	05 28 16.3	+0.7
DSZ	Denniston Nort	4.46	47	P	Pn	05 28 21.0	0.0
THZ	Tophouse	5.05	54	P	Pn	05 28 30.8	+1.6
MRNZ	Matariki Terra	5.21	50	P	Pn	05 28 32.2	+0.9
QRZ	Quartz Range	5.51	44	P	Pn	05 28 35.3	-0.1
TKNZ	Takaka Hill	5.58	48	P	Pn	05 28 37.0	+0.7
KIW	Kapiti Island	6.79	56	P	Pn	05 28 54.2	+1.2

IDC ***21*** *05:56:32.4±2.3, 13°.92N×91°.59W, h0^{km}, mb3.8/5, mbtmp3.8/6, ML3.7/1, MS3.6/16, Error ellipse: s-maj=107.1km s-min=45.0km az=56.0*

GCG ***21*** *05:56:37.4±2.5, 13°.72N×92°.30W, h38^{km}, MD4.1*

MEX ***21*** *05:56:37.6±0.5, 13°.81N×92°.28W, h55^{km}±60^{km}, MD4.4*

NEIC ***21*** *05:56:39.0±2.9, 13°.85N±0°.07×92°.39W±0°.06, h37^{km}±7^{km}, mb4.4/26, Md4.4/55(MEX), Error ellipse: s-maj=10.8km s-min=8.6km az=201.0*

ISC 21 05:56:38.9±1.4**, 13°.88N**±0°.07×**92°.44W**±0°.03**, h44**^{km}±13^{km}**, n106, σ1^{s}.93**/127**, mb4.4**/15**, MS3.5**/14**, 1C, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SULM	Suchitepequez,	0.95	63	⇑eP	Pn	05 56 54.8	-1.0
SULM				eS	Sn	05 57 14.1	+6.0
RTAL	Retalhuleu	0.96	48		Pn	05 56 53.9	-2.2
THIG		1.04	9		Pn	05 56 55.5	-1.5
THIG					Sn	05 57 11.1	+0.8
THIG		1.04	9	eP	Pn	05 56 55.5	-1.5
THIG				eS	Sn	05 57 11.1	+0.8
STG3	Santiaguito 3,	1.18	45	eP	Pn	05 56 56.9	-2.2
STG3				eS	Sn	05 57 18.0	+3.8
PATR	El Naranjo	1.25	9	eP	Pn	05 56 58.1	-2.0
PATR				eS	Sn	05 57 13.9	-1.9
CHUJ	Union Juarez	1.25	15	eP	Pn	05 56 57.8	-2.4
CHUJ				eS	Sn	05 57 13.7	-2.3
PAVE	Pavencul	1.33	11	iP	Pn	05 56 59.4	-1.9
PAVE				eS	Sn	05 57 16.9	-1.0
FUG	Fuego 3	1.65	70	eP	Pn	05 57 03.1	-2.5
FUG				eS	Sn	05 57 23.6	-2.1
HUEH	Huehuetenango	1.69	32		Pn	05 57 05.8	-0.4
PCG	Pacaya	1.85	74	eP	Pn	05 57 06.1	-2.2
PCG				eS	Sn	05 57 30.0	-0.7
PCIG		1.97	337		Pn	05 57 08.8	-1.0
PCIG					Sn	05 57 33.4	+0.2
PCIG		1.97	337	eP	Pn	05 57 08.8	-1.0
PCIG				eS	Sn	05 57 33.4	+0.2
NBG	Las Nubes	2.15	71	eP	Pn	05 57 11.4	-1.1
NBG				eS	Sn	05 57 39.5	+1.4
CCIG	Comitan	2.41	7		Pn	05 57 17.3	+1.3
CCIG	Comitan	2.41	7	eP	Pn	05 57 17.6	+1.6
CCIG				eS	Sn	05 57 46.0	+1.7
TGIG		2.96	347		Pn	05 57 23.9	+0.5
TGIG					Sn	05 57 59.3	+1.6
TGIG		2.96	347	eP	Pn	05 57 23.9	+0.5
TGIG				eS	Sn	05 57 59.3	+1.6
ESQI	Esquipulas	3.08	77		Pn	05 57 22.5	-2.7
NILT	Santiago Nilte	3.40	322	eP	Pn	05 57 28.4	-1.0
NILT				eS	Sn	05 58 08.8	+0.3
PETF	Flores	3.91	39		Pn	05 57 36.4	-0.1
CMIG	Matias Romero	3.97	324	Pn	Pn	05 57 37.3	0.0
	1.6nm,0.3s,baz=153,slow=12,SNR=39						
CMIG				Sn	Sn	05 58 25.3	+2.6
	7.9nm,0.3s,baz=210,slow=20,SNR=4.6						
CMIG	Matias Romero	3.97	324		Pn	05 57 37.1	-0.2
CMIG					Sn	05 58 23.7	+1.1
CMIG	Matias Romero	3.97	324	eP	Pn	05 57 37.1	-0.2
CMIG				eS	Sn	05 58 23.7	+1.1
HUIG	Huatulco	4.02	298		Pn	05 57 37.1	-0.8
HUIG	Huatulco	4.02	298	eP	Pn	05 57 37.1	-0.8
HUIG				eS	Sn	05 58 21.6	-2.2
NEUV	Arroyo Zacate	5.00	320	eP	Pn	05 57 50.6	-0.9
NEUV				eS	Sn	05 58 49.5	+1.5
PEIG	Puerto Escondi	5.02	295		Pn	05 57 51.3	-0.4
PEIG	Puerto Escondi	5.02	295	eP	Pn	05 57 51.3	-0.4
PEIG				iS	Sn	05 58 43.5	-5.0
OXIG	Oaxaca	5.22	308		Pn	05 57 54.2	-0.4
OXIG					Sn	05 58 55.3	+1.6
VHO	Vista Hermosa	5.22	308	eP	Pn	05 57 54.2	-0.4
VHO				eS	Sn	05 58 55.3	+1.6
PMUV	Sontecomapan	5.31	331	eP	Pn	05 57 53.2	-2.6
PMUV				eS	Sn	05 58 55.6	-0.1
YOIG	Yosondua	5.75	302		Pn	05 58 04.1	+2.1
YOIG					Sn	05 59 08.6	+1.7
YOIG	Yosondua	5.75	302	eP	Pn	05 58 04.1	+2.1
YOIG				eS	Sn	05 59 08.6	+1.7
PNIG	Pinotepa	6.04	295		Pn	05 58 06.2	+0.5
PNIG	Pinotepa	6.04	295	eP	Pn	05 58 06.2	+0.5
PNIG				eS	Sn	05 59 08.6	-5.0
TOIG	Toxpalan	6.11	314		Pn	05 58 07.2	+0.3
TOIG					Sn	05 59 15.9	+0.3
TOIG	Toxpalan	6.11	314	eP	Pn	05 58 07.2	+0.3
TOIG				eS	Sn	05 59 15.9	+0.3
TXIG	Tlaxiaco	6.13	304		Sn	05 59 18.3	+2.0
TXIG	Tlaxiaco	6.13	304	eP	Pn	05 58 10.7	+3.4
TXIG				eS	Sn	05 59 18.3	+2.0
MATN	Matagalpa	6.41	98		Pn	05 58 10.0	-0.9
HLIG	Huajuapan de L	6.49	308		Pn	05 58 14.5	+2.4
HLIG	Huajuapan de L	6.49	308	eP	Pn	05 58 14.5	+2.4
HLIG				eS	Sn	05 59 29.7	+4.7
TPIG	Tehuac#an	6.54	314	eS	Sn	05 59 25.1	-1.1
FTIG	Fresnillo de T	6.79	307		Sn	05 59 34.6	+2.4
FTIG	Fresnillo de T	6.79	307	eP	Pn	05 58 19.6	+3.5
FTIG				eS	Sn	05 59 34.6	+2.4
MGIG	Malinaltepec	6.84	300		Pn	05 58 19.2	+2.4
MGIG					Sn	05 59 33.2	-0.3
MGIG	Malinaltepec	6.84	300	eP	Pn	05 58 19.2	+2.4
MGIG				iS	Sn	05 59 33.2	-0.3
JAUV	Jalcomulco	6.88	323	eP	Pn	05 58 16.7	-0.5
JAUV				eS	Sn	05 59 30.4	-3.8
TLIG	Tlapa	6.95	303		Pn	05 58 19.1	+0.8
TLIG	Tlapa	6.95	303	eP	Pn	05 58 14.9	-3.4
TLIG				iS	Sn	05 59 38.0	+1.9
TEIG	Tepich	7.46	32	Pn	Pn	05 58 25.5	+0.3
CXUV	Coxquihui	7.96	322	eP	Pn	05 58 30.8	-1.4
CXUV				eS	Sn	05 59 57.8	-3.3
YAIG	Yautepec	8.06	309		Pn	05 58 34.3	+0.6
YAIG	Yautepec	8.06	309	eP	Pn	05 58 34.3	+0.6
YAIG				eS	Sn	06 00 01.7	-2.0
TX32	Lajitas Array	18.57	328	P	Pn	06 00 55.5	+2.6
TXAR	Lajitas Array	18.57	328	P	Pn	06 00 55.4	+2.5
	baz=152,slow=12,SNR=20						
TXAR				LR	LR	06 09 14.3	
	comp=Z,48nm,19.1s,baz=132,slow=40						
	3.2nm,1.0s						
TXAR	Lajitas Array	18.57	328	P	Pn	06 00 53.2	+0.3
TX31	Lajitas Ar. Si	18.57	328	P	Pn	06 00 54.1	+1.1
TX31				IAmb	IAmb	06 01 04.6	
	comp=Z,16nm,1.1s						
Z47A	Carrollton	19.64	11	P	Pn	06 01 03.9	-1.7
Z47A				IAmb	IAmb	06 01 06.1	
	comp=Z,16nm,0.9s						
LPIG	La Paz	19.70	304	LR	LR	06 09 00.9	
	comp=Z,95nm,18.2s,baz=197,slow=37						
ODSA	Odessa	20.38	335	IAmb	IAmb	06 01 15.4	
	comp=Z,16nm,0.7s						
MIAR	Mount Ida	20.60	357	P	Pn	06 01 14.4	-2.5
X37A	Clayton	20.79	353	P	Pn	06 01 17.5	-1.6
X37A				IAmb	IAmb	06 01 30.1	
	comp=Z,32nm,1.5s						
CLNB	Carlsbad	21.08	332	P	P	06 01 21.8	+2.1
HTMS	Hat Mesa	21.15	333	P	P	06 01 21.6	+1.2
GDL2	Guadalupe Moun	21.25	331	P	P	06 01 23.7	+2.2
W35A	Tecumseh	21.56	350	P	P	06 01 24.0	-0.6
W35A				IAmb	IAmb	06 01 25.3	
	comp=Z,11nm,0.5s						
OK030	Cody Creek RV	22.30	351	IAmb	IAmb	06 01 32.2	
	comp=Z,8.5nm,0.5s						
OK052	Battle Ridge R	22.37	351	P	P	06 01 32.4	-0.9
AMTX	Amarillo	22.52	340	P	P	06 01 33.9	-1.2
AMTX				IAmb	IAmb	06 01 37.6	
	comp=Z,15nm,0.9s						
TKL	Tuckaleechee C	23.05	18	LR	LR	06 11 47.6	
	comp=Z,155nm,19.2s,baz=199,slow=40						
121A	Cookes Peak, D	23.27	326	P	P	06 01 44.9	+2.1
U49A	Red Boiling Sp	23.32	14	P	P	06 01 40.9	-2.2
U49A				IAmb	IAmb	06 01 57.0	
	comp=Z,9.2nm,1.1s						
S44A	Carbondale	23.89	6	P	P	06 01 47.0	-1.4
S44A				IAmb	IAmb	06 01 48.3	
	comp=Z,12nm,1.0s						
BNM	Barren Site	23.93	330	P	P	06 01 50.6	+1.4
ANMO	Albuquerque	24.50	331	P	P	06 01 56.6	+2.2
	comp=Z,1.5nm,0.8s,baz=229,slow=7.3,SNR=6.4						
	comp=Z,1.5nm,0.8s						
ANMO	Albuquerque	24.50	331	P	P	06 01 55.9	+1.5
WCI	Wyandotte Cave	24.86	12	P	P	06 01 56.1	-1.2
WCI				IAmb	IAmb	06 01 58.6	
	comp=Z,7.3nm,0.8s						

SJG	San Juan	25.61	77	P	P	06 02 01.6	-2.8
MVCO	Mesa Verde	27.30	331	P	P	06 02 20.7	+0.9
MVCO				IAmb	IAmb	06 02 24.9	
	comp=Z,12nm,1.2s						
PFO	Pinyon Flats O	29.36	316	LR	LR	06 16 03.1	
	comp=Z,78nm,18.9s,baz=117,slow=39						
NNA	Nana	29.99	148	LR	LR	06 12 12.9	
	comp=Z,51nm,18.7s,baz=278,slow=32						
PDAR	Pinedale Array	32.36	336	P	P	06 03 07.7	+3.2
	comp=Z,0.2nm,0.4s,baz=129,slow=8.3,SNR=4.1						
	comp=Z,0.2nm,0.4s						
SADO	Sadowa	32.80	18	LR	LR	06 17 58.4	
	comp=Z,168nm,18.4s,baz=292,slow=40						
REDW	Red Top Meadow	33.37	335	P	P	06 03 13.9	+0.6
SNOW	Snow King Moun	33.42	335	P	P	06 03 15.4	+1.6
NVAR	Mina Array Bea	33.50	322	P	P	06 03 18.5	+4.0
	comp=Z,1.5nm,0.7s,baz=133,slow=8.8,SNR=13						
NVAR				LR	LR	06 19 04.5	
	comp=Z,63nm,19.6s,baz=241,slow=40						
	comp=Z,1.5nm,0.7s						
TPAW	Teton Pass	33.52	335	P	P	06 03 13.0	-1.6
TPAW				IAmb	IAmb	06 03 20.9	
	comp=Z,5.6nm,1.1s						
ULM	Lac du Bonnet	36.38	356	LR	LR	06 21 58.2	
	comp=Z,47nm,19.1s,baz=302,slow=42						
PLID	Pearl Lake	36.98	332	P	P	06 03 45.1	+0.8
PLID				IAmb	IAmb	06 03 59.6	
	comp=Z,7.7nm,1.4s						
YBH	Yreka Blue Hor	38.20	322	LR	LR	06 21 36.4	
	comp=Z,55nm,19.8s,baz=176,slow=39						
SCHQ	Schefferville	45.48	21	LR	LR	06 24 54.9	
	comp=Z,136nm,19.3s,baz=251,slow=38						
YKA	Yellowknife Ar	51.05	347	P	P	06 05 36.8	+0.3
	comp=Z,2.2nm,0.7s,baz=150,slow=7.6,SNR=41						
YKA				PcP	PcP	06 06 52.4	+0.6
	comp=Z,0.4nm,0.8s,baz=160,slow=3.3,SNR=6.4						
	comp=Z,2.2nm,0.7s						
FRB	Frobisher Bay	52.53	13	LR	LR	06 29 29.0	
	comp=Z,109nm,18.3s,baz=220,slow=38						
SFJD	Kangerlussuaq	59.76	18	LR	LR	06 32 53.1	
	comp=Z,81nm,19.1s,baz=201,slow=37						
INK	Inuvik	60.44	344	P	P	06 06 44.3	+0.7
ILAR	Eielson Array	62.78	337	P	P	06 07 00.8	+1.3
	comp=Z,0.8nm,0.8s,baz=125,slow=5.1,SNR=13						
	comp=Z,0.8nm,0.8s						
I23K	Minto, Yukon-K	63.89	337	P	P	06 07 08.5	+1.6
MLY	Manley	64.38	336	P	P	06 07 11.2	+1.0
MLY				IAmb	IAmb	06 07 12.2	
	comp=Z,3.1nm,0.8s						
BORG	Borgarnes	69.50	26	LR	LR	06 38 58.3	
	comp=Z,32nm,18.4s,baz=240,slow=37						
SPITS	Spitsbergen Ar	80.29	11	LR	LR	06 47 04.9	
	comp=Z,56nm,18.8s,baz=190,slow=38						
NOA	NORSAR Array B	84.45	28	LR	LR	06 45 14.5	
	comp=Z,20nm,20.8s,baz=110,slow=35						
ARCES	ARCESS Array B	86.38	18	LR	LR	06 48 05.6	
	comp=Z,41nm,18.0s,baz=260,slow=36						
WRA	Warramunga Arr	134.95	256	PKP	PKiKP	06 15 54.2	-1.4
	comp=Z,0.1nm,0.5s,baz=87,slow=2.3,SNR=1.0						
CMAR	Chiang Mai Arr	145.97	340	PKPbc	PKiKP	06 16 15.7	-2.5
	comp=Z,2.8nm,0.7s,baz=339,slow=3.7,SNR=16						

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*NDI **21** 05:56:33.9±2.4, 33°82N×72°10E, h10^{km}, ML3.9, mb4.3(NEIC)*
*IDC **21** 05:56:33.9±0.7, 33°84N×72°51E, h0^{km}, mb4.1/15, mbtmp4.2/21, ML4.0/6, MS3.0/2, Error ellipse: s-maj=19.3km s-min=13.9km az=44.0*
*NEIC **21** 05:56:37.3±2.3, 33°55N±0°09×72°67E±0°06, h41^{km}±9^{km}, mb4.3/22, Error ellipse: s-maj=14.5km s-min=4.9km az=156.0*
*MOS **21** 05:56:39.9±1.1, 34°05N×72°59E, h49^{km}, mb4.3/16, Error ellipse: s-maj=10.9km s-min=5.2km az=92.8*
*BJI **21** 05:56:42.7±0.0, 34°36N×72°22E, h100^{km}, mb4.5/16, mB4.1/5*
ISC 21 05:56:38.0±0.4**, 33°81N**±0°04×**72°68E**±0°03**, h34**^{km}**, n146,** σ1^{s}**99**/166**, mb4.2**/33**, 7C-2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIL	Nilore	0.51	108	Pn	Pb	05 56 48.2	-0.6
NIL				Sn	Sb	05 56 56.0	-0.3
CHCP	Chirah Chowk	0.51	107	P	Pb	05 56 48.6	-0.3
CEP	Cherat	0.64	272	P	Pn	05 56 49.0	-1.7
THW	Thamme Wali	1.28	218	P	Pb	05 57 01.8	+0.2
THW				S	Sb	05 57 19.0	+1.3
SARP	Sargodha	1.88	180	P	Pb	05 57 10.8	-0.9
JMU	Jammu	2.16	120	eP	Pb	05 57 15.8	-0.7
JMU				eS	Sb	05 57 45.3	+2.5
THN	Thein Dam	2.90	117	eP	Pb	05 57 26.6	-2.4
THN				eS	Sb	05 58 04.6	+0.6
THN				IAML		05 58 12.3	
	comp=N,460nm,0.3s						
THN				IAML		05 58 12.3	
	comp=E,486nm,0.3s						
KBL	Kabul	3.10	285	Pn	Pn	05 57 26.4	+1.7
KBL	Kabul	3.10	285	P	Pn	05 57 26.4	+1.7
BHK	Bhakra	3.96	126	eS	Sb	05 58 30.0	-4.5
SMLA	Simla	4.64	124	eP	Pn	05 57 49.2	+3.5
SMLA				eS	Sn	05 58 44.0	+5.6
SMLA				IAML		05 59 11.3	
	comp=E,399nm,0.3s						
GAR	Garm	5.52	341	Pn	Pn	05 58 00.9	+2.9
CHGR	Chuyangaron	5.61	331	Pn	Pn	05 58 01.1	+1.9
CHGR	Chuyangaron	5.61	331	P	Pn	05 58 01.1	+1.9
DRK	Karamyk	5.71	353	Pn	Pn	05 57 59.5	-1.2
DDI	Dehra Dun	5.74	126	eP	Pn	05 58 05.0	+4.1
DDI				eS	Sn	05 59 11.9	+6.3
KSH	Kashi	6.29	24	P	Pn	05 58 07.9	-0.5
KSH				S	Sn	05 59 12.3	-6.8
KSH				LR	LR		
	comp=E,410nm,8.7s						
KSH				LR	LR		
	comp=E,230nm,9.0s						
KSH				LR	LR		
	comp=E,450nm,11.0s						
KHET	Khetri	6.32	154	eP	Pn	05 58 10.5	+1.7
KHET				eS	Sn	05 59 19.0	-0.8
BTK	Batken	6.41	347	Pn	Pn	05 58 12.7	+2.5
BTK	Batken	6.41	347	P	Pn	05 58 12.7	+2.5
NDI	New Delhi	6.42	142	eP	Pn	05 58 12.4	+2.3
NDI				eP	Pn	05 58 13.0	+2.8
NDI				eS	Sn	05 59 25.0	+2.7
KUDL	Kundal	6.53	149	eP	Pn	05 58 13.7	+2.0
KUDL				eS	Sn	05 59 23.9	-1.0
SONA	Sohna	6.71	144	eP	Pn	05 58 16.1	+2.0
AJM	Ajmer	7.50	166	eP	Pn	05 58 26.9	+1.9
LGTI	Lohaghat	7.78	122	eP	Pn	05 58 29.1	+0.3
AML	Almayashu	8.35	5	P	Pn	05 58 40.4	+3.4
	SNR=122						
UCH	Uchtor	8.53	9	P	Pn	05 58 42.5	+3.0
	SNR=66						
ULHL	Ulahol	8.88	17	P	Pn	05 58 48.6	+4.5
	SNR=15						
EKS2	Erkin-Say	8.88	5	P	Pn	05 58 47.5	+3.5
	SNR=31						
TARG	Taragay, Kyrgy	8.89	26	Pn	Pn	05 58 46.3	+1.9
TARG	Taragay, Kyrgy	8.89	26	P	Pn	05 58 46.3	+1.9
AAK	Ala-Archa	8.93	9	P	Pn	05 58 49.4	+4.6
	SNR=15						
AAK	Ala-Archa	8.93	9	Pn	Pn	05 58 47.7	+2.9
	comp=E,9.7nm,0.3s,baz=191,slow=7.4,SNR=124						
AAK				Sn	Sn	06 00 24.5	+0.3
	comp=E,1.4nm,0.3s,baz=342,slow=20,SNR=2.4						
AAK				LR	LR	06 01 32.0	
	comp=E,42nm,20.2s,baz=210,slow=33						
	comp=E,25nm,0.5s						
AAK	Ala-Archa	8.93	9	Pn	Pn	05 58 47.1	+2.3
AAK	Ala-Archa	8.93	9	ceP	Pn	05 58 48.5	+3.7
AAK				pmax	pmax		
	comp=Z,18nm,0.5s						
KBK	Karagaybulak	9.01	11	P	Pn	05 58 50.9	+5.0
	SNR=13						
KDJ	Kajisay	9.04	22	Pn	Pn	05 58 46.2	0.0
KDJ	Kajisay	9.04	22	P	Pn	05 58 46.2	0.0
CHMS	Chumysh	9.32	9	P	Pn	05 58 53.0	+3.0
	SNR=9.8						
TKM2	Tokmak 2	9.38	13	P	Pn	05 58 54.7	+3.7
	SNR=9.4						
KK31	Karatay Array	9.44	350	Pn	Pn	05 58 52.1	+0.6
KK31	Karatay Array	9.44	350	P	Pn	05 58 52.1	+0.6
KKAR	Karatay Array	9.44	350	Pn	Pn	05 58 52.0	+0.5
KKAR	Karatay Array	9.44	350	Pn	Pn	05 58 51.7	+0.2
KKAR	Karatay Array	9.44	350	P	Pn	05 58 52.0	+0.5
JHNI	Jhansi	9.75	147	eP	Pn	05 58 56.3	+0.4
JHNI				eS	Sn	06 00 43.8	-0.4
PYUN	Piuthan	10.52	120	eP	Pn	05 59 07.0	+0.3
PYUN				eS	Sn	06 01 00.4	-3.0
DANN	Dangsing	10.95	117	eP	Pn	05 59 12.7	+0.2
KOLN	Koldanda	11.15	120	eP	Pn	05 59 15.5	+0.2
	comp=Z,4.4nm,0.4s						
BHPL	Bhopal	11.32	157	eP	Pn	05 59 17.4	0.0
BHPL				eS	Sn	06 01 16.7	-6.1
BHPL				eS	Sn	06 01 18.8	-4.0
GKN	Gorkha	11.79	116	eP	Pn	05 59 24.0	+0.1
DMN	Daman	12.35	117	eP	Pn	05 59 31.2	-0.5
KKN	Kakani	12.38	116	eP	Pn	05 59 31.0	-1.1
	comp=Z,11nm,0.6s						
GEYT	Alibeck	12.50	293	Pn	Pn	05 59 29.3	-4.2
	comp=Z,0.3nm,0.3s,baz=100,slow=7.5,SNR=1.5						
GEYT				Sn	Sn	06 01 50.0	-1.6
	comp=Z,0.4nm,0.3s,baz=106,slow=21,SNR=1.7						
	comp=Z,1.1nm,0.4s						
PKIN	Phulchoki	12.58	116	eP	Pn	05 59 33.7	-1.2
PKI	Pulchoki	12.59	116	eP	Pn	05 59 33.8	-1.3
GUN	Gumba	12.77	114	eP	Pn	05 59 36.4	-1.1
JIRN	Jiri	13.13	114	eP	Pn	05 59 41.4	-1.1
AKL	Akola	13.61	162	eP	Pn	05 59 48.5	-0.2
RAMN	Ramite	13.82	116	eP	Pn	05 59 49.5	-2.3
TAPN	Taplejung	14.46	112	eP	Pn	05 59 58.9	-1.6
ODAN	Odare	14.46	115	eP	Pn	05 59 58.7	-1.8
	comp=Z,1.7nm,0.5s						
MAKZ	Makanchi	14.78	26	Pn	Pn	06 00 04.3	-0.3
MAKZ	Makanchi	14.78	26	P	Pn	06 00 04.3	-0.3
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MK31	Makanchi Array	14.89	27	Pn	Pn	06 00 05.3	-0.7
MK31	Makanchi Array	14.89	27	i P	Pn	06 00 05.9	0.0
MKAR	Makanchi Array	14.89	27	Pn	Pn	06 00 05.8	-0.2
	comp=Z,0.5nm,0.3s,baz=209,slow=12,SNR=18						
	comp=Z,1.3nm,0.5s						
MKAR	Makanchi Array	14.89	27	Pn	Pn	06 00 04.8	-1.1
MKAR	Makanchi Array	14.89	27	i P	Pn	06 00 06.1	+0.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WMQ	Urumqi	15.37	45	eP	Pn	06 00 12.4	0.0
WMQ				PP	pP	06 00 27.3	+1.5
WMQ				S	Sn	06 03 01.3	-0.3
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KURBB	Kurchatov Arra	17.34	13	Pn	Pn	06 00 35.2	-2.1
	comp=Z,0.1nm,0.3s,baz=205,slow=11,SNR=12						
	comp=Z,2.2nm,0.6s						
KURK	Kurchatov	17.45	13	Pn	Pn	06 00 36.3	-2.3
KURK	Kurchatov	17.45	13	P	Pn	06 00 36.3	-2.3
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ABKAR	Akbulak array	18.10	332	P	Pn	06 00 44.5	-2.2
GOMU	GeErMu	18.29	76	P	Pn	06 00 57.1	+7.6
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,35nm,4.1s						
DGZ	Jazzator, Alta	19.27	30	d iP	Pn	06 01 01.0	+0.1
DGZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BVAR	Borovoye Array	19.28	356	P	P	06 01 00.2	+0.5
	comp=Z,0.2nm,0.3s,baz=161,slow=9.2,SNR=19						
BVAR				LR	LR	06 08 47.0	
	comp=Z,91nm,20.0s,baz=172,slow=38						
	comp=Z,5.5nm,0.6s						
BRVK	Borovoye	19.32	356	P	P	06 00 57.9	-2.2
BRVK	Borovoye	19.32	356	ceP	P	06 00 59.1	-1.0
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
AKTO	Aktyubinsk	19.80	331	P	P	06 01 05.1	-0.2
	comp=Z,3.7nm,0.3s,baz=149,slow=6.4,SNR=38						
	comp=Z,8.5nm,0.4s						
AKT	Akhty	21.14	299	eP	P	06 01 21.2	+1.1
AKT				e*PP	sP	06 01 34.5	+0.8
AKT				e		06 01 42.5	
AKT				pmax	pmax		
	comp=Z,11nm,0.6s						
ZAA0	Zalesovo Array	21.90	19	P	P	06 01 27.4	-0.5
ZAA0				IAmb	IAmb	06 01 29.5	
	comp=Z,6.7nm,0.8s						
ZALV	Zalesovo Beam	21.90	19	P	P	06 01 28.4	+0.4
	comp=Z,7.8nm,0.4s,baz=211,slow=10,SNR=37						
	comp=Z,7.8nm,0.4s						
ZALV	Zalesovo Beam	21.90	19	P	P	06 01 27.6	-0.4
TNCH	TengChong	24.10	104	eP	P	06 01 51.1	+0.3
TNCH				pP	pP	06 01 55.3	-5.4
TNCH				pmax	pmax		
	comp=Z,63nm,0.5s						
ZEI	Tsey	24.20	300	eP	P	06 01 53.0	+1.4
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GEVA	Gevas	24.31	289	P	P	06 01 49.9	-2.7
GEVA				IAmb	IAmb	06 02 24.6	
	comp=Z,14nm,1.0s						
ARU	Arti	24.62	341	P	P	06 01 55.5	+0.5
	comp=Z,3.8nm,0.3s,baz=129,slow=5.7,SNR=8.3						
	comp=Z,3.8nm,0.3s						
ARU	Arti	24.62	341	P	P	06 01 54.9	-0.1
ARU				IAmb	IAmb	06 01 56.3	
	comp=Z,5.5nm,0.6s						
ARU	Arti	24.62	341	d iP	P	06 01 55.7	+0.7
ARU						06 02 25.3	
ARU				S	S	06 06 13.8	0.0
ARU				SS	SnSn	06 07 03.2	+2.3
ARU				pmax	pmax		
	comp=Z,32nm,3.1s						
KIV	Kislovodsk	25.32	302	eP	P	06 02 00.2	-1.5
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BELG	Belogornoye	25.86	323	P	P	06 02 07.3	+1.1
	comp=Z,8.8nm,0.6s,baz=122,slow=3.4,SNR=6.4						
	comp=Z,8.8nm,0.6s						
BELG	Belogornoye	25.86	323	i P	P	06 02 06.5	+0.3
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CMAR	Chiang Mai Arr	27.99	116	P	P	06 02 28.5	+2.7
	comp=Z,1.1nm,0.3s,baz=295,slow=9.8,SNR=6.6						
	comp=Z,1.1nm,0.3s						
CMAR	Chiang Mai Arr	27.99	116	ceP	P	06 02 31.3	+5.5
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
SONM	Songino Array	28.85	51	P	P	06 02 36.0	+2.6
	comp=Z,0.2nm,0.4s,baz=238,slow=8.5,SNR=2.4						
	comp=Z,0.2nm,0.4s						
SONM	Songino Array	28.85	51	P	P	06 02 36.0	+2.6
HHC	Hu-ho-hao-te	31.52	66	eP	P	06 02 56.0	-1.0
HHC				pmax	pmax		
	comp=Z,27nm,1.0s						
HHC				pmax	pmax		
	comp=Z,89nm,5.0s						
OBN	Obninsk	32.88	321	eP	P	06 03 08.1	-0.5
OBN				e		06 04 14.4	
OBN				e		06 05 51.6	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	Malin Array Be	35.73	312	P	P	06 03 33.4	+0.1
	comp=Z,0.8nm,0.4s,baz=78,slow=6.4,SNR=8.6						
	comp=Z,0.8nm,0.4s						
AKASG	Malin Array Be	35.73	312	ceP	P	06 03 34.0	+0.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	35.73	312	P	P	06 03 33.6	+0.3
AKBB				IAmb	IAmb	06 03 34.3	
	comp=Z,11nm,1.4s						
AKBB	Malin Array Si	35.73	312	P	P	06 03 33.6	+0.3
AKBB				pmax	pmax		
	comp=Z,11nm,1.4s						
NRIK	Noril'sk	36.55	9	ceP	P	06 03 40.5	+0.4
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FINES	FINESS Array B	40.48	327	P	P	06 04 13.0	-0.2
	comp=Z,0.9nm,0.3s,baz=127,slow=9.2,SNR=13						
	comp=Z,0.9nm,0.3s						
FINES	FINESS Array B	40.48	327	P	P	06 04 13.1	-0.1
FINES	FINESS Array B	40.48	327	i P	P	06 04 12.3	-0.9
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZEA	Zeya	42.93	45	eP	P	06 04 29.8	-3.5
ARA0	ARCESS Array S	44.15	338	eP	P	06 04 43.7	+0.7
ARCES	ARCESS Array B	44.15	338	P	P	06 04 43.4	+0.4
	comp=Z,0.9nm,0.3s,baz=119,slow=8.2,SNR=22						
	comp=Z,0.9nm,0.3s						
ARCES	ARCESS Array B	44.15	338	P	P	06 04 43.6	+0.6
ARCES	ARCESS Array B	44.15	338	P	P	06 04 43.6	+0.6
ARCES				pmax	pmax		
	comp=Z,22nm,1.4s						
KTK1	Kautokeino	44.63	337	eP	P	06 04 47.1	+0.3
HAMF	Hammerfest	45.23	339	eP	P	06 04 50.7	-0.8
TRO	Tromso	46.28	337	eP	P	06 05 00.4	+0.6
GUMA	Gualdo di Mace	46.53	300	P	P	06 05 00.1	-2.1
GUMA				IAmb	IAmb	06 05 01.5	
	comp=Z,11nm,0.4s						
STEI	Steigen	46.99	334	eP	P	06 05 04.2	-1.2
NC405	NORSAR Array S	47.12	325	P	P	06 05 06.1	-0.5
NB2	NORSAR Subarra	47.36	324	P	P	06 05 08.2	-0.2
	comp=Z,3.8nm,0.5s,baz=97,slow=7.9						
NB2	NORSAR Subarra	47.36	324	P	P	06 05 08.2	-0.2
	baz=97,slow=7.9						
NOA	NORSAR Array B	47.36	324	P	P	06 05 08.0	-0.4
	comp=Z,3.8nm,0.7s,baz=97,slow=7.6,SNR=14						
	comp=Z,3.8nm,0.7s						
NC204	NORSAR Array S	47.60	325	P	P	06 05 10.0	-0.4
TIXI	Tiksi	47.77	21	ceP	P	06 05 12.3	+0.9
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HYA	Hoyanger	49.80	324	eP	P	06 05 26.9	-0.2
SPA0	Spitsbergen Ar	50.42	347	eP	P	06 05 32.6	+1.0
SPITS	Spitsbergen Ar	50.42	347	P	P	06 05 32.8	+1.1
SPITS				pmax	pmax		
	comp=Z,42nm,1.4s						
ESDC	Sonseca Array	59.96	300	P	P	06 06 42.1	+1.1
	comp=Z,1.8nm,0.8s,baz=55,slow=7.9,SNR=12						
	comp=Z,1.8nm,0.8s						
BILL	Bilibino	60.43	26	eP	P	06 06 44.7	+1.0
BILL				e		06 07 32.4	
BILL				i		06 09 00.0	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
TORD	Torodi Ar. Bea	67.08	271	P	P	06 07 28.0	-0.4
	comp=Z,0.6nm,0.5s,baz=44,slow=5.8,SNR=6.3						
	comp=Z,0.6nm,0.5s						
TORD	Torodi Ar. Bea	67.08	271	P	P	06 07 26.7	-1.7
TORD				IAmb	IAmb	06 07 28.4	
	comp=Z,4.7nm,1.5s						
IMAR	Indian Mountai	74.31	18	P	P	06 08 12.4	+0.8
BMAR	Burnt Mountain	75.22	14	P	P	06 08 17.5	+0.6
K20K	Telida	76.28	20	P	P	06 08 24.3	+1.3
K20K				IAmb	IAmb	06 08 30.5	
	comp=Z,4.5nm,1.4s						
INK	Inuvik	76.33	10	P	P	06 08 22.6	-0.5
INK				IAmb	IAmb	06 08 38.2	
	comp=Z,3.5nm,1.3s						
INK	Inuvik	76.33	10	P	P	06 08 22.6	-0.5
INK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
C36M	Paulatuk	76.41	6	P	P	06 08 23.1	-0.5
ILAR	Eielson Array	76.98	16	P	P	06 08 27.4	+0.6
	comp=Z,0.2nm,0.4s,baz=300,slow=4.9,SNR=6.7						
	comp=Z,0.2nm,0.4s						
KTH	Kantishna Hill	76.99	18	P	P	06 08 27.5	+0.5
KTH				IAmb	IAmb	06 08 33.2	
	comp=Z,8.2nm,1.5s						
SKT	Skwentna	78.09	20	P	P	06 08 34.1	+0.9
SKT				IAmb	IAmb	06 08 50.4	
	comp=Z,4.3nm,1.3s						
SUA	Susitna One	78.73	20	P	P	06 08 37.3	+0.5
SUA				IAmb	IAmb	06 08 54.2	
	comp=Z,5.7nm,1.3s						
DAWY	Dawson	79.22	14	P	P	06 08 38.9	-0.4
DAWY				IAmb	IAmb	06 09 15.9	
	comp=Z,4.0nm,1.5s						
WRA	Warramunga Arr	79.40	123	P	P	06 08 43.0	+2.1
	comp=Z,1.9nm,0.5s,baz=322,slow=4.8,SNR=46						
	comp=Z,1.9nm,0.5s						
WRA	Warramunga Arr	79.40	123	P	P	06 08 43.0	+2.1
ASAR	Alice Springs	81.58	126	P	P	06 08 54.3	+1.7
	comp=Z,0.9nm,0.5s,baz=312,slow=5.0,SNR=11						
	comp=Z,0.9nm,0.5s						
YKA	Yellowknife Ar	83.86	3	P	P	06 09 03.8	0.0
	comp=Z,0.6nm,0.6s,baz=349,slow=5.0,SNR=14						
	comp=Z,0.6nm,0.6s						
YKA	Yellowknife Ar	83.86	3	ceP	P	06 09 04.0	+0.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						

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*SJA **21** 05:56:52.4±0.8, 31°11S×71°58W, h52^{km}±7^{km}, ML4.1, MW4.1, Hypocentre not reviewed by the ISC*
*IDC **21** 05:56:53.6±4.4, 31°13S×71°06W, h35^{km}±34^{km}, mb3.3/2, mbtmp3.5/6, ML3.3/4, MS2.6/1, Error ellipse: s-maj=35.5km s-min=27.1km az=63.0*
*GUC **21** 05:56:54.9±0.9, 31°11S×71°25W, h61^{km}±3^{km}, ML4.1*
*NEIC **21** 05:56:55.7±3.0, 31°15S±0°05×71°6W±0°1, h41^{km}±30^{km}, mb3.7/2, ML4.0(GUC), Error ellipse: s-maj=17.5km s-min=6.4km az=100.0*
ISC 21 05:56:55.1±0.8**, 31°10S**±0°03×**71°40W**±0°05**, h55**^{km}±8^{km}**, n84,** σ1^{s}**68**/91**, 6C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO02	Combarbal	0.36	107		Pn	05 57 06.1	+0.7
CO02	Combarbal	0.36	107	i P	Pn	05 57 06.0	+0.6
CO02				eS	Sn	05 57 13.4	+0.6
CO02	Combarbal	0.36	107	eP		05 57 05.0	
CO02				eS		05 57 13.8	
CO02				IAML		05 57 14.7	
	comp=Z,7μm,0.1s						
CO06	Fray Jorge	0.47	334		Pn	05 57 08.4	+2.0
CO06	Fray Jorge	0.47	334	⇓iP	Pn	05 57 08.3	+2.0
CO06				i S	Sn	05 57 18.1	+3.6
CO06				IAML		05 57 19.6	
	comp=E,12μm,0.5s						
CO03	El Pedregal	0.66	67		Pn	05 57 09.0	+0.4
CO03	El Pedregal	0.66	67	⇑iP	Pn	05 57 09.1	+0.4
CO03				i S	Sn	05 57 18.9	+0.3
CO03				IAML		05 57 21.2	
	comp=N,12μm,0.1s						
CO03	El Pedregal	0.66	67	eP		05 57 08.8	
CO03				eS		05 57 19.6	
CO03				IAML		05 57 20.5	
	comp=Z,3μm,0.1s						
GO04	Tololo Observa	1.06	29		Pn	05 57 14.9	+1.0
GO04	Tololo Observa	1.06	29	eP	Pn	05 57 14.6	+0.6
GO04				eS	Sn	05 57 28.8	+0.9
GO04	Tololo Observa	1.06	29	eP		05 57 14.0	
GO04				eS		05 57 29.3	
CO05	La Serena	1.18	7		Pn	05 57 16.8	+1.3
CO05	La Serena	1.18	7	⇑iP	Pn	05 57 16.6	+1.3
CO05				i S	Sn	05 57 31.7	+1.2
CO05				IAML		05 57 37.6	
	comp=N,3μm,0.4s						
VA06	Catapilco	1.46	177		Pn	05 57 20.3	+1.1
VA06	Catapilco	1.46	177	⇑iP	Pn	05 57 20.2	+1.1
VA06				i S	Sn	05 57 33.6	-3.6
VA06				IAML		05 57 44.3	
	comp=N,4μm,0.4s						
CO01	Juntas del Tor	1.58	46		Pn	05 57 22.6	+1.5
CO01	Juntas del Tor	1.58	46	eP	Pn	05 57 22.4	+1.3
CO01				eS	Sn	05 57 42.3	+1.7
CO01				IAML		05 57 44.0	
	comp=N,2μm,0.2s						
CO01	Juntas del Tor	1.58	46	eP		05 57 21.0	
VA03	San Esteban	1.81	157		Pn	05 57 25.3	+1.3
VA03	San Esteban	1.81	157	eP	Pn	05 57 25.1	+1.1
VA03				i S	Sn	05 57 47.6	+1.7
VA03				IAML		05 57 50.6	
	comp=E,4μm,0.2s						
VA03	San Esteban	1.81	157	eP		05 57 24.0	
VA03				eS		05 57 49.5	
VA03				IAML		05 57 50.9	
	comp=Z,1μm,0.1s						
ROCH	El Roble	1.90	170	⇑iP	Pn	05 57 26.3	+1.0
ROCH				IAML		05 57 53.6	
	comp=N,2μm,0.3s						
ROC1	El Roble	1.90	170		Pn	05 57 26.6	+1.2
RTLS	Leoncito	1.93	112	eP		05 57 27.0	
RTLS				IAML		05 57 53.3	
	comp=Z,3μm,0.5s						
RTLS				eS		05 57 53.3	
VA01	Torpederas	1.93	186		Pn	05 57 25.1	-0.4
PEL	Peldehue	2.13	164		Pn	05 57 29.6	+1.3
PEL	Peldehue	2.13	164	⇑iP	Pn	05 57 29.6	+1.3
PEL				i S	Sn	05 57 55.3	+1.7
PEL				IAML		05 57 58.5	
	comp=E,1μm,0.3s						
LCO	Las Campanas	2.17	16	Pn	Pn	05 57 30.5	+1.5

LCO	Las Campanas	2.17	16	*e*P	Pn	05 57 30.2	+1.2
LCO				*e*S	Sn	05 57 56.5	+1.6
LCO	Las Campanas	2.17	16	*e*P		05 57 29.0	
MT02	Curacav	2.17	174		Pn	05 57 29.6	+0.8
MT02	Curacav	2.17	174	*e*P	Pn	05 57 29.1	+0.3
MT02	Curacav	2.17	174	*e*P		05 57 28.0	
MT10	Hacienda Santa	2.29	162	*e*P	Pn	05 57 31.6	+1.1
MT10				*e*S	Sn	05 57 59.8	+2.1
MT10				IAML		05 58 06.6	
	comp=E,3µm,0.4s						
MT05	Renca	2.36	166		Pn	05 57 32.7	+1.3
MT05	Renca	2.36	166	*e*P	Pn	05 57 32.5	+1.1
MT05				*e*S	Sn	05 58 01.2	+2.0
MT05				IAML		05 58 13.1	
	comp=E,2µm,0.5s						
MT05	Renca	2.36	166	*e*P		05 57 31.0	
ZON	Zonda	2.37	102		Pn	05 57 34.5	+2.9
ZON	Zonda	2.37	102	*e*P		05 57 34.0	
FCH	Farellones	2.41	157	*e*P	Pn	05 57 34.0	+1.6
FCH				*e*S	Sn	05 58 03.1	+2.1
FCH				IAML		05 58 09.8	
	comp=E,773nm,0.2s						
AC05	El Transito	2.46	24	Pn	Pn	05 57 34.9	+2.1
AC05	El Transito	2.46	24	*i* P	Pn	05 57 34.8	+1.9
AC05				IAML		05 58 09.1	
	comp=E,896nm,0.1s						
AC05	El Transito	2.46	24	*e*P		05 57 34.0	
SJA	San Juan	2.47	101	*e*P		05 57 36.0	
MT03	Universidad Ad	2.50	163		Pn	05 57 35.1	+1.6
MT03	Universidad Ad	2.50	163	*i* P	Pn	05 57 34.9	+1.4
MT03	Universidad Ad	2.50	163	*e*P		05 57 34.0	
RTLL	Cerro Villicun	2.52	96	*e*P		05 57 35.0	
MT04	Ro Olivares	2.54	155	*i* P	Pn	05 57 36.5	+2.5
MT04				*e*S	Sn	05 58 07.2	+3.3
MT04				IAML		05 58 12.5	
	comp=E,2µm,0.5s						
VA05	Santo Domingo	2.56	184		Pn	05 57 34.6	+0.5
VA05	Santo Domingo	2.56	184	*e*P	Pn	05 57 34.4	+0.3
VA05				IAML		05 58 21.1	
	comp=E,2µm,0.3s						
MT08	Bocatoma Ro	2.62	154		Pn	05 57 38.1	+2.9
MT08	Bocatoma Ro	2.62	154	*e*P	Pn	05 57 37.9	+2.8
MT08				*e*S	Sn	05 58 09.7	+3.8
MT08				IAML		05 58 17.3	
	comp=E,935nm,0.5s						
MT09	Talagante	2.69	173	Pn	Pn	05 57 37.4	+1.3
MT09	Talagante	2.69	173	*e*P	Pn	05 57 37.3	+1.2
MT09				IAML		05 58 18.5	
	comp=N,1µm,0.3s						
MT12	Pirque	2.73	165	*e*P	Pn	05 57 37.6	+1.2
MT12				IAML		05 58 22.6	
	comp=E,2µm,0.4s						
CFA	Coronel Fontan	2.75	101	Pg	Pn	05 57 38.8	+2.0
	comp=E,46nm,0.3s,baz=277,slow=14,SNR=430						
CFA				Lg	Lg	05 58 12.0	
	comp=E,64nm,0.3s,baz=180,slow=20,SNR=11						
CFA				LR	LR	05 58 52.9	
	comp=E,135nm,21.6s,baz=264,slow=48						
CFA	Coronel Fontan	2.75	101	*e*P		05 57 38.0	
MT01	Popeta	2.76	177	Pn	Pn	05 57 37.7	+0.8
MT01	Popeta	2.76	177	*e*P	Pn	05 57 37.5	+0.6
MT01				IAML		05 58 20.9	
	comp=E,939nm,0.1s						
MT01	Popeta	2.76	177	*e*P		05 57 36.0	
MT13	San Alfonso	2.80	161	Pn	Pn	05 57 39.9	+2.3
MT13	San Alfonso	2.80	161	⇑*i*P	Pn	05 57 39.9	+2.3
MT13				*i* S	Sn	05 58 13.7	+3.5
MT13				IAML		05 58 17.8	
	comp=E,866nm,0.4s						
AC04	Llanos de Chal	2.90	6	Pn	Pn	05 57 40.0	+1.2
AC04	Llanos de Chal	2.90	6	*i* P	Pn	05 57 40.0	+1.2
AC04				IAML		05 58 24.9	
	comp=N,508nm,0.3s						
AC04	Llanos de Chal	2.90	6	*e*P		05 57 39.0	
LMEL	Las Melosas	2.92	160		Pn	05 57 41.5	+2.3
LMEL	Las Melosas	2.92	160	*e*P	Pn	05 57 41.4	+2.1
LMEL				IAML		05 58 24.0	
	comp=N,2µm,0.1s						
BO01	Tunca	3.30	175	Pn	Pn	05 57 44.7	+0.5
BO01	Tunca	3.30	175	*e*P	Pn	05 57 44.5	+0.3
BO01	Tunca	3.30	175	*e*P		05 57 43.0	
BO03	Pichilemu	3.42	188	*e*P	Pn	05 57 45.3	-0.6
GO03	Copiap	3.64	17	*e*P	Pn	05 57 50.3	+1.3
GO03	Copiap	3.64	17	*e*P		05 57 49.0	
BO02	Sierra Bellavi	3.72	172	*e*P	Pn	05 57 50.8	+0.7
BO02	Sierra Bellavi	3.72	172	*e*P		05 57 50.0	
AC01	Pan de Azucar	4.98	8	Pn	Pn	05 58 08.0	+0.6
AC01	Pan de Azucar	4.98	8	*e*P	Pn	05 58 06.5	-0.8
AC01	Pan de Azucar	4.98	8	*e*P		05 58 06.0	
GO02	Mina Guanaco	6.12	16	Pn	Pn	05 58 22.4	-0.8
H03N1	Juan Fernandez	6.78	248	T	T	06 05 22.1	
	baz=74,slow=72,SNR=1186						
H03N3	Juan Fernandez	6.79	248	T	T	06 05 26.1	
	baz=74,slow=72,SNR=1106						
H03N2	Juan Fernandez	6.79	248	T	T	06 05 27.2	
	baz=74,slow=72,SNR=1302						
PB15	IPOC Station P	8.04	13	Pn	Pn	05 58 48.4	-1.1
GO06	Curarrehue	8.47	180	Pn	Pn	05 58 53.7	-1.5
LVC	Limon Verde	8.74	15	Pn	Pn	05 58 56.9	-2.3
	comp=N,0.3nm,0.3s,baz=187,slow=8.1,SNR=2.1						
	comp=N,2.2nm,0.6s						
LVC	Limon Verde	8.74	15	Pn	Pn	05 58 58.8	-0.4
PLCA	Paso Flores	9.64	176	Pn	Pn	05 59 11.2	0.0
	comp=N,0.1nm,0.3s,baz=331,slow=13,SNR=2.3						
	comp=N,1.4nm,1.1s						
TRQA	Tornquist	10.41	134	Pn	Pn	05 59 21.6	-0.1
ITQB	Itaqui	12.84	87	Pn	Pn	05 59 52.7	-2.0
CPUP	Villa Florida	13.23	72	Pn	Pn	05 59 58.7	-1.4
	comp=N,0.1nm,0.3s,baz=238,slow=13,SNR=3.3						
CPUP	Villa Florida	13.23	72	Pn	Pn	05 59 57.7	-2.5
LPAZ	La Paz	15.04	12	Pn	Pn	06 00 25.4	+0.5
	comp=N,0.1nm,0.3s,baz=192,slow=7.9,SNR=3.3						
	comp=N,1.3nm,0.7s						
LPAZ	La Paz	15.04	12	Pn	Pn	06 00 22.3	-2.6
LPAZ				IAmb	IAmb	06 00 29.1	
	comp=Z,3.2nm,1.0s						
PLTB	Pedras Altas	15.21	97	Pn	Pn	06 00 24.8	-1.7
PLTB				IAmb	IAmb	06 01 02.0	
	comp=Z,8.4nm,0.9s						
SIV	San Ignacio	17.75	34	P	P	06 00 58.2	-0.4
	baz=204,slow=10.0,SNR=4.0						
	comp=Z,0.9nm,0.7s						
TXAR	Lajitas Array	67.49	330	P	P	06 07 46.8	+1.4
	comp=Z,0.2nm,0.8s,baz=159,slow=7.7,SNR=2.0						
	comp=Z,0.2nm,0.8s						
TORD	Torodi Ar. Bea	82.71	70	P	P	06 09 13.1	-0.1
	comp=Z,0.5nm,0.6s,baz=249,slow=5.2,SNR=2.8						
	comp=Z,0.5nm,0.6s						
H11S2	WAKE ISLAND Hy	126.31	271	T	T	08 34 53.0	
	baz=116,slow=75,SNR=39						
H11S1	WAKE ISLAND Hy	126.32	271	T	T	08 34 54.1	
	baz=116,slow=75,SNR=54						
H11S3	WAKE ISLAND Hy	126.33	271	T	T	08 34 54.0	
	baz=116,slow=75,SNR=43						
H11N3	WAKE ISLAND Hy	126.65	272	T	T	08 35 21.0	
	baz=116,slow=76,SNR=6.8						
H11N1	WAKE ISLAND Hy	126.66	272	T	T	08 35 14.9	
	baz=116,slow=76,SNR=4.3						
H11N2	WAKE ISLAND Hy	126.67	272	T	T	08 35 19.7	
	baz=116,slow=76,SNR=10						
ZALV	Zalesovo Beam	151.47	30	PKPbc	PKPbc	06 16 42.2	0.0
	comp=Z,0.9nm,0.6s,baz=316,slow=4.0,SNR=4.9						

ROM 21 06:10:27.2±0.0, 42°.912N±0°.002×13°.045E±0°.004,
h10km, ML1.7/29, 16C-7D, Error ellipse: s-maj=0.3km
s-min=0.1km az=81.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FEMA	Monte Fema	0.05	4	⇓P	Pg	06 10 29.9	+0.4
FEMA				S	Sg	06 10 31.5	+0.4
FEMA				AML	AML		
	comp=E,3975µm,0.2s						
FEMA				AML	AML		
	comp=E,3185µm,0.8s						
FEMA				AML	AML		
	comp=N,2000µm,0.6s						
FEMA				AML	AML		
	comp=E,3975µm,0.2s						
FEMA				AML	AML		
	comp=N,1995µm,0.6s						
FEMA				AML	AML		
	comp=N,1995µm,1.4s						
MC2	Monte Cornacci	0.11	89	⇑P	Pg	06 10 30.6	+0.5
MC2				S	Sg	06 10 32.9	+0.7
T1245	Castelsantange	0.12	118	⇑P	Pg	06 10 30.8	+0.5
T1245				S	Sg	06 10 33.1	+0.7
T1245				AML	AML		
	comp=E,1114µm,0.9s						
T1245				AML	AML		
	comp=N,1034µm,0.7s						
T1245				AML	AML		
	comp=N,1098µm,0.3s						
T1245				AML	AML		
	comp=E,1111µm,0.9s						
T1245				AML	AML		
	comp=N,1038µm,0.7s						
T1245				AML	AML		
	comp=E,1020µm,0.3s						
T1245				AML	AML		
	comp=N,1098µm,0.3s						
T1245				AML	AML		
	comp=E,1108µm,0.9s						
T1245				AML	AML		
	comp=N,1035µm,0.7s						
T1245				AML	AML		
	comp=E,1020µm,0.3s						
T1245				AML	AML		
	comp=E,1108µm,1.1s						
FDMO	Fiordimonte	0.13	14	⇑P	Pg	06 10 30.8	+0.5
FDMO				S	Sg	06 10 33.1	+0.7
FDMO				AML	AML		
	comp=N,1350µm,0.9s						
FDMO				AML	AML		
	comp=E,1089µm,0.2s						
FDMO				AML	AML		
	comp=E,1090µm,0.2s						
CESI	CESI - Serrava	0.14	312	P	Pg	06 10 31.1	+0.6
CESI				S	Sg	06 10 33.7	+0.9
CESI				AML	AML		
	comp=E,1410µm,0.1s						
CESI				AML	AML		
	comp=N,1670µm,0.3s						
T1219	Muccia, Frazio	0.15	349	P	Pg	06 10 31.0	+0.4
T1219				S	Sg	06 10 33.6	+0.6
T1219				AML	AML		
	comp=E,920µm,0.4s						
T1219				AML	AML		
	comp=N,1112µm,0.1s						
T1219				AML	AML		
	comp=N,1120µm,0.1s						
T1219				AML	AML		
	comp=E,918µm,0.4s						
T1219				AML	AML		
	comp=N,1108µm,0.1s						
T1219				AML	AML		
	comp=E,872µm,0.4s						
T1219				AML	AML		
	comp=N,1121µm,0.1s						
T1219				AML	AML		
	comp=E,920µm,0.4s						
T1219				AML	AML		
	comp=E,873µm,0.4s						
T1219				AML	AML		
	comp=N,1118µm,0.1s						
T1219				AML	AML		
	comp=N,1110µm,0.1s						
T1212	Cascia, Frazio	0.16	180	P	Pg	06 10 31.4	+0.6
T1212				S	Sg	06 10 34.3	+1.1
T1212				AML	AML		
	comp=E,481µm,0.3s						
T1212				AML	AML		
	comp=N,754µm,0.2s						
T1212				AML	AML		
	comp=E,480µm,0.3s						
T1212				AML	AML		
	comp=N,754µm,0.2s						
T1256	Bolognola (MC)	0.16	54	⇑P	Pg	06 10 31.4	+0.5
T1256				S	Sg	06 10 34.5	+1.0
T1256				AML	AML		
	comp=E,416µm,0.4s						
T1256				AML	AML		
	comp=E,396µm,0.2s						
T1256				AML	AML		
	comp=N,307µm,0.5s						
T1256				AML	AML		
	comp=N,360µm,0.5s						
T1256				AML	AML		
	comp=E,395µm,0.2s						
T1256				AML	AML		
	comp=N,308µm,0.5s						
T1256				AML	AML		
	comp=N,360µm,1.5s						
T1256				AML	AML		
	comp=E,417µm,0.4s						
T1214	Arquata del Tr	0.19	142	⇑P	Pg	06 10 31.9	+0.5
T1214				S	Sg	06 10 35.1	+0.8
T1214				AML	AML		
	comp=E,230µm,1.1s						
T1214				AML	AML		
	comp=N,225µm,0.8s						
T1214				AML	AML		
	comp=E,206µm,1.4s						
T1214				AML	AML		
	comp=N,172µm,0.8s						
T1214				AML	AML		
	comp=E,229µm,1.1s						
T1214				AML	AML		
	comp=E,206µm,1.4s						
T1214				AML	AML		
	comp=N,171µm,0.1s						
T1214				AML	AML		
	comp=N,171µm,1.9s						
T1214				AML	AML		
	comp=E,229µm,0.9s						
T1214				AML	AML		
	comp=E,206µm,0.6s						
T1214				AML	AML		
	comp=N,224µm,0.8s						
T1220	Camerino, Fraz	0.20	9	⇑P	Pg	06 10 31.9	+0.4
T1220				S	Sg	06 10 35.4	+1.0
T1220				AML	AML		
	comp=E,1775µm,0.4s						
T1220				AML	AML		
	comp=N,1365µm,0.3s						
T1220				AML	AML		
	comp=E,1780µm,0.4s						
MMO1	Montemonaco	0.21	93	⇑P	Pg	06 10 32.1	+0.5
MMO1				S	Sg	06 10 35.6	+1.0
T1217	Poggiodomo (PG	0.22	203	⇑P	Pg	06 10 32.4	+0.6
T1217				S	Sg	06 10 36.1	+1.3
T1217				AML	AML		
	comp=E,228µm,1.6s						
T1217				AML	AML		
	comp=N,242µm,0.4s						
T1217				AML	AML		
	comp=E,229µm,1.6s						
T1217				AML	AML		
	comp=N,242µm,0.4s						
T1217				AML	AML		
	comp=E,229µm,0.4s						
T1218	Civita (PG)	0.25	168	⇑P	Pg	06 10 32.8	+0.5
T1218				S	Sg	06 10 36.9	+1.1
T1218				AML	AML		
	comp=N,274µm,0.2s						
T1218				AML	AML		
	comp=E,172µm,0.1s						
T1218				AML	AML		
	comp=N,274µm,0.2s						
T1218				AML	AML		
	comp=E,172µm,1.9s						
GUMA	Gualdo di Mace	0.26	55	⇑P	Pg	06 10 33.3	+0.7
GUMA				S	Sb	06 10 37.8	-0.8
GUMA				AML	AML		
	comp=E,348µm,1.5s						
GUMA				AML	AML		
	comp=N,330µm,0.5s						
GUMA				AML	AML		
	comp=E,348µm,0.5s						
T1241	Roccafluvione,	0.29	101	⇑P	Pg	06 10 33.5	+0.4
T1241				S	Sg	06 10 38.2	+1.2
T1241				AML	AML		
	comp=E,208µm,0.3s						
T1241				AML	AML		
	comp=N,279µm,0.2s						
ASSB	Assisi San Ben	0.31	295	⇓P	Pg	06 10 33.9	+0.3
ASSB				AML	AML		
	comp=E,238µm,0.2s						
ASSB				AML	AML		
	comp=N,284µm,0.4s						
SNTG	Esanatoglia	0.35	347	⇓P	Pg	06 10 34.5	+0.2
SNTG				S	Sb	06 10 40.2	-1.1
SNTG				AML	AML		
	comp=E,122µm,0.3s						
SNTG				AML	AML		
	comp=N,111µm,1.4s						
SNTG				AML	AML		
	comp=N,111µm,0.6s						
MOMA	Monte Martano	0.37	253	⇑P	Pg	06 10 35.0	+0.4
MOMA				S	Sb	06 10 40.9	-0.8
MOMA				AML	AML		
	comp=E,141µm,1.6s						
MOMA				AML	AML		
	comp=N,101µm,0.8s						
MOMA				AML	AML		
	comp=N,101µm,0.8s						
MOMA				AML	AML		
	comp=N,101µm,1.2s						
MOMA				AML	AML		
	comp=E,141µm,0.4s						
ARRO	Arrone	0.39	212	P	Pg	06 10 35.4	+0.4
ATCC	AVT- Casa Cast	0.40	313	P	Pg	06 10 35.6	+0.4
ATCC				S	Sb	06 10 42.1	-0.7
ATCC				AML	AML		
	comp=N,71µm,0.4s						
ATCC				AML	AML		
	comp=E,87µm,1.3s						
T1211	Morro Reatino	0.40	200	P	Pg	06 10 35.6	+0.4
T1211				S	Sb	06 10 42.3	-0.5
T1211				AML	AML		
	comp=E,174µm,0.1s						
T1211				AML	AML		
	comp=N,166µm,0.6s						
T1211				AML	AML		
	comp=E,173µm,0.1s						
T1211				AML	AML		
	comp=N,167µm,0.5s						
EL6	Elcito	0.42	6	⇑P	Pg	06 10 35.7	+0.2
EL6				S	Sb	06 10 42.5	-0.8
EL6				AML	AML		
	comp=E,210µm,0.1s						
EL6				AML	AML		
	comp=N,184µm,0.2s						
EL6				AML	AML		
	comp=E,210µm,0.1s						
EL6				AML	AML		
	comp=N,185µm,0.2s						
RM33	Pellescritta (	0.42	163	⇑P	Pg	06 10 35.8	+0.3
RM33				S	Sb	06 10 42.7	-0.6
RM33				AML	AML		
	comp=E,78µm,0.7s						
RM33				AML	AML		
	comp=N,56µm,1.3s						
RM33				AML	AML		
	comp=N,56µm,0.7s						
CAMP	Campotosto	0.46	144	S	Sg	06 10 36.6	-5.8
CAMP				AML	AML		
	comp=E,30µm,0.8s						
CAMP				AML	AML		
	comp=N,21µm,0.6s						
CAMP				AML	AML		
	comp=N,21µm,1.4s						
OFFI	Offida	0.47	87	⇓P	Pb	06 10 37.7	0.0
CING	Cingoli	0.48	13	⇓P	Pg	06 10 36.8	+0.2
CING				S	Sb	06 10 44.3	-0.6
CING				AML	AML		
	comp=E,90µm,0.1s						
CING				AML	AML		
	comp=N,59µm,1.0s						
T1247	Pizzolo (AQ)	0.51	158	S	Sg	06 10 37.1	-6.7
T1247				AML	AML		
	comp=E,118µm,0.5s						
T1247				AML	AML		
	comp=N,103µm,0.1s						
MURB	Monte Urbino	0.52	313	P	Pg	06 10 37.6	+0.2
MURB				AML	AML		
	comp=E,111µm,0.2s						
MURB				AML	AML		
	comp=N,70µm,0.2s						
SSFR	Montelago di S	0.56	340	⇓P	Pg	06 10 38.5	+0.3
SSFR				AML	AML		
	comp=E,220µm,1.6s						
SSFR				AML	AML		
	comp=N,199µm,1.6s						
SSFR				AML	AML		
	comp=E,87µm,1.6s						
SSFR				AML	AML		
	comp=N,78µm,0.1s						
SSFR				AML	AML		
	comp=E,220µm,0.4s						
SSFR				AML	AML		
	comp=E,87µm,0.4s						
GIGS	Gran Sasso	0.60	140	S	Sg	06 10 39.3	-7.6
FRON	Frontone	0.65	339	⇑P	Pg	06 10 40.1	+0.3
FRON				AML	AML		
	comp=E,24µm,1.3s						
FRON				AML	AML		
	comp=N,40µm,0.6s						
ATVO	AVT- Monte Val	0.66	315	⇓P	Pg	06 10 40.5	+0.4
PIEI	Pieia	0.73	329	⇑P	Pb	06 10 41.7	-0.4
FSSB	Fossombrone	0.81	346	P	Pg	06 10 42.6	-0.1
FSSB				AML	AML		
	comp=E,66µm,0.4s						
FSSB				AML	AML		
	comp=N,69µm,0.3s						
PE3	Peglio	0.88	333	P	Pn	06 10 47.0	+1.2
SGG	Gregorio Mates	1.82	146	S	Sn	06 11 15.8	-5.9
SGG				AML	AML		
	comp=N,36µm,0.7s						
SGG				AML	AML		
	comp=N,36µm,1.3s						
SGG				AML	AML		
	comp=E,53µm,0.3s						

ROM 21 06:11:15.1±0.1, 41°.553N±0°.006×13°.060E±0°.005,
h8km, ML2.0/8, 6C-1D, Error ellipse: s-maj=0.7km
s-min=0.4km az=189.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LATB	Latina	0.09	231	⇓P	Pg	06 11 17.6	+0.3
LATB				S	Sg	06 11 19.9	+1.0
LATB				AML	AML		
	comp=E,642µm,0.5s						
LATB				AML	AML		
	comp=N,522µm,0.6s						
GIUL	Giuliano Di Ro	0.15	88	⇑P	Pg	06 11 18.7	+0.5
GIUL				S	Sg	06 11 21.8	+1.3
GIUL				AML	AML		
	comp=E,1520µm,0.4s						
GIUL				AML	AML		
	comp=N,1325µm,0.4s						
GUAR	Guarcino	0.31	38	⇑P	Pg	06 11 21.8	+0.6
GUAR				S	Sb	06 11 27.1	-0.9
GUAR				AML	AML		
	comp=E,530µm,0.5s						
GUAR				AML	AML		
	comp=N,550µm,0.4s						
GUAR				AML	AML		
	comp=N,550µm,0.4s						
RCAV	Rocca di Cave	0.31	344	P	Pg	06 11 21.7	+0.5
RCAV				S	Sb	06 11 27.4	-0.6
RDP	Rocca di Papa	0.33	309	P	Pb	06 11 22.5	-0.7
RDP				S	Sb	06 11 28.0	-0.6
RMP	Rome, Mte Porz	0.37	314	P	Pb	06 11 23.2	-0.7
RMP				S	Sb	06 11 29.6	-0.3
CERT	Cerreto	0.40	352	⇑P	Pg	06 11 23.2	+0.3
CERT				S	Sb	06 11 29.9	-0.8
CERT				AML	AML		
	comp=N,152µm,0.6s						
CERT				AML	AML		
	comp=E,360µm,0.4s						
LRP	Arpino	0.41	76	⇑P	Pb	06 11 23.9	-0.5
LRP				S	Sb	06 11 30.1	-0.7
LRP				AML	AML		
	comp=N,264µm,1.5s						
LRP				AML	AML		
	comp=E,176µm,0.6s						
VVLD	Villa Vallelon	0.53	53	⇑P	Pg	06 11 25.4	+0.2
VVLD				S	Sb	06 11 33.9	-0.5
VVLD				AML	AML		
	comp=N,276µm,0.3s						
VVLD				AML	AML		
	comp=E,208µm,0.4s						
PTQR	Pietraquaria	0.53	28	P	Pg	06 11 25.7	+0.3
PTQR				S	Sb	06 11 34.5	-0.1

FIAM	Fiamignano	0.72	3	P	Pg	06 11 28.9	0.0
CERA	Filignano	0.72	86	P	Pg	06 11 29.1	+0.1
CERA				S	Sb	06 11 39.4	-0.5
CERA				AML	AML		
	comp=E,148µm,0.5s						
CERA				AML	AML		
	comp=N,138µm,0.5s						
CERA				AML	AML		
	comp=N,132µm,0.5s						
CERA				AML	AML		
	comp=E,159µm,0.6s						
MODR	Mondragone	0.74	123	P	Pg	06 11 29.2	-0.1
MODR				S	Sb	06 11 39.8	-0.6
MODR				AML	AML		
	comp=E,68µm,0.6s						
MODR				AML	AML		
	comp=N,103µm,1.4s						
MODR				AML	AML		
	comp=E,68µm,1.4s						
INTR	Introdacqua	0.78	54	⇑P	Pg	06 11 29.7	-0.4
INTR				S	Sb	06 11 41.5	-0.2
SRES	S.Oreste - Sor	0.80	329	P	Pg	06 11 30.7	+0.3
VENT	Ventotene	0.81	160	P	Pb	06 11 31.3	0.0
RNI2	Rionero Sannit	0.83	79	P	Pg	06 11 31.4	+0.3
TOLF	Tolfa	0.94	303	P	Pg	06 11 33.4	+0.2
T1216	Preci, Frazion	1.34	359	AML	AML		
	comp=N,157µm,0.5s						
T1216				AML	AML		
	comp=E,143µm,1.3s						
T1216				AML	AML		
	comp=E,143µm,0.7s						
GMB	Gambarie	4.00	147	AML	AML		
	comp=N,2140µm,0.1s						
GMB				AML	AML		
	comp=E,1455µm,0.1s						

*IDC **21** 06:23:08.2±2.8, 21°.17S×69°.43W, h0^{km}, mb3.7/2, mbtmp3.8/3, ML4.0/1, Error ellipse: s-maj=73.9km s-min=58.6km az=60.0*

*GUC **21** 06:23:29.0±0.7, 19°.76S×69°.20W, h114^{km}±3^{km}, ML3.3*

ISC 21 06:23:28.4±1.0, **19°.81S**±0°.04×**69°.30W**±0°.09, **h118**^{km}±7^{km}, **n25, σ0^s.85**/30, **6C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB11	IPOC Station P	0.34	278	⇓*i*P	Pn	06 23 45.4	-0.1
PB11				*i* S	Sn	06 23 58.2	-0.2
PB11				IAML		06 23 59.7	
	comp=E,1µm,0.2s						
PB08	IPOC Station P	0.36	158	⇓*i*P	Pn	06 23 45.8	-0.1
PB08				*i* S	Sn	06 23 58.6	-0.4
PB08				IAML		06 23 58.9	
	comp=E,2µm,0.2s						
MNMC	Minye Minye	0.73	337	⇓*i*P	Pn	06 23 48.3	+0.1
MNMC				*i* S	Sn	06 24 03.0	0.0
TA02	Huaiquique	0.91	239	⇑*i*P	Pn	06 23 50.2	+0.8
TA02				*i* S	Sn	06 24 06.2	+0.9
TA01	Diego Aracena	1.12	228	⇓*i*P	Pn	06 23 52.0	+0.5
TA01				*i* S	Sn	06 24 09.7	+0.6
TA01				IAML		06 24 10.3	
	comp=E,337nm,0.3s						
PB01	IPOC Station P	1.24	188	⇑*i*P	Pn	06 23 53.4	+0.5
PB01				*i* S	Sn	06 24 12.2	+0.6
PB01				IAML		06 24 13.7	
	comp=N,2µm,0.2s						
PB16	IPOC Station P	1.48	352	⇑*i*P	Pn	06 23 56.4	+0.3
PB16				*i* S	Sn	06 24 17.3	+0.3
PB12	IPOC Station P	1.54	320	⇑*i*P	Pn	06 23 56.1	-0.2
PB12				*e*S	Sn	06 24 16.7	-0.8
PB12				IAML		06 24 19.8	
	comp=E,210nm,0.2s						
PB02	IPOC Station P	1.61	200	⇑*i*P	Pn	06 23 58.0	+0.9
PB02				*i* S	Sn	06 24 19.6	+0.6
PB02				IAML		06 24 26.3	
	comp=E,596nm,0.3s						
PB09	IPOC Station P	1.98	179	*e*P	Pn	06 24 02.8	+1.1
PB09				IAML		06 24 31.5	
	comp=N,140nm,0.4s						
PB07	IPOC Station P	1.99	196	*i* P	Pn	06 24 02.6	+0.8
PB07				IAML		06 24 31.7	
	comp=E,231nm,0.2s						
PB18	Visviri	2.21	355	*i* P	Pn	06 24 06.9	+1.9
PB04	IPOC Station P	2.64	197	*e*P	Pn	06 24 10.6	+0.5
PB04				IAML		06 25 05.5	
	comp=E,113nm,0.5s						
LVC	Limon Verde	2.81	173	LR	LR	06 24 31.0	
	comp=E,60nm,20.8s,baz=212,slow=55						
LVC	Limon Verde	2.81	173	*e*P	Pn	06 24 13.2	+0.6
LVC				IAML		06 24 53.2	
	comp=E,159nm,0.4s						
PB06	IPOC Station P	2.90	185	*e*P	Pn	06 24 13.7	+0.2
PB15	IPOC Station P	3.39	183	*e*P	Pn	06 24 20.5	+0.5
LPAZ	La Paz	3.67	18	Pn	Pn	06 24 25.2	+1.1
	comp=E,3.2nm,0.3s,baz=197,slow=8.1,SNR=93						
	comp=E,12nm,0.5s						
LPAZ	La Paz	3.67	18	⇑*i*P	Pn	06 24 25.2	+1.1
PB10	IPOC Station P	3.87	197	*e*P	Pn	06 24 25.5	-0.7
TORD	Torodi Ar. Bea	77.14	71	P	P	06 35 07.4	-2.1
	comp=E,0.3nm,0.4s,baz=246,slow=5.8,SNR=5.0						
	comp=E,0.3nm,0.4s						
YKA	Yellowknife Ar	89.48	341	P	P	06 36 12.4	+0.8
	comp=E,0.3nm,0.7s,baz=133,slow=4.9,SNR=6.3						
	comp=E,0.3nm,0.7s						
H11S2	WAKE ISLAND Hy	127.29	279	T	T	09 02 01.0	
	baz=101,slow=75,SNR=4.6						
H11S1	WAKE ISLAND Hy	127.30	279	T	T	09 01 59.6	
	baz=101,slow=75,SNR=6.8						
H11S3	WAKE ISLAND Hy	127.31	279	T	T	09 02 03.8	
	baz=101,slow=75,SNR=5.1						

NNC 21 06:42:10.6±2.7, **53°.62N×90°.55E, h0^{km}, mb3.7, mpv3.4, 5C-5D, Error ellipse: s-maj=20.6km s-min=15.8km az=52.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	3.42	278	⇓Pg	Pb	06 43 13.1	+1.2
	2.2nm,0.8s						
ZAA0				⇑Lg	Lg	06 44 00.5	
	24nm,1.1s						
KURK	Kurchatov	7.89	253	⇑Pn	Pn	06 44 06.0	-0.5
	5.2nm,1.0s						
KURK				⇓Sn	Sn	06 45 36.1	-0.2
	7.7nm,0.7s						
KURK				⇑Lg	Lg	06 46 23.2	
	54nm,1.1s						
KURBB	Kurchatov Arra	7.98	253	⇓Pn	Pn	06 44 06.7	-1.0
	6.9nm,0.7s						
KURBB				⇓Sn	Sn	06 45 39.4	+0.8
	58nm,1.0s						
KURBB				⇑Lg	Lg	06 46 27.3	
	32nm,0.9s						
MK31	Makanchi Array	8.64	221	Pn	Pn	06 44 18.0	+1.3
	0.2nm,0.3s,baz=33,slow=12,SNR=27						
MK31				⇑Sn	Sn	06 45 57.0	+2.1
	3.0nm,0.7s						
MK31				⇓Lg	Lg	06 46 41.7	
	16nm,0.9s						

ROM 21 06:50:01.9±0.0, **43°.403N**±0°.001×**12°.603E**±0°.003, **h11^{km}, ML0.9**/6, **Error ellipse: s-maj=0.2km s-min=0.1km az=295.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATFO	Monte Foce - G	0.04	212	P	Pg	06 50 04.4	+0.3
ATFO				S	Sg	06 50 06.0	+0.5
ATFO				AML	AML		
	comp=E,308µm,0.1s						
ATFO				AML	AML		
	comp=N,210µm,1.3s						
SSFR	Montelago di S	0.14	76	P	Pg	06 50 05.5	+0.4
SSFR				S	Sg	06 50 08.2	+0.8
PIEI	Pieia	0.14	340	P	Pg	06 50 05.7	+0.5
PIEI				S	Sg	06 50 08.5	+0.9
PIEI				AML	AML		
	comp=E,37µm,1.6s						
PIEI				AML	AML		
	comp=N,19µm,1.6s						
PIEI				AML	AML		
	comp=E,37µm,0.4s						
ATVO	AVT- Monte Val	0.14	262	P	Pg	06 50 05.6	+0.4
ATVO				S	Sg	06 50 08.4	+0.8
ATVO				AML	AML		
	comp=N,28µm,0.2s						
ATVO				AML	AML		
	comp=N,28µm,0.2s						
ATVO				AML	AML		
	comp=E,47µm,0.5s						
FRON	Frontone	0.15	38	P	Pg	06 50 05.7	+0.4
FRON				S	Sg	06 50 08.7	+1.0
MURB	Monte Urbino	0.15	202	P	Pg	06 50 05.9	+0.5
MURB				S	Sg	06 50 08.8	+1.0
MURB				AML	AML		
	comp=E,199µm,0.3s						
MURB				AML	AML		
	comp=N,184µm,0.2s						
ATPI	Pietralunga -	0.15	288	P	Pg	06 50 05.9	+0.6
ATPI				S	Sg	06 50 08.9	+1.0
ATPI				AML	AML		
	comp=N,29µm,1.6s						
ATPI				AML	AML		
	comp=E,32µm,0.7s						
ATPI				AML	AML		
	comp=N,29µm,1.6s						
ATPI				AML	AML		
	comp=N,29µm,0.4s						
ATCC	AVT- Casa Cast	0.22	173	P	Pg	06 50 07.0	+0.5
ATCC				S	Sg	06 50 11.0	+1.4
ATCC				AML	AML		
	comp=E,87µm,0.5s						
ATCC				AML	AML		
	comp=N,86µm,0.2s						
ATCC				AML	AML		
	comp=E,86µm,0.5s						
MPAG	Monte Paganucc	0.25	27	P	Pg	06 50 07.6	+0.5
MPAG				S	Sb	06 50 12.0	-1.0
ARVD	Arcevia	0.26	69	P	Pg	06 50 07.7	+0.4
ARVD				S	Sb	06 50 12.2	-1.0
SNTG	Esanatoglia	0.29	121	P	Pg	06 50 08.3	+0.6
SNTG				S	Sb	06 50 12.8	-1.1
T1214	Arquata del Tr	0.78	145	AML	AML		
	comp=N,118µm,1.4s						
T1214				AML	AML		
	comp=E,148µm,1.0s						
T1214				AML	AML		
	comp=N,118µm,0.6s						
T1214				AML	AML		
	comp=E,148µm,1.0s						
T1241	Roccafluvione,	0.82	132	AML	AML		
	comp=N,65µm,0.4s						
T1241				AML	AML		
	comp=E,143µm,0.2s						
ARRO	Arrone	0.83	172	AML	AML		
	comp=N,34µm,1.0s						
ARRO				AML	AML		
	comp=E,39µm,0.2s						
ARRO				AML	AML		
	comp=N,34µm,1.0s						
T1211	Morro Reatino	0.89	168	AML	AML		
	comp=N,127µm,0.6s						
T1211				AML	AML		
	comp=E,111µm,1.6s						
T1211				AML	AML		
	comp=N,127µm,1.4s						

ROM 21 06:50:21.8±0.1, **42°.621N**±0°.005×**13°.239E**±0°.006, **h11^{km}, ML1.6**/2, **1D, Error ellipse: s-maj=0.6km s-min=0.5km az=26.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMA1	SAN MARTINO	0.07	83	⇓P	Pg	06 50 24.6	+0.3
SMA1				S	Sg	06 50 26.5	+0.4
SMA1				AML	AML		
	comp=E,1490µm,0.2s						
SMA1				AML	AML		
	comp=N,1515µm,0.3s						
T1218	Civita (PG)	0.10	298	P	Pg	06 50 24.7	0.0
T1218				S	Sg	06 50 26.9	+0.2
T1218				AML	AML		
	comp=E,306µm,0.1s						
T1218				AML	AML		
	comp=N,1042µm,0.4s						
T1218				AML	AML		
	comp=E,282µm,0.1s						
T1218				AML	AML		
	comp=N,1034µm,0.4s						
T1218				AML	AML		
	comp=E,282µm,0.1s						
T1218				AML	AML		
	comp=E,306µm,0.1s						
T1218				AML	AML		
	comp=N,1042µm,0.4s						
RM33	Pellescritta (	0.11	189	P	Pg	06 50 25.4	+0.6
RM33				S	Sg	06 50 27.9	+0.9
RM33				AML	AML		
	comp=E,390µm,1.2s						
RM33				AML	AML		
	comp=N,420µm,0.2s						
RM33				AML	AML		
	comp=E,330µm,1.2s						
RM33				AML	AML		
	comp=N,437µm,0.2s						
RM33				AML	AML		
	comp=E,390µm,1.2s						
RM33				AML	AML		
	comp=E,330µm,0.8s						
RM33				AML	AML		
	comp=E,390µm,0.8s						
RM33				AML	AML		
	comp=N,420µm,0.2s						
CAMP	Campotosto	0.15	124	P	Pg	06 50 25.9	+0.5
CAMP				S	Sg	06 50 28.6	+0.8
CAMP				AML	AML		
	comp=E,39µm,0.6s						
CAMP				AML	AML		
	comp=N,48µm,1.2s						
CAMP				AML	AML		
	comp=E,39µm,1.4s						
T1245	Castelsantange	0.24	351	P	Pb	06 50 27.8	-0.4
T1245				AML	AML		
	comp=E,108µm,1.6s						
T1245				AML	AML		
	comp=N,166µm,0.3s						
T1222	Castel Sant'An	0.27	214	P	Pg	06 50 27.6	+0.4
T1222				S	Sb	06 50 32.2	-1.0
T1241	Roccafluvione,	0.27	31	AML	AML		
	comp=N,65µm,0.4s						
T1241				AML	AML		
	comp=E,142µm,0.2s						
GIGS	Gran Sasso	0.30	125	P	Pg	06 50 28.0	+0.2
GIGS				S	Sg	06 50 32.9	+1.0

*CNRM **21** 06:50:55.4, 35°.60N×3°.67W, h17^{km}, ml2.5*

*SFS **21** 06:50:57.6, 35°.39N×3°.69W, h23^{km}, ML2.6/6, ML2.6/6, MLv2.6/6*

*MDD **21** 06:50:58.6±0.6, 35°.61N×3°.63W, h0^{km}, mb_Lg2.1/9, Error ellipse: s-maj=5.7km s-min=3.6km az=36.0*

ISC 21 06:50:56.3±1.0, **35°.56N**±0°.02×**3°.66W**±0°.03, **h13**^{km}±9^{km}, **n27, σ1^s.10**/52, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	Palemas	0.41	214	P	Pg	06 51 05.1	+0.6
PALE				S	Sg	06 51 10.5	+0.4
WMELI	Melilla	0.63	113	S	Sg	06 51 16.3	-0.6
WMELI				P	Pg	06 51 08.5	-0.1
EMEL	Melilla	0.63	114	Pg	Pn	06 51 10.1	-0.8
EMEL				Sg	Sg	06 51 16.1	-0.8
GOG	Mont Gurugu	0.64	122	P	Pg	06 51 08.3	-0.5
GOG				S	Sg	06 51 17.1	-0.2
CHAS	Isla Isabel II	1.07	110	S	Sb	06 51 30.1	-0.6
TAF	Taforalt	1.26	126	P	Pn	06 51 19.3	-0.5
TAF				S	Sg	06 51 37.0	-0.1
ELGU	Los Guajares,	1.30	1	S	Sg	06 51 38.7	+0.3
ELGU				P	Pg	06 51 21.7	+0.3
ELGU	Los Guajares,	1.30	1	Pg	Pg	06 51 21.5	+0.1
ELGU				Sg	Sb	06 51 37.6	+0.2
ELGU				*i* Vmb_Lg		06 51 41.6	
EMIJ	Mijas	1.35	318	P	Pg	06 51 22.3	+0.1
EMIJ				S	Sb	06 51 39.2	+0.6
EMIJ	Mijas	1.35	318	Pg	Pb	06 51 22.0	+0.6
EMIJ				Sg	Sb	06 51 39.3	+0.7
EMIJ				*i* Vmb_Lg		06 51 45.4	
EMAL	Malaga-Limoner	1.35	333	P	Pg	06 51 23.6	+1.4
EMAL				S	Sg	06 51 39.8	-0.1
CEU	Ceuta	1.43	284	P	Pn	06 51 21.0	-0.9
CEU				S	Sn	06 51 37.6	-3.1
CHEFC	Chefchaouen	1.45	252	P	Pn	06 51 21.0	-1.2
CHEFC				S	Sn	06 51 39.4	-1.8
EBER	Berja	1.47	25	S	Sb	06 51 43.2	+0.9
EBER				P	Pb	06 51 24.2	+0.6
EBER	Berja	1.47	25	Pg	Pb	06 51 24.0	+0.4
EBER				Sg	Sb	06 51 42.3	0.0
EBER				*i* Vmb_Lg		06 51 46.6	
EGOR	Sierra Gorda,	1.59	347	P	Pg	06 51 26.8	0.0
EGOR				S	Sb	06 51 46.2	+0.5
EGOR	Sierra Gorda,	1.59	347	Pn	Pg	06 51 28.3	+1.5
EGOR				Sn	Sb	06 51 46.3	+0.7
EGOR				*i* Vmb_Lg		06 51 53.9	
EQUE	Quentar	1.65	6	Pn	Pb	06 51 27.6	+1.0
EQUE				Sn	Sb	06 51 46.7	-0.6
EQUE				*i* Vmb_Lg		06 51 52.3	
EQES	Quesada	2.29	12	Pn	Pb	06 51 37.8	+0.3
EQES				Sn	Sb	06 52 06.0	+0.3
EQES				*i* Vmb_Lg		06 52 08.8	
EADA	Adamuz	2.70	344	Pn	Pb	06 51 43.2	-1.4
EADA				Sn	Sn	06 52 13.7	+1.6
EADA				*i* Vmb_Lg		06 52 23.2	
MD31	MD31	2.84	199	P	Pn	06 51 41.6	+0.2
MD31				S	Sn	06 52 16.0	+0.5
MDT	Midelt	2.85	196	P	Pn	06 51 41.4	-0.2
MDT				S	Sn	06 52 17.1	+1.2
TDRA	Tendrara	2.85	151	P	Pn	06 51 41.9	+0.2
TDRA				S	Sn	06 52 16.2	+0.1
ECAB	El Cabril	2.88	331	Pn	Pb	06 51 45.4	-2.1
ECAB				Sn	Sn	06 52 18.6	+2.1
ECAB				*i* Vmb_Lg		06 52 28.2	
ZHG	ZHG	3.24	230	P	Pn	06 51 48.7	+1.7
ZHG				S	Sn	06 52 27.6	+2.2
EMIN	Mina Concepcio	3.27	313	Sn	Sn	06 52 26.7	+0.6
EMIN				*i* Vmb_Lg		06 52 31.6	
PVAQ	Vaqueiros	3.75	301	P	Pn	06 51 51.3	-2.6
PVAQ				S	Sn	06 52 36.7	-1.1

IDC 21 06:59:57.4±30.0, **23°.07S×178°.64W, h550**^{km}±267^{km}, **mb3.2**/4, **mbtmp4.2**/4, **Error ellipse: s-maj=244.1km s-min=60.1km az=62.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	32.73	268	P	P	07 05 45.5	+0.2
	4.3nm,0.4s,baz=93,slow=9.7,SNR=10						
	4.3nm,0.4s						
STKA	Stephens Creek	36.19	247	P	P	07 06 13.9	-0.2
	1.2nm,0.5s,baz=101,slow=10,SNR=3.5						
	1.2nm,0.5s						
ASAR	Alice Springs	43.41	259	P	P	07 07 12.0	-0.1
	1.4nm,0.5s,baz=99,slow=7.9,SNR=15						
	1.4nm,0.5s						
WRA	Warramunga Arr	43.72	265	P	P	07 07 14.0	-0.4
	1.5nm,0.5s,baz=102,slow=8.4,SNR=68						
WRA				PcP	PcP	07 08 48.6	-0.7
	0.4nm,0.8s,baz=110,slow=2.1,SNR=2.0						
	1.5nm,0.5s						
MAW	Mawson	78.96	200	P	P	07 11 03.9	+0.1
	44nm,1.1s,baz=99,slow=13,SNR=1.7						

*NOU **21** 07:08:37.2, 37°.36S×179°.44E, h0^{km}, MLv3.7/7, Off E. Coast of N. Island, N.Z.*

*WEL **21** 07:08:42.8±0.8, 37°S±4°×17°9E±°, h12^{km}, M3.2/21, ML3.4/28, MLv3.2/21, Error ellipse: s-maj=0.0km s-min=0.0km az=97.5, confirmed*

ISC 21 07:08:41.3±2.8, **37°.32S**±0°.08×**179°.1E**±0°.1, **h8**^{km}±12^{km}, **n66, σ0^s.82**/73, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	0.67	249	P	Pg	07 08 54.6	+0.5
MXZ	Matakaoa Point	0.67	249	P	Pg	07 08 54.6	+0.5
MXZ				S	Sg	07 09 02.1	-0.8
WMGZ	Waiomatatini S	0.73	227	P	Pn	07 08 57.7	-0.1
WMGZ				S	Sb	07 09 08.0	+1.6
PKGZ	Pakihiroa	0.98	235	P	Pb	07 09 00.8	+0.2
PKGZ				S	Sg	07 09 13.6	+0.7
PUZ	Puketiti	1.00	221	P	Pn	07 09 01.5	-0.1
PUZ				S	Sb	07 09 14.6	+0.5
HAZ	Te Kaha	1.13	247	P	Pg	07 09 01.8	-1.0
HAZ				S	Sg	07 09 16.4	-1.1
TWGZ	Tauwhareparae	1.22	226	P	Pg	07 09 04.9	+0.2
TWGZ				S	Sg	07 09 20.4	-0.3
RUGZ	Raukumara Rang	1.29	240	P	Pn	07 09 05.8	0.0
CNGZ	Carnagh Statio	1.35	211	P	Pg	07 09 07.3	+0.1
TKGZ	Te Karaka	1.48	221	P	Pn	07 09 08.1	-0.1
WIZ	White Island	1.53	262	P	Pn	07 09 08.2	-0.6
MWZ	Matawai	1.60	230	P	Pn	07 09 09.8	0.0
RIGZ	Rimuhau	1.73	217	P	Pn	07 09 11.6	-0.1
WHRZ	Whale Island	1.76	252	P	Pn	07 09 12.2	+0.1
RAGZ	Rawiri	1.77	228	P	Pn	07 09 12.2	-0.1
URZ	Urewera	1.82	239	P	Pn	07 09 13.3	+0.4
URZ	Urewera	1.82	239	P	Pn	07 09 13.2	+0.2
URZ				S	Sn	07 09 35.2	-1.1
SNGZ	Shannon Statio	2.01	223	P	Pn	07 09 15.3	-0.2
EDRZ	Edgecumbe	2.02	247	P	Pn	07 09 15.7	0.0
KNZ	Kokohu	2.03	213	P	Pn	07 09 14.8	-1.0
MHGZ	Mahia Peninsul	2.05	207	P	Pn	07 09 15.9	-0.2
RTZ	Ruatahuna	2.11	232	P	Pn	07 09 17.0	+0.1
MUGZ	Murupara	2.17	237	P	Pn	07 09 17.5	-0.2
TARZ	Mount Tarawera	2.24	245	P	Pn	07 09 19.0	+0.2
RAHZ	Arahi	2.24	224	P	Pn	07 09 19.0	+0.3
WHHZ	Waihua	2.28	219	P	Pn	07 09 17.7	-1.5
MTHZ	Maungataniwha	2.34	229	P	Pn	07 09 20.1	0.0
KARZ	Kaharoa	2.36	252	P	Pn	07 09 20.0	-0.3
ALRZ	Allen Road	2.50	240	P	Pn	07 09 22.2	-0.1
NMHZ	Naumai	2.52	225	P	Pn	07 09 23.0	+0.4
ARHZ	Aropaoanui	2.54	220	P	Pn	07 09 22.9	+0.1
MRHZ	Matea Rd	2.59	234	P	Pn	07 09 23.4	-0.1
BKZ	Black Stump Fm	2.75	227	P	Pn	07 09 25.7	0.0
BKZ	Black Stump Fm	2.75	227	P	Pn	07 09 25.3	-0.5
KUZ	Kuaotunu	2.76	281	P	Pn	07 09 25.4	-0.4
KUZ	Kuaotunu	2.76	281	P	Pn	07 09 23.5	-2.2
MCHZ	McNeill Hill	2.83	221	P	Pn	07 09 26.2	-0.6
TOZ	Tahuroa Road	2.88	261	P	Pn	07 09 26.8	-0.7
KWHZ	Kaweka Forest	2.96	224	P	Pn	07 09 27.6	-1.1
KAHZ	Kahuranaki	3.02	214	P	Pn	07 09 27.9	-1.5
GRZ	Great Barrier	3.11	289	P	Pn	07 09 30.7	+0.1
WIAZ	Waiheke Island	3.21	278	P	Pn	07 09 30.5	-1.5
TMVZ	Te Maari	3.21	235	P	Pn	07 09 31.6	-0.5
BHHZ	Black Hill Sta	3.21	227	P	Pn	07 09 31.5	-0.6
ETVZ	East Tongariro	3.22	235	P	Pn	07 09 31.6	-0.6
NTVZ	North Tongarir	3.22	236	P	Pn	07 09 31.8	-0.5
OTVZ	Oturere	3.26	235	P	Pn	07 09 32.3	-0.5
NNVZ	North Ngauruho	3.28	236	P	Pn	07 09 33.2	+0.1
SNVZ	South Ngauruho	3.29	235	P	Pn	07 09 32.7	-0.6
NGZ	Ngauruhoe	3.31	235	P	Pn	07 09 33.1	-0.4
ETAZ	East Tamaki Re	3.35	275	P	Pn	07 09 34.1	+0.3
MOVZ	Moawhango	3.35	231	P	Pn	07 09 33.1	-0.9
WNVZ	Wahianoa	3.40	233	P	Pn	07 09 34.0	-0.7
MBAZ	Motutapu North	3.40	278	P	Pn	07 09 34.9	+0.3
PNHZ	Pukenui	3.44	220	P	Pn	07 09 33.5	-1.6
MTVZ	Mangateitei	3.51	233	P	Pn	07 09 35.5	-0.7
HIZ	Hauiti	3.55	249	P	Pn	07 09 37.6	+0.9
HIZ	Hauiti	3.55	249	P	Pn	07 09 37.2	+0.5
AWAZ	Awhitu Peninsu	3.56	273	P	Pn	07 09 37.2	+0.4
RVAZ	Riverhead Bore	3.65	277	P	Pn	07 09 37.4	-0.7
BFZ	Birch Farm	4.02	213	P	Pn	07 09 40.8	-2.3
WCZ	Waipu Caves	4.06	288	P	Pn	07 09 43.0	-0.6
OUZ	Omahuta	4.91	294	P	Pn	07 09 56.3	+0.9
OUZ	Omahuta	4.91	294	P	Pn	07 09 55.5	+0.1
TUWZ	Tuamarina	5.72	223	P	Pn	07 10 08.0	+1.6
CTZ	Chatham Island	7.19	154	P	Pn	07 10 28.9	+2.3

RSNC 21 07:18:23.6±0.8, **6°.85N×73°.08W, h155**^{km}±4^{km}, **ML3.1, Mw3.7, 5C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.28	202	⇑*i*P	Pn	07 18 44.3	-0.8
BARC				*e*S	Sn	07 18 58.9	-2.5
BARC				*i*		07 19 00.4	
	comp=Z,528nm,0.2s						

PAMC	**Pamplona, Colo**	**0.61**	**38**	⇓iP	Pn	07 18 47.1	+0.3
PAMC				eS	Sn	07 19 03.9	-0.5
PAMC				i		07 19 05.6	
	comp=Z,147nm,0.2s						
BRRC	**Barranca, Sant**	**0.68**	**292**	⇑iP	Pn	07 18 46.2	-0.4
BRRC				eS	Sn	07 19 03.0	-1.1
BRRC				i		07 19 07.1	
	comp=Z,263nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.41**	**257**	eP	Pn	07 18 50.9	-1.7
PTBC				eS	Sn	07 19 11.8	-3.1
PTBC				i		07 19 14.4	
	comp=Z,156nm,0.2s						
SPBC	**San Pablo de B**	**1.55**	**220**	⇑iP	Pn	07 18 53.2	-1.0
SPBC				eS	Sn	07 19 17.4	-0.3
SPBC				i		07 19 20.1	
	comp=Z,162nm,0.4s						
ZARC	**Zaragoza, Cauc**	**1.88**	**290**	eP	Pn	07 18 57.3	-0.4
ZARC				eS	Sn	07 19 23.3	-0.6
ZARC				i		07 19 29.0	
	comp=Z,195nm,0.3s						
CHIC	**Chingaza**	**2.30**	**196**	eP	Pn	07 19 02.5	-0.5
CHIC				eS	Sn	07 19 33.1	-0.3
CHIC				i		07 19 42.2	
	comp=Z,46nm,0.5s						
ROSC	**El Rosal**	**2.35**	**212**	⇑iP	Pn	07 19 04.2	+0.6
ROSC				eS	Sn	07 19 36.5	+2.2
ROSC				i		07 19 41.2	
	comp=Z,146nm,0.3s						
UREC	**San Jos de Ur**	**2.59**	**290**	eP	Pn	07 19 05.2	-1.0
UREC				eS	Sn	07 19 36.0	-3.1
UREC				i		07 19 45.9	
	comp=Z,82nm,0.2s						
LL1C	**La Loma 1 Cana**	**2.71**	**350**	eP	Pn	07 19 09.7	+2.1
LL1C				eS	Sn	07 19 41.8	0.0
VILC	**Villavicencio,**	**2.79**	**193**	eP	Pn	07 19 08.2	-0.5
VILC				eS	Sn	07 19 43.6	0.0
VILC				i		07 19 50.4	
	comp=Z,64nm,0.4s						
GUY2C	**Guyana, Caldas**	**2.79**	**235**	eP	Pn	07 19 09.3	+0.2
GUY2C				eS	Sn	07 19 45.6	+1.5
GUY2C				IAML		07 19 49.6	
	comp=Z,80nm,0.3s						
PTGC	**Puerto Gaitan,**	**2.80**	**160**	⇑iP	Pn	07 19 07.5	-1.2
PTGC				eS	Sn	07 19 40.5	-3.1
PTGC				i		07 19 44.9	
	comp=Z,40nm,0.2s						
CBOC	**Ciudad Bolivar**	**3.08**	**252**	eP	Pn	07 19 12.7	+0.3
CBOC				eS	Sn	07 19 49.4	-0.7
CBOC				i		07 19 52.1	
	comp=Z,26nm,0.2s						
DBBC	**Dabeiba**	**3.11**	**273**	eP	Pn	07 19 12.5	-0.2
DBBC				eS	Sn	07 19 49.1	-1.7
DBBC				i		07 19 56.8	
	comp=Z,37nm,0.4s						
ARGC	**Ariguani, Magd**	**3.20**	**339**	eP	Pn	07 19 15.6	+1.8
ARGC				eS	Sn	07 19 54.1	+1.4
ARGC				i		07 20 00.7	
	comp=Z,16nm,0.5s						
ANIL	**Santa Ana**	**3.29**	**225**	eP	Pn	07 19 16.6	+1.4
ANIL				eS	Sn	07 19 57.2	+2.0
ANIL				i		07 20 02.1	
	comp=Z,110nm,0.3s						
PRAC	**Prado**	**3.60**	**210**	eP	Pn	07 19 17.8	-1.1
PRAC				eS	Sn	07 20 02.3	+0.4
PRAC				i		07 20 08.9	
	comp=Z,58nm,0.4s						
APAC	**Apartado, Choc**	**3.63**	**287**	eP	Pn	07 19 18.9	-0.3
APAC				eS	Sn	07 20 01.6	-0.7
APAC				i		07 20 03.4	
	comp=Z,22nm,0.3s						
ORTC	**Ortega, Tolima**	**3.63**	**217**	eP	Pn	07 19 19.3	0.0
ORTC				eS	Sn	07 20 02.2	-0.5
ORTC				i		07 20 06.2	
	comp=Z,44nm,0.5s						
SJCC	**San Jacinto, C**	**3.67**	**326**	eP	Pn	07 19 18.7	-1.2
SJCC				eS	Sn	07 20 00.3	-3.3
SJCC				i		07 20 04.5	
	comp=Z,42nm,0.5s						
CRJC	**Cerrejon, Guaj**	**4.15**	**3**	eP	Pn	07 19 25.1	-0.9
CRJC				eS	Sn	07 20 12.0	-2.6
CRJC				i		07 20 13.7	
	comp=Z,32nm,0.2s						
GUVC	**San Jose del G**	**4.30**	**174**	eP	Pn	07 19 26.9	-1.1
GUVC				eS	Sn	07 20 15.8	-2.3
GUVC				i		07 20 17.9	
	comp=Z,17nm,0.2s						
YOTC	**Yotoco, Valle**	**4.32**	**229**	eP	Pn	07 19 27.2	-1.1
YOTC				eS	Sn	07 20 18.0	-0.9
MACC	**Macarena, Meta**	**4.74**	**189**	eP	Pn	07 19 31.4	-2.3
MACC				eS	Sn	07 20 24.1	-4.4
MACC				i		07 20 31.1	
	comp=Z,9.9nm,0.5s						
GARC	**Garzon, Huila**	**5.22**	**208**	eP	Pn	07 19 38.4	-1.9
GARC				eS	Sn	07 20 34.3	-6.0
GARC				i		07 20 44.4	
	comp=Z,17nm,0.2s						
POPC	**Popayan, Colom**	**5.59**	**220**	eP	Pn	07 19 45.0	-0.1
POPC				eS	Sn	07 20 48.0	-0.8
POPC				i		07 20 52.6	
	comp=Z,3.1nm,0.3s						
FLOC	**Florencia**	**5.83**	**206**	eP	Pn	07 19 47.1	-1.1
FLOC				eS	Sn	07 20 48.2	-6.2

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*IDC **21** 07:20:30.4±0.9, 19°.87N×120°.82E, h0km, mb3.9/8, mbtmp3.9/8, MS3.0/2, Error ellipse: s-maj=41.2km s-min=17.6km az=63.0*

*MAN **21** 07:20:35.2, 19°.86N×120°.78E, h30km, mb4.1, ML2.9, MS2.6*

ISC 21 07:20:35.5±0.8**, 19°.89N**±0°.08×**120°.8E**±0°.1**, h34**km**, n12, σ0s.56**/13**, mb4.0**/7**, 1C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CICP	**Calayan Island**	**0.91**	**133**	⇑iP	**Pn**	**07 20 51.4**	**-0.4**
CICP				i S	Sb	07 21 15.9	+11
BBP	**Basco**	**1.25**	**64**	⇓iP	**Pn**	**07 20 56.4**	**-0.1**
SGCP	**Gonzaga**	**2.03**	**144**	⇓eP	**Pn**	**07 21 07.7**	**+0.4**
SGCP				eS	**Sn**	**07 21 31.9**	**+0.4**
DAV	**Davao City (W)**	**13.57**	**159**	LR	LR	07 29 41.1	
	comp=Z,76nm,19.5s,baz=358,slow=41						
CMAR	**Chiang Mai Arr**	**20.67**	**270**	P	**P**	**07 25 12.4**	**-0.2**
	1.0nm,0.3s,baz=86,slow=8.3,SNR=4.8						
CMAR				LR	LR	07 32 12.4	
	comp=Z,33nm,20.9s,baz=95,slow=34						
	1.0nm,0.3s						
SONM	**Songino Array**	**30.22**	**341**	P	**P**	**07 26 42.3**	**-0.7**
	0.6nm,0.8s,baz=163,slow=12,SNR=4.4						
	0.6nm,0.8s						
MKAR	**Makanchi Array**	**41.25**	**320**	P	**P**	**07 28 18.0**	**+0.6**
	2.0nm,0.6s,baz=116,slow=9.5,SNR=24						
	2.0nm,0.6s						
WRA	**Warramunga Arr**	**41.75**	**161**	P	**P**	**07 28 20.6**	**-1.1**
	0.5nm,0.5s,baz=342,slow=9.1,SNR=12						
WRA				PcP	**PcP**	**07 30 18.0**	**+0.3**
	0.3nm,0.7s,baz=339,slow=2.8,SNR=1.5						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**45.14**	**163**	P	**P**	**07 28 49.0**	**0.0**
	0.6nm,0.7s,baz=346,slow=7.0,SNR=9.9						
	0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**45.22**	**323**	P	**P**	**07 28 49.6**	**+0.3**
	2.6nm,0.4s,baz=122,slow=7.8,SNR=16						
	2.6nm,0.4s						
FINES	**FINESS Array B**	**74.96**	**330**	P	**P**	**07 32 12.8**	**-0.1**
	3.1nm,1.1s,baz=93,slow=4.0,SNR=3.5						
	3.1nm,1.1s						
YKA	**Yellowknife Ar**	**87.06**	**22**	P	**P**	**07 33 18.1**	**+0.7**
	0.7nm,0.8s,baz=312,slow=4.7,SNR=14						
	0.7nm,0.8s						

IDC 21 07:27:07.6±2.6**, 54°.02N**×**86°.49E, h0**km**, mbtmp3.3**/2**, ML3.0**/2**, 18C-6D, Error ellipse: s-maj=22.9km s-min=13.5km az=52.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.99**	**266**	I	I	07 32 51.6	
	baz=84,slow=330						
ZALV	**Zalesovo Beam**	**0.99**	**266**	Pg	Pg	07 27 25.7	-0.9
	2.0nm,0.3s,baz=86,slow=17,SNR=14						
ZALV				Lg	Lg	07 27 40.1	
	4.9nm,0.3s,baz=85,slow=25,SNR=6.9						
KURK	**Kurchatov**	**5.85**	**239**	⇑P	Pb	07 28 44.0	-6.3
	4.2nm,0.5s						
KURK				⇑S	Pb	07 28 55.9	+5.6
	9.2nm,0.6s						
KUR04	**Kurchatov Arra**	**5.92**	**239**	⇑P	Pn	07 28 37.7	+1.3
KUR04				⇑S	Pb	07 28 52.5	+0.9
KUR14	**Kurchatov Arra**	**5.92**	**238**	⇓P	Pn	07 28 38.5	+2.0
KUR14				⇑S	Pb	07 28 51.8	+0.1
KUR05	**Kurchatov Arra**	**5.94**	**238**	⇓P	Pn	07 28 38.2	+1.5
KUR05				⇑S	Pb	07 28 52.6	+0.7
KUR15	**Kurchatov Arra**	**5.94**	**238**	⇓P	Pn	07 28 38.3	+1.6
KUR15				⇑S	Pb	07 28 53.0	+1.1
KURBB	**Kurchatov Arra**	**5.95**	**238**	Pn	Pn	07 28 38.4	+1.5
	0.4nm,0.3s,baz=57,slow=13,SNR=54						
KURBB	**Kurchatov Arra**	**5.95**	**238**	⇑P	Pn	07 28 38.0	+1.1
	8.2nm,0.4s						
KURBB				⇑S	Pb	07 28 53.4	+1.3
	10nm,0.3s						
KURBB	**Kurchatov Arra**	**5.95**	**238**				
	3.4nm,0.6s						
KUR16	**Kurchatov Arra**	**5.96**	**238**	⇓P	Pn	07 28 38.4	+1.4
KUR16				⇑S	Pb	07 28 53.1	+0.8
KUR06	**Kurchatov Arra**	**5.97**	**238**	⇑P	Pn	07 28 38.5	+1.4
KUR06				⇑S	Pb	07 28 52.1	-0.3
KUR17	**Kurchatov Arra**	**5.97**	**239**	⇑P	Pn	07 28 38.5	+1.3
KUR17				⇑S	Pb	07 28 53.1	+0.6
KUR07	**Kurchatov Arra**	**5.98**	**238**	⇑P	Pn	07 28 38.7	+1.4
KUR07				⇓S	Pb	07 28 52.0	-0.6
MK31	**Makanchi Array**	**7.72**	**202**	⇑Pg	Pg	07 29 43.3	+8.0
	0.1nm,0.2s,baz=316,slow=10.0,SNR=6.0						
MK31				⇓Lg	Lg	07 30 39.1	
	2.5nm,0.5s,baz=330,slow=29,SNR=16						
MKAR	**Makanchi Array**	**7.72**	**202**	Pn	Pn	07 29 01.6	+0.4
	0.2nm,0.3s,baz=25,slow=14,SNR=16						
	0.4nm,0.4s						
MAKZ	**Makanchi**	**7.77**	**204**	⇑Pg	Pg	07 29 42.3	+5.9
	1.3nm,0.7s						
MAKZ				⇑Lg	Lg	07 30 32.4	
	3.2nm,0.7s						

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*SNET **21** 07:41:57.6±1.0, 12°.65N×88°.01W, h48km±36km, ML3.2*

*INET **21** 07:41:58.1±0.7, 12°.68N×87°.87W, h23km±10km, ML3.0*

ISC 21 07:41:56.1±1.8**, 12°.57N**±0°.09×**87°.99W**±0°.06**, h27**km±14km**, n15, σ0s.50**/23**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.72**	**12**	eP	**Pn**	**07 42 10.7**	**0.0**
CNCH				eS	**Sn**	**07 42 21.3**	**+0.4**
CNCH				IAML		07 42 26.5	
	comp=Z,5μm,0.3s						
LCND	**La Caada**	**0.74**	**7**	eP	**Pb**	**07 42 10.7**	**+0.2**
LCND				eS	**Sn**	**07 42 21.4**	**+0.1**
LCND				IAML		07 42 24.4	
	comp=Z,1μm,0.3s						
VSM	**San Miguel**	**0.90**	**342**	eP	**Pb**	**07 42 13.6**	**+0.3**
CRIN	**San Cristobal**	**0.92**	**82**	eP	**Pn**	**07 42 13.8**	**+0.4**
CRIN				eS	**Sn**	**07 42 26.9**	**+1.0**
ALJI	**Alcalda de J**	**0.95**	**323**	eP	**Pb**	**07 42 13.8**	**0.0**
ALJI				eS	**Sb**	**07 42 25.8**	**-0.2**
ALJI				IAML		07 42 29.6	
	comp=Z,356nm,0.2s						
PACA	**Pacayal**	**0.95**	**340**	eP	**Pb**	**07 42 13.9**	**-0.2**
PACA				eS	**Sb**	**07 42 26.6**	**+0.2**
TECA	**Tecapa**	**1.05**	**332**	eP	**Pn**	**07 42 15.4**	**+0.1**
TELN	**Telica**	**1.13**	**88**	eP	**Pn**	**07 42 16.4**	**+0.1**
PQSS	**Presa 15 de Se**	**1.19**	**332**	eP	**Pn**	**07 42 16.8**	**-0.2**
PQSS				eS	**Sn**	**07 42 32.4**	**0.0**
PQSS				IAML		07 42 33.3	
	comp=Z,85nm,0.1s						
SCLA	**Alcaldia de Sa**	**1.34**	**327**	eP	**Pn**	**07 42 19.0**	**-0.2**
SCLA				eS	**Sn**	**07 42 36.3**	**+0.2**
MOMN	**Momotombo**	**1.42**	**96**	eP	**Pn**	**07 42 20.1**	**-0.2**
SJTE	**Alcalda de S**	**1.44**	**316**	eP	**Pn**	**07 42 21.4**	**+0.9**
SJTE				eS	**Sn**	**07 42 37.8**	**-0.9**
TGUH	**Tegucigalpa,Un**	**1.64**	**25**	eP	**Pn**	**07 42 22.7**	**-0.6**
MATN	**Matagalpa**	**2.04**	**80**	eP	**Pn**	**07 42 28.0**	**-0.8**
BOAB	**BOACO BROADBAN**	**2.27**	**93**	eP	**Pn**	**07 42 31.2**	**-0.7**

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*UCR **21** 07:47:39.1±1.7, 8°.40N×82°.87W, h20km±3km, MW3.6*

*UPA **21** 07:47:39.3±1.1, 8°.42N×82°.82W, h9km±5km, MW3.4*

ISC 21 07:47:38.9±0.9**, 8°.41N**±0°.03×**82°.87W**±0°.02**, h17**km±6km**, n34, σ0s.70**/56**, 9C-4D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	**La Esperanza,**	**0.07**	**95**	i P	**Pg**	**07 47 41.7**	**-0.5**
CCOL	**Caracol de Cor**	**0.11**	**268**	eP	**Pg**	**07 47 42.7**	**+0.2**
CCOL				eS	**Sb**	**07 47 46.4**	**+1.4**
CDITO	**Canoas**	**0.16**	**357**	⇑iP	**Pg**	**07 47 43.2**	**-0.1**
CDITO				eS	**Sb**	**07 47 46.7**	**+0.2**
PTPM	**Petroterminale**	**0.21**	**184**	i P	**Pg**	**07 47 44.1**	**+0.2**
PTPM				i S	**Sb**	**07 47 48.5**	**+0.7**
FITO	**Golfito**	**0.36**	**306**	⇑eP	**Pg**	**07 47 45.6**	**-0.8**
EDAD	**Golfito**	**0.38**	**309**	⇑eP	**Pg**	**07 47 46.1**	**-0.8**
EDAD				eS	**Sg**	**07 47 52.1**	**-0.1**
MLIR3	**Monte Lirio, C**	**0.38**	**6**	i P	**Pb**	**07 47 47.4**	**+0.2**
MLIR3				i S	**Sn**	**07 47 56.1**	**-0.6**
DVD	**David**	**0.41**	**87**	eP	**Pg**	**07 47 46.7**	**-0.6**
DVD				eS	**Sg**	**07 47 52.9**	**-0.2**
BRU2	**Volcan**	**0.42**	**24**	⇓iP	**Pg**	**07 47 47.7**	**+0.2**
BRU2				i S	**Sb**	**07 47 54.8**	**+0.8**
BRU2	**Volcan**	**0.42**	**24**	⇓iP	**Pg**	**07 47 47.6**	**+0.1**
BRU2				eS	**Sb**	**07 47 54.6**	**+0.6**
VITO	**San Vito**	**0.42**	**346**	⇑iP	**Pg**	**07 47 47.9**	**+0.3**
VITO				eS	**Sb**	**07 47 55.6**	**+1.6**
EDSV	**San Vito**	**0.42**	**345**	⇑iP	**Pg**	**07 47 47.8**	**+0.2**
EDSV				eS	**Sb**	**07 47 55.7**	**+1.6**
PTAR3	**Potrerillos Ar**	**0.46**	**53**	i P	**Pg**	**07 47 48.0**	**-0.3**
PTAR3				i S	**Sn**	**07 47 58.5**	**-0.2**
BC3P	**Paso Ancho**	**0.47**	**32**	i P	**Pg**	**07 47 48.3**	**-0.2**
BC3P				i S	**Sb**	**07 47 57.0**	**+1.3**
LNBQ3	**Los Naranjos,**	**0.56**	**48**	i P	**Pg**	**07 47 49.4**	**-0.8**
LNBQ3				i S	**Sb**	**07 47 58.9**	**+0.7**
EDP2	**Potrero Grande**	**0.67**	**333**	⇑eP	**Pg**	**07 47 51.9**	**-0.3**
EDP2				eS	**Sb**	**07 48 02.5**	**+1.2**
POTG	**Potrero Grande**	**0.68**	**338**	⇑eP	**Pg**	**07 47 52.1**	**-0.3**
POTG				eS	**Sb**	**07 48 02.4**	**+0.8**
EDPN	**Palmar Norte**	**0.80**	**313**	⇑iP	**Pg**	**07 47 53.3**	**-1.2**
EDPN				eS	**Sg**	**07 48 05.1**	**-0.1**
PLAN	**Los Planes de**	**0.85**	**288**	eP	**Pg**	**07 47 54.8**	**-0.6**
BURE	**Buenos Aires**	**0.89**	**328**	eP	**Pb**	**07 47 55.6**	**-0.3**
BURE				eS	**Sb**	**07 48 08.6**	**+1.1**
SRBA	**San Rafael, Bu**	**0.95**	**329**	⇑eP	**Pb**	**07 47 56.3**	**-0.7**
SRBA				eS	**Sb**	**07 48 08.9**	**-0.4**
CNI2	**El Empalme, Bo**	**1.08**	**21**	i P	**Pb**	**07 47 58.8**	**-0.3**
CNI2				i S	**Sb**	**07 48 13.2**	**+0.3**
PEZE	**Perez Zeledon,**	**1.25**	**320**	eP	**Pn**	**07 48 01.1**	**-0.7**
PEZE				eS	**Sb**	**07 48 18.9**	**+0.8**
CDM	**Cerro de Muert**	**1.44**	**322**	⇓iP	**Pn**	**07 48 04.0**	**-0.6**
MRVA	**Moravia de Chi**	**1.51**	**338**	⇓eP	**Pn**	**07 48 05.2**	**-0.2**
MRVA				eS	**Sn**	**07 48 25.2**	**+0.4**
RIMA	**Rio Macho**	**1.67**	**324**	eP	**Pn**	**07 48 07.0**	**-0.5**
RIMA				eS	**Sn**	**07 48 28.4**	**-0.2**
RAZU	**San Marcos de**	**1.69**	**317**	eP	**Pn**	**07 48 08.3**	**+0.5**
REPA	**Paraso**	**1.72**	**325**	eP	**Pn**	**07 48 08.0**	**-0.2**
VERB	**Verbena**	**1.73**	**332**	eP	**Pn**	**07 48 08.9**	**+0.6**
LCR2	**La Lucha 2**	**1.74**	**320**	eP	**Pn**	**07 48 08.0**	**-0.5**
ABE2	**San Pablo**	**1.74**	**318**	eP	**Pn**	**07 48 09.4**	**+0.8**
VTCV	**VTCV, Calle Va**	**1.78**	**331**	eP	**Pn**	**07 48 09.9**	**+0.8**
RAFA	**San Farael, Vo**	**1.80**	**329**	eP	**Pn**	**07 48 10.0**	**+0.5**
ACOS	**Acosta**	**1.88**	**317**	eP	**Pn**	**07 48 10.4**	**0.0**

TEH 21 07:50:16.0, 28°.32N×**54°.95E, h14**km±54km**, ML3.5, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.82**	**218**	Pg	Pg	07 50 31.8	-0.2
JHRM	**Jahrom**	**1.22**	**279**	Pg	Pg	07 50 40.0	+0.5
BNDS	**Bandar-Abbas**	**1.42**	**130**	Pg	Pn	07 50 41.1	-0.4
GENO	**Geno**	**1.42**	**130**	Pg	Pn	07 50 41.6	+0.1
GENO				Sg	Sg	07 51 03.9	+2.0
IBND	**Bandar-abas**	**1.66**	**121**	Pg	Pb	07 50 46.2	-0.1
QIR1	**Qir**	**1.68**	**276**	Pg	Pb	07 50 47.0	+0.2
GHIR	**Ghir-Karzin**	**1.73**	**269**	Pg	Pn	07 50 46.4	+0.7
LMD1	**Lamerd**	**1.86**	**239**	Pn	Pb	07 50 49.2	-0.5
NGRK	**Negar Kerman**	**2.04**	**49**	Pn	Pb	07 50 52.1	-1.0
KRBR	**Kerman**	**2.29**	**43**	Pn	Pn	07 50 55.1	+1.5
TVBK	**TV Kerman**	**2.29**	**43**	Pn	Pb	07 50 55.6	-1.8
KHGB	**Koh Gabri**	**2.44**	**33**	Pn	Pn	07 50 57.4	+1.8
CHMN	**Cheshme madani**	**2.74**	**55**	Pn	Pb	07 51 02.5	-2.4
IMEH	**Mehriz**	**3.07**	**355**	Pn	Pn	07 51 06.3	+2.0
KBAM	**BAM**	**3.18**	**74**	Pn	Pn	07 51 07.2	+1.5
AHBU	**AHRAM**	**3.26**	**280**	Pn	Pn	07 51 08.1	+1.5
YZKH	**Yazd**	**4.07**	**356**	Pn	Pn	07 51 19.8	+2.0
IBRJ	**Brojen**	**4.79**	**319**	Pn	Pn	07 51 29.7	+1.7
NASN	**Na'in**	**4.83**	**338**	Pn	Pn	07 51 29.5	+1.0
TPRV	**Parvadeh(Tabas**	**4.92**	**17**	Pn	Pn	07 51 31.7	+2.1
ANAR	**Anarak**	**4.96**	**348**	Pn	Pn	07 51 31.8	+1.6
NHDN	**Nehbandan**	**5.38**	**54**	Pn	Pn	07 51 37.9	+1.9
IPIR	**Pirpir**	**5.58**	**322**	Pn	Pn	07 51 40.0	+1.2
TKDS	**Koohdasht(Taba**	**5.59**	**19**	Pn	Pn	07 51 40.8	+2.0
KRSH	**Karshahi**	**6.12**	**338**	Pn	Pn	07 51 47.4	+1.2
GHVR	**GHOM**	**6.88**	**334**	Pn	Pn	07 51 58.4	+1.8
KHMZ	**Khomeyn**	**6.89**	**323**	Pn	Pn	07 51 56.9	+0.1

IDC 21 07:58:17.2±2.5**, 53°.70N**×**86°.64E, h0**km**, mbtmp2.8**/2**, ML2.5**/2**, Error ellipse: s-maj=21.2km s-min=12.7km az=68.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.11**	**284**	I	I	08 04 48.4	
	baz=100,slow=332,SNR=17						
ZALV	**Zalesovo Beam**	**1.11**	**284**	Pg	Pg	07 58 37.5	-0.9
	0.8nm,0.3s,baz=105,slow=13,SNR=7.0						
ZALV				Lg	Lg	07 58 53.5	
	1.8nm,0.3s,baz=105,slow=26,SNR=9.9						
KURBB	**Kurchatov Arra**	**5.86**	**242**	Pn	Pn	07 59 46.7	+1.4
	0.1nm,0.3s,baz=57,slow=14,SNR=5.4						
KURBB				Lg	Lg	08 01 24.4	
	baz=57,slow=38,SNR=2.6						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**7.46**	**204**	Pn	Pn	08 00 08.2	+1.0
	0.1nm,0.3s,baz=24,slow=13,SNR=7.9						
MKAR				Lg	Lg	08 02 12.6	
	baz=32,slow=25,SNR=3.7						
	0.2nm,0.3s						

IDC 21 08:01:46.4±2.6**, 53°.66N**×**86°.84E, h0**km**, mbtmp2.8**/2**, ML2.4**/2**, Error ellipse: s-maj=23.9km s-min=14.1km az=66.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.23**	**284**	I	I	08 08 30.0	
	0.1nm,0.7s,baz=100,slow=333,SNR=25						
ZALV	**Zalesovo Beam**	**1.23**	**284**	Pg	Pb	08 02 10.4	-0.1
	0.7nm,0.3s,baz=100,slow=11,SNR=21						
ZALV				Lg	Lg	08 02 25.9	
	1.0nm,0.3s,baz=104,slow=29,SNR=8.0						
KURBB	**Kurchatov Arra**	**5.95**	**243**	Pn	Pn	08 03 16.4	+0.6
	0.1nm,0.3s,baz=58,slow=14,SNR=4.1						
KURBB				Lg	Lg	08 04 55.5	
	baz=62,slow=32,SNR=4.2						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**7.47**	**205**	Pn	Pn	08 03 37.8	+1.2
	0.1nm,0.3s,baz=26,slow=14,SNR=10						
MKAR				Lg	Lg	08 05 42.2	
	baz=19,slow=32,SNR=1.6						
	0.3nm,0.6s						

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*NNC **21** 08:14:08.6±4.2, 54°.61N×83°.71E, h0km, mb3.4, mpv2.7, Error ellipse: s-maj=32.9km s-min=9.5km az=2.0, Suspected Mining explosion.*

*IDC **21** 08:14:08.4±1.4, 54°.59N×83°.75E, h0km, mbtmp3.3/3, ML2.8/3, Error ellipse: s-maj=13.3km s-min=9.1km az=5.0*

ISC 21 08:14:06.3±2.2**, 54°.7N**±0°.1×**83°.73E**±0°.06**, h0**km**, n9, σ1s.39**/13**, 4C-6D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.00**	**140**	I	I	08 20 25.7	
	baz=314,slow=328,SNR=6.4						
ZAA0	**Zalesovo Array**	**1.00**	**140**	⇑P	**Pb**	**08 14 25.8**	**-0.6**
	0.4nm,0.3s						
ZAA0				⇓S	**Sb**	**08 14 39.6**	**-0.4**
	3.4nm,0.3s						
ZALV	**Zalesovo Beam**	**1.00**	**140**	Pg	**Pg**	**08 14 24.6**	**-0.8**
	4.1nm,0.3s,baz=320,slow=18,SNR=31						
ZALV				Lg	Lg	08 14 39.3	
	6.5nm,0.3s,baz=314,slow=30,SNR=6.1						
KURK	**Kurchatov**	**5.07**	**220**	⇓Pg	**Pg**	**08 15 42.3**	**-1.0**
	1.5nm,0.5s						
KURK				⇓Sn	**Sn**	**08 16 21.8**	**-0.8**
	0.6nm,0.4s						
KURK				⇑Lg	Lg	08 16 45.0	
	5.7nm,0.7s						
KURBB	**Kurchatov Arra**	**5.18**	**220**	Pn	**Pn**	**08 15 27.0**	**+2.0**
	0.2nm,0.3s,baz=39,slow=13,SNR=5.4						
KURBB				Sn	**Sn**	**08 16 23.6**	**-1.8**
	0.1nm,0.3s,baz=32,slow=22,SNR=1.5						
KURBB				Lg	Lg	08 16 51.7	
	0.1nm,0.3s,baz=40,slow=32,SNR=5.4						
	1.2nm,0.2s						
KURBB	**Kurchatov Arra**	**5.18**	**220**	⇓Pg	**Pg**	**08 15 44.5**	**-0.9**
	0.8nm,0.5s,baz=39,slow=13						
KURBB				⇓Sn	**Sn**	**08 16 25.5**	**+0.2**
	3.4nm,0.7s						
KURBB				⇑Lg	Lg	08 16 53.5	
	13nm,0.8s						
MK31	**Makanchi Array**	**7.98**	**187**	Pn	**Pn**	**08 16 04.8**	**+1.3**
	0.3nm,0.5s,baz=39,slow=13,SNR=11						
MK31				⇓Sn	**Sn**	**08 17 36.8**	**+2.3**
	0.1nm,0.3s,baz=302,slow=34						
MK31				⇑Lg	Lg	08 18 17.0	
	0.5nm,0.7s,baz=32,slow=31						
MKAR	**Makanchi Array**	**7.98**	**187**	Pn	**Pn**	**08 16 04.0**	**+0.5**
	0.2nm,0.3s,baz=11,slow=13,SNR=11						
MKAR				Lg	Lg	08 18 17.4	
	0.1nm,0.3s,baz=8.9,slow=31,SNR=3.8						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**8.07**	**263**	Pn	**Pn**	**08 16 05.6**	**+1.0**
	0.1nm,0.3s,baz=68,slow=13,SNR=12						
	1.4nm,0.3s						

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*NOU **21** 08:25:06.8, 42°.11S×174°.22E, h26km, MLv3.4/7, Off E. Coast of S. Island, N.Z.*

*WEL **21** 08:25:06.9±0.3, 42°S±2°×17°4E±°, h14km±3km, M2.8/17, ML3.1/17, MLv2.8/17, Error ellipse: s-maj=0.0km s-min=0.0km az=103.1, confirmed*

ISC 21 08:25:06.1±1.1**, 41°.98S**±0°.03×**174°.05E**±0°.03**, h15**km±9km**, n76, σ1s.32**/81**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.27**	**28**	P	**Pg**	**08 25 13.5**	**+1.8**
BSWZ	**Blackbirch Sta**	**0.30**	**334**	P	**Pg**	**08 25 12.4**	**+0.1**
BSWZ				S	**Sg**	**08 25 15.8**	**-0.7**
TUWZ	**Tuamarina**	**0.56**	**352**	P	**Pg**	**08 25 17.1**	**0.0**
TUWZ				S	**Sb**	**08 25 24.3**	**-1.1**
KHZ	**Kahutara**	**0.57**	**221**	P	**Pb**	**08 25 19.3**	**+1.5**
KHZ	**Kahutara**	**0.57**	**221**	P	**Pb**	**08 25 19.4**	**+1.5**
KHZ				S	**Sn**	**08 25 29.2**	**+0.2**
TCW	**Tory Channel**	**0.79**	**13**	P	**Pg**	**08 25 21.3**	**-0.2**
TCW				S	**Sb**	**08 25 33.4**	**+1.3**
SNZO	**South Karori**	**0.83**	**36**	P	**Pn**	**08 25 23.5**	**+0.2**
THZ	**Tophouse**	**0.88**	**284**	P	**Pg**	**08 25 23.0**	**-0.2**
WEL	**Wellington**	**0.88**	**38**	P	**Pn**	**08 25 24.4**	**+0.4**
NNZ	**Nelson**	**0.92**	**327**	P	**Pg**	**08 25 23.1**	**-0.7**
NNZ				S	**Sg**	**08 25 34.4**	**-1.4**
PLWZ	**Palliser**	**0.99**	**66**	P	**Pg**	**08 25 25.6**	**+0.3**
MRNZ	**Matariki Terra**	**1.13**	**301**	P	**Pb**	**08 25 27.2**	**-0.1**
CAW	**Cannon Point**	**1.16**	**41**	P	**Pb**	**08 25 28.0**	**+0.1**
DUWZ	**D’Urville Isla**	**1.19**	**355**	P	**Pb**	**08 25 27.8**	**-0.5**
PAWZ	**Paruwai Farm**	**1.20**	**60**	P	**Pb**	**08 25 28.0**	**-0.4**
GVZ	**Greta Valley S**	**1.24**	**217**	P	**Pn**	**08 25 30.0**	**+1.1**
TKNZ	**Takaka Hill**	**1.25**	**319**	P	**Pn**	**08 25 28.8**	**-0.3**
KIW	**Kapiti Island**	**1.30**	**30**	P	**Pn**	**08 25 30.1**	**+0.4**
TRWZ	**Traveller**	**1.36**	**65**	P	**Pn**	**08 25 30.1**	**-0.4**
MTW	**Mount Morrison**	**1.37**	**53**	P	**Pn**	**08 25 30.3**	**-0.4**
OGWZ	**Otaki Gorge**	**1.44**	**36**	P	**Pn**	**08 25 31.8**	**+0.1**
LTZ	**Lake Taylor**	**1.54**	**238**	P	**Pn**	**08 25 33.7**	**+0.6**
HOWZ	**Holdsworth Sta**	**1.55**	**46**	P	**Pn**	**08 25 32.8**	**-0.4**
AMCZ	**Amberley**	**1.58**	**220**	P	**Pn**	**08 25 33.9**	**+0.4**
QRZ	**Quartz Range**	**1.63**	**315**	P	**Pn**	**08 25 35.2**	**+0.9**
QRZ	**Quartz Range**	**1.63**	**315**	P	**Pn**	**08 25 35.1**	**+0.9**
TMWZ	**Te Maipa**	**1.64**	**58**	P	**Pn**	**08 25 33.8**	**-0.6**
DSZ	**Denniston Nort**	**1.69**	**277**	P	**Pb**	**08 25 37.0**	**0.0**
MRZ	**Mangatainoka R**	**1.75**	**42**	P	**Pn**	**08 25 35.7**	**-0.3**
OXZ	**Oxford**	**2.00**	**227**	P	**Pn**	**08 25 38.8**	**-0.6**

MQZ	McQueen's Vall	2.00	210	P	Pn	08 25 38.6	-0.8
PRWZ	Pori Road	2.03	46	P	Pn	08 25 39.2	-0.7
AKCZ	Akaroa Harbour	2.06	204	P	Pn	08 25 40.5	+0.2
INZ	Inchbonnie	2.07	248	P	Pn	08 25 41.6	+1.3
BFZ	Birch Farm	2.10	53	P	Pn	08 25 39.6	-1.2
BFZ	Birch Farm	2.10	53	P	Pn	08 25 39.5	-1.3
RACZ	Rakaia	2.24	218	P	Pn	08 25 42.4	-0.2
DVHZ	Dannevirke	2.32	44	P	Pg	08 25 51.3	+0.7
WAZ	Wanganui	2.34	18	P	Pb	08 25 46.7	-1.3
MHCZ	Mount Hutt	2.39	229	P	Pn	08 25 44.4	-0.4
TSZ	Takapari Road	2.41	38	P	Pn	08 25 43.0	-2.0
LREZ	Lake Rotokare	2.54	6	P	Pb	08 25 50.1	-1.2
PNHZ	Pukenui	2.63	39	P	Pn	08 25 47.2	-0.9
KHEZ	Kahui Hut	2.69	359	P	Pn	08 25 51.4	+2.5
KHEZ	Kahui Hut	2.69	359	P	Pb	08 25 52.9	-1.0
NEZ	North Egmont	2.71	1	P	Pb	08 25 52.5	-1.9
NBEZ	Newall Road No	2.72	357	P	Pb	08 25 54.5	+0.1
PKE	Pukeiti	2.79	359	P	Pb	08 25 54.0	-1.6
DREZ	Durham Road	2.79	2	P	Pb	08 25 53.9	-1.8
RPZ	Rata Peaks	2.80	231	P	Pn	08 25 50.4	0.0
RPZ	Rata Peaks	2.80	231	P	Pn	08 25 50.3	-0.1
MTVZ	Mangateitei	2.81	23	P	Pb	08 25 56.2	+0.1
PKVZ	Pokaka	2.87	21	P	Pb	08 25 56.0	-1.0
ARCZ	Arundel	2.88	226	P	Pn	08 25 51.3	-0.2
MOVZ	Moawhango	2.88	27	P	Pb	08 25 56.7	-0.5
WNVZ	Wahianoa	2.90	24	P	Pn	08 25 54.4	+2.5
TRVZ	Turoa	2.92	24	P	Pn	08 25 55.3	+3.1
BHHZ	Black Hill Sta	2.92	32	P	Pb	08 25 57.9	-0.1
FWVZ	Far West T-bar	2.96	23	P	Pb	08 25 57.5	-1.1
TUVZ	Tukino	2.98	25	P	Pb	08 25 58.7	-0.2
NGZ	Ngauruhoe	3.04	23	P	Pb	08 25 58.8	-1.2
SNVZ	South Ngauruho	3.05	24	P	Pb	08 25 58.9	-1.2
GCSZ	Gaunt Creek Bo	3.05	243	P	Pb	08 25 58.8	-1.3
OTVZ	Oturere	3.08	24	P	Pn	08 25 55.4	+1.1
NNVZ	North Ngauruho	3.09	23	P	Pb	08 25 58.3	-2.5
WTVZ	West Tongariro	3.10	23	P	Pb	08 26 01.4	+0.5
ETVZ	East Tongariro	3.11	25	P	Pb	08 25 59.5	-1.8
TMVZ	Te Maari	3.13	24	P	Pn	08 25 58.0	+3.0
NTVZ	North Tongarir	3.14	24	P	Pb	08 25 59.7	-2.0
TMZ	Timaru	3.27	222	P	Pn	08 25 56.3	-0.6
BKZ	Black Stump Fm	3.38	34	P	Pb	08 26 05.7	+0.1
HIZ	Hauiti	3.52	10	P	Pn	08 26 03.3	+3.0
TLZ	Tolley Road	3.82	18	P	Pn	08 26 08.9	+4.5
ODZ	Otahua Downs	3.94	218	P	Pn	08 26 05.2	-0.7
ODZ	Otahua Downs	3.94	218	P	Pn	08 26 05.1	-0.9
RTZ	Ruatahuna	4.04	35	P	Pn	08 26 10.2	+2.6

IDC **21** *08:31:18.1±0.4, 6°.06N×77°.60W, h0^{km}, mb4.7/24, mbtmp4.7/30, ML3.7/6, MS4.0/44, Error ellipse: s-maj=14.6km s-min=9.4km az=55.0*

RSNC **21** *08:31:19.5±1.4, 6°.14N×77°.76W, h1^{km}±6^{km}, ML4.3, Mw4.9*

VAO **21** *08:31:20.1±0.3, 5°.99N×77°.46W, h10^{km}, mb4.9*

NEIC **21** *08:31:21.0±2.2, 6°.29N±0°.06×77°.52W±0°.06, h7^{km}±4^{km}, mb5.0/168, Error ellipse: s-maj=10.4km s-min=7.9km az=46.0*

MOS **21** *08:31:21.2±1.2, 6°.12N×77°.70W, h27^{km}, mb5.2/33, Error ellipse: s-maj=10.3km s-min=5.9km az=113.5*

UPA **21** *08:31:21.4±2.0, 6°.28N×77°.62W, h18^{km}, MW4.9*

BJI **21** *08:31:22.0±0.0, 6°.20N×77°.50W, h12^{km}, mB5.6/1, Ms5.2/2, Ms7 4.8/2*

GCMT **21** *08:31:25.0±0.3, 6°.22N±0°.02×77°.61W±0°.02, h15^{km}, MW5.0/86, Moment Tensor Solution. s23,c26; s86,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.78±.08; M$_{\theta\theta}$-0.20±.07; M$_{\phi\phi}$-1.58±.07; M$_{r\theta}$0.80±.29; M$_{\theta\phi}$0.76±.05; M$_{\phi r}$-4.03±.27; Best double couple: M$_0$4.50700×10^{16} NP1:φ$_s$168.00000°, δ78.00000°, λ95.00000°. NP2: φ$_s$324.00000°, δ13.00000°, λ67.00000°. Principal axes: T 4.4800, Plg57.0000°, Azm84.0000°; N 0.0500, Plg5.0000°, Azm347.0000°; P -4.5340, Plg33.0000°, Azm253.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR **21** *08:31:26.1, 5°.90N×76°.75W, h33^{km}, mb5.1, Ms4.4*

ISC 21 08:31:19.9±0.7**, 6°.16N**±0°.02×**77°.65W**±0°.03**, h11**^{km}±4^{km}**, n1013,** σ**1ˢ52**/1076**, mb5.0**/159**, MS4.0**/43**, 33C-27D, Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIZC	Pizarro, Choco	1.22	166	⇓iP	Pn	08 31 41.8	-1.1
PIZC				eS	Sb	08 31 57.0	-1.8
PIZC				i		08 32 27.5	
	comp=Z,6µm,0.6s						
CBOC	Ciudad Bolivar	1.65	100	⇑iP	Pn	08 31 47.3	-1.8
CBOC				eS	Sn	08 32 10.2	-0.2
CBOC				i		08 32 20.7	
	comp=Z,5µm,0.7s						
DBBC	Dabeiba	1.66	59	⇑iP	Pn	08 31 48.5	-0.6
DBBC				eS	Sn	08 32 10.5	0.0
DBBC				i		08 32 22.6	
	comp=Z,4µm,0.7s						
APAC	Apartado, Choc	2.03	31	⇑iP	Pn	08 31 54.5	+0.5
APAC				eSn	Sb	08 32 23.5	+1.4
APAC				i		08 32 44.8	
	comp=Z,2µm,0.7s						
MALC	Bahia Malaga	2.16	172	⇓iP	Pn	08 31 55.5	-0.3
MALC				eS	Sn	08 32 23.0	+0.4
UPD2	Meteti	2.40	351	⇓iP	Pn	08 31 59.3	+0.2
UPD2	Meteti	2.40	351	eP	Pn	08 31 59.4	+0.2
UPD2				eS	Sn	08 32 28.6	+0.1
UPD2				i		08 32 48.6	
	comp=Z,3µm,0.7s						
GUY2C	Guyana, Caldas	2.46	112	⇑iP	Pn	08 31 59.8	-0.5
GUY2C				eS	Sn	08 32 30.9	+0.3
YOTC	Yotoco, Valle	2.52	149	eP	Pn	08 31 59.5	-1.5
YOTC				eS	Sb	08 32 36.8	+0.4
UREC	San Jos de Ur	2.63	53	⇑iP	Pn	08 32 02.8	+0.4
UREC				eS	Sb	08 32 39.8	+0.4
UREC				i		08 32 44.0	
	comp=Z,2µm,0.7s						
ANIL	Santa Ana	2.78	126	eP	Pn	08 32 05.5	+0.8
ANIL				eS	Sn	08 32 39.2	+0.7
ANIL				i		08 32 52.0	
	comp=Z,2µm,0.6s						
PCRI3	Pocri, Los San	2.87	301	⇓iP	Pn	08 32 04.3	-1.2
PCRI3				eS	Sn	08 32 36.6	-3.5
LCBC	Los crdobas,	2.96	25	eP	Pn	08 32 08.8	+1.9
LCBC				eS	Sb	08 32 48.6	-0.5
LCBC				i		08 32 53.6	
	comp=Z,519nm,0.6s						
AZU	Azuero	3.07	302	⇓iP	Pn	08 32 07.1	-1.3
AZU				i S	Sn	08 32 42.2	-2.9
AZU	Azuero	3.07	302	⇓iP	Pn	08 32 07.0	-1.3
AZU				eS	Sn	08 32 41.4	-3.7
AZU				i		08 32 51.3	
	comp=Z,862nm,0.4s						
ZARC	Zaragoza, Cauc	3.07	64	⇑iP	Pn	08 32 09.1	+0.7
ZARC				eS	Sn	08 32 47.8	+2.6
ZARC				i		08 33 03.2	
	comp=Z,2µm,0.6s						
GR1C	Gorgona, Isla	3.18	189	eP	Pn	08 32 11.4	+1.5
GR1C				i		08 32 36.3	
	comp=Z,2µm,0.6s						
PTBC	PUERTO BERRIO,	3.19	83	⇑iP	Pn	08 32 11.2	+1.1
PTBC				eS	Sb	08 32 53.1	-2.6
PTBC				i		08 33 03.5	
	comp=Z,1µm,0.7s						
TABO3	Taboga, Panama	3.23	324	⇑eP	Pn	08 32 08.9	-1.7
CHIT3	Chitre	3.28	303	⇓iP	Pn	08 32 10.1	-1.1
CHIT3				i S	Sn	08 32 47.9	-2.3
CHIT3				eS	Sb	08 32 48.2	-10
ORTC	Ortega, Tolima	3.28	133	⇑iP	Pn	08 32 11.9	+0.7
ORTC				eS	Sb	08 32 59.5	+1.4
ORTC				i		08 33 09.4	
	comp=Z,692nm,0.6s						
CNTA3	Canitas, Panam	3.28	338	eP	Pn	08 32 11.4	+0.2
PESE3	Pese, Herrera	3.42	301	⇓iP	Pn	08 32 12.3	-0.8
PESE3				i S	Sn	08 32 50.5	-3.2
ARRA3	Arraijan, Pana	3.42	325	⇑iP	Pn	08 32 11.6	-1.7
ARRA3				i S	Sn	08 32 49.9	-4.0
CHOR3	La Chorrera	3.44	322	⇓eP	Pn	08 32 11.7	-1.7
CHOR3				i S	Sn	08 32 53.3	-0.8
VTON	El Valle, Cocl	3.45	315	⇑iP	Pn	08 32 12.8	-0.8
VTON				i S	Sn	08 32 53.8	-0.7
PNME	Penonome	3.52	311	⇓iP	Pn	08 32 13.5	-1.0
PNME				eS	Sn	08 32 54.8	-1.4
ROSC	El Rosal	3.56	111	Pn	Pn	08 32 15.8	+0.2
	comp=Z,15nm,0.3s,baz=332,slow=4.1,SNR=81						
ROSC				Lg	Lg	08 33 10.0	
	comp=Z,28nm,0.3s,baz=37,slow=22,SNR=2.1						
	comp=Z,342nm,0.9s						
ROSC	El Rosal	3.56	111	Pn	Pn	08 32 17.8	+2.3
ROSC	El Rosal	3.56	111	eP	Pn	08 32 17.8	+2.3
ROSC				eS	Sn	08 33 01.7	+3.9
ROSC				i		08 33 31.1	
	comp=Z,778nm,0.7s						
GAMB1	Gamboa	3.58	325	i P	Pn	08 32 13.9	-1.5
GAMB1				i S	Sn	08 32 55.6	-2.1
SPBC	San Pablo de B	3.59	98	⇑iP	Pn	08 32 16.6	+1.0
SPBC				eS	Sb	08 33 04.8	-2.4
SPBC				i		08 33 17.9	
	comp=Z,536nm,0.6s						
MARI3	Mariato, Verag	3.63	294	⇑iP	Pn	08 32 15.7	-0.4
MARI3				i S	Sn	08 32 58.3	-0.7
PRAC	Prado	3.67	131	Pn	Pn	08 32 17.6	+0.9
PRAC	Prado	3.67	131	eP	Pn	08 32 20.1	+3.4
PRAC				eS	Sb	08 33 13.4	+4.0
PRAC				i		08 33 19.0	
	comp=Z,879nm,0.8s						
BCIP	Isla Barro Col	3.69	324		Pn	08 32 15.2	-1.7
BCIP	Isla Barro Col	3.69	324	⇓eP	Pn	08 32 14.8	-2.1
BCIP	Isla Barro Col	3.69	324	P	Pn	08 32 15.2	-1.7
BCIP	Isla Barro Col	3.69	324	eP	Pn	08 32 14.9	-2.1
BCIP				eS	Sn	08 32 59.0	-1.5
BCIP				i		08 33 38.4	
	comp=Z,187nm,0.8s						
POPC	Popayan, Colom	3.73	165	eP	Pn	08 32 17.6	0.0
POPC				eS	Sn	08 32 58.6	-3.0
SABA3	Sabanitas, Col	3.82	326	⇓eP	Pn	08 32 15.5	-3.2
STIA3	Santiago, Vera	3.82	300	⇓iP	Pn	08 32 18.3	-0.4
SPIL	Cristobal, Col	3.82	324	eP	Pn	08 32 17.7	-1.0
CALO3	Calobre, Verag	3.83	304	⇑eP	Pn	08 32 18.3	-0.5
SFRA3	San Francisco,	3.90	302	⇓eP	Pn	08 32 18.9	-0.8
SFRA3				i S	Sn	08 33 04.4	-1.1
BRRC	Barranca, Sant	4.02	76	eP	Pn	08 32 22.6	+1.2
BRRC				eS	Sb	08 33 21.0	+1.5
BRRC				i		08 33 26.6	
	comp=Z,615nm,0.8s						
BETC	Betania	4.10	147	eP	Pn	08 32 24.9	+2.4
BETC				eS	Sb	08 33 22.8	+1.0
BETC				i		08 33 28.6	
	comp=Z,458nm,0.6s						
CHIC	Chingaza	4.19	111	⇑iP	Pn	08 32 26.3	+2.2
CHIC				eS	Sb	08 33 24.1	-0.5
CHIC				i		08 33 43.1	
	comp=Z,253nm,0.6s						
SJCC	San Jacinto, C	4.45	33	eP	Pn	08 32 27.0	-0.3
SJCC				eS	Sn	08 33 17.3	-1.9
SJCC				i		08 33 29.3	
	comp=Z,123nm,0.6s						
BARC	Barichara	4.46	84	⇑iP	Pn	08 32 29.0	+1.3
BARC				eS	Sn	08 33 25.1	+5.4
GARC	Garzon, Huila	4.50	151	eP	Pn	08 32 30.7	+2.5
GARC				eS	Sn	08 33 19.4	-1.3
GARC				i		08 33 25.8	
	comp=Z,120nm,0.3s						
NANC3	Nancito, Chiri	4.55	297	⇓eP	Pn	08 32 29.1	+0.4
CRUC	La Cruz	4.62	171	eP	Pn	08 32 31.4	+1.4
REME3	Remedios, Chir	4.63	297	⇓eP	Pn	08 32 31.0	+1.2
FLOC	Florencia	4.96	156	eP	Pn	08 32 36.3	+1.8
ARGC	Ariguani, Magd	4.99	42	eP	Pn	08 32 36.2	+1.4
ARGC				i		08 34 13.1	
	comp=Z,87nm,0.7s						
PAMC	Pamplona, Colo	5.05	76	⇑iP	Pn	08 32 37.6	+1.5
PAMC				eS	Sn	08 33 39.4	+4.7
PAMC				i		08 33 48.3	
	comp=Z,639nm,0.6s						
LOCO3	Loma Colorada,	5.23	296	⇑eP	Pn	08 32 39.0	+0.9
LL1C	La Loma 1 Cana	5.27	50	eP	Pn	08 32 43.2	+4.6
LL1C				eS	Sb	08 33 55.7	+0.4
PSOM3	Paja de Sombre	5.27	299	eP	Pn	08 32 39.0	+0.3
DVD	David	5.27	296	⇓eP	Pn	08 32 39.1	+0.5
LL5C	La Loma 5 El P	5.28	47	eP	Pn	08 32 42.5	+3.8
LL5C				eS	Sb	08 33 51.6	-4.0
LL5C				i		08 34 31.1	
	comp=Z,291nm,0.8s						
TULM	Tulcn-Chalpat	5.41	181		Pn	08 32 44.9	+3.9
TULM	Tulcn-Chalpat	5.41	181	eP	Pn	08 32 44.6	+3.6
TULM				i		08 33 36.7	
	comp=Z,73nm,0.8s						
LNBQ3	Los Naranjos,	5.42	299	⇑eP	Pn	08 32 41.4	+0.5
PTAR3	Potrerillos Ar	5.42	298	⇑eP	Pn	08 32 42.2	+1.4
MACC	Macarena, Meta	5.50	136	eP	Pn	08 32 41.9	0.0
MACC				i		08 34 37.0	
	comp=Z,139nm,0.6s						
PTPM	Petroterminale	5.57	292	⇓iP	Pn	08 32 43.6	+0.8
BC3P	Paso Ancho	5.58	299	eP	Pn	08 32 44.0	+0.9
BRU2	Volcan	5.64	298		Pn	08 32 43.9	0.0
BRU2	Volcan	5.64	298	⇓eP	Pn	08 32 43.9	0.0
BRU2	Volcan	5.64	298	eP	Pn	08 32 44.2	+0.3
CDITO	Canoas	5.71	295		Pn	08 32 45.4	+0.7
CDITO	Canoas	5.71	295	eP	Pn	08 32 44.9	+0.2
MLIR3	Monte Lirio, C	5.76	297	eP	Pn	08 32 46.3	+0.8
CNI2	El Empalme, Bo	5.77	304	eP	Pn	08 32 45.8	+0.3
PTGC	Puerto Gaitan,	5.83	109	eP	Pn	08 32 46.5	+0.2
PTGC				eS	Sn	08 33 59.0	+5.8
PTGC				i		08 34 48.9	
	comp=Z,98nm,0.7s						
IMBA	Imbabura, San	5.87	185		Pn	08 32 51.8	+4.5
EDSV	San Vito	5.90	297	eP	Pn	08 32 48.5	+1.0
OTAV	Otavalo	5.94	188		Pn	08 32 48.1	-0.1
OTAV	Otavalo	5.94	188	P	Pn	08 32 48.1	-0.1
FITO	Golfito	5.98	294	eP	Pn	08 32 47.9	-0.5
EDAD	Golfito	6.00	295	eP	Pn	08 32 48.8	0.0
SMRC	Santa Marta, M	6.01	34	eP	Pn	08 32 52.4	+3.5
SMRC				eS	Sn	08 33 58.7	+0.9
POTG	Potrero Grande	6.14	298	eP	Pn	08 32 50.8	+0.1
PULU	Pululahua	6.16	188		Pn	08 32 53.4	+2.2
GUVC	San Jose del G	6.16	125	eP	Pn	08 32 51.7	+0.7
GUVC				eS	Sn	08 34 02.6	+1.2
GUVC				i		08 34 38.4	
	comp=Z,47nm,0.6s						
EDP2	Potrero Grande	6.17	298	eP	Pn	08 32 52.1	+1.1
BRIBI	Bribri	6.20	304	eP	Pn	08 32 49.4	-2.0
SRBA	San Rafael, Bu	6.43	299		Pn	08 32 55.6	+0.9
SRBA	San Rafael, Bu	6.43	299	eP	Pn	08 32 55.3	+0.6
PLAN	Los Planes de	6.48	293	eP	Pn	08 32 55.3	0.0
PEZE	Perez Zeledon,	6.78	299		Pn	08 33 00.3	+0.9
PEZE	Perez Zeledon,	6.78	299	eP	Pn	08 32 59.9	+0.5
MRVA	Moravia de Chi	6.79	303	eP	Pn	08 32 59.1	-0.6
BATAN	Batan	6.89	305	eP	Pn	08 32 59.9	-1.0
SLOR	San Lorenzo -	6.90	187		Pn	08 33 05.3	+3.8
CDM	Cerro de Muert	6.93	299	eP	Pn	08 33 03.0	+1.1
RVSTA	Santa Teresita	7.05	303	eP	Pn	08 33 06.8	+3.7
RIMA	Rio Macho	7.12	301		Pn	08 33 05.2	+1.0
RIMA	Rio Macho	7.12	301	eP	Pn	08 33 04.3	0.0
PCAYA	Pacayas	7.15	302	eP	Pn	08 33 04.5	-0.2
REPA	Paraso	7.16	301	eP	Pn	08 33 06.6	+1.9
RAZU	San Marcos de	7.21	299	eP	Pn	08 33 07.1	+1.6
LCR2	La Lucha 2	7.23	300	eP	Pn	08 33 04.7	-1.1
ABE2	San Pablo	7.25	299	eP	Pn	08 33 08.0	+1.9
AMPA	Desamparados	7.36	301	eP	Pn	08 33 09.4	+2.0
ACOS	Acosta	7.39	300	eP	Pn	08 33 09.9	+1.9
MEXI	Barrio Mexico	7.40	301	eP	Pn	08 33 08.7	+0.7
HDC	Heredia	7.45	301		Pn	08 33 09.9	+1.2
HDC	Heredia	7.45	301	⇓eP	Pn	08 33 09.1	+0.2
HDC	Heredia	7.45	301	eP	Pn	08 33 09.0	+0.2
SDV	Santo Domingo	7.46	68	Pn	Pn	08 33 09.6	+0.6
	comp=Z,9.8nm,0.3s,baz=242,slow=5.2,SNR=65						
SDV				Sn	Sn	08 34 36.2	+2.4
	comp=Z,4.5nm,0.3s,baz=299,slow=19,SNR=2.4						
SDV				LR	LR	08 36 05.7	
	comp=Z,3µm,20.1s,baz=238,slow=39						
	comp=Z,51nm,0.5s						
SDV	Santo Domingo	7.46	68	Pn	Pn	08 33 09.1	+0.2
SDV	Santo Domingo	7.46	68	eP	Pn	08 33 08.8	-0.2
SANTA	Santa Ana	7.48	300	eP	Pn	08 33 10.0	+0.9
CHSH	Refugio Sur-Vo	7.70	189		Pn	08 33 17.4	+4.8
JACO	JACO, Garabito	7.77	297		Pn	08 33 15.4	+2.5
JACO	JACO, Garabito	7.77	297	eP	Pn	08 33 14.9	+1.9
URIC	Uribia, Colomb	7.84	45		Pn	08 33 13.3	-0.7
URIC	Uribia, Colomb	7.84	45	eP	Pn	08 33 13.8	-0.2
SOCE	Pocosol	8.07	302	eP	Pn	08 33 18.5	+1.3
JTS	Las Juntas de	8.31	300	Pn	Pn	08 33 21.7	+1.2
	comp=Z,1.7nm,0.3s,baz=92,slow=7.8,SNR=24						
JTS				LR	LR	08 36 38.8	
	comp=Z,2µm,20.1s,baz=100,slow=38						
	comp=Z,58nm,0.9s						
JTS	Las Juntas de	8.31	300	Pn	Pn	08 33 22.0	+1.5
JTS	Las Juntas de	8.31	300	eP	Pn	08 33 21.9	+1.4
JTS	Las Juntas de	8.31	300	d iP	Pn	08 33 22.8	+2.3
JTS	Las Juntas de	8.31	300	eP	Pn	08 33 21.8	+1.4
JUNT	Juntas	8.31	300	eP	Pn	08 33 22.1	+1.6
DUNO	Dulce Nombre,	8.69	297		Pn	08 33 29.8	+4.2
ACON	Acoyapa	9.41	308	Pn	Pn	08 33 33.8	-1.7
BAUV	El Baul	9.92	73	Pn	Pn	08 33 40.4	-2.1
BOAB	BOACO BROADBAN	10.08	309		Pn	08 33 44.9	+0.2
HATO	Hato, Curacao	10.46	54		Pn	08 33 49.6	-0.2
MATN	Matagalpa	10.57	310		Pn	08 33 52.3	+0.7
MCRA	Macar, Loja	10.71	192		Pn	08 33 56.0	+2.5
BIRV	Birongo	12.05	68	Pn	Pn	08 34 11.2	-0.5
SGCB	S£o Gabriel d	12.30	120	eP	Pn	08 34 13.4	-1.7
TBTG	Tabatinga, AM	12.86	143		Pn	08 34 21.9	-0.9
TBTG	Tabatinga, AM	12.86	143	eP	Pn	08 34 20.6	-2.2
ATAH	Atahualpa	13.23	183	Pn	Pn	08 34 27.4	-0.8
	comp=Z,0.2nm,0.3s,baz=345,slow=18,SNR=1.6						
ATAH				LR	LR	08 40 60.0	
	comp=Z,1µm,18.1s,baz=16,slow=44						
	comp=Z,2.5nm,0.7s						
PAPH	Port-au-Prince	13.35	23		Pn	08 34 28.1	-1.3
PCRV	Puerto La Cruz	13.48	72	Pn	Pn	08 34 32.1	+0.8
	comp=Z,3.0nm,0.3s,baz=222,slow=11,SNR=16						
PCRV				LR	LR	08 41 27.7	
	comp=Z,1µm,20.2s,slow=45						
	comp=Z,25nm,0.7s						
SDDR	Presa de Saban	14.17	25		Pn	08 34 41.7	+1.0
CZSB	Cruzeiro do Su	14.65	160	Pn	Pn	08 34 44.7	-2.6
CZSB	Cruzeiro do Su	14.65	160	eP	Pn	08 34 45.0	-2.4
PCDR	Punta Cana, DR	15.24	36		Pn	08 34 53.4	-1.9
CRPR	Cabo Rojo, PR	15.63	40	Pn	Pn	08 34 57.1	-3.2
CRPR				IAmb	IAmb	08 35 07.4	
	comp=Z,50nm,0.8s						
MLPR	Magueyes Islan	15.65	40	Pn	Pn	08 34 57.6	-3.0
MLPR				IAmb	IAmb	08 35 06.3	
	comp=Z,80nm,1.3s						
PRSN	Puerto Rico Se	15.77	40		Pn	08 34 60.0	-2.1
PRSN				IAmb	IAmb	08 35 06.5	
	comp=Z,68nm,0.8s						
OBIP	Obispado Ponce	15.99	41		Pn	08 35 02.2	-2.7
CELP	Cerrillos	16.03	41	Pn	Pn	08 35 02.3	-3.1
PETF	Flores	16.04	313	P	P	08 35 11.3	+2.3
UUPR	Utuado, UPR, P	16.07	41		Pn	08 35 03.2	-2.7
AOPR	Arecibo Observ	16.11	40		Pn	08 35 04.0	-2.5
AOPR				IAmb	IAmb	08 35 12.1	
	comp=Z,67nm,0.7s						
TEFE	Tefe	16.16	126	eP	Pn	08 35 03.4	-3.7
SJG	San Juan	16.34	42	Pn	Pn	08 35 06.2	-3.2
	comp=Z,3.0nm,0.3s,baz=225,slow=20,SNR=7.2						
SJG				Sn	Sn	08 38 01.4	-9.5
	comp=Z,1.7nm,0.3s,baz=270,slow=20,SNR=1.6						
SJG				LR	LR	08 43 34.5	
	comp=Z,466nm,18.1s,baz=211,slow=45						
SJG	San Juan	16.34	42		Pn	08 35 06.8	-2.6
SJG	San Juan	16.34	42	P	Pn	08 35 06.8	-2.6
SJG				pmax	pmax		
	comp=Z,57nm,1.2s						
EMPR	Esperanza - Ma	16.35	41		Pn	08 35 07.0	-2.5
EMPR				IAmb	IAmb	08 35 15.8	
	comp=Z,249nm,1.3s						
GCPR	Guaynabo City	16.52	42		Pn	08 35 09.6	-2.1
HUMP	Col San Antoni	16.56	43		Pn	08 35 09.0	-3.3
CBYP	Canovanas	16.65	43		Pn	08 35 11.2	-2.2
TRN	Trinidad (W)	16.68	73	e	Pn	08 35 11.6	-2.1
MTP	Monte Pirata	16.74	44	Pn	Pn	08 35 11.7	-2.8
GRGR	Grenville	16.86	68		Pn	08 35 13.4	-2.7
GRGR	Grenville	16.86	68	eP	Pn	08 35 07.2	-8.9
GRHS	Sauteurs	16.91	68	eP	Pn	08 35 17.6	+0.9
CDVI	St. Croix	17.06	46		Pn	08 35 16.7	-1.8
CDVI				IAmb	IAmb	08 35 18.6	
	comp=Z,110nm,0.8s						
CDVI	St. Croix	17.06	46	eP	P	08 35 24.1	+3.8
CUPR	Culebra, Puert	17.07	44	P	Pn	08 35 16.0	-2.6
GCMP	Grenada, Carri	17.19	67	eP	Pn	08 35 20.3	0.0
BOAV	Boa Vista	17.48	102	eP	Pn	08 35 19.3	-4.5
SVB	Belmont	17.63	65	P	Pn	08 35 22.3	-3.4
NNA	Nana	18.05	177	P	Pn	08 35 27.6	-3.3
	comp=Z,0.8nm,0.3s,baz=282,slow=6.2,SNR=1.5						
NNA				LR	LR	08 44 52.1	
	comp=Z,623nm,18.5s,baz=359,slow=45						
	comp=Z,2.6nm,0.3s						
SABA	Saba	18.11	50	P	Pn	08 35 27.9	-3.6
BIM	Bigot	18.29	62	eP	P	08 35 37.2	+3.2
FDF	Fort de France	18.31	61	eP	Pn	08 35 32.0	-2.2
MLYT	Lee's Yard	18.41	54	eP	Pn	08 35 37.0	+1.7
MPOM	Morne Pois Mar	18.44	62	eP	Pn	08 35 40.4	+4.7
SMRT	St. Maarten	18.49	49	P	P	08 35 34.5	-1.7
CBE	Ff, Capester	18.55	57	eP	Pn	08 35 40.4	+3.4
MAGL	Barre de l'ile	18.76	57	eP	Pn	08 35 42.1	+2.5
ABD	La Joyeuse, An	18.85	56	eP	Pn	08 35 44.2	+3.5
ANBD	Bethesda, Anti	18.93	54	eP	P	08 35 40.5	-0.5
BBGH	Gun Hill	19.13	67	eP	Pn	08 35 47.0	+3.0
ANWB	Willy Bob	19.26	52	eP	P	08 35 42.1	-2.5
MACA	Manacapuru-AM	19.31	118	P	P	08 35 43.0	-2.1
MACA	Manacapuru-AM	19.31	118	eP	P	08 35 42.7	-2.5
ETMB	Extrema	19.54	144	P	P	08 35 46.5	-1.2
ETMB				IAmb	IAmb	08 35 53.2	
	comp=Z,45nm,0.7s						
ETMB	Extrema	19.54	144	eP	P	08 35 46.0	-1.7
CMIG	Matias Romero	20.05	304	P	P	08 35 51.1	-2.2
	comp=Z,1.7nm,0.8s,baz=182,slow=23,SNR=1.2						
SAML	Samuel	20.81	136	P	P	08 35 59.2	-2.3
SAML				IAmb	IAmb	08 36 00.5	
	comp=Z,84nm,0.8s						
SAML	Samuel	20.81	136	P	P	08 35 59.2	-2.3
SAML				pmax	pmax		
	comp=Z,83nm,0.8s						
SAML	Samuel	20.81	136	eP	P	08 35 59.0	-2.6
DWPF	Disney Wildern	22.12	351	P	P	08 36 16.2	+0.7
	baz=170						
LPAZ	La Paz	24.21	157	P	P	08 36 35.2	-2.3
	comp=Z,8.2nm,0.8s,baz=325,slow=10,SNR=16						
	comp=Z,8.2nm,0.8s						
LPAZ	La Paz	24.21	157	P	P	08 36 35.8	-1.7
LPAZ	La Paz	24.21	157	P	P	08 36 35.8	-1.7
LPAZ				pmax	pmax		
	comp=Z,28nm,1.3s						
LPAZ	La Paz	24.21	157	eP	P	08 36 35.7	-1.8
ITTB	Itaituba	24.25	115	eP	P	08 36 34.1	-3.2
MALB	Monte Alegre	24.67	108	eP	P	08 36 38.8	-2.2
MDP	Montagnes des	24.91	91	P	P	08 36 41.2	-2.0
	comp=Z,30nm,1.0s,baz=256,slow=10,SNR=5.5						
MDP				LR	LR	08 46 33.3	
	comp=Z,917nm,19.6s,baz=279,slow=37						
	comp=Z,30nm,1.0s						
PB16	IPOC Station P	25.63	162	P	P	08 36 50.4	0.0
PB12	IPOC Station P	25.66	164	P	P	08 36 47.0	-3.0
VILB	Vilhena	25.71	138	P	P	08 36 49.6	-0.9
VILB	Vilhena	25.71	138	eP	P	08 36 49.3	-1.2
NPGB	Novo Progresso	25.82	120	eP	P	08 36 49.3	-2.2
255A	Hazlehurst	26.03	351	P	P	08 36 55.1	+2.0
	baz=169						
352A	Blakely	26.09	346	P	P	08 36 53.5	-0.3
352A				IAmb	IAmb	08 37 00.7	
	comp=Z,33nm,1.0s						
MCPB	Macapa, AP	26.35	103	eP	P	08 36 52.0	-4.3
MNMC	Minye Minye	26.36	163	P	P	08 36 56.9	+0.4
NHSC	New Hope	26.91	355	P	P	08 37 01.8	+0.6
	baz=174						
250A	Grady	26.92	344	P	P	08 37 01.6	+0.4
250A	Grady	26.92	344	P	P	08 37 03.4	+2.2
	baz=160						
PB11	IPOC Station P	26.93	163	P	P	08 37 02.3	+0.7
GO01	Chusmiza	26.98	162	P	P	08 37 02.7	+0.3
152A	Waverly Hall	27.18	347	P	P	08 37 05.3	+1.7
	baz=164						
PDRB	Porto dos Gac	27.29	130	eP	P	08 37 03.0	-1.8
HAW	Hawthorne Fire	27.31	353	P	P	08 37 06.4	+1.7
	baz=171						
SIV	San Ignacio	27.45	143	P	P	08 37 04.8	-1.4
	comp=Z,12nm,0.6s,baz=318,slow=9.4,SNR=57						
SIV				LR	LR	08 48 49.5	
	comp=Z,722nm,18.9s,baz=327,slow=38						
	comp=Z,12nm,0.6s						
CLDB	Colider	27.56	128	eP	P	08 37 05.3	-1.9
344A	Westbrook Farm	27.99	336	P	P	08 37 11.9	+1.1
344A				IAmb	IAmb	08 37 14.5	
	comp=Z,25nm,0.9s						
344A	Westbrook Farm	27.99	336	P	P	08 37 12.9	+2.1
	baz=151						
LRAL	Lakeview Retre	28.12	343	P	P	08 37 13.2	+1.3
LRAL				IAmb	IAmb	08 37 33.3	
	comp=Z,33nm,1.4s						
LRAL	Lakeview Retre	28.12	343	P	P	08 37 13.1	+1.1

	baz=160						
LRAL	**Lakeview Retre**	**28.12**	**343**	P	**P**	**08 37 13.8**	**+1.8**
	baz=160						
PTLB	**Pontes e Lacer**	**28.24**	**140**	P	**P**	**08 37 11.7**	**-1.5**
PTLB	**Pontes e Lacer**	**28.24**	**140**	*e*P	**P**	**08 37 10.9**	**-2.2**
VBMS	**Vicksburg**	**28.57**	**337**	P	**P**	**08 37 17.1**	**+1.0**
	baz=152						
BBSD	**Serra de San D**	**28.67**	**144**	*e*P	**P**	**08 37 15.1**	**-1.9**
Y49A	**Blount Mountai**	**28.73**	**345**	P	**P**	**08 37 18.7**	**+1.3**
Y49A	**Blount Mountai**	**28.73**	**345**	P	**P**	**08 37 19.1**	**+1.7**
	baz=161						
KMSC	**Kings Mountain**	**29.04**	**354**	P	**P**	**08 37 21.2**	**+1.0**
	baz=172						
PB03	**IPOC Station P**	**29.08**	**165**	P	**P**	**08 37 22.1**	**+1.3**
CASEE	**Lake Jocassee**	**29.10**	**351**	P	**P**	**08 37 22.9**	**+2.1**
	baz=169						
HKT	**Hockley**	**29.21**	**326**⇓	*i*P	**P**	**08 37 23.2**	**+1.5**
HKT				pmax	pmax		
	comp=Z,13nm,1.6s						
HKT	**Hockley**	**29.21**	**326**	P	**P**	**08 37 23.2**	**+1.5**
	baz=140						
W52A	**Murphy**	**29.37**	**349**	P	**P**	**08 37 25.3**	**+2.2**
	baz=167						
X48A	**Hartselle**	**29.46**	**344**	P	**P**	**08 37 25.4**	**+1.5**
	baz=160						
V58A	**Windy Hill, Pi**	**29.52**	**358**	P	**P**	**08 37 25.8**	**+1.4**
	baz=177						
V58A				P	**P**	**08 37 25.8**	**+1.4**
	baz=177						
Y45A	**Yeager Farm, C**	**29.69**	**340**	P	**P**	**08 37 28.1**	**+2.2**
	baz=155						
V53A	**Saluda**	**29.75**	**352**	P	**P**	**08 37 28.7**	**+2.2**
	baz=169						
V53A				P	**P**	**08 37 28.7**	**+2.2**
	baz=169						
LVC	**Limon Verde**	**29.84**	**164**	P	**P**	**08 37 27.3**	**-0.5**
	comp=Z,8.4nm,1.0s,baz=337,slow=4.8,SNR=4.8						
	comp=Z,8.4nm,1.0s						
LVC	**Limon Verde**	**29.84**	**164**	*e*P	**P**	**08 37 26.4**	**-1.4**
TKL	**Tuckaleechee C**	**29.89**	**350**	P	**P**	**08 37 27.6**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=163,slow=11,SNR=2.3						
TKL				LR	LR	08 50 56.7	
	comp=Z,221nm,18.4s,baz=154,slow=39						
	comp=Z,2.2nm,0.8s						
NATX	**Nacogdoches**	**30.03**	**330**	P	**P**	**08 37 30.5**	**+1.5**
	baz=144						
V52A	**Sevierville**	**30.04**	**350**	P	**P**	**08 37 31.2**	**+2.2**
	baz=168						
V51A	**Loudon**	**30.14**	**349**	P	**P**	**08 37 31.7**	**+1.9**
	baz=166						
U56A	**King**	**30.15**	**356**	P	**P**	**08 37 32.0**	**+2.1**
	baz=174						
U56A				P	**P**	**08 37 32.0**	**+2.1**
	baz=174						
833A	**Chaparral WMA,**	**30.17**	**319**	P	**P**	**08 37 30.9**	**+0.6**
833A	**Chaparral WMA,**	**30.17**	**319**	P	**P**	**08 37 31.4**	**+1.1**
	baz=133						
833A	**Chaparral WMA,**	**30.17**	**319**	P	**P**	**08 37 31.7**	**+1.5**
	baz=133						
PLAL	**Pickwick Lake**	**30.25**	**343**	P	**P**	**08 37 30.6**	**-0.2**
PLAL				IAmb	IAmb	08 37 52.3	
	comp=Z,35nm,1.6s						
PRPB	**Parauapebas**	**30.36**	**113**	*e*P	**P**	**08 37 29.5**	**-2.6**
U54A	**Nelsons Funny**	**30.46**	**353**	P	**P**	**08 37 32.8**	**0.0**
U54A				IAmb	IAmb	08 37 53.8	
	comp=Z,18nm,0.9s						
U54A	**Nelsons Funny**	**30.46**	**353**	P	**P**	**08 37 34.6**	**+1.8**
	baz=172						
U54A				P	**P**	**08 37 34.6**	**+1.8**
	baz=172						
CCAR	**Cane Creek**	**30.57**	**336**	P	**P**	**08 37 34.5**	**+0.8**
V48A	**Smith Brothers**	**30.62**	**345**	P	**P**	**08 37 34.7**	**+0.5**
V48A				IAmb	IAmb	08 37 41.6	
	comp=Z,29nm,1.1s						
V48A	**Smith Brothers**	**30.62**	**345**	P	**P**	**08 37 36.0**	**+1.8**
	baz=162,SNR=11						
TMAB	**Tom-Au,PA,Br**	**30.70**	**105**	*e*P	**P**	**08 37 34.2**	**-0.9**
T57A	**Hurt**	**30.73**	**357**	P	**P**	**08 37 36.0**	**+0.9**
T57A	**Hurt**	**30.73**	**357**	P	**P**	**08 37 36.5**	**+1.4**
	baz=177						
T57A				P	**P**	**08 37 36.5**	**+1.4**
	baz=177						
W45A	**Hickory Valley**	**30.75**	**341**	P	**P**	**08 37 35.3**	**0.0**
W45A	**Hickory Valley**	**30.75**	**341**	P	**P**	**08 37 36.7**	**+1.4**
	baz=157						
SALV	**Santo Antonio**	**30.87**	**135**	*e*P	**P**	**08 37 34.8**	**-1.8**
WLAR	**White Oak Lake**	**30.92**	**334**	P	**P**	**08 37 37.4**	**+0.7**
WLAR				IAmb	IAmb	08 37 43.0	
	comp=Z,38nm,1.2s						
BLA	**Blacksburg**	**31.01**	**356**	P	**P**	**08 37 38.8**	**+1.2**
	baz=174						
BLA	**Blacksburg**	**31.01**	**356**	P	**P**	**08 37 39.4**	**+1.8**
	baz=174						
U49A	**Red Boiling Sp**	**31.11**	**347**	P	**P**	**08 37 40.2**	**+1.7**
	baz=164						
T50A	**Nancy**	**31.41**	**349**	P	**P**	**08 37 41.1**	**0.0**
T50A				IAmb	IAmb	08 37 48.5	
	comp=Z,39nm,1.8s						
T50A	**Nancy**	**31.41**	**349**	P	**P**	**08 37 42.6**	**+1.6**
	baz=166						
T50A				P	**P**	**08 37 42.6**	**+1.6**
	baz=166						
Z38A	**Mt. Pleasant**	**31.41**	**331**	P	**P**	**08 37 42.6**	**+1.5**
	baz=145						
X40A	**Basin Creek Fa**	**31.49**	**336**	P	**P**	**08 37 41.7**	**-0.1**
WHTX	**Lake Whitney,**	**31.67**	**327**	P	**P**	**08 37 44.2**	**+0.8**
	baz=140						
WHTX	**Lake Whitney,**	**31.67**	**327**	P	**P**	**08 37 44.7**	**+1.2**
	baz=140						
S51A	**Beattyville**	**31.80**	**351**	P	**P**	**08 37 45.8**	**+1.3**
	baz=168						
S51A				P	**P**	**08 37 45.8**	**+1.3**
	baz=168						
SNDB	**Serra Nova Dou**	**31.80**	**124**	*e*P	**P**	**08 37 43.2**	**-1.7**
MIAR	**Mount Ida**	**31.85**	**335**	P	**P**	**08 37 45.5**	**+0.5**
	baz=149						
MIAR	**Mount Ida**	**31.85**	**335**	P	**P**	**08 37 45.9**	**+0.9**
	baz=149						
T47A	**Sharon Grove**	**31.88**	**346**	P	**P**	**08 37 46.6**	**+1.4**
T47A				IAmb	IAmb	08 37 52.1	
	comp=Z,18nm,0.9s						
T47A	**Sharon Grove**	**31.88**	**346**	P	**P**	**08 37 46.1**	**+0.9**
	baz=162,SNR=7.7						
JCT	**Junction City**	**31.92**	**322**	P	**P**	**08 37 46.4**	**+0.7**
JCT				IAmb	IAmb	08 37 51.9	
	comp=Z,40nm,1.8s						
JCT	**Junction City**	**31.92**	**322**	P	**P**	**08 37 46.4**	**+0.7**
JCT				pmax	pmax		
	comp=Z,40nm,1.8s						
JCT	**Junction City**	**31.92**	**322**	P	**P**	**08 37 47.1**	**+1.4**
	baz=135						
JCT	**Junction City**	**31.92**	**322**	P	**P**	**08 37 47.3**	**+1.6**
	baz=135						
LCAR	**Lake Charles**	**32.24**	**339**	P	**P**	**08 37 49.4**	**+1.0**
LCAR				IAmb	IAmb	08 37 54.8	
	comp=Z,42nm,1.5s						
LCAR	**Lake Charles**	**32.24**	**339**	P	**P**	**08 37 49.1**	**+0.7**
	baz=154,SNR=14						
R53A	**Hurricane**	**32.26**	**354**	P	**P**	**08 37 48.9**	**+0.3**
	baz=172						
R53A				P	**P**	**08 37 48.9**	**+0.3**
	baz=172						
T45B	**Paducah**	**32.31**	**343**	P	**P**	**08 37 49.9**	**+0.9**
	baz=159						
FCAR	**Ozark Folk Cen**	**32.44**	**338**	P	**P**	**08 37 50.9**	**+0.8**
FCAR				IAmb	IAmb	08 37 56.0	
	comp=Z,47nm,1.9s						
PANT	**Pantanal (Braz**	**32.47**	**141**	*e*P	**P**	**08 37 48.7**	**-1.8**
R50A	**Paris**	**32.55**	**350**	P	**P**	**08 37 51.4**	**+0.4**
R50A				IAmb	IAmb	08 37 57.9	
	comp=Z,17nm,1.2s						
R50A	**Paris**	**32.55**	**350**	P	**P**	**08 37 52.6**	**+1.6**
	baz=167						
R50A				P	**P**	**08 37 52.6**	**+1.6**
	baz=167						
Z35A	**Perchaven, San**	**32.60**	**329**	P	**P**	**08 37 52.8**	**+1.2**
Z35A				IAmb	IAmb	08 37 56.8	
	comp=Z,22nm,1.1s						
Z35A	**Perchaven, San**	**32.60**	**329**	P	**P**	**08 37 52.7**	**+1.2**
	baz=142						
PP1B	**Ponte de Pedra**	**32.61**	**137**	*e*P	**P**	**08 37 50.5**	**-1.3**
X37A	**Clayton**	**32.69**	**332**	P	**P**	**08 37 53.7**	**+1.3**
	baz=146						
R49A	**Shelbyville**	**32.71**	**349**	P	**P**	**08 37 53.9**	**+1.5**
	baz=166						
R49A				P	**P**	**08 37 53.9**	**+1.5**
	baz=166						
Q56A	**Snyder Ridge,**	**32.76**	**358**	P	**P**	**08 37 55.2**	**+2.3**
	baz=177						
Q56A				P	**P**	**08 37 55.2**	**+2.3**
	baz=177						
Q54A	**Coxs Mills**	**32.80**	**355**	P	**P**	**08 37 55.6**	**+2.3**
	baz=174						
Q54A				P	**P**	**08 37 55.6**	**+2.3**
	baz=174						
WCI	**Wyandotte Cave**	**32.87**	**347**	P	**P**	**08 37 55.1**	**+1.2**
WCI				IAmb	IAmb	08 38 21.5	
	comp=Z,16nm,1.0s						
WCI	**Wyandotte Cave**	**32.87**	**347**	P	**P**	**08 37 55.1**	**+1.2**
WCI				pmax	pmax		
	comp=Z,16nm,1.0s						
WCI	**Wyandotte Cave**	**32.87**	**347**	P	**P**	**08 37 55.7**	**+1.8**
	baz=164						
WCI	**Wyandotte Cave**	**32.87**	**347**	P	**P**	**08 37 55.6**	**+1.7**
	baz=164						
Q52A	**Bidwell**	**32.92**	**353**	P	**P**	**08 37 56.2**	**+1.8**
	baz=171						
Q52A				P	**P**	**08 37 56.2**	**+1.8**
	baz=171						
USIN	**University of**	**32.94**	**345**	P	**P**	**08 37 54.5**	**-0.1**
SDMD	**Soldier's Deli**	**33.11**	**1**	P	**P**	**08 37 57.0**	**+1.1**
	baz=181						
S44A	**Carbondale**	**33.12**	**343**	P	**P**	**08 37 56.1**	**0.0**
S44A				IAmb	IAmb	08 38 02.5	
	comp=Z,26nm,1.2s						
S44A	**Carbondale**	**33.12**	**343**	P	**P**	**08 37 56.3**	**+0.2**
	baz=158						
U40A	**Yellville**	**33.13**	**337**	P	**P**	**08 37 57.2**	**+1.1**
	baz=151,SNR=14						
U40A				P	**P**	**08 37 57.2**	**+1.1**
	baz=151,SNR=14						
P57A	**Homestead Farm**	**33.18**	**359**	P	**P**	**08 37 57.6**	**+1.1**
P57A	**Homestead Farm**	**33.18**	**359**	P	**P**	**08 37 58.4**	**+1.9**
	baz=179						
P57A				P	**P**	**08 37 58.4**	**+1.9**
	baz=179						
P53A	**Whipple**	**33.35**	**355**	P	**P**	**08 37 59.8**	**+1.7**
	baz=173						
P53A				P	**P**	**08 37 59.8**	**+1.7**
	baz=173						
ABTX	**Abilene, Hawle**	**33.36**	**325**	P	**P**	**08 37 59.6**	**+1.2**
ABTX	**Abilene, Hawle**	**33.36**	**325**	P	**P**	**08 37 59.4**	**+1.1**
	baz=137						
ABTX	**Abilene, Hawle**	**33.36**	**325**	P	**P**	**08 37 59.2**	**+0.9**
	baz=137						
SMTB	**Santa Maria do**	**33.48**	**116**	*e*P	**P**	**08 37 58.1**	**-1.4**
BDQN	**Bodoquena, MS**	**33.48**	**143**	*e*P	**P**	**08 37 57.9**	**-1.5**
HHAR	**Hobbs**	**33.49**	**336**	P	**P**	**08 38 00.1**	**+0.7**
HHAR				IAmb	IAmb	08 38 04.5	
	comp=Z,31nm,1.4s						
ARAG	**Araguaiana, MT**	**33.57**	**131**	*e*P	**P**	**08 37 58.2**	**-2.0**
P52A	**Corning**	**33.57**	**354**	P	**P**	**08 38 01.4**	**+1.4**
	baz=172						
WTFS	**Witchita Falls**	**33.57**	**328**		**P**	**08 38 01.4**	**+1.3**
WTFS				IAmb	IAmb	08 38 06.5	
	comp=Z,22nm,1.0s						
TXAR	**Lajitas Array**	**33.68**	**316**	P	**P**	**08 38 02.5**	**+1.4**
	comp=Z,1.2nm,0.8s,baz=140,slow=9.3,SNR=13						
TXAR				PcP	**PcP**	**08 40 42.4**	**+1.2**
	comp=Z,2.3nm,0.8s,baz=143,slow=5.8,SNR=11						
TXAR				LR	LR	08 54 13.1	
	comp=Z,90nm,18.2s,baz=123,slow=41						
	comp=Z,1.2nm,0.8s						
TXAR	**Lajitas Array**	**33.68**	**316**	P	**P**	**08 38 02.8**	**+1.6**
TX31	**Lajitas Ar. Si**	**33.68**	**316**	P	**P**	**08 38 02.2**	**+1.0**
TX31				IAmb	IAmb	08 38 42.6	
	comp=Z,39nm,1.4s						
TX31	**Lajitas Ar. Si**	**33.68**	**316**	P	**P**	**08 38 02.7**	**+1.5**
	baz=128						
TX32	**Lajitas Array**	**33.68**	**316**	P	**P**	**08 38 02.4**	**+1.2**
FVM	**French Village**	**33.74**	**342**	P	**P**	**08 38 02.5**	**+1.0**
FVM				IAmb	IAmb	08 38 22.8	
	comp=Z,33nm,1.1s						
FVM	**French Village**	**33.74**	**342**	P	**P**	**08 38 02.5**	**+1.0**
FVM				pmax	pmax		
	comp=Z,33nm,1.2s						
FVM	**French Village**	**33.74**	**342**	P	**P**	**08 38 02.5**	**+1.0**
	baz=156,SNR=8.6						
OLIL	**Olney**	**33.78**	**345**	P	**P**	**08 38 02.2**	**+0.4**
OLIL	**Olney**	**33.78**	**345**	P	**P**	**08 38 02.8**	**+1.0**
	baz=161						
U38A	**Gravette**	**33.81**	**335**	P	**P**	**08 38 01.9**	**-0.3**
U38A	**Gravette**	**33.81**	**335**	P	**P**	**08 38 02.7**	**+0.5**
	baz=149						
AC02	**Maricunga**	**33.82**	**166**	P	**P**	**08 38 04.8**	**+1.9**
AC02				IAmb	IAmb	08 38 06.5	
	comp=Z,35nm,1.1s						
BLO	**Bloomington**	**33.83**	**348**	P	**P**	**08 38 02.3**	**+0.1**
BLO				IAmb	IAmb	08 38 23.2	
	comp=Z,23nm,0.8s						
BLO	**Bloomington**	**33.83**	**348**	P	**P**	**08 38 02.3**	**+0.1**
BLO				pmax	pmax		
	comp=Z,23nm,0.9s						
P49A	**Miami Univ. Ec**	**33.83**	**350**	P	**P**	**08 38 02.8**	**+0.6**
	baz=167						
P49A	**Miami Univ. Ec**	**33.83**	**350**	P	**P**	**08 38 02.8**	**+0.6**
	baz=167						
W35A	**Tecumseh**	**33.86**	**331**		**P**	**08 38 03.3**	**+0.7**
P48A	**Milroy**	**33.89**	**349**	P	**P**	**08 38 03.2**	**+0.5**
	baz=166						
P48A				P	**P**	**08 38 03.2**	**+0.5**
	baz=166						
MURT	**Porto Murtinho**	**33.92**	**145**	*e*P	**P**	**08 38 00.9**	**-2.3**
O54A	**Avella**	**33.96**	**356**	P	**P**	**08 38 05.3**	**+1.9**
	baz=175						
O54A				P	**P**	**08 38 05.3**	**+1.9**
	baz=175						
PABK	**Blue Knob Stat**	**33.97**	**359**	P	**P**	**08 38 05.6**	**+2.1**
	baz=178						
TUL1	**Leonard**	**33.97**	**333**	P	**P**	**08 38 03.9**	**+0.3**
TUL1				IAmb	IAmb	08 38 08.2	
	comp=Z,25nm,1.2s						
TUL1	**Leonard**	**33.97**	**333**	P	**P**	**08 38 04.5**	**+0.9**
	baz=146,SNR=8.4						
O52A	**Adamsville**	**34.02**	**354**	P	**P**	**08 38 05.0**	**+1.2**
	baz=172						
O52A				P	**P**	**08 38 05.0**	**+1.2**
	baz=172						
CCM	**Cathedral Cave**	**34.07**	**341**	P	**P**	**08 38 04.7**	**+0.3**
CCM	**Cathedral Cave**	**34.07**	**341**	P	**P**	**08 38 04.7**	**+0.3**
CCM				pmax	pmax		
	comp=Z,90nm,1.8s						
CCM	**Cathedral Cave**	**34.07**	**341**	P	**P**	**08 38 04.7**	**+0.3**
	baz=155						
CCM	**Cathedral Cave**	**34.07**	**341**	P	**P**	**08 38 04.7**	**+0.3**
	baz=155,SNR=13						
O53A	**New Philadelph**	**34.09**	**355**	P	**P**	**08 38 04.5**	**0.0**
	baz=173						
AQDB	**Aquidauana**	**34.15**	**141**	*e*P	**P**	**08 38 03.4**	**-1.8**
Q44A	**Meyer Farm, Va**	**34.18**	**344**	P	**P**	**08 38 04.2**	**-1.1**
Q44A				IAmb	IAmb	08 38 11.4	
	comp=Z,24nm,1.0s						
Q44A	**Meyer Farm, Va**	**34.18**	**344**	P	**P**	**08 38 05.9**	**+0.6**
	baz=159						
FNO	**Franklin**	**34.20**	**331**		**P**	**08 38 06.0**	**+0.5**
ACSO	**Alum Creek Sta**	**34.26**	**353**	P	**P**	**08 38 05.8**	**-0.2**
	baz=170						
SSPA	**Standing Stone**	**34.33**	**360**	P	**P**	**08 38 06.7**	**+0.2**
	baz=179						
SSPA	**Standing Stone**	**34.33**	**360**	P	**P**	**08 38 08.3**	**+1.7**
	baz=179						
OKCSW	**OKLAHOMA CITY**	**34.33**	**331**	P	**P**	**08 38 06.7**	**0.0**
P46A	**Rosedale**	**34.41**	**347**	P	**P**	**08 38 07.9**	**+0.7**
P46A				IAmb	IAmb	08 38 32.3	
	comp=Z,22nm,1.0s						
P46A	**Rosedale**	**34.41**	**347**	P	**P**	**08 38 08.1**	**+0.8**
	baz=163						
O49A	**Covington**	**34.41**	**351**	P	**P**	**08 38 08.6**	**+1.3**
	baz=168						
O49A				P	**P**	**08 38 08.6**	**+1.3**
	baz=168						
S39A	**Bolivar**	**34.48**	**338**	P	**P**	**08 38 07.6**	**-0.3**
S39A				IAmb	IAmb	08 38 12.9	
	comp=Z,36nm,1.5s						
S39A	**Bolivar**	**34.48**	**338**	P	**P**	**08 38 08.0**	**+0.1**
	baz=152,SNR=10						
WMOK	**Wichita Mounta**	**34.49**	**328**	P	**P**	**08 38 08.5**	**+0.4**
WMOK	**Wichita Mounta**	**34.49**	**328**	P	**P**	**08 38 08.5**	**+0.4**
WMOK				pmax	pmax		
	comp=Z,11nm,1.0s						
WMOK	**Wichita Mounta**	**34.49**	**328**	P	**P**	**08 38 08.6**	**+0.6**
	baz=140,SNR=11						
O48B	**Farmland**	**34.61**	**350**	P	**P**	**08 38 08.6**	**-0.4**
	baz=167,SNR=7.8						
O48B	**Farmland**	**34.61**	**350**	P	**P**	**08 38 10.1**	**+1.0**
	baz=167,SNR=7.8						
N53A	**Lisbon**	**34.61**	**356**	P	**P**	**08 38 10.3**	**+1.2**
	baz=174						
N53A				P	**P**	**08 38 10.3**	**+1.2**
	baz=174						
R40A	**Maddies Statio**	**34.63**	**340**	P	**P**	**08 38 09.3**	**+0.1**
R40A				IAmb	IAmb	08 38 16.1	
	comp=Z,48nm,1.9s						
R40A	**Maddies Statio**	**34.63**	**340**	P	**P**	**08 38 09.6**	**+0.4**
	baz=154,SNR=7.5						
POST	**Post**	**34.76**	**323**	P	**P**	**08 38 10.8**	**+0.2**
POST				IAmb	IAmb	08 38 13.7	
	comp=Z,22nm,0.9s						
C2SB	**Chapadao do Su**	**34.81**	**136**	*e*P	**P**	**08 38 10.3**	**-0.7**
PAL	**Palisades**	**34.86**	**5**	P	**P**	**08 38 11.1**	**0.0**
	baz=186						
N51A	**Ashland**	**34.87**	**354**	P	**P**	**08 38 12.7**	**+1.5**
	baz=172						
N51A				P	**P**	**08 38 12.7**	**+1.5**
	baz=172						
OK051	**E0350 and S346**	**34.94**	**332**	P	**P**	**08 38 12.0**	**+0.1**
OK051				IAmb	IAmb	08 38 14.4	
	comp=Z,22nm,0.8s						
P43A	**Skaggs, Pawnee**	**35.01**	**344**	P	**P**	**08 38 12.7**	**+0.2**
P43A				IAmb	IAmb	08 38 18.6	
	comp=Z,42nm,1.3s						
P43A	**Skaggs, Pawnee**	**35.01**	**344**	P	**P**	**08 38 13.2**	**+0.8**
	baz=159						
M57A	**Sunshine Farm,**	**35.03**	**1**	P	**P**	**08 38 14.7**	**+2.0**
	baz=181						
M57A				P	**P**	**08 38 14.7**	**+2.0**
	baz=181						
N49A	**Columbus Grove**	**35.10**	**351**	P	**P**	**08 38 14.4**	**+1.1**
	baz=168						
N49A				P	**P**	**08 38 14.4**	**+1.1**
	baz=168						
SFIN	**Lafayette**	**35.11**	**347**	P	**P**	**08 38 13.9**	**+0.5**
	baz=163						
SFIN	**Lafayette**	**35.11**	**347**	P	**P**	**08 38 13.8**	**+0.5**
	baz=163						
T35A	**Sooner Cattle**	**35.13**	**333**	P	**P**	**08 38 14.5**	**+0.9**
T35A				IAmb	IAmb	08 38 18.9	
	comp=Z,30nm,1.2s						
T35B	**Sooner Cattle**	**35.13**	**333**	P	**P**	**08 38 14.7**	**+1.1**
	baz=146,SNR=6.6						
M53A	**WI Miller and**	**35.23**	**356**	P	**P**	**08 38 14.6**	**+0.2**
	baz=175						
KSPA	**Keystone Colle**	**35.29**	**2**	P	**P**	**08 38 16.9**	**+2.1**
	baz=183						
NPNY	**Mohonk Preserv**	**35.58**	**5**	P	**P**	**08 38 19.4**	**+2.1**
	baz=186						
P40A	**Paris**	**35.67**	**341**	P	**P**	**08 38 18.4**	**+0.2**
	baz=155						
M65A	**Busby, Falmout**	**35.80**	**9**	P	**P**	**08 38 19.3**	**0.0**
	baz=192						
HDIL	**Hopedale**	**35.80**	**345**	P	**P**	**08 38 18.5**	**-0.7**
HDIL				IAmb	IAmb	08 38 20.0	
	comp=Z,18nm,0.8s						
HDIL	**Hopedale**	**35.80**	**345**	P	**P**	**08 38 19.0**	**-0.2**
	baz=160						
HDIL	**Hopedale**	**35.80**	**345**	P	**P**	**08 38 19.8**	**+0.5**
	baz=160						
ERPA	**Erie**	**35.87**	**357**	P	**P**	**08 38 20.7**	**+0.9**
	baz=176						
ERPA	**Erie**	**35.87**	**357**	P	**P**	**08 38 21.3**	**+1.5**
	baz=176						
U32A	**Winter Ranch,**	**35.88**	**330**	P	**P**	**08 38 20.9**	**+0.8**
	baz=142						
BINY	**Binghamton**	**35.92**	**2**	P	**P**	**08 38 20.6**	**+0.3**
	baz=183						
BINY	**Binghamton**	**35.92**	**2**	P	**P**	**08 38 22.2**	**+1.9**
	baz=183						
L59A	**Walton**	**35.95**	**3**	P	**P**	**08 38 22.5**	**+1.9**
	baz=184						
L59A				P	**P**	**08 38 22.5**	**+1.9**
	baz=184						
LPIG	**La Paz**	**36.07**	**303**	LR	LR	08 54 14.9	
	comp=Z,113nm,18.3s,baz=186,slow=38						
WVNY	**West Valley, N**	**36.10**	**359**	P	**P**	**08 38 23.7**	**+1.8**
	baz=178						
L64A	**Middleborough**	**36.14**	**9**	P	**P**	**08 38 24.0**	**+1.9**
	baz=191						
L64A				P	**P**	**08 38 24.0**	**+1.9**
	baz=191						
MSTX	**Muleshoe**	**36.15**	**323**	P	**P**	**08 38 22.4**	**-0.1**
	baz=134,SNR=21						
MSTX	**Muleshoe**	**36.15**	**323**	P	**P**	**08 38 23.4**	**+0.8**
	baz=134,SNR=21						
AMTX	**Amarillo**	**36.17**	**325**	P	**P**	**08 38 22.9**	**+0.3**
	baz=136						
AMTX	**Amarillo**	**36.17**	**325**	P	**P**	**08 38 23.3**	**+0.6**
	baz=136						
P38A	**Dawn**	**36.26**	**339**	P	**P**	**08 38 23.0**	**-0.2**
P38A				IAmb	IAmb	08 38 28.1	
	comp=Z,28nm,1.2s						
P38A	**Dawn**	**36.26**	**339**	P	**P**	**08 38 23.2**	**0.0**
	baz=152						
MNTX	**Cornudas Mount**	**36.30**	**318**	P	**P**	**08 38 23.9**	**+0.2**
	baz=128,SNR=14						
MNTX	**Cornudas Mount**	**36.30**	**318**	P	**P**	**08 38 24.9**	**+1.2**
	baz=128,SNR=14						
L61B	**Northampton**	**36.41**	**6**	P	**P**	**08 38 24.3**	**-0.2**
	baz=188						
L61B	**Northampton**	**36.41**	**6**	P	**P**	**08 38 25.5**	**+1.1**
	baz=188						
AMBA	**Amambai (Brazi**	**36.42**	**143**	*e*P	**P**	**08 38 22.4**	**-2.5**
K57A	**Scipio Center**	**36.43**	**1**	P	**P**	**08 38 24.9**	**+0.2**
K57A				IAmb	IAmb	08 38 31.6	
	comp=Z,34nm,1.1s						
K57A	**Scipio Center**	**36.43**	**1**	P	**P**	**08 38 26.4**	**+1.7**
	baz=182						
BDFB	**Brasilia**	**36.48**	**127**	P	**P**	**08 38 24.0**	**-1.5**
	comp=Z,13nm,0.9s,baz=292,slow=8.5,SNR=16						
BDFB				PcP	**PcP**	**08 40 47.7**	**-1.8**
	comp=Z,3.0nm,0.5s,baz=300,slow=5.8,SNR=2.6						
	comp=Z,13nm,0.9s						
BDFB	**Brasilia**	**36.48**	**127**	P	**P**	**08 38 24.5**	**-1.0**
BDFB				IAmb	IAmb	08 38 25.2	
	comp=Z,24nm,1.1s						
BDFB	**Brasilia**	**36.48**	**127**	P	**P**	**08 38 24.5**	**-1.0**
BDFB				pmax	pmax		
	comp=Z,24nm,1.1s						
BDFB	**Brasilia**	**36.48**	**127**	*e*P	**P**	**08 38 24.2**	**-1.3**
HRV	**Adam Dziewonsk**	**36.60**	**8**	P	**P**	**08 38 26.4**	**+0.4**
	baz=190						
HRV	**Adam Dziewonsk**	**36.60**	**8**	P	**P**	**08 38 27.9**	**+1.9**
	baz=190						
K62A	**Royalston**	**36.67**	**7**	P	**P**	**08 38 28.0**	**+1.4**
	baz=189						
K62A				P	**P**	**08 38 28.0**	**+1.4**
	baz=189						
J55A	**Hilton**	**36.95**	**360**	P	**P**	**08 38 30.8**	**+1.8**
	baz=180						
J55A				P	**P**	**08 38 30.8**	**+1.8**
	baz=180						
J56A	**Wolcott**	**36.97**	**1**	P	**P**	**08 38 31.1**	**+2.0**
	baz=181,SNR=5.4						
J56A				P	**P**	**08 38 31.1**	**+2.0**
	baz=181,SNR=5.4						
KSU1	**Kansas State U**	**37.00**	**335**	P	**P**	**08 38 30.1**	**+0.6**
	baz=147,SNR=9.9						
L44A	**Lake County Fo**	**37.01**	**347**	P	**P**	**08 38 29.5**	**0.0**
	baz=163						
J58A	**Remsen**	**37.11**	**3**	P	**P**	**08 38 31.9**	**+1.5**
J58A				IAmb	IAmb	08 38 37.2	
	comp=Z,29nm,1.1s						
J58A	**Remsen**	**37.11**	**3**	P	**P**	**08 38 32.5**	**+2.1**
	baz=184						
J58A				P	**P**	**08 38 32.5**	**+2.1**
	baz=184						
J57A	**Williamstown**	**37.13**	**2**	P	**P**	**08 38 31.7**	**+1.1**
J57A	**Williamstown**	**37.13**	**2**	P	**P**	**08 38 32.1**	**+1.6**
	baz=182						
J57A				P	**P**	**08 38 32.1**	**+1.6**
	baz=182						
ITRB	**Iturama**	**37.17**	**134**	*e*P	**P**	**08 38 30.1**	**-1.2**
N38A	**Joes South For**	**37.20**	**340**	P	**P**	**08 38 31.8**	**+0.5**
	baz=154						
J59A	**Piesco**	**37.26**	**4**	P	**P**	**08 38 32.7**	**+1.0**
J59A				IAmb	IAmb	08 38 34.5	
	comp=Z,26nm,1.1s						
J59A	**Piesco**	**37.26**	**4**	P	**P**	**08 38 34.1**	**+2.4**
	baz=185						
J59A				P	**P**	**08 38 34.1**	**+2.4**
	baz=185						
L42A	**Oliver, Polo**	**37.26**	**345**	P	**P**	**08 38 30.8**	**-0.9**

L42A				IAmb	IAmb	08 38 36.1	
	comp=Z,33nm,1.4s						
SDBA	SAO DESIDERIO	37.42	120	eP	P	08 38 31.7	-1.7
IPMB	Ipameri, GO	37.68	130	eP	P	08 38 34.1	-1.5
PCMB	Pacaembu	37.83	138	eP	P	08 38 34.5	-2.3
CPUP	Villa Florida	37.84	149	P	P	08 38 34.0	-2.8
	comp=Z,1.7nm,0.8s,baz=339,slow=9.1,SNR=4.8						
	comp=Z,1.7nm,0.8s						
CPUP	Villa Florida	37.84	149	P	P	08 38 34.0	-2.8
CPUP	Villa Florida	37.84	149	eP	P	08 38 34.1	-2.6
MCR1	Marechal Candi	38.15	144	eP	P	08 38 37.6	-1.9
CBKS	Cedar Bluff	38.16	332	P	P	08 38 39.6	+0.1
	baz=143						
SCCA	San Cayetano,	38.24	152	eP	P	08 38 38.3	-1.8
LBNH	Lisbon	38.26	7	P	P	08 38 39.8	-0.3
	baz=189						
JFWS	Jewell Farm	38.26	345	P	P	08 38 40.2	+0.1
	baz=159,SNR=7.6						
LONY	Lake Ozonia	38.40	4	P	P	08 38 42.7	+1.4
	baz=185						
121A	Cookes Peak, D	38.42	317	P	P	08 38 43.3	+1.3
	baz=126,SNR=6.6						
121A	Cookes Peak, D	38.42	317	P	P	08 38 44.9	+3.0
	baz=126,SNR=6.6						
SADO	Sadowa	38.48	358	LR	LR	08 56 23.8	
	comp=Z,204nm,18.1s,baz=157,slow=39						
CFA	Coronel Fontan	38.61	167	P	P	08 38 43.1	-0.2
	comp=Z,7.1nm,0.5s,baz=339,slow=7.1,SNR=18						
CFA				LR	LR	08 55 16.9	
	comp=Z,249nm,19.3s,baz=348,slow=37						
	comp=Z,7.1nm,0.5s						
BNM	Barren Site	38.66	320	P	P	08 38 45.6	+1.7
FRNY	Flat Rock	38.69	5	P	P	08 38 44.8	+1.1
	baz=186						
Y22A	Socorro	38.74	319	P	P	08 38 46.9	+2.3
	baz=129,SNR=9.5						
Y22D	IRIS PASSCAL I	38.80	320	P	P	08 38 46.6	+1.6
	baz=129						
Y22F	Passcal Instru	38.80	320	P	P	08 38 46.7	+1.7
	baz=129						
319A	Douglas	38.80	314	P	P	08 38 47.5	+2.5
I42A	Draeger Farm,	38.86	347	P	P	08 38 44.5	-0.6
I42A	Draeger Farm,	38.86	347	P	P	08 38 45.6	+0.4
	baz=162,SNR=5.5						
ANMO	Albuquerque	39.06	321	LR	LR	08 58 17.8	
	comp=Z,94nm,19.0s,baz=222,slow=41						
ANMO	Albuquerque	39.06	321	P	P	08 38 48.5	+1.2
ANMO	Albuquerque	39.06	321	d iP	P	08 38 48.7	+1.5
ANMO				pmax	pmax		
	comp=Z,23nm,1.2s						
ANMO	Albuquerque	39.06	321	P	P	08 38 48.6	+1.4
	baz=130						
ANMO	Albuquerque	39.06	321	P	P	08 38 49.3	+2.1
	baz=130,SNR=24						
H43A	Windswept, Lux	39.17	349	P	P	08 38 48.3	+0.5
	baz=164						
JANB	Januaria	39.20	123	eP	P	08 38 46.4	-2.1
T25A	Trinidad	39.33	325	P	P	08 38 51.4	+2.0
T25A				IAmb	IAmb	08 38 56.8	
	comp=Z,58nm,1.1s						
T25A	Trinidad	39.33	325	P	P	08 38 50.8	+1.4
	baz=135,SNR=27						
G45A	Suttons Bay	39.35	351	P	P	08 38 50.0	+0.7
	baz=167						
G45A				P	P	08 38 50.0	+0.7
	baz=167						
BB19B	Bebedouro	39.36	134	eP	P	08 38 49.5	-0.3
PMNB	Patos De Minas	39.36	129	eP	P	08 38 48.2	-1.6
G62A	West of Eustis	39.40	8	P	P	08 38 52.1	+2.4
	baz=191						
G62A				P	P	08 38 52.1	+2.4
	baz=191						
PTGB	Pitanga	39.53	142	eP	P	08 38 48.9	-2.3
BGNE	Belgrade	39.57	336	P	P	08 38 52.3	+1.1
	baz=147						
BGNE	Belgrade	39.57	336	P	P	08 38 51.9	+0.6
	baz=147						
PKME	Peaks-Kenny Pk	39.63	9	P	P	08 38 52.6	+1.1
	baz=193						
PKME	Peaks-Kenny Pk	39.63	9	P	P	08 38 53.5	+2.0
	baz=193						
KSCO	Kaye Shedlock'	39.73	329	P	P	08 38 53.9	+1.1
KSCO				IAmb	IAmb	08 38 59.2	
	comp=Z,50nm,1.1s						
KSCO	Kaye Shedlock'	39.73	329	P	P	08 38 53.9	+1.1
	baz=139						
KSCO	Kaye Shedlock'	39.73	329	P	P	08 38 54.6	+1.9
	baz=139						
FRBT	Francisco Belt	39.88	144	eP	P	08 38 51.1	-2.9
MECA	Mercedes	39.92	153	eP	P	08 38 52.4	-1.8
AZCA	Azaras, Argent	39.95	149	eP	P	08 38 51.9	-2.6
MT08	Bocatoma Ro	40.05	170	P	P	08 38 57.1	+1.6
MT08				IAmb	IAmb	08 38 59.5	
	comp=Z,20nm,1.1s						
FRTB	Fartura	40.16	138	eP	P	08 38 54.2	-2.1
I37B	Waseca	40.16	342	P	P	08 38 58.4	+2.4
	baz=155						
F64A	Sherman	40.37	10	P	P	08 38 58.7	+1.0
	baz=194						
F64A				P	P	08 38 58.7	+1.0
	baz=194						
SDCO	Great Sand Dun	40.37	325	P	P	08 38 59.5	+1.3
	baz=134,SNR=36						
SDCO	Great Sand Dun	40.37	325	P	P	08 39 00.8	+2.5
	baz=134,SNR=36						
TUC	Tucson	40.38	314	P	P	08 39 00.6	+2.4
TUC	Tucson	40.38	314	P	P	08 39 00.6	+2.4
TUC				pmax	pmax		
	comp=Z,11nm,1.1s						
TUC	Tucson	40.38	314	P	P	08 38 59.5	+1.3
	baz=123						
G40A	Rib Lake	40.46	346	P	P	08 38 58.6	+0.1
	baz=160						
E46A	Sault Ste Mari	40.47	353	P	P	08 38 59.1	+0.6
	baz=170						
CRSM	Crissiumal (Br	40.50	147	eP	P	08 38 56.1	-3.0
K31A	O'Neill	40.84	336	P	P	08 39 01.7	0.0
K31A	O'Neill	40.84	336	P	P	08 39 02.6	+0.9
	baz=147						
E43A	Lone Tree Farm	40.87	350	P	P	08 39 02.6	+0.7
	baz=166						
E63A	Oxbow	40.90	10	P	P	08 39 03.4	+1.4
	baz=194						
E63A				P	P	08 39 03.4	+1.4
	baz=194						
E62A	Clayton Lake	40.91	9	P	P	08 39 03.1	+0.9
E62A				IAmb	IAmb	08 39 05.3	
	comp=Z,20nm,0.7s						
E62A	Clayton Lake	40.91	9	P	P	08 39 04.7	+2.5
	baz=192,SNR=5.8						
E62A				P	P	08 39 04.7	+2.5
	baz=192,SNR=5.8						
OGNE	Ogallala	40.92	331	P	P	08 39 03.5	+1.0
	baz=141						
OGNE	Ogallala	40.92	331	P	P	08 39 04.2	+1.7
	baz=141						
RCLB	Rio Claro- Sao	40.94	135	eP	P	08 39 01.9	-1.0
ECSD	EROS Data Cent	40.97	339	P	P	08 39 02.3	-0.5
ECSD	EROS Data Cent	40.97	339	P	P	08 39 03.2	+0.4
	baz=150,SNR=15						
ECSD	EROS Data Cent	40.97	339	P	P	08 39 02.3	-0.5
	baz=150,SNR=15						
COWI	Conover	41.01	348	P	P	08 39 03.8	+0.7
	baz=162						
Q24A	Divide	41.03	327	P	P	08 39 03.6	-0.1
	baz=136,SNR=5.1						
X18A	Snowflake	41.06	318	P	P	08 39 06.0	+2.1
SPMN	Marine on St.	41.09	344	P	P	08 39 03.2	-0.5
	baz=156						
SPMN	Marine on St.	41.09	344	P	P	08 39 03.9	+0.2
	baz=156						
S22A	4UR Ranch, Cre	41.14	324	P	P	08 39 05.2	+0.7
	baz=132,SNR=16						
W18A	Petrified Fore	41.27	319	P	P	08 39 07.1	+1.5
W18A				IAmb	IAmb	08 39 13.9	
	comp=Z,47nm,1.4s						
W18A	Petrified Fore	41.27	319	P	P	08 39 06.3	+0.8
	baz=127,SNR=12						
LATQ	La Tuque	41.28	5	P	P	08 39 05.9	+0.7
LATQ				IAmb	IAmb	08 39 12.7	
	comp=Z,49nm,1.2s						
ITAB	Concordia	41.37	145	eP	P	08 39 04.1	-2.1
D62A	Allapoint, All	41.44	9	P	P	08 39 08.9	+2.4
	baz=193						
D62A				P	P	08 39 08.9	+2.4
	baz=193						
214A	Organ Pipe Nat	41.66	313	P	P	08 39 09.5	+0.9
	baz=120,SNR=7.1						
VAO	Valinhos	41.71	135	eP	P	08 39 07.4	-1.8
MVCO	Mesa Verde	41.78	322	P	P	08 39 10.7	+0.8
MVCO	Mesa Verde	41.78	322	P	P	08 39 10.7	+0.8
	baz=130						
D41A	Chassel	41.82	349	P	P	08 39 10.3	+0.7
	baz=163						
F36A	Milaca	41.88	343	P	P	08 39 09.9	-0.3
	baz=156,SNR=7.3						
ISCO	Idaho Springs	41.88	327	P	P	08 39 12.3	+1.6
ISCO	Idaho Springs	41.88	327	P	P	08 39 12.3	+1.6
ISCO				pmax	pmax		
	comp=Z,19nm,1.0s						
ISCO	Idaho Springs	41.88	327	P	P	08 39 11.6	+0.9
	baz=136,SNR=23						
ISCO	Idaho Springs	41.88	327	P	P	08 39 13.0	+2.3
	baz=136,SNR=23						
ALGR	Alto Alegre (B	42.08	147	eP	P	08 39 08.9	-3.2
RODS	Rosario do Sul	42.20	151	eP	P	08 39 10.7	-2.3
SUSD	Miller	42.45	337	P	P	08 39 14.5	-0.4
SUSD				IAmb	IAmb	08 39 19.5	
	comp=Z,43nm,0.9s						
SUSD	Miller	42.45	337	P	P	08 39 14.8	-0.1
	baz=148						
SUSD	Miller	42.45	337	P	P	08 39 14.6	-0.2
	baz=148						
WUAZ	Wupatki	42.58	318	P	P	08 39 18.1	+1.8
WUAZ	Wupatki	42.58	318	P	P	08 39 16.7	+0.4
	baz=125,SNR=8.6						
PV07	Paradox Valley	42.67	323	P	P	08 39 18.4	+1.4
PV07				IAmb	IAmb	08 39 24.1	
	comp=Z,52nm,1.3s						
F33A	5 Mile Ranch,	42.71	341	P	P	08 39 16.3	-0.6
	baz=152						
PV11	David Mesa, Pa	42.71	323	P	P	08 39 18.9	+1.6
PV11				IAmb	IAmb	08 39 25.0	
	comp=Z,74nm,1.6s						
N23A	Red Feather La	42.84	328	P	P	08 39 19.6	+1.2
	baz=136,SNR=7.6						
CPSB	Cacapava Do Su	43.13	149	eP	P	08 39 16.3	-4.2
EYMN	Ely	43.28	346	P	P	08 39 21.7	+0.2
	baz=160						
EYMN	Ely	43.28	346	P	P	08 39 21.6	+0.1
	baz=160						
RCBR	Riachuelo	43.34	105	eP	P	08 39 21.1	-1.5
SJMB	Sao Joao De Ma	43.62	125	eP	P	08 39 22.9	-1.8
GLA	Glamis	43.68	313	P	P	08 39 26.0	+1.0
	baz=119						
PDMCI	Parker Dam,Lak	43.82	315	P	P	08 39 27.0	+0.9
	baz=121						
VAS01	Vassouras-RJ	43.83	131	eP	P	08 39 24.4	-2.0
W13A	Hualapai Mount	44.06	316	P	P	08 39 30.2	+1.9
PLTB	Pedras Altas	44.14	150	eP	P	08 39 26.4	-2.3
B35A	Bob, Littlefor	44.22	345	P	P	08 39 29.0	-0.1
	baz=157						
RSSD	Black Hills	44.32	333	P	P	08 39 31.7	+1.5
RSSD				IAmb	IAmb	08 39 36.5	
	comp=Z,41nm,1.2s						
RSSD	Black Hills	44.32	333	P	P	08 39 31.7	+1.5
RSSD				pmax	pmax		
	comp=Z,41nm,1.2s						
RSSD	Black Hills	44.32	333	P	P	08 39 30.5	+0.2
	baz=141						
RSSD	Black Hills	44.32	333	P	P	08 39 31.9	+1.7
	baz=141,SNR=25						
SWSC	Sam W. Stewart	44.34	312	P	P	08 39 30.8	+0.4
	baz=118						
K22A	Casper	44.41	329	P	P	08 39 32.0	+1.1
	baz=136						
K22A	Casper	44.41	329	P	P	08 39 32.4	+1.5
	baz=136						
BC3	Big Chuckawall	44.43	313	P	P	08 39 32.7	+1.6
	baz=119,SNR=8.6						
IRM	Iron Mountain	44.46	314	P	P	08 39 33.1	+1.8
	baz=120,SNR=14						
DUB01	Friburgo-RJ	44.52	130	eP	P	08 39 30.8	-1.1
P17A	Butcher Ranch,	44.58	323	P	P	08 39 34.3	+2.0
P17A				IAmb	IAmb	08 39 39.1	
	comp=Z,28nm,1.2s						
AGMN	Agassiz Nation	44.76	343	P	P	08 39 34.0	+0.5
	baz=154						
AGMN	Agassiz Nation	44.76	343	P	P	08 39 33.6	+0.2
	baz=154						
MONP2	Monument Peak	44.78	312	P	P	08 39 34.4	+0.3
	baz=118						
E28A	Huff	44.90	338	P	P	08 39 35.0	+0.4
	baz=146,SNR=6.0						
ALF01	Guarapari-ES	44.99	127	eP	P	08 39 34.7	-0.9
BELC	Belle Mtn. Jos	45.00	313	P	P	08 39 36.3	+0.6
	baz=119,SNR=16						
V12A	Nelson	45.06	316	P	P	08 39 37.8	+1.6
V12A				IAmb	IAmb	08 39 43.2	
	comp=Z,14nm,1.1s						
PMD	Palm Desert	45.10	313	P	P	08 39 38.5	+2.1
RPN	Rapa Nui	45.11	221	LR	LR	08 54 13.8	
	comp=Z,252nm,18.5s,baz=58,slow=30						
TPFO	Pinon Flats	45.14	312	P	P	08 39 38.0	+1.2
	baz=118						
GMRC	Granite Mounta	45.14	314	P	P	08 39 38.4	+1.5
	baz=120,SNR=7.2						
PFO	Pinyon Flats O	45.15	312	LR	LR	08 59 46.2	
	comp=Z,147nm,21.9s,baz=71,slow=38						
PFO	Pinyon Flats O	45.15	312	P	P	08 39 37.6	+0.7
PFO	Pinyon Flats O	45.15	312	⇑eP	P	08 39 40.2	+3.3
PFO				pmax	pmax		
	comp=Z,21nm,1.3s						
MDND	Maddock	45.58	339	P	P	08 39 40.7	+0.7
	baz=148						
MDND	Maddock	45.58	339	P	P	08 39 40.2	+0.3
	baz=148						
HEC	Hector,Ludlow	45.65	314	P	P	08 39 41.2	+0.4
	baz=120,SNR=6.6						
TUQ	Turquoise Moun	45.66	315	P	P	08 39 41.9	+1.0
	baz=120						
MURC	Murrieta	45.68	312	P	P	08 39 41.7	+0.7
	baz=118						
BBRC	Big Bear Solar	45.79	313	P	P	08 39 41.9	-0.2
	baz=118						
BW06	Boulder Array	46.08	327	P	P	08 39 45.4	+1.2
BW06				IAmb	IAmb	08 39 50.3	
	comp=Z,33nm,1.4s						
BW06	Boulder Array	46.08	327	P	P	08 39 44.5	+0.3
	baz=133,SNR=24						
PD31	Pinedale Array	46.08	327	P	P	08 39 45.5	+1.2
PD31				IAmb	IAmb	08 39 50.3	
	comp=Z,30nm,1.4s						
PDAR	Pinedale Array	46.08	327	P	P	08 39 45.0	+0.8
	comp=Z,11nm,1.1s,baz=120,slow=8.8,SNR=25						
PDAR				LR	LR	09 02 57.2	
	comp=Z,72nm,19.2s,baz=139,slow=41						
	comp=Z,11nm,1.1s						
SHOC	Shoshone, Teco	46.14	315	P	P	08 39 44.9	+0.3
	baz=120						
GSC	Goldstone, Bar	46.21	314	P	P	08 39 46.3	+1.0
	baz=119						
DUG	Dugway, Tooele	46.28	322	P	P	08 39 47.1	+1.3
DUG				IAmb	IAmb	08 39 52.6	
	comp=Z,19nm,1.0s						
DUG	Dugway, Tooele	46.28	322	P	P	08 39 47.1	+1.3
DUG				pmax	pmax		
	comp=Z,19nm,1.0s						
DUG	Dugway, Tooele	46.28	322	P	P	08 39 46.7	+0.9
	baz=128,SNR=17						
BFSC	Mount Baldy Ra	46.32	313	P	P	08 39 47.2	+1.0
	baz=118						
TRQA	Tornquist	46.35	163	P	P	08 39 47.0	+0.9
TRQA	Tornquist	46.35	163	P	P	08 39 47.0	+0.9
TRQA				pmax	pmax		
	comp=Z,36nm,1.4s						
CIS	Catalina Islan	46.50	311	P	P	08 39 48.9	+1.4
	baz=116						
SPR3	Spring Creek 3	46.52	320	P	P	08 39 49.0	+1.1
SPR3				IAmb	IAmb	08 39 54.5	
	comp=Z,18nm,1.1s						
ULM	Lac du Bonnet	46.52	344	P	P	08 39 46.6	-0.7
	comp=Z,17nm,0.6s,baz=154,slow=8.9,SNR=22						
ULM				LR	LR	09 00 06.2	
	comp=Z,150nm,19.6s,baz=124,slow=37						
	comp=Z,17nm,0.6s						
ULM	Lac du Bonnet	46.52	344	P	P	08 39 46.3	-1.1
TPNV	Topopah Spring	46.66	317	P	P	08 39 50.4	+1.6
TPNV	Topopah Spring	46.66	317	P	P	08 39 50.4	+1.6
TPNV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TPNV	Topopah Spring	46.66	317	P	P	08 39 50.7	+1.8
	baz=121,SNR=5.9						
EDW2	Edwards Air Fo	46.87	313	P	P	08 39 52.2	+1.8
	baz=118						
MPMC	Manual Prospec	47.07	315	P	P	08 39 54.0	+1.9
	baz=119						
PLCA	Paso Flores	47.12	173	P	P	08 39 52.7	+0.5
	comp=Z,7.3nm,0.9s,baz=343,slow=8.8,SNR=17						
PLCA				LR	LR	08 59 48.9	
	comp=Z,169nm,19.7s,baz=346,slow=36						
	comp=Z,7.3nm,0.9s						
REDW	Red Top Meadow	47.18	327	P	P	08 39 54.1	+1.2
SNOW	Snow King Moun	47.19	327	P	P	08 39 54.8	+1.7
MOOW	Moose Ponds	47.38	327	P	P	08 39 55.6	+1.2
MOOW				IAmb	IAmb	08 40 00.5	
	comp=Z,18nm,1.1s						
RLMT	Red Lodge	47.57	330	P	P	08 39 57.1	+1.3
	baz=135,SNR=14						
SCZ2	Santa Cruz Isl	47.67	311	P	P	08 39 58.0	+1.4
	baz=116						
CWC	Cottonwood Cre	47.67	315	P	P	08 39 57.8	+1.0
	baz=119						
DGMT	Dagmar	47.82	336	P	P	08 39 58.0	+0.5
DGMT	Dagmar	47.82	336	P	P	08 39 58.6	+1.1
	baz=143,SNR=8.8						
ELK	Elko	48.09	321	LR	LR	09 04 33.4	
	comp=Z,83nm,18.6s,baz=124,slow=41						
VES	Vestal, Richgr	48.10	314	P	P	08 40 00.9	+1.0
	baz=118,SNR=5.9						
GCMT	Greycliff	48.24	330	P	P	08 40 02.3	+1.4
QLMT	Earthquake Lak	48.47	328	P	P	08 40 04.8	+1.9
SMMC	Simmler	48.52	313	P	P	08 40 04.8	+1.6
	baz=116						
NVAR	Mina Array Bea	48.82	317	P	P	08 40 07.5	+1.9
	comp=Z,4.6nm,0.8s,baz=126,slow=6.3,SNR=28						
NVAR				PcP	PcP	08 41 31.0	+0.7
	comp=Z,1.5nm,0.8s,baz=132,slow=4.0,SNR=2.2						
NVAR				LR	LR	09 01 49.0	
	comp=Z,82nm,22.0s,baz=154,slow=38						
	comp=Z,4.6nm,0.8s						
NVAR	Mina Array Bea	48.82	317	P	P	08 40 07.0	+1.3
BOZ	Bozeman (W)	49.10	329	P	P	08 40 09.1	+1.5
	baz=132,SNR=24						
HLID	Hailey	49.29	325	P	P	08 40 10.0	+0.9
	baz=128,SNR=15						
SCHQ	Schefferville	49.31	8	P	P	08 40 09.9	+1.0
	comp=Z,20nm,0.8s,baz=199,slow=6.7,SNR=52						
SCHQ				LR	LR	09 01 22.5	
	comp=Z,148nm,21.0s,baz=198,slow=36						
	comp=Z,20nm,0.8s						
LRM	Limekiln Ridge	49.67	328	P	P	08 40 13.8	+1.7
EGMT	Eagleton	49.88	332	P	P	08 40 14.8	+1.4
	baz=136,SNR=7.0						
MFID	Camas Ranch	50.02	324	P	P	08 40 15.6	+1.0
MFID				IAmb	IAmb	08 40 21.0	
	comp=Z,16nm,1.0s						
MSO	Missoula	51.11	329	P	P	08 40 24.1	+1.3
	baz=131						
FFC	Flin Flon	52.24	342	P	P	08 40 31.4	+0.5
FFC				IAmb	IAmb	08 40 36.1	
	comp=Z,18nm,0.9s						
FFC	Flin Flon	52.24	342	P	P	08 40 31.4	+0.5
FFC				pmax	pmax		
	comp=Z,18nm,1.0s						
I07A	Izee	52.58	323	P	P	08 40 34.8	+1.0
YBH	Yreka Blue Hor	53.39	319	LR	LR	09 06 02.6	
	comp=Z,94nm,21.5s,baz=140,slow=39						
NEW	Newport	53.69	328	P	P	08 40 42.9	+1.0
	baz=128						
FCC	Fort Churchill	53.99	349	P	P	08 40 43.5	-0.2
FCC	Fort Churchill	53.99	349	P	P	08 40 43.5	-0.2
FCC				pmax	pmax		
	comp=Z,52nm,1.0s						
LLLB	Lillooet	57.58	328	P	P	08 41 10.9	+1.1
HILA	High Level	60.41	338	P	P	08 41 29.5	+0.3
BBB	Bella Bella	61.73	327	LR	LR	09 14 11.3	
	comp=Z,61nm,18.3s,baz=174,slow=42						
YKA	Yellowknife Ar	62.40	342	P	P	08 41 42.6	+0.1
	comp=Z,11nm,0.9s,baz=131,slow=7.1,SNR=118						
	comp=Z,11nm,0.9s						
SFJD	Kangerlussuaq	63.50	12	LR	LR	09 11 21.7	
	comp=Z,81nm,18.1s,baz=218,slow=38						
DY2G	Dye2	64.00	13	i P	P	08 41 52.9	-0.5
DY2G				IAmb	IAmb	08 41 53.9	
	comp=Z,20nm,0.9s						
TAOE	Nuku Hiva Isla	64.06	257	eS	S	08 50 34.0	+2.4
	comp=Z,143nm,29.5s						
TAOE	Nuku Hiva Isla	64.06	257	eLR	LR	09 01 06.4	
	comp=Z,194nm,23.1s						
KOTAN	Kotaneelee Air	64.18	336	P	P	08 41 55.5	+1.0
	baz=127,SNR=11						
LIRD	Liard River Hi	64.60	335	P	P	08 41 57.8	+0.6
	baz=124,SNR=6.0						
V35K	Ketchikan	65.06	329	P	P	08 42 01.4	+1.3
	baz=117						
ISOG	Isortoq, Green	65.16	17	eP	P	08 41 59.5	-1.1
ISOG				IAmb	IAmb	08 42 02.4	
	comp=Z,31nm,1.0s						
T35M	Bob Quinn	65.17	331	P	P	08 42 01.8	+0.7
	baz=119						
ANGG	Ammassalik, Gr	65.60	17	eP	P	08 42 03.5	+0.1
DLBC	Dease Lake	65.80	333	P	P	08 42 05.8	+0.7
	baz=120						
WRGLY	Wrigley	65.86	339	P	P	08 42 06.0	+0.7
	baz=128						
S34M	Telegraph Cree	66.05	332	P	P	08 42 07.3	+0.7
	baz=119						
WTLY	Watson Lake, Y	66.13	335	P	P	08 42 08.4	+1.3
WTLY				IAmb	IAmb	08 42 13.1	
	comp=Z,16nm,1.1s						
WTLY	Watson Lake, Y	66.13	335	P	P	08 42 07.8	+0.6
	baz=122,SNR=11						
Q32M	Nakina River	67.08	333	P	P	08 42 14.3	+0.8
	baz=118						
ICESG	Greenland Ices	67.62	14	eP	P	08 42 16.5	-0.4
ICESG				IAmb	IAmb	08 42 21.5	
	comp=Z,70nm,1.1s						
R32K	Eaglecrest	67.81	331	P	P	08 42 19.2	+1.4
	baz=116						
UPNV	Upernavik	67.84	7	eP	P	08 42 17.7	0.0
UPNV				IAmb	IAmb	08 42 18.4	
	comp=Z,8.3nm,0.9s						
P33M	Teslin, Yukon	67.92	334	P	P	08 42 19.7	+1.1
	baz=118						
N32M	Quiet Lake	68.48	335	P	P	08 42 23.1	+1.0
	baz=118						
FARO	Faro, Yukon	69.11	336	P	P	08 42 26.8	+0.9
	baz=118						
RES	Resolute Bay	69.20	355	LR	LR	09 13 55.7	
	comp=Z,112nm,18.8s,baz=32,slow=37						
RES	Resolute Bay	69.20	355	P	P	08 42 25.9	-0.2
RES				IAmb	IAmb	08 42 30.9	
	comp=Z,15nm,1.1s						
RES	Resolute Bay	69.20	355	P	P	08 42 26.0	-0.2
RES				pmax	pmax		
	comp=Z,15nm,1.1s						
KULLO	Kullorsuaq	69.39	6	eP	P	08 42 27.4	+0.1
KULLO				IAmb	IAmb	08 42 28.7	
	comp=Z,9.9nm,0.7s						
M31M	Drury Creek, Y	69.53	335	P	P	08 42 29.4	+0.9
	baz=117						
MORF	Marmelete	69.60	53	eP	P	08 42 30.2	+0.7
MORF	Marmelete	69.60	53	eP	P	08 42 30.2	+0.7
MORF				A	A	08 42 33.5	
	comp=Z,77nm,1.6s						
MORF	Marmelete	69.60	53	eP	P	08 42 30.2	+0.7
MORF				IAmb	IAmb	08 42 31.3	
	comp=Z,52nm,1.2s						
O30N	Mendenhall	69.62	334	P	P	08 42 30.1	+1.0
	baz=115						
P30M	Million Dollar	69.73	333	P	P	08 42 30.8	+1.0
	baz=114						
N31M	Braeburn, Yuko	69.79	334	P	P	08 42 31.0	+0.9
	baz=116						
PNCL	Nicolau / Gran	69.81	52	eP	P	08 42 31.5	+0.8
PNCL				A	A	08 42 33.8	
	comp=Z,38nm,1.4s						
C36M	Paulatuk	69.95	344	P	P	08 42 32.0	+1.2
	baz=130						
MESJ	Messejana	70.02	52	eP	P	08 42 32.8	+0.8
MESJ	Messejana	70.02	52	eP	P	08 42 33.3	+1.3
MESJ				A	A	08 42 48.3	
	comp=Z,15nm,1.5s						
MESJ	Messejana	70.02	52	eP	P	08 42 32.8	+0.8
MESJ				IAmb	IAmb	08 42 33.0	
	comp=Z,13nm,1.2s						
PCAS	Casmilo, Conde	70.12	50	eP	P	08 42 33.8	+1.2
PCAS				A	A	08 42 34.3	
	comp=Z,48nm,1.1s						
PCVE	Castro Verde	70.13	52	eP	P	08 42 34.2	+1.5

PCVE				A	A	08 42 34.9	
	comp=Z,27nm,2.2s						
PMTG	Montargil	70.19	51	*e*P	P	08 42 33.7	+0.7
PMTG				A	A	08 42 43.8	
	comp=Z,25nm,1.5s						
COI	Coimbra	70.21	50	*e*P	P	08 42 34.7	+1.6
COI				A	A	08 42 35.3	
	comp=Z,54nm,1.0s						
HYT	Haines Junctio	70.27	333	P	P	08 42 34.3	+1.1
	baz=114						
EVO	Evora	70.28	51	*e*P	P	08 42 33.5	0.0
EVO				A	A	08 42 37.6	
	comp=Z,21nm,1.4s						
PBEJ	Beja	70.32	52	*e*P	P	08 42 35.0	+1.2
PBEJ				A	A	08 42 35.8	
	comp=Z,24nm,1.7s						
N30M	Aishikik Lake	70.35	334	P	P	08 42 34.9	+1.3
	baz=114						
TULEG	Thule	70.50	2	P	P	08 42 34.6	+0.5
SUMG	Summit	70.50	12	*i* P	P	08 42 35.1	+0.4
SUMG				IAmb	IAmb	08 42 36.1	
	comp=Z,41nm,0.8s						
O29M	Mount Kennedy	70.55	333	P	P	08 42 36.0	+1.1
	baz=113						
BORG	Borgarnes	70.56	22	LR	LR	09 10 43.4	
	comp=Z,60nm,21.4s,baz=244,slow=34						
PESTR	Estremoz	70.65	51	P	P	08 42 36.0	+0.2
PESTR				IAmb	IAmb	08 42 37.6	
	comp=Z,14nm,1.0s						
PESTR	Estremoz	70.65	51	*e*P	P	08 42 36.5	+0.7
PESTR				A	A	08 42 37.8	
	comp=Z,31nm,1.1s						
PVIS	Viseu	70.68	49	*e*P	P	08 42 36.8	+0.7
PVIS				A	A	08 42 49.6	
	comp=Z,33nm,1.8s						
M30M	Minto, Yukon	70.69	335	P	P	08 42 37.1	+1.4
M30M	Minto, Yukon	70.69	335	P	P	08 42 36.7	+1.0
	baz=115,SNR=16						
YUK6	Outpost Mounta	70.70	333	P	P	08 42 37.1	+1.1
	baz=113						
MAYO	Mayo, Yukon	70.77	336	P	P	08 42 36.4	+0.4
	baz=116						
POLO	Lamas de Olo	70.86	48	*e*P	P	08 42 38.0	+0.8
POLO				A	A	08 42 44.0	
	comp=Z,24nm,1.5s						
PCBR	Castelo Branco	70.87	50	*e*P	P	08 42 38.1	+1.0
PCBR				A	A	08 42 50.6	
	comp=Z,29nm,1.6s						
PMRV	Marv??o	70.88	50	*e*P	P	08 42 37.7	+0.5
PMRV				A	A	08 42 47.9	
	comp=Z,22nm,1.4s						
MTE	Manteigas	70.90	49	*e*P	P	08 42 37.8	+0.4
MTE				A	A	08 42 41.7	
	comp=Z,28nm,1.9s						
PVRL	Vila Real	70.90	49	*e*P	P	08 42 38.4	+1.0
PVRL				A	A	08 42 42.9	
	comp=Z,39nm,1.7s						
PBAR	Barrancos	70.99	52	*e*P	P	08 42 38.7	+0.8
PBAR				A	A	08 42 40.3	
	comp=Z,17nm,1.3s						
YUK4	Talbot Arm	70.99	334	P	P	08 42 38.4	+0.7
	baz=113						
PINM	Pinnacle	71.25	332	P	P	08 42 39.7	+0.6
	baz=111						
M29M	Somme Creek	71.34	335	P	P	08 42 40.1	+0.4
	baz=114						
MVO	Moncorvo	71.40	49	*e*P	P	08 42 41.2	+0.8
MVO				A	A	08 42 41.8	
	comp=Z,32nm,0.9s						
YUK8	Steele Glacier	71.46	333	P	P	08 42 40.9	+0.2
	baz=112						
O28M	Mount Upton	71.46	333	P	P	08 42 41.3	+0.7
	baz=111						
L29M	L29M	71.47	335	P	P	08 42 41.4	+1.0
	baz=114						
K29M	Barlow Dome	71.53	336	P	P	08 42 41.8	+1.0
	baz=115						
PBRG	Braganca	71.70	48	*e*P	P	08 42 41.9	-0.3
PBRG				A	A	08 42 53.6	
	comp=Z,27nm,1.8s						
F31M	Tsiigehtchic	71.80	340	P	P	08 42 43.1	+0.9
	baz=120,SNR=13						
A36M	Sachs Harbour	71.95	346	P	P	08 42 42.4	-0.6
A36M	Sachs Harbour	71.95	346	P	P	08 42 42.3	-0.7
	baz=129,SNR=39						
YUK3	Moose Creek	71.95	334	P	P	08 42 42.9	-0.6
	baz=111						
J29M	Klondike Camp	72.07	337	P	P	08 42 44.4	+0.5
	baz=114						
TIC	Toumodi	72.11	85⇑	*e*P	P	08 42 44.6	-0.5
	comp=Z,39nm,0.8s						
LIC	Lamto	72.14	85⇑	*e*P	P	08 42 44.9	-0.4
	comp=Z,114nm,0.8s						
INK	Inuvik	72.16	341	P	P	08 42 44.2	-0.1
INK	Inuvik	72.16	341	P	P	08 42 44.2	-0.1
INK				pmax	pmax		
	comp=Z,47nm,1.6s						
INK	Inuvik	72.16	341	P	P	08 42 44.5	+0.2
	baz=120,SNR=18						
BARN	Barnard Glacie	72.24	333	P	P	08 42 46.0	+0.8
BARN				IAmb	IAmb	08 42 55.9	
	comp=Z,9.5nm,0.9s						
DBIC	Dimbokro	72.27	85	P	P	08 42 46.1	0.0
	comp=Z,20nm,0.7s,baz=275,slow=7.1,SNR=23						
DBIC				LR	LR	09 12 45.2	
	comp=Z,136nm,18.9s,baz=282,slow=34						
	comp=Z,20nm,0.7s						
DBIC	Dimbokro	72.27	85	P	P	08 42 45.7	-0.4
DBIC	Dimbokro	72.27	85	P	P	08 42 45.7	-0.4
DBIC				pmax	pmax		
	comp=Z,27nm,0.8s						
EPYK	Eagle Plains	72.33	339	P	P	08 42 45.8	+0.4
EPYK				IAmb	IAmb	08 42 53.0	
	comp=Z,14nm,1.3s						
EPYK	Eagle Plains	72.33	339	P	P	08 42 45.4	0.0
	baz=116						
BVCY	Beaver Creek	72.36	334	P	P	08 42 46.1	+0.4
	baz=111						
DAWY	Dawson	72.38	336	P	P	08 42 46.2	+0.4
DAWY	Dawson	72.38	336	P	P	08 42 46.6	+0.8
	baz=113						
KIC	Kosan Boka	72.41	85⇑	*e*P	P	08 42 46.6	-0.3
	comp=Z,51nm,0.9s						
G30M	tAoh Zraii Nji	72.43	339	P	P	08 42 46.7	+0.6
	baz=117						
I29M	Ogilvie Camp,	72.48	337	P	P	08 42 47.2	+0.9
	baz=114						
NEEM	North Greenlan	72.63	6	*i* P	P	08 42 48.2	+0.8
NEEM				IAmb	IAmb	08 42 49.2	
	comp=Z,46nm,0.8s						
M27K	Edge Creek, AK	72.79	334	P	P	08 42 50.1	+1.7
M27K				IAmb	IAmb	08 42 55.2	
	comp=Z,22nm,1.2s						
M27K	Edge Creek, AK	72.79	334	P	P	08 42 49.0	+0.6
	baz=110						
MCARA	McCarthy VSAT	72.97	333	P	P	08 42 50.4	+1.1
	baz=109						
BCAR	Beaver Creek A	73.00	335	P	P	08 42 50.5	+1.0
L27K	Beaver Creek,	73.01	335	P	P	08 42 50.9	+1.3
L27K				IAmb	IAmb	08 42 56.4	
	comp=Z,17nm,0.9s						
L27K	Beaver Creek,	73.01	335	P	P	08 42 51.5	+1.9
	baz=110						
PAB	San Pablo	73.23	51	P	P	08 42 51.6	+0.3
PAB				IAmb	IAmb	08 42 53.3	
	comp=Z,18nm,1.1s						
PAB	San Pablo	73.23	51	P	P	08 42 51.7	+0.3
PAB				pmax	pmax		
	comp=Z,18nm,1.2s						
M26K	Nabesna, AK	73.29	334	P	P	08 42 53.0	+1.7
	baz=109						
GLB	Gilahina Butte	73.35	333	P	P	08 42 53.5	+1.9
GLB				IAmb	IAmb	08 42 59.0	
	comp=Z,37nm,1.6s						
EGAK	Eagle	73.36	336	P	P	08 42 52.6	+1.1
EGAK				IAmb	IAmb	08 42 58.6	
	comp=Z,14nm,1.3s						
EGAK	Eagle	73.36	336	P	P	08 42 52.3	+0.8
	baz=112						
K27K	Chicken	73.46	336	P	P	08 42 52.8	+0.7
	baz=110						
ESDC	Sonseca Array	73.54	51	P	P	08 42 53.8	+0.6
	comp=Z,9.5nm,0.9s,baz=271,slow=5.8,SNR=40						
ESDC				LR	LR	09 14 06.1	
	comp=Z,54nm,18.6s,baz=254,slow=35						
	comp=Z,9.5nm,0.9s						
ESDC	Sonseca Array	73.54	51	P	P	08 42 53.8	+0.6
ESDC				IAmb	IAmb	08 42 55.3	
	comp=Z,15nm,1.1s						
ESBB	Sonseca Array	73.54	51	P	P	08 42 54.0	+0.8
L26K	Log Cabin Wild	73.65	334	P	P	08 42 54.0	+0.6
	baz=109						
N25K	Chitina, Valde	73.76	333	P	P	08 42 55.1	+1.1
	baz=108						
I27K	Kandik River	73.84	337	P	P	08 42 55.7	+1.3
	baz=111						
H27K	Steamboat Moun	74.04	338	P	P	08 42 56.5	+0.9
	baz=112						
SCRK	Sand Creek	74.23	335	P	P	08 42 57.9	+1.1
	baz=109						
HARP	HAARP	74.25	333	P	P	08 42 58.1	+1.3
	baz=107						
G27K	Doyon Strip	74.31	338	P	P	08 42 57.8	+0.7
	baz=112						
KLU	Klutina	74.33	332	P	P	08 42 57.6	+0.2
	baz=106						
I26K	Coal Creek Min	74.34	337	P	P	08 42 58.1	+0.8
	baz=110						
RIDG	Independent Ri	74.52	335	P	P	08 42 59.2	+0.8
	baz=108,SNR=13						
PAX	Paxson	74.56	334	P	P	08 43 00.0	+1.3
	baz=107						
M24K	Tolsona, Glenn	74.62	333	P	P	08 43 00.5	+1.4
	baz=106						
PPT	Papeete	74.80	250	LR	LR	09 09 05.4	
	comp=Z,78nm,18.9s,baz=54,slow=30						
PPT2	Papeete2	74.80	250	*e*LR	LR	09 06 05.0	
	comp=Z,405nm,26.2s						
PPT2				*e*LR	LR	09 06 05.1	
	comp=Z,545nm,25.5s						
E27K	Coleen River	74.81	340	P	P	08 43 00.9	+0.9
	baz=112						
K24K	Donnelly Dome	74.93	335	P	P	08 43 01.7	+0.9
	baz=107,SNR=5.1						
SCM	Sheep Creek Mo	75.07	333	P	P	08 43 01.8	+0.2
	baz=105						
G26K	Porcupine Rive	75.14	338	P	P	08 43 02.8	+0.9
	baz=110						
M23K	Glacier View	75.24	332	P	P	08 43 03.3	+0.7
	baz=105,SNR=7.7						
PWL	Port Wells	75.29	331	P	P	08 43 03.8	+0.9
	baz=104						
PRP	Porcupine Dome	75.35	336	P	P	08 43 04.0	+0.7
	baz=108						
KNK	Knik Glacier	75.48	332	P	P	08 43 05.1	+1.1
	baz=104						
SML	Sawmill	75.52	332	P	P	08 43 05.0	+0.7
	baz=104						
F26K	Sheenjek River	75.53	339	P	P	08 43 05.2	+1.0
	baz=110						
BMAR	Burnt Mountain	75.60	338	P	P	08 43 05.9	+1.3
HDA	Harding Lake	75.60	335	P	P	08 43 05.2	+0.6
	baz=106,SNR=16						
DBG	Daneborg	75.62	14	*e*P	P	08 43 04.3	-0.2
SEW	Seward	75.65	331	P	P	08 43 06.0	+1.1
	baz=103						
IL31		75.68	336	P	P	08 43 05.7	+0.7
ILAR	Eielson Array	75.68	336	P	P	08 43 05.0	0.0
	comp=Z,2.4nm,0.8s,baz=126,slow=4.4,SNR=29						
	comp=Z,2.4nm,0.8s						
ILAR	Eielson Array	75.68	336	P	P	08 43 05.2	+0.2
ILAR	Eielson Array	75.68	336	P	P	08 43 05.2	+0.2
PMR	Palmer	75.84	332	P	P	08 43 06.3	+0.3
	baz=103						
O22K	Cooper Landing	75.87	331	P	P	08 43 06.1	-0.1
	baz=102						
WAT1	Susitna Watana	75.87	333	P	P	08 43 06.3	+0.1
	baz=104						
G25K	Bearman Lake	75.95	338	P	P	08 43 06.5	0.0
	baz=107						
POKR	Poker Plat Res	76.00	336	P	P	08 43 07.0	+0.1
	baz=106						
RC01	Rabbit Creek A	76.01	332	P	P	08 43 07.3	+0.4
	baz=103						
F25K	Christian Rive	76.04	339	P	P	08 43 07.0	-0.1
	baz=108						
C27K	Jago River	76.05	341	P	P	08 43 07.6	+0.5
	baz=110						
COLA	College	76.10	336⇓	*i*P	P	08 43 08.0	+0.6
COLA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
COLA	College	76.10	336	P	P	08 43 07.1	-0.3
	baz=105						
TCOL	CIGO, UAF Yank	76.11	336	P	P	08 43 07.3	-0.2
	baz=105						
RND	Reindeer	76.15	334	P	P	08 43 08.9	+1.1
RND	Reindeer	76.15	334	P	P	08 43 08.9	+1.1
RND				pmax	pmax		
	comp=Z,29nm,1.0s						
E25K	Arctic Village	76.18	339	P	P	08 43 08.0	+0.1
	baz=108						
BRSE	Bradley Lake S	76.21	330	P	P	08 43 08.5	+0.3
	baz=102						
MCK	McKinley	76.27	334	P	P	08 43 08.7	+0.2
	baz=104						
H24K	Noodor Dome	76.37	337	P	P	08 43 09.4	+0.3
	baz=106						
G24K	Hadweenzic Riv	76.45	337	P	P	08 43 09.7	+0.2
	baz=106						
NEA2	Nenana	76.53	335	P	P	08 43 09.8	-0.1
	baz=104,SNR=12						
C26K	Camden Bay	76.54	341	P	P	08 43 09.9	+0.1
	baz=109						
CUT	Chulitna	76.55	333	P	P	08 43 11.3	+1.3
	baz=102						
SUA	Susitna One	76.57	332	P	P	08 43 10.7	+0.4
	baz=102,SNR=7.6						
HOM	Homer	76.64	330	P	P	08 43 10.9	+0.3
	baz=101						
TRF	Thorofare Moun	76.79	334	P	P	08 43 12.3	+0.7
	baz=103						
I23K	Minto, Yukon-K	76.79	336	P	P	08 43 12.1	+0.8
I23K	Minto, Yukon-K	76.79	336	P	P	08 43 12.5	+1.2
	baz=104,SNR=7.9						
KDAK	Kodiak Island	76.79	328	LR	LR	09 19 43.1	
	comp=Z,47nm,18.1s,baz=104,slow=38						
D25K	Kavik River	76.83	340	P	P	08 43 12.5	+0.9
	baz=108						
F24K	Squaw Lake	76.84	338	P	P	08 43 12.0	+0.3
	baz=106						
H23K	Yukon River	77.03	336	P	P	08 43 13.4	+0.7
	baz=104						
SKT	Skwentna	77.04	332	P	P	08 43 13.8	+1.0
	baz=101						
DAG	Danmarks Havn	77.19	12	*i* P	P	08 43 13.1	-0.3
DAG				IAmb	IAmb	08 43 14.1	
	comp=Z,7.8nm,0.8s						
SPCR	Spurr Chakacha	77.20	331	P	P	08 43 14.5	+0.7
	baz=100						
BPAW	Bear Paw Mtn.	77.23	334	P	P	08 43 14.4	+0.5
BPAW				IAmb	IAmb	08 43 19.5	
	comp=Z,20nm,1.0s						
BPAW	Bear Paw Mtn.	77.23	334	P	P	08 43 14.3	+0.5
	baz=102,SNR=20						
MLY	Manley	77.33	335	P	P	08 43 15.3	+0.8
	baz=103,SNR=15						
G23K	Bananza Creek	77.44	337	P	P	08 43 16.0	+1.0
	baz=104						
PPLA	Purkeypile	77.52	333	P	P	08 43 16.4	+0.7
	baz=101						
CAST	Castle Rocks	77.57	334	P	P	08 43 16.6	+0.7
	baz=101,SNR=9.1						
E23K	Chandalar	77.62	339	P	P	08 43 17.0	+0.9
	baz=104						
COLD	Coldfoot	77.63	338	P	P	08 43 17.1	+1.0
	baz=104						
C24K	Franklin Bluff	77.73	340	P	P	08 43 17.0	+0.5
	baz=106						
CHUM	Lake Minchumin	77.76	334	P	P	08 43 17.2	+0.4
	baz=101						
M20K	Styx River	77.76	332	P	P	08 43 16.8	-0.2
I21K	Tanana	77.88	335	P	P	08 43 17.8	+0.4
	baz=102						
G22K	Bettles	78.06	337	P	P	08 43 18.7	+0.4
	baz=102						
O19K	Port Alsworth	78.06	330	P	P	08 43 18.7	+0.2
	baz=98						
Q18K	Katmai Hardscr	78.19	329	P	P	08 43 20.1	+0.6
	baz=98						
L20K	Farewell, AK	78.21	333	P	P	08 43 20.0	+0.6
	baz=99						
D23K	Nanushuk River	78.22	339	P	P	08 43 19.6	+0.3
	baz=104						
N19K	Bonanza Creek	78.23	331	P	P	08 43 19.9	+0.3
	baz=98						
TORD	Torodi Ar. Bea	78.28	78	P	P	08 43 20.4	-0.3
	comp=Z,8.3nm,0.8s,baz=285,slow=6.1,SNR=59						
TORD				LR	LR	09 19 27.5	
	comp=Z,91nm,18.3s,baz=254,slow=37						
	comp=Z,8.3nm,0.8s						
TORD	Torodi Ar. Bea	78.28	78	P	P	08 43 20.1	-0.6
H21K	Melozitna Rive	78.31	336	P	P	08 43 20.3	+0.4
	baz=101						
M19K	Big River Lodg	78.36	332	P	P	08 43 20.6	+0.4
	baz=99						
P18K	Big Mountain,	78.40	329	P	P	08 43 20.5	0.0
	baz=97						
E22K	Anaktuvuk Pass	78.44	338	P	P	08 43 20.7	+0.2
	baz=102						
K20K	Telida	78.44	333	P	P	08 43 21.2	+0.6
	baz=99						
O18K	Koktuh Hills	78.45	330	P	P	08 43 21.4	+0.6
	baz=98						
Q17K	Contact Creek	78.60	328	P	P	08 43 22.0	+0.3
	baz=97						
L19K	White Mountain	78.61	332	P	P	08 43 22.4	+0.8
	baz=98						
CLF	Chambon-Foret	78.70	42	P	P	08 43 22.7	+0.3
G21K	Allakaket	78.75	337	P	P	08 43 23.2	+0.9
	baz=100						
IMAR	Indian Mountai	78.75	336	P	P	08 43 22.5	+0.2
R17K	Ugashik Creek	78.80	327	P	P	08 43 23.0	+0.4
	baz=96						
SVW2	Sparrevohn	78.80	331	P	P	08 43 22.8	+0.2
SVW2				IAmb	IAmb	08 43 27.6	
	comp=Z,14nm,1.0s						
F21K	Alatna River	78.88	337	P	P	08 43 23.9	+1.0
	baz=101						
N18K	Kilae Creek	78.90	331	P	P	08 43 23.6	+0.4
	baz=97						
Q16K	King Salmon	79.05	329	P	P	08 43 24.6	+0.7
	baz=96						
TTA	Tatalina	79.25	333	P	P	08 43 25.8	+0.6
	baz=97						
O17K	Koliganek Bris	79.39	330	P	P	08 43 26.6	+0.7
	baz=96,SNR=9.8						
P16K	Nushagak River	79.78	329	P	P	08 43 29.1	+1.2
	baz=95						
NOR	Nord	79.84	8	*e*P	P	08 43 28.2	+0.3
NOR				IAmb	IAmb	08 43 29.8	
	comp=Z,9.3nm,1.1s						
GCSA	Galena City Sc	79.86	335	P	P	08 43 29.4	+1.1
	baz=97,SNR=8.2						
O16K	Kokwok River B	79.88	329	P	P	08 43 28.8	+0.3
	baz=95						
N16K	Nishlik Lake	80.29	330	P	P	08 43 30.8	0.0
	baz=94						
WLF	Walferdange	81.33	41	P	P	08 43 37.8	+1.3
WLF	Walferdange	81.33	41	P	P	08 43 37.8	+1.3
WLF				pmax	pmax		
	comp=Z,25nm,0.8s						
WLF	Walferdange	81.33	41	*e*P	P	08 43 37.7	+1.2
	comp=Z,33nm,1.1s,baz=272,slow=5.1						
TAM	Tamanrasset	81.36	68	P	P	08 43 38.5	+1.0
TAM				IAmb	IAmb	08 43 40.3	
	comp=Z,17nm,0.9s						
TAM	Tamanrasset	81.36	68	P	P	08 43 38.5	+1.0
TAM				pmax	pmax		
	comp=Z,17nm,0.9s						
S12K	Black Hills	81.80	325	P	P	08 43 39.0	+0.1
	baz=91						
AHRW	Bad Neuenahr-A	81.93	40	*e*P	P	08 43 40.7	+1.1
	comp=Z,48nm,1.7s,baz=272,slow=5.1						
BUG	Bochum--Univer	82.05	39	*e*P	P	08 43 41.5	+1.2
	baz=272,slow=5.1						
IBBN	Ibbenburen	82.35	38	*e*P	P	08 43 42.8	+0.9
	comp=Z,23nm,1.1s,baz=272,slow=5.1						
HLG	Helgoland	82.43	36	*e*P	P	08 43 43.4	+1.2
	comp=Z,130nm,1.0s,baz=272,slow=5.1						
RDOG	Red Dog Mine	82.55	338	P	P	08 43 43.0	+0.4
	baz=92						
BFO	Black Forest	82.77	42	*e*P	P	08 43 44.6	+0.4
	comp=Z,6.5nm,1.1s,baz=272,slow=5.1						
KASTN	Kahler Asten	82.77	39	*e*P	P	08 43 45.3	+1.2
	baz=272,slow=5.1						
TNS	Taunus Mts	82.81	40	*e*P	P	08 43 45.4	+1.0
	comp=Z,17nm,1.3s,baz=272,slow=5.1						
RETH	Rethem/Aller,	83.33	38	*e*P	P	08 43 48.9	+2.0
	comp=Z,19nm,1.0s,baz=272,slow=5.1						
ANM	Nome	83.50	334	P	P	08 43 48.4	+0.9
	baz=89						
NRDL	Niedersach Rie	83.79	38	*e*P	P	08 43 50.8	+1.6
	comp=Z,24nm,1.4s,baz=272,slow=5.1						
DAVA	Damuels	83.84	43	*i* P	P	08 43 50.9	+1.0
	comp=Z,11nm,0.8s						
BSEG	Bad Segeberg	83.87	36	*e*P	P	08 43 50.9	+1.3
	baz=272,slow=5.1						
KBS	Kingsbay	83.92	11	*ce*P	P	08 43 53.4	+3.9
KBS				pmax	pmax		
	comp=Z,40nm,1.3s						
CLZ	Clausthal	83.98	39	*e*P	P	08 43 51.9	+1.5
	comp=Z,14nm,1.2s,baz=272,slow=5.1						
KEST	Kesra	84.01	55	P	P	08 43 52.0	+1.1
	comp=Z,17nm,0.9s,baz=251,slow=3.2,SNR=11						
	comp=Z,17nm,0.9s						
NB2	NORSAR Subarra	84.10	29	P	P	08 43 51.7	+0.9
	comp=Z,1.5nm,0.7s,baz=272,slow=5.1						
NB2	NORSAR Subarra	84.10	29	P	P	08 43 51.7	+0.9
	baz=272,slow=5.1						
NOA	NORSAR Array B	84.10	29	P	P	08 43 51.8	+0.9
	comp=Z,2.0nm,0.7s,baz=273,slow=5.1,SNR=6.1						
NOA				LR	LR	09 17 36.6	
	comp=Z,29nm,20.5s,baz=295,slow=33						
	comp=Z,2.0nm,0.7s						
ASSE	Asse, Remlinge	84.15	38	*e*P	P	08 43 52.5	+1.4
	comp=Z,12nm,1.1s,baz=272,slow=5.1						
UNV	Unalaska Valle	84.40	323	P	P	08 43 53.6	+1.3
	baz=87						
RETA	Reutte	84.43	43	*i* P	P	08 43 53.9	+1.1
	comp=Z,13nm,1.2s						
FETA	Feichten	84.43	43	*e*P	P	08 43 54.1	+1.2
	comp=Z,9.2nm,0.9s						
FLTG	Flechtingen	84.49	38	*e*P	P	08 43 53.4	+0.6
	comp=Z,12nm,1.0s,baz=272,slow=5.1						
TNA	Tin City	84.55	335	P	P	08 43 54.2	+1.3
	baz=87						
GRF	Grafenberg Arr	84.62	41	*e*P	P	08 43 54.4	+0.8
	comp=Z,11nm,1.2s,baz=272,slow=5.1						
GRF				*e*L	L	09 17 07.3	
	comp=Z,152nm,18.3s						
MOTA	Moosalm	84.67	43	*e*P	P	08 43 54.9	+0.8
	comp=Z,5.6nm,1.0s						
SQTA	Sankt Quirin	84.75	43	*e*P	P	08 43 55.2	+0.8
	comp=Z,7.8nm,0.9s						
ZCCA	Zocca	84.76	46	P	P	08 43 54.9	+0.4
CASP	Castiglione de	84.77	48	P	P	08 43 54.7	+0.2
SPITS	Spitsbergen Ar	84.84	12	LR	LR	09 23 57.3	
	comp=Z,58nm,19.1s,baz=226,slow=37						
RAR	Rarotonga	84.91	248	LR	LR	09 12 29.9	
	comp=Z,114nm,20.7s,baz=92,slow=29						
WATA	Walderalm	84.99	43	*e*P	P	08 43 55.6	-0.1
	comp=Z,4.0nm,0.5s						
WTTA	Wattenberg	85.04	43	*i* P	P	08 43 57.1	+1.1
	comp=Z,4.3nm,0.7s						
PLN	Plauen	85.17	40	*e*P	P	08 43 57.3	+0.9
	comp=Z,13nm,1.0s,baz=272,slow=5.1						
MOR8	Moi Rana	85.26	24	*e*P	P	08 43 57.3	+0.9
WERD	Werda	85.27	40	*e*P	P	08 43 57.4	+0.5
	comp=Z,9.1nm,1.0s,baz=272,slow=5.1						
WERN	Wernitzgruen	85.33	40	*e*P	P	08 43 58.4	+1.2
	comp=Z,14nm,1.2s,baz=272,slow=5.1						
TANN	Tannenbergstha	85.37	40	*e*P	P	08 43 58.8	+1.4
	comp=Z,13nm,1.1s,baz=272,slow=5.1						
NKC	Novy Kostel	85.37	40	*e*P	P	08 44 00.7	+3.3
NKC	Novy Kostel	85.37	40	*e*P	P	08 44 00.7	+3.3
HFS	Hagfors	85.38	30	LR	LR	09 17 14.5	
	comp=Z,124nm,18.6s,baz=266,slow=32						
STEI	Steigen	85.43	22	*e*P	P	08 43 57.6	+0.4
CLL	Collm	85.65	39	*i* P	P	08 43 59.2	+0.5
	comp=Z,12nm,1.2s						
CLL				AMS	AMS	09 15 00.0	
	comp=Z,100nm,21.9s						
CLL	Collm	85.65	39	*i* P	P	08 43 59.2	+0.5
CLL				pmax	pmax		
	comp=Z,12nm,1.2s						
CLL	Collm	85.65	39	*e*P	P	08 43 60.0	+1.3
	comp=Z,12nm,1.2s,baz=272,slow=5.1						
CIMO	Cimolais	85.65	44	P	P	08 43 59.0	+0.1
CIMO				IAmb	IAmb	08 44 04.8	
	comp=Z,9.1nm,0.9s						
ABTA	Abfaltersbach	85.67	44	*i* P	P	08 44 00.1	+1.0
	comp=Z,9.9nm,0.8s						
RJOB	Jochberg	85.79	43	*e*P	P	08 44 00.4	+0.8

	baz=272,slow=5.1						
STAL	STALIGIAL	85.84	44	P	P	08 44 00.4	+0.5
NIKH	Nikolski High	85.86	323	P	P	08 43 60.0	+0.3
	baz=85						
FBE	Freiberg	85.90	39	eP	P	08 44 01.5	+1.6
	comp=Z,13nm,0.8s,baz=272,slow=5.1						
CLUD	Cludinico	85.95	44	P	P	08 44 00.5	+0.1
CLUD				IAmb	IAmb	08 44 01.9	
	comp=Z,16nm,0.9s						
KHC	Kasperske Hory	86.19	41	eP	P	08 44 01.9	+0.4
KHC				epP	sP	08 44 06.9	+1.1
KHC	Kasperske Hory	86.19	41c	iP	P	08 44 02.4	+0.9
KHC				pmax	pmax		
	comp=Z,39nm,1.2s						
KBA	Koelnbreinsper	86.21	43	iP	P	08 44 02.6	+0.8
	comp=Z,8.2nm,1.0s						
BRG	Berggiesshubel	86.27	39	iP	P	08 44 03.4	+1.5
BRG				Amp		08 44 04.1	
	comp=Z,13nm,1.0s						
BRG	Berggiesshubel	86.27	39	P	P	08 44 07.7	+5.9
BRG				Amp		08 44 08.5	
	comp=Z,6.2nm,1.0s						
BRG	Berggiesshubel	86.27	39	iP	P	08 44 03.3	+1.5
BRG				e		08 44 07.7	
BRG				pmax	pmax		
	comp=Z,13nm,1.0s						
BRG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRG	Berggiesshubel	86.27	39	eP	P	08 44 02.8	+1.0
	comp=Z,13nm,1.1s,baz=272,slow=5.1						
GEC2	GERESS Array S	86.30	41	P	P	08 44 02.8	+0.7
GEC2				IAmb	IAmb	08 44 03.9	
	comp=Z,13nm,1.0s						
GEC2	GERESS Array S	86.30	41	eP	P	08 44 02.9	+0.7
	comp=Z,12nm,1.0s,baz=272,slow=5.1						
GERES	GERESS Array B	86.30	41	P	P	08 44 03.1	+1.0
	comp=Z,5.3nm,0.8s,baz=268,slow=3.9,SNR=24						
GERES				LR	LR	09 18 17.5	
	comp=Z,51nm,20.8s,baz=248,slow=33						
	comp=Z,5.3nm,0.8s						
GERES	GERESS Array B	86.30	41	P	P	08 44 02.4	+0.3
GAMB	Gambell	86.31	334	P	P	08 44 01.8	+0.1
	baz=84						
BIOA	Bad Ischl, Aus	86.36	43	iP	P	08 44 03.3	+0.9
	comp=Z,6.2nm,0.5s						
FDMO	Fiordimonte	86.38	47	P	P	08 44 01.9	-0.6
FDMO				IAmb	IAmb	08 44 03.6	
	comp=Z,9.6nm,0.8s						
MYKA	Terra Mystica	86.46	44	iP	P	08 44 03.8	+0.9
	comp=Z,9.0nm,0.6s						
TRO	Tromso	86.56	20	eP	P	08 44 03.1	+0.3
CKRC	Cesky Krumlov	86.70	41	eP	P	08 44 04.3	+0.3
CKRC	Cesky Krumlov	86.70	41	eP	P	08 44 04.3	+0.3
PRU	Pruhonice	86.74	40	eP	P	08 44 05.0	+0.9
PRU	Pruhonice	86.74	40	eP	P	08 44 05.0	+0.9
SKDS	Skadanscina	86.81	45	iP	P	08 44 05.2	+0.6
HOPEN	Hopen	86.99	13	eP	P	08 44 05.4	+0.6
JETT	Jettan, Norway	87.09	20	eP	P	08 44 06.2	+0.7
OBKA	Obir	87.09	44	ePcP	PcP	08 44 07.6	-0.6
	comp=Z,3.8nm,0.8s						
LJU	Ljubljana	87.12	44	iP	P	08 44 07.1	+1.0
SOKA	Soboth	87.40	44	iP	P	08 44 07.4	-0.1
	comp=Z,4.0nm,0.9s						
UPC	Upice	87.62	40	eP	P	08 44 10.2	+1.8
UPC	Upice	87.62	40	eP	P	08 44 10.2	+1.8
CHVC	Chvalec	87.64	40	eP	P	08 44 09.5	+1.0
CHVC	Chvalec	87.64	40	eP	P	08 44 09.5	+1.0
ARSA	Arzberg	87.67	43	iP	P	08 44 09.6	+0.8
	comp=Z,4.2nm,1.0s						
OSTC	Ostas	87.74	40	eP	P	08 44 10.1	+1.1
OSTC	Ostas	87.74	40	eP	P	08 44 10.1	+1.1
DOBS	Dobrina	87.76	44	iP	P	08 44 09.9	+0.7
CONA	Conrad Observa	87.83	42	iP	P	08 44 10.5	+0.9
	comp=Z,8.5nm,0.7s						
DPC	Dobruska-Polom	87.84	40	eP	P	08 44 10.4	+0.9
DPC	Dobruska-Polom	87.84	40	eP	P	08 44 10.4	+0.9
HAMF	Hammerfest	87.97	19	eP	P	08 44 10.0	+0.4
KRUC	Moravsky	88.04	41	eP	P	08 44 11.7	+1.3
VRAC	Vranov	88.14	41	LR	LR	09 19 47.3	
	comp=Z,86nm,19.5s,baz=269,slow=33						
VRAC	Vranov	88.14	41	eP	P	08 44 11.9	+1.0
RONA	Rosalia, Austr	88.14	42	iP	P	08 44 12.1	+1.1
	comp=Z,7.8nm,0.9s						
KTK1	Kautokeino	88.18	21	eP	P	08 44 11.2	+0.5
MORC	Moravsky Berou	88.69	40	⇑P	P	08 44 15.7	+2.2
MORC	Moravsky Berou	88.69	40	P	P	08 44 14.5	+1.0
MORC				IAmb	IAmb	08 44 16.1	
	comp=Z,6.4nm,0.8s						
MORC	Moravsky Berou	88.69	40	eP	P	08 44 14.7	+1.1
MORC	Moravsky Berou	88.69	40	P	P	08 44 14.5	+1.0
MORC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MODS	Modra-Piesok	88.71	42	eP	P	08 44 15.5	+1.9
MODS	Modra-Piesok	88.71	42	eP	P	08 44 15.5	+1.9
ARA0	ARCESS Array S	88.84	20	eP	P	08 44 14.1	+0.3
ARCES	ARCESS Array B	88.84	20	P	P	08 44 14.0	+0.2
	comp=Z,8.5nm,0.8s,baz=289,slow=3.7,SNR=25						
ARCES				LR	LR	09 18 12.8	
	comp=Z,35nm,21.7s,baz=212,slow=32						
	comp=Z,8.5nm,0.8s						
JAVC	Velka Javorina	88.90	41	eP	P	08 44 16.7	+2.1
MAUC	Maruska	88.93	41	eP	P	08 44 16.5	+1.8
VYHS	Vyhne	89.72	41	eP	P	08 44 20.3	+1.9
VYHS	Vyhne	89.72	41	eP	P	08 44 20.3	+1.9
VADS	Vadso	89.96	19	eP	P	08 44 18.5	-0.5
LANS	Liptovska Anna	90.03	41	eP	P	08 44 22.8	+3.0
LANS				pmax	pmax		
	comp=Z,6.0nm,1.2s						
LANS	Liptovska Anna	90.03	41	eP	P	08 44 22.8	+3.0
FINES	FINESS Array B	91.14	28	P	P	08 44 24.6	0.0
	comp=Z,2.2nm,0.7s,baz=242,slow=4.1,SNR=4.6						
FINES				LR	LR	09 19 26.0	
	comp=Z,76nm,19.4s,baz=238,slow=32						
	comp=Z,2.2nm,0.7s						
DIVS	Divibare	91.22	46	P	P	08 44 25.9	+0.4
BZS	Buzias	92.09	44	⇑P	P	08 44 31.4	+2.0
GZR	Gura Zlata	92.93	44	⇑P	P	08 44 35.3	+1.9
BILL	Bilibino	93.76	340c	iP	P	08 44 35.1	-1.6
BILL				e*PP	sP	08 44 41.3	+0.2
BILL				e		08 48 18.6	
BILL				ePPP	PPP	08 50 21.0	
BILL				eS	SKSac	08 55 12.2	+1.1
BILL				pmax	pmax		
	comp=Z,9.0nm,2.4s						
BILL				MLR	MLR		
	comp=Z,52nm,17.0s						
ARR	Arges	94.22	44	⇓P	P	08 44 34.1	-5.2
MLR	Muntele Rosu	95.08	43	LR	LR	09 27 45.4	
	comp=Z,59nm,18.3s,baz=281,slow=36						
AFI	Afiamalu	95.45	257	LR	LR	09 18 48.7	
	comp=Z,62nm,19.4s,baz=148,slow=30						
AKASG	Malin Array Be	95.81	38	LR	LR	09 23 55.1	
	comp=Z,74nm,20.1s,baz=246,slow=33						
TSUM	Tsumeb	96.92	109	LR	LR	09 27 46.4	
	comp=Z,241nm,18.2s,baz=334,slow=35						
OBN	Obninsk	98.46	32	eP	Pdif	08 44 58.8	+0.6
OBN				e		08 49 01.4	
OBN				ePPP	PPP	08 51 04.1	
OBN				eS	SKSac	08 55 41.0	+4.8
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,142nm,5.0s						
TIXI	Tiksi	100.41	352	⇑eP	Pdif	08 45 09.0	+2.4
TIXI				pmax	pmax		
	comp=Z,7.0nm,3.0s						
BOSA	Boshof	104.24	118	Pdiff	Pdif	08 45 24.4	-0.4
	comp=Z,7.5nm,1.2s,baz=173,slow=7.0,SNR=3.8						
DZM	Mont Dzumac	116.28	249	eLR	LR	09 25 18.5	
	comp=Z,147nm,26.4s						
MK31	Makanchi Array	124.35	17		PKPdf	08 50 18.8	-0.5
MK31	Makanchi Array	124.35	17	⇑iPKIKP	PKPdf	08 50 18.3	-1.0
MKAR	Makanchi Array	124.35	17	PKP	PKPdf	08 50 17.6	-1.7
	comp=Z,1.4nm,0.8s,baz=343,slow=3.8,SNR=7.0						
AAK	Ala-Archa	125.22	25	⇓iPKIKP	PKiKP	08 50 22.6	+1.0
ULN	Ulaanbaatar	126.05	356	⇓iPKIKP	PKiKP	08 50 23.2	+0.1
SONM	Songino Array	126.12	357	PP	PP	08 52 15.9	+0.5
	comp=Z,1.4nm,0.9s,baz=352,slow=6.4,SNR=3.9						
KSH	Kashi	128.42	26	PKP	PKiKP	08 50 30.3	+2.2
WMQ	Urumqi	128.51	14	ePKP	PKiKP	08 50 28.6	+0.6
KSRS	Korea Array	130.48	333	PKP	PKPdf	08 50 31.2	0.0
	comp=Z,2.3nm,1.0s,baz=35,slow=3.0,SNR=2.6						
HHC	Hu-ho-hao-te	132.46	351	ePKP	PKPdf	08 50 31.1	-3.9
BTO	Baotou	132.93	352	ePKP	PKPdf	08 50 30.3	-5.6
BTO				PP	PP	08 52 58.3	-1.5
GTA	Gaotai	134.60	3	ePKP	PKPdf	08 50 39.8	+0.7
NJ2	Nanjing	138.87	338	ePKP	PKPdf	08 50 47.6	+0.6
AS31	Alice Springs	145.03	237		PKPbc	08 50 56.5	-1.1
ASAR	Alice Springs	145.03	237	PKPbc	PKPbc	08 50 57.0	-0.7
	comp=Z,8.5nm,0.9s,baz=121,slow=3.7,SNR=63						
ASAR	Alice Springs	145.03	237		PKPbc	08 50 56.8	-0.8
ASAR	Alice Springs	145.03	237	PKIKP	PKPbc	08 50 56.8	-0.8
WB2	Warramunga Arr	146.04	243	PKPdf	PKPdf	08 51 00.1	0.0
WRAB	Tennant Creek	146.04	243		PKPdf	08 51 00.3	+0.2
WRAB	Tennant Creek	146.04	243c	iPKP2	PKPbc	08 51 01.1	+0.2
WRA	Warramunga Arr	146.05	243	PKPbc	PKPdf	08 51 00.2	+0.1
	comp=Z,9.2nm,0.9s,baz=103,slow=3.6,SNR=57						
WB0	Warramunga Arr	146.06	243	PKPdf	PKPdf	08 51 00.4	+0.2
HYB	Hyderabad	146.81	45	ePKPbc	PKPbc	08 51 02.6	-0.6
GYA	Guiyang	147.31	353	PKPbc	PKiKP	08 51 08.6	+1.7
PZH	PanZhiHua	147.53	1	PKPbc	PKPbc	08 51 04.9	-0.2
CMAR	Chiang Mai Arr	155.31	8	PKP	PKPdf	08 51 13.2	-1.2
	comp=Z,0.8nm,0.3s,baz=318,slow=1.7,SNR=7.3						
CMAR				PKPab	PKPab	08 51 39.2	0.0
	comp=Z,1.9nm,0.4s,baz=327,slow=4.6,SNR=6.4						

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*UPA **21** 08:40:42.2±3.5, 5.28°N×77.74°W, h0km±155km, MW4.6*

*RSNC **21** 08:40:51.6±0.7, 6.12°N×77.81°W, h8km±4km, ML3.0, Mw3.5*

ISC 21 08:40:54.2±1.5**, 6.09°N**±0.04°×**77.82°W**±0.04°**, h27**km±16km**,**
n25, σ2.06s/28**, 3D, Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PIZC	Pizarro, Choco	1.21	157	eP	Pn	08 41 13.1	-2.2
PIZC				eS	Sb	08 41 29.6	-1.9
CBOC	Ciudad Bolivar	1.81	97	eP	Pn	08 41 19.6	-4.3
CBOC				eS	Sn	08 41 38.0	-8.0
CBOC				i		08 41 53.0	
	comp=Z,157nm,0.6s						
DBBC	Dabeiba	1.85	60	eP	Pn	08 41 20.6	-3.6
DBBC				eS	Sn	08 41 44.1	-2.8
DBBC				i		08 41 50.8	
	comp=Z,117nm,0.4s						
MALC	Bahia Malaga	2.12	167	eP	Pn	08 41 27.7	-0.1
MALC				eS	Sn	08 41 53.6	+0.4
MALC				i		08 41 55.9	
	comp=Z,81nm,0.2s						
UPD2	Meteti	2.45	356	eP	Pb	08 41 35.7	-2.0
UPD2				iS	Sb	08 42 14.3	+6.9
GUY2C	Guyana, Caldas	2.59	109	eP	Pn	08 41 32.4	-2.4
GUY2C				eS	Sn	08 42 08.0	+2.4
GUY2C				i		08 42 16.9	
	comp=Z,57nm,0.5s						
UREC	San Jos de Ur	2.81	54	eP	Pn	08 41 35.0	-2.5
UREC				i		08 42 15.5	
	comp=Z,116nm,0.9s						
ANIL	Santa Ana	2.88	123	eP	Pn	08 41 38.8	+0.1
ANIL				eS	Sn	08 42 12.4	-0.3
ANIL				i		08 42 25.5	
	comp=Z,61nm,0.5s						
AZU	Azuero	2.96	305	iP	Pn	08 41 39.4	-0.1
AZU				eS	Sn	08 42 12.9	-1.3
AZU	Azuero	2.96	305	eP	Pn	08 41 39.4	-0.1
AZU				eS	Sn	08 42 13.2	-1.0
AZU				i		08 42 19.9	
	comp=Z,39nm,0.4s						
CHIT3	Chitre	3.18	306	⇓eP	Pn	08 41 42.7	+0.3
ORTC	Ortega, Tolima	3.36	130	eP	Pn	08 41 45.1	+0.2
PTBC	PUERTO BERRIO,	3.38	82	eP	Pn	08 41 43.6	-1.6
PTBC				eS	Sn	08 42 25.5	+1.1
PTBC				i		08 42 42.1	
	comp=Z,27nm,0.6s						
VTON	El Valle, Cocl	3.38	318	⇓iP	Pn	08 41 46.0	+0.6
CHOR3	La Chorrera	3.39	326	eP	Pn	08 41 43.8	-1.6
MARI3	Mariato, Verag	3.51	296	eP	Pn	08 41 44.5	-2.4
BCIP	Isla Barro Col	3.65	327	eP	Pn	08 41 47.0	-2.0
ROSC	El Rosal	3.70	109	eP	Pn	08 41 51.4	+1.4
POPC	Popayan, Colom	3.70	162	⇓eP	Pn	08 41 51.1	+1.2
SPBC	San Pablo de B	3.76	96	eP	Pn	08 41 50.2	-0.2
SPBC				i		08 42 51.5	
	comp=Z,19nm,0.5s						
BBAC	Balboa, Cauca	4.08	172	eP	Pn	08 41 57.8	+2.8
BBAC				eS	Sn	08 42 37.2	-4.8
CHIC	Chingaza	4.32	109	eP	Pn	08 42 00.6	+2.1
GARC	Garzon, Huila	4.52	149	eP	Pn	08 42 02.4	+1.3
PAMC	Pamplona, Colo	5.24	76	eP	Pn	08 42 10.5	-0.7
PAMC				eS	Sn	08 43 10.0	-1.1
PAMC				i		08 43 17.1	
	comp=Z,17nm,0.7s						
BRU2	Volcan	5.53	299	eP	Pn	08 42 12.9	-2.0

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*THE **21** 08:42:12.9, 39.75°N×20.83°E, h27km±1km, ML2.3/5, Error ellipse: s-maj=1.7km s-min=0.7km az=132.0*

ATH 21 08:42:13.3, 39.88°N×20.77E, h12km±2km**, ML2.3**/4**, Error ellipse: s-maj=2.8km s-min=1.4km az=254.0, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JAN	Janina	0.23	163	P	Pg	08 42 18.3	+0.2
JAN				S	Sg	08 42 21.3	-0.1
	3µm,0.3s						
JAN	Janina	0.23	163	P	Pg	08 42 18.4	+0.2
JAN				S	Sg	08 42 22.0	+0.6
JAN				AML	AML	08 42 22.4	
	comp=E,6160µm,0.3s						
JAN				AML	AML	08 42 22.4	
	comp=N,5130µm,0.3s						
LSK	Leskovik	0.30	335	P	Pn	08 42 22.3	-1.3
LSK				S	Sb	08 42 28.7	+3.0
	comp=N,570nm,0.5s						
PENT	Pentalofos	0.43	42	P	Pb	08 42 22.5	-0.4
PENT				S	Sb	08 42 31.3	+2.0
PENT	Pentalofos	0.43	42	P	Pg	08 42 21.3	-0.4
KPRO	Kipourio	0.47	80	P	Pg	08 42 22.0	-0.4
KPRO				S	Sg	08 42 29.3	+0.6
	comp=N,315nm,0.5s						
KPRO	Kipourio	0.47	80	P	Pg	08 42 21.8	-0.7
IGT	Igoumenitsa	0.48	224	P	Pg	08 42 21.8	-0.9
IGT				S	Sg	08 42 29.1	0.0
	comp=N,452nm,0.3s						
IGT	Igoumenitsa	0.48	224	P	Pg	08 42 21.9	-0.8
IGT				S	Sg	08 42 29.0	-0.1
IGT				AML	AML	08 42 30.2	
	comp=E,1024µm,0.3s						
IGT				AML	AML	08 42 32.2	
	comp=N,780µm,0.3s						
KASA	Kassiopi	0.65	259	P	Pg	08 42 25.7	-0.2
KASA				S	Sb	08 42 35.1	-0.6
KEK	Kerkira	0.76	258	P	Pg	08 42 28.0	0.0
KEK				S	Sb	08 42 39.1	+0.2
	comp=N,175nm,0.4s						
KEK	Kerkira	0.76	258	P	Pg	08 42 28.2	+0.2
KEK				AML	AML	08 42 42.7	
	comp=N,268µm,0.5s						
KEK				AML	AML	08 42 45.0	
	comp=E,429µm,0.3s						
LKD2	Lefkada island	1.09	184	P	Pb	08 42 32.8	-1.3
LKD2				AML	AML	08 42 50.7	
	comp=N,161µm,0.3s						
LKD2				AML	AML	08 42 52.1	
	comp=E,166µm,0.5s						
EVR	Evrytania	1.25	140	P	Pn	08 42 36.6	-0.2
EVGI	Lefkada island	1.26	184	P	Pn	08 42 35.6	-1.1
MAKR	Makrakomi, Fth	1.36	129	P	Pn	08 42 37.9	-0.3
AGG	Agios Georgios	1.48	125	P	Pn	08 42 38.8	-1.0

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*SNET **21** 08:44:13.8±2.1, 13.84°N×90.31°W, h91km, ML4.7*

*NEIC **21** 08:44:13.0±2.2, 13.89°N±0.09°×90.28°W±0.05°, h106km±11km, mb4.6/33, Error ellipse: s-maj=14.0km s-min=7.2km az=192.0*

*IDC **21** 08:44:14.0±2.3, 14.11°N×89.97°W, h127km±18km, mb3.7/7, mbtmp4.1/10, Error ellipse: s-maj=31.1km s-min=17.7km az=49.0*

*GCG **21** 08:44:14.3±0.6, 14.00°N×90.41°W, h109km±11km, MD4.2*

*INET **21** 08:44:14.2±1.0, 13.87°N×90.23°W, h75km, ML5.0*

ISC 21 08:44:12.0±0.7**, 13.85°N**±0.06°×**90.32°W**±0.04°**, h116**km±5km**,**
n159, σ1.25s/196**, mb4.5**/10**, 1C-5D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NUBE	Las Nubes	0.53	84	eP	Pn	08 44 29.2	-0.6
NUBE				eS	Sn	08 44 43.0	-0.4
LOAL	Lomas de Alarc	0.55	74	eP	Pn	08 44 29.6	-0.3
LOAL				eS	Sn	08 44 43.3	0.0
SLOZ	Alcaldia de Sa	0.55	71	eP	Pn	08 44 29.5	-0.3
SLOZ				eS	Sn	08 44 43.2	-0.2
PCG	Pacaya	0.61	333	eP	Pn	08 44 31.5	+0.9
RTR	El Retiro	0.66	85	eP	Pn	08 44 30.6	-0.2
CEVE	Cerro Verde	0.68	91	eP	Pn	08 44 30.8	-0.3
CEVE				eS	Sn	08 44 45.2	-0.2
CEVE				eS	Sn	08 44 45.5	+0.1
SBLS	San Blas	0.68	90	eP	Pn	08 44 30.7	-0.4
NBG	Las Nubes	0.74	358	eP	Pn	08 44 32.7	+1.1
NBG				eS	Sn	08 44 47.2	+0.8
UNIC	Universidad Ca	0.76	80	iP	Pn	08 44 31.2	-0.3
UNIC				eS	Sn	08 44 46.2	0.0
FUG	Fuego 3	0.79	320	eP	Pn	08 44 32.4	+0.6
FUG				eS	Sn	08 44 48.8	+2.0
JAYA	Jayaque - finc	0.87	102	eP	Pn	08 44 32.2	-0.4
JAYA				eS	Sn	08 44 47.5	-0.6
CEDA	San Andres	0.90	93	eP	Pn	08 44 32.6	-0.1
CEDA				eS	Sn	08 44 48.4	0.0
BOQS	Boqueron	1.02	96	eP	Pn	08 44 33.7	-0.3
ITCA	Escuela Especi	1.03	99	eP	Pn	08 44 33.8	-0.3
ITCA				eS	Sn	08 44 50.9	+0.1
SNET	Serv Nac Est T	1.07	98		Pn	08 44 33.6	-0.8
SNET	Serv Nac Est T	1.07	98	eP	Pn	08 44 34.2	-0.2
SNET				eS	Sn	08 44 51.5	0.0
SNET	Serv Nac Est T	1.07	98	eP	Pn	08 44 34.2	-0.2
SEMO	Seminario San	1.07	97	eP	Pn	08 44 34.7	+0.2
MTO3	Montecristo	1.08	59	eP	Pn	08 44 34.7	-0.1
UESS	Universidad de	1.09	96	eP	Pn	08 44 34.7	0.0
UTEC	Universidad Te	1.10	97	eP	Pn	08 44 34.6	-0.1
UDBS	Universidad Do	1.14	96	eP	Pn	08 44 35.1	-0.1
LFU	La Fuente	1.18	95	eP	Pn	08 44 35.7	+0.1
ESQI	Esquipulas	1.19	53		Pn	08 44 35.6	-0.1
ESQI	Esquipulas	1.19	53	⇓iP	Pn	08 44 36.2	+0.5
ESQI				eS	Sn	08 44 55.1	+1.3
LFRS	El Faro	1.24	100	eP	Pn	08 44 36.2	-0.1
LBRS	Las Brisas	1.25	95	eP	Pn	08 44 36.6	+0.3
SULM	Suchitepequez,	1.29	291	⇓iP	Pn	08 44 38.0	+1.3
SULM				eS	Sn	08 44 55.1	-0.5
SJTE	Alcalda de S	1.30	100	eP	Pn	08 44 36.9	0.0
SJTE				eS	Sn	08 44 56.1	+0.2
PAVA	Las Pavas	1.35	95	⇓iP	Pn	08 44 37.8	+0.3
PAVA				eS	Sn	08 44 57.4	+0.5
LLGN	La Laguna	1.37	77	iP	Pn	08 44 37.7	-0.1
LLGN				eP	Pn	08 44 37.8	-0.1
LLGN				eS	Sn	08 44 57.5	+0.1
STG3	Santiaguito 3,	1.49	306	eP	Pn	08 44 39.8	+0.6
STG3				eS	Sn	08 44 55.9	-4.0
RTAL	Retalhuleu	1.50	297		Pn	08 44 39.3	+0.3
RTAL	Retalhuleu	1.50	297	eP	Pn	08 44 39.4	+0.3
RTAL				eS	Sn	08 45 00.2	+0.4
UESV	Universidad de	1.50	98	eP	Pn	08 44 39.3	0.0
UESV				eS	Sn	08 45 00.9	+0.9
P5NO	Presa 5 de nov	1.52	85	⇓eP	Pn	08 44 39.1	-0.3
P5NO				eS	Sn	08 45 00.6	+0.3
TECO	Alcaldia de Te	1.53	101	eP	Pn	08 44 39.5	0.0
TECO				eS	Sn	08 45 00.5	+0.1
SCLA	Alcaldia de Sa	1.55	95	eP	Pn	08 44 40.1	+0.3
SCLA				eS	Sn	08 45 02.1	+1.1
PQSS	Presa 15 de Se	1.72	97	eP	Pn	08 44 42.0	+0.2
COEB	Comit de Eme	1.77	101	eP	Pn	08 44 43.0	+0.5
COEB				eS	Sn	08 45 06.7	+0.8
ALJI	Alcalda de J	1.78	107	eP	Pn	08 44 42.6	+0.1
ALJI				eS	Sn	08 45 05.4	-0.4
TECA	Tecapa	1.80	101	eP	Pn	08 44 43.2	+0.3
HUEH	Huehuetenango	1.86	322		Pn	08 44 44.7	+1.0
HUEH	Huehuetenango	1.86	322	eP	Pn	08 44 44.5	+0.7
HUEH				eS	Sn	08 45 09.2	+1.3
HUEH				eS	Sn	08 45 09.7	+1.7
HUEH	Huehuetenango	1.86	322	eP	Pn	08 44 44.4	+0.7
PACA	Pacayal	1.98	101	eP	Pn	08 44 45.5	+0.5
PACA	Pacayal	1.98	101	eP	Pn	08 44 45.4	+0.4
LCY	Lacayo	2.01	102	eP	Pn	08 44 45.9	+0.4
VSM	San Miguel	2.03	102	eP	Pn	08 44 46.3	+0.4
LCND	La Caada	2.42	102	eP	Pn	08 44 50.9	+0.3
CNCH	Conchagua	2.48	103	eP	Pn	08 44 51.8	+0.3
TGUH	Tegucigalpa,Un	2.97	86	Pn	Pn	08 44 57.8	-0.1
TGUH	Tegucigalpa,Un	2.97	86	⇓iP	Pn	08 44 58.3	+0.5
TGUH	Tegucigalpa,Un	2.97	86	eP	Pn	08 44 57.9	+0.1
CCIG	Comitan	2.99	324		Pn	08 44 59.3	+1.1
PETF	Flores	3.08	8		Pn	08 44 59.2	0.0
PETF	Flores	3.08	8	eP	Pn	08 45 00.1	+0.9
PETF	Flores	3.08	8	eP	Pn	08 45 00.2	+0.9
CRIN	San Cristobal	3.38	109		Pn	08 45 04.5	+1.2
CRIN	San Cristobal	3.38	109	eP	Pn	08 45 04.0	+0.7
CRIN				eS	Sn	08 45 43.1	+0.2
CRIN				IAML		08 45 47.9	
	comp=N,6µm,0.4s						
CNGN	Cerro Negro	3.77	110		Pn	08 45 08.8	+0.3
CNGN	Cerro Negro	3.77	110	eP	Pn	08 45 09.0	+0.6
MOMN	Momotombo	3.95	111	eP	Pn	08 45 11.0	+0.2
COPN	Copaltepe	3.99	114	eP	Pn	08 45 11.0	-0.3
RCON	San Juan de Ri	4.06	95	eP	Pn	08 45 14.8	+2.4
HUEN		4.31	110	eP	Pn	08 45 15.8	+0.2
MGAN	Managua	4.31	113	eP	Pn	08 45 16.3	+0.7
MATN	Matagalpa	4.37	101		Pn	08 45 16.8	+0.3
MATN	Matagalpa	4.37	101	eP	Pn	08 45 16.8	+0.3
MASN	Masaya	4.46	114	eP	Pn	08 45 18.4	+0.7
BOAB	BOACO BROADBAN	4.74	106	Pn	Pn	08 45 21.0	-0.4
CMIG	Matias Romero	5.46	307	P	Pn	08 45 30.8	-0.2
	comp=N,11nm,0.4s,baz=148,slow=8.4,SNR=67						
CMIG				S	Sn	08 46 27.6	-5.1
	comp=N,31nm,0.5s,baz=129,slow=11,SNR=8.7						
HZTE	Horizontes, Gu	5.57	123		Pn	08 45 35.0	+2.4
HZTE	Horizontes, Gu	5.57	123	eP	Pn	08 45 34.8	+2.2
HZTE				IAML		08 46 40.2	
	comp=N,458nm,0.4s						
GB1A	Borinquen Arri	5.67	121	eP	Pn	08 45 35.4	+1.4
GPS2	Hotel Rincn d	5.75	122	⇑eP	Pn	08 45 36.9	+1.8
CLARA	Aguas Claras	5.88	121	eP	Pn	08 45 37.6	+0.9
ORTG	Ortega, Santa	5.88	126		Pn	08 45 38.2	+1.4
VMAR	Armenia, Volca	5.91	120	eP	Pn	08 45 38.0	+0.8
COLC	Colonia	5.92	122	eP	Pn	08 45 38.8	+1.4
CANAL	Canalete	5.95	120	eP	Pn	08 45 38.6	+0.8
CUI	Cuipilapa	5.95	122	eP	Pn	08 45 39.3	+1.5
DUNO	Dulce Nombre,	6.03	128		Pn	08 45 40.2	+1.5
DUNO	Dulce Nombre,	6.03	128	eP	Pn	08 45 40.7	+1.9
ESPN	Las Esperanzas	6.09	105	eP	Pn	08 45 40.2	+0.6
VERA	Finca Concepci	6.10	119	eP	Pn	08 45 40.4	+0.7
JTS	Las Juntas de	6.33	123	P	Pn	08 45 43.8	+1.0
	comp=N,28nm,0.3s,baz=313,slow=13,SNR=24						
JTS				S	Sn	08 46 45.7	-8.2
	comp=N,17nm,0.3s,baz=305,slow=18,SNR=2.1						
JTS	Las Juntas de	6.33	123	Pn	Pn	08 45 43.6	+0.8
JTS	Las Juntas de	6.33	123	eP	Pn	08 45 44.2	+1.3
TABAC	Tabacon	6.37	121	eP	Pn	08 45 43.9	+0.4
CEDE	Laguna Cedeo	6.43	121	eP	Pn	08 45 45.7	+1.5
CASO	Castillo	6.43	121	eP	Pn	08 45 44.7	+0.4
FORC	Fortuna	6.46	121	eP	Pn	08 45 46.2	+1.5
TEIG	Tepich	6.64	17		Pn	08 45 47.3	+0.3
TEIG	Tepich	6.64	17	eP	Pn	08 45 47.4	+0.3
ABE2	San Pablo	7.39	123	eP	Pn	08 45 58.7	+1.3
LCR2	La Lucha 2	7.41	123	eP	Pn	08 45 59.1	+1.5
SVQ2	Quepos	7.45	125	eP	Pn	08 46 01.4	+3.3
LLNJ	Naranjito	7.48	125	eP	Pn	08 46 00.9	+2.4
RIMA	Rio Macho	7.51	122		Pn	08 46 00.7	+1.7
RIMA	Rio Macho	7.51	122	eP	Pn	08 46 00.5	+1.5
RVLA	Villa Bonita	7.56	119	eP	Pn	08 46 01.2	+1.7
RVSTA	Santa Teresita	7.58	120	eP	Pn	08 46 01.5	+1.7
PEZE	Perez Zeledon,	7.87	124		Pn	08 46 06.1	+2.2
SRBA	San Rafael, Bu	8.22	123		Pn	08 46 10.3	+1.8
EDP2	Potrero Grande	8.49	124	eP	Pn	08 46 14.4	+2.3
EDAD	Golfito	8.71	126	eP	Pn	08 46 17.5	+2.4
TLIG	Tlapa	8.76	296		Pn	08 46 16.7	+0.8
EDSV	San Vito	8.77	124	eP	Pn	08 46 18.7	+2.7
BRU2	Volcan	9.01	123		Pn	08 46 20.5	+1.2
833A	Chaparral WMA,	16.70	331		P	08 48 00.7	+1.3
HKT	Hockley	16.82	343	P	P	08 48 01.4	+0.8
656A	Willston	17.05	24	P	Pn	08 48 05.7	+2.5
656A				IAmb	IAmb	08 48 07.2	
	comp=Z,47nm,0.9s						
344A	Westbrook Farm	17.53	359	P	Pn	08 48 10.7	+1.6
344A				IAmb	IAmb	08 48 13.8	
	comp=Z,32nm,1.1s						
342A	Flagon Creek P	17.55	354	P	Pn	08 48 10.6	+1.4
342A				IAmb	IAmb	08 48 18.9	
	comp=Z,32nm,0.8s						
435B	Jarrell	18.14	340	P	Pn	08 48 16.8	+0.4
435B				IAmb	IAmb	08 48 17.4	

	comp=Z,19nm,0.7s						
VBMS	**Vicksburg**	**18.29**	**359**	P	**Pn**	**08 48 18.6**	**+0.5**
146A	**Union**	**18.74**	**3**	P	**P**	**08 48 22.2**	**+0.5**
146A				IAmb	IAmb	08 48 24.7	
	comp=Z,46nm,1.1s						
WHTX	**Lake Whitney,**	**19.21**	**341**	P	**P**	**08 48 27.0**	**+0.1**
WHTX				IAmb	IAmb	08 48 42.8	
	comp=Z,22nm,0.9s						
Z47A	**Carrollton**	**19.38**	**6**	P	**Pn**	**08 48 30.1**	**-0.8**
Z47A				IAmb	IAmb	08 48 31.4	
	comp=Z,24nm,0.9s						
152A	**Waverly Hall**	**19.42**	**14**	P	**P**	**08 48 29.9**	**+0.7**
Z41A	**Richland Creek**	**19.46**	**354**	P	**P**	**08 48 30.1**	**+0.6**
FW16	**Waxahatchie**	**19.50**	**343**	P	**P**	**08 48 29.9**	**-0.1**
FW16				IAmb	IAmb	08 48 31.4	
	comp=Z,83nm,1.1s						
FW14	**Alvarado**	**19.51**	**342**	P	**P**	**08 48 30.2**	**+0.1**
FW14				IAmb	IAmb	08 48 31.2	
	comp=Z,57nm,0.8s						
TXAR	**Lajitas Array**	**19.76**	**323**	P	**Pn**	**08 48 35.1**	**-0.5**
	comp=Z,4.1nm,0.8s,baz=150,slow=11,SNR=53						
TXAR				PcP	**PcP**	**08 52 47.5**	**+0.7**
	comp=Z,0.8nm,0.9s,baz=150,slow=2.7,SNR=7.5						
TXAR				ScP	**ScP**	**08 56 13.0**	**+0.7**
	comp=Z,0.4nm,1.1s,baz=140,slow=7.9,SNR=4.6						
TX31	**Lajitas Ar. Si**	**19.76**	**323**	P	**Pn**	**08 48 34.5**	**-1.0**
TX31				IAmb	IAmb	08 48 37.2	
	comp=Z,34nm,1.3s						
TX32	**Lajitas Array**	**19.76**	**323**	P	**Pn**	**08 48 35.1**	**-0.4**
Z38A	**Mt. Pleasant**	**19.79**	**348**	P	**P**	**08 48 34.0**	**+0.8**
Z38A				IAmb	IAmb	08 48 35.3	
	comp=Z,23nm,0.8s						
SDV	**Santo Domingo**	**19.91**	**102**	P	**P**	**08 48 33.0**	**-1.9**
	comp=Z,2.6nm,0.7s,baz=315,slow=5.7,SNR=2.9						
WLAR	**White Oak Lake**	**19.92**	**353**		**P**	**08 48 35.1**	**+0.6**
WLAR				IAmb	IAmb	08 48 40.5	
	comp=Z,22nm,0.9s						
Z51A	**Franklin**	**19.94**	**13**	P	**Pn**	**08 48 37.7**	**+0.1**
Z51A				IAmb	IAmb	08 48 39.9	
	comp=Z,26nm,0.7s						
Z35A	**Perchaven, San**	**20.40**	**343**	P	**P**	**08 48 39.4**	**-0.3**
Z35A				IAmb	IAmb	08 48 40.3	
	comp=Z,25nm,0.8s						
Y52A	**Lilburn**	**20.73**	**15**	P	**P**	**08 48 43.1**	**-0.1**
X48A	**Hartselle**	**20.73**	**8**	P	**P**	**08 48 44.3**	**+1.1**
X48A				IAmb	IAmb	08 48 46.5	
	comp=Z,20nm,0.7s						
MIAR	**Mount Ida**	**20.82**	**352**	P	**P**	**08 48 43.8**	**-0.4**
LOOK	**Love County**	**21.00**	**344**	P	**P**	**08 48 46.4**	**+0.2**
FPAL	**Fort Paine**	**21.04**	**11**	P	**P**	**08 48 46.5**	**-0.1**
SWET	**Sewanee**	**21.64**	**10**	P	**P**	**08 48 53.0**	**-0.1**
SWET				IAmb	IAmb	08 48 54.9	
	comp=Z,19nm,0.8s						
FNO	**Franklin**	**22.26**	**345**		**P**	**08 48 58.6**	**-0.8**
TKL	**Tuckaleechee C**	**22.50**	**14**	P	**P**	**08 49 01.5**	**-0.4**
	comp=Z,8.6nm,0.6s,baz=183,slow=10,SNR=18						
	comp=Z,8.6nm,0.6s						
U49A	**Red Boiling Sp**	**22.94**	**9**	P	**P**	**08 49 06.2**	**0.0**
U49A				IAmb	IAmb	08 49 07.3	
	comp=Z,18nm,0.8s						
T45A	**Paducah**	**23.13**	**3**	P	**P**	**08 49 08.8**	**+0.9**
T47A	**Sharon Grove**	**23.23**	**7**	P	**P**	**08 49 08.6**	**-0.2**
WCI	**Wyandotte Cave**	**24.55**	**8**	P	**P**	**08 49 20.5**	**-0.4**
R32A	**Long Quarter,**	**25.59**	**345**	P	**P**	**08 49 30.5**	**+0.2**
R32A				IAmb	IAmb	08 49 32.6	
	comp=Z,14nm,0.8s						
CBX	**Cerro Bola**	**30.28**	**312**	P	**P**	**08 50 14.1**	**+1.7**
PDAR	**Pinedale Array**	**33.26**	**334**	P	**P**	**08 50 37.9**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=140,slow=10,SNR=2.1						
PDAR				PcP	**PcP**	**08 53 17.7**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=132,slow=6.2,SNR=3.8						
	comp=Z,0.2nm,0.6s						
NVAR	**Mina Array Bea**	**34.83**	**320**	P	**P**	**08 50 54.2**	**+2.2**
	comp=Z,4.6nm,0.7s,baz=134,slow=8.1,SNR=34						
NVAR				PcP	**PcP**	**08 53 23.9**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=155,slow=3.3,SNR=6.6						
	comp=Z,4.6nm,0.7s						
MCMT	**McKenzie Canyo**	**36.34**	**333**	P	**P**	**08 51 06.2**	**+1.2**
ULM	**Lac du Bonnet**	**36.59**	**354**	P	**P**	**08 51 04.3**	**-2.3**
	comp=Z,5.6nm,0.6s,baz=169,slow=10,SNR=8.4						
	comp=Z,5.6nm,0.6s						
SIV	**San Ignacio**	**41.41**	**135**	PcP	**PcP**	**08 53 43.3**	**0.0**
	comp=Z,0.7nm,0.7s,baz=295,slow=6.5,SNR=2.7						
SCHQ	**Schefferville**	**44.82**	**19**	P	**P**	**08 52 12.2**	**-2.0**
	comp=Z,5.8nm,0.7s,baz=212,slow=7.0,SNR=14						
SCHQ				PcP	**PcP**	**08 53 53.5**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=130,slow=7.9,SNR=1.0						
	comp=Z,5.8nm,0.7s						
SCHQ	**Schefferville**	**44.82**	**19**	P	**P**	**08 52 12.3**	**-1.8**
SCHQ				IAmb	IAmb	08 52 13.3	
	comp=Z,12nm,1.1s						
YKA	**Yellowknife Ar**	**51.56**	**346**	P	**P**	**08 53 04.3**	**-1.5**
	comp=Z,0.4nm,0.5s,baz=147,slow=7.8,SNR=13						
YKA				ScP	**ScP**	**08 58 03.4**	**-0.9**
	comp=Z,0.1nm,0.7s,baz=128,slow=7.1,SNR=1.7						
	comp=Z,0.4nm,0.5s						
ILAR	**Eielson Array**	**63.63**	**336**	P	**P**	**08 54 29.9**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=104,slow=5.5,SNR=6.7						
	comp=Z,0.2nm,0.5s						
WRA	**Warramunga Arr**	**136.94**	**256**	PKP	**PKPdf**	**09 03 22.9**	**+1.0**
	comp=Z,1.1nm,0.9s,baz=90,slow=2.0,SNR=8.4						
ASAR	**Alice Springs**	**137.15**	**250**	PKP	**PKPdf**	**09 03 22.2**	**-0.1**
	comp=Z,0.4nm,1.0s,baz=103,slow=2.0,SNR=5.3						
PZH	**PanZhiHua**	**138.21**	**344**	PKP	**PKPdf**	**09 03 24.3**	**0.0**
CMAR	**Chiang Mai Arr**	**146.63**	**344**	PKPbc	**PKPdf**	**09 03 39.5**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=358,slow=6.2,SNR=4.9						

DJA 21 08:51:14.1±0.4,5°S±5°×13°0E±°,h163^{km}±4^{km},M3.9/11, mb4.4/2,mB5.6/1,MLv3.7/11,Mw(mB)5.1/1,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**0.19**	**73**	P	Pn	08 51 37.3	+1.4
BNDI				S	Sn	08 51 54.8	+2.3
MSAI	**Masohi**	**1.46**	**327**	P	Pn	08 51 45.2	+0.9
MSAI				S	Sn	08 52 06.5	-1.0
AAI	**Ambon**	**1.76**	**300**	P	Pn	08 51 48.2	+0.8
AAI				S	Sn	08 52 13.4	+0.3
NLAI	**Namlea**	**2.93**	**297**	P	Pn	08 52 01.7	+0.5
FAKI	**Fak Fak**	**3.02**	**57**	P	Pn	08 52 02.1	-0.1
SANI	**Sanana**	**4.49**	**304**	P	Pn	08 52 21.4	+0.2
LBMI	**Labuha**	**4.50**	**330**	P	Pn	08 52 21.3	+0.1
RKPI	**Ransiki, Papua**	**5.39**	**56**	P	Pn	08 52 32.8	-0.2
	133nm,0.4s,8µm0.8nm						

NEIC 21 08:52:51.8±1.2,36°.86N±0°.01×121°.37W±0°.02,h15^{km}±2^{km}, Error ellipse: s-maj=2.0km s-min=1.5km az=84.0

NCEDC 21 08:52:51.6±2.1,36°.88N±0°.01×121°.34W±0°.01,h7^{km}±3^{km}, ML3.0/32,ML3.1/32(NEIC),Error ellipse: s-maj=1.7km s-min=1.7km az=175.0,Central California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACP	**Pacheco Peak**	**0.14**	**18**		Pg	08 52 57.4	+2.9
SAO	**San Andreas Ge**	**0.14**	**217**		Pg	08 52 58.0	+3.4
CDC	**Canada Road**	**0.19**	**322**		Pg	08 52 55.7	+0.4
GHS	**Gilroy Hot Spr**	**0.23**	**338**		Pg	08 52 56.5	+0.3
BJOM	**Mount Johnson**	**0.25**	**175**		Pg	08 52 57.3	+0.8
SCZ	**Santa Cruz**	**0.28**	**190**		Pg	08 52 57.4	+0.2
BEMM	**Emmet**	**0.29**	**138**		Pg	08 52 57.9	+0.5
BVL	**Bear Valley**	**0.33**	**158**		Pg	08 52 58.7	+0.7
CADM	**Anderson Res.**	**0.37**	**321**		Pg	08 52 59.0	+0.2
SCKWR	**San Luis Creek**	**0.37**	**35**		Pb	08 52 59.8	-0.8
BBGB	**Big Mountain B**	**0.38**	**141**		Pg	08 52 59.6	+0.5
JLAB	**Laurel Hill**	**0.42**	**311**		Pg	08 52 59.9	+0.2
BBNM	**San Benito**	**0.42**	**150**		Pg	08 53 00.6	+0.8
CCOB	**Coe Ranch Numb**	**0.46**	**325**		Pg	08 53 01.2	+0.6
BSGM	**Shirttail Gulc**	**0.47**	**172**		Pg	08 53 00.7	+0.1
CMPM	**Mikes Peak**	**0.48**	**2**		Pg	08 53 01.5	+0.6
ARN	**Arnold Ranch**	**0.49**	**342**		Pg	08 53 01.6	+0.4
HAST	**Hastings Reser**	**0.52**	**199**		Pg	08 53 01.8	+0.2
LRV	**Little Rabbit**	**0.52**	**150**		Pb	08 53 02.5	-0.6
MHC	**Mount Hamilton**	**0.52**	**332**		Pg	08 53 01.9	+0.2
C072	**Blauer Lane Sa**	**0.53**	**321**		Pb	08 53 02.7	-0.5
JRGM	**Rodeo Gulch Ro**	**0.53**	**288**		Pg	08 53 01.9	+0.1
C054	**Valleyhaven Wa**	**0.55**	**315**		Pg	08 53 02.4	+0.1
SCCB	**Santa Clara Co**	**0.59**	**314**		Pg	08 53 03.1	+0.2
JJOM	**Saint Joseph's**	**0.61**	**303**		Pg	08 53 03.0	-0.4
COSM	**Mount Oso**	**0.63**	**357**		Pg	08 53 04.4	+0.6
C041	**El Campo Drive**	**0.63**	**322**		Pb	08 53 04.6	-0.4
CALM	**Calaveras Res.**	**0.68**	**327**		Pg	08 53 04.9	+0.2
JSGM	**Saratoga Golf**	**0.70**	**306**		Pg	08 53 05.2	+0.2
BPOM	**Post Ranch**	**0.73**	**208**		Pg	08 53 05.7	0.0
JSCM	**Stevens Creek**	**0.75**	**303**		Pg	08 53 05.7	-0.3
JSJM	**St Joseph**	**0.75**	**307**		Pg	08 53 06.3	+0.2
PMPB	**Monarch Peak**	**0.79**	**147**		Pb	08 53 07.3	-0.5
PMPB	**Monarch Peak**	**0.79**	**147**	IAML		08 53 23.8	
	comp=E,886nm,0.7s						
PMPB				IAML		08 53 27.6	
	comp=N,855nm,0.7s						
PCCM	**Crazy Canyon**	**0.80**	**170**		Pg	08 53 07.3	+0.4
WENL	**Wente Vineyard**	**0.81**	**336**		Pg	08 53 07.5	+0.3
JFP	**Foothills Park**	**0.83**	**306**		Pg	08 53 07.3	-0.3
CVLM	**Vallecito**	**0.84**	**332**		Pg	08 53 08.2	+0.4
JSFB	**Stanford Teles**	**0.85**	**308**		Pg	08 53 07.7	-0.2
JPSM		**0.87**	**292**		Pg	08 53 08.4	+0.2
CNIC	**Niles Canyon**	**0.88**	**326**		Pg	08 53 08.8	+0.2
PJUM	**Juniper Ridge**	**0.89**	**137**		Pg	08 53 08.8	+0.2
JRSC	**Jasper Ridge**	**0.89**	**306**		Pg	08 53 08.3	-0.4
MYLM	**Yosemite Lake**	**0.89**	**55**		Pg	08 53 08.4	-0.3
BGH	**Bear Gulch**	**0.92**	**300**		Pg	08 53 09.3	0.0
PDRM	**Domengine Ranc**	**0.95**	**124**		Pb	08 53 10.4	0.0
CBSNC	**Byron Hot Spri**	**0.97**	**346**		Pb	08 53 10.9	+0.2
CMOB	**Morgan Territo**	**1.00**	**338**		Pb	08 53 11.4	0.0
PSMM	**Smith Mountain**	**1.00**	**143**		Pb	08 53 11.6	+0.2
PWMM	**Westland Maint**	**1.01**	**116**		Pn	08 53 12.0	-0.2
JCHM	**Cahill Ridge**	**1.04**	**308**		Pg	08 53 11.3	-0.3
CSLM	**San Leandro Hi**	**1.05**	**324**		Pg	08 53 11.5	-0.2
JCPM	**Coyote Point**	**1.06**	**312**		Pg	08 53 11.0	-0.9
PHSB	**Hesperia Broad**	**1.08**	**168**		Pg	08 53 12.0	-0.3
BGC	**Bolinger Road**	**1.10**	**329**		Pg	08 53 12.6	-0.1
CRHM	**Round Hill Res**	**1.11**	**332**		Pn	08 53 13.7	+0.1
SAC	**San Andreas**	**1.11**	**310**		Pg	08 53 11.9	-1.0
CMCM	**Mills College**	**1.12**	**324**		Pg	08 53 12.9	-0.2
PKD	**Bear Valley Ra**	**1.13**	**145**		Pg	08 53 12.6	-0.7
PANM	**San Antonio Re**	**1.15**	**162**		Pg	08 53 13.1	-0.5
PVCM	**Vineyard Canyo**	**1.15**	**146**		Pg	08 53 13.5	-0.3
PSTM	**Stockdale Moun**	**1.16**	**144**		Pg	08 53 13.1	-0.8
JSBM	**San Bruno Moun**	**1.16**	**314**		Pg	08 53 11.9	-2.0
JMGM	**Milagra Ridge**	**1.18**	**310**		Pg	08 53 12.2	-2.0
BKS	**Berkeley--Byer**	**1.23**	**325**		Pg	08 53 13.7	-1.4
CVPM	**Vollmer Peak**	**1.23**	**325**		Pg	08 53 13.7	-1.5
VAK	**Adit at Lawren**	**1.23**	**324**		Pg	08 53 13.2	-2.0
BRK	**Berkeley--Havi**	**1.23**	**324**		Pb	08 53 12.9	-2.3
CYBM	**Yerba Buena Is**	**1.24**	**319**		Pb	08 53 15.0	-0.3
CTM	**Castle Mountai**	**1.24**	**139**		Pn	08 53 16.1	+0.6
PHFM	**Heflinger Ranc**	**1.25**	**142**		Pb	08 53 14.8	-0.7
PWKM	**Work Ranch**	**1.25**	**148**		Pn	08 53 14.6	-1.0
JPRM	**Presidio of Sa**	**1.29**	**316**		Pn	08 53 13.7	-2.3
RAMR	**Ramage Ranch**	**1.30**	**163**		Pn	08 53 15.1	-1.1
CPIM	**Pinole Ridge**	**1.31**	**328**		Pn	08 53 15.4	-0.9
PSRM	**Scobie Ranch**	**1.33**	**140**		Pn	08 53 16.4	-0.2
CPMM	**Point Molate**	**1.37**	**322**		Pn	08 53 15.4	-1.7
PKLM	**Kerr Lake**	**1.37**	**144**		Pn	08 53 16.2	-0.9
PSNM	**Stone Corral**	**1.38**	**142**		Pn	08 53 16.7	-0.6
CMB	**Columbia Colle**	**1.38**	**33**		Pn	08 53 16.2	-1.2
CMB	**Columbia Colle**	**1.38**	**33**		Pn	08 53 16.5	-0.9
CMB				IAML		08 53 37.0	
	comp=N,181nm,0.4s						
CMB				IAML		08 53 38.2	
	comp=E,158nm,1.0s						
PMRM	**Maxey Ranch**	**1.41**	**140**		Pn	08 53 17.1	-0.7
TCHL	**Shandon**	**1.41**	**147**		Pn	08 53 16.5	-1.3
TCAS	**Cass Winery, P**	**1.41**	**153**		Pn	08 53 16.5	-1.3
ARDC	**Alexander Ranc**	**1.44**	**168**		Pn	08 53 16.9	-1.2
TRAM	**Private Proper**	**1.48**	**144**		Pn	08 53 16.8	-1.9
TSCN	**Private Proper**	**1.55**	**149**		Pn	08 53 19.2	-0.5
SNT	**Sears Point**	**1.57**	**326**		Pn	08 53 18.4	-1.6
NOLM	**Olema**	**1.64**	**315**		Pn	08 53 19.3	-1.5
TSCS	**Shell Creek So**	**1.64**	**151**		Pn	08 53 19.6	-1.3
TRAY	**Twisselman Ran**	**1.65**	**143**		Pn	08 53 20.2	-0.9
NADM	**Allendale**	**1.66**	**343**		Pn	08 53 20.2	-0.9
VOG	**Valley Oaks Go**	**1.67**	**109**		Pn	08 53 21.2	-0.1
CVS	**Carmenet Viney**	**1.71**	**329**		Pn	08 53 20.2	-1.7
MCCM	**Marconi Confer**	**1.76**	**316**	Pn	Pn	08 53 23.2	+0.7
RCTC	**Rector, Farmer**	**1.78**	**108**		Pn	08 53 22.1	-0.7
NTYM	**Taylor**	**1.84**	**326**		Pn	08 53 22.0	-1.6
SMMC	**Simmler**	**1.90**	**145**		Pn	08 53 24.2	-0.4
NBPM	**Berryessa Peak**	**1.91**	**340**		Pn	08 53 23.9	-0.7
MDPB	**Devils Postpil**	**1.95**	**67**		Pn	08 53 26.1	+0.6
MRDM	**Red Cones**	**1.96**	**68**		Pn	08 53 26.0	+0.5
BCH	**Branch Mountai**	**1.97**	**149**		Pn	08 53 24.5	-1.1
MINS	**Minaret Summit**	**1.98**	**66**		Pn	08 53 26.4	+0.6
CARC	**Carrizo Plain**	**1.98**	**142**		Pn	08 53 25.2	-0.5
MMPM	**Mammoth Pass**	**1.98**	**68**		Pn	08 53 26.7	+0.7
MMSM	**Mammoth Summit**	**1.99**	**67**		Pb	08 53 27.3	-1.0
OMMB	**Old Mammoth Mi**	**2.00**	**68**		Pn	08 53 26.8	+0.6
OMMB	**Old Mammoth Mi**	**2.00**	**68**	IAML		08 53 53.9	
	comp=E,166nm,0.6s						
OMMB				IAML		08 53 54.2	
	comp=N,180nm,0.5s						
MDCM	**Deadman Creek**	**2.01**	**65**		Pn	08 53 27.1	+0.8
MDYM	**Dry Creek**	**2.01**	**67**		Pn	08 53 27.4	+1.0
MMLB	**Mammoth Lakes**	**2.04**	**67**		Pb	08 53 28.7	-0.4
MLCM	**Laurel Creek C**	**2.07**	**69**		Pn	08 53 28.1	+1.1
LUL	**Lundy Lake**	**2.08**	**55**		Pn	08 53 28.4	+1.3
MGPM	**Gravel Pit**	**2.08**	**68**		Pb	08 53 28.9	-1.0
LMCR	**Lookout Mounta**	**2.09**	**65**		Pb	08 53 29.1	-0.9
MCBM	**Casa Benchmark**	**2.09**	**68**		Pb	08 53 28.8	-1.3
MCVM	**Convict Lake**	**2.12**	**70**		Pn	08 53 29.0	+1.1
MDRNC	**Doe Ridge**	**2.14**	**68**		Pb	08 53 29.6	-1.2
MLHM	**Little Hot Cre**	**2.17**	**68**		Pb	08 53 30.3	-1.0
SPG2	**Springville 2**	**2.18**	**107**		Pn	08 53 28.2	-0.1
WAKR	**Walker**	**2.22**	**42**		Pn	08 53 30.3	+1.3
WAKR	**Walker**	**2.22**	**42**	IAML		08 54 05.7	
	comp=N,129nm,0.7s						
WAKR				IAML		08 54 06.2	
	comp=E,150nm,0.6s						
MTUM	**Tungsten Hills**	**2.27**	**77**		Pn	08 53 31.1	+1.4
EMB	**Emerald Bay**	**2.31**	**25**		Pn	08 53 31.1	+0.8
EMB	**Emerald Bay**	**2.31**	**25**	IAML		08 54 09.1	
	comp=E,117nm,0.6s						
BENR	**Benton**	**2.36**	**68**		Pn	08 53 32.5	+1.5
MFBM	**Five Bridges**	**2.39**	**76**		Pb	08 53 33.6	-1.4
MRCM	**Red Rock Canyo**	**2.39**	**70**		Pb	08 53 33.6	-1.6
MCDM	**Chidago Canyon**	**2.41**	**73**		Pb	08 53 33.9	-1.5
OHCM	**Honcut**	**2.46**	**357**		Pn	08 53 32.2	+0.1
BCW	**Bitter Crk WRg**	**2.49**	**140**		Pn	08 53 33.9	+1.2
BCW				IAML		08 54 21.5	
	comp=E,64nm,0.7s						
BCW				IAML		08 54 38.3	
	comp=N,75nm,1.2s						
MLNR	**Milner Canyon**	**2.50**	**72**		Pb	08 53 35.2	-1.7
OSTM	**Stimpson Lane**	**2.50**	**355**		Pn	08 53 32.2	-0.5
HOPS	**Hopland Field**	**2.52**	**328**	Pn	Pn	08 53 31.5	-1.5
HOPS				IAML		08 53 55.0	
	comp=N,82nm,2.9s						
HOPS				IAML		08 54 05.8	
	comp=E,87nm,3.6s						
WASM	**Alta Sierra Ca**	**2.52**	**116**		Pn	08 53 32.7	-0.5
ISA	**Isabella, Lake**	**2.61**	**117**		Pn	08 53 35.2	+0.8
LHV	**Little Huntoon**	**2.64**	**58**		Pb	08 53 39.0	-0.2
LHV	**Little Huntoon**	**2.64**	**58**	IAML		08 54 19.6	
	comp=N,98nm,0.8s						
KVN	**Kaiserville**	**3.35**	**49**		Pn	08 53 45.8	+1.1
KVN				IAML		08 54 40.4	
	comp=E,30nm,1.2s						
KVN				IAML		08 54 41.1	
	comp=N,29nm,1.0s						
GSC	**Goldstone, Bar**	**3.99**	**112**		Pn	08 53 53.7	+0.3

MAN 21 09:01:23.0,10°.56N×123°.69E,h6^{km},mb4.3,ML3.1,MS2.9, 5C-4D,Cebu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.36**	**131**	⇓*i*P	Pg	09 01 30.6	+0.4
LLP				*i* S	Sg	09 01 36.3	+1.4
TABP	**Talibon, Bohol**	**0.79**	**126**	⇓*i*P	Pg	09 01 37.7	-0.5
TABP				*i* S	Sg	09 01 48.3	0.0
TBP	**Tagbilaran**	**0.88**	**169**	*e*P	Pg	09 01 39.9	-0.1
TBP				*i* S	Sn	09 01 54.5	-0.5
GUIM	**Jordan**	**1.08**	**274**	⇑*e*P	Pg	09 01 43.1	-0.8
GUIM				*e*S	Sg	09 01 58.1	+0.2
GHBP	**Garcia Hernand**	**1.11**	**146**	⇑*i*P	Pg	09 01 44.2	-0.2
GHBP				*i* S	Sn	09 02 01.8	+0.9
MSLP	**Maasin**	**1.23**	**110**	⇓*e*P	Pg	09 01 46.0	-0.5
MSLP				*e*S	Sb	09 02 03.1	+0.3
CNOP	**Candoni, Negro**	**1.26**	**235**	⇓*e*P	Pg	09 01 48.0	+0.7
CNOP				*e*S	Sb	09 02 03.9	+0.1
SNPH	**Sibulan**	**1.29**	**200**	⇑*i*P	Pn	09 01 46.9	-0.7
SNPH				*i* S	Sb	09 02 04.9	+0.3
RCP	**Roxas**	**1.36**	**317**	⇑*i*P	Pn	09 01 47.5	-1.0
RCP				*i* S	Sb	09 02 06.4	-0.2
LSIP	**Lazi, Siquijor**	**1.42**	**182**	⇑*i*P	Pn	09 01 49.0	-0.4
LSIP				*i* S	Sb	09 02 05.2	-3.1

ASRS 21 09:16:39.0±0.3,54°N±1°×8°2E±°,h10^{km},MLh3.1/8,Error ellipse: s-maj=3.7km s-min=2.8km az=112.8,confirmed

NNC 21 09:16:45.1±2.6,53°.37N×82°.38E,h0^{km},mb3.0,mpv2.7, Error ellipse: s-maj=44.4km s-min=12.6km az=143.0

ISC 21 09:16:43.3±1.0,53°.65N±0°.03×82°.23E±0°.04,h10^{km},n27, σ1^{s}79/44,3C-6D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHAR	**Kharino, NSO,**	**1.26**	**39**	Pg	**Pn**	**09 17 06.1**	**-0.7**
KHAR				Sg	**Sn**	**09 17 24.8**	**+1.0**
NVS	**Novosibirsk**	**1.33**	**26**	Pg	**Pn**	**09 17 06.5**	**-1.5**
NVS				Sg	**Sn**	**09 17 27.3**	**+1.6**
NVSII	**Novosibirsk**	**1.33**	**26**	Pg	**Pn**	**09 17 07.0**	**-0.9**
NVSII				Sg	**Sb**	**09 17 26.4**	**+0.9**
ZAA0	**Zalesovo Array**	**1.56**	**78**	⇓Pg	**Pb**	**09 17 12.6**	**+0.3**
	0.7nm,0.3s						
ZAA0				⇑Lg	Lg	09 17 35.9	
	8.2nm,0.3s						
SALR	**Pechorkino, Sa**	**2.19**	**68**	Pg	**Pb**	**09 17 23.6**	**+0.7**
SALR				Sg	**Sg**	**09 17 53.1**	**-0.4**
BJR1	**Bachatsky 1, K**	**2.33**	**74**	Pg	**Pb**	**09 17 25.2**	**0.0**
BJR1				Sg	**Sg**	**09 17 57.4**	**-0.6**
ELT	**Eltsovka**	**2.43**	**98**	Pg	**Pb**	**09 17 27.7**	**+0.7**
ELT				Sg	**Sg**	**09 18 00.1**	**-1.1**
VCHU	**Verkh-Chumysh,**	**2.52**	**81**	Sg	**Sb**	**09 18 01.5**	**+2.0**
POMOR	**Pomortsevo, Ku**	**2.65**	**72**	Sg	**Sg**	**09 18 07.7**	**-0.4**
GALT	**Gorno-Altaysk,**	**2.82**	**125**	Pg	**Pb**	**09 17 34.2**	**+0.6**
GALT				Sg	**Sg**	**09 18 11.1**	**-2.6**
MALIN	**Malinovka, Kuz**	**3.02**	**92**	Pg	**Pb**	**09 17 37.3**	**+0.2**
MALIN				Sg	**Sg**	**09 18 18.6**	**-1.5**
UKR	**Ust'-Kan**	**3.13**	**149**	Pg	**Pn**	**09 17 33.9**	**+1.1**
UKR				Sg	**Sg**	**09 18 20.0**	**-3.8**
TASR	**Tashtagol**	**3.51**	**102**	Pg	**Pb**	**09 17 43.7**	**-1.7**
TASR				Sg	**Sg**	**09 18 34.1**	**-1.9**
ARTR	**Artybash**	**3.58**	**119**	Sg	**Sg**	**09 18 37.7**	**-0.6**
KURK	**Kurchatov**	**3.68**	**219**	⇓Pg	**Pb**	**09 17 49.4**	**+1.1**
	1.8nm,0.4s						
KURK				⇓Lg	Lg	09 18 36.8	
	14nm,0.6s						
KURK	**Kurchatov**	**3.68**	**219**	Pg	**Pb**	**09 17 48.6**	**+0.2**
KURK				Sg	**Sb**	**09 18 36.2**	**+3.2**
KURBB	**Kurchatov Arra**	**3.79**	**218**	⇑Pg	**Pb**	**09 17 49.6**	**-0.6**
	3.8nm,0.5s,baz=41,slow=16						
KURBB				⇓Lg	Lg	09 18 39.4	
	24nm,0.6s,baz=45,slow=32						
LUZB	**Luzhba, Kemero**	**3.97**	**87**	Sg	**Sg**	**09 18 49.3**	**-1.3**
BRCR	**Berchikul'**	**4.06**	**58**	Pg	**Pb**	**09 17 56.1**	**+1.3**
BRCR				Sg	**Sg**	**09 18 54.3**	**+0.8**
ULGR	**Ulagan, Altay**	**4.65**	**128**	Pg	**Pb**	**09 18 06.3**	**+1.4**
ULGR				Sg	**Sg**	**09 19 14.6**	**+2.1**
CHBI	**Chibit, Altay**	**4.67**	**134**	Pg	**Pg**	**09 18 09.2**	**-3.4**
CHBI				Sg	**Sg**	**09 19 14.2**	**+1.3**
DGZ	**Jazzator, Alta**	**5.11**	**139**	Pg	**Pn**	**09 18 03.1**	**+3.2**
DGZ				Sg	**Sg**	**09 19 26.2**	**-1.0**
CUR	**Chagan-Uzun**	**5.19**	**131**	Sg	**Sg**	**09 19 29.7**	**-0.2**
CERR	**Cheremushki**	**5.57**	**94**	Sg	**Sg**	**09 19 41.5**	**-0.5**
MAKZ	**Makanchi**	**6.85**	**181**	Sg	**Sg**	**09 20 19.5**	**-3.5**
MK31	**Makanchi Array**	**6.86**	**180**	⇑Pn	**Pn**	**09 18 25.0**	**+1.1**
	0.1nm,0.2s,baz=6.9,slow=12,SNR=15						
MK31				⇓Sn	**Sn**	**09 19 42.9**	**+0.9**
	1.4nm,0.7s,baz=74,slow=36,SNR=4.1						
MK31				⇓Lg	Lg	09 20 15.9	
	3.1nm,0.5s,baz=0.2,slow=31,SNR=5.9						
MKAR	**Makanchi Array**	**6.86**	**180**	Pg	**Pn**	**09 18 25.4**	**+1.5**
MKAR				Sg	**Sg**	**09 20 18.7**	**-4.6**

IDC 21 09:29:20.0±2.7,54°.18N×86°.04E,h0^{km},mbtmp2.7/2, ML2.5/2,Error ellipse: s-maj=19.0km s-min=11.3km az=60.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.76**	**252**	I	I	09 33 58.6	
	baz=69,slow=326,SNR=11						
ZALV	**Zalesovo Beam**	**0.76**	**252**	Pg	Pg	09 29 34.0	-0.5
	0.9nm,0.3s,baz=70,slow=17,SNR=8.5						
ZALV				Lg	Lg	09 29 45.2	
	3.2nm,0.3s,baz=75,slow=32,SNR=18						
KURBB	**Kurchatov Arra**	**5.82**	**235**	Pn	Pn	09 30 49.0	+1.6
	0.1nm,0.3s,baz=52,slow=14,SNR=5.0						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.78**	**199**	Pn	Pn	09 31 14.5	+0.1
	0.1nm,0.3s,baz=22,slow=13,SNR=3.1						
	0.2nm,0.4s						

ROM 21 09:30:39.6±0.0,42°.842N±0°.002×13°.215E±0°.003, h12^{km},ML1.0/4,1C,Error ellipse: s-maj=0.2km s-min=0.1km az=265.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1245	**Castelsantange**	**0.02**	**306**	P	Pg	09 30 42.2	+0.1
T1245				S	Sg	09 30 43.8	0.0
T1245				AML	AML		
	comp=N,174µm,0.2s						
T1245				AML	AML		
	comp=E,200µm,0.2s						
MC2	**Monte Cornacci**	**0.07**	**346**	P	Pg	09 30 42.7	+0.2
T1214	**Arquata del Tr**	**0.08**	**183**	P	Pg	09 30 42.7	+0.3
T1214				S	Sg	09 30 44.8	+0.2
MMO1	**Montemonaco**	**0.10**	**55**	P	Pg	09 30 42.9	+0.3
MMO1				S	Sg	09 30 45.1	+0.3
T1212	**Cascia, Frazio**	**0.15**	**234**	P	Pg	09 30 43.7	+0.4
T1212				S	Sg	09 30 46.5	+0.6
T1241	**Roccafluvione,**	**0.16**	**85**	P	Pg	09 30 43.8	+0.4
T1241				S	Sg	09 30 46.7	+0.6
T1256	**Bolognola (MC)**	**0.16**	**3**	P	Pg	09 30 43.9	+0.3
T1256				S	Sg	09 30 46.9	+0.5
T1256				AML	AML		
	comp=E,27µm,1.6s						
T1256				AML	AML		
	comp=N,24µm,1.5s						
T1256				AML	AML		
	comp=E,27µm,1.6s						
T1256				AML	AML		
	comp=N,24µm,0.5s						
T1256				AML	AML		
	comp=E,27µm,0.4s						
FDMO	**Fiordimonte**	**0.21**	**334**	P	Pg	09 30 44.6	+0.3
FDMO				S	Sg	09 30 48.5	+0.9
FDMO				AML	AML		
	comp=E,40µm,0.2s						
FDMO				AML	AML		
	comp=N,59µm,0.2s						
T1217	**Poggiodomo (PG**	**0.25**	**238**	P	Pg	09 30 45.3	+0.4
RM33	**Pellescritta (**	**0.33**	**180**	⇑P	Pg	09 30 46.7	+0.3
TERO	**Teramo**	**0.36**	**127**	P	Pg	09 30 47.1	+0.2
TERO				S	Sb	09 30 52.9	-0.7
TERO				AML	AML		
	comp=E,33µm,1.5s						
TERO				AML	AML		
	comp=N,59µm,0.1s						
SENI	**Senigallia**	**0.86**	**1**	P	Pg	09 30 56.2	-0.1
APEC	**Apecchio**	**0.92**	**321**	S	Sg	09 31 09.5	0.0
APEC				AML	AML		
	comp=E,35µm,0.2s						
APEC				AML	AML		
	comp=N,49µm,0.5s						
APEC				AML	AML		
	comp=N,49µm,1.5s						
VIVA	**Pratoni del Vi**	**1.14**	**197**	S	Sb	09 31 15.3	-0.7
VIVA				AML	AML		
	comp=E,359µm,0.3s						
VIVA				AML	AML		
	comp=N,411µm,1.6s						

ROM 21 09:31:02.6±0.1,41°.506N±0°.004×15°.002E±0°.007, h25^{km}±1^{km},ML2.1/17,4C-1D,Error ellipse: s-maj=0.6km s-min=0.3km az=47.0,Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GATE	**Gambatesa**	**0.07**	**276**	P	Pb	09 31 07.1	-0.1
GATE				S	Sb	09 31 10.3	+0.1
GATE				AML	AML		

	comp=E,3035μm,0.5s						
GATE				AML	AML		
	comp=N,2180μm,0.4s						
GATE				AML	AML		
	comp=E,1215μm,0.7s						
GATE				AML	AML		
	comp=N,2125μm,0.4s						
GATE				AML	AML		
	comp=N,2125μm,1.6s						
GATE				AML	AML		
	comp=N,2180μm,1.6s						
GATE				AML	AML		
	comp=E,1215μm,1.3s						
GATE				AML	AML		
	comp=E,3040μm,0.5s						
CIGN	**Sant'Elia a Pi**	**0.17**	**334**	P	Pb	09 31 08.0	+0.1
CIGN				S	Sb	09 31 12.3	+0.8
CIGN				AML	AML		
	comp=E,352μm,0.4s						
CIGN				AML	AML		
	comp=N,276μm,0.5s						
CIGN				AML	AML		
	comp=E,168μm,0.3s						
MOCO	**Biccari - m.te**	**0.18**	**139**	⇓P	Pb	09 31 08.3	+0.1
MOCO				S	Sb	09 31 12.2	+0.3
MOCO				AML	AML		
	comp=E,446μm,1.4s						
MOCO				AML	AML		
	comp=N,256μm,0.6s						
MOCO				AML	AML		
	comp=E,446μm,1.4s						
MOCO				AML	AML		
	comp=E,454μm,0.4s						
MOCO				AML	AML		
	comp=E,446μm,0.6s						
MOCO				AML	AML		
	comp=N,256μm,0.6s						
MELA	**Melanico ??? S**	**0.22**	**25**	⇑P	Pb	09 31 08.6	+0.1
MELA				S	Sb	09 31 13.1	+0.5
MELA				AML	AML		
	comp=E,1375μm,0.4s						
MELA				AML	AML		
	comp=N,1805μm,0.5s						
MELA				AML	AML		
	comp=E,1460μm,0.4s						
MELA				AML	AML		
	comp=N,1735μm,0.5s						
SACR	**S. Croce Del S**	**0.25**	**244**	⇑P	Pb	09 31 08.9	-0.1
SACR				S	Sb	09 31 13.7	+0.4
SACR				AML	AML		
	comp=E,410μm,0.2s						
SACR				AML	AML		
	comp=N,347μm,0.9s						
SACR				AML	AML		
	comp=E,412μm,1.5s						
SACR				AML	AML		
	comp=N,348μm,0.9s						
SACR				AML	AML		
	comp=N,330μm,0.3s						
SACR				AML	AML		
	comp=E,432μm,0.2s						
SACR				AML	AML		
	comp=E,412μm,0.5s						
SACR				AML	AML		
	comp=N,348μm,1.1s						
BSSO	**Busso**	**0.31**	**278**	⇑P	Pb	09 31 10.1	+0.2
BSSO				S	Sb	09 31 15.5	+0.7
BSSO				AML	AML		
	comp=N,344μm,0.8s						
BSSO				AML	AML		
	comp=E,294μm,0.2s						
BSSO				AML	AML		
	comp=N,344μm,0.8s						
BSSO				AML	AML		
	comp=E,295μm,0.2s						
BSSO				AML	AML		
	comp=E,118μm,0.2s						
BSSO				AML	AML		
	comp=N,138μm,0.9s						
PSB1	**Pescosannita**	**0.32**	**207**	⇑P	Pb	09 31 09.9	-0.1
PSB1				S	Sb	09 31 15.4	+0.5
PSB1				AML	AML		
	comp=N,230μm,0.5s						
PSB1				AML	AML		
	comp=N,230μm,1.5s						
PSB1				AML	AML		
	comp=E,289μm,0.3s						
TRIV	**Trivento**	**0.43**	**308**	P	Pb	09 31 12.3	+0.6
TRIV				AML	AML		
	comp=E,93μm,0.3s						
TRIV				AML	AML		
	comp=N,83μm,0.3s						
VITU	**Vitulano (BN)**	**0.43**	**221**	P	Pb	09 31 11.3	-0.4
VITU				AML	AML		
	comp=E,269μm,0.6s						
VITU				AML	AML		
	comp=N,342μm,0.8s						
VITU				AML	AML		
	comp=N,342μm,1.2s						
SGTA	**Sant Agata di**	**0.46**	**143**	P	Pb	09 31 12.2	0.0
SGTA				S	Sb	09 31 19.8	+1.0
SGTA				AML	AML		
	comp=E,110μm,0.4s						
SGTA				AML	AML		
	comp=N,99μm,0.4s						
APRC	**Apricena**	**0.48**	**58**	P	Pb	09 31 12.0	-0.5
APRC				S	Sb	09 31 19.2	0.0
APRC				AML	AML		
	comp=E,559μm,1.0s						
APRC				AML	AML		
	comp=N,456μm,0.3s						
APRC				AML	AML		
	comp=E,559μm,1.0s						
CAFE	**Carife**	**0.51**	**160**	P	Pb	09 31 13.1	0.0
CAFE				S	Sn	09 31 21.4	-1.0
MIDA	**Miranda**	**0.58**	**284**	P	Pb	09 31 13.8	-0.4
MIDA				S	Sb	09 31 22.5	+0.4
MIDA				AML	AML		
	comp=E,110μm,0.3s						
MIDA				AML	AML		
	comp=N,118μm,0.3s						
MIDA				AML	AML		
	comp=N,118μm,1.7s						
SNAL	**S. Angelo Dei**	**0.60**	**165**	P	Pb	09 31 14.2	-0.4
SNAL				S	Sb	09 31 23.5	+0.8
SNAL				AML	AML		
	comp=E,130μm,0.2s						
SNAL				AML	AML		
	comp=N,84μm,0.3s						
SGRT	**San Giovanni R**	**0.61**	**66**	P	Pb	09 31 14.7	0.0
SGRT				AML	AML		
	comp=E,588μm,0.5s						
SGRT				AML	AML		
	comp=N,428μm,0.3s						
SGRT				AML	AML		
	comp=E,588μm,1.5s						
SGRT				AML	AML		
	comp=N,428μm,1.7s						
MSAG	**Monte S. Angel**	**0.71**	**73**	P	Pn	09 31 16.9	-0.3
MSAG				AML	AML		
	comp=E,500μm,0.2s						
MSAG				AML	AML		
	comp=N,1130μm,0.2s						
MSAG				AML	AML		
	comp=N,1095μm,0.2s						
MSAG				AML	AML		
	comp=E,458μm,0.4s						
MSAG				AML	AML		
	comp=N,1095μm,1.8s						
MSAG				AML	AML		
	comp=N,1130μm,1.8s						
MSAG				AML	AML		
	comp=E,500μm,1.8s						
TREM	**Isole Tremiti**	**0.72**	**31**	P	Pn	09 31 17.4	+0.1
TREM				AML	AML		
	comp=E,316μm,1.3s						
TREM				AML	AML		
	comp=N,2275μm,1.2s						
TREM				AML	AML		
	comp=E,316μm,0.7s						
TREM				AML	AML		
	comp=N,2275μm,0.8s						
LPEL	**Lama dei Pelig**	**0.82**	**312**	P	Pn	09 31 18.9	+0.2
LPEL				AML	AML		
	comp=N,147μm,0.2s						
LPEL				AML	AML		
	comp=E,107μm,0.2s						
LPEL				AML	AML		
	comp=E,107μm,1.8s						
MODR	**Mondragone**	**0.92**	**247**	AML	AML		
	comp=N,115μm,0.6s						
MODR				AML	AML		
	comp=E,78μm,0.5s						
MODR				AML	AML		
	comp=E,78μm,1.5s						
T1241	**Roccafluvione,**	**1.78**	**320**	S	Sb	09 31 57.9	+1.3
T1241				AML	AML		
	comp=E,19500μm,1.6s						
T1241				AML	AML		
	comp=N,20000μm,1.6s						
T1241				AML	AML		
	comp=N,20000μm,0.4s						
T1241				AML	AML		
	comp=E,19500μm,0.4s						
T1218	**Civita (PG)**	**1.82**	**310**	S	Sn	09 31 55.8	+0.9
T1214	**Arquata del Tr**	**1.83**	**314**	S	Sn	09 31 55.3	+0.2
T1214				AML	AML		
	comp=E,84μm,1.5s						
T1214				AML	AML		
	comp=N,66μm,0.4s						
MMO1	**Montemonaco**	**1.87**	**319**	S	Sn	09 31 57.1	+1.1
T1245	**Castelsantange**	**1.91**	**316**	S	Sn	09 31 55.6	-1.4
MC2	**Monte Cornacci**	**1.95**	**317**	S	Sn	09 31 56.4	-1.6
TDS	**Terranova Siba**	**2.11**	**151**	P	Pb	09 31 41.6	+1.5
SPS2	**Spezzano della**	**2.43**	**155**	S	Sb	09 32 13.6	-1.7
SPS2				AML	AML		
	comp=E,16μm,1.4s						
SPS2				AML	AML		
	comp=N,26μm,0.2s						
SPS2				AML	AML		
	comp=E,16μm,0.6s						
FOSV	**Fossato di Vic**	**2.44**	**318**	S	Sb	09 32 13.8	-1.6
MCIV	**Monte Civitell**	**2.78**	**298**	S	Sn	09 32 20.7	+2.2
MCIV				AML	AML		
	comp=N,262μm,0.3s						
MCIV				AML	AML		
	comp=E,520μm,0.1s						

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*WEL **21** 09:45:03.7±0.3, 42°S±2°×17°4E±°, h15^{km}±3^{km}, M3.0/15, ML3.2/15, MLv3.0/15, Error ellipse: s-maj=0.0km s-min=0.0km az=120.0, confirmed*

*NOU **21** 09:45:06.7, 42°.04S×173°.67E, h20^{km}, MLv3.5/7, South Island, New Zealand*

ISC 21 09:45:02.7±1.2**, 41°.97S**±0°.03×**173°.95E**±0°.03**, h14**^{km}±11^{km}**, n82,** σ**1^{s}28**/88**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSWZ	**Blackbirch Sta**	**0.26**	**348**	P	**Pb**	**09 45 09.0**	**-0.1**
BSWZ				S	**Sb**	**09 45 12.8**	**-0.7**
CMWZ	**Cape Campbell**	**0.29**	**42**	P	**Pb**	**09 45 10.4**	**+0.6**
CMWZ				S	**Sb**	**09 45 15.7**	**+1.2**
TUWZ	**Tuamarina**	**0.54**	**360**	P	**Pb**	**09 45 13.8**	**-0.1**
TUWZ				S	**Sb**	**09 45 21.1**	**-0.4**
KHZ	**Kahutara**	**0.54**	**214**	P	**Pn**	**09 45 16.0**	**0.0**
KHZ	**Kahutara**	**0.54**	**214**	P	**Pn**	**09 45 16.1**	**+0.1**
KHZ				S	**Sn**	**09 45 25.7**	**+0.8**
TCW	**Tory Channel**	**0.80**	**18**	P	**Pg**	**09 45 18.0**	**-0.1**
THZ	**Tophouse**	**0.81**	**284**	P	**Pn**	**09 45 19.6**	**-0.2**
THZ				S	**Sn**	**09 45 30.7**	**-0.9**
NNZ	**Nelson**	**0.86**	**330**	P	**Pg**	**09 45 19.7**	**+0.2**
NNZ				S	**Sg**	**09 45 31.2**	**+0.5**
WEL	**Wellington**	**0.92**	**42**	P	**Pn**	**09 45 21.1**	**-0.1**
PLWZ	**Palliser**	**1.05**	**68**	P	**Pb**	**09 45 22.3**	**-0.5**
MRNZ	**Matariki Terra**	**1.06**	**302**	P	**Pg**	**09 45 23.8**	**+0.7**
DUWZ	**D'Urville Isla**	**1.17**	**359**	P	**Pn**	**09 45 24.5**	**-0.1**
TKNZ	**Takaka Hill**	**1.19**	**321**	P	**Pg**	**09 45 25.4**	**-0.3**
CAW	**Cannon Point**	**1.20**	**45**	P	**Pn**	**09 45 24.9**	**-0.2**
GVZ	**Greta Valley S**	**1.21**	**214**	P	**Pg**	**09 45 26.6**	**+0.6**
PAWZ	**Paruwai Farm**	**1.25**	**63**	P	**Pn**	**09 45 24.9**	**-1.0**
KIW	**Kapiti Island**	**1.32**	**33**	P	**Pn**	**09 45 26.9**	**+0.1**
MTW	**Mount Morrison**	**1.42**	**56**	P	**Pn**	**09 45 27.1**	**-1.0**
TRWZ	**Traveller**	**1.42**	**67**	P	**Pn**	**09 45 26.9**	**-1.2**
OGWZ	**Otaki Gorge**	**1.47**	**39**	P	**Pn**	**09 45 28.6**	**-0.2**
LTZ	**Lake Taylor**	**1.48**	**236**	P	**Pb**	**09 45 30.4**	**+0.2**
AMCZ	**Amberley**	**1.54**	**218**	P	**Pb**	**09 45 30.6**	**-0.4**
QRZ	**Quartz Range**	**1.56**	**316**	P	**Pg**	**09 45 31.9**	**-0.9**
QRZ	**Quartz Range**	**1.56**	**316**	P	**Pg**	**09 45 31.8**	**-0.9**
HOWZ	**Holdsworth Sta**	**1.59**	**48**	P	**Pn**	**09 45 29.8**	**-0.7**
DSZ	**Denniston Nort**	**1.62**	**277**	P	**Pg**	**09 45 33.5**	**-0.3**
TMWZ	**Te Maipa**	**1.69**	**60**	P	**Pn**	**09 45 30.6**	**-1.3**
MRZ	**Mangatainoka R**	**1.79**	**44**	P	**Pn**	**09 45 32.5**	**-0.7**
OXZ	**Oxford**	**1.96**	**225**	P	**Pn**	**09 45 35.6**	**+0.1**
MQZ	**McQueen's Vall**	**1.98**	**208**	P	**Pn**	**09 45 35.3**	**-0.5**
INZ	**Inchbonnie**	**2.00**	**247**	P	**Pb**	**09 45 38.8**	**-0.2**
AKCZ	**Akaroa Harbour**	**2.05**	**201**	P	**Pn**	**09 45 37.1**	**+0.3**
PRWZ	**Pori Road**	**2.08**	**48**	P	**Pb**	**09 45 39.3**	**-0.9**
BFZ	**Birch Farm**	**2.15**	**54**	P	**Pg**	**09 45 44.4**	**+0.3**
BFZ	**Birch Farm**	**2.15**	**54**	P	**Pg**	**09 45 44.5**	**+0.4**
WAZ	**Wanganui**	**2.35**	**20**	P	**Pb**	**09 45 44.4**	**-0.4**
DVHZ	**Dannevirke**	**2.36**	**46**	P	**Pb**	**09 45 46.2**	**+1.1**
TSZ	**Takapari Road**	**2.44**	**39**	P	**Pn**	**09 45 41.5**	**-0.7**
WACZ	**Wakanui South**	**2.51**	**217**	P	**Pn**	**09 45 43.3**	**+0.2**
WVZ	**Waitaha Valley**	**2.62**	**244**	P	**Pb**	**09 45 48.5**	**-0.9**
PRHZ	**Porangahau**	**2.65**	**51**	P	**Pg**	**09 45 54.4**	**+0.9**
PNHZ	**Pukenui**	**2.67**	**40**	P	**Pb**	**09 45 51.2**	**+0.9**
KHEZ	**Kahui Hut**	**2.67**	**1**	P	**Pb**	**09 45 50.5**	**+0.1**
KHEZ	**Kahui Hut**	**2.67**	**1**	P	**Pb**	**09 45 49.9**	**-0.5**
WPHZ	**Waipukurau**	**2.68**	**46**	P	**Pg**	**09 45 53.6**	**-0.5**
NEZ	**North Egmont**	**2.70**	**2**	P	**Pb**	**09 45 50.0**	**-0.8**
NBEZ	**Newall Road No**	**2.70**	**359**	P	**Pg**	**09 45 53.6**	**-0.8**
RPZ	**Rata Peaks**	**2.75**	**230**	P	**Pn**	**09 45 47.3**	**+0.8**
RPZ	**Rata Peaks**	**2.75**	**230**	P	**Pn**	**09 45 47.4**	**+1.0**
PKE	**Pukeiti**	**2.77**	**1**	P	**Pb**	**09 45 50.1**	**-1.9**
MTVZ	**Mangateitei**	**2.83**	**25**	P	**Pb**	**09 45 52.1**	**-0.9**
ARCZ	**Arundel**	**2.84**	**225**	P	**Pn**	**09 45 48.1**	**+0.4**
PKVZ	**Pokaka**	**2.88**	**22**	P	**Pb**	**09 45 51.9**	**-2.0**
MHEZ	**Mangahewa**	**2.90**	**6**	P	**Pg**	**09 46 00.6**	**+2.2**
MOVZ	**Moawhango**	**2.90**	**29**	P	**Pb**	**09 45 52.8**	**-1.5**
VRZ	**Vera Road**	**2.91**	**13**	P	**Pn**	**09 45 50.5**	**+1.9**
WNVZ	**Wahianoa**	**2.92**	**26**	P	**Pb**	**09 45 52.3**	**-2.4**
TRVZ	**Turoa**	**2.93**	**25**	P	**Pn**	**09 45 49.3**	**+0.2**
PXZ	**Pawanui**	**2.93**	**50**	P	**Pg**	**09 45 58.6**	**-0.3**
BHHZ	**Black Hill Sta**	**2.95**	**34**	P	**Pb**	**09 45 54.8**	**-0.4**
FWVZ	**Far West T-bar**	**2.97**	**25**	P	**Pb**	**09 45 54.0**	**-1.6**
GCSZ	**Gaunt Creek Bo**	**2.99**	**242**	P	**Pb**	**09 45 54.9**	**-0.9**
TUVZ	**Tukino**	**2.99**	**26**	P	**Pn**	**09 45 52.4**	**+2.5**
NGZ	**Ngauruhoe**	**3.06**	**25**	P	**Pb**	**09 45 55.6**	**-1.5**
KAHZ	**Kahuranaki**	**3.10**	**47**	P	**Pg**	**09 46 03.1**	**+0.8**
NNVZ	**North Ngauruho**	**3.10**	**25**	P	**Pb**	**09 45 56.4**	**-1.5**
WTVZ	**West Tongariro**	**3.11**	**24**	P	**Pb**	**09 45 57.4**	**-0.5**
ETVZ	**East Tongariro**	**3.13**	**26**	P	**Pb**	**09 45 55.5**	**-2.8**
KRVZ	**Karewarewa**	**3.15**	**25**	P	**Pb**	**09 45 56.3**	**-2.2**
TMVZ	**Te Maari**	**3.15**	**26**	P	**Pn**	**09 45 54.3**	**+2.3**
NTVZ	**North Tongarir**	**3.15**	**25**	P	**Pn**	**09 45 55.3**	**+3.2**
KWHZ	**Kaweka Forest**	**3.16**	**37**	P	**Pb**	**09 45 59.7**	**+1.0**
TMZ	**Timaru**	**3.23**	**221**	P	**Pn**	**09 45 53.3**	**+0.2**
MCHZ	**McNeill Hill**	**3.27**	**41**	P	**Pg**	**09 46 03.8**	**-1.7**
RITZ	**Rihia Road**	**3.32**	**27**	P	**Pb**	**09 46 02.8**	**+1.3**
BKZ	**Black Stump Fm**	**3.40**	**36**	P	**Pb**	**09 46 03.0**	**+0.1**
HIZ	**Hauiti**	**3.52**	**12**	P	**Pb**	**09 46 01.2**	**-3.6**
HIZ	**Hauiti**	**3.52**	**12**	P	**Pn**	**09 46 00.2**	**+3.2**
NMHZ	**Naumai**	**3.60**	**38**	P	**Pg**	**09 46 09.2**	**-2.5**
TLZ	**Tolley Road**	**3.83**	**19**	P	**Pn**	**09 46 04.6**	**+3.3**
ODZ	**Otahua Downs**	**3.90**	**217**	P	**Pn**	**09 46 02.5**	**+0.3**
ODZ	**Otahua Downs**	**3.90**	**217**	P	**Pn**	**09 46 01.9**	**-0.3**

IDC 21 09:45:08.4±2.8**, 54°.29N**×**85°.97E, h0**^{km}**, mbtmp2.7**/2**, ML2.4**/2**, Error ellipse: s-maj=20.1km s-min=11.3km az=55.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.76**	**243**	I	I	09 49 39.3	
	baz=62,slow=326,SNR=8.3						
ZALV	**Zalesovo Beam**	**0.76**	**243**	Pg	Pg	09 45 22.2	-0.8
	0.4nm,0.3s,baz=63,slow=20,SNR=3.7						
ZALV				Lg	Lg	09 45 33.9	
	1.6nm,0.3s,baz=63,slow=29,SNR=11						
KURBB	**Kurchatov Arra**	**5.85**	**234**	Pn	Pn	09 46 37.2	+0.9
	baz=50,slow=14,SNR=4.9						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.87**	**199**	Pn	Pn	09 47 04.6	+0.6
	0.1nm,0.3s,baz=16,slow=12,SNR=2.7						
	0.2nm,0.3s						

WEL 21 09:46:02.0±0.8**, 42°S**±4°×**17°4E**±°**, h8**^{km}±8^{km}**, M2.4**/6**, ML2.6**/7**, MLv2.4**/6**, Error ellipse: s-maj=0.0km s-min=0.0km az=146.4, confirmed, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.06**	**233**	P	Pg	09 46 05.0	+1.1
BSWZ	**Blackbirch Sta**	**0.30**	**269**	P	Pg	09 46 08.4	+0.4
BSWZ				S	Sb	09 46 13.5	-1.3
TUWZ	**Tuamarina**	**0.38**	**318**	P	Pb	09 46 10.4	-0.5
TUWZ				S	Sb	09 46 16.5	-0.4
TCW	**Tory Channel**	**0.50**	**360**	P	Pb	09 46 12.5	-0.5
PLWZ	**Palliser**	**0.74**	**79**	P	Pb	09 46 17.2	0.0
MSWZ	**Moikau Station**	**0.79**	**68**	S	Sn	09 46 30.6	-0.7
NNZ	**Nelson**	**0.84**	**306**	P	Pg	09 46 18.3	+0.2
CAW	**Cannon Point**	**0.84**	**45**	P	Pb	09 46 18.8	-0.1

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*HEL **21** 10:00:17.5±0.2, 64°.74N×30°.74E, h0^{km}, ML1.6, Explosion*

*IDC **21** 10:00:20.5±2.7, 64°.73N×30°.17E, h0^{km}, mbtmp2.8/2, ML1.7/2, Error ellipse: s-maj=50.1km s-min=9.4km az=100.0*

ISC 21 10:00:16.2±1.1**, 64°.78N**±0°.03×**31°.09E**±0°.06**, h0**^{km}**, n25,** σ**1^{s}54**/38**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.75**	**222**	PG	**Pg**	**10 00 29.1**	**-1.4**
	baz=30						
RMF				MSG		10 00 37.5	
	comp=Z,7.2nm,0.2s						
RMF				SG	**Sg**	**10 00 38.1**	**-2.2**
KU6	**Riekki**	**1.35**	**339**	PG	**Pg**	**10 00 41.8**	**-0.3**
	baz=167						
KU6				MSG		10 00 57.9	
	comp=Z,5.3nm,0.2s						
KU6				SG	**Sg**	**10 00 59.2**	**-0.3**
MSF	**Maaselka**	**1.43**	**324**	PG	**Pn**	**10 00 42.3**	**-1.0**
	baz=152						
MSF				SB	**Sg**	**10 01 00.2**	**-1.7**
OLKF	**Oulanka, Finla**	**1.70**	**336**	PG	**Pb**	**10 00 47.8**	**-0.5**
OLKF				MSG		10 01 07.8	
	comp=Z,3.4nm,0.2s						
OLKF				SN	**Sb**	**10 01 10.2**	**-0.1**
JOF	**Joensuu**	**1.87**	**177**	PG	**Pb**	**10 00 50.4**	**-0.7**
	baz=351						
JOF				SG	**Sb**	**10 01 15.1**	**+0.1**
OUL	**Oulu**	**2.23**	**280**	PG	**Pn**	**10 00 54.7**	**+0.4**
OUL				SG	**Sn**	**10 01 20.9**	**-1.6**
OBF4	**Vikkela, Lumij**	**2.56**	**274**	PG	**Pn**	**10 00 59.6**	**+0.8**
	baz=87						
OBF4				MSG		10 01 28.8	
	comp=Z,5.6nm,0.2s						
OBF4				SG	**Sn**	**10 01 31.3**	**+0.7**
OUF	**Merijarvi**	**2.77**	**264**	PB	**Pn**	**10 01 01.6**	**-0.1**
	baz=76						
OUF				MSG		10 01 34.7	
	comp=Z,4.0nm,0.2s						
OUF				SG	**Sn**	**10 01 37.0**	**+1.2**
RNF	**Rovaniemi**	**2.79**	**314**	PB	**Pn**	**10 01 03.9**	**+1.8**
RNF				SB	**Sn**	**10 01 38.7**	**+2.4**
OBF0	**Syolatti, Pyha**	**2.96**	**268**	PB	**Pn**	**10 01 05.5**	**+1.1**
OBF0				MSG		10 01 40.2	
	comp=Z,4.2nm,0.2s						
OBF0				SG	**Sn**	**10 01 43.5**	**+2.9**
VRF	**Varrio**	**3.04**	**349**	PB	**Pn**	**10 01 07.9**	**+2.3**
VRF				MSG		10 01 47.1	
	comp=Z,0.9nm,0.2s						
TOF	**Tornio**	**3.11**	**298**	PN	**Pn**	**10 01 05.5**	**-1.0**
TOF				MSG		10 01 45.6	
	comp=Z,0.9nm,0.2s						
TOF				SB	**Sn**	**10 01 46.4**	**+2.1**
SGF	**Sodankyl**	**3.26**	**327**	SB	**Sb**	**10 01 53.4**	**-1.6**
OBF8	**Ulkokalla**	**3.33**	**266**	PN	**Pn**	**10 01 09.3**	**-0.1**
KALU	**Kalix**	**3.42**	**292**	SG	**Sb**	**10 01 59.3**	**-0.3**
KAF	**Kangasniemi**	**3.43**	**221**	PB	**Pn**	**10 01 13.8**	**+3.0**
KEF	**Keuruu**	**3.82**	**230**	PB	**Pn**	**10 01 18.3**	**+2.1**
PAJU	**Pajala**	**3.97**	**308**	SG	**Sb**	**10 02 16.1**	**+0.5**
FINES	**FINESS Array B**	**4.04**	**217**	Pn	**Pn**	**10 01 19.8**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=35,slow=12,SNR=1.9						
FINES				Pg	**Pb**	**10 01 27.6**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=27,slow=16,SNR=1.4						
FINES				Lg	Lg	10 02 18.2	
	comp=Z,0.2nm,0.3s,baz=27,slow=26,SNR=3.7						
	comp=Z,1.9nm,0.9s						
ERTU	**Ertsjaerv**	**4.09**	**300**	PN	**Pn**	**10 01 20.7**	**+0.8**
BURU	**Burvik**	**4.18**	**272**	PN	**Pn**	**10 01 20.5**	**-0.5**
BURU				SG	**Sb**	**10 02 23.0**	**+1.7**
UMAU	**Umeaa**	**4.62**	**264**	SG	**Sb**	**10 02 35.7**	**+1.7**
HEF	**Hetta**	**4.70**	**324**	SG	**Sb**	**10 02 39.0**	**+2.7**
ARCES	**ARCESS Array B**	**5.25**	**338**	Pn	**Pn**	**10 01 36.8**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=156,slow=13,SNR=24						
ARCES				Sn	**Sn**	**10 02 34.8**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=154,slow=23,SNR=1.6						
ARCES				Lg	Lg	10 02 55.5	
	comp=Z,0.1nm,0.3s,baz=160,slow=25,SNR=2.4						
	comp=Z,2.0nm,0.8s						
I43RU	**DUBNA INFRASON**	**8.62**	**157**	I	I	10 54 30.0	
	baz=343,slow=331,SNR=1.8						

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*DDA **21** 10:02:42.9±0.0, 39°.56N×26°.14E, h5^{km}±1^{km}, ML2.3*

*ATH **21** 10:02:43.0, 39°.54N×26°.08E, h10^{km}±2^{km}, ML2.2/6, Error ellipse: s-maj=3.0km s-min=1.2km az=239.0*

*ISK **21** 10:02:42.1, 39°.55N×26°.08E, h9^{km}, ML2.5/19*

*THE **21** 10:02:42.6, 39°.54N×26°.07E, h9^{km}±1^{km}, ML2.2/6, Error ellipse: s-maj=1.2km s-min=0.6km az=256.0*

ISC 21 10:02:42.5±0.8**, 39°.54N**±0°.02×**26°.09E**±0°.02**, h10**^{km}±5^{km}**, n50,** σ**0^{s}48**/82**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.05**	**139**	P	**Pg**	**10 02 44.6**	**0.0**
KOCA				S	**Sg**	**10 02 46.0**	**-0.1**
GPNR	**Gulpinar-Canak**	**0.09**	**160**	Pg	**Pg**	**10 02 44.9**	**-0.1**
GPNR				Sg	**Sg**	**10 02 46.7**	**-0.1**
BOZC	**Bozcaada**	**0.30**	**354**	Pg	**Pg**	**10 02 48.8**	**+0.2**
BOZC				Sg	**Sg**	**10 02 53.3**	**+0.7**
BOZC	**Bozcaada**	**0.30**	**354**	P	**Pg**	**10 02 48.8**	**+0.2**
BOZC				*i* AML	AML	10 02 53.0	
	comp=N,400nm,0.3s						
BOZC				*i* AML	AML	10 02 53.0	
	comp=E,580nm,0.2s						
BOZC				S	**Sg**	**10 02 53.2**	**+0.5**
PRK	**Paraskevi**	**0.33**	**155**	P	**Pg**	**10 02 49.3**	**+0.3**
PRK				S	**Sg**	**10 02 54.1**	**+0.7**
	1μm,0.2s						
PRK	**Paraskevi**	**0.33**	**155**	P	**Pg**	**10 02 49.3**	**+0.3**
PRK				S	**Sg**	**10 02 54.1**	**+0.7**
PRK				AML	AML	10 02 54.5	
	comp=N,2024μm,0.3s						
PRK				AML	AML	10 02 54.8	
	comp=E,2166μm,0.2s						
EZN	**Ezine**	**0.33**	**32**	P	**Pg**	**10 02 49.3**	**+0.1**
EZN				S	**Sg**	**10 02 54.3**	**+0.6**
EZN	**Ezine**	**0.33**	**32**	Pg	**Pg**	**10 02 49.3**	**+0.1**
EZN				Sg	**Sg**	**10 02 54.3**	**+0.6**
SIGR	**SIGRI**	**0.38**	**209**	P	**Pg**	**10 02 50.1**	**+0.1**
SIGR				S	**Sg**	**10 02 55.6**	**+0.6**
	comp=E,432nm,0.3s						
SIGR	**SIGRI**	**0.38**	**209**	Pg	**Pg**	**10 02 50.1**	**+0.1**
SIGR				Sg	**Sg**	**10 02 56.0**	**+1.0**
SIGR	**SIGRI**	**0.38**	**209**	P	**Pg**	**10 02 50.0**	**+0.1**
SIGR				S	**Sg**	**10 02 55.3**	**+0.3**
SIGR				AML	AML	10 02 57.5	
	comp=N,880μm,0.3s						
SIGR				AML	AML	10 02 57.8	
	comp=E,816μm,0.2s						
BAYC	**CANAKKALE_Bayr**	**0.40**	**60**	P	**Pg**	**10 02 50.4**	**0.0**
BAYC				S	**Sg**	**10 02 55.7**	**-0.1**
ECEA	**Canakkale, Ece**	**0.51**	**7**	P	**Pg**	**10 02 52.7**	**+0.3**
ECEA				S	**Sg**	**10 02 59.7**	**+0.7**
ECEA				*i* AML	AML	10 03 00.0	
	comp=E,205nm,0.5s						
ECEA				*i* AML	AML	10 03 00.0	
	comp=E,216nm,0.3s						
AYVA	**Ayvalik**	**0.52**	**117**	P	**Pg**	**10 02 52.7**	**+0.1**
AYVA				S	**Sb**	**10 03 02.9**	**+1.6**
COMU	**Canakkale**	**0.63**	**28**	Pg	**Pg**	**10 02 54.7**	**0.0**
COMU				Sg	**Sb**	**10 03 04.1**	**-0.4**
GADA	**Gvkgeada**	**0.66**	**347**	Pg	**Pg**	**10 02 55.1**	**-0.3**
GADA				Sg	**Sg**	**10 03 04.4**	**+0.3**
BUHA	**Balikesir, Bur**	**0.76**	**93**	P	**Pg**	**10 02 57.2**	**-0.1**

BUHA				S	**Sg**	**10 03 07.1**	**-0.1**
LIA	**Limnos Island**	**0.79**	**297**	P	**Pg**	**10 02 57.6**	**-0.1**
LIA				S	**Sg**	**10 03 08.5**	**+0.5**
	comp=E,262nm,0.2s						
LIA	**Limnos Island**	**0.79**	**297**	P	**Pg**	**10 02 57.8**	**+0.1**
LIA				AML	AML	10 03 10.8	
	comp=E,529µm,0.2s						
LIA				AML	AML	10 03 12.3	
	comp=N,518µm,0.2s						
DKL	**Dikili**	**0.79**	**127**	Pg	**Pg**	**10 02 57.8**	**+0.1**
CANM	**Can-anakkale**	**0.88**	**57**	Pg	**Pg**	**10 02 59.6**	**+0.2**
GELI	**Tayfur-Gelibol**	**0.90**	**19**	Pg	**Pg**	**10 02 59.6**	**-0.3**
ZEDA	**zmir-Bergama**	**0.96**	**127**	P	**Pb**	**10 03 01.3**	**+0.1**
ZEDA				*i* AML	AML	10 03 15.0	
	comp=N,100nm,0.3s						
ZEDA				S	**Sn**	**10 03 15.1**	**-0.6**
ZEDA				*i* AML	AML	10 03 16.0	
	comp=N,88nm,0.2s						
LPK	**Lapseki**	**0.97**	**32**	Pg	**Pg**	**10 03 00.9**	**-0.4**
SMTH	**Samothraki Isl**	**1.02**	**335**	P	**Pg**	**10 03 01.9**	**-0.3**
SMTH				S	**Sb**	**10 03 15.9**	**+0.1**
	comp=N,82nm,0.2s						
SMTH	**Samothraki Isl**	**1.02**	**335**	P	**Pg**	**10 03 02.0**	**-0.3**
SMTH				AML	AML	10 03 18.4	
	comp=E,158µm,0.1s						
SMTH				AML	AML	10 03 18.6	
	comp=N,166µm,0.3s						
PSRA	**Psara**	**1.08**	**203**	P	**Pb**	**10 03 03.4**	**+0.1**
CAVK	**Edirne/Enez-Ca**	**1.15**	**3**	P	**Pb**	**10 03 04.2**	**-0.3**
CAVK				S	**Sn**	**10 03 21.2**	**+0.7**
CAVK				*i* AML	AML	10 03 26.0	
	comp=N,51nm,0.2s						
CHOS	**Chios island**	**1.16**	**181**	P	**Pb**	**10 03 03.7**	**-0.9**
CHOS				S	**Sg**	**10 03 19.3**	**-0.4**
	comp=N,112nm,0.2s						
CHOS	**Chios island**	**1.16**	**181**	P	**Pb**	**10 03 03.8**	**-0.9**
CHOS				AML	AML	10 03 23.3	
	comp=E,261µm,0.3s						
CHOS				AML	AML	10 03 24.2	
	comp=N,191µm,0.2s						
ERIK	**Erikli-Kesan**	**1.17**	**16**	Pn	**Pb**	**10 03 04.2**	**-0.7**
ENEZ	**Enez**	**1.19**	**2**	P	**Pb**	**10 03 03.9**	**-1.3**
ENEZ				S	**Sn**	**10 03 22.0**	**+0.5**
ENEZ	**Enez**	**1.19**	**2**	Pn	**Pb**	**10 03 05.2**	**0.0**
BALY	**Balya**	**1.20**	**80**	P	**Pb**	**10 03 04.5**	**-0.8**
BALY				S	**Sb**	**10 03 20.4**	**-0.4**
BALY				*i* AML	AML	10 03 22.0	
	comp=N,50nm,0.3s						
URLA	**Izmir**	**1.24**	**161**	Pn	**Pn**	**10 03 05.1**	**-0.9**
KRBG	**Karabiga-Canak**	**1.26**	**47**	Pn	**Pn**	**10 03 06.1**	**0.0**
STEP	**BALIKESIR_Sava**	**1.27**	**97**	P	**Pn**	**10 03 05.2**	**-1.2**
STEP				S	**Sg**	**10 03 23.5**	**+0.1**
KNL	**Balıkesir**	**1.32**	**56**	P	**Pn**	**10 03 06.7**	**-0.3**
KNL				S	**Sg**	**10 03 25.5**	**+0.5**
KNL				*i* AML	AML	10 03 26.0	
	comp=N,69nm,0.8s						
KNL				*i* AML	AML	10 03 29.0	
	comp=N,61nm,0.4s						
GONE	**Gonen-Balikesi**	**1.33**	**67**	Pn	**Pn**	**10 03 07.2**	**+0.1**
ALN	**Alexandroupoli**	**1.35**	**358**	P	**Pn**	**10 03 07.0**	**-0.5**
ALN				S	**Sb**	**10 03 24.8**	**-0.5**
	comp=N,108nm,0.4s						
ALN	**Alexandroupoli**	**1.35**	**358**	Pn	**Pn**	**10 03 07.5**	**0.0**
ALN	**Alexandroupoli**	**1.35**	**358**	P	**Pn**	**10 03 07.3**	**-0.1**
ALN				AML	AML	10 03 27.0	
	comp=E,258µm,0.4s						
ALN				AML	AML	10 03 27.0	
	comp=N,173µm,0.4s						
KESN	**Edirne-Kesan**	**1.36**	**19**	P	**Pb**	**10 03 08.4**	**+0.2**
KESN				S	**Sb**	**10 03 26.1**	**+0.3**
KESN				*i* AML	AML	10 03 29.0	
	comp=N,97nm,0.3s						
KESN				*i* AML	AML	10 03 29.0	
	comp=N,64nm,0.2s						
BLCB	**Balcova**	**1.37**	**147**	P	**Pn**	**10 03 07.7**	**0.0**
BLCB				S	**Sn**	**10 03 26.4**	**+0.5**
BLCB	**Balcova**	**1.37**	**147**	Pn	**Pn**	**10 03 07.8**	**0.0**
BLCB				Sn	**Sg**	**10 03 26.8**	**+0.1**
BALB	**Balikesir**	**1.38**	**85**	Pn	**Pn**	**10 03 08.0**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.41**	**36**	Pn	**Pn**	**10 03 08.5**	**+0.1**
BKES	**Balkesir-Mer**	**1.43**	**82**	P	**Pn**	**10 03 09.0**	**+0.5**
BKES				S	**Sb**	**10 03 27.8**	**+0.3**
EDC	**Edincik**	**1.58**	**59**	Pn	**Pn**	**10 03 10.7**	**+0.1**
DURS	**Dursunbey**	**1.84**	**87**	P	**Pn**	**10 03 14.8**	**+0.5**
DURS				S	**Sn**	**10 03 37.5**	**-0.2**

IDC 21 10:13:22.5±4.4**,2°.64S×139°.51E,h0^{km},mb3.6**/2**,**
mbtmp3.7/3**,ML3.6**/1**,Error ellipse: s-maj=172.1km**
s-min=27.6km az=88.0,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.92**	**196**	P	Pn	10 17 32.4	-1.1
	0.2nm,0.3s,baz=17,slow=12,SNR=16						
WRA				S	Sn	10 20 45.1	-9.0
	0.6nm,0.9s,baz=16,slow=22,SNR=3.1						
	1.4nm,0.7s						
ASAR	**Alice Springs**	**21.59**	**194**	P	P	10 18 14.5	+0.3
	1.3nm,0.7s,baz=23,slow=8.4,SNR=18						
	1.3nm,0.7s						
MKAR	**Makanchi Array**	**70.22**	**322**	P	P	10 24 37.6	+0.1
	0.7nm,0.6s,baz=109,slow=7.8,SNR=11						
	0.7nm,0.6s						

SOME ***21*** *10:13:57.0,41°.77N×81°.98E,h15^{km}*
NNC ***21*** *10:13:59.0±1.8,41°.80N×81°.87E,h0^{km},mb3.5,mpv3.2,*
Error ellipse: s-maj=13.4km s-min=8.4km az=163.0
ISC 21 10:13:53.1±4.2**,42°.1N**±0°.2×**82°.7E**±0°.2**,h10^{km},n34,**
σ**1^s.32**/36**,3C-5D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**2.66**	**296**	Pg	**Pn**	**10 14 36.4**	**+0.3**
	9.0nm,0.3s						
SHLS				Lg	Lg	10 15 04.8	
	60nm,0.5s						
SHLS	**Shalkode**	**2.66**	**296**	*e*Pg	**Pn**	**10 14 36.4**	**+0.3**
	15nm,0.1s						
SHLS				*e*Lg	Lg	10 15 04.8	
	60nm,0.5s						
PDGK	**Podgornoye**	**2.71**	**299**	Pg	**Pb**	**10 14 40.9**	**-0.9**
	9.5nm,0.4s						
PDGK				Lg	Lg	10 15 13.0	
	15nm,0.4s						
PDGK	**Podgornoye**	**2.71**	**299**	⇓Pg	**Pg**	**10 14 44.7**	**-0.4**
	7.0nm,0.3s						
PDGK				⇑Lg	Lg	10 15 13.7	
	23nm,0.6s						
UZB	**Uzynbulak**	**2.95**	**293**	Pg	**Pb**	**10 14 45.5**	**-0.4**
	6.8nm,0.4s						
UZB				Lg	Lg	10 15 20.7	
	47nm,0.6s						
UZB	**Uzynbulak**	**2.95**	**293**	*e*Pg	**Pb**	**10 14 45.5**	**-0.4**
	6.8nm,0.1s						
UZB				*e*Lg	Lg	10 15 20.7	
	47nm,0.3s						
DJR	**Jarkent**	**3.14**	**318**	Pg	**Pg**	**10 14 52.0**	**-1.2**
	2.9nm,0.7s						
DJR				Lg	Lg	10 15 32.4	
	6.6nm,0.4s						
DJR	**Jarkent**	**3.14**	**318**	*e*Pg	**Pg**	**10 14 52.4**	**-0.8**
	2.7nm,0.1s						
DJR				*e*Lg	Lg	10 15 32.4	
	14nm,0.3s						
KPKS	**Kokpek**	**3.30**	**297**	Pg	**Pn**	**10 14 48.4**	**+3.5**
	24nm,0.4s						
KPKS				Lg	Lg	10 15 25.6	
	24nm,0.8s						
KPKS	**Kokpek**	**3.30**	**297**	*e*Pg	**Pb**	**10 14 51.5**	**-0.3**
	24nm,0.1s						
KPKS				*e*Lg	Lg	10 15 30.5	
	38nm,0.1s						
SATY	**Saty**	**3.35**	**289**	Pg	**Pb**	**10 14 51.7**	**-1.0**
	2.1nm,0.3s						
SATY				Lg	Lg	10 15 31.5	
	69nm,0.6s						
SATY	**Saty**	**3.35**	**289**	*e*Pg	**Pb**	**10 14 51.7**	**-1.0**
	2.0nm,0.1s						
SATY				*e*Lg	Lg	10 15 31.5	
	51nm,0.2s						
ZHN	**Zhinishke**	**3.37**	**291**	Pg	**Pb**	**10 14 52.3**	**-0.6**
	4.9nm,0.0s						
ZHN				Lg	Lg	10 15 32.3	
	45nm,0.5s						
ZHN	**Zhinishke**	**3.37**	**291**	*e*Pg	**Pb**	**10 14 52.3**	**-0.6**
	6.6nm,0.1s						
ZHN				*e*Lg	Lg	10 15 32.1	
	44nm,0.2s						
KURS	**Kuram**	**3.66**	**295**	Pg	**Pb**	**10 14 58.5**	**+0.7**
	3.2nm,0.7s						
KURS				Lg	Lg	10 15 42.6	
	6.3nm,0.5s						
KURS	**Kuram**	**3.66**	**295**	*e*Pg	**Pb**	**10 14 58.2**	**+0.4**
	3.6nm,0.3s						
KURS				*e*Lg	Lg	10 15 42.2	
	8.9nm,0.3s						
KOTS	**Kotyrbulak**	**4.31**	**288**	Pg	**Pb**	**10 15 06.1**	**-2.9**
	4.8nm,0.6s						
KOTS				Lg	Lg	10 15 55.6	
	19nm,0.8s						
KOTS	**Kotyrbulak**	**4.31**	**288**	*e*Pg	**Pb**	**10 15 06.2**	**-2.9**
	6.3nm,0.3s						
KOTS				*e*Lg	Lg	10 15 55.9	
	19nm,0.3s						
MDOK	**Medeo**	**4.34**	**287**	Pg	**Pb**	**10 15 08.0**	**-1.6**
	2.0nm,0.4s						
MDOK				Lg	Lg	10 15 58.8	
	4.1nm,0.4s						
MDOK	**Medeo**	**4.34**	**287**	*e*Pg	**Pb**	**10 15 07.9**	**-1.6**
	2.2nm,0.2s						
MDOK				*e*Lg	Lg	10 15 58.8	
	8.7nm,0.2s						
TNSS	**Tian-Shan**	**4.39**	**285**	Pg	**Pb**	**10 15 08.8**	**-1.7**
	1.8nm,0.3s						
TNSS				Lg	Lg	10 16 00.5	
	3.1nm,0.6s						
TNSS	**Tian-Shan**	**4.39**	**285**	*e*Pg	**Pb**	**10 15 08.8**	**-1.7**
	1.6nm,0.1s						
TNSS				*e*Lg	Lg	10 16 00.5	
	3.6nm,0.2s						
CHKK	**Chushkaly**	**4.59**	**295**	Pg	**Pb**	**10 15 14.3**	**+0.6**
	1.7nm,0.5s						
CHKK				Lg	Lg	10 16 09.7	
	7.4nm,0.5s						
CHKK	**Chushkaly**	**4.59**	**295**	*e*Pg	**Pb**	**10 15 14.3**	**+0.6**
	1.6nm,0.1s						
CHKK				*e*Lg	Lg	10 16 09.7	
	7.9nm,0.1s						
IZV	**Izvestkoviy**	**4.63**	**284**	Pg	**Pb**	**10 15 13.1**	**-1.4**
	1.0nm,0.7s						
IZV				Lg	Lg	10 16 07.6	
	7.6nm,1.1s						
IZV	**Izvestkoviy**	**4.63**	**284**	*e*Pg	**Pb**	**10 15 13.1**	**-1.4**
	1.0nm,0.1s						
IZV				*e*Lg	Lg	10 16 07.6	
	8.9nm,0.2s						
KTBS	**Karatobe**	**4.75**	**293**	Pg	**Pb**	**10 15 15.7**	**-0.7**
	1.7nm,0.5s						
KTBS				Lg	Lg	10 16 12.1	
	12nm,1.0s						
KTBS	**Karatobe**	**4.75**	**293**	*e*Pg	**Pb**	**10 15 15.8**	**-0.7**
	1.9nm,0.2s						
KTBS				*e*Lg	Lg	10 16 12.1	
	15nm,0.3s						
MK31	**Makanchi Array**	**4.76**	**356**	⇓Pn	**Pb**	**10 15 16.4**	**-0.1**
	0.3nm,0.2s,baz=179,slow=14						
MK31				⇑Sn	**Sb**	**10 16 13.7**	**-0.1**
	1.0nm,0.4s,baz=183,slow=24						
MK31				⇓Lg	Lg	10 16 35.1	
	4.0nm,0.6s,baz=182,slow=25						
MAKZ	**Makanchi**	**4.79**	**354**	⇑Pn	**Pb**	**10 15 15.8**	**-1.3**
	0.7nm,0.2s						
MAKZ				⇓Sn	**Sb**	**10 16 15.1**	**+0.3**
	1.1nm,0.3s						
MAKZ				⇓Lg	Lg	10 16 38.3	
	2.7nm,0.8s						
KUU	**Kurty**	**5.04**	**294**	Pg	**Pb**	**10 15 21.0**	**-0.4**
	1.4nm,0.6s						
KUU				Lg	Lg	10 16 22.2	
	4.1nm,0.9s						
KUU	**Kurty**	**5.04**	**294**	*e*Pg	**Pb**	**10 15 21.0**	**-0.4**
	1.4nm,0.2s						
KUU				*e*Lg	Lg	10 16 22.1	
	5.6nm,0.2s						
DGS	**Degeres**	**5.27**	**285**	Pg	**Pb**	**10 15 26.5**	**+1.1**
	1.8nm,0.8s						
DGS				Lg	Lg	10 16 30.6	
	7.1nm,0.7s						
DGS	**Degeres**	**5.27**	**285**	*e*Pg	**Pb**	**10 15 26.5**	**+1.1**
	1.9nm,0.2s						
DGS				*e*Lg	Lg	10 16 30.4	
	7.2nm,0.3s						

IDC 21 10:25:34.2±8.2**,11°.93S×166°.42E,h235^{km}**±76^{km}**,mb3.2**/4**,**
mbtmp3.8/5**,Error ellipse: s-maj=63.6km s-min=40.3km**
az=8.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.08**	**180**	P	Pn	10 27 53.7	-0.4
	2.5nm,0.3s,baz=308,slow=20,SNR=15						
DZM				S	S	10 29 47.3	-0.1
	6.4nm,1.0s,baz=246,slow=20,SNR=1.7						
CTA	**Charters Tower**	**20.99**	**245**	P	P	10 30 01.6	+1.7
	0.9nm,0.5s,baz=94,slow=13,SNR=1.7						
	0.9nm,0.5s						
WRA	**Warramunga Arr**	**31.81**	**251**	P	P	10 31 36.9	-0.3
	0.7nm,0.5s,baz=84,slow=8.7,SNR=11						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**33.00**	**245**	P	P	10 31 46.5	-1.0
	0.4nm,0.7s,baz=69,slow=9.8,SNR=6.2						
ASAR				PcP	PcP	10 34 26.9	+1.2
	0.2nm,0.6s,baz=66,slow=2.3,SNR=1.8						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**94.62**	**317**	P	P	10 38 27.6	-0.9
	0.6nm,0.7s,baz=93,slow=6.2,SNR=6.6						
	0.6nm,0.7s						

NEIC ***21*** *10:30:17.5±1.9,7°.11N±0°.06×73°.86W±0°.08,h86^{km}±5^{km},*
mb4.7/269,Error ellipse: s-maj=10.8km s-min=9.1km
az=101.0
IDC ***21*** *10:30:18.2±0.4,7°.07N×73°.84W,h107^{km}±3^{km},mb3.9/16,*
mbtmp4.4/20,MS3.1/9,Error ellipse: s-maj=13.2km
s-min=8.8km az=73.0
VAO ***21*** *10:30:19.8±0.3,7°.06N×73°.86W,h101^{km},mb4.5*
RSNC ***21*** *10:30:19.5±0.9,7°.15N×73°.92W,h100^{km}±4^{km},ML4.6,*
Mw4.6,Fault plane solution: NP1:ϕ$_s$23.00000°,
δ67.00000°,λ-102.00000°.
ISC 21 10:30:18.3±0.3**,7°.14N**±0°.03×**73°.87W**±0°.03**,h106^{km}**±3^{km}**,**
h106^{km}:pP-P,n619,σ**1^s.23**/648**,mb4.7**/148**,8C-5D,**
Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRRC	**Barranca, Sant**	**0.15**	**102**	⇓*i*P	**Pn**	**10 30 33.4**	**+0.3**
BRRC				*e*S	**Sn**	**10 30 44.0**	**-0.1**
BRRC				*i*		10 30 46.8	
	comp=Z,10µm,0.2s						
PTBC	**PUERTO BERRIO,**	**0.84**	**225**	⇓*i*P	**Pn**	**10 30 37.4**	**-0.2**
PTBC				*e*S	**Sn**	**10 30 51.0**	**-1.0**
PTBC				*i*		10 30 52.7	
	comp=Z,18µm,0.2s						
BARC	**Barichara**	**0.87**	**129**	⇓*i*P	**Pn**	**10 30 38.9**	**+0.8**
BARC				*e*S	**Sn**	**10 30 54.0**	**+1.1**
BARC				*i*		10 30 58.1	
	comp=Z,23µm,0.5s						
ZARC	**Zaragoza, Cauc**	**1.05**	**290**	⇑*i*P	**Pn**	**10 30 39.9**	**+0.3**
ZARC				*e*S	**Sn**	**10 30 55.5**	**-0.3**
ZARC				*i*		10 30 58.1	
	comp=Z,16µm,0.2s						
PAMC	**Pamplona, Colo**	**1.17**	**80**	⇓*i*P	**Pn**	**10 30 42.4**	**+0.9**
PAMC				*e*S	**Sn**	**10 30 60.0**	**+0.9**
PAMC				*i*		10 31 01.6	
	comp=Z,11µm,0.3s						
SPBC	**San Pablo de B**	**1.49**	**188**	⇓*i*P	**Pn**	**10 30 45.5**	**+0.6**
SPBC				*e*S	**Sn**	**10 31 05.2**	**+0.1**
SPBC				*i*		10 31 07.6	
	comp=Z,14µm,0.2s						
UREC	**San Jos de Ur**	**1.76**	**290**	⇑*i*P	**Pn**	**10 30 47.5**	**-0.7**
UREC				*e*S	**Sn**	**10 31 09.0**	**-1.8**
UREC				*i*		10 31 17.2	
	comp=Z,4µm,0.2s						
ROSC	**El Rosal**	**2.33**	**191**	P	**Pn**	**10 30 57.0**	**+1.2**
	comp=Z,1µm,0.3s,baz=346,slow=2.3,SNR=536						
ROSC				S	**Sn**	**10 31 28.6**	**+4.3**
	comp=Z,4µm,0.3s,baz=0.1,slow=23,SNR=37						
ROSC	**El Rosal**	**2.33**	**191**		**Pn**	**10 30 57.4**	**+1.6**
ROSC	**El Rosal**	**2.33**	**191**	⇑*i*P	**Pn**	**10 30 57.8**	**+2.0**
ROSC				*e*S	**Sn**	**10 31 27.4**	**+3.0**
DBBC	**Dabeiba**	**2.33**	**267**	⇑*i*P	**Pn**	**10 30 55.5**	**0.0**
DBBC				*e*S	**Sn**	**10 31 23.4**	**-0.6**
DBBC				*i*		10 31 35.4	
	comp=Z,1µm,0.4s						
LL1C	**La Loma 1 Cana**	**2.41**	**7**	*e*P	**Pn**	**10 30 58.5**	**+2.1**
LL1C				*e*S	**Sn**	**10 31 28.2**	**+2.6**
GUY2C	**Guyana, Caldas**	**2.42**	**218**	⇑*i*P	**Pn**	**10 30 57.8**	**+0.8**
GUY2C				*e*S	**Sn**	**10 31 20.9**	**-5.6**
GUY2C				IAML		10 31 37.9	
	comp=Z,2µm,0.6s						
CBOC	**Ciudad Bolivar**	**2.48**	**239**	⇑*i*P	**Pn**	**10 30 58.7**	**+1.2**
CBOC				*e*S	**Sn**	**10 31 26.9**	**-0.7**
CBOC				*i*		10 31 46.9	
	comp=Z,2µm,0.6s						
CHIC	**Chingaza**	**2.50**	**177**	*e*P	**Pn**	**10 30 59.1**	**+1.2**
CHIC				*e*S	**Sn**	**10 31 26.2**	**-2.1**
CHIC				*i*		10 31 41.9	
	comp=Z,1µm,0.5s						
LL5C	**La Loma 5 El P**	**2.60**	**3**	*e*P	**Pn**	**10 30 59.7**	**+0.8**
LL5C				*e*S	**Sn**	**10 31 28.9**	**-1.1**
NIZA	**Niza - Manizal**	**2.61**	**218**	*e*P	**Pn**	**10 31 02.7**	**+3.4**
NIZA				*e*S	**Sn**	**10 31 27.1**	**-3.8**
RECRC	**Villamaria, Ca**	**2.62**	**214**	*e*P	**Pn**	**10 31 01.9**	**+2.1**
RECRC				*e*S	**Sn**	**10 31 31.7**	**+0.3**
CMAN1	**Manizales, Cal**	**2.63**	**219**	*e*P	**Pn**	**10 31 02.9**	**+3.2**
CMAN1				*e*S	**Sn**	**10 31 35.0**	**+3.7**
ARGC	**Ariguani, Magd**	**2.73**	**352**	*e*P	**Pn**	**10 31 03.1**	**+2.5**
ARGC				*e*S	**Sn**	**10 31 36.1**	**+2.9**
ARGC				*i*		10 31 40.8	
	comp=Z,1µm,0.3s						
APAC	**Apartado, Choc**	**2.80**	**286**	⇑*i*P	**Pn**	**10 31 02.2**	**+0.7**
APAC				*e*S	**Sn**	**10 31 33.6**	**-1.1**
APAC				*i*		10 31 41.8	
	comp=Z,1µm,0.5s						
LCBC	**Los crdobas,**	**3.01**	**305**	*e*P	**Pn**	**10 31 04.3**	**-0.1**
LCBC				*e*S	**Sn**	**10 31 41.8**	**+1.9**
LCBC				*i*		10 31 50.5	
	comp=Z,1µm,0.4s						
SJCC	**San Jacinto, C**	**3.03**	**335**	⇑*i*P	**Pn**	**10 31 04.3**	**-0.4**
SJCC				*e*S	**Sn**	**10 31 38.3**	**-2.2**
SJCC				*i*		10 31 42.0	
	comp=Z,1µm,0.5s						
ANIL	**Santa Ana**	**3.04**	**210**	*e*P	**Pn**	**10 31 06.9**	**+1.8**
ANIL				*e*S	**Sn**	**10 31 36.7**	**-4.4**
ANIL				*i*		10 31 52.2	
	comp=Z,5µm,0.3s						
PTGC	**Puerto Gaitan,**	**3.39**	**149**	*e*P	**Pn**	**10 31 09.7**	**+0.2**
PTGC				*e*S	**Sn**	**10 31 49.5**	**+0.5**
PTGC				*i*		10 31 54.2	
	comp=Z,1µm,0.2s						
ORTC	**Ortega, Tolima**	**3.49**	**203**	*e*P	**Pn**	**10 31 11.7**	**+0.8**
ORTC				*e*S	**Sn**	**10 31 55.3**	**+3.9**
ORTC				*i*		10 32 01.2	
	comp=Z,2µm,0.6s						
PRAC	**Prado**	**3.55**	**197**	Pn	**Pn**	**10 31 08.8**	**-2.9**
PRAC	**Prado**	**3.55**	**197**	*e*P	**Pn**	**10 31 09.8**	**-1.9**
PRAC				*e*S	Sn	10 31 42.0	-11
PRAC				*i*		10 31 56.7	
	comp=Z,1µm,0.3s						
SDV	**Santo Domingo**	**3.64**	**61**	P	**Pn**	**10 31 14.2**	**+1.2**
	comp=Z,383nm,0.3s,baz=91,slow=5.1,SNR=1915						
SDV				S	**Sn**	**10 31 53.4**	**-1.8**
	comp=Z,994nm,0.4s,baz=234,slow=15,SNR=3.1						
SDV	**Santo Domingo**	**3.64**	**61**	*e*P	**Pn**	**10 31 13.9**	**+1.0**
CRJC	**Cerrejon, Guaj**	**3.98**	**14**	*e*P	**Pn**	**10 31 17.1**	**-0.3**
CRJC				*e*S	**Sn**	**10 32 02.8**	**-0.3**
CRJC				*i*		10 32 09.7	
	comp=Z,1µm,0.3s						
YOTC	**Yotoco, Valle**	**3.99**	**218**	*e*P	**Pn**	**10 31 17.6**	**0.0**
YOTC				*e*S	**Sn**	**10 32 03.6**	**+0.1**
SMRC	**Santa Marta, M**	**4.01**	**355**	*e*P	**Pn**	**10 31 18.7**	**+0.9**
SMRC				*e*S	**Sn**	**10 32 04.1**	**+0.1**
PIZC	**Pizarro, Choco**	**4.09**	**238**	*e*P	**Pn**	**10 31 20.9**	**+2.1**
PIZC				*e*S	**Sn**	**10 32 08.6**	**+2.8**
MALC	**Bahia Malaga**	**4.64**	**228**	*e*P	**Pn**	**10 31 27.8**	**+1.4**
MALC				*e*S	**Sn**	**10 32 23.0**	**+3.8**
BETC	**Betania**	**4.70**	**200**	*e*P	**Pn**	**10 31 28.4**	**+1.3**
BETC				*e*S	**Sn**	**10 32 22.9**	**+2.3**
GUVC	**San Jose del G**	**4.73**	**165**	*e*P	**Pn**	**10 31 27.4**	**-0.1**
GUVC				*e*S	**Sn**	**10 32 21.0**	**-0.2**
JAMC	**Jamundi, Valle**	**4.80**	**216**	*e*P	**Pn**	**10 31 28.7**	**+0.1**
JAMC				*e*S	**Sn**	**10 32 23.2**	**0.0**
URIC	**Uribia, Colomb**	**4.90**	**22**	Pn	**Pn**	**10 31 28.9**	**-0.8**
URIC	**Uribia, Colomb**	**4.90**	**22**	*e*P	**Pn**	**10 31 28.9**	**-0.8**
URIC				*e*S	**Sn**	**10 32 23.6**	**-1.7**
URIC				*i*		10 32 34.6	
	comp=Z,258nm,0.4s						
MACC	**Macarena, Meta**	**4.96**	**180**	*e*P	**Pn**	**10 31 30.3**	**-0.3**
MACC				*e*S	**Sn**	**10 32 24.1**	**-2.8**
MACC				*i*		10 32 30.9	
	comp=Z,479nm,0.7s						
GARC	**Garzon, Huila**	**5.18**	**198**	*e*P	**Pn**	**10 31 34.0**	**+0.2**
GARC				*e*S	**Sn**	**10 32 35.2**	**+2.7**
POPC	**Popayan, Colom**	**5.36**	**212**	*e*P	**Pn**	**10 31 35.7**	**-0.5**
FLOC	**Florencia**	**5.80**	**198**	*e*P	**Pn**	**10 31 42.1**	**+0.1**
FLOC				*e*S	**Sn**	**10 32 49.0**	**+1.8**
BAUV	**El Baul**	**6.04**	**72**	Pn	**Pn**	**10 31 44.0**	**-1.2**
BBAC	**Balboa, Cauca**	**6.10**	**214**	*e*P	**Pn**	**10 31 46.5**	**+0.2**
BBAC				*e*S	**Sn**	**10 32 55.1**	**+0.3**
BCIP	**Isla Barro Col**	**6.25**	**289**	Pn	**Pn**	**10 31 46.0**	**-2.0**
AUA1	**Aruba**	**6.55**	**35**	Pn	**Pn**	**10 31 52.2**	**+0.1**
GCUF	**Volcan Galeras**	**6.82**	**211**	*e*P	**Pn**	**10 31 57.1**	**+0.8**
GCUF				*e*S	**Sn**	**10 33 11.0**	**-1.7**
HATO	**Hato, Curacao**	**6.96**	**44**	Pn	**Pn**	**10 31 57.5**	**-0.3**
CMBC	**Cumbal**	**7.31**	**213**	*e*P	**Pn**	**10 32 05.7**	**+2.7**
TULM	**Tulcn-Chalpat**	**7.48**	**212**		**Pn**	**10 32 05.3**	**0.0**
BIRV	**Birongo**	**8.21**	**66**	Pn	**Pn**	**10 32 12.9**	**-1.8**
OTAV	**Otavalo**	**8.24**	**214**	Pn	**Pn**	**10 32 14.9**	**-0.7**
OTAV	**Otavalo**	**8.24**	**214**	*e*P	**Pn**	**10 32 14.9**	**-0.7**
BRU2	**Volcan**	**8.89**	**281**		**Pn**	**10 32 24.4**	**+0.2**
RGM0	**Gandoca**	**8.99**	**286**	Pn	**Pn**	**10 32 26.5**	**+1.2**
CDITO	**Canoas**	**9.04**	**280**		**Pn**	**10 32 25.6**	**-0.4**
SLOR	**San Lorenzo -**	**9.08**	**211**		**Pn**	**10 32 27.6**	**+0.6**
PCRV	**Puerto La Cruz**	**9.61**	**71**	P	**Pn**	**10 32 32.3**	**-1.5**
	comp=Z,73nm,0.5s,baz=279,slow=2.1,SNR=70						
PCRV				S	**Sn**	**10 34 15.7**	**-4.3**
	comp=Z,92nm,0.5s,baz=124,slow=23,SNR=7.0						
SRBA	**San Rafael, Bu**	**9.63**	**283**		**Pn**	**10 32 33.9**	**-0.2**
PRVC	**Isla de Provid**	**9.63**	**311**	Pn	**Pn**	**10 32 30.4**	**-3.6**
BATAN	**Batan**	**9.85**	**288**	Pn	**Pn**	**10 32 37.0**	**0.0**
SGCB	**S£o Gabriel d**	**9.92**	**136**	*e*P	**Pn**	**10 32 35.7**	**-2.3**
PEZE	**Perez Zeledon,**	**9.96**	**284**		**Pn**	**10 32 39.3**	**+0.6**
RIMA	**Rio Macho**	**10.23**	**285**		**Pn**	**10 32 42.2**	**-0.2**
HDC	**Heredia**	**10.53**	**286**	*e*P	**Pn**	**10 32 46.2**	**-0.1**
COVE	**Coope Vega, Sa**	**11.00**	**290**		**Pn**	**10 32 52.6**	**0.0**
GWJ	**Greenwich**	**11.22**	**346**	*i* P	**Pn**	**10 32 56.8**	**+1.1**
STH	**Stony Hill**	**11.24**	**345**	*i* P	**Pn**	**10 32 56.8**	**+0.9**
STH				*i* S	Sn	10 34 48.7	-11
MCJ	**Malvern**	**11.35**	**341**	*i* S	Sn	10 34 52.2	-10
JTS	**Las Juntas de**	**11.40**	**287**	P	**Pn**	**10 32 58.2**	**+0.3**
	comp=Z,7.3nm,0.4s,baz=79,slow=7.5,SNR=7.7						
JTS	**Las Juntas de**	**11.40**	**287**	Pn	**Pn**	**10 32 59.4**	**+1.5**
ESPN	**Las Esperanzas**	**11.45**	**297**	Pn	**Pn**	**10 32 57.5**	**-1.1**
MTDJ	**Mount Denham**	**11.59**	**342**	Pn	**Pn**	**10 33 01.3**	**+0.8**
TBTG	**Tabatinga, AM**	**11.92**	**161**	*e*P	**Pn**	**10 33 04.8**	**-0.2**
SDDR	**Presa de Saban**	**12.04**	**12**	Pn	**Pn**	**10 33 08.6**	**+2.1**
HZTE	**Horizontes, Gu**	**12.12**	**288**	Pn	**Pn**	**10 33 07.8**	**+0.2**
ACON	**Acoyapa**	**12.14**	**294**	Pn	**Pn**	**10 33 07.8**	**0.0**
CRPR	**Cabo Rojo, PR**	**12.65**	**31**	Pn	**Pn**	**10 33 12.8**	**-1.7**
MLPR	**Magueyes Islan**	**12.65**	**31**	Pn	**Pn**	**10 33 11.6**	**-2.9**
BOAB	**BOACO BROADBAN**	**12.77**	**295**	Pn	**Pn**	**10 33 16.5**	**+0.4**
OBIP	**Obispado Ponce**	**12.94**	**32**	Pn	**Pn**	**10 33 16.6**	**-1.8**
MCRA	**Macar, Loja**	**12.95**	**208**	Pn	**Pn**	**10 33 16.2**	**-2.3**
CELP	**Cerrillos**	**12.98**	**32**	Pn	**Pn**	**10 33 17.3**	**-1.6**
AGPR	**Aguadilla, PR**	**13.04**	**30**	Pn	**Pn**	**10 33 17.8**	**-1.8**
AOPR	**Arecibo Observ**	**13.12**	**31**	Pn	**Pn**	**10 33 18.5**	**-2.2**
MATN	**Matagalpa**	**13.19**	**297**	Pn	**Pn**	**10 33 20.4**	**-1.3**
SJG	**San Juan**	**13.25**	**34**	P	**Pn**	**10 33 18.9**	**-3.4**
	comp=Z,11nm,0.3s,baz=224,slow=11,SNR=11						
SJG				S	Sn	10 35 38.8	-9.3
	comp=Z,9.7nm,0.3s,baz=61,slow=19,SNR=1.3						
SJG				LR	LR	10 38 34.4	
	comp=Z,59nm,20.1s,baz=266,slow=37						
SJG	**San Juan**	**13.25**	**34**		**Pn**	**10 33 19.4**	**-2.9**
HUMP	**Col San Antoni**	**13.44**	**35**		**Pn**	**10 33 22.0**	**-2.8**
GCPR	**Guaynabo City**	**13.44**	**34**		**Pn**	**10 33 22.4**	**-2.5**
CBYP	**Canovanas**	**13.54**	**34**		**Pn**	**10 33 23.6**	**-2.6**
MTP	**Monte Pirata**	**13.57**	**36**	Pn	**Pn**	**10 33 24.2**	**-2.4**
CNGN	**Cerro Negro**	**13.72**	**294**	Pn	**Pn**	**10 33 27.3**	**-1.2**
CUPR	**Culebra, Puert**	**13.90**	**36**	Pn	**Pn**	**10 33 28.8**	**-1.9**
TEFE	**Tefe**	**14.03**	**139**	*e*P	**Pn**	**10 33 30.6**	**-1.9**

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BOAV  Boa Vista         14.10 109  Pn    Pn    10 33 30.8 -2.7
BIM   Bigot             14.54  59  Pn    Pn    10 33 37.6 -1.5
FDF   Fort de France    14.58  58  Pn    Pn    10 33 38.9 -0.8
MPOM  Morne Pois Mar    14.69  59  Pn    Pn    10 33 40.1 -0.8
SABA  Saba              14.69  44  Pn    Pn    10 33 40.5 -0.5
CZSB  Cruzeiro do Su    14.81 176        Pn    10 33 42.7 +0.2
CZSB  Cruzeiro do Su    14.81 176  eP    Pn    10 33 42.8 +0.2
TGUH  Tegucigalpa,Un    14.86 299  Pn    Pn    10 33 40.2 -3.0
ATAH  Atahualpa         14.88 198  LR    LR    10 41 03.6
      comp=Z,55nm,20.5s,baz=39,slow=44
ETMB  Extrema           18.49 156  P     P     10 34 25.0 -1.3
ETMB  Extrema           18.49 156  eP    P     10 34 25.0 -1.3
SAML  Samuel            19.20 146  P     P     10 34 32.6 -1.5
SAML                               IAmb  IAmb  10 34 55.9
      comp=Z,21nm,0.6s
NNA   Nana              19.23 189  LR    LR    10 43 13.8
      comp=Z,72nm,21.3s,baz=349,slow=40
CCIG  Comitan           20.05 299  P     P     10 34 39.8 -3.7
CCIG                               IAmb  IAmb  10 34 49.6
      comp=Z,20nm,0.7s
MDP   Montagnes des     21.20  94  LR    LR    10 42 46.5
      comp=Z,94nm,21.1s,baz=206,slow=35
ITTB  Itaituba          21.40 122  eP    P     10 34 59.2 +1.4
MALB  Monte Alegre      21.50 114  eP    P     10 35 00.9 +2.0
CMIG  Matias Romero     22.78 298  LR    LR    10 44 57.0
      comp=Z,27nm,18.4s,baz=130,slow=38
MCPB  Macapa, AP        22.99 108  eP    P     10 35 14.9 +0.6
NPGB  Novo Progresso    23.22 127  eP    P     10 35 15.2 -1.3
656A  Willston          23.57 341  P     P     10 35 21.7 +2.2
656A                               IAmb  IAmb  10 35 23.4
      comp=Z,57nm,1.1s
LPAZ  La Paz            23.96 166  P     P     10 35 22.4 -1.3
      comp=Z,1.8nm,0.4s,baz=352,slow=1.8,SNR=9.4
LPAZ                               pP    pP    10 35 46.8 +0.2
      comp=Z,13nm,0.6s,baz=325,slow=6.4,SNR=13
      comp=Z,1.8nm,0.4s
LPAZ  La Paz            23.96 166  P     P     10 35 24.4 +0.7
LPAZ                               IAmb  IAmb  10 35 48.6
      comp=Z,60nm,1.5s
LPAZ  La Paz            23.96 166  eP    P     10 35 22.7 -1.0
VILB  Vilhena           24.14 146  P     P     10 35 26.5 +1.8
VILB                               IAmb  IAmb  10 35 50.8
      comp=Z,18nm,0.8s
VILB  Vilhena           24.14 146  eP    P     10 35 25.3 +0.6
456A  Hilliard          24.68 343  P     P     10 35 31.6 +2.2
PDRB  Porto dos Gac     25.25 137  eP    P     10 35 36.3 +1.5
451A  Vernon            25.88 336  P     P     10 35 42.9 +2.6
SIV   San Ignacio       26.24 151  P     P     10 35 42.0 -1.8
      comp=Z,1.9nm,0.6s,baz=306,slow=10,SNR=6.6
SIV                                pP    pP    10 36 07.0 -0.6
      comp=Z,6.1nm,0.7s,baz=326,slow=11,SNR=8.8
SIV                                LR    LR    10 47 01.9
      comp=Z,93nm,19.9s,baz=63,slow=38
      comp=Z,1.9nm,0.6s
MNMC  Minye Minye       26.44 171  P     P     10 35 44.5 -1.3
MNMC                               IAmb  IAmb  10 36 08.6
      comp=Z,17nm,0.8s
PTLB  Pontes e Lacer    26.77 147  eP    P     10 35 49.8 +1.3
BRAL  Brewton           26.90 334  P     P     10 35 51.7 +2.2
      baz=150
250A  Grady             27.29 337  P     P     10 35 55.1 +2.1
250A                               IAmb  IAmb  10 35 55.9
      comp=Z,14nm,0.7s
152A  Waverly Hall      27.33 340  P     P     10 35 55.2 +1.9
PRPB  Parauapebas       27.40 118  eP    P     10 35 56.2 +2.0
PB08  IPOC Station P    27.50 170  P     P     10 35 56.7 +1.3
BIRD  Birdtown, Kers    28.04 348  P     P     10 36 01.2 +1.5
Z51A  Franklin          28.08 340  P     P     10 36 01.8 +1.7
Z51A                               IAmb  IAmb  10 36 03.0
      comp=Z,11nm,0.8s
LRAL  Lakeview Retre    28.51 336  P     P     10 36 05.5 +1.7
LRAL  Lakeview Retre    28.51 336  P     P     10 36 05.6 +1.8
      baz=152,SNR=6.3
PB02  IPOC Station P    28.55 172  P     P     10 36 05.9 +1.5
PB02                               IAmb  IAmb  10 36 37.3
      comp=Z,24nm,1.0s
KMSC  Kings Mountain    28.70 347  P     P     10 36 05.7 +0.2
344A  Westbrook Farm    28.87 329  P     P     10 36 06.7 -0.4
344A                               IAmb  IAmb  10 36 10.3
      comp=Z,26nm,0.8s
Y49A  Blount Mountai    29.01 338  P     P     10 36 10.4 +2.1
Z47A  Carrollton        29.09 335  P     P     10 36 10.8 +1.9
MOIG  Morelia           29.30 298  P     P     10 36 10.5 -0.8
W52A  Murphy            29.32 343  P     P     10 36 11.4 +0.4
W52A                               IAmb  IAmb  10 36 14.5
      comp=Z,15nm,1.1s
VBMS  Vicksburg         29.38 330  P     P     10 36 11.9 +0.3
VBMS  Vicksburg         29.38 330  P     P     10 36 13.4 +1.8
      baz=145
X48A  Hartselle         29.78 338  P     P     10 36 16.7 +1.7
X48A                               IAmb  IAmb  10 36 17.7
      comp=Z,12nm,0.9s
TKL   Tuckaleechee C    29.80 344  LR    LR    10 49 15.1
      comp=Z,19nm,19.5s,baz=136,slow=38
CPCT  Cooper Cave       29.83 342  P     P     10 36 17.5 +2.0
W50A  Signal Mountai    29.84 341  P     P     10 36 16.4 +0.7
T59A  Double "B" Far    29.89 354  P     P     10 36 17.3 +1.4
T59A                               IAmb  IAmb  10 36 17.9
      comp=Z,8.8nm,0.7s
LVC   Limon Verde       29.96 171  P     P     10 36 17.5 +0.4
      comp=Z,1.4nm,0.4s,baz=0.0,slow=11,SNR=2.1
LVC                                pP    pP    10 36 40.6 -0.2
      comp=Z,9.1nm,0.8s,baz=3.7,slow=6.9,SNR=6.8
      comp=Z,1.4nm,0.4s
V51A  Loudon            30.11 343  P     P     10 36 19.8 +1.9
V51A                               IAmb  IAmb  10 36 20.5
      comp=Z,10nm,0.7s
T57A  Hurt              30.12 351  P     P     10 36 19.3 +1.2
T57A                               IAmb  IAmb  10 36 20.1
      comp=Z,8.8nm,0.8s
Y45A  Yeager Farm, C    30.29 334  P     P     10 36 21.7 +2.1
SMTB  Santa Maria do    30.63 121  eP    P     10 36 25.1 +2.2
PLAL  Pickwick Lake     30.64 337  P     P     10 36 24.0 +1.3
PLAL                               IAmb  IAmb  10 36 25.1
      comp=Z,12nm,0.9s
OXF   Oxford            30.78 334  P     P     10 36 24.4 +0.5
OXF                                IAmb  IAmb  10 36 26.1
      comp=Z,16nm,1.0s
OXF   Oxford            30.78 334  P     P     10 36 25.4 +1.4
      baz=149
S57A  Dark Hollow, R    30.83 352  P     P     10 36 25.5 +1.2
S57A                               IAmb  IAmb  10 36 26.1
      comp=Z,8.2nm,0.7s
V48A  Smith Brothers    30.85 339  P     P     10 36 26.9 +2.4
V48A                               IAmb  IAmb  10 36 27.4
      comp=Z,18nm,0.8s
CLTN  Cedars of Leba    31.00 340  P     P     10 36 27.2 +1.5
W45A  Hickory Valley    31.24 335  P     P     10 36 29.1 +1.2
NATX  Nacogdoches       31.25 324  P     P     10 36 29.6 +1.5
NATX  Nacogdoches       31.25 324  P     P     10 36 29.3 +1.2
      baz=137
ARAG  Araguaiana, MT    31.50 136  eP    P     10 36 29.3 -1.2
WVT   Waverly           31.56 338  P     P     10 36 32.2 +1.5
WVT                                IAmb  IAmb  10 36 32.9
      comp=Z,18nm,0.9s
T47A  Sharon Grove      32.07 340  P     P     10 36 37.0 +1.8
T47A                               IAmb  IAmb  10 36 37.5
      comp=Z,10nm,0.8s
LNXT  Lenox             32.18 336  P     P     10 36 37.8 +1.6
X40A  Basin Creek Fa    32.35 330  P     P     10 36 37.8  0.0
435B  Jarrell           32.35 320  P     P     10 36 38.8 +1.0
      baz=132
R50A  Paris             32.42 345  IAmb  IAmb  10 36 41.3
      comp=Z,10nm,0.9s
WHAR  Wooly Hollow      32.73 331  P     P     10 36 41.9 +0.8
WHAR                               IAmb  IAmb  10 36 42.5
      comp=Z,13nm,0.9s
MIAR  Mount Ida         32.77 329  P     P     10 36 41.8 +0.4
MIAR  Mount Ida         32.77 329  P     P     10 36 42.1 +0.7
      baz=142
LCAR  Lake Charles      32.86 334  P     P     10 36 42.6 +0.5
LCAR                               IAmb  IAmb  10 36 43.9
      comp=Z,9.5nm,0.8s
WCI   Wyandotte Cave    32.93 342  P     P     10 36 43.9 +1.1
WCI                                IAmb  IAmb  10 36 45.0
      comp=Z,14nm,0.8s
WCI   Wyandotte Cave    32.93 342  P     P     10 36 44.1 +1.4
      baz=157
WHTX  Lake Whitney,     33.09 321  P     P     10 36 44.8 +0.6
      baz=133
FCAR  Ozark Folk Cen    33.15 332  IAmb  IAmb  10 36 45.9
      comp=Z,20nm,1.2s
P52A  Corning           33.20 348  P     P     10 36 46.5 +1.5
P52A  Corning           33.20 348  P     P     10 36 46.6 +1.5
      baz=165
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P51A  Williamsport      33.25 347  P     P     10 36 45.3 -0.2
P51A                               IAmb  IAmb  10 36 48.1
      comp=Z,10nm,0.8s
CGM3  Cape Girardeau    33.28 337  P     P     10 36 46.4 +0.6
SSPA  Standing Stone    33.55 354  P     P     10 36 49.9 +1.9
      baz=173
O53A  New Philadelph    33.62 350  P     P     10 36 50.2 +1.5
      baz=167
JCT   Junction City     33.62 317  P     P     10 36 49.3 +0.4
      baz=128
X37A  Clayton           33.75 327  IAmb  IAmb  10 36 51.4
      comp=Z,7.4nm,0.9s
ACSO  Alum Creek Sta    33.95 347  IAmb  IAmb  10 36 54.2
      comp=Z,10.0nm,0.8s
ACSO  Alum Creek Sta    33.95 347  P     P     10 36 53.3 +1.8
      baz=164
BDFB  Brasilia          34.18 132  eP    P     10 36 55.5 +1.6
KSPA  Keystone Colle    34.32 357  P     P     10 36 56.2 +1.6
KSPA                               IAmb  IAmb  10 36 57.2
      comp=Z,13nm,0.8s
HHAR  Hobbs             34.33 331  P     P     10 36 55.0 +0.1
HHAR                               IAmb  IAmb  10 36 55.8
      comp=Z,9.9nm,0.9s
Q44A  Meyer Farm, Va    34.45 339  IAmb  IAmb  10 36 57.5
      comp=Z,18nm,1.1s
O48B  Farmland          34.49 345  P     P     10 36 57.6 +1.4
      baz=160
CCM   Cathedral Cave    34.57 335  P     P     10 36 57.6 +0.7
CCM   Cathedral Cave    34.57 335  P     P     10 36 57.9 +0.9
      baz=149
U38A  Gravette          34.67 330        P     10 36 57.9  0.0
U38A                               IAmb  IAmb  10 36 58.5
      comp=Z,11nm,0.8s
U38A                                     PcP   10 39 30.2 +0.4
M53A  WI Miller and     34.69 351  P     P     10 36 59.6 +1.7
      baz=168
SDBA  SAO DESIDERIO     34.73 124  eP    P     10 36 59.9 +1.3
RLO   Rose Lookout      34.77 329  P     P     10 36 59.1 +0.4
RLO                                IAmb  IAmb  10 36 59.5
      comp=Z,13nm,0.7s
ABTX  Abilene, Hawle    34.88 320  P     P     10 37 00.6 +0.8
ABTX                               IAmb  IAmb  10 37 01.0
      comp=Z,8.9nm,0.7s
ABTX  Abilene, Hawle    34.88 320  P     P     10 37 00.6 +0.8
      baz=131
WTFS  Witchita Falls    34.92 323  P     P     10 37 00.3 +0.3
WTFS                               IAmb  IAmb  10 37 01.3
      comp=Z,10nm,0.9s
BINY  Binghamton        34.97 357  P     P     10 37 01.8 +1.5
      baz=176
TUL1  Leonard           34.98 328        P     10 37 00.8 +0.3
TUL1                               IAmb  IAmb  10 37 01.3
      comp=Z,9.8nm,0.6s
TUL1  Leonard           34.98 328  P     P     10 37 00.5 +0.1
      baz=140
M50A  Fremont           35.09 348  P     P     10 37 02.4 +1.1
SFIN  Lafayette         35.15 342  P     P     10 37 02.6 +0.8
SFIN  Lafayette         35.15 342  P     P     10 37 02.9 +1.0
      baz=157,SNR=6.2
S39A  Bolivar           35.17 333  P     P     10 37 02.1  0.0
S39A                               IAmb  IAmb  10 37 03.8
      comp=Z,8.3nm,0.8s
S39A                                     PcP   10 39 31.7 +0.5
R40A  Maddies Statio    35.20 334  P     P     10 37 02.4  0.0
R40A                               IAmb  IAmb  10 37 03.2
      comp=Z,10.0nm,0.7s
N47A  Urbana            35.22 344  P     P     10 37 02.6 +0.2
N47A                               IAmb  IAmb  10 37 04.4
      comp=Z,19nm,1.1s
ERPA  Erie              35.26 352  P     P     10 37 04.5 +1.7
      baz=170
DEOK  Depew             35.30 327        P     10 37 03.7 +0.4
QUOK  Quay              35.66 327        P     10 37 06.2 -0.1
OK033 Mehan             35.69 327  P     P     10 37 07.0 +0.5
OK033                              IAmb  IAmb  10 37 07.5
      comp=Z,15nm,1.0s
TXAR  Lajitas Array     35.70 312  P     P     10 37 07.2 +0.4
      comp=Z,2.0nm,0.6s,baz=121,slow=9.2,SNR=48
TXAR                               pP    pP    10 37 30.2 -0.8
      comp=Z,2.3nm,0.8s,baz=119,slow=7.8,SNR=6.3
TXAR                               PcP   PcP   10 39 33.6 +0.6
      comp=Z,1.9nm,0.6s,baz=132,slow=6.2,SNR=12
      comp=Z,2.0nm,0.6s
TXAR  Lajitas Array     35.70 312  P     P     10 37 07.6 +0.7
TX31  Lajitas Ar. Si    35.70 312  P     P     10 37 07.4 +0.5
TX31                                     PcP   10 39 34.0 +1.0
TX32  Lajitas Array     35.70 312  P     P     10 37 07.4 +0.5
TX32                               IAmb  IAmb  10 37 08.4
      comp=Z,9.2nm,1.3s
TX32                                     PcP   10 39 34.5 +1.5
WMOK  Wichita Mounta    35.78 324  P     P     10 37 07.5 +0.1
WMOK                               IAmb  IAmb  10 37 08.0
      comp=Z,9.1nm,1.1s
WMOK  Wichita Mounta    35.78 324  P     P     10 37 07.2 -0.2
      baz=134,SNR=8.2
OK048 Pawnee Station    35.97 327        P     10 37 09.2 +0.3
OK051 E0350 and S346    35.98 328  P     P     10 37 09.4 +0.3
HDIL  Hopedale          36.02 340  P     P     10 37 09.4 +0.1
      baz=153
HPIG                    36.05 307  P     P     10 37 10.7 +0.7
T35A  Sooner Cattle     36.12 328  P     P     10 37 10.3  0.0
T35A                               IAmb  IAmb  10 37 11.1
      comp=Z,13nm,0.8s
J55A  Hilton            36.15 355  P     P     10 37 11.3 +1.0
J55A                               IAmb  IAmb  10 37 12.5
      comp=Z,11nm,0.7s
P40A  Paris             36.16 336  P     P     10 37 11.0 +0.5
J57A  Williamstown      36.17 357  P     P     10 37 11.1 +0.6
BLOK  Blackwell         36.37 328        P     10 37 12.8 +0.5
CPUP  Villa Florida     36.94 155  LR    LR    10 54 02.0
      comp=Z,80nm,21.0s,baz=56,slow=39
L44A  Lake County Fo    37.05 343  P     P     10 37 18.8 +0.8
      baz=156
NOKA  Waynoka           37.21 326  P     P     10 37 20.1 +0.5
LONY  Lake Ozonia       37.34 359  P     P     10 37 21.7 +1.2
      baz=179
AMTX  Amarillo          37.64 321  P     P     10 37 23.7 +0.4
AMTX  Amarillo          37.64 321  P     P     10 37 23.9 +0.6
      baz=131
K43A  Burlington        37.65 342  P     P     10 37 23.2 +0.1
N38A  Joes South For    37.71 336  P     P     10 37 24.3 +0.7
MSTX  Muleshoe          37.76 319  P     P     10 37 24.6 +0.3
MSTX                               IAmb  IAmb  10 37 25.3
      comp=Z,13nm,1.2s
MSTX  Muleshoe          37.76 319  P     P     10 37 24.8 +0.5
      baz=128
KSU1  Kansas State U    37.85 331  P     P     10 37 24.4 -0.5
      baz=141,SNR=6.6
L40A  Anamosa           38.03 339  IAmb  IAmb  10 37 26.9
      comp=Z,9.3nm,0.8s
MNTX  Cornudas Mount    38.22 314  P     P     10 37 28.5 +0.4
      baz=123,SNR=15
JFWS  Jewell Farm       38.45 341  P     P     10 37 30.0 +0.1
      baz=153,SNR=6.4
SCIA  State Center      38.64 337  P     P     10 37 32.0 +0.5
      baz=148
I42A  Draeger Farm,     38.91 343  IAmb  IAmb  10 37 34.9
      comp=Z,10nm,0.8s
CBKS  Cedar Bluff       39.23 327  P     P     10 37 36.5  0.0
      baz=137
121A  Cookes Peak, D    40.39 313  IAmb  IAmb  10 38 13.1
      comp=Z,14nm,1.2s
121A  Cookes Peak, D    40.39 313  P     P     10 37 48.0 +1.6
      baz=121,SNR=8.2
ANMO  Albuquerque       40.78 317  P     P     10 37 50.8 +1.2
ANMO  Albuquerque       40.78 317  P     P     10 37 50.8 +1.2
      baz=125
T25A  Trinidad          40.78 322  P     P     10 37 50.8 +1.2
T25A                               IAmb  IAmb  10 37 52.3
      comp=Z,16nm,1.4s
T25A  Trinidad          40.78 322  P     P     10 37 51.3 +1.7
      baz=130,SNR=5.1
319A  Douglas           40.91 311  IAmb  IAmb  10 37 53.0
      comp=Z,9.1nm,1.0s
KSCO  Kaye Shedlock’    40.96 325  P     P     10 37 52.0 +1.1
KSCO                               IAmb  IAmb  10 37 52.5
      comp=Z,8.6nm,0.6s
KSCO  Kaye Shedlock’    40.96 325  P     P     10 37 51.5 +0.6
      baz=133
GUA01 Guaratinga, BA    41.12 125  eP    P     10 37 52.1 -0.2
SJMB  Sao Joao De Ma    41.21 129  eP    P     10 37 54.5 +1.5
DUN6  Lazy B Ranch      41.35 312  P     P     10 37 56.1 +2.0
DUN6                               IAmb  IAmb  10 37 56.7
      comp=Z,14nm,0.7s
SPMN  Marine on St.     41.35 340  P     P     10 37 55.2 +1.4
      baz=151
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ECSD  EROS Data Cent    41.55 335  P     P     10 37 55.1 -0.4
ECSD                               IAmb  IAmb  10 37 55.8
      comp=Z,8.8nm,0.7s
ECSD  EROS Data Cent    41.55 335  P     P     10 37 55.0 -0.5
      baz=145,SNR=11
K31A  O'Neill           41.61 332  P     P     10 37 56.1 +0.1
K31A                               IAmb  IAmb  10 37 57.0
      comp=Z,17nm,0.8s
SDCO  Great Sand Dun    41.84 321  P     P     10 37 59.8 +1.4
SDCO  Great Sand Dun    41.84 321  P     P     10 37 59.7 +1.4
      baz=129,SNR=15
F36A  Milaca            42.16 339  IAmb  IAmb  10 38 02.8
      comp=Z,8.8nm,0.8s
TUC   Tucson            42.48 311  P     P     10 38 03.6 +0.3
TUC   Tucson            42.48 311  P     P     10 38 04.3 +1.0
      baz=118
S22A  4UR Ranch, Cre    42.67 320  P     P     10 38 06.5 +1.4
      baz=127
W18A  Petrified Fore    43.12 315  IAmb  IAmb  10 38 11.1
      comp=Z,12nm,0.8s
W18A  Petrified Fore    43.12 315  P     P     10 38 09.9 +1.4
      baz=122
SUSD  Miller            43.12 334  P     P     10 38 07.9 -0.3
      baz=142,SNR=5.8
F33A  5 Mile Ranch,     43.15 337  IAmb  IAmb  10 38 09.2
      comp=Z,13nm,0.8s
ISCO  Idaho Springs     43.21 324  P     P     10 38 10.4 +1.0
ISCO                               IAmb  IAmb  10 38 12.3
      comp=Z,14nm,1.4s
ISCO  Idaho Springs     43.21 324  P     P     10 38 10.7 +1.3
      baz=130,SNR=12
EYMN  Ely               43.35 343  P     P     10 38 10.7 +0.8
      baz=154
MVCO  Mesa Verde        43.43 319  P     P     10 38 12.2 +1.1
MVCO  Mesa Verde        43.43 319  P     P     10 38 11.8 +0.7
      baz=125
SMCO  Snowmass          43.63 322  P     P     10 38 14.0 +1.1
214A  Organ Pipe Nat    43.86 310  P     P     10 38 15.5 +1.2
      baz=116
PV15  Paradox Valley    44.07 320  IAmb  IAmb  10 38 18.8
      comp=Z,15nm,1.0s
PHWY  Pilot Hill        44.11 325  P     P     10 38 17.4 +0.9
N23A  Red Feather La    44.12 325  P     P     10 38 17.5 +0.9
N23A                               IAmb  IAmb  10 38 20.1
      comp=Z,16nm,1.1s
N23A  Red Feather La    44.12 325  P     P     10 38 17.7 +1.1
      baz=131,SNR=8.1
PV13  Radium Mtn., P    44.18 320  P     P     10 38 18.0 +0.9
PV07  Paradox Valley    44.23 320  P     P     10 38 19.0 +1.5
WUAZ  Wupatki           44.47 315  IAmb  IAmb  10 38 22.6
      comp=Z,11nm,0.9s
WUAZ  Wupatki           44.47 315  P     P     10 38 20.6 +1.3
      baz=120,SNR=6.2
Y14A  Wickenburg        44.89 312  P     P     10 38 23.7 +1.2
AGMN  Agassiz Nation    45.07 339  P     P     10 38 23.7 +0.1
AGMN                               IAmb  IAmb  10 38 24.8
      comp=Z,14nm,0.7s
AGMN  Agassiz Nation    45.07 339  P     P     10 38 23.9 +0.2
      baz=148,SNR=7.6
RSSD  Black Hills       45.29 329  P     P     10 38 26.1 +0.3
      baz=136
RWWY  Rawlins           45.36 325  P     P     10 38 27.6 +1.2
RWWY                               IAmb  IAmb  10 38 28.6
      comp=Z,8.8nm,1.1s
E28A  Huff              45.55 334  P     P     10 38 26.6 -0.9
U15A  North Rim         45.58 315  P     P     10 38 29.6 +1.3
U15A                               IAmb  IAmb  10 38 30.6
      comp=Z,7.2nm,0.9s
K22A  Casper            45.60 326  P     P     10 38 28.6 +0.5
      baz=132
GLA   Glamis            45.86 310  P     P     10 38 29.1 -1.1
      baz=115
MDND  Maddock           46.10 336  P     P     10 38 31.7 -0.2
      baz=143,SNR=6.6
P17A  Butcher Ranch,    46.16 320  IAmb  IAmb  10 38 34.7
      comp=Z,6.7nm,0.8s
KNB   Kanab             46.24 316  P     P     10 38 35.1 +1.8
KNB                                IAmb  IAmb  10 38 35.8
      comp=Z,10nm,1.0s
TMUT  Trail Mountain    46.37 319  P     P     10 38 35.6 +1.2
LCMT  Little Creek M    46.53 316  IAmb  IAmb  10 38 38.3
      comp=Z,6.8nm,0.8s
SWSC  Sam W. Stewart    46.56 309  P     P     10 38 36.5 +0.8
      baz=114
IRM   Iron Mountain     46.58 311  P     P     10 38 36.8 +1.0
      baz=116
BC3   Big Chuckawall    46.59 310  P     P     10 38 37.0 +1.0
      baz=115
SZCU  Shurtz Canyon     46.71 316  P     P     10 38 37.1 +0.1
ULM   Lac du Bonnet     46.74 341  P     P     10 38 36.4 -0.3
      comp=Z,16nm,0.9s,baz=156,slow=7.6,SNR=17
      comp=Z,16nm,0.9s
ULM   Lac du Bonnet     46.74 341  P     P     10 38 36.6 -0.2
BSUT  Blindstream Ca    46.78 321  P     P     10 38 38.8 +1.0
BSUT                               IAmb  IAmb  10 38 39.8
      comp=Z,14nm,1.4s
TCRU  Three Creeks R    46.81 318  P     P     10 38 38.5 +0.7
TCRU                               IAmb  IAmb  10 38 40.0
      comp=Z,11nm,0.9s
CCUT  Cedar City        46.88 316  P     P     10 38 39.6 +1.2
MONP2 Monument Peak     47.02 309  P     P     10 38 40.3 +0.8
      baz=114
MPU   Maple Canyon      47.04 320  P     P     10 38 40.3 +0.7
MPU                                IAmb  IAmb  10 38 41.4
      comp=Z,9.9nm,1.1s
V12A  Nelson            47.06 313  IAmb  IAmb  10 38 41.5
      comp=Z,7.5nm,0.9s
BELC  Belle Mtn. Jos    47.15 311  P     P     10 38 41.4 +1.0
      baz=115
GMRC  Granite Mounta    47.23 312  P     P     10 38 41.7 +0.7
      baz=116
TPFO  Pinon Flats       47.33 310  P     P     10 38 42.6 +0.7
      baz=114
PFO   Pinyon Flats O    47.34 310  P     P     10 38 42.6 +0.7
      baz=114
BW06  Boulder Array     47.39 324  P     P     10 38 42.7 +0.4
BW06  Boulder Array     47.39 324  P     P     10 38 42.7 +0.4
      baz=128,SNR=9.9
PD31  Pinedale Array    47.39 324  P     P     10 38 42.8 +0.6
PDAR  Pinedale Array    47.39 324  P     P     10 38 42.1 -0.1
      comp=Z,2.3nm,0.6s,baz=132,slow=8.8,SNR=22
PDAR                               pP    pP    10 39 06.8 -0.5
      comp=Z,0.8nm,0.6s,baz=129,slow=7.1,SNR=2.1
PDAR                               PcP   PcP   10 40 10.7 -0.7
      comp=Z,0.9nm,0.5s,baz=126,slow=5.7,SNR=6.4
      comp=Z,2.3nm,0.6s
PDAR  Pinedale Array    47.39 324  P     P     10 38 42.4 +0.1
TCUT  Toone Canyon      47.52 321  P     P     10 38 44.4 +1.1
TCUT                               IAmb  IAmb  10 38 44.7
      comp=Z,11nm,0.6s
109C  Camp Elliot, M    47.55 309  P     P     10 38 43.8 +0.4
SHPR  Sheep Range       47.64 314  P     P     10 38 44.7 +0.5
TUQ   Turquoise Moun    47.71 312  P     P     10 38 45.9 +1.2
      baz=116
PLCA  Paso Flores       47.73 177  P     P     10 38 42.9 -1.7
      comp=Z,3.2nm,0.8s,baz=350,slow=8.7,SNR=13
PLCA                               pP    pP    10 39 08.1 -1.6
      comp=Z,2.1nm,0.5s,baz=357,slow=8.5,SNR=6.8
      comp=Z,3.2nm,0.8s
HEC   Hector,Ludlow     47.75 311  P     P     10 38 46.0 +1.0
      baz=115
DUG   Dugway, Tooele    47.89 320  P     P     10 38 47.1 +1.0
      baz=123,SNR=6.6
SCHQ  Schefferville     47.89   5  P     P     10 38 46.1 +0.5
      comp=Z,7.0nm,0.6s,baz=192,slow=7.0,SNR=22
      comp=Z,7.0nm,0.6s
SCHQ  Schefferville     47.89   5  P     P     10 38 46.8 +1.2
SCHQ                               IAmb  IAmb  10 38 46.9
      comp=Z,22nm,1.4s
HWUT  Hardware Ranch    47.90 322  P     P     10 38 46.3 +0.1
MURC  Murrieta          47.90 309  P     P     10 38 47.2 +1.1
      baz=113
BBRC  Big Bear Solar    47.95 310  P     P     10 38 47.8 +1.0
      baz=114
SHOC  Shoshone, Teco    48.17 313  P     P     10 38 49.2 +1.1
      baz=116
GSC   Goldstone, Bar    48.30 312  IAmb  IAmb  10 38 51.1
      comp=Z,6.1nm,0.8s
GSC   Goldstone, Bar    48.30 312  P     P     10 38 50.0 +0.8
      baz=115
BGU   Big Grassy Mou    48.43 320  IAmb  IAmb  10 38 51.8
      comp=Z,10nm,1.1s
BFSC  Mount Baldy Ra    48.50 310  P     P     10 38 51.1 +0.2
      baz=114
REDW  Red Top Meadow    48.50 324  P     P     10 38 51.5 +0.7
REDW                               IAmb  IAmb  10 38 52.5
      comp=Z,12nm,0.9s
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SNOW  Snow King Moun   48.51 324    P     P      10 38 51.5 +0.6
SNOW                                IAmb  IAmb   10 38 53.3
      comp=Z,8.7nm,0.8s
DGMT  Dagmar           48.53 333    P     P      10 38 51.3 +0.5
DGMT  Dagmar           48.53 333    P     P      10 38 51.6 +0.9
      baz=138
TPNV  Topopah Spring   48.62 314    P     P      10 38 52.9 +1.2
      baz=117
Q12A  Willow Creek R   48.62 317    IAmb  IAmb   10 38 54.2
      comp=Z,7.9nm,1.0s
TPAW  Teton Pass       48.64 324    IAmb  IAmb   10 38 52.5
      comp=Z,6.4nm,0.9s
MOOW  Moose Ponds      48.68 325    P     P      10 38 52.6 +0.5
RLMT  Red Lodge        48.71 327    P     P      10 38 53.0 +0.6
      baz=130,SNR=5.6
HVU   Hansel Valley    48.74 321    P     P      10 38 53.2 +0.6
R11B  Troy Canyon, C   48.80 316    P     P      10 38 54.1 +1.0
      baz=119
IMW   Indian Meadow    48.88 325    IAmb  IAmb   10 38 55.2
      comp=Z,5.5nm,0.7s
H17A  Grant Village    48.98 325    P     P      10 38 55.3 +0.8
      baz=128
EDW2  Edwards Air Fo   49.01 311    P     P      10 38 55.5 +0.8
      baz=114
MPMC  Manual Prospec   49.12 312    P     P      10 38 56.2 +0.5
      baz=115
CCAC  Calif City Air   49.14 311    P     P      10 38 55.5  -0.2
GCMT  Greycliff        49.36 327    P     P      10 38 58.0 +0.8
YMR   Madison River    49.36 325    P     P      10 38 58.8 +1.4
YMR                                 IAmb  IAmb   10 38 59.5
      comp=Z,4.3nm,0.7s
DSP   Deep Springs     50.04 314    IAmb  IAmb   10 39 04.6
      comp=Z,5.6nm,0.9s
VES   Vestal, Richgr   50.22 311    P     P      10 39 04.6 +0.9
      baz=114
BOZ   Bozeman (W)      50.31 326    P     P      10 39 05.0 +0.6
BOZ                                 IAmb  IAmb   10 39 05.7
      comp=Z,5.0nm,0.6s
BOZ   Bozeman (W)      50.31 326    P     P      10 39 05.3 +0.9
      baz=128,SNR=11
MCMT  McKenzie Canyo   50.53 325    P     P      10 39 07.0 +0.7
DLMT  Dillon           50.70 325    P     P      10 39 08.1 +0.7
DLMT                                IAmb  IAmb   10 39 09.5
      comp=Z,7.2nm,1.1s
HLID  Hailey           50.73 322    P     P      10 39 08.6 +0.9
      baz=124,SNR=7.1
NVAR  Mina Array Bea   50.74 315    P     P      10 39 08.4 +0.6
      comp=Z,1.9nm,0.6s,baz=123,slow=7.0,SNR=17
NVAR                                pP    pP     10 39 33.8 +0.5
      comp=Z,0.6nm,0.7s,baz=119,slow=6.6,SNR=1.8
NVAR                                PcP   PcP    10 40 23.9 +0.4
      comp=Z,2.7nm,0.8s,baz=136,slow=4.9,SNR=8.7
      comp=Z,1.9nm,0.6s
NVAR  Mina Array Bea   50.74 315    P     P      10 39 08.8 +1.0
EGMT  Eagleton         50.86 330    P     P      10 39 09.9 +1.4
      baz=131
KVN   Kaiserville      50.87 316    P     P      10 39 09.0 +0.2
HRY   Holter Researc   51.10 327    P     P      10 39 11.1 +0.7
MFID  Camas Ranch      51.52 322    P     P      10 39 13.8 +0.3
MFID                                IAmb  IAmb   10 39 15.1
      comp=Z,7.2nm,1.1s
MSO   Missoula         52.33 326    P     P      10 39 19.8 +0.4
      baz=126
PLID  Pearl Lake       52.52 323    P     P      10 39 21.2 +0.2
PLID                                IAmb  IAmb   10 39 22.0
      comp=Z,5.8nm,0.9s
FFC   Flin Flon        52.53 340    P     P      10 39 20.9 +0.3
FFC                                 IAmb  IAmb   10 39 21.4
      comp=Z,6.0nm,0.7s
WVOR  Wild Horse Val   52.80 319    P     P      10 39 23.5 +0.4
WVOR                                IAmb  IAmb   10 39 25.3
      comp=Z,6.5nm,0.8s
J08A  Circle Bar Ran   53.15 320    P     P      10 39 26.1 +0.6
FCC   Fort Churchill   53.80 347    P     P      10 39 29.5  -0.3
G08A  Pilot Rock       54.41 322    P     P      10 39 35.6 +0.9
G08A                                IAmb  IAmb   10 39 36.2
      comp=Z,12nm,1.2s
J05D  Fort Rock, OR    54.89 319    P     P      10 39 39.1 +0.9
NEW   Newport          54.92 326    P     P      10 39 38.3 +0.1
      baz=124
PINE  Pine Mountain    54.93 320    P     P      10 39 39.8 +1.2
B08A  Colville Reser   56.21 325    IAmb  IAmb   10 39 48.1
      comp=Z,6.8nm,0.7s
LTY   Liberty          56.42 323    IAmb  IAmb   10 39 51.2
      comp=Z,9.9nm,1.1s
YKA   Yellowknife Ar   62.71 340    P     P      10 40 31.9 +0.1
      comp=Z,23nm,0.6s,baz=133,slow=7.0,SNR=516
YKA                                 pP    pP     10 40 58.9 +1.0
      comp=Z,3.8nm,0.6s,baz=131,slow=7.2,SNR=4.0
KOTAN Kotaneelee Air   64.86 335    P     P      10 40 46.7 +0.7
      baz=123,SNR=6.5
LIRD  Liard River Hi   65.36 334    P     P      10 40 49.6 +0.4
      baz=120
T35M  Bob Quinn        66.17 330    P     P      10 40 55.4 +1.0
      baz=115
WRGLY Wrigley          66.34 338    P     P      10 40 55.8 +0.4
      baz=124,SNR=18
DLBC  Dease Lake       66.69 332    P     P      10 40 59.0 +1.1
DLBC                                IAmb  IAmb   10 40 59.8
      comp=Z,16nm,1.4s
DLBC  Dease Lake       66.69 332    P     P      10 40 58.7 +0.8
      baz=116
WTLY  Watson Lake, Y   66.90 334    P     P      10 40 60.0 +0.8
WTLY                                IAmb  IAmb   10 41 00.6
      comp=Z,12nm,0.9s
WTLY  Watson Lake, Y   66.90 334    P     P      10 40 59.9 +0.8
      baz=118,SNR=10
S34M  Telegraph Cree   67.00 331    P     P      10 41 00.8 +1.2
      baz=115
Q32M  Nakina River     67.98 332    P     P      10 41 07.3 +1.2
      baz=114
KULLO Kullorsuaq       68.08   5  eP     P      10 41 05.9  -0.3
KULLO                               IAmb  IAmb   10 41 08.1
      comp=Z,4.9nm,0.7s
S32K  Killisnoo        68.52 330    P     P      10 41 10.2 +1.0
      baz=112
P33M  Teslin, Yukon    68.75 333    P     P      10 41 12.0 +1.3
P33M  Teslin, Yukon    68.75 333    P     P      10 41 11.7 +0.9
      baz=114
R32K  Eaglecrest       68.79 330    P     P      10 41 12.3 +1.3
      baz=112
SUMG  Summit           68.81  11  i P     P      10 41 11.0  -0.3
SUMG                                IAmb  IAmb   10 41 12.9
      comp=Z,11nm,1.1s
P32M  Atlin            68.91 332    P     P      10 41 12.7 +0.9
      baz=113
N32M  Quiet Lake       69.25 334    P     P      10 41 14.7 +0.9
      baz=114
TULEG Thule            69.41   1    P     P      10 41 15.0 +0.5
TULEG                               IAmb  IAmb   10 41 15.9
      comp=Z,10.0nm,0.8s
TULEG Thule            69.41   1  eP     P      10 41 14.8 +0.4
TULEG                               IAmb  IAmb   10 41 15.6
      comp=Z,10nm,0.8s
SKAG  Skagway          69.62 331    P     P      10 41 17.0 +1.0
      baz=112
FARO  Faro, Yukon      69.81 335    P     P      10 41 18.2 +1.0
      baz=114
ESDC  Sonseca Array    70.02  50    P     P      10 41 18.7  -0.3
      comp=Z,1.5nm,0.9s,baz=267,slow=6.5,SNR=5.7
ESDC                                pP    pP     10 41 46.5 +1.0
      comp=Z,0.6nm,0.6s,baz=249,slow=6.6,SNR=2.5
      comp=Z,1.5nm,0.9s
M31M  Drury Creek, Y   70.25 334    P     P      10 41 21.1 +1.2
      baz=113
O30N  Mendenhall       70.46 333    P     P      10 41 22.3 +1.1
      baz=111,SNR=8.1
N31M  Braeburn, Yuko   70.58 333    P     P      10 41 23.3 +1.4
N31M                                IAmb  IAmb   10 41 24.0
      comp=Z,10nm,0.8s
N31M  Braeburn, Yuko   70.58 333    P     P      10 41 23.1 +1.2
      baz=112,SNR=5.8
P30M  Million Dollar   70.63 332    P     P      10 41 23.4 +1.1
      baz=110
HYT   Haines Junctio   71.12 332    P     P      10 41 26.7 +1.4
      baz=110
N30M  Aishikik Lake    71.16 333    P     P      10 41 26.9 +1.5
      baz=111
NEEM  North Greenlan   71.30   5  eP     P      10 41 26.4   0.0
NEEM                                IAmb  IAmb   10 41 27.6
      comp=Z,32nm,0.6s
M30M  Minto, Yukon     71.43 334    P     P      10 41 27.8 +0.8
M30M                                IAmb  IAmb   10 41 28.8
      comp=Z,12nm,0.8s
M30M  Minto, Yukon     71.43 334    P     P      10 41 27.9 +0.8
      baz=111,SNR=14
MAYO  Mayo, Yukon      71.43 335    IAmb  IAmb   10 41 29.5
      comp=Z,12nm,0.7s
MAYO  Mayo, Yukon      71.43 335    P     P      10 41 28.8 +1.8
      baz=112
YUK6  Outpost Mounta   71.56 332    P     P      10 41 28.9 +0.8
      baz=109
YUK4  Talbot Arm       71.82 333    P     P      10 41 30.6 +1.0
      baz=109
A36M  Sachs Harbour    71.94 345    P     P      10 41 30.0 +0.1
A36M  Sachs Harbour    71.94 345    P     P      10 41 29.8   0.0
      baz=125,SNR=50
M29M  Somme Creek      72.11 334    P     P      10 41 32.1 +1.0
      baz=110
F31M  Tsiigehtchic     72.18 339    P     P      10 41 31.9 +0.6
      baz=116,SNR=14
L29M  L29M             72.19 335    P     P      10 41 32.3 +0.7
      baz=110
K29M  Barlow Dome      72.19 335    P     P      10 41 32.5 +0.9
      baz=111
YUK8  Steele Glacier   72.31 332    P     P      10 41 33.5 +0.9
      baz=108
INK   Inuvik           72.48 340    P     P      10 41 33.5 +0.4
INK                                 IAmb  IAmb   10 41 34.3
      comp=Z,8.2nm,0.7s
INK   Inuvik           72.48 340    P     P      10 41 33.5 +0.4
      baz=116,SNR=12
J29M  Klondike Camp    72.69 336    P     P      10 41 34.8 +0.2
J29M                                IAmb  IAmb   10 41 36.6
      comp=Z,9.6nm,1.0s
J29M  Klondike Camp    72.69 336    P     P      10 41 35.9 +1.3
      baz=110
YUK3  Moose Creek      72.78 333    P     P      10 41 36.5 +1.2
      baz=108,SNR=7.5
EPYK  Eagle Plains     72.81 338    P     P      10 41 35.9 +0.7
EPYK                                IAmb  IAmb   10 41 36.2
      comp=Z,7.9nm,0.5s
EPYK  Eagle Plains     72.81 338    P     P      10 41 35.8 +0.6
      baz=112,SNR=5.9
G30M  tAoh Zraii Nji   72.87 339    P     P      10 41 36.1 +0.6
      baz=113
DAWY  Dawson           73.04 335    P     P      10 41 37.3 +0.6
DAWY  Dawson           73.04 335    P     P      10 41 37.5 +0.8
      baz=109
I29M  Ogilvie Camp,    73.05 337    P     P      10 41 37.3 +0.7
I29M  Ogilvie Camp,    73.05 337    P     P      10 41 37.1 +0.6
      baz=111
BVCY  Beaver Creek     73.15 333    P     P      10 41 38.7 +1.4
      baz=107
M27K  Edge Creek, AK   73.59 333    P     P      10 41 41.2 +1.2
M27K                                IAmb  IAmb   10 41 42.4
      comp=Z,13nm,1.1s
M27K  Edge Creek, AK   73.59 333    P     P      10 41 41.3 +1.4
      baz=106
BCAR  Beaver Creek A   73.75 334    P     P      10 41 41.9 +1.1
L27K  Beaver Creek,    73.77 334    P     P      10 41 41.7 +0.8
L27K                                IAmb  IAmb   10 41 43.1
      comp=Z,8.0nm,0.8s
L27K  Beaver Creek,    73.77 334    P     P      10 41 42.2 +1.3
      baz=107
DBG   Daneborg         73.81  13  eP     P      10 41 40.8   0.0
MCARA McCarthy VSAT    73.85 332    P     P      10 41 42.8 +1.4
      baz=105
EGAK  Eagle            74.00 336    P     P      10 41 43.0 +0.9
EGAK  Eagle            74.00 336    P     P      10 41 43.9 +1.8
      baz=108,SNR=5.1
M26K  Nabesna, AK      74.11 333    P     P      10 41 43.8 +0.9
      baz=105
K27K  Chicken          74.16 335    P     P      10 41 44.3 +1.2
      baz=107
TORD  Torodi Ar. Bea   74.40  78    P     P      10 41 43.8  -1.7
      comp=Z,0.3nm,0.3s,baz=284,slow=6.0,SNR=6.4
TORD                                pP    pP     10 42 10.8  -1.5
      comp=Z,0.4nm,0.6s,baz=284,slow=6.5,SNR=1.9
      comp=Z,0.3nm,0.3s
L26K  Log Cabin Wild   74.43 334    IAmb  IAmb   10 41 46.9
      comp=Z,8.5nm,0.7s
L26K  Log Cabin Wild   74.43 334    P     P      10 41 46.0 +1.4
      baz=105,SNR=10
I27K  Kandik River     74.43 336    P     P      10 41 45.5 +0.8
      baz=108
H27K  Steamboat Moun   74.59 337    P     P      10 41 46.3 +0.7
      baz=108
N25K  Chitina, Valde   74.64 332    P     P      10 41 47.2 +1.2
      baz=104
G27K  Doyon Strip      74.82 338    P     P      10 41 46.6  -0.3
      baz=108,SNR=5.4
DOT   Dot Lake         74.90 334    P     P      10 41 48.6 +1.1
EYAK  Cordova Ski Ar   74.94 331    P     P      10 41 48.3 +0.7
      baz=102
SCRK  Sand Creek       74.95 335    P     P      10 41 48.5 +0.7
SCRK                                IAmb  IAmb   10 41 50.4
      comp=Z,7.2nm,0.9s
SCRK  Sand Creek       74.95 335    P     P      10 41 48.9 +1.1
      baz=105,SNR=9.9
I26K  Coal Creek Min   74.96 336    P     P      10 41 47.9 +0.2
      baz=106
E27K  Coleen River     75.22 339    P     P      10 41 50.0 +0.8
      baz=108
KLU   Klutina          75.23 332    P     P      10 41 50.2 +0.8
      baz=102
RIDG  Independent Ri   75.26 334    P     P      10 41 50.6 +1.1
      baz=104,SNR=16
PAX   Paxson           75.35 333    IAmb  IAmb   10 41 51.6
      comp=Z,8.9nm,1.0s
PAX   Paxson           75.35 333    P     P      10 41 50.8 +0.7
      baz=103,SNR=7.1
M24K  Tolsona, Glenn   75.48 332    P     P      10 41 51.8 +1.0
      baz=102
DAG   Danmarks Havn    75.49  11  i P     P      10 41 49.0  -1.5
DAG                                 IAmb  IAmb   10 41 51.3
      comp=Z,3.5nm,0.7s
DAG   Danmarks Havn    75.49  11  i P     P      10 41 50.0  -0.5
DAG                                eS     pP     10 42 20.9 +3.5
G26K  Porcupine Rive   75.66 338    P     P      10 41 52.0 +0.4
      baz=106
K24K  Donnelly Dome    75.68 334    P     P      10 41 52.8 +0.9
      baz=103,SNR=7.1
SCM   Sheep Creek Mo   75.95 332    P     P      10 41 54.5 +1.0
SCM                                 IAmb  IAmb   10 41 55.2
      comp=Z,16nm,0.8s
SCM   Sheep Creek Mo   75.95 332    P     P      10 41 54.3 +0.7
      baz=101,SNR=5.2
PRP   Porcupine Dome   75.97 336    P     P      10 41 54.4 +0.7
PRP                                 IAmb  IAmb   10 41 54.9
      comp=Z,10nm,0.8s
PRP   Porcupine Dome   75.97 336    P     P      10 41 54.1 +0.5
      baz=104,SNR=17
F26K  Sheenjek River   76.00 338    P     P      10 41 55.0 +1.3
      baz=106
BMAR  Burnt Mountain   76.09 338    P     P      10 41 55.0 +0.9
FYU   Fort Yukon       76.12 337    P     P      10 41 55.2 +1.0
FYU                                 IAmb  IAmb   10 41 55.8
      comp=Z,11nm,1.0s
M23K  Glacier View     76.13 332    P     P      10 41 55.1 +0.7
      baz=101
PWL   Port Wells       76.25 331    P     P      10 41 55.3 +0.1
      baz=100
HDA   Harding Lake     76.31 335    P     P      10 41 55.8 +0.3
      baz=102,SNR=16
IL31                   76.36 335    P     P      10 41 55.5  -0.1
ILAR  Eielson Array    76.36 335    P     P      10 41 55.8 +0.1
      comp=Z,4.5nm,0.8s,baz=112,slow=4.3,SNR=50
ILAR                                pP    pP     10 42 21.8  -1.0
      comp=Z,1.3nm,0.8s,baz=120,slow=3.9,SNR=4.1
ILAR                                PP    PP     10 44 46.1  -2.4
      comp=Z,1.3nm,0.9s,baz=100,slow=7.2,SNR=8.8
      comp=Z,4.5nm,0.8s
C27K  Jago River       76.39 340    P     P      10 41 56.3 +0.6
      baz=107
KNK   Knik Glacier     76.41 332    P     P      10 41 56.5 +0.4
      baz=100
SML   Sawmill          76.42 332    P     P      10 41 56.5 +0.4
SML                                 IAmb  IAmb   10 41 58.1
      comp=Z,8.9nm,1.0s
SML   Sawmill          76.42 332    P     P      10 41 56.8 +0.7
      baz=100
G25K  Bearman Lake     76.50 337    P     P      10 41 57.4 +1.0
      baz=104
F25K  Christian Rive   76.53 338    P     P      10 41 57.4 +0.8
      baz=104,SNR=9.7
E25K  Arctic Village   76.63 339    P     P      10 41 58.1 +0.9
      baz=104,SNR=7.8
POKR  Poker Plat Res   76.67 335    P     P      10 41 58.4 +1.0
      baz=102
SEW   Seward           76.67 330    P     P      10 41 58.3 +0.8
      baz=99
GHO   Glory Hole Cre   76.69 332    IAmb  IAmb   10 41 59.0
      comp=Z,12nm,0.7s
WAT1  Susitna Watana   76.70 333    P     P      10 41 58.1 +0.4
      baz=100
PMR   Palmer           76.75 332    P     P      10 41 58.2 +0.3
      baz=100
COLA  College          76.79 335    P     P      10 41 58.4 +0.3
      baz=102
TCOL  CIGO, UAF Yank   76.80 335    P     P      10 41 58.3 +0.2
      baz=102
WRH   Wood River Hil   76.81 335    P     P      10 41 58.5 +0.3
C26K  Camden Bay       76.87 340    P     P      10 41 59.2 +0.8
      baz=106
RND   Reindeer         76.94 333    P     P      10 42 00.3 +1.2
RC01  Rabbit Creek A   76.96 331    P     P      10 41 59.5 +0.4
      baz=99
MDM   Murphy Dome      76.97 335    P     P      10 41 59.9 +0.8
MDM                                 IAmb  IAmb   10 42 00.6
      comp=Z,14nm,1.3s
H24K  Noodor Dome      77.00 336    P     P      10 41 59.9 +0.6
      baz=102
G24K  Hadweenzic Riv   77.02 337    P     P      10 42 00.2 +0.8
      baz=102
MCK   McKinley         77.04 334    P     P      10 42 00.2 +0.7
MCK   McKinley         77.04 334    P     P      10 42 00.1 +0.6
      baz=100
D25K  Kavik River      77.21 340    P     P      10 42 01.0 +0.5
      baz=104
NEA2  Nenana           77.25 335    P     P      10 42 00.3  -0.3
NEA2                                IAmb  IAmb   10 42 01.9
      comp=Z,9.9nm,0.9s
NEA2  Nenana           77.25 335    P     P      10 42 01.0 +0.3
      baz=100,SNR=11
BWN   Browne           77.34 334    IAmb  IAmb   10 42 02.5
      comp=Z,17nm,1.0s
F24K  Squaw Lake       77.35 338    P     P      10 42 02.3 +1.1
      baz=102
I23K  Minto, Yukon-K   77.47 335    IAmb  IAmb   10 42 03.0
      comp=Z,6.1nm,0.7s
I23K  Minto, Yukon-K   77.47 335    P     P      10 42 02.6 +0.8
      baz=100,SNR=9.4
SUA   Susitna One      77.50 331    P     P      10 42 02.6 +0.3
SUA                                 IAmb  IAmb   10 42 03.6
      comp=Z,12nm,0.6s
SUA   Susitna One      77.50 331    P     P      10 42 02.8 +0.6
      baz=98,SNR=7.0
TRF   Thorofare Moun   77.59 333    P     P      10 42 03.4 +0.6
TRF                                 IAmb  IAmb   10 42 03.9
      comp=Z,6.7nm,0.7s
TRF   Thorofare Moun   77.59 333    P     P      10 42 03.4 +0.6
      baz=99,SNR=5.1
H23K  Yukon River      77.67 336    P     P      10 42 03.7 +0.7
      baz=100
E24K  Your Creek       77.69 338    P     P      10 42 03.8 +0.7
      baz=102
KTH   Kantishna Hill   77.88 333    IAmb  IAmb   10 42 06.0
      comp=Z,12nm,1.1s
SKT   Skwentna         77.94 332    P     P      10 42 04.8 +0.2
      baz=98
BPAW  Bear Paw Mtn.    77.99 334    P     P      10 42 04.8  -0.1
BPAW                                IAmb  IAmb   10 42 05.7
      comp=Z,9.8nm,0.6s
BPAW  Bear Paw Mtn.    77.99 334    P     P      10 42 05.1 +0.2
      baz=98,SNR=15
G23K  Bananza Creek    78.01 337    P     P      10 42 06.1 +1.1
      baz=100
MLY   Manley           78.03 335    P     P      10 42 05.4 +0.3
MLY                                 IAmb  IAmb   10 42 06.3
      comp=Z,9.8nm,1.1s
MLY   Manley           78.03 335    P     P      10 42 05.3 +0.3
      baz=99,SNR=9.6
SPU   Mount Spurr      78.09 331    P     P      10 42 05.5 +0.1
C24K  Franklin Bluff   78.10 340    P     P      10 42 06.1 +0.8
      baz=102
E23K  Chandalar        78.10 338    P     P      10 42 06.1 +0.6
      baz=101
SPCR  Spurr Chakacha   78.17 331    P     P      10 42 06.0 +0.1
      baz=97
COLD  Coldfoot         78.17 337    P     P      10 42 06.7 +1.0
COLD                                IAmb  IAmb   10 42 08.0
      comp=Z,8.7nm,1.0s
COLD  Coldfoot         78.17 337    P     P      10 42 07.0 +1.3
      baz=100
PPLA  Purkeypile       78.36 333    P     P      10 42 07.5 +0.4
      baz=97,SNR=8.0
CAST  Castle Rocks     78.38 333    IAmb  IAmb   10 42 08.4
      comp=Z,13nm,0.9s
CAST  Castle Rocks     78.38 333    P     P      10 42 07.1 +0.1
      baz=97,SNR=19
NOR   Nord             78.39   7  eP     P      10 42 06.2  -0.5
NOR                                 IAmb  IAmb   10 42 07.7
      comp=Z,3.7nm,0.7s
NOR   Nord             78.39   7  eP     P      10 42 06.8   0.0
CHUM  Lake Minchumin   78.54 334    P     P      10 42 08.2 +0.4
      baz=97,SNR=10
I21K  Tanana           78.57 335    P     P      10 42 08.1 +0.1
      baz=98
G22K  Bettles          78.63 337    P     P      10 42 09.1 +0.9
      baz=99
D23K  Nanushuk River   78.65 339    P     P      10 42 09.2 +0.9
      baz=100,SNR=6.4
M20K  Styx River       78.68 332    P     P      10 42 09.2 +0.4
      baz=96
SENIN Lac Senin/Sane   78.78  44    P     P      10 42 10.7 +0.9
E22K  Anaktuvuk Pass   78.93 338    P     P      10 42 10.3 +0.3
      baz=98
F22K  John River       78.97 337    P     P      10 42 10.9 +0.7
      baz=98
H21K  Melozitna Rive   78.97 336    P     P      10 42 10.3 +0.1
      baz=97
L20K  Farewell, AK     79.09 332    P     P      10 42 10.9  -0.1
      baz=96
O19K  Port Alsworth    79.10 330    P     P      10 42 11.0 +0.1
O19K                                IAmb  IAmb   10 42 11.1
      comp=Z,5.4nm,0.7s
O19K  Port Alsworth    79.10 330    P     P      10 42 11.0 +0.1
      baz=95
N19K  Bonanza Creek    79.23 331    P     P      10 42 11.0  -0.7
      baz=95
K20K  Telida           79.26 333    P     P      10 42 12.2 +0.4
K20K                                IAmb  IAmb   10 42 12.8
      comp=Z,11nm,1.1s
K20K  Telida           79.26 333    P     P      10 42 11.7  -0.1
      baz=96,SNR=7.5
M19K  Big River Lodg   79.28 332    P     P      10 42 12.2 +0.3
      baz=95
G21K  Allakaket        79.36 336    P     P      10 42 13.3 +1.0
      baz=97
F21K  Alatna River     79.44 337    P     P      10 42 13.8 +1.1
      baz=97
O18K  Koktuh Hills     79.52 330    P     P      10 42 12.7  -0.6
      baz=94
L19K  White Mountain   79.52 332    P     P      10 42 13.0  -0.2
      baz=95
SVW2  Sparrevohn       79.78 331    IAmb  IAmb   10 42 15.0
      comp=Z,6.1nm,0.7s
N18K  Kilae Creek      79.91 330    P     P      10 42 15.1  -0.3
      baz=93
TTA   Tatalina         80.11 333    P     P      10 42 17.2 +0.8
TTA   Tatalina         80.11 333    P     P      10 42 16.3  -0.1
      baz=94
Q16K  King Salmon      80.19 328    P     P      10 42 16.5  -0.3
      baz=92
O17K  Koliganek Bris   80.46 329    P     P      10 42 18.0  -0.3
      baz=92
GCSA  Galena City Sc   80.60 334    P     P      10 42 19.4 +0.5
      baz=93
P16K  Nushagak River   80.90 329    P     P      10 42 20.5  -0.1
      baz=91
NB2   NORSAR Subarra   81.42  29    P     P      10 42 24.6 +1.2
      comp=Z,1.2nm,0.5s,baz=269,slow=5.6
NOA   NORSAR Array B   81.42  29    P     P      10 42 24.6 +1.2
      comp=Z,2.3nm,0.8s,baz=270,slow=5.4,SNR=7.6
NOA                                 pP    pP     10 42 52.0 +1.4
      comp=Z,5.2nm,0.9s,baz=269,slow=5.4,SNR=7.5
NOA                                 LR    LR     11 13 29.8
      comp=Z,8.6nm,21.9s,baz=255,slow=32
      comp=Z,2.3nm,0.8s
SDPT  Sand Point       82.25 325    P     P      10 42 28.1 +0.3
      baz=89
CIMO  Cimolais         82.34  44    IAmb  IAmb   10 42 29.6
      comp=Z,6.4nm,0.6s
CLL   Collm            82.52  39  eP     P      10 42 31.0 +1.6
CLUD  Cludinico        82.64  44    P     P      10 42 31.0 +0.8
CLUD                                IAmb  IAmb   10 42 31.6
      comp=Z,10nm,0.7s
KHC   Kasperske Hory   82.98  41    P     P      10 42 32.7 +0.8
RDOG  Red Dog Mine     83.07 338    P     P      10 42 33.0 +1.1
RDOG                                IAmb  IAmb   10 42 33.4
```

	comp=Z,6.0nm,0.6s						
RDOG	**Red Dog Mine**	83.07	338	P	P	10 42 32.2	+0.4
	baz=88						
GERES	**GERESS Array B**	83.08	42	P	P	10 42 32.7	+0.2
	comp=Z,1.6nm,0.7s,baz=232,slow=4.8,SNR=6.0						
GERES				pP	pP	10 43 01.2	+1.4
	comp=Z,0.5nm,0.4s,baz=176,slow=40,SNR=2.2						
	comp=Z,1.6nm,0.7s						
GERES	**GERESS Array B**	83.08	42	P	P	10 42 33.2	+0.8
PRED	**Cave del Predi**	83.11	44	P	P	10 42 33.1	+0.5
PRED				IAmb	IAmb	10 42 34.0	
	comp=Z,6.4nm,0.7s						
S12K	**Black Hills**	83.14	325	P	P	10 42 32.7	+0.2
	baz=87						
SABO	**M.te Sabotino**	83.16	45	P	P	10 42 34.3	+1.5
SABO				IAmb	IAmb	10 42 35.0	
	comp=Z,6.5nm,0.7s						
ANM	**Nome**	84.26	334	P	P	10 42 39.4	+1.4
ANM	**Nome**	84.26	334	P	P	10 42 38.4	+0.4
	baz=86						
TNA	**Tin City**	85.24	335	P	P	10 42 44.3	+1.5
TNA	**Tin City**	85.24	335	P	P	10 42 43.7	+0.9
	baz=83						
UNV	**Unalaska Valle**	85.85	324	P	P	10 42 46.1	0.0
	baz=84						
ARCES	**ARCESS Array B**	86.63	20	P	P	10 42 49.8	+0.1
	comp=Z,3.3nm,0.8s,baz=270,slow=4.1,SNR=13						
	comp=Z,3.3nm,0.8s						
GAMB	**Gambell**	87.11	334	P	P	10 42 52.1	+0.1
GAMB				IAmb	IAmb	10 42 54.1	
	comp=Z,6.9nm,0.6s						
GAMB	**Gambell**	87.11	334	P	P	10 42 51.8	-0.2
	baz=80,SNR=6.7						
FINES	**FINESS Array B**	88.51	28	P	P	10 42 59.2	+0.4
	comp=Z,1.6nm,0.5s,baz=267,slow=4.1,SNR=14						
FINES				pP	pP	10 43 27.1	+0.6
	comp=Z,3.4nm,0.9s,baz=262,slow=3.9,SNR=2.5						
	comp=Z,1.6nm,0.5s						
ZALV	**Zalesovo Beam**	116.54	14	PKP	PKPdf	10 48 49.2	-0.7
	comp=Z,0.6nm,0.5s,baz=222,slow=1.9,SNR=3.7						
MKAR	**Makanchi Array**	122.27	19	PKP	PKPdf	10 49 00.8	-0.4
	comp=Z,0.7nm,0.4s,baz=307,slow=2.7,SNR=14						
MKAR				pPKP	pPKPdf	10 49 28.2	-1.8
	comp=Z,0.4nm,0.4s,baz=302,slow=2.3,SNR=3.8						
USRK	**Ussuriysk Ar.**	123.82	338	PKP	PKPdf	10 49 03.4	-0.8
	comp=Z,1.4nm,0.5s,baz=231,slow=4.8,SNR=2.9						
SONM	**Songino Array**	125.27	360	PKP	PKPdf	10 49 06.7	-0.3
	comp=Z,0.6nm,0.5s,baz=345,slow=1.6,SNR=3.9						
KSH	**Kashi**	125.83	29	PKP	PKPdf	10 49 08.3	-0.1
KSH				sPKP		10 49 46.4	
MJAR	**Matsushiro Arr**	127.16	328	PKP	PKPdf	10 49 10.6	-0.2
	comp=Z,0.5nm,0.4s,baz=107,slow=1.8,SNR=4.5						
KSRS	**Korea Array**	131.19	337	PKP	PKPdf	10 49 17.6	-0.8
	comp=Z,1.1nm,0.5s,baz=50,slow=2.4,SNR=2.5						
SHL	**Shillong**	144.66	23	PKPdf	PKPab	10 49 42.3	-0.2
PZH	**PanZhiHua**	146.29	7	PP	PP	10 53 13.1	+4.1
PZH	**PanZhiHua**	146.29	7	AMB	AMB		
	comp=Z,140nm,9.0s						
PZH	**PanZhiHua**	146.29	7	PKPbc	PKPbc	10 49 47.3	-0.3
PZH	**PanZhiHua**	146.29	7	pPKP	pPKPdf	10 50 14.6	-0.7
AS31	**Alice Springs**	148.69	235		PKPbc	10 49 53.1	-1.1
ASAR	**Alice Springs**	148.69	235	PKP	PKPdf	10 49 49.5	-0.8
	comp=Z,3.8nm,0.5s,baz=115,slow=3.6,SNR=26						
ASAR				PKPbc	PKPbc	10 49 52.8	-1.4
	comp=Z,3.8nm,0.5s,baz=117,slow=3.5,SNR=85						
ASAR				pPKP	pPKPdf	10 50 19.2	0.0
	comp=Z,2.5nm,0.8s,baz=106,slow=2.5,SNR=4.8						
ASAR	**Alice Springs**	148.69	235	PKPbc	PKPbc	10 49 52.9	-1.3
MND	**Mandalay**	149.41	18	PKPbc	PKPbc	10 49 56.1	+0.2
WB2	**Warramunga Arr**	149.82	242		PKPbc	10 49 56.4	-0.7
WRAB	**Tennant Creek**	149.83	242	PKPbc	PKPbc	10 49 56.1	-1.0
WRA	**Warramunga Arr**	149.84	242	PKP	PKPdf	10 49 51.5	-0.7
	comp=Z,6.2nm,0.5s,baz=108,slow=2.6,SNR=10						
WRA				PKPbc	PKPbc	10 49 55.8	-1.3
	comp=Z,6.2nm,0.5s,baz=107,slow=2.9,SNR=106						
WRA				pPKP	pPKPdf	10 50 21.7	+0.6
	comp=Z,2.7nm,0.7s,baz=110,slow=2.3,SNR=3.3						
WRA	**Warramunga Arr**	149.84	242	PKPbc	PKPbc	10 49 56.2	-0.8
WB0	**Warramunga Arr**	149.85	243	PKPbc	PKPbc	10 49 56.4	-0.7
PALK	**Pallekele**	150.87	61	PKPbc	PKiKP	10 50 00.2	-0.1
CRAI	**Chiangrai**	152.22	12	PKPbc	PKiKP	10 50 02.9	0.0
CMAR	**Chiang Mai Arr**	153.59	16	PKP	PKPdf	10 49 57.1	-0.7
	comp=Z,0.6nm,0.3s,baz=14,slow=0.7,SNR=4.4						
CMAR				PKPbc	PKiKP	10 50 06.0	+0.2
	comp=Z,3.1nm,0.6s,baz=328,slow=2.6,SNR=15						
CMAR				PKPab	PKPab	10 50 18.1	-0.2
	comp=Z,3.3nm,0.6s,baz=328,slow=5.8,SNR=13						
CMAR				pPKPbc	pPKPbc	10 50 34.1	-0.4
	comp=Z,2.6nm,0.7s,baz=317,slow=2.5,SNR=2.8						
CMAR	**Chiang Mai Arr**	153.59	16	PKPdf	PKPdf	10 49 56.2	-1.7
CMAR				PKPbc	PKiKP	10 50 06.1	+0.4
CMAR				PKPab	PKPab	10 50 18.7	+0.4

WEL 21 10:32:06.5±0.4**,43°S**±3°×**17°3E**±°**,h5km,M2.2**/7**,ML2.4**/9**,**
MLv2.2/7**,Error ellipse: s-maj=0.0km s-min=0.0km**
az=110.4,confirmed,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVZ	**Greta Valley S**	0.37	158	P	Pg	10 32 14.0	+0.3
GVZ				S	Sg	10 32 19.7	+1.2
LTZ	**Lake Taylor**	0.45	250	P	Pg	10 32 15.8	+0.6
LTZ				S	Sg	10 32 22.5	+1.4
KHZ	**Kahutara**	0.56	68	P	Pg	10 32 17.4	+0.2
AMCZ	**Amberley**	0.57	194	P	Pg	10 32 18.1	+0.6
THZ	**Tophouse**	0.86	3	P	Pg	10 32 23.3	+0.2
THZ				S	Sg	10 32 34.3	0.0
OXZ	**Oxford**	0.92	220	P	Pg	10 32 23.7	-0.4
OXZ				S	Sg	10 32 36.4	+0.4
INZ	**Inchbonnie**	1.04	264	P	Pg	10 32 26.5	+0.1
MQZ	**McQueen's Vall**	1.09	187	P	Pg	10 32 25.5	-1.8
MQZ				S	Sg	10 32 39.3	-2.2
DSZ	**Denniston Nort**	1.17	318	P	Pb	10 32 29.3	0.0
BSWZ	**Blackbirch Sta**	1.19	40	P	Pg	10 32 29.0	-0.3
MRNZ	**Matariki Terra**	1.23	357	P	Pg	10 32 29.6	-0.4
TUWZ	**Tuamarina**	1.45	35	P	Pn	10 32 32.7	-0.7
TKNZ	**Takaka Hill**	1.59	3	P	Pn	10 32 35.2	-0.2
QRZ	**Quartz Range**	1.81	352	P	Pn	10 32 39.3	+0.9

IDC 21 10:41:42.2±2.6**,16°.47N**×**146°.63E,h181km**±31km**,mb3.1**/5**,**
mbtmp3.6/6**,Error ellipse: s-maj=151.3km**
s-min=20.5km az=112.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	3.33	211	P	Pn	10 42 36.9	+2.0
	79nm,0.9s,baz=326,slow=18,SNR=1.6						
GUMO				S	Sn	10 43 15.9	-0.2
	34nm,0.3s,baz=174,slow=21,SNR=8.7						
WRA	**Warramunga Arr**	38.14	199	P	P	10 48 43.9	-0.2
	0.2nm,0.4s,baz=29,slow=8.9,SNR=8.7						
	0.2nm,0.4s						
ASAR	**Alice Springs**	41.78	198	P	P	10 49 13.9	-0.1
	0.4nm,0.9s,baz=12,slow=9.5,SNR=2.1						
	0.4nm,0.9s						
ILAR	**Eielson Array**	65.25	26	P	P	10 52 03.5	-0.6
	0.4nm,0.4s,baz=254,slow=5.8,SNR=5.9						
	0.4nm,0.4s						
YKA	**Yellowknife Ar**	79.54	28	P	P	10 53 27.9	-0.7
	0.3nm,0.7s,baz=284,slow=5.0,SNR=4.2						
	0.3nm,0.7s						
NVAR	**Mina Array Bea**	83.81	52	P	P	10 53 53.5	+1.6
	0.4nm,0.6s,baz=263,slow=7.1,SNR=4.1						
	0.4nm,0.6s						

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*WEL **21** 10:58:00,41°.72S×174°.26E,h21km,ML4.4,Mw4.1, Moment Tensor Solution. s9 Moment tensor: Scale 10^{15} Nm; M_{rr}0.40; $M_{\theta\theta}$1.64; $M_{\phi\phi}$-2.04; $M_{r\theta}$-0.05; $M_{\theta\phi}$0.37; $M_{\phi r}$0.14; Fault plane solution: $M_0$1.88000×10^{15} NP1: ϕ_s219.00000°,δ87.00000°,λ-179.00000°. NP2: ϕ_s129.00000°,δ89.00000°,λ-3.00000°. Principal axes: T -208.4700, Plg1.0000°, Azm174.0000°; N 167.5900, Plg87.0000°, Azm290.0000°; P 40.8800, Plg3.0000°, Azm84.0000°;*

*IDC **21** 10:58:16.5±1.0,41°.49S×174°.04E,h0km,mb3.7/3, mbtmp3.7/5,ML3.6/2,MS2.4/1 Error ellipse: s-maj=29.3km s-min=23.3km az=126.0*

*NOU **21** 10:58:18.6,41°.92S×174°.57E,h16km,MLv4.6/13,Cook Strait, New Zealand*

*NEIC **21** 10:58:19.2,41°.78S×174°.32E,h16km*

*NEIC **21** 10:58:19.2±2.0,41°.78S±0°.03×174°.32E±0°.03,h16km±1km, mb4.3/7,Mwr4.1/30,Error ellipse: s-maj=4.9km s-min=2.6km az=146.0,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.30; $M_{\theta\theta}$1.21; $M_{\phi\phi}$-1.51; $M_{r\theta}$0.76; $M_{\theta\phi}$0.59; $M_{\phi r}$0.51; Fault plane solution: $M_0$1.76000×10^{15} NP1:ϕ_s30.18000°,δ77.66000°, λ150.01000°. NP2:ϕ_s127.21000°,δ60.77000°,λ14.18000°. Principal axes: T 1.8194, Plg30.0000°, Azm345.0000°; N -0.1202, Plg58.0000°, Azm190.0000°; P -1.6991, Plg11.0000°, Azm82.0000°;*

*WEL **21** 10:58:19.6±0.3,42°S±3°×17°4E±°,h12km±3km,M4.3/23, ML4.6/23,MLv4.3/23 Error ellipse: s-maj=0.0km s-min=0.0km az=145.6,confirmed*

ISC 21 10:58:18.7±0.8**,41°.82S**±0°.03×**174°.35E**±0°.03**,h17km**±5km**,**
n200,σ**1**^{s}**.31**/216**,mb4.2**/7**,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	0.12	303		Pg	10 58 22.7	+0.1
CMWZ				Sg	Sg	10 58 25.4	+0.3
CMWZ	**Cape Campbell**	0.12	303	P	Pg	10 58 22.6	+0.1
CMWZ				S	Sg	10 58 25.0	0.0
BSWZ	**Blackbirch Sta**	0.37	286		Pg	10 58 26.1	-0.2
BSWZ				Sg	Sg	10 58 31.0	-0.5
BSWZ	**Blackbirch Sta**	0.37	286	P	Pg	10 58 26.1	-0.2
BSWZ				S	Sg	10 58 30.9	-0.6
TUWZ	**Tuamarina**	0.49	322		Pg	10 58 27.9	-0.7
TUWZ				Sg	Sg	10 58 33.7	-1.5
TUWZ	**Tuamarina**	0.49	322	P	Pg	10 58 27.9	-0.7
TUWZ				S	Sg	10 58 33.6	-1.6
BHW	**Baring Head**	0.56	44		Pb	10 58 31.4	+1.2
SNZO	**South Karori**	0.57	28		Pb	10 58 30.9	+0.7
SNZO				Sg	Sb	10 58 39.1	+1.1
SNZO	**South Karori**	0.57	28	P	Pb	10 58 30.8	+0.6
TCW	**Tory Channel**	0.61	355		Pg	10 58 30.2	-0.5
TCW				Sg	Sg	10 58 38.0	-0.8
TCW	**Tory Channel**	0.61	355	P	Pg	10 58 30.2	-0.5
TCW				S	Sg	10 58 37.7	-1.1
WEL	**Wellington**	0.62	31	P	Pb	10 58 31.8	+0.8
WEL				S	Sb	10 58 40.6	+1.2
PLWZ	**Palliser**	0.72	70		Pn	10 58 35.2	+1.0
PLWZ					Sn	10 58 45.9	+1.0
PLWZ	**Palliser**	0.72	70	P	Pn	10 58 35.2	+1.0
MSWZ	**Moikau Station**	0.79	60		Pn	10 58 36.0	+1.0
MSWZ					Sn	10 58 47.7	+1.3
MSWZ	**Moikau Station**	0.79	60	P	Pn	10 58 36.2	+1.2
KHZ	**Kahutara**	0.85	225		Pn	10 58 37.2	+1.3
KHZ					Sn	10 58 49.9	+2.0
KHZ	**Kahutara**	0.85	225	P	Pn	10 58 37.2	+1.3
KHZ	**Kahutara**	0.85	225	P	Pn	10 58 37.1	+1.3
CAW	**Cannon Point**	0.89	38	P	Pn	10 58 36.6	+0.2
PAWZ	**Paruwai Farm**	0.92	62	P	Pn	10 58 37.7	+0.9
NNZ	**Nelson**	0.94	309		Pg	10 58 35.9	-1.1
NNZ				Sg	Sg	10 58 46.7	-2.7
NNZ	**Nelson**	0.94	309	P	Pg	10 58 35.8	-1.1
KIW	**Kapiti Island**	1.04	24	P	Pb	10 58 38.7	+0.4
DUWZ	**D'Urville Isla**	1.06	342	P	Pg	10 58 37.9	-1.4
THZ	**Tophouse**	1.08	272		Pg	10 58 39.2	-0.4
THZ	**Tophouse**	1.08	272	P	Pg	10 58 39.2	-0.4
MTW	**Mount Morrison**	1.09	53	P	Pn	10 58 39.9	+0.7
TRWZ	**Traveller**	1.09	68	P	Pn	10 58 39.9	+0.7
OGWZ	**Otaki Gorge**	1.17	32	P	Pn	10 58 41.2	+0.8
MRNZ	**Matariki Terra**	1.26	289		Pn	10 58 42.3	+0.7
MRNZ	**Matariki Terra**	1.26	289	P	Pn	10 58 42.2	+0.7
HOWZ	**Holdsworth Sta**	1.27	44	P	Pn	10 58 42.4	+0.7
TKNZ	**Takaka Hill**	1.30	306		Pn	10 58 42.2	+0.1
TKNZ	**Takaka Hill**	1.30	306	P	Pn	10 58 42.2	+0.1
TMWZ	**Te Maipa**	1.36	59	P	Pn	10 58 43.4	+0.5
MRZ	**Mangatainoka R**	1.48	39		Pn	10 58 45.4	+0.8
MRZ	**Mangatainoka R**	1.48	39	P	Pn	10 58 45.3	+0.8
GVZ	**Greta Valley S**	1.51	220		Pn	10 58 46.0	+1.0
GVZ	**Greta Valley S**	1.51	220	P	Pn	10 58 45.9	+1.0
TIWZ	**Tintock**	1.56	49	P	Pn	10 58 46.0	+0.3
CPWZ	**Castlepoint**	1.66	58	P	Pn	10 58 47.8	+0.7
QRZ	**Quartz Range**	1.69	305		Pb	10 58 48.9	-0.4
QRZ	**Quartz Range**	1.69	305	P	Pb	10 58 48.9	-0.4
QRZ	**Quartz Range**	1.69	305	P	Pb	10 58 48.8	-0.4
PRWZ	**Pori Road**	1.76	45	P	Pn	10 58 48.8	+0.4
POWZ	**Post Office Ro**	1.78	38	P	Pn	10 58 49.2	+0.5
LTZ	**Lake Taylor**	1.82	237		Pn	10 58 50.2	+1.0
LTZ	**Lake Taylor**	1.82	237	P	Pn	10 58 50.2	+1.0
BFZ	**Birch Farm**	1.83	52		Pn	10 58 49.1	-0.2
BFZ	**Birch Farm**	1.83	52	P	Pn	10 58 49.1	-0.2
BFZ	**Birch Farm**	1.83	52	P	Pn	10 58 49.1	-0.2
AMCZ	**Amberley**	1.85	222	Pn	Pn	10 58 50.7	+1.1
AMCZ	**Amberley**	1.85	222	P	Pn	10 58 50.2	+0.6
DSZ	**Denniston Nort**	1.90	271		Pn	10 58 52.0	+1.6
DSZ	**Denniston Nort**	1.90	271	P	Pn	10 58 52.0	+1.6
DVHZ	**Dannevirke**	2.05	43	P	Pn	10 58 52.2	-0.1
WAZ	**Wanganui**	2.11	13	P	Pb	10 58 55.9	-0.7
TSZ	**Takapari Road**	2.14	35	P	Pn	10 58 54.0	+0.4
MQZ	**McQueen's Vall**	2.26	213		Pn	10 58 54.9	-0.5
MQZ	**McQueen's Vall**	2.26	213	P	Pn	10 58 54.8	-0.5
OXZ	**Oxford**	2.28	228		Pn	10 58 55.3	-0.2
OXZ	**Oxford**	2.28	228	P	Pn	10 58 55.3	-0.2
AKCZ	**Akaroa Harbour**	2.31	207	P	Pn	10 58 56.3	+0.3
PRHZ	**Porangahau**	2.32	49	P	Pn	10 58 55.6	-0.6
INZ	**Inchbonnie**	2.34	246		Pn	10 58 56.7	+0.3
INZ	**Inchbonnie**	2.34	246	P	Pn	10 58 57.5	+1.2
LREZ	**Lake Rotokare**	2.35	1	P	Pb	10 58 59.3	-1.3
WPHZ	**Waipukurau**	2.36	43	P	Pn	10 58 56.6	-0.1
PNHZ	**Pukenui**	2.36	37	P	Pn	10 58 56.7	0.0
NMEZ	**Namu Road**	2.42	351	P	Pn	10 58 59.8	+2.3
PREZ	**Palmer Road**	2.47	357	P	Pb	10 59 01.0	-1.7
RACZ	**Rakaia**	2.51	220	P	Pn	10 58 58.4	-0.3
KHEZ	**Kahui Hut**	2.53	354	P	Pn	10 59 01.3	+2.2
KHEZ	**Kahui Hut**	2.53	354	P	Pn	10 59 01.4	+2.4
NEZ	**North Egmont**	2.55	356	P	Pn	10 59 02.0	+2.6
NBEZ	**Newall Road No**	2.57	352	P	Pn	10 59 01.8	+2.3
MTVZ	**Mangateitei**	2.57	20	P	Pn	10 59 01.8	+2.2
PXZ	**Pawanui**	2.61	48	P	Pn	10 58 59.0	-1.1
DREZ	**Durham Road**	2.62	358	P	Pn	10 59 02.9	+2.6
PKE	**Pukeiti**	2.63	354	P	Pn	10 59 02.8	+2.4
MOVZ	**Moawhango**	2.63	24	P	Pn	10 59 01.4	+0.9
PKVZ	**Pokaka**	2.63	17	P	Pn	10 59 02.4	+1.9
WNVZ	**Wahianoa**	2.66	21	P	Pn	10 59 02.5	+1.5
BHHZ	**Black Hill Sta**	2.67	30	P	Pn	10 59 01.4	+0.5
MHCZ	**Mount Hutt**	2.67	229	P	Pn	10 59 00.8	-0.2
TRVZ	**Turoa**	2.67	20	P	Pn	10 59 02.8	+1.6
DRZ	**Dome Shelter**	2.70	20	P	Pn	10 59 04.5	+2.8
WHVZ	**Whangaehu Hut**	2.70	21	P	Pn	10 59 03.2	+1.6
VRZ	**Vera Road**	2.71	7	P	Pn	10 59 03.8	+2.4
FWVZ	**Far West T-bar**	2.72	20	P	Pn	10 59 03.5	+1.8
TUVZ	**Tukino**	2.73	22	P	Pn	10 59 03.5	+1.6
MHEZ	**Mangahewa**	2.74	360	P	Pb	10 59 05.7	-1.5
KAHZ	**Kahuranaki**	2.79	44	P	Pn	10 59 01.8	-0.7
NGZ	**Ngauruhoe**	2.80	20	P	Pn	10 59 04.8	+1.9
SNVZ	**South Ngauruho**	2.81	21	P	Pn	10 59 04.6	+1.6
WACZ	**Wakanui South**	2.81	220	P	Pn	10 59 02.7	-0.2
OTVZ	**Oturere**	2.83	21	P	Pn	10 59 05.1	+1.8
NNVZ	**North Ngauruho**	2.85	20	P	Pn	10 59 05.4	+1.8
WTVZ	**West Tongariro**	2.86	20	P	Pn	10 59 05.5	+1.9
KWHZ	**Kaweka Forest**	2.86	34	P	Pn	10 59 03.4	-0.2
TWVZ	**Taurewa**	2.86	17	P	Pn	10 59 05.5	+1.8
ETVZ	**East Tongariro**	2.87	22	P	Pn	10 59 05.0	+1.2
TMVZ	**Te Maari**	2.89	21	P	Pn	10 59 05.3	+1.3
KRVZ	**Karewarewa**	2.89	20	P	Pn	10 59 06.1	+2.0
NTVZ	**North Tongarir**	2.90	21	P	Pn	10 59 05.6	+1.4
WVZ	**Waitaha Valley**	2.95	244	P	Pn	10 59 06.4	+1.6
MCHZ	**McNeill Hill**	2.97	38	P	Pn	10 59 04.6	-0.4
CKHZ	**Cape Kidnapper**	2.99	45	P	Pn	10 59 03.9	-1.4
KATZ	**Kakaramea**	3.02	20	P	Pb	10 59 12.8	+0.7
RITZ	**Rihia Road**	3.06	23	P	Pn	10 59 07.5	+1.2
RPZ	**Rata Peaks**	3.08	231	Pn	Pn	10 59 06.7	+0.2
	9.0nm,0.3s,baz=92,slow=2.6,SNR=41						
RPZ				Sn	Sn	10 59 40.7	-2.3
	17nm,0.3s,baz=14,slow=12,SNR=1.8						
RPZ				LR	LR	10 59 55.8	
	comp=Z,64nm,19.2s,baz=32,slow=32						
	20nm,0.3s						
RPZ	**Rata Peaks**	3.08	231	P	Pn	10 59 06.6	0.0
RPZ	**Rata Peaks**	3.08	231	P	Pn	10 59 06.7	+0.2
BKZ	**Black Stump Fm**	3.11	32	Pn	Pn	10 59 06.5	-0.5
BKZ	**Black Stump Fm**	3.11	32	P	Pn	10 59 06.0	-1.0
BKZ	**Black Stump Fm**	3.11	32	P	Pn	10 59 06.5	-0.5
RATZ	**Rangitukua**	3.14	21	P	Pn	10 59 10.6	+3.2
ARCZ	**Arundel**	3.16	226	P	Pn	10 59 07.8	+0.1
ARHZ	**Aropaoanui**	3.25	39	P	Pn	10 59 08.1	-0.7
WATZ	**Wairara**	3.28	19	P	Pb	10 59 15.4	-1.1
NMHZ	**Naumai**	3.30	35	P	Pn	10 59 09.0	-0.7
HIZ	**Hauiti**	3.32	7		Pn	10 59 11.2	+1.3
HIZ	**Hauiti**	3.32	7	P	Pn	10 59 12.0	+2.1
HIZ	**Hauiti**	3.32	7	P	Pn	10 59 11.9	+2.1
GCSZ	**Gaunt Creek Bo**	3.33	242	P	Pn	10 59 11.8	+1.9
MRHZ	**Matea Rd**	3.37	29	P	Pn	10 59 10.1	-0.5
WHTZ	**Whakaora**	3.38	22	P	Pb	10 59 17.4	-0.8
KUTZ	**Kaahu Road**	3.51	19	P	Pb	10 59 20.1	-0.3
WHHZ	**Waihua**	3.51	40	P	Pn	10 59 11.4	-1.0
TMZ	**Timaru**	3.55	222	P	Pn	10 59 13.0	0.0
RAHZ	**Arahi**	3.57	37	P	Pn	10 59 12.2	-1.2
WPRZ	**Whakapapatarin**	3.57	24	P	Pn	10 59 14.0	+0.6
ALRZ	**Allen Road**	3.59	26	P	Pn	10 59 13.1	-0.5
TLZ	**Tolley Road**	3.60	15	P	Pn	10 59 14.9	+1.1
PRRZ	**Plateau Road**	3.66	26	P	Pb	10 59 22.1	-0.9
HRRZ	**Handcock Road**	3.73	24	P	Pb	10 59 21.7	-2.5
FOZ	**Fox Glacier**	3.76	241		Pn	10 59 17.6	+1.8
FOZ	**Fox Glacier**	3.76	241	P	Pn	10 59 17.3	+1.5
RTZ	**Ruatahuna**	3.78	33		Pn	10 59 15.9	-0.3
RTZ	**Ruatahuna**	3.78	33	P	Pn	10 59 15.5	-0.7
HSRZ	**Hossack Road**	3.79	23	P	Pb	10 59 24.0	-1.1
SNGZ	**Shannon Statio**	3.80	38	P	Pn	10 59 14.9	-1.6
MHGZ	**Mahia Peninsul**	3.80	47	P	Pn	10 59 14.8	-1.7
MUGZ	**Murupara**	3.82	30	P	Pn	10 59 17.6	+0.9
LBZ	**Lake Benmore**	3.99	228	Pn	Pn	10 59 20.4	+1.3
LBZ	**Lake Benmore**	3.99	228	P	Pn	10 59 19.7	+0.7
RAGZ	**Rawiri**	4.06	36	P	Pn	10 59 18.5	-1.7
URZ	**Urewera**	4.14	32	Pn	Pn	10 59 19.1	-2.0
	2.6nm,0.3s,baz=326,slow=5.8,SNR=19						
URZ				Sn	Sn	11 00 07.7	-1.3
	4.1nm,0.3s,baz=345,slow=18,SNR=1.4						
	5.9nm,0.3s						
URZ	**Urewera**	4.14	32	P	Pn	10 59 20.5	-0.6
URZ	**Urewera**	4.14	32	P	Pn	10 59 19.6	-1.5
TOZ	**Tahuroa Road**	4.17	13	Pn	Pn	10 59 20.0	-1.6
TOZ	**Tahuroa Road**	4.17	13	P	Pn	10 59 22.9	+1.3
ODZ	**Otahua Downs**	4.21	219		Pn	10 59 21.6	-0.4
ODZ	**Otahua Downs**	4.21	219	P	Pn	10 59 21.8	-0.2
ODZ	**Otahua Downs**	4.21	219	P	Pn	10 59 21.5	-0.5
TGRZ	**Tauranga**	4.34	20	P	Pn	10 59 25.8	+1.9
TWGZ	**Tauwhareparae**	4.58	39	P	Pn	10 59 25.7	-1.5
RUGZ	**Raukumara Rang**	4.62	35	P	Pn	10 59 26.1	-1.7
JCZ	**Jackson Bay**	4.67	239	P	Pn	10 59 30.1	+1.7
JCZ	**Jackson Bay**	4.67	239	P	Pn	10 59 30.3	+1.9
AWAZ	**Awhitu Peninsu**	4.75	3	P	Pn	10 59 31.3	+1.8
HAZ	**Te Kaha**	4.84	34	P	Pn	10 59 29.2	-1.5
ETAZ	**East Tamaki Re**	4.88	5	P	Pn	10 59 33.2	+1.9
WTAZ	**Waiatarua**	4.88	2	P	Pn	10 59 33.6	+2.3
WKZ	**Wanaka**	4.92	230	Pn	Pn	10 59 32.2	+0.4
WKZ	**Wanaka**	4.92	230	P	Pn	10 59 31.9	+0.1
HBAZ	**Herne Bay Bore**	4.97	4	P	Pn	10 59 34.9	+2.4
EAZ	**Earnscleugh**	5.01	225	P	Pn	10 59 33.1	0.0
RVAZ	**Riverhead Bore**	5.04	2	P	Pn	10 59 35.1	+1.6
WIAZ	**Waiheke Island**	5.05	7	P	Pn	10 59 35.1	+1.4
MBAZ	**Motutapu North**	5.06	5	P	Pn	10 59 35.3	+1.6
KUZ	**Kuaotunu**	5.17	12	P	Pn	10 59 36.6	+1.3
	75nm,0.8s						
KUZ	**Kuaotunu**	5.17	12	P	Pn	10 59 36.0	+0.7
ABAZ	**Army Bay**	5.22	4	P	Pn	10 59 38.6	+2.6
MXZ	**Matakaoa Point**	5.23	37	Pn	Pn	10 59 34.9	-1.2
MSZ	**Milford Sound**	5.49	236	P	Pn	10 59 45.4	+5.7
MLZ	**Mavora Lakes**	5.75	230	Pn	Pn	10 59 44.4	+1.1
MLZ	**Mavora Lakes**	5.75	230	P	Pn	10 59 44.0	+0.8
SYZ	**Scrubby Hill**	6.03	217	P	Pn	10 59 47.8	+0.9
WHZ	**Wether Hill Ro**	6.17	226	Pn	Pn	10 59 47.6	-1.3
DCZ	**Deep Cove**	6.37	233	Pn	Pn	10 59 50.8	-0.9
OUZ	**Omahuta**	6.61	355	P	Pn	10 59 57.2	+2.1
	53nm,0.7s						
OUZ	**Omahuta**	6.61	355	P	Pn	10 59 57.0	+2.0
CTZ	**Chatham Island**	6.92	109	Pn	Pn	11 00 00.3	+1.0
PYZ	**Puysegur Point**	7.03	229	Pn	Pn	11 00 00.3	-0.5
RAO	**Raoul Island**	14.02	29	Pn	Pn	11 01 35.4	-1.1
MCQ	**Macquarie Isla**	16.28	214	Pn	Pn	11 02 06.3	+0.1
ASAR	**Alice Springs**	38.12	286	P	P	11 05 35.1	-1.8
	0.3nm,0.4s,baz=126,slow=6.9,SNR=9.6						
	0.3nm,0.4s						
WB2	**Warramunga Arr**	40.19	290	P	P	11 05 52.9	-1.3
WB2				IAmb	IAmb	11 06 25.4	
	comp=Z,11nm,1.5s						
WRAB	**Tennant Creek**	40.19	290	P	P	11 05 53.5	-0.7
WRAB				IAmb	IAmb	11 05 55.4	
	comp=Z,5.2nm,1.3s						
WRA	**Warramunga Arr**	40.19	290	P	P	11 05 51.8	-2.4
	comp=Z,0.5nm,0.6s,baz=127,slow=8.5,SNR=13						
WRA				PcP	PcP	11 07 56.4	-1.8
	comp=Z,0.2nm,0.7s,baz=124,slow=3.3,SNR=1.8						
	comp=Z,0.5nm,0.6s						
WRA	**Warramunga Arr**	40.19	290	P	P	11 05 55.0	+0.8
WB0	**Warramunga Arr**	40.27	291	P	P	11 05 54.4	-0.5
WB0				IAmb	IAmb	11 06 27.6	
	comp=Z,6.9nm,1.3s						
MTN	**Manton Dam**	47.31	295	P	P	11 06 51.8	+0.3
MTN				IAmb	IAmb	11 07 12.1	
	comp=Z,18nm,1.3s						
QSPA	**South Pole Qui**	48.31	180	P	P	11 07 02.4	+3.5
	comp=Z,1.1nm,0.7s,baz=360,slow=0.4,SNR=7.6						
	comp=Z,1.1nm,0.7s						
QSPA	**South Pole Qui**	48.31	180	P	P	11 06 59.3	+0.5
QSPA				IAmb	IAmb	11 07 38.5	
	comp=Z,4.7nm,1.2s						
YKA	**Yellowknife Ar**	118.40	30	PKP	PKPdf	11 17 04.2	+0.1
	comp=Z,0.3nm,0.8s,baz=251,slow=1.5,SNR=5.5						
ARCES	**ARCESS Array B**	147.86	340	PKPbc	PKPdf	11 18 01.1	+2.5
	comp=Z,2.2nm,0.8s,baz=33,slow=3.7,SNR=4.2						
TORD	**Torodi Ar. Bea**	150.73	195	PKPbc	PKPbc	11 18 10.7	+0.4
	comp=Z,0.5nm,0.5s,baz=156,slow=2.8,SNR=4.8						

NNC 21 11:10:06.2±5.8**,44°.06N**×**87°.97E,h0km,mb3.5,mpv3.1,**
6C-7D,Error ellipse: s-maj=96.4km s-min=41.4km
az=39.0,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	4.84	306	⇓Pn	Pn	11 11 20.2	-0.1
	1.1nm,0.5s,baz=124,slow=14,SNR=30						
MK31				⇑Pg	Pg	11 11 40.0	+1.0
	1.1nm,0.5s,baz=126,slow=16,SNR=4.4						
MK31				⇓Sn	Sn	11 12 16.8	-0.3
	1.2nm,0.5s,baz=122,slow=25,SNR=3.6						
MK31				Lg	Lg	11 12 43.1	
	2.6nm,0.6s,baz=130,slow=26,SNR=3.8						
MAKZ	**Makanchi**	5.03	305	⇑Pn	Pn	11 11 22.9	0.0
	2.6nm,0.6s						
MAKZ				⇑Pg	Pg	11 11 43.5	+0.9
	1.8nm,0.6s						
MAKZ				⇓Sn	Sn	11 12 20.3	-1.5
	1.8nm,0.7s						
MAKZ				⇓Lg	Lg	11 12 45.8	
	4.1nm,0.8s						
KURBB	**Kurchatov Arra**	9.17	319	⇓Pn	Pn	11 12 18.5	-1.1
	1.0nm,0.6s						
KURBB				⇓Sn	Sn	11 14 09.7	+6.3
	3.6nm,0.7s						
KURBB				⇑Lg	Lg	11 15 04.2	
	10nm,1.2s						
KURK	**Kurchatov**	9.19	320	⇑Pn	Pn	11 12 17.5	-2.4
	0.7nm,0.5s						
KURK				⇑Sn	Sn	11 14 01.6	-2.3
	1.0nm,0.7s						
KURK				⇓Lg	Lg	11 14 58.2	
	5.0nm,1.1s						

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*SJA **21** 11:14:58.4±0.4,31°.24S×68°.23W,h111km±2km,ML3.9, MW4.1,Hypocentre not reviewed by the ISC*

*IDC **21** 11:14:59.4±1.0,31°.31S×68°.37W,h106km±6km,mb3.6/1, mbtmp3.7/6,MS2.8/1,Error ellipse: s-maj=40.6km s-min=20.8km az=103.0*

ISC 21 11:14:58.6±0.8**,31°.17S**±0°.06×**68°.5W**±0°.2**,h100km,n11,**
σ**1**^{s}**.20**/14**,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJA	**San Juan**	0.36	186	*e*P		11 15 15.5	
SJA				*e*S		11 15 27.9	
CFA	**Coronel Fontan**	0.50	151	P	Pn	11 15 16.2	+1.8
	881nm,0.3s,baz=321,slow=4.8,SNR=3159						
CFA				S	Sn	11 15 27.9	+1.6
	3µm,0.3s,baz=120,slow=20,SNR=81						
CFA	**Coronel Fontan**	0.50	151	*e*P		11 15 15.5	
CFA				*e*S		11 15 27.7	
RTLS	**Leoncito**	0.91	226	*e*P		11 15 22.1	
RTLS				*e*S		11 15 39.5	

RTLS				IAML		11 15 41.0	
	comp=Z,2µm,0.6s						
ASAL	Salagasta	1.44	191	eP		11 15 25.6	
ASAL				eS		11 15 46.1	
CO01	Juntas del Tor	1.80	311	eP		11 15 32.4	
CO01				eS		11 15 59.0	
CO01				IAML		11 16 01.5	
	comp=Z,332nm,0.4s						
CO03	El Pedregal	1.89	279	eP		11 15 34.3	
CO03				eS		11 16 01.4	
CO03				IAML		11 16 02.8	
	comp=Z,696nm,0.8s						
AAGR	Agrelo	1.93	188	eP		11 15 31.6	
AAGR				eS		11 15 56.1	
CO02	Combarbal	2.13	268	eP		11 15 37.6	
CO02				eS		11 16 06.5	
CO02				IAML		11 16 07.7	
	comp=Z,885nm,0.3s						
GO04	Tololo Observa	2.20	296	eP		11 15 39.0	
GO04				eS		11 16 08.6	
LVC	Limon Verde	8.53	358	P	Pn	11 17 00.9	+1.2
	comp=Z,4.9nm,0.3s,baz=150,slow=11,SNR=20						
LVC				S	Sn	11 18 34.2	-0.2
	comp=Z,2.3nm,0.5s,baz=240,slow=10.0,SNR=1.5						
PLCA	Paso Flores	9.69	189	P	Pn	11 17 13.8	-1.1
	comp=Z,1.5nm,1.0s,baz=331,slow=13,SNR=2.6						
CPUP	Villa Florida	10.94	67	P	Pn	11 17 30.4	-1.7
	comp=Z,0.6nm,0.4s,baz=259,slow=10,SNR=1.5						
LPAZ	La Paz	14.82	1	P	P	11 18 27.6	+0.6
	comp=Z,1.3nm,0.6s,baz=237,slow=3.6,SNR=5.4						
LPAZ				LR	LR	11 26 07.3	
	comp=Z,37nm,19.2s,baz=196,slow=45						
SIV	San Ignacio	16.57	26	P	Pn	11 18 45.8	+0.9
	comp=Z,0.5nm,0.5s,baz=200,slow=18,SNR=3.6						
TORD	Torodi Ar. Bea	80.43	68	P	P	11 26 60.0	+0.4
	comp=Z,1.0nm,0.8s,baz=274,slow=5.8,SNR=5.9						
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	121.39	204	PKP	PKPdf	11 33 39.4	-1.3
	comp=Z,0.2nm,0.6s,baz=131,slow=1.3,SNR=1.6						
WRA	Warramunga Arr	124.64	206	PKP	PKiKP	11 33 46.2	-1.1
	comp=Z,0.2nm,0.5s,baz=167,slow=1.7,SNR=7.9						
ZALV	Zalesovo Beam	150.25	32	PKPbc	PKPbc	11 34 37.3	-0.2
	comp=Z,1.0nm,0.6s,baz=266,slow=4.3,SNR=5.4						
MKAR	Makanchi Array	152.67	47	PKPbc	PKiKP	11 34 43.7	+0.1
	comp=Z,0.4nm,0.7s,baz=320,slow=3.2,SNR=6.3						
MKAR				PKPab	PKPab	11 34 54.5	+0.1
	comp=Z,0.6nm,0.7s,baz=293,slow=4.1,SNR=5.8						

IDC 21 11:18:25.1±2.8**, 11°.72S**×**114°.43E, h0km, mb3.2**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=129.0km s-min=28.7km az=45.0, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.81	116	P	P	11 23 07.6	-0.7
	0.8nm,0.6s,baz=289,slow=12,SNR=7.7						
WRA				S	S	11 26 43.7	-18
	0.4nm,0.9s,baz=286,slow=25,SNR=2.3						
	0.8nm,0.6s						
ASAR	Alice Springs	22.00	125	P	P	11 23 21.7	+0.6
	0.2nm,0.4s,baz=302,slow=9.9,SNR=6.6						
ASAR				S	S	11 27 14.6	-10
	0.2nm,0.6s,baz=300,slow=24,SNR=1.8						
	0.2nm,0.4s						
MKAR	Makanchi Array	64.97	336	P	P	11 29 06.8	+0.1
	0.2nm,0.4s,baz=154,slow=7.4,SNR=3.7						
	0.2nm,0.4s						

IDC ***21*** *11:45:41.0±1.8, 7°.66S×116°.37E, h0km, mb3.6/6, mbtmp3.7/6, MS3.2/1, Error ellipse: s-maj=101.0km s-min=14.6km az=50.0*

DJA ***21*** *11:46:14.6±0.6, 8°S±12°×11°7E±°, h288km±6km, M4.0/8, mb4.4/1, MLv3.8/8*

ISC 21 11:46:12.6±0.9**, 7°.7S**±0°.1×**117°.23E**±0°.08**, h300km, n15, σ1.s50**/17**, mb3.4**/5**, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWSI	Taliwang, Sumb	1.07	199	P	Pn	11 46 52.9	-0.4
TWSI				S	S	11 47 23.4	-2.3
PLAI	Plampang	1.23	154	P	Pn	11 46 53.6	-0.5
PLAI				S	S	11 47 25.1	-2.1
IGBI	Denpasar	2.33	242	P	Pn	11 47 01.9	-0.2
IGBI				S	S	11 47 38.9	-2.7
JAGI	Jajag, Banyuwa	3.13	256	P	Pn	11 47 09.6	-0.1
BSSI	Bau Bau, Buton	3.60	64	P	Pn	11 47 18.4	+3.9
BLJI	Banyuglugur	3.60	269	P	Pn	11 47 15.4	+0.9
GMJI	Gumukmas	3.79	261	P	Pn	11 47 16.6	+0.1
BASI	Baing, Sumba	4.14	127	P	Pn	11 47 19.8	-0.5
PWJI	Pagerwojo	5.38	266	P	Pn	11 47 35.6	+1.0
WRA	Warramunga Arr	20.56	128	P	P	11 50 29.5	+0.2
	0.7nm,0.6s,baz=318,slow=10,SNR=14						
WRA				S	S	11 54 27.6	+27
	0.3nm,0.6s,baz=295,slow=20,SNR=2.4						
WRA				LR	LR	11 58 56.1	
	comp=Z,72nm,21.4s,baz=260,slow=37						
	0.7nm,0.6s						
ASAR	Alice Springs	22.52	137	P	P	11 50 49.4	+1.9
	0.7nm,0.4s,baz=311,slow=8.8,SNR=26						
	0.7nm,0.4s						
STKA	Stephens Creek	33.05	140	P	P	11 52 23.3	+2.7
	2.0nm,0.9s,baz=295,slow=7.4,SNR=5.2						
	2.0nm,0.9s						
SONM	Songino Array	56.14	351	P	P	11 55 21.2	-0.3
	0.8nm,0.8s,baz=171,slow=10,SNR=4.4						
	0.8nm,0.8s						
MKAR	Makanchi Array	62.53	334	P	P	11 56 04.5	-0.5
	0.2nm,0.3s,baz=150,slow=5.8,SNR=6.8						
	0.2nm,0.3s						
ZALV	Zalesovo Beam	67.23	340	P	P	11 56 33.7	-1.2
	0.7nm,0.6s,baz=161,slow=6.1,SNR=2.4						
	0.7nm,0.6s						

NEIC ***21*** *11:56:56.8±1.6, 31°.05S±0°.01×69°.93W±0°.08, h133km±9km, mb4.4/3, ML3.6(GUC), Error ellipse: s-maj=9.7km s-min=2.0km az=85.0*

GUC ***21*** *11:56:57.2±0.8, 31°.03S×70°.08W, h122km±4km, ML3.7*

ISC 21 11:56:56.4±0.9**, 31°.01S**±0°.03×**70°.07W**±0°.07**, h136**km±8km**, n59, σ0.s86**/81**, 4C-5D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO03	El Pedregal	0.56	287	Pn	Pn	11 57 16.7	+0.1
CO03	El Pedregal	0.56	287	⇓iP	Pn	11 57 16.7	+0.1
CO03				iS	Sn	11 57 31.0	-1.0
CO03				IAML		11 57 32.3	
	comp=E,4µm,0.2s						
CO02	Combarbal	0.82	256		Pn	11 57 19.1	+0.6
CO02	Combarbal	0.82	256	⇑iP	Pn	11 57 19.0	+0.6
CO02				iS	Sn	11 57 35.3	0.0
CO02				IAML		11 57 37.7	
	comp=E,3µm,0.3s						
CO01	Juntas del Tor	1.03	359		Pn	11 57 21.4	+1.0
CO01	Juntas del Tor	1.03	359	⇓iP	Pn	11 57 21.5	+1.0
CO01				eS	Sn	11 57 39.2	+0.5
GO04	Tololo Observa	1.04	323	Pn	Pn	11 57 21.1	+0.5
GO04	Tololo Observa	1.04	323	⇓iP	Pn	11 57 21.1	+0.5
GO04				iS	Sn	11 57 38.6	-0.3
GO04				IAML		11 57 43.8	
	comp=E,3µm,0.4s						
ZON	Zonda	1.31	115		Pn	11 57 20.9	-2.0
CO06	Fray Jorge	1.38	284		Pn	11 57 24.2	+0.5
CO06	Fray Jorge	1.38	284	⇑iP	Pn	11 57 24.4	+0.7
CO06				iS	Sn	11 57 44.2	-0.3
CO06				IAML		11 57 45.6	
	comp=E,526nm,0.4s						
CO05	La Serena	1.48	317		Pn	11 57 25.6	+0.8
CO05	La Serena	1.48	317	iP	Pn	11 57 25.6	+0.8
CO05				iS	Sn	11 57 46.5	+0.2
CO05				IAML		11 57 47.2	
	comp=N,1µm,0.3s						
VA03	San Esteban	1.80	193		Pn	11 57 29.3	+0.9
VA03	San Esteban	1.80	193	⇓iP	Pn	11 57 29.3	+0.9
VA03				iS	Sn	11 57 53.5	+0.5
VA03				IAML		11 57 54.9	
	comp=E,1µm,0.3s						
VA06	Catapilco	1.87	214	Pn	Pn	11 57 29.5	+0.4
VA06	Catapilco	1.87	214	iP	Pn	11 57 29.2	+0.1
VA06				iS	Sn	11 57 53.3	-0.9
VA06				IAML		11 57 58.6	
	comp=E,534nm,0.3s						
LCO	Las Campanas	2.06	345	Pn	Pn	11 57 32.8	+1.0
LCO	Las Campanas	2.06	345	iP	Pn	11 57 32.8	+1.0
LCO				iS	Sn	11 57 59.1	+0.2
ROCH	El Roble	2.11	202	eP	Pn	11 57 32.6	+0.3
ROCH				iS	Sn	11 57 59.6	-0.3
ROCH				IAML		11 58 01.8	
	comp=N,643nm,0.6s						
ROC1	El Roble	2.12	202		Pn	11 57 32.9	+0.4
AC05	El Transito	2.17	355	Pn	Pn	11 57 34.5	+1.6
PEL	Peldehue	2.19	194		Pn	11 57 33.8	+0.6
PEL	Peldehue	2.19	194	⇓iP	Pn	11 57 33.6	+0.5
PEL				iS	Sn	11 58 01.0	-0.4
PEL				IAML		11 58 04.8	
	comp=E,230nm,0.3s						
MT10	Hacienda Santa	2.29	190	iP	Pn	11 57 35.5	+1.1
MT10				iS	Sn	11 58 04.3	+0.6
MT10				IAML		11 58 07.5	
	comp=E,496nm,0.5s						
FCH	Farellones	2.32	185	iP	Pn	11 57 36.4	+1.4
FCH				iS	Sn	11 58 05.9	+1.3
FCH				IAML		11 58 08.0	
	comp=E,280nm,0.2s						
MT04	Ro Olivares	2.39	181	⇑iP	Pn	11 57 37.0	+1.2
MT04				iS	Sn	11 58 07.3	+1.3
MT04				IAML		11 58 13.0	
	comp=E,141nm,0.1s						
VA01	Torpederas	2.41	213	Pn	Pn	11 57 36.3	+0.5
MT02	Curacav	2.42	202		Pn	11 57 36.5	+0.6
MT02	Curacav	2.42	202	eP	Pn	11 57 36.0	+0.1
MT08	Bocatoma Ro	2.43	179	eP	Pn	11 57 37.4	+1.2
MT08				iS	Sn	11 58 07.1	+0.2
MT05	Renca	2.44	193		Pn	11 57 37.0	+0.8
MT05	Renca	2.44	193	⇑iP	Pn	11 57 37.0	+0.8
MT05				iS	Sn	11 58 07.4	+0.5
MT05				IAML		11 58 08.4	
	comp=E,631nm,0.2s						
MT03	Universidad Ad	2.51	188		Pn	11 57 38.0	+0.9
MT03	Universidad Ad	2.51	188	eP	Pn	11 57 38.0	+0.9
MT03				iS	Sn	11 58 08.4	+0.1
MT13	San Alfonso	2.73	184		Pn	11 57 41.0	+1.1
MT13	San Alfonso	2.73	184	iP	Pn	11 57 41.1	+1.1
MT13				iS	Sn	11 58 14.5	+0.9
MT13				IAML		11 58 18.5	
	comp=N,193nm,0.3s						
MT12	Pirque	2.75	188	iP	Pn	11 57 40.7	+0.6
MT12				iS	Sn	11 58 13.9	+0.1
MT12				IAML		11 58 16.8	
	comp=E,252nm,0.6s						
LMEL	Las Melosas	2.83	182		Pn	11 57 42.4	+1.1
LMEL	Las Melosas	2.83	182	eP	Pn	11 57 42.4	+1.1
LMEL				eS	Sn	11 58 16.9	+1.0
LMEL				IAML		11 58 22.7	
	comp=N,206nm,0.1s						
MT09	Talagante	2.87	195	Pn	Pn	11 57 41.5	-0.2
MT09	Talagante	2.87	195	iP	Pn	11 57 41.5	-0.2
MT09				iS	Sn	11 58 15.1	-1.6
MT09				IAML		11 58 17.0	
	comp=E,250nm,0.3s						
AC04	Llanos de Chal	2.93	342	Pn	Pn	11 57 43.5	+1.2
VA05	Santo Domingo	2.95	206		Pn	11 57 42.2	-0.3
MT01	Popeta	3.02	199	Pn	Pn	11 57 43.3	-0.1
MT01	Popeta	3.02	199	iP	Pn	11 57 43.4	-0.1
MT01				iS	Sn	11 58 17.9	-1.9
GO03	Copiap	3.41	358	Pn	Pn	11 57 49.5	+0.9
BO01	Tunca	3.48	194	Pn	Pn	11 57 49.0	-0.5
BO02	Sierra Bellavi	3.82	189		Pn	11 57 54.0	0.0
AC02	Maricunga	4.24	11		Pn	11 58 01.1	+1.1
AC01	Pan de Azucar	4.86	354	Pn	Pn	11 58 08.0	+0.2
GO02	Mina Guanaco	5.84	4	Pn	Pn	11 58 20.8	-0.3
GO06	Curarrehue	8.63	187	Pn	Pn	11 58 57.0	-1.4
TRQA	Tornquist	9.69	139	Pn	Pn	11 59 11.5	-1.0
PLCA	Paso Flores	9.71	182	Pn	Pn	11 59 12.4	-0.3
PB18	Visviri	13.37	2	Pn	Pn	12 00 01.5	+0.1
GO09	Cerro Castillo	20.31	184	P	P	12 01 22.4	+0.9
GO09				IAmb	IAmb	12 01 24.7	
	comp=Z,28nm,1.2s						
ETMB	Extrema	21.39	10	P	P	12 01 31.6	-1.7
ETMB				IAmb	IAmb	12 01 36.0	
	comp=Z,6.5nm,1.4s						
QSPA	South Pole Qui	59.22	180	P	P	12 06 43.4	+0.4
QSPA				IAmb	IAmb	12 06 53.3	
	comp=Z,9.1nm,1.5s						

IDC ***21*** *11:58:43.2±1.0, 37°.26S×179°.52E, h0km, mb4.3/5, mbtmp4.4/6, ML5.0/1, Error ellipse: s-maj=31.9km s-min=21.8km az=15.0*

NEIC ***21*** *11:58:43.0±1.4, 37°.78S±0°.08×179°.72E±0°.09, h10km±2km, mb4.7/25, Error ellipse: s-maj=15.6km s-min=8.7km az=34.0*

WEL ***21*** *11:58:45.5±0.8, 38°S±6°×18°0E±°, h33km, M4.5/27, ML4.8/27, MLv4.5/27, Error ellipse: s-maj=0.0km s-min=0.0km az=35.0, confirmed*

NOU ***21*** *11:58:47.2, 37°.82S×179°.51E, h13km, MLv4.5/15, Off E. Coast of N. Island, N.Z.*

ISC 21 11:58:40.6±1.5**, 37°.66S**±0°.05×**179°.93E**±0°.05**, h4**km±8km**, n210, σ2.s00**/220**, mb4.5**/18**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.21	262	P	Pg	11 59 05.9	+2.1
WMGZ				S	Sg	11 59 21.5	+2.1
MXZ	Matakaoa Point	1.29	274		Pg	11 59 06.0	+0.6
MXZ				Sn	Sn	11 59 20.9	-2.3
MXZ	Matakaoa Point	1.29	274	P	Pg	11 59 05.9	+0.6
MXZ	Matakaoa Point	1.29	274	P	Pg	11 59 05.9	+0.6
MXZ				S	Sn	11 59 20.9	-2.3
PUZ	Puketiti	1.38	252	P	Pg	11 59 08.7	+1.6
PUZ				S	Sg	11 59 26.5	+1.4
PKGZ	Pakihiroa	1.48	261	P	Pg	11 59 09.5	+0.4
PKGZ				S	Sg	11 59 27.9	-0.4
CNGZ	Carnagh Statio	1.59	238	P	Pg	11 59 12.5	+1.5
TWGZ	Tauwhareparae	1.62	251	P	Pg	11 59 12.2	+0.5
TWGZ				S	Sg	11 59 33.3	+0.5
HAZ	Te Kaha	1.70	266	P	Pb	11 59 12.6	+0.1
RUGZ	Raukumara Rang	1.81	260	P	Pb	11 59 14.0	-0.3
TKGZ	Te Karaka	1.81	244	P	Pb	11 59 14.9	+0.6
TKGZ				S	Sb	11 59 36.9	-0.6
RIGZ	Rimuhau	2.00	238	P	Pb	11 59 17.7	+0.2
RIGZ				S	Sb	11 59 42.1	-0.7
MWZ	Matawai	2.01	250	P	Pb	11 59 17.0	-0.8
RAGZ	Rawiri	2.15	246	P	Pb	11 59 19.6	-0.6
MHGZ	Mahia Peninsul	2.17	226	P	Pb	11 59 20.5	-0.1
WIZ	White Island	2.18	273	P	Pb	11 59 18.8	-1.8
WSRZ	White Island S	2.19	273	P	Pb	11 59 20.0	-0.8
KNZ	Kokohu	2.23	232	P	Pb	11 59 20.7	-0.8
URZ	Urewera	2.30	254	Pn	Pb	11 59 21.4	-1.3
	439nm,0.3s,baz=117,slow=1.8,SNR=2377						
URZ				Sn	Sn	11 59 47.0	-1.2
	191nm,0.3s,baz=71,slow=23,SNR=19						
	948nm,0.3s						
URZ	Urewera	2.30	254	P	Pb	11 59 21.7	-1.0
URZ	Urewera	2.30	254	P	Pb	11 59 21.5	-1.3
SNGZ	Shannon Statio	2.32	240	P	Pb	11 59 21.9	-1.2
WHRZ	Whale Island	2.35	264	P	Pb	11 59 21.7	-1.8
RTZ	Ruatahuna	2.51	247		Pn	11 59 21.7	-0.6
RTZ	Ruatahuna	2.51	247	P	Pb	11 59 24.8	-1.5
WHHZ	Waihua	2.54	235	P	Pb	11 59 25.2	-1.6
EDRZ	Edgecumbe	2.56	259	P	Pb	11 59 24.9	-2.3
RAHZ	Arahi	2.56	240	P	Pb	11 59 25.3	-1.8
MARZ	Manawahe	2.60	262	P	Pn	11 59 24.7	+1.3
MUGZ	Murupara	2.62	251	P	Pb	11 59 25.9	-2.2
MTHZ	Maungataniwha	2.70	243	P	Pb	11 59 27.3	-2.2
TARZ	Mount Tarawera	2.77	257	P	Pn	11 59 27.6	+1.8
MKRZ	Makatiti	2.78	259	P	Pb	11 59 28.0	-2.9
RRRZ	Republican Roa	2.78	255	P	Pb	11 59 28.3	-2.6
ARHZ	Aropaoanui	2.80	234	P	Pb	11 59 28.7	-2.5
LIRZ	Lichensteins R	2.83	262	P	Pn	11 59 28.1	+1.6
NMHZ	Naumai	2.84	239	P	Pb	11 59 29.3	-2.6
OMRZ	Omania	2.85	260	P	Pn	11 59 28.6	+1.7
HLRZ	Highlands Stat	2.89	257	P	Pn	11 59 29.4	+2.0
TGRZ	Tauranga	2.91	268	P	Pn	11 59 28.4	+0.8
PRRZ	Plateau Road	2.91	252	P	Pn	11 59 29.4	+1.7
KARZ	Kaharoa	2.94	262	P	Pn	11 59 29.4	+1.3
MYRZ	Mayor Island	2.96	276	P	Pn	11 59 29.0	+0.7
ALRZ	Allen Road	2.97	251	P	Pn	11 59 30.5	+2.0
HRRZ	Handcock Road	2.97	255	P	Pn	11 59 30.2	+1.7
HSRZ	Hossack Road	2.98	256	P	Pn	11 59 30.8	+2.1
CKHZ	Cape Kidnapper	2.99	227	P	Pn	11 59 30.9	+2.1
NGRZ	Ngongotaha	2.99	260	P	Pn	11 59 30.7	+1.8
UTU	Utuhina	3.00	259	P	Pn	11 59 31.2	+2.3
MRHZ	Matea Rd	3.00	246	P	Pn	11 59 31.0	+2.0
BKZ	Black Stump Fm	3.09	240		Pn	11 59 32.4	+2.2
BKZ	Black Stump Fm	3.09	240	P	Pn	11 59 32.5	+2.3
BKZ	Black Stump Fm	3.09	240	P	Pn	11 59 32.3	+2.2
WPRZ	Whakapapatarin	3.09	253	P	Pn	11 59 32.3	+2.0
GRRZ	Galatos Road	3.09	256	P	Pn	11 59 32.2	+2.0
MCHZ	McNeill Hill	3.10	234	P	Pn	11 59 32.6	+2.4
KMRZ	Kaimai	3.16	265	P	Pn	11 59 32.4	+1.2
KAHZ	Kahuranaki	3.20	227	P	Pn	11 59 33.7	+2.0
KWHZ	Kaweka Forest	3.26	236	P	Pn	11 59 34.9	+2.3
WHTZ	Whakaora	3.29	251	P	Pn	11 59 35.8	+2.8
KUTZ	Kaahu Road	3.34	254	P	Pn	11 59 35.4	+1.7
PXZ	Pawanui	3.36	224	P	Pn	11 59 35.1	+1.2
RITZ	Rihia Road	3.46	246	P	Pn	11 59 37.4	+2.1
WATZ	Wairara	3.47	251	P	Pn	11 59 38.1	+2.7
KUZ	Kuaotunu	3.48	284	P	Pn	11 59 35.4	-0.1
KUZ	Kuaotunu	3.48	284	P	Pn	11 59 35.1	-0.4
RATZ	Rangitukua	3.48	249	P	Pn	11 59 37.7	+2.0
TOZ	Tahuroa Road	3.51	268	Pn	Pn	11 59 36.6	+0.6
TOZ	Tahuroa Road	3.51	268	P	Pn	11 59 36.8	+0.8
TLZ	Tolley Road	3.53	258	P	Pn	11 59 37.6	+1.3
BHHZ	Black Hill Sta	3.54	238	P	Pn	11 59 38.2	+1.8
KATZ	Kakaramea	3.58	247	P	Pn	11 59 39.8	+2.8
TMVZ	Te Maari	3.62	245	P	Pn	11 59 39.2	+1.6
ETVZ	East Tongariro	3.62	245	P	Pn	11 59 39.3	+1.6
WPHZ	Waipukurau	3.63	228	P	Pn	11 59 39.0	+1.4
NTVZ	North Tongarir	3.63	245	P	Pn	11 59 39.4	+1.6
PRHZ	Porangahau	3.65	224	P	Pn	11 59 38.9	+1.0
KRVZ	Karewarewa	3.66	246	P	Pn	11 59 39.8	+1.7
OTVZ	Oturere	3.67	245	P	Pn	11 59 39.9	+1.6
PNHZ	Pukenui	3.68	231	P	Pn	11 59 39.6	+1.2
NNVZ	North Ngauruho	3.69	245	P	Pn	11 59 40.3	+1.7
SNVZ	South Ngauruho	3.69	244	P	Pn	11 59 40.3	+1.6
WTVZ	West Tongariro	3.70	246	P	Pn	11 59 40.7	+2.0
MOVZ	Moawhango	3.71	241	P	Pn	11 59 40.2	+1.5
TUVZ	Tukino	3.72	243	P	Pn	11 59 40.9	+2.0
NGZ	Ngauruhoe	3.72	245	P	Pn	11 59 40.6	+1.6
WHVZ	Whangaehu Hut	3.77	243	P	Pn	11 59 41.4	+1.7
WNVZ	Wahianoa	3.78	243	P	Pn	11 59 41.4	+1.5
DRZ	Dome Shelter	3.78	243	P	Pn	11 59 42.1	+2.1
FWVZ	Far West T-bar	3.78	244	P	Pn	11 59 41.9	+1.9
TWVZ	Taurewa	3.80	247	P	Pn	11 59 41.8	+1.8
TRVZ	Turoa	3.81	243	P	Pn	11 59 41.7	+1.4
GRZ	Great Barrier	3.85	290	P	Pn	11 59 40.8	+0.2
MTVZ	Mangateitei	3.90	242	P	Pn	11 59 43.4	+2.1
TSZ	Takapari Road	3.91	231	P	Pn	11 59 42.6	+1.1
WIAZ	Waiheke Island	3.92	281	P	Pn	11 59 42.5	+0.8
DVHZ	Dannevirke	3.94	227	P	Pn	11 59 42.8	+0.9
PKVZ	Pokaka	3.94	244	P	Pn	11 59 44.0	+2.0
ETAZ	East Tamaki Re	4.05	279	P	Pn	11 59 44.4	+1.1
HIZ	Hauiti	4.09	256		Pn	11 59 45.6	+1.7
HIZ	Hauiti	4.09	256	P	Pn	11 59 46.6	+2.7
HIZ	Hauiti	4.09	256	P	Pn	11 59 46.1	+2.2
MBAZ	Motutapu North	4.11	281	P	Pn	11 59 45.5	+1.2
BFZ	Birch Farm	4.16	222		Pn	11 59 43.8	-1.0
BFZ	Birch Farm	4.16	222	P	Pn	11 59 45.6	+0.8
ABAZ	Army Bay	4.21	283	P	Pn	11 59 46.6	+1.1
PRWZ	Pori Road	4.22	226	P	Pn	11 59 46.9	+1.2
HBAZ	Herne Bay Bore	4.22	279	P	Pn	11 59 47.2	+1.5
POWZ	Post Office Ro	4.23	229	P	Pn	11 59 47.2	+1.3
AWAZ	Awhitu Peninsu	4.25	276	P	Pn	11 59 47.7	+1.6
VRZ	Vera Road	4.32	249	P	Pn	11 59 49.1	+2.1
WTAZ	Waiatarua	4.33	278	P	Pn	11 59 48.9	+1.6
RVAZ	Riverhead Bore	4.36	280	P	Pn	11 59 48.9	+1.3
WAZ	Wanganui	4.39	240	P	Pn	11 59 50.1	+2.0
TIWZ	Tintock	4.42	224	P	Pn	11 59 49.9	+1.4
MRZ	Mangatainoka R	4.51	227	Pn	Pn	11 59 50.3	+0.5
MRZ	Mangatainoka R	4.51	227	P	Pn	11 59 50.2	+0.4
LREZ	Lake Rotokare	4.69	246	P	Pn	11 59 54.5	+2.3
DREZ	Durham Road	4.75	250	P	Pn	11 59 56.6	+3.6
WCZ	Waipu Caves	4.80	289	P	Pn	11 59 54.6	+1.0
PREZ	Palmer Road	4.83	248	P	Pn	11 59 57.8	+3.8
NEZ	North Egmont	4.85	249	P	Pn	11 59 57.4	+2.9
OGWZ	Otaki Gorge	4.85	228	P	Pn	11 59 54.7	+0.3
PKE	Pukeiti	4.91	250	P	Pn	11 59 58.5	+3.3
KHEZ	Kahui Hut	4.92	249	P	Pn	11 59 58.6	+3.2
KHEZ	Kahui Hut	4.92	249	P	Pn	11 59 58.6	+3.2
NBEZ	Newall Road No	5.02	250	P	Pn	12 00 00.1	+3.4
KIW	Kapiti Island	5.04	229	P	Pn	11 59 57.2	+0.2
NMEZ	Namu Road	5.05	248	P	Pn	12 00 00.5	+3.3
PLWZ	Palliser	5.31	221		Pn	11 59 58.7	-2.0
BHW	Baring Head	5.41	225	Pn	Pn	12 00 00.8	-1.3
SNZO	South Karori	5.44	226	Pn	Pn	12 00 00.8	-1.6
SNZO	South Karori	5.44	226	P	Pn	12 00 01.9	-0.5
TCW	Tory Channel	5.63	229	Pn	Pn	12 00 03.7	-1.4
OUZ	Omahuta	5.66	294	P	Pn	12 00 06.8	+1.3
OUZ	Omahuta	5.66	294	P	Pn	12 00 06.7	+1.3
TUWZ	Tuamarina	5.96	229		Pn	12 00 07.4	-2.2
CMWZ	Cape Campbell	6.00	225	Pn	Pn	12 00 08.4	-1.9
BSWZ	Blackbirch Sta	6.18	227	Pn	Pn	12 00 11.5	-1.1
NNZ	Nelson	6.19	233	Pn	Pn	12 00 12.4	-0.3
TKNZ	Takaka Hill	6.36	236		Pn	12 00 14.3	-0.9
QRZ	Quartz Range	6.55	239	Pn	Pn	12 00 16.8	-0.9
QRZ	Quartz Range	6.55	239	P	Pn	12 00 16.4	-1.4
CTZ	Chatham Island	6.61	158	Pn	Pn	12 00 20.6	+2.1
CTZ	Chatham Island	6.61	158	P	Pn	12 00 25.0	+6.5
CTZ	Chatham Island	6.61	158	P	Pn	12 00 25.1	+6.6
CTZ				S	Sn	12 01 34.5	+0.2
MRNZ	Matariki Terra	6.68	234	Pn	Pn	12 00 18.2	-1.3
THZ	Tophouse	6.79	231		Pn	12 00 17.8	-3.2
KHZ	Kahutara	6.82	224		Pn	12 00 19.8	-1.7
GVZ	Greta Valley S	7.47	223	Pn	Pn	12 00 29.9	-0.5
DSZ	Denniston Nort	7.47	234	Pn	Pn	12 00 28.7	-1.7
LTZ	Lake Taylor	7.77	226		Pn	12 00 32.6	-1.9
AMCZ	Amberley	7.82	223	Pn	Pn	12 00 33.3	-1.8
MQZ	McQueen's Vall	8.18	220	Pn	Pn	12 00 39.3	-0.7
INZ	Inchbonnie	8.23	229		Pn	12 00 40.2	-0.5
OXZ	Oxford	8.25	224		Pn	12 00 39.5	-1.6
GLKZ	Green Lake	8.57	13	S	Sn	12 02 14.6	-7.9
RPZ	Rata Peaks	9.05	225	Pn	Pn	12 00 52.5	+0.5
	3.1nm,0.3s,baz=116,slow=1.8,SNR=16						
RPZ				Sn	Sn	12 02 26.0	-8.3
	5.7nm,0.3s,baz=311,slow=23,SNR=12						
RPZ	Rata Peaks	9.05	225	Pn	Pn	12 00 50.4	-1.6
RPZ	Rata Peaks	9.05	225	P	Pn	12 00 51.7	-0.3
FOZ	Fox Glacier	9.67	230	Pn	Pn	12 00 59.9	-0.6
LBZ	Lake Benmore	9.96	225	Pn	Pn	12 01 02.9	-1.6
ODZ	Otahua Downs	10.15	220	Pn	Pn	12 01 05.0	-2.1
ODZ	Otahua Downs	10.15	220	P	Pn	12 01 05.7	-1.3
JCZ	Jackson Bay	10.59	229	P	Pn	12 01 13.1	-0.1
WKZ	Wanaka	10.89	225	Pn	Pn	12 01 16.4	-0.8
MLZ	Mavora Lakes	11.72	225	Pn	Pn	12 01 27.7	-0.9
SYZ	Scrubby Hill	11.94	219	P	Pn	12 01 32.0	+0.5
WHZ	Wether Hill Ro	12.14	224	Pn	Pn	12 01 33.2	-1.0
DCZ	Deep Cove	12.33	227	Pn	Pn	12 01 34.5	-2.3
TAU	Tasmania Unive	25.32	248	P	P	12 04 05.8	-2.5
TAU				IAmb	IAmb	12 04 20.4	
	comp=Z,32nm,1.1s						
TOO	Toolangi	27.19	260	P	P	12 04 24.5	-0.9
TOO				IAmb	IAmb	12 04 45.0	
	comp=Z,31nm,1.4s						
STKA	Stephens Creek	31.86	269	P	P	12 05 08.0	+1.2
	comp=Z,1.9nm,0.8s,baz=98,slow=14,SNR=1.7						
	comp=Z,1.9nm,0.8s						
STKA	Stephens Creek	31.86	269	P	P	12 05 06.0	-0.7
CTAO	Charters Tower	34.05	291	P	P	12 05 25.4	-0.7
CTAO				IAmb	IAmb	12 05 39.5	
	comp=Z,7.2nm,1.2s						
BBOO	Buckleboo	35.91	264	P	P	12 05 40.3	-1.7
COEN	Coen	40.26	296	P	P	12 06 18.9	+0.1
COEN				IAmb	IAmb	12 06 21.7	
	comp=Z,11nm,1.1s						
VNDA	Vanda	40.71	186	P	P	12 06 22.9	+1.0
VNDA				IAmb	IAmb	12 06 51.5	
	comp=Z,24nm,1.4s						
PMG	Port Moresby	40.78	305	P	P	12 06 22.3	-0.8
PMG				IAmb	IAmb	12 06 23.9	
	comp=Z,15nm,1.2s						
AS31	Alice Springs	41.57	276	P	P	12 06 29.4	-0.3
ASAR	Alice Springs	41.57	276	P	P	12 06 29.6	-0.1
	comp=Z,5.2nm,0.5s,baz=123,slow=8.0,SNR=138						
ASAR				PcP	PcP	12 08 27.5	+0.5
	comp=Z,0.2nm,0.5s,baz=116,slow=4.2,SNR=1.6						
	comp=Z,5.2nm,0.5s						
ASAR	Alice Springs	41.57	276	P	P	12 06 29.4	-0.2
RABL	Rabaul	41.88	316	P	P	12 06 32.1	-0.1
FORT	Forrest	42.98	263	P	P	12 06 40.2	-0.8
FORT				IAmb	IAmb	12 07 04.4	
	comp=Z,24nm,0.9s						
WB2	Warramunga Arr	43.21	281	P	P	12 06 42.8	-0.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRAB	Tennant Creek	43.21	281	P	P	12 06 41.8	-1.2
WRAB				IAmb	IAmb	12 06 54.4	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	43.22	281	P	P	12 06 42.5	-0.5
	comp=Z,2.2nm,0.5s,baz=121,slow=7.6,SNR=60						
WRA				PcP	PcP	12 08 36.0	+3.5
	comp=Z,0.3nm,0.6s,baz=115,slow=3.2,SNR=2.2						
	comp=Z,2.2nm,0.5s						
WRA	Warramunga Arr	43.22	281	P	P	12 06 41.8	-1.3
WB0	Warramunga Arr	43.27	281	P	P	12 06 43.2	-0.3
WB0				IAmb	IAmb	12 06 43.7	
	comp=Z,5.0nm,0.5s						
MTN	Manton Dam	49.89	286	P	P	12 07 35.5	+0.1
MTN				IAmb	IAmb	12 08 04.2	
	comp=Z,19nm,1.2s						
KNRA	Kununurra	50.00	282	P	P	12 07 35.6	-0.6
NWAO	Narrogin (SRO)	50.55	255	P	P	12 07 40.3	0.0
FITZ	Fitzroy Crossi	51.06	277	P	P	12 07 44.4	+0.2
QSPA	South Pole Qui	52.46	180	P	P	12 08 00.6	+6.2
	comp=Z,4.9nm,0.9s,baz=20,slow=1.6,SNR=20						
	comp=Z,4.9nm,0.9s						
QSPA	South Pole Qui	52.46	180	P	P	12 07 55.7	+1.3
QSPA				IAmb	IAmb	12 08 03.5	
	comp=Z,6.3nm,1.1s						
MORW	Morawa	53.14	259	P	P	12 07 59.0	-0.7
MORW				IAmb	IAmb	12 08 00.2	
	comp=Z,14nm,1.1s						
PSA00	Pilbara Seismi	53.78	269	P	P	12 08 03.8	-0.7
MBWA	Marble Bar	54.09	270	P	P	12 08 06.8	+0.1
FAKI	Fak Fak	55.64	297	P	P	12 08 17.6	-0.4
FAKI				IAmb	IAmb	12 08 23.6	
	comp=Z,12nm,1.0s						
SOEI	Soe	57.06	284	P	P	12 08 27.9	-0.4
PLCA	Paso Flores	78.82	133	P	P	12 10 51.0	+6.2
	comp=Z,2.0nm,0.9s,baz=228,slow=6.1,SNR=5.2						
	comp=Z,2.0nm,0.9s						
NJ2	Nanjing	89.73	312	*e*P	P	12 11 43.6	+3.6
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HHC	Hu-ho-hao-te	100.05	314	*e*P	Pdif	12 12 30.8	+3.7
HHC				pmax	pmax		
	comp=Z,41nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.6s						
BTO	Baotou	100.77	313	*e*P	Pdif	12 12 21.0	-9.3
BTO				pP	pPdif	12 12 25.1	-5.0
BTO	Baotou	100.77	313	S	SKKSac	12 23 44.9	-0.2
WMQ	Urumqi	116.24	306	*e*P	PKiKP	12 17 27.6	+2.6
KSH	Kashi	122.25	297	P	PKiKP	12 17 41.4	+4.4
ARCES	ARCESS Array B	145.22	345	PKP	PKiKP	12 18 20.2	-2.1
	comp=Z,3.0nm,0.5s,baz=26,slow=3.0,SNR=20						
FINES	FINESS Array B	151.15	334	PKPbc	PKiKP	12 18 36.0	+1.3
	comp=Z,3.8nm,0.8s,baz=70,slow=4.6,SNR=5.7						
TORD	Torodi Ar. Bea	155.53	184	PKPab	PKPab	12 19 05.5	+3.9
	comp=Z,1.4nm,0.8s,baz=183,slow=4.3,SNR=6.7						

IDC 21 12:08:12.1±12.0,**6°.14S**×**105°.92E,h0**^{km}**,mb3.8**/2,
mbtmp3.8/2,**Error ellipse: s-maj=897.6km**
s-min=109.3km az=58.0,Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	56.72	341	P	P	12 17 57.5	-0.1
	0.3nm,0.5s,baz=150,slow=7.7,SNR=4.4						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	62.44	346	P	P	12 18 36.9	0.0
	1.0nm,0.4s,baz=156,slow=6.6,SNR=5.0						
	1.0nm,0.4s						
TXAR	Lajitas Array	143.79	47	PKP	PKPdf	12 27 49.5	-0.6
	0.2nm,0.6s,baz=300,slow=1.8,SNR=3.9						

ROM 21 12:12:58.9±0.1,**42°.587N**±0°.003×**13°.312E**±0°.004,
h14^{km}**,ML1.2**/7**,4C-1D,Error ellipse: s-maj=0.3km**
s-min=0.1km az=178.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	SAN MARTINO	0.05	21	⇓P	Pg	12 13 01.9	+0.2
SMA1				S	Sg	12 13 03.8	+0.1
SMA1				AML	AML		
	comp=E,208µm,0.3s						
SMA1				AML	AML		
	comp=N,112µm,0.6s						
SMA1				AML	AML		
	comp=N,112µm,1.4s						
SMA1				AML	AML		
	comp=E,208µm,0.3s						
CAMP	Campotosto	0.09	125	P	Pg	12 13 02.4	+0.3
CAMP				S	Sg	12 13 04.5	+0.3
RM33	Pellescritta (	0.11	223	⇑P	Pb	12 13 02.6	-0.2
RM33				S	Sg	12 13 04.9	+0.4
RM33				AML	AML		
	comp=E,204µm,0.3s						
RM33				AML	AML		
	comp=N,108µm,0.3s						
RM33				AML	AML		
	comp=N,108µm,1.7s						
T1246	Crognaleto (TE	0.13	91	⇑P	Pg	12 13 02.9	+0.3
T1246				S	Sg	12 13 05.5	+0.4
T1218	Civita (PG)	0.17	300	⇑P	Pg	12 13 03.3	+0.2
T1218				S	Sg	12 13 06.3	+0.4
T1218				AML	AML		
	comp=N,337µm,0.2s						
T1218				AML	AML		
	comp=E,118µm,0.7s						
T1214	Arquata del Tr	0.19	336	P	Pg	12 13 03.7	+0.3
T1214				S	Sg	12 13 07.1	+0.6
TERO	Teramo	0.22	80	⇑P	Pg	12 13 04.0	+0.2
TERO				S	Sg	12 13 07.6	+0.5
TERO				AML	AML		
	comp=E,97µm,0.1s						
TERO				AML	AML		
	comp=N,79µm,0.1s						
GIGS	Gran Sasso	0.23	126	P	Pg	12 13 04.4	+0.3
GIGS				S	Sb	12 13 08.3	-0.7
T1212	Cascia, Frazio	0.26	310	P	Pg	12 13 04.7	+0.2
T1212				S	Sg	12 13 08.7	+0.5
T1222	Castel Sant'An	0.28	228	P	Pg	12 13 05.1	+0.4
T1222				S	Sb	12 13 09.6	-0.5
T1222				AML	AML		
	comp=N,58µm,1.4s						
T1222				AML	AML		
	comp=N,58µm,1.4s						
T1222				AML	AML		
	comp=E,68µm,0.4s						
T1222				AML	AML		
	comp=N,58µm,0.6s						
MMO1	Montemonaco	0.31	2	P	Pb	12 13 06.4	+0.1
MMO1				S	Sb	12 13 10.7	-0.6
T1211	Morro Reatino	0.34	261	P	Pg	12 13 06.1	+0.1
T1211				S	Sg	12 13 11.4	+0.6
T1211				AML	AML		
	comp=E,79µm,0.1s						
T1211				AML	AML		
	comp=N,46µm,0.1s						

ROM 21 12:13:53.3±0.1,**42°.690N**±0°.003×**13°.313E**±0°.004,
h13^{km}**,ML1.1**/5**,1C-1D,Error ellipse: s-maj=0.3km**
s-min=0.2km az=56.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	SAN MARTINO	0.06	164	⇓P	Pg	12 13 56.2	+0.3
SMA1				S	Sg	12 13 57.7	-0.2
SMA1				AML	AML		
	comp=N,327µm,0.3s						
SMA1				AML	AML		
	comp=E,286µm,0.1s						
T1214	Arquata del Tr	0.10	312	P	Pg	12 13 56.8	+0.3
T1214				S	Sg	12 13 59.0	+0.3
T1214				AML	AML		
	comp=E,130µm,1.4s						
T1214				AML	AML		
	comp=N,118µm,0.8s						
T1214				AML	AML		
	comp=E,130µm,1.4s						
T1214				AML	AML		
	comp=N,118µm,0.9s						
T1214				AML	AML		
	comp=E,130µm,0.6s						
T1214				AML	AML		
	comp=N,118µm,1.1s						
T1218	Civita (PG)	0.15	262	⇑P	Pg	12 13 57.3	+0.3
T1218				S	Sg	12 14 00.1	+0.5
CAMP	Campotosto	0.17	155	P	Pg	12 13 57.8	+0.5
CAMP				S	Sg	12 14 00.5	+0.4
T1246	Crognaleto (TE	0.17	129	P	Pb	12 13 58.1	-0.3
T1246				S	Sg	12 14 00.8	+0.7
T1245	Castelsantange	0.19	331	P	Pg	12 13 58.0	+0.3
T1245				S	Sg	12 14 01.3	+0.6
T1245				AML	AML		
	comp=E,64µm,1.6s						
T1245				AML	AML		
	comp=N,99µm,0.2s						
T1245				AML	AML		
	comp=N,99µm,0.2s						
T1245				AML	AML		
	comp=E,64µm,0.4s						
RM33	Pellescritta (	0.20	202	P	Pg	12 13 58.1	+0.5
RM33				S	Sg	12 14 01.5	+0.7
T1212	Cascia, Frazio	0.21	287	P	Pg	12 13 58.1	+0.3
T1212				S	Sg	12 14 01.7	+0.6
MMO1	Montemonaco	0.21	3	P	Pg	12 13 58.3	+0.4
MMO1				S	Sg	12 14 01.9	+0.8
TERO	Teramo	0.23	107	P	Pg	12 13 58.5	+0.3
TERO				S	Sg	12 14 02.1	+0.6
TERO				AML	AML		
	comp=E,57µm,0.2s						
TERO				AML	AML		
	comp=N,54µm,0.1s						
MC2	Monte Cornacci	0.24	338	P	Pg	12 13 58.3	-0.2
MC2				S	Sg	12 14 03.0	+0.9
T1217	Poggiodomo (PG	0.28	275	P	Pg	12 13 59.4	+0.3
T1217				S	Sb	12 14 04.1	-0.8
T1211	Morro Reatino	0.37	245	P	Pg	12 14 01.0	+0.2
T1211				S	Sb	12 14 06.9	-0.6

WEL 21 12:17:23.5±0.5,**42°S**±3°×**17°4E**±°,**h12**^{km}**,M2.2**/5**,ML2.5**/7,
MLv2.2/5**,Error ellipse: s-maj=0.0km s-min=0.0km**
az=118.7,confirmed,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.35	207	P	Pg	12 17 31.0	+0.5
KHZ				S	Sb	12 17 36.9	-0.2
BSWZ	Blackbirch Sta	0.40	13	P	Pg	12 17 31.9	+0.5
BSWZ				S	Sb	12 17 38.4	-0.2
CMWZ	Cape Campbell	0.49	44	P	Pb	12 17 34.1	0.0
TUWZ	Tuamarina	0.69	12	P	Pb	12 17 37.2	-0.2
TUWZ				S	Sb	12 17 47.7	+0.8
THZ	Tophouse	0.72	298	P	Pb	12 17 38.0	+0.1
THZ				S	Sb	12 17 48.3	+0.6
NNZ	Nelson	0.93	342	P	Pb	12 17 41.5	0.0
TCW	Tory Channel	0.98	24	P	Pg	12 17 41.9	-0.4
TCW				S	Sn	12 17 56.0	-0.8
GVZ	Greta Valley S	1.01	211	P	Pn	12 17 43.3	-0.2
GVZ				S	Sn	12 17 57.4	-0.3
WEL	Wellington	1.12	43	P	Pb	12 17 44.4	-0.3
TKNZ	Takaka Hill	1.22	331	P	Pg	12 17 47.4	+0.4
DUWZ	D'Urville Isla	1.31	6	P	Pb	12 17 48.0	0.0
DUWZ				S	Sg	12 18 05.7	+0.1
CAW	Cannon Point	1.40	45	P	Pn	12 17 47.7	-1.2
CAW				S	Sn	12 18 06.0	-1.3
KIW	Kapiti Island	1.52	35	P	Pn	12 17 50.1	-0.4
OGWZ	Otaki Gorge	1.67	40	P	Pn	12 17 51.5	-1.1
MQZ	McQueen's Vall	1.79	206	P	Pn	12 17 52.5	-1.7
MQZ				S	Sn	12 18 14.1	-2.7
MRZ	Mangatainoka R	1.99	44	P	Pn	12 17 55.4	-1.6
MRZ				S	Sn	12 18 19.9	-1.9

IDC 21 12:26:57.3±9.4,**2°.55S**×**138°.05E,h0**^{km}**,mb3.1**/2,
mbtmp3.2/3**,ML3.5**/1**,Error ellipse: s-maj=407.9km**
s-min=33.3km az=84.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.66	192	P	Pn	12 31 04.5	-0.5
	0.2nm,0.3s,baz=13,slow=12,SNR=11						
WRA				S	Sn	12 34 11.7	-11
	0.5nm,1.0s,baz=7.9,slow=24,SNR=2.1						
	0.2nm,0.3s						
ASAR	Alice Springs	21.37	190	P	P	12 31 46.9	+0.3
	0.2nm,0.4s,baz=15,slow=8.8,SNR=2.0						
	0.2nm,0.4s						
MKAR	Makanchi Array	69.26	323	P	P	12 38 06.4	0.0
	0.2nm,0.5s,baz=103,slow=6.4,SNR=2.9						
	0.2nm,0.5s						

WEL 21 12:43:28.2±0.4,**43°S**±4°×**17°3E**±°,**h12**^{km}**,M2.4**/5,
ML2.6/12**,MLv2.4**/5**,Error ellipse: s-maj=0.0km**
s-min=0.0km az=131.0,confirmed,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.17	46	P	Pg	12 43 32.4	+0.4
KHZ				S	Sg	12 43 35.4	+0.7
GVZ	Greta Valley S	0.50	210	P	Pb	12 43 39.3	+0.4
GVZ				S	Sb	12 43 47.4	+1.3
AMCZ	Amberley	0.83	219	P	Pb	12 43 45.0	+0.4
THZ	Tophouse	0.85	336	P	Pg	12 43 44.5	-0.1
LTZ	Lake Taylor	0.85	253	P	Pb	12 43 44.9	0.0
LTZ				S	Sb	12 43 56.3	0.0
BSWZ	Blackbirch Sta	0.90	25	P	Pb	12 43 46.1	+0.3
BSWZ				S	Sn	12 44 00.9	+1.3
TUWZ	Tuamarina	1.18	21	P	Pb	12 43 50.7	+0.1
TUWZ				S	Sn	12 44 07.5	+0.9
MRNZ	Matariki Terra	1.23	338	P	Pb	12 43 51.4	+0.1
OXZ	Oxford	1.26	231	P	Pn	12 43 50.5	-1.1
MQZ	McQueen's Vall	1.28	204	P	Pn	12 43 50.3	-1.6
AKCZ	Akaroa Harbour	1.38	194	P	Pn	12 43 52.0	-1.2
DSZ	Denniston Nort	1.41	304	P	Pb	12 43 54.1	-0.3
DSZ				S	Sg	12 44 13.7	+0.1
INZ	Inchbonnie	1.44	262	P	Pn	12 43 54.1	+0.1
RACZ	Rakaia	1.50	217	P	Pn	12 43 53.5	-1.3
MHCZ	Mount Hutt	1.66	232	P	Pn	12 43 55.9	-1.2
WACZ	Wakanui South	1.80	218	P	Pn	12 43 57.7	-1.3
CAW	Cannon Point	1.91	42	P	Pn	12 43 59.9	-0.6
WVZ	Waitaha Valley	2.01	254	P	Pn	12 44 02.1	+0.2
RPZ	Rata Peaks	2.07	234	P	Pn	12 44 01.7	-1.0
ARCZ	Arundel	2.14	228	P	Pn	12 44 02.6	-1.1
TMZ	Timaru	2.53	222	P	Pn	12 44 07.9	-1.1
ODZ	Otahua Downs	3.19	217	P	Pn	12 44 16.7	-1.5

IDC ***21*** *13:10:43.5±0.8,2°.24N×126°.64E,h0*^{km}*,mb3.9/9,*
mbtmp3.9/9,Error ellipse: s-maj=51.4km s-min=15.0km
az=69.0
NEIC ***21*** *13:10:45.5±1.1,2°.5N±0°.1×127°.0E±0°.1,h14*^{km}*±4*^{km}*,*
mb4.3/17,Error ellipse: s-maj=23.5km s-min=8.9km
az=51.0
DJA ***21*** *13:10:50.5±1.0,2°N±3°×12°7E±°,h28*^{km}*±10*^{km}*,M4.2/12,*
mb4.4/6,mB5.2/3,MLv4.1/12,Mw(mB)4.5/3
ISC 21 13:10:45.6±0.5,**2°.37N**±0°.06×**126°.90E**±0°.09**,h10**^{km}**,n53,**
σ**1**^{s}**48**/56**,mb4.3**/19**,2C-1D,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.66	164	Pn	Pn	13 11 15.0	+0.2
TNTI	Ternate	1.66	164	P	Pb	13 11 16.8	+0.6
TNTI				S	Sb	13 11 38.1	+0.9
SGSI	Sangihe	1.89	314	P	Pg	13 11 21.7	-0.2
SGSI				S	Sb	13 11 43.4	-0.5
LBMI	Labuha	3.05	169	P	Pn	13 11 36.0	+2.1
LBMI				S	Sn	13 12 11.8	+1.3
GTOI	Gorontalo	4.25	246	P	Pn	13 11 50.5	+0.1
SANI	Sanana	4.49	192	P	Pn	13 11 55.5	+1.9
SKMP	Bagumbayan, Su	4.74	330	⇑*e*P	Pn	13 12 00.4	+3.2
SKMP				*e*S	Sn	13 12 55.0	+2.7
MRSI	Marisa	5.30	249	P	Pn	13 12 06.2	+1.3
	77nm,1.0s,725nm0.2nm						
LUWI	Luwuk	5.34	231	Pn	Pn	13 12 08.4	+3.0
LUWI	Luwuk	5.34	231	P	Pn	13 12 08.1	+2.7
	193nm,0.9s,3µm1.2nm						
CTBH	Cotabato--PC H	5.50	331	⇑*e*P	Pb	13 12 14.3	-7.3
NLAI	Namlea	5.58	178	P	Pn	13 12 11.1	+2.4
	16nm,1.2s,0.1nm						
MSAI	Masohi	6.03	160	P	Pn	13 12 17.0	+2.1
TOLI2	Tolitoli	6.24	259	Pn	Pn	13 12 16.0	-1.8
PAGZ	Pagadian	6.47	327	⇓*e*P	Pn	13 12 24.6	+3.7
BNDI	Bandanaira	7.48	156	P	Pn	13 12 37.0	+2.2
	44nm,1.3s,0.2nm						
MYLDM	Lahad Datu	8.83	289	Pn	Pn	13 12 55.3	+1.9
SBUM	Sibu	14.66	271		P	13 14 19.9	+0.3
MTN	Manton Dam	15.69	165	Pn	Pn	13 14 26.1	-0.8
MTN				IAmb	IAmb	13 14 45.4	
	comp=Z,43nm,1.5s						
KNRA	Kununurra	18.03	174	P	Pn	13 14 55.9	-0.5
KNRA				IAmb	IAmb	13 15 11.1	
	comp=Z,12nm,0.8s						
CMJI	Cimerak	20.99	241	P	P	13 15 40.5	+11
WB0	Warramunga Arr	23.20	162	P	P	13 15 51.5	-1.3
WB0				IAmb	IAmb	13 15 56.0	
	comp=Z,7.6nm,0.8s						
WRAB	Tennant Creek	23.34	162	P	P	13 15 53.4	-0.9
WRAB				IAmb	IAmb	13 16 03.4	
	comp=Z,7.6nm,0.8s						
WRA	Warramunga Arr	23.35	162	P	P	13 15 53.3	-0.9
	comp=Z,5.3nm,0.6s,baz=334,slow=11,SNR=56						
	comp=Z,5.3nm,0.6s						
WRA	Warramunga Arr	23.35	162	P	P	13 15 53.4	-0.9
WB2	Warramunga Arr	23.35	162	P	P	13 15 53.5	-0.8
WB2				IAmb	IAmb	13 16 03.9	
	comp=Z,9.1nm,0.8s						
AS31	Alice Springs	26.76	166	P	P	13 16 25.1	-0.7
ASAR	Alice Springs	26.77	166	P	P	13 16 25.1	-0.7
	comp=Z,1.6nm,0.7s,baz=344,slow=10,SNR=28						
ASAR				PcP	PcP	13 19 48.4	-0.6
	comp=Z,0.5nm,0.6s,baz=340,slow=1.5,SNR=5.4						
	comp=Z,1.6nm,0.7s						
ASAR	Alice Springs	26.77	166	P	P	13 16 25.5	-0.3
PHRA	Phrae	30.66	303	P	P	13 16 59.3	-1.2
CMAR	Chiang Mai Arr	31.72	302	P	P	13 17 08.2	-1.7
	comp=Z,0.7nm,0.5s,baz=116,slow=6.9,SNR=8.1						
	comp=Z,0.7nm,0.5s						
CHTO	Chiang Mai	31.88	303	P	P	13 17 10.4	-0.9
FORT	Forrest	32.98	178	P	P	13 17 19.4	-1.4
PZH	PanZhiHua	34.04	317	P	P	13 17 31.3	+1.1
KSRS	Korea Array	34.93	1	P	P	13 17 38.1	+0.5
	comp=Z,1.0nm,0.6s,baz=179,slow=10,SNR=2.6						
	comp=Z,1.0nm,0.6s						
BBOO	Buckleboo	36.05	167	P	P	13 17 46.6	-0.8
EIDS	Eidsvold	36.19	141	P	P	13 17 47.9	-0.8
EIDS				IAmb	IAmb	13 17 53.3	
	comp=Z,9.8nm,1.1s						
STKA	Stephens Creek	36.81	159	P	P	13 17 52.5	-1.3
	comp=Z,4.7nm,0.7s,baz=330,slow=12,SNR=10						
	comp=Z,4.7nm,0.7s						
STKA	Stephens Creek	36.81	159	P	P	13 17 53.5	-0.3
ARMA	Armidale	40.25	146	P	P	13 18 22.3	-0.7
ARMA				IAmb	IAmb	13 18 25.5	
	comp=Z,12nm,0.7s						
HHC	Hu-ho-hao-te	40.73	342	*e*P	P	13 18 27.8	+1.0
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,210nm,6.9s						
KLR	Kul'dur	46.87	4	P	P	13 19 16.7	+0.8
	comp=Z,0.7nm,0.4s,baz=184,slow=13,SNR=2.2						
	comp=Z,0.7nm,0.4s						
SONM	Songino Array	48.63	342	P	P	13 19 29.2	-0.5
	comp=Z,1.0nm,0.9s,baz=157,slow=8.0,SNR=4.8						
	comp=Z,1.0nm,0.9s						
WMQ	Urumqi	53.93	326	*e*P	P	13 20 09.8	+0.3
WMQ				pmax	pmax		
	comp=Z,14nm,0.6s						
WMQ				LR	LR		
	comp=Z,170nm,20.1s						
MK31	Makanchi Array	58.76	326	P	P	13 20 42.2	-1.8
MK31				IAmb	IAmb	13 20 46.9	
	comp=Z,1.2nm,0.9s						
MKAR	Makanchi Array	58.76	326	P	P	13 20 42.7	-1.3
	comp=Z,0.4nm,0.3s,baz=127,slow=7.5,SNR=12						
	comp=Z,0.4nm,0.3s						
MKAR	Makanchi Array	58.76	326	P	P	13 20 42.3	-1.6
MAKZ	Makanchi	58.95	326	P	P	13 20 43.5	-1.7
MAKZ				IAmb	IAmb	13 20 46.9	
	comp=Z,2.5nm,1.0s						
KSH	Kashi	59.12	316	P	P	13 20 48.3	+1.6
KSH				pP	pwP	13 20 52.8	+0.6
KSH				PcP	PcP	13 21 37.8	+2.5
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZALV	Zalesovo Beam	61.87	333	P	P	13 21 05.7	+0.7
	comp=Z,0.6nm,0.7s,baz=133,slow=6.1,SNR=2.3						
	comp=Z,0.6nm,0.7s						
KURK	Kurchatov	62.97	328	P	P	13 21 11.0	-1.4
KKAR	Karatay Array	64.34	317	P	P	13 21 19.7	-1.9
ABKAR	Akbulak array	73.30	321	P	P	13 22 16.4	-1.0

ROM 21 13:13:33.5±0.1,**42°.501N**±0°.003×**13°.392E**±0°.004,
h10^{km}**,ML2.2**/34**,21C-6D,Error ellipse: s-maj=0.4km**
s-min=0.3km az=46.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	Campotosto	0.04	20	⇓P	Pg	13 13 35.9	+0.2
CAMP				S	Sg	13 13 37.1	0.0
CAMP				AML	AML		
	comp=N,3520µm,0.6s						
CAMP				AML	AML		
	comp=E,1800µm,1.5s						
CAMP				AML	AML		
	comp=E,1800µm,0.5s						
T1247	Pizzolo (AQ)	0.09	229	⇓P	Pg	13 13 36.6	+0.5
T1247				S	Sg	13 13 38.4	+0.4
T1246	Crognaleto (TE	0.11	42	⇓P	Pg	13 13 36.9	+0.5
T1246				S	Sg	13 13 38.9	+0.4
RM33	Pellescritta (	0.13	273	⇑P	Pg	13 13 37.2	+0.5
RM33				S	Sg	13 13 39.5	+0.5
RM33				AML	AML		
	comp=N,4855µm,0.4s						
RM33				AML	AML		
	comp=E,4280µm,1.0s						
RM33				AML	AML		
	comp=E,4240µm,1.0s						
RM33				AML	AML		
	comp=N,4670µm,0.4s						
RM33				AML	AML		
	comp=E,4240µm,1.0s						
RM33				AML	AML		
	comp=E,4280µm,1.0s						
RM33				AML	AML		
	comp=N,4860µm,0.4s						
SMA1	SAN MARTINO	0.14	342	⇑P	Pg	13 13 37.2	+0.4
SMA1				S	Sg	13 13 40.2	+1.1
SMA1				AML	AML		
	comp=E,1800µm,1.2s						
SMA1				AML	AML		
	comp=N,1500µm,1.0s						
SMA1				AML	AML		
	comp=E,1800µm,0.8s						
GIGS	Gran Sasso	0.14	111	⇑P	Pg	13 13 37.3	+0.5
GIGS				S	Sg	13 13 39.6	+0.5
GIGS				AML	AML		
	comp=N,1126µm,0.8s						
GIGS				AML	AML		
	comp=E,1435µm,0.3s						
GIGS				AML	AML		
	comp=E,1435µm,1.7s						
AQU	L'Aquila	0.15	177	P	Pb	13 13 37.7	-0.7
AQU				S	Sg	13 13 40.3	+1.0
AQU				AML	AML		
	comp=N,4625µm,1.1s						
AQU				AML	AML		
	comp=E,4025µm,0.2s						
AQU				AML	AML		
	comp=E,4095µm,0.3s						
AQU				AML	AML		
	comp=N,4515µm,1.1s						
T1218	Civita (PG)	0.27	310	⇑P	Pg	13 13 39.3	+0.4
T1218				S	Sg	13 13 43.8	+1.2
FAGN	Fagnano	0.28	149	⇑P	Pg	13 13 39.6	+0.5
FAGN				S	Sb	13 13 44.3	-1.0
FAGN				AML	AML		
	comp=E,5005µm,0.4s						
FAGN				AML	AML		
	comp=N,3515µm,0.6s						
T1222	Castel Sant'An	0.28	249	P	Pb	13 13 40.1	-0.6
T1222				S	Sb	13 13 44.8	-0.6
T1222				AML	AML		
	comp=E,913µm,0.4s						
T1222				AML	AML		
	comp=N,966µm,0.6s						
T1222				AML	AML		
	comp=E,892µm,1.1s						
T1222				AML	AML		
	comp=N,968µm,0.6s						

T1222				AML	AML		
	comp=N,967µm,0.6s						
T1222				AML	AML		
	comp=E,892µm,1.1s						
T1222				AML	AML		
	comp=N,972µm,0.6s						
T1222				AML	AML		
	comp=E,913µm,0.4s						
T1222				AML	AML		
	comp=N,967µm,1.4s						
T1222				AML	AML		
	comp=N,972µm,1.4s						
T1222				AML	AML		
	comp=E,892µm,0.9s						
T1214	**Arquata del Tr**	0.29	332	⇑P	Pg	13 13 40.0	+0.5
T1214				S	Sb	13 13 45.5	-0.4
T1214				AML	AML		
	comp=E,526µm,0.7s						
T1214				AML	AML		
	comp=N,502µm,0.5s						
T1214				AML	AML		
	comp=N,502µm,0.5s						
T1214				AML	AML		
	comp=E,526µm,0.7s						
T1214				AML	AML		
	comp=N,514µm,0.4s						
FIAM	**Fiamignano**	0.31	221	P	Pg	13 13 40.2	+0.4
FIAM				S	Sb	13 13 45.3	-1.0
FIAM				AML	AML		
	comp=E,922µm,0.5s						
FIAM				AML	AML		
	comp=E,922µm,1.5s						
FIAM				AML	AML		
	comp=N,614µm,1.1s						
VCEL	**Villa Celiera**	0.35	108	P	Pb	13 13 41.2	-0.7
VCEL				AML	AML		
	comp=N,1290µm,0.4s						
VCEL				AML	AML		
	comp=E,1980µm,0.4s						
T1241	**Roccafluvione,**	0.36	5	⇑P	Pg	13 13 41.2	+0.6
T1241				AML	AML		
	comp=N,21000µm,1.6s						
T1241				AML	AML		
	comp=E,13500µm,1.6s						
T1241				AML	AML		
	comp=N,21000µm,1.6s						
T1241				AML	AML		
	comp=E,280µm,1.0s						
T1241				AML	AML		
	comp=N,242µm,0.7s						
T1212	**Cascia, Frazio**	0.36	314	⇑P	Pg	13 13 41.0	+0.3
T1212				S	Sb	13 13 46.8	-1.0
T1212				AML	AML		
	comp=E,530µm,0.6s						
T1212				AML	AML		
	comp=E,488µm,0.6s						
T1212				AML	AML		
	comp=N,421µm,0.5s						
T1212				AML	AML		
	comp=E,530µm,0.6s						
T1212				AML	AML		
	comp=E,488µm,0.6s						
T1212				AML	AML		
	comp=N,429µm,0.7s						
T1212				AML	AML		
	comp=N,421µm,0.5s						
T1245	**Castelsantange**	0.39	337	⇓P	Pb	13 13 42.0	-0.6
T1245				AML	AML		
	comp=N,558µm,1.5s						
T1245				AML	AML		
	comp=N,488µm,1.5s						
T1245				AML	AML		
	comp=E,440µm,0.3s						
T1245				AML	AML		
	comp=N,557µm,1.5s						
T1245				AML	AML		
	comp=E,438µm,0.5s						
T1245				AML	AML		
	comp=E,441µm,0.3s						
T1245				AML	AML		
	comp=N,488µm,0.5s						
T1245				AML	AML		
	comp=N,557µm,0.5s						
T0110	**Collepietro**	0.40	134	⇑P	Pg	13 13 41.6	+0.3
T0110				S	Sb	13 13 48.5	-0.3
T0110				AML	AML		
	comp=E,1104µm,0.6s						
T0110				AML	AML		
	comp=N,1345µm,0.5s						
T1211	**Morro Reatino**	0.40	275	⇑P	Pg	13 13 41.5	+0.1
T1211				S	Sb	13 13 48.1	-0.8
T1211				AML	AML		
	comp=N,490µm,0.3s						
T1211				AML	AML		
	comp=E,271µm,0.9s						
T1211				AML	AML		
	comp=N,464µm,0.3s						
T1211				AML	AML		
	comp=E,259µm,1.0s						
T1211				AML	AML		
	comp=E,259µm,1.0s						
T1217	**Poggiodomo (PG**	0.40	302	P	Pg	13 13 41.7	+0.2
T1217				AML	AML		
	comp=N,254µm,1.6s						
T1217				AML	AML		
	comp=E,177µm,0.8s						
T1217				AML	AML		
	comp=N,254µm,1.6s						
T1217				AML	AML		
	comp=N,254µm,0.4s						
MMO1	**Montemonaco**	0.40	353	P	Pb	13 13 43.0	+0.3
MC2	**Monte Cornacci**	0.44	340	P	Pg	13 13 42.8	+0.6
ARRO	**Arrone**	0.47	280	⇑P	Pg	13 13 43.1	+0.4
ARRO				AML	AML		
	comp=E,129µm,0.4s						
ARRO				AML	AML		
	comp=N,152µm,0.6s						
ARRO				AML	AML		
	comp=N,152µm,1.4s						
T1216	**Preci, Frazion**	0.48	325	⇑P	Pg	13 13 43.4	+0.5
T1216				AML	AML		
	comp=N,373µm,0.6s						
T1216				AML	AML		
	comp=E,260µm,1.1s						
T1216				AML	AML		
	comp=N,374µm,0.6s						
T1216				AML	AML		
	comp=E,260µm,0.9s						
PTQR	**Pietraquaria**	0.48	179	⇑P	Pb	13 13 43.5	-0.6
PTQR				AML	AML		
	comp=N,188µm,0.5s						
PTQR				AML	AML		
	comp=E,199µm,0.2s						
OFFI	**Offida**	0.48	26	P	Pb	13 13 44.5	+0.4
OFFI				AML	AML		
	comp=E,850µm,0.5s						
OFFI				AML	AML		
	comp=N,739µm,0.7s						
T1256	**Bolognola (MC)**	0.52	346	P	Pg	13 13 44.1	+0.4
T1256				AML	AML		
	comp=E,230µm,1.0s						
T1256				AML	AML		
	comp=E,231µm,1.0s						
T1256				AML	AML		
	comp=N,180µm,0.7s						
GUMA	**Gualdo di Mace**	0.56	356	⇑P	Pb	13 13 45.5	0.0
GUMA				AML	AML		
	comp=E,414µm,0.5s						
GUMA				AML	AML		
	comp=N,588µm,0.4s						
FDMO	**Fiordimonte**	0.58	337	⇓P	Pg	13 13 45.1	+0.3
CESI	**CESI - Serrava**	0.62	325	P	Pg	13 13 45.7	+0.2
CESI				AML	AML		
	comp=E,164µm,0.9s						
CESI				AML	AML		
	comp=N,185µm,0.5s						
CESI				AML	AML		
	comp=E,164µm,1.1s						
INTR	**Introdacqua**	0.62	142	⇑P	Pg	13 13 45.6	+0.1
INTR				S	Sb	13 13 55.6	+0.4
INTR				AML	AML		
	comp=E,199µm,0.5s						
INTR				AML	AML		
	comp=N,502µm,0.6s						
INTR				AML	AML		
	comp=E,200nm,0.8s						
INTR				AML	AML		
	comp=N,383nm,0.6s						
INTR				AML	AML		
	comp=E,199µm,1.5s						
T1219	**Muccia, Frazio**	0.62	333	⇑P	Pg	13 13 45.6	0.0
T1219				AML	AML		
	comp=E,284µm,0.1s						
T1219				AML	AML		
	comp=N,298µm,0.0s						
T1219				AML	AML		
	comp=N,298µm,0.1s						
T1219				AML	AML		
	comp=E,284µm,0.1s						
CERT	**Cerreto**	0.63	209	⇑P	Pb	13 13 46.9	+0.2
CERT				AML	AML		
	comp=E,284µm,0.4s						
CERT				AML	AML		
	comp=N,136µm,0.4s						
CERT				AML	AML		
	comp=E,284µm,1.6s						
T1220	**Camerino, Fraz**	0.65	340	⇑P	Pg	13 13 46.3	+0.2
T1220				S	Sb	13 13 57.0	+0.9
T1220				AML	AML		
	comp=E,780µm,0.4s						
T1220				AML	AML		
	comp=N,570µm,0.4s						
T1220				AML	AML		
	comp=E,779µm,0.4s						
T1220				AML	AML		
	comp=N,574µm,0.4s						
T1220				AML	AML		
	comp=E,779µm,1.6s						
T1220				AML	AML		
	comp=N,574µm,1.6s						
MOMA	**Monte Martano**	0.68	297	⇑P	Pg	13 13 47.0	+0.4
MOMA				AML	AML		
	comp=E,126µm,1.3s						
MOMA				AML	AML		
	comp=N,128µm,0.6s						
MOMA				AML	AML		
	comp=E,126µm,0.7s						
LPEL	**Lama dei Pelig**	0.74	127	S	Sb	13 13 59.6	+0.9
LPEL				AML	AML		
	comp=N,268µm,0.3s						
LPEL				AML	AML		
	comp=E,339µm,0.3s						
EL6	**Elcito**	0.85	346	⇑P	Pg	13 13 50.1	+0.1
EL6				S	Sn	13 14 04.2	-0.1
EL6				AML	AML		
	comp=E,171µm,1.3s						
EL6				AML	AML		
	comp=N,188µm,0.5s						
EL6				AML	AML		
	comp=N,188µm,1.5s						
EL6				AML	AML		
	comp=E,171µm,0.7s						
CING	**Cingoli**	0.89	351	⇑P	Pb	13 13 51.0	0.0
CING				AML	AML		
	comp=N,65µm,1.2s						
CING				AML	AML		
	comp=N,65µm,0.8s						
CING				AML	AML		
	comp=E,104µm,0.5s						
FOSV	**Fossato di Vic**	0.92	330	P	Pg	13 13 48.9	-2.3
FOSV				AML	AML		
	comp=E,65µm,1.3s						
FOSV				AML	AML		
	comp=N,100µm,0.6s						
FOSV				AML	AML		
	comp=E,65µm,0.7s						
APEC	**Apecchio**	1.27	326	S	Sb	13 14 13.1	-1.0
APEC				AML	AML		
	comp=N,102µm,1.1s						
APEC				AML	AML		
	comp=E,118µm,0.7s						
PTRJ	**Pietraroja**	1.42	143	S	Sg	13 14 19.9	+0.8
FROS	**Frosini**	1.79	294	⇓P	Pg	13 14 10.3	+2.4
PII	**Pisa**	2.43	301	P	Pg	13 14 21.1	+1.1

MOS **21** *13:13:38.9±1.2, 5°.78S×104°.56E, h60^{km}, mb5.4/73, Error ellipse: s-maj=8.7km s-min=4.2km az=114.7*

IDC **21** *13:13:39.0±2.0, 5°.94S×104°.54E, h48^{km}±17^{km}, mb4.7/28, mbtmp4.9/28, MS4.0/39, Error ellipse: s-maj=15.8km s-min=9.4km az=52.0*

NEIC **21** *13:13:40.0±2.9, 6°.04S±0°.08×104°.37E±0°.08, h55^{km}±4^{km}, mb5.3/102, Error ellipse: s-maj=12.5km s-min=10.0km az=55.0*

DJA **21** *13:13:39.8±0.2, 6°S±2°×10°4E±°, h59^{km}±2^{km}, M5.0/60, mb5.0/60, mB5.4/24, MLv5.3/28, Mw(mB)4.9/24, MwMwp5.2/3, Mwp5.4/3*

GCMT **21** *13:13:41.0±0.3, 6°.55S±0°.02×104°.55E±0°.02, h60^{km}±1^{km}, MW5.0/79, Moment Tensor Solution. s50,c69; s79,c111; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.42±.15; $M_{\theta\theta}$-3.41±.11; $M_{\phi\phi}$0.99±.15; $M_{r\theta}$0.85±.10; $M_{\theta\phi}$2.18±.11; $M_{\phi r}$-1.08±.10; Best double couple: $M_0$3.76700×10^{16} NP1:ϕ_s137.00000°, δ61.00000°, λ125.00000°. NP2: ϕ_s262.00000°, δ44.00000°, λ44.00000°. Principal axes: T 3.0200, Plg58.0000°, Azm97.0000°; N 1.4980, Plg30.0000°, Azm299.0000°; P -4.5140, Plg10.0000°, Azm203.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 13:13:38.6±0.3**, 6°.13S**±0°.04×**104°.33E**±0°.03**, h51**^{km}±2^{km}**, h52**^{km}**:pP-P, n835,** σ1^{s}.**36**/891**, mb5.2**/153**, MS4.2**/60**, 62C-20D, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	**Kota Agung**	0.62	15	P	Pn	13 13 52.7	+1.3
KASI				S	Sn	13 14 02.7	+2.1
LWLI	**Liwa**	1.13	346	P	Pn	13 14 00.6	+2.3
LWLI				S	Sn	13 14 16.9	+4.0
BLSI	**Bandar Lampung**	1.18	50	P	Pn	13 14 00.3	+1.5
BLSI				S	Sn	13 14 16.9	+3.0
KLI	**Kotabumi**	1.36	23	P	Pn	13 14 03.8	+2.6
KLI				S	Sn	13 14 23.3	+5.1
CGJI	**Cibinong**	1.44	110	P	Pn	13 14 02.2	-0.1
CGJI				S	Sn	13 14 19.9	-0.2
SBJI	**Serang**	1.79	90	P	Pn	13 14 07.7	+0.6
SBJI				S	Sn	13 14 31.3	+2.6
MNAI	**Manna**	2.23	322	Pn	Pn	13 14 14.8	+1.8
MNAI	**Manna**	2.23	322	P	Pn	13 14 15.5	+2.4
MNAI				S	Sn	13 14 42.7	+3.3
CBJI	**Citeko**	2.52	97	P	Pn	13 14 20.4	+3.3
CBJI				S	Sn	13 14 51.8	+5.2
KSI	**Kapahiang**	3.01	325	P	Pn	13 14 27.3	+3.4
KSI				S	Sn	13 15 02.2	+3.5
PMBI	**Palembang**	3.21	8	Pn	Pn	13 14 27.5	+1.0
PMBI	**Palembang**	3.21	8	P	Pn	13 14 29.6	+3.0
PMBI				S	Sn	13 15 08.3	+4.7
MASI	**Maura Aman, Be**	3.62	325	P	Pn	13 14 34.6	+2.3
MASI				S	Sn	13 15 17.4	+3.5
JCJI	**Jatiwangi**	3.93	95	P	Pn	13 14 38.7	+2.2
PPBI	**Pangkal Pinang**	4.33	25	P	Pn	13 14 44.8	+2.8
PPBI				S	Sn	13 15 35.6	+4.4
CMJI	**Cimerak**	4.41	112	P	Pn	13 14 44.4	+1.4
JMBI	**JAMBI**	4.52	351	P	Pn	13 14 48.4	+3.9
KPJI	**Karang Pucung**	4.72	105	P	Pn	13 14 49.5	+2.2
PPSI	**Pulau Pagai**	5.45	308	P	Pn	13 14 58.7	+1.3
	1µm,1.1s,12µm15nm						
DSRI	**Dabo**	5.62	3	P	Pn	13 15 02.9	+3.3
	506nm,0.9s,5µm4µm1.5nm						
SDSI	**Sungai Dareh**	5.92	331	P	Pn	13 15 05.2	+1.5
	132nm,0.8s,1.0nm						
SMRI	**Semarang**	6.14	99	P	Pn	13 15 08.2	+1.4
	204nm,1.1s,1.6nm						
YOGI	**Yogyakarta**	6.15	106	P	Pn	13 15 08.3	+1.3
	129nm,1.4s,1.3nm						
UGM	**Wanagama**	6.40	106	Pn	Pn	13 15 12.9	+2.5
UGM	**Wanagama**	6.40	106	P	Pn	13 15 12.7	+2.3
	284nm,2.0s,1.7nm						
UGM				S	Sn	13 16 22.2	+0.1
	284nm,2.0s,1.7nm						
PDSI	**Padang**	6.46	323	P	Pn	13 15 12.4	+1.2
	167nm,0.7s,3µm2.3nm						
UWJI	**Ujung Watu**	6.58	93	P	Pn	13 15 14.5	+1.6
	116nm,0.8s,0.9nm						
TPRI	**Tanjung Pinang**	7.00	2	P	Pn	13 15 21.3	+2.7
	148nm,0.8s,3µm3µm0.8nm						
SISI	**Saibi**	7.08	312	P	Pn	13 15 20.7	+1.1
	243nm,0.8s,4µm2.1nm						
NGJI	**Ngawi**	7.19	100	P	Pn	13 15 35.0	+14
BKNI	**Bangkinang**	7.20	333	Pn	Pn	13 15 23.7	+2.3
BKNI	**Bangkinang**	7.20	333	P	Pn	13 15 24.1	+2.7
	194nm,0.6s,4µm1.6nm						
PWJI	**Pagerwojo**	7.65	105	P	Pn	13 15 28.8	+1.3
	101nm,0.7s,0.8nm						
MYKOM	**Kota Tinggi**	7.88	356	Pn	Pn	13 15 31.5	+0.9
GRJI	**Gresik**	8.13	96	P	Pn	13 15 36.4	+2.3
	304nm,0.8s						
PBSI	**Pulau Batu**	8.54	315	P	Pn	13 15 40.3	+0.6
	226nm,1.2s						
GMJI	**Gumukmas**	9.29	104	P	Pn	13 15 49.6	-0.4
	82nm,1.1s						
BLJI	**Banyuglugur**	9.34	100	P	Pn	13 15 51.9	+1.3
	184nm,0.5s,5µm						
COCO	**West Island**	9.54	230	Pn	Pn	13 15 53.2	-0.2
COCO	**West Island**	9.54	230	P	Pn	13 15 53.2	-0.2
ABJI	**Asem Bagus**	9.97	100	P	Pn	13 16 01.7	+2.4
	900nm,0.8s,8µm						
GSI	**Gunungsitoli**	10.00	317	Pn	Pn	13 15 58.1	-1.6
GSI	**Gunungsitoli**	10.00	317	P	Pn	13 15 59.3	-0.4
	70nm,0.5s						
JAGI	**Jajag, Banyuwa**	10.02	104	Pn	Pn	13 16 00.7	+0.8
JAGI	**Jajag, Banyuwa**	10.02	104	P	Pn	13 16 00.1	+0.2
	335nm,0.8s,6µm						
RPSI	**Rantau Prapat**	10.29	328	Pn	Pn	13 16 01.0	-2.7
PSI	**Prapat**	10.38	329	P	Pn	13 16 01.0	-4.1
SRBI	**Singaraja**	10.97	101	P	Pn	13 16 14.4	+1.4
IGBI	**Denpasar**	11.05	105	P	Pn	13 16 15.7	+1.6
	144nm,0.7s						
TWSI	**Taliwang, Sumb**	12.71	103	P	Pn	13 16 35.5	-1.3
	59nm,0.9s						
MLSI	**Meulaboh, Aceh**	13.01	322	P	Pn	13 16 41.5	+0.6
	56nm,0.8s						
BKB	**Balikpapan**	13.44	69	P	P	13 17 00.8	+6.2
PLAI	**Plampang**	13.60	102	P	Pn	13 16 48.9	0.0
	101nm,0.9s						
KAPI	**Kappang**	15.39	87	LR	LR	13 23 41.8	
	comp=Z,844nm,20.2s,baz=250,slow=40						
KAPI	**Kappang**	15.39	87	P	P	13 17 15.7	-0.6
KAPI	**Kappang**	15.39	87	*de*P	Pn	13 17 07.3	-5.3
SPSI	**Sidrap Palu**	15.53	83	P	Pn	13 17 15.6	+1.2
	44nm,1.1s,769nm						
BKSI	**Bulukumba**	15.73	88	P	P	13 17 18.8	-1.4
	192nm,1.1s,2µm						
MPSI	**Mapaga**	16.81	68	P	P	13 17 33.0	+0.8
	76nm,1.4s,1µm						
TOLI2	**Tolitoli**	17.93	67		P	13 17 45.1	+0.6
TOLI2				IAmb	IAmb	13 17 48.6	
	comp=Z,123nm,1.1s						
MMRI	**Maumere**	17.93	99		Pn	13 17 42.5	-2.0
MMRI				IAmb	IAmb	13 17 48.4	
	comp=Z,114nm,0.7s						
MMRI	**Maumere**	17.93	99	P	P	13 17 46.0	+1.5
	comp=Z,160nm,0.8s						
MYLDM	**Lahad Datu**	18.06	52	P	Pn	13 17 46.5	+0.5
MRSI	**Marisa**	18.76	70	P	Pn	13 17 55.4	+0.8
GIRL	**Giralia**	19.00	151	P	Pn	13 17 57.7	+0.4
	baz=19,SNR=13						
GIRL	**Giralia**	19.00	151	P	Pn	13 17 57.2	-0.1
GIRL				IAmb	IAmb	13 18 00.5	
	comp=Z,229nm,1.3s						
LUWI	**Luwuk**	19.08	75	P	Pn	13 17 58.6	+0.2
	comp=Z,165nm,1.1s,comp=Z,3µm						
GTOI	**Gorontalo**	19.82	71	P	P	13 18 04.7	-0.5
	comp=Z,34nm,1.0s,comp=Z,496nm						
SOEI	**Soe**	20.07	102	P	P	13 18 07.2	-0.9
SOEI	**Soe**	20.07	102	P	P	13 18 08.2	+0.1
	comp=Z,414nm,0.9s,comp=Z,4µm						
MBWA	**Marble Bar**	21.12	137	P	P	13 18 19.6	+0.4
PSA00	**Pilbara Seismi**	21.48	137	P	P	13 18 23.6	+0.5
SANI	**Sanana**	21.97	80	P	P	13 18 28.2	-0.3
	comp=Z,32nm,1.2s						
NLAI	**Namlea**	22.87	84	P	P	13 18 38.9	+0.9
LBMI	**Labuha**	23.75	78	P	P	13 18 46.9	+0.3
	comp=Z,183nm,1.0s,comp=Z,2µm						
AAI	**Ambon**	23.90	85	P	P	13 18 47.2	-0.7
	comp=Z,24nm,0.7s						
FITZ	**Fitzroy Crossi**	23.96	122	P	P	13 18 48.4	0.0
	baz=24						
TNTI	**Ternate**	24.00	74	P	P	13 18 48.5	-0.3
TNTI				IAmb	IAmb	13 18 50.4	
	comp=Z,85nm,1.0s						
TNTI	**Ternate**	24.00	74	P	P	13 18 49.3	+0.5
	comp=Z,88nm,1.6s,comp=Z,1µm						
PHRA	**Phrae**	24.80	351	P	P	13 18 54.3	-1.7
CM31	**Chiang Mai Arr**	25.00	348	P	P	13 18 56.7	-1.1
CMAR	**Chiang Mai Arr**	25.00	348	P	P	13 18 56.2	-1.6
	comp=Z,11nm,0.7s,baz=182,slow=8.9,SNR=54						
CMAR				PcP	PcP	13 22 33.9	+1.8
	comp=Z,1.5nm,0.3s,baz=210,slow=2.9,SNR=5.9						
CMAR				ScP	ScP	13 26 07.7	+0.6
	comp=Z,0.4nm,0.3s,baz=206,slow=3.9,SNR=4.4						
	comp=Z,11nm,0.7s						
CMAR	**Chiang Mai Arr**	25.00	348	P	P	13 18 55.6	-2.3
CMAR	**Chiang Mai Arr**	25.00	348	*ce*P	P	13 18 56.0	-1.8
CMAR				pmax	pmax		
	comp=Z,14nm,0.7s						
CHTO	**Chiang Mai**	25.34	348	P	P	13 18 58.8	-2.2
CHTO	**Chiang Mai**	25.34	348	P	P	13 18 58.8	-2.2
CHTO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BNDI	**Bandanaira**	25.51	88	P	P	13 19 03.3	+0.7
	comp=Z,37nm,1.0s						
QIZ	**Qiongzhong**	25.58	12	P	P	13 19 04.0	+0.9
QIZ				S	S	13 23 31.3	+3.7
QIZ				LR	LR		
	comp=Z,930nm,16.3s						
QIZ				LR	LR		
	comp=Z,320nm,15.9s						
QIZ				LR	LR		
	comp=Z,980nm,20.6s						
KNRA	**Kununurra**	25.77	114	P	P	13 19 04.0	-0.9
	baz=26,SNR=13						
KNRA	**Kununurra**	25.77	114	P	P	13 19 03.6	-1.3
CRAI	**Chiangrai**	26.48	352	P	P	13 19 09.3	-1.9
PALK	**Pallekele**	27.07	299	LR	LR	13 28 35.8	
	comp=Z,260nm,20.4s,baz=225,slow=33						
PALK	**Pallekele**	27.07	299	⇑*e*P	P	13 19 20.4	+3.7
PALK				pmax	pmax		
	comp=Z,12nm,1.0s						
MTN	**Manton Dam**	27.25	106	P	P	13 19 17.6	-0.7
	baz=27,SNR=47						
MTN	**Manton Dam**	27.25	106	P	P	13 19 16.9	-1.3
MTN				IAmb	IAmb	13 19 38.5	
	comp=Z,28nm,0.7s						
KDU	**Kakadu**	28.50	105	P	P	13 19 27.8	-1.6
	baz=28,SNR=27						
NWAO	**Narrogin (SRO)**	29.25	157	LR	LR	13 29 57.5	
	comp=Z,536nm,21.9s,baz=298,slow=33						
WRKA	**Warakurna**	29.67	132	P	P	13 19 40.8	+1.0
	baz=30,SNR=6.4						
H01W3	**Cape Leeuwin H**	30.02	164	T	T	13 51 44.0	
	baz=342,slow=76,SNR=13						
H01W2	**Cape Leeuwin H**	30.03	164	T	T	13 51 45.0	
	baz=342,slow=76,SNR=13						
H01W1	**Cape Leeuwin H**	30.03	164	T	T	13 51 41.1	
	baz=342,slow=76,SNR=27						
KMI	**Kunming**	31.10	357	⇑P	P	13 19 54.8	+2.3
KMI				S	S	13 24 54.3	-0.5
KMI				pmax	pmax		
	comp=Z,21nm,0.8s						
KMI				LR	LR		
	comp=Z,880nm,17.6s						
KMI				LR	LR		
	comp=Z,310nm,16.3s						
KMI				LR	LR		
	comp=Z,1µm,17.2s						
TNCH	**TengChong**	31.48	350	*e*P	P	13 19 59.1	+3.2
TNCH				pP	pP	13 20 11.6	+2.7
TNCH				S	S	13 25 03.4	+2.7
TNCH				pmax	pmax		
	comp=Z,15nm,0.8s						
TNCH				pmax	pmax		
	comp=Z,140nm,4.2s						
TNCH				LR	LR		
	comp=Z,210nm,19.8s						
TNCH				LR	LR		
	comp=Z,230nm,17.3s						
TNCH				LR	LR		
	comp=Z,680nm,15.7s						
H08S2	**Diego Garcia H**	31.64	265	T	T	13 53 02.1	
	baz=89,slow=76,SNR=13						
H08S3	**Diego Garcia H**	31.65	265	T	T	13 53 15.2	
	baz=89,slow=76,SNR=29						
H08S1	**Diego Carcia H**	31.66	265	T	T	13 53 16.9	
	baz=89,slow=76,SNR=28						

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WB0   Warramunga Arr   32.20 118    P      P       13 20 01.3 -0.9
WRA   Warramunga Arr   32.22 118    P      P       13 20 01.8 -0.5
      comp=Z,6.5nm,0.6s,baz=292,slow=10,SNR=48
WRA                                 PcP    PcP     13 22 50.6 +0.5
      comp=Z,3.2nm,0.7s,baz=300,slow=2.0,SNR=5.5
WRA                                 LR     LR      13 35 30.7
      comp=Z,203nm,19.1s,baz=284,slow=41
      comp=Z,6.5nm,0.6s
WRA   Warramunga Arr   32.22 118    P      P       13 20 01.4 -0.9
WRA                                        PcP     13 22 50.0 -0.1
WRAB  Tennant Creek    32.23 118    P      P       13 20 01.5 -0.8
WRAB  Tennant Creek    32.23 118ceP        P       13 20 01.9 -0.4
WRAB                                pmax   pmax
      comp=Z,20nm,1.3s
WRAB  Tennant Creek    32.23 118    P      P       13 20 01.7 -0.6
WRAB                                sP     sP      13 20 20.5 -1.0
WB2   Warramunga Arr   32.23 118    P      P       13 20 01.4 -1.0
WC3   Warramunga Arr   32.25 118    P      P       13 20 01.4 -1.2
      baz=32
PCHI  Peechi           32.41 301⇑eP        P       13 20 07.4 +3.4
PCHI                               eS      S       13 24 58.1  -17
GYA   Guiyang          32.47   4    P      P       13 20 06.8 +2.3
GYA                                 pmax   pmax
      comp=Z,20nm,1.1s
AS31  Alice Springs    33.36 125    P      P       13 20 12.1 -0.2
ASAR  Alice Springs    33.36 125    P      P       13 20 12.4 +0.2
      comp=Z,11nm,0.9s,baz=300,slow=8.0,SNR=46
ASAR                                S      S       13 25 28.2 -1.6
      comp=Z,2.4nm,1.0s,baz=297,slow=17,SNR=6.4
ASAR                                LR     LR      13 35 31.8
      comp=Z,295nm,19.3s,baz=298,slow=39
      comp=Z,11nm,0.9s
ASAR  Alice Springs    33.36 125    P      P       13 20 12.0 -0.3
ASAR                                PcP    PcP     13 22 53.5 +0.2
SHL   Shillong         33.75 339    P      P       13 20 13.9 -1.7
SHL                                 IAmb   IAmb    13 20 14.9
      comp=Z,16nm,0.7s
SHL   Shillong         33.75 339    P      P       13 20 14.0 -1.7
SHL                                 pmax   pmax
      comp=Z,16nm,0.7s
HYB   Hyderabad        34.58 313   eP      P       13 20 23.5 +0.6
ENH   Enshi            36.53   8    P      P       13 20 39.3 -0.1
ENH                                 IAmb   IAmb    13 20 41.3
      comp=Z,33nm,0.7s
ENH   Enshi            36.53   8    P      P       13 20 39.4 -0.1
ODAN  Odare            36.67 334   eP      P       13 20 40.1 -0.8
      comp=Z,86nm,0.9s
CD2   Chengdu          36.83 359    P      P       13 20 40.9 -1.1
CD2                                 pP     pP      13 20 56.9 +1.9
CD2                                 S      S       13 26 25.8 +2.9
CD2                                 pmax   pmax
      comp=Z,20nm,0.9s
CD2                                 pmax   pmax
      comp=Z,90nm,6.1s
CD2                                 LR     LR
      comp=Z,300nm,11.0s
CD2                                 LR     LR
      comp=Z,250nm,11.2s
CD2                                 LR     LR
      comp=Z,510nm,14.3s
TAPN  Taplejung        36.96 335   eP      P       13 20 43.0 -0.4
      comp=Z,101nm,0.8s
QIS   Mount Isa        37.09 116    P      P       13 20 44.2 -0.1
      baz=37,SNR=8.3
RAMN  Ramite           37.09 333   eP      P       13 20 44.4 -0.1
      comp=Z,19nm,0.4s
LSA   Lhasa            37.80 341    P      P       13 20 50.5 -0.3
LSA                                 pmax   pmax
      comp=Z,28nm,0.8s
LSA   Lhasa            37.80 341    P      P       13 20 50.3 -0.5
LSA                                 IAmb   IAmb    13 20 54.3
      comp=Z,17nm,0.6s
LSA   Lhasa            37.80 341    P      P       13 20 50.3 -0.5
LSA                                 pmax   pmax
      comp=Z,17nm,0.6s
JIRN  Jiri             37.89 333   eP      P       13 20 50.9 -0.5
      comp=Z,98nm,0.8s
PKI   Pulchoki         38.17 332   eP      P       13 20 52.6 -1.1
      comp=Z,20nm,0.8s
PKIN  Phulchoki        38.18 332   eP      P       13 20 52.9 -0.8
GUN   Gumba            38.24 333   eP      P       13 20 53.6 -0.7
      comp=Z,110nm,0.8s
DMN   Daman            38.34 332   eP      P       13 20 54.2 -0.9
KKN   Kakani           38.41 332   eP      P       13 20 54.9 -0.7
      comp=Z,80nm,0.9s
GKN   Gorkha           38.90 332   eP      P       13 20 59.2 -0.4
      comp=Z,48nm,0.5s
COEN  Coen             38.98 105    P      P       13 20 59.5 -0.9
      baz=39,SNR=16
COEN  Coen             38.98 105    P      P       13 20 59.0 -1.4
COEN                                IAmb   IAmb    13 21 00.3
      comp=Z,32nm,1.1s
KOLN  Koldanda         39.20 330   eP      P       13 21 01.8 -0.4
      comp=Z,133nm,0.9s
DANN  Dangsing         39.60 331   eP      P       13 21 05.0 -0.7
      comp=Z,160nm,0.8s
BBOO  Buckleboo        39.70 136    P      P       13 21 05.8 -0.3
BBOO                                IAmb   IAmb    13 21 54.2
      comp=Z,100nm,1.8s
PYUN  Piuthan          39.78 330   eP      P       13 21 06.5 -0.5
      comp=Z,55nm,0.7s
JOW   Kunigami         40.14  34    LR     LR      13 37 34.7
      comp=Z,220nm,20.5s,baz=229,slow=36
XAN   Xi'an            40.18   6⇑iP        P       13 21 10.3 +0.2
XAN                                 pP     pP      13 21 15.0 -8.4
XAN                                 pmax   pmax
      comp=Z,51nm,0.8s
XAN   Xi'an            40.18   6⇓iP        P       13 21 10.6 +0.5
XAN                                 pP     pP      13 21 25.3 +1.9
XAN                                 pmax   pmax
      comp=Z,51nm,0.8s
XAN                                 pmax   pmax
      comp=Z,130nm,3.5s
XAN                                 LR     LR
      comp=Z,250nm,15.8s
XAN                                 LR     LR
      comp=Z,260nm,18.6s
XAN                                 LR     LR
      comp=Z,460nm,19.2s
XAN   Xi'an            40.18   6    P      P       13 21 09.5 -0.6
NJ2   Nanjing          40.41  19   eP      P       13 21 13.3 +1.4
NJ2                                 pmax   pmax
      comp=Z,9.0nm,0.5s
MTSU  Mount Surprise   40.77 111    P      P       13 21 15.4 +0.2
      baz=41,SNR=29
LYN   LuoYang          41.18  10   ⇓P      P       13 21 18.1 -0.1
LYN                                 pP     pP      13 21 34.5 +2.9
LYN                                 S      S       13 27 28.9 +0.7
LYN                                 pmax   pmax
      comp=Z,39nm,1.0s
LYN                                 pmax   pmax
      comp=Z,120nm,4.5s
LYN                                 LR     LR
      comp=Z,420nm,23.7s
LYN                                 LR     LR
      comp=Z,250nm,20.4s
LYN                                 LR     LR
      comp=Z,400nm,18.8s
LZH   Lanzhou          41.99 359   ⇑P      P       13 21 25.3 +0.2
LZH                                 pP     pP      13 21 40.4 +2.1
LZH                                 PcP    PcP     13 23 21.1 +1.5
LZH                                 ScP    ScP     13 27 06.0 +0.1
LZH                                 pmax   pmax
      comp=Z,19nm,1.4s
LZH                                 pmax   pmax
      comp=Z,140nm,5.2s
LZH                                 LR     LR
      comp=Z,200nm,13.7s
LZH                                 LR     LR
      comp=Z,240nm,13.7s
LZH                                 LR     LR
      comp=Z,250nm,15.1s
HTT   Hallett          42.04 135    P      P       13 21 26.2 +0.8
      baz=42,SNR=4.1
PMG   Port Moresby     42.54  97    P      P       13 21 27.6 -2.1
      comp=Z,33nm,0.9s,baz=292,slow=1.5,SNR=11
      comp=Z,33nm,0.9s
PMG   Port Moresby     42.54  97    P      P       13 21 26.8 -2.9
PMG                                 IAmb   IAmb    13 21 32.7
      comp=Z,34nm,0.8s
PMG   Port Moresby     42.54  97c iP       P       13 21 28.3 -1.4
PMG                                 pmax   pmax
      comp=Z,43nm,1.0s
PMG   Port Moresby     42.54  97    P      P       13 21 29.8  0.0
PMG                                 pP     pP      13 21 42.5 -0.7
PMG                                 sP     sP      13 21 49.2  0.0
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CTA   Charters Tower   42.98 113    P      P       13 21 33.3 +0.1
      comp=Z,10nm,1.0s,baz=289,slow=7.0,SNR=6.7
CTA                                 LR     LR      13 40 33.5
      comp=Z,160nm,22.0s,baz=292,slow=38
      comp=Z,10nm,1.0s
CTAO  Charters Tower   42.98 113    P      P       13 21 32.9 -0.3
CTAO  Charters Tower   42.98 113    P      P       13 21 32.9 -0.3
CTAO                                pmax   pmax
      comp=Z,29nm,1.2s
CTAO  Charters Tower   42.98 113    P      P       13 21 33.2  0.0
GOMU  GeErMu           43.04 349    P      P       13 21 32.8 -1.0
GOMU                                pmax   pmax
      comp=Z,6.0nm,0.8s
GOMU                                pmax   pmax
      comp=Z,87nm,4.5s
GOMU                                LR     LR
      comp=Z,170nm,16.3s
GOMU                                LR     LR
      comp=Z,130nm,15.7s
GOMU                                LR     LR
      comp=Z,240nm,17.5s
QLP   Quilpie          43.09 123    P      P       13 21 35.1 +1.1
      baz=43,SNR=5.4
STKA  Stephens Creek   43.20 131    P      P       13 21 35.8 +1.0
      comp=Z,31nm,0.7s,baz=310,slow=7.6,SNR=67
STKA                                LR     LR      13 40 51.7
      comp=Z,233nm,19.4s,baz=308,slow=38
      comp=Z,31nm,0.7s
STKA  Stephens Creek   43.20 131    P      P       13 21 35.8 +1.0
      baz=43,SNR=65
STKA  Stephens Creek   43.20 131    P      P       13 21 35.4 +0.6
STKA  Stephens Creek   43.20 131d iP       P       13 21 34.9 +0.1
HNS   HongShan         44.37  12   ⇓P      P       13 21 45.1 +1.1
HNS                                eS      S       13 28 11.3 -3.6
HNS                                 pmax   pmax
      comp=Z,16nm,0.7s
HNS                                 LR     LR
      comp=Z,280nm,17.5s
HNS                                 LR     LR
      comp=Z,420nm,21.2s
GTA   Gaotai           45.50 355   eP      P       13 21 54.9 +1.7
GTA                                 pP     pP      13 22 08.8 +2.2
GTA                                 PcP    PcP     13 23 32.3 +0.9
GTA                                 pmax   pmax
      comp=Z,9.0nm,0.7s
GTA                                 LR     LR
      comp=Z,280nm,19.3s
GTA                                 LR     LR
      comp=Z,180nm,19.3s
GTA                                 LR     LR
      comp=Z,380nm,21.1s
CMSA  Cobar Meteorol   46.18 129    P      P       13 21 59.8 +1.3
      baz=46,SNR=8.1
JNU   Nakatsue         46.46  31    P      P       13 21 59.8 -0.9
      comp=Z,23nm,1.0s,baz=132,slow=6.3,SNR=4.2
JNU                                 LR     LR      13 40 24.3
      comp=Z,78nm,21.5s,baz=187,slow=35
      comp=Z,23nm,1.0s
BTO   Baotou           46.80   6   eP      P       13 22 05.3 +2.0
BTO                                 pP     sP      13 22 23.3 +0.5
BTO                                 sP     pP      13 22 33.3  +16
BTO                                 PP     PP      13 23 57.4 +3.3
BTO                                 S      S       13 28 51.3 +1.3
BTO                                 pmax   pmax
      comp=Z,52nm,1.2s
BTO                                 pmax   pmax
      comp=Z,620nm,6.5s
BTO                                 LR     LR
      comp=Z,2µm,19.0s
BTO                                 LR     LR
      comp=Z,1µm,15.9s
RMQ   Roma             46.88 121    P      P       13 22 05.5 +1.3
      baz=47,SNR=4.8
HHC   Hu-ho-hao-te     47.22   7   eP      P       13 22 08.3 +1.7
HHC                                 pmax   pmax
      comp=Z,35nm,0.7s
HHC                                 pmax   pmax
      comp=Z,230nm,4.6s
HHC                                 LR     LR
      comp=Z,500nm,19.0s
HHC                                 LR     LR
      comp=Z,490nm,19.7s
HHC                                 LR     LR
      comp=Z,750nm,19.0s
BJI   Beijing          47.22  12    P      P       13 22 06.6 +0.2
BJI                                 pmax   pmax
      comp=Z,10.0nm,0.9s
BJI                                 LR     LR
      comp=Z,170nm,21.0s
BJI                                 LR     LR
      comp=Z,100nm,19.6s
BJI                                 LR     LR
      comp=Z,250nm,21.3s
JMN   Monobe           48.52  33    P      P       13 22 16.1 -0.6
EIDS  Eidsvold         48.58 119    P      P       13 22 19.1 +1.7
      baz=49,SNR=3.1
EIDS  Eidsvold         48.58 119    P      P       13 22 16.8 -0.6
EIDS                                IAmb   IAmb    13 22 21.8
      comp=Z,69nm,1.9s
KSAR  Wonju Array Be   48.60  25    P      P       13 22 17.1  0.0
KSAR  Wonju Array Be   48.60  25    P      P       13 22 17.2  0.0
KSRS  Korea Array      48.62  25    P      P       13 22 17.6 +0.2
      comp=Z,7.8nm,0.7s,baz=220,slow=7.4,SNR=31
      comp=Z,7.8nm,0.7s
KS19  Wonju Array Si   48.64  25    P      P       13 22 17.1 -0.5
JHS   Saijyo           49.09  32    P      P       13 22 20.1 -1.0
NIL   Nilore           49.31 325    P      P       13 22 21.6 -1.2
NIL   Nilore           49.31 325    P      P       13 22 21.6 -1.2
NIL                                 pmax   pmax
      comp=Z,90nm,0.8s
NIL   Nilore           49.31 325    P      P       13 22 22.5 -0.3
CAN   Canberra         50.26 132    P      P       13 22 29.7 -0.4
CAN                                 IAmb   IAmb    13 24 06.1
      comp=Z,78nm,1.8s
CAN   Canberra         50.26 132    P      P       13 22 29.7 -0.4
CAN                                 pmax   pmax
      comp=Z,78nm,1.8s
CAN   Canberra         50.26 132    P      P       13 22 29.9 -0.1
CAN                                 pP     pP      13 22 42.8 -1.0
XLT   XiLinHaoTe       50.91  11   eP      P       13 22 34.6 -0.2
XLT                                 S      S       13 29 45.8 -2.0
XLT                                 pmax   pmax
      comp=Z,13nm,0.8s
XLT                                 pmax   pmax
      comp=Z,63nm,4.1s
XLT                                 LR     LR
      comp=Z,25nm,14.9s
XLT                                 LR     LR
      comp=Z,160nm,16.0s
XLT                                 LR     LR
      comp=Z,210nm,18.4s
INU   Inuyama          51.46  34    P      P       13 22 37.6 -1.4
INU                                 pP     pP      13 22 50.2 -2.5
JGF   Kuroka           51.83  34    P      P       13 22 41.3 -0.4
WMQ   Urumqi           51.94 345   ⇓P      P       13 22 42.5  0.0
WMQ                                 PcP    PcP     13 23 54.6 +0.1
WMQ                                 PP     PP      13 24 40.3 -0.7
WMQ                                 pmax   pmax
      comp=Z,23nm,0.9s
WMQ                                 pmax   pmax
      comp=Z,120nm,5.1s
WMQ                                 LR     LR
      comp=Z,220nm,22.1s
KBL   Kabul            52.40 323    P      P       13 22 45.2 -1.0
KBL                                 IAmb   IAmb    13 22 47.1
      comp=Z,28nm,1.0s
KBL   Kabul            52.40 323    P      P       13 22 45.2 -1.0
KBL                                 pmax   pmax
      comp=Z,28nm,1.0s
WUS   Wushi            52.42 336    P      P       13 22 46.2 +0.1
WUS                                 pP     pP      13 23 00.3 +0.5
KSH   Kashi            52.43 332    P      P       13 22 45.3 -1.0
KSH                                 PcP    PcP     13 23 59.8 +3.3
KSH                                 PP     PP      13 24 48.4 +2.8
KSH                                 S      S       13 30 04.4 -4.5
KSH                                 SS     SS      13 33 46.6 -1.1
KSH                                 pmax   pmax
      comp=Z,55nm,0.9s
KSH                                 pmax   pmax
      comp=Z,220nm,6.2s
MAJO  Matsushiro       52.99  34    P      P       13 22 47.7 -2.6
MAJO  Matsushiro       52.99  34    P      P       13 22 47.7 -2.6
MAJO                                pmax   pmax
      comp=Z,117nm,2.0s
MAJO  Matsushiro       52.99  34    P      P       13 22 48.1 -2.2
MJAR  Matsushiro Arr   52.99  34    P      P       13 22 48.4 -1.9
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      comp=Z,12nm,0.8s,baz=214,slow=7.7,SNR=24
      comp=Z,12nm,0.8s
MJB9  Matsu-Tunnel     52.99  34    P      P       13 22 48.9 -1.4
CN2   Changchun        53.24  19   eP      P       13 22 50.9 -1.1
CN2                                ePP     PP      13 24 54.5 +1.9
CN2                                eS      S       13 30 09.1  -10
CN2                                 pmax   pmax
      comp=Z,30nm,1.1s
CN2                                 LR     LR
      comp=Z,270nm,17.0s
CN2                                 LR     LR
      comp=Z,220nm,17.0s
CN2                                 LR     LR
      comp=Z,350nm,17.0s
WSAR  Wadi Sarin       53.33 305    LR     LR      13 44 00.6
      comp=Z,191nm,19.6s,baz=134,slow=34
SONM  Songino Array    53.76   2    P      P       13 22 55.7 -0.2
      comp=Z,20nm,0.8s,baz=178,slow=7.5,SNR=87
SONM                                ScP    ScP     13 27 55.1 -0.1
      comp=Z,0.8nm,0.8s,baz=180,slow=5.1,SNR=3.8
SONM                                LR     LR      13 47 19.0
      comp=Z,202nm,20.4s,baz=176,slow=38
      comp=Z,20nm,0.8s
SONM  Songino Array    53.76   2    P      P       13 22 55.3 -0.6
SONM                                IAmb   IAmb    13 22 57.9
      comp=Z,28nm,0.9s
ULN   Ulaanbaatar      53.81   2    P      P       13 22 55.7 -0.6
ULN                                 IAmb   IAmb    13 22 57.7
      comp=Z,16nm,1.0s
ULN   Ulaanbaatar      53.81   2    P      P       13 22 55.7 -0.6
ULN                                 pmax   pmax
      comp=Z,17nm,1.0s
ULN   Ulaanbaatar      53.81   2    P      P       13 22 56.1 -0.2
BIDO  Bidbid           53.87 305    P      P       13 22 45.2  -12
SHLS  Shalkode         53.99 338   eP      P       13 22 56.1 -1.6
      comp=Z,28nm,0.8s,baz=338
SHLS  Shalkode         53.99 338   eP      P       13 22 56.0 -1.6
SHLS                                pmax   pmax
      comp=Z,28nm,0.8s
KDJ   Kajisay          54.03 335    P      P       13 22 57.4 -0.7
KDJ   Kajisay          54.03 335    P      P       13 22 57.4 -0.7
KDJ                                 pmax   pmax
      comp=Z,67nm,0.9s
JSD   Sado             54.10  33    P      P       13 22 57.2 -1.2
UZB   Uzynbulak        54.15 337   eP      P       13 22 58.4 -0.4
      comp=Z,19nm,0.9s,baz=337
UZB   Uzynbulak        54.15 337   eP      P       13 22 58.4 -0.4
UZB                                 pmax   pmax
      comp=Z,19nm,0.9s
SATY  Saty             54.31 337   eP      P       13 22 59.6 -0.4
      comp=Z,18nm,0.9s,baz=337
SATY  Saty             54.31 337   eP      P       13 22 59.6 -0.4
SATY                                pmax   pmax
      comp=Z,19nm,0.9s
ULHL  Ulahol           54.52 335    P      P       13 23 01.7  0.0
      SNR=13
KPKS  Kokpek           54.55 337   eP      P       13 23 01.1 -0.6
      comp=Z,17nm,0.9s,baz=337
KPKS  Kokpek           54.55 337   eP      P       13 23 01.1 -0.6
KPKS                                pmax   pmax
      comp=Z,17nm,0.9s
HOQ   Hoqain           54.56 305    P      P       13 22 52.4  -10
GAR   Garm             54.84 328    P      P       13 23 01.9 -2.0
TNSS  Tian-Shan        54.88 336   eP      P       13 23 03.5 -1.0
      baz=336
TNSS  Tian-Shan        54.88 336   eP      P       13 23 03.5 -1.0
MDOK  Medeo            54.94 336   i P     P       13 23 04.4 -0.3
      baz=336
MDOK  Medeo            54.94 336   i P     P       13 23 04.3 -0.3
AAA   Alma-Ata         55.04 336   eP      P       13 23 05.0 -0.3
      baz=336
AAA   Alma-Ata         55.04 336   eP      P       13 23 04.9 -0.3
ARQ   Araqi            55.10 304    P      P       13 22 57.7 -8.3
CHGR  Chuyangaron      55.22 327    P      P       13 23 04.5 -2.1
CHGR  Chuyangaron      55.22 327    P      P       13 23 04.5 -2.1
CHGR                                pmax   pmax
      comp=Z,107nm,1.0s
UCH   Uchtor           55.27 333    P      P       13 23 07.1 -0.3
      SNR=23
WHFO  Wadi Hawf        55.32 297    P      P       13 23 08.9 +1.2
      SNR=9.7
TKM2  Tokmak 2         55.35 335    P      P       13 23 07.2 -0.4
      SNR=66
BTK   Batken           55.36 329    P      P       13 23 06.9 -0.8
BTK                                 IAmb   IAmb    13 23 08.8
      comp=Z,32nm,1.0s
BTK   Batken           55.36 329    P      P       13 23 06.9 -0.8
BTK                                 pmax   pmax
      comp=Z,32nm,1.0s
MDJ   Mudanjiang       55.39  22    P      P       13 23 07.4 -0.2
MDJ                                 S      S       13 30 50.9 +2.5
MDJ                                 sS     sS      13 31 15.5 +3.4
MDJ                                 ScS    ScS     13 32 52.8 +0.4
MDJ                                 pmax   pmax
      comp=Z,14nm,1.0s
MDJ                                 pmax   pmax
      comp=Z,160nm,3.5s
MDJ                                 LR     LR
      comp=Z,250nm,4.6s
MDJ                                 LR     LR
      comp=Z,120nm,4.2s
MDJ                                 LR     LR
      comp=Z,250nm,8.9s
MDJ   Mudanjiang       55.39  22    P      P       13 23 06.4 -1.2
MDJ   Mudanjiang       55.39  22    P      P       13 23 07.3 -0.3
KBK   Karagaybulak     55.42 334    P      P       13 23 08.4 +0.4
      SNR=20
SOHO  SOHO             55.45 305    P      P       13 23 10.4 +2.0
SOHO  SOHO             55.45 305    P      P       13 23 03.9 -4.5
CHKK  Chushkaly        55.54 336   eP      P       13 23 07.5 -1.2
      baz=336
CHKK  Chushkaly        55.54 336   eP      P       13 23 07.5 -1.2
AML   Almayashu        55.56 333    P      P       13 23 08.9 -0.5
      SNR=42
BNX   BinXian          55.60  19   ⇓P      P       13 23 09.0 -0.1
BNX                                 pmax   pmax
      comp=Z,77nm,0.9s
BNX                                 pmax   pmax
      comp=Z,140nm,5.6s
AAK   Ala-Archa        55.60 334    P      P       13 23 09.3 -0.2
      SNR=9.1
AAK   Ala-Archa        55.60 334    P      P       13 23 08.6 -0.8
AAK                                 IAmb   IAmb    13 23 10.5
      comp=Z,19nm,1.1s
AAK   Ala-Archa        55.60 334c iP       P       13 23 09.2 -0.2
AAK                                 pmax   pmax
      comp=Z,15nm,0.8s
AAK   Ala-Archa        55.60 334   i P     P       13 23 09.4  0.0
      SNR=10
AAK   Ala-Archa        55.60 334    P      P       13 23 09.2 -0.2
KUU   Kurty            55.84 336⇑iP        P       13 23 10.0 -0.9
      comp=Z,28nm,0.7s,baz=336
KUU   Kurty            55.84 336c iP       P       13 23 10.0 -0.9
KUU                                 pmax   pmax
      comp=Z,28nm,0.7s
EKS2  Erkin-Say        55.94 333    P      P       13 23 11.9 +0.1
      SNR=66
USA0B Ussuriysk Arra   55.96  24    P      P       13 23 10.5 -1.1
USA0B                               IAmb   IAmb    13 23 12.2
      comp=Z,44nm,0.9s
USA0B Ussuriysk Arra   55.96  24⇓iP        P       13 23 10.6 -1.1
USRK  Ussuriysk Ar.    55.96  24    P      P       13 23 11.3 -0.4
      comp=Z,34nm,0.8s,baz=216,slow=6.3,SNR=46
      comp=Z,34nm,0.8s
USRK  Ussuriysk Ar.    55.96  24    P      P       13 23 10.4 -1.3
TDK   Taldyqorghan     55.96 338   eP      P       13 23 11.1 -0.7
      comp=Z,31nm,1.0s,baz=338
TDK   Taldyqorghan     55.96 338   eP      P       13 23 11.0 -0.7
TDK                                 pmax   pmax
      comp=Z,31nm,1.0s
ZSN   Zaisan           56.05 344   eP      P       13 23 12.0 -0.4
      comp=Z,35nm,1.3s,baz=344
ZSN   Zaisan           56.05 344   eP      P       13 23 11.9 -0.4
ZSN                                 pmax   pmax
      comp=Z,35nm,1.3s
ALNE  Al Ain           56.05 304   i P     P       13 23 15.0 +2.2
      SNR=8.4
ALNE  Al Ain           56.05 304    P      P       13 23 10.9 -1.9
UOSS  Minazif          56.08 305    P      P       13 23 15.0 +2.1
UOSS  Minazif          56.08 305    P      P       13 23 15.0 +2.1
UOSS  Minazif          56.08 305    P      P       13 23 14.7 +1.8
ASHO  Ashiyiah         56.08 305    P      P       13 23 15.0 +2.0
ASHO  Ashiyiah         56.08 305    P      P       13 23 12.9 -0.1
HATD  Hatta, Dubai     56.08 305    P      P       13 23 15.1 +2.1
HATD  Hatta, Dubai     56.08 305    P      P       13 23 14.9 +1.9
USP   Ospenovka        56.10 334    P      P       13 23 12.7 -0.1
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      SNR=7.9
MDH   Madha              56.16 306    P      P       13 23 14.1 +0.6
SGDS  Sogindy            56.20 334   eP      P       13 23 12.6 -1.0
      baz=334
SGDS  Sogindy            56.20 334   eP      P       13 23 12.5 -1.0
MK31  Makanchi Array     56.20 342    P      P       13 23 12.1 -1.3
MK31                                  IAmb   IAmb    13 23 13.9
      comp=Z,13nm,0.8s
MK31  Makanchi Array     56.20 342c iP      P       13 23 12.3 -1.1
MKAR  Makanchi Array     56.20 342    P      P       13 23 13.0 -0.4
      comp=Z,14nm,0.6s,baz=143,slow=7.7,SNR=98
MKAR                                  S      S       13 31 00.1 +0.8
      comp=Z,0.6nm,1.0s,baz=162,slow=15,SNR=3.1
MKAR                                  LR     LR      13 50 13.6
      comp=Z,86nm,20.1s,baz=145,slow=39
      comp=Z,14nm,0.6s
MKAR  Makanchi Array     56.20 342    P      P       13 23 12.2 -1.2
ZAK   Zakamensk          56.29 359   eP      P       13 23 12.5 -1.5
ZAK                                   pmax   pmax
      comp=Z,9.0nm,1.3s
MSFE  Esma-Masafi        56.30 306    P      P       13 23 16.6 +2.0
MAKZ  Makanchi           56.31 342    P      P       13 23 12.2 -2.0
MAKZ  Makanchi           56.31 342    P      P       13 23 12.2 -2.0
MAKZ                                  pmax   pmax
      comp=Z,10.0nm,1.0s
MAKZ  Makanchi           56.31 342    P      P       13 23 13.8 -0.5
BANOM Banah              56.45 307    P      P       13 23 20.2 +4.6
FAQ   Al Faqa, Dubai     56.49 305  i P      P       13 23 18.0 +2.1
      SNR=15
FAQ   Al Faqa, Dubai     56.49 305    P      P       13 23 18.0 +2.1
      SNR=15
NAZ   Nazwa, Dubai       56.54 305  i P      P       13 23 18.4 +2.2
      SNR=8.0
NAZ   Nazwa, Dubai       56.54 305    P      P       13 23 18.4 +2.2
      SNR=8.0
SHME  Shamm              56.63 307    P      P       13 23 19.0 +2.2
ASUD  Al Ashush, Dub     56.65 305    P      P       13 23 19.1 +2.1
HIA   Hailar             56.78  12    P      P       13 23 15.7 -1.8
HIA                                   IAmb   IAmb    13 23 17.4
      comp=Z,17nm,1.1s
HIA   Hailar             56.78  12    P      P       13 23 15.7 -1.8
HIA                                   pmax   pmax
      comp=Z,17nm,1.1s
HIA   Hailar             56.78  12    P      P       13 23 16.8 -0.7
AJN   Ajban              56.90 304    P      P       13 23 20.5 +1.7
DZA   Taraz              57.25 332   eP      P       13 23 20.0 -0.9
      comp=Z,14nm,0.8s,baz=331
DZA   Taraz              57.25 332   eP      P       13 23 20.0 -0.9
DZA                                   pmax   pmax
      comp=Z,13nm,0.8s
IUG   Iuzhnay            57.32 330   eP      P       13 23 21.2 -0.4
      comp=Z,27nm,0.9s,baz=330
IUG   Iuzhnay            57.32 330   eP      P       13 23 21.1 -0.4
IUG                                   pmax   pmax
      comp=Z,27nm,0.9s
MZR   Muzera             57.50 302  i P      P       13 23 25.7 +2.6
      SNR=6.5
MZR   Muzera             57.50 302    P      P       13 23 25.3 +2.3
      SNR=5.9
DGZ   Jazzator, Alta     57.51 347c iP      P       13 23 22.5 -0.3
DGZ                                   pmax   pmax
      comp=Z,60nm,1.8s
JTM   Tenmabayashi       57.58  33    P      P       13 23 21.7 -1.6
JTM                                   IAmb   IAmb    13 23 22.9
      comp=Z,39nm,0.9s
MOY   Mondy              57.64 358   eP      P       13 23 24.0 +0.4
MOY                                   pmax   pmax
      comp=Z,26nm,1.9s
CHM   Chimkent           57.66 330   eP      P       13 23 23.4 -0.4
      baz=330
CHM   Chimkent           57.66 330   eP      P       13 23 23.4 -0.4
BTLS  Baital             57.72 335  i P      P       13 23 23.0 -1.2
      baz=335
BTLS  Baital             57.72 335  i P      P       13 23 23.0 -1.2
KK31  Karatay Array      57.80 331    P      P       13 23 23.2 -1.6
KK31  Karatay Array      57.80 331    P      P       13 23 23.2 -1.6
KK31                                  pmax   pmax
      comp=Z,9.0nm,1.0s
KKAR  Karatay Array      57.80 331    P      P       13 23 23.2 -1.6
KKAR  Karatay Array      57.80 331    P      P       13 23 23.2 -1.6
KKAR                                  pmax   pmax
      comp=Z,9.0nm,1.0s
ERM   Erimo              59.56  33⇑ eP      P       13 23 35.4 -1.6
ERM                                   pmax   pmax
      comp=Z,36nm,1.0s
ERM   Erimo              59.56  33    P      P       13 23 36.3 -0.8
HEH   HeiHe              59.61  17   eP      P       13 23 36.4 -0.8
HEH                                   pmax   pmax
      comp=Z,69nm,0.8s
HEH                                   pmax   pmax
      comp=Z,220nm,4.4s
KLR   Kul'dur            60.09  20    P      P       13 23 39.5 -1.0
      comp=Z,22nm,0.8s,baz=227,slow=5.3,SNR=82
KLR                                   LR     LR      13 51 15.4
      comp=Z,153nm,19.9s,baz=208,slow=38
      comp=Z,22nm,0.8s
KLR   Kul'dur            60.09  20c iP      P       13 23 39.4 -1.2
KLR                                   pmax   pmax
      comp=Z,31nm,0.8s
ASAJ  Asahikawa          60.74  31    P      P       13 23 43.7 -1.4
      comp=Z,20nm,0.8s,baz=244,slow=10,SNR=20
      comp=Z,20nm,0.8s
ASAJ  Asahikawa          60.74  31    P      P       13 23 43.9 -1.2
ASAJ                                  pmax   pmax
      comp=Z,142nm,2.0s
JKA   Kamikawa-asahi     60.74  31    P      P       13 23 43.9 -1.2
KURK  Kurchatov          60.81 342    P      P       13 23 44.5 -0.9
KURK                                  IAmb   IAmb    13 23 45.9
      comp=Z,38nm,0.9s
KURK  Kurchatov          60.81 342c iP      P       13 23 44.7 -0.7
KURK                                  pmax   pmax
      comp=Z,57nm,1.3s
KURK  Kurchatov          60.81 342    P      P       13 23 44.7 -0.7
KURK                                  pP     pP      13 23 57.6 -1.7
KURK                                  sP     sP      13 24 02.5 -2.5
GEYT  Alibeck            61.37 319    P      P       13 23 50.0 +0.5
      comp=Z,25nm,0.7s,baz=152,slow=6.7,SNR=47
GEYT                                  LR     LR      13 52 07.1
      comp=Z,108nm,21.8s,baz=154,slow=38
      comp=Z,25nm,0.7s
GYA0B ALIBECK ARRAY      61.37 319    P      P       13 23 49.7 +0.2
GYA0B                                 IAmb   IAmb    13 23 51.0
      comp=Z,31nm,0.8s
DZM   Mont Dzumac        61.90 112   eLR     LR      13 42 19.4
      comp=Z,285nm,23.8s
DZM   Mont Dzumac        61.90 112    LR     LR      13 53 13.5
      comp=Z,143nm,18.6s,baz=224,slow=38
ZAA0  Zalesovo Array     62.06 347    P      P       13 23 52.3 -1.5
ZAA0                                  IAmb   IAmb    13 23 53.9
      comp=Z,58nm,1.2s
ZALV  Zalesovo Beam      62.06 347    P      P       13 23 52.7 -1.1
      comp=Z,10nm,0.3s,baz=149,slow=4.8,SNR=81
ZALV                                  LR     LR      13 53 09.2
      comp=Z,181nm,21.2s,baz=122,slow=38
      comp=Z,10nm,0.3s
ZALV  Zalesovo Beam      62.06 347    P      P       13 23 52.2 -1.6
ZALV  Zalesovo Beam      62.06 347    P      P       13 23 52.2 -1.6
BRZS  Berezniki          62.26 337   eP      P       13 23 54.5 -0.8
      comp=Z,17nm,1.2s,baz=337
BRZS  Berezniki          62.26 337   eP      P       13 23 54.4 -0.8
BRZS                                  pmax   pmax
      comp=Z,17nm,1.2s
ZEA   Zeya               62.69  15   eP      P       13 23 57.7 -0.3
ZEA                                  e               13 32 44.6
ZEA                                   pmax   pmax
      comp=E,10.0nm,0.9s
ZEA                                   pmax   pmax
      comp=N,20nm,0.7s
ZEA                                   pmax   pmax
      comp=Z,40nm,0.8s
YSS   Yuzh-Sakhalins     62.84  29   eP      P       13 23 58.3 -0.8
YSS                                   pmax   pmax
      comp=Z,50nm,0.8s
YSS   Yuzh-Sakhalins     62.84  29    P      P       13 23 58.5 -0.7
GRNR  Gornyy             63.06  22⇑ iP      P       13 24 00.1 -0.4
GRNR                                  pmax   pmax
      comp=E,6.0nm,0.9s
GRNR                                  pmax   pmax
      comp=N,6.0nm,1.2s
GRNR                                  pmax   pmax
      comp=Z,10.0nm,1.1s
BOD   Bodaibo            64.21   6   eP      P       13 24 06.9 -1.1
BOD                                   pmax   pmax
      comp=Z,26nm,0.9s
RAYN  Ar Rayn            64.51 300    P      P       13 24 10.5 -0.2
RAYN                                  IAmb   IAmb    13 24 13.3
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      comp=Z,24nm,1.3s
RAYN  Ar Rayn            64.51 300    P      P       13 24 10.5 -0.2
RAYN                                  pmax   pmax
      comp=Z,25nm,1.3s
RAYN  Ar Rayn            64.51 300  i P      P       13 24 12.2 +1.6
      SNR=11
BRVK  Borovoye           65.62 338    P      P       13 24 16.2 -1.0
BRVK                                  IAmb   IAmb    13 24 17.6
      comp=Z,22nm,0.9s
BRVK  Borovoye           65.62 338c iP      P       13 24 15.7 -1.5
BRVK                                  pmax   pmax
      comp=Z,31nm,1.3s
BRVK  Borovoye           65.62 338    P      P       13 24 16.5 -0.7
TYV   Tymovskoe          65.65  26   eP      P       13 24 17.2 -0.2
TYV                                   pmax   pmax
      comp=Z,200nm,4.9s
TYV                                   pmax   pmax
      comp=Z,9.0nm,1.1s
ABKAR Akbulak array      67.33 330    P      P       13 24 27.7 -0.5
MAW   Mawson             67.45 196    LR     LR      13 47 40.1
      comp=Z,309nm,21.2s,baz=33,slow=30
RPZ   Rata Peaks         69.03 134    P      P       13 24 39.4 +0.3
RPZ                                   IAmb   IAmb    13 25 57.0
      comp=Z,125nm,1.9s
CCD   Concordia, Ant     69.78 175    P      P       13 24 46.1 +2.5
AKT   Akhty              70.04 318   eP      P       13 24 45.5  0.0
AKT                                  e               13 25 07.2
AKT                                   pmax   pmax
      comp=Z,41nm,1.0s
YAK   Yakutsk            70.72  12    LR     LR      13 57 56.4
      comp=Z,108nm,18.8s,baz=259,slow=38
YAK   Yakutsk            70.72  12    P      P       13 24 47.3 -1.6
YAK   Yakutsk            70.72  12c iP      P       13 24 47.2 -1.8
YAK                                  e               13 25 04.8
YAK                                  e*PP    PcP     13 25 10.0 +0.5
YAK                                  e               13 27 27.7
YAK                                  ePPP    PPP     13 29 02.9
YAK                                  eS      S       13 33 55.7 -3.7
YAK                                  e*SS    SKiKP   13 34 34.1 +6.4
YAK                                   pmax   pmax
      comp=Z,73nm,0.9s
YAK                                   pmax   pmax
      comp=N,18nm,1.5s
YAK                                   pmax   pmax
      comp=E,19nm,1.4s
YAK                                   pmax   pmax
      comp=Z,74nm,3.4s
YAK                                   pmax   pmax
      comp=N,66nm,4.1s
YAK                                   pmax   pmax
      comp=E,42nm,2.5s
YAK                                   smax   smax
      comp=E,98nm,3.5s
YAK                                   smax   smax
      comp=N,57nm,3.3s
YAK   Yakutsk            70.72  12    P      P       13 24 47.4 -1.5
GNI   Garni              71.47 316    LR     LR      13 57 57.7
      comp=N,41nm,21.9s,baz=124,slow=37
GNI   Garni              71.47 316⇓ eP      P       13 24 55.7 +1.4
GNI                                   pmax   pmax
      comp=Z,39nm,2.5s
GROC  Groznyy            72.11 319   eP      P       13 24 57.2 -0.6
SVE   Sverdlovsk         72.14 336deP       P       13 24 58.1 +0.4
SVE                                   pmax   pmax
      comp=Z,97nm,1.2s
BKZ   Black Stump Fm     72.33 129    P      P       13 24 59.3 -0.1
BKZ                                   IAmb   IAmb    13 25 00.6
      comp=Z,16nm,0.8s
ARU   Arti               72.71 335    P      P       13 25 00.8 -0.3
ARU                                   IAmb   IAmb    13 25 02.2
      comp=Z,71nm,1.1s
ARU   Arti               72.71 335c iP      P       13 25 00.9 -0.2
ARU                                   pmax   pmax
      comp=Z,117nm,1.7s
URZ   Urewera            72.72 128    LR     LR      14 00 50.0
      comp=Z,133nm,18.4s,baz=9.0,slow=39
ZEI   Tsey               73.17 318   eP      P       13 25 04.6 +0.2
ZEI                                   pmax   pmax
      comp=Z,17nm,0.7s
MBAR  Mbarara            73.62 271    LR     LR      13 52 40.2
      comp=Z,130nm,20.6s,baz=70,slow=32
MBAR  Mbarara            73.62 271⇓ iP      P       13 25 09.9 +2.3
MBAR                                  pmax   pmax
      comp=Z,11nm,1.0s
NCK   Nalchik            73.68 319⇑ iP      P       13 25 08.8 +1.7
NCK                                   pmax   pmax
      comp=Z,19nm,0.4s
PEA0B Petropavlovsk-     74.15  30    P      P       13 25 07.7 -1.9
PEA0B                                 IAmb   IAmb    13 25 40.9
      comp=Z,23nm,1.1s
PEA0B Petropavlovsk-     74.15  30    P      P       13 25 07.7 -1.9
PEA0B                                 pmax   pmax
      comp=Z,23nm,1.1s
PETK  Petropavlovsk-     74.15  30    P      P       13 25 08.4 -1.2
      comp=Z,7.4nm,0.8s,baz=210,slow=12,SNR=9.3
      comp=Z,7.4nm,0.8s
PETK  Petropavlovsk-     74.15  30    P      P       13 25 07.6 -2.0
PETK  Petropavlovsk-     74.15  30    P      P       13 25 07.6 -2.0
NEY   Neytrino           74.15 318⇑ eP      P       13 25 11.5 +1.4
NEY                                   pmax   pmax
      comp=Z,4.0nm,0.8s
KBZ   Khabaz             74.24 319    P      P       13 25 10.3 +0.1
      comp=Z,14nm,0.9s,baz=124,slow=5.4,SNR=19
      comp=Z,14nm,0.9s
KBZ   Khabaz             74.24 319c iP      P       13 25 11.1 +0.8
KBZ                                   pmax   pmax
      comp=Z,26nm,1.0s
KIV   Kislovodsk         74.47 319    P      P       13 25 11.9 +0.1
KIV                                   IAmb   IAmb    13 25 13.7
      comp=Z,28nm,1.3s
KIV   Kislovodsk         74.47 319   eP      P       13 25 12.9 +1.1
KIV                                   pmax   pmax
      comp=Z,16nm,1.0s
PET   Petropavlovsk      74.58  31    P      P       13 25 10.7 -1.4
PET                                   IAmb   IAmb    13 25 12.1
      comp=Z,36nm,0.9s
PET   Petropavlovsk      74.58  31d iP      P       13 25 11.3 -0.8
PET                                   pmax   pmax
      comp=Z,86nm,2.5s
MA2   Magadan            75.08  22    P      P       13 25 14.1 -0.7
      comp=Z,20nm,0.8s,baz=197,slow=5.2,SNR=5.9
MA2                                   LR     LR      14 02 44.7
      comp=Z,44nm,18.2s,baz=204,slow=39
      comp=Z,20nm,0.8s
MA2   Magadan            75.08  22    P      P       13 25 14.0 -0.8
MA2                                   IAmb   IAmb    13 25 15.3
      comp=Z,25nm,0.9s
MA2   Magadan            75.08  22d iP      P       13 25 14.5 -0.3
MA2                                   pmax   pmax
      comp=Z,26nm,1.3s
EIL   Elat               75.37 303    LR     LR      13 59 29.6
      comp=Z,56nm,18.1s,baz=64,slow=36
MMAI  Mount Meron Ar     75.94 306    LR     LR      13 59 10.5
      comp=Z,90nm,20.5s,baz=180,slow=36
NRIK  Noril'sk           76.19 354    P      P       13 25 20.1 -0.9
      comp=Z,29nm,1.0s,baz=163,slow=5.2,SNR=29
      comp=Z,29nm,1.0s
NRIK  Noril'sk           76.19 354    P      P       13 25 19.3 -1.7
NRIK                                  IAmb   IAmb    13 25 21.2
      comp=Z,48nm,1.1s
NRIK  Noril'sk           76.19 354deP       P       13 25 19.5 -1.5
NRIK                                  pmax   pmax
      comp=Z,54nm,1.1s
SOC   Sochi              76.29 317   eP      P       13 25 20.3 -1.8
SOC                                  e               13 28 11.0
SOC                                  ePPP    PPP     13 29 57.1
SOC                                  eS      S       13 35 02.1 -1.0
SOC                                  eSS     SS      13 39 53.4 -4.8
RAO   Raoul Island       76.36 119    LR     LR      13 59 58.2
      comp=Z,113nm,19.4s,baz=166,slow=36
LBTB  Lobatse            77.24 246    LR     LR      13 53 48.5
      comp=Z,133nm,19.8s,baz=105,slow=31
VNDA  Vanda              77.31 169    P      P       13 25 30.1 +2.7
      comp=Z,4.0nm,0.9s,baz=312,slow=9.6,SNR=2.5
      comp=Z,4.0nm,0.9s
BOSA  Boshof             77.51 242    P      P       13 25 30.9 +1.3
      comp=Z,2.2nm,0.7s,baz=84,slow=8.4,SNR=3.4
BOSA                                  LR     LR      13 54 50.7
      comp=Z,128nm,18.6s,baz=98,slow=32
      comp=Z,2.2nm,0.7s
SEY   Seymchan           77.89  20    P      P       13 25 30.2 -0.5
      comp=Z,7.4nm,0.8s,baz=238,slow=6.1,SNR=20
      comp=Z,7.4nm,0.8s
SEY   Seymchan           77.89  20⇓ iP      P       13 25 30.6 -0.1
SEY                                   pmax   pmax
      comp=Z,41nm,2.5s
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KIRV  Kirov              77.93 334    LR     LR      14 03 53.8
      comp=Z,70nm,19.9s,baz=106,slow=39
KIRV  Kirov              77.93 334c iP      P       13 25 31.3 +0.3
CSS   Mathiatis          78.15 307    P      P       13 25 32.9 +0.1
CSS                                   IAmb   IAmb    13 25 35.4
      comp=Z,57nm,1.0s
VRH   Novokhopyorsk      78.15 325   eP      P       13 25 32.4 +0.1
VRH                                  e               13 25 51.5
VRH                                  eS      S       13 35 18.6 -4.3
VRH                                   pmax   pmax
      comp=Z,40nm,0.7s
ANN   Anapa              78.27 318   eP      P       13 25 28.2 -5.0
ANN                                  e*PP    pP      13 25 46.7 -0.6
ANN                                  eS      S       13 35 17.2 -7.3
ANN                                  eSS     SS      13 40 22.5 -5.4
ANN                                   pmax   pmax
      comp=Z,33nm,1.2s
BR131 Keskin Array S     79.28 312    P      P       13 25 38.8 -0.2
BR131                                 IAmb   IAmb    13 25 40.4
      comp=Z,36nm,0.9s
BR131 Keskin Array S     79.28 312c iP      P       13 25 39.3 +0.3
BRTR  Keskin Array B     79.28 312    P      P       13 25 39.5 +0.5
      comp=Z,16nm,0.8s,baz=131,slow=7.4,SNR=40
BRTR                                  LR     LR      14 02 35.3
      comp=Z,65nm,19.6s,baz=109,slow=37
      comp=Z,16nm,0.8s
BRTR  Keskin Array B     79.28 312    P      P       13 25 38.8 -0.2
BRTR  Keskin Array B     79.28 312  i P      P       13 25 39.4 +0.4
BRTR                                  pmax   pmax
      comp=Z,16nm,0.8s
TIXI  Tiksi              79.28   8    LR     LR      14 03 56.3
      comp=Z,105nm,19.0s,baz=269,slow=38
TIXI  Tiksi              79.28   8    P      P       13 25 35.9 -2.3
TIXI  Tiksi              79.28   8    P      P       13 25 35.9 -2.3
TIXI                                  pmax   pmax
      comp=Z,13nm,0.9s
VORD  Divnogorie         79.44 324   eP      P       13 25 39.3 -0.2
VORD                                  pmax   pmax
      comp=Z,20nm,0.5s
VSR   Storozhevoye       79.62 325   eP      P       13 25 39.1 -1.3
VSR                                   pmax   pmax
      comp=Z,30nm,0.8s
VORR  Voronezh           79.77 325   eP      P       13 25 42.0 +0.8
VORR                                 e               13 26 03.3
VORR                                  S      S       13 35 31.1 -9.1
VORR                                  pmax   pmax
      comp=Z,40nm,1.1s
ANTO  Ankara             79.94 312    P      P       13 25 42.8 +0.2
ANTO                                  IAmb   IAmb    13 25 44.5
      comp=Z,32nm,1.1s
ANTO  Ankara             79.94 312    P      P       13 25 42.8 +0.2
ANTO                                  pmax   pmax
      comp=Z,31nm,1.1s
BR231 Keskin MP Arra     79.95 312    P      P       13 25 42.5 -0.2
BR231                                 IAmb   IAmb    13 25 44.5
      comp=Z,60nm,1.4s
LPSR  Galich'ya Gora     80.30 326   eP      P       13 25 43.5 -0.6
LPSR                                  pmax   pmax
      comp=Z,20nm,0.8s
SIM   Simferopol'        80.54 317   eP      P       13 25 36.6 -9.0
SIM                                  e               13 25 53.3
SIM                                   S      S       13 35 40.4 -8.2
SIM                                   pmax   pmax
      comp=Z,94nm,1.0s
SIM                                   smax   smax
      comp=N,252nm,26.7s
MDUB  Mudurnu            81.28 312    P      P       13 25 50.3 +0.5
SUR   Sutherland         81.29 238    LR     LR      13 56 47.1
      comp=N,187nm,19.3s,baz=130,slow=32
ELL   Elmali             81.30 308    P      P       13 25 50.2 +0.2
ELL   Elmali             81.30 308    P      P       13 25 50.2 +0.2
ELL                                   pmax   pmax
      comp=Z,410nm,1.8s
AKAS  Kas                81.41 308    P      P       13 25 50.1 -0.4
AKAS                                  IAmb   IAmb    13 25 51.5
      comp=Z,60nm,1.4s
BORA  Eskisehir          81.68 312    P      P       13 25 51.9  0.0
BORA                                  IAmb   IAmb    13 25 53.8
      comp=Z,26nm,0.9s
MOS   Moscow             82.24 328   eP      P       13 25 52.8 -1.5
MOS                                  e               13 26 13.6
MOS                                   pmax   pmax
      comp=Z,59nm,0.9s
OBN   Obninsk            82.56 328    P      P       13 25 56.0  0.0
OBN                                   IAmb   IAmb    13 25 57.6
      comp=Z,34nm,0.8s
OBN   Obninsk            82.56 328ceP       P       13 25 56.8 +0.8
OBN                                  e*PP    sP      13 26 13.8 -2.0
OBN                                  e*SP    pP      13 26 20.4  +10
OBN                                  e               13 29 03.6
OBN                                   pmax   pmax
      comp=Z,65nm,1.3s
OBN                                   MLR    MLR
      comp=Z,91nm,21.0s
KARP  Karpathos          83.18 307    P      P       13 25 59.4 -0.4
KLMR  Klimovskoe         83.41 334   eP      P       13 25 58.4 -1.9
KLMR                                  AMP            13 26 01.8
      comp=Z,46nm,1.2s
KLMR                                 epP     sP      13 26 19.0 -1.4
KLMR  Klimovskoe         83.41 334   eP      P       13 25 58.4 -1.9
KLMR                                 e*PP    sP      13 26 18.9 -1.4
KLMR                                  pmax   pmax
      comp=Z,46nm,1.2s
QSPA  South Pole Qui     83.86 180    LR     LR      13 59 11.8
      comp=Z,183nm,19.9s,baz=292,slow=32
TIRR  Tirgusor           84.30 316 ⇑P       P       13 26 06.2 +1.0
TIRR  Tirgusor           84.30 316    P      P       13 26 05.3 +0.2
TIRR  Tirgusor           84.30 316    P      P       13 26 05.4 +0.2
TIRR                                  pmax   pmax
      comp=Z,66nm,1.0s
TPGR  Topolog            84.40 316 ⇑P       P       13 26 06.7 +1.0
MILM  Milestii Mici      84.65 318⇑ iP      P       13 26 06.0 -0.9
      comp=Z,100nm,1.0s
MILM  Milestii Mici      84.65 318c iP      P       13 26 06.0 -0.9
MILM                                 e               13 26 30.0
MILM                                  pmax   pmax
      comp=Z,100nm,1.0s
KIS   Kishinev           84.67 318  i P      P       13 26 07.8 +0.8
      comp=Z,50nm,0.6s
KIS   Kishinev           84.67 318   eP      P       13 26 07.8 +0.8
KIS                                   pmax   pmax
      comp=Z,50nm,0.6s
CFR   Carcaliu           84.67 316 ⇑P       P       13 26 07.9 +0.9
CFR   Carcaliu           84.67 316    P      P       13 26 07.9 +0.9
HARR  Harsova            84.69 316 ⇑P       P       13 26 09.1 +2.0
HARR  Harsova            84.69 316    P      P       13 26 09.1 +2.0
IDI   Anoyia             84.95 306    LR     LR      14 09 45.2
      comp=Z,23nm,18.0s,baz=88,slow=40
TSUM  Tsumeb             84.95 251    LR     LR      13 59 26.5
      comp=Z,174nm,21.1s,baz=156,slow=32
ALN   Alexandroupoli     85.19 312    P      P       13 26 09.4 -0.3
ALN                                   IAmb   IAmb    13 26 11.8
      comp=Z,18nm,0.8s
ALN   Alexandroupoli     85.19 312    P      P       13 26 09.4 -0.3
ALN                                   pmax   pmax
      comp=Z,18nm,0.8s
SORM  Soroca             85.26 319 ⇑P       P       13 26 10.7 +0.7
SORM  Soroca             85.26 319    P      P       13 26 10.6 +0.7
VASR  Vaslui             85.26 318 ⇑P       P       13 26 11.2 +1.2
AKASG Malin Array Be     85.37 322    P      P       13 26 10.6 +0.1
      comp=Z,7.2nm,0.7s,baz=77,slow=3.9,SNR=41
AKASG                                 PP     PP      13 29 28.4 -0.7
      comp=Z,0.7nm,0.5s,baz=103,slow=7.5,SNR=4.9
      comp=Z,7.2nm,0.7s
AKASG Malin Array Be     85.37 322    P      P       13 26 09.9 -0.5
AKASG Malin Array Be     85.37 322  i P      P       13 26 10.5 +0.1
AKASG                                 pmax   pmax
      comp=Z,11nm,0.8s
AKBB  Malin Array Si     85.37 322    P      P       13 26 09.9 -0.5
AKBB                                  IAmb   IAmb    13 26 11.6
      comp=Z,20nm,0.8s
AKBB  Malin Array Si     85.37 322c iP      P       13 26 10.2 -0.2
AKBB                                  pmax   pmax
      comp=Z,22nm,0.9s
GHRR                     85.38 317 ⇑P       P       13 26 12.8 +2.2
BILL  Bilibino           85.54  19    P      P       13 26 09.8 -1.1
BILL  Bilibino           85.54  19d iP      P       13 26 09.5 -1.4
BILL                                 e*PP    pP      13 26 26.4 +0.8
BILL                                 e*SP    sP      13 26 33.9 +2.7
BILL                                 e               13 29 29.2
BILL                                 ePPP    PPP     13 31 21.5
BILL                                  pmax   pmax
      comp=Z,31nm,2.5s
BILL                                  MLR    MLR
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             comp=Z,57nm,21.0s
RDO    Rodhopi           85.61 312   P        P        13 26 11.9 +0.1
RDO                                  IAmb     IAmb     13 26 13.8
             comp=Z,15nm,1.1s
VRI    Vrincioaia        85.80 317  ⇑P        P        13 26 14.0 +1.3
VRI    Vrincioaia        85.80 317   P        P        13 26 13.9 +1.3
PLOR   Plostina          85.84 317  ⇑P        P        13 26 14.7 +1.8
PLOR   Plostina          85.84 317   P        P        13 26 14.7 +1.8
TESR   Tescani           86.00 317  ⇑P        P        13 26 15.2 +1.6
MLR    Muntele Rosu      86.25 316  ⇑P        P        13 26 16.7 +1.6
MLR    Muntele Rosu      86.25 316   P        P        13 26 15.3 +0.2
MLR    Muntele Rosu      86.25 316   P        P        13 26 15.3 +0.2
MLR                                  pmax     pmax
             comp=Z,113nm,1.3s
BIZ    Bicaz             86.46 318  ⇑P        P        13 26 18.6 +2.7
DOPR   Dopca             86.73 317  ⇑P        P        13 26 19.3 +2.1
PLVB   Pleven            86.74 314  ⇑P        P        13 26 19.5 +2.2
VOIR                     86.85 316  ⇑P        P        13 26 19.4 +1.4
VOIR                     86.85 316   P        P        13 26 19.4 +1.4
ARR    Arges             87.12 316  ⇑P        P        13 26 20.5 +1.2
MNK    Minsk             87.15 325  i P       P        13 26 18.8 -0.3
             comp=E,6.0nm,1.0s
MNK                                 i P       P        13 26 18.8 -0.3
             comp=N,37nm,1.0s
MNK                                 i P       P        13 26 18.8 -0.3
             comp=Z,52nm,1.0s,baz=104
MNK                                 i pP      pwP      13 26 35.4 -0.3
MNK                                 i PP      PP       13 29 43.5 +0.2
MNK                                 i PPP     PPP      13 31 38.2
MNK                                 i S       S        13 36 40.3  -14
MNK                                 i sS      pS       13 37 10.8 -1.9
MNK                                 i SS      SS       13 42 39.6 +0.5
MNK                                 i SSS     SSS      13 46 14.2
MNK                                 i LQ      LQ       13 59 34.2
MNK                                 i LR      LR       14 02 10.3
MNK                                 i LRM     MLR      14 05 04.1
             comp=Z,81nm,14.4s
MNK                                 i LRM     MLR      14 05 41.5
             comp=N,363nm,16.4s
MNK                                 i LRM     MLR      14 05 49.3
             comp=E,21nm,18.4s
MNK    Minsk             87.15 325  i P       P        13 26 18.7 -0.3
MNK                                 i *PP     pwP      13 26 35.4 -0.3
MNK                                 i                  13 29 43.5
MNK                                 i PPP     PPP      13 31 38.1
MNK                                 i S       S        13 36 40.3  -14
MNK                                 i SS      SS       13 42 39.6 +0.5
MNK                                 i SSS     SSS      13 46 14.2
MNK                                  pmax     pmax
             comp=N,37nm,1.0s
MNK                                  pmax     pmax
             comp=Z,52nm,1.0s
MNK                                  pmax     pmax
             comp=E,6.0nm,1.0s
MNK                                  MLR      MLR
             comp=Z,81nm,14.0s
MNK                                  MLR      MLR
             comp=N,363nm,16.0s
MNK                                  MLR      MLR
             comp=E,21nm,18.0s
BURAR  Bucovina Array    87.19 318  ⇑P        P        13 26 21.7 +2.1
BURAR  Bucovina Array    87.19 318   P        P        13 26 19.8 +0.2
BURAR  Bucovina Array    87.19 318   P        P        13 26 21.7 +2.1
BUR08  Bucovina Ar. S    87.21 318   P        P        13 26 19.0 -0.7
BUR08                                IAmb     IAmb     13 26 22.8
             comp=Z,28nm,0.9s
AGG    Agios Georgios    87.63 309   P        P        13 26 21.4 -0.4
AGG    Agios Georgios    87.63 309   P        P        13 26 21.4 -0.4
AGG                                  pmax     pmax
             comp=Z,2.0nm,1.0s
ITM    Ithomi            87.64 308   P        P        13 26 21.1 -0.8
ITM                                  IAmb     IAmb     13 26 24.1
             comp=Z,28nm,1.4s
ARCR   ARCALIA           87.66 318  ⇑P        P        13 26 23.4 +1.7
LIT    Litokhoron        87.69 311   P        P        13 26 20.9 -1.2
LIT    Litokhoron        87.69 311   P        P        13 26 20.9 -1.2
LOT    Lotru             87.74 316  ⇑P        P        13 26 23.5 +1.2
NACGM  Naroch            87.86 326  eP        P        13 26 23.1 +0.6
             comp=Z,54nm,0.8s,baz=104
CJR    Cluj-Napoca       88.09 317  ⇑P        P        13 26 26.5 +2.6
CJR    Cluj-Napoca       88.09 317   P        P        13 26 26.5 +2.6
LVZ    Lovozero          88.14 339   P        P        13 26 23.4 -0.2
LVZ    Lovozero          88.14 339⇓eP         P        13 26 23.1 -0.5
LVZ                                  pmax     pmax
             comp=Z,19nm,0.8s
LVV    L'vov             88.41 320  eP        P        13 26 25.9 +0.7
MARR   Marisel-Cluj      88.41 317  ⇑P        P        13 26 27.8 +2.4
GZR    Gura Zlata        88.41 316  ⇑P        P        13 26 26.8 +1.4
GZR    Gura Zlata        88.41 316   P        P        13 26 26.8 +1.4
APA    Apatity           88.46 339⇓iP         P        13 26 28.1 +3.0
APA                                  pmax     pmax
             comp=Z,8.0nm,0.8s
DJES   Djerdap           88.47 315  ⇑P        P        13 26 27.3 +1.7
HERR   Herculane         88.58 315  ⇑P        P        13 26 27.8 +1.7
FNA    Florina           88.65 311   P        P        13 26 25.7 -0.9
FNA    Florina           88.65 311   P        P        13 26 25.7 -0.9
DRGR                     88.71 317  ⇑P        P        13 26 28.1 +1.3
DRGR                     88.71 317   P        P        13 26 28.1 +1.3
VSU    Vasula            88.73 329d iP        P        13 26 27.3 +0.8
VSU                                  pmax     pmax
             comp=Z,123nm,0.9s
SURR   Surduc            88.93 316  ⇑P        P        13 26 29.1 +1.3
MDVR   Moldovita         89.05 315  ⇑P        P        13 26 30.0 +1.6
TRPA   Tarpa             89.06 318  ⇑P        P        13 26 29.7 +1.4
BZS    Buzias            89.26 316  ⇑P        P        13 26 30.7 +1.4
BZS    Buzias            89.26 316   P        P        13 26 30.6 +1.4
SIRR   Siria             89.33 317  ⇑P        P        13 26 32.0 +2.3
SNAA   Sanae             89.56 198   LR       LR       13 59 17.1
             comp=Z,182nm,21.4s,baz=109,slow=30
SNAA   Sanae             89.56 198⇓eP         P        13 26 32.1 +1.8
SNAA                                 pmax     pmax
             comp=Z,21nm,3.0s
KEK    Kerkira           89.68 310   P        P        13 26 33.1 +1.7
FINES  FINESS Array B    89.75 332   P        P        13 26 31.6 +0.4
             comp=Z,12nm,0.7s,baz=112,slow=8.5,SNR=24
             comp=Z,12nm,0.7s
FINES  FINESS Array B    89.75 332  i P       P        13 26 32.0 +0.8
FINES                                pmax     pmax
             comp=Z,12nm,0.7s
STHS   Stebnicka Huta    90.12 320  eP        P        13 26 34.4 +1.1
STHS                                 pmax     pmax
             comp=Z,12nm,0.9s
STHS   Stebnicka Huta    90.12 320  eP        P        13 26 34.4 +1.1
DIVS   Divibare          90.16 314   P        P        13 26 32.2 -1.5
PDG    Podgorica         90.46 312  ⇑P        P        13 26 36.7 +1.8
PDG    Podgorica         90.46 312   P        P        13 26 34.0 -1.0
VYHS   Vyhne             91.56 318  eP        P        13 26 41.4 +1.4
VYHS                                 pmax     pmax
             comp=Z,12nm,1.6s
VYHS   Vyhne             91.56 318  eP        P        13 26 41.4 +1.4
ARCES  ARCESS Array B    91.80 340   P        P        13 26 40.8 +0.2
             comp=Z,6.3nm,0.8s,baz=119,slow=4.3,SNR=8.0
ARCES                                LR       LR       14 12 07.8
             comp=Z,48nm,19.2s,baz=81,slow=38
             comp=Z,6.3nm,0.8s
JAVC   Velka Javorina    92.37 319  eP        P        13 26 46.5 +2.7
MORC   Moravsky Berou    92.56 320  ⇑P        P        13 26 46.7 +2.1
MORC   Moravsky Berou    92.56 320  eP        P        13 26 45.5 +0.9
MORC                                ePP       PP       13 30 26.6  0.0
MORC   Moravsky Berou    92.56 320   P        P        13 26 46.7 +2.1
CUC    Castrocucco       92.76 310   P        P        13 26 45.3 -0.5
GAMB   Gambell           92.78  26   P        P        13 26 45.7 +0.5
             baz=262
KRLC   Kraliky           93.08 320  eP        P        13 26 48.4 +1.4
KRLC   Kraliky           93.08 320  eP        P        13 26 48.4 +1.4
VRAC   Vranov            93.12 319   LR       LR       14 14 06.8
             comp=Z,14nm,19.0s,baz=70,slow=39
VRAC   Vranov            93.12 319  ePP       PP       13 30 30.2 -0.8
BELA   Belgrano 2        93.15 188   P        P        13 26 48.0 +1.2
DPC    Dobruska-Polom    93.40 320  eP        P        13 26 49.8 +1.3
DPC    Dobruska-Polom    93.40 320  eP        P        13 26 49.8 +1.3
GOLS   Golise            93.46 316  i P       P        13 26 50.2 +1.3
GROS   Grobnik           93.59 316  i P       P        13 26 50.4 +0.9
CKRC   Cesky Krumlov     94.58 318  eP        P        13 26 55.5 +1.6
CKRC   Cesky Krumlov     94.58 318  eP        P        13 26 55.5 +1.6
PRED   Cave del Predi    94.92 316   P        P        13 26 55.5 -0.1
GERES  GERESS Array B    94.98 318   P        P        13 26 56.3 +0.4
             comp=Z,0.8nm,0.6s,baz=116,slow=3.1,SNR=7.3
GERES                                PP       PP       13 30 45.6  0.0
             comp=Z,0.6nm,0.6s,baz=81,slow=8.6,SNR=3.8
GERES                                LR       LR       14 16 47.3
             comp=Z,28nm,18.3s,baz=69,slow=40
             comp=Z,0.8nm,0.6s
GERES  GERESS Array B    94.98 318   P        P        13 26 55.0 -0.8
KHC    Kasperske Hory    95.08 319  eP        P        13 27 00.2 +4.0
KHC    Kasperske Hory    95.08 319⇑eP         P        13 26 54.6 -1.6
KHC                                  pmax     pmax
             comp=Z,62nm,5.8s
SPITS  Spitsbergen Ar    95.53 348   LR       LR       14 16 58.4
             comp=Z,161nm,19.3s,baz=38,slow=40
CLL    Collm             95.57 321  ePx       Px       13 27 01.0
CLL                                  AMS      AMS      14 32 00.0
             comp=N,100nm,19.9s
CLL                                  AMS      AMS      14 32 00.0
             comp=E,100nm,20.0s
CLL                                  AMS      AMS      14 35 00.0
             comp=Z,100nm,19.0s
CLL    Collm             95.57 321  eP        P        13 27 01.0 +2.7
ANM    Nome              95.61  26   P        P        13 26 57.8 -0.4
ANM                                  IAmb     IAmb     13 26 59.7
             comp=Z,15nm,1.6s
ANM    Nome              95.61  26   P        P        13 26 57.8 -0.4
ANM                                  pmax     pmax
             comp=Z,15nm,1.6s
CIMO   Cimolais          95.69 316   P        P        13 26 57.9 -1.2
CIMO                                 IAmb     IAmb     13 27 01.1
             comp=Z,20nm,1.7s
N16K   Nishlik Lake      98.70  30   P        Pdif     13 27 12.4 +0.1
             baz=273
GCSA   Galena City Sc    99.26  25   P        Pdif     13 27 15.5 +0.8
             baz=275
G21K   Allakaket        100.43  23   P        Pdif     13 27 19.8 -0.1
             baz=279
E22K   Anaktuvuk Pass   100.81  22   P        Pdif     13 27 21.6  0.0
             baz=281
H21K   Melozitna Rive   100.85  24   P        Pdif     13 27 22.0 +0.2
             baz=279
I21K   Tanana           101.27  25   P        Pdif     13 27 24.0 +0.4
             baz=280
PPT2   Papeete2         103.36 110  eLR       LR       14 01 32.0
             comp=Z,149nm,24.0s
TAOE   Nuku Hiva Isla   114.03 102  eLR       LR       14 06 27.9
             comp=Z,122nm,22.7s
YKA    Yellowknife Ar   116.94  19   PKP      PKPdf    13 32 17.1 -0.3
             comp=Z,1.4nm,0.8s,baz=316,slow=1.6,SNR=20
YKA                                  PKKPbc   PKKPab   13 42 48.5 +1.2
             comp=Z,0.3nm,0.8s,baz=124,slow=4.4,SNR=5.9
FCC    Fort Churchill   125.60  12            PKPdf    13 32 33.8 -0.3
FCC    Fort Churchill   125.60  12   PKIKP    PKPdf    13 32 33.8 -0.3
MSO    Missoula         127.81  33            PKPdf    13 32 38.4 -0.5
MSO    Missoula         127.81  33   P        PKiKP    13 32 39.6 +0.1
             baz=309
EGMT   Eagleton         129.15  29   P        PKiKP    13 32 42.6 +0.5
             baz=314
NVAR   Mina Array Bea   129.80  44   PKP      PKiKP    13 32 43.9 +0.1
             comp=Z,1.3nm,0.9s,baz=338,slow=1.2,SNR=7.6
BOZ    Bozeman (W)      129.84  32   P        PKiKP    13 32 44.4 +0.8
             baz=311
SCHQ   Schefferville    130.91 353   PKP      PKiKP    13 32 45.0 -0.4
             comp=Z,2.5nm,0.8s,baz=198,slow=5.5,SNR=4.2
R11B   Troy Canyon, C   131.69  43   P        PKiKP    13 32 47.9 +0.2
             baz=301
PDAR   Pinedale Array   132.81  34   PKP      PKiKP    13 32 50.2 +0.4
             comp=Z,0.4nm,0.5s,baz=146,slow=0.5,SNR=7.4
ULM    Lac du Bonnet    132.87  18   PKP      PKPdf    13 32 48.4 +0.1
             comp=Z,4.4nm,0.7s,baz=344,slow=4.6,SNR=6.8
RSSD   Black Hills      134.72  29            PKPdf    13 32 51.8 -0.4
RSSD   Black Hills      134.72  29   PKIKP    PKPdf    13 32 51.8 -0.4
RSSD   Black Hills      134.72  29   P        PKPdf    13 32 52.8 +0.6
             baz=318
PLTB   Pedras Altas     136.84 208  eP        PKPdf    13 32 56.6 +0.4
MVCO   Mesa Verde       136.96  39   P        PKiKP    13 32 58.5 +0.1
             baz=308
ECSD   EROS Data Cent   138.26  23   P        PKPdf    13 32 59.2 +0.7
             baz=328
ANMO   Albuquerque      139.66  41   PKPdf    PKPdf    13 33 00.9 -0.7
ANMO   Albuquerque      139.66  41   PKIKP    PKPdf    13 33 00.9 -0.7
OK032  Salt Plains WL   143.16  31            PKPbc    13 33 04.4 -0.1
L48A   N Adams          143.49  11            PKPbc    13 33 04.9 -0.4
P40A   Paris            143.61  22            PKPbc    13 33 05.3 -0.3
P40A   Paris            143.61  22   P        PKPab    13 33 05.2 +0.4
             baz=332,SNR=6.2
WVNY   West Valley, N   143.78   4   P        PKPab    13 33 05.4  0.0
             baz=355
T35A   Sooner Cattle    143.92  29            PKPab    13 33 06.1  0.0
T35B   Sooner Cattle    143.92  29   P        PKPbc    13 33 06.8 +0.1
             baz=323,SNR=7.5
OK051  E0350 and S346   144.09  30            PKPab    13 33 06.9 +0.1
L56A   Greenwood        144.10   2            PKPab    13 33 06.8 +0.2
OK048  Pawnee Station   144.10  30            PKPab    13 33 06.8  0.0
N47A   Urbana           144.25  13            PKPbc    13 33 07.4 -0.2
N47A   Urbana           144.25  13   P        PKPbc    13 33 07.7 +0.1
             baz=343
N47A                                 P        PKPbc    13 33 07.7 +0.1
             baz=343
M50A   Fremont          144.26  10            PKPab    13 33 07.1 -0.1
M50A   Fremont          144.26  10   P        PKPbc    13 33 07.4 -0.2
             baz=347
M50A                                 P        PKPbc    13 33 07.4 -0.2
             baz=347
OK029  Liberty Lake     144.33  31            PKPab    13 33 07.7 +0.1
M52A   Chesterland      144.37   7            PKPab    13 33 07.5 -0.1
M52A   Chesterland      144.37   7   P        PKPbc    13 33 07.8 -0.2
             baz=350,SNR=8.2
M52A                                 P        PKPbc    13 33 07.8 -0.2
             baz=350,SNR=8.2
P43A   Skaggs, Pawnee   144.37  19            PKPab    13 33 07.8 +0.1
SFIN   Lafayette        144.39  15            PKPab    13 33 07.6 -0.1
SFIN   Lafayette        144.39  15   P        PKPbc    13 33 08.1 +0.1
             baz=340
SFIN   Lafayette        144.39  15   P        PKPbc    13 33 08.5 +0.5
             baz=340
QUOK   Quay             144.41  30            PKPab    13 33 07.7 -0.2
WMOK   Wichita Mounta   144.42  34            PKPab    13 33 07.5 -0.5
WMOK   Wichita Mounta   144.42  34   PKIKP    PKPab    13 33 07.5 -0.5
WMOK   Wichita Mounta   144.42  34   P        PKPab    13 33 08.0 -0.1
             baz=318
WMOK   Wichita Mounta   144.42  34   P        PKPab    13 33 07.9 -0.1
             baz=318,SNR=30
KSCT   Kent School, K   144.50 357            PKPab    13 33 07.6 -0.4
OK052  Battle Ridge R   144.51  30            PKPab    13 33 08.1 -0.2
N49A   Columbus Grove   144.53  11            PKPab    13 33 07.6 -0.6
N49A   Columbus Grove   144.53  11   P        PKPab    13 33 08.2  0.0
             baz=345,SNR=9.0
N49A                                 P        PKPab    13 33 08.2  0.0
             baz=345,SNR=9.0
M53A   WI Miller and    144.55   6            PKPab    13 33 07.7 -0.6
M53A   WI Miller and    144.55   6   P        PKPab    13 33 08.2 -0.1
             baz=351
R40A   Maddies Statio   144.61  23            PKPab    13 33 07.7 -0.9
R40A   Maddies Statio   144.61  23   P        PKPab    13 33 08.2 -0.4
             baz=331,SNR=29
M55A   Ridgway          144.70   4            PKPab    13 33 08.5 -0.3
M55A   Ridgway          144.70   4   P        PKPab    13 33 08.0 -0.8
             baz=355
M55A                                 P        PKPab    13 33 08.0 -0.8
             baz=355
S39A   Bolivar          144.71  25            PKPab    13 33 08.0 -1.0
S39A   Bolivar          144.71  25   P        PKPab    13 33 08.4 -0.6
             baz=329,SNR=21
KSPA   Keystone Colle   144.72   0            PKPab    13 33 08.5 -0.4
KSPA   Keystone Colle   144.72   0   P        PKPab    13 33 08.8 -0.1
             baz=360,SNR=5.4
M63A   Gales Ferry      144.72 355   P        PKPbc    13 33 09.5 +0.5
             baz=6.2
M63A                                 P        PKPbc    13 33 09.5 +0.5
             baz=6.2
HPIG                    144.74  51            PKPab    13 33 09.1 -0.6
AMBA   Amambai (Brazi   144.75 214  eP        PKPbc    13 33 10.2 +0.5
FNO    Franklin         144.77  32            PKPbc    13 33 09.4  0.0
DEOK   Depew            144.78  30            PKPab    13 33 08.7 -0.6
N51A   Ashland          144.84   9            PKPab    13 33 08.3 -1.1
N51A   Ashland          144.84   9   P        PKPab    13 33 08.7 -0.6
             baz=348,SNR=9.4
N51A                                 P        PKPab    13 33 08.7 -0.6
             baz=348,SNR=9.4
M57A   Sunshine Farm,   144.91   2            PKPab    13 33 08.6 -1.0
M57A   Sunshine Farm,   144.91   2   P        PKPab    13 33 08.8 -0.9
             baz=357,SNR=13
M57A                                 P        PKPab    13 33 08.8 -0.9
             baz=357,SNR=13
TX31   Lajitas Ar. Si   144.91  45            PKPbc    13 33 10.5 +0.3
TX31   Lajitas Ar. Si   144.91  45   P        PKPdf    13 33 11.0 +0.1
             baz=306
TX32   Lajitas Array    144.91  45            PKPbc    13 33 10.4 +0.2
TXAR   Lajitas Array    144.92  45   PKP      PKPdf    13 33 11.0  0.0
             comp=Z,31nm,0.8s,baz=285,slow=1.7,SNR=305
TXAR   Lajitas Array    144.92  45   PKPdf    PKPdf    13 33 10.6 -0.3
TXAR   Lajitas Array    144.92  45   PKIKP    PKPdf    13 33 10.6 -0.3
O48B   Farmland         144.97  13   P        PKPab    13 33 08.8 -1.0
             baz=343
O48B   Farmland         144.97  13   P        PKPab    13 33 09.6 -0.3
             baz=343,SNR=13
TUL1   Leonard          145.07  29            PKPbc    13 33 09.6 -0.7
TUL1   Leonard          145.07  29   P        PKPbc    13 33 10.0 -0.4
             baz=323
TUL1   Leonard          145.07  29   P        PKPbc    13 33 10.1 -0.2
             baz=323,SNR=7.2
P46A   Rosedale         145.07  16            PKPbc    13 33 09.6 -0.6
BDFB   Brasilia         145.10 231   PKPbc    PKPdf    13 33 13.1 +1.5
             comp=Z,9.1nm,0.7s,baz=131,slow=2.6,SNR=10
TRNY   Table Rock, Ra   145.11 358            PKPbc    13 33 09.6 -0.7
W35A   Tecumseh         145.12  31            PKPbc    13 33 10.1 -0.5
N53A   Lisbon           145.16   7            PKPbc    13 33 09.9 -0.6
N53A   Lisbon           145.16   7   P        PKPbc    13 33 09.5 -0.9
             baz=351,SNR=20
N53A                                 P        PKPbc    13 33 09.5 -0.9
             baz=351,SNR=20
ODNJ   Ogdensburg       145.18 359            PKPbc    13 33 09.9 -0.6
ODNJ   Ogdensburg       145.18 359   P        PKPbc    13 33 10.2 -0.3
             baz=1.8,SNR=9.9
O49A   Covington        145.20  12            PKPbc    13 33 09.7 -0.9
O49A   Covington        145.20  12   P        PKPbc    13 33 10.0 -0.6
             baz=345,SNR=14
O49A                                 P        PKPbc    13 33 10.0 -0.6
             baz=345,SNR=14
Q44A   Meyer Farm, Va   145.21  18   P        PKPbc    13 33 10.3 -0.4
             baz=336,SNR=12
CCM    Cathedral Cave   145.21  22            PKPbc    13 33 09.8 -0.9
CCM    Cathedral Cave   145.21  22   PKIKP    PKPbc    13 33 09.8 -0.9
CCM    Cathedral Cave   145.21  22   P        PKPbc    13 33 10.0 -0.7
             baz=332
CCM    Cathedral Cave   145.21  22   P        PKPbc    13 33 10.2 -0.5
             baz=332,SNR=20
PAL    Palisades        145.24 358            PKPbc    13 33 09.9 -0.7
PAL    Palisades        145.24 358   PKIKP    PKPbc    13 33 09.9 -0.7
PAL    Palisades        145.24 358   P        PKPbc    13 33 10.1 -0.5
             baz=3.0
U38A   Gravette         145.30  27            PKPbc    13 33 10.1 -1.0
U38A   Gravette         145.30  27   P        PKPbc    13 33 10.5 -0.6
             baz=326,SNR=25
ACSO   Alum Creek Sta   145.41  10            PKPbc    13 33 10.5 -0.8
ACSO   Alum Creek Sta   145.41  10   P        PKPbc    13 33 10.8 -0.5
             baz=347
ACSO   Alum Creek Sta   145.41  10   P        PKPbc    13 33 11.1 -0.2
             baz=347,SNR=19
N58A   Sunbury          145.42   1            PKPbc    13 33 10.6 -0.7
N58A   Sunbury          145.42   1   P        PKPbc    13 33 11.2 -0.1
             baz=358,SNR=20
N58A                                 P        PKPbc    13 33 11.2 -0.1
             baz=358,SNR=20
ABTX   Abilene, Hawle   145.45  37   P        PKPab    13 33 12.1 +0.1
             baz=315
ABTX   Abilene, Hawle   145.45  37   P        PKPab    13 33 12.2 +0.3
             baz=315,SNR=8.4
FVM    French Village   145.57  21   PKPdf    PKPdf    13 33 10.7 -1.0
FVM    French Village   145.57  21   PKIKP    PKPdf    13 33 10.7 -1.0
FVM    French Village   145.57  21   P        PKPdf    13 33 11.0 -0.7
             baz=334,SNR=8.3
SSPA   Standing Stone   145.58   3   PKPdf    PKPdf    13 33 11.0 -0.6
SSPA   Standing Stone   145.58   3   P        PKPdf    13 33 11.5 -0.1
             baz=356
SSPA   Standing Stone   145.58   3   P        PKPdf    13 33 11.6  0.0
             baz=356,SNR=13
HHAR   Hobbs            145.63  27   PKPdf    PKPdf    13 33 10.9 -1.0
OLIL   Olney            145.64  17   PKPdf    PKPdf    13 33 11.3 -0.4
OLIL   Olney            145.64  17   P        PKPbc    13 33 12.0  0.0
             baz=338,SNR=6.7
O53A   New Philadelph   145.66   8            PKPdf    13 33 11.3 -0.4
O53A   New Philadelph   145.66   8   P        PKPdf    13 33 11.7 -0.1
             baz=350
P48A   Milroy           145.67  13            PKPdf    13 33 11.1 -0.7
P48A   Milroy           145.67  13   P        PKPdf    13 33 11.5 -0.3
             baz=343,SNR=14
P48A                                 P        PKPdf    13 33 11.5 -0.3
             baz=343,SNR=14
LUPA   Lehigh Univers   145.68 360            PKPdf    13 33 11.4 -0.4
O52A   Adamsville       145.71   8            PKPdf    13 33 11.5 -0.4
O52A   Adamsville       145.71   8   P        PKPdf    13 33 11.7 -0.1
             baz=349,SNR=12
O52A                                 P        PKPdf    13 33 11.7 -0.1
             baz=349,SNR=12
P49A   Miami Univ. Ec   145.75  12   PKPdf    PKPdf    13 33 11.0 -0.9
P49A   Miami Univ. Ec   145.75  12   P        PKPdf    13 33 11.3 -0.6
             baz=344
P49A   Miami Univ. Ec   145.75  12   P        PKPdf    13 33 11.8 -0.1
             baz=344,SNR=10.0
O54A   Avella           145.83   6            PKPdf    13 33 12.1  0.0
O54A   Avella           145.83   6   P        PKPbc    13 33 12.5 -0.1
             baz=352,SNR=14
O54A                                 P        PKPbc    13 33 12.5 -0.1
             baz=352,SNR=14
PAGS   Pennsylvania G   146.03   1   PKPdf    PKPdf    13 33 12.3  0.0
U40A   Yellville        146.04  25   P        PKPbc    13 33 13.0 -0.4
             baz=328,SNR=33
U40A                                 P        PKPbc    13 33 13.0 -0.4
             baz=328,SNR=33
TUPA   Temple Univers   146.11 359   P        PKPbc    13 33 13.6 +0.2
             baz=0.8,SNR=6.0
P51A   Williamsport     146.13  10   PKPdf    PKPdf    13 33 12.0 -0.6
P51A   Williamsport     146.13  10   P        PKPdf    13 33 12.7 +0.1
             baz=347,SNR=10
P51A                                 P        PKPdf    13 33 12.7 +0.1
             baz=347,SNR=10
P52A   Corning          146.13   9   PKPdf    PKPdf    13 33 12.0 -0.6
P52A   Corning          146.13   9   P        PKPdf    13 33 12.7 +0.1
             baz=348
T42A   Van Buren        146.17  22   P        PKPbc    13 33 13.3 -0.4
             baz=332
S44A   Carbondale       146.23  20   PKPdf    PKPdf    13 33 12.2 -0.6
S44A   Carbondale       146.23  20   P        PKPbc    13 33 13.7 -0.2
             baz=335,SNR=9.5
MVL    Millersville     146.27   1   PKPbc    PKPbc    13 33 13.8 -0.1
Z35A   Perchaven, San   146.31  34            PKPbc    13 33 13.8 -0.5
X37A   Clayton          146.33  30            PKPdf    13 33 13.7 +0.6
X37A   Clayton          146.33  30   P        PKPbc    13 33 14.1 -0.2
             baz=323,SNR=13
WUPA   West Chester U   146.34 360            PKPbc    13 33 13.5 -0.6
P53A   Whipple          146.39   8            PKPbc    13 33 13.7 -0.6
P53A   Whipple          146.39   8   P        PKPbc    13 33 14.0 -0.3
             baz=350,SNR=9.1
P53A                                 P        PKPbc    13 33 14.0 -0.3
             baz=350,SNR=9.1
MCWV   Mont Chateau     146.41   6            PKPbc    13 33 14.1 -0.3
MCWV   Mont Chateau     146.41   6   P        PKPbc    13 33 14.2 -0.1
             baz=352
MCWV   Mont Chateau     146.41   6   P        PKPbc    13 33 14.5 +0.1
             baz=352,SNR=7.2
C2SB   Chapadao do Su   146.56 222  eP        PKPdf    13 33 14.0 +0.1
WCI    Wyandotte Cave   146.62  15   PKPbc    PKPbc    13 33 14.4 -0.6
WCI    Wyandotte Cave   146.62  15   PKP2     PKPbc    13 33 14.4 -0.6
WCI    Wyandotte Cave   146.62  15   P        PKPbc    13 33 14.7 -0.3
             baz=341
WCI    Wyandotte Cave   146.62  15   P        PKPbc    13 33 15.1 +0.1
             baz=341,SNR=11
P57A   Homestead Farm   146.72   3   PKPbc    PKPdf    13 33 14.2 +0.6
P57A   Homestead Farm   146.72   3   P        PKPbc    13 33 15.1 -0.2
             baz=356,SNR=14
P57A                                 P        PKPbc    13 33 15.1 -0.2
             baz=356,SNR=14
FCAR   Ozark Folk Cen   146.75  25   PKPbc    PKPdf    13 33 13.9 +0.2
Q52A   Bidwell          146.77   9   PKPbc    PKPbc    13 33 14.6 -0.8
Q52A   Bidwell          146.77   9   P        PKPbc    13 33 15.0 -0.5
             baz=348,SNR=12
Q52A                                 P        PKPbc    13 33 15.0 -0.5
             baz=348,SNR=12
JCT    Junction City    146.81  40   PKPbc    PKPbc    13 33 15.0 -0.9
JCT    Junction City    146.81  40   PKP2     PKPbc    13 33 15.0 -0.9
JCT    Junction City    146.81  40   P        PKPbc    13 33 16.2 +0.3
             baz=312
R49A   Shelbyville      146.84  14   PKPbc    PKPbc    13 33 15.0 -0.7
R49A   Shelbyville      146.84  14   P        PKPbc    13 33 15.5 -0.2
             baz=343,SNR=18
R49A                                 P        PKPbc    13 33 15.5 -0.2
             baz=343,SNR=18
SDMD   Soldier's Deli   146.85   2   PKPbc    PKPbc    13 33 15.0 -0.7
SDMD   Soldier's Deli   146.85   2   P        PKPbc    13 33 15.2 -0.4
             baz=358,SNR=6.6
Q54A   Coxs Mills       146.96   7   PKPbc    PKPbc    13 33 15.2 -0.7
Q54A   Coxs Mills       146.96   7   P        PKPbc    13 33 15.6 -0.3
             baz=351,SNR=15
Q54A                                 P        PKPbc    13 33 15.6 -0.3
             baz=351,SNR=15
LCAR   Lake Charles     146.98  23   PKPbc    PKPdf    13 33 14.8 +0.7
LCAR   Lake Charles     146.98  23   P        PKPbc    13 33 16.2 +0.1
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	baz=331,SNR=38						
R50A	Paris	147.04	13	PKPbc	PKPdf	13 33 15.2	+1.0
R50A	Paris	147.04	13	P	PKPbc	13 33 15.6	-0.6
	baz=344,SNR=14						
R50A				P	PKPbc	13 33 15.6	-0.6
	baz=344,SNR=14						
Q56A	Snyder Ridge,	147.08	5	PKPbc	PKPbc	13 33 15.9	-0.4
Q56A	Snyder Ridge,	147.08	5	P	PKPbc	13 33 16.2	-0.2
	baz=354,SNR=9.3						
Q56A				P	PKPbc	13 33 16.2	-0.2
	baz=354,SNR=9.3						
WHAR	Wooly Hollow	147.19	26	PKPbc	PKPbc	13 33 15.7	-1.1
WHTX	Lake Whitney,	147.19	36	P	PKPbc	13 33 17.2	+0.3
	baz=317						
WHTX	Lake Whitney,	147.19	36	P	PKPbc	13 33 17.4	+0.6
	baz=317,SNR=6.7						
MIAR	Mount Ida	147.23	28	PKPbc	PKPdf	13 33 15.6	+1.0
MIAR	Mount Ida	147.23	28	PKP2	PKPdf	13 33 15.6	+1.0
MIAR	Mount Ida	147.23	28	P	PKPbc	13 33 16.8	-0.1
	baz=326						
MIAR	Mount Ida	147.23	28	P	PKPbc	13 33 17.1	+0.2
	baz=326,SNR=25						
ROSB	Rosrio	147.25	255	*e*P	PKPdf	13 33 15.0	-0.2
R53A	Hurricane	147.44	9	PKPbc	PKPbc	13 33 16.4	-0.9
R53A	Hurricane	147.44	9	P	PKPbc	13 33 16.7	-0.7
	baz=348,SNR=18						
R53A				P	PKPbc	13 33 16.7	-0.7
	baz=348,SNR=18						
T47A	Sharon Grove	147.55	17	PKPbc	PKPbc	13 33 17.0	-0.7
T47A	Sharon Grove	147.55	17	P	PKPbc	13 33 17.2	-0.4
	baz=338,SNR=8.3						
UALR	University of	147.60	26	PKPbc	PKPbc	13 33 17.2	-0.7
X40A	Basin Creek Fa	147.62	27	PKPbc	PKPbc	13 33 17.1	-0.9
X40A	Basin Creek Fa	147.62	27	P	PKPbc	13 33 18.0	+0.1
	baz=327,SNR=5.4						
X40A				P	PKPbc	13 33 18.0	+0.1
	baz=327,SNR=5.4						
R55A	Marlinton	147.74	7	PKPbc	PKPbc	13 33 17.6	-0.6
R55A	Marlinton	147.74	7	P	PKPbc	13 33 17.8	-0.5
	baz=352,SNR=5.1						
R55A				P	PKPbc	13 33 17.8	-0.5
	baz=352,SNR=5.1						
S51A	Beattyville	147.81	12		PKPbc	13 33 17.5	-0.9
S51A	Beattyville	147.81	12	P	PKPbc	13 33 17.6	-0.8
	baz=345,SNR=18						
S51A				P	PKPbc	13 33 17.6	-0.8
	baz=345,SNR=18						
ARAG	Araguaiana, MT	147.93	227	*e*P	PKPdf	13 33 16.3	+0.1
S54A	Dingess, Beckl	148.06	8		PKPbc	13 33 17.9	-1.2
S54A	Dingess, Beckl	148.06	8	P	PKPbc	13 33 18.4	-0.7
	baz=349						
S54A				P	PKPbc	13 33 18.4	-0.7
	baz=349						
T50A	Nancy	148.13	14		PKPbc	13 33 17.8	-1.4
T50A	Nancy	148.13	14	P	PKPbc	13 33 18.3	-0.9
	baz=343						
T50A				P	PKPbc	13 33 18.3	-0.9
	baz=343						
R58B	Mineral	148.25	3	PKPbc	PKPbc	13 33 18.9	-0.6
R58B	Mineral	148.25	3	P	PKPbc	13 33 19.4	-0.1
	baz=356,SNR=7.8						
R58B				P	PKPbc	13 33 19.4	-0.1
	baz=356,SNR=7.8						
SMTB	Santa Maria do	148.29	242	*e*P	PKPdf	13 33 16.5	-0.5
S57A	Dark Hollow, R	148.37	5	PKPbc	PKPbc	13 33 19.3	-0.5
S57A	Dark Hollow, R	148.37	5	P	PKPbc	13 33 19.8	0.0
	baz=354,SNR=10						
S57A				P	PKPbc	13 33 19.8	0.0
	baz=354,SNR=10						
U49A	Red Boiling Sp	148.37	16		PKPbc	13 33 19.3	-0.6
U49A	Red Boiling Sp	148.37	16	P	PKPbc	13 33 19.5	-0.4
	baz=341,SNR=14						
833A	Chaparral WMA,	148.49	43	P	PKiKP	13 33 21.3	-0.7
	baz=310						
W45A	Hickory Valley	148.54	22	PKPbc	PKPbc	13 33 19.6	-0.7
CLTN	Cedars of Leba	148.61	17	PKPbc	PKPbc	13 33 20.0	-0.5
V48A	Smith Brothers	148.79	18		PKPbc	13 33 20.1	-0.9
V48A	Smith Brothers	148.79	18	P	PKPbc	13 33 20.4	-0.6
	baz=338,SNR=14						
TZTN	Tazewell	148.88	12		PKPbc	13 33 20.7	-0.4
TZTN	Tazewell	148.88	12	P	PKPbc	13 33 20.8	-0.4
	baz=345						
TZTN	Tazewell	148.88	12	P	PKPbc	13 33 21.1	-0.1
	baz=345,SNR=22						
OXF	Oxford	149.03	22		PKPbc	13 33 20.9	-0.7
OXF	Oxford	149.03	22	PKP2	PKPbc	13 33 20.9	-0.7
OXF	Oxford	149.03	22	P	PKPbc	13 33 21.1	-0.5
	baz=333						
OXF	Oxford	149.03	22	P	PKPbc	13 33 21.7	+0.1
	baz=333,SNR=9.9						
PLAL	Pickwick Lake	149.09	20		PKPbc	13 33 20.7	-1.0
T57A	Hurt	149.10	6	P	PKPbc	13 33 21.2	-0.5
	baz=353,SNR=7.0						
T57A				P	PKPbc	13 33 21.2	-0.5
	baz=353,SNR=7.0						
T60A	Surry	149.12	2		PKPbc	13 33 21.3	-0.4
T60A	Surry	149.12	2	P	PKPbc	13 33 21.9	+0.1
	baz=358,SNR=5.8						
T60A				P	PKPbc	13 33 21.9	+0.1
	baz=358,SNR=5.8						
U54A	Nelsons Funny	149.23	10		PKPbc	13 33 21.3	-0.9
U54A	Nelsons Funny	149.23	10	P	PKPbc	13 33 22.0	-0.2
	baz=348,SNR=5.2						
U54A				P	PKPbc	13 33 22.0	-0.2
	baz=348,SNR=5.2						
T59A	Double "B" Far	149.25	3		PKPbc	13 33 21.8	-0.3
T59A	Double "B" Far	149.25	3	P	PKPbc	13 33 22.3	+0.2
	baz=356,SNR=16						
T59A				P	PKPbc	13 33 22.3	+0.2
	baz=356,SNR=16						
V51A	Loudon	149.41	14		PKPbc	13 33 22.0	-0.5
V51A	Loudon	149.41	14	P	PKPbc	13 33 22.3	-0.3
	baz=343,SNR=14						
V52A	Sevierville	149.54	13		PKPbc	13 33 22.7	-0.2
V52A	Sevierville	149.54	13	P	PKPbc	13 33 23.0	+0.1
	baz=344,SNR=36						
SWET	Sewanee	149.54	17		PKPbc	13 33 21.9	-1.0
Y45A	Yeager Farm, C	149.55	23	PKPbc	PKPbc	13 33 22.5	-0.4
Y45A	Yeager Farm, C	149.55	23	P	PKPbc	13 33 23.4	+0.5
	baz=332,SNR=10						
U56A	King	149.61	8		PKPbc	13 33 22.4	-0.6
U56A	King	149.61	8	P	PKPbc	13 33 22.9	-0.2
	baz=351						
U56A				P	PKPbc	13 33 22.9	-0.2
	baz=351						
TKL	Tuckaleechee C	149.68	13		PKPbc	13 33 22.8	-0.5
TKL	Tuckaleechee C	149.68	13	PKP2	PKPbc	13 33 22.8	-0.5
TKL	Tuckaleechee C	149.68	13	P	PKPbc	13 33 23.1	-0.1
	baz=344,SNR=21						
CPCT	Cooper Cave	149.70	14		PKPbc	13 33 23.0	-0.3
W50A	Signal Mountai	149.73	16		PKPbc	13 33 22.9	-0.6
W50A	Signal Mountai	149.73	16	P	PKPbc	13 33 23.2	-0.2
	baz=341,SNR=11						
U59A	Littleton	149.85	3	P	PKPbc	13 33 23.7	+0.1
	baz=356,SNR=5.1						
U59A				P	PKPbc	13 33 23.7	+0.1
	baz=356,SNR=5.1						
V53A	Saluda	149.87	12		PKPbc	13 33 23.3	-0.5
V53A	Saluda	149.87	12	P	PKPbc	13 33 23.8	+0.1
	baz=346,SNR=31						
V53A				P	PKPbc	13 33 23.8	+0.1
	baz=346,SNR=31						
X48A	Hartselle	149.91	19		PKPbc	13 33 22.8	-1.0
X48A	Hartselle	149.91	19	P	PKPbc	13 33 23.3	-0.5
	baz=337,SNR=13						
V55A	Taylorsville	149.98	9		PKPbc	13 33 23.4	-0.6
V55A	Taylorsville	149.98	9	P	PKPbc	13 33 23.7	-0.3
	baz=349,SNR=11						
V55A				P	PKPbc	13 33 23.7	-0.3
	baz=349,SNR=11						
W52A	Murphy	150.18	14		PKPbc	13 33 24.2	-0.3
W52A	Murphy	150.18	14	P	PKPbc	13 33 24.5	0.0
	baz=343,SNR=8.3						
FPAL	Fort Paine	150.27	17		PKPbc	13 33 24.0	-0.7
V58A	Windy Hill, Pi	150.30	6		PKPbc	13 33 24.2	-0.5
V58A	Windy Hill, Pi	150.30	6	P	PKPbc	13 33 24.6	-0.1
	baz=353,SNR=5.2						
V58A				P	PKPbc	13 33 24.6	-0.1
	baz=353,SNR=5.2						
X51A	Calhoun	150.45	15		PKPbc	13 33 24.8	-0.3
X51A	Calhoun	150.45	15	P	PKPbc	13 33 25.1	-0.1
	baz=341,SNR=6.4						
X51A				P	PKPbc	13 33 25.1	-0.1
	baz=341,SNR=6.4						
CASEE	Lake Jocassee	150.50	12	P	PKPbc	13 33 25.6	+0.3
	baz=345,SNR=19						
SALV	Santo Antonio	150.50	222	*e*P	PKPdf	13 33 20.5	+0.1
KMSC	Kings Mountain	150.66	10		PKPbc	13 33 25.0	-0.6
KMSC	Kings Mountain	150.66	10	P	PKPbc	13 33 25.7	+0.1
	baz=348						
KMSC	Kings Mountain	150.66	10	P	PKPbc	13 33 25.3	-0.3
	baz=348,SNR=15						
Y49A	Blount Mountai	150.66	18		PKPbc	13 33 25.1	-0.6
Y49A	Blount Mountai	150.66	18	P	PKPbc	13 33 25.4	-0.3
	baz=338,SNR=33						
LVC	Limon Verde	150.69	193	PKPbc	PKiKP	13 33 28.5	+1.3
	comp=Z,8.8nm,0.9s,baz=327,slow=0.8,SNR=6.2						
LVC	Limon Verde	150.69	193	*e*P	PKPdf	13 33 20.6	-0.4
Z47A	Carrollton	150.70	22	P	PKPbc	13 33 25.7	0.0
	baz=334,SNR=13						
146A	Union	150.82	24	P	PKiKP	13 33 26.8	+0.1
	baz=332,SNR=7.1						
W57A	Gilead	150.84	7		PKPbc	13 33 25.5	-0.5
W57A	Gilead	150.84	7	P	PKPbc	13 33 25.7	-0.3
	baz=351,SNR=8.2						
W57A				P	PKPbc	13 33 25.7	-0.3
	baz=351,SNR=8.2						
PAULI	Pauline	150.89	10		PKPbc	13 33 25.8	-0.4
PAULI	Pauline	150.89	10	P	PKPbc	13 33 26.1	0.0
	baz=347,SNR=12						
LRAL	Lakeview Retre	151.22	20	P	PKPbc	13 33 26.5	-0.5
	baz=336						
BIRD	Birdtown, Kers	151.28	8	P	PKPbc	13 33 27.1	+0.1
	baz=350,SNR=9.9						
Y52A	Lilburn	151.32	15	P	PKiKP	13 33 27.6	-0.1
	baz=342,SNR=11						
Y52A				P	PKiKP	13 33 27.6	-0.1
	baz=342,SNR=11						
HODGE	Hodges	151.38	11	P	PKPbc	13 33 27.5	+0.2
	baz=346,SNR=12						
JSC	Jenkinsville	151.51	10		PKPbc	13 33 27.1	-0.5
JSC	Jenkinsville	151.51	10	PKIKP	PKPbc	13 33 27.1	-0.5
JSC	Jenkinsville	151.51	10	P	PKPbc	13 33 27.7	+0.1
	baz=348,SNR=13						
152A	Waverly Hall	152.28	17	P	PKPbc	13 33 29.2	-0.2
	baz=340						
SIV	San Ignacio	153.70	213	PKPbc	PKiKP	13 33 34.0	+0.9
	comp=Z,1.4nm,0.6s,baz=109,slow=3.2,SNR=5.7						
SDV	Santo Domingo	174.30	299	PKPab	PKPab	13 35 16.7	+0.4
	comp=Z,3.2nm,0.7s,baz=31,slow=6.5,SNR=4.9						
SDV				PP	PP	13 39 09.1	+0.7
	comp=Z,5.2nm,0.9s,baz=63,slow=5.5,SNR=4.9						

ROM 21 13:14:25.3±0.1**, 42°.493N**±0°.005×**13°.392E**±0°.005**, h10^{km}, ML1.5**/7**, 3C-6D, Error ellipse: s-maj=0.6km s-min=0.4km az=194.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	Campotosto	0.04	17	⇓P	Pg	13 14 27.6	+0.2
CAMP				S	Sg	13 14 28.8	-0.1
CAMP				AML	AML		
	comp=N,324µm,0.4s						
CAMP				AML	AML		
	comp=E,200µm,0.3s						
T1247	Pizzolo (AQ)	0.09	233	P	Pg	13 14 28.3	+0.5
T1247				S	Sg	13 14 30.1	+0.6
T1247				AML	AML		
	comp=N,921µm,0.8s						
T1247				AML	AML		
	comp=N,921µm,1.2s						
T1247				AML	AML		
	comp=E,849µm,0.4s						
RM33	Pellescritta (	0.13	277	⇑P	Pg	13 14 28.9	+0.5
RM33				S	Sg	13 14 31.2	+0.6
RM33				AML	AML		
	comp=E,504µm,1.0s						
RM33				AML	AML		
	comp=N,604µm,0.3s						
RM33				AML	AML		
	comp=E,554µm,1.0s						
RM33				AML	AML		
	comp=E,555µm,1.0s						
RM33				AML	AML		
	comp=N,598µm,0.3s						
RM33				AML	AML		
	comp=N,604µm,0.3s						
RM33				AML	AML		
	comp=E,504µm,1.0s						
GIGS	Gran Sasso	0.14	108	⇑P	Pg	13 14 29.0	+0.5
GIGS				S	Sg	13 14 31.4	+0.7
GIGS				AML	AML		
	comp=N,146µm,0.2s						
GIGS				AML	AML		
	comp=N,146µm,0.2s						
GIGS				AML	AML		
	comp=E,164µm,0.1s						
SMA1	SAN MARTINO	0.14	343	⇓P	Pg	13 14 29.0	+0.4
FAGN	Fagnano	0.27	148	S	Sb	13 14 36.2	-0.8
T1218	Civita (PG)	0.27	311	P	Pg	13 14 30.2	-0.6
T1214	Arquata del Tr	0.30	333	P	Pg	13 14 31.9	+0.5
T1214				S	Sb	13 14 37.1	-0.8
T1212	Cascia, Frazio	0.36	315	P	Pg	13 14 32.7	+0.2
T1212				S	Sg	13 14 38.5	+1.1
T1212				AML	AML		
	comp=N,73µm,0.6s						
T1212				AML	AML		
	comp=E,67µm,0.3s						
T1241	Roccafluvione,	0.36	5	P	Pg	13 14 33.2	+0.6
T0110	Collepietro	0.39	133	⇓P	Pb	13 14 33.9	-0.5
T1245	Castelsantange	0.39	338	P	Pg	13 14 33.5	+0.4
T1245				S	Sb	13 14 39.8	-0.9
T1245				AML	AML		
	comp=N,145µm,0.3s						
T1245				AML	AML		
	comp=N,231µm,0.8s						
T1211	Morro Reatino	0.40	276	⇓P	Pg	13 14 33.5	+0.4
MMO1	Montemonaco	0.41	353	P	Pb	13 14 34.4	-0.4
MMO1				S	Sb	13 14 40.2	-0.9
MC2	Monte Cornacci	0.45	341	S	Sg	13 14 41.1	+1.1
FDMO	Fiordimonte	0.59	338	⇓P	Pg	13 14 36.8	+0.1
FDMO				S	Sb	13 14 45.9	-0.2
T1219	Muccia, Frazio	0.63	333	S	Sb	13 14 47.1	-0.3
SRES	S.Oreste - Sor	0.70	249	⇓P	Pg	13 14 37.4	-1.4
LRP	Arpino	0.86	170	P	Pb	13 14 42.8	+0.5
EL6	Elcito	0.86	346	S	Sn	13 14 55.4	-1.0
VARP	Vesuvio Array	1.84	155	⇑P	Pn	13 14 57.1	+0.1

ATH 21 13:24:39.3, 39°.76N×19°.94E, h32^{km}±4^{km}, ML1.3/4**, Error ellipse: s-maj=6.9km s-min=1.7km az=204.0, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASA	Kassiopi	0.01	177	P	Pb	13 24 44.1	-0.4
KASA				S	Sb	13 24 48.2	+0.2
KASA				AML	AML	13 24 48.4	
	comp=N,250µm,0.2s						
KASA				AML	AML	13 24 48.5	
	comp=E,399µm,0.2s						
KEK	Kerkira	0.11	247	P	Pb	13 24 45.0	0.0
KEK				S	Sb	13 24 48.7	-0.2
KEK				AML	AML	13 24 48.9	
	comp=E,73µm,0.1s						
KEK				AML	AML	13 24 49.1	
	comp=N,110µm,0.2s						
IGT	Igoumenitsa	0.38	126	P	Pb	13 24 47.6	-0.4
IGT				S	Sb	13 24 54.0	+0.1
IGT				AML	AML	13 24 54.4	
	comp=N,48µm,0.4s						
IGT				AML	AML	13 24 55.5	
	comp=E,24µm,0.2s						
JAN	Janina	0.71	98	P	Pn	13 24 52.5	-0.7
JAN				AML	AML	13 24 56.3	
	comp=N,210µm,0.1s						
JAN				AML	AML	13 24 56.6	
	comp=E,152µm,0.1s						

NEIC ***21*** *13:31:56.8±2.2, 5°.94S±0°.06×151°.1E±0°.2, h35^{km}±2^{km}, mb4.5/35, Error ellipse: s-maj=27.1km s-min=8.8km az=103.0*

IDC ***21*** *13:31:59.5±1.2, 5°.80S×150°.97E, h60^{km}±12^{km}, mb3.7/11, mbtmp4.0/12, MS4.1/1, Error ellipse: s-maj=33.7km s-min=8.2km az=127.0*

ISC 21 13:31:57.9±0.6**, 5°.82S**±0°.09×**151°.0E**±0°.1**, h43^{km}, n62, σ0^{s}.90**/63**, mb4.5**/27**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.83	35	P	Pn	13 32 28.1	+1.1
	1000nm,0.3s,baz=251,slow=1.9,SNR=94						
KRVT				S	Sn	13 32 51.0	+2.2
	1µm,0.4s,baz=192,slow=20,SNR=6.3						
KRVT				LR	LR	13 32 57.1	
	comp=Z,276nm,21.5s,baz=17,slow=32						
RABL	Rabaul	2.00	36	Pn	Pn	13 32 30.3	+1.0
PMG	Port Moresby	5.20	227	P	Pn	13 33 15.6	+2.4
	11nm,0.3s,baz=61,slow=3.0,SNR=11						
PMG				S	Sn	13 34 13.5	+1.5
	53nm,0.3s,baz=359,slow=18,SNR=9.3						
PMG	Port Moresby	5.20	227		Pn	13 33 13.3	+0.1
COEN	Coen	11.15	223	Pn	Pn	13 34 35.3	+0.4
CTA	Charters Tower	14.91	198	P	P	13 35 31.8	+0.9
	1.8nm,0.9s,baz=24,slow=13,SNR=5.3						
CTAO	Charters Tower	14.91	198	P	P	13 35 31.4	+0.5
WB0	Warramunga Arr	21.27	228	P	P	13 36 40.7	-0.1
WRAB	Tennant Creek	21.40	228	P	P	13 36 41.9	-0.3
WB2	Warramunga Arr	21.41	228	P	P	13 36 41.9	-0.4
WRA	Warramunga Arr	21.42	228	P	P	13 36 42.4	0.0
	3.7nm,0.5s,baz=53,slow=10,SNR=70						
WRA				PcP	PcP	13 40 45.3	+0.3
	0.6nm,0.6s,baz=50,slow=2.0,SNR=4.8						
	3.7nm,0.5s						
AS31	Alice Springs	24.18	221	P	P	13 37 10.5	0.0
ASAR	Alice Springs	24.19	221	P	P	13 37 10.7	+0.1
	4.8nm,0.7s,baz=57,slow=9.3,SNR=77						
	4.8nm,0.7s						
ASAR	Alice Springs	24.19	221	P	P	13 37 10.4	-0.1
STKA	Stephens Creek	27.37	198	P	P	13 37 39.6	+0.4
	2.0nm,0.9s,baz=9.1,slow=12,SNR=1.7						
	2.0nm,0.9s						
STKA	Stephens Creek	27.37	198	P	P	13 37 38.9	-0.4
FITZ	Fitzroy Crossi	27.58	242	P	P	13 37 40.4	-0.9
MYLDM	Lahad Datu	34.22	288	P	P	13 38 38.7	-1.1
MYLDM				IAmb	IAmb	13 38 53.7	
	comp=Z,14nm,1.1s						
JMZ	Minamidaito 2	36.84	329	P	P	13 39 02.8	+0.6
MORW	Morawa	40.30	231	P	P	13 39 30.8	-0.4
MORW				IAmb	IAmb	13 39 46.0	
	comp=Z,33nm,1.4s						
YULB	Yu-li	41.03	316	P	P	13 39 38.1	+0.9
NACB	Ninganchiao	41.34	317	P	P	13 39 41.1	+1.3
TPUB	Ta-pu	41.43	315	P	P	13 39 39.7	-1.0
SSLB	Suanglung	41.52	316	P	P	13 39 41.1	-0.3
YHNB	Yeheng	41.82	318	P	P	13 39 44.7	+0.8
KSRS	Korea Array	48.12	335	P	P	13 40 34.2	+0.6
	comp=Z,1.1nm,0.7s,baz=154,slow=8.9,SNR=4.0						
	comp=Z,1.1nm,0.7s						
ASAJ	Asahikawa	50.28	352	LR	LR	14 01 01.4	
	comp=Z,184nm,20.8s,baz=214,slow=35						
PETK	Petropavlovsk-	58.98	5	P	P	13 41 51.2	-1.7
	comp=Z,1.0nm,0.5s,baz=175,slow=6.3,SNR=6.6						
	comp=Z,1.0nm,0.5s						
SONM	Songino Array	66.24	329	P	P	13 42 41.9	+0.2
	comp=Z,0.8nm,0.6s,baz=144,slow=6.4,SNR=2.4						
	comp=Z,0.8nm,0.6s						
SONM	Songino Array	66.24	329	P	P	13 42 42.2	+0.5
SONM				IAmb	IAmb	13 42 53.0	
	comp=Z,2.4nm,1.2s						
BILL	Bilibino	74.48	6	P	P	13 43 31.4	0.0
BILL				IAmb	IAmb	13 43 34.5	
	comp=Z,5.2nm,1.4s						
ANM	Nome	77.29	18	P	P	13 43 47.3	-0.3
N19K	Bonanza Creek	78.75	24	P	P	13 43 55.1	-0.7
N19K				IAmb	IAmb	13 44 06.4	
	comp=Z,6.6nm,1.2s						
M19K	Big River Lodg	79.40	23	P	P	13 43 58.8	-0.5
M19K				IAmb	IAmb	13 44 19.2	
	comp=Z,8.0nm,1.4s						
CNPM	China Poot	79.42	26	P	P	13 43 58.5	-0.9
M20K	Styx River	79.89	23	P	P	13 44 02.6	+0.5
M20K				IAmb	IAmb	13 44 10.4	
	comp=Z,9.5nm,1.4s						
MK31	Makanchi Array	79.91	319	P	P	13 44 03.0	+0.6
MKAR	Makanchi Array	79.91	319	P	P	13 44 02.2	-0.2
	comp=Z,0.4nm,0.6s,baz=104,slow=5.5,SNR=1.7						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	79.91	319	P	P	13 44 02.9	+0.5
MAKZ	Makanchi	80.11	319	P	P	13 44 03.8	+0.3
MAKZ				IAmb	IAmb	13 44 43.0	
	comp=Z,5.2nm,1.5s						
ZALV	Zalesovo Beam	81.00	327	P	P	13 44 07.3	-0.7
	comp=Z,0.8nm,0.7s,baz=113,slow=6.6,SNR=2.3						
	comp=Z,0.8nm,0.7s						
ZALV	Zalesovo Beam	81.00	327	P	P	13 44 07.6	-0.4
PWL	Port Wells	81.34	26	P	P	13 44 09.5	-0.3
SML	Sawmill	81.80	25	P	P	13 44 11.1	-1.1
SML				IAmb	IAmb	13 44 21.5	
	comp=Z,7.3nm,1.1s						
TRF	Thorofare Moun	81.83	23	P	P	13 44 12.2	-0.3
TRF				IAmb	IAmb	13 44 37.9	
	comp=Z,8.5nm,1.5s						
IMAR	Indian Mountai	81.95	20	P	P	13 44 12.0	-0.8
SCM	Sheep Creek Mo	82.23	25	P	P	13 44 14.1	-0.4
SCM				IAmb	IAmb	13 44 19.8	
	comp=Z,17nm,1.4s						
MLY	Manley	82.48	21	P	P	13 44 14.4	-1.3
MCK	McKinley	82.50	23	P	P	13 44 13.8	-1.9
MCK				IAmb	IAmb	13 44 16.3	
	comp=Z,4.8nm,1.0s						
I23K	Minto, Yukon-K	83.05	22	P	P	13 44 19.1	+0.6
I23K				IAmb	IAmb	13 44 59.0	
	comp=Z,6.0nm,1.1s						
CCB	Clear Creek Bu	83.38	22	P	P	13 44 19.8	-0.5
CCB				IAmb	IAmb	13 45 00.9	
	comp=Z,7.3nm,1.4s						
HDA	Harding Lake	83.59	23	P	P	13 44 20.6	-0.8
HDA				IAmb	IAmb	13 45 03.7	
	comp=Z,1.4nm,0.7s						
ILAR	Eielson Array	83.78	22	P	P	13 44 19.9	-2.4
	comp=Z,1.0nm,0.7s,baz=254,slow=4.7,SNR=13						
	comp=Z,1.0nm,0.7s						
ILAR	Eielson Array	83.78	22	P	P	13 44 21.6	-0.8
QSPA	South Pole Qui	84.15	180	P	P	13 44 23.5	-0.9
QSPA				IAmb	IAmb	13 44 24.7	
	comp=Z,3.3nm,0.9s						
M27K	Edge Creek, AK	84.77	26	P	P	13 44 26.9	-0.7
M27K				IAmb	IAmb	13 44 59.8	
	comp=Z,7.4nm,1.3s						
BMAR	Burnt Mountain	85.83	20	P	P	13 44 32.8	+0.2
EGAK	Eagle	86.01	23	P	P	13 44 33.5	0.0
EGAK				IAmb	IAmb	13 44 50.2	
	comp=Z,3.8nm,1.3s						
NVAR	Mina Array Bea	94.14	52	P	P	13 45 12.8	+0.1
	comp=Z,1.7nm,0.7s,baz=257,slow=5.8,SNR=13						
	comp=Z,1.7nm,0.7s						
YKA	Yellowknife Ar	97.17	28	P	Pdif	13 45 25.7	0.0
	comp=Z,0.1nm,0.4s,baz=272,slow=5.3,SNR=2.3						
	comp=Z,0.1nm,0.4s						
PDAR	Pinedale Array	100.87	48	P	Pdif	13 45 41.9	-1.1
	comp=Z,0.3nm,0.6s,baz=204,slow=3.6,SNR=2.9						
TORD	Torodi Ar. Bea	148.87	286	PKPbc	PKPbc	13 51 41.4	-0.6
	comp=Z,9.2nm,0.7s,baz=56,slow=3.1,SNR=64						

IDC ***21*** *13:32:22.2±0.8, 3°.12N×126°.89E, h0^{km}, mb4.1/11, mbtmp4.1/11, MS3.7/8, Error ellipse: s-maj=47.0km s-min=15.2km az=72.0*

DJA ***21*** *13:32:26.7±0.4, 3°N±3°×12°7E±°, h10^{km}, M4.2/12, mb4.3/10, mB4.8/4, MLv4.3/12, Mw(mB)4.1/4*

MAN ***21*** *13:32:26.6, 3°.18N×127°.05E, h182^{km}, mb5.3, ML4.2, MS4.4*

NEIC ***21*** *13:32:31.1±1.8, 3°.14N±0°.09×127°.1E±0°.1, h63^{km}±8^{km}, mb4.6/38, Error ellipse: s-maj=17.9km s-min=11.8km az=61.0*

ISC 21 13:32:28.7±0.5**, 3°.21N**±0°.04×**127°.12E**±0°.07**, h44^{km}, n84, σ1^{s}.29**/81**, mb4.5**/31**, MS3.7**/8**, 5C-2D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.66	286	P	Pn	13 32 54.1	-1.2
SGSI				S	Sn	13 33 17.9	+2.5
TNTI	Ternate	2.44	174		Pn	13 33 06.7	+0.7
TNTI	Ternate	2.44	174	P	Pn	13 33 06.4	+0.3
TNTI				S	Sn	13 33 37.1	+2.4
LBMI	Labuha	3.84	174	P	Pn	13 33 26.5	+1.1
LBMI				S	Sn	13 34 12.5	+3.1
SKMP	Bagumbayan, Su	4.17	322	⇓*e*P	Pn	13 33 29.7	-0.1
SKMP				*e*S	Sn	13 34 20.4	+3.0
KCP	Kidapawan	4.28	332	⇑*i*P	Pn	13 33 31.9	+0.4
CDOP	Cateel, Davao	4.59	352	⇑*i*P	Pn	13 33 37.1	+1.4

BIPH	Bislig	5.00	351	⇑eP	Pn	13 33 40.8	-0.4
BIPH				eS	Sn	13 34 39.5	+1.8
SANI	Sanana	5.35	192	P	Pn	13 33 44.6	-1.5
	30nm,1.3s,757nm0.1nm						
TASP	Talacogon, Agu	5.37	346	⇓iP	Pn	13 33 49.1	+2.8
TASP				i S	Sn	13 35 00.3	+14
CGP	Cagayan de Oro	5.74	335	eP	Pn	13 34 05.7	+14
MRSI	Marisa	5.85	242	P	Pn	13 33 54.9	+2.0
	69nm,1.3s,0.3nm						
PAGZ	Pagadian	5.92	321	⇑eP	Pn	13 33 53.2	-0.7
LUWI	Luwuk	6.07	226	P	Pn	13 33 56.6	+0.7
	67nm,1.1s,0.3nm						
NLAI	Namlea	6.41	180	P	Pn	13 34 01.8	+1.2
	24nm,1.1s,0.1nm						
GLSP	General Luna,	6.60	351	⇑eP	Pn	13 34 03.6	+0.3
GLSP				eS	Sn	13 35 28.0	+11
MSAI	Masohi	6.76	164	P	Pn	13 34 06.3	+0.8
	4.7nm,0.9s,365nm0.0nm						
AAI	Ambon	6.94	171	P	Pn	13 34 08.8	+0.9
	28nm,0.9s,1µm0.1nm						
FAKI	Fak Fak	7.96	140	Pn	Pn	13 34 24.4	+2.5
FAKI	Fak Fak	7.96	140	P	Pn	13 34 22.7	+0.8
	17nm,1.0s,0.1nm						
MYLDM	Lahad Datu	8.82	283	Pn	Pn	13 34 35.2	+1.5
SOEI	Soe	13.19	192	Pn	Pn	13 35 33.8	+0.1
KSM	Kuching	16.89	265	P	P	13 36 23.4	-0.2
KNRA	Kununurra	18.84	175	P	Pn	13 36 44.6	-1.4
FITZ	Fitzroy Crossi	21.23	184	P	P	13 37 10.2	-0.8
YHNB	Yeheng	22.04	346	P	P	13 37 18.9	-0.9
PMG	Port Moresby	23.58	122	LR	LR	13 49 26.2	
	comp=Z,187nm,18.3s,baz=298,slow=43						
WB0	Warramunga Arr	23.93	163	P	P	13 37 37.6	-1.2
WB0				IAmb	IAmb	13 37 50.1	
	comp=Z,12nm,0.6s						
WRAB	Tennant Creek	24.07	163	P	P	13 37 38.4	-1.7
WRA	Warramunga Arr	24.08	163	P	P	13 37 39.2	-1.0
	comp=Z,2.2nm,0.4s,baz=337,slow=11,SNR=8.6						
	comp=Z,2.2nm,0.4s						
WB2	Warramunga Arr	24.08	163	P	P	13 37 38.3	-1.9
PSA00	Pilbara Seismi	25.64	196	P	P	13 37 54.1	-0.3
PSA00				IAmb	IAmb	13 38 05.8	
	comp=Z,56nm,1.5s						
ASAR	Alice Springs	27.52	166	P	P	13 38 10.4	-1.0
	comp=Z,0.6nm,0.4s,baz=345,slow=7.3,SNR=8.5						
	comp=Z,0.6nm,0.4s						
CMAR	Chiang Mai Arr	31.47	301	P	P	13 38 44.7	-1.7
	comp=Z,0.6nm,0.5s,baz=126,slow=6.0,SNR=5.5						
	comp=Z,0.6nm,0.5s						
KSRS	Korea Array	34.08	1	P	P	13 39 09.5	+0.5
	comp=Z,1.2nm,0.8s,baz=184,slow=9.2,SNR=2.8						
	comp=Z,1.2nm,0.8s						
BBOO	Buckleboo	36.81	167	P	P	13 39 32.1	-0.5
STKA	Stephens Creek	37.51	160	P	P	13 39 38.0	-0.5
	comp=Z,3.3nm,0.6s,baz=340,slow=9.3,SNR=6.4						
	comp=Z,3.3nm,0.6s						
STKA	Stephens Creek	37.51	160	P	P	13 39 37.3	-1.2
BJT	Baijiatuau	37.96	346	P	P	13 39 42.1	0.0
BJT				IAmb	IAmb	13 39 44.4	
	comp=Z,18nm,1.1s						
KLR	Kul'dur	46.02	4	P	P	13 40 48.4	+0.6
	comp=Z,1.8nm,0.9s,baz=199,slow=7.1,SNR=3.5						
	comp=Z,1.8nm,0.9s						
PALK	Pallekele	46.38	277	LR	LR	14 00 10.4	
	comp=Z,116nm,22.0s,baz=190,slow=36						
SONM	Songino Array	47.91	341	P	P	13 41 02.4	-0.4
	comp=Z,0.7nm,0.5s,baz=158,slow=8.4,SNR=4.1						
	comp=Z,0.7nm,0.5s						
MK31	Makanchi Array	58.20	325	P	P	13 42 16.9	-1.5
MK31				IAmb	IAmb	13 42 37.9	
	comp=Z,5.6nm,1.4s						
MKAR	Makanchi Array	58.20	325	P	P	13 42 17.6	-0.8
	comp=Z,1.1nm,0.5s,baz=123,slow=7.5,SNR=22						
MKAR				LR	LR	14 10 09.2	
	comp=Z,126nm,19.2s,baz=120,slow=39						
	comp=Z,1.1nm,0.5s						
MKAR	Makanchi Array	58.20	325	P	P	13 42 17.3	-1.2
MAKZ	Makanchi	58.39	325	P	P	13 42 17.7	-2.0
MAKZ				IAmb	IAmb	13 42 21.1	
	comp=Z,3.4nm,0.9s						
MA2	Magadan	59.11	14	P	P	13 42 25.2	+0.8
ZAA0	Zalesovo Array	61.22	333	P	P	13 42 37.7	-1.3
ZAA0				IAmb	IAmb	13 42 54.6	
	comp=Z,5.9nm,1.4s						
ZALV	Zalesovo Beam	61.22	333	P	P	13 42 38.6	-0.4
	comp=Z,1.0nm,0.6s,baz=116,slow=6.8,SNR=4.4						
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	61.22	333	P	P	13 42 38.0	-1.1
KURK	Kurchatov	62.38	327	P	P	13 42 45.9	-1.0
KURK				IAmb	IAmb	13 42 58.6	
	comp=Z,4.8nm,0.8s						
BVAR	Borovoye Array	67.96	327	LR	LR	14 13 55.6	
	comp=Z,52nm,21.0s,baz=115,slow=37						
BRVK	Borovoye	68.03	327	P	P	13 43 23.8	+0.3
TIXI	Tiksi	68.35	1	P	P	13 43 25.3	+0.2
	comp=Z,1.6nm,0.3s,baz=90,slow=23,SNR=5.2						
	comp=Z,1.6nm,0.3s						
TIXI	Tiksi	68.35	1	P	P	13 43 25.5	+0.4
WSAR	Wadi Sarin	68.99	294	LR	LR	14 18 35.6	
	comp=Z,43nm,18.3s,baz=114,slow=40						
NRIK	Noril'sk	71.02	346	P	P	13 43 42.0	+0.4
	comp=Z,6.1nm,0.8s,baz=127,slow=5.6,SNR=12						
	comp=Z,6.1nm,0.8s						
ABKAR	Akbulak array	72.79	321	P	P	13 43 51.7	-0.9
XMAS	Kiritimati	75.35	89	P	P	13 44 06.3	-2.0
N19K	Bonanza Creek	81.55	29	P	P	13 44 43.5	+1.8
N19K				IAmb	IAmb	13 44 58.8	
	comp=Z,15nm,1.4s						
KDAK	Kodiak Island	82.11	32	P	P	13 44 44.7	+0.1
K20K	Telida	82.12	27	P	P	13 44 45.8	+1.2
K20K				IAmb	IAmb	13 45 09.1	
	comp=Z,6.9nm,1.4s						
M20K	Styx River	82.34	28	P	P	13 44 47.2	+1.4
M20K				IAmb	IAmb	13 44 54.3	
	comp=Z,9.2nm,1.4s						
IMAR	Indian Mountai	82.65	24	P	P	13 44 48.5	+1.3
PPLA	Purkeypile	82.91	27	P	P	13 44 49.5	+0.7
PPLA				IAmb	IAmb	13 45 02.1	
	comp=Z,12nm,1.4s						
H21K	Melozitna Rive	82.99	24	P	P	13 44 50.4	+1.4
H21K				IAmb	IAmb	13 45 02.1	
	comp=Z,7.1nm,1.2s						
CNPM	China Poot	83.00	31	P	P	13 44 49.5	+0.3
CAST	Castle Rocks	83.02	27	P	P	13 44 50.4	+1.2
SKT	Skwentna	83.11	28	P	P	13 44 49.8	+0.1
SKT				IAmb	IAmb	13 45 01.5	
	comp=Z,5.7nm,1.1s						
BRLK	Bradley Lake	83.20	30	P	P	13 44 50.1	-0.1
I21K	Tanana	83.27	25	P	P	13 44 51.4	+1.0
I21K				IAmb	IAmb	13 45 03.6	
	comp=Z,5.6nm,1.1s						
SUA	Susitna One	83.43	29	P	P	13 44 51.3	-0.2
SUA				IAmb	IAmb	13 45 16.3	
	comp=Z,10nm,1.4s						
BPAW	Bear Paw Mtn.	83.58	26	P	P	13 44 53.4	+1.4
BPAW				IAmb	IAmb	13 45 30.5	
	comp=Z,6.5nm,1.3s						
KBZ	Khabaz	83.62	313	LR	LR	14 26 21.5	
	comp=Z,32nm,20.4s,baz=64,slow=39						
MLY	Manley	83.78	25	P	P	13 44 54.2	+1.1
MLY				IAmb	IAmb	13 44 55.9	
	comp=Z,5.9nm,1.0s						
COLD	Coldfoot	84.21	23	P	P	13 44 56.4	+1.1
COLD				IAmb	IAmb	13 44 59.1	
	comp=Z,5.5nm,1.1s						
H23K	Yukon River	84.35	24	P	P	13 44 57.5	+1.6
H23K				IAmb	IAmb	13 44 59.8	
	comp=Z,4.2nm,1.0s						
PWL	Port Wells	84.55	29	P	P	13 44 57.9	+0.8
PWL				IAmb	IAmb	13 45 18.4	
	comp=Z,11nm,0.9s						
SML	Sawmill	84.60	28	P	P	13 44 57.9	+0.5
SCM	Sheep Creek Mo	85.08	28	P	P	13 45 00.7	+0.9
BMAR	Burnt Mountain	86.40	23		P	13 45 08.2	+2.0
IDI	Anoyia	98.11	306	LR	LR	14 37 30.9	
	comp=Z,18nm,19.3s,baz=84,slow=40						
NOA	NORSAR Array B	99.42	334	LR	LR	14 34 55.1	
	comp=Z,70nm,19.1s,baz=80,slow=38						
TORD	Torodi Ar. Bea	123.45	288	PKP	PKiKP	13 51 22.0	-0.5
	comp=Z,0.5nm,0.8s,baz=60,slow=2.7,SNR=2.6						

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*IDC **21** 13:51:20.6±8.0, 36°.73N×50°.53E, h0^{km}, mb3.8/4, mbtmp3.9/8, ML3.7/4, Error ellipse: s-maj=115.8km s-min=37.6km az=48.0*

*TEH **21** 13:51:26.4, 37°.00N×51°.11E, h22^{km}±36^{km}, ML3.7*

*AZER **21** 13:51:31.5±1.3, 37°.08N×50°.96E, h23^{km}, Error ellipse: s-maj=13.9km s-min=10.1km az=48.0*

ISC 21 13:51:26.6±0.7**, 36°.98N**±0°.04×**51°.08E**±0°.04**, h10^{km}, n59,** σ**1^{s}60**/80**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLST	Kelardasht - M	0.46	182	Pg	Pg	13 51 36.1	+0.4
QALM	Alamut, Qazvin	0.65	212	Pg	Pb	13 51 40.3	+0.1
MZPU	Pul - Mazandar	0.67	144	Pg	Pg	13 51 40.4	+0.8
IGZV	Ghazvin	0.91	229	Pg	Pg	13 51 44.7	+0.5
GIDE	GILAN DEYLAMAN	0.94	267	Pg	Pg	13 51 45.1	+0.5
JIR1	Jirandeh	1.06	255	Pg	Pg	13 51 46.7	-0.3
IPRN	Peran	1.25	126	Pg	Pn	13 51 49.7	-0.7
TEHA	Amirabad Tehra	1.26	168	Pg	Pn	13 51 50.2	-0.2
TEH	Tehran	1.27	169	Pg	Pn	13 51 49.9	-0.6
IMHD	Mahdasht	1.33	194	Pg	Pn	13 51 51.4	0.0
IHSB	Hasanabad	1.55	174	Pg	Pn	13 51 54.9	+0.5
IDMV	Damavand	1.60	151	Pg	Pn	13 51 56.0	+0.8
IRAZ	Razeghan	1.83	211	Pn	Pn	13 51 58.4	+0.2
IFIR	Firoozkooh	1.90	134	Pn	Pn	13 52 00.9	+1.5
ZNJK	Zanjan	1.94	262	Pn	Pn	13 52 00.5	+0.6
IVRN	Varamin	2.05	165	Pn	Pn	13 52 01.9	+0.6
IQOM	Qom	2.13	180	Pn	Pn	13 52 02.6	0.0
ILAS	Lasjerd	2.21	136	Pn	Pn	13 52 04.9	+1.3
GAS1	Astara - Iran	2.26	309	Pn	Pn	13 52 04.1	0.0
ASTR	Astara	2.40	312	P	Pn	13 52 06.2	+0.2
ASTR				S	Sn	13 52 34.9	-0.5
LKRN	Lenkeran, Azer	2.51	314	P	Pn	13 52 07.2	-0.2
LKRN				S	Sn	13 52 35.3	-2.7
HAGD	Aghdareh	2.67	217	Pn	Pn	13 52 10.4	+0.6
LRK	Lerik	2.73	308	P	Pn	13 52 10.9	+0.3
	SNR=10						
LRK				S	Sn	13 52 43.0	-0.8
ISFB	Sefidab	2.79	160	Pn	Pn	13 52 11.9	+0.5
YRD	Yardimli	2.96	312	P	Pn	13 52 14.2	+0.4
	SNR=4.6						
YRD				S	Sn	13 52 47.3	-2.2
GLBA	Clilabad	3.09	318	P	Pn	13 52 16.0	+0.5
GLBA				S	Sn	13 52 50.9	-1.6
KRSH	Karshahi	3.13	164	Pn	Pn	13 52 16.4	+0.3
QAMS	Qamsar	3.25	175	Pn	Pn	13 52 18.2	+0.3
ALIB	Äli-Bayra	3.39	332	P	Pn	13 52 23.4	+3.9
ALIB				S	Sn	13 53 03.9	+4.1
QRD	Qoradiz	3.86	311	S	Sn	13 53 10.7	-0.6
SHRO	Shahrood	4.10	102	Pn	Pn	13 52 32.1	+2.7
ATGJ	Altiaghaj	4.22	337	P	Pn	13 52 33.5	+2.5
ATGJ				S	Sn	13 53 21.3	+0.9
ZRD	Zardab	4.23	322	P	Pn	13 52 33.5	+2.4
ZRD				S	Sn	13 53 21.0	+0.5
PQL	Pirkuli	4.27	334	P	Pn	13 52 33.9	+2.2
	SNR=16						
PQL				S	Sn	13 53 22.8	+1.1
IKFM	Kafar-mosalman	4.34	218	Pn	Pn	13 52 33.8	+1.1
ANAR	Anarak	4.36	149	Pn	Pn	13 52 34.0	+0.9
IML	Ismayilli	4.42	330	P	Pn	13 52 35.4	+1.5
IML				S	Sn	13 53 25.4	-0.1
SIZA	Siyzn	4.43	338	P	Pn	13 52 36.0	+2.1
	SNR=8.6						
SIZA				S	Sn	13 53 26.6	+1.1
ORD	Ordubad	4.46	297	P	Pn	13 52 36.7	+2.3
ORD				S	Sn	13 53 28.2	+1.8
QBL	Gabala	4.70	328	P	Pn	13 52 39.0	+1.5
QBL				S	Sn	13 53 31.1	-1.0
XNQ	Khinaliq	4.77	332	P	Pn	13 52 40.1	+1.4
XNQ				S	Sn	13 53 35.2	+1.1
QUBA	Quba, Azerbaij	4.81	336	P	Pn	13 52 41.2	+2.1
QUBA				S	Sn	13 53 34.5	-0.3
NAX	Nakhchivan	4.92	298	S	Sn	13 53 43.1	+5.5
QSAR	Qusar	5.03	335	P	Pn	13 52 44.0	+1.9
	SNR=14						
QSAR				S	Sn	13 53 39.5	-0.8
SEKA	Sheki	5.19	326	P	Pn	13 52 45.7	+1.3
	SNR=7.5						
SEKA				S	Sn	13 53 42.0	-2.3
GANJ	Ganja	5.21	316	P	Pn	13 52 46.0	+1.4
GANJ				S	Sn	13 53 45.7	+0.9
ISFR	Sfrayin	5.54	87	Pn	Pn	13 52 49.2	-0.2
GDB	GEDABAY	5.58	314	P	Pn	13 52 52.0	+2.1
GDB				S	Sn	13 53 54.9	+0.7
GEYT	Alibeck	5.68	78	Pn	Pn	13 52 51.9	+0.8
	1.1nm,0.3s,baz=260,slow=17,SNR=8.8						
	2.2nm,0.3s						
ZKTA	Zakatala	5.79	325	P	Pn	13 52 54.4	+1.8
	SNR=8.9						
ZKTA				S	Sn	13 53 57.3	-1.8
QZX	Qazax, Azerbai	6.02	314	P	Pn	13 52 58.1	+2.3
QZX				S	Sn	13 54 06.0	+1.1
TPRV	Parvadeh(Tabas	6.06	129	Pn	Pn	13 52 57.5	+1.2
AKTO	Aktyubinsk	14.35	18	Pn	Pn	13 54 46.6	-3.0
	0.3nm,0.3s,baz=208,slow=10,SNR=4.2						
AKTO				Sn	Sn	13 57 19.6	-9.2
	0.3nm,0.3s,baz=42,slow=20,SNR=2.5						
	1.3nm,0.4s						
BELG	Belogornoye	15.60	352	Pn	Pn	13 55 04.0	-2.5
	0.8nm,0.3s,baz=107,slow=19,SNR=4.6						
	4.4nm,0.6s						
AAK	Ala-Archa	18.83	65	P	Pn	13 55 48.5	+1.3
	0.1nm,0.3s,baz=263,slow=12,SNR=4.6						
	0.9nm,0.8s						
ARU	Arti	20.10	12	P	P	13 55 59.2	-1.0
	8.3nm,0.5s,baz=196,slow=11,SNR=15						
	8.3nm,0.5s						
BVAR	Borovoye Array	20.96	34	P	P	13 56 09.8	+0.2
	1.5nm,0.4s,baz=226,slow=11,SNR=16						
	1.5nm,0.4s						
MKAR	Makanchi Array	25.08	57	P	P	13 56 51.6	+0.4
	0.7nm,0.8s,baz=252,slow=7.6,SNR=7.1						
	0.7nm,0.8s						
ZALV	Zalesovo Beam	28.75	43	P	P	13 57 23.6	-0.5
	0.7nm,0.6s,baz=246,slow=11,SNR=3.5						
	0.7nm,0.6s						

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*NEIC **21** 14:04:53.2±2.0, 0°.12N±0°.06×123°.23E±0°.07, h160^{km}±4^{km}, mb4.3/26, Error ellipse: s-maj=11.2km s-min=8.3km az=61.0*

*IDC **21** 14:04:54.2±2.5, 0°.07N×123°.21E, h170^{km}±23^{km}, mb3.4/7, mbtmp3.9/8, Error ellipse: s-maj=34.6km s-min=12.7km az=63.0*

*DJA **21** 14:04:54.7±0.3, 0°N±2°×12°3E±°, h148^{km}±4^{km}, M4.5/18, mb4.5/10, mB5.0/5, MLv4.5/18, Mw(mB)4.4/5*

ISC 21 14:04:53.3±0.5**, 0°.05S**±0°.05×**123°.01E**±0°.05**, h162^{km}, n63,** σ**1^{s}38**/70**, mb4.2**/20**, 1C-1D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTOI	Gorontalo	0.68	0	P	Pn	14 05 18.9	+1.9
GTOI				S	Sn	14 05 36.6	+1.4
LUWI	Luwuk	1.01	193	Pn	Pn	14 05 20.3	+0.9
LUWI	Luwuk	1.01	193	P	Pn	14 05 20.4	+1.0
LUWI				S	Sn	14 05 39.5	+0.1
MRSI	Marisa	1.19	296	P	Pn	14 05 21.0	+0.2
MRSI				S	Sn	14 05 40.9	-1.0
TOLI2	Tolitoli	2.50	297	Pn	Pn	14 05 35.1	0.0
MPSI	Mapaga	3.13	277	P	Pn	14 05 44.4	+1.6
SANI	Sanana	3.58	124	P	Pn	14 05 48.1	-0.5
TNTI	Ternate	4.44	79	Pn	Pn	14 05 55.3	-4.3
TNTI	Ternate	4.44	79	P	Pn	14 06 00.2	+0.6
TNTI				S	Sn	14 06 51.6	+0.3
SGSI	Sangihe	4.49	34	P	Pn	14 06 01.3	+1.0
LBMI	Labuha	4.53	97	P	Pn	14 06 01.2	+0.3
SPSI	Sidrap Palu	5.06	220	P	Pn	14 06 09.7	+2.0
	42nm,0.5s,0.2nm						
NLAI	Namlea	5.17	128	P	Pn	14 06 11.0	+1.7
	23nm,0.8s,9µm0.8nm						
KAPI	Kappang	5.91	213	P	Pn	14 06 21.6	+2.7
	22nm,0.6s,baz=41,slow=6.4,SNR=6.7						
KAPI	Kappang	5.91	213	Pn	Pn	14 06 20.6	+1.7
BKSI	Bulukumba	5.98	209	P	Pn	14 06 21.8	+1.9
	54nm,1.0s,0.2nm						
AAI	Ambon	6.32	125	P	Pn	14 06 27.1	+2.7
	61nm,0.7s,1µm0.2nm						
BSSI	Bau Bau, Buton	6.55	202	P	Pn	14 06 29.0	+1.5
	90nm,1.3s,0.5nm						
SKMP	Bagumbayan, Su	6.70	13	⇑eP	Pn	14 06 32.4	+2.8
SKMP				eS	Sn	14 07 46.3	+1.1
MYLDM	Lahad Datu	6.87	319	Pn	Pn	14 06 31.0	-0.7
PAGZ	Pagadian	7.86	3	⇓eP	Pn	14 06 49.3	+4.5
PAGZ				eS	Sn	14 08 12.4	-0.3
BNDI	Bandanaira	8.20	123	P	Pn	14 06 51.0	+1.6
	134nm,0.9s,2µm						
FAKI	Fak Fak	9.67	107	Pn	Pn	14 07 09.6	+0.7
FAKI	Fak Fak	9.67	107	P	Pn	14 07 09.6	+0.7
JAGI	Jajag, Banyuwa	12.16	226	Pn	Pn	14 07 44.0	+2.6
KNRA	Kununurra	16.54	160		Pn	14 08 37.7	+1.7
KNRA				IAmb	IAmb	14 08 41.0	
	comp=Z,9.2nm,0.9s						
FITZ	Fitzroy Crossi	18.12	172	P	P	14 08 53.9	+0.8
MYKOM	Kota Tinggi	19.24	276	P	P	14 09 04.9	-0.5
MYKOM				IAmb	IAmb	14 09 13.6	
	comp=Z,30nm,1.3s						
MNAI	Manna	20.48	258	P	P	14 09 19.3	+0.5
MBWA	Marble Bar	21.22	188	P	P	14 09 25.9	-0.7
MBWA				IAmb	IAmb	14 09 27.5	
	comp=Z,9.3nm,0.8s						
PSA00	Pilbara Seismi	21.61	188	P	P	14 09 30.5	-0.2
PSA00				IAmb	IAmb	14 09 34.6	
	comp=Z,21nm,1.4s						
WB0	Warramunga Arr	22.55	151	P	P	14 09 39.9	-0.2
WB0				IAmb	IAmb	14 10 14.1	
	comp=Z,7.4nm,1.0s						
WRA	Warramunga Arr	22.67	151	P	P	14 09 41.3	+0.1
	comp=Z,4.5nm,1.1s,baz=339,slow=9.6,SNR=29						
	comp=Z,4.5nm,1.1s						
WRA	Warramunga Arr	22.67	151	P	P	14 09 41.0	-0.1
WB2	Warramunga Arr	22.68	151	P	P	14 09 41.5	+0.3
WB2				IAmb	IAmb	14 09 42.5	
	comp=Z,23nm,1.5s						
COEN	Coen	24.28	126	P	P	14 09 52.8	-3.1
COEN				IAmb	IAmb	14 09 57.7	
	comp=Z,9.2nm,1.4s						
AS31	Alice Springs	25.75	156	P	P	14 10 09.3	+0.2
ASAR	Alice Springs	25.75	156	P	P	14 10 09.7	+0.6
	comp=Z,0.9nm,0.8s,baz=343,slow=11,SNR=10						
ASAR				PcP	PcP	14 13 35.0	0.0
	comp=Z,0.3nm,0.3s,baz=344,slow=1.9,SNR=8.5						
ASAR				ScP	ScP	14 16 58.2	-1.2
	comp=Z,0.3nm,0.7s,baz=338,slow=2.8,SNR=4.5						
	comp=Z,0.9nm,0.8s						
ASAR	Alice Springs	25.75	156	P	P	14 10 09.3	+0.1
CMAR	Chiang Mai Arr	29.95	309	P	P	14 10 49.5	+2.9
	comp=Z,0.5nm,0.4s,baz=137,slow=6.5,SNR=6.7						
	comp=Z,0.5nm,0.4s						
FORT	Forrest	30.93	172	P	P	14 10 55.3	+0.3
BBOO	Buckleboo	34.83	161	P	P	14 11 29.0	+0.1
BBOO				IAmb	IAmb	14 11 53.6	
	comp=Z,32nm,1.5s						
STKA	Stephens Creek	36.21	153	P	P	14 11 41.5	+0.8
	comp=Z,1.4nm,0.3s,baz=331,slow=8.3,SNR=12						
	comp=Z,1.4nm,0.3s						
STKA	Stephens Creek	36.21	153	P	P	14 11 41.5	+0.8
MJAR	Matsushiro Arr	39.05	20	P	P	14 12 03.3	-1.1
	comp=Z,1.0nm,0.6s,baz=186,slow=8.8,SNR=2.2						
	comp=Z,1.0nm,0.6s						
TOO	Toolangi	42.72	153	P	P	14 12 33.8	-0.7
TOO				IAmb	IAmb	14 13 16.2	
	comp=Z,36nm,1.5s						
MK31	Makanchi Array	58.66	328	P	P	14 14 33.2	-0.5
MKAR	Makanchi Array	58.66	328	P	P	14 14 33.5	-0.2
	comp=Z,0.6nm,0.3s,baz=127,slow=8.4,SNR=11						
	comp=Z,0.6nm,0.3s						
MKAR	Makanchi Array	58.66	328	P	P	14 14 33.0	-0.7
KBL	Kabul	60.98	310	P	P	14 14 50.0	0.0
KBL				IAmb	IAmb	14 15 34.5	
	comp=Z,2.0nm,0.6s						
KHZ	Kahutara	61.88	140	P	P	14 14 56.0	+0.5
BKZ	Black Stump Fm	62.41	135	P	P	14 14 60.0	+0.7
KURBB	Kurchatov Arra	63.01	330	P	P	14 15 02.3	-0.6
	comp=Z,0.3nm,0.3s,baz=117,slow=6.3,SNR=4.4						
	comp=Z,0.3nm,0.3s						
KURK	Kurchatov	63.02	330	P	P	14 15 02.2	-0.8
KURK				IAmb	IAmb	14 15 44.1	
	comp=Z,6.6nm,1.2s						
BILL	Bilibino	74.15	16	P	P	14 16 10.1	-1.5
BILL				IAmb	IAmb	14 16 38.1	
	comp=Z,5.8nm,1.5s						
RSO	Redoubt South	87.19	30	P	P	14 17 20.9	-0.5
IMAR	Indian Mountai	87.29	24	P	P	14 17 21.6	+0.2
PPTF	Pamatai, Papee	87.53	107	P	P	14 17 20.9	-2.8
SKT	Skwentna	87.90	28	P	P	14 17 23.5	-0.9
SKT				IAmb	IAmb	14 18 06.1	
	comp=Z,9.9nm,1.5s						
MLY	Manley	88.46	25	P	P	14 17 26.2	-0.8
I23K	Minto, Yukon-K	89.05	25	P	P	14 17 29.7	0.0
I23K				IAmb	IAmb	14 17 49.2	
	comp=Z,3.5nm,1.4s						
SPITS	Spitsbergen Ar	93.43	349	P	P	14 17 48.3	-1.6
	comp=Z,5.4nm,0.8s,baz=91,slow=8.3,SNR=7.2						
TORD	Torodi Ar. Bea	120.43	285	PKP	PKPdf	14 23 25.8	-0.8
	comp=Z,0.4nm,0.4s,baz=84,slow=2.1,SNR=8.4						

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*IDC **21** 14:08:05.0±3.0, 36°.19N×70°.80E, h106^{km}±25^{km}, mb3.7/13, mbtmp4.2/18, MS3.8/2, Error ellipse: s-maj=21.4km s-min=16.7km az=9.0*

*BJI **21** 14:08:05.4±0.0, 36°.57N×70°.63E, h143^{km}, mb4.5/15, mB4.8/4*

*MOS **21** 14:08:07.1±0.9, 36°.44N×70°.84E, h135^{km}, mb4.3/6, Error ellipse: s-maj=11.0km s-min=5.1km az=89.5*

*NEIC **21** 14:08:08.3±2.1, 36°.45N±0°.05×70°.8E±0°.1, h134^{km}±4^{km}, mb4.5/19, Error ellipse: s-maj=12.2km s-min=7.7km az=82.0*

*NNC **21** 14:08:14.6±3.6, 36°.90N×70°.93E, h163^{km}±35^{km}, mb3.7, mpv4.6, Error ellipse: s-maj=34.3km s-min=18.5km az=30.0*

ISC 21 14:08:08.7±0.4**, 36°.37N**±0°.05×**70°.87E**±0°.05**, h150^{km}, n129,** σ**2^{s}04**/136**, mb4.1**/25**, 9C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.35	220	Pn	Pn	14 08 48.0	-0.3
KBL	Kabul	2.35	220	PN	Pn	14 08 48.0	-0.3
CHGR	Chuyangaron	2.66	330	Pn	Pn	14 08 50.0	-1.9
CHGR	Chuyangaron	2.66	330	PN	Pn	14 08 50.0	-1.9
GAR	Garm	2.67	351		Pn	14 08 50.4	-1.6
CEP	Cherat	2.68	161	P	Pn	14 08 53.1	+0.9
CEP				S	Sn	14 09 26.0	+0.3
CHCP	Chirah Chowk	3.34	143	P	Pn	14 09 00.5	0.0
NIL	Nilore	3.34	144		Pn	14 09 00.4	-0.1
NIL	Nilore	3.34	144	PN	Pn	14 09 00.4	-0.1
THW	Thamme Wali	3.64	168	P	Pn	14 09 04.0	-0.3
BTK	Batken	3.69	359	Pn	Pn	14 09 03.9	-1.0
BTK	Batken	3.69	359	PN	Pn	14 09 03.9	-1.0
SARP	Sargodha	4.68	161	P	Pn	14 09 16.7	-1.2
JMU	Jammu	4.93	136	eP	Pn	14 09 20.2	-1.0
JMU				eS	Sn	14 10 14.4	-3.3
TAS	Tashkent	5.10	347	Pn	Pn	14 09 21.1	-2.3
TAS	Tashkent	5.10	347	PN	Pn	14 09 21.1	-2.3
KSH	Kashi	5.11	51	P	Pn	14 09 16.6	-7.1
KSH				sP		14 09 44.8	
KSH				S	Sn	14 10 09.8	-12
KSH				pmax	pmax		
	comp=Z,120nm,0.6s						
KSH				smax	smax		
	comp=N,1µm,0.7s						
KSH				smax	smax		
	comp=E,640nm,0.6s						
THN	Thein Dam	5.61	133	eP	Pn	14 09 29.9	-0.3
THN				eS	Sn	14 10 30.5	-3.3
AML	Almayashu	6.16	20	P	Pn	14 09 36.1	-1.7
	SNR=205						
UCH	Uchtor	6.50	25	P	Pn	14 09 40.7	-1.7
	SNR=84						
EKS2	Erkin-Say	6.67	19	P	Pn	14 09 43.3	-1.2
	SNR=37						
KK31	Karatay Array	6.73	358	Pn	Pn	14 09 43.5	-1.7
KK31	Karatay Array	6.73	358	⇑P	Pn	14 09 43.7	-1.5
	20nm,0.3s,baz=178,slow=12,SNR=423						
KK31				S	Sn	14 10 54.9	-5.8
	27nm,0.5s,baz=189,slow=17,SNR=9.8						
KK31	Karatay Array	6.73	358	PN	Pn	14 09 43.5	-1.7
KKAR	Karatay Array	6.73	358	Pn	Pn	14 09 43.2	-1.9
KKAR	Karatay Array	6.73	358		Pn	14 09 43.3	-1.9
KKAR	Karatay Array	6.73	358	PN	Pn	14 09 43.2	-1.9
BHK	Bhakra	6.75	135	eS	Sn	14 10 53.9	-7.5
AAK	Ala-Archa	6.86	23	P	Pn	14 09 45.8	-1.2
	SNR=50						
AAK	Ala-Archa	6.86	23	P	Pn	14 09 45.9	-1.0
	22nm,0.3s,baz=205,slow=6.7,SNR=87						
AAK				S	Sn	14 10 59.4	-4.6
	14nm,0.3s,baz=326,slow=24,SNR=18						
AAK	Ala-Archa	6.86	23	Pn	Pn	14 09 45.0	-1.9
AAK	Ala-Archa	6.86	23	dePN	Pn	14 09 45.5	-1.5
AAK				pmax	pmax		

	comp=Z,17nm,0.6s						
KBK	Karagaybulak	7.03	25	P	Pn	14 09 49.2	0.0
	SNR=10						
ULHL	Ulahol	7.20	34	P	Pn	14 09 51.0	-0.5
	SNR=16						
CHMS	Chumysh	7.27	23	P	Pn	14 09 51.4	-0.8
	SNR=41						
SMLA	Simla	7.40	133	eP	Pn	14 09 52.5	-1.6
SMLA				eS	Sn	14 11 10.2	-6.6
SMLA				IAML		14 11 23.0	
	comp=E,87nm,0.2s						
SMLA				IAML		14 11 24.6	
	comp=N,135nm,0.2s						
USP	Ospenovka	7.43	21	P	Pn	14 09 53.3	-1.2
	SNR=28						
TKM2	Tokmak 2	7.49	28	P	Pn	14 09 54.5	-0.9
	SNR=14						
KDJ	Kajisay	7.55	38		Pn	14 09 54.6	-1.7
KDJ	Kajisay	7.55	38	PN	Pn	14 09 54.6	-1.7
MDOK	Medeo	8.29	33	⇑P	Pn	14 10 06.3	+0.3
	comp=N,25nm,0.7s						
MDOK	Medeo	8.29	33	PN	Pn	14 10 06.3	+0.3
KHET	Khetri	9.26	152	eP	Pn	14 10 17.0	-2.0
KHET				eS	Sn	14 11 52.1	-10
KUDL	Kundal	9.48	148	eP	Pn	14 10 19.6	-2.2
KUDL				eS	Sn	14 11 57.5	-9.3
GEYT	Alibeck	10.30	283	P	Pn	14 10 30.5	-2.2
	comp=N,5.1nm,0.3s,baz=115,slow=8.9,SNR=23						
GEYT				S	Sn	14 12 21.9	-4.7
	comp=N,9.3nm,0.4s,baz=86,slow=23,SNR=6.0						
GYA0B	ALIBECK ARRAY	10.30	283		Pn	14 10 30.6	-2.1
PYUN	Piuthan	13.15	125	eP	Pn	14 11 08.8	-1.2
PYUN				eS	Sn	14 13 23.3	-12
MAKZ	Makanchi	13.32	35	Pn	Pn	14 11 10.6	-1.3
MAKZ	Makanchi	13.32	35	P	Pn	14 11 10.6	-1.3
MK31	Makanchi Array	13.46	36		Pn	14 11 12.5	-1.2
MK31	Makanchi Array	13.46	36	⇑P	Pn	14 11 12.9	-0.8
	comp=N,4.7nm,0.6s,baz=225,slow=16,SNR=61						
MK31	Makanchi Array	13.46	36	ceP	Pn	14 11 13.3	-0.4
MKAR	Makanchi Array	13.46	36	P	Pn	14 11 13.5	-0.2
	comp=N,7.0nm,0.8s,baz=221,slow=14,SNR=74						
MKAR	Makanchi Array	13.46	36		Pn	14 11 13.0	-0.7
MKAR	Makanchi Array	13.46	36	iP	Pn	14 11 14.1	+0.4
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
DANN	Dangsing	13.50	123	eP	Pn	14 11 12.9	-1.7
DANN				eS	Sn	14 13 31.1	-13
BHPL	Bhopal	14.26	155	eP	P	14 11 27.4	+0.6
BHPL				eS	Sn	14 13 49.8	-12
GKN	Gorkha	14.32	122	eS	Sn	14 13 50.3	-13
WMQ	Urumqi	14.86	55	eP	Pn	14 11 31.8	+0.5
PKIN	Phulchoki	15.11	121	eP	Pn	14 11 33.9	-0.9
PKI	Pulchoki	15.12	121	eP	Pn	14 11 34.0	-1.0
PKI				eS	Sn	14 14 08.9	-14
AB31	Akbulak array	15.15	332	⇓P	Pn	14 11 33.8	-1.0
	comp=Z,4.1nm,0.6s,baz=146,slow=12,SNR=133						
AB31	Akbulak array	15.15	332	P	Pn	14 11 33.8	-1.0
ABKAR	Akbulak array	15.15	332		Pn	14 11 32.9	-1.9
ABKAR	Akbulak array	15.15	332		Pn	14 11 32.8	-2.0
ABKAR				IAmb	IAmb	14 11 38.3	
	comp=Z,5.2nm,0.5s						
GUN	Gumba	15.24	119	eP	Pn	14 11 35.3	-1.2
KURBB	Kurchatov Arra	15.28	19	P	Pn	14 11 34.1	-2.3
	comp=Z,4.7nm,0.6s,baz=207,slow=12,SNR=17						
KURBB	Kurchatov Arra	15.28	19	⇑P	Pn	14 11 33.9	-2.5
	comp=Z,11nm,0.8s						
KURBB	Kurchatov Arra	15.28	19	P	Pn	14 11 33.9	-2.5
KURK	Kurchatov	15.39	19	Pn	Pn	14 11 35.7	-2.1
KURK	Kurchatov	15.39	19	⇑eP	P	14 11 38.6	-0.4
KURK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
JIRN	Jiri	15.61	119	eP	Pn	14 11 39.9	-1.2
BVA0	Borovoye Array	16.66	359	P	P	14 11 52.2	-0.9
	comp=Z,12nm,1.1s,baz=183,slow=4.7,SNR=27						
BVA0	Borovoye Array	16.66	359	P	P	14 11 52.2	-0.9
BVAR	Borovoye Array	16.66	359	P	Pn	14 11 53.4	+0.1
	comp=Z,6.8nm,0.6s,baz=156,slow=8.5,SNR=23						
BVAR				S	S	14 14 50.1	-8.2
	comp=Z,2.5nm,0.6s,baz=162,slow=23,SNR=6.0						
BRVK	Borovoye	16.70	359	P	P	14 11 52.1	-1.3
BRVK	Borovoye	16.70	359	c iP	P	14 11 52.7	-0.7
AKTO	Aktyubinsk	16.84	331	P	Pn	14 11 55.6	+0.1
	comp=Z,9.5nm,0.6s,baz=137,slow=9.4,SNR=26						
AKTO				S	S	14 14 51.0	-12
	comp=Z,3.1nm,0.7s,baz=321,slow=16,SNR=3.5						
AKTO	Aktyubinsk	16.84	331	⇓P	Pn	14 11 56.5	+1.0
	comp=Z,6.3nm,0.8s						
TAPN	Taplejung	16.88	117	eP	Pn	14 11 56.8	+0.4
DGZ	Jazzator, Alta	17.95	37	⇓iP	Pn	14 12 08.5	-0.4
DGZ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZAA0	Zalesovo Array	20.08	25	P	P	14 12 30.4	+0.2
ZAA0				IAmb	IAmb	14 12 35.4	
	comp=Z,18nm,0.8s						
ZALV	Zalesovo Beam	20.08	25	P	P	14 12 30.8	+0.5
	comp=Z,14nm,0.4s,baz=216,slow=9.6,SNR=43						
	comp=Z,14nm,0.4s						
ZALV	Zalesovo Beam	20.08	25	P	P	14 12 30.4	+0.2
ARU	Arti	21.73	341	P	P	14 12 48.9	+1.1
	comp=Z,3.2nm,0.4s,baz=123,slow=6.6,SNR=6.6						
	comp=Z,3.2nm,0.4s						
ARU	Arti	21.73	341	d iP	P	14 12 49.3	+1.5
ARU						14 13 23.2	
ARU				S	S	14 16 42.4	+4.3
ARU				pmax	pmax		
	comp=Z,12nm,1.2s						
RAYN	Ar Rayn	25.35	247	P	P	14 13 22.6	+0.7
RAYN	Ar Rayn	25.35	247	P	P	14 13 22.6	+0.7
RAYN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
OBN	Obninsk	29.97	320	eP	P	14 14 03.3	+0.7
OBN				e*PP	pP	14 14 36.7	+1.8
OBN				e*SP	sP	14 14 49.3	-3.2
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC	Hu-ho-hao-te	31.91	69	eP	P	14 14 22.4	+2.4
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,4.3s						
MILM	Milestii Mici	32.79	302	eP	P	14 14 24.0	-3.5
	comp=Z,10.0nm,0.5s						
MILM	Milestii Mici	32.79	302	eP	P	14 14 24.0	-3.5
MILM				pmax	pmax		
	comp=Z,10.0nm,0.5s						
AKASG	Malin Array Be	32.95	309	P	P	14 14 30.1	+1.3
	comp=Z,0.9nm,0.5s,baz=95,slow=8.9,SNR=4.1						
	comp=Z,0.9nm,0.5s						
AKASG	Malin Array Be	32.95	309	ceP	P	14 14 30.5	+1.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NRIK	Noril'sk	34.28	10	P	P	14 14 42.1	+2.1
	comp=Z,1.9nm,0.5s,baz=202,slow=5.4,SNR=2.8						
	comp=Z,1.9nm,0.5s						
NRIK	Noril'sk	34.28	10	P	P	14 14 42.0	+2.0
NRIK				IAmb	IAmb	14 14 42.8	
	comp=Z,8.6nm,1.4s						
FINES	FINESS Array B	37.54	326	P	P	14 15 09.8	+1.9
	comp=Z,1.9nm,0.7s,baz=111,slow=10,SNR=5.1						
	comp=Z,1.9nm,0.7s						
FINES	FINESS Array B	37.54	326	P	P	14 15 09.5	+1.6
NJ2	Nanjing	39.60	82	eP	P	14 15 25.9	+0.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VRAC	Vranov	40.99	306	LR	LR	14 36 18.0	
	comp=Z,65nm,18.3s,baz=56,slow=41						
ARCES	ARCESS Array B	41.23	338	P	P	14 15 40.5	+2.2
	comp=Z,0.6nm,0.4s,baz=114,slow=8.1,SNR=8.3						
	comp=Z,0.6nm,0.4s						
ARCES	ARCESS Array B	41.23	338	P	P	14 15 40.4	+2.0
ARCES				IAmb	IAmb	14 16 12.9	
	comp=Z,23nm,1.4s						
ARCES	ARCESS Array B	41.23	338	P	P	14 15 40.4	+2.0
ARCES				pmax	pmax		
	comp=Z,23nm,1.4s						
HFS	Hagfors	43.11	322	P	P	14 15 55.3	+1.6
	comp=Z,2.0nm,0.5s,baz=108,slow=9.5,SNR=5.4						
	comp=Z,2.0nm,0.5s						
NC303	NORSAR Array S	44.37	323	P	P	14 16 05.3	+1.6
NC303				IAmb	IAmb	14 16 23.3	
	comp=Z,24nm,1.3s						
NB201	NORSAR Array S	44.39	323	P	P	14 16 05.4	+1.4
NB2	NORSAR Subarra	44.42	323	P	P	14 16 05.2	+0.9
	comp=Z,3.3nm,0.9s,baz=98,slow=7.9						
NOA	NORSAR Array B	44.42	323	P	P	14 16 05.8	+1.5
	comp=Z,0.8nm,0.5s,baz=97,slow=7.9,SNR=4.3						
	comp=Z,0.8nm,0.5s						
GRA1	Grafenberg Arr	44.46	307	P	P	14 16 04.5	-0.2
GRA1				IAmb	IAmb	14 16 26.2	
	comp=Z,12nm,0.6s						
GRF	Grafenberg Arr	44.46	307	P	P	14 16 04.5	-0.2
GRF				pmax	pmax		
	comp=Z,12nm,0.6s						
GRFO	Grafenberg	44.46	307	P	P	14 16 04.5	-0.1
GRFO				IAmb	IAmb	14 16 26.1	
	comp=Z,11nm,0.7s						
GRFO	Grafenberg	44.46	307	P	P	14 16 04.5	-0.1
GRFO				pmax	pmax		
	comp=Z,11nm,0.7s						
NC204	NORSAR Array S	44.66	323	P	P	14 16 06.1	-0.1
NC204				IAmb	IAmb	14 16 15.6	
	comp=Z,5.3nm,0.8s						
SPB2	Spitsbergen Ar	47.59	347	P	P	14 16 30.9	+2.1
SPITS	Spitsbergen Ar	47.60	347	P	P	14 16 31.4	+2.6
	comp=Z,12nm,1.1s,baz=128,slow=11,SNR=11						
	comp=Z,12nm,1.1s						
EKA	Eskdalemuir Ar	52.31	316	LR	LR	14 43 29.3	
	comp=Z,146nm,20.8s,baz=20,slow=40						
BILL	Bilibino	58.77	26	eP	P	14 17 52.2	+1.7
BILL				e		14 18 41.5	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
TOA0	Torodi Ar. Sit	65.61	269	P	P	14 18 36.4	-0.5
TOA0				IAmb	IAmb	14 18 46.3	
	comp=Z,7.5nm,1.5s						
TORD	Torodi Ar. Bea	65.61	269	P	P	14 18 36.7	-0.2
	comp=Z,0.8nm,0.6s,baz=43,slow=5.5,SNR=6.0						
	comp=Z,0.8nm,0.6s						
TORD	Torodi Ar. Bea	65.61	269	P	P	14 18 36.1	-0.8
A21K	Barrow	67.47	15	P	P	14 18 50.1	+2.3
IMAR	Indian Mountai	72.33	18	P	P	14 19 17.8	+0.3
BMAR	Burnt Mountain	73.09	14	P	P	14 19 24.1	+2.0
PPLA	Purkeypile	75.25	19	P	P	14 19 36.3	+1.5
PPLA				IAmb	IAmb	14 20 08.7	
	comp=Z,12nm,1.4s						
SCRK	Sand Creek	76.25	15	P	P	14 19 41.4	+0.9
SCRK				IAmb	IAmb	14 19 49.5	
	comp=Z,5.5nm,1.4s						
YKA	Yellowknife Ar	81.38	3	P	P	14 20 09.8	+1.6
	comp=Z,0.4nm,0.7s,baz=351,slow=5.0,SNR=7.9						
	comp=Z,0.4nm,0.7s						
YKA	Yellowknife Ar	81.38	3	ceP	P	14 20 10.1	+1.8
WRA	Warramunga Arr	82.01	122	P	P	14 20 13.2	+1.0
	comp=Z,0.7nm,0.8s,baz=323,slow=4.9,SNR=9.6						
	comp=Z,0.7nm,0.8s						
ASAR	Alice Springs	84.26	125	P	P	14 20 25.4	+1.7
	comp=Z,0.4nm,0.7s,baz=316,slow=4.6,SNR=7.0						
	comp=Z,0.4nm,0.7s						

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*IDC **21** 14:33:49.0±1.4, 8°.27S×117°.57E, h0^{km}, mb3.7/3, mbtmp3.8/5, ML3.7/2, Error ellipse: s-maj=41.4km s-min=22.1km az=64.0*

*DJA **21** 14:33:50.6±0.2, 8°S±2°×11°8E±°, h10^{km}, M4.3/18, mb4.4/5, mB5.2/1, MLv4.2/18, Mw(mB)4.6/1*

*NEIC **21** 14:33:52.4±1.2, 8°.32S±0°.09×117°.54E±0°.03, h31^{km}±8^{km}, mb4.0/9, Error ellipse: s-maj=13.6km s-min=4.5km az=181.0*

ISC 21 14:33:49.8±0.6**, 8°.28S**±0°.05×**117°.52E**±0°.05**, h10**^{km}**, n40,** σ**1^{s}09**/45**, mb3.9**/5**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.60	155	P	Pb	14 34 03.0	+0.5
PLAI				S	Sb	14 34 11.7	+0.6
TWSI	Taliwang, Sumb	0.78	234	P	Pg	14 34 05.0	+0.1
DNP	Denpasar	2.32	260	P	Pn	14 34 29.7	+1.6
IGBI	Denpasar	2.41	257	P	Pn	14 34 30.8	+1.5
IGBI				S	Sb	14 35 04.3	+1.2
ABJI	Asem Bagus	3.29	278	P	Pn	14 34 42.3	+0.9
JAGI	Jajag, Banyuwa	3.34	266	Pn	Pn	14 34 42.4	+0.3
JAGI	Jajag, Banyuwa	3.34	266	P	Pn	14 34 42.8	+0.7
BASI	Baing, Sumba	3.58	123	P	Pn	14 34 46.5	+1.0
BSSI	Bau Bau, Buton	3.63	54	P	Pn	14 34 47.5	+1.4
BKSI	Bulukumba	3.91	42	P	Pn	14 34 50.6	+0.6
BKSI				S	Sn	14 35 35.2	-0.8
BLJI	Banyuglugur	3.92	277	P	Pn	14 34 49.8	-0.4
KAPI	Kappang	3.93	34	Pn	Pn	14 34 50.8	+0.6
	10nm,0.3s,baz=188,slow=3.3,SNR=15						
KAPI				Sn	Sn	14 35 36.3	0.0
	6.4nm,0.3s,baz=235,slow=24,SNR=11						
	30nm,0.2s						
KAPI	Kappang	3.93	34	Pn	Pn	14 34 50.6	+0.4
GMJI	Gumukmas	4.03	270	P	Pn	14 34 53.4	+1.7
MMRI	Maumere	4.68	95	P	Pn	14 35 01.6	+1.0
SPSI	Sidrap Palu	4.83	28	P	Pn	14 35 02.2	-0.5
GRJI	Gresik	5.18	285	P	Pn	14 35 08.4	+1.0
BBKI	Banjar Baru	5.47	331	P	Pn	14 35 12.4	+0.9
	53nm,0.8s,2µm0.3nm						
SOEI	Soe	6.82	103	Pn	Pn	14 35 29.4	-0.8
SOEI	Soe	6.82	103	P	Pn	14 35 30.6	+0.4
	18nm,0.9s,0.1nm						
MRSI	Marisa	9.75	27	P	Pn	14 36 11.9	+1.7
FITZ	Fitzroy Crossi	12.56	142	Pn	Pn	14 36 47.4	-1.2
KNRA	Kununurra	13.22	125	Pn	Pn	14 36 56.3	-1.5
PSA00	Pilbara Seismi	13.41	171	Pn	Pn	14 36 59.8	-0.5
MTN	Manton Dam	14.13	110	Pn	Pn	14 37 08.4	-1.7
FAKI	Fak Fak	15.59	71	P	Pn	14 37 32.5	+2.6
WB0	Warramunga Arr	19.94	127	P	P	14 38 21.1	-1.0
WB0				IAmb	IAmb	14 38 33.1	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	19.99	127	P	P	14 38 22.7	0.0
	comp=Z,0.2nm,0.3s,baz=302,slow=12,SNR=18						
	comp=Z,1.3nm,0.8s						
WRA	Warramunga Arr	19.99	127	P	P	14 38 21.6	-1.0
WRAB	Tennant Creek	19.99	127	P	P	14 38 22.7	0.0
WRAB				IAmb	IAmb	14 38 32.1	
	comp=Z,6.4nm,1.1s						
WB2	Warramunga Arr	20.00	127	P	P	14 38 21.6	-1.1
WB2				IAmb	IAmb	14 38 32.1	
	comp=Z,5.8nm,1.1s						
RPSI	Rantau Prapat	21.51	300	P	P	14 38 37.6	-1.6
RPSI				IAmb	IAmb	14 38 52.6	
	comp=Z,12nm,1.2s						
AS31	Alice Springs	21.92	136	P	P	14 38 44.4	+0.8
ASAR	Alice Springs	21.92	136	P	P	14 38 44.6	+1.0
	comp=Z,2.5nm,0.6s,baz=312,slow=8.3,SNR=51						
ASAR				PcP	PcP	14 42 42.4	-0.4
	comp=Z,0.6nm,1.0s,baz=338,slow=1.6,SNR=4.1						
	comp=Z,2.5nm,0.6s						
ASAR	Alice Springs	21.92	136	P	P	14 38 43.8	+0.3
COEN	Coen	25.79	105	P	P	14 39 19.9	-1.3
COEN				IAmb	IAmb	14 39 23.2	
	comp=Z,3.9nm,0.7s						
SONM	Songino Array	56.73	351	P	P	14 43 34.5	+0.6
	comp=Z,0.8nm,0.6s,baz=171,slow=8.2,SNR=5.9						
	comp=Z,0.8nm,0.6s						
MKAR	Makanchi Array	63.16	334	P	P	14 44 19.1	+1.1
	comp=Z,0.4nm,0.7s,baz=150,slow=7.3,SNR=5.1						
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	63.16	334	P	P	14 44 17.1	-0.9
QSPA	South Pole Qui	81.71	180	P	P	14 46 07.5	-1.0

WEL 21 14:34:54.1±0.4**, 41°S**±3°×**17°5E**±°**, h33**^{km}**, M2.2**/12**, ML2.5**/12**, MLv2.2**/12**, Error ellipse: s-maj=0.0km s-min=0.0km az=155.3, confirmed, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIW	Kapiti Island	0.17	55	P	Pb	14 35 01.8	+1.4
KIW				S	Sb	14 35 06.7	+2.0
CAW	Cannon Point	0.30	120	P	Pn	14 35 03.5	+1.3
CAW				S	Sb	14 35 10.4	+3.3
WEL	Wellington	0.33	174	P	Pn	14 35 03.9	+1.3
OGWZ	Otaki Gorge	0.37	67	P	Pn	14 35 03.9	+0.7
TCW	Tory Channel	0.42	233	P	Pn	14 35 04.7	+0.7
HOWZ	Holdsworth Sta	0.60	84	P	Pb	14 35 07.2	+0.8
HOWZ				S	Sn	14 35 16.9	+1.9
MTW	Mount Morrison	0.62	109	P	Pb	14 35 07.4	+0.7
MTW				S	Sn	14 35 17.4	+2.0
DUWZ	D'Urville Isla	0.63	284	P	Pb	14 35 07.1	+0.3
DUWZ				S	Sn	14 35 16.2	+0.5
PAWZ	Paruwai Farm	0.68	129	P	Pb	14 35 08.3	+0.6
PAWZ				S	Sn	14 35 18.7	+1.8
MRZ	Mangatainoka R	0.71	66	P	Pb	14 35 08.4	+0.2
MRZ				S	Sb	14 35 18.8	+1.1
PLWZ	Palliser	0.73	147	P	Pb	14 35 08.9	+0.4
TUWZ	Tuamarina	0.76	231	P	Pb	14 35 09.3	+0.4
TMWZ	Te Maipa	0.89	100	P	Pb	14 35 10.8	-0.4
TIWZ	Tintock	0.90	79	P	Pn	14 35 10.7	+0.2
TIWZ				S	Sb	14 35 23.3	+0.3
BSWZ	Blackbirch Sta	0.99	220	P	Pb	14 35 13.4	+0.6
BFZ	Birch Farm	1.19	77	P	Pn	14 35 13.8	-0.6
TSZ	Takapari Road	1.30	47	P	Pb	14 35 18.4	+0.3
TKNZ	Takaka Hill	1.34	266	P	Pb	14 35 18.0	-0.7
MRNZ	Matariki Terra	1.55	253	P	Pb	14 35 21.3	-1.0
THZ	Tophouse	1.59	239	P	Pb	14 35 21.6	-1.3
QRZ	Quartz Range	1.67	274	P	Pn	14 35 21.8	+0.8
VRZ	Vera Road	1.83	1	P	Pn	14 35 24.8	+1.5
TUVZ	Tukino	1.83	23	P	Pn	14 35 24.3	+0.9
TMVZ	Te Maari	1.99	23	P	Pn	14 35 27.2	+1.7

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*IDC **21** 14:46:35.1±1.1, 39°.67N×75°.49E, h0^{km}, mb3.5/6, mbtmp3.4/10, ML2.3/3, Error ellipse: s-maj=25.0km s-min=14.6km az=73.0*

*KRNET **21** 14:46:38.1±0.1, 39°.95N×75°.64E, mb3.7*

*SOME **21** 14:46:38.9, 40°.12N×75°.58E, h0^{km}*

*NNC **21** 14:46:41.1±0.9, 40°.09N×75°.61E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=7.1km s-min=4.0km az=166.0*

ISC 21 14:46:37.4±1.6**, 40°.04N**±0°.05×**75°.62E**±0°.03**, h0**^{km}±10^{km}**, n83,** σ**1^{s}79**/109**, mb3.6**/6**, 26C-24D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	1.42	12	⇑iP	Pn	14 47 05.9	+1.2
	baz=9.0						
NRN				⇑iS	Sn	14 47 26.2	+1.9
	baz=9.0						
ARLS	Aral	2.07	332	⇓iP	Pg	14 47 17.0	0.0
	baz=33						
ARLS				⇓iS	Sg	14 47 45.3	+1.5
	baz=33						
OHH	Osh	2.22	283	⇑iP	Pb	14 47 18.6	+0.2
	baz=86						
OHH				⇑iS	Sg	14 47 48.1	-0.6
	baz=86						
ULHL	Ulahol	2.25	12	P	Pg	14 47 21.3	+0.7
	SNR=62						
ULHL	Ulahol	2.25	12	⇓iP	Pb	14 47 19.8	+0.7
	baz=11						
ULHL				⇓iS	Sg	14 47 50.0	+0.2
	baz=11						
UCH	Uchtor	2.34	339	P	Pg	14 47 22.3	+0.1
	SNR=115						
UCH	Uchtor	2.34	339	⇓iP	Pb	14 47 21.2	+0.5
	baz=40						
UCH				⇓iS	Sg	14 47 52.5	-0.1
	baz=40						
KDJ	Kajisay	2.40	29	⇑iP	Pb	14 47 21.6	+0.1
	baz=28						
KDJ				⇑iS	Sg	14 47 53.3	-1.2
	baz=28						
AML	Almayashu	2.55	326	P	Pb	14 47 24.7	+0.5
	SNR=41						
AML	Almayashu	2.55	326	⇓iP	Pb	14 47 24.0	-0.1
	baz=27						
AML				⇓iS	Sg	14 47 57.4	-1.8
	baz=27						
KBK	Karagaybulak	2.66	349	P	Pb	14 47 26.9	+0.8
	SNR=71						
KBK	Karagaybulak	2.66	349	⇓iP	Pb	14 47 25.6	-0.4
	baz=49						
KBK				⇓iS	Sb	14 47 59.9	+0.6
	baz=49						
AAK	Ala-Archa	2.73	342	P	Pb	14 47 27.7	+0.6
	SNR=62						
AAK	Ala-Archa	2.73	342	Pn	Pb	14 47 27.8	+0.6
	23nm,0.3s,baz=149,slow=7.8,SNR=162						
AAK				Sn	Sg	14 48 05.2	+0.1
	6.8nm,0.3s,baz=47,slow=20,SNR=11						
AAK	Ala-Archa	2.73	342	⇑iP	Pb	14 47 26.4	-0.7
	baz=43						
AAK				⇑iS	Sb	14 48 01.5	+0.3
	baz=43						
FRU1	Bishkek	2.87	345	⇓iP	Pb	14 47 28.5	-0.9
	baz=45						
FRU1				⇓iS	Sb	14 48 05.2	+0.2
	baz=45						
TKM2	Tokmak 2	2.88	360	P	Pb	14 47 29.9	+0.2
	SNR=13						
TKM2	Tokmak 2	2.88	360	⇓iP	Pb	14 47 28.5	-1.2
	baz=59						
TKM2				⇓iS	Sb	14 48 05.2	-0.3
	baz=59						
EKS2	Erkin-Say	2.96	333	P	Pb	14 47 31.1	0.0
	SNR=13						
EKS2	Erkin-Say	2.96	333	⇑iP	Pb	14 47 29.7	-1.4
	baz=33						
EKS2				⇑iS	Sb	14 48 07.0	-0.9
	baz=33						
DRK	Karamyk	3.00	260	⇓iP	Pn	14 47 28.8	+2.4
	baz=62						
DRK				⇓iS	Sn	14 48 05.8	+2.7
	baz=62						
KST	Kastek	3.01	5	Pg	Pg	14 47 35.5	+0.4
	19nm,0.7s						
KST				Lg	Lg	14 48 15.9	
	72nm,0.7s						
KST	Kastek	3.01	5	ePg	Pg	14 47 35.5	+0.4
	19nm,0.2s						
KST				eLg	Lg	14 48 15.9	
	97nm,0.3s						
CHMS	Chumysh	3.03	348	P	Pb	14 47 31.9	-0.3
	SNR=13						
CHMS	Chumysh	3.03	348	⇑iP	Pb	14 47 30.3	-1.8
	baz=48						
CHMS				⇑iS	Sb	14 48 08.5	-1.1
	baz=48						
ANVS	Anan'yevo	3.14	29	⇑eP	Pn	14 47 31.9	+3.6
	baz=28						
ANVS				⇑eS	Sb	14 48 11.2	-2.0
	baz=28						
MTBS	Maitube	3.15	11	Pg	Pg	14 47 37.4	-0.3
	18nm,0.5s						
MTBS				Lg	Lg	14 48 19.1	
	24nm,0.6s						
MTBS	Maitube	3.15	11	ePg	Pg	14 47 37.4	-0.3
	18nm,0.2s						
MTBS				eLg	Lg	14 48 19.1	
	30nm,0.1s						
TNSS	Tian-Shan	3.16	18	Pg	Pg	14 47 38.3	+0.5
	23nm,0.4s						
TNSS				Lg	Lg	14 48 20.7	
	21nm,0.6s						
TNSS	Tian-Shan	3.16	18	ePg	Pg	14 47 38.3	+0.5
	24nm,0.1s						
TNSS				eLg	Lg	14 48 20.7	
	28nm,0.3s						
DGS	Degeres	3.20	2	Pg	Pg	14 47 39.4	+0.6
	28nm,0.6s						
DGS				Lg	Lg	14 48 22.6	
	52nm,0.6s						
DGS	Degeres	3.20	2	ePg	Pg	14 47 39.4	+0.6
	28nm,0.3s						
DGS				eLg	Lg	14 48 22.6	
	58nm,0.4s						
MRKS	Merke	3.25	327	Pg	Pg	14 47 40.0	+0.3
	11nm,0.5s						
MRKS				Lg	Lg	14 48 23.8	
	32nm,0.5s						
MRKS	Merke	3.25	327	ePg	Pg	14 47 40.0	+0.3
	11nm,0.5s						
MRKS				eLg	Lg	14 48 23.9	
	48nm,0.3s						
ARK	Arkit	3.28	304	⇑iP	Pn	14 47 33.8	+3.7
	baz=5.0						
ARK				⇑iS	Sb	14 48 14.2	-2.8
	baz=5.0						
MDOK	Medeo	3.30	18	⇑Pg	Pg	14 47 40.1	-0.5
	16nm,0.4s						
MDOK				Pg	Pg	14 47 40.7	+0.1
	17nm,0.6s						
MDOK				Lg	Lg	14 48 24.6	
	37nm,0.6s						
MDOK				Lg	Lg	14 48 25.1	
	38nm,0.9s						
MDOK	Medeo	3.30	18	ePg	Pg	14 47 40.8	+0.1
	17nm,0.2s						
MDOK				eLg	Lg	14 48 25.1	
	46nm,0.4s						
AAA	Alma-Ata	3.31	17	Pg	Pg	14 47 41.5	+0.6
	32nm,0.4s						

AAA				Lg	Lg	14 48 26.0	
	34nm,0.4s						
AAA	Alma-Ata	3.31	17	ePg	Pg	14 47 41.5	+0.6
	24nm,0.1s						
AAA				eLg	Lg	14 48 26.0	
	31nm,0.1s						
USP	Ospenovka	3.33	346	P	Pb	14 47 36.2	-1.1
	SNR=5.7						
USP	Ospenovka	3.33	346	⇑iP	Pb	14 47 34.7	-2.6
	baz=46						
USP				⇑iS	Sb	14 48 15.8	-2.6
	baz=46						
KOTS	Kotyrbulak	3.38	19	Pg	Pg	14 47 42.4	+0.2
	17nm,0.8s						
KOTS				Lg	Lg	14 48 28.0	
	160nm,0.9s						
KOTS	Kotyrbulak	3.38	19	ePg	Pg	14 47 42.4	+0.2
	17nm,0.2s						
KOTS				eLg	Lg	14 48 28.1	
	166nm,0.4s						
MNAS	Manas	3.39	317	⇓iP	Pb	14 47 35.6	-2.8
	baz=18						
MNAS				⇓iS	Sb	14 48 17.3	-2.9
	baz=18						
KRBS	Karabastau	3.65	1	Pg	Pg	14 47 47.0	-0.4
	20nm,0.5s						
KRBS				Lg	Lg	14 48 36.0	
	22nm,0.5s						
KRBS	Karabastau	3.65	1	ePg	Pg	14 47 47.0	-0.4
	20nm,0.2s						
KRBS				eLg	Lg	14 48 36.0	
	24nm,0.3s						
SATY	Saty	3.67	34	Pg	Pg	14 47 46.9	-0.8
	14nm,0.8s						
SATY				Lg	Lg	14 48 35.4	
	26nm,0.7s						
SATY	Saty	3.67	34	ePg	Pg	14 47 46.9	-0.8
	14nm,0.3s						
SATY				eLg	Lg	14 48 35.4	
	26nm,0.7s						
BTK	Batken	3.69	272	⇓iP	Pn	14 47 38.8	+3.2
	baz=73						
BTK				⇓iS	Sn	14 48 22.9	+3.1
	baz=73						
TRKS	Terek-Say	3.71	295	⇓iP	Pn	14 47 38.9	+2.8
	baz=95						
TRKS				⇓iS	Sn	14 48 23.1	+2.5
	baz=95						
KTBS	Karatobe	3.75	12	Pg	Pg	14 47 48.5	-0.8
	19nm,0.4s						
KTBS				Lg	Lg	14 48 38.8	
	61nm,1.0s						
KTBS	Karatobe	3.75	12	ePg	Pg	14 47 48.5	-0.8
	24nm,0.4s						
KTBS				eLg	Lg	14 48 38.8	
	61nm,1.0s						
KUU	Kurty	3.89	8	Pg	Pg	14 47 51.0	-0.9
	10nm,0.4s						
KUU				Lg	Lg	14 48 42.6	
	40nm,0.2s						
KUU	Kurty	3.89	8	ePg	Pg	14 47 51.0	-0.9
	10nm,0.4s						
KUU				eLg	Lg	14 48 42.6	
	42nm,0.3s						
KURS	Kuram	3.94	28	Pg	Pg	14 47 50.8	-2.0
	15nm,0.9s						
KURS				Lg	Lg	14 48 42.8	
	13nm,0.5s						
KURS	Kuram	3.94	28	ePg	Pg	14 47 50.8	-2.0
	15nm,0.4s						
KURS				eLg	Lg	14 48 42.8	
	15nm,0.2s						
CHKK	Chushkaly	3.95	15	Pg	Pg	14 47 52.0	-1.0
	12nm,0.6s						
CHKK				Lg	Lg	14 48 44.8	
	48nm,0.7s						
CHKK	Chushkaly	3.95	15	ePg	Pg	14 47 52.0	-1.0
	9.5nm,0.1s						
CHKK				eLg	Lg	14 48 44.5	
	42nm,0.2s						
UZB	Uzynbulak	4.02	38	Pg	Pg	14 47 52.6	-1.7
	6.0nm,0.6s						
UZB				Lg	Lg	14 48 46.2	
	14nm,0.9s						
UZB	Uzynbulak	4.02	38	ePg	Pg	14 47 52.6	-1.7
	6.0nm,0.2s						
UZB				eLg	Lg	14 48 45.5	
	16nm,0.4s						
KPKS	Kokpek	4.12	33	Pg	Pb	14 47 53.5	+2.7
	14nm,0.6s						
KPKS				Lg	Lg	14 48 47.2	
	21nm,1.1s						
KPKS	Kokpek	4.12	33	ePg	Pb	14 47 53.5	+2.7
	16nm,0.3s						
KPKS				eLg	Lg	14 48 47.2	
	49nm,0.3s						
GAR	Garm	4.23	257	⇑iP	Pn	14 47 45.0	+1.8
	baz=59						
GAR				⇑iS	Sn	14 48 35.3	+2.0
	baz=59						
SHLS	Shalkode	4.24	42	Pg	Pg	14 48 02.9	+4.2
	12nm,0.7s						
SHLS				Lg	Lg	14 49 02.7	
	18nm,0.9s						
SHLS	Shalkode	4.24	42	ePg	Pg	14 48 02.9	+4.2
	12nm,0.7s						
SHLS				eLg	Lg	14 49 02.7	
	19nm,0.3s						
PDGK	Podgornoye	4.38	40	Pg	Pg	14 47 59.6	-1.7
	2.2nm,1.0s						
PDGK				Lg	Lg	14 48 57.2	
	7.6nm,0.9s						
PDGK	Podgornoye	4.38	40	⇑Pn	Pn	14 47 48.7	+3.4
	6.0nm,0.6s						
PDGK				⇓Pg	Pg	14 48 00.1	-1.3
	4.1nm,0.5s						
PDGK				⇑Sn	Sb	14 48 43.9	-4.8
	26nm,0.7s						
PDGK				⇓Lg	Lg	14 48 57.6	
	13nm,0.7s						
IUG	Iuzhnay	4.72	298	Pg	Pg	14 48 08.5	+0.8
	12nm,0.7s						
IUG				Lg	Lg	14 49 12.4	
	12nm,0.5s						
IUG	Iuzhnay	4.72	298	ePg	Pg	14 48 08.5	+0.8
	6.4nm,0.2s						
IUG				eLg	Lg	14 49 12.4	
	19nm,0.3s						
KK31	Karatay Array	4.90	310	Pn	Pn	14 47 55.4	+3.1
	0.6nm,0.3s,baz=129,slow=12,SNR=50						
KK31				⇑Pg	Pg	14 48 09.0	-2.3
	2.0nm,0.5s,baz=130,slow=11,SNR=12						
KK31				⇑Sn	Sn	14 48 52.4	+2.7
	2.2nm,0.4s						
KK31				⇑Lg	Lg	14 49 14.4	
	3.0nm,0.5s,baz=127,slow=28,SNR=2.8						
BTLS	Baital	5.13	347	Pg	Pg	14 48 13.8	-1.9
	2.9nm,0.9s						
BTLS				Lg	Lg	14 49 21.9	
	12nm,0.8s						
BTLS	Baital	5.13	347	ePg	Pg	14 48 13.8	-1.9
	2.8nm,0.2s						
BTLS				eLg	Lg	14 49 21.9	
	12nm,0.3s						
DJR	Jarkent	5.29	34	Pg	Pg	14 48 17.2	-1.6
	2.7nm,1.2s						
DJR				Lg	Lg	14 49 27.2	
	4.1nm,0.9s						
DJR	Jarkent	5.29	34	ePg	Pg	14 48 17.2	-1.6
	1.8nm,0.2s						
DJR				eLg	Lg	14 49 27.2	
	5.3nm,0.2s						
MKAR	Makanchi Array	8.31	34	Pn	Pn	14 48 42.8	+3.7
	0.2nm,0.3s,baz=208,slow=15,SNR=16						
	0.8nm,0.5s						
KURBB	Kurchatov Arra	10.78	10	Pn	Pn	14 49 15.6	+2.8
	baz=193,slow=12,SNR=2.7						
	0.2nm,0.6s						
BVAR	Borovoye Array	13.47	346	Pn	Pn	14 49 50.2	+0.6
	baz=148,slow=12,SNR=1.5						
	0.3nm,0.6s						
SONM	Songino Array	23.38	60	P	P	14 51 47.7	+0.1
	0.2nm,0.4s,baz=263,slow=12,SNR=1.2						
	0.2nm,0.4s						
FINES	FINESS Array B	36.74	322	P	P	14 53 45.6	-0.4
	4.9nm,1.0s,baz=118,slow=11,SNR=4.0						
	4.9nm,1.0s						
TORD	Torodi Ar. Bea	69.39	270	P	P	14 57 44.8	-2.5
	0.2nm,0.3s,baz=49,slow=5.0,SNR=4.1						
	0.2nm,0.3s						
YKA	Yellowknife Ar	77.48	5	P	P	14 58 33.1	-1.1
	0.2nm,0.6s,baz=344,slow=5.6,SNR=4.7						
	0.2nm,0.6s						
WRA	Warramunga Arr	80.92	125	P	P	14 58 50.9	-2.7
	0.3nm,0.8s,baz=330,slow=6.7,SNR=1.1						
	0.3nm,0.8s						
ASAR	Alice Springs	83.44	128	P	P	14 59 03.8	-2.9
	0.4nm,0.7s,baz=329,slow=5.8,SNR=5.5						
	0.4nm,0.7s						

IDC 21 14:55:57.4±2.3**,2°.03N×126°.33E,h0**^{km}**,mb3.1**/3**,**
mbtmp3.1/3**,Error ellipse: s-maj=195.2km**
s-min=28.0km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.21	161	P	P	15 01 05.8	-0.3
	0.3nm,0.4s,baz=339,slow=10,SNR=6.8						
	0.3nm,0.4s						
ASAR	Alice Springs	26.58	164	P	P	15 01 37.6	+0.2
	0.3nm,1.0s,baz=348,slow=13,SNR=8.2						
	0.3nm,1.0s						
MKAR	Makanchi Array	58.72	326	P	P	15 05 57.1	0.0
	0.1nm,0.4s,baz=125,slow=5.6,SNR=1.4						
	0.1nm,0.4s						

GUC ***21*** *15:01:59.6±0.7,21°.62S×68°.48W,h127^{km}±4^{km},ML5.1*
NEIC ***21*** *15:01:59.2,21°.60S×68°.51W,h150^{km}*
VAO ***21*** *15:01:59.5±0.3,21°.53S×68°.31W,h122^{km},mb5.4*
SJA ***21*** *15:01:59.4±1.6,21°.60S×68°.40W,h100^{km},ML5.0,MW4.7, Hypocentre not reviewed by the ISC*
NEIC ***21*** *15:01:59.2±1.6,21°.58S±0°.05×68°.46W±0°.07,h125^{km}±5^{km}, mb5.1/255,Mww5.1/17,Mwr5.0(GUC),Error ellipse: s-maj=9.4km s-min=7.3km az=72.0*
IDC ***21*** *15:01:59.9±0.3,21°.74S×68°.36W,h129^{km}±3^{km},mb4.6/11, mbtmp4.9/16,MS3.7/25,Error ellipse: s-maj=12.2km s-min=8.2km az=107.0*
NEIC ***21*** *15:01:59.2,21°.60S×68°.73W,h150^{km},Moment Tensor Solution. Duration: 1^{s}.6 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.53; M$_{\theta\theta}$0.41; M$_{\phi\phi}$-1.94; M$_{r\theta}$-0.95; M$_{\theta\phi}$0.85; M$_{\phi r}$-4.97; Fault plane solution: M$_0$5.42000×10^{16} NP1: ϕ_s189.10000°,δ81.40000°,λ102.62000°. NP2: ϕ_s312.86000°,δ15.23000°,λ34.71000°. Principal axes: T 5.3776, Plg52.0000°, Azm114.0000°; N 0.0948, Plg12.0000°, Azm7.0000°; P -5.4724, Plg35.0000°, Azm268.0000°;*
MOS ***21*** *15:02:00.1±2.1,21°.55S×68°.27W,h136^{km},mb5.0/20 Error ellipse: s-maj=13.4km s-min=7.5km az=108.3*
GCMT ***21*** *15:02:04.2±0.3,21°.68S±0°.02×68°.70W±0°.02,h145^{km}±3^{km}, MW5.0/92,Moment Tensor Solution. s31,c34; s92,c121; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.46±.13; M$_{\theta\theta}$1.11±.19; M$_{\phi\phi}$-1.57±.22; M$_{r\theta}$-0.82±.09; M$_{\theta\phi}$0.87±.19; M$_{\phi r}$-3.43±.12; Best double couple: M$_0$3.86400×10^{16} NP1:ϕ_s196.00000°,δ85.00000°,λ112.00000°. NP2: ϕ_s298.00000°,δ22.00000°,λ13.00000°. Principal axes: T 3.5850, Plg46.0000°, Azm128.0000°; N 0.5520, Plg22.0000°, Azm14.0000°; P -4.1420, Plg36.0000°, Azm267.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 15:01:58.9±0.3**,21°.62S**±0°.03×**68°.29W**±0°.04**,h121**^{km}±2^{km}**,**
h121^{km}**:pP-P,n700,**σ**1^{s}.35**/659**,mb5.1**/142**,23C-12D,**
Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.90	258		Pn	15 02 19.5	-0.8
PB09	IPOC Station P	0.90	258	⇑iP	Pn	15 02 20.0	-0.3
PB09				eS	Sn	15 02 35.5	-1.0
PB09				IAML		15 02 37.2	
	comp=N,28µm,0.6s						
PB09	IPOC Station P	0.90	258	eP		15 02 19.8	
PB09				eS		15 02 36.0	
PB09				IAML		15 02 37.6	
	comp=Z,23µm,0.8s						
LVC	Limon Verde	1.14	210	P	Pn	15 02 23.1	+0.1
	comp=Z,4µm,0.5s,baz=16,slow=7.8,SNR=4637						
LVC				S	Sn	15 02 40.6	-0.4
	comp=Z,4µm,0.3s,baz=220,slow=18,SNR=51						
LVC				LR	LR	15 02 47.5	
	comp=Z,687nm,21.0s,baz=36,slow=48						
LVC	Limon Verde	1.14	210	Pn	Pn	15 02 22.7	-0.2
LVC	Limon Verde	1.14	210	⇑iP	Pn	15 02 23.0	+0.1
LVC				eS	Sn	15 02 40.6	-0.4
LVC	Limon Verde	1.14	210	eP	Pn	15 02 22.9	0.0
LVC	Limon Verde	1.14	210	eP		15 02 23.0	
LVC				eS		15 02 40.5	
PB01	IPOC Station P	1.25	297		Pn	15 02 22.5	-1.3
PB01	IPOC Station P	1.25	297	⇑iP	Pn	15 02 22.8	-1.0
PB01				eS	Sn	15 02 40.9	-1.7
PB01				IAML		15 02 42.8	
	comp=E,34µm,0.3s						
PB01	IPOC Station P	1.25	297	eP		15 02 22.6	
PB01				eS		15 02 40.6	
PB01				IAML		15 02 44.1	
	comp=Z,10µm,0.2s						
PB03	IPOC Station P	1.42	252		Pn	15 02 23.7	-2.0
PB03	IPOC Station P	1.42	252	⇑iP	Pn	15 02 24.6	-1.1
PB03				eS	Sn	15 02 43.4	-2.7
PB03				IAML		15 02 45.3	
	comp=E,29µm,0.4s						
PB03	IPOC Station P	1.42	252	eP		15 02 24.5	
PB03				eS		15 02 43.7	
PB03				IAML		15 02 45.6	
	comp=Z,19µm,0.4s						
PB07	IPOC Station P	1.49	266		Pn	15 02 24.1	-2.4
PB07	IPOC Station P	1.49	266	⇑iP	Pn	15 02 25.3	-1.2
PB07				eS	Sn	15 02 44.7	-2.7
PB07				IAML		15 02 45.9	
	comp=N,48µm,0.5s						
PB07	IPOC Station P	1.49	266	eP		15 02 25.0	
PB07				eS		15 02 45.2	
PB07				IAML		15 02 47.8	
	comp=Z,23µm,0.6s						
PB02	IPOC Station P	1.52	281		Pn	15 02 25.0	-1.8
PB02	IPOC Station P	1.52	281	⇑iP	Pn	15 02 25.5	-1.3
PB02				eS	Sn	15 02 45.3	-2.7
PB02				IAML		15 02 47.7	
	comp=E,48µm,0.5s						
PB02	IPOC Station P	1.52	281	eP		15 02 25.5	
PB02				eS		15 02 45.7	
PB02				IAML		15 02 48.2	
	comp=Z,30µm,0.3s						
PB06	IPOC Station P	1.61	227		Pn	15 02 27.1	-0.8
PB06	IPOC Station P	1.61	227	⇑iP	Pn	15 02 27.2	-0.6
PB06				eS	Sn	15 02 48.3	-1.5
PB06	IPOC Station P	1.61	227	eP		15 02 27.0	
PB06				eS		15 02 48.7	
PB06				IAML		15 02 50.9	
	comp=Z,13µm,0.5s						
PB08	IPOC Station P	1.68	331		Pn	15 02 29.0	+0.1
PB08	IPOC Station P	1.68	331	⇑iP	Pn	15 02 29.2	+0.3
PB08				eS	Sn	15 02 51.6	-0.1
PB08				IAML		15 02 53.8	
	comp=N,22µm,0.3s						
PB08	IPOC Station P	1.68	331	eP		15 02 29.2	
PB08				eS		15 02 51.8	
PB08				IAML		15 02 55.8	
	comp=Z,11µm,0.9s						
PB04	IPOC Station P	1.86	247		Pn	15 02 29.2	-1.8
PB04	IPOC Station P	1.86	247	⇑iP	Pn	15 02 29.4	-1.5
PB04				eS	Sn	15 02 52.0	-3.3
PB04				IAML		15 02 57.3	
	comp=N,16µm,0.4s						
PB04	IPOC Station P	1.86	247	eP		15 02 29.6	
PB04				eS		15 02 52.8	
PB04				IAML		15 03 08.4	
	comp=Z,10µm,0.7s						
PB15	IPOC Station P	1.92	214	⇑iP	Pn	15 02 31.5	-0.2
PB15				eS	Sn	15 02 56.4	-0.3
TA01	Diego Aracena	2.05	300	Pn	Pn	15 02 31.1	-1.9
TA01	Diego Aracena	2.05	300	⇑iP	Pn	15 02 31.4	-1.7
TA01				eS	Sn	15 02 55.7	-3.5
GO01	Chusmiza	2.12	336		Pn	15 02 34.1	-0.3
GO01	Chusmiza	2.12	336	⇑iP	Pn	15 02 34.2	-0.1
GO01				eS	Sn	15 03 00.9	-0.5
GO01				IAML		15 03 04.7	
	comp=N,21µm,0.4s						
GO01	Chusmiza	2.12	336	eP		15 02 34.3	
GO01				eS		15 03 00.6	
TA02	Huaiquique	2.18	308		Pn	15 02 32.6	-2.1
TA02	Huaiquique	2.18	308	⇑iP	Pn	15 02 32.7	-2.0
TA02				eS	Sn	15 02 58.4	-3.7
PB11	IPOC Station P	2.25	325	Pn	Pn	15 02 34.4	-1.2
PB11	IPOC Station P	2.25	325	⇑iP	Pn	15 02 34.5	-1.2
PB11				eS	Sn	15 03 01.8	-2.1
PB11	IPOC Station P	2.25	325	eP		15 02 34.5	
PB11				eS		15 03 01.4	
PB11				IAML		15 03 03.9	
	comp=Z,17µm,0.4s						
YJA	Yavi	2.64	103	eP		15 02 44.5	
MNMC	Minye Minye	2.76	333		Pn	15 02 41.8	-0.6
MNMC	Minye Minye	2.76	333	⇑iP	Pn	15 02 41.6	-0.8
MNMC				eS	Sn	15 03 14.5	-1.3
MNMCX	Minye Minye	2.76	333	eP		15 02 41.7	
MNMCX				eS		15 03 14.8	
MNMCX				IAML		15 03 17.2	
	comp=Z,9µm,0.2s						
PB10	IPOC Station P	2.82	228	⇑iP	Pn	15 02 40.6	-2.2
PB10	IPOC Station P	2.82	228	eP		15 02 41.5	
PB10				eS		15 03 10.0	
HJA	Humahuaca	3.10	121	eP		15 02 50.0	
PB16	IPOC Station P	3.46	341		Pn	15 02 51.3	-0.6
PB16	IPOC Station P	3.46	341	⇑iP	Pn	15 02 51.6	-0.3
PB16				eS	Sn	15 03 26.7	-6.0
PB12	IPOC Station P	3.55	327	Pn	Pn	15 02 49.7	-2.9
PB12	IPOC Station P	3.55	327	i P	Pn	15 02 49.8	-2.9
PB12				eS	Sn	15 03 23.3	-11
PB14	IPOC Station P	3.57	213	Pn	Pn	15 02 51.2	-1.9
PB14	IPOC Station P	3.57	213	eP	Pn	15 02 52.8	-0.3
PB14				eS	Sn	15 03 23.2	-12
PB14				IAML		15 03 57.9	
	comp=E,1µm,0.3s						
GO02	Mina Guanaco	3.72	198	eP		15 02 54.3	
GO02				eS		15 03 29.7	
GO02	Mina Guanaco	3.73	198	Pn	Pn	15 02 53.9	-1.2
GO02	Mina Guanaco	3.73	198	⇓iP	Pn	15 02 54.4	-0.8
AP01	Chacalluta	3.76	329		Pn	15 02 52.6	-2.7
AP01	Chacalluta	3.76	329	eP	Pn	15 02 53.2	-2.1
AP01				eS	Sn	15 03 35.5	-3.5
SLA	San Lorenzo	4.01	141	eP		15 02 59.0	
PB18	Visviri	4.16	344		Pn	15 02 59.4	-1.8
PB18	Visviri	4.16	344	eP	Pn	15 03 03.9	+2.7
PB18				eS	Sn	15 03 41.0	-8.3
AC01	Pan de Azucar	4.98	205		Pn	15 03 08.7	-2.9
AC01	Pan de Azucar	4.98	205	eP	Pn	15 03 09.0	-2.6
AC01				eS	Sn	15 04 01.7	-6.5
AC01	Pan de Azucar	4.98	205	eP		15 03 08.0	
AC01				eS		15 04 02.7	
AC01				IAML		15 04 40.8	
	comp=Z,586nm,0.5s						
LPAZ	La Paz	5.30	2	P	Pn	15 03 19.3	+2.7
	comp=Z,57nm,0.5s,baz=191,slow=6.5,SNR=106						
LPAZ				S	Sn	15 04 14.9	-2.1
	comp=Z,84nm,0.6s,baz=147,slow=8.5,SNR=3.9						
LPAZ	La Paz	5.30	2	Pn	Pn	15 03 16.6	-0.1
GO03	Copiap	6.21	196	Pn	Pn	15 03 24.6	-3.7
AC04	Llanos de Chal	7.03	200	Pn	Pn	15 03 34.0	-5.2
AC05	El Transito	7.41	194	Pn	Pn	15 03 40.1	-4.4
LCO	Las Campanas	7.68	196	Pn	Pn	15 03 43.5	-4.8
LCO	Las Campanas	7.68	196	P	Pn	15 03 43.5	-4.8
GO04	Tololo Observa	8.81	194		Pn	15 03 58.5	-5.1
SIV	San Ignacio	8.83	52	P	Pn	15 04 02.0	-1.8
	comp=Z,93nm,0.6s,baz=239,slow=11,SNR=170						
SIV				S	Sn	15 05 35.6	-6.1
	comp=Z,71nm,0.8s,baz=303,slow=22,SNR=8.8						
SIV				LR	LR	15 08 00.8	
	comp=Z,357nm,21.0s,baz=241,slow=40						
VACA	Villa Angela C	9.14	132	eP	Pn	15 04 08.4	+0.6
CO03	El Pedregal	9.43	193		Pn	15 04 06.6	-5.2
CO02	Combarbal	9.85	194		Pn	15 04 12.1	-5.4
CFA	Coronel Fontan	9.95	180	P	Pn	15 04 15.0	-3.7
	comp=Z,9.5nm,0.3s,baz=351,slow=14,SNR=28						
CFA				S	Sn	15 06 00.5	-8.0
	comp=Z,33nm,0.5s,baz=183,slow=16,SNR=7.9						
CFA				LR	LR	15 08 56.2	
	comp=Z,398nm,20.6s,baz=352,slow=42						
PTLB	Pontes e Lacer	10.63	56		Pn	15 04 25.5	-2.5
PTLB	Pontes e Lacer	10.63	56	eP	Pn	15 04 25.9	-2.0
BDQN	Bodoquena, MS	10.84	86	eP	Pn	15 04 29.1	-1.7
CPUP	Villa Florida	11.06	117	P	Pn	15 04 33.0	-0.8
	comp=Z,18nm,0.9s,baz=298,slow=12,SNR=28						
CPUP				S	Sn	15 06 32.5	-3.1
	comp=Z,9.3nm,0.8s,baz=274,slow=1.7,SNR=4.7						
CPUP				LR	LR	15 08 42.4	
	comp=Z,298nm,21.0s,baz=280,slow=36						
CPUP	Villa Florida	11.06	117		Pn	15 04 32.2	-1.5
CPUP	Villa Florida	11.06	117	P	Pn	15 04 33.0	-0.8
CPUP	Villa Florida	11.06	117	eP	Pn	15 04 32.8	-1.0
VILB	Vilhena	11.57	43		Pn	15 04 38.1	-2.5
VILB	Vilhena	11.57	43	eP	Pn	15 04 39.7	-0.9
AQDB	Aquidauana	11.81	87		Pn	15 04 41.6	-2.1
AQDB	Aquidauana	11.81	87	eP	Pn	15 04 42.1	-1.6
MT02	Curacav	11.87	192		Pn	15 04 39.8	-4.6
ETMB	Extrema	11.90	10		Pn	15 04 42.0	-3.0
ETMB	Extrema	11.90	10	eP	Pn	15 04 42.4	-2.5
MECA	Mercedes	11.91	132	eP	Pn	15 04 45.2	+0.2
MT13	San Alfonso	12.21	188		Pn	15 04 43.2	-5.7
AMBA	Amambai (Brazi	12.39	99	eP	Pn	15 04 50.5	-0.7
NNA	Nana	12.59	318	P	Pn	15 04 53.7	-0.3
	comp=Z,6.6nm,0.3s,baz=99,slow=13,SNR=1.4						
NNA				LR	LR	15 09 07.2	
	comp=Z,142nm,20.8s,baz=127,slow=34						
RVDE	Rio Verde (Bra	12.79	81	eP	Pn	15 04 53.6	-3.0
AZCA	Azaras, Argent	12.89	122	eP	Pn	15 04 58.7	+0.9
BO01	Tunca	12.96	190		Pn	15 04 58.2	-0.4
SALV	Santo Antonio	13.21	67	eP	Pn	15 05 00.0	-2.0
ITQB	Itaqui	13.22	130	Pn	Pn	15 05 00.8	-1.2
ITQB	Itaqui	13.22	130	eP	Pn	15 05 01.8	-0.2
PP1B	Ponte de Pedra	13.26	75	eP	Pn	15 05 02.2	-0.4
BO02	Sierra Bellavi	13.31	189	P	Pn	15 05 02.2	-0.9
MCR1	Marechal Candi	13.43	105	eP	Pn	15 05 04.2	-0.6
SAML	Samuel	13.52	22	Pn	Pn	15 05 04.1	-1.9
SAML	Samuel	13.52	22	P	Pn	15 05 04.1	-1.9
SAML	Samuel	13.52	22	eP	Pn	15 05 03.4	-2.6
CRSM	Crissiumal (Br	14.22	117	eP	Pn	15 05 14.9	+0.1
CZSB	Cruzeiro do Su	14.45	342	P	Pn	15 05 15.5	-2.4
CZSB	Cruzeiro do Su	14.45	342	eP	Pn	15 05 16.1	-1.7
FRBT	Francisco Belt	14.60	110	eP	Pn	15 05 20.7	+1.0
RODS	Rosario do Sul	14.63	129	eP	Pn	15 05 20.0	0.0
H03N1	Juan Fernandez	15.07	216	P	Pn	15 05 23.4	-1.9
	baz=108,slow=14,SNR=11						
H03N1				T	T	15 20 11.8	
	baz=43,slow=74,SNR=13						
H03N2	Juan Fernandez	15.08	216	P	Pn	15 05 24.0	-1.3
	baz=108,slow=14,SNR=9.4						
H03N2				T	T	15 20 10.6	
	baz=43,slow=74,SNR=5.8						
H03N3	Juan Fernandez	15.09	216	P	Pn	15 05 23.9	-1.6
	baz=108,slow=14,SNR=12						
H03N3				T	T	15 20 11.8	
	baz=43,slow=74,SNR=4.7						
PTGB	Pitanga	15.24	105	eP	Pn	15 05 28.7	+0.9
H03S3	Juan Fernandez	15.36	215	P	Pn	15 05 27.4	-1.5
	baz=344,slow=28,SNR=8.8						
H03S1	Juan Fernandez	15.37	215	P	Pn	15 05 27.0	-2.0
	baz=344,slow=28,SNR=5.5						
H03S2	Juan Fernandez	15.37	215	P	Pn	15 05 27.9	-1.2
	baz=344,slow=28,SNR=6.7						
ALGR	Alto Alegre (B	15.55	120	eP	Pn	15 05 31.5	-0.1
ITAB	Concordia	15.74	114	P	Pn	15 05 33.5	-0.5
ITAB	Concordia	15.74	114	eP	Pn	15 05 34.5	+0.5
PCMB	Pacaembu	15.84	93	eP	Pn	15 05 35.8	+0.5
CPSB	Cacapava Do Su	15.95	126	eP	Pn	15 05 35.8	-0.8
PLTB	Pedras Altas	16.55	131	P	Pn	15 05 41.7	-2.2
ARAG	Araguaiana, MT	16.68	72	eP	Pn	15 05 46.1	+0.4
ITRB	Iturama	16.89	87	eP	Pn	15 05 48.7	+0.5
TRQA	Tornquist	17.27	163	P	P	15 05 47.5	-4.7
TRQA	Tornquist	17.27	163	P	P	15 05 47.5	-4.7
ATAH	Atahualpa	17.39	324	P	Pn	15 05 56.8	+2.1
	comp=Z,14nm,0.7s,baz=133,slow=8.8,SNR=8.0						
FRTB	Fartura	17.39	99	eP	P	15 05 54.0	+0.2
TBTG	Tabatinga, AM	17.40	355	eP	Pn	15 05 54.0	-0.4
CNLB	Canela	17.50	119	eP	P	15 05 54.5	-0.4
TIJ01	Guaruva-PR	18.07	106	eP	P	15 06 02.1	+0.9
GO06	Curarrehue	18.11	188	P	P	15 06 01.5	-0.1
TEFE	Tefe	18.35	12	eP	P	15 06 04.1	-0.2
BB19B	Bebedouro	18.42	92	eP	P	15 06 05.4	+0.4
SNDB	Serra Nova Dou	18.87	62	eP	P	15 06 09.8	-0.1

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NPGB  Novo Progresso   19.13  43  eP     P      15 06 11.1 -1.7
PLCA  Paso Flores      19.15 185   P     P      15 06 13.2 +0.3
      comp=Z,8.4nm,0.7s,baz=4.1,slow=14,SNR=27
PLCA                          LR     LR     15 15 07.0
      comp=Z,243nm,18.2s,baz=359,slow=41
PLCA  Paso Flores      19.15 185   P     P      15 06 12.7 -0.2
PLCA  Paso Flores      19.15 185  eP     P      15 06 13.3 +0.4
IPMB  Ipameri, GO      19.24  83  eP     P      15 06 13.8 -0.1
RCLB  Rio Claro- Sao   19.27  96  eP     P      15 06 14.0 -0.3
SPB   Sao Paulo        19.36 100   P     P      15 06 14.2 -1.0
SPB   Sao Paulo        19.36 100  eP     P      15 06 15.5 +0.3
PET01 Itanhaem-SP      19.54 102  eP     P      15 06 17.4 +0.3
LL04  Puerto Octay     19.55 189   P     P      15 06 16.4 -0.7
VAO   Valinhos         19.78  98  eP     P      15 06 19.4 -0.4
MACA  Manacapuru-AM    19.78  23   P     P      15 06 16.3 -3.5
MACA  Manacapuru-AM    19.78  23  eP     P      15 06 18.2 -1.6
BDFB  Brasilia         20.11  76   P     P      15 06 23.2 -0.3
      comp=Z,24nm,0.4s,baz=254,slow=10,SNR=38
      comp=Z,24nm,0.4s
BDFB  Brasilia         20.11  76   P     P      15 06 22.4 -1.0
BDFB  Brasilia         20.11  76  eP     P      15 06 23.1 -0.4
MCRA  Macar, Loja      20.54 325  eP     P      15 06 29.0 +0.9
PMNB  Patos De Minas   20.75  85  eP     P      15 06 29.5 -0.9
PARB  Paraibuna        21.02  99  eP     P      15 06 32.5 -0.6
ITTB  Itaituba         21.04  37  eP     P      15 06 31.9 -1.5
SGCB  S£o Gabriel d    21.40   3  eP     P      15 06 35.8 -1.4
PIAT  Ana Tenorio      22.68 333  eP     P      15 06 54.5 +3.6
VAS01 Vassouras-RJ     23.05  96  eP     P      15 06 53.0 -1.0
PRPB  Parauapebas      23.57  52  eP     P      15 06 57.4 -1.3
SMTB  Santa Maria do   23.62  61  eP     P      15 06 58.5 -0.7
JANB  Januaria         23.66  78  eP     P      15 06 58.3 -1.4
BONI  La Bonita        23.72 336  eP     P      15 07 03.0 +2.7
OTAV  Otavalo          23.88 334   P     P      15 07 01.7 -0.3
OTAV  Otavalo          23.88 334   P     P      15 07 01.7 -0.3
OTAV                          pmax   pmax
      comp=Z,17nm,0.9s
OTAV  Otavalo          23.88 334  eP     P      15 07 04.6 +2.6
CUSE  Cuicocha Este    23.92 334  eP     P      15 07 09.4 +7.1
MALB  Monte Alegre     23.93  37  eP     P      15 07 00.9 -1.1
FLF1  Flavio Alfaro-   23.95 330  eP     P      15 07 03.7 +1.5
DUB01 Friburgo-RJ      24.05  96  eP     P      15 07 03.1 -0.1
SDBA  SAO DESIDERIO    24.14  72  eP     P      15 07 02.8 -1.2
FLOC  Florencia        24.16 342  eP     P      15 07 05.4 +1.4
CMBC  Cumbal           24.28 336  eP     P      15 07 13.8 +8.2
GCUF  Volcan Galeras   24.37 338  eP     P      15 07 03.8 -2.7
GARC  Garzon, Huila    24.68 343  eP     P      15 07 09.8 +0.7
BOAV  Boa Vista        25.05  19   P     P      15 07 11.8 -0.4
BOAV  Boa Vista        25.05  19  eP     P      15 07 12.5 +0.3
BOAV  Boa Vista        25.05  19  eP     P      15 07 12.4 +0.3
BBAC  Balboa, Cauca    25.07 338  eP     P      15 07 12.1 -0.5
BETC  Betania          25.14 343  eP     P      15 07 11.7 -1.4
POPC  Popayan, Colom   25.37 340  eP     P      15 07 18.6 +3.2
SJMB  Sao Joao De Ma   25.60  88  eP     P      15 07 16.3 -0.9
ALF01 Guarapari-ES     25.73  93  eP     P      15 07 18.9 +0.6
PTGC  Puerto Gaitan,   25.93 351  eP     P      15 07 17.4 -2.7
PRAC  Prado            25.99 345  eP     P      15 07 22.8 +2.1
JAMC  Jamundi, Valle   26.01 341  eP     P      15 07 20.5 -0.6
VILC  Villavicencio,   26.11 348  eP     P      15 07 26.3 +4.5
MCPB  Macapa, AP       26.41  39  eP     P      15 07 23.7 -0.7
CHIC  Chingaza         26.62 348  eP     P      15 07 25.9 -0.8
YOTC  Yotoco, Valle    26.64 342  eP     P      15 07 26.6  0.0
ROSC  El Rosal         26.95 347  LR     LR     15 19 42.1
      comp=Z,339nm,19.9s,baz=186,slow=39
GUA01 Guaratinga, BA   27.36  84  eP     P      15 07 32.2 -0.7
TMAB  Tom-Au,PA,Br     27.43  48  eP     P      15 07 34.3 +0.8
GUY2C Guyana, Caldas   27.56 345  eP     P      15 07 36.6 +1.4
SPBC  San Pablo de B   27.69 348  eP     P      15 07 35.9 -0.1
CBOC  Ciudad Bolivar   28.34 344  eP     P      15 07 40.8 -1.0
BARC  Barichara        28.44 350  eP     P      15 07 41.2 -1.6
PTBC  PUERTO BERRIO,   28.63 347  eP     P      15 07 38.5 -5.7
PAMC  Pamplona, Colo   29.10 351  eP     P      15 07 48.0 -1.0
DBBC  Dabeiba          29.50 344  eP     P      15 07 53.2 +1.2
ZARC  Zaragoza, Cauc   29.64 347  eP     P      15 07 51.9 -1.2
ROSB  Rosrio           29.97  55  eP     P      15 07 56.3 +0.2
BAUV  El Baul          30.37   0   P     P      15 07 58.3 -1.3
BAUV                          IAmb   IAmb   15 08 29.6
      comp=Z,41nm,1.0s
SDV   Santo Domingo    30.40 355  LR     LR     15 21 47.6
      comp=Z,130nm,20.8s,baz=164,slow=39
SDV   Santo Domingo    30.40 355   P     P      15 07 57.9 -2.2
SDV   Santo Domingo    30.40 355  eP     P      15 07 58.7 -1.4
MDP   Montagnes des    30.67  32  LR     LR     15 20 57.1
      comp=Z,111nm,18.9s,baz=236,slow=37
MPGF  Montagnes des    30.67  32   P     P      15 08 01.2 -1.0
EFI   East Falkland    31.04 168⥣eP     P      15 08 04.5 -0.6
EFI                           pmax   pmax
      comp=Z,92nm,1.5s
SJCC  San Jacinto, C   32.04 347  eP     P      15 08 11.6 -2.7
RCBR  Riachuelo        35.05  68  eP     P      15 08 40.6 +0.1
JTS   Las Juntas de    35.68 331  LR     LR     15 21 56.9
      comp=Z,106nm,20.4s,baz=86,slow=34
JTS   Las Juntas de    35.68 331 deP     P      15 08 47.2 +1.4
JTS                           pmax   pmax
      comp=Z,23nm,1.5s
JTS   Las Juntas de    35.68 331  eP     P      15 08 47.1 +1.4
MLPR  Magueyes Islan   39.36   2   P     P      15 09 11.0 -5.7
MLPR                          IAmb   IAmb   15 09 49.4
      comp=Z,29nm,0.8s
HOPE  Hope Point       40.50 152   P     P      15 09 27.2 +1.4
HOPE  Hope Point       40.50 152   P     P      15 09 27.2 +1.4
HOPE                          pmax   pmax
      comp=Z,75nm,0.9s
HOPE  Hope Point       40.50 152   P     P      15 09 27.6 +1.8
HOPE                          pP     pP     15 09 57.5 +3.0
PETF  Flores           43.74 329  IAmb   IAmb   15 09 54.0
      comp=Z,21nm,0.7s
TEIG  Tepich           45.95 333   P     P      15 10 09.0 -0.9
TEIG                          IAmb   IAmb   15 10 10.0
      comp=Z,33nm,1.0s
TEIG  Tepich           45.95 333   P     P      15 10 08.9 -1.0
TEIG                          pP     pP     15 10 38.7 -0.4
TEIG                          sP     sP     15 10 52.5 -0.7
CMIG  Matias Romero    46.46 324  LR     LR     15 27 49.4
      comp=Z,74nm,19.2s,baz=182,slow=33
TLIG  Tlapa            48.95 320  IAmb   IAmb   15 10 35.3
      comp=Z,36nm,0.8s
DWPF  Disney Wildern   51.04 345   P     P      15 10 48.8  0.0
      baz=164
DWPF  Disney Wildern   51.04 345   P     P      15 10 49.3 +0.5
      baz=164
DWPF  Disney Wildern   51.04 345   P     P      15 10 48.7 -0.1
DWPF                          pP     pP     15 11 19.1 +0.5
656A  Willston         52.52 344   P     P      15 11 00.2 +0.5
      baz=164
456A  Hilliard         53.69 345   P     P      15 11 08.9 +0.6
      baz=164
553A  Crawfordville    53.80 343   P     P      15 11 09.8 +0.7
      baz=162
255A  Hazlehurst       54.95 345   P     P      15 11 17.4  0.0
      baz=164
BRAL  Brewton          55.49 340   P     P      15 11 20.8 -0.5
      baz=159
BRAL  Brewton          55.49 340   P     P      15 11 21.3  0.0
      baz=159
NHSC  New Hope         55.59 348   P     P      15 11 22.0 +0.1
      baz=167
NHSC  New Hope         55.59 348   P     P      15 11 22.8 +0.9
      baz=167
250A  Grady            56.00 342   P     P      15 11 24.2 -0.8
      baz=160
HAW   Hawthorne Fire   56.13 347   P     P      15 11 26.0 +0.1
      baz=165,SNR=5.6
152A  Waverly Hall     56.22 343   P     P      15 11 25.0 -1.5
152A                          IAmb   IAmb   15 11 26.4
      comp=Z,26nm,1.2s
152A  Waverly Hall     56.22 343   P     P      15 11 25.6 -0.9
      baz=162,SNR=6.2
JSC   Jenkinsville     56.94 347   P     P      15 11 31.5 -0.1
      baz=166
HODGE Hodges           57.11 346   P     P      15 11 32.6 -0.1
      baz=165
BIRD  Birdtown, Kers   57.13 348  IAmb   IAmb   15 11 33.8
      comp=Z,29nm,0.9s
BIRD  Birdtown, Kers   57.13 348   P     P      15 11 32.9  0.0
      baz=167,SNR=7.3
Y52A  Lilburn          57.18 344   P     P      15 11 31.7 -1.6
Y52A                          IAmb   IAmb   15 11 33.3
      comp=Z,12nm,0.8s
Y52A  Lilburn          57.18 344   P     P      15 11 32.7 -0.6
      baz=163
Y52A                           P     P      15 11 32.7 -0.6
      baz=163
LRAL  Lakeview Retre   57.21 341   P     P      15 11 32.1 -1.4
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LRAL                          IAmb   IAmb   15 11 33.3
      comp=Z,17nm,0.9s
LRAL  Lakeview Retre   57.21 341   P     P      15 11 32.4 -1.1
      baz=160
LRAL  Lakeview Retre   57.21 341   P     P      15 11 32.7 -0.7
      baz=160
342B  Flagon Creek P   57.51 336   P     P      15 11 36.2 +0.6
      baz=154,SNR=5.2
W57A  Gilead           57.54 349   P     P      15 11 35.5 -0.3
      baz=167
W57A                           P     P      15 11 35.5 -0.3
      baz=167
PAULI Pauline          57.58 347  IAmb   IAmb   15 11 36.3
      comp=Z,12nm,0.8s
PAULI Pauline          57.58 347   P     P      15 11 36.2 +0.2
      baz=165
Z47A  Carrollton       57.69 340   P     P      15 11 36.0 -0.8
      baz=158
HKT   Hockley          57.72 332   P     P      15 11 36.4 -0.6
HKT                           IAmb   IAmb   15 11 38.3
      comp=Z,18nm,1.1s
HKT   Hockley          57.72 332diP     P      15 11 37.0  0.0
HKT                           pmax   pmax
      comp=Z,20nm,1.2s
HKT   Hockley          57.72 332   P     P      15 11 37.0  0.0
      baz=150
KMSC  Kings Mountain   57.79 347  IAmb   IAmb   15 11 37.8
      comp=Z,18nm,1.0s
KMSC  Kings Mountain   57.79 347   P     P      15 11 37.4 -0.1
      baz=166
Y49A  Blount Mountai   57.80 342  IAmb   IAmb   15 11 37.4
      comp=Z,21nm,1.1s
Y49A  Blount Mountai   57.80 342   P     P      15 11 36.9 -0.8
      baz=160,SNR=5.1
BG3   Lake Jocassee    57.99 346  IAmb   IAmb   15 11 39.5
      comp=Z,11nm,0.8s
CASEE Lake Jocassee    57.99 346   P     P      15 11 38.7 -0.2
      baz=164
V58A  Windy Hill, Pi   58.01 350   P     P      15 11 39.1  0.0
      baz=168
V58A                           P     P      15 11 39.1  0.0
      baz=168
833A  Chaparral WMA,   58.02 328   P     P      15 11 39.2 -0.1
      baz=146
833A  Chaparral WMA,   58.02 328   P     P      15 11 39.5 +0.1
      baz=146,SNR=10
X51A  Calhoun          58.05 344   P     P      15 11 38.8 -0.5
      baz=162,SNR=6.8
X51A                           P     P      15 11 38.8 -0.5
      baz=162,SNR=6.8
FPAL  Fort Paine       58.23 343  IAmb   IAmb   15 11 40.5
      comp=Z,20nm,1.2s
W52A  Murphy           58.32 345  IAmb   IAmb   15 11 41.7
      comp=Z,17nm,1.0s
W52A  Murphy           58.32 345   P     P      15 11 41.1 -0.2
      baz=163
V55A  Taylorsville     58.45 348   P     P      15 11 42.7 +0.5
      baz=166,SNR=10
V55A                           P     P      15 11 42.7 +0.5
      baz=166,SNR=10
X48A  Hartselle        58.54 342   P     P      15 11 41.1 -1.7
X48A                          pP     pP     15 12 12.2 -1.0
X48A  Hartselle        58.54 342   P     P      15 11 42.0 -0.8
      baz=160,SNR=11
BELA  Belgrano 2       58.55 172   P     P      15 11 43.1 +0.7
V53A  Saluda           58.61 346   P     P      15 11 42.7 -0.6
V53A  Saluda           58.61 346   P     P      15 11 43.0 -0.3
      baz=164
V53A                           P     P      15 11 43.0 -0.3
      baz=164
W50A  Signal Mountai   58.77 344   P     P      15 11 43.8 -0.6
      baz=162,SNR=10
Y45A  Yeager Farm, C   58.77 339   P     P      15 11 43.3 -1.1
      baz=157
U56A  King             58.77 349   P     P      15 11 45.1 +0.7
      baz=167
U56A                           P     P      15 11 45.1 +0.7
      baz=167
NATX  Nacogdoches      58.78 334   P     P      15 11 44.8 +0.3
      baz=151
NATX  Nacogdoches      58.78 334   P     P      15 11 45.0 +0.5
      baz=151
CPCT  Cooper Cave      58.80 345  IAmb   IAmb   15 11 44.8
      comp=Z,21nm,1.0s
TKL   Tuckaleechee C   58.82 345  LR     LR     15 40 28.3
      comp=Z,57nm,19.1s,baz=170,slow=39
TKL   Tuckaleechee C   58.82 345   P     P      15 11 43.0 -1.7
TKL                           IAmb   IAmb   15 11 44.8
      comp=Z,25nm,0.9s
TKL   Tuckaleechee C   58.82 345   P     P      15 11 43.0 -1.7
TKL                           pmax   pmax
      comp=Z,25nm,0.9s
TKL   Tuckaleechee C   58.82 345   P     P      15 11 44.0 -0.7
      baz=163,SNR=11
T59A  Double "B" Far   58.92 351   P     P      15 11 45.0 -0.4
      baz=170
T59A                           P     P      15 11 45.0 -0.4
      baz=170
SWET  Sewanee          58.95 343         pP     15 12 15.2 -0.9
V52A  Sevierville      58.96 346         pP     15 12 15.3 -0.8
V52A  Sevierville      58.96 346   P     P      15 11 45.5 -0.1
      baz=164,SNR=11
V51A  Loudon           59.10 345  IAmb   IAmb   15 11 46.6
      comp=Z,14nm,0.8s
V51A  Loudon           59.10 345   P     P      15 11 45.7 -0.9
      baz=163,SNR=5.3
SHEL  Horse Pasture    59.15  96   P     P      15 11 48.3 +0.8
SHEL  Horse Pasture    59.15  96   P     P      15 11 48.3 +0.8
SHEL                          pmax   pmax
      comp=Z,156nm,0.8s
SHEL  Horse Pasture    59.15  96   P     P      15 11 48.9 +1.4
435B  Jarrell          59.21 331   P     P      15 11 46.0 -1.4
      baz=148
435B  Jarrell          59.21 331   P     P      15 11 47.6 +0.1
      baz=148
T57A  Hurt             59.21 350   P     P      15 11 47.5 +0.1
      baz=168
T57A                           P     P      15 11 47.5 +0.1
      baz=168
U54A  Nelsons Funny    59.22 347   P     P      15 11 47.4 -0.1
      baz=166,SNR=10
U54A                           P     P      15 11 47.4 -0.1
      baz=166,SNR=10
OXF   Oxford           59.32 340   P     P      15 11 46.4 -1.8
      baz=157
OXF   Oxford           59.32 340   P     P      15 11 47.0 -1.2
      baz=157
PLAL  Pickwick Lake    59.34 341         pP     15 12 17.2 -1.6
Z41A  Richland Creek   59.37 336   P     P      15 11 49.3 +0.8
      baz=154
Z41A                           P     P      15 11 49.3 +0.8
      baz=154
237A  Washetta, Mont   59.47 333   P     P      15 11 50.1 +0.9
      baz=150
TZTN  Tazewell         59.62 346   P     P      15 11 49.4 -0.7
      baz=164
TZTN  Tazewell         59.62 346   P     P      15 11 49.5 -0.7
      baz=164
BLA   Blacksburg       59.62 349   P     P      15 11 50.2  0.0
      baz=167
BLA   Blacksburg       59.62 349   P     P      15 11 50.1 -0.1
      baz=167
V48A  Smith Brothers   59.69 343   P     P      15 11 49.7 -0.9
      baz=160,SNR=13
VNA3  Neumayer Olymp   59.78 161   P     P      15 11 51.8 +0.9
W45A  Hickory Valley   59.84 340   P     P      15 11 50.4 -1.3
      baz=158
CLTN  Cedars of Leba   59.88 343         pP     15 12 21.8 -0.8
VNA1  Neumayer--Stat   59.98 161   P     P      15 11 51.8 -0.4
JCT   Junction City    60.00 329   P     P      15 11 51.9 -1.1
JCT   Junction City    60.00 329   P     P      15 11 51.9 -1.1
JCT                           pmax   pmax
      comp=Z,32nm,0.8s
JCT   Junction City    60.00 329   P     P      15 11 52.4 -0.6
      baz=146
JCT   Junction City    60.00 329   P     P      15 11 52.6 -0.4
      baz=146,SNR=14
U49A  Red Boiling Sp   60.13 344  IAmb   IAmb   15 11 53.0
      comp=Z,14nm,0.7s
U49A  Red Boiling Sp   60.13 344   P     P      15 11 52.7 -0.9
      baz=162,SNR=5.5
WHTX  Lake Whitney,    60.18 331   P     P      15 11 53.8 -0.2
      baz=149,SNR=5.2
WHTX  Lake Whitney,    60.18 331   P     P      15 11 54.2 +0.1
      baz=149,SNR=5.2
Z38A  Mt. Pleasant     60.22 334   P     P      15 11 54.6 +0.2
      baz=152
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HPIG                   60.32 321  IAmb   IAmb   15 11 56.7
      comp=Z,28nm,1.2s
WVT   Waverly          60.34 342   P     P      15 11 53.6 -1.5
WVT                           pP     pP     15 12 24.6 -1.1
WVT                           sP     PcP    15 12 39.3 +0.3
VNA2  Neumayer--Watz   60.35 161   P     P      15 11 55.6 +0.8
      baz=298,slow=3.0
S54A  Dingess, Beckl   60.36 348   P     P      15 11 54.9 -0.4
      baz=166,SNR=7.6
S54A                           P     P      15 11 54.9 -0.4
      baz=166,SNR=7.6
T50A  Nancy            60.38 345  IAmb   IAmb   15 11 55.1
      comp=Z,18nm,0.8s
T50A  Nancy            60.38 345   P     P      15 11 54.5 -0.8
      baz=162
T50A                           P     P      15 11 54.5 -0.8
      baz=162
UALR  University of    60.56 337  IAmb   IAmb   15 11 56.7
      comp=Z,34nm,1.1s
SLBS  Sierra La Lagu   60.59 316   P     P      15 11 58.1 +1.0
SLBS                          pP     pP     15 12 28.4 +0.7
R55A  Marlinton        60.61 349   P     P      15 11 57.4 +0.4
      baz=168,SNR=5.6
R55A                           P     P      15 11 57.4 +0.4
      baz=168,SNR=5.6
S51A  Beattyville      60.67 346   P     P      15 11 56.5 -0.8
      baz=164
S51A                           P     P      15 11 56.5 -0.8
      baz=164
MIAR  Mount Ida        60.81 336  IAmb   IAmb   15 11 58.6
      comp=Z,26nm,0.8s
MIAR                                 pP     15 12 26.9 -2.0
MIAR  Mount Ida        60.81 336   P     P      15 11 57.3 -1.0
      baz=153,SNR=17
MIAR  Mount Ida        60.81 336   P     P      15 11 57.9 -0.5
      baz=153,SNR=17
T47A  Sharon Grove     60.93 343   P     P      15 11 58.1 -1.0
      baz=160,SNR=9.3
R53A  Hurricane        60.99 348  IAmb   IAmb   15 11 59.8
      comp=Z,18nm,0.9s
R53A  Hurricane        60.99 348   P     P      15 11 59.2 -0.3
      baz=166
R53A                           P     P      15 11 59.2 -0.3
      baz=166
WHAR  Wooly Hollow     61.00 338   P     P      15 11 58.4 -1.2
WHAR                          IAmb   IAmb   15 11 59.7
      comp=Z,16nm,0.9s
TX31  Lajitas Ar. Si   61.05 325  IAmb   IAmb   15 12 00.5
      comp=Z,16nm,0.8s
TX31  Lajitas Ar. Si   61.05 325   P     P      15 12 00.1 -0.2
      baz=142,SNR=15
TXAR  Lajitas Array    61.05 325   P     P      15 12 00.0 -0.2
      comp=Z,4.1nm,0.7s,baz=150,slow=8.9,SNR=58
TXAR                          pP     pP     15 12 31.1 +0.2
      comp=Z,1.8nm,0.7s,baz=142,slow=6.3,SNR=4.6
      comp=Z,4.1nm,0.7s
Q56A  Snyder Ridge,    61.20 350   P     P      15 12 01.5 +0.6
      baz=169
Q56A                           P     P      15 12 01.5 +0.6
      baz=169
Z35A  Perchaven, San   61.23 332   P     P      15 12 01.0 -0.2
      baz=149
LCAR  Lake Charles     61.32 339  IAmb   IAmb   15 12 01.5
      comp=Z,19nm,1.0s
LCAR  Lake Charles     61.32 339   P     P      15 12 00.5 -1.2
      baz=156,SNR=9.2
T45B  Paducah          61.40 342   P     P      15 12 01.5 -0.7
      baz=159
Q54A  Coxs Mills       61.42 349  IAmb   IAmb   15 12 36.5
      comp=Z,51nm,1.4s
Q54A  Coxs Mills       61.42 349   P     P      15 12 02.0 -0.3
      baz=167,SNR=7.0
Q54A                           P     P      15 12 02.0 -0.3
      baz=167,SNR=7.0
R50A  Paris            61.46 346  IAmb   IAmb   15 12 34.0
      comp=Z,52nm,1.7s
R50A  Paris            61.46 346   P     P      15 12 01.5 -1.1
      baz=163
R50A                           P     P      15 12 01.5 -1.1
      baz=163
P57A  Homestead Farm   61.46 351   P     P      15 12 03.8 +1.2
      baz=170
P57A                           P     P      15 12 03.8 +1.2
      baz=170
FCAR  Ozark Folk Cen   61.49 338  IAmb   IAmb   15 12 02.6
      comp=Z,17nm,0.9s
X37A  Clayton          61.54 335  IAmb   IAmb   15 12 04.2
      comp=Z,25nm,0.8s
X37A  Clayton          61.54 335   P     P      15 12 03.1 -0.1
      baz=152,SNR=9.3
R49A  Shelbyville      61.66 345   P     P      15 12 02.9 -1.1
      baz=162
R49A                           P     P      15 12 02.9 -1.1
      baz=162
Q52A  Bidwell          61.67 348   P     P      15 12 03.0 -1.0
      baz=166
Q52A                           P     P      15 12 03.0 -1.0
      baz=166
ABTX  Abilene, Hawle   61.70 330   P     P      15 12 03.5 -0.9
      baz=147,SNR=5.6
ABTX  Abilene, Hawle   61.70 330   P     P      15 12 04.4  0.0
      baz=147,SNR=5.6
PBMO  Poplar Bluff     61.73 340   P     P      15 12 03.3 -1.1
      baz=157
LOOK  Love County      61.77 333  IAmb   IAmb   15 12 05.5
      comp=Z,32nm,0.9s
WCI   Wyandotte Cave   61.88 344   P     P      15 12 03.4 -2.1
WCI   Wyandotte Cave   61.88 344   P     P      15 12 03.4 -2.1
WCI                           pmax   pmax
      comp=Z,26nm,0.6s
WCI   Wyandotte Cave   61.88 344   P     P      15 12 03.9 -1.6
      baz=161
WCI   Wyandotte Cave   61.88 344   P     P      15 12 04.1 -1.4
      baz=161
WCI   Wyandotte Cave   61.88 344   P     P      15 12 04.1 -1.4
WCI                           pP     pP     15 12 35.4 -0.8
MCWV  Mont Chateau     61.91 350   P     P      15 12 05.7 +0.1
      baz=168
MCWV  Mont Chateau     61.91 350   P     P      15 12 06.2 +0.6
      baz=168
SNAA  Sanae            61.98 161   P     P      15 12 06.6 +0.8
SNAA  Sanae            61.98 161   P     P      15 12 05.8  0.0
SNAA                          IAmb   IAmb   15 12 07.5
      comp=Z,22nm,0.8s
SNAA  Sanae            61.98 161   P     P      15 12 05.8  0.0
SNAA                          pmax   pmax
      comp=Z,22nm,0.8s
P53A  Whipple          62.01 349  IAmb   IAmb   15 12 40.1
      comp=Z,32nm,0.9s
P53A  Whipple          62.01 349   P     P      15 12 06.5 +0.3
      baz=166,SNR=7.1
P53A                           P     P      15 12 06.5 +0.3
      baz=166,SNR=7.1
WTFS  Witchita Falls   62.13 332   P     P      15 12 05.5 -1.7
WTFS                          IAmb   IAmb   15 12 07.2
      comp=Z,34nm,0.6s
U40A  Yellville        62.16 338   P     P      15 12 06.6 -0.8
      baz=154,SNR=11
U40A                           P     P      15 12 06.6 -0.8
      baz=154,SNR=11
S44A  Carbondale       62.21 341   P     P      15 12 06.8 -0.9
      baz=158,SNR=5.7
BBTS  Babate           62.27  59  LR     LR     15 40 52.6
      comp=Z,56nm,18.1s,baz=225,slow=37
P52A  Corning          62.29 348   P     P      15 12 07.1 -1.1
      baz=166
HHAR  Hobbs            62.48 337  IAmb   IAmb   15 12 09.8
      comp=Z,20nm,0.9s
SSPA  Standing Stone   62.57 352   P     P      15 12 10.1 +0.1
      baz=170
W35A  Tecumseh         62.64 334  IAmb   IAmb   15 12 10.9
      comp=Z,14nm,0.6s
ODSA  Odessa           62.69 327  IAmb   IAmb   15 12 11.2
      comp=Z,34nm,1.3s
O52A  Adamsville       62.70 348   P     P      15 12 10.0 -0.9
      baz=166
O52A                           P     P      15 12 10.0 -0.9
      baz=166
O53A  New Philadelph   62.72 349   P     P      15 12 10.2 -0.8
      baz=167
P49A  Miami Univ. Ec   62.74 346  IAmb   IAmb   15 12 42.0
      comp=Z,20nm,0.7s
P49A  Miami Univ. Ec   62.74 346   P     P      15 12 10.0 -1.1
      baz=163
P49A  Miami Univ. Ec   62.74 346   P     P      15 12 09.8 -1.4
      baz=163
RLO   Rose Lookout     62.79 336  IAmb   IAmb   15 12 11.6
      comp=Z,22nm,0.7s
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U38A	**Gravette**	**62.79**	**336**	IAmb	IAmb	15 12 11.7	
	comp=Z,54nm,1.9s						
U38A	**Gravette**	**62.79**	**336**	P	**P**	**15 12 10.7**	**-0.9**
	baz=153						
FVM	**French Village**	**62.83**	**340**	P	**P**	**15 12 10.8**	**-1.0**
	baz=157,SNR=17						
P48A	**Milroy**	**62.84**	**345**	IAmb	IAmb	15 12 42.4	
	comp=Z,15nm,0.7s						
P48A	**Milroy**	**62.84**	**345**	P	**P**	**15 12 10.4**	**-1.4**
	baz=162						
P48A				P	**P**	**15 12 10.4**	**-1.4**
	baz=162						
TUL1	**Leonard**	**62.86**	**335**	P	**P**	**15 12 11.4**	**-0.6**
	baz=151						
POST	**Post**	**62.95**	**329**	IAmb	IAmb	15 12 14.0	
	comp=Z,25nm,0.9s						
ACSO	**Alum Creek Sta**	**63.04**	**347**	IAmb	IAmb	15 12 46.3	
	comp=Z,29nm,0.8s						
ACSO	**Alum Creek Sta**	**63.04**	**347**	P	**P**	**15 12 12.4**	**-0.7**
	baz=165,SNR=5.1						
WMOK	**Wichita Mounta**	**63.09**	**332**	P	**P**	**15 12 12.4**	**-1.2**
WMOK				IAmb	IAmb	15 12 13.8	
	comp=Z,29nm,1.8s						
WMOK	**Wichita Mounta**	**63.09**	**332**	P	**P**	**15 12 12.4**	**-1.2**
WMOK				pmax	pmax		
	comp=Z,29nm,1.8s						
WMOK	**Wichita Mounta**	**63.09**	**332**	P	**P**	**15 12 12.3**	**-1.2**
	baz=148						
WMOK	**Wichita Mounta**	**63.09**	**332**	P	**P**	**15 12 12.7**	**-0.9**
	baz=148,SNR=5.0						
CCM	**Cathedral Cave**	**63.16**	**340**	P	**P**	**15 12 12.3**	**-1.6**
CCM				IAmb	IAmb	15 12 13.9	
	comp=Z,27nm,0.9s						
CCM	**Cathedral Cave**	**63.16**	**340**	P	**P**	**15 12 12.3**	**-1.6**
CCM				pmax	pmax		
	comp=Z,27nm,1.0s						
CCM	**Cathedral Cave**	**63.16**	**340**	P	**P**	**15 12 12.9**	**-1.0**
	baz=156						
CCM	**Cathedral Cave**	**63.16**	**340**	P	**P**	**15 12 13.1**	**-0.9**
	baz=156,SNR=13						
CCM	**Cathedral Cave**	**63.16**	**340**	P	**P**	**15 12 12.9**	**-1.0**
CCM				pP	**pP**	**15 12 44.1**	**-0.7**
N53A	**Lisbon**	**63.19**	**349**	P	**P**	**15 12 13.7**	**-0.4**
	baz=167						
N53A				P	**P**	**15 12 13.7**	**-0.4**
	baz=167						
Q44A	**Meyer Farm, Va**	**63.26**	**342**	IAmb	IAmb	15 12 45.2	
	comp=Z,24nm,0.7s						
Q44A	**Meyer Farm, Va**	**63.26**	**342**	P	**P**	**15 12 13.2**	**-1.4**
	baz=159						
O49A	**Covington**	**63.28**	**346**	P	**P**	**15 12 13.8**	**-0.9**
	baz=164						
O49A				P	**P**	**15 12 13.8**	**-0.9**
	baz=164						
M55A	**Ridgway**	**63.51**	**351**	P	**P**	**15 12 15.9**	**-0.4**
	baz=169						
M55A				P	**P**	**15 12 15.9**	**-0.4**
	baz=169						
S39A	**Bolivar**	**63.52**	**338**	IAmb	IAmb	15 12 16.5	
	comp=Z,33nm,0.8s						
S39A	**Bolivar**	**63.52**	**338**	P	**P**	**15 12 15.8**	**-0.6**
	baz=154,SNR=25						
O48B	**Farmland**	**63.53**	**346**	P	**P**	**15 12 15.0**	**-1.4**
	baz=163						
O48B	**Farmland**	**63.53**	**346**	P	**P**	**15 12 15.2**	**-1.1**
	baz=163						
GDL2	**Guadalupe Moun**	**63.68**	**326**	pP	pP	15 12 46.6	-2.0
TROLL	**Troll, Antarti**	**63.70**	**161**	P	**P**	**15 12 18.3**	**+1.0**
R40A	**Maddies Statio**	**63.70**	**339**	IAmb	IAmb	15 12 49.4	
	comp=Z,20nm,0.8s						
R40A	**Maddies Statio**	**63.70**	**339**	P	**P**	**15 12 16.7**	**-0.9**
	baz=155,SNR=11						
OK048	**Pawnee Station**	**63.76**	**334**		pP	15 12 47.9	-1.0
M53A	**WI Miller and**	**63.78**	**350**	P	**P**	**15 12 17.4**	**-0.6**
	baz=167						
L59A	**Walton**	**63.79**	**354**	P	**P**	**15 12 19.0**	**+0.9**
	baz=173						
L59A				P	**P**	**15 12 19.0**	**+0.9**
	baz=173						
MNTX	**Cornudas Mount**	**63.82**	**325**	P	**P**	**15 12 17.6**	**-0.9**
	baz=142,SNR=22						
BINY	**Binghamton**	**63.89**	**354**	P	**P**	**15 12 19.8**	**+1.1**
	baz=172						
ALLY	**Alegheny Colle**	**63.90**	**350**	P	**P**	**15 12 18.6**	**-0.1**
	baz=168						
N49A	**Columbus Grove**	**63.95**	**347**	P	**P**	**15 12 18.2**	**-0.9**
	baz=164,SNR=6.7						
N49A				P	**P**	**15 12 18.2**	**-0.9**
	baz=164,SNR=6.7						
M52A	**Chesterland**	**63.99**	**349**	P	**P**	**15 12 19.0**	**-0.3**
	baz=167						
M52A				P	**P**	**15 12 19.0**	**-0.3**
	baz=167						
T35A	**Sooner Cattle**	**64.02**	**335**	IAmb	IAmb	15 12 52.1	
	comp=Z,58nm,1.5s						
T35B	**Sooner Cattle**	**64.02**	**335**	P	**P**	**15 12 19.7**	**0.0**
	baz=151						
SFIN	**Lafayette**	**64.12**	**344**	P	**P**	**15 12 18.2**	**-2.0**
	baz=161						
SFIN	**Lafayette**	**64.12**	**344**	P	**P**	**15 12 18.6**	**-1.5**
	baz=161						
HCNY	**Howe Caverns**	**64.24**	**355**	P	**P**	**15 12 21.9**	**+1.0**
	baz=174						
N47A	**Urbana**	**64.25**	**345**	P	**P**	**15 12 19.7**	**-1.4**
	baz=162						
N47A				P	**P**	**15 12 19.7**	**-1.4**
	baz=162						
MSTX	**Muleshoe**	**64.29**	**329**	P	**P**	**15 12 20.6**	**-1.0**
	baz=144,SNR=11						
MSTX	**Muleshoe**	**64.29**	**329**	P	**P**	**15 12 21.1**	**-0.5**
	baz=144,SNR=11						
ERPA	**Erie**	**64.33**	**350**	P	**P**	**15 12 21.3**	**-0.3**
	baz=168						
ERPA	**Erie**	**64.33**	**350**	P	**P**	**15 12 21.4**	**-0.1**
	baz=168						
AMTX	**Amarillo**	**64.52**	**330**	IAmb	IAmb	15 12 24.8	
	comp=Z,12nm,0.6s						
AMTX	**Amarillo**	**64.52**	**330**	P	**P**	**15 12 22.0**	**-1.0**
	baz=146						
AMTX	**Amarillo**	**64.52**	**330**	P	**P**	**15 12 22.3**	**-0.8**
	baz=146,SNR=6.1						
U32A	**Winter Ranch,**	**64.58**	**333**	P	**P**	**15 12 23.4**	**+0.1**
	baz=149						
P40A	**Paris**	**64.76**	**340**	P	**P**	**15 12 23.6**	**-0.8**
	baz=156,SNR=6.3						
FFD	**Franklin Falls**	**64.84**	**357**	P	**P**	**15 12 26.7**	**+2.0**
	baz=177						
L48A	**N Adams**	**64.98**	**347**	P	**P**	**15 12 24.6**	**-1.2**
	baz=164						
L48A				P	**P**	**15 12 24.6**	**-1.2**
	baz=164						
J59A	**Piesco**	**65.01**	**355**	P	**P**	**15 12 26.3**	**+0.3**
	baz=174						
J59A				P	**P**	**15 12 26.3**	**+0.3**
	baz=174						
J56A	**Wolcott**	**65.05**	**353**	P	**P**	**15 12 25.5**	**-0.6**
	baz=171						
J56A				P	**P**	**15 12 25.5**	**-0.6**
	baz=171						
P38A	**Dawn**	**65.33**	**339**	P	**P**	**15 12 27.4**	**-0.7**
	baz=154,SNR=5.6						
K50A	**Casco**	**65.42**	**348**	P	**P**	**15 12 27.8**	**-0.7**
	baz=166						
K50A				P	**P**	**15 12 27.8**	**-0.7**
	baz=166						
121A	**Cookes Peak, D**	**65.76**	**324**	IAmb	IAmb	15 12 33.3	
	comp=Z,45nm,1.4s						
121A	**Cookes Peak, D**	**65.76**	**324**	P	**P**	**15 12 31.9**	**+0.6**
	baz=140,SNR=13						
121A	**Cookes Peak, D**	**65.76**	**324**	P	**P**	**15 12 32.3**	**+1.1**
	baz=140,SNR=13						
R32A	**Long Quarter,**	**66.20**	**334**	P	**P**	**15 12 33.6**	**-0.1**
	baz=149						
Y22A	**Socorro**	**66.39**	**325**	P	**P**	**15 12 36.0**	**+0.7**
	baz=141						
K43A	**Burlington**	**66.62**	**344**	P	**P**	**15 12 35.0**	**-1.2**
	baz=160						
SADO	**Sadowa**	**66.80**	**352**	LR	LR	15 43 09.8	
	comp=Z,46nm,21.6s,baz=127,slow=37						
L40A	**Anamosa**	**66.82**	**342**	P	**P**	**15 12 37.0**	**-0.5**
	baz=157						
ANMO	**Albuquerque**	**66.91**	**327**	P	**P**	**15 12 37.5**	**-1.0**
ANMO	**Albuquerque**	**66.91**	**327**	*d i*P	**P**	**15 12 38.8**	**+0.2**
ANMO				pmax	pmax		
	comp=Z,12nm,0.8s						
ANMO	**Albuquerque**	**66.91**	**327**	P	**P**	**15 12 38.5**	**-0.1**
	baz=142						
ANMO	**Albuquerque**	**66.91**	**327**	P	**P**	**15 12 39.2**	**+0.6**
	baz=142,SNR=14						
ANMO	**Albuquerque**	**66.91**	**327**	P	**P**	**15 12 38.9**	**+0.4**
ANMO				pP	**pP**	**15 13 10.1**	**+0.5**
CBKS	**Cedar Bluff**	**66.95**	**334**	P	**P**	**15 12 38.4**	**-0.1**
	baz=148						
CBKS	**Cedar Bluff**	**66.95**	**334**	P	**P**	**15 12 38.6**	**0.0**
	baz=148						
TUC	**Tucson**	**67.28**	**322**	P	**P**	**15 12 41.0**	**+0.2**
TUC				IAmb	IAmb	15 12 42.8	
	comp=Z,35nm,1.5s						
TUC	**Tucson**	**67.28**	**322**	P	**P**	**15 12 41.0**	**+0.2**
TUC				pmax	pmax		
	comp=Z,35nm,1.5s						
TUC	**Tucson**	**67.28**	**322**	P	**P**	**15 12 41.6**	**+0.8**
	baz=137						
TUC	**Tucson**	**67.28**	**322**	P	**P**	**15 12 41.5**	**+0.6**
TUC				pP	**pP**	**15 13 12.3**	**+0.2**
JFWS	**Jewell Farm**	**67.32**	**343**	P	**P**	**15 12 40.0**	**-0.7**
	baz=158						
JFWS	**Jewell Farm**	**67.32**	**343**	P	**P**	**15 12 40.0**	**-0.7**
	baz=158						
T25A	**Trinidad**	**67.64**	**329**	IAmb	IAmb	15 13 16.6	
	comp=Z,42nm,1.8s						
T25A	**Trinidad**	**67.64**	**329**	P	**P**	**15 12 43.6**	**+0.5**
	baz=144,SNR=6.8						
LIC	**Lamto**	**67.87**	**73**	⇑*i*P	**P**	**15 12 44.4**	**-0.4**
	comp=Z,83nm,0.7s						
I42A	**Draeger Farm,**	**67.88**	**344**	P	**P**	**15 12 43.4**	**-0.7**
	baz=160						
TIC	**Toumodi**	**68.06**	**73**	⇑*i*P	**P**	**15 12 45.7**	**-0.3**
	comp=Z,104nm,0.9s						
H43A	**Windswept, Lux**	**68.14**	**345**	P	**P**	**15 12 44.7**	**-1.1**
	baz=161						
KIC	**Kosan Boka**	**68.19**	**73**	⇑*i*P	**P**	**15 12 46.7**	**-0.1**
	comp=Z,235nm,0.8s						
DBIC	**Dimbokro**	**68.22**	**73**	P	**P**	**15 12 47.0**	**0.0**
	comp=Z,69nm,0.8s,baz=242,slow=6.4,SNR=85						
	comp=Z,69nm,0.8s						
DBIC	**Dimbokro**	**68.22**	**73**	P	**P**	**15 12 46.7**	**-0.3**
DBIC	**Dimbokro**	**68.22**	**73**	P	**P**	**15 12 47.0**	**0.0**
DBIC	**Dimbokro**	**68.22**	**73**	P	**P**	**15 12 47.0**	**0.0**
214A	**Organ Pipe Nat**	**68.22**	**320**	IAmb	IAmb	15 12 48.9	
	comp=Z,35nm,1.1s						
214A	**Organ Pipe Nat**	**68.22**	**320**	P	**P**	**15 12 47.7**	**+1.0**
	baz=136						
I40A	**Norwalk**	**68.33**	**343**	P	**P**	**15 12 46.4**	**-0.6**
	baz=158						
KSCO	**Kaye Shedlock’**	**68.35**	**332**	P	**P**	**15 12 46.3**	**-1.1**
	baz=146						
L34A	**Svendsen Farm,**	**68.39**	**338**	P	**P**	**15 12 46.5**	**-1.0**
	baz=152						
X18A	**Snowflake**	**68.45**	**324**	IAmb	IAmb	15 12 50.3	
	comp=Z,38nm,1.9s						
BGNE	**Belgrade**	**68.55**	**336**	P	**P**	**15 12 47.8**	**-0.7**
	baz=150						
BGNE	**Belgrade**	**68.55**	**336**	P	**P**	**15 12 48.3**	**-0.2**
	baz=150						
QSPA	**South Pole Qui**	**68.57**	**180**	P	**P**	**15 12 49.8**	**+1.2**
QSPA				pP	**pP**	**15 13 22.2**	**+2.6**
QSPA				sP	**sP**	**15 13 34.9**	**+1.7**
SDCO	**Great Sand Dun**	**68.64**	**329**	IAmb	IAmb	15 12 51.0	
	comp=Z,15nm,0.7s						
SDCO	**Great Sand Dun**	**68.64**	**329**	P	**P**	**15 12 49.5**	**+0.1**
	baz=143,SNR=36						
SDCO	**Great Sand Dun**	**68.64**	**329**	P	**P**	**15 12 50.1**	**+0.7**
	baz=143,SNR=36						
W18A	**Petrified Fore**	**68.77**	**324**	P	**P**	**15 12 50.7**	**+0.4**
	baz=139						
E46A	**Sault Ste Mari**	**69.20**	**348**	P	**P**	**15 12 51.8**	**-0.6**
	baz=164						
I37B	**Waseca**	**69.25**	**341**	P	**P**	**15 12 52.0**	**-0.7**
	baz=155						
S22A	**4UR Ranch, Cre**	**69.29**	**328**	P	**P**	**15 12 53.8**	**+0.4**
	baz=142,SNR=7.0						
Q24A	**Divide**	**69.45**	**330**	IAmb	IAmb	15 12 55.9	
	comp=Z,19nm,0.7s						
Q24A	**Divide**	**69.45**	**330**	P	**P**	**15 12 54.6**	**+0.1**
	baz=144,SNR=15						
G40A	**Rib Lake**	**69.49**	**344**	P	**P**	**15 12 53.4**	**-0.8**
	baz=158						
MVCO	**Mesa Verde**	**69.71**	**327**	IAmb	IAmb	15 12 57.6	
	comp=Z,23nm,0.7s						
MVCO	**Mesa Verde**	**69.71**	**327**	P	**P**	**15 12 56.4**	**+0.4**
	baz=140,SNR=21						
WUAZ	**Wupatki**	**69.97**	**324**	IAmb	IAmb	15 12 59.8	
	comp=Z,34nm,0.9s						
WUAZ	**Wupatki**	**69.97**	**324**	P	**P**	**15 12 58.4**	**+0.9**
	baz=138,SNR=18						
ECSD	**EROS Data Cent**	**70.03**	**339**	IAmb	IAmb	15 13 30.4	
	comp=Z,41nm,1.4s						
ECSD	**EROS Data Cent**	**70.03**	**339**	P	**P**	**15 12 56.9**	**-0.7**
	baz=152,SNR=5.8						
SPMN	**Marine on St.**	**70.17**	**342**	P	**P**	**15 12 57.4**	**-0.9**
	baz=156						
SPMN	**Marine on St.**	**70.17**	**342**	P	**P**	**15 12 57.3**	**-1.1**
	baz=156						
GLA	**Glamis**	**70.20**	**320**	IAmb	IAmb	15 13 00.9	
	comp=Z,17nm,0.9s						
GLA	**Glamis**	**70.20**	**320**	P	**P**	**15 12 59.8**	**+0.9**
	baz=134						
ISCO	**Idaho Springs**	**70.33**	**330**	P	**P**	**15 13 00.4**	**+0.5**
	baz=144,SNR=11						
BLYC	**Blythe**	**70.50**	**320**	IAmb	IAmb	15 13 02.9	
	comp=Z,27nm,1.0s						
PV15	**Paradox Valley**	**70.57**	**327**	IAmb	IAmb	15 13 03.3	
	comp=Z,22nm,0.9s						
PDMCI	**Parker Dam,Lak**	**70.67**	**321**	P	**P**	**15 13 02.1**	**+0.5**
	baz=135						
IKP	**In-Ko-Pah, Jac**	**70.70**	**319**	P	**P**	**15 13 02.8**	**+0.8**
	baz=133						
SWSC	**Sam W. Stewart**	**70.72**	**319**	P	**P**	**15 13 02.7**	**+0.8**
	baz=134						
F36A	**Milaca**	**70.96**	**342**	IAmb	IAmb	15 13 35.0	
	comp=Z,22nm,1.1s						
F36A	**Milaca**	**70.96**	**342**	P	**P**	**15 13 02.4**	**-0.7**
	baz=155						
BC3	**Big Chuckawall**	**70.99**	**320**	P	**P**	**15 13 04.7**	**+1.0**
	baz=134,SNR=21						
MONP2	**Monument Peak**	**71.06**	**319**	P	**P**	**15 13 05.2**	**+0.9**
	baz=133,SNR=9.7						
BAR	**Barrett**	**71.07**	**318**	IAmb	IAmb	15 13 06.2	
	comp=Z,19nm,0.8s						
U15A	**North Rim**	**71.14**	**324**	IAmb	IAmb	15 13 07.3	
	comp=Z,25nm,1.0s						
IRM	**Iron Mountain**	**71.16**	**320**	P	**P**	**15 13 05.6**	**+1.0**
	baz=134,SNR=16						
N23A	**Red Feather La**	**71.36**	**331**	P	**P**	**15 13 06.3**	**+0.3**
	baz=143,SNR=9.2						
PHWY	**Pilot Hill**	**71.47**	**331**	IAmb	IAmb	15 13 40.5	
	comp=Z,76nm,2.0s						
PMD	**Palm Desert**	**71.55**	**319**	P	**P**	**15 13 06.8**	**-0.1**
BELC	**Belle Mtn. Jos**	**71.56**	**320**	P	**P**	**15 13 08.0**	**+0.8**
	baz=134,SNR=9.6						
TPFO	**Pinon Flats**	**71.57**	**319**	P	**P**	**15 13 07.8**	**+0.6**
	baz=133,SNR=7.5						
PFO	**Pinyon Flats O**	**71.57**	**319**	*d i*P	**P**	**15 13 08.2**	**+0.9**
PFO				pmax	pmax		
	comp=Z,19nm,0.9s						
PFO	**Pinyon Flats O**	**71.57**	**319**	P	**P**	**15 13 08.1**	**+0.8**
	baz=133,SNR=6.1						
PFO	**Pinyon Flats O**	**71.57**	**319**	P	**P**	**15 13 08.2**	**+0.9**
PFO				pP	**pP**	**15 13 39.7**	**+0.9**
F33A	**5 Mile Ranch,**	**71.79**	**340**	P	**P**	**15 13 07.1**	**-1.0**
	baz=153						
O20A	**White River Ci**	**71.84**	**329**	P	**P**	**15 13 09.5**	**+0.8**
	baz=141						
KNB	**Kanab**	**71.86**	**324**	IAmb	IAmb	15 13 11.7	
	comp=Z,48nm,0.9s						
GMRC	**Granite Mounta**	**71.90**	**320**	P	**P**	**15 13 10.2**	**+1.0**
	baz=134,SNR=8.7						
MURC	**Murrieta**	**72.02**	**319**	P	**P**	**15 13 10.7**	**+0.9**
	baz=133						
ELS	**Elsinore Mount**	**72.19**	**319**	IAmb	IAmb	15 13 13.0	
	comp=Z,23nm,1.1s						
EYMN	**Ely**	**72.31**	**344**	P	**P**	**15 13 10.3**	**-0.9**
	baz=158						
HEC	**Hector,Ludlow**	**72.33**	**320**	P	**P**	**15 13 13.1**	**+1.4**
	baz=134,SNR=13						
SZCU	**Shurtz Canyon**	**72.42**	**324**	IAmb	IAmb	15 13 14.6	
	comp=Z,63nm,1.9s						
TUQ	**Turquoise Moun**	**72.50**	**321**	P	**P**	**15 13 13.4**	**+0.7**
	baz=134						
CCUT	**Cedar City**	**72.54**	**324**	IAmb	IAmb	15 13 15.8	
	comp=Z,36nm,0.8s						
P17A	**Butcher Ranch,**	**72.57**	**327**	IAmb	IAmb	15 13 14.8	
	comp=Z,31nm,0.8s						
CIS	**Catalina Islan**	**72.64**	**318**	P	**P**	**15 13 14.6**	**+1.1**
	baz=132						
BFSC	**Mount Baldy Ra**	**72.73**	**319**	P	**P**	**15 13 14.8**	**+0.7**
	baz=133,SNR=7.2						
RDMU	**Red Mountain**	**72.82**	**328**	IAmb	IAmb	15 13 16.0	
	comp=Z,22nm,0.8s						
GSC	**Goldstone, Bar**	**72.93**	**320**	P	**P**	**15 13 16.4**	**+1.1**
	baz=134,SNR=8.9						
K22A	**Casper**	**73.02**	**331**	IAmb	IAmb	15 13 49.1	
	comp=Z,62nm,1.7s						
K22A	**Casper**	**73.02**	**331**	P	**P**	**15 13 15.9**	**+0.1**
	baz=143						
K22A	**Casper**	**73.02**	**331**	P	**P**	**15 13 16.8**	**+1.0**
	baz=143						
RSSD	**Black Hills**	**73.15**	**334**	P	**P**	**15 13 15.7**	**-0.8**
RSSD				IAmb	IAmb	15 13 49.8	
	comp=Z,36nm,1.5s						
RSSD	**Black Hills**	**73.15**	**334**	P	**P**	**15 13 15.7**	**-0.8**
RSSD				pmax	pmax		
	comp=Z,36nm,1.5s						
RSSD	**Black Hills**	**73.15**	**334**	P	**P**	**15 13 16.7**	**+0.2**
	baz=146						
RSSD	**Black Hills**	**73.15**	**334**	P	**P**	**15 13 16.9**	**+0.3**
	baz=146,SNR=9.1						
B35A	**Bob, Littlefor**	**73.29**	**343**	IAmb	IAmb	15 13 49.2	
	comp=Z,26nm,0.8s						
B35A	**Bob, Littlefor**	**73.29**	**343**	P	**P**	**15 13 16.2**	**-0.8**
	baz=156						
EDW2	**Edwards Air Fo**	**73.37**	**319**	P	**P**	**15 13 18.2**	**+0.5**
	baz=132,SNR=11						
BSUT	**Blindstream Ca**	**73.38**	**328**	IAmb	IAmb	15 13 20.1	
	comp=Z,27nm,0.8s						
GWY	**Greenwater Val**	**73.46**	**321**	IAmb	IAmb	15 15 48.5	
	comp=Z,30nm,0.8s						
CCAC	**Calif City Air**	**73.56**	**319**	P	**P**	**15 13 18.9**	**0.0**
CCAC				IAmb	IAmb	15 13 20.9	
	comp=Z,30nm,0.7s						
PMPST	**Porto Santo, M**	**73.59**	**44**	*e*P	**P**	**15 13 23.7**	**+4.6**
PMPST				A	A	15 13 36.5	
	comp=Z,112nm,1.9s						
TPNV	**Topopah Spring**	**73.74**	**322**	IAmb	IAmb	15 13 22.5	
	comp=Z,23nm,1.0s						
TPNV	**Topopah Spring**	**73.74**	**322**	P	**P**	**15 13 21.3**	**+1.2**
	baz=134,SNR=12						
FURC	**Furnace Creek,**	**73.77**	**321**	P	**P**	**15 13 21.1**	**+1.1**
	baz=134,SNR=5.4						
AGMN	**Agassiz Nation**	**73.85**	**341**	IAmb	IAmb	15 13 52.7	
	comp=Z,20nm,0.9s						
AGMN	**Agassiz Nation**	**73.85**	**341**	P	**P**	**15 13 19.2**	**-1.0**
	baz=154						
AGMN	**Agassiz Nation**	**73.85**	**341**	P	**P**	**15 13 19.5**	**-0.7**
	baz=154						
WCT	**Wildcat Mounta**	**73.85**	**321**	IAmb	IAmb	15 13 23.2	
	comp=Z,22nm,1.0s						
MPMC	**Manual Prospec**	**73.86**	**320**	P	**P**	**15 13 21.1**	**+0.3**
	baz=133,SNR=11						
E28A	**Huff**	**73.93**	**337**	P	**P**	**15 13 21.1**	**+0.3**
	baz=149						
DUG	**Dugway, Tooele**	**74.17**	**326**	P	**P**	**15 13 22.6**	**+0.1**
DUG	**Dugway, Tooele**	**74.17**	**326**	P	**P**	**15 13 22.6**	**+0.1**
DUG				pmax	pmax		
	comp=Z,12nm,0.8s						
DUG	**Dugway, Tooele**	**74.17**	**326**	P	**P**	**15 13 23.2**	**+0.7**
	baz=138,SNR=12						
ISA	**Isabella, Lake**	**74.18**	**319**	P	**P**	**15 13 23.2**	**+0.7**
ISA				IAmb	IAmb	15 13 24.7	
	comp=Z,23nm,0.8s						
ISA	**Isabella, Lake**	**74.18**	**319**	P	**P**	**15 13 23.2**	**+0.7**
ISA				pmax	pmax		
	comp=Z,23nm,0.8s						
ISA	**Isabella, Lake**	**74.18**	**319**	P	**P**	**15 13 23.5**	**+0.9**
	baz=132,SNR=7.8						
R11B	**Troy Canyon, C**	**74.34**	**323**	P	**P**	**15 13 24.6**	**+1.1**
	baz=135						
GRAC	**Grapevine Rang**	**74.42**	**321**	P	**P**	**15 13 24.8**	**+0.9**
	baz=133						
CWC	**Cottonwood Cre**	**74.47**	**320**	P	**P**	**15 13 25.1**	**+0.8**
	baz=133						
PKM	**Mcpherson Peak**	**74.49**	**318**	P	**P**	**15 13 25.0**	**+0.5**
	baz=131						
BW06	**Boulder Array**	**74.50**	**330**	IAmb	IAmb	15 16 08.3	
	comp=Z,9.9nm,0.4s						
BW06	**Boulder Array**	**74.50**	**330**	P	**P**	**15 13 24.5**	**+0.1**
	baz=141,SNR=7.6						
PDAR	**Pinedale Array**	**74.50**	**330**	P	**P**	**15 13 24.4**	**-0.1**
	comp=Z,3.6nm,0.7s,baz=128,slow=7.8,SNR=31						
PDAR				LR	LR	15 49 54.5	
	comp=Z,31nm,18.6s,baz=148,slow=38						
	comp=Z,3.6nm,0.7s						
HWUT	**Hardware Ranch**	**74.59**	**328**	IAmb	IAmb	15 13 27.9	
	comp=Z,22nm,0.8s						
MDND	**Maddock**	**74.65**	**339**	P	**P**	**15 13 25.1**	**+0.3**
	baz=150,SNR=6.5						
SPUT	**South Promonto**	**74.81**	**327**	IAmb	IAmb	15 13 27.7	
	comp=Z,20nm,0.7s						
SMMC	**Simmler**	**74.88**	**318**	P	**P**	**15 13 28.3**	**+1.7**
	baz=131,SNR=5.7						
TIN	**Tinemaha, Big**	**74.97**	**321**	P	**P**	**15 13 28.4**	**+1.3**
	baz=133						
AHID	**Auburn Hatcher**	**75.23**	**329**	IAmb	IAmb	15 13 30.0	
	comp=Z,31nm,0.8s						
SNOW	**Snow King Moun**	**75.60**	**330**	IAmb	IAmb	15 13 32.4	
	comp=Z,19nm,0.8s						
ULM	**Lac du Bonnet**	**75.60**	**342**	P	**P**	**15 13 29.5**	**-0.8**
	comp=Z,11nm,0.5s,baz=153,slow=6.6,SNR=17						
ULM				pP	**pP**	**15 14 02.2**	**0.0**
	comp=Z,11nm,0.6s,baz=148,slow=5.4,SNR=6.8						
	comp=Z,11nm,0.5s						
ULM	**Lac du Bonnet**	**75.60**	**342**	IAmb	IAmb	15 14 02.8	
	comp=Z,18nm,0.8s						
OMMB	**Old Mammoth Mi**	**75.80**	**321**	IAmb	IAmb	15 13 34.0	
	comp=Z,20nm,0.8s						
ELK	**Elko**	**75.85**	**325**	LR	LR	15 49 03.6	
	comp=Z,34nm,19.6s,baz=147,slow=37						
NVAR	**Mina Array Bea**	**75.94**	**322**	P	**P**	**15 13 33.7**	**+1.0**
	comp=Z,7.7nm,0.8s,baz=158,slow=6.9,SNR=37						
NVAR				pP	**pP**	**15 14 05.4**	**+0.9**
	comp=Z,3.5nm,0.9s,baz=138,slow=7.7,SNR=3.5						
	comp=Z,7.7nm,0.8s						
IMW	**Indian Meadow**	**76.01**	**330**	IAmb	IAmb	15 13 34.9	
	comp=Z,18nm,0.8s						
FLWY	**Flagg Ranch**	**76.04**	**330**	IAmb	IAmb	15 13 35.3	
	comp=Z,34nm,0.8s						
LAO	**LASA Array**	**76.14**	**334**	P	**P**	**15 13 33.9**	**+0.4**
	baz=144						
LAO	**LASA Array**	**76.14**	**334**	P	**P**	**15 13 34.2**	**+0.7**
	baz=144						
SCHQ	**Schefferville**	**76.15**	**1**	P	**P**	**15 13 33.2**	**-0.1**
	comp=Z,4.6nm,0.7s,baz=213,slow=4.1,SNR=5.5						
	comp=Z,4.6nm,0.7s						
RLMT	**Red Lodge**	**76.19**	**331**	IAmb	IAmb	15 14 08.7	
	comp=Z,65nm,1.6s						
RLMT	**Red Lodge**	**76.19**	**331**	P	**P**	**15 13 34.8**	**+0.8**
	baz=141,SNR=15						
H17A	**Grant Village**	**76.22**	**330**	P	**P**	**15 13 35.9**	**+1.7**
	baz=140,SNR=7.2						
KVN	**Kaiserville**	**76.25**	**322**	IAmb	IAmb	15 13 36.0	
	comp=Z,21nm,0.9s						
YMP	**Mirror Lake Pl**	**76.30**	**331**	IAmb	IAmb	15 14 10.4	
	comp=Z,44nm,1.6s						
YMR	**Madison River**	**76.61**	**330**	IAmb	IAmb	15 14 11.8	
	comp=Z,71nm,1.4s						
DGMT	**Dagmar**	**76.81**	**336**	IAmb	IAmb	15 14 11.8	
	comp=Z,46nm,1.0s						
DGMT	**Dagmar**	**76.81**	**336**	P	**P**	**15 13 37.7**	**+0.5**
	baz=146						
DGMT	**Dagmar**	**76.81**	**336**	P	**P**	**15 13 37.7**	**+0.5**
	baz=146						
TORD	**Torodi Ar. Bea**	**76.86**	**70**	P	**P**	**15 13 37.8**	**-0.4**
	comp=Z,38nm,0.7s,baz=251,slow=5.3,SNR=209						
TORD				pP	**pP**	**15 14 12.8**	**+2.8**
	comp=Z,16nm,0.7s,baz=252,slow=5.4,SNR=4.1						
TORD				LR	LR	15 47 03.8	
	comp=Z,48nm,18.4s,baz=196,slow=35						
	comp=Z,38nm,0.7s						
TORD	**Torodi Ar. Bea**	**76.86**	**70**	IAmb	IAmb	15 13 38.8	
	comp=Z,42nm,0.9s						
PAHR	**Pah Rah Range**	**77.42**	**322**	IAmb	IAmb	15 13 43.2	
	comp=Z,45nm,0.8s						
HLID	**Hailey**	**77.45**	**328**	IAmb	IAmb	15 13 43.4	
	comp=Z,25nm,0.8s						
HLID	**Hailey**	**77.45**	**328**	P	**P**	**15 13 42.4**	**+1.3**
	baz=137,SNR=42						
BOZ	**Bozeman (W)**	**77.62**	**330**	P	**P**	**15 13 42.3**	**+0.3**
	baz=139,SNR=7.6						
WIN	**Windhoek**	**77.94**	**110**	IAmb	IAmb	15 13 46.1	
	comp=Z,27nm,0.8s						
SUR	**Sutherland**	**78.02**	**120**	LR	LR	15 46 27.6	
	comp=Z,102nm,18.2s,baz=163,slow=34						
SUR	**Sutherland**	**78.02**	**120**	P	**P**	**15 13 45.8**	**+1.1**

SUR				IAmb	IAmb	15 13 47.3	
	comp=Z,68nm,1.5s						
MFID	**Camas Ranch**	**78.06**	**327**	IAmb	IAmb	15 13 46.6	
	comp=Z,32nm,1.4s						
PLTX	**Planet X, Gerl**	**78.14**	**323**	IAmb	IAmb	15 13 46.7	
	comp=Z,36nm,0.7s						
EGMT	**Eagleton**	**78.66**	**333**	P	**P**	**15 13 47.5**	**-0.1**
	baz=141						
PLID	**Pearl Lake**	**79.34**	**328**	IAmb	IAmb	15 13 53.1	
	comp=Z,24nm,0.8s						
MOD	**Modoc Plateau**	**79.41**	**323**	IAmb	IAmb	15 13 53.6	
	comp=Z,32nm,1.2s						
TSUM	**Tsumeb**	**79.46**	**107**	LR	LR	15 45 10.2	
	comp=Z,56nm,19.5s,baz=156,slow=33						
TSUM	**Tsumeb**	**79.46**	**107**	P	**P**	**15 13 53.0**	**+0.3**
TSUM				IAmb	IAmb	15 13 54.7	
	comp=Z,42nm,0.8s						
MSO	**Missoula**	**79.61**	**330**	P	**P**	**15 13 54.0**	**+1.2**
	baz=138						
BMO	**Blue Mountains**	**79.83**	**327**	P	**P**	**15 13 54.2**	**+0.2**
BMO				IAmb	IAmb	15 13 55.7	
	comp=Z,19nm,0.8s						
BMO	**Blue Mountains**	**79.83**	**327**	P	**P**	**15 13 54.2**	**+0.2**
BMO				pmax	pmax		
	comp=Z,19nm,0.9s						
K05A	**Summer Lake**	**80.28**	**324**	IAmb	IAmb	15 13 58.8	
	comp=Z,34nm,0.8s						
PINE	**Pine Mountain**	**81.01**	**324**	IAmb	IAmb	15 14 02.6	
	comp=Z,29nm,0.8s						
J04A	**Umpqua Nationa**	**81.29**	**323**	IAmb	IAmb	15 14 03.5	
	comp=Z,29nm,0.8s						
FFC	**Flin Flon**	**81.33**	**341**	P	**P**	**15 14 01.0**	**-0.6**
FFC				pP	**pP**	**15 14 33.5**	**-0.4**
FFC				IAmb	IAmb	15 14 35.7	
	comp=Z,34nm,1.5s						
FFC	**Flin Flon**	**81.33**	**341**	P	**P**	**15 14 01.0**	**-0.6**
FFC				*PP	**pP**	**15 14 33.5**	**-0.4**
FFC				pmax	pmax		
	comp=Z,34nm,1.5s						
MDT	**Midelt**	**81.39**	**50**	LR	LR	15 51 02.4	
	comp=Z,64nm,18.1s,baz=156,slow=36						
PBDV	**Barranco-do-Ve**	**81.58**	**45**	*e*P	**P**	**15 14 05.0**	**+1.6**
PBDV				A	A	15 14 11.9	
	comp=Z,37nm,1.3s						
I05D	**Terrebonne, OR**	**81.59**	**325**	IAmb	IAmb	15 14 05.3	
	comp=Z,29nm,0.7s						
PNCL	**Nicolau / Gran**	**81.69**	**44**	*e*P	**P**	**15 14 03.4**	**-0.5**
PNCL				A	A	15 14 07.2	
	comp=Z,24nm,1.7s						
SOE	**Somerset East**	**81.70**	**122**	P	**P**	**15 14 05.2**	**+0.8**
SOE				IAmb	IAmb	15 14 06.4	
	comp=Z,49nm,1.1s						
PCVE	**Castro Verde**	**81.73**	**44**	*e*P	**P**	**15 14 04.6**	**+0.5**
PCVE				A	A	15 14 09.8	
	comp=Z,31nm,2.1s						
MESJ	**Messejana**	**81.73**	**44**	*e*P	**P**	**15 14 05.5**	**+1.3**
MESJ				A	A	15 14 13.3	
	comp=Z,25nm,2.0s						
PVAQ	**Vaqueiros**	**81.81**	**44**	*e*P	**P**	**15 14 06.0**	**+1.4**
PVAQ				A	A	15 14 20.6	
	comp=Z,25nm,1.6s						
PBEJ	**Beja**	**82.07**	**44**	*e*P	**P**	**15 14 07.3**	**+1.4**
PBEJ				A	A	15 14 19.8	
	comp=Z,15nm,1.5s						
NEW	**Newport**	**82.14**	**329**	LR	LR	15 53 48.8	
	comp=Z,31nm,18.4s,baz=127,slow=38						
GRHM	**Grahamstown, E**	**82.15**	**123**	P	**P**	**15 14 07.3**	**+0.6**
GRHM				IAmb	IAmb	15 14 08.6	
	comp=Z,35nm,0.9s						
BUCK	**Buck Mountain**	**82.39**	**324**	IAmb	IAmb	15 14 08.8	
	comp=Z,24nm,0.7s						
PMTG	**Montargil**	**82.44**	**43**	*e*P	**P**	**15 14 08.7**	**+0.9**
PMTG				A	A	15 14 09.7	
	comp=Z,18nm,2.2s						
PBAR	**Barrancos**	**82.69**	**44**	*e*P	**P**	**15 14 10.1**	**+1.0**
PBAR				A	A	15 14 15.7	
	comp=Z,15nm,1.3s						
FCC	**Fort Churchill**	**82.88**	**347**	pP	**pP**	**15 14 41.7**	**-0.1**
FCC				IAmb	IAmb	15 14 43.5	
	comp=Z,22nm,0.8s						
BOSA	**Boshof**	**82.89**	**118**	P	**P**	**15 14 10.9**	**+0.2**
	comp=Z,20nm,0.8s,baz=251,slow=3.0,SNR=27						
BOSA				LR	LR	15 50 44.9	
	comp=Z,82nm,19.3s,baz=192,slow=35						
	comp=Z,20nm,0.8s						
BOSA	**Boshof**	**82.89**	**118**	P	**P**	**15 14 10.4**	**-0.2**
BOSA				IAmb	IAmb	15 14 12.0	
	comp=Z,22nm,0.8s						
BOSA	**Boshof**	**82.89**	**118**	P	**P**	**15 14 10.5**	**-0.2**
BOSA				pmax	pmax		
	comp=Z,22nm,0.8s						
LTY	**Liberty**	**83.18**	**327**	IAmb	IAmb	15 14 46.4	
	comp=Z,31nm,1.4s						
MTE	**Manteigas**	**83.64**	**42**	*e*P	**P**	**15 14 14.3**	**+0.2**
MTE				A	A	15 14 25.5	
	comp=Z,23nm,1.8s						
TAM	**Tamanrasset**	**84.36**	**63**	P	**P**	**15 14 17.6**	**-0.6**
TAM	**Tamanrasset**	**84.36**	**63**	P	**P**	**15 14 17.6**	**-0.6**
TAM				pmax	pmax		
	comp=Z,14nm,1.3s						
MVO	**Moncorvo**	**84.40**	**42**	*e*P	**P**	**15 14 18.6**	**+0.7**
MVO				A	A	15 14 35.4	
	comp=Z,30nm,1.8s						
LBTB	**Lobatse**	**84.45**	**115**	LR	LR	15 49 36.7	
	comp=Z,75nm,18.2s,baz=180,slow=34						
LBTB	**Lobatse**	**84.45**	**115**	P	**P**	**15 14 18.7**	**0.0**
LBTB				IAmb	IAmb	15 14 20.2	
	comp=Z,30nm,0.7s						
LBTB	**Lobatse**	**84.45**	**115**	P	**P**	**15 14 18.7**	**0.0**
LBTB				pmax	pmax		
	comp=Z,30nm,0.7s						
PAB	**San Pablo**	**85.20**	**44**	P	**P**	**15 14 22.1**	**+0.2**
PAB	**San Pablo**	**85.20**	**44**	P	**P**	**15 14 22.1**	**+0.2**
PAB				pmax	pmax		
	comp=Z,12nm,0.8s						
ESDC	**Sonseca Array**	**85.52**	**44**	P	**P**	**15 14 23.9**	**+0.5**
	comp=Z,5.2nm,0.9s,baz=246,slow=4.8,SNR=20						
ESDC				LR	LR	15 53 27.6	
	comp=Z,33nm,19.8s,baz=134,slow=36						
	comp=Z,5.2nm,0.9s						
LLLB	**Lillooet**	**86.01**	**329**	pP	**pP**	**15 14 56.8**	**-1.2**
LLLB				IAmb	IAmb	15 14 59.9	
	comp=Z,61nm,1.6s						
YKA	**Yellowknife Ar**	**91.49**	**340**	P	**P**	**15 14 51.4**	**+0.2**
	comp=Z,17nm,0.7s,baz=134,slow=4.6,SNR=317						
YKA				pP	**pP**	**15 15 24.6**	**+0.7**
	comp=Z,6.3nm,0.8s,baz=137,slow=4.9,SNR=7.8						
	comp=Z,17nm,0.7s						
KOTAN	**Kotaneelee Air**	**93.15**	**336**	P	**P**	**15 14 59.8**	**+0.8**
	baz=130						
WRAK	**Wrangell Islan**	**94.49**	**330**	P	**P**	**15 15 05.3**	**+0.1**
	baz=123						
DLBC	**Dease Lake**	**94.57**	**332**	LR	LR	16 04 38.5	
	comp=Z,36nm,18.1s,baz=105,slow=40						
RES	**Resolute Bay**	**97.59**	**353**	LR	LR	16 02 14.2	
	comp=Z,41nm,18.7s,baz=14,slow=37						
ILAR	**Eielson Array**	**104.60**	**334**	PP	**PP**	**15 20 12.5**	**+1.2**
	comp=Z,1.0nm,1.0s,baz=99,slow=5.2,SNR=6.4						
MILM	**Milestii Mici**	**110.22**	**46**	*e*P	**Pdif**	**15 16 17.0**	**+1.3**
	comp=Z,11nm,0.3s						
MILM	**Milestii Mici**	**110.22**	**46**	*e*P	**Pdif**	**15 16 17.0**	**+1.3**
MILM				pmax	pmax		
	comp=Z,11nm,0.3s						
MNK	**Minsk**	**110.85**	**38**	*i* P	**Pdif**	**15 16 18.8**	**+0.5**
	comp=E,4.0nm,1.3s						
MNK				*i* P	**Pdif**	**15 16 18.8**	**+0.5**
	comp=N,26nm,0.8s,baz=262						
MNK				*i* P	**Pdif**	**15 16 18.8**	**+0.5**
	comp=Z,5.0nm,0.7s						
MNK				*i* pP	**pPdif**	**15 16 50.9**	**-0.2**
MNK				*i* PP	**PP**	**15 20 58.2**	**+1.2**
MNK				*i* PPP	PPP	15 23 18.9	
MNK				*i* SKS	**SKSdf**	**15 27 17.3**	**-0.8**
MNK				*i* SS	**SS**	**15 36 23.4**	**+5.1**
MNK				*i* SSS	SSS	15 40 30.7	
MNK				*i* LRM	MLR	16 08 06.2	
	comp=N,363nm,17.2s						
MNK				*i* LRM	MLR	16 08 07.5	
	comp=E,14nm,21.6s						
MNK				*i* LRM	MLR	16 08 11.3	
	comp=Z,72nm,19.7s						
MNK	**Minsk**	**110.85**	**38**	*i* P	**Pdif**	**15 16 18.8**	**+0.5**
MNK				*i*		15 20 58.2	
MNK				*i* PPP	PPP	15 23 18.9	
MNK				*i*		15 27 17.2	
MNK				*i* SS	SS	15 36 23.3	+5.0
MNK				*i* SSS	SSS	15 40 30.7	
MNK				pmax	pmax		
	comp=E,4.0nm,1.3s						
MNK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,26nm,0.8s						
MNK				MLR	MLR		
	comp=N,363nm,17.0s						
MNK				MLR	MLR		
	comp=E,14nm,22.0s						
MNK				MLR	MLR		
	comp=Z,72nm,20.0s						
OBN	**Obninsk**	**115.91**	**38**	*e*PKIKP	**PKiKP**	**15 20 28.5**	**+1.5**
OBN				*e*		15 20 59.8	
OBN				*e*		15 21 37.6	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBZ	**Khabaz**	**119.74**	**51**	PKP	**PKiKP**	**15 20 35.9**	**+1.0**
	comp=Z,3.6nm,1.0s,baz=198,slow=3.2,SNR=3.8						
BILL	**Bilibino**	**122.84**	**339**	*e*PKIKP	**PKiKP**	**15 20 41.4**	**+1.2**
BILL				*e*		15 21 13.8	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.3s						
H11S2	**WAKE ISLAND Hy**	**128.46**	**277**	T	T	17 41 12.8	
	baz=103,slow=74,SNR=117						
H11S1	**WAKE ISLAND Hy**	**128.47**	**277**	T	T	17 41 17.0	
	baz=103,slow=74						
H11S3	**WAKE ISLAND Hy**	**128.48**	**277**	T	T	17 41 13.8	
	baz=103						
H11N3	**WAKE ISLAND Hy**	**128.54**	**278**	T	T	17 41 24.6	
	baz=104,slow=75,SNR=72						
H11N2	**WAKE ISLAND Hy**	**128.56**	**278**	T	T	17 41 25.8	
	baz=104,slow=75,SNR=80						
H11N1	**WAKE ISLAND Hy**	**128.56**	**278**	T	T	17 41 25.9	
	baz=104,slow=75,SNR=50						
ASAR	**Alice Springs**	**130.07**	**207**	PKP	**PKPdf**	**15 20 55.5**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=134,slow=1.9,SNR=18						
ASAR				pPKP	**pPKPdf**	**15 21 30.0**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=132,slow=1.9,SNR=5.5						
SEY	**Seymchan**	**130.43**	**337**	⇓*i*PKIKP	**PKiKP**	**15 20 57.7**	**+2.2**
PET	**Petropavlovsk**	**132.50**	**323**	⇓*i*PKIKP	**PKiKP**	**15 21 01.8**	**+1.8**
PETK	**Petropavlovsk-**	**133.00**	**324**	PKP	**PKiKP**	**15 21 00.8**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=62,slow=3.5,SNR=5.4						
MA2	**Magadan**	**133.08**	**334**	⇓*i*PKIKP	**PKiKP**	**15 21 02.4**	**+1.4**
WRA	**Warramunga Arr**	**133.14**	**210**	PKP	**PKPdf**	**15 21 01.3**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=155,slow=1.8,SNR=28						
WRA				pPKP	**pPKPdf**	**15 21 36.2**	**+0.8**
	comp=Z,2.6nm,0.6s,baz=160,slow=1.8,SNR=10.0						
WRAB	**Tennant Creek**	**133.14**	**210**	⇓*i*PKIKP	**PKiKP**	**15 21 02.1**	**-0.3**
BRVK	**Borovoye**	**135.49**	**35**	⇓*i*PKIKP	**PKiKP**	**15 21 07.1**	**+1.0**
KURK	**Kurchatov**	**141.11**	**34**	⇓*e*PKIKP	**PKPdf**	**15 21 15.1**	**+0.2**
ZALV	**Zalesovo Beam**	**141.81**	**26**	PKP	**PKPdf**	**15 21 17.1**	**+1.1**
	comp=Z,1.8nm,0.5s,baz=315,slow=3.8,SNR=4.4						
ZALV				pPKP	**pPKPdf**	**15 21 50.9**	**+0.8**
	comp=Z,5.2nm,0.8s,baz=293,slow=2.7,SNR=3.3						
AAK	**Ala-Archa**	**142.56**	**47**	⇓*e*PKIKP	**PKPdf**	**15 21 18.8**	**+0.8**
KSH	**Kashi**	**144.73**	**51**	PKP	**PKPdf**	**15 21 21.9**	**+0.1**
KSH				sPKP		15 21 58.6	
MK31	**Makanchi Array**	**145.39**	**36**	*c i*PKP2	**PKPab**	**15 21 23.0**	**0.0**
MKAR	**Makanchi Array**	**145.39**	**36**	PKPbc	**PKPab**	**15 21 23.2**	**+0.2**
	comp=Z,3.6nm,0.5s,baz=327,slow=2.9,SNR=58						
MKAR				pPKPbc	**pPKPdf**	**15 21 57.5**	**+0.8**
	comp=Z,9.8nm,0.9s,baz=324,slow=2.9,SNR=5.3						
ZEA	**Zeya**	**145.81**	**344**	*e*PKP2	**PKPab**	**15 21 24.2**	**-0.1**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ASAJ	**Asahikawa**	**146.02**	**319**	PKPbc	**PKPab**	**15 21 24.9**	**-0.5**
	comp=Z,8.3nm,0.7s,baz=246,slow=3.8,SNR=8.1						
ASAJ	**Asahikawa**	**146.02**	**319**	PKP2	**PKPab**	**15 21 25.0**	**-0.5**
DGZ	**Jazzator, Alta**	**146.03**	**29**	⇑*i*PKP2	**PKPab**	**15 21 25.5**	**0.0**
GUMO	**Guam**	**147.45**	**261**	PKPbc	**PKPbc**	**15 21 29.4**	**-0.2**
	comp=Z,57nm,0.7s,baz=180,slow=23,SNR=4.3						
KLR	**Kul'dur**	**148.17**	**335**	PKPbc	**PKPbc**	**15 21 30.4**	**-0.2**
	comp=Z,2.7nm,0.6s,baz=40,slow=5.3,SNR=10						
KLR				pPKPbc	**pPKPbc**	**15 22 05.0**	**+0.8**
	comp=Z,2.9nm,0.7s,baz=70,slow=3.7,SNR=4.9						
HEH	**HeiHe**	**148.86**	**340**	*e*P	**PKPbc**	**15 21 31.6**	**-0.6**
WMQ	**Urumqi**	**150.22**	**36**	*e*P	**PKPdf**	**15 21 30.3**	**-0.4**
ZAK	**Zakamensk**	**150.53**	**11**	*e*PKIKP	**PKiKP**	**15 21 37.2**	**0.0**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
USRK	**Ussuriysk Ar.**	**151.91**	**328**	PKPbc	**PKiKP**	**15 21 40.2**	**+0.1**
	comp=Z,5.5nm,0.8s,baz=27,slow=3.4,SNR=5.5						
USRK				pPKPbc	**pPKPbc**	**15 22 14.3**	**+0.7**
	comp=Z,6.4nm,0.7s,baz=21,slow=0.2,SNR=5.9						
MJAR	**Matsushiro Arr**	**152.59**	**309**	PKPbc	**PKPbc**	**15 21 41.3**	**-0.2**
	comp=Z,5.0nm,0.9s,baz=86,slow=3.2,SNR=6.6						
MJAR				pPKPbc	**pPKPbc**	**15 22 16.2**	**+0.6**
	comp=Z,3.1nm,0.7s,baz=94,slow=2.0,SNR=4.1						
SONM	**Songino Array**	**153.50**	**8**	PKPbc	**PKiKP**	**15 21 43.9**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=284,slow=1.0,SNR=5.3						
KSRS	**Korea Array**	**158.88**	**322**	PKPab	**PKPab**	**15 22 20.1**	**+0.9**
	comp=Z,1.9nm,0.7s,baz=45,slow=4.7,SNR=4.9						
HHC	**Hu-ho-hao-te**	**160.83**	**0**	*e*P	**PKPdf**	**15 21 46.6**	**+1.6**
CM31	**Chiang Mai Arr**	**167.60**	**102**	IAmb	IAmb	15 22 59.2	
	comp=Z,6.1nm,1.1s						
CM31	**Chiang Mai Arr**	**167.60**	**102**	P	**PKPab**	**15 22 58.0**	**-0.3**
CMAR	**Chiang Mai Arr**	**167.60**	**102**	PKPab	**PKPab**	**15 22 58.5**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=257,slow=5.2,SNR=9.1						
CMAR				PP	**PP**	**15 26 48.4**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=269,slow=4.5,SNR=2.5						
CMAR	**Chiang Mai Arr**	**167.60**	**102**	P	**PKPab**	**15 22 58.1**	**-0.1**
CMAR	**Chiang Mai Arr**	**167.60**	**102**	PKP2	**PKPab**	**15 22 58.1**	**-0.1**
CHTO	**Chiang Mai**	**167.70**	**101**	PKP2	**PKPab**	**15 22 57.7**	**-1.0**
CHTO	**Chiang Mai**	**167.70**	**101**	P	**PKPab**	**15 22 57.7**	**-1.0**
NJ2	**Nanjing**	**167.81**	**330**	*e*P	**PKPdf**	**15 21 50.6**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH	**PanZhiHua**	**169.68**	**60**	PKP	**PKPdf**	**15 21 52.8**	**-0.1**

ISK ***21*** *15:14:22.5, 39°.67N×26°.07E, h5*^{km}*, ML1.9/3*

DDA 21 15:14:23.3±0.0**, 39°.57N×26°.37E, h7**^{km}±1^{km}**, ML1.1, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	**Canakkale, Ayv**	**0.19**	**248**	P	Pg	15 14 27.6	+0.5
KOCA				S	Sg	15 14 30.9	+1.1
BAYC	**CANAKKALE_Bayr**	**0.22**	**39**	P	Pg	15 14 27.9	+0.2
BAYC				*i* AML	AML	15 14 31.0	
	comp=E,46nm,0.1s						
BAYC				S	Sg	15 14 31.1	+0.5
GPNR	**Gulpinar-Canak**	**0.22**	**237**	Pg	Pg	15 14 27.5	-0.1
GPNR				Sg	Sg	15 14 31.8	+1.3
BOZC	**Bozcaada**	**0.36**	**318**	P	Pg	15 14 31.0	+0.6
BOZC				*i* AML	AML	15 14 36.0	
	comp=E,32nm,0.2s						
BOZC				S	Sg	15 14 36.1	+0.9
BOZC				*i* AML	AML	15 14 37.0	
	comp=N,22nm,0.2s						
COMU	**Canakkale**	**0.53**	**9**	Pg	Pg	15 14 34.1	+0.5
COMU				Sg	Sb	15 14 42.7	-0.2
SIGR	**SIGRI**	**0.54**	**228**	Pg	Pg	15 14 33.1	-0.6
SIGR				Sg	Sg	15 14 41.3	+0.6
ZEDA	**zmir-Bergama**	**0.82**	**138**	P	Pg	15 14 35.7	-3.3
ZEDA				*i* AML	AML	15 14 54.0	
	comp=E,7.8nm,0.3s						
ZEDA				*i* AML	AML	15 14 55.0	
	comp=N,7.4nm,0.6s						
KARB	**zmir-Karabur**	**0.91**	**178**	P	Pg	15 14 41.0	+0.3
KARB				S	Sg	15 14 52.4	-0.2
KARB				*i* AML	AML	15 14 56.0	
	comp=E,8.7nm,0.6s						

IDC ***21*** *15:15:27.3±1.8, 34°.86N×140°.22E, h0*^{km}*, mb3.6/2, mbtmp3.7/4, ML3.4/2, Error ellipse: s-maj=59.0km s-min=21.5km az=71.0*

NEIC ***21*** *15:15:33.2±2.1, 35°.04N±0°.05×140°.15E±0°.08, h77*^{km}*±11*^{km}*, mb4.2/8, Error ellipse: s-maj=9.6km s-min=7.6km az=73.0*

JMA ***21*** *15:15:33.8±0.2, 35°.1N±0°.7×140°.0E±0°.7, h69*^{km}*±1*^{km}*, MV3.3/40, SOUTHERN BOSO PENINSULA*

JMA Felt I J1 at SOUTHERN BOSO PENINSULA .

ISC 21 15:15:33.4±0.8**, 35°.06N**±0°.04×**140°.07E**±0°.04**, h70**^{km}±5^{km}**, n48, σ1**^{s}**.23**/60**, mb4.4**/8**, 10D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKUC	**kamogawauchiur**	**0.14**	**47**	*i* P	**Pn**	**15 15 44.2**	**+0.4**
JKUC				S	**Sn**	**15 15 51.3**	**-0.1**
TATJ	**Tateyama 2**	**0.15**	**258**	*i* P	**Pn**	**15 15 44.5**	**+0.7**
TATJ				*e*S	**Sn**	**15 15 52.0**	**+0.6**
KTR	**Katsuura**	**0.22**	**67**	*i* P	**Pn**	**15 15 44.6**	**+0.6**
KTR				S	**Sn**	**15 15 52.0**	**+0.1**
BSO4	**Boso 4**	**0.23**	**108**	*i* P	**Pn**	**15 15 45.2**	**+1.2**
BSO4				X		15 15 53.6	
JYO	**Yokosk**	**0.37**	**296**	⇓*i*P	**Pn**	**15 15 45.6**	**+0.6**
JYO				⇓S	**Sn**	**15 15 54.3**	**+0.7**
BSO3	**Boso 3**	**0.44**	**126**	⇓*i*P	**Pn**	**15 15 46.5**	**+1.1**
BSO3				⇓X		15 15 56.2	
JIM2	**Oshima 3**	**0.63**	**237**	*i* P	**Pn**	**15 15 47.4**	**-0.1**
JIM2				S	**Sn**	**15 15 56.9**	**-1.1**
JOD2	**Odawara 2**	**0.83**	**284**	*i* P	**Pn**	**15 15 49.5**	**-0.3**
JOD2				S	**Sn**	**15 16 00.7**	**-1.4**
BSO1	**Boso 1**	**0.85**	**118**	⇓P	**Pn**	**15 15 50.4**	**+1.0**
BSO1				⇓X		15 16 02.8	
JIZS	**Izushimoda**	**1.04**	**251**	*i* P	**Pn**	**15 15 52.6**	**+0.2**
JIZS				S	**Sn**	**15 16 05.9**	**-0.6**
JMYK	**Miyake Tsubota**	**1.09**	**204**	P	**Pn**	**15 15 53.6**	**+0.6**
JMYK				S	**Sn**	**15 16 08.1**	**+0.4**
JFNN	**Fujinakano**	**1.15**	**277**	P	**Pn**	**15 15 54.2**	**+0.4**
JFNN				S	**Sn**	**15 16 08.8**	**-0.1**
JMKN	**Mikurajimanish**	**1.23**	**199**	P	**Pn**	**15 15 55.5**	**+0.7**
JMKN				S	**Sn**	**15 16 11.2**	**+0.3**
JYN	**Shimob**	**1.32**	**290**	⇓*i*P	**Pn**	**15 15 56.4**	**+0.2**
JYN				⇓S	**Sn**	**15 16 12.9**	**-0.3**
JRY	**Ryogami san**	**1.35**	**315**	⇓*i*P	**Pn**	**15 15 56.7**	**+0.3**
JRY				⇓S	**Sn**	**15 16 13.3**	**-0.3**
JAG	**Ashikaga**	**1.45**	**340**	*i* P	**Pn**	**15 15 57.7**	**0.0**
SHZ3	**Shizuoka 3**	**1.53**	**271**	P	**Pn**	**15 15 59.6**	**+0.9**
SHZ3				S	**Sn**	**15 16 19.1**	**+1.1**
JSG	**Sagara**	**1.60**	**257**	Pn	**Pn**	**15 15 60.0**	**+0.3**
JSG					**Sn**	**15 16 21.2**	**+1.7**
JHJ2	**Mitsune**	**1.96**	**186**	Pn	**Pn**	**15 16 04.1**	**-0.4**
JHJ2				Sn	**Sn**	**15 16 27.6**	**-0.5**
MJAR	**Matsushiro Arr**	**2.12**	**315**	Pn	**Pn**	**15 16 07.7**	**+1.1**
	8.8nm,0.3s,baz=163,slow=14,SNR=341						
MJAR				Sn	**Sn**	**15 16 34.9**	**+3.0**
	3.5nm,0.3s,baz=238,slow=14,SNR=3.9						
	45nm,0.3s						
MAJO	**Matsushiro**	**2.12**	**315**	Pn	**Pn**	**15 16 07.3**	**+0.6**
MAJO				Sn	**Sn**	**15 16 32.6**	**+0.6**
MJB9	**Matsu-Tunnel**	**2.12**	**315**	Pn	**Pn**	**15 16 08.1**	**+1.4**
JGF	**Kuroka**	**2.28**	**284**	Pn	**Pn**	**15 16 10.4**	**+1.5**
INU	**Inuyama**	**2.52**	**277**	Pn	**Pn**	**15 16 13.2**	**+1.1**
JMM	**Marumori**	**2.86**	**12**	Pn	**Pn**	**15 16 18.5**	**+1.9**
JSD	**Sado**	**3.31**	**334**	Pn	**Pn**	**15 16 22.8**	**0.0**
JTM	**Tenmabayashi**	**5.77**	**8**	Pn	**Pn**	**15 16 57.4**	**+1.1**
ERM	**Erimo**	**7.35**	**18**		**Pn**	**15 17 13.9**	**-4.0**
ASAJ	**Asahikawa**	**9.25**	**11**	Pn	**Pn**	**15 17 43.7**	**-0.2**
	0.4nm,0.3s,baz=206,slow=14,SNR=7.3						
	2.3nm,0.4s						
JKA	**Kamikawa-asahi**	**9.25**	**11**	Pn	**Pn**	**15 17 42.7**	**-1.2**
PEA0B	**Petropavlovsk-**	**21.93**	**29**	P	**P**	**15 20 19.4**	**-1.5**
HHC	**Hu-ho-hao-te**	**23.15**	**293**	*e*P	**P**	**15 20 33.8**	**-0.1**
HHC				pmax	pmax		
	comp=Z,24nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,5.2s						
H11N2	**WAKE ISLAND Hy**	**28.17**	**116**	T	T	15 51 06.1	
	baz=308,slow=75,SNR=97						
H11N1	**WAKE ISLAND Hy**	**28.18**	**116**	T	T	15 51 07.4	
	baz=308,slow=75,SNR=67						
H11N3	**WAKE ISLAND Hy**	**28.19**	**116**	T	T	15 51 07.5	
	baz=308,slow=75,SNR=71						
H11S3	**WAKE ISLAND Hy**	**28.80**	**118**	T	T	15 51 53.1	
	baz=310,slow=76,SNR=33						
H11S1	**WAKE ISLAND Hy**	**28.80**	**118**	T	T	15 51 53.2	
	baz=310,slow=76,SNR=31						
H11S2	**WAKE ISLAND Hy**	**28.82**	**118**	T	T	15 51 54.4	
	baz=310,slow=76,SNR=37						
WMQ	**Urumqi**	**40.79**	**299**	*e*P	**P**	**15 23 07.1**	**-0.7**
WMQ				pP	pP	15 23 28.0	+2.9
WMQ				sP	sP	15 23 36.3	+3.1
WMQ				ScP	**ScP**	**15 28 49.5**	**-1.6**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MK31	**Makanchi Array**	**44.27**	**304**	P	**P**	**15 23 35.0**	**-0.9**
MK31				IAmb	IAmb	15 23 37.1	
	comp=Z,1.4nm,1.1s						
MKAR	**Makanchi Array**	**44.27**	**304**	P	**P**	**15 23 35.3**	**-0.6**
KSH	**Kashi**	**50.24**	**295**	P	**P**	**15 24 26.5**	**+4.0**
KSH				pP	pP	15 24 43.9	+3.7
KSH				sP	sP	15 24 52.3	+4.1
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WB0	**Warramunga Arr**	**54.79**	**187**	P	**P**	**15 24 55.1**	**-1.0**
WRAB	**Tennant Creek**	**54.96**	**187**	P	**P**	**15 24 56.5**	**-0.9**
WRAB				IAmb	IAmb	15 25 14.7	
	comp=Z,4.6nm,1.1s						
WB2	**Warramunga Arr**	**54.97**	**187**	P	**P**	**15 24 56.5**	**-0.9**
WB2				IAmb	IAmb	15 25 10.8	
	comp=Z,5.5nm,1.4s						
WRA	**Warramunga Arr**	**54.97**	**187**	P	**P**	**15 24 58.8**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=2.6,slow=7.6,SNR=18						
	comp=Z,0.8nm,0.6s						
WRA	**Warramunga Arr**	**54.97**	**187**	P	**P**	**15 24 57.2**	**-0.2**
ASAR	**Alice Springs**	**58.70**	**187**	P	**P**	**15 25 25.4**	**+1.7**
	comp=Z,0.1nm,0.4s,baz=19,slow=11,SNR=11						
	comp=Z,0.1nm,0.4s						

KRNET ***21*** *15:17:44.3±0.1, 41°.74N×70°.25E, h16*^{km}*, mb2.8*

SOME ***21*** *15:17:46.7, 41°.78N×70°.30E, h15*^{km}

ISU ***21*** *15:17:46.2, 41°.67N×70°.28E, h11*^{km}

ISC 21 15:17:45.4±1.0**, 41°.74N**±0°.03×**70°.23E**±0°.03**, h9**^{km}±9^{km}**, n35, σ2**^{s}**.19**/51**, 18C-7D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHRV	**Charvak**	**0.23**	**245**	P	**Pg**	**15 17 49.4**	**-0.7**
CHRV				S	**Sg**	**15 17 53.5**	**+0.2**
CHMG	**Chimgan**	**0.25**	**221**	P	**Pg**	**15 17 50.1**	**-0.4**
CHMG				S	**Sg**	**15 17 53.8**	**-0.1**
IUG	**Iuzhnay**	**0.43**	**340**	*e*P	**Pg**	**15 17 53.9**	**0.0**
	165nm,0.1s						
IUG				*e*S	**Sg**	**15 18 00.0**	**+0.3**
	404nm,0.1s						
TRKS	**Terek-Say**	**0.71**	**107**	⇑*e*P	**Pg**	**15 17 58.7**	**-0.5**
	baz=11						
TRKS				⇑*i*S	**Sg**	**15 18 08.9**	**+0.4**
	baz=11						
TAS	**Tashkent**	**0.81**	**240**	⇑*i*P	**Pg**	**15 17 59.8**	**-1.3**
	baz=40						
TAS				⇑*i*S	**Sg**	**15 18 11.3**	**-0.4**
	baz=40						
ARK	**Arkit**	**1.30**	**87**	⇑*i*P	**Pn**	**15 18 08.4**	**-1.5**
	baz=87						
ARK				⇑*i*S	**Sb**	**15 18 25.9**	**-1.0**
	baz=87						
ARK	**Arkit**	**1.30**	**87**	P	**Pn**	**15 18 08.4**	**-1.5**
ARK				S	**Sb**	**15 18 25.9**	**-1.0**
KK31	**Karatay Array**	**1.38**	**9**	P	**Pn**	**15 18 10.9**	**0.0**
	0.8nm,0.2s,baz=185,slow=13,SNR=67						
KK31				⇓S	**Sb**	**15 18 28.3**	**-1.0**
	7.9nm,0.2s,baz=188,slow=30,SNR=28						
KKAR	**Karatay Array**	**1.38**	**9**	⇓*i*P	**Pn**	**15 18 10.1**	**-0.9**
	baz=8.0						
KKAR				⇓*i*S	**Sb**	**15 18 28.7**	**-0.5**
	baz=8.0						
BTK	**Batken**	**1.74**	**165**	⇑*e*P	**Pn**	**15 18 16.5**	**+0.6**
	baz=65						
BTK				⇑*i*S	**Sb**	**15 18 39.5**	**0.0**
	baz=65						
BTK	**Batken**	**1.74**	**165**	P	**Pn**	**15 18 16.5**	**+0.6**
BTK				S	**Sb**	**15 18 39.5**	**0.0**
CHMI	**Chimion**	**1.76**	**146**	P	**Pb**	**15 18 18.7**	**+0.7**
FRG	**Fergana**	**1.80**	**139**	P	**Pb**	**15 18 19.4**	**+0.8**
MNAS	**Manas**	**1.85**	**65**	⇑*i*P	**Pn**	**15 18 18.2**	**+0.7**
	baz=65						
MNAS				⇑*i*S	**Sb**	**15 18 42.8**	**-0.1**
	baz=65						
ANR	**Andizhan**	**1.88**	**121**	P	**Sg**	**15 18 46.6**	**+0.7**
OHH	**Osh**	**2.28**	**121**	⇑*i*P	**Pn**	**15 18 24.1**	**+0.8**
	baz=22						
OHH				⇑*i*S	**Sn**	**15 18 53.3**	**+1.7**
	baz=22						
MRKS	**Merke**	**2.44**	**65**	*e*Pg	**Pb**	**15 18 30.4**	**+0.8**
	5.4nm,0.1s						
MRKS				*e*Lg	Lg	15 19 01.5	
	23nm,0.2s						
DRK	**Karamyk**	**2.55**	**152**	⇑*i*P	**Pn**	**15 18 28.2**	**+0.9**
	baz=52						
DRK				⇑*i*S	**Sn**	**15 19 00.5**	**+1.9**

	baz=52						
AML	**Almayashu**	**2.62**	**80**	⇑*e*P	**Pn**	**15 18 29.2**	**+0.9**
	baz=80						
AML				⇑*i*S	**Sn**	**15 19 01.7**	**+1.4**
	baz=80						
EKS2	**Erkin-Say**	**2.79**	**70**	⇑*i*P	**Pn**	**15 18 31.4**	**+0.9**
	baz=69						
EKS2				⇑*i*S	**Sn**	**15 19 05.5**	**+1.1**
	baz=69						
ARLS	**Aral**	**3.06**	**86**	⇓*e*P	**Pn**	**15 18 35.3**	**+1.1**
	baz=86						
ARLS				⇓*i*S	**Sn**	**15 19 12.2**	**+1.1**
	baz=86						
UCH	**Uchtor**	**3.23**	**80**	⇓*e*P	**Pn**	**15 18 37.7**	**+0.9**
	baz=80						
UCH				⇓*i*S	**Sn**	**15 19 16.5**	**+0.9**
	baz=80						
KST	**Kastek**	**4.44**	**71**	*e*Pg	**Pb**	**15 19 06.4**	**+2.7**
	0.8nm,0.2s						
KST				*e*Lg	Lg	15 20 03.1	
	4.9nm,0.2s						
KRBS	**Karabastau**	**4.46**	**62**	*e*Pg	**Pb**	**15 19 07.7**	**+3.6**
	0.9nm,0.2s						
KRBS				*e*Lg	Lg	15 20 04.9	
	1.4nm,0.2s						
TNSS	**Tian-Shan**	**5.14**	**73**	*e*Pg	**Pg**	**15 19 20.2**	**-3.7**
	0.4nm,0.1s						
TNSS				*e*Lg	Lg	15 20 26.4	
	2.2nm,0.2s						
KTBS	**Karatobe**	**5.15**	**65**	*e*Pg	**Pb**	**15 19 19.6**	**+3.9**
	0.6nm,0.2s						
KTBS				*e*Lg	Lg	15 20 25.3	
	5.2nm,0.4s						
PYUN	**Piuthan**	**17.14**	**139**	*e*P	**P**	**15 21 50.4**	**+3.3**
	11nm,0.5s						
DANN	**Dangsing**	**17.32**	**136**	*e*P	**P**	**15 21 52.6**	**+3.4**
	20nm,0.7s						
GKN	**Gorkha**	**18.06**	**135**	*e*P	**Pn**	**15 21 56.9**	**+0.1**
	6.9nm,0.4s						
PKIN	**Phulchoki**	**18.81**	**134**	*e*P	**P**	**15 22 00.2**	**-5.4**
GUN	**Gumba**	**18.81**	**132**	*e*P	**P**	**15 22 01.1**	**-4.6**
	14nm,0.7s						
PKI	**Pulchoki**	**18.82**	**134**	*e*P	**P**	**15 22 00.6**	**-5.1**
	6.6nm,0.6s						
JIRN	**Jiri**	**19.18**	**132**	*e*P	**P**	**15 22 02.9**	**-6.8**
	8.3nm,0.8s						
RAMN	**Ramite**	**19.96**	**133**	*e*P	P	15 22 06.5	-12
	15nm,0.6s						
TAPN	**Taplejung**	**20.27**	**130**	*e*P	P	15 22 09.3	-12
	15nm,1.1s						

MAN 21 15:34:47.0, 16°.39N×120°.36E, h10^{km}, mb3.6, ML2.3, MS1.8, 2C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAMP	**Sagada Mountai**	**0.86**	**37**	⇓*e*P	Pg	15 35 03.4	-0.2
SAMP				*e*S	Sg	15 35 15.2	+0.4
PCPH	**Palayan**	**1.08**	**139**	⇓*e*P	Pb	15 35 06.0	-1.8
BALP	**Baler**	**1.33**	**119**	⇑*e*P	Pn	15 35 11.3	-0.4
BALP				*e*S	Sg	15 35 30.0	+0.1
CAUP	**Cauayan**	**1.51**	**68**	⇑*e*P	Pg	15 35 15.8	-0.1
CAUP				*e*S	Sg	15 35 38.0	+2.5

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*IDC **21** 15:40:40.5±1.2, 25°.41N×93°.11E, h0^{km}, mb3.3/5, mbtmp3.3/5, ML4.5/1, Error ellipse: s-maj=41.0km s-min=19.5km az=80.0*

*NDI **21** 15:40:43.7±2.8, 24°.98N×92°.06E, h20^{km}, ML3.9, mb4.4(NEIC)*

*NEIC **21** 15:40:45.4±2.8, 25°.38N±0°.03×92°.56E±0°.07, h35^{km}±5^{km}, mb4.4/8, Error ellipse: s-maj=9.5km s-min=2.2km az=67.0*

ISC 21 15:40:45.1±1.1, 25°.06N±0°.05×92°.16E±0°.06, h42^{km}±11^{km}, n31, σ1^{s}.49/31, mb3.5/9, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	**Shillong**	**0.57**	**334**		**Pn**	**15 40 56.6**	**-0.4**
SHL	**Shillong**	**0.57**	**334**	*e*P	**Pn**	**15 40 56.8**	**-0.2**
SHL				*e*S	**Sn**	**15 41 05.3**	**-0.1**
SHL				IAML		15 41 06.2	
	comp=E,3µm,0.2s						
SHL				IAML		15 41 06.3	
	comp=N,5µm,0.2s						
SILR	**SILCHAR**	**0.64**	**115**	*e*P	**Pn**	**15 40 56.8**	**-1.0**
SILR				*e*S	**Sn**	**15 41 07.3**	**+0.5**
SILR				IAML		15 41 12.1	
	comp=N,3µm,0.3s						
SILR				IAML		15 41 13.8	
	comp=E,3µm,0.4s						
GUWA	**GUWAHATI**	**1.21**	**339**	*e*P	**Pn**	**15 41 06.0**	**+0.5**
GUWA				*e*S	**Sn**	**15 41 22.5**	**+1.8**
IMP	**Imphal**	**1.63**	**98**	*e*P	**Pn**	**15 41 12.0**	**+0.5**
IMP				*e*S	**Sn**	**15 41 35.0**	**+3.7**
TEZP	**TEZPUR**	**1.66**	**20**	*e*P	Pn	15 41 14.3	+2.6
TEZP				*e*S	Sn	15 41 36.0	+4.3
TEZP				IAML		15 41 37.8	
	comp=N,4µm,0.2s						
TEZP				IAML		15 41 39.6	
	comp=E,3µm,0.2s						
KOHI	**KOHIMA**	**1.88**	**69**	*e*P	Pn	15 41 17.9	+3.1
KOHI				*e*S	Sn	15 41 43.8	+6.4
KOHI				IAML		15 41 49.7	
	comp=N,718nm,0.6s						
KOHI				IAML		15 41 52.6	
	comp=E,1µm,0.5s						
BRDH	**Bariadhala**	**2.42**	**191**	Pn	Pn	15 41 29.9	+7.8
	comp=E,65nm,0.3s,baz=90,slow=8.6,SNR=8.4						
BRDH				Sn	Sn	15 42 07.8	+17
	comp=E,9.4nm,0.3s,baz=90,slow=22,SNR=6.5						
MOKO	**MOKOCHONG**	**2.47**	**59**	IAML		15 42 06.4	
	comp=N,674nm,0.5s						
MOKO				IAML		15 42 07.2	
	comp=E,766nm,0.5s						
ITAN	**ITANAGAR**	**2.51**	**34**	*e*P	Pn	15 41 24.3	+0.9
ITAN				*e*S	**Sn**	**15 41 53.7**	**+1.0**
ITAN				IAML		15 42 05.4	
	comp=E,843nm,0.2s						
SAIH	**SAIHA**	**2.67**	**163**	*e*P	Pn	15 41 23.9	-1.8
SAIH				*e*S	**Sn**	**15 41 55.2**	**-1.6**
ZIRO	**ZIRO**	**2.89**	**31**	*e*P	Pn	15 41 29.7	+0.9
ZIRO				*e*S	**Sn**	**15 42 02.4**	**+0.1**
ZIRO				IAML		15 42 04.5	
	comp=N,1µm,0.3s						
ZIRO				IAML		15 42 09.4	
	comp=E,1µm,0.3s						
GTK	**Tadong**	**3.91**	**306**	*e*P	**Pn**	**15 41 44.0**	**+1.2**
LKP	**Lekhapani**	**4.01**	**55**	*e*S	**Sn**	**15 42 30.0**	**+0.3**
LSA	**Lhasa**	**4.71**	**349**	Pn	**Pn**	**15 41 51.1**	**-3.0**
KDJ	**Kajisay**	**21.06**	**328**	P	**P**	**15 45 26.9**	**+1.1**
MK31	**Makanchi Array**	**23.08**	**343**	P	**P**	**15 45 45.6**	**-1.5**
MKAR	**Makanchi Array**	**23.08**	**343**	P	**P**	**15 45 47.0**	**-0.1**
	comp=E,0.4nm,0.5s,baz=155,slow=10,SNR=14						
	comp=E,0.4nm,0.5s						
MKAR	**Makanchi Array**	**23.08**	**343**	P	**P**	**15 45 45.7**	**-1.4**
KURBB	**Kurchatov Arra**	**27.61**	**341**	P	**P**	**15 46 28.8**	**+0.4**
	comp=E,0.2nm,0.6s,baz=162,slow=9.5,SNR=3.1						
	comp=E,0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**29.37**	**351**	P	**P**	**15 46 43.7**	**-0.3**
	comp=E,0.4nm,0.4s,baz=173,slow=13,SNR=2.7						
	comp=E,0.4nm,0.4s						
ABKAR	**Akbulak array**	**34.82**	**322**	P	**P**	**15 47 32.2**	**+0.4**
KBN	**Korca**	**60.42**	**304**	P	**P**	**15 50 51.0**	**+0.5**
WB0	**Warramunga Arr**	**60.60**	**133**	P	**P**	**15 50 50.0**	**-1.8**
WB0				IAmb	IAmb	15 51 08.5	
	comp=Z,5.1nm,1.2s						
WRA	**Warramunga Arr**	**60.69**	**134**	P	**P**	**15 50 51.3**	**-1.2**
	comp=Z,0.2nm,0.8s,baz=321,slow=7.6,SNR=2.0						
	comp=Z,0.2nm,0.8s						
WB2	**Warramunga Arr**	**60.70**	**134**	P	**P**	**15 50 50.2**	**-2.3**
WB2				IAmb	IAmb	15 51 33.1	
	comp=Z,5.9nm,1.2s						
BILL	**Bilibino**	**61.07**	**24**	P	**P**	**15 50 52.0**	**-2.4**
BILL				IAmb	IAmb	15 50 52.7	
	comp=Z,3.5nm,1.3s						
NWAO	**Narrogin (SRO)**	**62.41**	**156**	P	**P**	**15 51 06.0**	**+2.2**
COEN	**Coen**	**63.06**	**122**	P	**P**	**15 51 08.8**	**+0.4**
COEN				IAmb	IAmb	15 51 19.7	
	comp=Z,2.9nm,1.1s						
ASAR	**Alice Springs**	**63.10**	**137**	P	**P**	**15 51 08.0**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=322,slow=7.2,SNR=2.4						
	comp=Z,0.2nm,0.7s						
BMAR	**Burnt Mountain**	**78.67**	**19**	P	**P**	**15 52 43.2**	**+0.7**

WEL 21 16:01:09.6±0.4, 43°S±2°×17°3E±°, h5^{km}, M2.1/4, ML2.4/7, MLv2.1/4, Error ellipse: s-maj=0.0km s-min=0.0km az=113.5, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.34**	**73**	P	Pg	16 01 16.1	+0.1
KHZ				S	Sg	16 01 21.2	+0.8
GVZ	**Greta Valley S**	**0.45**	**187**	P	Pg	16 01 18.7	+0.4
GVZ				S	Sb	16 01 26.0	-1.2
LTZ	**Lake Taylor**	**0.67**	**247**	P	Pg	16 01 22.8	+0.3
LTZ				S	Sb	16 01 32.3	-1.1
AMCZ	**Amberley**	**0.74**	**207**	P	Pg	16 01 24.1	+0.3
THZ	**Tophouse**	**0.77**	**349**	P	Pg	16 01 24.8	+0.5
THZ				S	Sg	16 01 35.0	+0.7
BSWZ	**Blackbirch Sta**	**0.98**	**36**	P	Pb	16 01 29.0	-0.1
OXZ	**Oxford**	**1.13**	**224**	P	Pg	16 01 30.2	-0.9
OXZ				S	Sg	16 01 46.0	+0.2
MRNZ	**Matariki Terra**	**1.15**	**347**	P	Pn	16 01 32.1	-0.2
MQZ	**McQueen's Vall**	**1.23**	**195**	P	Pg	16 01 30.9	-2.4
DSZ	**Denniston Nort**	**1.24**	**308**	P	Pn	16 01 34.1	+0.5
DSZ				S	Sn	16 01 51.3	+0.6
INZ	**Inchbonnie**	**1.25**	**260**	P	Pg	16 01 33.4	-0.1
TUWZ	**Tuamarina**	**1.25**	**30**	P	Pg	16 01 33.5	-0.1
NNZ	**Nelson**	**1.31**	**9**	P	Pg	16 01 35.6	+0.8
RACZ	**Rakaia**	**1.40**	**210**	P	Pn	16 01 29.9	-5.9
TKNZ	**Takaka Hill**	**1.49**	**356**	P	Pn	16 01 37.3	+0.3
MHCZ	**Mount Hutt**	**1.52**	**228**	P	Pn	16 01 35.9	-1.6
TCW	**Tory Channel**	**1.57**	**34**	P	Pn	16 01 38.2	+0.1
QRZ	**Quartz Range**	**1.75**	**345**	P	Pb	16 01 41.7	-0.3
DUWZ	**D'Urville Isla**	**1.82**	**20**	P	Pb	16 01 42.8	-0.6
RPZ	**Rata Peaks**	**1.92**	**231**	P	Pn	16 01 41.7	-1.3

IDC 21 16:06:57.8±8.1, 13°.20N×92°.95E, h0^{km}, mb3.4/2, mbtmp3.2/3, ML3.4/1, Error ellipse: s-maj=170.9km s-min=48.3km az=105.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.79**	**47**	Pn	Pn	16 08 51.7	-0.7
	0.1nm,0.3s,baz=238,slow=15,SNR=2.2						
	0.2nm,0.3s						
H08S3	**Diego Garcia H**	**29.01**	**226**	T	T	16 44 04.9	
	baz=42						
H08S2	**Diego Garcia H**	**29.01**	**226**	T	T	16 44 04.9	
	baz=42						
H08S1	**Diego Carcia H**	**29.02**	**226**	T	T	16 44 04.9	
	baz=42						
WRA	**Warramunga Arr**	**52.38**	**128**	P	P	16 16 11.7	-0.4
	0.3nm,0.8s,baz=302,slow=9.6,SNR=5.0						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**54.28**	**132**	P	P	16 16 26.5	+0.3
	0.3nm,0.4s,baz=309,slow=7.3,SNR=11						
	0.3nm,0.4s						

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*IDC **21** 16:34:02.3±2.0, 34°.66N×140°.59E, h0^{km}, mb3.1/2, mbtmp3.4/4, ML3.2/2, Error ellipse: s-maj=54.3km s-min=27.3km az=77.0*

*JMA **21** 16:34:09.2±0.2, 34°.8N±0°.6×140°.1E±0°.7, h64^{km}±1^{km}, MV3.1/38, SE OFF BOSO PENINSULA*

ISC 21 16:34:08.7±1.1, 34°.88N±0°.05×140°.11E±0°.05, h70^{km}±8^{km}, n21, σ1^{s}.37/29, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO4	**Boso 4**	**0.22**	**59**	*i* P	**Pn**	**16 34 20.0**	**+0.7**
BSO4				X		16 34 27.9	
TATJ	**Tateyama 2**	**0.24**	**311**	*i* P	**Pn**	**16 34 20.3**	**+0.8**
TATJ				S	**Sn**	**16 34 28.2**	**+0.9**
JKUC	**kamogawauchiur**	**0.29**	**15**	*i* P	**Pn**	**16 34 20.0**	**+0.2**
JKUC				S	**Sn**	**16 34 27.9**	**-0.1**
KTR	**Katsuura**	**0.32**	**32**	P	**Pn**	**16 34 20.3**	**+0.3**
KTR				S	**Sn**	**16 34 28.2**	**-0.1**
BSO3	**Boso 3**	**0.34**	**102**	*i* P	**Pn**	**16 34 20.4**	**+0.6**
BSO3				X		16 34 29.0	
JIM2	**Oshima 3**	**0.58**	**254**	*i* P	**Pn**	**16 34 22.1**	**-0.2**
JIM2				S	**Sn**	**16 34 30.9**	**-1.4**
BSO1	**Boso 1**	**0.75**	**107**	P	**Pn**	**16 34 24.1**	**+0.6**
BSO1				X		16 34 34.8	
JTHY	**Toshimahigashi**	**0.76**	**243**	P	**Pn**	**16 34 24.6**	**+0.3**
JTHY				S	**Sn**	**16 34 35.1**	**-0.6**
JOD2	**Odawara 2**	**0.92**	**295**	*i* P	**Pn**	**16 34 26.3**	**+0.1**
JOD2				S	**Sn**	**16 34 38.5**	**-0.7**
JMYK	**Miyake Tsubota**	**0.94**	**210**	P	**Pn**	**16 34 26.2**	**-0.1**
JMYK				S	**Sn**	**16 34 38.5**	**-0.9**
JIZS	**Izushimoda**	**1.02**	**262**	*i* P	**Pn**	**16 34 27.8**	**+0.3**
JIZS				S	**Sn**	**16 34 40.9**	**-0.5**
JMKN	**Mikurajimanish**	**1.07**	**204**	P	**Pn**	**16 34 28.5**	**+0.4**
JMKN				S	**Sn**	**16 34 42.1**	**-0.4**
JFNN	**Fujinakano**	**1.21**	**286**	S	**Sn**	**16 34 46.4**	**+0.7**
JYN	**Shimob**	**1.42**	**296**	*i* P	**Pn**	**16 34 33.7**	**+1.0**
JYN				S	**Sn**	**16 34 51.9**	**+1.2**
MJAR	**Matsushiro Arr**	**2.27**	**318**	Pn	**Pn**	**16 34 45.5**	**+1.5**
	3.3nm,0.3s,baz=132,slow=20,SNR=123						
MJAR				Sn	**Sn**	**16 35 12.0**	**+1.1**
	2.4nm,0.3s,baz=160,slow=14,SNR=4.4						
	31nm,0.4s						
ASAJ	**Asahikawa**	**9.43**	**11**	Pn	**Pn**	**16 36 21.3**	**-0.3**
	0.3nm,0.3s,baz=193,slow=32,SNR=2.4						
ASAJ				Sn	**Sn**	**16 38 00.3**	**-5.6**
	0.1nm,0.3s,baz=142,slow=27,SNR=2.4						
	6.1nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**28.07**	**116**	T	T	17 09 27.7	
	baz=310,slow=74						
H11N1	**WAKE ISLAND Hy**	**28.07**	**116**	T	T	17 09 09.8	
	baz=310						
H11N3	**WAKE ISLAND Hy**	**28.08**	**116**	T	T	17 09 11.2	
	baz=310,slow=74						
MKAR	**Makanchi Array**	**44.40**	**304**	P	P	16 42 18.9	+6.5
	0.1nm,0.5s,baz=72,slow=9.3,SNR=1.5						
	0.1nm,0.5s						
WRA	**Warramunga Arr**	**54.79**	**187**	P	**P**	**16 43 32.4**	**+1.0**
	0.3nm,0.6s,baz=5.8,slow=7.5,SNR=5.7						
	0.3nm,0.6s						

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*IDC **21** 16:34:47.9±3.9, 18°.75S×177°.64W, h536^{km}±43^{km}, mb2.8/7, mbtmp3.7/8, Error ellipse: s-maj=25.6km s-min=15.5km az=109.0*

ISC 21 16:34:49.0±0.8, 18°.7S±0°.1×177°.7W±0°.2, h550^{km}, n10, σ0^{s}.69/13, mb3.2/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**19.98**	**192**	P	**P**	**16 38 43.7**	**-1.1**
	2.0nm,0.3s,baz=337,slow=2.7,SNR=7.5						
URZ				S	**S**	**16 41 57.1**	**+1.2**
	7.6nm,1.0s,baz=305,slow=9.7,SNR=1.6						
WRA	**Warramunga Arr**	**45.14**	**260**	P	**P**	**16 42 17.3**	**+0.2**
	0.5nm,0.6s,baz=96,slow=7.3,SNR=15						
WRA				PcP	**PcP**	**16 43 45.9**	**0.0**
	0.3nm,0.8s,baz=90,slow=3.5,SNR=1.3						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**45.21**	**255**	P	**P**	**16 42 18.0**	**+0.3**
	0.4nm,0.4s,baz=94,slow=7.1,SNR=18						
ASAR				PcP	**PcP**	**16 43 45.9**	**-0.3**
	0.2nm,0.5s,baz=105,slow=3.9,SNR=5.0						
	0.4nm,0.4s						
PETK	**Petropavlovsk-**	**74.63**	**345**	P	**P**	**16 45 32.3**	**+0.2**
	1.0nm,0.6s,baz=134,slow=8.5,SNR=5.7						
	1.0nm,0.6s						
NVAR	**Mina Array Bea**	**79.56**	**43**	P	**P**	**16 45 59.9**	**+0.3**
	0.2nm,0.3s,baz=208,slow=11,SNR=2.0						
	0.2nm,0.3s						
ILAR	**Eielson Array**	**86.53**	**13**	P	**P**	**16 46 33.0**	**-0.5**
	0.3nm,0.4s,baz=226,slow=4.8,SNR=10						
	0.3nm,0.4s						
PDAR	**Pinedale Array**	**87.49**	**43**	P	**P**	**16 46 39.1**	**+0.3**
	0.2nm,0.6s,baz=215,slow=7.7,SNR=2.3						
	0.2nm,0.6s						
YKA	**Yellowknife Ar**	**94.79**	**25**	P	**P**	**16 47 12.3**	**+0.6**
	0.1nm,0.6s,baz=234,slow=5.4,SNR=1.9						
	0.1nm,0.6s						
MKAR	**Makanchi Array**	**110.17**	**314**	PKiKP	**PKiKP**	**16 52 17.7**	**-0.8**
	0.1nm,0.5s,baz=90,slow=0.6,SNR=4.8						
ARCES	**ARCESS Array B**	**127.23**	**350**	PKP	**PKPdf**	**16 52 50.1**	**-0.5**
	2.6nm,0.9s,baz=12,slow=6.2,SNR=5.0						

ROM 21 16:37:54.2±0.0, 42°.770N±0°.002×13°.066E±0°.003, h11^{km}, Md1.1/2, ML1.0/5, 1C-1D, Error ellipse: s-maj=0.2km s-min=0.2km az=287.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.02**	**221**	⇓P	Pg	16 37 56.5	+0.3
T1212				S	Sg	16 37 57.8	+0.1
T1214	**Arquata del Tr**	**0.11**	**95**	P	Pg	16 37 57.5	+0.4
T1214				S	Sg	16 37 59.6	+0.4
T1218	**Civita (PG)**	**0.11**	**160**	P	Pg	16 37 57.5	+0.4
T1218				S	Sg	16 37 59.7	+0.5
T1217	**Poggiodomo (PG**	**0.12**	**240**	⇑P	Pg	16 37 57.7	+0.5
T1217				S	Sg	16 37 59.9	+0.6
T1245	**Castelsantange**	**0.12**	**46**	P	Pg	16 37 57.9	+0.5
T1245				S	Sg	16 38 00.1	+0.4
T1245				AML	AML		
	comp=E,474µm,0.7s						
T1245				AML	AML		
	comp=N,304µm,0.2s						
T1245				AML	AML		
	comp=E,474µm,1.3s						
T1245				AML	AML		
	comp=N,304µm,1.8s						
T1245				END			
T1216	**Preci, Frazion**	**0.13**	**344**	P	Pg	16 37 57.8	+0.5
T1216				S	Sg	16 38 00.1	+0.6
T1216				AML	AML		
	comp=E,122µm,0.1s						
T1216				AML	AML		
	comp=E,122µm,0.1s						
T1216				AML	AML		
	comp=N,203µm,0.4s						
T1216				END			
MC2	**Monte Cornacci**	**0.17**	**33**	P	Pg	16 37 58.7	+0.6
MC2				S	Sg	16 38 01.8	+1.0
MMO1	**Montemonaco**	**0.23**	**56**	P	Pg	16 37 59.6	+0.5
MMO1				S	Sg	16 38 03.4	+1.0
T1256	**Bolognola (MC)**	**0.26**	**26**	P	Pb	16 38 00.5	-0.6
T1256				S	Sb	16 38 04.6	-1.2
FDMO	**Fiordimonte**	**0.27**	**3**	P	Pg	16 38 00.3	+0.6
FDMO				S	Sb	16 38 04.6	-1.1
FDMO				AML	AML		
	comp=N,27µm,0.0s						
FDMO				AML	AML		
	comp=E,15µm,0.2s						
RM33	**Pellescritta (**	**0.28**	**157**	P	Pg	16 38 00.5	+0.5
RM33				S	Sg	16 38 05.0	+1.1
T1211	**Morro Reatino**	**0.28**	**213**	P	Pg	16 38 00.6	+0.6
T1211				S	Sg	16 38 05.0	+1.1
T1241	**Roccafluvione,**	**0.28**	**72**	P	Pg	16 38 00.4	+0.4
T1241				S	Sb	16 38 05.2	-1.0
T1241				AML	AML		
	comp=N,22µm,0.2s						
T1219	**Muccia, Frazio**	**0.29**	**351**	P	Pg	16 38 00.5	+0.4
T1219				S	Sg	16 38 05.2	+1.1
T1219				AML	AML		
	comp=N,23µm,0.2s						
MOMA	**Monte Martano**	**0.37**	**276**	AML	AML		
	comp=E,29µm,0.2s						
MOMA				AML	AML		
	comp=N,24µm,1.2s						

ROM 21 16:38:54.0±0.0, 42°.939N±0°.003×12°.994E±0°.004, h11^{km}, ML1.3/9, 1D, Error ellipse: s-maj=0.3km s-min=0.2km az=236.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.05**	**159**	P	Pg	16 38 56.6	+0.4
T1216				S	Sg	16 38 58.2	+0.4
T1216				AML	AML		
	comp=E,676µm,0.5s						
T1216				AML	AML		
	comp=N,776µm,0.3s						
CESI	**CESI - Serrava**	**0.09**	**315**	P	Pg	16 38 57.2	+0.5
CESI				S	Sg	16 38 59.3	+0.6
CESI				AML	AML		
	comp=E,244µm,0.2s						
CESI				AML	AML		
	comp=N,324µm,0.1s						
T1245	**Castelsantange**	**0.17**	**120**	⇓P	Pg	16 38 58.2	+0.4
T1245				S	Sg	16 39 01.3	+0.8
T1245				AML	AML		
	comp=N,218µm,1.1s						
T1245				AML	AML		
	comp=N,218µm,0.9s						
T1245				AML	AML		
	comp=E,150µm,0.2s						
T1256	**Bolognola (MC)**	**0.18**	**68**	P	Pg	16 38 58.7	+0.6
T1256				S	Sg	16 39 01.8	+0.9
T1256				AML	AML		
	comp=E,68µm,1.4s						
T1256				AML	AML		
	comp=N,102µm,0.1s						
T1220	**Camerino, Fraz**	**0.18**	**22**	P	Pg	16 38 58.5	+0.5
T1220				S	Sg	16 39 01.9	+1.0
T1220				AML	AML		
	comp=E,449µm,0.3s						
T1220				AML	AML		
	comp=N,502µm,0.9s						
T1220				AML	AML		
	comp=N,502µm,1.1s						
T1212	**Cascia, Frazio**	**0.19**	**169**	P	Pg	16 38 58.6	+0.4
T1212				S	Sg	16 39 01.9	+0.9
T1212				AML	AML		
	comp=E,60µm,1.4s						
T1212				AML	AML		
	comp=N,86µm,1.3s						
T1217	**Poggiodomo (PG**	**0.23**	**191**	P	Pg	16 38 59.3	+0.4
T1217				S	Sg	16 39 03.2	+1.1
T1214	**Arquata del Tr**	**0.24**	**139**	P	Pg	16 38 59.3	+0.3
T1214				S	Sg	16 39 03.3	+0.8
MMO1	**Montemonaco**	**0.25**	**99**	P	Pg	16 38 59.5	+0.4
MMO1				S	Sg	16 39 03.7	+1.1
ASSB	**Assisi San Ben**	**0.27**	**293**	P	Pg	16 38 59.7	+0.2
ASSB				S	Sg	16 39 04.0	+0.9
ASSB				AML	AML		
	comp=E,90µm,0.7s						
ASSB				AML	AML		
	comp=N,51µm,0.1s						
ASSB				AML	AML		
	comp=E,90µm,1.3s						
T1241	**Roccafluvione,**	**0.33**	**104**	P	Pg	16 39 01.0	+0.3
T1241				S	Sb	16 39 06.4	-0.9
T1211	**Morro Reatino**	**0.42**	**194**	P	Pg	16 39 02.6	+0.3
T1211				S	Sb	16 39 09.3	-0.4
TERO	**Teramo**	**0.55**	**125**	P	Pg	16 39 04.7	0.0
TERO				S	Sb	16 39 12.9	-0.6
TERO				AML	AML		
	comp=E,15µm,1.3s						
TERO				AML	AML		
	comp=N,15µm,1.1s						
TERO				AML	AML		
	comp=N,15µm,0.9s						

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*ISK **21** 16:56:18.7, 39°.56N×26°.20E, h7^{km}, ML2.3/6*

*DDA **21** 16:56:19.9±0.0, 39°.56N×26°.12E, h6^{km}, ML2.5*

*THE **21** 16:56:20.2, 39°.56N×26°.11E, h10^{km}±1^{km}, ML2.1/10, Error ellipse: s-maj=2.0km s-min=0.9km az=118.0*

*ATH **21** 16:56:20.7, 39°.55N×26°.10E, h12^{km}±1^{km}, ML2.3/7, Error ellipse: s-maj=2.2km s-min=0.8km az=247.0*

ISC 21 16:56:19.9±0.8, 39°.57N±0°.01×26°.12E±0°.02, h10^{km}±6^{km}, n47, σ0^{s}.61/88, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.07**	**171**	P	**Pg**	**16 56 21.9**	**-0.3**
KOCA				S	**Sg**	**16 56 23.1**	**-0.6**
BOZC	**Bozcaada**	**0.28**	**349**	P	**Pg**	**16 56 25.9**	**+0.3**
BOZC				P	**Pg**	**16 56 25.9**	**+0.3**
BOZC				S	**Sg**	**16 56 29.9**	**+0.5**
BOZC				S	**Sb**	**16 56 30.2**	**-1.6**
EZN	**Ezine**	**0.30**	**31**	P	**Pg**	**16 56 26.3**	**+0.3**
EZN				S	**Sg**	**16 56 30.5**	**+0.5**
	370nm,0.1s						
PRK	**Paraskevi**	**0.34**	**160**	P	**Pg**	**16 56 27.1**	**+0.4**
PRK				S	**Sg**	**16 56 32.0**	**+0.8**
	2µm,0.4s						
PRK	**Paraskevi**	**0.34**	**160**	P	**Pg**	**16 56 27.1**	**+0.4**
PRK				S	**Sg**	**16 56 32.1**	**+0.9**
PRK				AML	AML	16 56 33.7	
	comp=E,3883µm,0.4s						
PRK				AML	AML	16 56 34.0	

	comp=N,3422µm,0.4s						
BAYC	**CANAKKALE_Bayr**	0.37	62	P	Pg	16 56 27.5	+0.3
BAYC				S	Sg	16 56 32.7	+0.6
SIGR	**SIGRI**	0.41	210	P	Pg	16 56 28.0	0.0
SIGR				S	Sg	16 56 34.0	+0.5
	comp=N,302nm,0.2s						
SIGR	**SIGRI**	0.41	210	Pg	Pg	16 56 28.0	0.0
SIGR				Sg	Sg	16 56 34.3	+0.8
SIGR	**SIGRI**	0.41	210	P	Pg	16 56 27.9	0.0
SIGR				S	Sg	16 56 33.7	+0.2
SIGR				AML	AML	16 56 36.3	
	comp=N,598µm,0.3s						
SIGR				AML	AML	16 56 36.3	
	comp=E,620µm,0.2s						
ECEA	**Canakkale, Ece**	0.48	5	P	Pg	16 56 29.7	+0.5
ECEA				S	Sb	16 56 37.2	-0.3
AYVA	**Ayvalik**	0.51	120	P	Pg	16 56 30.0	+0.2
AYVA				S	Sb	16 56 37.8	-0.6
COMU	**Canakkale**	0.59	27	Pg	Pg	16 56 30.3	-1.2
GOKA	**anakkale-Gk**	0.64	345	P	Pg	16 56 32.4	0.0
GOKA				S	Sg	16 56 41.4	+0.6
GOKA				*i* AML	AML	16 56 42.0	
	comp=E,218nm,0.2s						
GOKA				*i* AML	AML	16 56 42.0	
	comp=E,182nm,0.2s						
BUHA	**Balikesir, Bur**	0.74	95	P	Pg	16 56 34.3	+0.1
BUHA				S	Sg	16 56 44.0	+0.2
LIA	**Limnos Island**	0.80	295	P	Pg	16 56 35.5	+0.2
LIA				S	Sb	16 56 46.7	+0.1
	comp=E,232nm,0.3s						
LIA	**Limnos Island**	0.80	295	P	Pg	16 56 35.2	-0.1
LIA				S	Sb	16 56 46.6	-0.1
LIA				AML	AML	16 56 47.0	
	comp=E,336µm,0.3s						
LIA				AML	AML	16 56 50.2	
	comp=N,558µm,0.4s						
CANM	**Can-anakkale**	0.84	58	Pg	Pg	16 56 34.5	-1.6
KARB	**zmir-Karabur**	0.93	166	P	Pb	16 56 38.3	+0.1
KARB				S	Sb	16 56 51.2	+0.7
KARB				*i* AML	AML	16 56 53.0	
	comp=N,121nm,0.4s						
KARB				*i* AML	AML	16 56 53.0	
	comp=N,210nm,0.4s						
ZEDA	**zmir-Bergama**	0.95	129	P	Pg	16 56 38.3	0.0
ZEDA				S	Sb	16 56 52.2	+1.0
SMTH	**Samothraki Isl**	1.01	333	P	Pg	16 56 39.5	+0.2
SMTH				S	Sg	16 56 53.0	+0.5
	comp=N,110nm,0.2s						
SMTH	**Samothraki Isl**	1.01	333	P	Pg	16 56 39.3	0.0
SMTH				S	Sb	16 56 53.5	+0.7
SMTH				AML	AML	16 56 55.5	
	comp=E,201µm,0.3s						
SMTH				AML	AML	16 56 56.2	
	comp=N,238µm,0.2s						
PSRA	**Psara**	1.11	203	P	Pb	16 56 41.4	+0.2
PSRA				S	Sb	16 56 55.5	-0.2
CAVK	**Edirne/Enez-Ca**	1.12	2	P	Pb	16 56 41.4	0.0
CAVK				S	Sn	16 56 57.2	0.0
CAVK				*i* AML	AML	16 57 04.0	
	comp=N,82nm,0.7s						
ENEZ	**Enez**	1.17	1	P	Pb	16 56 42.2	+0.1
ENEZ				S	Sn	16 56 59.2	+1.0
	comp=N,142nm,0.3s						
BALY	**Balya**	1.17	81	P	Pb	16 56 42.2	0.0
BALY				S	Sb	16 56 57.4	0.0
BALY				*i* AML	AML	16 57 01.0	
	comp=N,78nm,0.3s						
CHOS	**Chios island**	1.18	183	P	Pb	16 56 42.3	-0.1
CHOS				S	Sb	16 56 56.8	-1.0
	comp=N,182nm,0.4s						
CHOS	**Chios island**	1.18	183	P	Pb	16 56 41.9	-0.5
CHOS				S	Sb	16 56 57.3	-0.5
CHOS				AML	AML	16 57 02.3	
	comp=N,296µm,0.6s						
CHOS				AML	AML	16 57 03.8	
	comp=E,432µm,0.2s						
KRBG	**Karabiga-Canak**	1.22	47	Pn	Pn	16 56 41.3	-1.7
STEP	**BALIKESIR_Sava**	1.25	98	P	Pb	16 56 44.0	+0.4
STEP				S	Sn	16 57 00.6	+0.3
STEP				*i* AML	AML	16 57 05.0	
	comp=E,72nm,0.5s						
STEP				*i* AML	AML	16 57 06.0	
	comp=E,67nm,0.5s						
URLA	**Izmir**	1.26	163	P	Pn	16 56 43.0	-0.6
URLA				S	Sb	16 56 59.9	-0.2
KNL	**Balıkesir**	1.29	57	P	Pn	16 56 44.3	+0.4
KNL				S	Sg	16 57 02.4	+1.1
KNL				*i* AML	AML	16 57 03.0	
	comp=E,154nm,0.5s						
KNL				*i* AML	AML	16 57 04.0	
	comp=E,102nm,0.6s						
GONE	**Gonen-Balikesi**	1.29	68	Pn	Pn	16 56 43.5	-0.5
KESN	**Edirne-Kesan**	1.33	19	P	Pn	16 56 44.8	0.0
KESN				S	Sb	16 57 02.8	+0.5
KESN				*i* AML	AML	16 57 05.0	
	comp=E,98nm,0.3s						
KESN				*i* AML	AML	16 57 07.0	
	comp=E,87nm,0.2s						
ALN	**Alexandroupoli**	1.33	357	P	Pn	16 56 44.7	+0.2
ALN				S	Sb	16 57 01.3	-0.7
	comp=E,98nm,0.4s						
ALN	**Alexandroupoli**	1.33	357	Pn	Pn	16 56 44.3	-0.2
ALN	**Alexandroupoli**	1.33	357	P	Pn	16 56 44.5	0.0
ALN				S	Sb	16 57 01.1	-0.8
ALN				AML	AML	16 57 03.7	
	comp=E,278µm,0.5s						
ALN				AML	AML	16 57 05.0	
	comp=N,112µm,0.3s						
ZEYE	**Izmir, Urla-Ze**	1.36	167	P	Pn	16 56 44.7	-0.2
ZEYE				S	Sb	16 57 01.8	-1.0
BKES	**Balkesir-Mer**	1.40	83	P	Pb	16 56 46.4	+0.3
BKES				S	Sn	16 57 04.1	0.0
THAS	**Thassos island**	1.50	314	P	Pn	16 56 46.5	-0.2
THAS				S	Sn	16 57 05.2	-1.1
	comp=N,70nm,0.2s						
THAS	**Thassos island**	1.50	314	P	Pn	16 56 46.5	-0.2
THAS				S	Sn	16 57 05.2	-1.1
THAS				AML	AML	16 57 09.4	
	comp=N,177µm,0.5s						
THAS				AML	AML	16 57 10.7	
	comp=E,111µm,0.3s						
EDC	**Edincik**	1.55	59	Pn	Pn	16 56 46.1	-1.4
UKOP	**Uzunkopru-Edir**	1.61	14	Pn	Pn	16 56 47.6	-0.7
RDO	**Rodhopi**	1.64	344	P	Pn	16 56 49.3	+0.5
RDO				S	Sn	16 57 09.8	-0.1
	comp=E,20nm,0.3s						
RDO	**Rodhopi**	1.64	344	Pn	Pn	16 56 49.2	+0.5
RDO	**Rodhopi**	1.64	344	P	Pn	16 56 49.5	+0.7
RDO				S	Sn	16 57 10.1	+0.3
BAND	**Balkesir-Ban**	1.71	62	P	Pg	16 56 52.6	-0.1
BAND				S	Sn	16 57 11.9	+0.3
DURS	**Dursunbey**	1.82	88	P	Pn	16 56 52.0	+0.7
DURS				S	Sb	16 57 15.5	-0.6

ISK ***21*** *16:57:47.3, 39°.56N×26°.14E, h8^{km}, ML2.4/6*

DDA ***21*** *16:57:48.0±0.0, 39°.56N×26°.15E, h4^{km}±1^{km}, ML2.6*

ATH ***21*** *16:57:48.5, 39°.54N×26°.06E, h13^{km}±1^{km}, ML2.3/7, Error ellipse: s-maj=2.3km s-min=0.8km az=232.0*

THE ***21*** *16:57:48.1, 39°.56N×26°.10E, h8^{km}±1^{km}, ML2.2/10, Error ellipse: s-maj=1.4km s-min=0.6km az=150.0*

ISC 21 16:57:47.8±0.8**, 39°.57N**±0°.01×**26°.11E**±0°.02**, h10**^{km}±6^{km}**, n45, σ0^{s}.58**/82**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	0.07	163	P	Pg	16 57 49.7	-0.2
KOCA				S	Sg	16 57 51.0	-0.6
BOZC	**Bozcaada**	0.28	350	P	Pg	16 57 53.8	+0.3
BOZC				P	Pg	16 57 53.8	+0.3
BOZC				S	Sg	16 57 57.7	+0.4
EZN	**Ezine**	0.31	32	P	Pg	16 57 54.2	+0.2
EZN				S	Sg	16 57 58.4	+0.3
	448nm,0.1s						
PRK	**Paraskevi**	0.34	159	P	Pg	16 57 54.9	+0.3
PRK				S	Sg	16 57 59.9	+0.8
	2µm,0.4s						
PRK	**Paraskevi**	0.34	159	P	Pg	16 57 54.9	+0.3
PRK				S	Sg	16 58 00.2	+1.1
PRK				AML	AML	16 58 01.6	
	comp=E,4678µm,0.4s						
PRK				AML	AML	16 58 01.8	
	comp=N,4165µm,0.4s						
BAYC	**CANAKKALE_Bayr**	0.38	62	P	Pg	16 57 55.4	+0.1
BAYC				S	Sg	16 58 00.3	0.0
SIGR	**SIGRI**	0.41	210	P	Pg	16 57 55.9	+0.1
SIGR				S	Sg	16 58 01.4	+0.3
	comp=N,382nm,0.2s						
SIGR	**SIGRI**	0.41	210	Pg	Pg	16 57 55.8	+0.1
SIGR				Sg	Sg	16 58 02.1	+1.0
SIGR	**SIGRI**	0.41	210	P	Pg	16 57 55.8	+0.1
SIGR				S	Sg	16 58 00.3	-0.8
SIGR				AML	AML	16 58 04.1	
	comp=N,696µm,0.3s						
SIGR				AML	AML	16 58 04.2	
	comp=E,827µm,0.2s						
ECEA	**Canakkale, Ece**	0.48	6	P	Pg	16 57 57.6	+0.4
ECEA				S	Sb	16 58 05.3	-0.2
AYVA	**Ayvalik**	0.52	120	P	Pg	16 57 57.9	+0.1
AYVA				S	Sg	16 58 05.2	+0.6
COMU	**Canakkale**	0.60	27	Pg	Pg	16 57 59.3	-0.2
GOKA	**anakkale-Gk**	0.65	346	P	Pg	16 58 00.6	+0.3
GOKA				S	Sg	16 58 09.3	+0.5
BUHA	**Balikesir, Bur**	0.75	95	P	Pg	16 58 02.0	-0.2
BUHA				S	Sg	16 58 11.9	-0.1
LIA	**Limnos Island**	0.79	295	P	Pg	16 58 03.3	+0.2
LIA				S	Sg	16 58 14.4	+1.0
	comp=E,318nm,0.2s						
LIA	**Limnos Island**	0.79	295	P	Pg	16 58 03.3	+0.2
LIA				S	Sg	16 58 13.7	+0.3
LIA				AML	AML	16 58 17.5	
	comp=E,748µm,0.3s						
LIA				AML	AML	16 58 18.9	
	comp=N,515µm,0.2s						
CANM	**Can-anakkale**	0.85	58	Pg	Pg	16 58 03.4	-0.8
CANM				Sg	Sb	16 58 15.9	-0.2
KARB	**zmir-Karabur**	0.93	165	P	Pb	16 58 06.2	+0.2
KARB				S	Sb	16 58 19.4	+1.0
KARB				*i* AML	AML	16 58 21.0	
	comp=N,191nm,0.3s						
KARB				*i* AML	AML	16 58 21.0	
	comp=N,253nm,0.4s						
ZEDA	**zmir-Bergama**	0.96	128	P	Pg	16 58 06.0	-0.3
ZEDA				S	Sb	16 58 20.0	+0.8
SMTH	**Samothraki Isl**	1.01	334	P	Pg	16 58 07.4	+0.2
SMTH				S	Sg	16 58 21.2	+0.8
	comp=N,90nm,0.2s						
SMTH	**Samothraki Isl**	1.01	334	P	Pg	16 58 07.3	0.0
SMTH				S	Sb	16 58 21.5	+0.8
SMTH				AML	AML	16 58 23.5	
	comp=E,135µm,0.2s						
SMTH				AML	AML	16 58 24.1	
	comp=N,213µm,0.2s						
CAVK	**Edirne/Enez-Ca**	1.13	2	P	Pg	16 58 07.7	-1.8
CAVK				S	Sn	16 58 25.8	+0.7
ENEZ	**Enez**	1.17	1	P	Pb	16 58 10.1	0.0
ENEZ				S	Sn	16 58 27.3	+1.1
	comp=N,135nm,0.4s						
BALY	**Balya**	1.18	81	P	Pg	16 58 10.3	-0.1
BALY				S	Sb	16 58 25.7	+0.2
BALY				*i* AML	AML	16 58 28.0	
	comp=N,96nm,0.5s						
CHOS	**Chios island**	1.18	182	P	Pg	16 58 10.1	-0.3
CHOS				S	Sb	16 58 26.2	+0.6
	comp=N,225nm,0.2s						
CHOS	**Chios island**	1.18	182	P	Pg	16 58 09.7	-0.7
CHOS				S	Sg	16 58 25.0	-0.7
CHOS				AML	AML	16 58 31.6	
	comp=E,583µm,0.2s						
CHOS				AML	AML	16 58 31.6	
	comp=N,332µm,0.3s						
KRBG	**Karabiga-Canak**	1.23	47	Pn	Pb	16 58 10.5	-0.6
STEP	**BALIKESIR_Sava**	1.26	98	P	Pb	16 58 11.2	-0.4
STEP				S	Sn	16 58 29.6	+1.2
STEP				*i* AML	AML	16 58 32.0	
	comp=N,102nm,0.3s						
URLA	**Izmir**	1.26	163	P	Pn	16 58 10.7	-0.8
URLA				S	Sb	16 58 27.8	-0.1
URLA				*i* AML	AML	16 58 30.0	
	comp=N,109nm,0.3s						
KNL	**Balıkesir**	1.29	57	P	Pn	16 58 12.3	+0.4
KNL				S	Sg	16 58 29.4	-0.1
KNL				*i* AML	AML	16 58 31.0	
	comp=N,165nm,0.5s						
KNL				*i* AML	AML	16 58 32.0	
	comp=N,106nm,0.5s						
GONE	**Gonen-Balikesi**	1.30	68	Pn	Pn	16 58 11.7	-0.3
ALN	**Alexandroupoli**	1.33	358	P	Pn	16 58 12.6	+0.2
ALN				S	Sb	16 58 29.3	-0.7
	comp=N,72nm,0.4s						
ALN	**Alexandroupoli**	1.33	358	Pn	Pn	16 58 12.4	-0.1
ALN	**Alexandroupoli**	1.33	358	P	Pn	16 58 12.4	-0.1
ALN				S	Sb	16 58 29.1	-0.8
ALN				AML	AML	16 58 31.6	
	comp=E,216µm,0.5s						
ALN				AML	AML	16 58 32.9	
	comp=N,75µm,0.4s						
KESN	**Edirne-Kesan**	1.33	19	P	Pn	16 58 12.5	-0.3
KESN				S	Sb	16 58 30.7	+0.4
KESN				*i* AML	AML	16 58 32.0	
	comp=N,105nm,0.2s						
KESN				*i* AML	AML	16 58 33.0	
	comp=N,124nm,0.3s						
ZEYE	**Izmir, Urla-Ze**	1.36	167	P	Pn	16 58 12.8	0.0
ZEYE				S	Sb	16 58 30.0	-0.7
ZEYE				*i* AML	AML	16 58 36.0	
	comp=N,77nm,0.4s						
ZEYE				*i* AML	AML	16 58 37.0	
	comp=N,76nm,0.2s						
BLCB	**Balcova**	1.38	148	P	Pn	16 58 12.9	-0.2
BKES	**Balkesir-Mer**	1.41	83	P	Pb	16 58 14.4	+0.2
BKES				S	Sb	16 58 31.9	-0.4
THAS	**Thassos island**	1.49	315	P	Pn	16 58 14.1	-0.5
THAS				S	Sn	16 58 33.3	-0.9
	comp=N,65nm,0.3s						
THAS	**Thassos island**	1.49	315	P	Pn	16 58 14.2	-0.5
THAS				S	Sn	16 58 32.7	-1.4
THAS				AML	AML	16 58 37.6	
	comp=N,153µm,0.3s						
THAS				AML	AML	16 58 38.6	
	comp=E,108µm,0.3s						
EDC	**Edincik**	1.56	59	Pn	Pn	16 58 16.0	+0.5
UKOP	**Uzunkopru-Edir**	1.61	14	Pn	Pn	16 58 16.9	+0.6
RDO	**Rodhopi**	1.64	345	P	Pn	16 58 16.7	0.0
RDO				S	Sn	16 58 37.6	-0.2
	comp=E,18nm,0.2s						
RDO	**Rodhopi**	1.64	345	Pn	Pn	16 58 17.3	+0.6
KAVA	**Kavala**	1.88	320	P	Pn	16 58 19.5	-0.5

DNK ***21*** *17:17:18.9±1.4, 51°.46N×15°.68E, h10^{km}±42^{km}, ML2.8*

IPEC ***21*** *17:17:19.2±0.3, 51°.50N×16°.14E, h1^{km}, ML2.9/5, Error ellipse: s-maj=2.1km s-min=1.1km az=36.0*

IDC ***21*** *17:17:19.2±0.6, 51°.51N×15°.92E, h0^{km}, mb3.3/3, mbtmp3.4/12, ML3.3/9, Error ellipse: s-maj=9.7km s-min=5.9km az=101.0*

VIE ***21*** *17:17:20.2, 51°.44N×16°.09E, h0^{km}, mb3.0/17, ml3.3/14, ms3.7/2 74 km WNW of Wroclaw Suspected Mining induced.*

BGR ***21*** *17:17:20.1±0.6, 51°.47N×16°.09E, h1^{km}, ML3.4/12, Error ellipse: s-maj=6.7km s-min=3.3km az=19.0*

UPP ***21*** *17:17:22.9±3.3, 51°.74N×15°.47E, h0^{km}, ML2.2*

LDG ***21*** *17:17:22.4±0.6, 51°.24N×16°.00E, h1^{km}, Ml3.8/6, Error ellipse: s-maj=15.0km s-min=5.1km az=19.0, Suspected Mining induced.*

ISC 21 17:17:17.2±0.5**, 51°.58N**±0°.03×**16°.10E**±0°.02**, h0**^{km}**, n119, σ1^{s}.58**/184**, mb3.2**/3**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.75	171	*i* Pg	Pg	17 17 32.4	+0.9
KSP				*e*Sg	Sg	17 17 41.1	-0.2
KSP	**Ksiaz**	0.75	171	*e*Pg	Pg	17 17 32.5	+0.9
CHVC	**Chvalec**	1.00	182	*e*PG	Pb	17 17 37.1	-0.2
CHVC				*e*SG	Sg	17 17 48.5	-0.7
	comp=Z,149nm,0.6s						
OSTC	**Ostas**	1.03	176	*e*PG	Pb	17 17 37.8	-0.1
OSTC				*e*SG	Sg	17 17 50.0	-0.3
	comp=Z,171nm,0.4s						
UPC	**Upice**	1.08	183	*e*PG	Pb	17 17 38.4	-0.3
UPC				*e*SG	Sg	17 17 51.4	-0.4
DPC	**Dobruska-Polom**	1.24	173	*e*PG	Pg	17 17 41.1	+0.1
DPC				*e*SG	Sg	17 17 56.0	-1.1
	comp=Z,158nm,0.3s						
DPC	**Dobruska-Polom**	1.24	173	*e*Pg	Pg	17 17 41.2	+0.1
DPC				*e*Sg	Sg	17 17 55.4	-1.7
PVCC	**Panska Ves**	1.43	223	*e*PG	Pb	17 17 45.4	+0.7
PVCC				*e*SG	Sn	17 18 04.0	+0.1
	comp=Z,402nm,0.2s						
BRG	**Berggiesshubel**	1.53	243	Pn	Pb	17 17 46.2	-0.3
BRG				Pg	Pg	17 17 48.1	+1.6
BRG				Sg	Sn	17 18 07.7	+1.3
BRG				Amp		17 18 09.1	
	comp=Z,257nm,0.4s						
KRLC	**Kraliky**	1.57	164	*e*PG	Pn	17 17 46.6	+0.2
KRLC				*e*SG	Sn	17 18 06.5	-0.9
	comp=Z,144nm,0.4s						
RUE	**Ruedersdorf**	1.69	303	*e*P	Pb	17 17 48.6	-0.5
FBE	**Freiberg**	1.85	250	*e*Pn	Pn	17 17 50.7	+0.6
FBE				*e*Sg	Sg	17 18 17.3	+0.7
GOPC	**GO Pecny, Ondr**	1.87	207	*e*PN	Pn	17 17 50.8	+0.4
PRU	**Pruhonice**	1.88	212	*e*PN	Pn	17 17 50.8	+0.3
PRU				*e*PG	Pb	17 17 52.7	+0.4
PRU				*e*SG	Sb	17 18 16.4	+0.1
	comp=Z,67nm,0.4s						
CLL	**Collm**	1.96	263	*e*Pn	Pn	17 17 52.0	+0.4
CLL				*e*Pg	Pg	17 17 56.0	+1.3
CLL				*e*Sg	Sg	17 18 21.0	+1.0
	comp=Z,88nm,0.3s						
CLL	**Collm**	1.96	263	*e*Pn	Pn	17 17 52.4	+0.7
MORC	**Moravsky Berou**	2.03	153	*e*Pn	Pn	17 17 52.9	+0.2
MORC	**Moravsky Berou**	2.03	153	*e*Pn	Pn	17 17 53.0	+0.3
	baz=333						
MORC				*e*Sg	Sb	17 18 19.9	-0.8
	comp=Z,84nm,0.4s,baz=333						
OKC	**Ostrava-Krasne**	2.18	143	*e*PG	Pg	17 17 59.0	+0.1
OKC				*e*SG	Sb	17 18 25.5	+0.5
	comp=Z,90nm,0.6s						
VRAC	**Vranov**	2.30	172	Pn	Pn	17 17 56.9	+0.5
	comp=Z,6.2nm,0.3s,baz=331,slow=15,SNR=25						
VRAC				Lg	Lg	17 18 29.0	
	comp=Z,8.2nm,0.3s,baz=6.5,slow=21,SNR=4.6						
	comp=Z,15nm,0.3s						
VRAC	**Vranov**	2.30	172	*e*Pn	Pn	17 17 57.1	+0.8
	baz=353						
VRAC				*e*Sg	Sb	17 18 28.4	-0.1
	comp=Z,53nm,0.3s,baz=353						
KRUC	**Moravsky**	2.53	176	*e*Pn	Pn	17 18 00.3	+0.8
	baz=356						
KRUC	**Moravsky**	2.53	176	*e*Pg	Pb	17 18 03.7	+0.2
	baz=356						
KRUC				*e*Sg	Sb	17 18 35.8	+0.7
	comp=Z,76nm,0.6s,baz=356						
TANN	**Tannenbergstha**	2.58	244	*e*Pn	Pn	17 18 01.1	+0.9
WERD	**Werda**	2.65	246	*e*Pn	Pn	17 18 02.3	+1.1
NKC	**Novy Kostel**	2.68	241	*e*PN	Pn	17 18 02.9	+1.3
NKC				*e*PG	Pg	17 18 09.2	+0.7
NKC				*e*SG	Sg	17 18 44.3	+1.1
	comp=Z,152nm,0.3s						
OJC	**Ojcow**	2.71	119	*e*Pn	Pn	17 18 00.3	-1.7
OJC				*e*Pg	Pg	17 18 10.0	+0.9
OJC				*e*Sg	Sg	17 18 45.9	+1.7
JAVC	**Velka Javorina**	2.91	159	*e*PN	Pn	17 18 04.8	0.0
KHC	**Kasperske Hory**	2.94	214	*e*PN	Pn	17 18 06.1	+0.9
KHC				*e*PG	Pg	17 18 12.2	-1.3
KHC				*e*SN	Sn	17 18 40.6	-0.6
KHC				*e*SG	Sg	17 18 49.9	-1.6
	comp=Z,45nm,0.4s						
MOX	**Moxa**	2.98	253	*e*Pn	Pn	17 18 06.7	+1.0
MOX				*e*Sg	Sg	17 18 53.1	+0.3
CKRC	**Cesky Krumlov**	3.00	203	*e*PN	Pn	17 18 07.3	+1.4
CKRC				*e*PG	Pb	17 18 13.0	+1.6
CKRC				*e*SG	Sg	17 18 51.2	-2.2
	comp=Z,60nm,0.5s						
MANZ	**Manzenberg**	3.00	239	*e*Pn	Pn	17 18 06.9	+1.0
ROTZ	**Rotzenmuhle**	3.07	235	*e*Pn	Pn	17 18 07.9	+1.0
ROTZ				*e*Sg	Sg	17 18 55.2	-0.6
GEC2	**GERESS Array S**	3.15	210	*e*Pn	Pn	17 18 08.6	+0.6
GERES	**GERESS Array B**	3.15	210	Pn	Pn	17 18 08.6	+0.6
	comp=Z,3.9nm,0.3s,baz=32,slow=14,SNR=58						
GERES				Pg	Pb	17 18 14.7	+0.7
	comp=Z,9.0nm,0.3s,baz=28,slow=17,SNR=29						
GERES				Lg	Lg	17 18 54.2	
	comp=Z,12nm,0.3s,baz=32,slow=28,SNR=3.1						
	comp=Z,6.9nm,0.4s						
LANS	**Liptovska Anna**	3.25	137	*e*PN	Pn	17 18 10.8	+1.3
LANS				*e*PG	Pg	17 18 22.7	+3.2
LANS				*e*SG	Sg	17 19 02.6	+1.0
MODS	**Modra-Piesok**	3.30	166	*e*PN	Pn	17 18 10.3	+0.2
MODS				*e*PG	Pg	17 18 20.4	0.0
MODS				*e*SG	Sg	17 19 02.6	-0.6
NIE	**Niedzica**	3.45	127	*e*P	Pg	17 18 24.1	+0.9
NIE				*e*S	Sg	17 19 09.2	+1.3
VYHS	**Vyhne**	3.56	149	*e*PN	Pn	17 18 14.0	+0.3
VYHS				*e*PG	Pg	17 18 26.6	+1.2
VYHS				*e*SG	Sg	17 19 10.0	-1.5
BSD	**Bornholm Skovb**	3.61	349	*e*P	Pn	17 18 15.5	+1.2
BSD	**Bornholm Skovb**	3.61	349	*i* P	Pn	17 18 16.7	+2.4
BSD				*e*S	Sn	17 18 58.2	+0.7
BSD				IAML		17 19 00.1	
	comp=Z,11nm,0.4s						
CONA	**Conrad Observa**	3.66	183	*i* Pn	Pn	17 18 16.2	+1.0
	comp=Z,4.1nm,0.4s,SNR=11						
CONA				Sg	Sg	17 19 13.7	-1.0
	comp=Z,37nm,0.5s						
RONA	**Rosalia, Austr**	3.89	178	*e*Pn	Pn	17 18 19.2	+0.9
	comp=Z,2.1nm,0.2s						
MOA	**Molln**	3.92	198	*i* Pn	Pn	17 18 19.8	+1.2
	comp=Z,4.6nm,0.2s,SNR=14						
MOA				Sg	Sg	17 19 25.7	+2.5
	comp=Z,44nm,0.5s						
STHS	**Stebnicka Huta**	3.94	121	*e*PN	Pn	17 18 19.9	+1.1
STHS				*e*PG	Pg	17 18 34.3	+1.7
STHS				*e*SG	Sg	17 19 28.8	+5.3
KECS	**Kecovo**	4.20	136	*e*PG	Pg	17 18 40.8	+3.2
KECS				*e*SG	Sg	17 19 34.8	+2.8
BIOA	**Bad Ischl, Aus**	4.21	203	*e*Pn	Pn	17 18 23.6	+1.0
	comp=Z,8.9nm,0.3s,SNR=7.5						
LUNU	**Lund**	4.35	340	*i* P	Pn	17 18 26.2	+1.7
LUNU				*e*S	Sn	17 19 15.5	-0.4
ARSA	**Arzberg**	4.35	185	*e*Pn	Pn	17 18 26.0	+1.4
	comp=Z,2.8nm,0.3s						
ARSA				Sg	Sg	17 19 41.1	+4.1
	comp=Z,32nm,0.7s						
BLEU	**Blekinge**	4.73	358	P	Pn	17 18 31.9	+2.1
BLEU	**Blekinge**	4.73	358	*e*P	Pn	17 18 31.4	+1.6
BLEU				P	Pn	17 18 31.9	+2.1
BJUU	**Bjuv**	4.85	339	P	Pn	17 18 32.6	+1.2
BJUU	**Bjuv**	4.85	339	*e*P	Pn	17 18 32.6	+1.2
BJUU				P	Pn	17 18 32.6	+1.2
BJUU				*e*S	Sn	17 19 27.6	-0.6
KBA	**Koelnbreinsper**	4.86	203	*e*Pn	Pn	17 18 33.0	+1.4
	comp=Z,6.3nm,0.4s,SNR=22						
SOKA	**Soboth**	4.96	189	*e*Pn	Pn	17 18 34.3	+1.4
	comp=Z,2.1nm,0.4s						
SOKA				Pg	Pg	17 18 52.8	+0.6
	comp=Z,4.7nm,0.4s						
DEL	**Delary**	5.07	346	P	Pn	17 18 36.0	+1.6
DEL				S	Sn	17 19 32.0	-1.5
DEL	**Delary**	5.07	346	*e*P	Pn	17 18 35.1	+0.7
DEL	**Delary**	5.07	346	P	Pn	17 18 36.0	+1.6
DEL				*i* P	Pn	17 18 36.1	+1.8
DEL				S	Sn	17 19 32.0	-1.5
DEL				*e*S	Sn	17 19 32.4	-1.2
WATA	**Walderalm**	5.17	217	*e*Pn	Pn	17 18 37.8	+1.8
	comp=Z,4.1nm,0.3s						
WTTA	**Wattenberg**	5.21	216	*e*Pn	Pn	17 18 37.6	+1.0
	comp=Z,2.6nm,0.3s,SNR=4.5						
MOTA	**Moosalm**	5.35	219	*e*Pn	Pn	17 18 39.0	+0.7
	comp=Z,2.1nm,0.3s						
MOTA				*e*Sn	Sn	17 19 40.4	-0.3
	comp=Z,3.2nm,0.3s						
ABTA	**Abfaltersbach**	5.38	207	*e*Pn	Pn	17 18 39.9	+1.1
	comp=Z,3.5nm,0.5s						
ABTA				Sg	Sg	17 20 10.1	+0.1
	comp=Z,18nm,0.6s						
VXJU	**Vaexsjoe**	5.39	353	P	Pn	17 18 41.0	+2.2
VXJU	**Vaexsjoe**	5.39	353	P	Pn	17 18 41.0	+2.2
SQTA	**Sankt Quirin**	5.41	218	*e*Pn	Pn	17 18 41.3	+2.2
	comp=Z,4.4nm,0.2s,SNR=4.0						
SQTA				*e*Sn	Sn	17 19 43.5	+1.3
	comp=Z,3.6nm,0.2s						
OSKU	**Oskarshamn**	5.62	360	P	Pn	17 18 44.4	+2.4
OSKU	**Oskarshamn**	5.62	360	P	Pn	17 18 44.4	+2.4
BYXU	**Byxelkrok**	5.74	5	P	Pn	17 18 46.3	+2.7
BYXU	**Byxelkrok**	5.74	5	P	Pn	17 18 46.3	+2.7
FETA	**Feichten**	5.76	220	*e*Pn	Pn	17 18 44.7	+0.7
	comp=Z,1.4nm,0.5s						
DAVA	**Damuels**	5.91	226	*e*Pn	Pn	17 18 46.5	+0.4

	comp=Z,2.4nm,0.3s						
EKSU	Eksjoe	6.02	356	P	Pn	17 18 49.8	+2.4
EKSU	Eksjoe	6.02	356	P	Pn	17 18 49.8	+2.4
VSTU	Vaestervik	6.09	2	P	Pn	17 18 51.4	+3.0
VSTU	Vaestervik	6.09	2	P	Pn	17 18 51.4	+3.0
PABE	Paberze	6.12	47	*e*P	Pn	17 18 51.5	+2.8
CDF	Champ du Feu	6.51	244	*e*Pn	Pn	17 18 55.2	+0.9
CDF	Champ du Feu	6.51	244	*e*Pg	Pg	17 19 24.5	+2.6
CDF				*e*Sg	Sg	17 20 46.7	+0.4
	comp=Z,28nm,0.7s						
VIKU	Vikbolandet	6.94	3	P	Pn	17 19 02.7	+2.7
VIKU	Vikbolandet	6.94	3	*e*P	Pn	17 19 01.7	+1.7
VIKU	Vikbolandet	6.94	3	P	Pn	17 19 02.7	+2.7
HINF	Hinteralfeld	7.08	241	*e*Pn	Pn	17 19 02.1	0.0
HINF	Hinteralfeld	7.08	241	*e*Pg	Pg	17 19 31.3	-1.5
HINF				*e*Sg	Sg	17 21 04.3	-0.2
	comp=Z,14nm,0.6s						
NACGM	Naroch	7.22	58	*e*P	Pn	17 19 02.5	-1.4
	comp=Z,8.0nm,1.1s,baz=246						
HAU	Haudompre	7.26	244	*e*Pn	Pn	17 19 04.0	-0.4
HAU	Haudompre	7.26	244	*e*Pg	Pg	17 19 35.0	-1.1
HAU				*e*Sg	Sg	17 21 08.6	-1.5
	comp=Z,13nm,0.5s						
GIVF	Givet	7.29	263	*e*Pn	Pn	17 19 06.3	+1.4
PAGF	Fort de Pagny	7.33	250	*e*Pn	Pn	17 19 05.5	0.0
PAGF				*e*Sg	Sg	17 21 11.9	-0.6
	comp=Z,86nm,1.3s						
SAVF	Savonnieres en	7.66	251	*e*Pn	Pn	17 19 10.3	+0.4
BAIF	Baives	7.69	263	*e*Pn	Pn	17 19 11.4	+1.1
MEZF	Maizieres J'vi	7.75	251	*e*Pg	Pg	17 19 44.5	-1.1
SFTF	Sexfontaines	7.90	249	*e*Pn	Pn	17 19 13.5	+0.2
SFTF	Sexfontaines	7.90	249	*e*Pg	Pg	17 19 47.5	-1.0
CABF	La Chapelle	8.24	237	*e*Pn	Pn	17 19 17.9	-0.1
CABF				*e*Sg	Sg	17 21 40.1	-1.5
	comp=Z,35nm,1.2s						
AKASG	Malin Array Be	8.30	91	Pn	Pn	17 19 19.0	+0.2
	comp=Z,2.2nm,0.3s,baz=279,slow=12,SNR=12						
AKASG				Sn	Sn	17 20 49.6	-3.5
	comp=Z,1.1nm,0.3s,baz=274,slow=23,SNR=4.7						
AKASG				Lg	Lg	17 21 47.5	
	baz=279,slow=30						
	comp=Z,1.1nm,0.4s						
HFS	Hagfors	8.68	352	Pn	Pn	17 19 25.0	+1.2
	comp=Z,0.3nm,0.3s,baz=165,slow=13,SNR=12						
HFS				Sn	Sn	17 21 00.8	-1.5
	comp=Z,0.4nm,0.3s,baz=169,slow=31,SNR=2.2						
	comp=Z,1.2nm,0.6s						
LPL	La Plagne	8.68	229	*e*Pn	Pn	17 19 22.8	-1.4
LOR	Lormes	9.07	246	*e*Pn	Pn	17 19 29.0	-0.3
MBDF	Montbardon	9.27	226	*e*Pn	Pn	17 19 31.6	-0.5
SSF	Saint Saulge	9.38	246	*e*Pn	Pn	17 19 32.7	-0.9
SMF	Signal de Mont	9.43	243	*e*Pn	Pn	17 19 34.3	0.0
ORIF	Oris-en-Rattie	9.53	230	*e*Pn	Pn	17 19 34.3	-1.4
AVF	Avril sur Loir	9.62	245	*e*Pn	Pn	17 19 35.7	-1.1
SBF	Sospel	9.68	220	*e*Pn	Pn	17 19 36.8	-0.8
MEF	Metsahovi	9.82	25	*e*P	Pn	17 19 41.9	+2.5
NOA	NORSAR Array B	9.86	346	Pn	Pn	17 19 38.5	-1.5
	baz=174,slow=12,SNR=4.4						
NOA				Sn	Sn	17 21 25.9	-5.4
	baz=198,slow=15,SNR=1.9						
	comp=Z,0.2nm,0.5s						
RAF	Rauma	9.97	16	*e*P	Pn	17 19 42.8	+1.3
BGF	Bois d'Agland	10.04	245	*e*Pg	Pg	17 20 26.3	
BGF				*e*Sg	Sg	17 22 36.1	
	comp=Z,6.3nm,0.5s						
VIVF	Saint-Julien-l	10.16	233	*e*Pn	Pn	17 19 43.2	-1.1
PGF	Pioggiola	10.25	211	*e*Pn	Pn	17 19 43.2	-2.3
SMRF	Simiane la Rot	10.39	227	*e*Pn	Pn	17 19 45.1	-2.3
LMR	La Mourre	10.49	222	*e*Pn	Pn	17 19 47.8	-1.0
FINES	FINESS Array B	11.30	25	Pn	Pn	17 19 59.4	-0.3
	comp=Z,0.4nm,0.3s,baz=208,slow=11,SNR=12						
FINES				Sn	Sn	17 22 00.6	-5.9
	comp=Z,0.3nm,0.3s,baz=210,slow=20,SNR=4.3						
	comp=Z,1.0nm,0.4s						
EKA	Eskdalemuir Ar	12.07	296	Pn	Pn	17 20 09.2	-1.0
	baz=105,slow=14						
	comp=Z,0.3nm,0.3s						
ARCES	ARCESS Array B	18.55	10	Pn	P	17 21 33.7	-1.4
	comp=Z,0.1nm,0.3s,baz=191,slow=12,SNR=13						
	comp=Z,0.7nm,0.4s						
KVAR	Kislovodsk Arr	19.36	103	P	Pn	17 21 47.4	+2.2
	baz=270,slow=5.1						
	comp=Z,2.1nm,0.5s						
TORD	Torodi Ar. Bea	40.07	202	P	P	17 24 54.7	+0.5
	comp=Z,0.3nm,0.5s,baz=8.7,slow=7.7,SNR=1.8						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	42.19	69	P	P	17 25 13.3	+1.8
	comp=Z,0.1nm,0.4s,baz=310,slow=7.8,SNR=2.4						
	comp=Z,0.1nm,0.4s						
YKA	Yellowknife Ar	59.79	336	P	P	17 27 25.8	+2.3
	comp=Z,0.5nm,0.6s,baz=30,slow=6.8,SNR=8.5						
	comp=Z,0.5nm,0.6s						

NEIC 21 17:20:52.5±0.6**, 36°.39N**±0°.02×**112°.24W**±0°.04**, h18**^{km}±5^{km}**,**
ML2.9/138**, Error ellipse: s-maj=4.9km s-min=2.8km**
az=57.0, Western Arizona

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U15A	North Rim	0.06	317		Pg	17 20 56.3	+0.1
U15A				Sg	Sg	17 20 59.1	+0.2
U15A				IAML		17 20 59.2	
	comp=N,2µm,0.5s						
U15A				IAML		17 20 59.2	
	comp=E,2µm,0.5s						
KNB	Kanab	0.78	324		Pb	17 21 07.6	-0.2
KNB				Sg	Sb	17 21 17.7	-0.4
LCMT	Little Creek M	1.02	308		Pb	17 21 11.6	-0.1
LCMT				Sg	Sb	17 21 25.0	+0.1
LCMT				IAML		17 21 28.6	
	comp=E,284nm,0.2s						
LCMT				IAML		17 21 29.3	
	comp=N,221nm,0.1s						
PKCU	Pink Cliffs	1.06	357		Pb	17 21 12.0	-0.5
PKCU				Sg	Sb	17 21 26.2	0.0
PKCU				IAML		17 21 30.1	
	comp=N,286nm,0.3s						
PKCU				IAML		17 21 32.7	
	comp=E,503nm,0.3s						
WUAZ	Wupatki	1.12	141		Pg	17 21 14.0	-0.2
WUAZ					Sb	17 21 27.5	-0.2
WUAZ				IAML		17 21 31.0	
	comp=E,349nm,0.3s						
WUAZ				IAML		17 21 31.1	
	comp=E,522nm,0.4s						
SZCU	Shurtz Canyon	1.38	331		Pb	17 21 17.9	-0.1
SZCU					Sb	17 21 35.5	0.0
SZCU				IAML		17 21 39.5	
	comp=N,224nm,0.1s						
SZCU				IAML		17 21 39.7	
	comp=E,392nm,0.4s						
CCUT	Cedar City	1.47	323	Pn	Pb	17 21 19.6	+0.1
CCUT					Sb	17 21 38.1	+0.2
MTPU	Mount Pierson	1.65	2		Pb	17 21 22.3	-0.4
MTPU					Sb	17 21 43.1	-0.3
MTPU				IAML		17 21 45.2	
	comp=E,256nm,0.3s						
MTPU				IAML		17 21 46.3	
	comp=N,184nm,0.4s						
W13A	Hualapai Mount	1.85	227		Pn	17 21 24.7	+1.1
X16A	Lo Mia Camp, P	2.07	161		Pb	17 21 29.1	-0.6
X16A				IAML		17 21 58.1	
	comp=N,48nm,0.5s						
X16A				IAML		17 21 59.7	
	comp=E,55nm,0.4s						
MVU	Marysvale	2.12	1		Pb	17 21 29.3	-1.2
MSU	Marysvale	2.12	1		Pb	17 21 29.8	-0.8
V12A	Nelson	2.21	253		Pb	17 21 31.6	-0.4
TCRU	Three Creeks R	2.23	356		Pb	17 21 31.3	-1.1
TCRU				IAML		17 22 02.1	
	comp=E,83nm,0.4s						
TCRU				IAML		17 22 03.5	
	comp=N,98nm,0.4s						
SHPR	Sheep Range	2.35	274	Pn	Pn	17 21 32.0	+1.5
W18A	Petrified Fore	2.40	121		Pn	17 21 33.2	+2.1
W18A				IAML		17 22 11.7	
	comp=N,107nm,0.6s						
W18A				IAML		17 22 12.8	
	comp=E,138nm,0.7s						
PRN	Pahroc Range	2.47	295		Pn	17 21 33.7	+1.6
PRN				IAML		17 22 09.6	
	comp=E,70nm,0.6s						
PRN				IAML		17 22 22.7	
	comp=N,64nm,0.5s						
Y14A	Wickenburg	2.52	195	Pn	Pn	17 21 33.6	+0.9
Y14A				IAML		17 22 19.6	
	comp=N,37nm,0.7s						
Y14A				IAML		17 22 19.8	
	comp=E,31nm,0.5s						
X18A	Snowflake	2.63	134		Pb	17 21 36.9	-2.4
X18A				IAML		17 22 20.5	
	comp=N,68nm,0.9s						
TMUT	Trail Mountain	3.02	15		Pn	17 21 40.3	+0.6
PV05	Paradox Valley	3.02	55	Pn	Pb	17 21 43.3	-2.7
SRU	San Rafael Swe	3.04	26		Pn	17 21 42.4	+2.5
SRU				IAML		17 22 33.1	
	comp=N,78nm,0.7s						
SPR3	Spring Creek 3	3.09	328		Pn	17 21 41.8	+1.1
MVCO	Mesa Verde	3.12	74	Pn	Pn	17 21 43.3	+2.3
MVCO				IAML		17 22 29.9	
	comp=N,68nm,0.3s						
MVCO				IAML		17 22 30.3	
	comp=N,65nm,0.3s						
PV17	East Wray Mesa	3.23	53	Pn	Pn	17 21 45.1	+2.6
PV10	Paradox Valley	3.23	51		Pn	17 21 44.1	+1.5
PV13	Radium Mtn., P	3.25	56		Pn	17 21 45.7	+2.8
TPNV	Topopah Spring	3.27	281	Pn	Pn	17 21 46.6	+3.5
TPNV				IAML		17 22 35.3	
	comp=N,21nm,0.9s						
TPNV				IAML		17 22 39.6	
	comp=N,16nm,0.7s						
PV03	Paradox Valley	3.29	54	Pn	Pn	17 21 45.9	+2.6
PV11	David Mesa, Pa	3.29	54		Pn	17 21 44.4	+1.0
PV23	Carpenter Ridg	3.30	50		Pn	17 21 46.0	+2.5
PV02	Paradox Valley	3.33	56	Pn	Pn	17 21 46.4	+2.4
Q12A	Willow Creek R	3.35	323		Pn	17 21 45.1	+0.9
Q12A				IAML		17 23 17.2	
	comp=N,25nm,0.1s						
Q12A				IAML		17 23 18.6	
	comp=E,21nm,0.1s						
PV01	Paradox Valley	3.41	58	Pn	Pn	17 21 47.7	+2.6
PV01				IAML		17 22 41.8	
	comp=N,67nm,0.3s						
PV01				IAML		17 22 43.6	
	comp=E,55nm,0.7s						
PV07	Paradox Valley	3.52	53		Pn	17 21 49.2	+2.6
PV07				IAML		17 22 45.3	
	comp=N,46nm,0.4s						
PV07				IAML		17 22 45.4	
	comp=E,62nm,0.8s						
WCT	Wildcat Mounta	3.55	278		Pn	17 21 48.3	+1.4
NLU	North Lily Min	3.57	2		Pn	17 21 48.5	+1.3
PV15	Paradox Valley	3.58	56		Pn	17 21 49.6	+2.2
GWY	Greenwater Val	3.58	268	Pn	Pn	17 21 47.3	0.0
GWY				IAML		17 22 52.9	
	comp=N,14nm,0.6s						
GWY				IAML		17 22 53.9	
	comp=E,14nm,0.8s						
MPU	Maple Canyon	3.66	7	Pn	Pn	17 21 49.3	+0.9
QSM	Queen of Sheba	3.77	265		Pn	17 21 52.7	+3.0
113A	Mohawk Valley,	3.82	200	Pn	Pn	17 21 52.5	+2.1
DUG	Dugway, Tooele	3.83	353	Pn	Pn	17 21 53.6	+2.8
GSC	Goldstone, Bar	3.86	255		Pg	17 22 03.4	-3.1
GSC				IAML		17 22 20.4	
	comp=E,26nm,0.1s						
GSC				IAML		17 22 20.4	
	comp=N,13nm,0.1s						
GLA	Glamis	3.95	213	Pn	Pn	17 21 52.9	+0.7
GLA				IAML		17 23 02.7	
	comp=E,30nm,0.8s						
GLA				IAML		17 23 06.1	
	comp=N,13nm,0.6s						
BSUT	Blindstream Ca	4.30	15		Pn	17 22 00.9	+3.4
BSUT				IAML		17 23 12.8	
	comp=E,11nm,0.6s						
BSUT				IAML		17 23 17.8	
	comp=N,7.8nm,1.3s						
LCH	Last Change Ra	4.42	283	Pn	Pn	17 22 00.1	+1.4
LCH				IAML		17 23 22.1	
	comp=E,6.5nm,3.9s						
PFO	Pinyon Flats O	4.43	233	Pn	Pn	17 21 59.3	+0.3
PFO				IAML		17 23 29.4	
	comp=E,6.9nm,4.5s						
214A	Organ Pipe Nat	4.44	186	Pn	Pn	17 22 01.1	+2.0
214A				IAML		17 22 55.6	
	comp=E,7.3nm,3.2s						
214A				IAML		17 23 30.0	
	comp=N,7.0nm,3.2s						
S22A	4UR Ranch, Cre	4.54	71		Pn	17 22 01.4	+0.8
S22A				IAML		17 23 14.9	
	comp=N,12nm,0.5s						
S22A				IAML		17 23 19.6	
	comp=E,13nm,0.8s						
BGU	Big Grassy Mou	4.58	352	Pn	Pn	17 22 02.6	+1.7
BGU				IAML		17 24 28.0	
	comp=E,5.5nm,4.3s						
UABX	UABC, Campus M	4.58	216	Pn	Pn	17 22 01.9	+1.0
DUN6	Lazy B Ranch	4.62	145	Pn	Pn	17 22 03.9	+2.3
RDMU	Red Mountain	4.68	26		Pn	17 22 03.7	+1.3
RDMU				IAML		17 23 16.8	
	comp=N,16nm,0.8s						
RDMU				IAML		17 23 16.9	
	comp=E,19nm,0.8s						
DSP	Deep Springs	4.70	284	Pn	Pn	17 22 02.5	0.0
DSP				IAML		17 23 31.1	
	comp=N,5.9nm,3.0s						
DSP				IAML		17 23 56.5	
	comp=E,7.9nm,4.2s						
TCUT	Toone Canyon	4.77	8	Pn	Pn	17 22 05.5	+1.8
TCUT				IAML		17 23 27.1	
	comp=N,18nm,1.3s						
YUH	Yuha Desert	4.81	220	Pn	Pn	17 22 05.6	+1.6
YUH				IAML		17 23 57.4	
	comp=E,7.0nm,5.0s						
YUH				IAML		17 24 22.3	
	comp=N,6.9nm,4.9s						
LENM	Lemitar	4.84	116	Pn	Pn	17 22 04.7	0.0
CCAC	Calif City Air	4.85	257	Pn	Pn	17 22 05.9	+1.2
CCAC				IAML		17 23 00.9	
	comp=E,19nm,0.3s						
CCAC				IAML		17 23 24.8	
	comp=N,16nm,3.6s						
O20A	White River Ci	4.89	39		Pn	17 22 06.5	+1.2
ANMO	Albuquerque	4.92	105		Pn	17 22 07.2	+1.4
ANMO				IAML		17 23 28.4	
	comp=N,6.7nm,1.7s						
ANMO				IAML		17 23 30.7	
	comp=N,6.3nm,0.6s						
SMCO	Snowmass	5.02	55	Pn	Pn	17 22 08.3	+1.0
BNM	Barren Site	5.11	114	Pn	Pn	17 22 08.5	+0.2
BAR	Barrett	5.20	226	Pn	Pn	17 22 11.0	+1.6
BAR				IAML		17 23 28.3	
	comp=N,17nm,0.1s						
121A	Cookes Peak, D	5.32	135		Pn	17 22 11.9	+0.6
121A				IAML		17 23 47.8	
	comp=E,10nm,0.8s						
121A				IAML		17 23 55.5	
	comp=N,7.8nm,1.4s						
ESJX	Sierra Juarez	5.34	216	Pn	Pn	17 22 11.7	+0.1
KVN	Kaiserville	5.35	302	Pn	Pn	17 22 11.8	+0.1
KVN				IAML		17 22 53.4	
	comp=N,6.0nm,4.7s						
KVN				IAML		17 23 46.5	
	comp=E,7.1nm,4.8s						
CBX	Cerro Bola	5.46	223	Pn	Pn	17 22 14.0	+0.8

IDC ***21*** *17:23:46.4*±*66.0, 12°.31S*×*171°.02E, h0*^{km}*, mb3.6/3,*
mbtmp3.6/3, Error ellipse: s-maj=1134.0km
s-min=142.1km az=65.0

NOU ***21*** *17:24:33.2, 14°.50S*×*166°.99E, h112*^{km}*, MLv4.6/8,*
Vanuatu Islands

ISC 21 17:24:37.9±3.7**, 14°.8S**±0°.3×**166°.9E**±0°.3**, h100**^{km}**, n7,**
σ**0s.77**/7**, mb3.2**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	3.13	157	P	Pn	17 25 25.4	0.0
YATNC	Mamie plateau,	7.19	180	P	Pn	17 26 19.5	-0.9
	28nm,1.4s						
DZM	Mont Dzumac	7.21	183	P	Pn	17 26 21.1	+0.3
PINNC	Pines Island,	7.76	176	P	Pn	17 26 27.9	-0.2
STKA	Stephens Creek	28.66	229	P	P	17 30 26.3	+1.0
	4.2nm,1.1s,baz=45,slow=11,SNR=2.5						
	4.2nm,1.1s						
WRA	Warramunga Arr	31.46	256	P	P	17 30 49.6	-0.6
	0.4nm,1.1s,baz=84,slow=8.7,SNR=1.2						
	0.4nm,1.1s						
ASAR	Alice Springs	32.30	249	P	P	17 30 57.2	-0.5
	0.2nm,0.4s,baz=79,slow=9.0,SNR=12						
	0.2nm,0.4s						

NEIC ***21*** *17:32:26.4*±*2.1, 0°.72N*±*0°.05*×*123°.69E*±*0°.04, h271*^{km}±*7*^{km}*,*
mb4.3/32, Error ellipse: s-maj=9.8km s-min=3.1km
az=142.0

IDC ***21*** *17:32:26.2*±*1.8, 0°.89N*×*123°.97E, h279*^{km}±*17*^{km}*, mb3.6/16,*
mbtmp4.2/16, Error ellipse: s-maj=24.3km s-min=9.0km
az=66.0

DJA ***21*** *17:32:28.1*±*0.2, 1°N*±*3°*×*12°4E*±*°, h255*^{km}±*3*^{km}*, M4.2/18,*
mb4.1/17, mB5.0/4, MLv4.2/18, Mw(mB)4.4/4

ISC 21 17:32:25.9±0.6**, 0°.75N**±0°.05×**123°.71E**±0°.04**, h277**^{km}±5^{km}**,**
n121, σ**1s.36**/137**, mb4.2**/32**, 2C-2D, Minahassa Peninsula,**
Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	Marisa	1.79	261	P	Pn	17 33 09.5	+0.5
MRSI				S	S	17 33 41.8	-1.3
LUWI	Luwuk	2.01	208		Pn	17 33 10.3	-0.6
LUWI				Sn	S	17 33 42.8	-3.7
LUWI	Luwuk	2.01	208	P	Pn	17 33 10.6	-0.2
LUWI				S	S	17 33 42.9	-3.6
TOLI2	Tolitoli	2.95	277	Pn	Pn	17 33 20.2	+0.6
TOLI2				Sn	S	17 34 00.2	-2.2
TOLI2	Tolitoli	2.95	277	P	Pn	17 33 20.6	+1.0
SGSI	Sangihe	3.44	32	P	Pn	17 33 26.4	+1.6
SANI	Sanana	3.59	141	P	Pn	17 33 25.6	-0.9
SANI	Sanana	3.59	141	P	Pn	17 33 25.4	-1.1
TNTI	Ternate	3.66	90	Pn	Pn	17 33 27.8	+0.7
TNTI				Sn	S	17 34 14.0	-2.0
TNTI	Ternate	3.66	90	P	Pn	17 33 28.1	+0.9
TNTI	Ternate	3.66	90	P	Pn	17 33 27.7	+0.5
TNTI				S	S	17 34 16.1	+0.1
MPSI	Mapaga	3.83	264	P	Pn	17 33 30.3	+1.1
LBMI	Labuha	4.03	110	P	Pn	17 33 31.5	+0.1
NLAI	Namlea	5.21	139	P	Pn	17 33 46.8	+1.6
	15nm,0.6s,10µm0.3nm						
SKMP	Bagumbayan, Su	5.79	8	⇓*e*P	Pn	17 33 55.3	+3.2
SPSI	Sidrap Palu	6.12	220	P	Pn	17 33 57.0	+0.8
	20nm,1.1s,0.1nm						
AAI	Ambon	6.29	135	P	Pn	17 33 59.8	+1.6
	9.1nm,0.6s,0.1nm						
MSAI	Masohi	6.62	128	P	Pn	17 34 04.7	+2.4
	4.0nm,0.6s,0.0nm						
MYLDM	Lahad Datu	6.81	310		Pn	17 34 07.1	+2.4
BKSI	Bulukumba	7.02	211	P	Pn	17 34 07.3	+0.1
	23nm,1.8s,0.1nm						
PAGZ	Pagadian	7.06	357	⇑*e*P	Pn	17 34 11.5	+3.8
BIPH	Bislig	7.84	20	⇓*e*P	Pn	17 34 18.9	+1.5
BIPH				*e*S	S	17 35 42.5	-5.1
BNDI	Bandanaira	8.11	130	P	Pn	17 34 23.0	+2.2
BNDI	Bandanaira	8.11	130	P	Pn	17 34 22.7	+1.9
	80nm,0.7s						
FAKI	Fak Fak	9.28	113	Pn	Pn	17 34 36.1	+0.7
FAKI	Fak Fak	9.28	113	P	Pn	17 34 36.1	+0.7
SOEI	Soe	10.45	177		Pn	17 34 50.2	+0.1
SOEI	Soe	10.45	177	P	Pn	17 34 50.7	+0.6
SOEI	Soe	10.45	177	P	P	17 34 52.4	-1.7
	36nm,1.2s						
SAUI	Saumlaki	11.51	139	P	Pn	17 35 03.4	+0.3
	111nm,0.8s,3µm						
SBUM	Sibu	11.61	278	P	P	17 35 06.6	-0.2
JAGI	Jajag, Banyuwa	13.22	226		P	17 35 25.2	+0.5
JAGI	Jajag, Banyuwa	13.22	226	P	P	17 35 27.5	+2.8
KSM	Kuching	13.42	273		P	17 35 27.7	+0.7
MTN	Manton Dam	15.38	152	P	P	17 35 48.7	+0.1
MTN	Manton Dam	15.38	152	P	Pn	17 35 49.6	-0.2
KDU	Kakadu	15.93	147	P	P	17 35 55.5	+0.9
KNRA	Kununurra	17.07	163	P	P	17 36 07.7	+0.7
KNRA	Kununurra	17.07	163	P	P	17 36 07.6	+0.6
FITZ	Fitzroy Crossi	18.83	174	P	P	17 36 24.8	-1.1
PSA00	Pilbara Seismi	22.51	189	P	P	17 37 02.4	-0.1
PSA00				IAmb	IAmb	17 37 25.5	
	comp=Z,27nm,1.4s						
IPM	Ipoh	22.96	280	P	P	17 37 07.1	+0.3
IPM				IAmb	IAmb	17 37 08.8	
	comp=Z,11nm,0.6s						
WRAB	Tennant Creek	23.05	154	P	P	17 37 07.3	-0.2
WRAB	Tennant Creek	23.05	154	P	P	17 37 07.7	+0.2
WRA	Warramunga Arr	23.05	154	P	P	17 37 07.3	-0.2
	comp=Z,31nm,0.6s,baz=337,slow=11,SNR=250						
WRA				S	S	17 40 54.5	-3.0
	comp=Z,1.1nm,0.7s,baz=329,slow=17,SNR=4.6						
WRA				ScP	ScP	17 43 59.0	-0.5
	comp=Z,0.3nm,0.8s,baz=319,slow=2.7,SNR=1.2						
WRA	Warramunga Arr	23.05	154	P	P	17 37 07.1	-0.5
WB2	Warramunga Arr	23.06	154	P	P	17 37 07.5	-0.1
KULM	Kulim	23.46	282	P	P	17 37 12.2	+0.9
KULM				IAmb	IAmb	17 37 21.9	
	comp=Z,23nm,1.3s						
COEN	Coen	24.19	128	P	P	17 37 18.1	+0.2
COEN				IAmb	IAmb	17 37 21.5	
	comp=Z,4.5nm,0.6s						
COEN	Coen	24.19	128	P	P	17 37 18.1	+0.2
PMG	Port Moresby	25.44	114	P	P	17 37 26.1	-3.1
	comp=Z,5.0nm,0.7s,baz=255,slow=19,SNR=1.8						
	comp=Z,5.0nm,0.7s						
WRKA	Warakurna	26.02	170	P	P	17 37 34.8	+0.6
AS31	Alice Springs	26.21	158	P	P	17 37 35.8	-0.2
AS31				IAmb	IAmb	17 37 42.2	
	comp=Z,1.3nm,0.5s						
ASAR	Alice Springs	26.22	158	P	P	17 37 36.0	0.0
	comp=Z,1.1nm,0.4s,baz=338,slow=7.0,SNR=38						
ASAR				PcP	PcP	17 40 54.5	-0.5
	comp=Z,0.3nm,0.5s,baz=354,slow=2.0,SNR=1.3						
ASAR				S	S	17 41 45.2	-2.2
	comp=Z,1.6nm,1.0s,baz=351,slow=22,SNR=4.9						
ASAR				ScP	ScP	17 44 07.8	-0.5
	comp=Z,0.9nm,0.5s,baz=339,slow=2.8,SNR=15						
	comp=Z,1.1nm,0.4s						
AS01	Alice Springs	26.23	158	P	P	17 37 36.4	+0.2
QIS	Mount Isa	26.28	145	P	P	17 37 37.3	+0.7
MTSU	Mount Surprise	27.62	134	P	P	17 37 48.9	+0.3
PHRA	Phrae	29.02	309	P	P	17 38 01.6	+0.7
CMAR	Chiang Mai Arr	30.01	307	P	P	17 38 10.9	+1.3
	comp=Z,1.1nm,0.8s,baz=132,slow=7.6,SNR=11						
	comp=Z,1.1nm,0.8s						
CHTO	Chiang Mai	30.21	308	P	P	17 38 10.3	-1.1
CTA	Charters Tower	30.28	134	P	P	17 38 12.7	+0.7
	comp=Z,2.8nm,0.8s,baz=292,slow=15,SNR=1.9						
	comp=Z,2.8nm,0.8s						
OOD	Oodnadatta	30.63	159	P	P	17 38 15.0	+0.1
FORT	Forrest	31.63	173	P	P	17 38 23.8	+0.2
FORT	Forrest	31.63	173	P	P	17 38 23.9	+0.3
MULG	Mulgathing	32.40	163	P	P	17 38 30.8	+0.5
INKA	Innaminka	32.72	151	P	P	17 38 34.2	+1.1
LCRK	Leigh Creek	33.96	157	P	P	17 38 43.3	-0.5
BBOO	Buckleboo	35.36	162	P	P	17 38 55.7	0.0
BBOO				IAmb	IAmb	17 39 09.3	
	comp=Z,26nm,1.3s						
BBOO	Buckleboo	35.36	162	P	P	17 38 55.6	-0.1
STKA	Stephens Creek	36.61	154	P	P	17 39 06.5	+0.2
	comp=Z,4.8nm,0.5s,baz=334,slow=8.4,SNR=16						
	comp=Z,4.8nm,0.5s						
STKA	Stephens Creek	36.61	154	P	P	17 39 07.0	+0.7
STKA	Stephens Creek	36.61	154	P	P	17 39 06.9	+0.7
HTT	Hallett	36.90	159	P	P	17 39 09.8	+1.1
CMSA	Cobar Meteorol	38.28	149	P	P	17 39 21.7	+1.5
LZH	Lanzhou	39.70	334	⇑P	P	17 39 43.4	+11
LZH				sP	PnPn	17 41 14.6	-1.4
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
ARMA	Armidale	40.83	142	P	P	17 39 43.0	+1.7
ARMA				IAmb	IAmb	17 40 08.3	
	comp=Z,20nm,1.4s						
ARMA	Armidale	40.83	142	P	P	17 39 43.3	+2.0
ARPS	Mount Arapiles	40.95	158	P	P	17 39 43.2	+1.2
HHC	Hu-ho-hao-te	41.41	346	*e*P	P	17 39 50.0	+4.2
HHC				pmax	pmax		
	comp=Z,31nm,0.8s						
HHC				pmax	pmax		
	comp=Z,230nm,6.5s						
YNG	Young	41.85	149	P	P	17 39 51.3	+1.9
CAN	Canberra	42.96	149	P	P	17 40 00.4	+2.1
CAN				IAmb	IAmb	17 40 01.1	
	comp=Z,14nm,0.6s						
CAN	Canberra	42.96	149	P	P	17 40 00.5	+2.1
TOO	Toolangi	43.12	154	P	P	17 40 01.0	+1.4
TOO				IAmb	IAmb	17 40 08.0	
	comp=Z,26nm,1.5s						
TAPN	Taplejung	43.49	311	*e*P	P	17 40 03.1	+0.1

USRK	Ussuriysk Ar.	43.88	9	P	P	17 40 04.9	-0.5
	comp=Z,1.1nm,0.5s,baz=163,slow=6.3,SNR=2.1						
	comp=Z,1.1nm,0.5s						
USRK	Ussuriysk Ar.	43.88	9	P	P	17 40 06.1	+0.7
RAMN	Ramite	44.14	309	eP	P	17 40 08.8	+0.7
	comp=Z,14nm,0.7s						
JIRN	Jiri	44.81	310	eP	P	17 40 13.6	+0.1
GUN	Gumba	45.17	310	eP	P	17 40 16.5	+0.2
PKI	Pulchoki	45.37	309	eP	P	17 40 18.6	+0.8
	comp=Z,4.0nm,0.4s						
GKN	Gorkha	46.17	309	eP	P	17 40 24.4	+0.5
ASAJ	Asahikawa	46.33	19	P	P	17 40 20.9	-3.8
	comp=Z,4.6nm,0.8s,baz=177,slow=18,SNR=1.9						
	comp=Z,4.6nm,0.8s						
KOLN	Koldanda	46.87	309	eP	P	17 40 29.5	+0.2
DANN	Dangsing	47.02	309	eP	P	17 40 30.8	+0.2
	comp=Z,23nm,0.7s						
PYUN	Piuthan	47.50	309	eP	P	17 40 34.7	+0.6
	comp=Z,35nm,0.9s						
SONM	Songino Array	49.25	345	P	P	17 40 46.9	-0.1
	comp=Z,0.9nm,0.8s,baz=159,slow=7.5,SNR=6.6						
	comp=Z,0.9nm,0.8s						
SONM	Songino Array	49.25	345	P	P	17 40 47.0	0.0
WMQ	Urumqi	53.53	328	eP	P	17 41 20.8	+2.2
WMQ				pP	pP	17 42 18.3	+1.7
WMQ				PcP	pwP	17 42 24.3	+0.4
WMQ				pmax	pmax		
	comp=Z,18nm,0.8s						
MK31	Makanchi Array	58.36	328	P	P	17 41 52.4	-0.2
MK31				PcP	PcP	17 42 39.6	-0.6
MKAR	Makanchi Array	58.36	328	P	P	17 41 52.5	-0.1
	comp=Z,1.6nm,0.5s,baz=120,slow=8.8,SNR=26						
MKAR				PcP	PcP	17 42 40.1	-0.1
	comp=Z,0.5nm,0.5s,baz=152,slow=2.7,SNR=5.1						
MKAR				ScP	ScP	17 46 12.3	-1.3
	comp=Z,0.3nm,0.6s,baz=132,slow=5.4,SNR=3.6						
	comp=Z,1.6nm,0.5s						
MKAR	Makanchi Array	58.36	328	P	P	17 41 51.9	-0.6
MKAR				PcP	PcP	17 42 39.7	-0.5
MAKZ	Makanchi	58.53	328	P	P	17 41 53.1	-0.6
MAKZ				PcP	PcP	17 42 40.6	-0.4
KDJ	Kajisay	58.64	321	P	P	17 41 55.1	+0.3
PETK	Petropavlovsk-	59.32	23	P	P	17 41 56.9	-2.0
	comp=Z,1.0nm,0.7s,baz=235,slow=5.2,SNR=1.5						
	comp=Z,1.0nm,0.7s						
KBL	Kabul	61.01	310	P	P	17 42 11.0	0.0
KBL				IAmb	IAmb	17 42 12.6	
	comp=Z,4.5nm,0.8s						
RPZ	Rata Peaks	61.16	143	P	P	17 42 12.3	+0.7
	comp=Z,6.1nm,0.7s,baz=27,slow=4.5,SNR=2.4						
	comp=Z,6.1nm,0.7s						
RPZ	Rata Peaks	61.16	143	P	P	17 42 12.8	+1.1
RPZ				IAmb	IAmb	17 42 26.8	
	comp=Z,12nm,1.1s						
YAK	Yakutsk	61.29	3	P	P	17 42 12.2	+0.2
	comp=Z,4.2nm,0.6s,baz=230,slow=0.9,SNR=7.4						
	comp=Z,4.2nm,0.6s						
YAK	Yakutsk	61.29	3	P	P	17 42 12.4	+0.4
YAK				IAmb	IAmb	17 42 13.8	
	comp=Z,7.9nm,0.7s						
LTZ	Lake Taylor	61.42	141	P	P	17 42 15.1	+1.7
TCW	Tory Channel	61.92	139	P	P	17 42 17.1	+0.4
ZALV	Zalesovo Beam	61.93	335	P	P	17 42 15.1	-1.4
	comp=Z,0.5nm,0.3s,baz=134,slow=4.3,SNR=3.0						
	comp=Z,0.5nm,0.3s						
KHZ	Kahutara	62.04	140	P	P	17 42 18.2	+0.8
KURK	Kurchatov	62.69	330	P	P	17 42 21.0	-0.6
KURK				IAmb	IAmb	17 42 24.9	
	comp=Z,4.2nm,0.5s						
KKAR	Karatay Array	63.41	319	P	P	17 42 26.2	-0.3
TIXI	Tiksi	70.86	2	P	P	17 43 11.7	-0.9
	comp=Z,2.0nm,0.3s,baz=270,slow=20,SNR=11						
	comp=Z,2.0nm,0.3s						
TIXI	Tiksi	70.86	2	P	P	17 43 12.2	-0.4
TIXI				IAmb	IAmb	17 43 13.1	
	comp=Z,2.2nm,0.8s						
VOI	Vohitsoka	78.15	248	P	P	17 43 54.2	-1.3
VOI				IAmb	IAmb	17 43 55.9	
	comp=Z,9.9nm,1.0s						
ILAR	Eielson Array	89.07	25	P	P	17 44 48.9	-0.7
	comp=Z,0.2nm,0.6s,baz=271,slow=4.5,SNR=4.4						
	comp=Z,0.2nm,0.6s						
ARCES	ARCESS Array B	92.18	340	P	P	17 45 02.5	-1.5
	comp=Z,1.9nm,1.0s,baz=15,slow=5.0,SNR=1.1						
	comp=Z,1.9nm,1.0s						
TORD	Torodi Ar. Bea	120.89	286	PKP	PKPdf	17 50 45.9	-0.6
	comp=Z,0.3nm,0.4s,baz=36,slow=0.8,SNR=4.3						

SCB 21 17:38:05.0±0.9, 21°.35S×66°.82W, h210km±8km, ML3.4/4, MW3.5, Error ellipse: s-maj=3.2km s-min=2.4km az=2.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MOCB	Mochara	1.10	85	Pg	Pn	17 38 37.8	+0.8
YJA	Yavi	1.46	124	Pg	Pn	17 38 40.7	+0.9
PB09	IPOC Station P	2.30	258	Pg	Pn	17 38 48.3	+0.8
PB08	IPOC Station P	2.50	298	Pg	Pn	17 38 50.6	+0.7
PB01	IPOC Station P	2.51	277	Pg	Pn	17 38 50.7	+1.0
PB01				Sg	S	17 39 24.6	+0.4
PB01				IAML		17 39 27.5	
	122nm,0.2s						
GO01	Chusmiza	2.79	306	Pg	Pn	17 38 54.0	+0.7
PB03	IPOC Station P	2.82	255	Pg	Pn	17 38 54.0	+0.8
PB02	IPOC Station P	2.87	270	Pg	Pn	17 38 54.5	+0.7
PB02				Sg	S	17 39 31.1	-0.3
PB02				IAML		17 39 32.5	
	180nm,0.1s						
PB07	IPOC Station P	2.88	262	Pg	Pn	17 38 54.6	+0.6
PB07				Sg	S	17 39 31.3	-0.5
PB07				IAML		17 39 31.9	
	97nm,0.3s						
PB04	IPOC Station P	3.25	252	Pg	Pn	17 38 58.8	+0.6
SOET	ToroToro	3.35	17	Pg	Pn	17 38 59.8	0.0
SOET				Sg	S	17 39 41.2	-1.0
SOET				IAML		17 39 43.9	
	12nm,0.5s						
SLA	San Lorenzo	3.57	160	Pg	Pn	17 39 02.3	+0.3
SOEJ	Jacaque	4.54	343	Pg	Pn	17 39 15.3	+0.8
GO02	Mina Guanaco	4.57	213	Pg	Pn	17 39 14.8	+0.3
BBOE	La Paz, Chanca	4.65	346	Pg	Pn	17 39 16.6	+0.8
BBOD	La Paz, Gloria	4.98	340	Pg	Pn	17 39 20.8	+0.8
LPAZ	La Paz	5.19	346	Pg	Pn	17 39 23.2	+0.5

HLW 21 17:39:43.2, 29°.07N×34°.97E, h11km±5km, Md3.5, Ml3.7
GII 21 17:39:44.9±0.0, 29°.11N×34°.80E, h9km±1km, MD3.5/7, Mm3.5/5
SGS 21 17:39:45.7, 29°.14N×34°.78E, h26km, Ml3.1
JSO 21 17:39:46, 29°.18N×34°.72E, h9km±10km, ML3.0/20, Mw3.7/20
ISC 21 17:39:45.5±1.0, 29°.11N±0°.02×34°.76E±0°.03, h20km±2km, n69, σ0.76/82, Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HAQS	Haql	0.15	111	P	Pb	17 39 50.8	-0.3
HAQS	Haql	0.15	111	S	Sb	17 39 54.4	-0.7
JMOS	Jabal al Moall	0.31	78	S	Sb	17 39 57.1	+0.2
JMOS	Jabal al Moall	0.31	78	P	Pb	17 39 52.4	+0.1
HQLS		0.33	54	S	Sb	17 39 57.4	-0.1
HQLS		0.33	54	P	Pb	17 39 52.4	-0.2
TAYS	Tayyib Ism	0.56	170	S	Sb	17 40 05.1	+0.8
TAYS	Tayyib Ism	0.56	170	P	Pb	17 39 56.8	+0.2
EIL	Elat	0.59	16	Pg	Pb	17 39 56.4	-0.7
EIL				Sg	Sb	17 40 04.0	-1.1
EIL	Elat	0.59	16	P	Pb	17 39 56.5	-0.7
EIL				S	Sb	17 40 03.9	-1.1
EIL				IAML		17 40 05.3	
AQBJ	Aqaba	0.67	22	P	Pb	17 39 57.6	-0.9
AQBJ				S	Sb	17 40 07.3	-0.1
AQBJ				IAML		17 40 08.4	
MBRI	Mt Berech	0.70	11	Pg	Pb	17 39 58.2	-0.8
MBRI				Sg	Sb	17 40 07.4	-0.9
MBRI	Mt Berech	0.70	11	P	Pb	17 39 58.3	-0.8
MBRI				S	Sb	17 40 07.8	-0.5
BDAS	Al Bad`	0.74	156	S	Sb	17 40 09.6	+0.4
BDAS	Al Bad`	0.74	156	P	Pb	17 39 59.4	-0.2
JLOS		0.74	120	S	Sb	17 40 09.2	-0.3
JLOS		0.74	120	P	Pb	17 39 59.3	-0.4
RSHS		0.80	178	S	Sb	17 40 11.0	-0.2
RSHS				P	Pb	17 40 00.3	-0.4
HKAT	Jabal Katrina	0.89	229	P	Pn	17 40 02.8	-0.2
	baz=238						
HKAT				S	Sn	17 40 16.0	+0.6
	baz=238						
HRFI	Mount Harif	0.96	15	Pg	Pb	17 40 01.8	-1.6
HRFI				Sg	Sb	17 40 15.2	-0.5
KRMI	Paran Flat	1.01	358	Pg	Pb	17 40 03.4	-0.9
KRMI				Sg	Sb	17 40 16.8	-0.3
AYUS	`Aynunah	1.02	154	P	Pb	17 40 03.2	-1.1
KRABS	KRABS	1.09	156	P	Pn	17 40 04.4	-1.2
TR2	Tor 2	1.16	232	P	Pb	17 40 06.5	-0.3
	baz=239						
TR2				S	Sn	17 40 23.6	+1.8
	baz=239						
PRNI	Paran	1.26	10	Pg	Pn	17 40 06.9	-1.0
PRNI				Sg	Sb	17 40 24.4	+0.1
PRNI	Paran	1.26	10	P	Pn	17 40 07.6	-0.3
TR1	Tor 1	1.30	213	P	Pn	17 40 08.2	-0.3
	baz=221						
HRDS	Abu Rudays	1.34	253	P	Pb	17 40 09.2	-0.7
	baz=257						
HSNJ	Maan	1.40	35	P	Pn	17 40 10.3	+0.3
HSNJ				IAML		17 40 32.2	
WTBKS	WTBKS	1.44	135	P	Pn	17 40 09.5	-0.9
RMNI	Mount Ramon	1.49	0	Pn	Pn	17 40 11.0	-0.1
ZFRI	Zfri	1.49	14	Pn	Pn	17 40 10.4	-0.6
ZFRI				Sn	Sb	17 40 30.7	-0.1
ZFRI	Zfri	1.49	14	P	Pn	17 40 11.4	+0.4
ZFRI				IAML		17 40 34.1	
ZNM	Zenema	1.67	280	P	Pb	17 40 15.1	-0.4
	baz=280						
TBKS	Tabuk	1.80	119	P	Pn	17 40 14.8	-0.5
KZIT	Kziot	1.82	350	Pn	Pn	17 40 15.4	-0.2
KZIT				Sn	Sb	17 40 39.2	-1.3
KZIT	Kziot	1.82	350	P	Pn	17 40 16.0	+0.4
KZIT				IAML		17 40 49.9	
SUZ	Suez	1.83	294	P	Pb	17 40 17.2	-1.1
	baz=293						
GRB	Gharib	1.92	245	P	Pn	17 40 16.4	-0.6
	baz=248						
ZAF	Zafarana	1.94	276	P	Pb	17 40 17.9	-2.2
	baz=277						
KARJ	KARJ	2.15	21	P	Pb	17 40 32.1	+8.4
KARJ				IAML		17 41 25.3	
HHRG	Al Ghardaqah	2.15	210	P	Pn	17 40 20.8	+0.6
	baz=212						
LISJ	El Lisan	2.22	16	P	Pn	17 40 21.3	+0.3
YTIR	Yattir	2.27	8	Pn	Pn	17 40 21.8	-0.1
YTIR				Sn	Sn	17 40 50.2	+0.9
YTIR	Yattir	2.27	8	P	Pb	17 40 26.3	+0.5
GHAJ	Ghor Haditha	2.30	17	Pn	Pn	17 40 21.8	-0.4
AMAZ	Amatzia	2.42	3	Pn	Pn	17 40 23.9	0.0
AMAZ				Sn	Sn	17 40 54.1	+1.1
AMAZ	Amatzia	2.42	3	P	Pb	17 40 29.5	+1.1
AMAZ				IAML		17 41 05.6	
DSI	Dead Sea	2.51	12	Pn	Pn	17 40 24.5	-0.6
DSI	Dead Sea	2.51	12	P	Pb	17 40 30.0	+0.1
DSI				IAML		17 41 15.6	
WALJ	Wala	2.61	20	P	Pn	17 40 28.4	+1.9
GLL	Jalalah	2.71	281	P	Pn	17 40 28.3	+0.5
	baz=281						
WJHS		2.77	148	P	Pn	17 40 27.8	-0.9
HSAF	As Saff	2.84	281	P	Pn	17 40 30.4	+0.7
	baz=282						
BIDS	Bi'r al Bayda'	2.96	138	P	Pn	17 40 30.7	-0.6
NBNS	Bani Suef	3.08	262	P	Pn	17 40 33.8	+0.9
	baz=264						
SLTI	Sal'it	3.13	4	Pn	Pn	17 40 33.3	-0.4
SLTI	Sal'it	3.13	4	P	Pb	17 40 40.9	+0.4
HMDT	Nahal Hemdat	3.21	12	Pn	Pn	17 40 34.4	-0.2
HMDT	Nahal Hemdat	3.21	12	P	Pb	17 40 41.8	+0.1
HMDT				IAML		17 41 34.4	
ASUT		3.29	240	P	Pn	17 40 36.1	+0.3
	baz=242						
QRNJ	Al-Qirein	3.29	12	P	Pn	17 40 36.3	+0.5
MMLI	Mount Malkishu	3.37	10	Pn	Pn	17 40 37.0	+0.1
EWJHS	Al Wajh	3.38	150	P	Pn	17 40 36.1	-1.0
OFRI	`Ofer	3.51	3	Pn	Pn	17 40 39.9	+1.0
ASF	Jabal al Asfar	3.57	31	P	Pb	17 40 53.1	+5.2
ASF				IAML		17 41 44.3	
TAMRE	El Minia	3.67	248	P	Pn	17 40 41.3	+0.3
	baz=250						
SHMJ	Saham	3.71	13	P	Pb	17 40 50.4	+0.1
RYAN	Fayoum	3.92	271	P	Pn	17 40 44.7	+0.2
	baz=272						

IDC 21 17:48:57.2±0.7, 64°.68N×17°.65W, h0km, mb3.5/13, mbtmp3.5/16, ML2.5/2, MS3.1/7, Error ellipse: s-maj=22.9km s-min=12.4km az=15.0
ISC 21 17:48:58.4±0.6, 64°.61N±0°.08×17°.64W±0°.06, h9km, n21, σ1.58/21, mb3.6/13, MS3.1/5, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BORG	Borgarnes	1.59	277	Pn	Pn	17 49 24.3	-2.3
	23nm,0.3s,baz=98,slow=13,SNR=70						
BORG				Sn	Sn	17 49 46.9	-0.4
	12nm,0.3s,baz=66,slow=20,SNR=5.6						
SCO	Scoresbysund	6.12	346	e	Pn	17 50 25.8	-3.1
	baz=142,slow=11						
SCO				iP	Pn	17 50 27.6	-1.3
SCO				iS	Sn	17 51 41.0	+2.2
SCO				IAML		17 51 52.4	
	comp=Z,1.7nm,0.4s						
EKA	Eskdalemuir Ar	11.76	135	Pn	Pn	17 51 45.0	-1.1
	comp=Z,1.5nm,0.4s,baz=323,slow=13,SNR=15						
NOA	NORSAR Array B	13.59	92	LR	LR	17 57 06.1	
	comp=Z,48nm,18.9s,baz=315,slow=36						
HFS	Hagfors	15.11	93	Pn	Pn	17 52 29.7	-1.9
	comp=Z,0.1nm,0.3s,baz=231,slow=9.1,SNR=1.6						
HFS				LR	LR	17 59 12.7	
	comp=Z,57nm,18.2s,baz=324,slow=41						
	comp=Z,2.2nm,0.9s						
FINES	FINESS Array B	19.77	79	P	P	17 53 27.8	-0.6
	comp=Z,0.1nm,0.3s,baz=321,slow=20,SNR=1.1						
	comp=Z,1.2nm,0.8s						
GERES	GERESS Array B	22.98	118	P	P	17 54 04.7	+1.7
	comp=Z,0.2nm,0.3s,baz=303,slow=5.9,SNR=5.0						
GERES				LR	LR	18 03 49.3	
	comp=Z,72nm,19.7s,baz=315,slow=39						
	comp=Z,0.2nm,0.3s						
SCHQ	Schefferville	25.98	271	P	P	17 54 32.8	+1.9
	comp=Z,1.9nm,0.8s,baz=55,slow=19,SNR=1.6						
SCHQ				LR	LR	18 02 30.7	
	comp=Z,44nm,20.9s,baz=106,slow=31						
	comp=Z,1.9nm,0.8s						
ESDC	Sonseca Array	26.23	156	P	P	17 54 34.5	+1.2
	comp=Z,0.4nm,0.6s,baz=298,slow=4.5,SNR=2.6						
ESDC				LR	LR	18 04 52.5	
	comp=Z,42nm,19.0s,baz=302,slow=36						
	comp=Z,0.4nm,0.6s						
AKASG	Malin Array Be	27.90	97	P	P	17 54 49.2	+1.1
	comp=Z,0.1nm,0.3s,baz=319,slow=9.7,SNR=2.0						
	comp=Z,0.1nm,0.3s						
BRTR	Keskin Array B	38.52	105	P	P	17 56 22.6	+1.7
	comp=Z,0.9nm,0.6s,baz=287,slow=5.6,SNR=1.8						
	comp=Z,0.9nm,0.6s						
YKA	Yellowknife Ar	39.21	313	P	P	17 56 26.2	0.0
	comp=Z,0.3nm,0.8s,baz=41,slow=8.1,SNR=4.6						
	comp=Z,0.3nm,0.8s						
AKTO	Aktyubinsk	40.36	73	LR	LR	18 12 55.4	
	comp=Z,38nm,19.7s,baz=264,slow=36						
ILAR	Eielson Array	45.71	332	P	P	17 57 18.8	-0.2
	comp=Z,1.1nm,1.1s,baz=22,slow=6.7,SNR=5.7						
	comp=Z,1.1nm,1.1s						
ZALV	Zalesovo Beam	47.72	51	P	P	17 57 34.0	-0.8
	comp=Z,0.2nm,0.3s,baz=322,slow=9.1,SNR=2.0						
	comp=Z,0.2nm,0.3s						
MKAR	Makanchi Array	52.81	58	P	P	17 58 11.8	-1.7
	comp=Z,0.6nm,0.8s,baz=322,slow=6.6,SNR=7.5						
	comp=Z,0.6nm,0.8s						
TORD	Torodi Ar. Bea	53.12	156	P	P	17 58 15.2	-0.8
	comp=Z,0.2nm,0.6s,baz=1.4,slow=7.5,SNR=1.7						
	comp=Z,0.2nm,0.6s						
PDAR	Pinedale Array	53.14	293	P	P	17 58 16.4	+0.1
	comp=Z,0.8nm,0.9s,baz=60,slow=7.4,SNR=4.3						
	comp=Z,0.8nm,0.9s						
SONM	Songino Array	59.72	40	P	P	17 59 03.6	+0.6
	comp=Z,0.4nm,0.7s,baz=325,slow=7.0,SNR=4.1						
	comp=Z,0.4nm,0.7s						
TXAR	Lajitas Array	62.23	280	P	P	17 59 21.8	+1.5
	comp=Z,0.3nm,0.8s,baz=51,slow=5.9,SNR=2.6						
	comp=Z,0.3nm,0.8s						
KSRS	Korea Array	74.73	28	LR	LR	18 37 06.9	
	comp=Z,10nm,18.1s,baz=230,slow=39						

IDC 21 18:03:58.2±0.6, 6°.70N×72°.89W, h169km±6km, mb3.4/7, mbtmp4.0/11, MS2.3/1, Error ellipse: s-maj=17.8km s-min=7.2km az=134.0
RSNC 21 18:03:59.5±1.4, 6°.79N×73°.10W, h148km±5km, ML4.2, Mw4.2, Fault plane solution: NP1:φs90.00000°, δ27.00000°, λ-162.00000°.
ISC 21 18:03:57.6±0.7, 6°.85N±0°.03×73°.03W±0°.04, h159km±5km, n52, σ1.91/89, mb3.5/7, 5C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BARC	Barichara	0.30	212⇓	iP	Pn	18 04 19.8	+0.2
BARC				eS	Sn	18 04 35.0	-1.3
BARC				i		18 04 36.6	
	comp=Z,3μm,0.4s						
PAMC	Pamplona, Colo	0.59	33⇓	iP	Pn	18 04 22.5	+1.4
PAMC				eS	Sn	18 04 39.8	+0.8
PAMC				i		18 04 42.0	
	comp=Z,3μm,0.5s						
BRRC	Barranca, Sant	0.73	291⇑	iP	Pn	18 04 21.7	+0.4
BRRC				eS	Sn	18 04 39.0	-0.4
BRRC				i		18 04 42.2	
	comp=Z,1μm,0.1s						
PTBC	PUERTO BERRIO,	1.45	258⇑	iP	Pn	18 04 26.2	-1.3
PTBC				eS	Sn	18 04 47.6	-2.7
PTBC				i		18 04 55.3	
	comp=Z,2μm,0.4s						
SPBC	San Pablo de B	1.58	221⇑	iP	Pn	18 04 28.5	-0.3
SPBC				eS	Sn	18 04 50.9	-1.9
SPBC				i		18 04 55.8	
	comp=Z,2μm,0.2s						
ZARC	Zaragoza, Cauc	1.93	290	eP	Pn	18 04 31.8	-0.7
ZARC				eS	Sn	18 04 57.4	-2.0
ZARC				i		18 05 05.4	
	comp=Z,1μm,0.3s						
NORC	Norcasia	2.23	235	eP	Pn	18 04 35.4	-0.7
NORC				eS	Sn	18 05 04.1	-1.7
NORC				i		18 05 08.1	
	comp=Z,1μm,0.2s						
CHIC	Chingaza	2.31	198⇑	iP	Pn	18 04 37.3	-0.1
CHIC				eS	Sn	18 05 05.4	-2.7
CHIC				i		18 05 13.2	
	comp=Z,548nm,0.6s						
ROSC	El Rosal	2.37	213	P	Pn	18 04 39.3	+1.2
	comp=Z,463nm,0.3s,baz=297,slow=7.6,SNR=164						
ROSC				S	Sn	18 05 10.2	+0.9
	comp=Z,1μm,0.3s,baz=192,slow=22,SNR=21						
ROSC	El Rosal	2.37	213⇑	iP	Pn	18 04 39.1	+1.0
ROSC				eS	Sn	18 05 10.5	+1.2
ROSC				i		18 05 14.4	
	comp=Z,1μm,0.3s						
UREC	San Jos de Ur	2.65	290	eP	Pn	18 04 39.4	-1.5
UREC				eS	Sn	18 05 10.6	-3.9
UREC				i		18 05 24.8	
	comp=Z,1μm,0.2s						
LL1C	La Loma 1 Cana	2.73	349	eP	Pn	18 04 44.2	+2.2
LL1C				eS	Sn	18 05 18.9	+2.4
LL1C				i		18 05 25.2	
	comp=Z,2μm,0.4s						
PTGC	Puerto Gaitan,	2.77	161	eP	Pn	18 04 42.5	-0.1
PTGC				eS	Sn	18 05 15.7	-1.7
PTGC				i		18 05 19.3	
	comp=Z,501nm,0.2s						
VILC	Villavicencio,	2.80	194	eP	Pn	18 04 42.7	-0.3
VILC				eS	Sn	18 05 16.4	-1.8
GUY2C	Guyana, Caldas	2.83	235	eP	Pn	18 04 44.6	+0.9
GUY2C				eS	Sn	18 05 17.9	-1.4
GUY2C				IAML		18 05 25.3	
	comp=Z,777nm,0.6s						
LL5C	La Loma 5 El P	2.97	347	eP	Pn	18 04 47.4	+2.5
LL5C				eS	Sn	18 05 22.9	+1.2
LL5C				i		18 05 23.9	
	comp=Z,649nm,0.2s						
RECRC	Villamaria, Ca	2.98	231	eP	Pn	18 04 46.9	+1.2
RECRC				eS	Sn	18 05 25.1	+2.3
NIZA	Niza - Manizal	3.01	234	eP	Pn	18 04 48.1	+2.3
NIZA				eS	Sn	18 05 27.2	+4.1
SDV	Santo Domingo	3.12	49	P	Pn	18 04 49.0	+1.9
	comp=Z,144nm,0.3s,baz=216,slow=3.5,SNR=254						
SDV				S	Sn	18 05 26.6	+1.2
	comp=Z,271nm,0.3s,baz=0.8,slow=15,SNR=35						
SDV				LR	LR	18 05 52.7	
	comp=Z,49nm,20.1s,baz=142,slow=37						
CBOC	Ciudad Bolivar	3.12	252	eP	Pn	18 04 47.6	+0.5
CBOC				eS	Sn	18 05 23.7	-1.7
CBOC				i		18 05 30.2	
	comp=Z,322nm,0.4s						
DBBC	Dabeiba	3.17	273	eP	Pn	18 04 47.2	-0.4
DBBC				eS	Sn	18 05 23.3	-2.9
DBBC				i		18 05 25.7	
	comp=Z,415nm,0.2s						
ARGC	Ariguani, Magd	3.23	338	eP	Pn	18 04 49.7	+1.5
ARGC				eS	Sn	18 05 27.3	-0.3
ARGC				i		18 05 32.5	
	comp=Z,232nm,0.2s						
ANIL	Santa Ana	3.33	225	eP	Pn	18 04 50.8	+1.0
ANIL				eS	Sn	18 05 30.9	+0.6
ANIL				i		18 05 36.5	
	comp=Z,1μm,0.3s						
PRAC	Prado	3.62	211	eP	Pn	18 04 53.3	0.0
PRAC				eS	Sn	18 05 32.3	-4.3
PRAC				i		18 05 44.1	
	comp=Z,498nm,0.5s						
ORTC	Ortega, Tolima	3.66	217	eP	Pn	18 04 53.8	-0.1
ORTC				eS	Sn	18 05 36.8	-0.7
ORTC				i		18 05 43.5	
	comp=Z,376nm,0.5s						
APAC	Apartado, Choc	3.68	287	eP	Pn	18 04 53.6	-0.4
APAC				eS	Sn	18 05 35.4	-2.4
APAC				i		18 05 41.1	
	comp=Z,398nm,0.5s						
SJCC	San Jacinto, C	3.71	325	eP	Pn	18 04 53.3	-1.1
SJCC				eS	Sn	18 05 35.2	-3.3
SJCC				i		18 05 39.4	
	comp=Z,270nm,0.5s						
LCBC	Los crdobas,	3.87	301	eS	Sn	18 05 39.2	-2.9
LCBC				i		18 05 44.8	
	comp=Z,199nm,0.2s						
CRJC	Cerrejon, Guaj	4.15	2	eP	Pn	18 04 59.7	-0.5
CRJC				eS	Sn	18 05 46.0	-2.9
CRJC				i		18 05 54.2	
	comp=Z,372nm,0.2s						
GUVC	San Jose del G	4.29	175	eP	Pn	18 05 02.1	+0.1
GUVC				eS	Sn	18 05 51.8	-0.4
GUVC				i		18 05 56.6	
	comp=Z,272nm,0.2s						
YOTC	Yotoco, Valle	4.36	229	eP	Pn	18 05 02.2	-0.8
SOLC	Bahia Solano	4.40	262	eP	Pn	18 05 04.6	+1.2
SMRC	Santa Marta, M	4.45	345	eP	Pn	18 05 04.8	+0.8
SMRC				eS	Sn	18 05 53.0	-2.8
PIZC	Pizarro, Choco	4.70	247	eP	Pn	18 05 08.7	+1.4
PIZC				eS	Sn	18 06 01.3	-0.3
MACC	Macarena, Meta	4.74	190	eP	Pn	18 05 06.2	-1.7
MACC				eS	Sn	18 05 58.3	-4.4
BETC	Betania	4.79	210	eP	Pn	18 05 07.2	-1.3
BETC				eS	Sn	18 05 57.9	-6.0
URIC	Uribia, Colomb	4.93	12	eP	Pn	18 05 09.8	-0.5
URIC				eS	Sn	18 06 04.6	-2.6
JAMC	Jamundi, Valle	5.12	225	eP	Pn	18 05 12.7	-0.3
JAMC				eS	Sn	18 06 09.3	-2.7
MALC	Bahia Malaga	5.13	237	eP	Pn	18 05 13.7	+0.7
MALC				eS	Sn	18 06 12.6	+0.8
PCRV	Puerto La Cruz	8.93	68	P	Pn	18 06 03.9	+0.4
	comp=Z,3.4nm,0.3s,baz=234,slow=8.7,SNR=8.8						
PCRV				S	Sn	18 07 39.5	-3.4
	comp=Z,8.8nm,0.6s,baz=97,slow=18,SNR=1.9						
JTS	Las Juntas de	12.28	287	P	Pn	18 06 50.4	+3.0
	comp=Z,3.9nm,0.5s,baz=72,slow=17,SNR=2.1						
TXAR	Lajitas Array	36.52	312	P	P	18 10 49.1	+1.1
	comp=Z,1.0nm,0.6s,baz=127,slow=9.6,SNR=15						
	comp=Z,1.0nm,0.6s						
SCHQ	Schefferville	48.11	5	P	P	18 12 22.2	+1.0
	comp=Z,5.2nm,0.6s,baz=198,slow=6.8,SNR=15						
	comp=Z,5.2nm,0.6s						
PDAR	Pinedale Array	48.11	324	P	P	18 12 22.8	+1.1
	comp=Z,0.3nm,0.5s,baz=122,slow=9.2,SNR=4.9						
	comp=Z,0.3nm,0.5s						
NVAR	Mina Array Bea	51.53	315	P	P	18 12 47.6	0.0
	comp=Z,0.5nm,0.5s,baz=156,slow=6.9,SNR=2.2						
	comp=Z,0.5nm,0.5s						
YKA	Yellowknife Ar	63.27	340	P	P	18 14 09.7	+0.7
	comp=Z,0.4nm,0.6s,baz=131,slow=7.1,SNR=8.7						
	comp=Z,0.4nm,0.6s						

DBIC	Dimbokro	67.64	86	P	P	18 14 37.0	-0.9
	comp=Z,3.1nm,0.8s,baz=292,slow=5.9,SNR=3.7						
	comp=Z,3.1nm,0.8s						
TORD	Torodi Ar. Bea	73.64	78	P	P	18 15 12.2	-2.2
	comp=Z,0.2nm,0.4s,baz=277,slow=6.6,SNR=1.5						
	comp=Z,0.2nm,0.4s						
MKAR	Makanchi Array	122.27	20	PKP	PKPdf	18 22 33.8	-0.1
	comp=Z,0.2nm,0.4s,baz=248,slow=2.1,SNR=5.8						
ASAR	Alice Springs	149.20	234	PKPbc	PKPbc	18 23 27.8	-0.4
	comp=Z,0.6nm,0.5s,baz=121,slow=3.5,SNR=16						
WRA	Warramunga Arr	150.43	241	PKPbc	PKPbc	18 23 29.2	-2.1
	comp=Z,0.4nm,0.4s,baz=108,slow=3.1,SNR=19						
CMAR	Chiang Mai Arr	153.64	17	PKPbc	PKiKP	18 23 39.5	+0.9
	comp=Z,0.4nm,0.5s,baz=310,slow=3.2,SNR=5.8						

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*DSN **21** 18:15:51.1±1.6, 28°.24N×57°.09E, h10km, ML3.3/8, Error ellipse: s-maj=69.8km s-min=13.5km az=112.0*
*TEH **21** 18:15:52.6, 28°.01N×57°.48E, h50km, ML3.9*
*IDC **21** 18:15:54.3±4.8, 27°.81N×57°.54E, h79km±63km, mb3.5/8, mbtmp3.8/9, ML3.2/1, MS3.3/3, Error ellipse: s-maj=39.1km s-min=20.8km az=131.0*
*OMAN **21** 18:15:57.8±0.7, 27°.56N×58°.16E, h10km, mb4.7/2, ml3.5/18, Error ellipse: s-maj=12.6km s-min=6.2km az=2.0*
ISC 21 18:15:53.4±0.8, **28°.00N**±0°.04×**57°.56E**±0°.05, **h52**km±8km, **n101**, σ**1s.90**/100, **mb3.6**/7, **MS3.6**/3, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNJ	Kahnooj	0.14	113	Pg	Pn	18 16 00.8	-0.9
KHNJ				Sg	Sn	18 16 07.4	-0.1
IBND	Bandar-abas	1.06	239	Pg	Pn	18 16 11.5	-0.5
IBND				Sg	Sn	18 16 26.7	+1.0
GENO	Geno	1.37	244	Pg	Pn	18 16 15.6	-0.8
KBAM	BAM	1.37	35	Pg	Pn	18 16 17.8	+1.4
NGRK	Negar Kerman	1.79	336	Pg	Pn	18 16 22.5	+0.2
CHMN	Cheshme madani	1.85	359	Pn	Pn	18 16 23.9	+0.8
TVBK	TV Kerman	2.10	341	Pn	Pn	18 16 27.9	+1.5
JASK	Jask - Hormozg	2.15	173	P	Pn	18 16 27.8	+1.0
	SNR=20						
JASK	Jask - Hormozg	2.15	173	Pn	Pn	18 16 27.1	+0.3
SHME	Shamm	2.32	213	P	Pn	18 16 30.4	+1.2
SHME				S	Sn	18 16 59.1	+2.5
SHME	Shamm	2.32	213	P	Pn	18 16 34.5	+5.3
	SNR=12						
SHME				S	Sn	18 17 06.8	+10
SHME	Shamm	2.32	213	Pn	Pn	18 16 29.5	+0.3
BANOM	Banah	2.36	209	P	Pn	18 16 30.4	+0.6
BANOM				S	Sn	18 17 01.8	+4.3
BANOM	Banah	2.36	209	P	Pn	18 16 33.7	+4.0
	SNR=43						
BANOM				S	Sn	18 17 03.9	+6.4
BANOM	Banah	2.36	209	Pn	Pn	18 16 30.7	+0.9
KHGB	Koh Gabri	2.55	338	Pn	Pn	18 16 33.4	+0.9
LAR1	LAR	2.84	264	Pn	Pn	18 16 35.6	-0.8
MASF	Masafi	2.91	206	P	Pn	18 16 41.3	+4.1
MSFE	Esma-Masafi	2.92	206	P	Pn	18 16 38.2	+0.8
MSFE	Esma-Masafi	2.92	206	Pn	Pn	18 16 38.6	+1.3
MDH	Madha	2.92	203	P	Pn	18 16 37.6	+0.2
MDH	Madha	2.92	203	P	Pn	18 16 40.0	+2.6
MDH	Madha	2.92	203	Pn	Pn	18 16 37.9	+0.4
UMQ	Umm Al-Quwin	3.00	215	Pn	Pn	18 16 38.8	+0.4
ZRDN	Zarand Kerman	3.09	343	Pn	Pn	18 16 40.8	+0.9
ZHDN	Zahedan	3.17	63	Pn	Pn	18 16 43.2	+2.1
UOSS	Minazif	3.28	202	P	Pn	18 16 42.9	+0.5
UOSS	Minazif	3.28	202	P	Pn	18 16 46.3	+3.9
UOSS	Minazif	3.28	202	Pn	Pn	18 16 43.6	+1.2
HATD	Hatta, Dubai	3.41	202	P	Pn	18 16 46.4	+2.2
HATD	Hatta, Dubai	3.41	202	P	Pn	18 16 50.9	+6.7
HATD	Hatta, Dubai	3.41	202	Pn	Pn	18 16 45.3	+1.1
NAZ	Nazwa, Dubai	3.45	210	P	Pn	18 16 52.8	+8.1
NAZ	Nazwa, Dubai	3.45	210	Pn	Pn	18 16 45.7	+1.0
CHBR	Chabahar	3.54	132	Pn	Pn	18 16 47.0	+1.1
ASHO	Ashiyiah	3.57	203	P	Pn	18 16 49.2	+2.8
ASHO	Ashiyiah	3.57	203	P	Pn	18 16 53.1	+6.7
	SNR=12						
ASHO	Ashiyiah	3.57	203	Pn	Pn	18 16 47.5	+1.1
FAQ	Al Faqa, Dubai	3.69	209	P	Pn	18 16 53.6	+5.6
FAQ	Al Faqa, Dubai	3.69	209	Pn	Pn	18 16 48.4	+0.4
ASUD	Al Ashush, Dub	3.92	211	P	Pn	18 16 51.2	+0.2
ASUD	Al Ashush, Dub	3.92	211	P	Pn	18 17 00.2	+9.2
	SNR=17						
ASUD	Al Ashush, Dub	3.92	211	Pn	Pn	18 16 52.1	+1.1
SOHO	SOHO	3.96	194	P	Pn	18 16 56.3	+4.6
NHDN	Nehbandan	4.01	32	Pn	Pn	18 16 54.5	+2.0
ESRB	Sir Abu	4.07	228	Pn	Pn	18 16 52.6	-0.6
AJN	Ajban	4.13	215	Pn	Pn	18 16 53.8	-0.2
NGCH	Negor - Chabah	4.14	129	P	Pn	18 16 55.7	+1.6
	SNR=7.7						
NGCH	Negor - Chabah	4.14	129	Pn	Pn	18 16 55.4	+1.2
BSRN	Basiran	4.17	19	Pn	Pn	18 16 56.2	+1.5
ALNE	Al Ain	4.25	203	P	Pn	18 16 58.7	+3.0
ALNE	Al Ain	4.25	203	P	Pn	18 17 00.8	+5.1
ALNE	Al Ain	4.25	203	Pn	Pn	18 16 57.2	+1.4
SRVN	Saravan	4.33	97	Pn	Pn	18 17 00.1	+3.2
HOQ	Hoqain	4.41	183	P	Pn	18 17 00.1	+2.3
BIDO	Bidbid	4.49	173	P	Pn	18 17 00.1	+1.1
BIDO	Bidbid	4.49	173	Pn	Pn	18 17 01.1	+2.1
IKOO	Kooshah	4.58	15	Pn	Pn	18 17 02.2	+1.9
SHI	Shiraz	4.72	291	Pn	Pn	18 17 02.5	+0.3
ARQ	Araqi	4.74	192	P	Pn	18 17 04.3	+1.9
	SNR=9.3						
ARQ				S	Sn	18 17 57.3	+1.2
WSAR	Wadi Sarin	4.84	168	P	Pn	18 17 03.5	-0.3
	1.1nm,0.3s,baz=112,slow=21,SNR=1.6						
WSAR				S	Sn	18 17 55.2	-3.4
	29nm,0.4s,baz=94,slow=19,SNR=20						
	3.2nm,0.3s						
WSAR	Wadi Sarin	4.84	168	P	Pn	18 17 03.7	0.0
	SNR=66						
WSAR				S	Sn	18 17 55.7	-2.9
SMDO	Samad	4.94	175	P	Pn	18 17 04.8	-0.4
ITEG	Tejag	4.98	12	Pn	Pn	18 17 07.8	+2.0
TPRV	Parvadeh(Tabas	5.07	352	Pn	Pn	18 17 08.7	+1.8
IDAH	Dahanechah	5.12	22	Pn	Pn	18 17 10.2	+2.4
BSY	Bisya	5.25	184	P	Pn	18 17 12.3	+3.0
	SNR=12						
BSY				S	Sn	18 18 10.0	+1.5
MZWR	Madinat Zayed	5.37	219	P	Pn	18 17 18.8	+7.8
MZWR	Madinat Zayed	5.37	219	Pn	Pn	18 17 10.3	-0.7
WBK	Wadi Bani Khal	5.52	166	P	Pn	18 17 13.0	-0.1
	SNR=24						
WBK				S	Sn	18 18 12.2	-3.1
AFRZ	Afriz	5.55	13	Pn	Pn	18 17 15.5	+1.9
DSBU	Dashti - Bushe	5.57	275	Pn	Pn	18 17 12.4	-1.4
AHBU	AHRAM	5.58	280	Pn	Pn	18 17 12.7	-1.2
TKDS	Koohdasht(Taba	5.61	356	Pn	Pn	18 17 15.5	+1.2
JMDO	Jabal Madar	5.63	175	P	Pn	18 17 16.0	+1.4
UMZA	Um Al Zommool	5.70	203	P	Pn	18 17 18.9	+3.4
UMZA	Um Al Zommool	5.70	203	Pn	Pn	18 17 15.8	+0.3
GHWR	Ruwais	5.83	227	Pn	Pn	18 17 15.5	-1.7
IRAM	Ramesheh	5.88	311	Pn	Pn	18 17 17.2	-1.0
KLNJ	Kolanjah	6.00	301	Pn	Pn	18 17 18.7	-1.3
JLN	Jalan Bani Buh	6.06	164	P	Pn	18 17 20.3	-0.2
SHRT	Shahrakht	6.09	22	Pn	Pn	18 17 23.8	+2.8
ANAR	Anarak	6.13	328	Pn	Pn	18 17 21.9	+0.3
MZR	Muzera	6.20	217	Pn	Pn	18 17 20.9	-1.4
IGAR	Gharneh	6.48	314	Pn	Pn	18 17 25.8	-0.7
IZEF	Zefreh	6.65	318	Pn	Pn	18 17 27.5	-1.2
IBRJ	Brojen	6.71	307	Pn	Pn	18 17 28.9	-0.7
MHTO	MHTO	7.00	177	P	Pn	18 17 34.3	+0.9
TBJM	Torbat-e-JAM	7.62	17	Pn	Pn	18 17 44.8	+2.8
AMIS	Naft Sefid	8.06	299	Pn	Pn	18 17 45.9	-2.0
AAK	Ala-Archa	20.05	39	P	P	18 20 22.5	+0.1
	0.6nm,0.5s,baz=248,slow=5.4,SNR=3.7						
	0.6nm,0.5s						
AKTO	Aktyubinsk	22.40	1	P	P	18 20 47.3	-0.1
	1.4nm,0.5s,baz=188,slow=7.9,SNR=4.8						
	1.4nm,0.5s						
BVAR	Borovoye Array	26.75	17	P	P	18 21 28.0	0.0
	1.6nm,0.5s,baz=197,slow=7.6,SNR=16						
	1.6nm,0.5s						
MKAR	Makanchi Array	26.98	39	P	P	18 21 30.4	+0.1
	0.4nm,0.3s,baz=222,slow=7.9,SNR=10						
	0.4nm,0.3s						
KURBB	Kurchatov Arra	27.63	29	P	P	18 21 36.1	+0.2
	0.3nm,0.2s,baz=232,slow=7.8,SNR=4.3						
	0.3nm,0.2s						
AKASG	Malin Array Be	31.20	324	P	P	18 22 07.6	0.0
	0.2nm,0.3s,baz=130,slow=9.1,SNR=1.6						
	0.2nm,0.3s						
ZALV	Zalesovo Beam	32.72	30	P	P	18 22 20.6	-0.2
	1.6nm,0.3s,baz=230,slow=8.8,SNR=10						
	1.6nm,0.3s						
VRAC	Vranov	37.80	316	LR	LR	18 39 14.0	
	comp=Z,11nm,21.0s,baz=339,slow=37						
TORD	Torodi Ar. Bea	53.92	266	P	P	18 25 09.8	-2.3
	0.3nm,0.5s,baz=58,slow=6.8,SNR=3.7						
	0.3nm,0.5s						
TSUM	Tsumeb	60.81	224	LR	LR	18 53 51.4	
	comp=Z,58nm,19.4s,baz=152,slow=38						
JNU	Nakatsue	62.16	65	LR	LR	18 55 07.0	
	comp=Z,40nm,19.2s,baz=204,slow=38						

WEL 21 18:47:04.2±0.5, **42°S**±3°×**17°4E**±°, **h5**km, **M2.2**/7, **ML2.4**/12, **MLv2.2**/7, **Error ellipse: s-maj=0.0km s-min=0.0km az=123.6, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSWZ	Blackbirch Sta	0.37	16	P	Pg	18 47 11.7	+0.5
BSWZ				S	Sg	18 47 17.5	+1.5
KHZ	Kahutara	0.38	203	P	Pg	18 47 11.6	+0.1
CMWZ	Cape Campbell	0.48	48	P	Pb	18 47 14.3	-0.7
TUWZ	Tuamarina	0.66	14	P	Pg	18 47 17.1	+0.4
TUWZ				S	Sb	18 47 26.9	-0.6
THZ	Tophouse	0.69	296	P	Pg	18 47 17.7	+0.2
THZ				S	Sg	18 47 27.4	+1.0
NNZ	Nelson	0.89	342	P	Pg	18 47 21.2	-0.1
NNZ				S	Sg	18 47 33.4	+0.6
TCW	Tory Channel	0.95	25	P	Pg	18 47 21.9	-0.4
MRNZ	Matariki Terra	0.99	312	P	Pb	18 47 23.5	-0.3
GVZ	Greta Valley S	1.04	210	P	Pg	18 47 24.1	0.0
GVZ				S	Sb	18 47 39.2	+0.5
TKNZ	Takaka Hill	1.19	330	P	Pg	18 47 26.6	-0.3
TKNZ				S	Sb	18 47 42.9	+0.1
DUWZ	D'Urville Isla	1.27	6	P	Pg	18 47 27.6	-0.9
LTZ	Lake Taylor	1.30	236	P	Pn	18 47 28.1	-1.0
LTZ				S	Sg	18 47 45.6	-0.4
CAW	Cannon Point	1.38	47	P	Pn	18 47 28.6	-1.6
PAWZ	Paruwai Farm	1.44	62	P	Pn	18 47 28.5	-2.4
DSZ	Denniston Nort	1.48	282	P	Pb	18 47 32.2	+0.1
KIW	Kapiti Island	1.49	37	P	Pn	18 47 30.7	-1.0
QRZ	Quartz Range	1.54	323	P	Pn	18 47 32.5	+0.3
MTW	Mount Morrison	1.60	56	P	Pn	18 47 30.4	-2.7
INZ	Inchbonnie	1.82	248	P	Pn	18 47 36.1	0.0

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*DJA **21** 18:48:04.9±0.3, 2°N±2°×9°9E±°, h132km±5km, M4.1/16, mb4.5/4, MLv3.9/16*
*NEIC **21** 18:48:04.7±1.1, 2°.40N±0°.06×98°.91E±0°.06, h143km±4km, mb4.3/33, Error ellipse: s-maj=9.5km s-min=7.7km az=127.0*
*IDC **21** 18:48:11.6±10.0, 2°.51N×99°.12E, h209km±95km, mb3.6/8, mbtmp4.2/9, Error ellipse: s-maj=72.7km s-min=12.6km az=58.0*
ISC 21 18:48:04.0±0.7, **2°.34N**±0°.04×**98°.93E**±0°.05, **h145**km±6km, **n77**, σ**1s.04**/81, **mb4.2**/25, **1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPSI	Rantau Prapat	0.35	358		Pn	18 48 24.6	+0.5
RPSI				Sn	Sn	18 48 39.1	-0.3
TSI	Tuntungan	1.21	342	P	Pn	18 48 30.7	+0.5
KCSI	Kotacane, Aceh	1.65	315	P	Pn	18 48 35.2	+0.3
KCSI				S	Sn	18 48 58.6	+0.2
GSI	Gunungsitoli	1.71	233	Pn	Pn	18 48 36.5	+1.0
GSI				Sn	Sn	18 48 58.9	-0.6
GSI	Gunungsitoli	1.71	233	P	Pn	18 48 36.4	+1.0
GSI				S	Sn	18 48 59.7	+0.1
PBSI	Pulau Batu	2.47	195	P	Pn	18 48 44.4	-0.2
SNSI	Sinabang, Aceh	2.60	271	P	Pn	18 48 47.5	+1.3
BKNI	Bangkinang	2.91	134		Pn	18 48 51.1	+1.1
BKNI	Bangkinang	2.91	134	P	Pn	18 48 49.2	-0.8
IPM	Ipoh	2.98	45	Pn	Pn	18 48 51.5	+0.5
IPM				Sn	Sn	18 49 26.9	-0.3
MLSI	Meulaboh, Aceh	3.17	307	P	Pn	18 48 54.4	+1.1
KULM	Kulim	3.39	30	Pn	Pn	18 48 56.4	+0.1
LHMI	Lhok Sumawe	3.48	325	Pn	Pn	18 48 57.6	+0.2
LHMI	Lhok Sumawe	3.48	325	P	Pn	18 48 58.4	+1.0
PDSI	Padang	3.58	155	P	Pn	18 48 59.2	+0.5
SDSI	Sungai Dareh	4.10	143	P	Pn	18 49 06.3	+0.8
MYKOM	Kota Tinggi	4.94	96	Pn	Pn	18 49 17.7	+1.0
PPSI	Pulau Pagai	5.19	168	P	Pn	18 49 18.8	-1.1
	248nm,0.9s,0.9nm						
SRIT	Nakonsritamara	6.25	6	Pn	Pn	18 49 33.4	-0.6
MASI	Maura Aman, Be	6.37	149	P	Pn	18 49 36.8	+1.0
MNAI	Manna	7.78	149	Pn	Pn	18 49 53.9	-0.7
MNAI	Manna	7.78	149	P	Pn	18 49 52.2	-2.4
PPBI	Pangkal Pinang	8.48	122	P	Pn	18 49 59.0	-4.9
PBA	Port Blair	11.10	327	Pn	Pn	18 50 37.4	-1.4
CMAR	Chiang Mai Arr	16.01	0	P	P	18 51 43.3	+1.4
	2.3nm,0.6s,baz=190,slow=11,SNR=16						
CMAR	Chiang Mai Arr	16.01	0	P	Pn	18 51 40.2	-1.2
PHRA	Phrae	16.11	4	P	Pn	18 51 42.6	+0.2
CRAI	Chiangrai	17.83	4	P	P	18 52 02.0	0.0
TNCH	TengChong	22.56	359	⇑P	P	18 52 53.0	+0.6
TNCH				pP	pP	18 53 20.5	+1.3
TNCH				pmax	pmax		
	comp=Z,13nm,0.9s						
SHL	Shillong	24.07	344	P	P	18 53 05.2	-1.1
PZH	PanZhiHua	24.17	6	P	P	18 53 10.3	+3.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,150nm,5.0s						
TAPN	Taplejung	27.09	338	*e*P	P	18 53 34.6	+0.9
	comp=Z,14nm,0.9s						
JIRN	Jiri	27.97	335	*e*P	P	18 53 41.8	+0.2
GUN	Gumba	28.32	335	*e*P	P	18 53 44.9	+0.2
	comp=Z,8.7nm,0.5s						
KOLN	Koldanda	29.23	331	*e*P	P	18 53 53.0	+0.4
	comp=Z,15nm,0.6s						
DANN	Dangsing	29.64	332	*e*P	P	18 53 56.5	+0.2
	comp=Z,8.9nm,0.6s						
PYUN	Piuthan	29.80	331	*e*P	P	18 53 57.8	+0.2
	comp=Z,4.9nm,0.6s						
HHC	Hu-ho-hao-te	39.99	15	*e*P	P	18 55 27.4	+2.7
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC				pmax	pmax		
	comp=Z,190nm,5.0s						
WB0	Warramunga Arr	41.16	124	P	P	18 55 34.3	-0.3
WB0				IAmb	IAmb	18 55 59.7	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	41.20	124	P	P	18 55 35.0	+0.1
	comp=Z,0.9nm,0.4s,baz=317,slow=10,SNR=38						
	comp=Z,0.9nm,0.4s						
WRAB	Tennant Creek	41.21	124	P	P	18 55 34.5	-0.4
WRAB				IAmb	IAmb	18 55 43.4	
	comp=Z,9.8nm,1.4s						
KSH	Kashi	42.49	333	P	P	18 55 44.6	-0.5
KSH				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WMQ	Urumqi	42.49	348	*e*P	P	18 55 46.8	+1.8
ASAR	Alice Springs	42.73	129	P	P	18 55 48.8	+1.5
	comp=Z,0.8nm,0.5s,baz=302,slow=7.9,SNR=34						
	comp=Z,0.8nm,0.5s						
AS31	Alice Springs	42.74	129	P	P	18 55 48.0	+0.7
KS19	Wonju Array Si	43.94	34	P	P	18 55 55.7	-1.0
KS19				IAmb	IAmb	18 56 29.5	
	comp=Z,12nm,1.2s						
KDJ	Kajisay	44.15	337	P	P	18 55 59.8	+1.3
DRK	Karamyk	44.45	330	P	P	18 55 57.5	-3.5
AAK	Ala-Archa	45.68	335	P	P	18 56 11.5	+0.9
AAK				IAmb	IAmb	18 56 36.2	
	comp=Z,7.8nm,0.7s						
SONM	Songino Array	45.77	7	P	P	18 56 10.8	-0.4
	comp=Z,0.6nm,0.3s,baz=190,slow=9.5,SNR=4.1						
	comp=Z,0.6nm,0.3s						
SONM	Songino Array	45.77	7	P	P	18 56 11.0	-0.1
MK31	Makanchi Array	46.59	344	P	P	18 56 17.5	+0.1
MK31				IAmb	IAmb	18 56 19.3	
	comp=Z,2.6nm,0.9s						
MKAR	Makanchi Array	46.59	344	P	P	18 56 17.9	+0.5
	comp=Z,1.7nm,0.4s,baz=153,slow=9.0,SNR=82						
	comp=Z,1.7nm,0.4s						
MKAR	Makanchi Array	46.59	344	P	P	18 56 17.5	+0.1
MAKZ	Makanchi	46.69	344	P	P	18 56 18.5	+0.3
MAKZ				IAmb	IAmb	18 56 19.3	
	comp=Z,3.4nm,1.1s						
KK31	Karatay Array	47.84	332	P	P	18 56 28.4	+1.2
KKAR	Karatay Array	47.84	332	P	P	18 56 28.3	+1.2
KKAR	Karatay Array	47.84	332	P	P	18 56 27.9	+0.7
KURK	Kurchatov	51.17	344	P	P	18 56 52.3	+0.1
KURK				IAmb	IAmb	18 56 53.7	
	comp=Z,3.3nm,0.6s						
GYA0B	ALIBECK ARRAY	51.48	319	P	P	18 56 52.9	-2.0
GYA0B				IAmb	IAmb	18 56 58.6	
	comp=Z,3.5nm,0.6s						
ZAA0	Zalesovo Array	52.73	350	P	P	18 57 03.7	0.0
ZAA0				IAmb	IAmb	18 57 05.3	
	comp=Z,5.0nm,0.5s						
ZALV	Zalesovo Beam	52.73	350	P	P	18 57 04.2	+0.5
	comp=Z,5.3nm,0.4s,baz=162,slow=7.0,SNR=36						
	comp=Z,5.3nm,0.4s						
ZALV	Zalesovo Beam	52.73	350	P	P	18 57 03.8	+0.1
BRVK	Borovoye	55.83	340	P	P	18 57 26.4	+0.2
BRVK				IAmb	IAmb	18 57 26.9	
	comp=Z,5.3nm,1.4s						
ABKAR	Akbulak array	57.35	331	P	P	18 57 36.8	-0.2
ABKAR				IAmb	IAmb	18 57 38.7	
	comp=Z,2.0nm,0.9s						
ABKAR	Akbulak array	57.35	331	P	P	18 57 36.2	-0.8
KBZ	Khabaz	64.36	318	P	P	18 58 24.2	-0.3
	comp=Z,1.4nm,0.8s,baz=129,slow=6.5,SNR=2.4						
	comp=Z,1.4nm,0.8s						
NRIK	Noril'sk	67.32	356	P	P	18 58 41.2	-1.7
	comp=Z,2.1nm,0.5s,baz=117,slow=5.7,SNR=3.3						
	comp=Z,2.1nm,0.5s						
NRIK	Noril'sk	67.32	356	P	P	18 58 43.1	+0.2
NRIK				IAmb	IAmb	18 58 43.5	
	comp=Z,2.6nm,0.6s						
TIXI	Tiksi	71.77	10	P	P	18 59 10.3	+0.1
TIXI				IAmb	IAmb	18 59 10.9	
	comp=Z,5.7nm,1.1s						
ELL	Elmali	71.85	308	P	P	18 59 10.8	-0.7
MAW	Mawson	74.22	194	P	P	18 59 25.2	+0.6
BURAR	Bucovina Array	77.32	318	P	P	18 59 43.1	+0.2
BUR08	Bucovina Ar. S	77.34	318	P	P	18 59 43.4	+0.4
BUR08				IAmb	IAmb	18 59 54.8	
	comp=Z,5.9nm,1.5s						
FINES	FINESS Array B	79.80	332	P	P	18 59 56.5	+0.6
	comp=Z,1.5nm,0.5s,baz=111,slow=5.0,SNR=12						
	comp=Z,1.5nm,0.5s						
KHZ	Kahutara	80.26	134	P	P	19 00 00.3	+1.4
PLCA	Paso Flores	140.62	193	PKP	PKiKP	19 07 18.6	-0.9
	comp=Z,1.7nm,1.0s,baz=87,slow=3.2,SNR=3.1						

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*NOU **21** 18:55:54.3, 18°.31S×170°.01E, h341km, MLv4.0/8, Vanuatu Islands*
*IDC **21** 18:56:06.0±24.0, 18°.62S×169°.40E, h0km, mb3.7/3, mbtmp3.6/4, ML3.1/1, MS2.9/2, Error ellipse: s-maj=425.3km s-min=70.4km az=87.0*
ISC 21 18:56:24.8±4.0, **19°.1S**±0°.2×**167°.8E**±0°.5, **h35**km, **n9**, σ**0s.85**/9, **mb3.8**/3, **Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YATNC	Mamie plateau,	3.07	197	P	Pn	18 57 11.7	+1.0
DZM	Mont Dzumac	3.22	204	Pn	Pn	18 57 12.2	-0.8
	1.0nm,0.3s,baz=58,slow=12,SNR=21						
DZM				Sn	Sn	18 57 50.0	-0.2
	1.7nm,0.3s,baz=295,slow=23,SNR=8.2						
DZM				LR	LR	18 58 34.6	
	comp=Z,59nm,19.6s,baz=36,slow=34						
	2.9nm,0.4s						
DZM	Mont Dzumac	3.22	204	P	Pn	18 57 12.7	-0.3
NOUC	Port Laguerre	3.31	205	P	Pn	18 57 15.1	+1.1
OUENC	Ouen Island, N	3.42	196	P	Pn	18 57 14.9	-0.7
PINNC	Pines Island,	3.51	186	P	Pn	18 57 12.0	-4.8
STKA	Stephens Creek	26.80	237	P	P	19 02 02.0	+0.3
	1.2nm,0.5s,baz=53,slow=10,SNR=3.3						
	1.2nm,0.5s						
WRA	Warramunga Arr	31.55	263	P	P	19 02 43.3	-0.8
	0.4nm,1.0s,baz=84,slow=8.2,SNR=1.6						
	0.4nm,1.0s						
ASAR	Alice Springs	31.87	256	P	P	19 02 47.4	+0.5
	0.7nm,0.5s,baz=84,slow=8.4,SNR=18						
ASAR				LR	LR	19 14 49.6	
	comp=Z,44nm,18.5s,baz=190,slow=34						
	0.7nm,0.5s						

IDC 21 18:57:19.6±3.0, **30°.89S**×**177°.29W**, **h0**km, **mb3.5**/2, **mbtmp3.7**/3, **ML3.0**/1, **Error ellipse: s-maj=63.9km s-min=25.5km az=97.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.72	342	Pn	Pb	18 57 51.5	-0.5
	52nm,0.3s,baz=36,slow=15,SNR=6.2						
RAO				Sn	Sb	18 58 14.1	-0.1
	158nm,0.3s,baz=97,slow=20,SNR=5.5						
URZ	Urewera	8.68	211	Pn	Pn	18 59 26.5	+0.1
	0.2nm,0.3s,baz=56,slow=15,SNR=2.0						
URZ				Sn	Sn	19 00 55.8	-9.1
	0.4nm,0.3s,baz=326,slow=15,SNR=2.2						
	9.2nm,1.0s						
ASAR	Alice Springs	43.69	267	P	P	19 05 26.4	-0.1
	0.4nm,0.6s,baz=105,slow=8.0,SNR=7.3						
	0.4nm,0.6s						
WRA	Warramunga Arr	44.72	272	P	P	19 05 34.6	-0.2
	0.3nm,0.3s,baz=111,slow=7.9,SNR=16						
	0.3nm,0.3s						
FINES	FINESS Array B	145.81	340	PKPbc	PKPdf	19 16 58.7	-0.7
	1.3nm,0.6s,baz=54,slow=3.3,SNR=5.3						

WEL 21 19:04:28.4±0.8, **42°S**±4°×**17°3E**±°, **h71**km±8km, **M2.0**/6, **ML2.4**/11, **MLv2.0**/6, **Error ellipse: s-maj=0.0km s-min=0.0km az=115.8, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THZ	Tophouse	0.17	117	P	Pn	19 04 40.4	+1.3
THZ				S	Sn	19 04 49.5	+2.6
MRNZ	Matariki Terra	0.29	8	P	Pn	19 04 41.1	+1.5
MRNZ				S	Sn	19 04 50.9	+3.0
DSZ	Denniston Nort	0.68	265	P	Pn	19 04 44.4	+1.2
DSZ				S	Sn	19 04 55.9	+1.8
TKNZ	Takaka Hill	0.68	16	P	Pn	19 04 44.0	+0.8
TKNZ				S	Sn	19 04 56.0	+2.0
NNZ	Nelson	0.69	47	P	Pn	19 04 44.2	+0.9
NNZ				S	Sn	19 04 56.2	+2.0
QRZ	Quartz Range	0.87	351	P	Pn	19 04 46.4	+1.1
QRZ				S	Sn	19 04 59.4	+1.4
BSWZ	Blackbirch Sta	0.88	92	P	Pn	19 04 45.9	+0.5
KHZ	Kahutara	0.96	140	P	Pn	19 04 46.3	-0.1
TUWZ	Tuamarina	0.96	75	P	Pn	19 04 46.8	+0.3
LTZ	Lake Taylor	1.14	196	P	Pn	19 04 49.0	+0.2
TCW	Tory Channel	1.27	69	P	Pn	19 04 50.5	0.0
GVZ	Greta Valley S	1.30	169	P	Pn	19 04 50.5	-0.3
INZ	Inchbonnie	1.40	222	P	Pn	19 04 52.6	+0.5
INZ				S	Sn	19 05 10.2	+0.4
OXZ	Oxford	1.71	197	P	Pn	19 04 55.1	-1.1
PLWZ	Palliser	1.91	87	P	Pn	19 04 56.8	-2.1
MQZ	McQueen's Vall	2.02	181	P	Pn	19 04 58.4	-1.9
TMZ	Timaru	2.97	204	P	Pn	19 05 11.6	-1.6

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*IDC **21** 19:07:30.6±1.0, 26°.64N×141°.89E, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=39.4km s-min=15.2km az=115.0*
*NEIC **21** 19:07:35.8±1.4, 27°.0N±0°.1×141°.9E±0°.3, h54km±17km, mb4.4/11, Error ellipse: s-maj=36.8km s-min=11.7km az=70.0*
ISC 21 19:07:35.7±0.7, **26°.84N**±0°.09×**141°.9E**±0°.1, **h48**km, **n20**, σ**1s.05**/22, **mb4.2**/9, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	0.36	46	Pn	Pn	19 07 45.6	+0.3
	269nm,0.3s,baz=276,slow=23,SNR=33						
JCJ				Sn	Sn	19 07 52.4	+0.3
	622nm,0.3s,baz=291,slow=23,SNR=18						
JCJ				LR	LR	19 08 07.7	
	comp=Z,278nm,20.9s,baz=218,slow=70						
JCJ	Chichijima	0.36	46		Pn	19 07 45.3	0.0
JCJ					Sn	19 07 51.9	-0.3
JMM	Marumori	11.03	355	Pn	Pn	19 10 09.8	-1.1
JTM	Tenmabayashi	13.93	357	Pn	Pn	19 10 50.6	+0.3
CMAR	Chiang Mai Arr	40.35	267	P	P	19 15 10.6	+1.6
	0.4nm,0.7s,baz=61,slow=6.5,SNR=2.4						
	0.4nm,0.7s						
COEN	Coen	40.57	178	P	P	19 15 11.0	+0.3
COEN				IAmb	IAmb	19 15 40.9	
	comp=Z,2.7nm,0.9s						
KNRA	Kununurra	44.15	198	P	P	19 15 39.3	-0.4

KNRA				IAmb	IAmb	19 16 03.4	
	comp=Z,24nm,1.4s						
WB0	**Warramunga Arr**	**46.90**	**190**	P	**P**	**19 16 01.3**	**-0.2**
WB0				IAmb	IAmb	19 16 02.2	
	comp=Z,5.9nm,0.7s						
WRAB	**Tennant Creek**	**47.07**	**190**	P	**P**	**19 16 03.0**	**+0.2**
WB2	**Warramunga Arr**	**47.08**	**190**	P	**P**	**19 16 02.4**	**-0.5**
WRA	**Warramunga Arr**	**47.08**	**190**	P	**P**	**19 16 03.0**	**+0.1**
	comp=Z,6.9nm,0.6s,baz=11,slow=8.8,SNR=94						
	comp=Z,6.9nm,0.6s						
WRA	**Warramunga Arr**	**47.08**	**190**	P	**P**	**19 16 02.2**	**-0.7**
FITZ	**Fitzroy Crossi**	**47.38**	**201**	P	**P**	**19 16 05.8**	**+0.6**
ASAR	**Alice Springs**	**50.80**	**189**	P	**P**	**19 16 31.1**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=5.1,slow=5.6,SNR=17						
	comp=Z,0.4nm,0.4s						
ASAR	**Alice Springs**	**50.80**	**189**	P	**P**	**19 16 31.0**	**-0.4**
PSA00	**Pilbara Seismi**	**52.65**	**206**	P	**P**	**19 16 44.2**	**-1.0**
KURK	**Kurchatov**	**52.98**	**315**	P	**P**	**19 16 44.7**	**-2.6**
KURK				IAmb	IAmb	19 17 25.1	
	comp=Z,3.4nm,1.1s						
STKA	**Stephens Creek**	**58.39**	**180**	P	**P**	**19 17 26.4**	**+0.1**
STKA				IAmb	IAmb	19 17 44.8	
	comp=Z,2.2nm,1.3s						
FORT	**Forrest**	**58.80**	**194**	P	**P**	**19 17 27.9**	**-1.2**
FINES	**FINESS Array B**	**78.06**	**334**	P	**P**	**19 19 31.5**	**+2.5**
	comp=Z,1.3nm,0.6s,baz=70,slow=4.7,SNR=7.7						
	comp=Z,1.3nm,0.6s						

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*WEL **21** 19:09:48.4±0.3, 40°S±2°×17°5E±°, h12^{km}, M3.5/20, ML3.8/21, MLv3.5/20, Error ellipse: s-maj=0.0km s-min=0.0km az=80.9, confirmed*

*NOU **21** 19:09:50.0, 40°.11S×174°.93E, h63^{km}, MLv3.4/8, Cook Strait, New Zealand*

ISC 21 19:09:49.5±1.4**, 40°.12S**±0°.03×**174°.96E**±0°.03**, h29**^{km}±13^{km}**, n109,** σ**1^{s}.06**/114**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WAZ	**Wanganui**	**0.36**	**4**	P	**Pb**	**19 09 57.5**	**-0.2**
WAZ				S	**Sn**	**19 10 03.9**	**-0.9**
POWZ	**Post Office Ro**	**0.68**	**114**	P	**Pn**	**19 10 02.8**	**-0.3**
POWZ				S	**Sn**	**19 10 12.0**	**-0.8**
OGWZ	**Otaki Gorge**	**0.72**	**167**	P	**Pn**	**19 10 03.1**	**-0.5**
OGWZ				S	**Sn**	**19 10 12.8**	**-0.9**
MRZ	**Mangatainoka R**	**0.72**	**139**	P	**Pn**	**19 10 03.6**	**-0.2**
MRZ				S	**Sn**	**19 10 13.4**	**-0.4**
KIW	**Kapiti Island**	**0.75**	**183**	P	**Pn**	**19 10 03.2**	**-0.8**
KIW				S	**Sn**	**19 10 12.7**	**-1.7**
TSZ	**Takapari Road**	**0.77**	**86**	P	**Pn**	**19 10 03.9**	**-0.5**
TSZ				S	**Sn**	**19 10 14.3**	**-0.8**
LREZ	**Lake Rotokare**	**0.78**	**327**	P	**Pn**	**19 10 04.6**	**+0.2**
LREZ				S	**Sn**	**19 10 16.6**	**+1.4**
MTVZ	**Mangateitei**	**0.83**	**29**	P	**Pn**	**19 10 04.3**	**-0.9**
PKVZ	**Pokaka**	**0.88**	**20**	P	**Pn**	**19 10 04.7**	**-1.1**
HOWZ	**Holdsworth Sta**	**0.89**	**152**	P	**Pn**	**19 10 06.1**	**+0.1**
PRWZ	**Pori Road**	**0.89**	**120**	P	**Pn**	**19 10 06.8**	**+0.8**
WNVZ	**Wahianoa**	**0.93**	**32**	P	**Pn**	**19 10 05.8**	**-0.9**
TRVZ	**Turoa**	**0.93**	**29**	P	**Pn**	**19 10 05.9**	**-0.9**
MOVZ	**Moawhango**	**0.94**	**41**	P	**Pn**	**19 10 05.6**	**-1.1**
DVHZ	**Dannevirke**	**0.95**	**102**	P	**Pn**	**19 10 07.3**	**+0.6**
DRZ	**Dome Shelter**	**0.96**	**29**	P	**Pn**	**19 10 06.4**	**-0.8**
WHVZ	**Whangaehu Hut**	**0.96**	**31**	P	**Pn**	**19 10 06.4**	**-0.9**
TIWZ	**Tintock**	**0.97**	**133**	P	**Pn**	**19 10 07.8**	**+0.7**
FWVZ	**Far West T-bar**	**0.97**	**28**	P	**Pn**	**19 10 06.3**	**-1.0**
PNHZ	**Pukenui**	**0.98**	**79**	P	**Pn**	**19 10 06.9**	**-0.4**
PREZ	**Palmer Road**	**0.99**	**321**	P	**Pn**	**19 10 07.9**	**+0.6**
CAW	**Cannon Point**	**0.99**	**175**	P	**Pn**	**19 10 07.4**	**-0.1**
VRZ	**Vera Road**	**1.00**	**351**	P	**Pn**	**19 10 07.4**	**-0.1**
TUVZ	**Tukino**	**1.00**	**33**	P	**Pn**	**19 10 07.0**	**-0.6**
DUWZ	**D'Urville Isla**	**1.05**	**229**	P	**Pn**	**19 10 07.5**	**-0.7**
BHHZ	**Black Hill Sta**	**1.06**	**54**	P	**Pn**	**19 10 07.2**	**-1.1**
NGZ	**Ngauruhoe**	**1.06**	**28**	P	**Pn**	**19 10 07.6**	**-0.9**
SNVZ	**South Ngauruho**	**1.07**	**30**	P	**Pn**	**19 10 08.0**	**-0.6**
NEZ	**North Egmont**	**1.07**	**322**	P	**Pn**	**19 10 09.0**	**+0.4**
NMEZ	**Namu Road**	**1.09**	**310**	P	**Pn**	**19 10 09.4**	**+0.7**
DREZ	**Durham Road**	**1.09**	**328**	P	**Pn**	**19 10 09.7**	**+0.9**
KHEZ	**Kahui Hut**	**1.09**	**318**	P	**Pn**	**19 10 09.5**	**+0.7**
KHEZ	**Kahui Hut**	**1.09**	**318**	P	**Pn**	**19 10 09.6**	**+0.7**
OTVZ	**Oturere**	**1.10**	**30**	P	**Pn**	**19 10 08.5**	**-0.5**
NNVZ	**North Ngauruho**	**1.11**	**28**	P	**Pn**	**19 10 08.2**	**-0.9**
TWVZ	**Taurewa**	**1.11**	**20**	P	**Pn**	**19 10 07.9**	**-1.2**
WTVZ	**West Tongariro**	**1.11**	**26**	P	**Pn**	**19 10 08.2**	**-0.9**
MTW	**Mount Morrison**	**1.12**	**158**	P	**Pn**	**19 10 10.0**	**+0.8**
BFZ	**Birch Farm**	**1.14**	**120**	P	**Pn**	**19 10 10.0**	**+0.6**
BFZ	**Birch Farm**	**1.14**	**120**	P	**Pn**	**19 10 09.8**	**+0.4**
ETVZ	**East Tongariro**	**1.14**	**31**	P	**Pn**	**19 10 08.9**	**-0.6**
WPHZ	**Waipukurau**	**1.14**	**88**	P	**Pn**	**19 10 10.7**	**+1.3**
MHEZ	**Mangahewa**	**1.15**	**335**	P	**Pn**	**19 10 11.1**	**+1.6**
KRVZ	**Karewarewa**	**1.15**	**28**	P	**Pn**	**19 10 08.8**	**-0.9**
TMVZ	**Te Maari**	**1.15**	**30**	P	**Pn**	**19 10 09.2**	**-0.5**
NTVZ	**North Tongarir**	**1.16**	**29**	P	**Pn**	**19 10 09.3**	**-0.5**
WEL	**Wellington**	**1.18**	**187**	P	**Pn**	**19 10 10.4**	**+0.4**
PKE	**Pukeiti**	**1.19**	**321**	P	**Pn**	**19 10 11.3**	**+1.2**
NBEZ	**Newall Road No**	**1.19**	**315**	P	**Pn**	**19 10 11.2**	**+1.0**
SNZO	**South Karori**	**1.21**	**189**	P	**Pn**	**19 10 10.8**	**+0.4**
TCW	**Tory Channel**	**1.21**	**205**	P	**Pn**	**19 10 10.0**	**-0.4**
TMWZ	**Te Maipa**	**1.22**	**145**	P	**Pn**	**19 10 10.9**	**+0.3**
CPWZ	**Castlepoint**	**1.24**	**130**	P	**Pn**	**19 10 12.6**	**+1.8**
KATZ	**Kakaramea**	**1.27**	**27**	P	**Pn**	**19 10 10.9**	**-0.4**
PRHZ	**Porangahau**	**1.30**	**97**	P	**Pn**	**19 10 12.6**	**+1.0**
PAWZ	**Paruwai Farm**	**1.31**	**164**	P	**Pn**	**19 10 12.9**	**+1.0**
KWHZ	**Kaweka Forest**	**1.32**	**59**	P	**Pn**	**19 10 12.4**	**+0.4**
RITZ	**Rihia Road**	**1.33**	**32**	P	**Pn**	**19 10 12.5**	**+0.4**
RATZ	**Rangitukua**	**1.40**	**27**	P	**Pn**	**19 10 13.3**	**+0.2**
TRWZ	**Traveller**	**1.40**	**157**	P	**Pn**	**19 10 14.4**	**+1.4**
PXZ	**Pawanui**	**1.47**	**87**	P	**Pn**	**19 10 14.3**	**+0.4**
PLWZ	**Palliser**	**1.47**	**171**	P	**Pn**	**19 10 14.6**	**+0.5**
MCHZ	**McNeill Hill**	**1.50**	**64**	P	**Pn**	**19 10 16.4**	**+2.0**
KAHZ	**Kahuranaki**	**1.51**	**78**	P	**Pn**	**19 10 15.7**	**+1.1**
BKZ	**Black Stump Fm**	**1.52**	**52**	P	**Pn**	**19 10 15.5**	**+0.8**
BKZ	**Black Stump Fm**	**1.52**	**52**	P	**Pn**	**19 10 15.5**	**+0.8**
TUWZ	**Tuamarina**	**1.52**	**210**	P	**Pn**	**19 10 14.5**	**-0.1**
WATZ	**Wairara**	**1.53**	**23**	P	**Pn**	**19 10 15.5**	**+0.7**
HIZ	**Hauiti**	**1.60**	**357**	P	**Pn**	**19 10 15.6**	**-0.2**
HIZ	**Hauiti**	**1.60**	**357**	P	**Pn**	**19 10 15.8**	**0.0**
NNZ	**Nelson**	**1.63**	**227**	P	**Pn**	**19 10 16.5**	**+0.4**
CKHZ	**Cape Kidnapper**	**1.69**	**75**	P	**Pn**	**19 10 20.2**	**+3.2**
MRHZ	**Matea Rd**	**1.71**	**42**	P	**Pn**	**19 10 18.2**	**+0.9**
CMWZ	**Cape Campbell**	**1.73**	**199**	P	**Pn**	**19 10 20.2**	**+2.7**
NMHZ	**Naumai**	**1.75**	**55**	P	**Pn**	**19 10 19.6**	**+1.7**
KUTZ	**Kaahu Road**	**1.76**	**23**	P	**Pn**	**19 10 20.4**	**+2.4**
TKNZ	**Takaka Hill**	**1.77**	**238**	P	**Pn**	**19 10 18.6**	**+0.5**
ARHZ	**Aropaoanui**	**1.79**	**62**	P	**Pn**	**19 10 21.8**	**+3.5**
BSWZ	**Blackbirch Sta**	**1.80**	**207**	P	**Pn**	**19 10 19.6**	**+1.1**
TLZ	**Tolley Road**	**1.84**	**14**	P	**Pn**	**19 10 18.6**	**-0.5**
WPRZ	**Whakapapatarin**	**1.85**	**31**	P	**Pn**	**19 10 20.8**	**+1.6**
ALRZ	**Allen Road**	**1.89**	**35**	P	**Pn**	**19 10 19.9**	**+0.2**
MTHZ	**Maungataniwha**	**1.93**	**50**	P	**Pn**	**19 10 20.9**	**+0.6**
PRRZ	**Plateau Road**	**1.96**	**35**	P	**Pn**	**19 10 21.1**	**+0.4**
QRZ	**Quartz Range**	**1.98**	**248**	P	**Pn**	**19 10 21.1**	**+0.1**
QRZ	**Quartz Range**	**1.98**	**248**	P	**Pn**	**19 10 21.1**	**+0.1**
RAHZ	**Arahi**	**2.04**	**55**	P	**Pn**	**19 10 25.7**	**+3.9**
MRNZ	**Matariki Terra**	**2.11**	**232**	P	**Pn**	**19 10 23.6**	**+0.9**
MUGZ	**Murupara**	**2.16**	**41**	P	**Pn**	**19 10 24.7**	**+1.2**
RTZ	**Ruatahuna**	**2.17**	**47**	P	**Pn**	**19 10 23.9**	**+0.2**
THZ	**Tophouse**	**2.26**	**223**	P	**Pn**	**19 10 26.4**	**+1.5**
SNGZ	**Shannon Statio**	**2.28**	**55**	P	Pn	19 10 29.6	+4.6
TOZ	**Tahuroa Road**	**2.42**	**10**	P	**Pn**	**19 10 26.1**	**-0.9**
URZ	**Urewera**	**2.50**	**43**	P	**Pn**	**19 10 28.0**	**-0.1**
URZ	**Urewera**	**2.50**	**43**	P	**Pn**	**19 10 28.0**	**-0.1**
RAGZ	**Rawiri**	**2.50**	**51**	P	Pn	19 10 33.4	+5.2
MWZ	**Matawai**	**2.67**	**49**	P	**Pn**	**19 10 30.8**	**+0.2**
DSZ	**Denniston Nort**	**2.89**	**235**	P	**Pn**	**19 10 34.4**	**+0.9**
RUGZ	**Raukumara Rang**	**3.02**	**46**	P	**Pn**	**19 10 35.1**	**-0.2**
TWGZ	**Tauwhareparae**	**3.05**	**52**	P	**Pn**	**19 10 36.6**	**+0.9**
AWAZ	**Awhitu Peninsu**	**3.06**	**355**	P	**Pn**	**19 10 36.6**	**+0.9**
HAZ	**Te Kaha**	**3.23**	**44**	P	**Pn**	**19 10 38.7**	**+0.7**
PKGZ	**Pakihiroa**	**3.29**	**49**	P	**Pn**	**19 10 39.1**	**0.0**
LTZ	**Lake Taylor**	**3.34**	**216**	P	**Pn**	**19 10 39.6**	**-0.2**
WMGZ	**Waiomatatini S**	**3.54**	**51**	P	**Pn**	**19 10 41.7**	**-0.7**
MXZ	**Matakaoa Point**	**3.65**	**47**	P	**Pn**	**19 10 44.5**	**+0.5**
MXZ	**Matakaoa Point**	**3.65**	**47**	P	**Pn**	**19 10 44.7**	**+0.7**
TMZ	**Timaru**	**5.17**	**213**	P	**Pn**	**19 11 04.1**	**-0.8**
JCZ	**Jackson Bay**	**6.06**	**227**	P	**Pn**	**19 11 17.5**	**+0.4**

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*NNC **21** 19:12:17.0±0.8, 42°.32N×71°.72E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=11.1km s-min=3.8km az=174.0*

*KRNET **21** 19:12:17.8±0.1, 42°.21N×71°.81E, h29^{km}, mb3.2*

*SOME **21** 19:12:18.7, 42°.23N×71°.88E, h15^{km}*

*KNET **21** 19:12:20.1±0.6, 42°.23N×71°.93E, h18^{km}±6^{km}, ml2.8, Error ellipse: s-maj=8.8km s-min=3.0km az=22.0*

ISC 21 19:12:17.2±1.0**, 42°.29N**±0°.03×**71°.84E**±0°.02**, h12**^{km}±9^{km}**, n72,** σ**1^{s}.44**/108**, 39C-18D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.50**	**170**	⇑*i*P	**Pg**	**19 12 27.0**	**0.0**
	baz=64						
ARK				⇑*i*S	**Sg**	**19 12 33.5**	**-0.2**
	baz=64						
MNAS	**Manas**	**0.53**	**68**	⇑*i*P	**Pn**	**19 12 29.7**	**-1.0**
	baz=62						
MNAS				⇑*i*S	**Sn**	**19 12 38.0**	**-1.6**
	baz=62						
DZA	**Taraz**	**0.71**	**328**	P	**Pn**	**19 12 32.7**	**-0.3**
	251nm,0.2s						
DZA				S	**Sn**	**19 12 42.7**	**-1.2**
	332nm,0.2s						
DZA	**Taraz**	**0.71**	**328**	*e*P	**Pn**	**19 12 32.7**	**-0.3**
	baz=33						
DZA				*e*S	**Sn**	**19 12 42.7**	**-1.2**
	baz=33						
DZA	**Taraz**	**0.71**	**328**	*e*P	**Pn**	**19 12 32.7**	**-0.3**
	261nm,0.1s						
DZA				*e*S	**Sn**	**19 12 42.7**	**-1.2**
	553nm,0.1s						
TRKS	**Terek-Say**	**0.93**	**215**	⇑*i*P	**Pg**	**19 12 34.0**	**-1.0**
	baz=12						
TRKS				⇑*i*S	**Sg**	**19 12 46.4**	**-0.7**
	baz=12						
MRKS	**Merke**	**1.12**	**66**	P	**Pn**	**19 12 40.8**	**+2.0**
	18nm,0.1s						
MRKS				S	**Sn**	**19 12 56.2**	**+2.0**
	92nm,0.2s						
MRKS	**Merke**	**1.12**	**66**	*e*P	**Pn**	**19 12 40.6**	**+1.9**
	18nm,0.1s						
MRKS				*e*S	**Sn**	**19 12 56.0**	**+1.9**
	94nm,0.1s						
KK31	**Karatay Array**	**1.27**	**310**	⇑P	**Pg**	**19 12 41.6**	**-0.1**
	10nm,0.3s,baz=129,slow=17						
KK31				⇓S	**Sn**	**19 12 58.5**	**+0.7**
	36nm,0.3s,baz=132,slow=26						
KKAR	**Karatay Array**	**1.27**	**310**	⇑*i*P	**Pg**	**19 12 41.5**	**-0.1**
	baz=13						
KKAR				⇑*i*S	**Sn**	**19 12 58.4**	**+0.6**
	baz=13						
IUG	**Iuzhnay**	**1.35**	**264**	P	**Pb**	**19 12 42.9**	**+0.4**
	31nm,0.2s						
IUG				S	**Sb**	**19 13 00.3**	**+0.5**
	207nm,0.2s						
IUG	**Iuzhnay**	**1.35**	**264**	*e*P	**Pb**	**19 12 42.9**	**+0.4**
	baz=68						
IUG				*e*S	**Sb**	**19 13 00.4**	**+0.5**
	baz=68						
IUG	**Iuzhnay**	**1.35**	**264**	*e*P	**Pb**	**19 12 42.9**	**+0.4**
	31nm,0.1s						
IUG				*e*S	**Sb**	**19 13 00.3**	**+0.5**
	332nm,0.1s						
AML	**Almayashu**	**1.39**	**96**	⇓P	**Pg**	**19 12 44.1**	**+0.3**
	26nm,0.1s,SNR=84						
AML				⇓S	**Sg**	**19 13 03.7**	**+1.8**
	76nm,0.2s						
AML	**Almayashu**	**1.39**	**96**	⇑*i*P	**Pg**	**19 12 43.8**	**0.0**
	baz=93						
AML				⇑*i*S	**Sg**	**19 13 02.3**	**+0.5**
	baz=93						
EKS2	**Erkin-Say**	**1.48**	**75**	⇓P	**Pg**	**19 12 46.6**	**+1.1**
	8.7nm,0.2s,SNR=45						
EKS2				⇓S	**Sg**	**19 13 07.2**	**+2.5**
	18nm,0.2s						
EKS2	**Erkin-Say**	**1.48**	**75**	⇓*i*P	**Pg**	**19 12 45.6**	**+0.1**
	baz=72						
EKS2				⇓*i*S	**Sg**	**19 13 05.5**	**+0.8**
	baz=72						
CHM	**Chimkent**	**1.66**	**272**	*e*P	**Pg**	**19 12 49.2**	**+0.2**
	95nm,0.3s						
CHM				*e*S	**Sg**	**19 13 11.4**	**+0.8**
	221nm,0.1s						
ARLS	**Aral**	**1.90**	**102**	⇑*e*P	**Pb**	**19 12 50.9**	**-0.9**
	baz=0.0						
ARLS				⇑*i*S	**Sb**	**19 13 14.9**	**-0.6**
	baz=0.0						
OHH	**Osh**	**1.90**	**158**	⇑*i*P	**Pn**	**19 12 49.5**	**0.0**
	baz=56						
OHH				⇑*i*S	**Sn**	**19 13 13.2**	**-0.3**
	baz=56						
UCH	**Uchtor**	**1.98**	**91**	⇓P	**Pg**	**19 12 55.0**	**-0.2**
	9.0nm,0.1s,SNR=32						
UCH				⇑S	**Sg**	**19 13 22.2**	**+1.2**
	40nm,0.2s						
UCH	**Uchtor**	**1.98**	**91**	⇑*i*P	**Pb**	**19 12 52.4**	**-1.1**
	baz=89						
UCH				⇑*i*S	**Sb**	**19 13 17.4**	**-0.9**
	baz=89						
AAK	**Ala-Archa**	**1.99**	**79**	⇑P	**Pg**	**19 12 55.8**	**+0.4**
	28nm,0.3s,SNR=38						
AAK				⇑S	**Sg**	**19 13 22.5**	**+1.3**
	34nm,0.3s						
AAK	**Ala-Archa**	**1.99**	**79**	⇑*i*P	**Pb**	**19 12 52.6**	**-0.8**
	baz=77						
AAK				⇑*i*S	**Sb**	**19 13 17.8**	**-0.5**
	baz=77						
FRU1	**Bishkek**	**2.12**	**75**	⇑*i*P	**Pb**	**19 12 54.5**	**-1.1**
	baz=73						
FRU1				⇑*i*S	**Sb**	**19 13 21.3**	**-0.7**
	baz=73						
USP	**Ospenovka**	**2.19**	**63**	⇑P	**Pg**	**19 12 57.5**	**-1.5**
	9.8nm,0.3s,SNR=11						
USP				⇑S	**Sg**	**19 13 27.5**	**+0.1**
	68nm,0.3s						
USP	**Ospenovka**	**2.19**	**63**	⇓*i*P	**Pb**	**19 12 55.6**	**-1.0**
	baz=61						
USP				⇓*i*S	**Sb**	**19 13 23.1**	**-0.6**
	baz=61						
CHMS	**Chumysh**	**2.26**	**71**	⇑P	**Pg**	**19 12 59.0**	**-1.4**
	10nm,0.2s,SNR=17						
CHMS				⇑S	**Sg**	**19 13 29.0**	**-0.7**
	77nm,0.4s						
CHMS	**Chumysh**	**2.26**	**71**	P	Pn	19 12 49.2	-5.2
	95nm,0.3s						
CHMS				S	Sn	19 13 12.1	-10
	144nm,0.4s						
CHMS	**Chumysh**	**2.26**	**71**	⇓*i*P	**Pb**	**19 12 56.5**	**-1.4**
	baz=69						
CHMS				⇓*i*S	**Sb**	**19 13 24.4**	**-1.4**
	baz=69						
KBK	**Karagaybulak**	**2.33**	**80**	P	**Pg**	**19 13 00.8**	**-1.0**
	SNR=13						
KBK	**Karagaybulak**	**2.33**	**80**	⇑*i*P	**Pb**	**19 12 57.3**	**-1.8**
	baz=78						
KBK				⇑*i*S	**Sb**	**19 13 25.8**	**-2.1**
	baz=78						
SGDS	**Sogindy**	**2.35**	**60**	Pg	**Pb**	**19 12 59.9**	**+0.4**
	9.6nm,0.2s						
SGDS				Lg	Lg	19 13 32.6	
	83nm,0.6s						
BTK	**Batken**	**2.36**	**199**	⇓*i*P	**Pn**	**19 12 55.9**	**+0.1**
	baz=99						
BTK				⇓*i*S	**Sn**	**19 13 23.7**	**-1.1**
	baz=99						
TKM2	**Tokmak 2**	**2.84**	**76**	⇑P	**Pb**	**19 13 07.0**	**-0.9**
	4.4nm,0.2s,SNR=19						
TKM2	**Tokmak 2**	**2.84**	**76**	⇓*i*P	**Pn**	**19 13 04.6**	**+2.1**
	baz=75						
TKM2				⇓*i*S	**Sn**	**19 13 38.3**	**+1.5**
	baz=75						
BOOM	**Boomskoye usch**	**3.04**	**85**	⇓*e*P	**Pn**	**19 13 07.0**	**+1.7**
	baz=83						
BOOM				⇓*i*S	**Sn**	**19 13 42.9**	**+1.2**
	baz=83						
DGS	**Degeres**	**3.04**	**71**	Pg	**Pb**	**19 13 12.4**	**+1.1**
	7.2nm,0.1s						
DGS				Lg	Lg	19 13 52.6	
	26nm,0.5s						
DGS	**Degeres**	**3.04**	**71**	*e*Pg	**Pg**	**19 13 14.4**	**-1.1**
	4.3nm,2.0s						
DGS				*e*Lg	Lg	19 13 53.8	
	58nm,0.3s						
KST	**Kastek**	**3.13**	**75**	Pg	**Pg**	**19 13 15.5**	**-1.6**
	4.1nm,0.1s						
KST				Lg	Lg	19 13 56.9	
	28nm,0.4s						
KST	**Kastek**	**3.13**	**75**	*e*Pg	**Pg**	**19 13 15.7**	**-1.4**
	4.4nm,0.2s						
KST				*e*Lg	Lg	19 13 56.6	
	30nm,0.4s						
KRBS	**Karabastau**	**3.14**	**62**	Pg	**Pg**	**19 13 15.8**	**-1.6**
	14nm,0.3s						
KRBS				Lg	Lg	19 13 56.1	
	15nm,0.2s						
KRBS	**Karabastau**	**3.14**	**62**	*e*Pg	**Pg**	**19 13 15.8**	**-1.6**
	1.4nm,0.2s						
KRBS				*e*Lg	Lg	19 13 56.1	
	15nm,0.1s						
BTLS	**Baital**	**3.18**	**29**	Pg	**Pg**	**19 13 17.0**	**-1.0**
	1.9nm,0.1s						
BTLS				Lg	Lg	19 13 59.2	
	12nm,0.3s						
BTLS	**Baital**	**3.18**	**29**	*e*Pg	**Pg**	**19 13 17.0**	**-1.0**
	1.9nm,0.1s						
BTLS				*e*Lg	Lg	19 13 59.2	
	12nm,0.3s						
NRN	**Naryn**	**3.22**	**104**	⇑*i*P	**Pn**	**19 13 08.9**	**+1.0**
	baz=3.0						
NRN				⇑*i*S	**Sn**	**19 13 46.1**	**-0.2**
	baz=3.0						
ULHL	**Ulahol**	**3.27**	**89**	⇑*i*P	**Pn**	**19 13 10.2**	**+1.8**
	baz=88						
ULHL				⇑*i*S	**Sn**	**19 13 48.2**	**+1.0**
	baz=88						
MTBS	**Maitube**	**3.48**	**75**	Pg	**Pg**	**19 13 22.8**	**-1.1**
	14nm,0.3s						
MTBS				Lg	Lg	19 14 07.2	
	13nm,0.2s						
MTBS	**Maitube**	**3.48**	**75**	*e*Pg	**Pg**	**19 13 22.2**	**-1.7**
	1.7nm,0.1s						
MTBS				*e*Lg	Lg	19 14 07.9	
	9.8nm,0.2s						
IZV	**Izvestkoviy**	**3.60**	**76**	Pg	**Pg**	**19 13 24.5**	**-1.5**
	4.3nm,0.5s						
IZV				Lg	Lg	19 14 11.8	
	19nm,0.7s						
IZV	**Izvestkoviy**	**3.60**	**76**	*e*Pg	**Pg**	**19 13 24.5**	**-1.5**
	2.0nm,0.2s						
IZV				*e*Lg	Lg	19 14 11.8	
	19nm,0.3s						
KUU	**Kurty**	**3.66**	**63**	Pg	**Pg**	**19 13 26.2**	**-1.1**
	12nm,0.2s						
KUU				Lg	Lg	19 14 13.5	
	16nm,0.3s						
KUU	**Kurty**	**3.66**	**63**	*e*Pg	**Pg**	**19 13 25.7**	**-1.6**
	12nm,0.2s						
KUU				*e*Lg	Lg	19 14 13.5	
	16nm,0.2s						
KTBS	**Karatobe**	**3.82**	**67**	Pg	**Pg**	**19 13 28.8**	**-1.6**
	3.1nm,0.3s						
KTBS				Lg	Lg	19 14 18.1	
	38nm,0.4s						
KTBS	**Karatobe**	**3.82**	**67**	*e*Pg	**Pg**	**19 13 28.5**	**-1.9**
	2.6nm,0.1s						
KTBS				*e*Lg	Lg	19 14 18.1	
	34nm,0.3s						
TNSS	**Tian-Shan**	**3.84**	**77**	Pg	**Pg**	**19 13 28.7**	**-2.0**
	3.6nm,0.3s						
TNSS				Lg	Lg	19 14 18.6	
	3.5nm,0.3s						
TNSS	**Tian-Shan**	**3.84**	**77**	*e*Pg	**Pg**	**19 13 28.6**	**-2.0**
	2.4nm,0.2s						
TNSS				*e*Lg	Lg	19 14 18.6	
	5.7nm,0.3s						
MDOK	**Medeo**	**3.93**	**75**	Pg	**Pg**	**19 13 31.3**	**-1.2**
	9.3nm,0.4s						
MDOK				Lg	Lg	19 14 23.2	
	7.2nm,0.3s						
MDOK	**Medeo**	**3.93**	**75**	*e*Pg	**Pg**	**19 13 31.3**	**-1.2**
	9.6nm,0.2s						
MDOK				*e*Lg	Lg	19 14 23.2	
	7.2nm,0.3s						
KDJ	**Kajisay**	**3.97**	**91**	⇑*i*P	**Pn**	**19 13 19.8**	**+1.8**
	baz=89						
KDJ				⇑*i*S	**Sn**	**19 14 05.1**	**+0.6**
	baz=89						
KOTS	**Kotyrbulak**	**3.99**	**75**	Pg	**Pg**	**19 13 34.2**	**+0.6**
	11nm,0.2s						
KOTS				Lg	Lg	19 14 27.0	
	12nm,0.6s						
KOTS	**Kotyrbulak**	**3.99**	**75**	*e*Pg	**Pg**	**19 13 33.9**	**+0.3**
	11nm,0.2s						
KOTS				*e*Lg	Lg	19 14 27.0	
	13nm,0.3s						
CHKK	**Chushkaly**	**4.08**	**66**	Pg	**Pg**	**19 13 33.6**	**-1.7**
	2.4nm,0.3s						
CHKK				Lg	Lg	19 14 27.0	
	11nm,0.3s						
CHKK	**Chushkaly**	**4.08**	**66**	*e*Pg	**Pg**	**19 13 33.6**	**-1.7**
	1.6nm,0.1s						
CHKK				*e*Lg	Lg	19 14 27.0	
	12nm,0.2s						
ANVS	**Anan'yevo**	**4.33**	**82**	⇑*i*P	**Pn**	**19 13 25.1**	**+2.1**
	baz=80						
ANVS				⇑*i*S	**Sn**	**19 14 14.0**	**+0.5**
	baz=80						
SATY	**Saty**	**4.90**	**79**	Pg	**Pg**	**19 13 49.3**	**-1.7**
	1.5nm,0.2s						
SATY				Lg	Lg	19 14 53.7	
	9.7nm,0.7s						
SATY	**Saty**	**4.90**	**79**	*e*Pg	**Pg**	**19 13 49.0**	**-1.9**
	2.5nm,0.3s						
SATY				*e*Lg	Lg	19 14 53.7	
	9.7nm,0.3s						
KPKS	**Kokpek**	**5.16**	**75**	Pg	**Pb**	**19 13 50.5**	**+3.0**
	4.4nm,0.4s						
KPKS				Lg	Lg	19 14 58.9	
	10nm,0.7s						
KPKS	**Kokpek**	**5.16**	**75**	*e*Pg	**Pg**	**19 13 51.8**	**-4.2**
	1.1nm,0.1s						
KPKS				*e*Lg	Lg	19 14 58.9	
	12nm,0.4s						
BLB	**Baldybastay**	**5.17**	**67**	Pg	**Pg**	**19 13 52.3**	**-3.9**
	4.5nm,0.3s						
BLB				Lg	Lg	19 14 59.2	
	5.4nm,0.4s						
UZB	**Uzynbulak**	**5.36**	**78**	Pg	**Pg**	**19 13 56.3**	**-3.4**
	5.3nm,0.3s						
UZB				Lg	Lg	19 15 06.9	
	4.8nm,0.5s						
UZB	**Uzynbulak**	**5.36**	**78**	*e*Pg	**Pg**	**19 13 56.3**	**-3.4**
	3.5nm,0.1s						
UZB				*e*Lg	Lg	19 15 06.9	
	5.1nm,0.3s						

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*SOME **21** 19:15:13.9, 40°.65N×77°.05E, h5^{km}*

*NNC **21** 19:15:14.8±0.8, 40°.65N×77°.10E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=5.1km s-min=3.9km az=163.0*

*KRNET **21** 19:15:15.5±0.1, 40°.75N×76°.99E, h15^{km}, mb3.2*

ISC 21 19:15:17.4±1.4**, 40°.76N**±0°.07×**77°.08E**±0°.04**, h10**^{km}**, n77,** σ**0^{s}.96**/97**, 30C-14D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.05**	**310**	⇑*i*P	**Pg**	**19 15 35.0**	**-2.7**
	baz=12						
NRN				⇑*i*S	**Sg**	**19 15 49.1**	**-2.3**
	baz=12						
KDJ	**Kajisay**	**1.37**	**3**	⇑*i*P	**Pn**	**19 15 41.7**	**-1.1**
	baz=6.0						
KDJ				⇑*i*S	**Sb**	**19 16 00.7**	**-0.2**
	baz=6.0						
ULHL	**Ulahol**	**1.61**	**337**	P	**Pn**	**19 15 46.5**	**+0.3**
	SNR=8.1						
ULHL	**Ulahol**	**1.61**	**337**	⇑*i*P	**Pn**	**19 15 45.2**	**-0.9**
	baz=40						
ULHL				⇑*i*S	**Sn**	**19 16 07.2**	**+0.2**
	baz=40						
BOOM	**Boomskoye usch**	**1.92**	**334**	⇑*i*P	**Pn**	**19 15 50.9**	**+0.5**
	baz=36						
BOOM				⇑*i*S	**Sb**	**19 16 16.9**	**0.0**
	baz=36						
PRZ	**Przheval'sk**	**1.98**	**30**	⇑*i*P	**Pb**	**19 15 53.0**	**-0.8**
	baz=31						
PRZ				⇑*i*S	**Sg**	**19 16 20.3**	**-1.0**
	baz=31						
ANVS	**Anan'yevo**	**2.07**	**12**	⇓*i*P	**Pn**	**19 15 53.7**	**+1.3**
	baz=14						
ANVS				⇓*i*S	**Sb**	**19 16 21.7**	**+0.7**
	baz=14						
TNSS	**Tian-Shan**	**2.27**	**358**	Pg	**Pb**	**19 15 59.1**	**+0.3**
	47nm,0.3s						
TNSS				Lg	Lg	19 16 32.2	
	23nm,0.4s						
TNSS	**Tian-Shan**	**2.27**	**358**	*e*Pg	**Pb**	**19 15 59.1**	**+0.3**
	47nm,0.3s						
TNSS				*e*Lg	Lg	19 16 31.9	

	37nm,0.2s						
IZV	**Izvestkoviy**	**2.30**	**352**	Pg	**Pb**	**19 15 59.4**	**+0.4**
	13nm,0.3s						
IZV				Lg	Lg	19 16 32.2	
	78nm,0.3s						
IZV	**Izvestkoviy**	**2.30**	**352**	*e*Pg	**Pb**	**19 15 59.5**	**+0.4**
	14nm,0.3s						
IZV				*e*Lg	Lg	19 16 32.2	
	83nm,0.2s						
ARLS	**Aral**	**2.35**	**299**	⇑*e*P	**Pn**	**19 15 56.4**	**+0.2**
	baz=0.0						
ARLS				⇑*i*S	**Sn**	**19 16 26.2**	**+1.1**
	baz=0.0						
MDOK	**Medeo**	**2.40**	**360**	⇑Pg	**Pb**	**19 16 00.8**	**0.0**
	12nm,0.4s						
MDOK				Pg	**Pb**	**19 16 01.1**	**+0.3**
	23nm,0.4s						
MDOK				Lg	Lg	19 16 35.1	
	91nm,0.6s						
MDOK				⇑Lg	Lg	19 16 36.0	
	37nm,0.5s						
MDOK	**Medeo**	**2.40**	**360**	*e*Pg	**Pb**	**19 16 01.1**	**+0.3**
	23nm,0.2s						
MDOK				*e*Lg	Lg	19 16 35.1	
	91nm,0.2s						
MTBS	**Maitube**	**2.41**	**349**	Pg	**Pb**	**19 16 01.2**	**+0.2**
	15nm,0.2s						
MTBS				Lg	Lg	19 16 34.7	
	30nm,0.2s						
MTBS	**Maitube**	**2.41**	**349**	*e*Pg	**Pb**	**19 16 01.2**	**+0.2**
	15nm,0.2s						
MTBS				*e*Lg	Lg	19 16 34.7	
	43nm,0.2s						
UCH	**Uchtor**	**2.42**	**308**	P	**Pb**	**19 16 00.9**	**-0.4**
	SNR=13						
UCH	**Uchtor**	**2.42**	**308**	*i* P	**Pn**	**19 15 57.7**	**+0.3**
	baz=9.0						
UCH				*i* S	**Sn**	**19 16 28.6**	**+1.3**
	baz=9.0						
TKM2	**Tokmak 2**	**2.42**	**333**	P	**Pb**	**19 16 01.8**	**+0.6**
	SNR=9.7						
TKM2	**Tokmak 2**	**2.42**	**333**	⇑*i*P	**Pn**	**19 15 58.1**	**+0.8**
	baz=35						
TKM2				⇑*i*S	**Sb**	**19 16 29.2**	**-2.0**
	baz=35						
KST	**Kastek**	**2.42**	**340**	Pg	**Pb**	**19 16 01.4**	**+0.2**
	9.4nm,0.2s						
KST				Lg	Lg	19 16 35.4	
	30nm,0.5s						
KST	**Kastek**	**2.42**	**340**	*e*Pg	**Pb**	**19 16 01.4**	**+0.2**
	9.4nm,0.1s						
KST				*e*Lg	Lg	19 16 35.4	
	30nm,0.5s						
AAA	**Alma-Ata**	**2.45**	**357**	Pg	**Pb**	**19 16 02.2**	**+0.7**
	48nm,0.2s						
AAA				Lg	Lg	19 16 37.3	
	58nm,0.5s						
AAA	**Alma-Ata**	**2.45**	**357**	*e*Pg	**Pb**	**19 16 02.2**	**+0.7**
	48nm,0.1s						
AAA				*e*Lg	Lg	19 16 37.3	
	54nm,0.2s						
KNDC	**Almaty**	**2.45**	**358**	⇓Pg	**Pb**	**19 16 02.0**	**+0.3**
	18nm,0.3s						
KNDC				⇓Lg	Lg	19 16 37.7	
	60nm,0.4s						
KOTS	**Kotyrbulak**	**2.47**	**1**	Pg	**Pb**	**19 16 02.5**	**+0.5**
	38nm,0.2s						
KOTS				Lg	Lg	19 16 38.0	
	86nm,0.4s						
KOTS	**Kotyrbulak**	**2.47**	**1**	*e*Pg	**Pb**	**19 16 02.5**	**+0.5**
	38nm,0.2s						
KOTS				*e*Lg	Lg	19 16 37.2	
	156nm,0.2s						
KBK	**Karagaybulak**	**2.47**	**321**	P	**Pb**	**19 16 02.4**	**+0.4**
	SNR=20						
KBK	**Karagaybulak**	**2.47**	**321**	⇑*i*P	**Pn**	**19 15 58.6**	**+0.6**
	baz=22						
KBK				⇑*i*S	**Sn**	**19 16 29.9**	**+1.6**
	baz=22						
SATY	**Saty**	**2.50**	**23**	Pg	**Pb**	**19 16 02.5**	**0.0**
	14nm,0.3s						
SATY				Lg	Lg	19 16 37.2	
	40nm,0.2s						
SATY	**Saty**	**2.50**	**23**	*e*Pg	**Pb**	**19 16 02.5**	**0.0**
	12nm,0.3s						
SATY				*e*Lg	Lg	19 16 37.2	
	40nm,0.2s						
ZHN	**Zhinishke**	**2.61**	**22**	Pg	**Pb**	**19 16 04.3**	**-0.1**
	12nm,0.1s						
ZHN				Lg	Lg	19 16 40.2	
	62nm,0.2s						
ZHN	**Zhinishke**	**2.61**	**22**	*e*Pg	**Pb**	**19 16 04.3**	**-0.1**
	12nm,0.1s						
ZHN				*e*Lg	Lg	19 16 40.2	
	62nm,0.2s						
DGS	**Degeres**	**2.66**	**339**	Pg	**Pb**	**19 16 06.0**	**+0.8**
	16nm,0.2s						
DGS				Lg	Lg	19 16 43.3	
	34nm,0.4s						
DGS	**Degeres**	**2.66**	**339**	*e*Pg	**Pb**	**19 16 06.0**	**+0.8**
	16nm,0.2s						
DGS				*e*Lg	Lg	19 16 43.3	
	37nm,0.2s						
AAK	**Ala-Archa**	**2.69**	**315**	P	**Pb**	**19 16 05.4**	**-0.4**
	SNR=20						
AAK	**Ala-Archa**	**2.69**	**315**	⇓*i*P	**Pn**	**19 16 01.5**	**+0.6**
	baz=16						
AAK				⇓*i*S	**Sn**	**19 16 35.0**	**+1.3**
	baz=16						
FRU1	**Bishkek**	**2.74**	**319**	⇑*i*P	**Pn**	**19 16 02.5**	**+0.9**
	baz=20						
FRU1				⇑*i*S	**Sn**	**19 16 36.8**	**+2.0**
	baz=20						
UZB	**Uzynbulak**	**2.79**	**31**	Pg	**Pb**	**19 16 07.4**	**0.0**
	9.8nm,0.3s						
UZB				Lg	Lg	19 16 46.5	
	19nm,0.5s						
UZB	**Uzynbulak**	**2.79**	**31**	*e*Pg	**Pb**	**19 16 07.4**	**0.0**
	9.8nm,0.3s						
UZB				*e*Lg	Lg	19 16 46.4	
	20nm,0.2s						
CHMS	**Chumysh**	**2.83**	**323**	P	**Pb**	**19 16 08.2**	**+0.2**
	SNR=12						
CHMS	**Chumysh**	**2.83**	**323**	⇑*i*P	**Pn**	**19 16 03.5**	**+0.8**
	baz=24						
CHMS				⇑*i*S	**Sn**	**19 16 38.3**	**+1.4**
	baz=24						
KURS	**Kuram**	**2.84**	**16**	Pg	**Pb**	**19 16 08.3**	**0.0**
	9.0nm,0.6s						
KURS				Lg	Lg	19 16 47.2	
	16nm,0.5s						
KURS	**Kuram**	**2.84**	**16**	*e*Pg	**Pb**	**19 16 08.3**	**0.0**
	9.0nm,0.6s						
KURS				*e*Lg	Lg	19 16 47.1	
	16nm,0.3s						
AML	**Almayashu**	**2.89**	**299**	P	**Pb**	**19 16 08.9**	**-0.4**
	SNR=11						
AML	**Almayashu**	**2.89**	**299**	⇓*i*P	**Pn**	**19 16 04.3**	**+0.5**
	baz=0.0						
AML				⇓*i*S	**Sn**	**19 16 39.7**	**+0.9**
	baz=0.0						
KPKS	**Kokpek**	**2.95**	**23**	Pg	**Pb**	**19 16 09.3**	**-0.9**
	12nm,0.2s						
KPKS				Lg	Lg	19 16 48.9	
	28nm,0.5s						
KPKS	**Kokpek**	**2.95**	**23**	*e*Pg	**Pb**	**19 16 09.3**	**-0.9**
	12nm,0.2s						
KPKS				*e*Lg	Lg	19 16 48.9	
	29nm,0.2s						
KTBS	**Karatobe**	**2.96**	**354**	Pg	**Pb**	**19 16 10.6**	**+0.3**
	16nm,0.3s						
KTBS				Lg	Lg	19 16 51.5	
	32nm,0.4s						
KTBS	**Karatobe**	**2.96**	**354**	*e*Pg	**Pb**	**19 16 10.6**	**+0.3**
	17nm,0.2s						
KTBS				*e*Lg	Lg	19 16 51.5	
	54nm,0.2s						
SHLS	**Shalkode**	**2.98**	**36**	Pg	**Pg**	**19 16 14.9**	**+0.3**
	13nm,0.2s						
SHLS				Lg	Lg	19 16 59.3	
	51nm,0.6s						
SHLS	**Shalkode**	**2.98**	**36**	*e*Pg	**Pg**	**19 16 14.9**	**+0.3**
	13nm,0.2s						
SHLS				*e*Lg	Lg	19 16 59.3	
	51nm,0.6s						
CHKK	**Chushkaly**	**3.09**	**359**	Pg	**Pb**	**19 16 12.8**	**+0.3**
	14nm,0.4s						
CHKK				Lg	Lg	19 16 55.3	
	32nm,0.3s						
CHKK	**Chushkaly**	**3.09**	**359**	*e*Pg	**Pb**	**19 16 12.8**	**+0.3**
	14nm,0.3s						
CHKK				*e*Lg	Lg	19 16 55.3	
	32nm,0.2s						
KRBS	**Karabastau**	**3.11**	**341**	Pg	**Pb**	**19 16 13.4**	**+0.5**
	6.1nm,0.2s						
KRBS				Lg	Lg	19 16 56.6	
	20nm,0.3s						
KRBS	**Karabastau**	**3.11**	**341**	*e*Pg	**Pb**	**19 16 13.3**	**+0.5**
	6.1nm,0.2s						
KRBS				*e*Lg	Lg	19 16 56.6	
	27nm,0.3s						
EKS2	**Erkin-Say**	**3.11**	**309**	P	**Pb**	**19 16 14.3**	**+1.4**
	SNR=6.2						
EKS2	**Erkin-Say**	**3.11**	**309**	⇑*i*P	**Pn**	**19 16 07.2**	**+0.5**
	baz=10.0						
EKS2				⇑*i*S	**Sn**	**19 16 44.9**	**+0.9**
	baz=10.0						
PDGK	**Podgornoye**	**3.13**	**34**	Pg	**Pb**	**19 16 13.0**	**-0.3**
	3.4nm,0.3s						
PDGK				Lg	Lg	19 16 55.2	
	9.9nm,0.5s						
PDGK	**Podgornoye**	**3.13**	**34**	⇓Pg	**Pb**	**19 16 13.3**	**0.0**
	2.8nm,0.3s						
PDGK				⇑Lg	Lg	19 16 54.7	
	19nm,0.8s						
USP	**Ospenovka**	**3.15**	**323**	P	**Pb**	**19 16 14.0**	**+0.4**
	SNR=8.7						
USP	**Ospenovka**	**3.15**	**323**	⇓*i*P	**Pn**	**19 16 07.8**	**+0.6**
	baz=24						
USP				⇓*i*S	**Sn**	**19 16 46.0**	**+1.1**
	baz=24						
KUU	**Kurty**	**3.17**	**350**	Pg	**Pb**	**19 16 14.3**	**+0.4**
	2.8nm,0.3s						
KUU				Lg	Lg	19 16 57.9	
	23nm,0.6s						
KUU	**Kurty**	**3.17**	**350**	*e*Pg	**Pb**	**19 16 14.3**	**+0.4**
	2.8nm,0.1s						
KUU				*e*Lg	Lg	19 16 57.9	
	23nm,0.6s						
OHH	**Osh**	**3.27**	**267**	⇑*i*P	**Pn**	**19 16 08.9**	**0.0**
	baz=67						
OHH				⇑*i*S	**Sn**	**19 16 47.9**	**0.0**
	baz=67						
BLB	**Baldybastay**	**3.49**	**17**	Pg	**Pb**	**19 16 19.9**	**+0.5**
	19nm,0.3s						
BLB				Lg	Lg	19 17 06.3	
	28nm,0.2s						
ARXS	**Arharly**	**3.49**	**9**	Pg	**Pb**	**19 16 19.2**	**-0.2**
	0.8nm,0.4s						
ARXS				Lg	Lg	19 17 07.1	
	13nm,0.6s						
ARXS	**Arharly**	**3.49**	**9**	*e*Pg	**Pb**	**19 16 19.2**	**-0.2**
	0.8nm,0.4s						
ARXS				*e*Lg	Lg	19 17 07.1	
	14nm,0.4s						
MRKS	**Merke**	**3.50**	**306**	Pg	**Pb**	**19 16 19.4**	**0.0**
	3.1nm,0.3s						
MRKS				Lg	Lg	19 17 06.5	
	18nm,0.4s						
MRKS	**Merke**	**3.50**	**306**	*e*Pg	**Pb**	**19 16 19.4**	**0.0**
	2.1nm,0.1s						
MRKS				*e*Lg	Lg	19 17 06.5	
	18nm,0.2s						
ARK	**Arkit**	**3.99**	**287**	⇓*i*P	**Pn**	**19 16 19.1**	**+0.4**
	baz=87						
ARK				⇓*i*S	**Sn**	**19 17 05.6**	**0.0**
	baz=87						
TRKS	**Terek-Say**	**4.55**	**282**	⇑*i*P	**Pn**	**19 16 26.4**	**0.0**
	baz=81						
TRKS				⇑*i*S	**Sn**	**19 17 18.1**	**-1.3**
	baz=81						
BTLS	**Baital**	**4.82**	**334**	Pg	**Pb**	**19 16 44.6**	**+2.7**
	2.0nm,0.3s						
BTLS				Lg	Lg	19 17 49.4	
	5.5nm,0.6s						
BTLS	**Baital**	**4.82**	**334**	*e*Pg	**Pb**	**19 16 44.6**	**+2.7**
	1.6nm,0.2s						
BTLS				*e*Lg	Lg	19 17 49.4	
	4.7nm,0.3s						
KK31	**Karatay Array**	**5.42**	**298**	⇓Pg	**Pb**	**19 16 55.0**	**+2.7**
	1.0nm,0.6s,baz=119,slow=16						
KK31				⇑Lg	Lg	19 18 06.7	
	1.3nm,0.4s,baz=115,slow=28						
IUG	**Iuzhnay**	**5.47**	**287**	Pg	**Pb**	**19 16 55.3**	**+2.2**
	9.6nm,0.5s						
IUG				Lg	Lg	19 18 09.1	
	14nm,1.2s						
IUG	**Iuzhnay**	**5.47**	**287**	*e*Pg	**Pb**	**19 16 55.3**	**+2.2**
	10nm,0.4s						
IUG				*e*Lg	Lg	19 18 08.6	
	14nm,1.2s						

IDC 21 19:43:38.4±7.6**,23°.02S**×**176°.89W,h0^{km},mb3.3**/2**,mbtmp3.3**/2**,Error ellipse: s-maj=314.1km s-min=66.7km az=147.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**45.00**	**259**	P	P	19 51 56.0	0.0
	0.4nm,0.8s,baz=81,slow=7.4,SNR=3.1						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**45.32**	**264**	P	P	19 51 58.3	-0.3
	0.1nm,0.4s,baz=104,slow=7.7,SNR=5.0						
	0.1nm,0.4s						
H03S2	**Juan Fernandez**	**83.73**	**124**	T	T	21 27 03.3	
	baz=244,slow=74,SNR=7.5						
H03S1	**Juan Fernandez**	**83.74**	**124**	T	T	21 27 02.0	
	baz=244,slow=74,SNR=7.7						
H03S3	**Juan Fernandez**	**83.74**	**124**	T	T	21 27 09.1	
	baz=244,slow=74,SNR=9.2						
H03N2	**Juan Fernandez**	**83.88**	**124**	T	T	21 27 06.1	
	baz=251,slow=73,SNR=18						
H03N3	**Juan Fernandez**	**83.88**	**124**	T	T	21 27 08.3	
	baz=251,slow=73,SNR=21						
H03N1	**Juan Fernandez**	**83.89**	**124**	T	T	21 27 12.9	
	baz=251,slow=73,SNR=22						
AKASG	**Malin Array Be**	**145.71**	**330**	PKPbc	PKPdf	20 03 18.2	-0.5
	0.4nm,0.5s,baz=38,slow=4.7,SNR=1.8						

IDC ***21*** *20:00:32.0±2.6,37°.17N×142°.50E,h0^{km},mb3.3/3,mbtmp3.3/4,ML2.4/1,Error ellipse: s-maj=70.1km s-min=34.1km az=172.0*

JMA ***21*** *20:00:37.2±0.3,37°.3N±0°.5×142°.1E±1°.0,h31^{km}±4^{km},MV3.2/32,E OFF FUKUSHIMA PREF*

ISC 21 20:00:36.0±3.7**,37°.27N**±0°.06×**142°.15E**±0°.09**,h16**^{km}±23^{km}**,n22,**σ**1.^{s}11**/23**,mb3.1**/3**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.02**	**276**	P	**Pb**	**20 00 55.4**	**+0.1**
ONAJ	**Iwakimizuishiy**	**1.09**	**261**	*e*S	**Sb**	**20 01 10.5**	**-0.1**
JMST	**Minamisoumatoc**	**1.10**	**295**	P	**Pb**	**20 00 56.7**	**+0.1**
JMST				*e*S	**Sb**	**20 01 10.5**	**-0.2**
JIKH	**Ishinomakikobu**	**1.17**	**333**	P	**Pn**	**20 00 57.8**	**+0.1**
JIKH				*e*S	**Sb**	**20 01 12.1**	**-0.6**
JMM	**Marumori**	**1.23**	**299**	*e*P	**Pb**	**20 00 58.8**	**-0.1**
JMM				*e*S	**Sb**	**20 01 14.0**	**-0.5**
JIO	**Ouri**	**1.34**	**332**	P	**Pn**	**20 01 00.4**	**+0.4**
JIO				*e*S	**Sn**	**20 01 16.6**	**-0.9**
JHO	**Hitachi**	**1.43**	**243**	P	**Pn**	**20 01 01.2**	**-0.1**
JOTO	**OTAMA OYAMA**	**1.48**	**282**	*e*P	**Pb**	**20 01 02.9**	**-0.1**
JOTO				*e*S	**Sn**	**20 01 20.9**	**0.0**
JOU	**Okura**	**1.61**	**313**	P	**Pb**	**20 01 05.0**	**-0.3**
JOU				*e*S	**Sb**	**20 01 25.3**	**0.0**
JMK	**Ichinoseki**	**1.83**	**337**	P	**Pb**	**20 01 08.5**	**-0.6**
JFY	**Yanaizu**	**1.95**	**275**	*e*P	**Pb**	**20 01 10.4**	**-0.8**
MJAR	**Matsushiro Arr**	**3.24**	**258**	Pn	**Pn**	**20 01 28.1**	**+1.9**
	0.4nm,0.3s,baz=82,slow=14,SNR=13						
MJAR				Sn	**Sb**	**20 02 09.1**	**-3.3**
	0.2nm,0.3s,baz=94,slow=30,SNR=4.1						
	3.3nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**27.77**	**122**	T	T	20 35 33.9	
	baz=315,slow=75,SNR=7.8						
H11N1	**WAKE ISLAND Hy**	**27.78**	**122**	T	T	20 35 32.2	
	baz=315,slow=75,SNR=5.6						
H11N3	**WAKE ISLAND Hy**	**27.79**	**122**	T	T	20 35 32.7	
	baz=315,slow=75,SNR=7.0						
SONM	**Songino Array**	**28.14**	**303**	P	**P**	**20 06 29.2**	**+1.8**
	0.2nm,0.5s,baz=97,slow=7.7,SNR=2.2						
	0.2nm,0.5s						
H11S1	**WAKE ISLAND Hy**	**28.50**	**124**	T	T	20 36 06.8	
	baz=316,slow=76,SNR=7.1						
H11S3	**WAKE ISLAND Hy**	**28.50**	**124**	T	T	20 36 12.4	
	baz=316,slow=76,SNR=6.1						
H11S2	**WAKE ISLAND Hy**	**28.52**	**124**	T	T	20 36 09.3	
	baz=316,slow=76,SNR=6.2						
MKAR	**Makanchi Array**	**44.49**	**302**	P	**P**	**20 08 46.7**	**+0.2**
	0.2nm,0.7s,baz=77,slow=9.0,SNR=1.8						
	0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**46.32**	**308**	P	**P**	**20 09 01.2**	**+0.3**
	0.4nm,0.5s,baz=83,slow=8.1,SNR=5.0						
	0.4nm,0.5s						
LPAZ	**La Paz**	**146.06**	**60**	PKPbc	**PKPdf**	**20 20 13.8**	**-1.7**
	0.6nm,0.4s,baz=284,slow=4.2,SNR=2.3						

ISK ***21*** *20:07:37.7,38°.23N×42°.81E,h8^{km},ML2.3/6*

DDA ***21*** *20:07:38.7±0.0,38°.28N×42°.83E,h7^{km}±2^{km},ML2.5*

ISC 21 20:07:38.6±0.9**,38°.27N**±0°.03×**42°.82E**±0°.02**,h10**^{km}±7^{km}**,n17,**σ**0.^{s}68**/30**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKDM	**Akdamar-Van**	**0.14**	**64**	Pg	**Pg**	**20 07 41.8**	**-0.1**
AKDM				Sg	**Sg**	**20 07 44.7**	**+0.5**
GEVA	**Gevas**	**0.19**	**76**	P	**Pg**	**20 07 42.8**	**+0.1**
GEVA				S	**Sg**	**20 07 46.1**	**+0.5**
GEVA				*i* AML	AML	20 07 48.0	
	comp=N,918nm,0.1s						
GEVA				*i* AML	AML	20 07 49.0	
	comp=E,1μm,0.2s						
PERV	**Siirt/Pervari-**	**0.39**	**214**	P	**Pb**	**20 07 47.3**	**-0.3**
PERV				S	**Sb**	**20 07 53.3**	**-0.4**
PERV				*i* AML	AML	20 07 57.0	
	comp=N,449nm,0.4s						
PERV				*i* AML	AML	20 07 58.0	
	comp=E,356nm,0.2s						
TVAN	**Van**	**0.53**	**60**	P	**Pg**	**20 07 48.5**	**-0.5**
TVAN				S	**Sg**	**20 07 55.9**	**-0.1**
ADCV	**BITLIS_Adilcev**	**0.55**	**352**	P	**Pb**	**20 07 50.0**	**-0.4**
ADCV				*i* AML	AML	20 07 58.0	
	comp=N,556nm,0.2s						
ADCV				*i* AML	AML	20 07 58.0	
	comp=E,261nm,0.6s						
ADCV				S	**Sb**	**20 07 58.0**	**-0.4**
VANB	**Van**	**0.56**	**54**	Pg	**Pg**	**20 07 48.5**	**-0.9**
BLIS	**Bitlis-Merkez**	**0.57**	**285**	P	**Pb**	**20 07 50.1**	**-0.7**
BLIS				S	**Sg**	**20 07 58.0**	**+0.6**
GURO	**Guroymak-BITLI**	**0.68**	**295**	Pg	**Pg**	**20 07 51.9**	**+0.1**
GURO				Sg	**Sg**	**20 08 01.1**	**+0.4**
MLAZ	**Malazgirt-MUS**	**0.90**	**347**	Pg	**Pg**	**20 07 56.0**	**+0.1**
MLAZ				Sg	**Sb**	**20 08 09.5**	**+1.0**
VMUR	**Van-Muradiye**	**0.93**	**39**	P	**Pg**	**20 07 56.0**	**-0.6**
VMUR				S	**Sg**	**20 08 08.1**	**-0.6**
HAKT	**HAKKARI**	**1.00**	**135**	P	**Pb**	**20 07 57.8**	**-0.3**
HAKT				S	**Sn**	**20 08 13.3**	**+0.1**
OZAP	**Van, Ozalp-Mer**	**1.00**	**66**	P	**Pg**	**20 07 57.3**	**-0.5**
MUSM	**Mu-Merkez**	**1.12**	**294**	P	**Pg**	**20 07 59.9**	**-0.3**
MUSM				S	**Sg**	**20 08 14.6**	**-0.2**
CUKT	**Cukurca**	**1.19**	**148**	Pn	**Pg**	**20 08 00.4**	**-1.1**
SVAN	**Silvan-Diyarba**	**1.28**	**265**	Pn	**Pn**	**20 08 02.5**	**-0.1**
SVAN				Sn	**Sn**	**20 08 20.2**	**+0.3**
AGRB	**Hanur-Agry**	**1.31**	**6**	Pn	**Pn**	**20 08 03.3**	**+0.1**
YOVA	**Hakkari_Yksek**	**1.35**	**120**	P	**Pg**	**20 08 05.0**	**+0.5**
YOVA				S	**Sn**	**20 08 23.9**	**+2.2**

IDC ***21*** *20:09:03.6±1.2,36°.96N×141°.51E,h0^{km},mb3.5/5,mbtmp3.4/7,ML2.8/2,Error ellipse: s-maj=26.5km s-min=22.8km az=113.0*

JMA ***21*** *20:09:05.6±0.2,37°.2N±0°.4×141°.4E±0°.9,h27^{km}±1^{km},MV3.4/40,E OFF FUKUSHIMA PREF*

ISC 21 20:09:05.0±1.8**,37°.12N**±0°.04×**141°.43E**±0°.07**,h11**^{km}±10^{km}**,n24,**σ**1.^{s}10**/31**,mb3.5**/5**,2D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.50**	**299**	P	**Pg**	**20 09 15.1**	**+0.3**
JFK				S	**Sg**	**20 09 22.1**	**+0.6**
ONAJ	**Iwakimizuishiy**	**0.51**	**268**	P	**Pb**	**20 09 15.4**	**-0.5**
ONAJ				S	**Sb**	**20 09 22.8**	**-0.5**
JFFD	**Fukushimafurud**	**0.69**	**268**	*i* P	**Pg**	**20 09 18.7**	**+0.3**
JFFD				S	**Sb**	**20 09 27.9**	**-0.8**
JMST	**Minamisoumatoc**	**0.74**	**324**	*i* P	**Pb**	**20 09 19.1**	**-0.8**
JMST				S	**Sb**	**20 09 29.1**	**-0.9**
JHO	**Hitachi**	**0.86**	**234**	⇓*i*P	**Pg**	**20 09 21.0**	**-0.5**
JHO				⇓S	**Sg**	**20 09 32.4**	**-0.3**
JMM	**Marumori**	**0.90**	**326**	*i* P	**Pb**	**20 09 21.8**	**-0.8**
JMM				S	**Sb**	**20 09 33.8**	**-0.8**
JOTO	**OTAMA OYAMA**	**0.97**	**297**	*i* P	**Pb**	**20 09 23.7**	**-0.3**
JOTO				S	**Sb**	**20 09 36.6**	**-0.3**
JSB	**Shiboa**	**1.22**	**263**	P	**Pg**	**20 09 28.6**	**+0.2**
JSB				*e*S	**Sg**	**20 09 44.6**	**+0.4**
JIO	**Ouri**	**1.33**	**357**	*i* P	**Pn**	**20 09 28.3**	**-1.2**
JIO				S	**Sn**	**20 09 45.1**	**-2.1**
JOU	**Okura**	**1.38**	**334**	P	**Pn**	**20 09 30.0**	**-0.2**
JOU				*e*S	**Sn**	**20 09 47.8**	**-0.7**
JFY	**Yanaizu**	**1.40**	**282**	P	**Pb**	**20 09 30.9**	**-0.4**
JFY				S	**Sb**	**20 09 49.3**	**+0.1**
MJAR	**Matsushiro Arr**	**2.65**	**258**	Pn	**Pn**	**20 09 48.4**	**+0.7**
	0.4nm,0.3s,baz=87,slow=16,SNR=11						
MJAR				Sn	**Sb**	**20 10 21.7**	**-3.2**
	0.4nm,0.3s,baz=92,slow=29,SNR=6.1						
	2.4nm,0.3s						
ASAJ	**Asahikawa**	**7.04**	**7**	Pn	**Pn**	**20 10 48.2**	**+0.3**
	0.3nm,0.3s,baz=201,slow=14,SNR=2.1						
ASAJ				Sn	**Sn**	**20 12 07.5**	**-0.6**
	0.5nm,0.3s,baz=298,slow=20,SNR=1.8						
	3.6nm,0.7s						
SONM	**Songino Array**	**27.75**	**304**	P	**P**	**20 14 54.7**	**+1.1**
	0.6nm,0.9s,baz=95,slow=6.1,SNR=1.9						
	0.6nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**28.18**	**121**	T	T	20 44 27.6	
	baz=314,slow=75,SNR=115						
H11N1	**WAKE ISLAND Hy**	**28.19**	**121**	T	T	20 44 27.8	
	baz=314,slow=75,SNR=114						
H11N3	**WAKE ISLAND Hy**	**28.20**	**121**	T	T	20 44 29.4	
	baz=314,slow=75,SNR=118						
H11S1	**WAKE ISLAND Hy**	**28.90**	**123**	T	T	20 45 20.6	
	baz=315,slow=75,SNR=34						
H11S3	**WAKE ISLAND Hy**	**28.90**	**123**	T	T	20 45 22.2	
	baz=315,slow=75,SNR=19						
H11S2	**WAKE ISLAND Hy**	**28.91**	**123**	T	T	20 45 22.6	
	baz=315,slow=75,SNR=22						
MKAR	**Makanchi Array**	**44.08**	**302**	P	**P**	**20 17 14.8**	**+1.8**
	0.5nm,0.8s,baz=90,slow=9.7,SNR=4.7						
	0.5nm,0.8s						
ILAR	**Eielson Array**	**49.41**	**32**	P	**P**	**20 17 56.2**	**+1.7**
	0.6nm,0.8s,baz=277,slow=5.9,SNR=7.2						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**57.15**	**188**	P	**P**	**20 18 50.4**	**-1.4**
	0.5nm,0.9s,baz=4.4,slow=7.2,SNR=7.0						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**60.88**	**188**	P	**P**	**20 19 17.4**	**-0.3**
	0.3nm,0.8s,baz=3.5,slow=7.6,SNR=2.6						
	0.3nm,0.8s						

WEL 21 20:24:35.7±0.5**,43°S**±4°×**17°3E**±°**,h12**^{km}**,M2.2**/2**,ML2.2**/6**,MLv2.2**/2**,Error ellipse: s-maj=0.0km s-min=0.0km az=148.8,confirmed,South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	**Greta Valley S**	**0.35**	**151**	P	Pb	20 24 43.7	-0.2
GVZ				S	Sb	20 24 49.1	-0.4
LTZ	**Lake Taylor**	**0.41**	**252**	P	Pb	20 24 44.8	-0.1
LTZ				S	Sb	20 24 50.8	-0.3
AMCZ	**Amberley**	**0.53**	**192**	P	Pn	20 24 48.0	-1.0
KHZ	**Kahutara**	**0.60**	**66**	P	Pb	20 24 48.3	+0.3
OXZ	**Oxford**	**0.87**	**220**	P	Pb	20 24 53.0	+0.3
OXZ				S	Sb	20 25 05.1	+0.7
MQZ	**McQueen's Vall**	**1.05**	**186**	P	Pb	20 24 55.0	-0.8
DSZ	**Denniston Nort**	**1.18**	**321**	P	Pg	20 24 59.6	+1.3
MHCZ	**Mount Hutt**	**1.26**	**226**	P	Pn	20 24 59.0	-0.1
WACZ	**Wakanui South**	**1.46**	**208**	P	Pn	20 25 01.0	-0.9
KIW	**Kapiti Island**	**2.39**	**42**	P	Pn	20 25 15.8	+1.2
HOWZ	**Holdsworth Sta**	**2.69**	**50**	P	Pb	20 25 22.2	-1.5
MRZ	**Mangatainoka R**	**2.88**	**47**	P	Pn	20 25 20.0	-1.4

IDC ***21*** *20:57:53.3±2.6,17°.08N×85°.10W,h0^{km},mb3.4/3,mbtmp3.6/5,ML3.3/2,MS3.3/5,Error ellipse: s-maj=69.3km s-min=36.5km az=23.0*

ISC 21 20:57:57.5±1.3**,16°.9N**±0°.3×**85°.2W**±0°.2**,h35**^{km}**,n9,**σ**0.^{s}29**/5**,MS3.2**/4**,North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	Las Juntas de	6.54	178	Lg	Lg	21 01 22.5	
	1.4nm,0.3s,baz=334,slow=23,SNR=2.0						
CMIG	Matias Romero	9.27	273	Pn	Pn	21 00 08.7	0.0
	0.9nm,0.3s,baz=93,slow=8.6,SNR=7.5						
	2.6nm,0.4s						
SDV	Santo Domingo	16.26	117	Pn	Pn	21 01 43.6	0.0
	0.4nm,0.3s,baz=9.5,slow=12,SNR=3.0						
SDV				LR	LR	21 08 39.7	
	comp=Z,47nm,18.7s,baz=262,slow=40						
	1.9nm,0.5s						
TXAR	Lajitas Array	21.00	309	P	P	21 02 38.4	+0.3
	1.1nm,0.8s,baz=121,slow=12,SNR=11						
	1.1nm,0.8s						
PFO	Pinyon Flats O	32.65	307	LR	LR	21 19 26.7	
	comp=Z,40nm,19.4s,baz=105,slow=40						
PDAR	Pinedale Array	33.13	326	P	P	21 04 30.4	-0.2
	0.4nm,0.8s,baz=150,slow=9.4,SNR=3.0						
PDAR				LR	LR	21 19 28.1	
	comp=Z,37nm,19.7s,baz=152,slow=39						
	0.4nm,0.8s						
LPAZ	La Paz	37.00	152	LR	LR	21 21 06.2	
	comp=Z,46nm,20.9s,baz=310,slow=38						
SIV	San Ignacio	40.40	143	LR	LR	21 23 22.9	
	comp=Z,140nm,19.0s,baz=256,slow=38						
ILAR	Eielson Array	62.92	335	P	P	21 08 20.2	+0.1
	0.6nm,1.0s,baz=106,slow=5.7,SNR=4.1						
	0.6nm,1.0s						

*IDC **21** 21:01:03.1±0.9, 30°.00N×139°.10E, h413^{km}±12^{km}, mb3.0/11, mbtmp3.8/15, Error ellipse: s-maj=27.3km s-min=10.7km az=71.0*

*JMA **21** 21:01:03.9±0.2, 30°N±1°×13°9E±°, h425^{km}, MV3.5/24, NEAR TORISHIMA IS*

ISC 21 21:01:03.1±0.6**, 30°.07N**±0°.06×**139°.3E**±0°.1**, h425^{km}, n33,** σ**1^{s}31**/41**, mb3.3**/10**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.89	139	P	P	21 02 16.6	+0.9
CBIJ				eS	S	21 03 13.5	-1.2
JCJ	Chichijima	3.89	139	P	P	21 02 16.6	+0.9
	54nm,0.3s,baz=286,slow=21,SNR=1.7						
JCJ				S	S	21 03 13.9	-0.8
	144nm,0.3s,baz=287,slow=23,SNR=10						
BSO1	Boso 1	4.78	17	eS	S	21 03 28.3	-0.7
BSO3	Boso 3	4.83	12	S	S	21 03 29.4	-0.8
BSO4	Boso 4	4.98	10	S	S	21 03 33.1	-0.2
JOD2	Odawara 2	5.18	358	P	P	21 02 29.1	+1.2
JOD2				S	S	21 03 36.5	-0.8
JHU	Hanno	5.77	360	P	P	21 02 34.5	+0.6
JHU				S	S	21 03 45.8	-2.4
JRY	Ryogami san	5.94	357	P	P	21 02 37.2	+1.5
JAG	Ashikaga	6.34	1	P	P	21 02 40.2	+0.4
JAG				S	S	21 03 54.4	-4.9
MJAR	Matsushiro Arr	6.52	352	P	P	21 02 42.3	0.0
	0.7nm,0.3s,baz=171,slow=9.9,SNR=1.8						
JHO	Hitachi	6.61	9	P	P	21 02 43.5	+0.4
JHO				S	S	21 04 01.6	-3.0
KSRS	Korea Array	12.00	311	P	P	21 03 42.2	0.0
	3.3nm,0.5s,baz=127,slow=11,SNR=12						
USRK	Ussuriysk Ar.	15.26	340	P	P	21 04 18.7	+1.3
	0.7nm,0.3s,baz=153,slow=13,SNR=2.5						
KLR	Kul'dur	19.99	345	P	P	21 05 07.2	+1.6
	0.9nm,0.3s,baz=156,slow=11,SNR=5.2						
	0.9nm,0.3s						
SONM	Songino Array	30.84	314	P	P	21 06 42.4	0.0
	0.5nm,0.4s,baz=129,slow=8.6,SNR=6.0						
	0.5nm,0.4s						
CMAR	Chiang Mai Arr	38.40	262	P	P	21 07 45.3	-1.1
	0.5nm,0.6s,baz=67,slow=6.1,SNR=5.1						
	0.5nm,0.6s						
TAPN	Taplejung	45.04	280	eP	P	21 08 38.8	-0.8
	3.2nm,0.4s						
ZALV	Zalesovo Beam	45.60	318	P	P	21 08 42.9	-0.2
	0.8nm,0.4s,baz=96,slow=8.9,SNR=5.6						
	0.8nm,0.4s						
RAMN	Ramite	46.10	280	eP	P	21 08 47.1	-0.6
	7.5nm,0.5s						
JIRN	Jiri	46.25	281	eP	P	21 08 48.7	-0.3
	9.7nm,0.4s						
GUN	Gumba	46.44	281	eP	P	21 08 49.5	-1.0
MKAR	Makanchi Array	46.66	308	P	P	21 08 51.1	-0.3
	0.5nm,0.4s,baz=84,slow=9.7,SNR=12						
MKAR				ScP	ScP	21 13 29.4	0.0
	0.1nm,0.5s,baz=81,slow=5.7,SNR=2.4						
	0.5nm,0.4s						
PKIN	Phulchoki	46.95	281	eP	P	21 08 52.9	-1.3
GKN	Gorkha	47.47	282	eP	P	21 08 57.6	-0.5
DANN	Dangsing	48.12	282	eP	P	21 09 02.8	-0.3
	10nm,0.7s						
PYUN	Piuthan	48.84	282	eP	P	21 09 08.1	-0.4
	21nm,0.6s						
WRA	Warramunga Arr	49.95	186	P	P	21 09 17.0	+0.5
	0.2nm,0.3s,baz=6.8,slow=8.8,SNR=12						
WRA				PcP	PcP	21 10 30.5	+1.2
	0.3nm,0.9s,baz=359,slow=4.1,SNR=1.3						
	0.2nm,0.3s						
ASAR	Alice Springs	53.68	186	P	P	21 09 44.3	+0.8
	0.2nm,0.5s,baz=359,slow=5.9,SNR=4.6						
	0.2nm,0.5s						
ARCES	ARCESS Array B	69.91	340	P	P	21 11 31.2	+1.7
	2.4nm,0.8s,baz=71,slow=7.8,SNR=8.4						
	2.4nm,0.8s						
KBZ	Khabaz	74.15	312	P	P	21 11 54.4	-0.4
	1.8nm,0.8s,baz=233,slow=23,SNR=3.9						
	1.8nm,0.8s						
FINES	FINESS Array B	74.17	333	P	P	21 11 55.2	+0.7
	0.8nm,0.4s,baz=62,slow=4.7,SNR=13						
	0.8nm,0.4s						
NB2	NORSAR Subarra	79.92	337	P	P	21 12 27.0	+0.8
	comp=Z,0.2nm,0.4s,baz=45,slow=4.6						
NOA	NORSAR Array B	79.92	337	P	P	21 12 26.6	+0.5
	comp=Z,0.7nm,0.6s,baz=46,slow=5.1,SNR=3.3						
	comp=Z,0.7nm,0.6s						

*BJI **21** 21:08:08.5±0.0, 13°.34N×144°.91E, h148^{km}, mb4.6/41, mB5.0/17*

*IDC **21** 21:08:11.1±0.3, 13°.70N×144°.84E, h132^{km}±2^{km}, mb3.9/21, mbtmp4.3/21, MS4.4/1, Error ellipse: s-maj=17.8km s-min=10.2km az=84.0*

*NEIC **21** 21:08:12.2±1.3, 13°.70N±0°.08×144°.7E±0°.1, h136^{km}±4^{km}, mb4.6/59, Error ellipse: s-maj=15.2km s-min=10.6km az=109.0*

ISC 21 21:08:11.9±0.6**, 13°.65N**±0°.06×**144°.72E**±0°.08**, h137^{km}**±5^{km}**, n123,** σ**0^{s}79**/125**, mb4.5**/60**, 2C-2D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.15	113	P	Pn	21 08 30.6	+0.1
	8µm,0.3s,baz=168,slow=1.3,SNR=887						
GUMO				S	Sn	21 08 43.6	-1.0
	5µm,0.3s,baz=313,slow=19,SNR=29						
GUMO	Guam	0.15	113	Pn	Pn	21 08 31.0	+0.5
GUMO				Sn	Sn	21 08 44.3	-0.3
GUMO	Guam	0.15	113	P	Pn	21 08 30.8	+0.3
PATS	Pohnpei	14.98	116		P	21 11 38.1	-0.8
PATS	Pohnpei	14.98	116	P	P	21 11 39.3	+0.4
RABL	Rabaul	19.20	157	P	Pn	21 12 27.1	-0.6
JOW	Kunigami	20.22	313	P	P	21 12 36.6	+0.4
	12nm,0.5s,baz=107,slow=22,SNR=1.8						
	12nm,0.5s						
JOW	Kunigami	20.22	313	P	P	21 12 37.7	+1.5
JOW				IAmb	IAmb	21 12 55.5	
	comp=Z,47nm,1.3s						
FAKI	Fak Fak	20.59	218	P	Pn	21 12 43.5	-0.5
FAKI				IAmb	IAmb	21 12 47.3	
	comp=Z,12nm,0.8s						
FAKI	Fak Fak	20.59	218	P	P	21 12 41.4	+1.1
H11S3	WAKE ISLAND Hy	21.64	74	T	T	21 35 32.9	
	baz=260,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	21.66	74	T	T	21 35 31.4	
	baz=260,slow=75,SNR=12						
H11S2	WAKE ISLAND Hy	21.66	74	T	T	21 35 34.2	
	baz=260,slow=75,SNR=8.8						
H11N1	WAKE ISLAND Hy	22.06	71	T	T	21 36 05.1	
	baz=257,slow=75,SNR=23						
H11N2	WAKE ISLAND Hy	22.07	71	T	T	21 36 06.8	
	baz=257,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	22.08	71	T	T	21 36 06.5	
	baz=257,slow=75,SNR=24						
JMN	Monobe	22.29	336	P	P	21 12 59.5	+1.5
JMN				IAmb	IAmb	21 13 09.8	
	comp=Z,41nm,1.2s						
JGF	Kuroka	22.84	344	P	P	21 13 03.4	+0.1
JGF				IAmb	IAmb	21 13 28.4	
	comp=Z,26nm,1.3s						
JGF	Kuroka	22.84	344	P	P	21 13 04.5	+1.2
PMG	Port Moresby	23.03	174	P	P	21 13 05.5	+0.3
	comp=Z,12nm,0.7s,baz=346,slow=9.5,SNR=5.0						
	comp=Z,12nm,0.7s						
PMG	Port Moresby	23.03	174	P	P	21 13 05.2	0.0
PMG				IAmb	IAmb	21 13 06.9	
	comp=Z,19nm,1.1s						
JNU	Nakatsue	23.13	329	P	P	21 13 05.5	-0.5
	comp=Z,9.2nm,0.7s,baz=131,slow=1.4,SNR=5.5						
	comp=Z,9.2nm,0.7s						
JNU	Nakatsue	23.13	329	P	P	21 13 04.5	-1.5
JNU				IAmb	IAmb	21 13 27.7	
	comp=Z,14nm,1.0s						
MJAR	Matsushiro Arr	23.53	347	P	P	21 13 09.4	-0.2
	comp=Z,1.7nm,0.7s,baz=220,slow=6.8,SNR=8.0						
	comp=Z,1.7nm,0.7s						
MAJO	Matsushiro	23.53	347	P	P	21 13 08.6	-1.0
MAJO	Matsushiro	23.53	347	P	P	21 13 10.8	+1.2
MJB9	Matsu-Tunnel	23.54	347	P	P	21 13 09.1	-0.6
JHS	Saijyo	23.70	336	P	P	21 13 10.7	-0.5
JHS	Saijyo	23.70	336	P	P	21 13 12.3	+1.1
	comp=Z,44nm,2.2s						
YULB	Yu-li	24.20	297	P	P	21 13 15.0	-0.8
YULB				IAmb	IAmb	21 13 21.6	
	comp=Z,20nm,1.0s						
YULB	Yu-li	24.20	297	P	P	21 13 16.3	+0.5
SSLB	Suanglung	24.63	298	P	P	21 13 19.0	-0.7
SSLB				IAmb	IAmb	21 13 24.2	
	comp=Z,18nm,0.6s						
SSLB	Suanglung	24.63	298	P	P	21 13 19.6	-0.2
JSD	Sado	24.96	348	P	P	21 13 23.3	+0.8
HNR	Honiara	27.46	146	LR	LR	21 24 29.4	
	comp=Z,770nm,18.5s,baz=150,slow=36						
COEN	Coen	27.47	183	P	P	21 13 44.9	-0.4
COEN	Coen	27.47	183	P	P	21 13 46.3	+1.0
	comp=Z,5.4nm,2.0s						
KSRS	Korea Array	28.04	331	P	P	21 13 50.0	-0.2
	comp=Z,2.3nm,0.5s,baz=146,slow=9.6,SNR=8.2						
	comp=Z,2.3nm,0.5s						
NJ2	Nanjing	29.93	312	eP	P	21 14 08.1	+1.1
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
JKA	Kamikawa-asahi	30.42	357	P	P	21 14 11.1	0.0
JKA				IAmb	IAmb	21 14 22.0	
	comp=Z,18nm,1.1s						
ASAJ	Asahikawa	30.42	357	P	P	21 14 11.1	-0.1
	comp=Z,6.1nm,1.0s,baz=202,slow=16,SNR=2.0						
	comp=Z,6.1nm,1.0s						
MDJ	Mudanjiang	33.45	340	P	P	21 14 38.5	+0.8
MDJ				pP	pP	21 15 05.9	-0.4
MDJ				S	S	21 19 49.9	+0.9
MDJ				PcS	PcS	21 21 03.5	+2.0
MDJ				ScS	ScS	21 24 49.5	+0.7
MDJ				pmax	pmax		
	comp=Z,11nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,280nm,5.3s						
WB0	Warramunga Arr	34.73	197	P	P	21 14 49.0	0.0
WB0				IAmb	IAmb	21 14 56.3	
	comp=Z,10nm,1.4s						
WB2	Warramunga Arr	34.91	197	P	P	21 14 50.8	+0.3
WB2				IAmb	IAmb	21 14 51.9	
	comp=Z,5.6nm,0.7s						
WRA	Warramunga Arr	34.91	197	P	P	21 14 50.6	+0.1
	comp=Z,3.0nm,0.8s,baz=19,slow=9.2,SNR=30						
WRA				PcP	PcP	21 17 21.2	+0.9
	comp=Z,0.5nm,0.4s,baz=10,slow=3.3,SNR=4.6						
WRA				ScP	ScP	21 20 52.3	-0.9
	comp=Z,0.6nm,0.8s,baz=14,slow=3.6,SNR=6.1						
	comp=Z,3.0nm,0.8s						
BNX	BinXian	35.18	339	⇓P	P	21 14 53.1	+0.5
BNX				pmax	pmax		
	comp=Z,18nm,0.9s						
BNX				pmax	pmax		
	comp=Z,89nm,6.7s						
HNS	HongShan	35.69	317	⇑P	P	21 14 57.6	+0.6
HNS				pmax	pmax		
	comp=Z,19nm,0.7s						
LYN	LuoYang	35.81	311	⇓iP	P	21 14 58.6	+0.5
LYN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ENH	Enshi	36.44	303	P	P	21 15 03.0	-0.5
ENH				IAmb	IAmb	21 15 04.7	
	comp=Z,6.7nm,0.7s						
FITZ	Fitzroy Crossi	36.73	211	P	P	21 15 06.8	+0.7
KLR	Kul'dur	37.05	346	P	P	21 15 08.2	-0.3
	comp=Z,1.2nm,0.4s,baz=164,slow=4.7,SNR=9.3						
	comp=Z,1.2nm,0.4s						
AS31	Alice Springs	38.56	196	P	P	21 15 21.9	+0.5
ASAR	Alice Springs	38.57	196	P	P	21 15 21.4	-0.1
	comp=Z,1.5nm,0.7s,baz=19,slow=12,SNR=28						
ASAR				PcP	PcP	21 17 32.4	+1.0
	comp=Z,0.5nm,0.7s,baz=22,slow=5.3,SNR=2.7						
ASAR				ScP	ScP	21 21 06.4	-0.3
	comp=Z,0.4nm,0.8s,baz=6.9,slow=3.2,SNR=2.5						
	comp=Z,1.5nm,0.7s						
ASAR	Alice Springs	38.57	196	P	P	21 15 21.0	-0.4
HEH	HeiHe	39.14	342	eP	P	21 15 25.8	-0.1
HEH				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC	Hu-ho-hao-te	39.63	319	eP	P	21 15 30.6	+0.3
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,270nm,4.4s						
HIA	Hailar	41.03	335	P	P	21 15 41.5	-0.1
HIA				IAmb	IAmb	21 15 43.5	
	comp=Z,10nm,0.9s						
DZM	Mont Dzumac	41.40	149	P	P	21 15 46.4	+1.5
PZH	PanZhiHua	42.15	294	P	P	21 15 51.4	+0.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MBWA	Marble Bar	42.42	216	P	P	21 15 52.9	-0.3
MBWA				IAmb	IAmb	21 16 20.7	
	comp=Z,30nm,1.5s						
LZH	Lanzhou	42.87	309	⇑P	P	21 15 57.5	+0.6
LZH				pP	pwP	21 16 30.0	-1.5
LZH				pmax	pmax		
	comp=Z,13nm,1.4s						
CMAR	Chiang Mai Arr	44.17	282	P	P	21 16 07.8	+0.4
	comp=Z,2.4nm,0.7s,baz=87,slow=6.0,SNR=25						
	comp=Z,2.4nm,0.7s						
CMAR	Chiang Mai Arr	44.17	282	P	P	21 16 07.1	-0.3
KULM	Kulim	44.20	264	P	P	21 16 07.5	0.0
KULM				IAmb	IAmb	21 16 09.1	
	comp=Z,9.9nm,1.1s						
STKA	Stephens Creek	45.37	184	P	P	21 16 16.3	-0.3
	comp=Z,2.2nm,0.7s,baz=358,slow=8.7,SNR=4.2						
	comp=Z,2.2nm,0.7s						
STKA	Stephens Creek	45.37	184	P	P	21 16 16.2	-0.3
SONM	Songino Array	46.60	325	P	P	21 16 26.8	+0.5
	comp=Z,1.0nm,0.6s,baz=136,slow=7.5,SNR=12						
	comp=Z,1.0nm,0.6s						
SONM	Songino Array	46.60	325	P	P	21 16 26.6	+0.4
BBOO	Buckleboo	46.93	190	P	P	21 16 28.7	0.0
GTA	Gaotai	47.03	312	eP	P	21 16 29.9	+0.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GSI	Gunungsitoli	48.22	259	P	P	21 16 37.5	-1.6
GSI				IAmb	IAmb	21 16 39.3	
	comp=Z,19nm,1.2s						
MORW	Morawa	50.71	213	P	P	21 16 57.0	-0.7
SHL	Shillong	50.88	292	P	P	21 16 58.1	-1.2
SHL				IAmb	IAmb	21 16 59.0	
	comp=Z,4.5nm,0.5s						
LSA	Lhasa	51.84	297	P	P	21 17 07.0	+0.2
LSA				IAmb	IAmb	21 17 08.6	
	comp=Z,4.1nm,0.7s						
UNV	Unalaska Valle	55.35	33	P	P	21 17 30.9	-0.4
JIRN	Jiri	56.05	294	eP	P	21 17 36.4	-0.9
GUN	Gumba	56.34	295	eP	P	21 17 38.7	-0.6
	comp=Z,8.2nm,0.6s						
WMQ	Urumqi	56.99	314	eP	P	21 17 42.9	-0.4
WMQ				pP	pP	21 18 14.8	+0.5
WMQ				sP	sP	21 18 31.5	+2.5
WMQ				PcP	PcP	21 18 36.5	-0.4
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
GKN	Gorkha	57.44	295	eP	P	21 17 45.9	-0.9
	comp=Z,5.8nm,0.6s						
DANN	Dangsing	58.22	295	eP	P	21 17 51.6	-0.8
	comp=Z,16nm,0.6s						
PYUN	Piuthan	58.90	295	eP	P	21 17 55.9	-1.1
RTZ	Ruatahuna	60.11	151	P	P	21 18 05.2	+0.3
BKZ	Black Stump Fm	60.33	152	P	P	21 18 06.5	+0.2
MK31	Makanchi Array	61.35	316	P	P	21 18 13.3	+0.1
MK31				IAmb	IAmb	21 18 13.6	
	comp=Z,2.5nm,0.5s						
MKAR	Makanchi Array	61.35	316	P	P	21 18 13.2	+0.1
	comp=Z,3.3nm,0.5s,baz=92,slow=8.5,SNR=77						
	comp=Z,3.3nm,0.5s						
ZALV	Zalesovo Beam	61.49	324	P	P	21 18 13.3	-0.7
	comp=Z,0.6nm,0.4s,baz=109,slow=8.1,SNR=3.8						
	comp=Z,0.6nm,0.4s						
MAKZ	Makanchi	61.56	316	P	P	21 18 14.7	+0.1
MAKZ				IAmb	IAmb	21 18 15.4	
	comp=Z,4.6nm,0.6s						
N19K	Bonanza Creek	64.09	28	P	P	21 18 31.0	-0.2
N19K				IAmb	IAmb	21 18 47.7	
	comp=Z,9.9nm,1.4s						
KDJ	Kajisay	64.34	310	P	P	21 18 33.5	+0.2
KURK	Kurchatov	64.45	320	P	P	21 18 33.1	-0.4
KURK				IAmb	IAmb	21 18 33.8	
	comp=Z,4.2nm,0.7s						
KSH	Kashi	65.09	307	P	P	21 18 41.1	+3.0
KSH				sP	sP	21 19 30.5	+6.1
KSH				pmax	pmax		
	comp=Z,2.0nm,1.3s						
BOOM	Boomskoye usch	65.29	311	P	P	21 18 39.3	-0.1
BOOM				IAmb	IAmb	21 18 40.3	
	comp=Z,11nm,1.3s						
CAST	Castle Rocks	66.01	26	P	P	21 18 42.5	-0.9
PWL	Port Wells	66.99	29	P	P	21 18 48.8	-0.9
ILAR	Eielson Array	68.58	25	P	P	21 18 57.0	-2.5
	comp=Z,1.3nm,0.3s,baz=253,slow=5.6,SNR=46						
	comp=Z,1.3nm,0.3s						
KKAR	Karatay Array	69.31	311	P	P	21 19 04.2	-0.3
BRVK	Borovoye	69.86	322	P	P	21 19 07.0	-0.6
BMAR	Burnt Mountain	70.10	23	P	P	21 19 08.7	-0.2
BCAR	Beaver Creek A	70.45	28	P	P	21 19 10.4	-0.8
HYT	Haines Junctio	72.22	30	P	P	21 19 22.3	+0.3
INK	Inuvik	74.36	22	P	P	21 19 33.5	-0.6
	comp=Z,0.5nm,0.5s,baz=9.0,slow=4.2,SNR=4.2						
	comp=Z,0.5nm,0.5s						
DIB	Dawson Inlet,	74.89	38	P	P	21 19 37.3	-0.2
DIB				IAmb	IAmb	21 19 46.9	
	comp=Z,16nm,1.3s						
MOBC	Moresby Island	75.20	38	P	P	21 19 39.1	-0.3
GRNB	Grenville Isla	76.36	37	P	P	21 19 45.8	0.0
GRNB				IAmb	IAmb	21 20 11.6	
	comp=Z,14nm,1.2s						
ABKAR	Akbulak array	76.40	318	P	P	21 19 45.0	-1.2
ABKAR	Akbulak array	76.40	318	P	P	21 19 45.5	-0.7
ABKAR				IAmb	IAmb	21 19 47.2	
	comp=Z,1.5nm,0.9s						
I02E	Swisshome, OR	81.65	47	P	P	21 20 15.6	+0.7
YKA	Yellowknife Ar	82.87	27	P	P	21 20 20.2	-0.6
	comp=Z,1.5nm,0.6s,baz=285,slow=5.0,SNR=21						
	comp=Z,1.5nm,0.6s						
L04D	Klamath Falls	83.14	48	P	P	21 20 22.9	0.0
J05D	Fort Rock, OR	83.68	47	P	P	21 20 26.3	+0.8
K05A	Summer Lake	84.04	48	P	P	21 20 28.2	+0.7
K05A				IAmb	IAmb	21 20 29.3	
	comp=Z,6.9nm,0.7s						
PLID	Pearl Lake	86.88	44	P	P	21 20 41.3	-0.3
PLID				IAmb	IAmb	21 20 42.2	
	comp=Z,6.8nm,0.7s						
ARCES	ARCESS Array B	86.98	342	P	P	21 20 41.2	-0.1
	comp=Z,2.9nm,0.9s,baz=57,slow=6.6,SNR=3.6						
	comp=Z,2.9nm,0.9s						
NVAR	Mina Array Bea	86.99	51	P	P	21 20 43.0	+0.7
	comp=Z,3.1nm,0.7s,baz=267,slow=8.8,SNR=6.5						
	comp=Z,3.1nm,0.7s						
NVAR	Mina Array Bea	86.99	51	P	P	21 20 42.7	+0.4
WALA	Waterton Lakes	87.10	40	P	P	21 20 43.3	+0.9
WALA				IAmb	IAmb	21 20 44.1	
	comp=Z,3.2nm,0.7s						
MFID	Camas Ranch	87.46	46	P	P	21 20 45.0	+0.8
HLID	Hailey	88.41	46	P	P	21 20 49.4	+0.6
HLID				IAmb	IAmb	21 20 50.5	
	comp=Z,4.7nm,0.9s						
ELK	Elko	88.64	48	P	P	21 20 50.7	+0.7
ELK				IAmb	IAmb	21 20 52.3	
	comp=Z,7.5nm,1.1s						
FINES	FINESS Array B	91.05	335	P	P	21 20 58.4	-2.0
	comp=Z,0.9nm,0.5s,baz=64,slow=4.4,SNR=7.6						
	comp=Z,0.9nm,0.5s						
PDAR	Pinedale Array	92.02	45	P	P	21 21 05.5	-0.2
	comp=Z,0.6nm,0.7s,baz=253,slow=4.5,SNR=3.9						
	comp=Z,0.6nm,0.7s						
TORD	Torodi Ar. Bea	134.71	304	PKP	PKPdf	21 27 15.0	-0.3
	comp=Z,0.5nm,0.4s,baz=84,slow=1.8,SNR=6.0						
LPAZ	La Paz	148.17	99	PKPbc	PKPbc	21 27 42.8	-0.6
	comp=Z,2.7nm,0.8s,baz=11,slow=0.6,SNR=8.6						

ROM 21 21:17:42.1±0.0**, 43°.109N**±0°.002×**13°.037E**±0°.005**, h12^{km}, ML1.2**/14**, 5C-4D, Error ellipse: s-maj=0.4km s-min=0.1km az=66.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1220	Camerino, Fraz	0.04	88	P	Pg	21 17 44.6	+0.2
T1220				AML	AML		
	comp=N,417µm,0.2s						
T1220				AML	AML		
	comp=E,641µm,1.3s						
T1220				AML	AML		
	comp=N,416µm,0.2s						
T1220				AML	AML		
	comp=E,641µm,0.7s						
T1220				AML	AML		
	comp=N,416µm,1.8s						
T1219	Muccia, Frazio	0.06	202	P	Pg	21 17 44.8	+0.2
T1219				S	Sg	21 17 46.7	+0.3
T1219				AML	AML		
	comp=N,236µm,0.1s						
T1219				AML	AML		
	comp=E,283µm,0.2s						
T1219				AML	AML		
	comp=E,262µm,0.2s						
T1219				AML	AML		
	comp=N,239µm,0.1s						
CESI	CESI - Serrava	0.14	223	P	Pg	21 17 46.0	+0.4
CESI				S	Sg	21 17 49.0	+0.8
CESI				AML	AML		
	comp=E,174µm,0.4s						
CESI				AML	AML		
	comp=N,144µm,0.3s						
SNTG	Esanatoglia	0.16	334	P	Pg	21 17 46.2	+0.3
SNTG				S	Sg	21 17 49.2	+0.6
SNTG				AML	AML		
	comp=E,77µm,0.5s						
SNTG				AML	AML		
	comp=N,99µm,0.2s						
T1256	Bolognola (MC)	0.17	126	⇓P	Pg	21 17 46.4	+0.3
T1256				S	Sg	21 17 49.7	+0.8
T1256				AML	AML		
	comp=E,80µm,0.8s						
T1256				AML	AML		
	comp=N,141µm,0.6s						
T1216	Preci, Frazion	0.22	183	⇑P	Pg	21 17 47.0	+0.2
T1216				S	Sg	21 17 50.9	+0.8
GUMA	Gualdo di Mace	0.22	102	⇑P	Pg	21 17 47.4	+0.5
GUMA				AML	AML		
	comp=E,238µm,0.3s						
GUMA				AML	AML		
	comp=N,179µm,0.2s						
EL6	Elcito	0.23	12	P	Pg	21 17 47.2	+0.2
EL6				S	Sg	21 17 51.3	+1.0
EL6				AML	AML		
	comp=N,95µm,1.0s						
EL6				AML	AML		
	comp=N,95µm,1.0s						
EL6				AML	AML		
	comp=N,95µm,1.0s						
EL6				AML	AML		
	comp=E,93µm,0.4s						
MC2	Monte Cornacci	0.23	150	P	Pg	21 17 47.3	+0.2
MC2				S	Sg	21 17 51.4	+1.0
FOSV	Fossato di Vic	0.27	313	⇑P	Pg	21 17 48.1	+0.3
FOSV				S	Sb	21 17 52.9	-0.8
FOSV				AML	AML		
	comp=E,36µm,0.2s						
FOSV				AML	AML		
	comp=N,27µm,0.1s						
T1245	Castelsantange	0.28	156	P	Pg	21 17 48.0	+0.2
T1245				S	Sb	21 17 53.0	-0.7

T1245				AML	AML		
	comp=E,55µm,0.3s						
T1245				AML	AML		
	comp=N,100µm,1.5s						
ASSB	Assisi San Ben	0.28	257	⇓P	Pg	21 17 48.3	+0.3
ASSB				AML	AML		
	comp=N,37µm,0.3s						
ASSB				AML	AML		
	comp=E,33µm,0.3s						
CING	Cingoli	0.29	23	P	Pg	21 17 48.6	+0.5
CING				S	Sb	21 17 53.4	-0.8
CING				AML	AML		
	comp=N,35µm,0.4s						
CING				AML	AML		
	comp=N,35µm,1.6s						
CING				AML	AML		
	comp=E,47µm,0.2s						
ATCC	AVT- Casa Cast	0.30	285	⇑P	Pg	21 17 48.6	+0.3
ATCC				S	Sb	21 17 53.8	-0.5
ATCC				AML	AML		
	comp=E,84µm,0.3s						
ATCC				AML	AML		
	comp=N,42µm,0.2s						
ATCC				AML	AML		
	comp=E,84µm,1.7s						
T1212	Cascia, Frazio	0.36	179	P	Pg	21 17 49.4	+0.1
T1212				S	Sb	21 17 55.4	-0.6
T1214	Arquata del Tr	0.37	160	P	Pg	21 17 49.7	+0.1
T1214				S	Sb	21 17 55.8	-0.6
SSFR	Montelago di S	0.38	330	⇓P	Pg	21 17 49.8	+0.1
SSFR				AML	AML		
	comp=N,52µm,0.9s						
SSFR				AML	AML		
	comp=E,62µm,0.2s						
ARVD	Arcevia	0.40	350	S	Sb	21 17 56.8	-0.3
ARVD				AML	AML		
	comp=E,21µm,1.4s						
ARVD				AML	AML		
	comp=N,16µm,1.5s						
MURB	Monte Urbino	0.41	293	⇑P	Pg	21 17 50.5	+0.3
ATVO	AVT- Monte Val	0.54	301	⇓P	Pg	21 17 52.7	+0.1

ROM 21 21:18:38.1±0.1,**43°.048N**±0°.003×**13°.025E**±0°.004, **h6^{km},ML1.1**/3,**1C,Error ellipse: s-maj=0.4km s-min=0.1km az=246.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1219	Muccia, Frazio	0.01	301	P	Pg	21 18 39.4	+0.1
T1219				S	Sg	21 18 40.1	-0.1
T1219				AML	AML		
	comp=E,1232µm,0.4s						
T1219				AML	AML		
	comp=N,1505µm,0.2s						
T1219				AML	AML		
	comp=E,1140µm,0.4s						
T1219				AML	AML		
	comp=N,1620µm,0.2s						
T1219				AML	AML		
	comp=E,1232µm,0.4s						
T1220	Camerino, Fraz	0.08	37	P	Pg	21 18 40.2	+0.3
T1220				S	Sg	21 18 41.8	+0.5
T1220				AML	AML		
	comp=N,664µm,0.2s						
T1220				AML	AML		
	comp=E,833µm,0.3s						
T1220				AML	AML		
	comp=N,666µm,0.2s						
CSP1	Cessapalombo	0.14	71	⇑P	Pg	21 18 41.3	+0.3
CSP1				S	Sg	21 18 43.8	+0.8
T1256	Bolognola (MC)	0.15	106	P	Pg	21 18 41.6	+0.4
T1256				S	Sg	21 18 44.4	+1.0
T1256				AML	AML		
	comp=N,45µm,0.2s						
T1256				AML	AML		
	comp=E,69µm,0.3s						
T1216	Preci, Frazion	0.16	182	P	Pg	21 18 42.2	+0.9
T1216				S	Sg	21 18 44.8	+1.4
MC2	Monte Cornacci	0.18	138	P	Pg	21 18 42.3	+0.5
MC2				S	Sg	21 18 45.7	+1.4
SNTG	Esanatoglia	0.22	343	P	Pg	21 18 43.0	+0.6
SNTG				S	Sg	21 18 46.9	+1.6
T1212	Cascia, Frazio	0.30	177	P	Pg	21 18 44.5	+0.6
T1212				S	Sb	21 18 49.5	-1.5
ATCC	AVT- Casa Cast	0.31	296	P	Pg	21 18 44.9	+0.7
ATCC				S	Sb	21 18 50.5	-1.0
ATCC				AML	AML		
	comp=N,42µm,1.2s						
ATCC				AML	AML		
	comp=N,42µm,1.2s						
ATCC				AML	AML		
	comp=N,42µm,0.8s						
ATCC				AML	AML		
	comp=E,50µm,0.8s						
T1214	Arquata del Tr	0.32	155	P	Pb	21 18 45.4	-0.9
T1214				S	Sg	21 18 50.1	+1.5

IDC 21 21:22:03.8±3.1,**1°.41S**×**134°.42E,h0^{km},mb3.3**/2, **mbtmp3.3**/3,**ML3.4**/1,**Error ellipse: s-maj=137.4km s-min=29.6km az=77.0,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.42	180	P	Pn	21 26 20.3	-0.5
	0.1nm,0.3s,baz=359,slow=11,SNR=13						
	0.4nm,0.4s						
ASAR	Alice Springs	22.13	181	P	P	21 27 01.4	+0.1
	0.6nm,0.6s,baz=9.2,slow=11,SNR=12						
	0.6nm,0.6s						
MKAR	Makanchi Array	66.18	324	P	P	21 32 53.5	0.0
	0.2nm,0.6s,baz=116,slow=7.5,SNR=2.9						
	0.2nm,0.6s						

DRS ***21*** *21:25:27.8±0.0,39°.49N×49°.36E,h26^{km}*

IDC ***21*** *21:25:28.2±1.3,40°.24N×48°.84E,h0^{km},mb3.4/9, mbtmp3.5/18,ML3.2/9,Error ellipse: s-maj=25.2km s-min=10.5km az=171.0*

MOS ***21*** *21:25:29.3±1.5,40°.17N×49°.13E,h15^{km},mb3.8/1,Error ellipse: s-maj=10.0km s-min=6.2km az=115.4*

AZER ***21*** *21:25:31.8±0.0,40°.09N×48°.75E,h13^{km},Error ellipse: s-maj=0.3km s-min=0.3km az=254.0*

TEH ***21*** *21:25:32.9,40°.10N×48°.78E,h23^{km}±18^{km},ML3.3*

ISC 21 21:25:31.1±0.6,**40°.11N**±0°.02×**48°.77E**±0°.02,**h10^{km},n96,** σ**2^{s}47**/145,**mb3.2**/9,**Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALIB	Äli-Bayra	0.24	131	P	Pg	21 25 39.1	+3.2
	SNR=140						
ALIB				S	Sg	21 25 46.5	+7.3
ALIB	Äli-Bayra	0.24	131	Pg	Pg	21 25 39.1	+3.2
SAAT	Saatly	0.37	227	P	Pn	21 25 43.2	+0.8
SAAT				S	Sb	21 25 51.9	+6.5
SAAT	Saatly	0.37	227	Pg	Pn	21 25 42.4	-0.1
GBS	Qobustan	0.44	17	P	Pb	21 25 42.6	+1.6
	SNR=2394						
GBS				S	Sb	21 25 52.8	+5.1
GBS	Qobustan	0.44	17	Pg	Pb	21 25 42.6	+1.6
KDMR	Kurdemir	0.52	300	P	Pb	21 25 43.7	+1.4
	SNR=18						
KDMR				S	Sb	21 25 53.7	+3.8
KDMR	Kurdemir	0.52	300	Pg	Pb	21 25 43.7	+1.4
PQL	Pirkuli	0.69	349	P	Pg	21 25 46.1	+1.7
	SNR=78						
PQL				S	Sn	21 25 59.0	+1.1
PQL	Pirkuli	0.69	349	Pg	Pg	21 25 43.7	-0.7
ATGJ	Altiaghaj	0.76	10	P	Pb	21 25 48.0	+1.6
	SNR=148						
ATGJ				S	Sn	21 26 02.4	+2.9
ATGJ	Altiaghaj	0.76	10	Pg	Pb	21 25 48.2	+1.8
GOBA	Gobu	0.79	68	P	Pn	21 25 49.6	+1.3
	SNR=30						
GOBA				S	Sn	21 26 03.4	+3.3
GOBA	Gobu	0.79	68	Pg	Pn	21 25 50.2	+1.9
IML	Ismayilli	0.81	327	P	Pg	21 25 47.8	+1.1
	SNR=444						
IML				S	Sn	21 26 02.1	+1.2
IML	Ismayilli	0.81	327	Pg	Pg	21 25 47.9	+1.1
ZRD	Zardab	0.85	282	P	Pb	21 25 49.6	+1.7
	SNR=77						
ZRD				S	Sn	21 26 04.6	+3.1
ZRD	Zardab	0.85	282	Pg	Pb	21 25 49.6	+1.7
GLBA	Clilabad	0.92	199	P	Pb	21 25 49.9	+0.8
	SNR=105						
GLBA				S	Sn	21 26 07.4	+4.1
GLBA	Clilabad	0.92	199	Pg	Pb	21 25 49.9	+0.8
SIZA	Siyzn	0.97	6	P	Pn	21 25 51.9	+1.0
	SNR=610						
SIZA				S	Sn	21 26 08.5	+3.8
SIZA	Siyzn	0.97	6	Pg	Pn	21 25 52.0	+1.2
BLQ	Beylaqan	1.01	248	P	Pg	21 25 51.7	+1.1
	SNR=86						
BLQ				S	Sn	21 26 07.2	+1.6
BLQ	Beylaqan	1.01	248	Pg	Pg	21 25 51.6	+1.1
NDR	Nardaran	1.04	63	P	Pn	21 25 53.2	+1.4
	SNR=14						
NDR				S	Sn	21 26 11.1	+4.8
NDR	Nardaran	1.04	63	Pg	Pn	21 25 52.4	+0.7
QBL	Gabala	1.09	320	P	Pb	21 25 52.3	+0.1
	SNR=15						
QBL				S	Sb	21 26 08.9	+2.4
XNQ	Khinaliq	1.16	336	P	Pb	21 25 53.3	-0.1
	SNR=96						
XNQ				S	Sn	21 26 13.1	+3.4
BRDA	Brd	1.23	277	P	Pb	21 25 56.2	+1.8
	SNR=22						
BRDA				S	Sg	21 26 12.7	+2.0
QUBA	Quba, Azerbaij	1.26	350	P	Pg	21 25 56.6	+1.4
	SNR=34						
QUBA				Sn	Sn	21 26 16.3	+4.5
YRD	Yardimli	1.26	199	P	Pn	21 25 55.0	0.0
	SNR=93						
YRD				S	Sn	21 26 13.6	+1.4
AGDM	Agdam	1.27	270	Pn	Pn	21 25 56.1	+1.1
	SNR=276						
AGDM				Sn	Sg	21 26 16.0	+3.8
QRD	Qoradiz	1.29	240	Pn	Pn	21 25 55.7	+0.4
	SNR=23						
QRD				Sn	Sn	21 26 14.1	+1.5
LKRN	Lenkeran, Azer	1.40	180	Pn	Pn	21 25 56.8	+0.1
	SNR=26						
LKRN				Sn	Sg	21 26 17.6	+1.4
LKRN	Lenkeran, Azer	1.40	180	PG	Pn	21 25 56.9	+0.2
MNGR	Mingechevir, A	1.45	298	Pn	Pn	21 25 58.9	+1.6
	SNR=32						
MNGR				Sn	Sg	21 26 19.7	+2.1
MNGR	Mingechevir, A	1.45	298	PN	Pn	21 25 58.9	+1.6
QSAR	Qusar	1.45	345	Pn	Pb	21 25 59.3	+1.1
	SNR=92						
QSAR				Sn	Sg	21 26 20.4	+2.6
LRK	Lerik	1.51	193	Pn	Pn	21 25 58.4	+0.1
	SNR=119						
LRK				Sn	Sg	21 26 19.9	+0.3
ASTR	Astara	1.55	179	Pn	Pn	21 25 58.7	-0.1
	SNR=19						
ASTR				Sn	Sg	21 26 22.2	+1.2
KSMR	Kasumkent	1.57	342	ePn	Pn	21 26 00.9	+1.8
	1.0nm,0.2s						
KSMR				eSn	Sg	21 26 26.2	+4.8
	204nm,0.3s						
KSMR	Kasumkent	1.57	342	ePN	Pn	21 26 00.8	+1.8
KSMR				eS	Sg	21 26 26.2	+4.8
KSMR				pmax	pmax		
	comp=Z,1.0nm,0.2s						
KSMR				smax	smax		
	comp=N,654nm,0.4s						
KSMR				smax	smax		
	comp=E,867nm,0.3s						
KSMR				smax	smax		
	comp=E,703nm,0.3s						
AKT	Akhty	1.58	330	ePn	Pn	21 26 00.4	+1.1
	comp=E,94nm,0.6s						
AKT				eSn	Sg	21 26 24.9	+3.0
	comp=E,866nm,0.3s						
AKT	Akhty	1.58	330	ePN	Pn	21 26 00.3	+1.1
AKT				eS	Sg	21 26 25.3	+3.5
AKT				pmax	pmax		
	comp=Z,95nm,0.6s						
AKT				smax	smax		
	comp=N,204nm,0.4s						
SEKA	Sheki	1.62	313	Pn	Pn	21 26 00.6	+0.8
	SNR=242						
SEKA				Sn	Sb	21 26 24.2	+2.5
SEKA	Sheki	1.62	313	PN	Pn	21 26 00.8	+1.0
GAS1	Astara - Iran	1.73	178	Pg	Pn	21 26 02.2	+1.1
DRN	Derbent	1.94	350	ePn	Pn	21 26 05.1	+0.9
	comp=N,35nm,0.5s						
DRN				eSn	Sg	21 26 34.1	+0.5
	comp=N,75nm,0.4s						
DRN	Derbent	1.94	350	ePN	Pn	21 26 05.0	+0.9
DRN				eS	Sg	21 26 34.7	+1.2
DRN				pmax	pmax		
	comp=Z,36nm,0.5s						
DRN				pmax	pmax		
	comp=N,83nm,1.0s						
DRN				pmax	pmax		
	comp=E,58nm,0.8s						
DRN				smax	smax		
	comp=E,186nm,0.4s						
GANJ	Ganja	1.94	287	Pn	Pn	21 26 05.2	+1.0
	SNR=13						
GANJ				Sn	Sn	21 26 31.4	+2.7
GANJ	Ganja	1.94	287	PN	Pn	21 26 05.4	+1.2
URKR	Urkarakh	2.22	338	ePn	Pn	21 26 09.9	+1.8
	comp=E,75nm,0.4s						
URKR				eSn	Sb	21 26 42.2	+3.1
	comp=E,97nm,0.4s						
URKR	Urkarakh	2.22	338	ePN	Pn	21 26 09.9	+1.8
URKR				eS	Sb	21 26 42.2	+3.1
URKR				eS	Sg	21 26 43.2	+0.7
URKR				pmax	pmax		
	comp=Z,76nm,0.4s						
URKR				smax	smax		
	comp=E,76nm,0.4s						
URKR				smax	smax		
	comp=N,69nm,0.5s						
URKR				smax	smax		
	comp=E,60nm,0.6s						
ZKTA	Zakatala	2.23	314	Pn	Pn	21 26 10.2	+2.0
	SNR=246						
ZKTA				Sn	Sb	21 26 40.9	+1.8
IHRS	Heris	2.24	217	Pn	Pn	21 26 10.2	+1.8
TVRZ	Varzaqan	2.29	226	Pn	Pn	21 26 11.0	+1.9
KMKR	Kumukh	2.38	328	ePn	Pn	21 26 12.4	+2.1
	comp=E,2.0nm,0.4s						
KMKR				eSn	Sb	21 26 46.1	+2.5
	comp=E,50nm,0.4s						
KMKR	Kumukh	2.38	328	ePN	Pn	21 26 12.4	+2.1
KMKR				eS	Sb	21 26 46.1	+2.5
KMKR				eS	Sb	21 26 46.2	+2.5
KMKR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KMKR				smax	smax		
	comp=E,98nm,0.4s						
KMKR				smax	smax		
	comp=N,94nm,0.4s						
KMKR				smax	smax		
	comp=E,81nm,0.6s						
GDB	GEDABAY	2.38	286	Pn	Pn	21 26 11.5	+1.1
	SNR=79						
GDB				Sn	Sb	21 26 44.2	+0.5
ISRB	Sarab	2.44	201	Pn	Pn	21 26 13.2	+1.9
ORD	Ordubad	2.45	242	Pn	Pn	21 26 13.7	+2.5
	SNR=30						
ORD				Sn	Sb	21 26 45.7	+0.1
SGKR	Sergokala	2.49	341	ePn	Pn	21 26 13.0	+1.3
	comp=E,1.0nm,0.2s						
SGKR				eSn	Sb	21 26 47.8	+1.1
	comp=E,50nm,0.4s						
SGKR	Sergokala	2.49	341	ePN	Pn	21 26 13.0	+1.3
SGKR				eS	Sb	21 26 47.7	+1.1
SGKR				eS	Sg	21 26 48.7	-2.4
SGKR				pmax	pmax		
	comp=Z,1.0nm,0.2s						
SGKR				smax	smax		
	comp=N,103nm,0.6s						
SGKR				smax	smax		
	comp=E,50nm,0.4s						
SGKR				smax	smax		
	comp=N,92nm,0.6s						
SBZ	Shahbuz	2.58	255	Pn	Pn	21 26 15.8	+2.8
	SNR=24						
SBZ				Sg	Sb	21 26 52.0	+2.6
NAX	Nakhchivan	2.70	251	Pg	Pb	21 26 18.9	-0.6
	SNR=26						
NAX				Sg	Sb	21 26 53.4	+0.8
NAX	Nakhchivan	2.70	251	PN	Pn	21 26 17.5	+2.9
QZX	Qazax, Azerbai	2.75	291	Pn	Pn	21 26 16.9	+1.5
	SNR=43						
QZX				Sn	Sn	21 26 53.4	+4.6
IMRD	Marand	2.76	241	Pn	Pn	21 26 18.0	+2.5
ITBZ	Tabriz	2.77	228	Pn	Pn	21 26 17.5	+1.8
HYR	Heyderabad	3.04	264	Pn	Pn	21 26 22.0	+2.7
	SNR=8.1						
HYR				Sg	Sb	21 27 07.2	+4.7
ISHB	Shabestar	3.06	234	Pn	Pn	21 26 21.9	+2.2
GNI	Garni	3.09	272	Pn	Pn	21 26 23.1	+3.0
	comp=N,6.8nm,0.3s,baz=304,slow=3.0,SNR=40						
GNI				Lg	Lg	21 27 06.4	
	comp=N,4.2nm,0.3s,baz=37,slow=21,SNR=6.1						
	comp=N,24nm,0.5s						
MAKU	Maku	3.24	258	Pn	Pn	21 26 24.7	+2.5
IAZR	Azarshahr	3.26	223	Pn	Pn	21 26 24.6	+2.0
GROC	Groznyy	3.81	325	ePN	Pb	21 26 42.0	+3.7
GROC				e		21 27 17.0	
GROC				e		21 27 38.0	
GROC				smax	smax		
	comp=E,24nm,0.7s						
GROC				smax	smax		
	comp=N,26nm,0.7s						
ZEI	Tsey	4.53	308	ePN	Pn	21 26 42.9	+3.0
ZEI				pmax	pmax		
	comp=Z,13nm,0.7s						
IDMV	Damavand	5.21	149	Pn	Pn	21 26 50.9	+1.5
KBZ	Khabaz	5.68	311	Pn	Pn	21 26 56.8	+1.3
	comp=Z,0.2nm,0.3s,baz=133,slow=13,SNR=6.6						
	comp=Z,0.5nm,0.3s						
ILAS	Lasjerd	5.77	144	Pn	Pn	21 26 58.6	+1.6
KVAR	Kislovodsk Arr	5.93	312	Pn	Pn	21 26 59.0	-0.1
	baz=73,slow=19						
	comp=Z,2.0nm,0.5s						
GEYT	Alibeck	7.60	104	Pn	Pn	21 27 19.6	-2.2
	comp=Z,0.6nm,0.3s,baz=274,slow=17,SNR=8.9						
GEYT				Sn	Sn	21 28 40.5	-7.5
	baz=279,slow=21						
	comp=Z,0.9nm,0.3s						
AKTO	Aktyubinsk	12.19	29	Pn	Pn	21 28 20.9	-3.8
	comp=Z,0.1nm,0.3s,baz=98,slow=22,SNR=1.9						
AKTO				Sn	Sn	21 30 28.4	-12
	comp=Z,0.1nm,0.3s,baz=304,slow=17,SNR=1.6						
	comp=Z,0.5nm,0.4s						
BELG	Belogornoye	12.31	357	Pn	Pn	21 28 22.4	-3.8
	comp=Z,0.6nm,0.3s,baz=270,slow=6.1,SNR=4.4						
BELG				Sn	Sn	21 30 31.4	-12
	comp=Z,0.2nm,0.3s,baz=139,slow=22,SNR=2.0						
	comp=Z,3.1nm,0.5s						
AKASG	Malin Array Be	17.28	314	P	Pn	21 29 30.7	-1.6
	comp=Z,0.8nm,0.3s,baz=137,slow=27,SNR=4.2						
	comp=Z,0.5nm,0.4s						
ARU	Arti	17.55	18	P	Pn	21 29 30.7	-4.9
	baz=185,slow=8.5,SNR=4.9						
ARU				S	Sn	21 32 33.9	-17
	comp=Z,0.5nm,0.3s,baz=276,slow=23,SNR=1.2						
	comp=Z,1.1nm,0.4s						
BVAR	Borovoye Array	19.59	42	P	P	21 29 55.5	-3.7
	baz=239,slow=9.8,SNR=3.2						
	comp=Z,0.3nm,0.4s						
KURBB	Kurchatov Arra	23.25	53	P	P	21 30 36.0	-2.4
	comp=Z,0.6nm,0.8s,baz=258,slow=9.6,SNR=5.2						
	comp=Z,0.6nm,0.8s						
KURK	Kurchatov	23.33	53	P	P	21 30 36.0	-3.2
MKAR	Makanchi Array	25.10	63	P	P	21 30 53.1	-2.7
	comp=Z,0.2nm,0.4s,baz=255,slow=7.5,SNR=7.8						
	comp=Z,0.2nm,0.4s						
FINES	FINESS Array B	25.47	334	P	P	21 30 57.1	-1.9
	comp=Z,1.0nm,0.4s,baz=142,slow=12,SNR=11						
	comp=Z,1.0nm,0.4s						
GERES	GERESS Array B	26.31	301	P	P	21 31 05.5	-1.3
	comp=Z,0.2nm,0.4s,baz=113,slow=10.0,SNR=2.0						
	comp=Z,0.2nm,0.4s						
ZALV	Zalesovo Beam	27.85	48	P	P	21 31 17.9	-2.6
	comp=Z,0.4nm,0.3s,baz=247,slow=9.8,SNR=3.7						
	comp=Z,0.4nm,0.3s						
NOA	NORSAR Array B	31.07	325	P	P	21 31 46.7	-2.4
	comp=Z,0.1nm,0.4s,baz=126,slow=8.8,SNR=4.8						
	comp=Z,0.1nm,0.4s						
ARCES	ARCESS Array B	31.95	345	P	P	21 31 55.4	-1.2
	comp=Z,1.3nm,0.7s,baz=144,slow=11,SNR=1.5						
	comp=Z,1.3nm,0.7s						
ESDC	Sonseca Array	39.96	287	P	P	21 33 03.6	-2.1
	comp=Z,0.2nm,0.4s,baz=50,slow=7.9,SNR=4.5						
	comp=Z,0.2nm,0.4s						
YKA	Yellowknife Ar	76.87	352	P	P	21 37 21.1	-1.7
	comp=Z,0.1nm,0.6s,baz=8.2,slow=4.7,SNR=2.1						
	comp=Z,0.1nm,0.6s						

NEIC ***21*** *21:40:02.4±1.3,12°.3S±0°.1×167°.1E±0°.1,h208^{km}±8^{km}, mb4.5/30,Error ellipse: s-maj=17.5km s-min=14.8km az=72.0*

IDC ***21*** *21:40:05.8±3.8,12°.31S×166°.87E,h244^{km}±35^{km}, mb3.6/11,mbtmp4.2/13,Error ellipse: s-maj=20.7km s-min=20.3km az=112.0*

ISC 21 21:40:03.0±0.5,**12°.28S**±0°.07×**166°.97E**±0°.09,**h220^{km},n59,** σ**0^{s}88**/62,**mb4.3**/23,**Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	7.46	292	Pn	Pn	21 41 46.6	-2.8
DZM	Mont Dzumac	9.75	183	P	Pn	21 42 22.1	+3.2
	5.7nm,0.6s,baz=51,slow=6.4,SNR=6.8						
DZM				S	S	21 44 07.1	-1.3
	6.0nm,0.9s,baz=109,slow=17,SNR=1.9						
DZM	Mont Dzumac	9.75	183	Pn	Pn	21 42 19.4	+0.5
ONTNC	Ouen Toro	9.99	183	Pn	Pn	21 42 21.5	-0.3
PMG	Port Moresby	19.67	276	P	P	21 44 15.6	0.0
	14nm,0.7s,baz=194,slow=3.5,SNR=5.0						
PMG	Port Moresby	19.67	276	P	P	21 44 15.9	+0.3
PMG				IAmb	IAmb	21 44 19.9	
	comp=Z,13nm,0.8s						
EIDS	Eidsvold	19.87	227	P	P	21 44 18.5	+0.9
EIDS				IAmb	IAmb	21 44 38.7	
	comp=Z,15nm,1.2s						
CTA	Charters Tower	21.34	246	P	P	21 44 33.5	+0.2
	comp=Z,4.3nm,0.5s,baz=78,slow=12,SNR=12						
	comp=Z,4.3nm,0.5s						
CTAO	Charters Tower	21.34	246	P	P	21 44 33.3	0.0
CTAO				IAmb	IAmb	21 44 36.6	
	comp=Z,15nm,1.4s						
ARMA	Armidale	22.97	216	P	P	21 44 49.2	+0.7
ARMA				IAmb	IAmb	21 44 50.6	
	comp=Z,10nm,0.8s						
COEN	Coen	23.23	263	P	P	21 44 52.1	+1.1
BKZ	Black Stump Fm	28.08	164	P	P	21 45 33.7	-0.6
BKZ				IAmb	IAmb	21 45 41.6	
	comp=Z,16nm,1.2s						
STKA	Stephens Creek	30.42	226	P	P	21 45 55.1	+0.2
	comp=Z,1.1nm,0.3s,baz=47,slow=8.5,SNR=4.3						
	comp=Z,1.1nm,0.3s						
STKA	Stephens Creek	30.42	226	P	P	21 45 55.5	+0.5
LTZ	Lake Taylor	30.74	172	P	P	21 45 57.6	0.0
TOO	Toolangi	31.68	214	P	P	21 46 05.7	-0.3
WB0	Warramunga Arr	32.14	252	P	P	21 46 10.0	-0.3
WRA	Warramunga Arr	32.22	252	P	P	21 46 10.2	-0.8
	comp=Z,1.0nm,0.7s,baz=83,slow=8.8,SNR=14						
	comp=Z,1.0nm,0.7s						
RAR	Rarotonga	33.00	110	P	P	21 46 16.4	-1.2
ASAR	Alice Springs	33.35	246	P	P	21 46 20.2	-0.5
	comp=Z,1.1nm,0.7s,baz=68,slow=9.7,SNR=14						
ASAR				pP	pP	21 47 06.5	+2.0
	comp=Z,1.6nm,0.7s,baz=72,slow=9.5,SNR=11						
	comp=Z,1.1nm,0.7s						
BBOO	Buckleboo	34.90	229	P	P	21 46 33.7	-0.2
BBOO				IAmb	IAmb	21 46 42.1	
	comp=Z,8.4nm,0.9s						
MTN	Manton Dam	34.97	265	P	P	21 46 35.0	+0.3
MTN				IAmb	IAmb	21 46 54.7	
	comp=Z,21nm,1.4s						
KNRA	Kununurra	37.20	260	P	P	21 46 54.0	+0.5
KNRA				IAmb	IAmb	21 47 08.8	
	comp=Z,21nm,1.4s						
FITZ	Fitzroy Crossi	40.24	256	P	P	21 47 18.9	+0.1
JKA	Kamikawa-asahi	60.35	340	P	P	21 49 49.8	+1.0
JKA				IAmb	IAmb	21 50 18.7	
	comp=Z,24nm,1.4s						
ASAJ	Asahikawa	60.35	340	P	P	21 49 49.2	+0.4
	comp=Z,5.8nm,0.9s,baz=258,slow=25,SNR=1.1						
	comp=Z,5.8nm,0.9s						
VNDA	Vanda	65.29	181	P	P	21 50 21.1	+0.2
	comp=Z,1.8nm,0.7s,baz=350,slow=8.0,SNR=6.3						
	comp=Z,1.8nm,0.7s						
VNDA	Vanda	65.29	181	P	P	21 50 21.1	+0.2
VNDA				IAmb	IAmb	21 50 39.0	

	comp=Z,15nm,1.4s						
SBA	Scott Base	65.57	180	P	P	21 50 23.6	+1.0
QSPA	South Pole Qui	77.73	180	P	P	21 51 35.4	0.0
Q19K	Cape Douglas,	77.81	20	P	P	21 51 36.2	+0.5
BILL	Bilibino	80.11	360	P	P	21 51 48.4	+0.5
SONM	Songino Array	80.37	323	P	P	21 51 50.1	+0.2
	comp=Z,0.5nm,0.7s,baz=134,slow=4.6,SNR=3.6						
	comp=Z,0.5nm,0.7s						
SKT	Skwentna	80.82	18	P	P	21 51 52.4	+0.5
KNK	Knik Glacier	81.39	20	P	P	21 51 55.6	+0.7
KNK				IAmb	IAmb	21 51 56.5	
	comp=Z,5.7nm,0.7s						
CAST	Castle Rocks	81.75	17	P	P	21 51 56.9	+0.1
CAST				IAmb	IAmb	21 51 58.9	
	comp=Z,5.1nm,0.7s						
SCM	Sheep Creek Mo	82.07	20	P	P	21 51 59.1	+0.5
SCM				IAmb	IAmb	21 52 00.2	
	comp=Z,8.7nm,0.8s						
IMAR	Indian Mountai	83.29	15	P	P	21 52 05.6	+1.0
K02D	Willamette Mer	83.61	44	P	P	21 52 07.4	+0.4
WRH	Wood River Hil	83.72	18	P	P	21 52 07.0	+0.2
WRH				IAmb	IAmb	21 52 07.8	
	comp=Z,7.1nm,1.0s						
CCB	Clear Creek Bu	83.93	18	P	P	21 52 07.8	-0.1
CCB				IAmb	IAmb	21 52 08.6	
	comp=Z,6.0nm,0.6s						
IL31		84.30	18	P	P	21 52 09.8	+0.1
IL31				IAmb	IAmb	21 52 10.3	
	comp=Z,7.0nm,0.8s						
ILAR	Eielson Array	84.30	18	P	P	21 52 10.0	+0.2
	comp=Z,5.9nm,0.6s,baz=247,slow=5.2,SNR=93						
	comp=Z,5.9nm,0.6s						
ILAR	Eielson Array	84.30	18	P	P	21 52 09.8	+0.1
BCAR	Beaver Creek A	84.81	21	P	P	21 52 13.0	+0.6
BMAR	Burnt Mountain	86.83	17	P	P	21 52 23.7	+1.4
BELA	Belgrano 2	89.17	176	P	P	21 52 32.2	-1.0
MKAR	Makanchi Array	95.24	317	P	P	21 53 02.7	+1.0
	comp=Z,0.8nm,0.6s,baz=92,slow=6.4,SNR=11						
	comp=Z,0.8nm,0.6s						
TXAR	Lajitas Array	95.36	61	P	P	21 53 01.7	-1.1
	comp=Z,0.2nm,0.6s,baz=232,slow=4.4,SNR=3.0						
	comp=Z,0.2nm,0.6s						
YKA	Yellowknife Ar	95.51	27	P	P	21 53 02.0	-0.6
	comp=Z,0.5nm,0.6s,baz=257,slow=4.7,SNR=8.4						
	comp=Z,0.5nm,0.6s						
ARCES	ARCESS Array B	117.82	346	PKP	PKPdf	21 58 22.9	+0.3
	comp=Z,3.5nm,0.5s,baz=73,slow=2.2,SNR=44						
SCHQ	Schefferville	120.42	33	PKP	PKPdf	21 58 27.2	-0.8
	comp=Z,2.1nm,0.8s,baz=216,slow=13,SNR=3.7						
FINES	FINESS Array B	123.35	339	PKP	PKPdf	21 58 33.2	-0.2
	comp=Z,4.0nm,0.9s,baz=65,slow=2.2,SNR=9.6						
NB2	NORSAR Subarra	128.20	345	PKP	PKPdf	21 58 43.1	+0.3
	comp=Z,0.4nm,0.5s,baz=41,slow=2.7						
NOA	NORSAR Array B	128.20	345	PKP	PKPdf	21 58 43.1	+0.3
	comp=Z,1.1nm,0.7s,baz=29,slow=2.0,SNR=3.7						
GERES	GERESS Array B	137.34	334	PKP	PKPdf	21 59 00.6	+0.2
	comp=Z,0.4nm,0.7s,baz=101,slow=3.1,SNR=4.2						
KEST	Kesra	149.12	323	PKPbc	PKPbc	21 59 24.9	-1.0
	comp=Z,6.1nm,0.7s,baz=53,slow=15,SNR=7.7						
ESDC	Sonseca Array	151.56	345	PKPbc	PKPbc	21 59 31.8	+0.3
	comp=Z,2.3nm,0.8s,baz=6.8,slow=3.9,SNR=14						
ESDC				PKPab	PKPab	21 59 41.9	+1.2
	comp=Z,1.5nm,0.7s,baz=6.7,slow=4.0,SNR=8.3						
TORD	Torodi Ar. Bea	165.61	275	PKPab	PKPab	22 00 41.5	-0.8
	comp=Z,0.6nm,0.9s,baz=81,slow=1.5,SNR=2.8						

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*FUNV **21** 21:57:04.9, 11°.21N×61°.84W, h23^{km}, MW2.9*
*TRN **21** 21:57:05.1, 11°.19N×61°.82W, h56^{km}, MD2.6*
ISC 21 21:57:05.1±1.7**, 11°.22N**±0°.04×**61°.86W**±0°.05**, h48**^{km}±45^{km}**,**
n8, σ1^s.41/15**, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.72	142	eP	Pn	21 57 19.0	0.0
TRN				eS	Sn	21 57 28.8	-0.4
GRGR	Grenville	0.93	12	eP	Pn	21 57 18.8	-3.1
GRGR				eS	Sn	21 57 35.5	+1.4
TBH	Brigand Hill	1.07	133	eP	Pn	21 57 24.2	+0.5
GRSS	Sisters	1.10	13	eP	Pn	21 57 24.9	+0.8
GRSS				eS	Sn	21 57 39.9	+1.7
TOSP	Speyside	1.30	86	eP	Pn	21 57 26.6	-0.3
TOSP				eS	Sn	21 57 42.8	-0.2
GCMP	Grenada, Carri	1.33	19	eP	Pn	21 57 27.1	-0.2
GCMP				eS	Sn	21 57 44.0	+0.2
CRUV	Carupano	1.46	248	eP	Pn	21 57 29.5	+0.5
CRUV				eS	Sn	21 57 47.6	+0.7
PCRV	Puerto La Cruz	2.92	249	eP	Pn	21 57 49.7	+0.5
PCRV				eS	Sn	21 58 20.7	-2.3

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*TRN **21** 21:58:36.3, 11°.22N×61°.83W, h49^{km}, MD2.7*
*FUNV **21** 21:58:36.4, 11°.22N×61°.82W, h23^{km}, MW2.9*
ISC 21 21:58:36.1±1.8**, 11°.21N**±0°.04×**61°.82W**±0°.05**, h58**^{km}±32^{km}**,**
n8, σ0^s.45/15**, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.70	144	eP	Pn	21 58 50.2	0.0
TRN				eS	Sn	21 58 59.9	-0.7
GRGR	Grenville	0.93	10	eS	Sn	21 59 06.1	+0.3
TBH	Brigand Hill	1.04	134	eP	Pn	21 58 55.0	+0.4
TBH				eS	Sn	21 59 08.7	+0.3
GRSS	Sisters	1.10	11	eP	Pn	21 58 55.8	+0.4
GRSS				eS	Sn	21 59 09.5	-0.2
TOSP	Speyside	1.27	86	eP	Pn	21 58 57.6	0.0
TOSP				eS	Sn	21 59 13.7	0.0
GCMP	Grenada, Carri	1.32	17	eP	Pn	21 58 58.1	-0.3
GCMP				eS	Sn	21 59 14.8	-0.2
CRUV	Carupano	1.49	249	eP	Pn	21 59 01.4	+0.8
CRUV				eS	Sn	21 59 18.8	-0.2
PCRV	Puerto La Cruz	2.95	250	eP	Pn	21 59 20.5	-0.1
PCRV				eS	Sn	21 59 54.2	-0.7

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*WEL **21** 22:11:50.7±0.3, 42°S±2°×17°4E±°, h5^{km}, M3.0/15, ML3.2/12, MLv3.0/15, Error ellipse: s-maj=0.0km s-min=0.0km az=133.4, confirmed*
*NOU **21** 22:11:51.3, 42°.12S×173°.67E, h17^{km}, MLv3.5/9, South Island, New Zealand*
ISC 21 22:11:49.9±1.3**, 42°.06S**±0°.03×**173°.71E**±0°.03**, h3**^{km}±13^{km}**,**
n73, σ1^s.49/78**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSWZ	Blackbirch Sta	0.37	19	P	Pg	22 11 57.2	+0.2
KHZ	Kahutara	0.38	200	P	Pb	22 11 59.4	+0.2
KHZ	Kahutara	0.38	200	P	Pb	22 11 59.5	+0.4
KHZ				S	Sb	22 12 05.9	+0.5
CMWZ	Cape Campbell	0.49	50	P	Pg	22 12 01.0	+1.8
TUWZ	Tuamarina	0.66	15	P	Pg	22 12 02.6	+0.1
TUWZ				S	Sg	22 12 11.5	+0.5
THZ	Tophouse	0.67	296	P	Pg	22 12 02.6	-0.1
THZ				S	Sg	22 12 11.0	-0.5
NNZ	Nelson	0.88	343	P	Pg	22 12 05.8	-0.9
TCW	Tory Channel	0.95	27	P	Pg	22 12 07.6	-0.5
TCW				S	Sg	22 12 20.4	0.0
MRNZ	Matariki Terra	0.97	313	P	Pg	22 12 08.1	-0.4
GVZ	Greta Valley S	1.03	209	P	Pn	22 12 11.3	0.0
GVZ				S	Sn	22 12 26.8	+0.5
SNZO	South Karori	1.06	45	P	Pb	22 12 11.0	+0.2
WEL	Wellington	1.11	46	P	Pb	22 12 11.7	0.0
PLWZ	Palliser	1.25	67	P	Pn	22 12 13.0	-1.3
LTZ	Lake Taylor	1.29	236	P	Pn	22 12 14.6	-0.2
LTZ				S	Sg	22 12 32.3	+1.1
AMCZ	Amberley	1.36	215	P	Pn	22 12 15.5	-0.2
CAW	Cannon Point	1.40	47	P	Pn	22 12 15.3	-0.9
PAWZ	Paruwai Farm	1.45	63	P	Pn	22 12 15.6	-1.5
DSZ	Denniston Nort	1.46	282	P	Pb	22 12 17.5	-0.2
KIW	Kapiti Island	1.50	37	P	Pn	22 12 17.2	-0.5
QRZ	Quartz Range	1.52	324	P	Pn	22 12 17.1	-0.9
QRZ	Quartz Range	1.52	324	P	Pn	22 12 17.1	-0.9
MTW	Mount Morrison	1.62	57	P	Pn	22 12 17.7	-1.6
TRWZ	Traveller	1.62	66	P	Pn	22 12 17.7	-1.6
OGWZ	Otaki Gorge	1.66	42	P	Pn	22 12 18.9	-0.9
OXZ	Oxford	1.77	224	P	Pn	22 12 20.3	-1.0
HOWZ	Holdsworth Sta	1.79	50	P	Pn	22 12 20.1	-1.6
INZ	Inchbonnie	1.81	248	P	Pn	22 12 22.5	+0.7
MQZ	McQueen’s Vall	1.82	205	P	Pn	22 12 20.5	-1.5
TMWZ	Te Maipa	1.89	60	P	Pn	22 12 21.3	-1.8
AKCZ	Akaroa Harbour	1.90	198	P	Pn	22 12 22.6	-0.6
MRZ	Mangatainoka R	1.98	46	P	Pn	22 12 22.9	-1.4
RACZ	Rakaia	2.02	214	P	Pn	22 12 23.8	-1.0
MHCZ	Mount Hutt	2.15	226	P	Pn	22 12 25.6	-1.2
PRWZ	Pori Road	2.27	49	P	Pn	22 12 27.5	-0.8
WACZ	Wakanui South	2.33	216	P	Pn	22 12 27.8	-1.2
WVZ	Waitaha Valley	2.42	244	P	Pn	22 12 31.1	+0.9
WAZ	Wanganui	2.50	23	P	Pb	22 12 34.2	-1.2
RPZ	Rata Peaks	2.56	229	P	Pn	22 12 31.6	-0.6
TSZ	Takapari Road	2.63	41	P	Pn	22 12 33.9	+0.7
KHEZ	Kahui Hut	2.78	5	P	Pn	22 12 37.5	+2.2
KHEZ	Kahui Hut	2.78	5	P	Pb	22 12 38.0	-2.1
GCSZ	Gaunt Creek Bo	2.79	242	P	Pn	22 12 36.3	+0.9
PNHZ	Pukenui	2.86	42	P	Pb	22 12 41.5	+0.1
VRZ	Vera Road	3.04	16	P	Pn	22 12 41.6	+2.8
TMZ	Timaru	3.05	220	P	Pn	22 12 38.3	-0.6
MOVZ	Moawhango	3.07	31	P	Pb	22 12 43.1	-2.1
WNVZ	Wahianoa	3.09	28	P	Pn	22 12 42.5	+2.8
TRVZ	Turoa	3.09	27	P	Pn	22 12 41.9	+2.1
WHVZ	Whangaehu Hut	3.12	28	P	Pb	22 12 45.8	-0.4
BHHZ	Black Hill Sta	3.13	36	P	Pb	22 12 44.5	-1.6
FWVZ	Far West T-bar	3.13	27	P	Pb	22 12 46.1	-0.2
TUVZ	Tukino	3.16	29	P	Pn	22 12 43.3	+2.6
NGZ	Ngauruhoe	3.22	27	P	Pn	22 12 44.1	+2.6
SNVZ	South Ngauruho	3.23	28	P	Pb	22 12 48.0	+0.1
TWVZ	Taurewa	3.27	24	P	Pb	22 12 48.4	-0.1
NNVZ	North Ngauruho	3.27	27	P	Pn	22 12 44.6	+2.5
WTVZ	West Tongariro	3.27	27	P	Pb	22 12 46.0	-2.6
ETVZ	East Tongariro	3.30	28	P	Pn	22 12 44.6	+2.1
KRVZ	Karewarewa	3.31	27	P	Pb	22 12 49.5	+0.2
TMVZ	Te Maari	3.31	28	P	Pn	22 12 44.0	+1.3
BKZ	Black Stump Fm	3.59	37	P	Pn	22 12 47.7	+1.3
BKZ	Black Stump Fm	3.59	37	P	Pb	22 12 52.9	-1.0
HIZ	Hauiti	3.65	14	P	Pn	22 12 47.9	+0.6
HIZ	Hauiti	3.65	14	P	Pn	22 12 49.5	+2.3
ODZ	Otahua Downs	3.72	216	P	Pn	22 12 46.6	-1.6
ODZ	Otahua Downs	3.72	216	P	Pn	22 12 46.7	-1.6
ARHZ	Aropaoanui	3.75	43	P	Pn	22 12 52.4	+3.8
TLZ	Tolley Road	3.98	21	P	Pn	22 12 56.4	+4.5
MTHZ	Maungataniwha	4.00	38	P	Pn	22 12 55.1	+3.1
SNGZ	Shannon Statio	4.29	41	P	Pn	22 12 55.6	-0.4
TOZ	Tahuroa Road	4.54	18	P	Pn	22 12 56.1	-3.3
URZ	Urewera	4.61	36	P	Pn	22 13 00.7	+0.4
OUZ	Omahuta	6.83	359	P	Pn	22 13 33.4	+2.5

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*IDC **21** 22:13:32.2±1.1, 29°.88N×132°.05E, h0^{km}, mb3.6/7, mbtmp3.6/9, ML3.1/2, MS3.4/2, Error ellipse: s-maj=39.6km s-min=19.4km az=79.0*
*JMA **21** 22:13:36.0±0.2, 29°.9N±0°.6×13°2E±°, h64^{km}±4^{km}, MV3.5/35, NEAR AMAMI-OSHIMA ISLAND*
*NIED **21** 22:13:36.0, 29°.93N×132°.04E, h64^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-7.47; $M_{\theta\theta}$2.15; $M_{\phi\phi}$5.33; $M_{r\theta}$0.72; $M_{\theta\phi}$1.06; $M_{\phi r}$2.46; Fault plane solution: $M_0$7.05000×10^{14} NP1: ϕ_s197.00000°, δ56.00000°, λ-90.00000°. NP2: ϕ_s17.00000°, δ34.00000°, λ-90.00000°.*
ISC 21 22:13:34.8±2.1**, 29°.88N**±0°.05×**132°.02E**±0°.07**, h17**^{km}±11^{km}**,**
n25, σ1^s.05/34**, mb3.5**/7**, Southeast of Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMTN	Minamitane	1.10	298	P	Pg	22 13 55.6	-0.4
JMTN				S	Sg	22 14 10.7	+0.3
JTN	Tanegashima 3	1.18	311	P	Pb	22 13 56.7	-0.1
JTN				eS	Sb	22 14 11.9	+0.1
JYAK	Yakushimahirau	1.36	285	P	Pn	22 13 59.1	+0.2
JYAK				eS	Sb	22 14 16.7	-0.1
JTSR	Tashiro 2	1.59	324	P	Pn	22 14 02.0	-0.2
JTSR				eS	Sn	22 14 21.6	-0.8
JKC	Kuchinoerabu	1.68	290	eP	Pn	22 14 04.4	+1.0
JKC				eS	Sn	22 14 25.1	+0.6
JNAR	Kushima--Naru	1.76	339	eP	Pn	22 14 04.7	+0.2
JNAR				S	Sn	22 14 25.4	-1.0
JNN	Nakanoshima	1.86	269	eP	Pn	22 14 06.9	+1.0
JSU	Suzuyama	2.10	321	eP	Pn	22 14 09.3	0.0
JSU				eS	Sn	22 14 33.9	-1.2
JTZ	Takazaki	2.17	338	eP	Pn	22 14 10.4	+0.4
JTZ				S	Sn	22 14 35.7	-0.8
JTSN	Tsuno	2.40	349	eP	Pn	22 14 13.2	0.0
JTSN				eS	Sn	22 14 40.5	-1.7
JZO	Okuchi	2.56	332	eP	Pn	22 14 15.7	+0.2
JZO				eS	Sn	22 14 45.5	-0.7
JTAJ	Takarajima	2.56	254	P	Pn	22 14 16.4	+0.9
JAM	Amami Oshima	2.57	236	P	Pn	22 14 15.7	+0.1
JSJ	Shimokoshiki	2.67	313	eP	Pn	22 14 16.1	-0.9
JSJ				S	Sn	22 14 47.3	-1.7
JNU	Nakatsue	3.37	343	Pn	Pn	22 14 26.4	-0.3
	2.7nm,0.3s,baz=323,slow=2.4,SNR=14						
JNU				Sn	Sn	22 15 04.6	-1.8
	5.7nm,0.3s,baz=281,slow=13,SNR=13						
	6.7nm,0.4s						
JOW	Kunigami	4.49	228	Pn	Pn	22 14 41.6	-0.4
	2.0nm,0.3s,baz=269,slow=16,SNR=2.2						
JOW				Sn	Sn	22 15 30.3	-3.5
	5.3nm,0.3s,baz=45,slow=28,SNR=2.6						
	9.4nm,0.4s						
SONM	Songino Array	26.63	319	P	P	22 19 13.9	+1.3
	0.2nm,0.5s,baz=140,slow=7.8,SNR=1.7						
	0.2nm,0.5s						
MKAR	Makanchi Array	41.76	308	P	P	22 21 22.6	-0.6
	0.6nm,0.8s,baz=95,slow=8.8,SNR=6.3						
	0.6nm,0.8s						
TIXI	Tiksi	41.85	359	LR	LR	22 39 40.1	
	comp=Z,32nm,20.0s,baz=159,slow=38						
WRA	Warramunga Arr	49.59	177	P	P	22 22 24.6	-0.5
	0.9nm,0.8s,baz=353,slow=8.3,SNR=6.1						
	0.9nm,0.8s						
ASAR	Alice Springs	53.27	178	P	P	22 22 53.3	+0.6
	0.5nm,0.8s,baz=11,slow=13,SNR=5.7						
	0.5nm,0.8s						
ARU	Arti	56.66	320	LR	LR	22 50 37.6	
	comp=Z,48nm,18.9s,baz=147,slow=39						
FINES	FINESS Array B	71.33	331	P	P	22 24 53.3	0.0
	1.2nm,0.7s,baz=66,slow=4.7,SNR=5.2						
	1.2nm,0.7s						
YKA	Yellowknife Ar	73.79	26	P	P	22 25 08.0	+0.1
	0.3nm,0.7s,baz=295,slow=5.4,SNR=4.4						
	0.3nm,0.7s						
AKASG	Malin Array Be	74.91	320	P	P	22 25 15.2	+0.6
	0.3nm,0.4s,baz=57,slow=6.3,SNR=4.1						
	0.3nm,0.4s						

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*IDC **21** 22:13:33.6±1.7, 17°.59S×178°.53W, h0^{km}, mb4.1/9, mbtmp4.1/9, MS3.8/28, Error ellipse: s-maj=74.9km s-min=24.0km az=155.0*
*GCMT **21** 22:13:43.0±0.4, 15°.46S±0°.02×179°.31W±0°.02, h23^{km}±2^{km}, MW4.9/79, Moment Tensor Solution. s18,c21; s79,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.45±.18; $M_{\theta\theta}$-1.74±.16; $M_{\phi\phi}$1.29±.13; $M_{r\theta}$0.03±.21; $M_{\theta\phi}$2.22±.11; $M_{\phi r}$0.05±.19; Best double couple: $M_0$2.68900×10^{16} NP1: ϕ_s73.00000°, δ89.00000°, λ1.00000°. NP2: ϕ_s343.00000°, δ89.00000°, λ179.00000°. Principal axes: T 2.4650, Plg2.0000°, Azm298.0000°; N 0.4460, Plg88.0000°, Azm115.0000°; P -2.9130, Plg0.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*
ISC 21 22:13:38.8±1.7**, 17°.8S**±0°.5×**178°.5W**±0°.2**, h35**^{km}**, n42,**
σ2^s.32/17**, mb4.0**/9**, MS3.9**/29**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.55	60	LR	LR	22 17 59.1	
	comp=Z,148nm,20.5s,baz=252,slow=36						
DZM	Mont Dzumac	14.77	251	eLR	LR	22 20 46.8	
	comp=Z,208nm,23.7s						
DZM	Mont Dzumac	14.77	251	LR	LR	22 22 09.2	
	comp=Z,235nm,18.7s,baz=36,slow=35						
HNR	Honiara	22.54	289	LR	LR	22 25 10.5	
	comp=Z,13µm,21.1s,baz=154,slow=31						
RPZ	Rata Peaks	27.27	197	LR	LR	22 29 22.9	
	comp=Z,144nm,18.1s,baz=0.5,slow=34						
PPT2	Papeete2	27.54	94	eLR	LR	22 26 51.4	
	comp=Z,540nm,26.5s						
PPT2				eLR	LR	22 26 51.7	
	comp=Z,370nm,26.0s						
PPT	Papeete	27.54	94	LR	LR	22 28 01.6	
	comp=Z,113nm,20.2s,baz=272,slow=32						
KRVT	Keravat (AS076	31.83	291	LR	LR	22 30 42.1	
	comp=Z,554nm,21.8s,baz=269,slow=32						
CTA	Charters Tower	33.38	260	LR	LR	22 32 19.1	
	comp=Z,129nm,18.1s,baz=82,slow=34						
TAOE	Nuku Hiva Isla	38.30	82	eLR	LR	22 31 45.4	
	comp=Z,283nm,26.3s						
STKA	Stephens Creek	38.59	241	LR	LR	22 35 40.6	
	comp=Z,207nm,20.4s,baz=56,slow=34						
WRA	Warramunga Arr	44.56	259	P	P	22 21 47.3	-0.5
	1.9nm,1.2s,baz=90,slow=7.6,SNR=6.0						
WRA				LR	LR	22 40 43.5	
	comp=Z,90nm,19.3s,baz=91,slow=37						
	1.9nm,1.2s						
ASAR	Alice Springs	44.73	254	P	P	22 21 49.4	+0.3
	0.7nm,0.6s,baz=81,slow=8.4,SNR=9.5						
ASAR				LR	LR	22 39 15.8	
	comp=Z,161nm,19.0s,baz=90,slow=34						
	0.7nm,0.6s						
JCJ	Chichijima	58.73	319	LR	LR	22 44 12.2	
	comp=Z,82nm,19.6s,baz=170,slow=31						
NWAO	Narrogin (SRO)	59.17	242	LR	LR	22 49 14.9	
	comp=Z,103nm,18.2s,baz=338,slow=36						
DAV	Davao City (W)	60.50	289	LR	LR	22 46 46.0	
	comp=Z,34nm,21.4s,baz=234,slow=33						
MJAR	Matsushiro Arr	67.80	323	LR	LR	22 47 32.5	
	comp=Z,84nm,21.3s,baz=162,slow=30						
ASAJ	Asahikawa	71.17	331	LR	LR	22 53 32.5	
	comp=Z,50nm,18.3s,baz=150,slow=34						
QSPA	South Pole Qui	72.22	180	LR	LR	22 53 21.1	
	comp=Z,76nm,20.2s,baz=318,slow=33						
PETK	Petropavlovsk-	73.59	345	LR	LR	22 49 36.2	
	comp=Z,55nm,21.5s,baz=138,slow=30						
KSRS	Korea Array	74.59	318	P	P	22 25 13.4	-1.0
	0.8nm,0.4s,baz=141,slow=4.8,SNR=5.7						
KSRS				LR	LR	22 51 10.0	
	comp=Z,43nm,21.0s,baz=105,slow=30						
	0.8nm,0.4s						
PFO	Pinyon Flats O	78.17	49	LR	LR	22 51 50.0	
	comp=Z,54nm,19.1s,baz=234,slow=29						
KDAK	Kodiak Island	78.35	14	LR	LR	22 51 29.5	
	comp=Z,49nm,20.7s,baz=180,slow=29						
LPIG	La Paz	78.47	60	LR	LR	22 51 40.1	
	comp=Z,67nm,18.9s,baz=224,slow=29						
YBH	Yreka Blue Hor	78.52	39	LR	LR	22 52 09.5	
	comp=Z,95nm,21.1s,baz=247,slow=30						
NVAR	Mina Array Bea	79.43	44	P	P	22 25 40.8	-1.1
	0.4nm,0.3s,baz=216,slow=8.7,SNR=3.5						
NVAR				LR	LR	22 52 04.2	
	comp=Z,88nm,20.5s,baz=270,slow=29						
	0.4nm,0.3s						
ELK	Elko	82.66	43	LR	LR	22 54 56.4	
	comp=Z,62nm,19.5s,baz=247,slow=30						
DLBC	Dease Lake	85.80	23	LR	LR	22 59 32.4	
	comp=Z,58nm,18.2s,baz=272,slow=32						
ILAR	Eielson Array	85.83	13	P	P	22 26 15.0	+0.6
	6.2nm,0.9s,baz=236,slow=6.3,SNR=6.7						
ILAR				LR	LR	23 04 18.1	
	comp=Z,29nm,18.8s,baz=78,slow=36						
	6.2nm,0.9s						
TXAR	Lajitas Array	86.03	58	P	P	22 26 16.4	+0.2
	0.3nm,0.8s,baz=224,slow=5.0,SNR=2.8						
TXAR				LR	LR	22 58 31.7	
	comp=Z,75nm,18.1s,baz=220,slow=31						
	0.3nm,0.8s						
PDAR	Pinedale Array	87.36	43	P	P	22 26 21.4	-1.3
	0.6nm,0.8s,baz=197,slow=2.7,SNR=3.3						
PDAR				LR	LR	22 57 46.9	
	comp=Z,48nm,19.7s,baz=256,slow=30						
	0.6nm,0.8s						
CMAR	Chiang Mai Arr	88.78	290	P	P	22 26 30.4	+0.8
	1.4nm,0.3s,baz=123,slow=3.3,SNR=1.4						
	1.4nm,0.3s						
SONM	Songino Array	93.44	319	P	P	22 26 48.2	-2.6
	0.6nm,1.0s,baz=151,slow=3.3,SNR=2.4						
	0.6nm,1.0s						
ATAH	Atahualpa	97.37	100	LR	LR	23 01 52.3	
	comp=Z,86nm,20.7s,baz=263,slow=30						
GERES	GERESS Array B	147.52	345	PKPbc	PKPbc	22 33 18.4	-0.9
	0.1nm,0.3s,baz=35,slow=2.4,SNR=1.4						
CONA	Conrad Observa	147.77	342	ePKP	PKPab	22 33 26.3	+3.8
	7.2nm,1.0s						
RONA	Rosalia, Austr	147.84	341	ePKP	PKPab	22 33 26.4	+3.7
	6.3nm,1.3s						
ARSA	Arzberg	148.48	342	ePKP	PKPab	22 33 28.8	+3.6
	2.3nm,0.9s						
WTTA	Wattenberg	149.49	346	ePKP	PKPab	22 33 30.9	+1.4
	3.2nm,0.7s						
ABTA	Abfaltersbach	149.77	345	ePKP	PKPab	22 33 32.8	+2.3
	3.2nm,1.0s						
DAVA	Damuels	149.83	349	ePKiKP	PKPab	22 33 33.2	+2.3
	6.5nm,1.1s						
FETA	Feichten	149.92	347	ePKiKP	PKPab	22 33 34.1	+2.9
	2.8nm,1.1s						

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*IDC **21** 22:29:55.0±1.1, 17°.78N×145°.82E, h0^{km}, mb3.7/6, mbtmp3.7/7, ML4.2/1, Error ellipse: s-maj=53.4km s-min=23.3km az=103.0*
*NEIC **21** 22:30:01.4±1.7, 17°.56N±0°.08×146°.2E±0°.3, h34^{km}±7^{km}, mb4.4/8, Error ellipse: s-maj=34.8km s-min=11.8km az=93.0*
ISC 21 22:30:00.8±0.7**, 17°.62N**±0°.09×**146°.1E**±0°.3**, h35**^{km}**, n24,**
σ1^s.43/19**, mb4.3**/10**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.17	196	Pn	Pn	22 31 02.3	+0.4
	13nm,0.3s,baz=163,slow=7.8,SNR=1.8						
GUMO				Sn	Sn	22 31 48.6	-0.9
	7.2nm,0.3s,baz=346,slow=11,SNR=2.2						
	25nm,0.3s						
GUMO	Guam	4.17	196	Pn	Pn	22 31 03.4	+1.4
H11S3	WAKE ISLAND Hy	19.62	84	T	T	22 55 20.0	
	baz=270,slow=75,SNR=3.4						
H11S1	WAKE ISLAND Hy	19.64	84	T	T	22 55 20.2	
	baz=270,slow=75,SNR=5.2						
H11S2	WAKE ISLAND Hy	19.64	84	T	T	22 55 19.9	
	baz=270,slow=75,SNR=3.8						
H11N1	WAKE ISLAND Hy	19.84	81	T	T	22 55 34.0	
	baz=267,slow=75,SNR=6.5						
H11N2	WAKE ISLAND Hy	19.84	81	T	T	22 55 36.3	
	baz=267,slow=75,SNR=8.1						
H11N3	WAKE ISLAND Hy	19.85	81	T	T	22 55 34.6	
	baz=267,slow=75,SNR=6.4						
COEN	Coen	31.51	185	P	P	22 36 21.3	+1.7
COEN				IAmb	IAmb	22 36 36.1	
	comp=Z,9.2nm,1.5s						
WB0	Warramunga Arr	38.89	198	P	P	22 37 22.1	-1.0
WB0				IAmb	IAmb	22 37 28.4	
	comp=Z,6.8nm,1.3s						
WRA	Warramunga Arr	39.07	198	P	P	22 37 23.9	-0.7
	comp=Z,0.3nm,0.7s,baz=22,slow=11,SNR=6.5						
	comp=Z,0.3nm,0.7s						
EIDS	Eidsvold	43.01	173	P	P	22 37 55.7	-1.2
CAN	Canberra	52.73	177	P	P	22 39 12.3	+0.2
MK31	Makanchi Array	59.46	314	P	P	22 40 01.2	+1.0
MKAR	Makanchi Array	59.46	314	P	P	22 39 56.4	-3.8
	comp=Z,0.1nm,0.7s,baz=93,slow=7.7,SNR=1.4						
	comp=Z,0.1nm,0.7s						
MKAR	Makanchi Array	59.46	314	P	P	22 40 01.1	+0.8
CAST	Castle Rocks	61.89	27	P	P	22 40 17.2	+0.7
CAST				IAmb	IAmb	22 40 18.0	
	comp=Z,3.4nm,1.2s						
KURK	Kurchatov	62.30	318	P	P	22 40 21.1	+1.7
TRF	Thorofare Moun	62.67	27	P	P	22 40 22.3	+0.4
TRF				IAmb	IAmb	22 40 37.3	
	comp=Z,11nm,1.5s						
ILAR	Eielson Array	64.45	26	P	P	22 40 32.4	-1.0
	comp=Z,0.3nm,0.5s,baz=255,slow=6.0,SNR=6.7						
	comp=Z,0.3nm,0.5s						
BMAR	Burnt Mountain	65.96	23	P	P	22 40 44.6	+1.5
YKA	Yellowknife Ar	78.77	28	P	P	22 41 58.9	-0.7
	comp=Z,0.4nm,0.7s,baz=283,slow=4.8,SNR=5.3						
	comp=Z,0.4nm,0.7s						
ARCES	ARCESS Array B	83.62	342	P	P	22 42 25.0	-0.3
	comp=Z,3.1nm,0.8s,baz=66,slow=7.0,SNR=5.6						
	comp=Z,3.1nm,0.8s						
FINES	FINESS Array B	88.00	335	P	P	22 42 46.7	-0.3
	comp=Z,1.8nm,0.9s,baz=98,slow=7.2,SNR=7.1						
	comp=Z,1.8nm,0.9s						

ROM 21 22:31:37.1±0.1**, 42°.509N**±0°.003×**13°.394E**±0°.004**,**
h9^{km}**, ML1.1**/11**, 2C-6D, Error ellipse: s-maj=0.3km s-min=0.3km az=62.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	Campotosto	0.03	22	P	Pg	22 31 39.2	+0.3
CAMP				S	Sg	22 31 40.4	+0.1
CAMP				AML	AML		
	comp=E,101µm,0.4s						

```
CAMP                              AML  AML
      comp=N,170µm,0.7s
CAMP                              AML  AML
      comp=E,101µm,1.6s
T1247 Pizzolo (AQ)      0.10 227 ⇓P    Pg    22 31 40.0 +0.4
T1247                             S    Sg    22 31 41.8 +0.4
T1247                             AML  AML
      comp=N,574µm,0.4s
T1247                             AML  AML
      comp=E,546µm,0.8s
T1247                             AML  AML
      comp=E,546µm,1.2s
SMA1  SAN MARTINO       0.13 340  P    Pg    22 31 40.7 +0.5
SMA1                              S    Sg    22 31 43.2 +1.0
SMA1                              AML  AML
      comp=E,82µm,1.2s
SMA1                              AML  AML
      comp=N,99µm,0.4s
RM33  Pellescritta (    0.13 270 ⇑P    Pg    22 31 40.6 +0.4
RM33                              S    Sg    22 31 42.9 +0.6
RM33                              AML  AML
      comp=E,267µm,1.3s
RM33                              AML  AML
      comp=N,270µm,1.0s
RM33                              AML  AML
      comp=E,242µm,1.0s
RM33                              AML  AML
      comp=E,268µm,1.3s
RM33                              AML  AML
      comp=N,216µm,0.3s
RM33                              AML  AML
      comp=E,268µm,0.7s
GIGS  Gran Sasso        0.14 114 ⇑P    Pg    22 31 40.7 +0.4
GIGS                              S    Sg    22 31 43.0 +0.5
GIGS                              AML  AML
      comp=N,87µm,0.1s
GIGS                              AML  AML
      comp=E,57µm,0.3s
AQU   L'Aquila          0.15 178  P    Pg    22 31 41.4 +0.9
AQU                               S    Sg    22 31 43.9 +1.1
AQU                               AML  AML
      comp=E,114µm,0.9s
AQU                               AML  AML
      comp=N,120µm,1.5s
AQU                               AML  AML
      comp=E,100µm,0.3s
AQU                               AML  AML
      comp=N,94µm,0.7s
AQU                               AML  AML
      comp=N,120µm,1.5s
AQU                               AML  AML
      comp=N,120µm,0.5s
TERO  Teramo            0.19  54 ⇓P    Pg    22 31 41.6 +0.5
TERO                              S    Sg    22 31 44.9 +1.0
TERO                              AML  AML
      comp=E,76µm,0.4s
TERO                              AML  AML
      comp=N,80µm,0.8s
T1214 Arquata del Tr    0.28 331 ⇓P    Pg    22 31 43.6 +0.7
T1214                             S    Sb    22 31 48.5 -1.0
T1241 Roccafluvione,    0.35   5  P    Pb    22 31 44.9 -0.6
T1241                             AML  AML
      comp=N,20µm,1.6s
T1241                             AML  AML
      comp=N,20µm,1.6s
T1241                             AML  AML
      comp=N,20µm,0.4s
T1241                             AML  AML
      comp=E,20µm,1.4s
VCEL  Villa Celiera     0.35 109 ⇓P    Pb    22 31 45.4 -0.2
VCEL                              AML  AML
      comp=N,45µm,1.4s
VCEL                              AML  AML
      comp=E,47µm,0.7s
VCEL                              AML  AML
      comp=E,47µm,1.3s
VCEL                              AML  AML
      comp=N,45µm,0.6s
T1212 Cascia, Frazio    0.35 313 ⇓P    Pg    22 31 44.4 +0.2
T1212                             S    Sb    22 31 50.2 -1.2
T1245 Castelsantange    0.38 336  S    Sb    22 31 51.3 -0.9
T1217 Poggiodomo (PG    0.40 301  P    Pg    22 31 45.3 +0.4
T1211 Morro Reatino     0.40 274  P    Pg    22 31 45.4 +0.4
T1211                             S    Sb    22 31 51.7 -1.0
T0110 Collepietro       0.40 135  P    Pg    22 31 45.5 +0.5
T0110                             AML  AML
      comp=N,40µm,1.2s
T0110                             AML  AML
      comp=N,40µm,0.8s
T0110                             AML  AML
      comp=E,42µm,1.1s
MC2   Monte Cornacci    0.43 340  P    Pg    22 31 46.1 +0.5
MC2                               S    Sb    22 31 52.8 -0.9
ARRO  Arrone            0.47 279  P    Pg    22 31 46.5 +0.3
T1216 Preci, Frazion    0.47 324  P    Pg    22 31 46.6 +0.3
T1216                             S    Sb    22 31 54.0 -0.7
FDMO  Fiordimonte       0.57 337 ⇓P    Pg    22 31 48.5 +0.3
FDMO                              S    Sb    22 31 57.5 -0.2
FDMO                              AML  AML
      comp=E,22µm,1.4s
FDMO                              AML  AML
      comp=N,28µm,0.4s
FDMO                              AML  AML
      comp=E,22µm,0.6s
T1219 Muccia, Frazio    0.62 333  P    Pg    22 31 49.2 +0.2
T1219                             S    Sg    22 31 57.5 +0.3
MOMA  Monte Martano     0.68 296  P    Pg    22 31 50.5 +0.4
CPGN  Carpegna, Ital    1.51 329  S    Sg    22 32 27.4 +1.6
```

ROM 21 22:31:42.5±0.1, 41°.170N±0°.004×14°.660E±0°.006,
h10km, ML2.3/47, 2C-2D, Error ellipse: s-maj=0.5km
s-min=0.2km az=243.0, Southern Italy

```
Code  Station Name       Δ°   AZ°    Phase ID         Time      Res
                                  Op   ISC         h  m  s      ISC
VITU  Vitulano (BN)     0.03 301  P    Pg    22 31 44.8 +0.4
VITU                              S    Sg    22 31 46.8 +1.0
VITU                              AML  AML
      comp=E,5340µm,1.4s
VITU                              AML  AML
      comp=N,24050µm,0.4s
VITU                              AML  AML
      comp=E,5335µm,1.4s
VITU                              AML  AML
      comp=N,23300µm,0.4s
VITU                              AML  AML
      comp=E,17700µm,0.5s
PSB1  Pescosannita      0.13  65  P    Pg    22 31 46.0 +0.5
PSB1                              S    Sg    22 31 48.9 +1.2
PSB1                              AML  AML
      comp=E,1200µm,0.5s
PSB1                              AML  AML
      comp=E,1200µm,0.5s
PSB1                              AML  AML
      comp=N,1405µm,0.7s
PSB1                              AML  AML
      comp=N,1490µm,0.7s
PSB1                              AML  AML
      comp=E,1203µm,0.5s
PSB1                              AML  AML
      comp=N,1410µm,0.7s
PSB1                              AML  AML
      comp=E,1315µm,0.5s
PAOL  Paolisi           0.15 207 ⇑P    Pg    22 31 46.3 +0.4
PAOL                              S    Sg    22 31 49.3 +0.9
PAOL                              AML  AML
      comp=N,2620µm,0.8s
PAOL                              AML  AML
      comp=E,2990µm,0.4s
PAOL                              AML  AML
      comp=E,3190µm,0.4s
PAOL                              AML  AML
      comp=N,2435µm,0.8s
PTRJ  Pietraroja        0.22 333 ⇓P    Pg    22 31 47.2 +0.2
PTRJ                              S    Sg    22 31 51.3 +1.1
PTRJ                              AML  AML
      comp=E,1250µm,0.5s
PTRJ                              AML  AML
      comp=N,1345µm,0.3s
PTRJ                              AML  AML
      comp=E,1205µm,0.5s
PTRJ                              AML  AML
      comp=N,1235µm,0.3s
SACR  S. Croce Del S    0.23   9  P    Pg    22 31 47.9 +0.6
SACR                              S    Sg    22 31 52.2 +1.7
SACR                              AML  AML
      comp=E,1029µm,1.6s
SACR                              AML  AML
      comp=N,734µm,0.4s
SACR                              AML  AML
      comp=E,1062µm,1.6s
SACR                              AML  AML
      comp=N,782µm,0.4s
SACR                              AML  AML
      comp=E,1062µm,0.4s
SACR                              AML  AML
      comp=E,1029µm,0.4s
SACR                              AML  AML
      comp=N,734µm,1.6s
SACR                              AML  AML
      comp=N,782µm,1.6s
MRB1  Monte Rocchett    0.24 100 ⇑P    Pg    22 31 47.9 +0.4
MRB1                              S    Sg    22 31 52.3 +1.6
MRB1                              AML  AML
      comp=N,2625µm,0.5s
MRB1                              AML  AML
      comp=E,1910µm,0.4s
MRB1                              AML  AML
      comp=N,2540µm,0.5s
MRB1                              AML  AML
      comp=E,1920µm,0.4s
MRB1                              AML  AML
      comp=N,2625µm,1.5s
MRB1                              AML  AML
      comp=N,2540µm,1.5s
SGG   Gregorio Mates    0.30 316  P    Pg    22 31 48.6 +0.1
SGG                               S    Sb    22 31 54.8 -0.4
SGG                               AML  AML
      comp=N,3.0nm,0.4s
SGG                               AML  AML
      comp=E,2.5nm,1.6s
SGG                               AML  AML
      comp=E,851µm,1.6s
SGG                               AML  AML
      comp=N,934µm,0.4s
SGG                               AML  AML
      comp=E,2.5nm,0.4s
SGG                               AML  AML
      comp=E,851µm,0.4s
T1101 Santa Maria De    0.32 343  P    Pg    22 31 49.2 +0.3
BIOG  Biogem            0.36  85  P    Pb    22 31 50.9  0.0
BIOG                              AML  AML
      comp=E,980µm,0.5s
BIOG                              AML  AML
      comp=E,913µm,1.4s
BIOG                              AML  AML
      comp=N,1016µm,0.4s
BIOG                              AML  AML
      comp=E,913µm,0.6s
BIOG                              AML  AML
      comp=N,1205µm,0.7s
BIOG                              AML  AML
      comp=E,980µm,0.5s
PIGN  Pignataro Magg    0.36 275  P    Pg    22 31 49.7 +0.1
PIGN                              AML  AML
      comp=E,752µm,0.2s
PIGN                              AML  AML
      comp=N,689µm,0.6s
PIGN                              AML  AML
      comp=E,788µm,0.2s
PIGN                              AML  AML
      comp=E,752µm,0.2s
PIGN                              AML  AML
      comp=N,690µm,0.6s
PIGN                              AML  AML
      comp=N,647µm,0.5s
BSSO  Busso             0.38 352 ⇓P    Pg    22 31 50.4 +0.4
BSSO                              S    Sb    22 31 57.2 -0.1
BSSO                              AML  AML
      comp=N,484µm,0.4s
BSSO                              AML  AML
      comp=E,692µm,0.5s
BSSO                              AML  AML
      comp=N,199µm,0.4s
BSSO                              AML  AML
      comp=E,288µm,0.5s
VVDG  Vesuvio Valle     0.38 208  P    Pg    22 31 50.6 +0.6
VVDG                              AML  AML
VVDG                              AML  AML
VBKN  Vesuvio Bunker    0.38 207  P    Pg    22 31 50.7 +0.6
VBKN                              AML  AML
      comp=E,2875µm,0.3s
VBKN                              AML  AML
      comp=N,2120µm,0.5s
GATE  Gambatesa         0.39  29  P    Pb    22 31 51.1 -0.5
GATE                              AML  AML
      comp=E,356µm,1.2s
GATE                              AML  AML
      comp=N,452µm,0.5s
GATE                              AML  AML
      comp=N,478µm,0.5s
GATE                              AML  AML
      comp=E,208µm,0.4s
GATE                              AML  AML
      comp=N,451µm,0.5s
GATE                              AML  AML
      comp=E,356µm,0.8s
GATE                              AML  AML
      comp=N,478µm,1.5s
GATE                              AML  AML
      comp=E,208µm,1.6s
GATE                              AML  AML
      comp=N,451µm,1.5s
VCRE  Vesuvio Crater    0.39 206  P    Pg    22 31 50.8 +0.6
CRTO  Cratere Ovest,    0.39 207  P    Pg    22 31 50.9 +0.7
CRTO                              AML  AML
CRTO                              AML  AML
CRTO                              AML  AML
OVO   Vesuviano         0.40 210  P    Pg    22 31 50.7 +0.4
VARP  Vesuvio Array     0.40 208  P    Pg    22 31 51.0 +0.6
VARP                              S    Sb    22 31 57.7 -0.1
VARP                              AML  AML
      comp=N,1475µm,0.2s
VARP                              AML  AML
      comp=E,1065µm,0.5s
VARP                              AML  AML
      comp=N,1475µm,1.8s
VAGA  Valle Agricola    0.40 308  P    Pg    22 31 51.0 +0.5
VAGA                              S    Sb    22 31 57.9 -0.1
VAGA                              AML  AML
      comp=E,503µm,1.2s
VAGA                              AML  AML
      comp=E,525µm,0.6s
VAGA                              AML  AML
      comp=E,503µm,0.8s
VAGA                              AML  AML
      comp=N,939µm,0.2s
VAGA                              AML  AML
      comp=N,890µm,0.2s
VTIR  Vesuvio Tirone    0.41 206  P    Pg    22 31 51.0 +0.5
VTIR                              AML  AML
      comp=E,1148µm,1.4s
VTIR                              AML  AML
      comp=N,844µm,0.6s
VTIR                              AML  AML
      comp=E,1148µm,0.6s
MOCO  Biccari - m.te    0.42  62  P    Pb    22 31 51.5 -0.6
MOCO                              AML  AML
      comp=N,77µm,0.8s
MOCO                              AML  AML
      comp=E,178µm,0.3s
MOCO                              AML  AML
      comp=E,178µm,1.7s
CAFE  Carife            0.46 108  P    Pg    22 31 51.6 +0.2
CAFE                              S    Sb    22 31 59.1 -0.5
CAFE                              AML  AML
      comp=E,546µm,0.4s
CAFE                              AML  AML
      comp=N,460µm,0.5s
CAFE                              AML  AML
      comp=N,388µm,0.5s
CAFE                              AML  AML
      comp=E,506µm,0.4s
SNAL  S. Angelo Dei     0.48 120  P    Pg    22 31 51.4 -0.5
SNAL                              S    Sb    22 31 59.5 -0.7
SNAL                              AML  AML
      comp=N,206µm,0.9s
SNAL                              AML  AML
      comp=E,251µm,0.9s
SNAL                              AML  AML
      comp=N,206µm,0.9s
SNAL                              AML  AML
      comp=N,208µm,0.5s
SNAL                              AML  AML
      comp=E,250µm,0.9s
SNAL                              AML  AML
      comp=E,251µm,1.0s
SNAL                              AML  AML
      comp=E,250µm,1.1s
SNAL                              AML  AML
      comp=N,206µm,1.1s
CIGN  Sant’Elia a Pi    0.52  21  P    Pb    22 31 53.6 -0.1
CIGN                              AML  AML
      comp=N,154µm,1.1s
CIGN                              AML  AML
      comp=E,124µm,0.6s
SGTA  Sant Agata di     0.53  94  P    Pg    22 31 53.0 +0.1
SGTA                              AML  AML
      comp=N,223µm,0.5s
SGTA                              AML  AML
      comp=E,208µm,0.4s
MCRV  Calabrutti - M    0.55 135  P    Pg    22 31 52.2 -0.9
MCRV                              AML  AML
      comp=N,597µm,0.6s
MCRV                              AML  AML
      comp=E,506µm,0.3s
MIDA  Miranda           0.56 327  P    Pg    22 31 53.0 -0.5
MIDA                              AML  AML
      comp=E,376µm,0.6s
MIDA                              AML  AML
      comp=E,376µm,0.6s
MIDA                              AML  AML
      comp=N,292µm,0.5s
MODR  Mondragone        0.59 268  P    Pg    22 31 54.2 +0.3
MODR                              AML  AML
      comp=N,358µm,0.5s
MODR                              AML  AML
      comp=E,344µm,1.3s
MODR                              AML  AML
      comp=E,344µm,0.7s
TRIV  Trivento          0.60 352  P    Pg    22 31 54.1 -0.1
TRIV                              AML  AML
      comp=E,384µm,0.4s
TRIV                              AML  AML
      comp=N,284µm,0.4s
TRIV                              AML  AML
      comp=E,386µm,0.4s
TRIV                              AML  AML
      comp=E,384µm,1.6s
TRIV                              AML  AML
      comp=N,284µm,0.3s
MELA  Melanico ??? S    0.64  33  P    Pg    22 31 54.4 -0.4
MELA                              AML  AML
      comp=N,305µm,1.5s
MELA                              AML  AML
      comp=E,321µm,0.3s
MELA                              AML  AML
      comp=N,305µm,0.5s
CERA  Filignano         0.65 312  P    Pg    22 31 54.9 -0.1
CERA                              AML  AML
      comp=E,396µm,0.8s
CERA                              AML  AML
      comp=N,418µm,0.4s
RNI2  Rionero Sannit    0.66 325  P    Pg    22 31 54.8 -0.3
RNI2                              AML  AML
      comp=E,256µm,1.4s
RNI2                              AML  AML
      comp=N,339µm,0.6s
RNI2                              AML  AML
      comp=E,256µm,1.4s
RNI2                              AML  AML
      comp=E,256µm,1.4s
RNI2                              AML  AML
      comp=N,342µm,0.6s
RNI2                              AML  AML
      comp=E,256µm,0.6s
RNI2                              AML  AML
      comp=E,256µm,0.6s
MRLC  Muro Lucano       0.75 123  P    Pg    22 31 56.7 -0.2
MRLC                              AML  AML
      comp=N,298µm,0.4s
MRLC                              AML  AML
      comp=E,370µm,0.4s
VULT  Monte Vulture     0.76 106  P    Pb    22 31 57.5 -0.3
VULT                              AML  AML
      comp=E,483µm,0.3s
VULT                              AML  AML
      comp=N,529µm,1.2s
VULT                              AML  AML
      comp=E,488µm,0.3s
VULT                              AML  AML
      comp=N,534µm,0.3s
VULT                              AML  AML
      comp=N,529µm,1.1s
VULT                              AML  AML
      comp=E,488µm,1.7s
VULT                              AML  AML
      comp=E,483µm,1.7s
VULT                              AML  AML
      comp=N,534µm,1.7s
CDRU  Civita di Ruta    0.84 144  P    Pg    22 31 56.8 -1.8
CDRU                              AML  AML
      comp=E,311µm,0.3s
CDRU                              AML  AML
      comp=N,172µm,0.4s
APRC  Apricena          0.89  48  P    Pg    22 31 58.2 -1.3
APRC                              AML  AML
      comp=E,349µm,0.9s
APRC                              AML  AML
      comp=N,354µm,0.6s
APRC                              AML  AML
      comp=E,349µm,1.1s
POFI  Posta Fibreno     0.90 308  P    Pg    22 31 59.8  0.0
POFI                              AML  AML
      comp=E,93µm,0.5s
POFI                              AML  AML
      comp=N,110µm,0.5s
LRP   Arpino            0.94 301  P    Pb    22 32 00.8  0.0
LRP                               AML  AML
      comp=E,87µm,0.4s
LRP                               AML  AML
      comp=N,75µm,0.6s
LRP                               AML  AML
      comp=N,75µm,1.4s
LPEL  Lama dei Pelig    0.95 338  P    Pg    22 32 00.5 -0.2
LPEL                              AML  AML
      comp=N,92µm,0.9s
LPEL                              AML  AML
      comp=E,121µm,0.2s
SGRT  San Giovanni R    1.00  54  P    Pg    22 32 00.3 -1.4
SGRT                              AML  AML
      comp=E,192µm,0.6s
SGRT                              AML  AML
      comp=N,194µm,0.4s
PALZ  Palazzo San Ge    1.01 102  P    Pb    22 32 02.0  0.0
PALZ                              AML  AML
      comp=E,228µm,1.2s
PALZ                              AML  AML
      comp=E,228µm,0.8s
PALZ                              AML  AML
      comp=N,702µm,0.7s
INTR  Introdacqua       1.01 326  AML  AML
      comp=E,98µm,0.6s
INTR                              AML  AML
      comp=N,187µm,0.6s
VVLD  Villa Vallelon    1.05 312  P    Pg    22 32 02.6 -0.1
VVLD                              AML  AML
      comp=N,104µm,0.5s
VVLD                              AML  AML
      comp=E,90µm,0.7s
SLCN  Sala Consilina    1.07 136  P    Pb    22 32 03.4 +0.2
SLCN                              AML  AML
      comp=E,220µm,0.4s
SLCN                              AML  AML
      comp=N,178µm,0.5s
MSAG  Monte S. Angel    1.08  60  P    Pg    22 32 02.7 -0.6
MSAG                              AML  AML
      comp=N,336µm,0.2s
MSAG                              AML  AML
      comp=N,350µm,0.3s
MSAG                              AML  AML
      comp=E,170µm,0.3s
MSAG                              AML  AML
      comp=E,168µm,0.3s
GIUL  Giuliano Di Ro    1.13 291  P    Pb    22 32 03.1 -1.0
GIUL                              AML  AML
      comp=E,32µm,0.9s
GIUL                              AML  AML
      comp=N,34µm,0.6s
```

GIUL				AML	AML		
	comp=E,32µm,1.1s						
MCEL	Monticello	1.21	134	P	Pb	22 32 05.4	-0.1
MCEL				AML	AML		
	comp=N,118µm,0.5s						
MCEL				AML	AML		
	comp=N,118µm,1.5s						
MCEL				AML	AML		
	comp=E,138µm,0.7s						
MTSN	Montesano sull	1.23	137	P	Pn	22 32 05.5	-0.3
MTSN				AML	AML		
	comp=E,123µm,0.5s						
MTSN				AML	AML		
	comp=N,88µm,0.3s						
MTSN				AML	AML		
	comp=E,123µm,1.5s						
MGR	Morigerati	1.23	146	P	Pn	22 32 03.2	-2.5
MGR				AML	AML		
	comp=E,54µm,0.8s						
MGR				AML	AML		
	comp=N,73µm,0.4s						
T0110	Collepietro	1.25	328	AML	AML		
	comp=E,112µm,0.6s						
T0110				AML	AML		
	comp=N,109µm,1.2s						
SIRI	Monte Sirino -	1.35	137	P	Pn	22 32 07.1	-0.3
SIRI				AML	AML		
	comp=E,89µm,1.6s						
SIRI				AML	AML		
	comp=E,89µm,0.4s						
SIRI				AML	AML		
	comp=N,60µm,0.4s						
AMUR	Altamura	1.49	99	AML	AML		
	comp=N,88µm,0.8s						
AMUR				AML	AML		
	comp=E,55µm,0.8s						
AMUR				AML	AML		
	comp=N,88µm,1.2s						
AMUR				AML	AML		
	comp=E,55µm,1.2s						
SAMA	S.Maria delle	1.67	292	AML	AML		
	comp=N,321µm,0.1s						
SAMA				AML	AML		
	comp=E,278µm,0.6s						

WEL 21 22:34:40.9±0.4,**42˚S**±3˚×**17˚4E**±˚,**h5**^{km},**M2.0**/6,**ML2.2**/7, **MLv2.0**/6,**Error ellipse: s-maj=0.0km s-min=0.0km az=128.3,confirmed,South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHZ	Kahutara	0.37	191	P	Pg	22 34 48.3	+0.3
KHZ				S	Sg	22 34 53.7	+0.8
BSWZ	Blackbirch Sta	0.38	28	P	Pg	22 34 48.5	+0.3
BSWZ				S	Sg	22 34 54.7	+1.5
CMWZ	Cape Campbell	0.53	55	P	Pb	22 34 51.9	-0.7
CMWZ				S	Sb	22 35 00.8	+0.3
THZ	Tophouse	0.62	298	P	Pg	22 34 52.9	+0.2
TUWZ	Tuamarina	0.66	20	P	Pg	22 34 53.9	+0.3
MRNZ	Matariki Terra	0.93	315	P	Pg	22 34 58.9	+0.3
MRNZ				S	Sb	22 35 11.8	-0.2
TCW	Tory Channel	0.97	30	P	Pg	22 34 58.9	-0.5
GVZ	Greta Valley S	1.02	206	P	Pg	22 35 00.4	0.0
GVZ				S	Sb	22 35 15.4	+0.8
LTZ	Lake Taylor	1.25	234	P	Pg	22 35 03.8	-0.9
DSZ	Denniston Nort	1.40	282	P	Pg	22 35 07.7	0.0

NNC ***21*** *22:47:21.6±40.0,37.˚56N×74.˚33E,h227^{km}±417^{km},mb2.5, mpv3.6,Error ellipse: s-maj=426.8km s-min=149.4km az=1.0*
IDC ***21*** *22:47:22.3±4.2,36.˚46N×71.˚38E,h184^{km}±37^{km},mb3.1/6, mbtmp3.6/9,Error ellipse: s-maj=32.2km s-min=23.3km az=166.0*
SOME ***21*** *22:47:31.1,38.˚38N×71.˚57E,h0^{km}*
ISC 21 22:47:24.9±0.7,**36.˚76N**±0.˚09×**71.˚29E**±0.˚09,**h200**^{km},**n31,** σ**1^{s}43**/32,**mb3.2**/6,**3D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	Iuzhnay	5.47	350	*e*Pg	Pn	22 48 45.9	+0.6
	61nm,0.1s						
IUG				*e*Lg	Lg	22 49 46.4	
	62nm,0.3s						
AML	Almayashu	5.68	18	P	Pn	22 48 48.4	+0.1
	SNR=74						
CHM	Chimkent	5.71	347	*e*Pg	Pn	22 48 49.0	+0.7
	160nm,0.1s						
CHM				*e*Lg	Lg	22 49 51.4	
	162nm,0.3s						
UCH	Uchtor	6.00	24	P	Pn	22 48 52.6	+0.1
	SNR=36						
DZA	Taraz	6.13	0	*e*Pg	Pn	22 48 54.6	+0.9
	53nm,0.1s						
DZA				*e*Lg	Lg	22 50 01.8	
	78nm,0.1s						
MRKS	Merke	6.16	13	*e*Pg	Pn	22 48 54.5	+0.2
	9.2nm,0.4s						
MRKS				*e*Lg	Lg	22 50 01.3	
	18nm,0.2s						
EKS2	Erkin-Say	6.20	17	P	Pn	22 48 55.1	+0.3
	SNR=14						
KK31	Karatay Array	6.37	355	⇓P	Pn	22 48 56.5	-0.3
	7.3nm,0.3s,baz=180,slow=17						
KK31				⇓S	Sn	22 50 05.2	-4.5
	6.5nm,0.4s,baz=182,slow=21						
AAK	Ala-Archa	6.37	22	P	Pn	22 48 57.0	+0.1
	SNR=22						
KBK	Karagaybulak	6.53	24	P	Pn	22 49 00.3	+1.2
	SNR=7.1						
CHMS	Chumysh	6.78	22	P	Pn	22 49 02.2	+0.1
	SNR=7.3						
USP	Ospenovka	6.95	20	P	Pn	22 49 04.0	-0.4
	SNR=12						
TKM2	Tokmak 2	6.99	27	P	Pn	22 49 05.7	+0.6
	SNR=13						
GEYT	Alibeck	10.56	280	P	Pn	22 49 50.3	-1.0
	0.7nm,0.4s,baz=99,slow=9.3,SNR=2.1						
MKAR	Makanchi Array	12.94	36	P	Pn	22 50 22.7	+1.1
	0.7nm,0.8s,baz=215,slow=12,SNR=7.3						
PYUN	Piuthan	13.11	128	*e*P	Pn	22 50 22.6	-1.4
DANN	Dangsing	13.44	125	*e*P	Pn	22 50 26.5	-1.7
GKN	Gorkha	14.25	124	*e*P	Pn	22 50 37.7	-0.4
	3.3nm,0.3s						
AB31	Akbulak array	14.97	330	P	P	22 50 48.9	+1.6
	0.3nm,0.3s,baz=144,slow=12,SNR=34						
PKI	Pulchoki	15.04	123	*e*P	P	22 50 49.0	+0.3
JIRN	Jiri	15.52	122	*e*P	P	22 50 53.8	-0.1
	6.5nm,0.4s						
RAMN	Ramite	16.25	123	*e*P	Pn	22 51 05.0	+2.5
	2.0nm,0.3s						
AKTO	Aktyubinsk	16.68	329	⇓P	Pn	22 51 07.6	+0.4
	0.7nm,0.4s						
TAPN	Taplejung	16.76	119	*e*P	Pn	22 51 11.7	+3.0
	1.6nm,0.3s						
ZALV	Zalesovo Beam	19.58	24	P	P	22 51 38.2	+0.7
	1.2nm,0.4s,baz=212,slow=12,SNR=7.2						
FINES	FINESS Array B	37.40	326	P	P	22 54 19.9	+1.7
	2.1nm,1.0s,baz=105,slow=10,SNR=1.2						
	2.1nm,1.0s						
ARCES	ARCESS Array B	41.00	337	P	P	22 54 48.6	+0.8
	2.0nm,0.9s,baz=114,slow=9.0,SNR=1.3						
	2.0nm,0.9s						
NOA	NORSAR Array B	44.32	323	P	P	22 55 16.0	+1.3
	0.3nm,0.5s,baz=97,slow=7.8,SNR=1.4						
	0.3nm,0.5s						
TORD	Torodi Ar. Bea	65.96	269	P	P	22 57 49.3	-0.7
	0.4nm,0.6s,baz=49,slow=5.8,SNR=2.5						
	0.4nm,0.6s						
YKA	Yellowknife Ar	80.98	3	P	P	22 59 17.3	+0.6
	0.2nm,0.7s,baz=349,slow=5.5,SNR=4.5						
	0.2nm,0.7s						
WRA	Warramunga Arr	81.93	122	P	P	22 59 20.5	-1.8
	0.2nm,0.8s,baz=317,slow=4.5,SNR=1.8						
	0.2nm,0.8s						

IPEC ***21*** *22:53:33.7±0.1,50.˚29N×18.˚71E,h1^{km},ML1.3/4,Error ellipse: s-maj=2.2km s-min=0.8km az=169.0*
PRU 21 22:53:34.0±0.0,**50.˚30N**×**18.˚68E,h0**^{km}**,Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.58	217	*e*PG	Pg	22 53 44.6	-0.4
OKC				*e*SG	Sg	22 53 53.7	+1.2
	comp=Z,21nm,0.9s						
OJC	Ojcow	0.72	96	*e*Pg	Pg	22 53 47.0	-0.8
OJC				*e*Sg	Sg	22 53 56.6	-0.6
MORC	Moravsky Berou	0.90	235	*e*PG	Pg	22 53 50.9	-0.3
MORC				*e*SG	Sg	22 54 02.4	-0.5
MORC	Moravsky Berou	0.90	235	*e*Pg	Pg	22 53 50.8	-0.4
	baz=55						
MORC				*e*Sg	Sg	22 54 02.3	-0.6
	7.1nm,0.3s,baz=55						
MAUC	Maruska	1.09	211	*e*PG	Pg	22 53 54.4	-0.4
MAUC				*e*SG	Sb	22 54 09.7	-0.7
KRLC	Kraliky	1.24	260	*e*PG	Pg	22 53 56.5	-1.3
KRLC				*e*SG	Sg	22 54 13.9	+0.1
LANS	Liptovska Anna	1.26	156	*e*PG	Pg	22 53 58.2	+0.1
LANS				*e*SG	Sg	22 54 14.1	-0.3
LANS				*e*LG	Lg	22 54 18.3	
NIE	Niedzica	1.37	129	*e*Pg	Pg	22 53 59.6	-0.6
NIE				*e*Sg	Sg	22 54 18.1	+0.1
DPC	Dobruska-Polom	1.51	273	*e*PG	Pn	22 54 01.8	-0.6
DPC				*e*SG	Sb	22 54 22.7	0.0
OSTC	Ostas	1.60	280	*e*PG	Pn	22 54 03.1	-0.4
OSTC				*e*SG	Sn	22 54 24.3	-0.6
KSP	Ksiaz	1.62	291	*e*Pg	Pg	22 54 04.9	0.0
KSP				*e*Sg	Sg	22 54 27.0	+1.1
VRAC	Vranov	1.68	235	*e*Pn	Pn	22 54 04.3	-0.3
	baz=54						
VRAC				*e*Sg	Sn	22 54 26.7	-0.1
	2.3nm,0.3s,baz=54						
CHVC	Chvalec	1.70	281	*e*PG	Pn	22 54 04.4	-0.6
VYHS	Vyhne	1.81	177	*e*PN	Pn	22 54 04.7	-1.7
VYHS				*e*SN	Sn	22 54 29.6	-0.5
KRUC	Moravsky	1.93	231	*e*PN	Pn	22 54 07.9	-0.2
KRUC				*e*SG	Sb	22 54 34.6	-0.1
KRUC	Moravsky	1.93	231	*e*Pn	Pn	22 54 07.8	-0.3
	baz=50						
KRUC				*e*Sg	Sb	22 54 34.5	-0.2
	1.6nm,0.3s,baz=50						
KHC	Kasperske Hory	3.51	252	*e*SG	Sg	22 55 24.8	-1.9

WEL 21 23:06:21.2±0.4,**42˚S**±3˚×**17˚4E**±˚,**h5**^{km},**M2.1**/6,**ML2.4**/7, **MLv2.1**/6,**Error ellipse: s-maj=0.0km s-min=0.0km az=133.2,confirmed,South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSWZ	Blackbirch Sta	0.33	33	P	Pg	23 06 27.6	+0.1
BSWZ				S	Sg	23 06 32.7	+0.8
KHZ	Kahutara	0.43	189	P	Pg	23 06 29.8	+0.3
KHZ				S	Sg	23 06 36.2	+1.1
CMWZ	Cape Campbell	0.49	61	P	Pg	23 06 31.3	+0.6
CMWZ				S	Sb	23 06 39.3	-0.6
THZ	Tophouse	0.59	292	P	Pg	23 06 32.9	+0.4
THZ				S	Sg	23 06 41.3	+1.1
TUWZ	Tuamarina	0.61	22	P	Pg	23 06 33.0	+0.2
TUWZ				S	Sb	23 06 42.2	-0.9
MRNZ	Matariki Terra	0.88	312	P	Pg	23 06 38.4	+0.3
TCW	Tory Channel	0.92	32	P	Pg	23 06 38.0	-0.8
GVZ	Greta Valley S	1.07	204	P	Pg	23 06 41.7	0.0
DUWZ	D'Urville Isla	1.21	10	P	Pg	23 06 43.4	-0.9
LTZ	Lake Taylor	1.28	231	P	Pg	23 06 44.9	-0.8
CAW	Cannon Point	1.39	51	P	Pn	23 06 45.9	-1.4
QRZ	Quartz Range	1.43	324	P	Pb	23 06 48.1	-0.2
KIW	Kapiti Island	1.48	41	P	Pn	23 06 47.9	-0.6
MTW	Mount Morrison	1.63	60	P	Pn	23 06 50.2	-0.4
OGWZ	Otaki Gorge	1.65	45	P	Pn	23 06 49.3	-1.5
MQZ	McQueen's Vall	1.86	202	P	Pn	23 06 50.8	-2.9

NEIC ***21*** *23:10:24.1,8.˚57S×115.˚34E,h110^{km}*
NEIC ***21*** *23:10:24.1,8.˚87S×115.˚34E,h110^{km},Moment Tensor Solution. Duration: 3^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.97; M$_{θθ}$-0.36; M$_{φφ}$-2.61; M$_{rθ}$0.11; M$_{θφ}$0.58; M$_{φr}$1.00; Fault plane solution: M$_0$3.03000×10^{17} NP1: φ$_s$352.43000°,δ54.44000°,λ96.73000°. NP2: φ$_s$160.96000°,δ36.11000°,λ80.69000°. Principal axes: T 3.1585, Plg79.0000°, Azm289.0000°; N -0.2566, Plg5.0000°, Azm169.0000°; P -2.9019, Plg9.0000°, Azm78.0000°;*
MOS ***21*** *23:10:24.4±0.9,8.˚37S×115.˚27E,h123^{km},mb5.4/63, MS4.5/6 Error ellipse: s-maj=8.0km s-min=4.4km az=119.1*
NEIC ***21*** *23:10:25.1±2.2,8.˚49S±0.˚07×115.˚32E±0.˚05,h112^{km}±3^{km}, mb5.5/145,Mww5.6/22,Error ellipse: s-maj=10.9km s-min=7.4km az=193.0*
DJA ***21*** *23:10:26.8±0.1,9˚S±2˚×11˚5E±˚,h122^{km}±1^{km},M5.5/120, mb5.7/120,mB5.9/102,MLv6.1/28,Mw5.7/81, Mw(mB)5.5/102,MwMwp5.4/63,Mwp5.6/63*
IDC ***21*** *23:10:26.4±0.5,8.˚39S×115.˚24E,h127^{km}±3^{km},mb5.0/33, mbtmp5.4/35,MS4.4/52,Error ellipse: s-maj=10.2km s-min=7.7km az=86.0*
KLM ***21*** *23:10:27,8.˚88S×115.˚23E,h103^{km},mb5.8*
GCMT ***21*** *23:10:28.1±0.1,8.˚75S±0.˚01×115.˚27E±0.˚01,h130^{km}, MW5.7/155,Moment Tensor Solution. s149,c261; s155,c326; Duration: 1^{s}7 Moment tensor: Scale 10^{17} Nm; M$_{rr}$3.50±.04; M$_{θθ}$-0.20±.05; M$_{φφ}$-3.30±.05; M$_{rθ}$-1.46±.03; M$_{θφ}$-1.79±.04; M$_{φr}$1.38±.04; Best double couple: M$_0$4.33100×10^{17} NP1:φ$_s$0.00000°,δ55.00000°, λ58.00000°. NP2:φ$_s$228.00000°,δ46.00000°,λ128.00000°. Principal axes: T 4.4850, Plg64.0000°, Azm213.0000°; N -0.3030, Plg26.0000°, Azm20.0000°; P -4.1780, Plg5.0000°, Azm112.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 21 23:10:26.4±0.2,**8.˚54S**±0.˚03×**115.˚25E**±0.˚03,**h133**^{km}±1^{km}, **h134**^{km}**:pP-P,n1353,**σ**1^{s}60**/1589,**mb5.4**/207**,96C-37D, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DNP	Denpasar	0.14	196	P	Pn	23 10 44.1	-0.5
IGBI	Denpasar	0.29	201	P	Pn	23 10 43.3	-1.7
JAGI	Jajag, Banyuwa	1.09	274	Pn	Pn	23 10 49.0	-1.4
JAGI				Sn	Sn	23 11 06.2	-2.5
JAGI	Jajag, Banyuwa	1.09	274	P	Pn	23 10 50.3	-0.2
JAGI				S	Sn	23 11 06.9	-1.8
ABJI	Asem Bagus	1.25	306	P	Pn	23 10 53.4	+1.3
ABJI				S	Sn	23 11 13.1	+1.5
TWSI	Taliwang, Sumb	1.63	97	P	Pn	23 10 56.2	0.0
TWSI				S	Sn	23 11 18.0	-0.9
GMJI	Gumukmas	1.81	278	P	Pn	23 10 58.2	-0.1
GMJI				S	Sn	23 11 22.3	-0.3
BLJI	Banyuglugur	1.82	296	P	Pn	23 10 59.6	+1.2
BLJI				S	Sn	23 11 24.2	+1.3
PLAI	Plampang	2.51	97	P	Pn	23 11 07.0	0.0
PLAI	Plampang	2.51	97	P	Pn	23 11 07.8	+0.8
PLAI				S	Sn	23 11 38.8	+0.7
GRJI	Gresik	3.19	300	P	Pn	23 11 17.9	+2.3
PWJI	Pagerwojo	3.45	278	P	Pn	23 11 18.6	-0.4
BWJI	Bawean	3.71	316	P	Pn	23 11 25.5	+3.0
TBJI	Tambak Boyo	3.78	297	P	Pn	23 11 25.7	+2.3
NGJI	Ngawi	3.93	287	P	Pn	23 11 27.8	+2.4
UGM	Wanagama	4.72	277		Pn	23 11 35.4	-0.5
UGM	Wanagama	4.72	277	P	Pn	23 11 36.7	+0.8
UGM	Wanagama	4.72	277	P	Pn	23 11 36.1	+0.2
UWJI	Ujung Watu	4.76	296	P	Pn	23 11 38.6	+2.2
YOGI	Yogyakarta	4.96	278	P	Pn	23 11 39.3	+0.2
SMRI	Semarang	4.99	287	Pn	Pn	23 11 38.9	-0.6
SMRI	Semarang	4.99	287	P	Pn	23 11 41.2	+1.7
SMRI	Semarang	4.99	287	P	Pn	23 11 41.0	+1.5
	4µm,0.8s,59µm45µm15nm						
BBKI	Banjar Baru	5.06	355	P	Pn	23 11 44.8	+4.3
	7µm,1.2s,72µm28µm23nm						
BASI	Baing, Sumba	5.51	108	P	Pn	23 11 43.6	-2.9
	5µm,1.1s,73µm39µm34nm						
KAPI	Kappang	5.68	52	P	Pn	23 11 49.5	+0.7
	585nm,0.7s,baz=228,slow=7.5,SNR=95						
KAPI				S	Sn	23 12 54.8	+1.9
	621nm,0.6s,baz=18,slow=22,SNR=21						
KAPI	Kappang	5.68	52	Pn	Pn	23 11 50.4	+1.6
KAPI	Kappang	5.68	52	P	Pn	23 11 51.1	+2.4
KAPI	Kappang	5.68	52	*d i*P	Pn	23 11 50.9	+2.2
KAPI	Kappang	5.68	52	P	Pn	23 11 51.4	+2.6
BSSI	Bau Bau, Buton	5.72	66	P	Pn	23 11 51.3	+2.0
	3µm,0.5s,43µm26µm13nm						
BKSI	Bulukumba	5.80	57	P	Pn	23 11 52.6	+2.3
	1µm,0.6s,13µm21µm8.3nm						
KPJI	Karang Pucung	6.37	280	P	Pn	23 11 59.2	+1.2
	2µm,0.6s,28µm29µm12nm						
SPSI	Sidrap Palu	6.39	45	P	Pn	23 12 01.7	+3.4
	693nm,1.1s,6µm12µm4.5nm						
CMJI	Cimerak	6.78	276	P	Pn	23 12 02.4	-1.0
	2µm,0.8s,32µm35µm11nm						
PBKI	Pangkalan Bun	6.81	328	P	Pn	23 12 07.2	+3.3
	3µm,1.2s,28µm7.5nm						
MMRI	Maumere	6.91	91	Pn	Pn	23 12 03.0	-2.2
MMRI	Maumere	6.91	91	P	Pn	23 12 03.2	-2.0
MMRI	Maumere	6.91	91	P	Pn	23 12 03.3	-2.0
	3µm,0.7s,44µm29µm15nm						
JCJI	Jatiwangi	7.21	286	P	Pn	23 12 10.3	+0.9
	2µm,0.9s,23µm29µm6.6nm						
BKB	Balikpapan	7.42	13	Pn	Pn	23 12 21.0	+8.9
BKB	Balikpapan	7.42	13	P	Pn	23 12 20.3	+8.2
MTKI	Muara Teweh, K	7.56	357	P	Pn	23 12 17.7	+3.7
BBJI	Bungbulang	7.60	278	P	Pn	23 12 14.0	-0.7
CNJI	Cibinong	8.14	278	P	Pn	23 12 20.8	-1.0
	379nm,0.8s,17µm5µm						
SOEI	Soe	8.98	98	Pn	Pn	23 12 29.5	-3.8
SOEI	Soe	8.98	98	P	Pn	23 12 30.4	-2.9
SOEI	Soe	8.98	98	P	Pn	23 12 30.2	-3.1
	1µm,0.7s,20µm14µm						
SBJI	Serang	9.36	284	P	Pn	23 12 38.0	-0.2
	955nm,0.9s,13µm						
CGJI	Cibinong	9.66	281	P	Pn	23 12 41.0	-1.3
	3µm,0.6s,33µm						
MPSI	Mapaga	9.96	28	P	Pn	23 12 51.3	+5.0
	309nm,0.9s,4µm6µm						
BLSI	Bandar Lampung	10.42	287	P	Pn	23 12 53.7	+1.3
	617nm,0.7s,7µm						
LUWI	Luwuk	10.57	46	Pn	Pn	23 12 58.3	+3.9
LUWI	Luwuk	10.57	46	P	Pn	23 12 59.1	+4.7
	357nm,1.3s						
LUWI	Luwuk	10.57	46	P	Pn	23 12 58.8	+4.4
	355nm,1.2s,5µm						
KLI	Kotabumi	10.95	289	P	Pn	23 13 00.2	+0.7
	417nm,0.8s,6µm13µm						
TOLI2	Tolitoli	11.06	30	Pn	Pn	23 12 57.9	-3.1
TOLI2	Tolitoli	11.06	30	P	P	23 13 07.7	-2.4
PPBI	Pangkal Pinang	11.06	304	P	Pn	23 13 02.6	+1.6
	785nm,1.1s,11µm10µm						
KASI	Kota Agung	11.09	285	P	Pn	23 13 00.1	-1.2
	519nm,0.5s,10µm11µm						
KSM	Kuching	11.10	333	Pn	Pn	23 13 03.3	+1.8
KSM	Kuching	11.10	333	P	P	23 13 07.0	-3.5
MRSI	Marisa	11.17	37	P	Pn	23 13 06.0	+3.6
	447nm,0.8s,3µm3µm						
SBUM	Sibu	11.33	344	Pn	Pn	23 13 05.9	+1.4
LWLI	Liwa	11.65	287	P	Pn	23 13 08.7	-0.1
	1µm,0.6s,18µm10µm						
PMBI	Palembang	11.82	298	Pn	Pn	23 13 13.9	+2.9
PMBI	Palembang	11.82	298	P	P	23 13 17.1	-1.4
PMBI	Palembang	11.82	298	P	P	23 13 18.4	-0.1
GTOI	Gorontalo	11.96	41	P	P	23 13 17.1	-2.9
	246nm,0.7s,2µm						
SANI	Sanana	12.48	59	P	P	23 13 23.9	-2.0
SANI	Sanana	12.48	59	P	P	23 13 23.0	-2.9
	1µm,1.0s,18µm8µm						
MNAI	Manna	12.90	288	Pn	Pn	23 13 23.2	-1.8
MNAI	Manna	12.90	288	P	Pn	23 13 23.8	-1.3
	2µm,0.7s,26µm10µm						
NLAI	Namlea	12.91	67	P	P	23 13 29.8	-0.9
	402nm,1.1s,7µm						
MBWA	Marble Bar	13.27	161	Pn	Pn	23 13 24.4	-5.3
MBWA	Marble Bar	13.27	161	P	Pn	23 13 25.8	-3.9
DSRI	Dabo	13.31	306	P	Pn	23 13 31.7	+1.4
	206nm,0.5s,4µm8µm						
JMBI	JAMBI	13.44	300	P	P	23 13 41.8	+5.2
KSI	Kapahiang	13.49	290	P	Pn	23 13 32.0	-0.7
	2µm,0.7s,25µm						
PSA00	Pilbara Seismi	13.69	162	Pn	Pn	23 13 30.1	-5.0
PSA00	Pilbara Seismi	13.69	162	P	Pn	23 13 31.4	-3.7
AAI	Ambon	13.74	70	P	P	23 13 38.8	-1.2
	672nm,1.4s,8µm8µm						
FITZ	Fitzroy Crossi	13.87	134	Pn	Pn	23 13 35.4	-1.9
MASI	Maura Aman, Be	14.01	292	P	Pn	23 13 39.1	-0.2
	1µm,0.8s,21µm10µm						
MYLDM	Lahad Datu	14.01	13	P	P	23 13 43.6	+0.7
MYLDM				ScP	ScP	23 22 13.1	+1.5
GIRL	Giralia	14.05	184	P	Pn	23 13 37.3	-2.5
	baz=14,SNR=139						
GIRL	Giralia	14.05	184	Pn	Pn	23 13 36.4	-3.3
GIRL	Giralia	14.05	184	P	Pn	23 13 37.5	-2.2
TPRI	Tanjung Pinang	14.23	311	P	P	23 13 44.6	-0.8
	130nm,0.9s,4µm7µm						
LBMI	Labuha	14.51	58	P	Pn	23 13 46.8	+1.2
	755nm,1.0s,9µm						
KKM	Kota Kinabalu	14.52	4	P	P	23 13 48.7	0.0
KKM	Kota Kinabalu	14.52	4	P	P	23 13 52.4	+3.7
MSAI	Masohi	14.55	70	P	P	23 13 49.3	+0.4
	129nm,0.5s,1µm						
KNRA	Kununurra	14.99	120	P	Pn	23 13 49.5	-2.1
	baz=15,SNR=162						
KNRA	Kununurra	14.99	120	Pn	Pn	23 13 49.2	-2.4
KNRA	Kununurra	14.99	120	P	Pn	23 13 50.1	-1.5
BTDF	Bukit Timah Da	15.09	310	P	P	23 13 58.6	+3.7
BNDI	Bandanaira	15.10	76	P	P	23 13 57.4	+2.4
BNDI	Bandanaira	15.10	76	P	P	23 13 56.1	+1.1
	2µm,0.6s,24µm17µm						
TNTI	Ternate	15.21	53		P	23 13 57.1	+0.8
TNTI	Ternate	15.21	53	P	P	23 13 58.9	+2.6
	412nm,1.8s						
TNTI	Ternate	15.21	53	P	P	23 13 58.3	+2.0
	415nm,1.8s,7µm3µm						
MYKOM	Kota Tinggi	15.31	312	P	Pn	23 13 55.9	+0.3
SDSI	Sungai Dareh	15.70	298	P	P	23 14 01.7	0.0
	230nm,1.5s,5µm11µm						
SAUI	Saumlaki	15.89	89	Pn	Pn	23 13 59.4	-3.5
SAUI	Saumlaki	15.89	89	P	Pn	23 14 03.2	+0.3
SAUI	Saumlaki	15.89	89	P	Pn	23 14 00.8	-2.1
	936nm,0.6s,14µm8µm						
SGSI	Sangihe	15.89	41	P	P	23 14 08.4	+4.6
	269nm,1.0s,17µm						
MTN	Manton Dam	16.18	107	P	Pn	23 14 04.0	-2.3
	baz=16,SNR=786						
MTN	Manton Dam	16.18	107	Pn	Pn	23 14 03.7	-2.6
MTN	Manton Dam	16.18	107	P	Pn	23 14 05.7	-0.7
PPSI	Pulau Pagai	16.21	290	P	Pn	23 14 05.8	-0.9
	583nm,0.6s,12µm						
PDSI	Padang	16.56	296	P	Pn	23 14 11.0	-0.1
	243nm,0.6s,7µm12µm						
BKNI	Bangkinang	16.68	301		Pn	23 14 12.4	0.0
BKNI	Bangkinang	16.68	301	P	P	23 14 17.9	+5.4
BKNI	Bangkinang	16.68	301	P	P	23 14 15.6	+3.1
	277nm,0.7s,12µm12µm						
KDU	Kakadu	17.42	105	P	P	23 14 19.5	-1.1
	baz=17,SNR=151						
KDU	Kakadu	17.42	105	P	P	23 14 19.8	-0.9
GSPH	General Santos	17.46	34	*e*P	Pn	23 14 27.9	+6.0
SKMP	Bagumbayan, Su	17.60	32	⇓*e*P	Pn	23 14 26.7	+3.1
SWI	Sorong	17.68	65	P	Pn	23 14 24.8	+0.3
	808nm,1.3s,10µm8µm						
JRMM	Jerantut	17.74	314	P	Pn	23 14 30.0	+4.7
FAKI	Fak Fak	17.81	73	P	P	23 14 24.3	-0.6
FAKI				ScP	ScP	23 22 19.9	+0.9
FAKI	Fak Fak	17.81	73	P	P	23 14 24.6	-0.3
	582nm,0.9s,8µm6µm						
CTBH	Cotabato--PC H	18.05	30	⇑*i*P	Pn	23 14 32.2	+3.4
MEEK	Meekatharra	18.28	170	P	Pn	23 14 31.2	-0.3
	baz=18,SNR=467						
MEEK	Meekatharra	18.28	170	P	P	23 14 30.4	+0.4
KCP	Kidapawan	18.30	33	⇑*i*P	Pn	23 14 35.2	+3.2
KCP				*e*S	Sn	23 17 58.6	+1.2
COCO	West Island	18.47	257	P	P	23 14 32.6	+0.5
COCO	West Island	18.47	257	P	P	23 14 32.6	+0.5
PPR	Puerto Princes	18.53	11	⇑*i*P	Pn	23 14 37.8	+3.3
DAV	Davao City (W)	18.62	34	P	P	23 14 33.4	-0.4
	119nm,0.4s,baz=238,slow=17,SNR=1.3						
DAV				S	Sn	23 18 02.3	-2.6
	63nm,0.3s,baz=304,slow=19,SNR=1.2						
DAV	Davao City (W)	18.62	34	P	P	23 14 33.1	-0.6
DAV	Davao City (W)	18.62	34	P	Pn	23 14 40.0	+4.4
PBSI	Pulau Batu	18.89	296	P	P	23 14 37.5	+0.7
	312nm,1.1s,12µm						
MATI	Mati	18.90	36	⇓*e*P	Pn	23 14 43.4	+4.5
IPM	Ipoh	19.20	312	P	P	23 14 41.1	+1.0
IPM	Ipoh	19.20	312	P	Pn	23 14 46.6	+4.1
LSIP	Lazi, Siquijor	19.44	26	⇓*e*P	Pn	23 14 46.1	+0.9
SNPH	Sibulan	19.47	24	*e*P	Pn	23 14 47.4	+1.8
CNOP	Candoni, Negro	19.68	22	⇑*e*P	Pn	23 14 49.5	+1.5
RPSI	Rantau Prapat	19.74	304	P	P	23 14 45.5	-0.4
PSI	Prapat	19.80	304	P	P	23 14 45.5	-1.2
BIPH	Bislig	19.97	34	⇑*e*P	Pn	23 14 50.0	-1.5

KULM	Kulim	20.02	313	P	P	23 14 48.6	-0.4
RKPI	Ransiki, Papua	20.10	71	P	P	23 14 51.0	+1.2
	755nm,0.7s,8µm6µm						
GSI	Gunungsitoli	20.15	298	P	P	23 14 48.6	-1.8
GSI				ScP	ScP	23 22 25.4	+1.2
GSI	Gunungsitoli	20.15	298	P	Pn	23 14 56.2	+2.6
	108nm,0.7s						
GSI	Gunungsitoli	20.15	298	P	P	23 14 49.2	-1.2
	107nm,0.6s,5µm9µm						
GHBP	Garcia Hernand	20.19	27	⇑iP	Pn	23 14 54.0	0.0
GUIM	Jordan	20.40	21	⇓eP	Pn	23 14 56.8	+0.4
MORW	Morawa	20.43	178	P	P	23 14 54.3	+1.0
	baz=20,SNR=96						
MORW	Morawa	20.43	178	P	P	23 14 51.7	-1.6
MORW	Morawa	20.43	178	P	P	23 14 54.7	+1.4
TSI	Tuntungan	20.49	305	P	Pn	23 14 55.9	-1.7
	598nm,0.9s,9µm8µm						
WRKA	Warakurna	20.59	144	P	P	23 14 55.8	+0.8
	baz=21,SNR=182						
WRKA	Warakurna	20.59	144	P	P	23 14 56.0	+1.0
LLP	Lapu-Lapu	20.65	25	⇓eP	Pn	23 14 58.2	-1.3
LLP				eS	S	23 18 42.2	+2.9
SCPH	Surigao	20.86	29	⇑eP	Pn	23 15 01.6	-0.4
MSLP	Maasin	20.88	27	⇓eP	P	23 14 59.8	+1.7
KCSI	Kotacane, Aceh	21.15	304	P	P	23 15 01.5	+0.3
	163nm,0.6s,2µm						
GLSP	General Luna,	21.18	31	⇑eP	P	23 15 04.0	+2.5
RCP	Roxas	21.32	21	⇓eP	P	23 15 05.8	+2.9
DLV	T Lat	21.43	342	P	P	23 15 09.7	+5.4
	77nm,1.4s						
WB0	Warramunga Arr	21.63	123	P	P	23 15 04.1	-2.2
WRA	Warramunga Arr	21.67	124	P	P	23 15 06.2	-0.4
	50nm,0.5s,baz=297,slow=12,SNR=532						
WRA				S	S	23 18 54.6	-3.8
	107nm,1.2s,baz=301,slow=20,SNR=25						
WRA				ScP	ScP	23 22 27.8	0.0
	22nm,0.9s,baz=292,slow=2.9,SNR=5.0						
WRA				P3KPbc		23 48 55.4	
	0.7nm,0.6s,baz=120,slow=4.0,SNR=8.5						
	50nm,0.5s						
WRA	Warramunga Arr	21.67	124	P	P	23 15 05.2	-1.4
WRAB	Tennant Creek	21.67	124	P	P	23 15 05.6	-1.1
WRAB	Tennant Creek	21.67	124	P	P	23 15 06.7	0.0
WRAB	Tennant Creek	21.67	124	d iP	P	23 15 06.2	-0.5
WRAB				pmax	pmax		
	comp=Z,111nm,1.0s						
WB2	Warramunga Arr	21.68	124	P	P	23 15 05.2	-1.6
SNSI	Sinabang, Aceh	21.78	299	P	P	23 15 10.7	+2.9
	comp=Z,429nm,1.1s						
OTRP	Odiongan	21.83	18	⇑eP	P	23 15 11.4	+3.0
SRPI	Serui, Papua	21.92	74	P	P	23 15 10.6	+1.3
	comp=Z,295nm,0.6s,comp=Z,4µm						
BLDU	Ballidu	22.00	177	P	P	23 15 10.9	+0.9
	baz=22,SNR=303						
BLDU	Ballidu	22.00	177	P	P	23 15 11.1	+1.1
MLSI	Meulaboh, Aceh	22.70	303	P	P	23 15 18.2	+1.2
	comp=Z,293nm,0.6s,comp=Z,5µm						
LHMI	Lhok Sumawe	22.81	306	P	P	23 15 18.6	+0.6
LHMI	Lhok Sumawe	22.81	306	P	P	23 15 19.4	+1.3
	comp=Z,856nm,0.9s,comp=Z,8µmcomp=Z,9µm						
CNP	Catarman	22.91	24	⇓eP	P	23 15 22.0	+3.0
KLBR	Kellerberrin	23.05	175	P	P	23 15 21.0	+0.8
	baz=23,SNR=44						
KLBR	Kellerberrin	23.05	175	P	P	23 15 20.8	+0.6
SRIT	Nakonsritamara	23.09	317	P	P	23 15 21.4	+0.7
MTKN	Mount Kenneth	23.28	179	P	P	23 15 24.9	+2.6
MUN	Mundaring	23.34	178	P	P	23 15 24.4	+1.6
	baz=23,SNR=41						
MUN	Mundaring	23.34	178	P	P	23 15 24.4	+1.6
AS31	Alice Springs	23.35	132	P	P	23 15 23.3	+0.2
ASAR	Alice Springs	23.35	132	P	P	23 15 24.1	+1.0
	comp=Z,105nm,0.7s,baz=306,slow=8.8,SNR=692						
ASAR				PcP	PcP	23 19 07.0	+0.8
	comp=Z,20nm,0.6s,baz=303,slow=1.6,SNR=5.6						
ASAR				S	S	23 19 23.4	-2.6
	comp=Z,4.4nm,0.7s,baz=317,slow=20,SNR=1.2						
ASAR				ScP	ScP	23 22 32.5	+0.3
	comp=Z,22nm,1.0s,baz=316,slow=3.5,SNR=7.8						
	comp=Z,105nm,0.7s						
ASAR	Alice Springs	23.35	132	P	P	23 15 23.3	+0.2
ASAR				PcP	PcP	23 19 07.0	+0.8
ASAR				ScP	ScP	23 22 30.7	-1.5
AS01	Alice Springs	23.38	132	P	P	23 15 24.2	+0.8
KMBL	Kambalda	23.54	166	P	P	23 15 25.3	+0.6
	baz=24,SNR=54						
KMBL	Kambalda	23.54	166	P	P	23 15 25.2	+0.6
SMPI	Sarmi	24.24	76	P	P	23 15 32.0	+0.8
	comp=Z,215nm,1.1s,comp=Z,7µmcomp=Z,5µm						
NWAO	Narrogin (SRO)	24.33	176	P	P	23 15 33.2	+1.4
	comp=Z,311nm,0.8s,baz=347,slow=7.0,SNR=109						
NWAO				S	S	23 19 39.8	-1.7
	comp=Z,16nm,0.5s,baz=306,slow=14,SNR=1.5						
	comp=Z,311nm,0.8s						
NWAO	Narrogin (SRO)	24.33	176	P	P	23 15 33.2	+1.4
	baz=24,SNR=95						
NWAO				P	P	23 15 33.2	+1.4
	baz=24,SNR=95						
NWAO	Narrogin (SRO)	24.33	176	P	P	23 15 31.6	-0.3
NWAO	Narrogin (SRO)	24.33	176	P	P	23 15 33.1	+1.2
NWAO	Narrogin (SRO)	24.33	176	P	P	23 15 33.4	+1.5
FORT	Forrest	25.15	153	P	P	23 15 40.4	+1.1
	baz=25,SNR=154						
FORT	Forrest	25.15	153	P	P	23 15 39.6	+0.3
FORT	Forrest	25.15	153	P	P	23 15 40.2	+0.9
GENI	Genyem	25.48	78	P	P	23 15 44.2	+1.7
GENI	Genyem	25.48	78	P	P	23 15 43.3	+0.8
	comp=Z,222nm,0.7s,comp=Z,6µmcomp=Z,3µm						
RKGY	Rocky Gully	25.99	177	P	P	23 15 48.7	+1.9
	baz=26,SNR=80						
RKGY	Rocky Gully	25.99	177	P	P	23 15 48.7	+1.9
QIS	Mount Isa	26.38	120	P	P	23 15 51.7	+1.1
	baz=26,SNR=31						
QIS	Mount Isa	26.38	120	P	P	23 15 52.7	+2.1
OOD	Oodnadatta	27.19	137	P	P	23 15 58.7	+1.0
MULG	Mulgathing	27.88	143	P	P	23 16 04.7	+0.9
COEN	Coen	27.90	104	P	P	23 16 05.2	+1.0
	baz=28,SNR=72						
COEN	Coen	27.90	104	P	P	23 16 04.1	-0.1
COEN				IAmb	IAmb	23 16 50.4	
	comp=Z,94nm,0.8s						
COEN	Coen	27.90	104	P	P	23 16 05.7	+1.5
QIZ	Qiongzhong	27.91	349	P	P	23 16 06.6	+2.4
QIZ				pP	pP	23 16 30.8	-1.7
QIZ				S	S	23 20 40.9	+2.7
QIZ				sS	sS	23 21 28.3	-0.1
QIZ				pmax	pmax		
	comp=Z,42nm,1.0s						
QIZ				pmax	pmax		
	comp=Z,240nm,4.1s						
QIZ				LR	LR		
	comp=Z,980nm,15.6s						
QIZ				LR	LR		
	comp=Z,450nm,20.2s						
QIZ				LR	LR		
	comp=Z,920nm,18.4s						
QIZ	Qiongzhong	27.91	349	P	P	23 16 05.2	+1.1
MTSU	Mount Surprise	29.80	112	P	P	23 16 22.8	+1.8
	baz=30,SNR=76						
MTSU	Mount Surprise	29.80	112	P	P	23 16 23.0	+1.9
PBA	Port Blair	30.06	312	P	P	23 16 23.3	0.0
PBA				IAmb	IAmb	23 16 26.3	
	comp=Z,81nm,0.6s						
PBA				PcP	PcP	23 19 23.5	+1.4
PBA	Port Blair	30.06	312	P	P	23 16 24.1	+0.8
LCRK	Leigh Creek	30.59	139	P	P	23 16 29.0	+1.2
PHRA	Phrae	30.69	331	P	P	23 16 30.4	+1.7
PHRA				PcP	PcP	23 19 25.5	+1.8
PHRA				ScP	ScP	23 22 55.2	+1.1
INKA	Innaminka	30.73	132	P	P	23 16 31.1	+2.1
BBOO	Buckleboo	30.89	144	P	P	23 16 31.0	+0.6
	baz=31,SNR=65						
BBOO	Buckleboo	30.89	144	P	P	23 16 29.6	-0.8
BBOO				IAmb	IAmb	23 16 33.0	
	comp=Z,95nm,0.8s						
BBOO				PcP	PcP	23 19 24.3	+0.2
BBOO	Buckleboo	30.89	144	P	P	23 16 31.2	+0.8
DGPR	DIGLIPUR	30.94	314	eP	P	23 16 30.8	-0.1
DGPR				IAmb	IAmb	23 16 35.5	
	comp=Z,145nm,0.8s						
CM31	Chiang Mai Arr	31.29	329	P	P	23 16 36.0	+2.0
CM31				PcP	PcP	23 19 26.8	+1.5
CM31	Chiang Mai Arr	31.29	329	P	P	23 16 36.2	+2.2
	SNR=20						
CMAR	Chiang Mai Arr	31.29	329	P	P	23 16 35.7	+1.7
	comp=Z,35nm,0.9s,baz=158,slow=7.3,SNR=108						
CMAR				PcP	PcP	23 19 26.8	+1.5
	comp=Z,19nm,0.7s,baz=183,slow=3.0,SNR=13						
CMAR				ScP	ScP	23 22 57.3	+1.2
	comp=Z,16nm,0.8s,baz=180,slow=3.0,SNR=18						
CMAR				LR	LR	23 30 31.0	
	comp=Z,1µm,19.5s,baz=145,slow=39						
CMAR				P3KPbc		23 48 13.2	
	comp=Z,2.9nm,0.3s,baz=317,slow=6.2,SNR=10						
CMAR	Chiang Mai Arr	31.29	329	P	P	23 16 35.6	+1.7
CMAR					PcP	23 19 25.9	+0.6
CMAR				ScP	ScP	23 22 57.0	+0.9
PMG	Port Moresby	31.52	94	P	P	23 16 37.2	+1.0
	comp=Z,15nm,0.5s,baz=246,slow=6.3,SNR=6.2						
PMG				S	S	23 21 32.6	-2.4
	comp=Z,8.6nm,0.4s,baz=174,slow=21,SNR=1.4						
PMG				LR	LR	23 30 45.6	
	comp=Z,965nm,19.6s,baz=300,slow=39						
	comp=Z,15nm,0.5s						
PMG	Port Moresby	31.52	94	P	P	23 16 35.2	-1.0
PMG				ScP	ScP	23 22 56.9	-0.1
PMG	Port Moresby	31.52	94	P	P	23 16 40.5	+4.3
	comp=Z,27nm,0.7s						
PMG	Port Moresby	31.52	94	d iP	P	23 16 37.0	+0.8
PMG				pmax	pmax		
	comp=Z,17nm,0.7s						
CHTO	Chiang Mai	31.59	329	P	P	23 16 37.6	+0.9
CHTO				PcP	PcP	23 19 27.7	+1.6
CHTO				ScP	ScP	23 22 57.9	+0.8
WHYH	Whyalla	31.94	143	P	P	23 16 41.0	+1.4
CTA	Charters Tower	32.09	114	P	P	23 16 43.1	+1.9
	comp=Z,35nm,0.7s,baz=275,slow=11,SNR=43						
CTA				S	S	23 21 42.8	-1.0
	comp=Z,9.5nm,1.0s,baz=163,slow=21,SNR=9.1						
CTA				ScP	ScP	23 22 58.6	-0.3
	comp=Z,16nm,0.9s,baz=323,slow=7.3,SNR=5.0						
CTA				LR	LR	23 29 30.5	
	comp=Z,731nm,20.8s,baz=324,slow=36						
	comp=Z,35nm,0.7s						
CTA	Charters Tower	32.09	114	P	P	23 16 43.3	+2.1
CTAO	Charters Tower	32.09	114	P	P	23 16 41.4	+0.2
CTAO				ScP	ScP	23 22 59.9	+1.0
CTAO	Charters Tower	32.09	114	P	P	23 16 43.4	+2.2
CTAO	Charters Tower	32.09	114	P	P	23 16 42.7	+1.5
CTAO				pP	pP	23 17 09.9	+0.1
CRAI	Chiangrai	32.12	333	P	P	23 16 42.9	+1.6
CRAI				PcP	PcP	23 19 28.6	+1.1
CRAI				ScP	ScP	23 22 59.7	+0.8
YULB	Yu-li	32.29	10	ScP	ScP	23 22 58.8	-0.6
PTPS	Port Pirie	32.29	143	P	P	23 16 44.5	+1.9
TV1H	Townsville Har	32.36	113	P	P	23 16 46.4	+2.9
	comp=Z,29nm,0.7s						
SSLB	Suanglung	32.61	10	P	P	23 16 44.8	-0.8
SSLB				ScP	ScP	23 23 00.6	+0.1
SSLB	Suanglung	32.61	10	P	P	23 16 53.9	+8.3
	comp=Z,56nm,1.5s						
QLP	Quilpie	32.81	127	P	P	23 16 49.4	+2.0
	baz=33,SNR=18						
QLP	Quilpie	32.81	127	P	P	23 16 49.5	+2.1
HTT	Hallett	33.03	142	P	P	23 16 50.5	+1.4
	baz=33,SNR=44						
HTT	Hallett	33.03	142	P	P	23 16 50.7	+1.5
NACB	Ninganchiao	33.10	11	P	P	23 16 49.8	0.0
NACB				IAmb	IAmb	23 17 34.4	
	comp=Z,128nm,1.6s						
YHNB	Yeheng	33.55	10	P	P	23 16 53.8	+0.1
STKA	Stephens Creek	33.73	137	P	P	23 16 56.6	+1.3
	comp=Z,36nm,0.4s,baz=311,slow=9.0,SNR=102						
STKA				PcP	PcP	23 19 32.4	+0.5
	comp=Z,46nm,0.6s,baz=324,slow=5.8,SNR=5.0						
STKA				LR	LR	23 30 54.2	
	comp=Z,1µm,21.8s,baz=291,slow=36						
	comp=Z,36nm,0.4s						
STKA	Stephens Creek	33.73	137	P	P	23 16 56.5	+1.3
	baz=34,SNR=57						
STKA	Stephens Creek	33.73	137	P	P	23 16 55.6	+0.3
STKA				PcP	PcP	23 19 32.6	+0.7
STKA	Stephens Creek	33.73	137	P	P	23 16 56.6	+1.3
STKA	Stephens Creek	33.73	137	c iP	P	23 16 55.4	+0.1
KMI	Kunming	35.61	340	⇓P	P	23 17 15.4	+3.7
KMI				pP	pP	23 17 44.0	+3.3
KMI				S	S	23 22 40.8	+2.5
KMI				ScP	ScP	23 23 13.4	+2.0
KMI				sS	sS	23 23 29.8	+0.5
KMI				pmax	pmax		
	comp=Z,37nm,1.0s						
KMI				pmax	pmax		
	comp=Z,660nm,6.1s						
KMI				LR	LR		
	comp=Z,1µm,23.8s						
KMI				LR	LR		
	comp=Z,2µm,17.0s						
KMI				LR	LR		
	comp=Z,2µm,16.8s						
GYA	Guiyang	35.78	347	⇓iP	P	23 17 15.4	+2.4
GYA				pP	pP	23 17 44.8	+2.8
GYA				PP	PnPn	23 18 41.6	+3.8
GYA				PcP	PcP	23 19 40.1	+2.1
GYA				S	S	23 22 42.0	+1.4
GYA				ScP	ScP	23 23 14.8	+2.9
GYA				ScS	ScS	23 27 18.9	+1.4
GYA				pmax	pmax		
	comp=Z,57nm,0.8s						
GYA				LR	LR		
	comp=Z,1µm,19.0s						
GYA				LR	LR		
	comp=Z,1µm,14.8s						
GYA				LR	LR		
	comp=Z,2µm,18.6s						
CMSA	Cobar Meteorol	36.40	133	P	P	23 17 20.5	+2.4
	baz=36,SNR=25						
CMSA	Cobar Meteorol	36.40	133	P	P	23 17 20.6	+2.5
RMQ	Roma	36.43	124	P	P	23 17 21.2	+2.7
	baz=36,SNR=16						
RMQ	Roma	36.43	124	P	P	23 17 21.0	+2.5
CNSH	ChangSha	36.58	357	⇑P	P	23 17 22.1	+2.5
CNSH				pP	pP	23 17 50.8	+2.2
CNSH				S	S	23 22 55.3	+2.9
CNSH				pmax	pmax		
	comp=Z,79nm,0.8s						
CNSH				LR	LR		
	comp=Z,830nm,12.8s						
CNSH				LR	LR		
	comp=Z,1µm,15.3s						
CNSH				LR	LR		
	comp=Z,940nm,23.0s						
GUMO	Guam	36.72	53	P	P	23 17 20.4	-0.5
	comp=Z,240nm,0.5s,baz=173,slow=13,SNR=18						
	comp=Z,240nm,0.5s						
GUMO	Guam	36.72	53	P	P	23 17 20.2	-0.8
GUMO	Guam	36.72	53	P	P	23 17 20.2	-0.8
GUMO				pmax	pmax		
	comp=Z,274nm,0.6s						
KRVT	Keravat (AS076	36.77	86	LR	LR	23 34 48.5	
	comp=Z,356nm,21.7s,baz=40,slow=40						
ARPS	Mount Arapiles	37.05	143	P	P	23 17 25.2	+1.7
	baz=37,SNR=35						
ARPS	Mount Arapiles	37.05	143	P	P	23 17 25.4	+1.9
TNCH	TengChong	37.14	334	⇓P	P	23 17 27.8	+3.2
TNCH				pP	pP	23 17 54.8	+1.0
TNCH				sP	sP	23 18 08.6	-0.3
TNCH				PP	PnPn	23 18 57.6	+3.4
TNCH				PcP	PcP	23 19 43.8	+1.6
TNCH				S	S	23 23 05.8	+4.3
TNCH				ScP	ScP	23 23 19.1	+2.1
TNCH				sS	sS	23 23 53.3	+0.6
TNCH				SS	SS	23 25 45.3	-4.6
TNCH				ScS	ScS	23 27 26.0	+0.7
TNCH				pmax	pmax		
	comp=Z,56nm,1.0s						
TNCH				pmax	pmax		
	comp=Z,700nm,4.3s						
TNCH				LR	LR		
	comp=Z,970nm,13.1s						
TNCH				LR	LR		
	comp=Z,850nm,13.8s						
TNCH				LR	LR		
	comp=Z,2µm,21.5s						
PZH	PanZhiHua	37.23	340	P	P	23 17 27.4	+2.1
PZH				pP	pP	23 17 56.4	+2.0
PZH				PcP	PcP	23 19 43.8	+1.4
PZH				S	S	23 23 03.0	+0.4
PZH				ScP	ScP	23 23 17.4	+0.1
PZH				PcS	PcS	23 23 30.3	-0.8
PZH				ScS	ScS	23 27 24.3	-1.3
PZH				pmax	pmax		
	comp=Z,30nm,0.8s						
PZH				pmax	pmax		
	comp=Z,550nm,6.4s						
PZH				LR	LR		
	comp=Z,960nm,19.5s						
PZH				LR	LR		
	comp=Z,1µm,17.8s						
PZH				LR	LR		
	comp=Z,1µm,20.6s						
JOW	Kunigami	37.37	19	P	P	23 17 25.9	-0.4
	comp=Z,34nm,0.7s,baz=254,slow=6.8,SNR=6.5						
JOW				ScP	ScP	23 23 19.0	+1.4
	comp=Z,43nm,0.8s,baz=184,slow=3.1,SNR=4.6						
JOW				LR	LR	23 34 12.8	
	comp=Z,687nm,21.0s,baz=176,slow=38						
	comp=Z,34nm,0.7s						
JOW	Kunigami	37.37	19	IAmb	IAmb	23 18 14.1	
	comp=Z,70nm,1.1s						
GD1S	Gladstone Soft	37.56	118	P	P	23 17 30.8	+2.8
SAIH	SAIHA	37.78	325	eP	P	23 17 31.5	+1.5
PALK	Pallekele	37.85	294	P	P	23 17 29.8	-0.9
PALK				IAmb	IAmb	23 17 33.0	
	comp=Z,75nm,1.0s						
PALK	Pallekele	37.85	294	P	P	23 17 29.8	-0.9
PALK				pmax	pmax		
	comp=Z,75nm,1.0s						
PALK	Pallekele	37.85	294	P	P	23 17 31.6	+0.9
EIDS	Eidsvold	37.97	121	P	P	23 17 33.1	+1.6
	baz=38,SNR=8.7						
EIDS	Eidsvold	37.97	121	P	P	23 17 32.0	+0.5
EIDS	Eidsvold	37.97	121	P	P	23 17 33.6	+2.1
BRAT	Ballarat	38.81	143	P	P	23 17 41.9	+3.6
	comp=Z,34nm,0.8s						
WHN	Wuhan	38.87	359	⇑P	P	23 17 41.9	+3.1
WHN				pP	pP	23 18 12.3	+4.2
WHN				ScP	S	23 23 25.1	-1.9
WHN				S	ScP	23 23 29.6	+6.4
WHN				ScS	ScS	23 27 34.4	-0.2
WHN				pmax	pmax		
	comp=Z,110nm,0.9s						
WHN				LR	LR		
	comp=Z,3µm,15.0s						
AUDCS	Dubbo College	38.90	132	P	P	23 17 39.8	+0.7
	comp=Z,55nm,1.0s						
ENH	Enshi	38.99	352	P	P	23 17 40.0	+0.2
ENH				IAmb	IAmb	23 18 15.6	
	comp=Z,65nm,0.8s						
ENH				ScP	ScP	23 23 24.6	+0.8
ENH	Enshi	38.99	352	P	P	23 17 40.7	+0.8
ENH				pP	pP	23 18 10.6	+1.5
IMP	Imphal	39.14	328	eP	P	23 17 42.4	+1.1
IMP				IAmb	IAmb	23 17 43.6	
	comp=Z,70nm,0.8s						
GEXS	Deakin Univers	39.45	143	P	P	23 17 47.2	+3.6
TOO	Toolangi	39.78	141	P	P	23 17 49.6	+3.2
	baz=40,SNR=14						
TOO	Toolangi	39.78	141	P	P	23 17 48.4	+1.9
TOO				IAmb	IAmb	23 17 51.7	
	comp=Z,107nm,1.1s						
TOO	Toolangi	39.78	141	P	P	23 17 49.4	+3.0
TOO	Toolangi	39.78	141	P	P	23 17 48.4	+1.9
TOO				pmax	pmax		
	comp=Z,107nm,1.1s						
KOHI	KOHIMA	39.79	329	eP	P	23 17 47.5	+0.8
KOHI				IAmb	IAmb	23 17 49.9	
	comp=Z,87nm,0.7s						
YNG	Young	39.79	135	P	P	23 17 48.9	+2.3
SSE	Sheshan	39.82	8	P	P	23 17 48.0	+1.3
SSE				pP	pP	23 18 19.0	+3.0
SSE				S	S	23 23 43.4	+2.2
SSE				pmax	pmax		
	comp=Z,33nm,0.9s						
SSE				pmax	pmax		
	comp=Z,170nm,4.7s						
SSE				LR	LR		
	comp=Z,280nm,19.9s						
MOKO	MOKOCHONG	40.08	330	eP	P	23 17 50.3	+1.1
MOKO				IAmb	IAmb	23 17 56.7	
	comp=Z,100nm,0.7s						
LKP	Lekhapani	40.32	333	eP	P	23 17 52.6	+1.7
ARMA	Armidale	40.34	128	P	P	23 17 54.4	+3.1
	baz=40,SNR=14						
ARMA	Armidale	40.34	128	P	P	23 17 50.8	-0.5
ARMA				IAmb	IAmb	23 17 57.1	
	comp=Z,127nm,1.6s						
ARMA					ScP	23 23 30.2	+0.9
ARMA	Armidale	40.34	128	P	P	23 17 54.6	+3.3
NJ2	Nanjing	40.51	5	⇓iP	P	23 17 55.3	+2.9
NJ2				PP	PP	23 19 27.5	-1.1
NJ2				PcP	PcP	23 19 59.4	+7.0
NJ2				S	S	23 23 51.3	-0.2
NJ2				pmax	pmax		
	comp=Z,34nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,1µm,5.1s						
NJ2				LR	LR		
	comp=Z,810nm,14.5s						
NJ2				LR	LR		
	comp=Z,520nm,10.8s						
NJ2				LR	LR		
	comp=Z,1µm,16.5s						
CD2	Chengdu	40.75	345	P	P	23 17 55.4	+1.0
CD2				pP	pP	23 18 22.3	-1.7
CD2				sP	sP	23 18 37.0	-2.0
CD2				PP	PnPn	23 19 33.9	-2.7
CD2				S	S	23 23 53.3	-1.9
CD2				sS	sS	23 24 46.1	-0.9
CD2				SS	SS	23 27 05.5	+3.9
CD2				pmax	pmax		
	comp=Z,160nm,0.8s						
CD2				pmax	pmax		
	comp=Z,530nm,5.7s						
CD2				LR	LR		
	comp=Z,640nm,12.0s						
CD2				LR	LR		
	comp=Z,970nm,13.9s						
CD2				LR	LR		
	comp=Z,1µm,11.8s						
BWNR	Bhubaneshwar	40.75	315	eP	P	23 17 56.0	+1.5
CAN	Canberra	40.76	136	P	P	23 17 55.2	+0.6
CAN				IAmb	IAmb	23 17 59.3	
	comp=Z,74nm,1.0s						
CAN	Canberra	40.76	136	P	P	23 17 57.3	+2.7
CAN	Canberra	40.76	136	P	P	23 17 55.2	+0.6
CAN				pmax	pmax		
	comp=Z,74nm,1.0s						
SHL	Shillong	40.83	327	P	P	23 17 55.6	+0.3
SHL				PcP	PcP	23 19 54.5	+0.6
SHL				ScP	ScP	23 23 31.6	+0.3
SHL	Shillong	40.83	327	eP	P	23 17 56.4	+1.0
SHL				IAmb	IAmb	23 17 57.8	
	comp=Z,165nm,0.8s						
SHL	Shillong	40.83	327	P	P	23 17 56.8	+1.5
	SNR=84						
VIS	Vishakhapatnam	40.93	310	eP	P	23 17 57.1	+1.1
CNB	Canberra Magne	41.01	136	P	P	23 17 58.8	+2.2
ITAN	ITANAGAR	41.16	330	eP	P	23 17 59.3	+1.5
TEZP	TEZPUR	41.19	329	eP	P	23 17 58.8	+0.8
TEZP				IAmb	IAmb	23 18 01.0	
	comp=Z,53nm,0.8s						
SYDH	Sydney Hard Ro	41.19	133	P	P	23 18 01.3	+3.2
MGCD	Mangrove Creek	41.20	132	P	P	23 18 01.1	+3.0
	baz=41,SNR=12						
MGCD	Mangrove Creek	41.20	132	P	P	23 18 01.1	+3.0
ZIRO	ZIRO	41.41	331	eP	P	23 18 02.6	+2.5
GUWA	GUWAHATI	41.43	327	eP	P	23 18 02.2	+2.2
GUWA				IAmb	IAmb	23 18 03.5	
	comp=Z,88nm,0.8s						
WOLH	Wollongong Har	41.61	134	P	P	23 18 05.1	+3.7
	comp=Z,72nm,0.8s						
SALM	Salem	41.95	298	eP	P	23 18 05.2	+0.8
SALM				IAmb	IAmb	23 18 06.5	
	comp=Z,62nm,1.2s						
KOD	Kodaikanal	41.98	296	eP	P	23 18 05.5	+0.4
VJD	Vijayawada	42.33	306	eP	P	23 18 08.6	+1.1
DGAR	Diego Garcia	42.38	268	P	P	23 18 08.7	+0.7
DGAR	Diego Garcia	42.38	268	P	P	23 18 08.7	+0.7
DGAR				pmax	pmax		
	comp=Z,756nm,1.8s						
TAWA	Tawang	42.46	329	eP	P	23 18 10.6	+1.8
XAN	Xi'an	42.77	352	⇑iP	P	23 18 11.6	+0.7
XAN				pP	pP	23 18 40.4	-0.2
XAN				ScP	ScP	23 23 39.8	+1.2
XAN				S	S	23 24 20.8	-4.1
XAN				sS	sS	23 25 19.6	+2.5

XAN				pmax	pmax		
	comp=Z,36nm,0.8s						
XAN				pmax	pmax		
	comp=Z,840nm,5.9s						
XAN				LR	LR		
	comp=Z,690nm,14.4s						
XAN				LR	LR		
	comp=Z,600nm,20.6s						
XAN				LR	LR		
	comp=Z,2µm,19.6s						
LYN	**LuoYang**	**42.94**	**357**	⇓*i*P	**P**	**23 18 13.5**	**+1.4**
LYN				pP	pP	23 18 44.8	+2.9
LYN				sP	sP	23 19 01.3	+4.5
LYN				ScP	**ScP**	**23 23 39.3**	**+0.1**
LYN				S	**S**	**23 24 22.6**	**-4.6**
LYN				sS	sS	23 25 23.8	+4.4
LYN				SS	**SS**	**23 27 37.3**	**-7.1**
LYN				pmax	pmax		
	comp=Z,47nm,0.6s						
LYN				pmax	pmax		
	comp=Z,290nm,6.2s						
KAAM	**Kaadhehdhoo**	**43.05**	**280**	P	**P**	**23 18 15.8**	**+2.4**
PCHI	**Peechi**	**43.11**	**295**	*e*P	**P**	**23 18 14.2**	**+0.4**
MOO	**Moorlands**	**43.90**	**146**	P	**P**	**23 18 22.7**	**+2.9**
	baz=44,SNR=7.8						
MOO	**Moorlands**	**43.90**	**146**	P	**P**	**23 18 22.5**	**+2.6**
JCJ	**Chichijima**	**44.01**	**36**	P	**P**	**23 18 19.5**	**-1.4**
	comp=Z,45nm,0.3s,baz=280,slow=22,SNR=1.4						
JCJ				LR	LR	23 37 43.6	
	comp=Z,92nm,21.9s,baz=290,slow=37						
	comp=Z,45nm,0.3s						
GTK	**Tadong**	**44.02**	**325**	*e*P	**P**	**23 18 22.8**	**+1.7**
GTK				IAmb	IAmb	23 18 24.0	
	comp=Z,122nm,1.2s						
JNU	**Nakatsue**	**44.02**	**19**	P	**P**	**23 18 20.1**	**-0.8**
	comp=Z,24nm,0.9s,baz=218,slow=3.7,SNR=9.8						
	comp=Z,24nm,0.9s						
HNR	**Honiara**	**44.14**	**95**	P	**P**	**23 18 23.0**	**+0.9**
	comp=Z,6µm,0.8s,baz=204,slow=2.6,SNR=7.5						
HNR				S	**S**	**23 24 42.6**	**-2.7**
	comp=Z,1µm,0.4s,baz=93,slow=22,SNR=8.3						
HNR	**Honiara**	**44.14**	**95**	P	**P**	**23 18 21.8**	**-0.3**
HNR	**Honiara**	**44.14**	**95**	P	**P**	**23 18 24.2**	**+2.1**
	comp=Z,454nm,0.8s						
HNR	**Honiara**	**44.14**	**95**	P	**P**	**23 18 21.8**	**-0.3**
HNR				pmax	pmax		
	comp=Z,418nm,0.8s						
TAU	**Tasmania Unive**	**44.28**	**146**	P	**P**	**23 18 22.9**	**+0.1**
TAU				IAmb	IAmb	23 18 27.8	
	comp=Z,134nm,1.5s						
TAU	**Tasmania Unive**	**44.28**	**146**	P	**P**	**23 18 22.9**	**+0.1**
TAU				pmax	pmax		
	comp=Z,134nm,1.5s						
ODAN	**Odare**	**44.37**	**323**	*e*P	**P**	**23 18 24.9**	**+0.9**
HYB	**Hyderabad**	**44.50**	**306**	*e*P	**P**	**23 18 25.2**	**+0.2**
HYB				IVmB_BB		23 18 25.8	
	comp=Z,499nm,0.8s						
HYB				*e*pP	**pP**	**23 18 52.9**	**-2.3**
HYB				*e*PcP	**PcP**	**23 20 07.8**	**+1.6**
HYB				*e*ScP	**ScP**	**23 23 47.4**	**+1.4**
HYB				*e*		23 24 46.2	
HYB				*e*		23 25 35.7	
HYB				*e*ScS	**ScS**	**23 28 09.1**	**-0.6**
BLSP	**Bilaspur**	**44.54**	**314**	*e*P	**P**	**23 18 25.4**	**+0.3**
BLSP				IAmb	IAmb	23 18 27.7	
	comp=Z,99nm,1.1s						
LSA	**Lhasa**	**44.54**	**330**	P	**P**	**23 18 27.4**	**+1.8**
LSA				S	**S**	**23 24 49.0**	**-2.6**
LSA				pmax	pmax		
	comp=Z,20nm,0.6s						
LSA				LR	LR		
	comp=Z,1µm,22.8s						
LSA				LR	LR		
	comp=Z,2µm,38.4s						
LSA				LR	LR		
	comp=Z,1µm,28.5s						
LSA	**Lhasa**	**44.54**	**330**	P	**P**	**23 18 26.6**	**+1.0**
LSA				ScP	**ScP**	**23 23 47.2**	**+0.7**
LSA	**Lhasa**	**44.54**	**330**	P	**P**	**23 18 26.6**	**+1.0**
LSA				pmax	pmax		
	comp=Z,45nm,0.9s						
TIA	**Tai'an**	**44.55**	**2**	P	**P**	**23 18 25.8**	**+0.8**
TIA				pP	**pP**	**23 18 54.6**	**-0.3**
TIA				sP	**sP**	**23 19 04.3**	**-5.5**
TIA				ScP	**ScP**	**23 23 46.8**	**+1.0**
TIA				S	**S**	**23 24 43.8**	**-6.8**
TIA				sS	**sS**	**23 25 47.8**	**+4.7**
TIA				SS	**SS**	**23 28 12.3**	**-2.3**
TIA				pmax	pmax		
	comp=Z,25nm,0.8s						
TIA				pmax	pmax		
	comp=Z,240nm,5.8s						
TIA				LR	LR		
	comp=Z,620nm,15.9s						
TIA				LR	LR		
	comp=Z,630nm,17.7s						
TIA				LR	LR		
	comp=Z,920nm,20.1s						
TAPN	**Taplejung**	**44.55**	**324**	*e*P	**P**	**23 18 26.8**	**+1.3**
	comp=Z,331nm,1.0s						
RAMN	**Ramite**	**44.91**	**323**	*e*P	**P**	**23 18 29.4**	**+1.1**
	comp=Z,162nm,0.9s						
MNCI	**Minicoy**	**45.24**	**291**	P	**P**	**23 18 31.4**	**+0.5**
MNCY	**Minicoy**	**45.26**	**291**	*e*P	**P**	**23 18 32.2**	**+1.3**
MNCY				IAmb	IAmb	23 18 33.7	
	comp=Z,127nm,0.7s						
JMN	**Monobe**	**45.61**	**22**	P	**P**	**23 18 33.6**	**+0.1**
JMN				IAmb	IAmb	23 18 37.2	
	comp=Z,72nm,0.8s						
LZH	**Lanzhou**	**45.67**	**347**	⇓P	**P**	**23 18 36.3**	**+2.2**
LZH				pP	pP	23 19 06.3	+2.2
LZH				sP	sP	23 19 16.9	-2.1
LZH				S	**S**	**23 25 06.0**	**-1.1**
LZH				sS	sS	23 25 57.8	-1.9
LZH				ScS	**ScS**	**23 28 16.9**	**+0.2**
LZH				pmax	pmax		
	comp=Z,34nm,1.4s						
LZH				pmax	pmax		
	comp=Z,940nm,6.5s						
LZH				LR	LR		
	comp=Z,890nm,15.5s						
LZH				LR	LR		
	comp=Z,750nm,14.8s						
LZH				LR	LR		
	comp=Z,1µm,16.1s						
JIRN	**Jiri**	**45.68**	**323**	*e*P	**P**	**23 18 35.2**	**+0.7**
	comp=Z,343nm,0.6s						
HNS	**HongShan**	**45.70**	**359**	⇓P	**P**	**23 18 34.9**	**+0.9**
HNS				pP	**pP**	**23 19 05.3**	**+1.2**
HNS				ScP	**ScP**	**23 23 51.8**	**+1.3**
HNS				S	**S**	**23 25 03.5**	**-3.6**
HNS				ScS	**ScS**	**23 28 16.1**	**-0.3**
HNS				pmax	pmax		
	comp=Z,26nm,1.0s						
HNS				pmax	pmax		
	comp=Z,250nm,5.4s						
HNS				LR	LR		
	comp=Z,1µm,16.3s						
HNS				LR	LR		
	comp=Z,720nm,20.7s						
GUN	**Gumba**	**46.05**	**323**	*e*P	**P**	**23 18 38.4**	**+1.0**
	comp=Z,365nm,0.8s						
PKI	**Pulchoki**	**46.08**	**322**	*e*P	**P**	**23 18 38.0**	**+0.4**
	comp=Z,160nm,0.8s						
TIY	**Taiyuan**	**46.09**	**357**	⇓P	**P**	**23 18 38.3**	**+1.1**
TIY				S	**S**	**23 25 10.8**	**-2.0**
TIY				ScS	**ScS**	**23 28 20.0**	**+0.8**
TIY				LR	LR		
	comp=Z,330nm,11.3s						
TIY				LR	LR		
	comp=Z,810nm,12.6s						
TIY				LR	LR		
	comp=Z,380nm,14.8s						
PKIN	**Phulchoki**	**46.09**	**322**	*e*P	**P**	**23 18 38.0**	**+0.3**
	comp=Z,152nm,0.7s						
TJN	**Taejon**	**46.11**	**14**	⇓*e*P	**P**	**23 18 38.7**	**+1.4**
DMN	**Daman**	**46.29**	**322**	*e*P	**P**	**23 18 39.8**	**+0.6**
	comp=Z,350nm,0.7s						
KKN	**Kakani**	**46.32**	**322**	*e*P	**P**	**23 18 39.9**	**+0.5**
	comp=Z,278nm,1.0s						
JHS	**Saijyo**	**46.48**	**20**	P	**P**	**23 18 40.1**	**-0.2**
JHS				IAmb	IAmb	23 19 15.4	
	comp=Z,85nm,0.9s						
ALBI	**Allahabad**	**46.82**	**317**	*e*P	**P**	**23 18 43.5**	**+0.5**
VLK	**Valmikinagar**	**46.85**	**321**	*e*P	**P**	**23 18 45.1**	**+1.9**
GKN	**Gorkha**	**46.86**	**322**	*e*P	**P**	**23 18 43.7**	**+0.2**
	comp=Z,246nm,0.7s						
KSAR	**Wonju Array Be**	**47.25**	**14**	P	**P**	**23 18 47.3**	**+1.2**
KSAR	**Wonju Array Be**	**47.25**	**14**	P	**P**	**23 18 47.3**	**+1.2**
KSRS	**Korea Array**	**47.27**	**14**	P	**P**	**23 18 46.9**	**+0.6**
	comp=Z,21nm,0.8s,baz=192,slow=7.2,SNR=50						
KSRS				pP	**pP**	**23 19 15.6**	**-0.9**
	comp=Z,52nm,1.1s,baz=190,slow=9.0,SNR=3.8						
KSRS				ScP	**ScP**	**23 23 58.1**	**+1.1**
	comp=Z,4.0nm,0.9s,baz=193,slow=3.2,SNR=7.0						
	comp=Z,21nm,0.8s						
KS19	**Wonju Array Si**	**47.30**	**14**	P	**P**	**23 18 47.3**	**+0.8**
KS19				IAmb	IAmb	23 19 21.1	
	comp=Z,92nm,1.1s						
KOLN	**Koldanda**	**47.34**	**321**	*e*P	**P**	**23 18 47.5**	**+0.2**
	comp=Z,380nm,0.9s						
AKL	**Akola**	**47.51**	**308**	*e*P	**P**	**23 18 48.5**	**0.0**
DL2	**Dalian**	**47.58**	**7**	P	**P**	**23 18 49.0**	**+0.4**
DL2				pP	**pP**	**23 19 18.6**	**-0.2**
DL2				S	**S**	**23 25 30.1**	**-3.7**
DL2				sS	**sS**	**23 26 29.3**	**+2.6**
DL2				pmax	pmax		
	comp=Z,34nm,1.1s						
DL2				pmax	pmax		
	comp=Z,580nm,5.8s						
DANN	**Dangsing**	**47.65**	**321**	*e*P	**P**	**23 18 50.1**	**+0.3**
	comp=Z,440nm,0.7s						
PYUN	**Piuthan**	**47.95**	**321**	*e*P	**P**	**23 18 52.4**	**+0.4**
	comp=Z,229nm,0.8s						
INU	**Inuyama**	**48.25**	**24**	P	**P**	**23 18 53.5**	**-0.4**
INU				IAmb	IAmb	23 18 55.1	
	comp=Z,144nm,1.6s						
BJT	**Baijiatuau**	**48.32**	**1**	P	**P**	**23 18 54.3**	**-0.1**
BJT				IAmb	IAmb	23 19 27.7	
	comp=Z,161nm,1.7s						
BJT				ScP	**ScP**	**23 24 01.5**	**0.0**
BJI	**Beijing**	**48.34**	**1**	P	**P**	**23 18 55.4**	**+0.9**
BJI				pP	**pP**	**23 19 26.9**	**+2.1**
BJI				sP	**sP**	**23 19 38.1**	**-1.5**
BJI				ScP	**ScP**	**23 24 02.5**	**+1.0**
BJI				S	**S**	**23 25 45.8**	**+1.2**
BJI				sS	**sS**	**23 26 40.8**	**+3.1**
BJI				pmax	pmax		
	comp=Z,16nm,1.6s						
BJI				pmax	pmax		
	comp=Z,570nm,6.6s						
BJI				LR	LR		
	comp=Z,290nm,20.4s						
BJI				LR	LR		
	comp=Z,350nm,18.6s						
BJI				LR	LR		
	comp=Z,470nm,18.3s						
GOMU	**GeErMu**	**48.48**	**338**	P	**P**	**23 18 57.9**	**+1.8**
GOMU				S	**S**	**23 25 40.8**	**-6.6**
GOMU				pmax	pmax		
	comp=Z,12nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,140nm,4.8s						
GOMU				LR	LR		
	comp=Z,430nm,15.1s						
GOMU				LR	LR		
	comp=Z,780nm,17.3s						
GOMU				LR	LR		
	comp=Z,460nm,17.8s						
BHPL	**Bhopal**	**48.65**	**311**	*e*P	**P**	**23 18 57.7**	**+0.5**
BHPL				IAmb	IAmb	23 18 59.3	
	comp=Z,52nm,0.8s						
KOUNC	**Koumac, New Ca**	**48.77**	**110**	P	**P**	**23 18 56.8**	**-1.4**
KOUNC				IAmb	IAmb	23 19 01.9	
	comp=Z,77nm,0.8s						
KOUNC	**Koumac, New Ca**	**48.77**	**110**	P	**P**	**23 19 00.8**	**+2.6**
BTO	**Baotou**	**49.14**	**355**	⇑*i*P	**P**	**23 19 02.8**	**+2.1**
BTO				pP	**pP**	**23 19 33.9**	**+2.7**
BTO				sP	**sP**	**23 19 50.8**	**+4.9**
BTO				PP	**PP**	**23 20 55.3**	**-0.5**
BTO				S	**S**	**23 25 57.5**	**+1.5**
BTO				sS	**sS**	**23 26 53.6**	**+4.4**
BTO				SS	**SS**	**23 29 31.3**	**+2.1**
BTO				pmax	pmax		
	comp=Z,140nm,0.7s						
BTO				pmax	pmax		
	comp=Z,1µm,5.4s						
BTO				LR	LR		
	comp=Z,3µm,11.9s						
BTO				LR	LR		
	comp=Z,2µm,17.0s						
BTO				LR	LR		
	comp=Z,2µm,16.8s						
HHC	**Hu-ho-hao-te**	**49.26**	**356**	*e*P	**P**	**23 19 02.8**	**+1.1**
HHC				pP	pP	23 19 27.8	-4.3
HHC				S	**S**	**23 25 52.3**	**-5.4**
HHC				sS	sS	23 26 55.8	+4.9
HHC				SS	**SS**	**23 29 31.3**	**+0.1**
HHC				pmax	pmax		
	comp=Z,26nm,0.9s						
MAJO	**Matsushiro**	**49.77**	**24**	P	**P**	**23 19 04.3**	**-1.1**
MAJO				IAmb	IAmb	23 19 44.5	
	comp=Z,82nm,1.4s						
MAJO	**Matsushiro**	**49.77**	**24**	⇓*i*P	**P**	**23 19 05.2**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,102nm,2.0s						
MJAR	**Matsushiro Arr**	**49.77**	**24**	P	**P**	**23 19 04.4**	**-1.1**
	comp=Z,18nm,0.8s,baz=193,slow=7.8,SNR=30						
MJAR				pP	**pP**	**23 19 33.8**	**-2.1**
	comp=Z,24nm,0.8s,baz=194,slow=6.8,SNR=4.5						
MJAR				ScP	**ScP**	**23 24 08.1**	**+0.3**
	comp=Z,4.7nm,0.8s,baz=206,slow=4.9,SNR=6.2						
	comp=Z,18nm,0.8s						
MJB9	**Matsu-Tunnel**	**49.77**	**24**	IAmb	IAmb	23 19 45.4	
	comp=Z,78nm,1.3s						
GTA	**Gaotai**	**49.81**	**344**	*e*P	**P**	**23 19 08.1**	**+2.2**
GTA				pP	pP	23 19 38.1	+1.6
GTA				sP	sP	23 19 51.4	+0.2
GTA				PcP	**PcP**	**23 20 26.6**	**+1.9**
GTA				ScP	**ScP**	**23 24 09.1**	**+1.1**
GTA				S	**S**	**23 26 04.8**	**-0.7**
GTA				sS	sS	23 26 55.4	-3.4
GTA				ScS	**ScS**	**23 28 41.3**	**-2.8**
GTA				SS	**SS**	**23 29 39.4**	**-0.7**
GTA				pmax	pmax		
	comp=Z,14nm,1.0s						
GTA				pmax	pmax		
	comp=Z,200nm,5.1s						
GTA				LR	LR		
	comp=Z,460nm,19.6s						
GTA				LR	LR		
	comp=Z,630nm,17.8s						
GTA				LR	LR		
	comp=Z,500nm,17.1s						
LGTI	**Lohaghat**	**50.62**	**320**	*e*P	**P**	**23 19 12.0**	**0.0**
SNY	**Shenyang**	**50.70**	**8**	⇑P	**P**	**23 19 11.3**	**-1.1**
SNY				pP	**pP**	**23 19 42.5**	**-0.4**
SNY				S	**S**	**23 26 11.9**	**-5.5**
SNY				sS	**sS**	**23 27 09.8**	**-1.1**
SNY				pmax	pmax		
	comp=Z,37nm,1.0s						
SNY				LR	LR		
	comp=Z,480nm,18.2s						
SNY				LR	LR		
	comp=Z,550nm,14.9s						
SNY				LR	LR		
	comp=Z,670nm,17.1s						
PTH	**Pithoragarh**	**50.71**	**320**	*e*P	**P**	**23 19 13.0**	**0.0**
NOUC	**Port Laguerre**	**50.82**	**111**	P	**P**	**23 19 16.0**	**+2.3**
DZM	**Mont Dzumac**	**50.95**	**111**	*e*P	**P**	**23 19 15.9**	**+1.2**
	comp=Z,99nm,1.7s						
DZM	**Mont Dzumac**	**50.95**	**111**	*e*LR	LR	23 33 59.1	
	comp=Z,2µm,37.9s						
DZM	**Mont Dzumac**	**50.95**	**111**	LR	LR	23 42 11.6	
	comp=Z,491nm,19.6s,baz=209,slow=37						
DZM	**Mont Dzumac**	**50.95**	**111**	P	**P**	**23 19 14.1**	**-0.7**
DZM	**Mont Dzumac**	**50.95**	**111**	P	**P**	**23 19 17.0**	**+2.3**
DZM	**Mont Dzumac**	**50.95**	**111**	P	**P**	**23 19 16.6**	**+1.8**
DZM				pP	**pP**	**23 19 45.8**	**+0.1**
JMM	**Marumori**	**51.97**	**26**	IAmb	IAmb	23 19 54.2	
	comp=Z,66nm,0.9s						
XLT	**XiLinHaoTe**	**52.20**	**1**	⇓*i*P	**P**	**23 19 24.4**	**+0.8**
XLT				pP	pP	23 19 53.3	-1.0
XLT				sP	sP	23 20 09.3	+0.3
XLT				PcP	**PcP**	**23 20 34.9**	**+1.5**
XLT				ScP	**ScP**	**23 24 17.5**	**-0.6**
XLT				S	**S**	**23 26 35.1**	**-3.0**
XLT				sS	sS	23 27 34.4	+2.6
XLT				pmax	pmax		
	comp=Z,20nm,1.1s						
XLT				pmax	pmax		
	comp=Z,270nm,6.7s						
XLT				LR	LR		
	comp=Z,620nm,16.7s						
XLT				LR	LR		
	comp=Z,520nm,20.4s						
KUDL	**Kundal**	**52.28**	**316**	*e*P	**P**	**23 19 23.3**	**-1.1**
CN2	**Changchun**	**52.91**	**9**	*e*P	**P**	**23 19 27.9**	**-0.8**
CN2				*e*S	**S**	**23 26 42.3**	**-5.3**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				LR	LR		
	comp=Z,390nm,21.0s						
CN2				LR	LR		
	comp=Z,340nm,21.0s						
CN2				LR	LR		
	comp=Z,530nm,23.0s						
SMLA	**Simla**	**53.72**	**319**	*e*P	**P**	**23 19 34.1**	**-0.8**
SMLA				IAmb	IAmb	23 19 35.7	
	comp=Z,81nm,0.8s						
MDJ	**Mudanjiang**	**54.48**	**13**	P	**P**	**23 19 40.3**	**+0.2**
MDJ				pP	pP	23 20 11.9	+0.8
MDJ				sP	sP	23 20 28.0	+2.4
MDJ				PcS	**PcS**	**23 24 38.4**	**-3.1**
MDJ				S	**S**	**23 27 15.0**	**+6.4**
MDJ				ScS	**ScS**	**23 29 15.0**	**-1.1**
MDJ				pmax	pmax		
	comp=Z,110nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,270nm,3.6s						
MDJ	**Mudanjiang**	**54.48**	**13**	P	**P**	**23 19 39.9**	**-0.3**
MDJ				pP	**pP**	**23 20 11.6**	**+0.5**
USA0B	**Ussuriysk Arra**	**54.64**	**15**	*c i*P	**P**	**23 19 41.7**	**+0.4**
USRK	**Ussuriysk Ar.**	**54.64**	**15**	P	**P**	**23 19 41.2**	**-0.1**
	comp=Z,47nm,0.6s,baz=188,slow=7.1,SNR=105						
USRK				pP	**pP**	**23 20 12.3**	**+0.1**
	comp=Z,94nm,0.8s,baz=191,slow=6.7,SNR=11						
USRK				S	**S**	**23 27 08.6**	**-2.3**
	comp=Z,5.9nm,1.0s,baz=210,slow=17,SNR=5.1						
	comp=Z,47nm,0.6s						
USRK	**Ussuriysk Ar.**	**54.64**	**15**	P	**P**	**23 19 40.3**	**-1.0**
BHUJ	**Bhuj**	**54.65**	**306**	*e*P	**P**	**23 19 41.4**	**-0.4**
BNX	**BinXian**	**55.13**	**10**	⇑P	**P**	**23 19 44.5**	**-0.3**
BNX				pmax	pmax		
	comp=Z,31nm,0.6s						
BNX				pmax	pmax		
	comp=Z,150nm,4.7s						
THN	**Thein Dam**	**55.51**	**319**	*e*P	**P**	**23 19 47.2**	**-0.6**
THN				IAmb	IAmb	23 19 52.7	
	comp=Z,117nm,0.8s						
ULN	**Ulaanbaatar**	**56.63**	**353**	P	**P**	**23 19 55.3**	**-0.3**
ULN				ScP	**ScP**	**23 24 38.1**	**+0.6**
ULN	**Ulaanbaatar**	**56.63**	**353**	*ce*P	**P**	**23 19 55.7**	**+0.1**
ULN				pmax	pmax		
	comp=Z,27nm,0.8s						
ULN	**Ulaanbaatar**	**56.63**	**353**	P	**P**	**23 19 55.9**	**+0.3**
ULN	**Ulaanbaatar**	**56.63**	**353**	P	**P**	**23 19 55.7**	**+0.1**
SONM	**Songino Array**	**56.68**	**353**	P	**P**	**23 19 56.1**	**+0.1**
	comp=Z,22nm,0.7s,baz=173,slow=9.2,SNR=122						
SONM				ScP	**ScP**	**23 24 38.1**	**+0.4**
	comp=Z,7.4nm,0.7s,baz=167,slow=4.3,SNR=9.2						
SONM				S	**S**	**23 27 35.9**	**-2.1**
	comp=Z,1.4nm,1.0s,baz=182,slow=10,SNR=2.9						
SONM				LR	LR	23 47 45.0	
	comp=Z,766nm,19.6s,baz=185,slow=40						
SONM				PKPPKP	**P'P'df**	**23 49 50.0**	**+3.1**
	comp=Z,0.5nm,0.7s,baz=280,slow=1.6,SNR=3.6						
	comp=Z,22nm,0.7s						
SONM	**Songino Array**	**56.68**	**353**	P	**P**	**23 19 55.7**	**-0.3**
SONM				IAmb	IAmb	23 20 29.3	
	comp=Z,42nm,1.0s						
SONM				ScP	**ScP**	**23 24 37.5**	**-0.2**
TEY	**Ternei**	**56.70**	**18**	*e*P	**P**	**23 19 55.7**	**-0.2**
TEY				*e*		23 20 27.7	
HIA	**Hailar**	**57.70**	**3**	P	**P**	**23 20 01.7**	**-1.3**
HIA	**Hailar**	**57.70**	**3**	P	**P**	**23 20 01.7**	**-1.3**
HIA				pmax	pmax		
	comp=Z,27nm,1.3s						
CASY	**Casey**	**57.74**	**182**	P	**P**	**23 20 03.4**	**+0.4**
WMQ	**Urumqi**	**57.80**	**337**	⇑P	**P**	**23 20 04.3**	**+0.4**
WMQ				pP	pP	23 20 33.0	-2.2
WMQ				PcP	**PcP**	**23 20 56.1**	**+1.1**
WMQ				ScP	**ScP**	**23 24 43.4**	**+0.7**
WMQ				S	**S**	**23 27 51.3**	**-1.5**
WMQ				sS	sS	23 28 44.4	-3.0
WMQ				ScS	**ScS**	**23 29 36.8**	**-3.6**
WMQ				SS	**SS**	**23 31 53.8**	**+7.9**
WMQ				pmax	pmax		
	comp=Z,73nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,850nm,5.9s						
WMQ				LR	LR		
	comp=Z,490nm,20.5s						
WMQ				LR	LR		
	comp=Z,440nm,23.5s						
NIL	**Nilore**	**57.88**	**319**	P	**P**	**23 20 03.4**	**-1.2**
NIL				IAmb	IAmb	23 20 04.8	
	comp=Z,45nm,0.6s						
NIL	**Nilore**	**57.88**	**319**	P	**P**	**23 20 03.4**	**-1.2**
NIL				pmax	pmax		
	comp=Z,45nm,0.6s						
ASAJ	**Asahikawa**	**57.97**	**23**	P	**P**	**23 20 04.9**	**0.0**
	comp=Z,17nm,0.7s,baz=210,slow=8.4,SNR=11						
ASAJ				LR	LR	23 44 23.0	
	comp=Z,292nm,21.8s,baz=185,slow=35						
	comp=Z,17nm,0.7s						
JCZ	**Jackson Bay**	**58.27**	**137**	P	**P**	**23 20 09.8**	**+2.6**
MLZ	**Mavora Lakes**	**58.30**	**139**	P	**P**	**23 20 06.8**	**-0.5**
MLZ				IAmb	IAmb	23 20 11.1	
	comp=Z,34nm,0.7s						
WHZ	**Wether Hill Ro**	**58.38**	**139**	P	**P**	**23 20 08.4**	**+0.5**
WHZ				IAmb	IAmb	23 20 10.9	
	comp=Z,39nm,0.8s						
RER	**Riviere de l'E**	**58.57**	**250**	P	**P**	**23 20 12.7**	**+3.0**
LBZ	**Lake Benmore**	**59.32**	**137**	IAmb	IAmb	23 21 06.0	
	comp=Z,69nm,1.5s						
KLR	**Kul'dur**	**59.32**	**13**	P	**P**	**23 20 13.6**	**-0.6**
	comp=Z,15nm,0.5s,baz=195,slow=4.2,SNR=68						
KLR				pP	**pP**	**23 20 45.1**	**-0.5**
	comp=Z,9.7nm,0.6s,baz=216,slow=6.3,SNR=4.0						
KLR				S	**S**	**23 28 08.3**	**-3.8**
	comp=Z,4.7nm,1.1s,baz=313,slow=24,SNR=10.0						
KLR				LR	LR	23 48 13.3	
	comp=Z,250nm,20.0s,baz=206,slow=38						
KLR				PKP2bc		23 49 52.4	
	comp=Z,1.5nm,0.9s,baz=348,slow=3.0,SNR=4.0						
	comp=Z,15nm,0.5s						
MSEY	**Mahe Island**	**59.45**	**270**	P	**P**	**23 20 15.7**	**-0.2**
MSEY				IAmb	IAmb	23 20 18.2	
	comp=Z,36nm,0.6s						
MSEY	**Mahe Island**	**59.45**	**270**	P	**P**	**23 20 15.7**	**-0.2**
MSEY				pmax	pmax		
	comp=Z,36nm,0.6s						
MSEY	**Mahe Island**	**59.45**	**270**	*i* P	**P**	**23 20 16.7**	**+0.8**
	SNR=17						
MSEY	**Mahe Island**	**59.45**	**270**	P	**P**	**23 20 17.4**	**+1.6**
MSEY	**Mahe Island**	**59.45**	**270**	P	**P**	**23 20 17.1**	**+1.2**
MSEY				pP	**pP**	**23 20 47.4**	**-0.2**
HEH	**HeiHe**	**59.50**	**9**	*e*P	**P**	**23 20 14.8**	**-0.6**
HEH				S	**S**	**23 28 11.0**	**-3.4**
HEH				sS	**sS**	**23 29 06.0**	**-3.2**
HEH				pmax	pmax		
	comp=Z,81nm,0.6s						
HEH				pmax	pmax		
	comp=Z,1µm,3.9s						
ZAK	**Zakamensk**	**59.60**	**351**	*e*P	**P**	**23 20 15.6**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
INZ	**Inchbonnie**	**59.65**	**135**	P	**P**	**23 20 15.3**	**-1.3**
INZ				IAmb	IAmb	23 20 19.1	
	comp=Z,74nm,1.3s						
RPZ	**Rata Peaks**	**59.69**	**136**	LR	LR	23 46 33.6	
	comp=Z,997nm,19.3s,baz=285,slow=36						
KSH	**Kashi**	**60.09**	**326**	P	**P**	**23 20 19.9**	**+0.1**
KSH				pP	pP	23 20 51.0	-0.4
KSH				PcP	**PcP**	**23 21 03.9**	**-0.4**
KSH				sP	sP	23 21 07.3	+1.4
KSH				ScP	**ScP**	**23 24 53.6**	**+0.5**
KSH				PcS	**PcS**	**23 25 02.3**	**-4.6**
KSH				S	**S**	**23 28 20.0**	**-2.6**
KSH				sS	sS	23 29 14.8	-2.7
KSH				SS	**SS**	**23 32 24.8**	**+2.8**
KSH				pmax	pmax		
	comp=Z,66nm,0.7s						
KSH				pmax	pmax		

	comp=Z,260nm,6.2s						
KSH				LR	LR		
	comp=Z,410nm,22.6s						
KSH				LR	LR		
	comp=Z,370nm,23.7s						
KSH				LR	LR		
	comp=Z,910nm,25.1s						
MRNZ	**Matariki Terra**	**60.20**	**133**	P	**P**	**23 20 21.6**	**+1.1**
MRNZ				ScP	**ScP**	**23 24 53.2**	**-0.3**
OXZ	**Oxford**	**60.25**	**135**	IAmb	IAmb	23 20 24.3	
	comp=Z,60nm,0.8s						
YSS	**Yuzh-Sakhalins**	**60.43**	**21**	*e*P	**P**	**23 20 21.9**	**+0.1**
YSS				*e**PP	**pP**	**23 20 53.4**	**+0.1**
YSS				*e*S	**S**	**23 28 23.1**	**-3.3**
YSS				pmax	pmax		
	comp=Z,40nm,0.5s						
YSS				pmax	pmax		
	comp=Z,100nm,3.1s						
YSS				smax	smax		
	comp=N,100nm,3.4s						
YSS				MLR	MLR		
	comp=Z,500nm,19.0s						
DRV	**Dumont d'Urvil**	**60.45**	**169**	P	**P**	**23 20 21.5**	**-0.1**
DRV				pP	**pP**	**23 20 53.4**	**+0.7**
TARG	**Taragay, Kyrgy**	**60.67**	**329**	P	**P**	**23 20 24.8**	**+0.7**
TARG				IAmb	IAmb	23 20 27.4	
	comp=Z,25nm,0.6s						
TARG	**Taragay, Kyrgy**	**60.67**	**329**	P	**P**	**23 20 24.8**	**+0.7**
TARG				pmax	pmax		
	comp=Z,25nm,0.6s						
MQZ	**McQueen's Vall**	**60.79**	**136**	P	**P**	**23 20 24.4**	**0.0**
MQZ				IAmb	IAmb	23 20 27.6	
	comp=Z,46nm,0.8s						
SHLS	**Shalkode**	**60.89**	**331**	*e*P	**P**	**23 20 24.3**	**-0.9**
	comp=Z,29nm,0.6s,baz=331						
SHLS	**Shalkode**	**60.89**	**331**	*e*P	**P**	**23 20 24.2**	**-0.9**
SHLS				pmax	pmax		
	comp=Z,29nm,0.6s						
KHZ	**Kahutara**	**61.04**	**134**	IAmb	IAmb	23 20 29.9	
	comp=Z,98nm,1.5s						
UZB	**Uzynbulak**	**61.09**	**330**	*e*P	**P**	**23 20 26.8**	**+0.2**
	baz=330						
UZB				*e*S	**S**	**23 28 33.8**	**-1.6**
	baz=330						
UZB	**Uzynbulak**	**61.09**	**330**	*e*P	**P**	**23 20 26.8**	**+0.2**
UZB				*e*S	**S**	**23 28 33.7**	**-1.6**
KBL	**Kabul**	**61.20**	**317**	P	**P**	**23 20 27.3**	**-0.2**
	SNR=22						
MOY	**Mondy**	**61.21**	**350**	*e*P	**P**	**23 20 27.6**	**+0.4**
MOY				*e*		23 20 59.7	
MOY				pmax	pmax		
	comp=Z,22nm,1.4s						
IRK	**Irkutsk**	**61.27**	**352**	*e*P	**P**	**23 20 27.1**	**-0.3**
IRK				*e*S	**S**	**23 28 37.2**	**+0.2**
IRK				pmax	pmax		
	comp=Z,122nm,2.8s						
KDJ	**Kajisay**	**61.28**	**328**	P	**P**	**23 20 27.6**	**-0.3**
KDJ				IAmb	IAmb	23 20 30.2	
	comp=Z,28nm,0.8s						
KDJ				ScP	**ScP**	**23 24 58.5**	**+0.1**
SATY	**Saty**	**61.33**	**330**	*e*P	**P**	**23 20 28.5**	**+0.3**
	comp=Z,15nm,0.7s,baz=330						
SATY				*e*S	**S**	**23 28 37.4**	**-1.0**
	baz=330						
SATY	**Saty**	**61.33**	**330**	*e*P	**P**	**23 20 28.5**	**+0.3**
SATY				*e*S	**S**	**23 28 37.3**	**-1.0**
SATY				pmax	pmax		
	comp=Z,15nm,0.7s						
ZHN	**Zhinishke**	**61.40**	**330**	*e*P	**P**	**23 20 28.7**	**+0.1**
	baz=330						
ZHN				*e*S	**S**	**23 28 38.5**	**-0.6**
	baz=330						
ZHN	**Zhinishke**	**61.40**	**330**	*e*P	**P**	**23 20 28.7**	**+0.1**
ZHN				*e*S	**S**	**23 28 38.5**	**-0.6**
KPKS	**Kokpek**	**61.50**	**330**	*e*P	**P**	**23 20 29.4**	**+0.2**
	comp=Z,19nm,0.7s,baz=330						
KPKS				*e*S	**S**	**23 28 39.4**	**-0.9**
	baz=330						
KPKS	**Kokpek**	**61.50**	**330**	*e*P	**P**	**23 20 29.4**	**+0.2**
KPKS				*e*S	**S**	**23 28 39.4**	**-0.9**
KPKS				pmax	pmax		
	comp=Z,19nm,0.7s						
SNZO	**South Karori**	**61.59**	**132**	P	**P**	**23 20 30.4**	**+0.5**
GRNR	**Gornyy**	**61.86**	**15⇑**	*i*P	**P**	**23 20 31.9**	**+0.5**
GRNR				pmax	pmax		
	comp=N,5.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GRNR				MLR	MLR		
	comp=N,470nm,18.0s						
GRNR				MLR	MLR		
	comp=E,330nm,18.0s						
GRNR				MLR	MLR		
	comp=Z,260nm,14.0s						
ZSN	**Zaisan**	**61.92**	**337**	*e*P	**P**	**23 20 32.6**	**+0.7**
	comp=Z,22nm,1.1s,baz=337						
ZSN				*e*S	**S**	**23 28 44.6**	**-0.7**
	baz=337						
ZSN	**Zaisan**	**61.92**	**337**	*e*P	**P**	**23 20 32.6**	**+0.7**
ZSN				*e*S	**S**	**23 28 44.6**	**-0.7**
ZSN				pmax	pmax		
	comp=Z,22nm,1.1s						
UGL	**Uglegorsk**	**62.02**	**20**	*e*P	**P**	**23 20 33.7**	**+1.3**
TNSS	**Tian-Shan**	**62.05**	**329**	*e*P	**P**	**23 20 33.5**	**+0.2**
	baz=329						
TNSS	**Tian-Shan**	**62.05**	**329**	*e*P	**P**	**23 20 33.5**	**+0.2**
PLWZ	**Palliser**	**62.06**	**133**	P	**P**	**23 20 32.9**	**-0.2**
MRZ	**Mangatainoka R**	**62.08**	**132**	IAmb	IAmb	23 20 35.4	
	comp=Z,57nm,0.8s						
MDOK	**Medeo**	**62.09**	**329**	*e*P	**P**	**23 20 33.9**	**+0.6**
	baz=329						
MDOK				*e*S	**S**	**23 28 46.9**	**-1.0**
	baz=329						
MDOK	**Medeo**	**62.09**	**329**	*e*P	**P**	**23 20 33.8**	**+0.6**
MDOK				*e*S	**S**	**23 28 46.9**	**-1.0**
BOOM	**Boomskoye usch**	**62.18**	**328**	P	**P**	**23 20 33.7**	**-0.2**
BOOM	**Boomskoye usch**	**62.18**	**328**	P	**P**	**23 20 33.7**	**-0.2**
AAA	**Alma-Ata**	**62.19**	**329**	*e*P	**P**	**23 20 34.4**	**+0.6**
	comp=Z,22nm,0.6s,baz=329						
AAA	**Alma-Ata**	**62.19**	**329**	*e*P	**P**	**23 20 34.4**	**+0.6**
AAA				pmax	pmax		
	comp=Z,22nm,0.6s						
MK31	**Makanchi Array**	**62.42**	**335**	P	**P**	**23 20 34.8**	**-0.5**
MK31				ScP	**ScP**	**23 25 02.9**	**-0.3**
MK31	**Makanchi Array**	**62.42**	**335***c*	*i*P	**P**	**23 20 35.0**	**-0.3**
MKAR	**Makanchi Array**	**62.42**	**335**	P	**P**	**23 20 35.1**	**-0.2**
	comp=Z,31nm,0.5s,baz=150,slow=7.1,SNR=387						
MKAR				ScP	**ScP**	**23 25 03.2**	**+0.1**
	comp=Z,5.9nm,0.9s,baz=141,slow=6.2,SNR=4.5						
MKAR				S	**S**	**23 28 50.2**	**-1.5**
	comp=Z,6.7nm,1.1s,baz=153,slow=11,SNR=12						
MKAR				PKPPKP	**P'P'df**	**23 49 39.5**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=326,slow=3.2,SNR=5.3						
MKAR				LR	LR	23 52 19.6	
	comp=Z,389nm,18.4s,baz=150,slow=40						
	comp=Z,31nm,0.5s						
MKAR	**Makanchi Array**	**62.42**	**335**	P	**P**	**23 20 34.6**	**-0.7**
MKAR				ScP	**ScP**	**23 25 03.3**	**+0.1**
BKZ	**Black Stump Fm**	**62.44**	**130**	P	**P**	**23 20 36.2**	**+0.6**
BKZ				IAmb	IAmb	23 21 09.6	
	comp=Z,66nm,1.1s						
BKZ	**Black Stump Fm**	**62.44**	**130**	P	**P**	**23 20 37.0**	**+1.4**
NGCH	**Negor - Chabah**	**62.50**	**304**	P	**P**	**23 20 37.2**	**+1.0**
MAKZ	**Makanchi**	**62.56**	**335**	P	**P**	**23 20 35.4**	**-0.8**
MAKZ				ScP	**ScP**	**23 25 03.4**	**-0.3**
MAKZ	**Makanchi**	**62.56**	**335**	⇑P	**P**	**23 20 35.9**	**-0.3**
CHKK	**Chushkaly**	**62.62**	**330**	*e*P	**P**	**23 20 36.5**	**-0.1**
	baz=330						
CHKK	**Chushkaly**	**62.62**	**330**	*e*P	**P**	**23 20 36.5**	**-0.1**
JLN	**Jalan Bani Buh**	**62.64**	**300**	P	**P**	**23 20 38.4**	**+1.3**
TKM2	**Tokmak 2**	**62.66**	**328**	P	**P**	**23 20 37.2**	**0.0**
	SNR=37						
RTZ	**Ruatahuna**	**62.70**	**129**	P	**P**	**23 20 37.4**	**0.0**
RTZ				IAmb	IAmb	23 20 39.8	
	comp=Z,52nm,0.7s						
URZ	**Urewera**	**62.73**	**129**	LR	LR	23 51 00.5	
	comp=Z,655nm,18.1s,baz=9.0,slow=39						
URZ	**Urewera**	**62.73**	**129**	P	**P**	**23 20 38.4**	**+0.9**
UCH	**Uchtor**	**62.76**	**327**	P	**P**	**23 20 38.9**	**+0.8**
	SNR=21						
TDK	**Taldyqorghan**	**62.77**	**331**	*e*P	**P**	**23 20 37.7**	**+0.1**
	baz=331						
TDK	**Taldyqorghan**	**62.77**	**331**	*e*P	**P**	**23 20 37.7**	**+0.1**
KBK	**Karagaybulak**	**62.82**	**328**	P	**P**	**23 20 38.3**	**+0.1**
	SNR=30						
ZEA	**Zeya**	**62.87**	**8**	*e*P	**P**	**23 20 38.6**	**+0.6**
ZEA				*e**PP	**pP**	**23 21 10.7**	**+0.9**
ZEA				*e*S	**S**	**23 28 56.2**	**-0.7**
ZEA				*e*		23 33 07.4	
ZEA				pmax	pmax		
	comp=Z,40nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,200nm,5.3s						
ZEA				smax	smax		
	comp=N,300nm,9.5s						
ZEA				MLR	MLR		
	comp=E,200nm,17.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,17.0s						
DGZ	**Jazzator, Alta**	**62.89**	**340***c*	*i*P	**P**	**23 20 38.8**	**+0.4**
DGZ				pmax	pmax		
	comp=Z,66nm,0.9s						
KUU	**Kurty**	**62.97**	**329**	*e*P	**P**	**23 20 38.5**	**-0.5**
	comp=Z,44nm,0.7s,baz=329						
KUU				*e*S	**S**	**23 28 56.9**	**-1.7**
	baz=329						
KUU	**Kurty**	**62.97**	**329**	*e*P	**P**	**23 20 38.5**	**-0.5**
KUU				*e*S	**S**	**23 28 56.9**	**-1.7**
KUU				pmax	pmax		
	comp=Z,44nm,0.7s						
AAK	**Ala-Archa**	**63.05**	**327**	P	**P**	**23 20 40.0**	**+0.4**
	SNR=21						
AAK	**Ala-Archa**	**63.05**	**327**	LR	LR	23 50 56.3	
	comp=Z,487nm,21.1s,baz=144,slow=39						
AAK	**Ala-Archa**	**63.05**	**327**	P	**P**	**23 20 39.5**	**-0.1**
AAK	**Ala-Archa**	**63.05**	**327***c*	*i*P	**P**	**23 20 40.4**	**+0.7**
AAK				pmax	pmax		
	comp=Z,46nm,1.7s						
AAK	**Ala-Archa**	**63.05**	**327**	*i* P	**P**	**23 20 38.8**	**-0.8**
	SNR=36						
AAK	**Ala-Archa**	**63.05**	**327**	P	**P**	**23 20 40.3**	**+0.6**
AML	**Almayashu**	**63.13**	**326**	P	**P**	**23 20 40.8**	**+0.2**
	SNR=40						
CHMS	**Chumysh**	**63.16**	**328**	P	**P**	**23 20 40.1**	**-0.2**
	SNR=7.8						
WBK	**Wadi Bani Khal**	**63.20**	**301**	P	**P**	**23 20 42.2**	**+1.4**
BTK	**Batken**	**63.42**	**323**	IAmb	IAmb	23 20 45.1	
	comp=Z,48nm,0.8s						
DQM	**DQM**	**63.44**	**297**	P	**P**	**23 20 43.0**	**+0.5**
	SNR=6.9						
DQM				P	**P**	**23 20 45.0**	**+2.5**
	SNR=7.2						
MHTO	**MHTO**	**63.45**	**298**	P	**P**	**23 20 42.3**	**-0.2**
	SNR=6.5						
EKS2	**Erkin-Say**	**63.45**	**327**	P	**P**	**23 20 42.8**	**+0.5**
	SNR=45						
USP	**Ospenovka**	**63.48**	**328**	P	**P**	**23 20 42.3**	**0.0**
	SNR=23						
MXZ	**Matakaoa Point**	**63.53**	**128**	P	**P**	**23 20 43.3**	**+0.5**
MXZ	**Matakaoa Point**	**63.53**	**128**	P	**P**	**23 20 44.5**	**+1.7**
SGDS	**Sogindy**	**63.54**	**328**	*e*P	**P**	**23 20 43.0**	**+0.2**
	baz=328						
SGDS	**Sogindy**	**63.54**	**328**	*e*P	**P**	**23 20 42.9**	**+0.2**
WSAR	**Wadi Sarin**	**63.73**	**301**	LR	LR	23 49 27.9	
	comp=Z,464nm,18.9s,baz=130,slow=37						
WSAR	**Wadi Sarin**	**63.73**	**301**	P	**P**	**23 20 45.2**	**+0.9**
	SNR=6.5						
JMDO	**Jabal Madar**	**63.84**	**300**	P	**P**	**23 20 45.3**	**+0.1**
SMDO	**Samad**	**64.15**	**301**	P	**P**	**23 20 47.5**	**+0.3**
BIDO	**Bidbid**	**64.26**	**301**	P	**P**	**23 20 48.3**	**+0.5**
BIDO				P	**P**	**23 20 50.0**	**+2.2**
	SNR=6.2						
SHAO	**Shalim**	**64.50**	**295**	*i* P	**P**	**23 20 48.8**	**-0.6**
	SNR=12						
SHAO	**Shalim**	**64.50**	**295**	P	**P**	**23 20 50.0**	**+0.5**
	SNR=12						
BSY	**Bisya**	**64.76**	**300**	P	**P**	**23 20 51.3**	**+0.2**
DZA	**Taraz**	**64.94**	**326**	*e*P	**P**	**23 20 52.3**	**+0.4**
	baz=326						
DZA	**Taraz**	**64.94**	**326**	*e*P	**P**	**23 20 52.3**	**+0.4**
BTLS	**Baital**	**64.94**	**329**	*e*P	**P**	**23 20 51.6**	**-0.3**
	baz=329						
BTLS	**Baital**	**64.94**	**329**	*e*P	**P**	**23 20 51.5**	**-0.3**
HOQ	**Hoqain**	**64.98**	**301**	P	**P**	**23 20 52.9**	**+0.4**
DMTO	**DMTO**	**65.01**	**294**	P	**P**	**23 20 53.0**	**+0.3**
	SNR=15						
TAS	**Tashkent**	**65.11**	**323**	P	**P**	**23 20 53.0**	**0.0**
TAS				IAmb	IAmb	23 20 54.9	
	comp=Z,91nm,0.9s						
TAS	**Tashkent**	**65.11**	**323**	P	**P**	**23 20 53.0**	**0.0**
TAS				pmax	pmax		
	comp=Z,91nm,0.9s						
IUG	**Iuzhnay**	**65.20**	**324**	*e*P	**P**	**23 20 54.3**	**+0.6**
	baz=324						
IUG				*e*S	**S**	**23 29 24.8**	**-1.6**
	baz=324						
IUG	**Iuzhnay**	**65.20**	**324**	*e*P	**P**	**23 20 54.3**	**+0.6**
IUG				*e*S	**S**	**23 29 24.8**	**-1.6**
FUTU	**Fugatoga**	**65.38**	**102**	P	**P**	**23 20 57.8**	**+2.6**
JASK	**Jask - Hormozg**	**65.40**	**303**	P	**P**	**23 20 55.7**	**+0.6**
KKAR	**Karatay Array**	**65.54**	**326**	P	**P**	**23 20 54.8**	**-0.9**
KKAR	**Karatay Array**	**65.54**	**326**	P	**P**	**23 20 54.8**	**-0.9**
CHM	**Chimkent**	**65.56**	**324**	*e*P	**P**	**23 20 56.6**	**+0.8**
	comp=Z,30nm,0.9s,baz=324						
CHM	**Chimkent**	**65.56**	**324**	*e*P	**P**	**23 20 56.6**	**+0.8**
CHM				pmax	pmax		
	comp=Z,30nm,0.9s						
ARQ	**Araqi**	**65.56**	**300**	P	**P**	**23 20 56.5**	**+0.3**
CRZF	**Crozet Islands**	**65.61**	**223**	P	**P**	**23 20 57.1**	**+1.0**
CRZF	**Crozet Islands**	**65.61**	**223**	P	**P**	**23 20 58.2**	**+2.1**
RBK	**Rabkut**	**65.62**	**294**	P	**P**	**23 20 57.3**	**+0.5**
	SNR=6.7						
RAO	**Raoul Island**	**65.68**	**118**	LR	LR	23 50 12.4	
	comp=Z,445nm,18.8s,baz=268,slow=36						
SOHO	**SOHO**	**65.84**	**301**	*i* P	**P**	**23 20 57.4**	**-0.6**
	SNR=7.7						
SOHO	**SOHO**	**65.84**	**301**	P	**P**	**23 20 58.0**	**0.0**
BOD	**Bodaibo**	**66.14**	**359**	*e*P	**P**	**23 20 59.9**	**+0.7**
BOD				pmax	pmax		
	comp=Z,38nm,1.9s						
WHFO	**Wadi Hawf**	**66.14**	**294**	P	**P**	**23 20 59.6**	**-0.5**
	SNR=5.6						
ABTO	**Aybut**	**66.40**	**293**	P	**P**	**23 21 01.7**	**-0.1**
	SNR=9.5						
UOSS	**Minazif**	**66.43**	**302**	P	**P**	**23 21 01.6**	**-0.1**
UOSS	**Minazif**	**66.43**	**302**	*i* P	**P**	**23 21 01.1**	**-0.7**
	SNR=9.6						
UOSS	**Minazif**	**66.43**	**302**	P	**P**	**23 21 01.7**	**-0.1**
UOSS	**Minazif**	**66.43**	**302**	P	**P**	**23 21 01.5**	**-0.1**
HATD	**Hatta, Dubai**	**66.44**	**302**	*i* P	**P**	**23 21 01.7**	**-0.2**
	SNR=19						
HATD	**Hatta, Dubai**	**66.44**	**302**	P	**P**	**23 21 02.3**	**+0.5**
	SNR=6.0						
ASHO	**Ashiyiah**	**66.45**	**302**	*i* P	**P**	**23 21 01.8**	**-0.1**
	SNR=20						
ASHO	**Ashiyiah**	**66.45**	**302**	P	**P**	**23 21 02.3**	**+0.3**
	SNR=6.9						
ALNE	**Al Ain**	**66.48**	**301**	*i* P	**P**	**23 21 02.0**	**-0.1**
	SNR=12						
ALNE	**Al Ain**	**66.48**	**301**	P	**P**	**23 21 03.1**	**+1.0**
	SNR=8.7						
MDH	**Madha**	**66.48**	**302**	*i* P	**P**	**23 21 00.8**	**-1.3**
	SNR=7.7						
MDH	**Madha**	**66.48**	**302**	P	**P**	**23 21 01.2**	**-0.9**
UMZA	**Um Al Zommool**	**66.50**	**299**	P	**P**	**23 21 01.8**	**-0.4**
ABPO	**Ambohimpanom**	**66.55**	**253**	P	**P**	**23 21 03.5**	**+0.7**
ABPO				IAmb	IAmb	23 21 07.6	
	comp=Z,63nm,1.2s						
ABPO	**Ambohimpanom**	**66.55**	**253**	P	**P**	**23 21 03.5**	**+0.7**
ABPO				pmax	pmax		
	comp=Z,63nm,1.3s						
ABPO	**Ambohimpanom**	**66.55**	**253**	P	**P**	**23 21 04.1**	**+1.3**
ABPO				pP	**pP**	**23 21 35.8**	**+0.7**
MSFE	**Esma-Masafi**	**66.62**	**302**	*i* P	**P**	**23 21 02.9**	**-0.1**
	SNR=9.4						
MASF	**Masafi**	**66.63**	**302**	P	**P**	**23 21 03.9**	**+0.8**
CCD	**Concordia, Ant**	**66.68**	**178**	P	**P**	**23 21 03.8**	**+0.8**
BANOM	**Banah**	**66.72**	**303**	*i* P	**P**	**23 21 04.0**	**+0.4**
	SNR=18						
BANOM	**Banah**	**66.72**	**303**	P	**P**	**23 21 04.0**	**+0.4**
FAQ	**Al Faqa, Dubai**	**66.87**	**301**	*i* P	**P**	**23 21 04.4**	**-0.1**
	SNR=56						
FAQ	**Al Faqa, Dubai**	**66.87**	**301**	P	**P**	**23 21 04.8**	**+0.2**
	SNR=12						
NAZ	**Nazwa, Dubai**	**66.90**	**302**	*i* P	**P**	**23 21 04.4**	**-0.3**
	SNR=8.6						
NAZ	**Nazwa, Dubai**	**66.90**	**302**	P	**P**	**23 21 05.2**	**+0.5**
	SNR=6.7						
SHME	**Shamm**	**66.90**	**303**	*i* P	**P**	**23 21 04.5**	**-0.2**
	SNR=13						
SHME	**Shamm**	**66.90**	**303**	P	**P**	**23 21 05.1**	**+0.4**
VOI	**Vohitsoka**	**66.92**	**250**	P	**P**	**23 21 04.1**	**-1.0**
VOI				IAmb	IAmb	23 21 08.6	
	comp=Z,46nm,0.7s						
VOI	**Vohitsoka**	**66.92**	**250**	P	**P**	**23 21 07.5**	**+2.3**
VOI	**Vohitsoka**	**66.92**	**250**	P	**P**	**23 21 07.4**	**+2.3**
	SNR=5.7						
KURK	**Kurchatov**	**67.00**	**336**	P	**P**	**23 21 04.4**	**-0.4**
KURK				IAmb	IAmb	23 21 06.4	
	comp=Z,97nm,1.6s						
KURK	**Kurchatov**	**67.00**	**336***c*	*i*P	**P**	**23 21 05.0**	**+0.2**
KURK				pmax	pmax		
	comp=Z,62nm,1.7s						
KURK	**Kurchatov**	**67.00**	**336**	P	**P**	**23 21 04.5**	**-0.4**
ASUD	**Al Ashush, Dub**	**67.05**	**301**	*i* P	**P**	**23 21 05.8**	**+0.2**
	SNR=24						
ASUD	**Al Ashush, Dub**	**67.05**	**301**	P	**P**	**23 21 06.2**	**+0.5**
	SNR=8.5						
AJN	**Ajban**	**67.31**	**301**	*i* P	**P**	**23 21 06.9**	**-0.4**
	SNR=12						
AJN	**Ajban**	**67.31**	**301**	P	**P**	**23 21 07.2**	**-0.2**
ZALV	**Zalesovo Beam**	**67.35**	**341**	P	**P**	**23 21 05.8**	**-1.1**
	comp=Z,27nm,0.6s,baz=145,slow=4.5,SNR=144						
ZALV				S	**S**	**23 29 47.5**	**-4.2**
	comp=Z,1.8nm,0.9s,baz=130,slow=6.6,SNR=3.7						
ZALV				PKP2bc		23 49 32.3	
	comp=Z,1.7nm,0.6s,baz=319,slow=4.3,SNR=7.3						
ZALV				LR	LR	23 52 18.4	
	comp=Z,381nm,20.7s,baz=160,slow=37						
	comp=Z,27nm,0.6s						
MZR	**Muzera**	**68.05**	**299**	*i* P	**P**	**23 21 11.5**	**-0.5**
	SNR=29						
MZR	**Muzera**	**68.05**	**299**	P	**P**	**23 21 12.3**	**+0.3**
	SNR=9.7						
MAW	**Mawson**	**68.43**	**199**	P	**P**	**23 21 15.4**	**+1.8**
	comp=Z,86nm,0.7s,baz=52,slow=5.9,SNR=14						
MAW				LR	LR	23 45 55.5	
	comp=Z,295nm,19.9s,baz=70,slow=31						
	comp=Z,86nm,0.7s						
MAW	**Mawson**	**68.43**	**199**	P	**P**	**23 21 16.0**	**+2.5**
	baz=68,SNR=10.0						
MAW	**Mawson**	**68.43**	**199**	P	**P**	**23 21 14.4**	**+0.9**
MAW	**Mawson**	**68.43**	**199**	P	**P**	**23 21 14.4**	**+0.9**
MAW				pmax	pmax		
	comp=Z,31nm,1.0s						
SKR	**Severo-Kuril's**	**68.78**	**27**	*e*P	P	23 21 07.2	-8.7
SKR				pmax	pmax		
	comp=Z,48nm,1.0s						
SKR				pmax	pmax		
	comp=Z,200nm,9.8s						
GHWR	**Ruwais**	**68.90**	**300**	P	**P**	**23 21 17.3**	**0.0**
BRZS	**Berezniki**	**69.05**	**332**	*e*P	**P**	**23 21 17.4**	**-0.3**
	baz=332						
BRZS	**Berezniki**	**69.05**	**332**	*e*P	**P**	**23 21 17.4**	**-0.3**
JRN	**Qarnain Island**	**69.26**	**301**	P	**P**	**23 21 19.3**	**-0.1**
GEYT	**Alibeck**	**70.48**	**315**	P	**P**	**23 21 27.4**	**+0.6**
	comp=Z,54nm,0.8s,baz=143,slow=5.2,SNR=68						
GEYT				PKP2bc		23 49 22.4	
	comp=Z,1.7nm,0.8s,baz=248,slow=1.6,SNR=8.9						
GEYT				LR	LR	23 57 47.5	
	comp=Z,362nm,18.2s,baz=130,slow=40						
	comp=Z,54nm,0.8s						
GEYT	**Alibeck**	**70.48**	**315**	P	**P**	**23 21 27.1**	**+0.3**
GEYT				IAmb	IAmb	23 21 30.1	
	comp=Z,102nm,1.1s						
GEYT	**Alibeck**	**70.48**	**315**	P	**P**	**23 21 27.1**	**+0.3**
GEYT				pmax	pmax		
	comp=Z,102nm,1.1s						
GYA0B	**ALIBECK ARRAY**	**70.48**	**315**	IAmb	IAmb	23 21 30.1	
	comp=Z,125nm,1.2s						
SHMA	**Al-Shehemyia**	**71.18**	**301**	P	**P**	**23 21 31.2**	**+0.1**
PEA0B	**Petropavlovsk-**	**71.20**	**25**	P	**P**	**23 21 30.5**	**-0.2**
PEA0B	**Petropavlovsk-**	**71.20**	**25***c*	*e*P	**P**	**23 21 30.3**	**-0.4**
PETK	**Petropavlovsk-**	**71.20**	**25**	P	**P**	**23 21 30.4**	**-0.3**
	comp=Z,7.9nm,0.6s,baz=11,slow=1.5,SNR=13						
PETK				LR	LR	23 52 56.0	
	comp=Z,185nm,22.0s,baz=229,slow=36						
	comp=Z,7.9nm,0.6s						
PETK	**Petropavlovsk-**	**71.20**	**25**	P	**P**	**23 21 29.9**	**-0.8**
PETK	**Petropavlovsk-**	**71.20**	**25**	P	**P**	**23 21 29.9**	**-0.8**
YAK	**Yakutsk**	**71.25**	**7**	P	**P**	**23 21 29.8**	**-1.0**
	comp=Z,47nm,0.7s,baz=179,slow=0.5,SNR=14						
YAK				pP	**pP**	**23 22 00.9**	**-2.4**
	comp=Z,7.5nm,0.3s,baz=163,slow=3.2,SNR=1.5						
YAK				LR	LR	23 57 13.0	
	comp=Z,190nm,18.0s,baz=206,slow=40						
	comp=Z,47nm,0.7s						
YAK	**Yakutsk**	**71.25**	**7**	P	**P**	**23 21 29.9**	**-0.9**
YAK				IAmb	IAmb	23 21 32.4	
	comp=Z,84nm,0.8s						
YAK	**Yakutsk**	**71.25**	**7**	*e*P	**P**	**23 21 29.7**	**-1.0**
YAK				*e*		23 21 46.7	
YAK				*e**PP	**pP**	**23 22 01.2**	**-2.1**
YAK				*e*		23 24 08.9	
YAK				*e*PPP	PPP	23 25 51.0	
YAK				*e*S	**S**	**23 30 34.0**	**-3.1**
YAK				*e*		23 31 23.0	
YAK				*e*SS	**SS**	**23 35 12.0**	**-2.1**
YAK				pmax	pmax		
	comp=Z,47nm,0.8s						
YAK				pmax	pmax		
	comp=N,19nm,1.4s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,105nm,2.5s						
YAK				pmax	pmax		
	comp=N,54nm,2.6s						
YAK				pmax	pmax		
	comp=E,46nm,2.8s						
YAK				smax	smax		
	comp=E,111nm,2.3s						
YAK				smax	smax		
	comp=N,91nm,2.8s						
AFI	**Afiamalu**	**71.55**	**102**	LR	LR	23 52 45.9	
	comp=N,90nm,19.4s,baz=268,slow=36						
PET	**Petropavlovsk**	**71.55**	**26**	*e*P	**P**	**23 21 32.9**	**+0.1**
PET				*e**PP	**pP**	**23 22 04.9**	**-0.4**
PET				*e*S	**S**	**23 30 42.7**	**+1.8**
PET				pmax	pmax		
	comp=Z,37nm,1.6s						
PET				pmax	pmax		
	comp=Z,100nm,12.0s						
PET				MLR	MLR		
	comp=Z,200nm,18.0s						
SAKB	**Bahrain**	**71.58**	**301**	P	**P**	**23 21 33.3**	**-0.3**
BVAR	**Borovoye Array**	**72.19**	**333**	LR	LR	23 57 09.2	
	comp=Z,275nm,19.2s,baz=129,slow=39						
BRVK	**Borovoye**	**72.26**	**333**	P	**P**	**23 21 36.5**	**-0.5**
BRVK				IAmb	IAmb	23 21 38.6	
	comp=Z,87nm,1.6s						
BRVK	**Borovoye**	**72.26**	**333**	P	**P**	**23 21 36.5**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,87nm,1.6s						
BRVK	**Borovoye**	**72.26**	**333**	P	**P**	**23 21 36.9**	**-0.2**
VNDA	**Vanda**	**73.03**	**170**	P	**P**	**23 21 42.8**	**+1.6**
	comp=Z,20nm,0.7s,baz=314,slow=7.3,SNR=77						
VNDA				LR	LR	23 50 36.1	
	comp=Z,362nm,21.2s,baz=327,slow=33						
	comp=Z,20nm,0.7s						
VNDA	**Vanda**	**73.03**	**170**	P	**P**	**23 21 42.9**	**+1.6**
VNDA	**Vanda**	**73.03**	**170**	P	**P**	**23 21 42.9**	**+1.6**
VNDA				pmax	pmax		
	comp=Z,55nm,1.2s						
MA2	**Magadan**	**73.58**	**18**	P	**P**	**23 21 43.9**	**-0.7**
	comp=Z,14nm,0.6s,baz=205,slow=4.7,SNR=6.2						
MA2				LR	LR	23 56 35.0	
	comp=Z,146nm,20.7s,baz=222,slow=38						
	comp=Z,14nm,0.6s						
MA2	**Magadan**	**73.58**	**18⇓**	*e*P	**P**	**23 21 44.5**	**-0.2**
MA2				pmax	pmax		
	comp=Z,70nm,1.8s						
ATD	**Arta Tunnel**	**74.71**	**284**	P	**P**	**23 21 51.5**	**-0.7**
ATD	**Arta Tunnel**	**74.71**	**284**	*e*P	P	23 22 00.0	+7.8
ATD				*e*S	**S**	**23 31 20.9**	**+2.7**
ATD				IAMs_20	IAMs_20	23 32 39.5	
	comp=E,983nm,14.6s						
ATD	**Arta Tunnel**	**74.71**	**284**	P	**P**	**23 21 54.1**	**+1.8**
	SNR=5.4						
ABKAR	**Akbulak array**	**75.09**	**326**	P	**P**	**23 21 53.2**	**-0.4**
ABKAR				IAmb	IAmb	23 21 56.0	
	comp=Z,53nm,0.8s						
RAYN	**Ar Rayn**	**75.19**	**297**	P	**P**	**23 21 54.8**	**0.0**
RAYN				IAmb	IAmb	23 21 57.4	
	comp=Z,82nm,0.9s						
RAYN	**Ar Rayn**	**75.19**	**297**	P	**P**	**23 21 54.8**	**0.0**
RAYN				pmax	pmax		

	comp=Z,82nm,1.0s						
RAYN	Ar Rayn	75.19	297	i P	P	23 21 54.8	0.0
	SNR=14						
RAYN	Ar Rayn	75.19	297	P	P	23 21 55.2	+0.4
SEY	Seymchan	76.73	16	P	P	23 22 02.3	-0.3
	comp=Z,5.7nm,0.4s,baz=229,slow=8.0,SNR=9.3						
	comp=Z,5.7nm,0.4s						
SEY	Seymchan	76.73	16	⇓eP	P	23 22 02.5	-0.2
SEY				pmax	pmax		
	comp=Z,31nm,1.7s						
AKTO	Aktyubinsk	76.77	326	LR	LR	00 01 19.8	
	comp=Z,309nm,18.6s,baz=30,slow=40						
KIBK	Kibwezi	77.00	270	IAmb	IAmb	23 22 08.5	
	comp=Z,51nm,0.7s						
KIBK	Kibwezi	77.00	270	P	P	23 22 07.3	+1.9
	SNR=28						
KMBO	Kilima Mbogo	77.96	271	P	P	23 22 10.7	-0.2
	comp=Z,0.3nm,0.7s,baz=41,slow=24,SNR=52						
KMBO	Kilima Mbogo	77.96	271	P	P	23 22 11.2	+0.3
KMBO	Kilima Mbogo	77.96	271	P	P	23 22 11.2	+0.3
KMBO				pmax	pmax		
	comp=Z,31nm,1.0s						
KMBO	Kilima Mbogo	77.96	271	i P	P	23 22 12.4	+1.4
	SNR=49						
KMBO	Kilima Mbogo	77.96	271	P	P	23 22 12.8	+1.9
AAE	Adis Abeba	78.15	281	eP	P	23 22 21.3	+9.3
AAE				IAMs_20	IAMs_20	23 32 05.7	
	comp=N,2µm,16.6s						
AAE				eS	S	23 32 05.9	+10
FURI	Furi	78.21	281	eP	P	23 22 21.3	+9.0
FURI				eS	S	23 32 00.0	+3.0
SHEM	Shemya Is, Ala	78.81	32	LR	LR	23 54 26.8	
	comp=N,78nm,20.0s,baz=299,slow=34						
SVE	Sverdlovsk	78.95	333	deP	P	23 22 15.2	+0.1
SVE				eS	S	23 31 58.3	-4.3
SVE				pmax	pmax		
	comp=Z,26nm,0.6s						
AKT	Akhty	79.23	315	eP	P	23 22 18.2	+1.1
AKT				e		23 22 25.9	
AKT				e*PP	pP	23 22 51.9	+1.2
AKT				e*SP	sP	23 23 06.2	+1.2
AKT				e		23 25 21.0	
AKT				pmax	pmax		
	comp=Z,40nm,0.7s						
ARU	Arti	79.69	332	LR	LR	00 03 06.4	
	comp=Z,244nm,18.6s,baz=120,slow=40						
ARU	Arti	79.69	332	P	P	23 22 18.4	-0.7
ARU				IAmb	IAmb	23 22 21.2	
	comp=Z,93nm,1.6s						
ARU	Arti	79.69	332	c iP	P	23 22 18.7	-0.4
ARU				*PP	pP	23 22 49.4	-3.2
ARU						23 25 16.4	
ARU				S	S	23 32 07.7	-2.6
ARU				pmax	pmax		
	comp=Z,65nm,1.7s						
MAK	Makhachkala	79.94	316	eP	P	23 22 18.6	-2.1
MAK				e*PP	pP	23 22 51.1	-3.2
MAK				e*SP	sP	23 23 04.3	-4.3
MAK				eS	S	23 32 10.2	-3.3
MAK				e*SS	sS	23 33 10.1	-1.1
MAK				eSS	SS	23 37 29.7	+3.4
MAK				pmax	pmax		
	comp=Z,199nm,1.5s						
NRIK	Noril'sk	80.05	350	P	P	23 22 20.0	-0.8
	comp=Z,3.5nm,0.8s,baz=165,slow=4.7,SNR=16						
NRIK				S	S	23 32 09.7	-4.0
	comp=Z,1.5nm,0.8s,baz=338,slow=21,SNR=10						
	comp=Z,3.5nm,0.8s						
NRIK	Noril'sk	80.05	350	IAmb	IAmb	23 23 03.2	
	comp=Z,111nm,1.8s						
NRIK	Noril'sk	80.05	350	c iP	P	23 22 19.8	-1.0
NRIK				pmax	pmax		
	comp=Z,44nm,1.8s						
LODK	Lodwar	80.53	275	eP	P	23 22 30.9	+6.2
LODK				eS	S	23 32 11.0	-10
LODK				IAMs_20	IAMs_20	23 33 51.1	
	comp=N,6µm,97.4s						
LODK	Lodwar	80.53	275	P	P	23 22 26.5	+1.9
	SNR=9.5						
TIXI	Tiksi	80.53	4	P	P	23 22 21.4	-1.9
	comp=N,23nm,0.8s,baz=270,slow=23,SNR=50						
TIXI				LR	LR	00 01 30.8	
	comp=N,248nm,19.5s,baz=180,slow=38						
	comp=N,23nm,0.8s						
TIXI	Tiksi	80.53	4	P	P	23 22 20.9	-2.4
TIXI	Tiksi	80.53	4	⇑P	P	23 22 21.8	-1.5
GNI	Garni	80.90	313	LR	LR	00 03 13.4	
	comp=N,138nm,19.9s,baz=111,slow=39						
GNI	Garni	80.90	313	P	P	23 22 26.6	+0.4
GNI	Garni	80.90	313	c iP	P	23 22 26.8	+0.6
GNI				pmax	pmax		
	comp=Z,59nm,1.7s						
GNI	Garni	80.90	313	P	P	23 22 26.5	+0.3
GNI	Garni	80.90	313	P	P	23 22 27.3	+1.1
GROC	Groznyy	81.19	316	eP	P	23 22 25.8	-1.6
GROC				eS	S	23 32 23.3	-3.3
QSPA	South Pole Qui	81.45	180	LR	LR	23 56 39.0	
	comp=Z,306nm,21.7s,baz=330,slow=34						
GEVA	Gevas	81.56	311	IAmb	IAmb	23 22 33.3	
	comp=Z,66nm,1.0s						
RAR	Rarotonga	82.31	110	LR	LR	23 58 19.5	
	comp=Z,60nm,21.7s,baz=254,slow=35						
ZEI	Tsey	82.36	315	eP	P	23 22 34.6	+0.8
ZEI				pmax	pmax		
	comp=Z,64nm,1.4s						
GURO	Guroymak-BITLI	82.40	311	IAmb	IAmb	23 22 37.4	
	comp=Z,65nm,0.8s						
NCK	Nalchik	82.80	316	⇓iP	P	23 22 37.4	+1.5
NCK				pmax	pmax		
	comp=Z,49nm,1.2s						
NEY	Neytrino	83.33	315	⇓eP	P	23 22 40.4	+1.6
NEY				pmax	pmax		
	comp=Z,11nm,1.0s						
KBZ	Khabaz	83.36	316	P	P	23 22 39.3	+0.7
	comp=Z,18nm,0.8s,baz=118,slow=7.1,SNR=53						
KBZ				S	S	23 32 45.0	-3.6
	comp=Z,1.6nm,1.0s,baz=354,slow=23,SNR=4.3						
	comp=Z,18nm,0.8s						
KBZ	Khabaz	83.36	316	c iP	P	23 22 39.8	+1.2
KBZ				pmax	pmax		
	comp=Z,26nm,0.9s						
BELG	Belogornoye	83.45	325	LR	LR	00 03 30.2	
	comp=Z,185nm,21.3s,baz=156,slow=38						
BELG	Belogornoye	83.45	325	c iP	P	23 22 39.0	+0.1
BELG				pmax	pmax		
	comp=Z,22nm,1.4s						
KIV	Kislovodsk	83.57	316	⇑P	P	23 22 41.1	+1.2
KIV	Kislovodsk	83.57	316	P	P	23 22 39.4	-0.5
KIV				IAmb	IAmb	23 22 42.4	
	comp=Z,89nm,1.8s						
KIV	Kislovodsk	83.57	316	eP	P	23 22 40.5	+0.6
KIV				e*PP	pP	23 23 12.8	-0.9
KIV				eS	S	23 32 49.7	-1.3
KIV				pmax	pmax		
	comp=Z,24nm,1.1s						
KIV	Kislovodsk	83.57	316	i P	P	23 22 40.4	+0.4
	SNR=11						
KIV	Kislovodsk	83.57	316	P	P	23 22 40.5	+0.6
KOPT	Kop Dagi	83.96	312	IAmb	IAmb	23 22 46.0	
	comp=Z,54nm,0.6s						
GRHM	Grahamstown, E	84.44	237	P	P	23 22 45.8	+1.2
MBAR	Mbarara	84.48	270	LR	LR	23 58 48.6	
	comp=Z,193nm,18.1s,baz=97,slow=34						
MBAR	Mbarara	84.48	270	P	P	23 22 45.8	+0.5
MBAR	Mbarara	84.48	270	c iP	P	23 22 46.9	+1.6
MBAR				pmax	pmax		
	comp=Z,85nm,0.6s						
MBAR	Mbarara	84.48	270	P	P	23 22 47.0	+1.6
KIRV	Kirov	85.05	331	LR	LR	00 05 58.6	
	comp=Z,355nm,20.1s,baz=117,slow=39						
KIRV	Kirov	85.05	331	ceP	P	23 22 46.9	+0.1
SOC	Sochi	85.52	315	eP	P	23 22 49.2	-0.4
SOC				e		23 26 07.4	
SOC				ePPP	PPP	23 28 01.0	
SOC				eS	S	23 33 01.5	-8.6
SOC				eSS	SS	23 38 41.5	-7.5
SOC				eSSS	SSS	23 42 13.7	
SOC				pmax	pmax		
	comp=Z,50nm,0.7s						
GAZ	Gaziantep	85.70	308	IAmb	IAmb	23 22 54.1	
	comp=Z,47nm,0.8s						
EIL	Elat	85.85	301	LR	LR	00 03 17.7	
	comp=Z,178nm,18.7s,baz=68,slow=37						
BOSA	Boshof	85.96	242	P	P	23 22 53.9	+1.5
	comp=Z,61nm,0.7s,baz=98,slow=3.9,SNR=160						
BOSA				pP	pP	23 23 26.2	+0.3
	comp=Z,25nm,0.9s,baz=85,slow=8.4,SNR=3.1						
BOSA				PKKPbc	PKKPbc	23 40 51.5	-0.9
	comp=Z,2.2nm,0.9s,baz=196,slow=0.8,SNR=4.0						
BOSA				LR	LR	23 57 39.5	
	comp=Z,489nm,18.1s,baz=106,slow=33						
	comp=Z,61nm,0.7s						
BOSA	Boshof	85.96	242	P	P	23 22 52.8	+0.4
BOSA	Boshof	85.96	242	P	P	23 22 52.8	+0.4
BOSA				pmax	pmax		
	comp=Z,92nm,0.9s						
LBTB	Lobatse	86.13	245	LR	LR	23 54 53.4	
	comp=Z,107nm,21.6s,baz=110,slow=31						
LBTB	Lobatse	86.13	245	P	P	23 22 54.2	+1.0
LBTB				IAmb	IAmb	23 22 57.9	
	comp=Z,101nm,1.3s						
LBTB	Lobatse	86.13	245	P	P	23 22 54.2	+1.0
LBTB				pmax	pmax		
	comp=Z,101nm,1.3s						
MMAI	Mount Meron Ar	86.19	304	LR	LR	00 05 35.8	
	comp=Z,176nm,19.6s,baz=173,slow=38						
VRH	Novokhopyorsk	86.46	323	eP	P	23 22 53.8	-0.2
VRH				e		23 23 27.2	
VRH				eS	SKSac	23 33 05.0	-3.0
VRH				pmax	pmax		
	comp=Z,170nm,1.8s						
VRH				smax	smax		
	comp=E,450nm,2.0s						
BNN	Bunyan	87.14	310	P	P	23 22 57.9	+0.1
ANN	Anapa	87.42	316	eP	P	23 22 55.3	-3.5
ANN				e*PP	pP	23 23 29.5	-3.4
ANN				eS	SKSac	23 33 09.3	-4.9
ANN				eSS	SS	23 39 12.7	-4.1
ANN				pmax	pmax		
	comp=Z,57nm,0.6s						
VORD	Divnogorie	87.86	322	eP	P	23 22 59.5	-1.2
VORD				e		23 23 31.9	
VORD				pmax	pmax		
	comp=Z,130nm,1.6s						
VSR	Storozhevoye	88.00	322	eP	P	23 22 59.5	-1.9
VSR				e		23 23 32.1	
VSR				eS	SKSac	23 33 13.8	-3.6
VSR				pmax	pmax		
	comp=Z,90nm,0.6s						
VSR				smax	smax		
	comp=N,190nm,1.4s						
VORR	Voronezh	88.10	323	eP	P	23 23 02.1	+0.2
VORR				e		23 23 35.4	
VORR				eS	SKSac	23 33 15.6	-2.4
VORR				pmax	pmax		
	comp=Z,130nm,1.6s						
VORR				smax	smax		
	comp=N,190nm,1.2s						
DIKM	Dikmen	88.22	312	⇑P	P	23 23 03.7	+1.0
CSS	Mathiatis	88.28	306	IAmb	IAmb	23 23 07.3	
	comp=Z,44nm,0.7s						
LPSR	Galich'ya Gora	88.53	324	eP	P	23 23 03.2	-0.7
LPSR				e		23 23 35.6	
LPSR				eS	SKSac	23 33 16.0	-4.5
LPSR				pmax	pmax		
	comp=Z,40nm,0.8s						
LPSR				smax	smax		
	comp=E,310nm,2.1s						
TROLL	Troll, Antarti	88.76	197	P	P	23 23 07.4	+2.5
BR131	Keskin Array S	89.01	310	P	P	23 23 06.7	+0.1
BR131	Keskin Array S	89.01	310	P	P	23 23 06.7	+0.1
BR131				pmax	pmax		
	comp=Z,58nm,0.8s						
BR131	Keskin Array S	89.01	310	P	P	23 23 07.0	+0.4
	SNR=24						
BRTR	Keskin Array B	89.01	310	P	P	23 23 06.8	+0.1
	comp=Z,31nm,0.7s,baz=136,slow=6.2,SNR=65						
BRTR				pP	pP	23 23 39.0	-2.0
	comp=Z,13nm,0.9s,baz=145,slow=4.5,SNR=3.0						
BRTR				LR	LR	00 07 31.5	
	comp=Z,210nm,19.9s,baz=108,slow=38						
	comp=Z,31nm,0.7s						
BRTR	Keskin Array B	89.01	310	P	P	23 23 06.3	-0.4
BZK	Bozkurt	89.20	313	⇑P	P	23 23 04.4	-2.9
SUR	Sutherland	89.20	238	LR	LR	23 58 54.1	
	comp=Z,406nm,18.6s,baz=109,slow=33						
SUR	Sutherland	89.20	238	P	P	23 23 08.7	+0.9
SUR				IAmb	IAmb	23 23 12.7	
	comp=Z,41nm,0.8s						
SUR	Sutherland	89.20	238	P	P	23 23 10.4	+2.5
ILGA	Ilgaz	89.22	312	IAmb	IAmb	23 23 10.3	
	comp=Z,47nm,1.0s						
ANTO	Ankara	89.67	310	⇑P	P	23 23 10.3	+0.6
ANTO	Ankara	89.67	310	P	P	23 23 09.8	+0.1
ANTO				IAmb	IAmb	23 23 12.2	
	comp=Z,29nm,0.7s						
ANTO	Ankara	89.67	310	P	P	23 23 09.8	+0.1
ANTO				pmax	pmax		
	comp=Z,29nm,0.7s						
ANTO	Ankara	89.67	310	P	P	23 23 10.7	+1.0
BR231	Keskin MP Arra	89.68	310	IAmb	IAmb	23 23 12.2	
	comp=Z,26nm,0.8s						
SIM	Simferopol'	89.75	315	eP	P	23 23 10.1	+0.3
SIM						23 26 46.7	
SIM				eS	S	23 33 45.7	-4.7
SIM				pmax	pmax		
	comp=Z,73nm,0.9s						
SIM				pmax	pmax		
	comp=Z,42nm,14.8s						
SIM				smax	smax		
	comp=N,209nm,17.0s						
UNV	Unalaska Valle	89.97	35	P	P	23 23 10.9	+0.3
	baz=256						
MOS	Moscow	90.11	326	eP	P	23 23 09.1	-2.1
MOS				e*PP	pP	23 23 40.5	-5.1
MOS				eS	SKSac	23 33 27.1	-2.5
MOS				pmax	pmax		
	comp=Z,53nm,0.8s						
SNAA	Sanae	90.42	196	P	P	23 23 14.7	+2.1
SNAA	Sanae	90.42	196	LR	LR	23 58 50.8	
	comp=Z,305nm,18.9s,baz=108,slow=32						
SNAA	Sanae	90.42	196	P	P	23 23 13.3	+0.8
SNAA	Sanae	90.42	196	c iP	P	23 23 14.7	+2.1
SNAA				pmax	pmax		
	comp=Z,120nm,1.4s						
OBN	Obninsk	90.53	326	LR	LR	00 08 01.5	
	comp=Z,62nm,18.1s,baz=109,slow=38						
OBN	Obninsk	90.53	326	c iP	P	23 23 13.0	-0.1
OBN				e*PP	pP	23 23 46.4	-1.1
OBN				e*SP	sP	23 24 01.9	+0.3
OBN				e		23 26 51.8	
OBN				eS	SKSac	23 33 31.3	-0.7
OBN				eSS	SS	23 40 01.5	+0.2
OBN				pmax	pmax		
	comp=Z,97nm,2.1s						
OBN				MLR	MLR		
	comp=Z,254nm,21.0s						
KLMR	Klimovskoe	90.54	332	eP	P	23 23 10.7	-2.4
KLMR				AMP		23 23 13.9	
	comp=Z,27nm,1.2s						
KLMR	Klimovskoe	90.54	332	eP	P	23 23 10.7	-2.4
KLMR				pmax	pmax		
	comp=Z,27nm,1.2s						
BORA	Eskisehir	91.44	310	IAmb	IAmb	23 23 20.6	
	comp=Z,20nm,0.7s						
AKAS	Kas	91.50	306	IAmb	IAmb	23 23 34.1	
	comp=Z,19nm,0.7s						
VNA2	Neumayer--Watz	92.06	196	P	P	23 23 22.4	+2.3
	baz=118,slow=5.0						
BELA	Belgrano 2	92.10	186	P	P	23 23 20.9	+0.8
PPT2	Papeete2	92.34	108	eS	S	23 34 12.9	-2.2
	comp=Z,575nm,28.5s						
PPT2	Papeete2	92.34	108	eLR	LR	23 53 10.3	
	comp=Z,1µm,33.8s						
VNA1	Neumayer--Stat	92.46	196	P	P	23 23 24.1	+2.2
VNA3	Neumayer Olymp	92.49	195	P	P	23 23 24.2	+2.1
KULA	Kula-Manisa	92.60	308	P	P	23 23 22.8	-0.5
MANT	Manisa	92.68	308	IAmb	IAmb	23 23 25.6	
	comp=Z,16nm,0.7s						
ISK	Istanbul-Kandi	92.69	311	P	P	23 23 22.7	-0.8
BALB	Balikesir	93.37	309	IAmb	IAmb	23 23 29.3	
	comp=Z,22nm,0.8s						
JURR	Jurilovca	93.38	315	⇑P	P	23 23 26.6	0.0
MANR	Mangalia	93.45	314	⇑P	P	23 23 27.1	+0.2
TLCR		93.49	315	⇑P	P	23 23 27.4	+0.3
TLCR		93.49	315	⇑P	P	23 23 27.4	+0.3
MFTR	Murfatlar	93.62	314	⇑P	P	23 23 27.8	+0.1
TIRR	Tirgusor	93.67	314	⇑P	P	23 23 27.9	0.0
TIRR	Tirgusor	93.67	314	P	P	23 23 27.4	-0.5
TIRR	Tirgusor	93.67	314	P	P	23 23 27.4	-0.5
TIRR				pmax	pmax		
	comp=Z,39nm,0.9s						
PSN	Preselentsi	93.72	313	P	P	23 23 28.2	0.0
TPGR	Topolog	93.72	315	⇑P	P	23 23 27.9	-0.3
TLBR	Topalu	93.94	314	⇑P	P	23 23 29.0	-0.2
CFR	Carcaliu	93.96	315	⇑P	P	23 23 29.0	-0.2
CFR	Carcaliu	93.96	315	⇑P	P	23 23 29.0	-0.2
AKASG	Malin Array Be	94.03	321	P	P	23 23 28.6	-0.8
	comp=Z,3.8nm,0.6s,baz=73,slow=3.7,SNR=47						
AKASG				PP	PP	23 27 16.7	-0.8
	comp=Z,0.3nm,0.3s,baz=78,slow=6.0,SNR=4.7						
AKASG				PKKPbc	PKKPdf	23 40 32.1	0.0
	comp=Z,1.4nm,0.5s,baz=282,slow=3.6,SNR=8.5						
AKASG				LR	LR	00 13 24.2	
	comp=Z,138nm,20.1s,baz=102,slow=40						
	comp=Z,3.8nm,0.6s						
AKBB	Malin Array Si	94.03	321	IAmb	IAmb	23 23 29.5	
	comp=Z,12nm,0.7s						
AKBB	Malin Array Si	94.03	321	deP	P	23 23 28.6	-0.8
AKBB				pmax	pmax		
	comp=Z,11nm,0.6s						
HARR	Harsova	94.04	314	⇓P	P	23 23 30.0	+0.4
HARR	Harsova	94.04	314	⇓P	P	23 23 30.0	+0.4
ICOR	Ion Corvin	94.05	314	⇑P	P	23 23 30.0	+0.3
LEOM	Leova	94.07	316	⇑P	P	23 23 30.1	+0.4
LEOM	Leova	94.07	316	⇑P	P	23 23 30.1	+0.4
VLDR	Vladesti	94.09	316	⇑P	P	23 23 30.3	+0.4
WIN	Windhoek	94.20	247	IAmb	IAmb	23 23 35.5	
	comp=Z,13nm,0.7s						
PRD	Provadia	94.22	313	P	P	23 23 30.9	+0.4
SORM	Soroca	94.23	318	⇑P	P	23 23 29.4	-1.0
SORM	Soroca	94.23	318	⇑P	P	23 23 29.4	-1.0
TSUM	Tsumeb	94.38	250	LR	LR	00 04 34.0	
	comp=Z,89nm,18.4s,baz=122,slow=34						
TSUM	Tsumeb	94.38	250	P	P	23 23 31.6	-0.4
TSUM				IAmb	IAmb	23 23 36.5	
	comp=Z,44nm,1.7s						
EDRB	Edirne	94.52	311	P	P	23 23 32.7	+0.8
PRK	Paraskevi	94.55	309	P	P	23 23 25.9	-6.2
GHRR		94.59	316	⇓P	P	23 23 32.8	+0.7
CHOS	Chios island	94.61	308	P	P	23 23 32.8	+0.3
JMB	Yambol	94.72	312	P	P	23 23 33.2	+0.4
APA	Apatity	94.73	338	⇓iP	P	23 23 38.0	+5.7
APA				i		23 27 30.8	
APA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ODBI	Odobesti	94.79	315	⇑P	P	23 23 33.5	+0.4
SIGR	SIGRI	94.86	309	P	P	23 23 29.7	-3.8
ALN	Alexandroupoli	94.92	310	IAmb	IAmb	23 23 34.9	
	comp=Z,10nm,0.7s						
VRI	Vrincioaia	95.03	315	⇑P	P	23 23 34.9	+0.7
VRI	Vrincioaia	95.03	315	⇑P	P	23 23 34.9	+0.7
PLOR	Plostina	95.09	315	⇑P	P	23 23 34.4	-0.1
PLOR	Plostina	95.09	315	⇑P	P	23 23 34.4	-0.1
IDI	Anoyia	95.16	305	LR	LR	00 08 23.5	
	comp=Z,57nm,21.8s,baz=86,slow=37						
TESR	Tescani	95.17	316	⇑P	P	23 23 34.6	-0.2
SZH	Strazhica	95.29	313	P	P	23 23 35.5	+0.1
RDO	Rodhopi	95.33	311	P	P	23 23 35.3	-0.3
RDO	Rodhopi	95.33	311	IAmb	IAmb	23 23 37.8	
	comp=Z,11nm,0.8s						
MNK	Minsk	95.36	324	i P	P	23 23 34.0	-1.5
	comp=E,4.0nm,1.6s						
MNK				i LRM	MLR	00 08 45.8	
	comp=N,230nm,16.0s						
MNK				i LRM	MLR	00 08 52.2	
	comp=Z,163nm,18.5s						
MNK				i LRM	MLR	00 09 25.4	
	comp=E,35nm,18.5s						
MNK				i P	P	23 23 34.0	-1.5
	comp=N,57nm,1.1s						
MNK				i P	P	23 23 34.0	-1.5
	comp=Z,19nm,1.4s,baz=97						
MNK				i pP	pP	23 24 07.0	-2.9
MNK				i PP	PP	23 27 25.9	-1.7
MNK				i PPP	PPP	23 29 29.4	
MNK				i S	SKSac	23 33 57.2	-1.6
MNK				i sS	sSKSac	23 34 57.6	-2.8
MNK				i SS	SS	23 41 09.7	-0.7
MNK				i SSS	SSS	23 44 51.9	
MNK	Minsk	95.36	324	i P	P	23 23 33.9	-1.5
MNK				i *PP	pP	23 24 06.9	-2.9
MNK				i		23 27 25.9	
MNK				i PPP	PPP	23 29 29.3	
MNK				i S	SKSac	23 33 57.1	-1.6
MNK				i SS	SS	23 41 09.6	-0.7
MNK				i SSS	SSS	23 44 51.8	
MNK				pmax	pmax		
	comp=E,4.0nm,1.6s						
MNK				pmax	pmax		
	comp=Z,19nm,1.4s						
MNK				pmax	pmax		
	comp=N,57nm,1.1s						
MNK				MLR	MLR		
	comp=N,230nm,16.0s						
MNK				MLR	MLR		
	comp=Z,163nm,19.0s						
MNK				MLR	MLR		
	comp=E,35nm,19.0s						
LIA	Limnos Island	95.46	309	P	P	23 23 35.0	-1.2
KDZ	Kurdzhali	95.48	311	P	P	23 23 36.2	-0.2
MLR	Muntele Rosu	95.53	315	⇑P	P	23 23 36.4	-0.2
MLR	Muntele Rosu	95.53	315	LR	LR	00 13 03.7	
	comp=E,254nm,20.0s,baz=74,slow=39						
MLR	Muntele Rosu	95.53	315	IAmb	IAmb	23 23 40.0	
	comp=Z,15nm,1.0s						
MLR	Muntele Rosu	95.53	315	⇑P	P	23 23 36.4	-0.2
DOPR	Dopca	95.97	315	⇑P	P	23 23 37.1	-1.4
RZN	Rozhen	96.01	311	P	P	23 23 38.8	-0.2
NACGM	Naroch	96.04	325	eP	P	23 23 38.3	-0.2
	comp=Z,9.0nm,0.8s,baz=96						
HUMR	Humele	96.11	314	⇑P	P	23 23 39.0	-0.1
O17K	Koliganek Bris	96.13	31	P	P	23 23 39.7	+0.9
	baz=264						
VOIR		96.16	315	⇑P	P	23 23 38.7	-0.7
VOIR		96.16	315	⇑P	P	23 23 38.7	-0.7
BURAR	Bucovina Array	96.26	317	⇑P	P	23 23 40.2	+0.4
BURAR	Bucovina Array	96.26	317	IAmb	IAmb	23 23 41.5	
	comp=Z,8.3nm,0.7s						
BURAR	Bucovina Array	96.26	317	⇑P	P	23 23 40.2	+0.4
VSU	Vasula	96.44	328	⇑eP	P	23 23 40.0	-0.2
VSU				pmax	pmax		
	comp=Z,97nm,1.7s						
VSU	Vasula	96.44	328	eP	P	23 23 40.3	+0.1
ARR	Arges	96.44	315	⇑P	P	23 23 39.9	-0.8
PGB	Panagyurishte	96.50	312	P	P	23 23 41.1	+0.1
MMB	Musomiste	96.74	311	P	P	23 23 42.8	+0.7
ARCR	ARCALIA	96.80	317	⇑P	P	23 23 42.6	+0.4
TTA	Tatalina	96.97	27	P	P	23 23 43.2	+0.6
	baz=265						
FINES	FINESS Array B	97.04	331	P	P	23 23 42.8	-0.1
	comp=Z,9.9nm,0.6s,baz=104,slow=6.1,SNR=40						
FINES				PKiKP	PKiKP	23 28 18.9	+0.8
	comp=Z,1.8nm,0.8s,baz=132,slow=2.8,SNR=3.5						
FINES				PKKPbc	PKKPbc	23 40 24.4	-1.3
	comp=Z,0.8nm,0.5s,baz=238,slow=1.8,SNR=7.2						
FINES				LR	LR	00 11 20.3	
	comp=Z,156nm,19.4s,baz=88,slow=38						
	comp=Z,9.9nm,0.6s						
LOT	Lotru	97.05	315	⇑P	Pdif	23 23 44.9	+1.3
VTS	Vitosha	97.19	312	⇑P	Pdif	23 23 57.4	+13
VTS	Vitosha	97.19	312	P	P	23 23 44.1	-0.2
KKB	Krupnik	97.24	311	P	P	23 23 43.8	-0.5
LVV	L'vov	97.24	319	eP	P	23 23 43.7	-0.4
BMR	Baia Mare	97.42	317	⇑P	P	23 23 44.4	-0.6
BMR	Baia Mare	97.42	317	⇑P	P	23 23 44.4	-0.6
AGG	Agios Georgios	97.57	308	P	P	23 23 44.4	-1.5
AGG	Agios Georgios	97.57	308	P	P	23 23 44.4	-1.5
AGG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
VAY	Valandovo	97.58	311	i P	P	23 23 45.0	-0.8
MARR	Marisel-Cluj	97.61	316	⇑P	P	23 23 45.9	-0.1
PABE	Paberze	97.70	325	eP	Pdif	23 23 46.0	0.0
GZR	Gura Zlata	97.75	315	⇓P	Pdif	23 23 48.2	+1.6
GZR	Gura Zlata	97.75	315	⇓P	Pdif	23 23 48.2	+1.6
MEF	Metsahovi	97.77	330	eP	P	23 23 46.0	-0.2
ARCES	ARCESS Array B	97.85	339	P	P	23 23 45.6	-0.8
	comp=Z,4.7nm,0.8s,baz=92,slow=5.5,SNR=8.4						
ARCES				PKiKP	PKiKP	23 28 19.4	0.0
	comp=Z,1.4nm,0.6s,baz=122,slow=1.2,SNR=6.7						
ARCES				PKKPbc	PKKPbc	23 40 21.1	-2.6
	comp=Z,1.2nm,0.6s,baz=256,slow=3.6,SNR=5.5						
ARCES				LR	LR	00 14 43.7	
	comp=Z,202nm,18.8s,baz=106,slow=40						

	comp=Z,4.7nm,0.8s						
K20K	Telida	97.88	27	P	Pdif	23 23 47.1	+0.4
	baz=267						
STIP	Stip	97.90	311	i P	P	23 23 45.7	-1.5
OHAK	Old Harbor	97.91	33	P	Pdif	23 23 46.9	0.0
	baz=266						
L20K	Farewell, AK	97.91	28	P	Pdif	23 23 47.1	+0.2
	baz=267						
IMAR	Indian Mountai	98.15	24	P	Pdif	23 23 48.3	+0.5
IMAR				PKKPdf	PKKPbc	23 40 21.1	-1.7
SURR	Surduc	98.23	315	⇑P	P	23 23 48.0	-0.6
G21K	Allakaket	98.27	24	P	Pdif	23 23 49.5	+1.2
	baz=268						
KDAK	Kodiak Island	98.32	33	LR	LR	00 03 28.1	
	comp=Z,84nm,21.2s,baz=277,slow=32						
BOVS	Bovan	98.39	313	⇑P	P	23 23 48.3	-1.0
BZS	Buzias	98.58	315	⇑P	P	23 23 49.0	-1.2
BZS	Buzias	98.58	315	⇑P	P	23 23 49.0	-1.2
CAST	Castle Rocks	98.77	27	P	Pdif	23 23 50.8	+0.1
	baz=268						
F22K	John River	98.82	23	P	Pdif	23 23 51.9	+1.1
	baz=269						
I21K	Tanana	98.86	25	P	Pdif	23 23 51.5	+0.5
	baz=269						
HOM	Homer	98.88	31	P	Pdif	23 23 51.7	+0.5
	baz=268						
OHR	Ohrid	98.90	310	i P	P	23 23 50.6	-1.2
E22K	Anaktuvuk Pass	98.97	22	P	Pdif	23 23 52.2	+0.8
	baz=270						
SKT	Skwentna	98.99	29	PKKPdf	PKKPdf	23 40 18.1	-5.4
STHS	Stebnicka Huta	99.03	319	eP	Pdif	23 23 52.6	+0.4
STHS	Stebnicka Huta	99.03	319	ePDIFF	Pdif	23 23 52.5	+0.4
G22K	Bettles	99.07	23	P	Pdif	23 23 53.2	+1.3
	baz=270						
RAF	Rauma	99.10	331	eP	Pdif	23 23 52.0	-0.1
BPAW	Bear Paw Mtn.	99.27	26	PKKPdf	PKKPdf	23 40 17.6	-5.4
BPAW	Bear Paw Mtn.	99.27	26	P	Pdif	23 23 53.3	+0.4
	baz=270						
MLY	Manley	99.38	25	P	Pdif	23 23 54.0	+0.5
	baz=270						
KEK	Kerkira	99.58	309	Pdif	Pdif	23 23 54.4	-0.5
TRF	Thorofare Moun	99.58	27	PKKPdf	PKKPdf	23 40 17.9	-4.8
COLD	Coldfoot	99.58	23	P	Pdif	23 23 55.7	+1.5
	baz=271						
DIVS	Divibare	99.65	313	Pdif	Pdif	23 23 54.4	-0.8
DIVS				IAmb	IAmb	23 23 57.6	
	comp=Z,16nm,1.5s						
G23K	Bananza Creek	99.66	24	P	Pdif	23 23 56.1	+1.4
	baz=271						
E23K	Chandalar	99.79	22	P	Pdif	23 23 56.5	+1.2
	baz=272						
RC01	Rabbit Creek A	99.84	29	P	Pdif	23 23 56.6	+1.1
	baz=270						
H23K	Yukon River	99.87	25	P	Pdif	23 23 57.2	+1.6
	baz=271						
I23K	Minto, Yukon-K	99.96	25	P	Pdif	23 23 55.1	-0.8
	baz=271						
D24K	Happy Valley	100.04	21	P	Pdif	23 23 56.4	+0.2
	baz=272						
NEA2	Nenana	100.10	26	P	Pdif	23 23 56.9	+0.3
	baz=271						
PDG	Podgorica	100.12	312	⇑P	Pdif	23 23 56.5	-0.6
PDG	Podgorica	100.12	312	Pdif	Pdif	23 23 55.4	-1.8
SPITS	Spitsbergen Ar	100.13	348	LR	LR	00 15 35.8	
	comp=Z,217nm,19.5s,baz=66,slow=39						
PMR	Palmer	100.13	29	P	Pdif	23 23 57.0	+0.3
	baz=271						
KNK	Knik Glacier	100.46	29	P	Pdif	23 23 58.2	-0.1
	baz=271						
F24K	Squaw Lake	100.47	23	P	Pdif	23 23 58.5	+0.3
	baz=273						
H24K	Noodor Dome	100.56	25	P	Pdif	23 23 59.2	+0.5
	baz=273						
VYHS	Vyhne	100.58	318	eP	Pdif	23 23 59.8	+0.7
VYHS				e		23 28 10.1	
VYHS	Vyhne	100.58	318	ePDIFF	Pdif	23 23 59.8	+0.7
VYHS	Vyhne	100.58	318	ePP	PP	23 28 10.1	+2.3
VYHS	Vyhne	100.58	318	e		23 47 54.5	
MORH	Mrgy, Hungar	100.67	315	⇑P	Pdif	23 23 59.1	-0.4
G24K	Hadweenzic Riv	100.67	24	P	Pdif	23 23 59.6	+0.5
	baz=273						
M23K	Glacier View	100.80	29	P	Pdif	23 24 00.3	+0.6
	baz=272						
ILAR	Eielson Array	101.03	26	P	Pdif	23 23 59.9	-0.8
	comp=Z,0.3nm,0.6s,baz=272,slow=4.8,SNR=6.6						
ILAR				PKiKP	PKiKP	23 28 25.1	-0.1
	comp=Z,0.6nm,0.6s,baz=263,slow=3.3,SNR=7.8						
ILAR				PKKPbc	PKKPbc	23 40 10.8	-3.7
	comp=Z,3.1nm,0.6s,baz=76,slow=1.2,SNR=24						
E25K	Arctic Village	101.30	22	P	Pdif	23 24 02.3	+0.5
	baz=275						
JAVC	Velka Javorina	101.36	318	ePDIFF	Pdif	23 24 04.0	+1.4
MORC	Moravsky Berou	101.44	319	ePDIFF	Pdif	23 24 03.2	+0.3
MORC				e		23 34 30.7	
Q23K	Middleton Isla	101.58	31	P	Pdif	23 24 04.1	+0.9
	baz=273						
MODS	Modra-Piesok	101.62	318	eP	Pdif	23 24 05.6	+1.9
MODS	Modra-Piesok	101.62	318	ePDIFF	Pdif	23 24 05.6	+1.9
C27K	Jago River	101.80	21	P	Pdif	23 24 04.4	+0.4
	baz=277						
KRLC	Kraliky	101.93	319	ePDIFF	Pdif	23 24 06.1	+1.0
KRLC	Kraliky	101.93	319	eP	Pdif	23 24 06.1	+1.0
RIDG	Independent Ri	102.00	27	P	Pdif	23 24 05.1	0.0
	baz=275						
VRAC	Vranov	102.06	319	ePDIFF	Pdif	23 24 06.1	+0.4
VRAC				e		23 34 33.4	
KRUC	Moravsky	102.20	318	ePDIFF	Pdif	23 24 06.2	0.0
KRUC				e		23 34 34.3	
DPC	Dobruska-Polom	102.22	320	ePDIFF	Pdif	23 24 08.7	+2.3
DPC				ePP	PP	23 28 19.9	-0.2
DPC	Dobruska-Polom	102.22	320	eP	Pdif	23 24 08.7	+2.3
DPC				e		23 28 19.9	
SCRK	Sand Creek	102.35	26	P	Pdif	23 24 06.8	+0.1
	baz=276						
CHVC	Chvalec	102.38	320	ePP	PP	23 28 20.9	-0.4
I26K	Coal Creek Min	102.56	25	P	Pdif	23 24 07.6	+0.1
	baz=277						
CONA	Conrad Observa	102.58	317	ePP	PP	23 28 21.2	-1.6
	comp=Z,6.2nm,1.3s						
CONA				ePKKP	PKKPbc	23 40 08.6	-0.9
	comp=Z,1.0nm,0.5s						
E27K	Coleen River	102.77	22	P	Pdif	23 24 09.1	+0.7
	baz=279						
ARSA	Arzberg	102.82	316	ePP	PP	23 28 22.5	-2.1
	comp=Z,2.0nm,0.8s						
ARSA				ePKKP	PKKPbc	23 40 08.5	-0.2
	comp=Z,0.4nm,0.3s						
TAOE	Nuku Hiva Isla	102.94	101	eLR	LR	23 58 04.6	
	comp=Z,282nm,22.5s						
G27K	Doyon Strip	102.96	23	P	Pdif	23 24 09.6	+0.4
	baz=279						
MCARA	McCarthy VSAT	103.07	29	P	Pdif	23 24 10.2	+0.4
	baz=276						
H27K	Steamboat Moun	103.10	24	P	Pdif	23 24 10.4	+0.5
	baz=279						
I27K	Kandik River	103.16	25	P	Pdif	23 24 10.9	+0.7
	baz=278						
SOKA	Soboth	103.17	316	ePP	PP	23 28 28.2	+0.9
	comp=Z,6.5nm,1.2s						
K27K	Chicken	103.18	26	P	Pdif	23 24 11.3	+1.0
	baz=278						
L27K	Beaver Creek,	103.42	27	P	Pdif	23 24 12.2	+0.8
	baz=278						
M27K	Edge Creek, AK	103.49	28	P	Pdif	23 24 12.5	+0.6
	baz=277						
OBKA	Obir	103.51	316	ePP	PP	23 28 26.9	-3.0
	comp=Z,7.3nm,1.3s						
OBKA				eSKS	SKSac	23 34 41.3	+1.6
	comp=Z,9.1nm,1.9s						
CKRC	Cesky Krumlov	103.58	318	ePKKP	PKKPbc	23 40 07.4	+0.9
MOA	Molln	103.65	317	ePKiKP	PKiKP	23 28 27.2	-3.3
	comp=Z,2.8nm,1.0s						
MOA				i PKKP	PKKPbc	23 40 08.7	+2.5
	comp=Z,1.1nm,0.4s						
BRG	Berggiesshubel	103.71	320	ePKP	PKiKP	23 28 31.0	+0.6
BRG				Amp		23 28 32.0	
	comp=Z,3.7nm,0.7s						
BVCY	Beaver Creek	103.95	28	P	Pdif	23 24 15.3	+1.5
	baz=278						
GERES	GERESS Array B	103.98	318	Pdiff	Pdif	23 24 14.2	-0.1
	comp=Z,0.6nm,0.7s,baz=90,slow=5.3,SNR=7.4						
GERES				PKiKP	PKiKP	23 28 31.6	+0.5
	comp=Z,1.3nm,0.6s,baz=88,slow=3.4,SNR=7.3						
GERES				PKKPbc	PKKPbc	23 40 05.2	-0.2
	comp=Z,0.5nm,0.6s,baz=306,slow=4.5,SNR=6.0						
KHC	Kasperske Hory	104.05	318	ePDIFF	Pdif	23 24 14.8	+0.3
KHC				ePP	PP	23 28 33.1	-0.6
KHC				ePKKP	PKKPbc	23 40 05.1	0.0
KHC	Kasperske Hory	104.05	318	eP	Pdif	23 24 14.8	+0.3
KHC				e		23 28 33.1	
MYKA	Terra Mystica	104.13	316	ePKiKP	PKiKP	23 28 27.9	-3.5
MYKA				ePKKP	PKKPbc	23 40 04.4	-0.4
	comp=Z,2.5nm,0.5s						
PRED	Cave del Predi	104.19	316	Pdif	Pdif	23 24 15.0	-0.3
PRED					PKiKP	23 28 30.6	-0.9
PRED				PKKPbc	PKKPbc	23 40 00.6	-4.0
NB2	NORSAR Subarra	104.22	331	PKKP	PKKPbc	23 40 03.7	-1.3
	comp=Z,7.2nm,1.2s,baz=262,slow=1.9						
NB2	NORSAR Subarra	104.22	331	PKKP	PKKPbc	23 40 03.7	-1.3
	baz=262,slow=1.9						
NOA	NORSAR Array B	104.22	331	Pdiff	Pdif	23 24 15.0	0.0
	comp=Z,0.5nm,0.7s,baz=80,slow=4.5,SNR=3.4						
NOA				PP	PP	23 28 33.2	-1.4
	comp=Z,1.0nm,0.7s,baz=83,slow=7.2,SNR=4.1						
NOA				PKKPbc	PKKPbc	23 40 04.3	-0.7
	comp=Z,1.4nm,0.7s,baz=61,slow=2.6,SNR=4.8						
KBA	Koelnbreinsper	104.31	316	ePKiKP	PKiKP	23 28 32.7	+0.8
	comp=Z,3.4nm,0.8s						
KBA				eSKS	SKSac	23 34 43.4	-0.2
	comp=Z,13nm,1.6s						
ABTA	Abfaltersbach	104.90	316	eSKS	SKSac	23 34 44.1	-1.9
	comp=Z,12nm,1.6s						
ABTA				PKKP	PKKPbc	23 39 58.9	-3.6
	comp=Z,2.1nm,0.7s						
CIMO	Cimolais	104.97	316	Pdif	Pdif	23 24 18.4	-0.3
L29M	L29M	105.08	27	P	PKiKP	23 28 33.2	+0.6
	baz=281						
YUK4	Talbot Arm	105.16	29	P	PKiKP	23 28 34.4	+1.3
	baz=280						
K29M	Barlow Dome	105.20	26	P	PKiKP	23 28 33.3	+0.4
	baz=282						
YUK6	Outpost Mounta	105.37	29	P	PKiKP	23 28 34.0	+0.5
	baz=280						
WTTA	Wattenberg	105.46	317	ePKiKP	PKiKP	23 28 34.6	+0.6
	comp=Z,3.1nm,0.6s						
WTTA				eSKS	SKSac	23 34 48.0	-0.7
	comp=Z,7.4nm,1.4s						
WTTA				ePKKP	PKKPbc	23 39 58.1	-2.8
	comp=Z,2.2nm,0.6s						
WATA	Walderalm	105.50	317	ePKiKP	PKiKP	23 28 34.4	+0.4
	comp=Z,3.3nm,0.6s						
INK	Inuvik	105.67	21	PKiKP	PKiKP	23 28 33.4	-0.1
	comp=Z,1.9nm,0.6s,baz=313,slow=4.2,SNR=8.8						
INK				PKKPbc	PKKPbc	23 39 58.4	-2.4
	comp=Z,2.7nm,0.6s,baz=63,slow=1.6,SNR=12						
INK	Inuvik	105.67	21	P	PKiKP	23 28 34.1	+0.6
	baz=287						
SQTA	Sankt Quirin	105.76	317	ePKiKP	PKiKP	23 28 35.7	+1.3
SQTA				eSKS	SKSac	23 34 48.6	-1.4
	comp=Z,6.7nm,1.1s						
SQTA				ePKKP	PKKPbc	23 39 58.6	-1.3
	comp=Z,1.0nm,0.3s						
M30M	Minto, Yukon	105.78	27	P	PKiKP	23 28 34.1	+0.2
	baz=282						
MOTA	Moosalm	105.82	317	ePKiKP	PKiKP	23 28 35.2	+0.6
	comp=Z,2.2nm,0.7s						
MOTA				SKS	SKSac	23 34 48.7	-1.6
	comp=Z,9.1nm,1.4s						
MOTA				ePKKP	PKKPbc	23 39 58.1	-1.7
	comp=Z,2.0nm,0.6s						
F31M	Tsiigehtchic	105.84	22	P	PKiKP	23 28 34.4	+0.6
	baz=286						
RETA	Reutte	106.04	317	ePKiKP	PKiKP	23 28 34.9	0.0
	comp=Z,6.0nm,1.3s						
RETA				eSKS	SKSac	23 34 52.3	+1.2
	comp=Z,12nm,1.7s						
P30M	Million Dollar	106.20	30	P	PKiKP	23 28 35.0	+0.2
	baz=281						
DAVA	Damuels	106.65	317	ePKiKP	PKiKP	23 28 35.3	-0.8
	comp=Z,5.0nm,0.8s						
M31M	Drury Creek, Y	106.96	27	P	PKiKP	23 28 37.1	+0.9
	baz=284						
A36M	Sachs Harbour	106.97	16	PKiKP	PKiKP	23 28 34.3	-1.5
A36M				PKKPbc	PKKPbc	23 39 51.8	-5.0
A36M				PKKPab	PKKPab	23 40 09.2	0.0
SIT	Sitka	107.66	33	P	PKiKP	23 28 37.5	0.0
	baz=282						
N32M	Quiet Lake	107.83	28	P	PKiKP	23 28 37.5	-0.3
	baz=285						
KEST	Kesra	107.84	305	PKKPbc	PKKPbc	23 39 53.8	+0.8
	comp=Z,3.9nm,0.9s,baz=349,slow=4.6,SNR=4.8						
P32M	Atlin	107.92	30	P	PKiKP	23 28 37.7	-0.3
	baz=284						
P33M	Teslin, Yukon	108.20	29	P	PKiKP	23 28 37.8	-0.8
	baz=285						
MMPY	Sheldon Lake,	108.25	27	P	PKiKP	23 28 38.2	-0.4
	baz=287						
Q32M	Nakina River	108.80	30	P	PKiKP	23 28 39.7	-0.2
	baz=285						
WRAK	Wrangell Islan	109.40	33	P	PKiKP	23 28 41.9	+1.2
	baz=284						
DBG	Daneborg	109.51	348	eP	PKiKP	23 28 40.7	+0.2
S34M	Telegraph Cree	109.65	31	P	PKiKP	23 28 42.6	+1.4
	baz=286						
DLBC	Dease Lake	110.07	31	P	PKiKP	23 28 42.2	+0.1
	baz=287						
T35M	Bob Quinn	110.37	32	P	PKiKP	23 28 43.2	+0.5
	baz=286						
NEEM	North Greenlan	110.75	357	eP	PKiKP	23 28 44.2	+1.0
WRGLY	Wrigley	111.36	25	P	PKiKP	23 28 45.9	+1.6
	baz=295						
LIRD	Liard River Hi	111.68	29	P	PKiKP	23 28 45.9	+0.9
	baz=291						
RES	Resolute Bay	111.69	8	PKKPbc	PKKPbc	23 39 40.0	-1.7
	comp=Z,1.5nm,0.6s,baz=195,slow=4.6,SNR=10						
TULEG	Thule	112.00	1	eP	PKiKP	23 28 45.7	+0.5
SCO	Scoresbysund	112.51	346	eP	PKiKP	23 28 48.0	+1.7
EKA	Eskdalemuir Ar	112.95	327	PKKPbc	PKKPbc	23 39 33.8	-3.3
	comp=Z,1.3nm,0.6s,baz=250,slow=3.4,SNR=6.4						
SUMG	Summit	114.07	352	i P	PKiKP	23 28 50.0	+0.2
TORD	Torodi Ar. Bea	114.73	281	Pdiff	Pdif	23 25 05.0	+2.3
	comp=Z,0.5nm,0.7s,baz=91,slow=6.5,SNR=2.6						
TORD				PKP	PKiKP	23 28 52.4	+0.2
	comp=Z,22nm,0.6s,baz=78,slow=1.5,SNR=164						
TORD				pPKP	pPKiKP	23 29 25.4	-2.5
	comp=Z,4.4nm,0.6s,baz=69,slow=1.9,SNR=2.7						
TORD				SKP	SKPdf	23 32 13.9	-1.5
	comp=Z,1.5nm,0.6s,baz=136,slow=1.2,SNR=3.6						
TORD				PKKPbc	PKKPbc	23 39 29.9	+0.2
	comp=Z,1.8nm,0.7s,baz=308,slow=3.7,SNR=9.1						
YKA	Yellowknife Ar	115.26	23	PKP	PKiKP	23 28 51.0	-0.7
	comp=Z,13nm,0.6s,baz=308,slow=1.8,SNR=162						
YKA				pPKP	pPKiKP	23 29 25.4	-2.4
	comp=Z,4.2nm,0.9s,baz=308,slow=1.8,SNR=2.8						
YKA				SKP	SKPdf	23 32 14.6	-0.5
	comp=Z,2.1nm,0.7s,baz=304,slow=1.8,SNR=7.7						
YKA				PKKPbc	PKKPbc	23 39 27.4	-2.0
	comp=Z,1.3nm,0.6s,baz=121,slow=3.9,SNR=16						
YKA				SKKPbc	SKKPbc	23 43 03.2	-0.5
	comp=Z,0.4nm,0.7s,baz=59,slow=3.2,SNR=3.7						
UPNV	Upernavik	115.60	357	eP	PKPdf	23 28 52.7	+0.5
WAPA	Wapiti River	116.76	32		PKPdf	23 28 54.8	-0.2
ICESG	Greenland Ices	117.34	350	i P	PKiKP	23 28 56.4	+0.3
ESDC	Sonseca Array	117.80	310	PKP	PKiKP	23 28 57.6	+0.1
	comp=Z,2.2nm,0.7s,baz=14,slow=2.9,SNR=19						
ESDC				PKKPbc	PKKPbc	23 39 20.4	+0.6
	comp=Z,1.5nm,0.6s,baz=276,slow=3.7,SNR=22						
PAB	San Pablo	118.12	310	PKPdf	PKiKP	23 28 58.7	+0.5
PAB	San Pablo	118.12	310	PKIKP	PKiKP	23 28 58.7	+0.5
F04A	Amboy	118.35	42	PKPdf	PKPdf	23 28 58.2	0.0
LTY	Liberty	119.05	40	PKPdf	PKPdf	23 28 59.2	-0.5
J05D	Fort Rock, OR	119.98	45	PKPdf	PKiKP	23 29 02.2	+0.4
ANGG	Ammassalik, Gr	119.98	347	i P	PKPdf	23 29 00.4	-0.4
PVRL	Vila Real	120.17	313	ePKP	PKiKP	23 29 03.6	+1.5
ISOG	Isortoq, Green	120.33	348	eP	PKPdf	23 29 01.2	-0.2
PGAV	Gavieira, Arco	120.37	314	ePKP	PKiKP	23 29 03.6	+1.1
PCBR	Castelo Branco	120.39	311	ePKP	PKiKP	23 29 03.7	+1.2
PBAR	Barrancos	120.48	309	ePKP	PKiKP	23 29 03.7	+1.0
KIC	Kosan Boka	120.50	272	⇑ePKIKP	PKiKP	23 29 03.5	+0.1
	comp=Z,58nm,0.6s						
DBIC	Dimbokro	120.65	273	PKP	PKiKP	23 29 04.0	+0.3
	comp=Z,30nm,0.6s,baz=110,slow=2.3,SNR=59						
DBIC				PKKPbc	PKKPbc	23 39 08.4	-0.1
	comp=Z,3.8nm,0.6s,baz=282,slow=5.4,SNR=8.7						
DBIC	Dimbokro	120.65	273	PKPdf	PKPdf	23 29 03.4	-0.2
DBIC	Dimbokro	120.65	273	PKIKP	PKPdf	23 29 03.4	-0.2
LIC	Lamto	120.77	272	⇑ePKIKP	PKiKP	23 29 04.0	+0.1
	comp=Z,127nm,0.6s						
DY2G	Dye2	120.78	351	i P	PKiKP	23 29 03.2	+0.5
TIC	Toumodi	120.81	273	⇑ePKIKP	PKiKP	23 29 04.0	0.0
	comp=Z,42nm,0.6s						
SFJD	Kangerlussuaq	120.84	354	PKPdf	PKPdf	23 29 02.2	-0.2
SFJD	Kangerlussuaq	120.84	354	PKIKP	PKPdf	23 29 02.2	-0.2
SFJD	Kangerlussuaq	120.84	354	eP	PKiKP	23 29 02.4	-0.1
NEW	Newport	120.88	38	PKPdf	PKiKP	23 29 03.4	+0.1
NEW	Newport	120.88	38	PKIKP	PKiKP	23 29 03.4	+0.1
NEW	Newport	120.88	38	P	PKiKP	23 29 04.1	+0.9
	baz=294,SNR=8.5						
PCAS	Casmilo, Conde	121.09	312	ePKP	PKiKP	23 29 05.1	+1.3
EVO	Evora	121.13	310	ePKP	PKiKP	23 29 04.0	0.0
PBEJ	Beja	121.15	309	ePKP	PKiKP	23 29 05.9	+1.9
PVAQ	Vaqueiros	121.19	309	ePKP	PKiKP	23 29 06.1	+2.0
PCVE	Castro Verde	121.38	309	ePKP	PKiKP	23 29 05.8	+1.3
MESJ	Messejana	121.47	309	ePKP	PKiKP	23 29 06.4	+1.8
PNCL	Nicolau / Gran	121.63	310	ePKP	PKiKP	23 29 06.5	+1.6
MORF	Marmelete	121.94	309	ePKP	PKiKP	23 29 07.8	+2.2
PLID	Pearl Lake	122.87	41	PKPdf	PKPdf	23 29 07.0	-0.3
SMMC	Simmler	123.09	53	P	PKiKP	23 29 08.1	+0.1
	baz=284						
PKM	Mcpherson Peak	123.34	54	P	PKPdf	23 29 08.4	0.0
	baz=284						
MSO	Missoula	123.44	39	P	PKiKP	23 29 08.6	+0.2
	baz=296,SNR=38						
KVN	Kaiserville	123.53	49	PKPdf	PKiKP	23 29 09.5	+0.6
KVN	Kaiserville	123.53	49	PKIKP	PKiKP	23 29 09.5	+0.6
NVAR	Mina Array Bea	123.56	49	PKP	PKiKP	23 29 10.5	+1.5
	comp=Z,15nm,0.6s,baz=267,slow=1.8,SNR=52						
NVAR				PKKPbc	PKKPbc	23 38 58.4	0.0
	comp=Z,1.6nm,0.6s,baz=108,slow=4.6,SNR=5.7						
TIN	Tinemaha, Big	124.02	51	P	PKiKP	23 29 10.6	+0.7
	baz=286						
ARVC	Arvin	124.07	53	P	PKiKP	23 29 10.6	+0.7
	baz=285						
DSP	Deep Springs	124.12	50	PKPdf	PKPdf	23 29 09.4	-0.1
ISA	Isabella, Lake	124.21	53	P	PKiKP	23 29 10.6	+0.3
	baz=285						
OSI	Osito Audit: C	124.28	54	P	PKiKP	23 29 10.3	-0.1
	baz=285						
CWC	Cottonwood Cre	124.30	52	P	PKiKP	23 29 10.5	0.0
	baz=286						
HLID	Hailey	124.52	42	P	PKiKP	23 29 11.3	+0.5
	baz=294						
DECC	Green Verdugo	124.68	54	P	PKiKP	23 29 11.5	+0.3
	baz=285						
EDW2	Edwards Air Fo	124.79	53	P	PKiKP	23 29 12.1	+0.7
	baz=285						
CIS	Catalina Islan	124.83	55	P	PKiKP	23 29 12.1	+0.7
	baz=284						
FMP	Fort Macarthur	124.85	55	P	PKiKP	23 29 12.0	+0.6
	baz=284						
MPMC	Manual Prospec	124.87	52	P	PKiKP	23 29 12.6	+0.9
	baz=286,SNR=7.4						
BFSC	Mount Baldy Ra	125.23	54	P	PKiKP	23 29 12.5	+0.1
	baz=285						
FURC	Furnace Creek,	125.24	51	P	PKiKP	23 29 12.7	+0.6
	baz=287						
FFC	Flin Flon	125.24	25	PKPdf	PKPdf	23 29 10.4	-0.8
FFC	Flin Flon	125.24	25	PKIKP	PKPdf	23 29 10.4	-0.8
EGMT	Eagleton	125.37	36	P	PKiKP	23 29 12.5	+0.3
	baz=301						
BOZ	Bozeman (W)	125.43	39	P	PKiKP	23 29 13.2	+0.7
	baz=298,SNR=31						
NRS	Narsarsuaq	125.56	349	eP	PKiKP	23 29 12.4	+0.4
TPNV	Topopah Spring	125.56	50	P	PKiKP	23 29 13.7	+0.6
	baz=288						
RRX	Edison Barstow	125.58	53	P	PKiKP	23 29 14.0	+1.0
	baz=286						
GSC	Goldstone, Bar	125.62	53	P	PKiKP	23 29 14.3	+1.2
	baz=286,SNR=8.2						
COYC	Coyhaique	125.73	174	PKPdf	PKPdf	23 29 12.4	-0.1
MURC	Murrieta	125.76	55	P	PKiKP	23 29 14.3	+1.0
	baz=285						
SHOC	Shoshone, Teco	125.86	52	P	PKiKP	23 29 14.2	+0.8
	baz=287						
109C	Camp Elliot, M	126.02	55	P	PKiKP	23 29 14.9	+1.1
	baz=284						
IVI	Ivigtut	126.02	350	eP	PKiKP	23 29 13.4	+0.5
HEC	Hector,Ludlow	126.12	53	P	PKiKP	23 29 15.2	+1.2
	baz=286						
TUQ	Turquoise Moun	126.27	52	P	PKiKP	23 29 15.5	+1.1
	baz=287						
PFO	Pinyon Flats O	126.35	54	P	PKiKP	23 29 15.7	+1.0
	baz=286						
TPFO	Pinon Flats	126.36	54	P	PKiKP	23 29 15.6	+0.9
	baz=286						
MONP2	Monument Peak	126.57	55	P	PKiKP	23 29 16.2	+1.0
	baz=285,SNR=8.9						
BELC	Belle Mtn. Jos	126.62	54	P	PKiKP	23 29 16.3	+1.1
	baz=286,SNR=7.4						
H17A	Grant Village	126.65	40	P	PKiKP	23 29 16.6	+1.5
	baz=298,SNR=11						
GMRC	Granite Mounta	126.67	53	P	PKiKP	23 29 16.3	+1.0
	baz=287,SNR=5.7						
MOOW	Moose Ponds	126.84	41	PKPdf	PKPdf	23 29 13.7	-1.3
IKP	In-Ko-Pah, Jac	126.89	55	P	PKiKP	23 29 16.6	+0.9
	baz=285,SNR=11						
DUG	Dugway, Tooele	126.95	45	P	PKiKP	23 29 16.6	+0.9
	baz=293						
SWSC	Sam W. Stewart	127.06	55	P	PKiKP	23 29 16.6	+0.8
	baz=286						
RLMT	Red Lodge	127.12	39	P	PKiKP	23 29 16.6	+0.7
	baz=300						
BC3	Big Chuckawall	127.15	54	P	PKiKP	23 29 17.2	+1.0
	baz=286,SNR=9.2						
IRM	Iron Mountain	127.25	53	P	PKiKP	23 29 17.4	+1.1
	baz=287,SNR=6.6						
GLA	Glamis	127.82	55	P	PKiKP	23 29 18.5	+1.0
	baz=286						
PDMCI	Parker Dam,Lak	128.00	53	P	PKiKP	23 29 18.2	+0.4
	baz=288						
BW06	Boulder Array	128.07	41	P	PKPdf	23 29 17.6	+0.3
	baz=298,SNR=13						
PDAR	Pinedale Array	128.07	41	PKP	PKPdf	23 29 17.6	+0.2
	comp=Z,3.1nm,0.5s,baz=164,slow=2.1,SNR=46						
PDAR				pPKP	pPKPdf	23 29 50.6	-2.5
	comp=Z,1.8nm,0.6s,baz=202,slow=3.2,SNR=2.7						
PDAR				SKPbc	SKPbc	23 32 24.1	
	comp=Z,2.3nm,0.6s,baz=286,slow=1.5,SNR=8.0						
PDAR				PKKPbc	PKKPbc	23 38 39.7	
	comp=Z,0.9nm,0.6s,baz=121,slow=5.4,SNR=9.8						
PDAR				SKKPbc	SKKPbc	23 42 18.9	-2.4
	comp=Z,0.6nm,0.7s,baz=104,slow=6.3,SNR=4.6						
LL02	Futaleuf	128.11	173	PKPdf	PKPdf	23 29 17.4	+0.2
LAO	LASA Array	128.11	35	P	PKiKP	23 29 18.5	+0.8
	baz=304,SNR=7.5						
DGMT	Dagmar	128.20	33	P	PKiKP	23 29 18.2	+0.5
	baz=307						
WUAZ	Wupatki	129.75	50	P	PKiKP	23 29 22.4	+1.0
	baz=291						
214A	Organ Pipe Nat	129.76	55	P	PKiKP	23 29 21.7	+0.3
	baz=287						
K22A	Casper	130.08	40	P	PKPdf	23 29 21.0	-0.1
	baz=301,SNR=11						
K22A	Casper	130.08	40	P	PKiKP	23 29 21.5	-0.4
	baz=301						
X16A	Lo Mia Camp, P	130.08	52	PKPdf	PKPdf	23 29 21.6	+0.2
O20A	White River Ci	130.16	44	PKPdf	PKiKP	23 29 21.9	-0.3
O20A	White River Ci	130.16	44	P	PKiKP	23 29 22.2	0.0
	baz=297,SNR=31						
PLCA	Paso Flores	130.68	174	PKhKP	PKPpre	23 29 17.4	
	comp=Z,1.7nm,0.6s,baz=299,slow=3.5,SNR=9.2						
PLCA				PKP	PKiKP	23 29 23.8	+0.7
	comp=Z,7.1nm,0.6s,baz=330,slow=1.0,SNR=25						
PLCA				SKPbc	SKPab	23 32 35.5	+1.5
	comp=Z,10nm,1.0s,baz=224,slow=4.3,SNR=6.4						
PLCA	Paso Flores	130.68	174	PKPdf	PKPdf	23 29 22.0	-0.2
PLCA				SKPbc	SKPab	23 32 35.6	+1.6
PLCA	Paso Flores	130.68	174	PKIKP	PKPdf	23 29 22.0	-0.2
PLCA	Paso Flores	130.68	174	eP	PKPdf	23 29 22.0	-0.2
RSSD	Black Hills	130.82	37	PKPdf	PKPdf	23 29 21.8	-0.7
RSSD				SKPbc	SKPbc	23 32 33.2	-1.3
RSSD	Black Hills	130.82	37	P	PKPdf	23 29 22.8	+0.3
	baz=304						
MDND	Maddock	130.98	31	P	PKiKP	23 29 22.9	-0.4
	baz=312						
MDND	Maddock	130.98	31	P	PKiKP	23 29 23.2	-0.1
	baz=312						
ULM	Lac du Bonnet	131.05	26	PKP	PKPdf	23 29 22.4	-0.1
	comp=Z,9.2nm,0.6s,baz=332,slow=2.0,SNR=14						
ULM				SKPbc	SKPbc	23 32 34.8	0.0
	comp=Z,86nm,0.9s,baz=313,slow=4.7,SNR=53						
W18A	Petrified Fore	131.15	50	P	PKiKP	23 29 24.7	+0.4
	baz=292,SNR=8.6						
E28A	Huff	131.24	33	P	PKiKP	23 29 24.3	+0.4
	baz=310						
MVCO	Mesa Verde	131.25	47		PKPdf	23 29 23.4	-0.2
MVCO				SKPbc	SKPbc	23 32 36.5	+0.2
MVCO	Mesa Verde	131.25	47	P	PKiKP	23 29 24.9	+0.4
	baz=295,SNR=6.2						

TUC	Tucson	131.29	54	PKPdf	PKPdf	23 29 24.0	+0.4
TUC				SKPbc	SKPbc	23 32 36.1	-0.3
TUC	Tucson	131.29	54	PKIKP	PKPdf	23 29 24.0	+0.4
TUC	Tucson	131.29	54	P	PKiKP	23 29 24.5	-0.1
	baz=289						
N23A	Red Feather La	131.33	42	P	PKiKP	23 29 24.7	+0.1
	baz=300,SNR=8.1						
GO06	Curarrehue	131.71	173	PKPdf	PKPdf	23 29 24.3	+0.1
ISCO	Idaho Springs	132.09	43	P	PKiKP	23 29 26.3	+0.1
	baz=299,SNR=12						
S22A	4UR Ranch, Cre	132.21	46	P	PKiKP	23 29 27.1	+0.6
	baz=297,SNR=11						
BBTS	Babate	132.45	282	SKPbc	SKPbc	23 32 41.0	+0.2
	comp=Z,37nm,0.7s,baz=134,slow=17,SNR=5.1						
AGMN	Agassiz Nation	132.48	28	P	PKiKP	23 29 26.9	+0.6
	baz=316						
Q24A	Divide	132.81	44	P	PKiKP	23 29 27.2	-0.5
	baz=299						
SDCO	Great Sand Dun	133.15	45	P	PKiKP	23 29 28.5	+0.1
	baz=298						
B35A	Bob, Littlefor	133.40	26		PKPdf	23 29 27.2	+0.3
B35A				SKPbc	SKPbc	23 32 43.0	-0.1
B35A	Bob, Littlefor	133.40	26	P	PKiKP	23 29 28.2	+0.1
	baz=319						
SUSD	Miller	133.54	34	P	PKiKP	23 29 28.0	-0.6
	baz=310						
TRQA	Tornquist	133.57	183	PKPdf	PKPdf	23 29 27.6	-0.1
TRQA	Tornquist	133.57	183	PKIKP	PKPdf	23 29 27.6	-0.1
121A	Cookes Peak, D	133.60	53	P	PKiKP	23 29 30.0	+0.7
	baz=291,SNR=8.9						
121A	Cookes Peak, D	133.60	53	P	PKPdf	23 29 28.2	+0.2
	baz=291,SNR=8.9						
ANMO	Albuquerque	133.69	49	PKPdf	PKPdf	23 29 28.4	+0.2
ANMO				SKPbc	SKPbc	23 32 45.3	+0.5
ANMO	Albuquerque	133.69	49	PKIKP	PKPdf	23 29 28.4	+0.2
ANMO	Albuquerque	133.69	49	P	PKiKP	23 29 29.6	+0.1
	baz=295						
Y22D	IRIS PASSCAL I	133.69	50	P	PKiKP	23 29 30.1	+0.7
	baz=293						
Y22F	Passcal Instru	133.69	50	P	PKiKP	23 29 29.6	+0.2
	baz=293						
Y22A	Socorro	133.71	51	P	PKiKP	23 29 29.7	+0.2
	baz=293,SNR=14						
SCHQ	Schefferville	133.81	2	PKP	PKPdf	23 29 27.9	+0.4
	comp=Z,16nm,0.8s,baz=7.3,slow=1.6,SNR=21						
SCHQ				SKPbc	SKPbc	23 32 44.9	+0.6
	comp=Z,63nm,0.9s,baz=30,slow=4.7,SNR=35						
OGNE	Ogallala	133.83	39	P	PKiKP	23 29 28.8	-0.6
	baz=304						
T25A	Trinidad	134.20	45	P	PKiKP	23 29 30.5	0.0
	baz=298						
KSCO	Kaye Shedlock’	134.49	42	P	PKiKP	23 29 30.8	-0.1
	baz=302						
EYMN	Ely	134.67	25	P	PKiKP	23 29 30.5	-0.3
	baz=321						
K31A	O'Neill	134.81	36	PKPdf	PKPdf	23 29 27.7	-2.1
ECSD	EROS Data Cent	135.28	33	P	PKPdf	23 29 31.2	+0.6
	baz=312						
F36A	Milaca	135.35	29	P	PKPdf	23 29 31.3	+0.7
	baz=317						
MNTX	Cornudas Mount	135.81	53	P	PKiKP	23 29 33.5	-0.1
	baz=293,SNR=17						
BGNE	Belgrade	135.92	37	PKPdf	PKPdf	23 29 31.7	-0.2
BGNE	Belgrade	135.92	37	P	PKPdf	23 29 31.5	-0.4
	baz=309						
BGNE	Belgrade	135.92	37	P	PKPdf	23 29 32.6	+0.6
	baz=309						
SPMN	Marine on St.	136.16	29	P	PKPdf	23 29 32.7	+0.5
	baz=318						
CBKS	Cedar Bluff	136.48	41	P	PKPdf	23 29 33.7	+0.6
	baz=305						
MSTX	Muleshoe	136.85	48	P	PKiKP	23 29 34.9	-0.9
	baz=297						
AMTX	Amarillo	137.22	47	P	PKPdf	23 29 35.3	+0.7
	baz=299						
R32A	Long Quarter,	137.37	40	P	PKPdf	23 29 34.9	+0.2
	baz=305						
TX31	Lajitas Ar. Si	138.06	55		PKPpre	23 29 26.5	
TX32	Lajitas Array	138.06	55	PKPpre	PKPpre	23 29 27.2	
TXAR	Lajitas Array	138.06	55	PKhKP	PKPpre	23 29 26.8	
	comp=Z,2.8nm,0.7s,baz=260,slow=3.4,SNR=36						
TXAR				SKPbc	SKPbc	23 32 58.4	+0.1
	comp=Z,5.0nm,0.6s,baz=251,slow=2.1,SNR=16						
TXAR				SKKPbc	SKKPbc	23 41 43.2	-0.7
	comp=Z,0.7nm,0.9s,baz=133,slow=6.3,SNR=3.5						
TXAR	Lajitas Array	138.06	55	PKPpre	PKPpre	23 29 26.9	
TXAR	Lajitas Array	138.06	55	PKHKP	PKPpre	23 29 26.9	
KSU1	Kansas State U	138.28	38	P	PKPdf	23 29 37.0	+0.7
	baz=308						
E46A	Sault Ste Mari	138.75	21	P	PKPdf	23 29 37.4	+0.5
	baz=330						
I42A	Draeger Farm,	138.97	27	P	PKPdf	23 29 37.3	-0.1
	baz=322						
JFWS	Jewell Farm	139.11	29	P	PKPdf	23 29 37.8	+0.1
	baz=320						
L40A	Anamosa	139.27	31	P	PKPdf	23 29 38.0	0.0
	baz=318						
BLOK	Blackwell	139.30	41	PKPpre	PKPpre	23 29 26.1	
BLOK				PKPdf	PKPdf	23 29 38.8	+0.6
WMOK	Wichita Mounta	139.35	45	P	PKPdf	23 29 38.7	+0.2
	baz=302						
ABTX	Abilene, Hawle	139.80	48		PKPpre	23 29 30.1	
ABTX					SKPdf	23 33 01.3	-0.6
JCT	Junction City	140.67	51		PKPpre	23 29 31.5	
JCT				PKPdf	PKPdf	23 29 41.3	+0.3
JCT	Junction City	140.67	51	PKHKP	PKPpre	23 29 31.5	
JCT						23 29 41.3	
JCT	Junction City	140.67	51	P	PKPdf	23 29 39.5	-1.5
	baz=296,SNR=14						
JCT	Junction City	140.67	51	P	PKPdf	23 29 42.1	+1.2
	baz=296,SNR=14						
TUL1	Leonard	140.72	41	P	PKPdf	23 29 40.3	-0.5
	baz=306						
BATG	Bathurst New B	141.39	1		PKPpre	23 29 36.0	
SADO	Sadowa	141.81	17	SKPbc	SKPbc	23 33 07.9	+0.2
	comp=Z,22nm,0.9s,baz=10,slow=3.0,SNR=6.2						
833A	Chaparral WMA,	141.91	54	P	PKPdf	23 29 42.7	-0.5
	baz=294						
833A	Chaparral WMA,	141.91	54	P	PKiKP	23 29 45.1	-1.0
	baz=294,SNR=11						
CCM	Cathedral Cave	142.13	35	PKPpre	PKPpre	23 29 37.5	
CCM					SKPbc	23 33 07.4	-1.4
435B	Jarrell	142.22	50	P	PKPdf	23 29 42.5	-1.2
	baz=299						
L48A	N Adams	142.47	24	P	PKPdf	23 29 41.6	-2.2
	baz=327						
L48A				P	PKPdf	23 29 41.6	-2.2
	baz=327						
F62A	Pittston Farm,	142.51	6	P	PKPdf	23 29 42.1	-1.7
	baz=351						
F62A				P	PKPdf	23 29 42.1	-1.7
	baz=351						
BMNY	Brushton-Moira	142.86	12	P	PKPdf	23 29 42.4	-1.9
	baz=344,SNR=8.3						
T42A	Van Buren	142.92	36	P	PKPdf	23 29 42.0	-2.8
	baz=313,SNR=24						
735A	Kenedy	142.94	53		PKPdf	23 29 43.4	-1.6
MIAR	Mount Ida	142.99	41	P	PKPdf	23 29 44.3	-0.6
	baz=308						
MIAR	Mount Ida	142.99	41	P	PKPdf	23 29 42.6	-2.3
	baz=308,SNR=12						
N49A	Columbus Grove	143.43	25	P	PKPbc	23 29 44.2	+1.2
	baz=326						
N49A				P	PKPbc	23 29 44.2	+1.2
	baz=326						
WCNY	West Carthage	143.44	13	P	PKPbc	23 29 43.2	+0.3
	baz=342						
LCAR	Lake Charles	143.54	37	P	PKPbc	23 29 43.7	+0.2
	baz=312,SNR=24						
O48B	Farmland	143.55	27	P	PKPdf	23 29 44.8	-1.0
	baz=324,SNR=7.4						
O48B	Farmland	143.55	27	P	PKPbc	23 29 44.2	+0.8
	baz=324						
J55A	Hilton	143.57	16	P	PKPdf	23 29 45.4	-0.2
	baz=338						
J55A				P	PKPdf	23 29 45.4	-0.2
	baz=338						
H62A	Milan	143.68	8	P	PKPbc	23 29 44.3	+0.7
	baz=349						
H62A				P	PKPbc	23 29 44.3	+0.7
	baz=349						
NCB	Newcomb	143.75	12	P	PKPbc	23 29 44.1	+0.2
	baz=344,SNR=7.9						
NATX	Nacogdoches	143.86	46	P	PKPdf	23 29 46.4	-0.2
	baz=303						
LBNH	Lisbon	143.89	9	P	PKPdf	23 29 45.5	-0.8
	baz=348						
J57A	Williamstown	143.90	14	P	PKPbc	23 29 44.7	+0.4
	baz=341,SNR=6.5						
J57A				P	PKPbc	23 29 44.7	+0.4
	baz=341,SNR=6.5						
HKT	Hockley	143.95	50		PKPbc	23 29 45.3	+0.5
HKT	Hockley	143.95	50	PKIKP	PKPbc	23 29 45.3	+0.5
ERPA	Erie	143.96	19	P	PKPbc	23 29 45.2	+0.6
	baz=334						
O49A	Covington	143.97	26	P	PKPbc	23 29 45.4	+0.8
	baz=326						
O49A				P	PKPbc	23 29 45.4	+0.8
	baz=326						
M52A	Chesterland	144.00	21	P	PKPdf	23 29 45.8	-0.7
	baz=331						
M52A				P	PKPdf	23 29 45.8	-0.7
	baz=331						
MCVT	Middlebury Col	144.00	10	P	PKPbc	23 29 44.7	+0.1
	baz=346						
P48A	Milroy	144.07	28	P	PKPbc	23 29 45.0	0.0
	baz=324,SNR=9.3						
P48A				P	PKPbc	23 29 45.0	0.0
	baz=324,SNR=9.3						
J58A	Remsen	144.11	13	P	PKPdf	23 29 45.8	-0.8
	baz=342,SNR=5.7						
J58A				P	PKPdf	23 29 45.8	-0.8
	baz=342,SNR=5.7						
WVNY	West Valley, N	144.13	18	P	PKPdf	23 29 46.0	-0.7
	baz=336,SNR=8.2						
N51A	Ashland	144.16	23	P	PKPbc	23 29 45.9	+0.7
	baz=329,SNR=5.5						
N51A				P	PKPbc	23 29 45.9	+0.7
	baz=329,SNR=5.5						
J59A	Piesco	144.18	12	P	PKPbc	23 29 45.4	+0.2
	baz=343,SNR=13						
J59A				P	PKPbc	23 29 45.4	+0.2
	baz=343,SNR=13						
M53A	WI Miller and	144.33	21	P	PKPbc	23 29 45.7	0.0
	baz=332						
HICK	Hickman	144.33	35		PKPbc	23 29 45.8	-0.1
P49A	Miami Univ. Ec	144.34	27	P	PKPab	23 29 45.2	-0.3
	baz=325,SNR=17						
P49A	Miami Univ. Ec	144.34	27	P	PKPab	23 29 45.6	+0.1
	baz=325,SNR=17						
K57A	Scipio Center	144.41	15	P	PKPab	23 29 45.2	-0.4
	baz=340,SNR=7.1						
CPUP	Villa Florida	144.59	192	PKP	PKPdf	23 29 48.9	+0.9
	comp=Z,263nm,0.6s,baz=178,slow=1.8,SNR=556						
CPUP				pPKP	pPKPdf	23 30 21.2	-2.5
	comp=Z,45nm,0.7s,baz=191,slow=3.8,SNR=2.9						
WCI	Wyandotte Cave	144.63	30	PKPdf	PKPab	23 29 45.9	-0.7
WCI	Wyandotte Cave	144.63	30	PKIKP	PKPab	23 29 45.9	-0.7
WCI	Wyandotte Cave	144.63	30	P	PKPab	23 29 46.6	0.0
	baz=321						
WCI	Wyandotte Cave	144.63	30	P	PKPdf	23 29 47.3	-0.4
	baz=321,SNR=27						
J61A	Chester	144.66	10	P	PKPdf	23 29 47.1	-0.5
	baz=346,SNR=7.8						
J61A				P	PKPdf	23 29 47.1	-0.5
	baz=346,SNR=7.8						
L56A	Greenwood	144.69	17	P	PKPab	23 29 46.2	-0.6
	baz=338,SNR=16						
L56A				P	PKPab	23 29 46.2	-0.6
	baz=338,SNR=16						
N53A	Lisbon	144.83	21	P	PKPab	23 29 47.1	-0.1
	baz=332,SNR=8.0						
N53A				P	PKPab	23 29 47.1	-0.1
	baz=332,SNR=8.0						
M55A	Ridgway	144.94	18	P	PKPbc	23 29 46.9	-0.7
	baz=335,SNR=13						
M55A				P	PKPbc	23 29 46.9	-0.7
	baz=335,SNR=13						
HCNY	Howe Caverns	144.94	12	P	PKPbc	23 29 47.2	-0.4
	baz=343,SNR=12						
BINY	Binghamton	145.04	15	P	PKPbc	23 29 47.3	-0.7
	baz=340,SNR=7.2						
BINY	Binghamton	145.04	15	P	PKPbc	23 29 48.0	0.0
	baz=340,SNR=7.2						
O52A	Adamsville	145.06	23	P	PKPbc	23 29 47.5	-0.5
	baz=330,SNR=17						
O52A				P	PKPbc	23 29 47.5	-0.5
	baz=330,SNR=17						
P51A	Williamsport	145.10	25	P	PKPbc	23 29 47.3	-0.9
	baz=327,SNR=25						
P51A				P	PKPbc	23 29 47.3	-0.9
	baz=327,SNR=25						
R49A	Shelbyville	145.13	29	P	PKPbc	23 29 48.0	-0.3
	baz=323,SNR=23						
R49A				P	PKPbc	23 29 48.0	-0.3
	baz=323,SNR=23						
T47A	Sharon Grove	145.17	32	P	PKPbc	23 29 48.0	-0.5
	baz=319,SNR=14						
UNH	University of	145.17	8	P	PKPab	23 29 48.3	0.0
	baz=349,SNR=6.7						
O53A	New Philadelph	145.18	22	P	PKPbc	23 29 47.7	-0.7
	baz=331,SNR=5.6						
L59A	Walton	145.28	13	P	PKPbc	23 29 48.5	-0.2
	baz=342,SNR=10						
L59A				P	PKPbc	23 29 48.5	-0.2
	baz=342,SNR=10						
P52A	Corning	145.35	24		PKPdf	23 29 48.1	-0.8
P52A	Corning	145.35	24	P	PKPdf	23 29 48.4	-0.5
	baz=329,SNR=33						
K62A	Royalston	145.38	10	P	PKPbc	23 29 49.0	+0.1
	baz=347						
K62A				P	PKPbc	23 29 49.0	+0.1
	baz=347						
L61B	Northampton	145.51	10	P	PKPdf	23 29 48.7	-0.3
	baz=346						
L61B	Northampton	145.51	10	P	PKPab	23 29 50.0	+0.2
	baz=346						
R50A	Paris	145.53	28	P	PKPdf	23 29 49.0	-0.2
	baz=324,SNR=32						
R50A				P	PKPdf	23 29 49.0	-0.2
	baz=324,SNR=32						
M57A	Sunshine Farm,	145.55	17	P	PKPbc	23 29 49.6	+0.1
	baz=338,SNR=18						
M57A				P	PKPbc	23 29 49.6	+0.1
	baz=338,SNR=18						
O54A	Avella	145.55	21	P	PKPbc	23 29 49.5	-0.1
	baz=332,SNR=18						
O54A				P	PKPbc	23 29 49.5	-0.1
	baz=332,SNR=18						
OXF	Oxford	145.64	38	P	PKPdf	23 29 49.6	+0.1
	baz=313,SNR=24						
OXF	Oxford	145.64	38	P	PKPab	23 29 50.2	-0.3
	baz=313,SNR=24						
HRV	Adam Dziewonsk	145.65	9	P	PKPbc	23 29 49.6	-0.1
	baz=348						
HRV	Adam Dziewonsk	145.65	9	P	PKPab	23 29 51.3	+1.1
	baz=348,SNR=9.4						
KSPA	Keystone Colle	145.70	15	P	PKPbc	23 29 49.9	-0.1
	baz=340,SNR=7.9						
342B	Flagon Creek P	145.72	45	P	PKiKP	23 29 53.4	-0.4
	baz=306,SNR=7.1						
P53A	Whipple	145.77	23	P	PKPbc	23 29 50.5	+0.2
	baz=330,SNR=38						
P53A				P	PKPbc	23 29 50.5	+0.2
	baz=330,SNR=38						
Q52A	Bidwell	145.87	25	P	PKPdf	23 29 50.0	+0.2
	baz=328,SNR=28						
Q52A				P	PKPdf	23 29 50.0	+0.2
	baz=328,SNR=28						
NPNY	Mohonk Preserv	145.90	13	P	PKPab	23 29 51.8	+0.6
	baz=343,SNR=12						
SSPA	Standing Stone	145.97	18	PKPdf	PKPdf	23 29 50.1	+0.2
SSPA	Standing Stone	145.97	18	P	PKPbc	23 29 51.0	+0.1
	baz=336						
SSPA	Standing Stone	145.97	18	P	PKPab	23 29 51.7	+0.2
	baz=336,SNR=26						
Y45A	Yeager Farm, C	145.99	39	P	PKPbc	23 29 51.1	0.0
	baz=312,SNR=42						
N58A	Sunbury	146.12	16	P	PKPbc	23 29 50.9	-0.4
	baz=338,SNR=21						
N58A				P	PKPbc	23 29 50.9	-0.4
	baz=338,SNR=21						
MCWV	Mont Chateau	146.20	21	P	PKPbc	23 29 51.9	+0.3
	baz=332						
MCWV	Mont Chateau	146.20	21	P	PKPbc	23 29 51.9	+0.3
	baz=332,SNR=18						
U49A	Red Boiling Sp	146.22	31	P	PKPbc	23 29 51.2	-0.5
	baz=320,SNR=55						
BRNY	Black Rk. Fore	146.25	13	P	PKPbc	23 29 51.7	0.0
	baz=343,SNR=8.4						
V48A	Smith Brothers	146.25	33	P	PKPbc	23 29 52.0	+0.1
	baz=318,SNR=27						
T50A	Nancy	146.30	30	P	PKPdf	23 29 51.2	+0.6
	baz=322						
T50A				P	PKPdf	23 29 51.2	+0.6
	baz=322						
S51A	Beattyville	146.39	28	P	PKPbc	23 29 51.5	-0.7
	baz=325,SNR=35						
S51A				P	PKPbc	23 29 51.5	-0.7
	baz=325,SNR=35						
Q54A	Coxs Mills	146.42	23	P	PKPbc	23 29 51.8	-0.4
	baz=330,SNR=32						
Q54A				P	PKPbc	23 29 51.8	-0.4
	baz=330,SNR=32						
ODNJ	Ogdensburg	146.43	14		PKPdf	23 29 49.8	-0.9
ODNJ	Ogdensburg	146.43	14	P	PKPdf	23 29 51.3	+0.6
	baz=342,SNR=21						
VBMS	Vicksburg	146.44	42	P	PKPab	23 29 53.3	-0.2
	baz=309,SNR=5.2						
VBMS	Vicksburg	146.44	42	P	PKPab	23 29 54.2	+0.7
	baz=309,SNR=5.2						
R53A	Hurricane	146.53	25	P	PKPdf	23 29 51.7	+0.7
	baz=328,SNR=16						
R53A				P	PKPdf	23 29 51.7	+0.7
	baz=328,SNR=16						
PAL	Palisades	146.66	13	P	PKPbc	23 29 53.3	+0.5
	baz=343,SNR=13						
PAL	Palisades	146.66	13	P	PKPbc	23 29 52.7	-0.1
	baz=343,SNR=13						
344A	Westbrook Farm	146.77	43	P	PKPab	23 29 54.2	-0.7
	baz=308,SNR=21						
FOR	Fordham	146.81	13	P	PKPbc	23 29 53.6	+0.3
	baz=343						
BRNJ	Basking Ridge	146.82	14	P	PKPbc	23 29 53.9	+0.7
	baz=342,SNR=14						
P57A	Homestead Farm	146.98	19	P	PKPbc	23 29 53.6	-0.2
	baz=335,SNR=20						
P57A				P	PKPbc	23 29 53.6	-0.2
	baz=335,SNR=20						
Q56A	Snyder Ridge,	146.98	21	P	PKPbc	23 29 52.9	-1.0
	baz=333,SNR=36						
Q56A				P	PKPbc	23 29 52.9	-1.0
	baz=333,SNR=36						
X48A	Hartselle	147.07	35	P	PKPdf	23 29 51.9	0.0
	baz=316,SNR=31						
TUPA	Temple Univers	147.16	15	P	PKPab	23 29 55.2	-0.9
	baz=341,SNR=9.6						
S54A	Dingess, Beckl	147.25	25	P	PKPbc	23 29 53.8	-0.9
	baz=329,SNR=8.9						
S54A				P	PKPbc	23 29 53.8	-0.9
	baz=329,SNR=8.9						
WUPA	West Chester U	147.27	16		PKPdf	23 29 51.6	-0.5
TZTN	Tazewell	147.30	29	P	PKPbc	23 29 54.9	+0.1
	baz=324						
TZTN	Tazewell	147.30	29	P	PKPbc	23 29 53.8	-1.0
	baz=324,SNR=17						
R55A	Marlinton	147.31	23	P	PKPbc	23 29 53.7	-1.2
	baz=331,SNR=8.0						
R55A				P	PKPbc	23 29 53.7	-1.2
	baz=331,SNR=8.0						
Z47A	Carrollton	147.35	38	P	PKPdf	23 29 53.7	+1.2
	baz=314,SNR=10						
GEDE	Greenville	147.38	16	P	PKPdf	23 29 53.1	+0.8
	baz=340,SNR=5.7						
SDMD	Soldier’s Deli	147.41	18	P	PKiKP	23 29 56.0	-1.1
	baz=337,SNR=8.4						
W50A	Signal Mountai	147.47	32	P	PKPdf	23 29 53.0	+0.4
	baz=320,SNR=20						
V51A	Loudon	147.50	30	P	PKPdf	23 29 52.5	-0.1
	baz=322						
V52A	Sevierville	147.84	30	P	PKPdf	23 29 54.5	+1.3
	baz=323,SNR=37						
Y49A	Blount Mountai	147.86	35	PKPdf	PKPdf	23 29 52.0	-1.3
Y49A	Blount Mountai	147.86	35	P	PKPdf	23 29 54.2	+0.9
	baz=317,SNR=28						
RCBR	Riachuelo	147.89	245	*e*P	PKPdf	23 29 53.4	-0.6
TKL	Tuckaleechee C	147.90	30	P	PKPdf	23 29 54.1	+0.8
	baz=323,SNR=44						
LRAL	Lakeview Retre	148.11	37	P	PKPbc	23 29 56.5	-0.6
	baz=315,SNR=32						
LRAL	Lakeview Retre	148.11	37	P	PKPdf	23 29 54.8	+1.1
	baz=315,SNR=32						
U54A	Nelsons Funny	148.11	27	P	PKPdf	23 29 54.8	+1.1
	baz=327,SNR=9.7						
U54A				P	PKPdf	23 29 54.8	+1.1
	baz=327,SNR=9.7						
BLA	Blacksburg	148.12	24	P	PKPbc	23 29 56.7	-0.3
	baz=330,SNR=6.9						
BLA	Blacksburg	148.12	24	P	PKPbc	23 29 57.5	+0.5
	baz=330,SNR=6.9						
X51A	Calhoun	148.19	33	P	PKPdf	23 29 55.1	+1.3
	baz=320,SNR=11						
X51A				P	PKPdf	23 29 55.1	+1.3
	baz=320,SNR=11						
W52A	Murphy	148.27	31	P	PKPdf	23 29 55.1	+1.2
	baz=322,SNR=8.9						
CBN	Corbin Frederi	148.35	19	P	PKPbc	23 29 57.1	-0.4
	baz=336						
V53A	Saluda	148.35	29	P	PKPdf	23 29 55.5	+1.4
	baz=324,SNR=99						
V53A				P	PKPdf	23 29 55.5	+1.4
	baz=324,SNR=99						
R58B	Mineral	148.40	20	P	PKPdf	23 29 54.8	+0.8
	baz=335,SNR=11						
R58B				P	PKPdf	23 29 54.8	+0.8
	baz=335,SNR=11						
T57A	Hurt	148.76	23	P	PKPbc	23 29 57.0	-1.7
	baz=332,SNR=10						
T57A				P	PKPbc	23 29 57.0	-1.7
	baz=332,SNR=10						
LVC	Limon Verde	148.77	173		PKPbc	23 29 57.8	-1.7
LVC	Limon Verde	148.77	173	PKIKP	PKPbc	23 29 57.8	-1.7
LVC	Limon Verde	148.77	173	*e*P	PKPdf	23 29 54.7	-0.9
U56A	King	148.88	25	P	PKPbc	23 29 59.2	+0.3
	baz=329,SNR=7.9						
U56A				P	PKPbc	23 29 59.2	+0.3
	baz=329,SNR=7.9						
V55A	Taylorsville	148.94	27	P	PKPbc	23 29 58.2	-0.9
	baz=327,SNR=14						
V55A				P	PKPbc	23 29 58.2	-0.9
	baz=327,SNR=14						
Z51A	Franklin	148.96	35	P	PKPdf	23 29 56.1	+1.0
	baz=318,SNR=8.7						
Y52A	Lilburn	149.15	32	P	PKPdf	23 29 56.8	+1.4
	baz=320,SNR=42						
Y52A				P	PKPdf	23 29 56.8	+1.4
	baz=320,SNR=42						
250A	Grady	149.29	38	P	PKPdf	23 29 57.1	+1.5
	baz=315,SNR=42						
BRAL	Brewton	149.36	40	P	PKiKP	23 30 00.9	-0.4
	baz=313						
BRAL	Brewton	149.36	40	P	PKiKP	23 30 01.5	+0.2
	baz=313,SNR=12						
T59A	Double "B" Far	149.41	20	P	PKPdf	23 29 57.2	+1.5
	baz=334,SNR=20						
T59A				P	PKPdf	23 29 57.2	+1.5
	baz=334,SNR=20						
KMSC	Kings Mountain	149.48	27	P	PKiKP	23 30 01.0	-0.5
	baz=326,SNR=9.4						
KMSC	Kings Mountain	149.48	27	P	PKPdf	23 29 57.1	+1.2
	baz=326,SNR=9.4						
PAULI	Pauline	149.52	28	P	PKiKP	23 30 01.5	-0.1
	baz=325,SNR=6.8						
T60A	Surry	149.53	19	P	PKPdf	23 29 58.1	+2.2
	baz=336,SNR=8.2						
T60A				P	PKPdf	23 29 58.1	+2.2
	baz=336,SNR=8.2						
152A	Waverly Hall	149.69	35	P	PKPdf	23 29 57.3	+1.0
	baz=318,SNR=31						
HODGE	Hodges	149.78	30	P	PKPdf	23 29 58.1	+1.7
	baz=324,SNR=9.7						
V58A	Windy Hill, Pi	149.87	24	P	PKPbc	23 30 01.8	+0.4
	baz=331,SNR=13						
V58A				P	PKPbc	23 30 01.8	+0.4
	baz=331,SNR=13						
U59A	Littleton	149.88	21	P	PKiKP	23 30 02.0	-0.2
	baz=334,SNR=6.6						
U59A				P	PKiKP	23 30 02.0	-0.2
	baz=334,SNR=6.6						
W57A	Gilead	150.06	26	P	PKiKP	23 30 02.3	-0.4
	baz=329,SNR=15						
W57A				P	PKiKP	23 30 02.3	-0.4
	baz=329,SNR=15						
JSC	Jenkinsville	150.22	28	P	PKiKP	23 30 03.1	0.0
	baz=326,SNR=7.8						
BIRD	Birdtown, Kers	150.28	27	P	PKiKP	23 30 03.6	+0.4
	baz=327,SNR=12						
352A	Blakely	150.44	37	P	PKiKP	23 30 03.6	0.0
	baz=316,SNR=10.0						
451A	Vernon	150.56	39	P	PKiKP	23 30 04.3	+0.5
	baz=314,SNR=8.7						
154A	Montrose	150.62	33	P	PKiKP	23 30 04.1	+0.2
	baz=321						

HAW	**Hawthorne Fire**	150.80	30	P	PKiKP	23 30 04.7	+0.4
	baz=324,SNR=17						
BDFB	**Brasilia**	150.81	215	PKP	PKPdf	23 30 00.3	+1.7
	comp=Z,15nm,0.9s,baz=168,slow=1.9,SNR=17						
BDFB				PKPbc	PKiKP	23 30 05.9	+0.9
	comp=Z,120nm,0.6s,baz=128,slow=1.8,SNR=125						
BDFB	**Brasilia**	150.81	215		PKiKP	23 30 04.7	-0.2
BDFB	**Brasilia**	150.81	215	eP	PKPdf	23 29 58.4	-0.2
CNNC	**Cliffs of the**	150.83	22	P	PKPbc	23 30 03.5	-0.2
	baz=332						
X58A	**Rowland**	150.85	25	P	PKiKP	23 30 04.4	+0.1
	baz=329,SNR=8.0						
X58A				P	PKiKP	23 30 04.4	+0.1
	baz=329,SNR=8.0						
TIGA	**Tifton**	151.25	35	P	PKiKP	23 30 05.0	-0.2
	baz=318,SNR=16						
TIGA	**Tifton**	151.25	35	P	PKiKP	23 30 05.5	+0.3
	baz=318,SNR=16						
Y58A	**Scranton**	151.26	26	P	PKiKP	23 30 05.4	+0.2
	baz=328,SNR=8.4						
Y58A				P	PKiKP	23 30 05.4	+0.2
	baz=328,SNR=8.4						
255A	**Hazlehurst**	151.49	33	P	PKiKP	23 30 05.9	+0.2
	baz=321,SNR=9.1						
NHSC	**New Hope**	151.70	28	P	PKiKP	23 30 06.8	+0.6
	baz=326,SNR=6.2						
NHSC	**New Hope**	151.70	28	P	PKiKP	23 30 07.0	+0.9
	baz=326,SNR=6.2						
PAYG	**Puerto Ayora**	152.96	109		PKiKP	23 30 09.4	+0.1
TEIG	**Tepich**	154.47	60	PKPdf	PKPdf	23 30 03.6	-0.1
DWPF	**Disney Wildern**	154.97	37	P	PKiKP	23 30 13.2	+0.1
	baz=318						
LPAZ	**La Paz**	155.10	172	PKP	PKPdf	23 30 06.2	+0.7
	comp=Z,3.8nm,0.8s,baz=65,slow=1.0,SNR=14						
LPAZ				PKPbc	PKPbc	23 30 16.7	
	comp=Z,10nm,0.6s,baz=320,slow=11,SNR=18						
LPAZ				PKPab	PKPab	23 30 32.3	+2.0
	comp=Z,30nm,0.7s,baz=185,slow=7.2,SNR=18						
LPAZ	**La Paz**	155.10	172	eP	PKPdf	23 30 05.1	-0.4
SIV	**San Ignacio**	155.35	189	PP	PP	23 34 05.9	+0.1
	comp=Z,6.3nm,0.8s,baz=190,slow=6.3,SNR=9.5						
VILB	**Vilhena**	158.17	192	PKPdf	PKPdf	23 30 06.9	-1.9
VILB				PKPab	PKPab	23 30 43.4	+0.5
ACON	**Acoyapa**	159.62	79	⇑eP	PKPdf	23 30 11.0	+0.6
SAML	**Samuel**	162.55	185	eP	PKPdf	23 30 12.7	-0.8
FLF1	**Flavio Alfaro-**	162.56	120	⇓eP	PKPdf	23 30 19.8	+6.2
PIAT	**Ana Tenorio**	163.53	125	⇑eP	PKPdf	23 30 16.9	+1.8
PAC1	**Pacto, Paraso**	163.78	120	⇓eP	PKPdf	23 30 22.7	+7.8
OTAV	**Otavalo**	164.05	120	⇑eP	PKPdf	23 30 16.9	+1.3
OTAV	**Otavalo**	164.05	120	eP	PKPdf	23 30 14.8	-0.8
BONI	**La Bonita**	164.95	122	eP	PKPdf	23 30 15.4	-0.7
BCIP	**Isla Barro Col**	165.08	86	eP	PKPdf	23 30 16.9	+1.0
TBTG	**Tabatinga, AM**	166.35	158	eP	PKPdf	23 30 13.9	-3.0
JAMC	**Jamundi, Valle**	167.02	113	eP	PKPdf	23 30 18.3	+0.6
FLOC	**Florencia**	167.13	122	⇑eP	PKPdf	23 30 18.3	+0.8
MDP	**Montagnes des**	167.50	255	PKP	PKPdf	23 30 17.8	0.0
	comp=Z,16nm,1.0s,baz=310,slow=11,SNR=3.8						
MDP				PKPab	PKPab	23 31 24.8	+0.7
	comp=Z,19nm,0.6s,baz=126,slow=3.8,SNR=16						
GARC	**Garzon, Huila**	167.58	120	⇑eP	PKPdf	23 30 16.9	-1.3
YOTC	**Yotoco, Valle**	167.62	111	⇑eP	PKPdf	23 30 16.9	-1.2
CBOC	**Ciudad Bolivar**	168.51	103	eP	PKPdf	23 30 21.3	+2.6
PRAC	**Prado**	168.84	115	eP	PKPdf	23 30 19.8	+1.1
MACC	**Macarena, Meta**	168.94	125	eP	PKPdf	23 30 18.3	-0.5
GUY2C	**Guyana, Caldas**	168.96	107	eP	PKPdf	23 30 16.9	-2.5
UREC	**San Jos de Ur**	169.30	93	⇑eP	PKPdf	23 30 16.9	-2.1
NORC	**Norcasia**	169.53	106	⇓eP	PKPdf	23 30 18.3	-0.8
SJCC	**San Jacinto, C**	169.62	82	eP	PKPdf	23 30 16.9	-2.3
ROSC	**El Rosal**	169.81	111	PKP	PKPdf	23 30 19.9	+0.1
	comp=Z,3.9nm,0.4s,baz=56,slow=4.0,SNR=8.0						
ROSC				PKPab	PKPab	23 31 35.1	+0.3
	comp=Z,6.6nm,0.4s,baz=59,slow=22,SNR=1.9						
ROSC	**El Rosal**	169.81	111	eP	PKPdf	23 30 18.3	-1.4
ZARC	**Zaragoza, Cauc**	169.94	95	eP	PKPdf	23 30 21.3	+1.9
PTBC	**PUERTO BERRIO,**	170.17	101	eP	PKPdf	23 30 18.3	-1.2
CHIC	**Chingaza**	170.27	113	⇑eP	PKPdf	23 30 18.3	-1.7
SPBC	**San Pablo de B**	170.31	107	eP	PKPdf	23 30 18.3	-1.3
ARGC	**Ariguani, Magd**	170.53	81	eP	PKPdf	23 30 15.4	-4.3
BRRC	**Barranca, Sant**	171.01	99	eP	PKPdf	23 30 19.8	-0.1
BARC	**Barichara**	171.42	102	eP	PKPdf	23 30 21.3	+0.8
BOAV	**Boa Vista**	172.58	215	⇑eP	PKPdf	23 30 18.3	-2.4
SDV	**Santo Domingo**	174.17	86	eP	PKPdf	23 30 21.0	-0.5

TRN ***21*** *23:17:13.7, 10°.86N×62°.27W, h74^{km}, MD3.7*
FUNV ***21*** *23:17:14.4, 10°.85N×62°.22W, h22^{km}, MW3.2*
ISC 21 23:17:13.6±1.3, **10°.86N**±0°.04×**62°.26W**±0°.04, **h77**^{km}±16^{km}, **n25,** σ1^{s}**06**/45, **1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	0.87	104	eP	Pn	23 17 30.4	-0.5
TRN				eS	Sn	23 17 44.1	+0.3
TPP	**Pointe-a-Pierr**	0.96	124	eP	Pn	23 17 31.3	-0.7
TPP				eS	Sn	23 17 45.8	0.0
CRUV	**Carupano**	0.98	259	⇓eP	Pn	23 17 32.2	0.0
CRUV				eS	Sn	23 17 45.5	-0.5
TBH	**Brigand Hill**	1.23	108	eP	Pn	23 17 36.4	+1.0
GRGR	**Grenville**	1.39	25	eP	Pn	23 17 37.6	+0.2
GRGR				eS	Sn	23 17 55.4	0.0
GRHS	**Sauteurs**	1.48	24	eP	Pn	23 17 38.9	+0.4
GRHS				eS	Sn	23 17 57.6	+0.2
TPR	**Prospect**	1.49	77	eP	Pn	23 17 40.0	+1.3
TPR				eS	Sn	23 17 58.3	+0.7
TOSP	**Speyside**	1.75	76	eP	Pn	23 17 41.7	-0.3
TOSP				eS	Sn	23 18 02.6	-1.0
GCMP	**Grenada, Carri**	1.81	27	eP	Pn	23 17 43.0	+0.2
GCMP				eS	Sn	23 18 04.8	-0.3
PCRV	**Puerto La Cruz**	2.43	254	eP	Pn	23 17 52.8	+1.5
PCRV				eS	Sn	23 18 20.8	+0.6
SVB	**Belmont**	2.59	22	eP	Pn	23 17 53.5	+0.1
SVB				eS	Sn	23 18 23.2	-0.6
SVV	**Soufriere Volc**	2.64	23	eP	Pn	23 17 54.7	+0.6
SVV				eS	Sn	23 18 24.0	-1.2
MCLT	**Moule a Chique**	3.11	24	eP	Pn	23 18 01.0	+0.6
MCLT				eS	Sn	23 18 35.0	-1.5
PRGV	**PARIAGUAN**	3.15	229	eP	Pn	23 18 01.4	+0.5
PRGV				eS	Sn	23 18 37.4	0.0
SLB	**Belfond**	3.18	22	eP	Pn	23 18 01.2	-0.2
SLB				eS	Sn	23 18 37.2	-1.0
SLBI	**Saint Lucia, B**	3.38	22	eP	Pn	23 18 05.5	+1.4
SLBI				eS	Sn	23 18 43.0	-0.1
BIM	**Bigot**	3.81	18	eP	Pn	23 18 11.1	+1.1
BIM				eS	Sn	23 18 52.4	-1.3
MPOM	**Morne Pois Mar**	3.81	21	eP	Pn	23 18 10.6	+0.6
MPOM				eS	Sn	23 18 52.8	-0.8
BIRV	**Birongo**	3.96	265	eP	Pn	23 18 13.0	+1.0
BIRV				eS	Sn	23 18 57.5	+0.2
FDF	**Fort de France**	4.00	16	eP	Pn	23 18 13.5	+1.0
TACV	**Tcata**	4.74	262	eP	Pn	23 18 24.4	+1.7
TACV				eS	Sn	23 19 15.2	-1.3
BENV	**Beln**	5.33	261	eP	Pn	23 18 32.0	+1.3
BENV				eS	Sn	23 19 28.9	-1.9
CACV	**CAICARA DEL OR**	5.35	233	eP	Pn	23 18 25.5	-5.4
CACV				eS	Sn	23 19 19.1	-12
BAUV	**El Baul**	6.01	252	eP	Pn	23 18 40.2	+0.3
BAUV				eS	Sn	23 19 43.7	-3.7
MAPV	**Macapo**	6.18	261	eP	Pn	23 18 43.0	+0.6

ROM 21 23:22:32.4±0.0, **42°.856N**±0°.002×**13°.092E**±0°.004, **h10**^{km}**, ML1.0**/8**, 1C-6D, Error ellipse: s-maj=0.3km s-min=0.2km az=84.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	0.06	303	P	Pg	23 22 35.1	+0.4
T1216				S	Sg	23 22 36.8	+0.5
T1245	**Castelsantange**	0.07	89	⇓P	Pg	23 22 35.2	+0.4
T1245				S	Sg	23 22 37.0	+0.5
T1245				AML	AML		
	comp=E,502μm,0.1s						
T1245				AML	AML		
	comp=N,846μm,0.3s						
MC2	**Monte Cornacci**	0.09	52	P	Pg	23 22 35.6	+0.4
MC2				S	Sg	23 22 37.7	+0.6
T1212	**Cascia, Frazio**	0.11	199	P	Pg	23 22 35.8	+0.5
T1212				S	Sg	23 22 37.9	+0.7
T1212				AML	AML		
	comp=E,98μm,0.3s						
T1212				AML	AML		
	comp=N,168μm,0.3s						
T1212				AML	AML		
	comp=E,98μm,1.7s						
T1214	**Arquata del Tr**	0.13	138	P	Pg	23 22 36.0	+0.4
T1214				S	Sg	23 22 38.4	+0.6
T1214				AML	AML		
	comp=E,148μm,0.2s						
T1214				AML	AML		
	comp=N,113μm,0.1s						
T1256	**Bolognola (MC)**	0.18	33	P	Pg	23 22 36.8	+0.4
T1256				S	Sg	23 22 40.0	+0.9
FDMO	**Fiordimonte**	0.18	359	P	Pg	23 22 36.9	+0.5
FDMO				S	Sg	23 22 40.0	+1.0
FDMO				AML	AML		
	comp=N,304μm,0.2s						
FDMO				AML	AML		
	comp=E,270μm,0.2s						
T1217	**Poggiodomo (PG**	0.19	219	P	Pg	23 22 36.9	+0.5
T1217				S	Sg	23 22 40.2	+1.0
T1218	**Civita (PG)**	0.19	175	P	Pg	23 22 37.0	+0.5
T1218				S	Sg	23 22 40.1	+0.9
T1218				AML	AML		
	comp=E,43μm,0.3s						
T1218				AML	AML		
	comp=N,49μm,1.0s						
T1218				AML	AML		
	comp=E,43μm,1.7s						
T1219	**Muccia, Frazio**	0.21	343	P	Pg	23 22 37.3	+0.4
T1219				S	Sg	23 22 40.8	+0.9
T1219				AML	AML		
	comp=E,341μm,0.4s						
T1219				AML	AML		
	comp=N,478μm,0.3s						
T1241	**Roccafluvione,**	0.25	90	⇑P	Pg	23 22 37.9	+0.3
T1241				AML	AML		
	comp=E,45μm,0.4s						
T1241				AML	AML		
	comp=N,48μm,0.2s						
T1220	**Camerino, Fraz**	0.25	359	⇓P	Pg	23 22 38.1	+0.5
T1220				AML	AML		
	comp=N,480μm,0.3s						
T1220				AML	AML		
	comp=E,685μm,0.3s						
GUMA	**Gualdo di Mace**	0.27	41	P	Pg	23 22 38.6	+0.6
GUMA				S	Sb	23 22 43.4	-0.8
GUMA				AML	AML		
	comp=E,102μm,0.2s						
GUMA				AML	AML		
	comp=N,88μm,0.5s						
SMA1	**SAN MARTINO**	0.29	141	P	Pg	23 22 38.7	+0.5
SMA1				S	Sg	23 22 43.4	+1.2
RM33	**Pellescritta (**	0.36	165	P	Pg	23 22 40.0	+0.5
RM33				S	Sb	23 22 45.8	-0.9
ASSB	**Assisi San Ben**	0.37	301	P	Pg	23 22 40.1	+0.3
ASSB				S	Sb	23 22 45.8	-1.1
ASSB				AML	AML		
	comp=E,35μm,0.2s						
ASSB				AML	AML		
	comp=N,34μm,1.2s						
MOMA	**Monte Martano**	0.39	262	P	Pb	23 22 40.8	-0.6
MOMA				S	Sb	23 22 47.4	-0.1
MOMA				AML	AML		
	comp=E,21μm,0.3s						
MOMA				AML	AML		
	comp=N,15μm,1.4s						
MOMA				AML	AML		
	comp=N,15μm,0.6s						
TERO	**Teramo**	0.44	122	⇓P	Pg	23 22 41.1	-0.1
TERO				AML	AML		
	comp=E,17μm,0.6s						
TERO				AML	AML		
	comp=N,17μm,0.5s						
ATCC	**AVT- Casa Cast**	0.47	315	⇓P	Pg	23 22 42.0	+0.4
EL6	**Elcito**	0.47	1	⇓P	Pn	23 22 49.6	+4.3
SRES	**S.Oreste - Sor**	0.75	215	⇓P	Pn	23 22 51.1	+2.0

ROM 21 23:23:05.1±0.1, **43°.059N**±0°.004×**13°.03E**±0°.01, **h9**^{km}**, ML1.0**/3**, 2C-3D, Error ellipse: s-maj=0.9km s-min=0.3km az=96.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	0.02	261	P	Pg	23 23 06.9	+0.1
T1219				S	Sg	23 23 08.0	-0.1
T1220	**Camerino, Fraz**	0.07	39	P	Pg	23 23 07.5	+0.2
T1220				S	Sg	23 23 08.9	+0.2
T1220				AML	AML		
	comp=E,685μm,0.3s						
T1220				AML	AML		
	comp=N,480μm,0.3s						
T1216	**Preci, Frazion**	0.17	183	P	Pg	23 23 09.3	+0.6
T1216				S	Sg	23 23 12.2	+1.1
MC2	**Monte Cornacci**	0.19	141	P	Pg	23 23 10.1	+1.0
SNTG	**Esanatoglia**	0.21	341	⇑P	Pg	23 23 10.3	+0.9
SNTG				S	Sg	23 23 14.0	+1.6
T1245	**Castelsantange**	0.23	150	⇓P	Pg	23 23 11.8	+1.9
ASSB	**Assisi San Ben**	0.27	267	P	Pg	23 23 11.4	+0.8
ASSB				S	Sb	23 23 16.2	-0.8
ASSB				AML	AML		
	comp=E,31μm,0.5s						
ASSB				AML	AML		
	comp=N,34μm,1.2s						
EL6	**Elcito**	0.28	11	⇓P	Pg	23 23 11.3	+0.6
EL6				S	Sb	23 23 16.1	-1.0
T1212	**Cascia, Frazio**	0.31	178	⇑P	Pg	23 23 11.8	+0.5
T1212				S	Sb	23 23 16.7	-1.2
T1212				AML	AML		
	comp=E,35μm,1.5s						
T1212				AML	AML		
	comp=N,41μm,1.0s						
CING	**Cingoli**	0.34	21	⇓P	Pg	23 23 12.4	+0.6
CING				S	Sb	23 23 18.0	-0.8

MAN 21 23:24:15.8, 8°.77N×122°.68E, h21^{km}**, mb4.5, ML3.4, MS3.2, 4C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	0.80	44	⇓iP	Pb	23 24 30.6	-0.3
SNPH				iS	Sb	23 24 41.8	+0.5
LSIP	**Lazi, Siquijor**	1.01	69	⇓iP	Pb	23 24 33.5	-1.1
LSIP				iS	Sn	23 24 50.3	+2.0
CNOP	**Candoni, Negro**	1.05	358	⇓iP	Pb	23 24 34.3	-1.1
CNOP				iS	Sn	23 24 49.2	-0.3
PAGZ	**Pagadian**	1.15	143	⇑eP	Pn	23 24 36.4	-0.2
GHBP	**Garcia Hernand**	1.84	62	⇑iP	Pn	23 24 46.2	+0.1
GHBP				iS	Sn	23 25 06.6	-2.1
GUIM	**Jordan**	1.85	357	⇑eP	Pn	23 24 46.5	+0.2
GUIM				eS	Sb	23 25 10.4	-1.2
LLP	**Lapu-Lapu**	2.00	39	⇑eP	Pn	23 24 48.7	+0.4
LLP				eS	Sn	23 25 13.4	+0.7
RCP	**Roxas**	2.78	1	⇓eP	Pn	23 25 01.3	+2.3
RCP				eS	Sb	23 25 36.3	-2.0

IDC 21 23:27:35.1±5.3**, 6°.54S×154°.41E, h0**^{km}**, mb3.7**/4**, mbtmp3.7**/4**, Error ellipse: s-maj=186.0km s-min=39.2km az=106.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	26.04	227	P	P	23 33 10.3	-0.1
	0.7nm,0.7s,baz=61,slow=9.6,SNR=4.3						
	0.7nm,0.7s						
SONM	**Songino Array**	68.64	327	P	P	23 38 40.8	+0.5
	0.4nm,0.5s,baz=140,slow=7.3,SNR=3.8						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	82.68	319	P	P	23 40 00.8	0.0
	0.6nm,0.9s,baz=122,slow=4.4,SNR=4.9						
	0.6nm,0.9s						
ZALV	**Zalesovo Beam**	83.48	326	P	P	23 40 03.8	-0.8
	0.4nm,0.3s,baz=94,slow=5.8,SNR=3.0						
	0.4nm,0.3s						
TORD	**Torodi Ar. Bea**	152.34	286	PKPbc	PKiKP	23 47 34.4	-0.1
	0.6nm,0.8s,baz=69,slow=4.0,SNR=3.6						

WEL 21 23:38:36.3±0.4**, 42°S**±2°×**17°3E**±°**, h5**^{km}**, M2.5**/7**, ML2.7**/7**, MLv2.5**/7**, Error ellipse: s-maj=0.0km s-min=0.0km az=113.4, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	**Kahutara**	0.13	73	P	Pg	23 38 39.3	+0.3
KHZ				S	Sg	23 38 41.6	+1.0
GVZ	**Greta Valley S**	0.57	206	P	Pg	23 38 47.5	+0.3
GVZ				S	Sb	23 38 56.5	-0.7
THZ	**Tophouse**	0.77	333	P	Pg	23 38 51.5	+0.4
THZ				S	Sg	23 39 02.1	+0.9
BSWZ	**Blackbirch Sta**	0.83	27	P	Pb	23 38 52.7	-0.4
LTZ	**Lake Taylor**	0.88	248	P	Pg	23 38 52.7	-0.4
LTZ				S	Sg	23 39 04.9	+0.4
AMCZ	**Amberley**	0.90	216	P	Pg	23 38 53.5	0.0
AMCZ				S	Sb	23 39 06.5	-0.1
CMWZ	**Cape Campbell**	0.94	42	P	Pn	23 38 56.3	+0.1
MRNZ	**Matariki Terra**	1.15	336	P	Pg	23 38 58.5	+0.1
MRNZ				S	Sn	23 39 15.2	0.0
OXZ	**Oxford**	1.31	228	P	Pn	23 38 58.5	-2.8
MQZ	**McQueen's Vall**	1.36	203	P	Pn	23 38 58.5	-3.4
DSZ	**Denniston Nort**	1.37	301	P	Pn	23 39 01.3	-0.7
TCW	**Tory Channel**	1.42	29	P	Pn	23 39 01.8	-0.9
INZ	**Inchbonnie**	1.45	259	P	Pn	23 39 02.0	-1.1
TKNZ	**Takaka Hill**	1.45	348	P	Pb	23 39 03.6	-0.3
AKCZ	**Akaroa Harbour**	1.46	193	P	Pn	23 39 00.0	-3.3
DUWZ	**D'Urville Isla**	1.70	14	P	Pb	23 39 07.4	-0.7
MHCZ	**Mount Hutt**	1.71	230	P	Pn	23 39 03.8	-2.9
QRZ	**Quartz Range**	1.75	338	P	Pn	23 39 07.7	+0.4
WVZ	**Waitaha Valley**	2.04	251	P	Pn	23 39 10.0	-1.3
RPZ	**Rata Peaks**	2.12	233	P	Pn	23 39 09.7	-2.6
ARCZ	**Arundel**	2.19	226	P	Pn	23 39 10.6	-2.8
GCSZ	**Gaunt Creek Bo**	2.40	248	P	Pn	23 39 15.1	-1.1
TMZ	**Timaru**	2.59	221	P	Pn	23 39 16.2	-2.6

NEIC ***21*** *23:40:31.6±1.8, 8°.4S±0°.2×115°.37E±0°.06, h115^{km}±8^{km}, mb4.0/12, Error ellipse: s-maj=23.0km s-min=2.7km az=199.0*
IDC ***21*** *23:40:32.5±2.9, 8°.28S×115°.43E, h126^{km}±22^{km}, mb3.4/3, mbtmp3.8/3, Error ellipse: s-maj=66.4km s-min=15.7km az=43.0*
DJA ***21*** *23:40:33.0±0.3, 9°S±5°×11°5E±°, h122^{km}±4^{km}, M4.4/17, mb4.4/7, MLv4.4/17*
ISC 21 23:40:32.6±0.7**, 8°.61S**±0°.09×**115°.24E**±0°.04**, h128**^{km}±5^{km}**, n50,** σ1^{s}**13**/63**, mb3.9**/8**, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DNP	**Denpasar**	0.07	201	P	Pn	23 40 50.5	+0.6
DNP				S	Sn	23 41 03.8	+0.8
JAGI	**Jajag, Banyuwa**	1.08	277	Pn	Pn	23 40 56.1	0.0
JAGI				Sn	Sn	23 41 12.2	-1.7
JAGI	**Jajag, Banyuwa**	1.08	277	P	Pn	23 40 56.2	+0.2
ABJI	**Asem Bagus**	1.28	309	P	Pn	23 40 59.2	+1.1
ABJI				S	Sn	23 41 18.8	+1.3
TWSI	**Taliwang, Sumb**	1.63	95	P	Pn	23 41 02.2	+0.2
TWSI				S	Sn	23 41 23.9	-0.6
GMJI	**Gumukmas**	1.80	281	P	Pn	23 41 04.6	+0.6
GMJI				S	Sn	23 41 28.7	+0.6
BLJI	**Banyuglugur**	1.84	298	P	Pn	23 41 05.9	+1.4
BLJI				S	Sn	23 41 29.5	+0.7
PLAI	**Plampang**	2.52	95	P	Pn	23 41 14.4	+1.5
PLAI	**Plampang**	2.52	95	P	Pn	23 41 13.9	+1.0
PLAI				S	Sn	23 41 45.1	+1.1
GRJI	**Gresik**	3.21	302	P	Pn	23 41 23.2	+1.3
GRJI				S	Sn	23 42 00.4	+0.5
PWJI	**Pagerwojo**	3.45	280	P	Pn	23 41 24.7	-0.2
PWJI				S	Sn	23 42 05.4	-0.1
BWJI	**Bawean**	3.75	317	P	Pn	23 41 30.1	+1.1
TBJI	**Tambak Boyo**	3.80	298	P	Pn	23 41 30.9	+1.3
UGM	**Wanagama**	4.71	278	Pn	Pn	23 41 42.8	+0.9
UGM				Sn	Sn	23 42 34.5	-1.3
UGM	**Wanagama**	4.71	278	P	Pn	23 41 43.1	+1.2
UGM	**Wanagama**	4.71	278	P	Pn	23 41 42.6	+0.7
UWJI	**Ujung Watu**	4.78	297	P	Pn	23 41 41.2	-1.5
SMRI	**Semarang**	5.00	288	P	Pn	23 41 46.6	+1.0
	89nm,1.1s,1.0nm						
BASI	**Baing, Sumba**	5.51	107	P	Pn	23 41 53.4	+0.9
	162nm,1.8s,0.9nm						
BSSI	**Bau Bau, Buton**	5.76	65	P	Pn	23 41 56.8	+0.9
	71nm,1.4s,0.4nm						
KPJI	**Karang Pucung**	6.37	281	P	Pn	23 42 04.9	+0.8
	30nm,1.8s,0.3nm						
BBJI	**Bungbulang**	7.60	278	P	Pn	23 42 21.0	+0.3
SOEI	**Soe**	8.99	98	Pn	Pn	23 42 37.1	-2.4
SOEI	**Soe**	8.99	98	P	Pn	23 42 38.5	-1.0
MNAI	**Manna**	12.91	288	Pn	Pn	23 43 30.7	-0.8
FITZ	**Fitzroy Crossi**	13.83	134	Pn	Pn	23 43 42.8	-0.5
KNRA	**Kununurra**	14.97	119	Pn	Pn	23 43 56.9	-0.8
KNRA	**Kununurra**	14.97	119	P	Pn	23 43 56.7	-1.0
MTN	**Manton Dam**	16.17	106		Pn	23 44 11.4	-1.3
MTN	**Manton Dam**	16.17	106	P	P	23 44 14.2	+0.7
FAKI	**Fak Fak**	17.84	73		P	23 44 29.9	-2.0
FAKI				IAmb	IAmb	23 44 34.5	
	comp=Z,9.2nm,0.8s						
WB0	**Warramunga Arr**	21.60	123	P	P	23 45 11.7	-0.9
WB0				IAmb	IAmb	23 45 41.6	
	comp=Z,9.0nm,1.4s						
WRA	**Warramunga Arr**	21.64	123	P	P	23 45 12.2	-0.8
	comp=Z,2.0nm,0.7s,baz=300,slow=11,SNR=45						
WRA				S	S	23 49 08.0	+3.1
	comp=Z,0.5nm,0.8s,baz=303,slow=25,SNR=2.2						
WRA				ScP	ScP	23 52 33.2	-1.9
	comp=Z,0.4nm,0.5s,baz=324,slow=2.1,SNR=4.7						
	comp=Z,2.0nm,0.7s						
WRA	**Warramunga Arr**	21.64	123	P	P	23 45 11.8	-1.2
WRAB	**Tennant Creek**	21.65	123	P	P	23 45 12.3	-0.7
WB2	**Warramunga Arr**	21.65	123	P	P	23 45 11.9	-1.2
AS31	**Alice Springs**	23.31	132	P	P	23 45 30.2	+0.8
ASAR	**Alice Springs**	23.31	132	P	P	23 45 30.1	+0.6
	comp=Z,1.1nm,0.4s,baz=310,slow=9.0,SNR=19						
ASAR				ScP	ScP	23 52 38.7	-0.7
	comp=Z,0.2nm,0.3s,baz=327,slow=3.8,SNR=2.1						
	comp=Z,1.1nm,0.4s						
AS01	**Alice Springs**	23.35	132	P	P	23 45 30.6	+0.9
OOD	**Oodnadatta**	27.15	137	P	P	23 46 04.9	+0.9
COEN	**Coen**	27.89	104	P	P	23 46 10.0	-0.8
COEN				IAmb	IAmb	23 46 24.4	
	comp=Z,6.1nm,1.3s						
CTAO	**Charters Tower**	32.08	114	P	P	23 46 47.0	-0.7
MK31	**Makanchi Array**	62.48	335	P	P	23 50 41.4	-1.0
MK31				IAmb	IAmb	23 50 50.9	
	comp=Z,2.8nm,1.5s						
MKAR	**Makanchi Array**	62.48	335	P	P	23 50 41.4	-1.0
	comp=Z,0.4nm,0.4s,baz=148,slow=7.2,SNR=13						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	62.48	335	P	P	23 50 41.2	-1.2
ABKAR	**Akbulak array**	75.14	326	P	P	23 52 00.2	-0.5
ABKAR				IAmb	IAmb	23 52 22.2	
	comp=Z,2.0nm,1.3s						
QSPA	**South Pole Qui**	81.38	180	P	P	23 52 36.1	+1.1
GURO	**Guroymak-BITLI**	82.43	311	P	P	23 52 41.4	+0.4
GURO				IAmb	IAmb	23 52 41.9	
	comp=Z,1.5nm,0.5s						
CPUP	**Villa Florida**	144.52	192	PKP	PKPab	23 59 54.7	+1.4
	comp=Z,3.6nm,0.5s,baz=154,slow=3.5,SNR=7.0						
BDFB	**Brasilia**	150.74	215	PKPbc	PKPbc	00 00 12.0	+1.0
	comp=Z,1.2nm,0.4s,baz=130,slow=5.2,SNR=3.2						

ROM 21 23:44:02.9±0.1**, 42°.685N**±0°.003×**13°.205E**±0°.004**, h11**^{km}**, ML2.3**/47**, 25C-15D, Error ellipse: s-maj=0.3km s-min=0.1km az=71.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1218	**Civita (PG)**	0.07	258	P	Pg	23 44 05.6	+0.2
T1218				S	Sg	23 44 07.5	+0.3
T1218				AML	AML		
	comp=E,8975μm,0.5s						
T1218				AML	AML		
	comp=E,9985μm,0.1s						
T1218				AML	AML		
	comp=E,8970μm,0.5s						
T1218				AML	AML		
	comp=N,34000μm,0.2s						
T1218				AML	AML		
	comp=N,34400μm,0.2s						
T1214	**Arquata del Tr**	0.07	2	P	Pg	23 44 05.8	+0.2
T1214				S	Sg	23 44 07.8	+0.3
T1214				AML	AML		
	comp=E,9265μm,0.1s						
T1214				AML	AML		
	comp=N,10450μm,0.3s						
T1214				AML	AML		
	comp=E,8385μm,0.1s						
T1214				AML	AML		
	comp=N,10040μm,0.3s						

T1214				AML	AML		
	comp=N,10450μm,0.3s						
T1214				AML	AML		
	comp=N,10040μm,0.3s						
T1214				AML	AML		
	comp=E,8380μm,0.1s						
T1214				AML	AML		
	comp=N,10045μm,0.3s						
SMA1	**SAN MARTINO**	**0.11**	**119**	⇓P	Pg	23 44 06.4	+0.5
SMA1				S	Sg	23 44 09.1	+1.1
SMA1				AML	AML		
	comp=E,2340μm,0.3s						
SMA1				AML	AML		
	comp=N,2740μm,0.4s						
T1212	**Cascia, Frazio**	**0.14**	**300**	P	Pg	23 44 06.5	+0.3
T1212				S	Sg	23 44 08.9	+0.3
T1212				AML	AML		
	comp=E,2710μm,1.3s						
T1212				AML	AML		
	comp=E,2750μm,1.3s						
T1212				AML	AML		
	comp=E,2710μm,1.3s						
T1212				AML	AML		
	comp=N,3265μm,0.4s						
T1212				AML	AML		
	comp=N,3475μm,0.4s						
T1212				AML	AML		
	comp=E,2745μm,1.3s						
T1245	**Castelsantange**	**0.17**	**356**	⇓P	Pg	23 44 07.3	+0.4
T1245				S	Sg	23 44 10.4	+0.8
T1245				AML	AML		
	comp=E,5005μm,1.0s						
T1245				AML	AML		
	comp=N,12500μm,1.2s						
T1245				AML	AML		
	comp=E,5005μm,1.0s						
T1245				AML	AML		
	comp=N,12500μm,1.3s						
T1245				AML	AML		
	comp=E,5840μm,0.3s						
T1245				AML	AML		
	comp=E,5010μm,1.0s						
T1245				AML	AML		
	comp=N,11850μm,1.3s						
T1245				AML	AML		
	comp=E,5010μm,1.0s						
T1245				AML	AML		
	comp=N,11850μm,0.7s						
T1245				AML	AML		
	comp=N,12500μm,0.7s						
RM33	**Pellescritta (**	**0.18**	**178**	P	Pg	23 44 07.3	+0.5
RM33				S	Sg	23 44 10.5	+0.9
RM33				AML	AML		
	comp=E,3025μm,0.1s						
RM33				AML	AML		
	comp=N,4120μm,0.2s						
RM33				AML	AML		
	comp=E,2925μm,0.1s						
RM33				AML	AML		
	comp=E,3025μm,0.2s						
RM33				AML	AML		
	comp=N,4120μm,0.2s						
RM33				AML	AML		
	comp=N,4060μm,0.2s						
T1217	**Poggiodomo (PG**	**0.20**	**278**	⇑P	Pg	23 44 07.7	+0.3
T1217				S	Sg	23 44 11.2	+0.8
T1217				AML	AML		
	comp=N,3740μm,0.2s						
T1217				AML	AML		
	comp=N,3555μm,0.2s						
T1217				AML	AML		
	comp=E,2105μm,0.5s						
T1217				AML	AML		
	comp=N,3735μm,0.2s						
T1217				AML	AML		
	comp=E,2480μm,0.3s						
T1217				AML	AML		
	comp=N,3555μm,0.2s						
T1217				AML	AML		
	comp=E,2105μm,0.5s						
T1217				AML	AML		
	comp=N,3735μm,0.2s						
CAMP	**Campotosto**	**0.21**	**135**	P	Pg	23 44 07.9	+0.4
CAMP				S	Sg	23 44 11.6	+1.1
CAMP				AML	AML		
	comp=E,234μm,0.8s						
CAMP				AML	AML		
	comp=N,294μm,0.4s						
MC2	**Monte Cornacci**	**0.23**	**357**	⇑P	Pg	23 44 08.2	+0.4
MC2				S	Sg	23 44 12.7	+1.5
T1241	**Roccafluvione,**	**0.24**	**44**	⇑P	Pg	23 44 08.3	+0.3
T1241				S	Sg	23 44 12.2	+0.9
T1241				AML	AML		
	comp=E,1630μm,0.2s						
T1241				AML	AML		
	comp=N,780μm,0.3s						
T1241				AML	AML		
	comp=N,786μm,0.9s						
T1241				AML	AML		
	comp=E,1700μm,0.8s						
T1241				AML	AML		
	comp=N,780μm,0.3s						
T1241				AML	AML		
	comp=E,1630μm,0.2s						
T1241				AML	AML		
	comp=N,786μm,1.1s						
T1216	**Preci, Frazion**	**0.25**	**326**	⇓P	Pg	23 44 08.3	+0.2
T1216				S	Sg	23 44 12.5	+1.0
T1216				AML	AML		
	comp=E,1445μm,0.6s						
T1216				AML	AML		
	comp=N,1685μm,0.6s						
T1216				AML	AML		
	comp=N,1685μm,1.4s						
T1247	**Pizzolo (AQ)**	**0.25**	**164**	⇑P	Pg	23 44 08.6	+0.4
T1247				S	Sb	23 44 13.1	-0.8
T1247				AML	AML		
	comp=E,1295μm,0.2s						
T1247				AML	AML		
	comp=N,1170μm,0.5s						
T1211	**Morro Reatino**	**0.30**	**240**	⇑P	Pg	23 44 09.3	+0.2
T1211				S	Sg	23 44 14.1	+1.0
T1211				AML	AML		
	comp=E,1375μm,0.1s						
T1211				AML	AML		
	comp=E,1390μm,0.1s						
T1211				AML	AML		
	comp=N,1580μm,0.4s						
T1211				AML	AML		
	comp=N,1570μm,0.4s						
TERO	**Teramo**	**0.30**	**102**	P	Pg	23 44 09.2	+0.1
TERO				S	Sg	23 44 13.8	+0.7
TERO				AML	AML		
	comp=E,469μm,0.4s						
TERO				AML	AML		
	comp=N,594μm,0.7s						
TERO				AML	AML		
	comp=E,512μm,0.4s						
TERO				AML	AML		
	comp=N,617μm,0.7s						
T1222	**Castel Sant'An**	**0.31**	**204**	⇑P	Pg	23 44 09.4	+0.2
T1222				S	Sg	23 44 14.4	+1.0
T1222				AML	AML		
	comp=N,602μm,1.1s						
T1222				AML	AML		
	comp=E,721μm,0.7s						
T1222				AML	AML		
	comp=E,740μm,1.5s						
T1222				AML	AML		
	comp=N,602μm,1.1s						
T1222				AML	AML		
	comp=E,722μm,0.7s						
T1222				AML	AML		
	comp=N,700μm,1.1s						
T1222				AML	AML		
	comp=E,740μm,0.5s						
T1222				AML	AML		
	comp=E,722μm,1.3s						
T1256	**Bolognola (MC)**	**0.32**	**3**	⇑P	Pg	23 44 09.7	+0.2
T1256				S	Sb	23 44 15.0	-1.0
T1256				AML	AML		
	comp=E,679μm,1.6s						
T1256				AML	AML		
	comp=N,729μm,1.5s						
T1256				AML	AML		
	comp=E,678μm,1.6s						
T1256				AML	AML		
	comp=N,774μm,1.5s						
T1256				AML	AML		
	comp=E,666μm,1.6s						
T1256				AML	AML		
	comp=N,729μm,0.5s						
T1256				AML	AML		
	comp=N,774μm,0.5s						
ARRO	**Arrone**	**0.34**	**252**	⇑P	Pg	23 44 10.0	+0.2
ARRO				AML	AML		
	comp=N,592μm,0.5s						
ARRO				AML	AML		
	comp=E,386μm,0.2s						
ARRO				AML	AML		
	comp=N,592μm,1.5s						
GIGS	**Gran Sasso**	**0.36**	**131**	⇑P	Pg	23 44 10.2	+0.1
GIGS				S	Sg	23 44 15.9	+1.1
GIGS				AML	AML		
	comp=E,63μm,0.7s						
GIGS				AML	AML		
	comp=N,73μm,0.1s						
GIGS				AML	AML		
	comp=E,63μm,1.3s						
GIGS				AML	AML		
	comp=N,73μm,1.9s						
AQU	**L'Aquila**	**0.36**	**156**	⇓P	Pg	23 44 10.5	+0.3
AQU				S	Sb	23 44 16.5	-0.5
AQU				AML	AML		
	comp=E,310μm,1.2s						
AQU				AML	AML		
	comp=N,242μm,1.5s						
AQU				AML	AML		
	comp=E,323μm,1.2s						
AQU				AML	AML		
	comp=N,242μm,0.5s						
AQU				AML	AML		
	comp=E,323μm,0.8s						
AQU				AML	AML		
	comp=E,310μm,0.8s						
AQU				AML	AML		
	comp=N,214μm,1.6s						
FDMO	**Fiordimonte**	**0.36**	**346**	⇑P	Pg	23 44 10.3	+0.1
FDMO				S	Sb	23 44 16.1	-1.0
FDMO				AML	AML		
	comp=E,588μm,0.2s						
FDMO				AML	AML		
	comp=N,526μm,0.2s						
CESI	**CESI - Serrava**	**0.39**	**325**	⇑P	Pg	23 44 10.9	+0.2
CESI				S	Sb	23 44 17.0	-0.9
CESI				AML	AML		
	comp=E,462μm,0.2s						
CESI				AML	AML		
	comp=N,828μm,0.2s						
GUMA	**Gualdo di Mace**	**0.39**	**14**	⇑P	Pg	23 44 11.2	+0.6
GUMA				S	Sb	23 44 17.9	0.0
GUMA				AML	AML		
	comp=E,2430μm,0.3s						
GUMA				AML	AML		
	comp=N,2285μm,0.5s						
GUMA				AML	AML		
	comp=E,2850μm,0.3s						
GUMA				AML	AML		
	comp=N,2305μm,0.4s						
GUMA				AML	AML		
	comp=N,2285μm,0.5s						
T1219	**Muccia, Frazio**	**0.40**	**339**	⇑P	Pg	23 44 11.0	+0.1
T1219				S	Sb	23 44 17.3	-0.9
T1219				AML	AML		
	comp=E,513μm,0.1s						
T1219				AML	AML		
	comp=E,488μm,0.1s						
T1219				AML	AML		
	comp=E,514μm,0.1s						
T1219				AML	AML		
	comp=N,1075μm,0.6s						
T1219				AML	AML		
	comp=N,1100μm,0.6s						
FIAM	**Fiamignano**	**0.42**	**189**	⇑P	Pg	23 44 11.4	+0.1
FIAM				S	Sb	23 44 17.9	-1.0
FIAM				AML	AML		
	comp=E,452μm,0.5s						
FIAM				AML	AML		
	comp=N,385μm,1.1s						
FIAM				AML	AML		
	comp=N,385μm,0.9s						
OFFI	**Offida**	**0.43**	**55**	⇑P	Pb	23 44 12.5	-0.1
OFFI				AML	AML		
	comp=E,690μm,0.5s						
OFFI				AML	AML		
	comp=N,1111μm,0.6s						
OFFI				AML	AML		
	comp=N,1111μm,1.4s						
T1220	**Camerino, Fraz**	**0.43**	**349**	⇑P	Pg	23 44 11.6	+0.1
T1220				S	Sb	23 44 18.5	-0.7
T1220				AML	AML		
	comp=E,1980μm,0.4s						
T1220				AML	AML		
	comp=N,2690μm,0.6s						
T1220				AML	AML		
	comp=N,2690μm,1.4s						
CESX	**Cesi**	**0.47**	**261**	P	Pg	23 44 11.9	-0.2
CESX				S	Sb	23 44 19.5	-0.6
CESX				AML	AML		
	comp=E,200μm,0.3s						
CESX				AML	AML		
	comp=N,270μm,0.2s						
MOMA	**Monte Martano**	**0.48**	**285**	P	Pg	23 44 12.5	+0.1
MOMA				S	Sb	23 44 20.4	-0.2
MOMA				AML	AML		
	comp=N,549μm,0.2s						
MOMA				AML	AML		
	comp=E,651μm,0.3s						
ASSB	**Assisi San Ben**	**0.54**	**312**	⇓P	Pg	23 44 13.3	-0.1
ASSB				S	Sb	23 44 21.9	-0.3
ASSB				AML	AML		
	comp=E,247μm,0.3s						
ASSB				AML	AML		
	comp=N,310μm,1.0s						
VCEL	**Villa Celiera**	**0.55**	**121**	⇓P	Pg	23 44 14.1	+0.4
VCEL				AML	AML		
	comp=E,272μm,0.4s						
VCEL				AML	AML		
	comp=N,254μm,0.3s						
SNTG	**Esanatoglia**	**0.60**	**341**	⇓P	Pg	23 44 14.5	-0.1
SNTG				S	Sb	23 44 24.8	+0.7
SNTG				AML	AML		
	comp=E,158μm,0.5s						
SNTG				AML	AML		
	comp=N,154μm,1.3s						
SNTG				AML	AML		
	comp=N,154μm,0.7s						
T0110	**Collepietro**	**0.62**	**137**	⇓P	Pg	23 44 14.9	-0.1
T0110				AML	AML		
	comp=E,190μm,0.5s						
T0110				AML	AML		
	comp=N,170μm,0.4s						
T0110				AML	AML		
	comp=E,190μm,1.5s						
EL6	**Elcito**	**0.65**	**353**	⇑P	Pg	23 44 15.4	-0.2
EL6				S	Sb	23 44 26.1	+0.6
EL6				AML	AML		
	comp=E,331μm,0.3s						
EL6				AML	AML		
	comp=N,316μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.65**	**321**	⇑P	Pg	23 44 15.5	-0.1
ATCC				AML	AML		
	comp=E,162μm,0.3s						
ATCC				AML	AML		
	comp=N,236μm,0.2s						
SRES	**S.Oreste - Sor**	**0.68**	**229**	⇓P	Pg	23 44 16.1	0.0
SRES				S	Sb	23 44 27.5	+1.2
SRES				AML	AML		
	comp=E,98μm,0.2s						
SRES				AML	AML		
	comp=N,95μm,0.4s						
SRES				AML	AML		
	comp=N,95μm,1.6s						
CING	**Cingoli**	**0.69**	**359**	P	Pg	23 44 16.1	-0.2
CING				AML	AML		
	comp=E,242μm,0.4s						
CING				AML	AML		
	comp=E,242μm,1.6s						
CING				AML	AML		
	comp=N,177μm,0.3s						
FOSV	**Fossato di Vic**	**0.69**	**332**	⇓P	Pg	23 44 16.5	+0.2
FOSV				AML	AML		
	comp=E,132μm,0.3s						
FOSV				AML	AML		
	comp=N,184μm,0.4s						
CERT	**Cerreto**	**0.75**	**193**	⇑P	Pg	23 44 16.7	-0.8
CERT				AML	AML		
	comp=N,140μm,1.3s						
CERT				AML	AML		
	comp=N,140μm,0.7s						
CERT				AML	AML		
	comp=E,243μm,0.4s						
PP3	**Marolino**	**0.75**	**23**	⇓P	Pb	23 44 18.4	+0.4
PP3				AML	AML		
	comp=N,537μm,0.4s						
PP3				AML	AML		
	comp=E,384μm,0.4s						
PP3				AML	AML		
	comp=E,396μm,0.5s						
PP3				AML	AML		
	comp=N,476μm,0.4s						
MURB	**Monte Urbino**	**0.76**	**319**	⇓P	Pg	23 44 17.7	0.0
MURB				S	Sn	23 44 30.2	-1.1
MURB				AML	AML		
	comp=E,352μm,0.3s						
MURB				AML	AML		
	comp=N,441μm,0.3s						
ATTE	**AVT- Monte Tez**	**0.81**	**310**	⇑P	Pn	23 44 21.3	+0.9
ATFO	**Monte Foce - G**	**0.82**	**326**	⇓P	Pb	23 44 19.3	0.0
ATFO				AML	AML		
	comp=E,83μm,0.5s						
ATFO				AML	AML		
	comp=N,116μm,0.3s						
ATFO				AML	AML		
	comp=E,83μm,1.5s						
ARVD	**Arcevia**	**0.84**	**347**	⇑P	Pg	23 44 18.8	-0.3
ARVD				S	Sn	23 44 32.6	-0.4
ARVD				AML	AML		
	comp=N,110μm,0.6s						
ARVD				AML	AML		
	comp=N,110μm,1.4s						
ARVD				AML	AML		
	comp=E,75μm,1.3s						
MGAB	**Montegabbione**	**0.84**	**286**	⇑P	Pb	23 44 19.4	-0.1
MGAB				AML	AML		
	comp=E,154μm,1.4s						
MGAB				AML	AML		
	comp=E,162μm,1.6s						
MGAB				AML	AML		
	comp=E,162μm,0.4s						
MGAB				AML	AML		
	comp=N,160μm,1.3s						
MGAB				AML	AML		
	comp=N,146μm,0.4s						
MGAB				AML	AML		
	comp=E,154μm,0.6s						
INTR	**Introdacqua**	**0.85**	**142**	⇑P	Pg	23 44 18.6	-0.7
INTR				AML	AML		
	comp=N,128μm,0.5s						
INTR				AML	AML		
	comp=E,68μm,0.5s						
FRON	**Frontone**	**0.90**	**337**	⇑P	Pg	23 44 20.0	-0.4
FRON				AML	AML		
	comp=N,108μm,0.3s						
FRON				AML	AML		
	comp=E,85μm,0.3s						
LPEL	**Lama dei Pelig**	**0.96**	**131**	P	Pn	23 44 22.4	-0.1
LPEL				AML	AML		
	comp=E,65μm,0.8s						
LPEL				AML	AML		
	comp=N,52μm,1.4s						
LPEL				AML	AML		
	comp=E,65μm,1.2s						
LPEL				AML	AML		
	comp=N,52μm,0.6s						
SACS	**San Casciano d**	**0.97**	**280**	⇓P	Pn	23 44 23.2	+0.7
PIEI	**Pieia**	**0.98**	**330**	P	Pg	23 44 21.5	-0.3
PIEI				AML	AML		
	comp=E,72μm,0.3s						
PIEI				AML	AML		
	comp=N,52μm,0.5s						
LAV9	**Lanuvio**	**1.07**	**201**	P	Pb	23 44 20.8	-2.7
TOLF	**Tolfa**	**1.09**	**236**	⇓P	Pn	23 44 25.3	+1.2
CSNT	**Castellina Chi**	**1.61**	**300**	⇑P	Pn	23 44 30.3	-0.9

ROM 21 23:44:38.5±0.1**,42°.679N**±0°.003×**13°.202E**±0°.005**,**
h13km,ML1.8/1**,6C-7D,Error ellipse: s-maj=0.3km**
s-min=0.1km az=79.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
T1218	**Civita (PG)**	**0.06**	**262**	P	Pg	23 44 41.4	+0.1
T1218				S	Sg	23 44 43.2	+0.1
T1218				AML	AML		
	comp=E,1145μm,0.5s						
T1218				AML	AML		
	comp=N,3720μm,0.2s						
T1218				AML	AML		
	comp=N,3645μm,0.2s						
T1218				AML	AML		
	comp=N,3715μm,0.2s						
T1218				AML	AML		
	comp=E,972μm,0.5s						
T1214	**Arquata del Tr**	**0.08**	**4**	P	Pg	23 44 41.5	+0.1
T1214				AML	AML		
	comp=E,1455μm,0.1s						
T1214				AML	AML		
	comp=E,1315μm,0.1s						
T1214				AML	AML		
	comp=N,1535μm,0.2s						
T1214				AML	AML		
	comp=N,1635μm,0.2s						
T1214				AML	AML		
	comp=E,1320μm,0.1s						
T1214				AML	AML		
	comp=E,1455μm,0.1s						
T1214				AML	AML		
	comp=N,1535μm,0.2s						
SMA1	**SAN MARTINO**	**0.11**	**116**	⇑P	Pb	23 44 42.2	-0.4
SMA1				S	Sg	23 44 44.5	+0.6
T1212	**Cascia, Frazio**	**0.14**	**302**	⇓P	Pg	23 44 42.2	+0.2
T1212				S	Sg	23 44 44.7	+0.2
RM33	**Pellescritta (**	**0.17**	**177**	P	Pg	23 44 43.0	+0.5
RM33				S	Sb	23 44 46.2	-0.7
RM33				AML	AML		
	comp=E,506μm,0.1s						
RM33				AML	AML		
	comp=N,528μm,0.9s						
T1245	**Castelsantange**	**0.18**	**357**	⇑P	Pg	23 44 43.0	+0.3
T1245				S	Sg	23 44 46.2	+0.6
T1217	**Poggiodomo (PG**	**0.20**	**279**	⇓P	Pg	23 44 43.4	+0.4
T1217				S	Sg	23 44 46.8	+0.6
MC2	**Monte Cornacci**	**0.23**	**358**	⇓P	Pg	23 44 44.0	+0.3
MC2				S	Sb	23 44 48.3	-0.6
T1241	**Roccafluvione,**	**0.24**	**44**	⇑P	Pg	23 44 43.9	+0.2
T1241				S	Sg	23 44 47.8	+0.5
T1247	**Pizzolo (AQ)**	**0.25**	**163**	⇓P	Pg	23 44 44.3	+0.5
T1216	**Preci, Frazion**	**0.25**	**328**	P	Pg	23 44 44.2	+0.4
T1216				S	Sg	23 44 48.2	+0.8
T1211	**Morro Reatino**	**0.29**	**240**	⇓P	Pg	23 44 44.5	-0.1
T1211				S	Sb	23 44 49.6	-0.9
TERO	**Teramo**	**0.30**	**101**	P	Pg	23 44 44.9	+0.2
TERO				S	Sg	23 44 49.4	+0.5
T1222	**Castel Sant'An**	**0.30**	**204**	⇑P	Pg	23 44 45.1	+0.4
T1256	**Bolognola (MC)**	**0.33**	**3**	P	Pg	23 44 45.5	+0.3
ARRO	**Arrone**	**0.34**	**253**	⇓P	Pg	23 44 45.7	+0.4
GIGS	**Gran Sasso**	**0.35**	**130**	P	Pg	23 44 46.0	+0.3
FDMO	**Fiordimonte**	**0.37**	**347**	⇓P	Pg	23 44 46.1	+0.2
FDMO				S	Sb	23 44 51.9	-0.7
GUMA	**Gualdo di Mace**	**0.40**	**14**	⇑P	Pb	23 44 46.9	-0.4
T1219	**Muccia, Frazio**	**0.40**	**339**	S	Sb	23 44 53.1	-0.6
T1220	**Camerino, Fraz**	**0.44**	**349**	⇑P	Pg	23 44 47.4	+0.2
T1220				S	Sb	23 44 54.5	-0.2

ROM 22 00:19:12.4±0.0**,42°.601N**±0°.002×**13°.315E**±0°.004**,**
h8km,ML1.8/22**,6C-6D,Error ellipse: s-maj=0.3km**
s-min=0.2km az=211.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	**0.03**	**27**	⇑P	Pg	00 19 14.4	+0.2
SMA1				S	Sg	00 19 15.3	-0.1
SMA1				AML	AML		
	comp=E,27750μm,0.2s						
SMA1				AML	AML		
	comp=N,11750μm,0.1s						

CAMP	**Campotosto**	**0.10**	**133**	⇓P	Pg	00 19 15.3	+0.5
CAMP				S	Sg	00 19 17.0	+0.4
CAMP				AML	AML		
	comp=N,625µm,0.6s						
CAMP				AML	AML		
	comp=E,952µm,0.8s						
RM33	**Pellescritta (**	**0.12**	**219**	⇑P	Pg	00 19 15.9	+0.7
RM33				S	Sg	00 19 18.0	+0.9
RM33				AML	AML		
	comp=E,910µm,0.7s						
RM33				AML	AML		
	comp=N,630µm,0.5s						
RM33				AML	AML		
	comp=N,620µm,0.5s						
RM33				AML	AML		
	comp=E,910µm,0.7s						
RM33				AML	AML		
	comp=N,620µm,0.5s						
RM33				AML	AML		
	comp=E,834µm,0.6s						
RM33				AML	AML		
	comp=N,630µm,0.5s						
T1246	**Crognaleto (TE**	**0.13**	**98**	⇑P	Pg	00 19 15.9	+0.5
T1246				S	Sg	00 19 18.2	+0.8
T1247	**Pizzolo (AQ)**	**0.16**	**184**	⇑P	Pg	00 19 16.5	+0.7
T1247				S	Sg	00 19 19.5	+1.3
T1247				AML	AML		
	comp=E,976µm,0.9s						
T1247				AML	AML		
	comp=N,1130µm,0.4s						
T1247				AML	AML		
	comp=E,976µm,1.1s						
T1218	**Civita (PG)**	**0.16**	**295**	P	Pg	00 19 16.6	+0.8
T1218				S	Sg	00 19 19.5	+1.2
T1218				AML	AML		
	comp=E,717µm,0.1s						
T1218				AML	AML		
	comp=N,1630µm,0.2s						
T1218				AML	AML		
	comp=N,1645µm,0.2s						
T1218				AML	AML		
	comp=E,711µm,0.1s						
T1218				AML	AML		
	comp=E,716µm,0.1s						
T1214	**Arquata del Tr**	**0.18**	**334**	⇓P	Pg	00 19 17.0	+0.9
T1214				S	Sg	00 19 19.9	+1.1
T1214				AML	AML		
	comp=E,308µm,0.9s						
T1214				AML	AML		
	comp=N,296µm,0.3s						
T1214				AML	AML		
	comp=E,560µm,1.3s						
T1214				AML	AML		
	comp=N,332µm,0.9s						
T1214				AML	AML		
	comp=E,558µm,1.3s						
T1214				AML	AML		
	comp=N,324µm,0.3s						
T1214				AML	AML		
	comp=E,558µm,0.7s						
T1214				AML	AML		
	comp=E,560µm,0.7s						
TERO	**Teramo**	**0.21**	**84**	⇑P	Pg	00 19 17.3	+0.6
TERO				S	Sg	00 19 20.8	+1.1
TERO				AML	AML		
	comp=N,1056µm,0.5s						
TERO				AML	AML		
	comp=N,928µm,0.5s						
TERO				AML	AML		
	comp=E,767µm,0.7s						
TERO				AML	AML		
	comp=E,842µm,0.7s						
GIGS	**Gran Sasso**	**0.24**	**129**	P	Pg	00 19 17.9	+0.6
GIGS				S	Sg	00 19 21.9	+1.3
T1212	**Cascia, Frazio**	**0.25**	**307**	P	Pg	00 19 18.1	+0.6
T1212				S	Sg	00 19 22.0	+1.2
T1212				AML	AML		
	comp=E,252µm,1.3s						
T1212				AML	AML		
	comp=N,296µm,0.4s						
T1212				AML	AML		
	comp=N,296µm,0.4s						
T1212				AML	AML		
	comp=E,250µm,0.2s						
T1212				AML	AML		
	comp=E,252µm,0.7s						
AQU	**L'Aquila**	**0.26**	**165**	P	Pg	00 19 18.3	+0.8
AQU				S	Sb	00 19 22.6	-1.2
AQU				AML	AML		
	comp=E,300µm,1.2s						
AQU				AML	AML		
	comp=N,227µm,0.3s						
AQU				AML	AML		
	comp=E,302µm,1.2s						
AQU				AML	AML		
	comp=N,232µm,1.0s						
T1241	**Roccafluvione,**	**0.27**	**19**	P	Pg	00 19 18.4	+0.6
T1241				S	Sb	00 19 22.8	-1.4
T1241				AML	AML		
	comp=E,320µm,0.4s						
T1241				AML	AML		
	comp=N,304µm,0.3s						
T1241				AML	AML		
	comp=E,275µm,1.3s						
T1241				AML	AML		
	comp=N,260µm,0.2s						
T1241				AML	AML		
	comp=N,304µm,0.2s						
T1241				AML	AML		
	comp=E,275µm,0.7s						
T1245	**Castelsantange**	**0.27**	**340**	P	Pb	00 19 18.8	-0.8
T1245				S	Sb	00 19 23.2	-1.2
T1245				AML	AML		
	comp=E,294µm,0.5s						
T1245				AML	AML		
	comp=N,386µm,1.0s						
T1245				AML	AML		
	comp=E,246µm,1.0s						
T1245				AML	AML		
	comp=N,334µm,1.1s						
T1245				AML	AML		
	comp=E,357µm,0.5s						
T1245				AML	AML		
	comp=E,326µm,0.5s						
T1245				AML	AML		
	comp=N,454µm,0.7s						
T1245				AML	AML		
	comp=N,514µm,0.7s						
T1222	**Castel Sant'An**	**0.29**	**226**	⇑P	Pg	00 19 18.7	+0.6
T1222				S	Sb	00 19 23.5	-1.2
T1222				AML	AML		
	comp=E,174µm,0.2s						
T1222				AML	AML		
	comp=N,179µm,1.5s						
T1222				AML	AML		
	comp=N,179µm,0.5s						
T1217	**Poggiodomo (PG**	**0.30**	**291**	P	Pg	00 19 19.1	+0.7
T1217				S	Sb	00 19 23.9	-1.4
T1217				AML	AML		
	comp=E,138µm,1.1s						
T1217				AML	AML		
	comp=N,192µm,1.5s						
T1217				AML	AML		
	comp=N,193µm,1.5s						
T1217				AML	AML		
	comp=N,193µm,0.5s						
T1217				AML	AML		
	comp=E,164µm,0.6s						
T1211	**Morro Reatino**	**0.35**	**259**	P	Pg	00 19 19.9	+0.6
T1211				S	Sb	00 19 25.3	-1.2
T1211				AML	AML		
	comp=E,190µm,0.7s						
T1211				AML	AML		
	comp=N,344µm,0.7s						
T1211				AML	AML		
	comp=N,372µm,0.7s						
T1211				AML	AML		
	comp=E,198µm,0.1s						
T1216	**Preci, Frazion**	**0.36**	**323**	P	Pg	00 19 20.1	+0.6
T1216				S	Sb	00 19 26.3	-0.6
T1216				AML	AML		
	comp=E,216µm,0.9s						
T1216				AML	AML		
	comp=N,166µm,0.2s						
T1216				AML	AML		
	comp=E,260µm,1.0s						
T1216				AML	AML		
	comp=N,182µm,0.4s						
T1216				AML	AML		
	comp=N,182µm,1.6s						
ARRO	**Arrone**	**0.41**	**267**	P	Pg	00 19 20.8	+0.5
ARRO				S	Sb	00 19 27.2	-0.9
ARRO				AML	AML		
	comp=E,95µm,0.2s						
ARRO				AML	AML		
	comp=N,94µm,0.6s						
ARRO				AML	AML		
	comp=N,94µm,1.4s						
T1256	**Bolognola (MC)**	**0.41**	**351**	⇓P	Pg	00 19 20.9	+0.4
T1256				S	Sb	00 19 27.9	-0.5
T1256				AML	AML		
	comp=E,93µm,1.0s						
T1256				AML	AML		
	comp=N,113µm,0.7s						
T1256				AML	AML		
	comp=N,113µm,1.3s						
OFFI	**Offida**	**0.43**	**39**	P	Pb	00 19 21.9	-0.3
OFFI				AML	AML		
	comp=N,613µm,0.5s						
OFFI				AML	AML		
	comp=N,613µm,1.5s						
OFFI				AML	AML		
	comp=E,468µm,0.4s						
GUMA	**Gualdo di Mace**	**0.46**	**2**	P	Pb	00 19 22.2	-0.6
GUMA				AML	AML		
	comp=E,286µm,0.4s						
GUMA				AML	AML		
	comp=N,301µm,0.2s						
FDMO	**Fiordimonte**	**0.47**	**339**	⇓P	Pg	00 19 21.8	+0.4
FDMO				S	Sb	00 19 29.6	-0.2
FDMO				AML	AML		
	comp=E,77µm,1.6s						
FDMO				AML	AML		
	comp=N,89µm,0.2s						
FDMO				AML	AML		
	comp=E,77µm,0.4s						
T0110	**Collepietro**	**0.51**	**137**	P	Pb	00 19 22.9	-0.7
T1219	**Muccia, Frazio**	**0.51**	**334**	⇓P	Pg	00 19 22.6	+0.4
T1219				S	Sb	00 19 30.8	-0.3
T1219				AML	AML		
	comp=N,124µm,0.2s						
T1219				AML	AML		
	comp=N,124µm,1.8s						
T1219				AML	AML		
	comp=E,109µm,0.4s						
T1220	**Camerino, Fraz**	**0.54**	**342**	⇓P	Pg	00 19 23.1	+0.4
T1220				S	Sb	00 19 31.9	0.0
CESX	**Cesi**	**0.54**	**271**	P	Pb	00 19 23.8	-0.4
CESX				S	Sb	00 19 31.5	-0.6
CESX				AML	AML		
	comp=E,54µm,1.4s						
CESX				AML	AML		
	comp=N,95µm,1.6s						
CESX				AML	AML		
	comp=N,95µm,0.4s						
CESX				AML	AML		
	comp=E,54µm,0.6s						
ASSB	**Assisi San Ben**	**0.65**	**313**	P	Pg	00 19 25.3	+0.3
ASSB				S	Sb	00 19 34.8	-0.5
ASSB				AML	AML		
	comp=N,68µm,0.1s						
ASSB				AML	AML		
	comp=N,68µm,1.9s						
ASSB				AML	AML		
	comp=E,65µm,0.6s						
SNTG	**Esanatoglia**	**0.71**	**337**	P	Pg	00 19 26.1	+0.1

ROM 22 00:19:53.8±0.1**, 42°.780N**±0°.003×**13°.151E**±0°.005**,**
h10^{km}, ML1.7/11**, 10C-5D, Error ellipse: s-maj=0.4km**
s-min=0.3km az=110.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.05**	**115**	P	Pg	00 19 56.3	+0.4
T1214				S	Sg	00 19 57.7	+0.3
T1214				AML	AML		
	comp=N,1365µm,0.2s						
T1214				AML	AML		
	comp=N,1285µm,0.2s						
T1214				AML	AML		
	comp=E,1505µm,0.3s						
T1214				AML	AML		
	comp=E,1420µm,0.3s						
T1245	**Castelsantange**	**0.08**	**20**	⇑P	Pg	00 19 56.6	+0.3
T1245				S	Sg	00 19 58.3	+0.2
T1245				AML	AML		
	comp=E,1128µm,0.9s						
T1245				AML	AML		
	comp=E,1127µm,0.9s						
T1245				AML	AML		
	comp=N,1670µm,0.6s						
T1245				AML	AML		
	comp=E,1150µm,0.9s						
T1245				AML	AML		
	comp=N,1670µm,1.4s						
T1245				AML	AML		
	comp=N,1680µm,0.3s						
T1245				AML	AML		
	comp=E,1150µm,1.1s						
T1245				AML	AML		
	comp=E,1127µm,1.1s						
T1212	**Cascia, Frazio**	**0.08**	**250**	P	Pg	00 19 56.5	+0.3
T1212				S	Sg	00 19 58.2	+0.3
T1212				AML	AML		
	comp=E,451µm,0.5s						
T1212				AML	AML		
	comp=E,428µm,1.2s						
T1212				AML	AML		
	comp=N,700µm,0.1s						
T1212				AML	AML		
	comp=E,427µm,1.2s						
T1212				AML	AML		
	comp=N,726µm,0.1s						
T1212				AML	AML		
	comp=E,427µm,0.8s						
T1218	**Civita (PG)**	**0.11**	**194**	P	Pg	00 19 57.1	+0.5
T1218				S	Sg	00 19 59.5	+0.8
T1218				AML	AML		
	comp=E,609µm,1.4s						
T1218				AML	AML		
	comp=N,606µm,0.5s						
T1218				AML	AML		
	comp=E,524µm,1.5s						
T1218				AML	AML		
	comp=N,622µm,1.4s						
T1218				AML	AML		
	comp=N,622µm,1.4s						
T1218				AML	AML		
	comp=E,609µm,0.6s						
T1218				AML	AML		
	comp=E,524µm,0.5s						
T1218				AML	AML		
	comp=N,622µm,0.6s						
MC2	**Monte Cornacci**	**0.14**	**12**	P	Pg	00 19 57.5	+0.4
MC2				S	Sg	00 20 00.2	+0.9
T1216	**Preci, Frazion**	**0.15**	**319**	⇑P	Pg	00 19 57.4	+0.3
T1216				S	Sg	00 20 00.1	+0.7
T1216				AML	AML		
	comp=E,179µm,0.6s						
T1216				AML	AML		
	comp=N,273µm,0.3s						
T1216				AML	AML		
	comp=E,180µm,0.6s						
T1216				AML	AML		
	comp=E,180µm,1.4s						
T1216				AML	AML		
	comp=N,273µm,0.3s						
T1217	**Poggiodomo (PG**	**0.17**	**247**	⇑P	Pg	00 19 58.0	+0.5
T1217				S	Sg	00 20 01.1	+0.9
T1217				AML	AML		
	comp=E,334µm,1.4s						
T1217				AML	AML		
	comp=N,273µm,0.3s						
T1217				AML	AML		
	comp=E,333µm,1.3s						
T1217				AML	AML		
	comp=N,274µm,0.3s						
T1217				AML	AML		
	comp=E,333µm,0.7s						
T1241	**Roccafluvione,**	**0.22**	**70**	P	Pg	00 19 59.0	+0.6
T1241				S	Sg	00 20 02.8	+1.4
T1241				AML	AML		
	comp=E,556µm,0.2s						
T1241				AML	AML		
	comp=N,440µm,1.4s						
T1241				AML	AML		
	comp=N,440µm,1.4s						
T1241				AML	AML		
	comp=E,592µm,0.2s						
T1241				AML	AML		
	comp=N,359µm,1.4s						
T1241				AML	AML		
	comp=E,592µm,1.8s						
T1241				AML	AML		
	comp=N,359µm,0.6s						
T1241				AML	AML		
	comp=N,440µm,0.6s						
T1241				AML	AML		
	comp=E,556µm,1.8s						
T1256	**Bolognola (MC)**	**0.23**	**14**	⇑P	Pg	00 19 59.1	+0.5
T1256				S	Sg	00 20 03.1	+1.1
T1256				AML	AML		
	comp=E,258µm,0.8s						
T1256				AML	AML		
	comp=N,362µm,0.2s						
T1256				AML	AML		
	comp=E,244µm,0.3s						
T1256				AML	AML		
	comp=E,258µm,0.8s						
T1256				AML	AML		
	comp=N,348µm,0.2s						
T1256				AML	AML		
	comp=N,362µm,0.2s						
FDMO	**Fiordimonte**	**0.26**	**350**	⇑P	Pg	00 19 59.5	+0.4
FDMO				S	Sg	00 20 03.9	+1.2
FDMO				AML	AML		
	comp=E,83µm,0.5s						
FDMO				AML	AML		
	comp=N,122µm,0.3s						
RM33	**Pellescritta (**	**0.28**	**170**	P	Pg	00 19 60.0	+0.6
RM33				S	Sb	00 20 04.6	-1.0
CESI	**CESI - Serrava**	**0.29**	**321**	P	Pg	00 20 00.1	+0.4
T1219	**Muccia, Frazio**	**0.29**	**339**	⇑P	Pg	00 20 00.0	+0.3
T1219				S	Sg	00 20 04.7	+0.9
T1219				AML	AML		
	comp=E,136µm,0.2s						
T1219				AML	AML		
	comp=N,140µm,0.2s						
CSP1	**Cessapalombo**	**0.31**	**7**	⇑P	Pg	00 20 00.6	+0.4
CSP1				S	Sb	00 20 05.7	-1.1
GUMA	**Gualdo di Mace**	**0.31**	**26**	P	Pb	00 20 00.8	-0.7
GUMA				S	Sb	00 20 06.4	-0.4
GUMA				AML	AML		
	comp=E,334µm,0.3s						
GUMA				AML	AML		
	comp=N,314µm,1.6s						
GUMA				AML	AML		
	comp=N,314µm,0.4s						
T1211	**Morro Reatino**	**0.33**	**222**	⇓P	Pg	00 20 00.8	+0.4
T1211				S	Sb	00 20 06.3	-0.9
T1220	**Camerino, Fraz**	**0.33**	**352**	⇓P	Pg	00 20 00.8	+0.4
T1220				S	Sb	00 20 06.1	-1.2
ARRO	**Arrone**	**0.35**	**235**	⇑P	Pg	00 20 00.9	+0.2
ARRO				S	Sb	00 20 06.7	-0.9
TERO	**Teramo**	**0.37**	**115**	P	Pg	00 20 01.3	+0.3
TERO				S	Sb	00 20 07.4	-1.0
MOMA	**Monte Martano**	**0.43**	**273**	P	Pb	00 20 03.5	0.0
MOMA				S	Sb	00 20 09.5	-0.6
ASSB	**Assisi San Ben**	**0.45**	**306**	⇑P	Pg	00 20 02.7	+0.2
GIGS	**Gran Sasso**	**0.45**	**137**	S	Sg	00 20 02.9	-5.7
SNTG	**Esanatoglia**	**0.50**	**342**	⇓P	Pg	00 20 03.7	+0.1
SNTG				S	Sb	00 20 11.4	-0.7
EL6	**Elcito**	**0.55**	**356**	⇑P	Pg	00 20 04.3	-0.2
EL6				S	Sb	00 20 13.5	-0.1
ATCC	**AVT- Casa Cast**	**0.55**	**317**	⇓P	Pg	00 20 04.7	+0.2
CING	**Cingoli**	**0.60**	**3**	P	Pg	00 20 05.5	+0.1
CING				S	Sb	00 20 14.8	-0.1
ARVD	**Arcevia**	**0.73**	**348**	⇓P	Pg	00 20 08.2	+0.2
ARVD				S	Sb	00 20 19.4	+0.5

*IDC **22** 00:20:59.0±0.6, 37°.33N×141°.53E, h0^{km}, mb4.1/26, mbtmp4.1/31, ML3.6/5, MS3.3/8, Error ellipse: s-maj=15.1km s-min=12.8km az=125.0*
*JMA **22** 00:21:01.5±0.2, 37°.3N±0°.4×141°.6E±0°.9, h34^{km}±1^{km}, MD4.5/40, MV4.7/40, E OFF FUKUSHIMA PREF*
JMA Felt II J1 at E OFF FUKUSHIMA PREF .
*NIED **22** 00:21:01.5, 37°.27N×141°.57E, h34^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.46; M$_{\theta\theta}$-0.48; M$_{\phi\phi}$0.95; M$_{r\theta}$1.07; M$_{\theta\phi}$0.55; M$_{\phi r}$0.83; Fault plane solution: M$_0$1.67000×10^{15} NP1: ϕ_s232.00000°, δ80.00000°, λ-61.00000°. NP2: ϕ_s339.00000°, δ31.00000°, λ-160.00000°.*
*NEIC **22** 00:21:02.2±1.6, 37°.40N±0°.05×141°.54E±0°.05, h14^{km}±4^{km}, mb4.6/50 Error ellipse: s-maj=8.6km s-min=2.6km az=214.0*
*BJI **22** 00:21:03.6±0.0, 37°.11N×141°.39E, h38^{km}, mb4.6/37, mB4.9/21, Ms4.1/5, Ms7 3.9/5*
ISC 22 00:21:03.3±0.7**, 37°.30N**±0°.04×**141°.58E**±0°.05**, h27**^{km}±3^{km}**,**
n207, σ**1^{s}.71**/192**, mb4.4**/58**, MS3.7**/5**, 15C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.57**	**276**	*i* P	**Pb**	**00 21 12.6**	**-2.1**
JFK				S	**Sb**	**00 21 20.2**	**-2.3**
JFK	**Kawauchi**	**0.57**	**276**	A	A	00 21 12.6	
	comp=E,15nm,0.5s,comp=E,42nm,1.0s						
ONAJ	**Iwakimizuishiy**	**0.66**	**252**	*i* P	**Pb**	**00 21 13.9**	**-2.4**
ONAJ				*i* S	**Sb**	**00 21 22.7**	**-2.4**
ONAJ	**Iwakimizuishiy**	**0.66**	**252**	A	A	00 21 13.9	
	comp=E,196nm,0.3s,comp=E,116nm,0.3s						
JMST	**Minamisoumatoc**	**0.69**	**307**	*i* P	**Pb**	**00 21 14.8**	**-2.0**
JMST				S	**Sb**	**00 21 24.4**	**-1.7**
JMST	**Minamisoumatoc**	**0.69**	**307**	A	A	00 21 14.8	
	comp=E,26nm,0.6s,comp=E,62nm,0.6s						
JMM	**Marumori**	**0.84**	**312**		**Pb**	**00 21 17.2**	**-2.1**
JMM					**Sb**	**00 21 27.2**	**-3.0**
JMM	**Marumori**	**0.84**	**312**	P	**Pb**	**00 21 17.2**	**-2.1**
JMM	**Marumori**	**0.84**	**312**	*i* P	**Pb**	**00 21 17.1**	**-2.1**
JMM				S	**Sb**	**00 21 28.4**	**-1.9**
JMM	**Marumori**	**0.84**	**312**	A	A	00 21 17.1	
	comp=E,30nm,0.4s,comp=E,35nm,0.4s						
JFFD	**Fukushimafurud**	**0.84**	**256**	*i* P	**Pb**	**00 21 16.8**	**-2.6**
JFFD				S	**Sb**	**00 21 27.2**	**-3.1**
JFFD	**Fukushimafurud**	**0.84**	**256**	A	A	00 21 16.8	
	comp=E,8.0nm,1.7s,comp=E,17nm,3.0s						
JOTO	**OTAMA OYAMA**	**1.03**	**285**	*i* P	**Pn**	**00 21 20.4**	**-1.5**
JOTO				S	**Sn**	**00 21 33.9**	**-1.6**
JOTO	**OTAMA OYAMA**	**1.03**	**285**	A	A	00 21 20.4	
	comp=E,60nm,1.0s,comp=E,52nm,1.0s						
JHO	**Hitachi**	**1.07**	**230**	⇓P	**Pn**	**00 21 19.2**	**-3.3**
JHO				⇓S	**Sn**	**00 21 33.2**	**-3.2**
JHO	**Hitachi**	**1.07**	**230**	A	A	00 21 19.2	
	comp=E,8.0nm,0.8s,comp=E,8.0nm,1.6s						
JIO	**Ouri**	**1.16**	**351**	P	**Pn**	**00 21 21.9**	**-1.9**
JIO	**Ouri**	**1.16**	**351**	A	A	00 21 21.9	
	comp=E,7.0nm,5.7s,comp=E,6.0nm,1.9s						
JHYU	**Hitachinakayam**	**1.25**	**220**	A	A	00 21 22.7	
	comp=E,12nm,3.2s,comp=E,11nm,0.6s						
JOU	**Okura**	**1.29**	**326**	P	**Pn**	**00 21 24.9**	**-0.6**
JOU				S	**Sn**	**00 21 41.9**	**+0.1**
JOU	**Okura**	**1.29**	**326**	A	A	00 21 24.9	
	comp=E,16nm,1.0s,comp=E,31nm,0.6s						
JYAR	**Yonezawaarcadi**	**1.29**	**298**	A	A	00 21 23.9	
	comp=E,46nm,1.4s,comp=E,32nm,0.7s						
JSB	**Shiboa**	**1.37**	**256**	A	A	00 21 24.7	
	comp=E,33nm,0.9s,comp=E,40nm,1.5s						
JOFO	**Osakifurukawao**	**1.40**	**338**	A	A	00 21 25.8	
	comp=E,67nm,1.1s,comp=E,90nm,1.0s						
JFY	**Yanaizu**	**1.50**	**274**	P	**Pn**	**00 21 27.6**	**-0.8**
JFY				S	**Sn**	**00 21 46.7**	**-0.5**
JFY	**Yanaizu**	**1.50**	**274**	A	A	00 21 27.6	
	comp=E,10.0nm,1.7s,comp=E,8.0nm,0.6s						
JYS	**Shirataka**	**1.51**	**308**	P	**Pn**	**00 21 28.4**	**-0.2**
JYS	**Shirataka**	**1.51**	**308**	A	A	00 21 28.4	
	comp=E,23nm,0.9s,comp=E,20nm,1.2s						
JYT	**Yasato**	**1.55**	**227**	A	A	00 21 27.1	
	comp=E,17nm,0.4s,comp=E,11nm,0.4s						
JMK	**Ichinoseki**	**1.67**	**350**	A	A	00 21 29.8	
	comp=E,10.0nm,1.9s,comp=E,5.0nm,2.2s						
OFUJ	**Ofunato**	**1.77**	**2**	A	A	00 21 31.4	
	comp=E,6.0nm,5.9s,comp=E,4.0nm,2.1s						
JNS	**Sasagawa**	**1.87**	**287**	A	A	00 21 32.3	
	comp=E,3.0nm,1.4s,comp=E,3.0nm,1.2s						

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JYK   Kaneyama          1.88 329  A       A       00 21 32.7
      comp=E,10.0nm,0.9s,comp=E,15nm,1.0s
JAG   Ashikaga          1.92 243  A       A       00 21 32.6
      comp=E,3.0nm,0.9s,comp=E,8.0nm,1.8s
JYA   Atsumi            1.96 312  A       A       00 21 33.8
      comp=E,16nm,1.1s,comp=E,19nm,0.9s
JOM   Ohasama           2.18 354  A       A       00 21 37.2
      comp=E,7.0nm,1.4s,comp=E,4.0nm,5.0s
JRG   Rokugo            2.22 341  A       A       00 21 37.7
      comp=E,5.0nm,1.6s,comp=E,8.0nm,0.9s
JIZZ  Izumozaki         2.30 277  A       A       00 21 38.3
      comp=E,17nm,3.9s,comp=E,14nm,3.5s
JYW   Yuwa              2.48 335  A       A       00 21 41.4
      comp=E,13nm,1.2s,comp=E,16nm,1.6s
JSZI  Iwateshizukuis    2.48 349  A       A       00 21 42.0
      comp=E,14nm,1.5s,comp=E,10.0nm,2.0s
JSD   Sado              2.74 287  Pn      Pn      00 21 44.5 -1.0
JSD   Sado              2.74 287  P       Pn      00 21 45.3 -0.1
MJAR  Matsushiro Arr    2.81 255  Pn      Pn      00 21 46.2 -0.3
      4.7nm,0.3s,baz=90,slow=15,SNR=54
MJAR                              Sn      Sn      00 22 21.2 +1.8
      10.0nm,0.3s,baz=73,slow=17,SNR=3.6
MJAR                              LR      LR      00 22 54.5
      comp=Z,146nm,19.9s,baz=68,slow=42
      26nm,0.3s
MAJO  Matsushiro        2.81 255  Pn      Pn      00 21 47.1 +0.6
MAJO  Matsushiro        2.81 255  P       Pn      00 21 47.7 +1.2
MJB9  Matsu-Tunnel      2.81 255  Pn      Pn      00 21 47.8 +1.3
JKEN  Kujiedanarisaw    2.90   2  A       A       00 21 47.5
      comp=E,8.0nm,0.9s,comp=E,10.0nm,1.0s
JTM   Tenmabayashi      3.50 354  Pn      Pn      00 21 54.9 -1.1
JTM   Tenmabayashi      3.50 354  P       Pn      00 21 56.5 +0.6
JIW   Iwasaki           3.51 340  A       A       00 21 56.0
      comp=E,2.0nm,4.7s,comp=E,3.0nm,2.2s
JGF   Kuroka            3.81 245  Pn      Pn      00 22 00.7 +0.5
JGF   Kuroka            3.81 245  P       Pn      00 22 01.0 +0.8
INU   Inuyama           4.17 243  Pn      Pn      00 22 05.4 +0.3
INU   Inuyama           4.17 243  P       Pn      00 22 06.3 +1.1
JHJ2  Mitsune           4.43 200  Pn      Pn      00 22 07.8 -0.8
JHJ2  Mitsune           4.43 200  P       Pn      00 22 08.5 -0.1
ERM   Erimo             4.86  14  Pn      Pn      00 22 14.0 -0.6
ERM   Erimo             4.86  14  P       Pn      00 22 14.6  0.0
JEM   Erimo             4.86  14  P       Pn      00 22 14.8 +0.2
ASAJ  Asahikawa         6.85   6  Pn      Pn      00 22 40.3 -1.6
      4.9nm,0.3s,baz=223,slow=10,SNR=13
ASAJ                              Sn      Sn      00 23 55.6 -3.3
      0.6nm,0.3s,baz=340,slow=30,SNR=1.5
      9.6nm,0.3s
JKA   Kamikawa-asahi    6.85   6  Pn      Pn      00 22 40.9 -1.0
JMN   Monobe            7.22 243  Pn      Pn      00 22 47.4 +0.2
JMN   Monobe            7.22 243  P       Pn      00 22 49.2 +2.1
JHS   Saijyo            7.23 254  Pn      Pn      00 22 48.4 +1.3
JHS   Saijyo            7.23 254  P       Pn      00 22 49.7 +2.6
JNU   Nakatsue          9.70 248  Pn      Pn      00 23 19.4 -1.7
      0.3nm,0.3s,baz=61,slow=19,SNR=2.6
      7.0nm,1.0s
USA0B Ussuriysk Arra   10.02 316  Pn      Pn      00 23 23.1 -2.2
USRK  Ussuriysk Ar.    10.02 316  Pn      Pn      00 23 27.8 +2.4
      0.7nm,0.3s,baz=131,slow=13,SNR=14
USRK                              LR      LR      00 27 11.0
      comp=Z,193nm,18.4s,baz=123,slow=37
USRK  Ussuriysk Ar.    10.02 316  Pn      Pn      00 23 23.7 -1.6
KSRS  Korea Array      10.87 275  Pn      Pn      00 23 37.8 +0.7
      0.5nm,0.3s,baz=87,slow=14,SNR=3.5
KSRS                              LR      LR      00 27 37.5
      comp=Z,104nm,18.3s,baz=70,slow=37
      3.4nm,0.9s
MDJ   Mudanjiang       11.63 313  P       Pn      00 23 51.3 +3.8
MDJ                               pP              00 23 57.6
MDJ                               PP      PnPn    00 23 59.1 +3.9
MDJ                               sP              00 24 02.4
MDJ                               pmax    pmax
      comp=Z,16nm,1.3s
MDJ                               pmax    pmax
      comp=Z,220nm,6.9s
CN2   Changchun        13.87 303 eP       Pn      00 24 19.8 +1.8
CN2                               pmax    pmax
      comp=Z,10.0nm,0.6s
KLR   Kul'dur          13.89 332  Pn      Pn      00 24 17.4 -0.9
      0.1nm,0.3s,baz=230,slow=11,SNR=2.4
KLR                               LR      LR      00 29 45.4
      comp=Z,73nm,18.2s,baz=112,slow=38
      0.5nm,0.4s
NJ2   Nanjing          19.40 261 eP       P       00 25 26.0 -1.2
NJ2                               pP      pP      00 25 34.4 -0.1
NJ2                               sP      sP      00 25 38.3 +0.4
NJ2                               pmax    pmax
      comp=Z,7.0nm,0.5s
NJ2                               pmax    pmax
      comp=Z,36nm,4.1s
XLT   XiLinHaoTe       20.41 297 eP       P       00 25 36.0 -2.2
XLT                               sP      sP      00 25 50.5 +1.5
XLT                               PP      PnPn    00 25 56.5 +0.9
XLT                               pmax    pmax
      comp=Z,15nm,0.8s
XLT                               pmax    pmax
      comp=Z,120nm,5.7s
HNS   HongShan         21.34 278 ⇑P       P       00 25 46.0 -2.3
HNS                               pmax    pmax
      comp=Z,7.0nm,0.7s
HHC   Hu-ho-hao-te     23.52 288 eP       P       00 26 09.8 -1.4
HHC                               pmax    pmax
      comp=Z,31nm,0.8s
HHC                               pmax    pmax
      comp=Z,200nm,5.3s
WHN   Wuhan            23.53 261  P       P       00 26 14.3 +3.0
BTO   Baotou           24.70 287 eP       P       00 26 23.4 +1.2
BTO                               pP      sP      00 26 32.9 -0.4
BTO                               sP      pP      00 26 36.6 +6.6
BTO                               PP      PnPn    00 26 59.9 +5.6
BTO                               S       S       00 30 43.8 +1.5
BTO                               sS      sS      00 30 54.8 -0.5
BTO                               SS      SnSn    00 31 37.0 +7.7
BTO                               pmax    pmax
      comp=Z,18nm,0.5s
BTO                               pmax    pmax
      comp=Z,590nm,4.4s
YAK   Yakutsk          25.84 347  P       P       00 26 31.5 -0.6
      10nm,0.4s,baz=86,slow=1.2,SNR=7.1
      10nm,0.4s
YAK   Yakutsk          25.84 347  P       P       00 26 31.8 -0.2
SEY   Seymchan         26.50  11  P       P       00 26 37.6 -0.4
      1.2nm,0.3s,baz=185,slow=9.9,SNR=2.8
      1.2nm,0.3s
ULN   Ulaanbaatar      27.32 304  P       P       00 26 44.0 -1.8
ENH   Enshi            27.49 265  P       P       00 26 47.0 -0.4
ENH                               IAmb    IAmb    00 26 55.1
      comp=Z,10.0nm,1.0s
SONM  Songino Array    27.75 303  P       P       00 26 48.2 -1.5
      comp=Z,4.5nm,0.8s,baz=99,slow=8.9,SNR=22
      comp=Z,4.5nm,0.8s
SONM  Songino Array    27.75 303  P       P       00 26 48.7 -0.9
H11N2 WAKE ISLAND Hy   28.17 121  T       T       00 56 20.3
      baz=314,slow=75,SNR=1252
H11N1 WAKE ISLAND Hy   28.18 121  T       T       00 56 15.5
      baz=314,slow=75,SNR=1614
H11N3 WAKE ISLAND Hy   28.19 121  T       T       00 56 21.6
      baz=314,slow=75,SNR=1125
H11S1 WAKE ISLAND Hy   28.89 124  T       T       00 57 14.9
      baz=316,slow=76,SNR=695
H11S3 WAKE ISLAND Hy   28.89 124  T       T       00 57 14.0
      baz=316,slow=76,SNR=650
H11S2 WAKE ISLAND Hy   28.91 124  T       T       00 57 10.9
      baz=316,slow=76,SNR=437
TIXI  Tiksi            35.04 353  P       P       00 27 52.2 -1.0
      comp=Z,1.5nm,0.3s,baz=90,slow=0.7,SNR=6.7
      comp=Z,1.5nm,0.3s
TIXI  Tiksi            35.04 353  P       P       00 27 51.9 -1.4
TIXI                              IAmb    IAmb    00 28 00.3
      comp=Z,4.1nm,0.7s
PZH   PanZhiHua        35.27 264  P       P       00 27 55.3 -0.6
PZH                               pmax    pmax
      comp=Z,10.0nm,0.5s
PZH                               pmax    pmax
      comp=Z,130nm,5.3s
GOMU  GeErMu           37.19 283  P       P       00 28 12.9 +0.3
GOMU                              pmax    pmax
      comp=Z,3.0nm,0.5s
GOMU                              pmax    pmax
      comp=Z,73nm,5.8s
WMQ   Urumqi           40.84 297 eP       P       00 28 43.3 +0.6
WMQ                               pP      sP      00 28 54.1 +0.1
WMQ                               sP      pP      00 28 56.6 +5.9
CMAR  Chiang Mai Arr   41.70 255  P       P       00 28 50.1 +0.3
      comp=Z,1.7nm,0.3s,baz=49,slow=8.5,SNR=0.8
      comp=Z,1.7nm,0.3s
ZAA0  Zalesovo Array   41.83 312  P       P       00 28 49.7 -0.9
ZAA0                              IAmb    IAmb    00 28 57.0
      comp=Z,13nm,0.9s
ZALV  Zalesovo Beam    41.83 312  P       P       00 28 49.4 -1.1
      comp=Z,12nm,0.8s,baz=87,slow=7.0,SNR=47
ZALV                              LR      LR      00 46 42.4
      comp=Z,46nm,19.3s,baz=343,slow=37
      comp=Z,12nm,0.8s
LSA   Lhasa            42.32 275  P       P       00 28 54.1 -1.3
LSA                               IAmb    IAmb    00 29 20.8
      comp=Z,6.4nm,0.5s
NRIK  Noril'sk         43.08 335  P       P       00 28 59.5 -0.9
      comp=Z,1.2nm,0.4s,baz=124,slow=3.6,SNR=1.3
      comp=Z,1.2nm,0.4s
MK31  Makanchi Array   44.09 302  P       P       00 29 07.9 -1.1
MK31                              IAmb    IAmb    00 29 09.8
      comp=Z,6.0nm,0.8s
MKAR  Makanchi Array   44.09 302  P       P       00 29 08.4 -0.6
      comp=Z,5.3nm,0.7s,baz=88,slow=9.4,SNR=86
MKAR                              LR      LR      00 46 54.7
      comp=Z,82nm,19.0s,baz=316,slow=35
      comp=Z,5.3nm,0.7s
MKAR  Makanchi Array   44.09 302  P       P       00 29 08.1 -0.9
MAKZ  Makanchi         44.30 302  P       P       00 29 10.3 -0.3
MAKZ                              IAmb    IAmb    00 29 11.6
      comp=Z,6.2nm,0.8s
SVW2  Sparrevohn       45.22  38  P       P       00 29 19.5 +1.7
SVW2                              IAmb    IAmb    00 29 27.9
      comp=Z,9.3nm,1.2s
KURK  Kurchatov        45.87 308  P       P       00 29 22.8 -0.2
Q19K  Cape Douglas,    46.19  41  P       P       00 29 25.9 +0.4
IMAR  Indian Mountai   46.35  31  P       P       00 29 28.1 +1.5
H21K  Melozitna Rive   46.71  31  P       P       00 29 31.1 +1.6
KDAK  Kodiak Island    46.81  42  P       P       00 29 30.5 +0.3
      comp=Z,4.6nm,0.8s,baz=311,slow=8.2,SNR=1.3
      comp=Z,4.6nm,0.8s
KDAK  Kodiak Island    46.81  42  P       P       00 29 30.3 +0.1
PPLA  Purkeypile       46.87  35  P       P       00 29 31.9 +1.0
PPLA                              IAmb    IAmb    00 29 42.0
      comp=Z,4.8nm,0.9s
CAST  Castle Rocks     46.92  34  P       P       00 29 32.1 +0.9
CAST                              IAmb    IAmb    00 29 43.7
      comp=Z,3.8nm,0.9s
BPAW  Bear Paw Mtn.    47.42  33  P       P       00 29 36.6 +1.6
MLY   Manley           47.55  32  P       P       00 29 35.2 -0.9
MLY                               IAmb    IAmb    00 29 44.2
      comp=Z,4.9nm,1.3s
H23K  Yukon River      48.06  31  P       P       00 29 39.5 -0.5
H23K                              IAmb    IAmb    00 29 50.2
      comp=Z,6.0nm,1.4s
KDJ   Kajisay          48.73 297  P       P       00 29 45.9 +0.2
KDJ                               IAmb    IAmb    00 29 54.7
      comp=Z,2.5nm,0.8s
H24K  Noodor Dome      48.75  31  P       P       00 29 47.2 +1.9
SCM   Sheep Creek Mo   49.17  36  P       P       00 29 49.9 +1.3
SCM                               IAmb    IAmb    00 30 00.4
      comp=Z,11nm,1.2s
ILAR  Eielson Array    49.19  32  P       P       00 29 48.4 -0.3
      comp=Z,0.8nm,0.8s,baz=270,slow=6.2,SNR=9.6
      comp=Z,0.8nm,0.8s
BMAR  Burnt Mountain   50.03  29  P       P       00 29 55.1 +0.1
RIDG  Independent Ri   50.15  34  P       P       00 29 56.5 +0.5
RIDG                              IAmb    IAmb    00 30 12.7
      comp=Z,8.2nm,1.2s
KSH   Kashi            50.42 294  P       P       00 30 03.5 +5.0
KSH                               pmax    pmax
      comp=Z,3.0nm,0.8s
DOT   Dot Lake         50.51  34  P       P       00 29 59.4 +0.7
BRVK  Borovoye         50.55 312  P       P       00 29 58.6 -0.5
BRVK                              IAmb    IAmb    00 30 25.4
      comp=Z,3.9nm,0.9s
K27K  Chicken          51.34  33  P       P       00 30 05.1 +0.2
EPYK  Eagle Plains     53.22  30  P       P       00 30 19.4 +0.4
EPYK                              IAmb    IAmb    00 30 28.0
      comp=Z,11nm,0.8s
GSI   Gunungsitoli     54.06 239  P       P       00 30 25.9 +0.3
KNRA  Kununurra        54.06 195  P       P       00 30 24.8 -0.7
INK   Inuvik           54.08  27  P       P       00 30 24.9 -0.1
      comp=Z,1.2nm,0.8s,baz=265,slow=6.2,SNR=4.1
      comp=Z,1.2nm,0.8s
INK   Inuvik           54.08  27  P       P       00 30 26.3 +1.2
INK                               IAmb    IAmb    00 30 33.1
      comp=Z,4.1nm,0.7s
CHGR  Chuyangaron      55.67 295  P       P       00 30 37.3 +0.1
ARU   Arti             56.25 318  P       P       00 30 40.7 -0.2
FITZ  Fitzroy Crossi   57.12 198  P       P       00 30 47.8 +0.4
C36M  Paulatuk         57.13  25  P       P       00 30 48.2 +1.3
C36M                              IAmb    IAmb    00 30 54.7
      comp=Z,6.2nm,0.5s
WB0   Warramunga Arr   57.17 188  P       P       00 30 46.7 -1.1
WB0                               IAmb    IAmb    00 31 11.4
      comp=Z,4.5nm,0.8s
WB2   Warramunga Arr   57.35 188  P       P       00 30 48.1 -1.0
WB2                               IAmb    IAmb    00 30 55.3
      comp=Z,7.7nm,1.1s
WRA   Warramunga Arr   57.35 188  P       P       00 30 48.5 -0.6
      comp=Z,1.7nm,0.5s,baz=5.2,slow=7.4,SNR=42
      comp=Z,1.7nm,0.5s
WRA   Warramunga Arr   57.35 188  P       P       00 30 48.7 -0.3
KBL   Kabul            57.45 291  P       P       00 30 48.3 -1.7
ABKAR Akbulak array    57.87 310  P       P       00 30 51.9 -0.6
ASAR  Alice Springs    61.07 188  P       P       00 31 14.6 -0.3
      comp=Z,1.3nm,0.7s,baz=11,slow=6.7,SNR=13
      comp=Z,1.3nm,0.7s
RES   Resolute Bay     62.30  14  P       P       00 31 22.7 +0.2
RES                               IAmb    IAmb    00 31 29.5
      comp=Z,4.9nm,0.8s
YKA   Yellowknife Ar   63.51  30  P       P       00 31 31.1 +0.4
      comp=Z,0.4nm,0.7s,baz=300,slow=6.3,SNR=8.2
      comp=Z,0.4nm,0.7s
ARCES ARCESS Array B   63.79 339  P       P       00 31 32.2 -0.3
      comp=Z,1.1nm,0.5s,baz=54,slow=8.2,SNR=9.3
      comp=Z,1.1nm,0.5s
ARCES ARCESS Array B   63.79 339  P       P       00 31 32.3 -0.1
ARCES                             IAmb    IAmb    00 31 52.7
      comp=Z,12nm,1.2s
GEYT  Alibeck          63.82 299  P       P       00 31 32.3 -0.9
      comp=Z,3.4nm,0.9s,baz=64,slow=6.8,SNR=5.5
      comp=Z,3.4nm,0.9s
GEYT  Alibeck          63.82 299  P       P       00 31 31.3 -2.0
GEYT                              IAmb    IAmb    00 31 40.2
      comp=Z,5.5nm,0.8s
DAG   Danmarks Havn    65.52 355 i P      P       00 31 43.0 -0.6
FIA1  FINESS Array S   68.64 332  P       P       00 32 03.2 -0.4
FINES FINESS Array B   68.64 332  P       P       00 32 03.1 -0.5
      comp=Z,1.2nm,0.3s,baz=37,slow=9.5,SNR=16
      comp=Z,1.2nm,0.3s
FINES FINESS Array B   68.64 332  P       P       00 32 03.6  0.0
STKA  Stephens Creek   68.82 180  P       P       00 32 04.7 -0.3
      comp=Z,1.8nm,0.7s,baz=331,slow=10,SNR=2.3
      comp=Z,1.8nm,0.7s
FORT  Forrest          68.90 192  P       P       00 32 06.1 +0.6
KBZ   Khabaz           70.83 311  P       P       00 32 16.8 -0.6
      comp=Z,3.2nm,1.0s,baz=26,slow=2.6,SNR=4.8
      comp=Z,3.2nm,1.0s
KIV   Kislovodsk       70.83 311 ⇑P       P       00 32 19.3 +1.7
KIV   Kislovodsk       70.83 311  P       P       00 32 15.2 -2.4
MNK   Minsk            72.35 326 i P      P       00 32 25.6 -0.7
      comp=E,1.0nm,0.8s
MNK                              i P      P       00 32 25.6 -0.7
      comp=N,39nm,1.0s
MNK                              i P      P       00 32 25.6 -0.7
      comp=Z,6.0nm,1.1s,baz=230
MNK                              i PcP    PcP     00 32 43.5 -0.7
MNK                              i PP     PP      00 35 05.9 -0.8
MNK                              i PPP    PPP     00 36 50.2
MNK                              i S      S       00 41 46.2 -1.6
MNK                              i ScS    SKKSac  00 42 29.1  0.0
MNK                              i SS     SS      00 46 25.0 -0.2
MNK                              i SSS    SSS     00 49 45.3
MNK                              i LQ     LQ      00 59 16.7
MNK                              i LR     LR      01 04 46.4
MNK                              i LRM    MLR     01 06 41.5
      comp=N,212nm,12.8s
MNK                              i LRM    MLR     01 06 47.1
      comp=Z,64nm,12.8s
MNK                              i LRM    MLR     01 07 06.3
      comp=E,17nm,17.2s
NACGM Naroch           72.57 327 eP       P       00 32 28.8 +1.1
      comp=Z,12nm,1.1s,baz=50
NC405 NORSAR Array S   73.78 337  P       P       00 32 35.1 +0.4
NC405                             IAmb    IAmb    00 33 01.0
      comp=Z,12nm,1.1s
NB2   NORSAR Subarra   73.99 337  P       P       00 32 36.5 +0.5
      comp=Z,2.6nm,0.7s,baz=39,slow=6.2
NOA   NORSAR Array B   73.99 337  P       P       00 32 35.9 -0.2
      comp=Z,0.7nm,0.5s,baz=54,slow=7.0,SNR=4.7
NOA                               LR      LR      01 08 39.6
      comp=Z,30nm,18.8s,baz=300,slow=39
      comp=Z,0.7nm,0.5s
AKASG Malin Array Be   74.17 322  P       P       00 32 36.8 -0.3
      comp=Z,1.1nm,0.4s,baz=42,slow=5.8,SNR=14
      comp=Z,1.1nm,0.4s
BOZ   Bozeman (W)      74.45  44  P       P       00 32 39.7 +0.5
NVAR  Mina Array Bea   74.72  53  P       P       00 32 41.0 +0.1
      comp=Z,0.7nm,0.8s,baz=276,slow=11,SNR=2.2
      comp=Z,0.7nm,0.8s
RLMT  Red Lodge        76.05  44  P       P       00 32 49.4 +0.9
PDAR  Pinedale Array   77.38  46  P       P       00 32 55.9 -0.2
      comp=Z,0.3nm,0.6s,baz=292,slow=2.5,SNR=4.4
      comp=Z,0.3nm,0.6s
PDAR  Pinedale Array   77.38  46  P       P       00 32 57.5 +1.4
BUR08 Bucovina Ar. S   78.17 322  P       P       00 32 59.9 -0.2
BUR08                             IAmb    IAmb    00 33 17.9
      comp=Z,6.0nm,1.4s
BURAR Bucovina Array   78.18 322 ⇑P       P       00 33 00.4 +0.2
BURAR Bucovina Array   78.18 322  P       P       00 32 59.2 -1.0
BURAR                             IAmb    IAmb    00 33 07.6
      comp=Z,3.1nm,0.9s
TPGR  Topolog          78.40 318 ⇓P       P       00 33 03.0 +1.6
VRI   Vrincioaia       78.61 320 ⇑P       P       00 33 05.1 +2.6
PLOR  Plostina         78.66 320 ⇑P       P       00 33 09.3 +6.5
BRTR  Keskin Array B   78.77 312  P       P       00 33 03.4 -0.3
      comp=Z,0.6nm,0.5s,baz=104,slow=9.2,SNR=2.1
      comp=Z,0.6nm,0.5s
OZUR                   78.94 320 ⇑P       P       00 33 08.0 +3.7
TRPA  Tarpa            79.12 323 ⇑P       P       00 33 08.0 +2.7
DOPR  Dopca            79.22 320 ⇑P       P       00 33 07.5 +1.6
MLR   Muntele Rosu     79.27 320 ⇑P       P       00 33 10.2 +3.9
VOIR                   79.76 320 ⇑P       P       00 33 11.2 +2.3
DRGR                   79.98 322 ⇑P       P       00 33 14.5 +4.4
MORC  Moravsky Berou   80.21 327 ⇑P       P       00 33 17.3 +6.1
CLL   Collm            80.93 330 eP       P       00 33 17.0 +2.1
CLL                              ex       x       00 33 31.0
VRAC  Vranov           80.97 327 ⇑P       P       00 33 09.7 -5.5
SURR  Surduc           81.01 322 ⇓P       P       00 33 16.4 +0.9
HERR  Herculane        81.48 321 ⇑P       P       00 33 22.6 +4.5
MMAI  Mount Meron Ar   81.92 305  LR      LR      01 11 36.6
      comp=Z,30nm,18.5s,baz=318,slow=37
CKRC  Cesky Krumlov    82.32 328 eP       P       00 33 27.8 +5.4
CONA  Conrad Observa   82.33 327 ePcP     PcP     00 33 27.1 -0.6
      comp=Z,4.5nm,1.6s
KHC   Kasperske Hory   82.38 329 eP       P       00 33 25.6 +2.9
GERES GERESS Array B   82.55 328  P       P       00 33 23.1 -0.6
      comp=Z,0.3nm,0.6s,baz=35,slow=4.9,SNR=2.6
      comp=Z,0.3nm,0.6s
ARSA  Arzberg          82.99 326 ePcP     PcP     00 33 30.8 +0.2
      comp=Z,1.0nm,0.5s
BIOA  Bad Ischl, Aus   83.47 328 ePcP     PcP     00 33 34.5 +1.8
      comp=Z,4.0nm,1.0s
SOKA  Soboth           83.65 326  PcP     PcP     00 33 36.0 +2.4
      comp=Z,2.4nm,0.8s
KBA   Koelnbreinsper   84.08 327 ePcP     PcP     00 33 35.9 +0.3
      comp=Z,2.1nm,1.1s
WTTA  Wattenberg       84.66 328 ePcP     PcP     00 33 38.0 -0.1
      comp=Z,8.6nm,1.8s
PDG   Podgorica        84.84 321 ⇑P       P       00 33 35.0 -0.4
SQTA  Sankt Quirin     84.87 329  PcP     PcP     00 33 40.6 +1.6
      comp=Z,3.1nm,0.9s
FETA  Feichten         85.22 329 ePcP     P       00 33 38.8 +1.3
      comp=Z,3.1nm,1.2s
DAVA  Damuels          85.36 329 ePcP     P       00 33 38.7 +0.6
      comp=Z,6.3nm,0.9s
TXAR  Lajitas Array    89.85  52  P       P       00 34 00.4 +0.4
      comp=Z,0.3nm,0.5s,baz=300,slow=2.1,SNR=6.3
      comp=Z,0.3nm,0.5s
LPAZ  La Paz          146.44  59  PKPbc   PKPab   00 40 44.1 +0.1
      comp=Z,1.4nm,0.6s,baz=345,slow=4.0,SNR=5.3
H03N2 Juan Fernandez  146.91  96  T       T       03 24 52.6
      baz=291,slow=76,SNR=39
H03N3 Juan Fernandez  146.93  96  T       T       03 24 54.0
      baz=291,slow=76,SNR=48
H03N1 Juan Fernandez  146.93  96  T       T       03 24 55.7
      baz=291,slow=76,SNR=57
```

ROM 22 00:21:51.7±0.1**, 43°.003N**±0°.003×**13°.021E**±0°.004**,**
h5^{km}, Md1.0/2**, ML0.9**/4**, 1C, Error ellipse: s-maj=0.3km**
s-min=0.1km az=218.0, Central Italy

```
Code  Station Name      Δ°   AZ°   Phase ID         Time        Res
                                  Op      ISC     h  m  s      ISC
FEMA  Monte Fema        0.05 153  P       Pg      00 21 53.3 +0.2
FEMA                              S       Sg      00 21 54.3 +0.1
T1219 Muccia, Frazio    0.05 349  P       Pg      00 21 53.4 +0.2
T1219                             S       Sg      00 21 54.5 +0.3
T1219                             AML     AML
      comp=N,68µm,0.2s
T1219                             AML     AML
      comp=E,62µm,0.2s
T1219                             END
FDMO  Fiordimonte       0.06  55 ⇑P       Pg      00 21 53.2  0.0
FDMO                              S       Sg      00 21 54.3  0.0
FDMO                              AML     AML
      comp=N,124µm,0.6s
FDMO                              AML     AML
      comp=E,108µm,0.3s
FDMO                              END
T1220 Camerino, Fraz    0.12  25  P       Pg      00 21 54.6 +0.4
T1220                             S       Sg      00 21 56.9 +1.1
T1220                             AML     AML
      comp=E,128µm,0.0s
T1256 Bolognola (MC)    0.15  89  P       Pg      00 21 55.1 +0.3
T1256                             S       Sg      00 21 57.8 +0.9
MC2   Monte Cornacci    0.15 126  P       Pg      00 21 55.2 +0.4
T1245 Castelsantange    0.19 140  P       Pg      00 21 56.1 +0.6
T1245                             S       Sg      00 21 59.4 +1.4
ASSB  Assisi San Ben    0.27 279  P       Pg      00 21 57.5 +0.6
ASSB                              S       Sb      00 22 02.2 -1.7
ASSB                              AML     AML
      comp=E,24µm,1.1s
ASSB                              AML     AML
      comp=E,24µm,0.9s
ASSB                              AML     AML
      comp=N,33µm,0.2s
SMA1  SAN MARTINO       0.44 148  AML     AML
      comp=N,518µm,1.6s
SMA1                              AML     AML
      comp=E,2125µm,0.4s
SMA1                              AML     AML
      comp=N,1400µm,0.2s
SMA1                              AML     AML
      comp=N,518µm,0.4s
SMA1                              AML     AML
      comp=E,1815µm,0.2s
RM33  Pellescritta (    0.51 164  AML     AML
      comp=E,1190µm,0.3s
RM33                              AML     AML
      comp=E,1255µm,0.3s
RM33                              AML     AML
      comp=N,768µm,0.6s
RM33                              AML     AML
      comp=N,772µm,0.6s
RM33                              AML     AML
      comp=N,769µm,0.6s
RM33                              AML     AML
      comp=E,1255µm,0.3s
TERO  Teramo            0.57 131  AML     AML
      comp=E,171µm,0.4s
TERO                              AML     AML
      comp=N,188µm,0.3s
T1247 Pizzolo (AQ)      0.60 160  AML     AML
      comp=N,888µm,0.8s
T1247                             AML     AML
      comp=E,950µm,0.7s
T1222 Castel Sant'An    0.60 179  AML     AML
      comp=N,117µm,0.3s
T1222                             AML     AML
      comp=E,138µm,0.3s
GIGS  Gran Sasso        0.68 144  AML     AML
      comp=N,42µm,0.1s
GIGS                              AML     AML
      comp=E,52µm,0.1s
AQU   L'Aquila          0.71 156  AML     AML
      comp=E,78µm,0.3s
AQU                               AML     AML
      comp=N,95µm,0.4s
VCEL  Villa Celiera     0.86 135  AML     AML
      comp=E,61µm,1.3s
VCEL                              AML     AML
      comp=E,61µm,0.7s
VCEL                              AML     AML
      comp=N,75µm,0.2s
```

ROM 22 00:21:57.7±0.2,**42°.521N**±0°.006×**13°.290E**±0°.009,
h11^{km},ML1.4/8,**4C-7D,Error ellipse: s-maj=0.6km**
s-min=0.6km az=99.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1218	**Civita (PG)**	**0.20**	**319**	⇓P	Pg	00 22 02.5	+0.5
T1218				S	Sg	00 22 05.8	+0.8
T1214	**Arquata del Tr**	**0.24**	**346**	⇓P	Pg	00 22 03.3	+0.4
T1214				S	Sg	00 22 07.5	+1.1
T1214				AML	AML		
	comp=E,104µm,1.6s						
T1214				AML	AML		
	comp=N,71µm,0.3s						
T1214				AML	AML		
	comp=E,103µm,1.6s						
T1214				AML	AML		
	comp=E,103µm,0.4s						
T1214				AML	AML		
	comp=N,71µm,0.3s						
TERO	**Teramo**	**0.25**	**66**	⇑P	Pg	00 22 03.3	+0.3
TERO				S	Sg	00 22 07.1	+0.6
TERO				AML	AML		
	comp=N,188µm,0.3s						
TERO				AML	AML		
	comp=E,171µm,0.4s						
FIAM	**Fiamignano**	**0.28**	**207**	⇓P	Pb	00 22 04.3	-0.6
FIAM				S	Sb	00 22 08.8	-1.0
FIAM				AML	AML		
	comp=E,110µm,0.6s						
FIAM				AML	AML		
	comp=N,81µm,0.4s						
FIAM				AML	AML		
	comp=N,81µm,1.6s						
T1212	**Cascia, Frazio**	**0.29**	**322**	⇓P	Pg	00 22 04.0	+0.3
T1212				S	Sg	00 22 08.5	+0.8
T1211	**Morro Reatino**	**0.32**	**272**	⇓P	Pg	00 22 04.6	+0.4
T1211				S	Sg	00 22 09.6	+1.1
T1217	**Poggiodomo (PG**	**0.33**	**306**	⇑P	Pg	00 22 04.7	+0.4
T1217				S	Sb	00 22 09.9	-1.1
T1245	**Castelsantange**	**0.34**	**347**	P	Pn	00 22 10.3	+1.4
T1245				AML	AML		
	comp=E,148µm,1.5s						
T1245				AML	AML		
	comp=E,148µm,0.5s						
T1245				AML	AML		
	comp=N,137µm,0.2s						
T1241	**Roccafluvione,**	**0.35**	**17**	P	Pg	00 22 05.0	+0.2
T1241				S	Sg	00 22 10.3	+0.9
T1241				AML	AML		
	comp=E,83µm,0.4s						
T1241				AML	AML		
	comp=N,55µm,0.2s						
ARRO	**Arrone**	**0.39**	**279**	⇑P	Pg	00 22 05.8	+0.3
ARRO				S	Sg	00 22 11.6	+0.9
ARRO				AML	AML		
	comp=E,44µm,0.2s						
ARRO				AML	AML		
	comp=E,44µm,0.2s						
ARRO				AML	AML		
	comp=N,67µm,0.7s						
T1216	**Preci, Frazion**	**0.42**	**332**	⇓P	Pb	00 22 07.0	-0.2
T1256	**Bolognola (MC)**	**0.49**	**354**	P	Pg	00 22 07.5	+0.2
T1256				S	Sb	00 22 15.5	-0.1
FDMO	**Fiordimonte**	**0.54**	**344**	⇓P	Pg	00 22 08.5	+0.3
GUMA	**Gualdo di Mace**	**0.54**	**4**	⇑P	Pg	00 22 08.8	+0.4
GUMA				S	Sb	00 22 17.2	+0.1
GUMA				AML	AML		
	comp=E,111µm,0.2s						
GUMA				AML	AML		
	comp=N,87µm,0.7s						
T1219	**Muccia, Frazio**	**0.57**	**339**	S	Sb	00 22 17.7	-0.3

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*NNC **22** 00:26:03.5±11.0,37°.15N×69°.13E,h0^{km},mb4.4,mpv4.2,*
Error ellipse: s-maj=99.9km s-min=77.1km az=148.0

ISC 22 00:26:04.1±5.7,**37°.0N**±0°.3×**70°.6E**±0°.2,**h10^{km},n12,**
σ**0^{s}.50**/12,**1C-1D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	**Iuzhnay**	**5.21**	**355**	Pg	**Pn**	**00 27 22.7**	**+0.6**
	52nm,0.3s						
IUG				Lg	Lg	00 28 25.0	
	61nm,0.5s						
AML	**Almayashu**	**5.69**	**24**	P	**Pn**	**00 27 29.6**	**+0.5**
	SNR=78						
UCH	**Uchtor**	**6.07**	**29**	P	**Pn**	**00 27 34.6**	**+0.3**
	SNR=18						
MRKS	**Merke**	**6.12**	**18**	Pg	**Pn**	**00 27 34.8**	**+0.1**
	7.8nm,0.3s						
MRKS				Lg	Lg	00 28 47.3	
	17nm,0.5s						
KK31	**Karatay Array**	**6.14**	**359**	Pn	**Pn**	**00 27 34.1**	**-0.8**
	1.7nm,0.3s,baz=186,slow=16,SNR=86						
KK31				⇓Sn	**Sn**	**00 28 45.2**	**0.0**
	1.0nm,0.3s,baz=193,slow=24,SNR=4.0						
EKS2	**Erkin-Say**	**6.20**	**22**	P	**Pn**	**00 27 36.1**	**+0.3**
	SNR=18						
AAK	**Ala-Archa**	**6.42**	**27**	P	**Pn**	**00 27 39.0**	**+0.2**
	SNR=11						
KBK	**Karagaybulak**	**6.60**	**29**	P	**Pn**	**00 27 41.6**	**+0.2**
	SNR=7.2						
CHMS	**Chumysh**	**6.82**	**26**	P	**Pn**	**00 27 44.0**	**-0.2**
	SNR=6.8						
USP	**Ospenovka**	**6.97**	**24**	P	**Pn**	**00 27 45.9**	**-0.5**
	SNR=9.0						
TKM2	**Tokmak 2**	**7.08**	**31**	P	**Pn**	**00 27 47.4**	**-0.6**
	SNR=28						
AB31	**Akbulak array**	**14.54**	**331**	⇑P	Pn	00 29 20.6	-9.1
	0.4nm,0.3s,baz=154,slow=11,SNR=31						

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*IDC **22** 00:36:07.7±2.9,25°.86S×137°.37E,h0^{km},mbtmp2.6/3,*
ML2.4/3,Error ellipse: s-maj=35.9km s-min=20.5km
az=50.0

*AUST **22** 00:36:08.8±0.8,25°.87S×137°.44E,h10^{km},Error ellipse:*
s-maj=12.8km s-min=7.7km az=73.0

ISC 22 00:36:07.7±1.1,**25°.95S**±0°.06×**137°.42E**±0°.07,**h8^{km},n14,**
σ**2^{s}.06**/20,**Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OOD	**Oodnadatta**	**2.40**	**220**	P	**Pn**	**00 36 49.7**	**+2.4**
	baz=2.5						
OOD				S	**Sb**	**00 37 20.6**	**-0.2**
	baz=2.5						
INKA	**Innaminka**	**3.47**	**122**	P	**Pn**	**00 37 03.0**	**+1.1**
	baz=3.5						
ASAR	**Alice Springs**	**3.92**	**305**	Pn	**Pn**	**00 37 08.2**	**0.0**
	0.2nm,0.3s,baz=128,slow=14,SNR=1.9						
ASAR				Sn	**Sn**	**00 37 55.9**	**+1.5**
	1.1nm,0.3s,baz=128,slow=22,SNR=15						
ASAR				Lg	Lg	00 38 10.7	
	0.7nm,0.3s,baz=116,slow=29,SNR=6.0						
	0.2nm,0.3s						
ASPA	**Alice Springs**	**3.92**	**305**	P	**Pn**	**00 37 09.1**	**+0.8**
	baz=3.9						
ASPA				S	**Sn**	**00 37 56.2**	**+1.7**
	baz=3.9						
LCRK	**Leigh Creek**	**4.54**	**171**	P	**Pn**	**00 37 19.0**	**+2.4**
	baz=4.6						
MULG	**Mulgathing**	**5.23**	**214**	P	**Pn**	**00 37 28.8**	**+2.5**
	baz=5.3						
QIS	**Mount Isa**	**5.73**	**21**	P	**Pn**	**00 37 33.4**	**+0.2**
	baz=5.7						
WB2	**Warramunga Arr**	**6.61**	**334**	P	**Pn**	**00 37 45.3**	**0.0**
	baz=6.6						
WRA	**Warramunga Arr**	**6.62**	**334**	Pn	**Pn**	**00 37 44.0**	**-1.3**
	baz=151,slow=13,SNR=2.5						
WRA				Sn	**Sn**	**00 38 58.6**	**-2.4**
	0.1nm,0.3s,baz=154,slow=25,SNR=2.0						
WRA				Lg	Lg	00 39 34.5	
	0.3nm,0.3s,baz=156,slow=29,SNR=5.6						
	0.3nm,0.8s						
BBOO	**Buckleboo**	**6.94**	**190**	P	**Pn**	**00 37 51.9**	**+2.3**
	baz=7.0						
STKA	**Stephens Creek**	**6.95**	**149**	Pn	**Pn**	**00 37 52.6**	**+2.8**
	0.1nm,0.3s,baz=323,slow=22,SNR=1.6						
STKA				Sn	**Sn**	**00 39 06.0**	**-3.1**
	0.2nm,0.3s,baz=15,slow=20,SNR=1.9						
	0.6nm,0.3s						
STKA	**Stephens Creek**	**6.95**	**149**	P	**Pn**	**00 37 52.1**	**+2.3**
	baz=7.0						
HTT	**Hallett**	**7.57**	**170**	P	**Pn**	**00 38 00.1**	**+1.7**
	baz=7.7						
FORT	**Forrest**	**9.54**	**238**	P	**Pn**	**00 38 25.6**	**+0.3**
	baz=9.6						
FORT				S	**Sn**	**00 40 09.8**	**-3.0**
	baz=9.6						

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*JMA **22** 00:39:55.1±0.5,46°N±2°×14°3E±°,h338^{km}±3^{km},MV3.3/30,*
NE OFF HOKKAIDO

*IDC **22** 00:39:55.7±0.7,45°.92N×143°.28E,h324^{km}±11^{km},*
mb3.0/10,mbtmp3.7/14,Error ellipse: s-maj=22.7km
s-min=13.8km az=169.0

*SKHL **22** 00:39:56.1±1.0,45°.80N×143°.53E,h326^{km}±3^{km},mb4.2/6,*
msh4.8/6

ISC 22 00:39:55.4±0.7,**45°.78N**±0°.07×**143°.37E**±0°.07,**h329^{km}**±6^{km},
n39,σ**1^{s}.10**/53,**mb3.2**/10,**Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSE	**Soyaes**	**0.99**	**214**	*e*P	**Pn**	**00 40 39.2**	**+0.4**
JSE				*e*S	**S**	**00 41 12.9**	**-0.6**
JWK2	**Keihoku**	**1.13**	**246**	*e*P	**Pn**	**00 40 40.1**	**+0.8**
JWK2				*e*S	**S**	**00 41 14.5**	**0.0**
YSS	**Yuzh-Sakhalins**	**1.25**	**340**	*e*P	**Pn**	**00 40 39.9**	**+0.1**
YSS				AMB	AMB	00 40 40.0	
	30nm,0.3s						
YSS				*e*S	**S**	**00 41 13.5**	**-1.9**
YSS				A	A	00 41 13.8	
	60nm,0.4s						
JRBN	**Rebuntou**	**1.65**	**258**	*e*P	**Pn**	**00 40 42.0**	**-0.3**
JRBN				*e*S	**S**	**00 41 18.1**	**-1.6**
JSS	**Shosan**	**1.75**	**218**	*e*P	**Pn**	**00 40 43.8**	**+0.8**
ASAJ	**Asahikawa**	**1.75**	**198**	P	**Pn**	**00 40 44.0**	**+1.0**
	47nm,0.6s,baz=354,slow=6.3,SNR=21						
ASAJ				S	**S**	**00 41 22.2**	**+1.1**
	7.2nm,0.5s,baz=76,slow=31,SNR=6.3						
JMP	**Maruseppu**	**1.77**	**180**	*e*P	**Pn**	**00 40 44.3**	**+1.1**
JMP				*e*S	**S**	**00 41 22.6**	**+1.1**
JTKR	**Abashiri--Toko**	**1.85**	**168**	*e*P	**Pn**	**00 40 44.8**	**+1.1**
JTKR				*e*S	**S**	**00 41 23.8**	**+1.4**
JKK2	**Kamakawa 2**	**1.96**	**193**	*e*P	**Pn**	**00 40 45.8**	**+1.3**
JRA	**Rausu**	**2.23**	**145**	*e*P	**Pn**	**00 40 47.8**	**+1.4**
JHR	**Hokuryu**	**2.35**	**210**	*e*P	**Pn**	**00 40 48.4**	**+0.9**
JNK	**Nakash**	**2.40**	**156**	*e*P	**Pn**	**00 40 48.6**	**+0.8**
YUK	**Yuzh-Kuril'sk**	**2.49**	**134**	*e*P	**Pn**	**00 40 48.8**	**+0.2**
JAR	**Ashorobuto**	**2.50**	**173**	*e*S	**S**	**00 41 32.7**	**+1.2**
JAK	**Akkeshi**	**2.94**	**161**	*e*P	**Pn**	**00 40 52.4**	**-0.2**
JAK				*e*S	**S**	**00 41 37.2**	**-1.4**
NMR	**Nemuro--Hokkai**	**2.94**	**144**	*e*P	**Pn**	**00 40 53.3**	**+0.7**
NMR				*e*S	**S**	**00 41 36.7**	**-1.9**
NMR				A	A	00 41 37.3	
	80nm,0.3s						
NMR				A	A	00 41 37.3	
	70nm,0.3s						
NEM2	**Nemuro 2**	**2.95**	**144**	*e*S	**S**	**00 41 36.3**	**-2.5**
AKK	**Akkeshi**	**2.96**	**159**	*e*P	**Pn**	**00 40 52.4**	**-0.4**
AKK				AMB	AMB	00 40 52.7	
	10.0nm,0.2s						
AKK				*e*S	**S**	**00 41 36.6**	**-2.3**
AKK				A	A	00 41 37.9	
	180nm,0.3s						
AKK				A	A	00 41 37.9	
	150nm,0.3s						
JBT2	**Biratori 2**	**3.09**	**194**	*e*P	**Pn**	**00 40 54.5**	**+0.4**
JBT2				*e*S	**S**	**00 41 40.7**	**-0.4**
JCH	**Churui**	**3.17**	**180**	*e*P	**Pn**	**00 40 54.5**	**-0.3**
JCH				*e*S	**S**	**00 41 39.5**	**-2.9**
JNBK	**Urakawa-nobuka**	**3.53**	**187**	*e*P	**Pn**	**00 40 58.5**	**+0.2**
JOSM	**Okushiri--Mats**	**4.64**	**219**	*e*P	**Pn**	**00 41 10.3**	**+0.2**
JOT	**Ohata**	**4.71**	**202**	*e*P	**Pn**	**00 41 10.4**	**-0.4**
JSI2	**Shiura 2**	**5.19**	**206**	*e*P	**Pn**	**00 41 16.4**	**+0.3**
JIW	**Iwasaki**	**5.74**	**206**	*e*P	**Pn**	**00 41 21.8**	**-0.7**
USRK	**Ussuriysk Ar.**	**8.22**	**263**	P	**Pn**	**00 41 52.2**	**+0.4**
	2.3nm,0.5s,baz=73,slow=13,SNR=6.2						
KLR	**Kul'dur**	**8.59**	**298**	P	**Pn**	**00 41 56.1**	**0.0**
	2.2nm,0.6s,baz=113,slow=7.7,SNR=9.3						
MJAR	**Matsushiro Arr**	**10.01**	**205**	P	**Pn**	**00 42 14.9**	**+1.4**
	2.5nm,0.5s,baz=8.4,slow=13,SNR=7.7						
SEY	**Seymchan**	**17.94**	**13**	P	**P**	**00 43 41.9**	**-0.5**
	2.1nm,0.3s,baz=193,slow=9.8,SNR=6.5						
SONM	**Songino Array**	**25.23**	**288**	P	**P**	**00 44 51.8**	**-0.5**
	1.0nm,0.5s,baz=90,slow=9.2,SNR=5.8						
	1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**37.62**	**304**	P	**P**	**00 46 39.1**	**-0.2**
	0.3nm,0.3s,baz=88,slow=6.3,SNR=3.8						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**41.27**	**294**	P	**P**	**00 47 08.8**	**-0.4**
	0.7nm,0.6s,baz=77,slow=8.5,SNR=12						
MKAR				PcP	**PcP**	**00 49 00.2**	**-0.7**
	0.1nm,0.3s,baz=48,slow=2.1,SNR=2.3						
MKAR				ScP	**ScP**	**00 52 19.6**	**+0.9**
	0.2nm,0.7s,baz=57,slow=5.3,SNR=2.2						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**41.48**	**37**	P	**P**	**00 47 10.5**	**-0.1**
	0.2nm,0.7s,baz=250,slow=5.5,SNR=4.7						
	0.2nm,0.7s						
YKA	**Yellowknife Ar**	**55.60**	**33**	P	**P**	**00 48 56.8**	**-0.5**
	0.4nm,0.5s,baz=303,slow=6.6,SNR=8.3						
	0.4nm,0.5s						
GEYT	**Alibeck**	**61.11**	**296**	P	**P**	**00 49 35.3**	**-0.2**
	1.4nm,0.5s,baz=40,slow=2.5,SNR=2.6						
	1.4nm,0.5s						
FINES	**FINESS Array B**	**61.81**	**331**	P	**P**	**00 49 38.5**	**-1.2**
	1.5nm,0.6s,baz=42,slow=5.9,SNR=10.0						
	1.5nm,0.6s						
KBZ	**Khabaz**	**66.43**	**309**	P	**P**	**00 50 11.0**	**+1.3**
	0.9nm,0.7s,baz=62,slow=4.4,SNR=4.2						
	0.9nm,0.7s						
PDAR	**Pinedale Array**	**70.61**	**48**	P	**P**	**00 50 36.5**	**+0.8**
	0.4nm,0.6s,baz=285,slow=0.9,SNR=5.8						
	0.4nm,0.6s						
TXAR	**Lajitas Array**	**83.70**	**54**	P	**P**	**00 51 49.6**	**+1.6**
	0.1nm,0.4s,baz=301,slow=4.9,SNR=6.5						
	0.1nm,0.4s						

ROM 22 01:01:16.7±0.1,**43°.025N**±0°.003×**13°.077E**±0°.005,
h4^{km}±1^{km},**ML1.4**/14,**6C-5D,Error ellipse: s-maj=0.4km**
s-min=0.1km az=74.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDMO	**Fiordimonte**	**0.01**	**34**	P	Pg	01 01 17.4	-0.2
FDMO				S	Sg	01 01 17.8	-0.4
T1219	**Muccia, Frazio**	**0.06**	**301**	⇑P	Pg	01 01 18.3	+0.2
T1219				S	Sg	01 01 19.7	+0.6
T1219				AML	AML		
	comp=E,551µm,0.1s						
T1219				AML	AML		
	comp=N,1135µm,0.2s						
T1219				AML	AML		
	comp=E,588µm,0.1s						
T1219				AML	AML		
	comp=N,1075µm,0.2s						
T1219				AML	AML		
	comp=E,550µm,0.1s						
T1219				AML	AML		
	comp=N,1075µm,0.2s						
T1219				AML	AML		
	comp=N,1135µm,0.2s						
FEMA	**Monte Fema**	**0.07**	**197**	P	Pg	01 01 18.4	+0.1
FEMA				S	Sg	01 01 19.9	+0.5
T1220	**Camerino, Fraz**	**0.09**	**6**	P	Pg	01 01 18.9	+0.3
T1220				S	Sg	01 01 20.8	+1.1
T1220				AML	AML		
	comp=E,3255µm,1.2s						
T1220				AML	AML		
	comp=N,2165µm,0.5s						
T1220				AML	AML		
	comp=E,3255µm,0.8s						
T1220				AML	AML		
	comp=N,2165µm,1.5s						
T1256	**Bolognola (MC)**	**0.11**	**100**	P	Pg	01 01 19.2	+0.2
T1256				S	Sg	01 01 21.2	+0.6
T1256				AML	AML		
	comp=E,261µm,0.5s						
T1256				AML	AML		
	comp=N,234µm,0.4s						
CSP1	**Cessapalombo**	**0.12**	**55**	⇑P	Pg	01 01 19.3	+0.2
CSP1				S	Sg	01 01 21.6	+1.0
CSP1				AML	AML		
	comp=N,344µm,0.7s						
CSP1				AML	AML		
	comp=N,344µm,1.3s						
CSP1				AML	AML		
	comp=E,406µm,0.3s						
CESI	**CESI - Serrava**	**0.13**	**261**	P	Pg	01 01 19.7	+0.5
CESI				S	Sg	01 01 22.3	+1.3
MC2	**Monte Cornacci**	**0.14**	**143**	P	Pg	01 01 19.8	+0.3
MC2				S	Sg	01 01 22.6	+1.2
T1216	**Preci, Frazion**	**0.14**	**198**	P	Pg	01 01 19.7	+0.2
T1216				S	Sg	01 01 22.4	+1.0
T1216				AML	AML		
	comp=E,250µm,0.6s						
T1216				AML	AML		
	comp=E,250µm,0.6s						
T1216				AML	AML		
	comp=E,250µm,1.4s						
T1216				AML	AML		
	comp=N,250µm,0.1s						
T1245	**Castelsantange**	**0.19**	**154**	P	Pg	01 01 20.6	+0.2
T1245				S	Sg	01 01 24.4	+1.6
T1245				AML	AML		
	comp=N,194µm,1.4s						
T1245				AML	AML		
	comp=E,206µm,0.6s						
T1245				AML	AML		
	comp=N,194µm,0.6s						
GUMA	**Gualdo di Mace**	**0.19**	**79**	P	Pg	01 01 21.0	+0.5
GUMA				S	Sg	01 01 24.8	+1.8
GUMA				AML	AML		
	comp=E,416µm,0.3s						
GUMA				AML	AML		
	comp=N,440µm,1.6s						
GUMA				AML	AML		
	comp=N,387µm,0.2s						
GUMA				AML	AML		
	comp=E,572µm,0.2s						
GUMA				AML	AML		
	comp=N,440µm,0.4s						
SNTG	**Esanatoglia**	**0.25**	**337**	P	Pg	01 01 21.8	+0.3
SNTG				S	Sg	01 01 26.4	+1.5
SNTG				AML	AML		
	comp=E,49µm,0.6s						
SNTG				AML	AML		
	comp=N,47µm,0.4s						
SNTG				AML	AML		
	comp=E,49µm,0.6s						
T1212	**Cascia, Frazio**	**0.27**	**185**	⇓P	Pg	01 01 22.4	+0.4
T1212				AML	AML		
	comp=N,96µm,0.4s						
T1212				AML	AML		
	comp=E,109µm,0.4s						
T1214	**Arquata del Tr**	**0.28**	**160**	⇑P	Pg	01 01 22.5	+0.3
EL6	**Elcito**	**0.30**	**3**	⇑P	Pg	01 01 22.9	+0.3
ASSB	**Assisi San Ben**	**0.31**	**273**	⇑P	Pg	01 01 22.9	+0.3
ASSB				AML	AML		
	comp=E,116µm,0.3s						
ASSB				AML	AML		
	comp=N,72µm,0.8s						
T1241	**Roccafluvione,**	**0.31**	**123**	⇑P	Pg	01 01 22.9	+0.2
T1241				AML	AML		
	comp=E,40µm,0.7s						
T1241				AML	AML		
	comp=N,38µm,0.8s						
FOSV	**Fossato di Vic**	**0.35**	**320**	⇓P	Pg	01 01 23.9	+0.3
FOSV				AML	AML		
	comp=E,26µm,0.5s						
FOSV				AML	AML		
	comp=N,87µm,0.3s						
T1218	**Civita (PG)**	**0.36**	**175**	⇓P	Pg	01 01 23.7	+0.1
ATCC	**AVT- Casa Cast**	**0.36**	**297**	⇓P	Pg	01 01 24.0	+0.4
ATCC				AML	AML		
	comp=E,61µm,0.3s						
ATCC				AML	AML		
	comp=N,64µm,0.3s						
ATCC				AML	AML		
	comp=E,61µm,0.3s						
CING	**Cingoli**	**0.36**	**14**	⇓P	Pg	01 01 24.0	+0.3
CING				AML	AML		
	comp=E,38µm,1.1s						
CING				AML	AML		
	comp=N,35µm,0.9s						
CING				AML	AML		
	comp=N,35µm,1.1s						
CING				AML	AML		
	comp=E,38µm,0.9s						
ARVD	**Arcevia**	**0.48**	**348**	S	Sb	01 01 34.2	-0.9
ARRO	**Arrone**	**0.50**	**207**	S	Sb	01 01 34.6	-1.1
ARRO				AML	AML		
	comp=E,53µm,0.2s						
ARRO				AML	AML		
	comp=N,44µm,0.2s						

ROM 22 01:01:53.9±0.1,**42°.874N**±0°.004×**13°.032E**±0°.006,
h11^{km},ML1.1/2,**3C-1D,Error ellipse: s-maj=0.5km**
s-min=0.3km az=288.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1216	**Preci, Frazion**	**0.02**	**330**	P	Pg	01 01 56.2	+0.4
T1216				S	Sg	01 01 57.5	+0.2
T1216				AML	AML		
	comp=N,142µm,0.5s						
T1216				AML	AML		
	comp=E,191µm,0.3s						
T1245	**Castelsantange**	**0.12**	**99**	⇑P	Pg	01 01 57.4	+0.4
T1245				S	Sg	01 01 59.6	+0.5
T1245				AML	AML		
	comp=E,174µm,0.6s						
T1245				AML	AML		
	comp=N,222µm,0.2s						
MC2	**Monte Cornacci**	**0.12**	**72**	P	Pg	01 01 57.5	+0.5
MC2				S	Sg	01 01 60.0	+0.6
T1212	**Cascia, Frazio**	**0.12**	**176**	P	Pg	01 01 57.6	+0.6
T1212				S	Sg	01 01 59.8	+0.7
T1214	**Arquata del Tr**	**0.17**	**131**	P	Pg	01 01 58.3	+0.5
T1214				S	Sg	01 02 01.1	+0.6
T1217	**Poggiodomo (PG**	**0.18**	**205**	⇓P	Pg	01 01 58.5	+0.7
T1217				S	Sg	01 02 01.6	+1.0
T1219	**Muccia, Frazio**	**0.18**	**354**	⇑P	Pg	01 01 58.2	+0.3
T1256	**Bolognola (MC)**	**0.19**	**47**	P	Pg	01 01 58.7	+0.5
T1218	**Civita (PG)**	**0.21**	**163**	P	Pb	01 01 59.3	-0.6
T1218				S	Sg	01 02 02.9	+1.4
T1220	**Camerino, Fraz**	**0.24**	**10**	P	Pg	01 01 58.4	-0.5
CSP1	**Cessapalombo**	**0.25**	**30**	P	Pg	01 01 59.8	+0.6
CSP1				S	Sb	01 02 04.0	-1.1
T1241	**Roccafluvione,**	**0.29**	**93**	⇑P	Pg	01 02 00.3	+0.5

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*IDC **22** 01:04:35.3±1.1,54°.09S×141°.83E,h0^{km},mb4.2/6,*
mbtmp4.2/6,MS3.6/8,Error ellipse: s-maj=77.5km
s-min=18.6km az=86.0

*NEIC **22** 01:04:36.4±1.4,54°.2S±0°.1×141°.2E±0°.2,h10^{km}±2^{km},*
mb4.4/11,Error ellipse: s-maj=22.9km s-min=17.2km
az=260.0

ISC 22 01:04:36.5±0.6,**54°.14S**±0°.08×**141°.3E**±0°.1,**h10^{km},n35,**
σ**1^{s}.05**/28,**mb4.3**/10,**MS3.5**/8,**West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCQ	**Macquarie Isla**	**10.34**	**99**	Pn	**Pn**	**01 07 05.9**	**+1.2**
TAU	**Tasmania Unive**	**11.93**	**22**	Pn	**Pn**	**01 07 27.7**	**+1.2**
TOO	**Toolangi**	**16.83**	**12**	Pn	**Pn**	**01 08 30.9**	**-1.2**
TOO				IAmb	IAmb	01 08 37.5	
	comp=Z,17nm,0.9s						
CASY	**Casey**	**19.25**	**219**	P	**P**	**01 09 00.7**	**0.0**
RPZ	**Rata Peaks**	**22.01**	**74**	LR	LR	01 15 29.2	
	comp=Z,120nm,20.2s,baz=220,slow=30						
STKA	**Stephens Creek**	**22.25**	**1**	P	**P**	**01 09 33.5**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=185,slow=16,SNR=4.0						
STKA				LR	LR	01 16 45.0	
	comp=Z,129nm,20.6s,baz=202,slow=33						
	comp=Z,2.1nm,0.7s						
STKA	**Stephens Creek**	**22.25**	**1**	P	**P**	**01 09 33.8**	**+0.3**
VNDA	**Vanda**	**24.63**	**169**	P	**P**	**01 09 56.9**	**+0.3**
	comp=Z,2.9nm,1.0s,baz=341,slow=5.0,SNR=4.1						
VNDA				LR	LR	01 17 54.7	
	comp=Z,103nm,19.9s,baz=286,slow=32						
	comp=Z,2.9nm,1.0s						
VNDA	**Vanda**	**24.63**	**169**	P	**P**	**01 09 54.5**	**-2.1**
VNDA				IAmb	IAmb	01 10 06.4	
	comp=Z,7.6nm,1.1s						
BSWZ	**Blackbirch Sta**	**24.89**	**73**	P	**P**	**01 09 57.5**	**-1.8**
FORT	**Forrest**	**25.21**	**333**	P	**P**	**01 10 01.2**	**-1.0**
H01W1	**Cape Leeuwin H**	**27.00**	**304**	T	T	01 39 07.0	
	baz=142,slow=75,SNR=5.1						
H01W2	**Cape Leeuwin H**	**27.01**	**304**	T	T	01 39 02.4	
	baz=142,slow=75,SNR=6.5						

H01W3	Cape Leeuwin H	27.02	304	T	T	01 39 03.1	
	baz=142,slow=75,SNR=6.4						
ASAR	Alice Springs	30.93	347	P	P	01 10 54.1	+0.7
	comp=Z,3.1nm,0.8s,baz=160,slow=7.6,SNR=12						
ASAR				PcP	PcP	01 13 49.6	-0.1
	comp=Z,0.2nm,0.3s,baz=186,slow=0.9,SNR=1.4						
	comp=Z,3.1nm,0.8s						
ASAR	Alice Springs	30.93	347	P	P	01 10 52.9	-0.6
AS31	Alice Springs	30.93	347	P	P	01 10 53.0	-0.5
AS31				IAmb	IAmb	01 11 00.2	
	comp=Z,1.7nm,0.9s						
CTA	Charters Tower	34.21	8	LR	LR	01 24 40.3	
	comp=Z,115nm,19.1s,baz=100,slow=35						
WB2	Warramunga Arr	34.55	348	P	P	01 11 25.1	0.0
WB2				IAmb	IAmb	01 11 33.3	
	comp=Z,8.0nm,0.9s						
WRA	Warramunga Arr	34.55	348	P	P	01 11 25.6	+0.5
	comp=Z,5.4nm,0.8s,baz=170,slow=7.6,SNR=11						
WRA				PcP	PcP	01 13 59.6	-0.1
	comp=Z,0.5nm,0.8s,baz=175,slow=1.7,SNR=3.1						
	comp=Z,5.4nm,0.8s						
WRA	Warramunga Arr	34.55	348	P	P	01 11 25.6	+0.5
WB0	Warramunga Arr	34.72	349	P	P	01 11 26.9	+0.3
WB0				IAmb	IAmb	01 11 29.4	
	comp=Z,8.5nm,0.9s						
QSPA	South Pole Qui	35.97	180	P	P	01 11 38.4	+1.2
	comp=Z,2.4nm,0.8s,baz=356,slow=3.4,SNR=5.7						
QSPA				LR	LR	01 26 02.9	
	comp=Z,168nm,19.1s,baz=315,slow=36						
	comp=Z,2.4nm,0.8s						
QSPA	South Pole Qui	35.97	180	P	P	01 11 36.6	-0.5
QSPA				IAmb	IAmb	01 11 53.6	
	comp=Z,16nm,1.5s						
PMG	Port Moresby	44.86	8	LR	LR	01 30 26.7	
	comp=Z,61nm,18.0s,baz=341,slow=35						
BELA	Belgrano 2	48.22	181	P	P	01 13 15.9	-0.7
BELA				IAmb	IAmb	01 13 18.2	
	comp=Z,3.0nm,1.0s						
RPN	Rapa Nui	78.90	121	LR	LR	01 41 02.0	
	comp=Z,18nm,21.9s,baz=12,slow=28						
PALK	Pallekele	79.33	298	LR	LR	01 46 07.9	
	comp=Z,46nm,18.9s,baz=254,slow=31						
LBTB	Lobatse	83.75	235	P	P	01 17 08.4	+2.5
	comp=Z,4.4nm,1.1s,baz=219,slow=6.5,SNR=3.8						
	comp=Z,4.4nm,1.1s						
H03N1	Juan Fernandez	86.12	147	T	T	02 51 16.2	
	SNR=4.4						
YKA	Yellowknife Ar	141.52	46	PKhKP	PKPpre	01 23 58.8	
	comp=Z,0.1nm,0.6s,baz=72,slow=19,SNR=1.8						
YKA				PKP	PKPdf	01 24 04.4	-1.9
	comp=Z,0.2nm,0.7s,baz=245,slow=3.2,SNR=3.9						
FINES	FINESS Array B	146.04	309	PKPbc	PKPbc	01 24 15.1	-0.1
	comp=Z,1.8nm,0.7s,baz=104,slow=6.1,SNR=4.3						
GERES	GERESS Array B	147.56	282	PKPbc	PKPbc	01 24 20.6	+0.5
	comp=Z,0.4nm,0.7s,baz=120,slow=3.9,SNR=4.6						
ARCES	ARCESS Array B	147.87	323	PKPbc	PKiKP	01 24 21.3	-0.8
	comp=Z,3.8nm,0.9s,baz=53,slow=3.5,SNR=2.1						
ESDC	Sonseca Array	152.52	253	PKPbc	PKPbc	01 24 32.2	-0.2
	comp=Z,0.3nm,0.6s,baz=146,slow=1.8,SNR=5.1						

IDC 22 01:14:28.1±5.2**, 8°.40S**×**159°.31E, h66**^{km}±60^{km}**, mb3.2**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=62.0km s-min=37.5km az=147.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.21	149	P	Pn	01 14 49.7	+0.6
	5µm,0.3s,baz=188,slow=8.0,SNR=21						
HNR				S	Sn	01 15 04.7	-0.1
	10µm,0.3s,baz=17,slow=20,SNR=16						
WRA	Warramunga Arr	26.75	242	P	P	01 20 01.6	-0.1
	0.2nm,0.5s,baz=68,slow=9.3,SNR=5.1						
	0.2nm,0.5s						
H11N1	WAKE ISLAND Hy	28.91	15	T	T	01 50 23.9	
	baz=195,slow=76,SNR=41						
H11N3	WAKE ISLAND Hy	28.92	15	T	T	01 50 36.6	
	baz=195,slow=76,SNR=44						
H11N2	WAKE ISLAND Hy	28.93	15	T	T	01 50 37.2	
	baz=195,slow=76,SNR=44						
ILAR	Eielson Array	83.14	20	P	P	01 26 46.4	-0.1
	0.2nm,0.5s,baz=258,slow=4.5,SNR=1.9						
	0.2nm,0.5s						
MKAR	Makanchi Array	87.29	318	P	P	01 27 07.7	0.0
	0.5nm,0.6s,baz=89,slow=6.1,SNR=8.2						
	0.5nm,0.6s						

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*IDC **22** 01:33:22.4±4.9, 7°.31N×82°.64W, h0^{km}, mb3.3/3, mbtmp3.4/4, ML3.6/1, Error ellipse: s-maj=199.2km s-min=53.3km az=41.0*

*UCR **22** 01:33:24.2±1.5, 7°.25N×82°.70W, h10^{km}, MW4.0*

ISC 22 01:33:25.6±1.7**, 7°.6N**±0°.1×**82°.5W**±0°.2**, h12**^{km}**, n29,** σ**1^{s}.35**/32**, mb3.5**/3**, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PEZE	Perez Zeledon,	2.13	328	*e*P	Pn	01 34 02.2	+1.1
PEZE				*e*S	Sb	01 34 31.6	+0.9
CDM	Cerro de Muert	2.32	328	*e*P	Pn	01 34 04.6	+0.6
MRVA	Moravia de Chi	2.41	338	*e*P	Pn	01 34 06.2	+1.1
MRVA				*e*S	Sb	01 34 38.9	0.0
ABE2	San Pablo	2.60	325	*e*P	Pn	01 34 09.0	+1.3
ABE2				*e*S	Sb	01 34 44.6	+0.1
LCR2	La Lucha 2	2.61	326	*e*P	Pn	01 34 08.8	+1.0
LCR2				*e*S	Sb	01 34 42.9	-1.7
RVSTA	Santa Teresita	2.63	335	*e*P	Pn	01 34 09.7	+1.6
BATAN	Batan	2.65	341	*e*P	Pb	01 34 11.3	-1.7
VTCV	VTCV, Calle Va	2.67	334	*e*P	Pn	01 34 10.2	+1.4
RAFA	San Farael, Vo	2.69	332	*e*P	Pn	01 34 10.4	+1.3
LCOCO	El Coco	2.70	338	*e*P	Pb	01 34 11.6	-2.3
OCM	Ochomogo	2.71	328	*e*P	Pn	01 34 09.9	+0.7
ICR3	Volcano Irazu	2.72	332	*e*P	Pn	01 34 10.6	+1.1
HAYA	Volcan Irazu	2.72	331	*e*P	Pn	01 34 11.3	+1.7
VTLO	VTLO	2.73	334	*e*P	Pn	01 34 10.6	+1.1
VICA	Volcano Irazu	2.73	331	*e*P	Pn	01 34 11.0	+1.3
RVLA	Villa Bonita	2.73	337	*e*P	Pb	01 34 11.9	-2.5
RVLA				*e*S	Sb	01 34 48.8	+0.9
VIRE	VIRE	2.74	330	*e*P	Pn	01 34 11.1	+1.3
CVIMO	Finca Echandi	2.81	330	*e*P	Pn	01 34 12.5	+1.9
SOCE	Pocosol	3.48	324	*e*P	Pn	01 34 22.0	+2.4
JTS	Las Juntas de	3.61	319	Pn	Pn	01 34 21.6	+0.2
	4.5nm,0.3s,baz=167,slow=18,SNR=14						
JTS				Sn	Sn	01 35 05.4	+1.3
	baz=72,slow=20						
	16nm,0.4s						
JTS	Las Juntas de	3.61	319	*e*P	Pn	01 34 22.0	+0.6
SAJU	San Juanillo,	4.01	308	*e*P	Pn	01 34 27.6	+0.7
ORTG	Ortega, Santa	4.01	314	*e*P	Pn	01 34 28.0	+1.0
TXAR	Lajitas Array	29.40	320	P	P	01 39 29.9	+0.7
	0.2nm,0.8s,baz=149,slow=9.5,SNR=2.0						
	0.2nm,0.8s						
YKA	Yellowknife Ar	59.60	343	P	P	01 43 28.9	-0.3
	0.4nm,0.8s,baz=143,slow=6.4,SNR=8.5						
	0.4nm,0.8s						
ILAR	Eielson Array	72.42	336	P	P	01 44 51.3	-0.2
	0.3nm,0.7s,baz=102,slow=4.2,SNR=3.5						
	0.3nm,0.7s						
H01W1	Cape Leeuwin H	148.78	207	T	T	04 39 36.4	
	baz=146						
H01W2	Cape Leeuwin H	148.79	207	T	T	04 39 34.5	
	baz=146						
H01W3	Cape Leeuwin H	148.80	207	T	T	04 39 34.4	
	baz=146						

ROM 22 01:44:38.7±0.0**, 42°.977N**±0°.002×**13°.110E**±0°.004**, h9**^{km}**, ML1.1**/9**, 7C-7D, Error ellipse: s-maj=0.3km s-min=0.2km az=91.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FDMO	Fiordimonte	0.06	344	⇑P	Pg	01 44 40.8	0.0
FDMO				S	Sg	01 44 42.3	0.0
FDMO				AML	AML		
	comp=N,214µm,0.2s						
FDMO				AML	AML		
	comp=E,132µm,0.2s						
MC2	Monte Cornacci	0.09	137	⇓P	Pg	01 44 41.4	+0.2
MC2				S	Sg	01 44 43.4	+0.3
T1256	Bolognola (MC)	0.09	71	⇑P	Pg	01 44 41.4	+0.1
T1256				S	Sg	01 44 43.1	0.0
T1256				AML	AML		
	comp=N,284µm,0.8s						
T1256				AML	AML		
	comp=E,201µm,0.8s						
T1216	Preci, Frazion	0.11	218	⇑P	Pg	01 44 41.9	+0.5
T1216				S	Sg	01 44 44.1	+0.8
T1216				AML	AML		
	comp=E,84µm,0.2s						
T1216				AML	AML		
	comp=E,84µm,0.2s						
T1216				AML	AML		
	comp=N,144µm,0.2s						
T1219	Muccia, Frazio	0.11	316	⇓P	Pg	01 44 41.8	+0.3
T1219				AML	AML		
	comp=E,144µm,0.1s						
T1219				AML	AML		
	comp=N,190µm,0.3s						
T1219				AML	AML		
	comp=N,190µm,0.3s						
T1219				AML	AML		
	comp=N,190µm,1.7s						
T1219				AML	AML		
	comp=E,144µm,0.1s						
T1220	Camerino, Fraz	0.13	353	P	Pg	01 44 42.1	+0.4
T1220				S	Sg	01 44 44.8	+0.9
T1245	Castelsantange	0.13	155	P	Pg	01 44 42.4	+0.5
T1245				S	Sg	01 44 45.0	+0.9
T1245				AML	AML		
	comp=N,279µm,0.6s						
T1245				AML	AML		
	comp=E,198µm,0.6s						
GUMA	Gualdo di Mace	0.19	63	⇑P	Pg	01 44 43.4	+0.7
GUMA				S	Sg	01 44 46.9	+1.5
GUMA				AML	AML		
	comp=N,203µm,0.5s						
GUMA				AML	AML		
	comp=E,204µm,0.3s						
T1214	Arquata del Tr	0.23	162	P	Pg	01 44 44.2	+0.8
T1214				AML	AML		
	comp=N,52µm,0.2s						
T1214				AML	AML		
	comp=E,55µm,0.8s						
T1214				AML	AML		
	comp=N,52µm,1.8s						
T1212	Cascia, Frazio	0.23	192	⇓P	Pg	01 44 44.1	+0.7
T1212				S	Sg	01 44 48.2	+1.5
T1241	Roccafluvione,	0.27	117	⇑P	Pg	01 44 44.6	+0.6
T1241				S	Sb	01 44 49.1	-1.2
T1217	Poggiodomo (PG	0.30	206	⇑P	Pg	01 44 45.3	+0.6
T1217				S	Sb	01 44 50.4	-0.8
SNTG	Esanatoglia	0.30	336	P	Pg	01 44 45.3	+0.5
SNTG				S	Sb	01 44 50.2	-1.2
SNTG				AML	AML		
	comp=E,21µm,0.7s						
SNTG				AML	AML		
	comp=N,25µm,0.2s						
T1218	Civita (PG)	0.31	179	⇓P	Pg	01 44 45.4	+0.5
T1218				S	Sb	01 44 50.5	-1.1
ASSB	Assisi San Ben	0.34	281	P	Pg	01 44 45.9	+0.5
ASSB				S	Sb	01 44 51.7	-0.7
ASSB				AML	AML		
	comp=N,30µm,1.1s						
ASSB				AML	AML		
	comp=E,29µm,0.3s						
ASSB				AML	AML		
	comp=N,30µm,0.9s						
EL6	Elcito	0.35	359	⇑P	Pg	01 44 46.2	+0.5
EL6				S	Sb	01 44 52.0	-0.8
SMA1	SAN MARTINO	0.38	154	⇓P	Pg	01 44 46.8	+0.5
SMA1				S	Sb	01 44 53.0	-0.8
ATCC	AVT- Casa Cast	0.40	301	P	Pb	01 44 47.4	-0.6
CING	Cingoli	0.40	9	P	Pg	01 44 47.0	+0.4
CING				S	Sb	01 44 53.5	-0.8
OFFI	Offida	0.42	96	⇓P	Pb	01 44 48.6	+0.3
T1211	Morro Reatino	0.48	203	S	Sb	01 44 57.0	+0.4
ARVD	Arcevia	0.54	347	⇓P	Pb	01 44 49.8	-0.4
ARVD				S	Sb	01 44 58.1	0.0

ROM 22 01:45:26.9±0.1**, 43°.048N**±0°.004×**13°.031E**±0°.006**, h8**^{km}**, ML1.3**/14**, 10C-1D, Error ellipse: s-maj=0.5km s-min=0.3km az=38.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	Muccia, Frazio	0.02	294	P	Pg	01 45 28.4	-0.1
T1219				S	Sg	01 45 29.1	-0.5
T1219				AML	AML		
	comp=N,722µm,0.1s						
T1219				AML	AML		
	comp=N,768µm,0.1s						
T1219				AML	AML		
	comp=E,655µm,0.1s						
T1219				AML	AML		
	comp=E,680µm,0.1s						
FDMO	Fiordimonte	0.04	106	P	Pg	01 45 28.3	-0.3
FDMO				S	Sg	01 45 29.5	-0.3
FDMO				AML	AML		
	comp=E,1295µm,0.1s						
FDMO				AML	AML		
	comp=N,1810µm,0.1s						
T1220	Camerino, Fraz	0.07	35	⇑P	Pg	01 45 29.3	+0.3
T1220				S	Sg	01 45 30.8	+0.4
T1220				AML	AML		
	comp=E,1915µm,0.3s						
T1220				AML	AML		
	comp=N,1780µm,0.2s						
CESI	CESI - Serrava	0.10	245	⇑P	Pg	01 45 30.0	+0.7
CESI				AML	AML		
	comp=N,186µm,0.3s						
CESI				AML	AML		
	comp=E,172µm,0.4s						
T1256	Bolognola (MC)	0.15	106	⇑P	Pg	01 45 30.7	+0.5
T1256				S	Sg	01 45 33.3	+0.9
T1256				AML	AML		
	comp=E,146µm,0.3s						
T1256				AML	AML		
	comp=N,141µm,1.4s						
T1256				AML	AML		
	comp=N,141µm,0.6s						
T1216	Preci, Frazion	0.16	183	⇑P	Pg	01 45 30.9	+0.7
T1216				S	Sg	01 45 34.4	+1.9
T1216				AML	AML		
	comp=E,126µm,0.4s						
T1216				AML	AML		
	comp=N,128µm,0.2s						
T1216				AML	AML		
	comp=E,126µm,1.6s						
MC2	Monte Cornacci	0.18	139	⇑P	Pg	01 45 31.7	+1.1
MC2				S	Sg	01 45 34.8	+1.5
SNTG	Esanatoglia	0.22	342	⇑P	Pg	01 45 32.0	+0.7
SNTG				S	Sg	01 45 36.2	+1.9
SNTG				AML	AML		
	comp=E,43µm,0.1s						
SNTG				AML	AML		
	comp=N,49µm,1.6s						
SNTG				AML	AML		
	comp=N,49µm,0.4s						
GUMA	Gualdo di Mace	0.22	86	⇑P	Pg	01 45 32.3	+0.9
GUMA				S	Sg	01 45 36.8	+2.3
GUMA				AML	AML		
	comp=E,380µm,0.3s						
GUMA				AML	AML		
	comp=N,368µm,0.2s						
T1245	Castelsantange	0.22	149	P	Pg	01 45 32.1	+0.6
T1245				S	Sg	01 45 36.1	+1.6
T1245				AML	AML		
	comp=N,155µm,0.6s						
T1245				AML	AML		
	comp=E,110µm,0.2s						
ASSB	Assisi San Ben	0.27	269	⇑P	Pg	01 45 33.0	+0.7
ASSB				S	Sb	01 45 37.9	-1.0
ASSB				AML	AML		
	comp=N,116µm,1.2s						
ASSB				AML	AML		
	comp=E,99µm,0.5s						
EL6	Elcito	0.29	10	P	Pg	01 45 33.2	+0.6
EL6				AML	AML		
	comp=E,137µm,0.8s						
EL6				AML	AML		
	comp=N,172µm,0.2s						
EL6				AML	AML		
	comp=E,137µm,1.2s						
T1212	Cascia, Frazio	0.30	178	P	Pg	01 45 33.4	+0.6
T1212				S	Sb	01 45 38.5	-1.0
ATCC	AVT- Casa Cast	0.32	296	P	Pb	01 45 34.1	-0.8
ATCC				S	Sb	01 45 39.7	-0.5
ATCC				AML	AML		
	comp=E,101µm,0.8s						
ATCC				AML	AML		
	comp=N,82µm,1.1s						
ATCC				AML	AML		
	comp=E,101µm,1.2s						
ATCC				AML	AML		
	comp=N,82µm,0.9s						
T1214	Arquata del Tr	0.32	156	P	Pb	01 45 34.1	-0.8
T1214				S	Sb	01 45 38.9	-1.4
T1217	Poggiodomo (PG	0.34	192	P	Pb	01 45 34.8	-0.6
T1217				S	Sb	01 45 40.4	-0.5
CING	Cingoli	0.35	20	⇑P	Pg	01 45 34.4	+0.6
CING				AML	AML		
	comp=E,88µm,0.7s						
CING				AML	AML		
	comp=N,53µm,0.6s						
T1241	Roccafluvione,	0.35	123	P	Pg	01 45 34.2	+0.3
T1241				S	Sb	01 45 40.4	-0.7
T1218	Civita (PG)	0.38	171	P	Pg	01 45 34.8	+0.3
MURB	Monte Urbino	0.43	300	⇑P	Pg	01 45 36.0	+0.7
MURB				AML	AML		
	comp=E,69µm,0.6s						
MURB				AML	AML		
	comp=N,85µm,0.7s						
FRON	Frontone	0.52	335	P	Pb	01 45 37.8	-0.5
FRON				AML	AML		
	comp=E,17µm,0.7s						
FRON				AML	AML		
	comp=N,21µm,0.5s						
FRON				AML	AML		
	comp=E,17µm,1.3s						
ATVO	AVT- Monte Val	0.56	306	⇓P	Pg	01 45 38.3	+0.5
PIEI	Pieia	0.61	324	P	Pb	01 45 39.3	-0.5

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*IDC **22** 01:47:11.4±0.9, 51°.35N×176°.46W, h0^{km}, mb3.6/9, mbtmp3.7/12, ML3.2/2, MS3.2/2, Error ellipse: s-maj=33.8km s-min=16.4km az=160.0*

*NEIC **22** 01:47:18.8±1.9, 51°.51N±0°.06×176°.6W±0°.1, h47^{km}±6^{km}, mb3.9/48, ML3.9(AEIC), Error ellipse: s-maj=11.8km s-min=6.3km az=121.0*

*AEIC **22** 01:47:18.4±1.9, 51°.49N±0°.05×176°.6W±0°.1, h40^{km}±7^{km}, Error ellipse: s-maj=11.6km s-min=2.5km az=129.0*

ISC 22 01:47:18.6±0.7**, 51°.5N**±0°.1×**176°.60W**±0°.05**, h47**^{km}**, n94,** σ**1^{s}.13**/88**, mb3.8**/15**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADK	Adak	0.39	352		Pn	01 47 27.8	-0.6
ADK					Sn	01 47 35.0	-0.4
KIWB	Kanaga Island	0.50	316	Pn	Pn	01 47 29.5	-0.1
AMKA	Amchitka	2.57	269	Pn	Pn	01 47 58.1	+0.5
NIKH	Nikolski High	4.98	70	Pn	Pn	01 48 31.1	+0.4
NIKH	Nikolski High	4.98	70		Sn	01 49 30.0	+3.0
SHEM	Shemya Is, Ala	5.86	286	Pn	Pn	01 48 41.8	-0.9
	2.0nm,0.3s,baz=120,slow=19,SNR=1.8						
SHEM				Sn	Sn	01 49 51.3	+2.7
	2.1nm,0.3s,baz=88,slow=23,SNR=1.7						
	63nm,1.0s						
SMY	Shemya	5.86	286	Pn	Pn	01 48 42.1	-0.7
UNV	Unalaska Valle	6.57	65	Pn	Pn	01 48 52.4	-0.1
SPIA	Saint Paul Isl	6.79	31	Pn	Pn	01 48 56.5	+1.0
AKUT	Akutan	7.07	64	Pn	Pn	01 48 58.5	-0.8
ANM	Nome	14.35	20	Pn	Pn	01 50 39.2	+0.5
P18K	Big Mountain,	14.42	48	Pn	Pn	01 50 41.1	+1.4
O18K	Koktuh Hills	14.63	47	Pn	Pn	01 50 43.5	+1.2
N18K	Kilae Creek	14.71	43	Pn	Pn	01 50 43.1	-0.3
Q19K	Cape Douglas,	15.01	51	Pn	Pn	01 50 46.5	-0.9
SVW2	Sparrevohn	15.05	42	Pn	Pn	01 50 48.8	+0.9
SVW2				IAmb	IAmb	01 51 11.8	
	comp=Z,6.6nm,0.9s						
KDAK	Kodiak Island	15.21	56	Pn	Pn	01 50 48.0	-1.9
	comp=Z,6.0nm,0.8s,baz=253,slow=11,SNR=23						
KDAK				Sn	Sn	01 53 36.3	-0.7
	comp=Z,0.2nm,0.3s,baz=252,slow=20,SNR=2.4						
KDAK	Kodiak Island	15.21	56	Pn	Pn	01 50 48.0	-1.9
N19K	Bonanza Creek	15.38	44	Pn	Pn	01 50 50.9	-1.3
ILSW	Iliamna Southw	15.63	48	Pn	Pn	01 50 54.8	-0.7
PETK	Petropavlovsk-	15.78	286	Pn	Pn	01 50 57.1	-0.3
	comp=Z,0.1nm,0.3s,baz=95,slow=18,SNR=2.4						
PETK				LR	LR	01 56 40.8	
	comp=Z,45nm,21.6s,baz=81,slow=36						
	comp=Z,3.5nm,1.0s						
L19K	White Mountain	15.91	39	P	P	01 51 04.0	+2.0
L19K				IAmb	IAmb	01 51 05.3	
	comp=Z,6.7nm,0.9s						
RSO	Redoubt South	16.00	47		P	01 51 03.5	+0.4
SPU	Mount Spurr	16.60	45	Pn	Pn	01 51 07.3	-0.4
BRLK	Bradley Lake	16.62	50	Pn	Pn	01 51 06.8	-1.1
K20K	Telida	16.86	37		Pn	01 51 11.9	+1.0
SKT	Skwentna	17.17	43		P	01 51 16.6	+0.7
SKT				IAmb	IAmb	01 51 43.6	
	comp=Z,10.0nm,1.3s						
SUA	Susitna One	17.30	45	Pn	Pn	01 51 15.8	-0.6
SUA				IAmb	IAmb	01 51 45.0	
	comp=Z,13nm,1.4s						
PPLA	Purkeypile	17.34	39		P	01 51 17.8	0.0
FIS	Fire Island	17.41	46		Pn	01 51 17.9	+0.2
SEW	Seward	17.41	50	Pn	Pn	01 51 14.9	-2.8
CAST	Castle Rocks	17.64	38		P	01 51 21.5	+0.4
KTH	Kantishna Hill	18.16	38		Pn	01 51 27.4	+0.4
KTH				IAmb	IAmb	01 51 46.5	
	comp=Z,12nm,0.9s						
KNK	Knik Glacier	18.30	46	P	P	01 51 27.4	-0.9
KNK				IAmb	IAmb	01 51 57.8	
	comp=Z,10nm,1.1s						
TRF	Thorofare Moun	18.36	39	P	P	01 51 29.7	+0.5
BPAW	Bear Paw Mtn.	18.41	37	P	P	01 51 29.7	+0.2
SML	Sawmill	18.49	45	P	P	01 51 28.0	-2.4
IMAR	Indian Mountai	18.57	30	P	P	01 51 31.1	-0.1
I21K	Tanana	18.65	33	P	P	01 51 31.8	-0.3
I21K				IAmb	IAmb	01 51 50.3	
	comp=Z,9.6nm,1.1s						
SCM	Sheep Creek Mo	18.95	46	P	P	01 51 36.0	+0.6
MLY	Manley	19.00	35	P	P	01 51 36.9	+0.8
MCK	McKinley	19.03	39	P	P	01 51 36.8	+0.5
KLU	Klutina	19.48	47	P	P	01 51 41.6	+0.3
KLU				IAmb	IAmb	01 51 45.2	
	comp=Z,13nm,1.3s						
M24K	Tolsona, Glenn	19.55	45	P	P	01 51 43.2	+1.2
I23K	Minto, Yukon-K	19.56	35	P	P	01 51 43.0	+1.0
I23K				IAmb	IAmb	01 52 12.5	
	comp=Z,8.3nm,1.2s						
WRH	Wood River Hil	19.70	38	P	P	01 51 42.6	-1.0
WRH				IAmb	IAmb	01 52 04.9	
	comp=Z,7.3nm,1.3s						
CCB	Clear Creek Bu	19.89	38	P	P	01 51 43.4	-2.3
HDA	Harding Lake	20.11	39	P	P	01 51 48.6	+0.5
N25K	Chitina, Valde	20.12	47	P	P	01 51 46.4	-1.8
N25K				IAmb	IAmb	01 52 27.7	
	comp=Z,15nm,1.4s						
PAX	Paxson	20.15	43	P	P	01 51 49.7	+1.1
PAX				IAmb	IAmb	01 52 08.1	
	comp=Z,4.5nm,0.8s						
IL31		20.30	38	P	P	01 51 49.8	-0.2
ILAR	Eielson Array	20.30	38	P	P	01 51 49.2	-0.9
	comp=Z,0.4nm,0.4s,baz=230,slow=10.0,SNR=15						
ILAR				PcP	PcP	01 56 00.8	-0.7
	comp=Z,0.1nm,0.5s,baz=276,slow=3.1,SNR=1.9						
	comp=Z,0.4nm,0.4s						
ILAR	Eielson Array	20.30	38	P	Pn	01 51 51.7	-0.7
GLB	Gilahina Butte	20.44	48	P	Pn	01 51 53.4	-0.8
GLB				IAmb	IAmb	01 52 19.0	
	comp=Z,6.3nm,1.2s						
H24K	Noodor Dome	20.45	34	P	P	01 51 52.6	+0.9
H24K				IAmb	IAmb	01 52 13.9	
	comp=Z,12nm,1.4s						
VRDI	Verde Repeater	20.56	49	P	P	01 51 53.5	+0.3
VRDI				IAmb	IAmb	01 52 06.2	
	comp=Z,8.8nm,1.3s						
RIDG	Independent Ri	20.69	41	P	P	01 51 52.7	-1.7
RIDG				IAmb	IAmb	01 52 15.9	
	comp=Z,6.2nm,0.8s						
DOT	Dot Lake	20.98	42	P	P	01 51 57.2	-0.3
DOT				IAmb	IAmb	01 52 17.8	
	comp=Z,6.6nm,0.8s						
M26K	Nabesna, AK	21.06	46	P	P	01 51 58.6	+0.2
M26K				IAmb	IAmb	01 52 18.7	
	comp=Z,9.5nm,1.4s						
SCRK	Sand Creek	21.13	41	P	P	01 51 58.0	-1.2
SCRK				IAmb	IAmb	01 52 09.6	
	comp=Z,5.2nm,0.8s						
BARN	Barnard Glacie	21.37	50	P	P	01 52 03.2	+1.3
BARN				IAmb	IAmb	01 52 14.0	

	comp=Z,10nm,1.2s						
M27K	Edge Creek, AK	21.55	46	P	P	01 52 05.3	+1.5
M27K				IAmb	IAmb	01 52 28.1	
	comp=Z,6.0nm,1.1s						
L27K	Beaver Creek,	21.76	44	P	P	01 52 04.9	-0.9
BCAR	Beaver Creek A	21.78	44	P	P	01 52 06.1	0.0
K27K	Chicken	21.94	42	P	P	01 52 08.1	+0.3
BMAR	Burnt Mountain	22.39	33	P	P	01 52 11.9	-0.6
EGAK	Eagle	22.56	40	P	P	01 52 13.1	-1.2
EGAK				IAmb	IAmb	01 52 37.4	
	comp=Z,4.0nm,0.9s						
DAWY	Dawson	23.08	43	P	P	01 52 20.4	+0.6
DAWY				IAmb	IAmb	01 52 51.9	
	comp=Z,3.5nm,0.8s						
INK	Inuvik	26.57	35	P	P	01 52 50.5	-1.1
	comp=Z,0.3nm,0.5s,baz=268,slow=11,SNR=2.3						
INK				PcP	PcP	01 56 14.6	0.0
	comp=Z,0.8nm,0.7s,baz=269,slow=2.4,SNR=4.4						
	comp=Z,0.3nm,0.5s						
INK	Inuvik	26.57	35	P	P	01 52 49.3	-2.4
YKA	Yellowknife Ar	34.15	47	P	P	01 53 58.8	+0.2
	comp=Z,0.2nm,0.6s,baz=277,slow=8.0,SNR=3.9						
YKA				PcP	PcP	01 56 34.5	-0.1
	comp=Z,0.6nm,0.8s,baz=276,slow=2.6,SNR=9.8						
	comp=Z,0.2nm,0.6s						
H11N2	WAKE ISLAND Hy	34.25	208	T	T	02 30 22.8	
	baz=18,slow=76,SNR=665						
H11N3	WAKE ISLAND Hy	34.26	208	T	T	02 30 28.2	
	baz=18,slow=76,SNR=657						
H11N1	WAKE ISLAND Hy	34.27	208	T	T	02 30 29.9	
	baz=18,slow=76,SNR=696						
USRK	Ussuriysk Ar.	34.64	279	P	P	01 54 02.9	-0.2
H11S1	WAKE ISLAND Hy	35.47	208	T	T	02 32 00.6	
	baz=18,slow=76,SNR=231						
H11S2	WAKE ISLAND Hy	35.48	208	T	T	02 31 59.6	
	baz=18,slow=76,SNR=224						
H11S3	WAKE ISLAND Hy	35.48	208	T	T	02 31 59.3	
	baz=18,slow=76,SNR=230						
KSRS	Korea Array	41.01	272	P	P	01 54 58.3	+1.4
	comp=Z,0.6nm,0.4s,baz=60,slow=7.2,SNR=2.4						
	comp=Z,0.6nm,0.4s						
MCMT	McKenzie Canyo	41.83	73	P	P	01 55 03.5	-0.3
BOZ	Bozeman (W)	42.14	71	P	P	01 55 06.8	+0.5
BOZ				IAmb	IAmb	01 55 40.1	
	comp=Z,3.2nm,1.4s						
PDAR	Pinedale Array	44.96	74	P	P	01 55 27.4	-1.6
	comp=Z,0.8nm,0.6s,baz=318,slow=3.9,SNR=9.3						
	comp=Z,0.8nm,0.6s						
PDAR	Pinedale Array	44.96	74	P	P	01 55 29.0	0.0
SONM	Songino Array	47.82	298	PcP	PcP	01 57 18.1	-1.3
	comp=Z,1.0nm,0.5s,baz=58,slow=2.4,SNR=4.7						
PV13	Radium Mtn., P	48.19	78	P	P	01 55 55.1	+0.8
FRB	Frobisher Bay	52.20	32	LR	LR	02 19 35.6	
	comp=Z,38nm,18.7s,baz=158,slow=37						
MKAR	Makanchi Array	61.03	310	P	P	01 57 25.6	-1.4
	comp=Z,0.2nm,0.6s,baz=63,slow=6.1,SNR=2.5						
	comp=Z,0.2nm,0.6s						
WRA	Warramunga Arr	83.07	226	P	P	01 59 38.0	-1.0
	comp=Z,0.6nm,0.9s,baz=36,slow=6.0,SNR=4.9						
	comp=Z,0.6nm,0.9s						
ASAR	Alice Springs	86.52	224	P	P	01 59 56.1	-0.2
	comp=Z,0.4nm,0.3s,baz=30,slow=5.8,SNR=5.0						
	comp=Z,0.4nm,0.3s						
ESDC	Sonseca Array	88.98	6	P	P	02 00 09.8	+1.8
	comp=Z,1.1nm,1.1s,baz=336,slow=7.1,SNR=4.0						
	comp=Z,1.1nm,1.1s						
H03N2	Juan Fernandez	119.86	107	T	T	04 17 36.0	
	baz=317,slow=77,SNR=77						
H03N1	Juan Fernandez	119.87	107	T	T	04 17 37.3	
	baz=317,slow=77,SNR=95						
H03N3	Juan Fernandez	119.87	107	T	T	04 17 36.6	
	baz=317,slow=77,SNR=102						
BOSA	Boshof	151.88	316	PKPbc	PKPbc	02 07 08.0	-0.1
	comp=Z,2.0nm,0.7s,baz=34,slow=5.3,SNR=3.3						

NEIC ***22*** *01:50:07.2±1.3, 6°.53N±0°.09×72°.8W±0°.1, h175^{km}±9^{km}, mb4.2/17, Error ellipse: s-maj=16.8km s-min=10.6km az=128.0*

IDC ***22*** *01:50:08.4±1.3, 6°.76N×73°.00W, h166^{km}±12^{km}, mb3.4/5, mbtmp4.1/10, Error ellipse: s-maj=24.6km s-min=16.6km az=133.0*

RSNC ***22*** *01:50:08.2±1.3, 6°.84N×73°.17W, h153^{km}±5^{km}, ML3.7, Mw3.9, Fault plane solution: NP1:φ$_{s}$131.00000°, δ24.00000°, λ-62.00000°.*

ISC 22 01:50:07.2±0.6**, 6°.86N**±0°.03×**73°.07W**±0°.04**, h153**^{km}±5^{km}**, n87, σ1**^{s}**75**/125**, mb4.2**/14**, 8C-8D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.29	203	⇓*i*P	Pn	01 50 28.8	+0.4
BARC				*e*S	Sn	01 50 44.0	-0.5
BARC				*i*		01 50 47.5	
	comp=Z,1μm,0.5s						
PAMC	Pamplona, Colo	0.60	38	⇓*i*P	Pn	01 50 31.6	+1.6
PAMC				*e*S	Sn	01 50 48.8	+1.4
PAMC				*i*		01 50 51.1	
	comp=Z,2μm,0.5s						
BRRC	Barranca, Sant	0.68	291	⇓*i*P	Pn	01 50 30.6	+0.7
BRRC				*e*S	Sn	01 50 47.7	+0.5
BRRC				*i*		01 50 49.7	
	comp=Z,663nm,0.1s						
PTBC	PUERTO BERRIO,	1.41	257	⇑*e*P	Pn	01 50 35.2	-1.0
PTBC				*e*S	Sn	01 50 56.4	-1.8
PTBC				*i*		01 50 58.5	
	comp=Z,549nm,0.6s						
SPBC	San Pablo de B	1.56	220	⇑*e*P	Pn	01 50 37.5	-0.2
SPBC				*i*		01 51 02.3	
	comp=Z,874nm,0.4s						
ZARC	Zaragoza, Cauc	1.88	290	⇓*e*P	Pn	01 50 40.8	-0.4
ZARC				*e*S	Sn	01 51 05.3	-2.0
ZARC				*i*		01 51 13.9	
	comp=Z,363nm,0.1s						
NORC	Norcasia	2.21	234	*e*P	Pn	01 50 44.3	-0.7
NORC				*e*S	Sn	01 51 11.7	-2.4
NORC				*i*		01 51 20.4	
	comp=Z,360nm,0.5s						
CHIC	Chingaza	2.31	197	⇑*i*P	Pn	01 50 46.7	0.0
CHIC				*e*S	Sn	01 51 14.7	-2.3
CHIC				*i*		01 51 19.9	
	comp=Z,446nm,0.5s						
ROSC	El Rosal	2.36	212	P	Pn	01 50 48.6	+1.4
	comp=Z,372nm,0.3s,baz=18,slow=3.4,SNR=127						
ROSC				S	Sn	01 51 14.7	-3.3
	comp=Z,298nm,0.6s,baz=79,slow=22,SNR=4.5						
ROSC	El Rosal	2.36	212		Pn	01 50 48.3	+1.1
ROSC	El Rosal	2.36	212	⇑*e*P	Pn	01 50 48.4	+1.1
ROSC				*e*S	Sn	01 51 16.8	-1.3
ROSC				*i*		01 51 27.1	
	comp=Z,639nm,0.3s						
UREC	San Jos de Ur	2.60	290	*e*P	Pn	01 50 48.5	-1.2
UREC				*e*S	Sn	01 51 18.6	-3.9
UREC				*i*		01 51 29.9	
	comp=Z,269nm,0.3s						
LL1C	La Loma 1 Cana	2.71	350	*e*P	Pn	01 50 53.2	+2.1
LL1C				*e*S	Sn	01 51 28.3	+3.3
VILC	Villavicencio,	2.80	193	*e*P	Pn	01 50 52.1	-0.3
VILC				*e*S	Sn	01 51 26.6	-0.7
VILC				*i*		01 51 29.6	
	comp=Z,513nm,0.5s						
GUY2C	Guyana, Caldas	2.80	235	*e*P	Pn	01 50 52.9	+0.1
GUY2C				*e*S	Sn	01 51 27.1	-0.7
GUY2C				IAML		01 51 39.1	
	comp=Z,378nm,0.5s						
PTGC	Puerto Gaitan,	2.80	161	⇑*e*P	Pn	01 50 52.0	-0.3
PTGC				*e*S	Sn	01 51 25.1	-2.0
PTGC				*i*		01 51 30.3	
	comp=Z,587nm,0.3s						
RECRC	Villamaria, Ca	2.95	230	*e*P	Pn	01 50 56.4	+1.8
NIZA	Niza - Manizal	2.98	233	*e*P	Pn	01 50 57.1	+2.2
NIZA				*e*S	Sn	01 51 33.8	+2.2
CBOC	Ciudad Bolivar	3.09	251	*e*P	Pn	01 50 56.3	+0.2
CBOC				*e*S	Sn	01 51 33.7	-0.1
CBOC				*i*		01 51 43.9	
	comp=Z,94nm,0.5s						
DBBC	Dabeiba	3.12	273	⇓*e*P	Pn	01 50 56.2	-0.2
DBBC				*e*S	Sn	01 51 32.0	-2.4
DBBC				*i*		01 51 35.4	
	comp=Z,104nm,0.4s						
SDV	Santo Domingo	3.14	50	P	Pn	01 50 58.4	+1.7
	comp=Z,34nm,0.3s,baz=247,slow=4.7,SNR=77						
SDV				S	Sn	01 51 34.5	-0.5
	comp=Z,289nm,0.4s,baz=106,slow=23,SNR=15						
SDV	Santo Domingo	3.14	50	Pn	Pn	01 50 57.6	+0.9
ARGC	Ariguani, Magd	3.20	339	*e*P	Pn	01 50 59.0	+1.8
ARGC				*e*S	Sn	01 51 37.6	+1.5
ARGC				*i*		01 51 49.2	
	comp=Z,97nm,0.3s						
ANIL	Santa Ana	3.31	225	⇓*e*P	Pn	01 51 00.0	+1.1
ANIL				*e*S	Sn	01 51 38.6	-0.3
PRAC	Prado	3.61	210	Pn	Pn	01 51 01.5	-1.1
PRAC	Prado	3.61	210	*e*P	Pn	01 51 01.7	-0.9
PRAC				*e*S	Sn	01 51 44.7	-0.9
PRAC				*i*		01 51 51.1	
	comp=Z,273nm,0.4s						
APAC	Apartado, Choc	3.63	287	⇓*e*P	Pn	01 51 02.7	-0.1
APAC				*e*S	Sn	01 51 44.5	-1.5
APAC				*i*		01 51 49.7	
	comp=Z,128nm,0.4s						
ORTC	Ortega, Tolima	3.65	217	*e*P	Pn	01 51 03.0	-0.1
ORTC				*e*S	Sn	01 51 46.8	+0.4
ORTC				*i*		01 51 50.2	
	comp=Z,193nm,0.4s						
SJCC	San Jacinto, C	3.67	325	⇓*e*P	Pn	01 51 02.5	-0.9
SJCC				*e*S	Sn	01 51 43.7	-3.3
SJCC				*i*		01 51 48.6	
	comp=Z,105nm,0.5s						
LCBC	Los crdobas,	3.82	301	*e*P	Pn	01 51 04.7	-0.6
LCBC				*e*S	Sn	01 51 44.7	-5.7
LCBC				*i*		01 51 53.8	
	comp=Z,81nm,0.5s						
CRJC	Cerrejon, Guaj	4.14	3	⇑*e*P	Pn	01 51 09.0	-0.5
CRJC				*e*S	Sn	01 51 55.2	-2.7
CRJC				*i*		01 52 01.4	
	comp=Z,95nm,0.4s						
GUVC	San Jose del G	4.31	174	*e*P	Pn	01 51 11.4	-0.3
GUVC				*e*S	Sn	01 51 58.8	-3.1
GUVC				*i*		01 52 04.8	
	comp=Z,153nm,0.5s						
YOTC	Yotoco, Valle	4.34	229	*e*P	Pn	01 51 11.3	-0.8
YOTC				*e*P	Pn	01 51 11.5	-0.6
YOTC				*e*S	Sn	01 52 07.5	+4.9
YOTC				*i*		01 52 12.2	
	comp=N,27nm,0.3s						
YOTC				*i*		01 52 13.6	
	comp=Z,40nm,0.8s						
SMRC	Santa Marta, M	4.43	345	*e*P	Pn	01 51 13.4	+0.2
SMRC				*e*S	Sn	01 52 00.6	-4.0
SMRC				*i*		01 52 05.3	
	comp=Z,96nm,0.4s						
MACC	Macarena, Meta	4.75	189	⇑*e*P	Pn	01 51 15.7	-1.7
MACC				*e*S	Sn	01 52 07.8	-4.4
MACC				*i*		01 52 14.3	
	comp=Z,222nm,0.9s						
BETC	Betania	4.78	210	*e*P	Pn	01 51 16.5	-1.4
BETC				*i*		01 52 15.5	
	comp=Z,41nm,0.4s						
URIC	Uribia, Colomb	4.93	12	Pn	Pn	01 51 18.9	-0.9
URIC	Uribia, Colomb	4.93	12	*e*P	Pn	01 51 19.2	-0.6
URIC				*e*S	Sn	01 52 14.0	-2.4
URIC				*i*		01 52 31.4	
	comp=Z,19nm,0.5s						
JAMC	Jamundi, Valle	5.10	225	*e*P	Pn	01 51 22.0	-0.3
JAMC				*e*S	Sn	01 52 19.9	-0.9
JAMC				*i*		01 52 28.4	
	comp=Z,17nm,0.4s						
GARC	Garzon, Huila	5.23	208	*e*P	Pn	01 51 22.9	-1.1
GARC				*e*S	Sn	01 52 18.6	-5.5
GARC				*i*		01 52 25.3	
	comp=Z,81nm,0.3s						
BAUV	El Baul	5.39	67	Pn	Pn	01 51 24.6	-1.3
POPC	Popayan, Colom	5.60	220	*e*P	Pn	01 51 28.5	-0.4
POPC				*e*S	Sn	01 52 31.2	-1.5
FLOC	Florencia	5.84	206	⇑*e*P	Pn	01 51 30.9	-1.0
FLOC				*e*S	Sn	01 52 36.7	-1.5
FLOC				*i*		01 53 08.8	
	comp=Z,12nm,0.4s						
BBAC	Balboa, Cauca	6.36	221	*e*P	Pn	01 51 39.6	+0.5
BBAC				*e*S	Sn	01 52 48.7	-2.2
BBAC				*i*		01 52 54.4	
	comp=Z,9.5nm,0.3s						
GCUF	Volcan Galeras	7.04	217	*e*P	Pn	01 51 48.8	+0.5
GCUF				*e*S	Sn	01 53 06.7	-0.8
GCUF				*i*		01 53 14.0	
	comp=Z,7.3nm,0.4s						
BIRV	Birongo	7.62	61	Pn	Pn	01 51 53.1	-2.5
TULM	Tulcn-Chalpat	7.71	218		Pn	01 51 56.0	-1.3
OTAV	Otavalo	8.49	219	Pn	Pn	01 52 07.2	-0.4
PCRV	Puerto La Cruz	8.97	68	P	Pn	01 52 15.5	+1.9
	comp=Z,6.2nm,0.6s,baz=72,slow=17,SNR=2.1						
PCRV				S	Sn	01 53 51.8	-1.5
	comp=Z,4.4nm,0.6s,baz=180,slow=20,SNR=1.3						
MTDJ	Mount Denham	12.11	339	Pn	Pn	01 52 57.7	+2.7
SDDR	Presa de Saban	12.17	8	Pn	Pn	01 52 58.4	+2.6
JTS	Las Juntas de	12.23	287	P	P	01 53 00.3	-2.4
	comp=Z,6.6nm,0.5s,baz=104,slow=19,SNR=1.5						
JTS	Las Juntas de	12.23	287		P	01 53 04.9	+2.2
ORTG	Ortega, Santa	12.73	287	P	P	01 53 10.4	+2.1
SJG	San Juan	13.06	30	P	Pn	01 53 06.6	-0.5
	comp=Z,4.2nm,0.4s,baz=194,slow=14,SNR=6.4						
SJG	San Juan	13.06	30	Pn	Pn	01 53 06.2	-1.0
MCRA	Macar, Loja	13.10	212	Pn	Pn	01 53 04.1	-3.7
GTBY	Guantanamo Bay	13.14	352	Pn	P	01 53 10.6	-2.1
GCPR	Guaynabo City	13.26	30	Pn	Pn	01 53 08.8	-1.0
CBYP	Canovanas	13.34	31	Pn	Pn	01 53 10.0	-0.8
LPAZ	La Paz	23.51	168	P	P	01 54 54.7	-10
PB10	IPOC Station P	30.29	175	P	P	01 55 57.3	-6.8
WHAR	Wooly Hollow	33.36	331	P	P	01 56 31.6	+0.7
WHAR				IAmb	IAmb	01 56 31.8	
	comp=Z,6.5nm,1.3s						
P48A	Milroy	34.31	343	P	P	01 56 40.1	+0.9
P48A				IAmb	IAmb	01 56 51.8	
	comp=Z,12nm,1.4s						
CCM	Cathedral Cave	35.16	335	P	P	01 56 47.5	+1.1
CCM				IAmb	IAmb	01 56 48.6	
	comp=Z,3.1nm,0.8s						
TXAR	Lajitas Array	36.47	312	P	P	01 56 58.4	+0.5
	comp=Z,0.4nm,0.5s,baz=124,slow=8.8,SNR=12						
TXAR				PcP	PcP	01 59 20.0	+1.4
	comp=Z,0.1nm,0.5s,baz=147,slow=7.5,SNR=1.8						
	comp=Z,0.4nm,0.5s						
TXAR	Lajitas Array	36.47	312	P	P	01 56 58.5	+0.7
TX31	Lajitas Ar. Si	36.48	312	P	P	01 56 57.7	-0.2
TX31				IAmb	IAmb	01 57 12.6	
	comp=Z,2.1nm,0.8s						
TX32	Lajitas Array	36.48	312	P	P	01 56 58.0	+0.1
P40A	Paris	36.74	335	P	P	01 57 00.4	+0.6
P40A				IAmb	IAmb	01 57 01.0	
	comp=Z,5.4nm,0.7s						
MNTX	Cornudas Mount	38.98	314	P	P	01 57 19.2	+0.4
LMN	Caledonia Moun	39.50	9		P	01 57 22.2	-0.7
D62A	Allapoint, All	40.22	4	P	P	01 57 28.7	-0.1
BATG	Bathurst New B	40.72	7	P	P	01 57 33.5	+0.7
BATG				IAmb	IAmb	01 57 40.7	
	comp=Z,17nm,1.4s						
ECSD	EROS Data Cent	42.13	334	P	P	01 57 44.1	-0.4
EYMN	Ely	43.85	342	P	P	01 57 58.7	+0.5
EYMN				IAmb	IAmb	01 58 14.7	
	comp=Z,11nm,1.2s						
WUAZ	Wupatki	45.23	315	P	P	01 58 08.9	-0.7
WUAZ				IAmb	IAmb	01 58 29.2	
	comp=Z,5.1nm,0.8s						
PDAR	Pinedale Array	48.08	324	P	P	01 58 32.6	+0.9
	comp=Z,0.3nm,0.5s,baz=131,slow=9.7,SNR=3.2						
	comp=Z,0.3nm,0.5s						
SCHQ	Schefferville	48.10	5	P	P	01 58 32.4	+1.0
	comp=Z,2.6nm,0.6s,baz=196,slow=5.8,SNR=6.9						
	comp=Z,2.6nm,0.6s						
YKA	Yellowknife Ar	63.24	340	P	P	02 00 18.9	-0.3
	comp=Z,0.7nm,0.7s,baz=133,slow=6.8,SNR=17						
	comp=Z,0.7nm,0.7s						
INK	Inuvik	73.01	340	P	P	02 01 20.2	+0.3
BMAR	Burnt Mountain	76.64	338	P	P	02 01 40.8	-0.1
PPLA	Purkeypile	78.97	333	P	P	02 01 54.1	+0.1
PPLA				IAmb	IAmb	02 02 10.8	
	comp=Z,9.0nm,1.3s						
ARCES	ARCESS Array B	86.62	20	P	P	02 02 34.3	+1.2
	comp=Z,2.9nm,1.0s,baz=250,slow=4.4,SNR=1.5						
	comp=Z,2.9nm,1.0s						
MKAR	Makanchi Array	122.27	20	PKP	PKPdf	02 08 43.6	-0.7
	comp=Z,0.1nm,0.4s,baz=344,slow=1.3,SNR=1.6						
ASAR	Alice Springs	149.18	234	PKPbc	PKPbc	02 09 37.2	-1.4
	comp=Z,0.6nm,0.5s,baz=114,slow=3.6,SNR=6.2						
WRA	Warramunga Arr	150.40	241	PKPbc	PKPbc	02 09 40.5	-1.2
	comp=Z,0.6nm,0.4s,baz=108,slow=2.7,SNR=30						

ROM 22 02:02:40.9±0.2**, 42°.62N**±0°.01×**13°.35E**±0°.01**, h11**^{km}±1^{km}**, ML1.0**/4**, 3C-2D, Error ellipse: s-maj=1.3km s-min=1.0km az=223.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RM33	Pellescritta (	0.15	223	⇓P	Pg	02 02 45.0	+0.6
RM33				S	Sg	02 02 47.7	+0.9
RM33				AML	AML		
	comp=E,50μm,0.3s						
RM33				AML	AML		
	comp=N,52μm,0.3s						
T1214	Arquata del Tr	0.18	323	P	Pb	02 02 47.2	+0.9
T1214				S	Sg	02 02 48.1	+0.4
T1218	Civita (PG)	0.18	287	⇑P	Pg	02 02 45.5	+0.6
T1218				S	Sg	02 02 48.9	+1.1
TERO	Teramo	0.19	88	⇑P	Pg	02 02 45.6	+0.6
TERO				S	Sg	02 02 48.9	+1.1
TERO				AML	AML		
	comp=E,122μm,0.7s						
TERO				AML	AML		
	comp=N,145μm,0.2s						
GIGS	Gran Sasso	0.23	136	P	Pg	02 02 46.4	+0.6
GIGS				S	Sg	02 02 50.0	+1.0
GIGS				AML	AML		
	comp=N,13μm,0.2s						
GIGS				AML	AML		
	comp=E,20μm,0.6s						
T1241	Roccafluvione,	0.24	14	⇑P	Pg	02 02 46.7	+0.7
T1241				S	Sg	02 02 50.7	+1.2
T1245	Castelsantange	0.27	333	⇓P	Pb	02 02 47.8	-0.1
T1245				S	Sg	02 02 49.6	-0.6
T1245				AML	AML		
	comp=N,112μm,1.1s						
T1245				AML	AML		
	comp=E,79μm,0.2s						
T1219	Muccia, Frazio	0.51	330	S	Sg	02 02 57.5	0.0

ROM 22 02:03:30.3±0.1**, 43°.044N**±0°.003×**13°.015E**±0°.005**, h7**^{km}**, ML1.3**/16**, 12C-4D, Error ellipse: s-maj=0.3km s-min=0.3km az=239.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1219	Muccia, Frazio	0.01	334	P	Pg	02 03 31.4	-0.3
T1219				S	Sg	02 03 32.0	-0.7
T1220	Camerino, Fraz	0.09	39	⇑P	Pg	02 03 32.8	+0.3
T1220				S	Sg	02 03 34.5	+0.7
T1220				AML	AML		
	comp=E,948μm,0.2s						
T1220				AML	AML		
	comp=N,1017μm,0.2s						
T1220				AML	AML		
	comp=E,948μm,0.2s						
T1220				AML	AML		
	comp=N,1022μm,0.2s						
T1216	Preci, Frazion	0.15	179	⇑P	Pg	02 03 34.1	+0.6
T1216				S	Sg	02 03 37.2	+1.5
T1216				AML	AML		
	comp=E,167μm,0.3s						
T1216				AML	AML		
	comp=N,239μm,0.2s						
T1216				AML	AML		
	comp=E,166μm,0.3s						
T1256	Bolognola (MC)	0.16	104	P	Pg	02 03 34.3	+0.7
T1256				S	Sg	02 03 37.3	+1.3
T1256				AML	AML		
	comp=E,95μm,0.8s						
T1256				AML	AML		
	comp=E,95μm,0.8s						
T1256				AML	AML		
	comp=N,150μm,1.4s						
T1256				AML	AML		
	comp=N,150μm,0.6s						
T1256				AML	AML		
	comp=E,95μm,1.2s						
SNTG	Esanatoglia	0.22	346	P	Pg	02 03 35.3	+0.7
SNTG				S	Sg	02 03 39.4	+1.8
SNTG				AML	AML		
	comp=N,57μm,0.7s						
SNTG				AML	AML		
	comp=E,67μm,1.2s						
SNTG				AML	AML		
	comp=E,67μm,0.8s						
T1245	Castelsantange	0.23	146	P	Pg	02 03 35.5	+0.6
T1245				S	Sg	02 03 39.6	+1.7
T1245				AML	AML		
	comp=E,124μm,0.5s						
T1245				AML	AML		
	comp=N,157μm,1.0s						
T1245				AML	AML		
	comp=E,124μm,1.5s						
GUMA	Gualdo di Mace	0.24	85	⇑P	Pg	02 03 35.9	+0.9
GUMA				S	Sg	02 03 40.4	+2.2
GUMA				AML	AML		
	comp=E,458μm,0.3s						
GUMA				AML	AML		
	comp=N,334μm,0.2s						
ASSB	Assisi San Ben	0.26	270	⇑P	Pg	02 03 36.1	+0.7
ASSB				S	Sb	02 03 40.9	-1.2
ASSB				AML	AML		
	comp=N,113μm,0.8s						
ASSB				AML	AML		
	comp=N,113μm,1.2s						
ASSB				AML	AML		
	comp=E,75μm,1.4s						
EL6	Elcito	0.29	13	⇓P	Pg	02 03 36.7	+0.6
EL6				S	Sb	02 03 41.8	-1.3
EL6				AML	AML		
	comp=E,126μm,0.3s						
EL6				AML	AML		
	comp=E,126μm,0.3s						
EL6				AML	AML		
	comp=N,142μm,0.3s						
EL6				AML	AML		
	comp=E,126μm,1.7s						
T1212	Cascia, Frazio	0.29	176	⇑P	Pg	02 03 36.8	+0.7
T1212				S	Sb	02 03 41.8	-1.2
ATCC	AVT- Casa Cast	0.31	297	⇑P	Pg	02 03 37.1	+0.7
ATCC				S	Sb	02 03 42.6	-0.8
ATCC				AML	AML		
	comp=E,101μm,0.6s						
ATCC				AML	AML		
	comp=N,87μm,0.4s						
ATCC				AML	AML		
	comp=E,101μm,1.4s						
FOSV	Fossato di Vic	0.31	324	⇑P	Pb	02 03 37.5	-0.8
FOSV				S	Sb	02 03 42.4	-1.1
FOSV				AML	AML		
	comp=E,29μm,1.1s						
FOSV				AML	AML		
	comp=N,42μm,1.1s						
T1214	Arquata del Tr	0.32	153	⇓P	Pg	02 03 37.1	+0.5
T1214				S	Sb	02 03 42.6	-1.2
CING	Cingoli	0.36	22	⇓P	Pg	02 03 37.8	+0.5
CING				S	Sb	02 03 43.8	-1.0
CING				AML	AML		
	comp=N,65μm,0.1s						
CING				AML	AML		
	comp=E,65μm,0.1s						
T1241	Roccafluvione,	0.36	121	⇑P	Pg	02 03 37.9	+0.6
T1241				S	Sb	02 03 44.2	-0.7
T1241				AML	AML		
	comp=E,33μm,1.0s						
T1241				AML	AML		
	comp=N,37μm,0.8s						
T1241				AML	AML		
	comp=E,33μm,1.0s						
T1218	Civita (PG)	0.38	169	⇑P	Pg	02 03 38.2	+0.5
T1218				S	Sb	02 03 44.5	-1.1
MOMA	Monte Martano	0.41	234	⇑P	Pg	02 03 39.0	+0.8
MOMA				S	Sb	02 03 46.2	-0.1
MOMA				AML	AML		
	comp=E,37μm,0.9s						
MOMA				AML	AML		
	comp=N,41μm,0.6s						
MURB	Monte Urbino	0.42	302	⇑P	Pg	02 03 39.2	+0.7
MURB				S	Sb	02 03 46.6	0.0
MURB				AML	AML		
	comp=E,76μm,0.2s						
MURB				AML	AML		
	comp=N,57μm,0.4s						
SSFR	Montelago di S	0.43	337	⇓P	Pg	02 03 39.1	+0.5
SSFR				S	Sb	02 03 46.6	-0.3
SSFR				AML	AML		
	comp=E,61μm,1.2s						
SSFR				AML	AML		

	comp=N,71μm,0.7s						
SSFR				AML	AML		
	comp=E,61μm,0.8s						
SMA1	SAN MARTINO	0.48	150	⇑P	Pg	02 03 39.8	+0.3
SMA1				AML	AML		
	comp=E,27μm,1.6s						
SMA1				AML	AML		
	comp=N,24μm,1.5s						
SMA1				AML	AML		
	comp=N,24μm,0.5s						
TERO	Teramo	0.60	134	P	Pg	02 03 42.0	+0.1
TERO				S	Sb	02 03 51.8	-0.2
SSP9	Sansepolcro	0.83	310	S	Sn	02 04 00.5	-0.5

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*IDC **22** 02:05:35.0±1.4, 2°.58N×125°.72E, h0km, mb3.5/4, mbtmp3.6/4, MS3.6/3, Error ellipse: s-maj=155.0km s-min=22.6km az=68.0*

ISC 22 02:05:36.9±1.3**, 2°.4N**±0°.3×**125°.3E**±0°.8**, h10km, n8,** σ1^s.**69**/5**, mb3.6**/4**, 1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKMP	Bagumbayan, Su	4.17	350	⇓eP	Pn	02 06 41.2	+0.5
DAV	Davao City (W)	4.66	4	LR	LR	02 08 51.7	
	comp=Z,154nm,18.0s,baz=26,slow=44						
WRA	Warramunga Arr	23.90	159	P	P	02 10 49.7	-1.4
	1.4nm,0.8s,baz=338,slow=10,SNR=7.6						
	1.4nm,0.8s						
ASAR	Alice Springs	27.22	163	P	P	02 11 23.0	+1.8
	0.2nm,0.3s,baz=346,slow=11,SNR=1.7						
	0.2nm,0.3s						
HNR	Honiara	36.47	109	LR	LR	02 28 25.5	
	comp=Z,675nm,19.6s,baz=322,slow=38						
PALK	Pallekele	44.67	278	LR	LR	02 36 28.0	
	comp=Z,29nm,18.3s,baz=218,slow=41						
SONM	Songino Array	48.13	343	P	P	02 14 16.7	-0.5
	0.3nm,0.3s,baz=152,slow=9.4,SNR=1.8						
	0.3nm,0.3s						
MKAR	Makanchi Array	57.85	326	P	P	02 15 28.8	-0.1
	0.3nm,0.5s,baz=116,slow=8.7,SNR=6.7						
	0.3nm,0.5s						

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*KRSC **22** 02:28:49.6±0.9, 53°.53N×160°.97E, h41km±16km, Ml4.4*
*MOS **22** 02:28:51.2±0.6, 53°.51N×160°.91E, h49km, mb4.0/4, Error ellipse: s-maj=9.2km s-min=5.0km az=77.0*
*IDC **22** 02:28:55.9±1.9, 53°.80N×160°.26E, h82km±20km, mb3.5/12, mbtmp3.8/12, MS2.8/1, Error ellipse: s-maj=26.1km s-min=17.3km az=141.0*

ISC 22 02:28:52.0±1.1**, 53°.57N**±0°.04×**160°.84E**±0°.04**, h45**km±11km**, n90,** σ1^s.**43**/101**, mb3.6**/13**, 1C-2D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	0.68	227	PN	Pn	02 29 04.8	-0.5
SPN				S	Sn	02 29 14.3	-0.5
SPN	Mys Shipunski	0.68	227	eP	Pn	02 29 04.8	-0.5
SPN				eS	Sn	02 29 14.3	-0.5
NLC	Nalytchevo	0.98	247	PN	Pn	02 29 09.8	+0.5
NLC				S	Sn	02 29 22.6	+0.6
NLC	Nalytchevo	0.98	247	eP	Pn	02 29 09.8	+0.5
NLC				eS	Sn	02 29 22.6	+0.6
SMAR	Somma	1.26	257	PN	Pn	02 29 13.1	-0.2
SMAR	Somma	1.26	257	eP	Pn	02 29 13.1	-0.2
UGLR	Uglovaya	1.26	254	PN	Pn	02 29 13.4	+0.2
UGLR	Uglovaya	1.26	254	eP	Pn	02 29 13.4	+0.2
AVH	Avacha	1.30	257	PN	Pn	02 29 13.9	+0.2
AVH				S	Sn	02 29 30.7	+0.8
AVH	Avacha	1.30	257	eP	Pn	02 29 13.9	+0.2
AVH				eS	Sn	02 29 30.7	+0.8
KRX	Arik	1.33	262	PN	Pn	02 29 14.0	-0.2
KRX	Arik	1.33	262	eP	Pn	02 29 14.0	-0.2
KOK	Koryaka	1.35	259	PN	Pn	02 29 14.5	+0.1
KOK	Koryaka	1.35	259	eP	Pn	02 29 14.5	+0.1
DALK	Dalny	1.36	248	PN	Pn	02 29 14.3	-0.2
DALK	Dalny	1.36	248	eP	Pn	02 29 14.2	-0.2
PET	Petropavlovsk	1.42	248	PN	Pn	02 29 15.3	0.0
PET				S	Sn	02 29 32.7	-0.1
PET	Petropavlovsk	1.42	248	eP	Pn	02 29 15.3	0.0
PET				eS	Sn	02 29 32.7	-0.1
INSR	Institute	1.43	251	eP	Pn	02 29 15.6	+0.2
TUMD	Tumrok D	1.66	351	eP	Pn	02 29 18.6	0.0
TUMD				eS	Sn	02 29 37.9	-0.9
GNL	Ganaly	1.73	275	PN	Pn	02 29 20.3	+0.6
GNL	Ganaly	1.73	275	eP	Pn	02 29 20.3	+0.6
TUMR	Tumrok	1.77	347	PN	Pn	02 29 18.6	-1.6
TUMR				S	Sn	02 29 37.9	-3.6
TUMR	Tumrok	1.77	347	eP	Pn	02 29 21.1	+0.9
KRMR	Karymshinskiy	1.79	247	PN	Pn	02 29 20.7	+0.4
KRMR				S	Sn	02 29 43.3	+1.4
KRMR	Karymshinskiy	1.79	247	eP	Pn	02 29 20.7	+0.4
KRMR				eS	Sn	02 29 43.3	+1.4
MTVR	Mutnovka	1.94	237	PN	Pn	02 29 22.7	+0.2
MTVR	Mutnovka	1.94	237	eP	Pn	02 29 22.7	+0.2
PEA0B	Petropavlovsk-	1.94	258	c iPN	Pn	02 29 23.1	+0.7
PEA0B				eS	Sn	02 29 47.1	+1.5
PETK	Petropavlovsk-	1.94	258	P	Pn	02 29 21.8	-0.6
	54nm,0.4s,baz=84,slow=16,SNR=32						
PETK				S	Sn	02 29 45.4	-0.2
	40nm,0.4s,baz=54,slow=16,SNR=3.6						
PETK				LR	LR	02 29 56.3	
	comp=Z,32nm,19.6s,baz=91,slow=36						
GRL	Gorelyy	1.96	240	PN	Pn	02 29 23.4	+0.6
GRL	Gorelyy	1.96	240	eP	Pn	02 29 23.4	+0.6
KMNR	Kamenistaya	2.22	351	PN	Pn	02 29 28.0	+1.6
KMNR	Kamenistaya	2.22	351	eP	Pn	02 29 28.0	+1.6
APC	Apacha	2.31	255	PN	Pn	02 29 28.7	+1.3
APC	Apacha	2.31	255	eP	Pn	02 29 28.7	+1.3
BZP	Bezymyannyi-Pe	2.36	356	eP	Pn	02 29 29.7	+1.4
BZGR	Bezymyannyi-Gr	2.38	358	PN	Pn	02 29 30.4	+1.8
BZGR	Bezymyannyi-Gr	2.38	358	eP	Pn	02 29 30.4	+1.8
BZMR	Bezymyannaya	2.38	355	PN	Pn	02 29 30.4	+1.7
BZMR	Bezymyannaya	2.38	355	eP	Pn	02 29 30.4	+1.7
KIRR	Kirishev	2.41	353	PN	Pn	02 29 30.7	+1.7
KIRR	Kirishev	2.41	353	eP	Pn	02 29 30.7	+1.7
BZWR	Bezymyannyi-We	2.41	355	PN	Pn	02 29 30.9	+1.8
BZWR	Bezymyannyi-We	2.41	355	eP	Pn	02 29 30.9	+1.8
KPT	Kopyto	2.43	352	PN	Pn	02 29 31.0	+1.7
KPT	Kopyto	2.43	352	eP	Pn	02 29 31.0	+1.7
KDTR	Khodutka, Kamc	2.44	225	PN	Pn	02 29 29.6	+0.4
KDTR	Khodutka, Kamc	2.44	225	eP	Pn	02 29 29.6	+0.4
ESO	Esso	2.67	333	PN	Pn	02 29 34.8	+2.3
ESO	Esso	2.67	333	eP	Pn	02 29 34.8	+2.3
KLY	Klyuchi	2.76	358	PN	Pn	02 29 35.2	+1.6
KLY	Klyuchi	2.76	358	eP	Pn	02 29 35.2	+1.6
SRDR	Sredinnyy	2.83	347	PN	Pn	02 29 35.3	+0.6
SRDR	Sredinnyy	2.83	347	eP	Pn	02 29 35.3	+0.6
KBTR	Krutoberegovo	2.88	22	PN	Pn	02 29 36.7	+1.4
KBTR				S	Sn	02 30 11.0	+2.2
KBTR	Krutoberegovo	2.88	22	eP	Pn	02 29 36.7	+1.4
KBTR				eS	Sn	02 30 11.0	+2.2
KBG	Krutoberegovo	2.90	21	PN	Pn	02 29 36.4	+0.8
KBG	Krutoberegovo	2.90	21	eP	Pn	02 29 36.4	+0.8
SMKR	Semkarok	3.04	7	PN	Pn	02 29 39.4	+1.8
SMKR	Semkarok	3.04	7	eP	Pn	02 29 39.4	+1.8
SRKR	Sorokina	3.10	3	PN	Pn	02 29 40.0	+1.6
SRKR	Sorokina	3.10	3	eP	Pn	02 29 40.0	+1.6
PAU	Pauzhetka	3.24	231	PN	Pn	02 29 43.5	+3.3
PAU	Pauzhetka	3.24	231	eP	Pn	02 29 43.5	+3.3
BKI	Bering	3.42	59	PN	Pn	02 29 43.4	+0.8
BKI				S	Sn	02 30 19.3	-2.5
BKI	Bering	3.42	59	eP	Pn	02 29 43.4	+0.8
BKI				eS	Sn	02 30 19.3	-2.5
KLR	Kul'dur	18.60	268	⇓eP	P	02 33 03.7	-1.5
KLR				pmax	pmax		
	comp=Z,9.0nm,3.0s						
TIXI	Tiksi	22.84	334	⇓eP	P	02 33 50.3	-0.5
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MJAR	Matsushiro Arr	23.19	232	LR	LR	02 43 33.2	
	comp=Z,23nm,18.7s,baz=184,slow=38						
ILAR	Eielson Array	28.16	46	P	P	02 34 39.7	+0.2
	comp=Z,0.9nm,0.8s,baz=263,slow=7.8,SNR=4.2						
	comp=Z,0.9nm,0.8s						
INK	Inuvik	33.22	38	P	P	02 35 24.6	+0.6
	comp=Z,0.9nm,0.6s,baz=270,slow=11,SNR=5.2						
	comp=Z,0.9nm,0.6s						
H11N2	WAKE ISLAND Hy	34.09	170	T	T	03 11 50.0	
	baz=354,slow=76,SNR=174						
H11N3	WAKE ISLAND Hy	34.11	170	T	T	03 11 55.1	
	baz=354,slow=76,SNR=164						
H11N1	WAKE ISLAND Hy	34.11	170	T	T	03 12 03.1	
	baz=354,slow=76,SNR=161						
H11S1	WAKE ISLAND Hy	35.28	170	T	T	03 13 23.3	
	baz=352,slow=76,SNR=6.5						
H11S3	WAKE ISLAND Hy	35.29	170	T	T	03 13 24.2	
	baz=352,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	35.30	170	T	T	03 13 30.4	
	baz=352,slow=76,SNR=6.4						
YKA	Yellowknife Ar	42.51	43	P	P	02 36 43.1	+0.8
	comp=Z,0.5nm,0.6s,baz=298,slow=7.7,SNR=7.6						
	comp=Z,0.5nm,0.6s						
YKA	Yellowknife Ar	42.51	43	eP	P	02 36 43.4	+1.0
ARCES	ARCESS Array B	52.98	342	P	P	02 37 59.7	-3.6
	comp=Z,3.6nm,0.9s,baz=40,slow=8.8,SNR=2.1						
	comp=Z,3.6nm,0.9s						
NVAR	Mina Array Bea	55.16	71	P	P	02 38 22.7	+2.8
	comp=Z,0.6nm,0.8s,baz=290,slow=5.7,SNR=3.5						
	comp=Z,0.6nm,0.8s						
PDAR	Pinedale Array	56.90	62	P	P	02 38 33.8	+1.5
	comp=Z,0.3nm,0.6s,baz=343,slow=3.9,SNR=4.3						
	comp=Z,0.3nm,0.6s						
FINES	FINESS Array B	59.87	337	P	P	02 38 51.0	-1.4
	comp=Z,4.0nm,1.0s,baz=5.7,slow=5.7,SNR=4.6						
	comp=Z,4.0nm,1.0s						
FINES	FINESS Array B	59.87	337	i P	P	02 38 52.2	-0.2
FINES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NOA	NORSAR Array B	63.21	344	P	P	02 39 13.5	-1.5
	comp=Z,2.3nm,1.1s,baz=14,slow=5.8,SNR=2.2						
	comp=Z,2.3nm,1.1s						
TXAR	Lajitas Array	70.04	68	P	P	02 40 00.5	+1.3
	comp=Z,0.3nm,0.4s,baz=302,slow=5.3,SNR=6.2						
	comp=Z,0.3nm,0.4s						
GERES	GERESS Array B	74.24	338	P	P	02 40 20.3	-3.6
	comp=Z,0.2nm,0.5s,baz=312,slow=12,SNR=2.3						
	comp=Z,0.2nm,0.5s						
WRA	Warramunga Arr	76.70	206	P	P	02 40 37.8	-0.2
	comp=Z,0.6nm,0.9s,baz=18,slow=6.1,SNR=3.1						
	comp=Z,0.6nm,0.9s						
ASAR	Alice Springs	80.38	205	P	P	02 40 58.1	-0.2
	comp=Z,0.5nm,0.7s,baz=25,slow=6.2,SNR=4.5						
	comp=Z,0.5nm,0.7s						

ROM 22 02:45:35.7±0.1**, 42°.669N**±0°.004×**13°.189E**±0°.005**, h11**km**, ML0.9**/5**, 3C-4D, Error ellipse: s-maj=0.5km s-min=0.4km az=221.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1214	Arquata del Tr	0.09	9	⇓P	Pg	02 45 38.8	+0.3
T1214				S	Sg	02 45 40.9	+0.4
T1212	Cascia, Frazio	0.14	308	⇓P	Pg	02 45 39.5	+0.5
T1212				S	Sg	02 45 41.8	+0.5
T1212				AML	AML		
	comp=E,97μm,0.3s						
T1212				AML	AML		
	comp=N,104μm,0.3s						
T1212				AML	AML		
	comp=E,97μm,0.3s						
T1212				AML	AML		
	comp=N,104μm,0.3s						
RM33	Pellescritta (	0.16	173	P	Pg	02 45 40.0	+0.7
RM33				S	Sg	02 45 43.1	+1.1
RM33				AML	AML		
	comp=E,45μm,1.0s						
RM33				AML	AML		
	comp=N,96μm,0.2s						
RM33				AML	AML		
	comp=E,45μm,1.0s						
RM33				AML	AML		
	comp=N,96μm,0.2s						
T1245	Castelsantange	0.19	360	P	Pg	02 45 40.3	+0.4
T1245				S	Sg	02 45 44.0	+1.3
T1245				AML	AML		
	comp=E,56μm,0.3s						
T1245				AML	AML		
	comp=N,74μm,0.6s						
T1217	Poggiodomo (PG	0.19	283	⇑P	Pg	02 45 40.5	+0.5
T1217				S	Sg	02 45 43.8	+1.0
T1216	Preci, Frazion	0.25	331	⇓P	Pg	02 45 41.5	+0.4
T1216				S	Sb	02 45 46.1	-0.8
T1241	Roccafluvione,	0.26	44	⇑P	Pg	02 45 41.4	+0.4
T1241				S	Sg	02 45 45.6	+0.9
T1241				AML	AML		
	comp=E,32μm,0.2s						
T1241				AML	AML		
	comp=N,19μm,1.1s						
TERO	Teramo	0.31	98	P	Pg	02 45 42.2	+0.2
TERO				AML	AML		
	comp=E,25μm,1.4s						
TERO				AML	AML		
	comp=N,33μm,0.5s						
FDMO	Fiordimonte	0.38	349	P	Pg	02 45 43.2	0.0
T1219	Muccia, Frazio	0.41	341	⇑P	Pg	02 45 44.1	+0.2
T1219				S	Sb	02 45 50.4	-1.0
T1220	Camerino, Fraz	0.45	351	⇓P	Pg	02 45 44.8	+0.2
T1220				S	Sb	02 45 52.1	-0.3

ROM 22 02:46:33.2±0.0**, 42°.569N**±0°.002×**13°.333E**±0°.002**, h10**km**, ML1.5**/13**, 7C-6D, Error ellipse: s-maj=0.2km s-min=0.2km az=204.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMA1	SAN MARTINO	0.06	1	P	Pg	02 46 35.8	+0.3
SMA1				S	Sg	02 46 37.2	+0.1
SMA1				AML	AML		
	comp=E,3610μm,0.4s						
SMA1				AML	AML		
	comp=N,2470μm,0.3s						
CAMP	Campotosto	0.07	121	P	Pg	02 46 35.8	+0.3
CAMP				S	Sg	02 46 37.2	+0.1
CAMP				AML	AML		
	comp=E,718μm,0.2s						
CAMP				AML	AML		
	comp=N,710μm,0.3s						
RM33	Pellescritta (	0.11	236	P	Pg	02 46 36.5	+0.5
RM33				S	Sg	02 46 38.4	+0.5
RM33				AML	AML		
	comp=E,942μm,1.3s						
RM33				AML	AML		
	comp=E,975μm,1.3s						
RM33				AML	AML		
	comp=E,942μm,1.3s						
RM33				AML	AML		
	comp=N,913μm,0.2s						
RM33				AML	AML		
	comp=N,867μm,0.2s						
RM33				AML	AML		
	comp=N,913μm,0.2s						
RM33				AML	AML		
	comp=E,942μm,0.7s						
RM33				AML	AML		
	comp=E,975μm,0.7s						
T1246	Crognaleto (TE	0.12	83	P	Pg	02 46 36.7	+0.6
T1246				S	Sg	02 46 38.9	+0.6
T1247	Pizzolo (AQ)	0.13	191	⇓P	Pg	02 46 36.9	+0.7
T1247				S	Sg	02 46 39.5	+1.1
T1247				AML	AML		
	comp=E,548μm,0.3s						
T1247				AML	AML		
	comp=N,622μm,0.3s						
T1218	Civita (PG)	0.19	302	P	Pg	02 46 37.8	+0.5
T1218				S	Sg	02 46 40.9	+0.8
T1218				AML	AML		
	comp=N,393μm,0.2s						
T1218				AML	AML		
	comp=N,392μm,0.2s						
T1218				AML	AML		
	comp=N,393μm,0.2s						
T1218				AML	AML		
	comp=E,150μm,0.2s						
TERO	Teramo	0.21	75	⇑P	Pg	02 46 38.1	+0.6
TERO				S	Sg	02 46 41.6	+1.1
TERO				AML	AML		
	comp=N,306μm,0.1s						
TERO				AML	AML		
	comp=E,228μm,0.2s						
GIGS	Gran Sasso	0.21	124	P	Pg	02 46 38.2	+0.6
GIGS				S	Sg	02 46 41.6	+1.0
GIGS				AML	AML		
	comp=N,34μm,0.1s						
GIGS				AML	AML		
	comp=E,71μm,0.4s						
T1214	Arquata del Tr	0.21	334	P	Pg	02 46 38.4	+0.7
T1214				S	Sg	02 46 42.1	+1.4
AQU	L'Aquila	0.22	167	P	Pg	02 46 38.5	+0.7
AQU				S	Sg	02 46 42.6	+1.7
AQU				AML	AML		
	comp=E,83μm,0.4s						
AQU				AML	AML		
	comp=N,96μm,0.3s						
T1222	Castel Sant’An	0.28	233	P	Pg	02 46 39.4	+0.6
T1222				S	Sb	02 46 43.9	-1.1
T1212	Cascia, Frazio	0.28	311	P	Pg	02 46 39.4	+0.5
T1212				S	Sg	02 46 43.9	+1.2
T1212				AML	AML		
	comp=E,67μm,0.6s						
T1212				AML	AML		
	comp=N,68μm,0.5s						
T1241	Roccafluvione,	0.30	14	P	Pg	02 46 39.7	+0.5
T1241				S	Sb	02 46 44.6	-1.0
T1241				AML	AML		
	comp=N,70μm,1.2s						
T1241				AML	AML		
	comp=E,85μm,0.5s						
T1241				AML	AML		
	comp=N,70μm,1.2s						
T1241				AML	AML		
	comp=N,70μm,0.8s						
T1241				AML	AML		
	comp=E,85μm,1.5s						
T1245	Castelsantange	0.31	340	P	Pg	02 46 40.1	+0.7
T1245				S	Sb	02 46 45.1	-0.9
T1245				AML	AML		
	comp=E,95μm,1.3s						
T1245				AML	AML		
	comp=E,95μm,0.7s						
T1245				AML	AML		
	comp=N,158μm,1.0s						
T1217	Poggiodomo (PG	0.33	296	P	Pg	02 46 40.4	+0.6
T1217				S	Sb	02 46 45.5	-1.1
T1217				AML	AML		
	comp=E,116μm,1.6s						
T1217				AML	AML		
	comp=N,654μm,1.3s						
T1217				AML	AML		
	comp=E,116μm,1.6s						
T1217				AML	AML		
	comp=N,654μm,1.3s						
T1217				AML	AML		
	comp=E,116μm,0.4s						
T1217				AML	AML		
	comp=N,654μm,0.7s						
T1211	Morro Reatino	0.35	264	P	Pg	02 46 40.7	+0.4
T1211				S	Sg	02 46 46.0	+1.1
MC2	Monte Cornacci	0.36	343	P	Pg	02 46 40.9	+0.5
MC2				S	Sb	02 46 47.0	-0.6
T1216	Preci, Frazion	0.40	324	⇓P	Pb	02 46 41.7	-0.6
T1216				AML	AML		
	comp=N,78μm,0.6s						
T1216				AML	AML		
	comp=E,61μm,1.5s						
T1216				AML	AML		
	comp=N,78μm,0.6s						
T1216				AML	AML		
	comp=N,78μm,1.4s						
VCEL	Villa Celiera	0.41	115	P	Pb	02 46 42.6	0.0
VCEL				AML	AML		
	comp=E,100μm,0.5s						
VCEL				AML	AML		
	comp=N,110μm,1.1s						
VCEL				AML	AML		
	comp=N,110μm,0.9s						
VCEL				AML	AML		
	comp=E,100μm,1.5s						
ARRO	Arrone	0.42	272	⇓P	Pg	02 46 41.9	+0.5
T1256	Bolognola (MC)	0.44	350	⇓P	Pg	02 46 42.5	+0.6
T1256				AML	AML		
	comp=E,34μm,0.7s						
T1256				AML	AML		
	comp=N,39μm,1.4s						
T1256				AML	AML		
	comp=N,39μm,1.4s						
OFFI	Offida	0.45	35	⇓P	Pb	02 46 43.5	+0.4
OFFI				AML	AML		
	comp=E,98μm,1.2s						
OFFI				AML	AML		
	comp=N,127μm,0.6s						
T0110	Collepietro	0.48	136	⇑P	Pb	02 46 43.3	-0.3
T0110				AML	AML		
	comp=E,58μm,0.8s						
T0110				AML	AML		
	comp=N,48μm,0.7s						
T0110				AML	AML		
	comp=E,58μm,1.2s						
GUMA	Gualdo di Mace	0.49	0	⇑P	Pb	02 46 43.7	-0.3
GUMA				AML	AML		
	comp=E,123μm,0.3s						
GUMA				AML	AML		
	comp=N,90μm,0.9s						
GUMA				AML	AML		
	comp=N,90μm,1.1s						
FDMO	Fiordimonte	0.50	339	⇑P	Pg	02 46 43.3	+0.4
FDMO				AML	AML		
	comp=E,27μm,1.6s						
FDMO				AML	AML		
	comp=N,31μm,0.2s						
FDMO				AML	AML		
	comp=E,27μm,0.4s						
T1219	Muccia, Frazio	0.54	334	⇑P	Pg	02 46 43.9	+0.2
T1219				S	Sb	02 46 52.6	-0.1
T1220	Camerino, Fraz	0.57	342	⇓P	Pg	02 46 44.5	+0.2
MOMA	Monte Martano	0.61	293	S	Sb	02 46 55.0	+0.4
MOMA				AML	AML		
	comp=E,31μm,0.3s						
MOMA				AML	AML		
	comp=N,30μm,0.7s						
MOMA				AML	AML		
	comp=E,31μm,1.7s						
MOMA				AML	AML		
	comp=N,30μm,1.3s						
EL6	Elcito	0.78	347	⇑P	Pg	02 46 48.3	+0.1
CING	Cingoli	0.81	353	⇑P	Pb	02 46 49.2	-0.2
SACR	S. Croce Del S	1.56	138	S	Sg	02 47 24.9	+1.7

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*DSN **22** 02:48:30.2±3.4, 28°.87N×54°.43E, h10km, ML3.5/5, Error ellipse: s-maj=110.4km s-min=23.5km az=52.0*
*IDC **22** 02:48:39.8±1.1, 28°.40N×55°.59E, h0km, mb3.5/15, mbtmp3.6/20, ML3.7/5, Error ellipse: s-maj=21.2km s-min=19.3km az=170.0*
*TEH **22** 02:48:45.2, 28°.22N×55°.55E, h22km±60km, ML3.4*

ISC 22 02:48:43.6±0.5**, 28°.39N**±0°.04×**55°.50E**±0°.04**, h22**km**, n72,** σ1^s.**74**/63**, mb3.4**/15**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENO	Geno	1.15	149	Pg	Pn	02 49 03.0	-1.5
LAR1	LAR	1.22	234	Pg	Pb	02 49 06.6	+0.6
IBND	Bandar-abas	1.31	135	Sg	Sb	02 49 24.7	+0.8
NGRK	Negar Kerman	1.65	40	Pg	Pb	02 49 14.9	+1.3
JHRM	Jahrom	1.69	274	Pg	Pb	02 49 16.2	+2.1
TVBK	TV Kerman	1.94	34	Pn	Pb	02 49 20.1	+1.7
KHNJ	Kahnooj	2.00	102	Pn	Pn	02 49 17.4	+1.3
KHGB	Koh Gabri	2.16	23	Pn	Pb	02 49 23.6	+1.5
QIR1	Qir	2.16	273	Pn	Pb	02 49 22.3	+0.3
CHMN	Cheshme madani	2.31	50	Pn	Pb	02 49 24.8	0.0
LMD1	Lamerd	2.31	244	Pn	Pb	02 49 23.9	-0.7
SHME	Shamm	2.40	166	P	Pn	02 49 18.8	-2.7
SHME	Shamm	2.40	166	Pn	Pn	02 49 22.1	+0.6
BANOM	Banah	2.56	164	P	Pn	02 49 25.2	+1.4
BANOM				S	Sb	02 50 04.3	+4.5
BANOM	Banah	2.56	164	Pn	Pn	02 49 25.0	+1.2
KBAM	BAM	2.70	73	Pn	Pb	02 49 29.1	-2.1
ZRDN	Zarand Kerman	2.73	19	Pn	Pb	02 49 31.5	-0.2
SHI	Shiraz	2.90	296	Pn	Pb	02 49 34.4	-0.3
MSFE	Esma-Masafi	3.07	169	P	Pn	02 49 28.9	-1.9
MSFE	Esma-Masafi	3.07	169	Pn	Pn	02 49 32.5	+1.7
IMEH	Mehriz	3.09	346	Pn	Pb	02 49 37.1	-0.9
MDH	Madha	3.16	167	Pn	Pn	02 49 33.3	+1.3
IBAF	Bafgh	3.19	1	Pn	Pb	02 49 38.1	-1.5
JASK	Jask - Hormozg	3.28	139	Pn	Pn	02 49 34.2	+0.5
NAZ	Nazwa, Dubai	3.39	177	Pn	Pn	02 49 36.7	+1.5
UOSS	Minazif	3.49	169	P	Pn	02 49 34.6	-2.0
UOSS	Minazif	3.49	169	Pn	Pn	02 49 37.2	+0.7
HATD	Hatta, Dubai	3.59	171	P	Pn	02 49 35.3	-2.7
HATD	Hatta, Dubai	3.59	171	Pn	Pn	02 49 39.2	+1.2

FAQ	Al Faqa, Dubai	3.63	179	Pn	Pn	02 49 39.4	+0.9
ASHO	Ashiyiah	3.72	172	P	Pn	02 49 38.8	-1.1
ASHO	Ashiyiah	3.72	172	Pn	Pn	02 49 41.5	+1.7
DSBU	Dashti - Bushe	3.73	271	Pn	Pn	02 49 43.3	+3.4
ICHK	Chekchek	3.96	346	Pn	Pb	02 49 49.0	-3.8
KLNJ	Kolanjah	4.29	308	Pn	Pb	02 49 53.4	-5.0
IRAM	Ramesheh	4.35	322	Pn	Pn	02 49 53.7	+5.1
TPRV	Parvadeh(Tabas	4.74	12	Pn	Pn	02 49 59.1	+5.3
BSRN	Basiran	4.75	40	Pn	Pn	02 49 58.5	+4.5
NHDN	Nehbandan	4.96	52	Pn	Pn	02 50 01.1	+4.2
ANAR	Anarak	5.02	343	Pn	Pn	02 50 03.6	+5.9
IBRJ	Brojen	5.08	315	Pn	Pn	02 50 04.4	+5.8
CHBR	Chabahar	5.25	121	Pn	Pn	02 50 01.6	+0.9
ITEG	Tejag	5.29	31	Pn	Pn	02 50 06.4	+4.8
TKDS	Koohdasht(Taba	5.39	15	Pn	Pn	02 50 08.5	+5.7
SHK1	Shahrekord	5.59	316	Pn	Pn	02 50 11.4	+5.7
MZR	Muzera	5.66	199	Pn	Pn	02 50 06.3	-0.1
IPIR	Pirpir	5.84	318	Pn	Pn	02 50 14.3	+5.1
WSAR	Wadi Sarin	5.85	150	Pn	Pn	02 50 08.3	-0.8
	1.5nm,0.3s,baz=337,slow=11,SNR=16						
WSAR				Sn	Sn	02 51 15.8	+0.3
	0.6nm,0.3s,baz=106,slow=24,SNR=1.8						
	4.2nm,0.4s						
NGCH	Negor - Chabah	5.87	120	Pn	Pn	02 50 10.1	+0.8
SRVN	Saravan	6.18	98	Pn	Pn	02 50 16.2	+2.5
IKFM	Kafar-mosalman	8.33	310	Pn	Pn	02 50 49.3	+6.3
GEYT	Alibeck	9.77	12	Pn	Pn	02 51 01.6	-1.1
	0.3nm,0.3s,baz=227,slow=30,SNR=1.9						
	0.5nm,0.4s						
GNI	Garni	14.71	326	Pn	Pn	02 52 11.1	+0.7
	0.2nm,0.3s,baz=215,slow=18,SNR=3.3						
	1.2nm,0.5s						
MMAI	Mount Meron Ar	17.88	290	P	P	02 52 51.6	+0.1
	0.4nm,0.3s,baz=102,slow=17,SNR=4.2						
	0.7nm,0.5s						
KVAR	Kislovodsk Arr	18.62	330	P	P	02 52 59.8	+0.1
	baz=146,slow=15						
	2.6nm,0.4s						
AAK	Ala-Archa	20.94	42	P	Pn	02 53 28.5	+0.9
	0.9nm,0.5s,baz=212,slow=8.6,SNR=5.2						
BRTR	Keskin Array B	21.29	308	P	P	02 53 28.1	-0.7
	0.9nm,0.5s,baz=139,slow=11,SNR=5.0						
	0.9nm,0.5s						
AKTO	Aktyubinsk	22.10	4	P	P	02 53 37.1	-0.1
	3.3nm,1.0s,baz=208,slow=8.4,SNR=5.9						
	3.3nm,1.0s						
BVAR	Borovoye Array	26.97	20	P	P	02 54 21.7	-1.8
	0.3nm,0.5s,baz=211,slow=10,SNR=4.5						
	0.3nm,0.5s						
MKAR	Makanchi Array	27.87	41	P	P	02 54 29.2	-2.4
	0.1nm,0.6s,baz=221,slow=0.9,SNR=2.3						
	0.1nm,0.6s						
KURBB	Kurchatov Arra	28.23	32	P	P	02 54 33.0	-1.8
	0.1nm,0.2s,baz=232,slow=9.0,SNR=1.4						
	0.1nm,0.2s						
AKASG	Malin Array Be	29.84	326	P	P	02 54 47.7	-1.4
	0.2nm,0.3s,baz=38,slow=5.9,SNR=1.4						
	0.2nm,0.3s						
ZALV	Zalesovo Beam	33.32	32	P	P	02 55 19.5	-0.1
	1.0nm,0.7s,baz=251,slow=9.2,SNR=5.5						
	1.0nm,0.7s						
GERES	GERESS Array B	37.91	314	P	P	02 55 58.3	-0.9
	0.2nm,0.5s,baz=98,slow=11,SNR=3.1						
	0.2nm,0.5s						
KHC	Kasperske Hory	38.07	315	*e*P	P	02 56 02.4	+1.9
FINES	FINESS Array B	38.41	338	P	P	02 56 02.0	-1.1
	2.4nm,0.9s,baz=212,slow=13,SNR=1.8						
	2.4nm,0.9s						
NOA	NORSAR Array B	43.93	331	P	P	02 56 49.9	+1.3
	0.4nm,0.6s,baz=134,slow=8.7,SNR=1.4						
	0.4nm,0.6s						
ARCES	ARCESS Array B	44.67	346	P	P	02 56 55.4	+1.0
	0.9nm,0.7s,baz=45,slow=12,SNR=2.4						
	0.9nm,0.7s						
ESDC	Sonseca Array	49.74	299	P	P	02 57 35.0	+0.6
	0.3nm,0.8s,baz=64,slow=5.9,SNR=1.9						
	0.3nm,0.8s						
TORD	Torodi Ar. Bea	52.14	265	P	P	02 57 52.3	-0.4
	1.8nm,0.6s,baz=62,slow=6.4,SNR=16						
	1.8nm,0.6s						
ILAR	Eielson Array	85.52	9	P	P	03 01 18.7	-0.8
	0.1nm,0.9s,baz=321,slow=4.5,SNR=1.3						
	0.1nm,0.9s						
YKA	Yellowknife Ar	89.09	355	P	P	03 01 37.7	+0.9
	0.2nm,0.6s,baz=4.1,slow=4.9,SNR=5.2						
	0.2nm,0.6s						

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*IDC **22** 02:54:18.3±2.1, 19°.58S×177°.82W, h548km±24km, mb3.5/13, mbtmp4.4/15, Error ellipse: s-maj=21.9km s-min=14.4km az=144.0*

*NEIC **22** 02:54:20.0±1.3, 19°.9S±0°.1×177°.8W±0°.1, h567km±10km, mb4.5/33, Error ellipse: s-maj=23.1km s-min=7.8km az=214.0*

ISC 22 02:54:17.6±0.5, **19°.67S**±0°.07×**177°.76W**±0°.08, **h550**km, **n93,** σ**1**^{s}**34**/95, **mb4.5**/30, **7C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	7.42	87	P	P	02 56 11.7	+2.0
AFI	Afiamalu	8.10	46	P	P	02 56 16.4	-0.2
	16nm,0.8s,baz=203,slow=13,SNR=1.9						
AFI				S	S	02 57 50.6	-3.4
	27nm,0.5s,baz=126,slow=12,SNR=3.1						
GLKZ	Green Lake	9.55	181	S	S	02 58 21.1	+0.8
PINNC	Pines Island,	14.11	255	P	P	02 57 19.4	+1.5
DZM	Mont Dzumac	14.95	258	P	P	02 57 27.2	+0.4
	10.0nm,0.5s,baz=104,slow=12,SNR=14						
DZM	Mont Dzumac	14.95	258	P	P	02 57 28.5	+1.8
KOUNC	Koumac, New Ca	16.89	264	P	P	02 57 46.3	+0.9
WMGZ	Waiomatatini S	18.39	190	P	P	02 57 59.6	+0.8
HAZ	Te Kaha	18.43	191	P	P	02 57 58.8	-0.5
PKGZ	Pakihiroa	18.51	190	P	P	02 58 01.2	+1.1
RUGZ	Raukumara Rang	18.66	191	P	P	02 58 01.5	0.0
PUZ	Puketiti	18.66	190	P	P	02 58 01.8	+0.4
TWGZ	Tauwhareparae	18.81	190	P	P	02 58 03.3	+0.6
MWZ	Matawai	19.04	191	P	P	02 58 03.7	-1.2
URZ	Urewera	19.05	192	P	P	02 58 00.6	-4.3
	15nm,0.3s,baz=354,slow=2.3,SNR=30						
URZ				S	S	03 01 03.0	-6.5
	3.5nm,0.8s,baz=265,slow=19,SNR=1.6						
URZ	Urewera	19.05	192	P	P	02 58 02.8	-2.1
CNGZ	Carnagh Statio	19.07	190	P	P	02 58 06.1	+1.1
RTZ	Ruatahuna	19.42	192	P	P	02 58 07.1	-1.3
RTZ	Ruatahuna	19.42	192	P	P	02 58 07.4	-1.0
SNGZ	Shannon Statio	19.51	192	P	P	02 58 09.5	+0.3
BKZ	Black Stump Fm	20.05	193	P	P	02 58 12.5	-1.5
BKZ				IAmb	IAmb	02 58 22.1	
	comp=Z,14nm,1.3s						
BKZ	Black Stump Fm	20.05	193	P	P	02 58 12.7	-1.3
TMVZ	Te Maari	20.18	195	P	P	02 58 15.1	-0.2
ETVZ	East Tongariro	20.20	195	P	P	02 58 14.9	-0.6
OTVZ	Oturere	20.24	195	P	P	02 58 15.1	-0.8
BHHZ	Black Hill Sta	20.46	194	P	P	02 58 15.4	-2.3
PNHZ	Pukenui	20.83	193	P	P	02 58 20.7	-0.4
BFZ	Birch Farm	21.56	192	P	P	02 58 26.4	-1.2
BFZ	Birch Farm	21.56	192	P	P	02 58 26.7	-0.9
MRZ	Mangatainoka R	21.68	194	P	P	02 58 27.4	-1.3
HOWZ	Holdsworth Sta	21.92	194	P	P	02 58 30.7	-0.2
TCW	Tory Channel	22.52	196	P	P	02 58 36.5	+0.3
QRZ	Quartz Range	22.66	199	P	P	02 58 37.2	-0.2
THZ	Tophouse	23.41	198	P	P	02 58 43.6	-0.6
THZ				IAmb	IAmb	02 59 25.7	
	comp=Z,16nm,1.0s						
DSZ	Denniston Nort	23.72	200	P	P	02 58 46.6	-0.3
HNR	Honiara	23.83	292	P	P	02 58 43.5	-4.7
	comp=Z,2µm,0.3s,baz=76,slow=19,SNR=5.3						
LTZ	Lake Taylor	24.53	198	P	P	02 58 51.9	-2.2
LTZ				IAmb	IAmb	02 58 55.3	
	comp=Z,30nm,1.4s						
INZ	Inchbonnie	24.72	199	P	P	02 58 55.1	-0.6
RPZ	Rata Peaks	25.74	199	P	P	02 59 05.4	+0.7
RPZ				IAmb	IAmb	02 59 30.0	
	comp=Z,25nm,1.2s						
DCZ	Deep Cove	28.59	202	P	P	02 59 29.4	-0.2
EIDS	Eidsvold	29.29	253	P	P	02 59 37.1	+1.0
EIDS				IAmb	IAmb	03 00 02.3	
	comp=Z,23nm,1.5s						
ARMA	Armidale	29.64	243	P	P	02 59 40.0	+0.9
ARMA				IAmb	IAmb	03 00 02.8	
	comp=Z,14nm,1.2s						
CTA	Charters Tower	33.80	263	P	P	03 00 15.1	+0.4
	comp=Z,14nm,0.4s,baz=91,slow=9.7,SNR=50						
	comp=Z,14nm,0.4s						
CTAO	Charters Tower	33.80	263	P	P	03 00 15.6	+1.0
PMG	Port Moresby	35.38	282	P	P	03 00 28.1	+0.2
	comp=Z,12nm,0.5s,baz=70,slow=7.5,SNR=5.6						
	comp=Z,12nm,0.5s						
COEN	Coen	37.76	272	P	P	03 00 48.5	+1.1
COEN				IAmb	IAmb	03 00 49.2	
	comp=Z,11nm,0.7s						
STKA	Stephens Creek	38.35	243	P	P	03 00 53.0	+0.9
	comp=Z,2.9nm,0.5s,baz=89,slow=10,SNR=9.3						
	comp=Z,2.9nm,0.5s						
STKA	Stephens Creek	38.35	243	P	P	03 00 53.0	+0.9
BBOO	Buckleboo	43.12	243	P	P	03 01 29.9	0.0
BBOO				IAmb	IAmb	03 01 30.7	
	comp=Z,12nm,0.5s						
WB0	Warramunga Arr	44.92	261	P	P	03 01 43.8	-0.2
WB0				IAmb	IAmb	03 01 44.5	
	comp=Z,21nm,1.3s						
AS31	Alice Springs	44.93	256	P	P	03 01 44.2	+0.1
WB2	Warramunga Arr	44.93	261	P	P	03 01 44.0	-0.1
WB2				IAmb	IAmb	03 01 44.9	
	comp=Z,21nm,1.3s						
ASAR	Alice Springs	44.93	256	P	P	03 01 44.4	+0.3
	comp=Z,12nm,0.7s,baz=87,slow=8.1,SNR=136						
ASAR				PcP	PcP	03 03 13.4	-0.3
	comp=Z,0.4nm,0.4s,baz=106,slow=3.6,SNR=2.8						
ASAR				S	S	03 07 27.8	-15
	comp=Z,0.7nm,0.8s,baz=78,slow=8.4,SNR=4.1						
	comp=Z,12nm,0.7s						
WRAB	Tennant Creek	44.93	261	P	P	03 01 43.9	-0.3
WRAB				IAmb	IAmb	03 02 03.9	
	comp=Z,12nm,0.9s						
WRA	Warramunga Arr	44.94	261	P	P	03 01 43.8	-0.4
	comp=Z,4.0nm,0.3s,baz=98,slow=7.7,SNR=238						
WRA				S	S	03 07 27.6	-15
	comp=Z,0.8nm,1.0s,baz=103,slow=7.8,SNR=4.5						
	comp=Z,4.0nm,0.3s						
WRA	Warramunga Arr	44.94	261	P	P	03 01 43.3	-0.9
MTN	Manton Dam	49.38	270	P	P	03 02 17.5	-0.1
MTN				IAmb	IAmb	03 02 18.9	
	comp=Z,10.0nm,0.6s						
FORT	Forrest	49.83	246	P	P	03 02 20.5	-0.1
FORT				IAmb	IAmb	03 02 21.3	
	comp=Z,16nm,0.8s						
KNRA	Kununurra	50.94	265	P	P	03 02 28.8	-0.2
KNRA				IAmb	IAmb	03 02 29.1	
	comp=Z,12nm,1.0s						
FAKI	Fak Fak	51.54	282	P	P	03 02 33.1	-0.2
SOEI	Soe	56.70	271	P	P	03 03 10.7	+0.8
SOEI				IAmb	IAmb	03 03 12.3	
	comp=Z,27nm,0.7s						
MBWA	Marble Bar	58.26	257	P	P	03 03 18.9	-1.3
MBWA				IAmb	IAmb	03 03 42.8	
	comp=Z,46nm,1.4s						
SBA	Scott Base	58.71	184	P	P	03 03 22.2	-0.1
SBA				IAmb	IAmb	03 03 50.0	
	comp=Z,32nm,1.5s						
VNDA	Vanda	58.75	185	P	P	03 03 23.9	+1.4
	comp=Z,1.7nm,0.7s,baz=1.9,slow=5.9,SNR=7.2						
	comp=Z,1.7nm,0.7s						
VNDA	Vanda	58.75	185	P	P	03 03 23.5	+0.9
CASY	Casey	64.81	205	P	P	03 04 02.2	+0.2
MJAR	Matsushiro Arr	69.68	323	P	P	03 04 32.5	+0.1
	comp=Z,2.9nm,0.7s,baz=154,slow=5.4,SNR=5.5						
	comp=Z,2.9nm,0.7s						
QSPA	South Pole Qui	70.39	180	P	P	03 04 36.8	+0.5
PETK	Petropavlovsk-	75.53	345	P	P	03 05 06.3	+0.7
	comp=Z,1.8nm,0.8s,baz=218,slow=9.0,SNR=2.3						
	comp=Z,1.8nm,0.8s						
USRK	Ussuriysk Ar.	78.41	326	P	P	03 05 22.8	+1.2
	comp=Z,2.5nm,0.8s,baz=142,slow=12,SNR=3.0						
	comp=Z,2.5nm,0.8s						
BELA	Belgrano 2	80.35	173	P	P	03 05 30.6	-0.8
TXAR	Lajitas Array	86.42	57	P	P	03 06 04.0	+1.5
	comp=Z,0.3nm,0.6s,baz=217,slow=7.1,SNR=5.8						
	comp=Z,0.3nm,0.6s						
ILAR	Eielson Array	87.46	13	P	P	03 06 05.9	-0.5
	comp=Z,0.3nm,0.6s,baz=210,slow=6.0,SNR=6.4						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	88.21	43	P	P	03 06 11.6	+0.9
	comp=Z,0.3nm,0.7s,baz=202,slow=1.5,SNR=2.8						
	comp=Z,0.3nm,0.7s						
CMAR	Chiang Mai Arr	90.05	289	P	P	03 06 20.8	+1.3
	comp=Z,0.9nm,0.3s,baz=105,slow=3.4,SNR=5.6						
	comp=Z,0.9nm,0.3s						
AKASG	Malin Array Be	142.40	332	PKhKP	PKPpre	03 12 42.8	
	comp=Z,0.4nm,0.3s,baz=37,slow=3.8,SNR=5.1						
SORM	Soroca	144.61	329	⇑P	PKPdf	03 12 50.9	-0.8
BUR08	Bucovina Ar. S	146.43	332	PKPdf	PKPdf	03 12 54.0	-1.0
BRTR	Keskin Array B	146.44	313	PKPbc	PKPbc	03 12 57.0	-0.8
	comp=Z,0.7nm,0.5s,baz=101,slow=7.5,SNR=3.1						
BRTR	Keskin Array B	146.44	313	PKPbc	PKPbc	03 12 56.7	-1.1
BURAR	Bucovina Array	146.45	331	⇑P	PKPbc	03 12 58.0	+0.6
BURAR	Bucovina Array	146.45	331	PKPbc	PKPbc	03 12 57.2	-0.3
CFR	Carcaliu	146.73	326	⇑P	PKPdf	03 12 55.7	+0.3
CLL	Collm	147.31	347	*e*PKPbc	PKPbc	03 12 59.0	-0.4
MANR	Mangalia	147.37	323	⇑P	PKPbc	03 12 59.1	-0.7
DOPR	Dopca	147.58	329	⇑P	PKPbc	03 13 00.5	+0.2
MLR	Muntele Rosu	147.65	328	⇑P	PKPab	03 13 05.4	+0.5
MLR	Muntele Rosu	147.65	328	PKPbc	PKPbc	03 13 00.3	-0.4
ARR	Arges	148.38	329	⇑P	PKiKP	03 13 03.2	-0.5
KHC	Kasperske Hory	149.23	345	PKPbc	PKPbc	03 13 04.5	+0.1
GERES	GERESS Array B	149.46	345	PKPbc	PKPbc	03 13 04.6	-0.4
	comp=Z,0.7nm,0.6s,baz=29,slow=3.0,SNR=7.4						
GERES	GERESS Array B	149.46	345	PKPbc	PKPbc	03 13 04.5	-0.6
CIMO	Cimolais	152.14	345	PKPbc	PKPbc	03 13 10.3	-0.8

IDC 22 02:58:21.9±1.3, **5°.42S**×**150°.36E, h0**km, **mb3.5**/4, **mbtmp3.5**/4, **Error ellipse: s-maj=61.1km s-min=20.0km az=137.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.00	56	Pn	Pn	02 58 57.9	+1.0
	11nm,0.3s,baz=231,slow=2.6,SNR=6.2						
KRVT				Sn	Sb	02 59 24.5	0.0
	18nm,0.3s,baz=162,slow=20,SNR=3.0						
WRA	Warramunga Arr	21.24	226	P	P	03 03 10.8	+1.1
	0.8nm,0.7s,baz=52,slow=10,SNR=4.9						
	0.8nm,0.7s						
ASAR	Alice Springs	24.09	220	P	P	03 03 38.8	-0.6
	1.3nm,0.7s,baz=55,slow=8.6,SNR=7.7						
	1.3nm,0.7s						
ZALV	Zalesovo Beam	80.33	327	P	P	03 10 35.5	+0.7
	0.2nm,0.3s,baz=125,slow=7.2,SNR=1.2						
	0.2nm,0.3s						
ILAR	Eielson Array	83.65	23	P	P	03 10 50.7	-1.4
	0.3nm,1.0s,baz=246,slow=5.6,SNR=2.1						
	0.3nm,1.0s						

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*SOME **22** 03:07:47.7, 42°.15N×69°.03E, h10km*

*KRNET **22** 03:07:47.9±0.1, 42°.15N×69°.03E, h18km, mb3.5*

*NNC **22** 03:07:48.9±2.0, 42°.30N×69°.11E, h0km, mb3.6, mpv3.6, Error ellipse: s-maj=14.1km s-min=6.6km az=56.0*

ISC 22 03:07:47.8±2.0, **42°.17N**±0°.05×**68°.98E**±0°.08, **h1**km±10km, **n25,** σ**1**^{s}**17**/43, **16C-4D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHM	Chimkent	0.49	72	*e*P	Pg	03 07 56.8	-0.3
	207nm,0.2s						
CHM				*e*S	Sg	03 08 03.4	0.0
	3µm,0.3s						
TCH	Chimkent	0.49	72	*e*P	Pg	03 07 56.8	-0.3
	baz=67						
TCH				*e*S	Sg	03 08 03.4	0.0
	baz=67						
IUG	Iuzhnay	0.78	91	P	Pg	03 08 01.9	-0.9
	102nm,0.2s						
IUG				S	Sg	03 08 12.8	-0.1
	426nm,0.2s						
IUG	Iuzhnay	0.78	91	*e*P	Pg	03 08 01.8	-1.0
	baz=90						
IUG				*e*S	Sg	03 08 12.7	-0.2
	baz=90						
IUG	Iuzhnay	0.78	91	*e*P	Pg	03 08 01.8	-1.0
	102nm,0.2s						
IUG				*e*S	Sg	03 08 12.7	-0.2
	426nm,0.2s						
TAS	Tashkent	0.88	164	⇑*i*P	Pg	03 08 03.9	-0.7
	baz=66						
TAS				⇑*i*S	Sg	03 08 15.5	-0.4
	baz=66						
KK31	Karatay Array	1.47	50	Pn	Pn	03 08 14.8	-0.6
	2.8nm,0.2s,baz=230,slow=16,SNR=154						
KK31				Sn	Sn	03 08 33.6	-1.6
	21nm,0.3s,baz=233,slow=28,SNR=33						
KKAR	Karatay Array	1.47	50	⇑*i*P	Pn	03 08 14.8	-0.6
	baz=48						
KKAR				⇑*i*S	Sn	03 08 34.1	-1.2
	baz=48						
TRKS	Terek-Say	1.74	111	⇑*i*P	Pb	03 08 19.9	-0.7
	baz=12						
TRKS				⇑*i*S	Sb	03 08 43.3	+0.4
	baz=12						
DZA	Taraz	1.88	67	*e*P	Pn	03 08 21.6	+0.4
	baz=66						
DZA				*e*S	Sb	03 08 46.2	-0.8
	baz=66						
DZA	Taraz	1.88	67	*e*P	Pn	03 08 21.6	+0.4
	49nm,0.3s						
DZA				*e*S	Sb	03 08 46.2	-0.8
	202nm,0.2s						
ARK	Arkit	2.25	98	⇑*i*P	Pn	03 08 26.7	+0.3
	baz=98						
ARK				⇑*i*S	Sn	03 08 55.0	+0.1
	baz=98						
BTK	Batken	2.53	146	⇑*i*P	Pn	03 08 30.5	+0.5
	baz=46						
BTK				⇑*i*S	Sn	03 09 01.4	-0.1
	baz=46						
MNAS	Manas	2.63	82	⇑*i*P	Pn	03 08 32.1	+0.5
	baz=81						
MNAS				⇑*i*S	Sn	03 09 04.2	0.0
	baz=81						
MRKS	Merke	3.19	78	Pg	Pb	03 08 44.8	-0.6
	6.4nm,0.3s						
MRKS				Lg	Lg	03 09 25.8	
	31nm,0.6s						
MRKS	Merke	3.19	78	*e*Pg	Pb	03 08 45.6	+0.3
	6.4nm,0.3s						
MRKS				*e*Lg	Lg	03 09 27.1	
	33nm,0.2s						
OHH	Osh	3.30	119	⇓*i*P	Pn	03 08 41.2	+0.5
	baz=19						
OHH				⇓*i*S	Sn	03 09 20.0	-0.7
	baz=19						
AML	Almayashu	3.50	89	⇑*i*P	Pn	03 08 44.1	+0.3
	baz=89						
AML				⇑*i*S	Sn	03 09 25.2	-0.9
	baz=89						
EKS2	Erkin-Say	3.59	81	⇑*e*P	Pn	03 08 45.3	+0.6
	baz=80						
EKS2				⇑*i*S	Sn	03 09 27.3	-0.4
	baz=80						
ARLS	Aral	3.99	93	⇓*i*P	Pn	03 08 51.0	+0.7
	baz=93						
ARLS				⇓*i*S	Sn	03 09 36.8	-1.0
	baz=93						
DGS	Degeres	5.12	76	Pg	Pb	03 09 21.6	+3.4
	2.9nm,0.4s						
DGS				Lg	Lg	03 10 29.0	
	14nm,0.6s						
DGS	Degeres	5.12	76	*e*Pg	Pb	03 09 21.2	+3.0
	2.9nm,0.2s						
DGS				*e*Lg	Lg	03 10 29.0	
	14nm,0.6s						
KST	Kastek	5.23	78	Pg	Pb	03 09 21.4	+1.3
	1.9nm,0.3s						
KST				Lg	Lg	03 10 28.4	
	21nm,0.8s						
KST	Kastek	5.23	78	*e*Pg	Pb	03 09 23.2	+3.1
	1.9nm,0.3s						
KST				*e*Lg	Lg	03 10 31.7	
	21nm,0.0s						
MTBS	Maitube	5.58	78	Pg	Pb	03 09 28.4	+2.4
	1.6nm,0.4s						
MTBS				Lg	Lg	03 10 40.4	
	5.8nm,0.4s						

IDC 22 03:08:35.9±1.7, **58°.17S**×**153°.15E, h0**km, **mb3.7**/3, **mbtmp3.6**/4, **ML3.4**/1, **Error ellipse: s-maj=41.7km s-min=31.3km az=66.0, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	19.66	174	P	P	03 13 06.1	+0.2
	0.1nm,0.3s,baz=297,slow=2.3,SNR=1.1						
	0.4nm,0.5s						
URZ	Urewera	25.29	48	P	P	03 14 03.5	-0.3
	3.8nm,0.8s,baz=204,slow=20,SNR=8.5						
	3.8nm,0.8s						
URZ	Urewera	25.29	48	P	P	03 14 03.5	-0.2
ASAR	Alice Springs	37.13	330	P	P	03 15 47.2	-0.9
	0.3nm,0.5s,baz=165,slow=9.5,SNR=6.8						
	0.3nm,0.5s						
WRA	Warramunga Arr	40.58	332	P	P	03 16 17.9	+0.8
	0.5nm,0.6s,baz=171,slow=8.0,SNR=8.7						
	0.5nm,0.6s						

WEL 22 03:12:47.2, 43°S±5°×**17°4E**±1°0, **h23**km±17km, **M2.4**/11, **ML2.7**/17, **MLv2.4**/11, **Error ellipse: s-maj=0.0km s-min=0.0km az=82.4, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.12	2	P	Pb	03 12 51.8	+0.1
GVZ	Greta Valley S	0.57	220	P	Pn	03 13 00.4	+0.5
BSWZ	Blackbirch Sta	0.86	17	P	Pn	03 13 05.7	+1.9
THZ	Tophouse	0.90	329	P	Pn	03 13 04.8	+0.3
LTZ	Lake Taylor	0.96	255	P	Pn	03 13 06.0	+0.7
TUWZ	Tuamarina	1.15	16	P	Pb	03 13 10.5	+2.2
MRNZ	Matariki Terra	1.27	333	P	Pb	03 13 11.9	+1.5
NNZ	Nelson	1.32	355	P	Pb	03 13 13.4	+2.2
MQZ	McQueen's Vall	1.34	209	P	Pb	03 13 11.3	-0.2
AKCZ	Akaroa Harbour	1.41	199	P	Pb	03 13 12.9	+0.1
TCW	Tory Channel	1.43	23	P	Pb	03 13 14.2	+1.1
DSZ	Denniston Nort	1.51	301	P	Pb	03 13 14.8	+0.4
INZ	Inchbonnie	1.55	262	P	Pb	03 13 15.7	+0.5
TKNZ	Takaka Hill	1.56	344	P	Pb	03 13 16.7	+1.4
PLWZ	Palliser	1.60	54	P	Pb	03 13 16.1	0.0
PAWZ	Paruwai Farm	1.82	51	P	Pb	03 13 18.9	-0.9
CAW	Cannon Point	1.83	39	P	Pb	03 13 19.4	-0.5
QRZ	Quartz Range	1.87	336	P	Pb	03 13 21.0	+0.4
MTW	Mount Morrison	2.01	48	P	Pn	03 13 21.0	+1.3
WVZ	Waitaha Valley	2.13	254	P	Pb	03 13 23.5	-1.5
RPZ	Rata Peaks	2.17	236	P	Pn	03 13 22.8	+1.0
MSZ	Milford Sound	4.60	240	P	Pn	03 13 57.8	+2.6
WMGZ	Waiomatatini S	6.01	40	P	Pn	03 14 20.8	+6.2

IDC 22 03:23:04.2±15.0, **23°.19S**×**68°.81E, h0**km, **mb3.7**/4, **mbtmp3.7**/4, **MS3.6**/2, **Error ellipse: s-maj=517.1km s-min=36.8km az=52.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	15.85	13	T	T	03 42 29.4	
	baz=192,slow=76,SNR=168						
H08S2	Diego Garcia H	15.86	13	T	T	03 42 22.4	
	baz=192,slow=76,SNR=175						
H08S3	Diego Garcia H	15.87	13	T	T	03 42 23.7	
	baz=192,slow=76,SNR=203						
LSZ	Lusaka	39.05	274	LR	LR	03 42 57.7	
	comp=Z,78nm,18.5s,baz=183,slow=31						
ASAR	Alice Springs	59.23	105	P	P	03 33 07.5	-0.3
	0.5nm,0.8s,baz=243,slow=5.5,SNR=4.8						
ASAR				LR	LR	03 54 32.8	
	comp=Z,50nm,21.9s,baz=172,slow=32						
	0.5nm,0.8s						
WRA	Warramunga Arr	60.58	101	P	P	03 33 17.1	+0.1
	1.0nm,0.7s,baz=256,slow=6.9,SNR=11						
	1.0nm,0.7s						
MKAR	Makanchi Array	70.71	10	P	P	03 34 21.4	-0.4
	0.4nm,0.9s,baz=208,slow=4.9,SNR=3.1						
	0.4nm,0.9s						
ZALV	Zalesovo Beam	78.05	10	P	P	03 35 04.9	+0.5
	0.5nm,0.4s,baz=175,slow=7.1,SNR=1.9						
	0.5nm,0.4s						

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*IDC **22** 03:26:38.9±1.6, 31°.80N×140°.55E, h84km±14km, mb3.7/17, mbtmp4.0/21, MS3.4/28, Error ellipse: s-maj=21.8km s-min=9.2km az=72.0*

*NIED **22** 03:26:38.8, 32°.17N×140°.73E, h19km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.15; $M_{\theta\theta}$-0.49; $M_{\phi\phi}$0.65; $M_{r\theta}$0.38; $M_{\theta\phi}$-0.24; $M_{\phi r}$-3.75; Fault plane solution: $M_0$3.80000×10^{15} NP1: ϕ_s355.00000°, δ87.00000°, λ-88.00000°. NP2: ϕ_s143.00000°, δ4.00000°, λ-122.00000°.*

*JMA **22** 03:26:38.8±0.4, 32°N±1°×14°1E±°, h19km, MV4.4/28, E OFF HACHIJOJIMA ISLAND*

ISC 22 03:26:33.5±0.6**, 31.°77N**±0.°06×**140.°80E**±0.°08**, h35km, n66, σ2s30**/52**, mb4.1**/17**, MS3.6**/24**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	1.55	327	P	Pn	03 27 00.4	+1.8
JHCJ				S	Sn	03 27 15.9	-1.6
JHJ2	Mitsune	1.57	328	*e*P	Pn	03 27 01.0	+2.0
JHJ2				*e*S	Sn	03 27 16.8	-1.3
JMYK	Miyake Tsubota	2.51	336	*e*S	Sn	03 27 41.0	-0.2
BSO1	Boso 1	2.88	3	P	Pn	03 27 18.5	+2.1
BSO1				S	Sn	03 27 49.0	-0.5
JIM2	Oshima 3	3.15	339	P	Pn	03 27 23.4	+2.8
JIM2				S	Sn	03 27 55.7	-1.4
TATJ	Tateyama 2	3.34	347	*e*P	Pn	03 27 26.8	+3.6
JIZS	Izushimoda	3.35	332	*e*P	Pn	03 27 26.5	+3.2
TK02	Tokai 2	3.35	311	*e*P	Pn	03 27 27.0	+3.7
JKUC	kamogawauchiur	3.42	352	P	Pn	03 27 26.6	+2.4
JKUC				S	Sn	03 28 01.6	-1.9
JHTM	Izuhatsuma	3.51	335	P	Pn	03 27 29.2	+3.6
JYO	Yokosk	3.57	345	S	Sn	03 28 08.0	+0.6
JOD2	Odawara 2	3.76	338	*e*P	Pn	03 27 31.9	+2.9
JOD2				*e*S	Sn	03 28 10.9	-1.2
JSGW	Sagamiharawaka	4.04	341	P	Pn	03 27 36.2	+3.3
JSGW				S	Sn	03 28 16.7	-2.4
JYN	Shimob	4.17	334	*e*P	Pn	03 27 38.8	+4.2
JAA	Atsumi	4.19	314	P	Pn	03 27 38.2	+3.3
JIE	Ise	4.32	308	*e*P	Pn	03 27 39.5	+2.9
JMMH	Miemihama	4.51	298	P	Pn	03 27 42.2	+2.9
JRY	Ryogami san	4.52	340	*e*P	Pn	03 27 43.5	+4.1
JAG	Ashikaga	4.77	347	*e*P	Pn	03 27 45.8	+2.9
JAG				*e*S	Sn	03 28 35.0	-2.0
JCJ	Chichijima	4.81	165	P	Pn	03 27 49.0	+5.5
	45nm,0.3s,baz=270,slow=20,SNR=1.4						
JCJ				S	Sn	03 28 45.5	+7.5
	99nm,0.4s,baz=285,slow=20,SNR=4.6						
MJAR	Matsushiro Arr	5.22	336	P	Pn	03 27 52.7	+3.6
	7.7nm,0.9s,baz=147,slow=15,SNR=13						
MJAR				S	Sn	03 28 51.6	+3.6
	8.6nm,0.6s,baz=167,slow=11,SNR=4.9						
MJAR				LR	LR	03 30 09.5	
	comp=Z,66nm,19.6s,baz=62,slow=41						
JNU	Nakatsue	8.49	282	P	Pn	03 28 37.1	+3.1
	5.0nm,0.4s,baz=170,slow=7.4,SNR=11						
JNU				LR	LR	03 31 49.0	
	comp=Z,188nm,19.4s,baz=119,slow=37						
JOW	Kunigami	11.98	249	LR	LR	03 33 32.6	
	comp=Z,171nm,21.6s,baz=96,slow=35						
KSRS	Korea Array	12.02	302	P	Pn	03 29 29.0	+6.7
	5.0nm,0.9s,baz=119,slow=14,SNR=18						
KSRS				LR	LR	03 33 39.2	
	comp=Z,140nm,21.6s,baz=115,slow=36						
KLR	Kul'dur	18.72	341	P	P	03 30 50.3	+1.3
	0.8nm,0.6s,baz=157,slow=15,SNR=2.8						
PETK	Petropavlovsk-	24.58	25	LR	LR	03 41 23.9	
	comp=Z,39nm,21.1s,baz=186,slow=36						
H11N2	WAKE ISLAND Hy	26.31	111	T	T	04 01 09.8	
	baz=304,slow=75,SNR=25						
H11N1	WAKE ISLAND Hy	26.32	111	T	T	04 01 11.9	
	baz=304,slow=75,SNR=36						
H11N3	WAKE ISLAND Hy	26.33	111	T	T	04 01 10.6	
	baz=304,slow=75,SNR=28						
H11S3	WAKE ISLAND Hy	26.82	113	T	T	04 00 49.6	
	baz=304,slow=75,SNR=56						
H11S1	WAKE ISLAND Hy	26.83	113	T	T	04 00 50.1	
	baz=304,slow=75,SNR=69						
H11S2	WAKE ISLAND Hy	26.84	113	T	T	04 00 51.4	
	baz=304,slow=75,SNR=34						
MA2	Magadan	28.60	11	LR	LR	03 45 38.4	
	comp=Z,32nm,18.1s,baz=99,slow=40						
SONM	Songino Array	30.61	312	P	P	03 32 43.0	-1.3
	0.6nm,0.5s,baz=78,slow=9.2,SNR=4.1						
SONM				LR	LR	03 44 41.8	
	comp=Z,53nm,19.9s,baz=3.0,slow=36						
	0.6nm,0.5s						
SHEM	Shemya Is, Ala	31.91	39	LR	LR	03 43 28.2	
	comp=Z,24nm,21.4s,baz=350,slow=32						
CMAR	Chiang Mai Arr	39.91	261	LR	LR	03 51 48.1	
	comp=Z,28nm,19.0s,baz=70,slow=38						
BRDH	Bariadhala	44.33	271	LR	LR	03 56 53.7	
	comp=Z,114nm,18.6s,baz=50,slow=41						
HNR	Honiara	44.88	153	LR	LR	03 51 58.5	
	comp=Z,455nm,21.0s,baz=346,slow=34						
ZALV	Zalesovo Beam	45.23	316	P	P	03 34 46.5	-0.6
	0.8nm,0.4s,baz=84,slow=9.1,SNR=3.3						
ZALV				PcP	PcP	03 36 27.0	+0.3
	0.8nm,0.5s,baz=64,slow=3.4,SNR=4.1						
ZALV				LR	LR	03 54 23.0	
	comp=Z,40nm,18.1s,baz=112,slow=37						
	0.8nm,0.4s						
MKAR	Makanchi Array	46.65	306	P	P	03 34 57.1	-1.3
	0.7nm,0.4s,baz=90,slow=8.3,SNR=15						
MKAR				PcP	PcP	03 36 32.2	+0.4
	0.3nm,0.3s,baz=83,slow=11,SNR=5.2						
MKAR				LR	LR	03 54 54.0	
	comp=Z,36nm,18.3s,baz=74,slow=36						
	0.7nm,0.4s						
KDAK	Kodiak Island	51.43	39	P	P	03 35 36.5	+1.8
	6.3nm,0.8s,baz=326,slow=14,SNR=1.7						
KDAK				LR	LR	03 58 10.6	
	comp=Z,22nm,19.0s,baz=277,slow=37						
	6.3nm,0.8s						
WRA	Warramunga Arr	51.79	188	P	P	03 35 37.9	0.0
	2.4nm,0.5s,baz=2.8,slow=7.8,SNR=54						
WRA				PcP	PcP	03 36 52.9	+2.2
	0.6nm,0.6s,baz=1.6,slow=4.0,SNR=2.1						
	2.4nm,0.5s						
CTA	Charters Tower	51.83	173	P	P	03 35 38.5	+0.3
	1.2nm,0.5s,baz=3.4,slow=19,SNR=1.8						
	1.2nm,0.5s						
BVAR	Borovoye Array	53.84	315	LR	LR	03 58 06.3	
	comp=Z,42nm,18.1s,baz=80,slow=35						
ASAR	Alice Springs	55.52	188	P	P	03 36 05.5	+0.4
	1.1nm,0.5s,baz=14,slow=10.0,SNR=24						
	1.1nm,0.5s						
AKTO	Aktyubinsk	61.88	314	LR	LR	04 06 12.8	
	comp=Z,33nm,18.8s,baz=234,slow=38						
KIRV	Kirov	64.18	324	LR	LR	04 05 10.6	
	comp=Z,41nm,18.2s,baz=313,slow=36						
YKA	Yellowknife Ar	68.63	29	P	P	03 37 33.9	+1.2
	0.2nm,0.8s,baz=296,slow=5.9,SNR=2.7						
	0.2nm,0.8s						
ARCES	ARCESS Array B	68.75	340	P	P	03 37 33.1	-0.3
	1.8nm,0.8s,baz=0.0,slow=3.1,SNR=1.5						
	1.8nm,0.8s						
WSAR	Wadi Sarin	71.80	286	LR	LR	04 11 50.5	
	comp=Z,37nm,18.6s,baz=116,slow=38						
FINES	FINESS Array B	73.24	333	P	P	03 37 60.0	-0.7
	1.4nm,0.5s,baz=103,slow=6.1,SNR=12						
	1.4nm,0.5s						
KBZ	Khabaz	73.98	312	P	P	03 38 04.1	-1.2
	2.3nm,0.7s,baz=30,slow=4.2,SNR=6.6						
KBZ				LR	LR	04 11 56.8	
	comp=Z,32nm,19.1s,baz=52,slow=37						
	2.3nm,0.7s						
YBH	Yreka Blue Hor	74.01	51	LR	LR	04 03 10.8	
	comp=Z,24nm,21.0s,baz=290,slow=30						
GNI	Garni	74.48	308	LR	LR	04 14 03.5	
	comp=Z,22nm,19.5s,baz=87,slow=38						
AKASG	Malin Array Be	78.16	323	P	P	03 38 26.5	-2.5
	0.5nm,0.3s,baz=47,slow=5.2,SNR=4.6						
AKASG				LR	LR	04 14 48.3	
	comp=Z,58nm,18.6s,baz=1.5,slow=37						
	0.5nm,0.3s						
NVAR	Mina Array Bea	78.59	52	LR	LR	04 06 29.7	
	comp=Z,42nm,20.4s,baz=218,slow=30						
NB2	NORSAR Subarra	78.84	338	P	P	03 38 33.4	+0.8
	comp=Z,0.5nm,0.5s,baz=41,slow=5.1						
NOA	NORSAR Array B	78.84	338	P	P	03 38 30.8	-1.9
	comp=Z,0.4nm,0.4s,baz=58,slow=6.9,SNR=5.3						
NOA				LR	LR	04 16 43.3	
	comp=Z,27nm,18.4s,baz=270,slow=38						
	comp=Z,0.4nm,0.4s						
ELK	Elko	79.37	49	LR	LR	04 07 29.1	
	comp=Z,28nm,20.7s,baz=256,slow=31						
PDAR	Pinedale Array	81.74	44	P	P	03 38 48.4	-0.5
	comp=Z,0.3nm,0.6s,baz=260,slow=2.8,SNR=4.4						
	comp=Z,0.3nm,0.6s						
BRTR	Keskin Array B	81.97	312	P	P	03 38 47.7	-2.3
	comp=Z,1.2nm,0.7s,baz=115,slow=5.4,SNR=3.0						
	comp=Z,1.2nm,0.7s						
PFO	Pinyon Flats O	82.42	55	LR	LR	04 10 36.9	
	comp=Z,36nm,20.8s,baz=230,slow=32						
PPT	Papeete	82.78	116	LR	LR	04 07 55.6	
	comp=Z,32nm,20.1s,baz=220,slow=30						
GERES	GERESS Array B	86.91	328	P	P	03 39 12.9	-1.9
	comp=Z,0.2nm,0.5s,baz=35,slow=3.6,SNR=2.2						
	comp=Z,0.2nm,0.5s						
ANMO	Albuquerque	88.38	49	LR	LR	04 10 42.4	
	comp=Z,43nm,20.9s,baz=20,slow=30						
TXAR	Lajitas Array	93.74	52	P	P	03 39 47.4	+0.2
	comp=Z,0.6nm,0.7s,baz=294,slow=2.5,SNR=9.0						
	comp=Z,0.6nm,0.7s						

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*IDC **22** 04:06:38.7±1.4, 14.°97S×168.°14E, h0km, mb3.9/6, mbtmp3.9/7, ML3.8/1, MS3.3/2, Error ellipse: s-maj=41.3km s-min=28.1km az=110.0*

*NOU **22** 04:06:48.0, 15.°42S×167.°91E, h0km, MLv4.3/9, Vanuatu Islands*

ISC 22 04:06:44.6±1.1**, 15.°02S**±0.°10×**168.°0E**±0.°2**, h36km, n13, σ1s78**/13**, mb3.8**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOUNC	Koumac, New Ca	6.56	212	P	Pn	04 08 20.2	+1.7
	50nm,0.8s						
YATNC	Mamie plateau,	7.09	189	P	Pn	04 08 29.1	+3.3
	25nm,0.9s						
DZM	Mont Dzumac	7.17	192	Pn	Pn	04 08 27.0	-0.1
	1.5nm,0.3s,baz=16,slow=19,SNR=15						
DZM				Sn	Sn	04 09 44.7	-2.7
	baz=345,slow=20						
	5.4nm,0.4s						
DZM	Mont Dzumac	7.17	192	P	Pn	04 08 27.9	+0.8
	14nm,1.1s						
NOUC	Port Laguerre	7.23	193	P	Pn	04 08 29.5	+1.7
OUENC	Ouen Island, N	7.45	189	P	Pn	04 08 32.9	+2.2
	22nm,0.8s						
WRA	Warramunga Arr	32.47	256	P	P	04 13 11.5	-0.4
	0.7nm,0.7s,baz=86,slow=8.8,SNR=7.1						
WRA				LR	LR	04 25 14.0	
	comp=Z,51nm,19.0s,baz=106,slow=34						
	0.7nm,0.7s						
ASAR	Alice Springs	33.26	250	P	P	04 13 19.0	+0.2
	2.4nm,0.4s,baz=80,slow=8.9,SNR=29						
	2.4nm,0.4s						
VNDA	Vanda	62.59	182	P	P	04 17 04.1	-0.5
	1.9nm,1.1s,baz=1.4,slow=3.4,SNR=3.1						
	1.9nm,1.1s						
ASAJ	Asahikawa	63.27	340	LR	LR	04 41 18.9	
	comp=Z,22nm,20.1s,baz=28,slow=33						
SONM	Songino Array	83.17	323	P	P	04 19 07.9	+0.8
	0.3nm,0.3s,baz=122,slow=5.4,SNR=1.6						
	0.3nm,0.3s						
ILAR	Eielson Array	86.57	18	P	P	04 19 22.8	-0.9
	0.2nm,0.6s,baz=234,slow=4.7,SNR=5.0						
	0.2nm,0.6s						
MKAR	Makanchi Array	97.92	316	P	P	04 20 16.3	-0.5
	0.2nm,0.6s,baz=109,slow=7.4,SNR=2.9						
	0.2nm,0.6s						

IDC 22 04:31:06.4±2.0**, 6.°54S×129.°39E, h0km, mb3.5**/2**, mbtmp3.6**/4**, ML3.7**/2**, Error ellipse: s-maj=148.7km s-min=29.6km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.16	161	Pn	Pn	04 34 27.8	-0.7
	0.4nm,0.3s,baz=343,slow=13,SNR=14						
WRA				Sn	Sn	04 36 54.0	-13
	0.5nm,0.3s,baz=352,slow=23,SNR=6.8						
	0.8nm,0.5s						
ASAR	Alice Springs	17.57	166	P	Pn	04 35 13.3	+0.4
	0.2nm,0.3s,baz=339,slow=11,SNR=12						
	1.4nm,0.8s						
MKAR	Makanchi Array	67.51	327	P	P	04 42 04.8	+0.4
	0.3nm,0.4s,baz=116,slow=7.5,SNR=8.1						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	71.80	329	P	P	04 42 30.2	-0.6
	0.1nm,0.5s,baz=124,slow=6.6,SNR=1.6						
	0.1nm,0.5s						

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*ISK **22** 04:34:20.1, 36.°11N×29.°67E, h39km±1km, ML2.4/15*

*DDA **22** 04:34:20.0±0.0, 36.°16N×29.°65E, h37km±1km, ML2.5*

*NIC **22** 04:34:25.8±0.0, 35.°99N×30.°20E, h21km±31km, Ml2.7/5*

ISC 22 04:34:20.0±1.2**, 36.°04N**±0.°04×**29.°67E**±0.°03**, h33km**±3km**, n35, σ1s10**/58**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKAS	Kas	0.20	344	Pg	Pb	04 34 26.7	-0.1
AKAS				Sg	Sb	04 34 32.7	+1.3
AKAS	Kas	0.20	344	P	Pb	04 34 26.6	-0.1
AKAS				S	Sb	04 34 31.4	0.0
AKAS				*i* AML	AML	04 34 32.0	
	comp=E,2µm,0.6s						
IZZE	Mula-Seydike	0.53	317	P	Pb	04 34 30.4	-0.8
IZZE				S	Sb	04 34 37.5	-1.3
IZZE				*i* AML	AML	04 34 38.0	
	comp=E,375nm,0.4s						
AKUM	Antalya-Kumluc	0.61	63	P	Pb	04 34 32.7	+0.3
AKUM				S	Sb	04 34 40.5	-0.2
ELL	Elmali	0.73	15	Pg	Pn	04 34 32.9	-1.2
ELL				Sg	Sb	04 34 42.8	-1.4
FETY	Fethiye	0.76	321	Pg	Pn	04 34 33.6	-0.8
FETY				Sg	Sb	04 34 44.0	-0.9
FETY	Fethiye	0.76	321	P	Pn	04 34 35.7	+1.4
FETY				S	Sb	04 34 45.3	+0.3
KORT	Korkueli	1.10	30	Pg	Pn	04 34 38.9	-0.3
KORT				Sg	Sn	04 34 53.0	-0.3
KORT	Korkueli	1.10	30	P	Pn	04 34 38.9	-0.3
KORT				S	Sn	04 34 54.5	+1.2
CAEL	Denizli, Camel	1.11	345	P	Pn	04 34 39.5	+0.1
CAEL				S	Sn	04 34 53.3	-0.3
CAEL				*i* AML	AML	04 34 59.0	
	comp=E,75nm,0.4s						
DALY	Dalyan (Mula)	1.13	313	Pg	Pn	04 34 39.4	0.0
DALY				Sg	Sn	04 34 53.7	-0.1
ANTB	Antalya	1.16	42	Pn	Pn	04 34 40.3	+0.4
GOLH	Golhisar	1.19	356	P	Pn	04 34 40.1	-0.4
GOLH				S	Sn	04 34 56.0	+0.4
TURN	Turunc	1.36	303	Pn	Pn	04 34 43.1	+0.4
APMY	Acipayam-Deniz	1.46	348	Pn	Pn	04 34 44.3	+0.3
BUCA	Burdur, Bucak-	1.47	29	P	Pn	04 34 44.7	+0.5
BUCA				S	Sn	04 35 04.2	+2.0
TAVA	DENIZLI_Tavas	1.54	337	P	Pn	04 34 46.4	+1.1
TAVA				S	Sn	04 35 04.3	+0.1
YER	Yerkesik	1.56	315	Pn	Pn	04 34 45.8	+0.3
BCK	Bucak	1.59	27	Pn	Pn	04 34 46.3	+0.4
BRDR	BURDUR-Merkez	1.68	11	P	Pn	04 34 47.0	-0.1
BRDR				S	Sn	04 35 07.5	0.0
KEPZ	Antalya-Kepez	1.78	61	P	Pn	04 34 49.5	+1.1
KEPZ				S	Sn	04 35 07.8	-2.1
SUTC	Sutluce-Ispart	1.78	36	Pn	Pn	04 34 49.2	+0.6
DAT	Datca	1.82	293	Pn	Pn	04 34 50.1	+1.0
MLSB	Milas	1.97	310	Pn	Pn	04 34 51.7	+0.6
GAZI	Gazipasa	2.15	84	Pn	Pn	04 34 53.8	+0.3
GAZI	Gazipasa	2.15	84	P	Pn	04 34 52.9	-0.6
GAZI				S	Sn	04 35 17.1	-1.9
BODT	Bodrum	2.16	299	Pn	Pn	04 34 54.3	+0.7
SEDI	Konya, Seydise	2.18	49	P	Pn	04 34 54.6	+0.5
SEDI				S	Sn	04 35 22.9	+2.8
AKMS	Akamas	2.40	114	P	Pn	04 34 58.3	+1.3
AKMS				S	Sn	04 35 24.0	-1.2
AKMS				AML	AML	04 35 25.8	
	0.1nm,0.3s						
AKMS				AML	AML	04 35 25.8	
	0.1nm,0.3s						
AKMS				AML	AML	04 35 27.9	
	0.2nm,0.2s						
AKMS				AML	AML	04 35 27.9	
	0.2nm,0.2s						
HDMB	Hadim	2.44	67	Pn	Pn	04 34 59.1	+1.3
ALFC	Alefka	2.54	110	P	Pn	04 34 59.7	+0.8
ALFC				S	Sn	04 35 27.5	-1.3
ALFC				AML	AML	04 35 30.5	
	0.1nm,0.2s						
ALFC				AML	AML	04 35 30.5	
	0.1nm,0.2s						
ALFC				AML	AML	04 35 31.2	
	0.1nm,0.1s						
ALFC				AML	AML	04 35 31.2	
	0.1nm,0.1s						
SHUT	Suhut-Afyon	2.60	15	Pn	Pn	04 35 00.7	+0.9
TROD	Troodos	2.83	112	P	Pn	04 35 03.7	+0.7
TROD				S	Sn	04 35 33.8	-2.2
TROD				AML	AML	04 35 45.1	
	0.1nm,0.3s						
TROD				AML	AML	04 35 45.1	
	0.1nm,0.3s						
SZAC	Souni	2.92	115	P	Pn	04 35 06.2	+2.1
SZAC				S	Sn	04 35 36.2	-1.9
SZAC				AML	AML	04 35 42.2	
	0.1nm,0.3s						
SZAC				AML	AML	04 35 42.2	
	0.1nm,0.3s						
SZAC				AML	AML	04 35 42.2	
	0.1nm,0.2s						
SZAC				AML	AML	04 35 42.2	
	0.1nm,0.2s						
ASGA	Asgata	3.18	112	P	Pn	04 35 09.6	+2.0
ASGA				S	Sn	04 35 44.1	-0.2
ASGA				AML	AML	04 35 57.1	
	0.1nm,0.5s						
ASGA				AML	AML	04 35 57.1	
	0.1nm,0.5s						

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*IDC **22** 04:45:04.4±3.2, 9.°42S×124.°14E, h72km±30km, mb4.0/6, mbtmp4.2/9, MS3.0/3, Error ellipse: s-maj=41.7km s-min=18.7km az=69.0*

*DJA **22** 04:45:05.9±0.3, 10°S±3°×12°4E±°, h69km±6km, M4.6/11, mb4.7/7, mB5.1/4, MLv4.6/11, Mw(mB)4.5/4*

*NEIC **22** 04:45:05.7±2.0, 9.°58S±0.°09×123.°80E±0.°07, h74km±6km, mb4.3/13, Error ellipse: s-maj=14.3km s-min=7.7km az=209.0*

ISC 22 04:45:05.0±0.5**, 9.°59S**±0.°06×**123.°81E**±0.°05**, h66km, n82, σ2s22**/86**, mb4.2**/12**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.48	110		Pn	04 45 18.5	+1.1
SOEI				Sn	Sn	04 45 29.7	+3.2
SOEI	Soe	0.48	110	P	Pn	04 45 19.0	+1.6
SOEI				S	Sn	04 45 30.6	+4.1
MMRI	Maumere	1.82	301	Pn	Pn	04 45 34.8	+0.7
MMRI	Maumere	1.82	301	P	Pn	04 45 35.1	+0.9
MMRI	Maumere	1.82	301	P	Pn	04 45 35.0	+0.9
BASI	Baing, Sumba	3.25	259	P	Pn	04 45 55.6	+2.1
BASI				S	Sn	04 46 33.6	+2.6
BSSI	Bau Bau, Buton	4.75	316	P	Pn	04 46 16.2	+2.1
BKSI	Bulukumba	5.60	319	P	Pn	04 46 26.9	+1.2
	64nm,0.6s,580nm0.2nm						
PLAI	Plampang	6.00	277	P	Pn	04 46 32.9	+1.6
PLAI	Plampang	6.00	277	P	Pn	04 46 32.9	+1.6
	91nm,0.7s,0.5nm						
KAPI	Kappang	6.07	318	P	Pn	04 46 33.5	+1.3
	20nm,0.5s,baz=139,slow=8.0,SNR=16						
KAPI				LR	LR	04 48 60.0	
	comp=Z,137nm,18.2s,baz=132,slow=38						
KAPI	Kappang	6.07	318	Pn	Pn	04 46 34.2	+2.0
KAPI	Kappang	6.07	318	P	Pn	04 46 35.2	+3.0
SPSI	Sidrap Palu	6.88	324	P	Pn	04 46 45.3	+2.1
	17nm,0.8s,0.1nm						
KNRA	Kununurra	7.75	142	Pn	Pn	04 46 54.7	-0.5
KNRA	Kununurra	7.75	142	P	Pn	04 46 54.8	-0.3
SANI	Sanana	7.79	16	P	Pn	04 46 58.2	+2.4
SANI	Sanana	7.79	16	P	Pn	04 46 58.0	+2.2
	114nm,0.6s,1µm0.5nm						
MTN	Manton Dam	7.88	115	Pn	Pn	04 46 56.7	-0.2
MTN	Manton Dam	7.88	115	P	Pn	04 46 56.6	-0.4
LUWI	Luwuk	8.55	353	Pn	Pn	04 47 06.9	+0.8
LUWI	Luwuk	8.55	353	P	Pn	04 47 10.6	+4.4
IGBI	Denpasar	8.59	274	P	Pn	04 47 08.8	+2.2
FITZ	Fitzroy Crossi	8.65	168	Pn	Pn	04 47 06.9	-0.6
KDU	Kakadu	9.04	111	P	Pn	04 47 11.8	-1.1
FAKI	Fak Fak	10.69	52	Pn	Pn	04 47 35.4	+0.1
FAKI	Fak Fak	10.69	52	P	Pn	04 47 38.2	+2.8
TOLI2	Tolitoli	11.05	344	Pn	Pn	04 47 40.8	+0.5
TOLI2	Tolitoli	11.05	344	P	Pn	04 47 44.9	+4.6
WRA	Warramunga Arr	14.47	137	P	Pn	04 48 22.4	-4.1
	1.9nm,0.5s,baz=318,slow=13,SNR=52						
WRA				S	Sn	04 50 52.1	-14
	11nm,0.5s,baz=306,slow=24,SNR=14						
WRA				LR	LR	04 54 56.0	
	comp=Z,73nm,20.0s,baz=260,slow=41						
WRAB	Tennant Creek	14.47	136	P	Pn	04 48 26.1	-0.4
WB2	Warramunga Arr	14.48	136	Pn	Pn	04 48 22.8	-3.8
WRKA	Warakurna	15.95	165	P	Pn	04 48 44.3	-1.1
AS31	Alice Springs	17.00	147		Pn	04 48 58.0	-0.6
ASAR	Alice Springs	17.00	147	P	Pn	04 48 57.9	-0.7
	4.3nm,0.5s,baz=318,slow=12,SNR=46						
ASAR				S	Sn	04 51 56.8	-10
	13nm,0.6s,baz=321,slow=23,SNR=24						
ASAR	Alice Springs	17.00	147		P	04 48 59.8	+0.3
AS01	Alice Springs	17.03	147	P	Pn	04 48 58.8	-0.1
MEEK	Meekatharra	17.66	195	P	P	04 49 07.2	+0.5
QIS	Mount Isa	18.73	127	P	Pn	04 49 20.7	+1.0
COEN	Coen	19.45	105	Pn	Pn	04 49 28.1	0.0
MORW	Morawa	20.71	200	P	P	04 49 40.4	+0.4
MORW				IAmb	IAmb	04 49 42.4	
	comp=Z,16nm,0.7s						
MORW	Morawa	20.71	200	P	P	04 49 41.7	+1.7
OOD	Oodnadatta	21.29	150	P	P	04 49 49.0	+2.8
FORT	Forrest	21.45	170	P	P	04 49 48.8	+0.8
FORT	Forrest	21.45	170	P	P	04 49 49.9	+2.0
BLDU	Ballidu	21.95	197	P	P	04 49 54.5	+1.3
KLBR	Kellerberrin	22.61	194	P	P	04 50 01.6	+1.3
MULG	Mulgathing	22.70	156	P	P	04 50 03.9	+2.5
NWAO	Narrogin (SRO)	24.01	194	P	P	04 50 14.9	+1.3
	comp=Z,28nm,1.2s,baz=11,slow=7.9,SNR=6.0						
	comp=Z,28nm,1.2s						
NWAO	Narrogin (SRO)	24.01	194	P	P	04 50 14.5	+0.8
NWAO	Narrogin (SRO)	24.01	194	P	P	04 50 15.4	+1.7
INKA	Innaminka	24.10	141	P	P	04 50 17.7	+3.1
BBOO	Buckleboo	25.73	156	P	P	04 50 31.4	+2.0
HTT	Hallett	27.51	152	P	P	04 50 48.1	+2.7
STKA	Stephens Creek	27.64	146	P	P	04 50 48.5	+2.0
	comp=Z,1.5nm,0.5s,baz=320,slow=9.5,SNR=4.6						
ARPS	Mount Arapiles	31.61	152	P	P	04 51 25.1	+3.4
CMAR	Chiang Mai Arr	37.13	319	P	P	04 52 09.2	-0.4
	comp=Z,1.2nm,0.3s,baz=145,slow=7.5,SNR=5.2						
CMAR				LR	LR	05 11 37.4	
	comp=Z,19nm,18.8s,baz=135,slow=43						
	comp=Z,1.2nm,0.3s						
MJAR	Matsushiro Arr	47.84	16	P	P	04 53 33.8	-2.4
	comp=Z,0.8nm,0.3s,baz=234,slow=12,SNR=1.6						
	comp=Z,0.8nm,0.3s						
TAPN	Taplejung	50.72	317	*e*P	P	04 53 56.9	-1.8
	comp=Z,6.7nm,0.4s						
RAMN	Ramite	51.20	316	*e*P	P	04 54 01.3	-1.0
JIRN	Jiri	51.94	317	*e*P	P	04 54 06.3	-1.6
	comp=Z,6.9nm,0.3s						
GUN	Gumba	52.31	317	*e*P	P	04 54 09.0	-1.6
	comp=Z,12nm,0.4s						
PKI	Pulchoki	52.42	316	*e*P	P	04 54 09.1	-2.3
	comp=Z,11nm,0.5s						
MRNZ	Matariki Terra	53.40	135	P	P	04 54 16.4	-1.7
DANN	Dangsing	54.04	316	*e*P	P	04 54 21.4	-1.9
	comp=Z,25nm,0.5s						
USRK	Ussuriysk Ar.	54.04	7	P	P	04 54 23.7	+1.1
PYUN	Piuthan	54.42	315	*e*P	P	04 54 24.3	-1.7
	comp=Z,8.7nm,0.5s						
SONM	Songino Array	59.22	346	P	P	04 54 57.6	-1.9
	comp=Z,0.5nm,0.5s,baz=157,slow=9.9,SNR=2.7						
	comp=Z,0.5nm,0.5s						
MK31	Makanchi Array	67.22	330	P	P	04 55 51.0	-1.3
MK31				IAmb	IAmb	04 55 52.2	
	comp=Z,2.3nm,0.8s						
MKAR	Makanchi Array	67.22	330	P	P	04 55 51.2	-1.2
	comp=Z,2.4nm,0.5s,baz=134,slow=7.3,SNR=53						
	comp=Z,2.4nm,0.5s						
MKAR	Makanchi Array	67.22	330	P	P	04 55 51.0	-1.3
MAKZ	Makanchi	67.39	330	P	P	04 55 52.3	-1.0
MAKZ				IAmb	IAmb	04 55 53.1	
	comp=Z,2.8nm,1.1s						
BOOM	Boomskoye usch	67.79	324	P	P	04 55 55.5	-0.7
AAK	Ala-Archa	68.73	323	P	P	04 56 01.6	-0.5
AAK				IAmb	IAmb	04 56 03.1	
	comp=Z,1.8nm,0.7s						
ZALV	Zalesovo Beam	71.36	337	P	P	04 56 15.8	-1.9
	comp=Z,1.3nm,0.5s,baz=116,slow=6.8,SNR=5.5						
	comp=Z,1.3nm,0.5s						
ZALV	Zalesovo Beam	71.36	337	P	P	04 56 15.9	-1.7
KURK	Kurchatov	71.69	332	P	P	04 56 19.1	-0.7
KURK				IAmb	IAmb	04 56 19.5	
	comp=Z,3.6nm,0.6s						
QSPA	South Pole Qui	80.41	180	P	P	04 57 11.1	+1.8
QSPA				IAmb	IAmb	04 57 54.3	
	comp=Z,3.4nm,1.1s						
ABKAR	Akbulak array	80.81	323	P	P	04 57 10.0	-1.6
ABKAR	Akbulak array	80.81	323	P	P	04 57 10.2	-1.3

ABKAR				IAmb	IAmb	04 57 42.9	
	comp=Z,2.1nm,1.4s						
ESDC	**Sonseca Array**	**124.85**	**312**	PKP	**PKPdf**	**05 03 56.1**	**-1.8**
	comp=Z,0.4nm,0.7s,baz=95,slow=9.1,SNR=2.2						
CPUP	**Villa Florida**	**144.28**	**178**	PKP	**PKPdf**	**05 04 34.3**	**0.0**
	comp=Z,2.9nm,1.1s,baz=163,slow=6.3,SNR=4.0						

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*IDC **22** 04:52:04.8±0.9, 8°.04S×161°.01E, h0^{km}, mb4.0/10, mbtmp4.0/12, ML3.7/2, MS3.4/11, Error ellipse: s-maj=32.0km s-min=18.8km az=118.0*

*NEIC **22** 04:52:06.2±0.9, 7°.91S±0°.09×161°.1E±0°.1, h10^{km}±1^{km}, mb4.6/11, Error ellipse: s-maj=25.3km s-min=15.2km az=281.0*

ISC 22 04:52:10.1±0.6, 8°.09S±0°.08×161°.0E±0°.1, h35^{km}, n40, σ0^{s}98/28, mb4.2/15, MS3.2/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.69**	**218**	Pn	**Pn**	**04 52 38.1**	**+1.0**
	2µm,0.3s,baz=108,slow=5.1,SNR=10						
HNR				Sn	**Sn**	**04 52 56.5**	**-1.0**
	2µm,0.3s,baz=90,slow=16,SNR=4.2						
HNR				LR	LR	04 53 26.7	
	comp=Z,13µm,19.1s,baz=120,slow=47						
HNR	**Honiara**	**1.69**	**218**	Pn	**Pn**	**04 52 38.6**	**+1.5**
PMG	**Port Moresby**	**13.74**	**264**	LR	LR	05 00 30.5	
	comp=Z,192nm,20.4s,baz=128,slow=37						
DZM	**Mont Dzumac**	**14.86**	**160**	Pn	**Pn**	**04 55 37.8**	**-0.1**
	0.1nm,0.3s,baz=241,slow=11,SNR=2.1						
DZM				LR	LR	05 00 02.2	
	comp=Z,119nm,18.1s,baz=35,slow=32						
	5.1nm,0.9s						
CTA	**Charters Tower**	**18.59**	**229**	P	**P**	**04 56 24.2**	**-0.4**
	0.3nm,0.3s,baz=30,slow=13,SNR=5.1						
CTA				LR	LR	05 02 37.3	
	comp=Z,137nm,21.7s,baz=64,slow=34						
	4.7nm,0.8s						
CTAO	**Charters Tower**	**18.59**	**229**	P	**Pn**	**04 56 25.0**	**0.0**
CTAO				IAmb	IAmb	04 56 33.9	
	comp=Z,18nm,1.1s						
EIDS	**Eidsvold**	**19.61**	**208**	P	**Pn**	**04 56 36.7**	**-0.5**
EIDS				IAmb	IAmb	04 56 38.6	
	comp=Z,30nm,1.0s						
ARMA	**Armidale**	**23.88**	**200**	P	**P**	**04 57 20.5**	**-0.2**
ARMA				IAmb	IAmb	04 57 22.8	
	comp=Z,20nm,1.2s						
H11S2	**WAKE ISLAND Hy**	**27.01**	**12**	T	T	05 26 19.7	
	baz=193,slow=76,SNR=52						
H11S3	**WAKE ISLAND Hy**	**27.01**	**12**	T	T	05 26 28.7	
	baz=193,slow=76,SNR=46						
H11S1	**WAKE ISLAND Hy**	**27.02**	**12**	T	T	05 26 29.9	
	baz=193,slow=76,SNR=31						
H11N1	**WAKE ISLAND Hy**	**28.23**	**12**	T	T	05 28 01.6	
	baz=193,slow=76,SNR=54						
H11N3	**WAKE ISLAND Hy**	**28.24**	**12**	T	T	05 28 06.0	
	baz=193,slow=76,SNR=48						
H11N2	**WAKE ISLAND Hy**	**28.25**	**12**	T	T	05 28 05.1	
	baz=193,slow=76,SNR=46						
WB0	**Warramunga Arr**	**28.25**	**243**	P	**P**	**04 58 00.5**	**+0.2**
WB0				IAmb	IAmb	04 58 10.8	
	comp=Z,15nm,1.4s						
WB2	**Warramunga Arr**	**28.35**	**243**	P	**P**	**04 57 58.9**	**-2.3**
WB2				IAmb	IAmb	04 58 01.6	
	comp=Z,9.9nm,1.2s						
WRA	**Warramunga Arr**	**28.36**	**243**	P	**P**	**04 58 00.4**	**-0.9**
	comp=Z,3.0nm,1.0s,baz=70,slow=9.1,SNR=5.6						
WRA				LR	LR	05 08 49.9	
	comp=Z,145nm,19.4s,baz=68,slow=35						
	comp=Z,3.0nm,1.0s						
STKA	**Stephens Creek**	**29.76**	**215**	LR	LR	05 10 20.2	
	comp=Z,108nm,19.2s,baz=25,slow=37						
STKA	**Stephens Creek**	**29.76**	**215**	P	**P**	**04 58 14.1**	**+0.6**
ASAR	**Alice Springs**	**30.22**	**236**	P	**P**	**04 58 16.1**	**-1.7**
	comp=Z,1.2nm,0.9s,baz=61,slow=9.1,SNR=5.0						
ASAR				LR	LR	05 10 00.5	
	comp=Z,142nm,19.0s,baz=78,slow=36						
	comp=Z,1.2nm,0.9s						
TOO	**Toolangi**	**32.54**	**203**	P	**P**	**04 58 38.6**	**+0.6**
BBOO	**Buckleboo**	**33.74**	**220**	P	**P**	**04 58 48.5**	**0.0**
BKZ	**Black Stump Fm**	**33.93**	**158**	P	**P**	**04 58 49.9**	**-0.2**
BKZ				IAmb	IAmb	04 58 50.3	
	comp=Z,24nm,1.5s						
DAV	**Davao City (W)**	**38.39**	**292**	LR	LR	05 16 17.2	
	comp=Z,21nm,18.3s,baz=163,slow=38						
KAPI	**Kappang**	**41.07**	**272**	LR	LR	05 17 42.2	
	comp=Z,29nm,18.3s,baz=151,slow=37						
JNU	**Nakatsue**	**50.00**	**327**	LR	LR	05 22 46.6	
	comp=Z,20nm,18.1s,baz=138,slow=37						
KSRS	**Korea Array**	**54.85**	**328**	LR	LR	05 23 21.8	
	comp=Z,17nm,18.9s,baz=190,slow=34						
KLR	**Kul'dur**	**62.56**	**339**	LR	LR	05 29 06.9	
	comp=Z,17nm,19.1s,baz=286,slow=36						
CMAR	**Chiang Mai Arr**	**66.64**	**294**	P	**P**	**05 02 59.1**	**+1.4**
	comp=Z,1.4nm,0.3s,baz=108,slow=4.8,SNR=4.0						
	comp=Z,1.4nm,0.3s						
VNDA	**Vanda**	**69.40**	**180**	P	**P**	**05 03 14.6**	**+0.6**
	comp=Z,2.5nm,1.0s,baz=342,slow=1.8,SNR=4.7						
	comp=Z,2.5nm,1.0s						
VNDA	**Vanda**	**69.40**	**180**	P	**P**	**05 03 14.3**	**+0.3**
SONM	**Songino Array**	**73.55**	**325**	P	**P**	**05 03 40.3**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=144,slow=5.2,SNR=2.6						
	comp=Z,0.5nm,0.5s						
IMAR	**Indian Mountai**	**80.93**	**17**	P	**P**	**05 04 19.4**	**-1.1**
QSPA	**South Pole Qui**	**81.89**	**180**	P	**P**	**05 04 26.4**	**+0.5**
QSPA				IAmb	IAmb	05 05 04.4	
	comp=Z,8.2nm,1.4s						
ILAR	**Eielson Array**	**82.29**	**20**	P	**P**	**05 04 26.6**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=251,slow=4.8,SNR=6.1						
	comp=Z,0.6nm,0.8s						
MKAR	**Makanchi Array**	**88.19**	**318**	P	**P**	**05 04 58.2**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=98,slow=5.8,SNR=9.8						
	comp=Z,1.0nm,0.8s						
ZALV	**Zalesovo Beam**	**88.45**	**325**	P	**P**	**05 04 59.1**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=121,slow=7.4,SNR=1.7						
	comp=Z,0.3nm,0.4s						
YKA	**Yellowknife Ar**	**94.53**	**28**	P	**P**	**05 05 26.5**	**-0.2**
	comp=Z,0.4nm,1.0s,baz=256,slow=4.4,SNR=5.4						
	comp=Z,0.4nm,1.0s						
PDAR	**Pinedale Array**	**95.03**	**48**	P	**P**	**05 05 30.1**	**+0.4**
	comp=Z,0.4nm,0.9s,baz=270,slow=3.0,SNR=3.5						
	comp=Z,0.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**159.05**	**286**	PKPab	**PKPab**	**05 12 40.3**	**-2.0**
	comp=Z,0.4nm,1.0s,baz=164,slow=10,SNR=2.5						

IDC 22 05:11:53.3±3.2, 7°.92S×107°.59E, h0^{km}, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=172.9km s-min=29.2km az=51.0, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**28.53**	**118**	P	P	05 17 50.8	-0.1
	0.2nm,0.4s,baz=290,slow=10,SNR=7.0						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**29.69**	**125**	P	P	05 18 01.8	+0.6
	0.3nm,0.4s,baz=300,slow=8.3,SNR=4.5						
	0.3nm,0.4s						
STKA	**Stephens Creek**	**39.60**	**132**	P	P	05 19 26.2	-0.5
	4.0nm,0.5s,baz=307,slow=9.0,SNR=6.5						
	4.0nm,0.5s						
MKAR	**Makanchi Array**	**58.94**	**340**	P	P	05 21 54.4	0.0
	0.2nm,0.9s,baz=133,slow=8.5,SNR=1.6						
	0.2nm,0.9s						

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*NEIC **22** 05:12:31.6±2.8, 14°.9S±0°.1×173°.59W±0°.09, h10^{km}±1^{km}, mb4.7/35, Error ellipse: s-maj=20.0km s-min=11.3km az=145.0*

*IDC **22** 05:12:33.9±1.1, 15°.21S×173°.63W, h0^{km}, mb4.2/11, mbtmp4.2/11, MS3.7/25, Error ellipse: s-maj=50.5km s-min=18.8km az=149.0*

ISC 22 05:12:31.5±0.6, 15°.3S±0°.1×173°.1W±0°.1, h10^{km}, n101, σ1^{s}56/65, mb4.7/29, MS3.8/27, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.84**	**43**	Pn	**Pb**	**05 13 04.6**	**-0.7**
	137nm,0.3s,baz=179,slow=1.1,SNR=78						
AFI				Sn	**Sn**	**05 13 25.1**	**-1.5**
	275nm,0.3s,baz=96,slow=17,SNR=9.3						
AFI	**Afiamalu**	**1.84**	**43**	Pn	**Pg**	**05 13 05.4**	**-1.4**
NIUE	**Niue**	**4.84**	**142**	Pn	Pn	05 13 51.4	+7.0
MSVF	**Nonsavu**	**8.86**	**253**	Pn	Pn	05 14 34.5	-5.4
RAR	**Rarotonga**	**13.95**	**117**	Pn	**P**	**05 15 58.8**	**+1.3**
DZM	**Mont Dzumac**	**20.54**	**248**	*e*LR	LR	05 22 52.8	
	comp=Z,333nm,23.2s						
DZM	**Mont Dzumac**	**20.54**	**248**	LR	LR	05 23 48.8	
	comp=Z,272nm,18.3s,baz=48,slow=34						
PPT	**Papeete**	**22.65**	**99**	LR	LR	05 25 08.3	
	comp=Z,54nm,18.1s,baz=350,slow=32						
PPT2	**Papeete2**	**22.65**	**99**	*e*LR	LR	05 23 09.7	
	comp=Z,153nm,24.8s						
PPT2	**Papeete2**	**22.65**	**99**	*e*T	T	05 41 17.7	
	4.2nm,0.3s						
TVO	**Taravao**	**22.97**	**100**	*e*T	T	05 41 46.3	
	1.2nm,0.3s						
URZ	**Urewera**	**24.49**	**199**	LR	LR	05 26 03.8	
	comp=Z,204nm,19.2s,baz=94,slow=33						
HNR	**Honiara**	**26.97**	**279**	LR	LR	05 26 29.8	
	comp=Z,1µm,21.4s,baz=123,slow=32						
SNZO	**South Karori**	**28.04**	**200**	P	**P**	**05 18 22.2**	**-0.6**
QRZ	**Quartz Range**	**28.38**	**203**	P	**P**	**05 18 24.7**	**-1.3**
RPZ	**Rata Peaks**	**31.43**	**202**	LR	LR	05 31 09.5	
	comp=Z,172nm,18.7s,baz=358,slow=36						
TAOE	**Nuku Hiva Isla**	**32.79**	**83**	*e*LR	LR	05 27 54.2	
	comp=Z,160nm,22.8s						
CTA	**Charters Tower**	**38.98**	**257**	LR	LR	05 34 17.1	
	comp=Z,59nm,18.5s,baz=84,slow=34						
H11S2	**WAKE ISLAND Hy**	**39.01**	**329**	T	T	06 00 52.6	
	baz=149,slow=76,SNR=32						
H11S3	**WAKE ISLAND Hy**	**39.02**	**329**	T	T	06 00 48.4	
	baz=149,slow=76,SNR=68						
H11S1	**WAKE ISLAND Hy**	**39.03**	**329**	T	T	06 00 54.0	
	baz=149,slow=76,SNR=48						
PMG	**Port Moresby**	**39.24**	**274**	LR	LR	05 34 55.3	
	comp=Z,75nm,18.8s,baz=334,slow=35						
H11N3	**WAKE ISLAND Hy**	**39.95**	**330**	T	T	06 02 05.6	
	baz=150,slow=76,SNR=41						
H11N1	**WAKE ISLAND Hy**	**39.96**	**330**	T	T	06 02 03.1	
	baz=150,slow=76,SNR=42						
H11N2	**WAKE ISLAND Hy**	**39.97**	**330**	T	T	06 02 03.6	
	baz=150,slow=76,SNR=37						
STKA	**Stephens Creek**	**44.38**	**240**	P	**P**	**05 20 43.5**	**+1.1**
	3.1nm,0.9s,baz=178,slow=6.4,SNR=3.3						
STKA				LR	LR	05 38 15.9	
	comp=Z,100nm,18.0s,baz=37,slow=35						
	3.1nm,0.9s						
WRA	**Warramunga Arr**	**50.18**	**257**	P	**P**	**05 21 26.9**	**-1.0**
	0.6nm,0.4s,baz=90,slow=7.4,SNR=20						
	0.6nm,0.4s						
AS31	**Alice Springs**	**50.45**	**252**	P	**P**	**05 21 26.2**	**-3.8**
ASAR	**Alice Springs**	**50.45**	**252**	P	**P**	**05 21 29.5**	**-0.4**
	9.0nm,0.8s,baz=85,slow=8.4,SNR=70						
ASAR				LR	LR	05 40 51.7	
	comp=Z,140nm,19.5s,baz=112,slow=34						
	9.0nm,0.8s						
ASAR	**Alice Springs**	**50.45**	**252**	P	P	05 21 23.8	-6.1
MBWA	**Marble Bar**	**63.70**	**254**	P	**P**	**05 22 59.4**	**-4.3**
SHEM	**Shemya Is, Ala**	**68.61**	**352**	LR	LR	05 48 11.3	
	comp=Z,33nm,20.5s,baz=91,slow=31						
MJAR	**Matsushiro Arr**	**69.04**	**320**	P	**P**	**05 23 38.8**	**+1.2**
	0.8nm,0.3s,baz=190,slow=11,SNR=2.5						
	0.8nm,0.3s						
JOW	**Kunigami**	**70.66**	**306**	LR	LR	05 48 49.0	
	comp=Z,26nm,20.0s,baz=204,slow=31						
PFO	**Pinyon Flats O**	**72.60**	**47**	LR	LR	05 49 50.1	
	comp=Z,109nm,19.2s,baz=222,slow=31						
PETK	**Petropavlovsk-**	**72.60**	**342**	P	**P**	**05 24 01.5**	**+2.6**
	1.3nm,0.7s,baz=206,slow=13,SNR=1.9						
	1.3nm,0.7s						
LPIG	**La Paz**	**72.70**	**58**	LR	LR	05 47 18.4	
	comp=Z,62nm,19.4s,baz=219,slow=28						
YBH	**Yreka Blue Hor**	**73.30**	**37**	LR	LR	05 51 23.0	
	comp=Z,49nm,18.8s,baz=240,slow=32						
NVAR	**Mina Array Bea**	**74.02**	**42**	P	P	05 24 13.2	+5.3
	1.9nm,0.9s,baz=235,slow=8.9,SNR=7.9						
NVAR				LR	LR	05 50 13.1	
	comp=Z,62nm,19.2s,baz=206,slow=30						
	1.9nm,0.9s						
NVAR	**Mina Array Bea**	**74.02**	**42**	P	**P**	**05 24 08.6**	**+0.7**
KVN	**Kaiserville**	**74.50**	**41**	P	**P**	**05 24 09.8**	**-0.8**
KVN				IAmb	IAmb	05 24 21.0	
	comp=Z,10nm,1.5s						
TPH	**Tonopah**	**74.52**	**43**	P	**P**	**05 24 09.1**	**-1.7**
KDAK	**Kodiak Island**	**74.73**	**11**	LR	LR	05 48 51.6	
	comp=Z,38nm,20.8s,baz=214,slow=29						
KSRS	**Korea Array**	**76.28**	**315**	P	**P**	**05 24 23.3**	**+2.6**
	comp=Z,0.4nm,0.3s,baz=92,slow=12,SNR=1.6						
	comp=Z,0.4nm,0.3s						
319A	**Douglas**	**76.76**	**52**	P	**P**	**05 24 22.3**	**-1.4**
319A				IAmb	IAmb	05 24 33.7	
	comp=Z,7.4nm,1.1s						
ELK	**Elko**	**77.27**	**41**	LR	LR	05 51 41.4	
	comp=Z,47nm,19.7s,baz=248,slow=30						
HLID	**Hailey**	**79.32**	**39**	P	**P**	**05 24 36.1**	**-1.6**
BARN	**Barnard Glacie**	**80.09**	**15**	P	**P**	**05 24 41.7**	**+0.2**
BARN				IAmb	IAmb	05 24 48.2	
	comp=Z,10nm,1.1s						
TXAR	**Lajitas Array**	**80.27**	**56**	P	P	05 24 50.0	+6.9
	comp=Z,1.2nm,1.0s,baz=240,slow=4.2,SNR=8.9						
TXAR				LR	LR	05 54 47.5	
	comp=Z,67nm,19.0s,baz=228,slow=31						
	comp=Z,1.2nm,1.0s						
NEW	**Newport**	**80.42**	**34**	LR	LR	05 52 58.4	
	comp=Z,38nm,20.1s,baz=208,slow=30						
TRF	**Thorofare Moun**	**80.43**	**10**	P	**P**	**05 24 43.1**	**-0.2**
TRF				IAmb	IAmb	05 24 51.9	
	comp=Z,11nm,1.1s						
ANMO	**Albuquerque**	**80.47**	**50**	LR	LR	05 52 39.1	
	comp=Z,71nm,20.3s,baz=330,slow=30						
TNA	**Tin City**	**80.68**	**2**	P	**P**	**05 24 43.4**	**-0.8**
GDL2	**Guadalupe Moun**	**80.89**	**53**	P	**P**	**05 24 47.7**	**+1.4**
MCK	**McKinley**	**80.93**	**11**	P	**P**	**05 24 43.7**	**-2.0**
MCK				IAmb	IAmb	05 24 51.8	
	comp=Z,13nm,0.9s						
MCMT	**McKenzie Canyo**	**80.95**	**39**	P	**P**	**05 24 46.5**	**-0.1**
L26K	**Log Cabin Wild**	**81.41**	**13**	P	**P**	**05 24 47.7**	**-0.6**
REDW	**Red Top Meadow**	**81.42**	**41**	P	**P**	**05 24 48.3**	**-0.8**
REDW				IAmb	IAmb	05 24 56.0	
	comp=Z,6.4nm,1.1s						
TPAW	**Teton Pass**	**81.43**	**41**	P	**P**	**05 24 45.6**	**-3.6**
TPAW				IAmb	IAmb	05 24 55.8	
	comp=Z,6.8nm,1.0s						
S22A	**4UR Ranch, Cre**	**81.44**	**47**	P	**P**	**05 24 50.9**	**+1.5**
S22A				IAmb	IAmb	05 24 57.5	
	comp=Z,6.9nm,1.1s						
DLBC	**Dease Lake**	**81.46**	**21**	LR	LR	05 57 06.9	
	comp=Z,58nm,18.1s,baz=302,slow=33						
IMW	**Indian Meadow**	**81.64**	**40**	P	**P**	**05 24 49.2**	**-1.1**
IMW				IAmb	IAmb	05 24 57.3	
	comp=Z,5.7nm,1.0s						
NEA2	**Nenana**	**81.70**	**10**	P	**P**	**05 24 48.7**	**-1.1**
NEA2				IAmb	IAmb	05 24 55.5	
	comp=Z,6.7nm,1.0s						
WRH	**Wood River Hil**	**81.76**	**11**	P	**P**	**05 24 48.7**	**-1.4**
WRH				IAmb	IAmb	05 24 56.3	
	comp=Z,13nm,1.0s						
DOT	**Dot Lake**	**81.80**	**13**	P	**P**	**05 24 48.6**	**-1.7**
DOT				IAmb	IAmb	05 24 55.9	
	comp=Z,7.9nm,1.0s						
MLY	**Manley**	**81.83**	**9**	P	**P**	**05 24 49.5**	**-1.0**
FLWY	**Flagg Ranch**	**81.88**	**40**	P	**P**	**05 24 49.8**	**-1.7**
FLWY				IAmb	IAmb	05 24 59.4	
	comp=Z,5.8nm,0.9s						
HDA	**Harding Lake**	**81.91**	**11**	P	**P**	**05 24 50.8**	**-0.1**
HDA				IAmb	IAmb	05 24 56.5	
	comp=Z,10nm,1.0s						
PD31	**Pinedale Array**	**81.95**	**42**	P	**P**	**05 24 50.9**	**-1.0**
PDAR	**Pinedale Array**	**81.95**	**42**	P	P	05 24 57.0	+5.1
	comp=Z,1.7nm,0.9s,baz=219,slow=4.7,SNR=11						
PDAR				LR	LR	05 56 41.7	
	comp=Z,59nm,18.1s,baz=252,slow=32						
	comp=Z,1.7nm,0.9s						
PDAR	**Pinedale Array**	**81.95**	**42**	P	**P**	**05 24 51.8**	**-0.1**
CCB	**Clear Creek Bu**	**81.97**	**11**	P	**P**	**05 24 49.4**	**-1.8**
CCB				IAmb	IAmb	05 24 56.7	
	comp=Z,9.7nm,0.8s						
COLA	**College**	**82.17**	**11**	P	**P**	**05 24 52.1**	**-0.1**
ILAR	**Eielson Array**	**82.25**	**11**	P	**P**	**05 24 56.4**	**+3.7**
	comp=Z,1.8nm,0.9s,baz=199,slow=6.1,SNR=15						
ILAR				LR	LR	05 52 45.3	
	comp=Z,26nm,21.8s,baz=285,slow=29						
	comp=Z,1.8nm,0.9s						
ILAR	**Eielson Array**	**82.25**	**11**	P	**P**	**05 24 52.7**	**+0.1**
IMAR	**Indian Mountai**	**82.30**	**8**	P	**P**	**05 24 52.2**	**-0.7**
POKR	**Poker Plat Res**	**82.47**	**11**	P	**P**	**05 24 53.6**	**-0.2**
HRY	**Holter Researc**	**82.55**	**37**	P	**P**	**05 24 56.3**	**+1.5**
DAWY	**Dawson**	**83.21**	**14**	P	**P**	**05 24 56.4**	**-1.4**
DAWY				IAmb	IAmb	05 25 03.3	
	comp=Z,6.4nm,1.1s						
EGAK	**Eagle**	**83.42**	**13**	P	**P**	**05 24 59.3**	**+0.6**
I26K	**Coal Creek Min**	**83.45**	**12**	P	**P**	**05 24 59.4**	**+0.5**
I26K				IAmb	IAmb	05 25 05.4	
	comp=Z,4.8nm,0.9s						
COLD	**Coldfoot**	**83.96**	**9**	P	**P**	**05 25 01.0**	**-0.5**
COLD				IAmb	IAmb	05 25 08.4	
	comp=Z,5.1nm,0.9s						
EGMT	**Eagleton**	**84.43**	**37**	P	**P**	**05 25 05.5**	**+1.1**
ABTX	**Abilene, Hawle**	**84.72**	**54**	P	**P**	**05 25 08.1**	**+1.9**
BMAR	**Burnt Mountain**	**85.06**	**11**	P	**P**	**05 25 07.7**	**+0.6**
YKA	**Yellowknife Ar**	**89.85**	**23**	P	P	05 25 34.9	+4.7
	comp=Z,1.7nm,0.8s,baz=235,slow=4.4,SNR=29						
	comp=Z,1.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**92.87**	**288**	LR	LR	06 01 46.8	
	comp=Z,12nm,21.7s,baz=180,slow=32						
TKL	**Tuckaleechee C**	**98.17**	**55**	LR	LR	06 06 26.5	
	comp=Z,37nm,18.1s,baz=303,slow=33						
GERES	**GERESS Array B**	**146.05**	**352**	PKPbc	**PKiKP**	**05 32 15.6**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=20,slow=4.3,SNR=6.8						
BRTR	**Keskin Array B**	**146.25**	**321**	PKPbc	**PKiKP**	**05 32 16.9**	**+0.9**
	comp=Z,4.6nm,1.1s,baz=144,slow=2.3,SNR=6.1						
CONA	**Conrad Observa**	**146.60**	**349**	*e*PKiKP	**PKiKP**	**05 32 18.4**	**+2.0**
	comp=Z,4.1nm,1.1s						
RONA	**Rosalia, Austr**	**146.74**	**348**	*e*PKP	**PKiKP**	**05 32 18.1**	**+1.4**
	comp=Z,4.8nm,1.2s						
MOA	**Molln**	**146.94**	**351**	*e*PKP	**PKiKP**	**05 32 18.0**	**+1.0**
	comp=Z,7.8nm,1.3s						
RETA	**Reutte**	**147.71**	**355**	*e*PKP	**PKPab**	**05 32 21.3**	**+2.4**
	comp=Z,11nm,1.5s						
MOTA	**Moosalm**	**147.82**	**355**	*e*PKP	**PKPab**	**05 32 21.3**	**+1.8**
	comp=Z,5.3nm,1.1s						
KBA	**Koelnbreinsper**	**147.83**	**352**	*e*PKP	**PKPab**	**05 32 20.9**	**+1.4**
	comp=Z,3.6nm,1.3s						
WTTA	**Wattenberg**	**147.85**	**354**	*e*PKP	**PKPab**	**05 32 19.9**	**+0.3**
	comp=Z,2.9nm,0.7s						
SOKA	**Soboth**	**147.96**	**349**	*e*PKP	**PKPab**	**05 32 19.6**	**-0.3**
	comp=Z,4.6nm,1.2s						
DAVA	**Damuels**	**147.98**	**356**	*e*PKP	**PKPab**	**05 32 21.6**	**+1.5**
	comp=Z,6.1nm,0.9s						
FETA	**Feichten**	**148.18**	**355**	*e*PKP	**PKPab**	**05 32 21.3**	**+0.4**
	comp=Z,5.7nm,1.5s						
ABTA	**Abfaltersbach**	**148.27**	**353**	*e*PKP	**PKPab**	**05 32 21.0**	**-0.1**
	comp=Z,3.8nm,0.9s						

IDC 22 05:26:01.3±2.5, 54°.50N×86°.33E, h0^{km}, mbtmp3.0/3, ML2.6/3, Error ellipse: s-maj=19.8km s-min=14.2km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.04**	**239**	I	I	05 32 14.1	
	baz=56,slow=330,SNR=20						
ZALV	**Zalesovo Beam**	**1.04**	**239**	Pg	Pg	05 26 19.5	-1.8
	1.6nm,0.3s,baz=59,slow=15,SNR=10						
ZALV				Lg	Lg	05 26 35.5	
	3.4nm,0.3s,baz=59,slow=29,SNR=13						
KURBB	**Kurchatov Arra**	**6.14**	**234**	Pn	Pn	05 27 33.2	+0.1
	0.1nm,0.3s,baz=51,slow=14,SNR=14						
KURBB				Sn	Sn	05 28 44.5	+0.6
	baz=45,slow=18,SNR=1.8						
KURBB				Lg	Lg	05 29 17.6	
	baz=53,slow=32,SNR=10						
	0.8nm,0.3s						
MKAR	**Makanchi Array**	**8.13**	**200**	Pn	Pn	05 28 00.9	+0.4
	0.1nm,0.3s,baz=23,slow=13,SNR=8.9						
MKAR				Sn	Sn	05 29 33.8	+0.8
	baz=12,slow=12,SNR=4.2						
MKAR				Lg	Lg	05 30 19.9	
	baz=11,slow=33,SNR=5.6						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**9.56**	**268**	Pn	Pn	05 28 20.6	+0.5
	baz=74,slow=14,SNR=2.8						
	0.4nm,0.4s						

ROM 22 05:29:03.1±0.5, 42°.87N±0°.02×13°.21E±0°.04, h11^{km}±3^{km}, ML1.3/9, 4C, Error ellipse: s-maj=2.7km s-min=2.3km az=64.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1245	**Castelsantange**	**0.02**	**235**	P	Pg	05 29 06.3	+0.9
T1245				S	Sg	05 29 07.8	+0.8
T1245				AML	AML		
	comp=E,108µm,1.4s						
T1245				AML	AML		
	comp=N,128µm,0.2s						
T1245				AML	AML		
	comp=E,108µm,0.6s						
MC2	**Monte Cornacci**	**0.05**	**344**	⇑P	Pg	05 29 05.6	0.0
MC2				S	Sg	05 29 06.4	-1.0
T1256	**Bolognola (MC)**	**0.14**	**5**	P	Pb	05 29 07.5	-0.4
T1256				AML	AML		
	comp=E,49µm,1.5s						
T1256				AML	AML		
	comp=N,63µm,1.5s						
T1256				AML	AML		
	comp=E,49µm,0.5s						
T1216	**Preci, Frazion**	**0.14**	**280**	⇑P	Pb	05 29 07.3	-0.6
T1216				S	Sg	05 29 09.4	+0.5
T1216				AML	AML		
	comp=N,58µm,0.5s						
T1216				AML	AML		
	comp=E,60µm,0.2s						
FDMO	**Fiordimonte**	**0.19**	**332**	⇑P	Pg	05 29 08.0	+0.6
FDMO				S	Sg	05 29 10.7	+0.5
FDMO				AML	AML		
	comp=E,96µm,0.6s						
FDMO				AML	AML		
	comp=N,90µm,0.2s						
T1219	**Muccia, Frazio**	**0.24**	**322**	⇑P	Pg	05 29 08.7	+0.6
T1219				AML	AML		
	comp=N,964µm,0.3s						
T1219				AML	AML		
	comp=N,926µm,0.3s						
T1219				AML	AML		
	comp=E,506µm,0.4s						
T1219				AML	AML		
	comp=E,486µm,0.4s						
T1217	**Poggiodomo (PG**	**0.26**	**233**	P	Pg	05 29 05.5	-3.0
T1217				AML	AML		
	comp=N,25µm,1.6s						
T1217				AML	AML		
	comp=N,25µm,0.4s						
T1217				AML	AML		
	comp=E,28µm,1.6s						
T1220	**Camerino, Fraz**	**0.26**	**340**	P	Pb	05 29 09.2	-0.6
T1220				AML	AML		
	comp=E,194µm,0.2s						
T1220				AML	AML		
	comp=N,187µm,1.6s						
T1220				AML	AML		
	comp=N,187µm,0.4s						
RM33	**Pellescritta (**	**0.36**	**179**	P	Pb	05 29 11.2	-0.3
RM33				S	Sg	05 29 13.0	-2.1
RM33				AML	AML		
	comp=E,105µm,0.1s						
RM33				AML	AML		
	comp=N,107µm,0.2s						
RM33				AML	AML		
	comp=E,105µm,0.1s						
T1247	**Pizzolo (AQ)**	**0.43**	**171**	P	Pg	05 29 10.0	-1.7
T1247				AML	AML		
	comp=E,568µm,0.2s						
T1247				AML	AML		
	comp=N,485µm,1.4s						
T1247				AML	AML		
	comp=N,485µm,0.6s						

ROM 22 05:29:30.8±0.2, 42°.685N±0°.005×13°.194E±0°.010, h11^{km}±1^{km}, ML1.6/3, 3C-2D, Error ellipse: s-maj=0.8km s-min=0.4km az=252.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1218	**Civita (PG)**	**0.06**	**255**	⇑P	Pg	05 29 33.5	+0.3
T1218				S	Sg	05 29 35.4	+0.4
T1214	**Arquata del Tr**	**0.07**	**8**	P	Pg	05 29 33.6	+0.2
T1214				S	Sg	05 29 35.5	+0.1
T1212	**Cascia, Frazio**	**0.13**	**301**	⇑P	Pg	05 29 34.4	+0.4
T1212				S	Sg	05 29 36.8	+0.5
T1245	**Castelsantange**	**0.17**	**358**	⇓P	Pg	05 29 35.1	+0.4
T1245				S	Sg	05 29 38.3	+0.8
RM33	**Pellescritta (**	**0.18**	**175**	⇑P	Pg	05 29 35.2	+0.4
RM33				S	Sg	05 29 38.3	+0.8
T1216	**Preci, Frazion**	**0.24**	**328**	⇓P	Pb	05 29 37.6	+0.4

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	ISC
T1216				S	Sg	05 29 40.2	+1.0

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*TRN **22** 05:33:17.8, 11°.01N×61°.96W, h60km, MD3.7*
*FUNV **22** 05:33:19.4, 11°.02N×61°.88W, h35km, MW3.5*
ISC 22 05:33:17.3±1.3**, 11°.01N**±0°.04×**61°.95W**±0°.04**, h74**km±16km**,**
n27, σ1ˢ.39/50**, 1C-1D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.65	124	⇑iP	Pn	05 33 31.5	-0.4
TRN				eS	Sn	05 33 40.7	-2.0
TPP	Pointe-a-Pierr	0.84	144	eP	Pn	05 33 35.0	+0.8
TPP				eS	Sn	05 33 45.2	-1.4
TBH	Brigand Hill	1.01	121	eP	Pn	05 33 37.3	+1.2
TBH				eS	Sn	05 33 50.3	+0.1
GRGR	Grenville	1.16	15	eP	Pn	05 33 38.0	0.0
GRGR				eS	Sn	05 33 53.3	-0.1
TPR	Prospect	1.17	81	eP	Pn	05 33 38.9	+0.8
TPR				eS	Sn	05 33 54.5	+0.9
GRHS	Sauteurs	1.25	14	eP	Pn	05 33 39.0	-0.1
GRHS				eS	Sn	05 33 54.9	-0.5
CRUV	Carupano	1.31	255	⇓eP	Pn	05 33 40.7	+0.9
CRUV				eS	Sn	05 33 57.6	+0.8
GRSS	Sisters	1.32	14	eP	Pn	05 33 41.2	+1.1
GRSS				eS	Sn	05 33 58.1	+0.9
TOSP	Speyside	1.42	78	eP	Pn	05 33 41.3	0.0
TOSP				eS	Sn	05 33 58.6	-0.8
GCMP	Grenada, Carri	1.56	19	eP	Pn	05 33 43.3	+0.2
GCMP				eS	Sn	05 34 02.1	-0.6
SVOC	Richmond Hill,	2.25	18	eP	Pn	05 33 53.5	+1.1
SVOC				eS	Sn	05 34 19.4	+0.2
SVB	Belmont	2.35	17	eP	Pn	05 33 54.7	+0.8
SVB				eS	Sn	05 34 20.6	-1.2
SVV	Soufriere Volc	2.41	17	eP	Pn	05 33 54.6	+0.1
PCRV	Puerto La Cruz	2.77	253	eP	Pn	05 34 01.1	+1.6
PCRV				eS	Sn	05 34 32.5	+0.6
MCLT	Moule a Chique	2.86	20	eP	Pn	05 34 01.1	+0.4
MCLT				eS	Sn	05 34 33.7	-0.4
SLBI	Saint Lucia, B	3.15	18	eP	Pn	05 34 04.8	+0.3
SLBI				eS	Sn	05 34 40.6	-0.3
PRGV	PARIAGUAN	3.47	230	eP	Pn	05 34 10.3	+1.3
PRGV				eS	Sn	05 34 48.8	-0.1
MPOM	Morne Pois Mar	3.58	17	eP	Pn	05 34 11.4	+0.9
MPOM				eS	Sn	05 34 50.5	-1.0
BIM	Bigot	3.59	14	eP	Pn	05 34 11.7	+1.0
BIM				eS	Sn	05 34 50.4	-1.5
FDF	Fort de France	3.79	12	eS	Sn	05 34 55.5	-1.2
BIRV	Birongo	4.28	263	eP	Pn	05 34 22.0	+2.0
BIRV				eS	Sn	05 35 07.1	-1.6
MERV	Las Mercedes	4.62	248	eP	Pn	05 34 26.6	+1.9
MERV				eS	Sn	05 35 15.9	-1.3
TACV	Tcata	5.07	261	eP	Pn	05 34 31.8	+1.0
TACV				eS	Sn	05 35 25.8	-2.2
BENV	Beln	5.65	260	eP	Pn	05 34 40.6	+1.7
BENV				eS	Sn	05 35 39.4	-3.1
CACV	CAICARA DEL OR	5.68	233	eP	Pn	05 34 35.0	-4.1
CACV				eS	Sn	05 35 30.4	-12
BAUV	El Baul	6.34	252	eP	Pn	05 34 49.7	+1.5
BAUV				eS	Sn	05 35 55.9	-3.4
MAPV	Macapo	6.51	260	eP	Pn	05 34 51.7	+1.2
MAPV				eS	Sn	05 35 59.7	-3.7

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*NEIC **22** 06:06:36.0±1.2, 19°.9N±0°.1×146°.5E±0°.2, h157km±9km, mb4.6/19, Error ellipse: s-maj=27.5km s-min=15.3km az=85.0*
*IDC **22** 06:06:52.9±3.2, 19°.02N×145°.36E, h250km±31km, mb3.4/10, mbtmp4.1/11, Error ellipse: s-maj=26.9km s-min=15.1km az=97.0*
ISC 22 06:06:52.6±0.6**, 19°.10N**±0°.09×**145°.3E**±0°.1**, h250**km**, n38,**
σ1ˢ.39/31**, mb4.1**/18**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.50	185	P	Pn	06 08 13.5	-1.0
	46nm,0.3s,baz=360,slow=17,SNR=3.0						
GUMO				S	S	06 09 11.7	-8.3
	66nm,0.3s,baz=171,slow=23,SNR=2.0						
GUMO	Guam	5.50	185	Pn	Pn	06 08 06.8	-7.7
GUMO	Guam	5.50	185	P	Pn	06 08 16.5	+2.0
JOW	Kunigami	17.47	299	P	P	06 10 35.5	-4.0
JOW				IAmb	IAmb	06 10 50.4	
	comp=Z,40nm,1.3s						
H11S3	WAKE ISLAND Hy	20.24	88	T	T	06 32 40.3	
	baz=275						
H11S1	WAKE ISLAND Hy	20.25	88	T	T	06 32 29.8	
	baz=275						
H11S2	WAKE ISLAND Hy	20.26	88	T	T	06 32 35.8	
	baz=275						
JTU	Tsushima	20.88	321	P	P	06 11 07.2	-8.7
ERM	Erimo	22.92	356	P	P	06 11 19.9	-15
LUWI	Luwuk	29.85	230		P	06 12 40.2	+3.1
TOLI2	Tolitoli	29.96	236	P	P	06 12 39.3	+1.2
TOLI2				IAmb	IAmb	06 13 03.7	
	comp=Z,5.5nm,1.0s						
COEN	Coen	32.92	184	P	P	06 13 03.4	-0.4
COEN				IAmb	IAmb	06 13 03.8	
	comp=Z,6.7nm,0.7s						
KNRA	Kununurra	38.21	206	P	P	06 13 49.3	+0.6
KNRA				IAmb	IAmb	06 13 51.3	
	comp=Z,11nm,0.7s						
CTAO	Charters Tower	38.96	179	P	P	06 13 52.5	-2.4
WB0	Warramunga Arr	40.08	196	P	P	06 14 04.5	+0.3
WB0				IAmb	IAmb	06 14 05.1	
	comp=Z,41nm,1.4s						
WRAB	Tennant Creek	40.25	196	P	P	06 14 05.9	+0.4
WRAB				IAmb	IAmb	06 14 06.6	
	comp=Z,16nm,0.6s						
WB2	Warramunga Arr	40.26	196	P	P	06 14 06.1	+0.5
WB2				IAmb	IAmb	06 14 06.8	
	comp=Z,16nm,0.8s						
WRA	Warramunga Arr	40.27	196	P	P	06 14 05.6	0.0
	comp=Z,11nm,0.7s,baz=2.4,slow=9.0,SNR=113						
	comp=Z,11nm,0.7s						
WRA	Warramunga Arr	40.27	196	P	P	06 14 05.5	-0.2
FITZ	Fitzroy Crossi	41.72	209	P	P	06 14 18.2	+0.8
AS31	Alice Springs	43.94	195	P	P	06 14 35.1	-0.1
ASAR	Alice Springs	43.94	195	P	P	06 14 34.6	-0.6
	comp=Z,3.9nm,0.6s,baz=16,slow=8.2,SNR=70						
	comp=Z,3.9nm,0.6s						
ASAR	Alice Springs	43.94	195	P	P	06 14 35.3	+0.1
DZM	Mont Dzumac	45.84	152	P	P	06 14 50.0	-0.2
	comp=Z,7.2nm,0.5s,baz=284,slow=8.3,SNR=14						
	comp=Z,7.2nm,0.5s						
OUENC	Ouen Island, N	46.32	152	P	P	06 14 45.9	-7.9
OUENC				IAmb	IAmb	06 14 54.3	
	comp=Z,19nm,0.8s						
RPSI	Rantau Prapat	48.19	256	P	P	06 15 08.4	-0.1
RPSI				IAmb	IAmb	06 15 09.1	
	comp=Z,6.6nm,0.9s						
STKA	Stephens Creek	50.81	184	P	P	06 15 26.6	-1.2
	comp=Z,2.3nm,0.7s,baz=355,slow=13,SNR=3.5						
	comp=Z,2.3nm,0.7s						
FORT	Forrest	52.30	199	P	P	06 15 37.3	-1.5
BBOO	Buckleboo	52.37	190	P	P	06 15 38.5	-0.8
MKAR	Makanchi Array	57.93	314	P	P	06 16 20.8	+2.0
	comp=Z,0.2nm,0.5s,baz=106,slow=6.7,SNR=2.5						
MKAR				PcP	PcP	06 17 08.6	+0.5
	comp=Z,0.3nm,0.7s,baz=87,slow=7.6,SNR=2.0						
	comp=Z,0.2nm,0.5s						
NWAO	Narrogin (SRO)	58.28	208	P	P	06 16 22.0	+0.6
ILAR	Eielson Array	63.45	26	P	P	06 16 55.9	+0.2
	comp=Z,0.6nm,0.8s,baz=248,slow=6.2,SNR=5.3						
	comp=Z,0.6nm,0.8s						
YKA	Yellowknife Ar	77.80	28	P	P	06 18 23.1	+1.1
	comp=Z,0.3nm,0.7s,baz=289,slow=5.2,SNR=5.5						
	comp=Z,0.3nm,0.7s						
NVAR	Mina Array Bea	83.17	52	P	P	06 18 52.8	+1.5
	comp=Z,0.9nm,0.7s,baz=270,slow=5.4,SNR=6.3						
	comp=Z,0.9nm,0.7s						
FINES	FINESS Array B	86.37	335	P	P	06 19 05.7	-0.7
	comp=Z,0.7nm,0.4s,baz=76,slow=5.9,SNR=9.2						
	comp=Z,0.7nm,0.4s						
PDAR	Pinedale Array	87.80	45	P	P	06 19 12.7	-1.3
	comp=Z,0.1nm,0.5s,baz=325,slow=4.4,SNR=1.6						
	comp=Z,0.1nm,0.5s						
PLCA	Paso Flores	142.53	133	PKhKP	PKPpre	06 25 52.7	
	comp=Z,1.6nm,1.0s,baz=239,slow=5.9,SNR=3.6						
LPAZ	La Paz	148.04	90	PKPbc	PKPbc	06 26 09.5	-0.7
	comp=Z,0.4nm,0.5s,baz=276,slow=9.2,SNR=1.7						

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*DDA **22** 06:38:10.7±0.0, 39°.54N×26°.20E, h4km±1km, ML2.7*
*ISK **22** 06:38:10.3, 39°.53N×26°.14E, h14km, ML3.1/43*
*THE **22** 06:38:11.0, 39°.54N×26°.16E, h4km±1km, ML2.7/8, Error ellipse: s-maj=1.9km s-min=0.5km az=216.0*
*ATH **22** 06:38:11.7, 39°.52N×26°.14E, h13km±1km, ML2.8/7, Error ellipse: s-maj=2.1km s-min=0.9km az=250.0*
ISC 22 06:38:10.7±0.8**, 39°.54N**±0°.01×**26°.17E**±0°.02**, h9**km±5km**,**
n92, σ0ˢ.55/129**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.04	214	P	Pg	06 38 12.3	-0.2
KOCA				S	Sg	06 38 13.8	+0.1
GPNR	Gulpinar-Canak	0.08	198	Pg	Pg	06 38 13.0	+0.1
GPNR				Sg	Sg	06 38 14.7	+0.2
PRK	Paraskevi	0.30	164	P	Pg	06 38 17.2	+0.5
PRK				S	Sg	06 38 22.1	+1.4
	2μm,0.5s						
PRK	Paraskevi	0.30	164	P	Pg	06 38 17.3	+0.6
PRK				S	Sg	06 38 22.1	+1.4
PRK				AML	AML	06 38 23.1	
	comp=E,5174μm,0.4s						
PRK				AML	AML	06 38 25.2	
	comp=N,3601μm,0.7s						
EZN	Ezine	0.31	23	P	Pg	06 38 17.0	0.0
EZN				S	Sg	06 38 21.1	-0.1
	comp=N,2μm,0.2s						
EZN	Ezine	0.31	23	Pg	Pg	06 38 17.3	+0.3
BAYC	CANAKKALE_Bayr	0.36	55	P	Pg	06 38 17.6	-0.2
BAYC				S	Sg	06 38 22.5	-0.1
BAYC				i AML	AML	06 38 23.0	
	comp=N,525nm,0.4s						
SIGR	SIGRI	0.40	217	P	Pg	06 38 19.0	+0.4
SIGR				S	Sg	06 38 24.8	+0.8
	comp=N,862nm,0.4s						
SIGR	SIGRI	0.40	217	Pg	Pg	06 38 19.0	+0.4
SIGR				Sg	Sg	06 38 25.1	+1.1
SIGR	SIGRI	0.40	217	P	Pg	06 38 18.8	+0.1
SIGR				S	Sg	06 38 24.2	+0.3
SIGR				AML	AML	06 38 28.8	
	comp=N,2023μm,0.3s						
SIGR				AML	AML	06 38 29.2	
	comp=E,1488μm,0.3s						
AYVA	Ayvalik	0.47	119	P	Pg	06 38 20.2	+0.4
AYVA				i AML	AML	06 38 33.0	
	comp=E,467nm,0.3s						
AYVA				i AML	AML	06 38 34.0	
	comp=E,424nm,0.3s						
ECEA	Canakkale, Ece	0.51	1	P	Pg	06 38 20.8	+0.2
ECEA				S	Sg	06 38 28.4	+1.2
ECEA				i AML	AML	06 38 29.0	
	comp=E,1μm,0.6s						
ECEA				i AML	AML	06 38 30.0	
	comp=E,1μm,0.5s						
COMU	Canakkale	0.61	23	Pg	Pg	06 38 22.8	+0.3
COMU				Sg	Sb	06 38 32.4	+0.1
GOKA	anakkale-Gk	0.68	343	P	Pg	06 38 24.4	+0.5
GOKA				S	Sg	06 38 33.3	+0.4
GOKA				i AML	AML	06 38 34.0	
	comp=E,436nm,0.2s						
GOKA				i AML	AML	06 38 34.0	
	comp=E,424nm,0.6s						
GADA	Gvkgeada	0.69	343	Pg	Pg	06 38 24.2	+0.2
GADA				Sg	Sg	06 38 33.5	+0.6
BUHA	Balikesir, Bur	0.70	93	P	Pg	06 38 24.2	-0.1
BUHA				S	Sg	06 38 33.5	0.0
BUHA				i AML	AML	06 38 40.0	
	comp=E,203nm,0.3s						
DKL	Dikili	0.74	129	Pg	Pg	06 38 25.2	+0.3
CANM	Can-anakkale	0.83	55	Pg	Pb	06 38 27.4	0.0
LIA	Limnos Island	0.84	296	P	Pg	06 38 27.3	+0.4
LIA				S	Sb	06 38 39.0	+0.1
	comp=E,890nm,0.2s						
LIA	Limnos Island	0.84	296	P	Pb	06 38 27.5	0.0
LIA				S	Sb	06 38 39.1	+0.2
LIA				AML	AML	06 38 42.9	
	comp=N,1818μm,0.3s						
LIA				AML	AML	06 38 43.6	
	comp=E,1788μm,0.3s						
KARB	zmir-Karabur	0.89	168	P	Pg	06 38 28.3	+0.4
KARB				S	Sn	06 38 41.3	-1.3
KARB				i AML	AML	06 38 42.0	
	comp=E,283nm,0.4s						
KARB				i AML	AML	06 38 43.0	
	comp=E,345nm,0.3s						
GELI	Tayfur-Gelibol	0.89	15	Pg	Pg	06 38 28.1	+0.2
GELI				Sg	Sb	06 38 40.9	+0.5
ZEDA	zmir-Bergama	0.91	129	P	Pg	06 38 28.2	0.0
ZEDA				S	Sn	06 38 42.0	-0.9
ZEDA				i AML	AML	06 38 44.0	
	comp=E,164nm,0.4s						
LPK	Lapseki	0.95	28	Pg	Pb	06 38 28.9	-0.5
SMTH	Samothraki Isl	1.05	333	P	Pb	06 38 31.0	-0.2
SMTH				S	Sg	06 38 45.2	+0.5
	comp=E,280nm,0.3s						
SMTH	Samothraki Isl	1.05	333	P	Pb	06 38 30.9	-0.2
SMTH				S	Sg	06 38 45.4	+0.7
SMTH				AML	AML	06 38 47.7	
	comp=N,608μm,0.4s						
SMTH				AML	AML	06 38 47.8	
	comp=E,502μm,0.3s						
PSRA	Psara	1.10	206	P	Pg	06 38 32.3	+0.5
PSRA				S	Sb	06 38 45.9	-0.4
PSRA				AML	AML	06 38 50.4	
	comp=N,1632μm,0.2s						
PSRA				AML	AML	06 38 51.8	
	comp=E,2347μm,0.3s						
BALY	Balya	1.14	79	P	Pb	06 38 32.7	0.0
BALY				S	Sg	06 38 47.8	+0.3
BALY				i AML	AML	06 38 50.0	
	comp=E,210nm,0.3s						
BALY				i AML	AML	06 38 50.0	
	comp=E,230nm,0.3s						
CHOS	Chios island	1.15	184	P	Pb	06 38 32.6	-0.3
CHOS				S	Sn	06 38 48.4	-0.6
	comp=E,612nm,0.6s						
CHOS	Chios island	1.15	184	P	Pb	06 38 32.5	-0.4
CHOS				S	Sb	06 38 46.9	-1.0
CHOS				AML	AML	06 38 50.6	
	comp=N,784μm,0.7s						
CHOS				AML	AML	06 38 53.7	
	comp=E,1620μm,0.5s						
CAVK	Edirne/Enez-Ca	1.15	0	P	Pn	06 38 33.0	-0.1
CAVK				S	Sn	06 38 48.5	-0.5
CAVK				i AML	AML	06 38 51.0	
	comp=E,335nm,0.6s						
CAVK				i AML	AML	06 38 51.0	
	comp=E,318nm,0.4s						
ERIK	Erikli-Kesan	1.16	13	Pn	Pb	06 38 32.5	-0.5
ERIK				Sn	Sg	06 38 48.7	+0.5
ENEZ	Enez	1.20	359	P	Pn	06 38 33.5	-0.2
ENEZ				S	Sg	06 38 50.8	+1.5
	comp=E,1μm,0.4s						
ENEZ	Enez	1.20	359	Pn	Pn	06 38 33.3	-0.4
STEP	BALIKESIR_Sava	1.21	97	P	Pg	06 38 34.5	+0.5
STEP				S	Sg	06 38 51.0	+1.3
STEP				i AML	AML	06 38 53.0	
	comp=E,84nm,0.3s						
STEP				i AML	AML	06 38 53.0	
	comp=E,112nm,0.3s						
KRBG	Karabiga-Canak	1.22	45	Pn	Pn	06 38 33.5	-0.5
URLA	Izmir	1.22	164	Pn	Pn	06 38 32.9	-1.1
URLA	Izmir	1.22	164	P	Pn	06 38 33.7	-0.4
URLA				S	Sg	06 38 51.3	+1.3
URLA				i AML	AML	06 38 52.0	
	comp=E,300nm,0.6s						
URLA				i AML	AML	06 38 55.0	
	comp=E,216nm,0.3s						
GONE	Gonen-Balikesi	1.28	66	Pn	Pn	06 38 34.3	-0.5
KNL	Balıkesir	1.28	54	P	Pb	06 38 34.8	-0.1
KNL				S	Sb	06 38 51.5	0.0
KNL				i AML	AML	06 38 53.0	
	comp=E,138nm,0.3s						
KNL				i AML	AML	06 38 54.0	
	comp=E,174nm,0.3s						
ZEYE	Izmir, Urla-Ze	1.32	168	P	Pn	06 38 34.8	-0.5
ZEYE				S	Sg	06 38 54.3	+1.1
ZEYE				i AML	AML	06 38 56.0	
	comp=E,306nm,0.3s						
ZEYE				i AML	AML	06 38 57.0	
	comp=E,238nm,0.3s						
BALB	Balikesir	1.33	85	Pn	Pn	06 38 34.9	-0.6
BLCB	Balcova	1.34	149	P	Pn	06 38 34.9	-0.7
BLCB	Balcova	1.34	149	Pn	Pn	06 38 34.9	-0.7
KESN	Edirne-Kesan	1.35	17	P	Pg	06 38 36.7	+0.1
KESN				S	Sn	06 38 54.2	-0.1
KESN				i AML	AML	06 38 56.0	
	comp=E,442nm,0.3s						
KESN				i AML	AML	06 38 57.0	
	comp=E,681nm,0.5s						
ALN	Alexandroupoli	1.36	356	P	Pb	06 38 36.1	-0.3
ALN				S	Sg	06 38 54.4	-0.2
	comp=E,512nm,0.4s						
ALN	Alexandroupoli	1.36	356	Pn	Pn	06 38 35.1	-0.9
ALN	Alexandroupoli	1.36	356	P	Pb	06 38 36.1	-0.3
ALN				AML	AML	06 38 55.5	
	comp=E,1260μm,0.3s						
ALN				AML	AML	06 38 56.3	
	comp=N,788μm,0.4s						
BKES	Balkesir-Mer	1.38	81	P	Pb	06 38 36.5	-0.1
BKES				S	Sg	06 38 55.2	+0.3
BKES				i AML	AML	06 38 57.0	
	comp=N,108nm,0.2s						
RKY	Sarkoy-Tekirda	1.39	34	Pn	Pn	06 38 35.7	-0.7
AKS	Akhisar	1.44	117	Pn	Pn	06 38 36.5	-0.5
EDC	Edincik	1.54	58	Pn	Pn	06 38 38.0	-0.3
THAS	Thassos island	1.54	314	P	Pn	06 38 38.0	-0.4
THAS	Thassos island	1.54	314	P	Pn	06 38 38.1	-0.4
DGB	zmir	1.58	159	P	Pn	06 38 38.6	-0.4
DGB				S	Sb	06 38 59.8	-0.5
UKOP	Uzunkopru-Edir	1.63	12	Pn	Pn	06 38 39.1	-0.5
RDO	Rodhopi	1.68	344	P	Pn	06 38 40.6	+0.3
RDO	Rodhopi	1.68	344	Pn	Pn	06 38 39.6	-0.7
RDO	Rodhopi	1.68	344	P	Pn	06 38 40.7	+0.3
BAND	Balkesir-Ban	1.70	61	P	Pb	06 38 41.3	-0.8
BAND				i AML	AML	06 39 06.0	
	comp=N,104nm,0.2s						
BAND				i AML	AML	06 39 08.0	
	comp=N,69nm,0.2s						
DURS	Dursunbey	1.78	87	P	Pn	06 38 42.0	+0.2
DURS				S	Sb	06 39 07.0	+0.8
DURS				i AML	AML	06 39 11.0	
	comp=N,110nm,0.4s						
DURS				i AML	AML	06 39 11.0	
	comp=N,61nm,0.4s						
KCTX	Karacabey (Bur	1.83	66	Pn	Pn	06 38 42.1	-0.4
KYMI	Kymi, Euboea I	1.84	241	P	Pn	06 38 41.9	-0.7
DST	Dursunbey	1.90	87	Pn	Pn	06 38 43.4	0.0
SMG	Samos	1.90	164	P	Pn	06 38 42.9	-0.4
SMG	Samos	1.90	164	P	Pn	06 38 42.4	-1.0
KAVA	Kavala	1.93	320	P	Pn	06 38 43.8	0.0
EREA	Eretria	2.07	238	P	Pn	06 38 45.8	+0.1
KOKK	Kokkinochori,	2.10	308	P	Pn	06 38 46.5	+0.4
ORLT	Orhaneli	2.16	76	Pn	Pn	06 38 47.4	+0.4
KDZ	Kurdzhali	2.19	345	Pn	Pn	06 38 46.7	-0.6
KULA	Kula-Manisa	2.19	117	Pn	Pn	06 38 47.4	-0.1
SIMA	Simav-Kutahya	2.23	101	Pn	Pn	06 38 47.2	-0.8
MDNY	Mudanya-Bursa	2.25	67	Pn	Pn	06 38 48.2	+0.1
SLVT	Silivri	2.30	42	Pn	Pn	06 38 49.1	+0.2
ARMT	Armutlu	2.31	63	Pn	Pn	06 38 49.5	+0.5
CTKS	Kestanelik-??a	2.46	46	Pn	Pn	06 38 51.5	+0.4
CTYL	Yalikoy Yolu	2.52	39	Pn	Pn	06 38 52.0	+0.1
KIYI	Yalıkoy-Catalc	2.54	39	Pn	Pn	06 38 52.4	+0.3
TVSB	Tavsanli	2.55	91	Pn	Pn	06 38 52.5	+0.1
BGKT	Bogazkoy	2.58	50	Pn	Pn	06 38 52.8	+0.1
BODT	Bodrum	2.63	160	Pn	Pn	06 38 53.4	0.0
YLV	Yalova	2.67	66	Pn	Pn	06 38 54.4	+0.4
ISK	Istanbul-Kandi	2.69	54	Pn	Pn	06 38 54.6	+0.4
KLYT	Kilyos	2.79	51	Pn	Pn	06 38 55.8	+0.3
CAVI	Cavuskoy	2.91	76	Pn	Pn	06 38 57.5	+0.3
HRT	Hereke	2.97	63	Pn	Pn	06 38 58.4	+0.2
DAT	Datca	3.02	158	Pn	Pn	06 38 58.9	+0.1
SILT	Sile	3.11	58	Pn	Pn	06 39 00.4	+0.4
SANT	Santorini	3.21	190	Pn	Pn	06 39 01.1	-0.3
BASM	Basmaki-Afyon	3.44	117	Pn	Pn	06 39 04.9	+0.3
MDUB	Mudurnu	3.98	75	Pn	Pn	06 39 12.8	+0.8

SSNC 22 06:38:44.0±3.6**, 18°.30N**×**81°.16W, h0**km**, MD3.6, ML2.1,**
North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGV	Manicaragua	3.95	16	eP	Pn	06 39 46.0	+0.1
MGV				eS	Sn	06 40 33.5	+0.5
LMGC	Las Mercedes	4.30	65	eP	Pn	06 39 50.2	-0.5
LMGC				eS	Sn	06 40 39.5	-2.1
LMGC				IAML		06 40 44.9	
	comp=E,0.9nm,0.1s						
LMGC				IAML		06 40 47.1	
	comp=N,1.2nm,0.1s						
SOR	Soroa	4.80	339	eP	Pn	06 39 56.6	-0.9
RCC	Rio Carpintero	5.43	71	eP	Pn	06 40 05.6	-0.6

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*IDC **22** 06:48:27.1±4.6, 36°.12N×71°.65E, h76km±35km, mb3.6/6, mbtmp3.9/12, ML3.6/6, MS3.8/1, Error ellipse: s-maj=47.3km s-min=21.6km az=160.0*
*NNC **22** 06:48:44.1±18.0, 37°.45N×69°.51E, h0km, mb4.2, mpv4.6, Error ellipse: s-maj=179.7km s-min=76.1km az=141.0*
ISC 22 06:48:30.2±0.7**, 36°.40N**±0°.08×**71°.39E**±0°.06**, h100**km**, n37,**
σ2ˢ.34/46**, mb3.9**/6**, 1C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	4.77	48	Pn	Pn	06 49 36.5	-3.5
KSH				pP		06 50 03.1	
KSH				Sn	Sn	06 50 22.5	-12
KSH				pmax	pmax		
	comp=Z,140nm,0.5s						
KSH				smax	smax		
	comp=N,450nm,0.6s						
KSH				smax	smax		
	comp=E,280nm,0.5s						
AML	Almayashu	6.00	17	P	Pn	06 49 57.5	+0.7
	SNR=107						
UCH	Uchtor	6.30	22	P	Pn	06 50 02.1	+1.0
	SNR=28						
EKS2	Erkin-Say	6.52	16	P	Pn	06 50 04.8	+1.2
	SNR=30						
AAK	Ala-Archa	6.68	20	P	Pn	06 50 07.0	+1.2
	SNR=40						
AAK	Ala-Archa	6.68	20	P	Pn	06 50 07.1	+1.3
	comp=E,9.5nm,0.3s,baz=193,slow=9.2,SNR=92						
AAK				S	Sn	06 51 17.7	-2.7
	comp=E,3.1nm,0.3s,baz=328,slow=21,SNR=8.5						
	comp=E,17nm,0.3s						
KK31	Karatay Array	6.73	354	⇑P	Pn	06 50 07.0	+0.6
	comp=E,26nm,0.4s,baz=182,slow=13,SNR=862						
KK31				⇓S	Sn	06 51 17.2	-4.3
	comp=E,4.5nm,0.5s,baz=190,slow=21,SNR=4.5						
KBK	Karagaybulak	6.83	23	P	Pn	06 50 09.4	+1.5
	SNR=7.9						
ULHL	Ulahol	6.94	31	P	Pn	06 50 11.8	+2.3
	SNR=10						
CHMS	Chumysh	7.08	20	P	Pn	06 50 11.9	+0.7
	SNR=13						
USP	Ospenovka	7.26	18	P	Pn	06 50 14.0	+0.3
	SNR=18						
TKM2	Tokmak 2	7.28	25	P	Pn	06 50 15.5	+1.5
	SNR=8.9						
GEYT	Alibeck	10.71	282	P	Pn	06 51 00.1	-0.4
	comp=E,0.7nm,0.3s,baz=99,slow=8.9,SNR=3.2						
GEYT				S	Sn	06 52 54.4	-4.0
	comp=E,1.2nm,0.4s,baz=334,slow=40,SNR=1.9						
	comp=E,1.6nm,0.4s						
GYA0B	ALIBECK ARRAY	10.71	282	P	Pn	06 50 58.3	-2.2
GYA0B				S	Sn	06 52 42.9	-15
PYUN	Piuthan	12.83	127	eP	Pn	06 51 29.2	+0.1
	comp=E,10.0nm,0.4s						
DANN	Dangsing	13.17	124	eP	Pn	06 51 33.5	-0.1
	comp=E,6.4nm,0.2s						
MKAR	Makanchi Array	13.19	35	P	Pn	06 51 32.2	-1.3
	comp=E,0.1nm,0.3s,baz=230,slow=15,SNR=6.6						
	comp=E,1.0nm,0.8s						
GUN	Gumba	14.89	121	eP	Pn	06 51 56.4	+0.5
	comp=E,3.0nm,0.2s						
KURBB	Kurchatov Arra	15.12	18	P	Pn	06 52 00.3	+2.0
	comp=E,0.1nm,0.3s,baz=206,slow=10,SNR=8.2						
	comp=E,1.2nm,0.7s						
JIRN	Jiri	15.26	121	eP	Pn	06 52 00.8	+0.1
	comp=E,7.0nm,0.3s						
AB31	Akbulak array	15.33	331	P	Pn	06 51 59.3	-1.6
	comp=E,1.0nm,0.3s,baz=166,slow=11,SNR=90						
AB31				S	Sn	06 54 36.0	-14
	comp=E,0.8nm,0.5s,baz=175,slow=22,SNR=6.1						
RAMN	Ramite	15.99	122	eP	P	06 52 11.1	-0.1

	comp=E,3.0nm,0.3s						
TAPN	Taplejung	16.52	118	eP	P	06 52 19.4	+2.3
	comp=E,1.8nm,0.2s						
BVA0	Borovoye Array	16.64	358	P	P	06 52 23.8	+5.9
	comp=E,2.4nm,1.1s,baz=168,slow=11,SNR=5.3						
BVAR	Borovoye Array	16.64	358	P	Pn	06 52 17.0	-0.2
	comp=E,0.1nm,0.3s,baz=166,slow=12,SNR=7.3						
	comp=E,0.8nm,0.4s						
BRVK	Borovoye	16.68	358	P	P	06 52 24.4	+6.1
	comp=E,3.0nm,1.3s						
AKTO	Aktyubinsk	17.03	330	P	P	06 52 23.2	+1.0
	comp=E,0.5nm,0.3s,baz=119,slow=7.8,SNR=7.2						
	comp=E,2.0nm,0.4s						
AKTO	Aktyubinsk	17.03	330	P	P	06 52 24.0	+1.8
	comp=E,4.3nm,1.2s						
AKTO				S	Sn	06 55 15.4	-16
	comp=E,8.6nm,2.1s						
ZALV	Zalesovo Beam	19.88	24	P	P	06 52 53.7	+0.4
	comp=E,2.5nm,0.4s,baz=221,slow=10,SNR=12						
	comp=E,2.5nm,0.4s						
SONM	Songino Array	28.13	55	P	P	06 54 11.5	-1.3
	comp=E,0.6nm,0.3s,baz=242,slow=10.0,SNR=3.1						
	comp=E,0.6nm,0.3s						
AKASG	Malin Array Be	33.26	309	P	P	06 55 00.5	+2.7
	comp=E,0.9nm,0.5s,baz=104,slow=8.3,SNR=8.5						
	comp=E,0.9nm,0.5s						
MNK	Minsk	34.79	315	i P	P	06 55 09.7	-1.3
	comp=E,3.0nm,0.8s						
MNK				i P	P	06 55 09.7	-1.3
	comp=N,50nm,0.8s						
MNK				i P	P	06 55 09.7	-1.3
	comp=Z,8.0nm,0.8s,baz=283						
MNK				i pP	pP	06 55 32.4	-2.0
MNK				i PP	PnPn	06 56 30.4	-0.1
MNK				i S	S	07 00 35.5	+1.5
MNK				i sS	ScP	07 01 15.5	-2.8
MNK				i SS	SnSn	07 03 03.4	+5.3
MNK				i LR	LR	07 09 16.2	
MNK				i LRM	MLR	07 10 43.9	
	comp=E,33nm,19.3s						
MNK				i LRM	MLR	07 11 22.6	
	comp=N,325nm,19.3s						
MNK				i LRM	MLR	07 11 34.2	
	comp=Z,67nm,20.0s						
FINES	FINESS Array B	37.74	326	P	P	06 55 38.6	+2.6
	comp=Z,1.3nm,0.7s,baz=120,slow=8.8,SNR=6.1						
	comp=Z,1.3nm,0.7s						
NB2	NORSAR Subarra	44.65	323	P	P	06 56 34.5	+1.9
	comp=Z,0.6nm,0.5s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.65	323	P	P	06 56 33.5	+0.9
	comp=Z,0.8nm,0.6s,baz=103,slow=7.2,SNR=2.9						
	comp=Z,0.8nm,0.6s						
JOW	Kunigami	48.77	84	LR	LR	07 19 40.2	
	comp=Z,113nm,21.6s,baz=110,slow=39						
TORD	Torodi Ar. Bea	66.03	269	P	P	06 59 07.5	+1.0
	comp=Z,0.7nm,0.5s,baz=59,slow=3.5,SNR=10.0						
	comp=Z,0.7nm,0.5s						

IDC ***22*** *06:50:11.6±0.6, 38°.27N×144°.85E, h0^{km}, mb4.0/22, mbtmp4.0/26, ML3.4/4, MS3.2/20, Error ellipse: s-maj=15.4km s-min=14.2km az=132.0*

JMA ***22*** *06:50:15.6±0.2, 38°.4N±0°.8×14°5E±°, h48^{km}, MV4.5/32, FAR E OFF NORTH HONSHU*

NIED ***22*** *06:50:15.6, 38°.37N×144°.57E, h48^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.71; $M_{\theta\theta}$1.01; $M_{\phi\phi}$0.69; $M_{r\theta}$0.68; $M_{\theta\phi}$0.47; $M_{\phi r}$0.56; Fault plane solution: $M_0$1.77000×10^{15} NP1: ϕ_s233.00000°, δ60.00000°, λ-91.00000°. NP2:ϕ_s55.00000°, δ30.00000°, λ-88.00000°.*

NEIC ***22*** *06:50:16.3±2.2, 38°.35N±0°.08×144°.65E±0°.07, h24^{km}±6^{km}, mb4.5/12 Error ellipse: s-maj=11.9km s-min=7.1km az=158.0*

ISC 22 06:50:16.5±0.6**, 38°.44N**±0°.05×**144°.69E**±0°.06**, h29^{km}, n86, σ1^{s}46**/83**, mb4.2**/29**, MS3.4**/15**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.45	286	i P	Pn	06 50 53.5	-1.0
OFUJ				eS	Sn	06 51 21.0	-2.4
MIYJ	Miyakonagasawa	2.51	298	i P	Pn	06 50 54.4	-1.0
MIYJ				S	Sn	06 51 22.8	-2.2
JIKH	Ishinomakikobu	2.54	268	P	Pn	06 50 54.0	-1.7
JIKH				S	Sn	06 51 21.9	-3.8
JKMT	Kesennumamotoy	2.55	279	P	Pn	06 50 54.7	-1.1
JKMT				S	Sn	06 51 23.1	-2.8
JMK	Ichinoseki	2.76	282	i P	Pn	06 50 58.0	-0.8
JMK				S	Sn	06 51 30.3	-0.9
JOM	Ohasama	2.84	292	i P	Pn	06 50 59.4	-0.6
JOM				S	Sn	06 51 32.3	-0.9
JMM	Marumori	3.12	261		Pn	06 51 02.0	-1.8
JANG	Nango	3.13	309	P	Pn	06 51 02.6	-1.3
JANG				eS	Sn	06 51 38.5	-1.8
JYK	Kaneyama	3.42	279	P	Pn	06 51 07.6	-0.4
JOTO	OTAMA OYAMA	3.55	257	P	Pn	06 51 09.0	-0.7
JOTO				S	Sn	06 51 48.2	-2.5
JTM	Tenmabayashi	3.65	311	Pn	Pn	06 51 10.3	-0.8
ERM	Erimo	3.76	342	Pn	Pn	06 51 11.9	-0.7
JOT	Ohata	4.06	318	P	Pn	06 51 16.0	-0.7
JOT				eS	Sn	06 52 00.8	-2.4
JCH	Churui	4.29	347	eP	Pn	06 51 18.5	-1.4
JCH				eS	Sn	06 52 06.2	-2.7
NEM2	Nemuro 2	4.99	9	P	Pn	06 51 26.7	-2.7
JSD	Sado	5.08	267	Pn	Pn	06 51 30.0	-0.7
JRY	Ryogami san	5.21	244	P	Pn	06 51 30.7	-1.8
JOSM	Okushiri--Mats	5.40	314	P	Pn	06 51 35.5	+0.4
MJAR	Matsushiro Arr	5.49	252	Pn	Pn	06 51 36.5	+0.2
	0.6nm,0.3s,baz=68,slow=8.8,SNR=13						
MJAR				Sn	Sn	06 52 37.4	-1.1
	0.2nm,0.3s,baz=210,slow=30,SNR=1.5						
	5.1nm,0.4s						
MAJO	Matsushiro	5.49	252		Pn	06 51 36.6	+0.2
MJB9	Matsu-Tunnel	5.49	252		Pn	06 51 33.3	-3.1
JTKR	Abashiri--Toko	5.56	354	i P	Pn	06 51 35.8	-1.4
JHR	Hokuryu	5.75	338	P	Pn	06 51 40.6	+0.6
JKA	Kamikawa-asahi	5.89	345		Pn	06 51 40.5	-1.3
ASAJ	Asahikawa	5.89	345	Pn	Pn	06 51 36.2	-5.6
	0.2nm,0.3s,baz=201,slow=22,SNR=6.4						
ASAJ				Sn	Sn	06 52 45.4	-2.9
	3.6nm,0.3s,baz=27,slow=32,SNR=2.0						
ASAJ				LR	LR	06 54 46.4	
	comp=Z,172nm,19.1s,baz=79,slow=45						
JGF	Kuroka	6.51	246		Pn	06 51 49.9	-0.6
JHJ2	Mitsune	6.62	218	Pn	Pn	06 51 51.1	-0.8
USA0B	Ussuriysk Arra	11.15	305		Pn	06 52 53.6	-0.3
USRK	Ussuriysk Ar.	11.15	305	Pn	Pn	06 52 54.4	+0.5
	1.4nm,0.3s,baz=107,slow=14,SNR=17						
USRK				LR	LR	06 57 34.5	
	comp=Z,87nm,18.9s,baz=133,slow=39						
	12nm,0.6s						
MDJ	Mudanjiang	12.88	303		Pn	06 53 18.0	+0.4
KSRS	Korea Array	13.27	271	Pn	Pn	06 53 25.4	+2.5
	0.3nm,0.3s,baz=82,slow=14,SNR=4.5						
KSRS				LR	LR	06 58 27.6	
	comp=Z,42nm,19.4s,baz=80,slow=37						
	1.2nm,0.5s						
KLR	Kul'dur	14.25	323	Pn	Pn	06 53 34.8	-1.4
	0.1nm,0.3s,baz=135,slow=17,SNR=4.7						
KLR				LR	LR	06 59 04.0	
	comp=Z,58nm,20.4s,baz=128,slow=37						
PETK	Petropavlovsk-	17.21	27	P	Pn	06 54 13.6	-1.0
	0.1nm,0.3s,baz=196,slow=15,SNR=2.2						
PETK				LR	LR	07 02 30.4	
	comp=Z,17nm,18.1s,baz=222,slow=43						
	3.4nm,1.1s						
TIA	Tai'an	22.00	273	eP	P	06 55 10.1	+1.7
TIA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GUMO	Guam	24.75	180	LR	LR	07 04 09.3	
	comp=Z,16nm,19.9s,baz=101,slow=34						
SHEM	Shemya Is, Ala	24.84	45	LR	LR	07 03 19.0	
	comp=Z,20nm,19.1s,baz=12,slow=32						
SEY	Seymchan	24.97	8	P	P	06 55 38.9	+1.7
	comp=Z,4.9nm,0.7s,baz=194,slow=7.1,SNR=9.2						
	comp=Z,4.9nm,0.7s						
YAK	Yakutsk	25.37	343	LR	LR	07 06 38.2	
	comp=Z,30nm,18.2s,baz=92,slow=39						
H11N2	WAKE ISLAND Hy	26.79	128	T	T	07 23 41.8	
	baz=319,slow=74,SNR=20						
H11N1	WAKE ISLAND Hy	26.80	128	T	T	07 23 36.2	
	baz=319,slow=74,SNR=8.6						
H11N3	WAKE ISLAND Hy	26.81	128	T	T	07 23 36.5	
	baz=319,slow=74,SNR=10						
H11S1	WAKE ISLAND Hy	27.60	130	T	T	07 24 37.4	
	baz=321,slow=76,SNR=6.4						
H11S3	WAKE ISLAND Hy	27.60	130	T	T	07 24 40.0	
	baz=321,slow=76,SNR=6.6						
H11S2	WAKE ISLAND Hy	27.61	130	T	T	07 24 37.3	
	baz=321,slow=76,SNR=7.0						
SONM	Songino Array	29.22	301	P	P	06 56 16.1	+0.4
	comp=Z,0.4nm,0.4s,baz=89,slow=12,SNR=1.8						
	comp=Z,0.4nm,0.4s						
TIXI	Tiksi	34.26	351	LR	LR	07 12 48.5	
	comp=Z,23nm,18.9s,baz=316,slow=39						
ZALV	Zalesovo Beam	42.91	311	P	P	06 58 13.7	+1.3
	comp=Z,0.6nm,0.4s,baz=103,slow=6.5,SNR=2.0						
ZALV				PcP	PcP	07 00 02.3	-0.3
	comp=Z,1.0nm,0.5s,baz=114,slow=5.0,SNR=3.6						
ZALV				LR	LR	07 16 26.9	
	comp=Z,44nm,18.5s,baz=118,slow=36						
	comp=Z,0.6nm,0.4s						
KDAK	Kodiak Island	44.31	43	P	P	06 58 23.0	-0.5
	comp=Z,12nm,0.8s,baz=267,slow=5.2,SNR=8.9						
	comp=Z,12nm,0.8s						
CMAR	Chiang Mai Arr	44.36	257	LR	LR	07 16 18.7	
	comp=Z,8.5nm,21.2s,baz=245,slow=35						
MK31	Makanchi Array	45.59	302	P	P	06 58 34.0	+0.2
MKAR	Makanchi Array	45.59	302	P	P	06 58 34.5	+0.6
	comp=Z,0.8nm,0.7s,baz=82,slow=10,SNR=7.9						
MKAR				LR	LR	07 17 43.9	
	comp=Z,28nm,19.2s,baz=58,slow=36						
	comp=Z,0.8nm,0.7s						
ILAR	Eielson Array	46.91	33	P	P	06 58 43.8	-0.2
	comp=Z,0.8nm,0.8s,baz=261,slow=6.2,SNR=8.8						
	comp=Z,0.8nm,0.8s						
KURK	Kurchatov	47.13	308	P	P	06 58 46.8	+0.9
KURBB	Kurchatov Arra	47.20	307	P	P	06 58 47.3	+0.8
	comp=Z,1.8nm,0.6s,baz=82,slow=8.3,SNR=14						
	comp=Z,1.8nm,0.6s						
BMAR	Burnt Mountain	47.84	29	P	P	06 58 52.7	+1.4
L26K	Log Cabin Wild	48.56	35	P	P	06 58 57.5	+0.7
L26K				IAmb	IAmb	06 59 03.3	
	comp=Z,3.7nm,1.1s						
MCARA	McCarthy VSAT	48.88	38	P	P	06 59 00.2	+0.9
L27K	Beaver Creek,	49.24	35	P	P	06 59 03.0	+0.9
TARG	Taragay, Kyrgy	50.11	296	P	P	06 59 11.1	+1.7
TARG				IAmb	IAmb	06 59 21.4	
	comp=Z,4.3nm,0.8s						
BVAR	Borovoye Array	51.56	312	P	P	06 59 20.5	+0.8
	comp=Z,1.1nm,0.7s,baz=64,slow=13,SNR=4.2						
BVAR				LR	LR	07 23 00.3	
	comp=Z,48nm,19.0s,baz=306,slow=38						
	comp=Z,1.1nm,0.7s						
INK	Inuvik	51.95	28	P	P	06 59 22.4	+0.1
	comp=Z,0.6nm,0.5s,baz=302,slow=6.4,SNR=8.5						
	comp=Z,0.6nm,0.5s						
ARU	Arti	57.03	319	P	P	07 00 00.3	+0.9
	comp=Z,3.9nm,0.2s,baz=50,slow=17,SNR=1.2						
ARU				LR	LR	07 25 47.9	
	comp=Z,40nm,18.3s,baz=17,slow=37						
	comp=Z,3.9nm,0.2s						
WB0	Warramunga Arr	58.70	191	P	P	07 00 09.1	-2.4
WB0				IAmb	IAmb	07 00 09.6	
	comp=Z,3.7nm,0.8s						
WB2	Warramunga Arr	58.88	191	P	P	07 00 10.3	-2.4
WB2				IAmb	IAmb	07 00 11.7	
	comp=Z,3.9nm,0.8s						
WRA	Warramunga Arr	58.88	191	P	P	07 00 10.6	-2.1
	comp=Z,3.1nm,0.7s,baz=12,slow=7.2,SNR=18						
	comp=Z,3.1nm,0.7s						
WRA	Warramunga Arr	58.88	191	P	P	07 00 10.6	-2.1
ABKAR	Akbulak array	59.02	310	P	P	07 00 13.7	+0.3
ABKAR				IAmb	IAmb	07 00 24.5	
	comp=Z,2.6nm,0.8s						
YKA	Yellowknife Ar	61.28	31	P	P	07 00 28.1	-0.6
	comp=Z,0.6nm,0.7s,baz=302,slow=6.7,SNR=9.4						
	comp=Z,0.6nm,0.7s						
ASAR	Alice Springs	62.60	191	P	P	07 00 36.2	-1.8
	comp=Z,1.3nm,0.8s,baz=8.2,slow=6.8,SNR=15						
ASAR				PcP	PcP	07 01 15.9	-0.9
	comp=Z,0.4nm,0.6s,baz=2.4,slow=4.4,SNR=1.6						
	comp=Z,1.3nm,0.8s						
DZM	Mont Dzumac	63.56	157	P	P	07 00 44.3	-0.1
	comp=Z,7.9nm,0.9s,baz=336,slow=24,SNR=3.6						
	comp=Z,7.9nm,0.9s						
FINES	FINESS Array B	68.76	333	P	P	07 01 18.0	+0.6
	comp=Z,2.9nm,0.9s,baz=51,slow=12,SNR=4.1						
FINES				LR	LR	07 34 02.5	
	comp=Z,44nm,19.8s,baz=86,slow=38						
	comp=Z,2.9nm,0.9s						
KBZ	Khabaz	71.94	312	P	P	07 01 38.7	+1.7
	comp=Z,1.9nm,0.8s,baz=73,slow=11,SNR=3.8						
	comp=Z,1.9nm,0.8s						
NVAR	Mina Array Bea	72.06	55	P	P	07 01 37.8	-0.4
	comp=Z,1.0nm,0.8s,baz=302,slow=5.2,SNR=7.1						
	comp=Z,1.0nm,0.8s						
HFS	Hagfors	73.85	337	LR	LR	07 38 09.3	
	comp=Z,28nm,18.2s,baz=328,slow=39						
NOA	NORSAR Array B	73.87	338	LR	LR	07 39 50.6	
	comp=Z,16nm,18.2s,baz=275,slow=40						
AKASG	Malin Array Be	74.75	323	P	P	07 01 53.8	+0.3
	comp=Z,0.2nm,0.4s,baz=42,slow=5.1,SNR=4.7						
	comp=Z,0.2nm,0.4s						
PDAR	Pinedale Array	74.82	47	P	P	07 01 54.2	-0.2
	comp=Z,0.6nm,0.6s,baz=294,slow=1.8,SNR=7.0						
	comp=Z,0.6nm,0.6s						
PDAR	Pinedale Array	74.82	47	P	P	07 01 53.9	-0.5
SRU	San Rafael Swe	76.53	51	P	P	07 02 04.7	+0.5
SRU				IAmb	IAmb	07 02 05.7	
	comp=Z,5.8nm,1.2s						
MLR	Muntele Rosu	79.96	321	LR	LR	07 39 32.6	
	comp=Z,39nm,20.8s,baz=59,slow=37						
GERES	GERESS Array B	82.85	330	P	P	07 02 38.8	+0.6
	comp=Z,0.2nm,0.3s,baz=19,slow=9.3,SNR=1.9						
GERES				LR	LR	07 43 05.1	
	comp=Z,45nm,18.4s,baz=293,slow=38						
	comp=Z,0.2nm,0.3s						
MMAI	Mount Meron Ar	83.23	307	P	P	07 02 42.3	+1.9
	comp=Z,0.3nm,0.3s,baz=32,slow=8.5,SNR=1.5						
	comp=Z,0.3nm,0.3s						
EIL	Elat	85.75	305	LR	LR	07 45 02.2	
	comp=Z,30nm,19.4s,baz=61,slow=38						
TXAR	Lajitas Array	87.20	54	P	P	07 03 00.3	-0.1
	comp=Z,0.7nm,0.6s,baz=301,slow=3.3,SNR=12						
	comp=Z,0.7nm,0.6s						
TORD	Torodi Ar. Bea	118.10	318	PKP	PKPdf	07 08 60.0	-1.2
	comp=Z,0.2nm,0.4s,baz=55,slow=2.0,SNR=1.8						
LPAZ	La Paz	143.74	62	PKhKP	PKPpre	07 09 46.1	
	comp=Z,0.6nm,0.5s,baz=7.5,slow=13,SNR=2.1						

NNC ***22*** *06:54:59.0±4.1, 55°.22N×87°.95E, h0^{km}, mb3.1, mpv2.6, Error ellipse: s-maj=75.6km s-min=27.1km az=150.0, Suspected Mining explosion.*

IDC ***22*** *06:55:18.6±2.5, 54°.13N×86°.39E, h0^{km}, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=20.9km s-min=12.8km az=55.0*

ISC 22 06:55:19.8±3.4**, 54°.1N**±0°.2×**86°.3E**±0°.2**, h0^{km}, n8, σ1^{s}28**/10**, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.88	264	I	I	07 00 50.0	
	baz=81,slow=333,SNR=4.7						
ZAA0	Zalesovo Array	0.88	264	Pn	Pg	06 55 35.6	-1.0
	0.2nm,0.3s						
ZAA0				Pg	Pn	06 55 41.3	+1.8
	0.2nm,0.4s						
ZAA0				Sn	Sn	06 56 04.3	+11
	0.4nm,0.2s						
ZAA0				Lg	Lg	06 56 09.9	
	0.2nm,0.2s						
ZALV	Zalesovo Beam	0.88	264	Pg	Pg	06 55 34.8	-1.9
	1.4nm,0.3s,baz=80,slow=17,SNR=16						
ZALV				Lg	Lg	06 55 50.7	
	2.6nm,0.3s,baz=74,slow=27,SNR=14						
KURK	Kurchatov	5.77	238	Pn	Pn	06 56 46.0	-0.6
	5.3nm,2.0s						
KURK				Sn	Sb	06 58 11.5	+0.7
	13nm,2.6s						
KURK				Lg	Lg	06 58 49.9	
	6.4nm,0.7s						
KURBB	Kurchatov Arra	5.87	237	Pn	Pn	06 56 49.2	+1.2
	0.2nm,0.3s,baz=54,slow=13,SNR=16						
	0.8nm,0.4s						
KURBB	Kurchatov Arra	5.87	237	Pn	Pn	06 56 47.9	-0.1
	4.0nm,1.4s,baz=143,slow=12						
KURBB				Sn	Sb	06 58 14.6	+0.8
	5.6nm,1.9s,baz=151,slow=20						
KURBB				Lg	Lg	06 58 53.0	
	1.2nm,0.5s						
MK31	Makanchi Array	7.71	201	P	Pn	06 57 13.4	+0.2
	0.7nm,0.6s,baz=25,slow=13,SNR=14						
MK31				S	Sn	06 58 55.0	+14
	0.7nm,0.5s,baz=31,slow=26,SNR=3.8						
MKAR	Makanchi Array	7.71	201	Pn	Pn	06 57 14.1	+0.8
	0.2nm,0.3s,baz=17,slow=12,SNR=8.8						
	0.3nm,0.4s						

IDC ***22*** *07:01:01.8±4.9, 18°.79S×174°.97W, h104^{km}±36^{km}, mb3.5/5, mbtmp3.9/6, Error ellipse: s-maj=91.9km s-min=21.4km az=145.0*

ISC 22 07:01:02.6±2.0**, 18°.4S**±0°.4×**175°.1W**±0°.3**, h100^{km}, n13, σ1^{s}82**/8**, mb3.8**/5**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	5.52	36	P	Pn	07 02 24.5	+2.0
	7.0nm,0.3s,baz=213,slow=6.4,SNR=4.3						
AFI				S	Sn	07 03 22.0	-2.7
	42nm,0.3s,baz=71,slow=22,SNR=13						
WRA	Warramunga Arr	47.60	260	P	P	07 09 27.9	-0.9
	0.5nm,0.3s,baz=95,slow=7.7,SNR=34						
	0.5nm,0.3s						
ASAR	Alice Springs	47.65	254	P	P	07 09 28.4	-0.7
	1.1nm,0.7s,baz=90,slow=8.3,SNR=17						
	1.1nm,0.7s						
MJAR	Matsushiro Arr	70.20	322	P	P	07 12 05.9	+1.2
	0.6nm,0.3s,baz=135,slow=6.2,SNR=1.4						
	0.6nm,0.3s						
NVAR	Mina Array Bea	77.67	42	P	P	07 12 48.6	0.0
	0.6nm,0.6s,baz=225,slow=8.4,SNR=3.1						
	0.6nm,0.6s						
H03S2	Juan Fernandez	84.92	124	T	T	08 46 20.2	
	baz=252						
H03S1	Juan Fernandez	84.94	124	T	T	08 46 14.3	
	baz=252						
H03S3	Juan Fernandez	84.94	124	T	T	08 46 10.9	
	baz=252						
H03N2	Juan Fernandez	85.04	123	T	T	08 46 24.1	
	baz=250						
H03N3	Juan Fernandez	85.05	123	T	T	08 46 24.1	
	baz=250						
H03N1	Juan Fernandez	85.06	123	T	T	08 46 22.4	
	baz=250						
ILAR	Eielson Array	85.71	12	P	P	07 13 30.2	+0.3
	0.3nm,0.7s,baz=222,slow=5.7,SNR=8.0						
	0.3nm,0.7s						
GERES	GERESS Array B	148.81	349	PKPbc	PKPbc	07 20 37.1	-1.5
	0.2nm,0.3s,baz=23,slow=5.3,SNR=3.8						

TEH ***22*** *07:18:29.3, 38°.37N×55°.53E, h7^{km}±113^{km}, ML3.6*

IDC ***22*** *07:18:29.7±1.9, 38°.17N×55°.37E, h0^{km}, mb2.8/3, mbtmp3.3/6, ML3.3/3, MS1.9/1, Error ellipse: s-maj=25.9km s-min=18.4km az=71.0*

AZER ***22*** *07:18:38.7±3.1, 38°.23N×54°.85E, h10^{km}, Error ellipse: s-maj=42.3km s-min=20.0km az=2.0*

ISC 22 07:18:31.3±0.7**, 38°.35N**±0°.05×**55°.46E**±0°.04**, h10^{km}, n38, σ1^{s}87**/44**, Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRVT	Maraveh tapeh	0.85	144	Pg	Pg	07 18 45.8	-1.8
IMND	Minoodasht	1.09	182	Pg	Pb	07 18 51.2	-1.0
IMND				Sg	Sb	07 19 07.8	+1.2
GEYT	Alibeck	2.13	101	Pn	Pn	07 19 07.2	+0.2
	38nm,0.3s,baz=280,slow=20,SNR=124						
GEYT				LR	LR	07 19 31.6	
	comp=Z,27nm,21.5s,baz=310,slow=28						
GEYT				Sn	Sb	07 19 37.5	+0.9
	14nm,0.3s,baz=277,slow=18,SNR=3.7						
	116nm,0.5s						
IGLO	Ghaloghah	2.26	216	Pn	Pn	07 19 11.1	+2.2
ISFR	Sfrayin	2.39	122	Pn	Pn	07 19 12.0	+1.2
SBZV	Sabzevar	2.60	138	Pn	Pn	07 19 14.8	+1.2
IEMG	Emamgholi	2.69	109	Pn	Pn	07 19 14.6	-0.3
ISHM	Shahmirzad	3.08	215	Pn	Pn	07 19 22.3	+2.1
IANJ	Anjilo	3.14	204	Pn	Pn	07 19 23.4	+2.5
IAKL	Akhelmad	3.15	123	Pn	Pn	07 19 22.3	+1.1
IPRN	Peran	3.26	231	Pn	Pn	07 19 25.2	+2.6
IKRD	Kardeh	3.58	115	Pn	Pn	07 19 28.1	+1.0
MZPU	Pul - Mazandar	3.64	240	Pn	Pn	07 19 29.4	+1.5
KLST	Kelardasht - M	3.96	244	Pn	Pn	07 19 34.4	+2.2
IMYA	Miami	4.21	117	Pn	Pn	07 19 35.8	+0.2
TBHD	Torbat heydari	4.21	133	Pn	Pn	07 19 36.5	+0.8
QALM	Alamut, Qazvin	4.29	245	Pn	Pn	07 19 38.4	+1.6
TNSJ	Nastanj	4.48	168	Pn	Pn	07 19 41.0	+1.8
ISFB	Sefidab	4.76	214	Pn	Pn	07 19 45.7	+2.5
TKDS	Koohdasht(Taba	4.92	164	Pn	Pn	07 19 47.1	+1.8
TBJM	Torbat-e-JAM	4.97	127	Pn	Pn	07 19 47.1	+1.0
KRSH	Karshahi	5.14	213	Pn	Pn	07 19 51.3	+2.9
TPRV	Parvadeh(Tabas	5.41	169	Pn	Pn	07 19 53.5	+1.5
GLBA	Clilabad	5.59	281	S	Sn	07 20 56.5	-2.4
LRK	Lerik	5.60	275	P	Pn	07 19 56.1	+1.4
LRK				S	Sn	07 20 56.0	-3.2
YRD	Yardimli	5.68	278	P	Pn	07 19 58.0	+2.1
YRD				S	Sn	07 20 57.7	-3.6
SIZA	Siyzn	5.75	300	S	Sn	07 21 06.4	+3.7
ITEG	Tejag	6.07	153	Pn	Pn	07 20 02.6	+1.4
ISRB	Sarab	6.17	268	Pn	Pn	07 20 03.6	+1.0
XNQ	Khinaliq	6.31	299	S	Sn	07 21 17.9	+1.2
GANJ	Ganja	7.43	291	S	Sn	07 21 41.8	-2.3
ORD	Ordubad	7.43	277	P	Pn	07 20 20.5	+0.7
ORD				S	Sn	07 21 41.5	-2.8
GDB	GEDABAY	7.87	291	P	Pn	07 20 26.9	+1.0
GDB				S	Sn	07 21 52.8	-2.2
AKTO	Aktyubinsk	12.22	8	Pn	Pn	07 21 25.4	+0.1
	0.4nm,0.3s,baz=187,slow=15,SNR=8.2						
	2.7nm,0.6s						
BVAR	Borovoye Array	17.94	30	Pn	Pn	07 22 39.6	-1.2
	baz=224,slow=6.0,SNR=3.8						
	0.5nm,0.7s						
KURBB	Kurchatov Arra	20.43	46	P	P	07 23 09.5	+1.1
	0.1nm,0.3s,baz=241,slow=12,SNR=3.4						
	0.1nm,0.3s						
MKAR	Makanchi Array	21.40	58	P	P	07 23 19.9	+0.8
	0.5nm,0.6s,baz=248,slow=11,SNR=6.5						
	0.5nm,0.6s						
AKASG	Malin Array Be	22.28	312	P	P	07 23 28.5	+0.1
	0.2nm,0.3s,baz=111,slow=9.6,SNR=4.3						
	0.2nm,0.3s						

IDC 22 07:23:56.4±1.8**, 54°.61N**×**83°.75E, h0^{km}, mbtmp2.7**/3**, ML2.2**/3**, Error ellipse: s-maj=16.5km s-min=9.7km az=12.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.91	136	I	I	07 29 30.0	
	baz=316,slow=315,SNR=1.3						
ZALV	Zalesovo Beam	0.92	136	Pg	Pg	07 24 12.6	-1.3
	2.3nm,0.3s,baz=319,slow=15,SNR=14						
ZALV				Lg	Lg	07 24 27.6	
	4.2nm,0.3s,baz=309,slow=32,SNR=18						
KURBB	Kurchatov Arra	5.11	221	Pn	Pn	07 25 14.5	+0.3
	baz=41,slow=14,SNR=4.4						
KURBB				Pg	Pb	07 25 29.1	+2.5
	baz=38,slow=15,SNR=11						
KURBB				Sn	Sn	07 26 12.8	-0.9
	baz=37,slow=21,SNR=2.2						
KURBB				Lg	Lg	07 26 37.6	
	baz=42,slow=31,SNR=3.5						
	0.2nm,0.5s						
MKAR	Makanchi Array	7.88	187	Pn	Pn	07 25 53.3	+1.0
	0.1nm,0.3s,baz=4.5,slow=9.9,SNR=3.2						
MKAR				Lg	Lg	07 28 05.1	
	0.1nm,0.3s,baz=0.5,slow=30,SNR=2.8						
	0.3nm,0.7s						
BVAR	Borovoye Array	8.07	264	Pn	Pn	07 25 53.8	-0.9
	baz=66,slow=14,SNR=4.5						
	0.6nm,0.5s						

ROM 22 07:25:55.1±0.1**, 42°.537N**±0°.004×**13°.357E**±0°.005**, h10^{km}, ML0.9**/4**, 3C, Error ellipse: s-maj=0.5km s-min=0.3km az=192.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	SAN MARTINO	0.10	350	P	Pg	07 25 58.4	+0.6
SMA1				S	Sg	07 26 00.1	+0.4
SMA1				AML	AML		
	comp=E,98μm,1.3s						
SMA1				AML	AML		
	comp=N,101μm,0.6s						

SMA1				AML	AML		
	comp=E,98µm,0.7s						
RM33	Pellescritta (	0.11	255	⇑P	Pg	07 25 58.3	+0.4
RM33				S	Sg	07 26 00.2	+0.3
RM33				AML	AML		
	comp=E,146µm,1.1s						
RM33				AML	AML		
	comp=N,120µm,0.1s						
RM33				AML	AML		
	comp=E,146µm,0.9s						
GIGS	Gran Sasso	0.18	119	⇑P	Pg	07 25 59.9	+1.0
GIGS				S	Sg	07 26 02.5	+0.9
TERO	Teramo	0.20	65	P	Pg	07 26 00.0	+0.7
TERO				S	Sg	07 26 03.3	+1.1
TERO				AML	AML		
	comp=E,48µm,0.7s						
TERO				AML	AML		
	comp=N,56µm,1.5s						
TERO				AML	AML		
	comp=N,56µm,0.5s						
T1214	Arquata del Tr	0.25	334	P	Pg	07 26 01.0	+0.7
T1214				S	Sg	07 26 05.1	+1.4
T1212	Cascia, Frazio	0.32	313	⇑P	Pg	07 26 02.1	+0.7
T1212				S	Sb	07 26 07.0	-1.2

ROM 22 07:26:39.9±0.1, 42°.858N±0°.004×13°.017E±0°.007, h11^{km}, ML0.6/3, 1C-1D, Error ellipse: s-maj=0.5km s-min=0.4km az=266.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1216	Preci, Frazion	0.03	2	P	Pg	07 26 42.3	+0.4
T1216				S	Sg	07 26 43.4	0.0
T1216				AML	AML		
	comp=N,99µm,1.2s						
T1216				AML	AML		
	comp=E,114µm,0.3s						
T1245	Castelsantange	0.13	91	P	Pg	07 26 43.7	+0.6
T1245				S	Sg	07 26 46.0	+0.7
T1245				AML	AML		
	comp=E,30µm,0.4s						
T1245				AML	AML		
	comp=N,44µm,0.7s						
MC2	Monte Cornacci	0.14	67	P	Pb	07 26 44.1	-0.6
T1217	Poggiodomo (PG	0.16	203	P	Pg	07 26 44.2	+0.7
T1217				S	Sg	07 26 46.9	+0.9
T1214	Arquata del Tr	0.17	125	P	Pb	07 26 44.5	-0.7
T1214				S	Sg	07 26 47.2	+0.8
FDMO	Fiordimonte	0.19	16	⇓P	Pg	07 26 44.5	+0.6
FDMO				S	Sg	07 26 47.9	+1.2
FDMO				AML	AML		
	comp=E,24µm,1.0s						
FDMO				AML	AML		
	comp=E,24µm,1.0s						
FDMO				AML	AML		
	comp=N,16µm,1.3s						
T1219	Muccia, Frazio	0.20	358	⇑P	Pg	07 26 44.7	+0.5
MMO1	Montemonaco	0.23	80	P	Pg	07 26 45.4	+0.6
MMO1				S	Sg	07 26 49.2	+1.2
CSP1	Cessapalombo	0.27	30	P	Pb	07 26 46.2	-0.7
CSP1				S	Sg	07 26 50.3	+1.1

IDC 22 07:31:31.8±4.6, 6°.90S×149°.42E, h95^{km}±39^{km}, mb3.2/2, mbtmp3.6/4, MS2.6/2, Error ellipse: s-maj=106.3km s-min=33.8km az=127.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.35	222	P	Pn	07 32 22.3	+0.2
	25nm,0.3s,baz=40,slow=7.9,SNR=17						
PMG				S	Sn	07 33 01.1	+0.2
	45nm,0.3s,baz=60,slow=20,SNR=9.9						
PMG				LR	LR	07 33 59.3	
	comp=Z,127nm,18.7s,baz=88,slow=44						
CTA	Charters Tower	13.46	193	LR	LR	07 39 59.3	
	comp=Z,18nm,19.1s,baz=254,slow=38						
WRA	Warramunga Arr	19.55	227	P	P	07 35 52.4	+0.2
	0.8nm,0.4s,baz=52,slow=10,SNR=15						
ASAR	Alice Springs	22.36	220	P	P	07 36 22.6	+0.3
	0.9nm,0.7s,baz=53,slow=9.0,SNR=11						
	0.9nm,0.7s						
ILAR	Eielson Array	85.37	23	P	P	07 43 57.6	-0.5
	0.4nm,0.8s,baz=242,slow=4.5,SNR=5.9						
	0.4nm,0.8s						
TORD	Torodi Ar. Bea	147.64	284	PKPbc	PKPbc	07 51 06.5	+0.2
	0.3nm,0.4s,baz=69,slow=3.4,SNR=2.8						

IDC 22 07:52:55.5±293.0, 56°.83N×41°.59E, h0^{km}, Error ellipse: s-maj=113.8km s-min=56.4km az=91.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	2.41	269	I	I	08 07 30.0	
	baz=88,slow=315,SNR=2.3						
I31KZ	AKTYUBINSK INF	11.67	116	I	I	09 07 10.0	
	baz=316,slow=345,SNR=1.8						
I46RU	ZALESOVO INFRA	24.42	78	I	I	10 23 00.0	
	baz=299,slow=321,SNR=1.4						

*BJI **22** 08:02:24.1±0.0, 7°.04S×130°.19E, h165^{km}, mb5.0/63, mB4.9/30*

*MOS **22** 08:02:25.6±0.9, 6°.75S×129°.78E, h143^{km}, mb5.0/33, Error ellipse: s-maj=10.8km s-min=5.3km az=120.5*

*DJA **22** 08:02:27.0±0.1, 7°S±1°×13°0E±°, h149^{km}±2^{km}, M5.1/75, mb5.3/75, mB5.5/43, MLv5.6/19, Mw(mB)5.0/43, MwMwp4.7/4, Mwp5.1/4*

*NEIC **22** 08:02:27.3±2.4, 6°.71S±0°.05×129°.77E±0°.04, h140^{km}±6^{km}, mb5.1/74, Error ellipse: s-maj=9.6km s-min=3.0km az=142.0*

*IDC **22** 08:02:28.7±1.1, 6°.78S×129°.77E, h157^{km}±9^{km}, mb4.5/38, mbtmp4.9/41, MS3.6/13, Error ellipse: s-maj=12.0km s-min=7.1km az=65.0*

*GCMT **22** 08:02:28.3±0.3, 6°.82S±0°.02×129°.82E±0°.03, h139^{km}±4^{km}, MW5.0/78, Moment Tensor Solution. s17,c17; s78,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.61±.13; $M_{\theta\theta}$-2.52±.16; $M_{\phi\phi}$1.91±.19; $M_{r\theta}$0.41±.09; $M_{\theta\phi}$1.93±.17; $M_{\phi r}$1.71±.10; Best double couple: $M_0$3.44800×10^{16} NP1:ϕ_s332.00000°, δ72.00000°, λ155.00000°. NP2: ϕ_s70.00000°, δ66.00000°, λ20.00000°. Principal axes: T 3.6380, Plg30.0000°, Azm289.0000°; N -0.3840, Plg60.0000°, Azm118.0000°; P -3.2570, Plg4.0000°, Azm22.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 08:02:27.5±0.4, 6°.79S±0°.03×129°.80E±0°.04, h152^{km}±3^{km}, h152^{km}:pP-P, n523, σ1^{s}53/558, mb5.0/121, 20C-6D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.90	129	Pn	Pn	08 03 01.9	+0.4
SAUI	Saumlaki	1.90	129	P	Pn	08 03 01.9	+0.4
SAUI	Saumlaki	1.90	129	P	Pn	08 03 02.1	+0.6
SAUI				S	Sn	08 03 28.7	+1.0
BNDI	Bandanaira	2.26	3	P	Pn	08 03 07.3	+1.5
BNDI	Bandanaira	2.26	3	P	Pn	08 03 07.3	+1.5
AAI	Ambon	3.48	333	P	Pn	08 03 22.8	+1.8
MSAI	Masohi	3.53	346	P	Pn	08 03 24.0	+2.2
NLAI	Namlea	4.44	323	P	Pn	08 03 35.9	+2.4
FAKI	Fak Fak	4.56	32	Pn	Pn	08 03 33.1	-1.9
FAKI	Fak Fak	4.56	32	P	Pn	08 03 33.2	-1.9
FAKI	Fak Fak	4.56	32	P	Pn	08 03 33.2	-1.9
FAKI				S	Sn	08 04 23.4	-4.4
SANI	Sanana	6.05	321	P	Pn	08 03 57.1	+2.1
SANI	Sanana	6.05	321	P	Pn	08 03 56.9	+1.9
	269nm,1.0s,2µm0.8nm						
SANI				S	Sn	08 05 07.2	+3.8
	269nm,1.0s,2µm0.8nm						
SWI	Sorong	6.07	14	P	Pn	08 03 53.4	-1.7
	502nm,0.6s,11µm2.8nm						
SWI				S	Sn	08 05 00.1	-3.7
	502nm,0.6s,11µm2.8nm						
MTN	Manton Dam	6.15	168	P	Pn	08 03 54.1	-2.2
	baz=5.9						
MTN	Manton Dam	6.15	168	Pn	Pn	08 03 55.0	-1.2
MTN	Manton Dam	6.15	168	P	Pn	08 03 55.0	-1.2
SOEI	Soe	6.22	241	Pn	Pn	08 03 56.7	-0.5
SOEI	Soe	6.22	241	P	Pn	08 03 57.2	0.0
SOEI	Soe	6.22	241	P	Pn	08 03 57.3	0.0
	830nm,0.5s,11µm10nm						
SOEI				S	Sn	08 05 06.8	-0.7
	830nm,0.5s,11µm10nm						
KDU	Kakadu	6.42	156	P	Pn	08 03 56.7	-3.2
	baz=6.2						
KDU	Kakadu	6.42	156	P	Pn	08 03 58.3	-1.5
LBMI	Labuha	6.53	339	P	Pn	08 04 03.2	+1.9
	727nm,1.0s,9µm3.8nm						
LBMI				S	Sn	08 05 15.9	+1.0
	727nm,1.0s,9µm3.8nm						
RKPI	Ransiki, Papua	6.83	40	P	Pn	08 04 04.4	-0.8
	3µm,0.5s,46µm17nm						
RKPI				S	Sn	08 05 18.5	-3.4
	3µm,0.5s,46µm17nm						
MMRI	Maumere	7.72	256	Pn	Pn	08 04 16.9	-0.2
MMRI	Maumere	7.72	256	P	Pn	08 04 18.4	+1.3
	248nm,0.5s,4µm1.4nm						
MMRI				S	Sn	08 05 43.8	+0.5
	248nm,0.5s,4µm1.4nm						
TNTI	Ternate	7.90	342	Pn	Pn	08 04 18.3	-1.2
TNTI	Ternate	7.90	342	P	Pn	08 04 20.9	+1.3
TNTI	Ternate	7.90	342	P	Pn	08 04 20.4	+0.8
	86nm,1.2s,0.4nm						
SRPI	Serui, Papua	8.07	53	P	Pn	08 04 22.5	+0.6
	683nm,0.8s						
KNRA	Kununurra	8.89	186	P	Pn	08 04 29.4	-3.3
	baz=8.7						
KNRA	Kununurra	8.89	186	Pn	Pn	08 04 29.9	-2.8
KNRA	Kununurra	8.89	186	P	Pn	08 04 30.0	-2.7
LUWI	Luwuk	9.04	309	Pn	Pn	08 04 34.3	-0.5
LUWI	Luwuk	9.04	309	P	Pn	08 04 38.3	+3.5
LUWI	Luwuk	9.04	309	P	Pn	08 04 37.8	+3.0
	275nm,1.3s,7µm						
BSSI	Bau Bau, Buton	9.27	273	P	Pn	08 04 39.0	+1.1
	129nm,1.0s,2µm						
BKSI	Bulukumba	9.73	278	P	Pn	08 04 45.4	+1.4
BASI	Baing, Sumba	9.74	249	P	Pn	08 04 43.6	-0.4
	443nm,0.7s,7µm						
SMPI	Sarmi	10.08	62	P	Pn	08 04 48.5	-0.1
	187nm,0.9s,2µm						
KAPI	Kappang	10.15	279	P	Pn	08 04 50.9	+1.4
	56nm,0.9s,baz=66,slow=7.7,SNR=13						
KAPI				S	Sn	08 06 38.7	-3.3
	12nm,0.3s,baz=173,slow=14,SNR=1.7						
KAPI				LR	LR	08 08 16.5	
	comp=Z,300nm,21.9s,baz=106,slow=34						
KAPI	Kappang	10.15	279	Pn	Pn	08 04 47.9	-1.6
KAPI	Kappang	10.15	279	P	Pn	08 04 50.7	+1.2
KAPI	Kappang	10.15	279	*d i*P	Pn	08 04 48.7	-0.8
SPSI	Sidrap Palu	10.38	285	P	Pn	08 04 53.9	+1.4
	299nm,0.6s,3µm						
GENI	Genyem	11.14	68	P	Pn	08 05 03.7	+1.1
	129nm,0.7s						
GENI	Genyem	11.14	68	P	Pn	08 05 05.4	+2.8
	132nm,0.8s						
TOLI2	Tolitoli	11.95	311		Pn	08 05 11.6	-1.5
TOLI2	Tolitoli	11.95	311	P	Pn	08 05 15.8	+2.7
FITZ	Fitzroy Crossi	11.95	199	P	Pn	08 05 08.9	-4.1
	baz=12						
FITZ	Fitzroy Crossi	11.95	199		Pn	08 05 08.9	-4.1
PLAI	Plampang	12.08	260	P	Pn	08 05 11.8	-3.1
PLAI	Plampang	12.08	260	P	Pn	08 05 12.3	-2.6
	158nm,0.5s,2µm						
TWSI	Taliwang, Sumb	12.95	261	P	Pn	08 05 25.6	-0.4
	93nm,0.5s						
WB0	Warramunga Arr	13.65	161	P	Pn	08 05 30.8	-4.1
GSPH	General Santos	13.68	339	⇑*i*P	P	08 05 39.7	+0.5
WRAB	Tennant Creek	13.79	162	P	Pn	08 05 32.7	-3.9
WRAB	Tennant Creek	13.79	162	P	Pn	08 05 32.8	-3.9
WRAB	Tennant Creek	13.79	162	*ce*P	Pn	08 05 33.2	-3.5
WRAB				pmax	pmax		
	comp=Z,166nm,1.3s						
WRA	Warramunga Arr	13.79	162	P	Pn	08 05 32.4	-4.4
	comp=Z,64nm,0.5s,baz=339,slow=13,SNR=286						
WRA				S	Sn	08 07 54.1	-16
	comp=Z,204nm,0.6s,baz=340,slow=22,SNR=12						
WRA				LR	LR	08 11 49.9	
	comp=Z,335nm,18.9s,baz=335,slow=41						
WRA	Warramunga Arr	13.79	162	P	Pn	08 05 31.3	-5.5
WRA	Warramunga Arr	13.79	162	P	Pn	08 05 31.3	-5.5
WB2	Warramunga Arr	13.80	162	P	Pn	08 05 32.7	-4.1
	baz=14						
WB2	Warramunga Arr	13.80	162	P	Pn	08 05 32.5	-4.3
WB1	Warramunga Ar.	13.81	162	P	Pn	08 05 32.9	-4.1
BKB	Balikpapan	13.99	293	P	Pn	08 05 39.8	+0.4
BKB	Balikpapan	13.99	293	P	P	08 05 41.6	-0.9
BKB	Balikpapan	13.99	293	P	P	08 05 42.5	0.0
	comp=Z,327nm,1.0s,comp=Z,4µm						
DAV	Davao City (W)	14.40	343	LR	LR	08 11 50.2	
	comp=Z,168nm,21.7s,baz=124,slow=39						
SRBI	Singaraja	14.52	264	P	Pn	08 05 46.7	+0.7
	comp=Z,71nm,0.8s						
IGBI	Denpasar	14.66	261	P	Pn	08 05 48.4	+0.7
	comp=Z,177nm,0.6s						
COEN	Coen	14.95	119	P	Pn	08 05 47.5	-3.9
	baz=15						
COEN	Coen	14.95	119	P	Pn	08 05 48.6	-2.7
COEN	Coen	14.95	119	P	Pn	08 05 48.5	-2.8
CTBH	Cotabato--PC H	14.98	338	⇑*i*P	P	08 05 55.7	+2.2
BBKI	Banjar Baru	15.26	282	P	P	08 05 58.6	+2.0
	comp=Z,587nm,0.6s,comp=Z,11µm						
BIPH	Bislig	15.27	347	⇓*e*P	P	08 05 57.2	+0.6
ABJI	Asem Bagus	15.47	265	P	Pn	08 05 58.0	+0.2
	comp=Z,191nm,0.7s						
JAGI	Jajag, Banyuwa	15.60	263	P	Pn	08 05 56.7	-2.7
JAGI	Jajag, Banyuwa	15.60	263	P	Pn	08 05 57.0	-2.4
JAGI	Jajag, Banyuwa	15.60	263	P	Pn	08 05 56.7	-2.7
	comp=Z,167nm,0.8s						
MTKI	Muara Teweh, K	15.96	291	P	P	08 06 06.3	+1.9
	comp=Z,208nm,0.9s,comp=Z,5µm						
CGP	Cagayan de Oro	15.98	341	⇑*e*P	P	08 06 04.9	+0.3
BLJI	Banyuglugur	16.10	266	P	Pn	08 06 05.7	+0.2
	comp=Z,421nm,0.6s,comp=Z,9µmcomp=Z,8µm						
GMJI	Gumukmas	16.28	264	P	Pn	08 06 05.9	-1.8
	comp=Z,104nm,0.9s						
MYLDM	Lahad Datu	16.39	316	P	P	08 06 11.6	+2.5
QIS	Mount Isa	16.66	146	P	P	08 06 10.6	-1.4
	baz=16						
QIS	Mount Isa	16.66	146	P	P	08 06 10.9	-1.1
GRJI	Gresik	17.20	269	P	Pn	08 06 18.5	-0.3
	comp=Z,429nm,1.0s						
AS31	Alice Springs	17.23	167	P	P	08 06 18.2	-0.1
ASAR	Alice Springs	17.23	167	P	P	08 06 17.5	-0.8
	comp=Z,132nm,0.6s,baz=345,slow=9.4,SNR=790						
ASAR				S	S	08 09 11.9	-18
	comp=Z,31nm,0.7s,baz=337,slow=14,SNR=4.4						
ASAR				LR	LR	08 13 45.2	
	comp=Z,311nm,18.5s,baz=344,slow=39						
ASAR	Alice Springs	17.23	167	P	P	08 06 17.6	-0.7
AS01	Alice Springs	17.24	167	P	P	08 06 18.0	-0.4
MBWA	Marble Bar	17.29	213	P	P	08 06 17.9	-1.0
MBWA	Marble Bar	17.29	213	P	P	08 06 18.3	-0.6
PMG	Port Moresby	17.38	100	P	Pn	08 06 21.4	+0.5
	comp=Z,18nm,0.4s,baz=307,slow=6.6,SNR=11						
PMG				S	S	08 09 24.6	-8.7
	comp=Z,11nm,0.4s,baz=0.4,slow=23,SNR=1.6						
PMG				LR	LR	08 15 10.5	
	comp=Z,236nm,20.4s,baz=328,slow=44						
PMG	Port Moresby	17.38	100	P	Pn	08 06 20.8	-0.2
PMG	Port Moresby	17.38	100	P	Pn	08 06 21.5	+0.5
PMG	Port Moresby	17.38	100	P	Pn	08 06 21.4	+0.5
TBP	Tagbilaran	17.41	340	*e*P	Pn	08 06 22.7	+1.4
PSA00	Pilbara Seismi	17.56	212	P	P	08 06 20.8	-1.1
PSA00	Pilbara Seismi	17.56	212	P	P	08 06 21.5	-0.4
PSA00	Pilbara Seismi	17.56	212	P	P	08 06 21.6	-0.4
PWJI	Pagerwojo	17.89	265	P	P	08 06 23.1	-2.5
	comp=Z,92nm,0.6s						
MTSU	Mount Surprise	18.09	130	P	P	08 06 27.8	+0.1
	baz=18						
MTSU	Mount Surprise	18.09	130	P	Pn	08 06 29.6	+0.2
WRKA	Warakurna	18.20	184	P	P	08 06 26.9	-2.0
	baz=18						
WRKA	Warakurna	18.20	184	P	P	08 06 28.9	0.0
NGJI	Ngawi	18.21	267	P	Pn	08 06 30.4	-0.4
	comp=Z,97nm,0.9s						
PBKI	Pangkalan Bun	18.52	282	P	P	08 06 32.3	-0.1
	comp=Z,1µm,0.6s						
KKM	Kota Kinabalu	18.61	313	P	P	08 06 32.7	-0.9
KKM	Kota Kinabalu	18.61	313	P	Pn	08 06 35.2	-0.4
UGM	Wanagama	19.15	265	P	P	08 06 37.3	-2.1
RCP	Roxas	19.54	339	⇓*i*P	P	08 06 44.5	+1.0
TV1H	Townsville Har	20.65	128	P	P	08 06 57.1	+1.7
KPJI	Karang Pucung	20.72	267	P	P	08 06 54.7	-1.5
	comp=Z,172nm,0.7s						
CTA	Charters Tower	20.72	131	P	P	08 06 57.7	+1.5
	comp=Z,16nm,0.9s,baz=301,slow=11,SNR=15						
CTA				S	S	08 10 41.0	+1.6
	comp=Z,7.9nm,0.7s,baz=323,slow=20,SNR=1.8						
CTA				LR	LR	08 15 52.3	
	comp=Z,182nm,18.2s,baz=285,slow=39						
	comp=Z,16nm,0.9s						
CTA	Charters Tower	20.72	131	P	P	08 06 57.5	+1.3
	baz=21						
CTA	Charters Tower	20.72	131	P	P	08 06 58.0	+1.8
CTAO	Charters Tower	20.72	131	P	P	08 06 57.1	+0.9
CTAO	Charters Tower	20.72	131	P	P	08 06 57.9	+1.8
CTAO	Charters Tower	20.72	131	P	P	08 06 57.1	+0.9
CMJI	Cimerak	21.20	266	P	P	08 06 58.0	-3.4
	comp=Z,180nm,0.6s						
OOD	Oodnadatta	21.62	166	P	P	08 07 05.6	-0.1
GIRL	Giralia	21.76	222	P	P	08 07 09.0	+1.8
GIRL				IAmb	IAmb	08 07 24.8	
	comp=Z,135nm,0.9s						
BBJI	Bungbulang	21.99	267	P	P	08 07 06.8	-2.9
MEEK	Meekatharra	22.43	207	P	P	08 07 12.3	-1.5
	baz=22						
MEEK	Meekatharra	22.43	207	P	P	08 07 13.7	-0.1
CNJI	Cibinong	22.51	267	P	P	08 07 12.6	-2.1
	comp=Z,337nm,0.9s,comp=Z,2µm						
CBJI	Citeko	22.80	270	P	P	08 07 14.6	-2.9
	comp=Z,335nm,0.7s						
INKA	Innaminka	23.28	155	P	P	08 07 22.8	+1.1
MULG	Mulgathing	23.71	171	P	P	08 07 26.1	+0.5
FORT	Forrest	23.92	184	P	P	08 07 27.0	-0.5
	baz=24						
FORT	Forrest	23.92	184	P	P	08 07 28.3	+0.8
FORT	Forrest	23.92	184	P	P	08 07 27.9	+0.4
CGJI	Cibinong	23.94	269	P	P	08 07 25.6	-2.3
	comp=Z,180nm,0.5s,comp=Z,3µm						
QLP	Quilpie	24.00	147	P	P	08 07 29.0	+0.7
PPBI	Pangkal Pinang	24.03	280	P	P	08 07 29.5	+0.8
	comp=Z,137nm,0.9s,comp=Z,13µm						
LCRK	Leigh Creek	24.82	162	P	P	08 07 36.1	+0.4
KASI	Kota Agung	25.19	271	P	P	08 07 37.4	-1.8
	comp=Z,83nm,1.0s						
KMBL	Kambalda	25.55	196	P	P	08 07 42.3	+0.1
	baz=25						
KMBL	Kambalda	25.55	196	P	P	08 07 42.7	+0.4
MORW	Morawa	25.68	209	P	P	08 07 44.3	+0.8
	baz=26						
MORW	Morawa	25.68	209	P	P	08 07 44.1	+0.6
MORW				IAmb	IAmb	08 08 25.3	
	comp=Z,53nm,0.8s						
MORW	Morawa	25.68	209	P	P	08 07 43.8	+0.3
RK1H	Rockhampton Ha	25.85	132	P	P	08 07 42.0	-3.0
BBOO	Buckleboo	26.53	168	P	P	08 07 51.0	-0.1
BBOO				IAmb	IAmb	08 08 37.1	
	comp=Z,47nm,0.8s						
BBOO	Buckleboo	26.53	168	P	P	08 07 51.1	0.0
RMQ	Roma	26.64	140	P	P	08 07 52.5	+0.4
MNAI	Manna	26.82	274	P	P	08 07 53.3	-0.7
KLBR	Kellerberrin	27.12	203	P	P	08 07 54.1	-2.3
	baz=27						
KLBR	Kellerberrin	27.12	203	P	P	08 07 56.8	+0.4
STKA	Stephens Creek	27.28	158	P	P	08 07 57.9	+0.1
	comp=Z,16nm,0.5s,baz=332,slow=9.4,SNR=19						
STKA				LR	LR	08 20 26.7	
	comp=Z,161nm,20.3s,baz=339,slow=40						
	comp=Z,16nm,0.5s						
STKA	Stephens Creek	27.28	158	P	P	08 07 57.9	+0.1
	baz=27						
STKA	Stephens Creek	27.28	158	P	P	08 07 57.9	+0.1
STKA	Stephens Creek	27.28	158	P	P	08 07 58.3	+0.5
STKA	Stephens Creek	27.28	158	*i* P	P	08 07 58.2	+0.5
EIDS	Eidsvold	27.47	135	P	P	08 07 59.7	+0.1
DLV	T Lat	28.21	311	P	P	08 08 06.8	+0.3
AULRC	Lightning Ridg	28.29	145	P	P	08 08 07.5	+0.7
NWAO	Narrogin (SRO)	28.51	203	P	P	08 08 09.2	+0.6
	comp=Z,5.5nm,0.5s,baz=33,slow=6.7,SNR=10						
NWAO				LR	LR	08 20 54.4	
	comp=Z,78nm,21.6s,baz=240,slow=39						
	comp=Z,5.5nm,0.5s						
NWAO	Narrogin (SRO)	28.51	203	P	P	08 08 09.4	+0.7
NWAO				IAmb	IAmb	08 08 57.0	
	comp=Z,40nm,0.8s						
NWAO	Narrogin (SRO)	28.51	203	P	P	08 08 09.4	+0.7
NWAO				pmax	pmax		
	comp=Z,40nm,0.8s						
CMSA	Cobar Meteorol	28.75	151	P	P	08 08 12.2	+1.3
	baz=29						
CMSA	Cobar Meteorol	28.75	151	P	P	08 08 11.5	+0.6
SDSI	Sungai Dareh	28.89	280	P	P	08 08 13.8	+1.5
	comp=Z,69nm,1.0s						
HNR	Honiara	29.95	97	LR	LR	08 20 46.6	
	comp=Z,872nm,18.0s,baz=284,slow=37						
AUDCS	Dubbo College	30.80	148	P	P	08 08 29.6	+0.7
IPM	Ipoh	30.83	291	P	P	08 08 27.6	-1.9
IPM				IAmb	IAmb	08 08 32.2	
	comp=Z,33nm,0.8s						
IPM	Ipoh	30.83	291	P	P	08 08 31.1	+1.6
ARMA	Armidale	31.18	142	P	P	08 08 35.1	+2.6
KULM	Kulim	31.47	292	P	P	08 08 34.8	-0.3
KULM				IAmb	IAmb	08 08 37.9	
	comp=Z,43nm,0.9s						
ARPS	Mount Arapiles	31.80	161	P	P	08 08 38.5	+0.9
PBSI	Pulau Batu	32.15	281	P	P	08 08 41.0	0.0
	comp=Z,114nm,1.5s						
SKLT	Songkhla	32.24	295	P	P	08 08 42.5	+0.7
PSI	Prapat	32.26	286	P	P	08 08 40.4	-1.8
YNG	Young	32.31	150	P	P	08 08 43.4	+1.2
GSI	Gunungsitoli	33.15	283	P	P	08 08 48.2	-1.6
GSI	Gunungsitoli	33.15	283	P	P	08 08 50.2	+0.4
GSI	Gunungsitoli	33.15	283	P	P	08 08 48.3	-1.5
	comp=Z,112nm,1.0s						
CAN	Canberra	33.43	151	P	P	08 08 53.5	+1.5
CAN				IAmb	IAmb	08 10 01.2	
	comp=Z,60nm,1.5s						
CAN	Canberra	33.43	151	P	P	08 08 53.5	+1.5
CAN				pmax	pmax		
	comp=Z,60nm,1.5s						
KCSI	Kotacane, Aceh	33.58	287	P	P	08 08 55.6	+2.1
	comp=Z,23nm,0.5s,comp=Z,2µm						
SRIT	Nakonsritamara	33.76	296	IAmb	IAmb	08 09 03.3	
	comp=Z,55nm,1.2s						
SRIT	Nakonsritamara	33.76	296	P	P	08 08 55.0	0.0
TOO	Toolangi	33.80	157	P	P	08 08 55.9	+0.8
TOO	Toolangi	33.80	157	P	P	08 08 55.9	+0.8
TOO				pmax	pmax		
	comp=Z,23nm,1.3s						
SURA	Surathani	33.99	297	P	P	08 08 58.0	+1.0
NAYO	Nakonayok	35.19	307	P	P	08 09 07.4	+0.1
NONG	Nongkai	36.09	314	P	P	08 09 14.6	-0.3
DZM	Mont Dzumac	38.46	117	LR	LR	08 27 09.7	
	comp=Z,124nm,18.2s,baz=238,slow=38						
DZM	Mont Dzumac	38.46	117	P	P	08 09 36.4	+1.3
CM31	Chiang Mai Arr	39.45	310	P	P	08 09 43.7	+0.6
	SNR=13						
CMAR	Chiang Mai Arr	39.45	310	P	P	08 09 43.5	+0.3
	comp=Z,26nm,0.8s,baz=141,slow=7.4,SNR=137						
CMAR				PcP	PcP	08 11 49.2	+1.0
	comp=Z,2.3nm,0.4s,baz=170,slow=3.0,SNR=5.5						
CMAR				ScP	ScP	08 15 23.8	+0.9
	comp=Z,1.2nm,0.3s,baz=166,slow=3.5,SNR=5.8						
CMAR				LR	LR	08 27 13.1	
	comp=Z,12nm,18.3s,baz=115,slow=38						
	comp=Z,26nm,0.8s						
CMAR	Chiang Mai Arr	39.45	310	P	P	08 09 43.2	+0.1
CRAI	Chiangrai	39.48	313	P	P	08 09 43.4	0.0
CRAI				IAmb	IAmb	08 09 44.8	
	comp=Z,37nm,1.2s						
CHTO	Chiang Mai	39.66	310	P	P	08 09 45.3	+0.4
CHTO	Chiang Mai	39.66	310	P	P	08 09 45.3	+0.4
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
JNU	Nakatsue	39.71	1	P	P	08 09 44.8	-0.3
	comp=Z,7.0nm,0.7s,baz=205,slow=5.6,SNR=5.8						
	comp=Z,7.0nm,0.7s						
GYA	Guiyang	39.95	327	P	P	08 09 47.6	+0.3
GYA				pmax	pmax		
	comp=Z,18nm,0.6s						
WHN	Wuhan	39.97	339	P	P	08 09 48.1	+0.9
WHN				pmax	pmax		
	comp=Z,66nm,0.8s						
NJ2	Nanjing	40.02	345	⇓P	P	08 09 48.6	+1.0
NJ2				pP	pP	08 10 20.1	+0.7
NJ2				sP	sP	08 10 37.1	+1.1
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						

NJ2				pmax	pmax		
	comp=Z,44nm,3.6s						
JMN	**Monobe**	**40.48**	**5**	P	**P**	**08 09 52.6**	**+1.1**
JMN				IAmb	IAmb	08 09 56.3	
	comp=Z,61nm,1.6s						
KMI	**Kunming**	**41.23**	**321**	⇓P	**P**	**08 09 58.5**	**+0.5**
KMI				pmax	pmax		
	comp=Z,20nm,1.0s						
JHS	**Saijyo**	**41.68**	**4**	P	**P**	**08 10 01.7**	**+0.5**
JHS				IAmb	IAmb	08 10 54.3	
	comp=Z,137nm,1.9s						
ENH	**Enshi**	**41.69**	**333**	P	**P**	**08 10 00.7**	**-0.7**
ENH				IAmb	IAmb	08 10 02.0	
	comp=Z,31nm,0.8s						
ENH	**Enshi**	**41.69**	**333**	P	**P**	**08 10 01.2**	**-0.2**
ENH	**Enshi**	**41.69**	**333**	P	**P**	**08 10 00.8**	**-0.7**
ENH				pP	**pP**	**08 10 31.4**	**-2.1**
PZH	**PanZhiHua**	**42.85**	**322**	P	**P**	**08 10 11.0**	**0.0**
PZH				pmax	pmax		
	comp=Z,20nm,0.7s						
PZH				pmax	pmax		
	comp=Z,120nm,5.8s						
MND	**Mandalay**	**43.70**	**312**	P	**P**	**08 10 17.9**	**+0.2**
MJAR	**Matsushiro Arr**	**43.82**	**10**	P	**P**	**08 10 17.8**	**-0.7**
	comp=Z,3.8nm,0.7s,baz=188,slow=9.3,SNR=9.5						
	comp=Z,3.8nm,0.7s						
MAJO	**Matsushiro**	**43.82**	**10**	P	**P**	**08 10 17.2**	**-1.2**
MAJO				IAmb	IAmb	08 11 15.0	
	comp=Z,23nm,0.8s						
MAJO	**Matsushiro**	**43.82**	**10**	P	**P**	**08 10 17.2**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,23nm,0.8s						
MAJO	**Matsushiro**	**43.82**	**10**	P	**P**	**08 10 17.2**	**-1.2**
MAJO				pP	**pP**	**08 10 49.6**	**-1.6**
MJB9	**Matsu-Tunnel**	**43.83**	**10**	P	**P**	**08 10 18.7**	**+0.2**
MJB9				IAmb	IAmb	08 11 15.9	
	comp=Z,23nm,0.8s						
KSRS	**Korea Array**	**44.05**	**358**	P	**P**	**08 10 21.1**	**+0.9**
	comp=Z,2.3nm,0.6s,baz=174,slow=9.5,SNR=12						
KSRS				ScP	**ScP**	**08 15 40.0**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=173,slow=4.4,SNR=4.9						
	comp=Z,2.3nm,0.6s						
LYN	**LuoYang**	**44.27**	**339**	⇑P	**P**	**08 10 22.1**	**+0.1**
LYN				pmax	pmax		
	comp=Z,16nm,1.0s						
CD2	**Chengdu**	**45.02**	**328**	P	**P**	**08 10 26.9**	**-1.3**
XAN	**Xi'an**	**45.17**	**335**	P	**P**	**08 10 28.6**	**-0.6**
XAN				pmax	pmax		
	comp=Z,47nm,0.7s						
XAN				pmax	pmax		
	comp=Z,74nm,4.9s						
XAN				LR	LR		
	comp=Z,310nm,21.0s						
XAN				LR	LR		
	comp=Z,220nm,20.6s						
XAN				LR	LR		
	comp=Z,290nm,12.7s						
XAN	**Xi'an**	**45.17**	**335**	P	**P**	**08 10 27.6**	**-1.6**
JMM	**Marumori**	**45.60**	**12**	P	**P**	**08 10 33.3**	**+0.9**
JMM				IAmb	IAmb	08 11 08.5	
	comp=Z,77nm,1.3s						
HNS	**HongShan**	**46.17**	**343**	⇑P	**P**	**08 10 37.0**	**+0.1**
HNS				sP	**sP**	**08 11 27.5**	**+1.4**
HNS				*e*S	**S**	**08 17 08.4**	**-3.2**
HNS				pmax	pmax		
	comp=Z,31nm,0.9s						
HNS				LR	LR		
	comp=Z,360nm,20.7s						
HNS				LR	LR		
	comp=Z,350nm,17.5s						
HNS				LR	LR		
	comp=Z,340nm,18.6s						
BJT	**Baijiatuau**	**48.25**	**346**	IAmb	IAmb	08 10 54.1	
	comp=Z,24nm,0.6s						
BJT	**Baijiatuau**	**48.25**	**346**	P	**P**	**08 10 53.5**	**+0.5**
BJT	**Baijiatuau**	**48.25**	**346**	P	**P**	**08 10 53.0**	**0.0**
MSVF	**Nonsavu**	**48.25**	**108**	*i* P	**P**	**08 10 55.5**	**+1.9**
MSVF				pmax	pmax		
	comp=Z,14nm,1.0s						
BJI	**Beijing**	**48.27**	**346**	P	**P**	**08 10 53.3**	**+0.2**
BJI				pmax	pmax		
	comp=Z,23nm,0.7s						
BJI				LR	LR		
	comp=Z,300nm,20.1s						
BJI				LR	LR		
	comp=Z,220nm,21.0s						
BJI				LR	LR		
	comp=Z,180nm,17.6s						
SHL	**Shillong**	**48.92**	**313**	IAmb	IAmb	08 11 00.9	
	comp=Z,25nm,0.8s						
SHL	**Shillong**	**48.92**	**313**	P	**P**	**08 10 57.8**	**-0.8**
	SNR=8.9						
LZH	**Lanzhou**	**49.13**	**332**	⇑P	**P**	**08 11 00.8**	**+0.8**
LZH				pP	pP	08 11 32.6	-0.5
LZH				pmax	pmax		
	comp=Z,59nm,1.5s						
LZH				pmax	pmax		
	comp=Z,110nm,5.8s						
LZH				LR	LR		
	comp=Z,300nm,14.1s						
LZH				LR	LR		
	comp=Z,200nm,11.3s						
LZH				LR	LR		
	comp=Z,360nm,12.7s						
HHC	**Hu-ho-hao-te**	**50.29**	**342**	*e*P	**P**	**08 11 09.3**	**+0.7**
HHC				pmax	pmax		
	comp=Z,41nm,0.9s						
HHC				pmax	pmax		
	comp=Z,250nm,4.9s						
HHC				LR	LR		
	comp=Z,510nm,12.5s						
HHC				LR	LR		
	comp=Z,660nm,12.2s						
CN2	**Changchun**	**50.51**	**356**	*e*P	P	08 11 15.3	+5.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BTO	**Baotou**	**50.56**	**341**	*e*P	P	08 11 05.8	-4.9
BTO				pP	pP	08 11 38.0	-5.9
BTO				sP	pwP	08 11 53.8	+4.3
BTO				sS	sS	08 19 02.6	-8.8
BTO	**Baotou**	**50.56**	**341**	SS	**SS**	**08 21 44.6**	**-5.2**
BTO				pmax	pmax		
	comp=Z,23nm,0.7s						
BTO				pmax	pmax		
	comp=Z,370nm,5.5s						
BTO				LR	LR		
	comp=N,2µm,16.8s						
BTO				LR	LR		
	comp=E,1µm,15.8s						
BTO				LR	LR		
	comp=Z,3µm,13.9s						
USA0B	**Ussuriysk Arra**	**50.80**	**2**	P	**P**	**08 11 11.3**	**-0.9**
USA0B	**Ussuriysk Arra**	**50.80**	**2**	P	**P**	**08 11 11.3**	**-0.9**
USA0B				pmax	pmax		
	comp=Z,10.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**50.80**	**2**	P	**P**	**08 11 12.8**	**+0.7**
	comp=Z,8.5nm,0.5s,baz=186,slow=7.1,SNR=13						
	comp=Z,8.5nm,0.5s						
USRK	**Ussuriysk Ar.**	**50.80**	**2**	P	**P**	**08 11 11.3**	**-0.9**
PALK	**Pallekele**	**50.93**	**285**	P	**P**	**08 11 12.7**	**-1.2**
	comp=Z,12nm,0.7s,baz=197,slow=7.9,SNR=12						
PALK				PcP	**PcP**	**08 12 29.6**	**+1.4**
	comp=Z,4.1nm,0.4s,baz=188,slow=1.8,SNR=5.8						
	comp=Z,12nm,0.7s						
PALK	**Pallekele**	**50.93**	**285**	P	**P**	**08 11 12.4**	**-1.4**
PALK				IAmb	IAmb	08 11 16.9	
	comp=Z,38nm,1.4s						
PALK	**Pallekele**	**50.93**	**285**	P	**P**	**08 11 12.9**	**-1.0**
WHZ	**Wether Hill Ro**	**50.98**	**146**	P	**P**	**08 11 13.2**	**-0.4**
MDJ	**Mudanjiang**	**51.17**	**360**	P	**P**	**08 11 10.5**	**-4.5**
MDJ				pmax	pmax		
	comp=Z,25nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,360nm,6.3s						
MDJ				LR	LR		
	comp=Z,380nm,20.3s						
MDJ				LR	LR		
	comp=Z,590nm,15.8s						
MDJ				LR	LR		
	comp=Z,710nm,16.7s						
RPZ	**Rata Peaks**	**51.52**	**142**	P	**P**	**08 11 19.4**	**+1.7**
	comp=Z,9.8nm,0.6s,baz=243,slow=1.4,SNR=6.7						
	comp=Z,9.8nm,0.6s						
LSA	**Lhasa**	**51.91**	**316**	P	**P**	**08 11 22.1**	**+0.7**
LSA				pmax	pmax		
	comp=Z,19nm,0.7s						
LSA	**Lhasa**	**51.91**	**316**	IAmb	IAmb	08 11 23.5	
	comp=Z,30nm,0.6s						
LSA	**Lhasa**	**51.91**	**316**	P	**P**	**08 11 21.4**	**0.0**
LSA	**Lhasa**	**51.91**	**316**	P	**P**	**08 11 21.7**	**+0.3**
XLT	**XiLinHaoTe**	**51.96**	**347**	*e*P	**P**	**08 11 24.0**	**+3.0**
XLT				pP	pP	08 11 56.8	+2.3
XLT				pmax	pmax		
	comp=Z,42nm,1.3s						
XLT				pmax	pmax		
	comp=Z,130nm,4.3s						
XLT				LR	LR		
	comp=Z,72nm,16.2s						
XLT				LR	LR		
	comp=Z,500nm,17.0s						
XLT				LR	LR		
	comp=Z,730nm,14.0s						
ASAJ	**Asahikawa**	**51.98**	**12**	P	**P**	**08 11 20.8**	**-0.2**
	comp=Z,4.2nm,0.4s,baz=247,slow=7.4,SNR=5.8						
ASAJ				LR	LR	08 32 39.9	
	comp=Z,28nm,19.7s,baz=50,slow=35						
	comp=Z,4.2nm,0.4s						
TUWZ	**Tuamarina**	**52.17**	**138**	P	**P**	**08 11 22.6**	**0.0**
BNX	**BinXian**	**52.34**	**358**	⇓P	**P**	**08 11 21.0**	**-2.7**
BNX				pmax	pmax		
	comp=Z,11nm,0.7s						
BNX				pmax	pmax		
	comp=Z,240nm,5.6s						
BKZ	**Black Stump Fm**	**52.88**	**135**	P	**P**	**08 11 29.4**	**+1.5**
BKZ				IAmb	IAmb	08 12 07.6	
	comp=Z,19nm,0.9s						
URZ	**Urewera**	**52.95**	**134**	P	**P**	**08 11 29.2**	**+0.9**
	comp=Z,2.2nm,0.6s,baz=336,slow=20,SNR=1.7						
	comp=Z,2.2nm,0.6s						
TAPN	**Taplejung**	**53.00**	**312**	*e*P	**P**	**08 11 29.2**	**-0.1**
	comp=Z,102nm,0.4s						
RAMN	**Ramite**	**53.62**	**311**	*e*P	**P**	**08 11 33.8**	**+0.1**
	comp=Z,238nm,0.6s						
GTA	**Gaotai**	**53.70**	**331**	*e*P	**P**	**08 11 34.5**	**+0.6**
GTA				pP	pP	08 12 08.9	+1.4
GTA				pmax	pmax		
	comp=Z,31nm,0.7s						
GTA				LR	LR		
	comp=Z,180nm,16.4s						
GTA				LR	LR		
	comp=Z,460nm,17.8s						
GTA				LR	LR		
	comp=Z,330nm,16.4s						
GOMU	**GeErMu**	**53.91**	**325**	P	**P**	**08 11 37.3**	**+1.5**
GOMU				pmax	pmax		
	comp=Z,7.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,77nm,5.3s						
GOMU				LR	LR		
	comp=Z,190nm,15.0s						
GOMU				LR	LR		
	comp=Z,160nm,14.1s						
GOMU				LR	LR		
	comp=Z,95nm,13.4s						
JIRN	**Jiri**	**54.30**	**311**	*e*P	**P**	**08 11 38.4**	**-0.4**
GUN	**Gumba**	**54.67**	**311**	*e*P	**P**	**08 11 41.2**	**-0.2**
	comp=Z,203nm,0.6s						
PKI	**Pulchoki**	**54.84**	**311**	*e*P	**P**	**08 11 42.1**	**-0.6**
PKIN	**Phulchoki**	**54.85**	**311**	*e*P	**P**	**08 11 42.0**	**-0.7**
	comp=Z,46nm,0.5s						
DMN	**Daman**	**55.09**	**310**	*e*P	**P**	**08 11 44.0**	**-0.4**
	comp=Z,46nm,0.5s						
GKN	**Gorkha**	**55.65**	**311**	*e*P	**P**	**08 11 48.1**	**-0.1**
	comp=Z,22nm,0.2s						
KLR	**Kul'dur**	**55.81**	**2**	P	**P**	**08 11 49.5**	**+0.7**
	comp=Z,4.0nm,0.7s,baz=252,slow=5.2,SNR=2.5						
	comp=Z,4.0nm,0.7s						
HYB	**Hyderabad**	**56.05**	**296**	*e*P	**P**	**08 11 51.0**	**-0.1**
DANN	**Dangsing**	**56.49**	**310**	*e*P	**P**	**08 11 53.9**	**-0.5**
	comp=Z,94nm,0.8s						
PYUN	**Piuthan**	**56.95**	**310**	*e*P	**P**	**08 11 57.4**	**-0.1**
	comp=Z,153nm,0.7s						
AFI	**Afiamalu**	**57.79**	**102**	P	**P**	**08 12 05.0**	**+1.5**
	comp=Z,14nm,0.6s,baz=279,slow=19,SNR=4.0						
	comp=Z,14nm,0.6s						
AFI	**Afiamalu**	**57.79**	**102**	P	**P**	**08 12 05.0**	**+1.5**
ULN	**Ulaanbaatar**	**58.01**	**342**	P	**P**	**08 12 05.0**	**+0.5**
ULN	**Ulaanbaatar**	**58.01**	**342**	*ce*P	**P**	**08 12 05.6**	**+1.1**
ULN				pmax	pmax		
	comp=Z,40nm,0.7s						
ULN	**Ulaanbaatar**	**58.01**	**342**	P	**P**	**08 12 05.8**	**+1.3**
ULN	**Ulaanbaatar**	**58.01**	**342**	P	**P**	**08 12 04.8**	**+0.3**
ULN				x	x	08 12 11.5	
ULN				sP	**pwP**	**08 12 48.7**	**+4.4**
SONM	**Songino Array**	**58.19**	**342**	P	**P**	**08 12 06.8**	**+1.1**
	comp=Z,10nm,0.5s,baz=157,slow=7.0,SNR=48						
	comp=Z,10nm,0.5s						
SONM	**Songino Array**	**58.19**	**342**	P	**P**	**08 12 06.6**	**+1.0**
SONM				IAmb	IAmb	08 12 08.2	
	comp=Z,11nm,0.6s						
MNCI	**Minicoy**	**58.52**	**284**	P	**P**	**08 12 08.6**	**+0.1**
ZEA	**Zeya**	**60.34**	**358**	*e*P	**P**	**08 12 21.1**	**+0.9**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZAK	**Zakamensk**	**61.41**	**341**	*e*P	**P**	**08 12 27.8**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WMQ	**Urumqi**	**63.12**	**327**	*e*P	**P**	**08 12 38.8**	**-0.3**
WMQ				pP	PcP	08 13 14.9	-0.4
WMQ				pmax	pmax		
	comp=Z,55nm,0.9s						
WMQ				LR	LR		
	comp=Z,220nm,14.1s						
WMQ				LR	LR		
	comp=Z,410nm,13.5s						
WMQ				LR	LR		
	comp=Z,160nm,16.3s						
MOY	**Mondy**	**63.26**	**340**	*e*P	**P**	**08 12 41.4**	**+1.5**
MOY				pmax	pmax		
	comp=Z,36nm,1.2s						
PETK	**Petropavlovsk-**	**64.19**	**18**	P	**P**	**08 12 46.3**	**+0.5**
	comp=Z,3.0nm,0.5s,baz=170,slow=4.2,SNR=3.9						
	comp=Z,3.0nm,0.5s						
NIL	**Nilore**	**66.93**	**311**	P	**P**	**08 13 04.1**	**+0.2**
NIL	**Nilore**	**66.93**	**311**	P	**P**	**08 13 04.1**	**+0.2**
NIL				pmax	pmax		
	comp=Z,51nm,0.5s						
NIL	**Nilore**	**66.93**	**311**	P	**P**	**08 13 04.4**	**+0.5**
NIL	**Nilore**	**66.93**	**311**	P	**P**	**08 13 03.9**	**-0.1**
ZSN	**Zaisan**	**66.99**	**329**	*e*P	**P**	**08 13 04.7**	**+0.7**
	comp=Z,16nm,0.8s,baz=329						
ZSN	**Zaisan**	**66.99**	**329**	*e*P	**P**	**08 13 04.7**	**+0.7**
ZSN				pmax	pmax		
	comp=Z,16nm,0.8s						
DGZ	**Jazzator, Alta**	**67.23**	**332**	*i* P	**P**	**08 13 06.6**	**+1.0**
DGZ				pmax	pmax		
	comp=Z,43nm,0.6s						
SHLS	**Shalkode**	**67.44**	**322**	*e*P	**P**	**08 13 06.3**	**-0.7**
	comp=Z,7.5nm,0.7s,baz=323						
SHLS	**Shalkode**	**67.44**	**322**	*e*P	**P**	**08 13 06.3**	**-0.7**
SHLS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
UZB	**Uzynbulak**	**67.70**	**322**	*e*P	**P**	**08 13 09.5**	**+0.8**
	baz=322						
UZB	**Uzynbulak**	**67.70**	**322**	*e*P	**P**	**08 13 09.4**	**+0.8**
KSH	**Kashi**	**67.73**	**318**	P	**P**	**08 13 11.3**	**+2.4**
KSH				PcP	**PcP**	**08 13 36.8**	**+2.1**
KSH				pP	pP	08 13 44.5	0.0
KSH				ScS	**SKiKP**	**08 22 50.5**	**-0.3**
KSH				pmax	pmax		
	comp=Z,15nm,0.7s						
KSH				LR	LR		
	comp=Z,150nm,9.5s						
KSH				LR	LR		
	comp=Z,270nm,11.6s						
KSH				LR	LR		
	comp=Z,200nm,11.0s						
MK31	**Makanchi Array**	**67.95**	**327**	*c i*P	**P**	**08 13 10.4**	**+0.4**
MKAR	**Makanchi Array**	**67.95**	**327**	P	**P**	**08 13 11.0**	**+1.0**
	comp=Z,53nm,0.6s,baz=120,slow=8.2,SNR=439						
	comp=Z,53nm,0.6s						
MKAR	**Makanchi Array**	**67.95**	**327**	P	**P**	**08 13 10.8**	**+0.8**
SATY	**Saty**	**68.03**	**322**	*e*P	**P**	**08 13 11.5**	**+0.8**
	comp=Z,8.3nm,0.7s,baz=322						
SATY	**Saty**	**68.03**	**322**	*e*P	**P**	**08 13 11.4**	**+0.8**
SATY				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KPKS	**Kokpek**	**68.08**	**322**	*e*P	**P**	**08 13 11.8**	**+0.8**
	comp=Z,7.2nm,0.6s,baz=322						
KPKS	**Kokpek**	**68.08**	**322**	*e*P	**P**	**08 13 11.7**	**+0.8**
KPKS				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MAKZ	**Makanchi**	**68.12**	**327**	P	**P**	**08 13 11.8**	**+0.7**
MAKZ	**Makanchi**	**68.12**	**327**	P	**P**	**08 13 11.8**	**+0.7**
MAKZ				pmax	pmax		
	comp=Z,43nm,0.7s						
MAKZ	**Makanchi**	**68.12**	**327**	P	**P**	**08 13 09.9**	**-1.2**
MA2	**Magadan**	**68.24**	**11**	*i* P	**P**	**08 13 12.2**	**+0.7**
MA2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KDJ	**Kajisay**	**68.29**	**320**	IAmb	IAmb	08 13 15.0	
	comp=Z,13nm,0.6s						
YAK	**Yakutsk**	**68.62**	**360**	P	**P**	**08 13 14.5**	**+0.8**
	comp=Z,24nm,0.5s,baz=265,slow=0.5,SNR=8.5						
	comp=Z,24nm,0.5s						
YAK	**Yakutsk**	**68.62**	**360**	P	**P**	**08 13 14.4**	**+0.6**
YAK	**Yakutsk**	**68.62**	**360**	*e*P	**P**	**08 13 14.2**	**+0.4**
YAK				*e*		08 13 37.3	
YAK				*e**PP	**pP**	**08 13 50.9**	**+1.6**
YAK				*e*		08 15 50.3	
YAK				*e*S	**S**	**08 22 04.1**	**+0.2**
YAK				*e*		08 22 54.9	
YAK				*e*SS	**SS**	**08 26 31.9**	**+0.3**
YAK				pmax	pmax		
	comp=Z,46nm,0.8s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,191nm,3.8s						
YAK				pmax	pmax		
	comp=N,91nm,3.8s						
YAK				pmax	pmax		
	comp=E,60nm,4.5s						
YAK				smax	smax		
	comp=E,85nm,1.9s						
YAK				smax	smax		
	comp=N,18nm,1.5s						
MDOK	**Medeo**	**68.92**	**321**	*e*P	**P**	**08 13 17.2**	**+0.9**
	baz=321						
MDOK	**Medeo**	**68.92**	**321**	*e*P	**P**	**08 13 17.2**	**+0.9**
AAA	**Alma-Ata**	**69.03**	**321**	*e*P	**P**	**08 13 17.6**	**+0.8**
	baz=321						
AAA	**Alma-Ata**	**69.03**	**321**	*e*P	**P**	**08 13 17.6**	**+0.8**
TDK	**Taldyqorghan**	**69.10**	**324**	*e*P	**P**	**08 13 18.2**	**+1.0**
	baz=324						
TDK	**Taldyqorghan**	**69.10**	**324**	*e*P	**P**	**08 13 18.1**	**+1.0**
BOOM	**Boomskoye usch**	**69.26**	**320**	P	**P**	**08 13 19.5**	**+1.1**
BOOM				IAmb	IAmb	08 13 20.6	
	comp=Z,52nm,1.6s						
BOOM	**Boomskoye usch**	**69.26**	**320**	P	**P**	**08 13 19.5**	**+1.1**
BOOM				pmax	pmax		
	comp=Z,52nm,1.6s						
CHKK	**Chushkaly**	**69.32**	**322**	*e*P	**P**	**08 13 18.9**	**+0.3**
	baz=322						
CHKK	**Chushkaly**	**69.32**	**322**	*e*P	**P**	**08 13 18.9**	**+0.3**
TKM2	**Tokmak 2**	**69.70**	**321**	P	**P**	**08 13 22.1**	**+0.9**
	SNR=29						
KUU	**Kurty**	**69.74**	**322**	*e*P	**P**	**08 13 21.9**	**+0.8**
	baz=322						
KUU	**Kurty**	**69.74**	**322**	*e*P	**P**	**08 13 21.8**	**+0.7**
KBK	**Karagaybulak**	**69.98**	**320**	P	**P**	**08 13 24.0**	**+1.2**
	SNR=10						
UCH	**Uchtor**	**70.04**	**319**	P	**P**	**08 13 25.3**	**+1.7**
	SNR=28						
SHEM	**Shemya Is, Ala**	**70.19**	**27**	LR	LR	08 39 02.1	
	comp=Z,21nm,20.9s,baz=171,slow=31						
AAK	**Ala-Archa**	**70.26**	**320**	P	**P**	**08 13 25.7**	**+1.2**
	SNR=21						
AAK	**Ala-Archa**	**70.26**	**320**	P	**P**	**08 13 26.0**	**+1.6**
	comp=Z,19nm,0.8s,baz=137,slow=5.2,SNR=49						
	comp=Z,19nm,0.8s						
AAK	**Ala-Archa**	**70.26**	**320**	P	**P**	**08 13 26.1**	**+1.6**
AAK				IAmb	IAmb	08 13 26.9	
	comp=Z,23nm,0.9s						
AAK	**Ala-Archa**	**70.26**	**320**	*ce*P	**P**	**08 13 25.9**	**+1.4**
AAK				pmax	pmax		
	comp=Z,47nm,1.7s						
AAK	**Ala-Archa**	**70.26**	**320**	*i* P	**P**	**08 13 25.7**	**+1.2**
	SNR=28						
AAK	**Ala-Archa**	**70.26**	**320**	P	**P**	**08 13 25.8**	**+1.4**
AAK	**Ala-Archa**	**70.26**	**320**	P	**P**	**08 13 24.3**	**-0.2**
KBL	**Kabul**	**70.48**	**310**	P	**P**	**08 13 26.2**	**+0.1**
KBL	**Kabul**	**70.48**	**310**	P	**P**	**08 13 26.2**	**+0.1**
KBL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KBL	**Kabul**	**70.48**	**310**	P	**P**	**08 13 26.2**	**+0.1**
	SNR=5.7						
AML	**Almayashu**	**70.53**	**319**	P	**P**	**08 13 27.7**	**+1.3**
	SNR=39						
DRK	**Karamyk**	**70.56**	**316**	P	**P**	**08 13 23.7**	**-2.8**
DRK				IAmb	IAmb	08 13 24.1	
	comp=Z,22nm,0.7s						
USP	**Ospenovka**	**70.57**	**320**	P	**P**	**08 13 26.8**	**+0.5**
	SNR=44						
SGDS	**Sogindy**	**70.58**	**321**	*e*P	**P**	**08 13 26.9**	**+0.5**
	baz=321						
SGDS	**Sogindy**	**70.58**	**321**	*e*P	**P**	**08 13 26.8**	**+0.5**
EKS2	**Erkin-Say**	**70.73**	**320**	P	**P**	**08 13 28.7**	**+1.4**
	SNR=20						
ZAA0	**Zalesovo Array**	**71.31**	**334**	P	**P**	**08 13 30.4**	**0.0**
ZAA0				IAmb	IAmb	08 13 31.2	
	comp=Z,33nm,0.8s						
ZALV	**Zalesovo Beam**	**71.31**	**334**	P	**P**	**08 13 30.2**	**-0.1**
	comp=Z,31nm,0.6s,baz=124,slow=5.3,SNR=106						
	comp=Z,31nm,0.6s						
SEY	**Seymchan**	**71.64**	**11**	P	**P**	**08 13 33.1**	**+1.0**
	comp=Z,7.7nm,0.6s,baz=199,slow=5.1,SNR=18						
	comp=Z,7.7nm,0.6s						
SEY	**Seymchan**	**71.64**	**11**	*ce*P	**P**	**08 13 34.1**	**+1.9**
SEY				pmax	pmax		
	comp=Z,9.0nm,1.3s						
BTLS	**Baital**	**71.74**	**322**	*e*P	**P**	**08 13 33.8**	**+0.6**
	baz=322						
BTLS	**Baital**	**71.74**	**322**	*e*P	**P**	**08 13 33.7**	**+0.6**
KURBB	**Kurchatov Arra**	**72.23**	**329**	P	**P**	**08 13 36.6**	**+0.6**
	comp=Z,50nm,0.6s,baz=130,slow=5.0,SNR=370						
	comp=Z,50nm,0.6s						
KURK	**Kurchatov**	**72.24**	**329**	P	**P**	**08 13 36.9**	**+0.9**
KURK				IAmb	IAmb	08 13 37.5	
	comp=Z,66nm,1.0s						
KURK	**Kurchatov**	**72.24**	**329**	*ce*P	**P**	**08 13 36.4**	**+0.4**
KURK				pmax	pmax		
	comp=Z,86nm,1.3s						
KURK	**Kurchatov**	**72.24**	**329**	P	**P**	**08 13 36.6**	**+0.6**
VNDA	**Vanda**	**72.67**	**173**	P	**P**	**08 13 38.7**	**+0.5**
	comp=Z,2.8nm,0.8s,baz=324,slow=6.8,SNR=7.6						
	comp=Z,2.8nm,0.8s						
VNDA	**Vanda**	**72.67**	**173**	P	**P**	**08 13 39.4**	**+1.2**
IUG	**Iuzhnay**	**72.95**	**318**	*e*P	**P**	**08 13 41.7**	**+1.1**
	comp=Z,7.5nm,0.5s,baz=318						
IUG	**Iuzhnay**	**72.95**	**318**	*e*P	**P**	**08 13 41.6**	**+1.1**
IUG				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KK31	**Karatay Array**	**73.06**	**319**	P	**P**	**08 13 41.6**	**+0.5**
KK31	**Karatay Array**	**73.06**	**319**	P	**P**	**08 13 41.6**	**+0.5**
KK31				pmax	pmax		
	comp=Z,26nm,1.1s						
CHM	**Chimkent**	**73.31**	**318**	*e*P	**P**	**08 13 43.6**	**+1.0**
	baz=318						
CHM	**Chimkent**	**73.31**	**318**	*e*P	**P**	**08 13 43.5**	**+1.0**
NGCH	**Negor - Chabah**	**73.93**	**299**	P	**P**	**08 13 47.7**	**+1.2**
JLN	**Jalan Bani Buh**	**74.64**	**295**	P	**P**	**08 13 51.3**	**+0.7**
BRZS	**Berezniki**	**75.03**	**326**	*e*P	**P**	**08 13 53.0**	**+0.7**
	comp=Z,14nm,0.5s,baz=326						
BRZS	**Berezniki**	**75.03**	**326**	*e*P	**P**	**08 13 53.0**	**+0.7**
BRZS				pmax	pmax		
	comp=Z,14nm,0.5s						
WBK	**Wadi Bani Khal**	**75.14**	**295**	P	**P**	**08 13 54.7**	**+1.2**
WSAR	**Wadi Sarin**	**75.60**	**296**	P	**P**	**08 13 57.3**	**+1.1**
MHTO	**MHTO**	**75.67**	**294**	P	**P**	**08 13 56.6**	**0.0**
	SNR=9.3						
DQM	**DQM**	**75.83**	**292**	P	**P**	**08 13 58.2**	**+0.7**
JMDO	**Jabal Madar**	**75.86**	**295**	P	**P**	**08 13 58.7**	**+1.0**
SMDO	**Samad**	**76.08**	**296**	P	**P**	**08 14 00.1**	**+1.1**
BIDO	**Bidbid**	**76.11**	**296**	P	**P**	**08 13 60.0**	**+0.9**
	SNR=8.0						
BSY	**Bisya**	**76.77**	**295**	P	**P**	**08 14 03.2**	**+0.5**
HOQ	**Hoqain**	**76.86**	**296**	P	**P**	**08 14 04.5**	**+1.2**
JASK	**Jask - Hormozg**	**76.91**	**298**	P	**P**	**08 14 05.5**	**+2.0**
SHAO	**Shalim**	**77.20**	**290**	*i* P	**P**	**08 14 06.5**	**+1.3**
	SNR=9.2						
SHAO	**Shalim**	**77.20**	**290**	P	**P**	**08 14 06.4**	**+1.2**
	SNR=9.3						
ARQ	**Araqi**	**77.51**	**296**	P	**P**	**08 14 08.2**	**+1.3**
	SNR=12						
SOHO	**SOHO**	**77.68**	**296**	*i* P	**P**	**08 14 08.0**	**+0.3**

	SNR=23						
SOHO	SOHO	77.68	296	P	P	08 14 08.3	+0.5
DMTO	DMTO	77.77	290	P	P	08 14 08.8	+0.3
	SNR=7.2						
BVAR	Borovoye Array	77.78	328	P	P	08 14 08.2	+0.4
	comp=Z,34nm,0.8s,baz=123,slow=5.5,SNR=148						
	comp=Z,34nm,0.8s						
BRVK	Borovoye	77.86	328	P	P	08 14 08.8	+0.6
BRVK				IAmb	IAmb	08 14 09.6	
	comp=Z,35nm,0.8s						
BRVK	Borovoye	77.86	328	ceP	P	08 14 08.4	+0.2
BRVK				pmax	pmax		
	comp=Z,48nm,1.0s						
BRVK	Borovoye	77.86	328	P	P	08 14 08.7	+0.6
MDH	Madha	78.15	298	i P	P	08 14 09.9	-0.5
	SNR=7.8						
MDH	Madha	78.15	298	P	P	08 14 11.7	+1.3
UOSS	Minazif	78.15	297	P	P	08 14 10.6	+0.2
UOSS				IAmb	IAmb	08 14 13.4	
	comp=Z,32nm,0.7s						
UOSS	Minazif	78.15	297	i P	P	08 14 10.9	+0.4
	SNR=12						
UOSS	Minazif	78.15	297	P	P	08 14 11.2	+0.7
HATD	Hatta, Dubai	78.19	297	i P	P	08 14 11.1	+0.4
	SNR=20						
HATD	Hatta, Dubai	78.19	297	P	P	08 14 11.7	+1.0
	SNR=5.2						
ASHO	Ashiyiah	78.22	297	i P	P	08 14 10.9	0.0
	SNR=20						
ASHO	Ashiyiah	78.22	297	P	P	08 14 11.8	+1.0
	SNR=5.3						
TIXI	Tiksi	78.28	360	P	P	08 14 10.0	-0.1
	comp=Z,8.3nm,0.5s,baz=270,slow=23,SNR=7.1						
	comp=Z,8.3nm,0.5s						
TIXI	Tiksi	78.28	360	P	P	08 14 10.7	+0.6
TIXI	Tiksi	78.28	360	ceP	P	08 14 10.5	+0.4
TIXI				pmax	pmax		
	comp=Z,11nm,1.0s						
MSFE	Esma-Masafi	78.29	298	i P	P	08 14 11.7	+0.5
	SNR=25						
MASF	Masafi	78.29	298	P	P	08 14 12.5	+1.2
	SNR=8.3						
BANOM	Banah	78.30	298	i P	P	08 14 11.5	+0.3
	SNR=29						
BANOM	Banah	78.30	298	P	P	08 14 12.4	+1.2
	SNR=7.2						
ALNE	Al Ain	78.36	296	i P	P	08 14 12.0	+0.4
	SNR=7.0						
ALNE	Al Ain	78.36	296	P	P	08 14 14.0	+2.4
	SNR=7.1						
RBK	Rabkut	78.43	289	P	P	08 14 13.3	+1.2
SHME	Shamm	78.46	298	i P	P	08 14 13.8	+1.7
	SNR=16						
SHME	Shamm	78.46	298	P	P	08 14 13.3	+1.2
UMZA	Um Al Zommool	78.59	295	P	P	08 14 13.7	+0.8
NAZ	Nazwa, Dubai	78.64	297	i P	P	08 14 16.0	+2.9
	SNR=5.8						
NAZ	Nazwa, Dubai	78.64	297	P	P	08 14 14.6	+1.5
FAQ	Al Faqa, Dubai	78.65	297	i P	P	08 14 13.4	+0.3
	SNR=37						
FAQ	Al Faqa, Dubai	78.65	297	P	P	08 14 13.8	+0.6
	SNR=6.2						
UMQ	Umm Al-Quwin	78.76	298	P	P	08 14 15.4	+1.7
ASUD	Al Ashush, Dub	78.86	297	i P	P	08 14 14.8	+0.5
	SNR=15						
ASUD	Al Ashush, Dub	78.86	297	P	P	08 14 15.5	+1.2
WHFO	Wadi Hawf	78.91	290	P	P	08 14 14.6	-0.1
	SNR=17						
BILL	Bilibino	78.96	13⇑	eP	P	08 14 16.8	+2.9
BILL				e*PP	pP	08 14 51.9	+1.3
BILL				e		08 17 15.5	
BILL				ePPP	PPP	08 19 06.7	
BILL				eS	SKSac	08 24 26.1	+11
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ABTO	Aybut	79.25	289	P	P	08 14 16.9	+0.3
GEYT	Alibeck	79.93	310	P	P	08 14 20.8	+0.9
	comp=Z,14nm,0.7s,baz=172,slow=4.2,SNR=21						
	comp=Z,14nm,0.7s						
MZR	Muzera	80.17	295	P	P	08 14 22.3	+0.8
OPO	Ambohidratompo	80.89	252	P	P	08 14 26.2	+0.7
	comp=Z,20nm,0.7s,baz=88,slow=5.2,SNR=11						
	comp=Z,20nm,0.7s						
GHWR	Ruwais	80.91	296	P	P	08 14 26.0	+0.7
VOI	Vohitsoka	81.03	249	P	P	08 14 26.8	+0.6
VOI				IAmb	IAmb	08 14 31.6	
	comp=Z,33nm,0.9s						
VOI	Vohitsoka	81.03	249	P	P	08 14 27.5	+1.3
VOI	Vohitsoka	81.03	249	P	P	08 14 27.0	+0.8
NRIK	Noril'sk	81.31	346	P	P	08 14 27.2	+0.7
	comp=Z,9.4nm,0.8s,baz=134,slow=4.8,SNR=9.5						
	comp=Z,9.4nm,0.8s						
NRIK	Noril'sk	81.31	346	ceP	P	08 14 27.4	+0.9
NRIK				pmax	pmax		
	comp=Z,24nm,1.4s						
SHMA	Al-Shehemyia	82.98	297	P	P	08 14 36.7	+0.6
QSPA	South Pole Qui	83.18	180	P	P	08 14 37.1	+0.6
	comp=Z,4.5nm,0.7s,baz=305,slow=1.5,SNR=36						
	comp=Z,4.5nm,0.7s						
QSPA	South Pole Qui	83.18	180	P	P	08 14 37.1	+0.6
QSPA				IAmb	IAmb	08 14 39.6	
	comp=Z,40nm,2.0s						
AKTO	Aktyubinsk	83.79	322	P	P	08 14 40.1	+0.4
	comp=Z,11nm,0.6s,baz=108,slow=5.7,SNR=45						
	comp=Z,11nm,0.6s						
SVE	Sverdlovsk	84.49	329	eP	P	08 14 43.7	+0.6
SVE				pmax	pmax		
	comp=Z,43nm,1.1s						
TNA	Tin City	85.10	22	P	P	08 14 46.1	+0.2
ARU	Arti	85.43	328	P	P	08 14 48.0	+0.2
	comp=Z,19nm,0.6s,baz=136,slow=3.0,SNR=31						
	comp=Z,19nm,0.6s						
ARU	Arti	85.43	328	P	P	08 14 48.0	+0.2
ARU				IAmb	IAmb	08 14 48.8	
	comp=Z,26nm,0.7s						
ARU	Arti	85.43	328	c iP	P	08 14 47.9	+0.2
ARU						08 18 04.7	
ARU				S	S	08 24 58.9	-7.2
ARU				SS	SS	08 30 42.6	-2.3
ARU				pmax	pmax		
	comp=Z,31nm,0.8s						
P16K	Nushagak River	86.77	30	P	P	08 14 55.9	+1.6
	baz=251						
N16K	Nishlik Lake	86.87	28	P	P	08 14 56.7	+1.9
	baz=250						
LKRN	Lenkeran, Azer	87.25	309	P	P	08 14 57.7	+0.6
RAYN	Ar Rayn	87.48	294	P	P	08 14 59.4	+0.8
RAYN	Ar Rayn	87.48	294	P	P	08 14 59.4	+0.8
RAYN				pmax	pmax		
	comp=Z,43nm,0.7s						
RAYN	Ar Rayn	87.48	294	i P	P	08 14 58.7	+0.1
	SNR=38						
RAYN	Ar Rayn	87.48	294	P	P	08 14 59.4	+0.8
RDOG	Red Dog Mine	87.98	20	P	P	08 15 00.9	+0.9
	baz=246						
AKT	Akhty	88.55	312	eP	P	08 15 04.1	+0.8
AKT				e*PP	pP	08 15 39.8	-1.1
AKT				e		08 18 34.0	
AKT				pmax	pmax		
	comp=Z,28nm,0.9s						
SEKA	Sheki	88.89	312	P	P	08 15 05.5	+0.6
MNGR	Mingechevir, A	88.90	311	P	P	08 15 05.4	+0.6
GCSA	Galena City Sc	89.08	24	P	P	08 15 06.0	+0.9
	baz=252						
GANJ	Ganja	89.45	311	P	P	08 15 07.5	0.0
L20K	Farewell, AK	89.71	27	P	P	08 15 09.4	+1.2
	baz=255						
NAX	Nakhchivan	89.85	309	P	P	08 15 10.5	+1.0
K20K	Telida	89.86	26	P	P	08 15 09.8	+1.0
	baz=255						
BELG	Belogornoye	90.57	323	P	P	08 15 13.2	+0.9
	comp=Z,9.7nm,0.6s,baz=177,slow=14,SNR=4.3						
	comp=Z,9.7nm,0.6s						
CHUM	Lake Minchumin	90.75	26	P	P	08 15 14.0	+1.0
	baz=256						
KIRV	Kirov	90.76	329	P	P	08 15 12.1	-0.9
	comp=Z,13nm,0.6s,baz=66,slow=2.0,SNR=3.9						
	comp=Z,13nm,0.6s						
KIRV	Kirov	90.76	329	ceP	P	08 15 12.3	-0.8
A21K	Barrow	91.19	18	P	P	08 15 15.7	+0.9
	baz=252						
KTH	Kantishna Hill	91.28	26	P	P	08 15 15.4	-0.1
ZEI	Tsey	91.56	313	eP	P	08 15 14.5	-3.0
ZEI				pmax	pmax		
	comp=Z,16nm,1.3s						
F22K	John River	91.67	22	P	P	08 15 18.5	+1.3
	baz=256						
MLY	Manley	91.68	25	P	P	08 15 17.7	+0.4
	baz=258						
G22K	Bettles	91.79	23	P	P	08 15 18.5	+0.8
	baz=257						
E22K	Anaktuvuk Pass	91.95	22	P	P	08 15 19.5	+0.9
	baz=257						
I23K	Minto, Yukon-K	92.27	25	P	P	08 15 20.6	+0.7
	baz=259						
G23K	Bananza Creek	92.32	23	P	P	08 15 21.1	+0.9
	baz=258						
H23K	Yukon River	92.33	24	P	P	08 15 21.1	+0.8
	baz=259						
KBZ	Khabaz	92.41	314	P	P	08 15 21.2	+0.1
	comp=Z,4.1nm,0.8s,baz=96,slow=4.8,SNR=7.0						
	comp=Z,4.1nm,0.8s						
KBZ	Khabaz	92.41	314	ceP	P	08 15 21.6	+0.5
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GURO	Guroymak-BITLI	92.44	308	IAmb	IAmb	08 15 26.1	
	comp=Z,18nm,1.0s						
SHA1	Shidzhatmaz	92.58	314	i P	P	08 15 21.8	-0.4
KIV	Kislovodsk	92.59	314	eP	P	08 15 21.9	-0.2
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
H24K	Noodor Dome	93.01	24	P	P	08 15 24.0	+0.6
	baz=260						
HDA	Harding Lake	93.16	26	P	P	08 15 23.7	-0.4
	baz=261						
ILAR	Eielson Array	93.25	25	P	P	08 15 23.2	-1.2
	comp=Z,0.9nm,0.6s,baz=248,slow=4.8,SNR=11						
	comp=Z,0.9nm,0.6s						
F24K	Squaw Lake	93.29	22	P	P	08 15 25.9	+1.2
	baz=260						
G24K	Hadweenzic Riv	93.31	23	P	P	08 15 25.9	+1.1
	baz=261						
F25K	Christian Rive	94.15	22	P	P	08 15 29.3	+0.6
	baz=262						
E25K	Arctic Village	94.25	22	P	P	08 15 29.9	+0.9
	baz=262						
L26K	Log Cabin Wild	94.57	27	P	P	08 15 32.6	+1.9
	baz=264						
G26K	Porcupine Rive	94.79	23	P	P	08 15 32.7	+1.1
	baz=264						
C27K	Jago River	95.09	21	P	P	08 15 34.0	+1.1
	baz=264						
K27K	Chicken	95.23	26	P	P	08 15 35.4	+1.8
	baz=265						
I27K	Kandik River	95.55	25	P	P	08 15 36.0	+0.9
	baz=266						
H27K	Steamboat Moun	95.63	24	P	P	08 15 36.9	+1.5
	baz=266						
E27K	Coleen River	95.74	22	P	P	08 15 36.5	+0.6
	baz=266						
SNAA	Sanae	95.82	194	P	P	08 15 35.7	-0.6
	comp=Z,2.4nm,0.7s,baz=163,slow=8.6,SNR=6.3						
	comp=Z,2.4nm,0.7s						
KLMR	Klimovskoe	96.02	331	eP	P	08 15 34.7	-2.5
KLMR				AMP		08 15 40.9	
	comp=Z,29nm,2.2s						
KLMR				ePP	PP	08 19 27.4	-4.3
KLMR				LR	LR	08 43 17.1	
KLMR	Klimovskoe	96.02	331	eP	P	08 15 34.6	-2.6
KLMR				e		08 19 27.3	
KLMR				pmax	pmax		
	comp=Z,29nm,2.2s						
DAWY	Dawson	96.41	26	P	P	08 15 40.4	+1.3
	baz=268						
I29M	Ogilvie Camp,	96.92	25	P	P	08 15 41.4	+0.1
	baz=269						
OBN	Obninsk	97.37	325	ceP	Pdif	08 15 43.8	+0.3
OBN				e*PP	pP	08 16 19.6	-1.6
OBN				e		08 19 44.1	
OBN				eS	SKSac	08 26 06.6	+0.3
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
INK	Inuvik	98.74	22	P	P	08 15 48.8	-0.5
	comp=Z,0.6nm,0.6s,baz=295,slow=5.8,SNR=4.5						
	comp=Z,0.6nm,0.6s						
BRTR	Keskin Array B	99.03	309	P	Pdif	08 15 49.3	-2.2
	comp=Z,1.6nm,0.6s,baz=131,slow=5.1,SNR=3.7						
BRTR	Keskin Array B	99.03	309	i P	Pdif	08 15 53.0	+1.5
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BOSA	Boshof	99.40	240	P	Pdif	08 15 52.5	-0.8
	comp=Z,1.0nm,0.7s,baz=111,slow=14,SNR=1.3						
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	101.32	340	eP	Pdif	08 15 58.2	-2.6
ARCES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AKASG	Malin Array Be	101.92	320	P	Pdif	08 16 02.9	-1.0
	comp=Z,1.3nm,0.5s,baz=60,slow=4.1,SNR=7.1						
AKASG	Malin Array Be	101.92	320	i P	Pdif	08 16 06.3	+2.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MNK	Minsk	102.42	324	i P	Pdif	08 16 04.7	-1.3
	comp=E,4.0nm,0.7s						
MNK				i P	Pdif	08 16 04.7	-1.3
	comp=N,21nm,0.8s						
MNK				i P	Pdif	08 16 04.7	-1.3
	comp=Z,8.0nm,0.7s,baz=84						
MNK				i pP	pPdif	08 16 40.5	-3.2
MNK				i PP	PP	08 20 19.0	-1.5
MNK				i PPP	PPP	08 22 29.6	
MNK				i S	SKSac	08 26 30.8	-0.4
MNK				i sS	sSKSac	08 27 36.3	-3.6
MNK				i PS	PS	08 29 29.2	-1.2
MNK				i SS	SS	08 34 47.3	+0.6
MNK				i SSS	SSS	08 38 42.1	
MNK				i LRM	MLR	09 03 00.4	
	comp=E,8.0nm,20.3s						
MNK				i LRM	MLR	09 03 00.4	
	comp=N,265nm,20.4s						
MNK				i LRM	MLR	09 03 00.4	
	comp=Z,55nm,15.8s						
MNK	Minsk	102.42	324	i P	Pdif	08 16 04.7	-1.3
MNK				i		08 20 18.9	
MNK				i PPP	PPP	08 22 29.6	
MNK				i S	SKSac	08 26 30.7	-0.4
MNK				i *SS	sSKSac	08 27 36.3	-3.6
MNK				i PS	PS	08 29 29.2	-1.3
MNK				i SS	SS	08 34 47.2	+0.6
MNK				i SSS	SSS	08 38 42.0	
MNK				pmax	pmax		
	comp=E,4.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,21nm,0.8s						
MNK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MNK				MLR	MLR		
	comp=N,265nm,20.0s						
MNK				MLR	MLR		
	comp=E,8.0nm,20.0s						
MNK				MLR	MLR		
	comp=Z,55nm,16.0s						
FINES	FINESS Array B	102.49	331	PP	PKiKP	08 20 25.4	-1.3
	comp=Z,2.9nm,1.0s,baz=94,slow=8.0,SNR=3.8						
STHS	Stebnicka Huta	107.18	320	eP	Pdif	08 16 28.2	+0.8
STHS	Stebnicka Huta	107.18	320	ePDIFF	Pdif	08 16 28.2	+0.8
YKA	Yellowknife Ar	107.65	26	PKiKP	PKiKP	08 20 35.7	-0.4
	comp=Z,0.5nm,0.6s,baz=299,slow=1.5,SNR=8.8						
YKA				SKP		08 23 56.4	
	comp=Z,0.3nm,0.8s,baz=298,slow=1.0,SNR=4.0						
YKA				PKKPbc	PKKPbc	08 31 50.3	-3.0
	comp=Z,0.6nm,0.8s,baz=113,slow=3.2,SNR=8.6						
NVAR	Mina Array Bea	111.32	51	PKKPbc	PKKPbc	08 31 40.2	-0.9
	comp=Z,0.2nm,0.5s,baz=123,slow=5.9,SNR=2.5						
GERES	GERESS Array B	112.14	320	PKiKP	PKiKP	08 20 45.4	+0.2
	comp=Z,0.5nm,0.4s,baz=101,slow=0.7,SNR=4.8						
SNOW	Snow King Moun	115.85	45		PKiKP	08 20 52.9	+0.2
PDAR	Pinedale Array	116.89	45	PKP	PKiKP	08 20 55.2	+0.5
	comp=Z,0.6nm,0.7s,baz=270,slow=0.6,SNR=6.4						
PDAR				SKP		08 24 14.8	
	comp=Z,0.6nm,0.8s,baz=162,slow=0.3,SNR=5.1						
PDAR				PKKPbc	PKKPbc	08 31 18.8	-3.5
	comp=Z,0.4nm,0.7s,baz=108,slow=3.3,SNR=3.7						
MVCO	Mesa Verde	119.17	51	P	PKiKP	08 21 01.2	+1.9
	baz=285						
S22A	4UR Ranch, Cre	120.31	50	P	PKiKP	08 21 03.6	+2.0
	baz=286						
121A	Cookes Peak, D	120.83	56	P	PKiKP	08 21 04.5	+1.9
	baz=283						
SDCO	Great Sand Dun	121.32	50	P	PKiKP	08 21 05.6	+2.0
	baz=287						
ANMO	Albuquerque	121.34	53	P	PKiKP	08 21 05.5	+1.9
	baz=285						
ULM	Lac du Bonnet	122.38	33	PKP	PKPdf	08 21 04.7	0.0
	comp=Z,3.1nm,0.6s,baz=317,slow=4.0,SNR=4.6						
MNTX	Cornudas Mount	123.01	57	P	PKiKP	08 21 08.3	+1.6
	baz=284						
TXAR	Lajitas Array	124.99	59	PKP	PKiKP	08 21 11.4	+0.6
	comp=Z,0.4nm,0.5s,baz=176,slow=2.3,SNR=10						
TXAR				SKPbc	SKPbc	08 24 11.1	
	comp=Z,0.2nm,0.8s,baz=191,slow=4.2,SNR=2.0						
TXAR				PKKPbc	PKKPbc	08 30 51.4	0.0
	comp=Z,0.1nm,0.5s,baz=120,slow=5.0,SNR=3.9						
PLCA	Paso Flores	129.14	160	PKP	PKiKP	08 21 19.7	+0.9
	comp=Z,1.8nm,0.7s,baz=323,slow=2.4,SNR=9.0						
PLCA				SKPbc	SKPbc	08 24 25.1	-0.5
	comp=Z,2.0nm,0.8s,baz=207,slow=4.9,SNR=7.0						
P38A	Dawn	129.24	43		PKiKP	08 21 19.1	+0.2
SCHQ	Schefferville	130.27	13	PKP	PKiKP	08 21 20.6	+0.1
	comp=Z,1.3nm,0.8s,baz=99,slow=16,SNR=1.6						
SCHQ				SKPbc	SKPab	08 24 28.1	-0.7
	comp=Z,9.2nm,0.9s,baz=346,slow=7.5,SNR=8.6						
S39A	Bolivar	130.28	45	PKPdf	PKiKP	08 21 20.8	-0.2
DBIC	Dimbokro	134.98	273	PKP	PKiKP	08 21 30.4	-0.7
	comp=Z,4.5nm,0.6s,baz=141,slow=1.3,SNR=5.0						
DBIC				SKPbc	SKPbc	08 24 45.5	-0.8
	comp=Z,8.7nm,0.9s,baz=199,slow=2.3,SNR=6.6						
CFA	Coronel Fontan	138.11	157	PKP	PKPdf	08 21 35.6	+0.5
	comp=Z,4.1nm,0.6s,baz=237,slow=5.7,SNR=8.2						
MATN	Matagalpa	144.31	77		PKPdf	08 21 46.5	-0.2
BBTS	Babate	146.05	286	PKPbc	PKPbc	08 21 50.3	-0.3
	comp=Z,72nm,0.6s,baz=315,slow=21,SNR=8.1						
CPUP	Villa Florida	146.35	168	PKPbc	PKPbc	08 21 51.1	-0.1
	comp=Z,12nm,0.8s,baz=200,slow=2.4,SNR=26						
CPUP				SKPbc	SKPbc	08 25 14.5	-1.6
	comp=Z,6.5nm,0.8s,baz=163,slow=3.1,SNR=8.6						
LPAZ	La Paz	151.00	142	PKP	PKPdf	08 22 00.2	+1.9
	comp=Z,1.3nm,0.8s,baz=259,slow=4.6,SNR=3.9						
LPAZ				PKPbc	PKiKP	08 22 05.6	+0.8
	comp=Z,3.6nm,0.4s,baz=92,slow=3.9,SNR=7.9						

KRSC ***22*** *08:06:25.2±2.8, 51°.11N×159°.98E, h49^{km}±24^{km}, Mc4.3, Ml4.7*

IDC ***22*** *08:06:26.6±0.7, 51°.51N×159°.40E, h0^{km}, mb4.2/25, mbtmp4.2/30, ML4.6/4, MS3.8/26, Error ellipse: s-maj=18.4km s-min=11.6km az=153.0*

MOS ***22*** *08:06:30.3±1.1, 51°.30N×159°.57E, h50^{km}, mb4.8/19, MS3.8/5, Error ellipse: s-maj=8.7km s-min=4.0km az=99.1*

NEIC ***22*** *08:06:32.0±2.5, 51°.45N±0°.09×159°.5E±0°.1, h36^{km}±8^{km}, mb4.8/35, Error ellipse: s-maj=13.4km s-min=10.8km az=169.0*

ISC 22 08:06:30.6±0.5**, 51°.37N**±0°.05×**159°.56E**±0°.04**, h30^{km}, n204, σ1^{s}.49**/185**, mb4.6**/55**, MS3.9**/21**, 6C-1D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	1.02	296	PN	Pb	08 06 49.4	-0.4
KDTR				S	Sb	08 07 04.8	+2.0
KDTR	Khodutka, Kamc	1.02	296	eP	Pb	08 06 49.4	-0.4
KDTR				eS	Sb	08 07 04.8	+2.0
RUS	Russkaya	1.25	329	PN	Pn	08 06 52.6	+0.6
RUS	Russkaya	1.25	329	eP	Pn	08 06 52.6	+0.6
MTVR	Mutnovka	1.40	323	PN	Pb	08 06 55.2	-1.1
MTVR	Mutnovka	1.40	323	eP	Pb	08 06 55.2	-1.1
GRL	Gorelyy	1.50	323	PN	Pb	08 06 56.9	-1.0
GRL	Gorelyy	1.50	323	eP	Pb	08 06 56.9	-1.0
KRMR	Karymshinskiy	1.71	329	PN	Pn	08 06 59.6	+1.3
KRMR	Karymshinskiy	1.71	329	eP	Pn	08 06 59.6	+1.3
PAU	Pauzhetka	1.72	274	PN	Pb	08 07 00.3	-1.3
PAU	Pauzhetka	1.72	274	eP	Pb	08 07 00.3	-1.3
DALK	Dalny	1.73	344	PN	Pn	08 06 59.5	+0.8
DALK	Dalny	1.73	344	eP	Pn	08 06 59.5	+0.8
PET	Petropavlovsk	1.75	342		Pn	08 06 59.5	+0.7
PET	Petropavlovsk	1.75	342	cePN	Pn	08 06 59.6	+0.7
PET				pmax	pmax		
	comp=Z,145nm,1.0s						
PET	Petropavlovsk	1.75	342	eP	Pn	08 06 59.7	+0.9
SPN	Mys Shipunski	1.75	9	PN	Pn	08 06 58.6	-0.3
SPN	Mys Shipunski	1.75	9	eP	Pn	08 06 58.6	-0.3
INSR	Institute	1.80	341	eP	Pn	08 07 00.6	+1.0
NLC	Nalytchevo	1.81	356	PN	Pb	08 07 02.4	-0.6
NLC	Nalytchevo	1.81	356	eP	Pb	08 07 02.4	-0.6
UGLR	Uglovaya	1.90	347	PN	Pn	08 07 02.2	+1.2
UGLR	Uglovaya	1.90	347	eP	Pn	08 07 02.2	+1.2
SMAR	Somma	1.95	347	PN	Pb	08 07 04.5	-1.2
SMAR	Somma	1.95	347	eP	Pb	08 07 04.5	-1.2
AVH	Avacha	1.96	345	PN	Pn	08 07 03.4	+1.5
AVH	Avacha	1.96	345	eP	Pn	08 07 03.4	+1.5
KRER	Koryakskii	2.00	346	PN	Pn	08 07 03.5	+1.0
KRER	Koryakskii	2.00	346	eP	Pn	08 07 03.5	+1.0
KOK	Koryaka	2.01	344	PN	Pn	08 07 03.8	+1.3
KOK	Koryaka	2.01	344	eP	Pn	08 07 03.8	+1.3
KRX	Arik	2.07	345	PN	Pn	08 07 04.4	+1.0
KRX	Arik	2.07	345	eP	Pn	08 07 04.4	+1.0
PEA0B	Petropavlovsk-	2.08	327	Pn	Pn	08 07 05.2	+1.7
PEA0B	Petropavlovsk-	2.08	327	PN	Pn	08 07 05.2	+1.7
PETK	Petropavlovsk-	2.08	327	Pn	Pn	08 07 04.5	+1.0
	comp=Z,26nm,0.3s,baz=141,slow=17,SNR=58						
PETK				Sn	Sb	08 07 34.8	+1.7
	comp=Z,30nm,0.3s,baz=134,slow=19,SNR=4.5						
APC	Apacha	2.15	317	PN	Pb	08 07 06.8	-2.0
APC	Apacha	2.15	317	eP	Pb	08 07 06.8	-2.0
SKR	Severo-Kuril's	2.28	254	i PN	Pn	08 07 06.1	-0.1
SKR				i S	Sn	08 07 32.1	-1.1
SKR				pmax	pmax		
	comp=Z,879nm,0.7s						
SKR				pmax	pmax		
	comp=Z,300nm,3.6s						
SKR				smax	smax		
	comp=N,4µm,0.5s						
SKR				smax	smax		
	comp=E,3µm,0.5s						
SKR				MLR	MLR		
	comp=Z,3µm,18.0s						
SKR	Severo-Kuril's	2.28	254	eP	Pn	08 07 05.5	-0.7
GNL	Ganaly	2.53	338	PN	Pn	08 07 11.5	+1.8
GNL	Ganaly	2.53	338	eP	Pn	08 07 11.5	+1.8
TUMD	Tumrok D	3.87	7	eP	Pn	08 07 29.3	+1.2
TUMR	Tumrok	3.94	5	PN	Pn	08 07 31.2	+2.1
TUMR	Tumrok	3.94	5	eP	Pn	08 07 31.2	+2.1
KMNR	Kamenistaya	4.41	5	PN	Pn	08 07 39.4	+3.8
KMNR	Kamenistaya	4.41	5	eP	Pn	08 07 39.4	+3.8
SRDR	Sredinnyy	4.96	1	PN	Pn	08 07 45.8	+2.8
SRDR	Sredinnyy	4.96	1	eP	Pn	08 07 45.8	+2.8
KBTR	Krutoberegovo	5.22	20	PN	Pn	08 07 47.0	+0.5
KBTR	Krutoberegovo	5.22	20	eP	Pn	08 07 47.0	+0.5
KBG	Krutoberegovo	5.24	20	PN	Pn	08 07 47.4	+0.7
KBG	Krutoberegovo	5.24	20	eP	Pn	08 07 47.4	+0.7
BKI	Bering	5.43	43	PN	Pn	08 07 48.3	-1.2
BKI	Bering	5.43	43	eP	Pn	08 07 48.3	-1.2
BKI				eS	Sn	08 08 44.6	-6.3
SHEM	Shemya Is, Ala	9.07	76	Pn	Pn	08 08 37.6	-1.6
	comp=Z,8.9nm,0.3s,baz=111,slow=0.8,SNR=11						
SHEM				Sn	Sn	08 10 09.3	-11
	comp=Z,7.3nm,0.3s,baz=199,slow=22,SNR=12						
SHEM				LR	LR	08 12 11.8	
	comp=Z,187nm,19.6s,baz=288,slow=38						
	comp=Z,61nm,0.5s						
MA2	Magadan	9.61	332	LR	LR	08 13 25.3	
	comp=Z,288nm,18.0s,baz=140,slow=44						
MA2	Magadan	9.61	332	i PN	Pn	08 08 47.5	+0.8
MA2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
OKH	Okha	10.38	289	dePN	Pn	08 09 06.0	+8.7
OKH				MLR	MLR		
	comp=Z,1µm,14.0s						
OKH				MLR	MLR		
	comp=E,1µm,15.0s						
YSS	Yuzh-Sakhalins	11.85	255	ePN	Pn	08 09 24.1	+6.7
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=N,500nm,15.0s						
YSS				MLR	MLR		
	comp=Z,700nm,15.0s						
YSS				MLR	MLR		
	comp=E,700nm,14.0s						
SEY	Seymchan	12.22	344	Pn	Pn	08 09 21.4	-1.0
	comp=E,2.2nm,1.0s,baz=170,slow=23,SNR=2.7						
SEY	Seymchan	12.22	344	i PN	Pn	08 09 21.9	-0.5
SEY				pmax	pmax		
	comp=Z,3.0nm,1.3s						
JKA	Kamikawa-asahi	13.51	244	Pn	Pn	08 09 39.8	-0.2
ASAJ	Asahikawa	13.51	244	LR	LR	08 15 45.1	
	comp=Z,283nm,18.3s,baz=340,slow=41						

ASAJ	**Asahikawa**	**13.51**	**244**	PN	**Pn**	**08 09 39.8**	**-0.3**
BILL	**Bilibino**	**17.04**	**9**	Pn	**Pn**	**08 10 25.8**	**-0.5**
BILL	**Bilibino**	**17.04**	**9**	⇑*e*P	**Pn**	**08 10 26.7**	**+0.4**
BILL				pmax	pmax		
	comp=Z,12nm,0.7s						
BILL				MLR	MLR		
	comp=Z,337nm,16.0s						
KLR	**Kul'dur**	**17.85**	**274**	P	**Pn**	**08 10 36.6**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=70,slow=11,SNR=20						
KLR				LR	LR	08 18 26.5	
	comp=Z,212nm,18.8s,baz=56,slow=41						
	comp=Z,9.9nm,0.9s						
KLR	**Kul'dur**	**17.85**	**274**	*ce*P	**P**	**08 10 38.0**	**+1.0**
KLR				pmax	pmax		
	comp=Z,23nm,1.3s						
SPIA	**Saint Paul Isl**	**18.46**	**60**	P	**Pn**	**08 10 47.0**	**+3.1**
YAK	**Yakutsk**	**19.37**	**315**	P	**P**	**08 10 51.1**	**-2.5**
	comp=Z,0.3nm,0.3s,baz=260,slow=1.5,SNR=8.9						
YAK				LR	LR	08 19 26.8	
	comp=Z,287nm,18.5s,baz=94,slow=41						
	comp=Z,29nm,0.7s						
YAK	**Yakutsk**	**19.37**	**315**	*e*P	**P**	**08 10 51.9**	**-1.7**
YAK				*e*S	**S**	**08 14 30.1**	**-0.7**
YAK				pmax	pmax		
	comp=Z,52nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,12nm,0.9s						
YAK				smax	smax		
	comp=N,46nm,3.0s						
YAK				smax	smax		
	comp=E,37nm,2.9s						
ZEA	**Zeya**	**19.70**	**290**	*e*P	**P**	**08 10 56.7**	**-0.5**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA				MLR	MLR		
	comp=E,300nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,15.0s						
USA0B	**Ussuriysk Arra**	**19.79**	**260**	*i* P	**P**	**08 10 56.3**	**-1.9**
USRK	**Ussuriysk Ar.**	**19.79**	**260**	P	**P**	**08 10 56.6**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=69,slow=11,SNR=5.3						
	comp=Z,4.0nm,0.7s						
HEH	**HeiHe**	**20.26**	**279**	P	**P**	**08 11 02.8**	**-0.6**
HEH				pmax	pmax		
	comp=Z,12nm,0.7s						
MDJ	**Mudanjiang**	**21.06**	**263**	P	**P**	**08 11 08.5**	**-3.6**
MDJ				IAmb	IAmb	08 11 11.1	
	comp=Z,16nm,0.8s						
MJB9	**Matsu-Tunnel**	**21.24**	**234**	P	**P**	**08 11 15.0**	**+1.0**
MAJO	**Matsushiro**	**21.24**	**234**	P	**P**	**08 11 13.3**	**-0.8**
MAJO	**Matsushiro**	**21.24**	**234**	P	**P**	**08 11 13.3**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,23nm,0.8s						
MJAR	**Matsushiro Arr**	**21.24**	**234**	P	**P**	**08 11 13.5**	**-0.6**
	comp=Z,12nm,0.8s,baz=29,slow=9.8,SNR=16						
	comp=Z,12nm,0.8s						
TNA	**Tin City**	**21.81**	**37**	P	**P**	**08 11 22.9**	**+3.0**
ANM	**Nome**	**22.43**	**41**	P	**P**	**08 11 29.6**	**+2.9**
ANM	**Nome**	**22.43**	**41**	P	**P**	**08 11 29.6**	**+2.9**
ANM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
INU	**Inuyama**	**22.77**	**234**	P	**P**	**08 11 31.4**	**+1.0**
INU				IAmb	IAmb	08 11 32.4	
	comp=Z,30nm,1.1s						
TIXI	**Tiksi**	**24.53**	**337**	P	**P**	**08 11 46.6**	**-0.4**
	comp=Z,90nm,0.8s,baz=270,slow=22,SNR=87						
TIXI	**Tiksi**	**24.53**	**337**	P	**P**	**08 11 46.2**	**-0.8**
TIXI	**Tiksi**	**24.53**	**337**	P	**P**	**08 11 46.2**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,86nm,0.7s						
HIA	**Hailar**	**25.30**	**281**	P	**P**	**08 11 52.7**	**-1.6**
HIA				IAmb	IAmb	08 12 05.8	
	comp=Z,27nm,0.7s						
HIA	**Hailar**	**25.30**	**281**	P	**P**	**08 11 53.2**	**-1.1**
HIA	**Hailar**	**25.30**	**281**	x	pP	08 12 03.6	+1.7
HIA	**Hailar**	**25.30**	**281**	P	**P**	**08 11 52.5**	**-1.8**
KSRS	**Korea Array**	**26.30**	**250**	P	**P**	**08 12 03.5**	**+0.2**
	comp=Z,4.6nm,0.8s,baz=49,slow=8.8,SNR=16						
KSRS				LR	LR	08 22 44.0	
	comp=Z,174nm,18.7s,baz=165,slow=37						
	comp=Z,4.6nm,0.8s						
KSAR	**Wonju Array Be**	**26.33**	**250**	P	**P**	**08 12 03.5**	**-0.1**
KSAR	**Wonju Array Be**	**26.33**	**250**	P	**P**	**08 12 03.5**	**-0.1**
BOD	**Bodaibo**	**26.74**	**302**	*e*P	**P**	**08 12 04.1**	**-3.0**
BOD				pmax	pmax		
	comp=Z,10.0nm,1.3s						
JNU	**Nakatsue**	**27.72**	**240**	P	**P**	**08 12 17.9**	**+1.6**
	comp=Z,12nm,0.8s,baz=100,slow=5.9,SNR=6.2						
	comp=Z,12nm,0.8s						
JNU	**Nakatsue**	**27.72**	**240**	P	**P**	**08 12 18.1**	**+1.9**
JNU				IAmb	IAmb	08 12 44.7	
	comp=Z,66nm,1.5s						
ILAR	**Eielson Array**	**30.28**	**43**	P	**P**	**08 12 38.1**	**-0.5**
	comp=Z,0.5nm,0.9s,baz=263,slow=7.8,SNR=5.8						
ILAR				LR	LR	08 26 48.6	
	comp=Z,115nm,18.1s,baz=296,slow=40						
	comp=Z,0.5nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**32.10**	**167**	T	T	08 47 12.0	
	baz=350,slow=76,SNR=23						
H11N3	**WAKE ISLAND Hy**	**32.11**	**167**	T	T	08 47 11.6	
	baz=350,slow=76,SNR=30						
H11N1	**WAKE ISLAND Hy**	**32.12**	**167**	T	T	08 47 12.7	
	baz=350,slow=76,SNR=20						
BCAR	**Beaver Creek A**	**32.63**	**46**	P	**P**	**08 12 59.7**	**+0.3**
H11S1	**WAKE ISLAND Hy**	**33.27**	**168**	T	T	08 48 38.8	
	baz=350,slow=76,SNR=4.3						
H11S3	**WAKE ISLAND Hy**	**33.29**	**168**	T	T	08 48 40.4	
	baz=350,slow=76,SNR=8.2						
H11S2	**WAKE ISLAND Hy**	**33.29**	**168**	T	T	08 48 39.7	
	baz=350,slow=76,SNR=2.7						
ULN	**Ulaanbaatar**	**33.60**	**285**	*i* P	**P**	**08 13 07.3**	**-0.8**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SONM	**Songino Array**	**34.01**	**285**	P	**P**	**08 13 10.1**	**-1.5**
	comp=Z,1.3nm,0.6s,baz=68,slow=9.0,SNR=1.6						
	comp=Z,1.3nm,0.6s						
ZAK	**Zakamensk**	**34.78**	**291**	*e*P	**P**	**08 13 18.4**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,14nm,1.3s						
INK	**Inuvik**	**35.45**	**36**	P	**P**	**08 13 23.7**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=272,slow=6.7,SNR=12						
	comp=Z,2.1nm,0.8s						
INK	**Inuvik**	**35.45**	**36**	P	**P**	**08 13 24.1**	**+0.5**
INK	**Inuvik**	**35.45**	**36**	P	**P**	**08 13 24.1**	**+0.5**
INK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NRIK	**Noril'sk**	**37.14**	**326**	LR	LR	08 30 35.7	
	comp=Z,282nm,18.6s,baz=70,slow=39						
NRIK	**Noril'sk**	**37.14**	**326**	*i* P	**P**	**08 13 36.2**	**-1.9**
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
A36M	**Sachs Harbour**	**37.78**	**29**	P	**P**	**08 13 44.1**	**+0.6**
C36M	**Paulatuk**	**38.66**	**34**	P	**P**	**08 13 52.4**	**+1.6**
NACB	**Ninganchiao**	**39.77**	**241**	P	**P**	**08 14 02.2**	**+1.6**
ZALV	**Zalesovo Beam**	**43.45**	**304**	PcP	**PcP**	**08 16 17.5**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=124,slow=2.1,SNR=2.1						
DGZ	**Jazzator, Alta**	**44.15**	**297**	*i* P	**P**	**08 14 36.0**	**-0.4**
DGZ				pmax	pmax		
	comp=Z,13nm,0.9s						
YKA	**Yellowknife Ar**	**44.67**	**41**	P	**P**	**08 14 40.2**	**+0.2**
	comp=Z,0.4nm,0.9s,baz=297,slow=7.7,SNR=4.4						
	comp=Z,0.4nm,0.9s						
RES	**Resolute Bay**	**45.05**	**21**	P	**P**	**08 14 43.0**	**0.0**
	comp=Z,1.2nm,0.8s,baz=293,slow=6.8,SNR=7.1						
RES				PcP	**PcP**	**08 16 23.9**	**+0.6**
	comp=Z,1.4nm,1.1s,baz=327,slow=3.4,SNR=3.6						
	comp=Z,1.2nm,0.8s						
KURK	**Kurchatov**	**48.38**	**303**	*i* P	**P**	**08 15 08.2**	**-1.1**
KURK				pmax	pmax		
	comp=Z,11nm,0.9s						
KURBB	**Kurchatov Arra**	**48.48**	**303**	P	**P**	**08 15 08.3**	**-1.8**
	comp=Z,6.1nm,0.7s,baz=62,slow=8.0,SNR=5.7						
	comp=Z,6.1nm,0.7s						
MK31	**Makanchi Array**	**48.62**	**297**	*i* P	**P**	**08 15 10.1**	**-1.2**
MKAR	**Makanchi Array**	**48.62**	**297**	P	**P**	**08 15 10.2**	**-1.1**
	comp=Z,2.2nm,0.4s,baz=62,slow=7.4,SNR=4.0						
MKAR				LR	LR	08 37 25.0	
	comp=Z,73nm,19.0s,baz=60,slow=38						
	comp=Z,2.2nm,0.4s						
PZH	**PanZhiHua**	**49.83**	**263**	P	**P**	**08 15 20.8**	**-0.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,150nm,4.9s						
BVAR	**Borovoye Array**	**51.21**	**309**	P	**P**	**08 15 29.3**	**-1.6**
	comp=Z,8.6nm,0.7s,baz=51,slow=7.8,SNR=5.8						
BVAR				LR	LR	08 39 31.1	
	comp=Z,194nm,18.1s,baz=61,slow=39						
	comp=Z,8.6nm,0.7s						
BRVK	**Borovoye**	**51.24**	**309**	*ce*P	**P**	**08 15 29.8**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
YBH	**Yreka Blue Hor**	**51.95**	**68**	LR	LR	08 33 58.9	
	comp=Z,31nm,20.7s,baz=304,slow=32						
DAG	**Danmarks Havn**	**52.13**	**359**	*i* P	**P**	**08 15 37.0**	**-0.4**
ARU	**Arti**	**54.45**	**318**	LR	LR	08 43 17.4	
	comp=Z,106nm,18.3s,baz=10,slow=41						
ARU	**Arti**	**54.45**	**318**	*i* P	**P**	**08 15 54.8**	**+0.1**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ARCES	**ARCESS Array B**	**54.83**	**342**	P	**P**	**08 15 57.0**	**-0.3**
	comp=Z,6.9nm,0.9s,baz=57,slow=6.6,SNR=7.4						
ARCES				LR	LR	08 44 07.5	
	comp=Z,59nm,18.2s,baz=286,slow=41						
	comp=Z,6.9nm,0.9s						
ARCES	**ARCESS Array B**	**54.83**	**342**	P	**P**	**08 15 57.0**	**-0.3**
AAK	**Ala-Archa**	**55.55**	**297**	P	**P**	**08 16 02.6**	**-0.5**
	comp=Z,2.1nm,0.5s,baz=126,slow=19,SNR=3.0						
	comp=Z,2.1nm,0.5s						
AAK	**Ala-Archa**	**55.55**	**297**	*ce*P	**P**	**08 16 03.2**	**+0.1**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SUMG	**Summit**	**55.71**	**6**	*i* P	**P**	**08 16 03.0**	**-1.1**
KIRV	**Kirov**	**56.59**	**324**	LR	LR	08 43 36.3	
	comp=Z,170nm,19.1s,baz=31,slow=40						
NVAR	**Mina Array Bea**	**56.66**	**69**	P	**P**	**08 16 12.6**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=299,slow=7.2,SNR=3.9						
	comp=Z,0.5nm,0.7s						
PHRA	**Phrae**	**56.69**	**258**	P	**P**	**08 16 12.0**	**+0.7**
KSH	**Kashi**	**56.77**	**293**	P	**P**	**08 16 15.3**	**+3.5**
KSH				pP	pwP	08 16 27.1	+2.7
KSH				PcP	**PcP**	**08 17 07.3**	**-0.1**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,110nm,6.5s						
KSH				LR	LR		
	comp=N,350nm,8.3s						
KSH				LR	LR		
	comp=E,200nm,8.1s						
CHTO	**Chiang Mai**	**57.24**	**259**	P	**P**	**08 16 15.8**	**+0.6**
CHTO	**Chiang Mai**	**57.24**	**259**	P	**P**	**08 16 15.8**	**+0.6**
CMAR	**Chiang Mai Arr**	**57.51**	**259**	P	**P**	**08 16 18.3**	**+1.2**
	comp=E,1.8nm,0.3s,baz=23,slow=6.7,SNR=9.5						
CMAR				LR	LR	08 43 00.8	
	comp=E,66nm,18.6s,baz=180,slow=38						
	comp=E,1.8nm,0.3s						
PDAR	**Pinedale Array**	**58.67**	**60**	P	**P**	**08 16 26.5**	**+1.3**
	comp=E,0.5nm,0.8s,baz=336,slow=2.2,SNR=3.9						
	comp=E,0.5nm,0.8s						
PFO	**Pinyon Flats O**	**61.04**	**72**	LR	LR	08 41 12.2	
	comp=E,42nm,18.4s,baz=170,slow=34						
CHGR	**Chuyangaron**	**61.23**	**297**	P	**P**	**08 16 42.0**	**-0.7**
CHGR				IAmb	IAmb	08 16 43.5	
	comp=Z,20nm,0.9s						
CHGR	**Chuyangaron**	**61.23**	**297**	P	**P**	**08 16 42.0**	**-0.7**
CHGR				pmax	pmax		
	comp=Z,20nm,0.9s						
FIA1	**FINESS Array S**	**61.57**	**337**	P	**P**	**08 16 45.2**	**+0.7**
FINES	**FINESS Array B**	**61.57**	**337**	P	**P**	**08 16 43.6**	**-0.9**
	comp=Z,4.0nm,0.7s,baz=37,slow=9.8,SNR=9.3						
	comp=Z,4.0nm,0.7s						
FINES	**FINESS Array B**	**61.57**	**337**	P	**P**	**08 16 43.8**	**-0.7**
FINES	**FINESS Array B**	**61.57**	**337**	*e*P	**P**	**08 16 44.0**	**-0.5**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BELG	**Belogornoye**	**61.82**	**320**	*i* P	**P**	**08 16 46.4**	**+0.1**
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NIL	**Nilore**	**62.39**	**290**	P	**P**	**08 16 49.7**	**-0.8**
NIL				IAmb	IAmb	08 17 02.9	
	comp=Z,20nm,1.0s						
NIL	**Nilore**	**62.39**	**290**	P	**P**	**08 16 49.7**	**-0.8**
NIL				pmax	pmax		
	comp=Z,20nm,1.0s						
OBN	**Obninsk**	**63.79**	**328**	LR	LR	08 48 39.7	
	comp=Z,36nm,19.2s,baz=181,slow=40						
OBN	**Obninsk**	**63.79**	**328**	⇑*e*P	**P**	**08 16 59.2**	**-0.1**
OBN				*e*		08 17 35.1	
OBN				*e*		08 19 23.9	
OBN				*e*S	**PnS**	**08 25 58.4**	**+7.5**
OBN				pmax	pmax		
	comp=Z,27nm,2.5s						
OBN				MLR	MLR		
	comp=Z,193nm,17.0s						
NB2	**NORSAR Subarra**	**65.11**	**344**	P	**P**	**08 17 08.2**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=22,slow=6.5						
NOA	**NORSAR Array B**	**65.11**	**344**	P	**P**	**08 17 08.5**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=20,slow=6.7,SNR=5.0						
	comp=Z,1.8nm,0.8s						
NOA	**NORSAR Array B**	**65.11**	**344**	*e*P	**P**	**08 17 09.7**	**+1.8**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
HFS	**Hagfors**	**65.49**	**342**	LR	LR	08 50 07.4	
	comp=Z,100nm,18.2s,baz=357,slow=40						
NACGM	**Naroch**	**67.03**	**333**	*e*P	**P**	**08 17 20.3**	**-0.1**
	comp=N,875nm,0.8s						
PABE	**Paberze**	**67.29**	**334**	P	**P**	**08 17 21.3**	**-0.6**
PABE				IAmb	IAmb	08 17 23.4	
	comp=Z,21nm,0.7s						
SCHQ	**Schefferville**	**67.33**	**27**	LR	LR	08 50 11.5	
	comp=Z,47nm,18.3s,baz=82,slow=39						
GEYT	**Alibeck**	**67.75**	**303**	P	**P**	**08 17 24.2**	**-1.0**
	comp=Z,5.2nm,0.7s,baz=38,slow=2.6,SNR=6.9						
	comp=Z,5.2nm,0.7s						
GEYT	**Alibeck**	**67.75**	**303**	P	**P**	**08 17 23.5**	**-1.7**
GEYT				IAmb	IAmb	08 17 27.1	
	comp=Z,6.7nm,0.8s						
AKASG	**Malin Array Be**	**69.92**	**329**	P	**P**	**08 17 37.8**	**-0.6**
	comp=Z,6.9nm,0.5s,baz=30,slow=6.1,SNR=30						
AKASG				LR	LR	08 51 26.1	
	comp=Z,72nm,18.3s,baz=36,slow=39						
	comp=Z,6.9nm,0.5s						
AKASG	**Malin Array Be**	**69.92**	**329**	*i* P	**P**	**08 17 38.0**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AKBB	**Malin Array Si**	**69.92**	**329**	P	**P**	**08 17 37.1**	**-1.3**
AKBB				IAmb	IAmb	08 17 39.0	
	comp=Z,17nm,0.9s						
AKBB	**Malin Array Si**	**69.92**	**329**	P	**P**	**08 17 37.1**	**-1.3**
AKBB				pmax	pmax		
	comp=Z,17nm,0.9s						
SHA1	**Shidzhatmaz**	**70.66**	**317**	*i* P	**P**	**08 17 44.0**	**+0.6**
RLO	**Rose Lookout**	**71.16**	**56**	P	**P**	**08 17 48.2**	**+1.9**
RLO				IAmb	IAmb	08 18 00.5	
	comp=Z,52nm,0.8s						
TXAR	**Lajitas Array**	**71.63**	**66**	P	**P**	**08 17 49.6**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=303,slow=5.0,SNR=5.9						
	comp=Z,0.4nm,0.7s						
CLL	**Collm**	**73.85**	**339**	*i* P	**P**	**08 18 02.7**	**+0.7**
CLL				*i* pP	**pwP**	**08 18 14.7**	**+0.2**
CLL	**Collm**	**73.85**	**339**	*e*P	**P**	**08 18 03.0**	**+1.0**
	comp=Z,6.0nm,1.2s						
CLL				*e*pP	**pwP**	**08 18 15.0**	**+0.5**
CLL	**Collm**	**73.85**	**339**	*e*P	**P**	**08 18 03.0**	**+1.0**
CLL				*e**PP	**pwP**	**08 18 15.0**	**+0.5**
CLL				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BUR08	**Bucovina Ar. S**	**73.88**	**330**	IAmb	IAmb	08 18 03.9	
	comp=Z,6.8nm,1.1s						
BURAR	**Bucovina Array**	**73.90**	**330**	P	**P**	**08 18 02.5**	**-0.1**
BURAR				IAmb	IAmb	08 18 04.2	
	comp=Z,5.7nm,0.8s						
DPC	**Dobruska-Polom**	**73.94**	**336**	*e*P	**P**	**08 18 03.8**	**+1.1**
DPC	**Dobruska-Polom**	**73.94**	**336**	*e*P	**P**	**08 18 03.8**	**+1.1**
WRA	**Warramunga Arr**	**74.38**	**205**	P	**P**	**08 18 05.1**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=28,slow=5.7,SNR=2.6						
	comp=Z,1.3nm,0.6s						
KOPT	**Kop Dagi**	**74.62**	**316**	IAmb	IAmb	08 18 09.7	
	comp=Z,14nm,1.2s						
VRAC	**Vranov**	**74.84**	**336**	LR	LR	08 55 12.5	
	comp=Z,56nm,19.6s,baz=2.5,slow=39						
GURO	**Guroymak-BITLI**	**75.14**	**314**	P	**P**	**08 18 09.4**	**-0.5**
MLR	**Muntele Rosu**	**75.54**	**328**	IAmb	IAmb	08 18 14.0	
	comp=Z,6.2nm,0.7s						
TIRR	**Tirgusor**	**75.61**	**326**	IAmb	IAmb	08 18 13.8	
	comp=Z,30nm,1.0s						
KHC	**Kasperske Hory**	**75.75**	**338**	*e*P	**P**	**08 18 14.4**	**+1.3**
KHC	**Kasperske Hory**	**75.75**	**338**	*e*P	**P**	**08 18 14.4**	**+1.3**
GERES	**GERESS Array B**	**75.98**	**338**	P	**P**	**08 18 13.7**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=54,slow=6.8,SNR=5.1						
GERES				LR	LR	08 56 58.9	
	comp=Z,73nm,18.4s,baz=31,slow=40						
	comp=Z,0.6nm,0.5s						
GERES	**GERESS Array B**	**75.98**	**338**	*e*P	**P**	**08 18 15.6**	**+1.1**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ILGA	**Ilgaz**	**76.58**	**321**	P	**P**	**08 18 19.6**	**+1.4**
BRTR	**Keskin Array B**	**77.74**	**320**	P	**P**	**08 18 24.1**	**-0.5**
	comp=Z,2.9nm,0.9s,baz=47,slow=9.0,SNR=8.0						
	comp=Z,2.9nm,0.9s						
BRTR	**Keskin Array B**	**77.74**	**320**	*i* P	**P**	**08 18 25.3**	**+0.7**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ASAR	**Alice Springs**	**78.05**	**204**	LR	LR	08 49 23.5	
	comp=Z,60nm,21.6s,baz=163,slow=33						
DIVS	**Divibare**	**78.66**	**332**	P	**P**	**08 18 28.4**	**-1.2**
DIVS				IAmb	IAmb	08 18 31.2	
	comp=Z,3.6nm,0.7s						
UOSS	**Minazif**	**78.73**	**296**	P	**P**	**08 18 29.9**	**-0.2**
UOSS				IAmb	IAmb	08 18 30.7	
	comp=Z,12nm,0.9s						
RAO	**Raoul Island**	**82.69**	**160**	LR	LR	08 49 34.6	
	comp=Z,216nm,21.0s,baz=146,slow=31						
IDI	**Anoyia**	**84.97**	**324**	LR	LR	09 00 51.0	
	comp=Z,34nm,19.3s,baz=98,slow=38						
EIL	**Elat**	**85.76**	**314**	LR	LR	09 02 24.8	
	comp=Z,57nm,18.1s,baz=62,slow=39						
ESDC	**Sonseca Array**	**88.19**	**347**	P	**P**	**08 19 17.6**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=20,slow=4.1,SNR=2.1						
	comp=Z,0.4nm,0.5s						
H03N2	**Juan Fernandez**	**134.53**	**90**	T	T	10 56 20.0	
	baz=314,slow=77,SNR=9.4						
H03N1	**Juan Fernandez**	**134.54**	**90**	T	T	10 56 21.9	
	baz=314,slow=77,SNR=7.4						
H03N3	**Juan Fernandez**	**134.54**	**90**	T	T	10 56 20.8	
	baz=314,slow=77,SNR=14						

ROM 22 08:13:41.3±0.1, 42°.949N±0°.003×13°.017E±0°.005, h11^{km}, ML1.0/6, 3C-3D, Error ellipse: s-maj=0.4km s-min=0.2km az=94.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.06**	**178**	P	Pg	08 13 44.0	+0.4
T1216				S	Sg	08 13 45.7	+0.4
FDMO	**Fiordimonte**	**0.10**	**31**	⇑P	Pg	08 13 44.5	+0.3
FDMO				S	Sg	08 13 46.5	+0.3
FDMO				AML	AML		
	comp=E,101μm,0.2s						
FDMO				AML	AML		
	comp=N,130μm,0.2s						
MC2	**Monte Cornacci**	**0.13**	**106**	P	Pb	08 13 45.4	-0.5
T1245	**Castelsantange**	**0.16**	**126**	⇑P	Pg	08 13 45.4	+0.4
T1245				S	Sg	08 13 48.2	+0.7
T1245				AML	AML		
	comp=N,59μm,0.1s						
T1245				AML	AML		
	comp=E,63μm,0.9s						
T1245				AML	AML		
	comp=E,63μm,1.1s						
T1256	**Bolognola (MC)**	**0.16**	**69**	P	Pg	08 13 45.5	+0.4
T1256				S	Sg	08 13 48.6	+0.8
T1220	**Camerino, Fraz**	**0.17**	**18**	⇓P	Pg	08 13 45.6	+0.5
T1220				S	Sg	08 13 48.8	+1.0
T1220				AML	AML		
	comp=E,232μm,1.6s						
T1220				AML	AML		
	comp=N,224μm,0.2s						
T1220				AML	AML		
	comp=E,232μm,1.6s						
T1220				AML	AML		
	comp=N,224μm,0.2s						
T1212	**Cascia, Frazio**	**0.20**	**174**	⇓P	Pg	08 13 46.0	+0.5
T1212				S	Sg	08 13 49.6	+1.0
T1214	**Arquata del Tr**	**0.24**	**143**	⇓P	Pb	08 13 47.1	-0.5
T1214				S	Sg	08 13 50.4	+0.7
T1214				AML	AML		
	comp=E,47μm,1.6s						
T1214				AML	AML		
	comp=N,28μm,1.6s						
T1214				AML	AML		
	comp=E,47μm,0.4s						
T1214				AML	AML		
	comp=N,28μm,0.4s						
T1217	**Poggiodomo (PG**	**0.24**	**195**	P	Pg	08 13 46.9	+0.4
T1217				S	Sg	08 13 50.9	+1.1
T1217				AML	AML		
	comp=N,56μm,1.6s						
T1217				AML	AML		
	comp=E,60μm,1.6s						
T1217				AML	AML		
	comp=N,56μm,1.6s						
T1217				AML	AML		
	comp=N,56μm,0.4s						
T1217				AML	AML		
	comp=E,60μm,0.4s						
ASSB	**Assisi San Ben**	**0.28**	**290**	⇑P	Pg	08 13 47.4	+0.3
ASSB				S	Sb	08 13 52.0	-1.1
ASSB				AML	AML		
	comp=E,45μm,0.3s						
ASSB				AML	AML		
	comp=N,39μm,0.1s						

IDC ***22*** *08:28:48.0±0.6, 54°.13S×142°.08E, h0^{km}, mb4.5/9, mbtmp4.5/9, MS4.0/29, Error ellipse: s-maj=34.6km s-min=15.5km az=84.0*

NEIC ***22*** *08:28:49.3±1.2, 54°.16S±0°.04×141°.7E±0°.2, h10^{km}±1^{km}, mb4.8/20, Error ellipse: s-maj=20.9km s-min=8.0km az=273.0*

GCMT ***22*** *08:28:50.3±0.3, 54°.06S±0°.01×141°.94E±0°.04, h19^{km}±1^{km}, MW4.9/79, Moment Tensor Solution. s24,c25; s79,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.55±.18; M$_{\theta\theta}$2.80±.14; M$_{\phi\phi}$-2.25±.11; M$_{r\theta}$0.91±.24; M$_{\theta\phi}$0.25±.08; M$_{\phi r}$-0.83±.28; Best double couple: M$_0$2.84200×10^{16} NP1:φ$_s$310.00000°, δ83.00000°, λ-28.00000°. NP2: φ$_s$43.00000°, δ63.00000°, λ-173.00000°. Principal axes: T 3.0330, Plg14.0000°, Azm360.0000°; N -0.3860, Plg62.0000°, Azm118.0000°; P -2.6510, Plg24.0000°, Azm263.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 08:28:49.3±0.5, 54°.16S±0°.08×141°.8E±0°.1, h10^{km}, n101, σ0^{s}.93/67, mb4.7/20, MS4.0/32, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**10.04**	**99**	Pn	**Pn**	**08 31 14.2**	**+0.9**
TOO	**Toolangi**	**16.79**	**10**	P	**P**	**08 32 45.9**	**-0.7**
TOO	**Toolangi**	**16.79**	**10**	P	**P**	**08 32 47.0**	**+0.4**
MLZ	**Mavora Lakes**	**19.06**	**73**	P	**Pn**	**08 33 12.7**	**+0.4**
YNG	**Young**	**20.40**	**16**	P	**P**	**08 33 27.2**	**+1.0**
HTT	**Hallett**	**20.83**	**353**	P	**P**	**08 33 31.5**	**+0.6**
WHYH	**Whyalla**	**21.33**	**350**	P	**P**	**08 33 37.9**	**+1.7**
BBOO	**Buckleboo**	**21.73**	**347**	P	**P**	**08 33 41.4**	**+0.8**
BBOO				IAmb	IAmb	08 33 44.6	
	comp=Z,62nm,1.3s						
BBOO	**Buckleboo**	**21.73**	**347**	P	**P**	**08 33 42.5**	**+2.0**
RPZ	**Rata Peaks**	**21.73**	**73**	P	**P**	**08 33 39.2**	**-1.2**
	comp=Z,21nm,1.1s,baz=250,slow=10.0,SNR=4.3						
RPZ				LR	LR	08 40 34.1	
	comp=Z,932nm,18.6s,baz=228,slow=33						
	comp=Z,21nm,1.1s						
STKA	**Stephens Creek**	**22.28**	**360**	P	**P**	**08 33 45.9**	**-0.5**
	comp=Z,17nm,1.2s,baz=170,slow=10,SNR=7.3						
STKA				LR	LR	08 41 15.1	
	comp=Z,1μm,19.0s,baz=195,slow=34						
	comp=Z,17nm,1.2s						
STKA	**Stephens Creek**	**22.28**	**360**	P	**P**	**08 33 46.0**	**-0.5**
STKA	**Stephens Creek**	**22.28**	**360**	P	**P**	**08 33 47.6**	**+1.2**
AUDCS	**Dubbo College**	**22.46**	**15**	P	**P**	**08 33 49.3**	**+0.9**
	comp=Z,24nm,1.6s						
CMSA	**Cobar Meteorol**	**22.79**	**9**	P	**P**	**08 33 52.7**	**+0.9**
LCRK	**Leigh Creek**	**23.84**	**352**	P	**P**	**08 34 02.6**	**+0.2**
MULG	**Mulgathing**	**24.51**	**344**	P	**P**	**08 34 09.5**	**+0.9**
VNDA	**Vanda**	**24.55**	**170**	P	**P**	**08 34 08.4**	**-0.2**
	comp=Z,4.4nm,0.7s,baz=326,slow=9.4,SNR=27						
	comp=Z,4.4nm,0.7s						
VNDA	**Vanda**	**24.55**	**170**	P	**P**	**08 34 08.6**	**0.0**
VNDA				IAmb	IAmb	08 34 18.8	
	comp=Z,16nm,1.2s						
TKNZ	**Takaka Hill**	**24.55**	**70**	P	**P**	**08 34 07.8**	**-1.2**
ARMA	**Armidale**	**24.77**	**21**	P	**P**	**08 34 12.2**	**+1.1**

ARMA				IAmb	IAmb	08 34 16.1	
	comp=Z,14nm,1.1s						
ARMA	Armidale	24.77	21	P	P	08 34 11.6	+0.4
AULRC	Lightning Ridg	25.12	13	P	P	08 34 14.8	+0.6
	comp=Z,26nm,1.1s						
FORT	Forrest	25.38	332	P	P	08 34 16.4	0.0
FORT				IAmb	IAmb	08 34 23.4	
	comp=Z,28nm,1.1s						
SBA	Scott Base	25.39	168	P	P	08 34 16.4	+0.2
SBA				IAmb	IAmb	08 34 22.4	
	comp=Z,34nm,1.5s						
MRZ	Mangatainoka R	26.27	73	P	P	08 34 24.5	0.0
MRZ				IAmb	IAmb	08 34 48.9	
	comp=Z,36nm,1.2s						
INKA	Innaminka	26.41	358	P	P	08 34 26.0	+0.2
H01W1	Cape Leeuwin H	27.27	304	T	T	09 03 14.7	
	baz=142,slow=75,SNR=13						
H01W2	Cape Leeuwin H	27.27	304	T	T	09 03 15.2	
	baz=142,slow=75,SNR=12						
H01W3	Cape Leeuwin H	27.29	304	T	T	09 03 16.0	
	baz=142,slow=75,SNR=13						
NWAO	Narrogin (SRO)	27.45	311	LR	LR	08 43 07.4	
	comp=Z,121nm,21.9s,baz=65,slow=31						
QLP	Quilpie	27.61	5	P	P	08 34 37.7	+1.0
BKZ	Black Stump Fm	27.80	72	P	P	08 34 37.1	-1.2
BKZ				IAmb	IAmb	08 35 15.3	
	comp=Z,22nm,1.4s						
RMQ	Roma	28.13	13	P	P	08 34 42.2	+0.9
	comp=Z,12nm,0.8s						
URZ	Urewera	28.78	71	LR	LR	08 44 21.9	
	comp=Z,559nm,21.7s,baz=310,slow=33						
AS01	Alice Springs	31.02	346	P	P	08 35 06.3	-0.7
ASAR	Alice Springs	31.03	346	P	P	08 35 06.4	-0.6
	comp=Z,5.5nm,0.7s,baz=165,slow=10.0,SNR=74						
ASAR				PcP	PcP	08 38 02.9	+0.1
	comp=Z,1.2nm,0.7s,baz=149,slow=1.4,SNR=8.0						
	comp=Z,5.5nm,0.7s						
ASAR	Alice Springs	31.03	346	P	P	08 35 06.0	-1.0
AS31	Alice Springs	31.03	346	P	P	08 35 06.7	-0.3
QIS	Mount Isa	33.59	356	P	P	08 35 29.1	-0.4
CTA	Charters Tower	34.19	7	LR	LR	08 48 40.8	
	comp=Z,843nm,19.7s,baz=166,slow=35						
WB2	Warramunga Arr	34.63	348	P	P	08 35 36.8	-1.8
WRA	Warramunga Arr	34.63	348	P	P	08 35 37.4	-1.2
	comp=Z,14nm,0.9s,baz=170,slow=7.9,SNR=79						
WRA				PcP	PcP	08 38 12.8	+0.1
	comp=Z,2.0nm,0.7s,baz=186,slow=2.7,SNR=7.4						
WRA				LR	LR	08 47 53.2	
	comp=Z,315nm,21.8s,baz=193,slow=33						
	comp=Z,14nm,0.9s						
WRA	Warramunga Arr	34.63	348	P	P	08 35 37.3	-1.2
WRAB	Tennant Creek	34.64	348	P	P	08 35 37.9	-0.7
WRAB	Tennant Creek	34.64	348	P	P	08 35 37.8	-0.8
WB0	Warramunga Arr	34.80	348	P	P	08 35 38.9	-1.1
WB0				IAmb	IAmb	08 35 41.0	
	comp=Z,15nm,0.8s						
QSPA	South Pole Qui	35.95	180	P	P	08 35 49.9	+0.2
	comp=Z,10nm,0.8s,baz=340,slow=2.1,SNR=41						
	comp=Z,10nm,0.8s						
QSPA	South Pole Qui	35.95	180	P	P	08 35 49.8	+0.2
QSPA				IAmb	IAmb	08 35 56.4	
	comp=Z,16nm,0.9s						
MTSU	Mount Surprise	36.01	4	P	P	08 35 50.9	+0.4
MBWA	Marble Bar	36.97	324	P	P	08 35 57.3	-1.3
DZM	Mont Dzumac	37.07	40	*e*LR	LR	08 45 11.0	
	comp=Z,205nm,25.2s						
DZM	Mont Dzumac	37.07	40	LR	LR	08 47 11.9	
	comp=Z,98nm,20.8s,baz=209,slow=30						
KDU	Kakadu	42.03	346	P	P	08 36 40.5	-0.2
MTN	Manton Dam	42.07	344	P	P	08 36 41.2	+0.1
MTN	Manton Dam	42.07	344	P	P	08 36 41.2	+0.1
PMG	Port Moresby	44.84	8	LR	LR	08 54 56.4	
	comp=Z,286nm,18.5s,baz=156,slow=35						
MSVF	Nonsavu	45.84	52	LR	LR	08 52 51.0	
	comp=Z,114nm,18.1s,baz=225,slow=32						
HNR	Honiara	46.92	25	LR	LR	08 55 03.3	
	comp=Z,2µm,18.9s,baz=216,slow=34						
BELA	Belgrano 2	48.20	181	P	P	08 37 29.2	0.0
BELA				IAmb	IAmb	08 37 30.4	
	comp=Z,7.5nm,0.9s						
KRVT	Keravat (AS076	50.40	13	LR	LR	08 57 24.7	
	comp=Z,276nm,20.9s,baz=307,slow=34						
SNAA	Sanae	52.01	193	P	P	08 37 57.9	-0.3
	comp=Z,2.7nm,0.7s,baz=146,slow=14,SNR=5.6						
SNAA				LR	LR	08 59 55.3	
	comp=Z,789nm,18.6s,baz=126,slow=36						
	comp=Z,2.7nm,0.7s						
SNAA	Sanae	52.01	193	P	P	08 37 57.8	-0.4
RAR	Rarotonga	54.69	77	LR	LR	08 58 25.5	
	comp=Z,118nm,18.8s,baz=276,slow=33						
PMSA	Palmer Station	59.74	168	LR	LR	09 01 24.6	
	comp=Z,127nm,20.8s,baz=155,slow=33						
PPT2	Papeete2	63.44	83	*e*LR	LR	08 57 57.9	
	comp=Z,283nm,30.2s						
PPT	Papeete	63.45	83	LR	LR	08 59 53.0	
	comp=Z,55nm,20.4s,baz=216,slow=30						
GUMO	Guam	67.53	3	LR	LR	09 10 13.1	
	comp=Z,64nm,18.6s,baz=177,slow=37						
H08S2	Diego Garcia H	71.76	283	T	T	09 58 47.2	
	baz=159,slow=76,SNR=5.5						
H08S1	Diego Carcia H	71.77	283	T	T	09 58 47.7	
	baz=159,slow=76,SNR=6.1						
H08S3	Diego Garcia H	71.78	283	T	T	09 58 47.2	
	baz=159,slow=76,SNR=5.9						
TAOE	Nuku Hiva Isla	75.89	86	*e*LR	LR	09 03 45.4	
	comp=Z,190nm,23.6s						
RPN	Rapa Nui	78.63	121	LR	LR	09 08 06.4	
	comp=Z,29nm,20.8s,baz=198,slow=30						
PALK	Pallekele	79.61	298	LR	LR	09 10 54.6	
	comp=Z,69nm,18.1s,baz=246,slow=32						
SUR	Sutherland	79.92	227	LR	LR	09 11 44.1	
	comp=Z,76nm,19.0s,baz=161,slow=32						
CMAR	Chiang Mai Arr	81.10	319	P	P	08 41 06.7	+2.2
	comp=Z,1.0nm,0.3s,baz=174,slow=5.7,SNR=10						
CMAR				LR	LR	09 18 32.6	
	comp=Z,48nm,18.5s,baz=140,slow=37						
	comp=Z,1.0nm,0.3s						
BOSA	Boshof	81.11	233	LR	LR	09 11 07.7	
	comp=Z,53nm,19.1s,baz=168,slow=31						
JOW	Kunigami	81.50	348	LR	LR	09 16 54.7	
	comp=Z,40nm,19.2s,baz=312,slow=35						
LBTB	Lobatse	83.99	235	LR	LR	09 12 25.0	
	comp=Z,89nm,19.0s,baz=147,slow=31						
H03S1	Juan Fernandez	85.57	147	T	T	10 16 41.9	
	baz=201,slow=74,SNR=9.6						
H03S2	Juan Fernandez	85.57	147	T	T	10 16 38.2	
	baz=201,slow=74,SNR=10						
H03S3	Juan Fernandez	85.58	147	T	T	10 16 39.0	
	baz=201,slow=74,SNR=9.3						
JNU	Nakatsue	87.44	351	LR	LR	09 20 20.0	
	comp=Z,60nm,19.6s,baz=156,slow=35						
MJAR	Matsushiro Arr	90.39	357	P	P	08 41 50.7	+0.5
	comp=Z,2.3nm,0.8s,baz=169,slow=6.6,SNR=4.1						
MJAR				LR	LR	09 20 19.1	
	comp=Z,50nm,20.2s,baz=176,slow=34						
	comp=Z,2.3nm,0.8s						
LSZ	Lusaka	90.88	242	LR	LR	09 18 25.9	
	comp=Z,64nm,18.1s,baz=142,slow=33						
KSRS	Korea Array	92.03	349	LR	LR	09 23 57.0	
	comp=Z,41nm,19.1s,baz=170,slow=36						
ASAJ	Asahikawa	97.91	1	LR	LR	09 26 01.1	
	comp=Z,34nm,21.8s,baz=34,slow=35						
CPUP	Villa Florida	98.15	163	LR	LR	09 24 05.7	
	comp=Z,35nm,20.7s,baz=187,slow=34						
USRK	Ussuriysk Ar.	98.34	353	LR	LR	09 23 52.9	
	comp=Z,72nm,21.3s,baz=146,slow=34						
BVAR	Borovoye Array	122.09	317	PKP	PKPdf	08 47 42.1	-0.7
	comp=Z,0.3nm,0.5s,baz=104,slow=6.1,SNR=2.3						
NVAR	Mina Array Bea	125.46	72	PKP	PKiKP	08 47 50.3	-0.2
	comp=Z,0.4nm,0.7s,baz=216,slow=4.5,SNR=3.0						
ILAR	Eielson Array	130.55	32	PKP	PKPdf	08 47 58.7	0.0
	comp=Z,0.4nm,0.7s,baz=228,slow=2.3,SNR=3.5						
INK	Inuvik	136.94	33	PKP	PKPdf	08 48 10.2	-0.3
	comp=Z,0.8nm,0.8s,baz=324,slow=3.6,SNR=4.4						
YKA	Yellowknife Ar	141.32	46	PKP	PKPdf	08 48 16.8	-1.9
	comp=Z,0.4nm,0.7s,baz=234,slow=3.1,SNR=7.2						
FINES	FINESS Array B	146.29	309	PKPbc	PKPab	08 48 28.9	-0.6
	comp=Z,4.9nm,0.8s,baz=92,slow=6.1,SNR=8.0						
GERES	GERESS Array B	147.87	282	PKPbc	PKPbc	08 48 33.2	-0.4
	comp=Z,1.2nm,0.8s,baz=160,slow=3.1,SNR=6.7						
ARCES	ARCESS Array B	148.07	323	PKPbc	PKiKP	08 48 34.4	-0.8
	comp=Z,4.6nm,0.6s,baz=95,slow=4.0,SNR=19						
CLL	Collm	149.41	286	*e*PKPab	PKPab	08 48 44.0	+1.7
SPITS	Spitsbergen Ar	149.51	341	PKPbc	PKiKP	08 48 37.5	-0.5
	comp=Z,5.1nm,0.6s,baz=80,slow=9.4,SNR=5.3						
ESDC	Sonseca Array	152.80	252	PKPbc	PKiKP	08 48 47.5	+1.5
	comp=Z,1.1nm,0.8s,baz=184,slow=5.1,SNR=5.4						
DAG	Danmarks Havn	156.16	349	*i* P	PKPab	08 49 08.0	-2.0

IDC 22 08:32:04.7±1.8, 2°.33N×125°.22E, h0^{km}, mb3.5/4, mbtmp3.5/4, MS3.3/2, Error ellipse: s-maj=183.7km s-min=24.7km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	22.42	59	LR	LR	08 45 25.1	
	comp=Z,59nm,19.7s,baz=242,slow=36						
WRA	Warramunga Arr	23.87	158	P	P	08 37 19.9	-0.2
	0.5nm,0.5s,baz=337,slow=10,SNR=1.9						
	0.5nm,0.5s						
ASAR	Alice Springs	27.18	162	P	P	08 37 50.5	+0.3
	0.1nm,0.5s,baz=347,slow=7.4,SNR=1.3						
	0.1nm,0.5s						
MKAR	Makanchi Array	57.86	326	P	P	08 41 58.3	-0.1
	0.2nm,0.4s,baz=126,slow=7.9,SNR=2.1						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	62.12	328	P	P	08 42 27.4	-0.1
	0.6nm,0.2s,baz=125,slow=4.9,SNR=2.1						
	0.6nm,0.2s						
URZ	Urewera	62.57	136	LR	LR	09 09 58.8	
	comp=Z,24nm,19.6s,baz=357,slow=36						

NNC 22 08:33:41.8±5.0, 57°.95N×84°.06E, h0^{km}, mb3.7, mpv3.4, 5C-4D, Error ellipse: s-maj=37.7km s-min=37.3km az=108.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	4.03	174	⇑Pn	Pn	08 34 43.6	-1.1
	1.8nm,0.8s						
ZAA0				⇓Sn	Sn	08 35 34.4	+1.8
	14nm,0.9s						
KURK	Kurchatov	7.91	206	⇓Pn	Pn	08 35 39.6	+1.6
	3.6nm,1.1s						
KURK				⇑Sn	Sn	08 37 08.5	+0.4
	6.4nm,0.9s						
KURK				⇓Lg	Lg	08 37 53.2	
	27nm,1.1s						
KURBB	Kurchatov Arra	8.02	206	⇑Pn	Pn	08 35 40.7	+1.3
	3.0nm,0.7s						
KURBB				⇑Sn	Sn	08 37 11.0	+0.2
	12nm,1.1s						
KURBB				⇑Lg	Lg	08 37 58.9	
	35nm,0.9s						
MK31	Makanchi Array	11.22	186	⇓Pn	Pn	08 36 20.8	-2.6
	0.6nm,0.6s,baz=37,slow=13,SNR=9.3						
MAKZ	Makanchi	11.23	187	Pn	Pn	08 36 23.1	-0.4
	3.5nm,1.6s						

IDC 22 08:38:35.0±3.4, 54°.56N×83°.69E, h0^{km}, mbtmp2.7/1, ML2.4/1, Error ellipse: s-maj=23.2km s-min=14.1km az=152.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.90	132	I	I	08 42 28.2	
	baz=316,slow=309,SNR=3.4						
ZALV	Zalesovo Beam	0.90	132	Pg	Pg	08 38 52.8	+0.5
	1.0nm,0.3s,baz=310,slow=17,SNR=8.6						
ZALV				Lg	Lg	08 39 04.9	
	2.0nm,0.3s,baz=311,slow=25,SNR=11						
MKAR	Makanchi Array	7.83	187	Pn	Pn	08 40 29.9	-0.1
	0.1nm,0.3s,baz=11,slow=13,SNR=1.2						
	0.3nm,0.6s						

DJA 22 08:44:08.2±0.6, 2°S±3°×10°2E±°, h143^{km}±5^{km}, M4.2/8, mb5.2/1, mB5.4/1, MLv3.8/8, Mw(mB)4.8/1, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASI	Maura Aman, Be	0.93	159	P	Pn	08 44 32.8	+1.1
MASI				S	Sn	08 44 52.4	+2.7
SDSI	Sungai Dareh	1.41	340	P	Pn	08 44 37.0	+0.7
SDSI				S	Sn	08 44 58.5	+0.7
KSI	Kapahiang	1.53	154	S	Sn	08 45 01.7	+1.5
PPSI	Pulau Pagai	1.96	255	P	Pn	08 44 43.4	+1.0
PPSI				S	Sn	08 45 08.6	-0.1
PDSI	Padang	1.98	313	P	Pn	08 44 42.6	-0.1
PDSI				S	Sn	08 45 09.8	+0.6
MNAI	Manna	2.32	153	P	Pn	08 44 46.8	-0.1
MNAI				S	Sn	08 45 16.2	-0.4
PBSI	Pulau Batu	4.24	301	P	Pn	08 45 11.7	+0.2
GSI	Gunungsitoli	5.60	309	P	Pn	08 45 29.0	-0.6

IDC 22 08:49:56.9±326.0, 54°.59N×41°.01E, h0^{km}, Error ellipse: s-maj=141.0km s-min=64.9km az=140.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	3.03	316	I	I	09 07 10.0	
	0.3nm,0.9s,baz=133,slow=326,SNR=5.0						
I31KZ	AKTYUBINSK INF	11.19	105	I	I	09 56 10.0	
	0.1nm,0.5s,baz=296,slow=330,SNR=1.0						
I37NO	I37NO	17.78	333	I	I	10 44 00.0	
	baz=127,slow=326,SNR=1.4						
I46RU	ZALESOVO INFRA	25.29	73	I	I	11 27 40.0	
	baz=290,slow=317,SNR=2.5						

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*IDC **22** 08:54:22.6±3.2, 16°.93S×175°.05W, h283^{km}±30^{km}, mb3.3/3, mbtmp4.0/5, Error ellipse: s-maj=126.2km s-min=22.2km az=153.0*

ISC 22 08:54:24.2±1.7, 16°.6S±0°.6×175°.2W±0°.4, h300^{km}, n5, σ1^{s}18/7, mb3.4/3, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	4.21	52	P	Pn	08 55 32.9	0.0
	8.3nm,0.3s,baz=208,slow=4.5,SNR=13						
AFI				S	S	08 56 27.5	-0.4
	28nm,0.4s,baz=216,slow=17,SNR=8.5						
MSVF	Nonsavu	6.57	259	P	Pn	08 56 00.5	0.0
	8.9nm,0.8s,baz=90,slow=20,SNR=6.5						
STKA	Stephens Creek	41.98	241	P	P	09 01 45.7	-0.9
	1.2nm,0.5s,baz=76,slow=11,SNR=3.8						
	1.2nm,0.5s						
WRA	Warramunga Arr	47.92	258	P	P	09 02 33.2	-0.1
	0.6nm,0.7s,baz=96,slow=7.2,SNR=12						
	0.6nm,0.7s						
ASAR	Alice Springs	48.13	253	P	P	09 02 34.6	-0.2
	2.8nm,0.6s,baz=89,slow=8.4,SNR=68						
ASAR				PcP	PcP	09 03 59.5	+2.1
	0.2nm,0.6s,baz=89,slow=4.7,SNR=1.5						
	2.8nm,0.6s						

IDC 22 08:55:15.8±2.4, 54°.26N×86°.03E, h0^{km}, mbtmp3.4/2, ML3.1/2, Error ellipse: s-maj=18.4km s-min=11.0km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.78	247	I	I	08 59 58.6	
	baz=66,slow=330,SNR=1.9						
ZALV	Zalesovo Beam	0.78	247	Pg	Pg	08 55 29.7	-0.9
	1.9nm,0.3s,baz=63,slow=17,SNR=13						
ZALV				Lg	Lg	08 55 41.8	
	7.9nm,0.3s,baz=66,slow=28,SNR=12						
KURBB	Kurchatov Arra	5.85	235	Pn	Pn	08 56 45.0	+1.3
	0.2nm,0.3s,baz=52,slow=14,SNR=9.6						
	1.4nm,0.2s						
MKAR	Makanchi Array	7.84	199	Pn	Pn	08 57 11.7	+0.6
	0.6nm,0.3s,baz=22,slow=14,SNR=15						
MKAR				Lg	Lg	08 59 23.0	
	baz=26,slow=30,SNR=3.1						
	0.8nm,0.3s						

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*NERS **22** 09:04:47.2±0.0, 65°.37N×168°.27W, h0^{km}*

*NEIC **22** 09:04:52.5±1.7, 65°.23N±0°.06×169°.2W±0°.1, h10^{km}±1^{km}, mb4.2/15, ML4.3(AEIC), Error ellipse: s-maj=10.2km s-min=7.8km az=330.0*

*IDC **22** 09:04:52.2±0.7, 65°.40N×169°.08W, h0^{km}, mb4.0/17, mbtmp4.0/20, ML3.6/3, MS3.3/8, Error ellipse: s-maj=22.1km s-min=12.5km az=21.0*

*MOS **22** 09:04:52.2±0.9, 65°.18N×169°.05W, h15^{km}, mb4.6/14, MS3.7/8, Error ellipse: s-maj=23.7km s-min=10.6km az=113.9*

*AEIC **22** 09:04:53.5±1.7, 65°.20N±0°.07×169°.03W±0°.09, h21^{km}±5^{km}, Error ellipse: s-maj=10.8km s-min=2.5km az=150.0*

ISC 22 09:04:52.9±0.4, 65°.16N±0°.05×168°.90W±0°.03, h10^{km}, n267, σ1^{s}35/272, mb4.4/39, MS3.4/8, 12C, Bering Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNA	Tin City	0.58	45		Pb	09 05 05.2	+0.2
TNA				Sg	Sb	09 05 14.1	+0.8
TNA	Tin City	0.58	45	P	Pb	09 05 05.6	+0.6
	baz=238,SNR=1000						
ANM	Nome	1.62	110		Pb	09 05 23.2	+0.5
ANM				Sn	Sg	09 05 44.7	-0.1
ANM	Nome	1.62	110	P	Pn	09 05 21.3	-0.1
	baz=294,SNR=653						
RDOG	Red Dog Mine	3.77	37		Pn	09 05 51.0	0.0
RDOG	Red Dog Mine	3.77	37	P	Pn	09 05 50.7	-0.2
	baz=224						
GCSA	Galena City Sc	5.13	89		Pn	09 06 10.2	+0.6
GCSA					Sn	09 07 07.3	-1.4
GCSA	Galena City Sc	5.13	89	P	Pn	09 06 10.1	+0.6
	baz=281,SNR=23						
ANDR	Anadyr'	5.80	272	*e*P	Pn	09 06 20.5	+1.7
ANDR				*e*Pg	Pg	09 06 39.6	-4.1
ANDR				Pgmax		09 06 51.2	
	70nm,0.5s						
ANDR				*e*Sg	Sg	09 07 58.8	+0.1
ANDR				Sgmax		09 08 07.3	
	350nm,0.9s						
TTA	Tatalina	6.08	106		Pn	09 06 24.2	+1.4
TTA	Tatalina	6.08	106	P	Pn	09 06 24.5	+1.8
	baz=298,SNR=24						
IMAR	Indian Mountai	6.34	76	Pn	Pn	09 06 27.1	+0.8
G21K	Allakaket	6.46	71	P	Pn	09 06 28.1	+0.1
	baz=266						
F21K	Alatna River	6.58	65	P	Pn	09 06 29.5	+0.1
	baz=260						
N16K	Nishlik Lake	6.60	131	P	Pn	09 06 30.6	+0.8
	baz=320						
K20K	Telida	6.71	99	Pn	Pn	09 06 32.2	+0.9
K20K	Telida	6.71	99	P	Pn	09 06 32.1	+0.9
	baz=293,SNR=16						
H21K	Melozitna Rive	6.74	78	P	Pn	09 06 32.4	+0.7
	baz=274						
L19K	White Mountain	6.92	109	Pn	Pn	09 06 35.8	+1.6
L19K	White Mountain	6.92	109	P	Pn	09 06 35.7	+1.6
	baz=302						
I21K	Tanana	7.12	82		Pn	09 06 37.4	+0.5
I21K	Tanana	7.12	82	P	Pn	09 06 37.4	+0.5
	baz=278,SNR=8.6						
F22K	John River	7.13	63	P	Pn	09 06 37.9	+0.8
	baz=259						
L20K	Farewell, AK	7.16	105	P	Pn	09 06 38.8	+1.3
	baz=299						
M19K	Big River Lodg	7.25	110		Pn	09 06 40.7	+1.9
M19K	Big River Lodg	7.25	110	P	Pn	09 06 40.3	+1.6
	baz=303						
CHUM	Lake Minchumin	7.26	93		Pn	09 06 39.7	+0.8
CHUM	Lake Minchumin	7.26	93	P	Pn	09 06 39.9	+1.0
	baz=288,SNR=12						
SVW2	Sparrevohn	7.27	118		Pn	09 06 41.2	+2.2
G22K	Bettles	7.29	68	P	Pn	09 06 39.8	+0.5
	baz=265,SNR=9.0						
E22K	Anaktuvuk Pass	7.41	59	P	Pn	09 06 42.2	+1.2
	baz=255						
N18K	Kilae Creek	7.44	121		Pn	09 06 43.3	+2.0
N18K	Kilae Creek	7.44	121	P	Pn	09 06 42.9	+1.7
	baz=313						
O16K	Kokwok River B	7.50	133	P	Pn	09 06 43.1	+1.0
	baz=322						
CAST	Castle Rocks	7.51	96		Pn	09 06 43.6	+1.2
CAST	Castle Rocks	7.51	96	P	Pn	09 06 43.4	+1.0
	baz=291,SNR=11						
MLY	Manley	7.67	83		Pn	09 06 44.5	0.0
MLY	Manley	7.67	83	P	Pn	09 06 44.4	0.0
	baz=280,SNR=11						
PPLA	Purkeypile	7.67	100		Pn	09 06 46.0	+1.3
PPLA	Purkeypile	7.67	100	P	Pn	09 06 46.1	+1.4
	baz=295						
A21K	Barrow	7.68	31		Pn	09 06 44.1	-0.3
A21K	Barrow	7.68	31	P	Pn	09 06 44.0	-0.5
	baz=223,SNR=9.6						
O17K	Koliganek Bris	7.68	129	P	Pn	09 06 45.9	+1.4
	baz=320						
BPAW	Bear Paw Mtn.	7.76	90		Pn	09 06 46.4	+0.6
BPAW	Bear Paw Mtn.	7.76	90	P	Pn	09 06 46.7	+0.9
	baz=286,SNR=8.5						
M20K	Styx River	7.77	108		Pn	09 06 48.3	+2.4
M20K	Styx River	7.77	108	P	Pn	09 06 47.9	+2.0
	baz=302						
COLD	Coldfoot	7.84	66		Pn	09 06 46.6	-0.2
COLD	Coldfoot	7.84	66	P	Pn	09 06 46.8	+0.1
	baz=264						
G23K	Bananza Creek	7.87	70	P	Pn	09 06 47.3	+0.1
	baz=268						
N19K	Bonanza Creek	7.87	117		Pn	09 06 48.9	+1.6
N19K	Bonanza Creek	7.87	117	P	Pn	09 06 49.3	+2.0
	baz=310						
KTH	Kantishna Hill	7.96	93		Pn	09 06 49.6	+1.2
P16K	Nushagak River	7.99	135	P	Pn	09 06 49.9	+1.2
	baz=325						
SPIA	Saint Paul Isl	8.03	185	Pn	Pn	09 06 49.4	0.0
SPIA	Saint Paul Isl	8.03	185	P	Pn	09 06 48.5	-0.9
	baz=3.2						
D23K	Nanushuk River	8.06	54	P	Pn	09 06 50.7	+0.9
	baz=251						
H23K	Yukon River	8.07	76		Pn	09 06 50.7	+0.8
H23K	Yukon River	8.07	76	P	Pn	09 06 50.8	+0.8
	baz=275						
E23K	Chandalar	8.19	61	P	Pn	09 06 53.8	+2.1
	baz=259,SNR=21						
I23K	Minto, Yukon-K	8.22	81		Pn	09 06 52.7	+0.6
I23K	Minto, Yukon-K	8.22	81	P	Pn	09 06 52.2	+0.2
	baz=280,SNR=5.1						
O18K	Koktuh Hills	8.26	124	Pn	Pn	09 06 53.8	+1.2
O18K	Koktuh Hills	8.26	124	P	Pn	09 06 53.7	+1.2
	baz=316						
TRF	Thorofare Moun	8.26	93		Pn	09 06 53.8	+1.1
TRF	Thorofare Moun	8.26	93	P	Pn	09 06 54.1	+1.4
	baz=291,SNR=8.0						
O19K	Port Alsworth	8.34	120	Pn	Pn	09 06 55.2	+1.6
O19K	Port Alsworth	8.34	120	P	Pn	09 06 55.5	+1.9
	baz=313						
SKT	Skwentna	8.37	104		Pn	09 06 56.3	+2.3
SKT	Skwentna	8.37	104	P	Pn	09 06 56.5	+2.5
	baz=300,SNR=8.9						
NEA2	Nenana	8.45	85		Pn	09 06 55.4	+0.3
NEA2	Nenana	8.45	85	P	Pn	09 06 55.5	+0.3
	baz=283,SNR=13						
SPCR	Spurr Chakacha	8.51	110	P	Pn	09 06 58.4	+2.3
	baz=305,SNR=5.2						
SPU	Mount Spurr	8.59	110		Pn	09 06 59.6	+2.6
P18K	Big Mountain,	8.59	126	P	Pn	09 06 58.2	+1.0
	baz=318						
E24K	Your Creek	8.61	61	P	Pn	09 06 59.2	+1.8
	baz=261						
Q16K	King Salmon	8.68	133	P	Pn	09 06 59.6	+1.4
	baz=324						
MDM	Murphy Dome	8.73	82		Pn	09 06 59.6	+0.6
MCK	McKinley	8.74	90		Pn	09 06 59.8	+0.7
MCK	McKinley	8.74	90	P	Pn	09 06 59.9	+0.8
	baz=289,SNR=7.2						
RSO	Redoubt South	8.75	115	Pn	Pn	09 07 01.4	+2.0
H24K	Noodor Dome	8.75	76		Pn	09 06 59.4	+0.1
H24K	Noodor Dome	8.75	76	P	Pn	09 06 59.2	-0.2
	baz=276						
F24K	Squaw Lake	8.76	65	P	Pn	09 07 00.2	+0.8
	baz=265						
G24K	Hadweenzic Riv	8.88	70	P	Pn	09 07 00.7	-0.3
	baz=271						
RND	Reindeer	8.88	92		Pn	09 07 02.1	+1.0
WRH	Wood River Hil	8.89	85	Pn	Pn	09 07 01.1	-0.1
TCOL	CIGO, UAF Yank	8.90	82	P	Pn	09 07 01.9	+0.6
	baz=282						
COLA	College	8.90	82		Pn	09 07 02.1	+0.7
COLA	College	8.90	82	*i* P	Pn	09 07 02.0	+0.7
COLA	College	8.90	82	P	Pn	09 07 01.8	+0.4
	baz=282						
SUA	Susitna One	8.96	106	Pn	Pn	09 07 04.8	+2.6
SUA	Susitna One	8.96	106	P	Pn	09 07 04.9	+2.8
	baz=303,SNR=10						
CCB	Clear Creek Bu	8.97	84		Pn	09 07 02.2	0.0
C24K	Franklin Bluff	8.98	50	P	Pn	09 07 02.3	-0.1
	baz=250						

POKR	Poker Plat Res	9.03	80	P	Pn	09 07 03.2	+0.1
	baz=281						
P19K	Oil Pt	9.11	120	P	Pn	09 07 06.6	+2.4
	baz=314						
Q18K	Katmai Hardscr	9.23	129	P	Pn	09 07 07.2	+1.2
	baz=321						
Q17K	Contact Creek	9.25	132	P	Pn	09 07 07.2	+1.0
	baz=324,SNR=5.6						
IL31		9.33	82		Pn	09 07 07.5	+0.4
ILAR	Eielson Array	9.33	82	Pn	Pn	09 07 07.1	-0.1
	0.6nm,0.3s,baz=276,slow=14,SNR=70						
ILAR				Sn	Sn	09 08 47.2	-4.8
	2.8nm,0.3s,baz=291,slow=21,SNR=19						
ILAR				Lg	Lg	09 09 47.2	
	baz=268,slow=31						
ILAR				LR	LR	09 10 42.1	
	comp=Z,91nm,19.7s,baz=296,slow=37						
ILAR	Eielson Array	9.33	82	Pn	Pn	09 07 07.4	+0.2
R16K	Pilot Point	9.34	139	P	Pn	09 07 08.9	+1.6
	baz=329						
HDA	Harding Lake	9.39	85		Pn	09 07 08.4	+0.4
HDA	Harding Lake	9.39	85	P	Pn	09 07 08.3	+0.4
	baz=285						
G25K	Bearman Lake	9.42	70	P	Pn	09 07 09.9	+1.5
	baz=271						
GHO	Glory Hole Cre	9.54	102		Pn	09 07 12.6	+2.4
PMR	Palmer	9.55	103	P	Pn	09 07 12.4	+2.2
	baz=301						
RC01	Rabbit Creek A	9.57	106	P	Pn	09 07 13.1	+2.6
	baz=304						
R17K	Ugashik Creek	9.62	136	P	Pn	09 07 11.9	+0.8
	baz=327						
F25K	Christian Rive	9.62	65	P	Pn	09 07 11.5	+0.2
	baz=267,SNR=10						
D25K	Kavik River	9.64	54	P	Pn	09 07 11.5	0.0
	baz=256						
E25K	Arctic Village	9.70	62	P	Pn	09 07 13.5	+1.2
	baz=264,SNR=13						
PRP	Porcupine Dome	9.76	77	Pn	Pn	09 07 13.3	+0.1
PRP	Porcupine Dome	9.76	77	P	Pn	09 07 14.0	+0.8
	baz=279,SNR=9.1						
SML	Sawmill	9.77	101	Pn	Pn	09 07 14.8	+1.5
SML	Sawmill	9.77	101	P	Pn	09 07 16.0	+2.7
	baz=299,SNR=5.7						
KNK	Knik Glacier	9.92	103		Pn	09 07 17.1	+1.8
KNK	Knik Glacier	9.92	103	P	Pn	09 07 18.4	+3.1
	baz=301						
CNPM	China Poot	9.94	116	Pn	Pn	09 07 16.1	+0.5
BMAR	Burnt Mountain	10.03	66	Pn	Pn	09 07 17.6	+0.9
M23K	Glacier View	10.03	100	P	Pn	09 07 18.7	+1.9
	baz=299						
SCM	Sheep Creek Mo	10.18	99	P	Pn	09 07 22.0	+3.2
	baz=299						
F26K	Sheenjek River	10.20	64	P	Pn	09 07 20.5	+1.4
	baz=268						
BILL	Bilibino	10.25	297	*e*P	Pn	09 07 18.7	-1.1
BILL	Bilibino	10.25	297	⇑*e*P	Pn	09 07 19.0	-0.8
BILL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BILL				MLR	MLR		
	comp=Z,172nm,12.0s						
C26K	Camden Bay	10.29	52	P	Pn	09 07 21.2	+0.9
	baz=255,SNR=50						
G26K	Porcupine Rive	10.34	69	P	Pn	09 07 21.7	+0.8
	baz=272						
RIDG	Independent Ri	10.46	87	P	Pn	09 07 23.8	+1.0
	baz=289						
PAX	Paxson	10.47	91		Pn	09 07 25.6	+2.7
PAX	Paxson	10.47	91	P	Pn	09 07 25.6	+2.7
	baz=293						
M24K	Tolsona, Glenn	10.53	96		Pn	09 07 25.6	+1.8
M24K	Tolsona, Glenn	10.53	96	P	Pn	09 07 26.2	+2.5
	baz=297						
C27K	Jago River	10.62	54	P	Pn	09 07 25.6	+0.7
	baz=258						
KDAK	Kodiak Island	10.72	126	Pn	Pn	09 07 28.4	+2.3
	comp=Z,1.1nm,0.3s,baz=9.0,slow=6.4,SNR=17						
KDAK				Sn	Sn	09 09 23.8	-2.2
	comp=Z,0.2nm,0.3s,baz=340,slow=22,SNR=2.1						
	comp=Z,10nm,0.9s						
KDAK	Kodiak Island	10.72	126	*i* P	Pn	09 07 29.4	+3.2
SCRK	Sand Creek	10.75	85	Pn	Pn	09 07 27.2	+0.5
SCRK	Sand Creek	10.75	85	P	Pn	09 07 28.7	+1.9
	baz=288						
I26K	Coal Creek Min	10.77	77	P	Pn	09 07 28.0	+1.0
	baz=282						
DOT	Dot Lake	10.82	87		Pn	09 07 28.1	+0.4
KLU	Klutina	10.93	99	P	Pn	09 07 31.4	+2.2
	baz=300						
G27K	Doyon Strip	11.18	69	P	Pn	09 07 34.5	+2.0
	baz=275						
E27K	Coleen River	11.19	62	P	Pn	09 07 33.3	+0.7
	baz=268,SNR=8.8						
H27K	Steamboat Moun	11.29	72	P	Pn	09 07 35.7	+1.6
	baz=278						
L26K	Log Cabin Wild	11.35	89	P	Pn	09 07 36.5	+1.7
	baz=293						
I27K	Kandik River	11.35	75	P	Pn	09 07 36.7	+1.8
	baz=281						
N25K	Chitina, Valde	11.43	97	Pn	Pn	09 07 38.5	+2.5
K27K	Chicken	11.54	83	P	Pn	09 07 38.8	+1.4
	baz=288						
EGAK	Eagle	11.71	79		Pn	09 07 40.0	+0.2
EGAK	Eagle	11.71	79	P	Pn	09 07 41.4	+1.6
	baz=285,SNR=8.0						
M26K	Nabesna, AK	11.74	92	P	Pn	09 07 43.3	+3.0
	baz=295						
L27K	Beaver Creek,	11.97	88	P	Pn	09 07 43.7	+0.4
	baz=292						
MCARA	McCarthy VSAT	12.20	96	P	Pn	09 07 48.5	+2.1
	baz=300						
M27K	Edge Creek, AK	12.23	91	P	Pn	09 07 48.2	+1.2
	baz=296						
BVCY	Beaver Creek	12.64	90	P	Pn	09 07 52.8	+0.3
	baz=295						
DAWY	Dawson	12.65	81	Pn	Pn	09 07 53.6	+1.0
DAWY	Dawson	12.65	81	P	Pn	09 07 53.6	+1.0
	baz=289,SNR=6.3						
I29M	Ogilvie Camp,	12.75	75	P	Pn	09 07 55.6	+1.6
	baz=284						
YUK3	Moose Creek	13.09	92	P	Pn	09 07 58.9	+0.1
	baz=298						
EPYK	Eagle Plains	13.19	70	P	Pn	09 08 00.6	+0.6
	baz=280						
G30M	tAoh Zraii Nji	13.30	67	P	Pn	09 08 02.6	+1.2
	baz=278						
K29M	Barlow Dome	13.51	81	P	Pn	09 08 05.0	+0.7
	baz=290						
L29M	L29M	13.51	85	P	Pn	09 08 05.7	+1.3
	baz=293						
YUK8	Steele Glacier	13.62	93	P	Pn	09 08 06.4	+0.3
	baz=300						
M29M	Somme Creek	13.64	87	P	Pn	09 08 07.3	+1.1
	baz=295						
INK	Inuvik	14.19	61	Pn	Pn	09 08 12.2	-1.4
	comp=Z,0.3nm,0.3s,baz=278,slow=15,SNR=15						
INK				LR	LR	09 14 19.4	
	comp=Z,93nm,18.4s,baz=320,slow=40						
	comp=Z,2.3nm,0.7s						
INK	Inuvik	14.19	61	Pn	Pn	09 08 13.4	-0.2
INK	Inuvik	14.19	61	P	Pn	09 08 14.5	+1.0
	baz=274						
F31M	Tsiigehtchic	14.20	65	P	Pn	09 08 14.4	+0.8
	baz=278						
M30M	Minto, Yukon	14.29	86	P	Pn	09 08 15.2	+0.2
	baz=295						
N30M	Aishikik Lake	14.66	90	P	Pn	09 08 20.8	+0.7
	baz=299						
HYT	Haines Junctio	14.80	92	P	Pn	09 08 22.2	+0.1
	baz=301						
SHEM	Shemya Is, Ala	15.16	223	LR	LR	09 14 41.1	
	comp=Z,78nm,18.1s,baz=78,slow=38						
N31M	Braeburn, Yuko	15.21	89	P	Pn	09 08 27.7	+0.3
	baz=299						
P30M	Million Dollar	15.40	94	P	Pn	09 08 30.0	0.0
	baz=303						
O30N	Mendenhall	15.43	91	P	Pn	09 08 30.0	-0.3
	baz=301						
M31M	Drury Creek, Y	15.46	85	P	Pn	09 08 28.0	-2.7
	baz=296						
OMS	Omsukchan	15.67	277	*e*S	Sg	09 13 17.9	
FARO	Faro, Yukon	15.89	84	P	Pn	09 08 36.4	+0.1
	baz=296						
N32M	Quiet Lake	16.51	87	P	Pn	09 08 44.6	+0.4
	baz=300						
SEY	Seymchan	16.91	280	*e*P	Pn	09 08 48.4	-0.8
SEY				*e*S	Sg	09 14 10.6	
SEY	Seymchan	16.91	280	*i* P	Pn	09 08 48.7	-0.5
SEY				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SEY				MLR	MLR		
	comp=Z,116nm,14.0s						
A36M	Sachs Harbour	16.96	47	Pn	Pn	09 08 48.4	-1.4
A36M				IAmb	IAmb	09 08 54.4	
	comp=Z,18nm,0.9s						
A36M	Sachs Harbour	16.96	47	P	Pn	09 08 48.6	-1.2
	baz=269,SNR=19						
S31K	Pelican	16.97	100	P	Pn	09 08 49.0	-1.0
	baz=309						
P33M	Teslin, Yukon	17.10	90	P	P	09 08 53.6	+0.1
P33M	Teslin, Yukon	17.10	90	P	Pn	09 08 51.1	-0.6
	baz=302						
C36M	Paulatuk	17.50	56	P	Pn	09 08 56.2	-0.3
C36M	Paulatuk	17.50	56	P	Pn	09 08 56.5	0.0
	baz=278,SNR=10						
JIS	Juneau Island	17.55	97	P	P	09 08 58.1	-0.1
JIS				IAmb	IAmb	09 09 11.8	
	comp=Z,14nm,1.2s						
Q32M	Nakina River	18.03	93	P	Pn	09 09 02.8	-0.7
	baz=306						
SUUS	Susuman	18.72	283	*e*P	Pn	09 09 14.1	+2.5
SUUS				Pmax		09 09 14.1	
SUUS				*e*S	Sg	09 14 58.2	
WTLY	Watson Lake, Y	18.85	87	P	Pn	09 09 13.2	0.0
WTLY				IAmb	IAmb	09 09 22.6	
	comp=Z,9.3nm,1.2s						
WTLY	Watson Lake, Y	18.85	87	P	Pn	09 09 13.6	+0.3
	baz=303						
S34M	Telegraph Cree	19.14	94	P	P	09 09 13.9	-1.9
	baz=308						
MA2	Magadan	19.25	272	*e*P	P	09 09 16.4	-0.6
MA2	Magadan	19.25	272	*i* P	P	09 09 16.4	-0.6
MA2				pmax	pmax		
	comp=Z,14nm,1.3s						
MA2				MLR	MLR		
	comp=Z,61nm,15.0s						
DLBC	Dease Lake	19.29	92	P	P	09 09 18.1	+0.6
	comp=Z,0.1nm,0.3s,baz=312,slow=20,SNR=5.3						
	comp=Z,3.2nm,1.1s						
DLBC	Dease Lake	19.29	92	P	P	09 09 15.9	-1.6
	baz=307						
WRAK	Wrangell Islan	19.59	99	P	P	09 09 19.2	-1.5
	baz=312						
LIRD	Liard River Hi	20.38	86	P	P	09 09 29.1	-0.2
	baz=305						
TIXI	Tiksi	22.77	314	*ce*P	P	09 09 55.6	+0.7
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TIXI				MLR	MLR		
	comp=Z,34nm,15.0s						
YKA	Yellowknife Ar	23.48	71	P	P	09 10 02.9	+0.7
	comp=Z,1.1nm,0.9s,baz=298,slow=8.3,SNR=20						
YKA				PcP	PcP	09 13 47.0	-0.4
	comp=Z,0.1nm,0.5s,baz=294,slow=2.2,SNR=3.9						
	comp=Z,1.1nm,0.9s						
YKA	Yellowknife Ar	23.48	71	*i* P	P	09 10 03.5	+1.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
RES	Resolute Bay	25.21	37	P	P	09 10 18.4	+0.3
	comp=Z,4.1nm,1.1s,baz=293,slow=11,SNR=7.5						
RES				LR	LR	09 22 33.1	
	comp=Z,68nm,18.1s,baz=346,slow=42						
	comp=Z,4.1nm,1.1s						
RES	Resolute Bay	25.21	37	P	P	09 10 18.6	+0.4
RES				IAmb	IAmb	09 10 21.2	
	comp=Z,5.2nm,1.2s						
YAK	Yakutsk	26.54	292	*e*P	P	09 10 32.0	+1.8
YAK				*e*		09 13 57.9	
YAK				*e*S	S	09 15 07.0	+2.9
YAK				*e*SS	SnSn	09 16 09.8	+4.3
YAK				*e*		09 21 28.2	
YAK				pmax	pmax		
	comp=Z,21nm,0.9s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				smax	smax		
	comp=E,95nm,4.5s						
YAK				smax	smax		
	comp=N,23nm,2.1s						
YAK				MLR	MLR		
	comp=Z,80nm,8.0s						
YSS	Yuzh-Sakhalins	31.50	258	*i* P	P	09 11 15.2	+0.8
YSS				pmax	pmax		
	comp=Z,16nm,1.2s						
YSS				MLR	MLR		
	comp=Z,79nm,21.0s						
KLR	Kul'dur	34.35	272	*i* P	P	09 11 37.9	-1.4
KLR				pmax	pmax		
	comp=Z,10.0nm,2.3s						
KLR				MLR	MLR		
	comp=Z,75nm,5.0s						
MSO	Missoula	34.36	95	P	P	09 11 40.7	+1.1
	baz=322						
HRY	Holter Researc	35.34	93	P	P	09 11 49.4	+1.3
NRIK	Noril'sk	35.69	324	P	P	09 11 51.0	+0.4
NRIK				IAmb	IAmb	09 11 52.7	
	comp=Z,5.7nm,1.0s						
NRIK	Noril'sk	35.69	324	*ce*P	P	09 11 50.5	-0.1
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NRIK				MLR	MLR		
	comp=Z,42nm,18.0s						
BOZ	Bozeman (W)	36.31	94	P	P	09 11 57.5	+1.0
BOZ				IAmb	IAmb	09 12 18.8	
	comp=Z,2.9nm,1.2s						
BOZ	Bozeman (W)	36.31	94	P	P	09 11 56.6	+0.1
	baz=323						
SPITS	Spitsbergen Ar	36.86	358	P	P	09 11 59.1	-1.5
	comp=Z,9.0nm,1.0s,baz=343,slow=1.5,SNR=4.9						
	comp=Z,9.0nm,1.0s						
USA0B	Ussuriysk Arra	38.21	266	*i* P	P	09 12 11.7	-0.7
FRB	Frobisher Bay	38.92	44	LR	LR	09 31 26.4	
	comp=Z,80nm,18.2s,baz=315,slow=41						
SPUT	South Promonto	39.47	99	P	P	09 12 24.9	+1.7
SPUT				IAmb	IAmb	09 12 39.5	
	comp=Z,5.0nm,1.0s						
PDAR	Pinedale Array	39.48	95	P	P	09 12 24.4	+1.1
	comp=Z,0.7nm,0.7s,baz=322,slow=3.7,SNR=6.5						
	comp=Z,0.7nm,0.7s						
PDAR	Pinedale Array	39.48	95	P	P	09 12 24.1	+0.8
NVAR	Mina Array Bea	39.50	107	P	P	09 12 25.4	+2.0
	comp=Z,0.4nm,0.7s,baz=336,slow=5.9,SNR=3.2						
	comp=Z,0.4nm,0.7s						
BSUT	Blindstream Ca	40.82	98	P	P	09 12 35.9	+1.3
MJAR	Matsushiro Arr	42.05	254	P	P	09 12 44.6	+0.3
	comp=Z,1.5nm,0.7s,baz=25,slow=9.4,SNR=2.7						
	comp=Z,1.5nm,0.7s						
ARCES	ARCESS Array B	45.21	353	P	P	09 13 08.6	-0.8
	comp=Z,1.8nm,0.7s,baz=14,slow=5.5,SNR=4.7						
	comp=Z,1.8nm,0.7s						
ULN	Ulaanbaatar	45.60	290	*ce*P	P	09 13 12.9	0.0
ULN				pmax	pmax		
	comp=Z,5.0nm,2.5s						
ULN				MLR	MLR		
	comp=Z,36nm,5.0s						
SONM	Songino Array	45.89	291	P	P	09 13 15.2	+0.1
	comp=Z,1.2nm,0.7s,baz=31,slow=8.2,SNR=5.5						
	comp=Z,1.2nm,0.7s						
SCHQ	Schefferville	46.52	51	P	P	09 13 20.3	+0.5
	comp=Z,5.5nm,1.0s,baz=343,slow=6.3,SNR=4.3						
	comp=Z,5.5nm,1.0s						
JNU	Nakatsue	48.01	259	LR	LR	09 34 58.4	
	comp=Z,44nm,18.1s,baz=118,slow=38						
ZAA0	Zalesovo Array	48.62	311	P	P	09 13 36.0	-0.1
ZAA0				IAmb	IAmb	09 13 37.3	
	comp=Z,2.9nm,0.8s						
ZALV	Zalesovo Beam	48.62	311	P	P	09 13 35.3	-0.9
	comp=Z,2.3nm,0.7s,baz=28,slow=6.7,SNR=10.0						
	comp=Z,2.3nm,0.7s						
ZALV	Zalesovo Beam	48.62	311	P	P	09 13 35.8	-0.3
ZALV	Zalesovo Beam	48.62	311	*i* P	P	09 13 36.3	+0.2
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KAN14	Manchester OK	49.22	89	P	P	09 13 40.5	-0.5
OK032	Salt Plains WL	49.25	89	P	P	09 13 41.6	+0.4
HHC	Hu-ho-hao-te	49.55	281	*e*P	P	09 13 41.3	-2.3
HHC				pmax	pmax		
	comp=Z,30nm,0.6s						
HHC				pmax	pmax		
	comp=Z,230nm,5.5s						
BTO	Baotou	50.39	283	*e*P	P	09 13 59.9	+10
BTO				pmax	pmax		
	comp=Z,16nm,0.6s						
BTO				pmax	pmax		
	comp=Z,460nm,4.4s						
CLNB	Carlsbad	50.75	97	P	P	09 13 53.3	+0.5
DGZ	Jazzator, Alta	51.36	306	*i* P	P	09 13 57.0	-0.2
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
DGZ				MLR	MLR		
	comp=Z,36nm,6.0s						
FINES	FINESS Array B	53.22	351	P	P	09 14 10.0	-0.6
	comp=Z,6.9nm,1.1s,baz=0.0,slow=7.6,SNR=9.3						
	comp=Z,6.9nm,1.1s						
FINES	FINESS Array B	53.22	351	*ce*P	P	09 14 11.1	+0.5
FINES				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KURK	Kurchatov	53.35	313	*ce*P	P	09 14 12.0	+0.3
KURK				pmax	pmax		
	comp=Z,12nm,1.7s						
KURK				MLR	MLR		
	comp=Z,48nm,6.0s						
TXAR	Lajitas Array	53.39	99	P	P	09 14 13.6	+1.1
	comp=Z,0.5nm,0.6s,baz=324,slow=5.2,SNR=8.5						
	comp=Z,0.5nm,0.6s						
ARU	Arti	53.49	329	*i* P	P	09 14 12.2	-0.5
ARU				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARU				MLR	MLR		
	comp=Z,156nm,6.0s						
BRVK	Borovoye	53.70	320	P	P	09 14 13.6	-0.7
BRVK				IAmb	IAmb	09 14 15.4	
	comp=Z,8.5nm,0.8s						
BRVK	Borovoye	53.70	320	*ce*P	P	09 14 14.8	+0.5
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRVK				MLR	MLR		
	comp=Z,87nm,6.0s						
PKME	Peaks-Kenny Pk	53.71	60	P	P	09 14 14.5	0.0
NOA	NORSAR Array B	54.12	360	LR	LR	09 37 44.7	
	comp=Z,29nm,18.3s,baz=265,slow=37						
MKAR	Makanchi Array	55.60	308	P	P	09 14 28.2	0.0
	comp=Z,0.5nm,0.8s,baz=46,slow=6.9,SNR=4.1						
	comp=Z,0.5nm,0.8s						
WMQ	Urumqi	56.33	302	*e*P	P	09 14 32.5	-1.0
WMQ				PP	PP	09 16 39.6	+1.1
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
OBN	Obninsk	58.49	343	⇑*e*P	P	09 14 48.4	0.0
OBN				*e*		09 15 37.8	
OBN				*e*		09 17 01.3	
OBN				*e*S	S	09 22 53.1	+1.9
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BELG	Belogornoye	59.46	335	P	P	09 14 54.2	-1.0
	comp=Z,14nm,0.8s,baz=45,slow=2.9,SNR=3.6						
	comp=Z,14nm,0.8s						
AAK	Ala-Archa	61.83	312	LR	LR	09 46 48.7	
	comp=Z,40nm,19.1s,baz=164,slow=41						
AAK	Ala-Archa	61.83	312	*ce*P	P	09 15 12.1	+0.3
AAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
AAK				MLR	MLR		
	comp=Z,50nm,16.0s						
ARLS	Aral	62.59	311	P	P	09 15 18.4	+1.5
ARK	Arkit	63.38	313	P	P	09 15 22.9	+0.8
AKASG	Malin Array Be	63.63	347	P	P	09 15 22.1	-1.3
	comp=Z,1.0nm,0.5s,baz=16,slow=5.8,SNR=6.2						
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	63.63	347	*ce*P	P	09 15 24.2	+0.8
AKBB	Malin Array Si	63.63	347	*ce*P	P	09 15 23.0	-0.4
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TRKS	Terek-Say	63.88	314	P	P	09 15 26.1	+0.7
KSH	Kashi	64.17	309	P	P	09 15 30.6	+3.3
KSH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PZH	PanZhiHua	66.01	281	P	P	09 15 39.5	+0.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
CHGR	Chuyangaron	67.12	314	P	P	09 15 46.8	+0.5
KIV	Kislovodsk	68.47	336	*e*P	P	09 15 54.3	-0.5
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KBZ	Khabaz	68.65	336	P	P	09 15 55.2	-0.5
	comp=Z,2.3nm,0.8s,baz=23,slow=6.1,SNR=4.8						
	comp=Z,2.3nm,0.8s						
KBZ	Khabaz	68.65	336	*ce*P	P	09 15 55.7	0.0
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KBZ				MLR	MLR		
	comp=Z,70nm,6.0s						
CMAR	Chiang Mai Arr	74.33	280	P	P	09 16 30.8	+0.4
	comp=Z,0.7nm,0.3s,baz=11,slow=6.7,SNR=9.5						
	comp=Z,0.7nm,0.3s						

ROM 22 09:34:00.4±0.1,44.°032N±0.°007×10.°705E±0.°005, h5^{km}±1^{km},ML0.6/3,Error ellipse: s-maj=0.7km s-min=0.3km az=197.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
POPM	Popiglio	0.04	71	P	Pg	09 34 01.6	0.0
POPM				S	Sg	09 34 02.4	0.0
POPM				AML	AML		
	comp=N,1391µm,0.2s						
POPM				AML	AML		
	comp=E,952µm,0.2s						
BDI	Bagni Di Lucca	0.08	292	P	Pg	09 34 02.7	+0.4
BDI				S	Sg	09 34 04.5	+0.9
MAIM	Mastiano	0.19	233	P	Pg	09 34 05.1	+0.9
MAIM				AML	AML		
	comp=E,20µm,0.4s						
MAIM				AML	AML		
	comp=N,19µm,0.4s						
MAIM				AML	AML		
	comp=N,19µm,1.6s						
MTCR	Monte La Croce	0.21	91	P	Pg	09 34 05.2	+0.7
MTCR				S	Sg	09 34 09.3	+1.9
MTCR				AML	AML		
	comp=N,28µm,0.2s						
MTCR				AML	AML		
	comp=E,22µm,0.2s						
VLC	Villacollemand	0.26	299	P	Pg	09 34 06.3	+0.8
VLC				S	Sg	09 34 10.6	+1.6
SARO	Sassorosso	0.27	305	P	Pg	09 34 06.0	+0.4
SARO				S	Sg	09 34 10.8	+1.7
MPPT	Montemurlo	0.29	105	P	Pg	09 34 06.8	+0.8
CRMI	Carmignano	0.31	141	P	Pg	09 34 07.1	+0.7
CRMI				S	Sb	09 34 12.6	-1.2
CRMI				AML	AML		
	comp=E,14µm,2.4s						
CRMI				AML	AML		
	comp=N,27µm,0.7s						
CRMI				AML	AML		
	comp=N,27µm,1.3s						
CRMI				AML	AML		
	comp=E,14µm,1.6s						
FNVD	Fontana Vidola	0.33	66	P	Pg	09 34 07.8	+1.0
FNVD				S	Sb	09 34 14.0	-0.5

ROM 22 09:34:54.7±0.1,42.°908N±0.°002×12.°973E±0.°006, h11^{km},ML1.0/2,4C-2D,Error ellipse: s-maj=0.5km s-min=0.1km az=277.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1216	Preci, Frazion	0.04	117	P	Pg	09 34 57.2	+0.4
T1216				S	Sg	09 34 58.6	+0.4
T1219	Muccia, Frazio	0.15	10	⇑P	Pg	09 34 58.6	+0.5
T1219				S	Sg	09 35 01.4	+0.8
FDMO	Fiordimonte	0.15	33	⇑P	Pg	09 34 58.8	+0.6
FDMO				S	Sg	09 35 01.5	+0.9
FDMO				AML	AML		
	comp=E,55µm,0.8s						
FDMO				AML	AML		
	comp=N,43µm,0.2s						
T1212	Cascia, Frazio	0.17	161	⇑P	Pg	09 34 59.1	+0.7
T1212				S	Sg	09 35 02.1	+1.1
T1245	Castelsantange	0.17	108	P	Pg	09 34 59.1	+0.6
T1217	Poggiodomo (PG	0.20	189	⇓P	Pg	09 34 59.6	+0.7
T1217				S	Sg	09 35 03.0	+1.1
T1256	Bolognola (MC)	0.21	62	AML	AML		
	comp=E,116µm,0.4s						

T1256				AML	AML		
	comp=E,116µm,1.6s						
T1256				AML	AML		
	comp=N,141µm,1.5s						
T1256				AML	AML		
	comp=N,141µm,0.5s						
T1214	**Arquata del Tr**	0.23	131	⇓P	Pg	09 35 00.1	+0.6
T1214				S	Sg	09 35 03.8	+1.1
CSP1	**Cessapalombo**	0.25	43	⇑P	Pg	09 35 00.5	+0.6
CSP1				S	Sb	09 35 04.7	-1.1

IDC 22 09:40:09.5±3.4,54°.23N×86°.94E,h0^{km},mbtmp2.7/2, ML2.3/2,Error ellipse: s-maj=29.7km s-min=17.1km az=64.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	1.28	258	I	I	09 48 21.1	
	baz=75,slow=327,SNR=2.8						
ZALV	**Zalesovo Beam**	1.28	258	Pg	Pg	09 40 33.6	-0.4
	1.2nm,0.3s,baz=75,slow=16,SNR=9.0						
ZALV				Lg	Lg	09 40 50.6	
	0.9nm,0.3s,baz=79,slow=30,SNR=4.9						
KURBB	**Kurchatov Arra**	6.28	238	Pn	Pn	09 41 44.1	+0.7
	baz=52,slow=14,SNR=4.6 0.4nm,0.3s						
MKAR	**Makanchi Array**	8.01	204	Pn	Pn	09 42 08.2	+1.1
	baz=26,slow=13,SNR=1.2						
MKAR				Lg	Lg	09 44 23.8	
	baz=32,slow=28,SNR=1.9 0.1nm,0.3s						

IDC 22 09:54:24.0±1.0,27°.53N×128°.25E,h0^{km},mb3.6/5, mbtmp3.6/6,ML3.8/1,MS3.2/2,Error ellipse: s-maj=40.6km s-min=13.5km az=85.0

JMA 22 09:54:25.7±0.1,27°.6N±0°.5×128°.3E±0°.6,h22^{km}±1^{km}, MV3.7/21,NEAR OKINAWAJIMA ISLAND

NIED 22 09:54:25.7,27°.64N×128°.32E,h22^{km},MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.55; $M_{\theta\theta}$0.97; $M_{\phi\phi}$0.58; $M_{r\theta}$-2.36; $M_{\theta\phi}$-2.42; $M_{\phi r}$-0.58; Fault plane solution: $M_0$3.69000×10^{14} NP1:ϕ_s96.00000°, δ73.00000°,λ-132.00000°. NP2:ϕ_s348.00000°, δ45.00000°,λ-25.00000°.

ISC 22 09:54:25.9±1.1,27°.63N±0°.03×128°.35E±0°.05,h17^{km}±8^{km}, n33,σ1^{s}20/38,mb3.6/5,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOKE	**Okinoerabujima**	0.33	144	P	Pg	09 54 33.2	+0.3
JOKE				S	Sg	09 54 38.5	+0.8
JTK	**Tokunoshima**	0.55	74	P	Pb	09 54 36.9	-0.3
JTK				S	Sg	09 54 45.0	+0.7
JYRO	**Yoronjima**	0.61	172	P	Pb	09 54 37.6	-0.6
JYRO				S	Sb	09 54 45.6	-0.8
JIH	**Iheya**	0.69	210	P	Pb	09 54 38.4	-1.0
JIH				S	Sg	09 54 48.3	-0.2
JOW	**Kunigami**	0.80	185	Pn	Pb	09 54 40.9	-0.5
	520nm,0.3s,baz=356,slow=17,SNR=849						
JOW				Sn	Sb	09 54 51.8	-0.1
	920nm,0.3s,baz=308,slow=7.8,SNR=20						
JOW	**Kunigami**	0.80	185	P	Pb	09 54 41.3	-0.1
JOW	**Kunigami**	0.80	185	P	Pb	09 54 40.6	-0.8
JAMN	**Amaminishikomi**	0.95	50	P	Pb	09 54 43.4	-0.5
JAMN				S	Sn	09 54 57.3	-0.3
JNTH	**Nagotoyohara**	1.15	195	P	Pn	09 54 46.6	-0.6
JNTH				S	Sn	09 55 01.7	-0.7
JAM	**Amami Oshima**	1.35	55	P	Pb	09 54 50.4	-0.4
JAGN	**Aguni-jima**	1.43	224	P	Pn	09 54 50.3	-0.8
JJT3	**Tamagusuku3**	1.57	199	P	Pb	09 54 53.7	-0.7
JZK	**Kikaishima**	1.59	64	P	Pg	09 54 56.0	-0.5
JTAJ	**Takarajima**	1.69	26	P	Pn	09 54 54.4	-0.2
JKE	**Kume jima 2**	1.91	227	P	Pn	09 54 56.9	-0.7
JKDJ	**Kitadaitoujima**	3.12	122	*e*S	Sn	09 55 51.2	-0.1
JMZ	**Minamidaito 2**	3.14	124	P	Pb	09 55 18.7	-2.5
JMZ	**Minamidaito 2**	3.14	124	*e*S	Sn	09 55 51.0	-0.6
JYAK	**Yakushimahirau**	3.21	36	*e*P	Pn	09 55 16.2	+0.6
JYAK				*e*S	Sn	09 55 53.3	-0.2
JMJ	**Miyako jima 2**	3.92	225	P	Pn	09 55 27.0	+1.6
JSU	**Suzuyama**	4.27	25	P	Pb	09 55 38.0	-2.6
JNU	**Nakatsue**	5.89	21	Pn	Pn	09 55 56.2	+3.8
	2.8nm,0.3s,baz=198,slow=9.6,SNR=23 4.7nm,0.5s						
NACB	**Ninganchiao**	6.99	242	P	Pn	09 56 07.9	+0.4
YULB	**Yu-li**	7.64	238	P	Pn	09 56 15.0	-1.5
TPUB	**Ta-pu**	8.20	240	P	Pn	09 56 24.5	+0.3
KSRS	**Korea Array**	9.80	358	Pn	Pn	09 56 51.2	+5.2
	0.2nm,0.3s,baz=174,slow=13,SNR=3.6						
KLR	**Kul'dur**	21.72	6	LR	LR	10 08 34.6	
	comp=Z,24nm,21.1s,baz=192,slow=39						
SONM	**Songino Array**	26.45	326	P	P	10 00 04.5	+2.4
	0.4nm,0.3s,baz=145,slow=10,SNR=2.8 0.4nm,0.3s						
MKAR	**Makanchi Array**	40.69	311	P	P	10 02 04.8	-0.6
	0.2nm,0.6s,baz=106,slow=9.6,SNR=2.9 0.2nm,0.6s						
WRA	**Warramunga Arr**	47.65	172	P	P	10 03 02.0	+0.6
	1.3nm,0.6s,baz=352,slow=8.3,SNR=16 1.3nm,0.6s						
ASAR	**Alice Springs**	51.28	173	P	P	10 03 30.4	+1.3
	1.0nm,0.9s,baz=3.8,slow=15,SNR=8.4 1.0nm,0.9s						
KIRV	**Kirov**	61.17	324	LR	LR	10 33 48.0	
	comp=Z,43nm,19.6s,baz=314,slow=39						
YKA	**Yellowknife Ar**	77.21	25	P	P	10 06 18.4	-0.2
	0.3nm,0.7s,baz=297,slow=5.5,SNR=4.0 0.3nm,0.7s						

SKHL 22 10:09:02.4±0.1,42°.90N×145°.80E,h43^{km}±2^{km},mb3.8/3

JMA 22 10:09:02.1±0.1,42°.9N±0°.5×145°.7E±0°.6,h46^{km}±1^{km}, MV2.8/39,OFF NEMURO PENINSULA

ISC 22 10:09:01.1±1.9,42°.87N±0°.10×145°.83E±0°.07,h43^{km}±18^{km}, n15,σ0^{s}55/27,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	0.50	353	*i* P	Pn	10 09 12.3	+0.4
NEM2				*e*S	Sn	10 09 19.8	+0.1
NMR	**Nemuro--Hokkai**	0.51	352	*i* P	Pn	10 09 12.4	+0.4
NMR				AMB	AMB	10 09 12.6	
	140nm,0.4s						
NMR				*i* S	Sn	10 09 19.8	0.0
NMR				A	A	10 09 20.0	
	130nm,0.2s						
NMR				A	A	10 09 20.0	
	400nm,0.2s						
JKHN	**Kushirohamanak**	0.54	294	*i* P	Pn	10 09 12.4	+0.1
JKHN				*e*S	Sn	10 09 20.1	-0.3
AKK	**Akkeshi**	0.74	282	*i* P	Pn	10 09 15.1	0.0
AKK				*i* S	Sn	10 09 24.6	-0.6
JAK	**Akkeshi**	0.84	279	P	Pn	10 09 16.5	0.0
JAK				*e*S	Sn	10 09 27.2	-0.5
JNK	**Nakash**	1.08	312	P	Pn	10 09 19.5	-0.3
JNK				*e*S	Sn	10 09 32.2	-1.4
JNSB	**Nemuroshibetsu**	1.09	327	*e*P	Pn	10 09 20.0	+0.1
JNSB				*e*S	Sn	10 09 33.3	-0.4
YUK	**Yuzh-Kuril'sk**	1.17	1	*i* P	Pn	10 09 21.3	+0.4
YUK				AMB	AMB	10 09 22.4	
	30nm,0.2s						
YUK				*e*S	Sn	10 09 35.3	-0.3
YUK				A	A	10 09 39.3	
	150nm,0.3s						
YUK				A	A	10 09 39.3	
	70nm,0.3s						
JRA	**Rausu**	1.19	335	*e*P	Pn	10 09 21.5	+0.3
SHO	**Shikotan**	1.24	36	*e*P	Pn	10 09 22.1	+0.2
SHO				AMB	AMB	10 09 24.3	
	30nm,0.6s						
SHO				*i* S	Sn	10 09 36.9	-0.5
SHO				A	A	10 09 40.4	
	50nm,0.2s						
SHO				A	A	10 09 40.4	
	90nm,0.2s						
JOB	**Onbets**	1.47	272	*e*P	Pn	10 09 25.3	+0.3
JOB				*e*S	Sn	10 09 42.5	-0.5
JAR	**Ashorobuto**	1.57	287	*e*P	Pn	10 09 27.0	+0.6
JAR				*e*S	Sn	10 09 45.2	-0.3
JTKR	**Abashiri--Toko**	1.78	309	*e*P	Pn	10 09 30.6	+1.2
JTKR				*e*S	Sn	10 09 51.1	+0.3
JCH	**Churui**	1.83	263	*e*S	Sn	10 09 52.3	+0.3
KUR	**Kuril'sk**	2.78	31	*e*S	Sn	10 10 14.7	-0.7
KUR				A	A	10 10 19.4	
	20nm,0.5s						
KUR				A	A	10 10 19.4	
	30nm,0.5s						

ROM 22 10:24:31.4±0.1,42°.797N±0°.004×13°.112E±0°.009, h12^{km}±1^{km},ML1.4/2,3C-1D,Error ellipse: s-maj=0.7km s-min=0.2km az=279.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1212	**Cascia, Frazio**	0.07	228	P	Pg	10 24 34.2	+0.3
T1212				S	Sg	10 24 35.8	+0.1
T1245	**Castelsantange**	0.08	43	⇑P	Pg	10 24 34.5	+0.4
T1245				S	Sg	10 24 36.2	0.0
T1245				AML	AML		
	comp=E,71µm,0.1s						
T1245				AML	AML		
	comp=N,137µm,0.2s						
T1216	**Preci, Frazion**	0.12	324	⇑P	Pb	10 24 35.1	-0.6
T1216				S	Sg	10 24 37.5	+0.8
T1218	**Civita (PG)**	0.13	179	P	Pg	10 24 35.1	+0.5
T1218				S	Sg	10 24 37.4	+0.4
T1217	**Poggiodomo (PG**	0.16	238	P	Pg	10 24 35.6	+0.5
T1217				S	Sg	10 24 38.4	+0.7
MMO1	**Montemonaco**	0.19	57	⇑P	Pg	10 24 36.2	+0.6
MMO1				S	Sg	10 24 39.5	+1.0
FDMO	**Fiordimonte**	0.24	356	⇓P	Pb	10 24 37.2	-0.6
FDMO				S	Sg	10 24 40.3	+0.5
RM33	**Pellescritta (**	0.30	165	P	Pg	10 24 38.0	+0.5
RM33				S	Sg	10 24 42.5	+1.0
T1222	**Castel Sant'An**	0.40	188	P	Pg	10 24 36.0	-3.3
SRES	**S.Oreste - Sor**	0.71	219	P	Pg	10 24 41.7	-3.5
SRES				AML	AML		
	comp=E,63µm,0.4s						
SRES				AML	AML		
	comp=N,140µm,0.4s						
SRES				AML	AML		
	comp=E,63µm,1.6s						
SRES				AML	AML		
	comp=N,140µm,1.6s						

ROM 22 10:25:19.1±0.1,42°.501N±0°.005×13°.398E±0°.005, h10^{km},ML0.9/4,6C-5D,Error ellipse: s-maj=0.5km s-min=0.4km az=11.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	0.04	13	P	Pg	10 25 21.3	+0.3
CAMP				S	Sg	10 25 22.5	+0.1
T1246	**Crognaleto (TE**	0.11	41	⇓P	Pg	10 25 22.3	+0.5
T1246				S	Sg	10 25 24.4	+0.6
GIGS	**Gran Sasso**	0.14	112	⇑P	Pg	10 25 22.7	+0.5
GIGS				S	Sg	10 25 25.1	+0.7
GIGS				AML	AML		
	comp=N,30µm,0.2s						
GIGS				AML	AML		
	comp=E,57µm,0.2s						
RM33	**Pellescritta (**	0.14	273	⇑P	Pg	10 25 22.6	+0.4
RM33				S	Sg	10 25 24.9	+0.5
RM33				AML	AML		
	comp=N,180µm,0.9s						
RM33				AML	AML		
	comp=E,164µm,1.1s						
TERO	**Teramo**	0.20	51	⇓P	Pg	10 25 23.7	+0.5
TERO				S	Sg	10 25 26.9	+0.9
TERO				AML	AML		
	comp=E,53µm,0.2s						
TERO				AML	AML		
	comp=N,60µm,0.4s						
TERO				AML	AML		
	comp=N,61µm,0.4s						
TERO				AML	AML		
	comp=N,61µm,1.6s						
TERO				AML	AML		
	comp=E,53µm,1.8s						
T1212	**Cascia, Frazio**	0.36	314	⇓P	Pg	10 25 26.5	+0.3
T0110	**Collepietro**	0.39	134	⇑P	Pb	10 25 27.6	-0.6
MMO1	**Montemonaco**	0.40	353	⇓P	Pg	10 25 27.3	+0.3
T1216	**Preci, Frazion**	0.48	324	⇑P	Pg	10 25 27.6	-0.8
T1216				S	Sb	10 25 37.8	+1.0
CDCA	**Citt' di Caste**	1.28	319	S	Sn	10 26 02.8	+2.4
PE3	**Peglio**	1.36	331	⇑P	Pg	10 25 45.1	-0.2
BRSN	**Barisano**	2.03	332	⇑P	Pb	10 25 56.1	+0.1
BRSN				S	Sn	10 26 18.7	+0.1
MCRV	**Calabrutti - M**	2.17	142	P	Pb	10 25 58.5	0.0
CAPA	**Cerignola FG**	2.25	126	S	Sg	10 26 32.4	+1.0
CAPA				AML	AML		
	comp=E,234µm,0.3s						
CAPA				AML	AML		
	comp=N,166µm,0.3s						
MGR	**Morigerati**	2.87	145	P	Pb	10 26 10.4	+0.1
NDIM	**Novi di Modena**	3.00	324	S	Sb	10 26 48.1	-1.0
CET2	**Cetraro**	3.54	146	P	Pg	10 26 24.9	-2.1
LEOD	**Capriano del C**	3.78	322	S	Sb	10 27 07.1	-4.7
EUCT	**Pavia**	4.10	313	P	Pg	10 26 38.1	+0.5
CIRO	**Champorcher**	5.22	308	⇓P	Pg	10 26 58.3	-0.7

DJA 22 10:25:03.3±0.6,5°N±6°×13°0E±°,h297^{km}±9^{km},M5.0/6, mb4.4/6,mB4.8/3,MLv5.3/4,Mw5.2/8,Mw(mB)4.0/3

MAN 22 10:25:50.6,7°.64N×126°.90E,h20^{km},mb4.6,ML3.5,MS3.4, 10C-5D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CDOP	**Cateel, Davao**	0.48	288	⇓*i*P	Pb	10 26 00.7	+0.4
CDOP				*i* S	Sb	10 26 06.3	-0.6
BIPH	**Bislig**	0.76	316	⇑*i*P	Pb	10 26 04.7	-0.4
BIPH				*i* S	Sb	10 26 12.4	-2.6
MATI	**Mati**	0.94	223	⇑*e*P	Pb	10 26 07.9	-0.2
TASP	**Talacogon, Agu**	1.35	307	⇑*i*P	Pb	10 26 15.1	-0.1
TASP				*i* S	Sn	10 26 27.9	-3.7
BUTP	**Butuan**	1.83	316	⇑*e*P	Pn	10 26 22.0	+1.1
BUTP				*e*S	Sb	10 26 46.2	+0.4
KCP	**Kidapawan**	1.90	251	⇑*i*P	Pn	10 26 22.4	+0.5
GLSP	**General Luna,**	2.26	340	⇓*e*P	Pn	10 26 27.4	+0.5
GLSP				*e*S	Sn	10 26 55.2	+1.0
CGP	**Cagayan de Oro**	2.33	291	⇓*e*P	Pn	10 26 28.2	+0.4
CGP				*e*S	Sn	10 26 57.2	+1.4
SCPH	**Surigao**	2.54	327	⇑*i*P	Pn	10 26 32.0	+1.3
SCPH				*i* S	Sb	10 27 04.0	-2.4
SKMP	**Bagumbayan, Su**	2.59	245	⇓*e*P	Pn	10 26 31.7	+0.3
CTBH	**Cotabato--PC H**	2.66	261	⇑*i*P	Pn	10 26 33.1	+0.8
MSLP	**Maasin**	3.19	321	⇓*e*P	Pn	10 26 40.8	+1.1
MSLP				*e*S	Sn	10 27 19.0	+1.9
GHBP	**Garcia Hernand**	3.22	308	⇑*i*P	Pn	10 26 41.0	+0.9
GHBP				*i* S	Sn	10 27 19.8	+1.8
PAGZ	**Pagadian**	3.49	274	⇑*e*P	Pn	10 26 43.0	-0.7
TABP	**Talibon, Bohol**	3.51	314	⇑*i*P	Pn	10 26 44.4	+0.3
TABP				*i* S	Sn	10 27 22.8	-2.3
TBP	**Tagbilaran**	3.63	304	*e*P	Pn	10 26 46.7	+1.1
TBP				*i* S	Sn	10 27 27.4	-0.5
LLP	**Lapu-Lapu**	3.93	313	*e*P	Pn	10 26 50.4	+0.6

IDC 22 10:25:53.2±0.6,1°.07N×126°.27E,h0^{km},mb4.0/17, mbtmp4.0/17,Error ellipse: s-maj=36.7km s-min=13.5km az=71.0

NEIC 22 10:25:56.1±1.2,1°.08N±0°.10×126°.34E±0°.04,h10^{km}±1^{km}, mb4.3/17,Error ellipse: s-maj=17.9km s-min=4.7km az=199.0

DJA 22 10:26:01.4±0.8,1°N±3°×12°7E±°,h26^{km}±8^{km},M4.0/11, mb4.2/5,MLv3.8/11

ISC 22 10:25:55.1±0.5,1°.12N±0°.04×126°.33E±0°.05,h10^{km},n57, σ1^{s}24/63,mb4.2/24,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	1.09	109		Pn	10 26 16.9	+0.4
TNTI				Sg	Sg	10 26 30.1	-0.3
TNTI	**Ternate**	1.09	109	P	Pn	10 26 17.0	+0.5
TNTI				S	Sg	10 26 30.0	-0.3
LBMI	**Labuha**	2.10	146	P	Pb	10 26 32.3	-1.1
LBMI				S	Sn	10 26 56.6	0.0
LBMI	**Labuha**	2.10	146	P	Pb	10 26 32.3	-1.1
	375nm,0.9s,7µm2.3nm						
SGSI	**Sangihe**	2.67	343	S	Sn	10 27 11.2	+0.6
SANI	**Sanana**	3.17	186	P	Pb	10 26 48.6	-2.9
SANI				S	Sn	10 27 24.6	+1.6
SANI	**Sanana**	3.17	186	P	Pb	10 26 50.2	-1.3
GTOI	**Gorontalo**	3.35	262	P	Pb	10 26 55.9	+1.2
LUWI	**Luwuk**	4.16	239	Pn	Pn	10 26 58.2	-0.5
LUWI	**Luwuk**	4.16	239	P	Pb	10 27 04.9	-3.5
NLAI	**Namlea**	4.40	170	P	Pn	10 27 05.7	+3.7
NLAI				S	Sn	10 27 54.5	+1.2
TOLI2	**Tolitoli**	5.55	270	Pn	Pn	10 27 17.7	-0.1
MPSI	**Mapaga**	6.48	263	P	Pn	10 27 31.1	+0.5
FAKI	**Fak Fak**	7.15	124		Pn	10 27 41.3	+1.5
FAKI	**Fak Fak**	7.15	124	P	Pn	10 27 43.3	+3.5
	36nm,0.9s,0.1nm						
BKSI	**Bulukumba**	8.91	224	P	Pn	10 28 10.9	+6.9
	11nm,0.9s						
MTN	**Manton Dam**	14.67	161	Pn	Pn	10 29 24.0	+1.1
KNRA	**Kununurra**	16.86	172		P	10 29 53.2	-0.3
KNRA				IAmb	IAmb	10 30 17.1	
	comp=Z,33nm,1.4s						
WB0	**Warramunga Arr**	22.21	160	P	P	10 30 52.2	+0.2
WB0				IAmb	IAmb	10 30 57.3	
	comp=Z,9.8nm,0.5s						
WRAB	**Tennant Creek**	22.35	160	P	P	10 30 53.5	+0.1
WRAB				IAmb	IAmb	10 30 59.7	
	comp=Z,9.4nm,0.7s						
WRA	**Warramunga Arr**	22.36	160	P	P	10 30 53.5	-0.1
	comp=Z,5.3nm,0.5s,baz=339,slow=11,SNR=113						
WRA				PcP	PcP	10 34 48.4	-0.5
	comp=Z,0.2nm,0.6s,baz=339,slow=2.4,SNR=1.6 comp=Z,5.3nm,0.5s						
WRA	**Warramunga Arr**	22.36	160	P	P	10 30 52.5	-1.0
WB2	**Warramunga Arr**	22.36	160	P	P	10 30 53.6	+0.1
WB2				IAmb	IAmb	10 30 59.8	
	comp=Z,9.9nm,0.7s						
AS31	**Alice Springs**	25.72	164	P	P	10 31 26.4	+0.6
ASAR	**Alice Springs**	25.72	164	P	P	10 31 25.8	-0.1
	comp=Z,0.8nm,0.3s,baz=349,slow=14,SNR=24						
ASAR				PcP	PcP	10 34 55.5	-0.6
	comp=Z,0.4nm,0.5s,baz=350,slow=2.4,SNR=4.2 comp=Z,0.8nm,0.3s						
ASAR	**Alice Springs**	25.72	164	P	P	10 31 26.1	+0.3
CMAR	**Chiang Mai Arr**	31.92	304	P	P	10 32 19.3	-1.9
	comp=Z,0.5nm,0.5s,baz=110,slow=12,SNR=1.6 comp=Z,0.5nm,0.5s						
BBOO	**Buckleboo**	34.98	166	P	P	10 32 47.7	+0.1
STKA	**Stephens Creek**	35.87	158	P	P	10 32 55.2	-0.1
	comp=Z,0.8nm,0.3s,baz=349,slow=9.4,SNR=4.9 comp=Z,0.8nm,0.3s						
STKA	**Stephens Creek**	35.87	158	P	P	10 32 55.7	+0.4
KSRS	**Korea Array**	36.18	2	P	P	10 32 57.1	-0.8
	comp=Z,0.5nm,0.5s,baz=175,slow=9.5,SNR=2.0 comp=Z,0.5nm,0.5s						
USA0B	**Ussuriysk Arra**	43.19	6	P	P	10 33 57.2	+1.0
USA0B				IAmb	IAmb	10 34 13.4	
	comp=Z,5.8nm,1.3s						
USRK	**Ussuriysk Ar.**	43.19	6	P	P	10 33 56.9	+0.7
	comp=Z,0.7nm,0.4s,baz=175,slow=6.7,SNR=7.6 comp=Z,0.7nm,0.4s						
USRK	**Ussuriysk Ar.**	43.19	6	P	P	10 33 57.7	+1.6
SONM	**Songino Array**	49.64	342	P	P	10 34 48.4	+1.4
	comp=Z,0.5nm,0.5s,baz=159,slow=9.9,SNR=3.6 comp=Z,0.5nm,0.5s						
PETK	**Petropavlovsk-**	57.98	22	P	P	10 35 48.8	+1.0
	comp=Z,1.1nm,0.7s,baz=195,slow=4.5,SNR=1.9 comp=Z,1.1nm,0.7s						
MK31	**Makanchi Array**	59.47	326	P	P	10 35 59.0	+0.7
MK31				IAmb	IAmb	10 36 01.0	
	comp=Z,3.1nm,1.5s						
MKAR	**Makanchi Array**	59.47	326	P	P	10 35 58.8	+0.4
	comp=Z,1.0nm,0.5s,baz=120,slow=7.9,SNR=15 comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	59.47	326	P	P	10 35 58.9	+0.5
MAKZ	**Makanchi**	59.66	326	P	P	10 36 00.2	+0.5
BKZ	**Black Stump Fm**	60.94	137	P	P	10 36 08.6	0.0
ZALV	**Zalesovo Beam**	62.73	334	P	P	10 36 19.7	-0.6
	comp=Z,0.5nm,0.3s,baz=125,slow=7.6,SNR=2.5 comp=Z,0.5nm,0.3s						
KURBB	**Kurchatov Arra**	63.72	328	P	P	10 36 27.3	+0.4
	comp=Z,2.7nm,0.6s,baz=128,slow=6.1,SNR=19 comp=Z,2.7nm,0.6s						
KURK	**Kurchatov**	63.72	328	P	P	10 36 27.6	+0.7
BVAR	**Borovoye Array**	69.28	328	P	P	10 37 01.8	-0.7
	comp=Z,0.5nm,0.4s,baz=126,slow=7.5,SNR=5.6 comp=Z,0.5nm,0.4s						
BRVK	**Borovoye**	69.36	328	P	P	10 37 03.8	+0.9
BRVK				IAmb	IAmb	10 37 04.7	
	comp=Z,1.7nm,0.8s						
TIXI	**Tiksi**	70.44	1	P	P	10 37 08.4	-0.8
	comp=Z,2.2nm,0.4s,baz=90,slow=20,SNR=3.0 comp=Z,2.2nm,0.4s						
TIXI	**Tiksi**	70.44	1	P	P	10 37 09.2	0.0
ABKAR	**Akbulak array**	73.91	321	P	P	10 37 31.0	+0.5
AKTO	**Aktyubinsk**	75.45	322	P	P	10 37 40.2	+0.8
	comp=Z,2.3nm,0.7s,baz=66,slow=3.6,SNR=7.9 comp=Z,2.3nm,0.7s						
VNDA	**Vanda**	80.91	173	P	P	10 38 07.2	-1.9
	comp=Z,0.8nm,0.6s,baz=313,slow=5.8,SNR=2.7 comp=Z,0.8nm,0.6s						
VNDA	**Vanda**	80.91	173	P	P	10 38 08.1	-1.0
VNDA				IAmb	IAmb	10 38 14.4	
	comp=Z,3.0nm,1.1s						
IMAR	**Indian Mountai**	84.87	24	P	P	10 38 30.4	+0.6
COLD	**Coldfoot**	86.43	23	P	P	10 38 38.6	+1.0
COLD				IAmb	IAmb	10 38 42.9	
	comp=Z,4.9nm,1.5s						
ILAR	**Eielson Array**	87.61	25	P	P	10 38 42.2	-1.2
	comp=Z,0.2nm,0.5s,baz=270,slow=4.2,SNR=4.6 comp=Z,0.2nm,0.5s						
ARCES	**ARCESS Array B**	92.74	340	P	P	10 39 05.2	-2.1
	comp=Z,1.4nm,0.7s,baz=64,slow=6.1,SNR=1.4 comp=Z,1.4nm,0.7s						
TXAR	**Lajitas Array**	123.48	53	PKP	PKPdf	10 44 52.6	-1.0
	comp=Z,0.1nm,0.7s,baz=259,slow=4.4,SNR=2.1						

IDC 22 10:35:59.1±1.1,38°.88N×74°.62E,h0^{km},mb3.8/8, mbtmp3.6/12,ML2.9/4,Error ellipse: s-maj=25.1km s-min=19.1km az=60.0

KRNET 22 10:36:01.2±0.1,39°.00N×74°.63E,mb3.7

NNC 22 10:36:01.4±3.2,38°.44N×73°.71E,h0^{km},mb3.9,mpv3.5, Error ellipse: s-maj=26.1km s-min=13.8km az=179.0

ISC 22 10:36:02.6±2.2,39°.29N±0°.08×74°.69E±0°.03,h11^{km}±12^{km}, n38,σ2^{s}29/50,mb3.8/8,16C-10D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	1.91	311	⇑*i*P	Pg	10 36 39.6	+0.3
	baz=17						
OHH				⇑*i*S	Sg	10 37 07.5	+3.4
	baz=17						
NRN	**Naryn**	2.36	25	⇑*i*P	Pg	10 36 47.1	-0.8
	baz=23						
NRN				⇑*i*S	Sg	10 37 20.6	+2.0
	baz=23						
ARLS	**Aral**	2.58	354	⇑*i*P	Pg	10 36 50.2	-1.9
	baz=55						
ARLS				⇑*i*S	Sg	10 37 26.1	+0.5
	baz=55						
AML	**Almayashu**	2.94	345	⇓*e*P	Pb	10 36 55.2	+0.1
	baz=47						
AML				⇓*i*S	Sg	10 37 34.5	-2.4
	baz=47						
UCH	**Uchtor**	2.94	357	⇑*e*P	Pb	10 36 55.4	+0.2
	baz=58						
UCH				⇑*e*S	Sg	10 37 34.8	-2.2
	baz=58						
ULHL	**Ulahol**	3.18	21	⇓*e*P	Pb	10 36 58.7	-0.5
	baz=20						
ULHL				⇓*i*S	Sg	10 37 40.7	-4.0
	baz=20						
ARK	**Arkit**	3.25	321	⇑*i*P	Pb	10 36 58.7	-1.7
	baz=25						
ARK				⇑*e*S	Sb	10 37 40.6	+0.6
	baz=25						
AAK	**Ala-Archa**	3.35	358	Pn	Pb	10 37 01.9	-0.1
	1.9nm,0.3s,baz=178,slow=10,SNR=8.1						
AAK				Lg	Lg	10 37 53.6	
	1.1nm,0.3s,baz=195,slow=24,SNR=4.6 2.4nm,0.5s						
TARG	**Taragay, Kyrgy**	3.40	43	⇑*i*P	Pb	10 37 01.2	-1.9
	baz=41						
TARG				⇑*i*S	Sb	10 37 45.0	+0.4
	baz=41						
GAR	**Garm**	3.41	266	⇑*e*P	Pn	10 36 57.2	+1.4
	baz=71						
GAR				⇑*i*S	Sn	10 37 38.2	+1.9
	baz=71						
MRKS	**Merke**	3.62	343	Pg	Pb	10 37 04.1	-2.5
	4.2nm,0.5s						

MRKS				Lg	Lg	10 38 05.3	
	14nm,0.6s						
IZV	**Izvestkoviy**	4.01	21	Pg	Pb	10 37 10.5	-2.9
	1.0nm,0.6s						
IZV				Lg	Lg	10 38 16.1	
	32nm,0.9s						
DGS	**Degeres**	4.03	11	Pg	Pb	10 37 11.3	-2.3
	8.0nm,0.8s						
DGS				Lg	Lg	10 38 16.9	
	20nm,0.8s						
MTBS	**Maitube**	4.05	18	Pg	Pb	10 37 11.5	-2.5
	4.6nm,0.5s						
MTBS				Lg	Lg	10 38 18.5	
	24nm,0.7s						
TNSS	**Tian-Shan**	4.11	24	Pg	Pb	10 37 12.8	-2.4
	2.6nm,0.9s						
TNSS				Lg	Lg	10 38 19.9	
	16nm,1.0s						
SGDS	**Sogindy**	4.16	359	Pg	Pb	10 37 12.7	-3.1
	3.6nm,0.3s						
MDOK	**Medeo**	4.26	24	Pg	Pb	10 37 15.5	-2.1
	2.2nm,0.4s						
MDOK				P	Pg	10 37 23.4	-0.7
	10nm,0.7s						
MDOK				S	Sg	10 38 24.6	+5.3
	74nm,1.4s						
MDOK				Lg	Lg	10 38 24.7	
	27nm,0.7s						
KNDC	**Almaty**	4.28	23	⇓P	Pg	10 37 23.5	-1.1
	31nm,0.6s						
KNDC				⇑S	Sg	10 38 26.4	+6.4
	296nm,1.0s						
KOTS	**Kotyrbulak**	4.34	24	Pg	Pb	10 37 16.7	-2.3
	2.0nm,0.5s						
KOTS				Lg	Lg	10 38 26.6	
	41nm,1.1s						
KTBS	**Karatobe**	4.66	18	Pg	Pb	10 37 22.6	-1.8
	0.9nm,0.7s						
KTBS				Lg	Lg	10 38 36.3	
	29nm,0.7s						
KUU	**Kurty**	4.76	15	Pg	Pb	10 37 23.8	-2.2
	1.5nm,0.6s						
KUU				Lg	Lg	10 38 38.6	
	46nm,1.0s						
CHKK	**Chushkaly**	4.87	20	Pg	Pb	10 37 27.7	-0.3
CHKK				Lg	Lg	10 38 44.9	
KK31	**Karatay Array**	4.94	322	⇓Pn	Pn	10 37 19.9	+3.2
	1.5nm,0.6s,baz=129,slow=12,SNR=9.5						
KK31				⇓Pg	Pg	10 37 35.7	-1.5
	3.7nm,0.8s,baz=146,slow=16,SNR=4.8						
KK31				⇑Sn	Sb	10 38 24.9	-3.6
	5.3nm,0.7s						
KK31				⇓Lg	Lg	10 38 46.0	
	3.6nm,0.5s						
PDGK	**Podgornoye**	5.42	40	⇓P	Pb	10 37 38.6	+1.3
	6.6nm,0.7s						
PDGK				⇓S	Sg	10 38 57.4	+0.9
	47nm,1.1s						
MKAR	**Makanchi Array**	9.33	34	Pn	Pn	10 38 21.7	+4.7
	baz=215,slow=13,SNR=3.3						
MKAR				Lg	Lg	10 41 03.5	
	baz=223,slow=30,SNR=3.1						
	0.3nm,0.8s						
KURBB	**Kurchatov Arra**	11.65	12	Lg	Lg	10 42 16.6	
	baz=201,slow=28,SNR=7.5						
BVAR	**Borovoye Array**	14.05	349	Pn	Pn	10 39 23.1	+1.6
	baz=149,slow=9.6,SNR=2.7						
	0.3nm,0.4s						
AB31	**Akbulak array**	14.49	318	P	Pn	10 39 29.2	+1.7
	2.1nm,0.7s,baz=122,slow=11,SNR=15						
AKTO	**Aktyubinsk**	16.20	319	Pn	Pn	10 39 50.0	0.0
	0.1nm,0.3s,baz=119,slow=13,SNR=3.6						
	0.9nm,0.5s						
ARU	**Arti**	20.18	333	P	Pn	10 40 38.6	-0.3
	6.6nm,0.7s,baz=168,slow=5.1,SNR=9.7						
	6.6nm,0.7s						
SONM	**Songino Array**	24.37	59	P	P	10 41 20.7	-0.1
	0.2nm,0.4s,baz=251,slow=9.0,SNR=1.7						
	0.2nm,0.4s						
FINES	**FINESS Array B**	36.90	323	P	P	10 43 10.7	-0.2
	2.5nm,0.8s,baz=110,slow=11,SNR=7.9						
	2.5nm,0.8s						
ARCES	**ARCESS Array B**	39.75	335	P	P	10 43 36.0	+1.2
	1.9nm,0.7s,baz=104,slow=8.9,SNR=10.0						
	1.9nm,0.7s						
TORD	**Torodi Ar. Bea**	68.67	270	P	P	10 47 04.6	-1.7
	0.5nm,0.6s,baz=59,slow=5.3,SNR=3.4						
INK	**Inuvik**	70.65	11	P	P	10 47 18.7	+1.1
	0.7nm,0.7s,baz=338,slow=6.9,SNR=5.9						
	0.7nm,0.7s						
YKA	**Yellowknife Ar**	78.28	4	P	P	10 48 02.4	+0.3
	0.4nm,0.7s,baz=351,slow=5.2,SNR=10						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	81.08	125	P	P	10 48 15.4	-2.5
	0.4nm,0.8s,baz=328,slow=4.9,SNR=2.7						
	0.4nm,0.8s						
ASAR	**Alice Springs**	83.55	128	P	P	10 48 28.3	-2.5
	0.6nm,1.0s,baz=316,slow=3.9,SNR=2.8						
	0.6nm,1.0s						

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*IDC **22** 10:50:45.9±1.1, 24°.57N×120°.92E, h0^{km}, mb3.3/6, mbtmp3.3/7, ML3.1/1, MS3.0/4, Error ellipse: s-maj=45.6km s-min=22.0km az=78.0*
*TAP **22** 10:50:49.1, 24°.79N×122°.11E, h10^{km}, ML3.8, B*
*JMA **22** 10:50:49.2±0.1, 24°.8N±0°.3×122°.1E±0°.2, h46^{km}±2^{km}, MV3.4/10, TAIWAN REGION*
ISC 22 10:50:47.6±1.0**, 24°.79N**±0°.02×**122°.23E**±0°.02**, h6**^{km}±8^{km}**, n140, σ0^{s}.80**/228**, mb3.3**/6**, 9C-14D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		0.28	282	⇓*i*P	Pg	10 50 53.4	+0.4
	baz=289						
EGS				*e*S	Sg	10 50 56.8	+0.1
	baz=289						
TWB1	**Santiao Chiao**	0.32	315	⇑*i*P	Pg	10 50 54.6	+0.9
	baz=335						
TWB1				*i* S	Sg	10 50 57.9	0.0
	baz=335						
EOS2	**EOS2**	0.36	180	*i* P	Pb	10 50 57.1	+0.7
	baz=163						
EOS2				S	Sb	10 51 02.8	+0.6
	baz=163						
NTC	**Toucheng**	0.37	281	⇓*e*P	Pg	10 50 55.3	+0.5
	baz=284						
NTC				*e*S	Sg	10 50 60.0	+0.2
	baz=284						
TWC	**Suao**	0.39	243	⇑*i*P	Pg	10 50 55.2	0.0
	baz=231						
TWC				*i* S	Sg	10 50 58.9	-1.3
	baz=231						
TIPB	**Shuangxi**	0.41	297	⇓*i*P	Pg	10 50 56.3	+0.7
	baz=305						
TIPB				*i* S	Sg	10 51 01.0	-0.1
	baz=305						
ILA	**Ilan**	0.44	268	P	Pg	10 50 56.3	+0.2
	baz=265						
ILA				*e*S	Sg	10 51 01.9	0.0
	baz=265						
SXI1	**Grass Mountain**	0.45	314	⇑*i*P	Pb	10 50 57.4	-0.5
	baz=325						
SXI1				*e*S	Sg	10 51 02.6	+0.5
	baz=325						
NDS	**Dongshan**	0.49	252	⇓*i*P	Pg	10 50 57.1	0.0
	baz=246						
NDS				*e*S	Sg	10 51 02.2	-1.3
	baz=246						
WFSB	**Wu-fen Shan**	0.50	305	⇓*i*P	Pb	10 50 58.2	-0.5
	baz=313						
WFSB				*e*S	Sg	10 51 04.0	+0.3
	baz=313						
EOS3	**EOS3**	0.50	171	⇑*i*P	Pb	10 50 59.7	+1.0
	baz=159						
EOS3				S	Sn	10 51 08.2	-1.8
	baz=159						
EWUT	**Wuta**	0.53	231	⇑*i*P	Pg	10 50 57.9	0.0
	baz=221						
EWUT				S	Sg	10 51 03.5	-1.4
	baz=221						
TNOU	**National Taiwa**	0.55	311	*e*P	Pb	10 50 59.5	-0.1
	baz=319						
ENA	**Nanau**	0.57	232	*i* P	Pg	10 50 58.8	+0.2
	baz=222						
ENA				S	Sg	10 51 04.7	-1.4
	baz=222						
FUSB	**Fushanzhiwuyua**	0.59	268	⇓*i*P	Pg	10 50 58.8	-0.1
	baz=266						
FUSB				*e*S	Sg	10 51 05.7	-0.9
	baz=266						
TWA	**Mucha**	0.62	288	*e*P	Pg	10 51 00.0	+0.5
	baz=292						
TWA				*e*S	Sg	10 51 08.2	+0.6
	baz=292						
ENTT	**Nioudou**	0.62	257	P	Pg	10 50 59.1	-0.4
	baz=252						
ENTT				*e*S	Sg	10 51 08.0	+0.3
	baz=252						
EHP	**Heping Village**	0.65	224	*e*P	Pg	10 51 00.9	+0.9
	baz=214						
EHP				*e*S	Sg	10 51 09.4	+0.8
	baz=214						
NWLT	**Wulai**	0.66	269	⇓*i*P	Pg	10 51 00.1	-0.2
	baz=268						
NWLT				*e*S	Sg	10 51 07.7	-1.3
	baz=268						
EOS4	**EOS4**	0.67	173	*i* P	Pb	10 51 02.3	+0.9
	baz=164						
EOS4				*e*S	Sn	10 51 12.7	-1.0
	baz=164						
NWRT	**Kuosheng**	0.67	309	*e*P	Pb	10 51 01.6	0.0
	baz=315						
LATG	**Datong**	0.69	249	⇓*i*P	Pg	10 51 00.6	-0.3
	baz=244						
LATG				*e*S	Sg	10 51 09.0	-0.8
	baz=244						
YM01	**YM01**	0.70	301	⇓*e*P	Pb	10 51 02.2	0.0
	baz=306						
TATO	**Taipei**	0.70	286	P	Pg	10 51 01.5	+0.5
TATO	**Taipei**	0.70	286	*e*P	Pg	10 51 01.6	+0.5
	baz=288						
YM08	**YM08**	0.71	305	P	Pb	10 51 02.1	-0.2
	baz=310						
JYNG	**Yonagunijimaku**	0.73	117	*i* P	Pn	10 51 04.5	+0.1
JYNG				S	Sn	10 51 15.5	-0.3
TWY	**Chenhua**	0.75	311	*e*P	Pb	10 51 03.2	+0.1
	baz=317						
TWY				*e*S	Sb	10 51 14.7	+1.1
	baz=317						
ANP	**Anpu**	0.76	302	*e*P	Pb	10 51 03.6	+0.4
	baz=307						
YOJ	**Yonaguni jima**	0.78	114	P	Pn	10 51 05.5	+0.5
YOJ	**Yonaguni jima**	0.78	114	P	Pn	10 51 05.1	+0.1
YOJ				S	Sn	10 51 16.9	-0.1
YOJ	**Yonaguni jima**	0.78	114	⇓*i*P	Pn	10 51 05.1	+0.1
	baz=112						
YOJ				*i* S	Sn	10 51 17.0	-0.1
	baz=112						
YHNB	**Yeheng**	0.79	262	P	Pg	10 51 02.1	-0.6
YHNB	**Yeheng**	0.79	262	⇓*e*P	Pg	10 51 02.2	-0.6
	baz=260						
YHNB				*e*S	Sg	10 51 11.4	-1.6
	baz=260						
NSK	**Sanguang**	0.80	262	⇓*i*P	Pg	10 51 02.4	-0.6
	baz=260						
NSK				*e*S	Sg	10 51 11.8	-1.7
	baz=260						
TWS1	**Kuangyinshan**	0.80	293	*e*P	Pb	10 51 04.2	+0.3
	baz=296						
NTST	**Danshui**	0.81	298	*e*P	Pn	10 51 04.8	-0.6
	baz=302						
ETL	**Fush Village**	0.83	222	*e*P	Pg	10 51 03.5	-0.1
	baz=215						
ETL				*e*S	Sg	10 51 14.7	+0.2
	baz=215						
NACB	**Ninganchiao**	0.84	224	P	Pg	10 51 03.7	0.0
NACB	**Ninganchiao**	0.84	224	⇑*i*P	Pg	10 51 03.4	-0.4
	baz=217						
NACB				*e*S	Sg	10 51 13.6	-1.0
	baz=217						
NNSB	**Datong**	0.85	246	*e*P	Pg	10 51 03.3	-0.6
	baz=241						
NNSB				*e*S	Sg	10 51 14.0	-1.0
	baz=241						
NNSH	**Datong**	0.85	246	*e*P	Pg	10 51 03.4	-0.6
	baz=241						
NNSH				*e*S	Sg	10 51 13.8	-1.2
	baz=241						
PCYT	**Pengchaiyu**	0.85	350	⇑*i*P	Pb	10 51 05.3	+0.6
	baz=358						
PCYT				*e*S	Sn	10 51 18.7	-0.2
	baz=358						
NNS	**Nan Shan**	0.85	246	*e*P	Pg	10 51 03.3	-0.7
	baz=242						
NNS				*e*S	Sg	10 51 14.0	-1.1
	baz=242						
NTY	**Taoyuan**	0.88	284	*e*P	Pb	10 51 05.2	+0.1
	baz=286						
ETLH	**Xiulin Townshi**	0.89	230	⇑P	Pg	10 51 04.3	-0.5
	baz=224						
ETLH				*e*S	Sg	10 51 15.6	-0.8
	baz=224						
TWD	**Chiawan**	0.91	220	P	Pg	10 51 04.8	-0.2
	baz=213						
TWD				*e*S	Sg	10 51 16.8	0.0
	baz=213						
NCU	**National Centr**	0.97	281	*e*P	Pb	10 51 07.1	+0.4
	baz=282						
NCUH	**Zhongli**	0.97	281	*e*P	Pn	10 51 07.3	-0.4
	baz=282						
HWA	**Hwalien**	0.99	216	*e*P	Pg	10 51 06.9	+0.4
	baz=209						
NFF	**Wufeng Townshi**	1.03	262	*e*P	Pg	10 51 07.4	+0.2
	baz=260						
NFF				*e*S	Sg	10 51 21.1	+0.5
	baz=260						
NJD	**Zhudong**	1.04	268	*e*P	Pn	10 51 08.8	+0.1
	baz=267						
FUSS	**Fushou**	1.05	240	*e*P	Pg	10 51 07.7	0.0
	baz=235						
FUSS				*e*S	Sg	10 51 20.1	-1.3
	baz=235						
ETM	**Tongmen**	1.06	220	*e*P	Pg	10 51 07.5	-0.4
	baz=214						
ETM				*e*S	Sg	10 51 20.5	-1.1
	baz=214						
TEYL	**Yanliau Villag**	1.08	213	*e*P	Pn	10 51 09.3	+0.1
	baz=208						
TEYL				*e*S	Sn	10 51 26.0	+1.5
	baz=208						
WHF	**Hehuan Shan**	1.09	234	*e*P	Pg	10 51 08.2	-0.3
	baz=230						
WHF				*e*S	Sg	10 51 21.9	-0.8
	baz=230						
NHW	**Xinwu Township**	1.10	282	*e*P	Pn	10 51 09.9	+0.4
	baz=282						
TWT	**Tachien**	1.10	241	*e*P	Pg	10 51 08.9	+0.3
	baz=238						
TWT				*e*S	Sg	10 51 22.4	-0.6
	baz=238						
HSN1	**Hsinchu**	1.10	270	*e*P	Pn	10 51 09.9	+0.4
	baz=269						
TDCB	**Techi**	1.11	242	*e*P	Pg	10 51 08.8	-0.1
	baz=238						
TDCB				*e*S	Sg	10 51 22.2	-1.2
	baz=238						
LIOB	**Emei**	1.12	263	*e*P	Pn	10 51 09.6	-0.1
	baz=262						
LIOB				*e*S	Sn	10 51 25.8	+0.4
	baz=262						
NSTT	**Nanjuang**	1.13	262	*e*P	Pg	10 51 09.6	+0.3
	baz=261						
NSTT				*e*S	Sb	10 51 24.8	+0.3
	baz=261						
SBCB	**Hsinchu**	1.13	271	*e*P	Pn	10 51 10.8	+0.9
	baz=270						
SBCB				*e*S	Sn	10 51 25.8	0.0
	baz=270						
HSN	**Hsinchu**	1.15	271	*e*P	Pb	10 51 09.9	+0.1
	baz=272						
CHGB	**Renai**	1.21	233	*e*P	Pb	10 51 10.4	-0.5
	baz=229						
CHGB				*e*S	Sg	10 51 26.3	0.0
	baz=229						
ESL	**Shilin**	1.21	217	*e*P	Pb	10 51 10.2	-0.7
	baz=212						
ESL				*e*S	Sb	10 51 26.4	-0.4
	baz=212						
OWD	**Renai**	1.27	230	*e*P	Pn	10 51 11.3	-0.7
	baz=226						
OWD				*e*S	Sb	10 51 27.6	-1.0
	baz=226						
WHP	**Taichung City**	1.28	247	*e*P	Pn	10 51 12.1	+0.1
	baz=244						
WHP				*e*S	Sb	10 51 27.2	-1.5
	baz=244						
WUSB	**Renai**	1.29	232	*e*P	Pn	10 51 12.0	-0.2
	baz=229						
WUSB				*e*S	Sb	10 51 28.0	-1.1
	baz=229						
EGFH	**Guangfu**	1.33	214	*e*P	Pn	10 51 12.2	-0.5
	baz=209						
EGFH				*e*S	Sg	10 51 31.0	+0.6
	baz=209						
NMLH	**Miaoli**	1.33	260	*e*P	Pg	10 51 14.1	+0.9
	baz=258						
NMLH				*e*S	Sg	10 51 32.1	+1.6
	baz=258						
WPL	**Puli Township**	1.40	237	*e*P	Pg	10 51 14.9	+0.6
	baz=233						
TWQ1	**Liyutan**	1.40	252	*e*P	Pg	10 51 15.6	+1.2
	baz=250						
TWQ1				*e*S	Sg	10 51 34.0	+1.4
	baz=250						
WCS	**Beigang Elemen**	1.41	239	*e*P	Pb	10 51 14.4	+0.2
	baz=236						
WCS				*e*S	Sg	10 51 34.3	+1.5
	baz=236						
DPDB	**Guoxing**	1.41	238	*e*P	Pb	10 51 14.5	+0.3
	baz=235						
DPDB				*e*S	Sg	10 51 33.6	+0.8
	baz=235						
VWDT	**VWDT**	1.43	224	⇑*e*P	Pb	10 51 14.4	-0.2
	baz=220						
VWDT				*e*S	Sn	10 51 32.6	-0.5
	baz=220						
IRIF	**Iriomote-Funau**	1.44	108	P	Pb	10 51 14.5	-0.2
IRIF				*e*S	Sg	10 51 33.5	-0.2
HGSD	**Ruisui**	1.48	210	*e*P	Pb	10 51 15.6	0.0
	baz=206						
HGSD				*e*S	Sg	10 51 39.5	+4.2
	baz=206						
SMLT	**Sun Moon Lake**	1.51	234	⇓*e*P	Pb	10 51 16.4	+0.4
	baz=230						
SMLT				*e*S	Sg	10 51 36.2	+0.1
	baz=230						
WDJ	**Dajia District**	1.51	254	*e*P	Pg	10 51 18.0	+1.4
	baz=252						
WDJ				*e*S	Sg	10 51 37.3	+1.1
	baz=252						
EHY	**Hungye**	1.52	213	*e*P	Pn	10 51 15.8	+0.5
	baz=209						
EHY				*e*S	Sg	10 51 37.2	+0.7
	baz=209						
TYC	**Yuchr**	1.53	235	*e*P	Pb	10 51 16.3	0.0
	baz=232						
TYC				*e*S	Sn	10 51 35.8	+0.2
	baz=232						
SSLB	**Suanglung**	1.53	230	P	Pb	10 51 16.3	-0.1
SSLB	**Suanglung**	1.53	230	*e*P	Pb	10 51 16.1	-0.2
	baz=226						
SSLB				*e*S	Sb	10 51 36.1	+0.1
	baz=226						
TCU	**Taichung**	1.55	246	*e*P	Pg	10 51 19.7	+2.3
	baz=244						
TCU				*e*S	Sg	10 51 38.6	+1.1
	baz=244						
HATJ	**Hateruma jima**	1.61	117	P	Pb	10 51 17.5	-0.1
HATJ				*e*S	Sb	10 51 38.3	+0.2
YULB	**Yu-li**	1.63	212	P	Pn	10 51 17.5	+0.7
YULB	**Yu-li**	1.63	212	*e*P	Pn	10 51 17.0	+0.2
	baz=208						
YULB				*e*S	Sn	10 51 38.5	+0.4
	baz=208						
EYUL	**Yuli**	1.66	210	*e*P	Pb	10 51 18.7	+0.2
	baz=207						
WHYT	**Xinyi Township**	1.66	230	*e*P	Pb	10 51 19.3	+0.7
	baz=226						
WHYT				*e*S	Sg	10 51 41.6	+0.6
	baz=226						
TWF1	**Yuli**	1.66	211	*e*P	Pn	10 51 17.3	+0.1
	baz=207						
TWF1				*e*S	Sg	10 51 41.2	+0.2
	baz=207						
WJS	**Zhushan**	1.68	235	*e*P	Pg	10 51 20.4	+0.8
	baz=232						
WJS				*e*S	Sg	10 51 42.3	+0.9
	baz=232						
WNT	**Mingjian**	1.68	238	*e*P	Pg	10 51 20.7	+0.9
	baz=235						
JKRS	**Kuro-shima**	1.71	108	P	Pb	10 51 18.8	-0.6
JKRS				S	Sb	10 51 40.6	-0.4
YUS	**Yu-Shan**	1.74	222	*e*P	Pg	10 51 21.0	0.0
	baz=219						
YUS				*e*S	Sb	10 51 42.7	+0.2
	baz=219						
JIJ	**Ishigaki jima**	1.79	103	P	Pn	10 51 19.4	+0.5
JIJ				*e*S	Sn	10 51 42.3	+0.3
FULB	**Fuli**	1.80	209	*e*P	Pn	10 51 19.6	+0.5
	baz=205						
FULB				*e*S	Sb	10 51 44.2	+0.5
	baz=205						
ALS	**Alishan**	1.82	226	*e*P	Pb	10 51 22.1	+0.7
	baz=223						
ALS				*e*S	Sg	10 51 46.9	+0.8
	baz=223						
CHN5	**Tsauling**	1.85	231	*e*P	Pg	10 51 23.2	+0.2
	baz=228						
CHN5				*e*S	Sg	10 51 47.6	+0.6
	baz=228						
CHKT	**Chengkung**	1.86	205	*e*P	Pn	10 51 19.6	-0.2
	baz=202						
CHKT				*e*S	Sn	10 51 43.4	-0.3
	baz=202						
WGK	**Gukeng**	1.88	235	*e*P	Pb	10 51 23.0	+0.8
	baz=232						
EHD	**Haiduan**	1.88	210	*e*P	Pn	10 51 20.4	+0.2
	baz=207						
EHD				*e*S	Sb	10 51 47.2	+1.2
	baz=207						
WDLH	**Douliu**	1.89	235	*e*P	Pg	10 51 24.1	+0.3
	baz=233						
WDLH				*e*S	Sg	10 51 49.0	+0.6
	baz=233						
JISG	**Ishigakijimahi**	1.90	96	P	Pb	10 51 22.2	-0.5
WRL	**Guolierlin Hig**	1.91	243	*e*P	Pb	10 51 23.4	+0.6
	baz=241						
WRL				*e*S	Sb	10 51 47.7	+0.9
	baz=241						
ELDTW	**Lidau**	1.94	215	*e*P	Pb	10 51 22.7	-0.7
	baz=212						
ELDTW				*e*S	Sb	10 51 47.9	0.0
	baz=212						
EDH	**Donghe**	2.00	205	*e*P	Pn	10 51 22.1	+0.3
	baz=202						
WCKO	**Fanlu**	2.00	228	*e*P	Pb	10 51 25.3	+1.0
	baz=226						
WCKO				*e*S	Sg	10 51 51.8	-0.1
	baz=226						
WTK	**Tuku**	2.01	237	*e*P	Pb	10 51 23.7	-0.8
	baz=235						
WTK				*e*S	Sb	10 51 50.5	+0.8
	baz=235						
CHN4	**Tsaushan**	2.07	227	*e*P	Pb	10 51 26.5	+1.0
	baz=224						
CHN4				*e*S	Sg	10 51 53.9	-0.2
	baz=224						
TPUB	**Ta-pu**	2.08	225	*e*P	Pb	10 51 26.8	+1.0
	baz=222						
TPUB				*e*S	Sb	10 51 52.9	+1.1
	baz=222						
STYH	**Taoyuan**	2.09	220	*e*P	Pb	10 51 25.8	0.0
	baz=217						
STYH				*e*S	Sb	10 51 51.1	-0.9
	baz=217						
STYT	**Tauyuan**	2.10	220	*e*P	Pb	10 51 26.3	+0.1
	baz=217						
WTP	**Ta-pu**	2.13	224	⇓*e*P	Pb	10 51 27.1	+0.5
	baz=221						
WTP				*e*S	Sg	10 51 55.5	-0.5
	baz=221						
TWK	**Hsinying**	2.20	227	*e*P	Pb	10 51 28.0	+0.3
	baz=224						
TWK				*e*S	Sb	10 51 56.8	+1.6
	baz=224						
LDUT	**Ludao**	2.21	199	*e*P	Pn	10 51 24.7	-0.1
	baz=195						
LDUT				*e*S	Sn	10 51 51.6	-0.9
	baz=195						
WSL	**Shuilin Townsh**	2.22	236	*e*P	Pb	10 51 28.3	+0.2
	baz=234						
WSL				*e*S	Sb	10 51 56.7	+0.9
	baz=234						
TWGBT	**Beinan**	2.23	209	P	Pn	10 51 25.3	+0.3

TWGBT	Beinan	2.23	209	eP	Pn	10 51 25.4	+0.4
	baz=206						
TWG	Pinlang	2.23	209	eP	Pn	10 51 25.4	+0.4
	baz=206						
CHN1	Nanshi	2.23	225	eP	Pb	10 51 28.7	+0.5
	baz=222						
CHN1				eS	Sb	10 51 56.4	+0.3
	baz=222						
SGST	Jiashian	2.27	222	eP	Pb	10 51 28.3	-0.7
	baz=219						
SGST				eS	Sb	10 51 57.4	+0.1
	baz=219						
ICHU	Yijhu	2.28	232	eP	Pb	10 51 29.5	+0.4
	baz=230						
ICHU				eS	Sb	10 51 59.0	+1.5
	baz=230						
CHN8	Yiju	2.34	233	eP	Pb	10 51 30.1	0.0
	baz=230						
CHN8				eS	Sg	10 52 01.4	-1.4
	baz=230						
ECL	Taimali	2.47	209	eP	Pn	10 51 30.0	+1.7
	baz=206						
SSD	Sandimen	2.50	216	eP	Pb	10 51 32.5	-0.5
	baz=213						
SSD				eS	Sb	10 52 04.4	+0.4
	baz=213						
VWUC	VWUC	2.54	275	eP	Pn	10 51 28.7	-0.6
	baz=275						
TWM1	Shoushan	2.56	221	eP	Pb	10 51 33.4	-0.5
	baz=218						
MASBT	Mashibuluo	2.61	214	eP	Pb	10 51 33.2	-1.6
	baz=212						
EAST	Anshuo	2.71	208	eP	Pn	10 51 33.1	+1.5
	baz=206						
KSRS	Korea Array	13.53	20	Pn	P	10 54 07.5	-1.9
	0.1nm,0.3s,baz=197,slow=12,SNR=1.3						
KSRS				LR	LR	10 59 23.8	
	comp=Z,46nm,19.7s,baz=205,slow=37						
	0.5nm,0.6s						
MJAR	Matsushiro Arr	18.03	46	LR	LR	11 03 48.4	
	comp=Z,36nm,18.5s,baz=193,slow=41						
CMAR	Chiang Mai Arr	22.53	258	LR	LR	11 05 05.6	
	comp=Z,29nm,18.4s,baz=195,slow=40						
KLR	Kul'dur	25.51	15	LR	LR	11 06 26.6	
	comp=Z,42nm,18.6s,baz=218,slow=36						
SONM	Songino Array	26.20	335	P	P	10 56 20.7	-2.5
	0.6nm,0.7s,baz=155,slow=10,SNR=2.7						
	0.6nm,0.7s						
MKAR	Makanchi Array	38.58	315	P	P	10 58 04.3	-6.9
	0.3nm,1.0s,baz=110,slow=9.3,SNR=2.2						
	0.3nm,1.0s						
PETK	Petropavlovsk-	38.84	34	P	P	10 58 20.0	+6.8
	1.0nm,0.8s,baz=241,slow=11,SNR=1.3						
	1.0nm,0.8s						
WRA	Warramunga Arr	45.99	164	P	P	10 59 11.9	+0.1
	0.5nm,0.6s,baz=346,slow=8.7,SNR=7.4						
	0.5nm,0.6s						
ASAR	Alice Springs	49.48	166	P	P	10 59 39.4	+0.6
	0.2nm,0.8s,baz=339,slow=6.9,SNR=1.7						
	0.2nm,0.8s						
YKA	Yellowknife Ar	82.05	23	P	P	11 03 10.3	+1.9
	0.1nm,0.6s,baz=305,slow=4.4,SNR=1.8						
	0.1nm,0.6s						

JMA ***22*** *11:00:46.6±0.3, 32°.2N±0°.8×14°1E±°, h14^{km}, MV3.6/29, E OFF HACHIJOJIMA ISLAND*

IDC ***22*** *11:00:48.3±3.3, 31°.78N×140°.63E, h92^{km}±29^{km}, mb3.2/7, mbtmp3.5/10, MS2.3/1, Error ellipse: s-maj=32.2km s-min=18.6km az=90.0*

ISC 22 11:00:46.5±1.0**, 31°.92N**±0°.08×**140°.69E**±0°.09**, h73**^{km}**, n31, σ2^{s}.02**/31**, mb3.5**/7**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	0.95	305	eP	Pn	11 01 03.1	-1.5
JHCJ	Hachijojimakas	1.37	327	P	Pn	11 01 08.4	-1.5
JHCJ				eS	Sn	11 01 24.1	-3.5
JHJ2	Mitsune	1.40	328	P	Pn	11 01 08.9	-1.4
JHJ2				eS	Sn	11 01 24.8	-3.3
JMYK	Miyake Tsubota	2.34	336	eP	Pn	11 01 23.0	+0.2
JMYK				S	Sn	11 01 49.1	-1.4
JKO	Kozu shima	2.61	330	eP	Pn	11 01 26.1	-0.3
BSO1	Boso 1	2.74	5	eP	Pn	11 01 26.8	-0.8
BSO1				eS	Sn	11 01 57.2	-2.2
TK02	Tokai 2	3.19	310	eP	Pn	11 01 35.1	+1.1
JOD2	Odawara 2	3.59	339	eP	Pn	11 01 39.5	-0.3
JOD2				eS	Sn	11 02 18.7	-2.4
JYN	Shimob	3.99	334	eP	Pn	11 01 47.0	+1.7
JIE	Ise	4.15	307	eP	Pn	11 01 47.9	+0.5
JRY	Ryogami san	4.35	341	eP	Pn	11 01 51.0	+0.9
JAG	Ashikaga	4.61	347	eS	Sn	11 02 42.3	-3.6
JTNC	Tanabenakahech	4.67	295	eP	Pn	11 01 54.5	0.0
JWY	Kouya	4.85	300	eP	Pn	11 01 58.3	+1.2
JYTA	Yamagatataniai	4.93	319	eP	Pn	11 01 59.4	+1.4
MJAR	Matsushiro Arr	5.05	337	P	Pn	11 02 02.7	+3.1
	5.7nm,0.8s,baz=157,slow=12,SNR=12						
MJAR				S	Sn	11 03 00.2	+3.5
	1.6nm,0.4s,baz=173,slow=32,SNR=4.2						
JNU	Nakatsue	8.37	281	P	Pn	11 02 46.8	+1.7
	1.5nm,0.4s,baz=90,slow=15,SNR=1.8						
KSRS	Korea Array	11.87	301	P	Pn	11 03 36.9	+4.2
	1.6nm,0.9s,baz=123,slow=14,SNR=6.5						
KSRS				LR	LR	11 08 23.5	
	comp=Z,15nm,18.6s,baz=100,slow=38						
H11N2	WAKE ISLAND Hy	26.45	111	T	T	11 34 46.3	
	baz=304,slow=75,SNR=4.7						
H11N1	WAKE ISLAND Hy	26.46	111	T	T	11 34 41.4	
	baz=304,slow=75,SNR=2.9						
H11N3	WAKE ISLAND Hy	26.47	111	T	T	11 34 24.7	
	baz=304,slow=75,SNR=3.6						
H11S3	WAKE ISLAND Hy	26.97	113	T	T	11 34 57.1	
	baz=304,slow=75,SNR=21						
H11S1	WAKE ISLAND Hy	26.97	113	T	T	11 34 57.6	
	baz=304,slow=75,SNR=24						
H11S2	WAKE ISLAND Hy	26.99	113	T	T	11 34 55.8	
	baz=304,slow=75,SNR=12						
SONM	Songino Array	30.44	311	P	P	11 06 52.8	+0.7
	0.3nm,0.5s,baz=124,slow=7.8,SNR=1.6						
	0.3nm,0.5s						
MKAR	Makanchi Array	46.49	306	P	P	11 09 06.5	+0.2
	0.4nm,0.7s,baz=89,slow=9.1,SNR=4.9						
	0.4nm,0.7s						
WRA	Warramunga Arr	51.92	188	P	P	11 09 46.4	-1.6
	0.2nm,0.4s,baz=1.2,slow=7.9,SNR=8.7						
	0.2nm,0.4s						
ILAR	Eielson Array	54.16	30	P	P	11 10 04.6	+0.7
	0.5nm,1.0s,baz=260,slow=5.1,SNR=4.0						
	0.5nm,1.0s						
ASAR	Alice Springs	55.65	188	P	P	11 10 13.6	-1.5
	0.2nm,0.7s,baz=15,slow=9.8,SNR=5.4						
	0.2nm,0.7s						
KBZ	Khabaz	73.81	312	P	P	11 12 13.0	-0.1
	1.5nm,0.8s,baz=118,slow=3.2,SNR=3.9						
	1.5nm,0.8s						
TXAR	Lajitas Array	93.72	52	P	P	11 13 56.7	+1.1
	0.2nm,0.7s,baz=298,slow=4.0,SNR=1.9						
	0.2nm,0.7s						

IDC ***22*** *11:14:14.8±0.9, 58°.31S×25°.54W, h0^{km}, mb3.9/3, mbtmp3.8/4, ML3.7/1, Error ellipse: s-maj=40.3km s-min=26.2km az=78.0*

NEIC ***22*** *11:14:26.1±1.6, 58°.57S±0°.10×26°.2W±0°.2, h97^{km}±7^{km}, mb4.5/14, Error ellipse: s-maj=14.4km s-min=13.4km az=197.0*

ISC 22 11:14:26.9±0.6**, 58°.59S**±0°.10×**26°.1W**±0°.1**, h107**^{km}**, n27, σ1^{s}.75**/27**, mb4.2**/10**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.21	302	Pn	Pn	11 16 09.9	+0.3
VNA1	Neumayer--Stat	14.21	155	P	Pn	11 17 39.4	-3.5
VNA3	Neumayer Olymp	14.39	158	P	Pn	11 17 42.0	-3.2
VNA2	Neumayer--Watz	14.61	155	P	Pn	11 17 44.8	-3.2
	baz=322,slow=11						
SNAA	Sanae	16.18	153	P	Pn	11 18 06.4	-1.2
SNAA	Sanae	16.18	153	Pn	Pn	11 18 06.5	-1.2
	0.3nm,0.3s,baz=311,slow=17,SNR=14						
SNAA				Sn	Sn	11 20 54.3	-12
	0.1nm,0.3s,baz=302,slow=19,SNR=1.8						
	1.1nm,0.4s						
SNAA	Sanae	16.18	153	Pn	Pn	11 18 06.6	-1.0
TROLL	Troll, Antarti	17.71	151	P	P	11 18 27.3	+1.5
PMSA	Palmer Station	18.82	235	P	P	11 18 36.7	-1.0
EFI	East Falkland	19.42	277	P	P	11 18 42.7	-1.7
EFI				IAmb	IAmb	11 18 54.5	
	comp=Z,78nm,1.4s						
BELA	Belgrano 2	19.59	185	P	P	11 18 45.9	-0.2
QSPA	South Pole Qui	31.65	180	P	P	11 20 42.6	+3.0
	comp=Z,1.1nm,0.7s,baz=69,slow=2.0,SNR=15						
	comp=Z,1.1nm,0.7s						
QSPA	South Pole Qui	31.65	180	P	P	11 20 42.8	+3.1
PLCA	Paso Flores	33.11	283	P	P	11 20 54.7	+2.2
	comp=Z,1.1nm,0.9s,baz=164,slow=7.8,SNR=4.0						
	comp=Z,1.1nm,0.9s						
PLCA	Paso Flores	33.11	283	P	P	11 20 51.8	-0.8
PLCA				IAmb	IAmb	11 21 04.9	
	comp=Z,4.9nm,1.4s						
MAW	Mawson	37.76	141	P	P	11 21 32.1	+0.3
AQDB	Aquidauana	43.70	318	P	P	11 22 20.3	-0.8
AQDB				IAmb	IAmb	11 22 34.9	
	comp=Z,12nm,1.4s						
MNMC	Minye Minye	50.47	302	P	P	11 23 14.6	+0.5
MNMC				IAmb	IAmb	11 23 27.4	
	comp=Z,12nm,1.3s						
LPAZ	La Paz	52.35	306	P	P	11 23 27.1	-1.4
LPAZ				IAmb	IAmb	11 23 27.5	
	comp=Z,3.6nm,1.4s						
BOAV	Boa Vista	66.67	322	P	P	11 25 06.4	+0.3
BOAV				IAmb	IAmb	11 25 10.6	
	comp=Z,4.2nm,1.0s						
DBIC	Dimbokro	67.25	23	P	P	11 25 09.0	-0.6
DBIC				IAmb	IAmb	11 25 29.0	
	comp=Z,16nm,1.4s						
TOA0	Torodi Ar. Sit	74.99	28	P	P	11 25 56.4	+0.1
TOA0				IAmb	IAmb	11 25 59.1	
	comp=Z,4.0nm,1.1s						
TORD	Torodi Ar. Bea	74.99	28	P	P	11 25 56.3	0.0
	comp=Z,1.4nm,0.7s,baz=199,slow=6.0,SNR=7.8						
ASAR	Alice Springs	96.38	162	P	P	11 27 44.5	+0.9
	comp=Z,0.2nm,0.7s,baz=183,slow=4.6,SNR=4.6						
	comp=Z,0.2nm,0.7s						
YKA	Yellowknife Ar	138.45	316	PKP	PKiKP	11 33 40.2	-0.1
	comp=Z,0.8nm,0.7s,baz=129,slow=2.4,SNR=15						
INK	Inuvik	148.13	318	PKPbc	PKiKP	11 33 59.8	-0.2
	comp=Z,2.6nm,0.7s,baz=118,slow=2.9,SNR=24						
ILAR	Eielson Array	152.22	308	PKPbc	PKiKP	11 34 10.1	+1.5
	comp=Z,1.4nm,0.6s,baz=122,slow=1.7,SNR=23						

NOU ***22*** *11:16:31.2, 37°.01S×179°.38E, h0^{km}, MLv3.6/7, Off E. Coast of N. Island, N.Z.*

WEL ***22*** *11:16:38.4±0.8, 37°S±3°×17°9E±°, h12^{km}, M3.1/22, ML3.4/29, MLv3.1/22, Error ellipse: s-maj=0.0km s-min=0.0km az=84.1, confirmed*

ISC 22 11:16:35.8±2.7**, 37°.03S**±0°.07×**179°.0E**±0°.1**, h9**^{km}±11^{km}**, n45, σ1^{s}.07**/60**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.74	224	P	Pg	11 16 50.5	+0.5
MXZ	Matakaoa Point	0.74	224	P	Pg	11 16 50.5	+0.5
MXZ				S	Sg	11 16 59.0	-0.7
WMGZ	Waiomatatini S	0.90	209	P	Pn	11 16 55.2	+0.6
WMGZ				S	Sn	11 17 08.1	+0.4
PKGZ	Pakihiroa	1.10	219	P	Pg	11 16 56.8	-0.2
PUZ	Puketiti	1.18	208	P	Pn	11 16 58.7	+0.2
PUZ				S	Sn	11 17 14.7	0.0
HAZ	Te Kaha	1.18	232	P	Pb	11 16 57.2	-1.1
RUGZ	Raukumara Rang	1.38	227	P	Pn	11 17 01.4	+0.1
TWGZ	Tauwhareparae	1.38	214	P	Pg	11 17 02.8	+0.6
CNGZ	Carnagh Statio	1.56	202	P	Pb	11 17 04.9	-0.1
CNGZ				S	Sb	11 17 25.1	+0.2
TKGZ	Te Karaka	1.66	212	P	Pn	11 17 05.1	+0.1
TKGZ				S	Sn	11 17 26.6	+0.2
MWZ	Matawai	1.72	221	P	Pn	11 17 06.8	+0.8
MWZ				S	Sn	11 17 28.5	+0.3
RAGZ	Rawiri	1.90	219	P	Pn	11 17 09.7	+1.2
URZ	Urewera	1.91	230	P	Pn	11 17 09.0	+0.5
URZ	Urewera	1.91	230	P	Pn	11 17 09.1	+0.6
URZ				S	Sn	11 17 32.7	+0.1
RIGZ	Rimuhau	1.92	209	P	Pn	11 17 09.3	+0.6
SNGZ	Shannon Statio	2.16	216	P	Pn	11 17 12.3	+0.3
SNGZ				S	Sn	11 17 40.0	+1.0
RTZ	Ruatahuna	2.22	224	P	Pn	11 17 13.6	+0.7
RTZ				S	Sn	11 17 41.4	+0.8
KNZ	Kokohu	2.23	207	P	Pn	11 17 12.2	-0.6
KNZ				S	Sn	11 17 39.2	-1.3
MUGZ	Murupara	2.25	230	P	Pn	11 17 14.0	+0.8
MUGZ				S	Sn	11 17 42.7	+1.5
RAHZ	Arahi	2.39	218	P	Pn	11 17 15.8	+0.7
MTHZ	Maungataniwha	2.47	222	P	Pn	11 17 17.2	+0.9
MTHZ				S	Sn	11 17 46.7	+0.2
KUZ	Kuaotunu	2.61	275	P	Pn	11 17 17.5	-0.6
KUZ	Kuaotunu	2.61	275	P	Pn	11 17 17.3	-0.8
KUZ				S	Sn	11 17 45.7	-4.2
NMHZ	Naumai	2.67	219	P	Pn	11 17 20.2	+1.2
NMHZ				S	Sn	11 17 52.3	+0.7
TOZ	Tahuroa Road	2.84	255	P	Pn	11 17 20.7	-0.6
BKZ	Black Stump Fm	2.88	222	P	Pn	11 17 22.0	+0.1
BKZ	Black Stump Fm	2.88	222	P	Pn	11 17 22.1	+0.2
BKZ				S	Sn	11 17 55.5	-1.3
GRZ	Great Barrier	2.92	284	P	Pn	11 17 24.1	+1.7
MCHZ	McNeill Hill	2.99	216	P	Pn	11 17 23.1	-0.3
WIAZ	Waiheke Island	3.07	273	P	Pn	11 17 24.5	0.0
KWHZ	Kaweka Forest	3.11	219	P	Pn	11 17 25.5	+0.4
KAHZ	Kahuranaki	3.20	210	P	Pn	11 17 24.9	-1.5
ETAZ	East Tamaki Re	3.23	270	P	Pn	11 17 27.0	+0.4
MBAZ	Motutapu North	3.26	273	P	Pn	11 17 28.8	+1.7
TMVZ	Te Maari	3.30	230	P	Pn	11 17 28.7	+0.9
ETVZ	East Tongariro	3.31	230	P	Pn	11 17 28.7	+0.8
BHHZ	Black Hill Sta	3.35	222	P	Pn	11 17 29.0	+0.7
NGZ	Ngauruhoe	3.40	230	P	Pn	11 17 30.8	+1.6
RVAZ	Riverhead Bore	3.52	273	P	Pn	11 17 31.3	+0.7
HIZ	Hauiti	3.57	244	P	Pn	11 17 33.0	+1.7
HIZ	Hauiti	3.57	244	P	Pn	11 17 33.1	+1.8
WCZ	Waipu Caves	3.87	285	P	Pn	11 17 36.4	+0.9
BFZ	Birch Farm	4.21	209	P	Pn	11 17 38.6	-1.6
OUZ	Omahuta	4.70	291	P	Pn	11 17 48.5	+1.6
OUZ	Omahuta	4.70	291	P	Pn	11 17 48.2	+1.3

NNC ***22*** *11:26:58.1±9.2, 37°.34N×71°.64E, h0^{km}, mb5.6, mpv5.3, Error ellipse: s-maj=96.8km s-min=52.9km az=162.0*

IDC ***22*** *11:27:01.0±0.4, 37°.65N×72°.18E, h0^{km}, mb4.7/44, mbtmp4.7/51, ML4.1/7, MS4.1/73, Error ellipse: s-maj=7.7km s-min=6.6km az=150.0*

MOS ***22*** *11:27:00.1±1.1, 37°.39N×72°.02E, h13^{km}, mb5.0/47, MS4.4/26, Error ellipse: s-maj=4.3km s-min=3.2km az=93.4*

NEIC ***22*** *11:27:01.9±1.1, 37°.50N±0°.07×71°.95E±0°.05, h10^{km}±3^{km}, mb5.1/136, Mwr4.9/21, Error ellipse: s-maj=10.0km s-min=5.2km az=177.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.01; $M_{\theta\theta}$-2.55; $M_{\phi\phi}$2.56; $M_{r\theta}$0.86; $M_{\theta\phi}$0.35; $M_{\phi r}$0.64; Fault plane solution: $M_0$2.79000×10^{16} NP1:ϕ_s319.23000°, δ67.57000°, λ-178.65000°. NP2:ϕ_s228.71000°, δ88.75000°, λ-22.43000°. Principal axes: T 2.7627, Plg15.0000°, Azm276.0000°; N 0.0523, Plg68.0000°, Azm46.0000°; P -2.8149, Plg17.0000°, Azm182.0000°;*

NEIC ***22*** *11:27:02.8, 37°.68N×71°.94E, h10^{km}*

GCMT ***22*** *11:27:03.9±0.2, 37°.66N±0°.01×72°.01E±0°.02, h30^{km}±1^{km}, MW5.1/116, Moment Tensor Solution. s31,c36; s116,c175; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.61±.24; $M_{\theta\theta}$-4.23±.17; $M_{\phi\phi}$4.84±.17; $M_{r\theta}$-0.56±.26; $M_{\theta\phi}$2.53±.13; $M_{\phi r}$-1.43±.24; Best double couple: $M_0$5.37700×10^{16} NP1:ϕ_s240.00000°, δ82.00000°, λ11.00000°. NP2:ϕ_s149.00000°, δ79.00000°, λ172.00000°. Principal axes: T 5.8570, Plg13.0000°, Azm105.0000°; N -0.9630, Plg76.0000°, Azm274.0000°; P -4.8960, Plg3.0000°, Azm14.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 11:27:02.5±0.4**, 37°.55N**±0°.03×**72°.03E**±0°.02**, h11**^{km}±2^{km}**, h12**^{km}**:pP-P, n809, σ2^{s}.09**/894**, mb4.9**/201**, MS4.2**/105**, 39C-38D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.94	355	Pn	Pn	11 27 29.7	-5.9
GAR	Garm	1.98	318		Pn	11 27 36.3	+0.3
CHGR	Chuyangaron	2.52	297	Pn	Pn	11 27 45.3	+1.9
CHGR	Chuyangaron	2.52	297	PN	Pn	11 27 45.3	+1.9
BTK	Batken	2.68	340		Pb	11 27 48.8	-1.6
BTK	Batken	2.68	340	PN	Pb	11 27 48.8	-1.6
OHH	Osh	3.03	11	PN	Pb	11 27 53.9	-2.5
KSH	Kashi	3.67	56	Pn	Pn	11 27 57.4	-1.8
KSH				Sn	Sn	11 28 38.5	-4.0
KSH				smax	smax		
	comp=N,22µm,1.0s						
KSH				smax	smax		
	comp=E,13µm,0.8s						
CEP	Cherat	3.72	181	P	Pb	11 28 06.5	-1.7
KBL	Kabul	3.85	220	Pn	Pb	11 28 07.0	-3.5
KBL	Kabul	3.85	220	PN	Pb	11 28 07.0	-3.5
KBL	Kabul	3.85	220	P	Pb	11 28 07.1	-3.5
	SNR=537						
KBL				S	Sb	11 28 57.2	-0.1
CHCP	Chirah Chowk	4.01	165	P	Pn	11 28 08.2	+4.4
NIL	Nilore	4.02	165		Pb	11 28 09.4	-3.8
NIL	Nilore	4.02	165	PN	Pb	11 28 09.4	-3.8
TRKS	Terek-Say	4.04	351	PN	Pn	11 28 05.6	+1.3
ARK	Arkit	4.24	359	PN	Pn	11 28 08.7	+1.6
TAS	Tashkent	4.32	332	Pn	Pn	11 28 10.0	+1.9
TAS	Tashkent	4.32	332	PN	Pn	11 28 10.0	+1.9
THW	Thamme Wali	4.75	183	P	Pn	11 28 19.2	+5.2
AML	Almayashu	4.75	15	P	Pn	11 28 17.0	+2.6
	SNR=198						
IUG	Iuzhnay	4.84	342	Pg	Pn	11 28 17.6	+2.3
	393nm,0.7s						
IUG	Iuzhnay	4.84	342	⇓iPn	Pn	11 28 17.6	+2.3
	baz=341						
IUG				i Pg	Pb	11 28 29.2	+1.9
	baz=341						
IUG				eSn	Sn	11 29 09.0	-2.4
	baz=341						
IUG				eLg	Lg	11 29 32.2	
	baz=341						
IUG	Iuzhnay	4.84	342	d iPN	Pn	11 28 17.6	+2.3
IUG				i		11 28 29.2	
IUG				e		11 29 32.2	
UCH	Uchtor	5.05	21	P	Pn	11 28 21.1	+2.6
	SNR=40						
CHM	Chimkent	5.12	339	i Pn	Pn	11 28 21.4	+2.3
	baz=338						
CHM				ePg	Pb	11 28 35.5	+3.5
	baz=338						
CHM	Chimkent	5.12	339	i PN	Pn	11 28 21.3	+2.3
CHM				e		11 28 35.4	
MRKS	Merke	5.27	10	Pg	Pn	11 28 23.7	+2.4
	110nm,0.7s						
MRKS				Lg	Lg	11 29 51.9	
	929nm,0.8s						
EKS2	Erkin-Say	5.28	14	P	Pn	11 28 24.1	+2.8
	SNR=147						
DZA	Taraz	5.36	355	Pg	Pn	11 28 24.9	+2.5
	1µm,0.5s						
DZA				Lg	Lg	11 29 50.2	
	3µm,0.9s						
DZA	Taraz	5.36	355	ePn	Pn	11 28 24.4	+1.9
	baz=354						
DZA				ePg	Pb	11 28 39.6	+3.5
	baz=354						
DZA	Taraz	5.36	355	ePN	Pn	11 28 24.3	+1.9
DZA				e		11 28 39.6	
AAK	Ala-Archa	5.42	20	P	Pn	11 28 26.4	+3.0
	SNR=35						
AAK	Ala-Archa	5.42	20	Pn	Pn	11 28 26.3	+3.0
	13nm,0.3s,baz=201,slow=7.6,SNR=181						
AAK				Sn	Sn	11 29 28.7	+2.9
	24nm,0.3s,baz=89,slow=18,SNR=1.0						
AAK				LR	LR	11 30 35.6	
	comp=Z,2µm,20.9s,baz=212,slow=40						
	81nm,0.6s						
AAK	Ala-Archa	5.42	20	Pn	Pn	11 28 24.8	+1.5
AAK	Ala-Archa	5.42	20	d iPN	Pn	11 28 25.7	+2.3
AAK				MLR	MLR		
	comp=Z,1µm,2.0s						
AAK	Ala-Archa	5.42	20	i P	Pn	11 28 26.4	+3.0
	SNR=51						
AAK	Ala-Archa	5.42	20	P	Pn	11 28 26.4	+3.0
AAK				S	Sn	11 29 29.7	+3.9
KBK	Karagaybulak	5.57	23	P	Pn	11 28 28.5	+3.1
	SNR=82						
FRU1	Bishkek	5.62	20	Pn	Pn	11 28 29.5	+3.5
FRU1	Bishkek	5.62	20	PN	Pn	11 28 29.5	+3.5
SARP	Sargodha	5.64	174	P	Pn	11 28 29.9	+3.7
KK31	Karatay Array	5.67	349	Pn	Pn	11 28 28.1	+1.5
KK31	Karatay Array	5.67	349	⇓Pn	Pn	11 28 28.5	+1.9
	comp=Z,62nm,0.4s,baz=173,slow=13,SNR=2353						
KK31				⇑Pg	Pb	11 28 45.7	+4.3
	comp=Z,356nm,0.6s,baz=160,slow=15,SNR=10						
KK31				⇑Sn	Sn	11 29 34.5	+2.9
	comp=Z,859nm,0.8s,baz=180,slow=22,SNR=5.0						
KK31				⇑Lg	Lg	11 29 59.0	
	comp=Z,894nm,0.8s,baz=167,slow=28,SNR=4.5						
KK31	Karatay Array	5.67	349	PN	Pn	11 28 28.1	+1.5
KKAR	Karatay Array	5.67	349		Pn	11 28 28.3	+1.7
KKAR	Karatay Array	5.67	349	PN	Pn	11 28 28.3	+1.7
ULHL	Ulahol	5.70	33	P	Pn	11 28 31.2	+4.0
	SNR=24						
CHMS	Chumysh	5.83	20	P	Pn	11 28 31.7	+2.9
	SNR=14						
USP	Ospenovka	6.02	18	P	Pn	11 28 33.7	+2.3
	SNR=74						
TKM2	Tokmak 2	6.02	26	P	Pn	11 28 34.6	+3.0
	SNR=15						
KDJ	Kajisay	6.05	39	Pn	Pn	11 28 34.7	+2.6
KDJ	Kajisay	6.05	39	PN	Pn	11 28 34.7	+2.6
TARG	Taragay, Kyrgy	6.11	45	Pn	Pn	11 28 37.2	+4.2
TARG	Taragay, Kyrgy	6.11	45	PN	Pn	11 28 37.2	+4.2
SGDS	Sogindy	6.22	18	Pg	Pn	11 28 36.3	+2.1
	comp=Z,57nm,0.6s						
SGDS				Lg	Lg	11 30 16.2	
	comp=Z,471nm,1.5s						
SGDS	Sogindy	6.22	18	⇓iPn	Pn	11 28 36.3	+2.1
	baz=18						
SGDS				i Pg	Pb	11 28 53.4	+2.6
	baz=18						
SGDS				eLg	Lg	11 30 16.1	
	baz=18						
SGDS	Sogindy	6.22	18	d iPN	Pn	11 28 36.3	+2.1
SGDS				i		11 28 53.4	
SGDS				e		11 30 16.1	
DGS	Degeres	6.37	26	Pg	Pn	11 28 39.6	+3.3
	comp=Z,105nm,0.8s						
DGS				Lg	Lg	11 30 19.8	
	comp=Z,483nm,0.8s						
TNSS	Tian-Shan	6.65	33	i Pn	Pn	11 28 42.1	+1.7
	baz=33						
TNSS				i Pg	Pb	11 29 02.2	+4.0
	baz=33						
TNSS				eLg	Lg	11 30 31.0	
	baz=33						
TNSS	Tian-Shan	6.65	33	i PN	Pn	11 28 42.9	+2.5
TNSS				i		11 29 02.2	
AAA	Alma-Ata	6.77	32	ePn	Pn	11 28 44.9	+3.0
	baz=32						
AAA				ePg	Pb	11 29 03.9	+3.7
	baz=32						
AAA	Alma-Ata	6.77	32	ePN	Pn	11 28 44.8	+3.0
AAA				e		11 29 03.9	
MDOK	Medeo	6.79	33	⇑Pn	Pn	11 28 45.2	+3.0
	comp=Z,110nm,0.8s						
MDOK				⇓Pg	Pb	11 29 04.3	+3.7
	comp=Z,353nm,0.8s						
MDOK				⇓Lg	Lg	11 30 43.4	
	comp=Z,664nm,1.1s						
MDOK	Medeo	6.79	33	⇑ePn	Pn	11 28 44.7	+2.6
	baz=33						
MDOK				i Pg	Pb	11 29 04.3	+3.7
	baz=33						
MDOK				eLg	Lg	11 30 34.0	
	baz=33						
MDOK	Medeo	6.79	33	c ePN	Pn	11 28 44.7	+2.6
MDOK				i		11 29 04.2	
MDOK				e		11 30 33.9	
KUU	Kurty	7.13	26	i Pn	Pn	11 28 48.3	+1.5
	baz=26						
KUU				i Pg	Pb	11 29 10.1	+3.8
	baz=26						
KUU	Kurty	7.13	26	i P	Pn	11 28 48.2	+1.5
CHKK	Chushkaly	7.34	29	i Pn	Pn	11 28 51.2	+1.6
	baz=29						
CHKK				i Pg	Pb	11 29 14.5	+4.7
	baz=29						
CHKK	Chushkaly	7.34	29	i P	Pn	11 28 51.1	+1.6
SATY	Saty	7.35	40	i Pn	Pn	11 28 52.2	+2.4
	baz=40						

SATY				*i* Pg	Pb	11 29 14.6	+4.6
	baz=40						
SATY	Saty	7.35	40	*i* P	Pn	11 28 52.2	+2.4
ZHN	Zhinishke	7.45	39	*i* Pn	Pn	11 28 53.1	+2.0
	baz=39						
ZHN				*i* Pg	Pb	11 29 16.0	+4.3
	baz=39						
ZHN	Zhinishke	7.45	39	*i* P	Pn	11 28 53.1	+2.0
BTLS	Baital	7.64	11	*i* Pn	Pn	11 28 54.6	+1.0
	baz=10						
BTLS				*e*Pg	Pb	11 29 18.6	+3.7
	baz=10						
BTLS	Baital	7.64	11	*i* P	Pn	11 28 54.6	+1.0
SMLA	Simla	7.69	145	*e*P	Pn	11 28 56.1	+1.9
SMLA				IAmb	IAmb	11 28 58.4	
	comp=Z,327nm,0.5s						
SMLA				*e*S	Sn	11 30 20.3	-1.0
SMLA				*e*S	Sn	11 30 20.5	-0.8
SMLA				IAML		11 30 24.5	
	comp=E,1µm,0.6s						
SMLA				IAML		11 30 31.4	
	comp=N,971nm,0.6s						
UZB	Uzynbulak	7.73	42	*i* Pn	Pn	11 28 57.4	+2.4
	baz=42						
UZB				*i* Pg	Pb	11 29 21.2	+4.6
	baz=42						
UZB	Uzynbulak	7.73	42	*i* P	Pn	11 28 57.4	+2.4
KPKS	Kokpek	7.79	39	*i* Pn	Pn	11 28 58.3	+2.5
	baz=39						
KPKS				*e*Pg	Pb	11 29 21.9	+4.4
	baz=39						
KPKS	Kokpek	7.79	39	*i* P	Pn	11 28 58.2	+2.5
SHLS	Shalkode	7.97	43	*e*Pn	Pn	11 29 04.3	+5.9
	baz=45						
SHLS				*e*Pg	Pg	11 29 30.2	-4.9
	baz=45						
SHLS	Shalkode	7.97	43	*e*P	Pn	11 29 04.2	+5.9
PDGK	Podgornoye	8.11	42	⇓Pn	Pn	11 29 02.3	+2.1
	comp=N,125nm,0.6s						
PDGK				⇑Lg	Lg	11 31 26.2	
	comp=N,436nm,1.0s						
PDGK	Podgornoye	8.11	42	P	Pn	11 29 02.2	+2.1
DDI	Dehra Dun	8.78	143	*e*P	Pn	11 29 10.4	+1.2
DDI				IAmb	IAmb	11 29 15.4	
	comp=Z,421nm,0.6s						
DDI				*e*S	Sn	11 30 42.5	-5.7
DDI				*e*S	Sn	11 30 44.9	-3.3
TDK	Taldyqorghan	8.86	31	*e*Pn	Pn	11 29 11.9	+1.6
	baz=31						
TDK				*i* Pg	Pg	11 29 42.2	-10
	baz=31						
TDK	Taldyqorghan	8.86	31	*e*P	Pn	11 29 11.9	+1.6
NDI	New Delhi	9.85	152	*e*P	Pn	11 29 26.5	+2.5
OTUK	Ortayu	10.69	1	⇓Pn	Pn	11 29 35.0	-0.4
	comp=Z,46nm,1.1s						
OTUK				⇓Lg	Lg	11 32 42.4	
	comp=Z,392nm,1.4s						
OTUK	Ortayu	10.69	1	P	Pn	11 29 35.3	-0.2
GEYT	Alibeck	11.02	276	Pn	Pn	11 29 37.9	-2.1
	comp=Z,11nm,0.3s,baz=106,slow=11,SNR=52						
GEYT				Sn	Sn	11 31 44.7	+1.4
	comp=Z,19nm,0.3s,baz=92,slow=15,SNR=7.2						
GEYT				Lg	Lg	11 32 57.0	
	baz=335,slow=28						
GEYT	Alibeck	11.02	276		Pn	11 29 38.1	-1.9
GEYT	Alibeck	11.02	276	P	Pn	11 29 38.1	-1.9
GYA0B	ALIBECK ARRAY	11.02	276		Pn	11 29 38.3	-1.8
GYA0B	ALIBECK ARRAY	11.02	276	P	Pn	11 29 32.7	-7.4
GYA0B				S	Sn	11 31 35.5	-7.8
MAKZ	Makanchi	11.83	35		Pn	11 29 50.8	-0.2
MAKZ	Makanchi	11.83	35	P	Pn	11 29 50.8	-0.2
MAKZ	Makanchi	11.83	35	P	Pn	11 29 50.8	-0.2
MKAR	Makanchi Array	11.96	36	Pn	Pn	11 29 53.9	+1.1
	comp=Z,0.9nm,0.3s,baz=230,slow=12,SNR=217						
MKAR				Lg	Lg	11 33 18.0	
	comp=Z,0.5nm,0.3s,baz=223,slow=26,SNR=3.1						
MKAR				LR	LR	11 35 01.6	
	comp=Z,842nm,20.2s,baz=232,slow=41						
	comp=Z,29nm,0.8s						
MKAR	Makanchi Array	11.96	36	P	Pn	11 29 54.0	+1.1
MK31	Makanchi Array	11.96	36		Pn	11 29 53.9	+1.1
MK31	Makanchi Array	11.96	36	P	Pn	11 29 54.3	+1.5
	comp=Z,48nm,0.8s,baz=218,slow=13,SNR=312						
MK31	Makanchi Array	11.96	36*d*	*i*P	Pn	11 29 53.8	+1.0
BRZS	Berezniki	12.44	2	*e*Pn	Pn	11 29 58.0	-1.3
	baz=1.7						
BRZS	Berezniki	12.44	2	*e*P	Pn	11 29 58.0	-1.3
PYUN	Piuthan	13.17	132	*e*P	Pn	11 30 05.6	-4.0
	comp=Z,389nm,0.5s						
WMQ	Urumqi	13.43	57	*e*P	Pn	11 30 12.9	-0.1
WMQ				pP	P	11 30 22.3	-0.1
WMQ				S	Sn	11 32 44.8	+2.6
WMQ				pmax	pmax		
	comp=Z,37nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,230nm,4.3s						
WMQ				LR	LR		
	comp=Z,5µm,13.9s						
WMQ				LR	LR		
	comp=Z,2µm,14.5s						
WMQ				LR	LR		
	comp=Z,630nm,17.9s						
DANN	Dangsing	13.45	130	*e*P	Pn	11 30 09.3	-4.2
	comp=Z,403nm,0.4s						
ZSN	Zaisan	13.68	40	*e*Pn	Pn	11 30 17.1	+0.8
	baz=40						
ZSN				*e*Pg	Pg	11 31 09.7	
	baz=40						
ZSN	Zaisan	13.68	40	*e*P	Pn	11 30 17.1	+0.8
KURBB	Kurchatov Arra	13.87	18	Pn	Pn	11 30 16.0	-2.8
	comp=Z,0.3nm,0.3s,baz=214,slow=13,SNR=101						
KURBB				Sn	Sn	11 32 43.4	-9.4
	baz=214,slow=27						
KURBB				Lg	Lg	11 34 16.7	
	comp=Z,0.1nm,0.3s,baz=218,slow=28,SNR=5.5						
	comp=Z,13nm,0.9s						
KURK	Kurchatov	13.98	18	Pn	Pn	11 30 17.7	-2.6
KURK	Kurchatov	13.98	18*c*	*e*P	Pn	11 30 18.1	-2.2
KURK				pmax	pmax		
	comp=Z,58nm,1.7s						
KURK	Kurchatov	13.98	18	P	Pn	11 30 18.0	-2.3
KURK				S	Sn	11 32 55.7	+0.4
GKN	Gorkha	14.24	128	*e*P	Pn	11 30 19.7	-4.5
	comp=Z,344nm,0.4s						
AB31	Akbulak array	14.61	327	P	Pn	11 30 26.0	-2.9
	comp=Z,33nm,0.6s,baz=135,slow=13,SNR=497						
AB31				S	Sn	11 33 07.6	-3.1
	comp=Z,5.0nm,0.3s,baz=255,slow=37,SNR=8.5						
AB31	Akbulak array	14.61	327	P	Pn	11 30 26.0	-2.9
AB31				S	Sn	11 33 07.6	-3.1
ABKAR	Akbulak array	14.61	327		Pn	11 30 25.7	-3.2
DMN	Daman	14.81	128	*e*P	Pn	11 30 27.5	-4.6
	comp=Z,164nm,0.4s						
BHPL	Bhopal	15.00	160	*e*P	Pn	11 30 32.0	-2.4
BHPL				IAmb	IAmb	11 30 44.3	
	comp=Z,80nm,0.6s						
PKIN	Phulchoki	15.02	128	*e*P	Pn	11 30 29.6	-5.2
	comp=Z,336nm,0.6s						
PKI	Pulchoki	15.03	128	*e*P	Pn	11 30 29.8	-5.3
	comp=Z,281nm,0.6s						
GUN	Gumba	15.09	126	*e*P	Pn	11 30 30.3	-5.6
	comp=Z,163nm,0.4s						
NGCH	Negor - Chabah	15.28	220	P	P	11 30 43.9	+1.0
JIRN	Jiri	15.46	126	*e*P	Pn	11 30 35.7	-5.2
	comp=Z,428nm,0.4s						
BVA0	Borovoye Array	15.52	356	⇓P	Pn	11 30 38.4	-2.7
	comp=Z,41nm,0.7s,baz=166,slow=14,SNR=212						
BVAR	Borovoye Array	15.52	356	Pn	Pn	11 30 37.9	-3.2
	comp=Z,0.2nm,0.3s,baz=163,slow=11,SNR=81						
BVAR				Sn	Sn	11 33 20.5	-12
	baz=174,slow=16						
BVAR				Lg	Lg	11 35 14.1	
	comp=Z,0.1nm,0.3s,baz=173,slow=18,SNR=2.3						
BVAR				LR	LR	11 36 46.3	
	comp=Z,817nm,21.9s,baz=175,slow=38						
	comp=Z,21nm,0.8s						
BRVK	Borovoye	15.56	356		Pn	11 30 39.2	-2.4
BRVK	Borovoye	15.56	356	P	Pn	11 30 41.6	0.0
BRVK	Borovoye	15.56	356*c*	*e*P	Pn	11 30 39.0	-2.6
BRVK				pmax	pmax		
	comp=Z,43nm,1.0s						
BRVK				MLR	MLR		
	comp=Z,1µm,13.0s						
BRVK	Borovoye	15.56	356	P	Pn	11 30 39.4	-2.1
BRVK				S	Sn	11 33 40.3	+6.5
RAMN	Ramite	16.22	126	*e*P	Pn	11 30 44.1	-6.4

	comp=Z,213nm,0.5s						
AKTO	Aktyubinsk	16.32	327	Pn	Pn	11 30 48.9	-2.5
	comp=Z,1.4nm,0.3s,baz=133,slow=14,SNR=48						
AKTO				Sn	Sn	11 33 41.3	-11
	comp=Z,2.8nm,0.3s,baz=148,slow=19,SNR=5.6						
AKTO				Lg	Lg	11 35 39.7	
	baz=220,slow=7.0						
AKTO				LR	LR	11 37 30.5	
	comp=Z,878nm,21.9s,baz=74,slow=39						
	comp=Z,23nm,0.8s						
AKTO	Aktyubinsk	16.32	327	⇓P	Pn	11 30 49.8	-1.6
	comp=Z,114nm,0.8s						
AKTO				S	Sn	11 33 39.3	-13
DGZ	Jazzator, Alta	16.45	38	*i* P	Pn	11 30 51.6	-1.6
DGZ				pmax	pmax		
	comp=Z,48nm,0.6s						
DGZ				MLR	MLR		
	comp=Z,707nm,10.0s						
TAPN	Taplejung	16.67	123	*e*P	Pn	11 30 50.4	-5.9
	comp=Z,356nm,0.6s						
JASK	Jask - Hormozg	16.73	230	P	P	11 31 01.6	+2.5
	SNR=7.9						
JASK				S	S	11 34 12.1	-1.5
BANOM	Banah	17.67	234	*i* P	P	11 31 10.4	+0.9
	SNR=29						
BANOM	Banah	17.67	234	P	P	11 31 11.2	+1.7
	SNR=18						
BANOM				S	S	11 34 34.5	+1.6
SHME	Shamm	17.68	234	*i* P	P	11 31 11.5	+1.9
	SNR=15						
LSA	Lhasa	17.73	111	P	Pn	11 31 07.0	-2.7
LSA				pmax	pmax		
	comp=Z,38nm,0.8s						
LSA	Lhasa	17.73	111		Pn	11 31 07.3	-2.4
LSA	Lhasa	17.73	111	P	Pn	11 31 07.3	-2.4
LSA				pmax	pmax		
	comp=Z,29nm,0.8s						
MDH	Madha	18.11	232	*i* P	P	11 31 15.5	+1.1
	SNR=13						
MDH	Madha	18.11	232	P	P	11 31 15.9	+1.5
	SNR=13						
MDH				S	S	11 34 45.1	+3.3
MASF	Masafi	18.15	233	P	P	11 31 17.4	+2.6
	SNR=8.7						
MASF				P	P	11 31 17.4	+2.6
	SNR=8.7						
MSFE	Esma-Masafi	18.16	233	*i* P	P	11 31 16.2	+1.3
	SNR=14						
GOMU	GeErMu	18.28	87	P	Pn	11 31 15.5	-0.9
GOMU				pP	pP	11 31 21.3	+0.2
GOMU				S	Sn	11 34 42.1	+1.5
GOMU				sS	sS	11 34 51.0	-2.0
GOMU				pmax	pmax		
	comp=Z,28nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,130nm,4.0s						
GOMU				LR	LR		
	comp=Z,460nm,10.5s						
GOMU				LR	LR		
	comp=Z,460nm,10.0s						
GOMU				LR	LR		
	comp=Z,380nm,11.6s						
LKRN	Lenkeran, Azer	18.32	281	P	Pn	11 31 16.1	-0.3
WSAR	Wadi Sarin	18.32	223	P	P	11 31 19.4	+2.7
	comp=Z,2.6nm,0.3s,baz=71,slow=8.3,SNR=15						
WSAR				S	S	11 34 47.9	+1.7
	comp=Z,6.3nm,1.0s,baz=346,slow=21,SNR=1.2						
WSAR				LR	LR	11 39 24.1	
	comp=Z,258nm,18.2s,baz=82,slow=40						
	comp=Z,49nm,0.9s						
WSAR	Wadi Sarin	18.32	223	P	P	11 31 21.5	+4.8
WSAR				S	S	11 34 48.3	+2.1
UOSS	Minazif	18.43	232	P	P	11 31 16.4	-1.4
UOSS	Minazif	18.43	232	P	Pn	11 31 19.0	+1.1
HATD	Hatta, Dubai	18.56	231	*i* P	Pn	11 31 21.2	+1.7
	SNR=15						
HATD	Hatta, Dubai	18.56	231	P	Pn	11 31 22.8	+3.3
	SNR=17						
HATD				S	S	11 34 51.4	+0.6
ZAA0	Zalesovo Array	18.62	24	P	P	11 31 18.0	-1.7
ZAA0				IAmb	IAmb	11 31 24.6	
	comp=Z,96nm,1.2s						
ZALV	Zalesovo Beam	18.62	24	P	P	11 31 17.2	-2.5
	comp=Z,4.5nm,0.3s,baz=219,slow=11,SNR=91						
ZALV				S	Sn	11 34 45.5	-2.5
	comp=Z,5.5nm,0.9s,baz=206,slow=16,SNR=1.1						
ZALV				LR	LR	11 38 38.8	
	comp=Z,677nm,20.0s,baz=220,slow=38						
	comp=Z,18nm,0.5s						
ZALV	Zalesovo Beam	18.62	24	P	P	11 31 18.4	-1.4
WBK	Wadi Bani Khal	18.66	221	P	Pn	11 31 26.0	+5.3
	SNR=11						
WBK				S	S	11 34 59.2	+6.3
ASHO	Ashiyiah	18.71	231	*i* P	Pn	11 31 22.8	+1.5
	SNR=71						
ASHO	Ashiyiah	18.71	231	P	Pn	11 31 23.4	+2.1
	SNR=55						
ASHO				P	Pn	11 31 23.4	+2.1
	SNR=55						
ASHO				S	S	11 34 57.7	+3.8
ASHO				S	S	11 34 57.7	+3.8
NAZ	Nazwa, Dubai	18.74	233	*i* P	Pn	11 31 24.3	+2.7
	SNR=6.9						
NAZ	Nazwa, Dubai	18.74	233	P	Pn	11 31 26.4	+4.7
	SNR=8.8						
NAZ				S	S	11 34 56.8	+2.3
JLN	Jalan Bani Buh	18.82	219	P	Pn	11 31 26.0	+3.4
	SNR=6.1						
JLN				P	Pn	11 31 26.0	+3.4
	SNR=6.1						
JLN				S	S	11 35 03.0	+6.9
JLN				S	S	11 35 03.0	+6.9
SOHO	SOHO	18.82	229	*i* P	Pn	11 31 25.2	+2.6
	SNR=6.2						
FAQ	Al Faqa, Dubai	18.96	232	*i* P	Pn	11 31 27.7	+3.4
	SNR=8.5						
FAQ	Al Faqa, Dubai	18.96	232	P	Pn	11 31 29.3	+5.0
	SNR=8.8						
FAQ				P	Pn	11 31 29.3	+5.0
	SNR=8.8						
POO	Poona	19.02	175	*e*P	Pn	11 31 26.5	+1.5
POO				IAmb	IAmb	11 31 30.1	
	comp=Z,55nm,1.1s						
AKT	Akhty	19.13	289	*e*P	P	11 31 25.7	+0.1
AKT				*e*		11 35 05.4	
AKT				pmax	pmax		
	comp=Z,32nm,0.6s						
ASUD	Al Ashush, Dub	19.21	233	*i* P	Pn	11 31 29.3	+2.0
	SNR=9.6						
ASUD	Al Ashush, Dub	19.21	233	P	Pn	11 31 30.9	+3.5
	SNR=5.7						
JMDO	Jabal Madar	19.31	222	P	Pn	11 31 32.2	+3.6
	SNR=11						
ALNE	Al Ain	19.36	231	*i* P	Pn	11 31 30.6	+1.4
	SNR=33						
ALNE	Al Ain	19.36	231	P	Pn	11 31 30.9	+1.7
	SNR=26						
ARQ	Araqi	19.44	228	P	Pn	11 31 32.4	+2.3
	SNR=16						
ARQ				P	Pn	11 31 32.4	+2.3
	SNR=16						
ARQ				S	S	11 35 13.7	+5.2
ARQ				S	S	11 35 13.7	+5.2
MAK	Makhachkala	19.45	294	*e*P	P	11 31 28.5	-0.4
MAK				*e*S	Sn	11 35 07.7	-0.5
MAK				pmax	pmax		
	comp=Z,237nm,1.4s						
MAK				MLR	MLR		
	comp=Z,647nm,10.0s						
AJN	Ajban	19.47	233	*i* P	Pn	11 31 31.6	+1.1
	SNR=9.1						
AJN	Ajban	19.47	233	P	Pn	11 31 32.8	+2.3
	SNR=12						
BSY	Bisya	19.51	225	P	Pn	11 31 34.5	+3.6
	SNR=14						
SEKA	Sheki	19.52	289	P	P	11 31 28.5	-1.2
MNGR	Mingechevir, A	19.59	287	P	P	11 31 30.3	-0.1
GUWA	GUWAHATI	20.14	119	*e*P	P	11 31 34.7	-1.7
GUWA				IAmb	IAmb	11 31 40.0	
	comp=Z,57nm,0.8s						
GANJ	Ganja	20.16	287	P	P	11 31 36.4	-0.4
MHTO	MHTO	20.52	220	P	Pn	11 31 44.3	+1.5
	SNR=12						
TEZP	TEZPUR	20.66	116	*e*P	P	11 31 41.6	-0.5
SHL	Shillong	20.66	120	P	P	11 31 39.7	-2.8
SHL				IAmb	IAmb	11 31 44.7	

	comp=Z,70nm,0.8s						
SHL	Shillong	20.66	120	*e*P	P	11 31 42.0	-0.5
SHL				IAML		11 31 44.9	
	comp=Z,77nm,1.1s						
SHL	Shillong	20.66	120	P	P	11 31 39.7	-2.8
SHL				pmax	pmax		
	comp=Z,71nm,0.8s						
SHL	Shillong	20.66	120	P	P	11 31 41.7	-0.8
	SNR=23						
GROC	Groznyy	20.72	294	*e*P	P	11 31 41.5	-1.3
GROC				*e*		11 31 59.5	
GROC				*e*S	S	11 35 33.3	-0.6
SVE	Sverdlovsk	20.73	342	*e*P	P	11 31 42.6	-0.1
SVE				*e*S	S	11 35 32.4	-1.4
SVE				pmax	pmax		
	comp=Z,61nm,1.1s						
SVE				MLR	MLR		
	comp=Z,2µm,14.0s						
NAX	Nakhchivan	20.85	283	P	P	11 31 43.9	-0.3
HYB	Hyderabad	20.86	162	IAmb	IAmb	11 31 52.1	
	comp=Z,70nm,0.9s						
ZIRO	ZIRO	20.89	112	*e*P	P	11 31 44.9	0.0
ARU	Arti	20.93	339	LR	LR	11 40 06.1	
	comp=Z,1µm,19.6s,baz=142,slow=38						
ARU	Arti	20.93	339	P	P	11 31 44.0	-0.9
ARU				IAmb	IAmb	11 32 00.5	
	comp=Z,72nm,0.9s						
ARU	Arti	20.93	339*c*	*i*P	P	11 31 45.0	+0.1
ARU				S	S	11 35 36.6	-1.2
ARU				SS	SnSn	11 35 59.0	+0.6
ARU				pmax	pmax		
	comp=Z,29nm,1.4s						
ARU				MLR	MLR		
	comp=Z,1µm,14.0s						
ITAN	ITANAGAR	21.02	113	*e*P	P	11 31 49.7	+3.7
ITAN				IAmb	IAmb	11 31 58.9	
	comp=Z,500nm,1.1s						
GHWR	Ruwais	21.26	236	P	P	11 31 50.2	+1.6
GNI	Garni	21.38	285	P	P	11 31 52.6	+2.5
	comp=Z,131nm,0.8s,baz=99,slow=5.2,SNR=41						
GNI				LR	LR	11 42 21.4	
	comp=Z,301nm,19.4s,baz=96,slow=43						
	comp=Z,131nm,0.8s						
GNI	Garni	21.38	285	P	P	11 31 49.4	-0.6
GNI	Garni	21.38	285*c*	*e*P	P	11 31 48.7	-1.4
GNI				pmax	pmax		
	comp=Z,301nm,1.3s						
GNI				MLR	MLR		
	comp=Z,332nm,16.0s						
MZR	Muzera	21.55	233	*i* P	P	11 31 54.3	+2.5
	SNR=13						
MZR	Muzera	21.55	233	P	P	11 31 54.8	+3.1
	SNR=11						
GTA	Gaotai	21.80	77	*e*P	P	11 31 54.8	+0.2
GTA				pP	sP	11 32 07.3	+6.0
GTA				sP	pP	11 32 12.3	+13
GTA				S	S	11 35 54.0	-1.6
GTA				PcP	PcP	11 36 01.3	+6.8
GTA				sS	Sn	11 36 05.9	+0.8
GTA				pmax	pmax		
	comp=Z,23nm,1.1s						
GTA				pmax	pmax		
	comp=Z,170nm,4.7s						
GTA				LR	LR		
	comp=Z,1µm,14.5s						
GTA				LR	LR		
	comp=Z,770nm,15.6s						
GTA				LR	LR		
	comp=Z,1µm,16.0s						
ZEI	Tsey	22.07	293	*e*P	P	11 31 56.4	-1.1
ZEI				pmax	pmax		
	comp=Z,59nm,1.3s						
MOKO	MOKOCHONG	22.07	114	*e*P	P	11 31 57.2	-0.3
MOKO				IAmb	IAmb	11 32 02.5	
	comp=Z,168nm,0.8s						
VIS	Vishakhapatnam	22.11	150	*e*S	S	11 36 01.0	-0.4
KOHI	KOHIMA	22.14	116	*e*P	P	11 31 57.9	-0.4
KOHI				IAmb	IAmb	11 32 06.2	
	comp=Z,191nm,0.9s						
NCK	Nalchik	22.35	294	*i* P	P	11 32 00.4	+0.1
NCK				pmax	pmax		
	comp=Z,23nm,1.0s						
NCK				MLR	MLR		
	comp=Z,809nm,10.0s						
ONI	Oni	22.38	292	P	P	11 31 59.7	-1.0
ONI				IAmb	IAmb	11 32 17.8	
	comp=Z,76nm,0.8s						
ONI	Oni	22.38	292	P	P	11 31 59.7	-1.0
ONI				pmax	pmax		
	comp=Z,76nm,0.8s						
BRDH	Bariadhala	22.46	126	P	P	11 32 02.0	+0.4
	comp=Z,139nm,0.3s,baz=270,slow=16,SNR=12						
BRDH				LR	LR	11 43 19.2	
	comp=Z,800nm,18.6s,baz=268,slow=44						
IMP	Imphal	22.57	118	*e*P	P	11 32 03.3	+0.5
IMP				IAmb	IAmb	11 32 08.4	
	comp=Z,224nm,1.1s						
BELG	Belogornoye	22.61	319	P	P	11 32 02.4	-0.5
	comp=Z,190nm,1.1s,baz=143,slow=5.1,SNR=14						
BELG				S	S	11 36 07.2	-3.2
	comp=Z,50nm,0.8s,baz=234,slow=19,SNR=3.6						
BELG				LR	LR	11 41 18.7	
	comp=Z,508nm,18.4s,baz=145,slow=38						
	comp=Z,190nm,1.1s						
BELG	Belogornoye	22.61	319	*i* P	P	11 32 03.1	+0.2
BELG				pmax	pmax		
	comp=Z,31nm,1.1s						
BELG				MLR	MLR		
	comp=Z,61nm,8.0s						
KARS	Kars	22.63	287	P	P	11 32 04.4	+0.9
KARS	Kars	22.63	287	P	P	11 32 04.4	+0.9
KARS				pmax	pmax		
	comp=Z,206nm,1.1s						
GEVA	Gevas	22.82	281	P	P	11 32 03.6	-2.0
GEVA				IAmb	IAmb	11 32 18.4	
	comp=Z,48nm,1.1s						
KBZ	Khabaz	22.88	295	P	P	11 32 07.5	+1.7
	comp=Z,28nm,0.9s,baz=111,slow=7.7,SNR=30						
KBZ				S	S	11 36 18.7	+3.5
	comp=Z,11nm,1.2s,baz=49,slow=19,SNR=1.5						
KBZ				LR	LR	11 42 23.7	
	comp=Z,547nm,20.8s,baz=89,slow=40						
	comp=Z,28nm,0.9s						
KBZ	Khabaz	22.88	295	*e*P	P	11 32 07.5	+1.7
KBZ				pmax	pmax		
	comp=Z,28nm,0.9s						
KBZ				MLR	MLR		
	comp=Z,532nm,16.0s						
NEY	Neytrino	22.96	294	*i* P	P	11 32 06.8	-0.2
NEY				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NEY				MLR	MLR		
	comp=Z,20nm,5.0s						
KVAR	Kislovodsk Arr	23.05	295	P	P	11 32 08.5	+0.7
	comp=Z,8.3nm,0.5s,baz=106,slow=20,SNR=1.8						
KVAR				S	S	11 36 21.6	+3.1
	comp=Z,20nm,0.7s,baz=183,slow=12,SNR=2.9						
	comp=Z,8.3nm,0.5s						
KIV	Kislovodsk	23.05	295	⇑P	P	11 32 09.7	+1.9
KIV	Kislovodsk	23.05	295	P	P	11 32 06.4	-1.4
KIV				IAmb	IAmb	11 32 18.2	
	comp=Z,45nm,0.7s						
KIV	Kislovodsk	23.05	295	*e*P	P	11 32 07.7	-0.1
KIV				*e*S	S	11 36 18.7	+0.2
KIV				pmax	pmax		
	comp=Z,63nm,1.0s						
KIV				MLR	MLR		
	comp=Z,156nm,14.0s						
KIV	Kislovodsk	23.05	295	P	P	11 32 12.3	+4.5
KIV				S	S	11 36 21.6	+3.0
SHA1	Shidzhatmaz	23.05	295	*i* P	P	11 32 06.3	-1.6
GURO	Guroymak-BITLI	23.60	282	P	P	11 32 12.9	-0.4
MOY	Mondy	24.79	46	*e*P	P	11 32 25.8	+1.5
MOY				pmax	pmax		
	comp=Z,28nm,1.8s						
SOC	Sochi	25.17	294	*e*P	P	11 32 29.5	+1.8
SOC				*e**PP	pP	11 32 32.3	-0.2
SOC				*e**SP	sP	11 32 33.9	-0.5
SOC				*e*PPP	PPP	11 33 08.1	
SOC				*e*S	S	11 36 56.9	+4.4
SOC				*e*SS	SnSn	11 37 44.9	+2.5
SOC				pmax	pmax		
	comp=Z,19nm,0.9s						
SOC				MLR	MLR		
	comp=Z,481nm,18.0s						
WHFO	Wadi Hawf	25.28	224	P	P	11 32 31.1	+2.2

	SNR=6.2						
LZH	**Lanzhou**	**25.45**	**84**	⇓P	**P**	**11 32 31.4**	**+0.9**
LZH				pP	sP	11 32 39.6	+2.2
LZH				sP	pP	11 32 42.4	+7.0
LZH				PcP	**PcP**	**11 36 00.1**	**-2.2**
LZH				pmax	pmax		
	comp=Z,46nm,1.5s						
LZH				pmax	pmax		
	comp=Z,190nm,4.8s						
LZH				LR	LR		
	comp=Z,2µm,16.5s						
LZH				LR	LR		
	comp=Z,900nm,15.1s						
LZH				LR	LR		
	comp=Z,820nm,15.1s						
KIRV	**Kirov**	**25.68**	**332**	P	**P**	**11 32 32.4**	**+0.4**
	comp=Z,67nm,0.6s,baz=150,slow=3.6,SNR=18						
	comp=Z,67nm,0.6s						
KIRV	**Kirov**	**25.68**	**332**	*ce*P	**P**	**11 32 32.2**	**+0.2**
ZAK	**Zakamensk**	**25.69**	**50**	*e*P	**P**	**11 32 32.9**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,24nm,1.0s						
TNCH	**TengChong**	**25.76**	**111**	P	**P**	**11 32 33.9**	**+0.5**
TNCH				S	**S**	**11 37 01.1**	**-1.4**
TNCH				sS	sS	11 37 10.4	-0.2
TNCH				SS	**SnSn**	**11 38 04.4**	**+7.0**
TNCH				pmax	pmax		
	comp=Z,140nm,0.9s						
TNCH				LR	LR		
	comp=Z,540nm,12.4s						
TNCH				LR	LR		
	comp=Z,620nm,12.4s						
TNCH				LR	LR		
	comp=Z,780nm,25.3s						
MND	**Mandalay**	**25.91**	**120**	P	**P**	**11 32 33.8**	**-0.7**
ABTO	**Aybut**	**26.00**	**224**	P	**P**	**11 32 39.4**	**+4.0**
	SNR=9.2						
RAYN	**Ar Rayn**	**26.67**	**246**	P	**P**	**11 32 40.6**	**-0.9**
RAYN				IAmb	IAmb	11 32 57.5	
	comp=Z,37nm,0.9s						
RAYN	**Ar Rayn**	**26.67**	**246**	P	**P**	**11 32 40.6**	**-0.9**
RAYN				pmax	pmax		
	comp=Z,37nm,0.9s						
RAYN	**Ar Rayn**	**26.67**	**246**	*i* P	**P**	**11 32 42.7**	**+1.2**
	SNR=24						
VORD	**Divnogorie**	**26.76**	**311**	*e*P	**P**	**11 32 42.3**	**+0.4**
VORD				pmax	pmax		
	comp=Z,30nm,1.0s						
ANN	**Anapa**	**26.88**	**297**	*e*P	**P**	**11 32 43.2**	**+0.1**
ANN				*e**PP	**pP**	**11 32 48.7**	**+0.8**
ANN				*e*PPP	PPP	11 33 33.7	
ANN				*e*S	**S**	**11 37 19.6**	**+0.2**
ANN				*e*SSS	SSS	11 38 38.0	
ANN				pmax	pmax		
	comp=Z,27nm,0.9s						
ANN				MLR	MLR		
	comp=Z,271nm,8.0s						
VSR	**Storozhevoye**	**26.91**	**311**	*e*P	**P**	**11 32 43.7**	**+0.4**
VSR				pmax	pmax		
	comp=Z,50nm,0.8s						
CD2	**Chengdu**	**26.98**	**95**	P	**P**	**11 32 44.8**	**+0.6**
CD2				pP	sP	11 32 50.3	-0.8
CD2				sP	pP	11 32 54.5	+5.4
CD2				S	**S**	**11 37 23.8**	**+2.4**
CD2				sS	sS	11 37 34.8	+5.3
CD2				pmax	pmax		
	comp=Z,20nm,0.4s						
CD2				pmax	pmax		
	comp=Z,140nm,5.4s						
CD2				LR	LR		
	comp=Z,620nm,9.1s						
CD2				LR	LR		
	comp=Z,510nm,9.2s						
CD2				LR	LR		
	comp=Z,610nm,10.8s						
SONM	**Songino Array**	**27.07**	**57**	P	**P**	**11 32 44.9**	**-0.1**
	comp=Z,7.1nm,0.8s,baz=256,slow=10,SNR=39						
SONM				LR	LR	11 43 34.9	
	comp=Z,796nm,19.3s,baz=260,slow=37						
	comp=Z,7.1nm,0.8s						
SONM	**Songino Array**	**27.07**	**57**	P	**P**	**11 32 44.8**	**-0.1**
SONM	**Songino Array**	**27.07**	**57**	*e*P	**P**	**11 32 45.3**	**+0.3**
SONM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH	**PanZhiHua**	**27.39**	**105**	P	**P**	**11 32 48.8**	**+0.8**
PZH				PP	**PP**	**11 33 41.3**	**-8.6**
PZH				S	**S**	**11 37 28.5**	**+0.4**
PZH				sS	**sS**	**11 37 38.9**	**+2.7**
PZH				pmax	pmax		
	comp=Z,20nm,1.1s						
PZH				pmax	pmax		
	comp=Z,170nm,4.6s						
PZH				LR	LR		
	comp=Z,1µm,20.5s						
PZH				LR	LR		
	comp=Z,320nm,18.5s						
PZH				LR	LR		
	comp=Z,550nm,20.1s						
LPSR	**Galich'ya Gora**	**27.50**	**314**	*e*P	**P**	**11 32 54.0**	**+5.4**
LPSR				pmax	pmax		
	comp=Z,40nm,1.1s						
ULN	**Ulaanbaatar**	**27.51**	**57**	P	**P**	**11 32 48.6**	**-0.3**
ULN	**Ulaanbaatar**	**27.51**	**57**	*ce*P	**P**	**11 32 49.2**	**+0.2**
ULN				pmax	pmax		
	comp=Z,19nm,1.7s						
GAZ	**Gaziantep**	**27.58**	**280**	P	**P**	**11 32 49.0**	**-0.7**
GAZ				IAmb	IAmb	11 33 18.5	
	comp=Z,41nm,1.2s						
BNN	**Bunyan**	**28.35**	**284**	P	**P**	**11 32 55.2**	**-1.3**
BNN				IAmb	IAmb	11 33 39.2	
	comp=Z,30nm,1.0s						
KMI	**Kunming**	**28.88**	**107**	⇓P	**P**	**11 33 01.8**	**+0.4**
KMI				S	**S**	**11 37 53.0**	**+1.2**
KMI				pmax	pmax		
	comp=Z,24nm,0.8s						
KMI				LR	LR		
	comp=Z,800nm,17.0s						
KMI				LR	LR		
	comp=Z,350nm,15.2s						
KMI				LR	LR		
	comp=Z,490nm,24.4s						
ASF	**Jabal al Asfar**	**29.21**	**270**	P	**P**	**11 33 07.0**	**+2.8**
	comp=Z,1.3nm,0.3s,baz=79,slow=5.2,SNR=5.0						
	comp=Z,1.3nm,0.3s						
SIM	**Simferopol'**	**29.24**	**297**	*e*P	**P**	**11 33 07.0**	**+2.8**
SIM				pmax	pmax		
	comp=Z,61nm,1.0s						
MOS	**Moscow**	**29.38**	**319**	*e*P	**P**	**11 33 04.0**	**-1.3**
MOS				*e*		11 34 10.7	
MOS				pmax	pmax		
	comp=Z,36nm,0.7s						
MOS				MLR	MLR		
	comp=Z,1µm,13.0s						
BTO	**Baotou**	**29.50**	**72**	*e*P	**P**	**11 33 05.8**	**-0.9**
BTO				S	**S**	**11 38 00.6**	**-0.5**
BTO				pmax	pmax		
	comp=Z,69nm,0.8s						
BTO				pmax	pmax		
	comp=Z,520nm,4.6s						
BTO				LR	LR		
	comp=Z,3µm,15.0s						
BTO				LR	LR		
	comp=Z,2µm,17.9s						
BTO				LR	LR		
	comp=Z,3µm,16.7s						
ILGA	**Ilgaz**	**29.69**	**289**	P	**P**	**11 33 06.4**	**-2.1**
ILGA				IAmb	IAmb	11 33 12.2	
	comp=Z,30nm,0.7s						
OBN	**Obninsk**	**29.70**	**318**	P	**P**	**11 33 08.1**	**0.0**
	comp=Z,4.4nm,0.4s,baz=146,slow=3.6,SNR=4.9						
OBN				LR	LR	11 47 46.3	
	comp=Z,38nm,20.0s,baz=137,slow=42						
	comp=Z,4.4nm,0.4s						
OBN	**Obninsk**	**29.70**	**318**	P	**P**	**11 33 07.9**	**-0.2**
OBN				IAmb	IAmb	11 34 05.1	
	comp=Z,55nm,1.2s						
OBN	**Obninsk**	**29.70**	**318**	*de*P	**P**	**11 33 08.4**	**+0.3**
OBN				*e*		11 34 01.0	
OBN				*e*PPP	PPP	11 34 14.3	
OBN				pmax	pmax		
	comp=Z,38nm,1.3s						
OBN				MLR	MLR		
	comp=Z,760nm,10.0s						
BR131	**Keskin Array S**	**29.91**	**286**	P	**P**	**11 33 09.1**	**-1.3**
BR131	**Keskin Array S**	**29.91**	**286**	P	**P**	**11 33 09.1**	**-1.3**
BR131				pmax	pmax		
	comp=Z,11nm,0.8s						
BRTR	**Keskin Array B**	**29.91**	**286**	P	**P**	**11 33 11.9**	**+1.5**
	comp=Z,2.0nm,0.6s,baz=97,slow=9.3,SNR=7.6						
BRTR				LR	LR	11 47 45.2	
	comp=Z,201nm,20.0s,baz=96,slow=42						
	comp=Z,2.0nm,0.6s						
BRTR	**Keskin Array B**	**29.91**	**286**	P	**P**	**11 33 08.9**	**-1.4**
BRTR	**Keskin Array B**	**29.91**	**286**	P	**P**	**11 33 09.0**	**-1.4**
XAN	**Xi'an**	**30.01**	**85**	⇓*i*P	**P**	**11 33 11.0**	**-0.2**
XAN				pP	sP	11 33 26.0	+7.9
XAN				S	**S**	**11 38 13.8**	**+4.7**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,120nm,5.2s						
XAN				LR	LR		
	comp=Z,1µm,11.0s						
XAN				LR	LR		
	comp=Z,790nm,13.1s						
XAN				LR	LR		
	comp=Z,670nm,11.7s						
CHTO	**Chiang Mai**	**30.02**	**121**	P	**P**	**11 33 10.7**	**-0.7**
CHTO	**Chiang Mai**	**30.02**	**121**	P	**P**	**11 33 10.7**	**-0.7**
CRAI	**Chiangrai**	**30.06**	**117**	P	**P**	**11 33 12.1**	**+0.3**
CRAI				IAmb	IAmb	11 33 12.9	
	comp=Z,30nm,0.7s						
MMAI	**Mount Meron Ar**	**30.11**	**272**	P	**P**	**11 33 13.2**	**+1.0**
	comp=Z,0.6nm,0.3s,baz=85,slow=3.2,SNR=1.6						
MMAI				PcP	**PcP**	**11 36 14.7**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=58,slow=3.6,SNR=1.1						
MMAI				LR	LR	11 48 11.0	
	comp=Z,312nm,18.2s,baz=156,slow=42						
CM31	**Chiang Mai Arr**	**30.27**	**122**	P	**P**	**11 33 11.6**	**-2.0**
CM31				IAmb	IAmb	11 34 16.3	
	comp=Z,17nm,1.0s						
CM31	**Chiang Mai Arr**	**30.27**	**122**	P	**P**	**11 33 14.4**	**+0.8**
	SNR=6.6						
CMAR	**Chiang Mai Arr**	**30.27**	**122**	P	**P**	**11 33 12.8**	**-0.8**
	comp=Z,6.0nm,0.8s,baz=311,slow=8.7,SNR=36						
CMAR				LR	LR	11 46 06.4	
	comp=Z,259nm,21.2s,baz=280,slow=38						
	comp=Z,6.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**30.27**	**122**	*e*P	**P**	**11 33 13.2**	**-0.4**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**30.64**	**71**	*e*P	**P**	**11 33 19.3**	**+2.5**
HHC				pmax	pmax		
	comp=Z,20nm,0.6s						
HHC				pmax	pmax		
	comp=Z,150nm,5.2s						
HHC				LR	LR		
	comp=Z,1µm,15.6s						
HHC				LR	LR		
	comp=Z,1µm,14.3s						
HHC				LR	LR		
	comp=Z,2µm,13.4s						
KLMR	**Klimovskoe**	**30.98**	**329**	*e*P	**P**	**11 33 17.1**	**-2.4**
KLMR				AMP		11 33 26.8	
	comp=Z,34nm,1.4s						
KLMR				*e*		11 34 04.3	
KLMR				*e*		11 39 30.8	
KLMR				*e*		11 39 30.8	
KLMR				LQ	LQ	11 43 26.7	
KLMR				LQ	LQ	11 43 26.7	
KLMR				LR	LR	11 43 43.8	
KLMR				AMP		11 46 18.9	
	comp=Z,669nm,13.1s						
KLMR	**Klimovskoe**	**30.98**	**329**	*e*P	**P**	**11 33 17.0**	**-2.4**
KLMR				pmax	pmax		
	comp=Z,34nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,669nm,13.0s						
PHRA	**Phrae**	**31.12**	**120**	P	**P**	**11 33 20.7**	**-0.3**
PALK	**Pallekele**	**31.15**	**163**	P	**P**	**11 33 22.5**	**+1.2**
	comp=Z,6.6nm,0.8s,baz=18,slow=6.4,SNR=4.4						
PALK				LR	LR	11 47 25.0	
	comp=Z,88nm,20.7s,baz=96,slow=39						
	comp=Z,6.6nm,0.8s						
PALK	**Pallekele**	**31.15**	**163**	P	**P**	**11 33 22.4**	**+1.0**
PALK	**Pallekele**	**31.15**	**163**	P	**P**	**11 33 22.4**	**+1.0**
PALK				pmax	pmax		
	comp=Z,11nm,1.0s						
GYA	**Guiyang**	**31.22**	**101**	⇓*i*P	**P**	**11 33 22.4**	**+0.3**
GYA				sP	sP	11 33 38.3	+9.3
GYA				S	**S**	**11 38 23.6**	**-4.8**
GYA				pmax	pmax		
	comp=Z,49nm,0.8s						
GYA				pmax	pmax		
	comp=Z,180nm,4.7s						
GYA				LR	LR		
	comp=Z,580nm,17.0s						
EIL	**Elat**	**31.70**	**267**	P	**P**	**11 33 28.0**	**+1.8**
	comp=Z,7.3nm,0.9s,baz=54,slow=9.5,SNR=6.1						
EIL				LR	LR	11 48 58.0	
	comp=Z,628nm,18.8s,baz=61,slow=41						
	comp=Z,7.3nm,0.9s						
ENH	**Enshi**	**31.77**	**92**	P	**P**	**11 33 26.5**	**-0.3**
ENH				IAmb	IAmb	11 33 31.7	
	comp=Z,17nm,1.0s						
ENH	**Enshi**	**31.77**	**92**	P	**P**	**11 33 27.0**	**+0.3**
BORA	**Eskisehir**	**32.31**	**287**	P	**P**	**11 33 29.8**	**-1.7**
BORA				pP	**pP**	**11 33 32.8**	**-3.6**
BORA				IAmb	IAmb	11 33 56.4	
	comp=Z,17nm,1.1s						
LYN	**LuoYang**	**32.66**	**83**	*e*P	**P**	**11 33 37.0**	**+2.5**
LYN				sP	sP	11 33 46.0	+4.6
LYN				S	**S**	**11 38 58.3**	**+7.9**
LYN				SS	**SnSn**	**11 40 52.9**	**+7.8**
LYN				pmax	pmax		
	comp=Z,11nm,0.7s						
LYN				pmax	pmax		
	comp=Z,150nm,6.1s						
LYN				LR	LR		
	comp=Z,810nm,17.1s						
LYN				LR	LR		
	comp=Z,580nm,16.1s						
LYN				LR	LR		
	comp=Z,610nm,14.7s						
AKASG	**Malin Array Be**	**32.95**	**307**	P	**P**	**11 33 36.9**	**+0.1**
	comp=Z,4.4nm,0.8s,baz=77,slow=7.2,SNR=21						
AKASG				LR	LR	11 49 31.2	
	comp=Z,415nm,18.9s,baz=78,slow=41						
	comp=Z,4.4nm,0.8s						
AKASG	**Malin Array Be**	**32.95**	**307**	P	**P**	**11 33 36.5**	**-0.2**
AKASG	**Malin Array Be**	**32.95**	**307**	*e*P	**P**	**11 33 36.8**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AKBB	**Malin Array Si**	**32.95**	**307**	P	**P**	**11 33 36.1**	**-0.7**
AKBB				IAmb	IAmb	11 33 59.9	
	comp=Z,27nm,0.9s						
AKBB	**Malin Array Si**	**32.95**	**307**	*de*P	**P**	**11 33 37.0**	**+0.2**
AKBB				pmax	pmax		
	comp=Z,313nm,6.2s						
AK05	**Malin Array Si**	**32.95**	**307**	P	**P**	**11 33 36.0**	**-0.8**
NRIK	**Noril'sk**	**32.95**	**10**	P	**P**	**11 33 36.6**	**0.0**
	comp=Z,32nm,1.0s,baz=200,slow=5.9,SNR=27						
NRIK				LR	LR	11 47 45.3	
	comp=Z,223nm,20.1s,baz=200,slow=38						
	comp=Z,32nm,1.0s						
NRIK	**Noril'sk**	**32.95**	**10**	P	**P**	**11 33 34.9**	**-1.8**
NRIK				pP	**P**	**11 33 37.0**	**+0.4**
NRIK				IAmb	IAmb	11 33 37.7	
	comp=Z,30nm,0.9s						
NRIK	**Noril'sk**	**32.95**	**10**	*e*P	**P**	**11 33 37.0**	**+0.4**
NRIK				pmax	pmax		
	comp=Z,28nm,0.9s						
NRIK				MLR	MLR		
	comp=Z,249nm,9.0s						
MILM	**Milestii Mici**	**32.97**	**300**	*e*P	**P**	**11 33 35.0**	**-2.1**
	comp=Z,20nm,1.0s						
MILM				*e*L	L	11 47 20.0	
MILM				LRM	MLR	11 48 18.0	
	comp=Z,600nm,17.0s						
MILM	**Milestii Mici**	**32.97**	**300**	*e*P	**P**	**11 33 35.0**	**-2.1**
MILM				pmax	pmax		
	comp=Z,20nm,1.0s						
MILM				MLR	MLR		
	comp=Z,600nm,17.0s						
MILM				MLR	MLR		
	comp=E,500nm,18.0s						
TPGR	**Topolog**	**33.29**	**297**	⇑P	**P**	**11 33 41.4**	**+1.5**
SORM	**Soroca**	**33.31**	**303**	⇑P	**P**	**11 33 41.6**	**+1.6**
SORM	**Soroca**	**33.31**	**303**	⇑P	**P**	**11 33 41.6**	**+1.6**
NONG	**Nongkai**	**33.45**	**117**	P	**P**	**11 33 41.5**	**0.0**
CFR	**Carcaliu**	**33.47**	**297**	⇑P	**P**	**11 33 42.9**	**+1.4**
CFR	**Carcaliu**	**33.47**	**297**	⇑P	**P**	**11 33 42.9**	**+1.4**
HNS	**HongShan**	**33.66**	**77**	⇓P	**P**	**11 33 43.6**	**+0.4**
HNS				PP	**PP**	**11 34 58.3**	**-0.9**
HNS				*e*S	**S**	**11 39 01.0**	**-4.8**
HNS				pmax	pmax		
	comp=E,10.0nm,0.9s						
HNS				LR	LR		
	comp=E,1µm,16.7s						
HNS				LR	LR		
	comp=E,420nm,17.5s						
HNS				LR	LR		
	comp=E,610nm,15.2s						
XLT	**XiLinHaoTe**	**33.67**	**65**	*e*P	**P**	**11 33 44.3**	**+1.0**
XLT				pP	sP	11 33 52.6	+2.3
XLT				sP	pP	11 33 55.4	+7.1
XLT				PP	**PP**	**11 34 57.5**	**-1.9**
XLT				pmax	pmax		
	comp=E,7.0nm,0.9s						
XLT				pmax	pmax		
	comp=E,53nm,3.9s						
XLT				LR	LR		
	comp=E,230nm,18.7s						
XLT				LR	LR		
	comp=E,420nm,11.5s						
XLT				LR	LR		
	comp=E,530nm,17.9s						
BOD	**Bodaibo**	**34.02**	**40**	*e*P	**P**	**11 33 47.1**	**+1.0**
BOD				pmax	pmax		
	comp=Z,27nm,1.7s						
MANT	**Manisa**	**34.02**	**285**	P	**P**	**11 33 44.6**	**-2.0**
MANT				pP	**pP**	**11 33 47.6**	**-3.9**
MANT				IAmb	IAmb	11 34 10.7	
	comp=Z,15nm,0.9s						
BJT	**Baijiatuau**	**34.24**	**72**	P	**P**	**11 33 47.1**	**-1.1**
BJT	**Baijiatuau**	**34.24**	**72**	P	**P**	**11 33 47.1**	**-1.1**
BJT				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MNK	**Minsk**	**34.35**	**314**	*i* P	**P**	**11 33 47.1**	**-1.8**
	comp=E,2.0nm,0.8s						
MNK				*i* P	**P**	**11 33 47.1**	**-1.8**
	comp=N,45nm,0.7s						
MNK				*i* P	**P**	**11 33 47.1**	**-1.8**
	comp=Z,9.0nm,0.8s,baz=281						
MNK				*i* PP	**PnPn**	**11 35 01.8**	**-1.5**
MNK				*i* PPP	PPP	11 35 13.6	
MNK				*i* S	**S**	**11 39 14.4**	**-1.7**
MNK				*i* SS	**SnSn**	**11 41 25.8**	**+0.2**
MNK				*i* SSS	SSS	11 41 41.5	
MNK				*i* LQ	LQ	11 45 12.6	
MNK				*i* LR	LR	11 47 00.1	
MNK				*i* LRM	MLR	11 49 14.3	
	comp=N,45nm,0.7s						
MNK				*i* LRM	MLR	11 49 31.6	
	comp=Z,528nm,17.9s						
MNK				*i* LRM	MLR	11 49 32.8	
	comp=E,81nm,17.2s						
MNK	**Minsk**	**34.35**	**314**	*i* P	**P**	**11 33 47.1**	**-1.8**
MNK				*i*		11 35 01.8	
MNK				*i*		11 36 22.6	
MNK				*i* S	**S**	**11 39 14.4**	**-1.7**
MNK				*i* SS	**SnSn**	**11 41 25.7**	**+0.2**
MNK				*i*		11 44 09.2	
MNK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,45nm,0.7s						
MNK				MLR	MLR		
	comp=N,45nm,1.0s						
MNK				MLR	MLR		
	comp=Z,528nm,18.0s						
MNK				MLR	MLR		
	comp=E,81nm,17.0s						
VRI	**Vrincioaia**	**34.43**	**299**	⇑P	**P**	**11 33 51.3**	**+1.5**
VRI	**Vrincioaia**	**34.43**	**299**	⇑P	**P**	**11 33 51.3**	**+1.5**
TESR	**Tescani**	**34.47**	**300**	⇑P	**P**	**11 33 51.7**	**+1.7**
PLOR	**Plostina**	**34.49**	**299**	⇓P	**P**	**11 33 52.6**	**+2.3**
PLOR	**Plostina**	**34.49**	**299**	⇓P	**P**	**11 33 52.6**	**+2.3**
NAYO	**Nakonayok**	**34.81**	**124**	P	**P**	**11 33 54.4**	**+1.1**
MLR	**Muntele Rosu**	**35.00**	**298**	⇓P	**P**	**11 33 57.4**	**+2.5**
MLR	**Muntele Rosu**	**35.00**	**298**	LR	LR	11 51 45.7	
	comp=E,297nm,18.6s,baz=60,slow=42						
MLR	**Muntele Rosu**	**35.00**	**298**	P	**P**	**11 33 52.9**	**-2.0**
MLR				pP	**pP**	**11 33 57.6**	**-2.2**
MLR	**Muntele Rosu**	**35.00**	**298**	P	**P**	**11 33 52.9**	**-2.0**
MLR				*PP	**pP**	**11 33 57.6**	**-2.2**
MLR				pmax	pmax		
	comp=Z,43nm,0.8s						
NACGM	**Naroch**	**35.05**	**314**	*e*P	**P**	**11 33 56.2**	**+1.2**
	comp=E,2µm,0.9s						
DOPR	**Dopca**	**35.36**	**299**	⇓P	**P**	**11 33 60.0**	**+2.1**
BURAR	**Bucovina Array**	**35.42**	**302**	⇓P	**P**	**11 33 59.7**	**+1.2**
BURAR	**Bucovina Array**	**35.42**	**302**	P	**P**	**11 33 57.3**	**-1.1**
BURAR				pP	**P**	**11 33 59.6**	**+1.2**
BURAR	**Bucovina Array**	**35.42**	**302**	⇓P	**P**	**11 33 59.7**	**+1.2**
BUR08	**Bucovina Ar. S**	**35.43**	**302**	P	**P**	**11 33 56.9**	**-1.7**
BUR08				pP	**pP**	**11 33 59.5**	**-4.0**
ALN	**Alexandroupoli**	**35.46**	**290**	P	**P**	**11 33 56.8**	**-1.9**
ALN	**Alexandroupoli**	**35.46**	**290**	P	**P**	**11 33 56.8**	**-1.9**
WHN	**Wuhan**	**35.53**	**89**	P	**P**	**11 33 59.6**	**+0.2**
VOIR		**35.63**	**298**	⇑P	**P**	**11 34 02.0**	**+1.7**
VOIR		**35.63**	**298**	⇑P	**P**	**11 34 02.0**	**+1.7**
TIA	**Tai'an**	**35.84**	**78**	*e*P	**P**	**11 34 01.8**	**-0.2**
TIA				pmax	pmax		
	comp=E,9.0nm,0.8s						
TIA				pmax	pmax		
	comp=E,79nm,3.9s						
TIA				LR	LR		
	comp=E,860nm,15.8s						
TIA				LR	LR		
	comp=E,500nm,17.2s						
TIA				LR	LR		
	comp=E,220nm,10.1s						
KARP	**Karpathos**	**35.84**	**281**	P	**P**	**11 33 58.7**	**-3.4**
KARP				pP	**pP**	**11 34 03.2**	**-3.8**
VSU	**Vasula**	**35.89**	**320**	*i* P	**P**	**11 34 02.3**	**+0.2**
VSU				pmax	pmax		
	comp=Z,59nm,1.0s						
VSU				MLR	MLR		
	comp=Z,945nm,6.0s						
HIA	**Hailar**	**36.02**	**55**	P	**P**	**11 34 00.4**	**-3.1**
HIA	**Hailar**	**36.02**	**55**	P	**P**	**11 34 00.4**	**-3.1**
HIA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LVV	**L'vov**	**36.21**	**305**	*e*P	**P**	**11 34 05.1**	**+0.1**
LVV				*e*		11 35 31.8	
LOT	**Lotru**	**36.53**	**298**	⇓P	**P**	**11 34 09.9**	**+1.9**
PABE	**Paberze**	**36.74**	**315**	*e*P	**P**	**11 34 08.0**	**-1.5**
LVZ	**Lovozero**	**36.80**	**337**	P	**P**	**11 34 09.2**	**-0.7**
LVZ	**Lovozero**	**36.80**	**337**	*i* P	**P**	**11 34 10.1**	**+0.2**
LVZ				pmax	pmax		
	comp=Z,28nm,0.9s						
LVZ				MLR	MLR		
	comp=Z,669nm,10.0s						
ATD	**Arta Tunnel**	**36.81**	**233**	P	**P**	**11 34 12.7**	**+2.2**
	comp=Z,0.7nm,0.7s,baz=0.0,slow=2.0,SNR=4.4						
ATD				LR	LR	11 51 18.2	
	comp=Z,9.3nm,20.5s,baz=20,slow=39						
MARR	**Marisel-Cluj**	**36.89**	**300**	⇑P	**P**	**11 34 12.8**	**+1.8**
APA	**Apatity**	**36.99**	**337**	*i* P	**P**	**11 34 10.4**	**-1.1**
APA				*i*		11 35 32.7	
APA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
FINES	**FINESS Array B**	**37.08**	**325**	P	**P**	**11 34 12.1**	**-0.2**
	comp=Z,10.0nm,0.6s,baz=114,slow=8.9,SNR=27						
FINES				LR	LR	11 50 32.3	
	comp=Z,186nm,21.1s,baz=113,slow=38						
	comp=Z,10.0nm,0.6s						
FINES	**FINESS Array B**	**37.08**	**325**	P	**P**	**11 34 11.6**	**-0.8**
FINES	**FINESS Array B**	**37.08**	**325**	*e*P	**P**	**11 34 12.9**	**+0.6**
FINES				pmax	pmax		
	comp=Z,12nm,0.6s						
DRGR		**37.16**	**300**	⇑P	**P**	**11 34 14.9**	**+1.6**
DRGR		**37.16**	**300**	⇑P	**P**	**11 34 14.9**	**+1.6**
TRPA	**Tarpa**	**37.21**	**303**	⇓P	**P**	**11 34 15.1**	**+1.5**
GZR	**Gura Zlata**	**37.23**	**298**	⇑P	**P**	**11 34 15.3**	**+1.4**
MTSE	**Matsula**	**37.43**	**320**	*e*P	**P**	**11 34 13.8**	**-1.5**
MEF	**Metsahovi**	**37.51**	**323**	*e*P	**P**	**11 34 14.8**	**-1.1**
SURR	**Surduc**	**37.65**	**299**	⇑P	**P**	**11 34 19.6**	**+2.3**
SURA	**Surathani**	**37.67**	**132**	P	**P**	**11 34 18.9**	**+1.1**
IDI	**Anoyia**	**37.69**	**281**	⇓P	**P**	**11 34 19.3**	**+1.4**
IDI	**Anoyia**	**37.69**	**281**	P	**P**	**11 34 18.7**	**+0.8**
	comp=Z,6.2nm,0.6s,baz=34,slow=14,SNR=6.3						
IDI				LR	LR	11 53 50.4	

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      comp=Z,136nm,19.4s,baz=81,slow=43
      comp=Z,6.2nm,0.6s
IDI   Anoyia            37.69 281  P      P      11 34 16.0  -1.9
QIZ   Qiongzhong        37.75 109  P      P      11 34 20.4  +1.9
QIZ                                S      S      11 40 11.3  +2.4
QIZ                                LR     LR
      comp=Z,630nm,17.5s
QIZ                                LR     LR
      comp=Z,440nm,19.9s
QIZ                                LR     LR
      comp=Z,340nm,23.0s
BZS   Buzias            38.02 299 ⇓P      P      11 34 22.1  +1.6
BZS   Buzias            38.02 299 ⇓P      P      11 34 22.1  +1.6
STHS  Stebnicka Huta    38.02 305 eP      P      11 34 24.3  +3.8
STHS                               pmax   pmax
      comp=Z,5.0nm,0.7s
STHS  Stebnicka Huta    38.02 305 eP      P      11 34 24.3  +3.8
MDVR  Moldovita         38.05 297 ⇑P      P      11 34 22.8  +2.0
SRIT  Nakonsritamara    38.11 132  P      P      11 34 22.4  +0.9
SRIT  Nakonsritamara    38.11 132  P      P      11 34 22.7  +1.2
BOVS  Bovan             38.21 295 ⇓P      P      11 34 23.3  +1.3
NJ2   Nanjing           38.53  84 eP      P      11 34 26.3  +1.4
NJ2                                pP     sP     11 34 32.5  +0.6
NJ2                                sP     pP     11 34 35.1  +5.2
NJ2                                pmax   pmax
      comp=Z,4.0nm,0.5s
NJ2                                pmax   pmax
      comp=Z,39nm,4.3s
NJ2                                LR     LR
      comp=Z,910nm,12.8s
NJ2                                LR     LR
      comp=Z,710nm,16.1s
NJ2                                LR     LR
      comp=Z,530nm,13.7s
DL2   Dalian            38.60  72  P      P      11 34 25.6  +0.2
DL2                                pmax   pmax
      comp=Z,17nm,0.8s
DL2                                LR     LR
      comp=Z,1µm,18.5s
DL2                                LR     LR
      comp=Z,660nm,18.0s
DL2                                LR     LR
      comp=Z,350nm,24.7s
AGG   Agios Georgios    38.65 288  P      P      11 34 24.9  -1.0
AGG   Agios Georgios    38.65 288  P      P      11 34 24.9  -1.0
AGG                                pmax   pmax
      comp=Z,2.0nm,0.8s
KLNR  Kaliningrad       38.79 313 i P     P      11 34 26.9  +0.1
KLNR                               pmax   pmax
      comp=Z,67nm,1.1s
KLNR                               MLR    MLR
      comp=Z,17µm,22.0s
OJC   Ojcow             38.94 306  P      P      11 34 26.8  -1.4
OJC   Ojcow             38.94 306  P      P      11 34 26.8  -1.4
OJC                                pmax   pmax
      comp=Z,13nm,0.9s
FNA   Florina           38.96 291  P      P      11 34 28.2  -0.3
FNA   Florina           38.96 291  P      P      11 34 28.2  -0.3
FNA                                pmax   pmax
      comp=Z,4.0nm,0.8s
RAF   Rauma             38.97 323 eP      P      11 34 26.3  -1.9
PSZ   Piszkesteto       38.99 302 ⇑P      P      11 34 30.2  +1.5
PSZ   Piszkesteto       38.99 302 ⇑P      P      11 34 30.2  +1.5
DIVS  Divibare          39.36 296  P      P      11 34 30.5  -1.4
DIVS                               IAmb   IAmb   11 34 43.8
      comp=Z,21nm,0.9s
VADS  Vadso             39.63 339 eP      P      11 34 34.4  +0.8
VYHS  Vyhne             39.65 303 eP      P      11 34 35.0  +0.8
VYHS  Vyhne             39.65 303 eP      P      11 34 35.0  +0.8
MORH  Mrgy, Hungar      40.01 300 ⇓P      P      11 34 38.5  +1.4
JAVC  Velka Javorina    40.40 304 eP      P      11 34 42.0  +1.6
JAVC                              e              11 35 39.8
CN2   Changchun         40.40  64 eP      P      11 34 41.8  +1.4
CN2                               epP     sP     11 34 47.8  +0.4
CN2                               eS      S      11 40 48.4   0.0
CN2                                pmax   pmax
      comp=Z,10.0nm,0.7s
CN2                                pmax   pmax
      comp=Z,200nm,6.0s
CN2                                LR     LR
      comp=Z,600nm,14.0s
CN2                                LR     LR
      comp=Z,600nm,14.0s
CN2                                LR     LR
      comp=Z,800nm,16.0s
MORC  Moravsky Berou    40.41 306 eP      P      11 34 41.8  +1.3
MORC                              e              11 35 42.7
GKP   Gorka Klasztor    40.49 311 eP      P      11 34 39.4  -1.6
ARA0  ARCESS Array S    40.50 337 eP      P      11 34 41.5  +0.7
ARA0                               IAmb   IAmb   11 34 46.5
      comp=Z,22nm,0.6s
ARCES ARCESS Array B    40.50 337  P      P      11 34 40.8  -0.1
      comp=Z,12nm,0.7s,baz=111,slow=8.1,SNR=33
ARCES                              LR     LR     11 50 22.4
      comp=Z,470nm,18.2s,baz=118,slow=35
      comp=Z,12nm,0.7s
ARCES ARCESS Array B    40.50 337  P      P      11 34 40.9  -0.1
ARCES                              IAmb   IAmb   11 36 11.1
      comp=Z,85nm,1.6s
ARCES ARCESS Array B    40.50 337 eP      P      11 34 41.3  +0.4
ARCES                              pmax   pmax
      comp=Z,21nm,0.7s
ZEA   Zeya              40.76  48 eP      P      11 34 44.7  +1.5
ZEA                                pmax   pmax
      comp=Z,10.0nm,1.2s
KRLC  Kraliky           40.88 306 eP      P      11 34 45.1  +0.7
KRLC  Kraliky           40.88 306 eP      P      11 34 45.1  +0.7
HEH   HeiHe             40.96  54 eP      P      11 34 44.9   0.0
HEH                                pmax   pmax
      comp=Z,68nm,0.7s
HEH                                LR     LR
      comp=Z,400nm,16.9s
HEH                                LR     LR
      comp=Z,470nm,16.9s
HEH                                LR     LR
      comp=Z,760nm,17.0s
KTK1  Kautokeino        40.99 336 eP      P      11 34 45.2  +0.2
KTK1                               IAmb   IAmb   11 34 50.2
      comp=Z,23nm,0.5s
VRAC  Vranov            41.06 305 ⇓P      P      11 34 47.6  +1.8
VRAC  Vranov            41.06 305  LR     LR     11 54 21.6
      comp=Z,164nm,18.0s,baz=82,slow=40
VRAC  Vranov            41.06 305 eP      P      11 34 46.9  +1.1
VRAC                              e              11 35 56.3
VRAC  Vranov            41.06 305 ⇓P      P      11 34 47.6  +1.8
DPC   Dobruska-Polom    41.16 306 eP      P      11 34 47.6  +1.0
DPC                                AMS    AMS    11 53 00.0
      comp=Z,600nm,13.3s
DPC   Dobruska-Polom    41.16 306 eP      P      11 34 47.6  +1.0
DPC                                MLR    MLR
      comp=Z,600nm,13.3s
KRUC  Moravsky          41.22 305 eP      P      11 34 48.1  +1.1
KRUC                              e              11 35 59.3
KULM  Kulim             41.38 134  P      P      11 34 47.4  -1.4
RONA  Rosalia, Austr    41.43 302 eP      P      11 34 49.3  +0.4
      comp=Z,5.3nm,0.7s
HAMF  Hammerfest        41.56 338 eP      P      11 34 50.5  +0.9
HAMF                               IAmb   IAmb   11 34 50.8
      comp=Z,32nm,0.9s
CONA  Conrad Observa    41.69 303 eP      P      11 34 51.5  +0.4
      comp=Z,9.0nm,0.9s,SNR=5.1
BSD   Bornholm Skovb    41.87 314 eP      P      11 34 50.3  -2.0
ARSA  Arzberg           42.01 302 eP      P      11 34 54.7  +1.1
      comp=Z,3.1nm,0.6s
JETT  Jettan, Norway    42.13 336 eP      P      11 34 55.1  +0.7
JETT                               IAmb   IAmb   11 34 59.9
      comp=Z,24nm,0.6s
IPM   Ipoh              42.26 134  P      P      11 34 54.8  -1.1
IPM                                IAmb   IAmb   11 34 56.7
      comp=Z,63nm,1.6s
IPM   Ipoh              42.26 134  P      P      11 34 56.2  +0.3
PRU   Pruhonice         42.33 306  AMS    AMS    11 53 50.0
      comp=Z,700nm,20.3s
SOKA  Soboth            42.42 301 eP      P      11 34 58.0  +1.0
      comp=Z,8.4nm,0.9s,SNR=5.7
DEL   Delary            42.48 316 eP      P      11 34 55.1  -2.1
PSI   Prapat            42.49 138  P      P      11 34 57.3  -0.6
PSI   Prapat            42.49 138  P      P      11 34 57.1  -0.8
PSI                                pmax   pmax
      comp=Z,15nm,1.0s
RPSI  Rantau Prapat     42.58 138  P      P      11 34 57.1  -1.3
BRG   Berggiesshubel    42.63 307 eP      P      11 34 59.7  +1.1
BRG                                Amp           11 35 09.6
      comp=Z,22nm,1.2s
BRG                                Amp           11 54 01.0
      comp=N,0.4nm,13.9s
BRG                                Amp           11 54 05.0
      comp=Z,0.6nm,9.7s
BRG                                Amp           11 54 09.0
      comp=E,0.4nm,16.1s
BRG   Berggiesshubel    42.63 307 eP      P      11 34 59.6  +1.1
BRG                                pmax   pmax
      comp=Z,22nm,1.2s
BRG                                MLR    MLR
      comp=N,375nm,13.9s
BRG                                MLR    MLR
      comp=Z,576nm,9.7s
BRG                                MLR    MLR
      comp=E,353nm,16.1s
YAK   Yakutsk           42.64  36  P      P      11 34 57.9  -0.6
      comp=E,9.8nm,0.4s,baz=289,slow=7.1,SNR=1.6
YAK                                LR     LR     11 53 36.8
      comp=E,367nm,19.3s,baz=264,slow=38
      comp=E,9.8nm,0.4s
YAK   Yakutsk           42.64  36  P      P      11 34 58.4  -0.1
YAK   Yakutsk           42.64  36 eP      P      11 34 58.7  +0.3
YAK                               e              11 36 50.3
YAK                               eS      S      11 41 18.7  -2.3
YAK                               eSS     SS     11 44 30.2  -0.6
YAK                               e              11 45 04.5
YAK                                pmax   pmax
      comp=Z,52nm,0.9s
YAK                                pmax   pmax
      comp=N,3.0nm,1.0s
YAK                                pmax   pmax
      comp=E,28nm,1.3s
YAK                                pmax   pmax
      comp=Z,182nm,4.3s
YAK                                pmax   pmax
      comp=N,89nm,4.3s
YAK                                pmax   pmax
      comp=E,56nm,4.6s
YAK                                smax   smax
      comp=E,50nm,2.3s
YAK                                smax   smax
      comp=N,35nm,2.3s
YAK                                MLR    MLR
      comp=Z,452nm,14.0s
YAK                                MLR    MLR
      comp=E,375nm,16.0s
TRO   Tromso            42.65 336 eP      P      11 34 58.2  -0.2
VNDS  Vrh nad Dolski    42.74 300 eP      P      11 35 00.3  +0.7
HFS   Hagfors           42.76 321  LR     LR     11 52 47.3
      comp=E,410nm,18.8s,baz=89,slow=36
MOA   Molln             42.77 303 eP      P      11 35 00.0  +0.3
      comp=E,6.4nm,1.0s
OBKA  Obir              42.78 301 eP      P      11 35 00.7  +0.8
      comp=E,8.0nm,1.2s
TIP   Timpagrande       42.79 290 ⇓P      P      11 35 01.6  +1.4
TIP   Timpagrande       42.79 290  P      P      11 34 58.3  -1.9
SGRT  San Giovanni R    42.88 294  P      P      11 34 58.6  -2.3
SGRT                               IAmb   IAmb   11 35 26.1
      comp=Z,17nm,0.8s
GERES GERESS Array B    43.00 304  P      P      11 35 02.8  +1.0
      comp=Z,1.1nm,0.5s,baz=63,slow=6.3,SNR=7.1
GERES                              LR     LR     11 56 25.0
      comp=Z,193nm,18.6s,baz=82,slow=41
      comp=Z,1.1nm,0.5s
GERES GERESS Array B    43.00 304  P      P      11 35 01.5  -0.3
GERES GERESS Array B    43.00 304 eP      P      11 35 02.1  +0.3
GERES                              pmax   pmax
      comp=Z,1.0nm,0.5s
KHC   Kasperske Hory    43.05 305  P      P      11 35 00.1  -1.9
KHC   Kasperske Hory    43.05 305 eP      P      11 35 02.7  +0.6
KHC   Kasperske Hory    43.05 305  P      P      11 35 00.2  -1.9
KHC                                pmax   pmax
      comp=Z,8.0nm,0.9s
GSI   Gunungsitoli      43.06 141  P      P      11 35 01.1  -1.4
GSI   Gunungsitoli      43.06 141  P      P      11 35 04.3  +1.9
MDJ   Mudanjiang        43.18  62  P      P      11 35 03.0  -0.1
MDJ                                pP     sP     11 35 11.9  +1.8
MDJ                                sP     pP     11 35 15.8  +7.6
MDJ                                PcS    PcS    11 40 40.9  -3.9
MDJ                                ScP    ScP    11 40 44.4  +0.9
MDJ                                S      S      11 41 28.1  -1.4
MDJ                                SS     SS     11 44 41.8  -0.2
MDJ                                ScS    ScS    11 45 00.0  -3.3
MDJ                                pmax   pmax
      comp=Z,14nm,2.5s
MDJ                                pmax   pmax
      comp=Z,200nm,8.3s
MDJ                                LR     LR
      comp=Z,990nm,12.0s
MDJ                                LR     LR
      comp=Z,440nm,14.6s
MDJ                                LR     LR
      comp=Z,630nm,17.1s
CLL   Collm             43.18 308 eP      P      11 35 03.0   0.0
      comp=Z,12nm,1.3s
CLL                               esP     pP     11 35 09.0  +1.0
CLL                               i x     x      11 35 16.9
CLL                               ePP     PP     11 36 45.0  +1.8
CLL                               e(PcP)  PcP    11 36 55.0  +2.7
CLL                               eS      S      11 41 27.0  -2.3
CLL                               eSS     SS     11 44 48.0  +6.2
CLL                                AMS    AMS    11 54 00.0
      comp=Z,400nm,19.0s
CLL   Collm             43.18 308 eP      P      11 35 03.0   0.0
CLL                               e*PP    pP     11 35 09.0  +1.0
CLL                               eS      S      11 41 27.0  -2.3
CLL                                pmax   pmax
      comp=Z,12nm,1.3s
CLL                                MLR    MLR
      comp=Z,400nm,19.0s
BIOA  Bad Ischl, Aus    43.21 303 eP      P      11 35 03.0  -0.3
      comp=Z,4.8nm,0.7s
FAUS  Fauske            43.26 332 eP      P      11 35 04.1  +0.6
FAUS                               IAmb   IAmb   11 35 12.1
      comp=Z,24nm,0.8s
MOR8  Moi Rana          43.31 330 eP      P      11 35 03.3  -0.6
MOR8                               IAmb   IAmb   11 35 04.1
      comp=Z,22nm,0.6s
VOJS  Vojsko            43.31 300 i P     P      11 35 04.9  +0.6
MYKA  Terra Mystica     43.37 301 eP      P      11 35 05.0  +0.3
      comp=Z,5.9nm,0.9s
STEI  Steigen           43.41 333 eP      P      11 35 05.3  +0.7
STEI                               IAmb   IAmb   11 35 06.6
      comp=Z,21nm,0.9s
TRI   Trieste           43.45 300  P      P      11 35 03.2  -2.1
TRI                                IAmb   IAmb   11 36 01.8
      comp=Z,22nm,1.2s
TRI   Trieste           43.45 300  P      P      11 35 03.2  -2.1
TRI                                pmax   pmax
      comp=Z,22nm,1.2s
PRED  Cave del Predi    43.46 301  P      P      11 35 04.6  -0.9
KBA   Koelnbreinsper    43.50 302 eP      P      11 35 06.3  +0.4
      comp=Z,13nm,1.7s
SABO  M.te Sabotino     43.52 300  P      P      11 35 04.8  -1.0
SABO                               IAmb   IAmb   11 35 17.1
      comp=Z,39nm,1.0s
KSAR  Wonju Array Be    43.74  72  P      P      11 35 06.6  -1.2
KSAR  Wonju Array Be    43.74  72  P      P      11 35 06.6  -1.2
KSRS  Korea Array       43.77  72  P      P      11 35 06.5  -1.5
      comp=Z,4.6nm,0.8s,baz=283,slow=7.1,SNR=22
KSRS                               LR     LR     11 55 46.5
      comp=Z,176nm,19.4s,baz=295,slow=40
      comp=Z,4.6nm,0.8s
KSRS  Korea Array       43.77  72 eP      P      11 35 07.2  -0.7
KSRS                               pmax   pmax
      comp=Z,5.0nm,0.8s
NC405 NORSAR Array S    43.81 322  P      P      11 35 07.0  -1.0
KLR   Kul'dur           43.87  55  P      P      11 35 08.1  -0.5
      comp=Z,8.6nm,0.5s,baz=283,slow=7.7,SNR=57
KLR                                LR     LR     11 54 36.4
      comp=Z,411nm,21.4s,baz=277,slow=38
      comp=Z,8.6nm,0.5s
KLR   Kul'dur           43.87  55ceP      P      11 35 08.7  +0.1
KLR                                pmax   pmax
      comp=Z,39nm,2.5s
KLR                                MLR    MLR
      comp=Z,427nm,17.0s
NC602 NORSAR Array S    43.87 322 eP      P      11 35 08.8  +0.3
KONS  Konsvik           43.90 330 eP      P      11 35 09.6  +1.0
KONS                               IAmb   IAmb   11 35 11.9
      comp=Z,15nm,0.9s
PAOL  Paolisi           43.92 293  P      P      11 35 07.9  -1.3
NC303 NORSAR Array S    43.98 323  P      P      11 35 08.9  -0.4
NC303                              IAmb   IAmb   11 35 17.1
      comp=Z,38nm,0.8s
NB2   NORSAR Subarra    44.05 322  P      P      11 35 09.4  -0.5
      comp=Z,21nm,0.9s,baz=93,slow=7.9
NB2   NORSAR Subarra    44.05 322  P      P      11 35 09.4  -0.5
      baz=93,slow=7.9
NOA   NORSAR Array B    44.05 322  P      P      11 35 09.2  -0.7
      comp=Z,10nm,0.8s,baz=93,slow=7.9,SNR=28
NOA                                LR     LR     11 56 24.6
      comp=Z,235nm,18.4s,baz=120,slow=40
      comp=Z,10nm,0.8s
NOA   NORSAR Array B    44.05 322 eP      P      11 35 09.6  -0.3
NOA                                pmax   pmax
      comp=Z,11nm,0.8s
STAL  STALIGIAL         44.07 301  P      P      11 35 09.2  -1.2
ABTA  Abfaltersbach     44.12 302 eP      P      11 35 11.4  +0.6
      comp=Z,5.3nm,0.6s
CIMO  Cimolais          44.25 301  P      P      11 35 10.8  -1.0
CIMO                               IAmb   IAmb   11 35 17.4
      comp=Z,11nm,0.9s
GUMA  Gualdo di Mace    44.31 296  P      P      11 35 11.3  -1.0
GUMA                               IAmb   IAmb   11 35 34.5
      comp=Z,31nm,0.9s
FDMO  Fiordimonte       44.49 296  P      P      11 35 12.8  -1.0
FDMO                               IAmb   IAmb   11 35 23.2
      comp=Z,25nm,0.8s
TIXI  Tiksi             44.49  22  P      P      11 35 12.7  -0.6
      comp=Z,12nm,0.7s,baz=269,slow=23,SNR=28
TIXI                               LR     LR     11 54 38.3
      comp=Z,477nm,18.9s,baz=265,slow=37
      comp=Z,12nm,0.7s
TIXI  Tiksi             44.49  22  P      P      11 35 12.3  -1.0
TIXI                               IAmb   IAmb   11 35 58.4
      comp=Z,22nm,0.7s
TIXI  Tiksi             44.49  22ceP      P      11 35 12.8  -0.5
TIXI                               pmax   pmax
      comp=Z,41nm,1.7s
TIXI                               MLR    MLR
      comp=Z,521nm,19.0s
GRF   Grafenberg Arr    44.50 306 eP      P      11 35 15.4  +1.7
      comp=Z,9.9nm,1.1s,baz=82,slow=6.8
GRF                               eL      L      11 53 37.1
      comp=Z,252nm,21.5s
WTTA  Wattenberg        44.62 303 eP      P      11 35 15.0  +0.1
      comp=Z,7.3nm,0.9s
WATA  Walderalm         44.64 303 i P     P      11 35 15.1  +0.1
      comp=Z,5.7nm,0.7s
KONO  Kongsberg         44.80 320 eP      P      11 35 15.7  -0.1
CTI   Castel Tesino     44.84 301  P      P      11 35 15.8  -0.7
CTI                                IAmb   IAmb   11 35 22.3
      comp=Z,11nm,0.7s
CTI   Castel Tesino     44.84 301  P      P      11 35 15.8  -0.7
CTI                                pmax   pmax
      comp=Z,11nm,0.7s
MURB  Monte Urbino      44.84 297  P      P      11 35 15.4  -1.1
USRK  Ussuriysk Ar.     44.95  62  P      P      11 35 16.1  -1.2
      comp=Z,2.5nm,0.6s,baz=303,slow=7.3,SNR=6.6
USRK                               LR     LR     11 54 02.4
      comp=Z,266nm,19.7s,baz=264,slow=36
      comp=Z,2.5nm,0.6s
USRK  Ussuriysk Ar.     44.95  62  P      P      11 35 16.7  -0.6
USRK  Ussuriysk Ar.     44.95  62  P      P      11 35 16.7  -0.6
MOTA  Moosalm           44.96 303 eP      P      11 35 17.7  +0.1
      comp=Z,5.5nm,0.7s
TEOL  Teolo             44.97 300  P      P      11 35 16.2  -1.2
TEOL                               IAmb   IAmb   11 35 35.2
      comp=Z,19nm,0.7s
DOMB  Dombas            45.13 324 eP      P      11 35 19.4  +0.9
FETA  Feichten          45.27 302 eP      P      11 35 20.3  +0.2
      comp=Z,5.0nm,0.9s
SKAR  Skarslia          45.45 322 eP      P      11 35 22.5  +1.3
FUORN Ofenpass-Fuorn    45.66 302  P      P      11 35 22.4  -0.9
DAVA  Damuels           45.79 303 eP      P      11 35 24.5  +0.4
      comp=Z,14nm,0.7s,SNR=4.6
SNART Snartemo          46.05 318 eP      P      11 35 26.4  +0.6
MYKOM Kota Tinggi       46.07 133  P      P      11 35 23.4  -3.0
MYKOM                              pP     pP     11 35 27.1  -4.4
MYKOM                              IAmb   IAmb   11 35 37.5
      comp=Z,24nm,0.9s
ODD1  Odda              46.30 321 eP      P      11 35 28.2  +0.4
GRNR  Gornyy            46.61  52⇑iP      P      11 35 30.7  +0.3
GRNR                               pmax   pmax
      comp=Z,6.0nm,1.1s
GRNR                               MLR    MLR
      comp=Z,400nm,14.0s
GRNR                               MLR    MLR
      comp=E,250nm,15.0s
GRNR                               MLR    MLR
      comp=N,350nm,17.0s
SPA0  Spitsbergen Ar    46.66 346 eP      P      11 35 31.1  +0.7
SPITS Spitsbergen Ar    46.66 346  P      P      11 35 29.9  -0.5
SPITS                              pmax   pmax
      comp=Z,75nm,1.5s
JNU   Nakatsue          47.54  77  P      P      11 35 37.3  -0.7
      comp=Z,14nm,0.8s,baz=313,slow=2.9,SNR=12
JNU                                LR     LR     11 57 07.3
      comp=Z,381nm,19.1s,baz=296,slow=38
      comp=Z,14nm,0.8s
JNU   Nakatsue          47.54  77  P      P      11 35 37.6  -0.3
JNU                                IAmb   IAmb   11 35 42.7
      comp=Z,23nm,1.0s
JNU   Nakatsue          47.54  77  P      P      11 35 37.9   0.0
SENIN Lac Senin/Sane    47.72 302  P      P      11 35 39.0  -0.4
KBS   Kingsbay          47.77 347 eP      P      11 35 39.8  +0.7
JOW   Kunigami          48.16  86  LR     LR     12 00 26.9
      comp=Z,262nm,18.3s,baz=292,slow=42
KEST  Kesra             49.49 288  P      P      11 35 54.0  +1.1
      comp=Z,8.1nm,0.7s,baz=29,slow=10,SNR=8.3
KEST                               LR     LR     12 00 32.5
      comp=Z,110nm,18.7s,baz=244,slow=41
      comp=Z,8.1nm,0.7s
KEST  Kesra             49.49 288  P      P      11 35 51.8  -1.1
KMBO  Kilima Mbogo      50.14 228  P      P      11 35 56.6  -1.7
KMBO  Kilima Mbogo      50.14 228  P      P      11 35 56.6  -1.7
KMBO                               pmax   pmax
      comp=Z,11nm,1.0s
KMBO  Kilima Mbogo      50.14 228 eP      P      11 35 58.8  +0.5
KMBO                               IAmb   IAmb   11 36 05.3
      comp=Z,28nm,1.0s
KSM   Kuching           50.27 126  P      P      11 35 57.8  -1.1
KSM                                IAmb   IAmb   11 36 00.7
      comp=Z,16nm,1.0s
KSM   Kuching           50.27 126  P      P      11 36 00.1  +1.2
KIBK  Kibwezi           50.66 226  P      P      11 36 00.3  -1.7
KIBK                               IAmb   IAmb   11 36 07.8
      comp=Z,21nm,0.9s
KIBK  Kibwezi           50.66 226  P      P      11 36 06.6  +4.6
      SNR=7.8
SBUM  Sibu              50.78 124  P      P      11 36 01.4  -1.4
SBUM                               pP     pP     11 36 04.4  -3.4
SBUM                               IAmb   IAmb   11 36 04.9
      comp=Z,27nm,1.4s
KKM   Kota Kinabalu     50.93 117  P      P      11 36 03.5  -0.6
KKM                                IAmb   IAmb   11 36 17.3
      comp=Z,28nm,0.8s
KKM   Kota Kinabalu     50.93 117  P      P      11 36 05.5  +1.4
YSS   Yuzh-Sakhalins    51.55  56  P      P      11 36 07.5  -0.8
YSS   Yuzh-Sakhalins    51.55  56  P      P      11 36 09.2  +1.0
YSS   Yuzh-Sakhalins    51.55  56 eP      P      11 36 08.8  +0.6
YSS                               eS      S      11 43 22.9  -5.6
YSS                                pmax   pmax
      comp=Z,30nm,1.3s
YSS                                MLR    MLR
      comp=E,400nm,15.0s
YSS                                MLR    MLR
      comp=Z,600nm,15.0s
MJAR  Matsushiro Arr    51.81  70  P      P      11 36 09.8  -0.6
      comp=Z,8.0nm,0.7s,baz=288,slow=9.6,SNR=17
MJAR                               LR     LR     11 59 19.2
      comp=Z,205nm,19.3s,baz=302,slow=38
      comp=Z,8.0nm,0.7s
MJA0  Matsu Arr-Jizo    51.84  70 eP      P      11 36 09.8  -0.8
MJA0                               pmax   pmax
      comp=Z,9.0nm,0.7s
EKA   Eskdalemuir Ar    52.11 316  LR     LR     12 00 18.0
      comp=Z,408nm,19.6s,baz=98,slow=38
ASAJ  Asahikawa         52.31  59  P      P      11 36 12.4  -1.5
      comp=Z,3.1nm,0.5s,baz=317,slow=5.5,SNR=6.4
ASAJ                               LR     LR     11 59 38.3
      comp=Z,444nm,18.6s,baz=324,slow=38
      comp=Z,3.1nm,0.5s
ASAJ  Asahikawa         52.31  59  P      P      11 36 13.0  -0.9
ASAJ                               pmax   pmax
      comp=Z,115nm,1.7s
JKA   Kamikawa-asahi    52.31  59  P      P      11 36 13.0  -0.9
JTM   Tenmabayashi      52.36  64  P      P      11 36 12.7  -1.6
NOR   Nord              52.92 349 eP      P      11 36 18.2  +0.2
NOR                                IAmb   IAmb   11 36 19.4
      comp=Z,7.4nm,1.2s
MA2   Magadan           53.03  39  LR     LR     12 00 14.3
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       comp=Z,208nm,19.8s,baz=274,slow=38
SEY    Seymchan          53.09  34   P      P        11 36 18.9 -0.5
       comp=Z,1.0nm,0.3s,baz=266,slow=18,SNR=2.2
       comp=Z,1.0nm,0.3s
MYLDM  Lahad Datu        53.16 116   P      P        11 36 19.9 -0.7
MYLDM                                IAmb   IAmb     11 37 02.9
       comp=Z,23nm,1.0s
MBAR   Mbarara           53.78 235   LR     LR       12 00 33.8
       comp=Z,118nm,18.2s,baz=36,slow=37
MBAR   Mbarara           53.78 235   P      P        11 36 23.8 -1.5
MBAR                                 IAmb   IAmb     11 36 31.1
       comp=Z,12nm,0.7s
MBAR   Mbarara           53.78 235ceP       P        11 36 28.5 +3.2
MBAR                                 pmax   pmax
       comp=Z,14nm,0.8s
MBAR   Mbarara           53.78 235 eP       P        11 36 27.4 +2.1
MBAR                                 IAmb   IAmb     11 36 30.4
       comp=Z,10nm,0.7s
DAG    Danmarks Havn     53.96 343 i P      P        11 36 25.0 -0.6
DAG                                  IAmb   IAmb     11 36 26.7
       comp=Z,16nm,0.4s
DBG    Daneborg          54.87 341 eP       P        11 36 33.4 +1.1
DBG                                  IAmb   IAmb     11 36 34.1
       comp=Z,1.8nm,0.6s
DAV    Davao City (W)    57.12 108   LR     LR       12 05 06.6
       comp=Z,136nm,19.1s,baz=318,slow=40
BILL   Bilibino          57.30  26   P      P        11 36 50.1 +0.3
BILL   Bilibino          57.30  26deP       P        11 36 50.3 +0.5
BILL                               e                 11 38 55.7
BILL                                 pmax   pmax
       comp=Z,25nm,1.7s
BILL                                 MLR    MLR
       comp=Z,173nm,21.0s
MPSI   Mapaga            57.54 118   P      P        11 36 53.3 +1.2
       comp=Z,24nm,1.1s,comp=Z,727nm
ESDC   Sonseca Array     57.70 298   P      P        11 36 53.4 +0.3
       comp=Z,10nm,0.8s,baz=56,slow=7.4,SNR=42
ESDC                                 LR     LR       12 06 41.2
       comp=Z,91nm,19.8s,baz=48,slow=41
       comp=Z,10nm,0.8s
ESDC   Sonseca Array     57.70 298   P      P        11 36 51.7 -1.3
PETK   Petropavlovsk-    58.65  45   P      P        11 36 58.0 -1.4
       comp=Z,2.1nm,0.9s,baz=267,slow=2.9,SNR=2.5
PETK                                 LR     LR       12 04 25.4
       comp=Z,208nm,18.7s,baz=292,slow=38
       comp=Z,2.1nm,0.9s
PETK   Petropavlovsk-    58.65  45   P      P        11 36 58.8 -0.6
PETK   Petropavlovsk-    58.65  45   P      P        11 36 58.8 -0.6
MRSI   Marisa            58.88 117   P      P        11 37 02.5 +1.0
       comp=Z,67nm,0.7s,comp=Z,1µm
JCJ    Chichijima        58.97  78   LR     LR       12 02 39.1
       comp=Z,142nm,21.3s,baz=310,slow=36
NEEM   North Greenlan    60.18 348 eP       P        11 37 10.3 +0.2
NEEM                                 IAmb   IAmb     11 37 11.4
       comp=Z,12nm,1.1s
SUMG   Summit            60.34 341 i P      P        11 37 12.0 +0.7
SUMG                                 IAmb   IAmb     11 37 13.7
       comp=Z,5.6nm,0.8s
KAPI   Kappang           61.32 123   LR     LR       12 04 47.2
       comp=Z,102nm,21.9s,baz=296,slow=37
KAPI   Kappang           61.32 123   P      P        11 37 19.0 +0.8
ICESG  Greenland Ices    62.55 338   IAmb   IAmb     11 37 31.7
       comp=Z,12nm,0.8s
KULLO  Kullorsuaq        63.24 347 eP       P        11 37 30.2 -0.1
KULLO                                IAmb   IAmb     11 37 31.5
       comp=Z,10nm,0.9s
TULEG  Thule             63.54 350   P      P        11 37 31.4 -0.9
TULEG  Thule             63.54 350 eP       P        11 37 32.2 -0.1
TULEG                                IAmb   IAmb     11 37 33.9
       comp=Z,17nm,1.5s
VOI    Vohitsoka         63.73 206 eP       P        11 37 34.9 +0.7
A21K   Barrow            66.09  15   P      P        11 37 49.6 +0.8
A21K   Barrow            66.09  15   P      P        11 37 46.0 -2.9
       baz=319
DY2G   Dye2              66.13 337 eP       P        11 37 50.7 +1.1
TOA0   Torodi Ar. Sit    66.56 269   P      P        11 37 51.9 -0.9
TOA0                                 IAmb   IAmb     11 38 10.2
       comp=Z,13nm,0.8s
TORD   Torodi Ar. Bea    66.56 269   P      P        11 37 52.2 -0.6
       comp=Z,7.2nm,0.3s,baz=47,slow=4.9,SNR=36
TORD                                 LR     LR       12 10 59.2
       comp=Z,116nm,19.5s,baz=58,slow=40
       comp=Z,7.2nm,0.3s
LSZ    Lusaka            66.77 227   LR     LR       12 07 45.4
       comp=Z,101nm,19.0s,baz=56,slow=36
LSZ    Lusaka            66.77 227   P      P        11 37 53.4 -0.8
LSZ                                  IAmb   IAmb     11 38 08.2
       comp=Z,6.6nm,0.9s
LSZ    Lusaka            66.77 227   P      P        11 37 53.4 -0.8
LSZ                                  pmax   pmax
       comp=Z,7.0nm,0.9s
RDOG   Red Dog Mine      67.00  20   P      P        11 37 51.9 -3.0
       baz=315
SFJD   Kangerlussuaq     67.08 339   LR     LR       12 06 49.3
       comp=Z,89nm,20.2s,baz=46,slow=36
KRI    Karoi             67.21 224 eP       P        11 37 57.4 +0.5
TNA    Tin City          67.28  23   P      P        11 37 56.7 +0.1
TNA                                  IAmb   IAmb     11 38 24.6
       comp=Z,19nm,1.6s
TNA    Tin City          67.28  23   P      P        11 37 55.4 -1.2
       baz=312,SNR=5.4
SHEM   Shemya Is, Ala    67.63  40   LR     LR       12 08 51.2
       comp=Z,182nm,19.4s,baz=327,slow=37
RES    Resolute Bay      67.71 356   P      P        11 37 58.9 -0.3
       comp=Z,0.7nm,0.5s,baz=17,slow=7.8,SNR=7.2
RES                                  LR     LR       12 08 01.5
       comp=Z,139nm,21.5s,baz=8.0,slow=36
       comp=Z,0.7nm,0.5s
RES    Resolute Bay      67.71 356   P      P        11 37 59.2  0.0
RES    Resolute Bay      67.71 356   P      P        11 37 59.2  0.0
RES                                  pmax   pmax
       comp=Z,6.0nm,1.2s
SOEI   Soe               67.82 123   P      P        11 38 02.6 +1.8
SOEI   Soe               67.82 123   P      P        11 38 00.5 -0.3
       comp=Z,45nm,1.1s
GUMO   Guam              68.31  89   LR     LR       12 09 08.8
       comp=Z,54nm,19.3s,baz=296,slow=37
FAKI   Fak Fak           68.68 111   P      P        11 38 05.2 -1.0
ANM    Nome              68.75  23   P      P        11 38 04.7 -1.2
       baz=314
C24K   Franklin Bluff    68.97  14   P      P        11 38 05.6 -1.5
       baz=326
D23K   Nanushuk River    69.20  15   P      P        11 38 06.6 -2.0
       baz=325
C26K   Camden Bay        69.51  13   P      P        11 38 09.0 -1.4
       baz=330
E22K   Anaktuvuk Pass    69.64  16   P      P        11 38 09.9 -1.5
       baz=324
D25K   Kavik River       69.75  14   P      P        11 38 10.6 -1.5
       baz=328
C27K   Jago River        69.97  13   P      P        11 38 13.2 -0.1
       baz=330
F21K   Alatna River      70.00  17   P      P        11 38 11.9 -1.7
       baz=323
F22K   John River        70.07  17   P      P        11 38 12.6 -1.4
       baz=324
A36M   Sachs Harbour     70.08   6   P      P        11 38 14.2 +0.3
A36M   Sachs Harbour     70.08   6   P      P        11 38 12.9 -1.0
       baz=346
E23K   Chandalar         70.17  15   P      P        11 38 13.4 -1.3
       baz=326
E24K   Your Creek        70.40  15   P      P        11 38 15.7 -0.4
       baz=327
G21K   Allakaket         70.56  18   P      P        11 38 15.4 -1.6
       baz=323
G22K   Bettles           70.70  17   P      P        11 38 18.3 +0.5
       baz=325
IMAR   Indian Mountai    70.92  18   P      P        11 38 19.1 -0.1
E25K   Arctic Village    70.94  14   P      P        11 38 19.1 -0.2
       baz=329
F24K   Squaw Lake        70.99  15   P      P        11 38 19.3 -0.4
       baz=328
GCSA   Galena City Sc    71.09  20   P      P        11 38 20.9 +0.7
       baz=321,SNR=5.4
G23K   Bananza Creek     71.21  16   P      P        11 38 20.6 -0.4
       baz=326
F25K   Christian Rive    71.38  14   P      P        11 38 22.3 +0.3
       baz=329
H21K   Melozitna Rive    71.42  18   P      P        11 38 22.0 -0.2
       baz=324
MUSN   Musina, Limpop    71.53 221 eP       P        11 38 27.2 +3.7
MUSN                                 IAmb   IAmb     11 38 37.3
       comp=Z,5.2nm,1.1s
F26K   Sheenjek River    71.58  14   P      P        11 38 23.4 +0.2
       baz=330
E27K   Coleen River      71.61  13   P      P        11 38 23.4  0.0
       baz=332
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BMAR   Burnt Mountain    71.73  14   P      P        11 38 24.4 +0.2
MOPA   Mopani            71.77 219 eP       P        11 38 28.1 +3.3
G24K   Hadweenzic Riv    71.77  15   P      P        11 38 24.3  0.0
       baz=328
G25K   Bearman Lake      72.00  15   P      P        11 38 25.8 +0.1
       baz=329
I21K   Tanana            72.01  18   P      P        11 38 26.6 +0.8
       baz=325
H23K   Yukon River       72.05  17   P      P        11 38 25.7 -0.4
       baz=326
G26K   Porcupine Rive    72.30  14   P      P        11 38 27.7 +0.2
       baz=331
FYU    Fort Yukon        72.35  15   P      P        11 38 27.8 +0.1
FYU                                  IAmb   IAmb     11 38 33.3
       comp=Z,37nm,1.3s
H24K   Noodor Dome       72.42  16   P      P        11 38 27.6 -0.7
       baz=328
MLY    Manley            72.43  18   P      P        11 38 28.8 +0.4
MLY                                  IAmb   IAmb     11 38 37.2
       comp=Z,12nm,1.1s
MLY    Manley            72.43  18   P      P        11 38 27.6 -0.9
       baz=326,SNR=6.7
I23K   Minto, Yukon-K    72.66  17   P      P        11 38 29.1 -0.5
       baz=327,SNR=7.9
INK    Inuvik            72.74  10   P      P        11 38 30.2 +0.1
       comp=Z,22nm,1.0s,baz=358,slow=8.2,SNR=34
INK                                  LR     LR       12 13 29.4
       comp=Z,74nm,20.5s,baz=266,slow=38
       comp=Z,22nm,1.0s
INK    Inuvik            72.74  10   P      P        11 38 30.3 +0.3
INK                                  IAmb   IAmb     11 38 34.9
       comp=Z,23nm,0.9s
INK    Inuvik            72.74  10   P      P        11 38 30.3 +0.3
INK                                  pmax   pmax
       comp=Z,23nm,0.9s
INK    Inuvik            72.74  10   P      P        11 38 29.6 -0.5
       baz=339
TTA    Tatalina          72.75  21   P      P        11 38 35.0 +4.6
TTA    Tatalina          72.75  21   P      P        11 38 29.7 -0.6
       baz=322
C36M   Paulatuk          72.75   6   P      P        11 38 29.7 -0.4
C36M                                 IAmb   IAmb     11 38 34.2
       comp=Z,24nm,0.8s
C36M   Paulatuk          72.75   6   P      P        11 38 29.5 -0.6
       baz=347
G27K   Doyon Strip       72.82  13   P      P        11 38 31.3 +0.7
       baz=333
K20K   Telida            72.95  20   P      P        11 38 31.2 -0.2
       baz=323
CHUM   Lake Minchumin    72.99  19   P      P        11 38 31.7 +0.1
       baz=325,SNR=6.5
POKR   Poker Plat Res    73.13  16   P      P        11 38 32.6 +0.1
POKR                                 IAmb   IAmb     11 38 50.9
       comp=Z,24nm,1.1s
POKR   Poker Plat Res    73.13  16   P      P        11 38 32.2 -0.3
       baz=328,SNR=6.6
BPAW   Bear Paw Mtn.     73.14  18   P      P        11 38 32.9 +0.3
       baz=326
NEA2   Nenana            73.20  17   P      P        11 38 32.0 -0.9
       baz=327
PRP    Porcupine Dome    73.20  15   P      P        11 38 32.3 -0.8
       baz=330
TCOL   CIGO, UAF Yank    73.24  17   P      P        11 38 32.6 -0.5
TCOL                                 IAmb   IAmb     11 38 37.7
       comp=Z,29nm,1.1s
TCOL   CIGO, UAF Yank    73.24  17   P      P        11 38 32.3 -0.8
       baz=328,SNR=6.0
COLA   College           73.24  17   P      P        11 38 34.3 +1.2
COLA   College           73.24  17   P      P        11 38 32.4 -0.6
       baz=328
H27K   Steamboat Moun    73.36  14   P      P        11 38 33.6 -0.3
       baz=333
CAST   Castle Rocks      73.43  19   P      P        11 38 34.5 +0.3
CAST                                 IAmb   IAmb     11 38 39.1
       comp=Z,33nm,1.2s
CAST   Castle Rocks      73.43  19   P      P        11 38 33.2 -1.0
       baz=325,SNR=7.6
F31M   Tsiigehtchic      73.52  10   P      P        11 38 34.5 -0.1
       baz=339
ILAR   Eielson Array     73.55  16   P      P        11 38 34.3 -0.6
       comp=Z,5.7nm,0.9s,baz=324,slow=4.9,SNR=29
ILAR                                 LR     LR       12 14 11.8
       comp=Z,123nm,20.0s,baz=295,slow=39
       comp=Z,5.7nm,0.9s
ILAR   Eielson Array     73.55  16   P      P        11 38 34.6 -0.3
ILAR   Eielson Array     73.55  16 eP       P        11 38 34.9  0.0
ILAR                                 pmax   pmax
       comp=Z,6.0nm,1.0s
G30M   tAoh Zraii Nji    73.58  11   P      P        11 38 33.8 -1.3
       baz=337
KTH    Kantishna Hill    73.61  19   P      P        11 38 35.9 +0.5
KTH                                  IAmb   IAmb     11 38 39.8
       comp=Z,34nm,1.2s
MBWA   Marble Bar        73.65 134   P      P        11 38 35.1 -0.9
L19K   White Mountain    73.68  21   P      P        11 38 34.6 -1.2
       baz=323
L20K   Farewell, AK      73.71  20   P      P        11 38 33.7 -2.3
       baz=324
PPLA   Purkeypile        73.83  19   P      P        11 38 36.5 -0.3
PPLA                                 IAmb   IAmb     11 39 04.7
       comp=Z,21nm,1.2s
PPLA   Purkeypile        73.83  19   P      P        11 38 35.4 -1.4
       baz=325
N16K   Nishlik Lake      73.84  24   P      P        11 38 35.4 -1.3
       baz=320
HDA    Harding Lake      73.84  17   P      P        11 38 35.4 -1.2
       baz=329
TRF    Thorofare Moun    73.86  18   P      P        11 38 35.2 -1.8
       baz=326
I26K   Coal Creek Min    73.87  15   P      P        11 38 36.1 -0.7
       baz=332
LEPH   Lephalale, Lim    73.90 222 eP       P        11 38 38.3 +0.7
LEPH                                 IAmb   IAmb     11 38 45.7
       comp=Z,11nm,1.2s
I27K   Kandik River      73.91  14   P      P        11 38 35.1 -2.1
       baz=333
MCK    McKinley          73.95  18   P      P        11 38 35.6 -1.8
       baz=327
M19K   Big River Lodg    74.03  21   P      P        11 38 36.6 -1.2
       baz=323
EPYK   Eagle Plains      74.07  12   P      P        11 38 35.1 -3.0
       baz=337
M20K   Styx River        74.40  20   P      P        11 38 38.5 -1.6
       baz=324
N18K   Kilae Creek       74.57  22   P      P        11 38 39.5 -1.5
       baz=322
K24K   Donnelly Dome     74.63  16   P      P        11 38 38.1 -3.2
       baz=330
MTN    Manton Dam        74.69 120   P      P        11 38 41.5 -0.7
MTN                                  IAmb   IAmb     11 38 42.0
       comp=Z,10nm,0.8s
I29M   Ogilvie Camp,     74.73  13   P      P        11 38 38.7 -3.2
       baz=336,SNR=5.6
EGAK   Eagle             74.73  14   P      P        11 38 40.9 -1.0
       baz=333
O16K   Kokwok River B    74.74  24   P      P        11 38 39.7 -2.2
       baz=321
SKT    Skwentna          74.76  20   P      P        11 38 42.3 +0.3
SKT                                  IAmb   IAmb     11 38 50.5
       comp=Z,27nm,0.9s
SKT    Skwentna          74.76  20   P      P        11 38 39.5 -2.6
       baz=326
FITZ   Fitzroy Crossi    74.87 128   P      P        11 38 43.2  0.0
SCRK   Sand Creek        74.87  16   P      P        11 38 42.5 -0.3
SCRK                                 IAmb   IAmb     11 38 47.4
       comp=Z,14nm,1.2s
SCRK   Sand Creek        74.87  16   P      P        11 38 41.1 -1.7
       baz=331,SNR=6.2
N19K   Bonanza Creek     74.88  22   P      P        11 38 41.3 -1.6
       baz=324
RIDG   Independent Ri    74.89  16   P      P        11 38 41.5 -1.3
       baz=330
O17K   Koliganek Bris    74.91  23   P      P        11 38 40.7 -2.2
       baz=322
KNRA   Kununurra         75.11 124   P      P        11 38 45.0 +0.4
KNRA   Kununurra         75.11 124   P      P        11 38 44.6  0.0
P16K   Nushagak River    75.21  24   P      P        11 38 43.0 -1.6
       baz=321
K27K   Chicken           75.22  15   P      P        11 38 44.5 -0.2
K27K                                 IAmb   IAmb     11 38 49.8
       comp=Z,17nm,1.1s
K27K   Chicken           75.22  15   P      P        11 38 44.0 -0.7
       baz=333
SUA    Susitna One       75.39  20   P      P        11 38 43.4 -2.4
       baz=326
PAX    Paxson            75.42  17   P      P        11 38 43.5 -2.4
       baz=330
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O18K   Koktuh Hills      75.43  23   P      P        11 38 46.3 +0.3
O18K                                 IAmb   IAmb     11 38 55.5
       comp=Z,24nm,0.9s
O18K   Koktuh Hills      75.43  23   P      P        11 38 44.8 -1.2
       baz=323
DBIC   Dimbokro          75.57 267   P      P        11 38 48.2 +0.8
       comp=Z,5.2nm,0.8s,baz=36,slow=10.0,SNR=3.4
DBIC                                 LR     LR       12 15 55.2
       comp=Z,170nm,18.8s,baz=55,slow=39
       comp=Z,5.2nm,0.8s
DBIC   Dimbokro          75.57 267   P      P        11 38 46.4 -1.0
DBIC                                 IAmb   IAmb     11 40 34.9
       comp=Z,54nm,1.9s
DBIC   Dimbokro          75.57 267   P      P        11 38 46.4 -1.0
DBIC                                 pmax   pmax
       comp=Z,54nm,1.9s
DBIC   Dimbokro          75.57 267 eP       P        11 38 45.9 -1.6
DBIC                                 IAmb   IAmb     11 38 54.6
       comp=Z,7.7nm,0.9s
KIC    Kosan Boka        75.66 267⇑iP       P        11 38 47.7 -0.3
       comp=Z,33nm,1.0s
PMR    Palmer            75.71  19   P      P        11 38 51.6 +4.1
PMR    Palmer            75.71  19   P      P        11 38 45.2 -2.2
       baz=328
DAWY   Dawson            75.71  14   P      P        11 38 47.8 +0.2
DAWY                                 IAmb   IAmb     11 38 52.1
       comp=Z,16nm,1.1s
DAWY   Dawson            75.71  14   P      P        11 38 46.8 -0.8
       baz=335,SNR=13
TIC    Toumodi           75.71 267⇑iP       P        11 38 47.9 -0.4
       comp=Z,3.0nm,0.3s
SML    Sawmill           75.73  19   P      P        11 38 47.9 +0.1
SML    Sawmill           75.73  19   P      P        11 38 45.1 -2.6
       baz=328
P18K   Big Mountain,     75.80  23   P      P        11 38 45.5 -2.6
       baz=323
L26K   Log Cabin Wild    75.84  16   P      P        11 38 47.6 -0.7
       baz=332,SNR=5.7
M23K   Glacier View      75.90  18   P      P        11 38 47.4 -1.3
       baz=329,SNR=8.0
Q16K   King Salmon       75.92  24   P      P        11 38 46.8 -1.9
       baz=322
SCM    Sheep Creek Mo    75.96  18   P      P        11 38 47.2 -1.9
       baz=329
LIC    Lamto             75.97 267⇑iP       P        11 38 50.2 +0.4
       comp=Z,4.0nm,0.2s
RC01   Rabbit Creek A    75.98  19   P      P        11 38 47.6 -1.5
       baz=327
HARP   HAARP             75.99  17   P      P        11 38 47.9 -1.3
       baz=330,SNR=11
LBTB   Lobatse           76.00 223   LR     LR       12 13 17.1
       comp=Z,98nm,18.1s,baz=30,slow=36
LBTB   Lobatse           76.00 223 eP       P        11 38 52.9 +3.1
LBTB                                 IAmb   IAmb     11 38 57.7
       comp=Z,19nm,1.5s
M24K   Tolsona, Glenn    76.01  17   P      P        11 38 47.7 -1.6
       baz=330
O20K   Slope Mountain    76.02  21   P      P        11 38 47.8 -1.5
       baz=325
KNK    Knik Glacier      76.04  19   P      P        11 38 47.4 -2.1
       baz=328
L27K   Beaver Creek,     76.14  15   P      P        11 38 48.1 -1.9
       baz=333
BCAR   Beaver Creek A    76.14  15   P      P        11 38 50.3 +0.3
TSUM   Tsumeb            76.21 232   LR     LR       12 15 56.7
       comp=Z,68nm,19.6s,baz=152,slow=38
TSUM   Tsumeb            76.21 232 eP       P        11 38 50.5 -0.6
K29M   Barlow Dome       76.26  13   P      P        11 38 49.1 -1.7
       baz=336,SNR=14
M26K   Nabesna, AK       76.47  16   P      P        11 38 49.0 -3.0
       baz=332
KLU    Klutina           76.60  18   P      P        11 38 50.5 -2.2
       baz=330
M27K   Edge Creek, AK    76.75  16   P      P        11 38 51.1 -2.5
       baz=333
MAYO   Mayo, Yukon       76.77  12   P      P        11 38 51.2 -2.4
       baz=338
N25K   Chitina, Valde    76.81  17   P      P        11 38 51.7 -2.2
       baz=331
L29M   L29M              76.82  14   P      P        11 38 51.7 -2.2
       baz=336
BVCY   Beaver Creek      76.92  15   P      P        11 38 52.3 -2.1
       baz=334
M29M   Somme Creek       77.37  14   P      P        11 38 55.3 -1.7
       baz=336
EYAK   Cordova Ski Ar    77.46  18   P      P        11 38 54.3 -3.1
       baz=330
M30M   Minto, Yukon      77.56  13   P      P        11 38 58.4 +0.4
M30M   Minto, Yukon      77.56  13   P      P        11 38 56.8 -1.2
       baz=337
YUK3   Moose Creek       77.57  15   P      P        11 38 55.7 -2.6
       baz=334,SNR=7.0
MORW   Morawa            78.05 142   P      P        11 39 00.2 -0.8
MORW   Morawa            78.05 142   P      P        11 39 01.5 +0.5
OHAK   Old Harbor        78.16  23   P      P        11 38 59.7 -1.7
       baz=325
YUK8   Steele Glacier    78.16  15   P      P        11 38 57.9 -3.8
       baz=335
M31M   Drury Creek, Y    78.33  12   P      P        11 39 02.6 +0.3
M31M                                 IAmb   IAmb     11 39 07.1
       comp=Z,14nm,1.1s
M31M   Drury Creek, Y    78.33  12   P      P        11 39 00.9 -1.3
       baz=339,SNR=7.0
YUK4   Talbot Arm        78.33  15   P      P        11 39 00.9 -1.6
       baz=336
FARO   Faro, Yukon       78.47  12   P      P        11 39 03.4 +0.3
FARO   Faro, Yukon       78.47  12   P      P        11 39 02.3 -0.8
       baz=340,SNR=5.9
N30M   Aishikik Lake     78.53  14   P      P        11 39 02.6 -0.8
       baz=337
O28M   Mount Upton       78.54  15   P      P        11 39 03.7 -0.1
       baz=334
N31M   Braeburn, Yuko    78.75  13   P      P        11 39 05.5 +0.9
N31M                                 IAmb   IAmb     11 39 09.5
       comp=Z,22nm,1.2s
N31M   Braeburn, Yuko    78.75  13   P      P        11 39 04.1 -0.5
       baz=338,SNR=5.1
YUK6   Outpost Mounta    78.76  15   P      P        11 39 02.8 -2.1
       baz=336
WRGLY  Wrigley           78.80   7   P      P        11 39 03.2 -1.6
       baz=348,SNR=6.8
HYT    Haines Junctio    79.04  14   P      P        11 39 06.7 +0.3
HYT                                  IAmb   IAmb     11 39 11.6
       comp=Z,12nm,0.9s
HYT    Haines Junctio    79.04  14   P      P        11 39 04.3 -2.0
       baz=337,SNR=8.4
BOSA   Boshof            79.08 221   P      P        11 39 09.4 +2.6
       comp=Z,2.9nm,0.7s,baz=33,slow=4.3,SNR=6.2
BOSA                                 LR     LR       12 17 31.5
       comp=Z,80nm,18.0s,baz=16,slow=38
       comp=Z,2.9nm,0.7s
BOSA   Boshof            79.08 221 eP       P        11 39 15.6 +8.7
BOSA                                 IAmb   IAmb     11 39 30.2
       comp=Z,440nm,4.5s
PINM   Pinnacle          79.14  16   P      P        11 39 04.4 -2.5
       baz=334
O30N   Mendenhall        79.36  14   P      P        11 39 06.4 -1.6
       baz=338
N32M   Quiet Lake        79.53  12   P      P        11 39 06.5 -2.5
       baz=340
PNL    Peninsula         79.71  16   P      P        11 39 07.5 -2.4
       baz=335
P30M   Million Dollar    79.79  14   P      P        11 39 08.5 -1.9
       baz=337
BBTS   Babate            80.10 281   LR     LR       12 19 30.3
       comp=Z,87nm,20.9s,baz=1.0,slow=39
YKA    Yellowknife Ar    80.16   3   P      P        11 39 12.3 +0.1
       comp=Z,12nm,0.8s,baz=350,slow=5.2,SNR=52
YKA                                  LR     LR       12 18 21.7
       comp=Z,83nm,18.4s,baz=310,slow=38
       comp=Z,12nm,0.8s
P33M   Teslin, Yukon     80.47  12   P      P        11 39 14.3 +0.2
P33M                                 IAmb   IAmb     11 39 18.5
       comp=Z,22nm,1.2s
P33M   Teslin, Yukon     80.47  12   P      P        11 39 11.8 -2.3
       baz=340,SNR=7.3
PLBC   Pleasant Camp     80.52  14   P      P        11 39 12.4 -1.8
       baz=338
SKAG   Skagway           80.72  14   P      P        11 39 14.1 -1.1
       baz=338
P32M   Atlin             80.89  13   P      P        11 39 15.3 -1.0
       baz=340
WTLY   Watson Lake, Y    81.19  10   P      P        11 39 16.2 -1.7
       baz=344
SCHQ   Schefferville     81.45 337   P      P        11 39 19.2 -0.1
       comp=Z,2.8nm,0.7s,baz=27,slow=13,SNR=3.7
SCHQ                                 LR     LR       12 15 05.9
       comp=Z,162nm,18.3s,baz=70,slow=35
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	comp=Z,2.8nm,0.7s						
ARMS	Ukamas	81.61	225	*e*P	P	11 39 20.7	+0.3
ARMS				IAmb	IAmb	11 39 27.0	
	comp=Z,5.9nm,1.1s						
WRKA	Warakurna	81.67	130	P	P	11 39 20.5	-0.3
Q32M	Nakina River	81.74	12	P	P	11 39 18.3	-2.7
	baz=341						
WB0	Warramunga Arr	81.77	123	P	P	11 39 20.8	-0.7
WB0				IAmb	IAmb	11 39 21.1	
	comp=Z,10nm,0.7s						
WRA	Warramunga Arr	81.86	123	P	P	11 39 20.7	-1.1
	comp=Z,13nm,0.7s,baz=323,slow=5.0,SNR=171						
WRA				LR	LR	12 23 35.1	
	comp=Z,56nm,18.9s,baz=292,slow=42						
	comp=Z,13nm,0.7s						
WRA	Warramunga Arr	81.86	123	P	P	11 39 20.8	-1.1
WRAB	Tennant Creek	81.86	123	P	P	11 39 21.0	-0.9
WB2	Warramunga Arr	81.86	123	P	P	11 39 21.2	-0.7
DLBC	Dease Lake	82.61	11	LR	LR	12 19 03.2	
	comp=Z,99nm,20.6s,baz=318,slow=38						
DLBC	Dease Lake	82.61	11	P	P	11 39 26.2	+0.8
DLBC				IAmb	IAmb	11 39 31.5	
	comp=Z,18nm,1.4s						
DLBC	Dease Lake	82.61	11	P	P	11 39 23.4	-2.0
	baz=343						
S34M	Telegraph Cree	82.93	12	P	P	11 39 24.3	-2.7
	baz=342						
FCC	Fort Churchill	83.35	353	P	P	11 39 29.6	+0.5
FCC				IAmb	IAmb	11 39 35.9	
	comp=Z,13nm,0.9s						
FCC	Fort Churchill	83.35	353	P	P	11 39 29.6	+0.5
FCC				pmax	pmax		
	comp=Z,13nm,1.0s						
T35M	Bob Quinn	83.96	12	P	P	11 39 28.2	-4.1
	baz=342						
COEN	Coen	84.04	113	P	P	11 39 32.6	-0.6
COEN				IAmb	IAmb	11 39 33.3	
	comp=Z,7.7nm,0.8s						
COEN	Coen	84.04	113	P	P	11 39 32.7	-0.6
PMG	Port Moresby	84.11	107	P	P	11 39 33.2	-0.4
	comp=Z,21nm,0.7s,baz=348,slow=5.5,SNR=11						
	comp=Z,21nm,0.7s						
PMG	Port Moresby	84.11	107	P	P	11 39 33.2	-0.4
PMG	Port Moresby	84.11	107	P	P	11 39 33.6	-0.1
WRAK	Wrangell Islan	84.13	13	P	P	11 39 28.8	-4.3
	baz=341						
AS31	Alice Springs	84.19	126	P	P	11 39 33.0	-0.9
ASAR	Alice Springs	84.19	126	P	P	11 39 33.0	-1.0
	comp=Z,5.0nm,0.6s,baz=309,slow=5.0,SNR=75						
ASAR				LR	LR	12 24 13.8	
	comp=Z,49nm,19.0s,baz=298,slow=41						
	comp=Z,5.0nm,0.6s						
ASAR	Alice Springs	84.19	126	P	P	11 39 32.7	-1.2
ASAR	Alice Springs	84.19	126	P	P	11 39 32.7	-1.2
AS01	Alice Springs	84.22	126	P	P	11 39 32.9	-1.2
SUR	Sutherland	84.39	222	LR	LR	12 21 21.4	
	comp=Z,46nm,18.1s,baz=9.5,slow=39						
FORT	Forrest	85.80	134	P	P	11 39 41.4	-0.4
QIS	Mount Isa	85.86	120	P	P	11 39 41.5	-0.8
MTSU	Mount Surprise	87.58	115	P	P	11 39 50.6	-0.2
OOD	Oodnadatta	88.23	127	P	P	11 39 53.2	-0.4
BBB	Bella Bella	88.92	12	LR	LR	12 25 26.1	
	comp=Z,55nm,18.0s,baz=299,slow=40						
CTA	Charters Tower	90.24	115	P	P	11 40 02.7	-0.6
	comp=Z,4.9nm,0.8s,baz=306,slow=6.0,SNR=7.0						
	comp=Z,4.9nm,0.8s						
ULM	Lac du Bonnet	91.93	352	LR	LR	12 23 47.1	
	comp=Z,154nm,19.7s,baz=22,slow=37						
BBOO	Buckleboo	91.96	131	P	P	11 40 10.6	-0.4
SADO	Sadowa	94.02	340	LR	LR	12 22 59.5	
	comp=Z,129nm,20.1s,baz=341,slow=36						
HNR	Honiara	94.03	99	LR	LR	12 20 55.0	
	comp=Z,409nm,21.8s,baz=192,slow=34						
NEW	Newport	94.18	6	LR	LR	12 25 20.0	
	comp=Z,99nm,20.7s,baz=5.0,slow=37						
STKA	Stephens Creek	94.75	127	LR	LR	12 30 51.3	
	comp=Z,57nm,20.0s,baz=300,slow=40						
EGMT	Eagleton	94.79	1	P	P	11 40 20.1	-4.0
	baz=359						
GD1S	Gladstone Soft	96.13	115	P	P	11 40 32.4	+2.1
YBH	Yreka Blue Hor	99.96	11	LR	LR	12 31 04.2	
	comp=Z,31nm,19.5s,baz=349,slow=38						
PDAR	Pinedale Array	100.05	1	P	Pdif	11 40 49.1	+1.0
	comp=Z,0.1nm,0.4s,baz=16,slow=6.7,SNR=2.5						
PDAR				LR	LR	12 30 31.8	
	comp=Z,79nm,18.2s,baz=18,slow=38						
	comp=Z,0.1nm,0.4s						
RODS	Rosario do Sul	136.11	263	*e*P	PKPdf	11 46 23.6	-0.1

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*IDC **22** 11:38:22.6±1.6, 15°.44S×178°.25W, h408^{km}±18^{km}, mb3.3/11, mbtmp4.1/14, Error ellipse: s-maj=26.8km s-min=12.5km az=148.0*

*NEIC **22** 11:38:24.0±1.7, 15°.0S±0°.1×178°.49W±0°.09, h408^{km}±9^{km}, mb4.1/13, Error ellipse: s-maj=19.8km s-min=8.2km az=148.0*

ISC 22 11:38:22.5±0.5**, 15°.2S**±0°.1×**178°.31W**±0°.10**, h400^{km}, n34, σ1^{s}.33**/33**, mb3.9**/18**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.30	234	P	Pn	11 39 38.6	+1.0
	78nm,0.4s,baz=73,slow=12,SNR=166						
MSVF	Nonsavu	4.30	234		Pn	11 39 39.4	+1.7
AFI	Afiamalu	6.46	79	P	Pn	11 39 59.1	-1.2
	23nm,0.7s,baz=222,slow=12,SNR=5.2						
AFI	Afiamalu	6.46	79		Pn	11 39 59.6	-0.7
FUNA	Funafuti	7.07	340		Pn	11 40 07.3	+0.2
DZM	Mont Dzumac	15.97	242	P	P	11 41 45.8	+0.1
	2.2nm,0.6s,baz=101,slow=10,SNR=6.4						
URZ	Urewera	23.32	189	P	P	11 42 53.8	-3.3
	2.8nm,0.3s,baz=349,slow=4.8,SNR=9.2						
	2.8nm,0.3s						
LBZ	Lake Benmore	30.69	196	P	P	11 44 05.8	+3.7
ARMA	Armidale	31.45	236	P	P	11 44 10.0	+0.9
ARMA				IAmb	IAmb	11 44 14.0	
	comp=Z,14nm,1.4s						
CTA	Charters Tower	34.07	257	P	P	11 44 31.2	-0.4
	comp=Z,1.7nm,0.5s,baz=92,slow=9.0,SNR=5.6						
	comp=Z,1.7nm,0.5s						
COEN	Coen	37.26	267	P	P	11 44 59.2	+0.8
STKA	Stephens Creek	40.07	238	P	P	11 45 19.9	-1.3
	comp=Z,0.7nm,0.4s,baz=24,slow=18,SNR=1.4						
	comp=Z,0.7nm,0.4s						
WB0	Warramunga Arr	45.23	257	P	P	11 46 01.1	-1.2
WB0				IAmb	IAmb	11 46 10.5	
	comp=Z,11nm,1.5s						
WB2	Warramunga Arr	45.26	257	P	P	11 45 59.9	-2.7
WB2				IAmb	IAmb	11 46 15.6	
	comp=Z,9.7nm,1.3s						
WRA	Warramunga Arr	45.27	257	P	P	11 46 01.1	-1.6
	comp=Z,0.3nm,0.3s,baz=94,slow=8.0,SNR=14						
	comp=Z,0.3nm,0.3s						
AS31	Alice Springs	45.67	252	P	P	11 46 05.1	-0.6
AS31				IAmb	IAmb	11 46 05.4	
	comp=Z,3.9nm,0.4s						
ASAR	Alice Springs	45.67	252	P	P	11 46 04.9	-0.8
	comp=Z,6.9nm,0.4s,baz=85,slow=8.4,SNR=122						
	comp=Z,6.9nm,0.4s						
ASAR	Alice Springs	45.67	252	P	P	11 46 04.3	-1.4
FORT	Forrest	51.29	243	P	P	11 46 47.0	-0.8
QSPA	South Pole Qui	74.84	180	P	P	11 49 20.0	-0.3
QSPA				IAmb	IAmb	11 49 37.5	
	comp=Z,4.2nm,1.3s						
NVAR	Mina Array Bea	77.42	44	P	P	11 49 35.2	0.0
	comp=Z,0.5nm,0.6s,baz=232,slow=7.0,SNR=5.0						
	comp=Z,0.5nm,0.6s						
SEY	Seymchan	81.17	347	P	P	11 49 54.0	-0.4
	comp=Z,1.1nm,0.5s,baz=108,slow=18,SNR=7.6						
	comp=Z,1.1nm,0.5s						
HLID	Hailey	82.54	41	P	P	11 50 02.9	+0.7
RIDG	Independent Ri	82.82	14	P	P	11 50 02.8	-0.1
H21K	Melozitna Rive	82.87	10	P	P	11 50 03.7	+0.6
HDA	Harding Lake	82.91	13	P	P	11 50 03.6	+0.3
HDA				IAmb	IAmb	11 50 04.0	
	comp=Z,2.6nm,0.6s						
ILAR	Eielson Array	83.24	13	P	P	11 50 04.5	-0.5
	comp=Z,1.0nm,0.5s,baz=232,slow=6.0,SNR=18						
	comp=Z,1.0nm,0.5s						
TXAR	Lajitas Array	84.48	58	P	P	11 50 13.3	+1.2
	comp=Z,0.6nm,0.7s,baz=232,slow=5.6,SNR=9.2						
	comp=Z,0.6nm,0.7s						
BELA	Belgrano 2	84.83	173	P	P	11 50 16.6	+3.7
BELA				IAmb	IAmb	11 50 29.2	
	comp=Z,5.1nm,1.4s						
PDAR	Pinedale Array	85.33	44	P	P	11 50 16.2	0.0
	comp=Z,0.6nm,0.5s,baz=190,slow=2.5,SNR=8.8						
	comp=Z,0.6nm,0.5s						
YKA	Yellowknife Ar	91.84	25	P	P	11 50 45.6	-0.3
	comp=Z,0.2nm,0.7s,baz=251,slow=3.8,SNR=2.3						
	comp=Z,0.2nm,0.7s						
ARCES	ARCESS Array B	123.68	350	PKP	PKPdf	11 56 31.8	-1.1
	comp=Z,4.7nm,1.0s,baz=37,slow=6.2,SNR=4.6						
GERES	GERESS Array B	145.03	346	PKPbc	PKPbc	11 57 13.2	-0.2
	comp=Z,0.3nm,0.5s,baz=48,slow=2.0,SNR=5.0						
DAVOX	Davos/Dischmat	147.78	349	PKPbc	PKPbc	11 57 21.4	0.0
	baz=337,slow=9.0						

HEL 22 11:42:49.5±0.1**, 63°.15N×27°.82E, h0^{km}, ML1.9, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAF	Kangasniemi	1.25	215	PG	Pg	11 43 11.9	-1.5
	baz=37						
KAF				MSG		11 43 27.4	
	comp=Z,17nm,0.2s						
KAF				SB	Sg	11 43 29.4	-0.2
RMF	Romuvaara	1.43	40	PN	Pn	11 43 16.4	-0.3
RMF				MSG		11 43 32.5	
	comp=Z,6.9nm,0.2s						
JOF	Joensuu	1.61	97	PN	Pn	11 43 19.2	+0.1
KEF	Keuruu	1.68	235	PG	Pn	11 43 19.7	-0.4
KEF				MSG		11 43 39.8	
	comp=Z,6.0nm,0.2s						
KEF				SG	Sn	11 43 41.2	-1.0
RUF	Ruokolahti	1.81	162	PG	Pn	11 43 22.0	+0.2
	baz=345						
RUF				MSG		11 43 43.4	
	comp=Z,7.6nm,0.2s						
OUF	Merijarvi	1.84	313	PG	Pn	11 43 22.8	+0.5
	baz=127						
OUF				MSG		11 43 44.2	
	comp=Z,9.0nm,0.2s						
OUF				SN	Sb	11 43 47.8	+0.3
FIA0	FINESS Array S	1.89	206	PG	Pn	11 43 23.2	+0.2
	baz=25						
FIA0				MSG		11 43 45.7	
	comp=Z,8.8nm,0.2s						
FIA0				SG	Sn	11 43 47.5	0.0
OBF4	Vikkela, Lumij	2.06	326	PG	Pb	11 43 26.7	-1.0
OBF4				MSG		11 43 50.7	
	comp=Z,9.7nm,0.2s						
OBF0	Syolatti, Pyha	2.09	312	PG	Pn	11 43 26.9	+1.2
OBF0				MSG		11 43 51.4	
	comp=Z,7.2nm,0.2s						
OBF0				SG	Sg	11 43 55.7	-0.8
OUL	Oulu	2.12	337	PG	Pb	11 43 27.6	-1.2
OUL				SG	Sb	11 43 55.6	0.0
OBF8	Ulkokalla	2.28	303	PG	Pb	11 43 30.1	-1.3
OBF8				MSG		11 43 56.9	
	comp=Z,7.7nm,0.2s						
VJF	Virojoki	2.62	183	MSG		11 44 06.7	
	comp=Z,4.9nm,0.2s						
VJF				SG	Sb	11 44 09.4	-0.5
PVF	Pernaja	2.77	200	MSG		11 44 11.1	
	comp=Z,3.5nm,0.2s						
KU6	Riekki	3.03	16	PB	Pn	11 43 41.0	+2.4
KU6				MSG		11 44 18.4	
	comp=Z,3.6nm,0.2s						
BURU	Burvik	3.19	300	PG	Pb	11 43 45.9	-1.1
UMAU	Umeaa	3.28	286	PG	Pb	11 43 49.2	+0.7
	baz=98						
UMAU				SB	Sn	11 44 23.9	+2.2
TOF	Tornio	3.31	335	SG	Sb	11 44 30.1	+0.4
RAF	Rauma	3.56	236	SN	Sn	11 44 23.7	-4.8
RNF	Rovaniemi	3.56	348	PN	Pn	11 43 47.4	+1.5
	baz=169						
ERTU	Ertsjaerv	4.18	327	PG	Pb	11 44 02.9	-0.9
ERTU				SG	Sb	11 44 55.4	+0.7
SGF	Sodankyl	4.35	353	PG	Pb	11 44 06.3	-0.4
PAJU	Pajala	4.37	335	PN	Pn	11 43 58.7	+1.6
PAJU				SB	Sb	11 44 56.6	-3.7
KLF	Kolari	4.41	340	PN	Pn	11 43 59.1	+1.4
VRF	Varrio	4.68	8	PG	Pb	11 44 12.6	+0.2

HEL 22 11:59:04.5±0.1**, 63°.86N×28°.11E, h0^{km}, ML1.1, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUL	Oulu	1.56	323	PN	Pn	11 59 33.2	-0.2
OUF	Merijarvi	1.56	290	PG	Pn	11 59 32.6	-0.9
OUF				MSG		11 59 51.4	
	comp=Z,0.9nm,0.2s						
OUF				SN	Sn	11 59 53.5	-0.9
JOF	Joensuu	1.73	122	PG	Pn	11 59 35.5	-0.3
JOF				SG	Sn	11 59 57.6	-0.9
KU6	Riekki	2.30	18	SN	Sn	12 00 10.7	-1.9
KU6				MSG		12 00 12.4	
	comp=Z,0.5nm,0.2s						
OLKF	Oulanka, Finla	2.53	12	SN	Sn	12 00 18.2	0.0
OLKF				MSG		12 00 19.1	
	comp=Z,0.3nm,0.2s						
FIA0	FINESS Array S	2.60	202	PG	Pb	11 59 50.5	-1.5
	baz=16						
FIA0				MSG		12 00 21.2	
	comp=Z,1.3nm,0.2s						
FIA0				SG	Sb	12 00 25.8	+1.4
RAF	Rauma	4.10	229	SB	Sb	12 01 05.6	-1.8

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*SJA **22** 12:09:57.7±0.8, 30°.03S×71°.77W, h11^{km}±2^{km}, ML3.7, MW3.4, Hypocentre not reviewed by the ISC*

GUC 22 12:10:04.3±0.6**, 30°.19S×71°.37W, h40^{km}**±3^{km}**, ML3.7, 5C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.29	22⇑	*i*P	Pn	12 10 12.8	+0.3
CO05				*e*S	Sn	12 10 19.5	+1.3
CO05				IAML		12 10 20.0	
	comp=N,6μm,0.5s						
GO04	Tololo Observa	0.49	88⇓	*i*P	Pn	12 10 16.4	+1.2
GO04				*e*S	Sn	12 10 25.6	+2.8
GO04				IAML		12 10 26.6	
	comp=E,20μm,0.4s						
GO04	Tololo Observa	0.49	88	*e*P		12 10 16.1	
CO06	Fray Jorge	0.53	206⇑	*i*P	Pn	12 10 16.1	+0.6
CO06				*e*S	Sn	12 10 25.3	+1.9
CO06				IAML		12 10 26.7	
	comp=E,4μm,0.2s						
CO03	El Pedregal	0.87	138	*i* P	Pn	12 10 21.6	+1.4
CO03				*e*S	Sn	12 10 34.6	+2.8
CO03				IAML		12 10 36.6	
	comp=E,4μm,0.5s						
CO03	El Pedregal	0.87	138	*e*P		12 10 16.1	
CO03				*e*P		12 10 21.4	
CO03				*e*S		12 10 35.4	
CO03				IAML		12 10 35.8	
	comp=Z,2μm,0.6s						
CO02	Combarbal	1.06	163⇑	*i*P	Pn	12 10 24.2	+1.4
CO02				*e*S	Sn	12 10 39.3	+3.0
CO02	Combarbal	1.06	163	*e*P		12 10 23.0	
CO02				*e*S		12 10 39.6	
CO02				IAML		12 10 40.4	
	comp=Z,2μm,0.2s						
CO01	Juntas del Tor	1.12	79⇓	*i*P	Pn	12 10 25.1	+1.3
CO01				*e*S	Sn	12 10 39.8	+1.6
CO01	Juntas del Tor	1.12	79	*e*P		12 10 23.0	
CO01				*e*P		12 10 25.2	
CO01				*e*S		12 10 40.3	
CO01				IAML		12 10 43.3	
	comp=Z,576nm,0.2s						
LCO	Las Campanas	1.31	26⇑	*i*P	Pn	12 10 25.9	-0.5
LCO				*e*S	Sn	12 10 42.7	-0.1
LCO	Las Campanas	1.31	26	*e*P		12 10 20.6	
LCO				*e*P		12 10 25.0	
LCO				*e*S		12 10 42.9	
LCO				IAML		12 10 45.2	
	comp=Z,920nm,0.3s						
AC05	El Transito	1.65	35	*e*P	Pn	12 10 31.6	+0.6
AC05				*e*S	Sn	12 10 52.1	+1.1
AC05				IAML		12 10 56.1	
	comp=N,831nm,0.3s						
AC05	El Transito	1.65	35	*e*P		12 10 31.0	
AC05				*e*S		12 10 52.9	
AC05				IAML		12 11 00.1	
	comp=Z,537nm,0.3s						
AC04	Llanos de Chal	2.00	7	*e*P		12 10 33.0	
AC04				*e*S		12 10 58.1	
RTLS	Leoncito	2.39	133	*e*P		12 10 45.0	
RTLS				IAML		12 11 25.7	
	comp=Z,555nm,0.7s						
VA03	San Esteban	2.66	165	*e*P	Pn	12 10 47.4	+2.7
VA03				*e*S	Sn	12 11 20.8	+5.0
VA03				IAML		12 11 26.1	
	comp=E,852nm,0.4s						
VA03	San Esteban	2.66	165	*e*P		12 10 46.0	
VA03				*e*S		12 11 20.6	
VA03				*e*S		12 11 23.6	
VA03				IAML		12 11 29.9	
	comp=Z,391nm,0.8s						
ZON	Zonda	2.68	121	*e*P		12 10 51.9	
ZON				*e*S		12 11 30.6	
ZON				IAML		12 11 31.8	
	comp=Z,102nm,0.5s						
RTLL	Cerro Villicun	2.74	115	*e*P		12 10 49.6	
RTLL				*e*S		12 11 27.6	
GO03	Copiap	2.77	21	*e*P		12 10 45.0	
GO03				*e*S		12 11 20.6	
GO03				*e*S		12 11 27.6	
ROC1	El Roble	2.79	174	*e*P		12 10 48.1	
ROC1				*e*S		12 11 28.5	
VA01	Torpederas	2.83	185	*e*P		12 10 47.2	
VA01				*e*S		12 11 27.1	
PEL	Peldehue	3.00	169	*e*P		12 10 51.4	
PEL				*e*S		12 11 31.6	
CFA	Coronel Fontan	3.04	118	*e*P		12 10 53.6	
CFA				*e*S		12 11 35.9	
MT02	Curacav	3.06	176	*e*P		12 10 51.1	
MT02				*e*S		12 11 33.8	
MT02				IAML		12 11 40.5	
	comp=Z,159nm,0.3s						
ASAL	Salagasta	3.23	138	*e*P		12 10 57.0	
ASAL				*e*S		12 11 39.6	
MT05	Renca	3.23	171	*e*P		12 10 54.6	
MT05				*e*S		12 11 36.8	
MT05				IAML		12 11 50.0	
	comp=Z,267nm,0.6s						
MT04	Ro Olivares	3.37	162	*e*P	Pn	12 10 58.6	+3.9
MT03	Universidad Ad	3.37	168	*e*P		12 10 57.0	
MT03				*e*S		12 11 39.7	
MT03				IAML		12 11 52.6	
	comp=Z,239nm,0.2s						
MT08	Bocatoma Ro	3.44	161	*e*P	Pn	12 11 00.4	+4.8
MT08				*e*S	Sn	12 11 47.9	+13
MT08				IAML		12 11 55.0	
	comp=N,149nm,0.6s						
MT09	Talagante	3.59	175	*e*P	Pn	12 10 59.0	+1.4
MT13	San Alfonso	3.66	166	*e*P	Pn	12 11 01.8	+3.3
MT13				*e*S	Sn	12 11 45.5	+5.0
MT01	Popeta	3.66	178	*e*P	Pn	12 10 59.1	+0.6
MT01				*e*S	Sn	12 11 47.4	+7.0
MT01				IAML		12 11 57.5	
MT01	Popeta	3.66	178	*e*P		12 10 59.2	
MT01				IAML		12 12 02.2	
	comp=Z,104nm,0.4s						
LMEL	Las Melosas	3.78	165⇑	*i*P	Pn	12 11 03.2	+3.1
LMEL				*e*S	Sn	12 11 48.9	+5.4
AC01	Pan de Azucar	4.09	10	*e*P		12 11 01.6	
AC01				IAML		12 12 13.0	
	comp=Z,82nm,0.5s						
BO01	Tunca	4.19	177	*e*S		12 12 03.6	
BO01				IAML		12 12 18.8	
	comp=Z,61nm,0.3s						
BO02	Sierra Bellavi	4.61	174	*e*P		12 11 13.0	
BO02				*e*S		12 12 11.5	
BO02				IAML		12 12 23.5	
	comp=Z,82nm,0.8s						
CYA	Choya	5.16	72	*e*P	Pn	12 11 20.8	+1.7
CYA				*e*S	Sn	12 12 17.2	-0.3
CYA	Choya	5.16	72	*e*P		12 11 20.6	
CYA				*e*S		12 12 28.3	

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*JMA **22** 12:12:39.7±0.1, 43°.0N±0°.5×144°.8E±0°.6, h92^{km}±1^{km}, MV3.0/39, OFF NEMURO PENINSULA*

*SKHL **22** 12:12:40.8±0.1, 43°.00N×144°.80E, h87^{km}±5^{km}, mb4.4/5, msha5.2/5*

ISC 22 12:12:39.0±1.7**, 42°.89N**±0°.07×**144°.87E**±0°.04**, h93^{km}**±9^{km}**, n19, σ0^{s}.71**/36**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKK	Akkeshi	0.13	352	*i* P	Pn	12 12 52.2	0.0
AKK				*i* S	Sn	12 13 00.8	-1.1
JAK	Akkeshi	0.16	310	*i* P	Pn	12 12 52.7	+0.5
JAK				*e*S	Sn	12 13 02.5	+0.4
JKHN	Kushirohamanak	0.29	48	*i* P	Pn	12 12 53.5	+0.7
JKHN				*e*S	Sn	12 13 03.6	+0.7
JNK	Nakash	0.70	351	P	Pn	12 12 55.4	-0.4
JNK				*e*S	Sn	12 13 07.2	-1.2
JOB	Onbets	0.76	271	*e*P	Pn	12 12 57.0	+0.6
JOB				*e*S	Sn	12 13 09.8	+0.5
NMR	Nemuro--Hokkai	0.79	52	*i* P	Pn	12 12 57.0	+0.3
NMR				AMB	AMB	12 12 57.2	
	200nm,0.2s						
NMR				*e*S	Sn	12 13 09.2	-0.7
NMR				A	A	12 13 10.1	
	560nm,0.2s						
NMR				A	A	12 13 10.1	
	790nm,0.2s						
NEM2	Nemuro 2	0.80	53	*i* P	Pn	12 12 56.9	+0.2
NEM2				*e*S	Sn	12 13 09.3	-0.6
JAR	Ashorobuto	0.90	297	*i* P	Pn	12 12 58.0	+0.1
JAR				*e*S	Sn	12 13 11.4	-0.5
JRA	Rausu	1.06	10	P	Pn	12 12 59.8	+0.2
JRA				*e*S	Sn	12 13 15.3	+0.2
JCH	Churui	1.14	257	P	Pn	12 13 01.1	+0.6
JCH				*e*S	Sn	12 13 16.4	-0.3
JTKR	Abashiri--Toko	1.29	327	P	Pn	12 13 02.5	+0.2
JTKR				*e*S	Sn	12 13 19.3	-0.5
YUK	Yuzh-Kuril'sk	1.35	32	*i* P	Pn	12 13 03.5	+0.4
YUK				AMB	AMB	12 13 03.7	
	20nm,0.2s						
YUK				*e*S	Sn	12 13 21.1	-0.1
YUK				A	A	12 13 22.5	
	380nm,0.2s						
YUK				A	A	12 13 22.5	
	190nm,0.2s						
JMP	Maruseppu	1.57	316	*e*P	Pn	12 13 05.8	+0.1
JMP				*e*S	Sn	12 13 25.2	-0.9
JNBK	Urakawa-nobuka	1.68	249	*e*P	Pn	12 13 07.2	+0.1
JNBK				*e*S	Sn	12 13 27.2	-1.3
JFR	Furan	1.69	280	*e*P	Pn	12 13 07.7	+0.4
JFR				*e*S	Sn	12 13 28.2	-0.6
SHO	Shikotan	1.73	55	*i* P	Pn	12 13 08.0	+0.2
SHO				AMB	AMB	12 13 09.2	
	20nm,0.2s						
SHO				*i* S	Sn	12 13 28.3	-1.4
SHO				A	A	12 13 30.9	
	140nm,0.3s						
SHO				A	A	12 13 30.9	
	250nm,0.3s						
JKK2	Kamakawa 2	1.83	303	P	Pn	12 13 09.5	+0.4
JKK2				*e*S	Sn	12 13 31.3	-0.8
KUR	Kuril'sk	3.19	42	*i* S	Sn	12 14 03.8	-0.3
KUR				A	A	12 14 10.4	
	20nm,0.3s						
KUR				A	A	12 14 10.4	
	30nm,0.3s						
YSS	Yuzh-Sakhalins	4.33	340	*e*P	Pn	12 13 44.2	+1.7
YSS				AMB	AMB	12 13 44.7	
	10.0nm,0.2s						

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*IDC **22** 12:17:34.6±1.8, 41°.42S×173°.90E, h0^{km}, mb3.6/3, mbtmp3.5/5, ML3.1/2, MS2.6/1, Error ellipse: s-maj=37.3km s-min=29.0km az=109.0*

*WEL **22** 12:17:37.4±0.7, 42°S±5°×17°4E±°, h25^{km}±6^{km}, M3.9/8, ML4.3/8, MLv3.9/8, Error ellipse: s-maj=0.0km s-min=0.0km az=43.8, confirmed*

*NOU **22** 12:17:37.4, 41°.83S×174°.38E, h23^{km}, MLv4.3/15, Cook Strait, New Zealand*

ISC 22 12:17:38.2±0.9**, 41°.66S**±0°.03×**174°.20E**±0°.02**, h33^{km}**±3^{km}**, n163, σ1^{s}.43**/179**, mb3.4**/3**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.09	174	P	Pb	12 17 44.0	0.0

CMWZ				S	Sb	12 17 48.8	+1.0
CMWZ	Cape Campbell	0.09	174	P	Pb	12 17 43.8	-0.2
CMWZ				S	Sb	12 17 48.9	+1.0
BSWZ	Blackbirch Sta	0.25	258	P	Pb	12 17 45.2	-0.2
BSWZ				S	Sn	12 17 49.8	+0.1
BSWZ	Blackbirch Sta	0.25	258	P	Pb	12 17 45.1	-0.3
BSWZ				S	Sb	12 17 50.1	-0.2
TUWZ	Tuamarina	0.30	320	P	Pb	12 17 45.3	-0.8
TUWZ				S	Sb	12 17 50.4	-0.9
TUWZ	Tuamarina	0.30	320	P	Pb	12 17 45.2	-0.8
TUWZ				S	Sb	12 17 50.5	-0.8
TCW	Tory Channel	0.45	7	P	Pb	12 17 47.4	-0.7
TCW				S	Sb	12 17 53.6	-1.3
SNZO	South Karori	0.52	47	P	Pb	12 17 48.9	-0.1
WEL	Wellington	0.57	49	P	Pn	12 17 50.0	0.0
WEL				S	Sn	12 17 59.0	+0.8
NNZ	Nelson	0.76	305	P	Pn	12 17 52.8	+0.1
PLWZ	Palliser	0.79	84	P	Pb	12 17 53.5	-0.2
PLWZ	Palliser	0.79	84	P	Pn	12 17 53.2	+0.1
PLWZ				S	Sb	12 18 05.1	+0.9
MSWZ	Moikau Station	0.82	73	P	Pb	12 17 54.2	+0.1
MSWZ				S	Sb	12 18 06.0	+1.0
MSWZ	Moikau Station	0.82	73	P	Pb	12 17 54.0	-0.1
MSWZ				S	Sb	12 18 06.4	+1.4
CAW	Cannon Point	0.85	50	P	Pb	12 17 54.6	-0.1
CAW				S	Sb	12 18 06.4	+0.6
CAW	Cannon Point	0.85	50	P	Pb	12 17 54.6	-0.1
CAW				S	Sb	12 18 06.9	+1.1
DUWZ	D'Urville Isla	0.89	346	P	Pn	12 17 54.6	+0.2
KHZ	Kahutara	0.90	213	P	Pb	12 17 55.2	-0.2
KHZ	Kahutara	0.90	213	P	Pb	12 17 55.6	+0.1
KIW	Kapiti Island	0.96	34	P	Pn	12 17 55.8	+0.3
PAWZ	Paruwai Farm	0.96	73	P	Pn	12 17 55.6	+0.2
PAWZ	Paruwai Farm	0.96	73	P	Pn	12 17 55.6	+0.2
PAWZ				S	Sn	12 18 08.0	0.0
THZ	Tophouse	0.98	264	P	Pb	12 17 56.2	-0.5
MTW	Mount Morrison	1.10	63	P	Pn	12 17 57.5	+0.2
MTW	Mount Morrison	1.10	63	P	Pn	12 17 57.2	-0.1
MTW				S	Sb	12 18 15.3	+2.6
MRNZ	Matariki Terra	1.12	283	P	Pb	12 17 58.7	-0.3
OGWZ	Otaki Gorge	1.12	41	P	Pb	12 17 58.4	-0.6
TKNZ	Takaka Hill	1.13	303	P	Pb	12 17 58.6	-0.6
TRWZ	Traveller	1.15	77	P	Pn	12 17 58.0	0.0
TRWZ	Traveller	1.15	77	P	Pn	12 17 57.7	-0.3
HOWZ	Holdsworth Sta	1.25	53	P	Pn	12 17 59.6	+0.2
TMWZ	Te Maipa	1.39	67	P	Pn	12 18 01.1	-0.2
TMWZ	Te Maipa	1.39	67	P	Pn	12 18 00.9	-0.4
MRZ	Mangatainoka R	1.44	47	P	Pn	12 18 02.4	+0.4
QRZ	Quartz Range	1.51	303	P	Pb	12 18 04.9	-0.8
QRZ	Quartz Range	1.51	303	P	Pb	12 18 04.9	-0.8
TIWZ	Tintock	1.55	56	P	Pn	12 18 03.5	0.0
TIWZ	Tintock	1.55	56	P	Pn	12 18 03.5	0.0
GVZ	Greta Valley S	1.57	213	P	Pn	12 18 04.3	+0.5
CPWZ	Castlepoint	1.68	64	P	Pb	12 18 08.0	-0.6
CPWZ	Castlepoint	1.68	64	P	Pn	12 18 05.3	0.0
PRWZ	Pori Road	1.73	51	P	Pn	12 18 06.1	0.0
POWZ	Post Office Ro	1.74	44	P	Pn	12 18 06.5	+0.4
DSZ	Denniston Nort	1.80	267	P	Pn	12 18 08.7	+1.7
LTZ	Lake Taylor	1.82	231	P	Pn	12 18 08.0	+0.7
BFZ	Birch Farm	1.83	58	P	Pn	12 18 06.6	-0.8
BFZ	Birch Farm	1.83	58	P	Pn	12 18 06.6	-0.8
BFZ	Birch Farm	1.83	58	P	Pn	12 18 06.4	-0.9
AMCZ	Amberley	1.90	217	P	Pn	12 18 08.5	+0.2
WAZ	Wanganui	2.00	18	P	Pb	12 18 12.4	-1.6
DVHZ	Dannevirke	2.02	48	P	Pn	12 18 09.4	-0.5
TSZ	Takapari Road	2.08	40	P	Pn	12 18 11.0	+0.1
LREZ	Lake Rotokare	2.20	4	P	Pb	12 18 15.8	-1.6
NMEZ	Namu Road	2.26	354	P	Pb	12 18 16.8	-1.6
OXZ	Oxford	2.31	223	P	Pn	12 18 13.3	-0.6
INZ	Inchbonnie	2.31	242	P	Pn	12 18 14.7	+0.8
PRHZ	Porangahau	2.31	54	P	Pn	12 18 13.0	-0.9
PNHZ	Pukenui	2.31	42	P	Pn	12 18 13.9	-0.1
PREZ	Palmer Road	2.32	359	P	Pb	12 18 18.0	-1.3
WPHZ	Waipukurau	2.33	48	P	Pn	12 18 13.9	-0.3
MQZ	McQueen's Vall	2.34	209	P	Pn	12 18 13.2	-1.2
KHEZ	Kahui Hut	2.37	356	P	Pb	12 18 18.3	-2.0
KHEZ	Kahui Hut	2.37	356	P	Pb	12 18 18.2	-2.0
NEZ	North Egmont	2.39	358	P	Pb	12 18 18.4	-2.3
NBEZ	Newall Road No	2.41	354	P	Pb	12 18 18.5	-2.3
AKCZ	Akaroa Harbour	2.41	203	P	Pn	12 18 13.3	-1.9
DREZ	Durham Road	2.47	360	P	Pb	12 18 19.6	-2.4
MTVZ	Mangateitei	2.47	23	P	Pn	12 18 18.6	+2.3
PKE	Pukeiti	2.47	356	P	Pb	12 18 19.2	-2.8
PKVZ	Pokaka	2.52	21	P	Pn	12 18 19.2	+2.2
MOVZ	Moawhango	2.54	28	P	Pn	12 18 18.4	+1.1
WNVZ	Wahianoa	2.56	25	P	Pn	12 18 19.8	+2.2
RACZ	Rakaia	2.56	216	P	Pn	12 18 16.6	-0.8
VRZ	Vera Road	2.57	10	P	Pn	12 18 20.2	+2.6
TRVZ	Turoa	2.57	24	P	Pn	12 18 19.8	+2.0
MHEZ	Mangahewa	2.58	2	P	Pb	12 18 22.0	-1.9
BHHZ	Black Hill Sta	2.59	34	P	Pn	12 18 18.5	+0.6
PXZ	Pawanui	2.59	52	P	Pn	12 18 16.6	-1.2
DRZ	Dome Shelter	2.60	24	P	Pb	12 18 25.0	+0.7
WHVZ	Whangaehu Hut	2.60	24	P	Pb	12 18 24.0	-0.3
FWVZ	Far West T-bar	2.62	24	P	Pb	12 18 23.6	-1.0
TUVZ	Tukino	2.63	25	P	Pn	12 18 20.4	+1.8
MHCZ	Mount Hutt	2.70	225	P	Pn	12 18 17.8	-1.6
NGZ	Ngauruhoe	2.70	24	P	Pn	12 18 21.3	+1.8
SNVZ	South Ngauruho	2.71	24	P	Pn	12 18 21.5	+1.9
OTVZ	Oturere	2.73	25	P	Pb	12 18 24.1	-2.4
NNVZ	North Ngauruho	2.75	24	P	Pn	12 18 22.2	+2.0
TWVZ	Taurewa	2.75	20	P	Pn	12 18 21.8	+1.6
WTVZ	West Tongariro	2.75	23	P	Pb	12 18 24.8	-2.1
KAHZ	Kahuranaki	2.76	48	P	Pn	12 18 19.1	-1.1
ETVZ	East Tongariro	2.77	25	P	Pn	12 18 23.3	+2.9
KRVZ	Karewarewa	2.79	24	P	Pb	12 18 28.4	+0.9
TMVZ	Te Maari	2.79	25	P	Pn	12 18 22.4	+1.7
NTVZ	North Tongarir	2.80	24	P	Pb	12 18 26.2	-1.4
KWHZ	Kaweka Forest	2.80	38	P	Pn	12 18 20.7	-0.1
KWHZ				P	Pb	12 18 28.0	+0.4
WACZ	Wakanui South	2.87	217	P	Pn	12 18 21.0	-0.6
KATZ	Kakaramea	2.92	24	P	Pb	12 18 30.1	+0.5
MCHZ	McNeill Hill	2.92	41	P	Pn	12 18 21.6	-0.7
WVZ	Waitaha Valley	2.93	240	P	Pn	12 18 23.0	+0.6
RITZ	Rihia Road	2.96	26	P	Pb	12 18 29.3	-1.1
RATZ	Rangitukua	3.04	24	P	Pb	12 18 30.1	-1.6
BKZ	Black Stump Fm	3.04	36	P	Pn	12 18 24.4	+0.3
BKZ	Black Stump Fm	3.04	36	P	Pn	12 18 23.5	-0.6
RPZ	Rata Peaks	3.10	227	Pn	Pn	12 18 23.4	-1.4
	5.3nm,0.3s,baz=18,slow=16,SNR=21						
RPZ				Sn	Sn	12 18 58.7	-2.0
	12nm,0.3s,baz=54,slow=19,SNR=9.6						
RPZ				LR	LR	12 19 27.1	
	comp=Z,81nm,18.7s,baz=351,slow=36 9.3nm,0.3s						
RPZ	Rata Peaks	3.10	227	P	Pn	12 18 24.6	-0.2
RPZ	Rata Peaks	3.10	227	P	Pn	12 18 24.4	-0.4
WATZ	Wairara	3.17	22	P	Pb	12 18 33.3	-0.7
HIZ	Hauiti	3.19	9	P	Pn	12 18 28.7	+2.7
HIZ	Hauiti	3.19	9	P	Pn	12 18 28.4	+2.4
ARCZ	Arundel	3.19	223	P	Pn	12 18 25.7	-0.3
ARHZ	Aropaoanui	3.21	43	P	Pb	12 18 33.4	-1.0
NMHZ	Naumai	3.24	39	P	Pn	12 18 26.2	-0.7
MRHZ	Matea Rd	3.29	32	P	Pn	12 18 27.0	-0.5
GCSZ	Gaunt Creek Bo	3.31	239	P	Pn	12 18 28.2	+0.5
TLZ	Tolley Road	3.48	18	P	Pn	12 18 32.0	+1.8
ALRZ	Allen Road	3.50	29	P	Pb	12 18 38.0	-1.5
RAHZ	Arahi	3.52	40	P	Pb	12 18 35.3	-4.5
PRRZ	Plateau Road	3.58	29	P	Pb	12 18 39.1	-1.7
TMZ	Timaru	3.59	220	P	Pn	12 18 31.2	-0.4
RTZ	Ruatahuna	3.71	36	P	Pn	12 18 32.7	-0.6
FOZ	Fox Glacier	3.74	239	P	Pn	12 18 34.0	+0.4
MUGZ	Murupara	3.74	33	P	Pn	12 18 32.8	-0.8
SNGZ	Shannon Statio	3.75	41	P	Pn	12 18 32.4	-1.4
MHGZ	Mahia Peninsul	3.78	50	P	Pn	12 18 34.0	-0.1
RAGZ	Rawiri	4.01	39	P	Pb	12 18 43.0	-5.2
LBZ	Lake Benmore	4.01	226	P	Pn	12 18 37.5	+0.1
RIGZ	Rimuhau	4.02	44	P	Pn	12 18 35.5	-2.0
TOZ	Tahuroa Road	4.05	15	P	Pn	12 18 39.4	+1.5
URZ	Urewera	4.07	34	Pn	Pn	12 18 36.6	-1.6
	0.5nm,0.3s,baz=325,slow=4.2,SNR=7.9						
URZ				Sn	Sn	12 19 22.8	-1.8
	2.3nm,0.3s,baz=144,slow=19,SNR=1.2 2.7nm,0.3s						
URZ	Urewera	4.07	34	P	Pn	12 18 38.8	+0.7
URZ	Urewera	4.07	34	P	Pn	12 18 36.5	-1.6
MWZ	Matawai	4.19	39	P	Pn	12 18 37.6	-2.3
ODZ	Otahua Downs	4.26	216	P	Pn	12 18 40.0	-0.8
ODZ	Otahua Downs	4.26	216	P	Pn	12 18 39.7	-1.1
TWGZ	Tauwhareparae	4.53	41	P	Pn	12 18 46.7	+2.1
RUGZ	Raukumara Rang	4.56	37	P	Pn	12 18 43.3	-1.7
AWAZ	Awhitu Peninsu	4.60	4	P	Pn	12 18 48.2	+2.7
JCZ	Jackson Bay	4.65	237	P	Pn	12 18 45.7	-0.6
JCZ	Jackson Bay	4.65	237	P	Pn	12 18 45.6	-0.6
WTAZ	Waiatarua	4.73	4	P	Pn	12 18 50.9	+3.6
ETAZ	East Tamaki Re	4.74	7	P	Pn	12 18 49.7	+2.4
PUZ	Puketiti	4.75	42	P	Pn	12 18 53.1	+5.6
HAZ	Te Kaha	4.78	36	P	Pn	12 18 46.7	-1.2
PKGZ	Pakihiroa	4.81	40	P	Pn	12 18 46.4	-2.0
PKGZ				S	Sn	12 19 40.9	-2.0
RVAZ	Riverhead Bore	4.89	4	P	Pn	12 18 52.2	+2.8
MBAZ	Motutapu North	4.92	7	P	Pn	12 18 52.6	+2.8
WKZ	Wanaka	4.93	228	P	Pn	12 18 49.1	-1.0
EAZ	Earnscleugh	5.04	223	P	Pn	12 18 50.8	-0.8
KUZ	Kuaotunu	5.05	14	P	Pn	12 18 53.1	+1.5
KUZ	Kuaotunu	5.05	14	P	Pn	12 18 53.5	+1.9
MXZ	Matakaoa Point	5.18	39	P	Pn	12 18 55.1	+1.7
MXZ	Matakaoa Point	5.18	39	P	Pn	12 19 00.3	+6.9
TUZ	Tuapeka	5.42	216	P	Pn	12 18 56.5	-0.1
MSZ	Milford Sound	5.49	235	P	Pn	12 19 00.7	+3.1
WCZ	Waipu Caves	5.72	1	P	Pn	12 19 03.3	+2.6
MLZ	Mavora Lakes	5.77	228	P	Pn	12 19 02.0	+0.4
SYZ	Scrubby Hill	6.08	215	P	Pn	12 19 04.7	-1.1
OUZ	Omahuta	6.45	356	P	Pn	12 19 13.7	+2.8
OUZ	Omahuta	6.45	356	P	Pn	12 19 13.9	+3.0
CTZ	Chatham Island	7.07	110	P	Pn	12 19 18.6	-0.8
VNDA	Vanda	36.33	185	P	P	12 24 42.0	+3.6
	1.8nm,1.1s,baz=13,slow=7.9,SNR=1.9 1.8nm,1.1s						
ASAR	Alice Springs	37.97	285	P	P	12 24 52.0	-1.0
	0.2nm,0.3s,baz=126,slow=6.5,SNR=5.1 0.2nm,0.3s						
WRA	Warramunga Arr	40.04	290	P	P	12 25 09.1	-1.2
	0.6nm,0.8s,baz=125,slow=8.3,SNR=5.8 0.6nm,0.8s						

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*IDC **22** 12:28:55.8±1.9, 17°.69S×178°.59W, h624km±21km, mb3.1/9, mbtmp4.1/11, Error ellipse: s-maj=60.7km s-min=16.4km az=153.0*

ISC 22 12:28:54.0±1.3, **17°.8S**±0°.4×**178°.5W**±0°.2, **h600**km, **n11**, σ**1s.22**/11, **mb3.9**/9, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.34	270	P	P	12 30 18.0	+2.7
	32nm,0.8s,baz=124,slow=7.7,SNR=26						
DZM	Mont Dzumac	14.84	251	P	P	12 32 01.0	+0.1
	3.4nm,0.7s,baz=52,slow=19,SNR=0.9						
CTA	Charters Tower	33.44	260	P	P	12 34 44.6	-0.5
	3.1nm,0.6s,baz=106,slow=8.6,SNR=8.7 3.1nm,0.6s						
PMG	Port Moresby	34.40	279	P	P	12 34 53.2	0.0
	7.3nm,0.7s,baz=148,slow=19,SNR=3.5 7.3nm,0.7s						
STKA	Stephens Creek	38.67	241	P	P	12 35 27.4	-0.5
	1.7nm,0.4s,baz=94,slow=8.3,SNR=5.4 1.7nm,0.4s						
WRA	Warramunga Arr	44.62	259	P	P	12 36 13.8	-1.1
	1.8nm,0.5s,baz=94,slow=7.3,SNR=118 1.8nm,0.5s						
ASAR	Alice Springs	44.80	254	P	P	12 36 15.4	-0.7
	7.2nm,0.5s,baz=87,slow=8.9,SNR=100 7.2nm,0.5s						
NVAR	Mina Array Bea	79.33	44	P	P	12 39 59.3	+0.2
	0.5nm,0.7s,baz=225,slow=8.9,SNR=2.7 0.5nm,0.7s						
ILAR	Eielson Array	85.74	13	P	P	12 40 29.1	-1.2
	0.2nm,0.4s,baz=220,slow=4.5,SNR=7.3 0.2nm,0.4s						
TXAR	Lajitas Array	85.94	58	P	P	12 40 33.0	+0.8
	0.5nm,0.7s,baz=213,slow=6.6,SNR=7.9 0.5nm,0.7s						
PDAR	Pinedale Array	87.26	43	P	P	12 40 37.7	-0.6
	0.3nm,0.7s,baz=223,slow=5.7,SNR=4.1 0.3nm,0.7s						

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*IDC **22** 12:31:51.6±2.2, 20°.38S×178°.90W, h603km±19km, mb2.8/7, mbtmp3.9/10, Error ellipse: s-maj=56.0km s-min=15.3km az=154.0*

ISC 22 12:31:50.9±1.2, **20°.5S**±0°.3×**178°.9W**±0°.2, **h600**km, **n12**, σ**1s.03**/13, **mb3.4**/8, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.97	312	P	P	12 33 16.8	+0.5
	5.9nm,0.4s,baz=237,slow=23,SNR=20						
AFI	Afiamalu	9.39	47	P	P	12 34 03.2	-0.7
	17nm,0.8s,baz=69,slow=23,SNR=2.1						
AFI				S	S	12 35 43.7	-9.1
	11nm,0.6s,baz=25,slow=22,SNR=2.0						
DZM	Mont Dzumac	13.79	261	P	P	12 34 47.1	-0.7
	4.4nm,0.7s,baz=106,slow=20,SNR=2.0						
CTA	Charters Tower	32.68	264	P	P	12 37 36.6	+1.0
	1.8nm,0.4s,baz=87,slow=11,SNR=12 1.8nm,0.4s						
ASAR	Alice Springs	43.73	257	P	P	12 39 05.3	+0.4
	0.4nm,0.4s,baz=87,slow=8.5,SNR=7.3						
ASAR				PcP	PcP	12 40 37.2	-0.9
	0.2nm,0.6s,baz=92,slow=4.6,SNR=1.4 0.4nm,0.4s						
WRA	Warramunga Arr	43.80	262	P	P	12 39 05.5	+0.2
	0.3nm,0.3s,baz=93,slow=6.7,SNR=35 0.3nm,0.3s						
GUMO	Guam	49.14	311	P	P	12 39 45.0	-0.6
	22nm,0.5s,baz=73,slow=19,SNR=1.4						
NVAR	Mina Array Bea	81.55	44	P	P	12 43 08.6	+1.3
	0.4nm,0.5s,baz=230,slow=6.9,SNR=2.8 0.4nm,0.5s						
TXAR	Lajitas Array	87.72	58	P	P	12 43 37.8	+0.4
	0.2nm,0.8s,baz=258,slow=3.3,SNR=2.6 0.2nm,0.8s						
ILAR	Eielson Array	88.45	13	P	P	12 43 40.2	+0.4
	0.3nm,0.5s,baz=217,slow=5.1,SNR=8.2 0.3nm,0.5s						
PDAR	Pinedale Array	89.49	44	P	P	12 43 45.9	+0.4
	0.4nm,0.6s,baz=194,slow=3.4,SNR=5.8 0.4nm,0.6s						
AKASG	Malin Array Be	142.57	330	PKP	PKPdf	12 50 14.1	-2.2
	1.8nm,0.5s,baz=41,slow=4.0,SNR=8.6						

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*IDC **22** 12:41:57.2±1.2, 0°.37N×98°.28E, h0km, mb3.8/8, mbtmp3.8/9, Error ellipse: s-maj=56.6km s-min=18.5km az=55.0*

*NEIC **22** 12:42:05.4±2.1, 0°.46N±0°.06×98°.39E±0°.09, h57km±13km, mb4.1/3, Error ellipse: s-maj=14.6km s-min=4.7km az=59.0*

*DJA **22** 12:42:05.8±0.5, 1°N±2°×9°8E±°, h31km±7km, M4.1/12, mb4.2/2, mB4.6/1, MLv4.0/12, Mw(mB)3.8/1*

ISC 22 12:42:04.9±0.7, **0°.56N**±0°.04×**98°.42E**±0°.05, **h43**km, **n36**, σ**1s.88**/38, **mb4.2**/13, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBSI	Pulau Batu	0.63	193	P	Pn	12 42 19.1	+1.6
PBSI				S	Sn	12 42 29.6	+3.2
GSI	Gunungsitoli	1.12	311		Pn	12 42 25.4	+1.1
GSI	Gunungsitoli	1.12	311	P	Pn	12 42 25.3	+1.1
GSI				S	Sn	12 42 40.8	+2.3
SISI	Saibi	1.99	160	P	Pn	12 42 37.9	+1.8
RPSI	Rantau Prapat	2.18	13		Pn	12 42 40.2	+1.5
PDSI	Padang	2.51	126	P	Pn	12 42 44.6	+1.3
BKNI	Bangkinang	2.63	95		Pn	12 42 46.4	+1.5
BKNI	Bangkinang	2.63	95	P	Pn	12 42 46.7	+1.8
SNSI	Sinabang, Aceh	2.79	311	P	Pn	12 42 48.4	+1.4
SNSI				S	Sn	12 43 21.3	+1.9
KCSI	Kotacane, Aceh	3.01	348	P	Pn	12 42 51.1	+0.9
SDSI	Sungai Dareh	3.35	116	P	Pn	12 42 56.7	+1.9
PPSI	Pulau Pagai	3.66	154	P	Pn	12 43 00.7	+1.6
PPSI				S	Sn	12 43 43.5	+2.4
MLSI	Meulaboh, Aceh	4.20	331	P	Pn	12 43 07.7	+1.3
IPM	Ipoh	4.68	34		Pn	12 43 15.5	+2.4
LHMI	Lhok Sumawe	4.87	342	Pn	Pn	12 43 17.0	+1.4
KULM	Kulim	5.20	25		Pn	12 43 21.8	+1.6
MYKOM	Kota Tinggi	5.56	77		Pn	12 43 26.9	+1.7
PMBI	Palembang	7.23	119	Pn	Pn	12 43 45.8	-2.3
CMAR	Chiang Mai Arr	17.79	2	P	Pn	12 46 07.4	-2.1
	0.3nm,0.3s,baz=206,slow=8.0,SNR=1.8						
TNCH	TengChong	24.32	0	*e*P	P	12 47 22.9	+4.0
TNCH				pmax	pmax		
	comp=Z,40nm,0.4s						
PZH	PanZhiHua	25.99	7	P	P	12 47 36.1	+2.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
H08S2	Diego Garcia H	27.11	252	T	T	13 15 21.2	
	baz=73,slow=75,SNR=105						
H08S3	Diego Garcia H	27.11	252	T	T	13 15 13.1	
	baz=73,slow=75,SNR=90						
H08S1	Diego Carcia H	27.13	252	T	T	13 15 25.5	
	baz=73,slow=75,SNR=90						
WB0	Warramunga Arr	40.63	122	P	P	12 49 38.8	-2.4
WB0				IAmb	IAmb	12 49 55.0	
	comp=Z,6.2nm,1.4s						
WRA	Warramunga Arr	40.66	122	P	P	12 49 38.8	-2.6
	comp=Z,0.3nm,0.6s,baz=305,slow=8.7,SNR=5.2						
WRA				PcP	PcP	12 51 41.9	-0.8
	comp=Z,0.3nm,0.7s,baz=314,slow=2.6,SNR=4.9 comp=Z,0.3nm,0.6s						
WRAB	Tennant Creek	40.67	122	P	P	12 49 37.6	-3.8
WRAB				IAmb	IAmb	12 50 02.4	
	comp=Z,5.4nm,1.3s						
ASAR	Alice Springs	42.04	127	P	P	12 49 50.5	-2.1
	comp=Z,0.4nm,0.7s,baz=299,slow=7.9,SNR=4.2						
ASAR				PcP	PcP	12 51 47.0	-0.2
	comp=Z,0.2nm,0.7s,baz=316,slow=2.6,SNR=1.1 comp=Z,0.4nm,0.7s						
WSAR	Wadi Sarin	44.72	303	P	P	12 50 11.5	-2.7
	comp=Z,4.4nm,0.8s,baz=133,slow=19,SNR=1.7 comp=Z,4.4nm,0.8s						
SONM	Songino Array	47.59	7	P	P	12 50 36.8	+0.2
	comp=Z,0.4nm,0.4s,baz=190,slow=7.3,SNR=2.7 comp=Z,0.4nm,0.4s						
MK31	Makanchi Array	48.16	345	P	P	12 50 41.3	+0.4
MK31				IAmb	IAmb	12 50 41.7	
	comp=Z,0.9nm,0.6s						
MKAR	Makanchi Array	48.16	345	P	P	12 50 41.0	+0.2
	comp=Z,1.0nm,0.5s,baz=156,slow=9.1,SNR=24 comp=Z,1.0nm,0.5s						
KURBB	Kurchatov Arra	52.67	344	P	P	12 51 13.8	-1.0
	comp=Z,0.6nm,0.2s,baz=166,slow=7.6,SNR=6.1 comp=Z,0.6nm,0.2s						
ZALV	Zalesovo Beam	54.38	350	P	P	12 51 26.9	-0.4
	comp=Z,0.9nm,0.3s,baz=165,slow=6.4,SNR=5.1 comp=Z,0.9nm,0.3s						
ZALV	Zalesovo Beam	54.38	350	P	P	12 51 27.6	+0.3
BVAR	Borovoye Array	57.26	340	P	P	12 51 47.1	-0.8
	comp=Z,0.5nm,0.6s,baz=134,slow=9.5,SNR=3.9 comp=Z,0.5nm,0.6s						

IDC 22 13:02:02.2±7.6, **48°.46S**×**120°.07E**, **h0**km, **mb3.6**/2, **mbtmp3.6**/2, **MS3.2**/1, **Error ellipse: s-maj=794.8km s-min=80.1km az=110.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	Cape Leeuwin H	14.25	340	T	T	13 20 40.9	
	baz=160,slow=74,SNR=14						
H01W1	Cape Leeuwin H	14.25	340	T	T	13 20 38.8	
	baz=160,slow=74,SNR=11						
H01W3	Cape Leeuwin H	14.27	340	T	T	13 20 39.3	
	baz=160,slow=74,SNR=12						
STKA	Stephens Creek	23.22	52	LR	LR	13 14 45.0	
	comp=Z,53nm,18.5s,baz=206,slow=33						
ASAR	Alice Springs	27.07	29	P	P	13 07 46.5	0.0
	1.2nm,1.0s,baz=200,slow=9.6,SNR=5.6 1.2nm,1.0s						
WRA	Warramunga Arr	30.70	27	P	P	13 08 18.7	0.0
	0.4nm,0.8s,baz=199,slow=8.0,SNR=2.7 0.4nm,0.8s						
YKA	Yellowknife Ar	147.11	44	PKPbc	PKPbc	13 21 45.1	-0.8
	0.1nm,0.6s,baz=256,slow=2.4,SNR=2.9						

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*LVSN **22** 13:22:33.0±5.8, 58°.20N×24°.24E, h0km±34km, ML1.8*

HEL 22 13:22:24.6±0.2, **60°.96N**×**29°.02E**, **h0**km, **ML1.4**, **Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUF	Ruokolahti	0.47	356	PG	Pg	13 22 33.0	-0.6
RUF				SG	Sg	13 22 39.0	-0.7
RUF				MSG		13 22 39.9	
	comp=Z,5.8nm,0.2s						
VJF	Virojoki	0.83	240	PB	Pg	13 22 40.0	-0.5
VJF				MSG		13 22 50.5	
	comp=Z,6.0nm,0.2s						
VJF				SB	Sg	13 22 51.8	+0.5
FIA0	FINESS Array S	1.50	290	PG	Pn	13 22 51.4	-1.4
FIA0				MSG		13 23 09.7	
	comp=Z,3.6nm,0.2s						
PVF	Pernaja	1.60	256	PG	Pn	13 22 53.3	-0.9
PVF				MSG		13 23 12.6	
	comp=Z,4.8nm,0.2s						
PVF				SN	Sg	13 23 16.0	-0.1
KAF	Kangasniemi	1.74	313	PG	Pn	13 22 55.8	-0.2
KAF				MSG		13 23 16.4	
	comp=Z,3.8nm,0.2s						
KAF				SN	Sb	13 23 19.4	-0.3
ARBE	Arbavere	2.15	226	*e*P	Pb	13 23 03.6	-0.7
ARBE				*e*S	Sn	13 23 22.2	-6.7
ARBE				AML	AML	13 23 36.2	
	comp=E,64nm,0.4s						
ARBE				AML	AML	13 23 49.2	
	comp=Z,37nm,0.5s						
ARBE				AML	AML	13 23 53.6	
	comp=N,74nm,0.9s						
JOF	Joensuu	2.25	28	PG	Pb	13 23 04.9	-1.1
JOF				SG	Sb	13 23 33.0	-1.2
KEF	Keuruu	2.33	303	PG	Pb	13 23 06.0	-1.3
KEF				MSG		13 23 33.3	
	comp=Z,1.6nm,0.2s						
KEF				SG	Sb	13 23 36.3	-0.3
MEF	Metsahovi	2.40	254	*e*P	Pb	13 23 07.6	-1.0
MEF				*e*S	Sb	13 23 37.3	-1.3
MEF				AML	AML	13 23 45.9	
	comp=N,8.4nm,0.6s						
MEF				AML	AML	13 23 46.3	
	comp=E,6.9nm,0.6s						
MEF				AML	AML	13 23 55.5	
	comp=Z,12nm,0.7s						
MEF	Metsahovi	2.40	254	PG	Pb	13 23 07.5	-1.1
MEF				MSG		13 23 35.6	
	comp=Z,2.0nm,0.2s						
MEF				SG	Sb	13 23 37.4	-1.3
RAF	Rauma	3.53	274	*e*P	Pb	13 23 25.5	-2.4
RAF				AML	AML	13 23 36.1	
	comp=Z,3.6nm,0.9s						
RAF				*e*S	Sn	13 24 06.0	+3.0
RAF				AML	AML	13 24 18.4	
	comp=N,3.1nm,0.5s						
RAF				AML	AML	13 24 23.3	
	comp=E,4.1nm,0.7s						
RAF	Rauma	3.53	274	SG	Sb	13 24 14.4	+3.1

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*JMA **22** 13:50:14.4±0.2, 35°.7N±0°.5×140°.6E±0°.6, h50km±1km, MV3.6/40, NEAR CHOSHI CITY*

JMA Felt II J1 at NEAR CHOSHI CITY .

*NEIC **22** 13:50:14.9±2.2, 35°.59N±0°.06×140°.7E±0°.1, h59km±7km, mb4.3/23, Error ellipse: s-maj=12.5km s-min=8.5km az=110.0*

*NIED **22** 13:50:14.4, 35°.70N×140°.63E, h50km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.94; $M_{\theta\theta}$-0.13; $M_{\phi\phi}$-0.81; $M_{r\theta}$0.18; $M_{\theta\phi}$-0.11; $M_{\phi r}$1.08; Fault plane solution: $M_0$1.41000×10^{15} NP1:ϕ_s9.00000°, δ70.00000°, λ90.00000°. NP2:ϕ_s189.00000°, δ20.00000°, λ90.00000°.*

*IDC **22** 13:50:17.2±2.5, 35°.59N×140°.48E, h71km±21km, mb3.5/17, mbtmp3.8/20, MS3.0/6 Error ellipse: s-maj=19.9km s-min=15.0km az=87.0*

ISC 22 13:50:14.7±0.7, **35°.69N**±0°.05×**140°.65E**±0°.05, **h51**km±5km, **n92**, σ**1s.31**/88, **mb4.1**/34, **MS2.9**/3, **8D**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	0.17	86	P	Pn	13 50 22.6	-0.4
CHOJ				*e*S	Sn	13 50 28.4	-0.4
JSMT	Sammumatsuo	0.17	254	⇓P	Pn	13 50 22.8	-0.2
JSMT				⇓*e*S	Sn	13 50 29.2	+0.3
JIHU	Itakohorinouch	0.29	340	⇓P	Pn	13 50 23.9	+0.1
JIHU				⇓S	Sn	13 50 31.2	+0.8
JCN	Nagara	0.46	234	P	Pn	13 50 25.5	0.0

JYT	Yasato	0.65	325	⇓P	Pn	13 50 27.3	-0.6
JYT				⇓S	Sn	13 50 36.5	-0.9
BSO4	Boso 4	0.74	200	P	Pn	13 50 28.9	-0.1
BSO3	Boso 3	0.89	188	P	Pn	13 50 30.5	-0.3
BSO1	Boso 1	1.07	165	P	Pn	13 50 32.6	-0.2
JAG	Ashikaga	1.22	307	⇓P	Pn	13 50 34.8	-0.5
JOD2	Odawara 2	1.35	252	⇓P	Pn	13 50 36.9	-0.2
JIM2	Oshima 3	1.39	226	P	Pn	13 50 36.4	-1.4
MJAR	Matsushiro Arr	2.15	294	P	Pn	13 50 49.0	+0.9
	28nm,0.4s,baz=101,slow=14,SNR=141						
MJAR				S	Sn	13 51 14.2	+0.6
	13nm,0.3s,baz=123,slow=25,SNR=2.6						
MAJO	Matsushiro	2.15	294	Pn	Pn	13 50 49.1	+0.9
MJB9	Matsu-Tunnel	2.16	294	Pn	Pn	13 50 49.7	+1.5
JMM	Marumori	2.17	3	Pn	Pn	13 50 49.1	+0.7
JSG	Sagara	2.26	244	Pn	Pn	13 50 49.4	-0.2
JHJ2	Mitsune	2.66	195	Pn	Pn	13 50 53.4	-1.7
JGF	Kuroka	2.69	269	Pn	Pn	13 50 55.9	+0.4
INU	Inuyama	2.98	264	Pn	Pn	13 50 59.9	+0.5
JSD	Sado	3.03	321	Pn	Pn	13 51 01.2	+1.1
JTM	Tenmabayashi	5.10	4	Pn	Pn	13 51 29.1	+0.6
JMN	Monobe	5.91	253	Pn	Pn	13 51 40.4	+0.7
JHS	Saijyo	6.20	266	Pn	Pn	13 51 44.1	+0.5
ERM	Erimo	6.61	16	Pn	Pn	13 51 48.2	-0.9
JNU	Nakatsue	8.47	255	P	Pn	13 52 15.5	+0.7
	2.0nm,0.7s,baz=8.2,slow=19,SNR=2.4						
JNU				LR	LR	13 55 53.1	
	comp=Z,175nm,18.0s,baz=84,slow=40						
ASAJ	Asahikawa	8.55	9	P	Pn	13 52 14.2	-1.5
	2.3nm,0.4s,baz=219,slow=12,SNR=9.0						
ASAJ				S	Sn	13 53 47.3	-3.3
	3.7nm,0.7s,baz=279,slow=25,SNR=1.2						
JKA	Kamikawa-asahi	8.55	9	Pn	Pn	13 52 14.0	-1.7
KSRS	Korea Array	10.39	283	P	Pn	13 52 44.1	+3.2
	1.7nm,0.7s,baz=101,slow=15,SNR=7.4						
KSRS				LR	LR	13 56 35.9	
	comp=Z,99nm,21.4s,baz=100,slow=37						
CN2	Changchun	14.21	309	*e*P	Pn	13 53 34.3	+1.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KLR	Kul'dur	15.03	337	LR	LR	13 59 25.1	
	comp=Z,46nm,19.0s,baz=32,slow=36						
TIA	Tai'an	19.05	278	*e*P	P	13 54 31.8	-0.8
TIA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XLT	XiLinHaoTe	20.53	301	*e*P	Pn	13 54 50.8	-0.5
XLT				pP	pP	13 55 03.0	+2.5
XLT				pmax	pmax		
	comp=Z,100nm,4.9s						
XLT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HNS	HongShan	20.90	282	*e*P	P	13 54 46.9	-5.7
HHC	Hu-ho-hao-te	23.35	292	*e*P	P	13 55 18.1	-0.5
HHC				pmax	pmax		
	comp=Z,17nm,1.2s						
ENH	Enshi	26.63	267	P	P	13 55 46.6	-1.9
ENH				IAmb	IAmb	13 55 48.2	
	comp=Z,9.6nm,0.8s						
YAK	Yakutsk	27.25	349	LR	LR	14 07 44.3	
	comp=Z,33nm,18.6s,baz=113,slow=38						
H11N2	WAKE ISLAND Hy	28.03	118	T	T	14 25 11.5	
	baz=310,slow=75,SNR=22						
H11N1	WAKE ISLAND Hy	28.04	118	T	T	14 25 20.7	
	baz=310,slow=75,SNR=24						
H11N3	WAKE ISLAND Hy	28.05	118	T	T	14 25 10.9	
	baz=310,slow=75,SNR=26						
SONM	Songino Array	28.05	306	P	P	13 56 00.8	-0.3
	comp=Z,1.0nm,0.7s,baz=102,slow=8.9,SNR=4.7						
	comp=Z,1.0nm,0.7s						
H11S1	WAKE ISLAND Hy	28.69	120	T	T	14 26 01.3	
	baz=312,slow=75,SNR=34						
H11S3	WAKE ISLAND Hy	28.69	120	T	T	14 26 01.4	
	baz=312,slow=75,SNR=28						
H11S2	WAKE ISLAND Hy	28.70	120	T	T	14 26 02.4	
	baz=312,slow=75,SNR=36						
SHEM	Shemya Is, Ala	29.06	44	LR	LR	14 07 12.4	
	comp=Z,18nm,19.6s,baz=282,slow=35						
GOMU	GeErMu	36.85	285	P	P	13 57 19.6	+1.2
GOMU				pP	pP	13 57 22.8	-8.9
GOMU				sP	sP	13 57 23.6	-14
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,58nm,5.2s						
CMAR	Chiang Mai Arr	40.57	256	P	P	13 57 48.2	-1.1
	comp=Z,0.3nm,0.3s,baz=52,slow=4.9,SNR=2.1						
CMAR				LR	LR	14 15 25.5	
	comp=Z,23nm,18.2s,baz=165,slow=37						
	comp=Z,0.3nm,0.3s						
WMQ	Urumqi	40.91	298	*e*P	P	13 57 51.9	0.0
WMQ				sP	sP	13 58 16.4	+4.9
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZAA0	Zalesovo Array	42.38	313	P	P	13 58 03.0	-0.6
ZAA0				IAmb	IAmb	13 58 04.8	
	comp=Z,3.1nm,0.9s						
ZALV	Zalesovo Beam	42.38	313	P	P	13 58 04.2	+0.5
	comp=Z,0.7nm,0.3s,baz=77,slow=6.5,SNR=6.9						
	comp=Z,0.7nm,0.3s						
ZALV	Zalesovo Beam	42.38	313	P	P	13 58 02.7	-1.0
MK31	Makanchi Array	44.32	303	P	P	13 58 18.0	-1.5
MKAR	Makanchi Array	44.32	303	P	P	13 58 20.0	+0.5
	comp=Z,1.3nm,0.5s,baz=85,slow=9.4,SNR=23						
	comp=Z,1.3nm,0.5s						
MKAR	Makanchi Array	44.32	303	P	P	13 58 18.0	-1.5
MAKZ	Makanchi	44.54	303	P	P	13 58 21.4	+0.2
MAKZ				IAmb	IAmb	13 58 28.6	
	comp=Z,5.9nm,1.4s						
KURK	Kurchatov	46.29	309	P	P	13 58 33.8	-1.1
KURK				IAmb	IAmb	13 58 36.0	
	comp=Z,4.8nm,0.8s						
KDJ	Kajisay	48.80	298	P	P	13 58 56.0	+1.1
KDJ				IAmb	IAmb	13 59 03.0	
	comp=Z,4.0nm,1.2s						
MTN	Manton Dam	49.10	192	P	P	13 58 56.5	-0.6
MDM	Murphy Dome	50.38	32	P	P	13 59 08.6	+2.3
MDM				IAmb	IAmb	13 59 10.1	
	comp=Z,2.2nm,1.0s						
KSH	Kashi	50.40	295	P	P	13 59 09.8	+2.8
KSH				pP	pP	13 59 25.0	+4.2
KSH				sP	sP	13 59 31.8	+5.0
KSH				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ILAR	Eielson Array	50.96	32	P	P	13 59 12.2	+1.6
	comp=Z,0.6nm,0.8s,baz=274,slow=6.5,SNR=6.9						
	comp=Z,0.6nm,0.8s						
BRVK	Borovoye	51.09	313	P	P	13 59 10.1	-1.6
BRVK				IAmb	IAmb	13 59 13.9	
	comp=Z,3.1nm,1.0s						
BMAR	Burnt Mountain	51.80	28	P	P	13 59 16.3	-0.7
KNRA	Kununurra	52.31	195	P	P	13 59 20.5	-0.7
I26K	Coal Creek Min	52.51	31	P	P	13 59 21.8	-0.4
I26K				IAmb	IAmb	13 59 48.0	
	comp=Z,2.7nm,1.2s						
KK31	Karatay Array	53.27	301	P	P	13 59 26.7	-1.5
KKAR	Karatay Array	53.27	301	P	P	13 59 27.0	-1.2
FITZ	Fitzroy Crossi	55.35	197	P	P	13 59 42.2	-1.1
WB0	Warramunga Arr	55.47	187	P	P	13 59 42.8	-1.5
WB0				IAmb	IAmb	13 59 45.1	
	comp=Z,8.4nm,1.4s						
WRAB	Tennant Creek	55.64	187	P	P	13 59 44.2	-1.2
WRAB				IAmb	IAmb	13 59 51.7	
	comp=Z,5.9nm,1.2s						
WB2	Warramunga Arr	55.65	187	P	P	13 59 44.7	-0.8
WB2				IAmb	IAmb	14 00 12.9	
	comp=Z,7.6nm,1.3s						
WRA	Warramunga Arr	55.65	187	P	P	13 59 44.6	-0.8
	comp=Z,0.9nm,0.6s,baz=2.3,slow=7.6,SNR=24						
	comp=Z,0.9nm,0.6s						
WRA	Warramunga Arr	55.65	187	P	P	13 59 44.7	-0.8
INK	Inuvik	55.86	27	P	P	13 59 47.6	+1.2
	comp=Z,0.7nm,0.8s,baz=289,slow=5.6,SNR=2.0						
	comp=Z,0.7nm,0.8s						
INK	Inuvik	55.86	27	P	P	13 59 47.1	+0.7
ARU	Arti	56.96	319	P	P	13 59 53.6	-0.9
A36M	Sachs Harbour	57.73	22	P	P	13 59 58.9	-0.8
A36M				IAmb	IAmb	14 00 03.2	
	comp=Z,3.0nm,1.1s						
ABKAR	Akbulak array	58.34	311	P	P	14 00 04.4	+0.1
AS31	Alice Springs	59.38	187	P	P	14 00 10.4	-1.3
ASAR	Alice Springs	59.38	187	P	P	14 00 11.4	-0.3
	comp=Z,0.5nm,0.8s,baz=14,slow=9.6,SNR=16						
	comp=Z,0.5nm,0.8s						
ASAR	Alice Springs	59.38	187	P	P	14 00 10.6	-1.2
RES	Resolute Bay	64.05	14	P	P	14 00 43.3	+0.8
RES				IAmb	IAmb	14 00 44.5	
	comp=Z,2.5nm,1.2s						
ARCES	ARCESS Array B	65.04	339	P	P	14 00 50.0	+0.9
	comp=Z,1.6nm,0.9s,baz=43,slow=7.3,SNR=3.9						
	comp=Z,1.6nm,0.9s						
YKA	Yellowknife Ar	65.28	30	P	P	14 00 51.7	+1.0
	comp=Z,0.3nm,0.8s,baz=293,slow=6.6,SNR=4.8						
	comp=Z,0.3nm,0.8s						
FINES	FINESS Array B	69.71	332	P	P	14 01 18.8	+0.1
	comp=Z,3.4nm,1.0s,baz=44,slow=7.6,SNR=6.0						
	comp=Z,3.4nm,1.0s						
FINES	FINESS Array B	69.71	332	P	P	14 01 17.5	-1.2
KBZ	Khabaz	71.31	311	P	P	14 01 29.6	+0.8
	comp=Z,1.4nm,0.6s,baz=53,slow=4.3,SNR=4.9						
	comp=Z,1.4nm,0.6s						
AKASG	Malin Array Be	74.98	322	P	P	14 01 50.3	0.0
	comp=Z,1.0nm,0.6s,baz=44,slow=5.3,SNR=6.5						
	comp=Z,1.0nm,0.6s						
NC204	NORSAR Array S	75.15	337	P	P	14 01 51.7	+0.6
NOA	NORSAR Array B	75.18	337	P	P	14 01 51.8	+0.4
	comp=Z,0.5nm,0.4s,baz=32,slow=3.9,SNR=1.9						
	comp=Z,0.5nm,0.4s						
NVAR	Mina Array Bea	76.29	53	P	P	14 02 00.7	+2.4
	comp=Z,0.4nm,0.7s,baz=279,slow=6.0,SNR=2.7						
	comp=Z,0.4nm,0.7s						
PDAR	Pinedale Array	79.05	45	P	P	14 02 15.3	+1.7
	comp=Z,0.3nm,0.6s,baz=20,slow=1.7,SNR=3.9						
	comp=Z,0.3nm,0.6s						
BRTR	Keskin Array B	79.28	311	P	P	14 02 15.4	+0.5
	comp=Z,0.5nm,0.7s,baz=64,slow=3.4,SNR=2.8						
	comp=Z,0.5nm,0.7s						

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*IDC **22** 14:00:09.6±0.8, 35.°98N×96.°78W, h0^{km}, mb3.7/4, mbtmp3.6/10, ML3.6/6, MS2.7/3, Error ellipse: s-maj=12.4km s-min=9.5km az=156.0*

*TUL **22** 14:00:09.1±0.6, 35.°85N±0.°01×96.°65W±0.°03, h5^{km}±5^{km}, ML4.1, mb_Lg3.9/125(NEIC), ML3.9/32(NEIC), Mwr3.7/37(NEIC), Error ellipse: s-maj=3.4km s-min=1.1km az=64.0*

*NEIC **22** 14:00:09.9±0.6, 35.°854N±0.°009×96.°66W±0.°03, h5^{km}±1^{km}, Error ellipse: s-maj=3.9km s-min=2.9km az=68.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.70; M$_{\theta\theta}$3.51; M$_{\phi\phi}$-2.81; M$_{r\theta}$-1.87; M$_{\theta\phi}$-1.65; M$_{\phi r}$1.97; Fault plane solution: M$_0$4.53000×10^{14} NP1: φ$_s$145.47000°, δ86.56000°, λ-38.11000°. NP2: φ$_s$238.17000°, δ51.97000°, λ-175.63000°. Principal axes: T 4.8994, Plg23.0000°, Azm198.0000°; N -0.8752, Plg52.0000°, Azm321.0000°; P -4.0242, Plg29.0000°, Azm95.0000°;*

*NEIC **22** 14:00:09.1, 35.°85N×96.°65W, h5^{km}*

*ANF **22** 14:00:09.2±0.7, 35.°86N×96.°66W, h4^{km}±6^{km}, ML4.7/12, Error ellipse: s-maj=3.4km s-min=2.4km az=107.0*

ISC 22 14:00:09.9±0.8**, 35.°86N**±0.°02×**96.°67W**±0.°02**, h9**^{km}±5^{km}**, n187, σ1.^{s}03**/177**, mb3.7**/4**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK030	Cody Creek RV	0.11	307	Pg	Pg	14 00 12.1	-0.5
OK030				Sg	Sg	14 00 14.2	-0.3
OK030				IAML		14 00 14.6	
	31μm,0.6s						
DEOK	Depew	0.14	97	Pg	Pg	14 00 12.2	-0.9
DEOK				Sg	Sg	14 00 14.3	-1.0
DEOK				IAML		14 00 14.8	
	comp=N,35μm,0.4s						
OK052	Battle Ridge R	0.17	322		Pg	14 00 13.2	-0.3
OK052				Sg	Sg	14 00 16.0	0.0
OK033	Mehan	0.28	311	Pg	Pg	14 00 15.3	-0.2
OK033				IAML		14 00 23.4	
	comp=N,14μm,0.5s						
OK033				IAML		14 00 25.0	
	comp=N,33μm,0.5s						
QUOK	Quay	0.31	355	Pg	Pg	14 00 15.8	-0.3
QUOK				IAML		14 00 22.4	
	comp=E,19μm,0.5s						
QUOK				IAML		14 00 26.7	
	comp=N,14μm,0.7s						
OK011	Prague	0.37	182	Pg	Pg	14 00 16.4	-0.8
OK005	Luther M Schoo	0.47	244	Pg	Pg	14 00 18.6	-0.4
OK048	Pawnee Station	0.60	339	Pg	Pg	14 00 21.0	-0.5
OK048				IAML		14 00 33.0	
	comp=N,8μm,0.6s						
OK029	Liberty Lake	0.64	265	Pg	Pg	14 00 21.7	-0.5
OK029				IAmb_Lg		14 00 30.4	
	comp=Z,2μm,0.8s						
OK029				IAML		14 00 31.2	
	comp=Z,4μm,0.8s						
OK051	E0350 and S346	0.66	349		Pg	14 00 21.8	-0.8
OK051				IAML		14 00 34.7	
	comp=Z,6μm,0.4s						
OK051				IAML		14 00 36.1	
	comp=Z,6μm,0.4s						
TUL1	Leonard	0.72	86		Pg	14 00 22.7	-1.1
TUL1	Leonard	0.72	86	P	Pg	14 00 22.8	-0.9
	baz=266,SNR=304						
TUL1				S	Sg	14 00 32.3	-0.8
	baz=266						
TUL1	Leonard	0.72	86	P	Pg	14 00 22.6	-1.1
	baz=266,SNR=287						
TUL1				S	Sg	14 00 32.3	-0.8
	baz=266						
W35A	Tecumseh	0.72	193	Pg	Pg	14 00 22.7	-1.1
W35A				IAmb_Lg		14 00 32.7	
	comp=Z,1μm,0.8s						
W35A				IAML		14 00 43.7	
	comp=N,5μm,0.6s						
OKCSW	OKLAHOMA CITY	0.77	234		Pg	14 00 24.0	-0.7
FNO	Franklin	0.84	225	Pg	Pg	14 00 24.9	-1.2
FNO				IAML		14 00 37.3	
	comp=E,7μm,0.8s						
BLOK	Blackwell	1.00	334	Pg	Pg	14 00 28.3	-0.8
T35A	Sooner Cattle	1.06	7	Pg	Pg	14 00 29.2	-1.1
T35A				IAML		14 00 46.1	
	comp=N,3μm,0.5s						
T35A				IAML		14 00 46.2	
	comp=E,2μm,0.3s						
T35B	Sooner Cattle	1.06	7	P	Pg	14 00 29.1	-1.2
	baz=186						
T35B				S	Sg	14 00 44.0	-0.2
	baz=186						
CROK	Carrier	1.24	302	Pg	Pg	14 00 32.6	-1.1
KAN13	South Haven SW	1.32	331		Pn	14 00 33.9	-0.7
RLO	Rose Lookout	1.37	77		Pn	14 00 34.4	-0.8
GC02	Grant County #	1.38	316		Pn	14 00 34.9	-0.4
KAN17	Caldwell West	1.47	324		Pn	14 00 36.6	-0.1
KAN09	Caldwell North	1.48	329		Pn	14 00 36.6	-0.2
KAN09				IAmb_Lg		14 01 00.2	
	comp=Z,918nm,0.7s						
KAN14	Manchester OK	1.51	317		Pn	14 00 37.1	-0.1
KS20	Mayfield South	1.54	333		Pn	14 00 37.5	-0.1
KS20				IAmb_Lg		14 00 59.4	
	comp=Z,493nm,0.8s						
OK032	Salt Plains WL	1.56	308		Pn	14 00 37.8	0.0
KAN01	Argonia South	1.56	326		Pn	14 00 37.9	0.0
KAN01				IAmb_Lg		14 01 01.2	
	comp=Z,622nm,0.8s						
X34A	Smith Ranch, M	1.57	217		Pn	14 00 38.1	+0.1
X34A				IAmb_Lg		14 01 00.2	
	comp=Z,398nm,1.0s						
KAN05	Bluff City Nor	1.58	323		Pn	14 00 38.4	+0.3
KS21	Milan North St	1.63	331		Pn	14 00 39.1	+0.3
CSTR	Hydro, Custer	1.65	263		Pn	14 00 39.3	+0.1
X37A	Clayton	1.66	140		Pn	14 00 39.2	0.0
X37A	Clayton	1.66	140	P	Pn	14 00 39.3	+0.1
	baz=321,SNR=76						
X37A				S	Sb	14 01 01.8	+0.3
	baz=321						
KAN06	Argonia West S	1.68	326		Pn	14 00 39.7	+0.2
KAN06				IAmb_Lg		14 01 07.0	
	comp=Z,702nm,0.8s						
KAN08	Anthony NE Sta	1.72	323		Pn	14 00 40.4	+0.4
OK038	West end E0370	1.78	291		Pn	14 00 41.2	+0.2
OK038				IAmb_Lg		14 01 07.0	
	comp=Z,541nm,0.7s						
OK035	E0210 Rd and N	1.85	298		Pn	14 00 42.1	+0.3
OK035				IAmb_Lg		14 01 10.7	
	comp=Z,1μm,0.7s						
LOOK	Love County	1.91	193		Pn	14 00 42.9	+0.3
LOOK				IAmb_Lg		14 01 14.4	
	comp=Z,384nm,0.7s						
U38A	Gravette	1.94	72		Pn	14 00 43.2	+0.2
U38A				IAmb_Lg		14 01 12.3	
	comp=Z,901nm,0.8s						
U38A	Gravette	1.94	72	P	Pn	14 00 43.4	+0.3
	baz=253,SNR=114						
U38A				S	Sb	14 01 10.4	+0.6
	baz=253						
U32A	Winter Ranch,	1.96	286		Pn	14 00 43.5	+0.2
U32A				IAmb_Lg		14 01 11.3	
	comp=Z,438nm,0.7s						
U32A	Winter Ranch,	1.96	286	S	Sb	14 01 11.2	+1.0
	baz=105						
WMOK	Wichita Mounta	2.06	238	P	Pn	14 00 45.2	+0.6
	baz=57						
WMOK				S	Sb	14 01 13.1	0.0
	baz=57						
WMOK	Wichita Mounta	2.06	238	P	Pn	14 00 45.2	+0.6
	baz=57,SNR=101						
WMOK				S	Sb	14 01 13.2	+0.1
	baz=57						
HHAR	Hobbs	2.25	78	Pn	Pn	14 00 47.7	+0.3
WTFS	Witchita Falls	2.56	216	IAmb_Lg		14 01 34.5	
	comp=Z,172nm,1.0s						
Z35A	Perchaven, San	2.57	191		Pn	14 00 51.9	+0.2
Z35A				IAmb_Lg		14 01 32.7	
	comp=Z,304nm,1.1s						
Z35A	Perchaven, San	2.57	191	P	Pn	14 00 52.2	+0.5
	baz=11,SNR=44						
MIAR	Mount Ida	2.85	116		Pn	14 00 55.9	+0.3
MIAR	Mount Ida	2.85	116	P	Pn	14 00 56.1	+0.5
	baz=298,SNR=45						
MIAR				S	Sn	14 01 32.6	+2.5
	baz=298						
MIAR	Mount Ida	2.85	116	P	Pn	14 00 56.1	+0.5
	baz=298,SNR=42						
Z38A	Mt. Pleasant	2.94	151	IAmb_Lg		14 01 48.3	
	comp=Z,513nm,0.7s						
Z38A	Mt. Pleasant	2.94	151	S	Sn	14 01 33.4	+1.1
	baz=333						
FW06	Azle	2.97	194		Pn	14 00 57.8	+0.6
R32A	Long Quarter,	3.03	328		Pn	14 00 58.4	+0.3
R32A	Long Quarter,	3.03	328	P	Pn	14 00 58.8	+0.7
	baz=147,SNR=12						
FW03	Perrin-Whitt E	3.04	203		Pn	14 00 58.5	+0.3
FW03				IAmb_Lg		14 01 49.8	
	comp=Z,149nm,0.9s						
U40A	Yellville	3.13	80	P	Pn	14 01 00.2	+0.7
	baz=262,SNR=40						
U40A				P	Pn	14 01 00.2	+0.7
	baz=262,SNR=40						
KSU1	Kansas State U	3.24	1		Pn	14 01 00.6	-0.3
KSU1				IAmb_Lg		14 01 57.0	
	comp=Z,410nm,0.9s						
KSU1	Kansas State U	3.24	1	P	Pn	14 01 00.9	+0.1
	baz=181,SNR=12						
KSU1				Sb	Sg	14 01 51.3	-2.6
	baz=181						
KSU1	Kansas State U	3.24	1	P	Pn	14 01 00.8	-0.1
	baz=181,SNR=17						
S39A	Bolivar	3.25	55	Pn	Pn	14 01 01.8	+0.7
S39A				IAmb_Lg		14 01 56.5	
	comp=Z,406nm,0.7s						
S39A	Bolivar	3.25	55	P	Pn	14 01 01.3	+0.2
	baz=236,SNR=36						
S39A				S	Sn	14 01 41.6	+1.7
	baz=236						
FW07	Weatherford	3.28	197		Pn	14 01 02.0	+0.5
FW07				IAmb_Lg		14 02 00.1	
	comp=Z,218nm,0.9s						
FW16	Waxahatchie	3.37	183	IAmb_Lg		14 01 57.6	
	comp=Z,156nm,0.9s						
X40A	Basin Creek Fa	3.43	112		Pn	14 01 03.2	-0.4
X40A	Basin Creek Fa	3.43	112	P	Pn	14 01 03.4	-0.1
	baz=295,SNR=6.8						
X40A				P	Pn	14 01 03.4	-0.1
	baz=295,SNR=6.8						
FW14	Alvarado	3.48	187	IAmb_Lg		14 01 59.3	
	comp=Z,98nm,0.8s						
FW13	Cleburne	3.56	190	IAmb_Lg		14 02 07.0	
	comp=Z,74nm,0.7s						
WHAR	Wooly Hollow	3.62	98	Pn	Pn	14 01 06.2	0.0
WHAR				IAmb_Lg		14 02 05.0	
	comp=Z,255nm,0.9s						
WLAR	White Oak Lake	3.65	125	IAmb_Lg		14 02 14.4	
	comp=Z,228nm,0.7s						
FCAR	Ozark Folk Cen	3.69	88		Pn	14 01 06.9	-0.3
FCAR				IAmb_Lg		14 02 08.6	
	comp=Z,491nm,1.1s						
UALR	University of	3.70	106	Pn	Pn	14 01 07.7	+0.4
UALR				IAmb_Lg		14 02 12.2	
	comp=Z,189nm,0.8s						
CBKS	Cedar Bluff	3.83	321		Pn	14 01 09.7	+0.7
CBKS				IAmb_Lg		14 02 19.8	
	comp=Z,378nm,0.9s						
CBKS	Cedar Bluff	3.83	321	P	Pn	14 01 09.0	-0.1
	baz=139,SNR=22						
CBKS				S	Sn	14 01 55.6	+1.3
	baz=139						
CBKS	Cedar Bluff	3.83	321	P	Pn	14 01 10.0	+0.9
	baz=139,SNR=7.8						
WHTX	Lake Whitney,	3.91	190	Pn	Pn	14 01 10.3	+0.2
WHTX	Lake Whitney,	3.91	190	P	Pn	14 01 10.4	+0.2
	baz=9.6,SNR=24						
WHTX				Sb	Sb	14 02 09.6	+3.1
	baz=9.6						
WHTX	Lake Whitney,	3.91	190	P	Pn	14 01 10.4	+0.2
	baz=9.6,SNR=6.5						
237A	Washetta, Mont	3.92	169		Pn	14 01 09.7	-0.5
237A	Washetta, Mont	3.92	169	P	Pn	14 01 10.0	-0.2
	baz=350						
237A				S	Sn	14 01 57.1	+0.8
	baz=350						
ABTX	Abilene, Hawle	4.06	218	Pn	Pn	14 01 12.0	-0.2
ABTX				IAmb_Lg		14 02 25.1	
	comp=Z,194nm,1.1s						
ABTX	Abilene, Hawle	4.06	218	P	Pn	14 01 11.8	-0.4
	baz=37,SNR=14						
ABTX				Sb	Sb	14 02 14.1	+3.3
	baz=37						
ABTX	Abilene, Hawle	4.06	218	P	Pn	14 01 12.0	-0.2
	baz=37,SNR=7.0						
Z41A	Richland Creek	4.12	128		Pn	14 01 12.8	-0.2
AMTX	Amarillo	4.21	258	Pn	Pn	14 01 15.0	+0.7
AMTX				IAmb_Lg		14 02 32.8	
	comp=Z,310nm,0.7s						
AMTX	Amarillo	4.21	258	P	Pn	14 01 14.6	+0.3
	baz=75						
AMTX				S	Sn	14 02 05.0	+1.3
	baz=75						
AMTX	Amarillo	4.21	258	P	Pn	14 01 14.9	+0.6
	baz=75,SNR=27						
AMTX				S	Sn	14 02 04.9	+1.3
	baz=75						
R40A	Maddies Statio	4.28	54	IAmb_Lg		14 02 28.6	
	comp=Z,448nm,0.8s						
R40A	Maddies Statio	4.28	54	P	Pn	14 01 15.6	+0.4
	baz=236,SNR=19						
NATX	Nacogdoches	4.42	157	IAmb_Lg		14 02 38.7	
	comp=Z,167nm,0.8s						
NATX	Nacogdoches	4.42	157	S	Sn	14 02 09.2	+0.5
	baz=339						
NATX	Nacogdoches	4.42	157	S	Sn	14 02 09.2	+0.5
	baz=339						
CCAR	Cane Creek	4.47	114	IAmb_Lg		14 02 40.8	
	comp=Z,389nm,0.8s						
LCAR	Lake Charles	4.48	86		Pn	14 01 17.6	-0.4
LCAR				IAmb_Lg		14 02 34.7	
	comp=Z,397nm,1.2s						
P38A	Dawn	4.51	33	Pn	Pn	14 01 18.5	+0.2
P38A				IAmb_Lg		14 02 32.4	
	comp=Z,352nm,0.9s						
P38A	Dawn	4.51	33	P	Pn	14 01 18.6	+0.2
	baz=214,SNR=17						
P38A				S	Sn	14 02 12.1	+1.2
	baz=214						
T42A	Van Buren	4.65	74		Pn	14 01 20.4	+0.2
T42A				IAmb_Lg		14 02 35.7	
	comp=Z,314nm,0.7s						
T42A	Van Buren	4.65	74	P	Pn	14 01 20.5	+0.2
	baz=257						
POST	Post	4.86	236		Pn	14 01 23.4	+0.1
POST				IAmb_Lg		14 02 49.1	
	comp=Z,140nm,0.8s						
CCM	Cathedral Cave	4.87	62		Pn	14 01 24.0	+0.7
CCM				IAmb_Lg		14 02 54.6	
	comp=Z,426nm,0.8s						
CCM	Cathedral Cave	4.87	62	Sb	Sb	14 02 38.6	+4.5
	baz=245						
N33A	J Bar K, Exete	4.91	353		Pn	14 01 23.9	0.0

N33A				IAmb_Lg		14 02 53.8	
	comp=Z,354nm,1.2s						
N35A	**Tabor**	**5.06**	**9**	IAmb_Lg		14 02 50.3	
	comp=Z,198nm,1.0s						
435B	**Jarrell**	**5.12**	**189**	IAmb_Lg		14 02 59.7	
	comp=Z,103nm,0.7s						
435B	**Jarrell**	**5.12**	**189**	P	**Pn**	**14 01 26.9**	**+0.1**
	baz=8.5						
435B				S	**Sn**	**14 02 27.0**	**+0.9**
	baz=8.5						
435B	**Jarrell**	**5.12**	**189**	P	**Pn**	**14 01 26.7**	**-0.1**
	baz=8.5						
PBMO	**Poplar Bluff**	**5.12**	**78**	IAmb_Lg		14 02 57.7	
	comp=Z,502nm,0.7s						
P40A	**Paris**	**5.18**	**44**	IAmb_Lg		14 02 54.5	
	comp=Z,437nm,0.8s						
P40A	**Paris**	**5.18**	**44**	S	**Sn**	**14 02 28.3**	**+0.7**
	baz=226						
MSTX	**Muleshoe**	**5.35**	**251**	Pn	**Pn**	**14 01 30.3**	**+0.2**
MSTX	**Muleshoe**	**5.35**	**251**	P	**Pn**	**14 01 30.0**	**-0.1**
	baz=68,SNR=5.9						
MSTX				S	**Sn**	**14 02 31.0**	**-0.9**
	baz=68						
FVM	**French Village**	**5.44**	**65**	Pn	**Pn**	**14 01 30.8**	**-0.3**
FVM	**French Village**	**5.44**	**65**	P	**Pn**	**14 01 31.3**	**+0.1**
	baz=249,SNR=6.9						
FVM				S	**Sn**	**14 02 34.1**	**+0.3**
	baz=249						
N38A	**Joes South For**	**5.62**	**28**	Pn	**Pn**	**14 01 33.9**	**+0.3**
N38A				IAmb_Lg		14 03 20.5	
	comp=Z,424nm,0.8s						
N38A	**Joes South For**	**5.62**	**28**	P	**Pn**	**14 01 34.1**	**+0.4**
	baz=210,SNR=21						
BGNE	**Belgrade**	**5.66**	**349**	Pn	**Pn**	**14 01 34.7**	**+0.6**
BGNE	**Belgrade**	**5.66**	**349**	P	**Pn**	**14 01 34.8**	**+0.6**
	baz=168						
BGNE				S	**Sn**	**14 02 37.4**	**-1.9**
	baz=168						
BGNE	**Belgrade**	**5.66**	**349**	P	**Pn**	**14 01 34.8**	**+0.6**
	baz=168,SNR=9.4						
KSCO	**Kaye Shedlock’**	**5.69**	**305**	IAmb_Lg		14 03 16.3	
	comp=Z,201nm,0.8s						
KSCO	**Kaye Shedlock’**	**5.69**	**305**	P	**Pn**	**14 01 34.7**	**0.0**
	baz=122						
KSCO				S	**Sn**	**14 02 40.4**	**+0.2**
	baz=122						
342B	**Flagon Creek P**	**5.76**	**140**	P	**Pn**	**14 01 35.9**	**+0.4**
	baz=322						
CGM3	**Cape Girardeau**	**5.83**	**74**	IAmb_Lg		14 03 18.5	
	comp=Z,240nm,1.0s						
JCT	**Junction City**	**5.97**	**207**	IAmb_Lg		14 03 20.4	
	comp=Z,188nm,0.7s						
JCT	**Junction City**	**5.97**	**207**	P	**Pn**	**14 01 37.6**	**-1.0**
	baz=25						
JCT	**Junction City**	**5.97**	**207**	P	**Pn**	**14 01 37.5**	**-1.0**
	baz=25						
OXF	**Oxford**	**6.10**	**101**	Pn	**Pn**	**14 01 40.1**	**-0.1**
OXF				IAmb_Lg		14 03 35.1	
	comp=Z,146nm,0.9s						
OXF	**Oxford**	**6.10**	**101**	P	**Pn**	**14 01 39.3**	**-0.9**
	baz=285,SNR=8.2						
OXF	**Oxford**	**6.10**	**101**	P	**Pn**	**14 01 40.2**	**-0.1**
	baz=285						
ODSA	**Odessa**	**6.14**	**234**	IAmb_Lg		14 03 37.5	
	comp=Z,70nm,1.1s						
W45A	**Hickory Valley**	**6.15**	**94**	IAmb_Lg		14 03 27.6	
	comp=Z,241nm,0.8s						
Y45A	**Yeager Farm, C**	**6.19**	**107**	Pn	**Pn**	**14 01 41.5**	**0.0**
Y45A	**Yeager Farm, C**	**6.19**	**107**	P	**Pn**	**14 01 41.1**	**-0.3**
	baz=291,SNR=8.6						
T25A	**Trinidad**	**6.36**	**284**	IAmb_Lg		14 03 35.6	
	comp=Z,167nm,0.8s						
T25A	**Trinidad**	**6.36**	**284**	P	**Pn**	**14 01 43.9**	**-0.2**
	baz=99,SNR=15						
OGNE	**Ogallala**	**6.59**	**322**	IAmb_Lg		14 03 45.2	
	comp=Z,247nm,0.8s						
SCIA	**State Center**	**6.61**	**23**	IAmb_Lg		14 03 54.0	
	comp=Z,253nm,0.7s						
SCIA	**State Center**	**6.61**	**23**	P	**Pn**	**14 01 47.8**	**+0.6**
	baz=205,SNR=5.9						
Q44A	**Meyer Farm, Va**	**6.81**	**61**	S	**Sn**	**14 03 07.6**	**0.0**
	baz=246						
K31A	**O'Neill**	**6.94**	**347**	IAmb_Lg		14 03 50.5	
	comp=Z,270nm,0.8s						
K31A	**O'Neill**	**6.94**	**347**	P	**Pn**	**14 01 52.5**	**+0.7**
	baz=166						
PLAL	**Pickwick Lake**	**7.07**	**95**	IAmb_Lg		14 03 56.8	
	comp=Z,90nm,0.8s						
SDCO	**Great Sand Dun**	**7.33**	**287**	P	**Pn**	**14 01 57.7**	**+0.3**
	baz=102,SNR=13						
SDCO	**Great Sand Dun**	**7.33**	**287**	P	**Pn**	**14 01 57.9**	**+0.5**
	baz=102,SNR=20						
Q24A	**Divide**	**7.42**	**297**	IAmb_Lg		14 04 10.0	
	comp=Z,114nm,0.8s						
Q24A	**Divide**	**7.42**	**297**	P	**Pn**	**14 01 59.0**	**+0.3**
	baz=112						
K38A	**Parkersburg**	**7.42**	**23**	P	**Pn**	**14 01 58.1**	**-0.3**
	baz=205,SNR=6.8						
HDIL	**Hopedale**	**7.46**	**49**	P	**Pn**	**14 01 59.1**	**+0.1**
	baz=233						
L40A	**Anamosa**	**7.51**	**33**	IAmb_Lg		14 04 08.7	
	comp=Z,190nm,0.8s						
BRIGG	**Briggsdale**	**7.64**	**310**	IAmb_Lg		14 04 22.1	
	comp=Z,129nm,0.9s						
833A	**Chaparral WMA,**	**7.86**	**198**	P	**Pn**	**14 02 04.1**	**-0.3**
	baz=16						
ECSD	**EROS Data Cent**	**7.87**	**0**	P	**Pn**	**14 02 04.1**	**-0.4**
	baz=180,SNR=35						
ECSD	**EROS Data Cent**	**7.87**	**0**	P	**Pn**	**14 02 03.7**	**-0.7**
	baz=180,SNR=48						
ANMO	**Albuquerque**	**8.04**	**266**	Pn	**Pn**	**14 02 06.8**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=189,slow=16,SNR=2.4						
ANMO				Pg	**Pb**	**14 02 31.6**	**+2.1**
	comp=Z,0.6nm,0.3s,baz=168,slow=16,SNR=6.6						
ANMO				Lg	Lg	14 04 19.5	
	comp=Z,2.1nm,0.3s,baz=65,slow=16,SNR=3.3						
ANMO				LR	LR	14 05 39.6	
	comp=Z,67nm,20.5s,baz=160,slow=42						
	comp=Z,0.9nm,0.5s						
ISCO	**Idaho Springs**	**8.09**	**302**	IAmb_Lg		14 04 37.3	
	comp=Z,102nm,1.0s						
ISCO	**Idaho Springs**	**8.09**	**302**	P	**Pn**	**14 02 07.4**	**-0.5**
	baz=116,SNR=8.2						
ISCO	**Idaho Springs**	**8.09**	**302**	P	**Pn**	**14 02 07.9**	**0.0**
	baz=116,SNR=13						
L42A	**Oliver, Polo**	**8.21**	**40**	IAmb_Lg		14 04 40.0	
	comp=Z,207nm,0.7s						
MNTX	**Cornudas Mount**	**8.35**	**243**	P	**Pn**	**14 02 11.0**	**-0.2**
	baz=58						
I37A	**Lemond, Waseca**	**8.52**	**16**	IAmb_Lg		14 05 03.5	
	comp=Z,124nm,0.9s						
JFWS	**Jewell Farm**	**8.62**	**33**	IAmb_Lg		14 04 44.5	
	comp=Z,185nm,0.8s						
JFWS	**Jewell Farm**	**8.62**	**33**	P	**Pn**	**14 02 14.1**	**-0.7**
	baz=217						
Y49A	**Blount Mountai**	**8.67**	**100**	P	**Pn**	**14 02 15.6**	**+0.1**
	baz=286						
SUSD	**Miller**	**8.75**	**349**	IAmb_Lg		14 04 48.1	
	comp=Z,151nm,1.2s						
PHWY	**Pilot Hill**	**8.76**	**311**	IAmb_Lg		14 04 48.1	
	comp=Z,89nm,0.7s						
TX31	**Lajitas Ar. Si**	**8.78**	**224**	P	**Pn**	**14 02 17.4**	**+0.3**
	baz=40,SNR=16						
TXAR	**Lajitas Array**	**8.78**	**224**	Pn	**Pn**	**14 02 16.8**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=56,slow=12,SNR=41						
TXAR				Pg	Pg	14 02 47.4	-11
	comp=Z,2.1nm,0.3s,baz=41,slow=15,SNR=13						
TXAR				Lg	Lg	14 04 41.9	
	comp=Z,3.5nm,0.3s,baz=47,slow=28,SNR=5.2						
	comp=Z,1.0nm,0.3s						
SFIN	**Lafayette**	**8.79**	**56**	P	**Pn**	**14 02 17.2**	**0.0**
	baz=242						
N23A	**Red Feather La**	**8.84**	**307**	IAmb_Lg		14 05 04.2	
	comp=Z,130nm,0.8s						
I40A	**Norwalk**	**9.27**	**28**	IAmb_Lg		14 05 18.2	
	comp=Z,123nm,1.1s						
I40A	**Norwalk**	**9.27**	**28**	P	**Pn**	**14 02 23.1**	**-0.7**
	baz=212,SNR=17						
L44A	**Lake County Fo**	**9.29**	**45**	IAmb_Lg		14 05 03.7	
	comp=Z,227nm,0.8s						
SPMN	**Marine on St.**	**9.81**	**16**	IAmb_Lg		14 05 35.1	
	comp=Z,50nm,0.8s						
F33A	**5 Mile Ranch,**	**9.97**	**2**	IAmb_Lg		14 05 28.1	
	comp=Z,46nm,0.9s						
I42A	**Draeger Farm,**	**9.99**	**34**	IAmb_Lg		14 05 24.5	
	comp=Z,74nm,0.9s						
TKL	**Tuckaleechee C**	**10.49**	**87**	Pn	**Pn**	**14 02 40.5**	**0.0**
	comp=Z,0.4nm,0.3s,baz=285,slow=16,SNR=1.7						
TKL				Sn	**Sn**	**14 04 36.9**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=264,slow=10,SNR=2.1						
TKL				Lg	Lg	14 05 37.8	
	comp=Z,4.1nm,0.3s,baz=179,slow=20,SNR=9.8						
	comp=Z,1.2nm,0.4s						
PDAR	**Pinedale Array**	**12.12**	**309**	Pn	**Pn**	**14 03 01.8**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=123,slow=16,SNR=5.6						
PDAR				Sn	**Sn**	**14 05 10.9**	**-7.4**
	comp=Z,0.1nm,0.3s,baz=120,slow=18,SNR=1.4						
PDAR				Lg	Lg	14 06 20.2	
	comp=Z,0.6nm,0.3s,baz=112,slow=34,SNR=1.7						
PDAR				LR	LR	14 08 31.0	
	comp=Z,32nm,20.3s,baz=128,slow=42						
	comp=Z,0.3nm,0.5s						
ULM	**Lac du Bonnet**	**14.39**	**2**	Pn	Pn	14 03 28.5	-5.2
	comp=Z,1.6nm,0.3s,baz=181,slow=11,SNR=8.8						
ULM				Sn	Sn	14 05 59.0	-14
	comp=Z,0.4nm,0.3s,baz=79,slow=19,SNR=1.8						
ULM				Lg	Lg	14 07 32.8	
	comp=Z,0.3nm,0.3s,baz=287,slow=22,SNR=1.3						
	comp=Z,4.2nm,0.4s						
PFO	**Pinyon Flats O**	**16.42**	**268**	LR	LR	14 10 09.8	
	comp=Z,34nm,21.7s,baz=154,slow=37						
LPIG	**La Paz**	**16.62**	**229**	Pn	**Pn**	**14 04 03.8**	**+0.7**
	comp=Z,9.1nm,0.3s,baz=73,slow=8.1,SNR=2.1						
NVAR	**Mina Array Bea**	**17.43**	**285**	Pn	**Pn**	**14 04 11.8**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=68,slow=15,SNR=1.7						
	comp=Z,0.2nm,0.6s						
YKA	**Yellowknife Ar**	**28.91**	**343**	P	**P**	**14 06 09.6**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=142,slow=8.1,SNR=2.7						
	comp=Z,0.1nm,0.3s						
ILAR	**Eielson Array**	**41.43**	**330**	P	**P**	**14 07 57.2**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=108,slow=7.7,SNR=2.9						
	comp=Z,0.2nm,0.7s						
ARCES	**ARCESS Array B**	**66.81**	**19**	P	**P**	**14 11 02.1**	**+0.6**
	comp=Z,3.9nm,1.0s,baz=289,slow=5.6,SNR=4.1						
	comp=Z,3.9nm,1.0s						
FINES	**FINESS Array B**	**72.52**	**25**	P	**P**	**14 11 39.1**	**+2.3**
	comp=Z,2.7nm,1.0s,baz=302,slow=3.1,SNR=3.7						
	comp=Z,2.7nm,1.0s						

IDC ***22*** *14:22:29.3±0.6, 56.°11N×113.°80E, h0^{km}, mb3.7/18, mbtmp3.8/20, ML3.2/2, MS3.4/20, Error ellipse: s-maj=16.9km s-min=13.7km az=160.0*

MOS ***22*** *14:22:29.9±1.2, 56.°13N×113.°79E, h11^{km}, mb4.0/11, MS3.4/9, Error ellipse: s-maj=8.6km s-min=5.7km az=75.7*

BYKL ***22*** *14:22:32.3±0.1, 56.°17N×113.°75E, h21^{km}±1^{km}*

NEIC ***22*** *14:22:32.1±1.2, 56.°20N±0.°08×113.°8E±0.°2, h15^{km}±5^{km}, mb4.1/14, Error ellipse: s-maj=13.8km s-min=10.5km az=118.0*

ISC 22 14:22:29.9±0.8**, 56.°16N**±0.°02×**113.°81E**±0.°02**, h2**^{km}±5^{km}**, n136,** σ**2.^{s}65**/184**, mb4.0**/28**, MS3.3**/18**, 15C-11D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.15**	**253**	⇓*i*Pg	**Pg**	**14 22 36.6**	**+3.9**
SVKR				Pmax		14 22 36.8	
	37µm,0.1s						
SVKR				*e*Sg	**Sg**	**14 22 39.6**	**+5.0**
SVKR				Smax		14 22 39.9	
	241µm,0.4s						
SVKR	**Severomuysk**	**0.15**	**253**	⇓*i*PG	**Pg**	**14 22 36.6**	**+3.9**
SVKR				*e*		14 22 39.8	
SVKR				pmax	pmax		
	comp=Z,37µm,0.4s						
SVKR				smax	smax		
	comp=N,240µm,2.2s						
UKT	**Uakit**	**0.68**	**189**	⇑*i*Pg	**Pg**	**14 22 44.9**	**+2.0**
UKT				Pmax		14 22 45.3	
	comp=N,3µm,0.6s						
UKT				*e*Sg	**Sg**	**14 22 53.8**	**+2.1**
UKT				Smax		14 22 55.0	
	comp=N,17µm,1.2s						
UKT	**Uakit**	**0.68**	**189**	⇑*i*PG	**Pg**	**14 22 44.9**	**+2.0**
UKT				*e*		14 22 53.9	
UKT				pmax	pmax		
	comp=Z,3µm,0.3s						
UKT				smax	smax		
	comp=N,11µm,0.5s						
NLYR	**Nelyaty**	**1.11**	**72**	⇑*i*Pg	**Pb**	**14 22 53.0**	**+1.2**
NLYR				Pmax		14 22 59.4	
	comp=N,571nm,0.2s						
NLYR				*e*Sg	**Sb**	**14 23 08.4**	**+1.7**
NLYR				Smax		14 23 12.7	
	comp=N,6µm,0.8s						
NLYR	**Nelyaty**	**1.11**	**72**	⇑*i*PG	**Pb**	**14 22 53.0**	**+1.2**
NLYR				*e*		14 23 08.4	
NLYR				pmax	pmax		
	comp=Z,961nm,0.4s						
NLYR				smax	smax		
	comp=N,6µm,1.0s						
YOA	**Uoyan**	**1.17**	**270**	⇓*i*PG	**Pb**	**14 22 53.7**	**+0.9**
YOA				*e*		14 23 09.9	
YOA				pmax	pmax		
	comp=Z,3µm,0.2s						
YOA				smax	smax		
	comp=N,70µm,0.5s						
KMO	**Kumora**	**1.49**	**260**	⇓*i*Pg	**Pn**	**14 22 59.0**	**+1.2**
KMO				Pmax		14 22 59.7	
	comp=N,2µm,0.5s						
KMO				*e*Sg	**Sb**	**14 23 18.5**	**+0.8**
KMO				Smax		14 23 20.2	
	comp=N,14µm,1.1s						
KMO	**Kumora**	**1.49**	**260**	⇓*i*PG	**Pn**	**14 22 58.9**	**+1.2**
KMO				*e*		14 23 18.5	
KMO				pmax	pmax		
	comp=Z,2µm,0.5s						
KMO				smax	smax		
	comp=N,14µm,0.9s						
BOD	**Bodaibo**	**1.67**	**4**	*e*Pg	**Pn**	**14 23 02.1**	**+2.0**
BOD				Pmax		14 23 03.1	
	comp=N,2µm,0.5s						
BOD				*e*Sg	**Sb**	**14 23 24.5**	**+1.8**
BOD				Smax		14 23 25.3	
	comp=N,6µm,0.9s						
BOD	**Bodaibo**	**1.67**	**4**	*e*PN	**Pn**	**14 23 01.9**	**+1.8**
BOD				*e*		14 23 02.9	
BOD				*e*		14 23 24.1	
BOD				pmax	pmax		
	comp=Z,2µm,0.5s						
BOD				smax	smax		
	comp=E,6µm,0.6s						
YLYR	**Ulyunkhan**	**1.98**	**231**	⇑*i*Pn	**Pn**	**14 23 05.7**	**+1.2**
	comp=E,115nm,1.0s						
YLYR				⇑*i*Pn	**Pn**	**14 23 05.7**	**+1.2**
	comp=E,175nm,1.0s						
YLYR				⇓*i*Pn	**Pn**	**14 23 05.7**	**+1.2**
	comp=E,227nm,1.0s						
YLYR				*e*Pg	**Pb**	**14 23 07.1**	**+0.4**
YLYR				Pmax		14 23 14.7	
	comp=E,614nm,0.4s						
YLYR				*e*Sg	**Sb**	**14 23 33.3**	**+1.5**
YLYR				Smax		14 23 35.0	
	comp=E,5µm,0.9s						
YLYR	**Ulyunkhan**	**1.98**	**231**	⇓*i*PN	**Pn**	**14 23 05.7**	**+1.2**
YLYR				*e*		14 23 07.4	
YLYR				*e*		14 23 33.2	
YLYR				pmax	pmax		
	comp=Z,615nm,0.4s						
YLYR				smax	smax		
	comp=N,5µm,0.6s						
CRS	**Chara**	**2.58**	**71**	*e*Pn	**Pn**	**14 23 14.3**	**+1.6**
CRS				*e*Pg	**Pb**	**14 23 19.6**	**+2.7**
CRS				Pmax		14 23 37.2	
	comp=N,784nm,0.9s						
CRS				*e*Sg	**Sb**	**14 23 53.5**	**+4.4**
CRS				Smax		14 24 02.1	
	comp=N,2µm,1.2s						
CRS	**Chara**	**2.58**	**71**	*e*PN	**Pb**	**14 23 19.4**	**+2.5**
CRS				*e*		14 23 53.7	
CRS				pmax	pmax		
	comp=Z,787nm,0.9s						
CRS				smax	smax		
	comp=E,2µm,1.2s						
SYVR	**Suvo**	**3.33**	**223**	⇓*i*Pn	**Pn**	**14 23 23.9**	**+0.8**
SYVR				*e*Pg	**Pb**	**14 23 32.1**	**+2.4**
SYVR				*e*		14 23 37.9	
SYVR				max		14 23 42.2	
	comp=E,419nm,1.1s						
SYVR				*e*Sn	**Sn**	**14 24 01.7**	**-1.6**
SYVR				*e*Sg	**Sb**	**14 24 14.9**	**+4.2**
SYVR				Smax		14 24 23.2	
	comp=E,2µm,0.8s						
SYVR	**Suvo**	**3.33**	**223**	⇓*i*PN	**Pn**	**14 23 23.8**	**+0.7**
SYVR				*e*		14 23 32.4	
SYVR				*e*		14 24 15.1	
SYVR				pmax	pmax		
	comp=Z,429nm,1.0s						
SYVR				smax	smax		
	comp=E,2µm,0.8s						
VTMR	**Vitim**	**3.36**	**349**	*e*Pn	**Pn**	**14 23 24.0**	**+0.7**
VTMR				*e*Pg	**Pb**	**14 23 32.6**	**+2.5**
VTMR				*e*PgPg	**Pg**	**14 23 37.0**	**+2.8**
VTMR				*e*Sg	**Sb**	**14 24 15.5**	**+4.2**
KHNR	**Khani**	**3.50**	**75**	*e*Pn	**Pn**	**14 23 27.3**	**+1.9**
KHNR				*e*Pg	**Pb**	**14 23 36.0**	**+3.4**
KHNR				*e*		14 23 42.5	
KHNR				*e*Sn	**Sn**	**14 24 07.0**	**-0.4**
KHNR				*e*Sg	**Sg**	**14 24 21.7**	**-0.6**
TUP	**Tupik**	**3.92**	**114**	⇑*i*Pn	**Pn**	**14 23 32.2**	**+1.1**
TUP				*e*		14 23 40.7	
TUP				*e*		14 23 51.1	
TUP				max		14 23 51.7	
	comp=E,198nm,0.5s						
TUP				*e*Sn	**Sn**	**14 24 15.8**	**-1.9**
TUP				*e*Sg	**Sb**	**14 24 34.3**	**+6.7**
TUP				Smax		14 24 40.0	
	comp=E,3µm,0.9s						
TUP	**Tupik**	**3.92**	**114**	*e*PN	**Pn**	**14 23 31.9**	**+0.8**
TUP				*e*		14 23 43.8	
TUP				*e*		14 24 33.6	
TUP				pmax	pmax		
	comp=Z,199nm,0.5s						
TUP				smax	smax		
	comp=N,1µm,0.8s						
MXMB	**Maximikha**	**4.13**	**227**	*e*Pn	**Pn**	**14 23 34.7**	**+0.7**
MXMB				*e*Pg	**Pb**	**14 23 46.4**	**+3.1**
MXMB				*e*		14 23 51.1	
MXMB				*e*Sn	**Sn**	**14 24 21.6**	**-1.2**
MXMB				*e*Sg	**Sg**	**14 24 39.7**	**-2.7**
CIT	**Chita**	**4.15**	**182**	*e*Pn	**Pn**	**14 23 35.9**	**+1.6**
CIT				*e*Pg	**Pb**	**14 23 46.6**	**+2.9**
CIT				Pmax		14 23 54.6	
	comp=N,218nm,1.0s						
CIT				*e*Sg	**Sg**	**14 24 40.9**	**-2.2**
CIT				Smax		14 24 44.8	
	comp=N,2µm,0.7s						
CIT				*e*		14 24 52.1	
CIT	**Chita**	**4.15**	**182**	*e*PN	**Pn**	**14 23 35.1**	**+0.8**
CIT				*e*		14 23 46.6	
CIT				*e*S	**Sn**	**14 24 23.3**	**-0.1**
CIT				*e*		14 24 40.5	
CIT				pmax	pmax		
	comp=Z,239nm,1.6s						
CIT				smax	smax		
	comp=E,2µm,1.0s						
OGRR	**Ongureny**	**4.38**	**237**	*e*Pn	**Pn**	**14 23 38.1**	**+0.6**
OGRR				*e*Pg	**Pb**	**14 23 50.1**	**+2.5**
OGRR				*e*		14 23 56.4	
OGRR				max		14 23 58.8	
	comp=E,246nm,1.4s						
OGRR				*e*Sg	**Sb**	**14 24 46.6**	**+5.7**
OGRR				Smax		14 24 51.1	
	comp=E,621nm,1.0s						
OGRR	**Ongureny**	**4.38**	**237**	⇓*i*PN	**Pn**	**14 23 41.2**	**+3.7**
OGRR				*e*		14 24 49.6	
OGRR				pmax	pmax		
	comp=Z,246nm,1.6s						
OGRR				smax	smax		
	comp=E,622nm,1.0s						
YKLR	**Yuktali**	**4.38**	**81**	*e*Pn	**Pn**	**14 23 39.0**	**+1.5**
YKLR				*e*Pg	**Pb**	**14 23 51.3**	**+3.7**
YKLR				*e*Sn	**Sn**	**14 24 28.2**	**-0.9**
YKLR				*e*Sg	**Sg**	**14 24 48.7**	**-1.9**
KELR	**Kotokel**	**4.77**	**227**	*e*Pn	**Pn**	**14 23 43.6**	**+0.8**
KELR				*e*Pg	**Pb**	**14 23 57.4**	**+3.2**
KELR				*e*Sn	**Sn**	**14 24 35.4**	**-3.3**
KELR				*e*Sg	**Sg**	**14 24 58.9**	**-4.1**
ZRHB	**Zarechye**	**5.31**	**230**	*e*Pn	**Pn**	**14 23 50.9**	**+0.7**
ZRHB				*e*Pg	**Pb**	**14 24 08.0**	**+4.6**
ZRHB				Pmax		14 24 18.6	
	comp=E,233nm,1.0s						
ZRHB				*e*Sn	**Sn**	**14 24 59.2**	**+7.3**
ZRHB				*e*Sg	**Sg**	**14 25 16.5**	**-3.8**
ZRHB				Smax		14 25 40.8	
	comp=E,2µm,1.1s						
TRG	**Tyrgan**	**5.53**	**235**	*e*Pn	**Pn**	**14 23 53.9**	**+0.7**
TRG				*e*		14 24 02.7	
TRG				*e*Pg	**Pb**	**14 24 11.1**	**+4.0**
TRG				Pmax		14 24 23.5	
	comp=E,59nm,0.8s						
TRG				*e*Sn	**Sn**	**14 24 52.9**	**-4.4**
TRG				*e*Sg	**Sg**	**14 25 22.3**	**-4.9**
TRG				Smax		14 25 41.7	
	comp=E,460nm,1.4s						
TRG	**Tyrgan**	**5.53**	**235**	*e*PN	**Pn**	**14 23 53.6**	**+0.4**
UUDB	**Ulan-Yde**	**5.62**	**223**	*e*Pg	**Pb**	**14 24 13.0**	**+4.3**
UUDB				*e*		14 24 15.2	
UUDB				max		14 24 23.2	
	comp=E,102nm,1.3s						
UUDB				*e*		14 25 00.6	
UUDB				*e*Sg	**Sg**	**14 25 26.1**	**-4.2**
UUDB				Smax		14 25 39.0	
	comp=E,1µm,1.3s						
KAB	**Kabansk**	**5.89**	**229**	*e*Pg	Pb	14 24 18.1	+4.9
KAB				Pmax		14 24 46.7	
	comp=E,285nm,1.0s						
KAB				*e*Sn	**Sn**	**14 25 03.7**	**-2.4**
KAB				*e*Sg	**Sg**	**14 25 35.3**	**-3.5**
KAB				Smax		14 25 59.1	
	comp=E,2µm,1.3s						
IENR	**Iengra**	**6.17**	**85**	*e*Pn	**Pn**	**14 24 03.1**	**+1.1**
IENR				*e*Pg	Pb	14 24 23.6	+5.6
IENR				*e*		14 24 27.2	
IENR				*e*		14 25 13.9	
IENR				*e*Sg	**Sg**	**14 25 44.2**	**-3.7**
IENR				*e*		14 25 53.0	
CLNS	**Chul'man**	**6.18**	**79**	*e*Pn	**Pn**	**14 24 03.8**	**+1.7**
CLNS				*e*Pg	Pb	14 24 23.9	+5.7
CLNS				*e*Sn	**Sn**	**14 25 11.5**	**-1.8**
CLNS				*e*Sg	**Sg**	**14 25 43.9**	**-4.2**
BGT	**Bolshoye Golou**	**6.43**	**234**	*e*Pn	**Pn**	**14 24 05.7**	**+0.1**
BGT				*e*Pg	Pb	14 24 28.0	+5.5
BGT				Pmax		14 24 38.0	
	comp=E,30nm,1.2s						
BGT				*e*		14 25 12.4	
BGT				*e*Sg	**Sg**	**14 25 50.4**	**-5.9**
BGT				Smax		14 26 09.2	
	comp=E,243nm,1.3s						
KPC	**Khapcheranga**	**6.53**	**188**	*e*	**Pn**	**14 24 06.4**	**-0.5**
KPC				*e*		14 24 14.8	
KPC				max		14 24 56.5	
	comp=E,33nm,0.7s						
KPC				*e*Sn	**Sn**	**14 25 19.7**	**-2.2**
KPC				*e*Sg	**Sg**	**14 25 53.9**	**-5.4**
KPC				Smax		14 25 59.0	
	comp=E,1µm,1.0s						
KPC	**Khapcheranga**	**6.53**	**188**	*e*PN	**Pn**	**14 24 06.4**	**-0.5**
KPC				*e*		14 24 28.5	
KPC				*e*		14 25 53.9	
KPC				pmax	pmax		
	comp=Z,19nm,0.8s						
KPC				smax	smax		
	comp=E,1µm,1.5s						
LSTR	**Listvyanka**	**6.81**	**235**	*e*Pn	**Pn**	**14 24 12.6**	**+1.8**
LSTR				*e*		14 24 20.6	
LSTR				*e*Pg	Pb	14 24 34.6	+5.6
LSTR				Pmax		14 24 42.6	
	comp=E,24nm,1.3s						
LSTR				*e*Sn	**Sn**	**14 25 25.7**	**-3.3**
LSTR				*e*Sg	**Sg**	**14 26 02.1**	**-6.5**
LSTR				Smax		14 26 17.1	
	comp=E,324nm,0.9s						
IRK	**Irkutsk**	**6.83**	**239**	*e*Sg	**Sg**	**14 26 03.1**	**-6.0**
IRK				Smax		14 26 15.5	
	comp=E,707nm,1.3s						
IRK	**Irkutsk**	**6.83**	**239**	*e*PG	Pb	14 24 35.9	+6.6
IRK				*e*		14 26 05.0	
IRK				pmax	pmax		
	comp=Z,73nm,0.1s						
IRK				smax	smax		
	comp=N,706nm,1.0s						
TLY	**Talaya**	**7.49**	**237**	*e*Pg	Pb	14 24 46.2	+5.7
TLY				*e*		14 24 55.1	
TLY				max		14 25 09.9	
	comp=N,18nm,0.8s						

TLY				*e*		14 25 45.1	
TLY				*e*Sg	**Sg**	**14 26 22.9**	**-7.3**
TLY				Smax		14 26 52.4	
	comp=N,153nm,1.3s						
TLY	**Talaya**	**7.49**	**237**	*e*PG	Pb	14 24 46.4	+5.9
TLY				*e*		14 26 24.4	
TLY				pmax	pmax		
	comp=Z,20nm,0.7s						
TLY				smax	smax		
	comp=E,153nm,1.2s						
HIA	**Hailar**	**7.79**	**150**		**Pn**	**14 24 24.9**	**+0.7**
HIA	**Hailar**	**7.79**	**150**	PN	**Pn**	**14 24 24.9**	**+0.7**
ARS	**Arshan**	**7.93**	**242**	*e*Pn	**Pn**	**14 24 27.0**	**+0.8**
ARS				*e*Pg	Pb	14 24 54.3	+6.3
ARS				Pmax		14 25 31.3	
	comp=E,51nm,0.6s						
ARS				*e*		14 25 55.4	
ARS				*e*Sg	Sg	14 26 35.8	-8.6
ARS				Smax		14 26 55.5	
	comp=E,998nm,0.9s						
ARS	**Arshan**	**7.93**	**242**	*e*PG	Pb	14 24 55.9	+7.9
ARS				pmax	pmax		
	comp=Z,36nm,0.6s						
ZEA	**Zeya**	**8.11**	**102**	*e*PN	**Pn**	**14 24 30.8**	**+2.2**
ZEA				*e*		14 25 57.5	
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZAK	**Zakamensk**	**8.56**	**232**	*e*Pg	Pg	14 25 06.3	-7.4
ZAK				*e*		14 25 15.5	
ZAK				max		14 25 57.4	
	comp=Z,19nm,1.3s						
ZAK				*e*Sg	**Sg**	**14 26 57.3**	**-7.1**
ZAK				*e*		14 27 04.4	
ZAK				max		14 27 21.3	
	comp=Z,220nm,1.1s						
ZAK	**Zakamensk**	**8.56**	**232**	*e*PN	**Pn**	**14 24 36.8**	**+2.0**
ZAK				*e*		14 26 59.1	
ZAK				pmax	pmax		
	comp=Z,15nm,0.8s						
ZAK				smax	smax		
	comp=N,211nm,1.1s						
MOY	**Mondy**	**8.80**	**245**	*e*Pn	**Pn**	**14 24 39.1**	**+1.0**
MOY				*e*		14 24 45.0	
MOY				*e*Pg	Pg	14 25 09.9	-8.4
MOY				Pmax		14 25 27.5	
	comp=N,41nm,1.1s						
MOY				*e*		14 26 29.6	
MOY				*e*Sg	Sg	14 27 02.8	-9.3
MOY				*e*		14 27 12.8	
MOY				max		14 27 20.9	
	comp=N,348nm,1.4s						
MOY	**Mondy**	**8.80**	**245**	*e*PN	**Pn**	**14 24 38.5**	**+0.4**
MOY				*e*		14 25 09.3	
MOY				*e*		14 27 01.8	
ORL	**Orlik**	**8.94**	**252**	*e*Pn	**Pn**	**14 24 40.3**	**+0.2**
ORL				*e*		14 24 47.9	
ORL				*e*		14 25 08.5	
ORL				*e*		14 25 21.4	
ORL				max		14 25 27.6	
	comp=N,43nm,1.3s						
ORL				*e*		14 26 30.7	
ORL				*e*Sg	Sg	14 27 07.6	-9.1
ORL				Smax		14 27 39.1	
	comp=N,183nm,1.6s						
ORL	**Orlik**	**8.94**	**252**	*e*PN	**Pn**	**14 24 40.5**	**+0.4**
ORL				*e*		14 25 11.3	
ORL				*e*		14 27 07.5	
ORL				pmax	pmax		
	comp=Z,44nm,1.1s						
ORL				smax	smax		
	comp=N,154nm,1.7s						
ULN	**Ulaanbaatar**	**9.29**	**209**	Pn	**Pn**	**14 24 46.6**	**+1.7**
ULN	**Ulaanbaatar**	**9.29**	**209**	*i* P	**Pn**	**14 24 46.9**	**+2.0**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.2s						
ULN				MLR	MLR		
	comp=Z,188nm,12.0s						
SONM	**Songino Array**	**9.50**	**212**	Pn	**Pn**	**14 24 48.7**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=25,slow=13,SNR=8.2						
SONM				Lg	Lg	14 27 28.3	
	comp=Z,4.6nm,0.3s,baz=34,slow=31,SNR=6.8						
SONM				LR	LR	14 28 43.8	
	comp=Z,218nm,18.6s,baz=358,slow=40						
	comp=Z,1.6nm,0.4s						
SONM	**Songino Array**	**9.50**	**212**	Pn	**Pn**	**14 24 47.6**	**-0.2**
YAK	**Yakutsk**	**10.05**	**48**	Pn	**Pn**	**14 24 57.1**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=164,slow=7.4,SNR=1.8						
YAK				Sn	**Sn**	**14 26 40.8**	**-7.4**
	baz=236,slow=7.3,SNR=1.9						
YAK				Lg	Lg	14 27 40.9	
	comp=Z,0.2nm,0.3s,baz=205,slow=24,SNR=8.1						
YAK				LR	LR	14 28 55.9	
	comp=Z,138nm,19.0s,baz=248,slow=38						
YAK	**Yakutsk**	**10.05**	**48**	*e*P	**Pn**	**14 24 56.5**	**+1.4**
YAK				*e*S	**Sn**	**14 26 50.6**	**+2.4**
YAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YAK				smax	smax		
	comp=E,14nm,1.0s						
YAK				smax	smax		
	comp=N,12nm,0.9s						
YAK				pmax	pmax		
	comp=Z,164nm,1.0s						
YAK				pmax	pmax		
	comp=N,40nm,0.9s						
YAK				pmax	pmax		
	comp=E,109nm,0.9s						
ARDR	**Aradan**	**12.40**	**262**	*e*		14 28 19.7	
ARDR				*e*Sg		14 28 53.7	
KLR	**Kul'dur**	**12.88**	**115**	Pn	**Pn**	**14 25 35.5**	**+1.6**
	comp=E,0.4nm,0.3s,baz=309,slow=15,SNR=8.4						
KLR				Lg	Lg	14 29 15.8	
	comp=E,1.0nm,0.3s,baz=222,slow=21,SNR=15						
KLR	**Kul'dur**	**12.88**	**115**	*i* P	**Pn**	**14 25 35.6**	**+1.7**
KLR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KLR				MLR	MLR		
	comp=Z,243nm,12.0s						
GRNR	**Gornyy**	**14.48**	**102**	⇑*i*P	Pn	14 25 51.1	-4.6
GRNR				*e*S	Sn	14 28 29.2	-7.4
GRNR				pmax	pmax		
	comp=E,1.0nm,0.5s						
GRNR				pmax	pmax		
	comp=N,2.0nm,0.4s						
GRNR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GRNR				smax	smax		
	comp=N,1.0nm,0.2s						
USA0B	**Ussuriysk Arra**	**16.63**	**128**	*i* P	**Pn**	**14 26 26.2**	**+2.2**
USRK	**Ussuriysk Ar.**	**16.63**	**128**	Lg	Lg	14 31 12.1	
	comp=N,0.3nm,0.3s,baz=323,slow=28,SNR=5.4						
USRK				LR	LR	14 33 03.1	
	comp=N,130nm,18.2s,baz=281,slow=38						
ZAA0	**Zalesovo Array**	**16.70**	**275**	Pn	**Pn**	**14 26 24.5**	**-0.3**
ZALV	**Zalesovo Beam**	**16.70**	**275**	Pn	**Pn**	**14 26 22.9**	**-1.9**
	comp=N,0.1nm,0.3s,baz=75,slow=18,SNR=2.5						
ZALV				Lg	Lg	14 31 18.7	
	comp=N,0.1nm,0.3s,baz=101,slow=30,SNR=2.9						
	comp=N,0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**16.70**	**275**		**Pn**	**14 26 24.4**	**-0.4**
TIXI	**Tiksi**	**16.80**	**17**	Pn	**Pn**	**14 26 23.1**	**-2.8**
	comp=N,90nm,0.3s,baz=271,slow=21,SNR=34						
TIXI				Sn	Sn	14 29 17.2	-16
	comp=N,49nm,0.3s,baz=270,slow=24,SNR=5.2						
TIXI				Lg	Lg	14 31 17.4	
	comp=N,11nm,0.3s,baz=270,slow=23,SNR=4.0						
TIXI				LR	LR	14 33 12.7	
	comp=N,147nm,18.7s,baz=272,slow=38						
TIXI	**Tiksi**	**16.80**	**17**		**Pn**	**14 26 26.0**	**+0.1**
TIXI				IAmb	IAmb	14 26 40.2	
	comp=Z,32nm,1.4s						
TIXI	**Tiksi**	**16.80**	**17**	*ce*P	**Pn**	**14 26 26.4**	**+0.4**
TIXI				pmax	pmax		
	comp=Z,12nm,0.8s						
TIXI				MLR	MLR		
	comp=Z,171nm,11.0s						
DGZ	**Jazzator, Alta**	**17.10**	**259**	*i* P	**Pn**	**14 26 31.3**	**+1.3**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
DGZ				MLR	MLR		
	comp=Z,120nm,12.0s						
NRIK	**Noril'sk**	**17.64**	**329**	P	**Pn**	**14 26 33.0**	**-3.4**
	comp=Z,2.9nm,0.4s,baz=113,slow=10,SNR=5.2						
NRIK				S	**S**	**14 29 58.0**	**-3.1**
	comp=Z,9.4nm,0.7s,baz=315,slow=22,SNR=4.4						
NRIK				Lg	Lg	14 31 40.7	
	comp=Z,0.4nm,0.3s,baz=23,slow=12,SNR=2.0						
NRIK				LR	LR	14 34 01.9	
	comp=Z,141nm,19.3s,baz=190,slow=39						
NRIK	**Noril'sk**	**17.64**	**329**	P	**Pn**	**14 26 34.5**	**-1.9**
NRIK				IAmb	IAmb	14 26 47.4	
	comp=Z,10nm,0.8s						
NRIK	**Noril'sk**	**17.64**	**329**	*ce*P	**Pn**	**14 26 37.3**	**+0.8**
NRIK				pmax	pmax		
	comp=Z,334nm,11.9s						
MA2	**Magadan**	**19.78**	**65**	LR	LR	14 34 53.5	
	comp=Z,65nm,18.4s,baz=255,slow=38						
SEY	**Seymchan**	**20.42**	**55**	P	**P**	**14 27 08.2**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=271,slow=14,SNR=6.2						
SEY				Lg	Lg	14 33 09.9	
	baz=328,slow=6.1,SNR=5.6						
	comp=Z,2.2nm,0.7s						
SEY	**Seymchan**	**20.42**	**55**	*i* P	**P**	**14 27 10.1**	**+2.1**
SEY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SEY				MLR	MLR		
	comp=Z,142nm,16.0s						
KSRS	**Korea Array**	**20.98**	**147**	P	**P**	**14 27 14.6**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=337,slow=8.0,SNR=2.2						
KSRS				Lg	Lg	14 33 34.5	
	comp=Z,0.1nm,0.3s,baz=39,slow=14,SNR=1.4						
KSRS				LR	LR	14 36 46.7	
	comp=Z,35nm,19.6s,baz=325,slow=41						
	comp=Z,0.7nm,0.8s						
KURK	**Kurchatov**	**21.49**	**270**	P	**P**	**14 27 19.1**	**-0.5**
KURK				IAmb	IAmb	14 27 47.0	
	comp=Z,6.7nm,0.9s						
KURK	**Kurchatov**	**21.49**	**270**	*ce*P	**P**	**14 27 20.8**	**+1.2**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURK				MLR	MLR		
	comp=Z,140nm,10.0s						
MK31	**Makanchi Array**	**21.58**	**258**	P	**P**	**14 27 20.6**	**0.0**
MK31				IAmb	IAmb	14 27 21.9	
	comp=Z,6.0nm,0.8s						
MK31	**Makanchi Array**	**21.58**	**258**	*d i*P	**P**	**14 27 20.9**	**+0.3**
MKAR	**Makanchi Array**	**21.58**	**258**	P	**P**	**14 27 21.2**	**+0.6**
	comp=Z,4.8nm,0.7s,baz=58,slow=9.6,SNR=58						
MKAR				Lg	Lg	14 33 52.1	
	baz=52,slow=33,SNR=1.7						
MKAR				LR	LR	14 35 55.9	
	comp=Z,170nm,18.1s,baz=62,slow=37						
	comp=Z,4.8nm,0.7s						
MKAR	**Makanchi Array**	**21.58**	**258**	P	**P**	**14 27 20.9**	**+0.3**
KURBB	**Kurchatov Arra**	**21.59**	**270**	P	**P**	**14 27 20.9**	**+0.2**
	comp=Z,5.3nm,0.8s,baz=66,slow=11,SNR=26						
KURBB				Lg	Lg	14 33 53.0	
	baz=324,slow=31,SNR=4.1						
	comp=Z,5.3nm,0.8s						
MAKZ	**Makanchi**	**21.74**	**258**	P	**P**	**14 27 22.5**	**+0.1**
MAKZ				IAmb	IAmb	14 27 34.9	
	comp=Z,5.2nm,0.9s						
MAKZ	**Makanchi**	**21.74**	**258**	P	**P**	**14 27 22.5**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ASAJ	**Asahikawa**	**21.86**	**111**	LR	LR	14 35 27.4	
	comp=Z,68nm,18.5s,baz=112,slow=36						
BVAR	**Borovoye Array**	**25.04**	**281**	P	**P**	**14 27 54.9**	**-0.3**
	comp=Z,3.7nm,0.8s,baz=64,slow=7.9,SNR=24						
	comp=Z,3.7nm,0.8s						
BRVK	**Borovoye**	**25.08**	**281**	P	**P**	**14 27 55.8**	**+0.2**
BRVK	**Borovoye**	**25.08**	**281**	*ce*P	**P**	**14 27 55.7**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRVK				MLR	MLR		
	comp=Z,92nm,6.0s						
PETK	**Petropavlovsk-**	**25.26**	**78**	LR	LR	14 37 58.0	
	comp=Z,70nm,21.5s,baz=288,slow=37						
BILL	**Bilibino**	**26.34**	**42**	⇑*e*P	**P**	**14 28 11.8**	**+5.0**
BILL				*e*		14 28 49.2	
BILL				*e*S	**S**	**14 32 32.3**	**-7.8**
BILL				*e*SS	SnSn	14 34 08.4	+29
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,37nm,16.0s						
AAK	**Ala-Archa**	**28.50**	**258**	P	**P**	**14 28 26.8**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=50,slow=7.4,SNR=5.1						
AAK				LR	LR	14 40 25.2	
	comp=Z,77nm,19.7s,baz=58,slow=38						
	comp=Z,1.0nm,0.7s						
AAK	**Ala-Archa**	**28.50**	**258**	P	**P**	**14 28 26.3**	**-0.3**
AAK				IAmb	IAmb	14 28 34.8	
	comp=Z,2.4nm,1.1s						
AAK	**Ala-Archa**	**28.50**	**258**	P	**P**	**14 28 26.3**	**-0.3**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ARU	**Arti**	**29.96**	**294**	LR	LR	14 42 56.2	
	comp=Z,64nm,19.9s,baz=59,slow=41						
KK31	**Karatay Array**	**30.39**	**263**	P	**P**	**14 28 42.3**	**-0.9**
KK31	**Karatay Array**	**30.39**	**263**	P	**P**	**14 28 42.3**	**-0.9**
KK31				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KKAR	**Karatay Array**	**30.39**	**263**	P	**P**	**14 28 42.9**	**-0.3**
KKAR	**Karatay Array**	**30.39**	**263**	P	**P**	**14 28 42.6**	**-0.6**
KKAR				IAmb	IAmb	14 28 44.9	
	comp=Z,1.5nm,1.0s						
KKAR	**Karatay Array**	**30.39**	**263**	P	**P**	**14 28 42.6**	**-0.6**
KKAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ABKAR	**Akbulak array**	**32.61**	**281**	P	**P**	**14 29 02.2**	**-0.4**
ARCES	**ARCESS Array B**	**38.58**	**326**	LR	LR	14 48 41.0	
	comp=Z,28nm,19.4s,baz=236,slow=41						
CMAR	**Chiang Mai Arr**	**39.28**	**203**	LR	LR	14 47 41.7	
	comp=Z,37nm,18.4s,baz=305,slow=39						
IMAR	**Indian Mountai**	**41.71**	**38**	P	**P**	**14 30 20.4**	**+0.7**
FINES	**FINESS Array B**	**42.48**	**315**	P	**P**	**14 30 25.0**	**-0.9**
	comp=Z,2.8nm,0.9s,baz=72,slow=9.2,SNR=4.1						
	comp=Z,2.8nm,0.9s						
FINES	**FINESS Array B**	**42.48**	**315**	*ce*P	**P**	**14 30 27.2**	**+1.3**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BMAR	**Burnt Mountain**	**43.85**	**33**	P	**P**	**14 30 38.7**	**+1.7**
ILAR	**Eielson Array**	**44.76**	**37**	P	**P**	**14 30 45.2**	**+1.0**
	comp=Z,0.5nm,0.8s,baz=304,slow=8.8,SNR=8.2						
ILAR				LR	LR	14 52 32.2	
	comp=Z,50nm,18.1s,baz=262,slow=40						
	comp=Z,0.5nm,0.8s						
KIV	**Kislovodsk**	**45.25**	**286**	*e*P	**P**	**14 30 50.3**	**+1.8**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MNK	**Minsk**	**45.86**	**306**	*i* P	**P**	**14 30 49.9**	**-3.1**
	comp=E,3.0nm,1.0s						
MNK				*i* P	**P**	**14 30 49.9**	**-3.1**
	comp=N,30nm,0.8s						
MNK				*i* P	**P**	**14 30 49.9**	**-3.1**
	comp=Z,7.0nm,0.7s,baz=231						
MNK				*i* PP	**PP**	**14 32 37.5**	**-2.6**
MNK				*i* PPP	PPP	14 33 17.6	
MNK				*i* S	**S**	**14 37 33.5**	**-4.2**
MNK				*i* SS	**SS**	**14 40 59.5**	**-1.9**
MNK				*i* SSS	SSS	14 41 49.3	
MNK				*i* LR	LR	14 49 54.5	
MNK				*i* LRM	MLR	14 51 55.2	
	comp=N,271nm,16.0s						
MNK				*i* LRM	MLR	14 52 01.6	
	comp=E,9.0nm,16.6s						
MNK				*i* LRM	MLR	14 52 01.6	
	comp=Z,91nm,16.0s						
MNK	**Minsk**	**45.86**	**306**	*i* P	**P**	**14 30 49.9**	**-3.1**
MNK				*i*		14 32 37.4	
MNK				*i* PPP	PPP	14 33 17.6	
MNK				*i* S	**S**	**14 37 33.4**	**-4.2**
MNK				*i* SS	**SS**	**14 40 59.5**	**-1.9**
MNK				pmax	pmax		
	comp=N,30nm,0.9s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MNK				MLR	MLR		
	comp=N,271nm,16.0s						
MNK				MLR	MLR		
	comp=E,9.0nm,17.0s						
MNK				MLR	MLR		
	comp=Z,91nm,16.0s						
DOT	**Dot Lake**	**46.43**	**37**	P	**P**	**14 30 57.6**	**+0.1**
DOT				IAmb	IAmb	14 31 10.4	
	comp=Z,2.4nm,0.8s						
KDAK	**Kodiak Island**	**47.08**	**47**	LR	LR	14 52 55.6	
	comp=Z,60nm,20.5s,baz=304,slow=39						
L27K	**Beaver Creek,**	**47.57**	**37**	P	**P**	**14 31 07.4**	**+1.0**
L27K				IAmb	IAmb	14 31 20.3	
	comp=Z,1.5nm,0.8s						
BCAR	**Beaver Creek A**	**47.58**	**37**	P	**P**	**14 31 07.4**	**+0.8**
AKASG	**Malin Array Be**	**47.68**	**301**	P	**P**	**14 31 06.7**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=38,slow=8.4,SNR=4.7						
	comp=Z,0.2nm,0.3s						
AKASG	**Malin Array Be**	**47.68**	**301**	*ce*P	**P**	**14 31 08.6**	**+1.2**
C36M	**Paulatuk**	**47.98**	**24**	P	**P**	**14 31 08.9**	**-0.5**
NC405	**NORSAR Array S**	**48.11**	**320**	P	**P**	**14 31 11.0**	**+0.4**
NOA	**NORSAR Array B**	**48.34**	**321**	P	**P**	**14 31 12.5**	**+0.1**
	comp=Z,1.5nm,0.9s,baz=55,slow=7.0,SNR=2.6						
NOA				LR	LR	14 54 07.9	
	comp=Z,24nm,18.9s,baz=0.0,slow=39						
	comp=Z,1.5nm,0.9s						
MLR	**Muntele Rosu**	**52.86**	**298**	LR	LR	14 57 38.3	
	comp=Z,82nm,18.2s,baz=353,slow=40						
YKA	**Yellowknife Ar**	**55.83**	**25**	P	**P**	**14 32 07.4**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=330,slow=6.9,SNR=14						
YKA				LR	LR	14 58 02.1	
	comp=Z,16nm,19.2s,baz=316,slow=38						
	comp=Z,0.9nm,0.7s						
GERES	**GERESS Array B**	**56.12**	**308**	P	**P**	**14 32 10.6**	**+0.1**
	comp=Z,0.3nm,0.2s,baz=51,slow=7.7,SNR=2.2						
	comp=Z,0.3nm,0.2s						
ESDC	**Sonseca Array**	**70.98**	**314**	P	**P**	**14 33 49.2**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=23,slow=7.1,SNR=8.9						
	comp=Z,1.5nm,0.7s						
ULM	**Lac du Bonnet**	**71.13**	**20**	LR	LR	15 08 49.5	
	comp=Z,27nm,18.1s,baz=58,slow=39						
PDAR	**Pinedale Array**	**74.86**	**32**	P	**P**	**14 34 12.0**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=74,slow=4.8,SNR=2.2						
	comp=Z,0.2nm,0.7s						
NVAR	**Mina Array Bea**	**75.92**	**40**	P	**P**	**14 34 18.6**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=324,slow=4.5,SNR=3.9						
	comp=Z,0.4nm,0.7s						
WRA	**Warramunga Arr**	**77.77**	**160**	P	**P**	**14 34 27.2**	**-1.1**
	comp=Z,1.2nm,0.9s,baz=352,slow=6.7,SNR=11						
	comp=Z,1.2nm,0.9s						
ASAR	**Alice Springs**	**81.32**	**161**	P	**P**	**14 34 46.6**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=356,slow=5.4,SNR=6.9						
	comp=Z,0.6nm,0.8s						
TXAR	**Lajitas Array**	**89.07**	**32**	P	**P**	**14 35 26.6**	**0.0**
	comp=Z,0.1nm,0.5s,baz=0.0,slow=1.8,SNR=2.4						
	comp=Z,0.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**91.02**	**295**	P	**P**	**14 35 34.6**	**-1.2**
	comp=Z,174nm,0.7s,baz=48,slow=6.4,SNR=6.8						
CPUP	**Villa Florida**	**149.51**	**344**	PKPbc	**PKPdf**	**14 42 18.9**	**+3.0**
	comp=Z,2.1nm,0.9s,baz=20,slow=5.3,SNR=4.0						

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*NIED **22** 14:47:21.6, 36°.64N×140°.94E, h48^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$4.89; M$_{\theta\theta}$-0.83; M$_{\phi\phi}$-4.06; M$_{r\theta}$-0.30; M$_{\theta\phi}$-1.82; M$_{\phi r}$2.64; Fault plane solution: M$_0$5.55000×10^{14} NP1:φ$_s$11.00000°, δ59.00000°, λ76.00000°. NP2:φ$_s$217.00000°, δ34.00000°, λ112.00000°.*

*JMA **22** 14:47:21.6±0.1, 36°.6N±0°.3×140°.9E±0°.7, h48^{km}±1^{km}, MV3.8/40, E OFF IBARAKI PREF*

JMA Felt II J1 at E OFF IBARAKI PREF .

*NEIC **22** 14:47:22.1±2.1, 36°.69N±0°.06×141°.0E±0°.1, h47^{km}±9^{km}, mb4.1/12, Error ellipse: s-maj=12.7km s-min=7.8km az=112.0*

*IDC **22** 14:47:23.1±2.1, 36°.63N×140°.90E, h63^{km}±17^{km}, mb3.5/12, mbtmp3.8/15, MS3.2/2, Error ellipse: s-maj=18.7km s-min=12.9km az=129.0*

ISC 22 14:47:21.4±1.0**, 36°.64N**±0°.04×**141°.00E**±0°.07**, h47**^{km}±7^{km}**, n70, σ1^{s}04**/72**, mb4.0**/20**, 11D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.35**	**266**	⇓P	**Pn**	**14 47 30.6**	**-0.1**
JHO				⇓S	**Sn**	**14 47 36.6**	**-0.8**
JHYU	**Hitachinakayam**	**0.45**	**228**	⇓P	**Pn**	**14 47 31.8**	**0.0**
JHYU				⇓S	**Sn**	**14 47 38.6**	**-0.6**
ONAJ	**Iwakimizuishiy**	**0.49**	**341**	P	**Pn**	**14 47 32.2**	**-0.2**
ONAJ				S	**Sn**	**14 47 39.4**	**-0.9**
JFFD	**Fukushimafurud**	**0.57**	**322**	⇓P	**Pn**	**14 47 33.2**	**-0.1**
JFFD				⇓S	**Sn**	**14 47 41.0**	**-1.0**
JFK	**Kawauchi**	**0.73**	**352**	⇓P	**Pn**	**14 47 35.1**	**-0.4**
JFK				⇓S	**Sn**	**14 47 44.4**	**-1.3**
JYT	**Yasato**	**0.77**	**238**	P	**Pn**	**14 47 35.4**	**-0.5**
JYT				S	**Sn**	**14 47 45.2**	**-1.2**
JOTO	**OTAMA OYAMA**	**1.06**	**330**	P	**Pn**	**14 47 40.3**	**+0.4**
JOTO				S	**Sn**	**14 47 53.5**	**-0.1**
JMM	**Marumori**	**1.24**	**352**	Pn	**Pn**	**14 47 42.3**	**0.0**
JMM	**Marumori**	**1.24**	**352**	P	**Pn**	**14 47 42.2**	**0.0**
JMM				*e*S	**Sn**	**14 47 57.5**	**-0.3**
JAG	**Ashikaga**	**1.26**	**261**	⇓P	**Pn**	**14 47 42.3**	**-0.3**
JFY	**Yanaizu**	**1.29**	**307**	P	**Pn**	**14 47 43.0**	**0.0**
JFY				*e*S	**Sn**	**14 47 58.8**	**-0.4**
JKT	**Katashina**	**1.41**	**276**	⇓P	**Pn**	**14 47 44.8**	**0.0**
JKT				⇓*e*S	**Sn**	**14 48 01.9**	**-0.4**
MJAR	**Matsushiro Arr**	**2.25**	**268**	P	**Pn**	**14 47 56.6**	**+0.5**
	47nm,0.3s,baz=89,slow=15,SNR=236						
MJAR				S	**Sn**	**14 48 22.8**	**+0.1**
	23nm,0.5s,baz=112,slow=17,SNR=3.0						
MAJO	**Matsushiro**	**2.25**	**268**	Pn	**Pn**	**14 47 56.7**	**+0.6**
MJB9	**Matsu-Tunnel**	**2.25**	**268**	Pn	**Pn**	**14 47 58.0**	**+1.8**
JSD	**Sado**	**2.59**	**303**	Pn	**Pn**	**14 48 00.2**	**-0.6**
JGF	**Kuroka**	**3.13**	**252**	Pn	**Pn**	**14 48 09.6**	**+1.4**
INU	**Inuyama**	**3.48**	**249**	Pn	**Pn**	**14 48 13.7**	**+0.8**
JHJ2	**Mitsune**	**3.65**	**196**	Pn	**Pn**	**14 48 16.6**	**+1.3**
JTM	**Tenmabayashi**	**4.14**	**1**	Pn	**Pn**	**14 48 23.6**	**+1.5**
ERM	**Erimo**	**5.62**	**17**	Pn	**Pn**	**14 48 42.8**	**+0.4**
JMN	**Monobe**	**6.51**	**246**	Pn	**Pn**	**14 48 55.9**	**+1.2**
JHS	**Saijyo**	**6.61**	**258**	Pn	**Pn**	**14 48 57.9**	**+1.9**
ASAJ	**Asahikawa**	**7.57**	**9**	P	**Pn**	**14 49 09.6**	**+0.5**
	4.1nm,0.6s,baz=215,slow=10,SNR=15						
ASAJ				S	**Sn**	**14 50 33.6**	**+0.2**
	7.5nm,0.9s,baz=170,slow=23,SNR=1.6						
JKA	**Kamikawa-asahi**	**7.57**	**9**	Pn	**Pn**	**14 49 08.8**	**-0.3**
KSRS	**Korea Array**	**10.49**	**278**	P	**Pn**	**14 49 51.6**	**+2.6**
	1.3nm,0.9s,baz=94,slow=12,SNR=2.0						
KLR	**Kul'dur**	**14.28**	**335**	LR	LR	14 55 14.2	
	comp=Z,20nm,19.9s,baz=140,slow=33						
XLT	**XiLinHaoTe**	**20.30**	**299**	*e*P	**P**	**14 51 51.8**	**-1.5**
XLT				pP	pP	14 52 02.8	-1.6
XLT				sP	sP	14 52 09.0	-1.4
XLT				pmax	pmax		
	comp=Z,100nm,4.3s						
XLT				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**23.29**	**289**	*e*P	**P**	**14 52 25.8**	**+0.7**
HHC				pmax	pmax		
	comp=Z,24nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,5.1s						
SONM	**Songino Array**	**27.73**	**305**	P	**P**	**14 53 05.1**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=108,slow=9.3,SNR=5.4						
	comp=Z,1.1nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.23**	**120**	T	T	15 23 12.2	
	baz=313,slow=75,SNR=30						
H11N1	**WAKE ISLAND Hy**	**28.24**	**120**	T	T	15 23 12.2	
	baz=313,slow=75,SNR=48						
H11N3	**WAKE ISLAND Hy**	**28.25**	**120**	T	T	15 23 05.5	
	baz=313,slow=75,SNR=35						
H11S1	**WAKE ISLAND Hy**	**28.93**	**122**	T	T	15 24 00.9	
	baz=314,slow=76,SNR=176						
H11S3	**WAKE ISLAND Hy**	**28.93**	**122**	T	T	15 24 03.0	
	baz=314,slow=76,SNR=92						
H11S2	**WAKE ISLAND Hy**	**28.94**	**122**	T	T	15 24 04.8	
	baz=314,slow=76,SNR=103						
PZH	**PanZhiHua**	**34.73**	**264**	P	**P**	**14 54 08.4**	**+1.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,100nm,7.2s						
WMQ	**Urumqi**	**40.72**	**297**	*e*P	**P**	**14 54 55.3**	**-2.2**
WMQ				pmax	pmax		
	comp=Z,20nm,0.9s						
ZAA0	**Zalesovo Array**	**41.94**	**313**	P	**P**	**14 55 06.5**	**-0.7**
ZAA0				IAmb	IAmb	14 55 07.8	
	comp=Z,2.1nm,0.8s						
ZALV	**Zalesovo Beam**	**41.94**	**313**	P	**P**	**14 55 06.9**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=105,slow=6.9,SNR=6.6						
	comp=Z,1.3nm,0.6s						
MK31	**Makanchi Array**	**44.05**	**302**	P	**P**	**14 55 26.1**	**+1.6**
MKAR	**Makanchi Array**	**44.05**	**302**	P	**P**	**14 55 24.2**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=87,slow=9.2,SNR=5.5						
MKAR				ScP	**ScP**	**15 00 53.3**	**-3.8**
	comp=Z,0.1nm,0.7s,baz=96,slow=2.9,SNR=2.0						
	comp=Z,0.5nm,0.6s						
MKAR	**Makanchi Array**	**44.05**	**302**	P	**P**	**14 55 25.0**	**+0.5**

MAKZ	Makanchi	44.26	302	P	P	14 55 26.2	+0.1
KURK	Kurchatov	45.92	308	P	P	14 55 38.9	-0.3
KURK				IAmb	IAmb	14 55 57.2	
	comp=Z,1.7nm,0.8s						
IL31		50.01	32	P	P	14 56 12.1	+1.6
IL31				IAmb	IAmb	14 56 31.0	
	comp=Z,4.6nm,1.4s						
ILAR	Eielson Array	50.01	32	P	P	14 56 12.1	+1.5
	comp=Z,0.7nm,0.7s,baz=271,slow=5.8,SNR=12						
	comp=Z,0.7nm,0.7s						
BMAR	Burnt Mountain	50.84	29	P	P	14 56 18.4	+1.4
SCRK	Sand Creek	51.32	33	P	P	14 56 22.2	+1.6
SCRK				IAmb	IAmb	14 56 23.0	
	comp=Z,1.0nm,0.8s						
BCAR	Beaver Creek A	52.41	34	P	P	14 56 28.2	-0.5
EGAK	Eagle	52.45	32	P	P	14 56 29.8	+0.9
EGAK				IAmb	IAmb	14 56 31.5	
	comp=Z,2.7nm,1.1s						
INK	Inuvik	54.89	27	P	P	14 56 47.7	+1.1
	comp=Z,0.9nm,0.5s,baz=287,slow=8.1,SNR=4.8						
	comp=Z,0.9nm,0.5s						
INK	Inuvik	54.89	27	P	P	14 56 48.0	+1.3
INK				IAmb	IAmb	14 57 32.2	
	comp=Z,3.0nm,1.4s						
WB0	Warramunga Arr	56.45	187	P	P	14 56 57.6	-0.8
WRAB	Tennant Creek	56.62	187	P	P	14 56 58.8	-0.8
WB2	Warramunga Arr	56.62	187	P	P	14 56 59.5	-0.2
WRA	Warramunga Arr	56.62	188	P	P	14 56 58.9	-0.7
	comp=Z,1.0nm,0.5s,baz=3.1,slow=7.4,SNR=16						
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	56.62	188	P	P	14 56 59.5	-0.1
ABKAR	Akbulak array	57.94	310	P	P	14 57 08.0	-0.7
ASAR	Alice Springs	60.35	187	P	P	14 57 25.2	-0.4
	comp=Z,0.7nm,0.9s,baz=16,slow=6.6,SNR=7.0						
	comp=Z,0.7nm,0.9s						
ASAR	Alice Springs	60.35	187	P	P	14 57 26.2	+0.6
YKA	Yellowknife Ar	64.31	30	P	P	14 57 51.8	+0.1
	comp=Z,0.1nm,0.3s,baz=300,slow=6.3,SNR=1.9						
	comp=Z,0.1nm,0.3s						
FINES	FINESS Array B	69.01	332	P	P	14 58 21.4	-0.1
	comp=Z,1.9nm,0.8s,baz=17,slow=5.8,SNR=2.0						
	comp=Z,1.9nm,0.8s						
AKASG	Malin Array Be	74.41	322	P	P	14 58 53.4	-0.8
	comp=Z,1.4nm,0.7s,baz=39,slow=5.4,SNR=4.6						
	comp=Z,1.4nm,0.7s						
NOA	NORSAR Array B	74.42	337	P	P	14 58 54.2	0.0
	comp=Z,1.2nm,0.8s,baz=39,slow=5.6,SNR=3.8						
	comp=Z,1.2nm,0.8s						
MLR	Muntele Rosu	79.47	320	LR	LR	15 38 18.1	
	comp=Z,54nm,19.4s,baz=356,slow=38						
TXAR	Lajitas Array	90.62	52	P	P	15 00 19.7	+0.6
	comp=Z,0.1nm,0.5s,baz=316,slow=4.1,SNR=1.9						
	comp=Z,0.1nm,0.5s						
H03N2	Juan Fernandez	147.31	96	T	T	17 51 55.1	
	baz=288,slow=76						
H03N3	Juan Fernandez	147.32	96	T	T	17 52 03.7	
	baz=288,slow=76						
H03N1	Juan Fernandez	147.33	96	T	T	17 52 06.0	
	baz=288,slow=76						

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*DJA **22** 15:11:00.3±0.4, 1°N±4°×12°0E±°, h16^{km}±4^{km}, M4.4/8, mb4.6/1, MLv4.3/8*

*NEIC **22** 15:11:00.2±1.7, 0°.70N±0°.04×120°.43E±0°.06, h37^{km}±11^{km}, mb4.0/12, Error ellipse: s-maj=10.1km s-min=2.9km az=126.0*

*IDC **22** 15:11:03.0±5.1, 0°.64N×120°.49E, h71^{km}±52^{km}, mb3.6/8, mbtmp3.9/9, ML3.7/1, MS3.2/10, Error ellipse: s-maj=51.4km s-min=16.2km az=62.0*

ISC 22 15:11:00.8±1.0**, 0°.77N**±0°.05×**120°.36E**±0°.05**, h43**^{km}±10^{km}**, n45, σ1^{s}74**/44**, mb4.0**/11**, MS3.1**/9**, 1D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOLI2	Tolitoli	0.54	51	Pn	Pn	15 11 11.4	-0.8
TOLI2					Sn	15 11 19.2	-1.0
MPSI	Mapaga	0.63	227	P	Pn	15 11 13.0	-0.4
MPSI				S	Sn	15 11 22.2	-0.2
MRSI	Marisa	1.60	100	P	Pn	15 11 27.5	+0.9
MRSI				S	Sn	15 11 48.8	+2.6
GTOI	Gorontalo	2.65	93	P	Pn	15 11 40.6	-0.4
GTOI				S	Sn	15 12 10.8	-1.2
LUWI	Luwuk	3.01	127	Pn	Pn	15 11 44.4	-1.5
LUWI	Luwuk	3.01	127	P	Pn	15 11 47.6	+1.7
LUWI				S	Sn	15 12 24.1	+3.4
SPSI	Sidrap Palu	4.74	187	P	Pn	15 12 11.8	+2.1
MYLDM	Lahad Datu	4.76	337	Pn	Pn	15 12 11.6	+1.6
KAPI	Kappang	5.78	186	P	Pn	15 12 23.9	-0.1
	2.1nm,0.3s,baz=314,slow=7.0,SNR=9.8						
KAPI				S	Sn	15 13 30.1	+1.1
	4.8nm,0.4s,baz=259,slow=18,SNR=0.8						
KAPI				LR	LR	15 15 08.8	
	comp=Z,168nm,20.7s,baz=329,slow=43						
	15nm,0.5s						
KAPI	Kappang	5.78	186	Pn	Pn	15 12 23.1	-0.9
BKSI	Bulukumba	6.05	182	P	Pn	15 12 29.5	+1.7
KKM	Kota Kinabalu	6.68	322	Pn	Pn	15 12 37.2	+0.7
PAGZ	Pagadian	7.65	23	⇓*e*P	Pn	15 12 49.2	-0.5
MTN	Manton Dam	17.24	142		Pn	15 14 57.5	-1.0
MTN				IAmb	IAmb	15 15 16.2	
	comp=Z,12nm,1.1s						
FITZ	Fitzroy Crossi	19.45	165	P	P	15 15 22.8	-1.2
WB0	Warramunga Arr	24.61	147	P	P	15 16 14.3	-3.0
WRAB	Tennant Creek	24.73	147	P	P	15 16 15.5	-2.8
WRAB				IAmb	IAmb	15 16 16.8	
	comp=Z,3.5nm,0.7s						
WRA	Warramunga Arr	24.73	147	P	P	15 16 15.4	-2.9
	comp=Z,3.3nm,0.7s,baz=334,slow=9.4,SNR=41						
	comp=Z,3.3nm,0.7s						
WRA	Warramunga Arr	24.73	147	P	P	15 16 14.9	-3.4
WB2	Warramunga Arr	24.73	147	P	P	15 16 15.3	-3.1
WB2				IAmb	IAmb	15 16 19.5	
	comp=Z,5.0nm,0.8s						
JOW	Kunigami	27.01	16	LR	LR	15 26 18.4	
	comp=Z,36nm,20.3s,baz=171,slow=34						
CMAR	Chiang Mai Arr	27.41	311	LR	LR	15 29 13.3	
	comp=Z,39nm,18.1s,baz=105,slow=40						
AS31	Alice Springs	27.62	152	P	P	15 16 42.3	-2.2
ASAR	Alice Springs	27.62	152	P	P	15 16 42.5	-2.0
	comp=Z,1.0nm,0.7s,baz=345,slow=14,SNR=25						
ASAR				LR	LR	15 28 42.2	
	comp=Z,66nm,18.8s,baz=296,slow=39						
	comp=Z,1.0nm,0.7s						
WHN	Wuhan	30.16	350	P	P	15 17 10.4	+3.6
KSRS	Korea Array	37.17	10	P	P	15 18 08.6	+1.0
	comp=Z,0.9nm,0.7s,baz=202,slow=9.5,SNR=2.5						
KSRS				LR	LR	15 33 26.6	
	comp=Z,13nm,20.2s,baz=220,slow=36						
	comp=Z,0.9nm,0.7s						
STKA	Stephens Creek	38.19	150	P	P	15 18 15.8	-0.6
	comp=Z,1.3nm,0.3s,baz=328,slow=13,SNR=3.6						
	comp=Z,1.3nm,0.3s						
MJAR	Matsushiro Arr	39.25	23	LR	LR	15 35 25.8	
	comp=Z,20nm,18.9s,baz=162,slow=37						
CAN	Canberra	44.77	146	P	P	15 19 09.9	-0.4
SONM	Songino Array	48.42	347	P	P	15 19 39.6	+0.7
	comp=Z,1.0nm,0.7s,baz=168,slow=7.8,SNR=3.7						
	comp=Z,1.0nm,0.7s						
SONM	Songino Array	48.42	347	P	P	15 19 39.7	+0.8
SONM				IAmb	IAmb	15 19 40.8	
	comp=Z,1.1nm,0.8s						
KSH	Kashi	55.86	319	P	P	15 20 36.1	+1.7
MK31	Makanchi Array	56.60	330	P	P	15 20 39.5	+0.1
MK31				IAmb	IAmb	15 20 40.9	
	comp=Z,2.0nm,1.1s						
MKAR	Makanchi Array	56.60	330	P	P	15 20 40.1	+0.8
	comp=Z,1.1nm,0.8s,baz=126,slow=8.8,SNR=11						
	comp=Z,1.1nm,0.8s						
MKAR	Makanchi Array	56.60	330	P	P	15 20 39.6	+0.3
AAK	Ala-Archa	58.48	322	P	P	15 20 53.4	+0.6
	comp=Z,1.1nm,0.6s,baz=56,slow=2.7,SNR=5.1						
	comp=Z,1.1nm,0.6s						
AAK	Ala-Archa	58.48	322	P	P	15 20 52.7	-0.1
AAK				IAmb	IAmb	15 20 54.9	
	comp=Z,1.2nm,0.6s						
ZALV	Zalesovo Beam	60.55	337	P	P	15 21 05.8	-0.8
	comp=Z,0.5nm,0.4s,baz=127,slow=3.9,SNR=4.6						
	comp=Z,0.5nm,0.4s						
KURBB	Kurchatov Arra	61.00	331	LR	LR	15 50 04.7	
	comp=Z,55nm,19.2s,baz=164,slow=38						
KURK	Kurchatov	61.02	331	P	P	15 21 09.6	-0.3
KKAR	Karatay Array	61.23	320	P	P	15 21 11.6	0.0
YAK	Yakutsk	61.52	5	LR	LR	15 48 01.9	
	comp=Z,17nm,21.8s,baz=89,slow=36						
MA2	Magadan	63.23	17	LR	LR	15 50 38.1	
	comp=Z,16nm,18.9s,baz=146,slow=38						
ABKAR	Akbulak array	70.52	323	P	P	15 22 09.3	-1.8
RAR	Rarotonga	80.83	112	LR	LR	15 59 13.3	
	comp=Z,36nm,19.2s,baz=272,slow=36						

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*NOU **22** 15:16:50.7, 11°.43S×162°.63E, h0^{km}, mb4.8/8, Solomon Islands*

*IDC **22** 15:16:56.0±3.2, 11°.65S×162°.19E, h52^{km}±24^{km}, mb3.5/4, mbtmp3.8/5, ML3.8/1, MS3.3/3, Error ellipse: s-maj=42.0km s-min=18.0km az=63.0*

ISC 22 15:16:54.0±1.4**, 11°.6S**±0°.1×**162°.5E**±0°.2**, h39**^{km}**, n18, σ2^{s}34**/13**, mb3.5**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.27	310	P	Pn	15 17 43.1	+0.4
	6µm,0.3s,baz=174,slow=9.2,SNR=77						
HNR				S	Sn	15 18 19.1	-1.4
	4µm,0.3s,baz=233,slow=17,SNR=8.1						
HNR				LR	LR	15 18 59.9	
	comp=Z,1µm,19.2s,baz=92,slow=40						
HNR	Honiara	3.27	310	P	Pn	15 17 43.4	+0.6
KOUNC	Koumac, New Ca	9.11	169	P	Pn	15 19 04.4	+1.5
DZM	Mont Dzumac	11.12	161	P	Pn	15 19 32.3	+1.8
	0.7nm,0.3s,baz=349,slow=16,SNR=33						
DZM				S	Sn	15 21 29.9	-3.7
	1.8nm,0.5s,baz=117,slow=21,SNR=1.2						
	7.2nm,0.7s						
DZM	Mont Dzumac	11.12	161	P	Pn	15 19 32.4	+1.9
CTA	Charters Tower	17.76	239	P	P	15 21 01.7	+2.9
CTAO	Charters Tower	17.76	239	P	P	15 21 01.8	+2.9
WRA	Warramunga Arr	28.31	249	P	P	15 22 40.8	-3.5
	0.5nm,0.9s,baz=80,slow=9.2,SNR=3.0						
WRA				LR	LR	15 32 27.4	
	comp=Z,41nm,18.1s,baz=120,slow=33						
	0.5nm,0.9s						
ASAR	Alice Springs	29.72	242	P	P	15 22 55.9	-0.8
	0.2nm,0.5s,baz=66,slow=10,SNR=6.6						
	0.2nm,0.5s						
H11S2	WAKE ISLAND Hy	30.15	8	T	T	15 53 48.9	
	baz=188,slow=76,SNR=61						
H11S3	WAKE ISLAND Hy	30.15	8	T	T	15 53 46.2	
	baz=188,slow=76,SNR=60						
H11S1	WAKE ISLAND Hy	30.16	8	T	T	15 53 47.3	
	baz=188,slow=76,SNR=62						
GUMO	Guam	30.49	325	LR	LR	15 34 38.2	
	comp=Z,28nm,21.5s,baz=94,slow=35						
H11N1	WAKE ISLAND Hy	31.38	8	T	T	15 55 18.2	
	baz=188,slow=76,SNR=28						
H11N3	WAKE ISLAND Hy	31.38	8	T	T	15 55 25.3	
	baz=188,slow=76,SNR=30						
H11N2	WAKE ISLAND Hy	31.39	8	T	T	15 55 33.7	
	baz=188,slow=76,SNR=30						
SONM	Songino Array	77.22	325	P	P	15 28 44.4	+0.2
	0.8nm,0.7s,baz=134,slow=6.0,SNR=4.8						
	0.8nm,0.7s						
MKAR	Makanchi Array	91.72	317	P	P	15 29 57.1	-0.4
	0.6nm,0.5s,baz=95,slow=6.2,SNR=15						
	0.6nm,0.5s						

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*NOU **22** 16:09:50.0, 42°.53S×173°.74E, h10^{km}, MLv3.9/14, South Island, New Zealand*

*WEL **22** 16:09:50.4, 42°S±4°×17°4E±°, h27^{km}±11^{km}, M3.5/28, ML3.6/28, MLv3.5/28, Error ellipse: s-maj=0.0km s-min=0.0km az=85.6, confirmed*

ISC 22 16:09:50.7±1.0**, 42°.40S**±0°.03×**173°.64E**±0°.04**, h24**^{km}±6^{km}**, n97, σ1^{s}33**/101**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.08	256	P	Pb	16 09 55.0	-0.1
KHZ	Kahutara	0.08	256	P	Pb	16 09 55.1	0.0
KHZ				S	Sb	16 09 57.5	-0.6
BSWZ	Blackbirch Sta	0.70	15	P	Pn	16 10 04.8	-0.3
GVZ	Greta Valley S	0.72	218	P	Pn	16 10 06.6	+1.1
GVZ				S	Sn	16 10 18.0	+2.2
CMWZ	Cape Campbell	0.78	34	P	Pn	16 10 07.6	+1.5
THZ	Tophouse	0.84	319	P	Pb	16 10 06.2	-0.4
THZ				S	Sb	16 10 15.6	-1.8
TUWZ	Tuamarina	0.99	13	P	Pb	16 10 10.0	+0.8
AMCZ	Amberley	1.07	223	P	Pb	16 10 11.1	+0.6
LTZ	Lake Taylor	1.08	249	P	Pb	16 10 11.2	+0.4
LTZ				S	Sb	16 10 24.7	+0.3
MRNZ	Matariki Terra	1.20	326	P	Pb	16 10 12.7	0.0
NNZ	Nelson	1.20	351	P	Pb	16 10 12.6	-0.1
NNZ				S	Sb	16 10 28.6	+0.9
TCW	Tory Channel	1.28	22	P	Pb	16 10 13.9	-0.1
SNZO	South Karori	1.35	37	P	Pb	16 10 15.3	+0.1
WEL	Wellington	1.40	38	P	Pb	16 10 15.9	-0.2
TKNZ	Takaka Hill	1.45	339	P	Pb	16 10 16.6	-0.5
PLWZ	Palliser	1.46	56	P	Pb	16 10 16.3	-0.9
MQZ	McQueen's Vall	1.50	209	P	Pn	16 10 15.8	-0.2
MQZ				S	Sn	16 10 34.7	-0.1
OXZ	Oxford	1.50	231	P	Pn	16 10 15.9	-0.2
DSZ	Denniston Nort	1.51	295	P	Pb	16 10 17.2	-0.9
AKCZ	Akaroa Harbour	1.57	200	P	Pn	16 10 17.5	+0.5
DUWZ	D'Urville Isla	1.61	8	P	Pb	16 10 19.0	-0.7
INZ	Inchbonnie	1.66	258	P	Pb	16 10 18.8	-1.7
CAW	Cannon Point	1.67	40	P	Pb	16 10 19.3	-1.5
PAWZ	Paruwai Farm	1.68	53	P	Pn	16 10 19.0	+0.5
RACZ	Rakaia	1.73	219	P	Pn	16 10 19.1	0.0
QRZ	Quartz Range	1.78	332	P	Pb	16 10 22.1	-0.5
QRZ	Quartz Range	1.78	332	P	Pb	16 10 21.8	-0.8
KIW	Kapiti Island	1.81	32	P	Pb	16 10 21.5	-1.6
TRWZ	Traveller	1.83	58	P	Pn	16 10 20.9	+0.4
MTW	Mount Morrison	1.86	49	P	Pn	16 10 21.4	+0.4
MHCZ	Mount Hutt	1.90	233	P	Pn	16 10 21.3	-0.3
OGWZ	Otaki Gorge	1.95	37	P	Pn	16 10 23.1	+0.8
WACZ	Wakanui South	2.03	220	P	Pn	16 10 23.5	+0.1
HOWZ	Holdsworth Sta	2.05	44	P	Pn	16 10 24.3	+0.6
TMWZ	Te Maipa	2.12	53	P	Pn	16 10 24.8	+0.2
WVZ	Waitaha Valley	2.24	251	P	Pn	16 10 27.0	+0.7
MRZ	Mangatainoka R	2.27	41	P	Pn	16 10 27.0	+0.4
RPZ	Rata Peaks	2.31	234	P	Pn	16 10 27.5	+0.3
RPZ	Rata Peaks	2.31	234	P	Pn	16 10 26.1	-1.1
ARCZ	Arundel	2.38	228	P	Pn	16 10 27.9	-0.2
PRWZ	Pori Road	2.54	44	P	Pb	16 10 36.2	+0.6
POWZ	Post Office Ro	2.56	39	P	Pn	16 10 32.4	+1.7
BFZ	Birch Farm	2.60	50	P	Pn	16 10 31.3	+0.1
BFZ	Birch Farm	2.60	50	P	Pn	16 10 31.2	0.0
GCSZ	Gaunt Creek Bo	2.60	248	P	Pn	16 10 32.2	+0.9
TMZ	Timaru	2.76	223	P	Pn	16 10 33.5	0.0
WAZ	Wanganui	2.83	22	P	Pb	16 10 37.4	-3.1
DVHZ	Dannevirke	2.83	43	P	Pn	16 10 33.9	-0.5
LREZ	Lake Rotokare	2.99	11	P	Pb	16 10 43.4	+0.1
FOZ	Fox Glacier	3.03	247	P	Pn	16 10 38.1	+1.0
PREZ	Palmer Road	3.08	8	P	Pb	16 10 43.3	-1.5
KHEZ	Kahui Hut	3.11	5	P	Pb	16 10 42.0	-3.4
KHEZ	Kahui Hut	3.11	5	P	Pb	16 10 43.9	-1.5
NBEZ	Newall Road No	3.13	3	P	Pb	16 10 42.7	-3.0
NEZ	North Egmont	3.14	6	P	Pb	16 10 44.0	-2.0
PNHZ	Pukenui	3.15	39	P	Pn	16 10 38.6	-0.1
LBZ	Lake Benmore	3.21	231	P	Pn	16 10 40.0	+0.4
PKE	Pukeiti	3.21	5	P	Pb	16 10 43.2	-3.9
MTVZ	Mangateitei	3.31	25	P	Pn	16 10 43.4	+2.3
PKVZ	Pokaka	3.36	23	P	Pn	16 10 43.8	+2.1
VRZ	Vera Road	3.38	15	P	Pn	16 10 44.5	+2.7
WNVZ	Wahianoa	3.41	26	P	Pn	16 10 43.9	+1.5
TRVZ	Turoa	3.42	26	P	Pn	16 10 44.3	+1.7
ODZ	Otahua Downs	3.42	218	P	Pn	16 10 42.1	-0.4
ODZ	Otahua Downs	3.42	218	P	Pn	16 10 42.2	-0.3
BHHZ	Black Hill Sta	3.44	33	P	Pn	16 10 43.3	+0.5
TUVZ	Tukino	3.48	27	P	Pn	16 10 45.5	+2.0
NGZ	Ngauruhoe	3.55	25	P	Pn	16 10 45.9	+1.5
NNVZ	North Ngauruho	3.59	25	P	Pn	16 10 46.5	+1.5
ETVZ	East Tongariro	3.62	26	P	Pn	16 10 47.2	+1.9
TMVZ	Te Maari	3.63	26	P	Pn	16 10 47.2	+1.7
NTVZ	North Tongarir	3.64	26	P	Pn	16 10 48.5	+2.9
BKZ	Black Stump Fm	3.89	35	P	Pn	16 10 50.3	+1.4
BKZ	Black Stump Fm	3.89	35	P	Pn	16 10 49.2	+0.3
JCZ	Jackson Bay	3.92	243	P	Pn	16 10 50.1	+0.7
JCZ	Jackson Bay	3.92	243	P	Pn	16 10 50.2	+0.7
HIZ	Hauiti	3.99	14	P	Pn	16 10 52.8	+2.5
HIZ	Hauiti	3.99	14	P	Pn	16 10 52.9	+2.6
HHSZ	Highcliff Hill	4.12	211	P	Pn	16 10 52.6	+0.5
EAZ	Earnscleugh	4.22	226	P	Pn	16 10 53.4	-0.1
MTHZ	Maungataniwha	4.30	36	P	Pn	16 10 59.7	+5.1
TLZ	Tolley Road	4.31	20	P	Pn	16 10 56.1	+1.3
TUZ	Tuapeka	4.58	218	P	Pn	16 10 58.5	+0.2
TOZ	Tahuroa Road	4.87	18	P	Pn	16 11 03.8	+1.3
URZ	Urewera	4.91	34	P	Pn	16 11 03.2	+0.3
URZ	Urewera	4.91	34	P	Pn	16 11 02.5	-0.5
MLZ	Mavora Lakes	4.97	231	P	Pn	16 11 03.5	-0.3
MWZ	Matawai	5.03	37	P	Pn	16 11 04.2	-0.4
SYZ	Scrubby Hill	5.24	216	P	Pn	16 11 08.1	+0.6
SYZ	Scrubby Hill	5.24	216	P	Pn	16 11 07.9	+0.4
AWAZ	Awhitu Peninsu	5.38	9	P	Pn	16 11 11.6	+2.2
WHZ	Wether Hill Ro	5.38	228	P	Pn	16 11 08.4	-1.0
ETAZ	East Tamaki Re	5.53	11	P	Pn	16 11 13.6	+2.2
MBAZ	Motutapu North	5.70	10	P	Pn	16 11 16.4	+2.5
APZ	The Paps	5.99	220	P	Pn	16 11 17.7	-0.1
OUZ	Omahuta	7.17	360	P	Pn	16 11 38.2	+4.3
CTZ	Chatham Island	7.26	104	P	Pn	16 11 35.5	+0.3

IDC 22 16:46:08.3±2.3**, 19°.27S**×**175°.57W, h0**^{km}**, mb3.8**/4**, mbtmp3.8**/4**, Error ellipse: s-maj=168.2km s-min=31.1km az=151.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.38	243	P	P	16 53 47.4	-0.8
	2.2nm,0.9s,baz=72,slow=13,SNR=3.0						
	2.2nm,0.9s						
ASAR	Alice Springs	47.04	255	P	P	16 54 41.5	-0.4
	1.1nm,0.9s,baz=92,slow=8.1,SNR=6.8						
ASAR				PcP	PcP	16 56 13.4	-1.0
	0.2nm,0.5s,baz=107,slow=4.1,SNR=1.8						
	1.1nm,0.9s						
WRA	Warramunga Arr	47.05	260	P	P	16 54 42.4	+0.2
	0.3nm,0.4s,baz=96,slow=7.7,SNR=17						
WRA				PcP	PcP	16 56 15.5	+1.2
	0.5nm,0.9s,baz=97,slow=5.6,SNR=2.4						
	0.3nm,0.4s						
NVAR	Mina Array Bea	78.57	42	P	P	16 58 12.0	-0.2
	0.5nm,0.8s,baz=225,slow=8.9,SNR=3.6						
	0.5nm,0.8s						

DJA 22 17:03:22.9±1.8**, 9°S**±5°×**11°9E**±°**, h27**^{km}±18^{km}**, M3.7**/10**, mb3.9**/2**, MLv3.6**/10**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	1.08	298	P	Pb	17 03 43.2	+0.2
PLAI				S	Sb	17 03 57.8	+1.1
TWSI	Taliwang, Sumb	1.93	288	P	Pn	17 03 54.5	+0.5
TWSI				S	Sn	17 04 18.4	+1.0
BASI	Baing, Sumba	2.01	116	P	Pn	17 03 55.1	0.0
MMRI	Maumere	3.52	79	P	Pn	17 04 16.6	+0.7
IGBI	Denpasar	3.59	278	P	Pn	17 04 16.1	-0.7
BSSI	Bau Bau, Buton	3.62	29	P	Pn	17 04 16.5	-0.7
BKSI	Bulukumba	4.22	19	P	Pn	17 04 25.0	-0.5
JAGI	Jajag, Banyuwa	4.62	280	P	Pn	17 04 29.5	-1.4
SOEI	Soe	5.47	95	P	Pn	17 04 43.1	+0.3
	18nm,2.4s,0.1nm						

IDC 22 17:19:16.2±3.6**, 28°.88N**×**140°.19E, h0**^{km}**, mb3.4**/2**, mbtmp3.3**/3**, ML2.4**/1**, Error ellipse: s-maj=273.9km s-min=34.8km az=85.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	7.82	348	Pn	Pn	17 21 11.1	-0.1
	0.1nm,0.3s,baz=190,slow=9.4,SNR=2.1						
	0.7nm,0.4s						
WRA	Warramunga Arr	48.86	187	P	P	17 28 03.8	0.0
	0.6nm,0.5s,baz=5.9,slow=7.6,SNR=20						
	0.6nm,0.5s						
ASAR	Alice Springs	52.59	187	P	P	17 28 31.4	-0.4
	0.2nm,0.9s,baz=1.1,slow=5.7,SNR=2.2						
	0.2nm,0.9s						

FUNV 22 17:20:21.0, 9°.55N×73°.10W, h37^{km}**, MW3.6, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	1.84	155	*e*P	Pn	17 20 50.2	-0.1
CAPV				*e*S	Sn	17 21 11.2	-1.3
CURV	Curarigua	3.13	81	*e*P	Pn	17 21 07.6	-0.2
CURV				*e*S	Sn	17 21 40.2	-3.8
SIQV	Siquisique	3.42	71	*e*P	Pn	17 21 11.0	-0.8
SIQV				*e*S	Sn	17 21 47.4	-3.7
BAUV	El Baul	5.03	96	*e*P	Pn	17 21 32.6	-1.3
BAUV				*e*S	Sn	17 22 24.6	-6.2
BENV	Beln	5.44	85	*e*P	Pn	17 21 38.7	-0.9

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*IDC **22** 17:22:31.6±3.4, 51°.95N×174°.15W, h0^{km}, mb3.3/1, mbtmp3.3/3, ML2.9/2, Error ellipse: s-maj=89.7km s-min=39.5km az=177.0*

*NEIC **22** 17:22:49.2±1.9, 54°.15N±0°.10×175°.2W±0°.1, h16^{km}±7^{km}, mb3.5/17, ML3.4(AEIC), Error ellipse: s-maj=16.7km s-min=7.8km az=142.0*

*AEIC **22** 17:22:54.5±2.3, 52°.6N±0°.4×174°.7W±0°.2, h219^{km}±8^{km}, Error ellipse: s-maj=53.2km s-min=7.5km az=164.0*

ISC 22 17:22:53.7±0.9**, 53°.0N**±0°.2×**174°.74W**±0°.07**, h200**^{km}**, n27, σ1^{s}40**/30**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSTR	Great Sitkin T	1.18	224		Pn	17 23 25.5	+0.7
GSTR					Sn	17 23 48.8	0.0
ADK	Adak	1.60	229		Pn	17 23 28.5	+0.2
ADK					Sn	17 23 54.8	-0.2
KIWB	Kanaga Island	1.84	234		Pn	17 23 30.7	+0.1
CLES	Cleveland East	2.94	91	Pn	Pn	17 23 41.5	-0.9
NIKH	Nikolski High	3.56	87		Pn	17 23 49.7	-0.3
NIKH					Sn	17 24 33.5	-0.5
AMKA	Amchitka	3.99	249		Pn	17 23 54.6	-0.7
KTH	Kantishna Hill	16.31	40	P	P	17 26 32.7	+1.9
KTH				IAmb	IAmb	17 26 46.5	
	comp=Z,9.4nm,1.5s						
PWL	Port Wells	16.35	51	Pn	P	17 26 31.1	0.0
KNK	Knik Glacier	16.47	49		P	17 26 35.0	+2.6
PETK	Petropavlovsk-	16.55	282	P	P	17 26 32.6	-0.7
	comp=Z,0.1nm,0.3s,baz=93,slow=15,SNR=7.7						
	comp=Z,0.5nm,0.4s						
SML	Sawmill	16.66	47	Pn	P	17 26 34.4	-0.2
SCM	Sheep Creek Mo	17.12	48	Pn	P	17 26 40.8	+1.2
MLY	Manley	17.16	36	Pn	P	17 26 37.9	-2.1
NEA2	Nenana	17.54	38		P	17 26 43.9	-0.1
I23K	Minto, Yukon-K	17.71	37		P	17 26 46.2	+0.2
WRH	Wood River Hil	17.85	39	Pn	P	17 26 47.0	-0.5
WRH				IAmb	IAmb	17 27 29.1	
	comp=Z,5.1nm,1.5s						
N25K	Chitina, Valde	18.30	50		P	17 26 56.0	+3.5
N25K				IAmb	IAmb	17 27 22.7	
	comp=Z,4.8nm,1.2s						
ILAR	Eielson Array	18.45	39	P	P	17 26 54.0	+0.1
	comp=Z,0.1nm,0.3s,baz=244,slow=8.9,SNR=6.1						
	comp=Z,0.4nm,0.6s						
H24K	Noodor Dome	18.60	36		P	17 26 57.0	+1.4
H24K				IAmb	IAmb	17 27 08.1	
	comp=Z,4.9nm,1.5s						
GLB	Gilahina Butte	18.62	51		P	17 26 59.4	+3.4
GLB				IAmb	IAmb	17 27 28.0	
	comp=Z,3.1nm,1.0s						
VRDI	Verde Repeater	18.75	51		Pn	17 27 01.9	+1.7
VRDI				IAmb	IAmb	17 27 20.1	
	comp=Z,7.1nm,1.2s						
DOT	Dot Lake	19.14	44	P	P	17 27 01.9	+0.4
SCRK	Sand Creek	19.28	43	P	P	17 27 02.7	-0.4
SCRK				IAmb	IAmb	17 27 10.2	
	comp=Z,5.9nm,1.5s						
K27K	Chicken	20.10	44	P	P	17 27 13.2	+1.5
K27K				IAmb	IAmb	17 27 42.1	
	comp=Z,5.3nm,1.4s						
I26K	Coal Creek Min	20.11	40	P	P	17 27 12.7	+0.9
I26K				IAmb	IAmb	17 27 25.3	
	comp=Z,3.5nm,1.3s						
BMAR	Burnt Mountain	20.54	34	P	P	17 27 16.6	+0.2
PDAR	Pinedale Array	43.47	76	P	P	17 30 35.7	-1.5
	comp=Z,0.2nm,0.6s,baz=322,slow=5.7,SNR=1.9						
	comp=Z,0.2nm,0.6s						

IDC 22 17:35:00.9±4.2**, 31°.58N**×**139°.74E, h102**^{km}±45^{km}**, mb3.2**/4**, mbtmp3.4**/5**, Error ellipse: s-maj=108.7km s-min=24.5km az=75.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr 1.8nm,1.0s,baz=151,slow=12,SNR=2.5	5.11	346	P	Pn	17 36 14.8	-0.4
H11S3	WAKE ISLAND Hy baz=304,slow=75,SNR=14	27.59	112	T	T	18 09 07.9	
H11S1	WAKE ISLAND Hy baz=304,slow=75,SNR=14	27.59	112	T	T	18 09 07.6	
H11S2	WAKE ISLAND Hy baz=304,slow=75,SNR=9.1	27.60	112	T	T	18 09 08.3	
MKAR	Makanchi Array 0.2nm,0.8s,baz=89,slow=11,SNR=2.1 0.2nm,0.8s	46.04	306	P	P	17 43 14.6	+0.3
WRA	Warramunga Arr 0.6nm,1.0s,baz=0.8,slow=7.7,SNR=8.6 0.6nm,1.0s	51.48	186	P	P	17 43 55.9	-0.2
ASAR	Alice Springs 0.2nm,0.8s,baz=24,slow=11,SNR=4.4 0.2nm,0.8s	55.21	187	P	P	17 44 23.3	0.0
FINES	FINESS Array B 4.0nm,1.1s,baz=60,slow=8.2,SNR=2.2 4.0nm,1.1s	73.00	333	P	P	17 46 18.9	-0.2

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*NOU **22** 17:44:59.4, 41°.83S×174°.40E, h11^{km}, MLv3.6/9, Cook Strait, New Zealand*

*WEL **22** 17:45:00.1±0.4, 42°S±2°×17°4E±°, h7^{km}±3^{km}, M3.0/16, ML3.2/16, MLv3.0/16, Error ellipse: s-maj=0.0km s-min=0.0km az=133.8, confirmed*

ISC 22 17:44:59.7±0.9, **41°.75S**±0°.03×**174°.30E**±0°.03, **h13**^{km}±6^{km}, **n72**, σ1^{s}.**11**/84, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.06	267	P	Pg	17 45 02.4	0.0
CMWZ				S	Sg	17 45 05.0	+0.7
BSWZ	Blackbirch Sta	0.32	275	P	Pg	17 45 05.8	-0.5
BSWZ				S	Sg	17 45 10.4	-0.3
TUWZ	Tuamarina	0.41	320	P	Pg	17 45 07.1	-0.9
TUWZ				S	Sg	17 45 12.6	-0.9
SNZO	South Karori	0.53	35	P	Pg	17 45 10.4	+0.3
TCW	Tory Channel	0.54	358	P	Pg	17 45 09.3	-0.9
TCW				S	Sg	17 45 16.7	-0.7
WEL	Wellington	0.58	38	P	Pg	17 45 11.4	+0.3
PLWZ	Palliser	0.74	76	P	Pn	17 45 15.7	-0.2
CAW	Cannon Point	0.86	42	P	Pg	17 45 16.3	0.0
CAW				S	Sb	17 45 28.6	+0.7
NNZ	Nelson	0.87	307	P	Pg	17 45 15.1	-1.4
NNZ				S	Sg	17 45 26.8	-1.1
KHZ	Kahutara	0.88	220	P	Pb	17 45 17.3	+0.6
KHZ	Kahutara	0.88	220	P	Pb	17 45 17.7	+1.0
KHZ				S	Sn	17 45 31.6	+1.3
PAWZ	Paruwai Farm	0.92	67	P	Pb	17 45 18.1	+0.6
PAWZ				S	Sn	17 45 32.9	+1.4
DUWZ	D'Urville Isla	0.99	343	P	Pg	17 45 17.2	-1.5
DUWZ				S	Sg	17 45 29.9	-1.7
KIW	Kapiti Island	1.00	28	P	Pg	17 45 18.1	-0.9
KIW				S	Sg	17 45 31.6	-0.4
THZ	Tophouse	1.04	269	P	Pg	17 45 19.0	-0.8
MTW	Mount Morrison	1.08	57	P	Pb	17 45 20.2	0.0
TRWZ	Traveller	1.10	72	P	Pb	17 45 20.4	-0.2
OGWZ	Otaki Gorge	1.14	36	P	Pb	17 45 20.7	-0.5
OGWZ				S	Sb	17 45 35.7	-0.2
MRNZ	Matariki Terra	1.21	286	P	Pn	17 45 21.8	-0.5
TKNZ	Takaka Hill	1.23	305	P	Pn	17 45 21.6	-1.0
HOWZ	Holdsworth Sta	1.25	48	P	Pn	17 45 22.5	-0.3
TMWZ	Te Maipa	1.36	62	P	Pn	17 45 23.7	-0.6
MRZ	Mangatainoka R	1.45	42	P	Pn	17 45 25.4	-0.2
GVZ	Greta Valley S	1.54	217	P	Pn	17 45 26.6	-0.3
TIWZ	Tintock	1.54	52	P	Pn	17 45 26.1	-0.7
QRZ	Quartz Range	1.62	304	P	Pn	17 45 28.4	+0.5
QRZ	Quartz Range	1.62	304	P	Pn	17 45 28.2	+0.3
PRWZ	Pori Road	1.73	47	P	Pn	17 45 29.5	0.0
POWZ	Post Office Ro	1.75	40	P	Pn	17 45 29.7	0.0
BFZ	Birch Farm	1.81	55	P	Pn	17 45 30.1	-0.5
BFZ	Birch Farm	1.81	55	P	Pn	17 45 29.8	-0.8
LTZ	Lake Taylor	1.83	235	P	Pn	17 45 30.7	-0.1
DSZ	Denniston Nort	1.87	269	P	Pn	17 45 32.3	+1.0
AMCZ	Amberley	1.88	220	P	Pn	17 45 30.9	-0.6
DVHZ	Dannevirke	2.02	45	P	Pn	17 45 32.9	-0.6
WAZ	Wanganui	2.06	15	P	Pb	17 45 37.9	+1.0
LREZ	Lake Rotokare	2.29	2	P	Pb	17 45 41.4	+0.6
OXZ	Oxford	2.30	226	P	Pn	17 45 35.9	-1.4
MQZ	McQueen's Vall	2.30	211	P	Pn	17 45 35.6	-1.7
PNHZ	Pukenui	2.33	39	P	Pn	17 45 37.3	-0.4
INZ	Inchbonnie	2.33	244	P	Pn	17 45 38.0	+0.2
KHEZ	Kahui Hut	2.46	355	P	Pn	17 45 41.2	+1.7
KHEZ	Kahui Hut	2.46	355	P	Pb	17 45 43.5	-0.3
NEZ	North Egmont	2.48	356	P	Pb	17 45 44.0	-0.2
MTVZ	Mangateitei	2.52	21	P	Pb	17 45 43.6	-1.3
MOVZ	Moawhango	2.59	26	P	Pb	17 45 45.7	-0.3
WNVZ	Wahianoa	2.61	23	P	Pn	17 45 42.9	+1.2
BHHZ	Black Hill Sta	2.62	31	P	Pn	17 45 42.1	+0.3
TRVZ	Turoa	2.62	22	P	Pb	17 45 47.1	+0.5
VRZ	Vera Road	2.64	8	P	Pn	17 45 43.9	+1.9
TUVZ	Tukino	2.68	23	P	Pb	17 45 48.6	+1.0
NGZ	Ngauruhoe	2.75	22	P	Pb	17 45 49.6	+0.7
SNVZ	South Ngauruho	2.75	22	P	Pb	17 45 48.8	-0.1
OTVZ	Oturere	2.78	22	P	Pb	17 45 50.0	+0.6
NNVZ	North Ngauruho	2.80	21	P	Pn	17 45 46.5	+2.2
WTVZ	West Tongariro	2.81	21	P	Pb	17 45 49.8	+0.1
ETVZ	East Tongariro	2.82	23	P	Pn	17 45 46.2	+1.6
TMVZ	Te Maari	2.84	23	P	Pn	17 45 46.2	+1.5
KRVZ	Karewarewa	2.84	22	P	Pb	17 45 50.7	+0.3
NTVZ	North Tongarir	2.85	22	P	Pn	17 45 46.4	+1.5
BKZ	Black Stump Fm	3.07	34	P	Pn	17 45 48.6	+0.6
BKZ	Black Stump Fm	3.07	34	P	Pn	17 45 47.1	-0.9
BKZ				P	Pn	17 45 47.1	-0.9
RPZ	Rata Peaks	3.10	229	P	Pn	17 45 48.2	0.0
RPZ	Rata Peaks	3.10	229	P	Pn	17 45 47.3	-0.9
ARCZ	Arundel	3.18	225	P	Pn	17 45 48.4	-1.0
HIZ	Hauiti	3.26	8	P	Pn	17 45 52.5	+2.0
HIZ	Hauiti	3.26	8	P	Pn	17 45 53.2	+2.7
GCSZ	Gaunt Creek Bo	3.33	241	P	Pn	17 45 54.2	+2.8
TLZ	Tolley Road	3.54	16	P	Pb	17 45 59.3	-2.9
TMZ	Timaru	3.57	221	P	Pn	17 45 53.6	-1.2
ODZ	Otahua Downs	4.24	218	P	Pn	17 46 02.7	-1.2
JCZ	Jackson Bay	4.67	238	P	Pn	17 46 12.8	+2.9

WEL 22 17:46:38.6±0.3, **42°S**±2°×**17°4E**±°, **h8**^{km}±2^{km}, **M3.4**/20, **ML3.7**/20, **MLv3.4**/20, **Error ellipse: s-maj=0.0km s-min=0.0km az=135.1, confirmed, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.09	179	P	Pg	17 46 41.1	+0.2
CMWZ				S	Sg	17 46 43.4	+0.9
BSWZ	Blackbirch Sta	0.26	257	P	Pg	17 46 44.4	+0.7
TUWZ	Tuamarina	0.30	319	P	Pb	17 46 45.8	-0.5
TUWZ				S	Sb	17 46 50.8	-0.6
TCW	Tory Channel	0.45	6	P	Pg	17 46 48.0	+0.7
TCW				S	Sb	17 46 54.7	-0.9
WEL	Wellington	0.56	48	P	Pg	17 46 50.0	+0.6
WEL				S	Sb	17 46 58.2	-0.7
NNZ	Nelson	0.77	305	P	Pb	17 46 53.8	-0.3
PLWZ	Palliser	0.79	84	P	Pb	17 46 54.3	-0.3
PLWZ				S	Sb	17 47 06.4	+1.0
MSWZ	Moikau Station	0.82	73	P	Pb	17 46 55.2	+0.2
MSWZ				S	Sn	17 47 07.5	-1.2
CAW	Cannon Point	0.85	50	P	Pg	17 46 54.9	0.0
DUWZ	D'Urville Isla	0.88	346	P	Pg	17 46 55.8	+0.2
KHZ	Kahutara	0.91	213	P	Pb	17 46 56.4	-0.2
KHZ				S	Sb	17 47 09.6	+0.8
PAWZ	Paruwai Farm	0.95	74	P	Pg	17 46 56.9	-0.1
KIW	Kapiti Island	0.96	34	P	Pg	17 46 56.8	-0.1
THZ	Tophouse	0.98	264	P	Pg	17 46 57.7	+0.2
MTW	Mount Morrison	1.09	63	P	Pg	17 46 58.8	-0.8
OGWZ	Otaki Gorge	1.11	41	P	Pg	17 46 59.4	-0.5
MRNZ	Matariki Terra	1.12	283	P	Pn	17 47 00.5	-0.1
TKNZ	Takaka Hill	1.13	303	P	Pg	17 47 00.3	0.0
TRWZ	Traveller	1.14	77	P	Pg	17 46 59.0	-1.5
HOWZ	Holdsworth Sta	1.24	53	P	Pn	17 47 01.2	-1.0
TMWZ	Te Maipa	1.38	67	P	Pn	17 47 02.5	-1.7
MRZ	Mangatainoka R	1.44	46	P	Pn	17 47 04.2	-0.7
QRZ	Quartz Range	1.52	303	P	Pb	17 47 06.9	-0.1
TIWZ	Tintock	1.54	56	P	Pn	17 47 06.0	-0.4
GVZ	Greta Valley S	1.57	213	P	Pn	17 47 05.3	-1.6
CPWZ	Castlepoint	1.68	64	P	Pg	17 47 11.8	+1.1
PRWZ	Pori Road	1.73	51	P	Pn	17 47 08.1	-0.8
POWZ	Post Office Ro	1.73	43	P	Pn	17 47 08.3	-0.7
DSZ	Denniston Nort	1.80	266	P	Pb	17 47 11.1	-0.8
BFZ	Birch Farm	1.82	58	P	Pn	17 47 08.5	-1.7
LTZ	Lake Taylor	1.83	231	P	Pn	17 47 09.4	-0.9
AMCZ	Amberley	1.91	217	P	Pn	17 47 09.6	-1.8
WAZ	Wanganui	1.99	17	P	Pg	17 47 16.1	-0.7
DVHZ	Dannevirke	2.01	48	P	Pn	17 47 11.2	-1.6
LREZ	Lake Rotokare	2.20	4	P	Pb	17 47 19.6	+1.0
PRHZ	Porangahau	2.30	54	P	Pn	17 47 15.1	-1.8
PNHZ	Pukenui	2.31	42	P	Pn	17 47 15.8	-1.2
PREZ	Palmer Road	2.31	359	P	Pb	17 47 20.8	+0.2
INZ	Inchbonnie	2.31	242	P	Pn	17 47 16.7	-0.3
OXZ	Oxford	2.31	223	P	Pn	17 47 14.6	-2.4
WPHZ	Waipukurau	2.32	47	P	Pn	17 47 17.1	0.0
MQZ	McQueen's Vall	2.35	209	P	Pn	17 47 14.3	-3.1
KHEZ	Kahui Hut	2.37	356	P	Pb	17 47 22.1	+0.6
NEZ	North Egmont	2.39	358	P	Pb	17 47 22.0	+0.2
NBEZ	Newall Road No	2.40	354	P	Pb	17 47 21.4	-0.7
MTVZ	Mangateitei	2.47	23	P	Pb	17 47 23.4	+0.2
PKE	Pukeiti	2.47	356	P	Pb	17 47 24.0	+0.8
PKVZ	Pokaka	2.52	20	P	Pb	17 47 24.6	+0.5
MOVZ	Moawhango	2.54	28	P	Pb	17 47 24.0	-0.4
WNVZ	Wahianoa	2.56	25	P	Pn	17 47 21.8	+1.3
VRZ	Vera Road	2.57	10	P	Pb	17 47 23.1	-1.8
TRVZ	Turoa	2.57	24	P	Pb	17 47 24.7	-0.4
RACZ	Rakaia	2.57	216	P	Pn	17 47 18.2	-2.2
BHHZ	Black Hill Sta	2.59	34	P	Pn	17 47 21.1	+0.4
PXZ	Pawanui	2.59	52	P	Pn	17 47 19.3	-1.4
DRZ	Dome Shelter	2.59	24	P	Pg	17 47 27.2	-1.2
WHVZ	Whangaehu Hut	2.60	24	P	Pb	17 47 24.8	-0.7
FWVZ	Far West T-bar	2.61	24	P	Pb	17 47 24.8	-1.0
TUVZ	Tukino	2.63	25	P	Pb	17 47 25.7	-0.3
NGZ	Ngauruhoe	2.70	24	P	Pb	17 47 28.3	+1.1
SNVZ	South Ngauruho	2.70	24	P	Pb	17 47 27.5	+0.3
MHCZ	Mount Hutt	2.70	225	P	Pn	17 47 20.4	-2.0
OTVZ	Oturere	2.73	24	P	Pb	17 47 28.5	+0.8
NNVZ	North Ngauruho	2.74	23	P	Pb	17 47 29.1	+1.1
TWVZ	Taurewa	2.75	20	P	Pb	17 47 28.0	-0.1
WTVZ	West Tongariro	2.75	23	P	Pb	17 47 28.4	+0.4
KAHZ	Kahuranaki	2.75	48	P	Pn	17 47 21.3	-1.8
ETVZ	East Tongariro	2.77	25	P	Pn	17 47 24.7	+1.3
TMVZ	Te Maari	2.78	25	P	Pn	17 47 24.3	+0.7
KRVZ	Karewarewa	2.79	24	P	Pb	17 47 29.1	+0.4
NTVZ	North Tongarir	2.79	24	P	Pb	17 47 29.6	+0.8
WACZ	Wakanui South	2.87	217	P	Pn	17 47 22.3	-2.4
KATZ	Kakaramea	2.91	23	P	Pb	17 47 31.7	+0.9
WVZ	Waitaha Valley	2.94	240	P	Pb	17 47 28.9	-2.2
RITZ	Rihia Road	2.96	26	P	Pb	17 47 31.7	+0.1
BKZ	Black Stump Fm	3.04	36	P	Pn	17 47 26.4	-0.6
RPZ	Rata Peaks	3.10	228	P	Pn	17 47 25.8	-2.1
HIZ	Hauiti	3.18	9	P	Pn	17 47 31.6	+2.7
ARCZ	Arundel	3.20	223	P	Pn	17 47 27.1	-2.0
GCSZ	Gaunt Creek Bo	3.32	239	P	Pn	17 47 32.0	+1.2
TLZ	Tolley Road	3.48	17	P	Pb	17 47 37.7	-2.7
TMZ	Timaru	3.60	220	P	Pn	17 47 32.3	-2.3
FOZ	Fox Glacier	3.75	239	P	Pn	17 47 36.8	+0.2
ODZ	Otahua Downs	4.27	216	P	Pn	17 47 40.9	-2.9
JCZ	Jackson Bay	4.66	237	P	Pn	17 47 51.8	+2.5
CTZ	Chatham Island	7.07	110	P	Pn	17 48 20.7	-1.6

IDC 22 17:52:36.6±7.2, **6°.29S**×**154°.34E**, **h135**^{km}±40^{km}, **mb3.2**/4, **mbtmp3.7**/6, **Error ellipse: s-maj=81.8km s-min=22.3km az=92.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076 25nm,0.6s,baz=270,slow=1.0,SNR=1.5	3.03	311	P	Pn	17 53 25.1	+1.3
KRVT	35nm,0.6s,baz=177,slow=18,SNR=2.2			S	Sn	17 54 00.5	+0.2
PMG	Port Moresby 10nm,0.5s,baz=35,slow=6.3,SNR=9.9	7.75	246	P	Pn	17 54 25.6	-1.2
WRA	Warramunga Arr 0.9nm,0.5s,baz=58,slow=9.7,SNR=13 0.9nm,0.5s	23.69	233	P	P	17 57 36.9	+0.7
ASAR	Alice Springs 0.4nm,0.8s,baz=59,slow=8.9,SNR=4.6 0.4nm,0.8s	26.16	227	P	P	17 57 58.2	-0.4
CMAR	Chiang Mai Arr 0.8nm,0.7s,baz=123,slow=5.3,SNR=9.0 0.8nm,0.7s	59.89	295	P	P	18 02 29.2	+0.5
MKAR	Makanchi Array 0.5nm,0.7s,baz=101,slow=5.5,SNR=6.9 0.5nm,0.7s	82.45	319	P	P	18 04 43.2	-0.8

KRSC 22 17:59:13.1±1.4, **56°.15N**×**164°.54E**, **h53**^{km}±20^{km}, **Ml3.5**, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.96	274	*e*P	Pn	17 59 31.0	+0.6
KBTR				*e*S	Sn	17 59 43.4	+0.3
KBG	Krutoberegovo	1.03	277	*e*P	Pn	17 59 32.0	+0.7
KBG				*e*S	Sn	17 59 44.7	0.0
BKI	Bering	1.25	139	*e*P	Pn	17 59 36.0	+1.8
BKI				*e*S	Sn	17 59 51.1	+1.2
SMKR	Semkarok	1.76	286	*e*P	Pn	17 59 44.4	+3.1
SRKR	Sorokina	1.94	287	*e*P	Pn	17 59 47.0	+3.3
KLY	Klyuchi	2.18	276	*e*P	Pn	17 59 49.0	+2.2
TUMD	Tumrok D	2.53	250	*e*P	Pn	17 59 55.7	+4.0
TUMD				*e*S	Sn	18 00 25.6	+4.3
TUMR	Tumrok	2.63	253	*e*P	Pn	17 59 57.7	+4.5
SRDR	Sredinnyy	2.70	276	*e*P	Pn	17 59 58.6	+4.5
OSSR	Ossora	3.21	346	*e*P	Pn	18 00 03.6	+2.6
OSSR				*e*S	Sn	18 00 38.7	+0.7
ESO	Esso	3.28	269	*e*P	Pn	18 00 08.6	+6.6
SPN	Mys Shipunski	4.03	223	*e*P	Pn	18 00 14.4	+2.2
SPN				*e*S	Sn	18 00 57.1	-0.9
KRER	Koryakskii	4.40	232	*e*P	Pn	18 00 22.0	+4.5
SMAR	Somma	4.41	231	*e*P	Pn	18 00 21.6	+4.0
KRX	Arik	4.41	233	*e*P	Pn	18 00 21.6	+4.0
AVH	Avacha	4.43	232	*e*P	Pn	18 00 22.4	+4.6
UGLR	Uglovaya	4.43	231	*e*P	Pn	18 00 21.9	+4.1
KOK	Koryaka	4.46	233	*e*P	Pn	18 00 22.4	+4.2
GNL	Ganaly	4.53	240	*e*P	Pn	18 00 24.1	+4.9
DALK	Dalny	4.59	230	*e*P	Pn	18 00 23.8	+3.9
DALK				*e*S	Sn	18 01 13.8	+2.0
KRMR	Karymshinskiy	5.00	231	*e*P	Pn	18 00 29.9	+4.4
KRMR				*e*S	Sn	18 01 26.5	+4.6
MTVR	Mutnovka	5.22	228	*e*P	Pn	18 00 33.2	+4.5
KDTR	Khodutka, Kamc	5.78	224	*e*P	Pn	18 00 39.5	+3.3
KMSK	Kamenskaya	6.40	7	*e*P	Pn	18 00 48.8	+4.2

IDC 22 18:15:39.4±18.0, **22°.36S**×**178°.53W**, **h650**^{km}±223^{km}, **mb3.0**/5, **mbtmp4.0**/5, **Error ellipse: s-maj=160.6km s-min=72.8km az=140.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower 2.7nm,0.4s,baz=93,slow=11,SNR=12 2.7nm,0.4s	32.87	267	P	P	18 21 23.1	+0.1
ASAR	Alice Springs 0.5nm,0.4s,baz=96,slow=7.6,SNR=12 0.5nm,0.4s	43.65	259	P	P	18 22 49.4	-0.2
WRA	Warramunga Arr 0.9nm,0.4s,baz=103,slow=8.3,SNR=30 0.9nm,0.4s	43.89	264	P	P	18 22 51.8	+0.4
ILAR	Eielson Array 0.2nm,0.5s,baz=220,slow=5.4,SNR=2.2 0.2nm,0.5s	90.22	13	P	P	18 27 31.2	-0.8
PDAR	Pinedale Array 0.6nm,0.6s,baz=212,slow=3.2,SNR=4.2 0.6nm,0.6s	90.64	43	P	P	18 27 35.5	+0.6

IDC 22 18:16:51.4±7.2, **4°.69S**×**145°.64E**, **h103**^{km}±75^{km}, **mb3.2**/3, **mbtmp3.5**/5, **ML1.1**/1, **Error ellipse: s-maj=55.9km s-min=31.5km az=141.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby 0.5nm,0.3s,baz=325,slow=19,SNR=1.6	4.92	162	P	Pn	18 18 05.0	+1.8
PMG	6.8nm,0.4s,baz=135,slow=22,SNR=6.3 9.0nm,1.0s			S	Sn	18 18 58.0	-1.0
WRA	Warramunga Arr 0.5nm,0.3s,baz=34,slow=11,SNR=42	18.73	215	P	P	18 21 02.6	+0.4
ASAR	Alice Springs 0.3nm,0.3s,baz=42,slow=7.6,SNR=18 0.3nm,0.3s	22.00	210	P	P	18 21 38.1	+0.7
MKAR	Makanchi Array 0.1nm,0.3s,baz=128,slow=6.4,SNR=3.1 0.1nm,0.3s	75.63	321	P	P	18 28 24.5	-0.7
ILAR	Eielson Array 0.8nm,0.7s,baz=248,slow=5.4,SNR=7.9 0.8nm,0.7s	84.82	23	P	P	18 29 14.2	+0.1

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*IDC **22** 18:20:27.8±2.0, 58°.09N×156°.41W, h100^{km}±15^{km}, mb3.5/14, mbtmp3.9/18, Error ellipse: s-maj=25.0km s-min=14.5km az=33.0*

*NEIC **22** 18:20:29.4±2.6, 57°.88N±0°.06×156°.3W±0°.1, h117^{km}±10^{km}, Error ellipse: s-maj=10.5km s-min=7.5km az=142.0*

*ANF **22** 18:20:29.7±0.2, 57°.87N×156°.19W, h127^{km}±2^{km}, ML3.8/42, Error ellipse: s-maj=2.5km s-min=1.9km az=142.0*

*AEIC **22** 18:20:31.2±2.9, 57°.86N±0°.07×156°.2W±0°.1, h122^{km}±6^{km}, ML3.8, mb4.4/21(NEIC), ML3.8/62(NEIC), Error ellipse: s-maj=10.5km s-min=8.1km az=136.0*

ISC 22 18:20:29.9±0.6, **57°.93N**±0°.04×**156°.19W**±0°.03, **h124**^{km}±6^{km}, **n317**, σ1^{s}.**23**/336, **mb4.0**/21, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
R17K	Ugashik Creek baz=26	0.31	200	P	Pn	18 20 47.6	+0.3
R17K	baz=26			S	Sn	18 21 00.5	+0.1
Q17K	Contact Creek baz=202,SNR=117	0.37	26	P	Pn	18 20 48.2	+0.5
Q17K	baz=202			S	Sn	18 21 01.5	+0.4
Q16K	King Salmon baz=163,SNR=68	0.79	342	P	Pn	18 20 51.1	+0.9
Q16K	baz=163			S	Sn	18 21 06.7	+1.1
R16K	Pilot Point baz=68,SNR=175	0.83	244	P	Pn	18 20 50.7	+0.1
R16K	baz=68			S	Sn	18 21 06.9	+0.7
Q18K	Katmai Hardscr baz=219,SNR=209	0.95	41	P	Pn	18 20 52.7	+0.9
Q18K	baz=219			S	Sn	18 21 09.2	+0.7
P16K	Nushagak River baz=141,SNR=52	1.45	320	P	Pn	18 20 57.7	+0.8
P16K	baz=141			S	Sn	18 21 19.0	+1.5
P18K	Big Mountain,	1.55	19	Pn	Pn	18 20 58.8	+0.7
P18K	Big Mountain, baz=198,SNR=173	1.55	19	P	Pn	18 20 58.9	+0.7
P18K	baz=198			S	Sn	18 21 20.5	+0.8
Q19K	Cape Douglas,	1.67	52		Pn	18 21 00.5	+0.9
Q19K	comp=N,1μm,0.7s			IAML		18 21 26.5	
Q19K	Cape Douglas, baz=232,SNR=75	1.67	52	P	Pn	18 21 00.7	+1.1
Q19K	baz=232			S	Sn	18 21 23.5	+1.3
OHAK	Old Harbor	1.72	113		Pn	18 20 59.5	-0.5
OHAK	comp=E,346nm,0.2s			IAML		18 21 22.3	
OHAK	comp=N,276nm,0.2s			IAML		18 21 23.1	
OHAK	Old Harbor	1.72	113	P	Pn	18 20 59.7	-0.3
OHAK	Old Harbor baz=293,SNR=6.4	1.72	113	P	Pn	18 20 59.5	-0.5
OHAK	baz=293			S	Sn	18 21 21.6	-1.4
O17K	Koliganek Bris baz=166,SNR=240	1.91	346	P	Pn	18 21 03.1	+0.9
O17K	baz=166			S	Sn	18 21 28.2	+1.1
KDAK	Kodiak Island comp=N,110nm,0.3s,baz=238,slow=2.3,SNR=1574	1.94	93	P	Pn	18 21 02.3	-0.3
KDAK	comp=N,106nm,0.3s,baz=55,slow=23,SNR=34			S	Sn	18 21 26.6	-1.1
KDAK	Kodiak Island	1.94	93		Pn	18 21 02.9	+0.2
KDAK	comp=N,433nm,0.2s			IAML		18 21 27.4	
KDAK	comp=N,527nm,0.4s			IAML		18 21 27.6	
KDAK	Kodiak Island baz=274	1.94	93	P	Pn	18 21 02.9	+0.2
KDAK	baz=274			S	Sn	18 21 27.0	-0.7
O16K	Kokwok River B baz=150,SNR=460	1.94	330	P	Pn	18 21 03.5	+0.8
O16K	baz=150			S	Sn	18 21 28.5	+0.7
O18K	Koktuh Hills	2.00	14		Pn	18 21 04.2	+0.8
O18K	Koktuh Hills baz=195,SNR=169	2.00	14	P	Pn	18 21 04.5	+1.0
CHGN	Chignik	2.04	217		Pn	18 21 03.1	-0.8
CHGN	comp=N,1μm,0.2s			IAML		18 21 29.3	
CHGN	Chignik baz=37,SNR=6.3	2.04	217	P	Pn	18 21 03.2	-0.6
Q20K	Shuyak Island baz=251,SNR=19	2.12	70	P	Pn	18 21 05.5	+0.6
Q20K	baz=251			S	Sn	18 21 32.0	+0.2
P19K	Oil Pt	2.31	41	Pn	Pn	18 21 08.4	+1.0
P19K	comp=N,250nm,0.8s			IAML		18 21 39.4	
P19K	comp=E,229nm,0.8s			IAML		18 21 40.0	
P19K	Oil Pt baz=222	2.31	41	P	Pn	18 21 08.8	+1.4
O19K	Port Alsworth	2.47	22		Pn	18 21 10.2	+0.9
O19K	comp=E,357nm,0.5s			IAML		18 22 06.5	
O19K	comp=N,226nm,0.4s			IAML		18 22 17.3	
O19K	Port Alsworth baz=203	2.47	22	P	Pn	18 21 10.4	+1.1
ILSW	Iliamna Southw	2.59	36		Pn	18 21 12.1	+1.0
ILSW	comp=N,106nm,0.7s			IAML		18 21 44.6	
N18K	Kilae Creek	2.76	3	Pn	Pn	18 21 13.8	+0.7
N18K	Kilae Creek baz=183	2.76	3	P	Pn	18 21 14.0	+0.9
O20K	Slope Mountain baz=221,SNR=6.7	2.84	39	P	Pn	18 21 15.5	+1.3
O20K	baz=221			S	Sn	18 21 49.6	+1.3
N16K	Nishlik Lake baz=152	2.87	334	P	Pn	18 21 15.5	+0.9
N16K	baz=152			S	Sn	18 21 50.0	+1.0
HOM	Homer	2.93	52		Pn	18 21 15.8	+0.5
HOM					Sn	18 21 51.4	+1.1
HOM	comp=E,496nm,0.5s			IAML		18 21 52.9	
HOM	Homer baz=234	2.93	52	P	Pn	18 21 16.3	+1.0
HOM	baz=234			S	Sn	18 21 50.7	+0.3
N19K	Bonanza Creek	3.02	16		Pn	18 21 17.9	+1.3
N19K	Bonanza Creek baz=197	3.02	16	P	Pn	18 21 18.1	+1.5
CNPM	China Poot	3.04	56		Pn	18 21 17.6	+0.9
CNPM	comp=E,149nm,0.4s			IAML		18 21 52.8	
CNPM	comp=N,186nm,0.6s			IAML		18 21 52.9	
RSO	Redoubt South	3.09	33		Pn	18 21 18.6	+1.0
SVW2	Sparrevohn	3.19	5		Pn	18 21 19.5	+0.9
SVW2	Sparrevohn	3.19	5	P	Pn	18 21 19.6	+0.9
BRLK	Bradley Lake	3.31	54		Pn	18 21 20.2	-0.1
BRLK	comp=N,225nm,0.6s			IAML		18 21 57.7	
BRLK	comp=E,201nm,0.6s			IAML		18 21 58.6	
BRSE	Bradley Lake S	3.37	55		Pn	18 21 21.1	+0.1
BRSE	Bradley Lake S baz=239	3.37	55	P	Pn	18 21 21.6	+0.6
SDPT	Sand Point	3.51	224	Pn	Pn	18 21 21.6	-1.2
SDPT	comp=N,228nm,0.6s			IAML		18 22 05.2	
SDPT	comp=E,189nm,0.7s			IAML		18 22 14.9	
SDPT	Sand Point	3.51	224	P	Pn	18 21 22.0	-0.9
SDPT	Sand Point	3.51	224	P	Pn	18 21 21.6	-1.2

	baz=42						
CAPN	Captain Cook N	3.84	40	Pn	Pn	18 21 28.9	+1.7
CAPN				IAML		18 22 34.9	
	comp=E,272nm,1.0s						
SPCR	Spurr Chakacha	3.85	30	P	Pn	18 21 28.6	+1.1
	baz=213,SNR=7.0						
S12K	Black Hills	3.92	238	P	Pn	18 21 28.1	-0.3
	baz=54,SNR=7.2						
S12K				S	Sn	18 22 12.1	-1.6
	baz=54						
SLKM	Skilak Lake	4.01	47		Pn	18 21 30.9	+1.3
M19K	Big River Lodg	4.09	12		Pn	18 21 32.2	+1.6
M19K	Big River Lodg	4.09	12	P	Pn	18 21 32.2	+1.6
	baz=193						
SEW	Seward	4.11	55		Pn	18 21 31.4	+0.6
SEW	Seward	4.11	55	P	Pn	18 21 31.7	+0.9
	baz=240						
O22K	Cooper Landing	4.19	50		Pn	18 21 33.2	+1.3
O22K	Cooper Landing	4.19	50	P	Pn	18 21 32.9	+0.9
	baz=234						
M20K	Styx River	4.25	20		Pn	18 21 34.9	+2.1
M20K				IAML		18 22 27.3	
	comp=E,27nm,1.1s						
M20K	Styx River	4.25	20	P	Pn	18 21 35.0	+2.2
	baz=202,SNR=125						
L19K	White Mountain	4.32	8	Pn	Pn	18 21 34.9	+1.3
L19K				IAML		18 23 10.1	
	comp=N,34nm,1.0s						
L19K				IAML		18 23 11.1	
	comp=E,40nm,0.9s						
L19K	White Mountain	4.32	8	P	Pn	18 21 35.0	+1.3
	baz=189,SNR=34						
FIS	Fire Island	4.43	41	Pn	Pn	18 21 35.6	+0.6
FIS				IAML		18 22 34.6	
	comp=E,153nm,0.8s						
SUA	Susitna One	4.49	36	Pn	Pn	18 21 37.0	+0.9
SUA				IAML		18 22 30.9	
	comp=N,146nm,0.7s						
SUA	Susitna One	4.49	36	P	Pn	18 21 36.7	+0.7
	baz=220,SNR=21						
RC01	Rabbit Creek A	4.56	43		Pn	18 21 37.5	+0.6
RC01	Rabbit Creek A	4.56	43	IAML		18 22 29.1	
	comp=E,154nm,0.3s						
RC01				IAML		18 22 31.9	
	comp=N,142nm,0.5s						
RC01	Rabbit Creek A	4.56	43	P	Pn	18 21 37.4	+0.5
	baz=228,SNR=5.2						
SKT	Skwentna	4.69	28		Pn	18 21 40.2	+1.6
SKT	Skwentna	4.69	28	IAML		18 22 37.2	
	comp=E,60nm,0.4s						
SKT				IAML		18 22 39.4	
	comp=N,46nm,0.5s						
SKT	Skwentna	4.69	28	P	Pn	18 21 39.7	+1.1
	baz=212,SNR=13						
L20K	Farewell, AK	4.71	13	P	Pn	18 21 40.6	+1.8
	baz=195						
PWL	Port Wells	4.97	51		Pn	18 21 42.1	-0.3
PWL	Port Wells	4.97	51	IAML		18 22 41.2	
	comp=E,119nm,0.5s						
PWL	Port Wells	4.97	51	P	Pn	18 21 42.3	-0.1
	baz=237						
P23K	Montague Islan	5.00	62	P	Pn	18 21 42.8	+0.1
	baz=248						
TTA	Tatalina	5.02	1	Pn	Pn	18 21 44.5	+1.5
TTA				IAML		18 23 29.9	
	comp=E,17nm,1.5s						
TTA	Tatalina	5.02	1	P	Pn	18 21 44.6	+1.6
TTA	Tatalina	5.02	1	P	Pn	18 21 43.9	+0.8
	baz=181,SNR=11						
FALS	False Pass	5.06	236		Pn	18 21 43.0	-0.5
FALS	False Pass	5.06	236	P	Pn	18 21 43.2	-0.4
	baz=50						
PMR	Palmer	5.12	41		Pn	18 21 43.6	-0.7
PMR				IAML		18 22 43.6	
	comp=E,47nm,0.5s						
PMR				IAML		18 22 46.9	
	comp=N,45nm,0.3s						
PMR	Palmer	5.12	41	P	Pn	18 21 44.5	+0.2
PMR	Palmer	5.12	41	P	Pn	18 21 44.1	-0.2
	baz=227						
KNK	Knik Glacier	5.25	45		Pn	18 21 45.7	-0.4
KNK	Knik Glacier	5.25	45	P	Pn	18 21 45.9	-0.2
	baz=231						
Q23K	Middleton Isla	5.35	70	Pn	Pn	18 21 48.0	+0.6
MID	Middleton Isla	5.36	70	Pn	Pn	18 21 48.0	+0.5
MID	Middleton Isla	5.36	70	P	Pn	18 21 48.0	+0.5
PPLA	Purkeypile	5.36	20		Pn	18 21 50.5	+2.8
PPLA	Purkeypile	5.36	20	P	Pn	18 21 50.0	+2.3
	baz=203,SNR=17						
CUT	Chulitna	5.37	31		Pn	18 21 48.8	+1.1
CUT	Chulitna	5.37	31	P	Pn	18 21 48.2	+0.4
	baz=216						
K20K	Telida	5.54	10	Pn	Pn	18 21 51.7	+1.6
K20K	Telida	5.54	10	P	Pn	18 21 51.6	+1.6
	baz=192,SNR=87						
SML	Sawmill	5.55	42		Pn	18 21 49.2	-0.9
SML	Sawmill	5.55	42	P	Pn	18 21 49.2	-0.9
	baz=228						
M23K	Glacier View	5.76	44	P	Pn	18 21 52.6	-0.3
	baz=231						
CAST	Castle Rocks	5.86	18		Pn	18 21 55.8	+1.5
CAST	Castle Rocks	5.86	18	P	Pn	18 21 56.1	+1.8
	baz=202,SNR=38						
SCM	Sheep Creek Mo	5.93	45		Pn	18 21 54.9	-0.4
SCM	Sheep Creek Mo	5.93	45	P	Pn	18 21 54.9	-0.4
	baz=232,SNR=6.0						
EYAK	Cordova Ski Ar	5.97	60		Pn	18 21 55.6	0.0
EYAK	Cordova Ski Ar	5.97	60	P	Pn	18 21 55.7	0.0
EYAK	Cordova Ski Ar	5.97	60	P	Pn	18 21 55.8	0.0
	baz=248,SNR=8.4						
WAT7	Susitna Watana	6.12	33		Pn	18 21 57.2	-0.6
DIV	Divide	6.19	54		Pn	18 21 59.2	+0.3
WAT1	Susitna Watana	6.20	34		Pn	18 21 58.2	-0.7
WAT1	Susitna Watana	6.20	34	P	Pn	18 21 58.2	-0.7
	baz=221						
KTH	Kantishna Hill	6.20	22	Pn	Pn	18 21 59.8	+0.8
TRF	Thorofare Moun	6.25	25		Pn	18 22 00.2	+0.6
TRF	Thorofare Moun	6.25	25	P	Pn	18 22 00.2	+0.6
	baz=210,SNR=17						
CHUM	Lake Minchumin	6.26	16		Pn	18 22 01.6	+1.9
CHUM	Lake Minchumin	6.26	16	P	Pn	18 22 01.3	+1.6
	baz=199,SNR=20						
KLU	Klutina	6.30	51		Pn	18 22 00.4	+0.1
KLU	Klutina	6.30	51	P	Pn	18 22 00.8	+0.4
	baz=239,SNR=27						
M24K	Tolsona, Glenn	6.54	46		Pn	18 22 03.4	0.0
M24K	Tolsona, Glenn	6.54	46	P	Pn	18 22 03.4	0.0
	baz=234						
RND	Reindeer	6.57	30		Pn	18 22 03.5	-0.4
AKUT	Akutan	6.58	239	Pn	Pn	18 22 03.3	-0.7
AKUT	Akutan	6.58	239	P	Pn	18 22 03.8	-0.2
BPAW	Bear Paw Mtn.	6.68	20		Pn	18 22 05.4	0.0
BPAW	Bear Paw Mtn.	6.68	20	P	Pn	18 22 05.5	+0.1
	baz=204,SNR=11						
MCK	McKinley	6.81	28		Pn	18 22 07.1	0.0
MCK	McKinley	6.81	28	P	Pn	18 22 07.0	-0.2
	baz=214,SNR=13						
GCSA	Galena City Sc	6.85	358		Pn	18 22 07.4	-0.1
GCSA	Galena City Sc	6.85	358	P	Pn	18 22 08.2	+0.7
	baz=177						
N25K	Chitina, Valde	6.91	53		Pn	18 22 09.0	+0.4
N25K	Chitina, Valde	6.91	53	P	Pn	18 22 08.9	+0.3
	baz=242,SNR=12						
BWN	Browne	7.06	25	Pn	Pn	18 22 10.4	0.0
HARP	HAARP	7.09	46	P	Pn	18 22 10.8	-0.1
	baz=235,SNR=6.6						
UNV	Unalaska Valle	7.10	239		Pn	18 22 09.8	-1.2
UNV	Unalaska Valle	7.10	239	P	Pn	18 22 09.9	-1.1
	baz=51						
GLB	Gilahina Butte	7.18	55	Pn	Pn	18 22 12.4	+0.2
SNH	Sunshine Point	7.25	66		Pn	18 22 13.7	+0.7
VRDI	Verde Repeater	7.26	58		Pn	18 22 13.6	+0.2
PAX	Paxson	7.32	42		Pn	18 22 13.7	-0.3
PAX	Paxson	7.32	42	P	Pn	18 22 13.8	-0.3
	baz=231,SNR=25						
NEA2	Nenana	7.51	24		Pn	18 22 15.2	-1.3
NEA2	Nenana	7.51	24	P	Pn	18 22 15.5	-1.0
	baz=210,SNR=32						
MCARA	McCarthy VSAT	7.51	57		Pn	18 22 16.9	+0.4
MCARA	McCarthy VSAT	7.51	57	P	Pn	18 22 16.8	+0.2
	baz=248						
I21K	Tanana	7.54	14		Pn	18 22 17.9	+1.0
I21K	Tanana	7.54	14	P	Pn	18 22 18.0	+1.0
	baz=197						
MLY	Manley	7.58	18		Pn	18 22 17.4	-0.2
MLY	Manley	7.58	18	P	Pn	18 22 17.2	-0.3
	baz=202,SNR=8.4						
WRH	Wood River Hil	7.63	27	Pn	Pn	18 22 16.9	-1.3
KIAG	Kiagna River	7.66	61		Pn	18 22 19.1	+0.4
BALM	Baldy	7.70	60		Pn	18 22 19.6	+0.3
K24K	Donnelly Dome	7.77	36	P	Pn	18 22 20.5	+0.5
	baz=225,SNR=16						
CCB	Clear Creek Bu	7.85	27		Pn	18 22 19.7	-1.3
HDA	Harding Lake	7.88	31		Pn	18 22 20.2	-1.3
HDA	Harding Lake	7.88	31	P	Pn	18 22 20.0	-1.4
	baz=218,SNR=43						
H21K	Melozitna Rive	7.92	10		Pn	18 22 23.5	+1.5
H21K	Melozitna Rive	7.92	10	P	Pn	18 22 23.5	+1.5
	baz=193						
I23K	Minto, Yukon-K	7.94	21		Pn	18 22 21.4	-0.8
I23K	Minto, Yukon-K	7.94	21	P	Pn	18 22 21.3	-1.0
	baz=207,SNR=18						
MENT	Mentasta	7.95	46		Pn	18 22 22.8	+0.4
M26K	Nabesna, AK	7.96	50		Pn	18 22 23.0	+0.4
M26K	Nabesna, AK	7.96	50	P	Pn	18 22 22.9	+0.3
	baz=241						
ANM	Nome	7.98	330	Pn	Pn	18 22 24.7	+1.8
ANM	Nome	7.98	330	P	Pn	18 22 21.8	-1.1
	baz=142						
MDM	Murphy Dome	8.01	25		Pn	18 22 22.0	-1.3
TCOL	CIGO, UAF Yank	8.02	26		Pn	18 22 21.6	-1.8
TCOL	CIGO, UAF Yank	8.02	26	P	Pn	18 22 22.7	-0.7
	baz=213						
COLA	College	8.03	26		Pn	18 22 21.5	-1.9
COLA	College	8.03	26	P	Pn	18 22 22.9	-0.5
COLA	College	8.03	26	P	Pn	18 22 22.6	-0.9
	baz=213						
BARN	Barnard Glacie	8.03	61		Pn	18 22 24.1	+0.4
RIDG	Independent Ri	8.03	39		Pn	18 22 23.3	-0.3
RIDG	Independent Ri	8.03	39	P	Pn	18 22 23.1	-0.5
	baz=228,SNR=7.3						
L26K	Log Cabin Wild	8.14	46		Pn	18 22 26.1	+1.1
L26K	Log Cabin Wild	8.14	46	P	Pn	18 22 25.7	+0.7
	baz=236						
IMAR	Indian Mountai	8.16	7	Pn	Pn	18 22 26.8	+1.5
IL31		8.18	29		Pn	18 22 24.0	-1.5
ILAR	Eielson Array	8.18	29	P	Pn	18 22 23.4	-2.2
	comp=N,18nm,0.5s,baz=216,slow=13,SNR=378						
ILAR				S	Sn	18 23 48.8	-7.4
	comp=N,5.7nm,0.5s,baz=360,slow=16,SNR=8.8						
DOT	Dot Lake	8.24	41		Pn	18 22 26.1	-0.4
SAMH	Samovar Hills	8.25	68		Pn	18 22 27.8	+1.2
POKR	Poker Plat Res	8.33	26		Pn	18 22 26.7	-0.9
POKR	Poker Plat Res	8.33	26	P	Pn	18 22 26.4	-1.1
	baz=214,SNR=12						
M27K	Edge Creek, AK	8.40	52		Pn	18 22 29.4	+0.7
M27K	Edge Creek, AK	8.40	52	P	Pn	18 22 29.2	+0.6
	baz=244						
SCRK	Sand Creek	8.47	39		Pn	18 22 28.3	-1.3
SCRK	Sand Creek	8.47	39	P	Pn	18 22 28.7	-1.0
	baz=230						
PCA	Pinnacle	8.50	69		Pn	18 22 30.2	+0.2
PINM	Pinnacle	8.51	69	P	Pn	18 22 29.6	-0.4
	baz=262						
H23K	Yukon River	8.52	19		Pn	18 22 29.3	-0.8
H23K	Yukon River	8.52	19	P	Pn	18 22 29.6	-0.5
	baz=204						
O28M	Mount Upton	8.65	64	P	Pn	18 22 33.0	+0.8
	baz=257						
G21K	Allakaket	8.71	7	P	Pn	18 22 34.0	+1.3
	baz=189						
NIKH	Nikolski High	8.74	241		Pn	18 22 31.1	-2.0
NIKH	Nikolski High	8.74	241	P	Pn	18 22 31.4	-1.8
NIKH	Nikolski High	8.74	241	P	Pn	18 22 31.3	-1.8
	baz=51						
L27K	Beaver Creek,	8.75	48		Pn	18 22 33.8	+0.5
L27K	Beaver Creek,	8.75	48	P	Pn	18 22 33.5	+0.2
	baz=240						
BCAR	Beaver Creek A	8.77	48	Pn	Pn	18 22 33.9	+0.4
BCPM	Bancas Point	8.79	70	Pn	Pn	18 22 34.5	+0.7
YUK3	Moose Creek	8.80	57	P	Pn	18 22 34.2	+0.1
	baz=251,SNR=11						
H24K	Noodor Dome	8.84	23		Pn	18 22 33.2	-1.3
H24K	Noodor Dome	8.84	23	P	Pn	18 22 32.9	-1.6
	baz=210						
BVCY	Beaver Creek	8.86	53	P	Pn	18 22 33.4	-1.3
	baz=246						
PNL	Peninsula	8.89	72		Pn	18 22 35.3	+0.1
PNL	Peninsula	8.89	72	P	Pn	18 22 35.4	+0.1
	baz=266						
YUK8	Steele Glacier	8.97	61	P	Pn	18 22 37.6	+1.1
	baz=255						
PRP	Porcupine Dome	9.13	29		Pn	18 22 37.0	-1.4
PRP	Porcupine Dome	9.13	29	P	Pn	18 22 36.8	-1.6
	baz=218,SNR=8.5						
K27K	Chicken	9.17	42		Pn	18 22 38.7	-0.2
K27K	Chicken	9.17	42	P	Pn	18 22 38.7	-0.2
	baz=234						
G23K	Bananza Creek	9.26	15	P	Pn	18 22 41.2	+1.1
	baz=201						
G22K	Bettles	9.28	12	P	Pn	18 22 41.3	+1.0
	baz=196						
O29M	Mount Kennedy	9.36	68	P	Pn	18 22 42.5	+0.8
	baz=263						
F21K	Alatna River	9.41	6	P	Pn	18 22 43.6	+1.5
	baz=189						
TNA	Tin City	9.44	329	Pn	Pn	18 22 44.5	+2.0
TNA	Tin City	9.44	329	P	Pn	18 22 43.9	+1.4
	baz=139,SNR=5.7						
YUK4	Talbot Arm	9.51	62	P	Pn	18 22 45.4	+1.7
	baz=256						
YUK6	Outpost Mounta	9.56	64	P	Pn	18 22 44.5	0.0
	baz=259						
I26K	Coal Creek Min	9.64	34		Pn	18 22 43.5	-1.7
I26K	Coal Creek Min	9.64	34	P	Pn	18 22 44.0	-1.1
	baz=226						
G24K	Hadweenzic Riv	9.68	21	P	Pn	18 22 43.6	-2.1
	baz=209						
COLD	Coldfoot	9.72	14	Pn	Pn	18 22 48.4	+2.1
F22K	John River	9.78	9	P	Pn	18 22 48.2	+1.1
	baz=193						
M29M	Somme Creek	9.90	55	P	Pn	18 22 49.2	+0.3
	baz=250						
EGAK	Eagle	9.94	40		Pn	18 22 48.1	-1.1
EGAK	Eagle	9.94	40	P	Pn	18 22 48.7	-0.5
	baz=233						
HYT	Haines Junctio	9.96	65		Pn	18 22 51.1	+1.5
HYT	Haines Junctio	9.96	65	P	Pn	18 22 50.3	+0.7
	baz=261						
G25K	Bearman Lake	10.01	24	P	Pn	18 22 48.2	-2.0
	baz=212						
FYU	Fort Yukon	10.04	26		Pn	18 22 48.8	-1.7
P30M	Million Dollar	10.15	69	P	Pn	18 22 52.5	+0.4
	baz=266						
DAWY	Dawson	10.19	46	Pn	Pn	18 22 52.7	+0.1
DAWY	Dawson	10.19	46	P	Pn	18 22 52.9	+0.2
	baz=240,SNR=9.7						
N30M	Aishikik Lake	10.27	62	P	Pn	18 22 52.7	-1.1
	baz=258						
L29M	L29M	10.28	52	P	Pn	18 22 53.2	-0.8
	baz=248						
I27K	Kandik River	10.31	36	P	Pn	18 22 53.4	-0.9
	baz=228						
F24K	Squaw Lake	10.34	18	P	Pn	18 22 54.4	-0.2
	baz=205						
PLBC	Pleasant Camp	10.43	73	P	Pn	18 22 54.7	-1.1
	baz=270						
E22K	Anaktuvuk Pass	10.43	9	P	Pn	18 22 57.0	+1.2
	baz=193						
E23K	Chandalar	10.59	14	P	Pn	18 22 57.9	-0.1
	baz=199						
O30N	Mendenhall	10.64	66	P	Pn	18 22 58.4	-0.3
	baz=263						
M30M	Minto, Yukon	10.68	56	Pn	Pn	18 23 00.1	+0.9
M30M	Minto, Yukon	10.68	56	P	Pn	18 22 59.2	-0.1
	baz=253						
G26K	Porcupine Rive	10.69	27	P	Pn	18 22 59.0	-0.4
	baz=218						
E24K	Your Creek	10.75	16	P	Pn	18 22 59.4	-0.8
	baz=202						
H27K	Steamboat Moun	10.76	33	P	Pn	18 22 58.9	-1.5
	baz=226						
F25K	Christian Rive	10.81	22	P	Pn	18 22 58.7	-2.3
	baz=211						
K29M	Barlow Dome	10.83	49	P	Pn	18 23 01.6	+0.3
	baz=245						
N31M	Braeburn, Yuko	10.89	62	Pn	Pn	18 22 57.9	-4.2
BMAR	Burnt Mountain	10.90	24	Pn	Pn	18 22 59.5	-2.6
SKAG	Skagway	10.96	73	Pn	Pn	18 23 03.5	+0.6
G27K	Doyon Strip	11.14	31	P	Pn	18 23 02.0	-3.3
	baz=224						
I29M	Ogilvie Camp,	11.27	41	Pn	Pn	18 23 06.7	-0.3
I29M	Ogilvie Camp,	11.27	41	P	Pn	18 23 06.7	-0.3
	baz=237						
E25K	Arctic Village	11.28	21	P	Pn	18 23 05.9	-1.3
	baz=210						
M31M	Drury Creek, Y	11.67	59	Pn	Pn	18 23 14.2	+1.8
M31M	Drury Creek, Y	11.67	59	P	Pn	18 23 13.5	+1.1
	baz=258						
FARO	Faro, Yukon	12.16	60		Pn	18 23 20.4	+1.6
FARO	Faro, Yukon	12.16	60	P	Pn	18 23 19.6	+0.8
	baz=259						
P33M	Teslin, Yukon	12.22	69	Pn	Pn	18 23 21.1	+1.4
EPYK	Eagle Plains	12.37	39	P	Pn	18 23 19.3	-2.2
	baz=236						
G30M	tAoh Zraii Nji	12.88	37	P	Pn	18 23 27.0	-1.2
	baz=235						
MMPY	Sheldon Lake,	13.18	59	P	Pn	18 23 33.4	+1.3
	baz=260						
ADK	Adak	13.22	252	Pn	Pn	18 23 31.0	-1.6
ADK	Adak	13.22	252	P	Pn	18 23 31.7	-0.9
KIWB	Kanaga Island	13.48	252	Pn	Pn	18 23 34.4	-1.5
DLBC	Dease Lake	13.78	77	P	Pn	18 23 40.7	+0.8
	comp=N,1.0nm,0.3s,baz=247,slow=12,SNR=1.4						
DLBC				S	Sn	18 26 11.1	-0.7
	comp=N,1.4nm,0.6s,baz=309,slow=11,SNR=2.7						
F31M	Tsiigehtchic	13.94	38	P	Pn	18 23 40.1	-1.6
	baz=238						
INK	Inuvik	14.49	35	P	Pn	18 23 47.2	-1.4
	comp=N,1.1nm,0.3s,baz=234,slow=14,SNR=8.9						
INK				S	Sn	18 26 26.6	-1.8
	comp=N,1.7nm,1.1s,baz=107,slow=19,SNR=2.2						
INK	Inuvik	14.49	35	P	Pn	18 23 47.6	-1.1
	baz=235						
MOBC	Moresby Island	14.49	99	P	P	18 23 53.1	+1.0
AMKA	Amchitka	15.57	256	Pn	Pn	18 24 02.0	-0.3
C36M	Paulatuk	18.00	38		P	18 24 29.1	-1.4
C36M				IAmb	IAmb	18 24 37.8	
	comp=Z,6.9nm,0.4s						
C36M	Paulatuk	18.00	38	P	P	18 24 29.3	-1.2
	baz=246,SNR=7.4						
A36M	Sachs Harbour	18.88	30	P	P	18 24 37.9	-2.3
A36M	Sachs Harbour	18.88	30	P	P	18 24 38.2	-2.0
	baz=238,SNR=5.3						
WAPA	Wapiti River	20.38	82	P	Pn	18 24 58.4	-1.3
WAPA				IAmb	IAmb	18 24 60.0	
	comp=Z,26nm,1.2s						
HILA	High Level	20.43	72	P	P	18 24 58.8	+1.7
YKA	Yellowknife Ar	20.87	60	P	P	18 25 02.3	+0.6
	comp=Z,7.0nm,0.7s,baz=272,slow=9.7,SNR=85						
YKA				PcP	PcP	18 29 04.2	-0.2
	comp=Z,0.5nm,0.5s,baz=272,slow=1.6,SNR=7.6 comp=Z,7.0nm,0.7s						
HAWA	Hanford	24.95	102	P	P	18 25 41.8	+0.4
HAWA				IAmb	IAmb	18 25 44.7	
	comp=Z,18nm,1.1s						
NVAR	Mina Array Bea	31.33	112	P	P	18 26 40.8	+2.3
	comp=Z,0.8nm,0.7s,baz=304,slow=8.6,SNR=6.2 comp=Z,0.8nm,0.7s						
FCC	Fort Churchill	31.58	62	P	P	18 26 41.7	+1.6
FCC				IAmb	IAmb	18 26 42.6	
	comp=Z,5.7nm,1.1s						
PD31	Pinedale Array	32.65	97	P	P	18 26 52.2	+2.2
PDAR	Pinedale Array	32.65	97	P	P	18 26 51.7	+1.6
	comp=Z,0.6nm,0.4s,baz=348,slow=3.9,SNR=13 comp=Z,0.6nm,0.4s						
PDAR	Pinedale Array	32.65	97	P	P	18 26 51.5	+1.5
R11B	Troy Canyon, C	32.75	109	P	P	18 26 51.6	+0.7
	baz=320						
TULEG	Thule	34.11	25	P	P	18 27 04.4	+2.4
TULEG				IAmb	IAmb	18 27 13.4	
	comp=Z,7.3nm,1.1s						
RSSD	Black Hills	34.66	90	P	P	18 27 09.5	+2.0
RSSD				IAmb	IAmb	18 27 09.9	
	comp=Z,4.0nm,0.6s						
SRU	San Rafael Swe	34.77	103	P	P	18 27 11.0	+2.6
ULM	Lac du Bonnet	35.11	76	P	P	18 27 12.3	+1.4
	comp=Z,3.1nm,0.4s,baz=293,slow=9.7,SNR=8.1 comp=Z,3.1nm,0.4s						
ULM	Lac du Bonnet	35.11	76	P	P	18 27 12.4	+1.6
ULM				IAmb	IAmb	18 27 13.1	
	comp=Z,15nm,1.4s						
O20A	White River Ci	35.22	99	P	P	18 27 14.2	+2.0
O20A				IAmb	IAmb	18 27 20.4	
	comp=Z,5.5nm,1.2s						
AGMN	Agassiz Nation	36.30	79	P	P	18 27 22.5	+1.4
AGMN				IAmb	IAmb	18 27 23.3	
	comp=Z,6.8nm,0.8s						
PV15	Paradox Valley	36.41	101	P	P	18 27 23.6	+1.1
PV15				IAmb	IAmb	18 27 24.9	
	comp=Z,5.0nm,0.7s						
EYMN	Ely	38.79	76	P	P	18 27 43.2	+1.1
EYMN	Ely	38.79	76	P	P	18 27 42.9	+0.7
	baz=310,SNR=5.1						
SPMN	Marine on St.	39.89	80	P	P	18 27 52.5	+1.3
	baz=312						
BNM	Barren Site	40.57	104	P	P	18 27 58.5	+1.2
E43A	Lone Tree Farm	42.14	75	P	P	18 28 10.8	+1.1
I42A	Draeger Farm,	42.84	79	P	P	18 28 16.7	+1.4
I42A				IAmb	IAmb	18 28 25.9	
	comp=Z,13nm,1.2s						
MNTX	Cornudas Mount	43.15	105	P	P	18 28 19.4	+1.5
MNTX	Cornudas Mount	43.15	105	P	P	18 28 19.7	+1.8
	baz=323						
E46A	Sault Ste Mari	43.53	73	P	P	18 28 22.1	+1.3
WMOK	Wichita Mounta	44.24	96	P	P	18 28 27.4	+0.7
	baz=320						
TUL1	Leonard	44.94	92	P	P	18 28 32.0	-0.2
	baz=319						
ABTX	Abilene, Hawle	45.41	99	P	P	18 28 35.8	-0.2
	baz=321						
TX31	Lajitas Ar. Si	45.92	105	P	P	18 28 41.7	+1.6
TX32	Lajitas Array	45.92	105	P	P	18 28 41.7	+1.6
TXAR	Lajitas Array	45.92	105	P	P	18 28 41.8	+1.7
	comp=Z,1.0nm,0.8s,baz=317,slow=5.2,SNR=12 comp=Z,1.0nm,0.8s						
TXAR	Lajitas Array	45.92	105	P	P	18 28 41.3	+1.3
SCHQ	Schefferville	46.11	53	P	P	18 28 41.4	+0.3
	comp=Z,2.6nm,0.6s,baz=254,slow=15,SNR=7.5 comp=Z,2.6nm,0.6s						
SFIN	Lafayette	46.27	81	P	P	18 28 39.5	-3.1
	baz=316						
ARCES	ARCESS Array B	52.83	359	P	P	18 29 31.2	-0.6
	comp=Z,1.6nm,0.8s,baz=27,slow=8.1,SNR=1.6 comp=Z,1.6nm,0.8s						
SONM	Songino Array	54.64	305	P	P	18 29 45.2	-0.3
	comp=Z,1.3nm,0.7s,baz=42,slow=6.1,SNR=8.3 comp=Z,1.3nm,0.7s						
FINES	FINESS Array B	60.95	359	P	P	18 30 28.4	-0.7
	comp=Z,1.4nm,0.8s,baz=4.3,slow=7.6,SNR=4.4 comp=Z,1.4nm,0.8s						
NOA	NORSAR Array B	60.96	7	P	P	18 30 27.7	-1.6
	comp=Z,0.6nm,0.7s,baz=351,slow=3.8,SNR=2.8 comp=Z,0.6nm,0.7s						
MKAR	Makanchi Array	64.98	320	P	P	18 30 56.0	-0.1
	comp=Z,0.1nm,0.4s,baz=16,slow=5.6,SNR=4.4 comp=Z,0.1nm,0.4s						
AKASG	Malin Array Be	71.64	356	P	P	18 31 36.0	-1.4
	comp=Z,0.3nm,0.4s,baz=14,slow=6.1,SNR=2.5 comp=Z,0.3nm,0.4s						
CMAR	Chiang Mai Arr	82.17	292	P	P	18 32 35.9	-1.0
	comp=Z,0.3nm,0.8s,baz=10.0,slow=5.5,SNR=4.5 comp=Z,0.3nm,0.8s						
BRTR	Keskin Array B	82.36	352	P	P	18 32 37.4	-0.4
	comp=Z,0.3nm,0.5s,baz=357,slow=9.8,SNR=1.7 comp=Z,0.3nm,0.5s						
BOSA	Boshof	150.68	357	PKPbc	PKPbc	18 40 06.7	-0.3
	comp=Z,2.4nm,0.5s,baz=324,slow=1.4,SNR=9.1						

IDC ***22*** *18:26:54.4±1.2, 2°.68S×139°.36E, h0^{km}, mb3.9/4, mbtmp3.9/6, ML3.5/2, MS3.1/5, Error ellipse: s-maj=56.9km s-min=22.5km az=86.0*

DJA ***22*** *18:26:57.4±2.4, 2°S±9°×14°0E±°, h16^{km}±18^{km}, M4.3/5, mb4.2/2, MLv4.4/5*

NEIC ***22*** *18:27:02.9±0.9, 2°.78S±0°.07×139°.1E±0°.1, h47^{km}±14^{km}, mb4.0/11, Error ellipse: s-maj=18.7km s-min=5.4km az=120.0*

ISC 22 18:27:00.8±0.7, **2°.69S**±0°.06×**139°.09E**±0°.05, **h35**^{km}**, n39,** σ**1^{s}.49**/39, **mb4.0**/7, **MS3.0**/3, **Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.79	332	P	Pn	18 27 14.8	-0.6
SMPI				S	Sn	18 27 27.1	+1.1
GENI	Genyem	1.08	85	P	Pn	18 27 19.6	+0.1

GENI	Genyem	1.08	85	P	Pn	18 27 19.2	-0.3
GENI				S	Sn	18 27 36.1	+2.8
SRPI	Serui, Papua	2.96	286	P	Pn	18 27 47.0	+1.7
FAKI	Fak Fak	6.83	268	Pn	Pn	18 28 40.7	+2.1
FAKI				Sn	Sn	18 29 51.7	-3.5
FAKI	Fak Fak	6.83	268	P	Pn	18 28 40.7	+2.1
FAKI	Fak Fak	6.83	268	P	Pn	18 28 43.6	+5.0
	23nm,1.2s,0.1nm						
COEN	Coen	11.90	160	Pn	Pn	18 29 48.5	+0.4
COEN	Coen	11.90	160	P	Pn	18 29 50.1	+2.0
MTN	Manton Dam	12.79	218	Pn	Pn	18 30 00.8	+0.4
MTN	Manton Dam	12.79	218	P	Pn	18 30 01.9	+1.6
SANI	Sanana	13.10	272	P	Pn	18 30 04.8	+0.3
MTSU	Mount Surprise	16.18	162	P	P	18 30 47.8	-0.7
SOEI	Soe	16.31	244	Pn	Pn	18 30 48.0	+0.7
KNRA	Kununurra	16.43	218		Pn	18 30 49.2	+0.4
KNRA	Kununurra	16.43	218	P	Pn	18 30 49.6	+0.8
GUMO	Guam	17.16	19	LR	LR	18 37 30.6	
	comp=Z,57nm,18.0s,baz=261,slow=37						
WB0	Warramunga Arr	17.58	195	P	Pn	18 31 02.4	-0.8
WB0				IAmb	IAmb	18 31 07.9	
	comp=Z,14nm,1.1s						
WRAB	Tennant Creek	17.75	195	P	Pn	18 31 04.7	-0.6
WRAB				IAmb	IAmb	18 31 24.0	
	comp=Z,10nm,1.0s						
WB2	Warramunga Arr	17.76	195	P	Pn	18 31 04.9	-0.5
WB2				IAmb	IAmb	18 31 10.7	
	comp=Z,16nm,1.2s						
WRA	Warramunga Arr	17.76	195	P	Pn	18 31 02.6	-2.8
	comp=Z,0.2nm,0.3s,baz=14,slow=13,SNR=32						
WRA				S	Sn	18 34 09.8	-13
	comp=Z,0.2nm,0.6s,baz=6.1,slow=24,SNR=1.4						
	comp=Z,0.7nm,0.4s						
WRA	Warramunga Arr	17.76	195	P	Pn	18 31 05.2	-0.2
QIS	Mount Isa	17.77	178	P	P	18 31 07.6	+1.6
CTA	Charters Tower	18.66	158	P	P	18 31 13.5	-2.3
	comp=Z,0.1nm,0.3s,baz=344,slow=14,SNR=1.5						
CTA				LR	LR	18 38 30.2	
	comp=Z,100nm,18.6s,baz=344,slow=38						
	comp=Z,4.3nm,1.1s						
CTAO	Charters Tower	18.66	158	P	P	18 31 15.8	0.0
CTAO				IAmb	IAmb	18 31 34.5	
	comp=Z,13nm,1.2s						
FITZ	Fitzroy Crossi	20.21	220	P	P	18 31 34.0	+1.3
AS01	Alice Springs	21.44	193	P	P	18 31 48.0	+2.0
AS31	Alice Springs	21.45	193	P	P	18 31 46.0	-0.1
AS31				IAmb	IAmb	18 31 51.3	
	comp=Z,2.7nm,0.9s						
ASAR	Alice Springs	21.45	193	P	P	18 31 45.8	-0.4
	comp=Z,5.8nm,0.8s,baz=18,slow=9.0,SNR=34						
ASAR				S	S	18 35 39.5	-2.9
	comp=Z,0.5nm,0.8s,baz=6.2,slow=28,SNR=2.8						
ASAR				LR	LR	18 41 31.9	
	comp=Z,52nm,18.2s,baz=328,slow=41						
	comp=Z,5.8nm,0.8s						
ASAR	Alice Springs	21.45	193	P	P	18 31 46.5	+0.3
WRKA	Warakurna	24.53	204	P	P	18 32 18.6	+1.3
JNU	Nakatsue	36.45	348	LR	LR	18 46 16.8	
	comp=Z,26nm,22.0s,baz=112,slow=32						
KSRS	Korea Array	41.26	346	LR	LR	18 50 53.1	
	comp=Z,9.5nm,19.6s,baz=345,slow=35						
MK31	Makanchi Array	70.00	322	P	P	18 38 09.7	+0.7
MK31				IAmb	IAmb	18 38 10.6	
	comp=Z,1.6nm,1.0s						
MKAR	Makanchi Array	70.00	322	P	P	18 38 09.5	+0.5
	comp=Z,1.7nm,0.8s,baz=108,slow=8.0,SNR=20						
	comp=Z,1.7nm,0.8s						
MKAR	Makanchi Array	70.00	322	P	P	18 38 09.4	+0.4
MAKZ	Makanchi	70.20	322	P	P	18 38 10.6	+0.4
MAKZ				IAmb	IAmb	18 38 11.6	
	comp=Z,3.0nm,0.8s						
ZALV	Zalesovo Beam	72.11	330	P	P	18 38 21.0	-0.5
	comp=Z,0.6nm,0.6s,baz=109,slow=6.2,SNR=2.4						
	comp=Z,0.6nm,0.6s						
ILAR	Eielson Array	85.66	24	P	P	18 39 33.9	-1.7
	comp=Z,0.6nm,0.7s,baz=267,slow=5.1,SNR=7.6						
	comp=Z,0.6nm,0.7s						

IDC ***22*** *18:38:17.2±2.1, 17°.60S×178°.76W, h607^{km}±20^{km}, mb3.1/5, mbtmp4.0/7, Error ellipse: s-maj=96.2km s-min=20.3km az=151.0*

NEIC ***22*** *18:38:18.7±1.1, 17°.31S±0°.10×178°.9W±0°.2, h619^{km}±14^{km}, mb4.1/12, Error ellipse: s-maj=28.1km s-min=12.4km az=107.0*

ISC 22 18:38:17.0±1.1**, 17°.4S**±0°.3×**178°.9W**±0°.2**, h600^{km}, n26, σ0^{s}.88**/27**, mb3.9**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	2.98	262	P	P	18 39 37.4	+1.4
	26nm,0.8s,baz=128,slow=1.9,SNR=23						
MSVF	Nonsavu	2.98	262	P	P	18 39 38.8	+2.7
MSVF				S	S	18 40 38.6	-1.9
LIFNC	LIFOU	13.58	253	P	P	18 41 10.8	-0.9
DZM	Mont Dzumac	14.61	249	P	P	18 41 21.7	-0.1
	5.3nm,0.9s,baz=60,slow=7.3,SNR=2.2						
ARMA	Armidale	29.86	239	P	P	18 43 37.7	+0.1
ARMA				IAmb	IAmb	18 44 06.7	
	comp=Z,14nm,1.3s						
CTAO	Charters Tower	33.12	260	P	P	18 44 06.4	+1.0
CTAO				IAmb	IAmb	18 44 43.7	
	comp=Z,12nm,1.2s						
STKA	Stephens Creek	38.53	240	P	P	18 44 49.2	-0.4
	comp=Z,1.4nm,0.5s,baz=95,slow=9.9,SNR=8.0						
	comp=Z,1.4nm,0.5s						
STKA	Stephens Creek	38.53	240	P	P	18 44 49.1	-0.6
BBOO	Buckleboo	43.30	240	P	P	18 45 26.8	-0.6
WB0	Warramunga Arr	44.28	259	P	P	18 45 34.9	-0.3
WB0				IAmb	IAmb	18 45 35.9	
	comp=Z,3.5nm,0.8s						
WB2	Warramunga Arr	44.30	259	P	P	18 45 35.1	-0.2
WB2				IAmb	IAmb	18 46 17.4	
	comp=Z,11nm,1.5s						
WRAB	Tennant Creek	44.30	259	P	P	18 45 35.3	-0.1
WRA	Warramunga Arr	44.31	259	P	P	18 45 35.0	-0.5
	comp=Z,1.2nm,0.5s,baz=94,slow=7.1,SNR=58						
	comp=Z,1.2nm,0.5s						
WRA	Warramunga Arr	44.31	259	P	P	18 45 34.5	-0.9
AS31	Alice Springs	44.53	254	P	P	18 45 37.2	+0.1
AS31				IAmb	IAmb	18 45 38.2	
	comp=Z,2.2nm,0.5s						
ASAR	Alice Springs	44.53	254	P	P	18 45 37.0	-0.1
	comp=Z,7.3nm,0.6s,baz=86,slow=8.6,SNR=210						
	comp=Z,7.3nm,0.6s						
ASAR	Alice Springs	44.53	254	P	P	18 45 36.5	-0.6
PSA00	Pilbara Seismi	57.64	255	P	P	18 47 11.5	0.0
PEA0B	Petropavlovsk-	73.03	345	P	P	18 48 46.3	-0.5
PETK	Petropavlovsk-	73.03	345	P	P	18 48 47.0	+0.2
TX32	Lajitas Array	86.06	58	P	P	18 49 55.1	-0.6
TX32				IAmb	IAmb	18 50 29.5	
	comp=Z,3.9nm,1.5s						
TXAR	Lajitas Array	86.06	58	P	P	18 49 55.4	-0.2
	comp=Z,0.4nm,0.6s,baz=214,slow=6.2,SNR=5.6						
	comp=Z,0.4nm,0.6s						
TXAR	Lajitas Array	86.06	58	P	P	18 49 55.8	+0.1
PDAR	Pinedale Array	87.24	44	P	P	18 50 00.5	-0.6
	comp=Z,0.2nm,0.4s,baz=197,slow=2.8,SNR=2.2						
	comp=Z,0.2nm,0.4s						
PDAR	Pinedale Array	87.24	44	P	P	18 50 00.8	-0.3
GERES	GERESS Array B	146.96	345	PKPbc	PKPbc	18 56 53.8	+0.5
	comp=Z,0.3nm,0.4s,baz=57,slow=3.6,SNR=4.2						

IDC 22 18:53:51.2±65.0**, 13°.42S**×**169°.82E, h0^{km}, mb3.8**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=1119.0km s-min=130.2km az=65.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	31.72	230	P	P	19 00 17.1	+0.1
	1.4nm,0.7s,baz=81,slow=12,SNR=4.2						
	1.4nm,0.7s						
WRA	Warramunga Arr	34.55	254	P	P	19 00 41.7	-0.2
	0.6nm,0.8s,baz=86,slow=8.8,SNR=5.6						
	0.6nm,0.8s						
ASAR	Alice Springs	35.45	248	P	P	19 00 49.5	-0.1
	0.7nm,0.4s,baz=77,slow=9.1,SNR=38						
	0.7nm,0.4s						

BJI ***22*** *18:57:14.6±0.0, 38°.70N×72°.62E, h86^{km}, mb4.1/12, mB4.7/5*

IDC ***22*** *18:57:15.1±4.0, 38°.35N×72°.77E, h95^{km}±30^{km}, mb3.5/10, mbtmp3.9/14, Error ellipse: s-maj=29.5km s-min=18.6km az=11.0*

MOS ***22*** *18:57:15.7±0.9, 38°.49N×72°.69E, h108^{km}, mb4.1/11, Error ellipse: s-maj=10.2km s-min=5.5km az=80.4*

NEIC ***22*** *18:57:16.6±2.0, 38°.54N±0°.06×72°.63E±0°.09, h92^{km}±9^{km}, mb4.3/39, Error ellipse: s-maj=10.8km s-min=8.2km az=86.0*

SOME ***22*** *18:57:20.7, 39°.43N×72°.62E, h15^{km}*

NNC ***22*** *18:57:24.5±4.5, 39°.53N×72°.83E, h0^{km}, mb4.2, mpv4.0, Error ellipse: s-maj=41.0km s-min=26.4km az=17.0*

ISC 22 18:57:15.9±0.5**, 38°.46N**±0°.05×**72°.62E**±0°.04**, h100^{km}, n165, σ2^{s}.04**/159**, mb4.2**/44**, 12C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	1.20	328		Pn	18 57 36.0	-2.8
DRK				Sn	Sn	18 57 54.8	-1.3
GAR	Garm	1.88	287	Pn	Pn	18 57 48.0	+1.1
BTK	Batken	2.12	319		Pn	18 57 52.3	+2.3
BTK	Batken	2.12	319	PN	Pn	18 57 52.3	+2.3
CHGR	Chuyangaron	2.72	275		Pn	18 57 58.5	+0.6
CHGR	Chuyangaron	2.72	275	PN	Pn	18 57 58.5	+0.6
KSH	Kashi	2.82	67	P	Pn	18 57 54.8	-4.5
KSH				S	Sn	18 58 24.9	-7.8
KSH				smax	smax		
	comp=N,2µm,0.6s						
KSH				smax	smax		
	comp=E,980nm,0.7s						
AML	Almayashu	3.75	12	P	Pn	18 58 13.6	+1.5
	SNR=78						
UCH	Uchtor	4.03	20	P	Pn	18 58 17.4	+1.5
	SNR=38						
IUG	Iuzhnay	4.18	333	Pg	Pn	18 58 19.1	+1.6
	49nm,0.4s						
IUG				Lg	Lg	18 59 04.8	
	105nm,0.4s						
IUG	Iuzhnay	4.18	333	ePg	Pn	18 58 21.5	+4.0
	49nm,0.4s						
IUG				eLg	Lg	18 59 05.5	
	105nm,0.4s						
EKS2	Erkin-Say	4.29	12	P	Pn	18 58 20.8	+1.8
	SNR=18						
MRKS	Merke	4.30	6	Pg	Pn	18 58 21.2	+2.0
	20nm,0.4s						
MRKS				Lg	Lg	18 59 08.5	
	110nm,0.3s						
MRKS	Merke	4.30	6	ePg	Pn	18 58 23.2	+4.0
	20nm,0.4s						
MRKS				eLg	Lg	18 59 08.5	
	110nm,0.3s						
AAK	Ala-Archa	4.41	18	P	Pn	18 58 22.9	+2.2
	SNR=14						
AAK	Ala-Archa	4.41	18	P	Pn	18 58 21.9	+1.3
	15nm,0.4s,baz=189,slow=6.3,SNR=114						
AAK				S	Sn	18 59 11.8	+0.8
	55nm,0.4s,baz=336,slow=21,SNR=46						
AAK	Ala-Archa	4.41	18		Pn	18 58 22.7	+2.0
AAK	Ala-Archa	4.41	18	dePN	Pn	18 58 22.6	+1.9
AAK				pmax	pmax		
	comp=Z,10.0nm,0.5s						
DZA	Taraz	4.53	348	Pg	Pn	18 58 23.7	+1.5
	comp=Z,118nm,0.3s						
DZA				Lg	Lg	18 59 12.7	
	comp=Z,188nm,0.3s						
KBK	Karagaybulak	4.55	22	P	Pn	18 58 24.8	+2.2
	SNR=12						
CEP	Cherat	4.67	187	P	Pn	18 58 26.4	+2.2
ULHL	Ulahol	4.68	35	P	Pn	18 58 25.5	+1.1
	SNR=20						
CHMS	Chumysh	4.81	19	P	Pn	18 58 28.0	+2.0
	SNR=17						
CHCP	Chirah Chowk	4.82	174	⇓P	Pn	18 58 27.1	+0.8
NIL	Nilore	4.83	174	Pn	Pn	18 58 27.1	+0.7
NIL	Nilore	4.83	174	PN	Pn	18 58 27.1	+0.7
KBL	Kabul	4.86	217		Pn	18 58 29.6	+2.7
KBL	Kabul	4.86	217	PN	Pn	18 58 29.6	+2.7
KK31	Karatay Array	4.90	342		Pn	18 58 28.7	+1.4
KK31	Karatay Array	4.90	342	⇑P	Pn	18 58 28.6	+1.3
	comp=Z,12nm,0.3s,baz=146,slow=11,SNR=718						
KK31				⇑S	Sn	18 59 22.2	-0.6
	comp=Z,16nm,0.2s						
KK31	Karatay Array	4.90	342	PN	Pn	18 58 28.7	+1.4
KKAR	Karatay Array	4.90	342		Pn	18 58 28.5	+1.3
KKAR	Karatay Array	4.90	342		Pn	18 58 28.7	+1.4
KKAR	Karatay Array	4.90	342	PN	Pn	18 58 28.7	+1.4
TKM2	Tokmak 2	5.00	26	P	Pn	18 58 30.3	+1.6
	SNR=13						
USP	Ospenovka	5.01	16	P	Pn	18 58 30.3	+1.6
	SNR=9.6						
KDJ	Kajisay	5.06	42	Pn	Pn	18 58 30.1	+0.7
KDJ	Kajisay	5.06	42	PN	Pn	18 58 30.2	+0.7
KST	Kastek	5.23	28	ePg	Pn	18 58 36.5	+4.7
	comp=Z,5.8nm,0.4s						
KST				eLg	Lg	18 59 30.8	
	comp=Z,45nm,0.3s						
THW	Thamme Wali	5.70	187	P	Pn	18 58 37.5	-0.6
MDOK	Medeo	5.77	34	P	Pn	18 58 39.6	+0.4
	comp=Z,11nm,0.8s						
MDOK	Medeo	5.77	34	PN	Pn	18 58 39.6	+0.4
JMU	Jammu	6.03	161	eP	Pn	18 58 41.1	-1.4
JMU				eS	Sn	18 59 43.2	-6.9
KUU	Kurty	6.11	26	Pg	Pn	18 58 56.4	+13
	comp=Z,3.2nm,0.8s						
KUU				Lg	Lg	19 00 09.5	
	comp=Z,12nm,0.8s						
KUU	Kurty	6.11	26	ePg	Pn	18 58 57.1	+14
	comp=Z,2.9nm,0.2s						
KUU				eLg	Lg	19 00 06.4	
	comp=Z,12nm,0.8s						
THN	Thein Dam	6.53	156	eP	Pn	18 58 48.2	-1.0
THN				eS	Sn	18 59 55.5	-6.7
THN				IAML		19 00 02.1	
	comp=N,192nm,0.5s						
THN				IAML		19 00 02.3	
	comp=E,161nm,0.3s						
PDGK	Podgornoye	7.12	45	⇑P	Pn	18 58 57.3	-0.2
	comp=E,6.4nm,0.6s						
PDGK	Podgornoye	7.12	45	PN	Pn	18 58 57.3	-0.2
BHK	Bhakra	7.69	155	eP	Pn	18 59 03.6	-1.6
BHK				eS	Sn	19 00 22.7	-8.0
SMLA	Simla	8.22	152	eP	Pn	18 59 09.5	-2.7
SMLA				eP	Pn	18 59 09.6	-2.7
SMLA				eS	Sn	19 00 32.1	-11
SMLA				eS	Sn	19 00 32.6	-11
SMLA				IAML		19 00 38.7	
	comp=N,157nm,0.5s						
SMLA				IAML		19 00 38.7	
	comp=N,165nm,0.4s						
SMLA				IAML		19 00 38.9	
	comp=E,128nm,0.5s						
SMLA				IAML		19 00 39.3	
	comp=E,153nm,0.5s						
DDI	Dehra Dun	9.28	149	eP	Pn	18 59 24.4	-2.4
DDI				eS	Sn	19 00 56.7	-13
DDI				eS	Sn	19 00 57.0	-12
KUDL	Kundal	10.79	161	eP	Pn	18 59 41.8	-5.5
KUDL				eS	Sn	19 01 32.7	-13
MAKZ	Makanchi	10.81	37	Pn	Pn	18 59 47.9	+0.4
MAKZ	Makanchi	10.81	37	P	Pn	18 59 47.9	+0.4
MK31	Makanchi Array	10.95	37		Pn	18 59 49.2	-0.2
MK31	Makanchi Array	10.95	37	P	Pn	18 59 49.2	-0.2
MKAR	Makanchi Array	10.95	37	P	Pn	18 59 48.8	-0.6
	comp=E,4.0nm,0.8s,baz=228,slow=14,SNR=46						
MKAR	Makanchi Array	10.95	37	Pn	Pn	18 59 49.9	+0.6
MKAR	Makanchi Array	10.95	37	i P	Pn	18 59 50.0	+0.6
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LGTI	Lohaghat	10.99	143	eP	Pn	18 59 43.8	-6.2
LGTI				eS	Sn	19 01 34.7	-16
LGTI				IAML		19 01 42.0	
	comp=E,30nm,0.5s						
GEYT	Alibeck	11.42	272	P	Pn	18 59 53.2	-2.6
	comp=E,0.8nm,0.3s,baz=100,slow=8.4,SNR=8.7						
GEYT				S	Sn	19 01 54.0	-7.5
	comp=E,1.1nm,0.4s,baz=192,slow=26,SNR=2.5						
GYA0B	ALIBECK ARRAY	11.42	272	Pn	Pn	18 59 53.9	-2.0
WMQ	Urumqi	12.56	60	eP	Pn	19 00 12.8	+1.9
KURBB	Kurchatov Arra	12.86	17	P	Pn	19 00 13.2	-1.6
	comp=E,1.0nm,0.6s,baz=205,slow=12,SNR=7.3						
KURK	Kurchatov	12.97	17	i P	Pn	19 00 13.7	-2.5
PYUN	Piuthan	13.48	137	eP	Pn	19 00 15.5	-7.8
	comp=E,34nm,0.4s						
DANN	Dangsing	13.71	134	eP	Pn	19 00 19.3	-7.0
	comp=E,22nm,0.3s						
AB31	Akbulak array	14.12	324	P	Pn	19 00 28.8	-2.3
ABKAR	Akbulak array	14.12	324	Pn	Pn	19 00 28.8	-2.4
GKN	Gorkha	14.48	133	eP	Pn	19 00 28.8	-7.3
	comp=E,16nm,0.3s						
BVA0	Borovoye Array	14.64	355	P	Pn	19 00 36.8	-1.1
BVAR	Borovoye Array	14.64	355	P	Pn	19 00 36.3	-1.6
	comp=E,1.0nm,0.4s,baz=153,slow=12,SNR=10						
BVAR				S	Sn	19 03 12.2	-7.0
	comp=E,0.8nm,0.6s,baz=149,slow=20,SNR=3.7						
BRVK	Borovoye	14.69	354	i P	Pn	19 00 37.0	-1.4
DMN	Daman	15.05	132	eP	Pn	19 00 36.0	-7.4
PKIN	Phulchoki	15.24	132	eP	Pn	19 00 39.5	-6.4
PKI	Pulchoki	15.25	132	eP	Pn	19 00 39.4	-6.7
	comp=E,7.9nm,0.4s						
GUN	Gumba	15.28	130	eP	Pn	19 00 40.0	-6.5
	comp=E,11nm,0.4s						
DGZ	Jazzator, Alta	15.44	39	i P	Pn	19 00 47.1	-1.1
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.5s						
JIRN	Jiri	15.65	129	eP	Pn	19 00 45.2	-5.9
	comp=Z,11nm,0.3s						
AKTO	Aktyubinsk	15.84	324	P	Pn	19 00 51.5	-1.4
	comp=Z,1.8nm,0.4s,baz=134,slow=10,SNR=8.5						
AKTO				S	Sn	19 03 40.0	-8.0
	comp=Z,1.9nm,0.7s,baz=20,slow=18,SNR=3.7						
AKTO	Aktyubinsk	15.84	324	P	Pn	19 00 51.9	-1.0
RAMN	Ramite	16.42	130	eP	Pn	19 00 53.3	-7.3
	comp=Z,13nm,0.4s						
TAPN	Taplejung	16.81	127	eP	Pn	19 00 58.9	-6.5
	comp=Z,17nm,0.6s						
ZAA0	Zalesovo Array	17.60	24	P	P	19 01 13.4	-0.7
ZALV	Zalesovo Beam	17.60	24	P	P	19 01 13.5	-0.6
	comp=Z,4.5nm,0.5s,baz=220,slow=10,SNR=26						
ZALV	Zalesovo Beam	17.60	24	P	P	19 01 13.2	-0.9
GTA	Gaotai	21.15	79	eP	P	19 01 53.8	+0.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BELG	Belogornoye	22.25	317	P	P	19 02 08.8	+4.5
	comp=Z,3.1nm,0.5s,baz=306,slow=2.4,SNR=6.4						
KBZ	Khabaz	22.94	293	i P	P	19 02 12.2	+0.8
KIV	Kislovodsk	23.10	293	eP	P	19 02 12.6	-0.5
KIV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TNCH	TengChong	25.68	114	eP	P	19 02 40.8	+4.1
TNCH				pmax	pmax		
	comp=Z,6.0nm,3.0s						
SONM	Songino Array	26.18	58	P	P	19 02 41.8	+0.7
	comp=Z,0.8nm,0.8s,baz=286,slow=12,SNR=5.3						
	comp=Z,0.8nm,0.8s						
ULN	Ulaanbaatar	26.63	58	i P	P	19 02 44.8	-0.3
ULN				pmax	pmax		
	comp=Z,8.0nm,3.1s						
PZH	PanZhiHua	27.20	107	P	P	19 02 52.6	+2.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,5.9s						
OBN	Obninsk	29.35	316	⇑eP	P	19 03 09.8	+0.9
OBN				e		19 04 12.8	
OBN				pmax	pmax		
	comp=Z,25nm,1.8s						
OBN				MLR	MLR		
	comp=Z,30nm,8.0s						
HHC	Hu-ho-hao-te	29.92	73	eP	P	19 03 17.8	+3.5
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,5.8s						
NRIK	Noril'sk	31.97	10	ceP	P	19 03 33.3	+1.4
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	Malin Array Be	32.77	306	P	P	19 03 40.4	+1.2
	comp=Z,0.2nm,0.2s,baz=74,slow=6.9,SNR=4.4						
	comp=Z,0.2nm,0.2s						
AKASG	Malin Array Be	32.77	306	ceP	P	19 03 40.9	+1.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
XLT	XiLinHaoTe	32.87	66	eP	P	19 03 42.8	+2.6
XLT				pP	pP	19 04 05.3	+1.1
XLT				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XLT				pmax	pmax		
	comp=Z,79nm,4.9s						
FINES	FINESS Array B	36.61	324	P	P	19 04 13.7	+1.7
	comp=Z,1.8nm,0.7s,baz=126,slow=9.7,SNR=7.5						
	comp=Z,1.8nm,0.7s						
FINES	FINESS Array B	36.61	324	ceP	P	19 04 13.8	+1.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	ARCESS Array B	39.84	336	P	P	19 04 40.5	+1.5
	comp=Z,2.8nm,0.9s,baz=98,slow=8.7,SNR=8.4						
	comp=Z,2.8nm,0.9s						
ARCES	ARCESS Array B	39.84	336	P	P	19 04 40.9	+1.8
ARCES				IAmb	IAmb	19 05 18.0	
	comp=Z,3.0nm,0.9s						
ARCES	ARCESS Array B	39.84	336	P	P	19 04 40.9	+1.8
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HEH	HeiHe	40.05	55	eP	P	19 04 42.0	+1.0
HEH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
YAK	Yakutsk	41.62	37	ceP	P	19 04 53.8	+0.1
YAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KLR	Kul'dur	42.96	56	P	P	19 05 04.8	0.0
	comp=Z,1.1nm,0.5s,baz=263,slow=6.3,SNR=6.6						
	comp=Z,1.1nm,0.5s						
KLR	Kul'dur	42.96	56	i P	P	19 05 04.0	-0.8
KLR				pmax	pmax		
	comp=Z,8.0nm,2.3s						
TIXI	Tiksi	43.47	23	P	P	19 05 09.2	+0.6
TIXI				IAmb	IAmb	19 05 10.1	
	comp=Z,4.3nm,0.5s						
TIXI	Tiksi	43.47	23	ceP	P	19 05 09.4	+0.8
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NC303	NORSAR Array S	43.55	322	P	P	19 05 11.3	+2.0
NB201	NORSAR Array S	43.57	322	P	P	19 05 11.6	+2.0
NB2	NORSAR Subarra	43.61	322	P	P	19 05 11.2	+1.3
	comp=Z,0.8nm,0.6s,baz=93,slow=8.6						
NOA	NORSAR Array B	43.61	322	P	P	19 05 10.9	+1.0
	comp=Z,1.0nm,0.6s,baz=92,slow=7.9,SNR=3.6						
	comp=Z,1.0nm,0.6s						
NC204	NORSAR Array S	43.84	322	P	P	19 05 13.2	+1.5
BILL	Bilibino	56.28	27	⇑eP	P	19 06 46.1	+0.6
BILL				e		19 08 47.9	
BILL				ePPP	PPP	19 10 07.3	
BILL				pmax	pmax		
	comp=Z,5.0nm,2.1s						
BILL				MLR	MLR		
	comp=Z,21nm,15.0s						
TORD	Torodi Ar. Bea	67.05	269	P	P	19 07 58.6	0.0
	comp=Z,0.4nm,0.4s,baz=47,slow=6.0,SNR=2.8						
IMAR	Indian Mountai	69.91	18	P	P	19 08 16.2	+0.6
H21K	Melozitna Rive	70.41	18	P	P	19 08 19.2	+0.5
BMAR	Burnt Mountain	70.73	14	P	P	19 08 22.4	+1.7
I21K	Tanana	71.00	18	P	P	19 08 23.2	+0.9
I21K				IAmb	IAmb	19 08 41.3	
	comp=Z,7.6nm,1.5s						
FYU	Fort Yukon	71.35	15	P	P	19 08 25.4	+1.1
FYU				IAmb	IAmb	19 08 42.6	
	comp=Z,10nm,1.5s						
H24K	Noodor Dome	71.41	16	P	P	19 08 26.1	+1.2
MLY	Manley	71.42	18	P	P	19 08 26.1	+1.2
INK	Inuvik	71.76	10	P	P	19 08 26.8	+0.1
	comp=Z,1.1nm,0.6s,baz=339,slow=5.7,SNR=4.9						
	comp=Z,1.1nm,0.6s						
INK	Inuvik	71.76	10	P	P	19 08 28.3	+1.6
INK	Inuvik	71.76	10	P	P	19 08 28.3	+1.6
INK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
K20K	Telida	71.93	20	P	P	19 08 29.2	+1.2
K20K				IAmb	IAmb	19 08 29.7	
	comp=Z,1.7nm,0.7s						
MDM	Murphy Dome	72.07	17	P	P	19 08 30.0	+1.3
MDM				IAmb	IAmb	19 08 30.3	
	comp=Z,1.8nm,0.7s						
BPAW	Bear Paw Mtn.	72.13	19	P	P	19 08 30.5	+1.3
NEA2	Nenana	72.19	18	P	P	19 08 30.4	+1.0
NEA2				IAmb	IAmb	19 08 42.4	
	comp=Z,6.1nm,1.5s						
CAST	Castle Rocks	72.41	19	P	P	19 08 32.1	+1.3
CAST				IAmb	IAmb	19 08 32.6	
	comp=Z,2.9nm,0.8s						
ILAR	Eielson Array	72.54	17	P	P	19 08 31.2	-0.3
	comp=Z,0.9nm,0.8s,baz=329,slow=3.9,SNR=8.0						
	comp=Z,0.9nm,0.8s						

ILAR	Eielson Array	72.54	17	P	P	19 08 32.0	+0.5
ILAR	Eielson Array	72.54	17	P	P	19 08 32.0	+0.5
KTH	Kantishna Hill	72.60	19	P	P	19 08 32.9	+0.9
KTH				IAmb	IAmb	19 08 33.9	
	comp=Z,3.3nm,1.0s						
PPLA	Purkeypile	72.81	20	P	P	19 08 34.3	+1.0
SKT	Skwentna	73.74	20	P	P	19 08 39.1	+0.5
SKT				IAmb	IAmb	19 08 59.9	
	comp=Z,8.8nm,1.5s						
SCRK	Sand Creek	73.86	16	P	P	19 08 40.1	+0.7
SCRK				IAmb	IAmb	19 08 41.1	
	comp=Z,1.3nm,0.6s						
RIDG	Independent Ri	73.88	16	P	P	19 08 39.9	+0.4
RIDG				IAmb	IAmb	19 08 40.5	
	comp=Z,3.8nm,1.1s						
DOT	Dot Lake	74.14	16	P	P	19 08 41.8	+0.9
DOT				IAmb	IAmb	19 09 18.6	
	comp=Z,4.3nm,1.4s						
SUA	Susitna One	74.38	20	P	P	19 08 43.0	+0.6
SUA				IAmb	IAmb	19 09 02.5	
	comp=Z,7.6nm,1.4s						
O18K	Koktuh Hills	74.41	23		P	19 08 44.2	+1.6
PAX	Paxson	74.41	17	P	P	19 08 43.3	+0.7
PAX				IAmb	IAmb	19 08 43.9	
	comp=Z,5.5nm,1.1s						
PAX	Paxson	74.41	17	P	P	19 08 43.3	+0.7
PAX				pmax	pmax		
	comp=Z,6.0nm,1.1s						
DAWY	Dawson	74.72	14	P	P	19 08 44.8	+0.5
SML	Sawmill	74.72	19	P	P	19 08 45.2	+0.9
P18K	Big Mountain,	74.78	23	P	P	19 08 46.0	+1.3
SCM	Sheep Creek Mo	74.95	18	P	P	19 08 46.5	+0.8
SCM	Sheep Creek Mo	74.95	18	P	P	19 08 46.5	+0.8
SCM				pmax	pmax		
	comp=Z,20nm,1.4s						
RC01	Rabbit Creek A	74.96	20	P	P	19 08 46.2	+0.5
RC01				IAmb	IAmb	19 09 01.6	
	comp=Z,5.9nm,1.0s						
M24K	Tolsona, Glenn	74.99	18	P	P	19 08 47.7	+1.8
KNK	Knik Glacier	75.02	19	P	P	19 08 46.7	+0.6
L27K	Beaver Creek,	75.13	15	P	P	19 08 46.8	+0.1
BCAR	Beaver Creek A	75.14	15	P	P	19 08 47.0	+0.2
KLU	Klutina	75.59	18	P	P	19 08 49.9	+0.5
KLU				IAmb	IAmb	19 09 11.0	
	comp=Z,6.7nm,1.4s						
M27K	Edge Creek, AK	75.75	16	P	P	19 08 52.0	+1.6
M27K				IAmb	IAmb	19 09 05.0	
	comp=Z,4.9nm,1.4s						
BRLK	Bradley Lake	75.75	21	P	P	19 08 49.8	-0.5
BRLK				IAmb	IAmb	19 09 02.0	
	comp=Z,7.2nm,1.0s						
N25K	Chitina, Valde	75.80	17	P	P	19 08 53.3	+2.7
N25K				IAmb	IAmb	19 08 53.7	
	comp=Z,10nm,1.4s						
VRDI	Verde Repeater	76.40	17	P	P	19 08 55.1	+0.9
VRDI				IAmb	IAmb	19 09 31.6	
	comp=Z,9.6nm,1.4s						
YKA	Yellowknife Ar	79.22	3	P	P	19 09 09.4	-0.1
	comp=Z,0.6nm,0.6s,baz=349,slow=5.4,SNR=14						
	comp=Z,0.6nm,0.6s						
YKA	Yellowknife Ar	79.22	3	ceP	P	19 09 10.5	+1.0
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	81.96	123	P	P	19 09 23.1	-1.7
	comp=Z,0.4nm,0.7s,baz=320,slow=4.6,SNR=5.9						
	comp=Z,0.4nm,0.7s						
WRA	Warramunga Arr	81.96	123	ceP	P	19 09 24.0	-0.7

ANF ***22*** *18:57:31.2±1.1, 32°.20N×115°.22W, h17^{km}±8^{km}, ML3.9/22, Error ellipse: s-maj=3.6km s-min=1.6km az=22.0*

MEX ***22*** *18:57:32.1±0.6, 32°.38N×115°.00W, h40^{km}±4^{km}, MD4.0*

PAS ***22*** *18:57:33.0±2.6, 32°.23N±0°.02×115°.23W±0°.03, h18^{km}±5^{km}, ML4.0/288, ML3.8/58(NEIC), Error ellipse: s-maj=3.9km s-min=2.7km az=136.0*

NEIC ***22*** *18:57:32.8±2.1, 32°.22N±0°.02×115°.22W±0°.02, h22^{km}±7^{km}, Error ellipse: s-maj=3.4km s-min=2.3km az=195.0*

ECX ***22*** *18:57:33.8±0.7, 32°.19N×115°.27W, h7^{km}±4^{km}, MD3.6, ML4.0, Fault plane solution: NP1:φs21.00000°, δ18.00000°, λ-57.00000°.*

ISC 22 18:57:31.9±0.8**, 32°.17N**±0°.02×**115°.24W**±0°.02**, h18**^{km}±4^{km}**, n145,** σ**1^{s}10**/186**, 9C-5D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RHX	Rio Hardy	0.05	222	⇓eP	Pg	18 57 35.1	-0.2
RHX				eS	Sg	18 57 36.8	-0.6
RHX				⇓e		18 57 37.1	
RHX				IAML		18 57 37.1	
	comp=N,67µm,0.2s						
GUVIX	Guadalupe Vict	0.19	48		Pg	18 57 37.2	+0.4
GUVIX	Guadalupe Vict	0.19	48	⇑iP	Pg	18 57 37.2	+0.4
GUVIX				iS	Sg	18 57 41.0	+0.9
MBIG	Mexicali	0.24	9	eP	Pb	18 57 37.9	+0.4
MBIG	Mexicali	0.24	9	eP	Pg	18 57 37.5	+0.1
MBIG				eP	Pb	18 57 37.7	+0.2
MBIG				eS	Sg	18 57 42.0	+0.8
MBIG				eS	Sb	18 57 42.6	+1.5
RITX	Riito Sonora	0.24	92	⇑iP	Pb	18 57 38.6	+1.1
RITX				eS	Sg	18 57 43.0	+1.7
CPBX	Cerro Prieto	0.25	348		Pg	18 57 37.7	0.0
CPBX	Cerro Prieto	0.25	348	IAML		18 57 44.0	
	comp=E,113µm,0.5s						
CPBX				IAML		18 57 47.5	
	comp=N,69µm,0.4s						
CPBX	Cerro Prieto	0.25	348	⇓eP	Pg	18 57 37.7	0.0
CPBX				eS	Sb	18 57 41.9	+0.2
CPBX				⇑e		18 57 47.5	
CPBX				IAML		18 57 47.5	
	comp=N,88µm,0.4s						
CTLX	Tlaxcala, TLX	0.31	16	eP	Pg	18 57 38.9	+0.2
CTLX				eS	Sb	18 57 43.9	+0.2
YUCAX	Ej. Yucat¡n	0.45	16	eP	Pb	18 57 41.6	+0.2
YUCAX				⇑e		18 57 49.9	
YUCAX				IAML		18 57 49.9	
	comp=E,20µm,0.2s						
POT2	Potabilizadora	0.47	345	eP	Pb	18 57 42.0	+0.4
EDOMX	El Doctor, EDO	0.47	117	⇑eP	Pb	18 57 42.8	+1.1
UABX	UABC, Campus M	0.49	340		Pb	18 57 42.3	+0.3
UABX					Sb	18 57 49.9	+1.1
UABX	UABC, Campus M	0.49	340	IAML		18 57 50.5	
	comp=E,30µm,0.8s						
UABX				IAML		18 57 50.6	
	comp=N,61µm,0.4s						
UABX	UABC, Campus M	0.49	340	eP	Pb	18 57 42.3	+0.3
SLRCX	San Luis Rio C	0.54	58		Pb	18 57 43.0	+0.2
SLRCX					Sb	18 57 50.9	+0.7
SLRCX	San Luis Rio C	0.54	58	eP	Pb	18 57 43.0	+0.2
SLRCX				eS	Sb	18 57 51.1	+1.0
CEA0	Mexicali	0.60	323	eP	Pg	18 57 44.0	+0.2
EMSC	East Mesa	0.60	21		Pb	18 57 44.0	0.0
EMSC					Sb	18 57 53.2	+1.1
EMSC	East Mesa	0.60	21	eP	Pb	18 57 43.9	0.0
EMSC				eS	Sb	18 57 52.9	+0.8
ESJX	Sierra Juarez	0.62	255		Pg	18 57 45.0	+0.7
ESJX					Sb	18 57 53.6	+0.9
ESJX	Sierra Juarez	0.62	255	IAML		18 57 54.9	
	comp=E,14µm,0.1s						
ESJX				IAML		18 57 54.9	
	comp=N,10µm,0.2s						
SGL	Mount Signal	0.62	320		Pb	18 57 44.2	-0.1
SGL					Sb	18 57 52.6	-0.1
SGL	Mount Signal	0.62	320	eP	Pb	18 57 44.2	-0.1
SGL				eS	Sb	18 57 52.6	-0.1
DREC	Desert Rsrch C	0.65	345		Pb	18 57 44.9	+0.1
DREC					Sn	18 57 55.4	-0.7
DREC	Desert Rsrch C	0.65	345	eP	Pg	18 57 45.0	+0.1
COA	Coachella	0.70	8		Pb	18 57 45.0	-0.5
COA					Sn	18 57 56.1	-1.0
SNR	Schaffner Ranc	0.71	347		Pg	18 57 46.1	+0.2
SNR					Sn	18 57 56.4	-1.0
WESC	Westside Schoo	0.71	325		Pg	18 57 46.1	+0.1
WESC					Sg	18 57 56.4	+0.8
WESC	Westside Schoo	0.71	325	⇑eP	Pg	18 57 46.1	+0.1
SJX	San Joaquin	0.73	236	⇑iP	Pb	18 57 45.1	-1.0
SJX				eS	Sb	18 57 53.4	-2.4
SJX				IAML		18 57 55.0	
	comp=N,14µm,0.2s						
SJX				⇑e		18 57 55.0	
YUH	Yuha Desert	0.74	310		Pb	18 57 45.9	-0.4
YUH					Sb	18 57 55.9	-0.3
YUH	Yuha Desert	0.74	310		Pb	18 57 45.8	-0.6
YUH	Yuha Desert	0.74	310	IAML		18 57 56.5	
	comp=E,4µm,0.4s						
YUH				IAML		18 57 57.6	
	comp=N,3µm,0.7s						
YUH2	Yuha Desert	0.74	310	eP	Pb	18 57 46.1	-0.2
IMPE	Imperial	0.77	340		Pb	18 57 46.8	-0.1
IMPE					Sg	18 57 58.2	+0.8
COK2	Cook Ranch 2	0.79	329		Pb	18 57 47.0	-0.1
COK2					Sg	18 57 58.1	+0.2
COK2	Cook Ranch 2	0.79	329	eP	Pb	18 57 47.0	-0.1
RMX	La Rumorosa	0.83	301		Pb	18 57 46.7	-1.1
RMX					Sb	18 57 56.8	-1.8
RMX	La Rumorosa	0.83	301	⇑eP	Pb	18 57 46.8	-1.1
RMX				eS	Sb	18 57 56.6	-2.1
RMX				IAML		18 57 57.3	
	comp=E,5µm,0.4s						
RMX				IAML		18 57 57.5	
	comp=N,5µm,0.3s						
RMX				⇓e		18 57 57.5	
RUN	Ruthven	0.83	16		Pb	18 57 46.7	-1.1
RUN					Sg	18 57 58.9	-0.3
IKP	In-Ko-Pah, Jac	0.87	303		Pb	18 57 48.3	-0.4
IKP					Sb	18 57 60.0	0.0
IKP	In-Ko-Pah, Jac	0.87	303	eP	Pb	18 57 48.3	-0.4
IKP	In-Ko-Pah, Jac	0.87	303	P	Pb	18 57 48.2	-0.4
	baz=120,SNR=670						
IKP				S	Sb	18 58 00.0	0.0
	baz=120						
SWSC	Sam W. Stewart	0.90	329	P	Pb	18 57 47.9	-1.1
	baz=146,SNR=151						
SWSC				S	Sb	18 58 00.5	-0.3
	baz=146						
VTX	Valle De La Tr	0.91	211		Pn	18 57 50.0	+0.2
VTX					Sn	18 58 02.8	+0.3
VTX	Valle De La Tr	0.91	211	IAML		18 58 03.8	
	comp=E,3µm,0.5s						
CRR	Carrizo Plain	0.94	319		Pb	18 57 48.7	-1.0
GLA	Glamis	0.94	22		Pb	18 57 48.5	-1.3
GLA					Sb	18 58 01.5	-0.5
GLA	Glamis	0.94	22	Pg	Pb	18 57 48.3	-1.5
GLA	Glamis	0.94	22	IAML		18 58 02.1	
	comp=E,3µm,0.7s						
GLA				IAML		18 58 02.5	
	comp=N,2µm,0.5s						
GLA	Glamis	0.94	22	P	Pb	18 57 48.6	-1.2
	baz=202,SNR=715						
GLA				S	Sb	18 58 01.2	-0.8
	baz=202						
SPIG	San Pedro Mart	1.14	190	eP	Pn	18 57 53.4	+0.1
SPIG				eS	Sg	18 58 10.3	+1.2
SFX	San Felipe	1.18	163		Pb	18 57 54.3	+0.5
SFX				IAML		18 58 12.6	
	comp=N,1µm,0.4s						
SFX				IAML		18 58 14.9	
	comp=E,1µm,0.7s						
SFX	San Felipe	1.18	163	⇓eP	Pn	18 57 52.9	-0.6
SFX	San Felipe	1.18	163	eP	Pn	18 57 52.6	-0.9
SFX				eS	Sn	18 58 09.4	+0.3
CBX	Cerro Bola	1.21	277		Pn	18 57 54.0	-0.1
CBX				IAML		18 58 15.8	
	comp=E,2µm,0.5s						
CBX				IAML		18 58 22.4	
	comp=N,2µm,0.7s						
CBX	Cerro Bola	1.21	277		Sg	18 58 11.1	-0.2
CBX	Cerro Bola	1.21	277	eP	Pn	18 57 53.9	-0.2
CBX				eS	Sn	18 58 10.4	+0.3
TKX	Tecate	1.22	289		Sn	18 58 10.8	+0.6
TKX	Tecate	1.22	289		Pn	18 57 53.6	-0.5
TKX	Tecate	1.22	289	IAML		18 58 11.1	
	comp=E,3µm,0.4s						
TKX				IAML		18 58 11.2	
	comp=N,4µm,0.3s						
MONP2	Monument Peak	1.23	306		Pb	18 57 54.9	+0.2
MONP2	Monument Peak	1.23	306	P	Pn	18 57 53.3	-1.0
	baz=123,SNR=230						
MONP2				S	Sb	18 58 10.2	-0.1
	baz=123						
TJIG	Tijuana	1.24	282	eP	Pn	18 57 54.1	-0.3
TJIG				eS	Sb	18 58 10.5	0.0
CCX	Cicese	1.24	256		Pb	18 57 55.2	+0.3
BAR	Barrett	1.31	293		Pn	18 57 55.3	-0.1
BAR				IAML		18 58 18.4	
	comp=E,2µm,0.2s						
SLH	Sleepy Hollow	1.33	320		Pb	18 57 56.5	+0.2
SLH					Sg	18 58 14.8	-0.1
DUZA	Dulzura	1.36	289		Pn	18 57 56.1	-0.1
DUZA					Sb	18 58 15.0	+0.9
113A	Mohawk Valley,	1.38	64		Pn	18 57 55.5	-0.8
113A				IAML		18 58 21.9	
	comp=N,2µm,1.0s						
113A				IAML		18 58 22.2	
	comp=E,964nm,0.6s						
JUEM	Julian Eagle M	1.46	309		Pn	18 57 57.4	-0.1
BC3	Big Chuckawall	1.49	353	P	Pn	18 57 56.7	-1.1
	baz=172,SNR=154						
OLP	Otay Lakes Par	1.49	287		Pn	18 57 58.0	+0.2
OLP					Sb	18 58 18.6	+0.9
EML	El Monte Cty P	1.53	298		Pn	18 57 58.1	-0.3
EML					Sb	18 58 19.7	+0.9
SDRC	San Diego Road	1.54	292		Sb	18 58 20.3	+1.2
MATG	Mataguay Scout	1.56	311		Pn	18 57 58.6	-0.3
MATG					Sg	18 58 22.1	-0.4
PIX	Pinacate	1.64	111		Pn	18 57 58.7	-1.1
DPP	Dos Picos Cty	1.65	300		Sb	18 58 23.2	+0.9
MTRP	Mission Trails	1.66	293		Sb	18 58 23.8	+1.2
BLYC	Blythe	1.69	21		Pn	18 57 59.8	-0.7
BLYC				IAML		18 58 32.4	
	comp=E,726nm,0.8s						
109C	Camp Elliot, M	1.73	295		Pn	18 58 01.1	+0.1
109C	Camp Elliot, M	1.73	295	P	Pn	18 58 01.1	+0.1
	baz=112,SNR=86						
109C				Sb	Sb	18 58 25.1	+0.7
	baz=112						
CPE	Camp Elliot	1.73	295		Pn	18 58 01.4	+0.4
FRD	Ford Ranch, An	1.75	319		Pn	18 58 00.5	-0.9
PMD	Palm Desert	1.75	327		Pn	18 58 00.1	-1.3
TPFO	Pinon Flats	1.75	325	P	Pn	18 58 00.5	-1.1
	baz=143,SNR=79						
XPFO	Pion Flat	1.76	325		Pn	18 58 00.6	-1.1
PFO	Pinyon Flats O	1.76	325	Pn	Pn	18 58 00.4	-1.2
PFO	Pinyon Flats O	1.76	325	P	Pn	18 58 00.4	-1.2
	baz=143,SNR=29						
PFO				Sb	Sb	18 58 26.3	+0.7
	baz=143						
BZNA	Buzz No.'s Pla	1.78	318		Pb	18 58 04.6	+0.5
PLM	Palomar	1.80	311		Pb	18 58 05.4	+0.9
CRY	Cary Ranch	1.87	318		Pg	18 58 07.3	-0.6
BELC	Belle Mtn. Jos	1.93	341	Pb	Pb	18 58 05.8	-0.8
	baz=160						
GORC	Green Oak Ranc	1.94	301		Pb	18 58 06.8	0.0
IRM	Iron Mountain	1.98	2		Pn	18 58 05.8	+1.2
IRM	Iron Mountain	1.98	2	P	Pn	18 58 03.8	-0.8
	baz=182,SNR=77						
TPC	Twentynine Pal	2.04	341		Pb	18 58 08.5	-0.1
POB	Polly Butte	2.07	317		Pg	18 58 10.6	-1.1
214A	Organ Pipe Nat	2.08	95		Pn	18 58 05.0	-0.9
214A				IAML		18 58 51.6	
	comp=N,437nm,1.1s						
214A	Organ Pipe Nat	2.08	95	eP	Pn	18 58 04.8	-1.0
214A				eS	Sn	18 58 23.7	-7.6
214A	Organ Pipe Nat	2.08	95	P	Pn	18 58 05.0	-0.9
	baz=278						
BACC	Bachelor Mtn.	2.08	314		Pg	18 58 10.8	-1.2
DGR	Domenigoni Val	2.09	315		Pg	18 58 11.0	-1.2
HMTC	Hemet	2.13	316		Pg	18 58 11.7	-1.2
MURC	Murrieta	2.17	311	P	Pn	18 58 07.2	-0.1
	baz=129,SNR=46						
MURC				Sb	Sb	18 58 39.2	+1.9
	baz=129						
PDMCI	Parker Dam,Lak	2.32	23	Sb	Sb	18 58 42.5	+1.1
	baz=204						
ELS	Elsinore Mount	2.35	309		Pb	18 58 14.7	+0.9
ELS	Elsinore Mount	2.35	309		Pn	18 58 09.5	-0.3
ELS	Elsinore Mount	2.35	309	IAML		18 58 45.8	
	comp=N,405nm,0.7s						
ELS				IAML		18 58 53.4	
	comp=E,413nm,1.2s						
Y14A	Wickenburg	2.58	46		Pn	18 58 13.0	+0.2
GMRC	Granite Mounta	2.63	353	P	Pn	18 58 13.0	-0.6
	baz=172,SNR=13						
NEE2	Needles Airpor	2.64	11	P	Pn	18 58 13.5	-0.1
	baz=192,SNR=18						
NEE2				S	Sn	18 58 45.8	+0.6
	baz=192						
BFSC	Mount Baldy Ra	2.89	316	Sb	Sb	18 59 00.3	+2.2
	baz=134						
CIS	Catalina Islan	2.94	295	P	Pn	18 58 17.9	+0.1
	baz=113,SNR=15						
CIS				Sb	Sb	18 59 01.8	+2.4
	baz=113						
FMP	Fort Macarthur	2.99	302	Sb	Sb	18 59 02.9	+2.1
	baz=119						
W13A	Hualapai Mount	3.13	21		Pn	18 58 20.5	-0.1
PASC	Pasadena Art C	3.17	310		Pb	18 58 28.7	+1.0
PASC				IAML		18 59 11.5	
	comp=N,240nm,1.1s						
GR2C	Griffith Obs.	3.21	308		Pn	18 58 23.5	+1.9
TUQ	Turquoise Moun	3.30	350	S	Sn	18 59 01.6	-0.1
	baz=170						
DECC	Green Verdugo	3.32	310	Sb	Sb	18 59 13.5	+3.2
	baz=127						
GSC	Goldstone, Bar	3.38	338		Pb	18 58 30.6	-0.7
GSC				IAML		18 59 43.7	
	comp=E,153nm,0.8s						
V12A	Nelson	3.56	5	Pn	Pn	18 58 25.7	-0.6
CCAC	Calif City Air	3.77	323		Pb	18 58 38.7	+0.8
CCAC				IAML		18 59 37.4	
	comp=E,282nm,1.9s						
CCAC				IAML		19 00 01.6	
	comp=N,222nm,1.1s						
TUC	Tucson	3.78	87		Pn	18 58 28.9	-0.5
TUC				IAML		18 59 51.6	
	comp=N,123nm,1.3s						
TUC	Tucson	3.78	87	P	Pn	18 58 28.4	-1.0
	baz=270						
OSI	Osito Audit: C	3.79	311	Sb	Sb	18 59 26.6	+2.6
	baz=128						
X16A	Lo Mia Camp, P	3.89	54	Pn	Pn	18 58 31.9	+0.9
GWY	Greenwater Val	4.17	344		Pn	18 58 34.5	-0.4
SHPR	Sheep Range	4.32	1	Pn	Pn	18 58 37.9	+1.0
BCW	Bitter Crk WRg	4.44	310		Pb	18 58 45.5	-3.9
BCW				IAML		19 00 00.2	
	comp=E,160nm,1.2s						
BCW				IAML		19 00 08.7	
	comp=N,166nm,1.6s						
WUAZ	Wupatki	4.64	43	Pn	Pn	18 58 41.5	+0.3
WUAZ				IAML		19 00 15.0	
	comp=N,100nm,1.4s						
WUAZ				IAML		19 00 22.5	
	comp=N,118nm,0.9s						
TPNV	Topopah Spring	4.84	350	Pn	Pn	18 58 43.8	-0.1
U15A	North Rim	4.90	29		Pn	18 58 46.7	+1.8
X18A	Snowflake	5.01	61		Pn	18 58 47.4	+1.0
LCMT	Little Creek M	5.10	18		Pn	18 58 49.0	+1.4
319A	Douglas	5.14	97	Pn	Pn	18 58 48.1	0.0
DUN6	Lazy B Ranch	5.22	84		Pn	18 58 49.4	+0.2
PRN	Pahroc Range	5.22	2	Pn	Pn	18 58 50.8	+1.6
KNB	Kanab	5.23	22	Pn	Pn	18 58 50.8	+1.4
LCH	Last Change Ra	5.42	339	Pn	Pn	18 58 52.3	+0.4
W18A	Petrified Fore	5.45	56	Pn	Pn	18 58 53.5	+1.0
121A	Cookes Peak, D	6.32	85		Pn	18 59 04.7	+0.3
121A	Cookes Peak, D	6.32	85	e	Pn	18 59 04.4	0.0
SPR3	Spring Creek 3	6.85	6	Pn	Pn	18 59 12.4	+0.6

NEIC ***22*** *18:59:05.4±1.5, 32°.21N±0°.02×115°.22W±0°.02, h19^{km}±6^{km}, Error ellipse: s-maj=3.6km s-min=2.0km az=145.0*

PAS ***22*** *18:59:06.2±2.0, 32°.224N±0°.010×115°.22W±0°.02, h15^{km}±2^{km}, ML3.8/27, ML3.4/40(NEIC), Error ellipse: s-maj=2.0km s-min=1.5km az=93.0*

ECX ***22*** *18:59:06.6±0.7, 32°.20N×115°.26W, h0^{km}±3^{km}, MD3.6, ML3.8*

ISC 22 18:59:05.1±1.0**, 32°.19N**±0°.02×**115°.27W**±0°.02**, h20**^{km}±2^{km}**, n65,** σ**0^{s}71**/77**, 4C-9D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RHX	Rio Hardy	0.06	192	⇓iP	Pb	18 59 08.2	-0.5
GUVIX	Guadalupe Vict	0.20	55		Sb	18 59 14.2	+0.1
GUVIX	Guadalupe Vict	0.20	55	Pg	Pb	18 59 10.2	-0.3
GUVIX				IAML		18 59 14.2	
	comp=N,57µm,0.5s						
GUVIX	Guadalupe Vict	0.20	55	IAML		18 59 14.5	
	comp=E,36µm,0.5s						
MBIG	Mexicali	0.23	16	⇓eP	Pb	18 59 11.1	+0.4
CPBX	Cerro Prieto	0.23	353		Pb	18 59 10.9	+0.1
CPBX	Cerro Prieto	0.23	353	IAML		18 59 16.7	
	comp=N,29µm,0.4s						
CPBX				IAML		18 59 17.5	
	comp=E,48µm,0.3s						
CPBX	Cerro Prieto	0.23	353	⇓eP	Pb	18 59 10.9	+0.1
CPBX				eS	Sb	18 59 14.7	-0.1
CPBX				⇑e		18 59 16.8	
CPBX				IAML		18 59 16.8	
	comp=N,37µm,0.4s						
RITX	Riito Sonora	0.26	95	eP	Pb	18 59 11.1	-0.1
RITX				eS	Sb	18 59 16.2	+0.9
CTLX	Tlaxcala, TLX	0.30	20	eP	Pb	18 59 12.0	+0.3
CTLX				eS	Sb	18 59 17.4	+1.1
YUCAX	Ej. Yucat¡n	0.44	20	⇓iP	Pb	18 59 14.8	+0.6
YUCAX				eS	Sb	18 59 21.3	+1.0
YUCAX				IAML		18 59 22.4	
	comp=N,13µm,0.1s						
UABX	UABC, Campus M	0.47	342		Pb	18 59 15.4	+0.9
UABX					Sn	18 59 23.3	-0.9
UABX	UABC, Campus M	0.47	342	IAML		18 59 23.8	
	comp=E,11µm,0.5s						
UABX				IAML		18 59 24.4	
	comp=N,6µm,0.9s						
UABX	UABC, Campus M	0.47	342	⇓iP	Pb	18 59 15.5	+0.9
EDOMX	El Doctor, EDO	0.50	117	eP	Pn	18 59 16.1	-0.9
SLRCX	San Luis Rio C	0.55	61		Pb	18 59 16.1	+0.1
SLRCX					Sb	18 59 23.9	+0.5
EMSC	East Mesa	0.60	24		Pb	18 59 17.1	+0.1
EMSC					Sn	18 59 25.9	-1.6
EMSC	East Mesa	0.60	24	⇓eP	Pb	18 59 17.0	+0.1
SGL	Mount Signal	0.60	320		Pb	18 59 17.4	+0.5
SGL					Sb	18 59 25.7	+0.8
SGL	Mount Signal	0.60	320	eP	Pb	18 59 17.4	+0.5
ESJX	Sierra Juarez	0.60	253		Pn	18 59 18.1	-0.5
ESJX	Sierra Juarez	0.60	253		Sn	18 59 28.0	+0.1
ESJX	Sierra Juarez	0.60	253	IAML		18 59 27.8	
	comp=N,2µm,0.2s						
ESJX	Sierra Juarez	0.60	253	IAML		18 59 28.4	
	comp=E,2µm,0.1s						
DREC	Desert Rsrch C	0.63	346		Pn	18 59 18.1	-0.8
DREC					Sn	18 59 28.2	-0.2
DREC	Desert Rsrch C	0.63	346	⇓eP	Pn	18 59 18.1	-0.8
COA	Coachella	0.68	10		Pb	18 59 18.2	-0.1
COA					Sn	18 59 28.9	-0.8
COA	Coachella	0.68	10	eP	Pb	18 59 18.2	-0.1
SNR	Schaffner Ranc	0.69	348		Pn	18 59 19.1	-0.5
SNR					Sn	18 59 30.3	+0.7
WESC	Westside Schoo	0.69	326		Pn	18 59 19.2	-0.5
WESC					Sn	18 59 29.6	-0.1
WESC	Westside Schoo	0.69	326	⇓iP	Pn	18 59 19.2	-0.5
YUH	Yuha Desert	0.72	310		Pb	18 59 19.3	+0.4
YUH					Sb	18 59 29.0	+0.7
YUH	Yuha Desert	0.72	310	IAML		18 59 29.7	
	comp=E,1µm,0.2s						
YUH				IAML		18 59 30.3	
	comp=N,939nm,0.6s						
YUH	Yuha Desert	0.72	310	Pg	Pb	18 59 19.1	+0.2
YUH2	Yuha Desert	0.72	310	⇓eP	Pb	18 59 19.3	+0.5
SJX	San Joaquin	0.72	234	⇑eP	Pb	18 59 18.2	-0.8
SJX				eS	Sb	18 59 26.9	-1.6
ECBX	El Chinero	0.74	165	⇑eP	Pn	18 59 20.7	+0.4
ECBX				IAML		18 59 31.0	
	comp=E,5µm,0.2s						
ECBX				⇑e		18 59 31.0	
IMPE	Imperial	0.75	341		Pn	18 59 20.1	-0.4
IMPE					Sn	18 59 31.7	+0.4
COK2	Cook Ranch 2	0.77	330		Pb	18 59 20.1	+0.4
COK2					Sn	18 59 31.6	0.0
COK2	Cook Ranch 2	0.77	330	eP	Pb	18 59 20.1	+0.4
RMX	La Rumorosa	0.80	301		Pb	18 59 20.1	-0.3
RMX					Sb	18 59 29.8	-1.0
RMX	La Rumorosa	0.80	301	IAML		18 59 30.5	
	comp=N,3µm,0.2s						
RMX				IAML		18 59 31.0	
	comp=E,3µm,0.2s						
RMX	La Rumorosa	0.80	301	eP	Pb	18 59 20.1	-0.3
RMX				IAML		18 59 30.6	
	comp=N,3µm,0.2s						
RMX				e		18 59 30.6	

RUN	Ruthven	0.82	17		Pb	18 59 19.9	-0.7
RUN					Sb	18 59 31.6	+0.4
IKP	In-Ko-Pah, Jac	0.85	303		Pb	18 59 21.8	+0.7
IKP					Sn	18 59 33.1	-0.7
VTX	Valle De La Tr	0.91	209		Pb	18 59 23.1	+0.9
VTX					Sn	18 59 36.3	+1.0
VTX	Valle De La Tr	0.91	209	IAML		18 59 37.5	
	comp=N,648nm,0.3s						
VTX				IAML		18 59 37.8	
	comp=E,1µm,0.3s						
CRR	Carrizo Plain	0.91	320		Pb	18 59 22.6	+0.4
CRR	Carrizo Plain	0.91	320	*e*P	Pb	18 59 22.6	+0.4
GLA	Glamis	0.94	23		Pn	18 59 21.7	-1.5
GLA					Sb	18 59 33.5	-1.3
GLA	Glamis	0.94	23	Pg	Pn	18 59 21.5	-1.7
GLA	Glamis	0.94	23	IAML		18 59 35.0	
	comp=E,2µm,0.5s						
GLA				IAML		18 59 43.4	
	comp=N,1µm,0.4s						
CBX	Cerro Bola	1.19	276	Pn	Pb	18 59 27.0	+0.1
CBX				IAML		18 59 46.0	
	comp=N,786nm,0.4s						
CBX				IAML		18 59 46.8	
	comp=E,996nm,0.4s						
TKX	Tecate	1.19	289	Pn	Pb	18 59 26.9	-0.1
TKX				IAML		18 59 44.3	
	comp=E,2µm,0.3s						
SFX	San Felipe	1.20	163	Pn	Pb	18 59 27.6	+0.5
SFX				IAML		18 59 46.5	
	comp=N,394nm,0.3s						
SFX				IAML		18 59 46.6	
	comp=E,419nm,0.4s						
CCX	Cicese	1.23	255	Pn	Pb	18 59 28.2	+0.6
BAR	Barrett	1.28	293	Pn	Pb	18 59 28.3	-0.2
BAR				IAML		18 59 47.6	
	comp=E,1µm,0.3s						
BAR				IAML		18 59 47.8	
	comp=N,2µm,0.2s						
113A	Mohawk Valley,	1.40	65	Pn	Pn	18 59 28.6	-0.7
PIX	Pinacate	1.66	112	Pn	Pn	18 59 33.1	+0.1
BLYC	Blythe	1.68	22	Pn	Pn	18 59 33.6	+0.3
BLYC				IAML		19 00 03.5	
	comp=E,210nm,0.5s						
BLYC				IAML		19 00 06.1	
	comp=N,261nm,0.6s						
109C	Camp Elliot, M	1.70	295	Pn	Pb	18 59 34.7	-0.9
PMD	Palm Desert	1.73	328	Pn	Pn	18 59 34.7	+0.8
PFO	Pinyon Flats O	1.74	325	Pn	Pn	18 59 33.9	-0.3
214A	Organ Pipe Nat	2.10	96	Pn	Pn	18 59 38.8	-0.3
PKCU	Pink Cliffs	5.78	24	Pn	Pn	19 00 31.6	+1.6

IDC 22 19:21:13.3±5.7**, 36°.99N**×**72°.47E, h105**km±53km**, mbtmp3.4**/6**, Error ellipse: s-maj=65.4km s-min=27.3km az=143.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.86	15	P	Pn	19 22 37.3	-0.4
	2.4nm,0.6s,baz=179,slow=5.9,SNR=6.2						
AAK				S	Sn	19 23 45.0	+1.4
	4.2nm,0.7s,baz=159,slow=1.3,SNR=3.9						
GEYT	Alibeck	11.45	279	P	Pn	19 23 54.4	+0.8
	0.7nm,0.6s,baz=90,slow=15,SNR=2.0						
GEYT				S	Sn	19 25 49.9	-10
	0.8nm,0.5s,baz=162,slow=10.0,SNR=1.6						
MKAR	Makanchi Array	12.22	34	P	Pn	19 24 02.9	-0.7
	0.3nm,0.8s,baz=225,slow=14,SNR=3.7						
BVAR	Borovoye Array	16.11	355	P	Pn	19 24 51.7	-1.8
	0.6nm,0.7s,baz=178,slow=8.7,SNR=3.0						
AKTO	Aktyubinsk	16.99	327	P	Pn	19 25 03.7	-0.6
	1.1nm,0.5s,baz=159,slow=5.7,SNR=5.4						
ZALV	Zalesovo Beam	19.00	23	P	P	19 25 27.2	+0.8
	0.8nm,0.5s,baz=209,slow=12,SNR=5.4						

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*IDC **22** 19:40:34.7±1.3, 30°.74S×71°.76W, h0km, mb3.4/1, mbtmp3.6/7, ML3.6/6, MS2.9/3, Error ellipse: s-maj=30.4km s-min=24.6km az=63.0*

*SJA **22** 19:40:36.3±0.8, 30°.70S×71°.69W, h15km±3km, ML3.9, MW3.9, Hypocentre not reviewed by the ISC*

*GUC **22** 19:40:40.4±0.8, 30°.73S×71°.47W, h47km±2km, ML4.0*

ISC 22 19:40:40.6±0.8**, 30°.73S**±0°.03×**71°.60W**±0°.07**, h44**km±7km**, n40, σ1s42**/50**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.06	335	*e*P	Pn	19 40 47.7	+0.1
CO06				*e*S	Sn	19 40 52.8	+0.4
CO06				IAML		19 40 54.0	
	comp=E,25µm,0.3s						
CO02	Combarbal	0.70	132	*e*P	Pn	19 40 53.1	-1.2
CO02				*e*S	Sn	19 41 02.0	-2.1
CO02				IAML		19 41 02.7	
	comp=N,61µm,0.3s						
CO02	Combarbal	0.70	132	*e*P		19 40 52.0	
CO02				*e*S		19 41 02.5	
CO02				IAML		19 41 03.2	
	comp=Z,12µm,0.3s						
CO03	El Pedregal	0.80	98	*e*P	Pn	19 40 54.0	-1.5
CO03				IAML		19 41 05.9	
	comp=E,4µm,0.1s						
CO03	El Pedregal	0.80	98	*e*S		19 41 04.5	
CO03				IAML		19 41 07.0	
	comp=Z,2µm,1.1s						
CO05	La Serena	0.87	21	*i* P	Pn	19 40 56.2	-0.2
CO05				*e*S	Sn	19 41 07.7	-0.2
CO05				IAML		19 41 13.3	
	comp=E,5µm,0.3s						
GO04	Tololo Observa	0.89	52	*e*P	Pn	19 40 55.6	-1.3
GO04				*e*S	Sn	19 41 07.2	-1.7
GO04	Tololo Observa	0.89	52	*e*P		19 40 55.0	
GO04				*e*S		19 41 07.8	
CO01	Juntas del Tor	1.51	60	*i* P	Pn	19 41 05.1	-0.2
CO01				*e*S	Sn	19 41 23.3	-0.6
CO01				IAML		19 41 28.0	
	comp=N,2µm,0.3s						
CO01	Juntas del Tor	1.51	60	*e*P		19 41 05.2	
CO01				*e*S		19 41 21.4	
CO01				IAML		19 41 28.2	
	comp=Z,1µm,0.2s						
VA06	Catapilco	1.84	172	*e*P	Pn	19 41 10.0	+0.2
VA06				*e*S	Sn	19 41 34.8	+3.0
VA06				IAML		19 41 48.3	
	comp=N,2µm,0.7s						
LCO	Las Campanas	1.89	25	*i* P	Pn	19 41 10.7	+0.2
LCO				*e*S	Sn	19 41 33.4	+0.1
LCO				IAML		19 41 45.7	
	comp=N,6µm,0.2s						
LCO	Las Campanas	1.89	25	*e*P		19 41 05.2	
LCO				*e*P		19 41 10.0	
LCO				*e*S		19 41 35.7	
LCO				*e*S		19 41 36.0	
LCO				IAML		19 41 41.4	
	comp=Z,4µm,0.3s						
AC05	El Transito	2.21	32	*e*P	Pn	19 41 15.8	+0.8
AC05				*e*S	Sn	19 41 42.7	+1.5
AC05				IAML		19 41 56.6	
	comp=E,946nm,0.2s						
AC05	El Transito	2.21	32	*e*P		19 41 15.0	
AC05				*e*S		19 41 46.2	
AC05				IAML		19 41 48.8	
	comp=Z,669nm,0.3s						
VA03	San Esteban	2.22	156	*e*P	Pn	19 41 15.8	+0.8
VA03				*e*S	Sn	19 41 42.2	+1.0
VA03				IAML		19 41 50.4	
	comp=E,1µm,0.2s						
VA03	San Esteban	2.22	156	*e*P		19 41 15.0	
VA03				*e*P		19 41 15.9	
VA03				*e*S		19 41 45.2	
VA03				IAML		19 41 51.8	
	comp=Z,570nm,0.8s						
RTLS	Leoncito	2.24	119	*e*P		19 41 17.8	
RTLS				*e*S		19 41 41.7	
RTLS				IAML		19 41 49.2	
	comp=Z,1µm,1.1s						
VA01	Torpederas	2.29	181	*e*P		19 41 13.7	
VA01				*e*S		19 41 51.9	
ROCH	El Roble	2.29	167	*e*P	Pn	19 41 16.5	+0.4
ROCH				IAML		19 41 56.6	
	comp=N,2µm,0.4s						
ROC1	El Roble	2.29	168	*e*P		19 41 11.7	
ROC1				*e*P		19 41 13.2	
ROC1				*e*P		19 41 16.9	
ROC1				*e*S		19 41 52.3	
PEL	Peldehue	2.53	162	*e*P	Pn	19 41 19.7	+0.5
PEL				IAML		19 42 03.9	
	comp=N,721nm,0.3s						
PEL	Peldehue	2.53	162	*e*P		19 41 20.3	
PEL				*e*S		19 41 52.2	
MT02	Curacav	2.55	171	*e*P	Pn	19 41 19.8	+0.4
MT02	Curacav	2.55	171	*e*P		19 41 20.2	
MT02				*e*S		19 41 49.7	
MT02				IAML		19 42 01.9	
	comp=Z,463nm,0.5s						
AC04	Llanos de Chal	2.56	11	*e*P	Pn	19 41 20.0	+0.4
AC04				IAML		19 42 05.0	
	comp=N,610nm,0.4s						
AC04	Llanos de Chal	2.56	11	*e*P		19 41 20.0	
AC04				*e*S		19 41 50.7	
AC04				IAML		19 42 05.3	
	comp=Z,373nm,0.6s						
ZON	Zonda	2.64	109	*e*P		19 41 22.8	
ZON				*e*S		19 41 59.2	
ZON				IAML		19 42 11.2	
	comp=Z,389nm,0.5s						
MT10	Hacienda Santa	2.69	161	*e*P	Pn	19 41 22.3	+0.8
RTLL	Cerro Villicun	2.75	103	*e*P		19 41 24.0	
RTLL				*e*S		19 42 04.0	
MT05	Renca	2.75	165	*e*P		19 41 23.0	
MT05				*e*S		19 41 57.2	
MT05				IAML		19 42 06.6	
	comp=Z,347nm,0.3s						
FCH	Farellones	2.82	157	*e*P	Pn	19 41 24.8	+1.3
FCH				IAML		19 42 15.4	
	comp=N,258nm,0.4s						
MT03	Universidad Ad	2.91	162	*e*P	Pn	19 41 25.9	+1.5
MT03	Universidad Ad	2.91	162	*e*P		19 41 26.0	
MT03				*e*S		19 42 05.2	
MT03				*e*S		19 42 06.7	
MT03				IAML		19 42 13.2	
	comp=Z,523nm,0.4s						
MT04	Ro Olivares	2.94	155	*e*P	Pn	19 41 26.5	+1.4
MT04				IAML		19 42 09.4	
	comp=E,444nm,0.6s						
ASAL	Salagasta	3.00	129	*e*P		19 41 28.4	
ASAL				*e*S		19 42 08.7	
CFA	Coronel Fontan	3.01	108	Pn	Pn	19 41 26.9	+1.0
	comp=E,49nm,0.3s,baz=273,slow=9.9,SNR=179						
CFA				Sn	Sn	19 42 04.3	+3.5
	comp=E,46nm,0.3s,baz=59,slow=19,SNR=3.0						
CFA				LR	LR	19 42 39.3	
	comp=E,107nm,20.2s,baz=122,slow=40						
	comp=E,130nm,0.4s						
CFA	Coronel Fontan	3.01	108	*e*P		19 41 26.0	
CFA				*e*P		19 41 27.5	
CFA				*e*S		19 42 06.7	
MT08	Bocatoma Ro	3.02	154	*e*P	Pn	19 41 28.9	+2.7
MT08				IAML		19 42 12.7	
	comp=E,385nm,0.5s						
MT09	Talagante	3.08	170	*e*P	Pn	19 41 27.5	+0.7
MT09				IAML		19 42 17.7	
	comp=E,474nm,0.3s						
ARCO	CERRO ARCO	3.10	133	*e*P		19 41 30.7	
ARCO				*e*S		19 42 06.7	
ARCO				*e*S		19 42 13.2	
MT12	Pirque	3.12	164	*e*P	Pn	19 41 26.3	-1.1
MT12				IAML		19 42 18.0	
	comp=E,766nm,0.6s						
MT01	Popeta	3.14	175	*e*P	Pn	19 41 27.8	+0.2
MT01				IAML		19 42 26.2	
	comp=E,244nm,0.4s						
MT01	Popeta	3.14	175	*e*P		19 41 28.2	
MT01				*e*S		19 42 06.7	
MT01				*e*S		19 42 07.7	
MT01				IAML		19 42 20.9	
	comp=Z,211nm,0.7s						
MT13	San Alfonso	3.21	160	*e*P	Pn	19 41 29.5	+1.0
MT13				IAML		19 42 18.1	
	comp=E,414nm,0.3s						
LMEL	Las Melosas	3.33	159	*e*P	Pn	19 41 31.9	+1.6
LMEL				IAML		19 42 20.3	
	comp=N,344nm,0.2s						
AAGR	Agrelo	3.33	136	*e*P		19 41 32.0	
GO03	Copiap	3.35	21	*e*P	Pn	19 41 30.8	+0.3
GO03				IAML		19 42 30.5	
	comp=N,525nm,0.5s						
GO03	Copiap	3.35	21	*e*P		19 41 31.1	
GO03				*e*S		19 42 11.7	
AC06	Mina Casimiro	3.54	18	*e*P	Pn	19 41 33.0	0.0
AC06				IAML		19 42 28.9	
	comp=N,328nm,0.4s						
BO01	Tunca	3.68	173	*e*P	Pn	19 41 35.4	+0.5
BO01	Tunca	3.68	173	*e*P		19 41 36.2	
BO01				IAML		19 42 45.4	
	comp=Z,112nm,0.6s						
BO02	Sierra Bellavi	4.11	171	*e*P	Pn	19 41 41.7	+0.8
BO02	Sierra Bellavi	4.11	171	*e*S		19 42 35.7	
BO02				IAML		19 42 52.8	
	comp=Z,194nm,0.5s						
AC01	Pan de Azucar	4.65	11	*e*P	Pn	19 41 46.7	-1.6
AC01	Pan de Azucar	4.65	11	*e*P		19 41 46.7	
AC01				*e*S		19 43 01.1	
AC01				IAML		19 43 05.7	
	comp=Z,106nm,0.5s						
LVC	Limon Verde	8.44	17	Pn	Pn	19 42 39.2	-1.4
	comp=Z,0.5nm,0.3s,baz=79,slow=5.2,SNR=2.1						
LVC				Sn	Sn	19 44 19.3	+4.5
	comp=Z,0.6nm,0.3s,baz=252,slow=20,SNR=1.2						
LVC				LR	LR	19 45 57.2	
	comp=Z,66nm,18.7s,baz=215,slow=38						
	comp=Z,1.6nm,0.4s						
PLCA	Paso Flores	10.02	175	Pn	Pn	19 43 01.5	-0.4
	comp=Z,0.1nm,0.3s,baz=346,slow=17,SNR=1.4						
	comp=Z,0.5nm,0.7s						
CPUP	Villa Florida	13.29	74	Pn	Pn	19 43 46.6	-0.1
	comp=Z,0.1nm,0.3s,baz=241,slow=17,SNR=1.4						
	comp=Z,1.0nm,0.6s						
LPAZ	La Paz	14.72	13	Pn	Pn	19 44 05.2	-1.4
	comp=Z,0.1nm,0.3s,baz=192,slow=8.2,SNR=4.2						
	comp=Z,1.4nm,0.8s						
SIV	San Ignacio	17.55	36	P	P	19 44 42.0	-0.8
	baz=222,slow=11,SNR=7.0						
	comp=Z,1.5nm,0.6s						
SJG	San Juan	48.84	7	LR	LR	20 10 30.0	
	comp=Z,26nm,18.1s,baz=230,slow=37						
TXAR	Lajitas Array	67.08	330	P	P	19 51 31.2	+1.6
	comp=Z,0.2nm,0.5s,baz=156,slow=8.9,SNR=3.5						
	comp=Z,0.2nm,0.5s						
BVAR	Borovoye Array	144.59	40	PKP	PKPdf	20 00 11.2	-0.6
	comp=Z,1.0nm,0.5s,baz=279,slow=1.3,SNR=7.4						
KURBB	Kurchatov Arra	150.18	40	PKPbc	PKiKP	20 00 26.2	-1.0
	comp=Z,0.5nm,0.6s,baz=298,slow=2.9,SNR=4.5						
ZALV	Zalesovo Beam	151.24	29	PKPbc	PKiKP	20 00 28.5	-0.7
	comp=Z,1.6nm,0.5s,baz=323,slow=3.1,SNR=8.0						

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*IDC **22** 19:50:52.8±1.5, 36°.10N×141°.53E, h0km, mb3.4/3, mbtmp3.4/6, ML3.4/2, Error ellipse: s-maj=35.1km s-min=20.9km az=70.0*

*JMA **22** 19:50:56.4±0.2, 36°.0N±0°.5×14°1E±°, h31km±2km, MV3.3/35, FAR E OFF IBARAKI PREF*

JMA Felt I J1 at FAR E OFF IBARAKI PREF .

ISC 22 19:50:56.6±1.5**, 36°.03N**±0°.05×**141°.27E**±0°.07**, h25**km±11km**, n22, σ1s04**/24**, mb3.5**/3**, 2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.47	226	⇓P	Pb	19 51 06.1	-0.2
CHOJ				⇓S	Sb	19 51 13.2	+0.3
JIHU	Itakohorinouch	0.61	264	P	Pn	19 51 09.2	-0.4
JIHU				S	Sn	19 51 18.0	-0.6
JHYU	Hitachinakayam	0.63	299	P	Pn	19 51 09.5	-0.5
JHYU				S	Sb	19 51 18.4	+0.8
JSMT	Sammumatsuo	0.77	240	P	Pb	19 51 11.8	+0.3
JSMT				S	Sn	19 51 22.2	-0.5
JHO	Hitachi	0.81	316	P	Pn	19 51 11.6	-0.9
JHO				S	Sn	19 51 23.0	-0.7
JYT	Yasato	0.89	283	P	Pn	19 51 12.6	-1.0
JYT				S	Sn	19 51 23.9	-1.7
ONAJ	Iwakimizuishiy	1.13	341	P	Pn	19 51 16.2	-0.8
JFK	Kawauchi	1.37	347	P	Pn	19 51 19.3	-0.9
BSO3	Boso 3	1.38	207	P	Pb	19 51 21.0	-0.5
BSO1	Boso 1	1.40	190	P	Pb	19 51 21.3	-0.3
MJAR	Matsushiro Arr	2.53	283	Pn	Pn	19 51 36.8	+0.7
	1.2nm,0.3s,baz=2.3,slow=22,SNR=12						
MJAR				Sn	Sb	19 52 13.5	+1.5
	0.4nm,0.3s,baz=40,slow=17,SNR=5.5						
ASAJ	Asahikawa	8.14	7	Pn	Pn	19 52 50.5	-2.6
	0.5nm,0.3s,baz=227,slow=11,SNR=5.4						
ASAJ				Sn	Sn	19 54 25.5	+1.3
	0.1nm,0.3s,baz=191,slow=19,SNR=1.6						
	3.4nm,0.8s						
USRK	Ussuriysk Ar.	10.81	322	Pn	Pn	19 53 30.0	+0.3
	0.4nm,0.3s,baz=142,slow=18,SNR=2.5						
	2.3nm,0.7s						
H11N2	WAKE ISLAND Hy	27.75	119	T	T	20 25 39.5	
	baz=311,slow=75,SNR=12						
H11N1	WAKE ISLAND Hy	27.76	119	T	T	20 25 42.2	
	baz=311,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	27.77	119	T	T	20 25 41.2	
	baz=311,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	28.43	121	T	T	20 26 31.4	
	baz=313,slow=75,SNR=20						
H11S3	WAKE ISLAND Hy	28.43	121	T	T	20 26 34.6	
	baz=313,slow=75,SNR=17						
H11S2	WAKE ISLAND Hy	28.44	121	T	T	20 26 34.5	
	baz=313,slow=75,SNR=18						
KURBB	Kurchatov Arra	46.53	309	P	P	19 59 22.4	+0.6
	0.3nm,0.5s,baz=80,slow=7.2,SNR=5.8						
	0.3nm,0.5s						
WRA	Warramunga Arr	56.05	188	P	P	20 00 34.1	+0.6
	0.2nm,0.4s,baz=5.4,slow=7.5,SNR=7.9						
	0.2nm,0.4s						
ASAR	Alice Springs	59.78	188	P	P	20 01 00.6	+1.0
	0.3nm,0.7s,baz=11,slow=8.3,SNR=5.2						
	0.3nm,0.7s						

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*TEH **22** 19:53:24.8, 36°.79N×54°.25E, h9km±17km, ML3.9*

*IDC **22** 19:53:24.5±0.9, 36°.76N×54°.30E, h0km, mb3.8/13, mbtmp3.8/22, ML3.3/9, MS3.2/7, Error ellipse: s-maj=20.5km s-min=11.2km az=4.0*

*MOS **22** 19:53:30.6±1.4, 37°.15N×54°.33E, h35km, mb4.0/11, Error ellipse: s-maj=8.8km s-min=5.4km az=134.8*

*AZER **22** 19:53:31.2±0.1, 37°.18N×53°.56E, h10km±7km, Error ellipse: s-maj=23.6km s-min=1.6km az=304.0*

*NEIC **22** 19:53:33.7±2.2, 37°.4N±0°.1×54°.40E±0°.09, h30km±5km, mb4.1/20, Error ellipse: s-maj=18.8km s-min=10.1km az=179.0*

ISC 22 19:53:26.6±0.5**, 36°.87N**±0°.04×**54°.27E**±0°.04**, h10**km**, n205, σ2s09**/231**, mb4.0**/29**, MS3.0**/3**, 26C-2D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGLO	Ghaloghah	0.51	224	Pg	Pg	19 53 33.8	-2.9
IMND	Minoodasht	0.99	67	Pg	Pg	19 53 44.3	-1.3
ISHM	Shahmirzad	1.33	217	Pg	Pn	19 53 48.3	-3.1
IANJ	Anjilo	1.43	192	Pg	Pn	19 53 49.4	-3.5
IANJ				Sg	Sb	19 54 09.3	-2.7
MRVT	Maraveh tapeh	1.65	61	Pg	Pn	19 53 55.8	+0.1
IPRN	Peran	1.68	248	Pg	Pn	19 53 55.5	-0.6
IFIR	Firoozkooh	1.74	225	Pg	Pn	19 53 55.9	-1.2
ILAS	Lasjerd	1.83	216	Pg	Pn	19 53 57.0	-1.4
MZPU	Pul - Mazandar	2.21	260	Pn	Pn	19 54 04.8	+1.1
IDMV	Damavand	2.23	235	Pn	Pn	19 54 03.6	-0.2
TEHA	Amirabad Tehra	2.59	245	Pn	Pn	19 54 09.2	+0.5
KLST	Kelardasht - M	2.60	263	Pn	Pn	19 54 09.2	+0.1
SBZV	Sabzevar	2.73	99	Pn	Pn	19 54 11.5	+0.7
IVRN	Varamin	2.79	228	Pn	Pn	19 54 11.2	-0.1
IHSB	Hasanabad	2.82	240	Pn	Pn	19 54 13.0	+1.2
ISFB	Sefidab	3.01	214	Pn	Pn	19 54 13.5	-1.0
IMHD	Mahdasht	3.14	249	Pn	Pn	19 54 16.7	+0.4
GEYT	Alibeck	3.24	70	Pn	Pn	19 54 17.1	-0.5
	3.9nm,0.3s,baz=251,slow=14,SNR=21						
GEYT				Sn	Sn	19 54 57.4	+1.2
	9.4nm,0.3s,baz=289,slow=14,SNR=5.5						
	10.0nm,0.4s						
GEYT	Alibeck	3.24	70	Pn	Pn	19 54 18.1	+0.5
GEYT	Alibeck	3.24	70	P	Pn	19 54 18.1	+0.5
GYA0B	ALIBECK ARRAY	3.24	70		Pn	19 54 18.2	+0.6
IGZV	Ghazvin	3.29	263	Pn	Pn	19 54 18.9	+0.4
KRSH	Karshahi	3.38	212	Pn	Pn	19 54 18.9	-0.7
TNSJ	Nastanj	3.48	146	Pn	Pn	19 54 20.5	-0.4
IEMG	Emamgholi	3.54	80	Pn	Pn	19 54 22.8	+0.8
JIR1	Jirandeh	3.59	269	Pn	Pn	19 54 22.8	+0.3
IAKL	Akhelmad	3.61	93	Pn	Pn	19 54 23.8	+0.9
ANAR	Anarak	3.70	187	Pn	Pn	19 54 23.3	-0.7
TKDS	Koohdasht(Taba	4.00	144	Pn	Pn	19 54 27.8	-0.3
IKLH	Kolahrood	4.18	213	Pn	Pn	19 54 30.4	-0.2
IKRD	Kardeh	4.21	90	Pn	Pn	19 54 32.2	+1.1
TBHD	Torbat heydari	4.28	108	Pn	Pn	19 54 31.8	-0.1
IZEF	Zefreh	4.28	202	Pn	Pn	19 54 30.8	-1.3
TPRV	Parvadeh(Tabas	4.32	152	Pn	Pn	19 54 32.0	-0.5
GAS1	Astara - Iran	4.57	291	Pn	Pn	19 54 35.6	-0.1
ICHK	Chekchek	4.62	179	Pn	Pn	19 54 35.8	-0.9
HAGD	Aghdareh	4.64	245	Pn	Pn	19 54 36.7	-0.3
ASTR	Astara	4.66	293	P	Pn	19 54 36.5	-0.5
ASTR				S	Sn	19 55 26.0	-5.1
LKRN	Lenkeran, Azer	4.72	295	P	Pn	19 54 38.0	+0.1
	SNR=6.1						
LKRN				S	Sn	19 55 28.8	-3.9
LKRN	Lenkeran, Azer	4.72	295	P	Pn	19 54 37.9	+0.1
GALA	Gala	4.78	319	S	Sn	19 55 31.6	-2.5
IGAR	Gharneh	4.82	203	Pn	Pn	19 54 38.8	-0.7
JRKH	Jarkhoshk	5.00	99	Pn	Pn	19 54 41.9	+0.1
LRK	Lerik	5.02	292	P	Pn	19 54 41.6	-0.6
	SNR=60						
LRK				S	Sn	19 55 34.9	-5.3
ALIB	Äli-Bayra	5.15	308	P	Pn	19 54 45.9	+2.1
	SNR=6.5						
ALIB				S	Sn	19 55 43.1	-0.2
TBJM	Torbat-e-JAM	5.16	106	Pn	Pn	19 54 44.6	+0.4
YRD	Yardimli	5.19	295	P	Pn	19 54 44.0	-0.5
	SNR=19						
YRD				S	Sn	19 55 40.9	-3.5
AFRZ	Afriz	5.19	130	Pn	Pn	19 54 44.4	-0.1
GLBA	Clilabad	5.21	299	P	Pn	19 54 45.0	+0.5
	SNR=18						
GLBA				S	Sn	19 55 42.9	-1.7
SHK1	Shahrekord	5.33	213	Pn	Pn	19 54 46.5	+0.1
ISRB	Sarab	5.35	282	Pn	Pn	19 54 47.0	+0.4
IBAF	Bafgh	5.38	168	Pn	Pn	19 54 46.3	-0.8
ITEG	Tejag	5.41	136	Pn	Pn	19 54 47.3	-0.2
IMEH	Mehriz	5.48	177	Pn	Pn	19 54 47.8	-0.7
GBS	Qobustan	5.54	313	P	Pn	19 54 51.0	+1.7
	SNR=8.9						
GBS				S	Sn	19 55 50.2	-2.9
IBRJ	Brojen	5.54	208	Pn	Pn	19 54 48.6	-0.9
IMON	Monand	5.75	128	Pn	Pn	19 54 52.7	+0.4
ATGJ	Altiaghaj	5.76	315	P	Pn	19 54 53.4	+1.2
ATGJ				S	Sn	19 55 56.0	-2.4
SHRT	Shahrakht	5.88	121	Pn	Pn	19 54 54.0	+0.1
KDMR	Kurdemir	5.91	308	S	Sn	19 56 01.1	-0.8
PQL	Pirkuli	5.91	313	P	Pn	19 54 54.9	+0.6
PQL				S	Sn	19 56 00.8	-1.4
IKOO	Kooshah	5.91	137	Pn	Pn	19 54 54.3	-0.2
IHRS	Heris	5.92	286	Pn	Pn	19 54 55.0	+0.5
SIZA	Siyzn	5.92	317	S	Sn	19 56 01.0	-1.5
BLQ	Beylaqan	5.99	300	P	Pn	19 54 56.0	+0.6
	SNR=9.0						
BLQ				S	Sn	19 56 00.6	-3.5
QRD	Qoradiz	6.05	297	P	Pn	19 54 57.0	+0.8
	SNR=5.4						
QRD				S	Sn	19 56 03.2	-2.4
IML	Ismayilli	6.16	311	P	Pn	19 54 59.0	+1.4
	SNR=13						
IML				S	Sn	19 56 03.2	-4.9
ZRD	Zardab	6.18	305	P	Pn	19 54 59.0	+1.1
	SNR=9.8						
ZRD				S	Sn	19 56 06.3	-2.2
IDAH	Dahanechah	6.18	130	Pn	Pn	19 54 57.9	-0.3
KLNJ	Kolanjah	6.26	202	Pn	Pn	19 54 59.1	-0.3
BSRN	Basiran	6.33	139	Pn	Pn	19 54 59.8	-0.3
QUBA	Quba, Azerbaij	6.34	317	S	Sn	19 56 09.4	-3.2
XNQ	Khinaliq	6.42	314	P	Pn	19 55 02.7	+1.3
	SNR=10.0						
XNQ				S	Sn	19 56 12.0	-2.8
QBL	Gabala	6.46	311	P	Pn	19 55 02.4	+0.7
	SNR=11						
QBL				S	Sn	19 56 10.9	-4.6
AGDM	Agdam	6.48	302	P	Pn	19 55 01.8	-0.3
	SNR=5.0						
AGDM				S	Sn	19 56 11.1	-4.9
BRDA	Brd	6.50	303	S	Sn	19 56 14.5	-2.1
QSAR	Qusar	6.57	317	P	Pn	19 55 04.4	+1.0
	SNR=17						
QSAR				S	Sn	19 56 15.6	-2.8

ITBZ	Tabriz	6.59	284	Pn	Pn	19 55 04.4	+0.6
AMIS	Naft Sefid	6.63	220	Pn	Pn	19 55 03.6	-0.6
KHGB	Koh Gabri	6.74	164	Pn	Pn	19 55 05.3	-0.5
IDHR	Dehrash	6.76	254	Pn	Pn	19 55 06.4	+0.2
AKT	Akhty	6.85	314	eP	Pn	19 55 08.6	+1.4
AKT				eS	Sn	19 56 22.1	-3.2
AKT				pmax	pmax		
	comp=Z,26nm,0.2s						
AKT				smax	smax		
	comp=N,42nm,0.3s						
AKT				smax	smax		
	comp=E,51nm,0.4s						
AKT				smax	smax		
	comp=E,43nm,0.4s						
ORD	Ordubad	6.86	290	P	Pn	19 55 07.6	+0.3
ORD				S	Sn	19 56 23.7	-1.8
SEKA	Sheki	7.00	310	P	Pn	19 55 10.0	+0.8
	SNR=14						
SEKA				S	Sn	19 56 26.0	-2.9
SEKA	Sheki	7.00	310	P	Pn	19 55 10.0	+0.8
ISHB	Shabestar	7.01	284	Pn	Pn	19 55 10.3	+0.7
IMRD	Marand	7.03	288	Pn	Pn	19 55 11.4	+1.7
GANJ	Ganja	7.26	304	P	Pn	19 55 12.8	-0.1
	SNR=5.8						
GANJ				S	Sn	19 56 30.2	-5.1
GANJ	Ganja	7.26	304	P	Pn	19 55 12.7	-0.1
SBZ	Shahbuz	7.32	293	P	Pn	19 55 14.9	+1.2
SBZ				S	Sn	19 56 35.3	-1.5
CHMN	Cheshme madani	7.51	158	Pn	Pn	19 55 16.2	-0.3
ZKTA	Zakatala	7.60	311	P	Pn	19 55 18.4	+0.9
	SNR=9.4						
ZKTA				S	Sn	19 56 39.6	-4.1
GDB	GEDABAY	7.68	303	P	Pn	19 55 19.0	+0.3
	SNR=17						
GDB				S	Sn	19 56 42.4	-3.3
MAKU	Maku	7.95	291	Pn	Pn	19 55 24.0	+1.6
MAK	Makhachkala	8.00	322	eP	Pn	19 55 22.7	-0.1
MAK				eS	Sn	19 56 52.9	-0.4
MAK				pmax	pmax		
	comp=Z,131nm,1.6s						
QZX	Qazax, Azerbai	8.09	304	S	Sn	19 56 52.7	-3.1
GNI	Garni	8.15	297	Pn	Pn	19 55 27.7	+2.5
	comp=Z,0.4nm,0.3s,baz=119,slow=2.3,SNR=3.7						
GNI				Sn	Sn	19 56 59.2	+1.8
	baz=246,slow=20						
	comp=Z,5.5nm,0.7s						
GNI	Garni	8.15	297	Pn	Pn	19 55 29.9	+4.8
GNI	Garni	8.15	297	ceP	Pn	19 55 29.4	+4.2
GNI				pmax	pmax		
	comp=Z,14nm,1.3s						
GEVA	Gevas	9.02	283	Pn	Pn	19 55 41.6	+4.6
KARS	Kars	9.51	297	Pn	Pn	19 55 45.8	+2.0
KARS	Kars	9.51	297	P	Pn	19 55 45.8	+2.0
AKH	Akhalkalaki	9.52	302	Pn	Pn	19 55 46.1	+2.2
AKH	Akhalkalaki	9.52	302	P	Pn	19 55 46.1	+2.2
ONI	Oni	10.10	308	Pn	Pn	19 55 53.0	+1.3
ONI	Oni	10.10	308	P	Pn	19 55 53.0	+1.3
KBZ	Khabaz	11.05	312	Pn	Pn	19 56 06.3	+1.7
	comp=Z,0.3nm,0.3s,baz=162,slow=7.8,SNR=7.2						
KBZ				Sn	Sn	19 58 04.5	-3.7
	comp=Z,0.3nm,0.3s,baz=286,slow=19,SNR=1.7						
KBZ				LR	LR	20 01 17.1	
	comp=Z,61nm,18.6s,baz=90,slow=42						
	comp=Z,0.6nm,0.3s						
KBZ	Khabaz	11.05	312	i P	Pn	19 56 06.9	+2.2
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SHA1	Shidzhatmaz	11.20	311	i P	Pn	19 56 09.4	+2.4
KOPT	Kop Dagi	11.25	290	Pn	Pn	19 56 10.5	+2.8
KVAR	Kislovodsk Arr	11.30	312	Pn	Pn	19 56 08.3	0.0
	baz=108,slow=20						
KVAR				Sn	Sn	19 58 10.9	-3.7
	baz=195,slow=20						
	comp=Z,1.4nm,0.5s						
KIV	Kislovodsk	11.31	312	Pn	Pn	19 56 08.2	0.0
KIV	Kislovodsk	11.31	312	eP	Pn	19 56 10.2	+1.9
KIV				eS	Sn	19 58 15.7	+1.0
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,21nm,13.0s						
GAR	Garm	12.85	76	Pn	Pn	19 56 26.0	-3.4
ABKAR	Akbulak array	13.04	17	Pn	Pn	19 56 31.3	-0.6
ABKAR	Akbulak array	13.04	17	Pn	Pn	19 56 30.5	-1.4
AKTO	Aktyubinsk	13.82	10	Pn	Pn	19 56 41.4	-1.1
	comp=Z,0.5nm,0.3s,baz=202,slow=12,SNR=5.3						
AKTO				Sn	Sn	19 59 09.6	-6.4
	comp=Z,1.3nm,0.3s,baz=37,slow=22,SNR=6.6						
AKTO				LR	LR	20 03 35.0	
	comp=Z,114nm,18.5s,baz=316,slow=44						
	comp=Z,1.8nm,0.3s						
BELG	Belogornoye	16.21	345	Pn	Pn	19 57 10.4	-3.9
	comp=Z,0.4nm,0.3s,baz=236,slow=6.0,SNR=5.8						
BELG				Sn	Sn	20 00 05.1	-8.9
	comp=Z,0.2nm,0.3s,baz=60,slow=20,SNR=2.7						
BRTR	Keskin Array B	16.44	286	Pn	P	19 57 19.4	-0.9
	baz=70,slow=12,SNR=2.0						
	comp=Z,0.3nm,0.6s						
BRTR	Keskin Array B	16.44	286	i P	P	19 57 25.2	+4.9
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AAK	Ala-Archa	16.57	63	Pn	Pn	19 57 17.3	-1.9
	comp=Z,0.3nm,0.3s,baz=240,slow=12,SNR=5.2						
	comp=Z,0.6nm,0.3s						
AAK	Ala-Archa	16.57	63	Pn	Pn	19 57 18.0	-1.1
AAK	Ala-Archa	16.57	63	ceP	Pn	19 57 18.9	-0.3
AAK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KSH	Kashi	17.26	75	P	Pn	19 57 23.8	-4.0
KSH				sP	sP	19 57 35.9	+2.4
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ELL	Elmali	19.50	277	P	Pn	19 57 59.4	+4.2
ELL				IAmb	IAmb	19 58 05.6	
	comp=Z,16nm,0.8s						
ELL	Elmali	19.50	277	P	Pn	19 57 59.4	+4.2
ELL				pmax	pmax		
	comp=Z,16nm,0.8s						
BVAR	Borovoye Array	19.70	30	P	P	19 57 56.4	+0.5
	comp=Z,0.1nm,0.3s,baz=214,slow=9.7,SNR=15						
BVAR				LR	LR	20 06 53.3	
	comp=Z,43nm,19.5s,baz=221,slow=41						
	comp=Z,3.7nm,0.8s						
ARU	Arti	19.77	7	P	P	19 57 56.8	+0.1
	baz=163,slow=7.8,SNR=9.5						
ARU				LR	LR	20 07 35.9	
	comp=Z,94nm,19.5s,baz=187,slow=43						
	comp=Z,1.8nm,0.3s						
ARU	Arti	19.77	7	P	P	19 57 58.0	+1.3
ARU				IAmb	IAmb	19 58 02.8	
	comp=Z,4.7nm,0.6s						
ARU	Arti	19.77	7	d iP	Pn	19 57 58.4	+0.2
ARU				S	S	20 01 38.6	-0.7
ARU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TLCR		20.86	301	⇑P	Pn	19 58 11.3	+0.3
TLCR		20.86	301	⇑P	Pn	19 58 11.3	+0.3
CFR	Carcaliu	21.32	301	⇑P	P	19 58 14.8	+1.3
CFR	Carcaliu	21.32	301	⇑P	P	19 58 14.8	+1.3
OBN	Obninsk	21.89	332	⇑eP	P	19 58 21.9	+2.4
OBN				e		19 58 45.8	
OBN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,29nm,8.0s						
KIRV	Kirov	21.96	353	LR	LR	20 09 23.4	
	comp=Z,56nm,18.2s,baz=211,slow=43						
SORM	Soroca	22.07	309	⇑P	P	19 58 21.8	+0.3
SORM	Soroca	22.07	309	⇑P	P	19 58 21.8	+0.3
KURBB	Kurchatov Arra	22.14	44	P	P	19 58 23.2	+0.9
	comp=Z,2.9nm,0.8s,baz=244,slow=11,SNR=12						
	comp=Z,2.9nm,0.8s						
KURK	Kurchatov	22.24	44	P	P	19 58 24.7	+1.4
KURK				IAmb	IAmb	19 58 29.7	
	comp=Z,4.4nm,0.8s						
KURK	Kurchatov	22.24	44	ceP	P	19 58 23.5	+0.2
KURK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VRI	Vrincioaia	22.45	302	⇑P	P	19 58 28.1	+2.4
VRI	Vrincioaia	22.45	302	⇑P	P	19 58 28.1	+2.4
PLOR	Plostina	22.50	302	⇑P	P	19 58 28.9	+2.7
PLOR	Plostina	22.50	302	⇑P	P	19 58 28.9	+2.7
AKASG	Malin Array Be	22.62	316	P	P	19 58 27.2	-0.2
	comp=Z,0.8nm,0.5s,baz=122,slow=9.9,SNR=7.0						
	comp=Z,0.8nm,0.5s						
AKASG	Malin Array Be	22.62	316	P	P	19 58 28.4	+1.0
AKASG	Malin Array Be	22.62	316	P	P	19 58 28.4	+1.0
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AKBB	Malin Array Si	22.62	316	P	P	19 58 28.2	+0.8
AKBB				IAmb	IAmb	19 58 33.9	
	comp=Z,18nm,1.3s						
AKBB	Malin Array Si	22.62	316	ceP	P	19 58 30.3	+2.9
AKBB				pmax	pmax		
	comp=Z,14nm,1.3s						
MAKZ	Makanchi	22.80	56	P	P	19 58 29.5	+0.1
MAKZ				IAmb	IAmb	19 58 31.8	
	comp=Z,5.1nm,1.1s						
MAKZ	Makanchi	22.80	56	⇑P	P	19 58 29.2	-0.2
MLR	Muntele Rosu	22.90	301	⇓P	P	19 58 33.2	+2.6
MLR	Muntele Rosu	22.90	301	P	P	19 58 32.0	+1.5
	comp=Z,5.6nm,0.8s,baz=205,slow=4.2,SNR=9.1						
	comp=Z,5.6nm,0.8s						
MLR	Muntele Rosu	22.90	301	P	P	19 58 33.2	+2.6
MLR				IAmb	IAmb	19 58 37.1	
	comp=Z,5.6nm,0.7s						
MLR	Muntele Rosu	22.90	301	P	P	19 58 33.2	+2.6
MLR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MK31	Makanchi Array	23.00	56	P	P	19 58 32.0	+0.5
MK31	Makanchi Array	23.00	56	P	P	19 58 32.1	+0.5
MK31				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MKAR	Makanchi Array	23.00	56	P	P	19 58 31.2	-0.3
	comp=Z,1.3nm,0.9s,baz=243,slow=11,SNR=12						
	comp=Z,1.3nm,0.9s						
MKAR	Makanchi Array	23.00	56	P	P	19 58 31.5	0.0
MKAR	Makanchi Array	23.00	56	ceP	P	19 58 32.0	+0.5
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DOPR	Dopca	23.38	302	⇑P	P	19 58 37.7	+2.3
VOIR		23.50	300	⇑P	P	19 58 38.6	+1.9
VOIR		23.50	300	⇑P	P	19 58 38.6	+1.9
IDI	Anoyia	23.76	275	P	P	19 58 39.5	+0.3
	comp=Z,5.1nm,1.0s,baz=38,slow=12,SNR=2.3						
	comp=Z,5.1nm,1.0s						
IDI	Anoyia	23.76	275	P	P	19 58 42.1	+2.8
BURAR	Bucovina Array	23.90	306	⇑P	P	19 58 39.4	-1.2
BURAR	Bucovina Array	23.90	306	P	P	19 58 42.9	+2.4
BURAR	Bucovina Array	23.90	306	⇑P	P	19 58 39.4	-1.2
BUR08	Bucovina Ar. S	23.92	306	P	P	19 58 42.1	+1.4
KLMR	Klimovskoe	25.76	343	eP	P	19 58 59.9	+2.7
KLMR				AMP		19 59 01.2	
	comp=Z,12nm,1.1s						
KLMR	Klimovskoe	25.76	343	eP	P	19 58 59.9	+2.7
KLMR				pmax	pmax		
	comp=Z,12nm,1.1s						
TRPA	Tarpa	25.78	306	⇑P	P	19 58 59.5	+2.0
SIRR	Siria	25.98	301	⇑P	P	19 59 01.0	+1.5
WMQ	Urumqi	26.27	64	eP	P	19 59 03.9	+1.7
WMQ				sP	sP	19 59 19.5	+13
WMQ				pmax	pmax		
	comp=Z,13nm,0.6s						
DIVS	Divibare	26.91	296	P	P	19 59 09.0	+1.1
DIVS				IAmb	IAmb	19 59 19.7	
	comp=Z,4.1nm,1.2s						
DGZ	Jazzator, Alta	27.09	51	i P	P	19 59 09.8	+0.2
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.4s						
ZALV	Zalesovo Beam	27.11	41	P	P	19 59 09.1	-0.3
	comp=Z,0.7nm,0.4s,baz=252,slow=10,SNR=5.2						
	comp=Z,0.7nm,0.4s						
ZALV	Zalesovo Beam	27.11	41	P	P	19 59 08.4	-1.1
FINES	FINESS Array B	30.28	333	P	P	19 59 37.5	-0.1
	comp=Z,2.0nm,0.9s,baz=138,slow=11,SNR=1.5						
	comp=Z,2.0nm,0.9s						
INTR	Introdacqua	31.38	292	P	P	19 59 52.7	+5.0
INTR				IAmb	IAmb	19 59 53.9	
	comp=Z,4.7nm,1.1s						
GERES	GERESS Array B	31.68	305	P	P	19 59 50.8	+0.5
	comp=Z,0.4nm,0.6s,baz=99,slow=6.2,SNR=2.2						
GERES				LR	LR	20 16 46.1	
	comp=Z,30nm,18.1s,baz=72,slow=44						
	comp=Z,0.4nm,0.6s						
GERES	GERESS Array B	31.68	305	P	P	19 59 51.2	+0.9
GERES	GERESS Array B	31.68	305	P	P	19 59 51.2	+0.9
NRCA	Norcia	31.91	294	P	P	19 59 54.6	+2.3
NRCA				IAmb	IAmb	20 00 33.9	
	comp=Z,3.4nm,1.1s						
MURB	Monte Urbino	32.32	295	P	P	19 59 59.0	+3.1
CLL	Collm	32.49	310	P	P	20 00 00.5	+3.3
CLL				IAmb	IAmb	20 00 31.8	
	comp=Z,2.8nm,0.9s						
CLL	Collm	32.49	310	eP	P	20 00 02.0	+4.8
CLL	Collm	32.49	310	P	P	20 00 00.5	+3.3
CLL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SENIN	Lac Senin/Sane	35.91	300	P	P	20 00 28.5	+1.3
NRIK	Noril'sk	37.20	19	i P	P	20 00 38.4	+0.8
NRIK				pmax	pmax		
	comp=Z,6.0nm,2.0s						
SSB	Saint Sauveur	37.90	299	P	P	20 00 45.6	+1.7
SSB	Saint Sauveur	37.90	299	P	P	20 00 45.6	+1.7
SSB				pmax	pmax		
	comp=Z,16nm,1.5s						
CMAR	Chiang Mai Arr	43.17	103	P	P	20 01 26.7	-1.0
	comp=Z,1.0nm,0.7s,baz=303,slow=9.0,SNR=12						
	comp=Z,1.0nm,0.7s						
CMAR	Chiang Mai Arr	43.17	103	ceP	P	20 01 27.2	-0.5
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
HHC	Hu-ho-hao-te	44.11	66	eP	P	20 01 37.1	+1.9
HHC				pmax	pmax		
	comp=Z,18nm,0.5s						
HHC				pmax	pmax		
	comp=Z,190nm,4.9s						
ESDC	Sonseca Array	45.11	292	P	P	20 01 44.7	+1.6
	comp=Z,0.5nm,0.5s,baz=69,slow=7.8,SNR=6.2						
	comp=Z,0.5nm,0.5s						
TIXI	Tiksi	50.64	23	LR	LR	20 26 12.9	
	comp=Z,32nm,19.4s,baz=346,slow=39						
TORD	Torodi Ar. Bea	52.43	257	P	P	20 02 39.0	-0.6
	comp=Z,0.4nm,0.8s,baz=35,slow=5.3,SNR=2.6						
DBIC	Dimbokro	61.47	256	P	P	20 03 49.2	+5.5
DBIC	Dimbokro	61.47	256	P	P	20 03 49.2	+5.5
DBIC				pmax	pmax		
	comp=Z,12nm,1.3s						
ILAR	Eielson Array	77.33	9	P	P	20 05 20.1	-0.9
	comp=Z,0.3nm,0.8s,baz=324,slow=5.6,SNR=1.9						
	comp=Z,0.3nm,0.8s						
YKA	Yellowknife Ar	80.57	355	ceP	P	20 05 42.7	+3.9
WRA	Warramunga Arr	94.16	112	P	P	20 06 44.9	-0.9
	comp=Z,0.4nm,0.8s,baz=320,slow=4.0,SNR=1.6						
	comp=Z,0.4nm,0.8s						
ASAR	Alice Springs	96.10	115	P	P	20 06 52.5	-2.2
	comp=Z,0.3nm,0.9s,baz=290,slow=5.5,SNR=1.5						
	comp=Z,0.3nm,0.9s						

IDC 22 19:55:24.0±599.0, 54°.58N×0°.94E, h0^{km}, Error ellipse: s-maj=340.8km s-min=192.2km az=111.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
I26DE	FREYUNG INFRAS	9.78	121	I	I	20 50 30.0	
	baz=314,slow=324,SNR=0.6						
I43RU	DUBNA INFRASON	20.43	69	I	I	22 01 00.0	
	baz=278,slow=303,SNR=1.1						
I31KZ	AKTYUBINSK INF	34.18	73	I	I	23 30 20.0	
	baz=303,slow=311,SNR=0.4						

IDC 22 19:57:17.7±999.0, 53°.83N×4°.10E, h0^{km}, Error ellipse: s-maj=440.6km s-min=167.2km az=114.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
I26DE	FREYUNG INFRAS	7.81	126	I	I	20 42 00.0	
	baz=314,slow=319,SNR=0.7						
I43RU	DUBNA INFRASON	18.98	68	I	I	21 52 52.0	
	baz=278,slow=306						
I31KZ	AKTYUBINSK INF	32.62	74	I	I	23 20 50.0	
	baz=298,slow=326,SNR=0.9						

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*IDC **22** 20:00:42.9±0.8, 43°.96N×105°.65W, h0^{km}, mb3.9/6, mbtmp3.8/13, ML3.3/6, Error ellipse: s-maj=18.6km s-min=6.9km az=145.0*

*NEIC **22** 20:00:43.0±1.3, 43°.79N±0°.05×105°.25W±0°.06, h0^{km}±2^{km}, ML3.5/87, Error ellipse: s-maj=8.5km s-min=6.6km az=156.0*

ISC 22 20:00:41.7±0.7, 43°.77N±0°.06×105°.25W±0°.05, h0^{km}, n98, σ1^s.30/98, mb4.1/6, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RSSD	Black Hills	0.94	68	Pg	Pb	20 01 00.9	-0.2
K22A	Casper	1.46	220		Pn	20 01 08.7	-0.8
K22A				IAML		20 01 32.6	
	comp=E,636nm,0.4s						
PHWY	Pilot Hill	2.48	184		Pn	20 01 24.6	+1.1
PHWY				IAML		20 02 02.6	
	comp=E,208nm,0.5s						
RWWY	Rawlins	2.54	215		Pn	20 01 26.0	+1.7
N23A	Red Feather La	2.92	190		Pn	20 01 31.4	+1.7
N23A				IAML		20 02 14.4	
	comp=N,194nm,0.6s						
N23A				IAML		20 02 22.5	
	comp=E,148nm,0.7s						
LAO	LASA Array	3.00	347	Pn	Pn	20 01 31.7	+1.2
RLMT	Red Lodge	3.18	296		Pn	20 01 34.0	+0.8
RLMT				IAML		20 02 25.7	
	comp=E,129nm,0.7s						
RLMT				IAML		20 02 26.5	
	comp=E,110nm,0.7s						
BRIGG	Briggsdale	3.26	167	Pn	Pn	20 01 35.5	+1.2
BW06	Boulder Array	3.31	254		Pn	20 01 35.6	+0.7
BW06				IAML		20 02 25.4	
	comp=E,98nm,0.7s						
BW06				IAML		20 02 32.5	
	comp=E,110nm,0.7s						
PD31	Pinedale Array	3.31	254	Pn	Pn	20 01 35.7	+0.8
PDAR	Pinedale Array	3.31	254	Pn	Pn	20 01 35.8	+0.9
	comp=E,14nm,0.4s,baz=68,slow=16,SNR=222						
PDAR				Pg	Pb	20 01 41.4	+0.1
	comp=E,28nm,0.3s,baz=58,slow=19,SNR=46						
PDAR				Lg	Lg	20 02 20.2	
	comp=E,21nm,0.3s,baz=64,slow=37,SNR=4.4						
PDAR	Pinedale Array	3.31	254	Pn	Pn	20 01 35.4	+0.4
YMP	Mirror Lake Pl	3.66	287		Pn	20 01 41.1	+1.3
OGNE	Ogallala	3.70	139	Pn	Pn	20 01 42.8	+2.6
GCMT	Greycliff	3.74	304		Pn	20 01 41.9	+1.1
LKWY	Lake	3.79	284		Pn	20 01 42.2	+0.6
LKWY				IAML		20 02 09.4	
	comp=E,96nm,0.6s						
H17A	Grant Village	3.89	281		Pn	20 01 45.0	+2.1
H17A				IAML		20 02 46.7	
	comp=N,59nm,0.6s						
FLWY	Flagg Ranch	3.95	276		Pn	20 01 44.5	+0.8
FLWY				IAML		20 03 00.4	
	comp=N,67nm,1.4s						
FLWY				IAML		20 03 11.2	
	comp=N,54nm,1.2s						
ISCO	Idaho Springs	3.98	184	Pn	Pn	20 01 46.3	+2.1
MOOW	Moose Ponds	3.98	272		Pn	20 01 46.3	+2.1
SNOW	Snow King Moun	4.01	267		Pn	20 01 46.2	+1.6
SNOW				IAML		20 03 03.8	
	comp=N,73nm,1.6s						
SNOW				IAML		20 03 10.2	
	comp=N,65nm,0.7s						
YNR	Norris Junctio	4.01	285		Pn	20 01 45.7	+1.0
REDW	Red Top Meadow	4.09	266		Pn	20 01 47.0	+1.2
IMW	Indian Meadow	4.12	274	Pn	Pn	20 01 48.1	+1.9
IMW				IAML		20 02 57.8	
	comp=N,74nm,0.6s						
IMW				IAML		20 02 58.5	
	comp=N,49nm,0.6s						
TPAW	Teton Pass	4.15	268		Pn	20 01 47.3	+0.8
TPAW				IAML		20 03 10.7	
	comp=N,71nm,0.9s						
FXWY	Fox Creek	4.19	270		Pn	20 01 48.4	+1.3
YMR	Madison River	4.21	284		Pn	20 01 48.3	+1.0
YMR				IAML		20 03 13.2	
	comp=N,71nm,1.1s						
YMR				IAML		20 03 17.6	
	comp=E,60nm,0.9s						
O20A	White River Ci	4.27	213		Pn	20 01 49.5	+1.4
O20A				IAML		20 03 00.5	
	comp=N,70nm,0.9s						
E28A	Huff	4.27	47		Pn	20 01 50.5	+2.5
AHID	Auburn Hatcher	4.39	259		Pn	20 01 51.3	+1.5
AHID				IAML		20 03 02.6	
	comp=N,68nm,0.7s						
AHID				IAML		20 03 15.7	
	comp=N,59nm,0.7s						
RDMU	Red Mountain	4.53	227		Pn	20 01 53.5	+1.7
RDMU				IAML		20 03 09.3	
	comp=E,55nm,0.9s						
RDMU				IAML		20 03 14.1	
	comp=N,43nm,0.8s						
QLMT	Earthquake Lak	4.56	286		Pn	20 01 53.1	+0.9
DGMT	Dagmar	4.75	8	Pn	Pn	20 01 56.8	+2.2
SMCO	Snowmass	4.77	196	Pn	Pn	20 01 56.2	+1.0
SMCO				IAML		20 03 20.8	
	comp=N,40nm,1.0s						
SMCO				IAML		20 03 24.6	
	comp=N,38nm,0.8s						
Q24A	Divide	4.81	179	Pn	Pn	20 01 57.3	+1.7
Q24A				IAML		20 03 16.0	
	comp=E,46nm,0.7s						
BOZ	Bozeman (W)	4.90	294		Pn	20 01 58.2	+1.4
BOZ				IAML		20 03 20.4	
	comp=E,24nm,0.6s						
BOZ				IAML		20 03 26.5	
	comp=E,32nm,0.8s						
HWUT	Hardware Ranch	5.13	247	Pn	Pn	20 02 01.0	+0.9
KSCO	Kaye Shedlock'	5.15	157	Pn	Pn	20 02 01.4	+1.2
BSUT	Blindstream Ca	5.22	234		Pn	20 02 02.0	+0.6
BSUT				IAML		20 03 46.8	
	comp=N,20nm,0.8s						
BSUT				IAML		20 03 47.6	
	comp=E,23nm,0.9s						
TCUT	Toone Canyon	5.27	242		Pn	20 02 03.3	+1.3
EGMT	Eagleton	5.29	325		Pn	20 02 02.4	+0.4
DLMT	Dillon	5.49	289		Pn	20 02 05.1	+0.3
HRY	Holter Researc	5.50	305		Pn	20 02 06.3	+1.4
LRM	Limekiln Ridge	5.52	294		Pn	20 02 05.9	+0.5
MCMT	McKenzie Canyo	5.56	284		Pn	20 02 07.0	+1.1
CTU	Camp Tracy	5.72	240	Pn	Pn	20 02 09.7	+1.6
SPUT	South Promonto	5.86	248	Pn	Pn	20 02 11.3	+1.3
HVU	Hansel Valley	5.89	253	Pn	Pn	20 02 11.8	+1.5
PV07	Paradox Valley	5.92	207	Pn	Pn	20 02 12.5	+1.7
P17A	Butcher Ranch,	5.95	226		Pn	20 02 10.7	-0.5
PV15	Paradox Valley	5.95	205		Pn	20 02 10.3	-1.0
SDCO	Great Sand Dun	6.03	182	Pn	Pn	20 02 13.1	+0.7
PV23	Carpenter Ridg	6.03	209		Pn	20 02 13.5	+1.1
MPU	Maple Canyon	6.07	234	Pn	Pn	20 02 12.9	+0.1
PV10	Paradox Valley	6.11	209		Pn	20 02 15.7	+2.3
SRU	San Rafael Swe	6.12	222		Pn	20 02 14.1	+0.6
PV11	David Mesa, Pa	6.12	208		Pn	20 02 14.1	+0.6
S22A	4UR Ranch, Cre	6.14	192		Pn	20 02 15.1	+1.1
PV13	Radium Mtn., P	6.23	207		Pn	20 02 16.7	+1.6
ECSD	EROS Data Cent	6.25	87	Pn	Pn	20 02 16.6	+1.4
TMUT	Trail Mountain	6.32	227		Pn	20 02 18.0	+1.5
NLU	North Lily Min	6.37	236	Pn	Pn	20 02 17.8	+0.9
BGU	Big Grassy Mou	6.43	246	Pn	Pn	20 02 19.1	+1.4
CBKS	Cedar Bluff	6.46	138		Pn	20 02 19.7	+1.6
Q16A	Castle Valley	6.59	225		Pn	20 02 21.2	+1.2
HLID	Hailey	6.65	271	Pn	Pn	20 02 23.0	+2.2
T25A	Trinidad	6.66	174		Pn	20 02 22.1	+1.2
DUG	Dugway, Tooele	6.67	240	Pn	Pn	20 02 21.6	+0.5
F33A	5 Mile Ranch,	6.70	69		Pn	20 02 20.9	-0.3
MSO	Missoula	6.85	300	Pn	Pn	20 02 23.6	+0.1
MVCO	Mesa Verde	7.01	202	Pn	Pn	20 02 28.4	+2.6
R32A	Long Quarter,	7.28	135	Pn	Pn	20 02 30.5	+1.3
MSU	Marysvale	7.41	227	Pn	Pn	20 02 32.9	+1.5
MVU	Marysvale	7.44	227	Pn	Pn	20 02 32.0	+0.3
AGMN	Agassiz Nation	7.94	52		Pn	20 02 39.5	+1.1
WALA	Waterton Lakes	7.98	314	Pn	Pn	20 02 39.0	0.0
ELK	Elko	8.00	251	Pn	Pn	20 02 40.3	+0.9
	comp=E,0.9nm,0.3s,baz=69,slow=10.0,SNR=15						
	comp=E,1.6nm,0.3s						
PKCU	Pink Cliffs	8.29	223	Pn	Pn	20 02 43.0	-0.6
SPR3	Spring Creek 3	8.33	238	Pn	Pn	20 02 45.9	+1.9
F36A	Milaca	8.59	72		Pn	20 02 47.1	-0.1
NOKA	Waynoka	8.61	144		Pn	20 02 47.7	+0.1
CCUT	Cedar City	8.75	227	Pn	Pn	20 02 51.6	+1.9
ULM	Lac du Bonnet	9.10	41	Pn	Pn	20 02 54.1	-0.1
	comp=E,2.0nm,0.3s,baz=234,slow=11,SNR=12						
ULM				Lg	Lg	20 05 25.6	
	comp=E,0.7nm,0.3s,baz=142,slow=20,SNR=2.6						
	comp=E,7.1nm,0.4s						
ULM	Lac du Bonnet	9.10	41	Pn	Pn	20 02 53.5	-0.7
U15A	North Rim	9.10	219		Pn	20 02 54.0	-0.5

B35A	**Bob, Littlefor**	**9.23**	**56**	Pn	**Pn**	**20 02 56.0**	**0.0**
NEW	**Newport**	**9.40**	**303**	Pn	Pn	20 02 53.9	-4.5
	comp=E,0.2nm,0.3s,baz=98,slow=15,SNR=2.7						
	comp=E,1.5nm,0.4s						
KVN	**Kaiserville**	**10.74**	**248**	Pn	**Pn**	**20 03 19.1**	**+2.2**
FFC	**Flin Flon**	**11.17**	**10**	Pn	**Pn**	**20 03 21.7**	**-0.8**
NVAR	**Mina Array Bea**	**11.20**	**246**	Pn	**Pn**	**20 03 25.6**	**+2.4**
	comp=E,0.2nm,0.3s,baz=48,slow=12,SNR=9.1						
	comp=E,1.3nm,0.7s						
TXAR	**Lajitas Array**	**14.47**	**174**	Pn	**P**	**20 04 12.8**	**-2.0**
	baz=357,slow=9.3,SNR=4.8						
TXAR				Lg	Lg	20 08 18.2	
	baz=9.6,slow=28,SNR=2.9						
	comp=E,0.3nm,0.6s						
YKA	**Yellowknife Ar**	**19.54**	**347**	P	**P**	**20 05 08.8**	**-1.7**
	comp=E,0.2nm,0.3s,baz=159,slow=12,SNR=11						
	comp=E,0.6nm,0.5s						
ARCES	**ARCESS Array B**	**61.38**	**18**	P	**P**	**20 10 58.9**	**0.0**
	comp=E,1.3nm,0.6s,baz=331,slow=7.2,SNR=7.6						
	comp=E,1.3nm,0.6s						
ZALV	**Zalesovo Beam**	**82.27**	**354**	P	**P**	**20 13 04.6**	**0.0**
	comp=E,1.0nm,0.6s,baz=348,slow=4.5,SNR=6.8						
	comp=E,1.0nm,0.6s						
BVAR	**Borovoye Array**	**83.50**	**3**	P	**P**	**20 13 11.7**	**+0.6**
	comp=E,0.7nm,0.6s,baz=351,slow=5.2,SNR=7.0						
	comp=E,0.7nm,0.6s						
SONM	**Songino Array**	**84.61**	**339**	P	**P**	**20 13 17.1**	**+0.1**
	comp=E,0.3nm,0.5s,baz=10,slow=3.3,SNR=3.5						
	comp=E,0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**85.93**	**358**	P	**P**	**20 13 23.4**	**+0.1**
	comp=E,0.2nm,0.4s,baz=2.9,slow=4.0,SNR=6.4						
	comp=E,0.2nm,0.4s						
MKAR	**Makanchi Array**	**89.57**	**355**	P	**P**	**20 13 41.2**	**+0.3**
	comp=E,0.7nm,0.6s,baz=14,slow=4.6,SNR=12						
	comp=E,0.7nm,0.6s						

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*NEIC **22** 20:15:53.8±1.4, 14°.7S±0°.1×166°.6E±0°.2, h10km±1km, mb4.5/14, Error ellipse: s-maj=26.2km s-min=16.9km az=100.0*

*IDC **22** 20:16:02.2±13.0, 15°.13S×165°.37E, h0km, mb3.9/3, mbtmp3.9/4, ML3.4/1, Error ellipse: s-maj=227.4km s-min=35.9km az=53.0*

ISC 22 20:15:53.4±0.8, **14°.71S**±0°.08×**166°.6E**±0°.1, **h10**km, **n25, σ1s.49**/27, **mb4.4**/10, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIFNC	**LIFOU**	**6.07**	**174**	Pn	**Pn**	**20 17 24.1**	**+0.9**
LIFNC				Sn	**Sn**	**20 18 31.7**	**-1.0**
KOUNC	**Koumac, New Ca**	**6.19**	**200**	Pn	**Pn**	**20 17 25.5**	**+0.5**
DZM	**Mont Dzumac**	**7.32**	**181**	Pn	Pn	20 17 45.9	+5.4
	0.6nm,0.3s,baz=37,slow=6.2,SNR=9.2						
DZM				Sn	**Sn**	**20 19 06.8**	**+3.1**
	0.6nm,0.3s,baz=198,slow=23,SNR=1.9						
	3.6nm,0.5s						
DZM	**Mont Dzumac**	**7.32**	**181**	Pn	**Pn**	**20 17 41.6**	**+1.1**
DZM				Sn	**Sn**	**20 18 59.8**	**-3.9**
ONTNC	**Ouen Toro**	**7.55**	**181**	Pn	**Pn**	**20 17 46.6**	**+3.0**
OUENC	**Ouen Island, N**	**7.67**	**178**	Pn	**Pn**	**20 17 47.1**	**+1.9**
PINNC	**Pines Island,**	**7.90**	**174**	Pn	**Pn**	**20 17 48.5**	**0.0**
EIDS	**Eidsvold**	**17.97**	**231**		**Pn**	**20 20 03.0**	**-0.4**
EIDS				IAmb	IAmb	20 20 36.6	
	comp=Z,22nm,1.5s						
STKA	**Stephens Creek**	**28.48**	**229**	P	**P**	**20 21 49.2**	**+0.4**
	comp=Z,1.4nm,0.5s,baz=61,slow=10,SNR=6.2						
	comp=Z,1.4nm,0.5s						
STKA	**Stephens Creek**	**28.48**	**229**	P	**P**	**20 21 48.8**	**-0.1**
WB0	**Warramunga Arr**	**31.09**	**256**	P	**P**	**20 22 12.3**	**+0.1**
WB0				IAmb	IAmb	20 22 51.0	
	comp=Z,9.4nm,1.5s						
WRAB	**Tennant Creek**	**31.14**	**256**	P	**P**	**20 22 11.8**	**-0.9**
WRAB				IAmb	IAmb	20 22 18.7	
	comp=Z,5.8nm,1.4s						
WRA	**Warramunga Arr**	**31.15**	**256**	P	**P**	**20 22 12.5**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=86,slow=9.2,SNR=5.5						
	comp=Z,0.6nm,0.9s						
AS31	**Alice Springs**	**32.03**	**249**	P	**P**	**20 22 19.7**	**-0.7**
ASAR	**Alice Springs**	**32.03**	**249**	P	**P**	**20 22 20.0**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=78,slow=9.3,SNR=19						
	comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**32.03**	**249**	P	**P**	**20 22 20.1**	**-0.3**
BBOO	**Buckleboo**	**33.04**	**232**	P	**P**	**20 22 29.3**	**+0.2**
BBOO				IAmb	IAmb	20 22 51.1	
	comp=Z,26nm,1.4s						
KNRA	**Kununurra**	**36.45**	**263**	P	**P**	**20 22 58.5**	**-0.3**
KNRA				IAmb	IAmb	20 23 35.6	
	comp=Z,15nm,1.1s						
FITZ	**Fitzroy Crossi**	**39.33**	**259**	P	**P**	**20 23 23.8**	**+0.7**
NWAO	**Narrogin (SRO)**	**48.16**	**239**	P	**P**	**20 24 34.1**	**0.0**
VNDA	**Vanda**	**62.86**	**181**	P	**P**	**20 26 19.5**	**+0.4**
VNDA				IAmb	IAmb	20 26 52.5	
	comp=Z,2.2nm,1.1s						
SBA	**Scott Base**	**63.15**	**180**	P	**P**	**20 26 19.2**	**-1.8**
SBA				IAmb	IAmb	20 26 32.4	
	comp=Z,8.1nm,1.5s						
MCARA	**McCarthy VSAT**	**85.67**	**22**	P	**P**	**20 28 34.1**	**+2.0**
AFDM	**Forest Hills D**	**86.03**	**48**	P	**P**	**20 28 33.7**	**-0.8**
PIX	**Pinacate**	**89.31**	**57**	P	**P**	**20 28 49.1**	**-1.2**
PIX				IAmb	IAmb	20 28 57.4	
	comp=Z,4.6nm,1.2s						

IDC 22 20:27:49.7±2.9, **6°.70S**×**131°.97E, h0**km, **mb3.5**/2, **mbtmp3.6**/4, **ML3.7**/2, **MS3.2**/3, **Error ellipse: s-maj=205.0km s-min=30.9km az=75.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**12.27**	**277**	LR	LR	20 36 48.2	
	comp=Z,72nm,19.7s,baz=112,slow=44						
WRA	**Warramunga Arr**	**13.36**	**170**	Pn	Pn	20 31 00.4	-0.4
	0.4nm,0.3s,baz=352,slow=13,SNR=22						
WRA				Sn	Sn	20 33 20.5	-10
	0.5nm,0.3s,baz=360,slow=23,SNR=6.4						
	0.9nm,0.4s						
ASAR	**Alice Springs**	**16.97**	**174**	Pn	Pn	20 31 49.1	+0.4
	0.2nm,0.3s,baz=359,slow=9.1,SNR=20						
ASAR				Sn	Sn	20 34 52.8	-5.4
	0.2nm,0.3s,baz=7.0,slow=26,SNR=6.1						
	1.1nm,0.6s						
CTA	**Charters Tower**	**19.22**	**135**	LR	LR	20 39 24.9	
	comp=Z,84nm,20.1s,baz=305,slow=36						
DZM	**Mont Dzumac**	**36.60**	**118**	LR	LR	20 50 37.9	
	comp=Z,58nm,18.2s,baz=213,slow=37						
MKAR	**Makanchi Array**	**69.06**	**326**	P	P	20 38 57.2	-0.3
	0.3nm,0.7s,baz=126,slow=6.3,SNR=3.6						
	0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**72.19**	**333**	P	P	20 39 16.7	+0.4
	0.2nm,0.4s,baz=123,slow=5.4,SNR=1.3						
	0.2nm,0.4s						

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*HVO **22** 20:29:32.1±1.1, 18°.97N±0°.07×155°.47W±0°.03, h41km±4km, ML2.5/7, ML2.9/34(NEIC), Error ellipse: s-maj=9.7km s-min=4.5km az=171.0*

NEIC 22 20:29:30.4±1.1, **18°.97N**±0°.06×**155°.47W**±0°.03, **h48**km±2km, **Error ellipse: s-maj=9.0km s-min=4.3km az=171.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HPO	**Honuapo**	**0.14**	**326**		Pn	20 29 38.2	0.0
HTC	**Hot Caves**	**0.27**	**15**		Pn	20 29 39.4	+0.2
KHU	**Kahuku**	**0.30**	**334**		Pn	20 29 39.4	-0.3
KHU	**Kahuku**	**0.30**	**334**		Sn	20 29 45.4	-0.8
KHU	**Kahuku**	**0.30**	**334**	IAML		20 29 45.6	
	comp=N,524nm,0.7s						
KHU				IAML		20 29 45.8	
	comp=E,788nm,0.8s						
HLP	**Hilina Pali**	**0.36**	**26**		Pn	20 29 40.0	0.0
HLP	**Hilina Pali**	**0.36**	**26**		Sn	20 29 44.9	-2.0
HLP				IAML		20 29 46.9	
	comp=N,1µm,0.1s						
HLP				IAML		20 29 48.3	
	comp=E,871nm,0.4s						
AIN	**Ainahou**	**0.40**	**2**		Sn	20 29 47.3	-0.5
AIN	**Ainahou**	**0.40**	**2**		Pn	20 29 40.9	+0.3
AIN	**Ainahou**	**0.40**	**2**	IAML		20 29 48.0	
	comp=E,2µm,0.2s						
AIN				IAML		20 29 48.1	
	comp=N,3µm,0.4s						
SDHHI	**Sand Hill**	**0.45**	**22**		Pn	20 29 41.0	-0.1
SDHHI					Sn	20 29 48.2	-0.5
RIM	**Rim**	**0.46**	**24**		Sn	20 29 47.8	-1.1
RIM	**Rim**	**0.46**	**24**	Pn	Pn	20 29 41.5	+0.3
RIM				IAML		20 29 47.7	
	comp=N,792nm,1.0s						
RIM	**Rim**	**0.46**	**24**	IAML		20 29 59.7	
	comp=E,565nm,1.0s						
WRMHI	**West Rim**	**0.46**	**21**		Pn	20 29 41.1	-0.2
WRMHI					Sn	20 29 47.8	-1.2
KKO	**Keanakako`i**	**0.47**	**25**		Pn	20 29 41.2	-0.1
KKO					Sn	20 29 47.7	-1.3
KKO	**Keanakako`i**	**0.47**	**25**	IAML		20 29 48.1	
	comp=E,740nm,0.3s						
KKO				IAML		20 29 57.5	
	comp=N,794nm,1.0s						
PUH	**Pauahi**	**0.47**	**31**		Pn	20 29 41.1	-0.2
PUH	**Pauahi**	**0.47**	**31**	IAML		20 29 48.3	
	comp=E,288nm,0.6s						
PUH				IAML		20 29 54.4	
	comp=N,494nm,1.5s						
UWE	**Uwekahuna**	**0.48**	**21**		Sn	20 29 48.3	-1.1
BYL	**Byron's Ledge**	**0.48**	**25**		Pn	20 29 41.3	-0.2
BYL	**Byron's Ledge**	**0.48**	**25**	IAML		20 29 48.2	
	comp=N,663nm,1.3s						
BYL				IAML		20 30 00.1	
	comp=E,440nm,1.4s						
UWB	**Uwekahuna B**	**0.49**	**22**		Pn	20 29 41.3	-0.2
UWB	**Uwekahuna B**	**0.49**	**22**	IAML		20 29 50.3	
	comp=E,234nm,2.0s						
UWB				IAML		20 29 54.6	
	comp=N,280nm,1.5s						
SBLHI	**Steaming Bluff**	**0.49**	**23**		Sn	20 29 48.0	-1.6
KNHH	**Kane Nui o Ham**	**0.50**	**35**		Pn	20 29 41.4	-0.2
RSD	**Rainshed**	**0.52**	**20**	Pn	Pn	20 29 43.0	+1.0
MWH	**Moku‘aweowe**	**0.53**	**347**		Sn	20 29 49.6	-1.3
MWH	**Moku‘aweowe**	**0.53**	**347**		Pn	20 29 42.3	-0.1
MWH	**Moku‘aweowe**	**0.53**	**347**	IAML		20 29 49.9	
	comp=E,368nm,0.7s						
MWH				IAML		20 29 50.2	
	comp=N,378nm,0.3s						
MLH	**Mauna Loa**	**0.53**	**9**	Pn	Pn	20 29 42.9	+0.8
MLH				IAML		20 29 50.0	
	comp=E,441nm,0.3s						
MLH				IAML		20 29 50.2	
	comp=N,650nm,0.3s						
STCH	**Steam Cracks**	**0.53**	**38**		Pn	20 29 41.7	-0.2
STCH	**Steam Cracks**	**0.53**	**38**	IAML		20 29 49.4	
	comp=N,360nm,0.7s						
STCH				IAML		20 29 49.8	
	comp=E,393nm,0.4s						
JCUZ	**Jacuzzi**	**0.54**	**40**		Sn	20 29 49.4	-1.1
NPOC	**North of Pu‘u**	**0.54**	**39**		Sn	20 29 49.3	-1.2
MLOA	**Mauna Loa Obse**	**0.57**	**350**		Pn	20 29 42.8	0.0
MLOA				IAML		20 29 50.8	
	comp=N,583nm,0.3s						
MLOA				IAML		20 29 50.9	
	comp=E,722nm,0.2s						
ALEP	**Alea Permanent**	**0.59**	**344**		Pn	20 29 42.8	-0.3
ALEP					Sn	20 29 51.1	-0.9
HMH	**Humu‘ula Sheep**	**0.63**	**359**		Pn	20 29 43.9	+0.5
HMH				IAML		20 29 52.7	
	comp=E,611nm,0.2s						
JOKA	**Jonika Flow**	**0.64**	**44**		Pn	20 29 43.0	-0.3
JOKA					Sn	20 29 51.1	-1.5
CPH	**Captain Cook**	**0.67**	**321**		Sn	20 29 52.1	-1.2
KHLU	**Kahalu`u**	**0.73**	**327**		Pn	20 29 44.4	-0.2
KHLU	**Kahalu`u**	**0.73**	**327**	IAML		20 29 54.5	
	comp=E,384nm,0.1s						
KHLU				IAML		20 29 54.9	
	comp=N,432nm,0.1s						
HUH	**Hualalai**	**0.79**	**334**		Pn	20 29 45.6	+0.1
HPAH	**Hawaii Prepara**	**1.07**	**349**		Sn	20 30 00.9	-2.1

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*UCR **22** 20:39:53.5±1.5, 12°.38N×84°.34W, h5km, MW3.9*

*INET **22** 20:39:54.0±3.0, 12°.33N×84°.32W, h2km±11km, MW3.1*

ISC 22 20:39:52.7±1.7, **12°.38N**±0°.06×**84°.35W**±0°.06, **h1**km±12km, **n59, σ0s.84**/74, **Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESPN	**Las Esperanzas**	**0.19**	**166**	*e*P	**Pg**	**20 39 56.7**	**+0.3**
ESPN				*e*S	**Sg**	**20 39 59.8**	**+0.8**
ACON	**Acoyapa**	**0.91**	**243**	*e*P	**Pg**	**20 40 10.2**	**+0.1**
ACON				*e*S	**Sb**	**20 40 24.1**	**+0.2**
ACON	**Acoyapa**	**0.91**	**243**	*e*P	**Pg**	**20 40 10.3**	**+0.1**
BOAB	**BOACO BROADBAN**	**1.29**	**273**	*e*P	**Pg**	**20 40 16.7**	**-0.8**
LCHIL	**Los Chiles**	**1.39**	**195**	*e*P	**Pg**	**20 40 20.4**	**+1.0**
LCHIL				*e*S	**Sb**	**20 40 37.8**	**+0.1**
CONN	**Concepcion**	**1.49**	**237**	*e*P	**Pn**	**20 40 19.8**	**-1.0**
VERA	**Finca Concepci**	**1.60**	**199**	*e*P	**Pn**	**20 40 21.1**	**-1.1**
VERA				*e*S	**Sb**	**20 40 43.8**	**-0.1**
MATN	**Matagalpa**	**1.63**	**290**	*e*P	**Pn**	**20 40 22.0**	**-0.7**
MATN				*e*S	**Sn**	**20 40 44.9**	**+0.4**
COVE	**Coope Vega, Sa**	**1.65**	**182**	*e*P	**Pn**	**20 40 21.2**	**-1.7**
CANAL	**Canalete**	**1.69**	**204**	*e*P	**Pn**	**20 40 22.1**	**-1.3**
CANAL				*e*S	**Sn**	**20 40 45.9**	**+0.2**
VMAR	**Armenia, Volca**	**1.73**	**206**	*e*P	**Pn**	**20 40 23.1**	**-0.9**
VMAR				*e*P	**Pb**	**20 40 23.3**	**-2.1**
VMAR				*e*S	**Sn**	**20 40 47.3**	**+0.5**
VMAR				*e*S	**Sb**	**20 40 47.5**	**-0.2**
PTEN	**Parque Tenorio**	**1.77**	**201**	*e*P	**Pn**	**20 40 24.0**	**-0.6**
PTEN				*e*S	**Sb**	**20 40 48.7**	**-0.2**
BUAI	**Buenos Aires**	**1.78**	**213**	*e*P	**Pn**	**20 40 24.4**	**-0.3**
BUAI				*e*S	**Sb**	**20 40 49.2**	**+0.1**
HUEN		**1.78**	**269**	*e*P	**Pn**	**20 40 25.3**	**+0.6**
HUEN				*e*S	**Sb**	**20 40 50.3**	**+1.2**
CLARA	**Aguas Claras**	**1.78**	**207**	*e*P	**Pn**	**20 40 24.3**	**-0.5**
CLARA				*e*S	**Sb**	**20 40 49.4**	**+0.2**
WILN	**Americas 2**	**1.81**	**263**	*e*P	**Pn**	**20 40 25.6**	**+0.5**
MESS	**Mesas**	**1.83**	**207**	*e*P	**Pn**	**20 40 24.9**	**-0.5**
VORI	**VORI**	**1.84**	**212**	*e*P	**Pn**	**20 40 26.8**	**+1.2**
HORNC	**Hornillas**	**1.85**	**206**	*e*P	**Pn**	**20 40 25.6**	**-0.1**
HORNC				*e*S	**Sn**	**20 40 50.3**	**+0.5**
GB1A	**Borinquen Arri**	**1.86**	**214**	*e*P	**Pn**	**20 40 25.6**	**-0.3**
GUAB	**Guayabo de Bag**	**1.88**	**207**	*e*S	**Sb**	**20 40 52.0**	**+0.2**
CUI	**Cuipilapa**	**1.89**	**205**	*e*P	**Pn**	**20 40 25.9**	**-0.4**
TISN	**Laguna Tiscapa**	**1.89**	**263**	*e*P	**Pn**	**20 40 27.1**	**+0.8**
COLC	**Colonia**	**1.90**	**206**	*e*P	**Pn**	**20 40 26.6**	**+0.2**
CEDE	**Laguna Cedeo**	**1.92**	**190**	*e*P	**Pb**	**20 40 28.5**	**-0.1**
CEDE				*e*S	**Sb**	**20 40 52.7**	**-0.4**
TABAC	**Tabacon**	**1.92**	**192**	*e*P	**Pn**	**20 40 26.4**	**-0.3**
LAPC	**Finca la Perla**	**1.93**	**214**	*e*P	**Pn**	**20 40 26.7**	**0.0**
GBS3	**Finca Las Img**	**1.93**	**214**	*e*P	**Pn**	**20 40 26.5**	**-0.2**
VACR	**Volcan Arenal**	**1.93**	**190**	*e*P	**Pn**	**20 40 26.4**	**-0.3**
CASO	**Castillo**	**1.97**	**191**	*e*S	**Sb**	**20 40 54.2**	**-0.5**
SOCE	**Pocosol**	**2.01**	**188**	*e*P	**Pn**	**20 40 26.8**	**-1.0**
CPMI	**Catarata Coope**	**2.09**	**181**	*e*P	**Pn**	**20 40 28.4**	**-0.7**
CARI	**Cariari**	**2.10**	**163**	*e*P	**Pn**	**20 40 28.6**	**-0.4**
RIFO	**Rio Frio, Sara**	**2.10**	**168**	*e*P	**Pn**	**20 40 29.2**	**+0.2**
JTS	**Las Juntas de**	**2.16**	**196**	*e*P	**Pn**	**20 40 28.2**	**-1.7**
JTS	**Las Juntas de**	**2.16**	**196**	*e*P	**Pn**	**20 40 30.1**	**+0.2**
CRPO	**Crater poas**	**2.18**	**177**	*e*P	**Pb**	**20 40 32.4**	**-0.8**
COPN	**Copaltepe**	**2.20**	**265**	*e*P	**Pn**	**20 40 31.7**	**+1.2**
VPTE	**Poasito**	**2.20**	**176**	*e*P	**Pn**	**20 40 31.0**	**+0.3**
CVIMO	**Finca Echandi**	**2.38**	**170**	*e*P	**Pb**	**20 40 35.6**	**-0.9**
LCOCO	**El Coco**	**2.41**	**161**	*e*P	**Pn**	**20 40 33.6**	**+0.2**
IRES	**Siquirres**	**2.42**	**160**	*e*P	**Pn**	**20 40 34.0**	**+0.5**
VICA	**Volcano Irazu**	**2.44**	**168**	*e*P	**Pn**	**20 40 33.6**	**-0.4**
HAYA	**Volcan Irazu**	**2.44**	**168**	*e*P	**Pn**	**20 40 33.8**	**-0.3**
ICR3	**Volcano Irazu**	**2.44**	**168**	*e*P	**Pn**	**20 40 34.1**	**-0.1**
HATIL	**Hatillo**	**2.46**	**213**	*e*P	**Pn**	**20 40 34.6**	**+0.6**
BATAN	**Batan**	**2.46**	**157**	*e*P	**Pn**	**20 40 35.2**	**+1.1**
POPE	**POPE, Guanacas**	**2.47**	**201**	*e*P	**Pn**	**20 40 35.4**	**+1.1**
JUD3	**Juan Diaz 3**	**2.49**	**208**	*e*P	**Pn**	**20 40 35.7**	**+1.2**
OCM	**Ochomogo**	**2.50**	**171**	*e*P	**Pn**	**20 40 34.9**	**+0.1**
CMARA	**Lajas Hojancha**	**2.58**	**204**	*e*P	**Pn**	**20 40 35.9**	**+0.2**
LAFE	**Finca La Fe, P**	**2.62**	**192**	*e*P	**Pn**	**20 40 37.9**	**+1.7**
LCR2	**La Lucha 2**	**2.65**	**173**	*e*P	**Pn**	**20 40 37.3**	**+0.5**
NARJA	**Naranjal**	**2.67**	**206**	*e*P	**Pn**	**20 40 36.6**	**-0.3**
ABE2	**San Pablo**	**2.68**	**174**	*e*P	**Pn**	**20 40 39.1**	**+1.8**
MRVA	**Moravia de Chi**	**2.69**	**161**	*e*P	**Pn**	**20 40 37.5**	**+0.1**
JACO	**JACO, Garabito**	**2.72**	**186**	*e*P	**Pn**	**20 40 39.0**	**+1.3**
CDM	**Cerro de Muert**	**2.87**	**168**	*e*P	**Pn**	**20 40 37.6**	**-2.5**
SRBA	**San Rafael, Bu**	**3.28**	**163**	*e*P	**Pn**	**20 40 45.9**	**+0.5**

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*GRAL **22** 20:42:48.3±0.3, 33°.42N×35°.34E, h13km±2km, MD2.6*

*GII **22** 20:42:48.5±0.2, 33°.41N×35°.38E, h4km, Mm1.6/8*

ISC 22 20:42:48.2±1.1, **33°.47N**±0°.03×**35°.36E**±0°.05, **h16**km±8km, **n19, σ0s.83**/32, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QRWL	**Qaraoun**	**0.28**	**74**	*e*P	**Pg**	**20 42 54.2**	**-0.1**
QRWL				*e*S	**Sg**	**20 42 58.7**	**+0.1**
DQRL	**Deir Qamar**	**0.29**	**37**	*e*P	**Pg**	**20 42 54.9**	**+0.3**
DQRL				*e*S	**Sg**	**20 42 59.6**	**+0.7**
GEM	**Giv'at Ha'Em**	**0.36**	**135**	Pg	**Pg**	**20 42 55.5**	**-0.2**
GEM				Sg	**Sb**	**20 43 00.7**	**-1.0**
NATI	**Neve Ativ**	**0.38**	**123**	Pg	**Pg**	**20 42 55.7**	**-0.2**
NATI				Sg	**Sg**	**20 43 00.9**	**-0.3**
RCY	**Rachaya**	**0.40**	**86**	*e*P	**Pg**	**20 42 56.2**	**-0.3**
RCY				*e*S	**Sg**	**20 43 02.0**	**0.0**
HNTI	**Hanita**	**0.41**	**202**	Pg	**Pg**	**20 42 56.2**	**-0.4**
HNTI				Sg	**Sg**	**20 43 02.1**	**-0.2**
MMA1	**Mount Meron ar**	**0.45**	**175**	Pg	**Pg**	**20 42 57.1**	**-0.2**
MMA0B	**Mount Meron ar**	**0.45**	**175**	Pg	**Pg**	**20 42 57.1**	**-0.3**
MMA0B				Sg	**Sb**	**20 43 03.7**	**-0.7**
MMA4	**Mount Meron ar**	**0.45**	**176**	Pg	**Pb**	**20 42 57.2**	**-0.7**
BHL	**Bhannes**	**0.50**	**30**	*e*P	**Pg**	**20 42 58.3**	**+0.1**
ZAHL	**Zahle**	**0.59**	**48**	*e*P	**Pg**	**20 42 59.7**	**-0.1**
BLGI	**Bet Lehem HaGe**	**0.75**	**191**	Pg	**Pg**	**20 43 02.5**	**-0.3**
BLGI				Sg	**Sb**	**20 43 13.0**	**+0.3**
OFRI	**`Ofer**	**0.90**	**200**	Pg	**Pg**	**20 43 05.1**	**-0.6**
OFRI				Sg	**Sb**	**20 43 17.2**	**0.0**
HWQ	**Hawqa**	**0.94**	**31**	*e*P	**Pg**	**20 43 05.4**	**-1.1**
MMLI	**Mount Malkishu**	**1.03**	**177**	Pg	**Pg**	**20 43 07.0**	**-1.1**
MMLI				Sg	**Sb**	**20 43 21.4**	**+0.5**
HMDT	**Nahal Hemdat**	**1.22**	**173**	Pg	**Pg**	**20 43 10.5**	**-1.3**
HMDT				Sg	**Sb**	**20 43 26.8**	**+0.4**
SLTI	**Sal'it**	**1.25**	**192**	Pg	**Pg**	**20 43 11.7**	**-0.7**
SLTI				Sg	**Sn**	**20 43 28.4**	**+0.8**
BEIL	**Beino**	**1.27**	**32**	*e*P	**Pg**	**20 43 10.8**	**-2.0**
SALP	**Salfit**	**1.40**	**186**	Pn	**Pn**	**20 43 13.6**	**+0.5**
SALP				Sn	**Sn**	**20 43 33.7**	**+2.4**

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*JMA **22** 21:09:29.2±0.3, 23°N±2°×122°.6E±0°.7, h63km, FAR S OFF ISHIGAKIJIMA*

*TAP **22** 21:09:29.4, 22°.65N×122°.50E, h43km±1km, ML2.9, D*

ISC 22 21:09:25.1±1.3, **22°.69N**±0°.03×**122°.59E**±0°.03, **h10**km±10km, **n72, σ0s.83**/130, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LDUT	**Ludao**	**1.03**	**269**	P	**Pn**	**21 09 46.0**	**+0.3**
	baz=271						
LDUT				S	**Sg**	**21 09 58.4**	**0.0**
	baz=271						
LYUB	**Lan-yu**	**1.16**	**234**	P	**Pg**	**21 09 47.7**	**+0.4**
	baz=241						
LYUB				S	**Sb**	**21 10 01.4**	**-0.9**
	baz=241						
LAY	**Lan-yu**	**1.16**	**236**	P	**Pg**	**21 09 47.9**	**+0.5**
	baz=244						
LAY				S	**Sb**	**21 10 01.6**	**-0.8**
	baz=244						
EDH	**Donghe**	**1.22**	**284**	P	**Pg**	**21 09 49.2**	**+0.7**
	baz=294						
EDH				S	**Sb**	**21 10 03.3**	**-0.8**
	baz=294						
FULB	**Fuli**	**1.30**	**293**	P	**Pb**	**21 09 50.0**	**+0.4**
	baz=296						
FULB				S	**Sb**	**21 10 05.5**	**-0.9**
	baz=296						
HGSD	**Ruisui**	**1.34**	**307**	*i* P	**Pb**	**21 09 50.5**	**+0.3**
	baz=310						
HGSD				*i* S	**Sb**	**21 10 05.6**	**-1.9**
	baz=310						
EYUL	**Yuli**	**1.34**	**299**	*e*P	**Pb**	**21 09 50.9**	**+0.5**
	baz=312						
EYUL				*e*S	**Sb**	**21 10 05.7**	**-1.9**
	baz=312						
EHD	**Haiduan**	**1.35**	**290**	P	**Pb**	**21 09 51.0**	**+0.4**
	baz=292						
EHD				*e*S	**Sb**	**21 10 06.9**	**-1.1**
	baz=292						
LONT	**Longtian**	**1.36**	**279**	*e*P	**Pg**	**21 09 51.8**	**+0.6**
	baz=274						
YULB	**Yu-li**	**1.38**	**301**	*e*P	**Pb**	**21 09 51.5**	**+0.5**
	baz=310						
YULB				*e*S	**Sb**	**21 10 07.8**	**-1.0**
	baz=310						
EHY	**Hungye**	**1.42**	**305**	*e*P	**Pb**	**21 09 52.0**	**+0.3**
	baz=308						
EHY				*e*S	**Sn**	**21 10 08.7**	**-1.1**
	baz=308						
EGFH	**Guangfu**	**1.45**	**313**	*e*P	**Pb**	**21 09 52.4**	**+0.3**
	baz=316						
EGFH				*e*S	**Sn**	**21 10 09.6**	**-0.9**
	baz=316						
ECL	**Taimali**	**1.51**	**267**	*e*P	**Pb**	**21 09 53.6**	**+0.3**
	baz=280						
ECL				*e*S	**Sn**	**21 10 11.7**	**-0.4**
	baz=280						
ELDTW	**Lidau**	**1.53**	**289**	P	**Pb**	**21 09 53.7**	**0.0**
	baz=291						
ELDTW				*e*S	**Sn**	**21 10 11.8**	**-0.9**
	baz=291						
ESL	**Shilin**	**1.54**	**317**	*e*P	**Pb**	**21 09 54.3**	**+0.5**
	baz=320						
ESL				*e*S	**Sn**	**21 10 11.5**	**-1.4**
	baz=320						
TAW	**Tawu**	**1.60**	**258**	*e*P	**Pg**	**21 09 56.1**	**+0.3**
	baz=258						
TAWH	**Dawu Township**	**1.61**	**258**	*e*P	**Pg**	**21 09 56.3**	**+0.3**
	baz=247						
TAWH				*e*S	**Sg**	**21 10 15.9**	**-1.0**
	baz=247						
EAST	**Anshuo**	**1.64**	**260**	P	**Pb**	**21 09 55.7**	**+0.2**
	baz=251						
EAST				S	**Sb**	**21 10 15.7**	**-0.5**
	baz=251						
TWD	**Chiawan**	**1.66**	**327**	*e*S	**Sn**	**21 10 16.0**	**+0.3**
	baz=330						
VWDT	**VWDT**	**1.70**	**309**	*e*P	**Pb**	**21 09 56.5**	**+0.1**
	baz=311						
VWDT				*e*S	**Sn**	**21 10 16.3**	**-0.4**
	baz=311						
ETL	**Fush Village**	**1.71**	**329**	*e*S	**Sn**	**21 10 17.0**	**0.0**
	baz=332						
NACB	**Ninganchiao**	**1.74**	**328**	P	**Pn**	**21 09 56.1**	**+0.7**
	baz=331						
NACB				S	**Sn**	**21 10 16.5**	**-1.1**
	baz=331						
STYH	**Taoyuan**	**1.74**	**286**	*e*P	**Pb**	**21 09 57.1**	**0.0**
	baz=293						
STYH				*e*S	**Sn**	**21 10 17.5**	**-0.2**
	baz=293						
SMST	**Manzhou Townsh**	**1.75**	**248**	*e*P	**Pn**	**21 09 56.5**	**+1.0**
	baz=247						
SMST				*e*S	**Sn**	**21 10 16.1**	**-1.9**
	baz=247						
HATJ	**Hateruma jima**	**1.76**	**39**	P	**Pn**	**21 09 56.9**	**+1.3**
HATJ				*e*S	**Sn**	**21 10 17.4**	**-0.7**
JYNG	**Yonagunijimaku**	**1.78**	**11**	*e*P	**Pn**	**21 09 57.1**	**+1.1**
TWKBT	**Hengchun**	**1.81**	**246**	*e*P	**Pb**	**21 09 57.8**	**-0.5**
	baz=252						
TWKBT				*e*S	**Sn**	**21 10 18.0**	**-1.3**
	baz=252						
MASBT	**Mashibuluo**	**1.81**	**268**	*e*P	**Pb**	**21 09 58.7**	**+0.4**
	baz=268						
MASBT				*e*S	**Sn**	**21 10 19.5**	**+0.1**
	baz=268						
OWD	**Renai**	**1.81**	**314**	*e*P	**Pb**	**21 09 58.2**	**-0.2**
	baz=317						
OWD				*e*S	**Sn**	**21 10 18.4**	**-1.2**
	baz=317						
TWK1	**Hengchun**	**1.81**	**246**	*e*P	**Pb**	**21 09 58.1**	**-0.3**
	baz=252						
TWK1				*e*S	**Sn**	**21 10 18.6**	**-0.8**
	baz=252						
ETLH	**Xiulin Townshi**	**1.82**	**326**	*e*P	**Pb**	**21 09 58.6**	**0.0**
	baz=329						
ETLH				*e*S	**Sn**	**21 10 20.2**	**+0.4**
	baz=329						
HEN	**Hengchun**	**1.84**	**249**	*e*P	**Pb**	**21 09 59.8**	**+0.9**
	baz=248						
HEN				*e*S	**Sn**	**21 10 20.7**	**+0.4**
	baz=248						
SCZT	**Fangliau**	**1.85**	**260**	*e*P	**Pb**	**21 09 59.8**	**+0.8**
	baz=249						
SCZT				*e*S	**Sb**	**21 10 21.5**	**-0.7**
	baz=249						
SSLB	**Suanglung**	**1.86**	**306**	P	**Pb**	**21 09 59.3**	**+0.1**
	baz=309						
SSLB				S	**Sn**	**21 10 20.5**	**-0.1**
	baz=309						
WUSB	**Renai**	**1.87**	**314**	*e*P	**Pb**	**21 09 59.4**	**-0.1**

	baz=317						
WUSB				S	Sn	21 10 20.6	-0.6
	baz=317						
CHGB	Renai	1.88	317	P	Pb	21 09 59.7	-0.1
	baz=319						
CHGB				S	Sn	21 10 21.3	-0.3
	baz=319						
WHYT	Xinyi Township	1.88	302	eP	Pb	21 09 59.8	+0.2
	baz=311						
WHYT				eS	Sn	21 10 20.9	-0.4
	baz=311						
SGST	Jiashian	1.89	282	eP	Pb	21 10 00.0	+0.3
	baz=283						
WHF	Hehuan Shan	1.89	320	eP	Pb	21 09 59.4	-0.6
	baz=323						
WHF				eS	Sn	21 10 21.3	-0.7
	baz=323						
ENA	Nanau	1.90	336	eP	Pb	21 09 59.8	-0.1
	baz=339						
ENA				eS	Sn	21 10 21.9	+0.3
	baz=339						
EWUT	Wuta	1.90	337	eP	Pb	21 09 60.0	+0.1
	baz=340						
EWUT				eS	Sn	21 10 22.4	+0.8
	baz=340						
WTP	Ta-pu	1.90	287	eP	Pg	21 10 01.1	-0.5
	baz=289						
WTP				eS	Sg	21 10 24.9	-1.4
	baz=289						
TPUB	Ta-pu	1.90	289	eP	Pb	21 10 00.3	+0.3
	baz=290						
TPUB				eS	Sb	21 10 24.6	+0.8
	baz=290						
IRIF	Iriomote-Funau	1.94	32	P	Pn	21 09 59.5	+1.4
IRIF				S	Sn	21 10 22.2	-0.5
CHN4	Tsaushan	1.95	290	eP	Pg	21 10 02.0	-0.6
	baz=291						
SMLT	Sun Moon Lake	1.95	308	eP	Pn	21 09 59.7	+1.2
	baz=317						
SMLT				eS	Sn	21 10 22.6	-0.6
	baz=317						
CHN1	Nanshi	1.96	285	eP	Pb	21 10 02.1	+1.1
	baz=288						
CHN1				eS	Sb	21 10 25.5	0.0
	baz=288						
WCKO	Fanlu	1.97	293	eP	Pb	21 10 01.6	+0.5
	baz=294						
WCKO				eS	Sb	21 10 25.1	-0.7
	baz=294						
CHN5	Tsauling	1.98	298	eP	Pb	21 10 02.1	+0.8
	baz=305						
CHN5				eS	Sb	21 10 26.2	+0.2
	baz=305						
FUSS	Fushou	1.98	322	eS	Sn	21 10 23.1	-0.9
	baz=324						
TYC	Yuchr	2.00	308	eS	Sn	21 10 23.7	-0.4
	baz=316						
JKRS	Kuro-shima	2.02	40	P	Pn	21 10 00.8	+1.6
JKRS				eS	Sn	21 10 23.9	-0.7
TWK	Hsinying	2.02	287	eP	Pb	21 10 02.5	+0.5
	baz=288						
TWK				eS	Sb	21 10 26.9	-0.3
	baz=288						
TWT	Tachien	2.02	320	eS	Sn	21 10 25.5	+0.5
	baz=323						
TWC	Suao	2.03	341	eS	Sn	21 10 25.8	+1.1
	baz=344						
NNSB	Datong	2.05	328	eP	Pb	21 10 02.1	-0.5
	baz=330						
NNSB				eS	Sn	21 10 26.0	+0.3
	baz=330						
WCS	Beigang Elemen	2.06	312	eP	Pb	21 10 01.9	-0.7
	baz=322						
WCS				eS	Sn	21 10 24.9	-0.6
	baz=322						
NNS	Nan Shan	2.07	328	eS	Sn	21 10 26.8	+0.8
	baz=330						
LATG	Datong	2.08	332	eP	Pb	21 10 02.8	-0.2
	baz=343						
LATG				eS	Sn	21 10 26.4	+0.2
	baz=343						
ENTT	Nioudou	2.15	334	eP	Pb	21 10 03.3	-1.0
	baz=337						
ENTT				eS	Sn	21 10 28.9	+0.9
	baz=337						
TWE	Neicheng	2.19	338	eP	Pb	21 10 04.1	-0.7
	baz=340						
TWE				eS	Sn	21 10 29.9	+1.1
	baz=340						
JIJ	Ishigaki jima	2.19	40	P	Pn	21 10 02.9	+1.3
JIJ				eS	Sn	21 10 27.2	-1.6
FUSB	Fushanzhiwuyua	2.25	336	eP	Pb	21 10 05.1	-0.9
	baz=339						
FUSB				eS	Sn	21 10 30.3	-0.2
	baz=339						
YHNB	Yeheng	2.26	331	eP	Pn	21 10 04.7	+2.1
	baz=333						
YHNB				eS	Sn	21 10 31.6	+0.9
	baz=333						
NSK	Sanguang	2.28	331	P	Pb	21 10 05.1	-1.2
	baz=333						
NSK				S	Sn	21 10 31.4	+0.4
	baz=333						
NWLT	Wulai	2.30	335	eP	Pb	21 10 05.6	-1.2
	baz=346						
NWLT				eS	Sn	21 10 31.6	0.0
	baz=346						
TIPB	Shuangxi	2.38	343	eP	Pb	21 10 07.5	-0.5
	baz=354						
TIPB				eS	Sn	21 10 35.2	+1.8
	baz=354						
LIOB	Emei	2.42	324	eP	Pb	21 10 07.6	-1.2
	baz=335						
LIOB				eS	Sn	21 10 34.9	+0.3
	baz=335						
JISG	Ishigakijimahi	2.46	40	P	Pn	21 10 06.5	+1.2
JISG				S	Sn	21 10 34.2	-1.3
JTJ	Tarama	2.74	45	P	Pn	21 10 10.7	+1.5
JTJ				S	Sn	21 10 41.8	-0.7
VWUC	VWUC	3.67	309	eS	Sn	21 11 07.0	+1.5
	baz=311						
PTMZ	Houxiangcun	3.94	307	eS	Sn	21 11 11.7	-0.4
	baz=319						

IDC ***22*** *21:20:22.6±2.7, 10°.37S×161°.36E, h70^{km}±21^{km}, mb3.3/6, mbtmp3.8/8, MS3.3/3, Error ellipse: s-maj=30.1km s-min=17.5km az=65.0*

ISC 22 21:20:21.5±1.0, **10°.4S**±0°.1×**161°.4E**±0°.1, **h61^{km}, n16,** σ**1^{s}.56**/11, **mb3.6**/6, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.77	304	P	Pn	21 20 49.7	-0.1
	6µm,0.5s,baz=166,slow=12,SNR=32						
HNR				S	Sn	21 21 10.6	-0.7
	19µm,0.3s,baz=167,slow=18,SNR=16						
DZM	Mont Dzumac	12.53	158	P	Pn	21 23 19.2	+2.0
	7.0nm,0.8s,baz=317,slow=12,SNR=11						
DZM				S	Sn	21 25 31.9	-3.3
	6.3nm,0.9s,baz=327,slow=17,SNR=2.6						
PMG	Port Moresby	14.10	273	LR	LR	21 28 09.0	
	comp=Z,128nm,20.3s,baz=66,slow=33						
CTA	Charters Tower	17.50	235	P	P	21 24 23.6	+1.7
	7.5nm,0.8s,baz=57,slow=12,SNR=7.6						
CTA				LR	LR	21 30 09.3	
	comp=Z,70nm,18.8s,baz=111,slow=34						
WRA	Warramunga Arr	27.77	247	P	P	21 26 04.7	-0.2
	0.5nm,0.5s,baz=77,slow=9.1,SNR=8.4						
	0.5nm,0.5s						
H11S2	WAKE ISLAND Hy	29.20	10	T	T	21 57 31.0	
	baz=188,slow=76,SNR=3.9						
H11S3	WAKE ISLAND Hy	29.20	10	T	T	21 57 48.1	
	baz=188,slow=76,SNR=9.7						
H11S1	WAKE ISLAND Hy	29.22	10	T	T	21 57 42.7	
	baz=188,slow=76,SNR=4.4						
ASAR	Alice Springs	29.36	240	P	P	21 26 18.1	-0.8
	0.1nm,0.3s,baz=68,slow=9.7,SNR=2.0						
ASAR				LR	LR	21 36 45.7	
	comp=Z,86nm,18.4s,baz=103,slow=34						
	0.1nm,0.3s						
H11N1	WAKE ISLAND Hy	30.43	10	T	T	21 57 04.7	
	baz=193,slow=76,SNR=5.9						
H11N3	WAKE ISLAND Hy	30.44	10	T	T	21 57 06.3	
	baz=193,slow=76,SNR=4.6						
H11N2	WAKE ISLAND Hy	30.45	10	T	T	21 56 48.8	
	baz=193,slow=76,SNR=7.5						
VNDA	Vanda	67.08	180	P	P	21 31 08.3	+0.4
	0.9nm,0.7s,baz=346,slow=7.4,SNR=7.4						
	0.9nm,0.7s						
SONM	Songino Array	75.71	325	P	P	21 32 00.5	-0.1
	0.6nm,0.6s,baz=139,slow=5.9,SNR=5.6						
	0.6nm,0.6s						
ILAR	Eielson Array	84.32	20	P	P	21 32 46.4	-0.1
	0.3nm,0.7s,baz=248,slow=4.8,SNR=2.2						
	0.3nm,0.7s						
MKAR	Makanchi Array	90.19	318	P	P	21 33 15.0	-0.4
	0.2nm,0.5s,baz=88,slow=5.0,SNR=4.4						
	0.2nm,0.5s						

SJA ***22*** *21:29:11.7±1.9, 21°.06S×67°.28W, h175^{km}, ML3.7, MW3.5, Hypocentre not reviewed by the ISC*

IDC ***22*** *21:29:11.2±1.1, 21°.07S×67°.20W, h176^{km}±11^{km}, mb3.1/3, mbtmp3.7/6, Error ellipse: s-maj=25.3km s-min=12.1km az=110.0*

NEIC ***22*** *21:29:12.9±1.6, 21°.12S±0°.07×67°.6W±0°.1, h200^{km}±10^{km}, mb4.0/6, ML3.6(GUC), Error ellipse: s-maj=14.9km s-min=8.3km az=115.0*

SCB ***22*** *21:29:12.6±1.2, 21°.12S×67°.40W, h178^{km}±9^{km}, ML3.6/4, MW3.7, Error ellipse: s-maj=3.9km s-min=2.9km az=0.0*

GUC ***22*** *21:29:12.8±0.8, 21°.09S×67°.51W, h205^{km}±11^{km}, ML3.8*

ISC 22 21:29:11.9±0.7, **21°.06S**±0°.04×**67°.36W**±0°.04, **h184**^{km}±7^{km}, **n87,** σ**1^{s}.55**/107, **mb3.7**/6, **3C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCB	Mochara	1.62	97	Pg	Pn	21 29 47.1	+1.3
MOCB				Sg	Sn	21 30 12.3	+0.3
MOCB				IAML		21 30 13.1	
	360nm,0.3s						
PB09	IPOC Station P	1.90	247		Pn	21 29 49.1	+0.7
PB09				Sn	Sn	21 30 17.6	+0.9
PB09	IPOC Station P	1.90	247	⇑iP	Pn	21 29 49.6	+1.1
PB09				eS	Sn	21 30 17.2	+0.5
PB09	IPOC Station P	1.90	247	Pg	Pn	21 29 49.5	+1.1
PB09	IPOC Station P	1.90	247	eP		21 29 49.4	
PB09				eS		21 30 17.8	
PB08	IPOC Station P	1.92	298		Pn	21 29 49.8	+1.0
PB08	IPOC Station P	1.92	298	⇓iP	Pn	21 29 49.8	+1.0
PB08				eS	Sn	21 30 17.9	+0.5
PB08	IPOC Station P	1.92	298	Pg	Pn	21 29 49.9	+1.1
PB08	IPOC Station P	1.92	298	eP		21 29 49.8	
PB08				eS		21 30 18.4	
PB01	IPOC Station P	1.99	270		Pn	21 29 49.3	0.0
PB01				Sn	Sn	21 30 17.5	-0.7
PB01	IPOC Station P	1.99	270	eP	Pn	21 29 49.7	+0.5
PB01				eS	Sn	21 30 17.9	-0.4
PB01				IAML		21 30 19.9	
	comp=E,156nm,0.2s						
PB01	IPOC Station P	1.99	270	Pg	Pn	21 29 49.3	0.0
PB01				Sg	Sn	21 30 17.8	-0.4
PB01				IAML		21 30 22.7	
	comp=E,128nm,0.2s						
PB01	IPOC Station P	1.99	270	eP		21 29 49.5	
PB01				eS		21 30 18.8	
YJA	Yavi	2.04	123	Pg	Pn	21 29 51.3	+1.1
YJA	Yavi	2.04	123	eP		21 29 51.3	
YJA				eS		21 30 17.4	
LVC	Limon Verde	2.11	223	P	Pn	21 29 51.4	+0.6
	comp=E,14nm,0.4s,baz=13,slow=7.0,SNR=48						
LVC				S	Sn	21 30 21.4	+0.3
	comp=E,53nm,0.3s,baz=277,slow=19,SNR=32						
LVC	Limon Verde	2.11	223		Pn	21 29 51.3	+0.4
LVC	Limon Verde	2.11	223	eP	Pn	21 29 51.2	+0.4
LVC				eS	Sn	21 30 20.1	-1.0
LVC				IAML		21 30 22.9	
	comp=E,355nm,0.2s						
LVC	Limon Verde	2.11	223	Pg	Pn	21 29 51.2	+0.4
LVC	Limon Verde	2.11	223	eP		21 29 51.3	
LVC				eS		21 30 22.1	
GO01	Chusmiza	2.21	309		Pn	21 29 52.7	+0.5
GO01	Chusmiza	2.21	309	⇑iP	Pn	21 29 53.1	+0.9
GO01				eS	Sn	21 30 26.7	+3.4
GO01				IAML		21 30 30.1	
	comp=N,342nm,0.3s						
GO01	Chusmiza	2.21	309	Pg	Pn	21 29 52.8	+0.7
GO01	Chusmiza	2.21	309	eP		21 29 53.0	
GO01				eS		21 30 27.6	
PB02	IPOC Station P	2.38	263		Pn	21 29 54.0	+0.4
PB02	IPOC Station P	2.38	263	eP	Pn	21 29 53.8	+0.2
PB02				eS	Sn	21 30 24.5	-1.5
PB02				IAML		21 30 26.8	
	comp=E,296nm,0.2s						
PB02	IPOC Station P	2.38	263	Pg	Pn	21 29 54.2	+0.6
PB02				Sg	Sn	21 30 25.3	-0.7
PB02				IAML		21 30 27.1	
	comp=E,310nm,0.3s						
PB02	IPOC Station P	2.38	263	eP		21 29 53.9	
PB02				eS		21 30 25.7	
PB02				IAML		21 30 26.3	
	comp=Z,401nm,0.2s						
PB03	IPOC Station P	2.44	246		Pn	21 29 54.4	+0.1
PB03	IPOC Station P	2.44	246	i P	Pn	21 29 54.5	+0.2
PB03				IAML		21 30 26.7	
	comp=E,347nm,0.3s						
PB03	IPOC Station P	2.44	246	Pg	Pn	21 29 54.5	+0.2
PB03	IPOC Station P	2.44	246	eP		21 29 54.6	
PB03				eS		21 30 26.1	
PB03				IAML		21 30 27.3	
	comp=Z,291nm,0.1s						
PB07	IPOC Station P	2.45	254		Pn	21 29 54.3	-0.1
PB07	IPOC Station P	2.45	254	eP	Pn	21 29 54.6	+0.2
PB07				eS	Sn	21 30 26.3	-1.2
PB07				IAML		21 30 28.0	
	comp=N,454nm,0.2s						
PB07	IPOC Station P	2.45	254	Pg	Pn	21 29 54.6	+0.2
PB07				Sg	Sn	21 30 26.3	-1.2
PB07				IAML		21 30 26.9	
	comp=N,216nm,0.3s						
PB07	IPOC Station P	2.45	254	eP		21 29 54.6	
PB07				eS		21 30 26.6	
PB07				IAML		21 30 27.4	
	comp=Z,267nm,0.4s						
PB11	IPOC Station P	2.52	301	Pn	Pn	21 29 55.4	+0.1
PB11	IPOC Station P	2.52	301	⇓iP	Pn	21 29 55.3	+0.1
PB11				eS	Sn	21 30 27.9	-1.0
PB11	IPOC Station P	2.52	301	eP		21 29 55.5	
PB11				eS		21 30 28.7	
PB11				IAML		21 30 31.7	
	comp=Z,148nm,0.2s						
PB06	IPOC Station P	2.63	231	Pg	Pn	21 29 56.7	+0.2
PB06	IPOC Station P	2.63	231	eP		21 29 56.5	
PB06				eS		21 30 30.6	
PB06				IAML		21 30 34.6	
	comp=Z,165nm,0.2s						
TA01	Diego Aracena	2.69	280	Pn	Pn	21 29 56.5	-0.5
TA01	Diego Aracena	2.69	280	eP	Pn	21 29 56.4	-0.7
TA01				eS	Sn	21 30 29.7	-2.4
TA01	Diego Aracena	2.69	280	Pg	Pn	21 29 56.8	-0.2
TA01	Diego Aracena	2.69	280	eP		21 29 56.5	
TA01				eP		21 29 56.7	
TA01				eS		21 30 29.5	
TA02	Huaiquique	2.71	286		Pn	21 29 56.7	-0.7
HJA	Humahuaca	2.79	140	eP		21 29 60.0	
HJA				eS		21 30 33.2	
HJA				IAML		21 30 38.1	
	comp=Z,111nm,0.5s						
MNMC	Minye Minye	2.85	312		Pn	21 30 00.1	+0.9
MNMC	Minye Minye	2.85	312	eP	Pn	21 30 00.0	+0.8
MNMC				eS	Sn	21 30 36.2	+0.1
MNMC				IAML		21 30 37.5	
	comp=E,348nm,0.4s						
MNMCX	Minye Minye	2.85	312	eP		21 30 00.2	
MNMCX				eS		21 30 37.3	
MNMCX				IAML		21 30 39.1	
	comp=Z,181nm,0.3s						
PB04	IPOC Station P	2.89	244	Pn	Pn	21 29 59.4	-0.2
PB04	IPOC Station P	2.89	244	eP	Pn	21 29 59.6	0.0
PB04				IAML		21 30 39.0	
	comp=N,246nm,0.1s						
PB04	IPOC Station P	2.89	244	Pg	Pn	21 29 59.6	0.0
PB04	IPOC Station P	2.89	244	eP		21 29 59.7	
PB04				eS		21 30 35.1	
PB04				IAML		21 30 39.5	
	comp=Z,188nm,0.3s						
PB15	IPOC Station P	2.90	222		Pn	21 29 59.9	+0.2
PB15	IPOC Station P	2.90	222	eP	Pn	21 29 59.6	-0.1
PB15	IPOC Station P	2.90	222	eP		21 30 00.0	
PB15				eS		21 30 31.1	
PB15				eS		21 30 36.5	
PB15				IAML		21 30 41.9	
	comp=Z,629nm,0.2s						
SOET	ToroToro	3.28	27	Pg	Pn	21 30 05.4	+0.9
PB16	IPOC Station P	3.39	323		Pn	21 30 07.4	+1.2
PB16	IPOC Station P	3.39	323	⇑iP	Pn	21 30 07.6	+1.5
PB16				eS	Sn	21 30 50.1	+1.8
PB16	IPOC Station P	3.39	323	eP		21 30 07.6	
PB16				eS		21 30 50.7	
PB12	IPOC Station P	3.71	311	Pn	Pn	21 30 08.4	-1.2
PB12	IPOC Station P	3.71	311	eP	Pn	21 30 08.7	-1.0
PB12				eS	Sn	21 30 51.3	-3.5
PB12	IPOC Station P	3.71	311	eP		21 30 08.6	
PB10	IPOC Station P	3.83	230		Pn	21 30 09.6	-1.4
PB10	IPOC Station P	3.83	230	i P	Pn	21 30 10.7	-0.4
PB18	Visviri	4.00	330		Pn	21 30 15.8	+2.2
SLA	San Lorenzo	4.02	155	Pg	Pn	21 30 14.7	+1.1
SOEJ	Jacaque	4.14	349	Pg	Pn	21 30 17.6	+2.0
BBOE	La Paz, Chanca	4.27	352	Pg	Pn	21 30 19.1	+1.9
BBOD	La Paz, Gloria	4.56	345	Pg	Pn	21 30 22.4	+1.5
GO02	Mina Guanaco	4.57	206	Pn	Pn	21 30 20.3	-0.3
GO02	Mina Guanaco	4.57	206	Pg	Pn	21 30 20.4	-0.3
LPAZ	La Paz	4.81	351	P	Pn	21 30 24.3	+0.2
	comp=Z,13nm,0.6s,baz=132,slow=2.9,SNR=38						
LPAZ				S	Sn	21 31 20.6	-0.2
	comp=Z,2.7nm,0.6s,baz=16,slow=20,SNR=1.3						
LPAZ	La Paz	4.81	351		Pn	21 30 25.4	+1.2
AC01	Pan de Azucar	5.87	210		Pn	21 30 35.4	-1.9
AC02	Maricunga	5.97	195	Pn	Pn	21 30 38.5	-0.5
AC06	Mina Casimiro	6.84	203		Pn	21 30 46.9	-3.0
GO03	Copiap	7.01	201	Pn	Pn	21 30 49.3	-3.0
SIV	San Ignacio	7.81	51	P	Pn	21 31 00.6	-2.3
	comp=Z,7.1nm,0.4s,baz=236,slow=10,SNR=39						
SIV				S	Sn	21 32 23.6	-7.1
	comp=Z,2.8nm,0.7s,baz=279,slow=14,SNR=5.6						
AC05	El Transito	8.18	198	Pn	Pn	21 31 04.8	-2.8
LCO	Las Campanas	8.47	200		Pn	21 31 07.5	-4.1
GO04	Tololo Observa	9.59	198	Pn	Pn	21 31 21.8	-4.4
CO03	El Pedregal	10.18	196	Pn	Pn	21 31 30.3	-3.6
CO06	Fray Jorge	10.31	201	Pn	Pn	21 31 30.2	-5.3
VILB	Vilhena	10.58	41		Pn	21 31 40.2	+1.2
CO02	Combarbal	10.61	197	Pn	Pn	21 31 36.6	-2.9
VA03	San Esteban	11.99	193	Pn	Pn	21 31 57.6	+0.3
ROC1	El Roble	12.30	195	Pn	Pn	21 31 59.5	-1.8
MT02	Curacav	12.60	195	Pn	Pn	21 32 03.1	-1.8
MT09	Talagante	13.06	193	Pn	Pn	21 32 09.8	-1.0
MT01	Popeta	13.21	194	Pn	Pn	21 32 11.3	-1.2
BO02	Sierra Bellavi	14.01	192	Pn	Pn	21 32 21.7	-0.9
ITAB	Concordia	15.19	117	P	P	21 32 39.2	+1.2
TRQA	Tornquist	17.56	166	P	P	21 33 03.1	-0.9
GO06	Curarrehue	18.79	190	P	P	21 33 16.3	-1.2
GO06				IAmb	IAmb	21 33 21.7	
	comp=Z,4.2nm,0.8s						
PLCA	Paso Flores	19.79	187	P	Pn	21 33 31.6	-0.4
	comp=Z,0.6nm,0.6s,baz=9.9,slow=9.4,SNR=3.7						
PLCA	Paso Flores	19.79	187	P	P	21 33 27.6	-0.6
PLCA				IAmb	IAmb	21 33 53.0	
	comp=Z,7.1nm,1.4s						
BOAV	Boa Vista	24.26	17	P	P	21 34 12.6	+0.4
BOAV				IAmb	IAmb	21 34 14.9	
	comp=Z,5.4nm,1.3s						
TXAR	Lajitas Array	61.12	324	P	P	21 39 07.0	+0.1
	comp=Z,0.1nm,0.4s,baz=148,slow=6.9,SNR=2.2						
	comp=Z,0.1nm,0.4s						
QSPA	South Pole Qui	69.13	180	P	P	21 39 59.1	+1.0
QSPA				IAmb	IAmb	21 40 12.4	
	comp=Z,3.8nm,1.4s						
PDAR	Pinedale Array	74.47	329	P	P	21 40 31.3	+1.1
	comp=Z,0.2nm,0.4s,baz=120,slow=9.4,SNR=4.8						
	comp=Z,0.2nm,0.4s						
TORD	Torodi Ar. Bea	75.85	70	P	P	21 40 37.7	-0.7
	comp=Z,0.5nm,0.4s,baz=245,slow=5.2,SNR=4.8						
YKA	Yellowknife Ar	91.27	340	P	P	21 41 56.5	+0.7
	comp=Z,0.6nm,0.8s,baz=133,slow=4.6,SNR=12						
	comp=Z,0.6nm,0.8s						
MKAR	Makanchi Array	144.43	37	PKP	PKPab	21 48 26.0	+1.0
	comp=Z,0.7nm,0.4s,baz=325,slow=3.4,SNR=17						

IDC 22 21:39:28.5±53.0, **17°.44S**×**176°.66W, h0^{km}, mb4.2**/3, **mbtmp4.2**/3, **MS3.2**/2, **Error ellipse: s-maj=994.2km s-min=160.3km az=79.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	5.87	54	LR	LR	21 43 04.9	
	comp=Z,110nm,21.6s,baz=81,slow=37						
STKA	Stephens Creek	40.31	241	P	P	21 47 08.4	+0.6
	1.5nm,0.3s,baz=71,slow=8.8,SNR=5.7						
	1.5nm,0.3s						
WRA	Warramunga Arr	46.35	259	P	P	21 47 56.7	-0.1
	1.1nm,0.4s,baz=97,slow=7.4,SNR=46						
	1.1nm,0.4s						
ASAR	Alice Springs	46.52	254	P	P	21 47 57.4	-0.7
	3.2nm,0.8s,baz=90,slow=7.5,SNR=28						
	3.2nm,0.8s						
CMIG	Matias Romero	87.50	71	LR	LR	22 24 25.8	
	comp=Z,28nm,19.6s,baz=12,slow=31						

MAN 22 22:39:38.0, 16°.40N×**121°.63E, h14^{km}, mb3.7, ML2.4, MS1.9, 1C-2D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAUP	Cauayan	0.57	19	⇓eP	Pg	22 39 48.9	-0.4
CAUP				eS	Sn	22 40 00.3	-0.7
SAMP	Sagada Mountai	0.97	314	⇑eP	Pb	22 39 55.6	-1.1
SAMP				eS	Sn	22 40 11.2	+0.3
PALP	Palanan	1.01	49	⇓eP	Pb	22 39 56.0	-1.3
PALP				eS	Sn	22 40 12.1	+0.4

KRNET ***22*** *23:05:06.9±0.1, 41°.02N×73°.53E, h21^{km}, mb3.2*

ISU ***22*** *23:05:07.2, 40°.90N×73°.62E, h23^{km}*

KNET ***22*** *23:05:09.4±0.8, 41°.15N×73°.60E, h13^{km}±5^{km}, ml2.7, Error ellipse: s-maj=8.6km s-min=4.4km az=69.0*

SOME ***22*** *23:05:09.5, 41°.25N×73°.53E, h5^{km}*

NNC ***22*** *23:05:12.3±5.9, 40°.78N×73°.35E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=58.6km s-min=16.0km az=1.0*

ISC 22 23:05:07.9±1.2, **41°.09N**±0°.03×**73°.50E**±0°.02, **h3**^{km}±10^{km}, **n90,** σ**1^{s}.50**/129, **48C-14D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.78	224	⇑iP	Pg	23 05 21.3	-1.6
	baz=29						
OHH				⇑iS	Sg	23 05 31.2	-1.8
	baz=29						
ANR	Andizhan	0.92	249	P	Pg	23 05 24.7	-0.9
ANR				S	Sb	23 05 38.6	-0.6
ARLS	Aral	0.99	39	⇑iP	Pg	23 05 25.9	-0.9
	baz=36						
ARLS				⇑iS	Sg	23 05 39.9	+0.2
	baz=36						
AML	Almayashu	1.05	8	⇑P	Pg	23 05 28.0	0.0
	23nm,0.1s,SNR=40						
AML				⇑S	Sb	23 05 43.0	-0.2
	439nm,0.7s						
AML	Almayashu	1.05	8	⇑iP	Pg	23 05 27.7	-0.3
	baz=6.0						
AML				⇑iS	Sg	23 05 42.7	+1.1
	baz=6.0						
ARK	Arkit	1.35	302	⇑iP	Pn	23 05 32.7	-1.0
	baz=4.0						
ARK				⇑iS	Sg	23 05 51.7	+0.4
	baz=4.0						
UCH	Uchtor	1.37	34	⇓P	Pn	23 05 33.4	-0.9
	11nm,0.2s,SNR=39						
UCH				⇓S	Sb	23 05 51.7	-0.7
	197nm,0.5s						
UCH	Uchtor	1.37	34	⇑iP	Pn	23 05 33.1	-1.1
	baz=31						
UCH				⇑iS	Sb	23 05 51.9	-0.5
	baz=31						
NAM	Namangan	1.39	266	P	Pg	23 05 34.9	+0.3
NAM				S	Sg	23 05 55.6	+3.0
KSNS	Kasansay	1.49	273	P	Pg	23 05 36.2	-0.3
KSNS				S	Sg	23 05 58.2	+2.4
KSNS				S	Sb	23 06 10.4	+15
MNAS	Manas	1.58	332	⇑iP	Pb	23 05 37.0	-0.8
	baz=33						
MNAS				⇑iS	Sg	23 05 59.0	+0.4
	baz=33						

EKS2	**Erkin-Say**	**1.58**	**8**	⇓P	**Pb**	**23 05 37.6**	**-0.2**
	11nm,0.2s,SNR=12						
EKS2				⇓S	**Sg**	**23 05 59.3**	**+0.6**
	46nm,0.2s						
EKS2	**Erkin-Say**	**1.58**	**8**	⇑*e*P	**Pn**	**23 05 37.0**	**+0.1**
	baz=6.0						
EKS2				⇑*i*S	**Sg**	**23 05 59.0**	**+0.3**
	baz=6.0						
MRKS	**Merke**	**1.66**	**353**	*e*P	**Pb**	**23 05 39.6**	**+0.4**
	32nm,0.2s						
MRKS				*e*S	**Sg**	**23 06 01.6**	**+0.2**
	89nm,0.3s						
CHMI	**Chimion**	**1.71**	**242**	P	**Pn**	**23 05 38.1**	**-0.5**
CHMI				S	**Sg**	**23 06 01.8**	**-1.0**
AAK	**Ala-Archa**	**1.71**	**25**	⇑P	**Pb**	**23 05 40.4**	**+0.3**
	18nm,0.2s,SNR=38						
AAK				⇑S	**Sg**	**23 06 03.2**	**+0.3**
	47nm,0.2s						
AAK	**Ala-Archa**	**1.71**	**25**	⇑*i*P	**Pn**	**23 05 38.9**	**+0.1**
	baz=24						
AAK				⇑*i*S	**Sb**	**23 06 02.6**	**+0.5**
	baz=24						
TRKS	**Terek-Say**	**1.83**	**285**	⇑*i*P	**Pn**	**23 05 40.0**	**-0.3**
	baz=85						
TRKS				⇑*i*S	**Sb**	**23 06 04.3**	**-1.0**
	baz=85						
KBK	**Karagaybulak**	**1.90**	**34**	⇑P	**Pb**	**23 05 43.3**	**0.0**
	15nm,0.2s,SNR=18						
KBK				⇑S	**Sg**	**23 06 09.0**	**0.0**
	90nm,0.2s						
KBK	**Karagaybulak**	**1.90**	**34**	⇑*i*P	**Pb**	**23 05 42.0**	**-1.3**
	baz=33						
KBK				⇑*i*S	**Sb**	**23 06 07.3**	**-0.2**
	baz=33						
FRU1	**Bishkek**	**1.91**	**26**	⇑*e*P	**Pb**	**23 05 42.3**	**-1.1**
	baz=24						
FRU1				⇑*i*S	**Sb**	**23 06 07.9**	**+0.2**
	baz=24						
NRN	**Naryn**	**1.92**	**79**	⇑*i*P	**Pn**	**23 05 41.0**	**-0.7**
	baz=77						
NRN				⇑*i*S	**Sn**	**23 06 05.8**	**-0.7**
	baz=77						
CHMS	**Chumysh**	**2.12**	**26**	⇑P	**Pb**	**23 05 46.7**	**-0.3**
	38nm,0.4s,SNR=14						
CHMS				⇑S	**Sg**	**23 06 15.7**	**-0.4**
	17nm,0.2s						
CHMS	**Chumysh**	**2.12**	**26**	Pg	**Sn**	**23 06 06.4**	**-4.7**
	26nm,0.3s						
CHMS				Lg	Lg	23 06 47.5	
	183nm,0.3s						
CHMS	**Chumysh**	**2.12**	**26**	⇓*e*P	**Pn**	**23 05 45.0**	**+0.8**
	baz=24						
CHMS				⇓*i*S	**Sb**	**23 06 12.6**	**-1.1**
	baz=24						
BTK	**Batken**	**2.29**	**244**	⇑*i*P	**Pn**	**23 05 45.7**	**-0.8**
	baz=46						
BTK				⇑*i*S	**Sn**	**23 06 14.5**	**-0.7**
	baz=46						
USP	**Ospenovka**	**2.30**	**19**	⇓P	**Pb**	**23 05 49.0**	**-0.9**
	17nm,0.3s,SNR=20						
USP				⇑S	**Sb**	**23 06 20.3**	**+1.5**
	36nm,0.3s						
USP	**Ospenovka**	**2.30**	**19**	⇑*e*P	**Pn**	**23 05 47.4**	**+0.7**
	baz=18						
USP				⇑*i*S	**Sb**	**23 06 17.1**	**-1.7**
	baz=18						
BOOM	**Boomskoye usch**	**2.30**	**52**	⇑*i*P	**Pn**	**23 05 47.0**	**+0.2**
	baz=50						
BOOM				⇑*i*S	**Sn**	**23 06 16.3**	**+0.6**
	baz=50						
ULHL	**Ulahol**	**2.36**	**60**	⇓P	**Pn**	**23 05 48.7**	**+1.1**
	7.7nm,0.2s,SNR=15						
ULHL				⇓S	**Sb**	**23 06 20.0**	**-0.7**
	28nm,0.2s						
ULHL	**Ulahol**	**2.36**	**60**	⇓*i*P	**Pn**	**23 05 47.8**	**+0.1**
	baz=58						
ULHL				⇓*i*S	**Sn**	**23 06 17.6**	**+0.4**
	baz=58						
TKM2	**Tokmak 2**	**2.41**	**40**	⇑P	**Pb**	**23 05 50.2**	**-1.7**
	36nm,0.4s,SNR=13						
DZA	**Taraz**	**2.42**	**319**	Pg	**Pb**	**23 05 52.9**	**+0.9**
	94nm,0.4s						
DZA				Lg	Lg	23 06 24.4	
	326nm,0.3s						
DZA	**Taraz**	**2.42**	**319**	*e*Pg	**Pb**	**23 05 52.9**	**+0.9**
	94nm,0.4s						
DZA				*e*Lg	Lg	23 06 24.4	
	326nm,0.3s						
SGDS	**Sogindy**	**2.50**	**19**	Pg	**Pg**	**23 05 55.0**	**-0.9**
	14nm,0.4s						
SGDS				Lg	Lg	23 06 27.5	
	47nm,0.4s						
CHMG	**Chimgan**	**2.66**	**281**	P	**Sn**	**23 06 27.2**	**+2.6**
KST	**Kastek**	**2.68**	**42**	Pg	**Pb**	**23 05 57.8**	**+1.3**
	6.9nm,0.3s						
KST				Lg	Lg	23 06 32.4	
	28nm,0.4s						
KST	**Kastek**	**2.68**	**42**	*e*Pg	**Pb**	**23 05 57.8**	**+1.3**
	6.9nm,0.3s						
KST				*e*Lg	Lg	23 06 32.4	
	28nm,0.4s						
CHRV	**Charvak**	**2.72**	**283**	P	**Pn**	**23 05 53.3**	**+0.8**
CHRV				S	**Pn**	**23 05 55.9**	**+3.4**
DGS	**Degeres**	**2.73**	**37**	Pg	**Pb**	**23 05 58.7**	**+1.2**
	13nm,0.5s						
DGS				Lg	Lg	23 06 34.0	
	38nm,0.5s						
DGS	**Degeres**	**2.73**	**37**	*e*Pg	**Pb**	**23 05 58.6**	**+1.2**
	13nm,0.2s						
DGS				*e*Lg	Lg	23 06 34.0	
	38nm,0.5s						
IUG	**Iuzhnay**	**2.80**	**293**	*e*Pg	**Pg**	**23 06 00.2**	**-1.4**
	38nm,0.1s						
IUG				*e*Lg	Lg	23 06 36.5	
	59nm,0.3s						
KDJ	**Kajisay**	**2.95**	**68**	⇓*i*P	**Pn**	**23 05 56.1**	**+0.3**
	baz=67						
KDJ				⇓*i*S	**Sn**	**23 06 32.0**	**+0.2**
	baz=67						
YBZ	**Yangibazar**	**2.96**	**275**	P	**Pb**	**23 06 01.5**	**+0.3**
MTBS	**Maitube**	**2.98**	**46**	Pg	**Pb**	**23 06 03.1**	**+1.4**
	9.3nm,0.5s						
MTBS				Lg	Lg	23 06 41.5	
	35nm,0.4s						
MTBS	**Maitube**	**2.98**	**46**	*e*Pg	**Pb**	**23 06 03.1**	**+1.4**
	9.3nm,0.5s						
MTBS				*e*Lg	Lg	23 06 41.5	
	35nm,0.4s						
KK31	**Karatay Array**	**2.99**	**313**	P	**Pb**	**23 06 01.9**	**0.0**
	15nm,0.6s,baz=132,slow=15,SNR=19						
KK31				⇓S	**Sg**	**23 06 42.8**	**-1.2**
	20nm,0.3s,baz=131,slow=28,SNR=16						
IZV	**Izvestkoviy**	**3.03**	**49**	Pg	**Pb**	**23 06 03.8**	**+1.3**
	8.5nm,0.5s						
IZV				Lg	Lg	23 06 42.8	
	34nm,0.5s						
IZV	**Izvestkoviy**	**3.03**	**49**	*e*Pg	**Pb**	**23 06 03.8**	**+1.3**
	8.5nm,0.5s						
IZV				*e*Lg	Lg	23 06 42.8	
	34nm,0.5s						
KRBS	**Karabastau**	**3.06**	**31**	Pg	**Pb**	**23 06 03.8**	**+0.8**
	1.6nm,0.3s						
KRBS				Lg	Lg	23 06 42.7	
	16nm,0.3s						
KRBS	**Karabastau**	**3.06**	**31**	*e*Pg	**Pb**	**23 06 03.8**	**+0.8**
	1.6nm,0.3s						
KRBS				*e*Lg	Lg	23 06 42.7	
	16nm,0.3s						
CHM	**Chimkent**	**3.16**	**294**	*e*Pg	**Pg**	**23 06 06.4**	**-2.0**
	26nm,0.3s						
CHM				*e*Lg	Lg	23 06 47.5	
	183nm,0.3s						
TAS	**Tashkent**	**3.18**	**276**	⇑*i*P	**Pn**	**23 05 59.1**	**+0.4**
	baz=77						
TAS				⇑*i*S	**Sn**	**23 06 37.1**	**0.0**
	baz=77						
TAS	**Tashkent**	**3.18**	**276**	P	**Sg**	**23 06 52.6**	**+2.7**
GAR	**Garm**	**3.21**	**230**	⇑*i*P	**Pn**	**23 05 59.2**	**-0.1**
	baz=32						
GAR				⇑*i*S	**Sn**	**23 06 37.0**	**-1.1**
	baz=32						
TNSS	**Tian-Shan**	**3.22**	**52**	Pg	**Pb**	**23 06 07.5**	**+1.6**
	7.3nm,0.4s						
TNSS				Lg	Lg	23 06 49.0	
	14nm,0.5s						
TNSS	**Tian-Shan**	**3.22**	**52**	*e*Pg	**Pb**	**23 06 07.5**	**+1.6**
	7.3nm,0.1s						
TNSS				*e*Lg	Lg	23 06 49.0	
	14nm,0.5s						
AAA	**Alma-Ata**	**3.31**	**49**	Pg	**Pb**	**23 06 08.7**	**+1.5**
	8.1nm,0.2s						
AAA				Lg	Lg	23 06 51.7	
	31nm,0.3s						
AAA	**Alma-Ata**	**3.31**	**49**	*e*Pg	**Pb**	**23 06 08.7**	**+1.5**
	8.1nm,0.2s						
AAA				*e*Lg	Lg	23 06 51.7	
	31nm,0.3s						
KNDC	**Almaty**	**3.34**	**49**	⇑Pn	**Pg**	**23 06 12.6**	**+0.7**
	25nm,0.7s						
KNDC				⇑Sn	**Sg**	**23 06 54.9**	**-0.3**
	68nm,0.9s						
MDOK	**Medeo**	**3.36**	**51**	Pn	**Pb**	**23 06 08.5**	**+0.5**
	3.6nm,0.4s						
MDOK				Pg	**Pg**	**23 06 10.5**	**-1.6**
	6.7nm,0.3s						
MDOK				Sn	**Sg**	**23 06 54.1**	**-1.6**
	33nm,0.8s						
MDOK				Lg	Lg	23 06 54.2	
	24nm,0.6s						
KOTS	**Kotyrbulak**	**3.44**	**50**	Pg	**Pg**	**23 06 12.2**	**-1.5**
	4.7nm,0.6s						
KOTS				Lg	Lg	23 06 57.2	
	32nm,0.6s						
KOTS	**Kotyrbulak**	**3.44**	**50**	*e*Pg	**Pg**	**23 06 12.2**	**-1.5**
	4.7nm,0.6s						
KOTS				*e*Lg	Lg	23 06 57.2	
	32nm,0.6s						
KUU	**Kurty**	**3.50**	**36**	Pg	**Pb**	**23 06 12.3**	**+1.8**
	4.0nm,0.3s						
KUU				Lg	Lg	23 06 57.2	
	14nm,0.2s						
KUU	**Kurty**	**3.50**	**36**	*e*Pg	**Pb**	**23 06 12.3**	**+1.8**
	4.0nm,0.3s						
KUU				*e*Lg	Lg	23 06 57.2	
	14nm,0.2s						
KTBS	**Karatobe**	**3.52**	**41**	Pg	**Pb**	**23 06 12.5**	**+1.6**
	2.5nm,0.3s						
KTBS				Lg	Lg	23 06 58.0	
	40nm,0.4s						
KTBS	**Karatobe**	**3.52**	**41**	*e*Pg	**Pb**	**23 06 12.5**	**+1.6**
	2.5nm,0.3s						
KTBS				*e*Lg	Lg	23 06 58.0	
	40nm,0.4s						
ANVS	**Anan'yevo**	**3.54**	**60**	⇑*i*P	**Pn**	**23 06 04.4**	**+0.5**
	baz=59						
ANVS				⇑*i*S	**Sn**	**23 06 45.8**	**-0.5**
	baz=59						
CHKK	**Chushkaly**	**3.78**	**42**	Pg	**Pb**	**23 06 17.5**	**+2.3**
	0.7nm,0.1s						
CHKK				Lg	Lg	23 07 06.4	
	18nm,0.4s						
CHKK	**Chushkaly**	**3.78**	**42**	*e*Pg	**Pb**	**23 06 17.5**	**+2.3**
	0.7nm,0.1s						
CHKK				*e*Lg	Lg	23 07 06.4	
	18nm,0.4s						
BTLS	**Baital**	**3.97**	**6**	Pg	**Pb**	**23 06 20.1**	**+1.7**
	3.9nm,0.4s						
BTLS				Lg	Lg	23 07 10.9	
	9.8nm,0.5s						
BTLS	**Baital**	**3.97**	**6**	*e*Pg	**Pb**	**23 06 20.1**	**+1.7**
	3.9nm,0.4s						
BTLS				*e*Lg	Lg	23 07 10.9	
	9.8nm,0.5s						
SATY	**Saty**	**4.15**	**60**	Pg	**Pb**	**23 06 23.6**	**+2.0**
	3.2nm,0.3s						
SATY				Lg	Lg	23 07 16.6	
	14nm,0.4s						
SATY	**Saty**	**4.15**	**60**	*e*Pg	**Pb**	**23 06 23.6**	**+2.0**
	3.2nm,0.3s						
SATY				*e*Lg	Lg	23 07 16.6	
	14nm,0.4s						
KURS	**Kuram**	**4.21**	**54**	Pg	**Pb**	**23 06 24.7**	**+2.1**
	3.1nm,0.9s						
KURS				Lg	Lg	23 07 18.6	
	6.0nm,0.6s						
KURS	**Kuram**	**4.21**	**54**	*e*Pg	**Pb**	**23 06 24.8**	**+2.1**
	3.1nm,0.9s						
KURS				*e*Lg	Lg	23 07 18.6	
	6.0nm,0.6s						
ZHN	**Zhinishke**	**4.22**	**59**	Pg	**Pb**	**23 06 25.2**	**+2.4**
	1.2nm,0.1s						
ZHN				Lg	Lg	23 07 19.3	
	23nm,0.2s						
ZHN	**Zhinishke**	**4.22**	**59**	*e*Pg	**Pb**	**23 06 25.2**	**+2.4**
	1.2nm,0.1s						
ZHN				*e*Lg	Lg	23 07 19.3	
	23nm,0.2s						
ARXS	**Arharly**	**4.46**	**44**	Pg	**Pb**	**23 06 29.4**	**+2.5**
	12nm,0.5s						
ARXS				Lg	Lg	23 07 27.1	
	13nm,0.4s						
ARXS	**Arharly**	**4.46**	**44**	*e*Pg	**Pb**	**23 06 29.4**	**+2.5**
	12nm,0.5s						
ARXS				*e*Lg	Lg	23 07 27.1	
	13nm,0.4s						
KPKS	**Kokpek**	**4.52**	**57**	Pg	**Pb**	**23 06 30.8**	**+2.9**
	3.3nm,0.3s						
KPKS				Lg	Lg	23 07 29.0	
	16nm,0.3s						
KPKS	**Kokpek**	**4.52**	**57**	*e*Pg	**Pb**	**23 06 30.8**	**+2.9**
	3.3nm,0.3s						
KPKS				*e*Lg	Lg	23 07 29.0	
	16nm,0.3s						
UZB	**Uzynbulak**	**4.59**	**62**	Pg	**Pb**	**23 06 31.2**	**+2.1**
	4.8nm,0.2s						
UZB				Lg	Lg	23 07 29.7	
	15nm,0.5s						
UZB	**Uzynbulak**	**4.59**	**62**	*e*Pg	**Pb**	**23 06 31.2**	**+2.1**
	4.8nm,0.2s						
UZB				*e*Lg	Lg	23 07 29.7	
	15nm,0.5s						
BLB	**Baldybastay**	**4.75**	**49**	Pg	**Pb**	**23 06 33.9**	**+2.1**
	9.8nm,0.3s						
BLB				Lg	Lg	23 07 34.7	
	15nm,0.3s						
SHLS	**Shalkode**	**4.89**	**63**	Pg	**Pg**	**23 06 41.6**	**0.0**
	2.8nm,0.3s						
SHLS				Lg	Lg	23 07 47.5	
	26nm,0.5s						
SHLS	**Shalkode**	**4.89**	**63**	*e*Pg	**Pg**	**23 06 43.6**	**+2.0**
	5.9nm,0.0s						
SHLS				*e*Lg	Lg	23 07 50.7	
	26nm,0.5s						
PDGK	**Podgornoye**	**4.98**	**61**	Pg	**Pb**	**23 06 38.3**	**+2.5**
	0.5nm,0.3s						
PDGK				Lg	Lg	23 07 41.8	
	4.1nm,0.5s						
DJR	**Jarkent**	**5.66**	**53**	Pg	**Pb**	**23 06 50.0**	**+2.8**
	1.1nm,0.1s						
DJR				Lg	Lg	23 08 02.0	
	4.0nm,0.5s						
DJR	**Jarkent**	**5.66**	**53**	*e*Pg	**Pg**	**23 06 52.1**	**-4.1**
	0.7nm,0.1s						
DJR				*e*Lg	Lg	23 08 05.3	
	3.9nm,0.1s						

NEIC ***22*** *23:38:29.6±1.8, 23°.7S±0°.1×179°.6W±0°.1, h525^{km}±5^{km}, mb4.4/22, Error ellipse: s-maj=21.1km s-min=14.8km az=143.0*

IDC ***22*** *23:38:31.5±3.5, 23°.71S×179°.94W, h528^{km}±35^{km}, mb3.3/4, mbtmp4.2/5, Error ellipse: s-maj=58.1km s-min=21.5km az=152.0*

ISC 22 23:38:30.5±0.6**, 23°.7S**±0°.1×**179°.76W**±0°.10**, h532**^{km}**, n36, σ0^{s}.88**/36**, mb4.3**/15**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.29**	**341**	P	**P**	**23 40 11.3**	**+0.2**
	6.8nm,0.5s,baz=238,slow=6.7,SNR=15						
MSVF	**Nonsavu**	**6.29**	**341**	P	**P**	**23 40 10.8**	**-0.3**
NIUE	**Niue**	**10.26**	**65**	P	**P**	**23 40 48.6**	**-2.3**
PINNC	**Pines Island,**	**11.82**	**273**	P	**P**	**23 41 07.5**	**+0.4**
KOUNC	**Koumac, New Ca**	**15.11**	**279**	P	**P**	**23 41 40.2**	**-1.3**
KOUNC				IAmb	IAmb	23 42 00.4	
	comp=Z,23nm,1.2s						
TCW	**Tory Channel**	**18.15**	**195**	P	**P**	**23 42 09.5**	**-0.9**
QRZ	**Quartz Range**	**18.25**	**199**	P	**P**	**23 42 10.4**	**-0.9**
THZ	**Tophouse**	**19.01**	**197**	P	**P**	**23 42 16.9**	**-1.4**
ARMA	**Armidale**	**26.29**	**249**	P	**P**	**23 43 24.6**	**+0.8**
ARMA				IAmb	IAmb	23 43 39.9	
	comp=Z,11nm,1.1s						
EIDS	**Eidsvold**	**26.55**	**260**	P	**P**	**23 43 26.4**	**+0.4**
EIDS				IAmb	IAmb	23 43 35.7	
	comp=Z,17nm,1.4s						
CAN	**Canberra**	**29.42**	**240**	P	**P**	**23 43 51.5**	**+0.5**
CTAO	**Charters Tower**	**31.69**	**270**	P	**P**	**23 44 11.0**	**+0.4**
CTAO				IAmb	IAmb	23 44 11.8	
	comp=Z,9.3nm,0.6s						
TOO	**Toolangi**	**32.73**	**237**	P	**P**	**23 44 19.0**	**-0.3**
TOO				IAmb	IAmb	23 44 41.4	
	comp=Z,20nm,1.4s						
STKA	**Stephens Creek**	**34.99**	**248**	P	**P**	**23 44 38.8**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=98,slow=5.7,SNR=2.3						
	comp=Z,1.8nm,0.6s						
STKA	**Stephens Creek**	**34.99**	**248**	P	**P**	**23 44 38.6**	**+0.2**
BBOO	**Buckleboo**	**39.72**	**247**	P	**P**	**23 45 16.2**	**-0.8**
AS31	**Alice Springs**	**42.28**	**260**	P	**P**	**23 45 37.0**	**-0.5**
ASAR	**Alice Springs**	**42.28**	**260**	P	**P**	**23 45 37.5**	**0.0**
	comp=Z,4.0nm,0.8s,baz=95,slow=7.9,SNR=33						
	comp=Z,4.0nm,0.8s						
ASAR	**Alice Springs**	**42.28**	**260**	P	**P**	**23 45 37.1**	**-0.5**
WB0	**Warramunga Arr**	**42.63**	**266**	P	**P**	**23 45 39.6**	**-0.6**
WB0				IAmb	IAmb	23 45 40.2	
	comp=Z,14nm,1.3s						
WRA	**Warramunga Arr**	**42.64**	**266**	P	**P**	**23 45 40.0**	**-0.4**
	comp=Z,4.6nm,0.6s,baz=103,slow=8.1,SNR=146						
	comp=Z,4.6nm,0.6s						
WRA	**Warramunga Arr**	**42.64**	**266**	P	**P**	**23 45 39.5**	**-0.9**
FORT	**Forrest**	**46.58**	**249**	P	**P**	**23 46 10.0**	**-0.6**
KNRA	**Kununurra**	**48.91**	**270**	P	**P**	**23 46 28.1**	**-0.1**
KNRA				IAmb	IAmb	23 46 46.1	
	comp=Z,25nm,1.4s						
VNDA	**Vanda**	**54.58**	**185**	P	**P**	**23 47 09.4**	**+1.2**
MORW	**Morawa**	**57.14**	**250**	P	**P**	**23 47 25.8**	**-0.9**
MORW				IAmb	IAmb	23 47 50.3	
	comp=Z,35nm,1.4s						
QSPA	**South Pole Qui**	**66.37**	**180**	P	**P**	**23 48 26.9**	**+0.6**
BELA	**Belgrano 2**	**76.59**	**173**	P	**P**	**23 49 25.3**	**-0.4**
BELA				IAmb	IAmb	23 49 26.5	
	comp=Z,14nm,1.5s						
CAST	**Castle Rocks**	**89.54**	**12**	P	**P**	**23 50 30.0**	**-0.5**
CAST				IAmb	IAmb	23 50 52.2	
	comp=Z,4.5nm,1.5s						
GLB	**Gilahina Butte**	**89.66**	**16**		**P**	**23 50 32.0**	**+0.8**
GLB				IAmb	IAmb	23 50 54.6	
	comp=Z,3.8nm,1.3s						
TRF	**Thorofare Moun**	**89.92**	**13**	P	**P**	**23 50 32.9**	**+0.4**
TRF				IAmb	IAmb	23 50 37.9	
	comp=Z,5.9nm,1.3s						
TXAR	**Lajitas Array**	**90.15**	**58**	P	**P**	**23 50 36.5**	**+2.2**
	comp=Z,0.6nm,0.7s,baz=209,slow=6.5,SNR=8.0						
	comp=Z,0.6nm,0.7s						
AKASG	**Malin Array Be**	**144.93**	**328**	PKP	**PKPdf**	**23 57 07.5**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=37,slow=4.0,SNR=6.5						
BRTR	**Keskin Array B**	**147.64**	**308**	PKPbc	**PKPbc**	**23 57 15.7**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=163,slow=4.2,SNR=4.1						
CLL	**Collm**	**150.74**	**344**	*i* PKPbc	**PKPbc**	**23 57 23.1**	**+0.8**
	comp=Z,5.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**169.40**	**188**	PKPab	**PKPab**	**23 58 54.2**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=160,slow=4.2,SNR=2.7						

NORS ***23*** *00:26:52.6±0.0, 41°.69N×43°.90E, h5^{km}, MPVA3.6*

TIF ***23*** *00:26:52.8, 41°.64N×43°.88E, h16^{km}*

ISK ***23*** *00:26:53.4, 41°.66N×43°.83E, h10^{km}, ML2.8/10*

DDA ***23*** *00:26:54.0±0.0, 41°.64N×43°.76E, h9^{km}±1^{km}, ML2.5*

AZER ***23*** *00:26:55.6±0.6, 41°.56N×44°.03E, h2^{km}, Error ellipse: s-maj=8.0km s-min=2.0km az=346.0*

ISC 23 00:26:54.1±0.8**, 41°.62N**±0°.01×**43°.88E**±0°.01**, h15**^{km}±5^{km}**, n74, σ1^{s}.18**/132**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRNG	**Burnasheti**	**0.04**	**271**	P	**Pg**	**00 26 56.9**	**-0.2**
BRNG				S	**Sg**	**00 26 59.2**	**+0.2**
TRLG	**Trialeti**	**0.18**	**117**	P	**Pg**	**00 26 58.2**	**-0.4**
TRLG				S	**Sg**	**00 27 01.2**	**-0.4**
AKH	**Akhalkalaki**	**0.36**	**234**	Pg	**Pg**	**00 27 01.3**	**-0.3**
AKH				Sg	**Sg**	**00 27 06.1**	**-0.6**
AKH	**Akhalkalaki**	**0.36**	**234**	P	**Pg**	**00 27 01.2**	**-0.3**
AKH				S	**Sg**	**00 27 06.4**	**-0.3**
DMNI	**Dmanisi**	**0.37**	**142**	P	**Pg**	**00 27 00.9**	**-0.8**
DMNI				S	**Sg**	**00 27 06.1**	**-0.8**
BGD	**Bogdanovka**	**0.42**	**211**	P	**Pg**	**00 27 02.2**	**-0.3**
BGD				S	**Sg**	**00 27 08.5**	**+0.2**
SEAG	**Tbilisi Sea**	**0.70**	**78**	P	**Pg**	**00 27 06.8**	**-1.0**
SEAG				S	**Sb**	**00 27 17.0**	**-0.6**
ABS	**Abastumani**	**0.81**	**280**	P	**Pg**	**00 27 08.9**	**-1.0**
ABS				S	**Sb**	**00 27 20.9**	**0.0**
EPOS	**Posof**	**0.88**	**263**	P	**Pg**	**00 27 09.6**	**-1.5**
EPOS				*i* AML	AML	00 27 28.0	
	comp=N,162nm,0.9s						
EPOS				*i* AML	AML	00 27 30.0	
	comp=E,68nm,0.7s						
GUDG	**Gudauri**	**0.95**	**28**	P	**Pg**	**00 27 11.2**	**-1.3**
GUDG				S	**Sb**	**00 27 24.6**	**-0.2**
EAK	**Akyaka**	**0.96**	**193**	P	**Pg**	**00 27 11.5**	**-1.1**
EAK				S	**Sg**	**00 27 24.6**	**-0.6**
EAK				*i* AML	AML	00 27 25.0	
	comp=N,273nm,0.3s						
EAK				*i* AML	AML	00 27 25.0	
	comp=E,370nm,0.4s						
TKB	**Tkibuli**	**0.98**	**318**	P	**Pg**	**00 27 12.0**	**-1.1**
TKB				S	**Sb**	**00 27 25.3**	**-0.4**
ONI	**Oni**	**1.02**	**342**	Pg	**Pg**	**00 27 12.4**	**-1.4**
ONI				Sg	**Sb**	**00 27 26.3**	**-0.4**
ONI	**Oni**	**1.02**	**342**	P	**Pg**	**00 27 12.3**	**-1.4**
ONI				S	**Sb**	**00 27 26.4**	**-0.4**
AHAN	**Ardahan-Merkez**	**1.05**	**245**	P	**Pg**	**00 27 13.4**	**-1.0**
AHAN				S	**Sb**	**00 27 28.1**	**+0.3**
AHAN				*i* AML	AML	00 27 35.0	
	comp=E,117nm,0.6s						
AHAN				*i* AML	AML	00 27 42.0	
	comp=N,83nm,0.4s						
DGRG	**David-gareji**	**1.13**	**98**	P	**Pb**	**00 27 14.7**	**-0.6**
DGRG				S	**Sn**	**00 27 30.9**	**+0.2**
PNSH	**Pansheti**	**1.15**	**28**	P	**Pg**	**00 27 14.8**	**-1.5**
PNSH				S	**Sb**	**00 27 30.2**	**-0.3**
KARS	**Kars**	**1.17**	**212**	Pn	**Pn**	**00 27 16.4**	**+0.4**
ZEI	**Tsey**	**1.17**	**1**	*i* Pg	**Pn**	**00 27 15.7**	**-0.3**
ZEI				*e*Sg	**Sn**	**00 27 31.8**	**0.0**
BOZK	**Kars-Merkez-Bo**	**1.24**	**214**	P	**Pn**	**00 27 17.0**	**-0.1**
BOZK				S	**Sb**	**00 27 33.4**	**+0.3**
BOZK				*i* AML	AML	00 27 34.0	
	comp=N,144nm,0.2s						
BOZK				*i* AML	AML	00 27 34.0	
	comp=E,175nm,0.6s						
LACR	**Lac**	**1.24**	**14**	*i* Pg	**Pb**	**00 27 16.7**	**-0.6**
LACR				*e*Sg	**Sn**	**00 27 34.1**	**+0.5**
QZX	**Qazax, Azerbai**	**1.25**	**116**	P	**Pn**	**00 27 15.7**	**-1.4**
QZX				S	**Sb**	**00 27 32.6**	**-0.8**
DIGR	**Digorskoe uzhe**	**1.30**	**350**	*e*Pg	**Pn**	**00 27 17.6**	**-0.2**
DIGR				*e*Sg	**Sn**	**00 27 36.8**	**+1.8**
SHTL	**Shatili**	**1.40**	**42**	P	**Pn**	**00 27 19.3**	**+0.1**
SHTL				S	**Sn**	**00 27 37.8**	**+0.3**
KORR	**Kora**	**1.47**	**5**	*e*Pg	**Pg**	**00 27 21.3**	**-1.0**
KORR				*e*Sg	**Sg**	**00 27 42.5**	**+1.0**
METS	**Metsamor**	**1.48**	**174**	P	**Pb**	**00 27 21.2**	**-0.1**
METS				S	**Sg**	**00 27 41.0**	**-0.7**
SENK	**Senkaya-Erzuru**	**1.57**	**228**	Pn	**Pb**	**00 27 22.4**	**-0.5**
SENK				Sn	**Sn**	**00 27 42.7**	**+0.9**
DAGI	**Agillar**	**1.58**	**250**	P	**Pb**	**00 27 22.3**	**-0.7**
DAGI				S	**Sb**	**00 27 43.6**	**+0.7**
DAGI				*i* AML	AML	00 27 48.0	
	comp=E,32nm,0.6s						
ARNR	**Ardon**	**1.58**	**11**	*e*Pg	**Pg**	**00 27 24.1**	**-0.5**
ARNR				*e*Sg	**Sg**	**00 27 47.6**	**+2.5**
KMGR	**Komgaron**	**1.61**	**27**	*e*Pg	**Pg**	**00 27 24.0**	**-1.0**
KMGR				*e*Sg	**Sg**	**00 27 47.3**	**+1.4**
GNI	**Garni**	**1.61**	**156**	Pn	**Pb**	**00 27 23.4**	**-0.2**
GNI				Sn	**Sg**	**00 27 45.0**	**-0.9**
BATM	**Batumi**	**1.64**	**270**	P	**Pn**	**00 27 22.9**	**+0.5**
BATM				S	**Sb**	**00 27 44.9**	**+0.4**
LSNR	**Lesken**	**1.66**	**359**	*e*Pg	**Pg**	**00 27 24.9**	**-1.0**
LSNR				*e*Sg	**Sg**	**00 27 48.6**	**+1.2**
TASB	**TASBURUN-IGDIR**	**1.66**	**171**	Pn	**Pb**	**00 27 24.1**	**-0.3**
TASB				Sn	**Sb**	**00 27 46.2**	**+1.1**
GDB	**GEDABAY**	**1.68**	**122**	Pn	**Pn**	**00 27 22.2**	**-0.8**
GDB				Sn	**Sn**	**00 27 43.5**	**-0.8**
DDFL	**Dedoflistskaro**	**1.69**	**95**	P	**Pb**	**00 27 25.0**	**+0.2**
DBOC	**Borcka**	**1.69**	**261**	P	**Pb**	**00 27 23.9**	**-1.0**
DBOC				S	**Sb**	**00 27 46.7**	**+0.8**
DBOC				*i* AML	AML	00 27 49.0	
	comp=E,58nm,0.3s						
STDR	**Stavd-Durt**	**1.75**	**4**	*e*Pg	**Pg**	**00 27 27.7**	**0.0**
STDR				*e*Sg	**Sg**	**00 27 53.8**	**+3.3**

DBAD	Bademkaya	1.76	251	P	Pb	00 27 25.2	-0.8
DBAD				S	Sb	00 27 47.9	0.0
DBAD				*i* AML	AML	00 27 50.0	
	comp=E,87nm,0.6s						
DBAD				*i* AML	AML	00 27 54.0	
	comp=N,56nm,0.5s						
IGDI	IGDIR	1.76	175	P	Pn	00 27 25.1	+1.0
IGDI				S	Sb	00 27 48.0	+0.1
DDEM	Demirkent	1.77	246	P	Pb	00 27 25.7	-0.5
DDEM				S	Sg	00 27 49.7	-1.3
DDEM				*i* AML	AML	00 27 51.0	
	comp=E,104nm,0.3s						
DDEM				*i* AML	AML	00 27 55.0	
	comp=N,165nm,0.5s						
LGD	Lagodekhi	1.78	82	P	Pn	00 27 24.9	+0.7
LGD				S	Sg	00 27 49.6	-1.7
NEY	Neytrino	1.84	333	*e*Pg	Pb	00 27 27.2	-0.3
NEY				*e*Sg	Sb	00 27 50.6	+0.2
HOPA	Hopa-Artvin	1.85	263	Pn	Pn	00 27 25.7	+0.5
HYR	Heyderabad	2.04	159	Pg	Pb	00 27 30.3	-0.5
HYR				Sn	Sn	00 27 52.4	-0.8
EATA	Eleskirt	2.05	211	P	Pb	00 27 31.0	-0.2
EATA				S	Sg	00 27 59.2	-0.9
EATA				*i* AML	AML	00 28 05.0	
	comp=E,18nm,0.6s						
ZKTA	Zakatala	2.05	89	Pn	Pn	00 27 29.1	+1.1
ZKTA				Sn	Sb	00 27 56.7	+0.3
GANJ	Ganja	2.08	117	Pn	Pn	00 27 29.1	+0.6
GANJ				Sn	Sn	00 27 55.5	+1.3
AGRB	Hanur-Agry	2.15	199	Pn	Pn	00 27 30.8	+1.2
KOPR	Koprukoy-ERZUR	2.24	224	Pn	Pn	00 27 32.2	+1.4
SHA1	Shidzhatmaz	2.30	337	*e*Pg	Pb	00 27 35.5	+0.1
SHA1				*e*Sg	Sg	00 28 05.2	-2.9
CHOM	Cayeli-Rize	2.41	258	Pn	Pn	00 27 33.5	+0.6
GNBR	Gunib	2.42	71	*e*Pn	Pb	00 27 35.8	-1.5
GNBR				*e*Sn	Sb	00 28 07.7	+0.7
KIV	Kislovodsk	2.49	340	Pn	Pn	00 27 34.9	+0.7
SEKA	Sheki	2.53	98	Pn	Pn	00 27 35.3	+0.6
SEKA				Sn	Sb	00 28 08.5	-1.5
MNGR	Mingechevir, A	2.56	108	Pg	Pb	00 27 38.2	-1.4
MNGR				Sn	Sn	00 28 06.6	+0.7
SBZ	Shahbuz	2.56	150	Pg	Pb	00 27 39.8	0.0
SBZ				Sg	Sb	00 28 13.5	+2.4
NAX	Nakhchivan	2.74	153	Pg	Pb	00 27 43.6	+0.8
NAX				Sg	Sg	00 28 20.0	-2.1
BRDA	Brd	2.84	117	Pg	Pb	00 27 44.2	-0.3
BRDA				Sg	Sg	00 28 22.6	-2.8
AGDM	Agdam	2.88	121	Pg	Pb	00 27 43.1	-2.0
AGDM				Sg	Sb	00 28 21.3	+1.3
QBL	Gabala	3.06	101	Pn	Pn	00 27 43.3	+1.4
QBL				Sn	Sn	00 28 21.3	+3.1
BAYT	Aydıntepe-Bayb	3.09	248	Pn	Pn	00 27 43.5	+1.1
ORD	Ordubad	3.14	148	Pg	Pb	00 27 49.8	+0.2
ORD				Sn	Sn	00 28 20.4	+0.1
ZRD	Zardab	3.18	114	Sg	Sb	00 28 32.3	+3.6
XNQ	Khinaliq	3.23	97	Pn	Pn	00 27 45.3	+0.8
XNQ				Sn	Sn	00 28 25.8	+3.0
BLQ	Beylaqan	3.38	123	Sn	Sn	00 28 25.8	-0.3
QRD	Qoradiz	3.39	128	Sg	Sb	00 28 38.1	+3.1
QUBA	Quba, Azerbaij	3.47	93	Sn	Sn	00 28 28.6	+0.1
PQL	Pirkuli	3.65	102	Pn	Pn	00 27 50.3	+0.2
PQL				Sn	Sn	00 28 33.0	0.0
SIZA	Siyzn	3.81	97	Sg	Sg	00 28 56.2	-0.3
ATGJ	Altiaghaj	3.89	100	Sn	Sn	00 28 40.5	+1.8
GLBA	Clilabad	4.18	123	Sn	Sn	00 28 45.7	-0.2
YRD	Yardimli	4.29	128	Pg	Pb	00 28 12.0	+2.7
YRD				Sn	Sn	00 28 48.0	-0.9
LRK	Lerik	4.53	130	Pg	Pb	00 28 11.7	-1.7
LRK				Sn	Sn	00 28 56.1	+1.4

IDC 23 00:42:34.2±2.5**, 2°.88S×151°.42E, h0^{km}, mb4.2**/2**, mbtmp4.2**/3**, ML2.5**/1**, Error ellipse: s-maj=40.3km s-min=27.2km az=52.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.54	157	Pn	Pg	00 43 04.0	+0.1
	109nm,0.3s,baz=244,slow=1.5,SNR=25						
KRVT				Sn	Sn	00 43 22.8	-1.0
	150nm,0.3s,baz=185,slow=21,SNR=16						
PMG	Port Moresby	7.75	213	Pn	Pn	00 44 30.0	+1.7
	4.0nm,0.3s,baz=23,slow=7.7,SNR=3.0						
PMG				Sn	Sn	00 45 58.7	+1.8
	5.9nm,0.3s,baz=133,slow=17,SNR=15 8.5nm,0.3s						
WRA	Warramunga Arr	23.79	223	P	P	00 47 46.9	-1.9
	4.0nm,0.6s,baz=51,slow=9.9,SNR=62 4.0nm,0.6s						
ASAR	Alice Springs	26.72	218	P	P	00 48 17.3	+1.7
	1.1nm,0.3s,baz=49,slow=8.7,SNR=22 1.1nm,0.3s						
TORD	Torodi Ar. Bea	148.37	291	PKPbc	PKPdf	01 02 22.0	+1.6
	0.3nm,0.3s,baz=103,slow=3.1,SNR=3.0						

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*SJA **23** 00:54:29.1±0.8, 31°.10S×71°.84W, h8^{km}±3^{km}, ML3.9, MW3.6, Hypocentre not reviewed by the ISC*
*GUC **23** 00:54:33.6±0.8, 31°.13S×71°.67W, h35^{km}±2^{km}, ML4.0*
*NEIC **23** 00:54:35.0±1.8, 31°.10S±0°.03×71°.62W±0°.05, h36^{km}±14^{km}, mb4.1/1, ML4.0(GUC), Error ellipse: s-maj=7.1km s-min=2.3km az=50.0*
ISC 23 00:54:34.6±2.1**, 31°.09S**±0°.03×**71°.72W**±0°.05**, h37**^{km}±2^{km}**, n58, σ1^{s}15**/83**, 3C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.42	10		Pn	00 54 43.5	-0.4
CO06					Sn	00 54 50.2	-0.6
CO06	Fray Jorge	0.42	10	*e*P	Pn	00 54 43.5	-0.4
CO06				*e*S	Sn	00 54 49.9	-0.9
CO02	Combarbal	0.63	101		Pn	00 54 45.5	-1.7
CO02				Sn	Sn	00 54 53.9	-2.1
CO02	Combarbal	0.63	101	⇑*i*P	Pn	00 54 45.5	-1.7
CO02				*i* S	Sn	00 54 53.8	-2.2
CO02				IAML		00 54 56.3	
	comp=E,17µm,0.3s						
CO02	Combarbal	0.63	101	*e*P		00 54 44.0	
CO02				IAML		00 54 56.1	
	comp=Z,4µm,0.3s						
CO03	El Pedregal	0.92	75		Pn	00 54 50.1	-1.0
CO03				Sn	Sn	00 55 02.0	-1.1
CO03	El Pedregal	0.92	75	⇓*i*P	Pn	00 54 50.1	-1.0
CO03				*i* S	Sn	00 55 01.8	-1.4
CO03				IAML		00 55 04.1	
	comp=N,7µm,0.2s						
CO03	El Pedregal	0.92	75	*e*P		00 54 49.0	
CO03				*e*S		00 55 02.4	
CO03				IAML		00 55 04.0	
	comp=Z,4µm,0.3s						
GO04	Tololo Observa	1.21	41		Pn	00 54 55.3	+0.1
GO04	Tololo Observa	1.21	41	⇓*i*P	Pn	00 54 55.3	+0.1
GO04				*e*S	Sn	00 55 10.8	+0.4
GO04				IAML		00 55 15.8	
	comp=N,11µm,0.4s						
GO04	Tololo Observa	1.21	41	*e*P		00 54 54.0	
GO04				*e*S		00 55 12.0	
GO04				IAML		00 55 13.9	
	comp=Z,3µm,0.4s						
CO05	La Serena	1.24	20		Pn	00 54 55.8	+0.5
CO05	La Serena	1.24	20	*e*P	Pn	00 54 55.9	+0.5
CO05				*e*S	Sn	00 55 12.0	+1.3
VA06	Catapilco	1.51	166		Pn	00 54 58.7	-0.4
VA06	Catapilco	1.51	166	⇑*e*P	Pn	00 54 58.8	-0.4
VA06				*e*S	Sn	00 55 17.5	-0.1
VA06				IAML		00 55 22.4	
	comp=N,4µm,0.3s						
CO01	Juntas del Tor	1.79	52		Pn	00 55 04.2	+1.0
CO01	Juntas del Tor	1.79	52	⇓*i*P	Pn	00 55 04.3	+1.2
CO01				*e*S	Sn	00 55 26.9	+2.2
VA01	Torpederas	1.93	178		Pn	00 55 04.5	-0.4
VA01	Torpederas	1.93	178	*e*P		00 55 04.0	
VA01				*e*S		00 55 30.4	
VA03	San Esteban	1.94	150		Pn	00 55 05.7	+0.6
VA03	San Esteban	1.94	150	*e*P	Pn	00 55 05.4	+0.2
VA03				*e*S	Sn	00 55 29.6	+1.3
VA03				IAML		00 55 33.7	
	comp=N,3µm,0.4s						
VA03	San Esteban	1.94	150	*e*P		00 55 05.0	
VA03				*e*S		00 55 30.7	
VA03				IAML		00 55 43.9	
	comp=Z,715nm,0.2s						
ROCH	El Roble	1.97	162	⇑*e*P	Pn	00 55 05.7	0.0
ROCH				*e*S	Sn	00 55 28.5	-0.7
ROCH				IAML		00 55 35.5	
	comp=N,2µm,0.4s						
ROC1	El Roble	1.97	163		Pn	00 55 05.7	-0.1
RTLS	Leoncito	2.19	110	*e*P		00 55 05.8	
RTLS				*e*P		00 55 10.0	
RTLS				*e*S		00 55 40.9	
RTLS				IAML		00 55 43.8	
	comp=Z,2µm,0.5s						
MT02	Curacav	2.22	167		Pn	00 55 08.4	-0.5
MT02	Curacav	2.22	167	*e*P	Pn	00 55 08.3	-0.5
MT02				*e*S	Sn	00 55 34.7	-0.4
MT02	Curacav	2.22	167	*e*P		00 55 08.3	
MT02				*e*S		00 55 39.3	
MT02				IAML		00 55 40.3	
	comp=Z,512nm,0.5s						
PEL	Peldehue	2.23	157		Pn	00 55 09.6	+0.6
PEL	Peldehue	2.23	157	*e*P	Pn	00 55 09.5	+0.5
PEL				*e*S	Sn	00 55 36.9	+1.6
PEL				IAML		00 55 40.7	
	comp=E,1µm,0.2s						
LCO	Las Campanas	2.25	23		Pn	00 55 10.2	+0.7
LCO	Las Campanas	2.25	23	*e*P		00 55 10.3	
LCO				*e*S		00 55 42.6	
LCO				IAML		00 55 47.0	
	comp=Z,2µm,1.1s						
MT10	Hacienda Santa	2.40	156	*e*P	Pn	00 55 12.0	+0.6
MT10				*e*S	Sn	00 55 41.0	+1.4
MT10				IAML		00 55 45.3	
	comp=N,2µm,0.4s						
MT05	Renca	2.44	160		Pn	00 55 12.7	+0.8
MT05	Renca	2.44	160	*e*P	Pn	00 55 12.5	+0.5
MT05				*e*S	Sn	00 55 41.9	+1.2
MT05				IAML		00 55 47.1	
	comp=E,2µm,0.4s						
MT05	Renca	2.44	160	*e*P		00 55 08.3	
MT05				*e*P		00 55 12.0	
MT05				*e*S		00 55 40.3	
MT05				IAML		00 55 49.3	
	comp=Z,677nm,0.6s						
FCH	Farellones	2.54	152	*e*P	Pn	00 55 14.3	+0.8
FCH				*e*S	Sn	00 55 45.1	+1.7
FCH				IAML		00 55 50.8	
	comp=E,482nm,0.2s						
VA05	Santo Domingo	2.56	178		Pn	00 55 12.7	-0.9
VA05	Santo Domingo	2.56	178	*e*P	Pn	00 55 12.9	-0.6
VA05				*e*S	Sn	00 55 41.3	-2.2
VA05				IAML		00 55 59.2	
	comp=E,1µm,0.3s						
AC05	El Transito	2.57	30	Pn	Pn	00 55 15.4	+1.6
AC05	El Transito	2.57	30	*e*P		00 55 15.0	
AC05				*e*S		00 55 51.9	
AC05				IAML		00 56 01.8	
	comp=Z,606nm,0.8s						
MT03	Universidad Ad	2.61	157		Pn	00 55 15.0	+0.6
MT03	Universidad Ad	2.61	157	*e*P	Pn	00 55 14.9	+0.6
MT03				*e*S	Sn	00 55 46.3	+1.6
MT03				IAML		00 55 57.4	
	comp=E,1µm,0.2s						
MT03	Universidad Ad	2.61	157	*e*P		00 55 14.0	
MT03				*e*S		00 55 48.8	
MT03				IAML		00 56 00.9	
	comp=Z,518nm,0.5s						
MT04	Ro Olivares	2.67	150	*e*P	Pn	00 55 16.8	+1.5
MT04				*e*S	Sn	00 55 48.3	+1.8
MT04				IAML		00 55 56.6	
	comp=E,539nm,0.5s						
MT09	Talagante	2.75	167		Pn	00 55 16.2	0.0
MT09	Talagante	2.75	167	*e*P	Pn	00 55 16.8	+0.5
MT09				*e*S	Sn	00 55 49.4	+1.0
MT09				IAML		00 56 01.9	
	comp=E,626nm,0.3s						
MT08	Bocatoma Ro	2.76	149	*e*P	Pn	00 55 18.9	+2.4
MT08				*e*S	Sn	00 55 53.5	+4.9
MT08				IAML		00 56 01.1	
	comp=E,354nm,0.5s						
MT01	Popeta	2.79	172		Pn	00 55 16.4	-0.4
MT01	Popeta	2.79	172	*e*P	Pn	00 55 16.5	-0.4
MT01				*e*S	Sn	00 55 50.4	+1.1
MT01				IAML		00 55 58.3	
	comp=E,373nm,0.4s						
MT01	Popeta	2.79	172	*e*P		00 55 15.0	
MT01				*e*P		00 55 16.6	
MT01				*e*S		00 55 51.8	
MT01				IAML		00 56 00.7	
	comp=Z,298nm,0.5s						
MT12	Pirque	2.82	160	*e*P	Pn	00 55 17.5	+0.4
MT12				*e*S	Sn	00 55 50.1	+0.3
MT12				IAML		00 56 03.4	
	comp=N,941nm,0.3s						
ASAL	Salagasta	2.88	122	*e*P		00 55 21.0	
ASAL				*e*S		00 55 55.8	
ASAL				IAML		00 56 11.6	
	comp=Z,250nm,0.7s						
MT13	San Alfonso	2.91	156	Pn	Pn	00 55 19.1	+0.7
MT13	San Alfonso	2.91	156	*e*P	Pn	00 55 19.8	+1.3
MT13				*e*S	Sn	00 55 53.1	+0.8
MT13				IAML		00 56 01.6	
	comp=E,593nm,0.4s						
AC04	Llanos de Chal	2.93	11	Pn	Pn	00 55 18.6	0.0
AC04	Llanos de Chal	2.93	11	*e*P		00 55 18.8	
AC04				*e*S		00 55 55.3	
AC04				IAML		00 56 08.1	
	comp=Z,248nm,0.6s						
LMEL	Las Melosas	3.03	155		Pn	00 55 20.4	+0.2
BO01	Tunca	3.34	171	Pn	Pn	00 55 24.0	-0.2
BO01	Tunca	3.34	171	*e*P		00 55 24.6	
BO01				*e*S		00 56 05.8	
GO03	Copiap	3.72	21	Pn	Pn	00 55 29.9	+0.4
BO02	Sierra Bellavi	3.78	168		Pn	00 55 30.6	+0.3
BO02	Sierra Bellavi	3.78	168	*e*P		00 55 30.8	
BO02				*e*S		00 56 18.8	
BO02				IAML		00 56 35.8	
	comp=Z,221nm,0.2s						
AC06	Mina Casimiro	3.91	18		Pn	00 55 32.1	0.0
ML02	Panimavida	4.67	177	Pn	Pn	00 55 41.8	-0.7
AC02	Maricunga	4.81	29	Pn	Pn	00 55 45.7	+0.8
GO06	Curarrehue	8.48	179	Pn	Pn	00 56 34.3	-0.6
PLCA	Paso Flores	9.67	175	Pn	Pn	00 56 50.5	-0.7
LL04	Puerto Octay	9.82	183	Pn	Pn	00 56 51.7	-1.4
TRQA	Tornquist	10.61	134	Pn	Pn	00 57 04.0	-0.1
ITQB	Itaqui	13.11	88	Pn	Pn	00 57 38.0	-0.2
CPUP	Villa Florida	13.49	73	Pn	Pn	00 57 42.2	-1.2
PLTB	Pedras Altas	15.48	97	Pn	Pn	00 58 09.7	-0.5
PLTB				IAmb	IAmb	00 58 42.7	
	comp=Z,15nm,1.3s						
QSPA	South Pole Qui	59.14	180	P	P	01 04 31.8	+0.5

IDC 23 00:59:33.9±636.0**, 49°.62N×37°.55E, h0^{km}, Error ellipse: s-maj=261.5km s-min=142.6km az=14.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	7.12	359	I	I	01 39 40.4	
	0.1nm,0.6s,baz=176,slow=331,SNR=2.8						
I31KZ	AKTYUBINSK INF	13.20	79	I	I	02 15 40.0	
	0.1nm,0.6s,baz=272,slow=312,SNR=4.6						
I46RU	ZALESOVO INFRA	29.12	63	I	I	04 03 01.4	
	baz=283,slow=321,SNR=2.1						

IDC 23 01:31:35.6±622.0**, 49°.60N×37°.56E, h0^{km}, Error ellipse: s-maj=252.3km s-min=138.4km az=13.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	7.14	359	I	I	02 14 51.8	
	baz=178,slow=328						
I31KZ	AKTYUBINSK INF	13.20	79	I	I	02 55 48.8	
	baz=272,slow=323						
I46RU	ZALESOVO INFRA	29.13	63	I	I	04 30 20.0	
	baz=284,slow=326,SNR=2.8						

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*SNET **23** 01:59:00.7±1.5, 12°.16N×87°.98W, h21^{km}, ML3.6*
*INET **23** 01:59:01.0±0.9, 12°.15N×87°.92W, h8^{km}±7^{km}, MW3.5*
*IDC **23** 01:59:01.5±1.6, 13°.24N×87°.17W, h0^{km}, mb3.6/4, mbtmp3.6/6, ML3.4/2, MS2.7/1, Error ellipse: s-maj=67.8km s-min=22.8km az=51.0*
ISC 23 01:59:00.5±1.7**, 12°.29N**±0°.07×**87°.90W**±0°.04**, h17**^{km}±10^{km}**, n40, σ1^{s}42**/49**, mb3.7**/4**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.92	64	*e*P	Pn	01 59 20.1	+1.2
CRIN				*e*S	Sn	01 59 34.8	+3.0
CNCH	Conchagua	0.98	4	*e*P	Pn	01 59 21.1	+1.5
CNCH				*e*S	Sn	01 59 36.2	+3.0
LCND	La Caada	1.01	0	*e*S	Sn	01 59 36.3	+2.4
TELN	Telica	1.09	73	*e*P	Pn	01 59 21.8	+0.7
VSM	San Miguel	1.19	342	*e*P	Pg	01 59 24.1	+0.6
LCY	Lacayo	1.19	341	*e*P	Pn	01 59 23.0	+0.4
CNGN	Cerro Negro	1.19	80	*e*P	Pn	01 59 23.1	+0.6
CNGN				*e*S	Sb	01 59 35.5	-2.4
ALJI	Alcalda de J	1.22	328	*e*P	Pn	01 59 22.8	0.0
ALJI				*e*S	Sn	01 59 39.6	+0.7
COPN	Copaltepe	1.28	95	*e*P	Pn	01 59 23.2	-0.5
MOMN	Momotombo	1.33	85	*e*P	Pn	01 59 24.6	+0.2
MOMN				*e*S	Sb	01 59 43.0	+1.0
TECA	Tecapa	1.33	334	*e*P	Pn	01 59 25.4	+0.8
COEB	Comit de Eme	1.35	333	*e*P	Pn	01 59 24.4	-0.3
COEB				*e*S	Sg	01 59 44.8	+0.6
COEB				IAML		01 59 49.8	
	comp=Z,672nm,0.5s						
TECO	Alcaldia de Te	1.51	325	*e*S	Sg	01 59 48.8	-0.5
UESV	Universidad de	1.59	327	*e*P	Pn	01 59 28.3	+0.3
UESV				*e*S	Sb	01 59 50.8	+1.3
UESV				IAML		01 59 58.2	
	comp=Z,892nm,0.6s						
TISN	Laguna Tiscapa	1.60	95	*e*P	Pn	01 59 27.9	-0.2
SCLA	Alcaldia de Sa	1.62	330	*e*P	Pn	01 59 29.1	+0.7
SCLA				*e*S	Sg	01 59 52.3	-0.6
MGAN	Managua	1.62	95	*e*P	Pn	01 59 28.5	+0.1
MGAN				*e*P	Pn	01 59 28.5	+0.1
MGAN				*e*S	Sb	01 59 50.3	+0.1
WILN	Americas 2	1.68	94	*e*P	Pn	01 59 28.9	-0.2
HUEN		1.69	88	*e*P	Pn	01 59 30.2	+0.9
SJTE	Alcalda de S	1.70	321	*e*P	Pn	01 59 30.2	+0.7
PAVA	Las Pavas	1.74	325	*e*P	Pn	01 59 31.0	+0.9
LFRS	El Faro	1.74	320	*e*P	Pn	01 59 30.9	+0.7
TGUH	Tegucigalpa,Un	1.86	19	*e*P	Pb	01 59 33.8	-0.3
TGUH	Tegucigalpa,Un	1.86	19	*e*P	Pb	01 59 33.8	-0.3
P5NO	Presa 5 de nov	1.88	334	*e*P	Pn	01 59 33.2	+1.3
MATN	Matagalpa	2.03	72	*e*P	Pn	01 59 34.7	+0.7
JAYA	Jayaque - finc	2.03	312	*e*P	Pn	01 59 34.8	+0.7
LLGN	La Laguna	2.12	331	*e*S	Sb	02 00 05.7	+1.0
BOAB	BOACO BROADBAN	2.19	86	*e*P	Pn	01 59 36.5	+0.3
BOAB				*e*S	Sn	02 00 03.4	+0.5
NUBE	Las Nubes	2.43	311	*e*P	Pn	01 59 39.4	-0.2
NUBE				IAML		02 00 13.9	
	comp=Z,254nm,0.4s						
ACON	Acoyapa	2.68	97	*e*P	Pn	01 59 43.6	+0.7
JTS	Las Juntas de	3.51	124	Pn	Pn	01 59 58.6	+4.3
	comp=Z,4.0nm,0.3s,baz=348,slow=8.0,SNR=8.8						
JTS				Sn	Sb	02 00 45.7	+1.2
	baz=287,slow=20 comp=Z,20nm,0.8s						
CMIG	Matias Romero	8.27	306	Pn	Pn	02 01 03.2	+3.4
	comp=Z,0.4nm,0.3s,baz=95,slow=11,SNR=2.2						
CMIG				Sn	Sn	02 02 45.4	+12
	comp=Z,0.2nm,0.3s,baz=307,slow=22,SNR=1.3						
CMIG				LR	LR	02 04 32.8	
	comp=Z,55nm,21.3s,baz=116,slow=40 comp=Z,1.0nm,0.3s						
TXAR	Lajitas Array	22.42	322	P	P	02 03 59.5	+0.9
	comp=Z,3.0nm,0.7s,baz=135,slow=10,SNR=34 comp=Z,3.0nm,0.7s						
PDAR	Pinedale Array	35.71	332	P	P	02 05 58.2	-0.2
	comp=Z,0.3nm,0.5s,baz=129,slow=9.4,SNR=3.3 comp=Z,0.3nm,0.5s						
H03N2	Juan Fernandez	46.27	170	T	T	02 57 53.5	
	baz=337,slow=77,SNR=122						
H03N1	Juan Fernandez	46.28	170	T	T	02 57 57.9	
	baz=337,slow=77,SNR=166						
H03N3	Juan Fernandez	46.29	170	T	T	02 57 53.7	
	baz=337,slow=77,SNR=143						
YKA	Yellowknife Ar	53.65	345	P	P	02 08 19.2	-1.7
	comp=Z,0.3nm,0.7s,baz=135,slow=8.3,SNR=9.2 comp=Z,0.3nm,0.7s						
RES	Resolute Bay	62.50	358	P	P	02 09 20.0	-2.7
	comp=Z,0.8nm,0.8s,baz=194,slow=9.0,SNR=5.7 comp=Z,0.8nm,0.8s						

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*SJA **23** 02:04:05.5±0.7, 30°.64S×68°.75W, h116^{km}±3^{km}, ML3.7, MW3.7, Hypocentre not reviewed by the ISC*
*IDC **23** 02:04:05.8±1.1, 30°.45S×68°.70W, h98^{km}±11^{km}, mb3.0/2, mbtmp3.6/6, Error ellipse: s-maj=28.2km s-min=14.1km az=87.0*
*GUC **23** 02:04:06.4±0.7, 30°.60S×68°.96W, h137^{km}±8^{km}, ML3.9*
ISC 23 02:04:05.8±0.7**, 30°.59S**±0°.04×**68°.72W**±0°.05**, h112**^{km}±8^{km}**, n34, σ1^{s}42**/49**, mb3.2**/3**, 2C-2D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOCA	Reserva Natura	0.48	220	*i* P		02 04 23.5	
DOCA				*i* S		02 04 36.9	
RTLL	Cerro Villicun	0.77	164	*i* P		02 04 25.4	
RTLL				IAML		02 04 42.4	
	comp=Z,2µm,0.3s						
SJA	San Juan	0.95	172	*i* P		02 04 27.5	
SJA				*e*S		02 04 42.6	
SJA				IAML		02 04 43.7	
	comp=Z,2µm,0.2s						
ZON	Zonda	0.96	178	*i* P		02 04 27.1	
ZON				*e*S		02 04 43.0	
ZON				IAML		02 04 43.6	
	comp=Z,2µm,0.6s						
CFA	Coronel Fontan	1.10	158	P	Pn	02 04 29.0	+0.8
	comp=Z,236nm,0.3s,baz=346,slow=16,SNR=3260						
CFA				S	Sn	02 04 45.6	+0.4
	comp=Z,2µm,0.4s,baz=235,slow=20,SNR=76						
CFA				LR	LR	02 04 51.9	
	comp=Z,43nm,21.5s,baz=126,slow=38						
CFA	Coronel Fontan	1.10	158	*i* P		02 04 28.9	
CFA				*e*S		02 04 45.6	
RTLS	Leoncito	1.30	202	*i* P		02 04 31.2	
RTLS				*e*S		02 04 50.8	
CO01	Juntas del Tor	1.33	297	⇑*i*P	Pn	02 04 33.1	+2.0
CO01				*i* S	Sn	02 04 52.5	+2.3
CO01				IAML		02 04 53.4	
	comp=E,1µm,0.3s						
CO01	Juntas del Tor	1.33	297	*i* P		02 04 32.0	
CO03	El Pedregal	1.71	261	*e*P	Pn	02 04 36.2	+0.9
CO03				*e*S	Sn	02 04 59.0	+1.1
CO03				IAML		02 04 60.0	
	comp=E,1µm,0.4s						
CO03	El Pedregal	1.71	261	*i* P		02 04 36.2	
CO03				IAML		02 05 01.7	
	comp=Z,412nm,0.6s						
GO04	Tololo Observa	1.84	282	*e*P	Pn	02 04 38.0	+0.9
GO04				*e*S	Sn	02 05 01.7	+0.7
GO04				IAML		02 05 04.7	
	comp=E,3µm,0.3s						
GO04	Tololo Observa	1.84	282	*i* P		02 04 38.1	
ASAL	Salagasta	2.00	183	*i* P		02 04 39.8	
ASAL				*e*S		02 05 03.9	
CO02	Combarbal	2.05	252	⇓*e*P	Pn	02 04 39.9	+0.3
CO02				*e*S	Sn	02 05 05.8	+0.3
CO02				IAML		02 05 08.2	
	comp=E,1µm,0.2s						
CO02	Combarbal	2.05	252	*i* P		02 04 39.9	
CO02				IAML		02 05 08.3	
	comp=Z,388nm,0.3s						
AC05	El Transito	2.21	322	⇑*i*P	Pn	02 04 43.6	+2.0
AC05				*e*S	Sn	02 05 11.1	+2.0
AC05				IAML		02 05 14.2	
	comp=N,507nm,0.2s						
CO05	La Serena	2.28	286	*e*P	Pn	02 04 42.5	+0.2
CO05				*e*S	Sn	02 05 09.3	-1.1
CO05				IAML		02 05 10.7	
	comp=E,1µm,0.3s						
AAGR	Agrelo	2.49	182	*i* P		02 04 45.8	
AAGR				IAML		02 05 18.7	
	comp=Z,227nm,0.3s						
CO06	Fray Jorge	2.51	267	⇓*e*P	Pn	02 04 44.4	-1.1
CO06				*e*S	Sn	02 05 13.0	-2.9
CO06				IAML		02 05 19.3	
	comp=E,288nm,0.3s						
VA03	San Esteban	2.67	215	*i* P		02 04 47.9	
VA03				IAML		02 05 27.7	
	comp=Z,213nm,0.5s						
FCH	Farellones	3.04	206	*e*P	Pn	02 04 53.6	+0.9

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FCH				eS	Sn	02 05 30.7	+1.9
FCH				IAML		02 05 31.9	
	comp=E,135nm,0.3s						
MT08	**Bocatoma Ro**	3.05	201	eP	Pn	02 04 54.2	+1.5
MT04	**Ro Olivares**	3.06	203	eP	Pn	02 04 54.0	+1.2
ROCH	**El Roble**	3.07	219	eP	Pn	02 04 52.3	-0.7
MT10	**Hacienda Santa**	3.09	209	eP	Pn	02 04 53.8	+0.6
AC04	**Llanos de Chal**	3.14	319	eP	Pn	02 04 54.3	+0.6
AC04				eS	Sn	02 05 30.5	-0.1
AC04				IAML		02 05 34.5	
	comp=E,591nm,0.1s						
GO03	**Copiap**	3.26	336	eP	Pn	02 04 56.5	+1.0
GO03				eS	Sn	02 05 33.7	0.0
GO03				IAML		02 05 37.2	
	comp=N,194nm,0.5s						
GO03	**Copiap**	3.26	336	i P		02 04 56.5	
MT03	**Universidad Ad**	3.27	207	eP	Pn	02 04 56.0	+0.5
MT05	**Renca**	3.28	211	eP	Pn	02 04 55.4	-0.2
MT05	**Renca**	3.28	211	i P		02 04 55.5	
MT05				IAML		02 05 36.3	
	comp=Z,130nm,0.4s						
MT02	**Curacav**	3.36	217	eP	Pn	02 04 55.5	-1.1
LMEL	**Las Melosas**	3.48	201	eP	Pn	02 04 59.3	+0.9
MT12	**Pirque**	3.50	206	eP	Pn	02 04 58.5	0.0
MT12				eS	Sn	02 05 38.2	-1.0
AC06	**Mina Casimiro**	3.52	336	eP	Pn	02 04 59.5	+0.7
AC06				eS	Sn	02 05 38.9	-0.9
MT09	**Talagante**	3.71	211	eP	Pn	02 05 00.2	-1.2
MT01	**Popeta**	3.91	213	eP	Pn	02 05 02.0	-1.9
LVC	**Limon Verde**	7.95	359	P	Pn	02 05 57.1	-1.8
	comp=Z,9.8nm,0.4s,baz=167,slow=11,SNR=20						
LVC				S	Sn	02 07 22.9	-4.5
	comp=Z,1.9nm,0.4s,baz=186,slow=17,SNR=1.3						
PLCA	**Paso Flores**	10.23	188	P	Pn	02 06 27.1	-2.4
	comp=Z,2.8nm,1.0s,baz=354,slow=11,SNR=10						
CPUP	**Villa Florida**	10.88	70	P	Pn	02 06 37.0	-1.3
	comp=Z,0.4nm,0.3s,baz=73,slow=9.4,SNR=1.8						
CPUP				S	Sn	02 08 37.9	-0.2
	comp=Z,0.8nm,0.3s,baz=147,slow=18,SNR=1.8						
LPAZ	**La Paz**	14.24	2	P	Pn	02 07 23.1	+0.1
	comp=Z,1.2nm,0.6s,baz=180,slow=9.7,SNR=4.5						
SIV	**San Ignacio**	16.13	27	P	P	02 07 46.4	-0.8
	comp=Z,0.8nm,0.5s,baz=196,slow=12,SNR=5.4						
TXAR	**Lajitas Array**	68.26	327	P	P	02 14 56.0	+1.5
	comp=Z,0.2nm,0.6s,baz=148,slow=8.6,SNR=2.4						
	comp=Z,0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	80.38	69	P	P	02 16 06.2	+1.1
	comp=Z,0.3nm,0.5s,baz=251,slow=6.0,SNR=2.1						
PDAR	**Pinedale Array**	82.07	331	P	P	02 16 13.8	+0.1
	comp=Z,0.3nm,0.8s,baz=129,slow=4.0,SNR=2.4						
	comp=Z,0.3nm,0.8s						
KURBB	**Kurchatov Arra**	148.46	41	PKPbc	PKPbc	02 23 40.0	+1.2
	comp=Z,0.2nm,0.3s,baz=291,slow=2.3,SNR=4.4						
ZALV	**Zalesovo Beam**	149.85	32	PKPbc	PKPbc	02 23 43.3	+1.1
	comp=Z,0.9nm,0.5s,baz=4.1,slow=2.0,SNR=3.7						
MKAR	**Makanchi Array**	152.39	46	PKPbc	PKPbc	02 23 49.4	+1.0
	comp=Z,0.5nm,0.7s,baz=288,slow=1.9,SNR=4.4						

ROM 23 02:22:02.4±0.0, 42°.751N±0°.002×13°.063E±0°.004, h11km, ML1.5/22, 16C-2D, Error ellipse: s-maj=0.3km s-min=0.2km az=74.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1218	**Civita (PG)**	0.09	154	P	Pg	02 22 05.4	+0.3
T1218				S	Sg	02 22 07.6	+0.7
T1218				AML	AML		
	comp=E,419μm,0.5s						
T1218				AML	AML		
	comp=N,659μm,1.1s						
T1218				AML	AML		
	comp=E,386μm,1.1s						
T1218				AML	AML		
	comp=N,653μm,0.4s						
NRCA	**Norcia**	0.09	25	P	Pg	02 22 05.3	+0.3
NRCA				S	Sg	02 22 07.2	+0.3
NRCA				AML	AML		
	comp=E,1320μm,0.6s						
NRCA				AML	AML		
	comp=E,1430μm,0.6s						
NRCA				AML	AML		
	comp=E,1325μm,0.6s						
NRCA				AML	AML		
	comp=N,955μm,0.1s						
NRCA				AML	AML		
	comp=N,986μm,0.1s						
T1217	**Poggiodomo (PG**	0.10	248	AML	AML		
	comp=E,900μm,0.3s						
T1217				AML	AML		
	comp=N,656μm,0.5s						
T1217				AML	AML		
	comp=E,766μm,0.3s						
T1217				AML	AML		
	comp=N,690μm,0.5s						
T1214	**Arquata del Tr**	0.11	85	⇑P	Pg	02 22 05.7	+0.5
T1214				S	Sg	02 22 08.2	+0.8
T1214				AML	AML		
	comp=E,907μm,0.5s						
T1214				AML	AML		
	comp=N,835μm,0.5s						
T1214				AML	AML		
	comp=E,868μm,0.5s						
T1214				AML	AML		
	comp=N,816μm,0.2s						
T1214				AML	AML		
	comp=E,910μm,0.5s						
T1214				AML	AML		
	comp=E,870μm,0.5s						
T1214				AML	AML		
	comp=N,816μm,0.2s						
T1214				AML	AML		
	comp=N,836μm,0.5s						
T1245	**Castelsantange**	0.14	41	⇑P	Pg	02 22 06.2	+0.4
T1245				S	Sg	02 22 08.8	+0.6
T1245				AML	AML		
	comp=E,534μm,0.2s						
T1245				AML	AML		
	comp=N,668μm,0.7s						
T1216	**Preci, Frazion**	0.14	347	⇑P	Pg	02 22 06.1	+0.4
T1216				S	Sg	02 22 08.9	+0.8
T1216				AML	AML		
	comp=E,538μm,0.5s						
T1216				AML	AML		
	comp=N,433μm,0.9s						
T1216				AML	AML		
	comp=N,433μm,1.1s						
MC2	**Monte Cornacci**	0.19	30	⇑P	Pg	02 22 07.0	+0.4
MC2				S	Sg	02 22 10.6	+1.1
SMA1	**SAN MARTINO**	0.23	121	⇑P	Pg	02 22 07.9	+0.6
SMA1				S	Sg	02 22 12.2	+1.6
SMA1				AML	AML		
	comp=E,110μm,1.6s						
SMA1				AML	AML		
	comp=N,85μm,0.2s						
SMA1				AML	AML		
	comp=E,110μm,0.4s						
T1211	**Morro Reatino**	0.27	215	⇑P	Pg	02 22 08.1	+0.3
T1211				S	Sb	02 22 13.0	-0.9
RM33	**Pellescritta (**	0.27	155	⇓P	Pg	02 22 08.2	+0.4
RM33				S	Sb	02 22 12.8	-1.1
RM33				AML	AML		
	comp=E,105μm,1.0s						
RM33				AML	AML		
	comp=N,65μm,0.1s						
ARRO	**Arrone**	0.28	232	⇑P	Pg	02 22 08.2	+0.1
ARRO				S	Sb	02 22 13.4	-0.7
ARRO				AML	AML		
	comp=E,89μm,0.2s						
ARRO				AML	AML		
	comp=N,62μm,0.8s						
ARRO				AML	AML		
	comp=E,89μm,1.8s						
T1256	**Bolognola (MC)**	0.28	25	P	Pg	02 22 08.3	+0.1
T1256				AML	AML		
	comp=N,50μm,0.6s						
T1256				AML	AML		
	comp=N,50μm,0.6s						
T1256				AML	AML		
	comp=E,50μm,0.3s						
FDMO	**Fiordimonte**	0.29	4	⇑P	Pg	02 22 08.4	+0.3
FDMO				S	Sb	02 22 13.4	-1.0
FDMO				AML	AML		
	comp=N,130μm,0.2s						
FDMO				AML	AML		
	comp=E,90μm,0.1s						
T1241	**Roccafluvione,**	0.29	69	⇑P	Pg	02 22 08.6	+0.4
T1241				S	Sg	02 22 13.3	+1.0
T1241				AML	AML		
	comp=E,25000μm,1.6s						
T1241				AML	AML		
	comp=N,19500μm,1.6s						
T1241				AML	AML		
	comp=E,92μm,0.2s						
T1241				AML	AML		
	comp=N,84μm,0.3s						
T1241				AML	AML		
	comp=E,25000μm,0.4s						
T1241				AML	AML		
	comp=N,19500μm,0.4s						
T1219	**Muccia, Frazio**	0.31	352	⇑P	Pg	02 22 08.8	+0.2
T1219				S	Sg	02 22 13.8	+1.0
CAMP	**Campotosto**	0.33	130	⇑P	Pg	02 22 09.3	+0.3
T1222	**Castel Sant'An**	0.35	183	P	Pg	02 22 09.9	+0.6
T1222				S	Sg	02 22 15.0	+1.0
T1247	**Pizzolo (AQ)**	0.35	151	P	Pg	02 22 09.9	+0.4
T1247				S	Sb	02 22 15.8	-0.6
T1247				AML	AML		
	comp=N,99μm,0.2s						
T1247				AML	AML		
	comp=E,92μm,0.7s						
CSP1	**Cessapalombo**	0.36	17	⇑P	Pg	02 22 09.8	+0.3
CSP1				S	Sg	02 22 15.4	+1.1
CSP1				AML	AML		
	comp=E,66μm,0.7s						
CSP1				AML	AML		
	comp=N,73μm,1.2s						
CSP1				AML	AML		
	comp=N,73μm,0.8s						
T1220	**Camerino, Fraz**	0.36	3	⇓P	Pg	02 22 09.4	-0.1
T1220				S	Sb	02 22 15.8	-0.7
T1220				AML	AML		
	comp=E,232μm,0.2s						
T1220				AML	AML		
	comp=N,302μm,0.3s						
MOMA	**Monte Martano**	0.37	278	P	Pg	02 22 10.1	+0.4
MOMA				S	Sb	02 22 15.8	-0.9
MOMA				AML	AML		
	comp=N,82μm,1.2s						
MOMA				AML	AML		
	comp=N,82μm,0.8s						
MOMA				AML	AML		
	comp=E,124μm,0.2s						
GUMA	**Gualdo di Mace**	0.37	33	P	Pg	02 22 10.3	+0.6
GUMA				S	Sb	02 22 16.4	-0.5
GUMA				AML	AML		
	comp=N,84μm,0.3s						
GUMA				AML	AML		
	comp=E,87μm,1.4s						
GUMA				AML	AML		
	comp=N,84μm,1.7s						
ASSB	**Assisi San Ben**	0.42	315	⇑P	Pg	02 22 10.7	+0.1
ASSB				S	Sb	02 22 17.3	-0.8
ASSB				AML	AML		
	comp=E,58μm,0.5s						
ASSB				AML	AML		
	comp=N,57μm,0.6s						
TERO	**Teramo**	0.42	108	P	Pg	02 22 10.7	0.0
TERO				S	Sg	02 22 17.1	+0.9
TERO				AML	AML		
	comp=E,36μm,0.1s						
TERO				AML	AML		
	comp=E,36μm,1.9s						
TERO				AML	AML		
	comp=N,42μm,0.4s						
FIAM	**Fiamignano**	0.48	175	S	Sg	02 22 19.1	+0.9
OFFI	**Offida**	0.49	68	⇑P	Pb	02 22 13.1	0.0
OFFI				AML	AML		
	comp=E,89μm,0.9s						
OFFI				AML	AML		
	comp=N,134μm,0.6s						
OFFI				AML	AML		
	comp=E,89μm,1.1s						
SNTG	**Esanatoglia**	0.51	350	⇑P	Pg	02 22 12.5	+0.2
SNTG				S	Sb	02 22 20.4	-0.5
SNTG				AML	AML		
	comp=N,37μm,1.3s						
SNTG				AML	AML		
	comp=E,44μm,0.6s						
ATCC	**AVT- Casa Cast**	0.53	325	⇑P	Pg	02 22 12.9	+0.1
ATCC				S	Sb	02 22 21.2	-0.3
ATCC				AML	AML		
	comp=N,44μm,1.0s						
ATCC				AML	AML		
	comp=E,53μm,0.7s						
CING	**Cingoli**	0.63	9	P	Pg	02 22 14.9	+0.2
ARVD	**Arcevia**	0.75	353	S	Sb	02 22 28.6	+0.8
ARVD				AML	AML		
	comp=N,15μm,1.5s						
ARVD				AML	AML		
	comp=E,24μm,1.3s						
ARVD				AML	AML		
	comp=N,15μm,0.5s						
ARVD				AML	AML		
	comp=E,24μm,0.7s						
SAMA	**S.Maria delle**	1.03	200	AML	AML		
	comp=E,179μm,1.3s						
SAMA				AML	AML		
	comp=N,220μm,0.1s						

ROM 23 02:22:43.6±0.1, 42°.664N±0°.004×13°.220E±0°.004, h13km, ML1.1/4, 3C-1D, Error ellipse: s-maj=0.3km s-min=0.3km az=185.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1218	**Civita (PG)**	0.08	275	P	Pg	02 22 46.7	+0.3
T1218				S	Sg	02 22 48.5	+0.1
T1218				AML	AML		
	comp=E,196μm,0.3s						
T1218				AML	AML		
	comp=N,230μm,0.2s						
T1218				AML	AML		
	comp=E,196μm,0.3s						
T1218				AML	AML		
	comp=N,231μm,0.1s						
SMA1	**SAN MARTINO**	0.09	111	P	Pg	02 22 46.4	-0.2
SMA1				S	Sg	02 22 49.2	+0.6
SMA1				AML	AML		
	comp=E,286μm,0.2s						
SMA1				AML	AML		
	comp=N,174μm,0.6s						
SMA1				AML	AML		
	comp=N,174μm,1.4s						
T1214	**Arquata del Tr**	0.10	355	P	Pg	02 22 47.0	+0.4
T1214				S	Sg	02 22 49.1	+0.3
RM33	**Pellescritta (**	0.15	182	P	Pb	02 22 47.9	-0.5
RM33				S	Sg	02 22 50.7	+0.8
T1212	**Cascia, Frazio**	0.16	304	⇑P	Pg	02 22 47.8	+0.4
T1212				S	Sg	02 22 50.5	+0.5
T1212				AML	AML		
	comp=E,40μm,0.1s						
T1212				AML	AML		
	comp=N,54μm,0.3s						
T1212				AML	AML		
	comp=E,40μm,0.1s						
T1212				AML	AML		
	comp=N,54μm,0.4s						
NRCA	**Norcia**	0.19	335	⇓P	Pg	02 22 48.4	+0.5
NRCA				S	Sg	02 22 51.5	+0.7
NRCA				AML	AML		
	comp=N,58μm,0.7s						
NRCA				AML	AML		
	comp=E,108μm,0.2s						
T1217	**Poggiodomo (PG**	0.22	283	P	Pg	02 22 48.8	+0.4
T1217				S	Sg	02 22 52.4	+0.8
T1241	**Roccafluvione,**	0.25	39	⇑P	Pg	02 22 49.3	+0.5
T1241				S	Sb	02 22 53.4	-0.9
TERO	**Teramo**	0.29	98	P	Pg	02 22 49.8	+0.3
TERO				S	Sg	02 22 54.3	+0.8
T1211	**Morro Reatino**	0.30	244	⇑P	Pg	02 22 50.1	+0.4

*NNC **23** 02:32:22.9±1.4, 37°.45N×56°.41E, h0km, mb3.7, Error ellipse: s-maj=16.1km s-min=7.0km az=179.0*
*IDC **23** 02:32:23.5±3.1, 36°.96N×56°.82E, h0km, mb3.4/3, mbtmp3.6/7, ML3.4/4, Error ellipse: s-maj=48.8km s-min=14.2km az=162.0*
*TEH **23** 02:32:24.1, 37°.19N×56°.80E, h6km±36km, ML3.5*

ISC 23 02:32:26.2±0.7, 37°.25N±0°.04×56°.82E±0°.04, h10km, n59, σ1ˢ54/62, mb3.5/3, 2C-4D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJRD	**Bojnurd**	0.65	46	Pg	Pg	02 32 38.8	0.0
MRVT	**Maraveh tapeh**	0.71	306	Pg	Pg	02 32 39.2	-0.7
SBZV	**Sabzevar**	1.07	143	Pg	Pg	02 32 45.3	-1.5
SBZV				Sg	Sg	02 33 00.1	-0.6
IMND	**Minoodasht**	1.12	271	Pg	Pb	02 32 46.2	-1.5
GEYT	**Alibeck**	1.24	56	Pg	Pn	02 32 49.5	-0.1
	77nm,0.3s,baz=246,slow=15,SNR=353						
GEYT				Lg	Lg	02 33 08.2	
	53nm,0.3s,baz=238,slow=13,SNR=3.6						
GYA0B	**ALIBECK ARRAY**	1.24	56	⇓P	Pn	02 32 49.6	0.0
GYA0B				⇓S	Sn	02 33 09.2	+2.8
SHRO	**Shahrood**	1.41	208	Pg	Pn	02 32 50.4	-1.6
IEMG	**Emamgholi**	1.47	83	Pg	Pn	02 32 53.3	+0.3
IAKL	**Akhelmad**	1.68	112	Pg	Pn	02 32 56.4	+0.5
IPAY	**Payeh**	1.92	114	Pn	Pb	02 33 00.9	-0.5
IKRD	**Kardeh**	2.21	101	Pn	Pn	02 33 04.8	+1.6
IMOG	**Moghan**	2.33	119	Pn	Pn	02 33 06.2	+1.4
IGLO	**Ghaloghah**	2.51	254	Pn	Pn	02 33 08.5	+1.3
TBHD	**Torbat heydari**	2.68	132	Pn	Pn	02 33 10.8	+1.3
IMYA	**Miami**	2.79	108	Pn	Pn	02 33 12.1	+1.0
IANJ	**Anjilo**	2.94	234	Pn	Pn	02 33 14.1	+0.9
JRKH	**Jarkhoshk**	3.14	114	Pn	Pn	02 33 17.0	+1.1
ISHM	**Shahmirzad**	3.18	244	Pn	Pn	02 33 18.1	+1.6
TNSJ	**Nastanj**	3.28	183	Pn	Pn	02 33 18.2	+0.4
TBJM	**Torbat-e-JAM**	3.46	124	Pn	Pn	02 33 21.0	+0.8
ILAS	**Lasjerd**	3.63	240	Pn	Pn	02 33 23.6	+0.9
TKDS	**Koohdasht(Taba**	3.63	176	Pn	Pn	02 33 23.1	+0.5
IFIR	**Firoozkooh**	3.65	245	Pn	Pn	02 33 24.8	+1.9
IPRN	**Peran**	3.73	256	Pn	Pn	02 33 25.3	+1.3
TPRV	**Parvadeh(Tabas**	4.21	181	Pn	Pn	02 33 31.0	+0.5
AFRZ	**Afriz**	4.22	154	Pn	Pn	02 33 31.5	+0.8
MZPU	**Pul - Mazandar**	4.29	261	Pn	Pn	02 33 33.2	+1.5
SHRT	**Shahrakht**	4.58	141	Pn	Pn	02 33 36.1	+0.5
ITEG	**Tejag**	4.62	159	Pn	Pn	02 33 37.3	+1.0
IMON	**Monand**	4.67	149	Pn	Pn	02 33 38.5	+1.5
KLST	**Kelardasht - M**	4.67	263	Pn	Pn	02 33 37.8	+0.8
IVRN	**Varamin**	4.69	243	Pn	Pn	02 33 38.2	+1.1
ISFB	**Sefidab**	4.71	233	Pn	Pn	02 33 38.0	+0.6
ANAR	**Anarak**	4.77	213	Pn	Pn	02 33 38.7	+0.4
QALM	**Alamut, Qazvin**	5.01	263	Pn	Pn	02 33 43.3	+1.6
KRSH	**Karshahi**	5.02	231	Pn	Pn	02 33 42.8	+1.0
IDAH	**Dahanechah**	5.15	150	Pn	Pn	02 33 44.0	+0.4
ICHK	**Chekchek**	5.37	202	Pn	Pn	02 33 46.9	+0.3
JIR1	**Jirandeh**	5.64	267	Pn	Pn	02 33 50.3	0.0
IZEF	**Zefreh**	5.69	222	Pn	Pn	02 33 51.7	+0.7
IKLH	**Kolahrood**	5.80	229	Pn	Pn	02 33 53.3	+0.7
IRAZ	**Razeghan**	5.86	254	Pn	Pn	02 33 54.5	+1.3
ZRDN	**Zarand Kerman**	6.27	182	Pn	Pn	02 33 59.9	+1.0
IRAM	**Ramesheh**	6.54	215	Pn	Pn	02 34 03.2	+0.6
KHGB	**Koh Gabri**	6.86	182	Pn	Pn	02 34 08.4	+1.4
ISRB	**Sarab**	7.29	277	Pn	Pn	02 34 13.4	+0.5
IHRS	**Heris**	7.81	281	Pn	Pn	02 34 21.4	+1.2
AMIS	**Naft Sefid**	8.34	230	Pn	Pn	02 34 29.3	+2.1
ITBZ	**Tabriz**	8.51	280	Pn	Pn	02 34 30.2	+0.6
ISHB	**Shabestar**	8.93	280	Pn	Pn	02 34 36.2	+0.8
GNI	**Garni**	9.87	291	Pn	Pn	02 34 50.7	+2.4
	0.4nm,0.3s,baz=176,slow=7.5,SNR=2.4						
	2.7nm,0.7s						
AB31	**Akbulak array**	12.21	10	⇑Pn	Pn	02 35 14.8	-5.4
	1.3nm,0.8s,baz=193,slow=14,SNR=8.7						
AB31				⇓Sn	Sn	02 37 34.2	-2.0
	1.0nm,0.7s,baz=195,slow=24,SNR=4.7						
KBZ	**Khabaz**	12.41	306	Pn	Pn	02 35 22.6	-0.2
	0.3nm,0.3s,baz=160,slow=12,SNR=2.4						
	0.7nm,0.4s						
AKTO	**Aktyubinsk**	13.21	3	Pn	Pn	02 35 35.0	+1.3
	0.2nm,0.3s,baz=202,slow=7.7,SNR=4.8						
AKTO				Sn	Sn	02 37 54.2	-6.4
	0.1nm,0.3s,baz=254,slow=16,SNR=1.6						
	0.8nm,0.4s						
AKTO	**Aktyubinsk**	13.21	3	⇑Pn	Pn	02 35 28.3	-5.4
	1.4nm,0.9s						
AKTO				⇓Sn	Sn	02 37 56.8	-3.8
	1.5nm,0.9s						
BVAR	**Borovoye Array**	18.40	27	P	P	02 36 42.2	+1.0
	0.1nm,0.3s,baz=205,slow=10,SNR=5.3						
	1.2nm,0.4s						
MKAR	**Makanchi Array**	21.11	55	P	P	02 37 11.6	+0.7
	0.7nm,0.6s,baz=243,slow=10.0,SNR=9.7						
	0.7nm,0.6s						
AKASG	**Malin Array Be**	23.81	313	P	P	02 37 41.5	+2.4
	0.6nm,0.4s,baz=108,slow=7.9,SNR=6.0						
	0.6nm,0.4s						
MLR	**Muntele Rosu**	24.47	299	P	P	02 37 45.2	-0.2
	1.3nm,0.9s,baz=86,slow=17,SNR=2.0						
	1.3nm,0.9s						

*IDC **23** 02:45:26.5±1.1, 31°.24N×141°.02E, h0km, mb3.7/6, mbtmp3.7/8, ML3.4/2, MS2.7/1, Error ellipse: s-maj=42.8km s-min=16.3km az=75.0*
*JMA **23** 02:45:27.1±0.3, 32°N±1°×14°3E±°, h43km, MV3.9/8, FAR E OFF IZU ISLANDS*

ISC 23 02:45:27.3±2.0, 31°.6N±0°.1×142°.3E±0°.4, h35km, n11, σ1ˢ00/12, mb3.7/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	3.22	341	P	Pn	02 46 14.0	-0.9
JCJ	**Chichijima**	4.50	181	Pn	Pn	02 46 33.0	-0.1
	7.1nm,0.3s,baz=288,slow=22,SNR=1.5						
JCJ				Sn	Sn	02 47 22.4	-1.8
	10.0nm,0.3s,baz=302,slow=23,SNR=2.0						
	32nm,0.3s						
JRY	**Ryogami san**	5.21	328	P	Pn	02 46 43.1	+0.4
JRY				S	Sn	02 47 41.2	-0.4
MJAR	**Matsushiro Arr**	5.96	327	Pn	Pn	02 46 52.5	-0.6
	0.3nm,0.3s,baz=155,slow=12,SNR=8.2						
MJAR				Sn	Sn	02 47 59.9	-0.2
	0.1nm,0.3s,baz=142,slow=25,SNR=1.7						
	2.4nm,0.3s						
KSRS	**Korea Array**	13.18	300	LR	LR	02 53 26.3	
	comp=Z,31nm,18.7s,baz=145,slow=38						
SONM	**Songino Array**	31.65	311	P	P	02 51 48.7	+1.4
	0.3nm,0.5s,baz=118,slow=12,SNR=3.0						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	46.20	316	P	P	02 53 48.9	+0.3
	0.6nm,0.4s,baz=101,slow=7.5,SNR=2.5						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	47.76	307	P	P	02 53 59.5	-1.4
	0.3nm,0.6s,baz=89,slow=9.1,SNR=6.8						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	51.82	190	P	P	02 54 32.4	+0.4
	2.3nm,0.6s,baz=7.2,slow=7.9,SNR=32						
	2.3nm,0.6s						
ILAR	**Eielson Array**	53.76	30	P	P	02 54 56.5	+11
	0.4nm,0.8s,baz=263,slow=7.2,SNR=4.3						
	0.4nm,0.8s						
ASAR	**Alice Springs**	55.55	189	P	P	02 54 59.6	+0.4
	1.0nm,0.6s,baz=18,slow=12,SNR=18						
	1.0nm,0.6s						

IDC 23 03:40:34.1±617.0, 49°.82N×37°.45E, h0km, Error ellipse: s-maj=253.7km s-min=134.1km az=12.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	6.92	359	I	I	04 19 34.2	
	0.1nm,0.6s,baz=177,slow=331,SNR=2.9						
I31KZ	**AKTYUBINSK INF**	13.22	80	I	I	05 00 30.5	
	baz=273,slow=318,SNR=2.3						
I46RU	**ZALESOVO INFRA**	29.09	63	I	I	06 42 40.0	
	baz=283,slow=316,SNR=1.2						

HEL 23 04:03:45.6±0.3, 67°.79N×20°.13E, h0km, ML1.0, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANU	**Lannavaara**	0.75	69	PG	Pg	04 03 58.8	-1.2
LANU				SG	Sg	04 04 08.7	-1.0
KIF	**Kilpisjarvi**	1.25	11	PG	Pg	04 04 08.6	-0.9
KIF				MSG		04 04 24.5	
	comp=Z,1.3nm,0.2s						
KIF				SG	Sg	04 04 25.1	-0.5
PAJU	**Pajala**	1.39	122	PG	Pg	04 04 10.5	-1.6
	baz=307						
PAJU				SG	Sg	04 04 29.0	-1.0

HEF	**Hetta**	**1.46**	**63**	PG	Pn	04 04 11.5	-1.7
HEF				MSG		04 04 29.7	
	comp=Z,0.6nm,0.2s						
HEF				SG	Sg	04 04 31.4	-1.1
ERTU	**Ertsjaerv**	**1.48**	**146**	SN	Sn	04 04 33.5	+0.1
KLF	**Kolari**	**1.58**	**109**	PG	Pn	04 04 13.9	-0.8
KLF				MSG		04 04 32.8	
	comp=Z,1.2nm,0.2s						
KLF				SN	Sn	04 04 35.2	-0.6
KTK1	**Kautokeino**	**1.68**	**42**	PG	Pn	04 04 16.0	-0.3
KTK1				SN	Sb	04 04 39.1	0.0
KALU	**Kalix**	**2.32**	**145**	SG	Sb	04 04 58.4	+1.0
TOF	**Tornio**	**2.38**	**134**	PG	Pb	04 04 27.6	-1.7
TOF				MSG		04 04 56.1	
	comp=Z,0.4nm,0.2s						
TOF				SG	Sb	04 04 58.6	-0.5
SGF	**Sodankyl**	**2.47**	**95**	SG	Sb	04 05 01.5	-0.3
RNF	**Rovaniemi**	**2.58**	**115**	PB	Pn	04 04 30.2	+1.7
RNF				SG	Sb	04 05 04.1	-0.8
ARA0	**ARCESS Array S**	**2.63**	**46**	PN	Pn	04 04 29.5	+0.2
	baz=228						
ARA0				SB	Sn	04 05 04.1	+2.2

IDC 23 04:10:06.8±1.3, 1°.23N×127°.02E, h0^{km}, mb3.6/4, mbtmp3.7/5, ML3.7/1, MS2.8/1, Error ellipse: s-maj=58.3km s-min=21.0km az=70.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**9.54**	**229**	Pn	Pn	04 12 26.4	+0.7
	0.7nm,0.3s,baz=58,slow=9.5,SNR=1.9						
	2.9nm,0.4s						
WRA	**Warramunga Arr**	**22.23**	**162**	P	P	04 15 03.9	-1.4
	0.5nm,0.5s,baz=338,slow=11,SNR=12						
	0.5nm,0.5s						
JOW	**Kunigami**	**25.49**	**3**	LR	LR	04 26 10.5	
	comp=Z,20nm,21.4s,baz=91,slow=38						
ASAR	**Alice Springs**	**25.63**	**165**	P	P	04 15 39.3	+1.0
	0.5nm,0.3s,baz=345,slow=11,SNR=8.7						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**59.77**	**326**	P	P	04 20 13.9	+0.1
	0.3nm,0.4s,baz=127,slow=7.9,SNR=4.1						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.99**	**328**	P	P	04 20 41.9	-0.2
	1.0nm,0.5s,baz=129,slow=5.9,SNR=13						
	1.0nm,0.5s						

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*IDC **23** 04:13:24.1±3.0, 55°.90N×86°.30E, h0^{km}, mbtmp3.0/3, ML2.4/3, Error ellipse: s-maj=24.8km s-min=23.7km az=86.0*

NNC 23 04:13:22.5±2.6, 55°.92N×86°.40E, h0^{km}, mb3.5, mpv3.1, 6C-2D, Error ellipse: s-maj=25.6km s-min=17.8km az=115.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**2.18**	**205**	I	I	04 26 05.5	
	baz=22,slow=332,SNR=16						
ZAA0	**Zalesovo Array**	**2.18**	**205**	⇑Pg	Pb	04 14 02.0	-0.8
	2.0nm,0.6s						
ZAA0				⇑Lg	Lg	04 14 32.8	
	1.5nm,0.4s						
ZALV	**Zalesovo Beam**	**2.18**	**205**	Pn	Pb	04 14 01.4	-1.3
	2.7nm,0.3s,baz=22,slow=16,SNR=67						
ZALV				Lg	Lg	04 14 32.5	
	5.4nm,0.3s,baz=27,slow=26,SNR=21						
	12nm,0.4s						
KURK	**Kurchatov**	**6.99**	**225**	⇑Pn	Pn	04 15 06.4	+0.4
	1.8nm,0.7s						
KURK				⇑Sn	Sn	04 16 27.8	+1.6
	0.7nm,0.5s						
KURK				⇑Lg	Lg	04 17 02.3	
	2.5nm,0.8s						
KURBB	**Kurchatov Arra**	**7.10**	**225**	Pn	Pn	04 15 07.8	+0.3
	0.1nm,0.3s,baz=42,slow=14,SNR=16						
KURBB				Sn	Sn	04 16 27.8	-1.1
	baz=41,slow=3.9,SNR=1.0						
KURBB				Lg	Lg	04 17 07.3	
	baz=40,slow=32,SNR=1.8						
	0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**7.10**	**225**	⇓Pn	Pn	04 15 08.0	+0.5
	1.9nm,0.7s,baz=41,slow=14						
KURBB				⇑Sn	Sn	04 16 28.9	+0.1
	1.7nm,0.5s						
KURBB				⇓Lg	Lg	04 17 06.8	
	3.1nm,0.6s,baz=40,slow=31						
MKAR	**Makanchi Array**	**9.49**	**197**	Pn	Pn	04 15 41.9	+1.5
	0.1nm,0.3s,baz=20,slow=14,SNR=5.2						
MKAR				Sn	Sn	04 17 25.5	-2.2
	0.1nm,0.3s,baz=19,slow=29,SNR=1.9						
MKAR				Lg	Lg	04 18 25.1	
	baz=7.9,slow=21,SNR=1.7						
	0.2nm,0.5s						

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*NNC **23** 04:44:10.2±0.9, 38°.56N×55°.36E, h0^{km}, mb3.7, Error ellipse: s-maj=10.8km s-min=3.9km az=54.0*
*TEH **23** 04:44:11.2, 38°.43N×55°.44E, h17^{km}±33^{km}, ML3.3*
*AZER **23** 04:44:15.4±3.1, 38°.05N×55°.07E, h10^{km}, Error ellipse: s-maj=19.9km s-min=11.6km az=102.0*

ISC 23 04:44:11.5±0.8, 38°.41N±0°.05×55°.45E±0°.05, h10^{km}, n47, σ1^s.91/58, 6C, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRVT	**Maraveh tapeh**	**0.90**	**146**	Pg	**Pg**	**04 44 27.3**	**-1.6**
IMND	**Minoodasht**	**1.15**	**182**	Pg	**Pb**	**04 44 32.9**	**-0.5**
IMND				Sg	**Sb**	**04 44 49.3**	**+0.9**
GYA0B	**ALIBECK ARRAY**	**2.16**	**102**	⇑Pn	**Pn**	**04 44 48.9**	**+1.4**
GYA0B				⇑Lg	Lg	04 45 22.3	
IGLO	**Ghaloghah**	**2.30**	**215**	Pn	**Pn**	**04 44 51.5**	**+1.9**
SBZV	**Sabzevar**	**2.65**	**139**	Pn	**Pn**	**04 44 56.4**	**+1.9**
IEMG	**Emamgholi**	**2.72**	**110**	Pn	**Pn**	**04 44 58.0**	**+2.5**
ISHM	**Shahmirzad**	**3.12**	**214**	Pn	**Pn**	**04 45 03.3**	**+2.4**
IANJ	**Anjilo**	**3.18**	**203**	Pn	**Pn**	**04 45 03.8**	**+2.0**
IAKL	**Akhelmad**	**3.19**	**123**	Pn	**Pn**	**04 45 03.8**	**+1.9**
IPRN	**Peran**	**3.29**	**230**	Pn	**Pn**	**04 45 05.3**	**+2.1**
IPAY	**Payeh**	**3.43**	**124**	Pn	**Pn**	**04 45 07.8**	**+2.6**
IFIR	**Firoozkooh**	**3.50**	**219**	Pn	**Pn**	**04 45 08.6**	**+2.3**
IKRD	**Kardeh**	**3.62**	**116**	Pn	**Pn**	**04 45 09.8**	**+2.0**
ILAS	**Lasjerd**	**3.62**	**214**	Pn	**Pn**	**04 45 10.0**	**+2.2**
MZPU	**Pul - Mazandar**	**3.66**	**239**	Pn	**Pn**	**04 45 09.9**	**+1.6**
KLST	**Kelardasht - M**	**3.97**	**243**	Pn	**Pn**	**04 45 13.9**	**+1.3**
IMYA	**Miami**	**4.24**	**118**	Pn	**Pn**	**04 45 18.0**	**+1.7**
QALM	**Alamut, Qazvin**	**4.30**	**244**	Pn	**Pn**	**04 45 19.0**	**+1.8**
TNSJ	**Nastanj**	**4.53**	**168**	Pn	**Pn**	**04 45 21.9**	**+1.7**
TKDS	**Koohdasht(Taba**	**4.97**	**164**	Pn	**Pn**	**04 45 28.0**	**+1.7**
TBJM	**Torbat-e-JAM**	**5.01**	**127**	Pn	**Pn**	**04 45 28.8**	**+1.8**
KRSH	**Karshahi**	**5.18**	**212**	Pn	**Pn**	**04 45 31.8**	**+2.6**
ASTR	**Astara**	**5.23**	**274**	P	**Pn**	**04 45 29.3**	**-0.4**
ASTR				S	**Sn**	**04 46 28.1**	**-1.9**
ANAR	**Anarak**	**5.39**	**196**	Pn	**Pn**	**04 45 33.1**	**+1.1**
TPRV	**Parvadeh(Tabas**	**5.46**	**169**	Pn	**Pn**	**04 45 34.2**	**+1.2**
GLBA	**Clilabad**	**5.57**	**281**	P	**Pn**	**04 45 35.2**	**+0.8**
GLBA				S	**Sn**	**04 46 36.3**	**-2.2**
LRK	**Lerik**	**5.58**	**275**	P	**Pn**	**04 45 34.4**	**-0.3**
LRK				S	**Sn**	**04 46 36.8**	**-2.1**
ATGJ	**Altiaghaj**	**5.59**	**298**	S	**Sn**	**04 46 42.7**	**+3.6**
YRD	**Yardimli**	**5.66**	**277**	P	**Pn**	**04 45 35.7**	**-0.2**
YRD				S	**Sn**	**04 46 38.4**	**-2.7**
AFRZ	**Afriz**	**5.75**	**149**	Pn	**Pn**	**04 45 38.4**	**+1.4**
PQL	**Pirkuli**	**5.80**	**296**	S	**Sn**	**04 46 46.6**	**+2.2**
QUBA	**Quba, Azerbaij**	**6.11**	**301**	S	**Sn**	**04 46 55.0**	**+3.3**
ITEG	**Tejag**	**6.12**	**153**	Pn	**Pn**	**04 45 43.9**	**+1.7**
SHRT	**Shahrakht**	**6.16**	**139**	Pn	**Pn**	**04 45 44.3**	**+1.7**
ISRB	**Sarab**	**6.16**	**267**	Pn	**Pn**	**04 45 44.2**	**+1.4**
XNQ	**Khinaliq**	**6.27**	**298**	P	**Pn**	**04 45 46.6**	**+2.4**
XNQ				S	**Sn**	**04 46 57.7**	**+1.7**
BLQ	**Beylaqan**	**6.28**	**285**	S	**Sn**	**04 46 56.3**	**+0.4**
QSAR	**Qusar**	**6.33**	**302**	S	**Sn**	**04 47 00.9**	**+3.6**
IHRS	**Heris**	**6.61**	**272**	Pn	**Pn**	**04 45 50.7**	**+1.9**
AGDM	**Agdam**	**6.69**	**287**	P	**Pn**	**04 45 51.3**	**+1.5**
AGDM				S	**Sn**	**04 47 04.6**	**-1.5**
GANJ	**Ganja**	**7.40**	**290**	P	**Pn**	**04 46 00.3**	**+0.8**
GANJ				S	**Sn**	**04 47 20.8**	**-2.7**
SBZ	**Shahbuz**	**7.78**	**280**	P	**Pn**	**04 46 06.9**	**+2.1**
SBZ				S	**Sn**	**04 47 33.0**	**-0.1**
NAX	**Nakhchivan**	**7.81**	**279**	P	**Pn**	**04 46 07.6**	**+2.3**
GDB	**GEDABAY**	**7.84**	**290**	P	**Pn**	**04 46 07.1**	**+1.4**
GDB				S	**Sn**	**04 47 34.3**	**-0.2**
QZX	**Qazax, Azerbai**	**8.20**	**292**	S	**Sn**	**04 47 43.6**	**+0.3**
AB31	**Akbulak array**	**11.32**	**15**	⇑Pn	**Pn**	**04 46 51.6**	**-1.5**
	0.5nm,0.5s,baz=198,slow=13,SNR=13						
AB31				⇑Sn	**Sn**	**04 48 57.7**	**-1.8**
	1.0nm,0.6s,baz=196,slow=23,SNR=15						
AKTO	**Aktyubinsk**	**12.16**	**8**	⇑Pn	Pn	04 47 02.7	-2.0
	2.0nm,0.8s						
AKTO				⇑Sn	**Sn**	**04 49 19.3**	**-1.0**
	1.1nm,0.7s						

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*IDC **23** 04:46:45.0±2.3, 37°.18N×35°.90E, h0^{km}, mb4.0/2, mbtmp3.8/3, ML2.7/1, MS2.4/3, Error ellipse: s-maj=45.9km s-min=21.0km az=70.0*
*DDA **23** 04:46:47.9±0.0, 37°.28N×36°.00E, h7^{km}±6^{km}, ML3.1*
*ISK **23** 04:46:47.6, 37°.31N×36°.03E, h15^{km}, ML3.1/15*

ISC 23 04:46:47.4±1.2, 37°.29N±0°.03×36°.01E±0°.02, h11^{km}±9^{km}, n33, σ0^s.94/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.24**	**322**	Pg	**Pg**	**04 46 53.7**	**+1.2**
CEYT	**Ceyhan**	**0.35**	**218**	Pg	**Pb**	**04 46 55.8**	**+0.1**
CEYT				Sg	**Sb**	**04 47 01.5**	**+0.3**
ANDN	**Andirin**	**0.39**	**42**	P	**Pb**	**04 46 56.6**	**+0.1**
ANDN				S	**Sb**	**04 47 03.2**	**+0.6**
ANDN				*i* AML	AML	04 47 04.0	
	comp=E,2µm,0.6s						
ANDN				*i* AML	AML	04 47 08.0	
	comp=N,2µm,0.6s						
AKO	**Adana**	**0.48**	**291**	P	**Pb**	**04 46 57.9**	**-0.1**
AKO				*i* AML	AML	04 47 07.0	
	comp=N,556nm,0.4s						
AKO				*i* AML	AML	04 47 09.0	
	comp=E,516nm,0.6s						
KAMA	**Osmaniye**	**0.53**	**101**	P	**Pb**	**04 46 58.4**	**-0.5**
KAMA				S	**Sb**	**04 47 06.1**	**-0.4**
KAMA				*i* AML	AML	04 47 09.0	
	comp=N,568nm,0.4s						
KAMA				*i* AML	AML	04 47 09.0	
	comp=E,1µm,0.5s						
SAIM	**ADANA**	**0.69**	**4**	P	**Pg**	**04 47 00.2**	**-0.6**
SAIM				*i* AML	AML	04 47 15.0	
	comp=E,782nm,0.2s						
SAIM				*i* AML	AML	04 47 16.0	
	comp=N,780nm,0.2s						
KMRS	**Kahramanmaras**	**0.74**	**73**	Pg	**Pb**	**04 47 02.1**	**-0.2**
KMRS				Sg	**Sb**	**04 47 12.5**	**0.0**
KARA	**Karaisali**	**0.77**	**268**	Pg	**Pg**	**04 47 02.4**	**+0.2**
KAHM	**Kahramanmaras,**	**0.81**	**73**	P	**Pb**	**04 47 03.5**	**0.0**
KAHM				S	**Sb**	**04 47 14.9**	**+0.4**
KAHM				*i* AML	AML	04 47 16.0	
	comp=E,706nm,1.0s						
KAHM				*i* AML	AML	04 47 17.0	
	comp=N,1µm,0.8s						
YAHY	**KAYSERI_Yahyal**	**0.96**	**328**	P	**Pg**	**04 47 05.7**	**-0.2**
YAHY				S	**Sb**	**04 47 18.6**	**-0.2**
YAHY				*i* AML	AML	04 47 22.0	
	comp=N,245nm,0.5s						
YAHY				*i* AML	AML	04 47 22.0	
	comp=E,246nm,0.5s						
GAZ	**Gaziantep**	**0.96**	**97**	Pg	**Pb**	**04 47 06.8**	**+0.6**
GAZ				Sg	**Sb**	**04 47 19.9**	**+0.9**
KUZU	**Kuzuini**	**0.99**	**121**	P	**Pn**	**04 47 07.5**	**+0.2**
KUZU				*i* AML	AML	04 47 22.0	
	comp=N,3µm,0.6s						
KUZU				S	**Sn**	**04 47 22.2**	**+0.7**
KUZU				*i* AML	AML	04 47 25.0	
	comp=E,2µm,0.8s						
DED	**Mersin**	**1.02**	**252**	P	**Pg**	**04 47 06.6**	**-0.5**
DED				S	**Sg**	**04 47 19.4**	**-1.0**
DED				*i* AML	AML	04 47 22.0	
	comp=E,304nm,0.7s						
DED				*i* AML	AML	04 47 22.0	
	comp=N,158nm,0.9s						
RHAN	**Hatay/Reyhanl**	**1.13**	**155**	P	**Pg**	**04 47 08.2**	**-0.9**
RHAN				S	**Sb**	**04 47 24.7**	**+1.0**
RHAN				*i* AML	AML	04 47 26.0	
	comp=E,1µm,0.6s						
RHAN				*i* AML	AML	04 47 31.0	
	comp=N,548nm,0.4s						
SARI	**SarD1z-Kayseri**	**1.16**	**16**	Pn	**Pb**	**04 47 09.7**	**0.0**
SARI				Sn	**Sn**	**04 47 25.6**	**-0.2**
GZT	**Gaziantep**	**1.24**	**86**	P	**Pn**	**04 47 11.1**	**+0.3**
GZT				S	**Sb**	**04 47 27.6**	**+0.6**
GZT				*i* AML	AML	04 47 30.0	
	comp=N,569nm,0.8s						
GZT				*i* AML	AML	04 47 37.0	
	comp=E,760nm,0.7s						
NZIP	**Nizip/Gaziante**	**1.35**	**100**	P	**Pg**	**04 47 13.3**	**0.0**
NZIP				S	**Sn**	**04 47 32.5**	**+2.2**
NZIP				*i* AML	AML	04 47 33.0	
	comp=N,556nm,0.6s						
NZIP				*i* AML	AML	04 47 33.0	
	comp=E,662nm,0.9s						
AKCA	**Adyaman/G¶l**	**1.42**	**69**	P	**Pg**	**04 47 14.2**	**-0.6**
AKCA				S	**Sn**	**04 47 35.6**	**+3.5**
AKCA				*i* AML	AML	04 47 37.0	
	comp=E,2µm,0.7s						
AKCA				*i* AML	AML	04 47 39.0	
	comp=N,1µm,0.8s						
BNN	**Bunyan**	**1.57**	**355**	Pn	**Pn**	**04 47 15.7**	**+0.3**
BNN				Sn	**Sn**	**04 47 35.5**	**-0.2**
KIZK	**Mersin**	**1.70**	**242**	Pn	**Pn**	**04 47 17.8**	**+0.7**
DARE	**Darende-Malaty**	**1.73**	**42**	Pn	**Pn**	**04 47 17.1**	**-0.5**
GULA	**Gulagac**	**1.76**	**307**	Pn	**Pn**	**04 47 18.6**	**+0.6**
YESY	**Yesilyurt**	**1.87**	**286**	Pn	**Pn**	**04 47 19.9**	**+0.4**
IKL	**Isikli**	**2.14**	**241**	Pn	**Pn**	**04 47 24.1**	**+1.0**
SULT	**Sultanhani-AKS**	**2.18**	**295**	Pn	**Pn**	**04 47 24.6**	**+0.9**
KRMN	**Karaman**	**2.20**	**268**	Pn	**Pn**	**04 47 24.6**	**+0.6**
EREN	**Erenkoy**	**2.30**	**221**	Pn	**Pn**	**04 47 26.3**	**+1.0**
BERE	**Bereket-Mersin**	**2.43**	**248**	Pn	**Pn**	**04 47 28.2**	**+1.0**
BRTR	**Keskin Array B**	**3.06**	**323**	Pn	**Pn**	**04 47 37.4**	**+1.4**
	0.9nm,0.3s,baz=149,slow=12,SNR=47						
BRTR				Sn	**Sn**	**04 48 13.2**	**+0.5**
	0.8nm,0.3s,baz=141,slow=24,SNR=5.6						
BRTR				Lg	Lg	04 48 24.5	
	0.3nm,0.3s,baz=150,slow=20,SNR=5.4						
BRTR				LR	LR	04 49 04.0	
	comp=Z,84nm,19.4s,baz=180,slow=45						
	5.5nm,0.6s						
MMAI	**Mount Meron Ar**	**4.29**	**187**	LR	LR	04 49 51.2	
	comp=Z,34nm,19.7s,baz=107,slow=45						
IDI	**Anoyia**	**9.20**	**261**	LR	LR	04 53 19.8	
	comp=Z,23nm,20.9s,baz=290,slow=43						
TORD	**Torodi Ar. Bea**	**38.92**	**241**	P	**P**	**04 54 11.2**	**-2.2**
	5.5nm,0.3s,baz=52,slow=9.5,SNR=2.8						
	5.5nm,0.3s						
YKA	**Yellowknife Ar**	**77.78**	**347**	P	**P**	**04 58 44.2**	**0.0**
	0.2nm,0.7s,baz=29,slow=5.4,SNR=2.5						
	0.2nm,0.7s						

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*ISN **23** 04:53:09.2±0.3, 32°.74N×47°.44E, h10^{km}, ML2.1*
*TEH **23** 04:53:10.6, 32°.73N×47°.63E, h10^{km}±156^{km}, ML2.5*

ISC 23 04:53:11.7±1.9, 32°.7N±0°.1×47°.63E±0°.06, h10^{km}, n9, σ0^s.82/10, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKFM	**Kafar-mosalman**	**0.81**	**13**	Pg	**Pg**	**04 53 27.2**	**-0.2**
IDOB	**Doab**	**1.15**	**23**	Pg	**Pb**	**04 53 33.0**	**-0.8**
IKOM	**Komasi**	**1.44**	**356**	Pg	**Pn**	**04 53 38.5**	**+0.4**
IBDR	**Badra**	**1.48**	**285**	*e*Pg	**Pn**	**04 53 38.5**	**+0.1**
	baz=106						
IBDR				*e*Sg	**Sg**	**04 53 59.0**	**-0.3**
IBDR				AML	AML	04 54 05.9	
	comp=N,30nm,0.5s						
IBDR				AML	AML	04 54 06.3	
	comp=E,38nm,0.5s						
KCHF	**Cheshme Sefid,**	**1.62**	**342**	Pg	**Pn**	**04 53 40.6**	**+0.1**
HSAM	**Samen**	**1.69**	**29**	Pg	**Pb**	**04 53 42.7**	**-0.3**
IGHG	**Ghaleghazi**	**1.82**	**331**	Pn	**Pn**	**04 53 44.4**	**+1.0**
IDHR	**Dehrash**	**2.22**	**333**	Pn	**Pn**	**04 53 50.3**	**+1.5**
IKLH	**Kolahrood**	**3.37**	**79**	Pn	**Pn**	**04 54 05.3**	**+0.6**

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*SJA **23** 04:56:23.9±0.6, 24°.30S×67°.28W, h190^{km}±5^{km}, ML4.3, MW4.0, Hypocentre not reviewed by the ISC*
*NEIC **23** 04:56:24.6±2.1, 24°.34S±0°.07×67°.26W±0°.05, h172^{km}±13^{km}, mb4.3/7, ML4.3(GUC), Error ellipse: s-maj=10.3km s-min=6.8km az=168.0*
*IDC **23** 04:56:24.2±1.1, 24°.31S×67°.11W, h154^{km}±10^{km}, mb3.3/4, mbtmp3.9/11, Error ellipse: s-maj=19.4km s-min=13.8km az=44.0*
*GUC **23** 04:56:25.4±0.5, 24°.26S×67°.53W, h208^{km}±7^{km}, ML4.2*
*VAO **23** 04:56:28.4±0.3, 24°.07S×67°.35W, h213^{km}, mb4.1*

ISC 23 04:56:24.2±0.5, 24°.29S±0°.04×67°.22W±0°.05, h169^{km}, n112, σ1^s.27/126, mb3.9/7, 8C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.62**	**106**	*e*P		04 56 58.0	
HJA	**Humahuaca**	**1.98**	**57**	*e*P		04 57 03.5	
HJA				*e*S		04 57 32.5	
LVC	**Limon Verde**	**2.28**	**317**	P	**Pn**	**04 57 05.4**	**+1.3**
	61nm,0.3s,baz=153,slow=5.3,SNR=221						
LVC				S	**Sn**	**04 57 35.1**	**+0.2**
	178nm,0.3s,baz=58,slow=19,SNR=50						
LVC	**Limon Verde**	**2.28**	**317**	Pn	**Pn**	**04 57 05.7**	**+1.6**
LVC				Sn	**Sn**	**04 57 35.9**	**+0.9**
LVC	**Limon Verde**	**2.28**	**317**	⇑*e*P	**Pn**	**04 57 05.6**	**+1.6**
LVC				*e*S	**Sn**	**04 57 35.8**	**+0.9**
LVC	**Limon Verde**	**2.28**	**317**	*e*P		04 57 05.3	
LVC				*e*S		04 57 36.1	
PB15	**IPOC Station P**	**2.33**	**297**		**Pn**	**04 57 05.4**	**+1.0**
PB15	**IPOC Station P**	**2.33**	**297**	⇑*i*P	**Pn**	**04 57 05.9**	**+1.4**
PB15				*e*S	**Sn**	**04 57 35.9**	**+0.3**
PB15	**IPOC Station P**	**2.33**	**297**	*e*P		04 57 05.8	
PB15				*e*S		04 57 36.4	
PB15				IAML		04 57 37.1	
	comp=Z,3µm,0.2s						
GO02	**Mina Guanaco**	**2.33**	**247**	Pn	**Pn**	**04 57 05.7**	**+1.1**
GO02	**Mina Guanaco**	**2.33**	**247**	⇑*i*P	**Pn**	**04 57 05.6**	**+1.1**
GO02				*e*S	**Sn**	**04 57 36.6**	**+0.8**
GO02				IAML		04 57 37.7	
	comp=N,1µm,0.1s						
GO02	**Mina Guanaco**	**2.33**	**247**	*e*P		04 57 05.7	
GO02				*e*S		04 57 37.0	
GO02				IAML		04 57 37.5	
	comp=Z,815nm,0.4s						
PB06	**IPOC Station P**	**2.67**	**306**	*e*P		04 57 09.6	
PB06				*e*S		04 57 43.2	
PB06				IAML		04 57 47.6	
	comp=Z,569nm,0.2s						
PB14	**IPOC Station P**	**2.92**	**263**	Pn	**Pn**	**04 57 11.9**	**+0.2**
PB14	**IPOC Station P**	**2.92**	**263**	*e*P		04 57 12.5	
PB14				*e*S		04 57 48.1	
PB09	**IPOC Station P**	**3.10**	**323**		**Pn**	**04 57 15.6**	**+1.8**
PB09	**IPOC Station P**	**3.10**	**323**	*e*P	**Pn**	**04 57 15.2**	**+1.4**
PB09				*e*S	**Sn**	**04 57 52.5**	**+0.2**
PB09				IAML		04 57 55.2	
	comp=E,313nm,0.2s						
PB09	**IPOC Station P**	**3.10**	**323**	*e*P		04 57 15.4	
PB09				*e*S		04 57 53.0	
PB09				IAML		04 57 53.6	
	comp=Z,276nm,0.2s						
PB10	**IPOC Station P**	**3.15**	**283**	Pn	**Pn**	**04 57 15.1**	**+1.0**
PB10	**IPOC Station P**	**3.15**	**283**	*e*P	**Pn**	**04 57 14.1**	**-0.1**
PB10				*e*S	**Sn**	**04 57 51.0**	**-2.0**
PB10				IAML		04 57 55.8	
	comp=E,243nm,0.3s						
PB10	**IPOC Station P**	**3.15**	**283**	*e*P		04 57 15.0	
PB10				*e*S		04 57 52.3	
PB03	**IPOC Station P**	**3.22**	**313**		**Pn**	**04 57 16.1**	**+0.8**
PB03	**IPOC Station P**	**3.22**	**313**	⇑*i*P	**Pn**	**04 57 16.1**	**+0.8**
PB03				*e*S	**Sn**	**04 57 53.1**	**-1.9**
PB03	**IPOC Station P**	**3.22**	**313**	*e*P		04 57 16.1	
PB03				*e*S		04 57 53.9	
PB03				IAML		04 57 54.7	
	comp=Z,598nm,0.2s						
PB04	**IPOC Station P**	**3.32**	**305**	Pn	**Pn**	**04 57 16.8**	**+0.2**
PB04	**IPOC Station P**	**3.32**	**305**	*e*P	**Pn**	**04 57 16.7**	**+0.2**
PB04				*e*S	**Sn**	**04 57 55.8**	**-1.5**
PB04	**IPOC Station P**	**3.32**	**305**	*e*P		04 57 17.2	
PB04				*e*S		04 57 55.8	
PB04				IAML		04 57 59.5	
	comp=Z,415nm,0.3s						
PB07	**IPOC Station P**	**3.54**	**316**	Pn	**Pn**	**04 57 19.8**	**+0.5**
PB07	**IPOC Station P**	**3.54**	**316**	⇑*i*P	**Pn**	**04 57 19.9**	**+0.6**
PB07				*e*S	**Sn**	**04 58 00.3**	**-1.9**
PB07	**IPOC Station P**	**3.54**	**316**	*e*P		04 57 19.9	
PB07				*e*S		04 58 00.6	
PB07				IAML		04 58 01.5	
	comp=Z,469nm,0.3s						
AC01	**Pan de Azucar**	**3.58**	**238**		**Pn**	**04 57 19.4**	**-0.2**
AC01	**Pan de Azucar**	**3.58**	**238**	⇑*e*P	**Pn**	**04 57 19.2**	**-0.4**
AC01				*e*S	**Sn**	**04 58 00.3**	**-2.4**
AC01	**Pan de Azucar**	**3.58**	**238**	*e*P		04 57 19.2	
AC01				*e*S		04 58 01.5	
PB01	**IPOC Station P**	**3.85**	**327**		**Pn**	**04 57 23.4**	**+0.3**
PB01	**IPOC Station P**	**3.85**	**327**	⇑*e*P	**Pn**	**04 57 23.8**	**+0.7**
PB01				*e*S	**Sn**	**04 58 07.2**	**-1.9**
PB02	**IPOC Station P**	**3.85**	**320**		**Pn**	**04 57 23.4**	**+0.2**
PB02	**IPOC Station P**	**3.85**	**320**	⇑*e*P	**Pn**	**04 57 23.4**	**+0.2**
PB02				*e*S	**Sn**	**04 58 06.4**	**-2.7**
AC06	**Mina Casimiro**	**4.16**	**222**		**Pn**	**04 57 26.6**	**-0.4**
GO03	**Copiap**	**4.27**	**219**	Pn	**Pn**	**04 57 28.1**	**-0.4**
GO03	**Copiap**	**4.27**	**219**	*e*P		04 57 28.1	
GO03				*e*S		04 58 17.3	
CYA	**Choya**	**4.33**	**163**	*e*P		04 57 30.4	
PB08	**IPOC Station P**	**4.50**	**336**		**Pn**	**04 57 32.9**	**+1.1**
TA01	**Diego Aracena**	**4.61**	**323**	Pn	**Pn**	**04 57 32.4**	**-0.5**
TA02	**Huaiquique**	**4.82**	**325**		**Pn**	**04 57 36.2**	**+0.6**
GO01	**Chusmiza**	**4.95**	**338**	Pn	**Pn**	**04 57 38.3**	**+0.5**
PB11	**IPOC Station P**	**5.04**	**333**		**Pn**	**04 57 37.9**	**-0.7**
AC04	**Llanos de Chal**	**5.21**	**221**	Pn	**Pn**	**04 57 39.0**	**-1.8**
AC05	**El Transito**	**5.29**	**210**	Pn	**Pn**	**04 57 41.0**	**-0.9**
AC05	**El Transito**	**5.29**	**210**	*e*P		04 57 41.3	
AC05				*e*S		04 58 41.4	
MNMC	**Minye Minye**	**5.58**	**336**		**Pn**	**04 57 45.9**	**0.0**
LCO	**Las Campanas**	**5.64**	**213**		**Pn**	**04 57 45.2**	**-1.4**
CO01	**Juntas del Tor**	**6.22**	**204**		**Pn**	**04 57 54.6**	**+0.4**
PB16	**IPOC Station P**	**6.29**	**340**	Pn	**Pn**	**04 57 56.3**	**+0.7**
PB12	**IPOC Station P**	**6.34**	**332**	Pn	**Pn**	**04 57 54.9**	**-0.9**
GO04	**Tololo Observa**	**6.67**	**208**		**Pn**	**04 57 58.3**	**-1.8**
CO03	**El Pedregal**	**7.22**	**204**	Pn	**Pn**	**04 58 05.5**	**-1.7**
CFA	**Coronel Fontan**	**7.35**	**187**	P	**Pn**	**04 58 08.8**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=325,slow=8.7,SNR=28						
CFA				S	**Sn**	**04 59 28.4**	**-3.0**
	comp=Z,4.3nm,0.5s,baz=324,slow=19,SNR=3.5						
CO02	**Combarbal**	**7.66**	**205**	Pn	**Pn**	**04 58 10.8**	**-2.3**
LPAZ	**La Paz**	**8.00**	**354**	P	**Pn**	**04 58 19.0**	**+0.8**
	comp=Z,2.5nm,0.3s,baz=166,slow=9.2,SNR=24						
LPAZ				S	**Sn**	**04 59 46.5**	**-1.6**
	baz=212,slow=13						
LPAZ	**La Paz**	**8.00**	**354**		**Pn**	**04 58 19.2**	**+1.0**
LPAZ	**La Paz**	**8.00**	**354**	*e*P	**Pn**	**04 58 17.8**	**-0.4**
CPUP	**Villa Florida**	**9.18**	**105**	P	**Pn**	**04 58 32.3**	**-0.8**
	comp=Z,3.0nm,0.8s,baz=292,slow=11,SNR=7.4						
CPUP	**Villa Florida**	**9.18**	**105**		**Pn**	**04 58 32.5**	**-0.6**
CPUP	**Villa Florida**	**9.18**	**105**	*e*P	Pn	04 58 38.6	+5.5
MECA	**Mercedes**	**9.50**	**124**	*e*P	Pn	04 58 42.5	+5.2
SIV	**San Ignacio**	**10.07**	**36**	P	**Pn**	**04 58 43.5**	**-1.5**
	comp=Z,4.1nm,0.5s,baz=217,slow=13,SNR=29						
SIV				S	**Sn**	**05 00 33.7**	**-3.2**
	comp=Z,1.5nm,0.9s,baz=277,slow=22,SNR=3.8						
ITQB	**Itaqui**	**10.86**	**122**	*e*P	**P**	**04 59 01.2**	**-1.8**
AQDB	**Aquidauana**	**11.31**	**73**	Pn	**Pn**	**04 59 03.0**	**+1.9**
AQDB	**Aquidauana**	**11.31**	**73**	*e*P	**Pn**	**04 59 03.5**	**+2.4**
PTLB	**Pontes e Lacer**	**11.62**	**42**	Pn	**Pn**	**04 59 04.8**	**-0.3**
PTLB	**Pontes e Lacer**	**11.62**	**42**	*e*P	**Pn**	**04 59 04.6**	**-0.5**
RODS	**Rosario do Sul**	**12.27**	**122**	*e*P	**P**	**04 59 18.6**	**-0.2**
CRSM	**Crissiumal (Br**	**12.28**	**108**	*e*P	**P**	**04 59 17.4**	**-1.5**
FRBT	**Francisco Belt**	**12.94**	**100**	*e*P	**P**	**04 59 26.8**	**+0.5**
VILB	**Vilhena**	**13.08**	**32**	*e*P	**Pn**	**04 59 23.2**	**-0.7**
ALGR	**Alto Alegre (B**	**13.47**	**113**	*e*P	**P**	**04 59 33.5**	**+1.2**
SALV	**Santo Antonio**	**13.66**	**54**	*e*P	**P**	**04 59 33.0**	**-1.4**
CPSB	**Cacapava Do Su**	**13.68**	**119**	*e*P	**P**	**04 59 34.9**	**+0.5**
PTGB	**Pitanga**	**13.81**	**95**	*e*P	**P**	**04 59 37.9**	**+1.9**
ITAB	**Concordia**	**13.91**	**105**	Pn	**Pn**	**04 59 34.5**	**+0.3**
ITAB	**Concordia**	**13.91**	**105**	*e*P	**P**	**04 59 36.1**	**-1.0**
PLTB	**Pedras Altas**	**14.14**	**125**	*e*P	**P**	**04 59 39.7**	**+0.1**
ETMB	**Extrema**	**14.42**	**4**	*e*P	**Pn**	**04 59 38.8**	**-1.9**
TRQA	**Tornquist**	**14.44**	**163**	Pn	**Pn**	**04 59 39.8**	**-0.9**
C2SB	**Chapadao do Su**	**14.46**	**70**	*e*P	**P**	**04 59 43.6**	**+0.4**
PCMB	**Pacaembu**	**14.94**	**83**	*e*P	**P**	**04 59 50.7**	**+2.1**
CNLB	**Canela**	**15.45**	**112**	*e*P	**P**	**04 59 57.5**	**+3.4**
GO06	**Curarrehue**	**15.67**	**192**	Pn	**Pn**	**04 59 54.0**	**-2.0**
GO06				IAmb	IAmb	04 59 59.8	
	comp=Z,4.8nm,0.7s						
SAML	**Samuel**	**15.73**	**15**		**Pn**	**04 59 56.5**	**-0.3**
SAML	**Samuel**	**15.73**	**15**	*e*P	**Pn**	**04 59 56.1**	**-0.7**
PDRB	**Porto dos Gac**	**16.06**	**40**	*e*P	**Pn**	**05 00 00.6**	**-0.3**

FRTB	Fartura	16.19	90	*e*P	Pn	05 00 04.1	+1.7
ITRB	Iturama	16.29	77	*e*P	Pn	05 00 05.6	+2.0
PLCA	Paso Flores	16.64	189	P	Pn	05 00 08.5	+0.8
	comp=Z,2.2nm,0.9s,baz=335,slow=7.3,SNR=6.7						
PLCA	Paso Flores	16.64	189	*e*P	Pn	05 00 09.1	+1.4
ARAG	Araguaiana, MT	16.80	62	*e*P	Pn	05 00 10.0	+0.3
BB19B	Bebedouro	17.55	83	*e*P	Pn	05 00 18.7	0.0
RCLB	Rio Claro- Sao	18.18	88	*e*P	Pn	05 00 26.2	+0.1
VAO	Valinhos	18.60	90	*e*P	P	05 00 29.7	+0.9
IPMB	Ipameri, GO	18.80	74	*e*P	P	05 00 31.5	+0.5
LL02	Futaleuf	19.24	190	P	P	05 00 35.8	+0.3
LL02				IAmb	IAmb	05 00 41.2	
	comp=Z,17nm,0.8s						
SNDB	Serra Nova Dou	19.44	54	*e*P	P	05 00 37.9	0.0
PARB	Paraibuna	19.78	92	*e*P	Pn	05 00 43.9	-1.2
BDFB	Brasilia	19.98	68	P	P	05 00 44.1	+0.3
	comp=Z,21nm,0.8s,baz=242,slow=10,SNR=28						
BDFB	Brasilia	19.98	68	P	P	05 00 43.9	+0.1
BDFB	Brasilia	19.98	68	*e*P	P	05 00 44.2	+0.3
PMNB	Patos De Minas	20.17	78	*e*P	P	05 00 46.4	+0.7
NPGB	Novo Progresso	20.57	35	*e*P	P	05 00 48.3	-1.7
MACA	Manacapuru-AM	21.93	18	P	P	05 01 03.7	-0.6
MACA				IAmb	IAmb	05 01 23.7	
	comp=Z,10.0nm,0.8s						
MACA	Manacapuru-AM	21.93	18	*e*P	P	05 01 03.1	-1.2
ITTB	Itaituba	22.69	31	*e*P	P	05 01 10.3	-1.2
JANB	Januaria	23.41	71	*e*P	P	05 01 18.1	-0.2
SGCB	S£o Gabriel d	24.02	0	*e*P	P	05 01 22.1	-1.6
SDBA	SAO DESIDERIO	24.21	65	*e*P	P	05 01 25.1	-0.4
SMTB	Santa Maria do	24.22	54	*e*P	P	05 01 25.5	0.0
GO08	Villa O'Higgin	24.50	189	P	P	05 01 28.6	+0.9
GO08				IAmb	IAmb	05 01 31.1	
	comp=Z,14nm,1.1s						
SJMB	Sao Joao De Ma	24.83	82	*e*P	P	05 01 31.4	+0.3
PMSA	Palmer Station	40.54	178	*e*P	P	05 03 47.2	+0.8
QSPA	South Pole Qui	65.92	180	P	P	05 06 53.8	+2.0
QSPA				IAmb	IAmb	05 07 00.4	
	comp=Z,5.2nm,1.4s						
PDAR	Pinedale Array	77.29	329	P	P	05 08 02.0	+1.9
	comp=Z,0.3nm,0.7s,baz=108,slow=8.0,SNR=3.9						
	comp=Z,0.3nm,0.7s						
NVAR	Mina Array Bea	78.64	321	P	P	05 08 11.3	+3.7
	comp=Z,0.3nm,0.5s,baz=134,slow=6.4,SNR=2.4						
	comp=Z,0.3nm,0.5s						
BOSA	Boshof	80.78	117	P	P	05 08 19.8	+0.3
	comp=Z,1.8nm,0.7s,baz=216,slow=14,SNR=2.3						
	comp=Z,1.8nm,0.7s						
YKA	Yellowknife Ar	94.32	340	P	P	05 09 24.9	+1.0
	comp=Z,0.2nm,0.6s,baz=134,slow=4.2,SNR=6.8						
	comp=Z,0.2nm,0.6s						
ASAR	Alice Springs	128.11	205	PKP	PKiKP	05 15 11.3	-0.3
	comp=Z,0.2nm,0.3s,baz=149,slow=2.2,SNR=5.0						
WRA	Warramunga Arr	131.28	207	PKP	PKiKP	05 15 18.3	+0.3
	comp=Z,0.3nm,0.5s,baz=164,slow=1.7,SNR=8.4						
GEYT	Alibeck	131.89	60	PKP	PKiKP	05 15 19.4	+0.8
	comp=Z,1.8nm,0.4s,baz=292,slow=9.2,SNR=2.4						
ZALV	Zalesovo Beam	143.74	28	PKP	PKPdf	05 15 39.3	+0.6
	comp=Z,0.3nm,0.4s,baz=291,slow=1.2,SNR=1.8						
MKAR	Makanchi Array	146.87	40	PKPbc	PKPab	05 15 48.0	-0.2
	comp=Z,0.5nm,0.6s,baz=289,slow=3.9,SNR=5.4						

WEL 23 05:25:15.8,42°S±8°×17°4E±°,h10^{km}±6^{km},M2.7/24, mB6.4/1,ML2.9/21,MLv2.7/24,Mw(mB)6.1/1,Error ellipse: s-maj=0.0km s-min=0.0km az=137.5,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.11	253	P	Pg	05 25 19.2	+0.6
BSWZ	Blackbirch Sta	0.36	270	P	Pg	05 25 23.2	+0.3
TUWZ	Tuamarina	0.42	313	P	Pg	05 25 24.6	+0.6
TCW	Tory Channel	0.51	354	P	Pb	05 25 26.3	-0.5
WEL	Wellington	0.53	36	P	Pb	05 25 27.2	0.0
PLWZ	Palliser	0.69	78	P	Pb	05 25 30.4	+0.4
CAW	Cannon Point	0.81	42	P	Pb	05 25 32.0	0.0
PAWZ	Paruwai Farm	0.87	68	P	Pb	05 25 33.0	-0.1
NNZ	Nelson	0.89	304	P	Pg	05 25 32.7	-0.2
KIW	Kapiti Island	0.95	26	P	Pg	05 25 34.2	+0.1
DUWZ	D'Urville Isla	0.97	340	P	Pg	05 25 34.4	-0.1
MTW	Mount Morrison	1.03	58	P	Pg	05 25 35.3	-0.3
OGWZ	Otaki Gorge	1.09	35	P	Pb	05 25 36.6	-0.2
HOWZ	Holdsworth Sta	1.20	47	P	Pb	05 25 37.8	-0.8
MRNZ	Matariki Terra	1.24	284	P	Pn	05 25 39.1	0.0
TKNZ	Takaka Hill	1.25	303	P	Pn	05 25 39.1	-0.2
TMWZ	Te Maipa	1.31	63	P	Pn	05 25 38.7	-1.4
MRZ	Mangatainoka R	1.40	42	P	Pn	05 25 40.7	-0.7
TIWZ	Tintock	1.49	51	P	Pn	05 25 41.6	-1.0
QRZ	Quartz Range	1.64	302	P	Pb	05 25 45.5	-0.6
PRWZ	Pori Road	1.69	47	P	Pn	05 25 44.3	-1.0
BFZ	Birch Farm	1.77	55	P	Pn	05 25 44.6	-1.8
WAZ	Wanganui	2.02	14	P	Pg	05 25 54.2	-0.3
PREZ	Palmer Road	2.38	356	P	Pg	05 26 01.1	-0.3
KHEZ	Kahui Hut	2.43	354	P	Pb	05 26 00.8	+1.1
PKE	Pukeiti	2.54	354	P	Pb	05 26 01.9	+0.5
MOVZ	Moawhango	2.54	25	P	Pb	05 26 02.0	+0.5
WNVZ	Wahianoa	2.57	22	P	Pn	05 25 58.6	+1.0
BHHZ	Black Hill Sta	2.58	31	P	Pb	05 26 03.1	+0.9
TRVZ	Turoa	2.58	21	P	Pb	05 26 02.2	-0.2
VRZ	Vera Road	2.61	7	P	Pg	05 26 04.7	-1.1
TUVZ	Tukino	2.64	23	P	Pb	05 26 03.9	+0.7
NGZ	Ngauruhoe	2.71	21	P	Pb	05 26 04.8	+0.3
SNVZ	South Ngauruho	2.71	22	P	Pb	05 26 05.4	+0.9
OTVZ	Oturere	2.74	22	P	Pn	05 26 00.6	+0.7
NNVZ	North Ngauruho	2.76	21	P	Pb	05 26 06.0	+0.8
WTVZ	West Tongariro	2.77	20	P	Pb	05 26 06.0	+0.6
ETVZ	East Tongariro	2.78	22	P	Pb	05 26 05.8	+0.2
TMVZ	Te Maari	2.80	22	P	Pb	05 26 06.4	+0.5
KRVZ	Karewarewa	2.80	21	P	Pb	05 26 07.0	+1.0
NTVZ	North Tongarir	2.80	22	P	Pb	05 26 06.6	+0.6
WMGZ	Waiomatatini S	5.00	40	P	Pn	05 26 32.2	+1.5
KUZ	Kuaotunu	5.08	13	P	Pn	05 26 35.2	+3.3

IDC 23 05:37:22.6±5.5,16°.27S×173°.94W,h0^{km},mb3.7/4, mbtmp3.7/4,Error ellipse: s-maj=265.1km s-min=32.7km az=143.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	49.15	258	P	P	05 46 13.1	+0.5
	0.4nm,0.3s,baz=97,slow=6.9,SNR=30						
	0.4nm,0.3s						
ASAR	Alice Springs	49.36	253	P	P	05 46 13.4	-0.7
	0.6nm,0.5s,baz=87,slow=7.7,SNR=7.4						
	0.6nm,0.5s						
ILAR	Eielson Array	83.40	11	P	P	05 49 51.5	+0.2
	0.6nm,1.0s,baz=210,slow=5.2,SNR=2.7						
	0.6nm,1.0s						
YKA	Yellowknife Ar	91.10	24	P	P	05 50 28.2	-0.5
	0.3nm,1.0s,baz=257,slow=5.5,SNR=3.0						
	0.3nm,1.0s						

BJI 23 05:43:57.1±0.0,5°.38S×146°.24E,h92^{km},mb4.7/24, mB5.1/15

IDC 23 05:44:01.0±0.7,5°.24S×145°.75E,h94^{km}±6^{km},mb4.0/19, mbtmp4.3/21,MS3.1/13,Error ellipse: s-maj=19.3km s-min=11.0km az=86.0

NEIC 23 05:44:00.8±1.5,5°.27S±0°.09×145°.7E±0°.1,h87^{km}±8^{km}, mb4.6/42,Error ellipse: s-maj=18.5km s-min=12.9km az=73.0

DJA 23 05:44:02.0±0.4,5°S±3°×14°6E±°,h86^{km}±6^{km},M4.7/18, mB5.2/6,mb4.7/18,MLv4.9/4,Mw(mB)4.5/6

ISC 23 05:44:01.6±0.4,5°.28S±0°.05×145°.71E±0°.07,h100^{km},n131, σ1^{s}08/117,mb4.5/47,1C-1D,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.34	161	P	Pn	05 45 04.7	-0.7
	79nm,0.3s,baz=343,slow=14,SNR=22						
PMG				S	Sn	05 45 51.1	-3.9
	600nm,0.5s,baz=348,slow=20,SNR=26						
PMG				LR	LR	05 46 39.7	
	comp=Z,342nm,20.5s,baz=44,slow=36						
PMG	Port Moresby	4.34	161	Pn	Pn	05 45 04.5	-1.0
PMG	Port Moresby	4.34	161	P	Pn	05 45 05.2	-0.2
GENI	Genyem	6.14	296	P	Pn	05 45 29.3	-0.4
	100nm,1.0s,2µm1.3nm						
MMPI	Merauke	6.16	239	P	Pn	05 45 28.3	-1.7
	14nm,0.8s,0.1nm						
KRVT	Keravat (AS076	6.37	82	LR	LR	05 47 28.4	
	comp=Z,85nm,21.1s,baz=25,slow=33						
COEN	Coen	8.97	196	Pn	Pn	05 46 09.6	+1.3
COEN	Coen	8.97	196	P	Pn	05 46 09.5	+1.1
MTSU	Mount Surprise	12.85	186	P	Pn	05 47 02.1	+1.6
FAKI	Fak Fak	13.62	279	Pn	Pn	05 47 10.0	-0.8
CTA	Charters Tower	14.73	178	P	P	05 47 28.7	+0.3
	5.4nm,0.7s,baz=354,slow=13,SNR=5.3						
CTA				LR	LR	05 53 28.3	
	comp=Z,96nm,18.1s,baz=262,slow=38						
CTAO	Charters Tower	14.73	178	P	P	05 47 29.1	+0.7
KDU	Kakadu	14.99	240	P	Pn	05 47 27.7	-0.6
MTN	Manton Dam	16.23	241	P	P	05 47 43.7	-1.3
MTN				IAmb	IAmb	05 47 45.0	
	comp=Z,66nm,0.8s						
MTN	Manton Dam	16.23	241	P	P	05 47 43.8	-1.2
QIS	Mount Isa	16.30	201	P	P	05 47 46.3	+0.5
WB0	Warramunga Arr	18.13	216	P	P	05 48 04.6	-1.4
WB0				IAmb	IAmb	05 48 07.6	
	comp=Z,21nm,1.1s						
WRAB	Tennant Creek	18.28	216	P	Pn	05 48 07.3	-1.5
WRAB				IAmb	IAmb	05 48 16.3	
	comp=Z,15nm,0.8s						
WRAB	Tennant Creek	18.28	216	P	Pn	05 48 07.6	-1.2
WB2	Warramunga Arr	18.29	216		Pn	05 48 07.0	-1.8
WRA	Warramunga Arr	18.29	216	P	P	05 48 06.6	-1.2
	comp=Z,10nm,0.8s,baz=28,slow=11,SNR=64						
WRA	Warramunga Arr	18.29	216	P	P	05 48 06.7	-1.1
WB1	Warramunga Ar.	18.30	216	P	Pn	05 48 07.8	-1.2
NLAI	Namlea	18.66	275	P	Pn	05 48 14.0	+0.6
	comp=Z,27nm,0.6s						
LBMI	Labuha	18.75	284	P	Pn	05 48 14.0	-0.4
	comp=Z,124nm,0.8s,comp=Z,2µm						
KNRA	Kununurra	19.58	237	P	P	05 48 21.3	-0.6
KNRA				IAmb	IAmb	05 48 25.0	
	comp=Z,66nm,1.2s						
KNRA	Kununurra	19.58	237	P	P	05 48 21.2	-0.6
SANI	Sanana	19.93	279	P	Pn	05 48 26.8	-1.5
	comp=Z,26nm,0.6s						
SANI	Sanana	19.93	279	P	Pn	05 48 25.9	-2.4
	comp=Z,26nm,0.9s						
EIDS	Eidsvold	20.63	166	P	P	05 48 32.4	-0.7
QLP	Quilpie	21.23	184	P	P	05 48 40.6	+1.1
RMQ	Roma	21.29	172	P	P	05 48 42.8	+2.7
AS01	Alice Springs	21.50	211	P	P	05 48 43.4	+0.9
AS31	Alice Springs	21.52	211	P	P	05 48 43.0	+0.2
ASAR	Alice Springs	21.53	211	P	P	05 48 42.2	-0.6
	comp=Z,7.7nm,0.8s,baz=38,slow=7.6,SNR=68						
	comp=Z,7.7nm,0.8s						
ASAR	Alice Springs	21.53	211	P	P	05 48 41.9	-0.9
SOEI	Soe	21.71	257	P	P	05 48 44.9	0.0
SOEI	Soe	21.71	257	P	P	05 48 46.8	+1.9
SOEI	Soe	21.71	257	P	P	05 48 46.0	+1.1
	comp=Z,70nm,0.7s						
INKA	Innaminka	22.83	191	P	P	05 48 57.3	+1.1
LUWI	Luwuk	23.28	280	P	P	05 49 00.8	+0.1
LUWI				IAmb	IAmb	05 49 04.2	
	comp=Z,40nm,0.7s						
FITZ	Fitzroy Crossi	23.38	235	P	P	05 49 01.0	-0.6
GTOI	Gorontalo	23.42	284	P	P	05 49 03.6	+1.6
	comp=Z,73nm,0.8s,comp=Z,500nm						
MMRI	Maumere	23.53	261	P	P	05 49 02.3	-0.7
AULRC	Lightning Ridg	24.11	175	P	P	05 49 09.7	+1.6
OOD	Oodnadatta	24.33	202	P	P	05 49 10.7	+0.6
BKSI	Bulukumba	25.47	269	P	P	05 49 21.5	+0.9
	comp=Z,14nm,0.8s						
ARMA	Armidale	25.62	168	P	P	05 49 21.1	-0.8
ARMA				IAmb	IAmb	05 49 24.6	
	comp=Z,20nm,1.1s						
TOLI2	Tolitoli	25.69	284	P	P	05 49 21.7	-0.9
TOLI2				IAmb	IAmb	05 49 27.3	
	comp=Z,17nm,0.8s						
TOLI2	Tolitoli	25.69	284	P	P	05 49 23.7	+1.1
WRKA	Warakurna	25.79	219	P	P	05 49 23.4	0.0
KAPI	Kappang	25.85	269	P	P	05 49 25.5	+1.5
	comp=Z,5.6nm,0.4s,baz=90,slow=7.8,SNR=3.5						
KAPI				LR	LR	06 02 08.4	
	comp=Z,24nm,18.8s,baz=117,slow=42						
	comp=Z,5.6nm,0.4s						
CMSA	Cobar Meteorol	26.12	180	P	P	05 49 27.6	+1.4
AUPHS	Peel High Scho	26.14	170	P	P	05 49 27.8	+1.3
STKA	Stephens Creek	26.74	188	P	P	05 49 32.3	+0.5
	comp=Z,10nm,0.8s,baz=352,slow=9.7,SNR=18						
STKA				LR	LR	06 01 24.4	
	comp=Z,63nm,19.2s,baz=22,slow=39						
	comp=Z,10nm,0.8s						
STKA	Stephens Creek	26.74	188	P	P	05 49 31.9	+0.1
STKA	Stephens Creek	26.74	188	P	P	05 49 32.2	+0.5
YNG	Young	28.98	175	P	P	05 49 53.4	+1.6
MBWA	Marble Bar	29.72	236	P	P	05 49 58.0	-0.5
CAN	Canberra	30.05	175	P	P	05 50 01.4	+0.2
FORT	Forrest	30.31	211	P	P	05 50 03.5	-0.1
H11S3	WAKE ISLAND Hy	31.40	41	T	T	06 23 36.8	
	baz=215						
H11S2	WAKE ISLAND Hy	31.41	41	T	T	06 23 38.8	
	baz=215						
H11S1	WAKE ISLAND Hy	31.42	41	T	T	06 23 34.7	
	baz=215						
TOO	Toolangi	32.14	180	P	P	05 50 19.8	+0.1
TOO				IAmb	IAmb	05 50 22.3	
	comp=Z,17nm,0.9s						
TOO	Toolangi	32.14	180	P	P	05 50 21.1	+1.5
BRAT	Ballarat	32.16	183	P	P	05 50 21.0	+1.3
JCJ	Chichijima	32.37	354	LR	LR	06 00 52.2	
	comp=Z,87nm,20.6s,baz=248,slow=31						
MSVF	Nonsavu	33.95	114	P	P	05 50 36.0	+0.2
	comp=Z,3.9nm,0.5s,baz=320,slow=7.9,SNR=3.3						
	comp=Z,3.9nm,0.5s						
MSVF	Nonsavu	33.95	114	P	P	05 50 38.7	+3.0
GIRL	Giralia	34.95	237	P	P	05 50 44.5	+0.3
JOW	Kunigami	36.11	333	LR	LR	06 03 02.2	
	comp=Z,17nm,20.7s,baz=37,slow=32						
MORW	Morawa	36.71	226	P	P	05 50 59.5	+0.4
MORW				IAmb	IAmb	05 51 00.2	
	comp=Z,16nm,1.1s						
BBJI	Bungbulang	37.87	265	P	P	05 51 08.3	-1.0
NWAO	Narrogin (SRO)	38.22	220	P	P	05 51 12.0	+0.2
	comp=Z,7.8nm,0.8s,baz=15,slow=5.7,SNR=1.8						
	comp=Z,7.8nm,0.8s						
NWAO	Narrogin (SRO)	38.22	220	P	P	05 51 12.4	+0.6
JNU	Nakatsue	40.70	341	P	P	05 51 31.4	-1.0
	comp=Z,7.6nm,1.0s,baz=243,slow=2.3,SNR=2.9						
JNU				LR	LR	06 05 49.7	
	comp=Z,34nm,20.1s,baz=162,slow=32						
	comp=Z,7.6nm,1.0s						
MJAR	Matsushiro Arr	42.19	351	P	P	05 51 44.7	+0.2
	comp=Z,1.0nm,0.5s,baz=186,slow=11,SNR=2.1						
MJAR				pP	pP	05 52 06.1	-1.8
	comp=Z,0.6nm,0.3s,baz=182,slow=9.6,SNR=2.4						
	comp=Z,1.0nm,0.5s						
RPZ	Rata Peaks	44.31	154	P	P	05 52 02.5	+1.0
	comp=Z,10nm,0.8s,baz=248,slow=5.4,SNR=2.5						
RPZ				LR	LR	06 11 10.0	
	comp=Z,82nm,18.4s,baz=350,slow=37						
	comp=Z,10nm,0.8s						
SDSI	Sungai Dareh	44.41	274	P	P	05 52 02.8	0.0
NJ2	Nanjing	45.08	327	*e*P	P	05 52 09.1	+1.4
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KSRS	Korea Array	45.63	340	P	P	05 52 12.8	+0.8
	comp=Z,4.7nm,0.9s,baz=158,slow=8.8,SNR=11						
KSRS				LR	LR	06 10 03.5	
	comp=Z,17nm,20.3s,baz=135,slow=34						
	comp=Z,4.7nm,0.9s						
JTM	Tenmabayashi	46.04	355	P	P	05 52 15.5	+0.3
WHN	Wuhan	46.58	322	P	P	05 52 22.3	+2.8
PSI	Prapat	47.41	279	P	P	05 52 28.2	+1.6
ASAJ	Asahikawa	49.25	357	LR	LR	06 11 44.2	
	comp=Z,8.9nm,21.0s,baz=46,slow=34						
USRK	Ussuriysk Ar.	50.78	347	P	P	05 52 51.5	0.0
	comp=Z,3.9nm,0.7s,baz=153,slow=9.7,SNR=6.4						
	comp=Z,3.9nm,0.7s						
HNS	HongShan	51.36	328	⇓P	P	05 52 56.3	+0.4
HNS				pmax	pmax		
	comp=Z,14nm,0.7s						
CMAR	Chiang Mai Arr	51.78	298	P	P	05 52 59.9	+0.5
	comp=Z,1.2nm,0.3s,baz=125,slow=5.4,SNR=5.3						
	comp=Z,1.2nm,0.3s						
CN2	Changchun	52.17	341	P	P	05 53 04.3	+2.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH	PanZhiHua	53.01	309	P	P	05 53 11.3	+2.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.3s						
BNX	BinXian	53.36	344	⇑P	P	05 53 11.3	+0.7
BNX				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BNX				pmax	pmax		
	comp=Z,120nm,6.1s						
TNCH	TengChong	54.87	306	P	P	05 53 23.6	+1.4
TNCH				pmax	pmax		
	comp=Z,140nm,4.6s						
HHC	Hu-ho-hao-te	55.55	329	*e*P	P	05 53 31.1	+4.3
HHC				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC				pmax	pmax		
	comp=Z,170nm,6.4s						
XLT	XiLinHaoTe	55.77	334	*e*P	P	05 53 30.5	+2.3
XLT				pP	pP	05 53 51.3	-1.5
XLT				sP	sP	05 53 58.6	-5.4
XLT				pmax	pmax		
	comp=Z,4.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,92nm,5.0s						
PEA0B	Petropavlovsk-	59.05	8	P	P	05 53 51.5	+0.5
PETK	Petropavlovsk-	59.05	8	P	P	05 53 49.9	-1.0
	comp=Z,1.5nm,0.6s,baz=122,slow=5.2,SNR=3.4						
	comp=Z,1.5nm,0.6s						
SHEM	Shemya Is, Ala	62.60	19	LR	LR	06 16 04.0	
	comp=Z,12nm,20.2s,baz=202,slow=31						
SONM	Songino Array	63.16	331	P	P	05 54 19.3	+0.3
	comp=Z,1.0nm,1.0s,baz=158,slow=6.3,SNR=5.2						
	comp=Z,1.0nm,1.0s						
SEY	Seymchan	68.22	3	P	P	05 54 50.5	-0.5
	comp=Z,1.4nm,0.5s,baz=246,slow=7.1,SNR=3.6						
	comp=Z,1.4nm,0.5s						
WMQ	Urumqi	71.41	320	*e*P	P	05 55 14.3	+3.1
VNDA	Vanda	72.70	176	P	P	05 55 19.2	+1.1
	comp=Z,1.6nm,0.8s,baz=312,slow=6.9,SNR=5.7						
	comp=Z,1.6nm,0.8s						
VNDA	Vanda	72.70	176	P	P	05 55 19.3	+1.1
VNDA				IAmb	IAmb	05 55 29.4	
	comp=Z,8.0nm,1.4s						
MKAR	Makanchi Array	76.13	321	P	P	05 55 37.4	-1.2
	comp=Z,0.6nm,0.8s,baz=102,slow=7.7,SNR=6.4						
MKAR				pP	pP	05 56 03.9	-0.6
	comp=Z,1.2nm,0.8s,baz=111,slow=6.6,SNR=6.4						
	comp=Z,0.6nm,0.8s						
MKAR	Makanchi Array	76.13	321	P	P	05 55 39.5	+0.9
ZALV	Zalesovo Beam	77.72	328	P	P	05 55 47.1	-0.2
	comp=Z,0.5nm,0.5s,baz=114,slow=6.5,SNR=2.4						
ZALV				pP	pP	05 56 11.9	-1.4
	comp=Z,0.9nm,0.5s,baz=160,slow=4.7,SNR=3.2						
	comp=Z,0.5nm,0.5s						
KSH	Kashi	77.94	312	P	P	05 55 52.3	+3.2
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BOOM	Boomskoye usch	78.86	315	P	P	05 55 54.9	+0.7
K20K	Telida	81.88	23	P	P	05 56 10.7	+1.1
K20K				IAmb	IAmb	05 56 38.3	
	comp=Z,7.2nm,1.5s						
CAST	Castle Rocks	82.69	24	P	P	05 56 14.4	+0.6
PWL	Port Wells	83.18	27	P	P	05 56 16.6	+0.2
IMAR	Indian Mountai	83.28	21	P	P	05 56 17.2	+0.4
I21K	Tanana	83.55	22	IAmb	IAmb	05 56 21.4	
	comp=Z,5.8nm,1.1s						
MLY	Manley	83.95	22	P	P	05 56 21.0	+0.7
MLY				IAmb	IAmb	05 56 22.9	
	comp=Z,3.7nm,0.9s						
I23K	Minto, Yukon-K	84.53	23	P	P	05 56 23.5	+0.4
QSPA	South Pole Qui	84.68	180	P	P	05 56 24.8	+0.7
WRH	Wood River Hil	84.74	23	P	P	05 56 23.7	-0.5
WRH				IAmb	IAmb	05 56 50.8	
	comp=Z,12nm,1.4s						
MDM	Murphy Dome	84.88	23	P	P	05 56 24.8	-0.2
MDM				IAmb	IAmb	05 56 51.7	
	comp=Z,5.0nm,1.3s						
CCB	Clear Creek Bu	84.92	23	P	P	05 56 25.0	-0.1
CCB				IAmb	IAmb	05 56 26.8	
	comp=Z,11nm,1.5s						
HDA	Harding Lake	85.17	24	P	P	05 56 26.0	-0.4
IL31		85.34	23	P	P	05 56 26.4	-0.7
IL31				IAmb	IAmb	05 56 27.6	
	comp=Z,8.1nm,1.3s						
ILAR	Eielson Array	85.34	23	P	P	05 56 26.2	-1.0
	comp=Z,4.1nm,0.9s,baz=252,slow=4.9,SNR=31						
ILAR				pP	pP	05 56 51.2	-1.8
	comp=Z,1.7nm,0.8s,baz=262,slow=5.1,SNR=4.6						
	comp=Z,4.1nm,0.9s						
ILAR	Eielson Array	85.34	23	P	P	05 56 26.6	-0.7
BARN	Barnard Glacie	86.29	28	P	P	05 56 33.4	+1.1
BARN				IAmb	IAmb	05 56 34.2	
	comp=Z,2.9nm,0.6s						
M27K	Edge Creek, AK	86.59	26	IAmb	IAmb	05 56 56.0	
	comp=Z,8.2nm,1.4s						
BCAR	Beaver Creek A	86.86	26	P	P	05 56 36.0	+1.2
K27K	Chicken	87.03	25	IAmb	IAmb	05 56 38.0	
	comp=Z,10nm,1.4s						
EGAK	Eagle	87.64	24	P	P	05 56 38.7	+0.2
EGAK				IAmb	IAmb	05 56 40.7	
	comp=Z,5.5nm,1.2s						
DAWY	Dawson	88.17	25	P	P	05 56 41.8	+0.7
DAWY				IAmb	IAmb	05 56 43.8	
	comp=Z,5.5nm,1.1s						
YBH	Yreka Blue Hor	94.66	49	LR	LR	06 32 10.5	
	comp=Z,17nm,19.5s,baz=241,slow=30						
YKA	Yellowknife Ar	99.14	28	P	Pdif	05 57 31.4	0.0
	comp=Z,0.4nm,0.9s,baz=270,slow=5.1,SNR=5.5						
YKA				pP	pP	05 57 55.3	-2.1
	comp=Z,0.1nm,0.4s,baz=274,slow=4.6,SNR=1.7						
	comp=Z,0.4nm,0.9s						

IDC 23 05:49:47.2±4.2,11°.24S×116°.77E,h0^{km},mb3.6/2, mbtmp3.7/3,ML4.0/1,Error ellipse: s-maj=269.7km s-min=26.0km az=46.0,South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.99	119	P	Pn	05 54 11.2	0.0
	0.5nm,0.3s,baz=297,slow=13,SNR=23						
WRA				S	Sn	05 57 34.0	-11
	0.3nm,0.4s,baz=292,slow=26,SNR=2.0						
	0.9nm,0.4s						
ASAR	Alice Springs	20.46	129	P	P	05 54 26.2	-0.4
	0.9nm,0.5s,baz=302,slow=10,SNR=9.4						
ASAR				S	S	05 58 04.0	-13
	0.2nm,0.4s,baz=301,slow=24,SNR=1.5						
	0.9nm,0.5s						
MKAR	Makanchi Array	65.49	335	P	P	06 00 32.2	0.0
	0.6nm,0.4s,baz=146,slow=7.3,SNR=12						
	0.6nm,0.4s						

ROM 23 05:50:14.3±0.1,42°.900N±0°.003×12°.878E±0°.004, h10^{km},ML1.3/9,8C-4D,Error ellipse: s-maj=0.3km s-min=0.1km az=49.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	Preci, Frazion	0.10	95	⇓P	Pg	05 50 17.7	+0.6
T1216				S	Sg	05 50 19.7	+0.7
T1216				AML	AML		
	comp=N,568µm,0.2s						
T1216				AML	AML		
	comp=E,584µm,0.5s						
CESI	CESI - Serrava	0.11	10	P	Pg	05 50 17.8	+0.6
CESI				S	Sg	05 50 20.0	+0.8
CESI				AML	AML		
	comp=E,209µm,0.5s						
CESI				AML	AML		
	comp=N,464µm,0.1s						
T1219	Muccia, Frazio	0.18	31	⇓P	Pg	05 50 18.9	+0.6
T1219				S	Sg	05 50 22.0	+1.0
T1219				AML	AML		
	comp=E,180µm,0.3s						
T1219				AML	AML		
	comp=N,101µm,1.3s						
NRCA	Norcia	0.19	111	⇑P	Pg	05 50 18.9	+0.6
NRCA				S	Sg	05 50 22.1	+1.0
NRCA				AML	AML		
	comp=E,271µm,0.2s						
NRCA				AML	AML		
	comp=N,254µm,1.2s						
T1212	Cascia, Frazio	0.19	140	⇑P	Pg	05 50 19.1	+0.7
T1212				S	Sg	05 50 22.1	+0.9
T1217	Poggiodomo (PG	0.19	168	P	Pb	05 50 19.2	-0.8
T1217				S	Sg	05 50 22.6	+1.3
FDMO	Fiordimonte	0.21	48	⇑P	Pg	05 50 19.4	+0.7
ASSB	Assisi San Ben	0.21	312	⇑P	Pg	05 50 19.4	+0.5
ASSB				S	Sg	05 50 23.0	+1.1
ASSB				AML	AML		
	comp=E,87µm,0.8s						

ASSB				AML	AML		
	comp=N,112µm,0.4s						
MC2	**Monte Cornacci**	**0.23**	**87**	⇑P	Pg	05 50 19.8	+0.6
T1245	**Castelsantange**	**0.23**	**101**	P	Pg	05 50 19.9	+0.7
T1245				S	Sg	05 50 23.9	+1.4
T1245				AML	AML		
	comp=E,146µm,0.3s						
T1245				AML	AML		
	comp=N,143µm,0.4s						
T1245				AML	AML		
	comp=N,144µm,0.4s						
T1245				AML	AML		
	comp=E,146µm,0.3s						
MOMA	**Monte Martano**	**0.25**	**247**	⇓P	Pb	05 50 20.4	-0.5
MOMA				S	Sg	05 50 24.3	+1.5
MOMA				AML	AML		
	comp=E,70µm,0.1s						
MOMA				AML	AML		
	comp=N,46µm,0.2s						
MOMA				AML	AML		
	comp=E,70µm,1.9s						
T1220	**Camerino, Fraz**	**0.26**	**36**	P	Pb	05 50 20.6	-0.5
T1220				S	Sb	05 50 24.7	-1.0
T1256	**Bolognola (MC)**	**0.28**	**67**	⇑P	Pg	05 50 20.6	+0.6
T1256				S	Sb	05 50 25.3	-1.0
T1256				AML	AML		
	comp=N,84µm,0.4s						
T1256				AML	AML		
	comp=E,50µm,0.6s						
T1256				AML	AML		
	comp=E,50µm,1.4s						
T1214	**Arquata del Tr**	**0.28**	**120**	⇑P	Pg	05 50 20.6	+0.5
T1214				S	Sb	05 50 25.2	-1.2
T1218	**Civita (PG)**	**0.29**	**143**	P	Pg	05 50 20.7	+0.5
ATCC	**AVT- Casa Cast**	**0.34**	**329**	⇑P	Pg	05 50 21.6	+0.5
SNTG	**Esanatoglia**	**0.36**	**7**	⇓P	Pg	05 50 20.8	-0.6
SNTG				AML	AML		
	comp=N,18µm,0.2s						
SNTG				AML	AML		
	comp=E,17µm,0.3s						
T1241	**Roccafluvione,**	**0.41**	**96**	P	Pg	05 50 22.8	+0.4
RM33	**Pellescritta (**	**0.46**	**147**	P	Pg	05 50 24.0	+0.6

*ROM **23** 05:50:49.6±0.1, 43°.047N±0°.003×13°.074E±0°.006, h9^{km}, ML1.4/14, Error ellipse: s-maj=0.5km s-min=0.2km az=77.0*

ISC 23 05:50:49.8±1.0**, 43°.05N**±0°.02×**13°.09E**±0°.03**, h9**^{km}±5^{km}**, n22,** σ**0^{s}.79**/36**, 9C-4D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDMO	**Fiordimonte**	**0.01**	**175**	P	**Pg**	**05 50 51.2**	**-0.2**
FDMO				S	**Sg**	**05 50 52.0**	**-0.6**
T1220	**Camerino, Fraz**	**0.06**	**2**	P	**Pg**	**05 50 52.0**	**+0.2**
T1220				S	**Sg**	**05 50 53.5**	**+0.2**
T1220				AML	AML		
	comp=E,1750µm,0.7s						
T1220				AML	AML		
	comp=N,1700µm,0.2s						
T1220				AML	AML		
	comp=N,1700µm,0.2s						
T1220				AML	AML		
	comp=E,1750µm,0.7s						
T1256	**Bolognola (MC)**	**0.11**	**113**	⇑P	**Pg**	**05 50 53.0**	**+0.4**
T1256				S	**Sg**	**05 50 55.1**	**+0.6**
T1256				AML	AML		
	comp=E,614µm,1.5s						
T1256				AML	AML		
	comp=N,332µm,1.0s						
T1256				AML	AML		
	comp=E,614µm,0.5s						
T1256				AML	AML		
	comp=N,332µm,1.0s						
CESI	**CESI - Serrava**	**0.14**	**251**	⇑P	**Pg**	**05 50 53.3**	**+0.3**
CESI				AML	AML		
	comp=E,110µm,1.1s						
CESI				AML	AML		
	comp=E,110µm,1.1s						
CESI				AML	AML		
	comp=N,132µm,0.3s						
MC2	**Monte Cornacci**	**0.16**	**151**	⇑P	**Pg**	**05 50 53.7**	**+0.4**
MC2				S	**Sg**	**05 50 56.9**	**+1.2**
T1216	**Preci, Frazion**	**0.17**	**197**	⇑P	**Pg**	**05 50 53.8**	**+0.4**
T1216				S	**Sg**	**05 50 56.9**	**+1.0**
T1216				AML	AML		
	comp=E,512µm,1.0s						
T1216				AML	AML		
	comp=N,493µm,0.3s						
T1216				AML	AML		
	comp=E,512µm,1.0s						
T1245	**Castelsantange**	**0.21**	**159**	⇑P	**Pg**	**05 50 54.5**	**+0.4**
T1245				S	**Sg**	**05 50 58.7**	**+1.6**
T1245				AML	AML		
	comp=E,151µm,0.8s						
T1245				AML	AML		
	comp=N,214µm,0.3s						
NRCA	**Norcia**	**0.22**	**174**	⇓P	**Pg**	**05 50 54.6**	**+0.3**
NRCA				S	**Sg**	**05 50 58.4**	**+1.1**
NRCA				AML	AML		
	comp=E,201µm,0.8s						
NRCA				AML	AML		
	comp=N,172µm,1.3s						
NRCA				AML	AML		
	comp=N,172µm,0.7s						
NRCA				AML	AML		
	comp=E,201µm,1.2s						
SNTG	**Esanatoglia**	**0.23**	**333**	⇓P	**Pg**	**05 50 54.9**	**+0.4**
SNTG				S	**Sg**	**05 50 59.1**	**+1.4**
SNTG				AML	AML		
	comp=N,74µm,1.1s						
SNTG				AML	AML		
	comp=E,56µm,1.3s						
EL6	**Elcito**	**0.28**	**2**	⇑P	**Pg**	**05 50 56.0**	**+0.5**
EL6				S	**Sb**	**05 51 01.0**	**-0.9**
T1212	**Cascia, Frazio**	**0.30**	**186**	⇓P	**Pg**	**05 50 56.1**	**+0.3**
T1212				S	**Sb**	**05 51 01.1**	**-1.4**
ASSB	**Assisi San Ben**	**0.31**	**269**	⇑P	**Pg**	**05 50 56.3**	**+0.2**
ASSB				S	**Sb**	**05 51 01.4**	**-1.5**
ASSB				AML	AML		
	comp=N,234µm,0.3s						
ASSB				AML	AML		
	comp=E,115µm,0.4s						
T1241	**Roccafluvione,**	**0.32**	**127**	P	**Pg**	**05 50 56.7**	**+0.5**
T1241				S	**Sb**	**05 51 02.0**	**-1.0**
T1241				AML	AML		
	comp=E,78µm,1.6s						
T1241				AML	AML		
	comp=N,68µm,0.2s						
T1241				AML	AML		
	comp=E,78µm,0.4s						
CING	**Cingoli**	**0.33**	**14**	P	**Pb**	**05 50 57.3**	**-0.7**
CING				S	**Sb**	**05 51 02.9**	**-0.7**
CING				AML	AML		
	comp=E,88µm,0.2s						
CING				AML	AML		
	comp=N,64µm,0.2s						
FOSV	**Fossato di Vic**	**0.34**	**316**	S	**Sb**	**05 51 02.6**	**-1.0**
FOSV				AML	AML		
	comp=N,146µm,0.3s						
FOSV				AML	AML		
	comp=N,146µm,1.7s						
FOSV				AML	AML		
	comp=E,41µm,0.6s						
SSFR	**Montelago di S**	**0.44**	**330**	⇑P	**Pg**	**05 50 58.8**	**+0.3**
SSFR				S	**Sb**	**05 51 06.8**	**+0.1**
SSFR				AML	AML		
	comp=E,94µm,0.2s						
SSFR				AML	AML		
	comp=N,66µm,0.2s						
SSFR				AML	AML		
	comp=N,66µm,1.8s						
MOMA	**Monte Martano**	**0.45**	**237**	P	**Pg**	**05 50 58.9**	**+0.3**
MOMA				AML	AML		
	comp=E,34µm,0.3s						
MOMA				AML	AML		
	comp=N,32µm,0.5s						
ARVD	**Arcevia**	**0.46**	**347**	⇓P	**Pg**	**05 50 59.1**	**+0.3**
ARVD				AML	AML		
	comp=E,27µm,1.6s						
ARVD				AML	AML		
	comp=N,22µm,1.5s						
ARVD				AML	AML		
	comp=E,27µm,0.4s						
ARVD				AML	AML		
	comp=N,22µm,0.5s						
SMA1	**SAN MARTINO**	**0.46**	**156**	⇑P	**Pg**	**05 50 58.9**	**+0.1**
FRON	**Frontone**	**0.54**	**331**	S	**Sb**	**05 51 09.4**	**+0.1**
RM33	**Pellescritta (**	**0.55**	**170**	S	**Sb**	**05 51 09.2**	**-0.5**
PIEI	**Pieia**	**0.63**	**321**	S	**Sb**	**05 51 12.6**	**+0.6**

*NEIC **23** 05:51:21.4±0.9, 5°.9S±0°.1×127°.9E±0°.1, h394^{km}±15^{km}, mb4.0/9, Error ellipse: s-maj=20.6km s-min=14.0km az=109.0*

*IDC **23** 05:51:23.0±3.6, 6°.01S×127°.95E, h423^{km}±44^{km}, mb3.2/1, mbtmp4.5/3, Error ellipse: s-maj=107.7km s-min=15.3km az=68.0*

ISC 23 05:51:21.4±1.0**, 5°.97S**±0°.10×**127°.9E**±0°.1**, h400**^{km}**, n18,** σ**0^{s}.72**/20**, mb3.7**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**5.23**	**224**		**Pn**	**05 52 45.3**	**-0.7**
FAKI	**Fak Fak**	**5.26**	**55**		**Pn**	**05 52 46.3**	**+0.1**
MTN	**Manton Dam**	**7.52**	**155**		**P**	**05 53 12.1**	**+0.6**
FITZ	**Fitzroy Crossi**	**12.26**	**190**	P	**P**	**05 54 05.1**	**+1.1**
WB0	**Warramunga Arr**	**15.08**	**156**	P	**P**	**05 54 35.8**	**+0.9**
WRAB	**Tennant Creek**	**15.21**	**156**	P	**P**	**05 54 37.1**	**+0.8**
WRAB				IAmb	IAmb	05 54 38.0	
	comp=Z,11nm,0.9s						
WRA	**Warramunga Arr**	**15.22**	**156**	P	**P**	**05 54 36.9**	**+0.6**
	comp=Z,11nm,0.3s,baz=334,slow=11,SNR=68						
WRA				S	**S**	**05 57 16.4**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=340,slow=21,SNR=6.1						
WRA	**Warramunga Arr**	**15.22**	**156**	P	**P**	**05 54 36.0**	**-0.3**
WB2	**Warramunga Arr**	**15.22**	**156**	P	**P**	**05 54 37.0**	**+0.6**
WB2				IAmb	IAmb	05 54 37.6	
	comp=Z,7.3nm,0.8s						
AS31	**Alice Springs**	**18.50**	**163**	P	**P**	**05 55 11.7**	**+0.3**
ASAR	**Alice Springs**	**18.50**	**163**	P	**P**	**05 55 11.8**	**+0.3**
	comp=Z,4.0nm,0.3s,baz=342,slow=11,SNR=28						
ASAR				S	**S**	**05 58 19.9**	**-1.1**
	comp=Z,0.8nm,0.8s,baz=343,slow=19,SNR=3.3						
ASAR	**Alice Springs**	**18.50**	**163**	P	**P**	**05 55 11.9**	**+0.5**
PMG	**Port Moresby**	**19.35**	**101**	P	**P**	**05 55 20.0**	**0.0**
PMG				IAmb	IAmb	05 55 37.3	
	comp=Z,18nm,1.1s						
FORT	**Forrest**	**24.68**	**180**	P	**P**	**05 56 09.1**	**+0.9**
MK31	**Makanchi Array**	**66.26**	**328**	P	**P**	**06 01 28.1**	**-0.1**
MK31				IAmb	IAmb	06 01 39.6	
	comp=Z,1.6nm,1.4s						
MKAR	**Makanchi Array**	**66.26**	**328**	P	**P**	**06 01 27.8**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=114,slow=8.1,SNR=11						
	comp=Z,0.7nm,0.4s						
MKAR	**Makanchi Array**	**66.26**	**328**	P	**P**	**06 01 28.0**	**-0.2**
MAKZ	**Makanchi**	**66.43**	**327**	P	**P**	**06 01 28.8**	**-0.4**
MAKZ				IAmb	IAmb	06 01 52.1	
	comp=Z,2.4nm,1.4s						

*NOU **23** 05:53:31.0, 38°.82S×175°.69E, h155^{km}, MLv3.5/10, North Island, New Zealand*

*WEL **23** 05:53:34.1±0.5, 39°S±4°×17°6E±°, h124^{km}±4^{km}, M3.2/60, ML3.0/29, MLv3.2/60, Error ellipse: s-maj=0.0km s-min=0.0km az=135.1, confirmed*

ISC 23 05:53:30.0±1.6**, 38°.80S**±0°.05×**175°.65E**±0°.05**, h160**^{km}±8^{km}**, n139,** σ**1^{s}.22**/148**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATZ	**Rangitukua**	**0.11**	**124**	P	**Pn**	**05 53 51.9**	**+0.5**
WATZ	**Wairara**	**0.11**	**34**	P	**Pn**	**05 53 52.1**	**+0.7**
KATZ	**Kakaramea**	**0.17**	**169**	P	**Pn**	**05 53 52.2**	**+0.7**
RITZ	**Rihia Road**	**0.24**	**137**	P	**Pn**	**05 53 52.5**	**+0.9**
KRVZ	**Karewarewa**	**0.29**	**182**	P	**Pn**	**05 53 52.5**	**+0.7**
KRVZ				S	**Sn**	**05 54 07.7**	**-0.9**
NTVZ	**North Tongarir**	**0.30**	**176**	P	**Pn**	**05 53 52.8**	**+1.0**
TMVZ	**Te Maari**	**0.32**	**173**	P	**Pn**	**05 53 52.8**	**+0.9**
TMVZ				S	**Sn**	**05 54 07.3**	**-1.4**
TWVZ	**Taurewa**	**0.32**	**212**	P	**Pn**	**05 53 52.7**	**+0.9**
TWVZ				S	**Sn**	**05 54 07.2**	**-1.5**
WTVZ	**West Tongariro**	**0.32**	**189**	P	**Pn**	**05 53 52.7**	**+0.8**
WTVZ				S	**Sn**	**05 54 07.5**	**-1.2**
NNVZ	**North Ngauruho**	**0.33**	**185**	P	**Pn**	**05 53 52.7**	**+0.8**
NNVZ				S	**Sn**	**05 54 07.7**	**-1.2**
ETVZ	**East Tongariro**	**0.34**	**172**	P	**Pn**	**05 53 53.0**	**+1.1**
KUTZ	**Kaahu Road**	**0.34**	**23**	P	**Pn**	**05 53 52.6**	**+0.7**
OTVZ	**Oturere**	**0.36**	**178**	P	**Pn**	**05 53 52.8**	**+0.8**
OTVZ				S	**Sn**	**05 54 08.3**	**-0.8**
NGZ	**Ngauruhoe**	**0.38**	**186**	P	**Pn**	**05 53 52.9**	**+0.8**
NGZ				S	**Sn**	**05 54 07.9**	**-1.2**
SNVZ	**South Ngauruho**	**0.38**	**181**	P	**Pn**	**05 53 52.9**	**+0.8**
SNVZ				S	**Sn**	**05 54 08.7**	**-0.6**
FWVZ	**Far West T-bar**	**0.46**	**190**	P	**Pn**	**05 53 53.4**	**+0.9**
TUVZ	**Tukino**	**0.47**	**180**	P	**Pn**	**05 53 53.6**	**+1.2**
TUVZ				S	**Sn**	**05 54 08.6**	**-1.1**
DRZ	**Dome Shelter**	**0.48**	**188**	P	**Pn**	**05 53 53.9**	**+1.2**
TLZ	**Tolley Road**	**0.48**	**349**	P	**Pn**	**05 53 53.2**	**+0.8**
TLZ				S	**Sn**	**05 54 08.2**	**-1.4**
WHVZ	**Whangaehu Hut**	**0.48**	**186**	P	**Pn**	**05 53 53.7**	**+1.1**
TRVZ	**Turoa**	**0.50**	**189**	P	**Pn**	**05 53 53.9**	**+1.1**
WNVZ	**Wahianoa**	**0.53**	**185**	P	**Pn**	**05 53 53.9**	**+1.2**
PKVZ	**Pokaka**	**0.54**	**206**	P	**Pn**	**05 53 53.9**	**+1.2**
GRRZ	**Galatos Road**	**0.58**	**39**	P	**Pn**	**05 53 53.6**	**+0.7**
ALRZ	**Allen Road**	**0.59**	**66**	P	**Pn**	**05 53 53.3**	**+0.4**
MRHZ	**Matea Rd**	**0.60**	**93**	P	**Pn**	**05 53 53.4**	**+0.4**
MTVZ	**Mangateitei**	**0.60**	**194**	P	**Pn**	**05 53 54.3**	**+1.3**
MOVZ	**Moawhango**	**0.61**	**173**	P	**Pn**	**05 53 54.1**	**+1.0**
HRRZ	**Handcock Road**	**0.64**	**50**	P	**Pn**	**05 53 53.8**	**+0.6**
PRRZ	**Plateau Road**	**0.65**	**63**	P	**Pn**	**05 53 53.7**	**+0.4**
HSRZ	**Hossack Road**	**0.68**	**44**	P	**Pn**	**05 53 54.0**	**+0.6**
HIZ	**Hauiti**	**0.69**	**295**	P	**Pn**	**05 53 54.3**	**+0.9**
HIZ	**Hauiti**	**0.69**	**295**	P	**Pn**	**05 53 54.5**	**+1.0**
BKZ	**Black Stump Fm**	**0.75**	**119**	P	**Pn**	**05 53 54.8**	**+0.9**
BKZ	**Black Stump Fm**	**0.75**	**119**	P	**Pn**	**05 53 54.8**	**+0.9**
UTU	**Utuhina**	**0.76**	**34**	P	**Pn**	**05 53 54.8**	**+0.9**
BHHZ	**Black Hill Sta**	**0.76**	**155**	P	**Pn**	**05 53 55.0**	**+1.1**
VRZ	**Vera Road**	**0.77**	**245**	P	**Pn**	**05 53 55.3**	**+1.4**
HLRZ	**Highlands Stat**	**0.78**	**45**	P	**Pn**	**05 53 55.4**	**+1.4**
NGRZ	**Ngongotaha**	**0.82**	**31**	P	**Pn**	**05 53 55.1**	**+0.7**
RRRZ	**Republican Roa**	**0.82**	**56**	P	**Pn**	**05 53 54.8**	**+0.5**
KWHZ	**Kaweka Forest**	**0.86**	**136**	P	**Pn**	**05 53 56.0**	**+1.4**
TARZ	**Mount Tarawera**	**0.88**	**50**	P	**Pn**	**05 53 55.5**	**+0.7**
OMRZ	**Omania**	**0.90**	**39**	P	**Pn**	**05 53 55.6**	**+0.6**
KARZ	**Kaharoa**	**0.91**	**31**	P	**Pn**	**05 53 55.6**	**+0.6**
MKRZ	**Makatiti**	**0.92**	**44**	P	**Pn**	**05 53 56.3**	**+1.1**
MTHZ	**Maungataniwha**	**0.93**	**93**	P	**Pn**	**05 53 56.0**	**+0.9**
MUGZ	**Murupara**	**0.93**	**70**	P	**Pn**	**05 53 55.4**	**+0.3**
NMHZ	**Naumai**	**0.95**	**108**	P	**Pn**	**05 53 57.2**	**+1.9**
KMRZ	**Kaimai**	**0.98**	**13**	P	**Pn**	**05 53 56.4**	**+0.8**
LIRZ	**Lichensteins R**	**0.98**	**36**	P	**Pn**	**05 53 56.3**	**+0.8**
MCHZ	**McNeill Hill**	**1.03**	**129**	P	**Pn**	**05 53 58.2**	**+2.3**
RTZ	**Ruatahuna**	**1.06**	**80**	P	**Pn**	**05 53 56.9**	**+0.7**
TOZ	**Tahuroa Road**	**1.08**	**354**	P	**Pn**	**05 53 57.4**	**+1.1**
WAZ	**Wanganui**	**1.08**	**208**	P	**Pn**	**05 53 58.1**	**+1.8**
EDRZ	**Edgecumbe**	**1.10**	**51**	P	**Pn**	**05 53 57.0**	**+0.4**
RAHZ	**Arahi**	**1.12**	**96**	P	**Pn**	**05 53 58.3**	**+1.6**
ARHZ	**Aropaoanui**	**1.14**	**114**	P	**Pn**	**05 53 58.8**	**+1.9**
LREZ	**Lake Rotokare**	**1.17**	**236**	P	**Pn**	**05 53 59.3**	**+2.3**
TGRZ	**Tauranga**	**1.17**	**24**	P	**Pn**	**05 53 58.0**	**+0.8**
PNHZ	**Pukenui**	**1.19**	**159**	P	**Pn**	**05 53 58.9**	**+1.6**
DREZ	**Durham Road**	**1.20**	**251**	P	**Pn**	**05 53 59.4**	**+2.1**
WHHZ	**Waihua**	**1.26**	**103**	P	**Pn**	**05 53 59.7**	**+1.7**
URZ	**Urewera**	**1.27**	**65**	P	**Pn**	**05 53 58.1**	**+0.1**
URZ	**Urewera**	**1.27**	**65**	P	**Pn**	**05 53 58.2**	**+0.3**
TSZ	**Takapari Road**	**1.28**	**169**	P	**Pn**	**05 53 59.8**	**+1.7**
PREZ	**Palmer Road**	**1.28**	**245**	P	**Pn**	**05 54 00.4**	**+2.2**
NEZ	**North Egmont**	**1.30**	**248**	P	**Pn**	**05 54 00.6**	**+2.2**
SNGZ	**Shannon Statio**	**1.32**	**90**	P	**Pn**	**05 54 00.1**	**+1.6**
PKE	**Pukeiti**	**1.35**	**253**	P	**Pn**	**05 54 00.8**	**+2.0**
KHEZ	**Kahui Hut**	**1.37**	**248**	P	**Pn**	**05 54 00.9**	**+1.9**
KHEZ	**Kahui Hut**	**1.37**	**248**	P	**Pn**	**05 54 01.1**	**+2.1**
KAHZ	**Kahuranaki**	**1.37**	**137**	P	**Pn**	**05 54 01.0**	**+2.0**
CKHZ	**Cape Kidnapper**	**1.40**	**128**	P	**Pn**	**05 54 01.6**	**+2.4**
WPHZ	**Waipukurau**	**1.40**	**154**	P	**Pn**	**05 54 01.1**	**+1.8**
RAGZ	**Rawiri**	**1.41**	**78**	P	**Pn**	**05 54 00.5**	**+1.0**
NBEZ	**Newall Road No**	**1.47**	**251**	P	**Pn**	**05 54 02.0**	**+2.1**
NMEZ	**Namu Road**	**1.51**	**246**	P	**Pn**	**05 54 02.2**	**+1.9**
MWZ	**Matawai**	**1.54**	**73**	P	**Pn**	**05 54 01.5**	**+0.8**
PXZ	**Pawanui**	**1.54**	**143**	P	**Pn**	**05 54 02.4**	**+1.8**
DVHZ	**Dannevirke**	**1.55**	**165**	P	**Pn**	**05 54 02.2**	**+1.5**
MYRZ	**Mayor Island**	**1.59**	**17**	P	**Pn**	**05 54 02.7**	**+1.5**
POWZ	**Post Office Ro**	**1.59**	**177**	P	**Pn**	**05 54 02.7**	**+1.5**
KNZ	**Kokohu**	**1.59**	**99**	P	**Pn**	**05 54 02.5**	**+1.3**
PRHZ	**Porangahau**	**1.65**	**153**	P	**Pn**	**05 54 03.6**	**+1.8**
RIGZ	**Rimuhau**	**1.65**	**87**	P	**Pn**	**05 54 03.2**	**+1.4**
TKGZ	**Te Karaka**	**1.76**	**79**	P	**Pn**	**05 54 04.5**	**+1.6**
PRWZ	**Pori Road**	**1.77**	**172**	P	**Pn**	**05 54 04.8**	**+1.7**
MHGZ	**Mahia Peninsul**	**1.79**	**102**	P	**Pn**	**05 54 05.0**	**+1.7**
RUGZ	**Raukumara Rang**	**1.80**	**63**	P	**Pn**	**05 54 03.4**	**-0.1**
MRZ	**Mangatainoka R**	**1.86**	**182**	P	**Pn**	**05 54 05.4**	**+1.4**
TWGZ	**Tauwhareparae**	**1.93**	**72**	P	**Pn**	**05 54 06.3**	**+1.4**
BFZ	**Birch Farm**	**1.93**	**166**	P	**Pn**	**05 54 06.0**	**+1.1**
BFZ	**Birch Farm**	**1.93**	**166**	P	**Pn**	**05 54 06.3**	**+1.5**
HAZ	**Te Kaha**	**1.98**	**59**	P	**Pn**	**05 54 05.4**	**+0.1**
TIWZ	**Tintock**	**1.98**	**175**	P	**Pn**	**05 54 06.8**	**+1.4**
OGWZ	**Otaki Gorge**	**2.05**	**190**	P	**Pn**	**05 54 07.6**	**+1.5**
KUZ	**Kuaotunu**	**2.05**	**2**	P	**Pn**	**05 54 07.4**	**+1.1**
KUZ	**Kuaotunu**	**2.05**	**2**	P	**Pn**	**05 54 07.6**	**+1.3**
HOWZ	**Holdsworth Sta**	**2.10**	**183**	P	**Pn**	**05 54 07.9**	**+1.1**
PKGZ	**Pakihiroa**	**2.11**	**65**	P	**Pn**	**05 54 08.0**	**+1.0**
KIW	**Kapiti Island**	**2.13**	**195**	P	**Pn**	**05 54 08.2**	**+1.1**
CPWZ	**Castlepoint**	**2.15**	**169**	P	**Pn**	**05 54 09.2**	**+1.9**
PUZ	**Puketiti**	**2.17**	**71**	P	**Pn**	**05 54 08.5**	**+0.8**
TMWZ	**Te Maipa**	**2.31**	**176**	P	**Pn**	**05 54 10.4**	**+1.1**
CAW	**Cannon Point**	**2.35**	**191**	P	**Pn**	**05 54 10.7**	**+1.0**
MTW	**Mount Morrison**	**2.36**	**183**	P	**Pn**	**05 54 10.7**	**+0.9**
WMGZ	**Waiomatatini S**	**2.38**	**67**	P	**Pn**	**05 54 10.9**	**+0.8**
DUWZ	**D'Urville Isla**	**2.40**	**213**	P	**Pn**	**05 54 11.3**	**+0.9**
MXZ	**Matakaoa Point**	**2.43**	**60**	P	**Pn**	**05 54 11.7**	**+1.0**
MXZ	**Matakaoa Point**	**2.43**	**60**	P	**Pn**	**05 54 11.8**	**+1.1**
WEL	**Wellington**	**2.57**	**195**	P	**Pn**	**05 54 13.2**	**+0.8**
PAWZ	**Paruwai Farm**	**2.58**	**184**	P	**Pn**	**05 54 13.3**	**+0.7**
TRWZ	**Traveller**	**2.59**	**179**	P	**Pn**	**05 54 13.5**	**+0.8**
SNZO	**South Karori**	**2.61**	**196**	P	**Pn**	**05 54 13.4**	**+0.6**
TCW	**Tory Channel**	**2.63**	**203**	P	**Pn**	**05 54 13.9**	**+0.8**
PLWZ	**Palliser**	**2.78**	**186**	P	**Pn**	**05 54 15.5**	**+0.5**
TUWZ	**Tuamarina**	**2.93**	**206**	P	**Pn**	**05 54 17.4**	**+0.6**
NNZ	**Nelson**	**2.98**	**215**	P	**Pn**	**05 54 18.0**	**+0.7**
TKNZ	**Takaka Hill**	**3.04**	**222**	P	**Pn**	**05 54 18.7**	**+0.5**
WCZ	**Waipu Caves**	**3.04**	**340**	P	**Pn**	**05 54 20.6**	**+2.3**
QRZ	**Quartz Range**	**3.14**	**229**	P	**Pn**	**05 54 20.0**	**+0.6**
QRZ	**Quartz Range**	**3.14**	**229**	P	**Pn**	**05 54 19.8**	**+0.4**
CMWZ	**Cape Campbell**	**3.14**	**200**	P	**Pn**	**05 54 20.9**	**+1.5**
BSWZ	**Blackbirch Sta**	**3.21**	**204**	P	**Pn**	**05 54 20.9**	**+0.7**
MRNZ	**Matariki Terra**	**3.41**	**220**	P	**Pn**	**05 54 23.3**	**+0.5**
THZ	**Tophouse**	**3.63**	**215**	P	**Pn**	**05 54 26.3**	**+0.7**
KHZ	**Kahutara**	**3.95**	**203**	P	**Pn**	**05 54 30.2**	**+0.5**
KHZ	**Kahutara**	**3.95**	**203**	P	**Pn**	**05 54 30.2**	**+0.5**
DSZ	**Denniston Nort**	**4.16**	**224**	P	**Pn**	**05 54 33.1**	**+0.6**
GVZ	**Greta Valley S**	**4.61**	**205**	P	**Pn**	**05 54 38.4**	**0.0**
INZ	**Inchbonnie**	**5.05**	**218**	P	**Pn**	**05 54 45.8**	**+1.6**
OXZ	**Oxford**	**5.28**	**210**	P	**Pn**	**05 54 46.5**	**-0.7**
RACZ	**Rakaia**	**5.59**	**207**	P	**Pn**	**05 54 50.3**	**-0.9**
ARCZ	**Arundel**	**6.14**	**212**	P	**Pn**	**05 54 58.7**	**+0.2**
TMZ	**Timaru**	**6.57**	**210**	P	**Pn**	**05 55 03.4**	**-0.9**
ODZ	**Otahua Downs**	**7.27**	**209**	P	**Pn**	**05 55 13.2**	**-0.3**
JCZ	**Jackson Bay**	**7.37**	**222**	P	**Pn**	**05 55 15.0**	**+0.1**
CTZ	**Chatham Island**	**7.63**	**133**	P	Pn	05 55 25.7	+7.5

*IDC **23** 06:09:27.4±0.8, 28°.39S×178°.32W, h198^{km}±8^{km}, mb3.6/11, mbtmp4.3/13, MS3.8/1, Error ellipse: s-maj=17.2km s-min=16.3km az=163.0*

ISC 23 06:09:25.8±0.5**, 28°.82S**±0°.05×**178°.3W**±0°.1**, h200**^{km}**, n53,** σ**2^{s}.05**/66**, mb3.8**/11**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.53**	**144**	LR	LR	06 09 49.0	
	comp=Z,160nm,21.4s,baz=148,slow=23						
RAO				P	**Pn**	**06 09 56.3**	**+3.2**
	6µm,0.2s,baz=89,slow=6.8,SNR=134						
RAO				S	**Sn**	**06 10 17.7**	**+3.4**
	2µm,0.3s,baz=229,slow=23,SNR=7.5						
GLKZ	**Green Lake**	**0.54**	**145**	P	**Pn**	**06 09 56.4**	**+3.3**
GLKZ				S	**Sn**	**06 10 16.4**	**+2.1**
MXZ	**Matakaoa Point**	**9.17**	**197**	P	**Pn**	**06 11 32.0**	**-2.3**
MXZ				S	**Sn**	**06 13 16.3**	**-0.7**
WMGZ	**Waiomatatini S**	**9.39**	**196**	P	**Pn**	**06 11 36.5**	**-0.6**
WMGZ				S	**Sn**	**06 13 23.7**	**+1.6**
HAZ	**Te Kaha**	**9.50**	**199**	P	**Pn**	**06 11 37.2**	**-1.2**
HAZ				S	**Sn**	**06 13 26.6**	**+1.9**
PKGZ	**Pakihiroa**	**9.54**	**198**	P	**Pn**	**06 11 36.8**	**-2.3**
PKGZ				S	**Sn**	**06 13 23.8**	**-2.0**
RUGZ	**Raukumara Rang**	**9.72**	**199**	P	**Pn**	**06 11 40.4**	**-1.1**
RUGZ				S	**Sn**	**06 13 30.0**	**-0.3**
URZ	**Urewera**	**10.17**	**201**	P	**Pn**	**06 11 45.3**	**-1.8**
	2.9nm,0.4s,baz=22,slow=4.1,SNR=12						
URZ				S	**S**	**06 13 41.3**	**+0.2**
	16nm,0.3s,baz=327,slow=19,SNR=14						
URZ	**Urewera**	**10.17**	**201**	P	**Pn**	**06 11 46.0**	**-1.1**
URZ				S	**S**	**06 13 40.3**	**-0.8**
MUGZ	**Murupara**	**10.47**	**202**	P	**Pn**	**06 11 50.9**	**-0.2**
MUGZ				S	**S**	**06 13 49.2**	**+0.8**
SNGZ	**Shannon Statio**	**10.58**	**199**	P	**Pn**	**06 11 51.6**	**-0.8**
SNGZ				S	**S**	**06 13 50.4**	**-0.5**
RAHZ	**Arahi**	**10.78**	**200**	S	**S**	**06 13 55.2**	**-0.4**
MTHZ	**Maungataniwha**	**10.79**	**201**	P	**Pn**	**06 11 53.3**	**-2.0**
MTHZ				S	**Sn**	**06 13 54.5**	**-1.2**
WHHZ	**Waihua**	**10.88**	**199**	S	**Sn**	**06 13 56.6**	**-1.2**
MRHZ	**Matea Rd**	**10.91**	**202**	P	**Pn**	**06 11 56.5**	**-0.4**
MRHZ				S	**Sn**	**06 13 57.9**	**-0.7**
NMHZ	**Naumai**	**11.03**	**200**	S	**Sn**	**06 14 00.3**	**-1.1**
MCHZ	**McNeill Hill**	**11.38**	**200**	P	**Pn**	**06 12 00.4**	**-2.3**
MCHZ				S	**Sn**	**06 14 08.2**	**-1.5**
KWHZ	**Kaweka Forest**	**11.45**	**201**	P	**Pn**	**06 12 01.7**	**-1.9**
KWHZ				S	**Sn**	**06 14 08.7**	**-2.6**
CKHZ	**Cape Kidnapper**	**11.47**	**198**	P	**Pn**	**06 12 00.7**	**-3.2**
CKHZ				S	**Sn**	**06 14 06.6**	**-5.1**
MSVF	**Nonsavu**	**11.54**	**342**	P	**Pn**	**06 12 01.9**	**-3.2**
	153nm,0.8s,baz=136,slow=14,SNR=68						
BHHZ	**Black Hill Sta**	**11.62**	**202**	P	**Pn**	**06 12 04.4**	**-1.5**
PNHZ	**Pukenui**	**11.96**	**201**	P	**Pn**	**06 12 07.5**	**-2.7**
PRHZ	**Porangahau**	**12.16**	**199**	P	**Pn**	**06 12 13.1**	**+0.4**
DVHZ	**Dannevirke**	**12.33**	**200**	P	**Pn**	**06 12 12.8**	**-2.0**
DVHZ				S	**Sn**	**06 14 26.3**	**-5.9**
THZ	**Tophouse**	**14.77**	**207**	P	**Pn**	**06 12 44.1**	**-1.1**
KHZ	**Kahutara**	**15.10**	**204**	P	**Pn**	**06 12 46.0**	**-3.1**
DZM	**Mont Dzumac**	**15.35**	**293**	P	**P**	**06 12 57.1**	**+4.4**
	5.7nm,0.7s,baz=134,slow=18,SNR=5.1						
AFI	**Afiamalu**	**16.02**	**23**	P	**P**	**06 12 55.7**	**-4.4**
	14nm,0.3s,baz=248,slow=6.4,SNR=5.6						
AFI				S	S	06 15 32.8	-25
	16nm,0.6s,baz=42,slow=23,SNR=1.9						
RAR	**Rarotonga**	**18.39**	**70**	P	**Pn**	**06 13 28.2**	**-0.2**
	23nm,1.1s,baz=200,slow=15,SNR=3.3						
CTA	**Charters Tower**	**33.34**	**277**	P	**P**	**06 15 45.5**	**+0.4**
	1.1nm,0.3s,baz=156,slow=16,SNR=1.7						
	1.1nm,0.3s						
ASAR	**Alice Springs**	**42.98**	**265**	P	**P**	**06 17 07.8**	**+2.3**
	0.4nm,0.5s,baz=95,slow=6.9,SNR=7.8						
ASAR				PcP	**PcP**	**06 18 52.3**	**0.0**
	0.7nm,0.8s,baz=102,slow=5.7,SNR=1.6						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**43.82**	**271**	P	**P**	**06 17 13.2**	**+0.8**
	0.9nm,0.5s,baz=108,slow=6.3,SNR=15						
	0.9nm,0.5s						
VNDA	**Vanda**	**49.64**	**186**	P	P	06 18 02.3	+5.8
	1.5nm,0.9s,baz=1.6,slow=8.8,SNR=6.2						
	1.5nm,0.9s						
MJAR	**Matsushiro Arr**	**76.81**	**325**	P	**P**	**06 20 55.1**	**-0.3**
	5.3nm,0.8s,baz=163,slow=5.7,SNR=9.9						
	5.3nm,0.8s						
SNAA	**Sanae**	**79.73**	**179**	LR	LR	06 55 43.2	
	comp=Z,53nm,18.8s,baz=120,slow=35						
H03S2	**Juan Fernandez**	**81.53**	**124**	T	T	07 51 39.6	
	baz=239						
H03S1	**Juan Fernandez**	**81.55**	**124**	T	T	07 51 30.0	
	baz=239						
H03S3	**Juan Fernandez**	**81.55**	**124**	T	T	07 51 37.7	
	baz=239						
KSRS	**Korea Array**	**83.00**	**320**	P	**P**	**06 21 29.6**	**+1.1**
	1.5nm,0.7s,baz=145,slow=6.9,SNR=7.2						
	1.5nm,0.7s						
PLCA	**Paso Flores**	**83.75**	**133**	P	**P**	**06 21 36.2**	**+3.5**
	1.7nm,0.8s,baz=214,slow=7.4,SNR=4.9						
	1.7nm,0.8s						
PETK	**Petropavlovsk-**	**84.23**	**346**	P	**P**	**06 21 34.5**	**+0.1**
	1.5nm,0.5s,baz=116,slow=6.8,SNR=5.1						
	1.5nm,0.5s						
USRK	**Ussuriysk Ar.**	**85.72**	**327**	P	**P**	**06 21 42.8**	**+0.8**
	6.0nm,0.9s,baz=115,slow=2.3,SNR=8.3						
	6.0nm,0.9s						
NVAR	**Mina Array Bea**	**87.25**	**43**	P	**P**	**06 21 49.4**	**-0.6**
	0.8nm,0.6s,baz=227,slow=8.9,SNR=6.9						
	0.8nm,0.6s						

ILAR	Eielson Array	96.45	13	P	P	06 22 30.7	-0.9
	0.3nm,0.9s,baz=210,slow=7.1,SNR=2.9						
	0.3nm,0.9s						
MKAR	Makanchi Array	116.57	311	PKP	PKiKP	06 27 45.8	+0.1
	0.3nm,0.5s,baz=44,slow=1.1,SNR=5.8						
KURBB	Kurchatov Arra	119.82	314	PKP	PKiKP	06 27 52.0	+0.2
	0.9nm,0.7s,baz=108,slow=1.9,SNR=8.9						
BVAR	Borovoye Array	125.11	317	PKP	PKiKP	06 28 02.5	+0.3
	1.9nm,0.8s,baz=153,slow=0.3,SNR=8.0						
FINES	FINESS Array B	143.59	341	PKhKP	PKPpre	06 28 33.4	
	4.1nm,0.9s,baz=47,slow=4.8,SNR=7.7						
FINES				PKP	PKiKP	06 28 37.4	-2.1
	1.7nm,0.8s,baz=57,slow=7.0,SNR=3.8						
KBZ	Khabaz	144.02	306	PKP	PKPdf	06 28 36.9	-0.4
	1.2nm,0.4s,baz=26,slow=3.6,SNR=2.7						
NB2	NORSAR Subarra	147.16	351	PKP	PKPbc	06 28 44.6	-0.1
	comp=Z,1.0nm,0.6s,baz=16,slow=3.2						
NOA	NORSAR Array B	147.16	351	PKPbc	PKPbc	06 28 44.9	+0.1
	comp=Z,2.6nm,0.7s,baz=15,slow=4.5,SNR=8.7						
AKASG	Malin Array Be	149.90	324	PKPbc	PKiKP	06 28 52.4	-0.3
	comp=Z,3.2nm,0.5s,baz=31,slow=3.1,SNR=28						
BRTR	Keskin Array B	151.61	301	PKPbc	PKiKP	06 28 57.4	+0.5
	comp=Z,2.5nm,0.8s,baz=123,slow=5.3,SNR=9.0						

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*IDC **23** 06:12:41.1±4.5, 19°.11N×122°.14E, h91^{km}±42^{km}, mb3.6/8, mbtmp3.9/10, Error ellipse: s-maj=40.1km s-min=14.4km az=75.0*

ISC 23 06:12:42.7±0.8,**19°.27N**±0°.04×**122°.22E**±0°.09,**h103**^{km}±7^{km}, **n26**,σ**1^{s}82**/34,**mb3.6**/8,**6C-6D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CICP	Calayan Island	0.70	270	⇓iP	Pn	06 13 00.2	-0.2
CICP				iS	Sn	06 13 12.1	-1.5
SGCP	Gonzaga	1.03	189	⇓eP	Pn	06 13 05.0	+1.2
SGCP				eS	Sn	06 13 21.0	+1.4
PACPP	Pamplona Cagay	1.15	226	⇑iP	Pn	06 13 04.5	-0.5
PACPP				iS	Sn	06 13 19.5	-2.4
BBP	Basco	1.19	348	⇓iP	Pn	06 13 06.3	+0.8
BBP				iS	Sn	06 13 23.5	+0.9
BBP	Basco	1.19	348	eP	Pn	06 13 06.6	+1.1
BBP				eS	Sn	06 13 22.8	+0.2
CVP	Callao Caves	1.60	194	⇑iP	Pn	06 13 11.0	+0.6
CVP				iS	Sn	06 13 31.3	-0.1
APYP	Conner	1.68	214	⇓eP	Pn	06 13 10.9	-0.4
APYP				iS	Pn	06 13 13.2	+1.9
APYP	Conner	1.68	214	⇓eP	Pn	06 13 11.5	+0.1
APYP				eS	Sn	06 13 31.4	-1.7
SIPP	Brgy, Tapao	2.14	232	⇑iP	Pn	06 13 17.3	+0.1
SIPP				eS	Sn	06 13 51.5	+7.8
SAMP	Sagada Mountai	2.51	210	⇑eP	Pn	06 13 22.1	0.0
SAMP				eS	Sn	06 13 51.7	-0.7
BALP	Baler	3.56	190	⇑eP	Pn	06 13 36.9	+0.8
PCPH	Palayan	3.84	196	⇓eP	Pn	06 13 40.5	+0.7
JCNP	Jose Panganiba	4.97	175	⇑eP	Pn	06 13 56.5	+1.3
JCNP				eS	Sn	06 14 28.8	-23
JOW	Kunigami	9.36	35	P	Pn	06 14 55.0	+0.3
	12nm,0.5s,baz=49,slow=20,SNR=1.2						
KSRS	Korea Array	18.79	14	P	Pn	06 16 55.1	-0.5
	1.9nm,0.5s,baz=193,slow=10,SNR=7.3						
SONM	Songino Array	31.27	339	P	P	06 18 53.4	+0.5
	0.5nm,0.5s,baz=164,slow=11,SNR=5.4						
	0.5nm,0.5s						
WRA	Warramunga Arr	40.74	162	P	P	06 20 11.8	-1.8
	4.2nm,0.4s,baz=343,slow=9.1,SNR=42						
	4.2nm,0.4s						
H11S3	WAKE ISLAND Hy	41.99	84	T	T	07 06 18.3	
	baz=278						
H11S1	WAKE ISLAND Hy	42.00	83	T	T	07 06 11.0	
	baz=278						
H11S2	WAKE ISLAND Hy	42.01	84	T	T	07 06 23.7	
	baz=278						
MKAR	Makanchi Array	42.60	319	P	P	06 20 30.0	+1.3
	0.2nm,0.4s,baz=115,slow=7.9,SNR=3.0						
MKAR				PcP	PcP	06 22 17.8	-1.3
	0.3nm,0.7s,baz=116,slow=3.4,SNR=1.3						
	0.2nm,0.4s						
ASAR	Alice Springs	44.17	165	P	P	06 20 40.2	-1.3
	2.9nm,0.4s,baz=346,slow=6.9,SNR=42						
	2.9nm,0.4s						
KURBB	Kurchatov Arra	46.53	323	P	P	06 20 58.9	-0.9
	0.1nm,0.3s,baz=121,slow=6.9,SNR=3.1						
	0.1nm,0.3s						
STKA	Stephens Creek	54.14	160	P	P	06 21 56.0	-1.3
	2.2nm,0.5s,baz=346,slow=8.2,SNR=6.5						
	2.2nm,0.5s						
ILAR	Eielson Array	73.14	27	P	P	06 24 02.8	+1.0
	0.3nm,0.8s,baz=278,slow=6.2,SNR=2.2						
	0.3nm,0.8s						
YKA	Yellowknife Ar	87.10	23	P	P	06 25 17.3	+0.6
	0.5nm,0.6s,baz=306,slow=4.4,SNR=12						
	0.5nm,0.6s						

IDC 23 06:24:41.2±3.0,**54°.46N**×**87°.11E,h0**^{km}**,mbtmp2.8**/2, **ML2.6**/2,**2C-3D,Error ellipse: s-maj=25.2km s-min=16.7km az=61.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.44	250	I	I	06 31 54.0	
	baz=71,slow=333,SNR=12						
ZAA0	Zalesovo Array	1.44	250	⇓P	Pn	06 25 06.5	-2.1
	0.4nm,0.2s						
ZAA0				⇓S	Sg	06 25 25.9	-1.5
	1.4nm,0.3s						
ZALV	Zalesovo Beam	1.44	250	Pg	Pn	06 25 06.5	-2.0
	1.3nm,0.3s,baz=64,slow=16,SNR=14						
ZALV				Lg	Lg	06 25 27.6	
	1.8nm,0.3s,baz=68,slow=27,SNR=11						
ZALV				Rg	Rg	06 25 37.0	
	2.2nm,0.4s,baz=67,slow=26,SNR=9.9						
KURBB	Kurchatov Arra	6.49	237	Pn	Pn	06 26 18.4	+0.5
	0.1nm,0.3s,baz=49,slow=13,SNR=6.0						
KURBB				Lg	Lg	06 28 05.9	
	baz=54,slow=32,SNR=1.3						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	6.49	237	⇓Pn	Pn	06 26 18.8	+0.9
	2.2nm,0.7s,baz=56,slow=13						
KURBB				⇑Sn	Sn	06 27 31.2	-1.4
	1.6nm,0.5s						
KURBB				⇑Lg	Lg	06 28 06.6	
	5.8nm,0.9s,baz=61,slow=30						
MKAR	Makanchi Array	8.27	204	Pn	Pn	06 26 43.6	+1.3
	0.1nm,0.3s,baz=20,slow=11,SNR=5.5						
MKAR				Sn	Sn	06 28 16.4	+0.1
	0.1nm,0.3s,baz=27,slow=27,SNR=3.3						
MKAR				Lg	Lg	06 29 02.2	
	0.1nm,0.3s,baz=19,slow=24,SNR=5.1						
	0.2nm,0.3s						

IDC 23 06:24:44.2±7.0,**17°.46S**×**177°.24W,h0**^{km}**,mb4.0**/3, **mbtmp4.0**/3,**Error ellipse: s-maj=304.0km s-min=36.1km az=142.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	45.81	259	P	P	06 33 08.1	-0.1
	1.3nm,0.6s,baz=95,slow=7.1,SNR=44						
	1.3nm,0.6s						
ASAR	Alice Springs	45.98	254	P	P	06 33 09.4	-0.1
	3.2nm,0.6s,baz=88,slow=8.8,SNR=34						
	3.2nm,0.6s						
ILAR	Eielson Array	85.21	13	P	P	06 37 22.1	0.0
	0.2nm,0.4s,baz=226,slow=5.1,SNR=6.3						
	0.2nm,0.4s						

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*IGIL **23** 06:26:14.6, 40°.56N×15°.76W, h23^{km}, ML3.1*

*MDD **23** 06:26:16.2±0.9, 40°.53N×15°.60W, h30^{km}±46^{km}, Mb4.6/14, M_mb4.0/15, Error ellipse: s-maj=25.3km s-min=5.4km az=91.0*

*INMG **23** 06:26:17.4±2.3, 40°.56N×15°.81W, h36^{km}±16^{km}, ML3.1, Error ellipse: s-maj=8.8km s-min=6.1km az=90.0*

*CNRM **23** 06:26:25.5, 39°.98N×14°.89W, h126^{km}*

ISC 23 06:26:18.5±3.4,**40°.49N**±0°.06×**15°.2W**±0°.2,**h35**^{km}**,n63,** σ**1^{s}54**/118,**14C,North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMAFR	Mafra	4.83	107	S	Sn	06 28 24.0	+0.6
PMAFR				P	Pn	06 27 30.5	+1.8
PMAFR	Mafra	4.83	107	eP	Pn	06 27 30.4	+1.7
PMAFR				eS	Sn	06 28 25.5	+2.1
PMAFR				A	A	06 28 31.0	
	34nm,0.3s						
PCAS	Casmilo, Conde	5.16	93	eP	Pn	06 27 34.9	+1.6
PCAS				eS	Sn	06 28 33.1	+1.5
PCAS				A	A	06 28 36.0	
	9.1nm,0.4s						
COI	Coimbra	5.21	91	eS	Sn	06 28 35.2	+2.4
COI				A	A	06 28 38.4	
	21nm,0.4s						
EMAZ	Mazaricos	5.28	60	P	Pn	06 27 35.3	+0.4
EMAZ				⇑iVmb_V		06 27 37.5	
	634nm,SNR=1.2						
EMAZ				S	Sn	06 28 32.1	-2.4
PGAV	Gavieira, Arco	5.45	72	eP	Pn	06 27 38.5	+1.2
PGAV				eS	Sn	06 28 39.1	+0.4
PGAV				A	A	06 28 42.7	
	11nm,0.4s						
PCAB	Cabril	5.57	75	eP	Pn	06 27 40.2	+1.3
PCAB				eS	Sn	06 28 42.0	+0.3
PCAB				A	A	06 28 44.3	
	12nm,0.4s						
PMTG	Montargil	5.58	102	eP	Pn	06 27 40.1	+1.2
PMTG				eS	Sn	06 28 41.6	-0.1
PMTG				A	A	06 28 45.0	
	5.6nm,0.3s						
ELOB	Lobios	5.58	73	P	Pn	06 27 39.9	+0.9
ELOB				⇑iVmb_V		06 27 43.6	
	567nm,SNR=1.7						
ELOB				S	Sn	06 28 40.9	-1.1
PVIS	Viseu	5.58	85	eP	Pn	06 27 40.3	+1.2
PVIS				eS	Sn	06 28 42.6	+0.5
PVIS				A	A	06 28 45.2	
	9.9nm,0.3s						
POLO	Lamas de Olo	5.70	79	eP	Pn	06 27 42.3	+1.6
POLO				eS	Sn	06 28 45.0	+0.1
POLO				A	A	06 28 48.1	
	3.0nm,0.5s						
PNCL	Nicolau / Gran	5.71	112	eP	Pn	06 27 42.2	+1.4
PNCL				eS	Sn	06 28 45.4	+0.3
PNCL				A	A	06 28 52.1	
	7.1nm,0.5s						
PVRL	Vila Real	5.75	80	eP	Pn	06 27 42.1	+0.8
PVRL				eS	Sn	06 28 45.7	-0.3
PVRL				A	A	06 28 49.6	
	11nm,0.2s						
PTEO	Sao Teotonio	5.85	118	eP	Pn	06 27 43.5	+0.8
PTEO				eS	Sn	06 28 47.0	-1.6
PTEO				A	A	06 28 51.0	
	29nm,0.6s						
MTE	Manteigas	5.86	88	eP	Pn	06 27 43.8	+0.9
MTE				eS	Sn	06 28 49.6	+0.7
MTE				A	A	06 28 53.5	
	9.6nm,0.3s						
EVO	Evora	5.91	107	S	Sn	06 28 49.3	-0.7
EVO				P	Pn	06 27 45.0	+1.5
EVO	Evora	5.91	107	eP	Pn	06 27 45.1	+1.5
EVO				eS	Sn	06 28 51.2	+1.2
EVO				A	A	06 28 53.3	
	7.8nm,0.7s						
PCBR	Castelo Branco	5.97	94	eS	Sn	06 28 50.4	-1.1
PCBR				A	A	06 28 58.5	
	8.1nm,0.3s						
PFVI	Vila Bisbo	6.01	122	P	Pn	06 27 47.5	+2.5
PFVI				S	Sn	06 28 47.7	-4.9
PFVI	Vila Bisbo	6.01	122	S	Sn	06 28 50.3	-2.3
PFVI				P	Pn	06 27 45.2	+0.3
PFVI	Vila Bisbo	6.01	122	eP	Pn	06 27 45.0	0.0
PFVI				eS	Sn	06 28 50.1	-2.5
MORF	Marmelete	6.03	120	eP	Pn	06 27 45.7	+0.4
MORF				eS	Sn	06 28 53.1	0.0
MORF				A	A	06 28 57.7	
	12nm,0.1s						
MORF	Marmelete	6.03	120	eP	Pn	06 27 45.6	+0.4
MORF				eS	Sn	06 28 52.4	-0.6
MORF				IAML		06 28 55.9	
	comp=N,20nm,0.2s						
MESJ	Messejana	6.05	114	eP	Pn	06 27 46.8	+1.3
MESJ				eS	Sn	06 28 53.7	+0.2
MESJ				A	A	06 28 56.7	
	comp=N,7.5nm,0.5s						
MESJ	Messejana	6.05	114	eP	Pn	06 27 46.2	+0.7
MESJ				eS	Sn	06 28 53.2	-0.3
MESJ				IAML		06 28 55.6	
	comp=N,14nm,0.2s						
PESTR	Estremoz	6.11	103	P	Pn	06 27 47.5	+1.2
PESTR				S	Sn	06 28 53.5	-1.4
PESTR	Estremoz	6.11	103	eP	Pn	06 27 47.1	+0.8
PESTR				eS	Sn	06 28 54.8	-0.1
PESTR				A	A	06 29 01.8	
	comp=N,9.1nm,0.6s						
PMRV	Marv??o	6.11	97	eP	Pn	06 27 47.7	+1.4
PMRV				eS	Sn	06 28 54.6	-0.4
PMRV				A	A	06 29 01.4	
	comp=N,10nm,0.2s						
PBEJ	Beja	6.22	111	eP	Pn	06 27 50.7	+3.0
PBEJ				eS	Sn	06 28 59.0	+1.4
PBEJ				A	A	06 29 01.9	
	comp=N,7.1nm,0.7s						
MVO	Moncorvo	6.25	81	eP	Pn	06 27 50.3	+2.0
MVO				eS	Sn	06 28 56.9	-1.7
MVO				A	A	06 29 05.6	
	comp=N,13nm,0.4s						
PCVE	Castro Verde	6.28	115	P	Pn	06 27 49.7	+1.1
PCVE				S	Sn	06 28 58.4	-0.6
PCVE	Castro Verde	6.28	115	eP	Pn	06 27 50.0	+1.4
PCVE				eS	Sn	06 28 58.9	-0.1
PCVE				A	A	06 29 02.4	
	comp=N,8.4nm,0.4s						
PBRG	Braganca	6.54	76	eP	Pn	06 27 52.9	+0.7
PBRG				eS	Sn	06 29 04.8	-0.7
PBRG				A	A	06 29 12.1	
	comp=N,6.9nm,0.5s						
PBDV	Barranco-do-Ve	6.55	117	eP	Pn	06 27 53.3	+1.0
PBDV				eS	Sn	06 29 05.8	0.0
PBDV				A	A	06 29 08.6	
	comp=N,6.8nm,0.2s						
ECAL	Calabor	6.56	74	P	Pn	06 27 53.3	+0.8
ECAL				⇑iVmb_V		06 27 58.1	
	comp=N,125nm,SNR=2.7						
ECAL				S	Sn	06 29 04.5	-1.7
EBAD	Badajoz	6.57	103	P	Pn	06 27 53.2	+0.6
EBAD				S	Sn	06 29 04.8	-1.5
EBAD	Badajoz	6.57	103	P	Pn	06 27 53.2	+0.6
EBAD				⇑iVmb_V		06 27 54.0	
	comp=N,275nm,SNR=1.6						
EBAD				S	Sn	06 29 04.7	-1.5
PVAQ	Vaqueiros	6.61	115	P	Pn	06 27 54.0	+0.8
PVAQ				S	Sn	06 29 05.0	-2.3
PVAQ	Vaqueiros	6.61	115	P	Pn	06 27 54.5	+1.3
PVAQ	Vaqueiros	6.61	115	eP	Pn	06 27 55.3	+2.1
PVAQ				eS	Sn	06 29 06.7	-0.6
PVAQ				A	A	06 29 10.1	
	comp=N,8.7nm,0.3s						
EPON	Pontenova	6.66	62	P	Pn	06 27 54.7	+0.9
EPON				⇑iVmb_V		06 27 55.6	
	comp=N,298nm,SNR=0.8						
EPON				S	Sn	06 29 05.4	-3.0
EGRO	El Granado	6.71	114	P	Pn	06 27 56.3	+1.8
EGRO				S	Sn	06 29 09.1	-0.6
EGRO	El Granado	6.71	114	P	Pn	06 27 56.1	+1.6
EGRO				⇑iVmb_V		06 28 00.2	
	comp=N,241nm,SNR=1.8						
EGRO				S	Sn	06 29 09.4	-0.3
PBAR	Barrancos	6.75	107	P	Pn	06 27 56.6	+1.5
PBAR				S	Sn	06 29 11.0	+0.3
PBAR	Barrancos	6.75	107	eP	Pn	06 27 56.9	+1.8
PBAR				eS	Sn	06 29 12.2	+1.5
PBAR				A	A	06 29 15.4	
	comp=N,8.6nm,0.6s						
EPLA	Plasencia	7.01	91	P	Pn	06 27 59.6	+1.0
EPLA				⇑iVmb_V		06 28 03.4	
	comp=N,239nm,SNR=1.6						
EPLA				S	Sn	06 29 14.3	-2.7
EMIN	Mina Concepcio	7.18	109	P	Pn	06 28 02.0	+1.0
EMIN				S	Sn	06 29 20.5	-0.9
EMIN	Mina Concepcio	7.18	109	P	Pn	06 28 02.5	+1.5
EMIN				⇑iVmb_V		06 28 05.9	
	comp=N,164nm,SNR=1.3						
EMIN				S	Sn	06 29 20.6	-0.7
ECAB	El Cabril	7.98	104	P	Pn	06 28 12.5	+0.6
ECAB				S	Sn	06 29 39.8	-1.1
ECAB	El Cabril	7.98	104	P	Pn	06 28 12.9	+1.0
ECAB				⇑iVmb_V		06 28 14.0	
	comp=N,109nm,SNR=1.0						
ECAB				S	Sn	06 29 38.1	-2.9
EARI	Arriondas	7.98	66	P	Pn	06 28 14.2	+2.2
EARI				⇑iVmb_V		06 28 15.9	
	comp=N,224nm,SNR=0.6						
EARI				S	Sn	06 29 39.4	-1.6
ESPR	Espera	8.17	113	P	Pn	06 28 16.8	+2.3
ESPR				S	Sn	06 29 44.8	-0.8
ESPR	Espera	8.17	113	P	Pn	06 28 16.0	+1.4
ESPR				⇑iVmb_V		06 28 20.1	
	comp=N,164nm,SNR=1.2						
ESPR				S	Sn	06 29 45.7	+0.1
PAB	San Pablo	8.40	93	P	Pn	06 28 18.1	+0.3
PAB				⇑iVmb_V		06 28 22.0	
	comp=N,136nm,SNR=1.2						
PAB				S	Sn	06 29 47.9	-3.5
GUD	Guadarrama	8.43	85	P	Pn	06 28 18.5	+0.3
GUD				⇑iVmb_V		06 28 20.2	
	comp=N,82nm,SNR=0.8						
GUD				S	Sn	06 29 50.4	-1.7
EADA	Adamuz	8.57	102	P	Pn	06 28 20.8	+0.7
EADA				S	Sn	06 29 53.0	-2.5
EADA	Adamuz	8.57	102	P	Pn	06 28 20.6	+0.5
EADA				⇑iVmb_V		06 28 22.9	
	comp=N,180nm,SNR=1.7						
EADA				S	Sn	06 29 53.1	-2.5
PSIM	Granatula de C	9.00	97	P	Pn	06 28 26.9	+0.9
PSIM				S	Sn	06 30 02.4	-3.7
ETOR	Torete	10.02	84	P	Pn	06 28 42.2	+2.3
OUK	Oukaimeden	11.01	145	P	Pn	06 28 52.0	-1.9
MD31	MD31	11.33	129	P	Pn	06 28 57.8	-0.1
TTIG	Tnine Tigouga,	11.35	149	P	Pn	06 28 55.7	-2.5
MDT	Midelt	11.46	129	P	Pn	06 28 58.5	-1.2

IDC 23 06:32:28.9±597.0,**49°.94N**×**37°.70E,h0**^{km}**,Error ellipse: s-maj=239.8km s-min=136.9km az=13.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	6.80	358	I	I	07 10 20.0	
	0.1nm,0.7s,baz=175,slow=332,SNR=3.2						
I31KZ	AKTYUBINSK INF	13.04	80	I	I	07 53 41.0	
	baz=273,slow=334						
I46RU	ZALESOVO INFRA	28.89	64	I	I	09 32 40.0	
	baz=282,slow=320,SNR=1.5						

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*NIED **23** 06:33:40.8, 40°.03N×144°.80E, h48^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.14; $M_{\theta\theta}$0.71; $M_{\phi\phi}$1.43; $M_{r\theta}$0.40; $M_{\theta\phi}$0.60; $M_{\phi r}$0.61; Fault plane solution: $M_0$2.09000×10^{14} NP1: ϕ_s211.00000°, δ55.00000°, λ-89.00000°. NP2:ϕ_s29.00000°, δ35.00000°, λ-92.00000°.*

*JMA **23** 06:33:40.8±0.4, 40°N±1°×14°5E±°, h48^{km}, MV3.5/26, FAR E OFF NORTH HONSHU*

*IDC **23** 06:33:40.4±3.1, 39°.08N×145°.14E, h0^{km}, mb3.3/3, mbtmp3.3/4, ML2.4/1, Error ellipse: s-maj=76.1km s-min=35.1km az=63.0*

ISC 23 06:33:39.3±1.5,**39°.95N**±0°.07×**145°.00E**±0°.09,**h32**^{km}**,n18,** σ**1^{s}25**/21,**mb3.2**/3,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	2.41	271	eP	Pn	06 34 16.6	+0.1
MIYJ	Miyakonagasawa	2.48	262	P	Pn	06 34 18.1	+0.7
MIYJ				eS	Sn	06 34 45.5	-1.0
JEM	Erimo	2.49	327	eS	Sn	06 34 46.7	-0.1
JKEN	Kujiedanarisaw	2.54	277	eP	Pn	06 34 18.0	-0.2
JANG	Nango	2.70	280	P	Pn	06 34 20.7	+0.2
JANG				S	Sn	06 34 50.0	-2.1
JNBK	Urakawa-nobuka	2.88	325	P	Pn	06 34 24.5	+1.5
JNBK				eS	Sn	06 34 57.3	+0.9
JOM	Ohasama	2.90	262	P	Pn	06 34 24.2	+1.0
JCH	Churui	2.93	336	eP	Pn	06 34 24.4	+0.8
JAK	Akkeshi	3.05	356	eP	Pn	06 34 25.3	+0.1
JMK	Ichinoseki	3.09	252	P	Pn	06 34 26.6	+0.8
JMK				eS	Sn	06 35 00.6	-1.1
NEM2	Nemuro 2	3.45	9	eS	Sn	06 35 07.7	-2.9
JAR	Ashorobuto	3.46	345	P	Pn	06 34 31.6	+0.6
JAR				S	Sn	06 35 09.6	-1.4
JYK	Kaneyama	3.74	255	P	Pn	06 34 36.1	+1.4
JTKR	Abashiri--Toko	4.10	349	eP	Pn	06 34 41.4	+1.7
MJAR	Matsushiro Arr	6.33	240	Pn	Pn	06 35 10.9	+0.4
	0.1nm,0.3s,baz=60,slow=11,SNR=1.8						
	1.0nm,0.3s						
SONM	Songino Array	28.67	299	P	P	06 39 42.9	+10
	0.1nm,0.4s,baz=96,slow=10,SNR=1.6						
	0.1nm,0.4s						
MKAR	Makanchi Array	45.02	300	P	P	06 42 02.6	+11
	0.3nm,0.8s,baz=79,slow=9.0,SNR=2.3						
	0.3nm,0.8s						
WRA	Warramunga Arr	60.41	192	P	P	06 43 45.8	+0.3
	0.3nm,0.6s,baz=9.5,slow=7.0,SNR=5.3						
	0.3nm,0.6s						

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*IDC **23** 06:46:48.2±19.0, 36°.75N×71°.98E, h111^{km}±97^{km}, mb3.3/2, mbtmp3.7/6, ML3.5/4, Error ellipse: s-maj=204.6km s-min=53.3km az=2.0*

*NNC **23** 06:47:00.9±17.0, 37°.99N×70°.69E, h0^{km}, mb3.9, mpv3.8, Error ellipse: s-maj=164.8km s-min=116.8km az=112.0*

ISC 23 06:46:50.2±1.0,**37°.16N**±0°.09×**71°.56E**±0°.08,**h106**^{km}**,n24,** σ**2^{s}73**/27,**3C-3D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.23	18	P	Pn	06 48 08.9	+2.6
	SNR=47						
UCH	Uchtor	5.55	23	P	Pn	06 48 13.1	+2.4
	SNR=21						
EKS2	Erkin-Say	5.75	17	P	Pn	06 48 16.1	+2.9
	SNR=13						
AAK	Ala-Archa	5.92	21	P	Pn	06 48 18.2	+2.7
	SNR=11						
AAK	Ala-Archa	5.92	21	P	Pn	06 48 18.2	+2.7
	4.4nm,0.3s,baz=140,slow=3.7,SNR=34						
AAK				S	Sn	06 49 20.5	-1.4
	13nm,0.5s,baz=320,slow=19,SNR=17						
	11nm,0.3s						
KK31	Karatay Array	5.99	353	⇑P	Pn	06 48 19.1	+2.8
	3.9nm,0.3s,baz=176,slow=11,SNR=165						
KK31				⇑S	Sn	06 49 20.8	-2.8
	8.2nm,0.3s,baz=150,slow=24,SNR=4.4						
ULHL	Ulahol	6.23	34	P	Pn	06 48 21.3	+1.6
	SNR=5.9						
CHMS	Chumysh	6.32	22	P	Pn	06 48 23.2	+2.4
	SNR=6.0						
TKM2	Tokmak 2	6.53	27	P	Pn	06 48 26.1	+2.3
	SNR=14						
GEYT	Alibeck	10.70	278	S	Sn	06 51 17.3	-0.8
	1.6nm,0.4s,baz=123,slow=23,SNR=2.4						
MKAR	Makanchi Array	12.49	36	P	Pn	06 49 42.6	-1.4
	0.1nm,0.3s,baz=218,slow=13,SNR=7.1						
	0.6nm,0.7s						
PYUN	Piuthan	13.20	130	eP	Pn	06 49 51.8	-1.8
	15nm,0.4s						
DANN	Dangsing	13.50	127	eP	Pn	06 49 56.1	-1.6
	4.9nm,0.2s						
AB31	Akbulak array	14.74	329	⇓P	Pn	06 50 14.6	+1.5
	0.3nm,0.3s,baz=139,slow=13						
AB31				⇑S	Sn	06 52 46.5	-9.1
	0.7nm,0.4s,baz=132,slow=26,SNR=5.8						
PKI	Pulchoki	15.10	125	eP	Pn	06 50 16.5	-1.6
	4.6nm,0.4s						
GUN	Gumba	15.18	123	eP	Pn	06 50 17.6	-1.6
	3.4nm,0.3s						
JIRN	Jiri	15.55	123	eP	Pn	06 50 22.3	-1.6
	12nm,0.4s						
RAMN	Ramite	16.30	124	eP	Pn	06 50 31.4	-1.6
	0.8nm,0.2s						
AKTO	Aktyubinsk	16.45	328	P	P	06 50 37.2	+2.0
	0.2nm,0.3s,baz=136,slow=12,SNR=2.5						
	0.8nm,0.5s						
AKTO	Aktyubinsk	16.45	328	⇓P	P	06 50 36.8	+1.6
	4.0nm,1.4s						
AKTO				⇓S	Sn	06 53 27.9	-8.9
	1.9nm,0.9s						
TAPN	Taplejung	16.78	121	eP	Pn	06 50 37.7	-1.3
	2.9nm,0.2s						
ZALV	Zalesovo Beam	19.13	24	P	P	06 51 05.0	+0.4
	0.5nm,0.3s,baz=213,slow=10,SNR=7.0						
	1.3nm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARCES	ARCESS Array B 1.9nm,0.8s,baz=111,slow=8.8,SNR=3.8 1.9nm,0.8s	40.71	337	P	P	06 54 21.8	+1.8
YKA	Yellowknife Ar 0.1nm,0.5s,baz=343,slow=5.4,SNR=2.2 0.1nm,0.5s	80.56	3	P	P	06 58 50.0	-0.3

WEL 23 07:03:54.4±0.4**, 43°S**±3°×**17°3E**±°**, h12**^{km}**, M2.1**/2**, mB4.5**/1**, ML2.6**/9**, MLv2.1**/2**, Mw(mB)3.7**/1**, Error ellipse: s-maj=0.0km s-min=0.0km az=105.1, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KHZ	Kahutara	0.34	61	P	Pg	07 04 01.3	0.0
KHZ				S	Sg	07 04 06.3	+0.4
GVZ	Greta Valley S	0.39	191	P	Pb	07 04 03.7	+0.5
GVZ				S	Sb	07 04 10.9	+1.7
LTZ	Lake Taylor	0.67	253	P	Pb	07 04 08.0	+0.1
LTZ				S	Sb	07 04 17.7	+0.6
THZ	Tophouse	0.84	348	P	Pg	07 04 10.1	-0.5
THZ				S	Sg	07 04 20.4	-1.2
BSWZ	Blackbirch Sta	1.03	33	P	Pb	07 04 13.8	-0.4
BSWZ				S	Sn	07 04 29.3	+0.3
MQZ	McQueen's Vall	1.17	197	P	Pb	07 04 15.3	-1.3
MQZ				S	Sb	07 04 30.0	-1.7
MRNZ	Matariki Terra	1.22	347	P	Pn	07 04 16.8	-0.4
MRNZ				S	Sn	07 04 34.3	+0.7
DSZ	Denniston Nort	1.30	310	P	Pn	07 04 18.4	0.0
TKNZ	Takaka Hill	1.56	355	P	Pn	07 04 22.0	0.0
QRZ	Quartz Range	1.82	345	P	Pn	07 04 26.3	+0.8
BKZ	Black Stump Fm	4.26	38	P	Pn	07 05 00.2	+1.1
RAGZ	Rawiri	5.23	40	P	Pn	07 05 13.3	+0.8
MBAZ	Motutapu North	5.97	14	P	Pn	07 05 23.9	+1.5

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*IDC **23** 07:12:09.1±0.8, 24°.78N×122°.16E, h0^{km}, mb3.6/9, mbtmp3.6/11, ML3.4/2, MS3.1/7, Error ellipse: s-maj=25.7km s-min=17.8km az=86.0*

*TAP **23** 07:12:11.2, 24°.95N×122°.39E, h15^{km}, ML3.8, D*

*JMA **23** 07:12:12.0±0.2, 25°N±1°×122°.4E±0°.6, h27^{km}, MV3.7/8, TAIWAN REGION*

ISC 23 07:12:11.6±1.1**, 24°.88N**±0°.03×**122°.38E**±0°.02**, h15**^{km}±7^{km}**, n88, σ0^{s}78**/99**, mb3.5**/8**, MS3.0**/5**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao baz=280	0.38	290	P	Pg	07 12 19.3	0.0
TWB1	baz=280			eS	Sg	07 12 24.6	0.0
EGS	baz=249	0.41	266	eP	Pb	07 12 20.3	-0.3
SXI1	Grass Mountain baz=287	0.51	295	eP	Pb	07 12 22.0	-0.3
SXI1	baz=287			eS	Sb	07 12 28.6	-1.0
TIPB	Shuangxi baz=273	0.51	281	eP	Pb	07 12 22.3	-0.1
TIPB	baz=273			eS	Sb	07 12 29.6	-0.1
TWC	Suao baz=227	0.55	241	P	Pb	07 12 22.7	-0.3
NDS	Dongshan baz=234	0.65	248	eP	Pb	07 12 25.1	+0.4
JYNG	Yonagunijimaku	0.66	129	P	Pb	07 12 24.8	-0.1
JYNG				S	Sb	07 12 34.2	+0.2
TWE	Neicheng baz=242	0.67	257	eP	Pb	07 12 25.3	+0.3
EWUT	Wuta baz=228	0.70	232	eP	Pb	07 12 25.8	+0.4
EWUT	baz=228			eS	Sb	07 12 35.9	+1.0
YOJ	Yonaguni jima	0.70	126	P	Pb	07 12 25.6	0.0
YOJ	Yonaguni jima	0.70	126	P	Pg	07 12 25.1	-0.2
YOJ				eS	Sb	07 12 35.3	+0.2
YOJ	Yonaguni jima baz=120	0.70	126	eP	Pg	07 12 25.2	-0.2
YOJ	baz=120			eS	Sb	07 12 35.0	-0.1
FUSB	Fushanzhiwuyua baz=256	0.73	261	eP	Pb	07 12 26.1	0.0
TWA	Mucha baz=273	0.73	278	eP	Pb	07 12 26.1	0.0
ENA	Nanau baz=228	0.73	233	P	Pb	07 12 26.1	0.0
ENTT	Nioudou baz=247	0.78	253	eP	Pb	07 12 27.1	+0.2
ENTT	baz=247			eS	Sn	07 12 38.9	-0.6
NHDH	Xindian Distri baz=271	0.78	277	eP	Pb	07 12 27.0	+0.1
NHDH	baz=271			eS	Sb	07 12 37.3	-0.1
YM01	YM01 baz=285	0.78	290	eP	Pb	07 12 26.9	-0.1
NWLT	Wulai baz=258	0.81	263	eP	Pb	07 12 27.4	+0.1
NWLT	baz=258			eS	Sb	07 12 38.2	+0.2
TAP	Taipei baz=276	0.81	282	eS	Sb	07 12 38.6	+0.5
TWY	Chenhua baz=295	0.81	300	eP	Pb	07 12 27.1	-0.3
TATO	Taipei	0.82	277	P	Pg	07 12 27.6	+0.1
ANP	Anpu baz=274	0.84	292	eP	Pn	07 12 28.1	-0.9
ANP	baz=274			eS	Sb	07 12 39.4	+0.2
LATG	Datong baz=242	0.85	247	P	Pn	07 12 28.4	-0.7
NTST	Danshui baz=284	0.89	289	eP	Pn	07 12 29.8	+0.2
TWS1	Kuangyinshan baz=280	0.90	285	eP	Pn	07 12 29.1	-0.7
YHNB	Yeheng	0.94	258	P	Pn	07 12 29.8	-0.5
YHNB	Yeheng baz=263	0.94	258	P	Pg	07 12 29.5	-0.2
NSK	Sanguang baz=263	0.95	258	eP	Pn	07 12 30.1	-0.4
ETL	Fush Village baz=221	0.99	224	eP	Pn	07 12 30.9	-0.2
NACB	Ninganchiao	1.00	226	P	Pg	07 12 30.7	-0.2
NACB	Ninganchiao baz=223	1.00	226	eP	Pb	07 12 30.6	-0.1
NACB	baz=223			eS	Sg	07 12 44.2	+0.1
NNSB	Datong baz=232	1.01	244	eP	Pg	07 12 30.9	-0.3
NNS	Nan Shan baz=232	1.01	245	eP	Pn	07 12 31.2	-0.3
ETLH	Xiulin Townshi baz=228	1.06	231	P	Pb	07 12 31.5	-0.1
TWD	Chiawan baz=227	1.07	222	eP	Pg	07 12 32.4	+0.2
TWD	baz=227			eS	Sn	07 12 46.8	+0.2
NFF	Wufeng Townshi baz=267	1.17	258	eP	Pb	07 12 33.5	-0.2
WHF	Hehuan Shan baz=232	1.25	235	eP	Pg	07 12 35.9	+0.2
TWT	Tachien baz=223	1.26	241	eP	Pg	07 12 35.9	0.0
LIOB	Emei baz=256	1.26	260	eP	Pb	07 12 34.8	-0.4
TDCB	Techi baz=223	1.27	241	eP	Pg	07 12 35.7	-0.4
NSTT	Nanjuang baz=255	1.28	259	eP	Pn	07 12 34.8	-0.2
ESL	Shilin baz=234	1.37	220	eP	Pb	07 12 36.5	-0.3
CHGB	Renai baz=231	1.37	234	P	Pg	07 12 37.8	-0.1
OWD	Renai baz=228	1.43	230	P	Pb	07 12 38.4	+0.3
WHP	Taichung City baz=258	1.44	246	eP	Pg	07 12 38.9	-0.4
WUSB	Renai baz=230	1.45	233	iP	Pg	07 12 39.1	-0.4
HATJ	Hateruma jima	1.53	122	eP	Pn	07 12 37.2	-1.2
VWDT	VWDT baz=223	1.59	226	P	Pb	07 12 40.8	+0.1
JKRS	Kuro-shima	1.61	113	eP	Pb	07 12 40.0	-1.1
HGSD	Ruisui baz=196	1.63	213	eP	Pn	07 12 40.1	+0.3
EHY	Hungye baz=213	1.67	216	eP	Pn	07 12 40.4	0.0
SMLT	Sun Moon Lake baz=218	1.67	234	eP	Pg	07 12 43.0	-0.8
JIJ	Ishigaki jima	1.68	107	eP	Pn	07 12 40.9	+0.4
JIJ				eS	Sb	07 13 02.1	-1.2
TYC	Yuchr baz=233	1.69	235	eP	Pb	07 12 42.9	+0.4
SSLB	Suanglung	1.69	231	P	Pb	07 12 42.5	0.0
SSLB	Suanglung baz=228	1.69	231	P	Pb	07 12 42.5	0.0
YULB	Yu-li baz=212	1.78	214	eP	Pn	07 12 41.7	-0.2
WHYT	Xinyi Township baz=228	1.82	230	eP	Pb	07 12 44.8	+0.1
FULB	Fuli baz=193	1.94	211	eP	Pn	07 12 45.1	+1.0
ALS	Alishan baz=207	1.98	227	eP	Pb	07 12 47.2	-0.3
EHD	Haiduan baz=210	2.03	212	eP	Pn	07 12 46.0	+0.7
EDH	Donghe baz=193	2.14	208	eP	Pn	07 12 47.7	+1.0
WCKO	Fanlu baz=226	2.16	229	eP	Pb	07 12 49.9	-0.6
CHN4	Tsaushan baz=225	2.23	227	eP	Pb	07 12 51.4	-0.2
TPUB	Ta-pu	2.24	226	P	Pb	07 12 50.9	-0.9
TPUB	Ta-pu baz=207	2.24	226	eP	Pb	07 12 50.9	-0.9
STYH	Taoyuan baz=204	2.24	221	eP	Pb	07 12 49.9	-2.0
WTP	Ta-pu baz=207	2.29	225	eP	Pb	07 12 51.4	-1.2
TWGBT	Beinan	2.37	210	P	Pb	07 12 52.8	-1.2
CHN1	Nanshi baz=223	2.39	226	eP	Pb	07 12 53.1	-1.3
VWUC	VWUC baz=270	2.67	273	eP	Pn	07 12 52.7	-1.3
MASBT	Mashibuluo baz=214	2.77	216	eP	Pn	07 12 57.0	+1.6
KSRS	Korea Array 0.3nm,0.3s,baz=200,slow=11,SNR=1.7	13.40	19	Pn	Pn	07 15 22.5	+1.2
KSRS	comp=Z,49nm,18.3s,baz=200,slow=39 0.6nm,0.4s			LR	LR	07 20 59.1	
MJAR	Matsushiro Arr 0.1nm,0.3s,baz=240,slow=12,SNR=1.3	17.87	46	P	P	07 16 23.8	+3.4
MJAR	comp=Z,27nm,21.2s,baz=188,slow=39 0.9nm,0.3s			LR	LR	07 23 51.2	
USRK	Ussuriysk Ar. 1.6nm,0.6s,baz=207,slow=13,SNR=2.8 1.6nm,0.6s	20.81	20	P	Pn	07 16 54.5	-0.4
CMAR	Chiang Mai Arr 1.1nm,0.3s,baz=105,slow=5.7,SNR=2.5 1.1nm,0.3s	22.68	258	P	P	07 17 10.9	-1.8
ASAJ	Asahikawa comp=Z,43nm,18.2s,baz=219,slow=36	25.30	36	LR	LR	07 27 15.4	
KLR	Kul'dur comp=Z,38nm,18.8s,baz=262,slow=36	25.39	14	LR	LR	07 27 32.0	
SONM	Songino Array 0.3nm,0.7s,baz=152,slow=12,SNR=2.4	26.18	335	P	P	07 17 44.9	-0.8
SONM	comp=Z,35nm,20.5s,baz=227,slow=37 0.3nm,0.7s			LR	LR	07 28 16.3	
MKAR	Makanchi Array 0.6nm,0.8s,baz=108,slow=10,SNR=6.8 0.6nm,0.8s	38.61	315	P	P	07 19 34.4	+0.1
PETK	Petropavlovsk- 0.7nm,0.4s,baz=222,slow=6.0,SNR=4.8 0.7nm,0.4s	38.69	34	P	P	07 19 37.3	+2.5
ZALV	Zalesovo Beam 0.3nm,0.3s,baz=123,slow=7.6,SNR=1.8 0.3nm,0.3s	40.27	326	P	P	07 19 46.6	-1.3
WRA	Warramunga Arr 1.1nm,0.9s,baz=346,slow=8.6,SNR=5.8	46.04	164	P	P	07 20 34.4	-0.5
WRA	0.2nm,0.7s,baz=343,slow=3.5,SNR=5.6 1.1nm,0.9s			PcP	PcP	07 22 10.1	-1.2
TIXI	Tiksi comp=Z,23nm,19.5s,baz=181,slow=40	46.95	3	LR	LR	07 43 13.7	
ASAR	Alice Springs 0.4nm,0.7s,baz=345,slow=10,SNR=4.5	49.53	166	P	P	07 21 02.2	+0.2
ASAR	0.2nm,0.6s,baz=4.5,slow=1.4,SNR=4.6 0.4nm,0.7s			PcP	PcP	07 22 22.8	-0.9
URZ	Urewera comp=Z,40nm,20.8s,baz=266,slow=32	81.09	139	LR	LR	07 55 19.4	
YKA	Yellowknife Ar 0.2nm,0.7s,baz=307,slow=5.1,SNR=5.5 0.2nm,0.7s	81.91	23	P	P	07 24 29.4	-0.9

IDC 23 07:23:15.3±610.0**, 49°.92N**×**37°.59E, h0**^{km}**, Error ellipse: s-maj=251.5km s-min=136.0km az=12.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON 0.1nm,0.7s,baz=176,slow=330,SNR=4.8	6.82	358	I	I	08 02 00.0	
I31KZ	AKTYUBINSK INF 0.3nm,0.6s,baz=273,slow=316,SNR=25	13.12	80	I	I	08 44 36.7	
I46RU	ZALESOVO INFRA baz=282,slow=311,SNR=1.6	28.97	64	I	I	10 23 30.0	

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*IDC **23** 07:24:37.0±1.0, 5°.26S×104°.03E, h0^{km}, mb4.0/10, mbtmp4.0/10, Error ellipse: s-maj=53.3km s-min=16.5km az=49.0*

*DJA **23** 07:24:55.4±0.8, 5°S±7°×10°5E±°, h97^{km}±8^{km}, M3.5/7, MLv3.5/7*

ISC 23 07:24:51.4±0.6**, 4°.77S**±0°.09×**104°.92E**±0°.08**, h100**^{km}**, n19, σ1^{s}94**/21**, mb3.9**/10**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KLI	Kotabumi	0.11	212	P	Pn	07 25 11.7	+6.3
BLSI	Bandar Lampung	0.68	151	P	Pn	07 25 14.3	+5.6
KASI	Kota Agung	0.86	209	P	Pn	07 25 11.6	+1.3
KASI				S	Sn	07 25 23.8	-0.7
LWLI	Liwa	0.89	254	P	Pn	07 25 13.1	+2.4
LWLI				S	Sn	07 25 25.9	+0.6
SBJI	Serang	1.81	138	P	Pn	07 25 22.4	+0.9
CGJI	Cibinong	1.99	157	P	Pn	07 25 25.8	+2.0
MNAI	Manna	2.00	282	P	Pn	07 25 26.5	+2.6
WRA	Warramunga Arr 0.7nm,0.5s,baz=311,slow=9.1,SNR=21	32.37	120	P	P	07 31 12.8	+1.1
WRA	0.1nm,0.4s,baz=314,slow=2.2,SNR=2.1 0.7nm,0.5s			PcP	PcP	07 33 57.5	+0.1
ASAR	Alice Springs 1.0nm,0.4s,baz=301,slow=7.7,SNR=13	33.67	127	P	P	07 31 24.1	+1.0
ASAR	0.1nm,0.3s,baz=300,slow=2.0,SNR=1.1 1.0nm,0.4s			PcP	PcP	07 33 59.9	-1.0
STKA	Stephens Creek 2.7nm,0.4s,baz=312,slow=9.7,SNR=14 2.7nm,0.4s	43.67	133	P	P	07 32 47.1	+0.7
SONM	Songino Array 0.7nm,0.7s,baz=179,slow=11,SNR=5.9 0.7nm,0.7s	52.40	1	P	P	07 33 55.3	+1.8
MKAR	Makanchi Array 0.5nm,0.4s,baz=154,slow=8.6,SNR=13 0.5nm,0.4s	55.11	341	P	P	07 34 12.4	-0.8
AKTO	Aktyubinsk 0.6nm,0.4s,baz=164,slow=7.4,SNR=2.2 0.6nm,0.4s	68.16	330	P	P	07 35 38.8	-2.0
PETK	Petropavlovsk- 3.0nm,1.2s,baz=238,slow=8.3,SNR=1.5 3.0nm,1.2s	72.69	30	P	P	07 36 11.1	+2.8
KBZ	Khabaz 0.6nm,0.3s,baz=72,slow=2.5,SNR=3.6 0.6nm,0.3s	73.61	318	P	P	07 36 12.4	-1.5
BRTR	Keskin Array B 0.7nm,0.7s,baz=148,slow=8.3,SNR=4.3 0.7nm,0.7s	78.80	312	P	P	07 36 39.1	-4.5
FINES	FINESS Array B 3.9nm,1.0s,baz=227,slow=4.2,SNR=3.4 3.9nm,1.0s	88.84	332	P	P	07 37 33.8	-0.2
TXAR	Lajitas Array 0.1nm,0.5s,baz=7.7,slow=1.6,SNR=4.7	143.55	45	PKP	PKPdf	07 44 13.9	-1.4
CPUP	Villa Florida 1.1nm,0.8s,baz=164,slow=7.4,SNR=2.5	144.62	208	PKP	PKPab	07 44 13.9	-1.9

IDC 23 07:43:18.3±3.0**, 33°.05S**×**178°.47W, h0**^{km}**, mb3.7**/2**, mbtmp3.8**/3**, ML3.6**/1**, MS3.2**/1**, Error ellipse: s-maj=70.9km s-min=36.3km az=117.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera 1.5nm,0.3s,baz=332,slow=4.6,SNR=11	6.32	213	Pn	Pn	07 44 53.6	+0.9
URZ	3.3nm,0.3s,baz=238,slow=21,SNR=3.5 4.0nm,0.3s			Sn	Sn	07 46 04.0	-1.6
DZM	Mont Dzumac comp=Z,80nm,18.4s,baz=75,slow=32	17.25	306	LR	LR	07 52 30.4	
ASAR	Alice Springs 0.7nm,0.6s,baz=114,slow=7.4,SNR=7.4 0.7nm,0.6s	42.63	270	P	P	07 51 16.7	0.0
WRA	Warramunga Arr 0.7nm,0.5s,baz=116,slow=7.6,SNR=13 0.7nm,0.5s	43.86	275	P	P	07 51 26.4	-0.2
FINES	FINESS Array B 0.6nm,0.5s,baz=20,slow=4.4,SNR=6.4	147.47	338	PKPbc	PKPbc	08 03 02.6	-0.9

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*IDC **23** 07:43:00.4±2.3, 8°.01S×116°.04E, h0^{km}, mb3.8/5, mbtmp3.9/5, Error ellipse: s-maj=140.1km s-min=19.9km az=55.0*

*DJA **23** 07:43:33.6±0.7, 8°S±10°×11°7E±°, h276^{km}±6^{km}, M3.5/6, MLv3.5/6*

ISC 23 07:43:32.0±0.9**, 8°.0S**±0°.1×**117°.05E**±0°.07**, h300**^{km}**, n12, σ1^{s}93**/15**, mb3.5**/4**, Bali Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWSI	Taliwang, Sumb	0.79	192	P	Pn	07 44 11.2	-0.3
TWSI				S	S	07 44 40.3	-2.6
PLAI	Plampang	1.12	140	P	Pn	07 44 12.3	-0.7
PLAI				S	S	07 44 42.1	-3.5
IGBI	Denpasar	2.07	246	P	Pn	07 44 19.7	+0.4
IGBI				S	S	07 44 53.7	-3.3
JAGI	Jajag, Banyuwa	2.91	260	P	Pn	07 44 27.4	+0.5
GMJI	Gumukmas	3.58	265	P	Pn	07 44 34.2	+0.4
BKSI	Bulukumba	4.02	50	P	Pn	07 44 38.5	0.0
BASI	Baing, Sumba	4.14	123	P	Pn	07 44 39.0	-0.8
WRA	Warramunga Arr 1.9nm,0.5s,baz=297,slow=13,SNR=38 1.9nm,0.5s	20.55	127	P	P	07 47 49.8	+1.1
ASAR	Alice Springs 1.9nm,0.4s,baz=313,slow=9.2,SNR=36 1.9nm,0.4s	22.47	136	P	P	07 48 08.8	+2.4
STKA	Stephens Creek 1.2nm,0.5s,baz=308,slow=8.1,SNR=4.3 1.2nm,0.5s	32.98	140	P	P	07 49 41.8	+2.3
SONM	Songino Array 1.0nm,0.6s,baz=171,slow=9.0,SNR=7.8 1.0nm,0.6s	56.35	351	P	P	07 52 42.3	-0.1
MKAR	Makanchi Array 0.3nm,0.4s,baz=140,slow=6.6,SNR=6.6 0.3nm,0.4s	62.67	334	P	P	07 53 24.7	-0.6

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*JMA **23** 07:48:59.5±0.1, 24°.9N±1°.0×122°.4E±0°.4, h15^{km}, MV3.2/7, TAIWAN REGION*

*TAP **23** 07:48:59.2, 24°.94N×122°.36E, h18^{km}, ML3.3, D*

ISC 23 07:48:59.2±1.1**, 24°.89N**±0°.04×**122°.38E**±0°.03**, h14**^{km}±10^{km}**, n36, σ0^{s}25**/49**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao baz=281	0.37	289	P	Pg	07 49 06.8	0.0
TWB1	baz=281			S	Sg	07 49 12.0	+0.1
SXI1	Grass Mountain baz=288	0.50	294	P	Pb	07 49 09.4	-0.5
SXI1	baz=288			eS	Sg	07 49 16.0	+0.1
TIPB	Shuangxi baz=273	0.51	280	P	Pb	07 49 09.9	-0.1
TIPB	baz=273			eS	Sb	07 49 17.2	-0.1
TWC	Suao baz=234	0.56	240	eP	Pg	07 49 10.3	+0.1
TWC	baz=234			eS	Sb	07 49 18.4	-0.2
NDS	Dongshan baz=233	0.65	247	eP	Pg	07 49 11.9	-0.1
TWE	Neicheng baz=250	0.67	256	eP	Pb	07 49 12.4	-0.2
JYNG	Yonagunijimaku	0.67	130	eP	Pg	07 49 12.1	-0.3
EWUT	Wuta baz=227	0.70	231	eP	Pb	07 49 13.2	-0.1
YOJ	Yonaguni jima	0.71	126	P	Pg	07 49 12.7	-0.4
YOJ				S	Sg	07 49 22.5	0.0
YOJ	Yonaguni jima baz=119	0.71	126	eP	Pg	07 49 12.7	-0.4
YOJ	baz=119			eS	Sg	07 49 22.6	0.0
TWA	Mucha baz=272	0.73	278	eP	Pb	07 49 13.7	-0.1
TWA	baz=272			eS	Sb	07 49 23.8	+0.2
FUSB	Fushanzhiwuyua baz=255	0.73	260	P	Pg	07 49 13.4	0.0
FUSB	baz=255			eS	Sb	07 49 23.5	-0.2
ENA	Nanau baz=227	0.74	232	P	Pb	07 49 13.7	-0.2
YM01	YM01 baz=286	0.78	290	eP	Pg	07 49 14.3	0.0
NWLT	Wulai baz=257	0.80	262	eP	Pg	07 49 15.0	+0.1
NWLT	baz=257			eS	Sg	07 49 25.5	+0.1
ANP	Anpu baz=287	0.83	291	eP	Pg	07 49 15.6	+0.1
LATG	Datong baz=242	0.85	246	P	Pg	07 49 16.0	+0.3
YHNB	Yeheng baz=261	0.94	257	P	Pb	07 49 17.3	-0.1
YHNB	baz=261			eS	Sg	07 49 29.9	+0.2
NSK	Sanguang baz=261	0.95	257	eP	Pb	07 49 17.5	0.0
ETL	Fush Village baz=220	1.00	224	eP	Pb	07 49 18.5	+0.2
NACB	Ninganchiao baz=222	1.01	225	eP	Pb	07 49 18.2	-0.3
NACB	baz=222			eS	Sb	07 49 31.7	+0.1
NNSB	Datong baz=225	1.01	243	P	Pb	07 49 18.8	+0.1
NNSB	baz=225			eS	Sg	07 49 32.2	+0.1
NNS	Nan Shan baz=225	1.02	244	eP	Pb	07 49 18.6	-0.1
ETLH	Xiulin Townshi baz=227	1.06	231	eP	Pb	07 49 19.4	-0.1
ETLH	baz=227			eS	Sg	07 49 33.9	+0.3
TWD	Chiawan baz=218	1.07	222	eP	Pn	07 49 19.7	-0.2
NFF	Wufeng Townshi baz=253	1.17	258	P	Pn	07 49 21.0	-0.3
WHF	Hehuan Shan baz=230	1.25	234	eP	Pb	07 49 22.9	0.0
LIOB	Emei baz=255	1.26	259	eP	Pn	07 49 22.4	-0.1
NSTT	Nanjuang baz=254	1.28	259	eP	Pn	07 49 22.5	-0.2
CHGB	Renai baz=230	1.37	233	P	Pg	07 49 25.4	-0.3
OWD	Renai baz=227	1.44	230	eP	Pb	07 49 26.1	+0.2
WUSB	Renai baz=229	1.45	232	eP	Pb	07 49 26.7	+0.5
HATJ	Hateruma jima	1.54	122	eS	Sb	07 49 47.4	+0.5
VWDT	VWDT baz=222	1.59	225	eP	Pb	07 49 28.2	-0.3
JIJ	Ishigaki jima	1.69	108	eP	Pn	07 49 29.1	+0.7
SSLB	Suanglung baz=227	1.70	230	P	Pb	07 49 30.1	-0.2

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*WEL **23** 07:51:00, 41°.00S×174°.92E, h64^{km}, ML4.8, Mw4.3, Moment Tensor Solution. s8 Moment tensor: Scale 10^{15} Nm; M$_{rr}$1.16; M$_{\theta\theta}$1.58; M$_{\phi\phi}$-2.74; M$_{r\theta}$-1.69; M$_{\theta\phi}$2.75;*

M$_{\phi r}$0.02; Fault plane solution: M$_0$3.99000×10^{15} NP1: φ$_s$196.00000°,δ62.00000°,λ163.00000°. NP2: φ$_s$293.00000°,δ75.00000°,λ29.00000°. Principal axes: T -418.3600, Plg31.0000°, Azm157.0000°; N 379.9700, Plg58.0000°, Azm318.0000°; P 38.3800, Plg9.0000°, Azm62.0000°;

*IDC **23** 07:51:43.4±0.8, 40°85S×174°78E, h0^{km}, mb4.2/5, mbtmp4.4/7, ML4.9/2, MS3.2/4 Error ellipse: s-maj=24.8km s-min=20.0km az=111.0*

*NOU **23** 07:51:49.9, 41°06S×174°94E, h76^{km}, MLv4.9/17, Cook Strait, New Zealand*

*NEIC **23** 07:51:51, 40°98S×174°89E, h63^{km}*

*NEIC **23** 07:51:51±2.3, 40°97S±0°05×174°86E±0°06, h60^{km}±4^{km}, mb4.6/10, Mwr4.4/36, Error ellipse: s-maj=8.0km s-min=5.9km az=142.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.49; M$_{\theta\theta}$2.37; M$_{\phi\phi}$-2.87; M$_{r\theta}$-2.07; M$_{\theta\phi}$3.16; M$_{\phi r}$0.19; Fault plane solution: M$_0$4.62000×10^{15} NP1:φ$_s$197.88000°,δ63.87000°, λ171.52000°. NP2:φ$_s$291.63000°,δ82.39000°,λ26.38000°. Principal axes: T 4.6538, Plg24.0000°, Azm158.0000°; N -0.0649, Plg63.0000°, Azm307.0000°; P -4.5889, Plg13.0000°, Azm62.0000°;*

*WEL **23** 07:51:51.4±0.6, 41°S±6°×17°5E±°, h54^{km}±9^{km}, M4.8/126, mB5.6/3, ML5.0/126, MLv4.8/126, Mw(mB)5.1/3 Error ellipse: s-maj=0.0km s-min=0.0km az=149.9, confirmed*

ISC 23 07:51:51.5±0.6**, 41°02S**±0°03×**174°90E**±0°03**, h71**^{km}±4^{km}**, n248,** σ1^s**76**/259**, mb4.5**/11**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAW	**Cannon Point**	**0.15**	**124**	P	**Pn**	**07 52 01.7**	**-0.4**
CAW				S	**Sn**	**07 52 08.8**	**-1.1**
KIW	**Kapiti Island**	**0.16**	**3**	P	**Pn**	**07 52 01.3**	**-0.8**
KIW				S	**Sn**	**07 52 07.9**	**-1.9**
WEL	**Wellington**	**0.28**	**201**	P	**Pn**	**07 52 02.4**	**-0.3**
WEL				S	**Sn**	**07 52 09.9**	**-1.0**
OGWZ	**Otaki Gorge**	**0.29**	**45**	P	**Pn**	**07 52 02.1**	**-0.6**
OGWZ				S	**Sn**	**07 52 09.5**	**-1.4**
SNZO	**South Karori**	**0.32**	**207**		**Pn**	**07 52 02.4**	**-0.5**
SNZO				Sn	**Sn**	**07 52 10.2**	**-1.1**
SNZO	**South Karori**	**0.32**	**207**	P	**Pn**	**07 52 02.6**	**-0.4**
BHW	**Baring Head**	**0.39**	**183**		**Pn**	**07 52 03.1**	**-0.4**
BHW				Sn	**Sn**	**07 52 11.0**	**-1.2**
MSWZ	**Moikau Station**	**0.47**	**146**		**Pn**	**07 52 04.2**	**-0.1**
MSWZ				Sn	**Sn**	**07 52 13.2**	**-0.3**
MSWZ	**Moikau Station**	**0.47**	**146**	P	**Pn**	**07 52 04.4**	**+0.2**
MSWZ				S	**Sn**	**07 52 13.3**	**-0.3**
MTW	**Mount Morrison**	**0.47**	**107**	P	**Pn**	**07 52 04.0**	**-0.2**
HOWZ	**Holdsworth Sta**	**0.48**	**75**	P	**Pn**	**07 52 03.7**	**-0.6**
HOWZ				S	**Sn**	**07 52 12.1**	**-1.5**
TCW	**Tory Channel**	**0.51**	**248**		**Pn**	**07 52 03.7**	**-0.8**
TCW				Sn	**Sn**	**07 52 12.4**	**-1.6**
TCW	**Tory Channel**	**0.51**	**248**	P	**Pn**	**07 52 04.0**	**-0.5**
TCW				S	**Sn**	**07 52 12.5**	**-1.6**
PAWZ	**Paruwai Farm**	**0.54**	**132**	P	**Pn**	**07 52 04.9**	**0.0**
PAWZ				S	**Sn**	**07 52 14.4**	**-0.3**
PLWZ	**Palliser**	**0.61**	**154**		**Pn**	**07 52 05.3**	**-0.3**
PLWZ	**Palliser**	**0.61**	**154**	P	**Pn**	**07 52 05.6**	**0.0**
MRZ	**Mangatainoka R**	**0.63**	**55**		**Pn**	**07 52 04.8**	**-0.9**
MRZ	**Mangatainoka R**	**0.63**	**55**	P	**Pn**	**07 52 04.9**	**-0.9**
TRWZ	**Traveller**	**0.70**	**123**	P	**Pn**	**07 52 06.7**	**+0.1**
DUWZ	**D'Urville Isla**	**0.77**	**286**	P	**Pn**	**07 52 06.6**	**-0.8**
TIWZ	**Tintock**	**0.79**	**72**	P	**Pn**	**07 52 06.9**	**-0.6**
TUWZ	**Tuamarina**	**0.83**	**240**		**Pn**	**07 52 07.3**	**-0.6**
TUWZ	**Tuamarina**	**0.83**	**240**	P	**Pn**	**07 52 07.3**	**-0.6**
CMWZ	**Cape Campbell**	**0.89**	**215**		**Pn**	**07 52 09.1**	**+0.3**
CMWZ	**Cape Campbell**	**0.89**	**215**	P	**Pn**	**07 52 09.2**	**+0.4**
POWZ	**Post Office Ro**	**0.91**	**47**	P	**Pn**	**07 52 07.9**	**-1.1**
PRWZ	**Pori Road**	**0.94**	**61**	P	**Pn**	**07 52 08.6**	**-0.7**
CPWZ	**Castlepoint**	**0.99**	**84**	P	**Pn**	**07 52 09.9**	**0.0**
BSWZ	**Blackbirch Sta**	**1.04**	**228**		**Pn**	**07 52 10.1**	**-0.4**
BSWZ	**Blackbirch Sta**	**1.04**	**228**	P	**Pn**	**07 52 10.2**	**-0.3**
BFZ	**Birch Farm**	**1.08**	**72**		**Pn**	**07 52 10.1**	**-0.9**
BFZ	**Birch Farm**	**1.08**	**72**	P	**Pn**	**07 52 10.1**	**-0.9**
BFZ	**Birch Farm**	**1.08**	**72**	P	**Pn**	**07 52 10.2**	**-0.9**
NNZ	**Nelson**	**1.17**	**260**		**Pn**	**07 52 11.3**	**-0.8**
NNZ	**Nelson**	**1.17**	**260**	P	**Pn**	**07 52 11.5**	**-0.7**
DVHZ	**Dannevirke**	**1.20**	**54**	P	**Pn**	**07 52 11.4**	**-1.3**
TSZ	**Takapari Road**	**1.26**	**40**	P	**Pn**	**07 52 12.2**	**-1.2**
WAZ	**Wanganui**	**1.27**	**3**	P	**Pn**	**07 52 13.5**	**0.0**
TKNZ	**Takaka Hill**	**1.47**	**269**		**Pn**	**07 52 15.5**	**-0.6**
TKNZ	**Takaka Hill**	**1.47**	**269**	P	**Pn**	**07 52 15.7**	**-0.4**
PNHZ	**Pukenui**	**1.49**	**42**	P	**Pn**	**07 52 15.0**	**-1.4**
WPHZ	**Waipukurau**	**1.51**	**51**	P	**Pn**	**07 52 15.3**	**-1.4**
PRHZ	**Porangahau**	**1.52**	**61**	P	**Pn**	**07 52 15.4**	**-1.4**
LREZ	**Lake Rotokare**	**1.60**	**346**	P	**Pn**	**07 52 18.0**	**+0.1**
MRNZ	**Matariki Terra**	**1.66**	**256**		**Pn**	**07 52 18.1**	**-0.5**
MRNZ	**Matariki Terra**	**1.66**	**256**	P	**Pn**	**07 52 18.3**	**-0.3**
THZ	**Tophouse**	**1.67**	**243**		**Pn**	**07 52 17.9**	**-0.9**
THZ	**Tophouse**	**1.67**	**243**	P	**Pn**	**07 52 17.8**	**-1.0**
MTVZ	**Mangateitei**	**1.69**	**15**	P	**Pn**	**07 52 18.7**	**-0.5**
KHZ	**Kahutara**	**1.73**	**216**		**Pn**	**07 52 19.1**	**-0.4**
KHZ	**Kahutara**	**1.73**	**216**	P	**Pn**	**07 52 19.1**	**-0.4**
KHZ	**Kahutara**	**1.73**	**216**	P	**Pn**	**07 52 19.1**	**-0.4**
MOVZ	**Moawhango**	**1.74**	**22**	P	**Pn**	**07 52 18.5**	**-1.3**
PKVZ	**Pokaka**	**1.76**	**11**	P	**Pn**	**07 52 19.5**	**-0.6**
BHHZ	**Black Hill Sta**	**1.77**	**31**	P	**Pn**	**07 52 18.9**	**-1.3**
WNVZ	**Wahianoa**	**1.77**	**18**	P	**Pn**	**07 52 19.6**	**-0.7**
NMEZ	**Namu Road**	**1.79**	**334**	P	**Pn**	**07 52 20.2**	**-0.1**
TRVZ	**Turoa**	**1.79**	**16**	P	**Pn**	**07 52 19.9**	**-0.7**
PXZ	**Pawanui**	**1.79**	**57**	P	**Pn**	**07 52 18.7**	**-1.7**
QRZ	**Quartz Range**	**1.81**	**275**		**Pn**	**07 52 19.8**	**-0.8**
QRZ	**Quartz Range**	**1.81**	**275**	P	**Pn**	**07 52 19.7**	**-0.9**
QRZ	**Quartz Range**	**1.81**	**275**	P	**Pn**	**07 52 19.6**	**-1.0**
WHVZ	**Whangaehu Hut**	**1.81**	**17**	P	**Pn**	**07 52 20.3**	**-0.6**
DRZ	**Dome Shelter**	**1.82**	**16**	P	**Pn**	**07 52 20.6**	**-0.5**
FWVZ	**Far West T-bar**	**1.83**	**16**	P	**Pn**	**07 52 20.5**	**-0.7**
TUVZ	**Tukino**	**1.84**	**19**	P	**Pn**	**07 52 20.7**	**-0.5**
KHEZ	**Kahui Hut**	**1.85**	**338**	P	**Pn**	**07 52 21.4**	**+0.1**
KHEZ	**Kahui Hut**	**1.85**	**338**	P	**Pn**	**07 52 21.3**	**-0.1**
NEZ	**North Egmont**	**1.85**	**340**	P	**Pn**	**07 52 21.2**	**-0.1**
VRZ	**Vera Road**	**1.90**	**357**	P	**Pn**	**07 52 21.5**	**-0.3**
DREZ	**Durham Road**	**1.91**	**343**	P	**Pn**	**07 52 22.2**	**+0.2**
SNVZ	**South Ngauruho**	**1.92**	**17**	P	**Pn**	**07 52 21.7**	**-0.6**
NGZ	**Ngauruhoe**	**1.92**	**16**	P	**Pn**	**07 52 21.8**	**-0.5**
NBEZ	**Newall Road No**	**1.92**	**335**	P	**Pn**	**07 52 21.9**	**-0.2**
KAHZ	**Kahuranaki**	**1.94**	**52**	P	**Pn**	**07 52 20.8**	**-1.7**
OTVZ	**Oturere**	**1.95**	**18**	P	**Pn**	**07 52 21.9**	**-0.7**
PKE	**Pukeiti**	**1.96**	**339**	P	**Pn**	**07 52 22.5**	**-0.1**
NNVZ	**North Ngauruho**	**1.97**	**16**	P	**Pn**	**07 52 22.4**	**-0.5**
KWHZ	**Kaweka Forest**	**1.98**	**37**	P	**Pn**	**07 52 21.2**	**-1.8**
WTVZ	**West Tongariro**	**1.98**	**16**	P	**Pn**	**07 52 22.4**	**-0.6**
ETVZ	**East Tongariro**	**1.98**	**19**	P	**Pn**	**07 52 22.2**	**-0.9**
TWVZ	**Taurewa**	**1.99**	**12**	P	**Pn**	**07 52 22.5**	**-0.7**
MHEZ	**Mangahewa**	**1.99**	**347**	P	**Pn**	**07 52 23.8**	**+0.7**
TMVZ	**Te Maari**	**2.00**	**18**	P	**Pn**	**07 52 22.5**	**-0.9**
KRVZ	**Karewarewa**	**2.01**	**17**	P	**Pn**	**07 52 22.9**	**-0.5**
NTVZ	**North Tongarir**	**2.01**	**17**	P	**Pn**	**07 52 22.7**	**-0.8**
MCHZ	**McNeill Hill**	**2.09**	**42**	P	**Pn**	**07 52 22.7**	**-1.7**
KATZ	**Kakaramea**	**2.13**	**17**	P	**Pn**	**07 52 24.4**	**-0.7**
CKHZ	**Cape Kidnapper**	**2.15**	**51**	P	**Pn**	**07 52 23.2**	**-2.0**
RITZ	**Rihia Road**	**2.17**	**20**	P	**Pn**	**07 52 24.6**	**-0.9**
BKZ	**Black Stump Fm**	**2.22**	**34**	Pn	**Pn**	**07 52 24.3**	**-2.0**
BKZ	**Black Stump Fm**	**2.22**	**34**	P	**Pn**	**07 52 24.2**	**-2.0**
BKZ	**Black Stump Fm**	**2.22**	**34**	P	**Pn**	**07 52 24.3**	**-2.0**
RATZ	**Rangitukua**	**2.25**	**18**	P	**Pn**	**07 52 25.8**	**-0.9**
ARHZ	**Aropaoanui**	**2.38**	**43**	P	**Pn**	**07 52 26.2**	**-2.1**
GVZ	**Greta Valley S**	**2.39**	**215**		**Pn**	**07 52 27.5**	**-0.9**
GVZ	**Greta Valley S**	**2.39**	**215**	P	**Pn**	**07 52 27.6**	**-0.9**
WATZ	**Wairara**	**2.40**	**16**	P	**Pn**	**07 52 27.6**	**-1.0**
NMHZ	**Naumai**	**2.42**	**38**	P	**Pn**	**07 52 27.0**	**-1.9**
DSZ	**Denniston Nort**	**2.44**	**252**		**Pn**	**07 52 28.0**	**-1.1**
DSZ	**Denniston Nort**	**2.44**	**252**	P	**Pn**	**07 52 28.0**	**-1.1**
MRHZ	**Matea Rd**	**2.48**	**29**	P	**Pn**	**07 52 27.5**	**-2.2**
WHTZ	**Whakaora**	**2.49**	**19**	P	**Pn**	**07 52 28.9**	**-1.0**
HIZ	**Hauiti**	**2.51**	**359**		**Pn**	**07 52 29.6**	**-0.4**
HIZ	**Hauiti**	**2.51**	**359**	P	**Pn**	**07 52 29.8**	**-0.2**
HIZ	**Hauiti**	**2.51**	**359**	P	**Pn**	**07 52 29.7**	**-0.4**
KUTZ	**Kaahu Road**	**2.63**	**16**	P	**Pn**	**07 52 30.6**	**-1.2**
MTHZ	**Maungataniwha**	**2.63**	**35**	P	**Pn**	**07 52 29.4**	**-2.4**
LTZ	**Lake Taylor**	**2.63**	**227**	Pn	**Pn**	**07 52 30.6**	**-1.2**
LTZ	**Lake Taylor**	**2.63**	**227**	P	**Pn**	**07 52 30.7**	**-1.1**
WHHZ	**Waihua**	**2.64**	**43**	P	**Pn**	**07 52 29.7**	**-2.2**
WPRZ	**Whakapapatarin**	**2.68**	**22**	P	**Pn**	**07 52 30.7**	**-1.8**
RAHZ	**Arahi**	**2.69**	**39**	P	**Pn**	**07 52 30.0**	**-2.6**
ALRZ	**Allen Road**	**2.70**	**25**	P	**Pn**	**07 52 30.4**	**-2.2**
AMCZ	**Amberley**	**2.73**	**217**		**Pn**	**07 52 31.7**	**-1.3**
AMCZ	**Amberley**	**2.73**	**217**	P	**Pn**	**07 52 31.6**	**-1.3**
TLZ	**Tolley Road**	**2.73**	**11**	P	**Pn**	**07 52 32.0**	**-1.2**
PRRZ	**Plateau Road**	**2.77**	**25**	P	**Pn**	**07 52 31.5**	**-2.2**
GRRZ	**Galatos Road**	**2.83**	**20**	P	**Pn**	**07 52 33.0**	**-1.4**
HRRZ	**Handcock Road**	**2.84**	**23**	P	**Pn**	**07 52 32.9**	**-1.7**
RTZ	**Ruatahuna**	**2.89**	**34**	Pn	**Pn**	**07 52 32.8**	**-2.5**
RTZ	**Ruatahuna**	**2.89**	**34**	P	**Pn**	**07 52 32.8**	**-2.5**
HSRZ	**Hossack Road**	**2.90**	**21**	P	**Pn**	**07 52 33.9**	**-1.5**
KNZ	**Kokohu**	**2.92**	**48**	P	**Pn**	**07 52 32.7**	**-2.9**
SNGZ	**Shannon Statio**	**2.92**	**41**	P	**Pn**	**07 52 32.8**	**-2.9**
MUGZ	**Murupara**	**2.92**	**30**	P	**Pn**	**07 52 32.7**	**-3.0**
RRRZ	**Republican Roa**	**2.96**	**25**	P	**Pn**	**07 52 33.8**	**-2.3**
MHGZ	**Mahia Peninsul**	**2.97**	**52**	P	**Pn**	**07 52 33.7**	**-2.6**
HLRZ	**Highlands Stat**	**2.98**	**23**	P	**Pn**	**07 52 36.4**	**-0.2**
UTU	**Utuhina**	**3.01**	**20**	P	**Pn**	**07 52 35.5**	**-1.5**
TARZ	**Mount Tarawera**	**3.05**	**25**	P	**Pn**	**07 52 35.8**	**-1.7**
NGRZ	**Ngongotaha**	**3.08**	**19**	P	**Pn**	**07 52 36.5**	**-1.4**
INZ	**Inchbonnie**	**3.09**	**235**		**Pn**	**07 52 36.4**	**-1.5**
INZ	**Inchbonnie**	**3.09**	**235**	P	**Pn**	**07 52 36.6**	**-1.4**
MKRZ	**Makatiti**	**3.12**	**23**	P	**Pn**	**07 52 37.8**	**-0.7**
OMRZ	**Omania**	**3.13**	**22**	P	**Pn**	**07 52 36.9**	**-1.6**
OXZ	**Oxford**	**3.13**	**222**		**Pn**	**07 52 36.1**	**-2.4**
OXZ	**Oxford**	**3.13**	**222**	P	**Pn**	**07 52 36.3**	**-2.2**
MQZ	**McQueen's Vall**	**3.16**	**211**	Pn	**Pn**	**07 52 36.4**	**-2.4**
MQZ	**McQueen's Vall**	**3.16**	**211**	P	**Pn**	**07 52 36.4**	**-2.4**
KARZ	**Kaharoa**	**3.17**	**20**	P	**Pn**	**07 52 39.0**	**-0.1**
RAGZ	**Rawiri**	**3.18**	**38**	P	**Pn**	**07 52 36.2**	**-3.1**
RIGZ	**Rimuhau**	**3.19**	**45**	P	**Pn**	**07 52 36.2**	**-3.2**
AKCZ	**Akaroa Harbour**	**3.21**	**207**	P	**Pn**	**07 52 37.9**	**-1.6**
EDRZ	**Edgecumbe**	**3.24**	**27**	P	**Pn**	**07 52 37.7**	**-2.3**
URZ	**Urewera**	**3.24**	**32**	Pn	**Pn**	**07 52 36.3**	**-3.8**
	215nm,0.3s,baz=300,slow=6.6,SNR=292						
URZ				Sn	**Sn**	**07 53 13.8**	**-3.7**
	212nm,0.3s,baz=172,slow=17,SNR=23						
	482nm,0.3s						
URZ	**Urewera**	**3.24**	**32**	P	**Pn**	**07 52 37.2**	**-2.8**
URZ	**Urewera**	**3.24**	**32**	P	**Pn**	**07 52 36.6**	**-3.4**
KMRZ	**Kaimai**	**3.27**	**15**	P	**Pn**	**07 52 39.3**	**-1.2**
TOZ	**Tahuroa Road**	**3.32**	**8**	Pn	**Pn**	**07 52 39.8**	**-1.3**
TOZ	**Tahuroa Road**	**3.32**	**8**	P	**Pn**	**07 52 40.0**	**-1.0**
MARZ	**Manawahe**	**3.33**	**25**	P	**Pn**	**07 52 39.2**	**-2.1**
MWZ	**Matawai**	**3.36**	**38**	P	**Pn**	**07 52 38.3**	**-3.5**
RACZ	**Rakaia**	**3.39**	**216**	P	**Pn**	**07 52 39.6**	**-2.4**
TKGZ	**Te Karaka**	**3.44**	**42**	P	**Pn**	**07 52 39.2**	**-3.5**
TGRZ	**Tauranga**	**3.45**	**18**	P	**Pn**	**07 52 41.5**	**-1.4**
MHCZ	**Mount Hutt**	**3.52**	**223**	P	**Pn**	**07 52 41.4**	**-2.4**
WHRZ	**Whale Island**	**3.55**	**28**	P	**Pn**	**07 52 42.1**	**-2.1**
CNGZ	**Carnagh Statio**	**3.59**	**46**	P	**Pn**	**07 52 41.4**	**-3.4**
WACZ	**Wakanui South**	**3.69**	**217**	P	**Pn**	**07 52 43.7**	**-2.4**
TWGZ	**Tauwhareparae**	**3.71**	**41**	P	**Pn**	**07 52 43.3**	**-3.1**
WVZ	**Waitaha Valley**	**3.72**	**235**	P	**Pn**	**07 52 44.6**	**-1.9**
RUGZ	**Raukumara Rang**	**3.73**	**36**	P	**Pn**	**07 52 43.2**	**-3.6**
MYRZ	**Mayor Island**	**3.88**	**16**	P	**Pn**	**07 52 47.8**	**-1.0**
WIZ	**White Island**	**3.92**	**28**	P	**Pn**	**07 52 46.4**	**-2.8**
RPZ	**Rata Peaks**	**3.92**	**225**	Pn	**Pn**	**07 52 47.0**	**-2.3**
	58nm,0.3s,baz=193,slow=2.8,SNR=93						
RPZ				Sn	**Sn**	**07 53 29.7**	**-4.3**
	60nm,0.3s,baz=88,slow=5.7,SNR=17						
	175nm,0.4s						
RPZ	**Rata Peaks**	**3.92**	**225**	P	**Pn**	**07 52 47.3**	**-2.0**
RPZ	**Rata Peaks**	**3.92**	**225**	P	**Pn**	**07 52 47.0**	**-2.3**
PUZ	**Puketiti**	**3.93**	**42**	P	**Pn**	**07 52 45.4**	**-4.0**
HAZ	**Te Kaha**	**3.95**	**35**	P	**Pn**	**07 52 45.5**	**-4.2**
AWAZ	**Awhitu Peninsu**	**3.96**	**357**	P	**Pn**	**07 52 49.3**	**-0.4**
PKGZ	**Pakihiroa**	**3.98**	**39**	P	**Pn**	**07 52 46.7**	**-3.5**
ARCZ	**Arundel**	**4.02**	**222**	P	**Pn**	**07 52 48.3**	**-2.3**
ETAZ	**East Tamaki Re**	**4.06**	**0**	P	**Pn**	**07 52 50.8**	**-0.4**
WTAZ	**Waiatarua**	**4.09**	**356**	P	**Pn**	**07 52 51.5**	**-0.2**
GCSZ	**Gaunt Creek Bo**	**4.10**	**234**	P	**Pn**	**07 52 49.4**	**-2.3**
EPAZ	**Eden Park BICE**	**4.14**	**358**	P	**Pn**	**07 52 52.7**	**+0.4**
HBAZ	**Herne Bay Bore**	**4.17**	**358**	P	**Pn**	**07 52 52.9**	**+0.2**
WMGZ	**Waiomatatini S**	**4.20**	**42**	P	**Pn**	**07 52 49.1**	**-4.0**
WIAZ	**Waiheke Island**	**4.23**	**3**	P	**Pn**	**07 52 52.7**	**-0.8**
MBAZ	**Motutapu North**	**4.25**	**360**	P	**Pn**	**07 52 53.0**	**-0.8**
RVAZ	**Riverhead Bore**	**4.25**	**357**	P	**Pn**	**07 52 53.3**	**-0.5**
KUZ	**Kuaotunu**	**4.32**	**9**	P	**Pn**	**07 52 53.6**	**-1.1**
KUZ	**Kuaotunu**	**4.32**	**9**	P	**Pn**	**07 52 53.3**	**-1.4**
MXZ	**Matakaoa Point**	**4.35**	**39**		**Pn**	**07 52 51.9**	**-3.2**
MXZ	**Matakaoa Point**	**4.35**	**39**	P	**Pn**	**07 52 52.1**	**-3.0**
MXZ	**Matakaoa Point**	**4.35**	**39**	P	**Pn**	**07 52 51.7**	**-3.4**
ABAZ	**Army Bay**	**4.42**	**359**	P	**Pn**	**07 52 55.8**	**-0.2**
TMZ	**Timaru**	**4.42**	**219**	P	**Pn**	**07 52 53.5**	**-2.6**
FOZ	**Fox Glacier**	**4.53**	**235**		**Pn**	**07 52 55.0**	**-2.6**
FOZ	**Fox Glacier**	**4.53**	**235**	P	**Pn**	**07 52 54.9**	**-2.6**
GRZ	**Great Barrier**	**4.78**	**5**	P	**Pn**	**07 52 59.6**	**-1.5**
LBZ	**Lake Benmore**	**4.83**	**224**		**Pn**	**07 53 00.0**	**-1.7**
LBZ	**Lake Benmore**	**4.83**	**224**	P	**Pn**	**07 52 59.4**	**-2.4**
ODZ	**Otahua Downs**	**5.09**	**216**		**Pn**	**07 53 03.5**	**-1.7**
ODZ	**Otahua Downs**	**5.09**	**216**	P	**Pn**	**07 53 02.8**	**-2.4**
ODZ	**Otahua Downs**	**5.09**	**216**	P	**Pn**	**07 53 02.5**	**-2.6**
WCZ	**Waipu Caves**	**5.09**	**355**	P	**Pn**	**07 53 04.5**	**-0.8**
JCZ	**Jackson Bay**	**5.45**	**234**	P	**Pn**	**07 53 07.1**	**-3.1**
JCZ	**Jackson Bay**	**5.45**	**234**	P	**Pn**	**07 53 06.6**	**-3.6**
WKZ	**Wanaka**	**5.75**	**227**	P	**Pn**	**07 53 10.1**	**-4.3**
HHSZ	**Highcliff Hill**	**5.78**	**211**	P	**Pn**	**07 53 13.3**	**-1.4**
EAZ	**Earnscleugh**	**5.87**	**222**	P	**Pn**	**07 53 12.8**	**-3.0**
OUZ	**Omahuta**	**5.88**	**350**	P	**Pn**	**07 53 16.2**	**+0.1**
OUZ	**Omahuta**	**5.88**	**350**	P	**Pn**	**07 53 16.2**	**+0.1**
TUZ	**Tuapeka**	**6.24**	**216**	P	**Pn**	**07 53 19.0**	**-1.9**
MSZ	**Milford Sound**	**6.29**	**232**	P	**Pn**	**07 53 18.8**	**-2.8**
MLZ	**Mavora Lakes**	**6.59**	**227**		**Pn**	**07 53 24.0**	**-1.8**
MLZ	**Mavora Lakes**	**6.59**	**227**	P	**Pn**	**07 53 21.2**	**-4.5**
CTZ	**Chatham Island**	**6.84**	**116**		**Pn**	**07 53 28.1**	**-1.0**
CTZ	**Chatham Island**	**6.84**	**116**	P	**Pn**	**07 53 28.2**	**-0.9**
CTZ	**Chatham Island**	**6.84**	**116**	P	**Pn**	**07 53 28.1**	**-1.0**
SYZ	**Scrubby Hill**	**6.91**	**215**	P	**Pn**	**07 53 28.5**	**-1.5**
SYZ	**Scrubby Hill**	**6.91**	**215**	P	**Pn**	**07 53 28.6**	**-1.5**
WHZ	**Wether Hill Ro**	**7.02**	**224**		**Pn**	**07 53 28.6**	**-3.0**
WHZ	**Wether Hill Ro**	**7.02**	**224**	P	**Pn**	**07 53 27.6**	**-3.9**
DCZ	**Deep Cove**	**7.19**	**229**		**Pn**	**07 53 32.0**	**-1.8**
DCZ	**Deep Cove**	**7.19**	**229**	P	**Pn**	**07 53 32.0**	**-1.8**
APZ	**The Paps**	**7.65**	**218**	P	**Pn**	**07 53 37.8**	**-2.5**
PYZ	**Puysegur Point**	**7.87**	**226**		**Pn**	**07 53 42.1**	**-1.1**
PYZ	**Puysegur Point**	**7.87**	**226**	P	**Pn**	**07 53 42.1**	**-1.1**
PYZ	**Puysegur Point**	**7.87**	**226**	P	**Pn**	**07 53 42.7**	**-0.5**
DZM	**Mont Dzumac**	**20.20**	**337**	LR	LR	08 02 47.6	
	comp=Z,84nm,19.9s,baz=208,slow=33						
TOO	**Toolangi**	**22.97**	**269**	P	**P**	**07 56 50.1**	**+0.1**
TOO				IAmb	IAmb	07 57 22.9	
	comp=Z,39nm,1.5s						
MSVF	**Nonsavu**	**23.37**	**8**	P	**P**	**07 56 51.6**	**-2.4**
	comp=Z,7.5nm,0.7s,baz=154,slow=13,SNR=2.3						
MSVF				LR	LR	08 04 19.8	
	comp=Z,78nm,19.0s,baz=180,slow=33						
	comp=Z,7.5nm,0.7s						
RAR	**Rarotonga**	**29.15**	**55**	LR	LR	08 07 49.5	
	comp=Z,36nm,19.8s,baz=276,slow=33						
BBOO	**Buckleboo**	**31.91**	**272**	P	**P**	**07 58 09.4**	**-0.8**
BBOO				IAmb	IAmb	07 58 29.7	
	comp=Z,15nm,1.1s						
CTA	**Charters Tower**	**32.07**	**302**	LR	LR	08 09 38.3	
	comp=Z,42nm,21.1s,baz=165,slow=34						
AS31	**Alice Springs**	**38.32**	**284**	P	**P**	**07 59 04.5**	**-0.9**
ASAR	**Alice Springs**	**38.32**	**284**	P	**P**	**07 59 05.5**	**0.0**
	comp=Z,1.3nm,0.4s,baz=127,slow=7.4,SNR=39						
	comp=Z,1.3nm,0.4s						
ASAR	**Alice Springs**	**38.32**	**284**	P	**P**	**07 59 04.2**	**-1.2**
WB2	**Warramunga Arr**	**40.31**	**289**	P	**P**	**07 59 20.8**	**-1.2**
WB2				IAmb	IAmb	07 59 45.0	
	comp=Z,8.4nm,1.2s						
WRA	**Warramunga Arr**	**40.32**	**289**	P	**P**	**07 59 20.9**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=127,slow=8.4,SNR=6.6						
	comp=Z,0.6nm,0.4s						
MTN	**Manton Dam**	**47.36**	**294**	P	**P**	**08 00 19.6**	**+1.1**
FITZ	**Fitzroy Crossi**	**47.81**	**283**	P	**P**	**08 00 21.4**	**-0.6**
QSPA	**South Pole Qui**	**49.11**	**180**	P	**P**	**08 00 34.3**	**+2.7**
	comp=Z,9.0nm,1.0s,baz=16,slow=1.9,SNR=33						
	comp=Z,9.0nm,1.0s						
QSPA	**South Pole Qui**	**49.11**	**180**	P	**P**	**08 00 33.9**	**+2.3**
QSPA				IAmb	IAmb	08 00 35.2	
	comp=Z,8.1nm,0.9s						
BELA	**Belgrano 2**	**60.01**	**173**	P	**P**	**08 01 51.0**	**+0.9**
PLCA	**Paso Flores**	**79.28**	**135**	P	**P**	**08 03 51.5**	**+2.2**
	comp=Z,1.3nm,0.8s,baz=262,slow=4.0,SNR=4.6						
	comp=Z,1.3nm,0.8s						
PLCA	**Paso Flores**	**79.28**	**135**	P	**P**	**08 03 51.1**	**+1.8**
PLCA				IAmb	IAmb	08 04 10.4	
	comp=Z,5.8nm,1.4s						
TRQA	**Tornquist**	**85.70**	**138**	P	**P**	**08 04 24.1**	**+1.4**
TRQA				IAmb	IAmb	08 05 01.5	
	comp=Z,4.5nm,1.2s						
PZH	**PanZhiHua**	**95.38**	**301**	P	**P**	**08 05 09.4**	**+1.3**
PZH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,90nm,4.6s						
HHC	**Hu-ho-hao-te**	**99.70**	**317**	*e*P	**Pdif**	**08 05 29.3**	**+2.1**
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,6.9s						
KBZ	**Khabaz**	**144.83**	**291**	PKP	**PKPdf**	**08 11 20.5**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=146,slow=24,SNR=1.5						
DBIC	**Dimbokro**	**145.79**	**180**	PKPbc	**PKPab**	**08 11 23.6**	**+0.3**
	comp=Z,1.5nm,0.5s,baz=196,slow=2.1,SNR=1.9						
ARCES	**ARCESS Array B**	**147.26**	**341**	PKPbc	**PKPbc**	**08 11 25.9**	**+0.3**
	comp=Z,1.9nm,0.8s,baz=85,slow=1.1,SNR=1.3						
BRTR	**Keskin Array B**	**150.62**	**280**	PKPbc	**PKPbc**	**08 11 34.2**	**-1.0**
	comp=Z,0.9nm,0.6s,baz=90,slow=1.4,SNR=2.3						
FINES	**FINESS Array B**	**152.19**	**328**	PKPbc	**PKiKP**	**08 11 40.4**	**+2.2**
	comp=Z,3.8nm,1.1s,baz=224,slow=13,SNR=1.8						

IDC 23 07:53:28.2±2.5**, 6°72S**×**129°75E, h0**^{km}**, mb3.4**/1**,
mbtmp3.1**/3**, ML2.5**/2**, MS2.7**/1**, Error ellipse:
s-maj=157.2km s-min=33.7km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.88**	**162**	Pn	Pn	07 56 46.1	-0.3
	baz=344,slow=13,SNR=1.7						
WRA				Sn	Sn	07 59 14.1	-7.3
	0.1nm,0.3s,baz=331,slow=21,SNR=2.6						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**17.32**	**167**	P	Pn	07 57 32.0	+0.4
	baz=353,slow=13,SNR=1.8						
	0.1nm,0.4s						
JCJ	**Chichijima**	**35.71**	**19**	LR	LR	08 16 05.4	
	comp=Z,11nm,18.3s,baz=90,slow=38						
MKAR	**Makanchi Array**	**67.86**	**327**	P	P	08 04 28.5	0.0
	0.4nm,1.0s,baz=134,slow=6.9,SNR=4.1						
	0.4nm,1.0s						

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*JMA **23** 07:54:18.2±0.1, 25°N±1°×122°4E±0°5, h18^{km}, MV3.2/7, TAIWAN REGION*

*TAP **23** 07:54:18.8, 24°87N×122°27E, h5^{km}, ML3.2, C*

ISC 23 07:54:18.0±1.1**, 24°89N**±0°03×**122°36E**±0°02**, h11**^{km}±9^{km}**,
n56,** σ**0^{s}44**/100**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.36**	**290**	P	**Pg**	**07 54 25.6**	**+0.4**
	baz=298						
TWB1				S	**Sg**	**07 54 30.2**	**+0.3**
	baz=298						
SXI1	**Grass Mountain**	**0.49**	**295**	P	**Pb**	**07 54 28.2**	**-0.4**
	baz=301						
SXI1				*e*S	**Sb**	**07 54 35.5**	**-0.3**
	baz=301						
TIPB	**Shuangxi**	**0.49**	**280**	P	**Pb**	**07 54 28.4**	**-0.3**
	baz=283						
TIPB				S	**Sb**	**07 54 35.4**	**-0.6**
	baz=283						
TWC	**Suao**	**0.54**	**240**	P	**Pg**	**07 54 29.0**	**+0.5**
	baz=235						
TWC				S	**Sb**	**07 54 36.9**	**-0.4**
	baz=235						
NDS	**Dongshan**	**0.64**	**247**	*e*P	**Pb**	**07 54 31.5**	**+0.3**
	baz=244						
NDS				*e*S	**Sb**	**07 54 40.2**	**+0.1**
	baz=244						
TWE	**Neicheng**	**0.65**	**256**	*e*P	**Pb**	**07 54 31.6**	**+0.3**
	baz=254						
TWE				*e*S	**Sb**	**07 54 40.7**	**+0.2**
	baz=254						
JYNG	**Yonagunijimaku**	**0.69**	**129**	*e*P	**Pg**	**07 54 31.1**	**-0.1**
JYNG				*e*S	**Sg**	**07 54 40.7**	**+0.5**
EWUT	**Wuta**	**0.69**	**231**	*e*P	**Pb**	**07 54 31.9**	**0.0**
	baz=226						
EWUT				*e*S	**Sb**	**07 54 41.4**	**-0.1**
	baz=226						
TWA	**Mucha**	**0.71**	**278**	*e*P	**Pb**	**07 54 32.8**	**+0.4**
	baz=279						
TWA				*e*S	**Sb**	**07 54 42.5**	**+0.2**
	baz=279						
FUSB	**Fushanzhiwuyua**	**0.71**	**260**	P	**Pb**	**07 54 32.3**	**-0.2**
	baz=259						
FUSB				*e*S	**Sb**	**07 54 41.8**	**-0.6**
	baz=259						
ENA	**Nanau**	**0.72**	**231**	*e*P	**Pb**	**07 54 32.5**	**-0.1**
	baz=227						
ENA				*e*S	**Sb**	**07 54 43.0**	**+0.4**
	baz=227						
YOJ	**Yonaguni jima**	**0.73**	**125**	P	**Pg**	**07 54 31.5**	**-0.5**
YOJ	**Yonaguni jima**	**0.73**	**125**	P	**Pg**	**07 54 31.6**	**-0.5**
YOJ				S	**Sg**	**07 54 41.6**	**+0.1**
YOJ	**Yonaguni jima**	**0.73**	**125**	*e*P	**Pn**	**07 54 34.3**	**+0.1**
	baz=121						
YOJ				*e*S	**Sn**	**07 54 46.5**	**+1.2**
	baz=121						
ENTT	**Nioudou**	**0.76**	**252**	*e*P	**Pb**	**07 54 33.5**	**+0.2**
	baz=249						
ENTT				*e*S	**Sb**	**07 54 44.0**	**+0.3**
	baz=249						
NHDH	**Xindian Distri**	**0.76**	**276**	*e*P	**Pb**	**07 54 33.4**	**+0.1**
	baz=277						
NHDH				*e*S	**Sb**	**07 54 43.8**	**0.0**
	baz=277						
YM01	**YM01**	**0.76**	**290**	*e*P	**Pb**	**07 54 33.3**	**0.0**
	baz=293						
YM01				*e*S	**Sb**	**07 54 44.0**	**+0.3**
	baz=293						
NWLT	**Wulai**	**0.79**	**262**	*e*P	**Pb**	**07 54 33.8**	**0.0**
	baz=262						
NWLT				*e*S	**Sb**	**07 54 44.2**	**-0.2**
	baz=262						
TAP	**Taipei**	**0.79**	**281**	*e*S	**Sb**	**07 54 44.0**	**-0.5**
	baz=283						
TATO	**Taipei**	**0.80**	**277**	P	**Pb**	**07 54 33.9**	**0.0**
LATG	**Datong**	**0.83**	**246**	*e*P	**Pb**	**07 54 34.6**	**0.0**
	baz=243						
LATG				*e*S	**Sb**	**07 54 46.0**	**+0.2**
	baz=243						
TWS1	**Kuangyinshan**	**0.88**	**284**	*e*P	**Pb**	**07 54 35.3**	**0.0**
	baz=286						
TWS1				*e*S	**Sb**	**07 54 47.3**	**+0.2**
	baz=286						
YHNB	**Yeheng**	**0.92**	**257**	P	**Pb**	**07 54 36.3**	**+0.3**
YHNB	**Yeheng**	**0.92**	**257**	P	**Pb**	**07 54 35.9**	**-0.2**
	baz=256						
YHNB				*e*S	**Sb**	**07 54 48.2**	**-0.2**
	baz=256						
NSK	**Sanguang**	**0.94**	**257**	P	**Pb**	**07 54 36.1**	**-0.1**
	baz=256						
NSK				*e*S	**Sb**	**07 54 48.1**	**-0.6**
	baz=256						
ETL	**Fush Village**	**0.99**	**223**	*e*P	**Pb**	**07 54 37.4**	**+0.3**
	baz=219						
ETL				*e*S	**Sn**	**07 54 50.9**	**-1.0**
	baz=219						
NACB	**Ninganchiao**	**0.99**	**225**	P	**Pg**	**07 54 37.0**	**-0.1**
NACB	**Ninganchiao**	**0.99**	**225**	*e*P	**Pg**	**07 54 36.8**	**-0.3**
	baz=221						
NACB				*e*S	**Sg**	**07 54 50.0**	**-0.1**
	baz=221						
NNSB	**Datong**	**1.00**	**243**	*e*P	**Pb**	**07 54 37.5**	**+0.1**
	baz=241						
NNSB				*e*S	**Sb**	**07 54 51.0**	**+0.4**
	baz=241						
NNS	**Nan Shan**	**1.00**	**244**	*e*P	**Pb**	**07 54 37.6**	**+0.2**
	baz=241						
NNS				*e*S	**Sb**	**07 54 50.9**	**+0.2**
	baz=241						
ETLH	**Xiulin Townshi**	**1.05**	**230**	P	**Pg**	**07 54 38.2**	**0.0**
	baz=227						
ETLH				*e*S	**Sb**	**07 54 52.3**	**+0.4**
	baz=227						
TWD	**Chiawan**	**1.06**	**221**	*e*P	**Pg**	**07 54 38.6**	**+0.2**
	baz=217						
TWD				*e*S	**Sb**	**07 54 52.7**	**+0.4**
	baz=217						
NFF	**Wufeng Townshi**	**1.16**	**258**	*e*P	**Pb**	**07 54 39.8**	**-0.3**
	baz=257						
NFF				*e*S	**Sn**	**07 54 55.8**	**-0.3**
	baz=257						
FUSS	**Fushou**	**1.20**	**238**	*e*P	**Pb**	**07 54 40.9**	**+0.1**
	baz=236						
FUSS				*e*S	**Sn**	**07 54 57.3**	**-0.1**
	baz=236						

WHF	Hehuan Shan	1.24	234	eP	Pn	07 54 41.8	+0.1
	baz=231						
WHF				eS	Sn	07 54 58.1	-0.5
	baz=231						
LIOB	Emei	1.25	259	eP	Pn	07 54 40.9	-0.5
	baz=258						
LIOB				eS	Sn	07 54 58.3	+0.1
	baz=258						
TWT	Tachien	1.25	240	eP	Pg	07 54 42.3	+0.3
	baz=238						
TWT				eS	Sn	07 54 59.4	+0.9
	baz=238						
NSTT	Nanjuang	1.26	259	eP	Pn	07 54 41.3	-0.3
	baz=258						
NSTT				eS	Sg	07 54 58.1	-0.6
	baz=258						
CHGB	Renai	1.36	233	eP	Pg	07 54 43.9	-0.2
	baz=231						
CHGB				eS	Sg	07 55 01.6	-0.2
	baz=231						
OWD	Renai	1.42	230	eP	Pb	07 54 44.7	0.0
	baz=227						
OWD				eS	Sg	07 55 03.9	+0.1
	baz=227						
WHP	Taichung City	1.42	245	eP	Pg	07 54 45.4	0.0
	baz=243						
WHP				eS	Sg	07 55 03.5	-0.4
	baz=243						
WUSB	Renai	1.44	232	eP	Pb	07 54 45.0	+0.1
	baz=230						
WUSB				eS	Sg	07 55 04.4	0.0
	baz=230						
HATJ	Hateruma jima	1.55	122	eS	Sn	07 55 06.3	+0.6
VWDT	VWDT	1.58	225	eP	Pb	07 54 46.9	-0.4
	baz=222						
VWDT				eS	Sb	07 55 07.8	+0.4
	baz=222						
HGSD	Ruisui	1.63	212	eP	Pb	07 54 48.2	+0.1
	baz=209						
HGSD				eS	Sg	07 55 09.7	-0.7
	baz=209						
JKRS	Kuro-shima	1.63	113	eP	Pn	07 54 46.3	-0.3
SMLT	Sun Moon Lake	1.67	233	eP	Pb	07 54 48.6	-0.1
	baz=231						
SMLT				eS	Sb	07 55 09.3	-0.5
	baz=231						
TYC	Yuchr	1.68	235	eP	Pb	07 54 48.7	-0.3
	baz=233						
TYC				eS	Sb	07 55 10.1	-0.1
	baz=233						
SSLB	Suanglung	1.69	230	P	Pb	07 54 48.9	-0.2
SSLB	Suanglung	1.69	230	eP	Pb	07 54 48.5	-0.5
	baz=228						
SSLB				eS	Sb	07 55 09.7	-0.7
	baz=228						
YULB	Yu-li	1.78	213	P	Pn	07 54 49.3	+0.6
YULB	Yu-li	1.78	213	eP	Pb	07 54 50.0	-0.6
	baz=211						
YULB				eS	Sb	07 55 12.3	-0.5
	baz=211						
WHYT	Xinyi Township	1.81	230	eP	Pb	07 54 50.5	-0.8
	baz=227						
WHYT				eS	Sb	07 55 13.2	-0.9
	baz=227						
CHN5	Tsauling	2.00	231	eP	Pb	07 54 53.4	-1.1
	baz=228						
EHD	Haiduan	2.03	212	eP	Pn	07 54 53.1	+1.0
	baz=209						
WTP	Ta-pu	2.28	225	eP	Pn	07 54 57.1	+1.4
	baz=222						

ROM 23 07:58:08.6±0.0, 42°.936N±0°.002×13°.032E±0°.004, h11^{km}, ML1.4/11, 5C-5D, Error ellipse: s-maj=0.3km s-min=0.2km az=255.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FEMA	Monte Fema	0.03	27	P	Pg	07 58 11.1	+0.3
FEMA				S	Sg	07 58 12.7	+0.3
T1216	Preci, Frazion	0.05	192	P	Pg	07 58 11.2	+0.4
T1216				S	Sg	07 58 12.7	+0.3
T1216				AML	AML		
	comp=E,724µm,0.3s						
T1216				AML	AML		
	comp=N,618µm,0.3s						
T1216				AML	AML		
	comp=E,724µm,1.7s						
FDMO	Fiordimonte	0.11	22	⇓P	Pg	07 58 11.9	+0.4
FDMO				S	Sg	07 58 14.0	+0.4
FDMO				AML	AML		
	comp=N,324µm,0.2s						
FDMO				AML	AML		
	comp=E,222µm,0.5s						
FDMO				AML	AML		
	comp=N,325µm,0.2s						
CESI	CESI - Serrava	0.12	307	P	Pg	07 58 12.2	+0.5
CESI				S	Sg	07 58 14.5	+0.7
CESI				AML	AML		
	comp=E,633µm,0.1s						
CESI				AML	AML		
	comp=N,970µm,0.2s						
MC2	Monte Cornacci	0.12	101	P	Pg	07 58 12.1	+0.3
MC2				S	Sg	07 58 14.7	+0.6
NRCA	Norcia	0.12	149	P	Pg	07 58 12.0	+0.4
NRCA				S	Sg	07 58 14.3	+0.5
NRCA				AML	AML		
	comp=N,425µm,0.1s						
NRCA				AML	AML		
	comp=E,316µm,1.1s						
T1219	Muccia, Frazio	0.12	352	⇓P	Pg	07 58 12.1	+0.4
T1219				S	Sg	07 58 14.3	+0.4
T1219				AML	AML		
	comp=E,182µm,1.1s						
T1219				AML	AML		
	comp=N,162µm,0.1s						
T1219				AML	AML		
	comp=E,161µm,1.1s						
T1219				AML	AML		
	comp=N,176µm,0.1s						
T1219				AML	AML		
	comp=E,161µm,0.9s						
T1219				AML	AML		
	comp=E,182µm,0.9s						
T1245	Castelsantange	0.14	124	⇑P	Pg	07 58 12.5	+0.4
T1245				S	Sg	07 58 15.2	+0.7
T1245				AML	AML		
	comp=N,640µm,0.1s						
T1245				AML	AML		
	comp=N,604µm,0.2s						
T1245				AML	AML		
	comp=E,523µm,0.3s						
T1245				AML	AML		
	comp=N,640µm,0.2s						
T1245				AML	AML		
	comp=E,561µm,0.8s						
T1256	Bolognola (MC)	0.16	64	P	Pg	07 58 12.7	+0.4
T1256				S	Sg	07 58 15.7	+0.8
T1256				AML	AML		
	comp=E,116µm,1.5s						
T1256				AML	AML		
	comp=N,242µm,0.2s						
T1220	Camerino, Fraz	0.18	14	P	Pg	07 58 13.2	+0.6
T1220				S	Sg	07 58 16.3	+1.0
T1220				AML	AML		
	comp=E,313µm,0.4s						
T1220				AML	AML		
	comp=N,377µm,1.6s						
T1220				AML	AML		
	comp=N,377µm,0.4s						
T1212	Cascia, Frazio	0.18	177	P	Pg	07 58 13.2	+0.6
T1212				S	Sg	07 58 16.6	+1.2
T1214	Arquata del Tr	0.22	143	P	Pg	07 58 13.7	+0.4
T1214				S	Sg	07 58 17.3	+0.8
GUMA	Gualdo di Mace	0.26	60	P	Pg	07 58 14.6	+0.7
GUMA				S	Sb	07 58 19.2	-0.6
ASSB	Assisi San Ben	0.29	291	⇑P	Pg	07 58 15.0	+0.4
ASSB				AML	AML		
	comp=E,94µm,0.3s						
ASSB				AML	AML		
	comp=N,77µm,1.5s						
ASSB				AML	AML		
	comp=E,94µm,1.7s						
ASSB				AML	AML		
	comp=N,77µm,0.5s						
T1241	Roccafluvione,	0.30	105	⇓P	Pg	07 58 14.9	+0.1
T1241				AML	AML		
	comp=E,48µm,0.3s						
T1241				AML	AML		
	comp=N,70µm,0.8s						
T1241				AML	AML		
	comp=N,70µm,0.8s						
SNTG	Esanatoglia	0.33	348	⇓P	Pb	07 58 16.2	-0.3
SNTG				AML	AML		
	comp=E,24µm,1.1s						
SNTG				AML	AML		
	comp=N,24µm,0.6s						
SNTG				AML	AML		
	comp=E,24µm,0.9s						
ATCC	AVT- Casa Cast	0.38	311	⇓P	Pg	07 58 16.6	+0.5
ATCC				AML	AML		
	comp=E,44µm,0.7s						
ATCC				AML	AML		
	comp=N,36µm,1.0s						
ATCC				AML	AML		
	comp=E,44µm,1.3s						
EL6	Elcito	0.40	7	⇑P	Pb	07 58 17.5	-0.3
FOSV	Fossato di Vic	0.41	331	⇑P	Pg	07 58 16.3	-0.4
T1211	Morro Reatino	0.42	198	S	Sb	07 58 24.7	+0.1
RM33	Pellescritta (	0.45	162	⇑P	Pb	07 58 18.6	0.0
TERO	Teramo	0.53	126	P	Pg	07 58 18.9	0.0
TERO				AML	AML		
	comp=E,19µm,0.8s						
TERO				AML	AML		
	comp=N,21µm,1.5s						
TERO				AML	AML		
	comp=E,19µm,1.2s						
TERO				AML	AML		
	comp=N,21µm,0.5s						
SRES	S.Oreste - Sor	0.80	209	S	Sg	07 58 32.6	-1.8

ROM 23 07:58:39.7±0.0, 42°.858N±0°.002×12°.943E±0°.004, h11^{km}, ML1.1/3, 1D, Error ellipse: s-maj=0.3km s-min=0.2km az=88.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1216	Preci, Frazion	0.07	60	P	Pg	07 58 42.5	+0.4
T1216				S	Sg	07 58 44.2	+0.5
T1216				AML	AML		
	comp=E,240µm,0.3s						
T1216				AML	AML		
	comp=N,238µm,0.4s						
T1216				AML	AML		
	comp=N,238µm,1.6s						
T1216				AML	AML		
	comp=E,240µm,1.7s						
NRCA	Norcia	0.13	101	⇓P	Pg	07 58 43.4	+0.5
NRCA				S	Sg	07 58 45.9	+0.7
NRCA				AML	AML		
	comp=E,83µm,0.1s						
NRCA				AML	AML		
	comp=N,193µm,0.1s						
T1212	Cascia, Frazio	0.13	145	P	Pg	07 58 43.4	+0.4
T1212				S	Sg	07 58 45.9	+0.8
FEMA	Monte Fema	0.13	37	P	Pg	07 58 43.2	+0.2
T1217	Poggiodomo (PG	0.15	183	P	Pg	07 58 43.6	+0.5
T1217				S	Sg	07 58 46.1	+0.6
CESI	CESI - Serrava	0.15	349	P	Pg	07 58 43.6	+0.4
CESI				S	Sg	07 58 46.5	+0.8
T1245	Castelsantange	0.18	90	P	Pg	07 58 44.4	+0.6
T1245				S	Sg	07 58 47.6	+1.1
T1219	Muccia, Frazio	0.20	13	P	Pg	07 58 44.6	+0.5
T1219				S	Sg	07 58 48.2	+1.1
FDMO	Fiordimonte	0.21	31	P	Pg	07 58 44.7	+0.6
FDMO				S	Sg	07 58 48.6	+1.4
T1214	Arquata del Tr	0.22	117	P	Pg	07 58 44.9	+0.5
T1214				S	Sg	07 58 48.7	+1.1
T1218	Civita (PG)	0.23	146	P	Pg	07 58 45.0	+0.5
T1218				AML	AML		
	comp=E,252µm,0.1s						
T1218				AML	AML		
	comp=E,240µm,0.1s						
T1218				AML	AML		
	comp=N,182µm,0.2s						
T1218				AML	AML		
	comp=E,253µm,0.1s						
T1218				AML	AML		
	comp=N,190µm,0.2s						
T1218				AML	AML		
	comp=N,182µm,0.2s						
T1220	Camerino, Fraz	0.27	23	P	Pg	07 58 46.0	+0.6
ASSB	Assisi San Ben	0.28	312	P	Pg	07 58 45.9	+0.4
ASSB				S	Sb	07 58 50.5	-1.1
MOMA	Monte Martano	0.28	259	P	Pb	07 58 46.7	-0.2
MOMA				S	Sg	07 58 50.4	+1.1
RM33	Pellescritta (	0.40	150	P	Pg	07 58 48.1	+0.4
RM33				AML	AML		
	comp=E,33µm,1.1s						
RM33				AML	AML		
	comp=N,24µm,0.2s						
RM33				AML	AML		
	comp=E,33µm,0.9s						

IDC 23 08:09:54.5±609.0, 49°.85N×37°.59E, h0^{km}, Error ellipse: s-maj=245.9km s-min=137.3km az=13.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	6.89	358	I	I	08 49 00.0	
	0.2nm,0.8s,baz=176,slow=330,SNR=5.6						
I31KZ	AKTYUBINSK INF	13.13	80	I	I	09 31 54.0	
	baz=273,slow=329						
I46RU	ZALESOVO INFRA	29.00	64	I	I	11 10 20.0	
	0.1nm,1.4s,baz=282,slow=314,SNR=5.1						

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*IDC **23** 08:20:13.7±0.8, 43°.92N×148°.56E, h0^{km}, mb3.6/13, mbtmp3.6/17, ML2.9/4, Error ellipse: s-maj=22.8km s-min=16.1km az=155.0*

*SKHL **23** 08:20:14.8±0.2, 43°.80N×148°.80E, h35^{km}±5^{km}, mb5.0/6*

*JMA **23** 08:20:15.7±0.8, 44°N±3°×14°9E±°, h30^{km}, MV4.2/13, SE OFF ETOROFU*

*NIED **23** 08:20:15.7, 44°.37N×148°.55E, h30^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.36; $M_{\theta\theta}$1.54; $M_{\phi\phi}$-4.91; $M_{r\theta}$-1.48; $M_{\theta\phi}$-1.15; $M_{\phi r}$0.33; Fault plane solution: $M_0$4.69000×10^{14} NP1: ϕ_s343.00000°, δ53.00000°, λ50.00000°. NP2: ϕ_s217.00000°, δ52.00000°, λ131.00000°.*

*MOS **23** 08:20:16.4±1.5, 43°.84N×148°.61E, h34^{km}, mb4.5/1 Error ellipse: s-maj=11.5km s-min=10.5km az=42.6*

ISC 23 08:20:15.0±2.8, 43°.85N±0°.06×148°.60E±0°.05, h11^{km}±17^{km}, n55, σ1^{s}.49/64, mb3.7/13, 1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	1.28	272	ePN	Pn	08 20 37.7	-1.1
SHO				eS	Sb	08 20 54.8	-0.7
SHO				pmax	pmax		
	comp=N,146nm,0.2s						
SHO				pmax	pmax		
	comp=E,176nm,0.2s						
SHO				pmax	pmax		
	comp=Z,182nm,0.2s						
SHO				smax	smax		
	comp=E,880nm,0.5s						
SHO				smax	smax		
	comp=N,1µm,0.3s						
SHO	Shikotan	1.28	272	eP	Pn	08 20 37.7	-1.1
SHO				AMB	AMB	08 20 42.2	
	comp=N,150nm,0.2s						
SHO				AMB	AMB	08 20 42.2	
	comp=N,180nm,0.2s						
SHO				eS	Sb	08 20 54.8	-0.7
SHO				A	A	08 20 57.2	
	comp=N,1µm,0.4s						
SHO				A	A	08 20 57.2	
	comp=N,880nm,0.4s						
KUR	Kuril'sk	1.48	340	⇓iPN	Pn	08 20 40.3	-1.3
KUR				eS	Sn	08 20 55.7	-5.2
KUR				pmax	pmax		
	comp=Z,219nm,0.2s						
KUR				pmax	pmax		
	comp=E,91nm,0.1s						
KUR				pmax	pmax		
	comp=N,161nm,0.2s						
KUR				smax	smax		
	comp=N,624nm,0.2s						
KUR				smax	smax		
	comp=E,456nm,0.2s						
KUR	Kuril'sk	1.48	340	i P	Pn	08 20 40.3	-1.3
KUR				AMB	AMB	08 20 43.7	
	comp=E,160nm,0.2s						
KUR				AMB	AMB	08 20 43.7	
	comp=E,90nm,0.2s						
KUR				AMB	AMB	08 20 43.7	
	comp=E,220nm,0.2s						
KUR				eS	Sn	08 20 59.3	-1.6
KUR				A	A	08 21 01.0	
	comp=E,640nm,0.2s						
KUR				A	A	08 21 01.0	
	comp=E,460nm,0.2s						
YUK	Yuzh-Kuril'sk	1.99	276	ePN	Pn	08 20 47.8	-0.7
YUK				eS	Sn	08 21 12.9	-0.5
YUK				pmax	pmax		
	comp=E,203nm,0.1s						
YUK				pmax	pmax		
	comp=Z,712nm,0.1s						
YUK				pmax	pmax		
	comp=N,206nm,0.2s						
YUK				smax	smax		
	comp=E,958nm,0.3s						
YUK				smax	smax		
	comp=N,820nm,0.2s						
YUK	Yuzh-Kuril'sk	1.99	276	eP	Pn	08 20 47.9	-0.6
YUK				AMB	AMB	08 20 49.7	
	comp=N,210nm,0.3s						
YUK				AMB	AMB	08 20 49.7	
	comp=N,200nm,0.3s						
YUK				AMB	AMB	08 20 49.7	
	comp=N,350nm,0.3s						
YUK				eS	Sn	08 21 12.9	-0.5
YUK				A	A	08 21 14.5	
	comp=N,820nm,0.3s						
YUK				A	A	08 21 14.5	
	comp=N,960nm,0.3s						
NEM2	Nemuro 2	2.13	258	eP	Pn	08 20 49.5	-1.0
NEM2				eS	Sn	08 21 15.8	-1.1
NMR	Nemuro--Hokkai	2.14	258	ePN	Pn	08 20 50.0	-0.6
NMR				eS	Sn	08 21 16.7	-0.4
NMR	Nemuro--Hokkai	2.14	258	eP	Pn	08 20 49.7	-0.9
NMR				eS	Sn	08 21 15.4	-1.7
RUSJ	Misakicho	2.44	277	ePN	Pn	08 20 54.7	+0.1
RUSJ				eS	Sn	08 21 24.6	+0.2
JRA	Rausu	2.52	273	eP	Pn	08 20 55.6	-0.2
JRA				eS	Sn	08 21 26.0	-0.5
JNK	Nakash	2.83	266	eP	Pn	08 20 59.9	-0.1
AKK	Akkeshi	2.86	254	eP	Pn	08 21 00.4	-0.1
AKK				eS	Sn	08 21 33.8	-1.1
JAK	Akkeshi	2.97	255	eP	Pn	08 21 01.6	-0.4
JAK				eS	Sn	08 21 35.2	-2.4
JTKR	Abashiri--Toko	3.39	274	eP	Pn	08 21 08.4	+0.6
JAR	Ashorobuto	3.55	263	eP	Pn	08 21 10.8	+0.8
JAR				eS	Sn	08 21 51.8	-0.3
JOB	Onbets	3.60	256	eP	Pn	08 21 10.9	+0.2
JOB				eS	Sn	08 21 50.6	-2.6
JCH	Churui	4.02	254	eP	Pn	08 21 17.2	+0.8
JCH				eS	Sn	08 22 02.6	-1.0
JKA	Kamikawa-asahi	4.34	276	eP	Pn	08 21 22.6	+1.8
ASAJ	Asahikawa	4.34	276	Pn	Pn	08 21 22.6	+1.7
	comp=N,1.2nm,0.3s,baz=64,slow=17,SNR=7.1						
ASAJ				Sn	Sn	08 22 14.0	+2.6
	comp=N,0.8nm,0.3s,baz=217,slow=31,SNR=1.4						
	comp=N,4.6nm,0.5s						
JNBK	Urakawa-nobuka	4.56	252	eP	Pn	08 21 25.3	+1.4
YSS	Yuzh-Sakhalins	5.16	309	ePN	Pn	08 21 37.8	+5.7
YSS				pmax	pmax		
	comp=Z,30nm,0.4s						
YSS	Yuzh-Sakhalins	5.16	309	eP	Pn	08 21 33.0	+0.9
YSS				AMB	AMB	08 21 38.2	
	comp=Z,30nm,0.4s						
JANG	Nango	6.31	239	eP	Pn	08 21 48.3	+0.4
JANG				eS	Sn	08 22 54.4	-5.6
TYV	Tymovskoe	8.10	332	eP	Pn	08 22 13.9	+1.5
TYV				AMB	AMB	08 22 17.3	
	comp=Z,40nm,0.6s						
SKR	Severo-Kuril’s	8.53	34	eP	Pn	08 22 17.9	-0.5
SKR				AMB	AMB	08 22 22.1	
	comp=Z,70nm,0.7s						
MJAR	Matsushiro Arr	10.78	231	Pn	Pn	08 22 50.4	+1.2
	comp=Z,0.1nm,0.3s,baz=28,slow=15,SNR=3.6						
	comp=Z,0.9nm,0.6s						
PETK	Petropavlovsk-	11.05	30	Pn	Pn	08 22 52.9	0.0
	comp=Z,0.1nm,0.3s,baz=204,slow=13,SNR=2.6						
	comp=Z,1.2nm,0.7s						
KLR	Kul'dur	12.78	301	Pn	Pn	08 23 17.7	+1.2
	comp=Z,0.1nm,0.3s,baz=108,slow=13,SNR=5.8						
	comp=Z,1.6nm,0.6s						
H11N2	WAKE ISLAND Hy	28.50	142	T	T	08 57 06.3	
	baz=332,slow=76,SNR=32						
H11N1	WAKE ISLAND Hy	28.52	142	T	T	08 57 07.4	
	baz=332,slow=76,SNR=36						
H11N3	WAKE ISLAND Hy	28.52	142	T	T	08 57 03.0	
	baz=332,slow=76,SNR=39						
H11S1	WAKE ISLAND Hy	29.50	143	T	T	08 58 11.1	
	baz=333,slow=76,SNR=70						
H11S3	WAKE ISLAND Hy	29.50	143	T	T	08 57 53.3	
	baz=333,slow=76,SNR=44						
H11S2	WAKE ISLAND Hy	29.51	143	T	T	08 58 15.1	
	baz=333,slow=76,SNR=50						
ILAR	Eielson Array	40.79	36	P	P	08 27 55.8	-0.1
	comp=Z,0.4nm,0.9s,baz=282,slow=9.3,SNR=5.3						
	comp=Z,0.4nm,0.9s						
ZALV	Zalesovo Beam	41.78	307	S	S	08 34 24.0	+2.9
	comp=Z,1.8nm,0.4s,baz=68,slow=15,SNR=7.2						
MKAR	Makanchi Array	45.47	298	P	P	08 28 33.7	-0.3
	comp=Z,0.8nm,0.8s,baz=72,slow=10.0,SNR=5.6						
	comp=Z,0.8nm,0.8s						
INK	Inuvik	45.79	30	P	P	08 28 36.2	+0.1
	comp=Z,0.8nm,0.6s,baz=292,slow=7.2,SNR=7.5						
	comp=Z,0.8nm,0.6s						
KURK	Kurchatov	46.34	304	P	P	08 28 40.8	0.0
KURK	Kurchatov	46.34	304	eP	P	08 28 40.8	0.0
KURBB	Kurchatov Arra	46.43	304	P	P	08 28 40.8	-0.7
	comp=Z,0.4nm,0.5s,baz=74,slow=9.0,SNR=4.2						
KURBB				S	S	08 35 28.3	-0.6
	comp=Z,0.2nm,0.3s,baz=360,slow=15,SNR=4.1						
	comp=Z,0.4nm,0.5s						
YKA	Yellowknife Ar	55.13	34	P	P	08 29 48.2	+1.4
	comp=Z,0.3nm,0.6s,baz=298,slow=6.6,SNR=5.4						
	comp=Z,0.3nm,0.6s						
WRA	Warramunga Arr	64.81	195	P	P	08 30 53.7	0.0
	comp=Z,0.4nm,0.8s,baz=14,slow=6.6,SNR=2.3						
	comp=Z,0.4nm,0.8s						
FINES	FINESS Array B	65.26	334	P	P	08 30 55.0	-1.2
	comp=Z,2.5nm,1.0s,baz=51,slow=10.0,SNR=4.0						
	comp=Z,2.5nm,1.0s						
FINES	FINESS Array B	65.26	334	P	P	08 30 55.0	-1.2
NVAR	Mina Array Bea	66.63	59	P	P	08 31 06.0	+0.3
	comp=Z,0.3nm,0.5s,baz=282,slow=6.4,SNR=2.2						
	comp=Z,0.3nm,0.5s						
ASAR	Alice Springs	68.52	194	P	P	08 31 18.7	+1.3
	comp=Z,0.7nm,0.9s,baz=2.2,slow=5.0,SNR=4.5						
	comp=Z,0.7nm,0.9s						
PDAR	Pinedale Array	69.04	51	P	P	08 31 20.2	-0.6
	comp=Z,0.2nm,0.6s,baz=335,slow=4.0,SNR=1.8						
	comp=Z,0.2nm,0.6s						
KBZ	Khabaz	70.52	312	P	P	08 31 29.9	+0.3
	comp=Z,1.5nm,0.9s,baz=109,slow=2.5,SNR=4.1						
	comp=Z,1.5nm,0.9s						
AKASG	Malin Array Be	72.12	324	P	P	08 31 38.1	-1.1
	comp=Z,0.3nm,0.3s,baz=38,slow=6.0,SNR=1.8						
	comp=Z,0.3nm,0.3s						
TXAR	Lajitas Array	81.72	57	P	P	08 32 35.0	+1.2
	comp=Z,0.5nm,0.6s,baz=292,slow=3.8,SNR=8.5						
	comp=Z,0.5nm,0.6s						
H03N2	Juan Fernandez	141.91	91	T	T	11 18 28.8	
	baz=305,slow=77,SNR=6.3						
H03N3	Juan Fernandez	141.93	91	T	T	11 18 28.4	
	baz=305,slow=77,SNR=6.7						
H03N1	Juan Fernandez	141.93	91	T	T	11 18 32.0	
	baz=305,slow=77,SNR=4.9						

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*NOU **23** 08:21:11.6, 37°.26S×179°.61E, h0^{km}, MLv3.8/8, Off E. Coast of N. Island, N.Z.*

*WEL **23** 08:21:19.9±0.9, 37°S±4°×17°9E±°, h12^{km}, M3.2/30, ML3.5/34, MLv3.2/30, Error ellipse: s-maj=0.0km s-min=0.0km az=94.2, confirmed*

ISC 23 08:21:17.5±2.8, 37°.32S±0°.06×179°.2E±0°.1, h12^{km}±11^{km}, n70, σ0^{s}.97/77, Off east coast of North Island

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

MXZ	Matakaoa Point	0.73	250	P	Pg	08 21 31.7	0.0
MXZ	Matakaoa Point	0.73	250	P	Pg	08 21 31.6	-0.1
MXZ				S	Sg	08 21 39.1	-2.2
WMGZ	Waiomatatini S	0.79	230	P	Pn	08 21 34.9	+0.5
WMGZ				S	Sb	08 21 45.0	+1.4
PUZ	Puketiti	1.05	224	P	Pn	08 21 38.5	+0.5
PUZ				S	Sg	08 21 51.7	+0.3
HAZ	Te Kaha	1.19	248	P	Pn	08 21 39.1	-0.8
TWGZ	Tauwhareparae	1.28	227	P	Pb	08 21 41.9	+0.4
TWGZ				S	Sb	08 21 57.9	0.0
RUGZ	Raukumara Rang	1.35	241	P	Pn	08 21 42.9	+0.6
RUGZ				S	Sb	08 21 58.8	-1.3
CNGZ	Carnagh Statio	1.40	213	P	Pg	08 21 44.4	+0.1
CNGZ				S	Sg	08 22 03.5	+1.0
TKGZ	Te Karaka	1.54	223	P	Pn	08 21 45.0	+0.4
TKGZ				S	Sn	08 22 02.9	-1.7
WIZ	White Island	1.59	262	P	Pn	08 21 46.1	+0.7
MWZ	Matawai	1.65	232	P	Pn	08 21 46.7	+0.4
RIGZ	Rimuhau	1.78	218	P	Pn	08 21 48.6	+0.5
RAGZ	Rawiri	1.82	229	P	Pn	08 21 49.0	+0.4
WHRZ	Whale Island	1.83	252	P	Pn	08 21 49.8	+1.1
URZ	Urewera	1.89	239	P	Pn	08 21 50.4	+0.9
URZ	Urewera	1.89	239	P	Pn	08 21 50.2	+0.7
SNGZ	Shannon Statio	2.06	224	P	Pn	08 21 52.1	+0.2
EDRZ	Edgecumbe	2.09	247	P	Pn	08 21 53.0	+0.7
RTZ	Ruatahuna	2.17	233	P	Pn	08 21 54.1	+0.7
MUGZ	Murupara	2.23	238	P	Pn	08 21 54.5	+0.3
TARZ	Mount Tarawera	2.31	246	P	Pn	08 21 56.2	+0.9
MYRZ	Mayor Island	2.34	270	P	Pn	08 21 55.9	+0.2
RRRZ	Republican Roa	2.34	243	P	Pn	08 21 56.5	+0.8
TGRZ	Tauranga	2.35	259	P	Pn	08 21 55.9	0.0
MTHZ	Maungataniwha	2.40	229	P	Pn	08 21 57.3	+0.7
KARZ	Kaharoa	2.43	252	P	Pn	08 21 57.2	+0.3
PRRZ	Plateau Road	2.50	241	P	Pn	08 21 58.4	+0.6
NMHZ	Naumai	2.58	226	P	Pn	08 21 59.8	+0.8
ARHZ	Aropaoanui	2.59	221	P	Pn	08 21 59.4	+0.3
KMRZ	Kaimai	2.62	257	P	Pn	08 21 59.5	-0.1
MRHZ	Matea Rd	2.65	234	P	Pn	08 22 00.4	+0.3
BKZ	Black Stump Fm	2.81	228	P	Pn	08 22 02.5	+0.3
BKZ	Black Stump Fm	2.81	228	P	Pn	08 22 02.3	+0.1
KUZ	Kuaotunu	2.82	281	P	Pn	08 22 00.7	-1.6
KUZ	Kuaotunu	2.82	281	P	Pn	08 22 00.9	-1.4
MCHZ	McNeill Hill	2.88	222	P	Pn	08 22 03.1	0.0
KUTZ	Kaahu Road	2.90	245	P	Pn	08 22 03.9	+0.5
TOZ	Tahuroa Road	2.95	261	P	Pn	08 22 04.0	0.0
KWHZ	Kaweka Forest	3.02	225	P	Pn	08 22 04.7	-0.4
TLZ	Tolley Road	3.05	250	P	Pn	08 22 05.7	+0.2
KAHZ	Kahuranaki	3.06	215	P	Pn	08 22 04.9	-0.8
BHHZ	Black Hill Sta	3.27	227	P	Pn	08 22 08.3	-0.2
TMVZ	Te Maari	3.27	236	P	Pn	08 22 08.7	0.0
WIAZ	Waiheke Island	3.27	278	P	Pn	08 22 09.0	+0.5
ETVZ	East Tongariro	3.28	235	P	Pn	08 22 08.7	0.0
NTVZ	North Tongarir	3.28	236	P	Pn	08 22 08.8	+0.1
KRVZ	Karewarewa	3.30	236	P	Pn	08 22 09.2	+0.2
OTVZ	Oturere	3.32	235	P	Pn	08 22 09.7	+0.3
NNVZ	North Ngauruho	3.34	236	P	Pn	08 22 10.1	+0.5
SNVZ	South Ngauruho	3.35	235	P	Pn	08 22 09.8	0.0
NGZ	Ngauruhoe	3.37	235	P	Pn	08 22 10.0	0.0
MOVZ	Moawhango	3.41	231	P	Pn	08 22 10.0	-0.4
ETAZ	East Tamaki Re	3.41	275	P	Pn	08 22 10.9	+0.5
WNVZ	Wahianoa	3.46	233	P	Pn	08 22 11.2	-0.1
MBAZ	Motutapu North	3.46	278	P	Pn	08 22 11.9	+0.8
ABAZ	Army Bay	3.55	280	P	Pn	08 22 13.4	+1.1
HIZ	Hauiti	3.62	249	P	Pn	08 22 14.3	+1.0
HIZ	Hauiti	3.62	249	P	Pn	08 22 14.4	+1.1
AWAZ	Awhitu Peninsu	3.63	273	P	Pn	08 22 14.5	+1.1
RVAZ	Riverhead Bore	3.72	277	P	Pn	08 22 15.0	+0.3
VRZ	Vera Road	3.92	241	P	Pn	08 22 18.6	+1.2
BFZ	Birch Farm	4.06	213	P	Pn	08 22 17.3	-2.1
WAZ	Wanganui	4.09	232	P	Pn	08 22 20.4	+0.7
WCZ	Waipu Caves	4.12	288	P	Pn	08 22 20.3	+0.1
NEZ	North Egmont	4.45	242	P	Pn	08 22 26.9	+2.1
PKE	Pukeiti	4.49	244	P	Pn	08 22 29.1	+3.7
KHEZ	Kahui Hut	4.51	242	P	Pn	08 22 25.4	-0.3
KHEZ	Kahui Hut	4.51	242	P	Pn	08 22 28.5	+2.8
OUZ	Omahuta	4.97	293	P	Pn	08 22 32.5	+0.7
OUZ	Omahuta	4.97	293	P	Pn	08 22 33.3	+1.5

SJA ***23*** *08:33:01.1±0.7, 20°.83S×69°.07W, h120^{km}±4^{km}, ML4.1, MW3.9, Hypocentre not reviewed by the ISC*
NEIC ***23*** *08:33:03.1±1.0, 20°.83S±0°.05×69°.07W±0°.09, h102^{km}±10^{km}, mb4.0/5, ML4.0(GUC), Error ellipse: s-maj=12.0km s-min=6.7km az=93.0*
GUC ***23*** *08:33:03.3±0.8, 20°.83S×69°.02W, h105^{km}±3^{km}, ML4.0*
IDC ***23*** *08:33:03.8±1.6, 20°.83S×68°.80W, h107^{km}±16^{km}, mb3.4/2, mbtmp3.7/6, MS3.0/1, Error ellipse: s-maj=32.8km s-min=14.7km az=108.0*
VAO ***23*** *08:33:04.2±0.5, 20°.88S×69°.28W, h141^{km}, mb4.0*
ISC 23 08:33:02.4±0.6**, 20°.84S**±0°.03×**69°.09W**±0°.06**, h111**^{km}±6^{km}**, n86, σ1^{s}04**/91**, 7C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.42	241		Pn	08 33 18.8	-0.3
PB01	IPOC Station P	0.42	241	⇑*i*P	Pn	08 33 18.8	-0.3
PB01				*i* S	Sn	08 33 31.2	-0.4
PB01				IAML		08 33 32.9	
	comp=E,8μm,0.3s						
PB01	IPOC Station P	0.42	241	*e*P		08 33 31.4	
PB01				*e*S		08 33 31.5	
PB01				IAML		08 33 32.4	
	comp=Z,5μm,0.1s						
PB08	IPOC Station P	0.69	355	Pn	Pn	08 33 21.0	-0.4
PB08	IPOC Station P	0.69	355	⇓*i*P	Pn	08 33 21.4	0.0
PB08				*i* S	Sn	08 33 35.0	-0.5
PB08				IAML		08 33 36.1	
	comp=N,10μm,0.3s						
PB02	IPOC Station P	0.89	237		Pn	08 33 23.2	+0.4
PB02	IPOC Station P	0.89	237	⇑*i*P	Pn	08 33 23.2	+0.4
PB02				*i* S	Sn	08 33 38.7	+0.5
PB02				IAML		08 33 40.9	
	comp=E,6μm,0.3s						
PB02	IPOC Station P	0.89	237	*e*P		08 33 23.0	
PB02				*e*S		08 33 39.1	
PB02				IAML		08 33 40.3	
	comp=Z,4μm,0.2s						
PB09	IPOC Station P	0.96	188		Pn	08 33 23.8	+0.1
PB09	IPOC Station P	0.96	188	⇑*i*P	Pn	08 33 24.1	+0.4
PB09				*i* S	Sn	08 33 40.0	+0.4
PB09				IAML		08 33 42.5	
	comp=N,2μm,0.1s						
PB09	IPOC Station P	0.96	188	*e*P		08 33 23.0	
PB09				*e*P		08 33 23.9	
PB09				*e*S		08 33 40.9	
PB09				IAML		08 33 42.3	
	comp=Z,2μm,0.7s						
TA01	Diego Aracena	1.05	285		Pn	08 33 24.2	-0.1
TA01	Diego Aracena	1.05	285	⇑*i*P	Pn	08 33 24.5	+0.2
TA01				*i* S	Sn	08 33 41.2	+0.4
TA01				IAML		08 33 43.4	
	comp=E,3μm,0.3s						
TA01	Diego Aracena	1.05	285	*e*P		08 33 23.0	
TA01				*e*P		08 33 24.4	
TA01				*e*S		08 33 42.3	
TA01				*e*S		08 33 43.0	
TA02	Huaiquique	1.13	300		Pn	08 33 25.2	+0.2
TA02	Huaiquique	1.13	300	⇑*i*P	Pn	08 33 25.4	+0.3
TA02				*i* S	Sn	08 33 42.3	+0.1
TA02	Huaiquique	1.13	300	*e*P		08 33 25.4	
TA02				*e*S		08 33 43.0	
TA02				IAML		08 33 43.6	
	comp=Z,3μm,0.2s						
PB07	IPOC Station P	1.15	220		Pn	08 33 25.6	0.0
PB07	IPOC Station P	1.15	220	⇑*i*P	Pn	08 33 26.0	+0.4
PB07				*i* S	Sn	08 33 43.3	+0.2
PB07				IAML		08 33 44.6	
	comp=E,3μm,0.4s						
PB07	IPOC Station P	1.15	220	*e*P		08 33 25.7	
PB07				*e*S		08 33 44.0	
PB07				IAML		08 33 45.0	
	comp=Z,2μm,0.4s						
GO01	Chusmiza	1.17	355		Pn	08 33 25.9	-0.2
GO01	Chusmiza	1.17	355	⇓*i*P	Pn	08 33 25.9	-0.2
GO01				*i* S	Sn	08 33 44.2	+0.3
GO01				IAML		08 33 45.8	
	comp=N,15μm,0.1s						
GO01	Chusmiza	1.17	355	*e*P		08 33 26.0	
GO01				*e*S		08 33 44.7	
GO01				IAML		08 33 45.6	
	comp=Z,2μm,0.1s						
PB11	IPOC Station P	1.20	334		Pn	08 33 25.8	-0.3
PB11	IPOC Station P	1.20	334	⇓*i*P	Pn	08 33 26.1	+0.1
PB11				*i* S	Sn	08 33 43.8	-0.1
PB11				IAML		08 33 45.3	
	comp=E,8μm,0.2s						
PB11	IPOC Station P	1.20	334	*e*P		08 33 26.0	
PB11				*e*S		08 33 44.3	
PB11				IAML		08 33 45.7	
	comp=Z,2μm,0.3s						
MNMC	Minye Minye	1.76	344		Pn	08 33 33.3	+0.5
MNMC	Minye Minye	1.76	344	*e*P	Pn	08 33 33.2	+0.3
MNMC				*i* S	Sn	08 33 56.9	+0.9
MNMCX	Minye Minye	1.76	344	*e*P		08 33 33.2	
MNMCX				*e*S		08 33 57.1	
MNMCX				IAML		08 33 59.0	
	comp=Z,1μm,0.6s						
LVC	Limon Verde	1.77	175	P	Pn	08 33 33.8	+0.8
	comp=Z,80nm,0.4s,baz=13,slow=7.5,SNR=172						
LVC				S	Sn	08 33 57.5	+1.3
	comp=Z,228nm,0.3s,baz=129,slow=21,SNR=48						
LVC	Limon Verde	1.77	175		Pn	08 33 33.2	+0.2
LVC	Limon Verde	1.77	175	*e*P	Pn	08 33 33.6	+0.6
LVC				*i* S	Sn	08 33 57.5	+1.3
LVC	Limon Verde	1.77	175	*e*P		08 33 33.0	
LVC				*e*S		08 33 58.5	
PB04	IPOC Station P	1.79	213		Pn	08 33 33.8	+0.8
PB04	IPOC Station P	1.79	213	*e*P	Pn	08 33 33.8	+0.8
PB04				*i* S	Sn	08 33 56.2	0.0
PB04				IAML		08 34 03.5	
	comp=E,709nm,0.4s						
PB04	IPOC Station P	1.79	213	*e*P		08 33 33.0	
PB04				*e*S		08 33 57.5	
PB06	IPOC Station P	1.91	193	*e*P		08 33 35.0	
PB06				*e*S		08 34 00.1	
PB15	IPOC Station P	2.38	188	*e*P		08 33 41.0	
PB15				*e*S		08 34 11.8	
PB15				IAML		08 34 17.0	
	comp=Z,1μm,0.3s						
PB15	IPOC Station P	2.39	188		Pn	08 33 42.0	+1.4
PB15	IPOC Station P	2.39	188	*e*P	Pn	08 33 41.3	+0.7
PB15				*i* S	Sn	08 34 10.2	+0.3
PB12	IPOC Station P	2.50	332		Pn	08 33 41.4	-0.6
PB12	IPOC Station P	2.50	332	⇑*i*P	Pn	08 33 41.4	-0.6
PB12				*i* S	Sn	08 34 13.0	+0.6
PB12				IAML		08 34 15.3	
	comp=E,517nm,0.6s						
PB12	IPOC Station P	2.50	332	*e*P		08 33 41.0	
PB12				*e*P		08 33 41.5	
PB12				*e*S		08 34 12.8	
PB16	IPOC Station P	2.52	351	Pn	Pn	08 33 43.3	+0.5
PB16	IPOC Station P	2.52	351	*e*P	Pn	08 33 43.9	+1.1
PB16				*i* S	Sn	08 34 15.3	+1.7
PB16				IAML		08 34 21.6	
	comp=N,207nm,0.6s						
PB16	IPOC Station P	2.52	351	*e*P		08 33 43.0	
PB16				*e*P		08 33 44.0	
PB16				*e*S		08 34 17.1	
PB10	IPOC Station P	2.99	207		Pn	08 33 48.6	+0.2
PB10	IPOC Station P	2.99	207	*e*P	Pn	08 33 47.9	-0.5
PB10	IPOC Station P	2.99	207	*e*P		08 33 48.5	
PB10				*e*S		08 34 23.3	
PB18	Visviri	3.25	353	*e*P	Pn	08 33 57.2	+4.9
YJA	Yavi	3.59	112	*e*P		08 33 57.0	
HJA	Humahuaca	4.15	125	*e*P		08 34 05.0	
GO02	Mina Guanaco	4.33	186	Pn	Pn	08 34 06.1	-0.4
GO02	Mina Guanaco	4.33	186	*e*P	Pn	08 34 06.2	-0.4
GO02				*e*S	Sn	08 34 56.4	+0.2
GO02	Mina Guanaco	4.33	186	*e*P		08 34 06.7	
GO02				*e*S		08 34 56.3	
GO02				IAML		08 35 23.5	
	comp=Z,110nm,0.3s						
LPAZ	La Paz	4.62	12	P	Pn	08 34 12.1	+1.3
	comp=Z,3.6nm,0.3s,baz=202,slow=5.6,SNR=29						
LPAZ				S	Sn	08 34 53.4	-10
	comp=Z,5.0nm,0.5s,baz=179,slow=7.8,SNR=3.7						
LPAZ	La Paz	4.62	12	*e*P	Pn	08 34 12.5	+1.7
AC06	Mina Casimiro	6.59	190	Pn	Pn	08 34 34.6	-2.3
AC05	El Transito	8.04	187		Pn	08 34 53.9	-2.6
SIV	San Ignacio	9.01	59	P	Pn	08 35 06.6	-3.1
	comp=Z,1.7nm,0.4s,baz=241,slow=12,SNR=6.9						
SIV				S	Sn	08 36 34.9	-15
	comp=Z,0.9nm,0.5s,baz=221,slow=12,SNR=2.3						
ESFA	Espinillo Form	10.60	115	*e*P	Pn	08 35 34.1	+3.0
CFA	Coronel Fontan	10.75	176	P	Pn	08 35 29.6	-3.6
	comp=Z,0.8nm,0.3s,baz=307,slow=11,SNR=8.6						
CFA				S	Sn	08 37 22.0	-10
	comp=Z,1.4nm,0.4s,baz=37,slow=16,SNR=2.8						
PTLB	Pontes e Lacer	10.87	62	*e*P	Pn	08 35 39.0	+4.0
ETMB	Extrema	11.30	15	*e*P	Pn	08 35 42.1	+1.4
CPUP	Villa Florida	12.09	119	P	Pn	08 35 49.0	-2.0
	comp=Z,1.1nm,0.8s,baz=272,slow=10,SNR=2.8						
CPUP	Villa Florida	12.09	119	*e*P	Pn	08 35 52.0	+1.0
RVDE	Rio Verde (Bra	13.43	85	*e*P	Pn	08 36 08.7	0.0
PDRB	Porto dos Gac	14.99	54	*e*P	P	08 36 31.1	-0.3
CRSM	Crissiumal (Br	15.24	119	*e*P	P	08 36 33.9	-0.2
H03N1	Juan Fernandez	15.28	213	T	T	08 51 59.1	
	baz=39						
H03N2	Juan Fernandez	15.29	213	T	T	08 51 55.5	
	baz=39						
H03N3	Juan Fernandez	15.30	213	T	T	08 51 49.0	
	baz=39						
FRBT	Francisco Belt	15.57	112	*e*P	P	08 36 37.5	-0.3
PTGB	Pitanga	16.17	107	*e*P	P	08 36 45.9	+1.4
ALGR	Alto Alegre (B	16.59	122	*e*P	P	08 36 49.0	0.0
PCMB	Pacaembu	16.64	96	*e*P	P	08 36 50.6	+1.0
ITAB	Concordia	16.74	116	*e*P	P	08 36 50.3	-0.4
ARAG	Araguaiana, MT	17.18	76	*e*P	Pn	08 36 55.8	0.0
TRQA	Tornquist	18.23	162	*e*P	P	08 37 05.9	-1.1
FRTB	Fartura	18.27	101	*e*P	Pn	08 37 07.6	-1.3
GO06	Curarrehue	18.80	186	P	Pn	08 37 14.6	-0.5
GO06				IAmb	IAmb	08 37 19.2	
	comp=Z,10nm,1.3s						
BB19B	Bebedouro	19.21	94	*e*P	P	08 37 17.2	-0.6
PLCA	Paso Flores	19.87	183	P	Pn	08 37 26.6	-1.0
	comp=Z,1.6nm,0.8s,baz=0.0,slow=12,SNR=6.3						
PLCA	Paso Flores	19.87	183	P	Pn	08 37 26.1	-1.4
IPMB	Ipameri, GO	19.90	85	*e*P	P	08 37 24.7	-0.6
RCLB	Rio Claro- Sao	20.11	98	*e*P	P	08 37 26.6	-0.9
LL04	Puerto Octay	20.21	187	P	P	08 37 29.6	+1.2
LL04				IAmb	IAmb	08 37 44.4	
	comp=Z,11nm,1.2s						
BDFB	Brasilia	20.67	79	P	P	08 37 32.6	-1.1
	comp=Z,3.1nm,0.4s,baz=252,slow=6.3,SNR=6.6						
	comp=Z,3.1nm,0.4s						
BDFB	Brasilia	20.67	79	P	P	08 37 32.0	-1.7
BDFB				IAmb	IAmb	08 37 49.9	
	comp=Z,9.1nm,1.2s						
SGCB	S£o Gabriel d	20.69	6	*e*P	P	08 37 33.6	-0.1
PARB	Paraibuna	21.89	101	*e*P	P	08 37 46.4	-0.2
SMTB	Santa Maria do	23.91	63	*e*P	P	08 38 05.8	-0.5
JANB	Januaria	24.25	80	*e*P	P	08 38 08.6	-0.8
BOAV	Boa Vista	24.57	21	P	P	08 38 12.2	+0.1
BOAV	Boa Vista	24.57	21	*e*P	P	08 38 12.5	+0.4
SDBA	SAO DESIDERIO	24.62	74	*e*P	P	08 38 12.7	0.0
MDP	Montagnes des	30.42	34	LR	LR	08 51 56.7	
	comp=Z,28nm,18.2s,baz=158,slow=37						
YKA	Yellowknife Ar	90.51	341	P	P	08 45 51.9	+0.7
	comp=Z,0.1nm,0.6s,baz=134,slow=5.0,SNR=2.7						
	comp=Z,0.1nm,0.6s						
H11S2	WAKE ISLAND Hy	127.62	278	T	T	11 11 56.8	
	baz=101,slow=74,SNR=18						
H11S1	WAKE ISLAND Hy	127.63	278	T	T	11 11 56.3	
	baz=101,slow=74,SNR=12						
H11S3	WAKE ISLAND Hy	127.64	278	T	T	11 11 54.5	
	baz=101,slow=74,SNR=17						
H11N3	WAKE ISLAND Hy	127.69	279	T	T	11 11 56.9	
	baz=102						
H11N2	WAKE ISLAND Hy	127.70	279	T	T	11 11 56.4	
	baz=102						
H11N1	WAKE ISLAND Hy	127.70	279	T	T	11 11 58.2	
	baz=102						
MKAR	Makanchi Array	145.20	35	PKPbc	PKPdf	08 52 28.2	+1.3
	comp=Z,1.2nm,0.7s,baz=333,slow=4.5,SNR=14						

IDC 23 08:52:50.0±608.0**, 49°.84N×37°.62E, h0**^{km}**, Error ellipse: s-maj=249.7km s-min=135.2km az=12.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	6.90	358	I	I	09 32 50.0	
	baz=177,slow=325,SNR=1.0						
I31KZ	AKTYUBINSK INF	13.11	80	I	I	10 10 20.0	
	0.2nm,0.7s,baz=274,slow=318,SNR=15						
I46RU	ZALESOVO INFRA	28.99	64	I	I	11 54 00.0	
	baz=282,slow=327,SNR=1.3						

JMA ***23*** *08:52:52.5±0.1, 38°.4N±0°.2×141°.8E±0°.5, h58^{km}, MD3.8/34, MV4.0/34, E OFF MIYAGI PREF*
JMA Felt II J1 at E OFF MIYAGI PREF .
IDC ***23*** *08:52:56.1±3.1, 38°.47N×141°.51E, h99^{km}±30^{km}, mb3.2/9, mbtmp3.5/11, Error ellipse: s-maj=28.8km s-min=21.6km az=102.0*
ISC 23 08:52:51.8±1.0**, 38°.43N**±0°.05×**141°.91E**±0°.08**, h59**^{km}±8^{km}**, n36, σ1^{s}13**/36**, mb3.7**/9**, 11D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.36	251	*i* P	Pn	08 53 02.6	+0.3
JIKH				S	Sn	08 53 09.6	-0.3
JIO	Ouri	0.44	273	*i* P	Pn	08 53 03.2	+0.3
JIO				S	Sn	08 53 10.8	-0.4
JIO	Ouri	0.44	273	A	A	08 53 03.2	
	comp=E,12nm,2.5s,comp=E,12nm,0.3s						
JKMT	Kesennumamotoy	0.51	319	⇓*i*P	Pn	08 53 04.2	+0.5
JKMT				⇓S	Sn	08 53 12.4	0.0
JKMT	Kesennumamotoy	0.51	319	A	A	08 53 04.2	
	comp=E,6.0nm,0.3s,comp=E,7.0nm,0.5s						
OFUJ	Ofunato	0.68	344	⇓*i*P	Pn	08 53 06.2	+0.6
OFUJ				⇓S	Sn	08 53 16.2	+0.4
JMK	Ichinoseki	0.75	314	⇓*i*P	Pn	08 53 07.1	+0.6
JMK				⇓S	Sn	08 53 17.5	+0.2
JMK	Ichinoseki	0.75	314	A	A	08 53 07.1	
	comp=E,6.0nm,0.5s,comp=E,16nm,0.3s						
JOU	Okura	0.98	267	*i* P	Pn	08 53 09.6	+0.1
JOU				S	Sn	08 53 22.2	-0.4
JMM	Marumori	1.04	238	P	Pn	08 53 10.1	-0.2
JMM				S	Sn	08 53 22.8	-1.2
JMST	Minamisoumatoc	1.07	229	A	A	08 53 11.0	
	comp=E,5.0nm,0.6s,comp=E,5.0nm,0.4s						
JOM	Ohasama	1.15	336	⇓*i*P	Pn	08 53 12.3	+0.6
JOM				⇓S	Sn	08 53 27.4	+0.9
JYK	Kaneyama	1.30	292	⇓*i*P	Pn	08 53 14.2	+0.4
JYK				⇓S	Sn	08 53 30.4	+0.1
JFK	Kawauchi	1.34	218	*i* P	Pn	08 53 14.3	0.0
JFK				S	Sn	08 53 30.2	-0.9
JFK	Kawauchi	1.34	218	A	A	08 53 14.3	
	comp=E,5.0nm,0.4s,comp=E,7.0nm,0.3s						
JRG	Rokugo	1.38	315	⇓*i*P	Pn	08 53 15.3	+0.5
ONAJ	Iwakimizuishiy	1.59	214	A	A	08 53 18.4	
	comp=E,5.0nm,4.0s,comp=E,4.0nm,2.7s						
MJAR	Matsushiro Arr	3.49	238	P	Pn	08 53 44.9	+1.3
	3.7nm,0.4s,baz=33,slow=14,SNR=33						
MJAR				S	Sn	08 54 26.4	+2.7
	3.2nm,0.3s,baz=12,slow=16,SNR=1.7						
ASAJ	Asahikawa	5.71	5	P	Pn	08 54 13.9	+0.1
	9.5nm,0.3s,baz=212,slow=12,SNR=22						
ASAJ				S	Sn	08 55 15.8	-2.2
	8.2nm,0.7s,baz=122,slow=24,SNR=1.9						
USRK	Ussuriysk Ar.	9.43	311	P	Pn	08 55 05.9	+1.2
	1.0nm,0.4s,baz=118,slow=14,SNR=7.1						
H11N2	WAKE ISLAND Hy	28.56	124	T	T	09 29 08.6	
	baz=316,slow=76						
H11N1	WAKE ISLAND Hy	28.57	124	T	T	09 29 09.8	
	baz=316,slow=76						
H11N3	WAKE ISLAND Hy	28.58	124	T	T	09 29 16.6	
	baz=316,slow=76						
H11S1	WAKE ISLAND Hy	29.32	126	T	T	09 30 01.5	
	baz=317,slow=76						
H11S3	WAKE ISLAND Hy	29.32	126	T	T	09 30 04.3	
	baz=317,slow=76						
H11S2	WAKE ISLAND Hy	29.34	126	T	T	09 30 01.9	
	baz=317,slow=76						
ZALV	Zalesovo Beam	41.28	311	P	P	09 00 27.4	-3.6
	0.8nm,0.4s,baz=77,slow=8.3,SNR=2.7						
	0.8nm,0.4s						
MKAR	Makanchi Array	43.72	301	P	P	09 00 50.6	-0.4
	0.2nm,0.4s,baz=85,slow=11,SNR=2.3						
	0.2nm,0.4s						
ILAR	Eielson Array	48.11	33	P	P	09 01 26.5	+1.2
	0.3nm,0.7s,baz=266,slow=6.4,SNR=5.2						
	0.3nm,0.7s						
INK	Inuvik	52.97	28	P	P	09 02 01.8	0.0
	0.6nm,0.8s,baz=321,slow=3.4,SNR=1.8						
	0.6nm,0.8s						
WRA	Warramunga Arr	58.49	188	P	P	09 02 41.4	-0.4
	0.5nm,0.8s,baz=5.0,slow=7.3,SNR=5.7						
	0.5nm,0.8s						
YKA	Yellowknife Ar	62.41	31	P	P	09 03 08.6	+0.5
	0.2nm,0.6s,baz=304,slow=6.8,SNR=5.9						
	0.2nm,0.6s						
NOA	NORSAR Array B	73.05	337	P	P	09 04 13.7	-1.4
	0.7nm,0.6s,baz=42,slow=5.4,SNR=3.3						
	0.7nm,0.6s						
PDAR	Pinedale Array	76.41	46	P	P	09 04 36.5	+1.3
	0.4nm,0.6s,baz=250,slow=2.0,SNR=6.0						
	0.4nm,0.6s						
TXAR	Lajitas Array	88.96	53	P	P	09 05 41.5	+1.2
	0.3nm,0.7s,baz=291,slow=2.5,SNR=5.7						
	0.3nm,0.7s						
LPAZ	La Paz	145.64	58	PKPbc	PKPbc	09 12 24.9	-0.1
	0.5nm,0.4s,baz=28,slow=4.8,SNR=4.3						

IDC ***23*** *08:53:47.0±0.9, 1°.71N×128°.80E, h0^{km}, mb3.8/7, mbtmp3.9/8, ML3.6/1, MS2.5/4, Error ellipse: s-maj=41.9km s-min=17.3km az=81.0*
DJA ***23*** *08:53:51.3±0.8, 2°N±4°×12°9E±°, h11^{km}±7^{km}, M4.0/10, mb4.3/4, mB4.9/1, MLv3.9/10, Mw(mB)4.2/1*
NEIC ***23*** *08:53:55.6±2.2, 1°.44N±0°.08×128°.48E±0°.09, h66^{km}±4^{km}, mb4.3/12, Error ellipse: s-maj=13.1km s-min=10.9km az=76.0*
ISC 23 08:53:54.4±0.6**, 1°.55N**±0°.06×**128°.58E**±0°.08**, h61**^{km}**, n46, σ1^{s}12**/39**, mb4.1**/11**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.44	237		Pn	08 54 17.1	-1.1
TNTI	Ternate	1.44	237	P	Pn	08 54 16.9	-1.3
TNTI				S	Sn	08 54 35.5	-0.7
LBMI	Labuha	2.43	206	P	Pn	08 54 31.2	-0.5
LBMI				S	Sn	08 55 01.0	+0.7
SIJI	Sorong	3.61	132	LR	LR	08 55 26.7	
	comp=Z,12nm,21.4s,baz=342,slow=28						
SGSI	Sangihe	3.71	305	P	Pn	08 54 48.6	-0.6
SANI	Sanana	4.42	216	P	Pn	08 54 58.7	-0.2
GTOI	Gorontalo	5.64	261	P	Pn	08 55 17.3	+1.6
	15nm,0.8s,0.0nm						
FAKI	Fak Fak	5.76	140	Pn	Pn	08 55 17.2	-0.2
FAKI	Fak Fak	5.76	140	P	Pn	08 55 16.3	-1.1
	20nm,1.0s,0.1nm						
MRSI	Marisa	6.72	261	P	Pn	08 55 30.6	+0.1
SPSI	Sidrap Palu	10.37	238	P	Pn	08 56 22.1	+1.7
MYLDM	Lahad Datu	10.68	290	Pn	Pn	08 56 25.8	+1.0
KAPI	Kappang	10.97	233	Pn	Pn	08 56 30.4	+1.8
	0.4nm,0.3s,baz=48,slow=14,SNR=1.2						
KAPI				LR	LR	09 00 59.3	
	comp=Z,21nm,20.3s,baz=104,slow=38						
	4.7nm,0.4s						
KNRA	Kununurra	17.12	179		Pn	08 57 46.8	-2.9
KNRA				IAmb	IAmb	08 58 08.2	
	comp=Z,16nm,1.1s						
KSM	Kuching	18.26	270	P	P	08 58 02.0	-1.2
KSM				IAmb	IAmb	08 58 09.3	
	comp=Z,40nm,1.4s						
GUMO	Guam	20.07	53	LR	LR	09 05 17.4	
	comp=Z,35nm,20.0s,baz=348,slow=35						
WB0	Warramunga Arr	21.94	165	P	P	08 58 43.1	+0.1
WRA	Warramunga Arr	22.10	165	P	P	08 58 45.3	+0.6
	comp=Z,1.6nm,0.7s,baz=345,slow=11,SNR=12						
	comp=Z,1.6nm,0.7s						
WRA	Warramunga Arr	22.10	165	P	P	08 58 44.4	-0.4
AS31	Alice Springs	25.60	169	P	P	08 59 18.0	-0.1
ASAR	Alice Springs	25.60	169	P	P	08 59 18.7	+0.6
	comp=Z,0.4nm,0.7s,baz=348,slow=13,SNR=9.2						
	comp=Z,0.4nm,0.7s						
ASAR	Alice Springs	25.60	169	P	P	08 59 18.2	+0.1
STKA	Stephens Creek	35.47	161	P	P	09 00 45.9	+0.8
	comp=Z,2.3nm,0.9s,baz=326,slow=13,SNR=3.7						
	comp=Z,2.3nm,0.9s						
MJAR	Matsushiro Arr	35.94	13	P	P	09 00 46.8	-2.3
	comp=Z,1.0nm,0.4s,baz=192,slow=10,SNR=1.9						
	comp=Z,1.0nm,0.4s						
H11S3	WAKE ISLAND Hy	40.98	63	T	T	09 45 26.9	
	baz=249,slow=74						

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H11S2 WAKE ISLAND Hy 41.00  63  T       T           09 45 20.0
      baz=249,slow=74
H11S1 WAKE ISLAND Hy 41.00  63  T       T           09 45 15.6
      baz=249
H11N1 WAKE ISLAND Hy 41.59  62  T       T           09 45 55.4
      baz=248,slow=75,SNR=10
H11N2 WAKE ISLAND Hy 41.60  62  T       T           09 45 54.1
      baz=248,slow=75,SNR=9.8
H11N3 WAKE ISLAND Hy 41.60  62  T       T           09 46 01.6
      baz=248,slow=75,SNR=14
SHL   Shillong       42.65 307  P       P           09 01 45.6 +0.2
ULN   Ulaanbaatar    49.76 341  P       P           09 02 40.1 -0.7
ULN                             IAmb    IAmb        09 02 42.4
      comp=Z,1.5nm,0.6s
SONM  Songino Array  49.94 341  P       P           09 02 43.4 +1.1
      comp=Z,0.4nm,0.5s,baz=157,slow=9.4,SNR=2.2
      comp=Z,0.4nm,0.5s
PEA0B Petropavlovsk- 56.77  21  P       P           09 03 33.4 +1.3
PETK  Petropavlovsk- 56.77  21  P       P           09 03 32.1  0.0
      comp=Z,1.0nm,0.9s,baz=213,slow=9.5,SNR=1.9
      comp=Z,1.0nm,0.9s
PETK  Petropavlovsk- 56.77  21  P       P           09 03 33.2 +1.1
YAK   Yakutsk        60.34   1  LR      LR          09 30 29.7
      comp=Z,12nm,18.7s,baz=217,slow=37
MK31  Makanchi Array 60.38 325  P       P           09 03 57.1 -0.3
MK31                            IAmb    IAmb        09 03 57.9
      comp=Z,1.2nm,0.7s
MKAR  Makanchi Array 60.38 325  P       P           09 03 57.4  0.0
      comp=Z,1.7nm,0.5s,baz=116,slow=7.9,SNR=26
      comp=Z,1.7nm,0.5s
MKAR  Makanchi Array 60.38 325  P       P           09 03 56.9 -0.5
MAKZ  Makanchi       60.57 325  P       P           09 03 58.1 -0.6
MAKZ                            IAmb    IAmb        09 03 59.1
      comp=Z,1.6nm,0.6s
KURK  Kurchatov      64.56 327  P       P           09 04 24.3 -0.8
KURK                            IAmb    IAmb        09 04 25.3
      comp=Z,4.3nm,0.6s
ABKAR Akbulak array  74.99 321  P       P           09 05 28.1 -1.2
IMAR  Indian Mountai 83.58  24  P       P           09 06 16.9 +1.2
BMAR  Burnt Mountain 87.36  23  P       P           09 06 36.4 +1.8
ARCES ARCESS Array B 93.11 340  P       P           09 07 02.6 +1.2
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*JMA **23** 08:59:45.9±0.3, 44°N±1°×144.°8E±1.°0, h159km±2km, MV2.5/34, NE OFF HOKKAIDO*
*SKHL **23** 08:59:46.1±0.4, 44.°20N×144.°30E, h130km±4km, mb3.8/4, msha4.5/4*
ISC 23 08:59:47.5±2.4, **44.°02N**±0.°08×**144.°71E**±0.°05, **h150**km±16km, **n17**, σ**0s76**/24, **Hokkaido region**

```
Code  Station Name    Δ°   AZ°   Phase ID          Time      Res
                             Op      ISC         h  m  s     ISC
JRA   Rausu           0.31 104  eP      Pn          09 00 07.6 -0.5
JRA                             eS      Sn          09 00 24.6 +1.0
JNK   Nakash          0.43 179  eP      Pn          09 00 08.5 -0.1
JTKR  Abashiri--Toko  0.58 266  eP      Pn          09 00 08.9 -0.4
JTKR                            eS      Sn          09 00 25.7 -0.1
YUK   Yuzh-Kuril'sk   0.83  88  eP      Pn          09 00 10.7 -0.2
YUK                              AMB    AMB         09 00 11.5
      20nm,0.3s
YUK                             eS      Sn          09 00 29.5 +0.8
YUK                              A      A           09 00 34.2
      70nm,0.3s
YUK                              A      A           09 00 34.2
      70nm,0.3s
JMP   Maruseppu       0.97 270  eP      Pn          09 00 11.4 -0.7
JMP                             eS      Sn          09 00 31.1 +0.3
NMR   Nemuro--Hokkai  0.98 131  eP      Pn          09 00 11.2 -0.9
NMR                              AMB    AMB         09 00 11.5
      10.0nm,0.2s
NMR                             eS      Sn          09 00 29.9 -0.9
NMR                              A      A           09 00 31.6
      60nm,0.2s
NMR                              A      A           09 00 31.6
      60nm,0.2s
JKHN  Kushirohamanak  0.99 160  eP      Pn          09 00 11.8 -0.4
JAR   Ashorobuto      0.99 224  eP      Pn          09 00 12.6 +0.3
NEM2  Nemuro 2        0.99 131  eP      Pn          09 00 11.1 -1.1
AKK   Akkeshi         1.00 174  eP      Pn          09 00 11.9 -0.4
AKK                             eS      Sn          09 00 31.4 +0.2
JAK   Akkeshi         1.02 180  eP      Pn          09 00 12.5 +0.1
JAK                             eS      Sn          09 00 32.5 +1.0
JKK2  Kamakawa 2      1.42 265  eP      Pn          09 00 15.9 -0.4
ASAJ  Asahikawa       1.53 275  eP      Pn          09 00 17.1 -0.3
JSE   Soyaes          1.79 303  eP      Pn          09 00 18.9 -1.3
JSS   Shosan          2.09 282  eP      Pn          09 00 24.1 +0.5
JWK2  Keihoku         2.39 304  eP      Pn          09 00 26.8 -0.4
KUR   Kuril'sk        2.56  61  eS      Sn          09 01 03.1 +1.5
KUR                              A      A           09 01 07.6
      20nm,0.3s
KUR                              A      A           09 01 07.6
      20nm,0.3s
```

IDC 23 09:11:25.8±618.0, **49.°67N**×**37.°77E**, **h0**km, **Error ellipse: s-maj=256.1km s-min=138.8km az=12.0, Ukraine-Moldova-Southwestern Russia region**

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Code  Station Name    Δ°   AZ°   Phase ID          Time      Res
                             Op      ISC         h  m  s     ISC
I43RU DUBNA INFRASON  7.08 358  I       I           09 54 00.0
      0.2nm,0.9s,baz=176,slow=330,SNR=4.1
I31KZ AKTYUBINSK INF 13.05  79  I       I           10 32 52.5
      0.3nm,0.6s,baz=273,slow=314,SNR=9.3
I46RU ZALESOVO INFRA28.98  63  I       I           12 10 00.0
      0.1nm,1.5s,baz=281,slow=314,SNR=3.1
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*JMA **23** 09:24:08.3±0.3, 39°N±2°×13°0E±°, h629km, MV3.9/65, SEA OF JAPAN*
*MOS **23** 09:24:10.3±0.7, 39.°19N×130.°29E, h592km, mb4.1/17, Error ellipse: s-maj=10.0km s-min=6.8km az=119.1*
*NEIC **23** 09:24:11.5±1.5, 39.°27N±0.°10×130.°2E±0.°1, h573km±7km, mb4.0/62, Error ellipse: s-maj=16.1km s-min=14.5km az=93.0*
*IDC **23** 09:24:11.5±0.6, 39.°22N×130.°15E, h583km±6km, mb3.2/27, mbtmp4.2/32, Error ellipse: s-maj=10.1km s-min=8.0km az=76.0*
ISC 23 09:24:11.7±0.4, **39.°16N**±0.°06×**130.°39E**±0.°06, **h600**km, **n205**, σ**1s57**/217, **mb3.9**/63, **13C-4D**, **Sea of Japan**

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Code  Station Name    Δ°   AZ°   Phase ID          Time      Res
                             Op      ISC         h  m  s     ISC
KSRS  Korea Array     2.58 229  P       P           09 25 27.2 -1.3
      58nm,0.7s,baz=46,slow=5.1,SNR=162
KSRS                            S       S           09 26 27.9 -3.3
      0.8nm,0.4s,baz=219,slow=7.5,SNR=1.1
KS19  Wonju Array Si  2.58 231  P       P           09 25 27.3 -1.3
KSAR  Wonju Array Be  2.61 230  P       P           09 25 27.0 -1.8
KSAR  Wonju Array Be  2.61 230  P       P           09 25 27.0 -1.8
INCN  Inchon          3.39 242  P       P           09 25 31.2 -2.0
INCN  Inchon          3.39 242  P       P           09 25 31.2 -2.0
JOI   OKI             3.65 141  P       P           09 25 34.5 -0.3
TJN   Taejon          3.67 222  P       P           09 25 33.3 -1.6
TJN   Taejon          3.67 222c iP      P           09 25 33.4 -1.5
VLA   Vladivostok     4.12  15⇑ eP      P           09 25 36.7 -1.0
JISK  Izumosakaura    4.15 151  P       P           09 25 37.5 -0.7
JHS   Saijyo          4.69 151  P       P           09 25 41.4 -1.0
JHS   Saijyo          4.69 151  P       P           09 25 41.3 -1.0
JTU   Tsushima        4.69 190  P       P           09 25 40.8 -1.5
JTU   Tsushima        4.69 190  P       P           09 25 41.4 -0.9
JKSM  Kasumi          4.93 135  P       P           09 25 43.6 -0.4
JKY   Yasaka          5.15 132  P       P           09 25 45.7 -0.1
USA0B Ussuriysk Arra  5.18  13  P       P           09 25 44.8 -0.9
USA0B Ussuriysk Arra  5.18  13c iP      P           09 25 44.7 -1.0
USRK  Ussuriysk Ar.   5.18  13  P       P           09 25 44.8 -0.9
      31nm,0.4s,baz=193,slow=7.5,SNR=145
USRK                            S       S           09 27 01.4 -1.4
      6.7nm,0.8s,baz=184,slow=19,SNR=5.1
JHG   Hegura jima     5.29 102  eP      P           09 25 46.6 -0.2
MDJ   Mudanjiang      5.49 354  P       P           09 25 46.6 -1.6
MDJ                             pmax    pmax
      comp=Z,55nm,0.7s
MDJ                             pmax    pmax
      comp=Z,110nm,5.1s
MDJ   Mudanjiang      5.49 354  P       P           09 25 45.9 -2.3
JKG   Kaga            5.52 120  P       P           09 25 48.4 -0.4
JWT   Wachi           5.57 132  P       P           09 25 49.5 +0.3
CN2   Changchun       5.94 323  P       P           09 25 49.9 -2.1
CN2                             pmax    pmax
      comp=Z,20nm,0.7s
JNU   Nakatsue        6.04 176  P       P           09 25 53.0 -0.4
      comp=Z,24nm,0.8s,baz=288,slow=2.8,SNR=18
JNU   Nakatsue        6.04 176          P           09 25 53.1 -0.2
JMN   Monobe          6.11 152  P       P           09 25 52.8 -1.1
JSD   Sado            6.27  98  P       P           09 25 53.5 -1.6
JSD   Sado            6.27  98  P       P           09 25 54.1 -0.9
INU   Inuyama         6.51 124  P       P           09 25 56.5 -0.8
JTO   Tosashimizu     6.58 162  P       P           09 25 57.2 -0.9
JGF   Kuroka          6.59 120  P       P           09 25 57.5 -0.5
JNG   Nsakai          6.70 112  P       P           09 25 58.1 -0.9
MJB9  Matsu-Tunnel    6.71 110  P       P           09 25 58.9 -0.2
MAJO  Matsushiro      6.72 110  P       P           09 25 58.3 -0.8
MAJO  Matsushiro      6.72 110⇑ eP      P           09 25 57.6 -1.5
MJAR  Matsushiro Arr  6.72 110  P       P           09 25 58.5 -0.6
      comp=Z,28nm,0.9s,baz=287,slow=9.6,SNR=52
JTNC  Tanabenakahech  6.79 140  P       P           09 25 59.4 -0.4
BNX   BinXian         6.94 342 ⇑P       P           09 25 59.0 -1.8
BNX                             pmax    pmax
      comp=Z,17nm,0.6s
BNX                             pmax    pmax
      comp=Z,93nm,5.0s
JIE   Ise             6.95 131  P       P           09 26 01.2 -0.1
JRY   Ryogami san     7.45 112  P       P           09 26 05.6 -0.3
JSJ   Shimokoshiki    7.49 184  P       P           09 26 05.6 -0.7
JSU   Suzuyama        7.64 180  P       P           09 26 06.9 -0.8
JRG   Rokugo          7.95  85  P       P           09 26 08.8 -1.7
JRG                             eS      S           09 27 43.6 -4.3
JOD2  Odawara 2       7.96 117  P       P           09 26 09.2 -1.4
JOD2                            eS      S           09 27 44.9 -3.2
JMM   Marumori        8.26  96  P       P           09 26 11.4 -1.9
JMM   Marumori        8.26  96  P       P           09 26 11.8 -1.6
JTM   Tenmabayashi    8.36  75  P       P           09 26 12.4 -1.9
JMK   Ichinoseki      8.43  88  P       P           09 26 13.3 -1.7
JMK                             eS      S           09 27 50.7 -5.5
JFK   Kawauchi        8.44  99  P       P           09 26 13.5 -1.7
JFK                             eS      S           09 27 49.6 -6.9
JOT   Ohata           8.45  71  P       P           09 26 14.0 -1.1
BSO1  Boso 1          9.60 115  P       P           09 26 24.5 -1.4
BSO1                            eS      S           09 28 11.9 -4.2
JHR   Hokuryu         9.66  58  eP      P           09 26 25.2 -1.7
KLR   Kul'dur        10.12   5  P       P           09 26 28.9 -2.3
      comp=Z,1.0nm,0.4s,baz=187,slow=8.8,SNR=6.7
KLR   Kul'dur        10.12   5⇑ eP      P           09 26 30.4 -0.9
KLR                             pmax    pmax
      comp=Z,2.0nm,1.1s
ERM   Erimo          10.12  70  P       P           09 26 31.3 -0.2
ERM   Erimo          10.12  70⇓ eP      P           09 26 30.6 -0.9
ASAJ  Asahikawa      10.39  58  P       P           09 26 32.5 -1.6
      comp=Z,4.9nm,0.4s,baz=252,slow=7.4,SNR=26
ASAJ  Asahikawa      10.39  58  P       P           09 26 32.1 -2.0
JKA   Kamikawa-asahi 10.39  58  P       P           09 26 32.1 -2.0
JCH   Churui         10.41  67  P       P           09 26 32.1 -2.2
TIA   Tai'an         10.91 258  P       P           09 26 37.6 -1.9
TIA                             pmax    pmax
      comp=Z,15nm,0.6s
JTKR  Abashiri--Toko 11.21  60  eP      P           09 26 41.0 -1.2
NEM2  Nemuro 2       12.29  65  eP      P           09 26 52.2 -1.0
ZEA   Zeya           14.74 353  eP      P           09 27 15.9 -1.2
BTO   Baotou         15.70 282  eP      P           09 27 25.9 -0.4
BTO                             sP      sP          09 29 36.8  -11
BTO                             pmax    pmax
      comp=Z,22nm,0.9s
BTO                             pmax    pmax
      comp=Z,370nm,4.4s
ULN   Ulaanbaatar    18.97 305  P       P           09 27 55.9 -0.2
ULN   Ulaanbaatar    18.97 305d iP      P           09 27 55.8 -0.2
ULN                             pmax    pmax
      comp=Z,9.0nm,0.9s
SONM  Songino Array  19.39 304  P       P           09 27 55.9 -3.9
      comp=Z,4.0nm,0.8s,baz=121,slow=9.1,SNR=5.1
SONM  Songino Array  19.39 304  P       P           09 27 59.4 -0.4
SONM                            IAmb    IAmb        09 28 03.2
      comp=Z,6.4nm,0.9s
SONM  Songino Array  19.39 304  P       P           09 27 59.4 -0.4
SONM                            pmax    pmax
      comp=Z,6.0nm,0.9s
GOMU  GeErMu         28.20 275  P       P           09 29 16.3 -1.9
GOMU                            pmax    pmax
      comp=Z,4.0nm,0.5s
GOMU                            pmax    pmax
      comp=Z,71nm,6.1s
DGZ   Jazzator, Alta 32.03 303c eP      P           09 29 51.1 +0.5
DGZ                             pmax    pmax
      comp=Z,4.0nm,0.8s
TIXI  Tiksi          32.57 359  P       P           09 29 53.7 -0.9
      comp=Z,1.3nm,0.3s,baz=90,slow=23,SNR=4.7
      comp=Z,1.3nm,0.3s
TIXI  Tiksi          32.57 359⇑ eP      P           09 29 54.8 +0.2
TIXI                            pmax    pmax
      comp=Z,2.0nm,0.9s
PHRA  Phrae          33.25 240  P       P           09 30 01.7 +0.6
CHTO  Chiang Mai     33.91 242  P       P           09 30 06.7 +0.1
CHTO  Chiang Mai     33.91 242  P       P           09 30 06.7 +0.1
ZALV  Zalesovo Beam  34.00 311  P       P           09 30 05.4 -1.5
      comp=Z,0.8nm,0.4s,baz=101,slow=7.7,SNR=3.7
ZALV                            ScP     ScP         09 35 13.9 -1.3
      comp=Z,1.3nm,0.6s,baz=91,slow=5.0,SNR=6.0
      comp=Z,0.8nm,0.4s
ZALV  Zalesovo Beam  34.00 311  i P     P           09 30 05.8 -1.1
ZALV                            pmax    pmax
      comp=Z,1.0nm,0.3s
CMAR  Chiang Mai Arr 34.16 242  P       P           09 30 07.5 -1.2
      comp=Z,2.5nm,0.3s,baz=39,slow=7.2,SNR=8.8
      comp=Z,2.5nm,0.3s
MK31  Makanchi Array 35.54 298  P       P           09 30 19.3 -0.5
MK31                            IAmb    IAmb        09 30 19.9
      comp=Z,2.2nm,0.6s
MK31  Makanchi Array 35.54 298  P       P           09 30 19.3 -0.5
MK31                            pmax    pmax
      comp=Z,2.0nm,0.6s
MKAR  Makanchi Array 35.54 298  P       P           09 30 19.6 -0.2
      comp=Z,2.1nm,0.4s,baz=84,slow=12,SNR=33
MKAR                            ScP     ScP         09 35 21.8 +0.7
      comp=Z,0.4nm,0.6s,baz=79,slow=5.1,SNR=4.7
      comp=Z,2.1nm,0.4s
MKAR  Makanchi Array 35.54 298  P       P           09 30 19.2 -0.6
MAKZ  Makanchi       35.75 298  P       P           09 30 20.4 -1.1
MAKZ                            IAmb    IAmb        09 30 22.2
      comp=Z,3.5nm,1.0s
MAKZ  Makanchi       35.75 298  P       P           09 30 20.4 -1.1
MAKZ                            pmax    pmax
      comp=Z,4.0nm,1.0s
KURK  Kurchatov      37.69 305  P       P           09 30 36.6 -0.6
KURK  Kurchatov      37.69 305d iP      P           09 30 36.5 -0.7
KURK                            pmax    pmax
      comp=Z,8.0nm,1.3s
KURBB Kurchatov Arra 37.75 305  P       P           09 30 37.2 -0.5
      comp=Z,1.8nm,0.4s,baz=92,slow=7.3,SNR=28
      comp=Z,1.8nm,0.4s
NRIK  Noril'sk       37.78 337  P       P           09 30 37.2 -0.5
      comp=Z,1.7nm,0.5s,baz=123,slow=9.9,SNR=7.3
      comp=Z,1.7nm,0.5s
NRIK  Noril'sk       37.78 337  P       P           09 30 37.3 -0.5
NRIK                            IAmb    IAmb        09 30 37.7
      comp=Z,2.1nm,0.6s
ANVS  Anan'yevo      39.44 293  P       P           09 30 51.9 +0.2
TARG  Taragay, Kyrgy 39.59 291  P       P           09 30 53.5 +0.3
TARG                            IAmb    IAmb        09 30 54.8
      comp=Z,6.3nm,0.8s
TARG  Taragay, Kyrgy 39.59 291  P       P           09 30 53.5 +0.3
TARG                            pmax    pmax
      comp=Z,6.0nm,0.8s
KDJ   Kajisay        39.94 292  P       P           09 30 55.1 -0.5
KDJ   Kajisay        39.94 292  P       P           09 30 55.2 -0.5
KDJ                             pmax    pmax
      comp=Z,4.0nm,0.5s
BOOM  Boomskoye usch 40.74 293  P       P           09 31 02.0 -0.1
BOOM                            IAmb    IAmb        09 31 03.5
      comp=Z,1.9nm,0.7s
BOOM  Boomskoye usch 40.74 293  P       P           09 31 02.0 -0.1
BOOM                            pmax    pmax
      comp=Z,2.0nm,0.7s
AAK   Ala-Archa      41.74 293  P       P           09 31 10.1 +0.2
      comp=Z,3.4nm,0.5s,baz=100,slow=7.9,SNR=7.8
      comp=Z,3.4nm,0.5s
AAK   Ala-Archa      41.74 293  P       P           09 31 09.9  0.0
AAK                             IAmb    IAmb        09 31 10.9
      comp=Z,4.5nm,0.9s
AAK   Ala-Archa      41.74 293  P       P           09 31 09.9  0.0
AAK                             pmax    pmax
      comp=Z,5.0nm,1.0s
FAKI  Fak Fak        41.91 177  P       P           09 31 12.6 +1.3
ARLS  Aral           42.07 292  P       P           09 31 13.1 +0.6
BVAR  Borovoye Array 42.60 309  P       P           09 31 15.9 -0.4
      comp=Z,1.9nm,0.3s,baz=97,slow=9.0,SNR=17
      comp=Z,1.9nm,0.3s
BRVK  Borovoye       42.66 309  P       P           09 31 16.4 -0.3
BRVK                            IAmb    IAmb        09 31 17.5
      comp=Z,4.0nm,0.9s
BRVK  Borovoye       42.66 309⇑ eP      P           09 31 16.5 -0.2
BRVK                            pmax    pmax
      comp=Z,5.0nm,1.3s
KK31  Karatay Array  44.44 295  P       P           09 31 30.5 -0.1
KK31                            IAmb    IAmb        09 31 31.6
      comp=Z,5.5nm,1.1s
KK31  Karatay Array  44.44 295  P       P           09 31 30.5 -0.1
KK31                            pmax    pmax
      comp=Z,6.0nm,1.1s
KKAR  Karatay Array  44.44 295  P       P           09 31 30.8 +0.2
KKAR  Karatay Array  44.44 295  P       P           09 31 30.7 +0.1
KKAR                            IAmb    IAmb        09 31 31.6
      comp=Z,5.5nm,1.1s
KKAR  Karatay Array  44.44 295  P       P           09 31 30.8 +0.2
KKAR                            pmax    pmax
      comp=Z,6.0nm,1.1s
GAR   Garm           45.86 290  P       P           09 31 41.6  0.0
CHGR  Chuyangaron    46.83 290  P       P           09 31 49.0 +0.2
CHGR  Chuyangaron    46.83 290  P       P           09 31 49.0 +0.2
CHGR                            pmax    pmax
      comp=Z,26nm,0.7s
ARU   Arti           48.88 316  P       P           09 32 03.0 -0.6
      comp=Z,8.5nm,0.6s,baz=95,slow=6.9,SNR=14
      comp=Z,8.5nm,0.6s
ARU   Arti           48.88 316  P       P           09 32 02.6 -1.0
ARU   Arti           48.88 316c iP      P           09 32 03.5 -0.2
ARU                             S       S           09 38 26.4 +2.7
ARU                             pmax    pmax
      comp=Z,11nm,0.7s
IMAR  Indian Mountai 49.34  32  P       P           09 32 08.9 +1.9
K20K  Telida         49.54  35  P       P           09 32 10.2 +1.8
M19K  Big River Lodg 49.62  37  P       P           09 32 11.1 +2.1
M19K                            IAmb    IAmb        09 32 27.4
      comp=Z,6.1nm,1.3s
P18K  Big Mountain,  49.65  40  P       P           09 32 11.4 +2.0
ABKAR Akbulak array  49.79 306  P       P           09 32 10.3 -0.1
ABKAR Akbulak array  49.79 306  IAmb    IAmb        09 32 11.0
      comp=Z,10nm,0.6s
M20K  Styx River     50.21  37  P       P           09 32 15.0 +1.6
M20K                            IAmb    IAmb        09 32 21.9
      comp=Z,8.2nm,1.5s
CAST  Castle Rocks   50.41  35  P       P           09 32 17.4 +2.6
CAST                            IAmb    IAmb        09 32 18.0
      comp=Z,2.0nm,0.6s
PPLA  Purkeypile     50.46  35  P       P           09 32 18.3 +3.0
PPLA                            IAmb    IAmb        09 32 58.1
      comp=Z,11nm,1.4s
AKTO  Aktyubinsk     50.65 308  P       P           09 32 16.7  0.0
      comp=Z,2.7nm,0.4s,baz=82,slow=10,SNR=6.2
      comp=Z,2.7nm,0.4s
MLY   Manley         50.72  33  P       P           09 32 19.6 +2.6
KTH   Kantishna Hill 50.90  34  P       P           09 32 20.2 +1.7
KTH                             IAmb    IAmb        09 32 21.7
      comp=Z,4.1nm,1.0s
H23K  Yukon River    51.07  31  P       P           09 32 22.0 +2.5
KDAK  Kodiak Island  51.35  42  P       P           09 32 22.8 +1.2
KDAK  Kodiak Island  51.35  42  P       P           09 32 22.8 +1.2
KDAK                            pmax    pmax
      comp=Z,39nm,1.5s
MCK   McKinley       51.74  34  P       P           09 32 26.6 +2.2
MCK                             IAmb    IAmb        09 32 57.6
      comp=Z,7.3nm,1.4s
MCK   McKinley       51.74  34  P       P           09 32 26.6 +2.2
MCK                             pmax    pmax
      comp=Z,7.0nm,1.4s
MTN   Manton Dam     51.74 179  P       P           09 32 25.5 +0.6
MDM   Murphy Dome    51.78  32  P       P           09 32 26.9 +2.2
ILAR  Eielson Array  52.38  32  P       P           09 32 30.4 +1.5
      comp=Z,0.5nm,0.4s,baz=289,slow=8.0,SNR=16
      comp=Z,0.5nm,0.4s
ILAR  Eielson Array  52.38  32  P       P           09 32 30.1 +1.3
ILAR  Eielson Array  52.38  32  P       P           09 32 30.2 +1.3
IL03  Eielson Array  52.39  32  P       P           09 32 30.5 +1.5
HDA   Harding Lake   52.44  33  P       P           09 32 30.4 +1.1
HDA                             IAmb    IAmb        09 33 09.8
      comp=Z,6.6nm,1.5s
BMAR  Burnt Mountain 52.69  29  P       P           09 32 33.0 +1.9
PRP   Porcupine Dome 52.77  31  P       P           09 32 33.7 +1.9
SCM   Sheep Creek Mo 52.91  36  P       P           09 32 34.5 +1.7
SCM                             IAmb    IAmb        09 33 09.5
      comp=Z,14nm,1.3s
SCM   Sheep Creek Mo 52.91  36  P       P           09 32 34.5 +1.7
SCM                             pmax    pmax
      comp=Z,14nm,1.3s
KIRV  Kirov          53.15 320⇑ eP      P           09 32 34.5 +0.1
KIRV                           i *PP    pP          09 34 25.9  0.0
M24K  Tolsona, Glenn 53.36  36  P       P           09 32 38.2 +2.3
RIDG  Independent Ri 53.50  33  P       P           09 32 38.0 +1.1
RIDG                            IAmb    IAmb        09 32 53.6
      comp=Z,11nm,1.5s
SCRK  Sand Creek     53.80  33  P       P           09 32 40.1 +1.0
N25K  Chitina, Valde 54.22  36  P       P           09 32 44.4 +2.4
N25K                            IAmb    IAmb        09 32 45.1
      comp=Z,14nm,1.5s
GLB   Gilahina Butte 54.63  36  P       P           09 32 47.0 +2.2
GLB                             IAmb    IAmb        09 32 50.7
      comp=Z,7.5nm,1.3s
M26K  Nabesna, AK    54.70  35  P       P           09 32 47.5 +2.2
EGAK  Eagle          54.74  32  P       P           09 32 47.5 +2.0
VRDI  Verde Repeater 54.86  36  P       P           09 32 49.2 +2.6
VRDI                            IAmb    IAmb        09 32 51.2
      comp=Z,9.2nm,1.5s
L27K  Beaver Creek,  55.00  34  P       P           09 32 49.6 +2.2
L27K                            IAmb    IAmb        09 33 09.6
      comp=Z,6.1nm,1.5s
MCARA McCarthy VSAT  55.00  36  P       P           09 32 49.4 +2.0
MCARA                           IAmb    IAmb        09 33 22.4
      comp=Z,8.2nm,1.4s
BCAR  Beaver Creek A 55.02  34  P       P           09 32 50.4 +2.9
GEYT  Alibeck        55.10 293  P       P           09 32 48.1 -0.4
      comp=Z,3.0nm,0.5s,baz=62,slow=3.5,SNR=6.0
      comp=Z,3.0nm,0.5s
DAWY  Dawson         55.70  32  P       P           09 32 53.5 +1.3
BARN  Barnard Glacie 55.73  36  P       P           09 32 55.0 +2.3
BARN                            IAmb    IAmb        09 32 55.6
      comp=Z,3.2nm,0.6s
INK   Inuvik         56.41  26  P       P           09 32 58.2 +1.3
      comp=Z,0.3nm,0.5s,baz=312,slow=5.1,SNR=4.2
      comp=Z,0.3nm,0.5s
INK   Inuvik         56.41  26  P       P           09 32 58.7 +1.8
INK   Inuvik         56.41  26  P       P           09 32 58.7 +1.8
INK                             pmax    pmax
      comp=Z,3.0nm,1.4s
A36M  Sachs Harbour  57.47  21  P       P           09 33 05.9 +1.8
HYT   Haines Junctio 57.71  35  P       P           09 33 08.2 +2.1
KEV   Kevo           58.20 337  P       P           09 33 08.2 -0.8
KEV                             IAmb    IAmb        09 33 47.6
      comp=Z,11nm,1.1s
KEV   Kevo           58.20 337  P       P           09 33 08.2 -0.8
KEV                             pmax    pmax
      comp=Z,11nm,1.1s
N31M  Braeburn, Yuko 58.21  34  P       P           09 33 11.4 +2.1
N31M                            IAmb    IAmb        09 33 14.8
      comp=Z,6.8nm,1.2s
WB0   Warramunga Arr 58.74 176  P       P           09 33 14.6 +1.3
WB0                             IAmb    IAmb        09 33 21.2
      comp=Z,7.9nm,1.5s
ARCES ARCESS Array B 58.77 337  P       P           09 33 12.8 -0.1
      comp=Z,2.0nm,0.4s,baz=64,slow=8.5,SNR=32
      comp=Z,2.0nm,0.4s
WRA   Warramunga Arr 58.91 176  P       P           09 33 15.5 +1.0
      comp=Z,2.0nm,0.6s,baz=353,slow=7.6,SNR=44
WRA                             PcP     PcP         09 33 57.6 +1.9
      comp=Z,0.4nm,0.6s,baz=350,slow=4.3,SNR=1.9
      comp=Z,2.0nm,0.6s
WRA   Warramunga Arr 58.91 176  P       P           09 33 14.8 +0.3
WRA   Warramunga Arr 58.91 176  P       P           09 33 14.8 +0.3
WB2   Warramunga Arr 58.91 176  P       P           09 33 15.3 +0.9
WB2                             IAmb    IAmb        09 33 25.7
      comp=Z,6.1nm,1.2s
FARO  Faro, Yukon    58.94  33  P       P           09 33 16.2 +2.0
C36M  Paulatuk       59.06  23  P       P           09 33 16.2 +1.4
C36M                            IAmb    IAmb        09 33 16.6
      comp=Z,2.8nm,0.5s
CTAO  Charters Tower 60.78 163  P       P           09 33 28.6 +1.8
CTAO                            IAmb    IAmb        09 33 46.5
      comp=Z,13nm,1.3s
CTAO  Charters Tower 60.78 163  P       P           09 33 28.6 +1.8
CTAO                            pmax    pmax
      comp=Z,13nm,1.3s
ASAR  Alice Springs  62.58 176  P       P           09 33 39.9 +1.4
      comp=Z,0.9nm,0.5s,baz=359,slow=8.1,SNR=19
      comp=Z,0.9nm,0.5s
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FIA1	**FINESS Array S**	62.66	328	P	P	09 33 38.1	-0.3
FINES	**FINESS Array B**	62.66	328	P	P	09 33 38.2	-0.3
	comp=Z,2.4nm,0.4s,baz=65,slow=5.9,SNR=30						
	comp=Z,2.4nm,0.4s						
FINES	**FINESS Array B**	62.66	328	P	P	09 33 38.0	-0.5
KBZ	**Khabaz**	62.75	305	P	P	09 33 40.0	+0.6
	comp=Z,2.4nm,0.7s,baz=39,slow=3.9,SNR=6.2						
	comp=Z,2.4nm,0.7s						
KBZ	**Khabaz**	62.75	305	⇓eP	P	09 33 40.4	+1.1
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV	**Kislovodsk**	62.77	306	eP	P	09 33 39.7	+0.1
KIV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GNI	**Garni**	63.31	301	ceP	P	09 33 44.5	+1.3
GNI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NACGM	**Naroch**	65.93	322	eP	P	09 33 58.4	-0.8
	comp=Z,14nm,0.9s,baz=56						
YKA	**Yellowknife Ar**	66.14	27	P	P	09 34 00.9	+0.5
	comp=Z,0.8nm,0.9s,baz=306,slow=6.5,SNR=13						
	comp=Z,0.8nm,0.9s						
YKA	**Yellowknife Ar**	66.14	27	i P	P	09 34 02.2	+1.8
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	67.07	317	P	P	09 34 05.8	-0.5
	comp=Z,1.7nm,0.4s,baz=48,slow=6.2,SNR=14						
	comp=Z,1.7nm,0.4s						
AKBB	**Malin Array Si**	67.07	317	⇑eP	P	09 34 05.4	-0.9
AKBB				i *PP	pP	09 36 06.4	+0.5
NB2	**NORSAR Subarra**	68.59	333	P	P	09 34 14.9	-0.5
	comp=Z,1.7nm,0.6s,baz=47,slow=6.2						
NOA	**NORSAR Array B**	68.59	333	P	P	09 34 15.2	-0.2
	comp=Z,1.2nm,0.6s,baz=45,slow=6.1,SNR=7.2						
	comp=Z,1.2nm,0.6s						
BRTR	**Keskin Array B**	70.74	306	P	P	09 34 28.6	-0.1
	comp=Z,0.6nm,0.6s,baz=115,slow=5.6,SNR=5.0						
	comp=Z,0.6nm,0.6s						
STKA	**Stephens Creek**	71.44	170	P	P	09 34 34.9	+2.4
	comp=Z,2.2nm,0.3s,baz=10,slow=5.7,SNR=13						
	comp=Z,2.2nm,0.3s						
CLL	**Collm**	74.62	325	i P	P	09 34 50.7	+0.2
CLL	**Collm**	74.62	325	i P	P	09 34 50.7	+0.2
GERES	**GERESS Array B**	76.02	323	P	P	09 34 58.0	-0.5
	comp=Z,0.4nm,0.6s,baz=55,slow=8.5,SNR=2.4						
	comp=Z,0.4nm,0.6s						
GERES	**GERESS Array B**	76.02	323	P	P	09 34 58.0	-0.5
NVAR	**Mina Array Bea**	80.36	48	P	P	09 35 24.8	+2.8
	comp=Z,1.5nm,0.7s,baz=297,slow=5.1,SNR=11						
	comp=Z,1.5nm,0.7s						
PDAR	**Pinedale Array**	82.02	40	P	P	09 35 32.6	+2.3
	comp=Z,0.8nm,0.8s,baz=197,slow=0.9,SNR=7.4						
	comp=Z,0.8nm,0.8s						
TXAR	**Lajitas Array**	95.28	45	P	P	09 36 35.8	+3.1
	comp=Z,0.2nm,0.6s,baz=291,slow=2.7,SNR=2.9						
	comp=Z,0.2nm,0.6s						

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*TAP **23** 09:44:16.2, 24°.96N×122°.39E, h22^{km}, ML3.0, D*
*JMA **23** 09:44:16.9±0.1, 24°.9N±0°.7×122°.4E±0°.4, h16^{km}±4^{km}, MV2.9/5, TAIWAN REGION*
ISC 23 09:44:16.3±1.2**, 24°.91N**±0°.03×**122°.39E**±0°.03**, h18**^{km}±4^{km}**, n51, σ0^{s}41**/84**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	0.38	285	eP	Pg	09 44 23.9	-0.3
	baz=277						
TWB1				eS	Sg	09 44 29.3	-0.2
	baz=277						
EGS		0.42	261	eP	Pg	09 44 24.5	-0.5
	baz=247						
EGS				S	Sb	09 44 32.1	+0.8
	baz=247						
SXI1	**Grass Mountain**	0.50	292	P	Pb	09 44 26.7	0.0
	baz=285						
SXI1				eS	Sb	09 44 33.4	-0.2
	baz=285						
TIPB	**Shuangxi**	0.51	277	eP	Pg	09 44 26.9	+0.2
	baz=270						
TIPB				eS	Sb	09 44 34.0	0.0
	baz=270						
NWF	**Wu-fen Shan**	0.57	287	eP	Pg	09 44 28.0	+0.1
	baz=281						
TWC	**Suao**	0.57	239	P	Pb	09 44 27.4	-0.4
	baz=234						
TWC				eS	Sb	09 44 34.9	-0.7
	baz=234						
WFSB	**Wu-fen Shan**	0.57	287	P	Pg	09 44 28.1	+0.3
	baz=281						
WFSB				S	Sg	09 44 35.6	+0.1
	baz=281						
TNOU	**National Taiwa**	0.61	293	P	Pg	09 44 28.4	0.0
	baz=288						
TNOU				S	Sg	09 44 36.5	0.0
	baz=288						
NDS	**Dongshan**	0.67	246	eP	Pb	09 44 29.2	-0.2
	baz=242						
NDS				eS	Sn	09 44 40.2	-0.7
	baz=242						
TWE	**Neicheng**	0.68	254	eS	Sg	09 44 39.7	+0.9
	baz=249						
JYNG	**Yonagunijimaku**	0.68	132	P	Pb	09 44 29.7	0.0
JYNG				eS	Sb	09 44 39.1	+0.3
EWUT	**Wuta**	0.72	230	P	Pb	09 44 30.2	-0.2
	baz=227						
EWUT				eS	Sb	09 44 39.7	-0.2
	baz=227						
YOJ	**Yonaguni jima**	0.72	128	P	Pb	09 44 30.6	+0.2
YOJ				eS	Sb	09 44 39.8	-0.1
YOJ	**Yonaguni jima**	0.72	128	i P	Pb	09 44 30.4	0.0
	baz=125						
YOJ				S	Sb	09 44 39.9	-0.1
	baz=125						
TWA	**Mucha**	0.73	276	eS	Sg	09 44 40.8	+0.3
	baz=271						
FUSB	**Fushanzhiwuyua**	0.74	259	eP	Pb	09 44 30.5	-0.2
	baz=254						
FUSB				eS	Sb	09 44 40.2	-0.4
	baz=254						
ENA	**Nanau**	0.76	231	P	Pb	09 44 31.0	0.0
	baz=217						
ENA				eS	Sb	09 44 40.6	-0.4
	baz=217						
YM01	**YM01**	0.78	288	eP	Pb	09 44 31.5	+0.1
	baz=284						
NHDH	**Xindian Distri**	0.78	274	P	Pg	09 44 31.7	0.0
	baz=270						
NHDH				eS	Sg	09 44 42.4	+0.3
	baz=270						
ENTT	**Nioudou**	0.79	250	eP	Pb	09 44 31.8	+0.2
	baz=257						
ENTT				eS	Sg	09 44 43.1	+0.7
	baz=257						
TWY	**Chenhua**	0.80	297	eP	Pb	09 44 31.6	-0.2
	baz=293						
TWY				eS	Sg	09 44 43.1	+0.4
	baz=293						
NWLT	**Wulai**	0.81	261	eP	Pb	09 44 32.0	+0.1
	baz=257						
NWLT				eS	Sb	09 44 42.6	0.0
	baz=257						
LATG	**Datong**	0.87	245	P	Pg	09 44 33.4	+0.1
	baz=227						
LATG				eS	Sg	09 44 44.9	+0.1
	baz=227						
YHNB	**Yeheng**	0.95	256	P	Pb	09 44 34.3	0.0
	baz=264						
YHNB				eS	Sb	09 44 46.7	+0.2
	baz=264						
NSK	**Sanguang**	0.96	256	eP	Pb	09 44 34.8	+0.2
	baz=264						
NSK				eS	Sb	09 44 46.9	-0.1
	baz=264						
ETL	**Fush Village**	1.02	223	eP	Pb	09 44 35.7	+0.2
	baz=221						
ETL				eS	Sg	09 44 50.4	+0.8
	baz=221						
NACB	**Ninganchiao**	1.03	225	P	Pb	09 44 35.6	0.0
	baz=223						
NACB				eS	Sb	09 44 48.6	-0.1
	baz=223						
NNSB	**Datong**	1.03	243	P	Pb	09 44 35.9	+0.1
	baz=228						
NNSB				eS	Sn	09 44 49.5	-0.6
	baz=228						
NNSH	**Datong**	1.03	243	eP	Pn	09 44 36.0	0.0
	baz=227						
NNS	**Nan Shan**	1.03	243	P	Pn	09 44 36.0	-0.1
	baz=228						
NNS				eS	Sb	09 44 49.1	+0.1
	baz=228						
ETLH	**Xiulin Townshi**	1.08	230	eP	Pb	09 44 36.7	+0.1
	baz=220						
ETLH				eS	Sn	09 44 50.9	-0.3
	baz=220						
TWD	**Chiawan**	1.09	221	eP	Pb	09 44 37.0	+0.3
	baz=226						
TWD				eS	Sb	09 44 51.0	+0.3
	baz=226						
NFF	**Wufeng Townshi**	1.19	257	eP	Pn	09 44 37.7	-0.4
	baz=254						
FUSS	**Fushou**	1.23	238	eP	Pb	09 44 39.6	+0.3
	baz=236						
FUSS				eS	Sg	09 44 56.2	-0.2
	baz=236						
WHF	**Hehuan Shan**	1.27	234	eP	Pb	09 44 40.5	+0.4
	baz=231						
WHF				eS	Sn	09 44 57.1	+0.7
	baz=231						
LIOB	**Emei**	1.27	258	eP	Pn	09 44 39.5	+0.2
	baz=256						
NSTT	**Nanjuang**	1.29	258	eP	Pg	09 44 41.3	0.0
	baz=255						
CHGB	**Renai**	1.39	233	P	Pb	09 44 42.6	+0.6
	baz=231						
CHGB				eS	Sg	09 45 01.0	-0.4
	baz=231						
ESL	**Shilin**	1.39	219	eP	Pn	09 44 41.0	+0.1
	baz=202						
WHP	**Taichung City**	1.45	245	eP	Pg	09 44 44.6	+0.2
	baz=233						
WHP				eS	Sg	09 45 04.0	+0.6
	baz=233						
OWD	**Renai**	1.46	230	eP	Pb	09 44 43.3	+0.3
	baz=239						
OWD				eS	Sg	09 45 02.8	-0.7
	baz=239						
WUSB	**Renai**	1.47	232	eP	Pb	09 44 43.5	+0.2
	baz=231						
WUSB				eS	Sg	09 45 03.1	-1.0
	baz=231						
NMLH	**Miaoli**	1.50	256	eP	Pg	09 44 45.4	+0.2
	baz=266						
VWDT	**VWDT**	1.62	225	eP	Pb	09 44 46.1	+0.5
	baz=208						
HGSD	**Ruisui**	1.66	212	eP	Pb	09 44 45.8	-0.7
	baz=199						
SMLT	**Sun Moon Lake**	1.70	233	eP	Pb	09 44 47.7	+0.6
	baz=232						
EHY	**Hungye**	1.70	215	eP	Pn	09 44 45.1	0.0
	baz=215						
TYC	**Yuchr**	1.72	235	eP	Pb	09 44 48.3	+1.0
	baz=233						
SSLB	**Suanglung**	1.72	230	eP	Pb	09 44 48.3	+0.9
	baz=229						
WHYT	**Xinyi Township**	1.85	230	eP	Pb	09 44 50.5	+0.9
	baz=215						
CHN5	**Tsauling**	2.03	230	eP	Pb	09 44 52.9	+0.1
	baz=230						

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*KOLA **23** 10:00:15.9, 64°.74N×30°.92E, h0^{km}, ML2.2, Error ellipse: s-maj=19.5km s-min=14.3km az=170.0, Kostomuksha, Karelia*
*HEL **23** 10:00:15.9±0.2, 64°.79N×30°.70E, h0^{km}, ML2.1, Explosion*
*IDC **23** 10:00:16.0±2.2, 64°.70N×31°.09E, h0^{km}, mbtmp3.2/4, ML2.0/4, Error ellipse: s-maj=29.4km s-min=8.9km az=105.0*
*UPP **23** 10:00:17.6±3.0, 64°.67N×30°.38E, h0^{km}, ML1.9*
ISC 23 10:00:15.5±1.0**, 64°.80N**±0°.02×**30°.74E**±0°.05**, h0**^{km}**, n47, σ1^{s}70**/73**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RMF	**Romuvaara**	0.68	211	PG	Pg	10 00 28.1	-0.4
RMF				MSG		10 00 36.7	
	comp=Z,33nm,0.2s						
KU6	**Riekki**	1.28	344	PG	Pg	10 00 39.1	-1.0
	baz=163						
KU6				MSG		10 00 55.0	
	comp=Z,14nm,0.2s						
KU6				SB	Sg	10 00 55.6	-1.1
MSF	**Maaselka**	1.33	328	PG	Pg	10 00 39.6	-1.3
MSF				SG	Sg	10 00 57.5	-0.6
OLKF	**Oulanka, Finla**	1.63	341	PG	Pn	10 00 45.1	-0.3
OLKF				MSG		10 01 04.9	
	comp=Z,16nm,0.2s						
OLKF				SN	Sn	10 01 07.5	+0.4
JOF	**Joensuu**	1.90	172	PB	Pn	10 00 48.6	-0.6
JOF				SG	Sb	10 01 14.8	-0.5
OUL	**Oulu**	2.08	280	PG	Pn	10 00 52.7	+1.1
OUL				SG	Sn	10 01 18.6	+0.4
OBF4	**Vikkela, Lumij**	2.41	273	PB	Pn	10 00 57.2	+1.0
	baz=93						
OBF4				MSG		10 01 26.6	
	comp=Z,18nm,0.2s						
OBF4				SG	Sn	10 01 29.6	+3.2
OUF	**Merijarvi**	2.63	263	PB	Pn	10 01 00.2	+1.1
OUF				MSG		10 01 32.9	
	comp=Z,18nm,0.2s						
OUF				SG	Sn	10 01 35.4	+3.7
RNF	**Rovaniemi**	2.67	315	PN	Pn	10 01 00.3	+0.6
RNF				SG	Sb	10 01 36.7	-0.7
OBF0	**Syolatti, Pyha**	2.82	267	PB	Pn	10 01 02.8	+1.1
OBF0				MSG		10 01 38.3	
	comp=Z,10nm,0.2s						
OBF0				SG	Sb	10 01 41.4	-0.1
APA0	**Apatity Array**	2.96	17	P	Pn	10 01 04.5	+0.8
APA0				S	Sn	10 01 40.2	+0.3
TOF	**Tornio**	2.97	299	PB	Pn	10 01 04.8	+0.9
TOF				MSG		10 01 43.0	
	comp=Z,3.9nm,0.2s						
TOF				SB	Sn	10 01 43.7	+3.6
VRF	**Varrio**	3.00	352	PN	Pn	10 01 05.0	+0.7
VRF				MSG		10 01 44.3	
	comp=Z,4.8nm,0.2s						
VRF				SG	Sb	10 01 48.2	+1.3
SGF	**Sodankyl**	3.16	329	PN	Pn	10 01 06.4	0.0
SGF				SB	Sb	10 01 50.1	-1.4
KALU	**Kalix**	3.28	292	P	Pn	10 01 08.8	+0.8
KALU	**Kalix**	3.28	292	PB	Pn	10 01 09.9	+1.9
KALU				SB	Sn	10 01 52.1	+4.5
KAF	**Kangasniemi**	3.35	218	PN	Pn	10 01 10.7	+1.6
KAF				SG	Sb	10 01 58.9	+1.9
RUF	**Ruokolahti**	3.48	194	PN	Pn	10 01 11.6	+0.7
KLF	**Kolari**	3.69	315	PN	Pn	10 01 14.1	+0.3
KEF	**Keuruu**	3.73	228	PN	Pn	10 01 16.0	+1.7
KEF				SB	Sb	10 02 06.2	-1.6
PAJU	**Pajala**	3.84	309	P	Pn	10 01 16.8	+0.9
PAJU	**Pajala**	3.84	309	PN	Pn	10 01 17.4	+1.5
PAJU				SG	Sb	10 02 13.5	+2.3
SJUU	**Sjulsmark**	3.92	285	P	Pn	10 01 17.0	+0.1
SJUU				S	Sn	10 02 01.2	-2.3
ERTU	**Ertsjaerv**	3.95	300	P	Pn	10 01 18.0	+0.7
ERTU	**Ertsjaerv**	3.95	300	PN	Pn	10 01 18.1	+0.7
	baz=114						
FIA0	**FINESS Array S**	3.98	214	PN	Pn	10 01 18.9	+1.3
	baz=27						
FIA0				SB	Sb	10 02 13.2	-1.7
FINES	**FINESS Array B**	3.98	214	Pn	Pn	10 01 18.2	+0.6
	comp=Z,0.1nm,0.3s,baz=35,slow=14,SNR=8.7						
FINES				Sn	Sn	10 02 04.0	-0.9
	comp=Z,0.4nm,0.3s,baz=30,slow=14,SNR=3.4						
FINES				Lg	Lg	10 02 19.1	
	comp=Z,1.9nm,0.3s,baz=31,slow=28,SNR=14						
	comp=Z,3.3nm,1.0s						
BURU	**Burvik**	4.03	271	P	Pn	10 01 17.8	-0.5
BURU	**Burvik**	4.03	271	PN	Pn	10 01 17.9	-0.4
HARU	**Harads**	4.30	293	P	Pn	10 01 22.8	+0.8
MASU	**Masugnsbyn**	4.44	311	P	Pn	10 01 25.5	+1.5
UMAU	**Umeaa**	4.47	263	PN	Pn	10 01 24.2	-0.2
	baz=78						
VJF	**Virojoki**	4.52	200	SG	Sb	10 02 35.4	+4.9
HEF	**Hetta**	4.59	325	PN	Pn	10 01 27.1	+1.0
	baz=139						
HEF				SG	Sb	10 02 36.8	+4.1
LILU	**Lilltraesk**	4.64	281	P	Pn	10 01 26.7	0.0
TERR	**Teriberka**	4.74	19	P	Pn	10 01 28.3	+0.2
TERR				S	Sn	10 02 21.2	-2.6
LANU	**Lannavaara**	4.79	317	P	Pn	10 01 29.4	+0.5
SVAU	**Svanoeiden**	4.81	271	P	Pn	10 01 28.5	-0.6
ARCES	**ARCESS Array B**	5.18	339	Pn	Pn	10 01 34.0	-0.2
	comp=Z,0.4nm,0.3s,baz=156,slow=13,SNR=64						
ARCES				Sn	Sn	10 02 33.1	-1.4
	comp=Z,0.2nm,0.3s,baz=151,slow=24,SNR=5.3						
ARCES				Lg	Lg	10 02 53.9	
	comp=Z,0.2nm,0.3s,baz=149,slow=32,SNR=2.3						
	comp=Z,1.1nm,0.2s						
ARCES	**ARCESS Array B**	5.18	339	P	Pn	10 01 33.9	-0.2
ARCES				S	Sn	10 02 33.0	-1.5
VADS	**Vadso**	5.37	355	P	Pn	10 01 36.9	+0.1
VADS				S	Sn	10 02 38.7	-0.6
RATU	**Laukkuluspa**	5.42	309	P	Pn	10 01 38.2	+0.7
SALU	**Saltoluokta**	5.61	303	P	Pn	10 01 40.9	+0.9
NIKU	**Nikkaluokta**	5.63	308	P	Pn	10 01 40.9	+0.6
FAUS	**Fauske**	6.79	299	S	Sn	10 03 11.4	-2.7
HFS	**Hagfors**	9.16	247	Pn	Pn	10 02 26.8	-1.9
	comp=Z,0.1nm,0.3s,baz=59,slow=13,SNR=1.3						
HFS				Sn	Sn	10 04 07.7	-4.7
	comp=Z,0.1nm,0.3s,baz=58,slow=27,SNR=1.8						
HFS				Lg	Lg	10 04 59.3	
	comp=Z,0.4nm,0.3s,baz=57,slow=29,SNR=5.6						
	comp=Z,1.5nm,0.8s						
NOA	**NORSAR Array B**	9.65	256	Pn	Pn	10 02 34.5	-1.0
	baz=55,slow=14,SNR=2.0						
NOA				Lg	Lg	10 05 16.0	
	baz=120,slow=19,SNR=3.6						
	comp=Z,1.2nm,1.0s						

IDC 23 10:07:14.7±612.0**, 49°.69N×37°.84E, h0**^{km}**, Error ellipse: s-maj=253.9km s-min=138.5km az=11.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	7.05	357	I	I	10 49 50.7	
	0.3nm,0.8s,baz=176,slow=328,SNR=8.2						
I31KZ	**AKTYUBINSK INF**	13.00	79	I	I	11 30 24.0	
	0.5nm,0.7s,baz=274,slow=312,SNR=24						
I46RU	**ZALESOVO INFRA**	28.92	63	I	I	13 04 39.3	
	baz=281,slow=294,SNR=1.5						

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*NNC **23** 10:11:16.1±0.8, 51°.67N×75°.36E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=22.0km s-min=5.2km az=25.0, Suspected Mining explosion.*
*IDC **23** 10:11:19.7±1.0, 51°.67N×75°.53E, h0^{km}, mbtmp2.4/4, ML1.6/3, Error ellipse: s-maj=34.3km s-min=9.2km az=29.0*
ISC 23 10:11:09.0±1.2**, 52°.80N**±0°.08×**76°.18E**±0°.05**, h0**^{km}**, n10, σ1^{s}14**/10**, 6C-3D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	**Kurchatov**	2.58	143	⇓Pg	Pg	10 11 57.5	-0.9
	5.4nm,0.9s						
KURK				⇑Lg	Lg	10 12 26.5	
	13nm,0.9s						
KURBB	**Kurchatov Arra**	2.63	145	Pn	Pb	10 11 56.6	-0.3
	0.1nm,0.3s,baz=305,slow=19,SNR=26						
KURBB				Sn	Sn	10 12 25.6	+0.4
	0.1nm,0.3s,baz=306,slow=30,SNR=4.1						
	2.1nm,0.8s						
KURBB	**Kurchatov Arra**	2.63	145	⇑Pg	Pg	10 11 58.0	-1.3
	6.8nm,0.8s						
KURBB				⇑Lg	Lg	10 12 27.9	
	24nm,0.8s						
BVA0	**Borovoye Array**	3.51	276	⇑Pg	Pg	10 12 16.2	0.0
	2.4nm,1.0s,baz=112,slow=14,SNR=4.6						
BVA0				⇓Lg	Lg	10 13 03.0	
	7.8nm,1.1s,baz=112,slow=26,SNR=5.1						
BVAR	**Borovoye Array**	3.51	276	Pn	Pg	10 12 14.4	-1.8
	baz=115,slow=16,SNR=5.6						
BVAR				Sn	Sb	10 12 54.8	-0.3
	baz=108,slow=23,SNR=3.1						
BVAR				Rg	Rg	10 13 32.6	
	1.0nm,0.6s,baz=72,slow=24,SNR=3.8						
	0.6nm,0.4s						
BRVK	**Borovoye**	3.58	276	⇑Pg	Pg	10 12 17.3	-0.2
	2.2nm,0.9s						
BRVK				⇓Lg	Lg	10 13 07.2	
	7.0nm,1.1s						
ZALV	**Zalesovo Beam**	5.30	74	Pn	Pg	10 12 49.7	-0.8
	0.3nm,0.4s,baz=246,slow=10,SNR=4.2						
I46RU	**ZALESOVO INFRA**	5.30	74	I	I	10 49 30.0	
	baz=251,slow=319,SNR=4.3						
MK31	**Makanchi Array**	7.20	144	⇑Lg	Lg	10 14 47.0	
	4.1nm,1.1s,baz=318,slow=25,SNR=5.6						
MKAR	**Makanchi Array**	7.20	144	Pn	Pn	10 12 57.0	+1.6
	0.1nm,0.3s,baz=316,slow=10,SNR=4.2						
MKAR				Lg	Lg	10 14 45.9	
	0.1nm,0.3s,baz=317,slow=27,SNR=5.9						
	0.4nm,0.8s						

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*IDC **23** 10:19:44.8±15.0, 7°.40S×155°.36E, h172^{km}±153^{km}, mb3.2/7, mbtmp3.6/7, Error ellipse: s-maj=62.6km s-min=38.2km az=132.0*
ISC 23 10:19:41.8±1.2**, 7°.5S**±0°.2×**155°.6E**±0°.2**, h150**^{km}**, n8, σ0^{s}80**/8**, mb3.6**/7**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	4.77	312	S	Sn	10 21 47.5	+0.5
	88nm,0.8s,baz=242,slow=18,SNR=2.2						
WRA	**Warramunga Arr**	23.99	237	P	P	10 24 42.9	+0.1
	1.6nm,0.9s,baz=58,slow=9.2,SNR=9.9						
	1.6nm,0.9s						
ASAR	**Alice Springs**	26.26	230	P	P	10 25 03.6	+0.3
	0.2nm,0.8s,baz=58,slow=8.8,SNR=1.7						
	0.2nm,0.8s						
PETK	**Petropavlovsk-**	60.44	1	P	P	10 29 34.9	-0.4
	0.9nm,0.9s,baz=143,slow=7.1,SNR=6.1						
	0.9nm,0.9s						
SONM	**Songino Array**	70.10	327	P	P	10 30 37.9	+0.1
	0.4nm,0.4s,baz=132,slow=4.6,SNR=4.3						
	0.4nm,0.4s						
ILAR	**Eielson Array**	83.67	21	P	P	10 31 53.2	0.0
	0.2nm,0.4s,baz=246,slow=5.5,SNR=9.6						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	84.19	319	P	P	10 31 55.1	-1.2
	0.3nm,0.3s,baz=108,slow=9.3,SNR=17						
	0.3nm,0.3s						
YKA	**Yellowknife Ar**	96.54	28	P	P	10 32 55.1	+1.1
	0.1nm,0.4s,baz=266,slow=4.5,SNR=3.3						
	0.1nm,0.4s						

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*WEL **23** 10:22:32.8±0.4, 42°S±2°×17°4E±°, h8^{km}±3^{km}, M2.9/11, ML3.1/12, MLv2.9/11, Error ellipse: s-maj=0.0km s-min=0.0km az=112.8, confirmed*
*NOU **23** 10:22:35.9, 42°.31S×173°.06E, h98^{km}, MLv3.6/7, South Island, New Zealand*
ISC 23 10:22:32.8±0.9**, 42°.34S**±0°.03×**173°.69E**±0°.04**, h17**^{km}±7^{km}**, n71, σ1^{s}26**/74**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	**Kahutara**	0.13	235	P	Pg	10 22 36.7	0.0
KHZ				S	Sg	10 22 39.9	+0.6
BSWZ	**Blackbirch Sta**	0.64	13	P	Pg	10 22 44.3	-1.1
BSWZ				S	Sg	10 22 53.4	-0.6
CMWZ	**Cape Campbell**	0.71	34	P	Pg	10 22 47.1	+0.4
GVZ	**Greta Valley S**	0.79	217	P	Pg	10 22 49.2	+1.0
GVZ				S	Sb	10 23 01.2	+2.8
THZ	**Tophouse**	0.82	315	P	Pg	10 22 47.2	-1.6
THZ				S	Sg	10 22 57.6	-2.0
TUWZ	**Tuamarina**	0.93	12	P	Pg	10 22 49.6	-1.2
AMCZ	**Amberley**	1.13	222	P	Pb	10 22 53.6	-0.2
LTZ	**Lake Taylor**	1.13	247	P	Pb	10 22 53.2	-0.7
LTZ				S	Sb	10 23 08.6	+0.2
NNZ	**Nelson**	1.15	348	P	Pb	10 22 52.8	-1.2
MRNZ	**Matariki Terra**	1.17	323	P	Pn	10 22 53.6	-0.7
MRNZ				S	Sb	10 23 10.1	+0.8
TCW	**Tory Channel**	1.21	22	P	Pn	10 22 54.0	-0.9
TCW				S	Sb	10 23 11.1	+0.5
WEL	**Wellington**	1.33	38	P	Pn	10 22 55.9	-0.6
PLWZ	**Palliser**	1.40	57	P	Pn	10 22 56.6	-1.0
TKNZ	**Takaka Hill**	1.41	337	P	Pn	10 22 57.5	-0.2
DSZ	**Denniston Nort**	1.52	292	P	Pn	10 22 59.3	+0.1
DUWZ	**D'Urville Isla**	1.55	7	P	Pn	10 22 59.0	-0.5
MQZ	**McQueen's Vall**	1.56	209	P	Pn	10 22 58.4	-1.3
OXZ	**Oxford**	1.56	230	P	Pn	10 22 58.6	-1.1
CAW	**Cannon Point**	1.61	40	P	Pn	10 22 59.4	-1.0
PAWZ	**Paruwai Farm**	1.62	54	P	Pn	10 22 59.1	-1.4

AKCZ	**Akaroa Harbour**	**1.63**	**200**	P	**Pn**	**10 23 00.1**	**-0.6**
INZ	**Inchbonnie**	**1.70**	**256**	P	**Pn**	**10 23 01.6**	**0.0**
KIW	**Kapiti Island**	**1.74**	**32**	P	**Pn**	**10 23 01.6**	**-0.6**
QRZ	**Quartz Range**	**1.75**	**330**	P	**Pn**	**10 23 02.8**	**+0.6**
QRZ	**Quartz Range**	**1.75**	**330**	P	**Pn**	**10 23 02.8**	**+0.6**
RACZ	**Rakaia**	**1.79**	**219**	P	**Pn**	**10 23 01.9**	**-1.0**
MTW	**Mount Morrison**	**1.80**	**50**	P	**Pn**	**10 23 01.5**	**-1.4**
OGWZ	**Otaki Gorge**	**1.89**	**37**	P	**Pn**	**10 23 03.2**	**-1.0**
MHCZ	**Mount Hutt**	**1.96**	**232**	P	**Pn**	**10 23 04.1**	**-1.1**
HOWZ	**Holdsworth Sta**	**1.99**	**44**	P	**Pn**	**10 23 04.3**	**-1.3**
TMWZ	**Te Maipa**	**2.06**	**54**	P	**Pn**	**10 23 04.8**	**-1.8**
WACZ	**Wakanui South**	**2.10**	**220**	P	**Pn**	**10 23 06.1**	**-0.9**
MRZ	**Mangatainoka R**	**2.20**	**41**	P	**Pn**	**10 23 07.0**	**-1.5**
TIWZ	**Tintock**	**2.27**	**47**	P	**Pn**	**10 23 08.6**	**-1.0**
WVZ	**Waitaha Valley**	**2.29**	**250**	P	**Pn**	**10 23 09.8**	**+0.1**
RPZ	**Rata Peaks**	**2.37**	**234**	P	Pn	10 23 08.3	-2.5
RPZ	**Rata Peaks**	**2.37**	**234**	P	**Pn**	**10 23 09.8**	**-1.0**
ARCZ	**Arundel**	**2.44**	**228**	P	**Pn**	**10 23 11.0**	**-0.8**
BFZ	**Birch Farm**	**2.54**	**50**	P	**Pb**	**10 23 20.5**	**+2.7**
GCSZ	**Gaunt Creek Bo**	**2.66**	**247**	P	**Pn**	**10 23 15.0**	**+0.3**
WAZ	**Wanganui**	**2.77**	**21**	P	**Pn**	**10 23 17.5**	**+1.2**
TMZ	**Timaru**	**2.83**	**223**	P	**Pn**	**10 23 16.1**	**-1.0**
PREZ	**Palmer Road**	**3.02**	**7**	P	**Pn**	**10 23 21.8**	**+2.1**
KHEZ	**Kahui Hut**	**3.05**	**5**	P	**Pn**	**10 23 23.2**	**+2.9**
KHEZ	**Kahui Hut**	**3.05**	**5**	P	**Pn**	**10 23 22.6**	**+2.3**
NBEZ	**Newall Road No**	**3.07**	**3**	P	**Pn**	**10 23 23.1**	**+2.7**
FOZ	**Fox Glacier**	**3.08**	**246**	P	**Pn**	**10 23 21.2**	**+0.6**
NEZ	**North Egmont**	**3.08**	**6**	P	**Pn**	**10 23 24.0**	**+3.3**
PKE	**Pukeiti**	**3.15**	**4**	P	**Pn**	**10 23 23.3**	**+1.7**
MTVZ	**Mangateitei**	**3.25**	**25**	P	**Pn**	**10 23 23.2**	**+0.2**
VRZ	**Vera Road**	**3.31**	**15**	P	**Pn**	**10 23 24.8**	**+1.0**
WNVZ	**Wahianoa**	**3.34**	**26**	P	**Pn**	**10 23 24.6**	**+0.2**
TRVZ	**Turoa**	**3.35**	**26**	P	**Pn**	**10 23 25.0**	**+0.4**
BHHZ	**Black Hill Sta**	**3.37**	**33**	P	**Pn**	**10 23 23.6**	**-1.0**
SNVZ	**South Ngauruho**	**3.48**	**26**	P	**Pn**	**10 23 26.4**	**+0.1**
ODZ	**Otahua Downs**	**3.49**	**218**	P	**Pn**	**10 23 24.9**	**-1.3**
ODZ	**Otahua Downs**	**3.49**	**218**	P	**Pn**	**10 23 24.8**	**-1.3**
OTVZ	**Oturere**	**3.51**	**26**	P	**Pn**	**10 23 26.5**	**-0.2**
NNVZ	**North Ngauruho**	**3.52**	**25**	P	**Pn**	**10 23 26.9**	**0.0**
WTVZ	**West Tongariro**	**3.53**	**25**	P	Pn	10 23 33.0	+6.1
ETVZ	**East Tongariro**	**3.55**	**26**	P	**Pn**	**10 23 26.9**	**-0.3**
TMVZ	**Te Maari**	**3.57**	**26**	P	**Pn**	**10 23 27.3**	**-0.1**
NTVZ	**North Tongarir**	**3.58**	**26**	P	**Pn**	**10 23 27.5**	**0.0**
BKZ	**Black Stump Fm**	**3.82**	**35**	P	Pn	10 23 28.2	-2.7
HIZ	**Hauiti**	**3.93**	**14**	P	**Pn**	**10 23 34.7**	**+2.5**
HIZ	**Hauiti**	**3.93**	**14**	P	**Pn**	**10 23 33.3**	**+1.1**
JCZ	**Jackson Bay**	**3.98**	**243**	P	Pn	10 23 30.1	-2.9
TLZ	**Tolley Road**	**4.25**	**20**	P	**Pn**	**10 23 36.5**	**-0.2**
EAZ	**Earnscleugh**	**4.29**	**226**	P	**Pn**	**10 23 36.4**	**-0.7**
TWGZ	**Tauwhareparae**	**5.30**	**40**	P	**Pn**	**10 23 51.2**	**+0.1**
AWAZ	**Awhitu Peninsu**	**5.32**	**8**	P	**Pn**	**10 23 51.9**	**+0.6**

*SOME **23** 10:46:35.4, 44°.43N×82°.78E, h5^{km}*
*NNC **23** 10:46:35.5±3.1, 44°.23N×83°.26E, h0^{km}, mb2.6, mpv2.2, Error ellipse: s-maj=30.8km s-min=8.8km az=117.0*
ISC 23 10:46:29.0±3.8**, 44°.2N**±0°.1×**83°.2E**±0°.2**, h10**^{km}**, n6,** σ**1**^{s}**15**/9**, 5C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**2.45**	**274**	*e*Pg	**Pg**	**10 47 17.5**	**+1.6**
	1.9nm,0.2s						
DJR				*e*Lg	Lg	10 47 48.5	
	5.5nm,0.5s						
MK31	**Makanchi Array**	**2.64**	**346**	⇑Pn	**Pg**	**10 47 20.5**	**+0.9**
	0.1nm,0.2s,baz=160,slow=13,SNR=38						
MK31				⇑Sn	**Sg**	**10 47 52.9**	**-1.0**
	1.7nm,0.3s,baz=163,slow=26,SNR=12						
MAKZ	**Makanchi**	**2.72**	**342**	⇑Pn	**Pg**	**10 47 20.0**	**-1.1**
	1.0nm,0.4s						
MAKZ				⇓Sn	**Sg**	**10 47 56.1**	**-0.1**
	0.7nm,0.4s						
PDGK	**Podgornoye**	**2.83**	**253**	⇑Pn	**Pg**	**10 47 23.2**	**-0.1**
	1.0nm,0.6s						
PDGK				⇑Sn	**Sg**	**10 47 58.9**	**-1.1**
	1.8nm,0.4s						
SHLS	**Shalkode**	**2.92**	**250**	*e*Pg	**Pb**	**10 47 21.8**	**+0.6**
	6.0nm,0.4s						
SHLS				*e*Lg	Lg	10 47 54.9	
	14nm,0.3s						
KPKS	**Kokpek**	**3.36**	**258**	*e*Pg	**Pg**	**10 47 32.3**	**-0.9**
	1.4nm,0.3s						
KPKS				*e*Lg	Lg	10 48 13.0	
	3.8nm,0.5s						

*IDC **23** 10:46:33.1±1.0, 7°.95S×129°.73E, h0^{km}, mb3.9/7, mbtmp3.9/9, ML3.9/2, MS3.3/12, Error ellipse: s-maj=60.0km s-min=22.4km az=78.0*
*NEIC **23** 10:46:41.6±2.6, 7°.95S±0°.08×129°.8E±0°.1, h134^{km}±10^{km}, mb4.3/7, Error ellipse: s-maj=14.9km s-min=11.2km az=104.0*
ISC 23 10:46:42.2±0.6**, 8°.10S**±0°.06×**129°.72E**±0°.08**, h100**^{km}**, n49,** σ**2**^{s}**46**/38**, mb3.9**/10**, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.57**	**86**	Pn	**Pn**	**10 47 09.5**	**+0.2**
SAUI	**Saumlaki**	**1.57**	**86**	P	**Pn**	**10 47 09.4**	**0.0**
MTN	**Manton Dam**	**4.92**	**164**	Pn	**Pn**	**10 47 55.0**	**+1.2**
FAKI	**Fak Fak**	**5.73**	**26**		**Pn**	**10 48 01.5**	**-3.3**
KNRA	**Kununurra**	**7.59**	**187**	Pn	**Pn**	**10 48 29.5**	**-0.6**
KNRA	**Kununurra**	**7.59**	**187**	P	**Pn**	**10 48 28.9**	**-1.3**
KAPI	**Kappang**	**10.36**	**287**	LR	LR	10 52 46.3	
	comp=Z,118nm,21.3s,baz=111,slow=36						
FITZ	**Fitzroy Crossi**	**10.70**	**201**	Pn	**Pn**	**10 49 10.8**	**-1.7**
PLAI	**Plampang**	**11.83**	**266**	P	**Pn**	**10 49 26.6**	**-1.1**
WB0	**Warramunga Arr**	**12.46**	**159**	Pn	**Pn**	**10 49 33.2**	**-2.8**
WRAB	**Tennant Creek**	**12.60**	**160**		**Pn**	**10 49 35.0**	**-2.9**
WRAB					**Sn**	**10 51 56.5**	**+0.1**
WRAB	**Tennant Creek**	**12.60**	**160**	P	**Pn**	**10 49 35.5**	**-2.3**
WRA	**Warramunga Arr**	**12.60**	**160**	Pn	**Pn**	**10 49 34.2**	**-3.6**
	0.8nm,0.3s,baz=336,slow=13,SNR=38						
WRA				Sn	**Sn**	**10 51 53.3**	**-3.2**
	0.3nm,0.3s,baz=327,slow=25,SNR=4.8						
WRA				LR	LR	10 55 03.2	
	comp=Z,128nm,18.7s,baz=325,slow=40						
	7.1nm,0.8s						
WRA	**Warramunga Arr**	**12.60**	**160**		**Pn**	**10 49 34.5**	**-3.4**
WB2	**Warramunga Arr**	**12.60**	**160**	Pn	**Pn**	**10 49 35.3**	**-2.7**
WB2					**Sn**	**10 51 57.4**	**+0.8**
COEN	**Coen**	**14.44**	**115**	Pn	**Pn**	**10 49 58.1**	**-3.7**
AS31	**Alice Springs**	**15.99**	**166**	P	**Pn**	**10 50 21.0**	**-0.5**
ASAR	**Alice Springs**	**15.99**	**166**	Pn	**Pn**	**10 50 20.5**	**-1.0**
	0.3nm,0.3s,baz=343,slow=8.8,SNR=28						
ASAR				Sn	**Sn**	**10 53 18.8**	**+0.1**
	0.1nm,0.3s,baz=328,slow=15,SNR=5.0						
ASAR				LR	LR	10 57 25.7	
	comp=Z,85nm,21.7s,baz=342,slow=40						
	1.6nm,0.7s						
ASAR	**Alice Springs**	**15.99**	**166**	P	**Pn**	**10 50 22.1**	**+0.6**
AS01	**Alice Springs**	**16.00**	**166**	P	**Pn**	**10 50 21.7**	**+0.1**
MBWA	**Marble Bar**	**16.17**	**216**		**Pn**	**10 50 23.5**	**-0.2**
PSA00	**Pilbara Seismi**	**16.43**	**214**		**Pn**	**10 50 27.7**	**+0.8**
PSA00				IAmb	IAmb	10 50 29.4	
	comp=Z,41nm,1.2s						
WRKA	**Warakurna**	**16.90**	**184**	P	**Pn**	**10 50 33.0**	**+0.3**
PMG	**Port Moresby**	**17.29**	**96**	LR	LR	10 59 09.9	
	comp=Z,97nm,18.4s,baz=326,slow=44						
MTSU	**Mount Surprise**	**17.36**	**127**	P	**Pn**	**10 50 40.0**	**+1.7**
CTA	**Charters Tower**	**19.96**	**128**	LR	LR	10 59 43.5	
	comp=Z,222nm,19.3s,baz=266,slow=40						
SBUM	**Sibu**	**20.35**	**300**	P	**P**	**10 51 08.1**	**-2.8**
SBUM				IAmb	IAmb	10 51 18.2	
	comp=Z,6.8nm,0.8s						
OOD	**Oodnadatta**	**20.39**	**165**	P	Pn	10 51 16.0	+1.9
KSM	**Kuching**	**21.56**	**295**	P	**P**	**10 51 20.6**	**-3.2**
KSM				IAmb	IAmb	10 51 33.1	
	comp=Z,8.5nm,1.0s						
MULG	**Mulgathing**	**22.44**	**170**	P	**P**	**10 51 38.0**	**+5.0**
KRVT	**Keravat (AS076**	**22.49**	**82**	LR	LR	11 02 43.4	
	comp=Z,64nm,19.1s,baz=27,slow=43						
FORT	**Forrest**	**22.62**	**184**	P	**P**	**10 51 32.1**	**-2.6**
FORT				IAmb	IAmb	10 51 57.0	
	comp=Z,18nm,0.8s						
FORT	**Forrest**	**22.62**	**184**	P	**P**	**10 51 39.7**	**+4.9**
BBOO	**Buckleboo**	**25.29**	**167**	P	**P**	**10 51 57.3**	**-2.0**
BBOO				IAmb	IAmb	10 52 11.9	
	comp=Z,8.6nm,0.8s						
STKA	**Stephens Creek**	**26.12**	**157**	LR	LR	11 03 19.7	
	comp=Z,56nm,20.1s,baz=27,slow=38						
HNR	**Honiara**	**29.91**	**95**	LR	LR	11 05 39.6	
	comp=Z,692nm,18.3s,baz=153,slow=38						
DZM	**Mont Dzumac**	**37.96**	**116**	LR	LR	11 09 08.8	
	comp=Z,60nm,19.9s,baz=214,slow=36						
CMAR	**Chiang Mai Arr**	**40.23**	**311**	LR	LR	11 11 28.9	
	comp=Z,15nm,21.7s,baz=245,slow=37						
MJAR	**Matsushiro Arr**	**45.11**	**10**	P	**P**	**10 54 49.2**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=197,slow=8.7,SNR=3.3						
	comp=Z,1.2nm,0.8s						
RPZ	**Rata Peaks**	**50.55**	**142**	LR	LR	11 16 45.4	
	comp=Z,106nm,18.8s,baz=266,slow=36						
PALK	**Pallekele**	**51.19**	**286**	LR	LR	11 17 29.2	
	comp=Z,25nm,21.3s,baz=240,slow=36						
RAO	**Raoul Island**	**53.39**	**120**	LR	LR	11 17 36.6	
	comp=Z,60nm,20.2s,baz=174,slow=35						
SONM	**Songino Array**	**59.39**	**342**	P	**P**	**10 56 35.8**	**+1.7**
	comp=Z,0.2nm,0.5s,baz=152,slow=9.5,SNR=1.9						
	comp=Z,0.2nm,0.5s						
PETK	**Petropavlovsk-**	**65.45**	**18**	P	P	10 57 18.2	+3.9
	comp=Z,0.5nm,0.6s,baz=187,slow=3.8,SNR=1.8						
	comp=Z,0.5nm,0.6s						
MKAR	**Makanchi Array**	**68.98**	**327**	P	**P**	**10 57 40.2**	**+3.4**
	comp=Z,0.8nm,0.6s,baz=117,slow=8.1,SNR=8.7						
	comp=Z,0.8nm,0.6s						
VNDA	**Vanda**	**71.40**	**173**	P	P	10 57 56.3	+5.3
	comp=Z,1.8nm,0.9s,baz=319,slow=9.3,SNR=3.1						
	comp=Z,1.8nm,0.9s						
ZALV	**Zalesovo Beam**	**72.44**	**334**	P	**P**	**10 57 59.9**	**+2.4**
	comp=Z,0.8nm,0.5s,baz=122,slow=5.2,SNR=4.5						
	comp=Z,0.8nm,0.5s						
RSD	**Rainshed**	**78.73**	**68**	P	P	10 58 28.2	-6.3
ILAR	**Eielson Array**	**94.45**	**25**	P	**P**	**10 59 53.9**	**+3.1**
	comp=Z,0.6nm,0.8s,baz=252,slow=4.7,SNR=7.0						
	comp=Z,0.6nm,0.8s						

IDC 23 10:48:46.2±613.0**, 49°.71N**×**37°.75E, h0**^{km}**, Error ellipse: s-maj=252.0km s-min=138.2km az=12.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**7.04**	**358**	I	I	11 30 06.5	
	0.5nm,0.7s,baz=176,slow=326,SNR=8.1						
I31KZ	**AKTYUBINSK INF**	**13.05**	**79**	I	I	12 10 20.0	
	0.8nm,0.7s,baz=273,slow=315,SNR=32						
I46RU	**ZALESOVO INFRA**	**28.97**	**63**	I	I	13 47 53.1	
	0.1nm,1.4s,baz=281,slow=317,SNR=2.5						

IDC 23 11:13:37.3±8.4**, 19°.83S**×**179°.71W, h620**^{km}±34^{km}**, mb2.8**/3**, mbtmp3.6**/4**, Error ellipse: s-maj=254.3km s-min=32.2km az=143.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.97**	**314**	P	P	11 14 58.1	-0.1
	2.5nm,0.3s,baz=166,slow=9.9,SNR=5.5						
WRA	**Warramunga Arr**	**43.10**	**262**	P	P	11 20 45.3	+0.2
	0.4nm,0.3s,baz=97,slow=7.5,SNR=61						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**43.11**	**256**	P	P	11 20 45.0	-0.2
	1.5nm,0.5s,baz=93,slow=8.0,SNR=37						
	1.5nm,0.5s						
ILAR	**Eielson Array**	**88.03**	**13**	P	P	11 25 22.5	-0.1
	0.2nm,0.7s,baz=195,slow=5.6,SNR=1.7						
	0.2nm,0.7s						

*ISK **23** 11:14:46.3, 39°.57N×25°.97E, h5^{km}, ML2.8/25*
*DDA **23** 11:14:47.4±0.0, 39°.54N×26°.02E, h8^{km}±1^{km}, ML2.8*
*ATH **23** 11:14:47.9, 39°.53N×26°.00E, h12^{km}±1^{km}, ML2.7/8, Error ellipse: s-maj=1.7km s-min=0.8km az=239.0*
*THE **23** 11:14:47.4, 39°.55N×26°.02E, h0^{km}±1^{km}, ML2.6/6, Error ellipse: s-maj=1.4km s-min=0.4km az=74.0*
ISC 23 11:14:47.3±0.8**, 39°.54N**±0°.01×**26°.01E**±0°.02**, h12**^{km}±6^{km}**, n65,** σ**0**^{s}**57**/96**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	**Canakkale, Ayv**	**0.10**	**109**	P	**Pg**	**11 14 50.0**	**-0.2**
KOCA				S	**Sg**	**11 14 51.9**	**-0.3**
GPNR	**Gulpinar-Canak**	**0.12**	**130**	Pg	**Pg**	**11 14 50.1**	**-0.3**
BOZC	**Bozcaada**	**0.31**	**6**	Pg	**Pg**	**11 14 53.5**	**-0.1**
BOZC				Sg	**Sg**	**11 14 57.9**	**+0.1**
BOZC	**Bozcaada**	**0.31**	**6**	P	**Pg**	**11 14 53.5**	**-0.1**
BOZC				S	**Sg**	**11 14 58.1**	**+0.3**
SIGR	**SIGRI**	**0.34**	**201**	P	**Pg**	**11 14 54.4**	**+0.1**
SIGR				S	**Sg**	**11 14 59.9**	**+1.0**
	2µm,0.5s						
SIGR	**SIGRI**	**0.34**	**201**	Pg	**Pg**	**11 14 54.4**	**+0.1**
SIGR	**SIGRI**	**0.34**	**201**	P	**Pg**	**11 14 54.4**	**+0.1**
SIGR				S	**Sg**	**11 14 59.5**	**+0.6**
SIGR				AML	AML	11 15 00.1	
	comp=N,4594µm,0.4s						
SIGR				AML	AML	11 15 01.4	
	comp=E,3474µm,0.6s						
PRK	**Paraskevi**	**0.35**	**145**	P	**Pg**	**11 14 54.7**	**+0.4**
PRK				S	**Sg**	**11 15 00.1**	**+1.0**
	comp=E,2µm,0.3s						
PRK	**Paraskevi**	**0.35**	**145**	P	**Pg**	**11 14 54.8**	**+0.4**
PRK				S	**Sg**	**11 14 59.9**	**+0.8**
PRK				AML	AML	11 15 00.6	
	comp=N,4595µm,0.2s						
PRK				AML	AML	11 15 01.2	
	comp=E,5212µm,0.6s						
EZN	**Ezine**	**0.38**	**40**	P	**Pg**	**11 14 54.6**	**-0.3**
EZN				S	**Sg**	**11 15 00.4**	**+0.5**
	comp=E,712nm,0.1s						
EZN	**Ezine**	**0.38**	**40**	Pg	**Pg**	**11 14 54.8**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**0.46**	**63**	P	**Pg**	**11 14 56.3**	**-0.1**
BAYC				*i* AML	AML	11 15 02.0	
	comp=E,1µm,0.4s						
BAYC				S	**Sg**	**11 15 02.6**	**0.0**
BAYC				*i* AML	AML	11 15 03.0	
	comp=E,458nm,0.3s						
ECEA	**Canakkale, Ece**	**0.52**	**14**	P	**Pg**	**11 14 57.2**	**-0.4**
ECEA				S	**Sg**	**11 15 05.3**	**+0.7**
AYVA	**Ayvalik**	**0.57**	**113**	P	**Pg**	**11 14 58.5**	**+0.1**
AYVA				*i* AML	AML	11 15 15.0	
	comp=E,391nm,0.3s						
GOKA	**anakkale-Gk**	**0.66**	**353**	P	**Pg**	**11 14 59.7**	**-0.4**
GADA	**Gvkgeada**	**0.66**	**352**	Pg	**Pg**	**11 14 59.6**	**-0.6**
COMU	**Canakkale**	**0.67**	**32**	Pg	**Pg**	**11 15 00.0**	**-0.3**
COMU				Sg	**Sb**	**11 15 10.2**	**0.0**
LIA	**Limnos Island**	**0.74**	**300**	P	**Pg**	**11 15 01.6**	**0.0**
LIA				S	**Sb**	**11 15 13.1**	**+0.9**
	comp=E,770nm,0.5s						
LIA	**Limnos Island**	**0.74**	**300**	P	**Pg**	**11 15 01.6**	**0.0**
LIA				S	**Sb**	**11 15 12.4**	**+0.2**
LIA				AML	AML	11 15 15.0	
	comp=E,1680µm,0.6s						
LIA				AML	AML	11 15 16.1	
	comp=N,1400µm,0.5s						
BUHA	**Balikesir, Bur**	**0.82**	**92**	P	**Pg**	**11 15 03.1**	**-0.2**
BUHA				*i* AML	AML	11 15 18.0	
	comp=N,305nm,0.3s						
BUHA				*i* AML	AML	11 15 18.0	
	comp=N,173nm,0.5s						
DKL	**Dikili**	**0.83**	**123**	Pg	**Pn**	**11 15 04.9**	**0.0**
KARB	**zmir-Karabur**	**0.92**	**160**	P	**Pn**	**11 15 06.0**	**-0.2**
KARB				S	**Sn**	**11 15 18.6**	**-0.8**
KARB				*i* AML	AML	11 15 20.0	
	comp=N,263nm,0.3s						
KARB				*i* AML	AML	11 15 22.0	
	comp=N,232nm,0.4s						
CANM	**Can-anakkale**	**0.93**	**59**	Pg	**Pb**	**11 15 05.9**	**+0.4**
GELI	**Tayfur-Gelibol**	**0.93**	**22**	Pg	**Pg**	**11 15 04.9**	**-0.4**
GELI				Sg	**Sn**	**11 15 18.8**	**-0.8**
ZEDA	**zmir-Bergama**	**1.00**	**124**	P	**Pn**	**11 15 07.5**	**+0.3**
SMTH	**Samothraki Isl**	**1.01**	**339**	P	**Pg**	**11 15 06.3**	**-0.4**
SMTH				S	**Sb**	**11 15 20.6**	**+0.6**
	comp=N,220nm,0.5s						
SMTH	**Samothraki Isl**	**1.01**	**339**	P	**Pg**	**11 15 06.3**	**-0.4**
SMTH				S	**Sb**	**11 15 20.4**	**+0.4**
SMTH				AML	AML	11 15 22.2	
	comp=E,353µm,0.5s						
SMTH				AML	AML	11 15 22.4	
	comp=N,524µm,0.4s						
LPK	**Lapseki**	**1.01**	**34**	Pg	**Pb**	**11 15 06.7**	**-0.2**
PSRA	**Psara**	**1.05**	**200**	P	**Pb**	**11 15 07.4**	**-0.1**
PSRA				S	**Sg**	**11 15 21.4**	**+0.2**
PSRA				AML	AML	11 15 26.5	
	comp=E,2276µm,0.2s						
PSRA				AML	AML	11 15 27.1	
	comp=N,2928µm,0.2s						
CHOS	**Chios island**	**1.15**	**178**	P	**Pb**	**11 15 09.0**	**-0.2**
CHOS				S	**Sn**	**11 15 26.4**	**+1.4**
	comp=N,700nm,0.4s						
CHOS	**Chios island**	**1.15**	**178**	Pn	**Pg**	**11 15 09.9**	**+0.5**
CHOS	**Chios island**	**1.15**	**178**	P	**Pb**	**11 15 09.0**	**-0.2**
CHOS				S	**Sg**	**11 15 24.3**	**0.0**
CHOS				AML	AML	11 15 27.4	
	comp=N,1040µm,0.6s						
CHOS				AML	AML	11 15 29.0	
	comp=E,1772µm,0.3s						
ERIK	**Erikli-Kesan**	**1.20**	**19**	Pn	**Pn**	**11 15 09.4**	**-0.5**
ERIK				Sn	**Sn**	**11 15 26.3**	**+0.1**
ENEZ	**Enez**	**1.21**	**5**	Pn	**Pn**	**11 15 10.0**	**-0.1**
ENEZ				Sn	**Sn**	**11 15 27.6**	**+1.3**
BALY	**Balya**	**1.26**	**80**	P	**Pb**	**11 15 11.3**	**+0.2**
BALY				S	**Sn**	**11 15 27.7**	**0.0**
BALY				*i* AML	AML	11 15 29.0	
	comp=E,283nm,0.5s						
BALY				*i* AML	AML	11 15 30.0	
	comp=E,164nm,0.2s						
URLA	**Izmir**	**1.26**	**159**	Pn	**Pn**	**11 15 10.6**	**-0.2**
URLA	**Izmir**	**1.26**	**159**	P	**Pn**	**11 15 10.4**	**-0.4**
URLA				S	**Sb**	**11 15 27.4**	**+0.1**
KRBG	**Karabiga-Canak**	**1.31**	**49**	Pn	**Pb**	**11 15 12.1**	**+0.2**
STEP	**BALIKESIR_Sava**	**1.33**	**96**	P	**Pb**	**11 15 12.4**	**+0.2**
STEP				*i* AML	AML	11 15 39.0	
	comp=E,84nm,0.4s						
STEP				*i* AML	AML	11 15 40.0	
	comp=E,139nm,0.6s						
ZEYE	**Izmir, Urla-Ze**	**1.35**	**163**	P	**Pn**	**11 15 11.5**	**-0.5**
ZEYE				S	**Sb**	**11 15 29.4**	**-0.4**
ZEYE				*i* AML	AML	11 15 33.0	
	comp=E,161nm,0.4s						
ZEYE				*i* AML	AML	11 15 35.0	
	comp=E,236nm,0.4s						
ALN	**Alexandroupoli**	**1.36**	**1**	Pn	**Pb**	**11 15 12.6**	**-0.2**
ALN				Sn	**Sg**	**11 15 31.6**	**+0.4**
ALN	**Alexandroupoli**	**1.36**	**1**	P	**Pn**	**11 15 12.3**	**+0.1**
ALN				AML	AML	11 15 32.4	
	comp=N,211µm,0.4s						
ALN				AML	AML	11 15 33.0	
	comp=E,218µm,0.3s						
KNL	**Balıkesir**	**1.38**	**57**	P	**Pb**	**11 15 13.2**	**+0.2**
KNL				S	**Sg**	**11 15 32.1**	**+0.5**
KNL				*i* AML	AML	11 15 34.0	
	comp=E,447nm,0.8s						
KNL				*i* AML	AML	11 15 34.0	
	comp=E,551nm,0.5s						
GONE	**Gonen-Balikesi**	**1.39**	**68**	Pn	**Pg**	**11 15 14.2**	**+0.2**
KESN	**Edirne-Kesan**	**1.39**	**21**	P	**Pn**	**11 15 13.1**	**+0.2**
KESN				S	**Sn**	**11 15 31.8**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.46**	**37**	Pn	**Pb**	**11 15 14.3**	**-0.2**
THAS	**Thassos island**	**1.46**	**318**	P	**Pn**	**11 15 13.3**	**-0.3**
THAS				S	**Sn**	**11 15 31.2**	**-1.4**
THAS				AML	AML	11 15 31.8	
	comp=N,220µm,0.5s						
THAS				AML	AML	11 15 32.4	
	comp=E,113µm,0.4s						
BKES	**Balkesir-Mer**	**1.49**	**82**	P	**Pg**	**11 15 16.0**	**0.0**
BKES				*i* AML	AML	11 15 38.0	
	comp=E,94nm,0.2s						
DGB	**zmir**	**1.63**	**155**	P	**Pn**	**11 15 14.9**	**-0.9**
DGB				*i* AML	AML	11 15 43.0	
	comp=E,72nm,0.3s						
EDC	**Edincik**	**1.64**	**60**	Pn	**Pb**	**11 15 17.6**	**+0.1**
RDO	**Rodhopi**	**1.65**	**347**	Pn	**Pn**	**11 15 16.8**	**+0.6**
RDO	**Rodhopi**	**1.65**	**347**	P	**Pn**	**11 15 16.4**	**+0.2**
UKOP	**Uzunkopru-Edir**	**1.66**	**16**	Pn	**Pb**	**11 15 17.4**	**-0.5**
KYMI	**Kymi, Euboea I**	**1.74**	**239**	P	**Pn**	**11 15 16.6**	**-0.8**
KYMI				S	**Sn**	**11 15 38.2**	**-1.3**
OUR	**Ouranopolis**	**1.75**	**298**	Pn	**Pn**	**11 15 18.5**	**+0.9**
KAVA	**Kavala**	**1.86**	**322**	P	**Pn**	**11 15 19.1**	**0.0**
DURS	**Dursunbey**	**1.90**	**87**	P	**Pn**	**11 15 20.1**	**+0.4**
DURS				S	**Sn**	**11 15 42.5**	**-1.2**
DURS				*i* AML	AML	11 15 50.0	
	comp=E,63nm,0.8s						
DURS				*i* AML	AML	11 15 50.0	
	comp=E,59nm,0.3s						
SMG	**Samos**	**1.93**	**160**	P	**Pn**	**11 15 19.9**	**-0.2**
KCTX	**Karacabey (Bur**	**1.94**	**67**	Pn	**Pb**	**11 15 22.0**	**-0.7**
DST	**Dursunbey**	**2.02**	**87**	Pn	**Pb**	**11 15 23.7**	**-0.3**
GCAM	**G?zelcaml?**	**2.07**	**152**	Pn	**Pb**	**11 15 24.2**	**-0.6**
BOTS	**Marmara Eregli**	**2.09**	**45**	Pn	**Pb**	**11 15 24.0**	**-1.2**
DEMI	**Demirci**	**2.15**	**102**	P	**Pg**	**11 15 28.0**	**-0.6**
KULA	**Kula-Manisa**	**2.30**	**115**	Pn	**Pb**	**11 15 28.1**	**-0.7**
KIRK	**Kırklareli**	**2.39**	**20**	P	**Pn**	**11 15 28.1**	**+1.7**

*JMA **23** 11:15:08.4±0.2, 38°.4N±0°.7×144°.6E±1°.0, h44^{km}, MV3.5/33, FAR E OFF NORTH HONSHU*
*IDC **23** 11:15:11.8±4.6, 38°.36N×144°.53E, h54^{km}±42^{km}, mb3.2/4, mbtmp3.5/7, ML2.9/3, MS2.3/1, Error ellipse: s-maj=41.9km s-min=19.4km az=116.0*
ISC 23 11:15:07.9±1.2**, 38°.40N**±0°.06×**144°.68E**±0°.08**, h29**^{km}**, n29,** σ**1**^{s}**81**/43**, mb3.5**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.45**	**287**	P	**Pn**	**11 15 46.5**	**+0.6**
OFUJ				S	**Sn**	**11 16 13.9**	**-0.9**
MIYJ	**Miyakonagasawa**	**2.52**	**299**	P	**Pn**	**11 15 47.4**	**+0.5**
MIYJ				*e*S	**Sn**	**11 16 16.1**	**-0.5**
JIKH	**Ishinomakikobu**	**2.52**	**269**	P	**Pn**	**11 15 47.0**	**0.0**
JIKH				S	**Sn**	**11 16 15.5**	**-1.2**
JKMT	**Kesennumamotoy**	**2.54**	**280**	P	**Pn**	**11 15 47.5**	**+0.3**
JMK	**Ichinoseki**	**2.76**	**283**	P	**Pn**	**11 15 51.0**	**+0.7**
JMK				*e*S	**Sn**	**11 16 23.2**	**+0.6**
JOM	**Ohasama**	**2.85**	**293**	P	**Pn**	**11 15 52.3**	**+0.9**
JOM				*e*S	**Sn**	**11 16 25.4**	**+0.6**
JANG	**Nango**	**3.15**	**310**	P	**Pn**	**11 15 56.0**	**+0.5**
JANG				*e*S	**Sn**	**11 16 32.2**	**+0.1**
JYK	**Kaneyama**	**3.42**	**280**	P	**Pn**	**11 16 00.6**	**+1.3**
JYK				*e*S	**Sn**	**11 16 39.7**	**+0.9**
JOTO	**OTAMA OYAMA**	**3.53**	**258**	P	**Pn**	**11 16 01.8**	**+0.9**
JOTO				S	**Sn**	**11 16 41.2**	**-0.5**
JOT	**Ohata**	**4.08**	**318**	*e*S	**Sn**	**11 16 53.9**	**-1.2**
JCH	**Churui**	**4.33**	**347**	*e*P	**Pn**	**11 16 11.6**	**-0.2**
JCH				*e*S	**Sn**	**11 16 59.6**	**-1.6**
BSO1	**Boso 1**	**4.78**	**220**	*e*P	**Pn**	**11 16 16.3**	**-1.1**
BSO1				S	**Sn**	**11 17 09.6**	**-2.0**
NEM2	**Nemuro 2**	**5.03**	**9**	P	**Pn**	**11 16 19.6**	**-1.8**
NEM2				*e*S	**Sn**	**11 17 14.1**	**-4.3**
JRY	**Ryogami san**	**5.18**	**244**	P	**Pn**	**11 16 23.5**	**0.0**
JRY				S	**Sn**	**11 17 19.4**	**-3.0**
JOSM	**Okushiri--Mats**	**5.42**	**314**	P	**Pn**	**11 16 28.2**	**+1.5**
JOD2	**Odawara 2**	**5.46**	**237**	P	**Pn**	**11 16 28.2**	**+0.8**
JOD2				*e*S	**Sn**	**11 17 24.6**	**-4.7**
MJAR	**Matsushiro Arr**	**5.47**	**252**	P	**Pn**	**11 16 28.7**	**+1.2**
	0.3nm,0.3s,baz=65,slow=8.1,SNR=14						
MJAR				S	**Sn**	**11 17 29.8**	**+0.5**
	1.2nm,0.4s,baz=91,slow=27,SNR=1.7						
	4.8nm,0.8s						
JTKR	**Abashiri--Toko**	**5.60**	**354**	*e*P	**Pn**	**11 16 28.8**	**-0.4**
JTKR				*e*S	**Sn**	**11 17 29.4**	**-3.1**
JHR	**Hokuryu**	**5.79**	**338**	*e*P	**Pn**	**11 16 33.7**	**+1.9**
JHR				*e*S	**Sn**	**11 17 37.4**	**+0.3**
ASAJ	**Asahikawa**	**5.92**	**345**	P	**Pn**	**11 16 35.2**	**+1.5**
	0.3nm,0.3s,baz=121,slow=12,SNR=1.7						
ASAJ				S	**Sn**	**11 17 38.4**	**-2.1**
	3.5nm,0.8s,baz=155,slow=19,SNR=1.7						
	2.7nm,0.6s						
USRK	**Ussuriysk Ar.**	**11.16**	**305**	P	**Pn**	**11 17 49.2**	**+3.8**
	0.1nm,0.3s,baz=101,slow=13,SNR=2.3						
	2.7nm,0.8s						
KSRS	**Korea Array**	**13.26**	**271**	P	**Pn**	**11 18 11.0**	**-3.2**
	1.2nm,0.8s,baz=105,slow=14,SNR=2.2						
KSRS				LR	LR	11 22 29.9	
	comp=Z,11nm,18.5s,baz=315,slow=33						
SEY	**Seymchan**	**25.01**	**8**	P	**P**	**11 20 31.8**	**+2.8**
	2.0nm,0.8s,baz=192,slow=20,SNR=4.4						
	2.0nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**26.77**	**128**	T	T	11 48 32.7	
	baz=320						
H11N1	**WAKE ISLAND Hy**	**26.78**	**128**	T	T	11 48 36.6	
	baz=320						
H11N3	**WAKE ISLAND Hy**	**26.79**	**128**	T	T	11 48 35.4	
	baz=320						
MKAR	**Makanchi Array**	**45.60**	**302**	P	**P**	**11 23 25.0**	**-0.4**
	0.2nm,0.4s,baz=90,slow=7.9,SNR=2.2						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**58.84**	**191**	P	**P**	**11 25 03.4**	**-0.5**
	0.5nm,0.8s,baz=12,slow=6.9,SNR=2.7						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**62.56**	**191**	P	**P**	**11 25 30.6**	**+1.4**

0.2nm,0.7s,baz=7.5,slow=7.0,SNR=1.4
0.2nm,0.7s

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*IDC **23** 11:37:15.5±1.6, 18.°96S×177.°79W, h565^{km}±12^{km}, mb3.1/10, mbtmp4.0/12, Error ellipse: s-maj=37.7km s-min=11.5km az=151.0*

ISC 23 11:37:12.9±0.9, **19.°0S**±0.°2×**177.°5W**±0.°1, **h550**^{km}**, n18, σ1^{s}70**/23, **mb3.6**/10, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.41**	**286**	P	**P**	**11 38 39.4**	**+1.3**
	9.7nm,0.3s,baz=224,slow=23,SNR=24						
MSVF				S	**S**	**11 39 48.8**	**+1.4**
	2.0nm,0.4s,baz=264,slow=22,SNR=1.0						
AFI	**Afiamalu**	**7.50**	**48**	P	**P**	**11 39 04.4**	**-1.5**
	19nm,0.4s,baz=196,slow=3.4,SNR=11						
AFI				S	**S**	**11 40 34.3**	**-4.1**
	30nm,0.6s,baz=0.5,slow=18,SNR=4.2						
DZM	**Mont Dzumac**	**15.33**	**256**	P	**P**	**11 40 24.3**	**-1.6**
	6.1nm,0.8s,baz=124,slow=16,SNR=9.5						
STKA	**Stephens Creek**	**38.85**	**243**	P	**P**	**11 43 51.5**	**+0.2**
	1.6nm,0.5s,baz=84,slow=10,SNR=6.7						
	1.6nm,0.5s						
WRA	**Warramunga Arr**	**45.28**	**261**	P	**P**	**11 44 41.2**	**-0.8**
	1.5nm,0.5s,baz=97,slow=7.6,SNR=52						
WRA				PcP	**PcP**	**11 46 10.6**	**+0.3**
	0.3nm,0.3s,baz=91,slow=3.8,SNR=4.8						
WRA				S	**S**	**11 50 39.7**	**-3.1**
	0.7nm,0.9s,baz=100,slow=13,SNR=4.4						
	1.5nm,0.5s						
ASAR	**Alice Springs**	**45.32**	**255**	P	**P**	**11 44 42.0**	**-0.3**
	2.3nm,0.5s,baz=84,slow=8.1,SNR=56						
ASAR				PcP	**PcP**	**11 46 10.6**	**+0.2**
	0.5nm,0.5s,baz=104,slow=4.0,SNR=7.3						
ASAR				S	**S**	**11 50 40.6**	**-2.7**
	0.9nm,1.0s,baz=89,slow=15,SNR=6.6						
	2.3nm,0.5s						
PETK	**Petropavlovsk-**	**74.98**	**345**	P	**P**	**11 47 58.7**	**+0.8**
	2.1nm,0.7s,baz=129,slow=7.8,SNR=9.9						
	2.1nm,0.7s						
NVAR	**Mina Array Bea**	**79.65**	**43**	P	**P**	**11 48 24.3**	**+0.5**
	0.5nm,0.7s,baz=233,slow=5.5,SNR=2.0						
	0.5nm,0.7s						
TXAR	**Lajitas Array**	**85.88**	**57**	P	**P**	**11 48 57.5**	**+2.3**
	0.6nm,0.7s,baz=213,slow=6.5,SNR=7.8						
	0.6nm,0.7s						
ILAR	**Eielson Array**	**86.79**	**13**	P	**P**	**11 48 58.7**	**+0.2**
	0.8nm,0.7s,baz=229,slow=4.2,SNR=18						
	0.8nm,0.7s						
PDAR	**Pinedale Array**	**87.58**	**43**	P	**P**	**11 49 04.5**	**+1.4**
	0.5nm,0.8s,baz=176,slow=2.4,SNR=4.2						
	0.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**90.06**	**289**	P	**P**	**11 49 15.9**	**+1.0**
	0.4nm,0.3s,baz=104,slow=3.8,SNR=1.5						
	0.4nm,0.3s						
YKA	**Yellowknife Ar**	**95.00**	**25**	P	**P**	**11 49 37.8**	**+1.4**
	0.2nm,0.7s,baz=235,slow=2.9,SNR=3.2						
	0.2nm,0.7s						
BVAR	**Borovoye Array**	**118.25**	**321**	PKP	**PKiKP**	**11 54 57.8**	**+0.1**
	1.0nm,0.4s,baz=132,slow=2.1,SNR=7.0						
ARCES	**ARCESS Array B**	**127.57**	**350**	PKP	**PKiKP**	**11 55 15.6**	**-0.1**
	1.5nm,0.5s,baz=356,slow=1.2,SNR=7.2						
AKASG	**Malin Array Be**	**141.95**	**332**	PKhKP	PKPpre	11 55 38.8	
	0.6nm,0.3s,baz=21,slow=4.1,SNR=4.8						
BRTR	**Keskin Array B**	**146.18**	**314**	PKPbc	**PKiKP**	**11 55 52.8**	**-1.9**
	1.1nm,0.6s,baz=144,slow=5.0,SNR=5.3						
GERES	**GERESS Array B**	**148.91**	**346**	PKPbc	**PKiKP**	**11 55 59.6**	**-0.4**
	1.0nm,0.5s,baz=8.5,slow=2.0,SNR=8.3						

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*LDG **23** 11:43:35.5±0.1, 42.°99N×0.°22W, h10^{km}, Md2.6/2, Ml2.7/16, Error ellipse: s-maj=1.5km s-min=1.4km az=36.0*
*MRB **23** 11:43:35.6±0.3, 42.°97N×0.°23W, h8^{km}±3^{km}, ML2.1/22, Error ellipse: s-maj=1.2km s-min=0.7km az=338.0*
*MDD **23** 11:43:36.6±0.3, 43.°00N×0.°25W, h12^{km}, mb_Lg2.5/10, Error ellipse: s-maj=2.2km s-min=1.6km az=7.0*
*STR **23** 11:43:36.2±0.5, 43.°N±4.°×.°±.°, h5^{km}, MLv2.2/13, Error ellipse: s-maj=0.0km s-min=0.0km az=6.6, preliminary*

ISC 23 11:43:34.9±0.8, **43.°04N**±0.°02×**0.°22W**±0.°01, **h17**^{km}±5^{km}, **n76, σ1^{s}06**/145, **3C, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYLO	**Lourdes**	**0.14**	**64**	P	**Pg**	**11 43 39.3**	**+0.3**
PYLO				S	**Sg**	**11 43 42.3**	**+0.6**
PYLO	**Lourdes**	**0.14**	**64**	⇑Pg	**Pg**	**11 43 39.2**	**+0.2**
PYLO				Sg	**Sg**	**11 43 41.6**	**-0.1**
VIEF	**Viey**	**0.24**	**130**	⇑Pg	**Pb**	**11 43 40.5**	**-0.3**
VIEF				Sg	**Sb**	**11 43 43.6**	**-1.1**
ETSF	**Etsaut**	**0.28**	**241**	*e*Pg	**Pg**	**11 43 40.9**	**-0.3**
ETSF				*e*Sg	**Sg**	**11 43 44.1**	**-1.3**
	169nm,0.2s						
ETSF	**Etsaut**	**0.28**	**241**	Pg	**Pg**	**11 43 40.9**	**-0.3**
ETSF				Sg	**Sg**	**11 43 44.1**	**-1.3**
CANF	**Canfranc**	**0.35**	**219**	⇑Pg	**Pg**	**11 43 42.1**	**-0.2**
CANF				Sg	**Sg**	**11 43 46.5**	**-0.8**
ATE	**Arette**	**0.35**	**278**	P	**Pg**	**11 43 42.5**	**+0.1**
ATE				S	**Sg**	**11 43 47.6**	**+0.2**
	44nm,0.1s						
ATE	**Arette**	**0.35**	**278**	Pg	**Pg**	**11 43 42.3**	**0.0**
ATE				Sg	**Sg**	**11 43 46.7**	**-0.7**
EPF	**Esparros**	**0.41**	**91**	*e*Pg	**Pg**	**11 43 43.9**	**+0.5**
EPF				*e*Sg	**Sg**	**11 43 49.8**	**+0.7**
	50nm,0.1s						
EPF	**Esparros**	**0.41**	**91**	Pg	**Pg**	**11 43 43.9**	**+0.5**
ECHI	**Chisagues Biel**	**0.48**	**140**	Pg	**Pg**	**11 43 44.8**	**+0.2**
ECHI				Sg	**Sg**	**11 43 50.8**	**-0.4**
ECHI	**Chisagues Biel**	**0.48**	**140**	S	**Sg**	**11 43 50.0**	**-1.2**
	118nm,0.1s						
ECHI	**Chisagues Biel**	**0.48**	**140**	Pg	**Pg**	**11 43 44.8**	**+0.2**
ECHI				Sg	**Sg**	**11 43 50.9**	**-0.3**
SJPF	**Ste Jean**	**0.74**	**276**	*e*Pg	**Pb**	**11 43 49.4**	**+0.1**
SJPF				*e*Sg	**Sb**	**11 43 58.7**	**-0.4**
	15nm,0.2s						
SJPF	**Ste Jean**	**0.74**	**276**	Pg	**Pb**	**11 43 49.4**	**+0.1**
OSSF	**Osses**	**0.79**	**286**	Pg	**Pg**	**11 43 50.8**	**+0.4**
EORO	**Oroz-Betelu**	**0.81**	**260**	Pg	**Pb**	**11 43 50.7**	**+0.1**
EORO				Sg	**Sg**	**11 44 02.1**	**+0.6**
EORO				*i* Vmb_Lg		11 44 07.1	
EORO	**Oroz-Betelu**	**0.81**	**260**	Pg	**Pb**	**11 43 50.7**	**+0.1**
EORO				Sg	**Sg**	**11 44 02.1**	**+0.6**
CARA	**Val d’Aran**	**0.83**	**113**	P	**Pb**	**11 43 50.8**	**-0.1**
CARA				S	**Sb**	**11 44 02.0**	**+0.1**
	48nm,0.2s						
TERF	**Tercis-les-Bai**	**0.91**	**315**	Pg	**Pn**	**11 43 54.4**	**+1.5**
TERF				Sg	**Sn**	**11 44 08.9**	**+3.2**
EALK	**Alkurruntz**	**0.96**	**281**	Pg	**Pg**	**11 43 53.8**	**+0.3**
EALK				Sg	**Sg**	**11 44 06.5**	**+0.3**
EALK				*i* Vmb_Lg		11 44 09.9	
EALK	**Alkurruntz**	**0.96**	**281**	Pg	**Pg**	**11 43 53.8**	**+0.3**
EALK				Sg	**Sg**	**11 44 06.5**	**+0.3**
EALK	**Alkurruntz**	**0.96**	**281**	Pg	**Pg**	**11 43 53.8**	**+0.3**
MLS	**Moulis**	**0.97**	**94**	P	**Pb**	**11 43 53.4**	**+0.2**
MLS				S	**Sg**	**11 44 06.9**	**+0.5**
	5.5nm,0.2s						
MLS	**Moulis**	**0.97**	**94**	Pg	**Pg**	**11 43 54.5**	**+0.8**
CTRE	**Tremp**	**1.02**	**134**	P	**Pb**	**11 43 53.7**	**-0.5**
CTRE				S	**Sb**	**11 44 07.0**	**-0.3**
	14nm,0.3s						
SALF	**Salau**	**1.07**	**104**	Pg	**Pg**	**11 43 56.4**	**+0.7**
SALF				Sg	**Sg**	**11 44 11.5**	**+1.7**
CEST	**Esterri de Car**	**1.17**	**111**	P	**Pn**	**11 43 56.5**	**-0.1**
CEST				S	**Sn**	**11 44 12.4**	**+0.2**
	12nm,0.1s						
CSOR	**Sort**	**1.20**	**123**	P	**Pn**	**11 43 56.8**	**-0.1**
CSOR				S	**Sn**	**11 44 12.8**	**-0.1**
	36nm,0.2s						
ESAC	**San Caprasio**	**1.33**	**188**	Pg	**Pg**	**11 44 01.2**	**+0.7**
ESAC				Sg	**Sg**	**11 44 17.4**	**-0.4**
CAVN	**Les Avellanes**	**1.36**	**148**	P	**Pn**	**11 43 59.1**	**0.0**
CAVN				S	**Sb**	**11 44 17.0**	**0.0**
	68nm,0.3s						
CORG	**Organya**	**1.39**	**125**	P	**Pn**	**11 44 00.0**	**+0.5**
CORG				S	**Sb**	**11 44 18.5**	**+0.5**
	6.8nm,0.1s						
PAND	**Andorre**	**1.40**	**111**	P	**Pb**	**11 44 00.4**	**-0.2**
PAND				S	**Sg**	**11 44 19.6**	**-0.5**
	25nm,0.2s						
PAND	**Andorre**	**1.40**	**111**	Pn	**Pg**	**11 44 03.2**	**+1.3**
PAND				Sn	**Sg**	**11 44 21.8**	**+1.7**
ARBS	**La Rabassa**	**1.43**	**114**	P	**Pb**	**11 44 01.4**	**+0.2**
ARBS				S	**Sg**	**11 44 20.5**	**-0.7**
	40nm,0.2s						
MONQ	**Montcuq**	**1.68**	**37**	Pn	**Pn**	**11 44 03.9**	**+0.5**
MONQ				Pg	**Pg**	**11 44 08.2**	**+1.0**
MONQ				Sn	**Sg**	**11 44 30.9**	**+1.8**
CLLI	**Llivia**	**1.71**	**108**	P	**Pb**	**11 44 05.6**	**-0.3**
CLLI				S	**Sb**	**11 44 27.4**	**+0.2**
	9.7nm,0.3s						
EMIR	**Miracle**	**1.71**	**130**	Pg	**Pg**	**11 44 07.7**	**-0.1**
EMIR				Sg	**Sg**	**11 44 29.7**	**-0.3**
EMIR				*i* Vmb_Lg		11 44 33.4	
EMIR	**Miracle**	**1.71**	**130**	P	**Pn**	**11 44 04.9**	**+0.9**
EMIR				S	**Sb**	**11 44 26.9**	**-0.2**
	31nm,0.3s						
CARF	**Carcanieres**	**1.74**	**100**	Pg	**Pg**	**11 44 08.9**	**+0.6**
CARF				Sn	**Sg**	**11 44 32.4**	**+1.4**
MTLF	**Montolieu**	**1.81**	**79**	*e*Pn	**Pn**	**11 44 06.5**	**+1.3**
MTLF	**Montolieu**	**1.81**	**79**	*e*Pg	**Pg**	**11 44 09.9**	**+0.2**
MTLF				*e*Sg	**Sg**	**11 44 33.5**	**+0.3**
	10nm,0.2s						
MTLF	**Montolieu**	**1.81**	**79**	Pn	**Pn**	**11 44 05.0**	**-0.2**
MTLF				Pg	**Pg**	**11 44 10.4**	**+0.7**
MTLF				Sn	**Sg**	**11 44 34.4**	**+1.3**
CBRU	**Bruguera**	**1.92**	**112**	P	**Pb**	**11 44 08.4**	**-1.2**
CBRU				S	**Sb**	**11 44 32.7**	**-0.7**
	14nm,0.5s						
EPOB	**Poblet**	**1.94**	**150**	Pg	**Pg**	**11 44 11.3**	**-0.8**
EPOB				Sg	**Sg**	**11 44 37.1**	**-0.3**
EPOB				*i* Vmb_Lg		11 44 39.4	
EPOB	**Poblet**	**1.94**	**150**	P	**Pn**	**11 44 07.8**	**+0.7**
EPOB				S	**Sn**	**11 44 31.8**	**+0.7**
	13nm,0.5s						
CORI	**Orista**	**1.99**	**122**	P	**Pn**	**11 44 08.9**	**+1.2**
CORI				S	**Sb**	**11 44 34.1**	**-0.9**
	20nm,0.4s						
LFF	**La Frestale**	**2.02**	**20**	*e*Pn	**Pn**	**11 44 09.3**	**+1.1**
LFF	**La Frestale**	**2.02**	**20**	*e*Pg	**Pg**	**11 44 13.8**	**0.0**
LFF				*e*Sn	**Sn**	**11 44 34.1**	**+1.0**
LFF				*e*Sg	**Sg**	**11 44 40.1**	**0.0**
	16nm,0.2s						
FILF	**Fillols**	**2.10**	**102**	P	**Pn**	**11 44 09.5**	**+0.2**
FILF				S	**Sn**	**11 44 35.0**	**-0.1**
FILF	**Fillols**	**2.10**	**102**	Pg	**Pb**	**11 44 13.9**	**+1.3**
FILF				Sg	**Sg**	**11 44 41.6**	**-0.9**
ERTA	**Horta de San J**	**2.12**	**169**	Pg	**Pg**	**11 44 14.3**	**-1.3**
ERTA				Sg	**Sg**	**11 44 42.3**	**-0.7**
ERTA				*i* Vmb_Lg		11 44 46.2	
ERTA	**Horta de San J**	**2.12**	**169**	P	**Pn**	**11 44 10.0**	**+0.5**
ERTA				S	**Sn**	**11 44 36.1**	**+0.7**
	11nm,0.5s						
CBEU	**Beuda**	**2.28**	**109**	P	**Pn**	**11 44 13.3**	**+1.6**
CBEU				S	**Sb**	**11 44 41.5**	**-1.8**
	14nm,0.3s						
CMAS	**Mas de Barbera**	**2.34**	**170**	P	**Pn**	**11 44 13.4**	**+0.8**
CMAS				S	**Sn**	**11 44 41.3**	**+0.3**
	10nm,0.3s						
CFON	**Fontmartina**	**2.34**	**122**	P	**Pn**	**11 44 13.7**	**+1.1**
CFON				S	**Sn**	**11 44 42.2**	**+1.1**
SJAF	**Saint Jean de**	**2.35**	**103**	P	**Pn**	**11 44 14.3**	**+1.6**
SJAF				S	**Sb**	**11 44 43.6**	**-1.9**
	0.7nm,0.1s						
CGAR	**Garraf**	**2.36**	**137**	S	**Sn**	**11 44 42.2**	**+0.9**
CAF	**Calviac**	**2.51**	**40**	*e*Pn	**Pn**	**11 44 16.1**	**+1.2**
CAF	**Calviac**	**2.51**	**40**	*e*Pg	**Pg**	**11 44 22.8**	**-0.2**
CAF				*e*Sg	**Sg**	**11 44 55.4**	**-0.1**
	9.6nm,0.2s						
ALCN	**Alcanar**	**2.54**	**168**	S	**Sn**	**11 44 46.0**	**+0.3**
CCAS	**Cassa de la Se**	**2.58**	**115**	P	**Pn**	**11 44 16.9**	**+1.1**
CCAS				S	**Sn**	**11 44 48.8**	**+2.0**
	2.2nm,0.2s						
RJF	**Les Rejaudoux**	**2.59**	**28**	*e*Pg	**Pg**	**11 44 24.2**	**-0.3**
RJF				*e*Sg	**Sg**	**11 44 57.9**	**-0.2**
	7.8nm,0.1s						
CPAL	**Palau Saverder**	**2.60**	**105**	P	**Pn**	**11 44 17.7**	**+1.6**
CPAL				S	**Sn**	**11 44 49.3**	**+2.1**
ETOR	**Torete**	**2.60**	**212**	Pb	**Pb**	**11 44 19.0**	**-2.1**
ETOR				Sn	**Sn**	**11 44 48.5**	**+1.0**
ETOR				Sg	**Sb**	**11 44 55.0**	**+2.2**
ETOR				*i* Vmb_Lg		11 45 00.8	
EMOS	**Mosqueruela**	**2.68**	**184**	Pg	**Pb**	**11 44 24.0**	**+1.5**
EMOS				Sn	**Sn**	**11 44 48.6**	**-0.8**
EMOS				Sg	**Sg**	**11 44 58.0**	**-2.9**
EMOS				*i* Vmb_Lg		11 45 06.5	
EMOS	**Mosqueruela**	**2.68**	**184**	P	**Pn**	**11 44 18.0**	**+0.6**
EMOS				S	**Sn**	**11 44 49.6**	**+0.2**
	1.3nm,0.2s						
LASF	**Ste Croix**	**3.14**	**69**	*e*Pn	**Pn**	**11 44 24.7**	**+1.1**
LASF				*e*Sg	**Sg**	**11 45 15.0**	**-0.8**
	1.9nm,0.2s						
MFF	**Saint Martin d**	**3.57**	**1**	*e*Pg	**Pg**	**11 44 42.0**	**-1.2**
MFF				*e*Sg	**Sg**	**11 45 28.1**	**-1.3**
	1.5nm,0.2s						
TCF	**Toulx Ste Croi**	**3.69**	**27**	*e*Pg	**Pg**	**11 44 44.5**	**-1.0**
TCF				*e*Sn	**Sn**	**11 45 13.8**	**-0.3**
TCF				*e*Sg	**Sg**	**11 45 32.0**	**-1.2**
	5.0nm,0.2s						
VIVF	**Saint-Julien-l**	**3.97**	**61**	*e*P	**Pb**	**11 44 40.8**	**-3.7**
VIVF				*e*Sg	**Sg**	**11 45 41.1**	**-1.4**
	1.3nm,0.2s						
BGF	**Bois d'Agland**	**4.14**	**31**	*e*Sg	**Sg**	**11 45 46.3**	**-1.5**
	4.8nm,0.3s						
AVF	**Avril sur Loir**	**4.53**	**33**	*e*Pg	**Pg**	**11 44 59.8**	**-1.8**
AVF				*e*Sg	**Sg**	**11 45 58.4**	**-1.9**
	1.1nm,0.2s						
SMF	**Signal de Mont**	**4.62**	**37**	*e*Pn	**Pn**	**11 44 44.9**	**+1.0**
SMF				*e*Sg	**Sg**	**11 46 01.3**	**-1.9**
	1.0nm,0.2s						
SSF	**Saint Saulge**	**4.81**	**32**	*e*Pn	**Pn**	**11 44 47.4**	**+0.9**
SSF				*e*Sg	**Sg**	**11 46 07.3**	**-2.0**
	1.6nm,0.3s						
LOR	**Lormes**	**5.12**	**33**	*e*Sg	**Sg**	**11 46 16.9**	**-2.3**
	1.5nm,0.3s						

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*IDC **23** 11:46:22.2±0.8, 37.°42N×72.°15E, h0^{km}, mb3.9/16, mbtmp3.9/24, ML3.4/8, MS3.3/29, Error ellipse: s-maj=15.7km s-min=14.6km az=169.0*
*NNC **23** 11:46:22.1±2.1, 37.°41N×71.°69E, h0^{km}, mb4.5, mpv4.3, Error ellipse: s-maj=19.4km s-min=11.8km az=31.0*

ISC 23 11:46:23.4±0.5, **37.°39N**±0.°04×**72.°00E**±0.°06, **h10**^{km}**, n71, σ2^{s}10**/65, **mb3.9**/19, **MS3.3**/24, **10C-8D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.56**	**181**	P	**Pg**	**11 47 30.9**	**-0.7**
CEP				S	**Sb**	**11 48 12.0**	**+2.2**
CHCP	**Chirah Chowk**	**3.86**	**164**	P	**Pb**	**11 47 32.0**	**+0.4**
THW	**Thamme Wali**	**4.59**	**183**	P	**Pb**	**11 47 41.9**	**-2.1**
AML	**Almayashu**	**4.92**	**15**	P	**Pn**	**11 47 39.3**	**+1.6**
	SNR=60						
UCH	**Uchtor**	**5.21**	**21**	P	**Pn**	**11 47 43.5**	**+1.7**
	SNR=18						
EKS2	**Erkin-Say**	**5.44**	**14**	P	**Pn**	**11 47 46.9**	**+2.3**
	SNR=8.4						
AAK	**Ala-Archa**	**5.58**	**19**	P	**Pn**	**11 47 48.8**	**+2.1**
	SNR=12						
AAK	**Ala-Archa**	**5.58**	**19**	Pn	**Pn**	**11 47 48.7**	**+2.1**
	1.4nm,0.3s,baz=187,slow=9.5,SNR=14						
AAK				Sn	**Sn**	**11 48 50.1**	**-0.8**
	baz=216,slow=18						
	4.4nm,0.3s						
KBK	**Karagaybulak**	**5.73**	**22**	P	**Pb**	**11 48 05.7**	**+2.1**
	SNR=8.3						
KK31	**Karatay Array**	**5.82**	**349**	⇑Pn	**Pn**	**11 47 50.5**	**+0.7**
	6.8nm,0.5s,baz=171,slow=12,SNR=128						
KK31				⇑Pg	**Pb**	**11 48 05.6**	**+0.6**
	17nm,0.5s,baz=176,slow=13,SNR=5.1						
KK31				⇓Sn	**Sn**	**11 48 56.8**	**+0.2**
	57nm,0.7s,baz=182,slow=19,SNR=6.3						
KK31				⇑Lg	Lg	11 49 25.6	
	59nm,0.7s,baz=166,slow=29,SNR=3.8						
ULHL	**Ulahol**	**5.85**	**33**	P	**Pn**	**11 47 52.7**	**+2.3**
	SNR=15						
TKM2	**Tokmak 2**	**6.18**	**25**	P	**Pn**	**11 47 56.5**	**+1.6**
	SNR=26						
USP	**Ospenovka**	**6.18**	**17**	P	**Pn**	**11 47 56.1**	**+1.4**
	SNR=5.8						
MDOK	**Medeo**	**6.94**	**32**	Pn	**Pn**	**11 48 07.6**	**+2.3**
	15nm,1.0s						
MDOK				⇑Pg	Pg	11 48 31.5	-4.8
	35nm,1.0s						
MDOK				⇑Lg	Lg	11 50 04.5	
	74nm,1.2s						
PDGK	**Podgornoye**	**8.24**	**42**	⇓Pn	**Pn**	**11 48 24.6**	**+1.5**
	32nm,1.4s						
PDGK				⇓Lg	Lg	11 50 48.2	
	52nm,1.3s						
OTUK	**Ortayu**	**10.85**	**1**	Pn	**Pn**	**11 49 00.9**	**+2.1**
OTUK				Lg	Lg	11 52 05.6	
GEYT	**Alibeck**	**11.02**	**277**	Pn	**Pn**	**11 49 01.3**	**+0.2**
	2.0nm,0.3s,baz=94,slow=11,SNR=5.2						
GEYT				Sn	**Sn**	**11 51 00.1**	**-4.3**
	1.8nm,0.3s,baz=99,slow=19,SNR=5.4						
GEYT				LR	LR	11 54 08.2	
	comp=Z,150nm,21.9s,baz=118,slow=42						
	3.0nm,0.3s						
MAKZ	**Makanchi**	**11.97**	**35**	⇑Pn	**Pn**	**11 49 14.9**	**+0.9**
	8.8nm,1.1s						
MK31	**Makanchi Array**	**12.11**	**36**	⇓Pn	**Pn**	**11 49 16.5**	**+0.6**
	4.0nm,0.8s,baz=224,slow=13,SNR=31						
MKAR	**Makanchi Array**	**12.11**	**36**	Pn	**Pn**	**11 49 16.4**	**+0.4**
	0.1nm,0.3s,baz=227,slow=18,SNR=31						
MKAR				Lg	Lg	11 52 36.8	
	0.1nm,0.3s,baz=228,slow=20,SNR=2.0						
MKAR				LR	LR	11 54 34.8	
	comp=Z,88nm,20.6s,baz=196,slow=41						
	2.7nm,0.8s						
PYUN	**Piuthan**	**13.08**	**132**	*e*P	**Pn**	**11 49 28.8**	**-0.7**
DANN	**Dangsing**	**13.37**	**129**	*e*P	**Pn**	**11 49 32.0**	**-1.5**
	24nm,0.3s						
KOLN	**Koldanda**	**13.69**	**131**	*e*P	**Pn**	**11 49 37.1**	**-0.7**
KURBB	**Kurchatov Arra**	**14.03**	**17**	Pn	**Pn**	**11 49 39.9**	**-2.3**
	baz=218,slow=12,SNR=9.5						
KURBB				Lg	Lg	11 53 40.0	
	baz=212,slow=29						
	1.3nm,1.0s						
GKN	**Gorkha**	**14.16**	**128**	*e*P	**Pn**	**11 49 42.3**	**-1.9**
	26nm,0.3s						
AB31	**Akbulak array**	**14.73**	**327**	⇓Pn	**Pn**	**11 49 48.4**	**-3.3**
	0.8nm,0.3s,baz=163,slow=9.3,SNR=39						
AB31				⇓Sn	**Sn**	**11 52 31.2**	**-3.7**
	9.7nm,0.6s,baz=137,slow=24,SNR=11						
PKIN	**Phulchoki**	**14.94**	**127**	*e*P	**Pn**	**11 49 51.7**	**-3.2**
	20nm,0.6s						
PKI	**Pulchoki**	**14.95**	**127**	*e*P	**Pn**	**11 49 52.3**	**-2.8**
GUN	**Gumba**	**15.02**	**125**	*e*P	**Pn**	**11 49 52.7**	**-3.4**
	32nm,0.8s						
JIRN	**Jiri**	**15.39**	**125**	*e*P	**Pn**	**11 49 57.3**	**-3.7**
	19nm,0.3s						
BVA0	**Borovoye Array**	**15.68**	**356**	⇑Pn	**Pn**	**11 50 01.1**	**-3.1**
	6.3nm,1.0s,baz=162,slow=9.3,SNR=7.7						
BVA0				⇓Lg	Lg	11 54 37.0	
	14nm,1.2s						
BVAR	**Borovoye Array**	**15.68**	**356**	Pn	**Pn**	**11 50 01.1**	**-3.1**
	baz=165,slow=12,SNR=11						
BVAR				Lg	Lg	11 54 38.5	
	baz=160,slow=28,SNR=1.7						
BVAR				LR	LR	11 56 18.6	
	comp=Z,71nm,21.8s,baz=178,slow=38						
	2.2nm,0.8s						
BRVK	**Borovoye**	**15.72**	**356**	⇑Pn	**Pn**	**11 50 01.8**	**-3.0**
	7.8nm,0.9s						
BRVK				⇓Lg	Lg	11 54 40.8	
	11nm,1.1s						
RAMN	**Ramite**	**16.14**	**126**	*e*P	**Pn**	**11 50 06.7**	**-3.9**
	17nm,0.5s						
AKTO	**Aktyubinsk**	**16.44**	**327**	Pn	**Pn**	**11 50 13.1**	**-1.0**
	0.7nm,0.3s,baz=132,slow=13,SNR=7.0						
AKTO				Sn	Sn	11 53 03.2	-13
	0.1nm,0.3s,baz=186,slow=15,SNR=4.5						
AKTO				Lg	Lg	11 55 06.3	
	0.1nm,0.3s,baz=28,slow=13,SNR=2.1						
AKTO				LR	LR	11 57 47.0	
	comp=Z,37nm,18.1s,baz=150,slow=42						
	2.8nm,0.4s						
AKTO	**Aktyubinsk**	**16.44**	**327**	⇑Pn	**Pn**	**11 50 11.2**	**-2.9**
	12nm,0.8s						
AKTO				⇑Sn	**Sn**	**11 53 16.3**	**-0.2**
	15nm,1.0s						
WSAR	**Wadi Sarin**	**18.19**	**223**	Pn	**P**	**11 50 39.5**	**+3.2**
	0.1nm,0.3s,baz=80,slow=7.3,SNR=3.2						
	2.5nm,0.9s						
ZALV	**Zalesovo Beam**	**18.78**	**24**	Pn	**P**	**11 50 40.7**	**-1.9**
	0.5nm,0.3s,baz=220,slow=11,SNR=10						
ZALV				LR	LR	11 58 01.5	
	comp=Z,67nm,21.3s,baz=214,slow=37						
	2.8nm,0.6s						
ARU	**Arti**	**21.07**	**339**	P	**P**	**11 51 07.4**	**-0.1**
	2.1nm,0.5s,baz=156,slow=16,SNR=2.0						
ARU				LR	LR	11 59 28.9	
	comp=Z,129nm,19.8s,baz=142,slow=37						
	2.1nm,0.5s						
GNI	**Garni**	**21.40**	**286**	P	**P**	**11 51 14.5**	**+3.1**
	16nm,0.7s,baz=127,slow=5.1,SNR=6.0						
GNI				LR	LR	12 02 33.1	
	comp=Z,48nm,18.0s,baz=122,slow=45						
	16nm,0.7s						
BELG	**Belogornoye**	**22.72**	**319**	P	**P**	**11 51 25.9**	**+0.6**
	13nm,0.8s,baz=114,slow=20,SNR=3.9						
	13nm,0.8s						
KBZ	**Khabaz**	**22.93**	**295**	P	**P**	**11 51 31.4**	**+3.9**
	5.2nm,0.9s,baz=139,slow=5.7,SNR=7.9						
KBZ				LR	LR	12 02 07.8	
	comp=Z,59nm,18.5s,baz=88,slow=41						
KVAR	**Kislovodsk Arr**	**23.09**	**296**	P	**P**	**11 51 33.4**	**+4.0**
	2.8nm,0.6s,baz=270,slow=17,SNR=1.3						
SONM	**Songino Array**	**27.18**	**56**	P	**P**	**11 52 07.7**	**+0.6**
	0.3nm,0.4s,baz=262,slow=8.5,SNR=1.7						
SONM				LR	LR	12 02 56.8	
	comp=Z,93nm,19.2s,baz=260,slow=37						
	0.3nm,0.4s						
BRTR	**Keskin Array B**	**29.94**	**286**	P	**P**	**11 52 33.9**	**+2.1**
	0.4nm,0.6s,baz=57,slow=5.3,SNR=1.6						
BRTR				LR	LR	12 08 31.1	
	comp=Z,42nm,18.1s,baz=102,slow=44						
	0.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**30.20**	**121**	P	**P**	**11 52 33.6**	**-0.5**
	0.6nm,0.3s,baz=301,slow=9.4,SNR=2.0						
CMAR				LR	LR	12 06 54.6	
	comp=Z,20nm,18.0s,baz=310,slow=41						
	0.6nm,0.3s						
PALK	**Pallekele**	**31.00**	**163**	LR	LR	12 05 42.8	
	comp=Z,61nm,19.6s,baz=101,slow=37						
EIL	**Elat**	**31.67**	**267**	LR	LR	12 07 26.6	
	comp=Z,62nm,20.6s,baz=62,slow=40						
AKASG	**Malin Array Be**	**33.02**	**308**	P	**P**	**11 52 59.6**	**+0.9**
	0.2nm,0.3s,baz=76,slow=6.7,SNR=2.3						
AKASG				LR	LR	12 07 15.6	
	comp=Z,52nm,19.6s,baz=34,slow=38						
	0.2nm,0.3s						
NRIK	**Noril'sk**	**33.11**	**10**	P	**P**	**11 52 59.0**	**-0.1**
	3.0nm,0.7s,baz=216,slow=8.0,SNR=4.5						
	3.0nm,0.7s						
FINES	**FINESS Array B**	**37.20**	**325**	P	**P**	**11 53 34.4**	**-0.1**
	2.1nm,0.8s,baz=108,slow=8.2,SNR=5.9						
FINES				LR	LR	12 10 29.4	
	comp=Z,34nm,19.1s,baz=38,slow=39						
	2.1nm,0.8s						
ARCES	**ARCESS Array B**	**40.64**	**337**	P	**P**	**11 54 03.6**	**+0.5**
	0.7nm,0.4s,baz=108,slow=5.9,SNR=10						
ARCES				LR	LR	12 10 50.0	
	comp=Z,102nm,19.5s,baz=146,slow=36						
	0.7nm,0.4s						
VRAC	**Vranov**	**41.14**	**305**	LR	LR	12 14 46.7	
	comp=Z,45nm,20.7s,baz=9.5,slow=41						
YAK	**Yakutsk**	**42.78**	**36**	LR	LR	12 12 50.9	
	comp=Z,41nm,18.2s,baz=274,slow=37						
HFS	**Hagfors**	**42.87**	**321**	LR	LR	12 12 51.0	
	comp=Z,51nm,19.4s,baz=75,slow=37						
GERES	**GERESS Array B**	**43.08**	**305**	LR	LR	12 13 23.5	
	comp=Z,36nm,18.1s,baz=11,slow=38						
KLR	**Kul'dur**	**43.98**	**55**	LR	LR	12 12 25.2	
	comp=Z,25nm,18.3s,baz=272,slow=36						
NB2	**NORSAR Subarra**	**44.16**	**322**	P	**P**	**11 54 32.5**	**+0.5**
	comp=Z,6.9nm,1.0s,baz=92,slow=7.9						
NOA	**NORSAR Array B**	**44.16**	**322**	P	**P**	**11 54 32.4**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=112,slow=5.8,SNR=2.7						
NOA				LR	LR	12 13 28.3	
	comp=Z,35nm,18.3s,baz=355,slow=37						
	comp=Z,0.7nm,0.7s						
JNU	**Nakatsue**	**47.60**	**77**	LR	LR	12 16 01.5	
	comp=Z,46nm,18.5s,baz=321,slow=38						
EKA	**Eskdalemuir Ar**	**52.21**	**316**	LR	LR	12 22 22.6	
	comp=Z,79nm,18.8s,baz=182,slow=41						
ASAJ	**Asahikawa**	**52.41**	**59**	LR	LR	12 19 22.4	
	comp=Z,64nm,19.1s,baz=297,slow=38						
DAV	**Davao City (W)**	**57.10**	**108**	LR	LR	12 23 10.4	
	comp=Z,28nm,18.7s,baz=320,slow=39						
ESDC	**Sonseca Array**	**57.75**	**298**	P	**P**	**11 56 15.1**	**+0.4**
	comp=Z,1.8nm,0.9s,baz=51,slow=7.8,SNR=6.4						
	comp=Z,1.8nm,0.9s						
PETK	**Petropavlovsk-**	**58.78**	**45**	LR	LR	12 23 48.7	
	comp=Z,37nm,21.0s,baz=171,slow=38						
JCJ	**Chichijima**	**59.03**	**78**	LR	LR	12 24 18.1	

	comp=Z,19nm,18.1s,baz=112,slow=39						
TORD	Torodi Ar. Bea	66.53	269	P	P	11 57 13.5	-0.3
	comp=Z,4.5nm,0.4s,baz=34,slow=5.5,SNR=1.1						
INK	Inuvik	72.90	10	P	P	11 57 52.7	+0.5
	comp=Z,0.5nm,0.5s,baz=346,slow=5.1,SNR=2.3						
	comp=Z,0.5nm,0.5s						
ILAR	Eielson Array	73.71	16	P	P	11 57 56.5	-0.6
	comp=Z,0.5nm,0.9s,baz=324,slow=32,SNR=4.0						
ILAR				LR	LR	12 34 47.5	
	comp=Z,37nm,18.1s,baz=190,slow=40						
	comp=Z,0.5nm,0.9s						
YKA	Yellowknife Ar	80.32	3	P	P	11 58 35.0	+0.7
	comp=Z,0.4nm,0.6s,baz=348,slow=5.5,SNR=9.3						
	comp=Z,0.4nm,0.6s						
WRA	Warramunga Arr	81.79	123	P	P	11 58 42.5	-0.1
	comp=Z,0.8nm,0.8s,baz=318,slow=4.9,SNR=11						
	comp=Z,0.8nm,0.8s						

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*IDC **23** 11:52:16.4±1.0, 37°.14N×141°.41E, h0^{km}, mb3.5/8, mbtmp3.5/10, ML3.2/2, MS2.6/3, Error ellipse: s-maj=27.3km s-min=21.0km az=134.0*

*NIED **23** 11:52:18.3, 37°.23N×141°.37E, h24^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.43; $M_{\theta\theta}$0.62; $M_{\phi\phi}$1.81; $M_{r\theta}$0.41; $M_{\theta\phi}$1.27; $M_{\phi r}$0.87; Fault plane solution: $M_0$2.70000×10^{14} NP1: ϕ_s210.00000°, δ55.00000°, λ-93.00000°. NP2: ϕ_s36.00000°, δ35.00000°, λ-85.00000°.*

*JMA **23** 11:52:18.3±0.2, 37°.2N±0°.3×141°.4E±0°.9, h24^{km}±1^{km}, MV3.5/40, E OFF FUKUSHIMA PREF*

ISC 23 11:52:17.8±1.6**, 37°.20N**±0°.04×**141°.38E**±0°.06**, h10**^{km}±9^{km}**, n32,** σ**0^{s}.92**/30**, mb3.5**/8**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	0.43	293	P	Pg	11 52 26.6	+0.3
JFK				*e*S	Sg	11 52 33.0	+1.0
ONAJ	Iwakimizuishiy	0.47	258	P	Pb	11 52 27.7	-0.5
ONAJ				S	Sb	11 52 34.4	-0.9
JMST	Minamisoumatoc	0.65	324	P	Pg	11 52 30.2	-0.2
JMST				S	Sg	11 52 39.5	+0.6
JFFD	Fukushimafurud	0.66	261	P	Pb	11 52 30.9	-0.6
JMM	Marumori	0.81	325	*i* P	Pg	11 52 33.0	-0.4
JMM				S	Sg	11 52 44.0	0.0
JHO	Hitachi	0.87	228	P	Pg	11 52 34.4	-0.3
JHO				*e*S	Sg	11 52 45.5	-0.6
JOTO	OTAMA OYAMA	0.90	294	P	Pg	11 52 35.2	0.0
JOTO				*e*S	Sg	11 52 47.1	+0.2
JSB	Shiboa	1.19	259	P	Pg	11 52 40.8	+0.2
JSB				S	Sn	11 52 57.2	+0.4
JIO	Ouri	1.25	359	P	Pn	11 52 39.8	-1.5
JOU	Okura	1.29	334	*i* P	Pn	11 52 41.7	-0.3
JOU				S	Sn	11 52 59.0	-0.4
MJAR	Matsushiro Arr	2.62	256	Pn	Pn	11 53 01.9	+1.6
	0.8nm,0.3s,baz=101,slow=7.8,SNR=20						
MJAR				Sn	Sn	11 53 29.2	-3.0
	0.5nm,0.3s,baz=75,slow=33,SNR=2.5						
	7.2nm,0.5s						
ASAJ	Asahikawa	6.97	7	Pn	Pn	11 53 59.6	-0.4
	0.9nm,0.3s,baz=211,slow=10,SNR=11						
ASAJ				Sn	Sn	11 55 19.2	-0.1
	0.1nm,0.3s,baz=63,slow=33,SNR=1.1						
	2.5nm,0.4s						
USRK	Ussuriysk Ar.	9.98	317	LR	LR	11 58 29.9	
	comp=Z,47nm,18.4s,baz=99,slow=37						
KSRS	Korea Array	10.72	275	LR	LR	11 58 26.8	
	comp=Z,28nm,21.0s,baz=115,slow=34						
KLR	Kul'dur	13.90	333	LR	LR	12 01 21.8	
	comp=Z,17nm,20.1s,baz=20,slow=39						
SONM	Songino Array	27.67	304	P	P	11 58 06.8	+0.9
	0.5nm,0.5s,baz=116,slow=6.6,SNR=2.8						
	0.5nm,0.5s						
H11N2	WAKE ISLAND Hy	28.26	121	T	T	12 27 45.2	
	baz=314,slow=75,SNR=47						
H11N1	WAKE ISLAND Hy	28.27	121	T	T	12 27 45.8	
	baz=314,slow=75,SNR=60						
H11N3	WAKE ISLAND Hy	28.28	121	T	T	12 27 46.5	
	baz=314,slow=75,SNR=65						
H11S1	WAKE ISLAND Hy	28.98	123	T	T	12 28 37.2	
	baz=316,slow=76,SNR=26						
H11S3	WAKE ISLAND Hy	28.98	123	T	T	12 28 34.6	
	baz=316,slow=76,SNR=35						
H11S2	WAKE ISLAND Hy	28.99	123	T	T	12 28 37.8	
	baz=316,slow=76,SNR=18						
ZALV	Zalesovo Beam	41.78	312	P	P	12 00 07.2	+0.1
	0.5nm,0.5s,baz=84,slow=5.9,SNR=2.2						
	0.5nm,0.5s						
MKAR	Makanchi Array	44.00	302	P	P	12 00 24.8	-0.5
	0.4nm,0.8s,baz=86,slow=9.5,SNR=3.7						
	0.4nm,0.8s						
ILAR	Eielson Array	49.37	32	P	P	12 01 07.6	+0.5
	0.6nm,0.8s,baz=266,slow=6.1,SNR=6.7						
	0.6nm,0.8s						
INK	Inuvik	54.25	27	P	P	12 01 44.0	+0.6
	0.4nm,0.5s,baz=296,slow=3.8,SNR=3.6						
	0.4nm,0.5s						
WRA	Warramunga Arr	57.22	188	P	P	12 02 04.5	-0.8
	0.4nm,0.7s,baz=4.6,slow=7.3,SNR=11						
	0.4nm,0.7s						
YKA	Yellowknife Ar	63.68	30	P	P	12 02 49.8	+0.9
	0.1nm,0.6s,baz=306,slow=7.4,SNR=2.8						
	0.1nm,0.6s						
TXAR	Lajitas Array	90.04	52	P	P	12 05 19.1	+0.9
	0.2nm,0.5s,baz=318,slow=3.6,SNR=2.7						
	0.2nm,0.5s						
H03N2	Juan Fernandez	147.07	96	T	T	14 56 19.4	
	baz=291,slow=76,SNR=6.9						
H03N3	Juan Fernandez	147.08	96	T	T	14 56 20.5	
	baz=291,slow=76,SNR=12						
H03N1	Juan Fernandez	147.09	96	T	T	14 56 20.6	
	baz=291,slow=76,SNR=9.7						

ROM 23 11:59:30.3±0.1**, 42°.816N**±0°.002×**13°.094E**±0°.004**, h8**^{km}**, ML0.7**/3**, 1D, Error ellipse: s-maj=0.3km s-min=0.1km az=105.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRCA	Norcia	0.02	40	P	Pg	11 59 32.0	+0.1
NRCA				S	Sg	11 59 33.1	0.0
NRCA				AML	AML		
	comp=N,802µm,0.1s						
NRCA				AML	AML		
	comp=E,755µm,0.2s						
T1212	Cascia, Frazio	0.07	210	P	Pg	11 59 32.8	+0.4
T1212				S	Sg	11 59 34.5	+0.7
T1245	Castelsantange	0.08	59	P	Pg	11 59 32.7	+0.1
T1245				AML	AML		
	comp=N,98µm,0.3s						
T1245				AML	AML		
	comp=E,88µm,0.9s						
T1245				AML	AML		
	comp=E,88µm,1.1s						
T1216	Preci, Frazion	0.09	324	P	Pg	11 59 33.2	+0.6
T1216				S	Sg	11 59 34.7	+0.4
T1214	Arquata del Tr	0.10	124	P	Pg	11 59 33.1	+0.3
T1214				S	Sg	11 59 35.1	+0.5
MC2	Monte Cornacci	0.12	36	P	Pg	11 59 33.4	+0.2
MC2				S	Sg	11 59 35.8	+0.6
T1218	Civita (PG)	0.15	174	P	Pg	11 59 33.9	+0.4
T1218				S	Sg	11 59 36.6	+0.9
T1217	Poggiodomo (PG	0.16	229	P	Pg	11 59 34.1	+0.4
T1217				S	Sg	11 59 36.9	+0.9
FDMO	Fiordimonte	0.22	359	⇓P	Pg	11 59 35.0	+0.2
FDMO				AML	AML		
	comp=N,25µm,0.3s						
FDMO				AML	AML		
	comp=E,32µm,1.0s						
FDMO				AML	AML		
	comp=N,25µm,0.3s						
FDMO				AML	AML		
	comp=E,32µm,1.0s						
T1219	Muccia, Frazio	0.25	345	P	Pg	11 59 35.4	+0.1
T1241	Roccafluvione,	0.25	81	P	Pg	11 59 35.0	-0.4
T1241				AML	AML		
	comp=E,39µm,1.6s						
T1241				AML	AML		
	comp=N,25µm,0.3s						
T1241				AML	AML		
	comp=N,25µm,0.3s						
T1241				AML	AML		
	comp=E,39µm,0.4s						
T1241				AML	AML		
	comp=N,25µm,1.7s						
RM33	Pellescritta (	0.32	164	P	Pg	11 59 37.0	+0.3
ARRO	Arrone	0.34	226	S	Sb	11 59 42.9	-1.2
TERO	Teramo	0.42	117	P	Pg	11 59 38.5	-0.1

ROM 23 12:00:16.0±0.1**, 43°.061N**±0°.004×**13°.102E**±0°.007**, h5**^{km}±1^{km}**, ML1.0**/3**, 3C-1D, Error ellipse: s-maj=0.6km s-min=0.3km az=70.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDMO	Fiordimonte	0.03	203	P	Pg	12 00 17.0	-0.1
FDMO				S	Sg	12 00 17.6	-0.2
T1220	Camerino, Fraz	0.05	349	⇑P	Pg	12 00 17.6	+0.3
T1220				S	Sg	12 00 19.0	+0.6
T1219	Muccia, Frazio	0.07	265	P	Pg	12 00 17.9	+0.3
T1219				S	Sg	12 00 19.4	+0.6
T1256	Bolognola (MC)	0.11	121	P	Pg	12 00 18.5	+0.3
T1256				S	Sg	12 00 20.5	+0.6
T1256				AML	AML		
	comp=E,112µm,1.4s						
T1256				AML	AML		
	comp=E,112µm,1.4s						
T1256				AML	AML		
	comp=N,126µm,0.3s						
T1256				AML	AML		
	comp=E,112µm,0.6s						
MC2	Monte Cornacci	0.16	156	P	Pg	12 00 20.1	+0.9
MC2				S	Sg	12 00 22.7	+1.2
GUMA	Gualdo di Mace	0.17	89	P	Pg	12 00 20.4	+1.0
T1216	Preci, Frazion	0.18	200	⇓P	Pg	12 00 20.0	+0.4
T1216				S	Sg	12 00 23.4	+1.4
T1216				AML	AML		
	comp=N,106µm,0.2s						
T1216				AML	AML		
	comp=E,128µm,0.3s						
T1216				AML	AML		
	comp=N,106µm,1.8s						
T1245	Castelsantange	0.21	163	P	Pg	12 00 20.5	+0.3
T1245				S	Sg	12 00 24.3	+1.3
T1245				AML	AML		
	comp=E,79µm,0.1s						
T1245				AML	AML		
	comp=N,76µm,0.1s						
T1245				AML	AML		
	comp=N,76µm,1.9s						
SNTG	Esanatoglia	0.23	329	⇑P	Pg	12 00 21.4	+1.0
EL6	Elcito	0.27	0	P	Pg	12 00 21.7	+0.5
EL6				S	Sg	12 00 26.0	+1.2
T1214	Arquata del Tr	0.31	165	⇑P	Pg	12 00 22.8	+0.8
T1241	Roccafluvione,	0.32	130	P	Pg	12 00 22.6	+0.5

IDC 23 12:07:40.6±4.2**, 6°.11S**×**154°.21E, h0**^{km}**, mb3.4**/4**, mbtmp3.4**/4**, Error ellipse: s-maj=140.5km s-min=34.1km az=111.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.71	233	P	P	12 12 54.7	+0.3
	0.3nm,0.6s,baz=55,slow=10,SNR=2.6						
	0.3nm,0.6s						
ASAR	Alice Springs	26.20	226	P	P	12 13 17.3	+0.1
	0.2nm,0.3s,baz=57,slow=9.1,SNR=4.1						
	0.2nm,0.3s						
SONM	Songino Array	68.17	327	P	P	12 18 42.6	-0.3
	0.3nm,0.5s,baz=133,slow=6.3,SNR=2.2						
	0.3nm,0.5s						
MKAR	Makanchi Array	82.23	319	P	P	12 20 04.9	+1.1
	0.4nm,0.9s,baz=90,slow=5.8,SNR=3.0						
	0.4nm,0.9s						
TORD	Torodi Ar. Bea	152.04	287	PKPbc	PKPbc	12 27 38.1	-0.9
	106nm,0.5s,baz=68,slow=3.3,SNR=5.3						

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*IDC **23** 12:10:13.6±1.7, 15°.00S×72°.01W, h92^{km}±18^{km}, mb3.3/3, mbtmp4.1/8, MS2.4/1, Error ellipse: s-maj=41.5km s-min=13.7km az=36.0*

*NEIC **23** 12:10:14.4±2.7, 15°.14S±0°.08×72°.13W±0°.09, h100^{km}±23^{km}, mb4.3/2, Mwr4.4(GUC), Error ellipse: s-maj=15.4km s-min=8.8km az=49.0*

*VAO **23** 12:10:16.3±0.3, 14°.99S×72°.00W, h109^{km}, mb4.4*

*GUC **23** 12:10:16.3±0.6, 15°.71S×72°.67W, h185^{km}±8^{km}, ML3.5*

ISC 23 12:10:14.8±0.6**, 15°.12S**±0°.05×**72°.15W**±0°.06**, h124**^{km}**, n86,** σ**2^{s}.07**/98**, mb3.9**/5**, 3C, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB18	Visviri	3.55	134		Pn	12 11 08.7	-0.3
PB18	Visviri	3.55	134	*e*P	Pn	12 11 12.9	+4.0
AP01	Chacalluta	3.67	152	*e*P	Pn	12 11 10.6	+0.6
AP01				*e*S	Sn	12 11 51.4	-1.3
PB12	IPOC Station P	3.88	154	Pn	Pn	12 11 12.8	-0.2
PB12	IPOC Station P	3.88	154	*i* P	Pn	12 11 12.5	-0.6
PB12				*e*S	Sn	12 11 55.8	-2.4
LPAZ	La Paz	4.04	107	P	Pn	12 11 17.6	+2.0
	24nm,0.3s,baz=304,slow=11,SNR=95						
LPAZ				S	Sn	12 12 03.2	+0.6
	17nm,0.7s,baz=321,slow=23,SNR=1.9						
LPAZ	La Paz	4.04	107	Pn	Pn	12 11 17.8	+2.3
LPAZ	La Paz	4.04	107	⇑*i*P	Pn	12 11 17.7	+2.1
PB16	IPOC Station P	4.08	142	Pn	Pn	12 11 17.6	+1.6
PB16	IPOC Station P	4.08	142	⇑*i*P	Pn	12 11 17.5	+1.6
PB16				*e*S	Sn	12 12 05.5	+2.1
MNMC	Minye Minye	4.67	149		Pn	12 11 23.8	0.0
MNMC	Minye Minye	4.67	149	⇑*i*P	Pn	12 11 23.4	-0.3
MNMC				*e*S	Sn	12 12 14.8	-2.5
PB11	IPOC Station P	5.19	153		Pn	12 11 28.5	-2.1
GO01	Chusmiza	5.33	148		Pn	12 11 33.0	+0.3
TA02	Huaiquique	5.47	160		Pn	12 11 33.0	-1.1
TA02					Sn	12 12 33.2	-2.7
NNA	Nana	5.53	304	P	Pn	12 11 35.4	+0.4
	58nm,0.4s,baz=135,slow=11,SNR=24						
NNA				S	Sn	12 12 36.8	-0.6
	40nm,0.5s,baz=203,slow=21,SNR=7.3						
NNA	Nana	5.53	304	Pn	Pn	12 11 34.9	-0.1
NNA					Sn	12 12 36.8	-0.6
TA01	Diego Aracena	5.73	161	Pn	Pn	12 11 37.3	-0.3
TA01					Sn	12 12 37.4	-4.8
PB08	IPOC Station P	5.75	151		Pn	12 11 38.1	-0.2
PB08					Sn	12 12 39.2	-4.2
PB01	IPOC Station P	6.41	157		Pn	12 11 45.7	-1.2
PB02	IPOC Station P	6.53	161		Pn	12 11 47.3	-1.2
PB07	IPOC Station P	6.91	162	Pn	Pn	12 11 52.6	-1.2
PB09	IPOC Station P	7.19	158		Pn	12 11 56.8	-0.7
PB03	IPOC Station P	7.25	162		Pn	12 11 56.7	-1.7
CZSB	Cruzeiro do Su	7.37	356		Pn	12 11 57.2	-2.6
ETMB	Extrema	7.84	48	Pn	Pn	12 12 04.9	-1.2
ETMB	Extrema	7.84	48	*e*P	Pn	12 12 04.6	-1.5
LVC	Limon Verde	8.05	158	P	Pn	12 12 08.6	-0.7
	8.7nm,0.4s,baz=343,slow=10,SNR=12						
LVC				S	Sn	12 13 32.8	-6.2
	9.1nm,0.5s,baz=218,slow=21,SNR=3.5						
LVC	Limon Verde	8.05	158	Pn	Pn	12 12 05.3	-4.1
LVC	Limon Verde	8.05	158	*e*P	Pn	12 12 11.6	+2.3
ATAH	Atahualpa	10.03	322	P	Pn	12 12 34.2	-1.8
	5.9nm,0.7s,baz=139,slow=12,SNR=3.4						
ATAH				S	Sn	12 14 21.9	-5.1
	4.1nm,0.7s,baz=59,slow=23,SNR=1.5						
SAML	Samuel	10.70	56	Pn	Pn	12 12 41.3	-3.4
SAML	Samuel	10.70	56	*e*P	Pn	12 12 41.4	-3.4
SIV	San Ignacio	10.71	96	P	Pn	12 12 43.2	-1.8
	6.4nm,0.8s,baz=273,slow=11,SNR=23						
SIV				S	Sn	12 14 34.8	-8.2
	2.6nm,0.8s,baz=294,slow=18,SNR=4.0						
SIV				LR	LR	12 17 00.8	
	comp=Z,20nm,20.4s,baz=278,slow=38						
TBTG	Tabatinga, AM	11.09	12	*e*P	Pn	12 12 47.2	-2.8
PTLB	Pontes e Lacer	12.56	93	*e*P	Pn	12 13 08.7	-0.6
MCRA	Macar, Loja	13.16	324		Pn	12 13 16.7	-0.5
MURT	Porto Murtinho	15.25	117	*e*P	Pn	12 13 42.7	-1.0
BDQN	Bodoquena, MS	15.59	112	*e*P	Pn	12 13 47.6	-0.3
TICA	Tres Isletas	15.70	137	*e*P	P	12 13 51.1	+0.6
SALV	Santo Antonio	15.88	95	*e*P	P	12 13 52.0	-0.7
MACA	Manacapuru-AM	16.40	45	*e*P	P	12 13 57.5	-0.9
AQDB	Aquidauana	16.54	111	*e*P	Pn	12 13 59.9	+0.3
PP1B	Ponte de Pedra	16.76	101	*e*P	P	12 14 02.3	-0.1
RVDE	Rio Verde (Bra	16.91	106	*e*P	P	12 14 04.4	+0.4
CPUP	Villa Florida	17.77	131	P	Pn	12 14 15.1	+0.6
	9.2nm,0.9s,baz=309,slow=11,SNR=15						
CPUP	Villa Florida	17.77	131		Pn	12 14 14.8	+0.3
CPUP				IAmb	IAmb	12 14 16.1	
	comp=Z,9.4nm,0.9s						
CPUP	Villa Florida	17.77	131	*e*P	Pn	12 14 15.4	+0.9
AMBA	Amambai (Brazi	17.97	118	*e*P	Pn	12 14 16.7	-0.2
NPGB	Novo Progresso	18.32	66	*e*P	Pn	12 14 19.8	-1.3
C2SB	Chapadao do Su	18.83	104	*e*P	P	12 14 25.9	+0.8
MECA	Mercedes	19.11	140	*e*P	Pn	12 14 30.5	+0.2
ITTB	Itaituba	19.37	58	*e*P	P	12 14 31.2	+0.2
MCR1	Marechal Candi	19.39	121	*e*P	Pn	12 14 32.9	-0.7
ARAG	Araguaiana, MT	19.62	94	*e*P	P	12 14 33.5	-0.2
AZCA	Azaras, Argent	19.77	133	*e*P	P	12 14 36.8	+1.5
ITQB	Itaqui	20.35	138	*e*P	P	12 14 43.1	+1.6
SNDB	Serra Nova Dou	20.52	84	*e*P	P	12 14 43.4	0.0
PCMB	Pacaembu	20.84	111	*e*P	P	12 14 46.9	+0.1
CRSM	Crissiumal (Br	20.85	129	*e*P	P	12 14 48.4	+1.6
FRBT	Francisco Belt	20.85	124	*e*P	P	12 14 48.1	+1.1
PTGB	Pitanga	21.14	120	*e*P	P	12 14 50.6	+0.5
ITRB	Iturama	21.28	105	*e*P	P	12 14 51.0	-0.6
RODS	Rosario do Sul	21.73	137	*e*P	P	12 14 58.2	+2.0
ITAB	Concordia	22.18	126	*e*P	P	12 15 00.7	-0.3
ALGR	Alto Alegre (B	22.31	131	*e*P	P	12 15 03.1	+0.7
FRTB	Fartura	22.82	114	*e*P	P	12 15 08.9	+1.5
CPSB	Cacapava Do Su	22.95	135	*e*P	P	12 15 10.4	+1.9
BDFB	Brasilia	23.28	94	P	P	12 15 11.4	-0.4
	comp=Z,2.5nm,0.4s,baz=265,slow=12,SNR=4.5						
	comp=Z,2.5nm,0.4s						
BDFB	Brasilia	23.28	94	*e*P	P	12 15 12.1	+0.3
PRPB	Parauapebas	23.66	70	*e*P	P	12 15 16.8	+1.6
PLTB	Pedras Altas	23.68	138	*e*P	P	12 15 16.4	+1.1
SDV	Santo Domingo	23.90	4	P	P	12 15 23.2	+5.7
	comp=Z,2.9nm,0.5s,baz=187,slow=17,SNR=9.0						
CNLB	Canela	24.19	129	*e*P	P	12 15 21.2	+1.3
BAUV	El Baul	24.25	10	P	P	12 15 22.4	+1.9
BAUV				IAmb	IAmb	12 15 27.8	
	comp=Z,27nm,1.0s						
MCPB	Macapa, AP	24.68	55	*e*P	P	12 15 25.3	+0.8
SMTB	Santa Maria do	24.80	78	*e*P	P	12 15 27.4	+1.8
PMNB	Patos De Minas	24.84	101	*e*P	P	12 15 27.6	+1.7
PLCA	Paso Flores	25.55	177	*e*P	P	12 15 36.6	+4.4
JANB	Januaria	26.87	94	*e*P	P	12 15 43.7	-0.6
ROSB	Rosrio	30.18	69	*e*P	P	12 16 14.0	+0.4
TXAR	Lajitas Array	53.66	325	P	P	12 19 26.4	+2.5
	comp=Z,0.1nm,0.6s,baz=134,slow=7.7,SNR=2.1						
	comp=Z,0.1nm,0.6s						
YKA	Yellowknife Ar	84.19	342	P	P	12 22 33.5	+1.6
	comp=Z,0.2nm,0.3s,baz=135,slow=4.9,SNR=7.9						
	comp=Z,0.2nm,0.3s						
ASAR	Alice Springs	133.79	214	PKP	PKiKP	12 29 20.1	+0.8
	comp=Z,0.3nm,0.8s,baz=150,slow=2.0,SNR=1.9						
WRA	Warramunga Arr	136.49	218	PKP	PKiKP	12 29 25.4	+0.6
	comp=Z,0.2nm,0.4s,baz=136,slow=1.6,SNR=9.0						
SONM	Songino Array	147.36	2	PKPbc	PKiKP	12 29 46.8	+0.5
	comp=Z,0.6nm,0.8s,baz=349,slow=4.4,SNR=2.5						

ROM 23 12:19:12.5±0.1**, 43°.045N**±0°.002×**13°.059E**±0°.004**, h10**^{km}**, ML1.0**/5**, 4C, Error ellipse: s-maj=0.3km s-min=0.2km az=100.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDMO	Fiordimonte	0.02	112	P	Pg	12 19 14.4	+0.1
FDMO				S	Sg	12 19 15.5	0.0
FDMO				AML	AML		
	comp=N,408µm,0.5s						
FDMO				AML	AML		
	comp=N,409µm,0.5s						
FDMO				AML	AML		
	comp=E,484µm,0.1s						
T1220	Camerino, Fraz	0.07	19	P	Pg	12 19 15.1	+0.4
T1220				S	Sg	12 19 16.8	+0.5
T1220				AML	AML		
	comp=E,776µm,0.2s						
T1220				AML	AML		
	comp=N,670µm,0.2s						
T1220				AML	AML		
	comp=E,775µm,0.2s						
T1220				AML	AML		
	comp=N,670µm,0.2s						
CESI	CESI - Serrava	0.12	251	P	Pg	12 19 16.0	+0.6
CESI				S	Sg	12 19 18.3	+0.8
CESI				AML	AML		
	comp=E,70µm,0.8s						
CESI				AML	AML		
	comp=N,72µm,0.1s						
CESI				AML	AML		
	comp=E,70µm,0.8s						
CESI				AML	AML		
	comp=N,72µm,0.1s						
CESI				AML	AML		
	comp=E,70µm,1.2s						
T1256	Bolognola (MC)	0.13	107	⇑P	Pg	12 19 16.1	+0.5
T1256				S	Sg	12 19 18.7	+0.9
T1256				AML	AML		
	comp=E,126µm,0.4s						
T1256				AML	AML		
	comp=N,154µm,1.5s						
T1256				AML	AML		
	comp=E,126µm,0.4s						
T1256				AML	AML		
	comp=N,154µm,1.5s						
T1256				AML	AML		
	comp=N,154µm,0.5s						
T1256				AML	AML		
	comp=E,126µm,1.6s						
T1216	Preci, Frazion	0.16	191	P	Pg	12 19 16.4	+0.5
T1216				S	Sg	12 19 19.2	+0.9
T1245	Castelsantange	0.21	153	⇑P	Pg	12 19 17.6	+0.7
T1245				S	Sg	12 19 21.4	+1.5
NRCA	Norcia	0.21	169	P	Pg	12 19 17.6	+0.6
NRCA				S	Sg	12 19 21.4	+1.5
SNTG	Esanatoglia	0.23	338	P	Pg	12 19 17.9	+0.8
SNTG				S	Sg	12 19 21.8	+1.4
EL6	Elcito	0.29	6	P	Pg	12 19 18.8	+0.5
EL6				S	Sb	12 19 23.7	-1.0
ASSB	Assisi San Ben	0.29	270	⇑P	Pg	12 19 19.0	+0.6
ASSB				S	Sb	12 19 23.8	-1.0
ASSB				AML	AML		
	comp=E,31µm,1.2s						
ASSB				AML	AML		
	comp=N,44µm,0.5s						
ASSB				AML	AML		
	comp=E,31µm,0.8s						
T1241	Roccafluvione,	0.33	124	AML	AML		
	comp=E,21µm,0.9s						
T1241				AML	AML		
	comp=N,24µm,0.2s						
AQU	L'Aquila	0.74	160	P	Pn	12 19 28.6	-0.4
PE3	Peglio	0.77	328	S	Sg	12 19 36.6	-0.8
RMP	Rome, Mte Porz	1.26	192	⇑P	Pn	12 19 34.4	-1.8
RMP				AML	AML		
	comp=N,342µm,0.1s						
RMP				AML	AML		
	comp=E,387µm,0.1s						

ROM 23 12:19:32.0±0.1**, 42°.706N**±0°.002×**13°.159E**±0°.004**, h11**^{km}**, ML1.2**/2**, 1C, Error ellipse: s-maj=0.3km s-min=0.1km az=95.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1218	Civita (PG)	0.05	222	P	Pg	12 19 34.7	+0.3
T1218				S	Sg	12 19 36.3	+0.3
T1218				AML	AML		
	comp=E,252µm,0.6s						
T1218				AML	AML		
	comp=N,312µm,0.5s						
T1218				AML	AML		
	comp=N,261µm,0.5s						
T1218				AML	AML		
	comp=N,261µm,0.5s						
T1218				AML	AML		
	comp=N,312µm,0.5s						
T1218				AML	AML		
	comp=E,252µm,1.4s						
T1218				AML	AML		
	comp=E,194µm,0.7s						
T1214	Arquata del Tr	0.06	34	P	Pg	12 19 34.8	+0.3
T1214				S	Sg	12 19 36.6	+0.3
NRCA	Norcia	0.13	345	P	Pg	12 19 35.7	+0.4
NRCA				S	Sg	12 19 38.0	+0.4
T1245	Castelsantange	0.15	8	P	Pg	12 19 36.2	+0.5
T1245				S	Sg	12 19 39.0	+0.8
T1245				AML	AML		

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            comp=E,89µm,0.2s
T1245                                  AML       AML
            comp=N,80µm,1.3s
T1245                                  AML       AML
            comp=N,80µm,0.7s
T1217  Poggiodomo (PG      0.17 272    P         Pg          12 19 36.3 +0.5
T1217                                  S         Sg          12 19 39.3 +0.8
RM33   Pellescritta (      0.20 168    P         Pg          12 19 36.8 +0.4
RM33                                   S         Sg          12 19 40.2 +0.9
MMO1   Montemonaco         0.23  33    P         Pg          12 19 37.3 +0.4
MMO1                                   S         Sg          12 19 41.1 +1.0
T1241  Roccafluvione,      0.25  53    AML       AML
            comp=E,34µm,0.9s
T1241                                  AML       AML
            comp=N,25µm,1.4s
TERO   Teramo              0.34 104   ⇑P         Pg          12 19 39.0 +0.2
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NNC ***23*** *12:23:40.2±3.4, 36°.91N×71°.72E, h0^{km}, mb4.5, mpv4.3, Error ellipse: s-maj=29.0km s-min=17.8km az=9.0*

MOS ***23*** *12:23:42.5±0.9, 36°.50N×71°.16E, h234^{km}, mb4.1/14, Error ellipse: s-maj=9.0km s-min=5.4km az=88.4*

IDC ***23*** *12:23:44.4±0.8, 36°.45N×71°.20E, h241^{km}±7^{km}, mb3.6/19, mbtmp4.3/26, Error ellipse: s-maj=11.3km s-min=9.8km az=53.0*

BJI ***23*** *12:23:44.5±0.0, 36°.85N×71°.18E, h234^{km}, mb4.2/16, mB4.4/9*

NEIC ***23*** *12:23:44.2±1.6, 36°.54N±0°.07×71°.17E±0°.07, h230^{km}±7^{km}, mb4.2/19, Error ellipse: s-maj=10.8km s-min=7.9km az=156.0*

ISC 23 12:23:43.3±0.5**, 36°.46N**±0°.04×**71°.22E**±0°.04**, h230**^{km}±5^{km}**, h230**^{km}**:pP-P, n165,** σ1^{s}.**72**/176**, mb4.1**/31**, 20C-8D, Afghanistan-Tajikistan border region**

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Code   Station Name         Δ°   AZ°     Phase ID             Time     Res
                                       Op        ISC         h  m  s   ISC
KBL    Kabul               2.61 224    Pn        Pn          12 24 31.1 +0.5
KBL    Kabul               2.61 224    PN        Pn          12 24 31.1 +0.5
GAR    Garm                2.64 345    Pn        Pn          12 24 30.9 +0.2
CEP    Cherat              2.69 168    P         Pn          12 24 33.5 +2.1
CEP                                    S         S           12 25 10.0 +1.0
CHGR   Chuyangaron         2.74 324    Pn        Pn          12 24 31.6 -0.2
CHGR   Chuyangaron         2.74 324    PN        Pn          12 24 31.6 -0.2
DRK    Karamyk             3.05   8              Pn          12 24 31.3 -4.1
CHCP   Chirah Chowk        3.26 148    P         Pn          12 24 39.0 +1.4
NIL    Nilore              3.26 149    Pn        Pn          12 24 39.0 +1.4
NIL    Nilore              3.26 149    PN        Pn          12 24 39.0 +1.4
BTK    Batken              3.61 355              Pn          12 24 42.8 +1.2
BTK    Batken              3.61 355    PN        Pn          12 24 42.8 +1.2
THW    Thamme Wali         3.68 173    P         Pn          12 24 43.3 +0.8
SARP   Sargodha            4.68 165    P         Pn          12 24 54.9 +0.3
KSH    Kashi               4.84  49    P         Pn          12 24 51.8 -4.8
KSH                                    S         S           12 25 42.9  -12
KSH                                    smax      smax
            comp=N,600nm,0.7s
KSH                                    smax      smax
            comp=E,700nm,0.8s
DHRM   DHARAMSHALA         5.94 134   eP         Pn          12 25 11.0 +0.5
DHRM                                  eS         S           12 26 17.6 -2.2
DHRM                                   IAML                  12 26 19.6
            comp=E,909nm,0.4s
DHRM                                   IAML                  12 26 20.5
            comp=N,578nm,0.7s
AML    Almayashu           5.98  18    P         Pn          12 25 11.1 -0.1
            SNR=254
UCH    Uchtor              6.30  23    P         Pn          12 25 15.4 +0.2
            SNR=167
EKS2   Erkin-Say           6.50  17    P         Pn          12 25 18.0 +0.6
            SNR=16
KK31   Karatay Array       6.66 356    Pn        Pn          12 25 19.1 -0.2
KK31   Karatay Array       6.66 356   ⇑P         Pn          12 25 14.9 -4.5
            comp=N,17nm,0.5s,baz=177,slow=12,SNR=184
KK31                                  ⇑S         S           12 26 28.7 -7.4
            comp=N,46nm,0.5s,baz=185,slow=28,SNR=4.7
KK31   Karatay Array       6.66 356    PN        Pn          12 25 19.1 -0.2
KKAR   Karatay Array       6.66 356    Pn        Pn          12 25 18.7 -0.6
KKAR   Karatay Array       6.66 356              Pn          12 25 18.9 -0.5
KKAR   Karatay Array       6.66 356    PN        Pn          12 25 18.7 -0.6
AAK    Ala-Archa           6.67  21    P         Pn          12 25 20.1 +0.5
            SNR=46
AAK    Ala-Archa           6.67  21    P         Pn          12 25 19.9 +0.2
            comp=N,27nm,0.3s,baz=194,slow=12,SNR=122
AAK                                    S         S           12 26 34.2 -2.3
            comp=N,19nm,0.3s,baz=141,slow=23,SNR=15
AAK    Ala-Archa           6.67  21c iPN         Pn          12 25 19.7 +0.1
AAK                                    pmax      pmax
            comp=Z,11nm,0.5s
AAK    Ala-Archa           6.67  21    Pn        Pn          12 25 20.2 +0.5
KBK    Karagaybulak        6.83  24    P         Pn          12 25 22.6 +1.0
            SNR=15
ULHL   Ulahol              6.97  32    P         Pn          12 25 23.0 -0.5
            SNR=15
CHMS   Chumysh             7.08  22    P         Pn          12 25 25.7 +1.0
            SNR=6.5
USP    Ospenovka           7.25  19    P         Pn          12 25 26.9 -0.1
            SNR=23
SMLA   Simla               7.26 135   eP         Pn          12 25 27.0 -0.1
SMLA                                  eS         S           12 26 45.2 -4.9
SMLA                                   IAML                  12 26 48.7
            comp=E,292nm,0.5s
SMLA                                   IAML                  12 26 50.7
            comp=N,258nm,0.5s
TKM2   Tokmak 2            7.28  26    P         Pn          12 25 27.7 +0.2
            SNR=42
KDJ    Kajisay             7.31  37    Pn        Pn          12 25 27.6 -0.2
KDJ    Kajisay             7.31  37    PN        Pn          12 25 27.6 -0.2
TARG   Taragay, Kyrgy      7.34  42              Pn          12 25 27.8 -0.7
TARG   Taragay, Kyrgy      7.34  42    PN        Pn          12 25 27.8 -0.7
MDOK   Medeo               8.06  32   ⇑P         Pn          12 25 31.7 -5.6
            comp=N,11nm,0.6s
MDOK                                  ⇑S         S           12 26 56.5  -12
            comp=N,13nm,0.7s
MDOK   Medeo               8.06  32    PN        Pn          12 25 30.7 -6.6
DDI    Dehra Dun           8.37 135   eS         S           12 27 11.7 -4.5
PDGK   Podgornoye          9.35  40   ⇓P         Pn          12 25 49.7 -4.1
            comp=N,3.4nm,0.5s
PDGK                                  ⇑S         S           12 27 26.4  -13
            comp=N,19nm,1.1s
PDGK   Podgornoye          9.35  40    P         Pn          12 25 49.7 -4.1
GEYT   Alibeck            10.56 282    P         Pn          12 26 07.5 -1.6
            comp=N,7.1nm,0.6s,baz=105,slow=11,SNR=14
GEYT                                   S         S           12 28 04.3 -3.2
            comp=N,2.2nm,0.5s,baz=81,slow=22,SNR=1.6
GEYT   Alibeck            10.56 282              Pn          12 26 07.0 -2.1
GEYT   Alibeck            10.56 282    P         Pn          12 26 07.1 -2.1
GYA0B  ALIBECK ARRAY      10.56 282              Pn          12 26 07.2 -2.0
PYUN   Piuthan            12.97 127   eP         Pn          12 26 38.6 -1.2
            comp=N,33nm,0.3s
PYUN                                  eS         S           12 28 52.7  -11
MAKZ   Makanchi           13.09  34    Pn        Pn          12 26 40.0 -0.8
MAKZ   Makanchi           13.09  34   ⇓P         Pn          12 26 40.1 -0.6
            comp=N,19nm,0.5s
MAKZ   Makanchi           13.09  34    P         Pn          12 26 40.0 -0.8
MK31   Makanchi Array     13.22  35   ⇑P         Pn          12 26 41.4 -1.1
            comp=N,3.0nm,0.3s,baz=210,slow=12,SNR=95
MK31   Makanchi Array     13.22  35d iP          Pn          12 26 41.3 -1.1
MKAR   Makanchi Array     13.22  35    P         Pn          12 26 41.4 -1.0
            comp=N,5.9nm,0.5s,baz=215,slow=7.8,SNR=41
DANN   Dangsing           13.32 124   eP         Pn          12 26 43.2 -0.9
            comp=N,38nm,0.5s
KOLN   Koldanda           13.59 126   eP         Pn          12 26 47.3 -0.1
GKN    Gorkha             14.13 123   eP         Pn          12 26 53.7 -0.2
            comp=N,76nm,0.4s
BHPL   Bhopal             14.22 156   eP         P           12 26 57.9 +2.1
BHPL                                  eS         S           12 29 26.1 -6.2
DMN    Daman              14.70 123   eP         Pn          12 27 00.6 -0.4
            comp=N,55nm,0.5s
KKN    Kakani             14.70 122   eP         Pn          12 27 00.2 -0.7
            comp=N,130nm,0.6s
PKIN   Phulchoki          14.92 122   eP         Pn          12 27 03.2 -0.4
            comp=N,52nm,0.5s
PKI    Pulchoki           14.93 122   eP         Pn          12 27 03.5 -0.3
            comp=N,59nm,0.6s
GUN    Gumba              15.04 120   eP         Pn          12 27 04.6 -0.6
            comp=N,36nm,0.4s
KURBB  Kurchatov Arra     15.11  18    P         Pn          12 27 04.3 -1.0
            comp=N,5.5nm,0.6s,baz=206,slow=11,SNR=20
KURBB  Kurchatov Arra     15.11  18   ⇑P         Pn          12 27 05.1 -0.3
            comp=N,7.1nm,0.5s
KURBB  Kurchatov Arra     15.11  18    P         Pn          12 27 05.5 +0.2
AB31   Akbulak array      15.21 331   ⇑P         P           12 27 15.5 +9.1
            comp=N,1.2nm,0.5s,baz=152,slow=11,SNR=40
AB31                                   S         S           12 29 58.6 +4.3
            comp=N,4.8nm,1.0s,baz=145,slow=23,SNR=7.2
AB31   Akbulak array      15.21 331    P         P           12 27 15.5 +9.1
ABKAR  Akbulak array      15.21 331    P         Pn          12 27 05.5 -1.0
ABKAR  Akbulak array      15.21 331    P         P           12 27 06.6 +0.2
ABKAR                                  IAmb      IAmb        12 27 17.8
            comp=Z,2.8nm,0.8s
KURK   Kurchatov          15.21  18              P           12 27 05.8 -0.6
KURK   Kurchatov          15.21  18   ⇑P         P           12 27 05.6 -0.8
            comp=Z,4.9nm,0.9s
KURK   Kurchatov          15.21  18    P         P           12 27 05.8 -0.6
KURK                                   pmax      pmax
            comp=Z,4.0nm,0.8s
JIRN   Jiri               15.41 120   eP         P           12 27 09.7 +0.4
            comp=Z,63nm,0.5s
RAMN   Ramite             16.14 122   eP         P           12 27 18.3 +1.1
            comp=Z,43nm,0.4s
BANOM  Banah              16.51 235    P         P           12 27 19.9 -1.1
BVA0   Borovoye Array     16.58 358   ⇑P         Pn          12 27 26.3 +3.5
            comp=Z,1.6nm,0.5s,baz=163,slow=9.5,SNR=5.1
BVA0   Borovoye Array     16.58 358    P         Pn          12 27 26.3 +3.5
BVAR   Borovoye Array     16.58 358    P         Pn          12 27 22.2 -0.6
            comp=Z,3.3nm,0.5s,baz=160,slow=9.8,SNR=24
BRVK   Borovoye           16.61 358    P         Pn          12 27 23.3  0.0
BRVK                                   IAmb      IAmb        12 27 26.2
            comp=Z,4.9nm,0.5s
BRVK   Borovoye           16.61 358   ⇑P         Pn          12 27 25.9 +2.6
            comp=Z,2.2nm,0.4s
BRVK   Borovoye           16.61 358⇑eP           P           12 27 22.0 +0.2
BRVK                                   pmax      pmax
            comp=Z,2.0nm,0.8s
TAPN   Taplejung          16.67 118   eP         Pn          12 27 25.1 +0.6
            comp=Z,48nm,0.6s
ODAN   Odare              16.74 120   eP         Pn          12 27 25.8 +0.5
            comp=Z,42nm,0.6s
AKTO   Aktyubinsk         16.91 330    P         Pn          12 27 25.9 -0.9
            comp=Z,8.8nm,0.6s,baz=140,slow=9.4,SNR=30
AKTO                                   S         S           12 30 28.8 -0.5
            comp=Z,1.3nm,0.7s,baz=307,slow=20,SNR=1.6
AKTO   Aktyubinsk         16.91 330   ⇓P         Pn          12 27 33.3 +6.5
            comp=Z,7.4nm,0.8s
AKTO                                  ⇑S         S           12 30 42.6  +13
            comp=Z,3.1nm,0.9s
WSAR   Wadi Sarin         17.09 223    P         Pn          12 27 29.0 -0.1
            comp=Z,6.5nm,0.6s,baz=84,slow=11,SNR=9.9
UOSS   Minazif            17.25 232    P         P           12 27 29.4 +0.4
UOSS                                   IAmb      IAmb        12 27 37.0
            comp=Z,8.9nm,0.8s
UOSS   Minazif            17.25 232    P         P           12 27 28.4 -0.7
HATD   Hatta, Dubai       17.38 232    P         P           12 27 31.3 +0.8
ASHO   Ashiyiah           17.53 232    P         P           12 27 33.2 +1.1
DGZ    Jazzator, Alta     17.71  37d iP          P           12 27 35.2 +1.3
DGZ                                    pmax      pmax
            comp=Z,9.0nm,0.7s
LSA    Lhasa              18.00 106    P         Pn          12 27 40.4 +0.2
LSA    Lhasa              18.00 106    P         Pn          12 27 40.4 +0.2
LSA                                    pmax      pmax
            comp=Z,12nm,0.5s
GOMU   GeErMu             19.01  84    P         P           12 27 50.3 +1.9
GOMU                                   pmax      pmax
            comp=Z,5.0nm,0.6s
GOMU                                   pmax      pmax
            comp=Z,65nm,6.3s
ZAA0   Zalesovo Array     19.88  24    IAmb      IAmb        12 28 12.8
            comp=Z,6.6nm,0.9s
ZALV   Zalesovo Beam      19.88  24    P         P           12 27 56.9 -0.2
            comp=Z,6.1nm,0.4s,baz=213,slow=11,SNR=22
ZALV                                   S         S           12 31 25.0 -2.9
            comp=Z,1.0nm,0.7s,baz=221,slow=19,SNR=2.6
ZALV   Zalesovo Beam      19.88  24  i P         P           12 27 57.2 +0.1
ZALV                                   pmax      pmax
            comp=Z,7.0nm,0.4s
SHL    Shillong           20.73 116    P         P           12 28 07.3 +0.7
SHL    Shillong           20.73 116    P         P           12 28 07.3 +0.7
SHL                                    pmax      pmax
            comp=Z,19nm,0.7s
GNI    Garni              21.08 288  i P         P           12 28 11.8 +1.7
GNI                                    pmax      pmax
            comp=Z,16nm,1.0s
ARU    Arti               21.73 341    P         P           12 28 17.0 +1.0
            comp=Z,2.4nm,0.3s,baz=117,slow=6.4,SNR=6.3
            comp=Z,2.4nm,0.3s
ARU    Arti               21.73 341    P         P           12 28 16.0 -0.1
ARU                                    IAmb      IAmb        12 28 17.9
            comp=Z,4.2nm,0.5s
ARU    Arti               21.73 341c iP          P           12 28 17.1 +1.0
ARU                                    S         S           12 32 03.2 +3.3
ARU                                    pmax      pmax
            comp=Z,3.0nm,0.6s
AKH    Akhalkalaki        22.08 291    P         P           12 28 21.7 +1.9
AKH    Akhalkalaki        22.08 291    P         P           12 28 21.7 +1.9
AKH                                    pmax      pmax
            comp=Z,29nm,1.0s
GTA    Gaotai             22.71  74   eP         P           12 28 28.0 +2.5
GTA                                    pmax      pmax
            comp=Z,11nm,0.6s
KBZ    Khabaz             22.78 297    P         P           12 28 26.6 +0.7
            comp=Z,2.7nm,0.8s,baz=130,slow=9.9,SNR=8.4
            comp=Z,2.7nm,0.8s
KBZ    Khabaz             22.78 297⇑eP           P           12 28 26.7 +0.8
KIV    Kislovodsk         22.96 298   eP         P           12 28 29.7 +2.0
KIV                                    pmax      pmax
            comp=Z,6.0nm,1.1s
BELG   Belogornoye        23.03 321    P         P           12 28 28.3 +0.2
            comp=Z,19nm,0.7s,baz=160,slow=3.7,SNR=5.9
            comp=Z,19nm,0.7s
BELG   Belogornoye        23.03 321⇓eP           P           12 28 28.8 +0.8
BELG                                   pmax      pmax
            comp=Z,4.0nm,0.9s
RAYN   Ar Rayn            25.64 247    P         P           12 28 51.3 -0.8
RAYN                                   IAmb      IAmb        12 28 53.0
            comp=Z,4.0nm,0.8s
RAYN   Ar Rayn            25.64 247    P         P           12 28 51.3 -0.8
RAYN                                   pmax      pmax
            comp=Z,4.0nm,0.9s
KIRV   Kirov              26.36 334⇓eP           P           12 28 58.3 +0.4
SONM   Songino Array      28.21  55    P         P           12 29 16.6 +1.8
            comp=Z,1.6nm,0.7s,baz=253,slow=9.6,SNR=10
SONM                                   pP        pP          12 30 04.8 +2.9
            comp=Z,1.1nm,0.8s,baz=254,slow=11,SNR=4.2
            comp=Z,1.6nm,0.7s
SONM   Songino Array      28.21  55    P         P           12 29 16.1 +1.3
SONM   Songino Array      28.21  55    P         P           12 29 16.1 +1.3
SONM                                   pmax      pmax
            comp=Z,2.0nm,0.9s
ULN    Ulaanbaatar        28.66  55⇑eP           P           12 29 20.5 +1.8
ULN                                  i *PP       pP          12 30 06.3 +0.4
ULN                                    pmax      pmax
            comp=Z,1.0nm,0.4s
BR131  Keskin Array S     29.62 288⇓eP           P           12 29 28.1 +0.8
BRTR   Keskin Array B     29.62 288    P         P           12 29 28.1 +0.8
            comp=Z,1.0nm,0.6s,baz=117,slow=9.6,SNR=6.5
            comp=Z,1.0nm,0.6s
OBN    Obninsk            30.09 319   eP         P           12 29 31.8 +0.8
OBN                                    pmax      pmax
            comp=Z,4.0nm,0.7s
CMAR   Chiang Mai Arr     30.28 119    P         P           12 29 34.0 +0.8
            comp=Z,0.8nm,0.7s,baz=297,slow=8.5,SNR=7.5
            comp=Z,0.8nm,0.7s
CMAR   Chiang Mai Arr     30.28 119ceP           P           12 29 34.5 +1.3
CMAR                                   pmax      pmax
            comp=Z,1.0nm,0.7s
PALK   Pallekele          30.31 161    P         P           12 29 34.8 +1.3
            comp=Z,3.7nm,0.6s,baz=19,slow=7.2,SNR=2.5
            comp=Z,3.7nm,0.6s
PHRA   Phrae              31.17 117    P         P           12 29 41.5 +0.6
AKASG  Malin Array Be     33.11 309    P         P           12 29 57.4 -0.1
            comp=Z,1.7nm,0.5s,baz=76,slow=6.8,SNR=18
            comp=Z,1.7nm,0.5s
AKASG  Malin Array Be     33.11 309    P         P           12 29 56.1 -1.4
AKASG                                  IAmb      IAmb        12 29 58.3
            comp=Z,3.2nm,0.9s
AKASG  Malin Array Be     33.11 309ceP           P           12 29 57.5  0.0
AKASG                                  pmax      pmax
            comp=Z,4.0nm,0.6s
AKBB   Malin Array Si     33.11 309⇑eP           P           12 29 57.2 -0.3
NACGM  Naroch             35.37 316   eP         P           12 30 17.2 +0.5
            comp=Z,12nm,1.1s,baz=102
FINES  FINESS Array B     37.62 326    P         P           12 30 36.0 +0.4
            comp=Z,2.5nm,0.5s,baz=120,slow=9.1,SNR=18
            comp=Z,2.5nm,0.5s
FINES  FINESS Array B     37.62 326    P         P           12 30 35.9 +0.2
VADS   Vadso              40.42 339   eP         P           12 30 59.5 +0.8
ARA0   ARCESS Array S     41.25 338   eP         P           12 31 06.6 +1.1
ARCES  ARCESS Array B     41.25 338    P         P           12 31 06.1 +0.6
            comp=Z,4.3nm,0.6s,baz=108,slow=7.8,SNR=19
            comp=Z,4.3nm,0.6s
ARCES  ARCESS Array B     41.25 338    P         P           12 31 05.6 +0.1
ARCES                                  IAmb      IAmb        12 31 08.1
            comp=Z,16nm,1.4s
ARCES  ARCESS Array B     41.25 338    P         P           12 31 05.6 +0.1
ARCES                                  pmax      pmax
            comp=Z,16nm,1.4s
KTK1   Kautokeino         41.73 336   eP         P           12 31 09.9 +0.5
HEH    HeiHe              42.13  53   eP         P           12 31 13.9 +1.0
HEH                                    pmax      pmax
            comp=Z,4.0nm,0.9s
HEH                                    pmax      pmax
            comp=Z,140nm,5.4s
FAUS   Fauske             43.92 332   eP         P           12 31 27.4 +0.5
MOR8   Moi Rana           43.94 331   eP         P           12 31 26.8 -0.4
NC602  NORSAR Array S     44.33 323   eP         P           12 31 30.4 +0.1
NC303  NORSAR Array S     44.46 323    P         P           12 31 31.8 +0.4
NC303                                  IAmb      IAmb        12 31 47.6
            comp=Z,26nm,1.4s
NB201  NORSAR Array S     44.48 323    P         P           12 31 31.2 -0.3
NB201                                  IAmb      IAmb        12 32 02.5
            comp=Z,37nm,1.3s
NB2    NORSAR Subarra     44.52 323    P         P           12 31 31.7 -0.1
            comp=Z,0.9nm,0.5s,baz=96,slow=7.9
NB2    NORSAR Subarra     44.52 323    P         P           12 31 31.7 -0.1
            baz=96,slow=7.9
NOA    NORSAR Array B     44.52 323    P         P           12 31 31.7 -0.1
            comp=Z,1.6nm,0.6s,baz=97,slow=7.7,SNR=7.4
            comp=Z,1.6nm,0.6s
KONS   Konsvik            44.53 331   eP         P           12 31 32.0 +0.3
HOMB   Homborsund         45.77 319   eP         P           12 31 41.9 +0.3
SPA0   Spitsbergen Ar     47.58 347   eP         P           12 31 56.1 +0.7
KIBK   Kibwezi            49.44 226    P         P           12 32 11.5 +1.1
KIBK                                   IAmb      IAmb        12 32 12.8
            comp=Z,3.6nm,0.7s
MBAR   Mbarara            52.63 235    P         P           12 32 34.7 +0.5
MBAR                                   IAmb      IAmb        12 32 35.5
            comp=Z,6.2nm,0.8s
MBAR   Mbarara            52.63 235    P         P           12 32 34.7 +0.5
MBAR                                   pmax      pmax
            comp=Z,6.0nm,0.8s
ESDC   Sonseca Array      57.63 298    P         P           12 33 08.7 -0.9
            comp=Z,1.3nm,0.8s,baz=74,slow=9.5,SNR=5.7
            comp=Z,1.3nm,0.8s
TORD   Torodi Ar. Bea     65.89 269    P         P           12 34 02.7 -2.1
            comp=Z,8.8nm,0.4s,baz=45,slow=5.8,SNR=1.6
            comp=Z,8.8nm,0.4s
ILAR   Eielson Array      74.77  16    P         P           12 34 57.5 -0.1
            comp=Z,0.6nm,0.9s,baz=317,slow=4.5,SNR=6.9
ILAR                                   pP        pP          12 35 54.3 +1.4
            comp=Z,0.7nm,0.9s,baz=309,slow=5.1,SNR=4.6
            comp=Z,0.6nm,0.9s
DBIC   Dimbokro           74.87 267    P         P           12 34 57.6 -1.4
            comp=Z,1.2nm,0.5s,baz=82,slow=5.1,SNR=1.7
            comp=Z,1.2nm,0.5s
BOSA   Boshof             77.83 220    P         P           12 35 14.3 -1.0
            comp=Z,1.1nm,0.4s,baz=47,slow=6.5,SNR=3.6
            comp=Z,1.1nm,0.4s
YKA    Yellowknife Ar     81.28   3    P         P           12 35 33.8 +0.4
            comp=Z,0.9nm,0.8s,baz=348,slow=5.1,SNR=15
YKA                                    pP        pP          12 36 31.0 +1.3
            comp=Z,0.8nm,0.8s,baz=349,slow=5.1,SNR=6.9
            comp=Z,0.9nm,0.8s
WRA    Warramunga Arr     81.82 122    P         P           12 35 35.8 -1.0
            comp=Z,1.2nm,0.3s,baz=323,slow=4.9,SNR=4.7
            comp=Z,1.2nm,0.3s
ASAR   Alice Springs      84.08 125    P         P           12 35 47.6 -0.7
            comp=Z,2.4nm,0.6s,baz=310,slow=4.8,SNR=27
ASAR                                   pP        pP          12 36 45.5 +0.7
            comp=Z,0.5nm,0.9s,baz=305,slow=4.6,SNR=2.0
            comp=Z,2.4nm,0.6s
CPUP   Villa Florida     135.39 268    PKP       PKPdf       12 42 34.7 -1.1
            comp=Z,1.6nm,0.6s,baz=58,slow=10,SNR=4.1
PLCA   Paso Flores       149.98 250    PKPbc     PKPbc       12 43 05.9 -0.4
            comp=Z,2.4nm,0.7s,baz=121,slow=1.7,SNR=9.2
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NEIC ***23*** *12:25:46.7±1.6, 63°.53N±0°.02×150°.98W±0°.03, h9^{km}±3^{km}, Error ellipse: s-maj=2.8km s-min=1.7km az=163.0*

AEIC 23 12:25:46.8±1.4**, 63°.54N**±0°.02×**151°.01W**±0°.03**, h8**^{km}±7^{km}**, ML2.4, ML2.5**/68(NEIC)**, Error ellipse: s-maj=2.8km s-min=1.7km az=176.0, Central Alaska**

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Code   Station Name         Δ°   AZ°     Phase ID             Time     Res
                                       Op        ISC         h  m  s   ISC
KTH    Kantishna Hill      0.04  66    Pg        Pg          12 25 48.7 +0.1
TRF    Thorofare Moun      0.33 105              Pg          12 25 53.5 +0.1
TRF                                              Sg          12 25 58.3 +0.5
TRF    Thorofare Moun      0.33 105    IAML                  12 25 58.5
            comp=E,560nm,0.2s
TRF                                    IAML                  12 25 58.9
            comp=N,541nm,0.2s
CAST   Castle Rocks        0.50 257    Pg        Pg          12 25 56.1 -0.3
CAST   Castle Rocks        0.50 257              Sg          12 26 02.5 -0.5
BPAW   Bear Paw Mtn.       0.57   1              Pg          12 25 57.7  0.0
BPAW                                             Sg          12 26 05.4 +0.3
BPAW   Bear Paw Mtn.       0.57   1    IAML                  12 26 05.7
            comp=E,226nm,0.1s
BPAW                                   IAML                  12 26 10.8
            comp=N,307nm,0.1s
CHUM   Lake Minchumin      0.68 301              Pg          12 26 00.0 +0.2
CHUM                                             Sg          12 26 09.0 +0.3
PPLA   Purkeypile          0.84 220              Pg          12 26 02.4 -0.5
BWN    Browne              0.93  46              Pn          12 26 05.8 -0.5
BWN    Browne              0.93  46    IAML                  12 26 23.2
            comp=E,108nm,0.4s
BWN                                    IAML                  12 26 24.5
            comp=N,102nm,0.5s
MCK    McKinley            0.94  77              Pg          12 26 04.7 -0.2
MCK    McKinley            0.94  77              Sb          12 26 18.0 -0.1
RND    Reindeer            0.98  97              Pg          12 26 04.7 -0.8
RND                                    IAML                  12 26 18.1
            comp=N,148nm,0.5s
RND                                    IAML                  12 26 22.8
            comp=E,89nm,0.3s
CUT    Chulitna            1.19 163              Pb          12 26 08.9 -0.6
WAT7   Susitna Watana      1.21 125              Pb          12 26 09.0 -0.9
WAT1   Susitna Watana      1.32 121              Pn          12 26 11.0 -0.5
NEA2   Nenana              1.36  38              Pn          12 26 11.1 -1.0
K20K   Telida              1.39 264              Pn          12 26 12.2 -0.2
K20K                                   IAML                  12 26 31.8
            comp=N,51nm,0.6s
K20K                                   IAML                  12 26 33.0
            comp=E,49nm,0.8s
MLY    Manley              1.50   4              Pn          12 26 13.7 -0.4
MLY                                    IAML                  12 26 35.8
            comp=N,85nm,0.4s
SKT    Skwentna            1.58 189              Pn          12 26 15.6 +0.4
SKT    Skwentna            1.58 189    IAML                  12 26 37.7
            comp=E,57nm,1.0s
SKT                                    IAML                  12 26 38.6
            comp=N,59nm,0.9s
WRH    Wood River Hil      1.59  53              Pn          12 26 14.2 -1.0
I21K   Tanana              1.70 346              Pn          12 26 16.7 -0.1
I21K                                   IAML                  12 26 42.1
            comp=E,42nm,0.5s
I21K                                   IAML                  12 26 46.0
            comp=N,41nm,0.8s
I23K   Minto, Yukon-K      1.77  23              Pn          12 26 17.1 -0.6
I23K                                   IAML                  12 26 43.4
            comp=N,60nm,0.5s
I23K                                   IAML                  12 26 44.5
            comp=E,43nm,0.4s
CCB    Clear Creek Bu      1.79  50              Pn          12 26 16.9 -1.1
CCB                                    IAML                  12 26 44.3
            comp=N,50nm,0.3s
CCB                                    IAML                  12 26 44.3
            comp=E,47nm,0.3s
MDM    Murphy Dome         1.87  39              Pn          12 26 18.3 -0.9
COLA   College             1.93  44    Pn        Pn          12 26 20.0 +0.2
M20K   Styx River          1.93 211              Pn          12 26 20.5 +0.6
HDA    Harding Lake        1.99  62              Pn          12 26 19.9 -0.9
HDA    Harding Lake        1.99  62    IAML                  12 26 51.4
            comp=E,30nm,0.3s
GHO    Glory Hole Cre      2.02 151              Pn          12 26 21.3 +0.2
SUA    Susitna One         2.08 177    Pn        Pn          12 26 22.6 +0.5
SML    Sawmill             2.13 143              Pn          12 26 22.9 +0.2
SML    Sawmill             2.13 143    IAML                  12 26 54.9
            comp=N,43nm,1.2s
PMR    Palmer              2.14 155    Pn        Pn          12 26 22.9 +0.2
PMR                                    IAML                  12 26 54.7
            comp=E,42nm,0.6s
PMR                                    IAML                  12 26 59.0
            comp=N,26nm,1.1s
IL31                       2.19  54              Pn          12 26 22.4 -1.0
ILAR   Eielson Array       2.19  54    Pn        Pn          12 26 22.4 -1.1
POKR   Poker Plat Res      2.22  43    Pn        Pn          12 26 24.1 +0.2
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L19K	**White Mountain**	**2.23**	**234**	Pn	Pn	12 26 24.0	0.0
L19K				IAML		12 26 58.5	
	comp=E,22nm,0.5s						
M19K	**Big River Lodg**	**2.26**	**225**	Pn	Pn	12 26 25.9	+1.5
M19K				IAML		12 26 58.9	
	comp=N,22nm,0.7s						
M19K				IAML		12 27 06.1	
	comp=E,21nm,0.8s						
H21K	**Melozitna Rive**	**2.27**	**341**		Pn	12 26 24.2	-0.3
H21K				IAML		12 26 58.4	
	comp=E,37nm,0.9s						
H21K				IAML		12 27 03.8	
	comp=N,30nm,0.6s						
H23K	**Yukon River**	**2.38**	**15**	Pn	Pn	12 26 26.5	+0.4
SPU	**Mount Spurr**	**2.41**	**192**	Pn	Pn	12 26 28.0	+1.5
KNK	**Knik Glacier**	**2.44**	**150**		Pn	12 26 28.7	+1.8
PAX	**Paxson**	**2.57**	**100**		Pn	12 26 29.9	+1.1
H24K	**Noodor Dome**	**2.67**	**29**	Pn	Pn	12 26 30.1	0.0
IMAR	**Indian Mountai**	**2.72**	**336**	Pn	Pn	12 26 30.7	-0.1
PWL	**Port Wells**	**2.96**	**154**	Pn	Pn	12 26 34.5	+0.4
PRP	**Porcupine Dome**	**3.09**	**48**		Pn	12 26 35.8	-0.2
PRP				IAML		12 27 12.3	
	comp=E,9.2nm,4.0s						
PRP				IAML		12 27 30.5	
	comp=N,9.3nm,0.4s						
SVW2	**Sparrevohn**	**3.25**	**223**	Pn	Pn	12 26 40.0	+2.0
SVW2				IAML		12 27 30.7	
	comp=N,12nm,0.8s						
SVW2				IAML		12 27 34.9	
	comp=E,11nm,1.1s						
COLD	**Coldfoot**	**3.72**	**5**	Pn	Pn	12 26 45.0	+0.5
K27K	**Chicken**	**3.99**	**79**		Pn	12 26 47.7	-0.5
K27K				IAML		12 27 16.5	
	comp=E,6.9nm,1.6s						

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*ISK **23** 12:26:44.3, 39°.54N×25°.99E, h6^{km}, ML2.7/17*
*THE **23** 12:26:44.9, 39°.55N×26°.00E, h4^{km}±1^{km}, ML2.5/6, Error ellipse: s-maj=1.5km s-min=0.4km az=130.0*
*ATH **23** 12:26:45.2, 39°.52N×25°.99E, h12^{km}±1^{km}, ML2.5/8, Error ellipse: s-maj=2.4km s-min=0.8km az=235.0*
*DDA **23** 12:26:45.0±0.0, 39°.54N×26°.04E, h9^{km}±1^{km}, ML2.6*
ISC 23 12:26:44.7±0.8**, 39°.54N**±0°.01×**25°.99E**±0°.02**, h11**^{km}±6^{km}**, n50, σ0^{s}.53**/86**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.12**	**108**	P	**Pg**	**12 26 47.5**	**-0.2**
KOCA				S	**Sg**	**12 26 49.5**	**-0.4**
GPNR	**Gulpinar-Canak**	**0.14**	**127**	Pg	**Pg**	**12 26 47.9**	**-0.1**
GPNR				Sg	**Sg**	**12 26 50.0**	**-0.3**
BOZC	**Bozcaada**	**0.30**	**9**	Pg	**Pg**	**12 26 50.9**	**0.0**
BOZC				Sg	**Sg**	**12 26 55.7**	**+0.7**
SIGR	**SIGRI**	**0.34**	**197**	P	**Pg**	**12 26 51.9**	**+0.3**
SIGR				S	**Sg**	**12 26 57.1**	**+0.9**
	1µm,0.2s						
SIGR	**SIGRI**	**0.34**	**197**	Pg	**Pg**	**12 26 51.9**	**+0.3**
SIGR				Sg	**Sg**	**12 26 57.1**	**+0.9**
SIGR	**SIGRI**	**0.34**	**197**	P	**Pg**	**12 26 51.8**	**+0.3**
SIGR				S	**Sg**	**12 26 56.1**	**-0.1**
SIGR				AML	AML	12 26 57.6	
	comp=N,3452µm,0.2s						
SIGR				AML	AML	12 26 58.1	
	comp=E,2376µm,0.2s						
PRK	**Paraskevi**	**0.37**	**143**	P	**Pg**	**12 26 52.2**	**+0.2**
PRK				S	**Sg**	**12 26 57.6**	**+0.7**
	comp=E,1µm,0.3s						
PRK	**Paraskevi**	**0.37**	**143**	P	**Pg**	**12 26 52.3**	**+0.3**
PRK				S	**Sg**	**12 26 56.5**	**-0.3**
PRK				AML	AML	12 26 58.0	
	comp=E,2779µm,0.2s						
PRK				AML	AML	12 26 58.3	
	comp=N,2601µm,0.5s						
EZN	**Ezine**	**0.39**	**42**	P	**Pg**	**12 26 52.2**	**-0.1**
EZN				S	**Sg**	**12 26 57.8**	**+0.3**
	comp=N,638nm,0.3s						
EZN	**Ezine**	**0.39**	**42**	Pg	**Pg**	**12 26 52.3**	**-0.1**
EZN				Sg	**Sg**	**12 26 57.8**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**0.48**	**65**	P	**Pg**	**12 26 53.8**	**-0.3**
BAYC				*i* AML	AML	12 27 00.0	
	comp=N,611nm,0.2s						
BAYC				*i* AML	AML	12 27 00.0	
	comp=N,473nm,0.2s						
BAYC				S	**Sg**	**12 27 00.1**	**-0.3**
ECEA	**Canakkale, Ece**	**0.52**	**16**	P	**Pg**	**12 26 55.3**	**+0.4**
ECEA				S	**Sg**	**12 27 02.3**	**+0.4**
ECEA				*i* AML	AML	12 27 03.0	
	comp=N,440nm,0.3s						
ECEA				*i* AML	AML	12 27 03.0	
	comp=N,674nm,0.3s						
GOKA	**anakkale-Gk**	**0.65**	**355**	P	**Pg**	**12 26 57.3**	**-0.1**
GOKA				*i* AML	AML	12 27 12.0	
	comp=N,334nm,0.5s						
GOKA				*i* AML	AML	12 27 13.0	
	comp=N,335nm,0.4s						
GADA	**Gvkgeada**	**0.65**	**354**	Pg	**Pg**	**12 26 57.2**	**-0.2**
GADA				Sg	**Sg**	**12 27 06.8**	**+0.8**
COMU	**Canakkale**	**0.67**	**34**	Pg	**Pg**	**12 26 57.9**	**+0.2**
COMU				Sg	**Sb**	**12 27 07.5**	**-0.3**
LIA	**Limnos Island**	**0.72**	**300**	P	**Pg**	**12 26 58.9**	**+0.3**
LIA				S	**Sb**	**12 27 09.6**	**+0.5**
	comp=N,632nm,0.4s						
LIA	**Limnos Island**	**0.72**	**300**	P	**Pg**	**12 26 59.0**	**+0.5**
LIA				S	**Sb**	**12 27 09.3**	**+0.3**
LIA				AML	AML	12 27 12.4	
	comp=E,2185µm,0.5s						
LIA				AML	AML	12 27 13.1	
	comp=N,1593µm,0.3s						
BUHA	**Balikesir, Bur**	**0.84**	**92**	P	**Pg**	**12 27 00.8**	**-0.1**
BUHA				S	**Sg**	**12 27 11.6**	**-0.3**
BUHA				*i* AML	AML	12 27 15.0	
	comp=N,208nm,0.3s						
GELI	**Tayfur-Gelibol**	**0.93**	**23**	Pg	**Pg**	**12 27 02.4**	**-0.3**
GELI				Sg	**Sb**	**12 27 16.4**	**+1.0**
KARB	**zmir-Karabur**	**0.94**	**159**	P	**Pb**	**12 27 03.4**	**+0.5**
KARB				S	**Sb**	**12 27 15.9**	**+0.5**
KARB				*i* AML	AML	12 27 18.0	
	comp=N,158nm,0.2s						
KARB				*i* AML	AML	12 27 18.0	
	comp=N,159nm,0.4s						
CANM	**Can-anakkale**	**0.95**	**60**	Pg	**Pg**	**12 27 03.0**	**+0.1**
CANM				Sg	**Sb**	**12 27 16.4**	**+0.7**
SMTH	**Samothraki Isl**	**0.99**	**339**	P	**Pg**	**12 27 03.4**	**-0.5**
SMTH				S	**Sb**	**12 27 17.6**	**+0.5**
	comp=N,145nm,0.4s						
SMTH	**Samothraki Isl**	**0.99**	**339**	P	**Pg**	**12 27 03.4**	**-0.5**
SMTH				S	**Sb**	**12 27 17.8**	**+0.7**
SMTH				AML	AML	12 27 19.1	
	comp=N,316µm,0.4s						
SMTH				AML	AML	12 27 19.2	
	comp=E,253µm,0.3s						
LPK	**Lapseki**	**1.02**	**35**	Pg	**Pg**	**12 27 04.1**	**-0.3**
LPK				Sg	**Sb**	**12 27 18.9**	**+1.0**
ZEDA	**zmir-Bergama**	**1.02**	**124**	P	**Pn**	**12 27 05.2**	**+0.2**
CHOS	**Chios island**	**1.15**	**177**	P	**Pb**	**12 27 06.5**	**-0.2**
CHOS				S	**Sn**	**12 27 22.8**	**+0.1**
	comp=E,415nm,0.2s						
CHOS	**Chios island**	**1.15**	**177**	Pn	**Pb**	**12 27 06.6**	**-0.2**
CHOS	**Chios island**	**1.15**	**177**	P	**Pb**	**12 27 06.2**	**-0.5**
CHOS				S	**Sg**	**12 27 21.7**	**-0.1**
CHOS				AML	AML	12 27 25.3	
	comp=N,650µm,0.3s						
CHOS				AML	AML	12 27 26.8	
	comp=E,1014µm,0.2s						
ERIK	**Erikli-Kesan**	**1.20**	**19**	Pn	**Pb**	**12 27 07.1**	**-0.3**
ERIK				Sn	**Sn**	**12 27 24.3**	**+0.6**
ENEZ	**Enez**	**1.20**	**6**	P	**Pb**	**12 27 06.8**	**-0.7**
ENEZ	**Enez**	**1.20**	**6**	Pn	**Pb**	**12 27 07.6**	**+0.1**
URLA	**Izmir**	**1.27**	**158**	Pn	**Pn**	**12 27 07.9**	**-0.6**
URLA				Sn	**Sn**	**12 27 25.9**	**+0.4**
KRBG	**Karabiga-Canak**	**1.32**	**49**	Pn	**Pn**	**12 27 09.5**	**+0.4**
STEP	**BALIKESIR_Sava**	**1.35**	**96**	P	**Pg**	**12 27 11.2**	**+0.5**
STEP				S	**Sn**	**12 27 27.6**	**+0.1**
ALN	**Alexandroupoli**	**1.36**	**2**	P	**Pn**	**12 27 09.4**	**-0.2**
ALN	**Alexandroupoli**	**1.36**	**2**	Pn	**Pn**	**12 27 09.9**	**+0.3**
ALN	**Alexandroupoli**	**1.36**	**2**	P	**Pn**	**12 27 09.5**	**-0.1**
ALN				S	**Sb**	**12 27 27.5**	**0.0**
ALN				AML	AML	12 27 29.2	
	comp=E,195µm,0.3s						
ALN				AML	AML	12 27 29.9	
	comp=N,156µm,0.4s						
ZEYE	**Izmir, Urla-Ze**	**1.36**	**163**	P	**Pn**	**12 27 09.3**	**-0.3**
ZEYE				S	**Sb**	**12 27 27.3**	**-0.3**
ZEYE				*i* AML	AML	12 27 31.0	
	comp=N,103nm,0.4s						
ZEYE				*i* AML	AML	12 27 33.0	
	comp=N,94nm,0.3s						
KNL	**Balıkesir**	**1.39**	**58**	P	**Pn**	**12 27 10.5**	**+0.4**
KNL				S	**Sg**	**12 27 29.2**	**-0.2**
KNL				*i* AML	AML	12 27 30.0	
	comp=N,198nm,0.7s						
GONE	**Gonen-Balikesi**	**1.40**	**68**	Pn	**Pn**	**12 27 10.6**	**+0.4**
THAS	**Thassos island**	**1.44**	**318**	P	**Pn**	**12 27 10.8**	**0.0**
THAS	**Thassos island**	**1.44**	**318**	P	**Pn**	**12 27 10.4**	**-0.4**
THAS				S	**Sn**	**12 27 29.0**	**-0.8**
THAS				AML	AML	12 27 29.7	
	comp=N,193µm,0.5s						
THAS				AML	AML	12 27 30.5	
	comp=E,126µm,0.2s						
RKY	**Sarkoy-Tekirda**	**1.47**	**38**	Pn	**Pn**	**12 27 11.8**	**+0.6**
RDO	**Rodhopi**	**1.64**	**348**	P	**Pn**	**12 27 13.8**	**+0.3**
RDO	**Rodhopi**	**1.64**	**348**	P	**Pn**	**12 27 13.6**	**+0.1**
RDO				S	**Sn**	**12 27 33.4**	**-1.2**
EDC	**Edincik**	**1.65**	**60**	Pn	**Pn**	**12 27 14.3**	**+0.6**
EDC				Sn	**Sb**	**12 27 36.4**	**+0.4**
KAVA	**Kavala**	**1.84**	**323**	P	**Pn**	**12 27 16.4**	**+0.1**
KAVA	**Kavala**	**1.84**	**323**	P	**Pn**	**12 27 16.4**	**+0.1**
KAVA				S	**Sn**	**12 27 37.9**	**-1.7**
SMG	**Samos**	**1.95**	**160**	P	**Pn**	**12 27 17.3**	**-0.4**
SMG	**Samos**	**1.95**	**160**	P	**Pn**	**12 27 17.2**	**-0.6**
SMG				S	**Sn**	**12 27 40.5**	**-1.7**
SMG				AML	AML	12 27 49.9	
	comp=E,404µm,0.5s						
SMG				AML	AML	12 27 52.9	
	comp=N,292µm,0.5s						

HEL 23 12:44:03.1±0.0**, 61°.48N×23°.55E, h0^{km}, ML1.0, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KPF	**Kankaanpaa**	**0.79**	**297**	*e*P	Pg	12 44 16.9	-1.3
KPF				*e*S	Sg	12 44 27.3	-1.1
KEF	**Keuruu**	**0.93**	**42**	*e*P	Pg	12 44 20.2	-0.8
KEF				*e*S	Sg	12 44 31.7	-1.4
KEF				MSG		12 44 32.1	
	comp=Z,1.2nm,0.2s						
RAF	**Rauma**	**0.97**	**243**	*e*PB	Pg	12 44 21.1	-0.7
RAF				MSG		12 44 33.7	
	comp=Z,1.1nm,0.2s						
RAF				*e*SB	Sg	12 44 34.1	-0.2
NUR	**Nurmijrvi**	**1.11**	**151**	*e*S	Sg	12 44 37.2	-1.6
MEF	**Metsahovi**	**1.33**	**161**	*e*P	Pg	12 44 27.2	-1.4
UMAU	**Umeaa**	**2.75**	**333**	*e*SB	Sb	12 45 25.7	-1.6

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*IDC **23** 12:52:27.5±1.5, 11°.28S×162°.70E, h0^{km}, mb3.7/5, mbtmp3.9/7, ML3.6/2, MS3.5/23, Error ellipse: s-maj=30.7km s-min=26.9km az=97.0*
ISC 23 12:52:33.1±1.1**, 11°.4S**±0°.1×**162°.7E**±0°.1**, h39**^{km}**, n32, σ1^{s}.07**/9**, mb3.7**/5**, MS3.4**/19**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.33**	**305**	Pn	**Pn**	**12 53 22.0**	**-0.7**
	686nm,0.3s,baz=179,slow=8.2,SNR=18						
HNR				Sn	**Sn**	**12 54 02.7**	**+1.7**
	772nm,0.3s,baz=229,slow=20,SNR=3.3						
DZM	**Mont Dzumac**	**11.24**	**162**	Pn	**Pn**	**12 55 12.0**	**+0.7**
	0.2nm,0.3s,baz=326,slow=18,SNR=8.7						
DZM				LR	LR	12 58 25.7	
	comp=Z,152nm,19.4s,baz=22,slow=32						
	8.0nm,1.1s						
PMG	**Port Moresby**	**15.44**	**276**	LR	LR	13 01 22.5	
	comp=Z,210nm,20.5s,baz=112,slow=35						
MSVF	**Nonsavu**	**16.13**	**115**	LR	LR	13 01 02.6	
	comp=Z,211nm,20.6s,baz=273,slow=32						
CTA	**Charters Tower**	**18.07**	**239**	P	**P**	**12 56 42.1**	**+0.8**
	0.2nm,0.3s,baz=65,slow=14,SNR=5.1						
CTA				LR	LR	13 03 07.7	
	comp=Z,174nm,18.3s,baz=78,slow=35						
	7.5nm,0.9s						
AFI	**Afiamalu**	**25.00**	**99**	LR	LR	13 05 37.8	
	comp=Z,68nm,20.5s,baz=250,slow=32						
RAO	**Raoul Island**	**25.36**	**137**	LR	LR	13 06 40.3	
	comp=Z,106nm,19.0s,baz=202,slow=34						
STKA	**Stephens Creek**	**28.24**	**220**	LR	LR	13 08 50.6	
	comp=Z,153nm,19.7s,baz=29,slow=35						
WRA	**Warramunga Arr**	**28.60**	**249**	P	**P**	**12 58 25.2**	**-0.7**
	0.3nm,0.4s,baz=78,slow=9.0,SNR=5.6						
	0.3nm,0.4s						
H11S2	**WAKE ISLAND Hy**	**29.91**	**8**	T	T	13 29 33.0	
	baz=188,slow=76,SNR=50						
H11S3	**WAKE ISLAND Hy**	**29.91**	**8**	T	T	13 29 34.5	
	baz=188,slow=76,SNR=31						
H11S1	**WAKE ISLAND Hy**	**29.93**	**8**	T	T	13 29 36.1	
	baz=188,slow=76,SNR=27						
ASAR	**Alice Springs**	**30.02**	**242**	P	**P**	**12 58 37.3**	**-1.2**
	0.7nm,0.8s,baz=66,slow=9.6,SNR=9.0						
ASAR				LR	LR	13 10 33.0	
	comp=Z,132nm,18.4s,baz=70,slow=36						
	0.7nm,0.8s						
GUMO	**Guam**	**30.46**	**324**	LR	LR	13 09 48.9	
	comp=Z,94nm,22.0s,baz=152,slow=34						
H11N1	**WAKE ISLAND Hy**	**31.14**	**8**	T	T	13 31 06.8	
	baz=188,slow=76,SNR=23						
H11N3	**WAKE ISLAND Hy**	**31.14**	**8**	T	T	13 31 02.0	
	baz=188,slow=76,SNR=14						
H11N2	**WAKE ISLAND Hy**	**31.16**	**8**	T	T	13 31 08.3	
	baz=188,slow=76,SNR=14						
SIJI	**Sorong**	**32.92**	**286**	LR	LR	13 12 15.5	
	comp=Z,130nm,19.8s,baz=71,slow=36						
RPZ	**Rata Peaks**	**33.05**	**169**	LR	LR	13 10 54.3	
	comp=Z,94nm,18.7s,baz=19,slow=33						
DAV	**Davao City (W)**	**41.24**	**295**	LR	LR	13 16 58.1	
	comp=Z,30nm,18.2s,baz=151,slow=36						
KAPI	**Kappang**	**42.96**	**275**	LR	LR	13 20 23.7	
	comp=Z,23nm,19.4s,baz=102,slow=39						
PPT	**Papeete**	**46.50**	**103**	LR	LR	13 16 00.1	
	comp=Z,38nm,19.7s,baz=349,slow=30						
NWAO	**Narrogin (SRO)**	**46.85**	**235**	LR	LR	13 20 44.9	
	comp=Z,111nm,18.7s,baz=42,slow=36						
JNU	**Nakatsue**	**53.65**	**327**	LR	LR	13 20 43.6	
	comp=Z,24nm,22.0s,baz=153,slow=32						
KSRS	**Korea Array**	**58.50**	**328**	LR	LR	13 25 34.4	
	comp=Z,23nm,20.3s,baz=140,slow=34						
KLR	**Kul'dur**	**66.20**	**338**	LR	LR	13 29 45.0	
	comp=Z,19nm,20.7s,baz=144,slow=34						
SONM	**Songino Array**	**77.18**	**325**	P	**P**	**13 04 23.0**	**0.0**
	1.2nm,0.7s,baz=116,slow=6.6,SNR=2.7						
	1.2nm,0.7s						
ILAR	**Eielson Array**	**84.76**	**19**	P	**P**	**13 05 03.2**	**+0.4**
	0.5nm,0.9s,baz=215,slow=6.0,SNR=4.2						
ILAR				LR	LR	13 37 19.4	
	comp=Z,26nm,19.9s,baz=222,slow=32						
	0.5nm,0.9s						
NVAR	**Mina Array Bea**	**88.49**	**50**	LR	LR	13 37 03.9	
	comp=Z,33nm,21.1s,baz=230,slow=30						
MKAR	**Makanchi Array**	**91.72**	**317**	P	**P**	**13 05 36.1**	**-0.5**
	0.3nm,0.7s,baz=124,slow=5.5,SNR=2.9						
MKAR				LR	LR	13 46 37.6	
	comp=Z,12nm,21.1s,baz=96,slow=36						
	0.3nm,0.7s						
NRIK	**Noril'sk**	**95.38**	**340**	LR	LR	13 50 46.7	
	comp=Z,23nm,19.5s,baz=70,slow=37						
SNAA	**Sanae**	**96.61**	**185**	LR	LR	13 47 52.0	
	comp=Z,62nm,19.0s,baz=224,slow=34						

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*TRN **23** 12:58:05.8, 18°.92N×64°.30W, h24^{km}, M3.6(RSPR)*
*NEIC **23** 12:58:07.2±1.6, 19°.0N±0°.1×64°.20W±0°.06, h51^{km}±36^{km}, ML3.6/40, Md3.6/24(RSPR), Error ellipse: s-maj=15.4km s-min=7.6km az=188.0*
*RSPR **23** 12:58:08.6, 18°.77N×64°.22W, h71^{km}±7^{km}, MD3.6/11*
*OSPL **23** 12:58:44.6±0.3, 18°.40N×67°.19W, h5^{km}, ML2.0*
ISC 23 12:58:08.6±1.5**, 18°.93N**±0°.10×**64°.30W**±0°.03**, h54**^{km}±39^{km}**, n71, σ0^{s}.94**/86**, 21C, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUPR	**Culebra, Puert**	**1.12**	**237**	⇑*e*P	**Pn**	**12 58 27.5**	**-0.6**
CUPR	**Culebra, Puert**	**1.12**	**237**	*e*S	**Sn**	**12 58 42.5**	**+0.1**
CUPR	**Culebra, Puert**	**1.12**	**237**		**Pn**	**12 58 27.5**	**-0.6**
CUPR					**Sn**	**12 58 42.5**	**+0.1**
CDVI	**St. Croix**	**1.25**	**201**		**Pn**	**12 58 30.2**	**+0.4**
CDVI	**St. Croix**	**1.25**	**201**	*e*P	**Pn**	**12 58 30.1**	**+0.2**
CDVI				*e*S	**Sn**	**12 58 46.8**	**+1.2**
MTP	**Monte Pirata**	**1.45**	**235**	⇑*e*P	**Pn**	**12 58 32.3**	**-0.2**
MTP	**Monte Pirata**	**1.45**	**235**		**Pn**	**12 58 32.3**	**-0.2**
MTP					**Sn**	**12 58 50.5**	**0.0**
MTP	**Monte Pirata**	**1.45**	**235**	IAML		12 58 53.1	
	comp=N,667nm,0.3s						
MTP				IAML		12 58 57.4	
	comp=E,888nm,0.3s						
MTP	**Monte Pirata**	**1.45**	**235**	⇑*e*P	**Pn**	**12 58 32.3**	**-0.2**
MTP				*e*S	**Sn**	**12 58 50.5**	**0.0**
SMRT	**St. Maarten**	**1.45**	**127**		**Pn**	**12 58 31.7**	**-0.8**
SMRT				IAML		12 58 54.3	
	comp=N,784nm,0.5s						
SMRT				IAML		12 59 02.4	
	comp=E,772nm,0.4s						
SMRT	**St. Maarten**	**1.45**	**127**	*e*P	**Pn**	**12 58 32.5**	**0.0**
SMRT				*e*S	**Sn**	**12 58 51.9**	**+1.3**
CBYP	**Canovanas**	**1.62**	**246**	⇑*e*P	**Pn**	**12 58 34.2**	**-0.6**
CBYP	**Canovanas**	**1.62**	**246**		**Pn**	**12 58 34.2**	**-0.6**
CBYP					**Sn**	**12 58 55.8**	**+1.2**
CBYP	**Canovanas**	**1.62**	**246**	⇑*e*P	**Pn**	**12 58 34.2**	**-0.6**
CBYP				*e*S	**Sn**	**12 58 55.8**	**+1.2**
SABA	**Saba**	**1.64**	**142**	Pn	**Pn**	**12 58 33.7**	**-1.4**
SABA				IAML		12 59 05.5	
	comp=E,985nm,0.7s						
SABA				IAML		12 59 19.1	
	comp=N,714nm,0.4s						
HUMP	**Col San Antoni**	**1.67**	**242**	⇑*e*P	**Pn**	**12 58 35.1**	**-0.3**
HUMP	**Col San Antoni**	**1.67**	**242**		**Pn**	**12 58 35.1**	**-0.3**
HUMP					**Sn**	**12 58 56.1**	**+0.3**
HUMP	**Col San Antoni**	**1.67**	**242**	IAML		12 59 03.6	
	comp=E,490nm,0.5s						
HUMP				IAML		12 59 04.8	
	comp=N,638nm,0.3s						
HUMP	**Col San Antoni**	**1.67**	**242**	⇑*e*P	**Pn**	**12 58 35.1**	**-0.3**
HUMP				*e*S	**Sn**	**12 58 56.1**	**+0.3**
GCPR	**Guaynabo City**	**1.80**	**250**	⇑*e*P	**Pn**	**12 58 36.9**	**-0.4**
GCPR	**Guaynabo City**	**1.80**	**250**	*e*S	**Sn**	**12 58 58.1**	**-0.9**
GCPR	**Guaynabo City**	**1.80**	**250**		**Pn**	**12 58 36.9**	**-0.4**
GCPR					**Sn**	**12 58 58.1**	**-0.9**
SEUS	**St. Eustatius**	**1.90**	**139**	Pn	**Pn**	**12 58 36.4**	**-2.3**
SEUS				IAML		12 59 39.1	
	comp=N,371nm,0.1s						
SJG	**San Juan**	**1.94**	**245**		**Pn**	**12 58 38.8**	**-0.3**
IGPR	**InterUniversit**	**1.97**	**241**	⇑*e*P	**Pn**	**12 58 39.6**	**+0.1**
IGPR	**InterUniversit**	**1.97**	**241**	*e*S	**Sn**	**12 59 03.2**	**+0.2**
IGPR	**InterUniversit**	**1.97**	**241**		**Pn**	**12 58 39.6**	**+0.1**
IGPR					**Sn**	**12 59 03.2**	**+0.2**
EMPR	**Esperanza - Ma**	**2.16**	**258**		**Pn**	**12 58 42.4**	**+0.2**
EMPR				IAML		12 59 15.9	
	comp=N,551nm,0.5s						
CELP	**Cerrillos**	**2.33**	**249**	⇑*e*P	**Pn**	**12 58 44.6**	**+0.1**
CELP	**Cerrillos**	**2.33**	**249**		**Pn**	**12 58 44.6**	**+0.1**
CELP					**Sn**	**12 59 10.2**	**-1.7**
CELP	**Cerrillos**	**2.33**	**249**	IAML		12 59 16.6	
	comp=E,219nm,0.6s						
CELP				IAML		12 59 19.8	
	comp=N,276nm,0.9s						
CELP	**Cerrillos**	**2.33**	**249**	⇑*e*P	**Pn**	**12 58 44.6**	**+0.1**
CELP				*e*S	**Sn**	**12 59 10.2**	**-1.7**
OBIP	**Obispado Ponce**	**2.36**	**248**	⇑*e*P	**Pn**	**12 58 44.4**	**-0.5**
OBIP	**Obispado Ponce**	**2.36**	**248**		**Pn**	**12 58 44.4**	**-0.5**
OBIP					**Sn**	**12 59 11.9**	**-0.8**
OBIP	**Obispado Ponce**	**2.36**	**248**	IAML		12 59 18.9	
	comp=N,200nm,0.8s						
OBIP				IAML		12 59 20.1	
	comp=E,238nm,0.7s						
OBIP	**Obispado Ponce**	**2.36**	**248**	⇑*e*P	**Pn**	**12 58 44.4**	**-0.5**
OBIP				*e*S	**Sn**	**12 59 11.9**	**-0.8**
UUPR	**Utuado, UPR, P**	**2.39**	**254**		**Pn**	**12 58 45.6**	**+0.2**
AOPR	**Arecibo Observ**	**2.40**	**256**	⇑*e*P	**Pn**	**12 58 45.6**	**+0.1**
AOPR	**Arecibo Observ**	**2.40**	**256**		**Pn**	**12 58 45.6**	**+0.1**
AOPR	**Arecibo Observ**	**2.40**	**256**	IAML		12 59 26.4	
	comp=N,476nm,0.4s						
AOPR	**Arecibo Observ**	**2.40**	**256**	*e*P	**Pn**	**12 58 45.1**	**-0.3**
AOPR				*e*S	**Sn**	**12 59 14.3**	**+0.6**
ANWB	**Willy Bob**	**2.70**	**117**	Pn	**Pn**	**12 58 47.8**	**-1.7**
ANWB	**Willy Bob**	**2.70**	**117**	*e*P	**Pn**	**12 58 48.1**	**-1.4**
ANWB				*e*S	**Sn**	**12 59 22.4**	**+1.4**
AGPR	**Aguadilla, PR**	**2.71**	**261**	⇑*e*P	**Pn**	**12 58 49.5**	**-0.1**
AGPR	**Aguadilla, PR**	**2.71**	**261**		**Pn**	**12 58 49.5**	**-0.1**
AGPR					**Sn**	**12 59 23.0**	**+1.8**
AGPR	**Aguadilla, PR**	**2.71**	**261**	IAML		12 59 25.5	
	comp=N,196nm,0.7s						
AGPR				IAML		12 59 31.1	
	comp=E,213nm,0.6s						
AGPR	**Aguadilla, PR**	**2.71**	**261**	⇑*e*P	**Pn**	**12 58 49.5**	**-0.1**
AGPR				*e*S	**Sn**	**12 59 23.0**	**+1.8**
AGPR	**Aguadilla, PR**	**2.71**	**261**	*i* P	**Pn**	**12 58 46.6**	**-3.0**
AGPR				IAML		12 59 24.3	
	comp=Z,95nm,0.3s						
MLPR	**Magueyes Islan**	**2.78**	**250**	⇑*e*P	**Pn**	**12 58 51.3**	**+0.7**
MLPR	**Magueyes Islan**	**2.78**	**250**	*e*S	**Sn**	**12 59 23.3**	**+0.4**
MLPR	**Magueyes Islan**	**2.78**	**250**		**Pn**	**12 58 51.3**	**+0.7**
MLPR					**Sn**	**12 59 23.3**	**+0.4**
PRSN	**Puerto Rico Se**	**2.79**	**256**		**Pn**	**12 58 51.6**	**+0.8**
CRPR	**Cabo Rojo, PR**	**2.82**	**251**	⇑*e*P	**Pn**	**12 58 51.7**	**+0.5**
CRPR	**Cabo Rojo, PR**	**2.82**	**251**		**Pn**	**12 58 51.7**	**+0.5**
CRPR					**Sn**	**12 59 24.4**	**+0.3**
CRPR	**Cabo Rojo, PR**	**2.82**	**251**	IAML		12 59 33.7	
	comp=N,153nm,0.9s						
CRPR				IAML		12 59 36.2	
	comp=E,184nm,0.7s						
CRPR	**Cabo Rojo, PR**	**2.82**	**251**	⇑*e*P	**Pn**	**12 58 51.7**	**+0.5**
CRPR				*e*S	**Sn**	**12 59 24.4**	**+0.3**
CRPR	**Cabo Rojo, PR**	**2.82**	**251**	*i* P	**Pn**	**12 58 51.7**	**+0.5**
CRPR				IAML		12 59 33.6	
	comp=Z,154nm,0.6s						
MBFL	**Flemmings, Mon**	**2.94**	**137**	*e*P	**Pn**	**12 58 52.1**	**-0.8**
MLYT	**Lee's Yard**	**2.98**	**137**	*e*P	**Pn**	**12 58 54.7**	**+1.3**
ANBD	**Bethesda, Anti**	**3.05**	**127**	*e*P	**Pn**	**12 58 53.8**	**-0.5**
ANBD				*e*S	**Sn**	**12 59 29.9**	**+0.2**
IDE	**Isla Desecheo**	**3.06**	**260**	⇑*e*P	**Pn**	**12 58 55.6**	**+1.1**
IDE	**Isla Desecheo**	**3.06**	**260**		**Pn**	**12 58 55.6**	**+1.1**
IDE	**Isla Desecheo**	**3.06**	**260**	⇑*e*P	**Pn**	**12 58 55.6**	**+1.1**
PCDR	**Punta Cana, DR**	**3.89**	**265**	Pn	**Pn**	**12 59 06.9**	**+1.0**
PCDR				IAML		13 00 58.9	
	comp=E,119nm,2.4s						
MAGL	**Barre de l'ile**	**4.13**	**135**	*e*P	**Pn**	**12 59 08.7**	**-0.6**
SDDR	**Presa de Saban**	**6.62**	**272**		**Pn**	**12 59 43.0**	**-0.3**
SDDR	**Presa de Saban**	**6.62**	**272**	*i* P	**Pn**	**12 59 43.9**	**+0.5**
SDDR				IAML		13 00 12.8	
	comp=Z,11nm,1.7s						
GRTK	**Grand Turk**	**6.91**	**293**	Pn	**Pn**	**12 59 44.8**	**-2.6**
LODA1	**ITESIL, Dajabo**	**7.02**	**276**	*e*	Pn	12 59 55.2	+6.4
BIRV	**Birongo**	**8.62**	**193**	Pn	**Pn**	**13 00 09.7**	**-1.1**
URIC	**Uribia, Colomb**	**10.33**	**227**	Pn	**Pn**	**13 00 32.1**	**-2.0**

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*UPP **23** 13:00:07.7±1.0, 65°.14N×25°.38E, h0^{km}, ML1.6*
HEL 23 13:00:06.1±0.1**, 65°.12N×25°.68E, h0^{km}, ML1.3, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUL	**Oulu**	**0.10**	**110**	PG	Pg	13 00 07.2	-0.8
OUL				SG	Sg	13 00 07.8	-1.4
OBF4	**Vikkela, Lumij**	**0.39**	**219**	PG	Pg	13 00 13.0	-0.6
OBF4				SG	Sg	13 00 18.2	-0.4
OUF	**Merijarvi**	**0.86**	**209**	PG	Pg	13 00 21.4	-1.0
OUF				SG	Sg	13 00 32.5	-1.1
OUF				MSG		13 00 32.6	
	comp=Z,3.6nm,0.2s						
OBF0	**Syolatti, Pyha**	**0.88**	**225**	PG	Pg	13 00 22.0	-0.9
	baz=40						
OBF0				MSG		13 00 33.1	
	comp=Z,2.3nm,0.2s						
OBF0				SB	Sg	13 00 34.2	0.0
TOF	**Tornio**	**1.12**	**330**	PG	Pg	13 00 26.2	-1.3
	baz=146						
TOF				MSG		13 00 40.1	
	comp=Z,1.4nm,0.2s						
TOF				SB	Sg	13 00 40.8	-1.2
KALU	**Kalix**	**1.22**	**309**	P	Pg	13 00 28.1	-1.4
KALU				S	Sg	13 00 43.9	-1.4
KALU	**Kalix**	**1.22**	**309**	PG	Pg	13 00 28.3	-1.2
	baz=122						
KALU				SB	Sg	13 00 44.4	-0.9
OBF8	**Ulkokalla**	**1.24**	**232**	PN	Pg	13 00 29.0	-0.9
OBF8				MSG		13 00 43.7	
	comp=Z,5.2nm,0.2s						
RNF	**Rovaniemi**	**1.50**	**5**	PN	Pn	13 00 33.9	-0.4
	baz=188						
RNF				SN	Sg	13 00 53.2	-1.1

MSF	**Maaselka**	**1.61**	**59**	PN	Pn	13 00 35.7	-0.1
MSF				SN	Sg	13 00 58.7	+0.9
SJUU	**Sjulsmark**	**1.75**	**285**	P	Pn	13 00 37.7	0.0
SJUU				S	Sn	13 01 00.3	-0.5
BURU	**Burvik**	**1.92**	**256**	P	Pn	13 00 40.2	+0.3
BURU	**Burvik**	**1.92**	**256**	PG	Pn	13 00 40.3	+0.4
BURU				SG	Sb	13 01 05.9	-0.3
OLKF	**Oulanka, Finla**	**1.96**	**50**	PG	Pb	13 00 41.5	-1.0
OLKF				MSG		13 01 04.2	
	comp=Z,1.3nm,0.2s						
OLKF				SG	Sb	13 01 07.0	-0.4
KU6	**Riekki**	**1.97**	**61**	PG	Pn	13 00 41.2	+0.5
KU6				MSG		13 01 04.7	
	comp=Z,1.8nm,0.2s						
KU6				SG	Sb	13 01 07.6	-0.4
ERTU	**Ertsjaerv**	**2.04**	**317**	P	Pn	13 00 42.3	+0.7
ERTU				S	Sn	13 01 07.5	-0.2
ERTU	**Ertsjaerv**	**2.04**	**317**	PG	Pn	13 00 42.5	+0.9
	baz=133						
ERTU				SG	Sb	13 01 09.0	-0.7
RMF	**Romuvaara**	**2.04**	**114**	PG	Pn	13 00 42.5	+0.9
RMF				MSG		13 01 06.7	
	comp=Z,2.6nm,0.2s						
RMF				SG	Sb	13 01 09.2	-0.7
PAJU	**Pajala**	**2.18**	**332**	PG	Pb	13 00 45.1	-1.4
PAJU				SG	Sn	13 01 12.6	+1.3
SGF	**Sodankyl**	**2.36**	**8**	SG	Sb	13 01 18.2	-0.9
LILU	**Lilltraesk**	**2.46**	**277**	P	Pn	13 00 47.5	0.0
UMAU	**Umeaa**	**2.49**	**242**	PB	Pn	13 00 47.9	+0.1
	baz=62						
UMAU				SG	Sb	13 01 21.5	-1.3
HEF	**Hetta**	**3.40**	**347**	SG	Sb	13 01 47.8	-1.2
FIA0	**FINESS Array S**	**3.69**	**177**	SG	Sg	13 02 01.6	-3.0

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*IDC **23** 13:01:38.9±0.8, 11°.76N×142°.78E, h0^{km}, mb3.8/11, mbtmp3.9/12, ML3.9/1, Error ellipse: s-maj=24.5km s-min=17.4km az=116.0*

ISC 23 13:01:43.7±0.8, **11°.7N**±0°.1×**142°.8E**±0°.1, **h32**^{km}, **n13**, σ**0ˢ.96**/14, **mb3.8**/11, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.76**	**48**	Pn	**Pn**	**13 02 25.5**	**-0.2**
	21nm,0.3s,baz=205,slow=12,SNR=12						
GUMO				Sn	**Sn**	**13 02 59.0**	**+1.0**
	24nm,0.3s,baz=6.4,slow=22,SNR=2.2						
	135nm,0.5s						
WRA	**Warramunga Arr**	**32.55**	**195**	P	**P**	**13 08 12.2**	**+0.2**
	0.5nm,0.8s,baz=21,slow=9.6,SNR=5.6						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**36.23**	**194**	P	**P**	**13 08 44.2**	**+0.2**
	0.3nm,0.6s,baz=18,slow=12,SNR=7.6						
	0.3nm,0.6s						
KLR	**Kul'dur**	**38.49**	**348**	P	**P**	**13 09 03.5**	**+0.7**
	1.3nm,0.9s,baz=126,slow=8.7,SNR=3.6						
	1.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**42.76**	**284**	P	**P**	**13 09 39.0**	**+0.4**
	1.7nm,0.9s,baz=87,slow=6.3,SNR=10						
	1.7nm,0.9s						
PETK	**Petropavlovsk-**	**42.98**	**13**	P	**P**	**13 09 38.7**	**-1.1**
	1.1nm,1.0s,baz=193,slow=8.6,SNR=4.8						
	1.1nm,1.0s						
SONM	**Songino Array**	**47.12**	**327**	P	**P**	**13 10 14.4**	**+1.5**
	0.5nm,0.7s,baz=140,slow=7.6,SNR=2.1						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**61.42**	**317**	P	**P**	**13 11 56.2**	**-0.8**
	0.6nm,0.6s,baz=100,slow=7.9,SNR=6.5						
	0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**61.96**	**325**	P	**P**	**13 11 58.6**	**-1.8**
	0.3nm,0.2s,baz=110,slow=8.3,SNR=2.1						
	0.3nm,0.2s						
KDAK	**Kodiak Island**	**66.72**	**32**	P	**P**	**13 12 31.0**	**-0.6**
	7.2nm,0.8s,baz=229,slow=2.5,SNR=5.1						
	7.2nm,0.8s						
YKA	**Yellowknife Ar**	**85.44**	**27**	P	**P**	**13 14 17.6**	**-0.4**
	1.2nm,0.6s,baz=285,slow=4.8,SNR=26						
	1.2nm,0.6s						
NVAR	**Mina Array Bea**	**89.68**	**51**	P	**P**	**13 14 40.0**	**+0.8**
	1.2nm,0.8s,baz=289,slow=6.4,SNR=3.0						
	1.2nm,0.8s						
LPAZ	**La Paz**	**149.70**	**102**	PKPbc	**PKPbc**	**13 21 31.7**	**-0.3**
	1.3nm,0.8s,baz=303,slow=2.7,SNR=3.0						

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*BGR **23** 13:11:07.2±0.6, 46°.29N×13°.19E, h10^{km}, ML2.6/9, Error ellipse: s-maj=7.8km s-min=3.3km az=179.0*

*LDG **23** 13:11:07.9±0.2, 46°.31N×13°.17E, h11^{km}, Ml3.0/4, Error ellipse: s-maj=5.1km s-min=4.4km az=16.0*

*ROM **23** 13:11:07.3±0.1, 46°.337N±0°.004×13°.171E±0°.006, h10^{km}, ML2.8/84, Error ellipse: s-maj=0.5km s-min=0.4km az=203.0*

*VIE **23** 13:11:07.2, 46°.33N×13°.15E, h6^{km}, mb2.3/19, ml3.0/19 1 km S of Venzone*

*PRU **23** 13:11:08.4±0.0, 46°.33N×13°.18E, h4^{km}*

ISC 23 13:11:07.6±0.7, **46°.32N**±0°.01×**13°.16E**±0°.01, **h13**^{km}±3^{km}, **n148**, σ**1ˢ.41**/220, **21C-24D**, **Austria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOO	**Bordano**	**0.04**	**264**	⇑*e*Pg	**Pg**	**13 11 09.7**	**-0.4**
BOO				*e*Sg	**Sg**	**13 11 11.1**	**-0.7**
BOO	**Bordano**	**0.04**	**264**	⇑*i*P	**Pg**	**13 11 09.7**	**-0.4**
BOO				S	**Sg**	**13 11 11.1**	**-0.7**
GEPF	**Gemona**	**0.05**	**197**	⇑*i*P	**Pg**	**13 11 09.8**	**-0.2**
GEPF				S	**Sg**	**13 11 11.6**	**-0.2**
GEPF				AML	AML		
	comp=N,8145µm,0.1s						
GEPF				AML	AML		
	comp=E,5890µm,0.7s						
BAD	**Bernadia**	**0.10**	**147**	⇑*e*Pg	**Pg**	**13 11 10.5**	**-0.2**
BAD				*e*Sg	**Sg**	**13 11 12.8**	**-0.1**
BAD	**Bernadia**	**0.10**	**147**	P	**Pg**	**13 11 10.5**	**-0.2**
BAD				S	**Sg**	**13 11 12.8**	**-0.1**
VINO	**Villanova**	**0.11**	**129**	⇓*e*Pg	**Pg**	**13 11 10.5**	**-0.2**
VINO				*e*Sg	**Sg**	**13 11 12.7**	**-0.2**
VINO	**Villanova**	**0.11**	**129**	P	**Pg**	**13 11 10.5**	**-0.2**
VINO				S	**Sg**	**13 11 12.7**	**-0.2**
VINO				AML	AML		
	comp=N,3595µm,0.5s						
VINO				AML	AML		
	comp=E,4255µm,0.3s						
VINO				AML	AML		
	comp=N,3595µm,1.5s						
BUA	**Buia**	**0.11**	**194**	⇑*e*Pg	**Pg**	**13 11 10.6**	**-0.1**
BUA				*e*Sg	**Sg**	**13 11 12.9**	**0.0**
FUSE	**Fusea**	**0.14**	**309**	⇓*e*Pg	**Pg**	**13 11 10.9**	**-0.3**
FUSE				*e*Sg	**Sg**	**13 11 13.9**	**+0.2**
FUSE	**Fusea**	**0.14**	**309**	⇓*i*P	**Pg**	**13 11 10.9**	**-0.3**
FUSE				S	**Sg**	**13 11 14.1**	**+0.4**
MPRI	**Monte Prat**	**0.14**	**235**	⇑*e*Pg	**Pg**	**13 11 11.1**	**-0.1**
MPRI				*e*Sg	**Sg**	**13 11 13.9**	**+0.1**
MPRI	**Monte Prat**	**0.14**	**235**	⇑*i*P	**Pg**	**13 11 11.1**	**-0.1**
MPRI				S	**Sg**	**13 11 14.1**	**+0.3**
MPRI				AML	AML		
	comp=N,13550µm,0.5s						
MPRI				AML	AML		
	comp=N,10450µm,0.5s						
MPRI				AML	AML		
	comp=E,6475µm,0.6s						
MPRI				AML	AML		
	comp=E,8110µm,0.6s						
PTCC	**Patocco-Chiusa**	**0.16**	**59**	⇑*i*P	**Pg**	**13 11 11.2**	**-0.3**
PTCC				S	**Sg**	**13 11 14.1**	**0.0**
PTCC				AML	AML		
	comp=E,3335µm,0.2s						
PTCC				AML	AML		
	comp=N,4250µm,0.1s						
PLRO	**Paularo**	**0.23**	**358**	⇓*e*Pg	**Pg**	**13 11 12.5**	**-0.1**
PLRO				*e*Sg	**Sg**	**13 11 16.4**	**+0.4**
PLRO	**Paularo**	**0.23**	**358**	P	**Pg**	**13 11 12.6**	**-0.1**
PLRO				S	**Sg**	**13 11 16.4**	**+0.4**
CLUD	**Cludinico**	**0.23**	**305**	⇓*e*Pg	**Pg**	**13 11 12.4**	**-0.2**
CLUD				*e*Sg	**Sg**	**13 11 16.4**	**+0.2**
CLUD	**Cludinico**	**0.23**	**305**	⇓*i*P	**Pg**	**13 11 12.5**	**-0.2**
CLUD				S	**Sg**	**13 11 16.3**	**+0.2**
CLUD				AML	AML		
	comp=E,3030µm,0.6s						
CLUD				AML	AML		
	comp=E,3155µm,0.6s						
CLUD				AML	AML		
	comp=N,1795µm,1.6s						
CLUD				AML	AML		
	comp=N,1705µm,1.6s						
CLUD				AML	AML		
	comp=E,3030µm,1.4s						
CLUD				AML	AML		
	comp=E,3155µm,1.4s						
COLI	**Coloredo**	**0.24**	**142**	⇓*e*Pg	**Pg**	**13 11 12.8**	**0.0**
COLI				*e*Sg	**Sg**	**13 11 17.2**	**+0.9**
ROBS	**Robic**	**0.26**	**108**	⇓*i*Pg	**Pg**	**13 11 12.6**	**-0.4**
ROBS				*i* Sg	**Sg**	**13 11 16.6**	**0.0**
ROBS				IAML		13 11 17.4	
	comp=Z,168nm,0.1s						
ZOU	**Zoufplan**	**0.27**	**331**	⇓*e*Pg	**Pg**	**13 11 13.3**	**0.0**
ZOU				*e*Sg	**Sg**	**13 11 17.8**	**+0.6**
ZOU	**Zoufplan**	**0.27**	**331**	⇓*i*P	**Pg**	**13 11 13.3**	**0.0**
ZOU				S	**Sg**	**13 11 17.8**	**+0.6**
ZOU				AML	AML		
	comp=N,2845µm,1.2s						
ZOU				AML	AML		
	comp=E,3660µm,0.6s						
ZOU				AML	AML		
	comp=E,3690µm,0.6s						
ZOU				AML	AML		
	comp=N,2825µm,1.1s						
ZOU				AML	AML		
	comp=N,2850µm,1.2s						
LSR	**Lussari**	**0.30**	**59**	⇑*e*Pg	**Pg**	**13 11 13.7**	**-0.1**
LSR				*e*Sg	**Sg**	**13 11 18.5**	**+0.5**
PRED	**Cave del Predi**	**0.30**	**67**	⇑*e*Pg	**Pg**	**13 11 13.6**	**-0.4**
PRED				*e*Sg	**Sg**	**13 11 18.7**	**+0.5**
PRED	**Cave del Predi**	**0.30**	**67**	P	**Pg**	**13 11 13.5**	**-0.4**
PRED				S	**Sg**	**13 11 18.7**	**+0.5**
STAL	**STALIGIAL**	**0.32**	**258**	⇓P	**Pg**	**13 11 13.7**	**-0.5**
STAL				S	**Sg**	**13 11 18.6**	**+0.1**
STAL				AML	AML		
	comp=E,3600µm,0.2s						
STAL				AML	AML		
	comp=E,4075µm,0.3s						
STAL				AML	AML		
	comp=N,4610µm,1.5s						
STAL				AML	AML		
	comp=N,3555µm,1.4s						
STAL				AML	AML		
	comp=N,3555µm,0.6s						
ACOM	**Acomizza, Ital**	**0.33**	**47**	⇑*e*Pg	**Pg**	**13 11 14.3**	**-0.2**
ACOM				*e*Sg	**Sg**	**13 11 19.6**	**+0.5**
ACOM	**Acomizza, Ital**	**0.33**	**47**	P	**Pg**	**13 11 14.2**	**-0.2**
ACOM				S	**Sg**	**13 11 19.8**	**+0.8**
ACOM				AML	AML		
	comp=E,2095µm,1.0s						
ACOM				AML	AML		
	comp=E,2030µm,1.0s						
ACOM				AML	AML		
	comp=N,1330µm,0.2s						
ACOM				AML	AML		
	comp=N,1270µm,0.2s						
ACOM				AML	AML		
	comp=E,2095µm,1.0s						
ACOM				AML	AML		
	comp=E,2030µm,1.0s						
DRE	**Drenchia**	**0.37**	**114**	⇓*e*Pg	**Pg**	**13 11 14.6**	**-0.5**
DRE				*e*Sg	**Sb**	**13 11 21.1**	**-0.6**
DRE	**Drenchia**	**0.37**	**114**	P	**Pg**	**13 11 14.6**	**-0.5**
DRE				S	**Sb**	**13 11 21.1**	**-0.6**
FVI	**Forni Avoltri**	**0.38**	**316**	P	**Pg**	**13 11 14.9**	**-0.4**
FVI				S	**Sg**	**13 11 20.6**	**+0.2**
CSMI	**Casera Mimoias**	**0.40**	**298**	⇓*e*Pg	**Pg**	**13 11 15.2**	**-0.5**
CSMI				*e*Sg	**Sg**	**13 11 21.5**	**+0.4**
TLI	**Talmassons**	**0.41**	**186**	*e*Pg	**Pg**	**13 11 15.5**	**-0.2**
CADS	**Cadrg**	**0.41**	**103**	⇓*i*Pg	**Pg**	**13 11 15.2**	**-0.6**
CADS				*i* Sg	**Sg**	**13 11 21.8**	**+0.5**
CADS				IAML		13 11 23.5	
	comp=Z,302nm,0.1s						
MLNI	**Malnisio**	**0.42**	**246**	⇓*e*Pg	**Pg**	**13 11 15.9**	**-0.1**
MYKA	**Terra Mystica**	**0.45**	**47**	*i* Pg	**Pg**	**13 11 16.4**	**-0.2**
	comp=Z,11nm,0.1s,SNR=49						
MYKA				*i* Sg	**Sg**	**13 11 23.3**	**+0.7**
	comp=Z,103nm,0.2s						
SABO	**M.te Sabotino**	**0.46**	**138**	⇑*e*Pg	**Pg**	**13 11 16.5**	**-0.2**
SABO				*e*Sg	**Sb**	**13 11 24.9**	**+0.6**
SABO	**M.te Sabotino**	**0.46**	**138**	P	**Pg**	**13 11 16.5**	**-0.2**
SABO				S	**Sb**	**13 11 24.7**	**+0.4**
SABO				AML	AML		
	comp=E,8300µm,0.2s						
SABO				AML	AML		
	comp=N,5710µm,0.3s						
SABO				AML	AML		
	comp=N,1470µm,0.8s						
SABO				AML	AML		
	comp=E,2070µm,0.3s						
SABO				AML	AML		
	comp=E,8305µm,0.2s						
SABO				AML	AML		
	comp=N,1470µm,1.2s						
SABO				AML	AML		
	comp=N,5710µm,1.7s						
CIMO	**Cimolais**	**0.50**	**269**	*e*Pg	**Pg**	**13 11 16.5**	**-1.0**
CIMO				*e*Sg	**Sg**	**13 11 23.8**	**-0.3**
CIMO	**Cimolais**	**0.50**	**269**	P	**Pg**	**13 11 16.4**	**-1.0**
CIMO				AML	AML		
	comp=E,298µm,0.4s						
CIMO				AML	AML		
	comp=E,299µm,0.4s						
CIMO				AML	AML		
	comp=N,396µm,0.5s						
CIMO				AML	AML		
	comp=E,298µm,0.4s						
CIMO				AML	AML		
	comp=N,393µm,0.5s						
POLC	**Polcenigo**	**0.55**	**237**	P	**Pg**	**13 11 18.4**	**+0.1**
POLC				S	**Sb**	**13 11 27.8**	**+1.0**
GORS	**Gorjuse**	**0.58**	**90**	*i* Pg	**Pg**	**13 11 18.1**	**-0.9**
GORS				*i* Sg	**Sg**	**13 11 27.2**	**+0.5**
GORS				IAML		13 11 29.4	
	comp=Z,98nm,0.1s						
CSO	**Casso**	**0.58**	**265**	*e*Pg	**Pg**	**13 11 18.1**	**-1.0**
VOJS	**Vojsko**	**0.58**	**120**	*i* Pg	**Pg**	**13 11 18.1**	**-0.9**
VOJS				*e*Sg	**Sb**	**13 11 27.8**	**-0.1**
VOJS				IAML		13 11 30.6	
	comp=Z,173nm,0.1s						
CAE	**Caneva**	**0.59**	**238**	*e*Pg	**Pg**	**13 11 19.2**	**-0.1**
CAE	**Caneva**	**0.59**	**238**	P	**Pg**	**13 11 19.1**	**-0.1**
ABTA	**Abfaltersbach**	**0.62**	**314**	*i* Pg	**Pg**	**13 11 19.3**	**-0.4**
	comp=Z,7.8nm,0.1s,SNR=12						
ABTA				*i* Sg	**Sg**	**13 11 28.0**	**+0.2**
	comp=Z,48nm,0.1s						
FRE8	**Fregona**	**0.64**	**241**	P	**Pg**	**13 11 19.7**	**-0.4**
AFL	**Alpe Faloria**	**0.71**	**287**	*e*Pg	**Pg**	**13 11 21.7**	**+0.3**
TRI	**Trieste**	**0.75**	**145**	*e*Pg	**Pg**	**13 11 21.6**	**-0.5**
TRI	**Trieste**	**0.75**	**145**	P	**Pg**	**13 11 20.8**	**-1.3**
TRI				S	**Sb**	**13 11 32.7**	**+0.2**
TRI				AML	AML		
	comp=E,416µm,1.4s						
TRI				AML	AML		
	comp=N,208µm,0.1s						
TRI				AML	AML		
	comp=E,416µm,0.6s						
JAVS	**Javornik**	**0.76**	**124**	*i* Pg	**Pg**	**13 11 21.1**	**-1.3**
KBA	**Koelnbreinsper**	**0.77**	**9**	*i* Pg	**Pg**	**13 11 22.5**	**0.0**
	comp=E,9.3nm,0.1s,SNR=67						
KBA				*i* Sg	**Sg**	**13 11 33.0**	**+0.5**
	comp=E,172nm,0.2s						
KBA	**Koelnbreinsper**	**0.77**	**9**	*e*Pg	**Pg**	**13 11 22.6**	**0.0**
KBA				*e*Sg	**Sg**	**13 11 31.4**	**-1.2**
AGOR	**Agordo**	**0.77**	**267**	*e*Pg	**Pg**	**13 11 22.6**	**0.0**
AGOR	**Agordo**	**0.77**	**267**	P	**Pg**	**13 11 23.0**	**+0.4**
AGOR				AML	AML		
	comp=E,354µm,0.8s						
AGOR				AML	AML		
	comp=N,486µm,1.1s						
AGOR				AML	AML		
	comp=E,354µm,0.8s						
AGOR				AML	AML		
	comp=N,486µm,1.1s						
AGOR				AML	AML		
	comp=N,302µm,0.3s						
AGOR				AML	AML		
	comp=N,486µm,0.9s						
AGOR				AML	AML		
	comp=E,271µm,0.7s						
AGOR				AML	AML		
	comp=N,302µm,1.7s						
CRNS	**Crni Vrh**	**0.80**	**107**	*i* Pg	**Pg**	**13 11 22.2**	**-1.0**
VARN	**Col Varnada, M**	**0.81**	**246**	*e*Pg	**Pg**	**13 11 22.3**	**-0.9**
VARN	**Col Varnada, M**	**0.81**	**246**	P	**Pg**	**13 11 22.2**	**-0.9**
VARN				AML	AML		
	comp=E,560µm,0.3s						
VARN				AML	AML		
	comp=E,584µm,0.3s						
VARN				AML	AML		
	comp=N,358µm,1.0s						
VARN				AML	AML		
	comp=N,366µm,0.8s						
VARN				AML	AML		
	comp=N,358µm,1.0s						
ED06	**Collalto TV**	**0.81**	**235**	*e*Pg	**Pg**	**13 11 23.5**	**+0.2**
RISI	**Rein**	**0.97**	**310**	P	**Pg**	**13 11 25.9**	**-0.6**
RISI				AML	AML		
	comp=N,826µm,0.4s						
RISI				AML	AML		
	comp=E,522µm,0.2s						
OBKA	**Obir**	**0.98**	**79**	*i* Pg	**Pg**	**13 11 25.8**	**-0.7**
	comp=E,6.0nm,0.1s,SNR=11						
OBKA				*i* Sg	**Sb**	**13 11 39.9**	**+0.6**
	comp=E,145nm,0.5s						
OBKA	**Obir**	**0.98**	**79**	*e*Pg	**Pg**	**13 11 25.9**	**-0.7**
OBKA				*e*Sg	**Sg**	**13 11 38.2**	**-1.1**
LJU	**Ljubljana**	**0.99**	**106**	⇓P	**Pg**	**13 11 26.1**	**-0.6**
LJU				AML	AML		
	comp=E,3480µm,1.0s						
LJU				AML	AML		
	comp=N,4775µm,0.6s						
CGRP	**Cima Grappa**	**1.05**	**245**	P	**Pg**	**13 11 27.9**	**+0.1**
CGRP				AML	AML		
	comp=E,262µm,0.4s						
CGRP				AML	AML		
	comp=N,233µm,0.9s						
CGRP				AML	AML		
	comp=N,197µm,0.4s						
CGRP				AML	AML		
	comp=N,233µm,1.1s						
CGRP				AML	AML		
	comp=E,254µm,0.9s						
BRES	**Bressanone**	**1.05**	**291**	P	**Pg**	**13 11 27.4**	**-0.5**
BRES				AML	AML		
	comp=E,292µm,0.2s						
BRES				AML	AML		
	comp=N,320µm,0.2s						
CTI	**Castel Tesino**	**1.08**	**256**	P	**Pb**	**13 11 28.8**	**+0.5**
CTI				AML	AML		
	comp=N,496µm,1.1s						
CTI				AML	AML		
	comp=E,754µm,0.8s						
CTI				AML	AML		
	comp=N,496µm,0.9s						
BOSI	**Bolzano**	**1.29**	**278**	AML	AML		
	comp=E,632µm,0.4s						
BOSI				AML	AML		
	comp=E,632µm,1.6s						
BOSI				AML	AML		
	comp=N,770µm,0.3s						
SOKA	**Soboth**	**1.34**	**74**	*i* Pg	**Pn**	**13 11 32.5**	**+0.4**
	comp=N,2.1nm,0.2s						
SOKA				*e*Sg	**Sg**	**13 11 52.1**	**+1.3**
	comp=N,18nm,0.3s						
ROSI	**Rosskopf**	**1.35**	**297**	P	**Pn**	**13 11 32.8**	**+0.5**
ROSI				AML	AML		
	comp=E,498µm,0.5s						
ROSI				AML	AML		
	comp=N,477µm,0.7s						
BIOA	**Bad Ischl, Aus**	**1.41**	**13**	*e*Pg	**Pb**	**13 11 34.6**	**+0.9**
	comp=N,3.3nm,0.2s						
BIOA				*e*Sg	**Sg**	**13 11 53.1**	**+0.2**
	comp=N,54nm,0.3s						
WTTA	**Wattenberg**	**1.41**	**312**	*e*Pg	**Pb**	**13 11 34.2**	**+0.4**
	comp=N,5.2nm,0.1s,SNR=12						
WTTA				*e*Sn	**Sg**	**13 11 53.3**	**+0.3**
	comp=N,43nm,0.3s						
WTTA	**Wattenberg**	**1.41**	**312**	*e*Pg	**Pn**	**13 11 34.0**	**+0.8**
WTTA	**Wattenberg**	**1.41**	**312**	P	**Pn**	**13 11 33.6**	**+0.5**
WTTA				AML	AML		
	comp=N,210µm,1.6s						
WTTA				AML	AML		
	comp=E,148µm,0.8s						
WTTA				AML	AML		
	comp=N,210µm,0.4s						
WTTA				AML	AML		
	comp=E,148µm,1.2s						
RJOB	**Jochberg**	**1.44**	**350**	*e*Pg	**Pb**	**13 11 34.7**	**+0.4**
DOSS	**Dosso del Somm**	**1.44**	**253**	P	**Pn**	**13 11 34.5**	**+0.9**
DOSS				AML	AML		
	comp=E,433µm,0.3s						
DOSS				AML	AML		
	comp=N,503µm,1.4s						
DOSS				AML	AML		
	comp=E,500µm,1.4s						
DOSS				AML	AML		
	comp=N,504µm,1.4s						
DOSS				AML	AML		
	comp=E,500µm,0.6s						
DOSS				AML	AML		
	comp=N,454µm,0.3s						
DOSS				AML	AML		
	comp=N,504µm,0.6s						
SMRN	**Sveta Marina**	**1.47**	**151**	*e*Pn	**Pn**	**13 11 34.4**	**+0.7**
SMRN				Sn	**Sg**	**13 11 54.5**	**-0.3**
BRJN	**Brijuni**	**1.48**	**164**	P	**Pb**	**13 11 34.9**	**0.0**
BRJN				S	**Sg**	**13 11 54.7**	**-0.4**
WATA	**Walderalm**	**1.48**	**314**	Pg	**Pb**	**13 11 35.9**	**+0.7**
	comp=N,2.8nm,0.2s,SNR=6.2						
WATA				*e*Sg	**Sg**	**13 11 56.3**	**+0.8**
	comp=N,43nm,0.2s						
GAGG	**Gaggia**	**1.55**	**262**	P	**Pb**	**13 11 36.4**	**+0.2**
GAGG				AML	AML		
	comp=E,330µm,0.8s						
GAGG				AML	AML		
	comp=N,425µm,1.5s						
GAGG				AML	AML		
	comp=E,427µm,1.5s						
GAGG				AML	AML		
	comp=N,426µm,1.5s						
GAGG				AML	AML		
	comp=E,427µm,0.5s						
GAGG				AML	AML		
	comp=N,304µm,0.8s						
GAGG				AML	AML		
	comp=N,426µm,0.5s						
LUSI	**Trento, Gardas**	**1.58**	**257**	P	**Pn**	**13 11 36.6**	**+1.1**
LUSI				AML	AML		
	comp=E,306µm,0.8s						
LUSI				AML	AML		
	comp=N,773µm,0.2s						
ROVR	**Rover Verones**	**1.61**	**246**	P	**Pn**	**13 11 36.4**	**+0.6**
ROVR				AML	AML		
	comp=E,116µm,0.6s						
ROVR				AML	AML		
	comp=N,260µm,0.3s						
ROVR				AML	AML		
	comp=E,116µm,1.4s						
SQTA	**Sankt Quirin**	**1.61**	**304**	Pn	**Pb**	**13 11 38.2**	**+0.9**
	SNR=8.0						
BOJS	**Bojanci**	**1.68**	**119**	⇑P	**Pb**	**13 11 38.0**	**-0.3**
BOJS				S	**Sg**	**13 12 02.3**	**+0.8**
BOJS				AML	AML		
	comp=E,406µm,0.3s						
BOJS				AML	AML		
	comp=N,430µm,0.6s						
MOA	**Molln**	**1.70**	**26**	*i* Pg	**Pb**	**13 11 39.4**	**+0.6**
	comp=N,7.2nm,0.2s						
MOA				*i* Sg	**Sg**	**13 12 03.3**	**+0.9**
	comp=N,17nm,0.3s						
MOTA	**Moosalm**	**1.74**	**307**	Pg	**Pg**	**13 11 41.0**	**-0.1**
	comp=N,3.9nm,0.1s,SNR=5.9						
MOTA				*e*Sg	**Sg**	**13 12 05.5**	**+1.8**
	comp=N,50nm,0.4s						
OZLJ	**Ozalj**	**1.76**	**113**	*e*Pn	**Pb**	**13 11 39.3**	**-0.4**
FETA	**Feichten**	**1.81**	**293**	*e*Pg	**Pb**	**13 11 41.5**	**+0.8**
	comp=N,5.4nm,0.3s,SNR=5.5						
FETA				*i* Sg	**Sg**	**13 12 05.6**	**-0.4**
	comp=N,5.8nm,0.3s						
MOSI	**Grossmontoni**	**1.83**	**280**	P	**Pb**	**13 11 41.3**	**+0.3**
MOSI				AML	AML		
	comp=N,716µm,0.5s						
MOSI				AML	AML		
	comp=E,442µm,0.3s						
MOSI				AML	AML		
	comp=N,716µm,1.5s						
PART	**Garmisch-Parte**	**1.83**	**311**	*e*Pg	**Pb**	**13 11 42.1**	**+1.1**
PART				*e*Sg	**Sg**	**13 12 07.2**	**+0.8**
MAGA	**Magasa**	**1.85**	**254**	P	**Pb**	**13 11 40.8**	**-0.5**
MAGA				AML	AML		
	comp=E,344µm,0.6s						
MAGA				AML	AML		
	comp=N,468µm,0.3s						

ZUGS	Zugspitze, Sch	1.85	307	eSg	Sg	13 12 08.9	+1.6
MABI	Malga Bissina	1.86	263	P	Pn	13 11 40.9	+1.6
MABI				AML	AML		
	comp=E,87µm,0.5s						
MABI				AML	AML		
	comp=N,148µm,0.6s						
ARSA	Arzberg	1.87	59	ePn	Pn	13 11 40.3	+0.9
	comp=N,2.1nm,0.2s						
ARSA				eSg	Sg	13 12 07.5	-0.3
	comp=N,7.0nm,0.3s						
BRMO	Bormio	1.94	276	AML	AML		
	comp=E,79µm,0.3s						
BRMO				AML	AML		
	comp=N,97µm,0.5s						
BRMO				AML	AML		
	comp=N,97µm,1.5s						
RABC	Rab	1.94	144	ePn	Pb	13 11 42.5	-0.3
RABC				Sn	Sb	13 12 06.9	-0.1
VOBA	Vobarno	1.97	251	AML	AML		
	comp=E,336µm,0.9s						
VOBA				AML	AML		
	comp=N,314µm,0.2s						
PTJ	Puntijarka	2.00	101	ePn	Pb	13 11 44.0	+0.2
RETA	Reutte	2.01	306	ePg	Pb	13 11 45.4	+1.3
	comp=N,2.8nm,0.1s						
RETA				Sg	Sg	13 12 12.7	+0.3
	comp=N,34nm,0.2s						
NVLJ	Novalja	2.13	145	ePn	Pn	13 11 44.2	+1.3
NVLJ				Sn	Sn	13 12 10.9	+1.7
OBER	Oberstdorf	2.25	300	ePg	Pb	13 11 49.0	+1.0
OBER				eSg	Sg	13 12 19.1	-0.7
DAVOX	Davos/Dischmat	2.31	283	⇓P	Pb	13 11 50.7	+1.4
DAVOX				AML	AML		
	comp=N,56µm,0.8s						
DAVOX				AML	AML		
	comp=E,51µm,0.6s						
VIRC	Vir	2.43	146	ePn	Pn	13 11 47.6	+0.6
VIRC				Sn	Sn	13 12 17.8	+1.3
CONA	Conrad Observa	2.44	48	ePn	Pn	13 11 49.6	+2.3
	comp=E,0.9nm,0.2s						
CONA				Sg	Sg	13 12 28.4	+2.2
	comp=E,5.7nm,0.5s						
DAVA	Damuels	2.45	294	ePg	Pg	13 11 55.8	+1.2
	comp=E,5.2nm,0.2s						
DAVA				eSg	Sg	13 12 25.3	-1.0
	comp=E,17nm,0.3s						
DAVA	Damuels	2.45	294	eSg	Sg	13 12 26.6	+0.2
GEC2	GERESS Array S	2.55	8	eSg	Sg	13 12 28.6	-0.8
MOSL	Moslavina	2.61	105	ePn	Pn	13 11 49.6	+0.1
CKRC	Cesky Krumlov	2.62	17	ePN	Pn	13 11 50.9	+1.3
CKRC				eSG	Sg	13 12 30.5	-1.1
	comp=E,26nm,0.5s						
GSCL	Gusciola	2.68	224	S	Sn	13 12 25.8	+3.0
DUGI	Dugi Otok	2.69	149	ePn	Pn	13 11 50.9	+0.3
KHC	Kasperske Hory	2.82	6	ePN	Pn	13 11 54.1	+1.7
KHC				eSN	Sn	13 12 28.7	+2.4
KHC				eSG	Sg	13 12 38.0	-0.2
	comp=E,10nm,0.6s						
CRE	Caprese Michel	2.84	198	⇑P	Pn	13 11 54.3	+1.6
CING	Cingoli	2.95	180	S	Sn	13 12 26.9	-2.5
PP3	Marolino	2.96	174	⇓P	Pn	13 11 54.1	-0.2
EL6	Elcito	3.00	181	⇑P	Pb	13 11 59.0	-1.9
EUCT	Pavia	3.03	250	S	Sg	13 12 43.9	-1.1
EUCT				AML	AML		
	comp=E,1410µm,1.5s						
EUCT				AML	AML		
	comp=E,1410µm,0.5s						
EUCT				AML	AML		
	comp=N,3360µm,0.1s						
ZIRJ	Zirje	3.20	146	ePn	Pn	13 11 58.4	+0.8
ASSB	Assisi San Ben	3.30	186	S	Sn	13 12 35.4	-2.7
SARZ	Sarezzano	3.32	245	P	Pb	13 12 05.4	-1.0
SARZ				S	Sg	13 13 02.3	+8.1
T1214	Arquata del Tr	3.56	179	⇓P	Pn	13 12 00.8	-1.9
T1214				AML	AML		
	comp=E,180µm,0.7s						
T1214				AML	AML		
	comp=N,164µm,0.5s						
T1218	Civita (PG)	3.65	181	⇑P	Pg	13 12 15.5	-2.1
T1218				AML	AML		
	comp=N,230µm,1.4s						
T1218				AML	AML		
	comp=N,230µm,0.6s						
T1218				AML	AML		
	comp=E,184µm,0.5s						
SMA1	SAN MARTINO	3.70	178	⇓P	Pb	13 12 13.2	+0.5
SMA1				AML	AML		
	comp=N,2070µm,0.3s						
SMA1				AML	AML		
	comp=E,2580µm,0.5s						
TERO	Teramo	3.71	175	⇓P	Pb	13 12 15.5	+2.4
TERO				AML	AML		
	comp=E,582µm,0.4s						
TERO				AML	AML		
	comp=N,594µm,0.3s						
TERO				AML	AML		
	comp=E,676µm,0.4s						
TERO				AML	AML		
	comp=E,676µm,1.6s						
TERO				AML	AML		
	comp=E,582µm,1.6s						
TERO				AML	AML		
	comp=N,665µm,0.3s						
GOPC	GO Pecny, Ondr	3.75	16	eSG	Sg	13 13 07.1	-1.0
	comp=N,18nm,1.0s						
PRU	Pruhonice	3.78	14	eSG	Sg	13 13 07.0	-2.0
	comp=N,13nm,0.5s						
CAMP	Campotosto	3.79	177	P	Pb	13 12 13.0	-1.5
CAMP				AML	AML		
	comp=E,882µm,0.3s						
CAMP				AML	AML		
	comp=N,894µm,0.7s						
T1211	Morro Reatino	3.80	183	⇑P	Pg	13 12 18.5	-1.8
RM33	Pellescritta (	3.81	179	⇓P	Pb	13 12 14.0	-0.8
RM33				AML	AML		
	comp=E,790µm,1.0s						
RM33				AML	AML		
	comp=N,744µm,0.3s						
RM33				AML	AML		
	comp=E,769µm,1.0s						
RM33				AML	AML		
	comp=N,732µm,0.3s						
T1247	Pizzolo (AQ)	3.88	178	⇓P	Pb	13 12 14.3	-1.7
T1247				S	Sn	13 12 52.6	+0.1
T1247				AML	AML		
	comp=E,1340µm,0.1s						
T1247				AML	AML		
	comp=N,1320µm,0.1s						
GIGS	Gran Sasso	3.88	176	⇓P	Pb	13 12 15.5	-0.5
GIGS				AML	AML		
	comp=N,100µm,0.2s						
GIGS				AML	AML		
	comp=E,155µm,0.1s						
T1222	Castel Sant'An	3.92	181	P	Pb	13 12 17.0	+0.3
T1222				AML	AML		
	comp=E,167µm,0.3s						
T1222				AML	AML		
	comp=N,90µm,0.4s						
VCEL	Villa Celiera	3.96	173	⇑P	Pb	13 12 20.2	+2.9
VCEL				AML	AML		
	comp=N,110µm,1.0s						
VCEL				AML	AML		
	comp=E,148µm,1.6s						
VCEL				AML	AML		
	comp=N,110µm,1.0s						
AQU	L'Aquila	3.97	177	S	Sn	13 12 57.9	+3.1
RICI	Ricice	4.00	134	ePn	Pn	13 12 09.7	+1.2
FAGN	Fagnano	4.07	176	⇑P	Pb	13 12 18.5	-0.6
FAGN				AML	AML		
	comp=N,146µm,0.3s						
FAGN				AML	AML		
	comp=E,166µm,0.4s						
T0110	Collepietro	4.12	174	⇑P	Pb	13 12 20.6	+0.6
LSTV	Lastovo	4.44	142	ePn	Pn	13 12 15.4	+0.7
CDF	Champ du Feu	4.51	300	eP	Pn	13 12 17.6	+1.9
CDF				eSn	Sn	13 13 03.0	-5.0
HINF	Hinteralfeld	4.56	291	eP	Pn	13 12 19.1	+2.8
HINF				eSn	Sn	13 13 07.1	-2.1
	comp=E,1.8nm,0.2s						
BRG	Berggiesshubel	4.58	6	Sg	Sg	13 13 34.1	-0.5
BRG				Amp		13 13 37.2	
	comp=Z,5.7nm,0.7s						
MBDF	Montbardon	4.76	253	ePn	Pn	13 12 18.1	-1.1
HAU	Haudompre	4.94	292	eP	Pn	13 12 24.2	+2.7
HAU				eSn	Sn	13 13 15.2	-3.3
	comp=Z,2.4nm,0.3s						
CLL	Collm	4.99	359	i Pn	Pn	13 12 23.7	+1.6
CLL				eSn	Sn	13 13 05.0	-15
CLL				ex	x	13 13 20.0	
CLL				eSg	Sg	13 13 46.0	-1.7
	comp=Z,7.0nm,1.1s						
SACR	S. Croce Del S	5.05	167	P	Pb	13 12 39.8	+3.9
PAGF	Fort de Pagny	5.51	297	ePn	Pn	13 12 27.5	-1.9
PAGF				eSn	Sn	13 13 26.8	-5.8
	comp=Z,25nm,0.7s						
SNAL	S. Angelo Dei	5.60	164	P	Pn	13 12 29.5	-1.1
LOR	Lormes	6.46	282	eP	Pn	13 12 45.1	+2.8
LOR				eSn	Sn	13 13 49.2	-6.6
	comp=Z,11nm,0.8s						
IST3	Stromboli F	7.67	168	⇑P	Pn	13 13 03.7	+4.6

NEIC 23 13:23:52.5±1.6, 11.°06S±0.°08×166.°38E±0.°07, h180km±7km, mb4.3/67, Error ellipse: s-maj=14.7km s-min=4.5km az=219.0

IDC 23 13:23:53.4±2.5, 11.°15S×166.°45E, h184km±22km, mb3.8/15, mbtmp4.4/17, Error ellipse: s-maj=18.7km s-min=14.3km az=92.0

ISC 23 13:23:53.7±0.4, **11.°27S**±0.°06×**166.°43E**±0.°08, **h200**km, **n103,** σ1.s**41**/106, **mb4.2**/50, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.63	285	P	Pn	13 25 27.2	-2.0
	2µm,0.7s,baz=159,slow=8.6,SNR=14						
HNR				S	Sn	13 26 46.4	+1.5
	194nm,0.5s,baz=6.5,slow=22,SNR=0.9						
HNR	Honiara	6.63	285		Pn	13 25 26.6	-2.6
KOUNC	Koumac, New Ca	9.46	192		Pn	13 26 08.2	+2.2
DZM	Mont Dzumac	10.74	180	P	P	13 26 25.0	-4.5
	5.8nm,0.4s,baz=14,slow=19,SNR=60						
DZM				S	Sn	13 28 19.6	-3.0
	3.9nm,0.5s,baz=332,slow=23,SNR=2.0						
DZM	Mont Dzumac	10.74	180	Pn	Pn	13 26 24.1	+1.4
ONTNC	Ouen Toro	10.98	180	Pn	P	13 26 28.3	-3.7
OUENC	Ouen Island, N	11.10	178	Pn	P	13 26 30.3	-2.9
PINNC	Pines Island,	11.33	175	Pn	P	13 26 33.5	-2.4
PATS	Pohnpei	19.71	335	P	P	13 28 06.8	-1.3
EIDS	Eidsvold	20.19	224	P	P	13 28 14.3	+1.0
EIDS				IAmb	IAmb	13 28 16.3	
	comp=Z,7.4nm,0.8s						
CTA	Charters Tower	21.29	243	P	P	13 28 27.4	+2.4
	comp=Z,17nm,1.4s,baz=84,slow=12,SNR=2.5						
	comp=Z,17nm,1.4s						
CTAO	Charters Tower	21.29	243	P	P	13 28 22.6	-2.4
ARMA	Armidale	23.50	214	P	P	13 28 45.6	-0.1
URZ	Urewera	28.53	162	P	P	13 29 32.9	+2.3
	comp=Z,2.9nm,0.6s,baz=20,slow=2.4,SNR=1.8						
	comp=Z,2.9nm,0.6s						
RTZ	Ruatahuna	28.82	163	P	P	13 29 34.8	+1.5
RTZ				IAmb	IAmb	13 29 39.1	
	comp=Z,6.0nm,1.0s						
BKZ	Black Stump Fm	29.20	164	P	P	13 29 38.8	+2.2
H11S2	WAKE ISLAND Hy	29.57	1	T	T	14 00 47.0	
	baz=181,slow=76,SNR=4.4						
H11S3	WAKE ISLAND Hy	29.57	0	T	T	14 00 45.0	
	baz=181,slow=76,SNR=3.6						
H11S1	WAKE ISLAND Hy	29.59	1	T	T	14 00 48.1	
	baz=181,slow=76,SNR=4.5						
MRZ	Mangatainoka R	30.37	166	P	P	13 29 48.0	+1.1
MRZ				IAmb	IAmb	13 29 50.8	
	comp=Z,7.3nm,1.0s						
STKA	Stephens Creek	30.75	224	P	P	13 29 52.5	+2.2
	comp=Z,4.1nm,0.7s,baz=42,slow=7.2,SNR=7.5						
	comp=Z,4.1nm,0.7s						
STKA	Stephens Creek	30.75	224	P	P	13 29 52.2	+1.9
THZ	Tophouse	30.91	171	P	P	13 29 53.5	+1.9
THZ				IAmb	IAmb	13 29 56.8	
	comp=Z,6.8nm,1.0s						
INZ	Inchbonnie	31.64	173	P	P	13 29 59.0	+1.0
LTZ	Lake Taylor	31.81	172	P	P	13 30 00.3	+0.8
LTZ				IAmb	IAmb	13 30 16.2	
	comp=Z,5.7nm,1.1s						
WB0	Warramunga Arr	31.96	251	P	P	13 30 01.5	+0.4
WB0				IAmb	IAmb	13 30 03.3	
	comp=Z,5.2nm,0.6s						
WB2	Warramunga Arr	32.03	250	P	P	13 30 00.7	-1.0
WB2				IAmb	IAmb	13 30 06.7	
	comp=Z,4.2nm,0.8s						
WB2				PcP	PcP	13 32 46.0	-0.7
WRAB	Tennant Creek	32.03	250	P	P	13 30 00.8	-0.9
WRAB				IAmb	IAmb	13 30 06.3	
	comp=Z,3.2nm,0.8s						
WRA	Warramunga Arr	32.04	250	P	P	13 30 02.4	+0.5
	comp=Z,2.3nm,0.6s,baz=84,slow=9.7,SNR=21						
WRA				PcP	PcP	13 32 48.7	+2.0
	comp=Z,0.5nm,0.7s,baz=73,slow=3.4,SNR=3.3						
	comp=Z,2.3nm,0.6s						
WRA	Warramunga Arr	32.04	250	P	P	13 30 00.9	-0.9
ASAR	Alice Springs	33.30	244	P	P	13 30 12.8	+0.1
	comp=Z,1.4nm,0.8s,baz=78,slow=8.8,SNR=8.6						
ASAR				PcP	PcP	13 32 51.9	+1.7
	comp=Z,0.7nm,0.6s,baz=79,slow=2.4,SNR=6.8						
	comp=Z,1.4nm,0.8s						
MTN	Manton Dam	34.54	264	P	P	13 30 21.9	-1.6
MTN				PcP	PcP	13 32 55.4	+1.6
BBOO	Buckleboo	35.17	228	P	P	13 30 28.8	+0.1
KNRA	Kununurra	36.86	259	P	P	13 30 41.7	-1.5
FITZ	Fitzroy Crossi	39.97	255	P	P	13 31 08.5	-0.6
FORT	Forrest	40.47	235	P	P	13 31 13.3	+0.3
PSA00	Pilbara Seismi	45.69	251	P	P	13 31 54.8	-0.2
MBWA	Marble Bar	45.76	251	P	P	13 31 55.4	-0.2
MLOA	Mauna Loa Obse	48.35	51	P	P	13 32 12.5	-3.6
NWAO	Narrogin (SRO)	49.90	236	P	P	13 32 27.3	+0.1
JMN	Monobe	54.42	327	P	P	13 32 57.4	-3.0
JNU	Nakatsue	55.65	324	P	P	13 33 07.0	-2.2
JNU				IAmb	IAmb	13 33 16.4	
	comp=Z,5.6nm,0.9s						
YULB	Yu-li	56.00	308	P	P	13 33 10.0	-1.8
JKA	Kamikawa-asahi	59.22	340	P	P	13 33 33.5	-0.4
JKA				IAmb	IAmb	13 33 44.8	
	comp=Z,6.2nm,1.1s						
ASAJ	Asahikawa	59.23	340	P	P	13 33 34.9	+1.0
	comp=Z,4.5nm,0.7s,baz=229,slow=10,SNR=6.8						
	comp=Z,4.5nm,0.7s						
KSRS	Korea Array	60.44	325	P	P	13 33 42.5	+0.2
	comp=Z,1.0nm,0.6s,baz=133,slow=6.6,SNR=3.7						
	comp=Z,1.0nm,0.6s						
PEA0B	Petropavlovsk-	64.55	354	P	P	13 34 09.1	-0.1
PEA0B				IAmb	IAmb	13 34 10.1	
	comp=Z,5.9nm,1.1s						
PETK	Petropavlovsk-	64.55	354	P	P	13 34 09.5	+0.3
	comp=Z,2.3nm,0.8s,baz=152,slow=6.5,SNR=7.8						
	comp=Z,2.3nm,0.8s						
CN2	Changchun	66.28	329	P	P	13 34 21.3	+0.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NIKH	Nikolski High	67.40	16	P	P	13 34 28.1	+0.8
CMAR	Chiang Mai Arr	72.81	293	P	P	13 35 03.4	+2.3
	comp=Z,3.8nm,0.8s,baz=118,slow=4.5,SNR=28						
	comp=Z,3.8nm,0.8s						
P18K	Big Mountain,	76.88	19	P	P	13 35 23.5	0.0
Q19K	Cape Douglas,	77.04	20	P	P	13 35 24.6	+0.2
O18K	Koktuh Hills	77.25	19	P	P	13 35 25.6	+0.1
O18K				IAmb	IAmb	13 35 30.0	
	comp=Z,7.6nm,1.0s						
ILSW	Iliamna Southw	78.02	19	P	P	13 35 28.5	-1.3
ILSW				IAmb	IAmb	13 35 30.6	
	comp=Z,7.3nm,1.2s						
SVW2	Sparrevohn	78.12	18	P	P	13 35 29.8	-0.4
SVW2				IAmb	IAmb	13 35 44.5	
	comp=Z,5.7nm,1.1s						
BRLK	Bradley Lake	78.61	20	P	P	13 35 32.9	-0.1
BRLK				IAmb	IAmb	13 35 35.1	
	comp=Z,6.2nm,0.8s						
QSPA	South Pole Qui	78.74	180	P	P	13 35 34.6	+0.7
M19K	Big River Lodg	79.10	18	P	P	13 35 36.7	+1.1
M19K				IAmb	IAmb	13 35 38.3	
	comp=Z,3.6nm,0.8s						
L19K	White Mountain	79.18	17	P	P	13 35 36.9	+0.8
L19K				IAmb	IAmb	13 35 38.5	
	comp=Z,3.1nm,0.7s						
SONM	Songino Array	79.24	324	P	P	13 35 38.0	+1.2
	comp=Z,1.2nm,0.7s,baz=141,slow=4.8,SNR=7.5						
	comp=Z,1.2nm,0.7s						
M20K	Styx River	79.47	18	P	P	13 35 37.2	-0.5
PMR	Palmer	80.53	20	P	P	13 35 43.5	+0.3
PMR				IAmb	IAmb	13 35 45.8	
	comp=Z,5.7nm,1.2s						
KNK	Knik Glacier	80.63	20	P	P	13 35 43.7	-0.2
SCM	Sheep Creek Mo	81.31	20	P	P	13 35 47.4	-0.1
SCM				IAmb	IAmb	13 35 49.9	
	comp=Z,6.3nm,0.9s						
TRF	Thorofare Moun	81.52	18	P	P	13 35 49.0	+0.4
TRF				IAmb	IAmb	13 35 59.6	
	comp=Z,3.9nm,1.1s						
RDOG	Red Dog Mine	82.11	11	P	P	13 35 51.6	+0.1
RDOG				IAmb	IAmb	13 35 53.6	
	comp=Z,3.8nm,0.6s						
N25K	Chitina, Valde	82.11	21	P	P	13 35 51.6	0.0
N25K				IAmb	IAmb	13 35 53.9	
	comp=Z,4.5nm,0.7s						
MCK	McKinley	82.14	18	P	P	13 35 50.5	-1.2
VRDI	Verde Repeater	82.27	22	P	P	13 35 52.0	-0.7
GLB	Gilahina Butte	82.28	22	P	P	13 35 51.1	-1.4
GLB				IAmb	IAmb	13 35 54.6	
	comp=Z,3.3nm,0.9s						
I21K	Tanana	82.31	16	P	P	13 35 52.8	+0.2
I21K				IAmb	IAmb	13 35 56.6	
	comp=Z,3.1nm,0.8s						
IMAR	Indian Mountai	82.46	15	P	P	13 35 53.3	0.0
MLY	Manley	82.55	17	P	P	13 35 54.5	+0.6
WRH	Wood River Hil	82.93	18	P	P	13 35 54.4	-1.4
WRH				IAmb	IAmb	13 35 57.0	
	comp=Z,5.1nm,1.0s						
CCB	Clear Creek Bu	83.14	18	P	P	13 35 56.6	-0.2
CCB				IAmb	IAmb	13 35 58.2	
	comp=Z,2.7nm,0.8s						
M26K	Nabesna, AK	83.20	21	P	P	13 35 57.0	-0.3
M26K				IAmb	IAmb	13 35 60.0	
	comp=Z,6.5nm,1.1s						
MDM	Murphy Dome	83.23	18	P	P	13 35 56.2	-1.1
HDA	Harding Lake	83.24	19	P	P	13 35 57.8	+0.4
RIDG	Independent Ri	83.45	20	P	P	13 35 59.5	+1.0
RIDG				IAmb	IAmb	13 36 00.2	
	comp=Z,4.6nm,1.0s						
IL31		83.51	18	P	P	13 35 59.5	+0.8
ILAR	Eielson Array	83.51	18	P	P	13 35 59.4	+0.6
	comp=Z,1.0nm,0.6s,baz=236,slow=4.7,SNR=25						
	comp=Z,1.0nm,0.6s						
M27K	Edge Creek, AK	83.58	22	P	P	13 35 59.7	+0.5
M27K				IAmb	IAmb	13 36 01.8	
	comp=Z,3.5nm,0.9s						
DOT	Dot Lake	83.65	20	P	P	13 35 60.0	+0.5
DOT				IAmb	IAmb	13 36 01.7	
	comp=Z,6.1nm,0.8s						
SCRK	Sand Creek	83.89	20	P	P	13 36 02.1	+1.3
SCRK				IAmb	IAmb	13 36 03.1	
	comp=Z,6.4nm,0.8s						
L27K	Beaver Creek,	84.04	21	P	P	13 36 01.7	+0.2
BCAR	Beaver Creek A	84.06	21	P	P	13 36 01.8	+0.2
HYT	Haines Junctio	84.31	24	P	P	13 36 03.2	+0.2
I26K	Coal Creek Min	85.04	19	P	P	13 36 08.2	+1.8
I26K				IAmb	IAmb	13 36 09.0	
	comp=Z,3.7nm,0.8s						
EGAK	Eagle	85.35	20	P	P	13 36 09.0	+1.0
EGAK				IAmb	IAmb	13 36 10.5	
	comp=Z,4.7nm,0.7s						
DAWY	Dawson	85.52	21	P	P	13 36 09.4	+0.5
DSP	Deep Springs	85.58	51	P	P	13 36 10.1	+0.4
NVAR	Mina Array Bea	85.65	50	P	P	13 36 12.1	+1.7
	comp=Z,0.6nm,0.6s,baz=242,slow=7.8,SNR=2.2						
	comp=Z,0.6nm,0.6s						
BMAR	Burnt Mountain	86.02	17	P	P	13 36 11.6	+0.4
A36M	Sachs Harbour	94.11	17	P	P	13 36 49.1	+0.2
A36M				IAmb	IAmb	13 36 50.6	
	comp=Z,2.6nm,0.9s						
ZALV	Zalesovo Beam	94.13	324	P	P	13 36 49.5	+0.1
	comp=Z,1.2nm,0.6s,baz=114,slow=3.5,SNR=6.6						
	comp=Z,1.2nm,0.6s						
MK31	Makanchi Array	94.14	317	P	P	13 36 49.0	-0.7
MK31				IAmb	IAmb	13 36 51.7	
	comp=Z,3.1nm,0.9s						
MKAR	Makanchi Array	94.14	317	P	P	13 36 50.8	+1.1
	comp=Z,2.6nm,0.6s,baz=94,slow=6.3,SNR=34						
	comp=Z,2.6nm,0.6s						
MKAR	Makanchi Array	94.14	317	P	P	13 36 49.1	-0.6
YKA	Yellowknife Ar	94.86	27	P	P	13 36 52.1	-0.5
	comp=Z,0.4nm,0.6s,baz=258,slow=4.4,SNR=7.7						
	comp=Z,0.4nm,0.6s						
ARCES	ARCESS Array B	116.71	346	PKP	PKiKP	13 42 14.6	+1.0
	comp=Z,1.7nm,0.6s,baz=56,slow=1.6,SNR=10						
FINES	FINESS Array B	122.22	339	PKP	PKiKP	13 42 25.2	+0.7
	comp=Z,1.4nm,0.8s,baz=44,slow=4.2,SNR=5.7						
ESDC	Sonseca Array	150.45	345	PKPbc	PKiKP	13 43 23.4	+0.7
	comp=Z,1.2nm,0.9s,baz=359,slow=4.0,SNR=2.4						

JMA 23 13:26:29.7±0.3, **24.°1N**±0.°6×**123.°5E**±0.°9, **h23**km±1km, **MV1.3**/6, **NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.24	96	P	Pb	13 26 35.6	-0.1
HATJ				eS	Sb	13 26 39.6	-0.2
IRIF	Iriomote-Funau	0.30	34	P	Pb	13 26 36.5	-0.2
IRIF				S	Sb	13 26 41.6	+0.2
JKRS	Kuro-shima	0.45	70	P	Pb	13 26 39.0	-0.1
JKRS				eS	Sb	13 26 45.4	-0.1
JIJ	Ishigaki jima	0.61	63	P	Pb	13 26 41.4	-0.5
JIJ				eS	Sb	13 26 49.6	-0.5
JISG	Ishigakijimahi	0.86	54	P	Pn	13 26 46.3	-0.1
JISG				eS	Sn	13 26 57.9	-0.5

TAP 23 13:26:51.8, 24.°19N×122.°14E, h55km, ML1.8, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	EOS4	0.18	114	P	Pn	13 27 00.0	0.0
	baz=114						
EOS4				S	Sn	13 27 04.8	-1.2
	baz=114						
EOS3	EOS3	0.19	60	P	Pn	13 26 59.8	-0.6
	baz=42						
EOS3				i S	Sn	13 27 06.3	-0.2
	baz=42						
EOS2	EOS2	0.24	21	S	Sn	13 27 07.6	+0.4
	baz=352						
EWUT	Wuta	0.41	308	P	Pn	13 27 02.4	0.0
	baz=314						
EWUT				S	Sn	13 27 10.2	+0.2
	baz=314						
ENA	Nanau	0.43	303	i P	Pn	13 27 02.7	+0.1
	baz=309						
ENA				i S	Sn	13 27 10.8	+0.4
	baz=309						
ETL	Fush Village	0.47	266	S	Sn	13 27 11.6	+0.4
	baz=258						
TWC	Suao	0.49	328	P	Pn	13 27 03.3	0.0
	baz=331						
TWC				i S	Sn	13 27 10.8	-0.7
	baz=331						
TWD	Chiawan	0.51	257	P	Pn	13 27 04.6	+1.2
	baz=252						
TWD				S	Sn	13 27 11.8	0.0
	baz=252						
LATG	Datong	0.65	302	P	Pn	13 27 05.7	+0.4
	baz=301						
TWE	Neicheng	0.68	321	P	Pn	13 27 06.3	+0.8
	baz=315						
ENTT	Nioudou	0.69	311	i P	Pn	13 27 06.0	+0.4
	baz=310						
ENTT				i S	Sn	13 27 15.9	+0.3
	baz=310						
NNSH	Datong	0.73	289	P	Pn	13 27 06.3	+0.1
	baz=289						
NNSH				i S	Sn	13 27 17.1	+0.4
	baz=289						
NNS	Nan Shan	0.74	290	S	Sn	13 27 17.9	+1.0
	baz=289						
FUSB	Fushanzhiwuyua	0.76	318	P	Pn	13 27 07.4	+0.9
	baz=318						
FUSB				S	Sn	13 27 18.8	+1.6
	baz=318						
NWLT	Wulai	0.82	315	P	Pn	13 27 08.3	+1.0
	baz=305						
TIPB	Shuangxi	0.83	340	P	Pn	13 27 08.9	+1.5
	baz=344						
TIPB				S	Sn	13 27 19.6	+0.8
	baz=344						
YHNB	Yeheng	0.84	304	P	Pn	13 27 08.0	+0.4
	baz=304						
NSK	Sanguang	0.86	304	P	Pn	13 27 08.7	+0.8
	baz=304						

NSK				S	Sn	13 27 19.3	-0.3
	baz=304						

NEIC ***23*** *13:35:39.0±1.8, 10°.10S±0°.10×161°.06E±0°.08, h59km±8km, mb4.6/32, Error ellipse: s-maj=17.0km s-min=7.3km az=215.0*

IDC ***23*** *13:35:39.1±2.6, 10°.12S×161°.12E, h54km±21km, mb3.9/9, mbtmp4.2/11, ML4.4/2, MS3.4/24, Error ellipse: s-maj=24.8km s-min=16.6km az=63.0*

ISC 23 13:35:39.6±0.5, **10°.23S**±0°.07×**161°.06E**±0°.08, **h67km, n73, σ1s.44**/55, **mb4.5**/25, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.35	306	P	Pn	13 36 00.8	-1.7
	30µm,0.5s,baz=182,slow=6.6,SNR=298						
HNR				S	Sn	13 36 18.4	-1.3
	132µm,0.4s,baz=1.2,slow=24,SNR=17						
HNR	Honiara	1.35	306		Pn	13 36 00.7	-1.8
KOUNC	Koumac, New Ca	10.72	164	Pn	Pn	13 38 12.1	+1.7
LIFNC	LIFOU	12.06	151	Pn	Pn	13 38 28.4	-0.3
DZM	Mont Dzumac	12.86	157	P	Pn	13 38 40.8	+1.2
	1.8nm,0.3s,baz=37,slow=10.0,SNR=61						
DZM				S	Sn	13 40 55.5	-5.6
	6.1nm,1.1s,baz=281,slow=22,SNR=1.4						
DZM				LR	LR	13 42 39.5	
	comp=Z,166nm,21.4s,baz=18,slow=32						
	3.8nm,0.3s						
DZM	Mont Dzumac	12.86	157	Pn	Pn	13 38 41.3	+1.7
ONTNC	Ouen Toro	13.08	157	Pn	Pn	13 38 44.5	+2.0
OUENC	Ouen Island, N	13.33	156	Pn	Pn	13 38 46.5	+0.6
PINNC	Pines Island,	13.75	154	Pn	Pn	13 38 47.7	-3.8
CTA	Charters Tower	17.31	234	P	P	13 39 40.4	+2.9
	0.9nm,0.3s,baz=60,slow=12,SNR=16						
CTA				LR	LR	13 45 39.5	
	comp=Z,154nm,21.0s,baz=75,slow=34						
	20nm,0.9s						
CTAO	Charters Tower	17.31	234	P	Pn	13 39 38.2	+1.2
COEN	Coen	17.87	256		P	13 39 42.5	-1.2
AFI	Afiamalu	26.81	101	LR	LR	13 49 23.8	
	comp=Z,165nm,21.3s,baz=240,slow=31						
RAO	Raoul Island	27.29	137	LR	LR	13 49 42.3	
	comp=Z,90nm,20.5s,baz=154,slow=31						
WRAB	Tennant Creek	27.50	246	P	P	13 41 20.9	+1.0
WRA	Warramunga Arr	27.51	246	PcP	PcP	13 44 37.2	+0.2
	0.4nm,0.7s,baz=58,slow=2.8,SNR=2.7						
WRA				LR	LR	13 52 05.9	
	comp=Z,63nm,21.7s,baz=83,slow=36						
STKA	Stephens Creek	28.08	217	LR	LR	13 51 30.9	
	comp=Z,121nm,20.1s,baz=35,slow=34						
AS31	Alice Springs	29.14	239	P	P	13 41 34.6	+0.1
ASAR	Alice Springs	29.14	239	P	P	13 41 35.1	+0.5
	0.6nm,0.5s,baz=63,slow=10,SNR=7.0						
ASAR				LR	LR	13 53 15.6	
	comp=Z,148nm,18.4s,baz=77,slow=36						
	0.6nm,0.5s						
ASAR	Alice Springs	29.14	239	P	P	13 41 33.9	-0.7
SIJI	Sorong	31.04	286	LR	LR	13 55 54.6	
	comp=Z,86nm,19.3s,baz=162,slow=39						
KNRA	Kununurra	31.91	257	P	P	13 41 59.8	+0.8
BKZ	Black Stump Fm	31.94	157	P	P	13 42 00.1	+1.0
BKZ				IAmb	IAmb	13 42 16.9	
	comp=Z,12nm,1.3s						
BBOO	Buckleboo	32.18	222	P	P	13 41 59.0	-2.2
RPZ	Rata Peaks	34.47	167	LR	LR	13 55 06.0	
	comp=Z,64nm,18.1s,baz=272,slow=34						
FITZ	Fitzroy Crossi	35.17	253	P	P	13 42 27.3	-0.1
DAV	Davao City (W)	39.29	295	LR	LR	13 59 41.9	
	comp=Z,28nm,18.2s,baz=122,slow=37						
KAPI	Kappang	41.24	274	LR	LR	14 00 38.5	
	comp=Z,15nm,21.2s,baz=125,slow=36						
MORW	Morawa	46.02	239	P	P	13 43 55.5	-1.2
NWAO	Narrogin (SRO)	46.16	234	P	P	13 43 57.7	0.0
PPT	Papeete	48.36	104	LR	LR	14 00 36.4	
	comp=Z,55nm,19.6s,baz=270,slow=31						
MJAR	Matsushiro Arr	51.25	336	LR	LR	14 04 27.5	
	comp=Z,21nm,21.8s,baz=140,slow=34						
JKA	Kamikawa-asahi	56.62	344	P	P	13 45 15.0	-0.7
ASAJ	Asahikawa	56.63	344	LR	LR	14 06 25.5	
	comp=Z,36nm,21.7s,baz=152,slow=33						
KSRS	Korea Array	56.69	329	LR	LR	14 07 49.0	
	comp=Z,14nm,21.1s,baz=145,slow=34						
PETK	Petropavlovsk-	63.15	358	P	P	13 46 00.7	+0.4
	comp=Z,1.2nm,0.8s,baz=128,slow=9.5,SNR=4.5						
	comp=Z,1.2nm,0.8s						
ADK	Adak	64.77	15	P	P	13 46 11.0	+0.1
VNDA	Vanda	67.28	180	P	P	13 46 28.5	+1.8
	comp=Z,1.5nm,0.7s,baz=342,slow=8.3,SNR=2.2						
	comp=Z,1.5nm,0.7s						
VNDA	Vanda	67.28	180	P	P	13 46 25.7	-1.0
CMAR	Chiang Mai Arr	67.58	295	P	P	13 46 31.6	+2.0
	comp=Z,0.3nm,0.5s,baz=129,slow=5.0,SNR=1.6						
CMAR				LR	LR	14 14 57.4	
	comp=Z,11nm,20.2s,baz=260,slow=35						
	comp=Z,0.3nm,0.5s						
NIKH	Nikolski High	68.00	19	P	P	13 46 28.7	-2.8
SONM	Songino Array	75.33	325	P	P	13 47 17.0	+1.1
	comp=Z,5.0nm,0.7s,baz=139,slow=6.2,SNR=28						
	comp=Z,5.0nm,0.7s						
BRDH	Bariadhala	75.40	297	LR	LR	14 23 52.8	
	comp=Z,26nm,18.1s,baz=28,slow=38						
KDAK	Kodiak Island	77.59	23	LR	LR	14 15 59.3	
	comp=Z,30nm,19.1s,baz=243,slow=31						
SVW2	Sparrevohn	78.84	20	P	P	13 47 35.0	-0.1
SVW2				IAmb	IAmb	13 47 38.1	
	comp=Z,11nm,1.0s						
TNA	Tin City	79.02	13	P	P	13 47 36.0	+0.1
QSPA	South Pole Qui	79.77	180	P	P	13 47 41.5	+1.1
QSPA				IAmb	IAmb	13 47 42.6	
	comp=Z,6.4nm,0.8s						
M19K	Big River Lodg	79.82	20	P	P	13 47 41.2	+0.8
M19K				IAmb	IAmb	13 47 43.0	
	comp=Z,5.9nm,0.8s						
L19K	White Mountain	79.87	19	P	P	13 47 40.7	0.0
L19K				IAmb	IAmb	13 48 03.9	
	comp=Z,6.6nm,1.0s						
CAST	Castle Rocks	81.65	19	P	P	13 47 49.9	-0.3
CAST				IAmb	IAmb	13 47 51.2	
	comp=Z,5.9nm,0.9s						
MCK	McKinley	82.91	20	P	P	13 47 55.9	-0.9
MLY	Manley	83.18	19	P	P	13 47 58.0	-0.1
MLY				IAmb	IAmb	13 47 59.8	
	comp=Z,4.8nm,1.0s						
WRH	Wood River Hil	83.67	20	P	P	13 48 00.3	-0.3
WRH				IAmb	IAmb	13 48 01.1	
	comp=Z,6.2nm,1.2s						
CCB	Clear Creek Bu	83.88	20	P	P	13 48 01.0	-0.7
MDM	Murphy Dome	83.94	19	P	P	13 48 00.3	-1.7
MDM				IAmb	IAmb	13 48 03.3	
	comp=Z,3.5nm,0.9s						
HDA	Harding Lake	84.01	20	P	P	13 48 01.7	-0.7
HDA				IAmb	IAmb	13 48 03.7	
	comp=Z,4.5nm,0.9s						
H23K	Yukon River	84.09	18	P	P	13 48 01.6	-1.2
H23K				IAmb	IAmb	13 48 04.6	
	comp=Z,4.4nm,0.9s						
M26K	Nabesna, AK	84.23	23	P	P	13 48 03.1	-0.5
M26K				IAmb	IAmb	13 48 06.6	
	comp=Z,7.3nm,1.2s						
ILAR	Eielson Array	84.26	20	P	P	13 48 03.5	-0.2
	comp=Z,0.7nm,0.4s,baz=241,slow=4.6,SNR=13						
	comp=Z,0.7nm,0.4s						
TIXI	Tiksi	84.46	350	LR	LR	14 26 39.5	
	comp=Z,14nm,18.9s,baz=0.0,slow=36						
M27K	Edge Creek, AK	84.63	23	P	P	13 48 04.1	-1.6
M27K				IAmb	IAmb	13 48 09.3	
	comp=Z,8.2nm,1.1s						
L27K	Beaver Creek,	85.05	23	P	P	13 48 07.6	0.0
L27K				IAmb	IAmb	13 48 10.2	
	comp=Z,5.4nm,1.3s						
BCAR	Beaver Creek A	85.06	23	P	P	13 48 06.1	-1.6
EGAK	Eagle	86.25	21	P	P	13 48 13.6	0.0
EGAK				IAmb	IAmb	13 48 16.0	
	comp=Z,6.0nm,1.0s						
YBH	Yreka Blue Hor	86.66	47	LR	LR	14 19 28.2	
	comp=Z,25nm,21.1s,baz=300,slow=30						
EPYK	Eagle Plains	88.66	21	P	P	13 48 26.2	+1.0
EPYK				IAmb	IAmb	13 49 03.4	
	comp=Z,7.7nm,1.4s						
NVAR	Mina Array Bea	89.05	51	P	P	13 48 29.3	+1.4
	comp=Z,1.3nm,0.7s,baz=233,slow=5.5,SNR=8.0						
	comp=Z,1.3nm,0.7s						
PFO	Pinyon Flats O	89.41	56	LR	LR	14 22 00.6	
	comp=Z,48nm,19.6s,baz=226,slow=31						
MKAR	Makanchi Array	89.80	318	P	P	13 48 31.5	+0.6
	comp=Z,0.8nm,0.7s,baz=98,slow=6.0,SNR=11						
	comp=Z,0.8nm,0.7s						
INK	Inuvik	90.66	20	LR	LR	14 28 28.5	
	comp=Z,33nm,18.8s,baz=342,slow=35						
YKA	Yellowknife Ar	96.38	28	P	P	13 49 00.7	-0.1
	comp=Z,1.0nm,0.7s,baz=256,slow=4.6,SNR=19						
	comp=Z,1.0nm,0.7s						
BVAR	Borovoye Array	98.48	322	LR	LR	14 35 32.5	
	comp=Z,16nm,18.1s,baz=127,slow=36						
TXAR	Lajitas Array	99.50	62	LR	LR	14 27 05.4	
	comp=Z,33nm,19.8s,baz=264,slow=31						

IDC 23 13:45:46.5±17.0, **41°.19S**×**85°.84W, h0km, mb3.7**/3, **mbtmp3.7**/3, **MS3.5**/13, **Error ellipse: s-maj=452.2km s-min=64.5km az=166.0, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03S2	Juan Fernandez	9.16	39	T	T	13 57 25.4	
	baz=215,slow=73						
H03S1	Juan Fernandez	9.16	39	T	T	13 57 26.5	
	baz=215,slow=73						
H03S3	Juan Fernandez	9.18	39	T	T	13 57 25.4	
	baz=215,slow=73						
CFA	Coronel Fontan	17.07	62	LR	LR	13 54 50.0	
	comp=Z,156nm,21.8s,baz=248,slow=32						
LVC	Limon Verde	23.37	43	LR	LR	13 57 48.8	
	comp=Z,92nm,19.2s,baz=218,slow=31						
RPN	Rapa Nui	23.88	299	LR	LR	13 57 48.9	
	comp=Z,69nm,21.5s,baz=93,slow=30						
CPUP	Villa Florida	27.80	67	LR	LR	14 02 05.0	
	comp=Z,101nm,18.8s,baz=222,slow=35						
LPAZ	La Paz	29.15	37	P	P	13 51 50.0	0.0
	1.0nm,0.6s,baz=196,slow=7.4,SNR=4.1						
LPAZ				LR	LR	14 01 24.2	
	comp=Z,20nm,20.1s,baz=200,slow=32						
	1.0nm,0.6s						
NNA	Nana	30.14	18	LR	LR	14 01 02.1	
	comp=Z,43nm,21.2s,baz=184,slow=30						
SIV	San Ignacio	32.99	48	LR	LR	14 04 54.1	
	comp=Z,59nm,21.3s,baz=272,slow=35						
ATAH	Atahualpa	34.55	13	LR	LR	14 03 03.1	
	comp=Z,74nm,21.3s,baz=258,slow=30						
ROSC	El Rosal	47.00	16	LR	LR	14 11 07.6	
	comp=Z,87nm,20.9s,baz=234,slow=32						
SDV	Santo Domingo	51.75	19	LR	LR	14 15 49.4	
	comp=Z,46nm,19.2s,baz=64,slow=35						
MDP	Montagnes des	55.17	42	LR	LR	14 17 47.1	
	comp=Z,40nm,19.1s,baz=239,slow=35						
RPZ	Rata Peaks	70.88	228	LR	LR	14 19 30.8	
	comp=Z,102nm,18.9s,baz=112,slow=29						
TXAR	Lajitas Array	72.08	344	P	P	13 57 12.6	+0.1
	0.8nm,0.8s,baz=167,slow=8.3,SNR=8.2						
	0.8nm,0.8s						
BBTS	Babate	84.65	65	LR	LR	14 34 39.2	
	comp=Z,85nm,18.0s,baz=112,slow=35						
PDAR	Pinedale Array	86.27	343	P	P	13 58 30.0	0.0
	0.2nm,0.7s,baz=156,slow=8.9,SNR=2.2						
	0.2nm,0.7s						

IDC ***23*** *13:46:04.6±3.6, 22°.02N×94°.40E, h116km±31km, mb3.3/6, mbtmp3.6/7, Error ellipse: s-maj=64.8km s-min=13.2km az=58.0*

ISC 23 13:46:03.5±1.7, **22°.0N**±0°.4×**94°.3E**±0°.4, **h100km, n8, σ1s.93**/11, **mb3.7**/6, **Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	Shillong	4.18	329	*e*PN	Pn	13 47 07.0	+1.6
SHL				*e*SN	Sn	13 47 50.0	-3.3
CMAR	Chiang Mai Arr	5.62	128	P	Pn	13 47 24.4	-0.3
	1.6nm,0.6s,baz=307,slow=13,SNR=13						
CMAR				S	Sn	13 48 28.6	+0.7
	0.5nm,0.5s,baz=307,slow=26,SNR=1.5						
MKAR	Makanchi Array	26.58	341	P	P	13 51 32.4	+0.1
	0.6nm,0.4s,baz=154,slow=9.7,SNR=12						
MKAR				pP	pP	13 51 57.9	+3.4
	0.4nm,0.5s,baz=142,slow=10,SNR=3.1						
	0.6nm,0.4s						
KURBB	Kurchatov Arra	31.13	340	P	P	13 52 12.2	-0.3
	0.4nm,0.6s,baz=153,slow=8.2,SNR=5.8						
	0.4nm,0.6s						
ZALV	Zalesovo Beam	32.71	350	P	P	13 52 25.1	-1.2
	0.8nm,0.5s,baz=170,slow=8.8,SNR=4.1						
	0.8nm,0.5s						
BVAR	Borovoye Array	35.97	335	P	P	13 52 54.2	-0.3
	0.3nm,0.4s,baz=153,slow=9.7,SNR=2.7						
	0.3nm,0.4s						
WRA	Warramunga Arr	57.18	134	P	P	13 55 39.0	-1.4
	0.6nm,0.6s,baz=320,slow=7.5,SNR=20						
	0.6nm,0.6s						
ASAR	Alice Springs	59.55	137	P	P	13 55 56.0	-0.9
	0.5nm,0.5s,baz=318,slow=6.9,SNR=15						
	0.5nm,0.5s						

IDC ***23*** *13:55:28.4±5.6, 36°.82N×72°.01E, h51km±61km, mbtmp3.5/7, ML3.0/7, Error ellipse: s-maj=67.3km s-min=27.5km az=142.0*

NNC ***23*** *13:55:30.4±4.4, 37°.70N×71°.83E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=34.1km s-min=30.2km az=105.0*

ISC 23 13:55:31.3±1.8, **37°.6N**±0°.1×**71°.72E**±0°.09, **h10km, n13, σ2s.79**/17, **3C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	Iuzhnay	4.71	345	Pg	Pb	13 56 55.7	+1.6
	29nm,0.6s						
IUG				Lg	Lg	13 57 56.9	
	71nm,0.9s						
MRKS	Merke	5.25	12	Pg	Pb	13 57 03.1	-0.2
	7.7nm,0.5s						
MRKS				Lg	Lg	13 58 09.9	
	14nm,0.9s						
AAK	Ala-Archa	5.45	22	P	Pn	13 56 57.9	+5.1
	0.7nm,0.3s,baz=195,slow=7.4,SNR=9.2						
AAK				S	Sb	13 58 06.2	-6.0
	4.7nm,0.7s,baz=166,slow=17,SNR=3.7						
	2.0nm,0.4s						
KK31	Karatay Array	5.56	351	Pn	Pn	13 56 54.8	+0.7
	1.4nm,0.4s,baz=175,slow=12,SNR=30						
KK31				⇓Pg	Pb	13 57 08.8	+0.4
	3.5nm,0.5s,baz=172,slow=13,SNR=3.5						
KK31				⇓Sn	Sn	13 58 00.6	+2.5
	14nm,0.9s,baz=182,slow=26,SNR=3.6						
KK31				⇓Lg	Lg	13 58 23.3	
	6.6nm,0.7s						
SGDS	Sogindy	6.24	20	Pg	Pb	13 57 22.9	+2.8
	2.7nm,1.0s						
SGDS				Lg	Lg	13 58 43.2	
	7.8nm,1.0s						
GEYT	Alibeck	10.77	276	P	Pn	13 58 04.3	-1.4
	0.2nm,0.3s,baz=88,slow=13,SNR=2.0						
	0.9nm,0.3s						
MKAR	Makanchi Array	12.05	37	P	Pn	13 58 22.6	-0.5
	0.1nm,0.3s,baz=210,slow=13,SNR=5.7						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	13.89	18	P	Pn	13 58 51.9	+3.8
	baz=208,slow=10,SNR=1.9						
	0.3nm,0.2s						
AB31	Akbulak array	14.42	328	⇑Pn	Pn	13 58 54.9	-0.5
	0.5nm,0.6s,baz=151,slow=12,SNR=10.0						
AB31				⇑Sn	Sn	14 01 32.4	-2.9
	1.8nm,0.6s,baz=152,slow=22,SNR=8.4						
BVAR	Borovoye Array	15.44	357	P	Pn	13 59 11.7	+2.6
	baz=173,slow=12,SNR=5.7						
	0.8nm,0.6s						
AKTO	Aktyubinsk	16.13	327	P	P	13 59 21.8	+0.4
	0.2nm,0.3s,baz=132,slow=5.8,SNR=5.5						
	2.6nm,0.8s						
AKTO	Aktyubinsk	16.13	327	⇑Pn	Pn	13 59 14.7	-3.4
	3.2nm,1.0s						
AKTO				⇓Sn	Sn	14 02 20.3	+3.4
	2.3nm,1.1s						
ZALV	Zalesovo Beam	18.66	25	P	P	13 59 49.2	-0.1
	0.1nm,0.3s,baz=218,slow=11,SNR=1.9						
	0.4nm,0.4s						

ISN ***23*** *14:21:02.2±0.7, 32°.62N×47°.59E, h6km±3km, ML2.7*

TEH ***23*** *14:21:03.1, 32°.71N×47°.60E, h7km±52km, ML3.1*

ISC 23 14:21:02.8±1.3, **32°.69N**±0°.03×**47°.62E**±0°.03, **h2km**±12km, **n33, σ1s.49**/40, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKFM	Kafar-mosalman	0.86	13	Pg	Pg	14 21 19.2	-0.2
IKFM				Sg	Sn	14 21 32.8	-2.3
IDOB	Doab	1.20	23	Pg	Pn	14 21 26.2	-0.6
IDOB				Sg	Sn	14 21 42.9	-0.8
IBDR	Badra	1.48	287	*e*Pg	Pb	14 21 30.0	-1.1
IBDR				*e*Sg	Sg	14 21 51.0	+0.5
IBDR				AML	AML	14 21 59.7	
	comp=N,111nm,0.5s						
IBDR				AML	AML	14 21 60.0	
	comp=E,128nm,0.5s						
IKOM	Komasi	1.49	357	Pg	Pg	14 21 31.4	0.0
RAFI	Al-Rafai	1.60	233	*e*Pn	Pn	14 21 32.0	-0.1
RAFI				*e*Sn	Sg	14 21 54.0	-0.1
KCHF	Cheshme Sefid,	1.66	343	Pg	Pg	14 21 34.6	0.0
KCHF				Sg	Sg	14 21 56.7	+0.6
HSAM	Samen	1.73	28	Pg	Pg	14 21 35.9	-0.1
AMIS	Naft Sefid	1.74	125	Pg	Pg	14 21 37.2	+1.0
KER	Kermanshah	1.74	347	Pg	Pb	14 21 35.3	-0.4
IBZA	Bozab	1.79	6	Pg	Pg	14 21 38.1	+0.9
IGHG	Ghaleghazi	1.86	332	Pn	Pg	14 21 38.8	+0.3
IDHR	Dehrash	2.26	333	Pn	Pb	14 21 42.3	-2.2
HAGD	Aghdareh	2.48	30	Pn	Pb	14 21 45.9	-2.3
IPIR	Pirpir	2.76	89	Pn	Pb	14 21 50.7	-2.4
SHK1	Shahrekord	2.78	96	Pn	Pn	14 21 50.1	+1.5
BHD	Baghdad	2.79	283	*e*Pn	Pn	14 21 49.0	+0.6
BHD				*e*Sn	Sn	14 22 23.0	+0.4
IBRJ	Brojen	3.18	103	Pn	Pn	14 21 55.1	+1.0
IRAZ	Razeghan	3.32	35	Pn	Pn	14 21 58.3	+2.3
QAMS	Qamsar	3.33	71	Pn	Pn	14 21 57.8	+1.6
IKLH	Kolahrood	3.39	78	Pn	Pn	14 21 58.9	+1.9
IQOM	Qom	3.59	52	Pn	Pn	14 22 01.3	+1.5
IGAR	Gharneh	3.75	93	Pn	Pn	14 22 02.6	+0.8
KLNJ	Kolanjah	3.77	115	Pn	Pn	14 22 03.5	+1.2
IKRK	Kirkuk	3.84	316	*e*Pn	Pn	14 22 04.0	+1.0
IKRK				*e*Sn	Sn	14 22 50.0	+1.3
IZEF	Zefreh	3.97	86	Pn	Pn	14 22 06.8	+1.8
KRSH	Karshahi	3.99	70	Pn	Pn	14 22 06.8	+1.6
IVRN	Varamin	4.12	55	Pn	Pn	14 22 08.6	+1.7
IRAM	Ramesheh	4.13	101	Pn	Pn	14 22 08.3	+1.2
ISFB	Sefidab	4.20	65	Pn	Pn	14 22 08.7	+0.7
QALM	Alamut, Qazvin	4.50	33	Pn	Pn	14 22 14.5	+2.4
KLST	Kelardasht - M	4.76	36	Pn	Pn	14 22 19.0	+3.1
ANAR	Anarak	5.16	83	Pn	Pn	14 22 22.3	+1.0
IPRN	Peran	5.27	46	Pn	Pn	14 22 24.9	+2.2

IDC 23 14:21:29.7±3.2, **14°.34N**×**145°.24E, h101km**±13km, **mb3.4**/4, **mbtmp3.7**/4, **Error ellipse: s-maj=94.4km s-min=24.1km az=87.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	0.82	206	P	Pn	14 21 49.7	+1.3
	710nm,0.3s,baz=0.0,slow=7.1,SNR=478						
GUMO				S	Sn	14 22 03.2	+0.8
	682nm,0.3s,baz=56,slow=22,SNR=46						
GUMO				LR	LR	14 22 11.3	
	comp=Z,31nm,21.6s,baz=190,slow=50						
H11S3	WAKE ISLAND Hy	20.98	76	T	T	14 47 23.2	
	baz=263,slow=74,SNR=8.2						
H11S1	WAKE ISLAND Hy	20.99	76	T	T	14 47 24.3	
	baz=263,slow=74,SNR=5.0						
H11S2	WAKE ISLAND Hy	20.99	76	T	T	14 47 24.6	
	baz=263,slow=74,SNR=4.7						
WRA	Warramunga Arr	35.71	198	P	P	14 28 18.7	-0.1
	1.7nm,0.7s,baz=21,slow=9.7,SNR=18						
	1.7nm,0.7s						
ASAR	Alice Springs	39.36	197	P	P	14 28 49.6	+0.1
	0.5nm,0.7s,baz=20,slow=11,SNR=15						
	0.5nm,0.7s						
MKAR	Makanchi Array	61.21	316	P	P	14 31 35.2	+1.1
	0.1nm,0.3s,baz=98,slow=8.7,SNR=2.1						
	0.1nm,0.3s						
FINES	FINESS Array B	90.64	335	P	P	14 34 18.8	-1.9
	1.0nm,0.6s,baz=85,slow=5.9,SNR=5.0						
	1.0nm,0.6s						

IDC ***23*** *14:35:33.8±1.8, 7°.75S×107°.99E, h46km±15km, mb4.3/27, mbtmp4.5/27, MS3.5/21, Error ellipse: s-maj=18.9km s-min=11.1km az=49.0*

DJA ***23*** *14:35:34.7±0.2, 8°S±3°×10°8E±°, h62km±2km, M4.8/54, mB5.3/20, mb4.9/54, MLv5.1/26, Mw(mB)4.7/20*

NEIC ***23*** *14:35:36.4±2.5, 7°.96S±0°.09×108°.01E±0°.07, h74km±6km, mb4.7/41, Error ellipse: s-maj=13.4km s-min=9.7km az=208.0*

ISC 23 14:35:35.3±0.6, **8°.03S**±0°.05×**107°.89E**±0°.03, **h65km**±4km, **n266, σ1s.45**/277, **mb4.6**/69, **1C, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMJI	Cimerak	0.60	66	P	Pn	14 35 47.9	-0.8
CMJI				S	Sn	14 35 56.8	-1.8
BBJI	Bungbulang	0.61	337	P	Pn	14 35 48.6	-0.4
CNJI	Cibinong	1.04	313	P	Pn	14 35 54.1	0.0
CNJI				S	Sn	14 36 07.4	-0.7
KPJI	Karang Pucung	1.24	56	P	Pn	14 35 57.4	+0.8
SKJI	Sukabumi	1.67	307	P	Pn	14 36 03.1	+0.7
SKJI				S	Sn	14 36 23.6	+0.6
YOGI	Yogyakarta	2.39	85	P	Pn	14 36 11.6	-0.5
YOGI				S	Sn	14 36 37.8	-2.5
SBJI	Serang	2.58	317	P	Pn	14 36 16.5	+1.8
CGJI	Cibinong	2.60	303	P	Pn	14 36 15.0	0.0
CGJI				S	Sn	14 36 42.3	-3.1
UGM	Wanagama	2.61	88	Pn	Pn	14 36 14.8	-0.3
UGM				Sn	Sn	14 36 44.5	-1.2
UGM	Wanagama	2.61	88	P	Pn	14 36 15.1	0.0
UGM	Wanagama	2.61	88	P	Pn	14 36 14.8	-0.3
UGM				S	Sn	14 36 42.7	-3.0
SMRI	Semarang	2.71	69		Pn	14 36 16.3	-0.2
SMRI	Semarang	2.71	69	P	Pn	14 36 18.5	+2.0
SMRI	Semarang	2.71	69	P	Pn	14 36 18.2	+1.7
SMRI				S	Sn	14 36 49.7	+1.6
XMI	Christmas Isla	3.24	222	P	Pn	14 36 22.0	-1.8
UWJI	Ujung Watu	3.43	62	P	Pn	14 36 27.4	+1.1
UWJI				S	Sn	14 37 05.5	-0.2
NGJI	Ngawi	3.60	80	P	Pn	14 36 30.2	+1.6
BLSI	Bandar Lampung	3.73	315	P	Pn	14 36 33.0	+2.5
PWJI	Pagerwojo	3.87	90	P	Pn	14 36 32.4	0.0
PWJI				S	Sn	14 37 14.9	-1.7
TBJI	Tambak Boyo	4.10	73	P	Pn	14 36 36.3	+0.8
TBJI				S	Sn	14 37 22.5	+0.2
KASI	Kota Agung	4.19	306	P	Pn	14 36 37.6	+0.8
KLI	Kotabumi	4.36	316	P	Pn	14 36 56.3	+17
GRJI	Gresik	4.68	77	P	Pn	14 36 44.1	+0.7
GRJI				S	Sn	14 37 36.4	-0.1
LWLI	Liwa	4.84	308	P	Pn	14 36 47.6	+1.8
BWJI	Bawean	5.20	66	P	Pn	14 36 51.0	+0.4
	422nm,0.6s,8µm2.8nm						
GMJI	Gumukmas	5.50	93	P	Pn	14 36 54.9	+0.2
	155nm,0.7s,3µm1.3nm						
BLJI	Banyuglugur	5.66	88	P	Pn	14 36 57.8	+1.0
	177nm,0.5s,4µm1.1nm						
PPBI	Pangkal Pinang	6.09	343	P	Pn	14 37 05.0	+2.3
	156nm,0.8s,18µm0.7nm						
MNAI	Manna	6.11	306	Pn	Pn	14 37 05.0	+1.9
MNAI	Manna	6.11	306	P	Pn	14 37 04.6	+1.5
	273nm,1.2s						
MNAI	Manna	6.11	306	P	Pn	14 37 04.4	+1.3
	282nm,1.2s,1.4nm						
JAGI	Jajag, Banyuwa	6.21	94	Pn	Pn	14 37 04.3	-0.1
JAGI	Jajag, Banyuwa	6.21	94	P	Pn	14 37 05.1	+0.7
	176nm,0.5s						
JAGI	Jajag, Banyuwa	6.21	94	P	Pn	14 37 04.4	0.0
	181nm,0.5s,5µm						
ABJI	Asem Bagus	6.29	88	P	Pn	14 37 06.8	+1.4
	231nm,0.7s,3µm1.2nm						
PBKI	Pangkalan Bun	6.49	36	P	Pn	14 37 09.3	+1.1
	262nm,0.8s,0.9nm						
KSI	Kapahiang	6.83	309	P	Pn	14 37 12.8	-0.2
	163nm,0.7s,5µm0.7nm						
IGBI	Denpasar	7.22	97	P	Pn	14 37 19.2	+1.0
	102nm,0.8s,3µm0.9nm						
SRBI	Singaraja	7.25	91	P	Pn	14 37 21.3	+2.7
	180nm,0.7s,3µm						
MASI	Maura Aman, Be	7.43	310	P	Pn	14 37 20.1	-1.1
	157nm,0.9s,0.7nm						
DSRI	Dabo	8.20	336	P	Pn	14 37 33.3	+1.7
	64nm,0.9s,1µm						
BBKI	Banjar Baru	8.27	57	P	Pn	14 37 35.0	+2.4
	46nm,1.0s						

TWSI	Taliwang, Sumb	8.92	95	P	Pn	14 37 41.0	-0.5
	65nm,0.8s,2µm						
PPSI	Pulau Pagai	9.43	303	P	Pn	14 37 47.6	-0.9
	242nm,1.1s						
TPRI	Tanjung Pinang	9.50	339	P	Pn	14 37 52.5	+3.1
	67nm,0.8s						
SDSI	Sungai Dareh	9.55	317	P	Pn	14 37 47.8	-2.3
	11nm,0.8s						
PLAI	Plampang	9.81	95	P	Pn	14 37 54.7	+1.0
	89nm,0.7s						
PLAI	Plampang	9.81	95	P	Pn	14 37 53.7	0.0
	88nm,0.7s,1µm						
PDSI	Padang	10.24	313	P	Pn	14 37 56.8	-2.7
	15nm,0.4s						
MYKOM	Kota Tinggi	10.55	337		Pn	14 38 06.9	+3.0
KAPI	Kappang	12.15	76	P	Pn	14 38 28.5	+2.8
	11nm,0.5s,baz=247,slow=14,SNR=9.0						
KAPI				LR	LR	14 43 29.3	
	comp=Z,226nm,21.4s,baz=257,slow=40						
BKSI	Bulukumba	12.44	78	P	Pn	14 38 30.9	+1.3
	19nm,0.6s						
SPSI	Sidrap Palu	12.48	72	P	Pn	14 38 31.1	+1.0
	12nm,1.0s						
BSSI	Bau Bau, Buton	12.64	82	P	Pn	14 38 32.2	-0.1
	64nm,1.0s						
GSI	Gunungsitoli	13.85	312	Pn	Pn	14 38 42.8	-5.9
GSI	Gunungsitoli	13.85	312	P	Pn	14 38 43.6	-5.0
	45nm,0.5s						
MMRI	Maumere	14.21	93	Pn	Pn	14 38 49.5	-3.8
MMRI	Maumere	14.21	93	P	Pn	14 38 53.0	-0.3
	86nm,0.7s						
MMRI	Maumere	14.21	93	P	Pn	14 38 50.3	-3.0
	85nm,0.7s,2µm						
MPSI	Mapaga	14.57	56	P	P	14 39 01.4	-1.5
	25nm,0.9s,336nm						
TOLI2	Tolitoli	15.73	55		Pn	14 39 06.2	-6.9
TOLI2	Tolitoli	15.73	55	P	P	14 39 17.3	+1.5
	20nm,0.6s						
GIRL	Giralia	15.76	158	Pn	Pn	14 39 10.4	-2.8
GIRL	Giralia	15.76	158	P	Pn	14 39 10.2	-3.1
	187nm,1.5s						
KKM	Kota Kinabalu	16.26	31	P	P	14 39 21.7	0.0
	30nm,1.5s						
SOEI	Soe	16.27	97	Pn	Pn	14 39 18.2	-1.7
SOEI				IAmb	IAmb	14 39 38.7	
	comp=Z,79nm,0.8s						
SOEI	Soe	16.27	97	P	Pn	14 39 17.6	-2.3
	comp=Z,111nm,0.7s						
SOEI	Soe	16.27	97	P	Pn	14 39 13.1	-6.8
MRSI	Marisa	16.36	60	P	P	14 39 22.6	-0.1
	comp=Z,47nm,0.8s						
MYLDM	Lahad Datu	16.86	39		Pn	14 39 23.4	-3.7
MYLDM				IAmb	IAmb	14 39 54.8	
	comp=Z,86nm,1.3s						
GTOI	Gorontalo	17.36	61	P	Pn	14 39 31.4	-1.9
	comp=Z,27nm,0.6s,comp=Z,274nm						
PSA00	Pilbara Seismi	17.73	141	P	Pn	14 39 35.9	-1.9
PSA00	Pilbara Seismi	17.73	141	P	Pn	14 39 36.2	-1.6
	comp=Z,52nm,2.4s						
SANI	Sanana	18.97	73	P	Pn	14 39 52.2	-0.7
	comp=Z,87nm,0.8s						
SANI	Sanana	18.97	73	P	Pn	14 39 51.6	-1.2
	comp=Z,86nm,0.8s,comp=Z,846nm						
NLAI	Namlea	19.69	77	P	Pn	14 40 01.1	-0.3
	comp=Z,46nm,0.5s						
FITZ	Fitzroy Crossi	19.95	122		P	14 40 02.4	+0.1
AAI	Ambon	20.65	79	P	P	14 40 09.3	-0.5
	comp=Z,113nm,0.6s,comp=Z,1µm						
LBMI	Labuha	20.87	70	P	P	14 40 12.8	+0.6
	comp=Z,181nm,0.7s,comp=Z,2µm						
TNTI	Ternate	21.29	67	P	P	14 40 16.9	+0.1
TNTI				IAmb	IAmb	14 40 20.1	
	comp=Z,50nm,0.7s						
TNTI	Ternate	21.29	67	P	P	14 40 16.8	+0.1
	comp=Z,79nm,1.0s						
TNTI	Ternate	21.29	67	P	P	14 40 16.1	-0.6
	comp=Z,78nm,1.0s,comp=Z,1µm						
KNRA	Kununurra	21.78	112	P	P	14 40 21.6	-0.2
KNRA				IAmb	IAmb	14 40 28.3	
	comp=Z,30nm,1.0s						
KNRA	Kununurra	21.78	112	P	P	14 40 22.5	+0.6
	comp=Z,29nm,0.9s						
MTN	Manton Dam	23.34	104	P	P	14 40 37.2	-0.9
MTN				IAmb	IAmb	14 40 50.7	
	comp=Z,62nm,1.4s						
MTN	Manton Dam	23.34	104	P	P	14 40 38.2	0.0
	comp=Z,37nm,0.8s						
BLDU	Ballidu	23.94	161	P	P	14 40 45.1	+1.7
	comp=Z,31nm,2.7s						
FAKI	Fak Fak	24.76	80	P	P	14 40 49.4	-1.8
FAKI				IAmb	IAmb	14 40 54.6	
	comp=Z,19nm,0.7s						
FAKI	Fak Fak	24.76	80	P	P	14 40 50.3	-0.8
	comp=Z,27nm,0.7s						
WRKA	Warakurna	25.79	133	P	P	14 41 01.4	+1.0
	comp=Z,9.8nm,0.7s						
NWAO	Narrogin (SRO)	26.25	162	LR	LR	14 50 27.2	
	comp=Z,164nm,21.7s,baz=37,slow=34						
RKPI	Ransiki, Papua	26.97	77	P	P	14 41 09.8	-1.3
	comp=Z,56nm,0.8s,comp=Z,4µm						
PHRA	Phrae	27.42	344	P	P	14 41 14.1	-0.9
CMAR	Chiang Mai Arr	27.76	342	P	P	14 41 16.5	-1.6
	comp=Z,0.9nm,0.5s,baz=175,slow=8.5,SNR=9.1						
CMAR				PcP	PcP	14 44 35.0	+1.6
	comp=Z,3.2nm,0.8s,baz=200,slow=3.4,SNR=15						
CMAR				ScP	ScP	14 48 10.0	+1.4
	comp=Z,1.4nm,0.9s,baz=213,slow=4.0,SNR=9.6						
CMAR				LR	LR	14 53 50.6	
	comp=Z,80nm,19.4s,baz=170,slow=40						
	comp=Z,0.9nm,0.5s						
WB0	Warramunga Arr	28.20	117	P	P	14 41 22.4	+0.4
WRA	Warramunga Arr	28.21	118	P	P	14 41 22.5	+0.4
	comp=Z,1.6nm,0.4s,baz=296,slow=11,SNR=62						
WRA				PcP	PcP	14 44 35.2	+0.7
	comp=Z,0.9nm,0.4s,baz=305,slow=2.1,SNR=5.6						
	comp=Z,1.6nm,0.4s						
WRA	Warramunga Arr	28.21	118	P	P	14 41 21.7	-0.4
WRAB	Tennant Creek	28.22	118	P	P	14 41 22.2	0.0
WRAB	Tennant Creek	28.22	118	P	P	14 41 22.8	+0.6
	comp=Z,8.8nm,1.0s						
WB2	Warramunga Arr	28.22	118	P	P	14 41 21.5	-0.8
ASAR	Alice Springs	29.37	125	P	P	14 41 32.8	+0.3
	comp=Z,1.1nm,0.4s,baz=303,slow=8.5,SNR=47						
ASAR				PcP	PcP	14 44 38.4	+0.9
	comp=Z,1.8nm,0.5s,baz=302,slow=2.2,SNR=12						
ASAR				ScP	ScP	14 48 15.1	+1.3
	comp=Z,1.6nm,0.9s,baz=326,slow=4.5,SNR=7.2						
ASAR				LR	LR	14 53 22.8	
	comp=Z,62nm,19.8s,baz=312,slow=36						
	comp=Z,1.1nm,0.4s						
AS31	Alice Springs	29.38	125	P	P	14 41 32.9	+0.4
AS01	Alice Springs	29.41	125	P	P	14 41 33.6	+0.8
	comp=Z,4.8nm,1.0s						
OOD	Oodnadatta	32.81	130	P	P	14 42 03.2	+0.6
	comp=Z,12nm,0.6s						
MULG	Mulgathing	33.02	136	P	P	14 42 05.3	+0.9
	comp=Z,14nm,1.8s						
QIS	Mount Isa	33.08	116	P	P	14 42 06.1	+1.0
	comp=Z,7.5nm,1.3s						
SSLB	Suanglung	34.10	22	P	P	14 42 12.3	-1.6
SSLB				PcP	PcP	14 44 51.6	+1.4
TNCH	TengChong	34.10	345	*e*P	P	14 42 16.8	+2.7
TNCH				pmax	pmax		
	comp=Z,130nm,3.9s						
BRDH	Bariadhala	34.42	333	LR	LR	14 59 23.3	
	comp=Z,103nm,18.5s,baz=92,slow=42						
PZH	PanZhiHua	34.84	350	P	P	14 42 22.3	+1.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,5.4s						
H08S2	Diego Garcia H	35.07	268	T	T	15 19 27.2	
	baz=92,slow=76,SNR=1316						
H08S3	Diego Garcia H	35.08	268	T	T	15 19 27.5	
	baz=92,slow=76,SNR=1031						
H08S1	Diego Carcia H	35.08	268	T	T	15 19 35.0	
	baz=92,slow=76,SNR=1437						
COEN	Coen	35.10	103	P	P	14 42 21.6	-1.0
COEN				IAmb	IAmb	14 42 23.6	
	comp=Z,11nm,1.0s						
BBOO	Buckleboo	35.90	137	P	P	14 42 28.9	-0.4
BBOO				IAmb	IAmb	14 42 47.1	
	comp=Z,13nm,1.1s						
BBOO				PcP	PcP	14 44 56.2	+0.9
BBOO	Buckleboo	35.90	137	P	P	14 42 29.7	+0.4
	comp=Z,16nm,2.1s						
LCRK	Leigh Creek	36.08	132	P	P	14 42 32.0	+1.1
	comp=Z,10nm,0.9s						
INKA	Innaminka	36.71	126	P	P	14 42 37.8	+1.5
	comp=Z,20nm,2.7s						
MTSU	Mount Surprise	36.80	110	P	P	14 42 38.7	+1.5
	comp=Z,6.9nm,0.7s						
HTT	Hallett	38.21	136	P	P	14 42 50.1	+1.1
	comp=Z,10nm,2.0s						
WHN	Wuhan	38.85	9	*e*P	P	14 42 57.4	+3.2
CTA	Charters Tower	38.99	112	P	P	14 42 56.9	+1.3
	comp=Z,3.6nm,0.8s,baz=275,slow=13,SNR=1.9						
	comp=Z,3.6nm,0.8s						
STKA	Stephens Creek	39.30	132	P	P	14 42 59.4	+1.4
	comp=Z,12nm,0.5s,baz=311,slow=7.9,SNR=70						
STKA				PcP	PcP	14 45 06.7	+0.9
	comp=Z,3.0nm,0.4s,baz=318,slow=2.8,SNR=4.1						
STKA				LR	LR	15 02 22.1	
	comp=Z,76nm,18.9s,baz=7.7,slow=41						
	comp=Z,12nm,0.5s						
STKA	Stephens Creek	39.30	132	P	P	14 42 59.0	+1.0
STKA				PcP	PcP	14 45 06.8	+1.0
STKA	Stephens Creek	39.30	132	P	P	14 42 59.4	+1.4
	comp=Z,3.8nm,0.6s						
TAPN	Taplejung	40.24	332	*e*P	P	14 43 04.9	-1.3
	comp=Z,5.5nm,0.5s						
RAMN	Ramite	40.44	330	*e*P	P	14 43 05.6	-2.2
NJ2	Nanjing	41.21	14	*e*P	P	14 43 14.5	+0.8
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
JIRN	Jiri	41.23	330	*e*P	P	14 43 12.9	-1.5
PKIN	Phulchoki	41.56	329	*e*P	P	14 43 15.0	-2.0
GUN	Gumba	41.59	330	*e*P	P	14 43 15.7	-1.7
	comp=Z,12nm,0.5s						
DMN	Daman	41.73	329	*e*P	P	14 43 17.5	-0.9
XAN	Xi'an	41.85	1	P	P	14 43 16.6	-2.4
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CMSA	Cobar Meteorol	42.23	129	P	P	14 43 24.3	+2.1
	comp=Z,12nm,1.1s						
GKN	Gorkha	42.29	329	*e*P	P	14 43 21.9	-1.0
	comp=Z,12nm,0.3s						
LYN	LuoYang	42.57	6	⇑P	P	14 43 27.4	+2.6
LYN				pmax	pmax		
	comp=Z,15nm,0.5s						
KOLN	Koldanda	42.65	327	*e*P	P	14 43 24.3	-1.5
DANN	Dangsing	43.03	328	*e*P	P	14 43 27.9	-1.1
PYUN	Piuthan	43.24	327	*e*P	P	14 43 29.3	-1.3
CAN	Canberra	46.36	132	P	P	14 43 55.1	-0.2
CAN	Canberra	46.36	132	P	P	14 43 57.7	+2.5
	comp=Z,34nm,2.0s						
JNU	Nakatsue	46.40	27	LR	LR	15 04 26.8	
	comp=Z,27nm,20.0s,baz=195,slow=38						
GTA	Gaotai	47.79	352	*e*P	P	14 44 07.8	+1.5
GTA				pP	pP	14 44 24.8	+1.8
GTA				PcP	PcP	14 45 35.3	+0.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BTO	Baotou	48.43	2	*e*P	P	14 44 11.1	-0.1
BTO				pP	pP	14 44 29.8	+1.9
BTO				sP	sP	14 44 38.5	+3.2
BTO				S	S	14 51 07.6	+0.4
BTO				pmax	pmax		
	comp=Z,40nm,0.5s						
HHC	Hu-ho-hao-te	48.75	4	*e*P	P	14 44 14.9	+1.3
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,230nm,6.0s						
KSRS	Korea Array	48.97	21	P	P	14 44 15.0	-0.2
	comp=Z,0.3nm,0.5s,baz=226,slow=8.3,SNR=2.1						
KSRS				LR	LR	15 06 52.3	
	comp=Z,9.4nm,19.1s,baz=180,slow=39						
	comp=Z,0.3nm,0.5s						
KSRS	Korea Array	48.97	21	P	P	14 44 15.0	-0.2
XLT	XiLinHaoTe	52.22	7	*e*P	P	14 44 40.3	+0.6
XLT				pP	sP	14 44 59.6	-4.4
XLT				sP	pP	14 45 08.0	+11
XLT				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,120nm,4.4s						
MJAR	Matsushiro Arr	52.68	31	P	P	14 44 41.5	-1.7
	comp=Z,1.5nm,0.7s,baz=200,slow=7.9,SNR=2.0						
	comp=Z,1.5nm,0.7s						
NIL	Nilore	52.91	324	P	P	14 44 43.4	-1.5
WMQ	Urumqi	54.76	342	*e*P	P	14 45 00.5	+2.2
WMQ				pmax	pmax		
	comp=Z,13nm,0.8s						
SONM	Songino Array	55.63	359	P	P	14 45 03.5	-1.1
	comp=Z,2.0nm,0.6s,baz=173,slow=8.5,SNR=14						
SONM				PcP	PcP	14 46 03.4	-0.1
	comp=Z,7.5nm,0.4s,baz=176,slow=4.1,SNR=34						
SONM				ScP	ScP	14 49 56.5	-0.4
	comp=Z,0.7nm,0.8s,baz=174,slow=4.1,SNR=4.3						
SONM				LR	LR	15 10 24.9	
	comp=Z,99nm,20.3s,baz=218,slow=38						
	comp=Z,2.0nm,0.6s						
ULN	Ulaanbaatar	55.66	359	P	P	14 45 03.2	-1.6
ULN				IAmb	IAmb	14 45 05.2	
	comp=Z,4.2nm,0.8s						
ULN				PcP	PcP	14 46 03.1	-0.5
KSH	Kashi	55.79	330	P	P	14 45 07.6	+1.7
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KBL	Kabul	56.06	321	P	P	14 45 06.7	-1.3
KBL				IAmb	IAmb	14 45 07.5	
	comp=Z,6.2nm,0.7s						
KDJ	Kajisay	57.28	333	P	P	14 45 14.6	-1.8
KDJ				IAmb	IAmb	14 45 17.0	
	comp=Z,7.8nm,0.7s						
GAR	Garm	58.36	326	P	P	14 45 22.2	-1.8
TKM2	Tokmak 2	58.62	333	P	P	14 45 25.5	-0.4
	SNR=32						
KBK	Karagaybulak	58.71	332	P	P	14 45 26.5	+0.1
	SNR=7.7						
CHGR	Chuyangaron	58.77	325	P	P	14 45 24.3	-2.6
AML	Almayashu	58.90	331	P	P	14 45 27.6	-0.5
	SNR=6.8						
MK31	Makanchi Array	59.15	340	P	P	14 45 27.4	-1.8
MK31				IAmb	IAmb	14 45 32.8	
	comp=Z,2.8nm,0.7s						
MKAR	Makanchi Array	59.15	340	P	P	14 45 27.4	-1.9
	comp=Z,4.1nm,0.4s,baz=155,slow=7.6,SNR=68						
MKAR				LR	LR	15 13 30.1	
	comp=Z,28nm,19.2s,baz=112,slow=39						
	comp=Z,4.1nm,0.4s						
MKAR	Makanchi Array	59.15	340	P	P	14 45 27.5	-1.8
EKS2	Erkin-Say	59.26	331	P	P	14 45 30.1	-0.1
	SNR=5.4						
USP	Ospenovka	59.39	332	P	P	14 45 30.4	-0.6
	SNR=6.0						
OPO	Ambohidratompo	59.76	253	P	P	14 45 36.3	+2.1
	comp=Z,2.5nm,0.7s,baz=99,slow=11,SNR=1.9						
	comp=Z,2.5nm,0.7s						
UOSS	Minazif	60.06	305	P	P	14 45 34.8	-1.1
UOSS	Minazif	60.06	305	P	P	14 45 36.0	+0.1
ASHO	Ashiyiah	60.06	304	P	P	14 45 36.3	+0.4
HATD	Hatta, Dubai	60.06	305	P	P	14 45 36.8	+0.8
MDH	Madha	60.14	305	P	P	14 45 34.3	-2.2
MSFE	Esma-Masafi	60.28	305	P	P	14 45 38.2	+0.8
BANOM	Banah	60.42	306	P	P	14 45 38.6	+0.2
FAQ	Al Faqa, Dubai	60.47	304	P	P	14 45 39.3	+0.6
HEH	HeiHe	60.48	14	*e*P	P	14 45 48.5	+10
HEH				pmax	pmax		
	comp=Z,4.0nm,1.2s						
HEH				pmax	pmax		
	comp=Z,250nm,5.0s						
NAZ	Nazwa, Dubai	60.52	305	P	P	14 45 38.0	-1.0
ASUD	Al Ashush, Dub	60.63	304	P	P	14 45 40.7	+0.8
JKA	Kamikawa-asahi	60.65	28	P	P	14 45 36.8	-2.8
KK31	Karatay Array	61.19	330	P	P	14 45 42.1	-1.2
KK31				IAmb	IAmb	14 45 43.7	
	comp=Z,1.9nm,0.5s						
KKAR	Karatay Array	61.19	330	P	P	14 45 41.9	-1.4
KKAR	Karatay Array	61.19	330	P	P	14 45 42.1	-1.2
KKAR				IAmb	IAmb	14 45 43.7	
	comp=Z,1.9nm,0.5s						
ZALV	Zalesovo Beam	64.75	345	P	P	14 46 05.1	-1.5
	comp=Z,1.6nm,0.3s,baz=151,slow=6.4,SNR=15						
ZALV				PcP	PcP	14 46 38.5	-1.2
	comp=Z,1.6nm,0.4s,baz=175,slow=2.9,SNR=5.5						
ZALV				LR	LR	15 15 31.0	
	comp=Z,26nm,20.7s,baz=108,slow=37						
	comp=Z,1.6nm,0.3s						
ZALV	Zalesovo Beam	64.75	345	P	P	14 46 04.9	-1.7
GEYT	Alibeck	65.12	318	P	P	14 46 09.3	-0.1
	comp=Z,11nm,0.6s,baz=150,slow=6.2,SNR=24						
	comp=Z,11nm,0.6s						
GEYT	Alibeck	65.12	318	P	P	14 46 08.8	-0.6
GEYT				IAmb	IAmb	14 46 10.3	
	comp=Z,13nm,0.8s						
GYA0B	ALIBECK ARRAY	65.12	318	P	P	14 46 09.2	-0.2
GYA0B				IAmb	IAmb	14 46 10.2	
	comp=Z,12nm,0.7s						
RPZ	Rata Peaks	65.18	135	LR	LR	15 12 59.9	
	comp=Z,63nm,21.4s,baz=252,slow=34						
MAW	Mawson	66.65	197	LR	LR	15 08 37.9	
	comp=Z,93nm,20.1s,baz=90,slow=30						
BKZ	Black Stump Fm	68.39	129	P	P	14 46 30.3	0.0
BKZ				IAmb	IAmb	14 46 51.6	
	comp=Z,21nm,1.2s						
RAYN	Ar Rayn	68.52	299	P	P	14 46 31.3	0.0
RAYN				IAmb	IAmb	14 46 32.6	
	comp=Z,9.4nm,1.4s						
RAYN	Ar Rayn	68.52	299	P	P	14 46 32.4	+1.0
BVAR	Borovoye Array	68.66	337	LR	LR	15 19 55.4	
	comp=Z,60nm,18.2s,baz=133,slow=39						
BRVK	Borovoye	68.72	337	P	P	14 46 30.8	-1.2
ABKAR	Akbulak array	70.75	329	P	P	14 46 43.5	-0.9
YAK	Yakutsk	71.87	11	LR	LR	15 19 58.4	
	comp=Z,16nm,18.9s,baz=264,slow=37						
PETK	Petropavlovsk-	74.06	29	P	P	14 47 02.0	-2.1
	comp=Z,3.2nm,0.9s,baz=227,slow=5.5,SNR=9.3						
	comp=Z,3.2nm,0.9s						
VNDA	Vanda	74.80	169	P	P	14 47 09.8	+1.8
	comp=Z,1.4nm,0.7s,baz=319,slow=7.2,SNR=9.9						
	comp=Z,1.4nm,0.7s						
VNDA	Vanda	74.80	169	P	P	14 47 07.4	-0.6
VNDA				IAmb	IAmb	14 47 30.6	
	comp=Z,12nm,1.2s						
MA2	Magadan	75.53	21	LR	LR	15 22 54.9	
	comp=Z,10nm,20.1s,baz=211,slow=38						
KBZ	Khabaz	78.00	318	P	P	14 47 25.8	-1.0
	comp=Z,4.2nm,1.0s,baz=107,slow=5.4,SNR=7.8						
	comp=Z,4.2nm,1.0s						
ASF	Jabal al Asfar	78.47	305	P	P	14 47 30.9	+1.2
	comp=Z,5.1nm,0.6s,baz=113,slow=3.8,SNR=6.1						
	comp=Z,5.1nm,0.6s						
BELG	Belogornoye	78.97	327	P	P	14 47 31.1	-0.7
	comp=Z,9.6nm,0.5s,baz=167,slow=0.3,SNR=6.8						
	comp=Z,9.6nm,0.5s						
EIL	Elat	79.37	302	P	P	14 47 35.5	+1.0
	comp=Z,3.2nm,0.5s,baz=185,slow=5.0,SNR=4.4						
	comp=Z,3.2nm,0.5s						
BOSA	Boshof	79.77	242	P	P	14 47 38.5	+1.5
	comp=Z,1.7nm,0.5s,baz=102,slow=4.1,SNR=5.7						
	comp=Z,1.7nm,0.5s						
MMAI	Mount Meron Ar	79.92	306	P	P	14 47 38.0	+0.4
	comp=Z,6.8nm,0.8s,baz=79,slow=8.1						
	comp=Z,6.8nm,0.8s						
TIXI	Tiksi	80.72	7	P	P	14 47 38.6	-2.4
TIXI				IAmb	IAmb	14 47 40.3	
	comp=Z,5.7nm,0.6s						
QSPA	South Pole Qui	81.97	180	P	P	14 47 48.1	+0.2
QSPA				IAmb	IAmb	14 47 56.4	
	comp=Z,8.4nm,1.1s						
BRTR	Keskin Array B	83.17	312	P	P	14 47 54.6	-0.1
	comp=Z,2.5nm,0.8s,baz=130,slow=6.7,SNR=14						
BRTR				LR	LR	15 28 35.3	
	comp=Z,21nm,18.4s,baz=144,slow=38						
	comp=Z,2.5nm,0.8s						
BRTR	Keskin Array B	83.17	312	P	P	14 47 54.2	-0.5
SUR	Sutherland	83.30	238	LR	LR	15 17 27.8	
	comp=Z,61nm,21.9s,baz=162,slow=30						
OBN	Obninsk	86.07	327	P	P	14 48 08.9	+0.3
	comp=Z,4.2nm,0.4s,baz=90,slow=10,SNR=4.4						
	comp=Z,4.2nm,0.4s						
KLMR	Klimovskoe	86.69	333	*e*P	P	14 48 09.7	-2.0
KLMR				AMP		14 48 13.2	
	comp=Z,43nm,1.8s						
SNAA	Sanae	88.81	197	LR	LR	15 23 22.3	
	comp=Z,92nm,18.2s,baz=112,slow=32						
IDI	Anoyia	88.92	306	P	P	14 48 23.2	+0.2
	comp=Z,3.7nm,0.6s,baz=32,slow=13,SNR=1.7						
	comp=Z,3.7nm,0.6s						
MLR	Muntele Rosu	90.06	316	P	P	14 48 28.6	+0.4
	comp=Z,1.7nm,0.4s,baz=109,slow=9.9,SNR=3.7						
	comp=Z,1.7nm,0.4s						
FINES	FINESS Array B	93.09	332	P	P	14 48 41.2	-0.5
	comp=Z,2.6nm,0.6s,baz=114,slow=8.0,SNR=16						
FINES				PKiKP	PKiKP	14 53 28.5	+0.1
	comp=Z,1.3nm,0.8s,baz=101,slow=2.8,SNR=6.1						
	comp=Z,2.6nm,0.6s						
ARCES	ARCESS Array B	94.81	340	P	P	14 48 48.4	-1.0
	comp=Z,2.2nm,0.7s,baz=20,slow=4.0,SNR=6.3						
ARCES				PKiKP	PKiKP	14 53 32.5	+1.3
	comp=Z,2.5nm,0.9s,baz=112,slow=1.0,SNR=1.3						
ARCES				LR	LR	15 37 18.4	
	comp=Z,60nm,18.1s,baz=270,slow=39						
	comp=Z,2.2nm,0.7s						
GERES	GERESS Array B	98.74	318	LR	LR	15 41 30.4	
	comp=Z,24nm,18.6s,baz=1.0,slow=40						
HFS	Hagfors	99.00	330	P	P	14 49 07.9	-0.7
	comp=Z,0.9nm,0.5s,baz=73,slow=5.0,SNR=1.8						
	comp=Z,0.9nm,0.5s						
ILAR	Eielson Array	103.70	25	PKiKP	PKiKP	14 53 46.8	-0.4
	comp=Z,0.2nm,0.7s,baz=276,slow=3.1,SNR=2.3						
YKA	Yellowknife Ar	117.51	21	PKP	PKPdf	14 54 13.3	0.0
	comp=Z,1.9nm,0.6s,baz=328,slow=1.7,SNR=38						
NVAR	Mina Array Bea	128.63	47	PKP	PKiKP	14 54 38.1	+1.7
	comp=Z,0.9nm,0.7s,baz=315,slow=1.2,SNR=6.2						
PDAR	Pinedale Array	132.28	37	PKP	PKiKP	14 54 44.0	+0.4
	comp=Z,0.8nm,0.5s,baz=30,slow=0.5,SNR=10						
PDAR				SKPbc	SKPab	14 58 05.2	+0.4
	comp=Z,0.4nm,0.7s,baz=29,slow=2.1,SNR=4.3						
SCHQ	Schefferville	133.13	356	PKP	PKPdf	14 54 44.0	+0.5
	comp=Z,5.0nm,0.5s,baz=303,slow=1.9,SNR=12						
ULM	Lac du Bonnet	133.49	21	PKP	PKPdf	14 54 45.3	+1.0
	comp=Z,1.5nm,0.5s,baz=297,slow=4.2,SNR=5.3						
CPUP	Villa Florida	142.95	202	PKP	PKPdf	14 55 03.2	+0.8
	comp=Z,1.4nm,0.7s,baz=156,slow=5.2,SNR=3.3						
TXAR	Lajitas Array	143.56	50	PKP	PKPbc	14 55 02.1	+1.2
	comp=Z,1.9nm,0.6s,baz=247,slow=0.3,SNR=12						
NCB	Newcomb	144.15	3	PKPdf	PKPab	14 55 01.9	+0.2
J57A	Williamstown	144.59	5	PKPdf	PKPab	14 55 03.1	-0.2
R40A	Maddies Statio	144.80	28	PKPdf	PKPab	14 55 04.3	+0.1
RLO	Rose Lookout	145.05	33	PKPdf	PKPab	14 55 05.0	-0.3
N47A	Urbana	145.12	18		PKPab	14 55 04.7	-0.6
K57A	Scipio Center	145.22	6	PKPdf	PKPbc	14 55 05.5	0.0
WVNY	West Valley, N	145.28	8		PKPbc	14 55 05.6	-0.1
CCM	Cathedral Cave	145.46	27		PKPbc	14 55 06.7	+0.3
L56A	Greenwood	145.69	7	PKPdf	PKPdf	14 55 06.7	0.0
JCT	Junction City	145.79	46		PKPab	14 55 08.7	+0.4
M53A	WI Miller and	145.87	12	PKPdf	PKPdf	14 55 07.4	+0.5
L59A	Walton	145.88	4	PKPdf	PKPbc	14 55 08.0	+0.3
FVM	French Village	145.89	26	PKPdf	PKPdf	14 55 07.6	+0.5
T42A	Van Buren	146.37	28		PKPbc	14 55 09.8	+0.6
KSPA	Keystone Colle	146.45	5		PKPbc	14 55 09.6	+0.2
BDFB	Brasilia	146.49	225	PKPbc	PKPbc	14 55 11.9	+1.6
	comp=Z,3.3nm,0.5s,baz=74,slow=5.1,SNR=5.8						
P49A	Miami Univ. Ec	146.65	18		PKPbc	14 55 09.8	-0.1
N58A	Sunbury	147.07	6		PKPbc	14 55 11.3	+0.2
LCAR	Lake Charles	147.11	29		PKPbc	14 55 11.6	+0.3
SSPA	Standing Stone	147.12	8		PKPbc	14 55 11.4	+0.1
P52A	Corning	147.27	14		PKPbc	14 55 11.7	-0.1
WCI	Wyandotte Cave	147.32	21		PKPbc	14 55 11.9	0.0
Q52A	Bidwell	147.87	15	PKPbc	PKPdf	14 55 12.0	+1.6
T47A	Sharon Grove	148.11	23		PKPbc	14 55 14.5	+0.4
Q54A	Coxs Mills	148.19	13		PKPbc	14 55 14.6	+0.3
Q56A	Snyder Ridge,	148.47	11	PKPab	PKPbc	14 55 15.4	+0.5
U49A	Red Boiling Sp	149.03	22		PKPbc	14 55 16.8	+0.3
PLAL	Pickwick Lake	149.43	26	PKPab	PKPbc	14 55 17.4	-0.1
TZTN	Tazewell	149.76	18		PKPbc	14 55 18.7	+0.4
SWET	Sewanee	150.12	23		PKPbc	14 55 19.3	+0.1
CPCT	Cooper Cave	150.43	21	PKPab	PKPbc	14 55 20.7	+0.7
T59A	Double "B" Far	150.77	9	PKPab	PKiKP	14 55 21.5	+0.2
V55A	Taylorsville	151.08	15	PKPbc	PKPbc	14 55 21.8	+0.4
Y49A	Blount Mountai	151.10	25		PKPbc	14 55 21.8	+0.2
BG3	Lake Jocassee	151.38	19		PKiKP	14 55 23.0	+0.3
KMSC	Kings Mountain	151.72	16	PKPbc	PKPbc	14 55 23.3	+0.4
PAULI	Pauline	151.88	17	PKPbc	PKPbc	14 55 23.8	+0.5
HODGE	Hodges	152.30	18	PKPbc	PKPbc	14 55 24.7	+0.5

NOU ***23*** *14:39:36.7, 10°.66S×162°.77E, h0^{km}, mb4.8/12, Solomon Islands*

IDC ***23*** *14:39:44.1±3.3, 11°.02S×162°.47E, h89^{km}±23^{km}, mb3.5/3, mbtmp4.0/5, Error ellipse: s-maj=48.6km s-min=20.8km az=52.0*

ISC 23 14:39:40.4±1.5, **10°.9S**±0°.2×**162°.7E**±0°.2, **h46**^{km}**, n20,** σ2ˢ.**74**/16, **mb3.5**/3, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.07	298	P	Pn	14 40 29.3	+2.8
	2µm,0.5s,baz=176,slow=11,SNR=19						
HNR				S	Sn	14 41 03.8	+1.8
	4µm,0.3s,baz=42,slow=22,SNR=5.7						
HNR	Honiara	3.07	298	P	Pn	14 40 25.9	-0.6
DVP	Devils Point	8.63	143	P	Pn	14 41 44.5	+1.7
KOUNC	Koumac, New Ca	9.73	171	P	Pn	14 42 00.3	+2.5
LIFNC	LIFOU	10.76	157	P	Pn	14 42 13.7	+1.8
DZM	Mont Dzumac	11.68	163	P	Pn	14 42 26.8	+2.1
	1.8nm,0.3s,baz=24,slow=10.0,SNR=156						
DZM				S	Sn	14 44 31.5	-2.3
	5.0nm,0.7s,baz=225,slow=24,SNR=1.5						
DZM	Mont Dzumac	11.68	163	P	Pn	14 42 27.5	+2.8
YATNC	Mamie plateau,	11.81	161	P	Pn	14 42 27.6	+1.3
ONTNC	Ouen Toro	11.91	163	P	Pn	14 42 31.4	+3.7
OUENC	Ouen Island, N	12.13	161	P	Pn	14 42 34.6	+3.9
	17nm,0.9s						
PINNC	Pines Island,	12.51	159	P	Pn	14 42 38.7	+2.8
WRA	Warramunga Arr	28.74	248	P	P	14 45 31.4	-2.5
	0.3nm,0.4s,baz=77,slow=9.1,SNR=3.0 0.3nm,0.4s						
H11S2	WAKE ISLAND Hy	29.46	8	T	T	15 16 44.1	
	baz=188,slow=76,SNR=109						
H11S3	WAKE ISLAND Hy	29.46	8	T	T	15 16 42.7	
	baz=188,slow=76,SNR=73						
H11S1	WAKE ISLAND Hy	29.48	8	T	T	15 16 46.0	
	baz=188,slow=76,SNR=86						
ASAR	Alice Springs	30.21	241	P	P	14 45 44.0	-2.8
	0.6nm,0.6s,baz=66,slow=9.7,SNR=5.6 0.6nm,0.6s						
H11N1	WAKE ISLAND Hy	30.69	8	T	T	15 18 14.4	
	baz=188,slow=76,SNR=32						
H11N3	WAKE ISLAND Hy	30.70	8	T	T	15 18 16.8	
	baz=188,slow=76,SNR=49						
H11N2	WAKE ISLAND Hy	30.71	8	T	T	15 18 15.7	
	baz=188,slow=76,SNR=48						
MKAR	Makanchi Array	91.37	317	P	P	14 52 39.8	-1.7
	0.7nm,0.7s,baz=99,slow=6.1,SNR=7.0 0.7nm,0.7s						

MAN 23 14:45:39.0, 10°.11N×125°.15E, h17km, mb3.9, ML2.7, MS2.3, 2C-3D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	0.28	275	⇓*i*P	Pb	14 45 45.9	+0.2
MSLP				*i* S	Sn	14 45 54.1	-0.2
TABP	Talibon, Bohol	0.80	269	⇓*i*P	Pg	14 45 55.0	+0.3
TABP				*i* S	Sg	14 46 05.7	+0.4
GHBP	Garcia Hernand	0.94	240	⇓*i*P	Pn	14 45 58.2	+0.7
GHBP				*i* S	Sn	14 46 17.7	+7.1
GLSP	General Luna,	1.02	108	⇑*e*P	Pb	14 45 56.8	-1.4
GLSP				*e*S	Sn	14 46 13.2	+0.7
DCPH	Dipolog City	2.33	230	⇑*e*P	Pb	14 46 20.0	-0.6

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*IDC **23** 14:45:53.5±1.6, 11°.38S×162°.47E, h0km, mb3.7/4, mbtmp3.7/5, ML3.3/1, MS3.3/5, Error ellipse: s-maj=36.0km s-min=31.2km az=99.0*

ISC 23 14:45:58.8±1.2**, 11°.5S**±0°.1×**162°.6E**±0°.2**, h39km, n16, σ1ˢ.67**/8**, mb3.5**/4**, MS3.3**/3**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.28	308	Pn	Pn	14 46 45.7	-2.0
	672nm,0.3s,baz=163,slow=7.1,SNR=26						
HNR				Sn	Sn	14 47 28.3	+2.8
	707nm,0.3s,baz=194,slow=22,SNR=6.8						
HNR				LR	LR	14 48 07.0	
	comp=Z,6µm,18.7s,baz=54,slow=42						
DZM	Mont Dzumac	11.15	161	Pn	Pn	14 48 37.1	+1.3
	0.2nm,0.3s,baz=323,slow=18,SNR=9.6						
DZM				Sn	Sn	14 50 38.7	-0.7
	0.1nm,0.3s,baz=233,slow=22,SNR=2.7 4.0nm,0.8s						
MSVF	Nonsavu	16.22	114	LR	LR	14 54 31.1	
	comp=Z,76nm,19.9s,baz=324,slow=32						
CTA	Charters Tower	17.84	239	LR	LR	14 56 14.8	
	comp=Z,88nm,21.4s,baz=316,slow=35						
WRA	Warramunga Arr	28.39	249	P	P	14 51 49.3	-0.4
	0.8nm,0.8s,baz=78,slow=8.7,SNR=3.4 0.8nm,0.8s						
ASAR	Alice Springs	29.80	242	P	P	14 52 01.9	-0.3
	0.9nm,0.7s,baz=66,slow=9.9,SNR=12						
ASAR				LR	LR	15 03 47.1	
	comp=Z,87nm,18.4s,baz=78,slow=36 0.9nm,0.7s						
H11S2	WAKE ISLAND Hy	30.08	8	T	T	15 23 00.7	
	baz=188,slow=76,SNR=36						
H11S3	WAKE ISLAND Hy	30.08	8	T	T	15 23 00.9	
	baz=188,slow=76,SNR=31						
H11S1	WAKE ISLAND Hy	30.09	8	T	T	15 23 01.8	
	baz=188,slow=76,SNR=29						
H11N1	WAKE ISLAND Hy	31.31	8	T	T	15 24 33.0	
	baz=188,slow=76,SNR=15						
H11N3	WAKE ISLAND Hy	31.31	8	T	T	15 24 32.9	
	baz=188,slow=76,SNR=11						
H11N2	WAKE ISLAND Hy	31.32	8	T	T	15 24 32.5	
	baz=188,slow=76,SNR=12						
RAR	Rarotonga	37.33	110	LR	LR	15 04 47.9	
	comp=Z,49nm,20.5s,baz=249,slow=30						
DAV	Davao City (W)	41.15	295	LR	LR	15 08 29.8	
	comp=Z,25nm,19.0s,baz=130,slow=33						
ILAR	Eielson Array	84.95	19	P	P	14 58 29.6	+0.1
	0.4nm,1.0s,baz=235,slow=3.2,SNR=4.3 0.4nm,1.0s						
MKAR	Makanchi Array	91.72	317	P	P	14 59 02.3	0.0
	0.1nm,0.4s,baz=91,slow=6.1,SNR=2.2 0.1nm,0.4s						

MAN 23 14:51:55.5, 10°.45N×123°.72E, h22km, mb3.8, ML2.5, MS2.0, 5C-2D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.28	118	⇑*i*P	Pn	14 52 03.3	-1.1
LLP				*i* S	Sn	14 52 09.0	-0.9
TABP	Talibon, Bohol	0.70	120	⇑*i*P	Pn	14 52 10.4	+0.3
TABP				*i* S	Sn	14 52 20.7	+0.3
GUIM	Jordan	1.12	279	⇑*e*P	Pn	14 52 15.7	-0.3
GUIM				*e*S	Sn	14 52 31.0	+0.3
RCP	Roxas	1.46	319	⇓*i*P	Pn	14 52 20.6	0.0
RCP				*e*S	Sn	14 52 39.2	+0.2
DCPH	Dipolog City	1.89	191	⇓*e*P	Sn	14 52 46.9	-2.7
TASP	Talacogon, Agu	2.86	134	⇑*i*P	Pn	14 52 40.6	+0.6
TASP				*i* S	Sn	14 53 09.6	-4.1
CTBH	Cotabato--PC H	3.25	171	⇑*e*P	Pn	14 52 44.5	-0.8

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*MAN **23** 14:52:06.1, 6°.50N×126°.62E, h39km, mb4.6, ML3.5, MS3.4*

*IDC **23** 14:52:08.4±4.1, 5°.94N×125°.30E, h73km±45km, mb3.1/5, mbtmp3.4/5, Error ellipse: s-maj=95.6km s-min=18.2km az=70.0*

ISC 23 14:52:04.4±1.8**, 6°.42N**±0°.07×**126°.78E**±0°.10**, h52km**±16km**, n20, σ1ˢ.83**/33**, mb3.5**/5**, 8C-5D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.74	316	⇓*e*P	Pn	14 52 19.1	+0.3
MATI				*e*S	Sn	14 52 28.4	-0.8
DAV	Davao City (W)	1.36	299	P	Pn	14 52 28.5	+1.5
	850nm,0.4s,baz=239,slow=5.9,SNR=21						
DAV				S	Sn	14 52 44.8	+0.8
	531nm,0.4s,baz=237,slow=22,SNR=28						
CDOP	Cateel, Davao	1.40	346	⇑*i*P	Pn	14 52 27.7	+0.1
CDOP				*i* S	Sn	14 52 44.1	-0.9
KCP	Kidapawan	1.78	289	⇓*i*P	Pn	14 52 32.6	-0.2
KCP				*i* S	Sn	14 52 52.2	-2.1
BIPH	Bislig	1.81	347	⇑*i*P	Pn	14 52 32.6	-0.6
BIPH				*i* S	Sn	14 52 53.4	-1.5
GSPH	General Santos	1.85	260	⇑*i*P	Pn	14 52 32.6	-1.2
GSPH				*i* S	Sn	14 52 53.1	-3.0
SKMP	Bagumbayan, Su	2.22	273	⇑*e*P	Pn	14 52 39.5	+0.6
SKMP				*e*S	Sn	14 53 09.0	+3.8
BUTP	Butuan	2.78	336	⇓*e*P	Pn	14 52 49.5	+2.9
BUTP				*e*S	Sn	14 53 23.6	+4.7
CGP	Cagayan de Oro	2.89	315	⇓*e*P	Pn	14 52 48.4	+0.4
CGP				*i* S	Sn	14 53 20.9	-0.7
GLSP	General Luna,	3.41	349	⇑*e*P	Pn	14 52 55.2	+0.1
GLSP				*e*S	Sn	14 53 21.3	-13
SCPH	Surigao	3.58	339	*e*P	Pn	14 52 55.3	-2.1
SCPH				*i* S	Sn	14 53 38.9	+0.4
GHBP	Garcia Hernand	4.01	323	⇓*i*P	Pn	14 53 03.5	0.0
GHBP				*i* S	Sn	14 53 49.7	+0.5
LSIP	Lazi, Siquijor	4.12	311	⇑*i*P	Pn	14 53 06.0	+1.0
LSIP				*i* S	Sn	14 53 24.9	-27
TABP	Talibon, Bohol	4.38	327	⇑*i*P	Pn	14 53 08.2	-0.3
TABP				*i* S	Sn	14 53 55.4	-2.9
RCP	Roxas	6.48	322	⇑*e*P	Pn	14 53 39.0	+1.7
WRA	Warramunga Arr	27.23	164	P	P	14 57 44.9	+1.2
	0.5nm,0.8s,baz=341,slow=10,SNR=3.0 0.5nm,0.8s						
ASAR	Alice Springs	30.70	167	P	P	14 58 16.4	+1.8
	0.5nm,0.5s,baz=343,slow=7.2,SNR=17						
ASAR				PcP	PcP	15 01 11.8	+0.1
	0.4nm,1.0s,baz=334,slow=2.3,SNR=2.7 0.5nm,0.5s						
MKAR	Makanchi Array	55.40	324	P	P	15 01 31.3	-2.2
	0.2nm,0.4s,baz=114,slow=6.9,SNR=2.6 0.2nm,0.4s						
KURBB	Kurchatov Arra	59.53	327	P	P	15 02 01.2	-1.3
	0.2nm,0.6s,baz=115,slow=8.7,SNR=3.3 0.2nm,0.6s						
BVAR	Borovoye Array	65.12	326	P	P	15 02 39.7	-0.1
	0.2nm,0.4s,baz=111,slow=7.9,SNR=2.1 0.2nm,0.4s						

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*IDC **23** 15:13:46.8±1.7, 6°.13S×154°.26E, h0km, mb3.6/5, mbtmp3.6/7, ML2.5/2, MS3.2/1, Error ellipse: s-maj=47.6km s-min=26.0km az=119.0*

ISC 23 15:13:54.3±1.3**, 6°.01S**±0°.10×**154°.0E**±0°.1**, h48km, n9, σ0ˢ.96**/10**, mb3.5**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.58	311	Pn	Pn	15 14 33.5	-0.1
	5.0nm,0.3s,baz=318,slow=1.4,SNR=17						
KRVT				Sn	Sn	15 15 03.1	-0.7
	22nm,0.3s,baz=150,slow=16,SNR=7.3 21nm,0.4s						
PMG	Port Moresby	7.55	243	Pn	Pn	15 15 41.0	-1.0
	1.1nm,0.3s,baz=64,slow=11,SNR=2.5						
PMG				Sn	Sn	15 17 07.3	+1.0
	0.8nm,0.3s,baz=0.0,slow=20,SNR=3.4 5.0nm,0.5s						
CTA	Charters Tower	15.88	208	LR	LR	15 23 43.7	
	comp=Z,72nm,18.4s,baz=79,slow=38						
WRA	Warramunga Arr	23.58	232	P	P	15 19 00.5	-0.4
	0.4nm,0.7s,baz=52,slow=9.7,SNR=3.0 0.4nm,0.7s						
ASAR	Alice Springs	26.10	226	P	P	15 19 23.8	-0.2
	1.1nm,0.8s,baz=63,slow=8.7,SNR=14 1.1nm,0.8s						
MKAR	Makanchi Array	82.00	319	P	P	15 26 10.5	+1.1
	0.7nm,0.8s,baz=102,slow=5.6,SNR=8.2 0.7nm,0.8s						
ZALV	Zalesovo Beam	82.80	326	P	P	15 26 14.7	+1.3
	0.4nm,0.5s,baz=116,slow=6.6,SNR=2.4 0.4nm,0.5s						
ILAR	Eielson Array	82.83	22	P	P	15 26 12.4	-0.9
	0.3nm,0.9s,baz=270,slow=3.3,SNR=1.7 0.3nm,0.9s						
TORD	Torodi Ar. Bea	151.79	287	PKPbc	PKiKP	15 33 45.4	+0.2
	2.5nm,0.5s,baz=71,slow=2.6,SNR=1.5						

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*DSN **23** 15:22:53.9±1.9, 27°.40N×56°.09E, h10km, ML3.1/9, Error ellipse: s-maj=29.9km s-min=14.9km az=86.0*

*OMAN **23** 15:22:59.6±0.5, 26°.93N×55°.43E, h3km±4km, mb5.3/1, ml2.9/21, Error ellipse: s-maj=7.3km s-min=3.6km az=45.0*

*TEH **23** 15:22:59.4, 26°.79N×55°.38E, h12km±28km, ML3.5*

ISC 23 15:23:02.2±1.5**, 26°.85N**±0°.03×**55°.43E**±0°.04**, h11km**±12km**, n67, σ1ˢ.20**/82**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENO	Geno	0.86	50	Pg	Pn	15 23 18.4	-2.0
SHME	Shamm	1.02	141	*e*P	Pb	15 23 19.8	-2.1
	SNR=17						
SHME				S	Sb	15 23 36.0	+0.6
SHME	Shamm	1.02	141	P	Pb	15 23 20.9	-1.0
	SNR=17						
SHME				S	Sn	15 23 36.3	-0.6
	SNR=8.2						
SHME	Shamm	1.02	141	Pg	Pb	15 23 20.5	-1.5
IBND	Bandar-abas	1.15	59	Pg	Pg	15 23 23.6	-0.8
IBND				Sg	Sg	15 23 41.2	+1.8
BANOM	Banah	1.21	140	*e*P	Pn	15 23 23.0	-2.1
	SNR=40						
BANOM				S	Sn	15 23 41.2	-0.3
BANOM	Banah	1.21	140	P	Pn	15 23 23.7	-1.5
	SNR=40						
BANOM				S	Sn	15 23 41.8	+0.2
BANOM	Banah	1.21	140	Pg	Pn	15 23 23.7	-1.5
LAR1	LAR	1.24	311	Pg	Pn	15 23 24.3	-1.4
LAR1				Sg	Sn	15 23 41.4	-1.1
UMQ	Umm Al-Quwin	1.34	171	P	Pn	15 23 26.4	-0.4
UMQ				S	Sb	15 23 46.5	+2.0
UMQ	Umm Al-Quwin	1.34	171	Pg	Pn	15 23 26.5	-0.4
MASF	Masafi	1.61	156	P	Pn	15 23 30.1	-0.7
	SNR=17						
MASF				S	Sb	15 23 53.1	+0.6
MSFE	Esma-Masafi	1.62	156	*e*P	Pn	15 23 28.0	-2.9
	SNR=17						
MSFE	Esma-Masafi	1.62	156	Pg	Pn	15 23 29.9	-1.0
MDH	Madha	1.73	153	P	Pn	15 23 31.7	-0.7
MDH				S	Sb	15 23 56.5	+0.7
MDH	Madha	1.73	153	Pg	Pn	15 23 32.3	0.0
NAZ	Nazwa, Dubai	1.87	174	P	Pn	15 23 33.2	-0.9
NAZ	Nazwa, Dubai	1.87	174	P	Pn	15 23 33.3	-0.9
ESRB	Sir Abu	1.95	214	Pn	Pn	15 23 33.9	-1.4
UOSS	Minazif	2.02	160	P	Pn	15 23 35.1	-1.2
UOSS	Minazif	2.02	160	Pn	Pn	15 23 36.5	+0.2
LMD1	Lamerd	2.08	284	Pn	Pn	15 23 37.2	+0.1
FAQ	Al Faqa, Dubai	2.10	176	P	Pn	15 23 36.2	-1.2
FAQ	Al Faqa, Dubai	2.10	176	P	Pn	15 23 36.7	-0.7
FAQ	Al Faqa, Dubai	2.10	176	Pn	Pn	15 23 36.7	-0.7
HATD	Hatta, Dubai	2.11	162	P	Pn	15 23 36.7	-0.9
HATD	Hatta, Dubai	2.11	162	P	Pn	15 23 37.0	-0.6
HATD				S	Sb	15 24 06.6	-0.3
HATD	Hatta, Dubai	2.11	162	Pn	Pn	15 23 37.7	+0.1
ASUD	Al Ashush, Dub	2.22	182	*e*P	Pn	15 23 38.4	-0.6
	SNR=11						
ASUD				S	Sg	15 24 16.3	+2.8
ASUD	Al Ashush, Dub	2.22	182	P	Pn	15 23 39.0	0.0
	SNR=11						
ASUD	Al Ashush, Dub	2.22	182	Pn	Pn	15 23 38.6	-0.3
ASHO	Ashiyiah	2.23	165	*e*P	Pn	15 23 38.3	-0.9
	SNR=11						
ASHO	Ashiyiah	2.23	165	P	Pn	15 23 38.5	-0.8
	SNR=16						
ASHO	Ashiyiah	2.23	165	Pn	Pn	15 23 38.4	-0.9
KHNJ	Kahnooj	2.30	61	Pn	Pn	15 23 39.7	-0.4
AJN	Ajban	2.31	190	P	Pn	15 23 40.0	-0.3
AJN				S	Sn	15 24 10.4	+1.6
JHRM	Jahrom	2.33	315	Pn	Pn	15 23 40.8	+0.2
JASK	Jask - Hormozg	2.40	114	P	Pn	15 23 40.5	-1.0
JASK	Jask - Hormozg	2.40	114	Pn	Pn	15 23 40.7	-0.7
ALNE	Al Ain	2.80	174	P	Pn	15 23 46.1	-0.9
ALNE	Al Ain	2.80	174	Pn	Pn	15 23 46.1	-0.9
SOHO	SOHO	2.88	160	P	Pn	15 23 47.1	-1.0
SOHO	SOHO	2.88	160	Pn	Pn	15 23 46.2	-1.9
KBAM	BAM	3.51	49	Pn	Pn	15 23 57.4	+0.5
CHMN	Cheshme madani	3.53	31	Pn	Pn	15 23 59.0	+1.7
KHGB	Koh Gabri	3.63	14	Pn	Pn	15 23 60.0	+1.3
ARQ	Araqi	3.64	164	P	Pn	15 23 57.9	-0.7
ARQ				S	Sn	15 24 43.7	+2.2
HOQ	Hoqain	3.67	152	P	Pn	15 23 57.6	-1.4
HOQ				S	Sn	15 24 43.3	+0.9
UMZA	Um Al Zommool	4.13	183	P	Pn	15 24 03.5	-1.7
UMZA	Um Al Zommool	4.13	183	Pn	Pn	15 24 03.4	-1.9
SHMA	Al-Shehemyia	4.13	257	P	Pn	15 24 03.6	-1.6
MZR	Muzera	4.22	205	P	Pn	15 24 06.4	-0.2
MZR	Muzera	4.22	205	Pn	Pn	15 24 04.9	-1.7
BSY	Bisya	4.39	158	P	Pn	15 24 08.3	-0.7
WSAR	Wadi Sarin	4.62	140	P	Pn	15 24 12.1	0.0
CHBR	Chabahar	4.71	104	Pn	Pn	15 24 12.7	-0.6
JMDO	Jabal Madar	5.08	151	P	Pn	15 24 17.6	-0.8
ISAD	Sadrabad	5.27	344	Pn	Pn	15 24 22.1	+0.9
WBK	Wadi Bani Khal	5.31	142	P	Pn	15 24 21.3	-0.2
KLNJ	Kolanjah	5.33	322	Pn	Pn	15 24 21.2	-1.0
ICHK	Chekchek	5.45	351	Pn	Pn	15 24 24.1	+0.5
IRAM	Ramesheh	5.61	332	Pn	Pn	15 24 25.0	-0.9
SRVN	Saravan	6.23	83	Pn	Pn	15 24 34.8	+0.4
MHTO	MHTO	6.28	158	P	Pn	15 24 34.6	-0.3
MHTO				S	Sn	15 25 48.7	+1.9
ANAR	Anarak	6.49	347	Pn	Pn	15 24 37.3	-0.5
IZEF	Zefreh	6.60	337	Pn	Pn	15 24 37.5	-2.0
KRSH	Karshahi	7.64	339	Pn	Pn	15 24 52.6	-1.1

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*SJA **23** 15:23:42.6±0.8, 20°.21S×70°.39W, h62km±6km, ML3.6, MW3.7, Hypocentre not reviewed by the ISC*

*GUC **23** 15:23:45.4±0.8, 20°.18S×70°.31W, h48km±2km, ML3.4*

*IDC **23** 15:23:49.5±2.6, 20°.34S×69°.48W, h0km, mbtmp3.4/3, ML3.1/3, MS2.9/2, Error ellipse: s-maj=66.5km s-min=24.0km az=95.0*

ISC 23 15:23:47.5±1.1**, 20°.27S**±0°.03×**70°.20W**±0°.07**, h35km**±4km**, n32, σ2ˢ.17**/33**, 3C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA02	Huaiquique	0.07	94	⇑*i*P	Pb	15 23 52.7	-0.6
TA02				*e*S	Sb	15 23 58.4	+1.1
TA02	Huaiquique	0.07	94	*e*P		15 23 53.5	
TA02				IAML		15 24 02.2	
	comp=Z,3µm,0.1s						
TA01	Diego Aracena	0.30	176	⇑*i*P	Pb	15 23 54.5	-0.9
TA01				*e*S	Sb	15 24 01.6	+0.8
TA01	Diego Aracena	0.30	176	*e*P		15 23 54.3	
PB11	IPOC Station P	0.72	46	⇓*i*P	Pn	15 23 59.3	-2.0
PB11				*e*S	Sn	15 24 10.3	-0.9
PB11				IAML		15 24 12.0	
	comp=N,3µm,0.2s						
PB11	IPOC Station P	0.72	46	*e*P		15 23 59.3	
PB11				*e*S		15 24 11.2	
PB11				IAML		15 24 11.5	
	comp=Z,2µm,0.4s						
PB08	IPOC Station P	0.99	83	⇓*i*P	Pn	15 24 04.5	-0.8
PB08				*e*S	Sn	15 24 19.1	+0.8
PB08				IAML		15 24 21.6	
	comp=N,660nm,0.2s						
PB08	IPOC Station P	0.99	83	*e*P		15 24 04.6	
PB08				*e*S		15 24 20.8	
PB08				*e*S		15 24 20.9	
PB01	IPOC Station P	1.02	139	⇓*i*P	Pn	15 24 05.2	-0.2
PB01				*e*S	Sn	15 24 20.5	+1.9
PB01				IAML		15 24 21.9	
	comp=E,3µm,0.2s						
PB01	IPOC Station P	1.02	139	*e*P		15 24 04.0	
PB01				*e*S		15 24 20.9	
PB01				IAML		15 24 21.0	
	comp=Z,1µm,0.2s						
PB02	IPOC Station P	1.09	165	*e*P	Pn	15 24 05.4	-0.9
PB02				*e*S	Sb	15 24 20.8	-1.1
PB02				IAML		15 24 27.8	
	comp=E,1µm,0.3s						
PB02	IPOC Station P	1.09	165	*e*P		15 24 04.0	
PB02				*e*S		15 24 21.9	
PB02				IAML		15 24 24.9	
	comp=Z,1µm,0.3s						
GO01	Chusmiza	1.12	58	*i* P	Pn	15 24 05.5	-1.6
GO01				*e*S	Sn	15 24 21.6	+0.1
GO01				IAML		15 24 25.6	
	comp=N,2µm,0.1s						
GO01	Chusmiza	1.12	58	*e*P		15 24 04.0	
GO01				*e*P		15 24 05.5	
GO01				*e*S		15 24 22.9	
MNMC	Minye Minye	1.27	27	⇓*i*P	Pn	15 24 06.4	-2.6
MNMC				*e*S	Sn	15 24 23.3	-1.6
MNMC				IAML		15 24 26.0	
	comp=E,3µm,0.2s						
MNMCX	Minye Minye	1.27	27	*e*P		15 24 06.3	
MNMCX				*e*S		15 24 23.8	
MNMCX				IAML		15 24 25.2	
	comp=Z,1µm,0.3s						
PB07	IPOC Station P	1.48	169	⇑*i*P	Pn	15 24 11.0	-0.8
PB07				*e*S	Sn	15 24 30.5	+0.3
PB07				IAML		15 24 33.9	
	comp=E,428nm,0.2s						
PB07	IPOC Station P	1.48	169	*e*P		15 24 10.0	
PB07				*e*S		15 24 31.4	
PB12	IPOC Station P	1.65	356	⇓*i*P	Pn	15 24 10.0	-4.0
PB12				*e*S	Sn	15 24 30.4	-3.7
PB12				IAML		15 24 34.8	
	comp=E,541nm,0.3s						
PB12	IPOC Station P	1.65	356	*e*P		15 24 09.9	
PB12				*e*S		15 24 31.8	
PB09	IPOC Station P	1.77	150	*e*P	Pb	15 24 16.6	-2.8
PB09				*e*S	Sb	15 24 39.1	-2.2
PB09				IAML		15 24 42.9	
	comp=N,512nm,0.6s						
PB09	IPOC Station P	1.77	150	*e*P		15 24 15.0	
PB09				*e*S		15 24 36.7	
PB09				IAML		15 24 47.5	
	comp=Z,542nm,0.5s						
PB03	IPOC Station P	1.82	167	*e*P	Pn	15 24 15.6	-0.9
PB03				*e*S	Sn	15 24 38.1	-0.4
PB03				IAML		15 24 45.9	
	comp=E,267nm,0.2s						
AP01	Chacalluta	1.89	356	*e*P		15 24 15.0	
AP01				*e*S		15 24 16.4	
AP01				IAML		15 24 48.8	
	comp=Z,416nm,0.4s						
PB16	IPOC Station P	2.03	19	⇓*i*P	Pn	15 24 17.0	-2.7
PB16	IPOC Station P	2.03	19	*e*P		15 24 17.2	
PB16				*e*S		15 24 39.7	
PB04	IPOC Station P	2.06	179	*e*P	Pn	15 24 17.5	-2.3
PB04				IAML		15 24 51.3	
	comp=N,256nm,0.2s						
PB04	IPOC Station P	2.06	179	*e*P		15 24 17.7	
PB04				*e*S		15 24 43.8	
PB04				IAML		15 24 53.9	
	comp=Z,221nm,0.3s						
PB06	IPOC Station P	2.50	167	*e*P		15 24 24.5	
PB06				*e*S		15 24 55.0	
LVC	Limon Verde	2.62	153	Pn	Pn	15 24 28.5	+0.7
	comp=Z,5.8nm,0.3s,baz=342,slow=11,SNR=18						
LVC				Sn	Sb	15 25 00.8	-5.3
	comp=Z,41nm,0.3s,baz=117,slow=17,SNR=9.0 comp=Z,24nm,0.3s						
LVC	Limon Verde	2.62	153	*e*P		15 24 27.0	
LVC				*e*S		15 24 57.2	
PB18	Visviri	2.75	15	*i* P	Pn	15 24 29.3	-0.3
PB15	IPOC Station P	3.01	167	*e*P	Pn	15 24 31.3	-1.5
PB15	IPOC Station P	3.01	167	*e*P		15 24 32.0	
PB15				*e*S		15 25 08.0	
PB15				IAML		15 25 21.1	
	comp=Z,225nm,0.3s						
PB10	IPOC Station P	3.25	186	*i* P	Pn	15 24 32.1	-3.9
PB10	IPOC Station P	3.25	186	*e*P		15 24 32.0	
PB10				*e*P		15 24 33.2	
PB10				*e*S		15 25 11.2	
LPAZ	La Paz	4.42	27	Pn	Pn	15 24 54.9	+2.3
	comp=Z,0.4nm,0.3s,baz=227,slow=5.1,SNR=8.7						
LPAZ				LR	LR	15 26 55.9	
	comp=Z,52nm,19.8s,baz=203,slow=44 comp=Z,1.4nm,0.3s						
SIV	San Ignacio	9.66	65	Pn	Pn	15 26 02.0	-2.1
	baz=249,slow=9.0,SNR=8.3 comp=Z,1.5nm,0.5s						
H03N1	Juan Fernandez	15.24	209	T	T	15 43 10.0	
	baz=33,slow=72,SNR=53						
H03N2	Juan Fernandez	15.25	209	T	T	15 43 09.9	
	baz=33,slow=72,SNR=50						
H03N3	Juan Fernandez	15.26	209	T	T	15 43 08.9	
	baz=33,slow=72,SNR=51						
TORD	Torodi Ar. Bea	78.09	71	P	P	15 35 47.4	+4.0
	comp=Z,1.8nm,0.3s,baz=261,slow=4.7,SNR=1.6						
BORG	Borgarnes	92.65	19	LR	LR	16 14 59.3	
	comp=Z,17nm,20.5s,baz=180,slow=33						
H11S2	WAKE ISLAND Hy	126.51	278	T	T	18 02 03.6	
	baz=101,slow=75,SNR=28						
H11S1	WAKE ISLAND Hy	126.52	278	T	T	18 02 05.4	
	baz=101,slow=75,SNR=34						
H11S3	WAKE ISLAND Hy	126.53	278	T	T	18 02 05.0	
	baz=101,slow=75,SNR=33						
H11N3	WAKE ISLAND Hy	126.57	280	T	T	18 02 07.3	
	baz=102,slow=75,SNR=18						
H11N2	WAKE ISLAND Hy	126.58	280	T	T	18 02 08.4	
	baz=102,slow=75,SNR=17						
H11N1	WAKE ISLAND Hy	126.58	280	T	T	18 02 07.7	
	baz=102,slow=75,SNR=16						
MKAR	Makanchi Array	145.32	34	PKP	PKiKP	15 43 29.3	+3.7
	comp=Z,0.3nm,0.7s,baz=299,slow=2.6,SNR=3.8						

IDC 23 15:32:41.1±2.0, 0°.88N×125°.91E, h0^{km}, mb3.4/3, mbtmp3.4/3, MS2.4/1, Error ellipse: s-maj=172.3km s-min=26.6km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	8.49	226	LR	LR	15 39 02.5	
	comp=Z,22nm,18.8s,baz=202,slow=45						
WRA	Warramunga Arr	22.29	159	P	P	15 37 39.6	-0.6
	1.3nm,0.8s,baz=337,slow=11,SNR=8.5						
	1.3nm,0.8s						
ASAR	Alice Springs	25.61	163	P	P	15 38 12.8	+0.5
	0.2nm,0.4s,baz=345,slow=11,SNR=16						
	0.2nm,0.4s						
MKAR	Makanchi Array	59.44	327	P	P	15 42 45.6	-0.1
	0.3nm,0.6s,baz=121,slow=7.9,SNR=4.0						
	0.3nm,0.6s						

IDC 23 15:49:17.5±1.9, 6°.95S×128°.65E, h0^{km}, mb3.7/1, mbtmp3.6/3, ML3.8/2, Error ellipse: s-maj=185.4km s-min=29.4km az=67.0

NEIC 23 15:49:34.0±2.5, 7°.34S±0°.10×128°.73E±0°.07, h155^{km}±5^{km}, mb4.3/6, Error ellipse: s-maj=14.5km s-min=9.8km az=168.0

ISC 23 15:49:32.3±0.7, 7°.43S±0°.06×128°.74E±0°.06, h150^{km}, n29, σ2^s.54/34, mb4.3/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.59	102	Pn	Pn	15 50 18.1	+3.5
SAUI				Sn	Sn	15 50 49.9	+2.7
SAUI	Saumlaki	2.59	102	P	Pn	15 50 18.6	+4.1
SOEI	Soe	4.99	242		Pn	15 50 48.1	+2.4
SOEI				Sn	Sn	15 51 41.7	-1.3
SOEI	Soe	4.99	242	P	Pn	15 50 48.3	+2.6
FAKI	Fak Fak	5.68	38	Pn	Pn	15 50 54.4	-0.3
FAKI				Sn	Sn	15 51 54.0	-5.2
FAKI	Fak Fak	5.68	38	P	Pn	15 50 54.9	+0.1
MTN	Manton Dam	5.87	157		Pn	15 50 58.3	+1.0
MTN				Sn	Sn	15 52 01.2	-2.6
MTN	Manton Dam	5.87	157	P	Pn	15 50 58.6	+1.3
KDU	Kakadu	6.38	145	P	Pn	15 51 05.3	+1.2
MMRI	Maumere	6.55	259	Pn	Pn	15 51 08.8	+2.4
KNRA	Kununurra	8.20	180		Pn	15 51 28.5	+0.2
KNRA	Kununurra	8.20	180	P	Pn	15 51 28.6	+0.3
PLAI	Plampang	10.95	262	P	Pn	15 52 06.3	+1.5
FITZ	Fitzroy Crossi	11.03	196	Pn	Pn	15 52 04.6	-1.2
FITZ	Fitzroy Crossi	11.03	196	P	Pn	15 52 04.3	-1.6
WB0	Warramunga Arr	13.43	156	Pn	Pn	15 52 35.3	-1.7
WRAB	Tennant Creek	13.57	157	Pn	Pn	15 52 38.0	-0.8
WRA	Warramunga Arr	13.57	157	Pn	Pn	15 52 37.4	-1.5
	0.7nm,0.3s,baz=331,slow=14,SNR=57						
WRA				Sn	Sn	15 54 57.2	-12
	1.4nm,0.3s,baz=330,slow=22,SNR=10						
	0.5nm,0.3s						
WRA	Warramunga Arr	13.57	157	Pn	Pn	15 52 37.7	-1.1
COEN	Coen	15.59	116	P	P	15 53 05.8	+0.7
COEN				IAmb	IAmb	15 53 26.5	
	comp=Z,8.4nm,1.1s						
MBWA	Marble Bar	16.19	212	P	P	15 53 13.7	+1.9
PSA00	Pilbara Seismi	16.48	211	P	P	15 53 15.9	+1.0
PSA00				IAmb	IAmb	15 53 42.7	
	comp=Z,52nm,1.2s						
AS31	Alice Springs	16.89	164	P	P	15 53 20.3	+0.8
ASAR	Alice Springs	16.89	164	P	Pn	15 53 22.0	+2.1
	comp=Z,0.1nm,0.3s,baz=343,slow=13,SNR=13						
ASAR				S	S	15 56 19.4	-8.4
	comp=Z,1.2nm,0.5s,baz=314,slow=16,SNR=6.5						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	16.89	164	P	Pn	15 53 21.6	+1.7
MORW	Morawa	24.63	208	P	P	15 54 41.6	+2.7
MORW				IAmb	IAmb	15 54 51.9	
	comp=Z,28nm,1.4s						
MKAR	Makanchi Array	67.91	327	P	P	16 00 15.2	+0.5
	comp=Z,15nm,0.4s,baz=122,slow=7.7,SNR=14						
ZALV	Zalesovo Beam	71.42	334	P	P	16 00 36.5	+0.5
	comp=Z,0.3nm,0.4s,baz=152,slow=6.5,SNR=2.8						
	comp=Z,0.3nm,0.4s						
KURK	Kurchatov	72.24	329	P	P	16 00 41.3	+0.3
KURK				IAmb	IAmb	16 00 43.2	
	comp=Z,5.5nm,1.4s						

KRSC 23 16:16:17.6±0.9, 56°.56N×161°.41E, h95^{km}±8^{km}, Ml3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMKR	Semkarok	0.04	58	*e*P	Pn	16 16 32.6	+1.6
SRKR	Sorokina	0.16	305	*e*P	Pn	16 16 32.4	+1.2
KLY	Klyuchi	0.49	240	*e*P	Pn	16 16 32.8	+0.1
KLY				*e*S	Sn	16 16 44.0	0.0
CIRR	Tsirk	0.58	220	*e*P	Pn	16 16 35.0	+1.3
CIRR				*e*S	Sn	16 16 47.8	+2.1
LGNR	Loginova	0.62	220	*e*S	Sn	16 16 48.6	+1.9
KBG	Krutoberegovo	0.78	112	*e*P	Pn	16 16 36.5	+1.2
BZWR	Bezymyannyi-We	0.79	221	*e*P	Pn	16 16 36.8	+1.2
BZWR				*e*S	Sn	16 16 50.9	+1.9
BZMR	Bezymyannaya	0.81	220	*e*P	Pn	16 16 37.1	+1.3
BZP	Bezymyannyi-Pe	0.81	217	*e*P	Pn	16 16 36.9	+1.0
BZP				*e*S	Sn	16 16 51.1	+1.6
KIRR	Kirishev	0.85	225	*e*P	Pn	16 16 37.0	+0.7
KIRR				*e*S	Sn	16 16 51.1	+0.9
KBTR	Krutoberegovo	0.86	114	*e*P	Pn	16 16 37.2	+1.0
KBTR				*e*S	Sn	16 16 51.7	+1.6
KPT	Kopyto	0.89	228	*e*P	Pn	16 16 37.2	+0.6
SRDR	Sredinnyy	0.97	256	*e*P	Pn	16 16 37.9	+0.5
SRDR				*e*S	Sn	16 16 52.9	+0.6
KMNR	Kamenistaya	1.04	220	*e*P	Pn	16 16 39.5	+1.2
TUMR	Tumrok	1.46	210	*e*P	Pn	16 16 44.5	+1.2
TUMD	Tumrok D	1.48	203	*e*P	Pn	16 16 44.3	+1.0
TUMD				*e*S	Sn	16 17 03.5	+0.7
ESO	Esso	1.64	248	*e*P	Pn	16 16 48.1	+2.7
TIGL	Tigil	1.92	310	*e*P	Pn	16 16 50.1	+1.2
PALN	Palana	2.65	344	*e*P	Pn	16 17 00.2	+1.8
OSSR	Ossora	2.84	17	*e*P	Pn	16 17 04.2	+3.2
BKI	Bering	2.91	116	*e*P	Pn	16 17 02.4	+0.5
BKI				*e*S	Sn	16 17 35.3	-0.8
GNL	Ganaly	3.49	216	*e*P	Pn	16 17 11.6	+1.7
SPN	Mys Shipunski	3.56	194	*e*P	Pn	16 17 11.2	+0.4
KRX	Arik	3.58	207	*e*P	Pn	16 17 13.7	+2.6
NLC	Nalytchevo	3.60	200	*e*P	Pn	16 17 15.3	+4.0
SMAR	Somma	3.63	206	*e*P	Pn	16 17 14.5	+2.6
AVH	Avacha	3.64	206	*e*P	Pn	16 17 15.6	+3.6
KOK	Koryaka	3.65	207	*e*P	Pn	16 17 16.0	+4.0
UGLR	Uglovaya	3.67	205	*e*P	Pn	16 17 15.2	+2.8
DALK	Dalny	3.86	205	*e*P	Pn	16 17 17.5	+2.8
PET	Petropavlovsk	3.89	205	*e*P	Pn	16 17 18.4	+3.3
KRMR	Karymshinskiy	4.19	208	*e*P	Pn	16 17 21.7	+2.5
GRL	Gorelyy	4.46	207	*e*P	Pn	16 17 26.2	+3.2
MTVR	Mutnovka	4.50	206	*e*P	Pn	16 17 26.1	+2.6
KDTR	Khodutka, Kamc	5.15	204	*e*P	Pn	16 17 33.4	+1.2

IDC 23 16:19:09.7±0.8, 36°.02N×142°.45E, h0^{km}, mb3.8/17, mbtmp3.8/22, ML3.4/5, MS3.1/8, Error ellipse: s-maj=17.7km s-min=17.3km az=54.0

JMA 23 16:19:11.5±0.2, 36°.2N±0°.4×14°3E±°, h59^{km}, MV3.5/28, FAR E OFF KANTO

NIED 23 16:19:11.5, 36°.19N×142°.55E, h59^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.98; $M_{\theta\theta}$-0.22; $M_{\phi\phi}$-0.76; $M_{r\theta}$0.09; $M_{\theta\phi}$-0.45; $M_{\phi r}$0.31; Fault plane solution: $M_0$1.05000×10^{15} NP1:ϕ_s25.00000°, δ54.00000°, λ85.00000°. NP2:ϕ_s214.00000°, δ36.00000°, λ97.00000°.

NEIC 23 16:19:16.2±1.4, 36°.37N±0°.06×142°.2E±0°.1, h32^{km}±5^{km}, mb4.6/24 Error ellipse: s-maj=12.8km s-min=8.4km az=95.0

ISC 23 16:19:14.7±1.1, 36°.28N±0°.05×142°.39E±0°.06, h28^{km}±7^{km}, n103, σ1^s.30/105, mb4.3/33, MS3.2/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.37	246	P	Pn	16 19 35.9	-2.0
CHOJ				*e*S	Sn	16 19 54.9	-0.2
JHYU	Hitachinakayam	1.46	273	P	Pn	16 19 38.0	-1.1
JHYU				S	Sn	16 19 57.2	-0.2
JHO	Hitachi	1.51	283	P	Pn	16 19 38.6	-1.3
JHO				S	Sn	16 19 58.9	+0.3
ONAJ	Iwakimizuishiy	1.52	303	P	Pn	16 19 39.1	-1.0
JFK	Kawauchi	1.63	312	P	Pn	16 19 40.4	-1.2
JFK				*e*S	Sn	16 20 01.9	+0.2
BSO1	Boso 1	1.99	216	P	Pn	16 19 43.9	-2.1
JMM	Marumori	2.04	322		Pn	16 19 46.0	-1.1
JMM				Sn	Sn	16 20 06.9	-4.8
JMM	Marumori	2.04	322	P	Pn	16 19 46.1	-1.1
JOTO	OTAMA OYAMA	2.09	309	*i* P	Pn	16 19 47.9	0.0
JOTO				*e*S	Sn	16 20 14.3	+1.3
JAG	Ashikaga	2.38	274	*i* P	Pn	16 19 50.6	-1.2
JMK	Ichinoseki	2.83	341	P	Pn	16 19 57.3	-0.7
JMK				*e*S	Sn	16 20 30.6	-0.6
JRY	Ryogami san	2.83	266	P	Pn	16 19 56.9	-1.3
JOD2	Odawara 2	2.87	250	P	Pn	16 19 57.4	-1.2
JYK	Kaneyama	3.09	329	P	Pn	16 20 01.0	-0.7
JYN	Shimob	3.22	257	P	Pn	16 20 02.8	-0.7
JOM	Ohasama	3.31	345	*e*P	Pn	16 20 03.7	-0.9
JOM				*e*S	Sn	16 20 43.1	0.0
MJAR	Matsushiro Arr	3.38	276	Pn	Pn	16 20 05.1	-0.6
	0.9nm,0.3s,baz=105,slow=7.8,SNR=45						
MJAR				Sn	Sn	16 20 47.6	+2.7
	0.5nm,0.3s,baz=297,slow=11,SNR=5.4						
MJAR				LR	LR	16 21 46.2	
	comp=Z,204nm,19.5s,baz=126,slow=45						
	12nm,0.6s						
MAJO	Matsushiro	3.38	276		Pn	16 20 05.2	-0.6
MAJO	Matsushiro	3.38	276	P	Pn	16 20 06.2	+0.5
MAT	Matsushiro	3.38	276	P	Pn	16 20 06.0	+0.3
MJB9	Matsu-Tunnel	3.39	276		Pn	16 20 06.1	+0.3
JSD	Sado	3.74	299	Pn	Pn	16 20 08.2	-2.3
JSD	Sado	3.74	299	P	Pn	16 20 10.7	+0.1
JHJ2	Mitsune	3.80	215	Pn	Pn	16 20 10.3	-1.2
JHJ2	Mitsune	3.80	215	P	Pn	16 20 10.9	-0.5
JGF	Kuroka	4.14	262		Pn	16 20 14.9	-1.2
JGF	Kuroka	4.14	262	P	Pn	16 20 16.7	+0.6
INU	Inuyama	4.46	260		Pn	16 20 20.1	-0.4
INU	Inuyama	4.46	260	P	Pn	16 20 20.9	+0.4
JTM	Tenmabayashi	4.62	347	Pn	Pn	16 20 22.7	0.0
ERM	Erimo	5.76	6	Pn	Pn	16 20 35.4	-3.0
JEM	Erimo	5.76	6	P	Pn	16 20 35.4	-3.0
JMN	Monobe	7.43	252	Pn	Pn	16 21 01.4	0.0
JHS	Saijyo	7.66	263	Pn	Pn	16 21 04.9	+0.5
JHS	Saijyo	7.66	263	P	Pn	16 21 05.6	+1.2
ASAJ	Asahikawa	7.83	1	Pn	Pn	16 21 05.8	-1.0
	1.1nm,0.3s,baz=213,slow=6.1,SNR=16						
ASAJ				Sn	Sn	16 22 34.3	-0.2
	baz=171,slow=9.6						
JKA	Kamikawa-asahi	7.83	1		Pn	16 21 06.1	-0.7
JCJ	Chichijima	9.15	181	Pn	Pn	16 21 18.1	-6.9
	3.1nm,0.3s,baz=275,slow=19,SNR=1.3						
JCJ				Sn	Sn	16 22 52.9	-14
	2.5nm,0.3s,baz=120,slow=21,SNR=1.5						
	52nm,0.7s						
USRK	Ussuriysk Ar.	11.21	318	Pn	Pn	16 21 53.4	+0.4
	0.4nm,0.3s,baz=127,slow=14,SNR=14						
USRK				LR	LR	16 26 01.6	
	comp=Z,112nm,18.1s,baz=159,slow=36						
	3.3nm,0.6s						
USRK	Ussuriysk Ar.	11.21	318	Pn	Pn	16 21 53.2	+0.1
USA0B	Ussuriysk Arra	11.21	318	Pn	Pn	16 21 53.4	+0.3
KSRS	Korea Array	11.65	280	Pn	Pn	16 21 58.8	-0.3
	0.1nm,0.3s,baz=91,slow=13,SNR=6.2						
KSRS				LR	LR	16 26 17.9	
	comp=Z,25nm,21.1s,baz=85,slow=36						
	2.3nm,0.7s						
KLR	Kul'dur	15.10	332	Pn	P	16 22 48.2	-2.8
	0.2nm,0.3s,baz=146,slow=8.0,SNR=7.5						
KLR				LR	LR	16 28 33.7	
	comp=Z,67nm,18.3s,baz=138,slow=37						
	1.6nm,0.6s						
HEH	HeiHe	17.68	327	P	P	16 23 22.0	+2.5
HEH				pmax	pmax		
	comp=Z,5.0nm,2.5s						
HEH				pmax	pmax		
	comp=Z,140nm,6.1s						
BTO	Baotou	25.64	290	*e*P	P	16 24 43.8	+1.8
BTO				pmax	pmax		
	comp=Z,37nm,1.0s						
BTO				pmax	pmax		
	comp=Z,310nm,4.4s						
YAK	Yakutsk	26.98	347	LR	LR	16 35 41.0	
	comp=Z,51nm,18.6s,baz=91,slow=36						
YAK	Yakutsk	26.98	347	P	P	16 24 52.7	-1.1
YAK				IAmb	IAmb	16 25 06.7	
	comp=Z,11nm,0.8s						
H11N2	WAKE ISLAND Hy	27.09	121	T	T	16 53 02.1	
	baz=312,slow=74,SNR=21						
H11N1	WAKE ISLAND Hy	27.09	121	T	T	16 53 00.8	
	baz=312,slow=74,SNR=22						
H11N3	WAKE ISLAND Hy	27.10	121	T	T	16 52 58.6	
	baz=312,slow=74,SNR=23						
XAN	Xi'an	27.38	275	P	P	16 24 57.0	-0.7
XAN				pP	pP	16 25 04.0	-0.7
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SEY	Seymchan	27.39	10	P	P	16 24 59.6	+2.2
	comp=Z,0.9nm,0.8s,baz=189,slow=21,SNR=1.6						
	comp=Z,0.9nm,0.8s						
H11S1	WAKE ISLAND Hy	27.79	123	T	T	16 53 55.1	
	baz=314,slow=76,SNR=24						
H11S3	WAKE ISLAND Hy	27.79	123	T	T	16 53 55.2	
	baz=314,slow=76,SNR=24						
H11S2	WAKE ISLAND Hy	27.80	123	T	T	16 53 55.9	
	baz=314,slow=76,SNR=14						
ENH	Enshi	28.07	267	P	P	16 25 02.4	-1.5
ENH				IAmb	IAmb	16 25 17.0	
	comp=Z,9.0nm,0.8s						
ULN	Ulaanbaatar	28.43	305	P	P	16 25 05.9	-1.3
SONM	Songino Array	28.86	305	P	P	16 25 12.0	+1.1
	comp=Z,3.4nm,0.7s,baz=107,slow=9.0,SNR=16						
	comp=Z,3.4nm,0.7s						
GTA	Gaotai	33.54	288	*e*P	P	16 25 53.8	+1.6
GTA				pP	pP	16 25 59.8	+0.5
GTA				sP	sP	16 26 03.3	+1.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GOMU	GeErMu	38.06	284	P	P	16 26 32.8	+1.5
GOMU				pP	pP	16 26 38.3	-0.1
GOMU				sP	sP	16 26 39.6	-1.6
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,53nm,5.5s						
TNCH	TengChong	39.07	266	P	P	16 26 40.4	+0.7
TNCH				pmax	pmax		
	comp=Z,20nm,0.4s						
CRAI	Chiangrai	39.98	258	P	P	16 26 45.7	-1.3
CMAR	Chiang Mai Arr	42.08	257	P	P	16 27 03.8	-0.5
	comp=Z,0.5nm,0.3s,baz=54,slow=9.1,SNR=5.2						
CMAR				LR	LR	16 47 09.2	
	comp=Z,12nm,18.6s,baz=160,slow=40						
	comp=Z,0.5nm,0.3s						
ZAA0	Zalesovo Array	43.01	313	P	P	16 27 09.6	-1.8
ZALV	Zalesovo Beam	43.01	313	P	P	16 27 11.8	+0.3
	comp=Z,1.8nm,0.6s,baz=91,slow=7.5,SNR=8.5						
	comp=Z,1.8nm,0.6s						
ZALV	Zalesovo Beam	43.01	313	P	P	16 27 10.1	-1.4
MK31	Makanchi Array	45.19	303	P	P	16 27 28.9	-0.2
MK31				IAmb	IAmb	16 27 33.3	
	comp=Z,3.6nm,0.8s						
MKAR	Makanchi Array	45.19	303	P	P	16 27 29.1	0.0
	comp=Z,2.8nm,0.7s,baz=88,slow=10,SNR=21						
	comp=Z,2.8nm,0.7s						
MKAR	Makanchi Array	45.19	303	P	P	16 27 28.9	-0.2
MAKZ	Makanchi	45.40	303	P	P	16 27 30.0	-0.8
MAKZ				IAmb	IAmb	16 27 34.7	
	comp=Z,5.7nm,0.9s						
PMG	Port Moresby	45.66	173	P	P	16 27 34.7	+1.7
PMG				IAmb	IAmb	16 27 45.0	
	comp=Z,14nm,1.1s						
KURK	Kurchatov	47.02	309	P	P	16 27 43.0	-0.3
H23K	Yukon River	48.62	31	P	P	16 27 55.7	+0.1
TARG	Taragay, Kyrgy	49.44	297	P	P	16 28 01.6	-1.2
TARG				IAmb	IAmb	16 28 15.4	
	comp=Z,4.0nm,0.7s						
ILAR	Eielson Array	49.72	32	P	P	16 28 04.3	+0.4
	comp=Z,0.5nm,0.9s,baz=258,slow=5.8,SNR=4.4						
	comp=Z,0.5nm,0.9s						
KDJ	Kajisay	49.78	298	P	P	16 28 03.9	-1.1
KDJ				IAmb	IAmb	16 28 10.6	
	comp=Z,1.9nm,0.6s						
AAK	Ala-Archa	51.54	299	P	P	16 28 17.7	-0.6
BVAR	Borovoye Array	51.66	313	LR	LR	16 49 53.1	
	comp=Z,27nm,18.7s,baz=86,slow=36						
GSI	Gunungsitoli	54.10	240	P	P	16 28 36.9	-0.4
KK31	Karatay Array	54.19	301	P	P	16 28 36.9	-0.8
KK31				IAmb	IAmb	16 28 49.8	
	comp=Z,7.2nm,1.1s						
KKAR	Karatay Array	54.19	301	P	P	16 28 37.2	-0.4
KKAR	Karatay Array	54.19	301	P	P	16 28 36.6	-1.0
KKAR				IAmb	IAmb	16 28 49.8	
	comp=Z,7.2nm,1.1s						
MAYO	Mayo, Yukon	54.62	33	P	P	16 28 40.8	+0.3
GAR	Garm	55.73	296	P	P	16 28 48.2	-0.8
GAR				IAmb	IAmb	16 29 01.1	
	comp=Z,8.9nm,1.1s						
WRA	Warramunga Arr	56.43	189	P	P	16 28 50.9	-2.9
	comp=Z,0.9nm,0.8s,baz=14,slow=7.9,SNR=5.2						
	comp=Z,0.9nm,0.8s						
WRA	Warramunga Arr	56.43	189	P	P	16 28 56.0	+2.1
CHGR	Chuyangaron	56.70	296	P	P	16 28 54.8	-1.1
ARU	Arti	57.45	319	P	P	16 29 01.3	+0.6
	comp=Z,1.2nm,0.5s,baz=91,slow=15,SNR=1.7						
ARU				LR	LR	16 56 02.6	
	comp=Z,26nm,20.0s,baz=102,slow=38						
	comp=Z,1.2nm,0.5s						
ARU	Arti	57.45	319	P	P	16 29 00.1	-0.6
ARU				IAmb	IAmb	16 29 12.1	
	comp=Z,7.2nm,0.9s						
ABKAR	Akbulak array	59.03	311	P	P	16 29 11.1	-0.8
ABKAR	Akbulak array	59.03	311	P	P	16 29 11.1	-0.8
ABKAR				IAmb	IAmb	16 29 22.9	
	comp=Z,5.1nm,0.8s						
AKTO	Aktyubinsk	59.77	313	P	P	16 29 18.9	+1.9
	comp=Z,1.3nm,0.7s,baz=51,slow=14,SNR=2.7						
	comp=Z,1.3nm,0.7s						
ASAR	Alice Springs	60.15	189	P	P	16 29 18.1	-1.8
	comp=Z,0.5nm,0.8s,baz=1.9,slow=6.3,SNR=4.8						
	comp=Z,0.5nm,0.8s						
ASAR	Alice Springs	60.15	189	P	P	16 29 21.8	+2.0
YKA	Yellowknife Ar	64.07	30	P	P	16 29 46.4	+0.7
	comp=Z,0.1nm,0.6s,baz=291,slow=5.8,SNR=1.9						
	comp=Z,0.1nm,0.6s						
FINES	FINESS Array B	69.85	333	P	P	16 30 22.8	+0.4
	comp=Z,2.7nm,0.9s,baz=79,slow=8.6,SNR=2.3						
	comp=Z,2.7nm,0.9s						
FINES	FINESS Array B	69.85	333	P	P	16 30 22.5	+0.1
KBZ	Khabaz	71.99	311	P	P	16 30 35.6	-0.2
	comp=Z,1.2nm,0.8s,baz=177,slow=1.7,SNR=4.3						
	comp=Z,1.2nm,0.8s						
NVAR	Mina Array Bea	74.81	53	P	P	16 30 52.1	-0.7
	comp=Z,0.2nm,0.3s,baz=305,slow=6.5,SNR=2.0						
	comp=Z,0.2nm,0.3s						
NOA	NORSAR Array B	75.19	338	P	P	16 30 54.7	+0.4
	comp=Z,0.3nm,0.7s,baz=14,slow=3.8,SNR=2.3						
	comp=Z,0.3nm,0.7s						
PDAR	Pinedale Array	77.64	46	P	P	16 31 10.4	+1.6
	comp=Z,0.2nm,0.6s,baz=344,slow=2.9,SNR=1.8						
	comp=Z,0.2nm,0.6s						
BRTR	Keskin Array B	79.94	312	P	P	16 31 22.3	+0.9
	comp=Z,0.3nm,0.5s,baz=71,slow=6.0,SNR=2.1						
	comp=Z,0.3nm,0.5s						
CLL	Collm	82.14	331	*e*P	P	16 31 32.0	-0.7
CLL				*i* pP	sP	16 31 43.1	+0.3

NOU 23 16:20:57.8, 34°.16S×179°.90W, h241^{km}, MLv4.2/8, South of Kermadec Islands

IDC 23 16:21:08.5±2.8, 34°.33S×176°.93E, h0^{km}, mb3.9/2, mbtmp3.8/3, ML3.2/1, Error ellipse: s-maj=65.2km s-min=37.8km az=60.0

WEL 23 16:21:13.2±0.9, 35°S±6°×17°9E±1°1, h247^{km}±9^{km}, M3.8/14, mB4.3/1, ML4.0/7, MLv3.8/14, Mw(mB)3.4/1, Error ellipse: s-maj=0.0km s-min=0.0km az=107.2, confirmed

ISC 23 16:21:11.6±3.6, 35°.1S±0°.1×178°.8E±0°.2, h250^{km}±16^{km}, n34, σ1^s.25/48, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.48	189	P	Pn	16 21 58.6	+0.1
MXZ	Matakaoa Point	2.48	189	P	Pn	16 21 58.2	-0.3
MXZ				S	S	16 22 33.6	-2.1
WMGZ	Waiomatatini S	2.72	187	P	Pn	16 22 01.5	+0.5
WMGZ				S	S	16 22 37.5	-2.6
HAZ	Te Kaha	2.76	197	P	Pn	16 22 01.8	+0.4
HAZ				S	S	16 22 41.2	+0.3
PKGZ	Pakihiroa	2.83	192	P	Pn	16 22 02.6	+0.3
PKGZ				S	S	16 22 41.7	-0.7
GRZ	Great Barrier	2.96	247	P	Pn	16 22 03.8	+0.2
PUZ	Puketiti	2.98	189	P	Pn	16 22 04.0	+0.2
PUZ				S	S	16 22 43.1	-2.2
RUGZ	Raukumara Rang	2.99	198	P	Pn	16 22 04.8	+0.8
RUGZ				S	S	16 22 46.9	+1.3
KUZ	Kuaotunu	2.99	236	P	Pn	16 22 05.0	+1.1
KUZ	Kuaotunu	2.99	236	P	Pn	16 22 04.5	+0.5
TWGZ	Tauwhareparae	3.13	192	P	Pn	16 22 06.6	+1.2
TWGZ				S	S	16 22 49.6	+1.4
CNGZ	Carnagh Statio	3.40	188	P	Pn	16 22 09.8	+1.5
TKGZ	Te Karaka	3.41	193	P	Pn	16 22 09.0	+0.6
TKGZ				S	S	16 22 53.6	0.0
URZ	Urewera	3.42	203	Pn	Pn	16 22 09.7	+1.1
	1.5nm,0.3s,baz=58,slow=12,SNR=55						
URZ				Sn	S	16 22 52.2	-1.7
	6.4nm,0.3s,baz=262,slow=22,SNR=16						
	5.2nm,0.3s						
URZ	Urewera	3.42	203	P	Pn	16 22 09.8	+1.1
WCZ	Waipu Caves	3.74	256	P	Pn	16 22 12.5	+0.2
RAHZ	Arahi	4.04	200	P	Pn	16 22 16.9	+1.2
RAHZ				S	S	16 23 06.9	+0.1
MTHZ	Maungataniwha	4.05	202	P	Pn	16 22 16.2	+0.3
MTHZ				S	S	16 23 06.8	-0.3
OUZ	Omahuta	4.28	267	P	Pn	16 22 19.1	+0.5
NMHZ	Naumai	4.29	201	P	Pn	16 22 19.9	+1.2
NMHZ				S	S	16 23 14.2	+1.9
ARHZ	Aropaoanui	4.39	199	P	Pn	16 22 20.8	+0.9
ARHZ				S	S	16 23 16.6	+2.4
BKZ	Black Stump Fm	4.45	204	P	Pn	16 22 22.0	+1.3
MCHZ	McNeill Hill	4.64	201	P	Pn	16 22 24.3	+1.4
MCHZ				S	S	16 23 18.5	-1.2
HIZ	Hauiti	4.65	222	P	Pn	16 22 28.1	+5.1
WPHZ	Waipukurau	5.29	200	P	Pn	16 22 29.6	-1.1
WPHZ				S	S	16 23 34.8	+0.7
PRHZ	Porangahau	5.42	198	P	Pn	16 22 32.8	+0.4
PRHZ				S	S	16 23 36.5	-0.6
DVHZ	Dannevirke	5.58	201	P	Pn	16 22 34.4	0.0
DVHZ				S	S	16 23 39.1	-1.6
BFZ	Birch Farm	5.92	199	P	Pn	16 22 40.1	+1.6
QRZ	Quartz Range	7.56	219	P	Pn	16 23 03.6	+4.4
THZ	Tophouse	8.09	213	P	Pn	16 23 07.3	+1.3
THZ				S	S	16 24 36.9	-1.3
KHZ	Kahutara	8.37	208	P	Pn	16 23 08.8	-0.6
KHZ				S	S	16 24 41.9	-2.5
ASAR	Alice Springs	40.46	274	P	P	16 28 35.6	+9.5
	1.0nm,0.5s,baz=114,slow=7.9,SNR=41						
	1.0nm,0.5s						
WRA	Warramunga Arr	41.89	279	P	P	16 28 46.7	+8.9
	0.8nm,0.5s,baz=118,slow=7.7,SNR=15						
	0.8nm,0.5s						
FINES	FINESS Array B	148.47	335	PKPbc	PKPab	16 40 52.0	+20
	1.5nm,0.8s,baz=76,slow=5.9,SNR=1.6						

NEIC 23 16:29:54.1±1.1, 36°.05N±0°.04×139°.96E±0°.07, h55^{km}±8^{km}, mb4.3/30, Error ellipse: s-maj=8.1km s-min=6.0km az=111.0

NIED 23 16:29:54.3, 36°.06N×139°.94E, h45^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.03; $M_{\theta\theta}$0.74; $M_{\phi\phi}$-2.77; $M_{r\theta}$-1.28; $M_{\theta\phi}$-1.17; $M_{\phi r}$6.42; Fault plane solution: $M_0$7.10000×10^{14} NP1: ϕ_s350.00000°, δ81.00000°, λ76.00000°. NP2: ϕ_s228.00000°, δ16.00000°, λ146.00000°.

JMA 23 16:29:54.3±0.1, 36°.1N±0°.2×139°.9E±0°.3, h45^{km}, MV3.9/35, SW IBARAKI PREF

JMA Felt II J1 at SW IBARAKI PREF .

IDC 23 16:29:55.4±1.6, 36°.04N×139°.82E, h67^{km}±13^{km}, mb3.7/15, mbtmp4.0/18, Error ellipse: s-maj=16.2km s-min=13.5km az=68.0

ISC 23 16:29:53.9±0.7, 36°.01N±0°.04×139°.98E±0°.05, h55^{km}±6^{km}, n100, σ1^s.40/108, mb4.3/30, 4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.28	39	*i* P	Pn	16 30 02.8	-0.5
JYT				S	Sn	16 30 08.7	-1.4
JAG	Ashikaga	0.59	314	⇓*i*P	Pn	16 30 05.8	-0.7
JAG				⇓S	Sn	16 30 14.0	-1.7

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JRY    Ryogami san         0.87 271  iP      Pn      16 30 09.6  -0.4
JKT    Katashina           0.95 322⇓ iP      Pn      16 30 10.4  -0.9
JKT                                 ⇓S       Sn      16 30 22.6  -1.4
JOD2   Odawara 2           1.04 224   P      Pn      16 30 12.6  +0.3
JOD2                                  S      Sn      16 30 26.1  +0.2
MJAR   Matsushiro Arr      1.52 291   P      Pn      16 30 18.0  -0.8
       161nm,0.3s,baz=90,slow=9.1,SNR=616
MJAR                                  S      Sn      16 30 35.6  -1.9
       82nm,0.5s,baz=136,slow=14,SNR=4.8
MJAR                                  LR     LR      16 31 08.4
       comp=Z,210nm,20.5s,baz=161,slow=52
MAJO   Matsushiro          1.52 291          Pn      16 30 18.0  -0.8
MAJO                                  Sn     Sn      16 30 34.0  -3.6
MAJO   Matsushiro          1.52 291   P      Pn      16 30 19.3  +0.5
MJB9   Matsu-Tunnel        1.53 291          Pn      16 30 18.9   0.0
JMM    Marumori            1.96  19          Pn      16 30 24.8  +0.1
JMM                                   Sn     Sn      16 30 48.3  +0.1
JMM    Marumori            1.96  19   P      Pn      16 30 25.5  +0.8
JSG    Sagara              1.98 228   Pn     Pn      16 30 26.8  +1.8
JSG                                   Sn     Sn      16 30 52.8  +4.1
JSG    Sagara              1.98 228   P      Pn      16 30 27.1  +2.1
JGF    Kuroka              2.17 260   Pn     Pn      16 30 28.3  +0.7
JGF    Kuroka              2.17 260   P      Pn      16 30 29.7  +2.1
JSD    Sado                2.44 326   Pn     Pn      16 30 30.9  -0.4
JSD    Sado                2.44 326   P      Pn      16 30 31.3   0.0
INU    Inuyama             2.50 256   Pn     Pn      16 30 33.0  +0.9
INU    Inuyama             2.50 256   P      Pn      16 30 33.7  +1.6
JHJ2   Mitsune             2.90 183   Pn     Pn      16 30 37.9  +0.4
JHJ2                                  Sn     Sn      16 31 09.6  -1.5
JHJ2   Mitsune             2.90 183   P      Pn      16 30 40.1  +2.6
JTM    Tenmabayashi        4.84  10   Pn     Pn      16 31 04.7  +0.5
JMN    Monobe              5.51 247   Pn     Pn      16 31 13.1  -0.2
JMN    Monobe              5.51 247   P      Pn      16 31 14.4  +1.1
JHS    Saijyo              5.69 262   Pn     Pn      16 31 16.1  +0.3
JHS    Saijyo              5.69 262   P      Pn      16 31 18.1  +2.3
ERM    Erimo               6.49  21   Pn     Pn      16 31 26.2  -0.4
ERM    Erimo               6.49  21   P      Pn      16 31 28.3  +1.7
JEM    Erimo               6.49  21   P      Pn      16 31 28.5  +1.9
JNU    Nakatsue            8.04 252   P      Pn      16 31 48.9  +0.9
       7.6nm,0.9s,baz=95,slow=5.1,SNR=4.0
JNU                                   S      Sn      16 33 07.8   -10
       6.5nm,1.0s,baz=322,slow=8.4,SNR=1.7
JNU    Nakatsue            8.04 252   Pn     Pn      16 31 45.3  -2.7
ASAJ   Asahikawa           8.34  13   P      Pn      16 31 53.2  +1.2
       1.4nm,0.4s,baz=223,slow=13,SNR=11
ASAJ                                  S      Sn      16 33 21.1  -3.6
       1.6nm,0.4s,baz=208,slow=19,SNR=1.8
JKA    Kamikawa-asahi      8.34  13   Pn     Pn      16 31 51.8  -0.2
JCJ    Chichijima          9.09 167   P      Pn      16 32 06.0  +3.7
       49nm,0.4s,baz=290,slow=18,SNR=2.4
JCJ                                   S      Sn      16 33 37.8  -5.4
       36nm,0.5s,baz=286,slow=22,SNR=1.7
JCJ    Chichijima          9.09 167   Pn     Pn      16 32 01.4  -0.9
KSRS   Korea Array         9.78 282   P      Pn      16 32 15.2  +3.4
       1.0nm,0.5s,baz=88,slow=15,SNR=3.3
USRK   Ussuriysk Ar.      10.21 326   P      Pn      16 32 20.2  +2.7
       1.4nm,0.6s,baz=144,slow=15,SNR=5.1
MDJ    Mudanjiang         11.68 321   P      Pn      16 32 39.3  +1.6
MDJ                                   sP             16 32 56.9
MDJ                                   S      Sn      16 34 47.0  +0.5
MDJ                                   PcP    PcP     16 38 23.5  -0.2
MDJ                                   ScP    ScP     16 41 51.3  -0.4
MDJ                                   PcS    PcS     16 41 58.4  +0.9
MDJ    Mudanjiang         11.68 321   ScS    ScS     16 45 20.3  -6.9
MDJ                                   pmax   pmax
       comp=Z,7.0nm,2.5s
MDJ                                   pmax   pmax
       comp=Z,95nm,6.2s
XLT    XiLinHaoTe         19.89 301  eP      Pn      16 34 21.8  -1.0
XLT                                   sP     sP      16 34 41.3  +1.3
XLT                                   pmax   pmax
       comp=Z,110nm,6.0s
XLT                                   pmax   pmax
       comp=Z,4.0nm,0.6s
PEA0B  Petropavlovsk-     21.15  31   P      P       16 34 34.7  +0.6
PEA0B                                 IAmb   IAmb    16 34 53.5
       comp=Z,13nm,1.2s
PETK   Petropavlovsk-     21.15  31   P      P       16 34 37.1  +2.9
       comp=Z,1.0nm,0.9s,baz=227,slow=5.7,SNR=1.1
       comp=Z,1.0nm,0.9s
PETK   Petropavlovsk-     21.15  31   P      P       16 34 33.9  -0.2
HHC    Hu-ho-hao-te       22.73 291  eP      P       16 34 50.9  -0.3
HHC                                   pmax   pmax
       comp=Z,19nm,0.9s
HHC                                   pmax   pmax
       comp=Z,200nm,6.4s
SONM   Songino Array      27.42 306   P      P       16 35 33.9  -0.5
       comp=Z,0.9nm,0.6s,baz=104,slow=7.8,SNR=4.1
       comp=Z,0.9nm,0.6s
H11N2  WAKE ISLAND Hy     28.66 117   T      T       17 05 43.9
       baz=312,slow=75,SNR=20
H11N1  WAKE ISLAND Hy     28.67 117   T      T       17 05 43.9
       baz=312,slow=75,SNR=19
H11N3  WAKE ISLAND Hy     28.68 117   T      T       17 05 43.9
       baz=312,slow=75,SNR=17
H11S3  WAKE ISLAND Hy     29.32 119   T      T       17 06 49.9
       baz=314,slow=76,SNR=19
H11S1  WAKE ISLAND Hy     29.32 119   T      T       17 06 46.9
       baz=314,slow=76,SNR=29
H11S2  WAKE ISLAND Hy     29.34 119   T      T       17 06 51.2
       baz=314,slow=76,SNR=30
PZH    PanZhiHua          33.85 265   P      P       16 36 31.6  +0.3
PZH                                   pmax   pmax
       comp=Z,8.0nm,0.8s
PZH                                   pmax   pmax
       comp=Z,100nm,5.1s
FAKI   Fak Fak            39.40 192   P      P       16 37 19.4  +1.1
FAKI                                  IAmb   IAmb    16 37 29.2
       comp=Z,9.3nm,0.9s
WMQ    Urumqi             40.28 298  eP      P       16 37 27.0  +1.5
ZAA0   Zalesovo Array     41.76 313   P      P       16 37 37.1  -0.3
ZAA0                                  IAmb   IAmb    16 37 38.1
       comp=Z,3.6nm,0.7s
ZALV   Zalesovo Beam      41.76 313   P      P       16 37 37.5   0.0
       comp=Z,3.7nm,0.5s,baz=96,slow=7.3,SNR=22
       comp=Z,3.7nm,0.5s
ZALV   Zalesovo Beam      41.76 313   P      P       16 37 37.0  -0.4
MK31   Makanchi Array     43.69 303   P      P       16 37 53.0  -0.3
MKAR   Makanchi Array     43.69 303   P      P       16 37 52.8  -0.5
       comp=Z,1.1nm,0.6s,baz=82,slow=11,SNR=15
       comp=Z,1.1nm,0.6s
MKAR   Makanchi Array     43.69 303   P      P       16 37 52.5  -0.8
MAKZ   Makanchi           43.90 303   P      P       16 37 54.3  -0.7
KURK   Kurchatov          45.66 309   P      P       16 38 07.6  -1.2
KURBB  Kurchatov Arra     45.73 309   P      P       16 38 08.7  -0.6
       comp=Z,3.1nm,0.5s,baz=85,slow=8.1,SNR=16
       comp=Z,3.1nm,0.5s
TARG   Taragay, Kyrgy     47.82 297   P      P       16 38 25.9  -0.5
TARG                                  IAmb   IAmb    16 38 27.8
       comp=Z,3.5nm,0.8s
K20K   Telida             47.82  34   P      P       16 38 27.2  +1.6
K20K                                  IAmb   IAmb    16 38 56.4
       comp=Z,3.2nm,1.2s
KDJ    Kajisay            48.17 297   P      P       16 38 28.6  -0.2
KDJ                                   IAmb   IAmb    16 38 29.8
       comp=Z,2.5nm,0.9s
KDAK   Kodiak Island      48.63  41   P      P       16 38 32.4  +0.6
       comp=Z,12nm,1.1s,baz=309,slow=6.4,SNR=2.1
       comp=Z,12nm,1.1s
MTN    Manton Dam         49.30 191   P      P       16 38 37.3  -0.1
SUA    Susitna One        49.37  36   P      P       16 38 37.0  -0.6
AAK    Ala-Archa          49.96 299   P      P       16 38 42.2  -0.3
AAK                                   IAmb   IAmb    16 38 42.9
       comp=Z,1.6nm,0.7s
BVAR   Borovoye Array     50.41 313   P      P       16 38 45.1  -0.3
       comp=Z,0.8nm,0.5s,baz=95,slow=8.4,SNR=6.9
       comp=Z,0.8nm,0.5s
ILAR   Eielson Array      50.97  32   P      P       16 38 49.6  +0.1
       comp=Z,0.6nm,0.8s,baz=272,slow=6.8,SNR=9.3
       comp=Z,0.6nm,0.8s
KNRA   Kununurra          52.49 194   P      P       16 39 02.0  +0.7
KK31   Karatay Array      52.64 300   P      P       16 39 01.3  -1.0
KK31                                  IAmb   IAmb    16 39 03.2
       comp=Z,3.5nm,1.1s
KKAR   Karatay Array      52.64 300   P      P       16 39 02.0  -0.3
KKAR                                  IAmb   IAmb    16 39 03.2
       comp=Z,3.5nm,1.1s
KKAR   Karatay Array      52.64 300   P      P       16 39 01.4  -0.9
BCAR   Beaver Creek A     53.39  34   P      P       16 39 09.0  +1.4
EGAK   Eagle              53.42  32   P      P       16 39 08.7  +1.0
EGAK                                  IAmb   IAmb    16 39 42.2
       comp=Z,3.3nm,1.4s
GAR    Garm               54.09 296   P      P       16 39 12.5  -0.7
GAR                                   IAmb   IAmb    16 39 16.4
       comp=Z,4.7nm,0.9s
CHGR   Chuyangaron        55.06 296   P      P       16 39 19.6  -0.6
FITZ   Fitzroy Crossi     55.50 197   P      P       16 39 23.7  +0.4
WB0    Warramunga Arr     55.73 186   P      P       16 39 24.1  -0.7
WRAB   Tennant Creek      55.89 186   P      P       16 39 25.3  -0.7
WB2    Warramunga Arr     55.90 186   P      P       16 39 25.9  -0.2
WB2                                   IAmb   IAmb    16 39 39.3
       comp=Z,6.1nm,1.2s
WRA    Warramunga Arr     55.90 186   P      P       16 39 26.1   0.0
       comp=Z,1.0nm,0.5s,baz=0.1,slow=7.5,SNR=38
       comp=Z,1.0nm,0.5s
WRA    Warramunga Arr     55.90 186   P      P       16 39 25.3  -0.9
ARU    Arti               56.36 319   P      P       16 39 28.3  -0.8
       comp=Z,1.5nm,0.4s,baz=119,slow=10,SNR=4.2
       comp=Z,1.5nm,0.4s
ARU    Arti               56.36 319   P      P       16 39 28.6  -0.5
ARU                                   IAmb   IAmb    16 39 58.4
       comp=Z,7.8nm,1.3s
ABKAR  Akbulak array      57.71 310   P      P       16 39 38.5  -0.3
ABKAR  Akbulak array      57.71 310   P      P       16 39 37.9  -0.8
AS31   Alice Springs      59.63 186   P      P       16 39 52.2  -0.1
ASAR   Alice Springs      59.63 186   P      P       16 39 52.5  +0.2
       comp=Z,0.6nm,0.8s,baz=1.9,slow=5.4,SNR=14
       comp=Z,0.6nm,0.8s
ASAR   Alice Springs      59.63 186   P      P       16 39 52.3   0.0
EUNU   Eureka             61.37   8   P      P       16 40 03.9  +0.4
BELG   Belogornoye        63.76 317   P      P       16 40 19.1  -0.6
       comp=Z,2.7nm,0.4s,baz=82,slow=5.9,SNR=3.6
       comp=Z,2.7nm,0.4s
ARCES  ARCESS Array B     64.54 339   P      P       16 40 24.2  -0.4
       comp=Z,3.0nm,0.9s,baz=56,slow=5.6,SNR=3.9
       comp=Z,3.0nm,0.9s
YKA    Yellowknife Ar     65.27  30   P      P       16 40 29.0  -0.4
       comp=Z,0.2nm,0.7s,baz=297,slow=6.1,SNR=2.8
       comp=Z,0.2nm,0.7s
FINES  FINESS Array B     69.17 332   P      P       16 40 53.9  -0.2
NC204  NORSAR Array S     74.64 337   P      P       16 41 27.2  +0.2
NC204                                 IAmb   IAmb    16 41 39.8
       comp=Z,6.9nm,1.0s
NOA    NORSAR Array B     74.67 337   P      P       16 41 26.8  -0.4
       comp=Z,1.0nm,0.8s,baz=44,slow=5.6,SNR=2.0
       comp=Z,1.0nm,0.8s
```

IDC 23 16:36:35.6±999.0, 56°.91N×30°.68E, h0km, Error ellipse: s-maj=1437.0km s-min=80.4km az=90.0, Baltic States-Belarus-Northwestern Russia

```
Code   Station Name        Δ°   AZ°    Phase ID          Time       Res
                                      Op     ISC      h  m  s     ISC
I43RU  DUBNA INFRASON      3.60  90   I      I       16 57 57.5
       0.2nm,0.7s,baz=275,slow=318,SNR=1.7
I31KZ  AKTYUBINSK INF     17.39 100   I      I       18 12 11.6
       baz=304,slow=308,SNR=6.2
I46RU  ZALESOVO INFRA     30.19  72   I      I       19 42 47.7
       baz=300,slow=327,SNR=1.0
```

IDC 23 16:37:17.9±7.9, 6°.85S×149°.34E, h74km±56km, mb2.9/1, mbtmp3.4/3, ML2.9/2, Error ellipse: s-maj=152.9km s-min=54.7km az=125.0, New Britain region

```
Code   Station Name        Δ°   AZ°    Phase ID          Time       Res
                                      Op     ISC      h  m  s     ISC
PMG    Port Moresby        3.33 220   P      Pn      16 38 08.6  +0.9
       11nm,0.3s,baz=21,slow=5.4,SNR=12
PMG                                   S      Sn      16 38 46.7  +0.5
       24nm,0.5s,baz=323,slow=24,SNR=7.2
       22nm,0.3s
WRA    Warramunga Arr     19.53 227   P      P       16 41 38.6  -1.0
       0.1nm,0.3s,baz=50,slow=11,SNR=5.7
       0.4nm,0.4s
ASAR   Alice Springs      22.35 220   P      P       16 42 10.0   0.0
       0.5nm,0.5s,baz=56,slow=9.1,SNR=17
       0.5nm,0.5s
TORD   Torodi Ar. Bea    147.55 284   PKPbc  PKPbc   16 56 54.5  -0.3
       0.7nm,0.3s,baz=73,slow=1.3,SNR=1.4
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*IDC **23** 16:42:38.7±0.8, 48°.81S×8°.71W, h0km, mb4.1/7, mbtmp4.2/7, MS3.6/29, Error ellipse: s-maj=26.8km s-min=20.5km az=118.0*

*NEIC **23** 16:42:40.1±1.5, 48°.9S±0°.1×8°.5W±0°.2, h10km±1km, mb4.4/14, Error ellipse: s-maj=25.2km s-min=19.6km az=147.0*

ISC 23 16:42:39.7±0.6, 48°.9S±0°.1×8°.5W±0°.1, h10km, n46, σ1s.14/25, mb4.4/15, MS3.7/29, Southern Mid-Atlantic Ridge

```
Code   Station Name        Δ°   AZ°    Phase ID          Time       Res
                                      Op     ISC      h  m  s     ISC
HOPE   Hope Point         18.13 242          Pn      16 46 48.9  -2.4
SNAA   Sanae              23.04 175   P      P       16 47 44.9  +0.2
       4.7nm,1.0s,baz=352,slow=5.6,SNR=3.5
SNAA                                  LR     LR      16 53 49.5
       comp=Z,130nm,21.7s,baz=88,slow=29
       4.7nm,1.0s
SNAA   Sanae              23.04 175   P      P       16 47 44.2  -0.4
SNAA                                  IAmb   IAmb    16 48 06.8
       comp=Z,14nm,1.3s
SUR    Sutherland         27.46  64   LR     LR      16 56 49.3
       comp=Z,103nm,19.4s,baz=195,slow=31
SUR    Sutherland         27.46  64   P      P       16 48 23.9  -2.2
BOSA   Boshof             32.83  64   P      P       16 49 13.5  +0.1
       comp=Z,2.4nm,1.0s,baz=214,slow=15,SNR=3.0
BOSA                                  LR     LR      16 59 56.7
       comp=Z,87nm,19.0s,baz=200,slow=32
       comp=Z,2.4nm,1.0s
PMSA   Palmer Station     32.99 220   LR     LR      17 00 27.3
       comp=Z,78nm,18.1s,baz=113,slow=32
LBTB   Lobatse            35.73  61   P      P       16 49 41.6  +2.9
       comp=Z,4.3nm,0.9s,baz=180,slow=6.1
LBTB                                  LR     LR      17 02 00.3
       comp=Z,62nm,18.1s,baz=180,slow=32
       comp=Z,4.3nm,0.9s
TSUM   Tsumeb             36.31  45   LR     LR      17 01 12.3
       comp=Z,80nm,21.9s,baz=198,slow=31
TSUM   Tsumeb             36.31  45   P      P       16 49 43.0  -0.6
TSUM                                  IAmb   IAmb    16 49 46.7
       comp=Z,6.5nm,1.0s
MAW    Mawson             39.26 145   LR     LR      17 03 04.2
       comp=Z,112nm,20.5s,baz=146,slow=31
TRQA   Tornquist          39.52 265   P      P       16 50 10.2  -0.2
QSPA   South Pole Qui     41.39 180   P      P       16 50 26.7  +0.9
       comp=Z,2.2nm,0.8s,baz=216,slow=4.2,SNR=12
QSPA                                  LR     LR      17 05 54.4
       comp=Z,114nm,20.8s,baz=214,slow=34
       comp=Z,2.2nm,0.8s
QSPA   South Pole Qui     41.39 180   P      P       16 50 26.4  +0.6
PLCA   Paso Flores        43.65 256   LR     LR      17 06 39.4
       comp=Z,63nm,19.2s,baz=134,slow=33
PLCA   Paso Flores        43.65 256   P      P       16 50 44.6  +0.3
PLCA                                  IAmb   IAmb    16 50 50.7
       comp=Z,7.4nm,1.2s
CPUP   Villa Florida      43.81 283   LR     LR      17 05 29.3
       comp=Z,29nm,20.8s,baz=195,slow=31
LSZ    Lusaka             44.97  55   LR     LR      17 07 33.7
       comp=Z,102nm,19.0s,baz=183,slow=33
BDFB   Brasilia           46.19 302   LR     LR      17 08 15.3
       comp=Z,58nm,18.6s,baz=147,slow=33
AQDB   Aquidauana         46.99 290   P      P       16 51 12.4  +1.4
AQDB                                  IAmb   IAmb    16 51 16.7
       comp=Z,4.3nm,0.7s
CFA    Coronel Fontan     47.48 268   P      P       16 51 15.0  +0.3
       comp=Z,1.3nm,0.4s,baz=157,slow=7.7,SNR=2.0
CFA                                   LR     LR      17 08 51.8
       comp=Z,20nm,21.0s,baz=221,slow=33
       comp=Z,1.3nm,0.4s
SIV    San Ignacio        53.71 289   LR     LR      17 12 41.0
       comp=Z,60nm,19.1s,baz=116,slow=34
VNDA   Vanda              53.75 177   LR     LR      17 13 40.0
       comp=Z,89nm,19.1s,baz=203,slow=35
OPO    Ambohidratompo     53.81  76   LR     LR      17 12 40.9
       comp=Z,54nm,18.2s,baz=265,slow=33
LVC    Limon Verde        53.94 276   P      P       16 52 03.5  -0.4
       comp=Z,1.0nm,0.5s,baz=55,slow=8.2,SNR=1.8
LVC                                   LR     LR      17 13 29.1
       comp=Z,25nm,19.2s,baz=169,slow=34
       comp=Z,1.0nm,0.5s
DBIC   Dimbokro           55.39   4   P      P       16 52 12.8  -1.2
       comp=Z,6.3nm,1.0s,baz=165,slow=5.0,SNR=4.0
DBIC                                  LR     LR      17 09 58.0
       comp=Z,88nm,18.9s,baz=192,slow=30
       comp=Z,6.3nm,1.0s
PB16   IPOC Station P     57.37 280   P      P       16 52 29.4  +0.6
PB16                                  IAmb   IAmb    16 52 44.6
       comp=Z,4.8nm,1.0s
PB12   IPOC Station P     57.71 279   P      P       16 52 31.1  +0.4
MBAR   Mbarara            58.73  48   LR     LR      17 15 53.1
       comp=Z,66nm,18.4s,baz=206,slow=34
SAML   Samuel             60.43 292   P      P       16 52 49.8  +0.3
SAML                                  IAmb   IAmb    16 53 00.7
       comp=Z,3.4nm,0.9s
ETMB   Extrema            61.63 289   P      P       16 52 57.3  -0.3
ETMB                                  IAmb   IAmb    16 53 08.8
       comp=Z,2.5nm,0.9s
KMBO   Kilima Mbogo       61.63  55   P      P       16 52 56.8  -1.1
TOA0   Torodi Ar. Sit     62.40  11   P      P       16 53 02.9  +0.3
TOA0                                  IAmb   IAmb    16 53 12.9
       comp=Z,4.7nm,1.2s
TORD   Torodi Ar. Bea     62.40  11   P      P       16 53 03.0  +0.4
       comp=Z,111nm,0.3s,baz=202,slow=7.0,SNR=4.0
TORD                                  LR     LR      17 14 28.8
       comp=Z,60nm,18.4s,baz=183,slow=31
BBTS   Babate             63.64 351   LR     LR      17 15 17.6
       comp=Z,111nm,19.5s,baz=178,slow=31
MDP    Montagnes des      66.05 311   LR     LR      17 18 30.7
       comp=Z,74nm,18.9s,baz=170,slow=33
SDV    Santo Domingo      79.04 297   LR     LR      17 27 57.9
       comp=Z,36nm,19.0s,baz=116,slow=34
MDT    Midelt             81.39   3   LR     LR      17 26 25.9
       comp=Z,102nm,20.5s,baz=354,slow=32
SJG    San Juan           84.01 306   LR     LR      17 29 28.5
       comp=Z,23nm,19.7s,baz=112,slow=34
EIL    Elat               87.30  37   LR     LR      17 30 53.9
       comp=Z,60nm,21.0s,baz=244,slow=33
ESDC   Sonseca Array      88.25   4   LR     LR      17 30 51.2
       comp=Z,47nm,19.1s,baz=145,slow=33
WSAR   Wadi Sarin         93.38  58   LR     LR      17 36 16.0
       comp=Z,35nm,20.1s,baz=181,slow=34
BRTR   Keskin Array B     95.77  31   LR     LR      17 37 16.9
       comp=Z,32nm,21.7s,baz=177,slow=34
YKA    Yellowknife Ar    138.59 318   PKP    PKPdf   17 02 05.4  +1.0
       comp=Z,0.1nm,0.4s,baz=101,slow=3.3,SNR=3.8
INK    Inuvik            146.92 326   PKPbc  PKPbc   17 02 20.4  -0.5
       comp=Z,1.5nm,0.8s,baz=89,slow=3.3,SNR=4.3
ILAR   Eielson Array     152.87 321   PKPbc  PKiKP   17 02 36.0  +0.2
       comp=Z,0.5nm,0.8s,baz=66,slow=1.1,SNR=5.2
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*NEIC **23** 16:46:12.4±1.1, 22°.2S±0°.2×179°.4W±0°.2, h592km±12km, mb4.4/26, Error ellipse: s-maj=25.7km s-min=21.9km az=77.0*

*IDC **23** 16:46:13.9±3.5, 22°.20S×179°.72W, h588km±24km, mb3.2/6, mbtmp4.2/8, Error ellipse: s-maj=63.9km s-min=18.7km az=134.0*

ISC 23 16:46:13.1±0.9, 22°.3S±0°.1×179°.6W±0°.1, h592km, n39, σ0s.90/40, mb4.3/19, South of Fiji Islands

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Code   Station Name        Δ°   AZ°    Phase ID          Time       Res
                                      Op     ISC      h  m  s     ISC
MSVF   Nonsavu             5.02 333   P      P       16 47 45.2  -0.7
       13nm,0.3s,baz=275,slow=22,SNR=54
MSVF                                  S      S       16 49 00.8  -0.6
       6.1nm,1.0s,baz=28,slow=22,SNR=1.0
MSVF   Nonsavu             5.02 333   P      P       16 47 44.9  -1.0
DZM    Mont Dzumac        12.97 268   P      P       16 49 03.1  +1.2
       3.5nm,0.6s,baz=113,slow=21,SNR=8.4
DZM    Mont Dzumac        12.97 268   P      P       16 49 04.1  +2.3
EIDS   Eidsvold           27.02 258   P      P       16 51 09.3  -0.2
EIDS                                  IAmb   IAmb    16 51 43.4
       comp=Z,12nm,1.3s
ARMA   Armidale           27.02 246   P      P       16 51 10.3  +0.7
ARMA                                  IAmb   IAmb    16 51 24.1
       comp=Z,14nm,1.4s
CAN    Canberra           30.34 238   P      P       16 51 38.3  +0.1
CTAO   Charters Tower     31.91 267   P      P       16 51 51.9  +0.1
CTAO                                  IAmb   IAmb    16 52 11.9
       comp=Z,16nm,1.2s
TOO    Toolangi           33.70 235   P      P       16 52 06.5  -0.2
TOO                                   IAmb   IAmb    16 52 35.1
       comp=Z,11nm,1.1s
STKA   Stephens Creek     35.74 246   P      P       16 52 23.7  +0.2
       comp=Z,2.6nm,0.4s,baz=90,slow=9.7,SNR=11
       comp=Z,2.6nm,0.4s
STKA   Stephens Creek     35.74 246   P      P       16 52 23.8  +0.2
BBOO   Buckleboo          40.48 245   P      P       16 53 01.2  -0.7
BBOO                                  IAmb   IAmb    16 53 41.0
       comp=Z,17nm,1.4s
AS31   Alice Springs      42.73 259   P      P       16 53 19.5  -0.3
ASAR   Alice Springs      42.73 259   P      P       16 53 19.4  -0.4
       comp=Z,4.7nm,0.6s,baz=99,slow=7.9,SNR=82
       comp=Z,4.7nm,0.6s
ASAR   Alice Springs      42.73 259   P      P       16 53 19.0  -0.8
WB0    Warramunga Arr     42.94 264   P      P       16 53 20.2  -1.2
WB0                                   IAmb   IAmb    16 53 21.2
       comp=Z,4.4nm,0.5s
WRA    Warramunga Arr     42.95 264   P      P       16 53 20.6  -0.9
       comp=Z,1.5nm,0.4s,baz=90,slow=5.7,SNR=159
       comp=Z,1.5nm,0.4s
WRA    Warramunga Arr     42.95 264   P      P       16 53 20.1  -1.4
FORT   Forrest            47.28 248   P      P       16 53 53.7  -0.6
MTN    Manton Dam         47.76 273   P      P       16 53 57.3  -0.8
KNRA   Kununurra          49.12 268   P      P       16 54 08.1  -0.1
KNRA                                  IAmb   IAmb    16 54 16.3
       comp=Z,14nm,1.1s
FITZ   Fitzroy Crossi     51.38 264   P      P       16 54 24.7  +0.1
SOEI   Soe                55.13 274   P      P       16 54 52.7  +1.4
SOEI                                  IAmb   IAmb    16 55 12.8
       comp=Z,25nm,1.0s
PSA00  Pilbara Seismi     55.88 258   P      P       16 54 55.3  -0.9
PSA00                                 IAmb   IAmb    16 54 56.3
       comp=Z,15nm,1.4s
PSA00  Pilbara Seismi     55.88 258   P      P       16 54 55.4  -0.9
PSA00                                 IAmb   IAmb    16 55 26.8
       comp=Z,42nm,1.4s
VNDA   Vanda              56.05 185   P      P       16 54 56.4  -0.1
MBWA   Marble Bar         56.07 259   P      P       16 54 57.1  -0.5
MBWA                                  IAmb   IAmb    16 54 57.7
       comp=Z,28nm,0.9s
NWAO   Narrogin (SRO)     56.30 244   P      P       16 54 58.5  -0.5
MORW   Morawa             57.83 249   P      P       16 55 08.8  -0.8
MORW                                  IAmb   IAmb    16 55 35.6
       comp=Z,26nm,1.3s
TOLI2  Tolitoli           62.57 284   P      P       16 55 41.0   0.0
TOLI2                                 IAmb   IAmb    16 55 42.8
       comp=Z,5.1nm,0.6s
QSPA   South Pole Qui     67.83 180   P      P       16 56 12.9  -0.1
UGM    Wanagama           68.49 270   P      P       16 56 17.8  -0.1
SSLB   Suanglung          73.75 305   P      P       16 56 47.6  -0.7
SSLB                                  IAmb   IAmb    16 57 12.9
       comp=Z,19nm,1.1s
KS19   Wonju Array Si     77.32 320   P      P       16 57 07.5  -0.2
PETK   Petropavlovsk-     77.60 346   P      P       16 57 09.0  +0.1
       comp=Z,1.0nm,0.7s,baz=198,slow=4.2,SNR=6.1
       comp=Z,1.0nm,0.7s
PETK   Petropavlovsk-     77.60 346   P      P       16 57 08.5  -0.4
NVAR   Mina Array Bea     83.29  44   P      P       16 57 40.4  +1.4
       comp=Z,0.4nm,0.5s,baz=236,slow=6.4,SNR=2.7
       comp=Z,0.4nm,0.5s
CMAR   Chiang Mai Arr     89.34 290   P      P       16 58 10.1  +2.1
       comp=Z,0.7nm,0.7s,baz=127,slow=3.7,SNR=7.0
       comp=Z,0.7nm,0.7s
BRTR   Keskin Array B    146.88 309   PKPbc  PKiKP   17 04 50.7  -1.4
       comp=Z,0.3nm,0.4s,baz=83,slow=3.6,SNR=2.7
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*NEIC **23** 16:57:52.2±1.7, 7°.3S±0°.1×155°.5E±0°.1, h64km±20km, mb4.2/7, Error ellipse: s-maj=24.5km s-min=9.7km az=217.0*

*IDC **23** 16:57:52.6±1.7, 7°.25S×155°.47E, h57km±16km, mb3.6/10, mbtmp4.0/14, Error ellipse: s-maj=17.4km s-min=11.4km az=30.0*

ISC 23 16:57:49.6±0.6, 7°.32S±0°.08×155°.44E±0°.07, h29km, n30, σ1s.74/29, mb4.0/14, Bougainville-Solomon Islands region

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Code   Station Name        Δ°   AZ°    Phase ID          Time       Res
                                      Op     ISC      h  m  s     ISC
RABL   Rabaul              4.50 313          Pn      16 58 58.6  +2.6
KRVT   Keravat (AS076      4.53 311   P      Pn      16 58 58.6  +2.4
       16nm,0.5s,baz=115,slow=23,SNR=2.0
KRVT                                  S      Sn      16 59 49.1  +1.1
       53nm,0.7s,baz=358,slow=22,SNR=1.7
HNR    Honiara             4.93 116   P      Pn      16 59 03.8  +2.1
       122nm,0.4s,baz=159,slow=20,SNR=1.5
HNR                                   S      Sn      17 00 00.8  +3.0
       702nm,0.6s,baz=269,slow=6.7,SNR=4.0
HNR    Honiara             4.93 116          Pn      16 59 03.0  +1.2
PMG    Port Moresby        8.46 255   P      Pn      16 59 53.6  +3.4
       5.1nm,0.4s,baz=96,slow=24,SNR=1.8
PMG    Port Moresby        8.46 255   Pn     Pn      16 59 53.3  +3.1
CTA    Charters Tower     15.51 214   P      P       17 01 29.5  -1.0
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	4.7nm,1.0s,baz=208,slow=8.0,SNR=1.8						
CTAO	**Charters Tower**	**15.51**	**214**		**P**	**17 01 29.3**	**-1.3**
CTAO				IAmb	IAmb	17 01 30.7	
	comp=Z,24nm,1.4s						
KOUNC	**Koumac, New Ca**	**15.70**	**148**		**P**	**17 01 31.4**	**-1.2**
KOUNC				IAmb	IAmb	17 01 34.0	
	comp=Z,15nm,1.0s						
WB0	**Warramunga Arr**	**23.88**	**237**	P	**P**	**17 02 59.4**	**-1.6**
WB0				IAmb	IAmb	17 03 21.4	
	comp=Z,11nm,1.4s						
WRAB	**Tennant Creek**	**23.99**	**236**	P	**P**	**17 03 00.1**	**-1.9**
WRAB				IAmb	IAmb	17 03 08.9	
	comp=Z,14nm,1.4s						
WB2	**Warramunga Arr**	**24.00**	**236**	P	**P**	**17 03 02.0**	**-0.1**
WRA	**Warramunga Arr**	**24.01**	**236**	P	**P**	**17 03 02.2**	**+0.1**
	comp=Z,3.0nm,0.9s,baz=62,slow=9.5,SNR=11						
	comp=Z,3.0nm,0.9s						
ASAR	**Alice Springs**	**26.30**	**229**	P	**P**	**17 03 23.9**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=58,slow=9.9,SNR=6.9						
	comp=Z,0.6nm,0.8s						
STKA	**Stephens Creek**	**27.64**	**206**	P	**P**	**17 03 35.9**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=309,slow=15,SNR=1.6						
	comp=Z,1.0nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**27.94**	**23**	T	T	17 32 07.7	
	baz=202,slow=75,SNR=11						
H11S2	**WAKE ISLAND Hy**	**27.95**	**23**	T	T	17 32 07.1	
	baz=202,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**27.96**	**23**	T	T	17 32 04.8	
	baz=202,slow=75,SNR=6.5						
BBOO	**Buckleboo**	**31.11**	**213**	P	**P**	**17 04 04.1**	**-1.6**
KAPI	**Kappang**	**35.55**	**272**	P	**P**	**17 04 44.5**	**-0.1**
	comp=Z,4.6nm,0.4s,baz=154,slow=7.9,SNR=3.8						
	comp=Z,4.6nm,0.4s						
LTZ	**Lake Taylor**	**38.31**	**160**	P	**P**	**17 05 07.3**	**-0.5**
LTZ				IAmb	IAmb	17 05 16.1	
	comp=Z,6.9nm,1.0s						
CMAR	**Chiang Mai Arr**	**61.32**	**296**	P	**P**	**17 08 04.0**	**+0.9**
	comp=Z,1.4nm,0.8s,baz=120,slow=5.2,SNR=7.8						
	comp=Z,1.4nm,0.8s						
SHEM	**Shemya Is, Ala**	**61.89**	**13**	P	**P**	**17 08 06.3**	**+0.1**
	comp=Z,38nm,0.8s,baz=133,slow=18,SNR=2.8						
SONM	**Songino Array**	**69.84**	**327**	P	**P**	**17 08 57.8**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=142,slow=5.4,SNR=4.8						
	comp=Z,1.4nm,0.8s						
ILAR	**Eielson Array**	**83.51**	**21**	P	**P**	**17 10 12.8**	**-1.6**
	comp=Z,0.2nm,0.5s,baz=251,slow=5.2,SNR=6.0						
	comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**83.94**	**319**	P	**P**	**17 10 16.5**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=109,slow=5.3,SNR=4.7						
	comp=Z,0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**84.69**	**326**	P	**P**	**17 10 20.0**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=123,slow=5.3,SNR=2.0						
	comp=Z,0.3nm,0.5s						
YKA	**Yellowknife Ar**	**96.41**	**28**	P	**P**	**17 11 14.6**	**-1.0**
	comp=Z,0.1nm,0.4s,baz=268,slow=4.5,SNR=5.3						
	comp=Z,0.1nm,0.4s						
BDFB	**Brasilia**	**147.44**	**135**	PKPbc	**PKPbc**	**17 17 31.0**	**-0.9**
	comp=Z,3.6nm,0.5s,baz=128,slow=2.4,SNR=4.8						
TORD	**Torodi Ar. Bea**	**153.54**	**285**	PKPbc	**PKPbc**	**17 17 43.6**	**-2.9**
	comp=Z,104nm,0.3s,baz=73,slow=2.9,SNR=8.9						

NEIC ***23*** *17:00:34.8±1.8, 7.°3S±0.°1×155.°52E±0.°08, h42^{km}±8^{km}, mb4.8/61, Error ellipse: s-maj=16.0km s-min=10.0km az=205.0*

IDC ***23*** *17:00:34.8±1.5, 7.°28S×155.°54E, h46^{km}±14^{km}, mb4.0/21, mbtmp4.3/24, ML2.8/2, MS3.8/27, Error ellipse: s-maj=14.4km s-min=10.1km az=44.0*

GCMT ***23*** *17:00:34.8±0.2, 7.°41S±0.°01×155.°43E±0.°02, h20^{km}, MW5.0/91, Moment Tensor Solution. s33,c39; s91,c134; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.04±.17; M$_{\theta\theta}$-2.60±.10; M$_{\phi\phi}$-0.44±.10; M$_{r\theta}$0.70±.16; M$_{\theta\phi}$1.31±.07; M$_{\phi r}$-0.77±.23; Best double couple: M$_0$3.30000×10^{16} NP1:φ$_s$122.00000°,δ54.00000°,λ99.00000°. NP2: φ$_s$288.00000°,δ37.00000°,λ78.00000°. Principal axes: T 3.2350, Plg79.0000°, Azm66.0000°; N 0.1240, Plg7.0000°, Azm297.0000°; P -3.3640, Plg9.0000°, Azm206.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***23*** *17:00:41.6±0.6, 7˚S±4˚×15˚5E±˚, h116^{km}±6^{km}, M4.6/28, mB5.1/5, mb4.6/28, MLv4.8/2, Mw(mB)4.4/5*

BJI ***23*** *17:00:41.0±0.0, 7.°40S×155.°40E, h115^{km}, mb4.6/45, mB4.9/21*

ISC 23 17:00:33.9±0.3**, 7.°27S**±0.°05×**155.°45E**±0.°05**, h35^{km}, n168,** σ**1.^{s}45**/160**, mb4.8**/77**, MS3.8**/26**, 1C-1D,**
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**4.48**	**313**	Pn	**Pn**	**17 01 38.0**	**-1.3**
RABL				Sn	Sn	17 02 40.8	+11
KRVT	**Keravat (AS076**	**4.50**	**311**	P	**Pn**	**17 01 41.4**	**+1.7**
	3.7nm,0.3s,baz=144,slow=22,SNR=0.8						
KRVT				S	**Sn**	**17 02 34.4**	**+3.6**
	682nm,1.1s,baz=240,slow=8.8,SNR=4.5						
	37nm,0.6s						
HNR	**Honiara**	**4.94**	**116**	P	**Pn**	**17 01 45.8**	**+0.2**
	1µm,1.0s,baz=295,slow=17,SNR=1.3						
HNR				S	**Sn**	**17 02 39.9**	**-1.7**
	4µm,0.9s,baz=358,slow=21,SNR=2.1						
HNR				LR	LR	17 03 49.6	
	comp=Z,35µm,20.3s,baz=282,slow=40						
HNR	**Honiara**	**4.94**	**116**	Pn	**Pn**	**17 01 43.9**	**-1.8**
PMG	**Port Moresby**	**8.48**	**255**	P	**Pn**	**17 02 38.0**	**+3.7**
	1.4nm,0.3s,baz=79,slow=12,SNR=3.5						
PMG				S	**Sn**	**17 04 03.9**	**-4.9**
	35nm,0.8s,baz=291,slow=10.0,SNR=2.6						
PMG				LR	LR	17 05 58.7	
	comp=Z,690nm,18.5s,baz=118,slow=38						
	18nm,0.7s						
PMG	**Port Moresby**	**8.48**	**255**	Pn	**Pn**	**17 02 31.5**	**-2.8**
COEN	**Coen**	**13.78**	**240**		**Pn**	**17 03 48.5**	**+1.7**
CTA	**Charters Tower**	**15.56**	**214**	P	**P**	**17 04 14.3**	**-0.4**
	13nm,0.9s,baz=42,slow=13,SNR=6.4						
CTA				LR	LR	17 09 07.9	
	comp=Z,770nm,21.9s,baz=44,slow=33						
CTAO	**Charters Tower**	**15.56**	**214**	P	**P**	**17 04 13.6**	**-1.1**
SMPI	**Sarmi**	**17.49**	**287**	P	**P**	**17 04 38.4**	**+2.3**
	42nm,1.4s						
DZM	**Mont Dzumac**	**18.14**	**145**	*e*Pn	**P**	**17 04 45.8**	**+2.5**
	59nm,1.2s						
DZM				*e*S	**Sn**	**17 08 05.7**	**+0.9**
	322nm,22.1s						
DZM				*e*LR	LR	17 08 56.9	
	comp=Z,398nm,23.4s						
DZM	**Mont Dzumac**	**18.14**	**145**	LR	LR	17 11 12.2	
	comp=Z,459nm,18.5s,baz=322,slow=35						
DZM	**Mont Dzumac**	**18.14**	**145**	P	**Pn**	**17 04 43.1**	**-0.1**
EIDS	**Eidsvold**	**18.48**	**193**	P	**Pn**	**17 04 49.4**	**+2.1**
RKPI	**Ransiki, Papua**	**21.96**	**284**	P	**P**	**17 05 24.1**	**-0.8**
	36nm,1.2s						
GUMO	**Guam**	**23.23**	**333**	LR	LR	17 13 47.5	
	comp=Z,80nm,18.9s,baz=144,slow=34						
FAKI	**Fak Fak**	**23.51**	**279**	P	**P**	**17 05 40.8**	**-0.2**
	27nm,1.2s						
WB0	**Warramunga Arr**	**23.91**	**237**	P	**P**	**17 05 44.6**	**-0.1**
WB0				IAmb	IAmb	17 05 50.1	
	comp=Z,29nm,1.0s						
SAUI	**Saumlaki**	**23.95**	**267**	P	**P**	**17 05 44.2**	**-1.0**
SAUI	**Saumlaki**	**23.95**	**267**	P	**P**	**17 05 46.2**	**+1.1**
	comp=Z,106nm,1.5s						
WRAB	**Tennant Creek**	**24.03**	**236**	P	**P**	**17 05 45.9**	**0.0**
WRAB				IAmb	IAmb	17 05 51.1	
	comp=Z,35nm,0.9s						
WB2	**Warramunga Arr**	**24.03**	**236**	P	**P**	**17 05 45.7**	**-0.1**
WB2				IAmb	IAmb	17 05 51.2	
	comp=Z,39nm,1.0s						
WRA	**Warramunga Arr**	**24.04**	**236**	P	**P**	**17 05 45.9**	**-0.1**
	comp=Z,15nm,0.8s,baz=62,slow=9.5,SNR=41						
WRA				PcP	**PcP**	**17 09 27.3**	**0.0**
	comp=Z,2.0nm,1.2s,baz=65,slow=2.2,SNR=4.2						
WRA				LR	LR	17 14 47.2	
	comp=Z,387nm,18.6s,baz=57,slow=35						
	comp=Z,15nm,0.8s						
WRA	**Warramunga Arr**	**24.04**	**236**	P	**P**	**17 05 45.8**	**-0.1**
MSVF	**Nonsavu**	**24.36**	**117**	P	**P**	**17 05 48.4**	**-0.6**
	comp=Z,2.4nm,0.6s,baz=236,slow=4.9,SNR=3.8						
MSVF				LR	LR	17 14 01.8	
	comp=Z,201nm,21.3s,baz=1.4,slow=33						
	comp=Z,2.4nm,0.6s						
MSVF	**Nonsavu**	**24.36**	**117**	P	**P**	**17 05 47.9**	**-1.0**
MSVF				IAmb	IAmb	17 06 05.5	
	comp=Z,43nm,1.2s						
MTN	**Manton Dam**	**24.57**	**255**	P	**P**	**17 05 48.1**	**-2.7**
MTN				IAmb	IAmb	17 06 08.9	
	comp=Z,51nm,1.2s						
SIJI	**Sorong**	**24.94**	**284**	LR	LR	17 16 26.2	
	comp=Z,313nm,20.3s,baz=73,slow=38						
AS31	**Alice Springs**	**26.34**	**229**	P	**P**	**17 06 06.5**	**-0.3**
ASAR	**Alice Springs**	**26.34**	**229**	P	**P**	**17 06 06.7**	**-0.2**
	comp=Z,3.1nm,1.0s,baz=62,slow=9.1,SNR=13						
ASAR				PcP	**PcP**	**17 09 33.1**	**+0.7**
	comp=Z,0.7nm,0.9s,baz=84,slow=2.6,SNR=2.6						
ASAR				LR	LR	17 16 15.9	
	comp=Z,294nm,18.7s,baz=53,slow=36						
	comp=Z,3.1nm,1.0s						
KNRA	**Kununurra**	**27.43**	**250**	P	**P**	**17 06 15.6**	**-1.1**
KNRA				IAmb	IAmb	17 06 38.9	
	comp=Z,49nm,1.4s						
STKA	**Stephens Creek**	**27.69**	**206**	P	**P**	**17 06 18.4**	**-0.4**
	comp=Z,10.0nm,0.9s,baz=11,slow=10,SNR=13						
STKA				LR	LR	17 16 51.0	
	comp=Z,567nm,19.9s,baz=27,slow=35						
	comp=Z,10.0nm,0.9s						
STKA	**Stephens Creek**	**27.69**	**206**	P	**P**	**17 06 19.1**	**+0.2**
H11S3	**WAKE ISLAND Hy**	**27.89**	**23**	T	T	17 34 45.6	
	baz=202,slow=75,SNR=24						
H11S2	**WAKE ISLAND Hy**	**27.90**	**23**	T	T	17 34 44.4	
	baz=202,slow=75,SNR=24						
H11S1	**WAKE ISLAND Hy**	**27.91**	**23**	T	T	17 34 49.7	
	baz=202,slow=75,SNR=13						
LBMI	**Labuha**	**28.64**	**282**	P	**P**	**17 06 28.5**	**+1.0**
	comp=Z,46nm,1.4s,comp=Z,884nm						
SANI	**Sanana**	**29.81**	**279**	P	**P**	**17 06 39.6**	**+1.7**
	comp=Z,13nm,1.1s						
FITZ	**Fitzroy Crossi**	**30.96**	**247**	P	**P**	**17 06 47.5**	**-0.6**
SGSI	**Sangihe**	**31.78**	**289**	P	**P**	**17 06 58.4**	**+3.1**
	comp=Z,148nm,0.5s						
AFI	**Afiamalu**	**32.85**	**104**	LR	LR	17 18 58.2	
	comp=Z,324nm,18.1s,baz=312,slow=34						
MMRI	**Maumere**	**32.92**	**265**	P	**P**	**17 07 04.8**	**-0.5**
MMRI	**Maumere**	**32.92**	**265**	P	**P**	**17 07 06.6**	**+1.3**
	comp=Z,31nm,1.5s						
BSSI	**Bau Bau, Buton**	**34.74**	**270**	P	**P**	**17 07 22.3**	**+1.2**
	comp=Z,56nm,1.5s						
BKSI	**Bulukumba**	**35.16**	**271**	P	**P**	**17 07 24.2**	**-0.6**
	comp=Z,15nm,1.2s						
KAPI	**Kappang**	**35.56**	**272**	P	**P**	**17 07 28.8**	**+0.6**
KAPI	**Kappang**	**35.56**	**272**	P	**P**	**17 07 28.1**	**-0.1**
KAPI				pP	**pwP**	**17 07 41.6**	**0.0**
SPSI	**Sidrap Palu**	**35.66**	**273**	P	**P**	**17 07 27.9**	**-1.1**
	comp=Z,14nm,1.0s						
MPSI	**Mapaga**	**36.26**	**281**	P	**P**	**17 07 33.2**	**-1.0**
	comp=Z,7.1nm,0.8s						
JCJ	**Chichijima**	**36.50**	**340**	LR	LR	17 20 24.4	
	comp=Z,126nm,19.4s,baz=114,slow=33						
TCW	**Tory Channel**	**37.73**	**157**	P	**P**	**17 07 46.6**	**+0.3**
TUWZ	**Tuamarina**	**37.78**	**157**	P	**P**	**17 07 47.8**	**+1.0**
RPZ	**Rata Peaks**	**38.80**	**162**	LR	LR	17 21 38.3	
	comp=Z,160nm,20.8s,baz=337,slow=33						
MYLDM	**Lahad Datu**	**38.89**	**288**	P	**P**	**17 07 55.1**	**-1.3**
MYLDM				IAmb	IAmb	17 07 59.9	
	comp=Z,38nm,1.6s						
PWJI	**Pagerwojo**	**43.25**	**266**	P	**P**	**17 08 34.7**	**+2.3**
	comp=Z,16nm,1.1s						
RAR	**Rarotonga**	**45.39**	**113**	LR	LR	17 24 14.9	
	comp=Z,134nm,21.1s,baz=252,slow=31						
JNU	**Nakatsue**	**46.46**	**331**	LR	LR	17 26 46.9	
	comp=Z,58nm,18.1s,baz=100,slow=34						
MJAR	**Matsushiro Arr**	**46.48**	**341**	P	**P**	**17 08 57.1**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=156,slow=7.7,SNR=1.1						
MJAR				LR	LR	17 27 49.8	
	comp=Z,70nm,19.2s,baz=161,slow=35						
	comp=Z,1.0nm,0.6s						
KSRS	**Korea Array**	**51.39**	**332**	P	**P**	**17 09 34.7**	**-0.6**
	comp=Z,2.7nm,1.0s,baz=154,slow=6.7,SNR=6.2						
KSRS				LR	LR	17 28 25.5	
	comp=Z,91nm,21.0s,baz=105,slow=32						
	comp=Z,2.7nm,1.0s						
QIZ	**Qiongzhong**	**51.99**	**301**	P	**P**	**17 09 38.5**	**-1.6**
QIZ				S	**S**	**17 17 00.5**	**-1.0**
QIZ				pmax	pmax		
	comp=Z,170nm,3.8s						
QIZ				LR	LR		
	comp=Z,150nm,12.7s						
QIZ				LR	LR		
	comp=Z,220nm,19.9s						
QIZ				LR	LR		
	comp=Z,160nm,17.5s						
QIZ	**Qiongzhong**	**51.99**	**301**	P	**P**	**17 09 41.0**	**+0.9**
QIZ				pP	**sP**	**17 09 53.6**	**0.0**
NJ2	**Nanjing**	**52.41**	**320**	*e*P	**P**	**17 09 43.6**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ASAJ	**Asahikawa**	**52.45**	**348**	LR	LR	17 30 42.6	
	comp=Z,143nm,19.9s,baz=174,slow=34						
SDSI	**Sungai Dareh**	**54.22**	**274**	P	**P**	**17 09 54.3**	**-2.4**
	comp=Z,18nm,2.0s						
WHN	**Wuhan**	**54.45**	**316**	P	P	17 10 05.8	+7.8
TBI	**Tubuai**	**55.15**	**113**	*e*LR	LR	17 26 03.8	
	comp=Z,665nm,31.2s						
TBI				*e*LR	LR	17 26 04.1	
	comp=Z,1µm,29.2s						
USRK	**Ussuriysk Ar.**	**55.44**	**340**	P	**P**	**17 10 04.4**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=132,slow=5.7,SNR=5.1						
	comp=Z,1.9nm,0.7s						
CN2	**Changchun**	**57.63**	**335**	P	P	17 10 30.6	+10
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ENH	**Enshi**	**57.75**	**313**	P	P	17 10 16.0	-5.7
ENH				IAmb	IAmb	17 10 34.6	
	comp=Z,9.6nm,0.9s						
GYA	**Guiyang**	**57.98**	**307**	*e*P	**P**	**17 10 23.9**	**+0.4**
GYA				pmax	pmax		
	comp=Z,11nm,1.0s						
HNS	**HongShan**	**58.49**	**322**	⇑P	**P**	**17 10 26.5**	**-0.2**
HNS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PETK	**Petropavlovsk-**	**60.17**	**2**	P	**P**	**17 10 38.7**	**+0.7**
	comp=Z,3.8nm,0.9s,baz=142,slow=5.1,SNR=4.0						
PETK				LR	LR	17 33 31.9	
	comp=Z,56nm,21.5s,baz=175,slow=33						
	comp=Z,3.8nm,0.9s						
PETK	**Petropavlovsk-**	**60.17**	**2**	P	**P**	**17 10 38.4**	**+0.4**
PHRA	**Phrae**	**60.17**	**296**	P	**P**	**17 10 39.0**	**+0.4**
XAN	**Xi'an**	**60.22**	**316**	P	**P**	**17 10 38.8**	**0.0**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KMI	**Kunming**	**60.54**	**304**	⇓P	**P**	**17 10 43.1**	**+1.7**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CRAI	**Chiangrai**	**60.65**	**298**	P	**P**	**17 10 42.6**	**+0.6**
CRAI				IAmb	IAmb	17 10 52.4	
	comp=Z,13nm,1.2s						
CM31	**Chiang Mai Arr**	**61.31**	**296**	P	**P**	**17 10 46.1**	**-0.4**
CM31				IAmb	IAmb	17 11 00.3	
	comp=Z,7.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**61.31**	**296**	P	**P**	**17 10 47.1**	**+0.7**
	comp=Z,3.0nm,0.7s,baz=123,slow=5.2,SNR=22						
CMAR				LR	LR	17 36 13.5	
	comp=Z,45nm,20.7s,baz=100,slow=35						
	comp=Z,3.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**61.31**	**296**	P	**P**	**17 10 46.5**	**+0.1**
CHTO	**Chiang Mai**	**61.43**	**296**	P	**P**	**17 10 47.8**	**+0.5**
PZH	**PanZhiHua**	**61.94**	**305**	P	**P**	**17 10 52.6**	**+1.9**
PZH				pmax	pmax		
	comp=Z,9.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.3s						
XLT	**XiLinHaoTe**	**62.12**	**329**	*e*P	**P**	**17 10 54.0**	**+2.5**
XLT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,59nm,4.7s						
CD2	**Chengdu**	**62.33**	**310**	P	**P**	**17 10 52.8**	**-0.4**
HHC	**Hu-ho-hao-te**	**62.58**	**324**	*e*P	**P**	**17 10 56.3**	**+1.6**
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,7.6s						
BTO	**Baotou**	**63.35**	**323**	*e*P	**P**	**17 11 00.1**	**+0.3**
BTO				pP	**PcP**	**17 11 30.4**	**-6.2**
BTO				PP	**PP**	**17 13 23.5**	**+4.0**
BTO				pmax	pmax		
	comp=Z,17nm,1.3s						
TNCH	**TengChong**	**64.01**	**302**	P	P	17 10 57.0	-7.6
TNCH				pP	pP	17 11 04.8	-10
TNCH				sP	pwP	17 11 07.4	-10
TNCH				S	**S**	**17 19 39.1**	**+0.1**
TNCH				sS	pS	17 19 45.9	-4.9
TNCH				pmax	pmax		
	comp=Z,15nm,0.5s						
TNCH				pmax	pmax		
	comp=Z,44nm,2.4s						
TNCH				LR	LR		
	comp=N,86nm,4.5s						
TNCH				LR	LR		
	comp=E,87nm,5.9s						
TNCH				LR	LR		
	comp=Z,94nm,8.8s						
LZH	**Lanzhou**	**64.83**	**315**	*e*P	**P**	**17 11 10.4**	**+0.7**
LZH				pmax	pmax		
	comp=Z,12nm,1.5s						
MA2	**Magadan**	**66.73**	**357**	LR	LR	17 41 00.6	
	comp=Z,34nm,19.1s,baz=124,slow=36						
GTA	**Gaotai**	**69.25**	**317**	*e*P	**P**	**17 11 38.5**	**+0.8**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.5s						
ULN	**Ulaanbaatar**	**69.47**	**327**	P	**P**	**17 11 37.8**	**-1.1**
ULN				IAmb	IAmb	17 11 52.9	
	comp=Z,18nm,1.7s						
ULN	**Ulaanbaatar**	**69.47**	**327**	P	**P**	**17 11 37.7**	**-1.2**
ULN				pP	**pwP**	**17 11 51.8**	**-0.2**
SONM	**Songino Array**	**69.81**	**327**	P	**P**	**17 11 40.9**	**0.0**
	comp=Z,3.7nm,0.9s,baz=129,slow=6.0,SNR=12						
	comp=Z,3.7nm,0.9s						
SONM	**Songino Array**	**69.81**	**327**	P	**P**	**17 11 41.1**	**+0.2**
SHL	**Shillong**	**69.82**	**300**	P	**P**	**17 11 41.0**	**-0.5**
SEY	**Seymchan**	**70.03**	**359**	P	**P**	**17 11 44.9**	**+3.0**
	comp=Z,1.5nm,0.8s,baz=92,slow=6.7,SNR=3.6						
SEY				LR	LR	17 39 34.9	
	comp=Z,50nm,19.2s,baz=22,slow=33						
CCD	**Concordia, Ant**	**70.21**	**188**	P	**P**	**17 11 47.4**	**+4.1**
CCD				pP	**sP**	**17 11 58.5**	**+0.7**
VNDA	**Vanda**	**70.30**	**179**	P	**P**	**17 11 43.6**	**+0.3**
	comp=Z,3.3nm,0.9s,baz=333,slow=4.0,SNR=4.0						
VNDA				LR	LR	17 38 02.4	
	comp=Z,68nm,18.6s,baz=294,slow=32						
	comp=Z,3.3nm,0.9s						
GOMU	**GeErMu**	**71.36**	**312**	P	P	17 11 59.3	+8.3
GOMU				pmax	pmax		
	comp=Z,72nm,5.1s						
LSA	**Lhasa**	**71.80**	**304**	P	**P**	**17 11 52.7**	**-1.2**
LSA				IAmb	IAmb	17 11 55.9	
	comp=Z,36nm,1.9s						
YAK	**Yakutsk**	**71.92**	**348**	P	**P**	**17 11 53.3**	**+0.1**
	comp=Z,4.4nm,0.7s,baz=106,slow=2.1,SNR=8.8						
YAK				LR	LR	17 42 58.9	
	comp=Z,37nm,19.4s,baz=194,slow=35						
	comp=Z,4.4nm,0.7s						
YAK	**Yakutsk**	**71.92**	**348**	P	**P**	**17 11 52.9**	**-0.3**
YAK				IAmb	IAmb	17 11 54.5	
	comp=Z,13nm,0.9s						
YAK	**Yakutsk**	**71.92**	**348**	P	**P**	**17 11 52.5**	**-0.8**
YAK				pP	**pP**	**17 12 03.1**	**-0.7**
TAPN	**Taplejung**	**73.93**	**301**	*e*P	**P**	**17 12 06.8**	**+0.4**
	comp=Z,33nm,0.9s						
ODAN	**Odare**	**74.06**	**300**	*e*P	**P**	**17 12 07.3**	**+0.3**
RAMN	**Ramite**	**74.76**	**300**	*e*P	**P**	**17 12 11.0**	**-0.1**
JIRN	**Jiri**	**75.31**	**301**	*e*P	**P**	**17 12 14.5**	**0.0**
BILL	**Bilibino**	**75.52**	**4**	P	**P**	**17 12 14.9**	**+0.6**
GUN	**Gumba**	**75.65**	**301**	*e*P	**P**	**17 12 16.5**	**+0.2**
	comp=Z,43nm,0.9s						
PKI	**Pulchoki**	**75.95**	**301**	*e*P	**P**	**17 12 18.0**	**-0.1**
	comp=Z,22nm,1.0s						
PKIN	**Phulchoki**	**75.97**	**301**	*e*P	**P**	**17 12 17.6**	**-0.5**
KKN	**Kakani**	**76.12**	**301**	*e*P	**P**	**17 12 19.0**	**+0.1**
DMN	**Daman**	**76.22**	**301**	*e*P	**P**	**17 12 20.1**	**+0.6**
GKN	**Gorkha**	**76.73**	**301**	*e*P	**P**	**17 12 22.1**	**-0.2**
	comp=Z,50nm,1.1s						
KDAK	**Kodiak Island**	**77.21**	**26**	LR	LR	17 44 50.6	
	comp=Z,58nm,18.2s,baz=221,slow=34						
ANM	**Nome**	**77.36**	**16**	P	**P**	**17 12 25.8**	**+1.0**
ANM				IAmb	IAmb	17 12 49.9	
	comp=Z,12nm,1.4s						
TNA	**Tin City**	**77.47**	**15**	P	**P**	**17 12 26.3**	**+1.0**
KOLN	**Koldanda**	**77.55**	**300**	*e*P	**P**	**17 12 26.7**	**-0.2**
DANN	**Dangsing**	**77.57**	**301**	*e*P	**P**	**17 12 26.6**	**-0.5**
PYUN	**Piuthan**	**78.16**	**301**	*e*P	**P**	**17 12 29.7**	**-0.6**
	comp=Z,33nm,1.1s						
WMQ	**Urumqi**	**79.33**	**317**	*e*P	**P**	**17 12 37.3**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,16nm,0.8s						
RDOG	**Red Dog Mine**	**80.66**	**15**	P	**P**	**17 12 43.5**	**+0.7**
RDOG				IAmb	IAmb	17 13 07.0	
	comp=Z,8.1nm,0.8s						
TIXI	**Tiksi**	**80.69**	**352**	P	**P**	**17 12 41.9**	**-1.0**
	comp=Z,0.6nm,0.2s,baz=270,slow=20,SNR=5.3						
TIXI				LR	LR	17 51 50.7	
	comp=Z,23nm,18.0s,baz=179,slow=38						
	comp=Z,0.6nm,0.2s						
TIXI	**Tiksi**	**80.69**	**352**	P	**P**	**17 12 43.2**	**+0.4**
CAST	**Castle Rocks**	**80.81**	**21**	P	**P**	**17 12 43.3**	**-0.5**
GHO	**Glory Hole Cre**	**81.04**	**23**	P	**P**	**17 12 43.9**	**-1.2**
KTH	**Kantishna Hill**	**81.31**	**21**	P	**P**	**17 12 44.2**	**-2.2**
KTH				IAmb	IAmb	17 12 46.7	
	comp=Z,17nm,1.6s						
IMAR	**Indian Mountai**	**81.83**	**19**	P	**P**	**17 12 49.1**	**0.0**
KLU	**Klutina**	**82.09**	**24**	P	**P**	**17 12 50.3**	**-0.3**
KLU				IAmb	IAmb	17 13 24.9	
	comp=Z,11nm,1.2s						
MCK	**McKinley**	**82.14**	**22**	P	**P**	**17 12 49.6**	**-1.2**
MCK				IAmb	IAmb	17 13 14.8	
	comp=Z,12nm,1.1s						
N25K	**Chitina, Valde**	**82.70**	**25**	P	**P**	**17 12 53.2**	**-0.6**
N25K				IAmb	IAmb	17 12 59.8	
	comp=Z,16nm,1.4s						
MDM	**Murphy Dome**	**83.08**	**21**	P	**P**	**17 12 53.7**	**-1.9**
MDM				IAmb	IAmb	17 12 55.9	
	comp=Z,11nm,1.4s						
TCOL	**CIGO, UAF Yank**	**83.16**	**21**	P	**P**	**17 12 52.5**	**-3.5**
COLA	**College**	**83.17**	**21**	P	**P**	**17 12 52.8**	**-3.3**
COLA				IAmb	IAmb	17 13 44.6	
	comp=Z,16nm,1.4s						
ILAR	**Eielson Array**	**83.46**	**21**	P	**P**	**17 12 56.0**	**-1.6**
	comp=Z,0.7nm,0.8s,baz=250,slow=5.1,SNR=6.8						
	comp=Z,0.7nm,0.8s						
ILAR	**Eielson Array**	**83.46**	**21**	P	P	17 12 52.4	-5.2
MK31	**Makanchi Array**	**83.91**	**319**	P	**P**	**17 12 59.7**	**-0.6**
MK31				IAmb	IAmb	17 13 13.8	
	comp=Z,15nm,2.0s						
MKAR	**Makanchi Array**	**83.91**	**319**	P	**P**	**17 12 59.6**	**-0.7**
	comp=Z,1.1nm,0.8s,baz=99,slow=6.4,SNR=11						
	comp=Z,1.1nm,0.8s						
MAKZ	**Makanchi**	**84.12**	**319**	P	**P**	**17 13 01.0**	**-0.4**
SCRK	**Sand Creek**	**84.12**	**23**	P	**P**	**17 13 01.6**	**+0.5**
SCRK				IAmb	IAmb	17 13 31.2	
	comp=Z,17nm,1.9s						
M27K	**Edge Creek, AK**	**84.19**	**25**	P	**P**	**17 13 02.0**	**+0.5**
M27K				IAmb	IAmb	17 13 03.5	
	comp=Z,8.4nm,1.1s						
MAW	**Mawson**	**84.32**	**203**	P	**P**	**17 13 01.6**	**-0.4**
	comp=Z,8.7nm,0.6s,baz=106,slow=8.1,SNR=1.1						
	comp=Z,8.7nm,0.6s						
BCAR	**Beaver Creek A**	**84.55**	**24**	P	**P**	**17 13 03.4**	**+0.1**
ZALV	**Zalesovo Beam**	**84.66**	**326**	P	**P**	**17 13 02.7**	**-1.2**
	comp=Z,1.1nm,0.7s,baz=116,slow=6.8,SNR=5.6						
ZALV				LR	LR	17 50 29.0	
	comp=Z,43nm,20.6s,baz=127,slow=35						
	comp=Z,1.1nm,0.7s						
HYT	**Haines Junctio**	**85.41**	**27**	P	**P**	**17 13 08.4**	**+0.7**
HYT				IAmb	IAmb	17 13 15.2	
	comp=Z,6.9nm,1.2s						
BMAR	**Burnt Mountain**	**85.65**	**20**	P	**P**	**17 13 09.0**	**+0.3**
KDJ	**Kajisay**	**86.21**	**313**	P	**P**	**17 13 12.2**	**0.0**
M30M	**Minto, Yukon**	**86.41**	**25**	P	**P**	**17 13 12.6**	**+0.1**
M30M				IAmb	IAmb	17 14 06.9	
	comp=Z,9.4nm,1.6s						
KSH	**Kashi**	**86.53**	**310**	P	**P**	**17 13 15.8**	**+2.0**
KSH				pmax	pmax		
	comp=Z,6.0nm,1.2s						
I29M	**Ogilvie Camp,**	**86.93**	**23**	P	**P**	**17 13 15.1**	**+0.1**
I29M				IAmb	IAmb	17 13 39.6	
	comp=Z,5.8nm,1.1s						
NIL	**Nilore**	**87.54**	**304**	P	**P**	**17 13 17.1**	**-1.6**
EPYK	**Eagle Plains**	**87.94**	**22**	P	**P**	**17 13 20.3**	**+0.5**
NRIK	**Noril'sk**	**89.14**	**341**	P	**P**	**17 13 24.9**	**-0.5**
	comp=Z,1.5nm,0.4s,baz=78,slow=3.8,SNR=5.3						
	comp=Z,1.5nm,0.4s						
NRIK	**Noril'sk**	**89.14**	**341**	P	**P**	**17 13 24.9**	**-0.5**
DRK	**Karamyk**	**89.69**	**310**	P	P	17 13 23.2	-5.8
DRK				IAmb	IAmb	17 13 54.8	
	comp=Z,4.2nm,0.7s						
INK	**Inuvik**	**89.81**	**21**	P	**P**	**17 13 27.8**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=197,slow=7.0,SNR=5.1						

	comp=Z,1.2nm,0.8s						
INK	**Inuvik**	**89.81**	**21**	P	**P**	**17 13 27.7**	**-0.8**
INK				IAmb	IAmb	17 13 52.1	
	comp=Z,6.9nm,1.2s						
GAR	**Garm**	**90.76**	**309**	P	**P**	**17 13 30.1**	**-3.7**
KK31	**Karatay Array**	**91.23**	**313**	P	**P**	**17 13 34.4**	**-1.4**
KKAR	**Karatay Array**	**91.23**	**313**	P	**P**	**17 13 34.4**	**-1.4**
NVAR	**Mina Array Bea**	**91.53**	**52**	P	**P**	**17 13 38.1**	**+0.6**
	comp=Z,0.9nm,0.9s,baz=232,slow=6.7,SNR=5.1						
	comp=Z,0.9nm,0.9s						
BRVK	**Borovoye**	**92.85**	**323**	P	**P**	**17 13 40.5**	**-2.4**
BRVK				IAmb	IAmb	17 13 42.7	
	comp=Z,6.6nm,1.4s						
C36M	**Paulatuk**	**93.39**	**21**	P	**P**	**17 13 44.4**	**-0.7**
YKA	**Yellowknife Ar**	**96.36**	**28**	P	**P**	**17 13 59.0**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=263,slow=4.7,SNR=13						
	comp=Z,0.6nm,0.7s						
PDAR	**Pinedale Array**	**98.54**	**48**	LR	LR	17 55 58.3	
	comp=Z,104nm,18.3s,baz=268,slow=34						
GERES	**GERESS Array B**	**127.52**	**329**	PKP	**PKPdf**	**17 19 35.3**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=0.0,slow=1.0,SNR=3.5						
BDFB	**Brasilia**	**147.47**	**134**	PKPbc	**PKPdf**	**17 20 13.7**	**+0.8**
	comp=Z,11nm,1.1s,baz=179,slow=2.5,SNR=7.3						
TORD	**Torodi Ar. Bea**	**153.53**	**285**	PKPbc	**PKPbc**	**17 20 29.0**	**-0.9**
	comp=Z,1.3nm,0.3s,baz=72,slow=1.8,SNR=2.5						

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*IDC **23** 17:01:55.6±2.4, 51°.88N×171°.96W, h0^{km}, mb3.3/5, mbtmp3.2/6, ML3.3/1, Error ellipse: s-maj=56.2km s-min=34.2km az=6.0*

*AEIC **23** 17:02:01.6±2.9, 51°.8N±0°.2×171°.7W±0°.1, h20^{km}±8^{km}, Error ellipse: s-maj=25.2km s-min=6.3km az=163.0*

*NEIC **23** 17:02:04.2±2.6, 52°.05N±0°.06×171°.63W±0°.08, h56^{km}±17^{km}, mb3.6/18, ML3.6/6, ML3.2(AEIC), Error ellipse: s-maj=8.9km s-min=7.1km az=182.0*

ISC 23 17:02:03.0±1.0, **52°.0N**±0°.2×**171°.67W**±0°.06, **h44^{km}, n42,** σ**1^{s}.33**/38, **mb3.3**/6, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLES	**Cleveland East**	**1.36**	**52**		**Pn**	**17 02 26.0**	**+0.4**
CLES				IAML		17 02 48.9	
	comp=N,2µm,0.4s						
CLES				IAML		17 02 49.4	
	comp=E,2µm,0.3s						
NIKH	**Nikolski High**	**1.98**	**59**		**Pn**	**17 02 33.7**	**-0.3**
NIKH					**Sn**	**17 02 58.0**	**+0.4**
GSTR	**Great Sitkin T**	**2.71**	**274**	Pn	**Pn**	**17 02 44.6**	**+0.5**
GSTR					**Sn**	**17 03 17.5**	**+1.8**
ADK	**Adak**	**3.11**	**270**		**Pn**	**17 02 49.2**	**-0.3**
ADK				IAML		17 03 32.1	
	comp=E,146nm,0.8s						
ADK				IAML		17 03 35.1	
	comp=E,148nm,0.6s						
KIWB	**Kanaga Island**	**3.40**	**270**	Pn	**Pn**	**17 02 53.7**	**+0.2**
UNV	**Unalaska Valle**	**3.63**	**57**		**Pn**	**17 02 57.8**	**+1.1**
AKUT	**Akutan**	**4.15**	**57**	Pn	**Pn**	**17 03 05.1**	**+1.4**
AKUT				IAML		17 05 46.3	
	comp=N,46nm,3.9s						
SPIA	**Saint Paul Isl**	**5.26**	**8**	Pn	**Pn**	**17 03 19.1**	**+0.2**
P18K	**Big Mountain,**	**11.84**	**45**	Pn	**Pn**	**17 04 50.6**	**+1.5**
M19K	**Big River Lodg**	**13.64**	**37**	Pn	**Pn**	**17 05 15.7**	**+2.1**
K20K	**Telida**	**14.70**	**32**	P	**P**	**17 05 32.4**	**-0.9**
CAST	**Castle Rocks**	**15.42**	**35**	P	**P**	**17 05 41.2**	**0.0**
CAST				IAmb	IAmb	17 06 12.5	
	comp=Z,5.3nm,1.4s						
KNK	**Knik Glacier**	**15.76**	**44**	P	**P**	**17 05 44.8**	**-0.2**
KTH	**Kantishna Hill**	**15.92**	**35**	P	**P**	**17 05 46.7**	**-0.1**
KTH				IAmb	IAmb	17 06 02.4	
	comp=Z,11nm,1.4s						
SML	**Sawmill**	**15.99**	**43**	P	**P**	**17 05 47.9**	**+0.3**
TRF	**Thorofare Moun**	**16.08**	**36**	Pn	**Pn**	**17 05 44.8**	**-1.1**
TRF				IAmb	IAmb	17 06 14.6	
	comp=Z,7.1nm,1.4s						
BPAW	**Bear Paw Mtn.**	**16.23**	**34**	Pn	**Pn**	**17 05 47.3**	**-0.3**
BPAW				IAmb	IAmb	17 06 19.7	
	comp=Z,6.5nm,1.5s						
SCM	**Sheep Creek Mo**	**16.43**	**44**	Pn	**Pn**	**17 05 47.2**	**-3.1**
MLY	**Manley**	**16.91**	**31**	Pn	**Pn**	**17 05 55.8**	**-0.4**
M24K	**Tolsona, Glenn**	**17.04**	**44**	Pn	**Pn**	**17 05 55.8**	**-2.1**
I23K	**Minto, Yukon-K**	**17.43**	**32**		**P**	**17 06 03.7**	**+0.3**
WRH	**Wood River Hil**	**17.47**	**35**		**P**	**17 06 03.2**	**-0.6**
WRH				IAmb	IAmb	17 06 06.9	
	comp=Z,4.3nm,1.3s						
CCB	**Clear Creek Bu**	**17.67**	**35**	Pn	**Pn**	**17 06 03.4**	**-2.1**
ILAR	**Eielson Array**	**18.07**	**35**	P	**Pn**	**17 06 09.2**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=230,slow=9.3,SNR=7.0						
	comp=Z,0.3nm,0.8s						
RIDG	**Independent Ri**	**18.31**	**40**	P	**Pn**	**17 06 13.4**	**-0.1**
RIDG				IAmb	IAmb	17 06 19.3	
	comp=Z,6.7nm,1.3s						
H24K	**Noodor Dome**	**18.35**	**32**	P	**Pn**	**17 06 14.5**	**+0.6**
I26K	**Coal Creek Min**	**19.70**	**37**	P	**P**	**17 06 24.1**	**-4.1**
I26K				IAmb	IAmb	17 06 33.5	
	comp=Z,4.6nm,1.4s						
EGAK	**Eagle**	**20.21**	**39**	P	**P**	**17 06 32.4**	**-1.5**
EGAK				IAmb	IAmb	17 06 39.9	
	comp=Z,5.1nm,1.3s						
BMAR	**Burnt Mountain**	**20.36**	**30**	P	**P**	**17 06 36.2**	**+0.7**
HYT	**Haines Junctio**	**20.64**	**51**	P	**P**	**17 06 39.1**	**+0.4**
HYT				IAmb	IAmb	17 06 42.1	
	comp=Z,3.3nm,0.7s						
SKAG	**Skagway**	**21.55**	**55**	P	**P**	**17 06 47.7**	**-0.6**
SKAG				IAmb	IAmb	17 06 50.6	
	comp=Z,5.9nm,1.0s						
INK	**Inuvik**	**24.44**	**34**	P	**P**	**17 07 16.3**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=250,slow=7.1,SNR=6.1						
	comp=Z,0.8nm,0.5s						
YKA	**Yellowknife Ar**	**31.55**	**48**	P	**P**	**17 08 22.3**	**+1.6**
	comp=Z,0.2nm,0.5s,baz=273,slow=7.9,SNR=6.3						
	comp=Z,0.2nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**36.30**	**216**	T	T	17 47 32.5	
	baz=21						
H11N3	**WAKE ISLAND Hy**	**36.31**	**216**	T	T	17 47 31.6	
	baz=21						
H11N1	**WAKE ISLAND Hy**	**36.32**	**216**	T	T	17 47 31.4	
	baz=21						
H11S1	**WAKE ISLAND Hy**	**37.50**	**215**	T	T	17 49 04.7	
	baz=22,slow=76,SNR=3.5						
H11S2	**WAKE ISLAND Hy**	**37.52**	**215**	T	T	17 49 05.1	
	baz=22,slow=76,SNR=3.0						
H11S3	**WAKE ISLAND Hy**	**37.52**	**215**	T	T	17 49 03.3	
	baz=22,slow=76,SNR=3.5						
PDAR	**Pinedale Array**	**41.86**	**77**	P	**P**	**17 09 48.9**	**0.0**
	comp=Z,0.1nm,0.5s,baz=313,slow=4.7,SNR=2.3						
	comp=Z,0.1nm,0.5s						
TXAR	**Lajitas Array**	**54.17**	**87**	P	**P**	**17 11 23.8**	**-0.2**
	comp=Z,0.1nm,0.5s,baz=316,slow=6.3,SNR=2.2						
	comp=Z,0.1nm,0.5s						
MKAR	**Makanchi Array**	**63.02**	**312**	P	**P**	**17 12 23.8**	**-1.4**
	comp=Z,0.2nm,0.5s,baz=38,slow=7.3,SNR=3.2						
	comp=Z,0.2nm,0.5s						

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*JMA **23** 17:09:24.9±0.2, 23°N±1°×12°1E±°, h0^{km}, TAIWAN REGION*

*TAP **23** 17:09:25.4, 23°.42N×120°.48E, h6^{km}, ML3.6, B*

ISC 23 17:09:26.5±0.8, **23°.42N**±0°.01×**120°.47E**±0°.01, **h10^{km}**±4^{km}, **n146,** σ**0^{s}.77**/257, **26C-27D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHY	**Chiayi**	**0.09**	**328**	⇑iP	**Pg**	**17 09 28.2**	**-0.7**
	baz=332						
CHY				i S	**Sg**	**17 09 30.4**	**-0.3**
	baz=332						
CHN2	**Minshiung**	**0.11**	**0**	⇑iP	**Pg**	**17 09 29.0**	**-0.2**
	baz=359						
CHN2				S	**Sg**	**17 09 32.4**	**+1.3**
	baz=359						
WCKO	**Fanlu**	**0.12**	**83**	⇓iP	**Pg**	**17 09 28.7**	**-0.7**
	baz=82						
WCKO				S	**Sg**	**17 09 31.7**	**+0.3**
	baz=82						
CHN4	**Tsaushan**	**0.13**	**123**	⇓iP	**Pg**	**17 09 29.1**	**-0.4**
	baz=123						
CHN4				eS	**Sg**	**17 09 32.3**	**+0.7**
	baz=123						
TWK	**Hsinying**	**0.16**	**175**	⇑iP	**Pg**	**17 09 29.9**	**-0.1**
	baz=172						
TWK				i S	**Sg**	**17 09 32.6**	**+0.2**
	baz=172						
TPUB	**Ta-pu**	**0.19**	**131**	⇓iP	**Pg**	**17 09 30.1**	**-0.3**
	baz=130						
TPUB				S	**Sg**	**17 09 33.7**	**+0.5**
	baz=130						
ICHU	**Yijhu**	**0.19**	**251**	⇓iP	**Pg**	**17 09 30.5**	**0.0**
	baz=251						
ICHU				S	**Sg**	**17 09 34.4**	**+1.2**
	baz=251						
SNST	**Tainan City**	**0.20**	**174**	⇑eP	**Pb**	**17 09 32.2**	**+1.5**
	baz=174						
WTP	**Ta-pu**	**0.22**	**144**	⇓iP	**Pg**	**17 09 31.1**	**0.0**
	baz=143						
WTP				S	**Sg**	**17 09 35.1**	**+1.0**
	baz=143						
CHN1	**Nanshi**	**0.24**	**168**	⇑iP	**Pg**	**17 09 31.5**	**0.0**
	baz=168						
CHN1				eS	**Sg**	**17 09 36.7**	**+1.9**
	baz=168						
WSL	**Shuilin Townsh**	**0.25**	**294**	⇓iP	**Pg**	**17 09 31.6**	**+0.1**
	baz=294						
WSL				eS	**Sg**	**17 09 35.6**	**+0.7**
	baz=294						
CHN8	**Yiju**	**0.25**	**252**	⇓iP	**Pg**	**17 09 31.9**	**+0.2**
	baz=252						
CHN8				S	**Sb**	**17 09 37.4**	**-0.2**
	baz=252						
CHN5	**Tsauling**	**0.26**	**47**	⇓iP	**Pg**	**17 09 31.7**	**-0.1**
	baz=47						
CHN5				S	**Sg**	**17 09 36.4**	**+1.1**
	baz=47						
WDLH	**Douliu**	**0.27**	**12**	⇑iP	**Pg**	**17 09 32.5**	**+0.5**
	baz=12						
WDLH				S	**Sb**	**17 09 38.0**	**-0.2**
	baz=12						
WGK	**Gukeng**	**0.27**	**17**	⇑iP	**Pg**	**17 09 32.6**	**+0.6**
	baz=18						
WGK				eS	**Sb**	**17 09 38.7**	**+0.5**
	baz=18						
WTK	**Tuku**	**0.28**	**343**	⇑iP	**Pg**	**17 09 32.3**	**+0.3**
	baz=343						
WTK				eS	**Sg**	**17 09 37.6**	**+1.8**
	baz=343						
WSF	**Szhu**	**0.32**	**313**	⇓iP	**Pg**	**17 09 33.0**	**+0.2**
	baz=313						
WSF				i S	**Sg**	**17 09 39.1**	**+2.0**
	baz=313						
ALS	**Alishan**	**0.32**	**74**	⇓iP	**Pg**	**17 09 33.2**	**+0.2**
	baz=74						
ALS				eS	**Sb**	**17 09 39.1**	**-0.6**
	baz=74						
SSHA	**Shanhua**	**0.33**	**211**	⇑eP	**Pg**	**17 09 34.0**	**+0.9**
	baz=211						
SSHA				eS	**Sb**	**17 09 40.9**	**+1.0**
	baz=211						
SGST	**Jiashian**	**0.35**	**164**	⇑eP	**Pg**	**17 09 32.9**	**-0.7**
	baz=163						
SGST				eS	**Sb**	**17 09 39.4**	**-1.1**
	baz=163						
SCLT	**Jiali**	**0.36**	**226**	⇑iP	**Pg**	**17 09 34.1**	**+0.6**
	baz=226						
SCLT				S	**Sb**	**17 09 41.3**	**+0.7**
	baz=226						
CHN3	**Shinhua**	**0.36**	**196**	⇑iP	**Pb**	**17 09 34.7**	**-0.3**
	baz=197						
CHN3				eS	**Sb**	**17 09 42.2**	**+1.5**
	baz=197						
STYT	**Tauyuan**	**0.37**	**135**	⇓iP	**Pg**	**17 09 33.9**	**+0.1**
	baz=134						
STYT				S	**Sb**	**17 09 40.0**	**-0.9**
	baz=134						
STYH	**Taoyuan**	**0.37**	**132**	⇓iP	**Pg**	**17 09 33.8**	**-0.1**
	baz=131						
STYH				S	**Sb**	**17 09 39.8**	**-1.3**
	baz=131						
SHHT	**Tainan City**	**0.42**	**196**	⇑eP	**Pb**	**17 09 36.1**	**+0.2**
	baz=196						
WHYT	**Xinyi Township**	**0.44**	**52**	⇓iP	**Pg**	**17 09 35.2**	**+0.1**
	baz=52						
WHYT				S	**Sb**	**17 09 42.4**	**-0.8**
	baz=52						
YUS	**Yu-Shan**	**0.44**	**81**	⇓eP	**Pg**	**17 09 35.8**	**+0.5**
	baz=82						
YUS				eS	**Sb**	**17 09 43.5**	**-0.1**
	baz=82						
TAI1	**Yung-k'ang**	**0.44**	**211**	eP	**Pb**	**17 09 36.3**	**-0.1**
	baz=210						
TAI1				eS	**Sb**	**17 09 45.0**	**+1.9**
	baz=210						
WMLT	**Mailiao**	**0.44**	**329**	eP	**Pg**	**17 09 35.4**	**+0.2**
	baz=329						
WMLT				eS	**Sb**	**17 09 42.9**	**-0.2**
	baz=329						
TSCK	**Chigu Township**	**0.45**	**232**	⇑iP	**Pg**	**17 09 35.4**	**+0.1**
	baz=233						
TSCK				eS	**Sb**	**17 09 43.4**	**0.0**
	baz=233						
SLGT	**Liugui**	**0.46**	**160**	eP	**Pb**	**17 09 36.5**	**-0.2**
	baz=160						
WJS	**Zhushan**	**0.46**	**30**	⇑iP	**Pg**	**17 09 35.9**	**+0.4**
	baz=30						
WJS				eS	**Sb**	**17 09 43.1**	**-0.5**
	baz=30						
WTCT	**Ta-ch'eng**	**0.47**	**338**	i P	**Pg**	**17 09 35.9**	**+0.2**
	baz=339						
WTCT				S	**Sb**	**17 09 43.9**	**-0.1**
	baz=339						
WRL	**Guolierlin Hig**	**0.48**	**349**	⇑iP	**Pg**	**17 09 36.1**	**+0.2**
	baz=349						
WRL				i S	**Sg**	**17 09 43.6**	**+1.3**
	baz=349						
WNT	**Mingjian**	**0.49**	**23**	⇑iP	**Pg**	**17 09 36.6**	**+0.6**
	baz=24						
WNT				eS	**Sb**	**17 09 45.0**	**+0.4**
	baz=24						
TAI	**Tainan**	**0.50**	**211**	eP	**Pb**	**17 09 37.3**	**0.0**
	baz=210						
WNT1	**Nantou City**	**0.52**	**21**	eP	**Pg**	**17 09 37.1**	**+0.5**
	baz=21						
WNT1				eS	**Sb**	**17 09 45.9**	**+0.7**
	baz=21						
SCST	**Cishan**	**0.54**	**178**	⇑iP	**Pb**	**17 09 37.9**	**-0.1**
	baz=178						
SCST				eS	**Sn**	**17 09 47.7**	**-1.6**
	baz=178						
WYL	**Yuanlin Townsh**	**0.54**	**10**	eP	**Pg**	**17 09 37.5**	**+0.4**
	baz=10.0						
WYL				eS	**Sb**	**17 09 46.4**	**+0.4**
	baz=10.0						
ELDTW	**Lidau**	**0.55**	**115**	⇓iP	**Pg**	**17 09 37.2**	**0.0**
	baz=115						
ELDTW				eS	**Sb**	**17 09 45.8**	**-0.5**
	baz=115						
SSLB	**Suanglung**	**0.57**	**50**	⇓iP	**Pg**	**17 09 37.5**	**-0.1**
	baz=50						
SSLB				eS	**Sb**	**17 09 46.3**	**-0.5**
	baz=50						
TYC	**Yuchr**	**0.59**	**36**	⇑iP	**Pg**	**17 09 38.5**	**+0.5**
	baz=37						
TYC				eS	**Sb**	**17 09 48.0**	**+0.5**
	baz=37						
TWM1	**Shoushan**	**0.60**	**185**	⇑eP	**Pb**	**17 09 40.0**	**+0.9**
	baz=184						
TWM1				eS	**Sn**	**17 09 54.5**	**+3.6**
	baz=184						
SMLT	**Sun Moon Lake**	**0.60**	**40**	⇓iP	**Pg**	**17 09 38.6**	**+0.4**
	baz=41						
SMLT				eS	**Sb**	**17 09 48.7**	**+0.9**
	baz=41						
WCHH	**Zhanghua**	**0.66**	**7**	⇑eP	**Pg**	**17 09 39.3**	**+0.1**
	baz=7.0						
WCHH				eS	**Sb**	**17 09 49.8**	**+0.5**
	baz=7.0						
SSD	**Sandimen**	**0.69**	**168**	⇑iP	**Pg**	**17 09 40.2**	**+0.4**
	baz=167						
SSD				eS	**Sb**	**17 09 51.0**	**+0.8**
	baz=167						
SGLT	**Jiouru**	**0.69**	**179**	eP	**Pn**	**17 09 42.0**	**-0.4**
	baz=178						
SGLT				eS	**Sn**	**17 09 54.4**	**+1.2**
	baz=178						
VWDT	**VWDT**	**0.69**	**62**	⇓iP	**Pg**	**17 09 40.3**	**+0.3**
	baz=62						
VWDT				eS	**Sb**	**17 09 50.4**	**+0.1**
	baz=62						
EHD	**Haiduan**	**0.73**	**112**	⇓iP	**Pg**	**17 09 40.2**	**-0.3**
	baz=112						
EHD				eS	**Sb**	**17 09 50.8**	**-0.5**
	baz=112						
TSMG	**Majia**	**0.73**	**168**	eP	**Pg**	**17 09 40.9**	**+0.3**
	baz=168						
TSMG				eS	**Sn**	**17 09 52.4**	**-1.7**
	baz=168						
WPL	**Puli Township**	**0.73**	**37**	eP	**Pg**	**17 09 40.6**	**-0.1**
	baz=37						
WPL				eS	**Sb**	**17 09 51.5**	**-0.1**
	baz=37						
DPDB	**Guoxing**	**0.73**	**34**	P	**Pg**	**17 09 40.8**	**+0.1**
	baz=34						
DPDB				eS	**Sb**	**17 09 51.9**	**+0.2**
	baz=34						
TSPT	**Pingtung City**	**0.74**	**178**	eP	**Pn**	**17 09 42.6**	**-0.4**
	baz=179						
TCU	**Taichung**	**0.74**	**14**	eP	**Pg**	**17 09 41.0**	**+0.1**
	baz=15						
WCS	**Beigang Elemen**	**0.75**	**32**	P	**Pg**	**17 09 41.0**	**0.0**
	baz=32						
WCS				eS	**Sb**	**17 09 52.2**	**+0.3**
	baz=32						
YULB	**Yu-li**	**0.76**	**92**	P	**Pg**	**17 09 40.7**	**-0.4**
	baz=92						
YULB				eS	**Sg**	**17 09 51.3**	**+0.3**
	baz=92						
ECS	**Chishang**	**0.76**	**115**	⇓eP	**Pg**	**17 09 41.3**	**+0.2**
	baz=115						
ECS				eS	**Sn**	**17 09 53.0**	**-1.8**
	baz=115						
TWF1	**Yuli**	**0.76**	**95**	⇓eP	**Pg**	**17 09 41.0**	**-0.2**
	baz=95						
TWF1				eS	**Sb**	**17 09 51.6**	**-0.6**
	baz=95						
WDGT	**Dungji**	**0.77**	**258**	eP	**Pg**	**17 09 40.7**	**-0.6**
	baz=258						
WDGT				eS	**Sg**	**17 09 51.5**	**+0.2**
	baz=258						
EYUL	**Yuli**	**0.78**	**95**	⇓P	**Pg**	**17 09 41.2**	**-0.3**
	baz=95						
EYUL				eS	**Sb**	**17 09 52.2**	**-0.6**
	baz=95						
EHY	**Hungye**	**0.78**	**84**	⇓eP	**Pg**	**17 09 41.5**	**-0.1**
	baz=84						
EHY				eS	**Sb**	**17 09 52.9**	**0.0**
	baz=84						
FULB	**Fuli**	**0.79**	**106**	⇓eP	**Pb**	**17 09 42.0**	**-0.3**
	baz=106						
FULB				eS	**Sn**	**17 09 54.2**	**-1.4**
	baz=106						
LONT	**Longtian**	**0.79**	**130**	eP	**Pg**	**17 09 41.7**	**-0.1**
	baz=130						
LONT				eS	**Sb**	**17 09 53.2**	**0.0**
	baz=130						
TWG	**Pinlang**	**0.81**	**137**	eP	**Pg**	**17 09 42.4**	**+0.2**
	baz=137						
TWG				eS	**Sb**	**17 09 54.2**	**+0.4**
	baz=137						
WUSB	**Renai**	**0.82**	**46**	⇓eP	**Pg**	**17 09 41.9**	**-0.3**
	baz=46						
WUSB				eS	**Sg**	**17 09 53.5**	**+0.5**
	baz=46						
MASBT	**Mashibuluo**	**0.82**	**170**	⇑eP	**Pg**	**17 09 42.4**	**+0.1**
	baz=170						
MASBT				eS	**Sn**	**17 09 55.2**	**-1.2**
	baz=170						
TWGBT	**Beinan**	**0.82**	**137**	eP	**Pg**	**17 09 42.3**	**0.0**
	baz=137						
TWGBT				eS	**Sb**	**17 09 54.1**	**+0.1**
	baz=137						
OWD	**Renai**	**0.83**	**50**	eP	**Pg**	**17 09 42.4**	**-0.2**
	baz=50						
OWD				eS	**Sb**	**17 09 54.1**	**-0.4**
	baz=50						
PHUB	**P'eng-hu**	**0.83**	**276**	eP	**Pg**	**17 09 41.6**	**-1.0**
	baz=276						
PHUB				eS	**Sg**	**17 09 53.2**	**-0.2**
	baz=276						
PNG	**Penghu**	**0.86**	**280**	⇓eP	**Pg**	**17 09 42.0**	**-1.0**
	baz=280						
PNG				eS	**Sg**	**17 09 53.9**	**-0.2**
	baz=280						
KAU	**Kaohsiung**	**0.86**	**190**	eP	**Pn**	**17 09 44.4**	**-0.3**
	baz=190						
HGSD	**Ruisui**	**0.88**	**85**	eP	**Pb**	**17 09 43.7**	**-0.1**
	baz=85						
HGSD				eS	**Sn**	**17 09 57.2**	**-0.4**
	baz=85						
CHKT	**Chengkung**	**0.88**	**111**	eP	**Pb**	**17 09 44.0**	**+0.1**
	baz=111						
CHKT				eS	**Sn**	**17 09 57.6**	**-0.2**
	baz=111						
EDH	**Donghe**	**0.89**	**120**	eP	**Pg**	**17 09 43.6**	**0.0**
	baz=120						
EDH				eS	**Sn**	**17 09 57.2**	**-0.8**
	baz=120						
CHGB	**Renai**	**0.90**	**45**	⇓eP	**Pg**	**17 09 43.5**	**-0.4**
	baz=45						
CHGB				eS	**Sg**	**17 09 55.9**	**+0.2**
	baz=45						
ECBN	**Changbin**	**0.90**	**97**	eP	**Pn**	**17 09 45.1**	**-0.2**
	baz=97						
ECBN				eS	**Sn**	**17 09 59.1**	**+0.7**
	baz=97						
EGFH	**Guangfu**	**0.91**	**74**	eP	**Pg**	**17 09 44.1**	**+0.1**
	baz=74						
EGFH				eS	**Sb**	**17 09 56.2**	**-0.3**
	baz=74						
TTN	**Taitung**	**0.91**	**137**	eP	**Pn**	**17 09 45.1**	**-0.3**
	baz=137						
WDJ	**Dajia District**	**0.93**	**9**	eP	**Pg**	**17 09 44.5**	**+0.1**
	baz=9.0						
WDJ				eS	**Sb**	**17 09 58.3**	**+1.1**
	baz=9.0						
ECL	**Taimali**	**0.93**	**152**	⇑eP	**Pg**	**17 09 44.3**	**-0.2**
	baz=151						
ECL				eS	**Sn**	**17 09 57.9**	**-1.2**
	baz=151						
WHP	**Taichung City**	**0.95**	**27**	eP	**Pg**	**17 09 44.7**	**-0.2**
	baz=27						
WHP				eS	**Sb**	**17 09 58.6**	**+0.7**
	baz=27						
TWQ1	**Liyutan**	**0.96**	**16**	eP	**Pg**	**17 09 44.8**	**-0.2**
	baz=17						
TWQ1				eS	**Sn**	**17 09 59.5**	**-0.3**
	baz=17						
ESL	**Shilin**	**0.96**	**66**	eP	**Pg**	**17 09 44.8**	**-0.2**
	baz=66						
ESL				eS	**Sn**	**17 09 58.8**	**-1.0**
	baz=66						
VCHM	**Qimei**	**0.98**	**258**	P	**Pb**	**17 09 44.2**	**-1.5**
	baz=258						
VCHM				eS	**Sg**	**17 09 57.8**	**-0.5**
	baz=258						
WHF	**Hehuan Shan**	**1.02**	**45**	eP	**Pg**	**17 09 46.0**	**-0.2**
	baz=45						
WHF				eS	**Sb**	**17 10 00.3**	**+0.1**
	baz=45						
NSY	**Sanyi**	**1.02**	**15**	eP	**Pb**	**17 09 46.0**	**-0.4**
	baz=15						
NSY				eS	**Sg**	**17 10 00.5**	**+1.0**
	baz=15						
TDCB	**Techi**	**1.04**	**37**	eP	**Pb**	**17 09 45.7**	**-0.9**
	baz=37						
TDCB				eS	**Sg**	**17 10 00.3**	**+0.3**
	baz=37						
TWT	**Tachien**	**1.05**	**38**	eP	**Pb**	**17 09 45.9**	**-0.9**
	baz=37						
TWT				eS	**Sg**	**17 10 00.4**	**+0.1**
	baz=37						
SCZT	**Fangliau**	**1.05**	**173**	⇑eP	**Pb**	**17 09 46.7**	**-0.2**
	baz=172						
SCZT				eS	**Sn**	**17 10 02.0**	**-0.1**
	baz=172						
TWP	**Hsiaoliuchiu**	**1.08**	**186**	eP	**Pn**	**17 09 47.5**	**-0.2**
	baz=185						
TWP				eS	**Sn**	**17 10 06.2**	**+3.6**
	baz=185						
ETM	**Tongmen**	**1.08**	**60**	eP	**Pb**	**17 09 46.8**	**-0.5**
	baz=60						
FUSS	**Fushou**	**1.08**	**40**	eP	**Pb**	**17 09 46.4**	**-1.1**
	baz=41						
FUSS				eS	**Sg**	**17 10 02.1**	**+0.6**
	baz=41						
EAST	**Anshuo**	**1.09**	**162**	eP	**Pb**	**17 09 47.3**	**-0.2**
	baz=161						
EAST				eS	**Sn**	**17 10 03.4**	**+0.3**
	baz=161						
TEYL	**Yanliau Villag**	**1.12**	**67**	eP	**Pg**	**17 09 48.6**	**+0.6**
	baz=65						
TEYL				eS	**Sn**	**17 10 04.4**	**+0.7**
	baz=65						
TAW	**Tawu**	**1.13**	**160**	eP	**Pn**	**17 09 48.2**	**-0.2**
	baz=160						

TAW				eS	Sn	17 10 04.3	+0.4
	baz=160						
TAWH	Dawu Township	1.14	160⇑	eP	Pb	17 09 48.1	-0.3
	baz=161						
TAWH				eS	Sn	17 10 04.7	+0.4
	baz=161						
NMLH	Miaoli	1.15	15	eP	Pb	17 09 48.0	-0.4
	baz=15						
HWA	Hwalien	1.17	62	eP	Pg	17 09 49.1	+0.1
	baz=62						
LDUT	Ludao	1.18	129	eP	Pb	17 09 48.5	-0.5
	baz=129						
LDUT				eS	Sn	17 10 06.2	+1.0
	baz=129						
ETLH	Xiulin Townshi	1.21	50	eP	Pn	17 09 48.5	-1.0
	baz=50						
ETLH				eS	Sn	17 10 07.1	+1.0
	baz=50						
TWD	Chiawan	1.22	57	eP	Pn	17 09 49.0	-0.5
	baz=58						
TWD				eS	Sg	17 10 06.0	+0.3
	baz=58						
NACB	Ninganchiao	1.27	54	eP	Pn	17 09 49.7	-0.6
	baz=54						
NACB				eS	Sb	17 10 06.8	-0.1
	baz=54						
ETL	Fush Village	1.28	55	eP	Pn	17 09 50.2	-0.4
	baz=55						
NSTT	Nanjuang	1.29	22	eP	Pn	17 09 49.9	-0.8
	baz=22						
NSTT				eS	Sn	17 10 08.3	+0.2
	baz=22						
NNSB	Datong	1.30	40	eP	Pn	17 09 50.1	-0.8
	baz=40						
NNSB				eS	Sn	17 10 08.2	-0.2
	baz=40						
NNSH	Datong	1.30	40	eP	Pn	17 09 50.1	-0.7
	baz=40						
NNS	Nan Shan	1.30	39	eP	Pn	17 09 50.4	-0.5
	baz=39						
NNS				eS	Sn	17 10 08.3	-0.2
	baz=39						
LIOB	Emei	1.31	22	eP	Pn	17 09 50.2	-0.7
	baz=22						
LIOB				eS	Sg	17 10 09.1	+0.3
	baz=22						
NFF	Wufeng Townshi	1.34	26	eP	Pn	17 09 50.9	-0.5
	baz=26						
NFF				eS	Sb	17 10 09.0	0.0
	baz=26						
HEN	Hengchun	1.43	170	eP	Pn	17 09 52.1	-0.4
	baz=170						
SMST	Manzhou Townsh	1.44	166	eP	Pn	17 09 51.9	-0.7
	baz=167						
SBCB	Hsinchu	1.44	19	eP	Pn	17 09 52.9	+0.2
	baz=19						
LATG	Datong	1.47	41	eP	Pn	17 09 53.0	-0.2
	baz=41						
LATG				eS	Sb	17 10 13.3	+0.6
	baz=41						
NSK	Sanguang	1.49	33	eP	Pn	17 09 53.2	-0.1
	baz=33						
NSK				eS	Sn	17 10 12.8	-0.1
	baz=33						
YHNB	Yeheng	1.49	33	eP	Pn	17 09 53.2	-0.2
	baz=34						
YHNB				eS	Sb	17 10 13.3	0.0
	baz=34						
TWK1	Hengchun	1.50	168	eP	Pn	17 09 53.1	-0.5
	baz=168						
TWKBT	Hengchun	1.51	168	eP	Pn	17 09 53.0	-0.6
	baz=168						
ENA	Nanau	1.53	49	eP	Pn	17 09 53.9	0.0
	baz=49						
EWUT	Wuta	1.57	49	eP	Pb	17 09 55.2	-0.4
	baz=49						
EWUT				eS	Sg	17 10 17.3	+0.4
	baz=49						
ENTT	Nioudou	1.57	39	eP	Pn	17 09 55.0	+0.5
	baz=40						
ENTT				eS	Sb	17 10 16.3	+0.7
	baz=40						
NWLT	Wulai	1.64	35	eP	Pn	17 09 55.9	+0.4
	baz=35						
NDS	Dongshan	1.66	43	eP	Pb	17 09 56.5	-0.6
	baz=43						
FUSB	Fushanzhiwuyua	1.68	37	eP	Pn	17 09 56.5	+0.5
	baz=37						
FUSB				eS	Sb	17 10 19.1	+0.4
	baz=37						
TWE	Neicheng	1.69	40	eP	Pb	17 09 57.5	-0.2
	baz=41						
LAY	Lan-yu	1.70	144	eP	Pn	17 09 55.1	-1.2
	baz=144						
LAY				eS	Sb	17 10 19.0	-0.3
	baz=144						
TWC	Suao	1.72	47	eP	Pb	17 09 59.1	+0.8
	baz=47						
TWC				eS	Sb	17 10 20.4	+0.3
	baz=47						
LYUB	Lan-yu	1.75	144	eP	Pn	17 09 54.7	-2.2
	baz=144						
TATO	Taipei	1.80	31	eP	Pn	17 09 58.5	+0.8
	baz=31						
VWUC	VWUC	1.82	329	eP	Pn	17 09 56.0	-1.9
	baz=329						
VWUC				eS	Sn	17 10 21.4	+0.4
	baz=329						
TWA	Mucha	1.85	33	eP	Pb	17 10 00.8	+0.3
	baz=33						
TIPB	Shuangxi	1.98	38	eP	Pn	17 10 00.3	+0.2
	baz=39						
TIPB				eS	Sg	17 10 30.4	+0.4
	baz=39						
YM01	YM01	1.98	30	eP	Pn	17 10 00.3	+0.1
	baz=30						
PTMZ	Houxiangcun	2.03	323	eP	Pn	17 09 59.8	-1.0
	baz=322						
PTMZ				eS	Sn	17 10 27.9	+1.7
	baz=322						
KNM	Kinmen	2.11	298	eP	Pn	17 10 02.4	+0.5
	baz=296						
KNMB	Chin-men Tao	2.17	299	eP	Pn	17 10 01.2	-1.5
	baz=299						
ZPLA	Ao Xicun	2.55	282	eP	Pn	17 10 06.5	-1.4
	baz=281						
AXDP	Jialang	2.72	303	eP	Pn	17 10 08.7	-1.6
	baz=303						
MATB	Ma-tsu	2.76	350	eP	Pn	17 10 09.4	-1.4
	baz=350						
DSXP	Dongshan	2.81	276	eP	Pn	17 10 10.8	-0.7
	baz=276						
DSXP				eS	Sn	17 10 44.2	-1.3
	baz=276						
MHZQ	Yeshan	2.97	334	eP	Pn	17 10 12.7	-1.0
	baz=334						
IRIF	Iriomote-Funau	3.12	72	eP	Pn	17 10 16.9	+1.2
IRIF				eS	Sn	17 10 54.5	+1.5
HATJ	Hateruma jima	3.12	78	eS	Sn	17 10 54.2	+1.2
LYJJ	Jianjiangzhen	3.18	348	eP	Pn	17 10 15.9	-0.7
	baz=348						
JIJ	Ishigaki jima	3.49	74	P	Pn	17 10 21.5	+0.7
JIJ				eS	Sn	17 11 03.1	+1.0
XPSS	Dashiqiu	3.50	356	eP	Pn	17 10 19.5	-1.5
	baz=356						
JISG	Ishigakijimahi	3.69	71	P	Pn	17 10 24.2	+0.6
JISG				eS	Sn	17 11 07.4	+0.1

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*IDC **23** 17:22:10.7±3.6, 36°.05N×140°.02E, h56^{km}±30^{km}, mb3.2/3, mbtmp3.5/4, Error ellipse: s-maj=32.3km s-min=27.4km az=1.0*

*JMA **23** 17:22:11.2±0.1, 36°.1N±0°.2×139°.9E±0°.3, h43^{km}, MV3.1/38, SW IBARAKI PREF*

JMA Felt I J1 at SW IBARAKI PREF .

ISC 23 17:22:10.4±1.0**, 36°.04N**±0°.06×**139°.95E**±0°.06**, h50**^{km}±9^{km}**, n14, σ0^{s}.65**/20**, mb3.5**/3**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYT	Yasato	0.27	47	P	Pn	17 22 19.6	+0.3
JYT				S	Sn	17 22 25.6	0.0
JAG	Ashikaga	0.56	314	i P	Pn	17 22 22.3	0.0
JAG				S	Sn	17 22 30.2	-0.7
JRY	Ryogami san	0.85	269	i P	Pn	17 22 26.1	-0.1
JRY				S	Sn	17 22 36.7	-1.0
JKT	Katashina	0.92	322	i P	Pn	17 22 27.0	-0.1
JKT				S	Sn	17 22 39.1	-0.3
JOD2	Odawara 2	1.05	222	eP	Pn	17 22 29.6	+0.8
JOD2				S	Sn	17 22 42.6	+0.2
JYN	Shimob	1.27	245	P	Pn	17 22 33.2	+1.4
BSO3	Boso 3	1.32	160	P	Pn	17 22 32.9	+0.7
JUON	Uonuma	1.37	329	P	Pn	17 22 33.5	+0.3
JFY	Yanaizu	1.38	352	i P	Pn	17 22 34.0	+0.7
MJAR	Matsushiro Arr	1.49	290	P	Pn	17 22 35.1	+0.3
	12nm,0.3s,baz=97,slow=9.8,SNR=31						
MJAR				S	Sn	17 22 54.2	+1.0
	7.8nm,0.4s,baz=26,slow=14,SNR=3.5						
ASAJ	Asahikawa	8.32	13	P	Pn	17 24 08.6	+0.2
	3.4nm,1.0s,baz=165,slow=17,SNR=0.7						
ZALV	Zalesovo Beam	41.72	313	P	P	17 29 54.3	+0.1
	0.5nm,0.2s,baz=98,slow=10,SNR=2.3						
	0.5nm,0.2s						
MKAR	Makanchi Array	43.66	303	P	P	17 30 10.0	-0.1
	0.1nm,0.5s,baz=86,slow=6.5,SNR=1.5						
	0.1nm,0.5s						
WRA	Warramunga Arr	55.93	186	P	P	17 31 42.9	-0.5
	0.5nm,1.0s,baz=0.1,slow=7.4,SNR=2.5						
	0.5nm,1.0s						

WEL 23 17:32:02.9±0.3**, 38°S**±2°×**17°8E**±°**, h25**^{km}±3^{km}**, M3.1**/29**, ML3.5**/29**, MLv3.1**/29**, Error ellipse: s-maj=0.0km s-min=0.0km az=125.7, confirmed, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TKGZ	Te Karaka	0.08	124	P	Pb	17 32 08.6	+1.1
TKGZ				S	Sb	17 32 13.6	+3.0
MWZ	Matawai	0.19	288	P	Pn	17 32 09.5	-0.7
MWZ				S	Sb	17 32 14.7	+2.3
TWGZ	Tauwhareparae	0.28	39	P	Pn	17 32 10.9	-0.4
TWGZ				S	Sn	17 32 17.8	+1.0
RAGZ	Rawiri	0.29	249	P	Pn	17 32 10.9	-0.7
RAGZ				S	Sn	17 32 17.5	+0.3
RIGZ	Rimuhau	0.31	180	P	Pn	17 32 11.2	-0.7
RIGZ				S	Sn	17 32 18.5	+0.8
CNGZ	Carnagh Statio	0.36	105	P	Pn	17 32 12.0	-0.6
RUGZ	Raukumara Rang	0.43	351	P	Pb	17 32 12.4	+0.3
RUGZ				S	Sn	17 32 20.0	-0.7
PUZ	Puketiti	0.51	51	P	Pb	17 32 13.7	+0.5
PUZ				S	Sn	17 32 23.0	+0.6
SNGZ	Shannon Statio	0.51	220	P	Pn	17 32 14.0	-0.6
SNGZ				S	Sn	17 32 22.9	+0.3
URZ	Urewera	0.53	284	P	Pb	17 32 14.1	+0.6
PKGZ	Pakihiroa	0.56	26	P	Pn	17 32 14.9	-0.4
PKGZ				S	Sn	17 32 25.1	+1.2
KNZ	Kokohu	0.63	186	P	Pb	17 32 14.9	-0.4
HAZ	Te Kaha	0.64	2	P	Pb	17 32 15.5	+0.2
RTZ	Ruatahuna	0.65	250	P	Pn	17 32 16.2	-0.4
RAHZ	Arahi	0.74	225	P	Pb	17 32 17.2	0.0
MHGZ	Mahia Peninsul	0.77	171	P	Pb	17 32 16.9	-0.7
WMGZ	Waiomatatini S	0.77	42	P	Pb	17 32 17.5	-0.1
MUGZ	Murupara	0.78	263	P	Pn	17 32 18.3	0.0
WHHZ	Waihua	0.80	211	P	Pb	17 32 18.0	-0.1
WHRZ	Whale Island	0.82	311	P	Pn	17 32 19.5	+0.7
EDRZ	Edgecumbe	0.85	289	P	Pn	17 32 19.5	+0.2
MTHZ	Maungataniwha	0.85	237	P	Pb	17 32 19.2	+0.1
MXZ	Matakaoa Point	0.94	28	P	Pn	17 32 20.2	-0.2
MARZ	Manawahe	0.95	295	P	Pn	17 32 20.4	-0.1
WIZ	White Island	0.97	332	P	Pn	17 32 20.7	-0.3
RRRZ	Republican Roa	0.98	273	P	Pb	17 32 21.2	0.0
TARZ	Mount Tarawera	1.00	279	P	Pb	17 32 21.6	0.0
NMHZ	Naumai	1.02	226	P	Pn	17 32 21.4	-0.3
MKRZ	Makatiti	1.05	284	P	Pb	17 32 23.3	+0.9
ARHZ	Aropaoanui	1.05	214	P	Pn	17 32 21.4	-0.6
PRRZ	Plateau Road	1.08	264	P	Pn	17 32 22.5	+0.1
ALRZ	Allen Road	1.12	261	P	Pn	17 32 23.2	+0.2
OMRZ	Omania	1.13	284	P	Pn	17 32 22.9	-0.2
MRHZ	Matea Rd	1.14	247	P	Pn	17 32 23.3	+0.1
HRRZ	Handcock Road	1.16	270	P	Pn	17 32 23.9	+0.3
HSRZ	Hossack Road	1.19	273	P	Pb	17 32 24.5	-0.3
KARZ	Kaharoa	1.25	287	P	Pn	17 32 24.6	-0.2
BKZ	Black Stump Fm	1.26	232	P	Pn	17 32 24.5	-0.3
WPRZ	Whakapapatarin	1.26	264	P	Pn	17 32 25.1	+0.2
MCHZ	McNeill Hill	1.34	218	P	Pn	17 32 25.2	-0.8
TGRZ	Tauranga	1.36	299	P	Pn	17 32 26.0	-0.2
CKHZ	Cape Kidnapper	1.37	203	P	Pn	17 32 24.6	-1.8
KWHZ	Kaweka Forest	1.47	225	P	Pn	17 32 26.8	-0.9
KUTZ	Kaahu Road	1.52	266	P	Pn	17 32 28.6	+0.1
KAHZ	Kahuranaki	1.56	206	P	Pn	17 32 27.2	-1.9
RITZ	Rihia Road	1.60	248	P	Pn	17 32 29.6	+0.1
RATZ	Rangitukua	1.63	252	P	Pn	17 32 30.1	+0.1
BHHZ	Black Hill Sta	1.72	230	P	Pn	17 32 30.4	-0.8
KATZ	Kakaramea	1.72	250	P	Pn	17 32 31.4	+0.1
TLZ	Tolley Road	1.75	271	P	Pn	17 32 31.3	-0.3
TMVZ	Te Maari	1.76	245	P	Pn	17 32 31.7	-0.2
ETVZ	East Tongariro	1.77	245	P	Pn	17 32 31.7	-0.3
NTVZ	North Tongarir	1.78	246	P	Pn	17 32 31.9	-0.2
PXZ	Pawanui	1.78	203	P	Pn	17 32 29.1	-2.9
KRVZ	Karewarewa	1.80	246	P	Pn	17 32 32.2	-0.2
OTVZ	Oturere	1.81	244	P	Pn	17 32 32.4	-0.2
NNVZ	North Ngauruho	1.83	246	P	Pn	17 32 32.8	0.0
SNVZ	South Ngauruho	1.84	244	P	Pn	17 32 32.7	-0.3
WTVZ	West Tongariro	1.84	246	P	Pn	17 32 33.0	0.0
NGZ	Ngauruhoe	1.86	244	P	Pn	17 32 33.2	-0.1
MOVZ	Moawhango	1.86	236	P	Pn	17 32 33.2	0.0
TOZ	Tahuroa Road	1.90	290	P	Pn	17 32 33.0	-0.6
FWVZ	Far West T-bar	1.93	243	P	Pn	17 32 34.1	-0.1
WNVZ	Wahianoa	1.93	240	P	Pn	17 32 33.9	-0.3
PNHZ	Pukenui	1.94	218	P	Pn	17 32 32.2	-2.1
TRVZ	Turoa	1.95	242	P	Pn	17 32 34.4	-0.1
WPHZ	Waipukurau	1.96	211	P	Pn	17 32 32.3	-2.2
PRHZ	Porangahau	2.06	205	P	Pn	17 32 32.9	-3.0
TSZ	Takapari Road	2.17	219	P	Pn	17 32 35.0	-2.5
DVHZ	Dannevirke	2.27	212	P	Pn	17 32 35.9	-2.8
HIZ	Hauiti	2.28	266	P	Pn	17 32 39.6	+0.7
VRZ	Vera Road	2.46	252	P	Pn	17 32 41.7	+0.4
POWZ	Post Office Ro	2.52	217	P	Pn	17 32 39.8	-2.5
WAZ	Wanganui	2.55	237	P	Pn	17 32 43.2	+0.6
PRWZ	Pori Road	2.56	212	P	Pn	17 32 40.2	-2.6
BFZ	Birch Farm	2.57	207	P	Pn	17 32 39.2	-3.6
TIWZ	Tintock	2.79	211	P	Pn	17 32 43.2	-2.6
GRZ	Great Barrier	2.82	319	P	Pn	17 32 45.6	-0.7
MRZ	Mangatainoka R	2.82	216	P	Pn	17 32 42.8	-3.6
LREZ	Lake Rotokare	2.83	247	P	Pn	17 32 47.3	+0.9
PREZ	Palmer Road	2.97	250	P	Pn	17 32 50.3	+1.9
NEZ	North Egmont	2.99	252	P	Pn	17 32 50.3	+1.5
HOWZ	Holdsworth Sta	3.04	214	P	Pn	17 32 45.4	-4.0
PKE	Pukeiti	3.06	254	P	Pn	17 32 50.8	+1.3
KHEZ	Kahui Hut	3.06	252	P	Pn	17 32 51.1	+1.4
TMWZ	Te Maipa	3.07	207	P	Pn	17 32 45.8	-4.0
OGWZ	Otaki Gorge	3.14	219	P	Pn	17 32 47.0	-3.7
MTW	Mount Morrison	3.26	212	P	Pn	17 32 48.5	-3.9
KIW	Kapiti Island	3.31	221	P	Pn	17 32 49.4	-3.5
WCZ	Waipu Caves	3.67	311	P	Pn	17 32 57.9	-0.1
DUWZ	D’Urville Isla	3.82	230	P	Pn	17 32 57.3	-2.8
TCW	Tory Channel	3.89	223	P	Pn	17 32 57.4	-3.6
NNZ	Nelson	4.40	229	P	Pn	17 33 04.7	-3.3
TKNZ	Takaka Hill	4.54	233	P	Pn	17 33 06.6	-3.5
MRNZ	Matariki Terra	4.88	230	P	Pn	17 33 11.3	-3.4
ARCZ	Arundel	7.45	220	P	Pn	17 33 46.0	-3.9

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*HEL **23** 18:00:59.7±0.2, 66°.97N×20°.53E, h0^{km}, ML1.8, Explosion*

*UPP **23** 18:01:00.1±0.1, 67°.04N×20°.95E, h0^{km}, ML1.9, Suspected explosion*

*IDC **23** 18:01:01.9±1.2, 67°.02N×21°.29E, h0^{km}, mbtmp2.7/3, ML1.8/3, Error ellipse: s-maj=23.3km s-min=9.8km az=102.0*

*BER **23** 18:01:03.4±1.8, 66°.96N×21°.22E, h0^{km}, ML1.5, Suspected explosion*

ISC 23 18:01:00.3±0.7**, 67°.03N**±0°.02×**20°.84E**±0°.02**, h0**^{km}**, n45, σ1^{s}.25**/62**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	Dundret	0.14	310	P	Pg	18 01 03.5	+0.5
DUNU				S	Sg	18 01 06.8	+2.1
MASU	Masugnsbyn	0.62	46	P	Pg	18 01 11.1	-1.0
ERTU	Ertsjaerv	0.72	131	P	Pg	18 01 13.1	-0.9
ERTU				S	Sg	18 01 23.2	-0.1
ERTU	Ertsjaerv	0.72	131	eP	Pg	18 01 13.4	-0.6
ERTU				eSB	Sb	18 01 25.1	-0.9
HARU	Harads	0.88	176	P	Pg	18 01 16.6	-0.3
PAJU	Pajala	0.89	89	P	Pg	18 01 16.2	-1.1
PAJU	Pajala	0.89	89	eP	Pg	18 01 16.0	-1.3
PAJU				eS	Sb	18 01 30.8	-0.3
RATU	Laukkuluspa	0.93	329	P	Pg	18 01 17.4	-0.7
KUA	Kurravaara	0.95	348	P	Pg	18 01 17.9	-0.5
SALU	Saltoluokta	0.97	292	P	Pb	18 01 19.4	-0.6
NIKU	Nikkaluokta	1.09	321	P	Pg	18 01 20.5	-0.7
LANU	Lannavaara	1.11	23	eP	Pg	18 01 20.2	-1.3
LANU				eS	Sb	18 01 37.8	+0.3
KALU	Kalix	1.55	138	P	Pn	18 01 28.9	-0.1
KALU	Kalix	1.55	138	ePN	Pn	18 01 28.7	-0.3
KALU				eSN	Sg	18 01 51.5	+1.4
SJUU	Sjulsmark	1.56	168	P	Pb	18 01 29.2	-0.8
TOF	Tornio	1.69	123	eP	Pn	18 01 30.8	-0.2
TOF				eSN	Sg	18 01 54.8	+0.3
TOF				MSG		18 01 55.9	
	comp=Z,6.8nm,0.2s						
HEF	Hetta	1.75	37	eP	Pn	18 01 31.7	-0.1
HEF				eS	Sn	18 01 54.5	-0.4
HEF	Hetta	1.75	37	eP	Pn	18 01 31.5	-0.4
HEF				eS	Sn	18 01 54.4	-0.4
HEF				MSG		18 02 00.8	
	comp=Z,5.6nm,0.2s						
LILU	Lilltraesk	1.80	193	P	Pb	18 01 32.8	-1.2
KIF	Kilpisjarvi	1.98	360	eP	Pb	18 01 36.8	-0.3
KIF				eS	Sg	18 02 03.2	-0.6
KIF	Kilpisjarvi	1.98	360	eP	Pb	18 01 36.5	-0.6
KIF				eS	Sg	18 02 03.2	-0.6
RNF	Rovaniemi	2.09	99	eP	Pn	18 01 37.2	+0.7
RNF				eS	Sb	18 02 05.3	-0.2
KTK1	Kautokeino	2.18	23	eP	Pb	18 01 40.0	-0.6
KTK1				IAML		18 02 10.9	
	comp=Z,4.7nm,0.2s						
FAUS	Fauske	2.19	282	eP	Pg	18 01 40.6	-1.6
FAUS				IAML		18 02 15.4	
	comp=Z,6.9nm,0.2s						
STEI	Steigen	2.34	295	eP	Pb	18 01 42.0	-1.1
STEI				IAML		18 02 22.8	
	comp=Z,3.0nm,0.1s						
JETT	Jettan, Norway	2.54	357	eP	Pb	18 01 46.5	-0.2
JETT				IAML		18 02 23.3	
	comp=Z,6.0nm,0.2s						
MOR8	Moi Rana	2.70	254	eP	Pb	18 01 46.7	-2.7
TRO	Tromso	2.71	346	eP	Pb	18 01 48.8	-0.7
OBF4	Vikkela, Lumij	2.83	140	ePG	Pb	18 01 50.5	-1.1
OUL	Oulu	2.84	131	ePB	Pb	18 01 50.2	-1.6
OUL				eSG	Sb	18 02 28.5	+1.4
OBF0	Syolatti, Pyha	2.91	150	ePG	Pb	18 01 52.0	-0.9
ARA0	ARCESS Array S	3.06	32	eP	Pn	18 01 50.5	+0.8
ARCES	ARCESS Array B	3.06	32	Pn	Pn	18 01 49.8	0.0
	comp=Z,0.1nm,0.3s,baz=213,slow=15,SNR=20						
ARCES				Sn	Sn	18 02 28.6	+1.7
	comp=Z,0.2nm,0.3s,baz=213,slow=22,SNR=7.1						
	comp=Z,1.2nm,0.6s						
KONS	Konsvik	3.11	264	eP	Pb	18 01 53.5	-2.7
OUF	Merijarvi	3.12	147	eSG	Sb	18 02 36.8	+1.6
UMAU	Umeaa	3.16	181	ePB	Pn	18 01 52.9	+1.7
UMAU				e		18 02 42.0	
STOK	Stokkvaagen	3.19	261	eP	Pb	18 01 55.0	-2.7
VRF	Varrio	3.46	74	eP	Pn	18 01 56.7	+1.3
VRF				eS	Sn	18 02 40.0	+3.0
MSF	Maaselka	3.48	105	eP	Pn	18 01 56.4	+0.9
MSF				eSB	Sb	18 02 45.5	+0.1
OLKF	Oulanka, Finla	3.48	98	eP	Pn	18 01 57.2	+1.6
KEV	Kevo	3.56	37	eP	Pn	18 01 57.4	+0.7
KU6	Riekki	3.76	101	eP	Pn	18 02 01.1	+1.7
HUSU	Husum	3.77	191	ePB	Pn	18 02 01.9	+2.4
FINES	FINESS Array B	6.06	155	Pn	Pn	18 02 32.1	+1.2
	comp=Z,0.1nm,0.3s,baz=346,slow=14,SNR=7.4						
FINES				Sn	Sn	18 03 39.7	-1.1
	comp=Z,0.1nm,0.3s,baz=344,slow=24,SNR=5.2						
	comp=Z,1.6nm,0.9s						
NOA	NORSAR Array B	7.34	220	Pn	Pn	18 02 50.3	+1.7
	baz=40,slow=17,SNR=1.6						
	comp=Z,0.4nm,0.8s						

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*IDC **23** 18:01:10.7±7.5, 24°.42S×177°.87W, h205^{km}±41^{km}, mb3.3/4, mbtmp4.0/5, MS3.2/1, Error ellipse: s-maj=86.1km s-min=30.7km az=48.0*

*NEIC **23** 18:01:22.5±0.6, 24°.4S±0°.1×178°.0W±0°.1, h319^{km}±11^{km}, mb4.5/28, Error ellipse: s-maj=19.9km s-min=10.0km az=145.0*

ISC 23 18:01:18.2±0.7**, 24°.83S**±0°.08×**177°.68W**±0°.09**, h300**^{km}**, n47, σ1^{s}.50**/44**, mb4.3**/7**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	4.41	183	Pn	Pn	18 02 38.3	+9.4
MSVF	Nonsavu	8.11	330	Pn	Pn	18 03 15.6	+2.4
NIUE	Niue	9.19	53	Pn	P	18 03 30.7	-0.3
NIUE				Sn	S	18 05 11.2	+0.3
AFI	Afiamalu	12.20	28	P	P	18 04 04.8	+0.2
MXZ	Matakaoa Point	13.15	194	P	Pn	18 04 12.3	-2.1
URZ	Urewera	14.10	197	P	P	18 04 24.6	-0.6
	5.3nm,0.3s,baz=342,slow=4.8,SNR=13						
URZ				S	S	18 06 52.1	-8.4
	2.7nm,0.3s,baz=258,slow=16,SNR=1.6						
OUENC	Ouen Island, N	14.39	276	P	P	18 04 26.5	-2.1
RTZ	Ruatahuna	14.47	197		P	18 04 27.4	-2.0
LIFNC	LIFOU	14.48	283	P	P	18 04 21.8	-7.8
DZM	Mont Dzumac	14.83	277	P	Pn	18 04 36.1	+1.3
	3.6nm,0.6s,baz=50,slow=20,SNR=2.0						
HIZ	Hauiti	15.04	203		Pn	18 04 36.7	-0.3
HIZ				IAmb	IAmb	18 04 53.7	
	comp=Z,39nm,1.2s						
BFZ	Birch Farm	16.61	196	P	P	18 04 53.2	+0.6
TCW	Tory Channel	17.66	200	P	P	18 05 02.4	-1.6
PLWZ	Palliser	17.70	198	P	P	18 05 05.0	+0.4
QRZ	Quartz Range	17.93	205		P	18 05 07.5	+0.6
QRZ				IAmb	IAmb	18 05 19.2	
	comp=Z,27nm,1.3s						
NNZ	Nelson	17.96	202	P	P	18 05 06.6	-0.7
NNZ				IAmb	IAmb	18 05 23.9	
	comp=Z,33nm,1.2s						
THZ	Tophouse	18.61	203	P	P	18 05 13.7	-0.6
THZ				IAmb	IAmb	18 05 24.7	
	comp=Z,22nm,1.5s						
KHZ	Kahutara	18.98	200	P	P	18 05 19.5	+1.4
KHZ				IAmb	IAmb	18 05 41.2	
	comp=Z,43nm,1.4s						
DSZ	Denniston Nort	19.00	205	P	P	18 05 17.7	-0.7
DSZ				IAmb	IAmb	18 05 30.4	
	comp=Z,50nm,1.5s						
GVZ	Greta Valley S	19.64	201	P	P	18 05 25.6	+0.4
LTZ	Lake Taylor	19.73	202	P	P	18 05 26.9	+0.8
LTZ				IAmb	IAmb	18 05 53.3	
	comp=Z,25nm,1.5s						
INZ	Inchbonnie	19.98	204	P	P	18 05 29.6	+0.9
INZ				IAmb	IAmb	18 05 40.8	
	comp=Z,25nm,1.4s						
OXZ	Oxford	20.29	202	P	P	18 05 32.4	+0.4
OXZ				IAmb	IAmb	18 05 36.4	
	comp=Z,16nm,1.0s						
MQZ	McQueen’s Vall	20.43	200	P	P	18 05 34.4	+1.1
RPZ	Rata Peaks	20.98	203	P	P	18 05 41.4	+2.7
	comp=Z,5.2nm,0.8s,baz=237,slow=23,SNR=1.6						
	comp=Z,5.2nm,0.8s						
RPZ	Rata Peaks	20.98	203	P	P	18 05 39.0	+0.3
RPZ				IAmb	IAmb	18 06 14.3	
	comp=Z,18nm,1.1s						
FOZ	Fox Glacier	21.29	206	P	P	18 05 41.8	+0.2
FOZ				IAmb	IAmb	18 06 20.3	
	comp=Z,22nm,1.2s						
LBZ	Lake Benmore	21.87	204	P	P	18 05 46.6	-0.3
LBZ				IAmb	IAmb	18 05 52.1	
	comp=Z,44nm,1.4s						
WKZ	Wanaka	22.69	205	P	P	18 05 55.9	+1.6
MLZ	Mavora Lakes	23.49	206	P	P	18 06 03.5	+1.9
MLZ				IAmb	IAmb	18 06 14.1	
	comp=Z,38nm,1.4s						
DCZ	Deep Cove	23.96	207	P	P	18 06 07.8	+2.0
DCZ				IAmb	IAmb	18 06 49.4	
	comp=Z,53nm,1.5s						
WHZ	Wether Hill Ro	23.99	205	P	P	18 06 07.5	+1.4
PPT	Papeete	27.14	80	LR	LR	18 18 17.2	
	comp=Z,44nm,18.0s,baz=58,slow=38						
STKA	Stephens Creek	36.36	249	P	P	18 07 55.7	+1.3
	comp=Z,1.1nm,0.5s,baz=90,slow=12,SNR=4.9						
	comp=Z,1.1nm,0.5s						
BBOO	Buckleboo	41.04	248	P	P	18 08 34.3	+1.2
JOHN	Johnston Islan	42.07	12	P	P	18 08 39.6	-1.7
AS31	Alice Springs	43.98	261	P	P	18 08 56.8	+0.1
ASAR	Alice Springs	43.98	261	P	P	18 08 56.9	+0.1
	comp=Z,0.3nm,0.3s,baz=93,slow=7.3,SNR=25						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,0.3nm,0.3s						
ASAR	Alice Springs	43.98	261	P	P	18 08 56.5	-0.2
WB2	Warramunga Arr	44.45	266	P	P	18 08 59.9	-0.5
WRAB	Tennant Creek	44.45	266	P	P	18 08 60.0	-0.5
WB0	Warramunga Arr	44.46	267	P	P	18 09 01.3	+0.9
WRA	Warramunga Arr	44.46	266	P	P	18 09 00.3	-0.2
	comp=Z,0.5nm,0.4s,baz=106,slow=8.0,SNR=16						
WRA				ScP	ScP	18 14 12.7	+11
	comp=Z,0.6nm,0.8s,baz=100,slow=3.4,SNR=3.6						
	comp=Z,0.5nm,0.4s						
WRA	Warramunga Arr	44.46	266	P	P	18 08 59.8	-0.7
GUMO	Guam	52.85	312	P	P	18 10 00.5	-3.4
QSPA	South Pole Qui	65.26	180	P	P	18 11 33.7	+5.6
TORD	Torodi Ar. Bea	168.36	177	PKPab	PKPab	18 22 04.9	+4.7
	comp=Z,0.5nm,0.3s,baz=180,slow=3.4,SNR=1.7						

IDC ***23*** *18:11:26.6±0.5, 13.°64N×144.°07E, h225^{km}±8^{km}, mb3.2/12, mbtmp3.7/12, Error ellipse: s-maj=30.7km s-min=12.3km az=88.0*

ISC 23 18:11:26.7±1.1, **13.°7N**±0.°1×**144.°7E**±0.°4, **h250^{km}, n14, σ1^{s}.25**/12, **mb3.4**/12, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.20	115	P	Pn	18 11 58.4	-0.6
	128nm,0.3s,baz=350,slow=23,SNR=88						
GUMO				S	S	18 12 22.5	-1.8
	221nm,0.3s,baz=53,slow=23,SNR=23						
JNU	Nakatsue	23.09	329	P	P	18 16 09.9	-0.8
	8.6nm,0.9s,baz=237,slow=2.8,SNR=5.8						
	8.6nm,0.9s						
MJAR	Matsushiro Arr	23.50	347	P	P	18 16 15.1	+0.7
	1.2nm,0.5s,baz=164,slow=8.0,SNR=7.1						
	1.2nm,0.5s						
KSRS	Korea Array	28.00	331	P	P	18 16 54.1	-0.5
	0.8nm,0.6s,baz=134,slow=9.7,SNR=5.5						
	0.8nm,0.6s						
WRA	Warramunga Arr	34.92	197	P	P	18 17 55.3	+0.1
	0.6nm,0.7s,baz=6.3,slow=9.6,SNR=13						
WRA				PcP	PcP	18 20 24.5	+2.6
	0.3nm,0.9s,baz=7.2,slow=2.9,SNR=1.5						
	0.6nm,0.7s						
KLR	Kul'dur	37.02	346	P	P	18 18 13.7	+1.1
	2.7nm,0.9s,baz=143,slow=7.4,SNR=8.4						
	2.7nm,0.9s						
ASAR	Alice Springs	38.58	196	P	P	18 18 25.9	0.0
	0.2nm,0.5s,baz=8.4,slow=10,SNR=4.8						
	0.2nm,0.5s						
CMAR	Chiang Mai Arr	44.12	282	P	P	18 19 08.9	-2.0
	0.5nm,0.7s,baz=83,slow=6.5,SNR=5.2						
	0.5nm,0.7s						
SONM	Songino Array	46.56	325	P	P	18 19 29.4	-0.3
	0.9nm,0.7s,baz=141,slow=7.1,SNR=5.4						
	0.9nm,0.7s						
SEY	Seymchan	49.49	5	P	P	18 19 55.1	+3.4
	1.3nm,0.9s,baz=153,slow=14,SNR=1.5						
	1.3nm,0.9s						
MKAR	Makanchi Array	61.30	316	P	P	18 21 16.1	+0.1
	0.7nm,0.5s,baz=88,slow=9.1,SNR=11						
	0.7nm,0.5s						
ZALV	Zalesovo Beam	61.45	324	P	P	18 21 16.5	-0.2
	0.6nm,0.5s,baz=104,slow=6.3,SNR=3.5						
	0.6nm,0.5s						
YKA	Yellowknife Ar	82.87	27	P	P	18 23 27.1	+4.0
	0.2nm,0.5s,baz=277,slow=4.8,SNR=4.9						
	0.2nm,0.5s						
TORD	Torodi Ar. Bea	134.67	304	PKP	PKiKP	18 30 17.2	-0.8
	0.6nm,0.3s,baz=129,slow=2.0,SNR=2.3						

IDC 23 18:24:52.7±46.0, **15.°24S**×**171.°16W, h0^{km}, mb4.0**/3, **mbtmp4.0**/3, **Error ellipse: s-maj=903.1km s-min=196.9km az=79.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	45.99	240	P	P	18 33 18.7	+0.7
	0.9nm,0.5s,baz=86,slow=9.4,SNR=3.2						
	0.9nm,0.5s						
WRA	Warramunga Arr	51.98	256	P	P	18 34 03.5	-0.7
	0.5nm,0.6s,baz=96,slow=6.9,SNR=13						
	0.5nm,0.6s						
ASAR	Alice Springs	52.21	252	P	P	18 34 05.9	0.0
	2.4nm,0.4s,baz=88,slow=8.1,SNR=70						
	2.4nm,0.4s						

IDC ***23*** *18:31:18.9±3.0, 9.°54S×120.°16E, h0^{km}, mb3.2/1, mbtmp3.6/3, ML3.7/2, Error ellipse: s-maj=266.6km s-min=30.7km az=51.0*

DJA ***23*** *18:31:19.5±0.3, 10°S±3°×12°0E±°, h10^{km}, M3.9/11, mb4.0/5, MLv3.8/11, MwMwp5.8/1, Mwp5.9/1*

ISC 23 18:31:18.6±0.9, **9.°76S**±0.°07×**119.°63E**±0.°05, **h10^{km}, n16, σ2^{s}.27**/17, **Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BASI	Baing, Sumba	1.04	116	P	Pg	18 31 38.7	+0.1
BASI				S	Sg	18 31 52.8	+0.6
PLAI	Plampang	2.05	297	P	Pn	18 31 51.8	-1.4
PLAI				S	Sn	18 32 14.8	-4.0
MMRI	Maumere	2.81	67	P	Pn	18 32 03.6	0.0
TWSI	Taliwang, Sumb	2.90	290	P	Pn	18 32 04.4	-0.4
BSSI	Bau Bau, Buton	3.69	13	P	Pn	18 32 15.6	-0.2
BSSI				S	Sn	18 32 57.4	-2.0
BKSI	Bulukumba	4.43	6	P	Pn	18 32 26.9	+0.9
BKSI				S	Sn	18 33 15.3	-2.4
IGBI	Denpasar	4.52	282	P	Pn	18 32 29.6	+2.4
SOEI	Soe	4.57	90	P	Pn	18 32 30.3	+2.3
GMJI	Gumukmas	6.29	283	P	Pn	18 32 54.3	+2.9
	13nm,1.3s,53μm0.1nm						
PWJI	Pagerwojo	7.92	282	P	Pn	18 33 17.5	+3.6
	19nm,2.3s,0.2nm						
WRA	Warramunga Arr	17.44	127	P	Pn	18 35 19.8	-2.4
	0.3nm,0.3s,baz=298,slow=13,SNR=6.9						
WRA				S	Sn	18 38 19.0	-18
	0.3nm,0.9s,baz=304,slow=24,SNR=1.2						
	1.0nm,0.3s						
ASAR	Alice Springs	19.42	137	P	P	18 35 45.2	0.0
	0.3nm,0.3s,baz=324,slow=13,SNR=16						
ASAR				S	Sn	18 39 09.7	-15
	0.2nm,0.6s,baz=306,slow=22,SNR=1.5						
	1.0nm,0.6s						
H08S2	Diego Garcia H	46.61	269	T	T	19 29 42.9	
	baz=98,slow=74						
H08S3	Diego Garcia H	46.62	269	T	T	19 29 44.0	
	baz=98,slow=74						
H08S1	Diego Carcia H	46.63	269	T	T	19 29 44.4	
	baz=98						
MKAR	Makanchi Array	65.41	333	P	P	18 42 03.8	+2.3
	0.2nm,0.6s,baz=141,slow=6.5,SNR=2.5						
	0.2nm,0.6s						

SKHL ***23*** *18:45:59.9±0.2, 44.°70N×148.°50E, h105^{km}±4^{km}, mb4.5/5, msha5.3/5*

JMA ***23*** *18:46:00.0±0.5, 44°N±3°×14°8E±°, h121^{km}, MV3.8/23, SE OFF ETOROFU*

ISC 23 18:45:57.4±3.8, **44.°56N**±0.°08×**148.°6E**±0.°2, **h114^{km}**±18^{km}, **n17, σ1^{s}.25**/30, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.87	321	*i* P	Pn	18 46 17.9	+0.4
KUR				AMB	AMB	18 46 18.1	
	210nm,0.2s						
KUR				*i* S	Sn	18 46 31.5	-1.3
KUR				A	A	18 46 36.1	
	220nm,0.3s						
KUR				A	A	18 46 36.1	
	180nm,0.3s						
SHO	Shikotan	1.47	243	*e*P	Pn	18 46 25.1	+1.1
SHO				AMB	AMB	18 46 26.7	
	30nm,0.2s						
SHO				*e*S	Sn	18 46 44.0	-0.3
SHO				A	A	18 46 46.4	
	480nm,0.3s						
SHO				A	A	18 46 46.4	
	450nm,0.3s						
YUK	Yuzh-Kuril'sk	2.06	256	*e*P	Pn	18 46 32.6	+1.3
YUK				AMB	AMB	18 46 33.6	
	120nm,0.2s						
YUK				*e*S	Sn	18 46 57.2	0.0
YUK				A	A	18 46 59.4	
	360nm,0.2s						
YUK				A	A	18 46 59.4	
	280nm,0.2s						
NEM2	Nemuro 2	2.41	241	P	Pn	18 46 36.6	+0.9
NEM2				*e*S	Sn	18 47 03.9	-1.2
NMR	Nemuro--Hokkai	2.41	241	*e*P	Pn	18 46 36.7	+0.9
NMR				*e*S	Sn	18 47 04.3	-0.9
JRA	Rausu	2.60	257	*e*P	Pn	18 46 39.2	+1.0
JNSB	Nemuroshibetsu	2.73	255	*e*P	Pn	18 46 41.3	+1.4
JNSB				*e*S	Sn	18 47 13.9	+1.3
JKHN	Kushirohamanak	2.92	241	*e*P	Pn	18 46 43.3	+0.9
JKHN				*e*S	Sn	18 47 15.7	-1.3
JNK	Nakash	2.99	252	*e*P	Pn	18 46 44.3	+1.0
JNK				*e*S	Sn	18 47 17.8	-0.8
AKK	Akkeshi	3.15	242	*e*P	Pn	18 46 46.3	+0.8
AKK				*e*S	Sn	18 47 21.9	-0.6
JAK	Akkeshi	3.25	243	*e*P	Pn	18 46 47.4	+0.6
JAK				*e*S	Sn	18 47 23.2	-1.7
JTKR	Abashiri--Toko	3.45	262	*e*P	Pn	18 46 49.8	+0.5
JAR	Ashorobuto	3.74	252	*e*P	Pn	18 46 54.7	+1.5
JAR				*e*S	Sn	18 47 36.9	+0.4
JKK2	Kamakawa 2	4.29	263	*e*P	Pn	18 47 01.6	+0.9
JCH	Churui	4.30	245	*e*P	Pn	18 47 01.1	+0.4
JCH				*e*S	Sn	18 47 46.6	-3.3
YSS	Yuzh-Sakhalins	4.76	302	*e*P	Pn	18 47 08.2	+1.2
YSS				*e*S	Sn	18 47 59.4	-1.7
YSS				A	A	18 48 06.2	
	10.0nm,0.4s						
YSS				A	A	18 48 06.2	
	10.0nm,0.4s						
JNBK	Urakawa-nobuka	4.85	244	*e*P	Pn	18 47 08.1	-0.2

NNC ***23*** *18:53:51.6±0.2, 43.°22N×78.°29E, h0^{km}, mb3.7, mpv3.9, Error ellipse: s-maj=2.8km s-min=1.3km az=0.0*

KRNET ***23*** *18:53:51.9±0.1, 43.°19N×78.°28E, h20^{km}, mb3.5*

SOME ***23*** *18:53:52.5, 43.°20N×78.°25E, h10^{km}*

KNET ***23*** *18:53:54.0±0.5, 43.°06N×78.°08E, h0^{km}, ml2.8, Error ellipse: s-maj=4.3km s-min=3.3km az=148.0*

ISC 23 18:53:52.7±0.8, **43.°20N**±0.°02×**78.°25E**±0.°01, **h8^{km}**±7^{km}, **n83, σ1^{s}.13**/160, **23C-22D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZHN	Zhinishke	0.14	104	P	Pg	18 53 55.4	-0.3
	3μm,0.1s						
ZHN				S	Sg	18 53 57.6	-0.2
	4μm,0.2s						
ZHN	Zhinishke	0.14	104	*e*P	Pg	18 53 55.4	-0.3
	baz=0.0						
ZHN				*e*S	Sg	18 53 57.6	-0.2
	baz=0.0						
ZHN	Zhinishke	0.14	104	*e*P	Pg	18 53 55.4	-0.3
	3μm,0.1s						
ZHN				*e*S	Sg	18 53 57.6	-0.2
	4μm,0.2s						
SATY	Saty	0.18	142	P	Pg	18 53 56.2	-0.2
	748nm,0.1s						
SATY				S	Sg	18 53 59.1	+0.1
	7μm,0.1s						
SATY	Saty	0.18	142	*e*P	Pg	18 53 56.2	-0.2
	baz=45						
SATY				*e*S	Sg	18 53 59.1	+0.1
	baz=45						
SATY	Saty	0.18	142	*e*P	Pg	18 53 56.2	-0.2
	748nm,0.1s						
SATY				*e*S	Sg	18 53 59.1	+0.1
	7μm,0.1s						
KURS	Kuram	0.29	348	P	Pg	18 53 58.5	0.0
	86nm,0.1s						
KURS				S	Sg	18 54 02.8	+0.4
	150nm,0.3s						
KURS	Kuram	0.29	348	*e*P	Pg	18 53 58.5	0.0
	baz=45						
KURS				*e*S	Sg	18 54 02.8	+0.4
	baz=45						
KURS	Kuram	0.29	348	*e*P	Pg	18 53 58.5	0.0
	86nm,0.1s						
KURS				*e*S	Sg	18 54 02.8	+0.4
	150nm,0.3s						
KPKS	Kokpek	0.41	50	P	Pg	18 54 00.1	-0.7
	188nm,0.1s						
KPKS				S	Sg	18 54 05.7	-0.5
	827nm,0.3s						
KPKS	Kokpek	0.41	50	*e*P	Pg	18 54 00.1	-0.7
	baz=46						
KPKS				*e*S	Sg	18 54 05.7	-0.5
	baz=46						
KPKS	Kokpek	0.41	50	*e*P	Pg	18 54 00.1	-0.7
	188nm,0.1s						
KPKS				*e*S	Sg	18 54 05.7	-0.5
	827nm,0.3s						
UZB	Uzynbulak	0.57	95	P	Pg	18 54 02.5	-1.2
	292nm,0.1s						
UZB				S	Sg	18 54 09.7	-1.4
	685nm,0.1s						
UZB	Uzynbulak	0.57	95	*e*P	Pg	18 54 02.5	-1.2
	baz=94						
UZB				*e*S	Sg	18 54 09.7	-1.4
	baz=94						
UZB	Uzynbulak	0.57	95	*e*P	Pg	18 54 02.5	-1.2
	292nm,0.1s						
UZB				*e*S	Sg	18 54 09.7	-1.4
	685nm,0.1s						
ANVS	Anan'yevo	0.60	226	⇓*e*P	Pg	18 54 03.6	-0.7
	baz=29						
ANVS				⇓*e*S	Sg	18 54 12.1	-0.1
	baz=29						
PRZ	Przheval'sk	0.73	171	⇓*e*P	Pg	18 54 05.2	-1.5
	baz=73						
PRZ				⇓*e*S	Sg	18 54 14.7	-1.5
	baz=73						
KOTS	Kotyrbulak	0.83	273	P	Pg	18 54 08.4	-0.4
	103nm,0.2s						
KOTS				S	Sg	18 54 20.0	+0.4
	116nm,0.3s						
KOTS	Kotyrbulak	0.83	273	*e*P	Pg	18 54 08.4	-0.4
	baz=73						
KOTS				*e*S	Sg	18 54 20.1	+0.4
	baz=73						
KOTS	Kotyrbulak	0.83	273	*e*P	Pg	18 54 08.4	-0.4
	103nm,0.2s						
KOTS				*e*S	Sg	18 54 20.0	+0.4
	116nm,0.3s						
SHLS	Shalkode	0.89	92	P	Pn	18 54 14.1	+2.5
	24nm,0.2s						
SHLS				S	Sn	18 54 29.7	+4.8
	80nm,0.2s						
SHLS	Shalkode	0.89	92	*e*P	Pn	18 54 14.1	+2.5
	baz=91						
SHLS				*e*S	Sn	18 54 29.6	+4.8
	baz=91						
SHLS	Shalkode	0.89	92	*e*P	Pn	18 54 14.1	+2.5
	24nm,0.2s						
SHLS				*e*S	Sn	18 54 29.6	+4.8
	80nm,0.2s						
BLB	Baldybastay	0.91	10	P	Pg	18 54 09.3	-0.9
	294nm,0.1s						
BLB				S	Sg	18 54 21.5	-0.6
	148nm,0.2s						
PDGK	Podgornoye	0.91	82	P	Pg	18 54 08.5	-1.8
	22nm,0.2s						
PDGK				S	Sg	18 54 20.2	-1.9
	55nm,0.2s						
PDGK	Podgornoye	0.91	82	⇑P	Pg	18 54 08.5	-1.8
	9.0nm,0.3s						
PDGK				⇓S	Sg	18 54 20.0	-2.1
	80nm,0.6s						
KNDC	Almaty	0.94	271	⇑P	Pg	18 54 10.3	-0.5
	16nm,0.2s						
KNDC				⇓S	Sg	18 54 23.7	+0.7
	25nm,0.3s						
TNSS	Tian-Shan	0.97	261	P	Pg	18 54 10.6	-0.8
	24nm,0.2s						
TNSS				S	Sg	18 54 23.7	-0.3
	80nm,0.2s						
TNSS	Tian-Shan	0.97	261	*e*P	Pg	18 54 10.6	-0.8
	baz=62						
TNSS				*e*S	Sg	18 54 23.7	-0.3
	baz=62						
TNSS	Tian-Shan	0.97	261	*e*P	Pg	18 54 10.6	-0.8
	24nm,0.2s						
TNSS				*e*S	Sg	18 54 23.7	-0.3
	80nm,0.2s						
AAA	Alma-Ata	0.98	271	P	Pg	18 54 11.4	-0.1
	103nm,0.2s						
AAA				S	Sb	18 54 25.1	0.0
	110nm,0.3s						
AAA	Alma-Ata	0.98	271	*e*P	Pg	18 54 11.4	-0.1
	103nm,0.2s						
AAA				*e*S	Sb	18 54 25.1	0.0
	110nm,0.3s						
ARXS	Arharly	1.06	343	P	Pg	18 54 12.0	-1.0
ARXS				S	Sg	18 54 26.2	-0.5
ARXS	Arharly	1.06	343	*e*P	Pg	18 54 12.0	-1.0
ARXS				*e*S	Sg	18 54 26.2	-0.5
CHKK	Chushkaly	1.13	306	P	Pb	18 54 13.3	-1.2
	8.9nm,0.1s						
CHKK				S	Sb	18 54 28.5	-0.9
	134nm,0.3s						
CHKK	Chushkaly	1.13	306	*e*P	Pb	18 54 13.3	-1.2
	baz=6.0						
CHKK				*e*S	Sb	18 54 28.5	-0.9
	baz=6.0						
CHKK	Chushkaly	1.13	306	*e*P	Pb	18 54 13.3	-1.2
	8.9nm,0.1s						
CHKK				*e*S	Sb	18 54 28.5	-0.9
	134nm,0.3s						
IZV	Izvestkoviy	1.21	263	P	Pn	18 54 15.0	-1.2
	11nm,0.2s						
IZV				S	Sb	18 54 31.6	-0.3
	84nm,0.2s						
IZV	Izvestkoviy	1.21	263	*e*P	Pn	18 54 15.0	-1.2
	baz=63						
IZV				*e*S	Sb	18 54 31.6	-0.3
	baz=63						
IZV	Izvestkoviy	1.21	263	*e*P	Pn	18 54 15.0	-1.2
	11nm,0.2s						
IZV				*e*S	Sb	18 54 31.6	-0.3
	84nm,0.2s						
KTBS	Karatobe	1.25	295	P	Pn	18 54 15.8	-0.8
	43nm,0.2s						
KTBS				S	Sb	18 54 32.7	-0.3
	160nm,0.3s						
KTBS	Karatobe	1.25	295	*e*P	Pn	18 54 15.8	-0.8
	baz=95						
KTBS				*e*S	Sb	18 54 32.6	-0.3
	baz=95						
KTBS	Karatobe	1.25	295	*e*P	Pn	18 54 15.8	-0.8
	43nm,0.2s						
KTBS				*e*S	Sb	18 54 32.6	-0.3
	160nm,0.3s						
KDJ	Kajisay	1.33	217	⇓*e*P	Pn	18 54 16.3	-1.5
	baz=17						
KDJ				⇓*i*S	Sb	18 54 33.3	-2.1
	baz=17						
MTBS	Maitube	1.34	268	P	Pn	18 54 17.1	-0.7
	45nm,0.2s						
MTBS				S	Sb	18 54 34.9	-0.5
	58nm,0.2s						
MTBS	Maitube	1.34	268	*e*P	Pn	18 54 17.1	-0.7
	baz=68						
MTBS				*e*S	Sb	18 54 34.9	-0.5
	baz=68						
MTBS	Maitube	1.34	268	*e*P	Pn	18 54 17.1	-0.7
	45nm,0.2s						
MTBS				*e*S	Sb	18 54 34.9	-0.5
	58nm,0.2s						
TARG	Taragay, Kyrgy	1.51	193	⇓*e*P	Pn	18 54 19.5	-1.0
	baz=94						
TARG				⇓*e*S	Sn	18 54 39.6	-0.9
	baz=94						
KUU	Kurty	1.55	297	P	Pn	18 54 20.8	+0.1
	30nm,0.2s						
KUU				S	Sn	18 54 41.2	+0.1
	115nm,0.2s						
KUU	Kurty	1.55	297	*e*P	Pn	18 54 20.8	+0.1
	baz=97						
KUU				*e*S	Sn	18 54 41.2	+0.1
	baz=97						
KUU	Kurty	1.55	297	*e*P	Pn	18 54 20.8	+0.1
	30nm,0.2s						
KUU				*e*S	Sn	18 54 41.2	+0.1
	115nm,0.2s						
DJR	Jarkent	1.59	44	P	Pn	18 54 20.6	-0.7
	14nm,0.3s						
DJR				S	Sn	18 54 40.9	-1.2
	57nm,0.4s						
DJR	Jarkent	1.59	44	*e*P	Pn	18 54 20.6	-0.7
	14nm,0.3s						
DJR				*e*S	Sn	18 54 40.9	-1.2
	57nm,0.4s						
KST	Kastek	1.68	265	P	Pb	18 54 23.5	-0.5
	13nm,0.2s						
KST				S	Sb	18 54 45.7	+0.3
	32nm,0.3s						
KST	Kastek	1.68	265	*e*P	Pb	18 54 23.6	-0.5
	baz=66						
KST				*e*S	Sb	18 54 45.8	+0.3
	baz=66						
KST	Kastek	1.68	265	*e*P	Pb	18 54 23.6	-0.5
	13nm,0.2s						
KST				*e*S	Sb	18 54 45.7	+0.3
	32nm,0.3s						
ULHL	Ulahol	1.76	238	⇑P	Pb	18 54 24.7	-0.8
	8.3nm,0.1s,SNR=22						
ULHL				⇓S	Sb	18 54 47.6	-0.3
	55nm,0.3s						
ULHL	Ulahol	1.76	238	⇓*e*P	Pb	18 54 24.5	-0.9
	baz=39						
ULHL				⇓*e*S	Sb	18 54 47.9	+0.1
	baz=39						
TDK	Taldyqorghan	1.80	3	P	Pb	18 54 25.2	-0.8
	40nm,0.3s						
TDK				S	Sb	18 54 48.7	-0.1
	184nm,0.5s						
TDK	Taldyqorghan	1.80	3	*e*P	Pb	18 54 25.2	-0.8
	40nm,0.3s						
TDK				*e*S	Sb	18 54 48.7	-0.1
	184nm,0.5s						
DGS	Degeres	1.81	272	P	Pn	18 54 25.1	+0.7
	33nm,0.2s						
DGS				S	Sb	18 54 49.1	-0.1
	55nm,0.4s						
DGS	Degeres	1.81	272	*e*P	Pn	18 54 25.1	+0.7
	baz=73						
DGS				*e*S	Sb	18 54 49.1	-0.1
	baz=73						
DGS	Degeres	1.81	272	*e*P	Pn	18 54 25.1	+0.7
	33nm,0.2s						
DGS				*e*S	Sb	18 54 49.1	-0.1
	55nm,0.4s						
BOOM	Boomskoye usch	1.84	248	⇓*i*P	Pn	18 54 25.4	+0.5
	baz=49						
BOOM				⇓*i*S	Sn	18 54 49.2	+0.7
	baz=49						
TKM2	Tokmak 2	1.97	263	⇓P	Pb	18 54 28.4	-0.5
	21nm,0.2s,SNR=44						
TKM2				⇑S	Sg	18 54 55.6	-0.2
	114nm,0.2s						
TKM2	Tokmak 2	1.97	263	⇑*e*P	Pn	18 54 27.3	+0.7
	baz=63						
TKM2				⇑*e*S	Sb	18 54 52.8	-0.9
	baz=63						
NRN	Naryn	2.43	224	⇑*e*P	Pn	18 54 33.8	+0.7
	baz=25						
NRN				⇑*e*S	Sn	18 55 04.0	+0.8
	baz=25						
KBK	Karagaybulak	2.49	258	⇓P	Pb	18 54 36.8	-1.0
	16nm,0.1s,SNR=24						
KBK				⇓S	Sb	18 55 10.3	+1.7
	60nm,0.4s						
KBK	Karagaybulak	2.49	258	⇑*e*P	Pn	18 54 34.5	+0.8
	baz=59						
KBK				⇑*e*S	Sn	18 55 05.0	+0.6
	baz=59						
CHMS	Chumysh	2.57	267	⇑P	Pb	18 54 37.9	-1.3
	4.8nm,0.2s,SNR=9.1						
CHMS				⇑S	Sb	18 55 12.0	+1.1
	28nm,0.2s						
CHMS	Chumysh	2.57	267	⇑*e*P	Pn	18 54 35.7	+0.9
	baz=67						
CHMS				⇑*e*S	Sn	18 55 07.1	+0.8
	baz=67						
SGDS	Sogindy	2.66	277	Pg	Pb	18 54 40.6	0.0
	3.3nm,0.2s						
SGDS				Lg	Lg	18 55 15.5	
	21nm,0.4s						
FRU1	Bishkek	2.69	263	⇓*e*P	Pn	18 54 37.3	+1.0
	baz=63						
FRU1				⇓*e*S	Sn	18 55 10.0	+0.9
	baz=63						
AAK	Ala-Archa	2.82	260	⇓*e*P	Pn	18 54 39.1	+0.9
	baz=60						
AAK				⇓*e*S	Sn	18 55 13.0	+0.5
	baz=60						

UCH	**Uchtor**	**2.92**	**252**	⇑*e*P	**Pn**	**18 54 40.5**	**+0.5**
	baz=52						
UCH				⇑*e*S	**Sn**	**18 55 15.6**	**+0.1**
	baz=52						
ARLS	**Aral**	**3.20**	**247**	⇑*e*P	**Pn**	**18 54 44.3**	**+0.8**
	baz=47						
ARLS				⇑*e*S	**Sn**	**18 55 22.0**	**+0.1**
	baz=47						
EKS2	**Erkin-Say**	**3.33**	**262**	⇑*e*P	**Pn**	**18 54 46.2**	**+0.9**
	baz=62						
EKS2				⇑*e*S	**Sn**	**18 55 25.5**	**+0.4**
	baz=62						
AML	**Almayashu**	**3.53**	**254**	⇑*e*P	**Pn**	**18 54 48.9**	**+0.7**
	baz=54						
AML				⇑*e*S	**Sn**	**18 55 30.3**	**0.0**
	baz=54						
BTLS	**Baital**	**3.54**	**303**	Pg	**Pb**	**18 54 56.8**	**+1.1**
	3.2nm,0.3s						
BTLS				Lg	Lg	18 55 42.4	
	5.7nm,0.3s						
BTLS	**Baital**	**3.54**	**303**	*e*Pg	**Pb**	**18 54 56.8**	**+1.1**
	3.2nm,0.3s						
BTLS				*e*Lg	Lg	18 55 42.4	
	5.7nm,0.3s						
MRKS	**Merke**	**3.72**	**265**	Pg	**Pb**	**18 54 59.7**	**+1.0**
	1.1nm,0.2s						
MRKS				Lg	Lg	18 55 47.9	
	12nm,0.3s						
MRKS	**Merke**	**3.72**	**265**	*e*Pg	**Pb**	**18 54 59.7**	**+1.0**
	1.1nm,0.2s						
MRKS				*e*Lg	Lg	18 55 47.9	
	12nm,0.3s						
KK31	**Karatay Array**	**5.66**	**272**	⇑Pg	**Pb**	**18 55 35.9**	**+4.0**
	0.8nm,0.6s,baz=80,slow=16,SNR=8.5						
KK31				Lg	Lg	18 56 51.0	
	0.9nm,0.3s,baz=82,slow=28,SNR=7.5						

IDC 23 19:12:46.4±2.4**,5°.98S**×**154°.76E,h169**^{km}±22^{km}**,mb3.2**/3**, mbtmp3.7**/5**,MS3.2**/2**,Error ellipse: s-maj=36.8km s-min=23.2km az=45.0,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.19**	**301**	P	Pn	19 13 37.4	+0.5
	14nm,0.3s,baz=188,slow=0.8,SNR=14						
KRVT				S	Sn	19 14 16.4	+0.2
	24nm,0.3s,baz=165,slow=22,SNR=3.5						
DZM	**Mont Dzumac**	**19.58**	**146**	P	P	19 17 01.4	-0.4
	3.1nm,0.4s,baz=254,slow=9.2,SNR=7.2						
WRA	**Warramunga Arr**	**24.22**	**233**	P	P	19 17 48.2	+0.4
	1.2nm,0.5s,baz=57,slow=10.0,SNR=34						
	1.2nm,0.5s						
ASAR	**Alice Springs**	**26.68**	**227**	P	P	19 18 09.6	-0.5
	0.3nm,0.4s,baz=58,slow=8.9,SNR=5.3						
	0.3nm,0.4s						
KAPI	**Kappang**	**34.86**	**270**	LR	LR	19 35 29.0	
	comp=Z,18nm,19.6s,baz=242,slow=39						
JOW	**Kunigami**	**41.49**	**323**	LR	LR	19 35 58.5	
	comp=Z,53nm,18.9s,baz=111,slow=34						
MKAR	**Makanchi Array**	**82.49**	**319**	P	P	19 24 50.4	+0.1
	0.3nm,0.8s,baz=97,slow=5.4,SNR=3.0						
	0.3nm,0.8s						

VAO ***23*** *19:32:07.5±1.6,24°.05S×70°.20W,h10*^{km}*,mb4.6*

SJA ***23*** *19:32:24.3±1.4,23°.53S×68°.81W,h85*^{km}*,ML4.0,MW3.9, Hypocentre not reviewed by the ISC*

IDC ***23*** *19:32:26.9±0.8,23°.53S×69°.05W,h96*^{km}*±6*^{km}*,mb3.7/3, mbtmp3.9/7,MS2.8/1,Error ellipse: s-maj=27.5km s-min=13.6km az=90.0*

NEIC ***23*** *19:32:26.8±1.7,23°.49S±0°.05×69°.29W±0°.07, h127*^{km}*±12*^{km}*,Error ellipse: s-maj=9.2km s-min=7.9km az=81.0*

GUC ***23*** *19:32:27.6±0.9,23°.50S×69°.12W,h105*^{km}*±5*^{km}*,ML4.2*

ISC 23 19:32:26.2±0.6**,23°.55S**±0°.04×**69°.02W**±0°.06**,h98**^{km}±5^{km}**, n92,**σ1^{s}**42**/109**,mb4.1**/4**,4C-2D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**0.54**	**309**		**Pn**	**19 32 43.1**	**+0.8**
PB15	**IPOC Station P**	**0.54**	**309**	⇑*i*P	**Pn**	**19 32 43.9**	**+1.5**
PB15				*e*S	**Sn**	**19 32 55.6**	**+1.2**
PB15	**IPOC Station P**	**0.54**	**309**	*e*P		19 32 43.7	
PB15				*e*S		19 32 56.0	
LVC	**Limon Verde**	**0.94**	**6**	P	**Pn**	**19 32 46.9**	**+0.6**
	596nm,0.3s,baz=184,slow=11,SNR=2604						
LVC				S	**Sn**	**19 33 01.8**	**+0.5**
	baz=135,slow=19						
LVC				LR	LR	19 33 17.6	
	comp=Z,296nm,19.8s,baz=212,slow=55						
LVC	**Limon Verde**	**0.94**	**6**		**Pn**	**19 32 47.1**	**+0.9**
LVC	**Limon Verde**	**0.94**	**6**	*e*P	**Pn**	**19 32 47.2**	**+0.9**
LVC				*e*S	**Sn**	**19 33 02.0**	**+0.7**
LVC	**Limon Verde**	**0.94**	**6**	*e*P		19 32 41.6	
LVC				*e*P		19 32 46.8	
LVC				*e*S		19 33 03.2	
LVC				IAML		19 33 04.6	
	comp=Z,2µm,0.1s						
PB06	**IPOC Station P**	**0.99**	**329**	*e*P		19 32 47.0	
PB06				IAML		19 33 06.1	
	comp=Z,5µm,0.4s						
PB10	**IPOC Station P**	**1.41**	**271**		**Pn**	**19 32 52.6**	**+1.3**
PB10	**IPOC Station P**	**1.41**	**271**	⇑*i*P	**Pn**	**19 32 52.8**	**+1.5**
PB10	**IPOC Station P**	**1.41**	**271**	*e*P		19 32 52.0	
PB10				*e*S		19 33 14.2	
PB10				IAML		19 33 15.0	
	comp=Z,718nm,0.6s						
PB04	**IPOC Station P**	**1.60**	**319**	Pn	**Pn**	**19 32 54.3**	**+0.6**
PB04	**IPOC Station P**	**1.60**	**319**	⇑*i*P	**Pn**	**19 32 54.6**	**+0.8**
PB04				*e*S	**Sn**	**19 33 14.0**	**-0.7**
PB04				IAML		19 33 17.6	
	comp=N,4µm,0.2s						
PB04	**IPOC Station P**	**1.60**	**319**	*e*P		19 32 54.0	
PB04				*e*S		19 33 14.8	
PB04				IAML		19 33 19.1	
	comp=Z,2µm,0.1s						
PB03	**IPOC Station P**	**1.65**	**335**		**Pn**	**19 32 54.9**	**+0.5**
PB03	**IPOC Station P**	**1.65**	**335**	⇓*i*P	**Pn**	**19 32 55.4**	**+1.1**
PB03				*e*S	**Sn**	**19 33 14.7**	**-0.9**
PB03				IAML		19 33 17.2	
	comp=N,4µm,0.4s						
PB03	**IPOC Station P**	**1.65**	**335**	*e*P		19 32 55.4	
PB03				*e*S		19 33 16.3	
PB03				IAML		19 33 19.4	
	comp=Z,4µm,0.2s						
PB14	**IPOC Station P**	**1.66**	**230**		**Pn**	**19 32 56.3**	**+1.7**
PB14	**IPOC Station P**	**1.66**	**230**	*e*P	**Pn**	**19 32 56.4**	**+1.7**
PB14				*e*S	**Sn**	**19 33 17.9**	**+1.7**
PB14	**IPOC Station P**	**1.66**	**230**	*e*P		19 32 56.0	
PB14				IAML		19 33 20.6	
	comp=Z,434nm,0.3s						
GO02	**Mina Guanaco**	**1.69**	**198**		**Pn**	**19 32 57.4**	**+2.4**
GO02	**Mina Guanaco**	**1.69**	**198**	⇑*i*P	**Pn**	**19 32 57.4**	**+2.4**
GO02				*e*S	**Sn**	**19 33 19.7**	**+2.9**
GO02				IAML		19 33 21.7	
	comp=N,2µm,0.3s						
GO02	**Mina Guanaco**	**1.69**	**198**	*e*P		19 32 57.4	
GO02				*e*S		19 33 20.4	
GO02				IAML		19 33 21.6	
	comp=Z,1µm,0.4s						
PB09	**IPOC Station P**	**1.76**	**353**		**Pn**	**19 32 57.5**	**+1.7**
PB09	**IPOC Station P**	**1.76**	**353**	⇓*i*P	**Pn**	**19 32 57.6**	**+1.8**
PB09				*e*S	**Sn**	**19 33 19.7**	**+1.4**
PB09	**IPOC Station P**	**1.76**	**353**	*e*P		19 32 51.9	
PB09				*e*S		19 33 20.4	
PB09				IAML		19 33 21.1	
	comp=Z,2µm,0.2s						
PB07	**IPOC Station P**	**1.99**	**336**	Pn	**Pn**	**19 32 58.7**	**0.0**
PB07	**IPOC Station P**	**1.99**	**336**	*e*P	**Pn**	**19 32 59.5**	**+0.8**
PB07				*e*S	**Sn**	**19 33 23.7**	**+0.2**
PB07				IAML		19 33 28.6	
	comp=E,2µm,0.4s						
PB07	**IPOC Station P**	**1.99**	**336**	*e*P		19 32 59.3	
PB07				*e*S		19 33 21.1	
PB07				IAML		19 33 25.9	
	comp=Z,1µm,0.3s						
PB02	**IPOC Station P**	**2.37**	**340**		**Pn**	**19 33 04.3**	**+0.7**
PB02	**IPOC Station P**	**2.37**	**340**	*e*P	**Pn**	**19 33 04.3**	**+0.7**
PB02				*e*S	**Sn**	**19 33 32.2**	**-0.1**
PB02				IAML		19 33 38.9	
	comp=N,2µm,0.3s						
PB02	**IPOC Station P**	**2.37**	**340**	*e*P		19 33 04.4	
PB02				IAML		19 33 39.6	
	comp=Z,2µm,0.4s						
PB01	**IPOC Station P**	**2.54**	**350**		**Pn**	**19 33 06.2**	**+0.3**
PB01	**IPOC Station P**	**2.54**	**350**	*i* P	**Pn**	**19 33 06.4**	**+0.6**
PB01				*e*S	**Sn**	**19 33 35.7**	**-0.5**
PB01				IAML		19 33 38.0	
	comp=E,1µm,0.2s						
PB01	**IPOC Station P**	**2.54**	**350**	*e*P		19 33 06.7	
PB01				IAML		19 33 38.4	
	comp=Z,852nm,0.2s						
AC01	**Pan de Azucar**	**2.96**	**209**		**Pn**	**19 33 12.0**	**+0.7**
AC01	**Pan de Azucar**	**2.96**	**209**	*i* P	**Pn**	**19 33 12.1**	**+0.7**
AC01				*e*S	**Sn**	**19 33 46.0**	**-0.1**
AC01				IAML		19 34 09.1	
	comp=E,505nm,0.6s						
AC01	**Pan de Azucar**	**2.96**	**209**	*e*P		19 33 12.2	
AC01				*e*S		19 33 41.6	
AC01				IAML		19 33 48.3	
	comp=Z,186nm,0.6s						
TA01	**Diego Aracena**	**3.16**	**340**		**Pn**	**19 33 13.9**	**-0.1**
TA01	**Diego Aracena**	**3.16**	**340**	*e*P	**Pn**	**19 33 13.3**	**-0.8**
TA01	**Diego Aracena**	**3.16**	**340**	*e*P		19 33 14.0	
TA01				IAML		19 34 06.9	
	comp=Z,245nm,0.3s						
AC02	**Maricunga**	**3.27**	**182**	Pn	**Pn**	**19 33 18.7**	**+2.8**
PB08	**IPOC Station P**	**3.40**	**358**		**Pn**	**19 33 18.2**	**+0.6**
PB08	**IPOC Station P**	**3.40**	**358**	*e*P	**Pn**	**19 33 18.2**	**+0.6**
PB08				IAML		19 34 22.8	
	comp=N,288nm,0.3s						
PB08	**IPOC Station P**	**3.40**	**358**	*e*P		19 33 17.0	
PB08				*e*S		19 33 48.1	
PB08				IAML		19 33 49.5	
	comp=Z,160nm,0.3s						
SLA	**San Lorenzo**	**3.41**	**111**	*e*P		19 33 16.8	
TA02	**Huaiquique**	**3.43**	**342**		**Pn**	**19 33 16.4**	**-1.2**
TA02	**Huaiquique**	**3.43**	**342**	*e*P		19 33 17.1	
TA02				IAML		19 34 08.3	
	comp=Z,224nm,0.1s						
YJA	**Yavi**	**3.51**	**68**	*e*P		19 33 17.4	
PB11	**IPOC Station P**	**3.82**	**351**	*e*P		19 33 22.0	
PB11				IAML		19 34 46.8	
	comp=Z,170nm,1.1s						
PB11	**IPOC Station P**	**3.82**	**351**		**Pn**	**19 33 22.7**	**-0.3**
PB11	**IPOC Station P**	**3.82**	**351**	*e*P	**Pn**	**19 33 22.3**	**-0.7**
GO01	**Chusmiza**	**3.87**	**358**		**Pn**	**19 33 24.4**	**+0.4**
GO01	**Chusmiza**	**3.87**	**358**	*e*P	**Pn**	**19 33 24.5**	**+0.4**
GO01	**Chusmiza**	**3.87**	**358**	*e*P		19 33 23.0	
GO01				IAML		19 34 35.4	
	comp=Z,123nm,0.7s						
AC06	**Mina Casimiro**	**3.98**	**197**		**Pn**	**19 33 25.8**	**+0.8**
AC06	**Mina Casimiro**	**3.98**	**197**	*e*P	**Pn**	**19 33 25.5**	**+0.5**
GO03	**Copiap**	**4.17**	**195**		**Pn**	**19 33 28.6**	**+0.9**
GO03	**Copiap**	**4.17**	**195**	*e*P	**Pn**	**19 33 28.2**	**+0.5**
GO03	**Copiap**	**4.17**	**195**	*e*P		19 33 23.1	
GO03				*e*S		19 34 11.6	
GO03				IAML		19 34 42.5	
	comp=Z,130nm,0.3s						
MNMC	**Minye Minye**	**4.43**	**353**		**Pn**	**19 33 30.7**	**-0.8**
MNMC	**Minye Minye**	**4.43**	**353**	*e*P	**Pn**	**19 33 32.3**	**+0.8**
MNMCX	**Minye Minye**	**4.43**	**353**	*e*P		19 33 32.2	
MNMCX				*e*S		19 34 34.6	
MNMCX				IAML		19 34 53.7	
	comp=Z,227nm,0.4s						
AC04	**Llanos de Chal**	**4.99**	**201**	Pn	**Pn**	**19 33 38.3**	**-0.4**
AC04	**Llanos de Chal**	**4.99**	**201**	*e*P	**Pn**	**19 33 37.8**	**-0.9**
AC04	**Llanos de Chal**	**4.99**	**201**	*e*P		19 33 38.0	
AC04				*e*S		19 34 32.5	
AC04				IAML		19 35 06.4	
	comp=Z,38nm,0.7s						
PB12	**IPOC Station P**	**5.07**	**346**		**Pn**	**19 33 39.2**	**-0.6**
PB12	**IPOC Station P**	**5.07**	**346**	*e*P	**Pn**	**19 33 36.4**	**-3.5**
PB16	**IPOC Station P**	**5.21**	**355**		**Pn**	**19 33 43.6**	**+1.3**
PB16	**IPOC Station P**	**5.21**	**355**	*e*P		19 33 41.0	
PB16				IAML		19 35 18.4	
	comp=Z,36nm,0.6s						
AC05	**El Transito**	**5.38**	**192**		**Pn**	**19 33 44.8**	**+0.6**
AC05	**El Transito**	**5.38**	**192**	*e*P		19 33 44.0	
AC05				IAML		19 35 20.3	
	comp=Z,68nm,0.8s						
LCO	**Las Campanas**	**5.64**	**195**		**Pn**	**19 33 47.0**	**-0.8**
CO01	**Juntas del Tor**	**6.47**	**188**		**Pn**	**19 33 59.9**	**+0.8**
GO04	**Tololo Observa**	**6.78**	**193**		**Pn**	**19 34 02.7**	**-0.6**
LPAZ	**La Paz**	**7.28**	**7**	P	**Pn**	**19 34 10.8**	**+0.4**
	comp=Z,1.4nm,0.5s,baz=157,slow=3.3,SNR=9.3						
LPAZ	**La Paz**	**7.28**	**7**		**Pn**	**19 34 12.1**	**+1.6**
CO03	**El Pedregal**	**7.41**	**191**	Pn	**Pn**	**19 34 09.8**	**-1.9**
CO06	**Fray Jorge**	**7.47**	**198**	Pn	**Pn**	**19 34 09.7**	**-2.7**
CO02	**Combarbal**	**7.82**	**193**	Pn	**Pn**	**19 34 14.5**	**-2.8**
CFA	**Coronel Fontan**	**8.05**	**175**	P	**Pn**	**19 34 20.2**	**-0.2**
	comp=Z,5.8nm,0.3s,baz=345,slow=14,SNR=18						
CFA				S	**Sn**	**19 35 43.6**	**-6.1**
	comp=Z,2.0nm,0.4s,baz=210,slow=20,SNR=1.1						
CFA				LR	LR	19 38 03.0	
	comp=Z,66nm,19.7s,baz=108,slow=42						
ROC1	**El Roble**	**9.55**	**190**	Pn	**Pn**	**19 34 38.4**	**-2.6**
MT02	**Curacav**	**9.85**	**190**	Pn	**Pn**	**19 34 43.5**	**-1.2**
SIV	**San Ignacio**	**10.60**	**46**	P	**Pn**	**19 34 51.8**	**-3.4**
	comp=Z,4.2nm,0.4s,baz=240,slow=11,SNR=18						
SIV				S	Sn	19 36 41.3	-11
	comp=Z,2.9nm,0.5s,baz=144,slow=20,SNR=6.1						
CPUP	**Villa Florida**	**10.96**	**107**	P	**Pn**	**19 35 01.5**	**+1.6**
	comp=Z,0.9nm,0.5s,baz=306,slow=14,SNR=2.0						
PTLB	**Pontes e Lacer**	**12.31**	**51**	Pn	**Pn**	**19 35 15.2**	**-2.9**
RVDE	**Rio Verde (Bra**	**13.87**	**74**	*e*P	**P**	**19 35 41.5**	**-2.1**
PP1B	**Ponte de Pedra**	**14.50**	**69**	*e*P	**P**	**19 35 49.9**	**-0.6**
PTGB	**Pitanga**	**15.52**	**98**	*e*P	**P**	**19 36 00.9**	**-1.1**
TRQA	**Tornquist**	**15.66**	**159**		**Pn**	**19 36 01.1**	**-0.1**
TRQA				IAmb	IAmb	19 36 06.5	
	comp=Z,5.4nm,0.7s						
ITAB	**Concordia**	**15.69**	**107**	Pn	**Pn**	**19 36 01.2**	**-0.5**
ITAB				IAmb	IAmb	19 36 29.3	
	comp=Z,31nm,1.5s						
PCMB	**Pacaembu**	**16.51**	**87**	*e*P	**Pn**	**19 36 12.2**	**+0.2**
PLCA	**Paso Flores**	**17.18**	**184**	P	**P**	**19 36 20.3**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=358,slow=11,SNR=5.0						
ITRB	**Iturama**	**17.76**	**81**	*e*P	**Pn**	**19 36 27.5**	**+0.3**
FRTB	**Fartura**	**17.85**	**93**	*e*P	**Pn**	**19 36 29.0**	**+0.7**
ARAG	**Araguaiana, MT**	**17.98**	**67**	*e*P	**Pn**	**19 36 30.0**	**+0.2**
IPMB	**Ipameri, GO**	**20.22**	**78**	*e*P	**P**	**19 36 54.1**	**+0.6**
VAO	**Valinhos**	**20.26**	**93**	*e*P	**P**	**19 36 54.3**	**+0.3**
BDFB	**Brasilia**	**21.27**	**72**	P	**P**	**19 37 05.3**	**+0.4**
	comp=Z,5.8nm,0.5s,baz=258,slow=12,SNR=9.6						
	comp=Z,5.8nm,0.5s						
BDFB	**Brasilia**	**21.27**	**72**	P	**P**	**19 37 05.1**	**+0.1**
BDFB				IAmb	IAmb	19 37 06.6	
	comp=Z,9.1nm,1.0s						
BDFB	**Brasilia**	**21.27**	**72**	*e*P	**P**	**19 37 05.4**	**+0.5**
PARB	**Paraibuna**	**21.46**	**94**	*e*P	**P**	**19 37 08.1**	**+1.3**
JANB	**Januaria**	**24.77**	**75**	*e*P	**P**	**19 37 40.2**	**+1.2**
SMTB	**Santa Maria do**	**25.18**	**58**	*e*P	**P**	**19 37 44.4**	**+1.7**
PRPB	**Parauapebas**	**25.30**	**50**	*e*P	**P**	**19 37 45.1**	**+1.3**
MALB	**Monte Alegre**	**25.88**	**36**	*e*P	**P**	**19 37 49.7**	**+0.8**
NAN01	**Guarapari, ES**	**27.59**	**84**	*e*P	**P**	**19 38 05.6**	**+1.3**
GUA01	**Guaratinga, BA**	**28.26**	**81**	*e*P	**P**	**19 38 12.2**	**+1.9**
GDU01	**Guandu, BA**	**29.51**	**76**	*e*P	**P**	**19 38 22.0**	**+0.6**
SNAA	**Sanae**	**60.38**	**161**	P	**P**	**19 42 26.3**	**+1.6**
	comp=Z,3.8nm,1.0s,baz=299,slow=13,SNR=2.2						
	comp=Z,3.8nm,1.0s						
TORD	**Torodi Ar. Bea**	**78.14**	**70**	P	**P**	**19 44 15.5**	**+0.4**
	comp=Z,1.3nm,0.4s,baz=252,slow=5.2,SNR=4.8						
TORD				pP	**pP**	**19 44 42.2**	**+1.0**
	comp=Z,2.6nm,0.8s,baz=255,slow=5.4,SNR=4.9						
YKA	**Yellowknife Ar**	**93.08**	**341**	P	**P**	**19 45 27.9**	**-0.5**
	comp=Z,0.2nm,0.7s,baz=128,slow=4.9,SNR=4.6						
YKA				pP	**pP**	**19 45 53.8**	**-1.4**
	comp=Z,0.1nm,0.4s,baz=132,slow=4.6,SNR=1.9						
	comp=Z,0.2nm,0.7s						
ASAR	**Alice Springs**	**128.05**	**207**	PKP	**PKiKP**	**19 51 22.4**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=140,slow=2.1,SNR=6.5						
WRA	**Warramunga Arr**	**131.14**	**210**	PKP	**PKiKP**	**19 51 28.9**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=148,slow=1.5,SNR=9.7						
ZALV	**Zalesovo Beam**	**143.84**	**26**	PKP	**PKPdf**	**19 51 49.8**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=292,slow=3.9,SNR=3.6						
ZALV				pPKP	**pPKPdf**	**19 52 15.7**	**-1.8**
	comp=Z,0.7nm,0.7s,baz=354,slow=1.4,SNR=2.4						
MKAR	**Makanchi Array**	**147.33**	**38**	PKPbc	**PKPab**	**19 51 59.4**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=343,slow=2.9,SNR=3.5						
MKAR				pPKPbc	**pPKPdf**	**19 52 24.7**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=321,slow=2.5,SNR=9.2						
PZH	**PanZhiHua**	**171.12**	**69**	PKP	**PKPdf**	**19 52 22.8**	**-0.8**

TAP 23 19:34:16.9,23°.44N×**120°.48E,h16**^{km}±1^{km}**,ML0.9,D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHY	**Chiayi**	**0.07**	**317**	P	Pg	19 34 20.3	+0.3
	baz=321						
CHY				S	Sg	19 34 22.9	+0.8
	baz=321						
WCKO	**Fanlu**	**0.12**	**92**	P	Pb	19 34 20.8	0.0
	baz=92						
WCKO				S	Sb	19 34 24.0	+0.6
	baz=92						
CHN4	**Tsaushan**	**0.14**	**131**	*i* P	Pb	19 34 21.4	+0.1
	baz=130						
CHN4				*i* S	Sb	19 34 24.4	+0.3
	baz=130						

DJA 23 19:59:47.4±0.4**,8°S**±7°×**11°8E**±°**,h189**^{km}±5^{km}**,M3.6**/10**, mb3.6**/2**,MLv3.6**/10**,Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.62**	**213**	P	Pn	20 00 14.9	+1.1
PLAI				S	Sn	20 00 35.4	+1.1
TWSI	**Taliwang, Sumb**	**1.30**	**250**	P	Pn	20 00 18.9	+0.5
TWSI				S	Sn	20 00 43.2	+0.9
SRBI	**Singaraja**	**2.89**	**274**	P	Pn	20 00 35.7	+0.6
IGBI	**Denpasar**	**2.99**	**260**	P	Pn	20 00 36.3	0.0
BASI	**Baing, Sumba**	**3.09**	**128**	P	Pn	20 00 37.6	+0.1
BSSI	**Bau Bau, Buton**	**3.18**	**48**	P	Pn	20 00 38.8	+0.1
BKSI	**Bulukumba**	**3.56**	**34**	P	Pn	20 00 43.4	0.0
MMRI	**Maumere**	**4.09**	**95**	P	Pn	20 00 49.2	-0.7
GMJI	**Gumukmas**	**4.63**	**270**	P	Pn	20 00 54.5	-2.3
SOEI	**Soe**	**6.24**	**104**	P	Pn	20 01 17.5	-0.3
	14nm,1.2s,0.1nm						
PWJI	**Pagerwojo**	**6.26**	**272**	P	Pn	20 01 18.9	+1.0
	19nm,1.7s,0.2nm						

ROM 23 20:05:44.2±0.0**,42°.796N**±0°.002×**13°.058E**±0°.004**, h11**^{km}**,ML2.2**/41**,17C-15D,Error ellipse: s-maj=0.3km s-min=0.2km az=96.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.04**	**193**	⇑P	Pg	20 05 46.7	+0.4
T1212				S	Sg	20 05 48.1	+0.3
T1212				AML	AML		
	comp=E,8660µm,0.2s						
T1212				AML	AML		
	comp=E,8660µm,0.1s						
T1212				AML	AML		
	comp=N,7550µm,0.2s						
T1212				AML	AML		
	comp=E,8665µm,0.1s						
T1212				AML	AML		
	comp=E,8655µm,0.1s						
T1212				AML	AML		
	comp=E,8665µm,0.2s						
T1212				AML	AML		
	comp=N,7450µm,0.2s						
T1212				AML	AML		
	comp=E,8655µm,0.1s						
NRCA	**Norcia**	**0.06**	**48**	⇓P	Pg	20 05 46.7	+0.3
NRCA				S	Sg	20 05 48.2	+0.1
NRCA				AML	AML		
	comp=E,11250µm,0.1s						
NRCA				AML	AML		
	comp=N,6650µm,0.1s						
NRCA				AML	AML		
	comp=E,12050µm,0.2s						
NRCA				AML	AML		
	comp=N,7180µm,0.1s						
NRCA				AML	AML		
	comp=E,11250µm,0.2s						
T1216	**Preci, Frazion**	**0.10**	**343**	AML	AML		
	comp=E,4185µm,0.6s						
T1216				AML	AML		
	comp=E,4185µm,0.6s						
T1216				AML	AML		
	comp=E,4185µm,1.4s						
T1216				AML	AML		
	comp=N,3745µm,0.2s						
T1245	**Castelsantange**	**0.11**	**58**	⇓P	Pg	20 05 47.6	+0.4
T1245				S	Sg	20 05 49.8	+0.4
T1245				AML	AML		
	comp=E,8610µm,0.6s						
T1245				AML	AML		
	comp=N,6510µm,0.8s						
T1245				AML	AML		
	comp=N,7070µm,0.2s						
T1245				AML	AML		
	comp=N,6505µm,0.8s						
T1245				AML	AML		
	comp=E,8645µm,0.2s						
T1245				AML	AML		
	comp=E,8610µm,0.6s						
T1214	**Arquata del Tr**	**0.12**	**108**	⇓P	Pg	20 05 47.6	+0.4
T1214				S	Sg	20 05 49.8	+0.5
T1214				AML	AML		
	comp=E,3535µm,0.5s						
T1214				AML	AML		
	comp=N,4065µm,0.3s						
T1214				AML	AML		
	comp=E,3325µm,0.5s						
T1214				AML	AML		
	comp=N,4010µm,0.7s						
T1214				AML	AML		
	comp=E,3535µm,0.5s						
T1214				AML	AML		
	comp=N,4060µm,0.2s						
T1214				AML	AML		
	comp=E,3325µm,0.5s						
T1214				AML	AML		
	comp=N,4010µm,0.7s						
T1214				AML	AML		
	comp=N,4060µm,1.8s						
T1214				AML	AML		
	comp=N,4010µm,1.3s						
T1217	**Poggiodomo (PG**	**0.13**	**228**	AML	AML		
	comp=E,1960µm,0.3s						
T1217				AML	AML		
	comp=E,1955µm,0.3s						
T1217				AML	AML		
	comp=E,1700µm,0.2s						
T1217				AML	AML		
	comp=N,2530µm,0.3s						
T1217				AML	AML		
	comp=N,2345µm,0.3s						
T1217				AML	AML		
	comp=N,2350µm,0.3s						
T1217				AML	AML		
	comp=E,1700µm,0.2s						
T1217				AML	AML		
	comp=N,2525µm,0.3s						
T1218	**Civita (PG)**	**0.13**	**161**	P	Pg	20 05 47.9	+0.5
T1218				S	Sg	20 05 50.4	+0.7
T1218				AML	AML		
	comp=E,1745µm,0.3s						
T1218				AML	AML		
	comp=N,2855µm,0.4s						
T1218				AML	AML		
	comp=E,1835µm,0.3s						
T1218				AML	AML		
	comp=N,2820µm,0.5s						
T1218				AML	AML		
	comp=E,1750µm,0.3s						
T1218				AML	AML		
	comp=N,2855µm,0.4s						
T1218				AML	AML		
	comp=N,2820µm,0.4s						
T1218				AML	AML		
	comp=E,1835µm,1.7s						
T1218				AML	AML		
	comp=E,1750µm,1.7s						
T1218				AML	AML		
	comp=N,2820µm,1.6s						
T1218				AML	AML		
	comp=N,2855µm,1.6s						
MC2	**Monte Cornacci**	**0.15**	**40**	⇓P	Pg	20 05 48.2	+0.5
MC2				S	Sg	20 05 51.3	+1.0
CESI	**CESI - Serrava**	**0.24**	**332**	⇑P	Pg	20 05 49.7	+0.6
CESI				S	Sg	20 05 53.7	+1.2
CESI				AML	AML		
	comp=N,1715µm,0.3s						
CESI				AML	AML		
	comp=E,790µm,0.5s						

CESI				AML	AML		
	comp=N,1715µm,1.7s						
T1256	**Bolognola (MC)**	**0.24**	**30**	⇓P	Pg	20 05 49.7	+0.4
T1256				S	Sg	20 05 53.8	+1.1
T1256				AML	AML		
	comp=N,628µm,0.4s						
T1256				AML	AML		
	comp=N,628µm,1.6s						
T1256				AML	AML		
	comp=E,1255µm,1.0s						
T1219	**Muccia, Frazio**	**0.26**	**352**	⇓P	Pg	20 05 50.0	+0.4
T1219				S	Sg	20 05 54.3	+1.1
T1219				AML	AML		
	comp=N,678µm,0.3s						
T1219				AML	AML		
	comp=E,470µm,0.2s						
T1219				AML	AML		
	comp=N,700µm,0.3s						
T1219				AML	AML		
	comp=E,459µm,0.1s						
T1219				AML	AML		
	comp=N,678µm,0.3s						
T1219				AML	AML		
	comp=E,469µm,0.2s						
T1219				AML	AML		
	comp=N,700µm,0.3s						
T1219				AML	AML		
	comp=E,459µm,1.9s						
SMA1	**SAN MARTINO**	**0.26**	**129**	⇑P	Pg	20 05 50.0	+0.5
SMA1				S	Sb	20 05 54.6	-1.0
SMA1				AML	AML		
	comp=E,941µm,0.2s						
SMA1				AML	AML		
	comp=N,860µm,0.3s						
SMA1				AML	AML		
	comp=E,942µm,0.2s						
T1241	**Roccafluvione,**	**0.28**	**77**	⇑P	Pg	20 05 50.3	+0.4
T1241				S	Sg	20 05 54.9	+1.1
T1241				AML	AML		
	comp=E,970µm,0.4s						
T1241				AML	AML		
	comp=N,730µm,0.8s						
T1241				AML	AML		
	comp=N,662µm,0.4s						
T1241				AML	AML		
	comp=N,731µm,0.8s						
T1241				AML	AML		
	comp=N,730µm,0.8s						
T1241				AML	AML		
	comp=E,1018µm,0.4s						
T1241				AML	AML		
	comp=N,730µm,1.2s						
T1241				AML	AML		
	comp=E,968µm,0.4s						
T1211	**Morro Reatino**	**0.30**	**210**	P	Pg	20 05 50.8	+0.5
T1211				S	Sb	20 05 55.9	-0.8
T1211				AML	AML		
	comp=E,570µm,1.0s						
T1211				AML	AML		
	comp=E,565µm,0.1s						
T1211				AML	AML		
	comp=E,569µm,1.0s						
T1211				AML	AML		
	comp=E,566µm,0.1s						
T1211				AML	AML		
	comp=N,1280µm,0.3s						
T1211				AML	AML		
	comp=E,569µm,1.0s						
T1211				AML	AML		
	comp=N,1330µm,0.3s						
ARRO	**Arrone**	**0.31**	**225**	P	Pb	20 05 51.0	-0.6
ARRO				S	Sb	20 05 55.9	-0.8
ARRO				AML	AML		
	comp=N,497µm,0.6s						
ARRO				AML	AML		
	comp=N,497µm,1.4s						
ARRO				AML	AML		
	comp=E,504µm,0.2s						
RM33	**Pellescritta (**	**0.31**	**158**	⇓P	Pg	20 05 50.7	+0.3
RM33				S	Sb	20 05 55.9	-1.0
RM33				AML	AML		
	comp=E,555µm,0.2s						
RM33				AML	AML		
	comp=N,486µm,0.3s						
RM33				AML	AML		
	comp=E,582µm,0.2s						
RM33				AML	AML		
	comp=N,504µm,0.9s						
RM33				AML	AML		
	comp=N,486µm,0.3s						
RM33				AML	AML		
	comp=N,504µm,1.1s						
T1220	**Camerino, Fraz**	**0.32**	**4**	⇓P	Pg	20 05 50.9	+0.4
T1220				AML	AML		
	comp=E,2300µm,0.3s						
T1220				AML	AML		
	comp=N,1680µm,0.3s						
T1220				AML	AML		
	comp=N,1685µm,0.3s						
GUMA	**Gualdo di Mace**	**0.34**	**37**	⇓P	Pb	20 05 51.6	-0.6
GUMA				S	Sb	20 05 57.4	-0.3
GUMA				AML	AML		
	comp=E,1207µm,0.5s						
GUMA				AML	AML		
	comp=N,1295µm,0.6s						
GUMA				AML	AML		
	comp=N,1470µm,0.5s						
GUMA				AML	AML		
	comp=E,1160µm,0.3s						
GUMA				AML	AML		
	comp=N,1295µm,0.6s						
MOMA	**Monte Martano**	**0.36**	**271**	⇑P	Pg	20 05 51.9	+0.5
MOMA				AML	AML		
	comp=E,538µm,0.2s						
MOMA				AML	AML		
	comp=N,361µm,0.2s						
CAMP	**Campotosto**	**0.37**	**135**	P	Pg	20 05 51.8	+0.3
CAMP				AML	AML		
	comp=E,148µm,0.3s						
CAMP				AML	AML		
	comp=N,138µm,0.6s						
CAMP				AML	AML		
	comp=N,138µm,1.4s						
ASSB	**Assisi San Ben**	**0.38**	**310**	⇑P	Pg	20 05 52.1	+0.3
ASSB				AML	AML		
	comp=E,322µm,1.2s						
ASSB				AML	AML		
	comp=N,418µm,0.2s						
ASSB				AML	AML		
	comp=E,322µm,0.8s						
T1222	**Castel Sant'An**	**0.40**	**182**	⇑P	Pg	20 05 52.1	+0.1
T1222				AML	AML		
	comp=E,279µm,0.3s						
T1222				AML	AML		
	comp=N,368µm,0.2s						
T1222				AML	AML		
	comp=E,279µm,0.4s						
T1247	**Pizzolo (AQ)**	**0.40**	**153**	P	Pg	20 05 52.3	+0.3
T1247				AML	AML		
	comp=E,444µm,1.0s						
T1247				AML	AML		
	comp=N,428µm,1.0s						
T1247				AML	AML		
	comp=E,444µm,1.0s						
CESX	**Cesi**	**0.40**	**242**	P	Pg	20 05 52.5	+0.4
CESX				AML	AML		
	comp=N,414µm,0.4s						
CESX				AML	AML		
	comp=E,520µm,0.5s						
TERO	**Teramo**	**0.44**	**113**	⇑P	Pg	20 05 52.8	0.0
TERO				AML	AML		
	comp=E,336µm,0.4s						
TERO				AML	AML		
	comp=N,368µm,0.2s						
TERO				AML	AML		
	comp=E,388µm,0.5s						
TERO				AML	AML		
	comp=N,368µm,0.2s						
TERO				AML	AML		
	comp=N,404µm,0.2s						
SNTG	**Esanatoglia**	**0.47**	**349**	P	Pg	20 05 53.6	+0.3
SNTG				AML	AML		
	comp=E,118µm,0.5s						
SNTG				AML	AML		
	comp=N,124µm,0.2s						
SNTG				AML	AML		
	comp=E,118µm,1.5s						
OFFI	**Offida**	**0.48**	**73**	⇑P	Pb	20 05 54.8	+0.1
OFFI				AML	AML		
	comp=N,422µm,0.4s						
OFFI				AML	AML		
	comp=E,470µm,0.5s						
ATCC	**AVT- Casa Cast**	**0.49**	**322**	⇑P	Pg	20 05 54.2	+0.3
ATCC				AML	AML		
	comp=E,268µm,0.8s						
ATCC				AML	AML		
	comp=N,242µm,0.3s						
ATCC				AML	AML		
	comp=E,268µm,1.2s						
GIGS	**Gran Sasso**	**0.51**	**132**	P	Pg	20 05 54.1	-0.1
GIGS				AML	AML		
	comp=E,58µm,0.8s						
GIGS				AML	AML		
	comp=N,55µm,0.1s						
GIGS				AML	AML		
	comp=E,58µm,1.2s						
FIAM	**Fiamignano**	**0.53**	**175**	⇓P	Pg	20 05 54.9	+0.4
FIAM				S	Sb	20 06 02.9	-0.4
FIAM				AML	AML		
	comp=E,144µm,0.2s						
FIAM				AML	AML		
	comp=N,160µm,1.2s						
FIAM				AML	AML		
	comp=N,160µm,0.8s						
EL6	**Elcito**	**0.53**	**3**	⇓P	Pg	20 05 54.8	+0.2
EL6				S	Sb	20 06 03.4	0.0
EL6				AML	AML		
	comp=N,384µm,0.8s						
EL6				AML	AML		
	comp=E,350µm,1.6s						
EL6				AML	AML		
	comp=N,384µm,1.2s						
FOSV	**Fossato di Vic**	**0.54**	**337**	P	Pg	20 05 55.1	+0.3
FOSV				AML	AML		
	comp=N,124µm,1.0s						
FOSV				AML	AML		
	comp=N,124µm,1.0s						
FOSV				AML	AML		
	comp=E,86µm,0.3s						
CING	**Cingoli**	**0.59**	**10**	⇑P	Pg	20 05 55.8	+0.2
CING				AML	AML		
	comp=E,143µm,0.6s						
CING				AML	AML		
	comp=N,117µm,1.4s						
CING				AML	AML		
	comp=N,117µm,0.6s						
MURB	**Monte Urbino**	**0.61**	**320**	⇑P	Pg	20 05 56.2	+0.2
MURB				S	Sb	20 06 07.1	+1.5
MURB				AML	AML		
	comp=E,458µm,0.2s						
MURB				AML	AML		
	comp=N,422µm,0.3s						
MURB				AML	AML		
	comp=E,456µm,0.2s						
MURB				AML	AML		
	comp=N,381µm,0.3s						
MURB				AML	AML		
	comp=N,422µm,0.3s						
FAGN	**Fagnano**	**0.66**	**144**	⇑P	Pg	20 05 57.2	+0.3
FAGN				AML	AML		
	comp=E,204µm,0.4s						
FAGN				AML	AML		
	comp=N,216µm,0.4s						
ATFO	**Monte Foce - G**	**0.67**	**328**	⇓P	Pb	20 05 57.9	-0.1
ATFO				AML	AML		
	comp=N,81µm,0.4s						
ATFO				AML	AML		
	comp=E,76µm,0.9s						
VCEL	**Villa Celiera**	**0.70**	**125**	⇑P	Pg	20 05 58.1	+0.3
VCEL				AML	AML		
	comp=N,162µm,0.9s						
VCEL				AML	AML		
	comp=E,214µm,0.3s						
VCEL				AML	AML		
	comp=N,162µm,1.1s						
ARVD	**Arcevia**	**0.71**	**353**	S	Sb	20 06 09.3	+1.0
ARVD				AML	AML		
	comp=N,49µm,0.3s						
ARVD				AML	AML		
	comp=E,68µm,0.3s						
PP3	**Marolino**	**0.71**	**35**	P	Pb	20 05 59.1	+0.6
PP3				AML	AML		
	comp=N,444µm,1.3s						
PP3				AML	AML		
	comp=E,432µm,0.4s						
PP3				AML	AML		
	comp=N,436µm,0.4s						
PP3				AML	AML		
	comp=N,444µm,0.7s						
PP3				AML	AML		
	comp=E,487µm,0.4s						
ATVO	**AVT- Monte Val**	**0.76**	**321**	P	Pg	20 05 58.8	0.0
ATVO				AML	AML		
	comp=E,49µm,0.6s						
ATVO				AML	AML		
	comp=N,48µm,1.5s						
ATVO				AML	AML		
	comp=N,48µm,0.5s						
ATVO				AML	AML		
	comp=E,49µm,1.4s						
T0110	**Collepietro**	**0.78**	**137**	⇑P	Pg	20 05 58.8	-0.4
T0110				AML	AML		
	comp=E,124µm,0.4s						
T0110				AML	AML		
	comp=N,112µm,0.4s						
PIEI	**Pieia**	**0.83**	**333**	⇓P	Pb	20 06 00.5	-0.2
PIEI				AML	AML		
	comp=E,44µm,1.6s						
PIEI				AML	AML		
	comp=E,44µm,0.4s						
PIEI				AML	AML		
	comp=N,31µm,0.2s						
SACS	**San Casciano d**	**0.85**	**274**	⇑P	Pn	20 06 02.4	+0.3
CERT	**Cerreto**	**0.85**	**184**	⇑P	Pg	20 06 00.7	+0.2
CERT				AML	AML		
	comp=E,100µm,0.5s						
CERT				AML	AML		
	comp=N,57µm,0.5s						
MPAG	**Monte Paganucc**	**0.86**	**345**	⇓P	Pb	20 06 01.6	+0.4
MPAG				AML	AML		
	comp=E,134µm,0.3s						
MPAG				AML	AML		
	comp=N,82µm,0.7s						
NARO	**Abbazia di Nar**	**0.89**	**337**	P	Pg	20 06 01.3	+0.1
NARO				AML	AML		
	comp=E,30µm,0.3s						
NARO				AML	AML		
	comp=N,31µm,1.3s						
NARO				AML	AML		
	comp=N,31µm,0.7s						
INTR	**Introdacqua**	**1.00**	**141**	⇓P	Pg	20 06 02.6	-0.9
INTR				AML	AML		
	comp=E,46µm,0.6s						
INTR				AML	AML		
	comp=N,78µm,0.5s						

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*NOU **23** 20:06:30.2, 42°.71S×173°.61E, h1km, MLv3.8/11, South Island, New Zealand*

*WEL **23** 20:06:32.0±0.4, 43°S±3°×17°3E±°, h12km±3km, M3.4/24, ML3.6/24, MLv3.4/24, Error ellipse: s-maj=0.0km s-min=0.0km az=125.3, confirmed*

ISC 23 20:06:31.2±1.0**, 42°.59S**±0°.03×**173°.47E**±0°.04**, h13**km±8km**, n78, σ1§81**/82**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.18**	**17**	P	**Pg**	**20 06 36.0**	**+0.7**
KHZ	**Kahutara**	**0.18**	**17**	P	**Pg**	**20 06 36.0**	**+0.7**
KHZ				S	**Sg**	**20 06 38.5**	**+0.3**
GVZ	**Greta Valley S**	**0.49**	**220**	P	**Pn**	**20 06 44.0**	**+0.1**
GVZ				S	**Sb**	**20 06 52.3**	**+3.5**
AMCZ	**Amberley**	**0.84**	**226**	P	**Pn**	**20 06 49.6**	**+1.0**
LTZ	**Lake Taylor**	**0.90**	**257**	P	**Pg**	**20 06 49.4**	**+0.8**
LTZ				S	**Sg**	**20 07 00.3**	**-0.1**
BSWZ	**Blackbirch Sta**	**0.93**	**19**	P	**Pg**	**20 06 49.5**	**+0.5**
THZ	**Tophouse**	**0.93**	**333**	P	**Pg**	**20 06 48.3**	**-0.8**
THZ				S	**Sg**	**20 06 58.5**	**-2.7**
CMWZ	**Cape Campbell**	**1.01**	**34**	P	**Pn**	**20 06 52.9**	**+1.9**
TUWZ	**Tuamarina**	**1.22**	**17**	P	**Pb**	**20 06 54.4**	**+0.4**
TUWZ				S	**Sg**	**20 07 10.0**	**-0.3**
MQZ	**McQueen's Vall**	**1.26**	**208**	P	**Pn**	**20 06 54.9**	**+0.5**
OXZ	**Oxford**	**1.28**	**235**	P	**Pn**	**20 06 55.2**	**+0.4**
MRNZ	**Matariki Terra**	**1.30**	**336**	P	**Pn**	**20 06 55.1**	**+0.1**
MRNZ				S	**Sb**	**20 07 11.0**	**-1.1**
AKCZ	**Akaroa Harbour**	**1.34**	**197**	P	**Pg**	**20 06 56.6**	**-0.3**
NNZ	**Nelson**	**1.38**	**357**	P	**Pn**	**20 06 56.5**	**+0.5**
RACZ	**Rakaia**	**1.49**	**220**	P	**Pn**	**20 06 58.1**	**+0.4**
DSZ	**Denniston Nort**	**1.50**	**304**	P	**Pn**	**20 06 58.0**	**+0.2**
INZ	**Inchbonnie**	**1.50**	**264**	P	**Pn**	**20 06 58.3**	**+0.5**
TCW	**Tory Channel**	**1.51**	**24**	P	**Pn**	**20 06 58.2**	**+0.3**
SNZO	**South Karori**	**1.58**	**36**	P	**Pn**	**20 06 59.5**	**+0.7**
TKNZ	**Takaka Hill**	**1.60**	**346**	P	**Pn**	**20 06 59.9**	**+0.8**
PLWZ	**Palliser**	**1.68**	**53**	P	**Pn**	**20 07 00.1**	**-0.1**
MHCZ	**Mount Hutt**	**1.68**	**235**	P	**Pn**	**20 07 00.5**	**+0.3**
WACZ	**Wakanui South**	**1.80**	**221**	P	**Pn**	**20 07 02.4**	**+0.5**
DUWZ	**D'Urville Isla**	**1.82**	**11**	P	**Pn**	**20 07 02.9**	**+0.8**
PAWZ	**Paruwai Farm**	**1.90**	**51**	P	**Pn**	**20 07 02.9**	**-0.3**
QRZ	**Quartz Range**	**1.90**	**338**	P	**Pn**	**20 07 04.6**	**+1.4**
QRZ	**Quartz Range**	**1.90**	**338**	P	**Pn**	**20 07 04.3**	**+1.1**
CAW	**Cannon Point**	**1.91**	**39**	P	**Pn**	**20 07 03.4**	**+0.1**
KIW	**Kapiti Island**	**2.04**	**32**	P	**Pn**	**20 07 05.9**	**+0.7**
WVZ	**Waitaha Valley**	**2.07**	**256**	P	**Pn**	**20 07 06.6**	**+1.1**
MTW	**Mount Morrison**	**2.09**	**47**	P	**Pn**	**20 07 06.2**	**+0.4**
RPZ	**Rata Peaks**	**2.09**	**237**	P	**Pn**	**20 07 06.4**	**+0.5**
RPZ	**Rata Peaks**	**2.09**	**237**	P	**Pn**	**20 07 06.4**	**+0.5**
ARCZ	**Arundel**	**2.15**	**230**	P	**Pn**	**20 07 07.2**	**+0.5**
HOWZ	**Holdsworth Sta**	**2.28**	**43**	P	**Pb**	**20 07 11.1**	**-1.1**
GCSZ	**Gaunt Creek Bo**	**2.42**	**252**	P	**Pn**	**20 07 11.6**	**+1.2**
MRZ	**Mangatainoka R**	**2.50**	**40**	P	**Pn**	**20 07 11.4**	**0.0**
TMZ	**Timaru**	**2.53**	**224**	P	**Pn**	**20 07 13.3**	**+1.3**
BFZ	**Birch Farm**	**2.83**	**48**	P	**Pn**	**20 07 15.3**	**-0.7**
BFZ	**Birch Farm**	**2.83**	**48**	P	**Pn**	**20 07 15.5**	**-0.4**
FOZ	**Fox Glacier**	**2.84**	**249**	P	**Pn**	**20 07 17.9**	**+1.8**
LBZ	**Lake Benmore**	**2.99**	**232**	P	**Pn**	**20 07 19.1**	**+0.9**
DVHZ	**Dannevirke**	**3.06**	**42**	P	**Pn**	**20 07 21.2**	**+2.0**
TSZ	**Takapari Road**	**3.15**	**37**	P	**Pn**	**20 07 23.7**	**+3.2**
ODZ	**Otahua Downs**	**3.19**	**219**	P	**Pn**	**20 07 21.1**	**+0.1**
ODZ	**Otahua Downs**	**3.19**	**219**	P	**Pn**	**20 07 21.2**	**+0.3**
KHEZ	**Kahui Hut**	**3.32**	**7**	P	**Pn**	**20 07 25.8**	**+2.9**
KHEZ	**Kahui Hut**	**3.32**	**7**	P	**Pn**	**20 07 25.6**	**+2.8**
NBEZ	**Newall Road No**	**3.33**	**5**	P	**Pn**	**20 07 26.2**	**+3.2**
NEZ	**North Egmont**	**3.35**	**8**	P	**Pn**	**20 07 27.7**	**+4.4**
PKE	**Pukeiti**	**3.42**	**7**	P	**Pn**	**20 07 26.5**	**+2.4**
WNVZ	**Wahianoa**	**3.64**	**27**	P	**Pn**	**20 07 28.6**	**+1.3**
BHHZ	**Black Hill Sta**	**3.67**	**33**	P	**Pn**	**20 07 30.9**	**+3.3**
FWVZ	**Far West T-bar**	**3.69**	**26**	P	**Pn**	**20 07 32.8**	**+4.8**
JCZ	**Jackson Bay**	**3.72**	**245**	P	**Pn**	**20 07 29.8**	**+1.4**
JCZ	**Jackson Bay**	**3.72**	**245**	P	**Pn**	**20 07 29.1**	**+0.7**
NGZ	**Ngauruhoe**	**3.78**	**26**	P	Pn	20 07 34.2	+5.0
SNVZ	**South Ngauruho**	**3.78**	**27**	P	**Pn**	**20 07 30.4**	**+1.2**
OTVZ	**Oturere**	**3.81**	**27**	P	**Pn**	**20 07 30.8**	**+1.1**
NNVZ	**North Ngauruho**	**3.82**	**26**	P	**Pn**	**20 07 33.6**	**+3.8**
TWVZ	**Taurewa**	**3.82**	**24**	P	**Pb**	**20 07 35.0**	**-3.5**
WTVZ	**West Tongariro**	**3.83**	**26**	P	**Pb**	**20 07 35.7**	**-3.0**
ETVZ	**East Tongariro**	**3.85**	**27**	P	**Pn**	**20 07 31.9**	**+1.7**
KRVZ	**Karewarewa**	**3.86**	**26**	P	**Pb**	**20 07 36.1**	**-3.2**
TMVZ	**Te Maari**	**3.87**	**27**	P	**Pn**	**20 07 32.0**	**+1.6**
NTVZ	**North Tongarir**	**3.87**	**26**	P	**Pn**	**20 07 34.7**	**+4.3**
WKZ	**Wanaka**	**3.92**	**234**	P	**Pn**	**20 07 31.8**	**+0.7**
BKZ	**Black Stump Fm**	**4.12**	**35**	P	**Pn**	**20 07 35.2**	**+1.4**
BKZ	**Black Stump Fm**	**4.12**	**35**	P	**Pn**	**20 07 36.5**	**+2.7**
HIZ	**Hauiti**	**4.21**	**15**	P	**Pn**	**20 07 36.6**	**+1.6**
HIZ	**Hauiti**	**4.21**	**15**	P	**Pn**	**20 07 36.8**	**+1.8**
TLZ	**Tolley Road**	**4.54**	**21**	P	**Pn**	**20 07 42.3**	**+2.7**
MLZ	**Mavora Lakes**	**4.75**	**232**	P	**Pn**	**20 07 42.3**	**-0.2**
WHZ	**Wether Hill Ro**	**5.16**	**228**	P	**Pn**	**20 07 46.5**	**-1.6**
TKGZ	**Te Karaka**	**5.32**	**40**	P	Pn	20 07 56.6	+6.3
AWAZ	**Awhitu Peninsu**	**5.59**	**10**	P	**Pn**	**20 07 55.6**	**+1.6**
WIAZ	**Waiheke Island**	**5.93**	**13**	P	**Pn**	**20 08 00.2**	**+1.5**
OUZ	**Omahuta**	**7.36**	**1**	P	**Pn**	**20 08 20.2**	**+1.9**

ROM 23 20:06:34.0±0.0**, 42°.797N**±0°.002×**13°.060E**±0°.003**, h11**km**, ML2.0**/30**, 8C-20D, Error ellipse: s-maj=0.2km s-min=0.2km az=265.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.05**	**194**	P	Pg	20 06 36.5	+0.3
T1212				S	Sg	20 06 37.9	+0.2
T1212				AML	AML		
	comp=E,4245µm,0.2s						
T1212				AML	AML		
	comp=N,4175µm,0.2s						
T1212				AML	AML		
	comp=E,4250µm,0.2s						
T1212				AML	AML		
	comp=E,4290µm,0.1s						
T1212				AML	AML		
	comp=N,4255µm,0.2s						
T1212				AML	AML		
	comp=N,4260µm,0.2s						
T1212				AML	AML		
	comp=N,4180µm,0.2s						
T1212				AML	AML		
	comp=E,4250µm,0.1s						
T1212				AML	AML		
	comp=E,4290µm,0.1s						
NRCA	**Norcia**	**0.05**	**47**	⇓P	Pg	20 06 36.5	+0.2
NRCA				S	Sg	20 06 37.9	0.0
NRCA				AML	AML		
	comp=N,5960µm,0.1s						
NRCA				AML	AML		
	comp=E,5495µm,0.1s						
NRCA				AML	AML		
	comp=N,5580µm,0.1s						
NRCA				AML	AML		
	comp=E,5495µm,0.1s						
NRCA				AML	AML		
	comp=N,5580µm,0.1s						
NRCA				AML	AML		
	comp=E,5910µm,0.1s						
T1216	**Preci, Frazion**	**0.10**	**342**	⇓P	Pg	20 06 37.1	+0.4
T1216				S	Sg	20 06 39.3	+0.6
T1216				AML	AML		
	comp=E,1840µm,0.6s						
T1216				AML	AML		
	comp=N,1680µm,0.9s						
T1245	**Castelsantange**	**0.11**	**58**	P	Pg	20 06 37.3	+0.3
T1245				S	Sg	20 06 39.6	+0.5
T1245				AML	AML		
	comp=E,3635µm,0.2s						
T1245				AML	AML		
	comp=N,3730µm,1.6s						
T1245				AML	AML		
	comp=E,3775µm,0.2s						
T1245				AML	AML		
	comp=N,3730µm,0.4s						
T1245				AML	AML		
	comp=N,3305µm,1.0s						
T1245				AML	AML		
	comp=E,3775µm,1.8s						
T1214	**Arquata del Tr**	**0.12**	**109**	⇓P	Pg	20 06 37.4	+0.4
T1214				S	Sg	20 06 39.6	+0.4
T1214				AML	AML		
	comp=E,1595µm,0.5s						
T1214				AML	AML		
	comp=N,1615µm,0.1s						
T1214				AML	AML		
	comp=E,1475µm,0.5s						
T1214				AML	AML		
	comp=N,1570µm,0.1s						
T1214				AML	AML		
	comp=N,1610µm,0.1s						
T1214				AML	AML		
	comp=N,1570µm,0.1s						
T1214				AML	AML		
	comp=E,1475µm,1.5s						
T1214				AML	AML		
	comp=E,1595µm,1.5s						
T1217	**Poggiodomo (PG**	**0.13**	**228**	⇑P	Pg	20 06 37.6	+0.5
T1217				S	Sg	20 06 40.1	+0.8
T1217				AML	AML		
	comp=N,1474µm,0.3s						
T1217				AML	AML		
	comp=E,874µm,0.2s						
T1217				AML	AML		
	comp=N,1510µm,0.3s						
T1217				AML	AML		
	comp=N,1474µm,0.3s						
T1217				AML	AML		
	comp=E,874µm,0.2s						
T1217				AML	AML		
	comp=E,994µm,0.2s						
T1218	**Civita (PG)**	**0.13**	**162**	⇓P	Pg	20 06 37.6	+0.4

T1218				S	Sg	20 06 40.2	+0.7
T1218				AML	AML		
	comp=E,1370µm,0.3s						
T1218				AML	AML		
	comp=N,2060µm,0.2s						
T1218				AML	AML		
	comp=E,1350µm,0.3s						
T1218				AML	AML		
	comp=N,2055µm,0.4s						
T1218				AML	AML		
	comp=E,1370µm,0.3s						
T1218				AML	AML		
	comp=E,1350µm,0.3s						
T1218				AML	AML		
	comp=N,2055µm,0.4s						
T1218				AML	AML		
	comp=N,2060µm,0.1s						
MC2	**Monte Cornacci**	**0.15**	**40**	⇓P	Pg	20 06 38.0	+0.4
MC2				S	Sg	20 06 41.0	+0.9
CESI	**CESI - Serrava**	**0.24**	**331**	⇓P	Pg	20 06 39.5	+0.5
CESI				S	Sg	20 06 43.5	+1.2
CESI				AML	AML		
	comp=E,237µm,1.6s						
CESI				AML	AML		
	comp=N,702µm,0.2s						
CESI				AML	AML		
	comp=E,237µm,0.4s						
FDMO	**Fiordimonte**	**0.24**	**5**	⇓P	Pg	20 06 39.5	+0.4
FDMO				AML	AML		
	comp=N,454µm,0.2s						
FDMO				AML	AML		
	comp=E,513µm,0.2s						
T1256	**Bolognola (MC)**	**0.24**	**30**	⇓P	Pg	20 06 39.5	+0.4
T1256				S	Sg	20 06 43.7	+1.2
T1256				AML	AML		
	comp=E,596µm,1.0s						
T1256				AML	AML		
	comp=N,335µm,0.5s						
T1256				AML	AML		
	comp=E,596µm,1.0s						
T1256				AML	AML		
	comp=N,335µm,1.5s						
SMA1	**SAN MARTINO**	**0.26**	**129**	⇑P	Pg	20 06 39.8	+0.4
SMA1				S	Sb	20 06 44.3	-1.2
SMA1				AML	AML		
	comp=N,290µm,0.7s						
SMA1				AML	AML		
	comp=E,432µm,0.3s						
T1219	**Muccia, Frazio**	**0.26**	**352**	⇓P	Pg	20 06 39.8	+0.4
T1219				AML	AML		
	comp=E,212µm,0.7s						
T1219				AML	AML		
	comp=N,272µm,0.3s						
T1219				AML	AML		
	comp=N,272µm,0.2s						
T1219				AML	AML		
	comp=E,212µm,0.7s						
T1241	**Roccafluvione,**	**0.28**	**78**	⇓P	Pg	20 06 40.1	+0.4
T1241				AML	AML		
	comp=E,409µm,0.4s						
T1241				AML	AML		
	comp=N,248µm,0.4s						
T1241				AML	AML		
	comp=N,248µm,1.6s						
T1211	**Morro Reatino**	**0.30**	**210**	P	Pg	20 06 40.6	+0.4
T1211				AML	AML		
	comp=E,365µm,0.8s						
T1211				AML	AML		
	comp=E,396µm,0.8s						
T1211				AML	AML		
	comp=E,366µm,0.8s						
T1211				AML	AML		
	comp=N,711µm,0.2s						
T1211				AML	AML		
	comp=E,396µm,0.8s						
T1211				AML	AML		
	comp=N,716µm,0.2s						
ARRO	**Arrone**	**0.31**	**225**	⇓P	Pb	20 06 41.2	-0.3
ARRO				AML	AML		
	comp=E,249µm,0.2s						
ARRO				AML	AML		
	comp=N,301µm,0.6s						
ARRO				AML	AML		
	comp=E,249µm,1.8s						
RM33	**Pellescritta (**	**0.31**	**158**	⇑P	Pg	20 06 40.5	+0.2
RM33				AML	AML		
	comp=N,296µm,0.8s						
RM33				AML	AML		
	comp=E,241µm,0.2s						
T1220	**Camerino, Fraz**	**0.31**	**4**	⇓P	Pg	20 06 40.7	+0.4
GUMA	**Gualdo di Mace**	**0.33**	**37**	⇓P	Pb	20 06 41.4	-0.6
GUMA				AML	AML		
	comp=E,572µm,0.3s						
GUMA				AML	AML		
	comp=N,662µm,0.6s						
GUMA				AML	AML		
	comp=N,714µm,0.5s						
GUMA				AML	AML		
	comp=E,595µm,0.8s						
MOMA	**Monte Martano**	**0.36**	**271**	⇑P	Pg	20 06 41.7	+0.5
MOMA				AML	AML		
	comp=E,298µm,0.2s						
MOMA				AML	AML		
	comp=N,170µm,1.4s						
CAMP	**Campotosto**	**0.37**	**135**	P	Pg	20 06 41.6	+0.3
CAMP				AML	AML		
	comp=E,64µm,0.3s						
CAMP				AML	AML		
	comp=N,65µm,0.6s						
CAMP				AML	AML		
	comp=N,65µm,1.4s						
ASSB	**Assisi San Ben**	**0.38**	**310**	P	Pg	20 06 42.0	+0.3
ASSB				AML	AML		
	comp=E,102µm,0.5s						
ASSB				AML	AML		
	comp=N,122µm,0.6s						
T1222	**Castel Sant'An**	**0.40**	**182**	⇑P	Pg	20 06 42.1	+0.3
T1222				AML	AML		
	comp=E,145µm,1.5s						
T1222				AML	AML		
	comp=N,184µm,0.3s						
T1222				AML	AML		
	comp=E,145µm,1.4s						
T1222				AML	AML		
	comp=N,184µm,0.3s						
T1222				AML	AML		
	comp=E,145µm,0.6s						
T1247	**Pizzolo (AQ)**	**0.40**	**154**	⇓P	Pg	20 06 42.1	+0.3
T1247				AML	AML		
	comp=E,225µm,0.2s						
T1247				AML	AML		
	comp=N,206µm,0.1s						
CESX	**Cesi**	**0.40**	**242**	⇓P	Pg	20 06 42.2	+0.3
CESX				AML	AML		
	comp=E,258µm,0.4s						
CESX				AML	AML		
	comp=N,238µm,0.4s						
TERO	**Teramo**	**0.44**	**113**	⇑P	Pg	20 06 42.5	-0.1
TERO				AML	AML		
	comp=E,169µm,0.5s						
TERO				AML	AML		
	comp=N,183µm,0.9s						
TERO				AML	AML		
	comp=E,169µm,1.5s						
SNTG	**Esanatoglia**	**0.47**	**349**	⇓P	Pg	20 06 43.3	+0.2
SNTG				AML	AML		
	comp=N,62µm,1.4s						
SNTG				AML	AML		
	comp=N,62µm,0.6s						
SNTG				AML	AML		
	comp=E,63µm,0.6s						
ATCC	**AVT- Casa Cast**	**0.50**	**322**	⇑P	Pg	20 06 44.0	+0.3
ATCC				AML	AML		
	comp=N,86µm,0.5s						
ATCC				AML	AML		
	comp=E,114µm,0.2s						
ATCC				AML	AML		
	comp=N,86µm,0.5s						
GIGS	**Gran Sasso**	**0.51**	**133**	P	Pg	20 06 43.9	-0.1
GIGS				AML	AML		
	comp=E,29µm,0.9s						
GIGS				AML	AML		
	comp=N,29µm,1.6s						
GIGS				AML	AML		
	comp=N,29µm,0.4s						
FIAM	**Fiamignano**	**0.53**	**175**	⇓P	Pg	20 06 44.5	+0.2
EL6	**Elcito**	**0.53**	**3**	⇓P	Pg	20 06 44.6	+0.1
CING	**Cingoli**	**0.59**	**10**	⇑P	Pg	20 06 45.7	+0.3
CING				AML	AML		
	comp=E,83µm,0.3s						
CING				AML	AML		
	comp=N,71µm,1.3s						
CING				AML	AML		
	comp=N,71µm,0.7s						
MURB	**Monte Urbino**	**0.61**	**320**	P	Pg	20 06 46.3	+0.4
VCEL	**Villa Celiera**	**0.70**	**125**	⇓P	Pg	20 06 47.9	+0.3
VCEL				S	Sb	20 06 59.4	+1.3
ARVD	**Arcevia**	**0.71**	**353**	S	Sb	20 06 59.1	+0.9
ARVD				AML	AML		
	comp=N,27µm,0.3s						
ARVD				AML	AML		
	comp=E,33µm,0.4s						
T0110	**Collepietro**	**0.78**	**137**	⇓P	Pg	20 06 48.9	-0.1

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*IDC **23** 20:15:03.5±1.9, 5°.05N×126°.62E, h0^{km}, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=197.9km s-min=24.7km az=66.0*

*MAN **23** 20:15:22.7, 5°.56N×126°.80E, h99^{km}, mb4.4, ML3.2, MS3.0*

ISC 23 20:15:15.1±1.5, **5°.22N**±0°.09×**127°.2E**±0°.1, **h100^{km}, n12,** σ**2^s.96**/16, **mb3.8**/4, **5C-3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	**General Santos**	**2.44**	**291**	⇑*i*P	**Pn**	**20 15 53.0**	**-0.5**
CDOP	**Cateel, Davao**	**2.67**	**343**	⇑*i*P	**Pn**	**20 15 59.0**	**+2.6**
CDOP				*i* S	**Sn**	**20 16 20.0**	**-8.2**
KCP	**Kidapawan**	**2.78**	**310**	⇑*i*P	**Pn**	**20 16 00.1**	**+2.1**
KCP				*i* S	**Sn**	**20 16 32.4**	**+1.4**
SKMP	**Bagumbayan, Su**	**2.98**	**296**	⇓*e*P	**Pn**	**20 16 01.6**	**+1.1**
SKMP				*e*S	**Sn**	**20 16 36.5**	**+0.9**
BIPH	**Bislig**	**3.07**	**343**	⇑*e*P	**Pn**	**20 16 05.3**	**+3.5**
BIPH				*e*S	**Sn**	**20 16 35.7**	**-2.0**
TASP	**Talacogon, Agu**	**3.51**	**336**	⇓*i*P	Pn	20 16 13.6	+5.9
TASP				*i* S	Sn	20 16 57.3	+8.9
GLSP	**General Luna,**	**4.67**	**346**	⇑*e*P	**Pn**	**20 16 26.1**	**+2.9**
GLSP				*e*S	**Sn**	**20 17 15.9**	**-0.4**
TABP	**Talibon, Bohol**	**5.63**	**329**	⇓*e*P	**Pn**	**20 16 38.6**	**+2.2**
TABP				*i* S	Sn	20 17 06.7	-33
WRA	**Warramunga Arr**	**25.96**	**165**	P	**P**	**20 20 38.1**	**-0.4**
	0.3nm,0.3s,baz=342,slow=10,SNR=15						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**56.64**	**324**	P	**P**	**20 24 47.4**	**-0.4**
	0.3nm,0.4s,baz=116,slow=7.7,SNR=8.5						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**59.50**	**332**	P	**P**	**20 25 06.7**	**-0.9**
	0.4nm,0.3s,baz=136,slow=6.3,SNR=2.3						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**60.77**	**327**	P	**P**	**20 25 15.6**	**-0.8**
	0.6nm,0.2s,baz=126,slow=6.9,SNR=1.3						
	0.6nm,0.2s						

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*IDC **23** 20:27:29.2±1.5, 19°.38N×155°.16W, h0^{km}, mb3.8/8, mbtmp3.8/8, MS3.4/13, Error ellipse: s-maj=39.0km s-min=10.4km az=4.0*

*NEIC **23** 20:27:29.1±1.4, 19°.25N±0°.02×155°.20W±0°.01, h10^{km}±3^{km}, Error ellipse: s-maj=2.7km s-min=1.8km az=157.0*

*HVO **23** 20:27:29.1±1.6, 19°.28N±0°.02×155°.18W±0°.01, h8^{km}±3^{km}, ML3.3/11, mb4.5/40(NEIC), ML4.5/50(NEIC), Mwr4.3/20(SLM), Error ellipse: s-maj=2.6km s-min=1.7km az=161.0*

*NEIC **23** 20:27:29, 19°.30N×155°.18W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.96; $M_{\theta\theta}$-1.19; $M_{\phi\phi}$0.23; $M_{r\theta}$3.19; $M_{\theta\phi}$-0.97; $M_{\phi r}$-0.52; Fault plane solution: $M_0$3.55000×10^{15} NP1:ϕ_s210.00000°, δ20.00000°, λ25.00000°. NP2:ϕ_s96.00000°, δ82.00000°, λ108.00000°. Principal axes: T 3.5468, Plg50.0000°, Azm27.0000°; N -0.0009, Plg18.0000°, Azm274.0000°; P -3.5459, Plg34.0000°, Azm171.0000°;*

ISC 23 20:27:29.6±0.6, **19°.34N**±0°.03×**155°.20W**±0°.02, **h12**^{km}±3^{km}, **n144,** σ**1^s.38**/119, **mb4.4**/32, **MS3.4**/15, **Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUH	**Pauahi**	**0.03**	**339**		**Pg**	**20 27 31.7**	**-0.3**
PUH				IAML		20 27 34.7	
	comp=N,291µm,0.9s						
KNHH	**Kane Nui o Ham**	**0.05**	**40**		**Pg**	**20 27 29.0**	**-3.1**
KNHH					**Sg**	**20 27 33.9**	**0.0**
KKO	**Keanakako`i**	**0.08**	**313**		**Pg**	**20 27 32.3**	**-0.1**
KKO				IAML		20 27 36.9	
	comp=E,109µm,0.7s						
RIM	**Rim**	**0.09**	**309**		**Pg**	**20 27 32.4**	**-0.1**
RIM				Sg	**Sg**	**20 27 35.4**	**+0.9**
STCH	**Steam Cracks**	**0.09**	**59**		**Pg**	**20 27 31.9**	**-0.5**
STCH				IAML		20 27 35.1	
	comp=N,217µm,0.9s						
STCH				IAML		20 27 36.0	
	comp=E,144µm,0.7s						
BYL	**Byron's Ledge**	**0.09**	**322**		**Pg**	**20 27 32.5**	**+0.1**
BYL				IAML		20 27 36.1	
	comp=N,138µm,1.3s						
HATHI	**Halema'uma'u T**	**0.10**	**326**		**Pg**	**20 27 32.6**	**0.0**
HATHI				IAML		20 27 36.2	
	comp=E,112µm,1.0s						
HATHI				IAML		20 27 36.3	
	comp=N,95µm,1.4s						
SDHHI	**Sand Hill**	**0.10**	**299**		**Pg**	**20 27 32.6**	**0.0**
SDHHI				IAML		20 27 36.2	
	comp=E,163µm,0.9s						
SDHHI				IAML		20 27 36.2	
	comp=N,138µm,1.0s						
NPH	**North Pit**	**0.10**	**314**		**Pg**	**20 27 32.5**	**-0.1**
NPOC	**North of Pu'u**	**0.10**	**60**		**Pg**	**20 27 32.0**	**-0.6**
NPOC					**Sg**	**20 27 34.8**	**+0.1**
NPOC				IAML		20 27 35.6	
	comp=N,200µm,0.8s						
NPOC				IAML		20 27 36.0	
	comp=E,147µm,0.7s						
JCUZ	**Jacuzzi**	**0.10**	**66**		**Pg**	**20 27 32.3**	**-0.3**
JCUZ					**Sg**	**20 27 35.0**	**+0.1**
JCUZ	**Jacuzzi**	**0.10**	**66**	IAML		20 27 35.5	
	comp=N,95µm,1.1s						
JCUZ				IAML		20 27 35.7	
	comp=E,128µm,0.5s						
SBLHI	**Steaming Bluff**	**0.10**	**324**		**Pg**	**20 27 32.7**	**0.0**
SBLHI				IAML		20 27 36.3	
	comp=E,75µm,1.0s						
SBLHI				IAML		20 27 36.5	
	comp=N,94µm,1.2s						
OBL	**Observatory Le**	**0.11**	**315**		**Pg**	**20 27 32.4**	**-0.3**
OBL				IAML		20 27 38.7	
	comp=N,141µm,0.6s						
HLP	**Hilina Pali**	**0.11**	**245**		**Pg**	**20 27 32.4**	**-0.3**
HLP					**Sg**	**20 27 32.9**	**-2.0**
HLP				IAML		20 27 36.2	
	comp=N,114µm,0.2s						
UWB	**Uwekahuna B**	**0.11**	**319**		**Pg**	**20 27 32.6**	**-0.1**
WRMHI	**West Rim**	**0.11**	**305**		**Pg**	**20 27 32.9**	**+0.1**
WRMHI					**Sg**	**20 27 36.0**	**+0.9**
UWE	**Uwekahuna**	**0.12**	**313**		**Pg**	**20 27 32.7**	**-0.1**
UWE				IAML		20 27 37.2	
	comp=E,144µm,1.0s						
UWE				IAML		20 27 37.2	
	comp=N,130µm,1.3s						
RSD	**Rainshed**	**0.14**	**330**		**Pg**	**20 27 33.2**	**+0.1**
RSD				IAML		20 27 37.8	
	comp=N,77µm,1.1s						
JOKA	**Jonika Flow**	**0.21**	**64**		**Pg**	**20 27 33.7**	**-0.5**
JOKA					**Sg**	**20 27 37.8**	**+0.5**
HTC	**Hot Caves**	**0.21**	**241**		**Pg**	**20 27 34.3**	**+0.1**
MLH	**Mauna Loa**	**0.23**	**311**		**Pg**	**20 27 34.8**	**+0.1**
MLH	**Mauna Loa**	**0.23**	**311**		**Sg**	**20 27 39.8**	**+1.7**
MLH	**Mauna Loa**	**0.23**	**311**	IAML		20 27 41.9	
	comp=N,37µm,0.7s						
MLH				IAML		20 27 42.0	
	comp=E,39µm,0.3s						
AIN	**Ainahou**	**0.24**	**277**		**Pg**	**20 27 35.1**	**+0.3**
AIN	**Ainahou**	**0.24**	**277**	IAML		20 27 41.5	
	comp=E,388µm,0.6s						
AIN				IAML		20 27 41.6	
	comp=N,219µm,0.4s						
PHO	**Puu Honuaula**	**0.33**	**65**		**Pg**	**20 27 36.3**	**0.0**
PHO					**Sb**	**20 27 42.0**	**-0.6**
HMH	**Humu'ula Sheep**	**0.37**	**315**		**Sb**	**20 27 44.8**	**+0.6**
HMH	**Humu'ula Sheep**	**0.37**	**315**		**Pg**	**20 27 37.4**	**+0.2**
HMH	**Humu'ula Sheep**	**0.37**	**315**	IAML		20 27 46.0	
	comp=N,117µm,0.3s						
HMH				IAML		20 27 46.1	
	comp=E,88µm,0.3s						
MWH	**Moku'aweowe**	**0.40**	**291**		**Pg**	**20 27 37.8**	**+0.1**
MWH				IAML		20 27 46.8	
	comp=N,52µm,0.5s						
MWH				IAML		20 27 49.9	
	comp=E,58µm,0.9s						
MWH	**Moku'aweowe**	**0.40**	**291**		**Sg**	**20 27 45.0**	**+1.9**
KHU	**Kahuku**	**0.40**	**256**		**Pg**	**20 27 37.1**	**-0.6**
KHU					**Sg**	**20 27 40.3**	**-2.8**
KHU				IAML		20 27 48.6	
	comp=E,44µm,0.4s						
KHU				IAML		20 27 49.3	
	comp=N,58µm,0.5s						
MLOA	**Mauna Loa Obse**	**0.40**	**299**		**Sg**	**20 27 45.1**	**+1.8**
MLOA	**Mauna Loa Obse**	**0.40**	**299**		**Pg**	**20 27 37.7**	**-0.1**
MLOA	**Mauna Loa Obse**	**0.40**	**299**	IAML		20 27 45.7	
	comp=E,76µm,0.5s						
MLOA				IAML		20 27 46.8	
	comp=N,53µm,0.4s						
HPO	**Honuapo**	**0.42**	**233**		**Pg**	**20 27 37.0**	**-0.9**
HPO					**Sg**	**20 27 43.4**	**0.0**
ALEP	**Alea Permanent**	**0.46**	**296**		**Pg**	**20 27 38.5**	**-0.3**
ALEP					**Sg**	**20 27 46.4**	**+1.3**
POHA	**Pohakuloa**	**0.52**	**323**		**Pg**	**20 27 39.6**	**-0.3**
POHA					**Sg**	**20 27 48.4**	**+1.6**
HUH	**Hualalai**	**0.69**	**300**		**Pg**	**20 27 42.5**	**-0.5**
CPH	**Captain Cook**	**0.69**	**282**		**Pg**	**20 27 41.5**	**-1.6**
CPH					**Sb**	**20 27 54.3**	**+1.2**
I59US	**HAWAII INFRASO**	**0.70**	**291**	Pg	**Pg**	**20 27 43.4**	**+0.2**
	baz=132,slow=12						
I59US				Lg	Lg	20 27 53.5	
	baz=146,slow=9.7						
KHLU	**Kahalu`u**	**0.70**	**291**		Pn	20 27 51.5	+6.1
KHLU	**Kahalu`u**	**0.70**	**291**		**Pg**	**20 27 41.5**	**-1.7**
KHLU	**Kahalu`u**	**0.70**	**291**	IAML		20 27 55.6	
	comp=E,28µm,0.2s						
KHLU				IAML		20 27 59.7	
	comp=N,17µm,0.6s						
HPAH	**Hawaii Prepara**	**0.83**	**326**		**Pg**	**20 27 43.7**	**-1.9**
HPAH				Sg	**Sg**	**20 27 55.9**	**-0.6**
MHA	**Mahukona**	**1.07**	**322**		**Pg**	**20 27 47.2**	**-3.1**
HLK	**Haleakala**	**1.72**	**325**		**Pn**	**20 27 56.6**	**-2.9**
HLK	**Haleakala**	**1.72**	**325**		**Sn**	**20 28 15.6**	**-6.0**
KHLH	**Kahului Airpor**	**1.93**	**324**		**Pn**	**20 27 59.1**	**-3.1**
HON	**Honolulu**	**3.28**	**307**		**Pn**	**20 28 17.3**	**-3.5**
KIP	**Kipapa**	**3.35**	**309**		**Pn**	**20 28 17.8**	**-4.0**
OPA	**Opana**	**3.52**	**312**		Pn	20 28 19.7	-4.4
KEKH	**Kekaha**	**4.97**	**303**	Pn	**Pn**	**20 28 40.4**	**-3.7**
TAOE	**Nuku Hiva Isla**	**31.70**	**151**	*e*LR	LR	20 42 08.5	
	comp=N,92nm,24.2s						
TAOE	**Nuku Hiva Isla**	**31.70**	**151**	*e*T	T	21 06 59.9	
	comp=N,52nm,0.2s						
PMOR	**Pomariorio Ree**	**34.88**	**168**	*e*T	T	21 10 57.7	
	comp=N,192nm,0.2s						
H11N3	**WAKE ISLAND Hy**	**35.66**	**277**	T	T	21 11 32.7	
	baz=84,slow=74,SNR=109						
H11N2	**WAKE ISLAND Hy**	**35.67**	**277**	T	T	21 11 33.8	
	baz=84,slow=74,SNR=115						
H11N1	**WAKE ISLAND Hy**	**35.68**	**277**	T	T	21 11 33.6	
	baz=84,slow=74,SNR=132						
H11S2	**WAKE ISLAND Hy**	**36.00**	**275**	T	T	21 12 07.4	
	baz=83,slow=74,SNR=56						
H11S1	**WAKE ISLAND Hy**	**36.00**	**275**	T	T	21 12 06.4	
	baz=83,slow=74,SNR=65						
H11S3	**WAKE ISLAND Hy**	**36.01**	**275**	T	T	21 12 08.5	
	baz=83,slow=74,SNR=61						
AFI	**Afiamalu**	**36.85**	**208**	LR	LR	20 47 31.6	
	comp=N,38nm,18.9s,baz=86,slow=33						
PPT2	**Papeete2**	**37.12**	**171**	*e*LR	LR	20 44 39.0	
	comp=N,131nm,26.8s						
PPT2	**Papeete2**	**37.12**	**171**	*e*T	T	21 13 44.4	
	comp=N,20nm,0.3s						
TIAR	**Tiarei**	**37.12**	**171**	*e*T	T	21 13 45.1	
	comp=N,21nm,0.2s						
NVAR	**Mina Array Bea**	**37.17**	**51**	P	**P**	**20 34 41.8**	**+1.0**
	comp=N,0.6nm,0.7s,baz=243,slow=10.0,SNR=1.6						
	comp=N,0.6nm,0.7s						
PFO	**Pinyon Flats O**	**37.25**	**60**	LR	LR	20 45 45.0	
	comp=N,52nm,18.2s,baz=228,slow=30						
TVO	**Taravao**	**37.35**	**171**	*e*T	T	21 14 04.4	
	comp=N,13nm,0.3s						
QSM	**Queen of Sheba**	**37.50**	**56**	P	**P**	**20 34 42.3**	**-1.0**
QSM				IAmb	IAmb	20 35 08.3	
	comp=Z,12nm,1.5s						
H02S1	**DAWSON INLET T**	**38.10**	**22**	T	T	21 14 53.8	
	SNR=194						
TPNV	**Topopah Spring**	**38.25**	**54**		**P**	**20 34 50.4**	**+0.5**
KDAK	**Kodiak Island**	**38.44**	**2**	LR	LR	20 46 10.1	
	comp=Z,65nm,21.1s,baz=226,slow=29						
BBB	**Bella Bella**	**39.01**	**26**	LR	LR	20 48 04.4	
	comp=Z,51nm,18.1s,baz=215,slow=32						
Q12A	**Willow Creek R**	**39.94**	**52**	P	P	20 34 58.7	-5.3
Q12A				IAmb	IAmb	20 35 29.8	
	comp=Z,9.6nm,1.1s						
RAR	**Rarotonga**	**40.55**	**187**	LR	LR	20 48 33.4	
	comp=Z,126nm,18.4s,baz=297,slow=31						
SHEM	**Shemya Is, Ala**	**40.96**	**332**	LR	LR	20 48 54.1	
	comp=Z,71nm,21.9s,baz=306,slow=31						
TBI	**Tubuai**	**42.80**	**172**	*e*T	T	21 20 52.2	
	comp=Z,350nm,0.3s						
L19K	**White Mountain**	**42.80**	**0**	P	**P**	**20 35 28.1**	**+1.1**
L19K				IAmb	IAmb	20 35 32.5	
	comp=Z,7.2nm,0.9s						
DLBC	**Dease Lake**	**43.16**	**19**	LR	LR	20 50 50.1	
	comp=Z,72nm,18.5s,baz=346,slow=32						
M27K	**Edge Creek, AK**	**43.97**	**9**	P	**P**	**20 35 38.1**	**+1.5**
M27K				IAmb	IAmb	20 35 43.3	
	comp=Z,7.2nm,1.1s						
K20K	**Telida**	**43.99**	**1**	P	**P**	**20 35 36.9**	**+0.4**
CAST	**Castle Rocks**	**44.09**	**2**	P	**P**	**20 35 36.8**	**-0.6**
PAX	**Paxson**	**44.11**	**6**	P	**P**	**20 35 38.0**	**+0.4**
PAX				IAmb	IAmb	20 35 43.6	
	comp=Z,7.9nm,1.0s						
PV23	**Carpenter Ridg**	**44.18**	**54**	P	**P**	**20 35 40.5**	**+1.7**
PV23				IAmb	IAmb	20 35 51.0	
	comp=Z,7.5nm,1.1s						
TRF	**Thorofare Moun**	**44.20**	**3**	P	**P**	**20 35 39.7**	**+1.3**
TRF				IAmb	IAmb	20 35 45.4	
	comp=Z,7.1nm,0.8s						
KTH	**Kantishna Hill**	**44.27**	**3**	P	**P**	**20 35 39.9**	**+1.0**
L26K	**Log Cabin Wild**	**44.41**	**8**	P	**P**	**20 35 40.3**	**+0.4**
MCK	**McKinley**	**44.56**	**4**	P	**P**	**20 35 42.4**	**+1.2**
MCK				IAmb	IAmb	20 35 47.0	
	comp=Z,6.4nm,1.0s						
L27K	**Beaver Creek,**	**44.64**	**9**	P	**P**	**20 35 41.9**	**+0.1**
BCAR	**Beaver Creek A**	**44.65**	**9**	P	**P**	**20 35 43.5**	**+1.6**
BPAW	**Bear Paw Mtn.**	**44.82**	**3**	P	**P**	**20 35 43.3**	**+0.1**
BW06	**Boulder Array**	**44.86**	**48**	P	**P**	**20 35 43.8**	**-0.3**
PD31	**Pinedale Array**	**44.86**	**48**	P	**P**	**20 35 44.1**	**0.0**
PDAR	**Pinedale Array**	**44.86**	**48**	P	**P**	**20 35 45.0**	**+0.8**
	comp=Z,1.3nm,0.9s,baz=256,slow=7.3,SNR=6.7						
	comp=Z,1.3nm,0.9s						
PDAR	**Pinedale Array**	**44.86**	**48**	P	**P**	**20 35 44.4**	**+0.3**
BWN	**Browne**	**44.97**	**4**	P	**P**	**20 35 45.1**	**+0.8**
M30M	**Minto, Yukon**	**45.04**	**12**		pP	20 35 47.1	-2.0
WRH	**Wood River Hil**	**45.35**	**4**	P	**P**	**20 35 48.4**	**+1.0**
HDA	**Harding Lake**	**45.38**	**5**	P	**P**	**20 35 48.3**	**+0.7**
HDA				IAmb	IAmb	20 35 53.4	
	comp=Z,6.3nm,1.2s						
NEA2	**Nenana**	**45.41**	**4**	P	**P**	**20 35 48.4**	**+0.6**
CCB	**Clear Creek Bu**	**45.55**	**4**	P	**P**	**20 35 49.4**	**+0.5**
CCB				IAmb	IAmb	20 35 50.9	
	comp=Z,4.7nm,1.0s						
ANM	**Nome**	**45.71**	**354**	P	**P**	**20 35 50.3**	**+0.1**
IL31		**45.74**	**5**	P	**P**	**20 35 50.2**	**-0.2**
IL31				IAmb	IAmb	20 36 14.1	
	comp=Z,3.1nm,0.8s						
ILAR	**Eielson Array**	**45.74**	**5**	P	**P**	**20 35 51.1**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=195,slow=7.4,SNR=22						
ILAR				LR	LR	20 50 23.6	
	comp=Z,24nm,19.4s,baz=100,slow=30						
	comp=Z,2.2nm,0.8s						
ILAR	**Eielson Array**	**45.74**	**5**	P	**P**	**20 35 49.0**	**-1.5**
IL03	**Eielson Array**	**45.74**	**5**	P	**P**	**20 35 50.9**	**+0.4**
MLY	**Manley**	**45.76**	**3**	P	**P**	**20 35 51.0**	**+0.4**
TCOL	**CIGO, UAF Yank**	**45.77**	**4**	P	**P**	**20 35 49.7**	**-0.9**
COLA	**College**	**45.77**	**4**	P	**P**	**20 35 49.6**	**-1.1**
MDM	**Murphy Dome**	**45.83**	**4**	P	**P**	**20 35 51.6**	**+0.4**
I23K	**Minto, Yukon-K**	**45.95**	**3**		**P**	**20 35 52.8**	**+0.8**
I23K				IAmb	IAmb	20 36 03.9	
	comp=Z,6.0nm,1.1s						
DAWY	**Dawson**	**45.96**	**10**	P	**P**	**20 35 53.4**	**+1.2**
DAWY				IAmb	IAmb	20 36 02.3	
	comp=Z,5.3nm,1.1s						

POKR	**Poker Plat Res**	**46.04**	**5**	P	**P**	**20 35 53.7**	**+0.8**
POKR				IAmb	IAmb	20 36 10.7	
	comp=Z,6.0nm,0.5s						
RWWY	**Rawlins**	**46.26**	**50**	P	**P**	**20 35 55.2**	**-0.1**
EGAK	**Eagle**	**46.37**	**8**	P	**P**	**20 35 57.4**	**+2.0**
EGAK				IAmb	IAmb	20 36 05.2	
	comp=Z,5.2nm,1.1s						
PRP	**Porcupine Dome**	**46.59**	**6**	P	**P**	**20 35 58.2**	**+0.8**
PRP				IAmb	IAmb	20 36 06.3	
	comp=Z,7.3nm,1.2s						
IMAR	**Indian Mountai**	**46.63**	**1**	P	**P**	**20 35 56.8**	**-0.7**
H24K	**Noodor Dome**	**46.72**	**4**	P	**P**	**20 35 58.8**	**+0.5**
H24K				IAmb	IAmb	20 36 03.7	
	comp=Z,5.8nm,1.1s						
N23A	**Red Feather La**	**47.01**	**52**	P	**P**	**20 36 01.3**	**+0.2**
N23A				IAmb	IAmb	20 36 04.5	
	comp=Z,9.9nm,1.1s						
FYU	**Fort Yukon**	**47.65**	**5**	P	**P**	**20 36 06.5**	**+1.2**
TXAR	**Lajitas Array**	**47.68**	**68**	P	**P**	**20 36 08.4**	**+2.1**
	comp=Z,1.2nm,0.7s,baz=241,slow=9.2,SNR=3.5						
	comp=Z,1.2nm,0.7s						
TXAR	**Lajitas Array**	**47.68**	**68**	P	**P**	**20 36 05.7**	**-0.6**
INK	**Inuvik**	**50.81**	**10**	LR	LR	20 56 02.4	
	comp=Z,44nm,18.7s,baz=354,slow=34						
INK	**Inuvik**	**50.81**	**10**	P	**P**	**20 36 30.0**	**+0.5**
INK				IAmb	IAmb	20 36 34.7	
	comp=Z,8.4nm,1.2s						
YKA	**Yellowknife Ar**	**51.36**	**23**	P	**P**	**20 36 34.9**	**+1.1**
	comp=Z,1.3nm,0.9s,baz=232,slow=7.5,SNR=16						
	comp=Z,1.3nm,0.9s						
A36M	**Sachs Harbour**	**55.43**	**11**	P	**P**	**20 37 03.4**	**-0.1**
A36M				IAmb	IAmb	20 37 05.1	
	comp=Z,3.9nm,0.9s						
ASAJ	**Asahikawa**	**56.94**	**311**	LR	LR	20 57 31.1	
	comp=Z,23nm,21.3s,baz=206,slow=32						
R50A	**Paris**	**63.48**	**56**	P	**P**	**20 37 58.7**	**-1.0**
RES	**Resolute Bay**	**63.79**	**15**	LR	LR	21 02 08.3	
	comp=Z,32nm,21.8s,baz=1.0,slow=33						
XLT	**XiLinHaoTe**	**75.95**	**312**	*e*P	**P**	**20 39 18.8**	**+2.2**
XLT				sP	PcP	20 39 27.0	-2.0
XLT				pmax	pmax		
	comp=Z,73nm,4.7s						
XLT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NJ2	**Nanjing**	**76.67**	**299**	*e*P	**P**	**20 39 21.6**	**+0.8**
NJ2				sP	**sP**	**20 39 27.6**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SFJD	**Kangerlussuaq**	**77.92**	**23**	LR	LR	21 12 05.2	
	comp=Z,37nm,18.3s,baz=84,slow=34						
HHC	**Hu-ho-hao-te**	**79.97**	**310**	*e*P	**P**	**20 39 38.0**	**-1.1**
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,6.1s						
ASAR	**Alice Springs**	**81.26**	**241**	P	**P**	**20 39 47.8**	**+1.7**
	comp=Z,0.7nm,1.0s,baz=58,slow=5.7,SNR=2.8						
	comp=Z,0.7nm,1.0s						
SONM	**Songino Array**	**81.35**	**318**	P	**P**	**20 39 46.8**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=98,slow=4.4,SNR=2.4						
	comp=Z,0.6nm,0.8s						
H03N2	**Juan Fernandez**	**89.61**	**126**	T	T	22 19 30.4	
	baz=298,slow=76,SNR=191						
H03N3	**Juan Fernandez**	**89.62**	**126**	T	T	22 19 31.6	
	baz=298,slow=76,SNR=253						
H03N1	**Juan Fernandez**	**89.63**	**126**	T	T	22 19 31.6	
	baz=298,slow=76,SNR=228						
PZH	**PanZhiHua**	**92.58**	**299**	P	**P**	**20 40 41.3**	**-0.4**
PZH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
WMQ	**Urumqi**	**94.83**	**320**	*e*P	**P**	**20 40 53.4**	**+1.7**
MKAR	**Makanchi Array**	**96.28**	**324**	P	**P**	**20 41 00.1**	**+2.0**
	comp=Z,0.2nm,0.6s,baz=54,slow=2.5,SNR=2.5						
	comp=Z,0.2nm,0.6s						
BVAR	**Borovoye Array**	**97.86**	**334**	LR	LR	21 24 12.9	
	comp=Z,12nm,21.0s,baz=48,slow=35						

NCEDC ***23*** *20:37:57.7±2.1, 40°.42N±0°.05×125°.25W±0°.05, h9^{km}±7^{km}, ML3.2/14, ML3.1/48(NEIC), Error ellipse: s-maj=7.5km s-min=5.0km az=178.0*

NEIC 23 20:37:55.3±1.6**, 40°.36N**±0°.05×**125°.42W**±0°.01**, h12**^{km}±6^{km}**, Error ellipse: s-maj=7.6km s-min=1.5km az=183.0, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	**Capetown**	**0.83**	**81**		Pb	20 38 12.2	+0.5
KCTM					Sb	20 38 24.0	+1.0
KSMM	**Slide Mountain**	**0.97**	**100**		Pg	20 38 13.5	-0.4
KMPM	**Mount Pierce**	**0.99**	**86**		Pg	20 38 13.8	-0.6
JCC	**Jacoby Creek,**	**1.15**	**66**		Pb	20 38 15.5	-1.7
JCC				IAML		20 38 30.4	
	comp=N,398nm,0.5s						
JCC				IAML		20 38 30.6	
	comp=E,641nm,0.6s						
KCRM	**Chalk Rock**	**1.22**	**86**		Pn	20 38 17.7	-0.6
KMRM	**Mail Ridge**	**1.31**	**95**		Pn	20 38 18.9	-0.7
KHMM	**Horse Mountain**	**1.38**	**68**		Pn	20 38 19.5	-1.1
KHMM				IAML		20 38 37.9	
	comp=E,437nm,0.7s						
KBSM	**Bell Springs**	**1.46**	**107**		Pn	20 38 21.5	-0.1
KCPM	**Cahto Peak**	**1.56**	**115**		Pn	20 38 22.4	-0.6
KPPM	**Pickett Peak**	**1.57**	**90**		Pn	20 38 23.5	+0.3
KIPM	**Iron Peak**	**1.58**	**110**		Pn	20 38 23.0	-0.4
KFPM	**Farley Peak**	**1.69**	**114**		Pn	20 38 24.4	-0.3
KHBM	**Hayfork Bally**	**1.70**	**79**		Pn	20 38 24.4	-0.6
GTC	**Three Chop Rid**	**1.72**	**123**		Pn	20 38 25.3	+0.2
KOMM	**Orleans Mounta**	**1.75**	**58**		Pn	20 38 24.1	-1.5
KBNM	**Bluenose Ridge**	**1.77**	**105**		Pn	20 38 26.1	+0.3
LBPM	**Beegum Peak**	**1.94**	**90**		Pn	20 38 28.1	-0.1
GWRM	**Wonder Ranch**	**2.00**	**124**		Pn	20 38 29.3	+0.4
LGPM	**Granite Peak**	**2.05**	**73**		Pn	20 38 28.9	-0.8
GHMM	**Hull Mountain**	**2.10**	**113**		Pn	20 38 30.2	-0.2
GGUM	**Gualala**	**2.11**	**135**		Pn	20 38 28.8	-1.6
GROM	**Round Mountain**	**2.15**	**101**		Pn	20 38 31.9	+0.8
GVV	**Valley View**	**2.18**	**105**		Pn	20 38 31.7	+0.1
LBKM	**Bonanza King**	**2.21**	**70**		Pn	20 38 30.9	-1.1
L02F	**Cave Junction**	**2.25**	**38**		Pn	20 38 31.1	-1.2
HOPS	**Hopland Field**	**2.27**	**126**	Pn	Pn	20 38 31.4	-1.2
HOPS				IAML		20 39 28.8	
	comp=N,54nm,3.6s						
GHLM	**Highland Sprin**	**2.27**	**125**		Pn	20 38 33.1	+0.4
GHGM	**Hogback Ridge**	**2.34**	**121**		Pn	20 38 34.1	+0.3
GTSM	**Trough Springs**	**2.41**	**115**		Pn	20 38 34.6	0.0
GCK	**Clark Valley**	**2.43**	**109**		Pn	20 38 35.7	+0.9
GHCM	**House Creek**	**2.45**	**135**		Pn	20 38 33.8	-1.4
YBH	**Yreka Blue Hor**	**2.46**	**55**	Pn	Pn	20 38 34.9	-0.5
GACM	**Adobe Creek**	**2.47**	**126**		Pn	20 38 35.4	-0.1
LTCM	**Tuscan Springs**	**2.52**	**92**		Pn	20 38 36.5	+0.4
GWKM	**Walker Ridge**	**2.61**	**119**		Pn	20 38 36.7	-0.6
LSHM	**Sage Hen Hill**	**2.61**	**79**		Pn	20 38 37.2	-0.2
GFC	**Funks Creek**	**2.62**	**112**		Pn	20 38 38.1	+0.7
M03C	**McCloud**	**2.66**	**69**		Pn	20 38 38.4	+0.2
K02D	**Willamette Mer**	**2.68**	**29**		Pn	20 38 37.3	-1.1
B040	**Montague**	**2.70**	**56**		Pn	20 38 39.5	+0.9
LMPM	**Military Pass**	**2.71**	**64**		Pn	20 38 39.4	+0.4
HUMO	**Hull Mountain**	**2.91**	**39**		Pn	20 38 40.8	-0.7
MCCM	**Marconi Confer**	**2.96**	**137**	Pn	Pn	20 38 41.8	-0.3
MCCM				IAML		20 39 26.3	
	comp=E,63nm,2.0s						
MCCM				IAML		20 40 00.5	
	comp=N,61nm,2.2s						
L04D	**Klamath Falls**	**2.99**	**51**		Pn	20 38 43.8	+1.0
J01E	**Myrtle Point**	**3.02**	**21**	Pn	Pn	20 38 41.8	-1.0
J01E				IAML		20 39 18.9	
	comp=E,69nm,0.7s						
J01E				IAML		20 39 19.4	
	comp=N,64nm,0.5s						
LBCM	**Butte Creek Ri**	**3.13**	**80**		Pn	20 38 45.4	+0.7
DBO	**Dodson Butte**	**3.20**	**30**	Pn	Pn	20 38 45.1	-0.5
DBO				IAML		20 39 06.7	
	comp=N,37nm,3.0s						
DBO				IAML		20 39 46.5	
	comp=E,40nm,3.1s						
K04D	**Chiloquin, OR**	**3.56**	**49**		Pn	20 38 51.5	+0.9
K04D				IAML		20 39 14.4	
	comp=E,42nm,0.9s						
K04D				IAML		20 39 53.3	
	comp=N,42nm,3.3s						
I03D	**Drain, OR**	**3.68**	**24**	Pn	Pn	20 38 51.9	-0.1
I03D				IAML		20 39 33.9	
	comp=N,40nm,3.0s						
I03D				IAML		20 39 43.5	
	comp=E,29nm,3.1s						
J04A	**Umpqua Nationa**	**3.80**	**40**		Pn	20 38 54.6	+0.8
I04A	**Tendick Farm,**	**4.10**	**32**	Pn	Pn	20 38 58.2	+0.3
JBNB	**Ben Lomond Mou**	**4.11**	**141**		Pb	20 39 06.5	-1.2
K05A	**Summer Lake**	**4.14**	**54**		Pn	20 38 59.5	+1.0
K05A				IAML		20 40 43.4	
	comp=E,20nm,4.6s						
K05A				IAML		20 41 19.3	
	comp=N,24nm,4.1s						
MOD	**Modoc Plateau**	**4.16**	**67**		Pn	20 38 59.0	+0.2
BUCK	**Buck Mountain**	**4.24**	**24**	Pn	Pn	20 39 00.5	+0.6
J05D	**Fort Rock, OR**	**4.28**	**46**		Pn	20 39 01.6	+1.2
MPK	**Martis Peak**	**4.28**	**103**	Pn	Pn	20 39 01.8	+1.2
MPK				IAML		20 39 57.2	
	comp=E,24nm,1.3s						
MPK				IAML		20 40 00.6	
	comp=N,19nm,0.7s						
CMB	**Columbia Colle**	**4.54**	**119**	Pn	Pn	20 39 04.8	+0.8
H04D	**Lebanon**	**4.61**	**25**	Pn	Pn	20 39 05.3	+0.5
PINE	**Pine Mountain**	**4.78**	**43**	Pn	Pn	20 39 08.7	+1.3
PINE				IAML		20 41 20.6	
	comp=E,18nm,4.0s						
PINE				IAML		20 41 26.2	
	comp=N,17nm,4.7s						
H04A	**Detroit Lake**	**4.94**	**28**	Pn	Pn	20 39 09.9	+0.5
H04A				IAML		20 41 29.6	
	comp=N,18nm,2.8s						
I05D	**Terrebonne, OR**	**5.00**	**36**		Pn	20 39 09.6	-0.6
BAPM	**Anderson Peak**	**5.12**	**143**		Pn	20 39 08.3	-3.7
WVOR	**Wild Horse Val**	**5.50**	**66**		Pn	20 39 18.5	+1.3
WVOR				IAML		20 40 57.0	
	comp=N,8.4nm,4.8s						
WVOR				IAML		20 40 58.8	
	comp=N,11nm,4.1s						
MDPB	**Devils Postpil**	**5.64**	**117**	Pn	Pn	20 39 20.6	+1.4
I07A	**Izee**	**5.75**	**48**		Pn	20 39 22.4	+1.7
NVAR	**Mina Array Bea**	**5.84**	**107**	Pn	Pn	20 39 21.5	-0.4
J08A	**Circle Bar Ran**	**5.99**	**58**		Pn	20 39 24.4	+0.5
G08A	**Pilot Rock**	**6.84**	**42**	Pn	Pn	20 39 37.9	+2.3
BMO	**Blue Mountains**	**7.48**	**50**	Pn	Pn	20 39 46.2	+1.9
PLID	**Pearl Lake**	**8.39**	**53**	Pn	Pn	20 39 59.1	+2.2
HLID	**Hailey**	**8.80**	**65**	Pn	Pn	20 40 05.3	+2.8

ROM 23 21:02:09.5±0.1**, 42°.662N**±0°.007×**13°.332E**±0°.009**, h10**^{km}**, ML1.4**/18**, 1C-2D, Error ellipse: s-maj=0.9km s-min=0.6km az=214.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	**0.03**	**175**	P	Pg	21 02 11.8	+0.2
SMA1				S	Sg	21 02 12.9	-0.1
SMA1				AML	AML		
	comp=N,734µm,0.3s						
SMA1				AML	AML		
	comp=E,504µm,0.1s						
T1214	**Arquata del Tr**	**0.13**	**317**	P	Pg	21 02 13.2	+0.5
T1214				S	Sg	21 02 15.8	+0.7
CAMP	**Campotosto**	**0.14**	**156**	P	Pg	21 02 13.4	+0.6
CAMP				S	Sg	21 02 15.9	+0.8
CAMP				AML	AML		
	comp=E,67µm,0.3s						
CAMP				AML	AML		
	comp=N,55µm,0.2s						
T1218	**Civita (PG)**	**0.16**	**273**	P	Pg	21 02 13.6	+0.5
T1218				S	Sg	21 02 16.4	+0.7
RM33	**Pellescritta (**	**0.18**	**210**	P	Pg	21 02 11.9	-1.5
RM33				S	Sg	21 02 24.6	+8.5
RM33				AML	AML		
	comp=E,600µm,1.6s						
RM33				AML	AML		
	comp=N,324µm,1.3s						
RM33				AML	AML		
	comp=E,643µm,1.0s						
RM33				AML	AML		
	comp=N,331µm,1.5s						
RM33				AML	AML		
	comp=E,600µm,1.6s						
RM33				AML	AML		
	comp=N,324µm,1.3s						
RM33				AML	AML		
	comp=E,640µm,1.0s						
RM33				AML	AML		
	comp=N,330µm,1.5s						
RM33				AML	AML		
	comp=E,600µm,0.4s						
RM33				AML	AML		
	comp=N,324µm,0.7s						
RM33				AML	AML		
	comp=N,330µm,0.5s						
TERO	**Teramo**	**0.20**	**101**	P	Pg	21 02 14.4	+0.6
TERO				AML	AML		
	comp=E,64µm,1.0s						
TERO				AML	AML		
	comp=N,88µm,0.3s						
TERO				AML	AML		
	comp=E,64µm,1.0s						
T1241	**Roccafluvione,**	**0.21**	**21**	⇓P	Pg	21 02 13.1	-0.8
T1241				S	Sg	21 02 17.8	+0.9
T1241				AML	AML		
	comp=E,50µm,0.3s						
T1241				AML	AML		
	comp=N,48µm,1.5s						
T1241				AML	AML		
	comp=N,48µm,1.5s						
T1241				AML	AML		
	comp=N,48µm,0.5s						
T1241				AML	AML		
	comp=E,50µm,0.3s						
T1245	**Castelsantange**	**0.22**	**331**	P	Pg	21 02 13.2	-1.0
T1245				S	Sg	21 02 19.2	+1.8
T1245				AML	AML		
	comp=N,124µm,0.3s						
T1245				AML	AML		
	comp=N,125µm,0.3s						
T1245				AML	AML		
	comp=E,127µm,0.5s						
NRCA	**Norcia**	**0.23**	**317**	P	Pg	21 02 12.8	-1.6
NRCA				AML	AML		
	comp=E,122µm,1.5s						
NRCA				AML	AML		
	comp=N,122µm,0.7s						
NRCA				AML	AML		
	comp=E,122µm,0.5s						
NRCA				AML	AML		
	comp=N,122µm,1.3s						
MC2	**Monte Cornacci**	**0.27**	**337**	⇑P	Pg	21 02 12.5	-2.6
MC2				S	Sg	21 02 17.6	-1.3
GIGS	**Gran Sasso**	**0.28**	**140**	P	Pb	21 02 16.1	-0.4
T1217	**Poggiodomo (PG**	**0.30**	**280**	⇓P	Pg	21 02 16.0	+0.4
T1217				S	Sg	21 02 20.7	+1.1

ROM 23 21:03:08.1±0.1**, 43°.016N**±0°.002×**13°.032E**±0°.005**, h8**^{km}**, ML2.1**/44**, 14C-28D, Error ellipse: s-maj=0.3km s-min=0.2km az=71.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.04**	**336**	⇓P	Pg	21 03 09.9	+0.1
T1219				S	Sg	21 03 10.8	-0.3
T1219				AML	AML		
	comp=N,12050µm,0.2s						
T1219				AML	AML		
	comp=E,10185µm,0.4s						
T1219				AML	AML		
	comp=N,11550µm,0.2s						
T1219				AML	AML		
	comp=N,12050µm,0.2s						
T1219				AML	AML		
	comp=E,9940µm,0.4s						
FDMO	**Fiordimonte**	**0.04**	**64**	P	Pg	21 03 10.0	+0.1
FDMO				S	Sg	21 03 10.9	-0.2
FEMA	**Monte Fema**	**0.06**	**166**	P	Pg	21 03 10.3	+0.2
FEMA				S	Sg	21 03 11.6	+0.1
FEMA				AML	AML		
	comp=N,8170µm,1.4s						
FEMA				AML	AML		
	comp=E,12050µm,1.4s						
FEMA				AML	AML		
	comp=N,8170µm,1.3s						
FEMA				AML	AML		
	comp=E,12050µm,0.6s						
FEMA				AML	AML		
	comp=N,8170µm,0.7s						
CESI	**CESI - Serrava**	**0.09**	**263**	⇑P	Pg	21 03 11.1	+0.6
CESI				S	Sg	21 03 13.0	+0.8
CESI				AML	AML		
	comp=N,3215µm,1.4s						
CESI				AML	AML		
	comp=E,2265µm,0.7s						
T1220	**Camerino, Fraz**	**0.10**	**24**	P	Pg	21 03 11.1	+0.6
T1220				S	Sg	21 03 13.3	+1.0
T1220				AML	AML		
	comp=E,15400µm,0.3s						
T1220				AML	AML		
	comp=E,15400µm,0.3s						
T1220				AML	AML		
	comp=N,7460µm,0.9s						
T1220				AML	AML		
	comp=N,7460µm,1.1s						
T1216	**Preci, Frazion**	**0.13**	**184**	⇓P	Pg	21 03 11.5	+0.6
T1216				S	Sg	21 03 13.9	+1.0
T1216				AML	AML		
	comp=E,1920µm,1.4s						
T1216				AML	AML		
	comp=N,2020µm,0.7s						
T1216				AML	AML		
	comp=E,1925µm,1.4s						
T1256	**Bolognola (MC)**	**0.14**	**94**	⇑P	Pg	21 03 11.9	+0.6
T1256				S	Sg	21 03 14.5	+1.0
T1256				AML	AML		
	comp=E,818µm,0.8s						
T1256				AML	AML		
	comp=E,928µm,0.8s						
T1256				AML	AML		
	comp=E,817µm,0.8s						
T1256				AML	AML		
	comp=N,1355µm,0.3s						
T1256				AML	AML		
	comp=N,1290µm,0.3s						
SEF1	**Sefro**	**0.14**	**335**	P	Pg	21 03 11.8	+0.6
SEF1				S	Sg	21 03 14.4	+1.0
MC2	**Monte Cornacci**	**0.16**	**132**	⇓P	Pg	21 03 12.1	+0.6
NRCA	**Norcia**	**0.19**	**162**	⇓P	Pg	21 03 12.7	+0.6
NRCA				S	Sg	21 03 16.1	+1.4
NRCA				AML	AML		
	comp=N,1915µm,1.6s						
NRCA				AML	AML		
	comp=E,1925µm,0.1s						
NRCA				AML	AML		
	comp=E,1795µm,0.1s						
NRCA				AML	AML		
	comp=N,1925µm,1.6s						
NRCA				AML	AML		
	comp=N,1925µm,0.4s						
NRCA				AML	AML		
	comp=N,1915µm,0.4s						
NRCA				AML	AML		
	comp=E,1925µm,1.9s						
NRCA				AML	AML		
	comp=E,1795µm,1.9s						
T1245	**Castelsantange**	**0.20**	**144**	⇓P	Pg	21 03 12.8	+0.7
T1245				S	Sg	21 03 16.4	+1.5
T1245				AML	AML		
	comp=E,1855µm,0.6s						
T1245				AML	AML		
	comp=N,2470µm,0.3s						
T1245				AML	AML		
	comp=E,1600µm,0.3s						
T1245				AML	AML		
	comp=N,2415µm,0.3s						
T1245				AML	AML		
	comp=N,2470µm,0.3s						
T1245				AML	AML		
	comp=E,1855µm,0.6s						
GAG1	**Gagliole**	**0.22**	**7**	⇓P	Pg	21 03 14.0	+1.4
GUMA	**Gualdo di Mace**	**0.23**	**78**	⇑P	Pg	21 03 13.7	+1.1
GUMA				AML	AML		
	comp=E,4055µm,0.3s						
GUMA				AML	AML		
	comp=E,5995µm,0.2s						
GUMA				AML	AML		
	comp=N,5160µm,0.2s						
GUMA				AML	AML		
	comp=N,5285µm,0.3s						
GUMA				AML	AML		
	comp=E,4055µm,0.3s						
SNTG	**Esanatoglia**	**0.25**	**344**	⇓P	Pg	21 03 13.7	+0.6
SNTG				S	Sg	21 03 18.2	+1.8
SNTG				AML	AML		
	comp=E,380µm,0.2s						
SNTG				AML	AML		
	comp=N,520µm,0.2s						
T1212	**Cascia, Frazio**	**0.27**	**178**	⇓P	Pg	21 03 14.1	+0.7
T1212				S	Sb	21 03 18.6	-1.2
T1212				AML	AML		
	comp=N,1144µm,0.6s						
T1212				AML	AML		
	comp=N,1115µm,0.6s						
T1212				AML	AML		
	comp=N,1115µm,1.4s						
T1212				AML	AML		
	comp=N,1144µm,1.4s						
T1212				AML	AML		
	comp=E,1028µm,0.2s						
T1212				AML	AML		
	comp=E,1060µm,0.2s						
ASSB	**Assisi San Ben**	**0.28**	**276**	⇓P	Pg	21 03 14.1	+0.6
T1214	**Arquata del Tr**	**0.29**	**153**	⇓P	Pg	21 03 14.4	+0.6
T1214				S	Sb	21 03 19.2	-1.3
T1214				AML	AML		
	comp=N,526µm,1.1s						
T1214				AML	AML		
	comp=E,748µm,0.2s						
T1214				AML	AML		
	comp=N,548µm,1.1s						
T1214				AML	AML		
	comp=E,724µm,0.2s						
T1214				AML	AML		
	comp=N,527µm,1.1s						
T1217	**Poggiodomo (PG**	**0.31**	**194**	P	Pg	21 03 14.9	+0.7
T1217				S	Sb	21 03 20.4	-0.8
T1217				AML	AML		
	comp=E,554µm,0.9s						
T1217				AML	AML		
	comp=N,596µm,1.3s						
T1217				AML	AML		
	comp=N,596µm,0.7s						
T1217				AML	AML		
	comp=E,554µm,1.1s						
EL6	**Elcito**	**0.32**	**9**	S	Sb	21 03 20.9	-0.5
ATCC	**AVT- Casa Cast**	**0.33**	**301**	⇑P	Pg	21 03 15.4	+0.7
ATCC				AML	AML		
	comp=E,688µm,1.0s						
ATCC				AML	AML		
	comp=N,379µm,0.3s						
ATCC				AML	AML		
	comp=E,688µm,1.0s						
T1241	**Roccafluvione,**	**0.33**	**118**	⇓P	Pg	21 03 15.3	+0.6
T1241				AML	AML		
	comp=E,449µm,1.4s						
T1241				AML	AML		
	comp=E,408µm,0.4s						
T1241				AML	AML		
	comp=N,449µm,1.1s						
T1241				AML	AML		
	comp=N,372µm,0.6s						
T1241				AML	AML		
	comp=N,449µm,0.9s						
T1241				AML	AML		
	comp=E,408µm,1.6s						
FOSV	**Fossato di Vic**	**0.34**	**325**	P	Pg	21 03 15.5	+0.7
FOSV				S	Sb	21 03 21.1	-0.9
FOSV				AML	AML		
	comp=E,379µm,0.5s						
FOSV				AML	AML		
	comp=N,434µm,0.3s						
T1218	**Civita (PG)**	**0.35**	**170**	⇓P	Pg	21 03 15.5	+0.5
T1218				AML	AML		
	comp=E,357µm,1.5s						
T1218				AML	AML		
	comp=N,517µm,0.7s						
T1218				AML	AML		
	comp=E,345µm,1.1s						
T1218				AML	AML		
	comp=N,546µm,0.7s						
T1218				AML	AML		
	comp=N,517µm,0.7s						
T1218				AML	AML		
	comp=E,345µm,0.9s						

T1218				AML	AML		
	comp=N,546µm,1.3s						
T1218				AML	AML		
	comp=E,357µm,0.5s						
CING	**Cingoli**	**0.38**	**18**	⇓P	Pb	21 03 16.3	-0.8
MOMA	**Monte Martano**	**0.40**	**238**	⇑P	Pg	21 03 16.5	+0.6
MOMA				AML	AML		
	comp=N,208µm,0.6s						
MOMA				AML	AML		
	comp=E,248µm,0.2s						
MOMA				AML	AML		
	comp=E,248µm,1.8s						
MURB	**Monte Urbino**	**0.45**	**304**	⇑P	Pg	21 03 17.4	+0.7
MURB				AML	AML		
	comp=E,668µm,0.3s						
MURB				AML	AML		
	comp=E,787µm,0.3s						
MURB				AML	AML		
	comp=N,572µm,0.2s						
MURB				AML	AML		
	comp=N,527µm,1.4s						
SMA1	**SAN MARTINO**	**0.45**	**150**	⇓P	Pg	21 03 17.2	+0.4
SMA1				AML	AML		
	comp=E,246µm,0.7s						
SMA1				AML	AML		
	comp=N,266µm,0.5s						
ARRO	**Arrone**	**0.48**	**204**	⇑P	Pg	21 03 18.0	+0.6
ARRO				AML	AML		
	comp=N,136µm,0.9s						
ARRO				AML	AML		
	comp=E,188µm,0.3s						
ARRO				AML	AML		
	comp=N,136µm,1.1s						
ARVD	**Arcevia**	**0.49**	**352**	S	Sb	21 03 26.4	+0.2
ARVD				AML	AML		
	comp=E,198µm,0.8s						
ARVD				AML	AML		
	comp=N,112µm,1.0s						
ARVD				AML	AML		
	comp=E,198µm,1.2s						
ATFO	**Monte Foce - G**	**0.49**	**316**	⇓P	Pg	21 03 18.1	+0.6
ATFO				AML	AML		
	comp=E,129µm,1.1s						
ATFO				AML	AML		
	comp=N,118µm,1.0s						
ATFO				AML	AML		
	comp=E,129µm,0.9s						
OFFI	**Offida**	**0.49**	**99**	⇓P	Pb	21 03 19.1	+0.2
T1211	**Morro Reatino**	**0.50**	**195**	⇓P	Pg	21 03 18.3	+0.5
T1211				S	Sb	21 03 26.6	0.0
T1211				AML	AML		
	comp=E,316µm,1.5s						
T1211				AML	AML		
	comp=E,304µm,1.5s						
T1211				AML	AML		
	comp=N,364µm,0.2s						
T1211				AML	AML		
	comp=E,316µm,1.5s						
T1211				AML	AML		
	comp=N,370µm,0.8s						
T1211				AML	AML		
	comp=E,304µm,1.5s						
T1211				AML	AML		
	comp=E,316µm,0.5s						
T1211				AML	AML		
	comp=E,304µm,0.5s						
T1211				AML	AML		
	comp=N,364µm,0.2s						
CESX	**Cesi**	**0.53**	**219**	⇓P	Pg	21 03 18.6	+0.4
CESX				AML	AML		
	comp=E,328µm,0.3s						
CESX				AML	AML		
	comp=N,207µm,0.4s						
CESX				AML	AML		
	comp=N,207µm,1.6s						
RM33	**Pellescritta (**	**0.53**	**165**	P	Pg	21 03 18.6	+0.3
RM33				S	Sb	21 03 27.2	-0.1
RM33				AML	AML		
	comp=N,156µm,0.2s						
RM33				AML	AML		
	comp=E,178µm,0.2s						
ATTE	**AVT- Monte Tez**	**0.53**	**290**	P	Pb	21 03 19.3	-0.3
ATTE				AML	AML		
	comp=E,83µm,0.5s						
ATTE				AML	AML		
	comp=N,56µm,1.6s						
FRON	**Frontone**	**0.55**	**336**	⇑P	Pg	21 03 19.2	+0.4
FRON				AML	AML		
	comp=E,122µm,0.4s						
FRON				AML	AML		
	comp=N,234µm,0.8s						
CAMP	**Campotosto**	**0.56**	**150**	⇓P	Pg	21 03 19.0	+0.2
CAMP				AML	AML		
	comp=N,76µm,0.5s						
CAMP				AML	AML		
	comp=E,71µm,0.2s						
PP3	**Marolino**	**0.56**	**49**	⇑P	Pg	21 03 17.6	-1.2
TERO	**Teramo**	**0.58**	**133**	⇓P	Pg	21 03 19.3	+0.1
TERO				AML	AML		
	comp=E,160µm,0.5s						
TERO				AML	AML		
	comp=N,224µm,0.5s						
TERO				AML	AML		
	comp=N,224µm,1.5s						
ATVO	**AVT- Monte Val**	**0.58**	**309**	⇑P	Pg	21 03 19.7	+0.3
ATVO				S	Sb	21 03 29.3	+0.2
ATVO				AML	AML		
	comp=E,85µm,0.5s						
ATVO				AML	AML		
	comp=N,68µm,0.7s						
T1247	**Pizzolo (AQ)**	**0.61**	**161**	⇑P	Pb	21 03 20.9	0.0
T1247				AML	AML		
	comp=E,182µm,0.5s						
T1247				AML	AML		
	comp=N,183µm,1.1s						
COR1	**Corinaldo**	**0.62**	**358**	⇑P	Pb	21 03 21.9	+0.8
COR1				AML	AML		
	comp=E,11600µm,1.2s						
COR1				AML	AML		
	comp=N,42400µm,1.3s						
COR1				AML	AML		
	comp=N,42400µm,0.7s						
COR1				AML	AML		
	comp=E,11600µm,0.8s						
ATPI	**Pietralunga -**	**0.63**	**314**	⇓P	Pg	21 03 20.8	+0.5
ATPI				S	Sb	21 03 31.2	+0.8
ATPI				AML	AML		
	comp=E,56µm,1.5s						
ATPI				AML	AML		
	comp=N,51µm,0.8s						
PIEI	**Pieia**	**0.63**	**325**	⇓P	Pg	21 03 20.7	+0.4
PIEI				S	Sb	21 03 31.4	+1.0
PIEI				AML	AML		
	comp=E,96µm,1.2s						
PIEI				AML	AML		
	comp=N,69µm,0.1s						
PIEI				AML	AML		
	comp=E,96µm,0.8s						
MPAG	**Monte Paganucc**	**0.64**	**342**	⇓P	Pb	21 03 21.2	-0.4
MPAG				AML	AML		
	comp=E,83µm,0.3s						
MPAG				AML	AML		
	comp=N,98µm,0.5s						
MPAG				AML	AML		
	comp=E,83µm,1.7s						
MPAG				AML	AML		
	comp=N,98µm,1.5s						
NARO	**Abbazia di Nar**	**0.68**	**331**	⇑P	Pg	21 03 21.5	+0.3
NARO				S	Sb	21 03 32.6	+0.9
NARO				AML	AML		
	comp=N,58µm,0.5s						
NARO				AML	AML		
	comp=E,53µm,0.3s						
GIGS	**Gran Sasso**	**0.69**	**145**	P	Pg	21 03 21.5	+0.1
GIGS				AML	AML		
	comp=E,36µm,0.1s						
GIGS				AML	AML		
	comp=N,29µm,1.3s						
GIGS				AML	AML		
	comp=N,29µm,0.7s						
FSSB	**Fossombrone**	**0.70**	**345**	⇓P	Pg	21 03 22.1	+0.5
FSSB				S	Sn	21 03 34.0	-1.3
FSSB				AML	AML		
	comp=N,382µm,0.2s						
FSSB				AML	AML		
	comp=E,306µm,0.4s						
FSSB				AML	AML		
	comp=E,306µm,1.6s						
APEC	**Apecchio**	**0.70**	**321**	S	Sn	21 03 34.3	-1.0
APEC				AML	AML		
	comp=E,70µm,0.3s						
APEC				AML	AML		
	comp=N,65µm,0.5s						
FIAM	**Fiamignano**	**0.75**	**175**	S	Sb	21 03 34.4	+0.6
FIAM				AML	AML		
	comp=N,81µm,0.2s						
FIAM				AML	AML		
	comp=E,63µm,0.3s						
SACS	**San Casciano d**	**0.84**	**259**	⇓P	Pb	21 03 25.2	+0.3
SACS				AML	AML		
	comp=E,31µm,0.6s						
SACS				AML	AML		
	comp=N,33µm,1.2s						
FAGN	**Fagnano**	**0.85**	**151**	⇓P	Pg	21 03 24.3	-0.2
FAGN				AML	AML		
	comp=N,104µm,0.6s						
FAGN				AML	AML		
	comp=E,123µm,0.4s						
VCEL	**Villa Celiera**	**0.86**	**136**	⇑P	Pg	21 03 24.8	+0.1
VCEL				AML	AML		
	comp=E,97µm,1.2s						
VCEL				AML	AML		
	comp=N,102µm,0.5s						
VCEL				AML	AML		
	comp=E,97µm,0.8s						
T0110	**Collepietro**	**0.96**	**145**	⇓P	Pg	21 03 26.4	-0.2
T0110				AML	AML		
	comp=E,84µm,1.5s						
T0110				AML	AML		
	comp=N,82µm,1.6s						
T0110				AML	AML		
	comp=E,84µm,0.5s						
T0110				AML	AML		
	comp=N,82µm,0.4s						
SAMA	**S.Maria delle**	**1.28**	**195**	⇓P	Pn	21 03 31.7	-0.5
SAMA				AML	AML		
	comp=N,637µm,0.1s						
SAMA				AML	AML		
	comp=E,520µm,0.1s						

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*SLM **23** 21:15:23.1±1.1, 36°.548N±0°.009×89°.65W±0°.01, h7^{km}±3^{km}, Md2.4/24, ML2.2/26(NEIC), Error ellipse: s-maj=1.3km s-min=1.3km az=194.0*

NEIC 23 21:15:23.0±0.7**, 36°.548N**±0°.010×**89°.651W**±0°.009**, h12**^{km}±2^{km}**, Error ellipse: s-maj=1.5km s-min=1.0km az=165.0, New Madrid region, Missouri**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARMO	**Marston**	**0.02**	**219**		Pg	21 15 26.3	+1.2
NMEM	**New Madrid Sch**	**0.06**	**64**		Pg	21 15 26.9	+1.5
CATM	**Catron**	**0.07**	**2**		Pg	21 15 27.1	+1.7
WALK	**Watson Lake**	**0.09**	**96**		Pg	21 15 25.5	-0.2
WALK					Sg	21 15 27.5	-0.1
NMMO	**New Madrid**	**0.09**	**63**		Pg	21 15 25.6	-0.2
NMMO					Sg	21 15 27.6	0.0
PENMO	**Penman**	**0.10**	**169**		Pg	21 15 25.6	-0.2
PENMO					Sg	21 15 27.8	-0.1
PGVM	**Portageville**	**0.11**	**216**		Pg	21 15 25.9	-0.1
PGVM					Sg	21 15 28.1	+0.1
POBM	**Portage Bay**	**0.14**	**184**		Pg	21 15 26.3	-0.1
POBM					Sg	21 15 28.9	+0.2
PVMO	**Portageville**	**0.14**	**196**		Pg	21 15 26.2	-0.2
PVMO					Sg	21 15 28.9	+0.1
PVMO				IAML		21 15 29.6	
	comp=N,587nm,0.4s						
PARMO	**Parma**	**0.14**	**325**		Pg	21 15 26.3	-0.1
PARMO	**Parma**	**0.14**	**325**		Sg	21 15 29.2	+0.3
PARMO	**Parma**	**0.14**	**325**	IAML		21 15 29.3	
	comp=E,824nm,0.2s						
PARMO				IAML		21 15 29.5	
	comp=N,824nm,0.1s						
PPLM	**Point Pleasant**	**0.15**	**159**		Pg	21 15 26.6	0.0
PPLM					Sg	21 15 29.3	+0.2
KEWM	**Kewanee**	**0.16**	**17**		Pg	21 15 26.7	0.0
KEWM					Sg	21 15 29.5	+0.2
SJMO	**Saint John's B**	**0.16**	**60**		Pg	21 15 26.7	0.0
SJMO					Sg	21 15 29.7	+0.3
COKM	**Charter Oak**	**0.17**	**339**		Pg	21 15 27.0	+0.1
COKM					Sg	21 15 30.1	+0.4
TOPM	**Tallapoosa**	**0.19**	**263**		Pg	21 15 27.3	+0.1
WADM	**Wardell**	**0.22**	**213**		Pg	21 15 27.7	+0.1
WADM					Sg	21 15 31.3	+0.6
HENM	**Henderson Moun**	**0.22**	**41**		Pg	21 15 27.7	0.0
HENM					Sg	21 15 31.4	+0.4
MATM	**Matthews**	**0.23**	**9**		Pg	21 15 28.0	+0.1
MATM					Sg	21 15 31.7	+0.5
MLDM	**Malden**	**0.23**	**290**		Pg	21 15 28.0	+0.1
WYBT	**Wynnburg**	**0.23**	**148**		Pg	21 15 28.1	+0.1
WYBT					Sg	21 15 32.1	+0.8
DWDM	**Dogwood**	**0.28**	**27**		Pg	21 15 28.8	0.0
DWDM					Sg	21 15 33.1	+0.5
EPRM	**East Prairie**	**0.29**	**54**		Pg	21 15 28.9	0.0
EPRM					Sg	21 15 33.4	+0.4
FLPT	**Flippin**	**0.30**	**117**		Pg	21 15 29.2	0.0
BRNM	**Bernie**	**0.33**	**302**		Pg	21 15 29.8	+0.1
BETM	**Bethany**	**0.34**	**281**		Pg	21 15 29.8	0.0
BETM					Sg	21 15 34.6	+0.3
HICK	**Hickman**	**0.34**	**91**		Pg	21 15 29.6	-0.3
HICK				Sg	Sg	21 15 34.4	0.0
HICK				IAML		21 15 35.4	
	comp=N,338nm,0.2s						
GUAMO	**Guam**	**0.37**	**336**		Pg	21 15 30.5	0.0
BRGM	**Braggadocio**	**0.38**	**206**		Pg	21 15 30.7	0.0
BRGM					Sg	21 15 36.4	+0.7
MIST	**Miston**	**0.40**	**162**		Pg	21 15 30.9	+0.1
GLAT	**Glass**	**0.40**	**133**		Pg	21 15 31.1	0.0
GLAT				Sg	Sg	21 15 36.9	+0.4
GLAT				IAML		21 15 37.5	
	comp=E,209nm,0.2s						
GLAT				IAML		21 15 37.5	
	comp=N,206nm,0.2s						
LNXT	**Lenox**	**0.46**	**164**		Pg	21 15 32.1	0.0
LNXT				Sg	Sb	21 15 39.1	-0.8
LNXT				IAML		21 15 39.4	
	comp=E,166nm,0.8s						
CHNM	**Channel**	**0.55**	**204**		Pg	21 15 34.0	+0.2
GNAR	**Gosnell**	**0.65**	**207**		Pg	21 15 35.7	0.0
GNAR				IAML		21 15 50.8	
	comp=N,93nm,0.5s						
PBMO	**Poplar Bluff**	**0.67**	**290**		Pg	21 15 35.6	-0.4
PBMO				IAML		21 15 44.7	
	comp=N,94nm,0.2s						
CGM3	**Cape Girardeau**	**0.75**	**360**	Pg	Pg	21 15 37.5	0.0
CGM3				IAML		21 15 51.4	
	comp=N,102nm,0.1s						
T45A	**Paducah**	**0.94**	**59**		Pb	21 15 41.3	+0.1
T45A	**Paducah**	**0.94**	**59**	Pg	Pg	21 15 40.9	-0.2
T45A	**Paducah**	**0.94**	**59**	IAML		21 15 56.4	
	comp=N,72nm,0.4s						
T45A				IAML		21 16 04.8	
	comp=E,62nm,0.8s						
S44A	**Carbondale**	**1.19**	**15**		Pn	21 15 45.2	-0.3
S44A	**Carbondale**	**1.19**	**15**	Pg	Pn	21 15 44.9	-0.6
S44A	**Carbondale**	**1.19**	**15**	IAML		21 16 05.7	
	comp=N,64nm,0.1s						
T42A	**Van Buren**	**1.25**	**293**	Pn	Pn	21 15 45.9	-0.5
LCAR	**Lake Charles**	**1.30**	**249**		Pn	21 15 46.7	-0.4
LCAR				IAML		21 16 07.5	
	comp=N,39nm,0.4s						
W45A	**Hickory Valley**	**1.44**	**165**	Pn	Pn	21 15 48.9	0.0
W45A					Pb	21 15 49.2	-0.6
FVM	**French Village**	**1.56**	**337**		Pn	21 15 51.1	+0.4
CCM	**Cathedral Cave**	**1.97**	**320**		Pn	21 15 57.3	+1.0
PLAL	**Pickwick Lake**	**2.02**	**140**		Pn	21 15 57.9	+0.9
T47A	**Sharon Grove**	**2.09**	**77**	Pn	Pn	21 15 58.8	+0.9
FCAR	**Ozark Folk Cen**	**2.10**	**253**		Pn	21 15 59.4	+1.2
S39A	**Bolivar**	**3.15**	**292**	Pn	Pn	21 16 13.4	+1.0

ROM 23 22:08:51.5±0.1**, 42°.810N**±0°.004×**13°.133E**±0°.007**, h9**^{km}**, ML1.5**/11**, 2C-2D, Error ellipse: s-maj=0.5km s-min=0.4km az=295.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.03**	**330**	P	Pg	22 08 53.1	-0.1
NRCA				AML	AML		
	comp=E,3035µm,0.2s						
NRCA				AML	AML		
	comp=N,4240µm,0.2s						
NRCA				AML	AML		
	comp=E,2775µm,0.2s						
NRCA				AML	AML		
	comp=N,3980µm,0.2s						
T1245	**Castelsantange**	**0.06**	**41**	P	Pg	22 08 53.9	+0.2
T1245				S	Sg	22 08 55.3	+0.1
T1245				AML	AML		
	comp=E,871µm,0.2s						
T1245				AML	AML		
	comp=N,842µm,1.3s						
T1245				AML	AML		
	comp=E,846µm,0.2s						
T1245				AML	AML		
	comp=N,851µm,1.1s						
T1245				AML	AML		
	comp=N,842µm,0.7s						
T1245				AML	AML		
	comp=E,846µm,1.8s						
T1245				AML	AML		
	comp=E,871µm,1.8s						
T1214	**Arquata del Tr**	**0.07**	**132**	P	Pg	22 08 53.9	+0.2
T1214				S	Sg	22 08 55.4	+0.1
T1214				AML	AML		
	comp=E,392µm,0.5s						
T1214				AML	AML		
	comp=N,586µm,0.6s						
T1212	**Cascia, Frazio**	**0.09**	**228**	P	Pg	22 08 54.2	+0.4
T1212				AML	AML		
	comp=E,234µm,0.4s						
T1212				AML	AML		
	comp=N,298µm,1.1s						
T1212				AML	AML		
	comp=E,234µm,0.4s						
T1212				AML	AML		
	comp=N,298µm,1.0s						
MC2	**Monte Cornacci**	**0.11**	**22**	P	Pg	22 08 55.0	+0.7
T1216	**Preci, Frazion**	**0.12**	**314**	P	Pg	22 08 54.7	+0.4
T1218	**Civita (PG)**	**0.14**	**185**	P	Pg	22 08 55.0	+0.4
T1218				AML	AML		
	comp=E,64µm,0.1s						
T1218				AML	AML		
	comp=N,100µm,0.2s						
T1218				AML	AML		
	comp=E,64µm,0.1s						
T1218				AML	AML		
	comp=N,101µm,0.2s						
T1217	**Poggiodomo (PG**	**0.18**	**237**	P	Pg	22 08 55.8	+0.6
T1256	**Bolognola (MC)**	**0.21**	**19**	S	Sg	22 09 01.1	+2.3
T1256				AML	AML		
	comp=E,33µm,1.4s						
T1256				AML	AML		
	comp=N,34µm,0.5s						
T1256				AML	AML		
	comp=E,33µm,0.6s						
T1241	**Roccafluvione,**	**0.22**	**78**	P	Pg	22 08 56.9	+0.8
T1241				AML	AML		
	comp=N,30µm,0.5s						
T1241				AML	AML		
	comp=E,38µm,0.3s						
T1241				AML	AML		
	comp=N,30µm,0.5s						
FDMO	**Fiordimonte**	**0.23**	**352**	⇓P	Pg	22 08 57.0	+0.8
FDMO				AML	AML		
	comp=E,1832µm,0.8s						
FDMO				AML	AML		
	comp=N,1225µm,0.2s						
FDMO				AML	AML		
	comp=N,2710µm,0.2s						
FDMO				AML	AML		
	comp=E,4330µm,0.3s						
CESI	**CESI - Serrava**	**0.26**	**319**	P	Pg	22 08 57.3	+0.6
T1219	**Muccia, Frazio**	**0.26**	**339**	⇓P	Pg	22 08 57.6	+0.8
T1219				AML	AML		
	comp=N,3135µm,0.1s						
T1219				AML	AML		
	comp=N,3165µm,0.1s						
T1219				AML	AML		
	comp=E,2170µm,0.4s						
T1219				AML	AML		
	comp=E,2135µm,0.6s						
CSP1	**Cessapalombo**	**0.29**	**11**	P	Pb	22 08 58.2	-0.7
T1220	**Camerino, Fraz**	**0.30**	**354**	P	Pb	22 08 58.4	-0.7
T1220				AML	AML		
	comp=E,4490µm,0.3s						
T1220				AML	AML		
	comp=N,1960µm,0.3s						
RM33	**Pellescritta (**	**0.31**	**169**	P	Pg	22 08 58.0	+0.5
RM33				AML	AML		
	comp=E,35µm,0.9s						
RM33				AML	AML		
	comp=N,39µm,0.3s						
TERO	**Teramo**	**0.39**	**118**	⇑P	Pg	22 08 59.6	+0.4
ASSB	**Assisi San Ben**	**0.42**	**304**	P	Pg	22 09 00.2	+0.5
ASSB				AML	AML		
	comp=E,252µm,0.3s						
ASSB				AML	AML		
	comp=N,250µm,0.4s						
SNTG	**Esanatoglia**	**0.47**	**342**	P	Pb	22 09 01.8	-0.1
SNTG				AML	AML		
	comp=N,118µm,0.2s						
SNTG				AML	AML		
	comp=E,111µm,1.0s						
CING	**Cingoli**	**0.57**	**5**	S	Sb	22 09 13.0	+1.1
CING				AML	AML		
	comp=E,153µm,0.2s						
CING				AML	AML		
	comp=N,73µm,1.0s						
CING				AML	AML		
	comp=N,73µm,1.0s						
VIVA	**Pratoni del Vi**	**1.09**	**194**	⇑P	Pg	22 09 11.4	-1.0
VIVA				S	Sg	22 09 25.0	-1.6
SAMA	**S.Maria delle**	**1.10**	**201**	P	Pg	22 09 12.0	-0.6
SAMA				AML	AML		
	comp=E,294µm,0.2s						
SAMA				AML	AML		
	comp=N,266µm,0.1s						

ROM 23 22:09:10.0±0.1**, 43°.014N**±0°.002×**13°.024E**±0°.004**, h8**^{km}**, ML1.6**/16**, 4C-5D, Error ellipse: s-maj=0.3km s-min=0.1km az=72.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.04**	**344**	P	Pg	22 09 11.9	+0.2
T1219				S	Sg	22 09 12.9	-0.1
FDMO	**Fiordimonte**	**0.05**	**64**	P	Pg	22 09 11.9	+0.1
FDMO				S	Sg	22 09 12.9	-0.2
FEMA	**Monte Fema**	**0.06**	**160**	P	Pg	22 09 11.7	-0.3
FEMA				S	Sg	22 09 13.4	+0.1
CESI	**CESI - Serrava**	**0.09**	**264**	P	Pg	22 09 13.0	+0.8
CESI				S	Sg	22 09 14.6	+0.7
CESI				AML	AML		
	comp=N,747µm,0.2s						
CESI				AML	AML		
	comp=E,728µm,0.8s						
CESI				AML	AML		
	comp=E,728µm,1.2s						
T1220	**Camerino, Fraz**	**0.11**	**26**	⇓P	Pg	22 09 12.6	+0.1
T1220				S	Sg	22 09 15.2	+0.9
T1220				AML	AML		
	comp=E,4490µm,0.3s						
T1220				AML	AML		
	comp=N,2010µm,0.5s						
T1216	**Preci, Frazion**	**0.12**	**182**	P	Pg	22 09 12.9	+0.2
T1216				S	Sg	22 09 15.7	+1.0
T1216				AML	AML		
	comp=E,662µm,0.3s						
T1216				AML	AML		
	comp=N,636µm,0.5s						
T1256	**Bolognola (MC)**	**0.15**	**93**	⇑P	Pg	22 09 13.8	+0.6
T1256				S	Sg	22 09 16.4	+0.9
T1256				AML	AML		
	comp=N,509µm,0.2s						
T1256				AML	AML		
	comp=E,381µm,0.3s						
MC2	**Monte Cornacci**	**0.16**	**129**	⇓P	Pg	22 09 14.1	+0.7
MC2				S	Sg	22 09 17.1	+1.2
NRCA	**Norcia**	**0.19**	**160**	⇓P	Pg	22 09 14.8	+0.9
T1245	**Castelsantange**	**0.20**	**142**	P	Pg	22 09 14.7	+0.6
T1245				S	Sg	22 09 18.4	+1.5
GUMA	**Gualdo di Mace**	**0.23**	**78**	P	Pg	22 09 15.7	+1.0
GUMA				S	Sg	22 09 20.0	+2.1
GUMA				AML	AML		

	comp=N,1960µm,0.3s						
GUMA				AML	AML		
	comp=N,1905µm,0.2s						
GUMA				AML	AML		
	comp=E,2360µm,0.2s						
GUMA				AML	AML		
	comp=E,1525µm,0.3s						
SNTG	**Esanatoglia**	**0.25**	**346**	P	Pg	22 09 15.8	+0.8
SNTG				S	Sg	22 09 20.1	+1.7
SNTG				AML	AML		
	comp=E,111µm,1.0s						
SNTG				AML	AML		
	comp=N,118µm,0.2s						
SNTG				AML	AML		
	comp=N,118µm,0.2s						
SNTG				AML	AML		
	comp=E,111µm,1.0s						
T1212	**Cascia, Frazio**	**0.26**	**177**	P	Pg	22 09 15.9	+0.7
T1212				S	Sb	22 09 20.5	-1.2
ASSB	**Assisi San Ben**	**0.27**	**276**	⇓P	Pg	22 09 15.7	+0.3
ASSB				S	Sb	22 09 20.9	-1.0
ASSB				AML	AML		
	comp=E,252µm,0.3s						
ASSB				AML	AML		
	comp=N,250µm,0.4s						
T1214	**Arquata del Tr**	**0.29**	**152**	P	Pg	22 09 16.2	+0.4
T1214				S	Sb	22 09 21.1	-1.4
T1217	**Poggiodomo (PG**	**0.31**	**193**	P	Pb	22 09 17.1	-0.8
T1217				S	Sb	22 09 22.1	-0.9
T1217				AML	AML		
	comp=N,185µm,1.3s						
T1217				AML	AML		
	comp=E,210µm,1.2s						
T1217				AML	AML		
	comp=N,185µm,0.7s						
T1217				AML	AML		
	comp=E,210µm,0.8s						
EL6	**Elcito**	**0.32**	**10**	P	Pg	22 09 17.0	+0.6
EL6				S	Sb	22 09 22.3	-1.1
EL6				AML	AML		
	comp=N,248µm,0.5s						
EL6				AML	AML		
	comp=E,270µm,0.9s						
EL6				AML	AML		
	comp=E,270µm,1.1s						
ATCC	**AVT- Casa Cast**	**0.33**	**301**	P	Pb	22 09 17.4	-0.7
T1241	**Roccafluvione,**	**0.34**	**118**	P	Pg	22 09 17.4	+0.7
T1241				S	Sb	22 09 22.9	-0.9
T1241				AML	AML		
	comp=E,167µm,1.0s						
T1241				AML	AML		
	comp=E,167µm,1.0s						
T1241				AML	AML		
	comp=N,153µm,1.5s						
FOSV	**Fossato di Vic**	**0.34**	**326**	⇑P	Pb	22 09 17.6	-0.7
FOSV				AML	AML		
	comp=N,84µm,0.3s						
FOSV				AML	AML		
	comp=E,68µm,0.3s						
MURB	**Monte Urbino**	**0.44**	**304**	⇑P	Pb	22 09 19.5	-0.6
MURB				S	Sb	22 09 27.6	+0.7
MURB				AML	AML		
	comp=E,202µm,1.1s						
MURB				AML	AML		
	comp=N,121µm,0.2s						
ARRO	**Arrone**	**0.47**	**204**	P	Pb	22 09 20.6	0.0
ARRO				AML	AML		
	comp=N,45µm,1.1s						
ARRO				AML	AML		
	comp=E,69µm,0.8s						
ARRO				AML	AML		
	comp=N,45µm,0.9s						
ARVD	**Arcevia**	**0.49**	**353**	P	Pb	22 09 20.2	-0.7
ARVD				S	Sb	22 09 27.9	-0.3
ARVD				AML	AML		
	comp=E,43µm,1.0s						
ARVD				AML	AML		
	comp=E,43µm,1.0s						
ARVD				AML	AML		
	comp=N,33µm,0.3s						
OFFI	**Offida**	**0.49**	**99**	⇑P	Pb	22 09 21.2	+0.3
OFFI				S	Sb	22 09 30.5	+2.3
OFFI				AML	AML		
	comp=N,197µm,0.4s						
OFFI				AML	AML		
	comp=E,160µm,0.3s						
OFFI				AML	AML		
	comp=E,160µm,1.7s						
T1211	**Morro Reatino**	**0.50**	**195**	P	Pb	22 09 20.3	-0.7
T1211				S	Sb	22 09 27.9	-0.6
T1211				AML	AML		
	comp=E,94µm,0.8s						
T1211				AML	AML		
	comp=N,123µm,0.4s						
T1211				AML	AML		
	comp=N,123µm,1.6s						
FRON	**Frontone**	**0.55**	**337**	⇓P	Pb	22 09 21.5	-0.4
FRON				AML	AML		
	comp=E,38µm,0.3s						
FRON				AML	AML		
	comp=N,67µm,0.3s						
TERO	**Teramo**	**0.58**	**132**	P	Pg	22 09 21.3	+0.1
TERO				S	Sb	22 09 30.3	-0.5
ATVO	**AVT- Monte Val**	**0.58**	**309**	P	Pg	22 09 21.7	+0.4
PIEI	**Pieia**	**0.63**	**326**	P	Pg	22 09 22.2	0.0
PIEI				AML	AML		
	comp=N,19µm,1.5s						
PIEI				AML	AML		
	comp=E,22µm,0.2s						
PIEI				AML	AML		
	comp=N,19µm,0.5s						

*FUNV **23** 22:11:57.1, 10°.43N×63°.30W, h5^{km}, MW3.5*
*TRN **23** 22:11:57.5, 10°.41N×63°.35W, h22^{km}, MD3.8*
ISC 23 22:11:54.7±1.8**, 10°.44N**±0°.05×**63°.34W**±0°.03**, h7**^{km}±14^{km}**,**
n18, σ1^{s}84/28**, 1C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.25**	**24**	⇑*i*P	**Pb**	**22 12 01.0**	**-0.6**
CRUV				*e*S	**Sb**	**22 12 05.3**	**-0.9**
PCRV	**Puerto La Cruz**	**1.30**	**258**	*e*P	**Pg**	**22 12 20.2**	**+0.5**
PCRV				*e*S	**Sn**	**22 12 39.1**	**+2.0**
TPP	**Pointe-a-Pierr**	**1.86**	**94**	*e*P	**Pb**	**22 12 29.5**	**+0.4**
TRN	**Trinidad (W)**	**1.92**	**84**	*e*P	**Pn**	**22 12 28.6**	**+0.9**
TRN				*e*S	**Sn**	**22 12 52.8**	**+0.7**
PRGV	**PARIAGUAN**	**2.11**	**218**	*e*P	**Pb**	**22 12 32.3**	**-1.0**
PRGV				*e*S	**Sb**	**22 12 59.5**	**-0.2**
TBH	**Brigand Hill**	**2.24**	**89**	*e*P	**Pn**	**22 12 33.8**	**+1.6**
GRGR	**Grenville**	**2.36**	**44**	*e*S	**Sn**	**22 13 03.6**	**+0.5**
GRSS	**Sisters**	**2.50**	**42**	*e*S	**Sb**	**22 13 12.0**	**+0.9**
TPR	**Prospect**	**2.62**	**73**	*e*P	**Pn**	**22 12 39.6**	**+2.0**
GCMP	**Grenada, Carri**	**2.77**	**43**	*e*P	**Pb**	**22 12 42.3**	**-2.2**
GCMP				*e*S	**Sn**	**22 13 12.9**	**-0.2**
GCMP				*e*S	**Sb**	**22 13 14.1**	**-4.5**
BIRV	**Birongo**	**2.88**	**271**	*e*P	**Pn**	**22 12 43.2**	**+2.1**
BIRV				*e*S	**Sn**	**22 13 17.2**	**+1.2**
TOSP	**Speyside**	**2.88**	**73**	*e*P	**Pn**	**22 12 42.6**	**+1.5**
TOSP				*e*S	**Sn**	**22 13 16.7**	**+0.6**
TACV	**Tcata**	**3.64**	**266**	*e*P	**Pn**	**22 12 54.0**	**+2.5**
BENV	**Beln**	**4.22**	**264**	*e*P	**Pn**	**22 13 01.2**	**+1.7**
CACV	**CAICARA DEL OR**	**4.26**	**228**	*e*P	**Pn**	**22 12 57.0**	**-3.1**
CACV				*e*S	Sn	22 13 40.5	-10
BAUV	**El Baul**	**4.87**	**253**	*e*P	**Pn**	**22 13 10.4**	**+2.0**
BAUV				*e*S	**Sn**	**22 14 03.8**	**-1.2**
BAUV	**El Baul**	**4.87**	**253**	*e*P	**Pn**	**22 13 09.9**	**+1.5**
MAPV	**Macapo**	**5.07**	**264**	*e*P	**Pn**	**22 13 12.1**	**+0.8**
MAPV				*e*S	**Sn**	**22 14 08.0**	**-2.2**

JMA 23 22:14:20.5±0.0**, 24°.3N**±0°.7×**14°1E**±°**, h136**^{km}**, MV4.1**/13**,**
IOTO ISLANDS REGION, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**2.47**	**16**	P	Pn	22 15 01.0	+0.4
CBIJ	**Chichi jima**	**2.92**	**14**	P	Pn	22 15 06.8	+0.5
CBIJ				*e*S	Sn	22 15 42.0	+0.4
BSO1	**Boso 1**	**10.37**	**358**	*e*P	Pn	22 16 46.5	+1.3
JAG	**Ashikaga**	**12.25**	**353**	*e*P	Pn	22 17 11.0	+0.6
JHO	**Hitachi**	**12.34**	**357**	*e*P	Pn	22 17 12.5	+0.9

ROM 23 22:33:31.8±0.1**, 43°.013N**±0°.003×**13°.020E**±0°.005**,**
h9^{km}**, ML2.3**/40**, 16C-10D, Error ellipse: s-maj=0.4km**
s-min=0.2km az=69.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.04**	**348**	P	Pg	22 33 33.7	0.0
T1219				S	Sg	22 33 34.8	-0.3
T1219				AML	AML		
	comp=E,15700µm,0.6s						
T1219				AML	AML		
	comp=N,23700µm,0.2s						
T1219				AML	AML		
	comp=E,14900µm,0.6s						
T1219				AML	AML		
	comp=E,15750µm,0.6s						
T1219				AML	AML		
	comp=N,23700µm,0.2s						
T1219				AML	AML		
	comp=N,23950µm,0.2s						
T1219				AML	AML		
	comp=E,14850µm,0.6s						
T1219				AML	AML		
	comp=N,23900µm,0.2s						
T1219				AML	AML		
	comp=E,14850µm,1.4s						
T1219				AML	AML		
	comp=E,15700µm,1.4s						
T1219				AML	AML		
	comp=N,23901µm,0.2s						
T1219				AML	AML		
	comp=N,23694µm,0.2s						
T1219				AML	AML		
	comp=E,13319µm,0.1s						
T1219				AML	AML		
	comp=E,12608µm,0.1s						
FDMO	**Fiordimonte**	**0.06**	**64**	P	Pg	22 33 33.7	0.0
FDMO				AML	AML		
	comp=N,7365µm,1.3s						
FDMO				AML	AML		
	comp=E,13550µm,0.3s						
FDMO				AML	AML		
	comp=N,7365µm,0.7s						
FDMO				AML	AML		
	comp=E,13550µm,1.7s						
FDMO				AML	AML		
	comp=N,6699µm,0.2s						
FDMO				AML	AML		
	comp=E,13561µm,0.3s						
FEMA	**Monte Fema**	**0.06**	**156**	P	Pg	22 33 34.0	+0.1
FEMA				S	Sg	22 33 35.4	+0.1
FEMA				AML	AML		
	comp=E,9950µm,0.3s						
FEMA				AML	AML		
	comp=N,6710µm,0.3s						
CESI	**CESI - Serrava**	**0.09**	**265**	P	Pg	22 33 34.8	+0.7
CESI				AML	AML		
	comp=E,4890µm,0.4s						
CESI				AML	AML		
	comp=N,5400µm,0.2s						
CESI				AML	AML		
	comp=N,5400µm,1.8s						
CESI				AML	AML		
	comp=N,5398µm,0.2s						
T1220	**Camerino, Fraz**	**0.11**	**27**	P	Pg	22 33 34.9	+0.5
T1220				S	Sg	22 33 37.2	+0.9
T1220				AML	AML		
	comp=E,25050µm,0.3s						
T1220				AML	AML		
	comp=N,10450µm,1.5s						
T1220				AML	AML		
	comp=E,25000µm,0.3s						
T1220				AML	AML		
	comp=N,10450µm,0.5s						
T1216	**Preci, Frazion**	**0.12**	**180**	P	Pg	22 33 35.2	+0.6
T1216				AML	AML		
	comp=E,2775µm,0.3s						
T1216				AML	AML		
	comp=N,3585µm,0.5s						
T1216				AML	AML		
	comp=E,2775µm,0.4s						
T1216				AML	AML		
	comp=E,2775µm,1.6s						
T1216				AML	AML		
	comp=E,2772µm,0.3s						
SEF1	**Sefro**	**0.14**	**339**	P	Pg	22 33 35.6	+0.6
SEF1				S	Sg	22 33 38.3	+1.1
SEF1				AML	AML		
	comp=E,5265µm,0.2s						
SEF1				AML	AML		
	comp=N,5125µm,0.5s						
SEF1				AML	AML		
	comp=E,5270µm,0.2s						
SEF1				AML	AML		
	comp=N,5125µm,0.5s						
SEF1				AML	AML		
	comp=E,5270µm,0.2s						
SEF1				AML	AML		
	comp=E,5266µm,0.2s						
SEF1				AML	AML		
	comp=N,4465µm,0.2s						
T1256	**Bolognola (MC)**	**0.15**	**92**	P	Pg	22 33 35.6	+0.4
T1256				S	Sg	22 33 38.3	+0.7
T1256				AML	AML		
	comp=E,1790µm,0.8s						
T1256				AML	AML		
	comp=N,2350µm,0.7s						
T1256				AML	AML		
	comp=E,1785µm,0.8s						
T1256				AML	AML		
	comp=N,2345µm,0.7s						
T1256				AML	AML		
	comp=N,2200µm,0.7s						
T1256				AML	AML		
	comp=E,1790µm,0.8s						
T1256				AML	AML		
	comp=E,1925µm,0.8s						
MC2	**Monte Cornacci**	**0.16**	**129**	P	Pg	22 33 35.7	+0.4
NRCA	**Norcia**	**0.19**	**159**	P	Pg	22 33 36.4	+0.6
NRCA				S	Sg	22 33 40.1	+1.5
NRCA				AML	AML		
	comp=N,1770µm,0.3s						
NRCA				AML	AML		
	comp=N,1855µm,0.3s						
NRCA				AML	AML		
	comp=E,2045µm,0.3s						
NRCA				AML	AML		
	comp=E,2015µm,0.3s						
NRCA				AML	AML		
	comp=N,1775µm,0.3s						
NRCA				AML	AML		
	comp=N,1482µm,0.1s						
NRCA				AML	AML		
	comp=N,1399µm,0.1s						
NRCA				AML	AML		
	comp=E,2012µm,0.3s						
NRCA				AML	AML		
	comp=E,2048µm,0.3s						
T1245	**Castelsantange**	**0.20**	**142**	P	Pg	22 33 36.5	+0.5
T1245				S	Sg	22 33 40.4	+1.5
T1245				AML	AML		
	comp=N,3450µm,0.6s						
T1245				AML	AML		
	comp=N,3450µm,0.6s						
T1245				AML	AML		
	comp=E,2240µm,0.3s						
T1245				AML	AML		
	comp=N,3130µm,0.6s						
T1245				AML	AML		
	comp=E,1880µm,0.3s						
T1245				AML	AML		
	comp=N,3130µm,0.6s						
T1245				AML	AML		
	comp=E,1877µm,0.3s						
T1245				AML	AML		
	comp=N,3452µm,0.6s						
T1245				AML	AML		
	comp=E,2238µm,0.3s						
GAG1	**Gagliole**	**0.23**	**9**	⇓P	Pg	22 33 37.9	+1.4
GUMA	**Gualdo di Mace**	**0.24**	**78**	P	Pg	22 33 37.5	+0.8
GUMA				S	Sg	22 33 41.8	+1.9
GUMA				AML	AML		
	comp=E,6280µm,0.3s						
GUMA				AML	AML		
	comp=E,8730µm,0.3s						
GUMA				AML	AML		
	comp=E,8730µm,1.7s						
GUMA				AML	AML		
	comp=N,6610µm,0.3s						
GUMA				AML	AML		
	comp=N,6285µm,0.3s						
GUMA				AML	AML		
	comp=N,6285µm,0.3s						
GUMA				AML	AML		
	comp=E,8715µm,0.3s						
GUMA				AML	AML		
	comp=N,6611µm,0.3s						
GUMA				AML	AML		
	comp=E,6282µm,0.3s						
SNTG	**Esanatoglia**	**0.25**	**347**	P	Pg	22 33 37.6	+0.7
SNTG				S	Sg	22 33 42.1	+1.8
SNTG				AML	AML		
	comp=E,831µm,1.2s						
SNTG				AML	AML		
	comp=N,850µm,1.0s						
SNTG				AML	AML		
	comp=N,824µm,1.0s						
SNTG				AML	AML		
	comp=N,850µm,1.0s						
SNTG				AML	AML		
	comp=N,850µm,1.0s						
SNTG				AML	AML		
	comp=E,831µm,0.8s						
SNTG				AML	AML		
	comp=E,792µm,0.2s						
SNTG				AML	AML		
	comp=N,824µm,1.0s						
SNTG				AML	AML		
	comp=N,804µm,0.2s						
SNTG				AML	AML		
	comp=E,817µm,0.1s						
SNTG				AML	AML		
	comp=N,735µm,0.1s						
SNTG				AML	AML		
	comp=E,792µm,0.2s						
T1212	**Cascia, Frazio**	**0.26**	**176**	P	Pb	22 33 37.9	-0.8
T1212				S	Sb	22 33 42.4	-1.0
T1212				AML	AML		
	comp=E,1585µm,0.3s						
T1212				AML	AML		
	comp=N,1440µm,0.3s						
T1212				AML	AML		
	comp=E,1580µm,0.4s						
T1212				AML	AML		
	comp=N,1410µm,0.3s						
T1212				AML	AML		
	comp=N,1440µm,0.3s						
T1212				AML	AML		
	comp=E,1580µm,0.4s						
T1212				AML	AML		
	comp=N,1410µm,0.3s						
T1212				AML	AML		
	comp=E,1581µm,0.4s						
T1212				AML	AML		
	comp=N,1444µm,0.3s						
T1212				AML	AML		
	comp=E,1587µm,0.3s						
T1212				AML	AML		
	comp=N,1411µm,0.3s						
ASSB	**Assisi San Ben**	**0.27**	**277**	⇑P	Pb	22 33 38.0	-0.8
ASSB				AML	AML		
	comp=E,1375µm,0.3s						
ASSB				AML	AML		
	comp=N,1630µm,0.3s						
ASSB				AML	AML		
	comp=E,1378µm,0.3s						
ASSB				AML	AML		
	comp=N,1629µm,0.3s						
T1214	**Arquata del Tr**	**0.29**	**151**	P	Pg	22 33 38.1	+0.5
T1214				S	Sb	22 33 43.3	-0.9
T1214				AML	AML		
	comp=E,756µm,0.7s						
T1214				AML	AML		
	comp=N,637µm,1.1s						
T1214				AML	AML		
	comp=E,700µm,0.3s						
T1214				AML	AML		
	comp=N,624µm,0.3s						
T1214				AML	AML		
	comp=E,756µm,0.6s						
T1214				AML	AML		
	comp=N,638µm,1.1s						
T1214				AML	AML		
	comp=E,700µm,0.4s						
T1214				AML	AML		
	comp=E,700µm,1.6s						
T1214				AML	AML		
	comp=N,624µm,0.3s						
T1214				AML	AML		
	comp=E,756µm,1.4s						
T1214				AML	AML		
	comp=E,699µm,0.3s						
T1214				AML	AML		
	comp=N,635µm,0.3s						
T1214				AML	AML		
	comp=E,739µm,0.3s						
T1214				AML	AML		
	comp=N,624µm,0.3s						
T1217	**Poggiodomo (PG**	**0.31**	**192**	P	Pg	22 33 38.7	+0.7
T1217				AML	AML		
	comp=E,869µm,1.1s						
T1217				AML	AML		
	comp=E,868µm,1.2s						
T1217				AML	AML		
	comp=N,766µm,1.3s						
T1217				AML	AML		
	comp=N,766µm,0.7s						
T1217				AML	AML		
	comp=E,868µm,0.8s						
T1217				AML	AML		
	comp=E,711µm,0.3s						
T1217				AML	AML		
	comp=E,749µm,0.3s						
T1217				AML	AML		
	comp=N,750µm,0.3s						
EL6	**Elcito**	**0.32**	**11**	⇑P	Pg	22 33 38.8	+0.6
EL6				AML	AML		
	comp=E,1655µm,0.4s						
EL6				AML	AML		
	comp=N,1280µm,1.0s						
EL6				AML	AML		
	comp=E,1650µm,0.4s						
EL6				AML	AML		
	comp=N,1275µm,1.0s						
EL6				AML	AML		
	comp=E,1486µm,0.2s						
EL6				AML	AML		
	comp=N,1264µm,0.3s						
ATCC	**AVT- Casa Cast**	**0.33**	**302**	⇑P	Pb	22 33 39.2	-0.6
ATCC				AML	AML		
	comp=N,819µm,0.8s						
ATCC				AML	AML		
	comp=E,1228µm,0.3s						
ATCC				AML	AML		
	comp=E,1228µm,0.3s						
ATCC				AML	AML		
	comp=N,688µm,0.3s						
FOSV	**Fossato di Vic**	**0.34**	**326**	⇓P	Pb	22 33 39.4	-0.7
FOSV				AML	AML		
	comp=E,552µm,0.2s						
FOSV				AML	AML		
	comp=N,666µm,0.3s						
FOSV				AML	AML		
	comp=N,665µm,0.3s						
FOSV				AML	AML		
	comp=E,552µm,0.2s						
T1241	**Roccafluvione,**	**0.34**	**117**	P	Pg	22 33 39.1	+0.6
T1241				AML	AML		
	comp=E,710µm,0.4s						
T1241				AML	AML		
	comp=N,670µm,0.7s						
T1241				AML	AML		
	comp=E,683µm,0.4s						
T1241				AML	AML		
	comp=N,666µm,0.7s						
T1241				AML	AML		
	comp=E,710µm,0.4s						
T1241				AML	AML		
	comp=N,670µm,0.6s						
T1241				AML	AML		
	comp=N,669µm,0.6s						
T1241				AML	AML		
	comp=N,666µm,0.7s						
T1218	**Civita (PG)**	**0.35**	**168**	P	Pg	22 33 39.3	+0.5
T1218				AML	AML		
	comp=E,508µm,0.4s						

T1218				AML	AML		
	comp=N,804µm,0.3s						
T1218				AML	AML		
	comp=E,465µm,0.4s						
T1218				AML	AML		
	comp=N,808µm,0.6s						
T1218				AML	AML		
	comp=E,508µm,0.4s						
T1218				AML	AML		
	comp=N,808µm,0.6s						
T1218				AML	AML		
	comp=N,804µm,0.3s						
T1218				AML	AML		
	comp=E,465µm,0.4s						
T1218				AML	AML		
	comp=E,465µm,0.4s						
T1218				AML	AML		
	comp=N,804µm,0.3s						
T1218				AML	AML		
	comp=N,804µm,0.3s						
T1218				AML	AML		
	comp=E,508µm,0.4s						
CING	**Cingoli**	**0.39**	**19**	⇑P	Pg	22 33 39.9	+0.6
CING				AML	AML		
	comp=N,470µm,1.2s						
CING				AML	AML		
	comp=E,740µm,0.2s						
CING				AML	AML		
	comp=N,362µm,0.1s						
CING				AML	AML		
	comp=E,740µm,0.2s						
MOMA	**Monte Martano**	**0.39**	**238**	⇑P	Pb	22 33 40.2	-0.7
MOMA				AML	AML		
	comp=E,347µm,1.2s						
MOMA				AML	AML		
	comp=N,413µm,0.9s						
MOMA				AML	AML		
	comp=E,357µm,0.2s						
MOMA				AML	AML		
	comp=E,347µm,1.2s						
MOMA				AML	AML		
	comp=N,414µm,0.9s						
MOMA				AML	AML		
	comp=N,280µm,0.6s						
MOMA				AML	AML		
	comp=N,279µm,0.3s						
MURB	**Monte Urbino**	**0.44**	**305**	⇑P	Pb	22 33 41.2	-0.5
MURB				AML	AML		
	comp=N,960µm,0.3s						
MURB				AML	AML		
	comp=E,1510µm,0.3s						
MURB				AML	AML		
	comp=N,1069µm,0.3s						
MURB				AML	AML		
	comp=E,1445µm,1.1s						
MURB				AML	AML		
	comp=E,1445µm,0.9s						
MURB				AML	AML		
	comp=N,959µm,0.3s						
MURB				AML	AML		
	comp=E,1296µm,0.3s						
MURB				AML	AML		
	comp=N,961µm,0.3s						
MURB				AML	AML		
	comp=E,1511µm,0.3s						
MURB				AML	AML		
	comp=N,1069µm,0.3s						
SSFR	**Montelago di S**	**0.46**	**338**	⇑P	Pb	22 33 41.6	-0.5
SSFR				AML	AML		
	comp=N,868µm,0.2s						
SSFR				AML	AML		
	comp=E,1030µm,0.2s						
SSFR				AML	AML		
	comp=N,820µm,0.2s						
SSFR				AML	AML		
	comp=E,1096µm,0.2s						
SSFR				AML	AML		
	comp=E,1096µm,0.2s						
SSFR				AML	AML		
	comp=N,869µm,0.2s						
SSFR				AML	AML		
	comp=N,820µm,0.2s						
SSFR				AML	AML		
	comp=E,1031µm,0.2s						
ARRO	**Arrone**	**0.47**	**203**	⇑P	Pb	22 33 41.6	-0.6
ARRO				S	Sb	22 33 49.6	+0.3
ARRO				AML	AML		
	comp=E,330µm,0.2s						
ARRO				AML	AML		
	comp=N,223µm,0.9s						
ARRO				AML	AML		
	comp=N,223µm,1.1s						
ARRO				AML	AML		
	comp=E,330µm,0.2s						
ATFO	**Monte Foce - G**	**0.48**	**317**	⇑P	Pb	22 33 41.9	-0.6
ATFO				AML	AML		
	comp=N,226µm,0.2s						
ATFO				AML	AML		
	comp=E,230µm,0.3s						
ATFO				AML	AML		
	comp=N,226µm,0.2s						
ARVD	**Arcevia**	**0.49**	**353**	⇓P	Pb	22 33 42.0	-0.6
ARVD				S	Sb	22 33 50.2	+0.4
ARVD				AML	AML		
	comp=N,233µm,0.2s						
ARVD				AML	AML		
	comp=E,292µm,0.2s						
ARVD				AML	AML		
	comp=N,233µm,0.2s						
ARVD				AML	AML		
	comp=E,292µm,0.1s						
OFFI	**Offida**	**0.49**	**99**	⇑P	Pb	22 33 42.8	+0.2
OFFI				AML	AML		
	comp=E,509µm,0.8s						
OFFI				AML	AML		
	comp=N,701µm,0.4s						
OFFI				AML	AML		
	comp=E,502µm,0.3s						
OFFI				AML	AML		
	comp=N,701µm,0.5s						
T1211	**Morro Reatino**	**0.49**	**194**	P	Pb	22 33 42.0	-0.6
T1211				AML	AML		
	comp=N,572µm,0.4s						
T1211				AML	AML		
	comp=E,319µm,0.3s						
T1211				AML	AML		
	comp=E,323µm,0.3s						
T1211				AML	AML		
	comp=N,592µm,0.4s						
T1211				AML	AML		
	comp=E,323µm,0.3s						
T1211				AML	AML		
	comp=E,319µm,0.3s						
CESX	**Cesi**	**0.52**	**219**	⇑P	Pg	22 33 42.3	+0.5
CESX				AML	AML		
	comp=E,536µm,0.3s						
CESX				AML	AML		
	comp=N,434µm,0.4s						
CESX				AML	AML		
	comp=N,434µm,0.4s						
CESX				AML	AML		
	comp=E,535µm,0.3s						
RM33	**Pellescritta (**	**0.52**	**164**	⇓P	Pg	22 33 42.2	+0.3
RM33				S	Sb	22 33 50.6	-0.3
RM33				AML	AML		
	comp=E,244µm,1.6s						
RM33				AML	AML		
	comp=N,252µm,1.2s						
RM33				AML	AML		
	comp=E,244µm,0.4s						
RM33				AML	AML		
	comp=N,252µm,0.8s						
RM33				AML	AML		
	comp=N,247µm,0.3s						
RM33				AML	AML		
	comp=N,260µm,0.3s						
FRON	**Frontone**	**0.55**	**337**	⇑P	Pg	22 33 43.0	+0.6
FRON				AML	AML		
	comp=E,221µm,0.8s						
FRON				AML	AML		
	comp=E,221µm,1.2s						
FRON				AML	AML		
	comp=N,384µm,0.3s						
FRON				AML	AML		
	comp=E,213µm,0.2s						
CAMP	**Campotosto**	**0.56**	**149**	⇓P	Pg	22 33 42.7	+0.1
CAMP				AML	AML		
	comp=E,122µm,0.9s						
CAMP				AML	AML		
	comp=N,114µm,0.5s						
CAMP				AML	AML		
	comp=N,114µm,0.5s						
TERO	**Teramo**	**0.58**	**132**	⇓P	Pg	22 33 43.0	0.0
TERO				AML	AML		
	comp=N,240µm,0.9s						
TERO				AML	AML		
	comp=E,217µm,0.8s						
TERO				AML	AML		
	comp=E,226µm,0.6s						
TERO				AML	AML		
	comp=N,230µm,0.9s						
TERO				AML	AML		
	comp=E,175µm,0.2s						
ATVO	**AVT- Monte Val**	**0.58**	**310**	⇑P	Pg	22 33 43.5	+0.5
ATVO				S	Sb	22 33 53.2	+0.7
ATVO				AML	AML		
	comp=N,128µm,0.7s						
ATVO				AML	AML		
	comp=E,166µm,0.6s						
ATVO				AML	AML		
	comp=N,121µm,0.6s						
T1222	**Castel Sant'An**	**0.61**	**179**	S	Sb	22 33 52.6	-0.8
ATPI	**Pietralunga -**	**0.63**	**314**	⇑P	Pb	22 33 44.5	-0.5
ATPI				S	Sb	22 33 55.0	+1.1
ATPI				AML	AML		
	comp=N,106µm,1.2s						
ATPI				AML	AML		
	comp=E,90µm,0.6s						
ATPI				AML	AML		
	comp=N,106µm,1.2s						
PIEI	**Pieia**	**0.63**	**326**	⇑P	Pb	22 33 44.7	-0.4
PIEI				S	Sb	22 33 55.4	+1.4
PIEI				AML	AML		
	comp=E,146µm,1.1s						
PIEI				AML	AML		
	comp=N,144µm,0.2s						
PIEI				AML	AML		
	comp=E,146µm,0.9s						
PIEI				AML	AML		
	comp=E,143µm,0.3s						
PIEI				AML	AML		
	comp=N,144µm,0.2s						
MPAG	**Monte Paganucc**	**0.65**	**343**	P	Pb	22 33 45.0	-0.2
MPAG				AML	AML		
	comp=E,191µm,0.3s						
MPAG				AML	AML		
	comp=N,226µm,0.5s						
MPAG				AML	AML		
	comp=N,226µm,1.5s						
MPAG				AML	AML		
	comp=N,171µm,0.4s						
MPAG				AML	AML		
	comp=E,191µm,0.3s						
GIGS	**Gran Sasso**	**0.69**	**144**	P	Pg	22 33 45.0	-0.1
GIGS				AML	AML		
	comp=N,38µm,0.3s						
GIGS				AML	AML		
	comp=E,37µm,0.3s						
GIGS				AML	AML		
	comp=E,37µm,0.5s						
GIGS				AML	AML		
	comp=N,38µm,0.3s						
APEC	**Apecchio**	**0.70**	**321**	S	Sn	22 33 57.9	-0.9
APEC				AML	AML		
	comp=E,114µm,1.2s						
APEC				AML	AML		
	comp=N,112µm,0.6s						
APEC				AML	AML		
	comp=E,114µm,0.8s						
FSSB	**Fossombrone**	**0.70**	**346**	⇓P	Pb	22 33 45.9	-0.3
FSSB				S	Sn	22 33 57.7	-1.2
FSSB				AML	AML		
	comp=E,494µm,0.4s						
FSSB				AML	AML		
	comp=N,774µm,0.3s						
FSSB				AML	AML		
	comp=E,491µm,0.3s						
FSSB				AML	AML		
	comp=N,774µm,0.3s						
BADI	**Badiali**	**0.75**	**312**	S	Sn	22 33 59.5	-0.7
SACS	**San Casciano d**	**0.83**	**259**	⇓P	Pn	22 33 49.2	-0.5
SACS				AML	AML		
	comp=E,68µm,0.6s						
SACS				AML	AML		
	comp=N,58µm,0.9s						
SACS				AML	AML		
	comp=N,55µm,0.4s						
SACS				AML	AML		
	comp=N,63µm,0.7s						
CAFI	**Castiglion Fio**	**0.83**	**293**	S	Sn	22 34 02.0	-0.1
CAFI				AML	AML		
	comp=E,90µm,0.5s						
CAFI				AML	AML		
	comp=N,91µm,0.5s						
CAFI				AML	AML		
	comp=N,91µm,1.5s						
CAFI				AML	AML		
	comp=N,91µm,0.5s						
CAFI				AML	AML		
	comp=E,90µm,0.5s						
PARC	**Parchiule**	**0.85**	**318**	⇓P	Pb	22 33 48.7	-0.1
PARC				AML	AML		
	comp=N,76µm,0.8s						
PARC				AML	AML		
	comp=N,76µm,1.2s						
PARC				AML	AML		
	comp=E,64µm,0.5s						
PARC				AML	AML		
	comp=N,71µm,0.6s						
FAGN	**Fagnano**	**0.85**	**151**	⇑P	Pb	22 33 48.7	-0.1
FAGN				AML	AML		
	comp=E,240µm,0.5s						
FAGN				AML	AML		
	comp=N,242µm,0.4s						
VCEL	**Villa Celiera**	**0.86**	**135**	⇓P	Pg	22 33 48.4	0.0
VCEL				AML	AML		
	comp=N,144µm,1.6s						
VCEL				AML	AML		
	comp=E,170µm,1.3s						
VCEL				AML	AML		
	comp=N,144µm,0.4s						
VCEL				AML	AML		
	comp=N,138µm,0.4s						
ABTA	**Abfaltersbach**	**3.75**	**355**	*e*Pn	Pn	22 34 33.4	+3.5
	comp=N,0.6nm,0.3s						
KBA	**Koelnbreinsper**	**4.07**	**3**	*e*Pn	Pn	22 34 38.0	+3.6
	comp=N,0.4nm,0.3s						

ROM 23 22:34:13.9±0.1**,42°642N**±0°006×**13°255E**±0°005**,
h13^{km},ML2.1**/7**,5C-1D,Error ellipse: s-maj=0.7km
s-min=0.4km az=198.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMA1	**SAN MARTINO**	**0.06**	**101**	P	Pg	22 34 16.9	+0.4
SMA1				AML	AML		
	comp=E,2690µm,0.5s						
SMA1				AML	AML		
	comp=N,1625µm,0.4s						
T1218	**Civita (PG)**	**0.11**	**285**	P	Pg	22 34 17.3	+0.2
T1218				S	Sg	22 34 19.5	+0.2
T1218				AML	AML		
	comp=E,1124µm,0.3s						
T1218				AML	AML		
	comp=N,1770µm,0.3s						
T1218				AML	AML		
	comp=E,1010µm,0.3s						
T1218				AML	AML		
	comp=E,1120µm,0.3s						
T1218				AML	AML		
	comp=E,1010µm,0.3s						
T1218				AML	AML		
	comp=N,1840µm,0.3s						
T1214	**Arquata del Tr**	**0.12**	**344**	P	Pb	22 34 17.8	-0.4
RM33	**Pellescritta (**	**0.14**	**193**	P	Pg	22 34 17.6	+0.2
RM33				AML	AML		
	comp=E,372µm,0.3s						
RM33				AML	AML		
	comp=N,232µm,1.1s						
RM33				AML	AML		
	comp=N,232µm,0.9s						
T1212	**Cascia, Frazio**	**0.19**	**305**	P	Pg	22 34 18.5	+0.3
T1212				S	Sg	22 34 21.8	+0.6
NRCA	**Norcia**	**0.22**	**332**	P	Pg	22 34 19.1	+0.5
NRCA				AML	AML		
	comp=N,2160µm,0.2s						
NRCA				AML	AML		
	comp=E,1455µm,0.1s						
NRCA				AML	AML		
	comp=N,2340µm,0.2s						
NRCA				AML	AML		
	comp=E,1280µm,0.1s						
T1245	**Castelsantange**	**0.22**	**347**	AML	AML		
	comp=E,555µm,0.4s						
T1245				AML	AML		
	comp=E,556µm,0.3s						
T1245				AML	AML		
	comp=N,797µm,0.7s						
T1245				AML	AML		
	comp=N,788µm,1.0s						
T1245				AML	AML		
	comp=E,568µm,0.3s						
T1245				AML	AML		
	comp=N,788µm,1.0s						
T1245				AML	AML		
	comp=N,797µm,1.3s						
T1217	**Poggiodomo (PG**	**0.25**	**286**	⇑P	Pg	22 34 19.6	+0.4
T1241	**Roccafluvione,**	**0.25**	**31**	⇑P	Pb	22 34 19.8	-0.5
TERO	**Teramo**	**0.26**	**94**	P	Pg	22 34 19.6	+0.3
TERO				S	Sg	22 34 23.8	+0.8
MC2	**Monte Cornacci**	**0.28**	**350**	P	Pg	22 34 20.0	+0.2
GIGS	**Gran Sasso**	**0.30**	**130**	⇑P	Pg	22 34 20.3	+0.2
T1216	**Preci, Frazion**	**0.30**	**325**	AML	AML		
	comp=E,428µm,1.5s						
T1216				AML	AML		
	comp=N,576µm,0.2s						
T1216				AML	AML		
	comp=E,428µm,0.5s						
T1211	**Morro Reatino**	**0.32**	**250**	⇑P	Pg	22 34 20.5	+0.1
T1256	**Bolognola (MC)**	**0.36**	**357**	P	Pg	22 34 21.4	+0.1
ARRO	**Arrone**	**0.37**	**260**	P	Pg	22 34 20.8	-0.4
GUMA	**Gualdo di Mace**	**0.42**	**8**	P	Pb	22 34 23.3	0.0
OFFI	**Offida**	**0.43**	**47**	⇑P	Pb	22 34 23.8	+0.5
T1220	**Camerino, Fraz**	**0.48**	**345**	P	Pg	22 34 22.7	-0.8
T1220				AML	AML		
	comp=N,6233µm,1.6s						
T1220				AML	AML		
T1220				AML	AML		
	comp=N,6233µm,0.4s						
ASSB	**Assisi San Ben**	**0.59**	**313**	⇓P	Pg	22 34 24.6	-0.9
SNTG	**Esanatoglia**	**0.66**	**339**	P	Pg	22 34 26.1	-0.5

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*IDC **23** 22:58:06.6±0.9, 38°19N×73°58E, h0^{km}, mb3.6/11,
mbtmp3.7/18, ML3.1/7, MS3.1/8, Error ellipse:
s-maj=17.1km s-min=15.4km az=162.0*
*BJI **23** 22:58:11.0±0.0, 38°43N×73°06E, h48^{km}, mb4.0/12,
mB4.5/2, ML3.8/2, Ms3.6/1, Ms7 3.3/2*
*NNC **23** 22:58:12.2±1.2, 38°52N×73°12E, h0^{km}, mb4.2, mpv3.9,
Error ellipse: s-maj=9.3km s-min=6.1km az=0.0*
*NEIC **23** 22:58:13.6±2.5, 38°31N±0°06×72°99E±0°09, h67^{km}±16^{km},
mb4.1/7, Error ellipse: s-maj=10.2km s-min=8.3km
az=117.0*

ISC 23 22:58:07.5±0.5**,38°02N**±0°04×**73°02E**±0°05**,h10^{km},n98,
σ2^{s}60**/97**,mb3.8**/16**,MS3.1**/4**,8C-9D,Tajikistan-Xinjiang
border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**2.33**	**296**	Pn	**Pb**	**22 58 48.9**	**-0.9**
BTK	**Batken**	**2.66**	**321**		**Pn**	**22 58 51.9**	**+1.4**
KSH	**Kashi**	**2.76**	**56**	P	Pn	22 58 45.1	-6.8
KSH				sP	Pg	22 59 04.3	+4.0
KSH				S	Sn	22 59 12.8	-12
CHGR	**Chuyangaron**	**3.10**	**283**	Pn	**Pb**	**22 58 59.6**	**-3.1**
NRN	**Naryn**	**4.12**	**33**	Pn	**Pn**	**22 59 10.4**	**-0.4**
AML	**Almayashu**	**4.14**	**7**	P	**Pn**	**22 59 10.7**	**-0.5**
	SNR=27						
CEP	**Cherat**	**4.28**	**192**	P	**Pb**	**22 59 24.2**	**+1.3**
CHCP	**Chirah Chowk**	**4.35**	**177**	P	**Pb**	**22 59 23.3**	**-0.8**
NIL	**Nilore**	**4.36**	**177**		**Pb**	**22 59 22.4**	**-1.8**
UCH	**Uchtor**	**4.36**	**15**	P	**Pn**	**22 59 13.8**	**-0.4**
	SNR=16						
TAS	**Tashkent**	**4.38**	**320**	Pn	**Pn**	**22 59 14.5**	**+0.5**
EKS2	**Erkin-Say**	**4.68**	**7**	P	Pb	22 59 23.9	-5.8
	SNR=10						
KBL	**Kabul**	**4.72**	**224**	Pn	**Pb**	**22 59 25.9**	**-4.7**
MRKS	**Merke**	**4.73**	**2**	Pg	**Pb**	**22 59 29.0**	**-1.5**
	8.2nm,0.4s						
MRKS				Lg	Lg	23 00 25.6	
	46nm,0.6s						
AAK	**Ala-Archa**	**4.75**	**13**	P	**Pn**	**22 59 20.0**	**+0.6**
	SNR=48						
AAK	**Ala-Archa**	**4.75**	**13**	Pn	**Pn**	**22 59 18.9**	**-0.4**
	2.0nm,0.3s,baz=189,slow=11,SNR=32						
AAK				Sn	**Sn**	**23 00 16.5**	**+1.9**
	1.9nm,0.3s,baz=191,slow=7.9,SNR=3.8						
AAK				LR	LR	23 01 13.6	
	comp=Z,128nm,18.2s,baz=218,slow=42						
	5.6nm,0.4s						
AAK	**Ala-Archa**	**4.75**	**13**	Pn	**Pn**	**22 59 18.5**	**-0.8**
KBK	**Karagaybulak**	**4.87**	**17**	P	**Pn**	**22 59 21.8**	**+0.9**
	SNR=7.8						
ULHL	**Ulahol**	**4.90**	**29**	P	**Pn**	**22 59 20.6**	**-0.8**
	SNR=10						
FRU1	**Bishkek**	**4.95**	**14**	Pn	**Pn**	**22 59 21.7**	**-0.2**
CHMS	**Chumysh**	**5.15**	**14**	P	**Pn**	**22 59 27.6**	**+2.9**
	SNR=5.4						
KDJ	**Kajisay**	**5.21**	**37**		**Pn**	**22 59 26.3**	**+0.7**
TKM2	**Tokmak 2**	**5.28**	**21**	P	**Pn**	**22 59 27.1**	**+0.5**
	SNR=5.9						
THW	**Thamme Wali**	**5.31**	**192**	P	**Pb**	**22 59 36.1**	**-4.3**
USP	**Ospenovka**	**5.37**	**12**	P	**Pn**	**22 59 27.1**	**-0.6**
	SNR=21						
KK31	**Karatay Array**	**5.43**	**340**	Pn	**Pn**	**22 59 27.3**	**-1.2**
KK31	**Karatay Array**	**5.43**	**340**	⇓Pn	**Pn**	**22 59 28.5**	**0.0**
	8.2nm,0.5s,baz=161,slow=12,SNR=115						
KK31				⇓Sn	**Sn**	**23 00 28.2**	**-2.8**
	31nm,0.8s						
KK31				⇓Lg	Lg	23 00 53.6	
	46nm,0.8s						
KKAR	**Karatay Array**	**5.43**	**340**	Pn	**Pn**	**22 59 27.8**	**-0.7**
KKAR	**Karatay Array**	**5.43**	**340**		**Pn**	**22 59 27.9**	**-0.6**
KST	**Kastek**	**5.50**	**23**	Pg	**Pb**	**22 59 43.1**	**-0.7**
	9.0nm,0.9s						
KST				Lg	Lg	23 00 49.8	
	44nm,0.9s						
JMU	**Jammu**	**5.50**	**163**	*e*P	Pb	22 59 36.6	-7.2
JMU				*e*S	**Sb**	**23 00 41.3**	**-8.5**
SGDS	**Sogindy**	**5.57**	**12**	Pg	**Pb**	**22 59 43.8**	**-1.0**
	17nm,0.6s						
SGDS				Lg	Lg	23 00 50.5	
	25nm,0.9s						
DGS	**Degeres**	**5.63**	**21**	Pg	**Pb**	**22 59 45.3**	**-0.5**
	21nm,0.8s						
DGS				Lg	Lg	23 00 54.2	
	41nm,1.2s						
IZV	**Izvestkoviy**	**5.71**	**28**	Pg	**Pb**	**22 59 48.7**	**+1.3**
	8.0nm,1.0s						
IZV				Lg	Lg	23 00 59.6	
	43nm,1.0s						
MTBS	**Maitube**	**5.73**	**26**	Pg	**Pb**	**22 59 48.6**	**+1.0**
	8.8nm,0.5s						
MTBS				Lg	Lg	23 00 59.5	
	20nm,1.0s						
TNSS	**Tian-Shan**	**5.84**	**30**	Pg	**Pb**	**22 59 50.9**	**+1.2**
	7.8nm,0.7s						
TNSS				Lg	Lg	23 01 03.0	
	17nm,1.3s						
THN	**Thein Dam**	**5.99**	**158**	*e*P	Pn	22 59 42.7	+6.5
THN				*e*S	Sn	23 00 53.9	+9.1
KNDC	**Almaty**	**6.00**	**29**	⇑Pg	**Pb**	**22 59 54.8**	**+2.6**
	36nm,0.8s						
KNDC				⇓Lg	Lg	23 01 06.8	
	228nm,1.1s						
KOTS	**Kotyrbulak**	**6.07**	**30**	Pg	**Pb**	**22 59 54.7**	**+1.2**
	16nm,1.1s						
KOTS				Lg	Lg	23 01 09.8	
	74nm,1.0s						
PRZ	**Przheval'sk**	**6.07**	**41**	Pn	**Pn**	**22 59 38.3**	**+0.8**
KTBS	**Karatobe**	**6.33**	**25**	Pg	**Pb**	**22 59 58.7**	**+0.9**
	8.0nm,0.6s						
KTBS				Lg	Lg	23 01 17.0	
	52nm,1.2s						
KURS	**Kuram**	**6.72**	**34**	Pg	**Pb**	**23 00 05.8**	**+1.4**
	7.1nm,0.8s						
KURS				Lg	Lg	23 01 29.3	
	26nm,1.6s						

KPKS	**Kokpek**	**6.94**	**37**	Pg	**Pb**	**23 00 09.2**	**+1.0**
	4.4nm,0.5s						
KPKS				Lg	Lg	23 01 34.5	
	38nm,0.8s						
PDGK	**Podgornoye**	**7.24**	**41**	Pg	**Pb**	**23 00 15.3**	**+2.0**
	2.0nm,0.8s						
PDGK				Lg	Lg	23 01 45.3	
	9.7nm,1.1s						
PDGK	**Podgornoye**	**7.24**	**41**	⇑Pn	**Pn**	**22 59 53.0**	**-0.4**
	6.7nm,0.7s						
PDGK				⇑Pg	Pg	23 00 20.1	-5.9
	12nm,1.1s						
PDGK				⇓Lg	Lg	23 01 50.5	
	41nm,1.3s						
SMLA	**Simla**	**7.67**	**152**	*e*P	Pn	23 00 05.0	+5.7
SMLA				*e*P	Pn	23 00 06.3	+7.0
SMLA				*e*S	**Sn**	**23 01 30.4**	**+4.1**
SMLA				*e*S	**Sn**	**23 01 33.3**	**+7.0**
SMLA				IAML		23 01 35.9	
	comp=N,34nm,0.5s						
SMLA				IAML		23 01 44.3	
	comp=E,29nm,0.6s						
SMLA				IAML		23 01 44.3	
	comp=E,29nm,0.7s						
SMLA				IAML		23 01 48.0	
	comp=N,34nm,0.4s						
OTUK	**Ortayu**	**10.24**	**357**	⇑Pn	**Pn**	**23 00 32.6**	**-1.8**
	comp=N,2.4nm,0.8s						
OTUK				⇑Lg	Lg	23 03 20.2	
	comp=N,41nm,1.3s						
KUDL	**Kundal**	**10.26**	**163**	*e*S	**Sn**	**23 02 30.9**	**+0.9**
MAKZ	**Makanchi**	**11.00**	**34**	Pn	**Pn**	**23 00 43.4**	**-1.4**
MAKZ	**Makanchi**	**11.00**	**34**	⇓Pn	**Pn**	**23 00 43.5**	**-1.4**
	comp=N,1.2nm,0.7s						
MAKZ				⇑Lg	Lg	23 03 47.2	
	comp=N,6.7nm,1.2s						
MK31	**Makanchi Array**	**11.13**	**35**		**Pn**	**23 00 46.6**	**0.0**
MK31	**Makanchi Array**	**11.13**	**35**	Pn	**Pn**	**23 00 45.7**	**-0.9**
	comp=N,2.9nm,0.9s,baz=213,slow=14,SNR=15						
MK31				⇑Lg	Lg	23 03 55.1	
	comp=N,1.7nm,0.8s,baz=221,slow=25,SNR=3.9						
MKAR	**Makanchi Array**	**11.13**	**35**	Pn	**Pn**	**23 00 44.0**	**-2.6**
	comp=N,0.1nm,0.3s,baz=218,slow=14,SNR=13						
MKAR				Lg	Lg	23 03 47.3	
	baz=226,slow=27,SNR=2.2						
MKAR				LR	LR	23 05 17.0	
	comp=N,71nm,20.6s,baz=240,slow=40						
	comp=N,0.7nm,0.6s						
MKAR	**Makanchi Array**	**11.13**	**35**	Pn	**Pn**	**23 00 45.4**	**-1.3**
GEYT	**Alibeck**	**11.76**	**274**	Pn	**Pn**	**23 00 59.5**	**+4.2**
	comp=N,0.4nm,0.3s,baz=104,slow=7.3,SNR=6.3						
GEYT				Sn	**Sn**	**23 03 13.2**	**+6.5**
	comp=N,0.4nm,0.3s,baz=102,slow=32,SNR=4.9						
	comp=N,1.2nm,0.3s						
GEYT	**Alibeck**	**11.76**	**274**	Pn	**Pn**	**23 00 56.6**	**+1.3**
GYA0B	**ALIBECK ARRAY**	**11.76**	**274**	Pn	**Pn**	**23 00 57.4**	**+2.0**
WMQ	**Urumqi**	**12.52**	**58**	*e*P	**Pn**	**23 01 09.5**	**+3.8**
PYUN	**Piuthan**	**12.94**	**137**	*e*P	**Pn**	**23 01 11.9**	**+0.2**
	comp=N,7.4nm,0.5s						
DANN	**Dangsing**	**13.18**	**134**	*e*P	**Pn**	**23 01 14.4**	**-0.5**
KURBB	**Kurchatov Arra**	**13.20**	**16**	Pn	**Pn**	**23 01 10.9**	**-4.0**
	baz=201,slow=12,SNR=5.0						
KURBB				Lg	Lg	23 04 51.2	
	baz=200,slow=32,SNR=4.4						
	comp=N,1.0nm,1.1s						
KURK	**Kurchatov**	**13.31**	**16**	Pn	**Pn**	**23 01 14.3**	**-2.0**
AB31	**Akbulak array**	**14.67**	**324**	⇑Pn	**Pn**	**23 01 34.2**	**-0.8**
	comp=N,1.3nm,0.5s,baz=130,slow=13,SNR=31						
AB31				⇓Sn	**Sn**	**23 04 18.4**	**+1.0**
	comp=N,2.0nm,0.7s,baz=136,slow=24,SNR=3.1						
ABKAR	**Akbulak array**	**14.67**	**324**		**Pn**	**23 01 31.7**	**-3.3**
GUN	**Gumba**	**14.75**	**129**	*e*P	**Pn**	**23 01 33.7**	**-2.9**
BVAR	**Borovoye Array**	**15.12**	**354**	Pn	**Pn**	**23 01 36.5**	**-4.5**
	baz=219,slow=38,SNR=3.2						
	comp=N,0.7nm,0.7s						
JIRN	**Jiri**	**15.12**	**129**	*e*P	**Pn**	**23 01 38.7**	**-2.9**
BRVK	**Borovoye**	**15.16**	**354**	Pn	**Pn**	**23 01 38.6**	**-3.0**
RAMN	**Ramite**	**15.89**	**130**	*e*P	**Pn**	**23 01 46.9**	**-4.6**
	comp=N,6.9nm,0.6s						
TAPN	**Taplejung**	**16.29**	**126**	*e*P	**Pn**	**23 01 51.7**	**-5.0**
	comp=N,3.3nm,0.5s						
AKTO	**Aktyubinsk**	**16.38**	**324**	Pn	**Pn**	**23 01 56.8**	**-0.7**
	comp=N,0.2nm,0.3s,baz=120,slow=12,SNR=4.0						
AKTO				LR	LR	23 08 21.2	
	comp=N,59nm,20.5s,baz=290,slow=37						
	comp=N,2.0nm,0.5s						
AKTO	**Aktyubinsk**	**16.38**	**324**	⇓Pn	**P**	**23 01 58.7**	**-1.6**
	comp=N,4.2nm,0.8s						
AKTO				⇓Sn	**Sn**	**23 04 55.1**	**-4.1**
	comp=N,4.3nm,1.3s						
ZAA0	**Zalesovo Array**	**17.88**	**23**	P	**Pn**	**23 02 13.1**	**-3.1**
ZAA0				IAmb	IAmb	23 02 15.2	
	comp=Z,10.0nm,1.2s						
ZALV	**Zalesovo Beam**	**17.88**	**23**	P	**Pn**	**23 02 12.4**	**-3.8**
	comp=Z,0.4nm,0.3s,baz=214,slow=10,SNR=11						
ZALV				LR	LR	23 09 08.8	
	comp=Z,42nm,18.5s,baz=227,slow=38						
	comp=Z,1.3nm,0.4s						
ZALV	**Zalesovo Beam**	**17.88**	**23**	P	**Pn**	**23 02 13.2**	**-3.0**
ARU	**Arti**	**20.80**	**337**	P	**P**	**23 02 49.1**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=104,slow=3.3,SNR=3.6						
	comp=Z,0.6nm,0.3s						
ARU	**Arti**	**20.80**	**337**	P	**P**	**23 02 45.0**	**-3.7**
ARU				IAmb	IAmb	23 03 06.9	
	comp=Z,8.4nm,1.2s						
GNI	**Garni**	**22.02**	**284**	P	**P**	**23 03 07.4**	**+5.2**
	comp=Z,1.2nm,0.6s,baz=107,slow=5.3,SNR=2.3						
	comp=Z,1.2nm,0.6s						
BELG	**Belogornoye**	**22.79**	**317**	P	**P**	**23 03 09.2**	**-0.9**
	comp=Z,14nm,0.9s,baz=15,slow=0.7,SNR=9.6						
AKH	**Akhalkalaki**	**22.91**	**288**	P	**P**	**23 03 11.2**	**-0.4**
ONI	**Oni**	**22.94**	**291**	P	**P**	**23 03 12.2**	**+0.3**
ONI				IAmb	IAmb	23 03 24.6	
	comp=Z,7.4nm,1.0s						
KBZ	**Khabaz**	**23.40**	**294**	P	P	23 03 25.7	+9.3
	comp=Z,0.3nm,0.3s,baz=330,slow=18,SNR=1.6						
SONM	**Songino Array**	**26.16**	**57**	P	**P**	**23 03 38.9**	**-3.1**
	comp=Z,0.7nm,0.8s,baz=255,slow=10.0,SNR=6.8						
SONM				LR	LR	23 14 24.6	
	comp=Z,40nm,19.3s,baz=226,slow=38						
	comp=Z,0.7nm,0.8s						
SONM	**Songino Array**	**26.16**	**57**	P	**P**	**23 03 39.7**	**-2.3**
PZH	**PanZhiHua**	**26.76**	**107**	P	**P**	**23 03 49.6**	**+2.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**29.75**	**72**	*e*P	**P**	**23 04 14.6**	**+0.4**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**29.86**	**124**	P	**P**	**23 04 13.7**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=304,slow=9.7,SNR=1.1						
	comp=Z,0.3nm,0.3s						
BRTR	**Keskin Array B**	**30.54**	**286**	P	**P**	**23 04 25.2**	**+4.0**
	comp=Z,0.8nm,0.9s,baz=71,slow=4.9,SNR=3.8						
	comp=Z,0.8nm,0.9s						
FINES	**FINESS Array B**	**37.16**	**324**	P	**P**	**23 05 21.3**	**+3.1**
	comp=Z,3.2nm,1.0s,baz=104,slow=12,SNR=4.8						
	comp=Z,3.2nm,1.0s						
KLR	**Kul'dur**	**42.96**	**55**	LR	LR	23 25 44.5	
	comp=Z,30nm,20.8s,baz=70,slow=39						
GERES	**GERESS Array B**	**43.39**	**304**	P	P	23 06 14.6	+4.4
	comp=Z,0.2nm,0.5s,baz=69,slow=5.4,SNR=2.0						
	comp=Z,0.2nm,0.5s						
NB2	**NORSAR Subarra**	**44.16**	**322**	P	**P**	**23 06 18.8**	**+2.7**
	comp=Z,2.4nm,1.0s,baz=93,slow=8.6						
NOA	**NORSAR Array B**	**44.16**	**322**	P	**P**	**23 06 18.6**	**+2.5**
	comp=Z,1.1nm,0.8s,baz=91,slow=7.9,SNR=4.6						
NOA				LR	LR	23 27 34.8	
	comp=Z,21nm,19.2s,baz=285,slow=40						
	comp=Z,1.1nm,0.8s						
DAV	**Davao City (W)**	**56.53**	**109**	LR	LR	23 31 11.6	
	comp=Z,26nm,20.8s,baz=80,slow=35						
TORD	**Torodi Ar. Bea**	**67.35**	**269**	P	**P**	**23 09 05.3**	**+2.2**
	comp=Z,0.6nm,0.7s,baz=45,slow=5.5,SNR=2.2						
INK	**Inuvik**	**72.14**	**10**	P	**P**	**23 09 30.3**	**-1.5**
	comp=Z,0.5nm,0.4s,baz=326,slow=3.6,SNR=1.5						
	comp=Z,0.5nm,0.4s						
ILAR	**Eielson Array**	**72.88**	**17**	P	**P**	**23 09 34.3**	**-2.0**
	comp=Z,0.3nm,0.9s,baz=316,slow=5.0,SNR=2.8						
	comp=Z,0.3nm,0.9s						
WRA	**Warramunga Arr**	**81.45**	**123**	P	**P**	**23 10 24.3**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=328,slow=5.3,SNR=8.5						
	comp=Z,0.5nm,0.7s						

PRU ***23*** *23:11:42.9±0.0, 42°.96N×13°.94E, h0*^{km}

ROM 23 23:11:42.0±0.0**, 43°.011N**±0°.002×**13°.027E**±0°.004**,**
h8^{km}**, ML2.8**/59**, 16C-14D, Error ellipse: s-maj=0.3km**

s-min=0.1km az=72.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.05**	**343**	P	Pg	23 11 43.8	0.0
T1219				S	Sg	23 11 44.7	-0.4
T1219				AML	AML		
	comp=E,30050µm,0.6s						
T1219				AML	AML		
	comp=N,49150µm,0.6s						
T1219				AML	AML		
	comp=E,30100µm,0.6s						
T1219				AML	AML		
	comp=N,48450µm,0.6s						
T1219				AML	AML		
	comp=N,49100µm,0.6s						
T1219				AML	AML		
	comp=N,48400µm,0.6s						
T1219				AML	AML		
	comp=E,34250µm,0.4s						
T1219				AML	AML		
	comp=E,30050µm,1.4s						
T1219				AML	AML		
	comp=N,48400µm,1.4s						
T1219				AML	AML		
	comp=N,49100µm,1.4s						
T1219				AML	AML		
	comp=E,28439µm,0.1s						
T1219				AML	AML		
	comp=E,26719µm,0.1s						
T1219				AML	AML		
	comp=N,40530µm,0.1s						
T1219				AML	AML		
	comp=N,41259µm,0.1s						
FEMA	**Monte Fema**	**0.05**	**161**	P	Pg	23 11 44.1	+0.2
FEMA				S	Sg	23 11 45.3	-0.1
FEMA				AML	AML		
	comp=E,49900µm,0.3s						
FEMA				AML	AML		
	comp=N,27850µm,1.4s						
FEMA				AML	AML		
	comp=N,27850µm,0.6s						
FEMA				AML	AML		
	comp=N,25950µm,0.1s						
FEMA				AML	AML		
	comp=E,49922µm,0.3s						
CESI	**CESI - Serrava**	**0.09**	**266**	⇑P	Pg	23 11 44.9	+0.6
CESI				S	Sg	23 11 46.8	+0.8
CESI				AML	AML		
	comp=E,15200µm,0.7s						
CESI				AML	AML		
	comp=N,20350µm,0.2s						
CESI				AML	AML		
	comp=N,20350µm,1.8s						
CESI				AML	AML		
	comp=N,20382µm,0.2s						
T1220	**Camerino, Fraz**	**0.11**	**25**	⇑P	Pg	23 11 45.0	+0.4
T1220				S	Sg	23 11 47.1	+0.7
T1220				AML	AML		
	comp=E,81800µm,0.3s						
T1220				AML	AML		
	comp=N,41950µm,0.3s						
T1220				AML	AML		
	comp=E,80500µm,0.3s						
T1220				AML	AML		
	comp=N,41300µm,1.6s						
T1220				AML	AML		
	comp=N,42000µm,0.3s						
T1220				AML	AML		
	comp=N,41300µm,1.6s						
T1220				AML	AML		
	comp=N,41300µm,0.4s						
T1220				AML	AML		
	comp=E,80603µm,0.3s						
T1220				AML	AML		
	comp=E,81812µm,0.3s						
T1216	**Preci, Frazion**	**0.12**	**183**	⇑P	Pg	23 11 45.3	+0.5
T1216				S	Sg	23 11 47.6	+1.0
T1216				AML	AML		
	comp=N,11060µm,1.6s						
T1216				AML	AML		
	comp=N,11065µm,1.6s						
T1216				AML	AML		
	comp=E,9905µm,0.4s						
T1216				AML	AML		
	comp=N,11065µm,0.4s						
T1216				AML	AML		
	comp=E,9559µm,0.3s						
T1256	**Bolognola (MC)**	**0.15**	**92**	P	Pg	23 11 45.7	+0.5
T1256				S	Sg	23 11 48.3	+0.8
T1256				AML	AML		
	comp=N,8795µm,0.3s						
T1256				AML	AML		
	comp=E,5895µm,0.6s						
T1256				AML	AML		
	comp=N,8500µm,0.3s						
T1256				AML	AML		
	comp=E,6525µm,0.6s						
T1256				AML	AML		
	comp=N,8498µm,0.3s						
T1256				AML	AML		
	comp=N,8792µm,0.3s						
SEF1	**Sefro**	**0.15**	**337**	P	Pg	23 11 45.7	+0.5
SEF1				S	Sg	23 11 48.2	+0.8
SEF1				AML	AML		
	comp=N,11700µm,0.5s						
SEF1				AML	AML		
	comp=N,11700µm,0.5s						
SEF1				AML	AML		
	comp=N,11700µm,1.5s						
SEF1				AML	AML		
	comp=E,13900µm,1.4s						
SEF1				AML	AML		
	comp=N,10692µm,0.2s						
SEF1				AML	AML		
	comp=E,12742µm,0.2s						
MC2	**Monte Cornacci**	**0.15**	**129**	⇓P	Pg	23 11 46.0	+0.6
NRCA	**Norcia**	**0.19**	**160**	⇓P	Pg	23 11 46.5	+0.6
NRCA				S	Sg	23 11 50.0	+1.4
NRCA				AML	AML		
	comp=E,9170µm,0.2s						
NRCA				AML	AML		
	comp=E,9170µm,0.2s						
NRCA				AML	AML		
	comp=E,9745µm,0.2s						
NRCA				AML	AML		
	comp=N,7080µm,1.0s						
NRCA				AML	AML		
	comp=N,7525µm,1.0s						
NRCA				AML	AML		
	comp=E,9754µm,0.1s						
NRCA				AML	AML		
	comp=E,9168µm,0.2s						
NRCA				AML	AML		
	comp=N,7492µm,0.1s						
NRCA				AML	AML		
	comp=N,7000µm,0.1s						
T1245	**Castelsantange**	**0.20**	**142**	⇓P	Pg	23 11 46.6	+0.6
T1245				S	Sg	23 11 50.2	+1.4
T1245				AML	AML		
	comp=E,8290µm,0.7s						
T1245				AML	AML		
	comp=N,11650µm,0.3s						
T1245				AML	AML		
	comp=E,8470µm,0.7s						
T1245				AML	AML		
	comp=E,8290µm,0.7s						
T1245				AML	AML		
	comp=N,12100µm,0.6s						
T1245				AML	AML		
	comp=N,12092µm,0.6s						
T1245				AML	AML		
	comp=E,8012µm,0.2s						
T1245				AML	AML		
	comp=E,8275µm,0.3s						
GAG1	**Gagliole**	**0.23**	**8**	P	Pg	23 11 47.6	+1.0
GAG1				S	Sg	23 11 51.7	+1.9
GAG1				AML	AML		
	comp=E,8420µm,0.3s						
GAG1				AML	AML		
	comp=N,8355µm,0.4s						
GAG1				AML	AML		
	comp=E,8420µm,0.3s						
GAG1				AML	AML		
	comp=N,8350µm,0.4s						
GAG1				AML	AML		
	comp=N,8129µm,0.3s						
GUMA	**Gualdo di Mace**	**0.23**	**77**	⇑P	Pg	23 11 47.6	+0.9
GUMA				S	Sg	23 11 51.9	+2.1
GUMA				AML	AML		
	comp=N,29800µm,0.3s						
GUMA				AML	AML		
	comp=E,40850µm,0.2s						
GUMA				AML	AML		
	comp=E,28150µm,0.3s						
GUMA				AML	AML		
	comp=N,30250µm,0.2s						
GUMA				AML	AML		
	comp=E,40885µm,0.2s						
GUMA				AML	AML		
	comp=E,28162µm,0.3s						
GUMA				AML	AML		
	comp=N,29799µm,0.3s						
GUMA				AML	AML		
	comp=N,30288µm,0.2s						
SNTG	**Esanatoglia**	**0.25**	**346**	⇓P	Pg	23 11 47.5	+0.5
SNTG				S	Sb	23 11 52.1	-1.3
SNTG				AML	AML		
	comp=E,2095µm,1.0s						
SNTG				AML	AML		
	comp=N,1900µm,1.0s						
SNTG				AML	AML		
	comp=N,2020µm,1.0s						
SNTG				AML	AML		
	comp=N,2020µm,1.0s						
SNTG				AML	AML		
	comp=N,1900µm,1.0s						
SNTG				AML	AML		
	comp=E,2020µm,1.0s						
SNTG				AML	AML		
	comp=N,1987µm,0.1s						
SNTG				AML	AML		
	comp=N,1739µm,0.1s						
SNTG				AML	AML		
	comp=E,1748µm,0.1s						
SNTG				AML	AML		
	comp=E,1768µm,0.1s						
T1212	**Cascia, Frazio**	**0.26**	**177**	⇓P	Pg	23 11 47.9	+0.7
T1212				S	Sb	23 11 52.5	-1.1
T1212				AML	AML		
	comp=E,6945µm,0.3s						
T1212				AML	AML		
	comp=N,6105µm,0.6s						
T1212				AML	AML		
	comp=N,6035µm,0.6s						
T1212				AML	AML		
	comp=E,6950µm,0.3s						
T1212				AML	AML		
	comp=N,6100µm,0.6s						
T1212				AML	AML		
	comp=E,6745µm,0.3s						
T1212				AML	AML		
	comp=N,6030µm,0.6s						
T1212				AML	AML		
	comp=E,6745µm,1.7s						
T1212				AML	AML		
	comp=N,6030µm,1.4s						
T1212				AML	AML		
	comp=N,6100µm,1.4s						
T1212				AML	AML		
	comp=E,6950µm,1.7s						
T1212				AML	AML		
	comp=N,5877µm,0.3s						
T1212				AML	AML		
	comp=N,5797µm,0.2s						
T1212				AML	AML		
	comp=E,6950µm,0.3s						
T1212				AML	AML		
	comp=E,6743µm,0.3s						
ASSB	**Assisi San Ben**	**0.27**	**277**	⇑P	Pg	23 11 48.1	+0.7
ASSB				S	Sb	23 11 52.8	-1.1
ASSB				AML	AML		
	comp=E,3210µm,1.2s						
ASSB				AML	AML		
	comp=N,5420µm,0.3s						
ASSB				AML	AML		
	comp=E,3210µm,0.8s						
ASSB				AML	AML		
	comp=E,3064µm,0.3s						
ASSB				AML	AML		
	comp=N,5418µm,0.3s						
T1214	**Arquata del Tr**	**0.28**	**152**	⇓P	Pg	23 11 48.2	+0.5
T1214				S	Sb	23 11 53.0	-1.3
T1214				AML	AML		
	comp=E,3370µm,0.2s						
T1214				AML	AML		
	comp=E,3290µm,0.8s						
T1214				AML	AML		
	comp=N,3440µm,0.2s						
T1214				AML	AML		
	comp=N,3435µm,0.2s						
T1214				AML	AML		
	comp=N,3495µm,0.2s						
T1214				AML	AML		
	comp=E,3290µm,1.2s						
T1214				AML	AML		
	comp=E,3370µm,0.2s						
T1214				AML	AML		
	comp=N,3495µm,0.2s						
T1214				AML	AML		
	comp=N,3438µm,0.2s						
T1214				AML	AML		
	comp=E,3370µm,0.2s						
T1214				AML	AML		
	comp=E,3273µm,0.2s						
T1217	**Poggiodomo (PG**	**0.31**	**193**	⇑P	Pg	23 11 48.8	+0.7
T1217				S	Sb	23 11 54.0	-0.9
T1217				AML	AML		
	comp=E,3330µm,0.8s						
T1217				AML	AML		
	comp=N,2860µm,1.3s						
T1217				AML	AML		
	comp=E,3465µm,1.2s						
T1217				AML	AML		
	comp=N,2975µm,1.3s						
T1217				AML	AML		
	comp=E,3330µm,0.8s						
T1217				AML	AML		
	comp=N,2860µm,1.3s						
T1217				AML	AML		
	comp=N,2860µm,0.7s						
T1217				AML	AML		
	comp=E,3465µm,0.8s						
T1217				AML	AML		
	comp=E,3330µm,1.2s						
T1217				AML	AML		
	comp=N,2975µm,0.7s						
T1217				AML	AML		
	comp=N,2713µm,0.3s						
T1217				AML	AML		
	comp=E,2752µm,0.3s						
EL6	**Elcito**	**0.32**	**10**	⇑P	Pg	23 11 48.9	+0.5
EL6				S	Sb	23 11 54.3	-1.1
EL6				AML	AML		
	comp=N,4085µm,1.1s						
EL6				AML	AML		
	comp=E,5945µm,0.8s						
EL6				AML	AML		
	comp=N,4085µm,0.9s						
EL6				AML	AML		
	comp=E,5945µm,1.2s						
EL6				AML	AML		
	comp=E,5316µm,0.2s						
EL6				AML	AML		
	comp=N,3471µm,0.2s						
ATCC	**AVT- Casa Cast**	**0.33**	**302**	⇑P	Pg	23 11 49.3	+0.7
ATCC				S	Sb	23 11 55.1	-0.5
ATCC				AML	AML		
	comp=E,3615µm,0.3s						
ATCC				AML	AML		
	comp=N,2315µm,0.8s						
ATCC				AML	AML		
	comp=N,2173µm,0.4s						
ATCC				AML	AML		
	comp=E,3617µm,0.3s						
T1241	**Roccafluvione,**	**0.34**	**117**	⇓P	Pg	23 11 49.1	+0.5
T1241				S	Sb	23 11 54.5	-1.2
T1241				AML	AML		
	comp=E,2415µm,0.5s						
T1241				AML	AML		
	comp=E,2410µm,0.5s						
T1241				AML	AML		
	comp=E,2555µm,0.6s						
T1241				AML	AML		
	comp=N,2525µm,0.7s						

T1241				AML	AML		
	comp=N,2505µm,0.7s						
FOSV	**Fossato di Vic**	**0.34**	**326**	P	Pg	23 11 49.3	+0.5
FOSV				S	Sb	23 11 55.0	-1.0
FOSV				AML	AML		
	comp=E,1545µm,0.6s						
FOSV				AML	AML		
	comp=N,2000µm,0.4s						
FOSV				AML	AML		
	comp=E,1415µm,0.2s						
FOSV				AML	AML		
	comp=N,2001µm,0.4s						
T1218	**Civita (PG)**	**0.35**	**169**	⇓P	Pg	23 11 49.3	+0.5
T1218				S	Sb	23 11 55.2	-0.9
T1218				AML	AML		
	comp=E,1790µm,0.6s						
T1218				AML	AML		
	comp=N,3080µm,0.7s						
T1218				AML	AML		
	comp=E,1865µm,0.6s						
T1218				AML	AML		
	comp=N,3120µm,0.8s						
T1218				AML	AML		
	comp=E,1795µm,0.6s						
T1218				AML	AML		
	comp=N,3075µm,0.7s						
T1218				AML	AML		
	comp=N,3120µm,1.2s						
T1218				AML	AML		
	comp=E,1795µm,1.4s						
T1218				AML	AML		
	comp=E,1865µm,1.4s						
T1218				AML	AML		
	comp=E,1849µm,0.3s						
T1218				AML	AML		
	comp=E,1769µm,0.3s						
T1218				AML	AML		
	comp=N,2832µm,0.2s						
T1218				AML	AML		
	comp=N,2846µm,0.2s						
MNTP	**Montappone**	**0.35**	**69**	P	Pb	23 11 50.0	-0.4
MNTP				S	Sb	23 11 56.6	+0.6
MNTP				AML	AML		
	comp=E,3715µm,0.8s						
MNTP				AML	AML		
	comp=E,3715µm,0.9s						
MNTP				AML	AML		
	comp=N,2830µm,0.6s						
MNTP				AML	AML		
	comp=N,2830µm,1.4s						
CING	**Cingoli**	**0.39**	**19**	⇑P	Pg	23 11 50.0	+0.5
CING				S	Sb	23 11 56.4	-0.7
CING				AML	AML		
	comp=N,1445µm,1.3s						
CING				AML	AML		
	comp=N,1445µm,0.7s						
CING				AML	AML		
	comp=E,2455µm,0.2s						
CING				AML	AML		
	comp=E,2454µm,0.2s						
CING				AML	AML		
	comp=N,1335µm,0.1s						
MOMA	**Monte Martano**	**0.39**	**238**	⇑P	Pg	23 11 50.3	+0.6
MOMA				AML	AML		
	comp=E,1148µm,0.5s						
MOMA				AML	AML		
	comp=E,1196µm,0.5s						
MOMA				AML	AML		
	comp=E,1148µm,0.5s						
MOMA				AML	AML		
	comp=N,1025µm,1.0s						
MOMA				AML	AML		
	comp=N,890µm,1.0s						
MOMA				AML	AML		
	comp=N,817µm,0.2s						
MOMA				AML	AML		
	comp=N,840µm,0.2s						
MOMA				AML	AML		
	comp=E,1177µm,0.2s						
MOMA				AML	AML		
	comp=E,1136µm,0.2s						
SMA1	**SAN MARTINO**	**0.44**	**149**	⇓P	Pg	23 11 51.0	+0.4
SMA1				S	Sb	23 11 58.3	-0.6
SMA1				AML	AML		
	comp=E,1785µm,0.6s						
SMA1				AML	AML		
	comp=N,1835µm,1.1s						
SMA1				AML	AML		
	comp=N,1835µm,0.9s						
MURB	**Monte Urbino**	**0.45**	**305**	⇑P	Pg	23 11 51.3	+0.7
MURB				S	Sb	23 11 59.0	+0.1
MURB				AML	AML		
	comp=E,4115µm,1.1s						
MURB				AML	AML		
	comp=N,3870µm,0.2s						
MURB				AML	AML		
	comp=N,3280µm,0.3s						
MURB				AML	AML		
	comp=E,4735µm,0.3s						
MURB				AML	AML		
	comp=E,4115µm,0.9s						
MURB				AML	AML		
	comp=E,4739µm,0.3s						
MURB				AML	AML		
	comp=E,4014µm,0.3s						
MURB				AML	AML		
	comp=N,3282µm,0.3s						
MURB				AML	AML		
	comp=N,3867µm,0.2s						
SSFR	**Montelago di S**	**0.46**	**337**	⇓P	Pg	23 11 51.4	+0.5
SSFR				AML	AML		
	comp=N,2960µm,0.2s						
SSFR				AML	AML		
	comp=E,3110µm,0.2s						
SSFR				AML	AML		
	comp=E,2975µm,0.2s						
SSFR				AML	AML		
	comp=N,2640µm,0.2s						
SSFR				AML	AML		
	comp=E,3111µm,0.2s						
SSFR				AML	AML		
	comp=E,2974µm,0.2s						
SSFR				AML	AML		
	comp=N,2641µm,0.2s						
SSFR				AML	AML		
	comp=N,2960µm,0.1s						
ATFO	**Monte Foce - G**	**0.49**	**317**	⇑P	Pg	23 11 52.0	+0.5
ATFO				S	Sb	23 12 00.2	0.0
ATFO				AML	AML		
	comp=E,680µm,0.3s						
ATFO				AML	AML		
	comp=N,618µm,0.2s						
ATFO				AML	AML		
	comp=N,618µm,0.2s						
OFFI	**Offida**	**0.49**	**99**	AML	AML		
	comp=E,2335µm,1.7s						
OFFI				AML	AML		
	comp=E,2335µm,0.3s						
OFFI				AML	AML		
	comp=N,2595µm,0.5s						
OFFI				AML	AML		
	comp=N,2595µm,1.5s						
ARVD	**Arcevia**	**0.49**	**353**	⇓P	Pg	23 11 51.9	+0.4
ARVD				S	Sb	23 12 00.2	0.0
ARVD				AML	AML		
	comp=E,899µm,0.8s						
ARVD				AML	AML		
	comp=N,808µm,0.2s						
ARVD				AML	AML		
	comp=E,899µm,1.2s						
ARVD				AML	AML		
	comp=E,847µm,0.2s						
ARVD				AML	AML		
	comp=N,808µm,0.2s						
T1211	**Morro Reatino**	**0.49**	**195**	⇑P	Pg	23 11 52.1	+0.5
T1211				S	Sb	23 12 00.0	-0.3
T1211				AML	AML		
	comp=E,1360µm,0.9s						
T1211				AML	AML		
	comp=N,1980µm,0.4s						
T1211				AML	AML		
	comp=E,1360µm,0.9s						
T1211				AML	AML		
	comp=N,1980µm,0.4s						
T1211				AML	AML		
	comp=E,1365µm,0.9s						
T1211				AML	AML		
	comp=N,2005µm,0.4s						
T1211				AML	AML		
	comp=N,1980µm,1.6s						
T1211				AML	AML		
	comp=N,2005µm,1.6s						
T1211				AML	AML		
	comp=E,1360µm,1.1s						
T1211				AML	AML		
	comp=E,1365µm,1.1s						
T1211				AML	AML		
	comp=E,1061µm,0.3s						
T1211				AML	AML		
	comp=E,1033µm,0.3s						
CESX	**Cesi**	**0.52**	**219**	⇑P	Pg	23 11 52.4	+0.4
CESX				S	Sb	23 12 00.5	-0.4
CESX				AML	AML		
	comp=E,1705µm,0.3s						
CESX				AML	AML		
	comp=N,1325µm,0.5s						
CESX				AML	AML		
	comp=E,1706µm,0.3s						
RM33	**Pellescritta (**	**0.52**	**165**	⇓P	Pg	23 11 52.3	+0.2
RM33				S	Sb	23 12 00.7	-0.3
RM33				AML	AML		
	comp=E,1215µm,0.2s						
RM33				AML	AML		
	comp=N,1045µm,1.2s						
RM33				AML	AML		
	comp=N,1050µm,0.3s						
RM33				AML	AML		
	comp=E,1210µm,0.2s						
RM33				AML	AML		
	comp=E,1210µm,0.2s						
RM33				AML	AML		
	comp=E,1214µm,0.2s						
RM33				AML	AML		
	comp=N,1049µm,0.3s						
RM33				AML	AML		
	comp=N,1039µm,0.3s						
ATTE	**AVT- Monte Tez**	**0.53**	**291**	⇑P	Pg	23 11 52.6	+0.4
ATTE				AML	AML		
	comp=N,421µm,1.5s						
ATTE				AML	AML		
	comp=E,610µm,0.5s						
ATTE				AML	AML		
	comp=E,610µm,1.5s						
ATTE				AML	AML		
	comp=N,421µm,0.5s						
CAMP	**Campotosto**	**0.55**	**149**	AML	AML		
	comp=N,451µm,1.2s						
CAMP				AML	AML		
	comp=N,451µm,0.8s						
CAMP				AML	AML		
	comp=E,420µm,0.8s						
FRON	**Frontone**	**0.55**	**337**	AML	AML		
	comp=N,1178µm,0.3s						
FRON				AML	AML		
	comp=E,684µm,0.4s						
PP3	**Marolino**	**0.56**	**49**	AML	AML		
	comp=E,1905µm,0.4s						
PP3				AML	AML		
	comp=N,2070µm,0.4s						
PP3				AML	AML		
	comp=E,1880µm,0.3s						
PP3				AML	AML		
	comp=N,2100µm,1.3s						
PP3				AML	AML		
	comp=N,2070µm,1.6s						
TERO	**Teramo**	**0.57**	**132**	AML	AML		
	comp=N,811µm,1.3s						
TERO				AML	AML		
	comp=E,856µm,0.8s						
TERO				AML	AML		
	comp=N,812µm,1.3s						
TERO				AML	AML		
	comp=E,901µm,0.8s						
TERO				AML	AML		
	comp=N,864µm,1.3s						
TERO				AML	AML		
	comp=N,811µm,0.7s						
TERO				AML	AML		
	comp=N,864µm,0.7s						
ATVO	**AVT- Monte Val**	**0.59**	**310**	AML	AML		
	comp=N,409µm,0.7s						
ATVO				AML	AML		
	comp=E,480µm,0.6s						
T1247	**Pizzolo (AQ)**	**0.60**	**161**	AML	AML		
	comp=N,1042µm,1.5s						
T1247				AML	AML		
	comp=N,1042µm,0.5s						
T1247				AML	AML		
	comp=E,952µm,0.6s						
T1222	**Castel Sant'An**	**0.61**	**179**	AML	AML		
	comp=E,858µm,0.4s						
T1222				AML	AML		
	comp=E,955µm,1.0s						
T1222				AML	AML		
	comp=N,706µm,0.4s						
T1222				AML	AML		
	comp=N,784µm,1.0s						
T1222				AML	AML		
	comp=N,706µm,0.4s						
T1222				AML	AML		
	comp=N,785µm,1.0s						
T1222				AML	AML		
	comp=E,954µm,1.0s						
T1222				AML	AML		
	comp=N,706µm,1.6s						
COR1	**Corinaldo**	**0.62**	**358**	AML	AML		
	comp=N,1241µm,0.4s						
COR1				AML	AML		
	comp=E,535µm,0.3s						
ATPI	**Pietralunga -**	**0.63**	**314**	AML	AML		
	comp=N,304µm,0.4s						
ATPI				AML	AML		
	comp=E,281µm,0.4s						
PIEI	**Pieia**	**0.64**	**326**	AML	AML		
	comp=N,362µm,0.2s						
PIEI				AML	AML		
	comp=E,493µm,1.2s						
PIEI				AML	AML		
	comp=E,493µm,0.8s						
ATMI	**Monte Miggiano**	**0.64**	**300**	AML	AML		
	comp=N,799µm,0.4s						
ATMI				AML	AML		
	comp=E,774µm,0.9s						
ATMI				AML	AML		
	comp=N,799µm,1.6s						
MPAG	**Monte Paganucc**	**0.65**	**343**	AML	AML		
	comp=E,528µm,1.7s						
MPAG				AML	AML		
	comp=N,597µm,0.5s						
MPAG				AML	AML		
	comp=E,528µm,0.3s						
MPAG				AML	AML		
	comp=N,597µm,1.5s						
MGAB	**Montegabbione**	**0.68**	**262**	AML	AML		
	comp=N,606µm,0.7s						
MGAB				AML	AML		
	comp=E,689µm,1.6s						
MGAB				AML	AML		
	comp=N,606µm,1.3s						
MGAB				AML	AML		
	comp=E,622µm,1.6s						
MGAB				AML	AML		
	comp=N,561µm,0.2s						
MGAB				AML	AML		
	comp=E,622µm,0.4s						
MGAB				AML	AML		
	comp=E,689µm,0.4s						
GIGS	**Gran Sasso**	**0.69**	**144**	AML	AML		
	comp=N,156µm,0.4s						
GIGS				AML	AML		
	comp=E,222µm,0.5s						
APEC	**Apecchio**	**0.70**	**321**	AML	AML		
	comp=N,342µm,0.3s						
APEC				AML	AML		
	comp=E,382µm,0.6s						
FSSB	**Fossombrone**	**0.70**	**345**	AML	AML		
	comp=N,2335µm,0.3s						
FSSB				AML	AML		
	comp=E,1735µm,0.3s						
AQU	**L'Aquila**	**0.71**	**157**	AML	AML		
	comp=E,352µm,0.9s						
AQU				AML	AML		
	comp=E,356µm,1.6s						
AQU				AML	AML		
	comp=N,388µm,0.4s						
AQU				AML	AML		
	comp=N,397µm,0.9s						
AQU				AML	AML		
	comp=E,352µm,1.1s						
FIAM	**Fiamignano**	**0.75**	**175**	AML	AML		
	comp=N,613µm,0.3s						
FIAM				AML	AML		
	comp=E,454µm,0.4s						
FIAM				AML	AML		
	comp=E,454µm,1.6s						
PE3	**Peglio**	**0.79**	**331**	AML	AML		
	comp=N,5µm,0.8s						
PE3				AML	AML		
	comp=N,5µm,1.2s						
PE3				AML	AML		
	comp=E,870µm,0.5s						
SACS	**San Casciano d**	**0.84**	**259**	AML	AML		
	comp=E,192µm,0.5s						
SACS				AML	AML		
	comp=E,189µm,0.5s						
SACS				AML	AML		
	comp=N,174µm,0.9s						
SACS				AML	AML		
	comp=N,179µm,0.9s						
SACS				AML	AML		
	comp=E,192µm,1.5s						
SACS				AML	AML		
	comp=E,189µm,1.5s						
CAFI	**Castiglion Fio**	**0.84**	**293**	AML	AML		
	comp=N,286µm,0.5s						
CAFI				AML	AML		
	comp=E,253µm,0.5s						
CAFI				AML	AML		
	comp=N,286µm,1.5s						
FAGN	**Fagnano**	**0.85**	**151**	AML	AML		
	comp=E,908µm,0.5s						
FAGN				AML	AML		
	comp=N,812µm,0.4s						
PARC	**Parchiule**	**0.86**	**318**	AML	AML		
	comp=N,216µm,0.5s						
PARC				AML	AML		
	comp=E,184µm,0.4s						
VCEL	**Villa Celiera**	**0.86**	**135**	AML	AML		
	comp=E,513µm,0.8s						
VCEL				AML	AML		
	comp=E,513µm,1.2s						
VCEL				AML	AML		
	comp=N,484µm,0.4s						
VCEL				AML	AML		
	comp=N,484µm,1.6s						
T0110	**Collepietro**	**0.96**	**144**	AML	AML		
	comp=N,520µm,0.4s						
T0110				AML	AML		
	comp=E,529µm,0.5s						
CRE	**Caprese Michel**	**0.99**	**308**	AML	AML		
	comp=E,120µm,1.1s						
CRE				AML	AML		
	comp=N,151µm,1.4s						
SF04	**Casetta**	**1.02**	**261**	AML	AML		
	comp=N,123µm,1.6s						
SF04				AML	AML		
	comp=E,144µm,0.3s						
SF04				AML	AML		
	comp=N,123µm,0.4s						
CERT	**Cerreto**	**1.06**	**182**	AML	AML		
	comp=N,292µm,0.7s						
CERT				AML	AML		
	comp=E,324µm,0.5s						
CERT				AML	AML		
	comp=N,292µm,1.3s						
INTR	**Introdacqua**	**1.19**	**147**	AML	AML		
	comp=E,188nm,1.0s						
INTR				AML	AML		
	comp=N,372nm,0.7s						
INTR				AML	AML		
	comp=E,160µm,1.0s						
INTR				AML	AML		
	comp=E,160µm,1.0s						
INTR				AML	AML		
	comp=N,466µm,0.7s						
BRSN	**Barisano**	**1.45**	**332**	⇑P	Pn	23 12 07.3	-1.0
BRSN				AML	AML		
	comp=N,1052µm,0.1s						
BRSN				AML	AML		
	comp=E,618µm,0.1s						
MIDA	**Miranda**	**1.64**	**146**	⇓P	Pg	23 12 13.7	+0.2
BRJN	**Brijuni**	**1.96**	**15**	⇓P	Pb	23 12 17.6	-0.4
VENL	**Venezia Lido**	**2.45**	**349**	P	Pb	23 12 24.5	-1.7
MNTV	**Mantova**	**2.68**	**324**	P	Pn	23 12 25.8	+0.5
OBKA	**Obir**	**3.66**	**17**	*i* Pn	Pn	23 12 40.3	+1.4
	comp=E,0.6nm,0.2s						
ABTA	**Abfaltersbach**	**3.75**	**355**	*e*Pn	Pn	23 12 42.7	+2.5
	comp=E,1.0nm,0.2s						
KBA	**Koelnbreinsper**	**4.07**	**3**	*e*Pn	Pn	23 12 47.5	+2.8
	comp=E,1.1nm,0.3s						
FETA	**Feichten**	**4.33**	**339**	*e*Pn	Pb	23 12 53.8	-4.5
	comp=E,0.8nm,0.4s						
WTTA	**Wattenberg**	**4.37**	**347**	*e*Pn	Pn	23 12 52.8	+4.1
	comp=E,1.1nm,0.2s						
SQTA	**Sankt Quirin**	**4.40**	**344**	*e*Pn	Pn	23 12 53.5	+4.4
	comp=E,1.6nm,0.2s						
WATA	**Walderalm**	**4.45**	**347**	*e*Pn	Pn	23 12 54.7	+5.0
	comp=E,0.6nm,0.1s						
MOTA	**Moosalm**	**4.54**	**343**	*e*Pn	Pn	23 12 55.4	+4.4
	comp=E,0.4nm,0.2s						
MOA	**Molln**	**4.92**	**10**	*e*Pn	Pn	23 12 58.2	+2.1
	comp=E,2.2nm,0.3s						
CONA	**Conrad Observa**	**5.31**	**21**	*e*Pn	Pn	23 13 02.7	+1.2
	comp=E,0.3nm,0.2s						
KHC	**Kasperske Hory**	**6.13**	**3**	*e*PN	Pn	23 13 14.5	+1.7
KHC				*e*SN	Sn	23 14 23.7	+0.6

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*NEIC **23** 23:15:40.1±1.9, 24°.79S±0°.08×176°.9W±0°.1, h94^{km}±8^{km}, mb4.4/37, Error ellipse: s-maj=14.0km s-min=10.7km az=117.0*

*IDC **23** 23:15:45.5±1.1, 24°.60S×177°.35W, h138^{km}±8^{km}, mb3.8/8, mbtmp4.3/10, MS3.2/3, Error ellipse: s-maj=25.3km s-min=17.5km az=156.0*

ISC 23 23:15:43.7±0.5**, 24°.87S**±0°.06×**177°.02W**±0°.07**, h126**^{km}**,**
n91, $\sigma 1^{s}.76$/87**, mb4.2**/21**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.44**	**190**	P	Pn	23 16 54.9	+5.8
	202nm,0.4s,baz=107,slow=19,SNR=3.0						
RAO				S	**Sn**	**23 17 43.1**	**+3.0**
	277nm,0.5s,baz=270,slow=20,SNR=2.1						
RAO	**Raoul Island**	**4.44**	**190**	Pn	**Pn**	**23 16 47.6**	**-1.6**
GLKZ	**Green Lake**	**4.45**	**190**	P	**Pn**	**23 16 50.7**	**+1.4**
GLKZ				S	**Sn**	**23 17 45.4**	**+5.1**
MSVF	**Nonsavu**	**8.45**	**326**	P	**Pn**	**23 17 43.4**	**0.0**
	271nm,1.1s,baz=146,slow=13,SNR=69						
MSVF				LR	LR	23 20 17.9	
	comp=Z,197nm,20.4s,baz=109,slow=34						
MSVF	**Nonsavu**	**8.45**	**326**	Pn	**Pn**	**23 17 42.9**	**-0.5**
NIUE	**Niue**	**8.75**	**50**		Pn	23 17 42.1	-5.2
AFI	**Afiamalu**	**11.97**	**25**	P	Pn	23 18 22.3	-8.2
	100nm,0.4s,baz=163,slow=2.2,SNR=28						
AFI				S	Sn	23 20 22.6	-20
	67nm,0.3s,baz=224,slow=23,SNR=8.4						
AFI	**Afiamalu**	**11.97**	**25**		Pn	23 18 22.6	-7.8
HAZ	**Te Kaha**	**13.59**	**198**	P	**P**	**23 18 56.4**	**+0.6**
HAZ				S	Sn	23 21 09.9	-11
PUZ	**Puketiti**	**13.76**	**196**	P	**Pn**	**23 18 49.5**	**-3.9**
PUZ				S	Sn	23 21 12.6	-13
RUGZ	**Raukumara Rang**	**13.81**	**198**	P	**Pn**	**23 18 53.0**	**-1.2**
CNGZ	**Carnagh Statio**	**14.16**	**195**	P	**Pn**	**23 18 56.7**	**-1.9**
MWZ	**Matawai**	**14.20**	**198**	P	**Pn**	**23 18 58.5**	**-0.6**
MWZ				S	Sn	23 21 23.9	-12
URZ	**Urewera**	**14.25**	**199**	P	**Pn**	**23 19 01.3**	**+1.7**
	11nm,0.3s,baz=24,slow=3.6,SNR=21						
URZ				S	Sn	23 21 26.5	-11
	5.5nm,0.5s,baz=236,slow=14,SNR=2.1						
URZ	**Urewera**	**14.25**	**199**	P	**Pn**	**23 19 00.5**	**+0.9**
URZ				S	Sn	23 21 24.9	-12
PINNC	**Pines Island,**	**14.40**	**276**		**Pn**	**23 19 01.8**	**+0.1**
RTZ	**Ruatahuna**	**14.62**	**199**	Pn	**Pn**	**23 19 03.9**	**-0.5**
SNGZ	**Shannon Statio**	**14.67**	**198**	P	**P**	**23 19 08.1**	**+0.2**
SNGZ				S	Sn	23 21 35.6	-12
RAHZ	**Arahi**	**14.87**	**198**	P	**Pn**	**23 19 09.2**	**+1.8**
MTHZ	**Maungataniwha**	**14.88**	**199**	P	**Pn**	**23 19 09.4**	**+1.8**
MTHZ				S	**Sn**	**23 21 45.4**	**-6.8**
NMHZ	**Naumai**	**15.11**	**199**	P	**Pn**	**23 19 11.1**	**+0.5**
HIZ	**Hauiti**	**15.25**	**205**	P	**P**	**23 19 14.3**	**+0.1**
HIZ				IAmb	IAmb	23 19 28.9	

```
      comp=Z,39nm,1.2s
BKZ   Black Stump Fm   15.27 199   Pn       Pn       23 19 11.9  -0.7
DZM   Mont Dzumac      15.42 277   LR       LR       23 22 59.8
      comp=Z,69nm,19.5s,baz=215,slow=29
BHHZ  Black Hill Sta   15.70 200   P        Pn       23 19 15.5  -2.4
BHHZ                               S        Sn       23 22 01.0   -11
KAHZ  Kahuranaki       15.74 198   P        Pn       23 19 15.9  -2.5
KAHZ                               S        Sn       23 22 00.1   -13
PXZ   Pawanui          15.97 197   P        Pn       23 19 20.3  -0.8
PXZ                                S        Sn       23 22 02.9   -15
RAR   Rarotonga        16.29  81   P        Pn       23 19 27.0  +1.8
      comp=Z,10nm,0.5s,baz=253,slow=1.1,SNR=5.2
RAR                                S        Sn       23 22 16.0   -10
      comp=Z,8.6nm,0.5s,baz=97,slow=15,SNR=2.1
RAR   Rarotonga        16.29  81            Pn       23 19 22.6  -2.6
RAR                                IAmb     IAmb     23 19 27.5
      comp=Z,23nm,1.0s
BFZ   Birch Farm       16.74 198            Pn       23 19 29.1  -1.5
BFZ                                IAmb     IAmb     23 19 32.1
      comp=Z,26nm,1.0s
MRZ   Mangatainoka R   16.92 200   Pn       P        23 19 29.6  -3.1
TCW   Tory Channel     17.84 202   P        P        23 19 39.5  -3.2
PLWZ  Palliser         17.85 199            P        23 19 41.3  -1.6
QRZ   Quartz Range     18.15 206   P        P        23 19 44.5  -1.7
QRZ                                IAmb     IAmb     23 20 01.1
      comp=Z,17nm,1.2s
NNZ   Nelson           18.16 204   P        P        23 19 42.4  -3.8
BSWZ  Blackbirch Sta   18.42 202   P        P        23 19 45.9  -3.3
THZ   Tophouse         18.81 204   P        P        23 19 52.8  -0.6
KHZ   Kahutara         19.16 202   P        P        23 19 55.4  -1.8
KHZ                                IAmb     IAmb     23 20 08.5
      comp=Z,22nm,1.1s
GVZ   Greta Valley S   19.82 202   P        P        23 20 01.1  -3.3
GVZ                                IAmb     IAmb     23 20 08.8
      comp=Z,30nm,1.1s
LTZ   Lake Taylor      19.93 204   P        P        23 20 03.5  -2.1
FOZ   Fox Glacier      21.52 207   P        P        23 20 22.8  +0.3
FOZ                                IAmb     IAmb     23 20 40.4
      comp=Z,12nm,1.1s
MLZ   Mavora Lakes     23.71 207   P        P        23 20 43.9  -0.2
MLZ                                IAmb     IAmb     23 20 51.2
      comp=Z,9.8nm,1.0s
DCZ   Deep Cove        24.20 208   P        P        23 20 48.4  +0.1
DCZ                                IAmb     IAmb     23 21 00.4
      comp=Z,24nm,1.2s
EIDS  Eidsvold         28.85 262   P        P        23 21 31.2  +0.9
EIDS                               IAmb     IAmb     23 21 32.8
      comp=Z,7.1nm,0.8s
CTAO  Charters Tower   34.20 271   P        P        23 22 18.1  +0.8
CTAO                               IAmb     IAmb     23 22 19.5
      comp=Z,8.5nm,0.9s
STKA  Stephens Creek   36.90 249   P        P        23 22 40.3   0.0
      comp=Z,0.8nm,0.4s,baz=95,slow=9.0,SNR=4.9
STKA                               pP       pwP      23 23 09.8  +2.1
      comp=Z,4.5nm,0.8s,baz=34,slow=6.6,SNR=5.2
      comp=Z,0.8nm,0.4s
STKA  Stephens Creek   36.90 249   P        P        23 22 41.5  +1.2
TAOE  Nuku Hiva Isla   38.55  72   P        P        23 22 52.3  -2.1
COEN  Coen             38.95 279   P        P        23 22 57.1  -0.5
COEN                               IAmb     IAmb     23 23 04.3
      comp=Z,4.1nm,1.1s
BBOO  Buckleboo        41.58 248   P        P        23 23 19.1  -0.1
BBOO                               IAmb     IAmb     23 23 21.9
      comp=Z,8.8nm,1.1s
AS31  Alice Springs    44.56 261   P        P        23 23 43.6  +0.3
ASAR  Alice Springs    44.56 261   P        P        23 23 41.6  -1.7
      comp=Z,1.2nm,0.4s,baz=87,slow=6.8,SNR=28
ASAR                               pP       pP       23 24 12.9  +1.4
      comp=Z,4.8nm,0.9s,baz=97,slow=8.4,SNR=7.7
ASAR                               PcP      PcP      23 25 24.1  -0.3
      comp=Z,0.7nm,0.5s,baz=115,slow=3.9,SNR=4.6
      comp=Z,1.2nm,0.4s
ASAR  Alice Springs    44.56 261   P        P        23 23 43.3   0.0
WB2   Warramunga Arr   45.04 266   P        P        23 23 46.4  -0.7
WB2                                IAmb     IAmb     23 23 47.9
      comp=Z,5.6nm,0.9s
WB0   Warramunga Arr   45.05 266   P        P        23 23 46.4  -0.7
WB0                                IAmb     IAmb     23 23 47.8
      comp=Z,5.1nm,0.9s
WRA   Warramunga Arr   45.05 266   P        P        23 23 45.3  -1.9
      comp=Z,2.2nm,0.3s,baz=99,slow=7.6,SNR=89
WRA                                pP       pP       23 24 16.2  +0.8
      comp=Z,3.4nm,0.8s,baz=104,slow=7.9,SNR=4.9
WRA                                PcP      PcP      23 25 25.3  -0.8
      comp=Z,1.1nm,0.7s,baz=99,slow=3.4,SNR=5.1
      comp=Z,2.2nm,0.3s
WRA   Warramunga Arr   45.05 266   P        P        23 23 46.1  -1.1
KNRA  Kununurra        51.39 269   P        P        23 24 35.8  -0.2
KAPI  Kappang          63.64 277   LR       LR       23 56 22.7
      comp=Z,20nm,18.2s,baz=236,slow=38
QSPA  South Pole Qui   65.22 180   P        P        23 26 13.6  +2.2
BELA  Belgrano 2       75.13 172   P        P        23 27 12.7  +1.3
BELA                               IAmb     IAmb     23 27 14.3
      comp=Z,2.2nm,0.5s
ADK   Adak             76.42   0   P        P        23 27 18.5  -0.4
H03S2 Juan Fernandez   82.80 124   T        T        00 59 10.1
      baz=243,slow=74,SNR=5.9
H03S1 Juan Fernandez   82.81 124   T        T        00 59 09.0
      baz=243,slow=74,SNR=8.7
H03S3 Juan Fernandez   82.82 124   T        T        00 59 09.0
      baz=243,slow=74,SNR=7.0
H03N3 Juan Fernandez   82.96 123   T        T        00 59 19.1
      baz=250,slow=72,SNR=7.5
H03N2 Juan Fernandez   82.97 123   T        T        00 59 21.2
      baz=250,slow=72,SNR=4.2
H03N1 Juan Fernandez   82.98 123   T        T        00 59 48.3
      baz=250,slow=72,SNR=4.7
NVAR  Mina Array Bea   83.60  42   P        P        23 27 59.0  +0.8
      comp=Z,1.0nm,0.6s,baz=222,slow=7.9,SNR=7.3
      comp=Z,1.0nm,0.6s
TUC   Tucson           84.98  51   P        P        23 28 05.7  +0.6
TUC                                IAmb     IAmb     23 28 08.1
      comp=Z,5.0nm,0.9s
PLCA  Paso Flores      85.64 133   P        P        23 28 10.9  +2.5
      comp=Z,1.5nm,0.7s,baz=211,slow=5.5,SNR=4.3
      comp=Z,1.5nm,0.7s
X16A  Lo Mia Camp, P   85.69  49   P        P        23 28 09.3  +0.5
X16A                               IAmb     IAmb     23 28 11.6
      comp=Z,6.2nm,1.0s
O18K  Koktuh Hills     86.30  11   P        P        23 28 10.2  -0.6
O19K  Port Alsworth    86.77  11   P        P        23 28 12.3  -0.8
L19K  White Mountain   88.55  10   P        P        23 28 21.3  -0.3
L19K                               IAmb     IAmb     23 28 23.5
      comp=Z,3.4nm,1.0s
TMUT  Trail Mountain   88.57  45   P        P        23 28 23.5  +0.9
SUA   Susitna One      88.61  12   P        P        23 28 21.3  -0.7
TXAR  Lajitas Array    88.66  57   P        P        23 28 24.4  +1.4
      comp=Z,1.7nm,0.9s,baz=224,slow=7.0,SNR=6.7
      comp=Z,1.7nm,0.9s
GHO   Glory Hole Cre   89.25  13   P        P        23 28 24.7  -0.2
M27K  Edge Creek, AK   91.35  16   P        P        23 28 35.3  +0.5
PDAR  Pinedale Array   91.53  43   P        P        23 28 36.4  +0.2
      comp=Z,1.2nm,0.8s,baz=212,slow=3.0,SNR=12
      comp=Z,1.2nm,0.8s
ILAR  Eielson Array    92.36  12   P        P        23 28 38.4  -0.9
      comp=Z,0.9nm,0.9s,baz=231,slow=6.1,SNR=8.6
      comp=Z,0.9nm,0.9s
MKAR  Makanchi Array  114.81 312   PKP      PKPdf    23 34 08.1  -1.2
      comp=Z,0.4nm,0.5s,baz=182,slow=1.1,SNR=9.7
MKAR                               PKKPbc   PKKPbc   23 44 48.1  +0.4
      comp=Z,0.3nm,0.7s,baz=298,slow=2.6,SNR=4.2
ARCES ARCESS Array B  133.36 349   PKP      PKPdf    23 34 43.5  -0.6
      comp=Z,3.5nm,0.9s,baz=45,slow=0.3,SNR=5.9
FINES FINESS Array B  140.20 343   PKhKP    PKPpre   23 34 51.7
      comp=Z,1.4nm,0.7s,baz=31,slow=2.3,SNR=7.5
FINES                              PKP      PKPdf    23 34 56.6  -0.3
      comp=Z,0.7nm,0.5s,baz=342,slow=2.4,SNR=4.1
NB2   NORSAR Subarra  143.41 353   PKP      PKPab    23 34 59.2  +0.1
      comp=Z,2.9nm,1.0s,baz=16,slow=3.8
NOA   NORSAR Array B  143.41 353   PKhKP    PKPpre   23 34 59.0
      comp=Z,0.3nm,0.5s,baz=20,slow=3.0,SNR=2.4
BRTR  Keskin Array B  150.32 307   PKPbc    PKPbc    23 35 19.4  -1.0
      comp=Z,1.3nm,0.6s,baz=141,slow=4.6,SNR=11
CLL   Collm           152.50 346 i PKPbc    PKPbc    23 35 24.7  -0.1
      comp=Z,11nm,1.0s
GERES GERESS Array B  154.63 343   PKP      PKPdf    23 35 20.2  -0.8
      comp=Z,0.2nm,0.4s,baz=128,slow=2.2,SNR=4.8
GERES                              PKPbc    PKPbc    23 35 29.4  -0.2
      comp=Z,0.5nm,0.8s,baz=40,slow=2.3,SNR=4.5
TORD  Torodi Ar. Bea  168.28 174   PKP      PKPdf    23 35 35.6  -0.5
      comp=Z,1.1nm,0.7s,baz=107,slow=0.5,SNR=6.9
TORD                               PKPab    PKPab    23 36 46.0  +1.1
      comp=Z,0.9nm,0.9s,baz=183,slow=5.1,SNR=3.9
```

IDC ***23*** *23:18:53.5±7.4, 36°.66N×71°.41E, h121^{km}±46^{km}, mb2.8/1, mbtmp3.4/6, Error ellipse: s-maj=101.1km s-min=27.3km az=145.0*

ISC 23 23:18:51.9±2.4**, 36°.6N**±0°.2×**71°.5E**±0°.2**, h114^{km}, n14, σ0^{s}58**/15**, Afghanistan-Tajikistan border region**

```
Code  Station Name         Δ°  AZ°    Phase ID           Time       Res
                                   Op       ISC        h  m  s     ISC
AML   Almayashu          5.83  16  P        Pn       23 20 16.3   0.0
      SNR=40
UCH   Uchtor             6.13  21  P        Pn       23 20 20.9  +0.5
      SNR=8.4
EKS2  Erkin-Say          6.35  15  P        Pn       23 20 23.2  +0.1
      SNR=16
AAK   Ala-Archa          6.51  20  P        Pn       23 20 25.7  +0.5
      SNR=23
AAK   Ala-Archa          6.51  20  P        Pn       23 20 25.8  +0.6
      9.8nm,0.3s,baz=187,slow=6.0,SNR=106
AAK                                S        Sn       23 21 38.2  +0.1
      1.6nm,0.5s,baz=341,slow=22,SNR=5.8
KBK   Karagaybulak       6.66  23  P        Pn       23 20 28.1  +0.8
      SNR=5.5
CHMS  Chumysh            6.91  20  P        Pn       23 20 31.2  +0.6
      SNR=6.4
USP   Ospenovka          7.10  18  P        Pn       23 20 33.2  +0.2
      SNR=13
TKM2  Tokmak 2           7.10  25  P        Pn       23 20 33.9  +0.5
      SNR=11
GEYT  Alibeck           10.76 281  P        Pn       23 21 22.8  +0.2
      0.6nm,0.3s,baz=235,slow=5.1,SNR=2.8
GEYT                               S        Sn       23 23 07.5   -14
      0.9nm,0.3s,baz=31,slow=20,SNR=4.5
MKAR  Makanchi Array    13.02  35  P        Pn       23 21 52.5   0.0
      0.5nm,0.9s,baz=229,slow=11,SNR=4.5
KURBB Kurchatov Arra    14.95  18  P        P        23 22 18.6  -1.3
      0.1nm,0.5s,baz=203,slow=11,SNR=2.2
ZALV  Zalesovo Beam     19.71  24  P        P        23 23 12.5  +0.4
      0.5nm,0.3s,baz=215,slow=11,SNR=4.4
YKA   Yellowknife Ar    81.18   3  P        P        23 30 54.5  +0.1
      0.1nm,0.3s,baz=356,slow=6.6,SNR=3.6
      0.1nm,0.3s
```

IDC 23 23:31:24.5±2.3**, 7°.18S**×**129°.46E, h0^{km}, mb3.3**/1**, mbtmp3.1**/3**, ML3.2**/2**, Error ellipse: s-maj=117.9km s-min=34.3km az=67.0, Banda Sea**

```
Code  Station Name         Δ°  AZ°    Phase ID           Time       Res
                                   Op       ISC        h  m  s     ISC
WRA   Warramunga Arr    13.54 160  Pn       Pn       23 34 37.3  -0.8
      0.1nm,0.3s,baz=339,slow=13,SNR=8.6
WRA                                Sn       Sn       23 36 58.5   -11
      0.2nm,0.3s,baz=332,slow=22,SNR=7.9
      0.2nm,0.4s
ASAR  Alice Springs     16.94 166  Pn       Pn       23 35 23.8  +0.7
      0.1nm,0.3s,baz=349,slow=9.5,SNR=1.8
      0.1nm,0.3s
MKAR  Makanchi Array    68.08 327  P        P        23 42 26.2   0.0
      0.1nm,0.3s,baz=111,slow=6.8,SNR=2.7
      0.1nm,0.3s
```

KRSC ***23*** *23:49:19.1±0.4, 55°.10N×161°.78E, h69^{km}±16^{km}, Ml5.2*
MOS ***23*** *23:49:19.6±1.0, 55°.15N×161°.74E, h72^{km}, mb4.5/27, Error ellipse: s-maj=7.5km s-min=3.9km az=77.8*
NEIC ***23*** *23:49:22.5±1.7, 55°.09N±0°.09×161°.6E±0°.1, h86^{km}±7^{km}, mb4.4/151, Error ellipse: s-maj=13.9km s-min=9.4km az=154.0*
IDC ***23*** *23:49:23.5±1.5, 55°.21N×161°.54E, h90^{km}±14^{km}, mb3.8/22, mbtmp4.1/27, MS3.4/31, Error ellipse: s-maj=14.2km s-min=10.1km az=137.0*

ISC 23 23:49:20.7±0.6**, 55°.11N**±0°.03×**161°.71E**±0°.03**, h70^{km}**±6^{km}**, n550, σ1^{s}14**/544**, mb4.4**/112**, 15C-5D, Near east coast of Kamchatka Peninsula**

```
Code  Station Name         Δ°  AZ°    Phase ID           Time       Res
                                   Op       ISC        h  m  s     ISC
TUMD  Tumrok D           0.76 277  eP       Pn       23 49 35.7  -0.5
TUMD                               eS       Sn       23 49 48.3  +0.5
TUMR  Tumrok             0.91 281   PN      Pn       23 49 35.7  -2.5
TUMR                                S       Sn       23 49 48.3  -2.9
TUMR  Tumrok             0.91 281  i P      Pn       23 49 38.3  +0.1
BZGR  Bezymyannyi-Gr     1.01 326   PN      Pn       23 49 39.6  +0.2
BZGR                                S       Sn       23 49 53.9  +0.6
BZGR  Bezymyannyi-Gr     1.01 326  eP       Pn       23 49 39.6  +0.2
BZGR                               eS       Sn       23 49 53.9  +0.6
BZP   Bezymyannyi-Pe     1.04 321  eP       Pn       23 49 39.5  -0.4
BZP                                eS       Sn       23 49 54.0  -0.1
KMNR  Kamenistaya        1.06 308   PN      Pn       23 49 40.1  +0.1
KMNR  Kamenistaya        1.06 308  i P      Pn       23 49 40.1  +0.1
BZMR  Bezymyannaya       1.08 321   PN      Pn       23 49 40.2  -0.1
BZMR  Bezymyannaya       1.08 321  i P      Pn       23 49 40.2  -0.1
BZWR  Bezymyannyi-We     1.10 322   PN      Pn       23 49 40.7  +0.1
BZWR  Bezymyannyi-We     1.10 322  i P      Pn       23 49 40.7  +0.1
LGNR  Loginova           1.13 330   PN      Pn       23 49 41.9  +0.8
LGNR  Loginova           1.13 330  eP       Pn       23 49 41.9  +0.8
CIRR  Tsirk              1.14 332   PN      Pn       23 49 41.4  +0.3
CIRR  Tsirk              1.14 332  i P      Pn       23 49 41.4  +0.3
KIRR  Kirishev           1.15 318   PN      Pn       23 49 41.0  -0.2
KIRR  Kirishev           1.15 318  i P      Pn       23 49 41.0  -0.2
KPT   Kopyto             1.20 316   PN      Pn       23 49 41.9  +0.1
KPT   Kopyto             1.20 316  i P      Pn       23 49 41.9  +0.1
KBTR  Krutoberegovo      1.27  29   PN      Pn       23 49 42.9  +0.3
KBTR  Krutoberegovo      1.27  29  eP       Pn       23 49 42.9  +0.3
KBG   Krutoberegovo      1.28  26   PN      Pn       23 49 43.0  +0.3
KBG                                 S       Sn       23 50 00.4  +1.2
KBG   Krutoberegovo      1.28  26  eP       Pn       23 49 43.0  +0.3
KBG                                i S      Sn       23 50 00.4  +1.2
KLY   Klyuchi            1.34 334   PN      Pn       23 49 43.2  -0.4
KLY   Klyuchi            1.34 334  eP       Pn       23 49 43.2  -0.4
SMKR  Semkarok           1.48 355   PN      Pn       23 49 45.8  +0.4
SMKR  Semkarok           1.48 355  eP       Pn       23 49 45.8  +0.4
SRKR  Sorokina           1.57 349   PN      Pn       23 49 47.3  +0.6
SRKR  Sorokina           1.57 349  eP       Pn       23 49 47.3  +0.6
ESO   Esso               1.89 297   PN      Pn       23 49 52.6  +1.7
ESO                                 S       Sn       23 50 15.3  +1.4
ESO   Esso               1.89 297  eP       Pn       23 49 52.6  +1.7
ESO                                eS       Sn       23 50 15.3  +1.4
SPN   Mys Shipunski      2.25 207   PN      Pn       23 49 55.3  -0.4
SPN                                 S       Sn       23 50 21.8  -0.6
SPN   Mys Shipunski      2.25 207  eP       Pn       23 49 55.3  -0.4
SPN                                eS       Sn       23 50 21.8  -0.6
NLC   Nalytchevo         2.39 216   PN      Pn       23 49 59.3  +1.7
NLC   Nalytchevo         2.39 216  eP       Pn       23 49 59.3  +1.7
BKI   Bering             2.45  86   PN      Pn       23 49 57.9  -0.5
BKI                                 S       Sn       23 50 25.7  -1.5
BKI   Bering             2.45  86  eP       Pn       23 49 57.9  -0.5
BKI                                eS       Sn       23 50 25.7  -1.5
SDLR  Sedlovina          2.48 223   PN      Pn       23 50 00.1  +1.2
SDLR  Sedlovina          2.48 223  eP       Pn       23 50 00.1  +1.2
KRER  Koryakskii         2.51 225   PN      Pn       23 50 00.7  +1.3
KRER  Koryakskii         2.51 225  eP       Pn       23 50 00.7  +1.3
KRX   Arik               2.51 227   PN      Pn       23 50 00.5  +1.1
KRX   Arik               2.51 227  eP       Pn       23 50 00.5  +1.1
SMAR  Somma              2.52 224   PN      Pn       23 50 00.4  +0.8
SMAR  Somma              2.52 224  eP       Pn       23 50 00.4  +0.8
AVH   Avacha             2.54 224   PN      Pn       23 50 01.1  +1.3
AVH   Avacha             2.54 224  eP       Pn       23 50 01.1  +1.3
UGLR  Uglovaya           2.55 223   PN      Pn       23 50 00.9  +1.0
UGLR  Uglovaya           2.55 223  eP       Pn       23 50 00.9  +1.0
KOK   Koryaka            2.56 226   PN      Pn       23 50 00.9  +0.9
KOK   Koryaka            2.56 226  eP       Pn       23 50 00.9  +0.9
GNL   Ganaly             2.62 239   PN      Pn       23 50 01.8  +1.0
GNL   Ganaly             2.62 239  eP       Pn       23 50 01.8  +1.0
DALK  Dalny              2.72 221   PN      Pn       23 50 02.7  +0.7
DALK                                S       Sn       23 50 34.1  +0.4
DALK  Dalny              2.72 221  eP       Pn       23 50 02.7  +0.7
DALK                               eS       Sn       23 50 34.1  +0.4
INSR  Institute          2.75 223  eP       Pn       23 50 04.4  +2.0
INSR                               eS       Sn       23 50 36.9  +2.4
PET   Petropavlovsk      2.76 222           Pn       23 50 03.7  +1.1
PET   Petropavlovsk      2.76 222⇓iPN       Pn       23 50 03.4  +0.8
PET                                eS       Sn       23 50 35.4  +0.6
PET                                 pmax    pmax
      comp=Z,1µm,0.4s
PET                                 smax    smax
      comp=N,5µm,0.5s
PET                                 smax    smax
      comp=E,4µm,0.6s
PET                                 MLR     MLR
      comp=Z,300nm,17.0s
PET   Petropavlovsk      2.76 222  eP       Pn       23 50 03.5  +0.8
PET                                eS       Sn       23 50 35.6  +0.9
PEA0B Petropavlovsk-     3.10 231           Pn       23 50 08.5  +1.3
PEA0B Petropavlovsk-     3.10 231   PN      Pn       23 50 08.5  +1.3
PETK  Petropavlovsk-     3.10 231   P       Pn       23 50 08.7  +1.5
      comp=Z,153nm,0.9s,baz=53,slow=15,SNR=164
PETK                                S       Sn       23 50 46.5  +3.4
      comp=Z,170nm,0.5s,baz=85,slow=18,SNR=7.9
PETK                                LR      LR       23 51 53.1
      comp=Z,166nm,18.2s,baz=67,slow=48
PETK  Petropavlovsk-     3.10 231           Pn       23 50 07.9  +0.6
KRMR  Karymshinskiy      3.11 224   PN      Pn       23 50 08.7  +1.3
KRMR  Karymshinskiy      3.11 224  eP       Pn       23 50 08.7  +1.3
TIGL  Tigil              3.15 329  eP       Pn       23 50 08.5  +0.7
GRL   Gorelyy            3.35 221   PN      Pn       23 50 13.4  +2.7
GRL   Gorelyy            3.35 221  eP       Pn       23 50 13.4  +2.7
MTVR  Mutnovka           3.36 220   PN      Pn       23 50 12.4  +1.5
MTVR                                S       Sn       23 50 51.5  +1.8
MTVR  Mutnovka           3.36 220  eP       Pn       23 50 12.4  +1.5
MTVR                               eS       Sn       23 50 51.5  +1.8
APC   Apacha             3.46 233   PN      Pn       23 50 14.2  +2.0
APC   Apacha             3.46 233  eP       Pn       23 50 14.2  +2.0
KDTR  Khodutka, Kamc     3.96 215   PN      Pn       23 50 19.7  +0.8
KDTR  Khodutka, Kamc     3.96 215  eP       Pn       23 50 19.7  +0.8
PALN  Palana             4.10 347   PN      Pn       23 50 22.7  +1.9
PALN  Palana             4.10 347  eP       Pn       23 50 22.7  +1.9
OSSR  Ossora             4.21  10   PN      Pn       23 50 22.2  -0.2
OSSR  Ossora             4.21  10  eP       Pn       23 50 22.2  -0.2
SKR   Severo-Kuril’s     5.58 220⇑ePN       Pn       23 50 42.6  +1.6
TILK  Tilichiki          5.85  22   PN      Pn       23 50 46.3  +1.6
TILK  Tilichiki          5.85  22  eP       Pn       23 50 46.3  +1.6
MA2   Magadan            7.41 312   P       Pn       23 51 07.6  +1.5
      comp=Z,12nm,0.6s,baz=110,slow=12,SNR=4.5
MA2                                 LR      LR       23 54 28.2
      comp=Z,183nm,18.5s,baz=126,slow=42
SHEM  Shemya Is, Ala     7.70 103   P       Pn       23 51 10.4  +0.4
      comp=Z,54nm,0.5s,baz=72,slow=2.9,SNR=11
SHEM                                S       Sn       23 52 31.1  -4.4
      comp=Z,22nm,0.3s,baz=274,slow=21,SNR=2.1
SMY   Shemya             7.70 103   Pn      Pn       23 51 08.6  -1.4
SMY   Shemya             7.70 103   PN      Pn       23 51 10.1  +0.1
SEY   Seymchan           9.19 332   P       Pn       23 51 32.5  +2.2
      comp=Z,0.9nm,0.4s,baz=158,slow=19,SNR=1.9
SEY   Seymchan           9.19 332⇑ePN       Pn       23 51 24.8  -5.5
TYV   Tymovskoe         12.23 258  ePN      P        23 52 20.5  -1.2
TYV                                 pmax    pmax
      comp=Z,100nm,3.2s
TYV                                 pmax    pmax
      comp=Z,9.0nm,1.1s
BILL  Bilibino          13.15   8  i PN     Pn       23 52 26.1  +2.0
BILL                                pmax    pmax
      comp=Z,26nm,1.1s
BILL                                MLR     MLR
      comp=Z,86nm,22.0s
ADK   Adak              13.25  95   Pn      Pn       23 52 24.9  -0.7
ADK   Adak              13.25  95   PN      Pn       23 52 24.9  -0.7
YSS   Yuzh-Sakhalins    14.41 243⇑eP        Pn       23 52 39.9  -1.1
YSS                                 pmax    pmax
      comp=Z,4.0nm,0.8s
SPIA  Saint Paul Isl    15.72  71           P        23 53 01.2  +0.9
JKA   Kamikawa-asahi    16.50 236           Pn       23 53 09.1  +1.6
ASAJ  Asahikawa         16.50 236   P       Pn       23 53 09.3  +1.7
      comp=Z,4.2nm,0.5s,baz=52,slow=18,SNR=1.8
ASAJ                                LR      LR       23 59 13.0
      comp=Z,62nm,21.4s,baz=120,slow=36
ASAJ  Asahikawa         16.50 236   P       Pn       23 53 09.1  +1.5
ASAJ                                pmax    pmax
      comp=Z,14nm,1.0s
NIKH  Nikolski High     17.36  85   P       Pn       23 53 18.1   0.0
NIKH  Nikolski High     17.36  85   P       P        23 53 20.4  +1.9
      baz=290
ERM   Erimo             17.88 231   P       P        23 53 21.6  -2.7
ERM   Erimo             17.88 231   P       P        23 53 21.6  -2.7
ERM                                 pmax    pmax
      comp=Z,99nm,1.5s
YAK   Yakutsk           17.93 306   LR      LR       00 00 59.7
      comp=Z,75nm,18.5s,baz=106,slow=39
YAK   Yakutsk           17.93 306  eP       Pn       23 53 39.7   +15
YAK                                 pmax    pmax
      comp=Z,28nm,1.1s
YAK                                 pmax    pmax
      comp=N,4.0nm,1.4s
YAK                                 pmax    pmax
      comp=E,6.0nm,1.6s
TNA   Tin City          18.10  43           Pn       23 53 28.4  +1.4
TNA   Tin City          18.10  43   P       Pn       23 53 27.8  +0.8
      baz=250,SNR=11
UNV   Unalaska Valle    18.43  81   P       Pn       23 53 32.5  +1.4
UNV                                 IAmb    IAmb     23 53 35.5
      comp=Z,37nm,1.0s
UNV   Unalaska Valle    18.43  81   P       Pn       23 53 32.4  +1.3
      baz=288
AKUT  Akutan            18.77  80   P       Pn       23 53 35.4  +0.3
ANM   Nome              18.83  47           Pn       23 53 37.2  +1.5
ANM   Nome              18.83  47   P       Pn       23 53 37.2  +1.5
ANM                                 pmax    pmax
      comp=Z,6.0nm,1.1s
ANM   Nome              18.83  47   P       P        23 53 35.1  +0.6
      baz=256
KLR   Kul'dur           19.20 265   P       P        23 53 40.2  +1.6
      comp=Z,1.6nm,0.6s,baz=64,slow=8.8,SNR=9.0
KLR   Kul'dur           19.20 265⇑eP        P        23 53 36.6  -2.0
KLR                                 pmax    pmax
      comp=Z,6.0nm,1.8s
JTM   Tenmabayashi      19.80 232   P       P        23 53 44.3  -1.0
S12K  Black Hills       20.44  73   P       P        23 53 53.7  +1.6
      baz=284
RDOG  Red Dog Mine      20.85  38   P       P        23 53 56.0  -0.4
      baz=250
HEH   HeiHe             21.21 271  eP       P        23 54 14.1   +14
HEH                                 pmax    pmax
      comp=Z,9.0nm,1.0s
HEH                                 pmax    pmax
      comp=Z,170nm,4.3s
SDPT  Sand Point        21.40  74   P       P        23 54 04.0  +1.7
      baz=286
N16K  Nishlik Lake      21.48  59   P       P        23 54 04.1  +0.9
      baz=274
TIXI  Tiksi             21.68 332   P       P        23 54 04.9  -0.4
      comp=Z,9.3nm,0.6s,baz=91,slow=23,SNR=19
TIXI                                LR      LR       00 03 23.5
      comp=Z,105nm,18.6s,baz=68,slow=39
      comp=Z,9.3nm,0.6s
TIXI  Tiksi             21.68 332   P       P        23 54 04.9  -0.4
TIXI                                IAmb    IAmb     23 54 09.7
      comp=Z,13nm,0.8s
TIXI  Tiksi             21.68 332⇑iP        P        23 54 04.8  -0.4
TIXI                                pmax    pmax
      comp=Z,18nm,1.0s
O16K  Kokwok River B    21.89  62   P       P        23 54 08.5  +1.0
      baz=276
USRK  Ussuriysk Ar.     21.95 253   LR      LR       00 02 34.1
      comp=Z,74nm,21.5s,baz=73,slow=36
P16K  Nushagak River    22.01  63   P       P        23 54 09.5  +0.7
      baz=278,SNR=7.6
CHGN  Chignik           22.29  70   P       P        23 54 12.0  +0.2
O17K  Koliganek Bris    22.38  61   P       P        23 54 13.4  +0.6
      baz=277
GCSA  Galena City Sc    22.46  48   P       P        23 54 13.2  -0.4
      baz=265
TTA   Tatalina          22.74  53   P       P        23 54 17.8  +1.0
TTA   Tatalina          22.74  53   P       P        23 54 17.8  +1.0
TTA                                 pmax    pmax
      comp=Z,8.0nm,0.9s
TTA   Tatalina          22.74  53   P       P        23 54 16.6  -0.2
      baz=270,SNR=8.6
R17K  Ugashik Creek     23.08  66   P       P        23 54 20.7  +0.6
      baz=282
Q17K  Contact Creek     23.22  65   P       P        23 54 21.3  -0.2
      baz=281
L19K  White Mountain    23.29  55   P       P        23 54 22.8  +0.7
L19K  White Mountain    23.29  55   P       P        23 54 22.1   0.0
      baz=273
O18K  Koktuh Hills      23.31  61   P       P        23 54 23.6  +1.2
O18K                                IAmb    IAmb     23 54 55.4
      comp=Z,12nm,1.1s
O18K  Koktuh Hills      23.31  61   P       P        23 54 22.8  +0.4
      baz=278
P18K  Big Mountain,     23.37  62   P       P        23 54 24.0  +1.1
P18K                                IAmb    IAmb     23 54 24.8
      comp=Z,13nm,0.9s
P18K  Big Mountain,     23.37  62   P       P        23 54 23.3  +0.4
      baz=279
M19K  Big River Lodg    23.52  55   P       P        23 54 25.4  +1.2
M19K  Big River Lodg    23.52  55   P       P        23 54 24.1  -0.1
      baz=274
N19K  Bonanza Creek     23.56  58   P       P        23 54 25.9  +1.2
N19K                                IAmb    IAmb     23 54 28.5
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      comp=Z,11nm,1.0s
N19K  Bonanza Creek     23.56  58 P     P     23 54 25.0 +0.3
      baz=276
Q18K  Katmai Hardscr    23.60  64 P     P     23 54 25.2 +0.1
      baz=281
K20K  Telida            23.62  52 P     P     23 54 26.3 +1.2
K20K                              IAmb  IAmb  23 54 28.3
      comp=Z,8.3nm,0.8s
K20K  Telida            23.62  52 P     P     23 54 25.6 +0.5
      baz=271,SNR=10
L20K  Farewell, AK      23.73  54 P     P     23 54 26.4 +0.2
      baz=273
IMAR  Indian Mountai    23.88  45 P     P     23 54 28.1 +0.7
G21K  Allakaket         24.04  44 P     P     23 54 28.3 -0.5
      baz=264
M20K  Styx River        24.12  55 P     P     23 54 31.0 +1.4
M20K                              IAmb  IAmb  23 54 32.7
      comp=Z,12nm,0.8s
M20K  Styx River        24.12  55 P     P     23 54 29.6 -0.1
      baz=275
F21K  Alatna River      24.14  42 P     P     23 54 29.5 -0.2
      baz=262
H21K  Melozitna Rive    24.25  46 P     P     23 54 31.0 +0.3
H21K  Melozitna Rive    24.25  46 P     P     23 54 30.6 -0.1
      baz=267
Q19K  Cape Douglas,     24.25  63 P     P     23 54 31.7 +0.8
Q19K  Cape Douglas,     24.25  63 P     P     23 54 31.6 +0.8
      baz=281
ILSW  Iliamna Southw    24.33  60 P     P     23 54 32.6 +1.0
ILSW                              IAmb  IAmb  23 54 34.5
      comp=Z,16nm,0.7s
P19K  Oil Pt            24.33  61 P     P     23 54 32.9 +1.3
P19K  Oil Pt            24.33  61 P     P     23 54 32.3 +0.7
      baz=280
CHUM  Lake Minchumin    24.40  50 P     P     23 54 32.3 +0.2
      baz=271,SNR=8.8
RSO   Redoubt South     24.45  59 P     P     23 54 27.1 -5.8
PPLA  Purkeypile        24.49  53 P     P     23 54 34.4 +1.3
PPLA                              IAmb  IAmb  23 54 36.6
      comp=Z,15nm,0.9s
PPLA  Purkeypile        24.49  53 P     P     23 54 34.5 +1.3
      baz=273,SNR=6.7
CAST  Castle Rocks      24.52  52 P     P     23 54 33.7 +0.5
CAST                              IAmb  IAmb  23 54 38.4
      comp=Z,10nm,0.8s
CAST  Castle Rocks      24.52  52 P     P     23 54 33.9 +0.6
      baz=272,SNR=13
MJAR  Matsushiro Arr    24.56 231 P     P     23 54 34.4 +0.6
      comp=Z,1.3nm,0.5s,baz=16,slow=9.7,SNR=2.6
MJAR                              LR    LR    00 05 19.0
      comp=Z,58nm,18.1s,baz=32,slow=39
      comp=Z,1.3nm,0.5s
I21K  Tanana            24.56  47 P     P     23 54 34.4 +0.8
I21K  Tanana            24.56  47 P     P     23 54 34.5 +1.0
      baz=268
O20K  Slope Mountain    24.57  60 P     P     23 54 34.6 +0.9
      baz=279
SPCR  Spurr Chakacha    24.62  57 P     P     23 54 35.4 +1.2
      baz=277
F22K  John River        24.67  42 P     P     23 54 36.2 +1.6
      baz=263,SNR=9.0
SPU   Mount Spurr       24.70  57 P     P     23 54 34.7 -0.2
OHAK  Old Harbor        24.80  66 P     P     23 54 35.9 +0.1
OHAK                              IAmb  IAmb  23 54 49.9
      comp=Z,30nm,1.4s
OHAK  Old Harbor        24.80  66 P     P     23 54 36.8 +1.0
      baz=285
SKT   Skwentna          24.86  55 P     P     23 54 35.9 -0.4
G22K  Bettles           24.87  43 P     P     23 54 37.2 +0.9
      baz=265
BPAW  Bear Paw Mtn.     24.99  50 P     P     23 54 38.5 +1.0
BPAW  Bear Paw Mtn.     24.99  50 P     P     23 54 38.8 +1.3
      baz=272,SNR=5.1
KTH   Kantishna Hill    25.03  51 P     P     23 54 39.2 +1.2
KTH                               IAmb  IAmb  23 55 12.2
      comp=Z,14nm,1.4s
KDAK  Kodiak Island     25.04  65 P     P     23 54 35.5 -2.4
      comp=Z,6.0nm,0.5s,baz=298,slow=5.8,SNR=11
KDAK  Kodiak Island     25.04  65 P     P     23 54 35.9 -2.0
KDAK                              IAmb  IAmb  23 55 02.5
      comp=Z,16nm,1.0s
KDAK  Kodiak Island     25.04  65 P     P     23 54 35.9 -2.0
KDAK                              pmax  pmax
      comp=Z,16nm,1.0s
KDAK  Kodiak Island     25.04  65 P     P     23 54 38.3 +0.4
      baz=284
MLY   Manley            25.09  48 P     P     23 54 38.9 +0.5
MLY   Manley            25.09  48 P     P     23 54 39.5 +1.1
      baz=270,SNR=5.9
SUA   Susitna One       25.29  56 P     P     23 54 40.7 +0.4
SUA                               IAmb  IAmb  23 54 44.6
      comp=Z,7.6nm,0.8s
SUA   Susitna One       25.29  56 P     P     23 54 40.9 +0.5
      baz=278
TRF   Thorofare Moun    25.32  51 P     P     23 54 41.6 +0.9
TRF                               IAmb  IAmb  23 54 45.4
      comp=Z,13nm,0.9s
TRF   Thorofare Moun    25.32  51 P     P     23 54 40.7  0.0
      baz=274,SNR=9.9
CNPM  China Poot        25.35  61 P     P     23 54 41.5 +0.6
COLD  Coldfoot          25.41  42 P     P     23 54 39.8 -1.4
COLD  Coldfoot          25.41  42 P     P     23 54 41.1 -0.1
      baz=266
CUT   Chulitna          25.41  54 P     P     23 54 41.3  0.0
CUT                               IAmb  IAmb  23 54 42.7
      comp=Z,15nm,0.8s
CUT   Chulitna          25.41  54 P     P     23 54 41.3  0.0
      baz=276
D23K  Nanushuk River    25.43  38 P     P     23 54 41.4  0.0
      baz=262
G23K  Bananza Creek     25.44  44 P     P     23 54 41.8 +0.3
      baz=267
BRLK  Bradley Lake      25.48  60 P     P     23 54 42.1 +0.1
BRLK                              IAmb  IAmb  23 55 25.6
      comp=Z,28nm,1.5s
H23K  Yukon River       25.60  46 P     P     23 54 44.5 +1.5
H23K                              IAmb  IAmb  23 55 09.9
      comp=Z,15nm,1.1s
H23K  Yukon River       25.60  46 P     P     23 54 43.5 +0.5
      baz=269
I23K  Minto, Yukon-K    25.67  47 P     P     23 54 45.1 +1.5
I23K                              IAmb  IAmb  23 55 17.4
      comp=Z,14nm,1.4s
I23K  Minto, Yukon-K    25.67  47 P     P     23 54 45.1 +1.5
      baz=271,SNR=5.1
E23K  Chandalar         25.70  41 P     P     23 54 44.7 +0.6
      baz=265
NEA2  Nenana            25.81  49 P     P     23 54 45.6 +0.8
NEA2  Nenana            25.81  49 P     P     23 54 45.4 +0.5
      baz=272
MCK   McKinley          25.91  51 P     P     23 54 47.4 +1.6
MCK                               IAmb  IAmb  23 55 18.5
      comp=Z,13nm,1.4s
MCK   McKinley          25.91  51 P     P     23 54 47.4 +1.6
MCK                               pmax  pmax
      comp=Z,13nm,1.4s
MCK   McKinley          25.91  51 P     P     23 54 46.7 +0.9
      baz=274
GHO   Glory Hole Cre    26.11  55 P     P     23 54 48.5 +0.7
D24K  Happy Valley      26.12  38 P     P     23 54 47.8 +0.2
      baz=263
E24K  Your Creek        26.13  41 P     P     23 54 48.1 +0.3
      baz=266,SNR=15
MDM   Murphy Dome       26.15  48 P     P     23 54 50.1 +2.0
WRH   Wood River Hil    26.23  49 P     P     23 54 49.9 +1.2
WRH                               IAmb  IAmb  23 55 16.0
      comp=Z,7.5nm,1.0s
H24K  Noodor Dome       26.28  46 P     P     23 54 51.1 +1.9
H24K  Noodor Dome       26.28  46 P     P     23 54 50.2 +1.0
      baz=271
F24K  Squaw Lake        26.32  42 P     P     23 54 50.0 +0.5
      baz=267
COLA  College           26.32  48⇑eP    P     23 54 48.5 -0.9
COLA                              pmax  pmax
      comp=Z,1.0nm,0.9s
CCB   Clear Creek Bu    26.35  48 P     P     23 54 49.0 -0.8
KNK   Knik Glacier      26.39  56 P     P     23 54 50.8 +0.7
KNK                               IAmb  IAmb  23 54 52.0
      comp=Z,16nm,1.2s
KNK   Knik Glacier      26.39  56 P     P     23 54 50.8 +0.7
      baz=279
SML   Sawmill           26.39  55 P     P     23 54 50.2  0.0
SML                               IAmb  IAmb  23 55 02.9
      comp=Z,10nm,1.0s
SML   Sawmill           26.39  55 P     P     23 54 50.3 +0.1
      baz=279
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G24K  Hadweenzic Riv    26.45  44 P     P     23 54 50.3 -0.4
      baz=270
PWL   Port Wells        26.54  57 P     P     23 54 50.5 -1.0
PWL   Port Wells        26.54  57 P     P     23 54 51.5 -0.1
      baz=281
M23K  Glacier View      26.67  55 P     P     23 54 53.0 +0.3
      baz=279
HDA   Harding Lake      26.73  49 P     P     23 54 53.6 +0.4
HDA   Harding Lake      26.73  49 P     P     23 54 53.3  0.0
      baz=275
IL31                    26.74  48 P     P     23 54 53.2  0.0
ILAR  Eielson Array     26.74  48 P     P     23 54 53.5 +0.3
      comp=Z,1.2nm,0.7s,baz=266,slow=8.0,SNR=14
ILAR                              LR    LR    00 05 04.8
      comp=Z,28nm,19.6s,baz=57,slow=35
      comp=Z,1.2nm,0.7s
ILAR  Eielson Array     26.74  48 P     P     23 54 52.6 -0.6
ILAR  Eielson Array     26.74  48 P     P     23 54 52.6 -0.6
IL03  Eielson Array     26.75  48 P     P     23 54 54.2 +0.9
SCM   Sheep Creek Mo    26.86  55 P     P     23 54 55.0 +0.6
SCM                               IAmb  IAmb  23 55 18.8
      comp=Z,9.7nm,0.8s
SCM   Sheep Creek Mo    26.86  55 P     P     23 54 55.0 +0.6
SCM                               pmax  pmax
      comp=Z,10.0nm,0.8s
SCM   Sheep Creek Mo    26.86  55 P     P     23 54 54.8 +0.3
      baz=279
G25K  Bearman Lake      27.00  44 P     P     23 54 56.4 +0.9
      baz=271
D25K  Kavik River       27.00  38 P     P     23 54 55.6 -0.1
      baz=265
F25K  Christian Rive    27.18  42 P     P     23 54 57.4 +0.1
      baz=269
E25K  Arctic Village    27.22  41 P     P     23 54 58.0 +0.3
      baz=268
PRP   Porcupine Dome    27.27  46 P     P     23 54 59.2 +1.0
PRP   Porcupine Dome    27.27  46 P     P     23 54 57.4 -0.8
      baz=274
FYU   Fort Yukon        27.35  44 P     P     23 54 59.9 +1.2
M24K  Tolsona, Glenn    27.35  54 P     P     23 55 00.0 +1.1
M24K                              IAmb  IAmb  23 55 31.8
      comp=Z,20nm,1.2s
M24K  Tolsona, Glenn    27.35  54 P     P     23 54 59.9 +1.1
      baz=280
PAX   Paxson            27.54  52 P     P     23 55 01.0 +0.4
      baz=279
C26K  Camden Bay        27.57  37 P     P     23 55 00.7 +0.1
      baz=266
KLU   Klutina           27.57  55 P     P     23 55 01.9 +1.1
KLU                               IAmb  IAmb  23 55 37.8
      comp=Z,11nm,1.3s
KLU   Klutina           27.57  55 P     P     23 55 01.4 +0.6
      baz=281
BMAR  Burnt Mountain    27.59  42 P     P     23 55 01.9 +1.0
RIDG  Independent Ri    27.72  50 P     P     23 55 01.7 -0.4
RIDG                              IAmb  IAmb  23 55 17.1
      comp=Z,12nm,1.4s
RIDG  Independent Ri    27.72  50 P     P     23 55 02.1  0.0
      baz=278
F26K  Sheenjek River    27.76  42 P     P     23 55 03.1 +0.7
      baz=271
Q23K  Middleton Isla    27.81  60 P     P     23 55 03.8 +1.0
      baz=285
EYAK  Cordova Ski Ar    27.84  57 P     P     23 55 03.4 +0.2
      baz=283
G26K  Porcupine Rive    27.91  43 P     P     23 55 04.5 +0.9
      baz=272
C27K  Jago River        27.96  37 P     P     23 55 04.2  0.0
      baz=267
SCRK  Sand Creek        28.07  50 P     P     23 55 05.1 -0.2
SCRK  Sand Creek        28.07  50 P     P     23 55 04.9 -0.4
      baz=278
DOT   Dot Lake          28.08  50 P     P     23 55 04.8 -0.5
N25K  Chitina, Valde    28.18  55 P     P     23 55 06.5 +0.3
N25K  Chitina, Valde    28.18  55 P     P     23 55 06.6 +0.4
      baz=282
I26K  Coal Creek Min    28.27  47 P     P     23 55 08.0 +1.1
I26K  Coal Creek Min    28.27  47 P     P     23 55 06.7 -0.3
      baz=276
L26K  Log Cabin Wild    28.49  51 P     P     23 55 07.7 -1.3
      baz=280
GLB   Gilahina Butte    28.58  55 P     P     23 55 09.4 -0.4
E27K  Coleen River      28.71  41 P     P     23 55 10.9  0.0
      baz=272
G27K  Doyon Strip       28.76  43 P     P     23 55 11.8 +0.6
      baz=274
M26K  Nabesna, AK       28.76  53 P     P     23 55 12.9 +1.5
M26K  Nabesna, AK       28.76  53 P     P     23 55 11.8 +0.4
      baz=281
VRDI  Verde Repeater    28.79  55 P     P     23 55 13.1 +1.3
VRDI                              IAmb  IAmb  23 55 31.4
      comp=Z,6.6nm,1.1s
H27K  Steamboat Moun    28.86  45 P     P     23 55 12.1 -0.1
      baz=276
K27K  Chicken           28.89  49 P     P     23 55 12.9 +0.5
K27K  Chicken           28.89  49 P     P     23 55 13.0 +0.5
      baz=279
MCARA McCarthy VSAT     28.96  55 P     P     23 55 13.2 +0.1
      baz=283
L27K  Beaver Creek,     29.17  51 P     P     23 55 15.7 +0.8
L27K  Beaver Creek,     29.17  51 P     P     23 55 15.9 +1.0
      baz=281
EGAK  Eagle             29.18  48 P     P     23 55 14.4 -0.6
EGAK                              IAmb  IAmb  23 55 40.8
      comp=Z,9.8nm,1.4s
EGAK  Eagle             29.18  48 P     P     23 55 15.4 +0.4
      baz=279
BCAR  Beaver Creek A    29.18  51 P     P     23 55 16.4 +1.3
M27K  Edge Creek, AK    29.28  53 P     P     23 55 17.4 +1.2
M27K                              IAmb  IAmb  23 55 19.1
      comp=Z,6.4nm,0.9s
M27K  Edge Creek, AK    29.28  53 P     P     23 55 16.9 +0.8
      baz=282
BARN  Barnard Glacie    29.68  55 P     P     23 55 20.9 +1.2
BVCY  Beaver Creek      29.73  52 P     P     23 55 21.1 +1.1
      baz=283
DAWY  Dawson            30.05  49 P     P     23 55 23.7 +1.0
      baz=281
YUK3  Moose Creek       30.06  53 P     P     23 55 24.3 +1.2
      baz=284
O28M  Mount Upton       30.45  55 P     P     23 55 27.5 +1.0
      baz=286
PCA   Pinnacle          30.60  57 P     P     23 55 28.3 +0.6
PINM  Pinnacle          30.61  57 P     P     23 55 28.7 +0.9
      baz=287
EPYK  Eagle Plains      30.77  44 P     P     23 55 29.9 +0.9
      baz=279
JNU   Nakatsue          30.78 237 LR    LR    00 08 09.9
      comp=Z,32nm,19.9s,baz=45,slow=37
L29M  L29M              30.80  50 P     P     23 55 30.6 +1.2
      baz=284
M29M  Somme Creek       30.81  52 P     P     23 55 30.6 +1.0
      baz=285
G30M  tAoh Zraii Nji    30.87  43 P     P     23 55 30.6 +0.7
      baz=279
K29M  Barlow Dome       30.91  49 P     P     23 55 31.4 +1.0
      baz=283
YUK4  Talbot Arm        31.01  54 P     P     23 55 32.2 +0.7
      baz=286
XLT   XiLinHaoTe        31.13 268 eP    P     23 55 31.3 -1.2
XLT                               pP    pP    23 55 40.9 -8.6
XLT                               sP    sP    23 55 45.3  -12
XLT                               pmax  pmax
      comp=Z,78nm,4.5s
XLT                               pmax  pmax
      comp=Z,5.0nm,0.8s
PNL   Peninsula         31.15  57 P     P     23 55 33.3 +0.9
      baz=288
YUK6  Outpost Mounta    31.26  55 P     P     23 55 34.7 +1.1
      baz=287
O29M  Mount Kennedy     31.35  56 P     P     23 55 35.3 +1.0
      baz=288
M30M  Minto, Yukon      31.53  51 P     P     23 55 36.7 +0.9
      baz=286
HYT   Haines Junctio    31.69  54 P     P     23 55 39.2 +1.8
HYT                               IAmb  IAmb  23 55 40.3
      comp=Z,8.0nm,1.0s
HYT   Haines Junctio    31.69  54 P     P     23 55 38.7 +1.3
      baz=288,SNR=6.1
INK   Inuvik            31.70  40 P     P     23 55 38.0 +0.9
      comp=Z,3.2nm,0.6s,baz=274,slow=5.8,SNR=15
      comp=Z,3.2nm,0.6s
INK   Inuvik            31.70  40 P     P     23 55 38.0 +0.9
INK                               IAmb  IAmb  23 55 40.2
      comp=Z,3.2nm,0.7s
INK   Inuvik            31.70  40 P     P     23 55 38.3 +1.2
      baz=279,SNR=8.0
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N30M  Aishikik Lake     31.70  53 P     P     23 55 36.7 -0.6
      baz=287
F31M  Tsiigehtchic      31.75  41 P     P     23 55 38.0 +0.4
      baz=280
O30N  Mendenhall        32.37  54 P     P     23 55 44.3 +1.1
      baz=289
M31M  Drury Creek, Y    32.71  51 P     P     23 55 48.1 +2.0
M31M                              IAmb  IAmb  23 55 49.2
      comp=Z,3.9nm,0.8s
M31M  Drury Creek, Y    32.71  51 P     P     23 55 47.4 +1.3
      baz=288,SNR=5.8
FARO  Faro, Yukon       33.16  51 P     P     23 55 51.2 +1.1
FARO  Faro, Yukon       33.16  51 P     P     23 55 50.9 +0.8
      baz=288
SKAG  Skagway           33.17  56 P     P     23 55 51.6 +1.5
      baz=291
BESE  Bessie Mountai    33.72  58 P     P     23 55 55.9 +0.9
P32M  Atlin             33.89  55 P     P     23 55 58.1 +1.7
      baz=292
A36M  Sachs Harbour     33.90  32 P     P     23 55 57.4 +1.1
A36M  Sachs Harbour     33.90  32 P     P     23 55 57.2 +0.9
      baz=280,SNR=17
MMPY  Sheldon Lake,     33.96  50 P     P     23 55 58.7 +1.6
      baz=289
R32K  Eaglecrest        34.00  58 P     P     23 55 57.5 +0.2
      baz=293
P33M  Teslin, Yukon     34.09  54 P     P     23 55 59.0 +0.8
      baz=292
SONM  Songino Array     34.40 281 P     P     23 56 01.9 +0.8
      comp=Z,0.4nm,0.5s,baz=45,slow=8.0,SNR=2.8
SONM                              PcP   PcP   23 58 35.5 +0.4
      comp=Z,0.5nm,0.5s,baz=115,slow=2.5,SNR=4.0
      comp=Z,0.4nm,0.5s
Q32M  Nakina River      34.82  56 P     P     23 56 06.1 +1.5
      baz=294
NRIK  Noril'sk          34.83 323 LR    LR    00 10 54.2
      comp=Z,91nm,19.8s,baz=4.0,slow=37
C36M  Paulatuk          34.85  37 P     P     23 56 05.1 +0.6
C36M  Paulatuk          34.85  37 P     P     23 56 05.1 +0.6
      baz=285,SNR=20
H11N2 WAKE ISLAND Hy    35.54 172 T     T     00 33 34.8
      baz=356,slow=76,SNR=777
H11N3 WAKE ISLAND Hy    35.56 172 T     T     00 33 35.8
      baz=356,slow=76,SNR=1093
H11N1 WAKE ISLAND Hy    35.56 172 T     T     00 33 37.0
      baz=356,slow=76,SNR=998
HHC   Hu-ho-hao-te      35.65 268 eP    P     23 56 12.8 +0.9
HHC                               pmax  pmax
      comp=Z,7.0nm,0.8s
HHC                               pmax  pmax
      comp=Z,96nm,5.6s
DLBC  Dease Lake        36.10  56 LR    LR    00 11 31.3
      comp=Z,52nm,18.3s,baz=304,slow=37
DLBC  Dease Lake        36.10  56 P     P     23 56 17.3 +1.9
      baz=296
T35M  Bob Quinn         36.63  58 P     P     23 56 22.1 +2.2
      baz=297
H11S1 WAKE ISLAND Hy    36.74 172 T     T     00 35 15.6
      baz=26,slow=76,SNR=22
H11S3 WAKE ISLAND Hy    36.75 172 T     T     00 35 06.0
      baz=26,slow=76,SNR=17
H11S2 WAKE ISLAND Hy    36.76 172 T     T     00 35 25.0
      baz=26,slow=76,SNR=12
KOTAN Kotaneelee Air    38.13  51 P     P     23 56 33.7 +1.2
      baz=297
EUNU  Eureka            39.76  15 P     P     23 56 46.4 +0.4
BBB   Bella Bella       40.10  64 LR    LR    00 13 02.1
      comp=Z,50nm,18.5s,baz=304,slow=35
YKA   Yellowknife Ar    41.04  45 P     P     23 56 57.6 +0.9
      comp=Z,2.2nm,0.7s,baz=298,slow=8.0,SNR=27
      comp=Z,2.2nm,0.7s
RES   Resolute Bay      41.09  23 P     P     23 56 57.2 +0.4
RES   Resolute Bay      41.09  23 P     P     23 56 57.3 +0.4
RES                               pmax  pmax
      comp=Z,2.0nm,0.7s
ZALV  Zalesovo Beam     42.50 302 PcP   PcP   23 58 59.5 -0.6
      comp=Z,0.6nm,0.4s,baz=42,slow=2.3,SNR=4.6
ZALV                              LR    LR    00 15 14.8
      comp=Z,39nm,19.3s,baz=42,slow=37
DGZ   Jazzator, Alta    43.65 295⇑eP    P     23 57 16.7 -1.5
DGZ                               pmax  pmax
      comp=Z,5.0nm,2.1s
BRLDA Berland Lookou    44.36  56 P     P     23 57 23.9 +0.1
KBS   Kingsbay          45.00 352 P     P     23 57 28.8 +0.3
KBS   Kingsbay          45.00 352 P     P     23 57 28.8 +0.3
KBS                               pmax  pmax
      comp=Z,14nm,0.9s
KBS   Kingsbay          45.00 352 eP    P     23 57 29.4 +1.0
SPITS Spitsbergen Ar    45.30 351 P     P     23 57 30.3 -0.5
SPITS                             pmax  pmax
      comp=Z,26nm,0.7s
SPB2  Spitsbergen Ar    45.30 350 P     P     23 57 30.4 -0.4
NEEM  North Greenlan    46.14   9 eP    P     23 57 37.1 -0.6
NEEM                              IAmb  IAmb  23 57 42.4
      comp=Z,11nm,1.0s
WMQ   Urumqi            47.21 289 eP    P     23 57 44.6 -1.7
WMQ                               pP    pP    23 57 56.8 -7.3
WMQ                               sP    sP    23 58 02.3  -10
WMQ                               pmax  pmax
      comp=Z,11nm,0.7s
KURK  Kurchatov         47.49 301 P     P     23 57 45.8 -2.5
KURK                              IAmb  IAmb  23 58 26.5
      comp=Z,3.7nm,1.1s
KURK  Kurchatov         47.49 301⇓eP    P     23 57 46.8 -1.4
KURK                              pmax  pmax
      comp=Z,3.0nm,1.3s
NEW   Newport           48.10  63 LR    LR    00 15 54.3
      comp=Z,25nm,21.7s,baz=337,slow=33
NEW   Newport           48.10  63 P     P     23 57 53.7 +0.7
      baz=311
MK31  Makanchi Array    48.15 295 P     P     23 57 51.2 -2.3
MK31  Makanchi Array    48.15 295⇑eP    P     23 57 51.7 -1.8
MKAR  Makanchi Array    48.15 295 P     P     23 57 52.6 -0.8
      comp=Z,0.6nm,0.7s,baz=60,slow=7.0,SNR=9.3
MKAR                              PcP   PcP   23 59 19.3 -0.6
      comp=Z,0.4nm,0.6s,baz=47,slow=5.3,SNR=1.8
MKAR                              LR    LR    00 19 08.7
      comp=Z,39nm,20.5s,baz=64,slow=37
      comp=Z,0.6nm,0.7s
MKAR  Makanchi Array    48.15 295 P     P     23 57 50.9 -2.6
MKAR  Makanchi Array    48.15 295ceP    P     23 57 53.2 -0.3
MKAR                              pmax  pmax
      comp=Z,1.0nm,0.6s
DAG   Danmarks Havn     48.38   0 eP    P     23 57 53.4 -1.4
DAG                               IAmb  IAmb  23 57 58.9
      comp=Z,3.8nm,0.7s
PINE  Pine Mountain     49.04  69 P     P     23 58 01.0 +0.4
G08A  Pilot Rock        49.10  67 P     P     23 58 00.6 -0.3
G08A                              IAmb  IAmb  23 58 17.2
      comp=Z,4.8nm,1.0s
WALA  Waterton Lakes    49.20  60 P     P     23 58 00.0 -1.6
J05D  Fort Rock, OR     49.22  70 P     P     23 58 01.5 -0.4
L04D  Klamath Falls     49.36  72 P     P     23 58 03.7 +0.8
YBH   Yreka Blue Hor    49.47  73 LR    LR    00 17 01.1
      comp=Z,28nm,18.3s,baz=318,slow=34
BVAR  Borovoye Array    49.89 308 LR    LR    00 22 45.3
      comp=Z,32nm,18.4s,baz=37,slow=40
BRVK  Borovoye          49.91 308 P     P     23 58 04.5 -2.3
BRVK                              IAmb  IAmb  23 58 15.5
      comp=Z,2.1nm,0.8s
BRVK  Borovoye          49.91 308deP    P     23 58 04.6 -2.2
BRVK                              pmax  pmax
      comp=Z,1.0nm,0.7s
MSO   Missoula          50.66  62 P     P     23 58 13.0 +0.2
      baz=313
PLID  Pearl Lake        50.78  65 P     P     23 58 13.5 -0.3
PLID                              IAmb  IAmb  23 58 17.7
      comp=Z,2.7nm,0.8s
DBG   Daneborg          50.85   1 eP    P     23 58 15.7 +2.1
DBG                               IAmb  IAmb  23 58 17.4
      comp=Z,3.1nm,0.8s
FCC   Fort Churchill    51.31  40 P     P     23 58 16.8 -0.4
FCC                               IAmb  IAmb  23 58 19.8
      comp=Z,4.8nm,0.8s
FCC   Fort Churchill    51.31  40 P     P     23 58 16.8 -0.4
FCC                               pmax  pmax
      comp=Z,5.0nm,0.8s
PZH   PanZhiHua         51.61 262 P     P     23 58 21.8 +1.7
PZH                               pmax  pmax
      comp=Z,6.0nm,0.7s
PZH                               pmax  pmax
      comp=Z,100nm,4.3s
ARCES ARCESS Array B    51.66 342 P     P     23 58 20.4 +0.7
      comp=Z,3.5nm,0.9s,baz=28,slow=10,SNR=1.2
      comp=Z,3.5nm,0.9s
HRY   Holter Researc    51.81  61 P     P     23 58 21.9 +0.5
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SUMG	**Summit**	**51.83**	**8**	iP	**P**	**23 58 21.0**	**-0.4**
SUMG				IAmb	IAmb	23 58 26.6	
	comp=Z,9.6nm,0.7s						
EGMT	**Eagleton**	**51.94**	**58**	P	**P**	**23 58 23.1**	**+0.9**
	baz=314						
ARU	**Arti**	**52.56**	**317**	LR	LR	00 22 39.8	
	comp=Z,65nm,18.5s,baz=24,slow=38						
ARU	**Arti**	**52.56**	**317**	P	**P**	**23 58 24.5**	**-2.1**
ARU				IAmb	IAmb	23 58 42.7	
	comp=Z,4.0nm,0.7s						
ARU	**Arti**	**52.56**	**317**	c iP	**P**	**23 58 24.3**	**-2.2**
ARU				*PP	**pP**	**23 58 41.5**	**-2.9**
ARU						23 59 32.5	
ARU				S	**S**	**00 05 47.2**	**-0.6**
ARU				SS	**SS**	**00 09 22.3**	**-3.6**
ARU				pmax	pmax		
	comp=Z,12nm,1.9s						
MCMT	**McKenzie Canyo**	**52.59**	**63**	P	**P**	**23 58 27.1**	**-0.2**
HLID	**Hailey**	**52.66**	**65**	P	**P**	**23 58 29.6**	**+1.9**
	baz=314						
BOZ	**Bozeman (W)**	**52.68**	**62**	P	**P**	**23 58 28.3**	**+0.5**
BOZ	**Bozeman (W)**	**52.68**	**62**	P	**P**	**23 58 28.3**	**+0.5**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BOZ	**Bozeman (W)**	**52.68**	**62**	P	**P**	**23 58 28.9**	**+1.1**
	baz=314						
KVN	**Kaiserville**	**53.86**	**72**	P	**P**	**23 58 36.6**	**0.0**
KVN				IAmb	IAmb	23 58 39.1	
	comp=Z,2.9nm,0.7s						
KVN	**Kaiserville**	**53.86**	**72**	P	**P**	**23 58 36.6**	**0.0**
KVN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KDJ	**Kajisay**	**54.00**	**294**	P	**P**	**23 58 37.0**	**-0.6**
KDJ				IAmb	IAmb	23 58 56.1	
	comp=Z,2.6nm,0.8s						
KDJ	**Kajisay**	**54.00**	**294**	P	**P**	**23 58 37.0**	**-0.6**
KDJ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LKWY	**Lake**	**54.02**	**62**	P	**P**	**23 58 38.0**	**+0.2**
LKWY	**Lake**	**54.02**	**62**	P	**P**	**23 58 38.0**	**+0.2**
LKWY				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YMP	**Mirror Lake Pl**	**54.02**	**62**	P	**P**	**23 58 37.4**	**-0.4**
YMP				IAmb	IAmb	23 58 46.7	
	comp=Z,3.8nm,1.0s						
H17A	**Grant Village**	**54.05**	**62**	P	**P**	**23 58 38.8**	**+0.8**
H17A				IAmb	IAmb	23 58 41.9	
	comp=Z,5.3nm,0.9s						
H17A	**Grant Village**	**54.05**	**62**	P	**P**	**23 58 40.3**	**+2.3**
	baz=315,SNR=5.1						
NVAR	**Mina Array Bea**	**54.19**	**72**	P	**P**	**23 58 40.9**	**+1.8**
	comp=Z,2.8nm,0.6s,baz=306,slow=7.5,SNR=24						
	comp=Z,2.8nm,0.6s						
NVAR	**Mina Array Bea**	**54.19**	**72**	P	**P**	**23 58 40.5**	**+1.4**
RLMT	**Red Lodge**	**54.20**	**61**	P	**P**	**23 58 39.0**	**0.0**
RLMT	**Red Lodge**	**54.20**	**61**	P	**P**	**23 58 40.6**	**+1.6**
	baz=315,SNR=6.8						
FLWY	**Flagg Ranch**	**54.21**	**63**	P	**P**	**23 58 39.5**	**+0.4**
FLWY				IAmb	IAmb	23 59 02.8	
	comp=Z,5.2nm,1.1s						
LHV	**Little Huntoon**	**54.21**	**73**	P	**P**	**23 58 37.6**	**-1.3**
LHV				IAmb	IAmb	23 58 55.5	
	comp=Z,6.5nm,1.1s						
IMW	**Indian Meadow**	**54.22**	**63**	P	**P**	**23 58 38.0**	**-1.3**
IMW				IAmb	IAmb	23 58 43.9	
	comp=Z,3.6nm,0.7s						
NV11	**Mina Array Sit**	**54.27**	**72**	P	**P**	**23 58 39.4**	**-0.2**
NV11				IAmb	IAmb	23 58 43.4	
	comp=Z,2.7nm,0.8s						
KIRV	**Kirov**	**54.33**	**323**	LR	LR	00 22 21.2	
	comp=Z,46nm,19.3s,baz=33,slow=36						
KIRV	**Kirov**	**54.33**	**323**	⇑eP	**P**	**23 58 38.4**	**-1.1**
FXWY	**Fox Creek**	**54.36**	**63**	P	**P**	**23 58 40.3**	**+0.1**
FXWY				IAmb	IAmb	23 58 42.9	
	comp=Z,3.3nm,0.8s						
MOOW	**Moose Ponds**	**54.42**	**63**	P	**P**	**23 58 40.5**	**-0.2**
LAO	**LASA Array**	**54.59**	**58**	P	**P**	**23 58 43.3**	**+1.6**
	baz=316						
HVU	**Hansel Valley**	**54.77**	**66**	P	**P**	**23 58 43.3**	**+0.2**
HVU				IAmb	IAmb	23 59 06.4	
	comp=Z,6.1nm,1.3s						
HVU	**Hansel Valley**	**54.77**	**66**	P	**P**	**23 58 43.3**	**+0.2**
HVU				pmax	pmax		
	comp=Z,6.0nm,1.3s						
AAK	**Ala-Archa**	**55.04**	**296**	LR	LR	00 22 13.2	
	comp=Z,60nm,19.8s,baz=35,slow=36						
AAK	**Ala-Archa**	**55.04**	**296**	⇓eP	**P**	**23 58 43.3**	**-1.8**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TPH	**Tonopah**	**55.04**	**72**	P	**P**	**23 58 45.7**	**+0.5**
TPH	**Tonopah**	**55.04**	**72**	P	**P**	**23 58 45.7**	**+0.5**
TPH				pmax	pmax		
	comp=Z,20nm,0.8s						
LCH	**Last Change Ra**	**55.42**	**73**	P	**P**	**23 58 47.2**	**-0.6**
LCH				IAmb	IAmb	23 59 20.8	
	comp=Z,5.7nm,1.5s						
HWUT	**Hardware Ranch**	**55.53**	**65**	P	**P**	**23 58 48.0**	**-0.7**
HWUT				IAmb	IAmb	23 58 51.4	
	comp=Z,4.0nm,0.7s						
VES	**Vestal, Richgr**	**55.63**	**75**	P	**P**	**23 58 51.4**	**+2.2**
	baz=317						
BW06	**Boulder Array**	**55.73**	**63**	P	**P**	**23 58 50.8**	**+0.7**
BW06				IAmb	IAmb	23 58 52.4	
	comp=Z,2.9nm,0.8s						
BW06	**Boulder Array**	**55.73**	**63**	P	**P**	**23 58 51.6**	**+1.5**
	baz=316						
PD31	**Pinedale Array**	**55.73**	**63**	P	**P**	**23 58 52.0**	**+1.9**
PD31				IAmb	IAmb	23 58 52.4	
	comp=Z,2.7nm,0.9s						
PDAR	**Pinedale Array**	**55.73**	**63**	P	**P**	**23 58 51.5**	**+1.4**
	comp=Z,2.6nm,0.8s,baz=328,slow=2.6,SNR=26						
	comp=Z,2.6nm,0.8s						
PDAR	**Pinedale Array**	**55.73**	**63**	P	**P**	**23 58 51.2**	**+1.1**
GRAC	**Grapevine Rang**	**55.74**	**73**	P	**P**	**23 58 52.1**	**+2.1**
	baz=317						
CWC	**Cottonwood Cre**	**55.75**	**74**	P	**P**	**23 58 52.1**	**+1.9**
	baz=317						
DUG	**Dugway, Tooele**	**55.89**	**67**	P	**P**	**23 58 51.3**	**+0.1**
DUG				IAmb	IAmb	23 58 54.4	
	comp=Z,2.9nm,0.7s						
DUG	**Dugway, Tooele**	**55.89**	**67**	P	**P**	**23 58 51.3**	**+0.1**
DUG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DUG	**Dugway, Tooele**	**55.89**	**67**	P	**P**	**23 58 52.8**	**+1.6**
	baz=317						
SPR3	**Spring Creek 3**	**55.94**	**69**	P	**P**	**23 58 53.0**	**+1.3**
SPR3				IAmb	IAmb	23 58 56.4	
	comp=Z,3.7nm,0.8s						
TCUT	**Toone Canyon**	**55.96**	**66**	P	**P**	**23 58 52.6**	**+0.8**
TCUT				IAmb	IAmb	23 58 55.2	
	comp=Z,3.8nm,0.7s						
MPMC	**Manual Prospec**	**56.36**	**74**	P	**P**	**23 58 55.9**	**+1.3**
	baz=318						
TPNV	**Topopah Spring**	**56.39**	**72**	P	**P**	**23 58 55.6**	**+0.8**
TPNV				IAmb	IAmb	23 58 58.9	
	comp=Z,3.7nm,0.9s						
TPNV	**Topopah Spring**	**56.39**	**72**	P	**P**	**23 58 55.6**	**+0.8**
TPNV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TPNV	**Topopah Spring**	**56.39**	**72**	P	**P**	**23 58 56.0**	**+1.2**
	baz=317						
FURC	**Furnace Creek,**	**56.40**	**73**	P	**P**	**23 58 56.3**	**+1.6**
	baz=317						
NLU	**North Lily Min**	**56.45**	**67**	P	**P**	**23 58 55.8**	**+0.5**
NLU				IAmb	IAmb	23 58 57.6	
	comp=Z,4.1nm,0.9s						
LRMC	**Laurel Mtn Rad**	**56.67**	**75**	P	**P**	**23 58 58.2**	**+1.4**
	baz=318						
SCZ2	**Santa Cruz Isl**	**56.68**	**77**	P	**P**	**23 58 57.6**	**+0.9**
	baz=318						
GWY	**Greenwater Val**	**56.72**	**73**	P	**P**	**23 58 57.5**	**+0.4**
GWY				IAmb	IAmb	23 59 00.4	
	comp=Z,5.5nm,1.1s						
BSUT	**Blindstream Ca**	**56.72**	**66**	P	**P**	**23 58 59.8**	**+2.4**
BSUT				IAmb	IAmb	23 59 00.4	
	comp=Z,3.5nm,0.6s						
KK31	**Karatay Array**	**56.74**	**299**	P	**P**	**23 58 56.2**	**-0.8**
KK31				IAmb	IAmb	23 59 17.5	
	comp=Z,2.9nm,0.9s						
KK31	**Karatay Array**	**56.74**	**299**	P	**P**	**23 58 56.2**	**-0.8**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KKAR	**Karatay Array**	**56.74**	**299**	P	**P**	**23 58 55.0**	**-2.0**
KKAR	**Karatay Array**	**56.74**	**299**	P	**P**	**23 58 56.5**	**-0.4**
KKAR				IAmb	IAmb	23 59 17.5	
	comp=Z,2.9nm,0.9s						
KKAR	**Karatay Array**	**56.74**	**299**	P	**P**	**23 58 56.6**	**-0.4**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
QSM	**Queen of Sheba**	**56.77**	**74**	P	**P**	**23 58 57.7**	**+0.4**
QSM				IAmb	IAmb	23 59 03.4	
	comp=Z,4.7nm,0.9s						
MDND	**Maddock**	**56.88**	**53**	P	**P**	**23 58 58.6**	**+0.7**
	baz=318						
EDW2	**Edwards Air Fo**	**56.94**	**75**	P	**P**	**23 58 59.6**	**+1.0**
	baz=318						
AKTO	**Aktyubinsk**	**57.16**	**312**	LR	LR	00 25 07.3	
	comp=Z,62nm,18.3s,baz=260,slow=38						
ABKAR	**Akbulak array**	**57.21**	**310**	P	**P**	**23 58 59.7**	**-0.5**
ABKAR	**Akbulak array**	**57.21**	**310**	P	**P**	**23 58 59.8**	**-0.4**
ABKAR				IAmb	IAmb	23 59 09.0	
	comp=Z,7.5nm,1.5s						
GSC	**Goldstone, Bar**	**57.29**	**74**	P	**P**	**23 59 02.2**	**+1.1**
	baz=318						
RSSD	**Black Hills**	**57.51**	**58**	P	**P**	**23 59 03.2**	**+0.6**
RSSD	**Black Hills**	**57.51**	**58**	P	**P**	**23 59 03.3**	**+0.6**
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.8s						
RSSD	**Black Hills**	**57.51**	**58**	P	**P**	**23 59 03.5**	**+0.8**
	baz=318						
CCUT	**Cedar City**	**57.52**	**70**	P	**P**	**23 59 04.2**	**+1.3**
CCUT				IAmb	IAmb	23 59 06.3	
	comp=Z,4.2nm,1.3s						
HEC	**Hector,Ludlow**	**57.90**	**74**	P	**P**	**23 59 06.8**	**+1.5**
	baz=318						
V12A	**Nelson**	**58.05**	**72**	P	**P**	**23 59 06.3**	**-0.2**
V12A				IAmb	IAmb	23 59 09.4	
	comp=Z,2.7nm,0.9s						
AGMN	**Agassiz Nation**	**58.22**	**50**	P	**P**	**23 59 07.4**	**+0.1**
	baz=319						
GMRC	**Granite Mounta**	**58.30**	**74**	P	**P**	**23 59 09.8**	**+1.5**
	baz=318						
O20A	**White River Ci**	**58.33**	**64**	P	**P**	**23 59 09.8**	**+1.3**
	baz=318						
FINES	**FINESS Array B**	**58.64**	**337**	P	**P**	**23 59 08.6**	**-1.4**
	comp=Z,2.9nm,0.7s,baz=22,slow=7.6,SNR=12						
	comp=Z,2.9nm,0.7s						
FINES	**FINESS Array B**	**58.64**	**337**	P	**P**	**23 59 08.9**	**-1.0**
FINES	**FINESS Array B**	**58.64**	**337**	ceP	**P**	**23 59 08.8**	**-1.2**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
PFO	**Pinyon Flats O**	**58.73**	**75**	P	**P**	**23 59 12.6**	**+1.4**
	baz=319						
N23A	**Red Feather La**	**58.94**	**62**	P	**P**	**23 59 13.2**	**+0.4**
N23A	**Red Feather La**	**58.94**	**62**	P	**P**	**23 59 14.3**	**+1.5**
	baz=318						
IRM	**Iron Mountain**	**59.05**	**74**	P	**P**	**23 59 14.7**	**+1.3**
	baz=319						
PV13	**Radium Mtn., P**	**59.49**	**66**	P	**P**	**23 59 17.1**	**+0.5**
CMAR	**Chiang Mai Arr**	**59.52**	**258**	LR	LR	00 26 53.3	
	comp=Z,16nm,18.5s,baz=55,slow=38						
PV15	**Paradox Valley**	**59.53**	**66**	P	**P**	**23 59 16.6**	**-0.3**
SWSC	**Sam W. Stewart**	**59.59**	**75**	P	**P**	**23 59 19.4**	**+2.4**
	baz=319						
PV01	**Paradox Valley**	**59.64**	**66**	P	**P**	**23 59 18.2**	**+0.6**
PV01				IAmb	IAmb	23 59 19.5	
	comp=Z,2.3nm,0.7s						
BELG	**Belogornoye**	**59.79**	**320**	LR	LR	00 28 00.5	
	comp=Z,58nm,18.1s,baz=143,slow=39						
GAR	**Garm**	**59.86**	**296**	P	**P**	**23 59 21.9**	**+3.0**
ISCO	**Idaho Springs**	**59.93**	**63**	P	**P**	**23 59 20.4**	**+0.8**
ISCO				IAmb	IAmb	23 59 25.8	
	comp=Z,1.7nm,0.7s						
ISCO	**Idaho Springs**	**59.93**	**63**	P	**P**	**23 59 20.4**	**+0.8**
ISCO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ISCO	**Idaho Springs**	**59.93**	**63**	P	**P**	**23 59 20.8**	**+1.2**
	baz=319						
GLA	**Glamis**	**60.05**	**74**	P	**P**	**23 59 21.4**	**+1.1**
	baz=319						
WUAZ	**Wupatki**	**60.10**	**70**	P	**P**	**23 59 21.6**	**+1.0**
	baz=319						
EYMN	**Ely**	**60.38**	**48**	P	**P**	**23 59 22.6**	**+0.4**
EYMN	**Ely**	**60.38**	**48**	P	**P**	**23 59 22.5**	**+0.2**
	baz=321						
CHGR	**Chuyangaron**	**60.71**	**296**	P	**P**	**23 59 26.7**	**+2.0**
CHGR	**Chuyangaron**	**60.71**	**296**	P	**P**	**23 59 26.7**	**+2.0**
CHGR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
S22A	**4UR Ranch, Cre**	**60.84**	**65**	P	**P**	**23 59 26.5**	**+0.7**
S22A				IAmb	IAmb	23 59 28.7	
	comp=Z,2.9nm,0.9s						
S22A	**4UR Ranch, Cre**	**60.84**	**65**	P	**P**	**23 59 27.1**	**+1.2**
	baz=319						
ECSD	**EROS Data Cent**	**61.35**	**54**	P	**P**	**23 59 28.7**	**-0.1**
ECSD				IAmb	IAmb	23 59 29.8	
	comp=Z,1.7nm,0.7s						
ECSD	**EROS Data Cent**	**61.35**	**54**	P	**P**	**23 59 29.0**	**+0.1**
	baz=320						
SDCO	**Great Sand Dun**	**61.53**	**64**	P	**P**	**23 59 31.5**	**+1.0**
	baz=320						
NC204	**NORSAR Array S**	**61.70**	**345**	P	**P**	**23 59 31.4**	**+0.3**
NC405	**NORSAR Array S**	**61.71**	**344**	P	**P**	**23 59 29.9**	**-1.1**
NB201	**NORSAR Array S**	**61.84**	**344**	P	**P**	**23 59 31.0**	**-0.9**
NB2	**NORSAR Subarra**	**61.86**	**344**	P	**P**	**23 59 30.3**	**-1.8**
	comp=Z,1.8nm,0.7s,baz=20,slow=6.9						
NOA	**NORSAR Array B**	**61.86**	**344**	P	**P**	**23 59 30.6**	**-1.5**
	comp=Z,2.6nm,0.9s,baz=19,slow=6.9,SNR=11						
	comp=Z,2.6nm,0.9s						
214A	**Organ Pipe Nat**	**61.99**	**74**	P	**P**	**23 59 34.8**	**+1.4**
	baz=320						
HFS	**Hagfors**	**62.31**	**343**	LR	LR	00 29 01.2	
	comp=Z,36nm,18.9s,baz=274,slow=38						
TUC	**Tucson**	**62.84**	**72**	P	**P**	**23 59 40.0**	**+0.9**
	baz=320						
ANMO	**Albuquerque**	**63.16**	**67**	⇓eP	**P**	**23 59 43.2**	**+1.9**
ANMO				pmax	pmax		
	comp=Z,9.0nm,2.5s						
ANMO	**Albuquerque**	**63.16**	**67**	P	**P**	**23 59 42.3**	**+1.0**
	baz=320						
SCHQ	**Schefferville**	**63.42**	**29**	P	**P**	**23 59 42.4**	**-0.1**
	comp=Z,4.3nm,0.7s,baz=347,slow=7.4,SNR=9.6						
	comp=Z,4.3nm,0.7s						
SCHQ	**Schefferville**	**63.42**	**29**	P	**P**	**23 59 42.8**	**+0.3**
HNR	**Honiara**	**64.32**	**182**	LR	LR	00 22 19.7	
	comp=Z,521nm,21.2s,baz=338,slow=31						
GEYT	**Alibeck**	**66.78**	**303**	P	**P**	**00 00 05.4**	**+0.8**
	comp=Z,1.3nm,0.6s,baz=12,slow=7.4,SNR=2.8						
	comp=Z,1.3nm,0.6s						
HDIL	**Hopedale**	**67.20**	**51**	P	**P**	**00 00 07.3**	**+0.2**
	baz=324						
CCM	**Cathedral Cave**	**68.32**	**54**	P	**P**	**00 00 14.0**	**-0.2**
	baz=324						
KBZ	**Khabaz**	**68.71**	**317**	P	**P**	**00 00 17.1**	**+0.6**
	comp=Z,2.0nm,0.7s,baz=55,slow=5.9,SNR=6.8						
KBZ				LR	LR	00 34 22.7	
	comp=Z,63nm,18.6s,baz=18,slow=39						
	comp=Z,2.0nm,0.7s						
KBZ	**Khabaz**	**68.71**	**317**	⇑eP	**P**	**00 00 16.0**	**-0.5**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TXAR	**Lajitas Array**	**69.00**	**69**	P	**P**	**00 00 19.3**	**+0.7**
	comp=Z,2.7nm,0.6s,baz=288,slow=4.6,SNR=12						
	comp=Z,2.7nm,0.6s						
SEKA	**Sheki**	**69.06**	**313**	P	**P**	**00 00 17.3**	**-1.6**
O48B	**Farmland**	**69.27**	**49**	P	**P**	**00 00 20.1**	**0.0**
	baz=326						
MNGR	**Mingechevir, A**	**69.47**	**313**	P	**P**	**00 00 20.2**	**-1.1**
GANJ	**Ganja**	**69.90**	**313**	P	**P**	**00 00 22.8**	**-1.2**
MIAR	**Mount Ida**	**70.03**	**58**	P	**P**	**00 00 24.0**	**-0.8**
	baz=324						
P49A	**Miami Univ. Ec**	**70.05**	**49**	P	**P**	**00 00 24.2**	**-0.7**
	baz=326						
JCT	**Junction City**	**70.13**	**65**	P	**P**	**00 00 26.0**	**+0.4**
	baz=323						
WHTX	**Lake Whitney,**	**70.14**	**63**	P	**P**	**00 00 26.0**	**+0.4**
	baz=324						
M53A	**WI Miller and**	**70.16**	**45**	P	**P**	**00 00 25.8**	**+0.2**
	baz=328						
ACSO	**Alum Creek Sta**	**70.22**	**47**	P	**P**	**00 00 25.9**	**0.0**
	baz=327						
WCI	**Wyandotte Cave**	**70.44**	**51**	P	**P**	**00 00 27.3**	**+0.1**
	baz=326						
O53A	**New Philadelph**	**70.94**	**46**	P	**P**	**00 00 29.9**	**-0.4**
	baz=328						
GNI	**Garni**	**70.97**	**314**	LR	LR	00 35 35.5	
	comp=Z,31nm,18.3s,baz=4.5,slow=39						
P52A	**Corning**	**71.07**	**47**	P	**P**	**00 00 31.5**	**+0.4**
	baz=327						
LBNH	**Lisbon**	**71.08**	**38**	P	**P**	**00 00 30.6**	**-0.5**
	baz=331						
VRAC	**Vranov**	**71.92**	**337**	LR	LR	00 36 36.2	
	comp=Z,32nm,18.4s,baz=354,slow=40						
SSPA	**Standing Stone**	**71.96**	**44**	P	**P**	**00 00 36.2**	**-0.2**
	baz=329						
GERES	**GERESS Array B**	**72.99**	**339**	P	**P**	**00 00 42.5**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=37,slow=3.3,SNR=4.7						
	comp=Z,0.5nm,0.6s						
KMSC	**Kings Mountain**	**75.20**	**49**	P	**P**	**00 00 55.5**	**0.0**
	baz=328						
BRTR	**Keskin Array B**	**75.65**	**321**	P	**P**	**00 00 57.9**	**-0.4**
	comp=Z,0.7nm,0.9s,baz=35,slow=4.0,SNR=3.9						
BRTR				LR	LR	00 38 42.7	
	comp=Z,23nm,18.7s,baz=351,slow=39						
	comp=Z,0.7nm,0.9s						
BRTR	**Keskin Array B**	**75.65**	**321**	ceP	**P**	**00 00 56.5**	**-1.7**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WB0	**Warramunga Arr**	**78.13**	**206**	P	**P**	**00 01 12.4**	**+0.4**
WB0				IAmb	IAmb	00 01 41.0	
	comp=Z,7.6nm,0.9s						
WRAB	**Tennant Creek**	**78.30**	**206**	⇑eP	**P**	**00 01 12.8**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.7s						
WB2	**Warramunga Arr**	**78.31**	**206**	P	**P**	**00 01 12.9**	**-0.1**
WB2				IAmb	IAmb	00 01 14.5	
	comp=Z,6.1nm,1.1s						
WRA	**Warramunga Arr**	**78.32**	**206**	P	**P**	**00 01 13.6**	**+0.5**
	comp=Z,2.2nm,0.8s,baz=20,slow=6.0,SNR=35						
	comp=Z,2.2nm,0.8s						
WRA	**Warramunga Arr**	**78.32**	**206**	P	**P**	**00 01 13.0**	**0.0**
WRA	**Warramunga Arr**	**78.32**	**206**	P	**P**	**00 01 13.0**	**0.0**
NRCA	**Norcia**	**78.83**	**337**	P	**P**	**00 01 15.7**	**-0.1**
SCTE	**Santa Cesarea**	**80.12**	**332**	P	**P**	**00 01 21.9**	**-0.8**
ASAR	**Alice Springs**	**81.99**	**206**	P	**P**	**00 01 33.7**	**+0.9**
	comp=Z,2.4nm,0.5s,baz=16,slow=5.1,SNR=26						
	comp=Z,2.4nm,0.5s						
ASAR	**Alice Springs**	**81.99**	**206**	P	**P**	**00 01 33.0**	**+0.2**
IDI	**Anoyia**	**82.65**	**326**	LR	LR	00 44 43.3	
	comp=Z,14nm,20.2s,baz=105,slow=40						
EIL	**Elat**	**84.04**	**315**	LR	LR	00 45 00.9	
	comp=Z,20nm,20.1s,baz=59,slow=40						
RAYN	**Ar Rayn**	**84.72**	**304**	P	**P**	**00 01 45.8**	**-1.3**
RAYN	**Ar Rayn**	**84.72**	**304**	P	**P**	**00 01 45.8**	**-1.3**
RAYN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ESDC	**Sonseca Array**	**84.79**	**349**	P	**P**	**00 01 47.4**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=2.9,slow=4.2,SNR=11						
	comp=Z,1.4nm,0.7s						
ESDC	**Sonseca Array**	**84.79**	**349**	P	**P**	**00 01 47.4**	**+0.2**
ESDC				IAmb	IAmb	00 02 26.0	
	comp=Z,4.7nm,1.4s						
KEST	**Kesra**	**86.46**	**338**	P	**P**	**00 01 54.6**	**-1.0**
	comp=Z,2.4nm,0.8s,baz=329,slow=9.5,SNR=2.1						
	comp=Z,2.4nm,0.8s						
KEST	**Kesra**	**86.46**	**338**	P	**P**	**00 01 54.2**	**-1.3**
KEST				IAmb	IAmb	00 02 23.9	
	comp=Z,6.5nm,1.1s						
RPZ	**Rata Peaks**	**98.78**	**173**	LR	LR	00 39 11.4	
	comp=Z,30nm,20.9s,baz=328,slow=30						
PLCA	**Paso Flores**	**143.06**	**89**	PKP	PKPbc	00 08 43.4	+0.5
	comp=Z,1.1nm,0.7s,baz=284,slow=3.6,SNR=6.5						

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*HVO **24** 00:00:11.7±0.5, 19°.60N±0°.03×155°.28W±0°.02, h20^{km}±5^{km}, ML2.5/11, ML2.5/48(NEIC), Error ellipse: s-maj=5.2km s-min=1.3km az=157.0*

NEIC 24 00:00:11.1±0.4**, 19°.59N**±0°.04×**155°.29W**±0°.03**, h22**^{km}±18^{km}**, Error ellipse: s-maj=6.8km s-min=2.9km az=199.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSD	**Rainshed**	**0.13**	**176**		Pb	00 00 16.1	-0.4
RSD				IAML		00 00 19.6	
	comp=N,1µm,0.4s						
MLH	**Mauna Loa**	**0.14**	**224**		Pb	00 00 16.1	-0.5
SBLHI	**Steaming Bluff**	**0.16**	**174**		Sb	00 00 19.4	-1.0
SBLHI	**Steaming Bluff**	**0.16**	**174**		Pb	00 00 16.0	-0.6
SBLHI	**Steaming Bluff**	**0.16**	**174**	IAML		00 00 21.1	
	comp=N,667nm,0.7s						
SBLHI				IAML		00 00 22.5	
	comp=E,542nm,1.2s						
UWB	**Uwekahuna B**	**0.17**	**177**		Pb	00 00 16.1	-0.5
HATHI	**Halema‘uma‘u T**	**0.17**	**172**		Pb	00 00 16.3	-0.4
HATHI				IAML		00 00 20.4	
	comp=E,954nm,1.1s						
HATHI				IAML		00 00 24.3	
	comp=N,760nm,0.8s						
UWE	**Uwekahuna**	**0.17**	**182**		Sb	00 00 19.7	-0.7
UWE	**Uwekahuna**	**0.17**	**182**		Pb	00 00 16.2	-0.4
UWE	**Uwekahuna**	**0.17**	**182**	IAML		00 00 20.2	
	comp=N,1µm,0.3s						
UWE				IAML		00 00 20.2	
	comp=E,2µm,0.3s						
OBL	**Observatory Le**	**0.17**	**179**		Pb	00 00 16.3	-0.4
OBL					Sb	00 00 19.8	-0.7
NPH	**North Pit**	**0.18**	**178**		Pb	00 00 16.1	-0.6
NPH				IAML		00 00 20.8	
	comp=N,590nm,0.3s						
BYL	**Byron's Ledge**	**0.18**	**172**	IAML		00 00 20.0	
	comp=E,745nm,1.2s						
BYL				IAML		00 00 20.3	
	comp=N,732nm,1.0s						
BYL	**Byron's Ledge**	**0.18**	**172**		Pb	00 00 16.4	-0.3
BYL					Sb	00 00 19.7	-0.8
WRMHI	**West Rim**	**0.18**	**184**		Pb	00 00 16.4	-0.3
HMH	**Humu‘ula Sheep**	**0.19**	**274**		Pb	00 00 16.6	-0.3
HMH				IAML		00 00 20.6	
	comp=N,1µm,0.3s						
HMH				IAML		00 00 20.6	
	comp=E,806nm,0.3s						
KKO	**Keanakako`i**	**0.19**	**174**		Pb	00 00 16.6	-0.3
KKO				IAML		00 00 23.1	
	comp=E,1µm,1.5s						
RIM	**Rim**	**0.20**	**177**		Pb	00 00 16.6	-0.2
RIM	**Rim**	**0.20**	**177**	IAML		00 00 26.2	
	comp=E,833nm,1.2s						
SDHHI	**Sand Hill**	**0.20**	**182**		Pb	00 00 16.6	-0.3
SDHHI	**Sand Hill**	**0.20**	**182**	IAML		00 00 19.7	
	comp=E,1µm,1.2s						
SDHHI				IAML		00 00 20.6	
	comp=N,1µm,0.6s						
PUH	**Pauahi**	**0.23**	**163**		Pb	00 00 17.0	-0.1
PUH					Sb	00 00 21.0	-0.2
PUH	**Pauahi**	**0.23**	**163**	IAML		00 00 21.0	
	comp=E,1µm,0.8s						
PUH				IAML		00 00 21.2	
	comp=N,960nm,0.2s						
KNHH	**Kane Nui o Ham**	**0.24**	**152**		Pb	00 00 17.2	0.0
KNHH					Sb	00 00 21.1	-0.2
STCH	**Steam Cracks**	**0.26**	**143**	IAML		00 00 21.9	
	comp=N,930nm,0.1s						
STCH				IAML		00 00 21.9	
	comp=E,815nm,0.1s						
STCH	**Steam Cracks**	**0.26**	**143**		Pb	00 00 17.4	0.0
STCH					Sb	00 00 21.5	-0.1
NPOC	**North of Pu‘u**	**0.26**	**140**		Pn	00 00 21.5	+1.8
AIN	**Ainahou**	**0.27**	**217**		Pb	00 00 17.8	+0.1
AIN	**Ainahou**	**0.27**	**217**	IAML		00 00 22.5	
	comp=E,354nm,0.4s						
AIN				IAML		00 00 22.8	
	comp=N,357nm,0.6s						
MLOA	**Mauna Loa Obse**	**0.28**	**259**	Pg	Pb	00 00 17.8	-0.2
POHA	**Pohakuloa**	**0.28**	**306**		Sb	00 00 21.5	-1.1
HLP	**Hilina Pali**	**0.29**	**184**		Pb	00 00 17.7	-0.2
HLP	**Hilina Pali**	**0.29**	**184**	IAML		00 00 24.9	
	comp=E,393nm,1.3s						
HLP				IAML		00 00 30.0	
	comp=N,448nm,2.6s						
JOKA	**Jonika Flow**	**0.31**	**120**		Pb	00 00 18.1	0.0
MWH	**Moku‘aweowe**	**0.31**	**250**		Pb	00 00 18.2	-0.4
MWH					Sb	00 00 23.2	-0.4
MWH	**Moku‘aweowe**	**0.31**	**250**	IAML		00 00 25.0	
	comp=E,321nm,1.3s						
MWH				IAML		00 00 27.3	
	comp=N,245nm,0.4s						
ALEP	**Alea Permanent**	**0.34**	**262**		Pb	00 00 18.6	-0.3
ALEP					Sb	00 00 23.6	-0.4
HTC	**Hot Caves**	**0.37**	**197**		Pb	00 00 19.1	+0.1
KHU	**Kahuku**	**0.46**	**222**		Sb	00 00 26.1	-1.2
KHU	**Kahuku**	**0.46**	**222**		Pb	00 00 20.0	-0.7
KHU	**Kahuku**	**0.46**	**222**	IAML		00 00 24.9	
	comp=E,245nm,2.3s						
KHU	**Kahuku**	**0.46**	**222**	IAML		00 00 35.3	
	comp=N,247nm,2.8s						
HUH	**Hualalai**	**0.53**	**280**	Pg	Pn	00 00 23.3	-0.3
HUH				IAML		00 00 41.0	

	comp=E,202nm,0.6s						
KHLU	**Kahalu`u**	**0.57**	**270**		Pb	00 00 21.4	-1.2
KHLU					Sb	00 00 28.8	-1.6
KHLU	**Kahalu`u**	**0.57**	**270**	IAML		00 00 29.4	
	comp=E,151nm,1.6s						
KHLU				IAML		00 00 29.6	
	comp=N,214nm,0.1s						
HPAH	**Hawaii Prepara**	**0.58**	**319**		Pb	00 00 22.6	-0.2

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*IDC **24** 00:03:05.8±1.2, 51°.18N×157°.13E, h0^{km}, mb3.3/5, mbtmp3.3/5, Error ellipse: s-maj=42.6km s-min=20.7km az=114.0*

*KRSC **24** 00:03:06.7±1.0, 51°.28N×156°.94E, h6^{km}±6^{km}, Ml3.6*

ISC 24 00:03:06.0±2.0, 51°.24N±0°.07×157°.09E±0°.07, h2^{km}±12^{km}, n26, σ0^{s}.86/28, mb3.3/5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	**0.29**	**323**	*e*P	**Pg**	**00 03 11.7**	**+0.3**
PAU				*e*S	**Sg**	**00 03 14.3**	**-0.9**
SKR	**Severo-Kuril's**	**0.83**	**228**	*e*P	**Pb**	**00 03 22.4**	**-0.6**
KDTR	**Khodutka, Kamc**	**0.84**	**47**	*e*P	**Pb**	**00 03 23.7**	**+0.4**
KDTR				*e*S	**Sn**	**00 03 36.0**	**-1.7**
MTVR	**Mutnovka**	**1.42**	**28**	*e*P	**Pb**	**00 03 32.9**	**-0.3**
GRL	**Gorelyy**	**1.45**	**25**	*e*P	**Pb**	**00 03 33.6**	**-0.2**
APC	**Apacha**	**1.69**	**1**	*e*P	**Pn**	**00 03 36.5**	**+0.1**
APC				*e*S	**Sn**	**00 03 58.5**	**-0.1**
KRMR	**Karymshinskiy**	**1.72**	**22**	*e*P	**Pb**	**00 03 37.9**	**-0.4**
PETK	**Petropavlovsk-**	**1.91**	**11**	Pn	**Pn**	**00 03 40.2**	**+0.7**
	5.3nm,0.3s,baz=187,slow=18,SNR=83						
PETK				Sn	**Sg**	**00 04 08.6**	**+1.3**
	2.9nm,0.3s,baz=159,slow=13,SNR=1.1						
PETK				LR	LR	00 04 23.9	
	comp=Z,50nm,18.6s,baz=121,slow=40						
DALK	**Dalny**	**2.07**	**29**	*e*P	**Pb**	**00 03 43.1**	**-1.0**
UGLR	**Uglovaya**	**2.24**	**28**	*e*P	**Pb**	**00 03 47.5**	**+0.2**
KOK	**Koryaka**	**2.27**	**24**	*e*P	**Pb**	**00 03 47.4**	**-0.3**
AVH	**Avacha**	**2.27**	**26**	*e*P	**Pb**	**00 03 47.3**	**-0.4**
SMAR	**Somma**	**2.29**	**27**	*e*P	**Pb**	**00 03 48.3**	**+0.3**
KRER	**Koryakskii**	**2.31**	**26**	*e*P	**Pb**	**00 03 48.0**	**-0.4**
KRX	**Arik**	**2.33**	**24**	*e*P	**Pb**	**00 03 48.2**	**-0.6**
NLC	**Nalytchevo**	**2.38**	**35**	*e*S	**Sg**	**00 04 21.3**	**-1.2**
GNL	**Ganaly**	**2.52**	**12**	*e*P	**Pn**	**00 03 49.5**	**+1.6**
SPN	**Mys Shipunski**	**2.60**	**43**	*e*P	**Pn**	**00 03 50.2**	**+1.3**
SPN				*e*S	**Sb**	**00 04 23.9**	**-1.6**
ILAR	**Eielson Array**	**31.44**	**43**	P	**P**	**00 09 29.1**	**+0.9**
	0.3nm,0.8s,baz=274,slow=7.3,SNR=2.5						
	0.3nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**32.38**	**163**	T	T	00 43 37.6	
	baz=349						
H11N1	**WAKE ISLAND Hy**	**32.40**	**163**	T	T	00 43 37.6	
	baz=349						
H11N3	**WAKE ISLAND Hy**	**32.40**	**163**	T	T	00 43 26.5	
	baz=349						
YKA	**Yellowknife Ar**	**45.78**	**40**	P	**P**	**00 11 27.8**	**-0.6**
	0.2nm,0.8s,baz=291,slow=7.0,SNR=1.9						
	0.2nm,0.8s						
MKAR	**Makanchi Array**	**47.28**	**296**	P	**P**	**00 11 40.8**	**+0.2**
	0.6nm,0.9s,baz=69,slow=6.6,SNR=4.6						
	0.6nm,0.9s						
WRA	**Warramunga Arr**	**73.64**	**202**	P	**P**	**00 14 40.9**	**+0.2**
	0.2nm,0.7s,baz=17,slow=6.7,SNR=1.9						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**77.33**	**202**	P	**P**	**00 15 01.9**	**+0.1**
	0.4nm,0.7s,baz=15,slow=5.1,SNR=3.0						
	0.4nm,0.7s						

IDC 24 00:08:46.1±1.4, 30°.95N×107°.73E, h0^{km}, mb3.4/3, mbtmp3.5/5, ML4.1/2, Error ellipse: s-maj=60.2km s-min=25.5km az=62.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**14.77**	**215**	Pn	Pn	00 12 16.8	+0.5
	1.0nm,0.3s,baz=17,slow=10,SNR=4.5						
	1.5nm,0.3s						
SONM	**Songino Array**	**16.90**	**357**	Pn	Pn	00 12 44.5	+0.3
	0.1nm,0.3s,baz=174,slow=14,SNR=1.5						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**25.20**	**316**	P	P	00 14 13.2	-0.1
	0.4nm,0.7s,baz=124,slow=10,SNR=4.4						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**56.69**	**150**	P	P	00 18 31.3	-0.2
	0.2nm,0.4s,baz=338,slow=7.8,SNR=12						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**59.82**	**152**	P	P	00 18 53.6	+0.1
	0.2nm,0.3s,baz=336,slow=6.6,SNR=1.8						
	0.2nm,0.3s						

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*IDC **24** 00:20:16.3±1.0, 6°.22N×93°.03E, h0^{km}, mb3.6/9, mbtmp3.7/11, ML3.8/2, Error ellipse: s-maj=37.8km s-min=18.1km az=52.0*

ISC 24 00:20:20.3±1.0, 6°.2N±0°.1×93°.0E±0°.1, h27^{km}, n17, σ0^{s}.46/13, mb3.7/9, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALK	**Pallekele**	**12.27**	**276**	Pn	**Pn**	**00 23 13.1**	**-0.4**
	0.7nm,0.3s,baz=121,slow=2.1,SNR=2.0						
PALK				Sn	Sn	00 25 17.9	-12
	2.1nm,0.3s,baz=243,slow=13,SNR=8.6						
	1.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**13.47**	**25**	Pn	**Pn**	**00 23 29.4**	**-0.4**
	0.2nm,0.3s,baz=231,slow=14,SNR=1.2						
	1.1nm,0.3s						
H08S3	**Diego Garcia H**	**24.67**	**236**	T	T	00 51 18.6	
	baz=56,slow=75,SNR=1027						
H08S2	**Diego Garcia H**	**24.67**	**236**	T	T	00 51 22.1	
	baz=56,slow=75,SNR=986						
H08S1	**Diego Carcia H**	**24.69**	**236**	T	T	00 51 21.7	
	baz=56,slow=75,SNR=915						
AAK	**Ala-Archa**	**39.80**	**339**	P	**P**	**00 27 51.6**	**+0.2**
	0.6nm,0.7s,baz=220,slow=12,SNR=3.4						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**41.46**	**349**	P	**P**	**00 28 04.2**	**-0.7**
	0.3nm,0.5s,baz=167,slow=8.5,SNR=6.2						
	0.3nm,0.5s						
SONM	**Songino Array**	**43.01**	**13**	P	**P**	**00 28 18.3**	**+0.6**
	0.3nm,0.6s,baz=213,slow=7.7,SNR=1.5						
SONM				PcP	**PcP**	**00 30 07.5**	**-0.1**
	0.2nm,0.5s,baz=201,slow=5.4,SNR=1.8						
	0.3nm,0.6s						
GEYT	**Alibeck**	**44.71**	**320**	P	**P**	**00 28 31.6**	**+0.3**
	0.6nm,0.5s,baz=157,slow=7.8,SNR=1.7						
	0.6nm,0.5s						
H01W3	**Cape Leeuwin H**	**45.48**	**155**	T	T	01 17 19.6	
	baz=330						
H01W2	**Cape Leeuwin H**	**45.49**	**155**	T	T	01 17 25.4	
	baz=330						
H01W1	**Cape Leeuwin H**	**45.50**	**155**	T	T	01 17 24.2	
	baz=330						
KURBB	**Kurchatov Arra**	**45.88**	**347**	P	**P**	**00 28 40.3**	**0.0**
	0.4nm,0.3s,baz=171,slow=7.3,SNR=1.4						
	0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**48.05**	**353**	P	**P**	**00 28 57.1**	**-0.1**
	1.1nm,0.3s,baz=165,slow=8.0,SNR=9.1						
	1.1nm,0.3s						
WRA	**Warramunga Arr**	**48.25**	**124**	P	**P**	**00 28 58.9**	**-0.5**
	0.8nm,0.8s,baz=299,slow=10.0,SNR=8.2						
WRA				PcP	**PcP**	**00 30 26.8**	**+0.6**
	0.2nm,0.4s,baz=312,slow=2.6,SNR=1.3						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**49.75**	**128**	P	**P**	**00 29 10.8**	**0.0**
	0.5nm,0.5s,baz=315,slow=8.3,SNR=7.8						
	0.5nm,0.5s						
BRTR	**Keskin Array B**	**62.67**	**312**	P	**P**	**00 30 43.4**	**+0.3**
	0.2nm,0.4s,baz=116,slow=9.8,SNR=3.0						
	0.2nm,0.4s						

IDC 24 00:27:03.1±3.8, 61°.53S×155°.09W, h0^{km}, mb3.6/2, mbtmp3.6/2, MS3.6/10, Error ellipse: s-maj=800.2km s-min=89.7km az=4.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**21.12**	**204**	LR	LR	00 37 17.4	
	comp=Z,102nm,20.0s,baz=3.0,slow=29						
QSPA	**South Pole Qui**	**28.60**	**180**	LR	LR	00 42 08.1	
	comp=Z,142nm,18.5s,baz=52,slow=32						
RAO	**Raoul Island**	**35.64**	**324**	LR	LR	00 43 56.7	
	comp=Z,152nm,19.9s,baz=107,slow=28						
PPT	**Papeete**	**44.08**	**8**	LR	LR	00 48 30.3	
	comp=Z,49nm,21.2s,baz=232,slow=29						
RPN	**Rapa Nui**	**45.89**	**63**	LR	LR	00 49 59.7	
	comp=Z,63nm,19.6s,baz=144,slow=30						
MSVF	**Nonsavu**	**47.69**	**324**	LR	LR	00 53 23.0	
	comp=Z,40nm,18.4s,baz=159,slow=33						
H03S2	**Juan Fernandez**	**54.42**	**96**	T	T	01 35 54.0	
	baz=212,slow=74,SNR=12						
H03S1	**Juan Fernandez**	**54.42**	**96**	T	T	01 35 47.7	
	baz=212,slow=74,SNR=12						
H03S3	**Juan Fernandez**	**54.44**	**96**	T	T	01 35 46.6	
	baz=212,slow=74,SNR=12						
H03N3	**Juan Fernandez**	**54.73**	**96**	T	T	01 36 11.1	
	baz=221,slow=79						
H03N2	**Juan Fernandez**	**54.74**	**96**	T	T	01 36 09.7	
	baz=221,slow=79						
H03N1	**Juan Fernandez**	**54.75**	**96**	T	T	01 36 09.3	
	baz=221,slow=79						
ASAR	**Alice Springs**	**60.44**	**275**	P	P	00 37 14.0	-0.3
	0.4nm,0.5s,baz=145,slow=6.6,SNR=5.8						
ASAR				LR	LR	00 59 29.1	
	comp=Z,55nm,19.5s,baz=169,slow=32						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**63.41**	**277**	P	P	00 37 34.4	+0.1
	0.4nm,0.7s,baz=154,slow=5.9,SNR=4.9						
	0.4nm,0.7s						
NNA	**Nana**	**73.94**	**85**	LR	LR	01 03 21.9	
	comp=Z,23nm,19.0s,baz=192,slow=30						
ATAH	**Atahualpa**	**77.42**	**82**	LR	LR	01 05 13.5	
	comp=Z,36nm,20.8s,baz=88,slow=30						
SUR	**Sutherland**	**86.37**	**177**	LR	LR	01 15 31.1	
	comp=Z,41nm,18.3s,baz=169,slow=34						
MKAR	**Makanchi Array**	**144.61**	**272**	PKP	PKPab	00 46 38.9	-0.1
	0.4nm,0.8s,baz=120,slow=1.2,SNR=3.9						
ZALV	**Zalesovo Beam**	**148.21**	**284**	PKPbc	PKPbc	00 46 49.5	-0.1
	0.2nm,0.3s,baz=143,slow=2.9,SNR=1.8						

IDC 24 00:50:53.1±2.8, 18°.86N×146°.34E, h0^{km}, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=120.8km s-min=24.3km az=81.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**40.32**	**198**	P	P	00 58 33.0	+0.5
	0.7nm,0.5s,baz=12,slow=8.3,SNR=46						
WRA				PcP	PcP	01 00 34.7	-1.5
	0.3nm,0.4s,baz=14,slow=3.4,SNR=5.6						
	0.7nm,0.5s						
SONM	**Songino Array**	**43.40**	**321**	P	P	00 58 57.5	-0.1
	0.2nm,0.4s,baz=127,slow=9.3,SNR=1.7						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**43.98**	**197**	P	P	00 59 01.8	-0.5
	0.3nm,0.4s,baz=13,slow=6.3,SNR=6.3						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**58.79**	**314**	P	P	01 00 54.0	+0.8
	0.1nm,0.4s,baz=95,slow=6.1,SNR=1.9						
	0.1nm,0.4s						
FINES	**FINESS Array B**	**86.99**	**335**	P	P	01 03 39.8	-0.2
	1.2nm,1.0s,baz=48,slow=4.1,SNR=3.9						
	1.2nm,1.0s						

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*IDC **24** 01:23:27.0±0.5, 28°.98N×67°.28E, h0^{km}, mb4.6/36, mbtmp4.6/38, ML4.1/2, MS4.2/73, Error ellipse: s-maj=12.5km s-min=9.8km az=20.0*

*MOS **24** 01:23:29.8±1.4, 29°.12N×67°.39E, h27^{km}, mb5.1/58, MS4.2/17, Error ellipse: s-maj=5.2km s-min=3.4km az=99.0*

*BJI **24** 01:23:29.4±0.0, 29°.38N×67°.37E, h10^{km}, mb4.7/63, mB5.0/44, Ms4.8/60, Ms7 4.5/58*

*GCMT **24** 01:23:31.0±0.3, 28°.90N±0°.02×67°.37E±0°.01, h25^{km}±1^{km}, MW5.0/96, Moment Tensor Solution. s23,c25; s96,c138; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.48±.15; $M_{\theta\theta}$-3.48±.12; $M_{\phi\phi}$3.00±.11; $M_{r\theta}$1.56±.26; $M_{\theta\phi}$-1.64±.09; $M_{\phi r}$-0.56±.23; Best double couple: $M_0$3.97900×10^{16} NP1:ϕ_s121.00000°, δ90.00000°, λ156.00000°. NP2: ϕ_s211.00000°, δ66.00000°, λ0.00000°. Principal axes: T 3.6740, Plg17.0000°, Azm73.0000°; N 0.6120, Plg66.0000°, Azm300.0000°; P -4.2840, Plg17.0000°, Azm169.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **24** 01:23:31.1±1.8, 29°.11N±0°.07×67°.18E±0°.06, h18^{km}±3^{km}, mb4.9/147 Error ellipse: s-maj=9.6km s-min=7.7km az=175.0*

*BGR **24** 01:24:14.6, 31°.51N×62°.48E, h33^{km}, mb4.1*

ISC 24 01:23:30.0±0.4, 28°.97N±0°.03×67°.28E±0°.03, h19^{km}±1^{km}, h19^{km}:pP-P, n746, σ2^{s}.10/757, mb4.8/194, MS4.3/110, 50C-47D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THW	**Thamme Wali**	**5.41**	**44**	⇑P	**Pn**	**01 24 49.1**	**-0.5**
SARP	**Sargodha**	**5.50**	**56**	⇑P	**Pn**	**01 24 49.7**	**-1.3**
KBL	**Kabul**	**5.75**	**15**	Pn	**Pn**	**01 24 54.7**	**+0.1**
KBL	**Kabul**	**5.75**	**15**	P	**Pn**	**01 24 54.7**	**+0.1**
KBL	**Kabul**	**5.75**	**15**	P	**Pn**	**01 24 56.0**	**+1.4**
	SNR=256						
KBL				S	**Sn**	**01 26 00.1**	**0.0**
CEP	**Cherat**	**6.25**	**38**	⇑P	**Pn**	**01 25 02.1**	**+0.8**
NGCH	**Negor - Chabah**	**6.55**	**238**	P	**Pn**	**01 25 06.2**	**+0.9**
	SNR=183						
NGCH				S	**Sn**	**01 26 18.1**	**-1.4**
NIL	**Nilore**	**6.92**	**46**	Pn	**Pn**	**01 25 10.1**	**-0.3**
NIL	**Nilore**	**6.92**	**46**	P	**Pn**	**01 25 10.1**	**-0.3**
CHCP	**Chirah Chowk**	**6.93**	**46**	⇑P	**Pn**	**01 25 09.8**	**-0.8**
AJM	**Ajmer**	**6.98**	**109**	*e*P	**Pn**	**01 25 11.5**	**+0.2**
AJM				*e*S	**Sn**	**01 26 28.3**	**-1.9**
JMU	**Jammu**	**7.54**	**58**	*e*P	**Pn**	**01 25 18.3**	**-0.6**
JMU				*e*S	**Sn**	**01 26 40.5**	**-3.2**
KHET	**Khetri**	**7.55**	**95**	*e*P	**Pn**	**01 25 18.7**	**-0.4**
KHET				*e*S	**Sn**	**01 26 39.0**	**-5.2**
THN	**Thein Dam**	**8.04**	**62**	*e*P	**Pn**	**01 25 25.5**	**-0.3**
THN				*e*S	**Sn**	**01 26 55.3**	**-0.8**
THN				IAML		01 26 57.4	
	comp=E,552nm,0.6s						
THN				IAML		01 26 58.1	
	comp=N,304nm,0.4s						
KUDL	**Kundal**	**8.14**	**94**	*e*P	**Pn**	**01 25 26.1**	**-1.0**
KUDL				*e*S	**Sn**	**01 26 53.0**	**-5.6**
BHK	**Bhakra**	**8.27**	**71**	*e*P	**Pn**	**01 25 27.4**	**-1.6**
BHK				*e*S	**Sn**	**01 26 59.5**	**-2.4**
BHK				IAML		01 27 05.1	
	comp=E,484nm,0.3s						
BHK				IAML		01 27 08.2	
	comp=N,476nm,0.3s						
SONA	**Sohna**	**8.64**	**92**	*e*P	**Pn**	**01 25 32.8**	**-1.3**
SONA				*e*S	**Sn**	**01 27 03.9**	**-7.1**
NDI	**New Delhi**	**8.72**	**89**	*e*P	**Pn**	**01 25 34.0**	**-1.1**
NDI				*e*S	**Sn**	**01 27 08.0**	**-4.9**
SMLA	**Simla**	**8.83**	**73**	*e*P	**Pn**	**01 25 35.3**	**-1.4**
SMLA				*e*P	**Pn**	**01 25 35.8**	**-0.8**
SMLA				*e*S	**Sn**	**01 27 09.2**	**-6.4**
SMLA				*e*S	**Sn**	**01 27 11.7**	**-3.9**
SMLA				IAML		01 27 16.1	
	comp=E,885nm,0.5s						
SMLA				IAML		01 27 16.1	
	comp=E,892nm,0.4s						
SMLA				IAML		01 27 16.4	
	comp=N,1μm,0.4s						
SMLA				IAML		01 27 16.5	
	comp=N,1μm,0.4s						
JASK	**Jask - Hormozg**	**8.92**	**252**	P	**Pn**	**01 25 38.5**	**+0.6**
	SNR=34						
JASK				S	**Sn**	**01 27 21.1**	**+3.2**
WSAR	**Wadi Sarin**	**9.64**	**236**	Pn	**Pn**	**01 25 46.8**	**-1.1**
	comp=N,11nm,0.3s,baz=117,slow=6.7,SNR=119						
WSAR				Sn	Sn	01 27 26.0	-10
	comp=N,7.0nm,0.3s,baz=256,slow=20,SNR=7.7						
WSAR				LR	LR	01 30 43.8	
	comp=N,4μm,19.3s,baz=89,slow=45						
	comp=N,53nm,0.4s						
WSAR	**Wadi Sarin**	**9.64**	**236**	P	**Pn**	**01 25 46.6**	**-1.2**
	SNR=128						
WSAR				S	**Sn**	**01 27 28.6**	**-7.0**
CHGR	**Chuyangaron**	**9.79**	**9**	Pn	**Pn**	**01 25 48.8**	**-1.0**
CHGR	**Chuyangaron**	**9.79**	**9**	P	**Pn**	**01 25 48.8**	**-1.0**
WBK	**Wadi Bani Khal**	**9.81**	**232**	P	**Pn**	**01 25 49.1**	**-1.0**
	SNR=90						
WBK				S	**Sn**	**01 27 32.5**	**-7.1**
	SNR=9.4						
JLN	**Jalan Bani Buh**	**9.83**	**228**	P	**Pn**	**01 25 49.0**	**-1.3**
	SNR=78						
JLN				P	**Pn**	**01 25 49.0**	**-1.3**
	SNR=78						
JLN				S	**Sn**	**01 27 33.4**	**-6.8**
	SNR=11						
JLN				S	**Sn**	**01 27 33.4**	**-6.8**
	SNR=11						
BIDO	**Bidbid**	**9.85**	**239**	P	**Pn**	**01 25 50.5**	**-0.1**
	SNR=30						
BIDO				P	**Pn**	**01 25 50.5**	**-0.1**
	SNR=30						
BIDO				S	**Sn**	**01 27 34.8**	**-5.8**
	SNR=5.4						
BIDO				S	**Sn**	**01 27 34.8**	**-5.8**
	SNR=5.4						
SMDO	**Samad**	**10.18**	**237**	P	**Pn**	**01 25 54.5**	**-0.7**
	SNR=82						
SMDO				P	**Pn**	**01 25 54.5**	**-0.7**
	SNR=82						
SMDO				S	**Sn**	**01 27 41.8**	**-7.0**
	SNR=6.4						
SMDO				S	**Sn**	**01 27 41.8**	**-7.0**
	SNR=6.4						
BANOM	**Banah**	**10.22**	**255**	*i* P	**Pn**	**01 25 54.7**	**-0.9**
	SNR=17						
BANOM	**Banah**	**10.22**	**255**	P	**Pn**	**01 25 54.9**	**-0.8**
	SNR=17						
GAR	**Garm**	**10.32**	**13**	Pn	**Pn**	**01 25 56.2**	**-0.9**
HOQ	**Hoqain**	**10.43**	**241**	P	**Pn**	**01 25 57.2**	**-1.4**
	SNR=48						
HOQ				P	**Pn**	**01 25 57.2**	**-1.4**
	SNR=48						
HOQ				S	**Sn**	**01 27 51.3**	**-3.7**
HOQ				S	**Sn**	**01 27 51.3**	**-3.7**
MDH	**Madha**	**10.44**	**252**	*i* P	**Pn**	**01 25 57.5**	**-1.3**
	SNR=33						
MDH	**Madha**	**10.44**	**252**	P	**Pn**	**01 25 57.5**	**-1.3**
	SNR=33						
MDH				P	**Pn**	**01 25 57.5**	**-1.3**
	SNR=33						
MASF	**Masafi**	**10.53**	**253**	P	**Pn**	**01 26 00.4**	**+0.4**
	SNR=17						
MASF				P	**Pn**	**01 26 00.4**	**+0.4**
	SNR=17						
MSFE	**Esma-Masafi**	**10.54**	**253**	*i* P	**Pn**	**01 26 00.1**	**+0.1**
	SNR=16						
JMDO	**Jabal Madar**	**10.57**	**234**	P	**Pn**	**01 26 00.5**	**+0.1**
	SNR=138						
JMDO				P	**Pn**	**01 26 00.5**	**+0.1**
	SNR=138						
UOSS	**Minazif**	**10.66**	**251**	Pn	**Pn**	**01 26 00.1**	**-1.7**
UOSS	**Minazif**	**10.66**	**251**	*i* P	**Pn**	**01 25 59.9**	**-1.8**
	SNR=20						
BHPL	**Bhopal**	**10.75**	**120**	*e*P	**Pn**	**01 26 02.7**	**-0.3**
SOHO	**SOHO**	**10.76**	**246**	*i* P	**Pn**	**01 26 01.3**	**-1.7**
	SNR=19						
SOHO	**SOHO**	**10.76**	**246**	P	**Pn**	**01 26 01.8**	**-1.3**
HATD	**Hatta, Dubai**	**10.77**	**250**	*i* P	**Pn**	**01 26 01.6**	**-1.8**
	SNR=21						
HATD	**Hatta, Dubai**	**10.77**	**250**	P	**Pn**	**01 26 01.5**	**-1.8**
	SNR=20						
HATD				P	**Pn**	**01 26 01.5**	**-1.8**
	SNR=20						
ASHO	**Ashiyiah**	**10.89**	**250**	*i* P	**Pn**	**01 26 05.0**	**0.0**
	SNR=54						
ASHO	**Ashiyiah**	**10.89**	**250**	P	**Pn**	**01 26 04.5**	**-0.4**
	SNR=54						
ASHO				P	**Pn**	**01 26 04.5**	**-0.4**
	SNR=54						
ASHO				S	**Sn**	**01 28 04.5**	**-1.9**
	SNR=11						
ASHO				S	**Sn**	**01 28 04.5**	**-1.9**
	SNR=11						
BSY	**Bisya**	**10.99**	**238**	P	**Pn**	**01 26 07.1**	**+0.8**
	SNR=143						
BSY				P	**Pn**	**01 26 07.1**	**+0.8**
	SNR=143						
NAZ	**Nazwa, Dubai**	**11.10**	**252**	*i* P	**Pn**	**01 26 07.6**	**-0.1**
	SNR=10.0						
NAZ	**Nazwa, Dubai**	**11.10**	**252**	P	**Pn**	**01 26 09.2**	**+1.5**
	SNR=11						
DRK	**Karamyk**	**11.13**	**18**		**Pn**	**01 26 04.4**	**-4.0**
ARQ	**Araqi**	**11.17**	**242**	P	**Pn**	**01 26 11.0**	**+2.2**
	SNR=48						
ARQ				P	**Pn**	**01 26 11.0**	**+2.2**
	SNR=48						
FAQ	**Al Faqa, Dubai**	**11.25**	**251**	*i* P	**Pn**	**01 26 10.4**	**+0.6**
	SNR=19						
FAQ	**Al Faqa, Dubai**	**11.25**	**251**	P	**Pn**	**01 26 11.5**	**+1.6**
	SNR=19						
FAQ				P	**Pn**	**01 26 11.5**	**+1.6**
	SNR=19						
PTH	**Pithoragarh**	**11.31**	**84**	*e*P	**Pn**	**01 26 08.6**	**-2.2**
PTH				*e*S	**Sn**	**01 28 10.8**	**-5.9**
LGTI	**Lohaghat**	**11.34**	**84**	*e*P	**Pn**	**01 26 06.9**	**-4.0**
LGTI				*e*S	Sn	01 28 07.3	-10
LGTI				IAML		01 28 18.2	
	comp=E,398nm,1.1s						
ALNE	**Al Ain**	**11.43**	**247**	*i* P	**Pn**	**01 26 13.1**	**+0.9**
	SNR=11						
ALNE	**Al Ain**	**11.43**	**247**	P	**Pn**	**01 26 13.6**	**+1.4**
	SNR=50						
ALNE				P	**Pn**	**01 26 13.6**	**+1.4**
	SNR=50						
ALNE				S	**Sn**	**01 28 14.7**	**-4.6**
	SNR=6.0						
ALNE				S	**Sn**	**01 28 14.7**	**-4.6**
	SNR=6.0						
BTK	**Batken**	**11.44**	**14**		**Pn**	**01 26 11.3**	**-1.1**
BTK	**Batken**	**11.44**	**14**	P	**Pn**	**01 26 11.3**	**-1.1**
ASUD	**Al Ashush, Dub**	**11.52**	**251**	*i* P	**Pn**	**01 26 13.7**	**+0.3**
	SNR=6.3						
ASUD	**Al Ashush, Dub**	**11.52**	**251**	P	**Pn**	**01 26 14.8**	**+1.4**
	SNR=6.3						
MHTO	**MHTO**	**11.59**	**229**	P	**Pn**	**01 26 13.7**	**-0.8**
	SNR=20						
MHTO				P	**Pn**	**01 26 13.7**	**-0.8**
	SNR=20						
GEYT	**Alibeck**	**11.76**	**322**	Pn	**Pn**	**01 26 16.0**	**-0.7**
	comp=E,0.2nm,0.3s,baz=145,slow=8.8,SNR=24						
GEYT				Sn	**Sn**	**01 28 23.4**	**-4.1**
	baz=164,slow=12						
GEYT				Lg	Lg	01 29 44.7	
	comp=E,0.2nm,0.3s,baz=160,slow=30,SNR=3.7						
	comp=E,12nm,1.1s						
GEYT	**Alibeck**	**11.76**	**322**		**Pn**	**01 26 16.7**	**-0.1**
GYA0B	**ALIBECK ARRAY**	**11.76**	**322**		**Pn**	**01 26 17.5**	**+0.7**
TAS	**Tashkent**	**12.44**	**7**	Pn	**Pn**	**01 26 25.1**	**-0.9**
TAS	**Tashkent**	**12.44**	**7**	P	**Pn**	**01 26 25.1**	**-0.9**
UMZA	**Um Al Zommool**	**12.56**	**243**	P	**Pn**	**01 26 28.4**	**+0.6**
UMZA				P	**Pn**	**01 26 28.4**	**+0.6**
UMZA				S	**Sn**	**01 28 41.8**	**-5.4**
UMZA				S	**Sn**	**01 28 41.8**	**-5.4**
KSH	**Kashi**	**12.73**	**32**	P	Pn	01 26 23.4	-6.8
KSH				pP	P	01 26 26.8	-14
KSH				S	Sn	01 28 35.8	-16
KSH				LR	LR		
	comp=E,4μm,14.1s						
KSH				LR	LR		
	comp=E,4μm,16.5s						
KSH				LR	LR		
	comp=E,3μm,15.9s						
JBP	**Jabalpur**	**12.79**	**114**	*e*P	**Pn**	**01 26 27.1**	**-3.7**
JBP				*e*S	Sn	01 28 41.9	-11
IUG	**Iuzhnay**	**13.34**	**9**	*i* P	**Pn**	**01 26 35.8**	**-2.5**
	baz=8.6						
IUG				*e*S	**Sn**	**01 29 02.6**	**-3.5**
	baz=8.6						
IUG	**Iuzhnay**	**13.34**	**9**	*i* P	**Pn**	**01 26 35.8**	**-2.5**
IUG				*e*S	**Sn**	**01 29 02.6**	**-3.5**
ALBI	**Allahabad**	**13.44**	**102**	*e*P	**Pn**	**01 26 36.5**	**-3.1**
ALBI				*e*S	Sn	01 28 58.8	-10
PYUN	**Piuthan**	**13.84**	**90**	*e*P	**Pn**	**01 26 41.7**	**-3.7**
	comp=E,357nm,0.7s						
AML	**Almayashu**	**14.12**	**20**	P	**Pn**	**01 26 47.1**	**-2.3**
	SNR=18						
KK31	**Karatay Array**	**14.34**	**10**		**Pn**	**01 26 49.4**	**-2.6**
KK31	**Karatay Array**	**14.34**	**10**	P	**Pn**	**01 26 49.4**	**-2.6**
KKAR	**Karatay Array**	**14.34**	**10**		**Pn**	**01 26 49.4**	**-2.6**
KKAR	**Karatay Array**	**14.34**	**10**	P	**Pn**	**01 26 49.4**	**-2.6**
KOLN	**Koldanda**	**14.42**	**91**	*e*P	**Pn**	**01 26 49.4**	**-3.9**
UCH	**Uchtor**	**14.47**	**22**	P	**Pn**	**01 26 50.7**	**-3.5**
	SNR=91						
DANN	**Dangsing**	**14.48**	**88**	*e*P	**Pn**	**01 26 50.5**	**-3.8**
	comp=E,217nm,0.6s						
EKS2	**Erkin-Say**	**14.63**	**19**	P	**Pn**	**01 26 53.8**	**-2.3**
	SNR=80						

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VLK   Valmikinagar      14.72  92 eP    Pn     01 26 55.0 -2.3
VLK                               eS    Sn     01 29 33.6 -6.3
AAK   Ala-Archa         14.83  21  P    Pn     01 26 56.4 -2.4
      SNR=32
AAK   Ala-Archa         14.83  21  Pn   Pn     01 26 56.5 -2.3
      comp=E,7.9nm,0.3s,baz=184,slow=5.8,SNR=51
AAK                                Sn   Sn     01 29 34.5 -8.1
      comp=E,0.6nm,0.3s,baz=186,slow=23,SNR=2.0
AAK                                LR   LR     01 34 01.2
      comp=E,1µm,21.9s,baz=202,slow=43
AAK   Ala-Archa         14.83  21       Pn     01 26 55.5 -3.3
AAK   Ala-Archa         14.83  21d iP   Pn     01 26 55.8 -3.0
AAK                                pmax pmax
      comp=Z,67nm,1.7s
AAK   Ala-Archa         14.83  21 i P   Pn     01 26 56.0 -2.8
      SNR=37
AAK   Ala-Archa         14.83  21  P    Pn     01 26 56.4 -2.4
KBK   Karagaybulak      15.00  22  P    Pn     01 26 58.0 -3.1
      SNR=30
ULHL  Ulahol            15.11  26  P    Pn     01 26 58.8 -3.8
      SNR=22
CHMS  Chumysh           15.24  21  P    Pn     01 27 02.9 -1.3
      SNR=15
GKN   Gorkha            15.29  89 eP    Pn     01 27 00.5 -4.5
      comp=Z,101nm,0.5s
KDJ   Kajisay           15.39  29  IAmb IAmb   01 27 14.6
      comp=Z,56nm,1.2s
USP   Ospenovka         15.40  20  P    Pn     01 27 04.5 -1.7
      SNR=31
TKM2  Tokmak 2          15.45  23  P    Pn     01 27 03.2 -3.9
      SNR=41
HYB   Hyderabad         15.46 136 eP    Pn     01 27 06.1 -1.2
SGDS  Sogindy           15.61  20 eP    Pn     01 27 06.4 -2.6
      baz=20
SGDS  Sogindy           15.61  20 eP    Pn     01 27 06.4 -2.6
DMN   Daman             15.76  91 eP    Pn     01 27 06.7 -4.5
KKN   Kakani            15.89  90 eP    Pn     01 27 07.8 -5.0
PKIN  Phulchoki         16.02  91 eP    Pn     01 27 09.7 -4.9
PKI   Pulchoki          16.03  91 eP    Pn     01 27 09.9 -4.9
TNSS  Tian-Shan         16.05  26 eP    Pn     01 27 11.2 -3.9
      baz=26
TNSS  Tian-Shan         16.05  26 eP    Pn     01 27 11.1 -3.9
GUN   Gumba             16.39  89 eP    Pn     01 27 15.2 -4.2
RBK   Rabkut            16.56 229  P    Pn     01 27 21.0 -0.3
      SNR=10.0
RBK                                P    Pn     01 27 21.0 -0.3
      SNR=10.0
WHFO  Wadi Hawf         16.56 231  P    Pn     01 27 21.0 -0.3
      SNR=17
WHFO                               P    Pn     01 27 21.0 -0.3
      SNR=17
KUU   Kurty             16.56  24 eP    Pn     01 27 18.4 -2.8
      baz=23
KUU   Kurty             16.56  24 eP    Pn     01 27 18.3 -2.8
SATY  Saty              16.67  30 eP    Pn     01 27 20.3 -2.3
      baz=30
SATY  Saty              16.67  30 eP    Pn     01 27 20.3 -2.3
JIRN  Jiri              16.70  90 eP    Pn     01 27 18.7 -4.7
BTLS  Baital            16.91  17 eP    Pn     01 27 22.7 -2.9
      baz=16
BTLS  Baital            16.91  17 eP    Pn     01 27 22.7 -2.9
UZB   Uzynbulak         17.01  31 eP    Pn     01 27 24.1 -2.9
      baz=31
UZB   Uzynbulak         17.01  31 eP    Pn     01 27 24.0 -2.9
KPKS  Kokpek            17.12  29 eP    Pn     01 27 24.7 -3.5
      baz=29
KPKS  Kokpek            17.12  29 eP    Pn     01 27 24.7 -3.5
RAMN  Ramite            17.19  92 eP    Pn     01 27 24.6 -4.8
SHLS  Shalkode          17.22  31 eP    Pn     01 27 28.7 -0.8
      baz=32
SHLS  Shalkode          17.22  31 eP    Pn     01 27 28.7 -0.8
ABTO  Aybut             17.27 231  P    P      01 27 32.1 +0.5
      SNR=6.4
ABTO                               P    P      01 27 32.1 +0.5
      SNR=6.4
BOK   Bokaro            17.44 103 eP    Pn     01 27 28.4 -3.9
BOK                               eP    Pn     01 27 28.4 -3.9
BOK                                IAmb IAmb   01 27 30.9
      comp=Z,67nm,0.7s
BOK                               eS    Sn     01 30 33.2  -13
BOK                                IAML        01 30 54.5
      comp=E,117nm,1.1s
BOK                                IAML        01 31 01.4
      comp=N,66nm,0.7s
ODAN  Odare             17.90  92 eP    Pn     01 27 33.9 -4.2
      comp=N,481nm,1.2s
TAPN  Taplejung         18.09  90 eP    Pn     01 27 36.8 -3.7
LKRN  Lenkeran, Azer    18.16 307  P    Pn     01 27 40.6 -0.4
AKT   Akhty             20.22 313 eP    P      01 28 04.5 +0.6
AKT                               e            01 28 20.8
AKT                                pmax pmax
      comp=Z,80nm,1.0s
RAYN  Ar Rayn           20.26 260  P    P      01 28 04.3 -0.2
RAYN                               IAmb IAmb   01 28 08.5
      comp=Z,68nm,1.0s
RAYN  Ar Rayn           20.26 260  P    P      01 28 04.3 -0.2
RAYN                               pmax pmax
      comp=Z,68nm,1.0s
RAYN  Ar Rayn           20.26 260 i P   P      01 28 04.4 -0.1
      SNR=99
RAYN  Ar Rayn           20.26 260  P    P      01 28 04.1 -0.3
RAYN                               S    Sn     01 31 54.1 -0.2
MNGR  Mingechevir, A    20.28 311  P    P      01 28 04.2 -0.2
SEKA  Sheki             20.42 312  P    P      01 28 05.0 -1.1
NAX   Nakhchivan        20.67 305  P    P      01 28 08.5 -0.4
GANJ  Ganja             20.73 310  P    P      01 28 09.1 -0.3
LSA   Lhasa             20.82  82 ⇑P    Pn     01 28 12.4 -1.0
LSA                                S    S      01 31 57.8 -4.9
LSA                                pmax pmax
      comp=Z,66nm,1.0s
LSA                                LR   LR
      comp=Z,3µm,17.8s
LSA                                LR   LR
      comp=Z,1µm,24.2s
LSA                                LR   LR
      comp=Z,1µm,18.5s
ABKAR Akbulak array     21.02 347  P    P      01 28 12.2 -0.2
MAK   Makhachkala       21.17 317 eP    P      01 28 12.1 -1.9
MAK                               eS    S      01 32 07.9 -0.8
MAK                                pmax pmax
      comp=Z,68nm,1.0s
MAK                                MLR  MLR
      comp=Z,743nm,16.0s
MAKZ  Makanchi          21.19  29  P    P      01 28 12.9 -1.4
MAKZ  Makanchi          21.19  29  P    P      01 28 12.9 -1.4
MAKZ                               pmax pmax
      comp=Z,210nm,1.2s
MNCI  Minicoy           21.29 164  P    P      01 28 17.4 +1.9
MK31  Makanchi Array    21.31  29  P    P      01 28 14.2 -1.4
MK31  Makanchi Array    21.31  29  P    P      01 28 14.2 -1.4
MK31                               pmax pmax
      comp=Z,157nm,1.6s
MKAR  Makanchi Array    21.31  29  P    P      01 28 14.7 -1.0
      comp=Z,24nm,0.6s,baz=207,slow=10,SNR=114
MKAR                               LR   LR     01 37 59.9
      comp=Z,2µm,18.2s,baz=226,slow=41
      comp=Z,24nm,0.6s
MKAR  Makanchi Array    21.31  29  P    P      01 28 13.9 -1.7
MKAR  Makanchi Array    21.31  29ceP    P      01 28 14.6 -1.0
MKAR                               pmax pmax
      comp=Z,23nm,0.6s
BRZS  Berezniki         21.38  10 eP    P      01 28 14.6 -1.7
      baz=9.4
BRZS  Berezniki         21.38  10 eP    P      01 28 14.6 -1.7
GNI   Garni             21.60 307  P    P      01 28 19.9 +1.1
      comp=Z,44nm,0.9s,baz=174,slow=3.6,SNR=6.2
      comp=Z,44nm,0.9s
GNI   Garni             21.60 307  P    P      01 28 17.1 -1.8
GNI                                IAmb IAmb   01 28 25.5
      comp=Z,69nm,1.0s
GNI   Garni             21.60 307deP    P      01 28 20.1 +1.2
GNI                                pmax pmax
      comp=Z,99nm,1.3s
GNI   Garni             21.60 307  P    P      01 28 20.8 +1.9
WMQ   Urumqi            22.04  42  P    P      01 28 23.9 +0.4
WMQ                                S    S      01 32 22.1 -3.8
WMQ                                pmax pmax
      comp=Z,15nm,1.7s
SHL   Shillong          22.12  93  P    P      01 28 17.5 -7.1
      SNR=21
GROC  Groznyy           22.35 315 eP    P      01 28 28.8 +2.1
GROC                              eS    S      01 32 33.5 +2.0
AKTO  Aktyubinsk        22.56 344  P    P      01 28 29.6 +0.7
      comp=Z,32nm,1.0s,baz=149,slow=9.2,SNR=28
AKTO                               LR   LR     01 38 38.9
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      comp=Z,759nm,18.5s,baz=190,slow=40
      comp=Z,32nm,1.0s
BRDH  Bariadhala        22.78 100  P    P      01 28 31.7 +0.2
      comp=Z,83nm,0.3s,baz=270,slow=22,SNR=1.5
BRDH                               LR   LR     01 38 53.2
      comp=Z,788nm,18.0s,baz=88,slow=41
ZSN   Zaisan            22.96  32 eP    P      01 28 31.2 -1.9
      baz=32
KURBB Kurchatov Arra    23.24  18  P    P      01 28 35.1 -0.8
      comp=Z,16nm,0.6s,baz=210,slow=9.6,SNR=94
KURBB                              LR   LR     01 38 44.3
      comp=Z,795nm,18.1s,baz=184,slow=40
      comp=Z,16nm,0.6s
KURK  Kurchatov         23.34  18  P    P      01 28 35.5 -1.5
KURK                               IAmb IAmb   01 28 46.7
      comp=Z,30nm,0.8s
KURK  Kurchatov         23.34  18deP    P      01 28 36.1 -0.9
KURK                               pmax pmax
      comp=Z,58nm,1.7s
SEM   Semipalatinsk     23.55  21 eP    P      01 28 37.7 -1.7
      baz=21
SEM   Semipalatinsk     23.55  21 eP    P      01 28 37.6 -1.7
NCK   Nalchik           23.87 314⇓eP    P      01 28 44.2 +1.9
NCK                                pmax pmax
      comp=Z,8.0nm,0.5s
BVAR  Borovoye Array    24.14   5  P    P      01 28 44.4 -0.3
      comp=Z,15nm,0.6s,baz=173,slow=8.6,SNR=100
BVAR                               LR   LR     01 40 00.8
      comp=Z,1µm,19.1s,baz=182,slow=41
      comp=Z,15nm,0.6s
BRVK  Borovoye          24.17   4  P    P      01 28 44.5 -0.4
BRVK  Borovoye          24.17   4deP    P      01 28 44.6 -0.3
BRVK                               pmax pmax
      comp=Z,70nm,2.5s
GOMU  GeErMu            24.24  66  P    P      01 28 47.9 +1.7
GOMU                               pP   pP     01 28 52.8 +0.6
GOMU                               sP   sP     01 28 54.3 -0.7
GOMU                               S    S      01 33 05.1 +1.0
GOMU                               sS   pS     01 33 11.3 +0.8
GOMU                               pmax pmax
      comp=Z,24nm,2.0s
GOMU                               pmax pmax
      comp=Z,160nm,3.6s
GOMU                               LR   LR
      comp=Z,900nm,16.0s
GOMU                               LR   LR
      comp=Z,320nm,16.6s
GOMU                               LR   LR
      comp=Z,230nm,16.9s
NEY   Neytrino          24.31 312⇑eP    P      01 28 47.9 +1.3
NEY                                pmax pmax
      comp=Z,4.0nm,0.8s
KBZ   Khabaz            24.43 314  P    P      01 28 47.4  0.0
      comp=Z,4.5nm,0.8s,baz=133,slow=9.4,SNR=4.6
KBZ                                LR   LR     01 39 12.2
      comp=Z,310nm,21.3s,baz=126,slow=39
      comp=Z,4.5nm,0.8s
KBZ   Khabaz            24.43 314⇑eP    P      01 28 47.9 +0.5
KBZ                                pmax pmax
      comp=Z,10.0nm,1.2s
KOPT  Kop Dagi          24.58 304  P    P      01 28 49.7 +0.5
KVAR  Kislovodsk Arr    24.67 314  LR   LR     01 41 30.8
      comp=Z,359nm,20.0s,baz=138,slow=44
KIV   Kislovodsk        24.67 314  P    P      01 28 49.7 -0.1
KIV   Kislovodsk        24.67 314 eP    P      01 28 49.6 -0.1
KIV                               eS    S      01 33 11.4 +1.0
KIV                                pmax pmax
      comp=Z,19nm,1.0s
PALK  Pallekele         25.02 147  P    P      01 28 53.6 +0.6
      comp=Z,11nm,1.0s,baz=82,slow=12,SNR=6.2
PALK                               LR   LR     01 39 51.6
      comp=Z,600nm,19.1s,baz=66,slow=39
      comp=Z,11nm,1.0s
PALK  Pallekele         25.02 147  P    P      01 28 54.8 +1.8
PALK                               IAmb IAmb   01 29 09.9
      comp=Z,60nm,1.8s
PALK  Pallekele         25.02 147⇑eP    P      01 28 53.8 +0.8
PALK                               pmax pmax
      comp=Z,15nm,0.9s
DGZ   Jazzator, Alta    25.76  31ceP    P      01 28 59.6  0.0
DGZ                                pmax pmax
      comp=Z,46nm,0.7s
ASF   Jabal al Asfar    26.31 285  P    P      01 29 04.6 -0.1
      comp=Z,15nm,1.1s,baz=105,slow=6.9,SNR=11
      comp=Z,15nm,1.1s
GAZ   Gaziantep         26.41 296  IAmb IAmb   01 29 31.9
      comp=Z,32nm,0.9s
SOC   Sochi             26.43 311 eP    P      01 29 04.4 -1.1
SOC                               ePPP  PPP    01 29 52.7
SOC                               eS    S      01 33 36.9 -1.2
SOC                               eSS   SnSn   01 34 51.5  +12
SOC                                pmax pmax
      comp=Z,18nm,0.9s
SOC                                MLR  MLR
      comp=Z,220nm,14.0s
MND   Mandalay          26.89  98  P    P      01 29 11.6 +1.8
MMAI  Mount Meron Ar    27.57 286  P    P      01 29 16.5 +0.6
      comp=Z,1.2nm,0.6s,baz=101,slow=15,SNR=2.5
MMAI                               LR   LR     01 42 13.0
      comp=Z,705nm,19.4s,baz=160,slow=41
      comp=Z,1.2nm,0.6s
BELG  Belogornoye       27.57 334  P    P      01 29 15.4 -0.2
      comp=Z,87nm,0.9s,baz=310,slow=1.3,SNR=38
BELG                               LR   LR     01 43 52.4
      comp=Z,951nm,19.0s,baz=135,slow=44
BELG  Belogornoye       27.57 334⇓eP    P      01 29 16.2 +0.6
BELG                               pmax pmax
      comp=Z,17nm,0.9s
ZAA0  Zalesovo Array    28.05  22  P    P      01 29 19.7 -0.2
ZAA0                               IAmb IAmb   01 29 47.0
      comp=Z,26nm,1.0s
ZALV  Zalesovo Beam     28.05  22  P    P      01 29 19.6 -0.3
      comp=Z,7.8nm,0.6s,baz=224,slow=9.6,SNR=35
ZALV                               LR   LR     01 42 11.7
      comp=Z,638nm,19.7s,baz=218,slow=40
      comp=Z,7.8nm,0.6s
TNCH  TengChong         28.07  91  P    P      01 29 23.8 +3.2
TNCH                               pP   sP     01 29 28.3 -1.1
ARU   Arti              28.14 350  P    P      01 29 20.4 -0.2
      comp=Z,6.1nm,0.6s,baz=172,slow=9.5,SNR=16
ARU                                LR   LR     01 43 05.7
      comp=Z,760nm,18.2s,baz=152,slow=42
      comp=Z,6.1nm,0.6s
ARU   Arti              28.14 350  P    P      01 29 20.1 -0.6
ARU   Arti              28.14 350c iP   P      01 29 22.3 +1.6
ARU                                            01 30 07.1
ARU                                PPP  PPP    01 30 22.4
ARU                                S    S      01 34 08.8 +4.0
ARU                                SS   SnSn   01 35 21.4 +0.5
ARU                                pmax pmax
      comp=Z,53nm,1.5s
ARU                                MLR  MLR
      comp=Z,621nm,17.0s
EIL   Elat              28.15 279  P    P      01 29 20.4 -0.7
      comp=Z,3.3nm,0.8s,baz=5.1,slow=14,SNR=3.5
EIL                                LR   LR     01 41 52.6
      comp=Z,752nm,20.2s,baz=83,slow=39
      comp=Z,3.3nm,0.8s
SVE   Sverdlovsk        28.24 352 eP    P      01 29 22.2 +0.6
SVE                                pmax pmax
      comp=Z,36nm,1.5s
SVE                                MLR  MLR
      comp=Z,603nm,12.0s
ANN   Anapa             28.42 312 eP    P      01 29 27.6 +4.3
ANN                                pmax pmax
      comp=Z,12nm,0.7s
ANN                                MLR  MLR
      comp=Z,562nm,17.0s
GTA   Gaotai            28.72  60 eP    P      01 29 27.4 +1.2
GTA                                S    S      01 34 14.0 -0.6
GTA                                sS   sS     01 34 23.8 -1.4
GTA                                pmax pmax
      comp=Z,8.0nm,1.6s
GTA                                LR   LR
      comp=Z,800nm,12.7s
GTA                                LR   LR
      comp=Z,480nm,14.9s
GTA                                LR   LR
      comp=Z,560nm,16.0s
VRH   Novokhopyorsk     29.32 326 eP    P      01 29 31.6 +0.3
VRH                                pmax pmax
      comp=Z,11nm,1.0s
BR131 Keskin Array S    29.62 300  P    P      01 29 33.6 -0.7
BR131 Keskin Array S    29.62 300  P    P      01 29 33.6 -0.7
BR131                              pmax pmax
      comp=Z,6.0nm,0.8s
BR131 Keskin Array S    29.62 300  P    P      01 29 33.9 -0.4
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      SNR=7.7
BRTR  Keskin Array B    29.62 300  P    P      01 29 33.5 -0.7
      comp=Z,3.0nm,0.7s,baz=123,slow=9.1,SNR=19
BRTR                               LR   LR     01 41 49.7
      comp=Z,515nm,19.7s,baz=116,slow=37
      comp=Z,3.0nm,0.7s
BRTR  Keskin Array B    29.62 300 i P   P      01 29 33.2 -1.0
BRTR                               pmax pmax
      comp=Z,3.0nm,0.7s
ANTO  Ankara            30.29 300  P    P      01 29 39.1 -0.9
ANTO  Ankara            30.29 300  P    P      01 29 39.2 -0.9
ANTO                               pmax pmax
      comp=Z,11nm,1.0s
VORD  Divnogorie        30.39 324 eP    P      01 29 41.8 +1.1
VORD                               pmax pmax
      comp=Z,10.0nm,0.8s
VORD                               MLR  MLR
      comp=Z,240nm,12.0s
PZH   PanZhiHua         30.54  86  P    P      01 29 46.1 +3.6
PZH                                pmax pmax
      comp=Z,10.0nm,1.0s
PZH                                pmax pmax
      comp=Z,100nm,5.8s
CHTO  Chiang Mai        30.58 102  P    P      01 29 43.3 +0.6
CHTO  Chiang Mai        30.58 102  P    P      01 29 43.3 +0.6
CHTO                               pmax pmax
      comp=Z,1.0nm,1.3s
VSR   Storozhevoye      30.61 324 eP    P      01 29 43.8 +1.2
VSR                                pmax pmax
      comp=Z,10.0nm,0.6s
VSR                                MLR  MLR
      comp=Z,310nm,18.0s
SIM   Simferopol'       30.67 310 eP    P      01 29 44.5 +1.2
SIM                                pmax pmax
      comp=Z,24nm,0.6s
SIM                                MLR  MLR
      comp=Z,200nm,19.0s
CMAR  Chiang Mai Arr    30.73 103  P    P      01 29 44.2 +0.1
      comp=Z,0.9nm,0.3s,baz=296,slow=7.7,SNR=9.5
CMAR                               LR   LR     01 43 16.7
      comp=Z,450nm,19.5s,baz=295,slow=39
      comp=Z,0.9nm,0.3s
VORR  Voronezh          30.85 325 eP    P      01 29 44.0 -0.8
VORR                               pmax pmax
      comp=Z,17nm,0.9s
LZH   Lanzhou           31.50  67 eP    P      01 29 53.8 +2.9
LZH                                pP   pP     01 29 57.5 +0.6
LZH                                sP   sP     01 30 00.9 +1.1
LZH                                pmax pmax
      comp=Z,19nm,1.2s
LZH                                LR   LR
      comp=Z,980nm,13.4s
LZH                                LR   LR
      comp=Z,370nm,13.6s
LZH                                LR   LR
      comp=Z,1µm,17.3s
LPSR  Galich'ya Gora    31.55 326 eP    P      01 29 52.2 +1.3
LPSR                               pmax pmax
      comp=Z,20nm,1.0s
LPSR                               MLR  MLR
      comp=Z,160nm,16.0s
CD2   Chengdu           31.58  77  P    P      01 29 51.3 -0.2
CD2                                pmax pmax
      comp=Z,10.0nm,1.0s
CD2                                LR   LR
      comp=Z,1µm,11.6s
CD2                                LR   LR
      comp=Z,320nm,10.0s
CD2                                LR   LR
      comp=Z,540nm,16.3s
KMI   Kunming           31.74  88 ⇓P    P      01 29 54.1 +0.9
KMI                                PcP  PcP    01 32 44.8 +0.2
KMI                                S    S      01 35 05.8 +3.4
KMI                                pmax pmax
      comp=Z,20nm,0.8s
KMI                                pmax pmax
      comp=Z,120nm,5.4s
KMI                                LR   LR
      comp=Z,810nm,15.9s
KMI                                LR   LR
      comp=Z,730nm,15.6s
KMI                                LR   LR
      comp=Z,670nm,15.9s
ISP   Isparta           31.77 296  P    P      01 29 52.9 -0.3
ISP   Isparta           31.77 296  P    P      01 29 52.9 -0.3
ISP                                pmax pmax
      comp=Z,28nm,0.9s
KIRV  Kirov             32.08 342  LR   LR     01 44 33.2
      comp=Z,359nm,18.2s,baz=156,slow=40
KIRV  Kirov             32.08 342ceP    P      01 29 56.8 +1.3
MOY   Mondy             33.80  38 eP    P      01 30 11.4 +0.6
MOY                                pmax pmax
      comp=Z,26nm,1.7s
MOS   Moscow            34.10 330 eP    P      01 30 12.2 -1.0
MOS                               eS    S      01 35 39.2 +1.2
MOS                                pmax pmax
      comp=Z,46nm,1.2s
MOS                                MLR  MLR
      comp=Z,600nm,16.0s
OBN   Obninsk           34.19 329  LR   LR     01 45 27.3
      comp=Z,64nm,21.6s,baz=141,slow=39
OBN   Obninsk           34.19 329  P    P      01 30 13.6 -0.3
OBN   Obninsk           34.19 329⇑eP    P      01 30 14.5 +0.6
OBN                               e*SP  pP     01 30 19.1 -1.2
OBN                                PPP  PPP    01 31 40.0
OBN                                            01 32 45.0
OBN                               eSS   SS     01 37 39.5  -28
OBN                                pmax pmax
      comp=Z,44nm,1.2s
TLCR                    34.32 309 ⇑P    P      01 30 19.6 +4.4
TLCR                    34.32 309 ⇑P    P      01 30 19.6 +4.4
TIRR  Tirgusor          34.42 307 ⇓P    P      01 30 19.5 +3.3
TIRR  Tirgusor          34.42 307 ⇓P    P      01 30 19.5 +3.3
ZAK   Zakamensk         34.51  42 eP    P      01 30 16.2 -0.8
ZAK                                pmax pmax
      comp=Z,15nm,1.3s
TPGR  Topolog           34.51 308 ⇑P    P      01 30 14.5 -2.4
ICOR  Ion Corvin        34.78 307 ⇓P    P      01 30 20.8 +1.6
GYA   Guiyang           34.85  85 ⇑P    P      01 30 24.4 +4.2
GYA                                pP   sP     01 30 28.3 -0.7
GYA                                S    S      01 35 55.8 +5.4
GYA                                pmax pmax
      comp=Z,21nm,1.2s
GYA                                pmax pmax
      comp=Z,170nm,3.5s
GYA                                LR   LR
      comp=Z,430nm,10.0s
GYA                                LR   LR
      comp=Z,430nm,15.2s
GYA                                LR   LR
      comp=Z,590nm,12.6s
VLDR  Vladesti          34.99 310 ⇓P    P      01 30 22.2 +1.1
SCHL  Schela            35.08 309 ⇓P    P      01 30 26.0 +4.3
MSEY  Mahe Island       35.32 201  P    P      01 30 25.6 +1.4
MSEY                               IAmb IAmb   01 30 28.4
      comp=Z,16nm,0.8s
MSEY  Mahe Island       35.32 201  P    P      01 30 25.6 +1.4
MSEY                               pmax pmax
      comp=Z,16nm,0.9s
MSEY  Mahe Island       35.32 201 i P   P      01 30 25.8 +1.6
      SNR=14
SORM  Soroca            35.48 314 ⇑P    P      01 30 23.7 -1.5
SORM  Soroca            35.48 314 ⇑P    P      01 30 23.7 -1.5
SONM  Songino Array     35.50  47  P    P      01 30 25.6  0.0
      comp=Z,7.4nm,1.0s,baz=248,slow=8.2,SNR=26
SONM                               PP   PnPn   01 31 42.8 -1.7
      comp=Z,1.7nm,0.8s,baz=251,slow=8.4,SNR=1.3
SONM                               LR   LR     01 47 41.9
      comp=Z,1µm,18.5s,baz=259,slow=41
      comp=Z,7.4nm,1.0s
SONM  Songino Array     35.50  47  P    P      01 30 26.1 +0.6
SONM                               IAmb IAmb   01 30 28.9
      comp=Z,29nm,1.6s
SONM  Songino Array     35.50  47  P    P      01 30 26.2 +0.6
SONM                               pmax pmax
      comp=Z,29nm,1.6s
GHRR                    35.50 310 ⇑P    P      01 30 27.2 +1.8
RAZG  Razgrad           35.58 305 ⇓P    P      01 30 27.7 +1.5
PANC  Panciu            35.63 309 ⇓P    P      01 30 20.5 -6.0
XAN   Xi'an             35.68  71  P    P      01 30 27.1 -0.1
XAN                                pP   sP     01 30 36.0 -0.1
XAN                                S    S      01 36 09.0 +6.0
XAN                                pmax pmax
      comp=Z,11nm,1.0s
XAN                                pmax pmax
      comp=Z,120nm,4.6s
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XAN				LR	LR		
	comp=Z,1µm,12.4s						
XAN				LR	LR		
	comp=Z,410nm,17.2s						
XAN				LR	LR		
	comp=Z,2µm,17.9s						
ISR	**Istrita**	**35.87**	**308**	⇓P	**P**	**01 30 32.3**	**+3.6**
VRI	**Vrincioaia**	**35.91**	**309**	⇓P	**P**	**01 30 30.4**	**+1.4**
ULN	**Ulaanbaatar**	**35.93**	**47**	P	**P**	**01 30 29.6**	**+0.4**
ULN				IAmb	IAmb	01 30 32.3	
	comp=Z,27nm,1.5s						
ULN	**Ulaanbaatar**	**35.93**	**47**	⇑P	**P**	**01 30 29.2**	**-0.1**
ULN				pmax	pmax		
	comp=Z,21nm,1.7s						
RDO	**Rodhopi**	**35.94**	**301**	IAmb	IAmb	01 30 31.5	
	comp=Z,14nm,1.0s						
PLOR	**Plostina**	**35.96**	**309**	⇑P	**P**	**01 30 31.3**	**+1.8**
NEHR	**Nehoiu**	**36.11**	**308**	⇓P	**P**	**01 30 31.8**	**+1.1**
TESR	**Tescani**	**36.12**	**310**	⇓P	**P**	**01 30 31.1**	**+0.3**
SURA	**Surathani**	**36.18**	**116**	P	**P**	**01 30 33.7**	**+2.2**
IDI	**Anoyia**	**36.24**	**291**	⇓P	**P**	**01 30 31.4**	**-0.6**
IDI	**Anoyia**	**36.24**	**291**	LR	LR	01 47 22.3	
	comp=Z,211nm,21.0s,baz=103,slow=40						
COVR	**Voineasa-Covas**	**36.26**	**309**	⇑P	**P**	**01 30 35.1**	**+3.1**
MLR	**Muntele Rosu**	**36.36**	**308**	⇓P	**P**	**01 30 33.6**	**+0.6**
MLR	**Muntele Rosu**	**36.36**	**308**	P	**P**	**01 30 33.1**	**+0.1**
MLR				IAmb	IAmb	01 30 41.6	
	comp=Z,16nm,0.8s						
MLR	**Muntele Rosu**	**36.36**	**308**	P	**P**	**01 30 33.1**	**+0.1**
MLR				pmax	pmax		
	comp=Z,16nm,0.8s						
SRIT	**Nakonsritamara**	**36.50**	**117**	IAmb	IAmb	01 30 43.6	
	comp=Z,31nm,1.1s						
ENH	**Enshi**	**36.56**	**77**	P	**P**	**01 30 35.7**	**+0.9**
COPA	**Copaceanca**	**36.60**	**306**	⇓P	**P**	**01 30 37.1**	**+2.2**
OZUR		**36.60**	**309**	⇓P	P	01 30 48.0	+13
BTO	**Baotou**	**36.64**	**60**	*e*P	**P**	**01 30 35.4**	**0.0**
BTO				pmax	pmax		
	comp=Z,41nm,1.0s						
BTO				pmax	pmax		
	comp=Z,620nm,3.9s						
BTO				LR	LR		
	comp=Z,2µm,11.9s						
BTO				LR	LR		
	comp=Z,2µm,14.6s						
BTO				LR	LR		
	comp=Z,3µm,18.6s						
HUMR	**Humele**	**36.84**	**307**	⇑P	**P**	**01 30 36.4**	**-0.5**
DOPR	**Dopca**	**36.85**	**309**	⇓P	**P**	**01 30 37.0**	**+0.1**
KLMR	**Klimovskoe**	**36.90**	**338**	*e*P	**P**	**01 30 35.0**	**-2.1**
KLMR				AMP		01 30 39.0	
	comp=Z,44nm,1.5s						
KLMR				*e*PP	**PP**	**01 31 58.4**	**-2.8**
KLMR				LQ	LQ	01 43 55.9	
KLMR				LQ	LQ	01 43 55.9	
KLMR				LR	LR	01 47 06.0	
KLMR				AMP		01 47 26.5	
	comp=Z,984nm,17.2s						
KLMR	**Klimovskoe**	**36.90**	**338**	*e*P	**P**	**01 30 35.0**	**-2.1**
KLMR				*e*		01 31 58.3	
KLMR				pmax	pmax		
	comp=Z,44nm,1.5s						
KLMR				MLR	MLR		
	comp=Z,984nm,17.0s						
VOIR		**36.97**	**308**	⇓P	**P**	**01 30 40.2**	**+2.1**
VOIR		**36.97**	**308**	⇓P	**P**	**01 30 40.2**	**+2.1**
ARR	**Arges**	**37.24**	**308**	⇑P	**P**	**01 30 40.0**	**-0.3**
BURAR	**Bucovina Array**	**37.35**	**312**	⇑P	**P**	**01 30 40.7**	**-0.6**
BURAR	**Bucovina Array**	**37.35**	**312**	⇑P	**P**	**01 30 40.7**	**-0.6**
BUR08	**Bucovina Ar. S**	**37.37**	**312**	P	**P**	**01 30 39.8**	**-1.7**
BUR08				IAmb	IAmb	01 30 54.2	
	comp=Z,42nm,2.0s						
ARCR	**ARCALIA**	**37.79**	**311**	⇑P	**P**	**01 30 47.7**	**+2.7**
VTS	**Vitosha**	**37.82**	**303**	⇓P	P	01 30 58.5	+13
HHC	**Hu-ho-hao-te**	**37.83**	**60**	*e*P	**P**	**01 30 49.0**	**+3.5**
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,5.7s						
HHC				LR	LR		
	comp=Z,430nm,13.5s						
HHC				LR	LR		
	comp=Z,1µm,19.8s						
HHC				LR	LR		
	comp=Z,1µm,16.8s						
LOT	**Lotru**	**37.85**	**308**	⇑P	**P**	**01 30 46.5**	**+0.8**
MNK	**Minsk**	**38.16**	**323**	*i* P	**P**	**01 30 47.8**	**-0.2**
	comp=Z,22nm,1.1s,baz=114						
MNK				*i* P	**pP**	**01 30 48.1**	**-6.2**
	comp=E,3.0nm,1.1s						
MNK				*i* P	**pP**	**01 30 48.1**	**-6.2**
	comp=N,49nm,1.0s						
MNK				*i* PP	**PP**	**01 32 15.4**	**+0.3**
MNK				*i* S	**S**	**01 36 40.3**	**+0.3**
MNK				*i* SS	**SS**	**01 39 27.6**	**-0.3**
MNK				*i* LQ	LQ	01 43 44.0	
MNK				*i* LR	LR	01 46 38.2	
MNK				*i* LRM	MLR	01 50 53.3	
	comp=N,1µm,23.9s						
MNK				*i* LRM	MLR	01 51 16.2	
	comp=E,69nm,17.2s						
MNK				*i* LRM	MLR	01 51 25.1	
	comp=Z,375nm,14.6s						
MNK	**Minsk**	**38.16**	**323**	*i* P	**P**	**01 30 47.7**	**-0.2**
MNK				*i*		01 32 15.3	
MNK				*i* S	**S**	**01 36 40.3**	**+0.3**
MNK				pmax	pmax		
	comp=Z,22nm,1.1s						
MNK				pmax	pmax		
	comp=N,49nm,1.0s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.1s						
MNK				MLR	MLR		
	comp=N,1µm,24.0s						
TIY	**Taiyuan**	**38.41**	**65**	P	**P**	**01 30 50.8**	**+0.4**
TIY				S	**S**	**01 36 48.9**	**+4.4**
TIY				pmax	pmax		
	comp=N,170nm,4.8s						
TIY				LR	LR		
	comp=N,540nm,12.4s						
TIY				LR	LR		
	comp=N,440nm,15.1s						
TIY				LR	LR		
	comp=N,500nm,15.1s						
BMR	**Baia Mare**	**38.49**	**311**	⇑P	P	01 30 57.3	+6.4
BMR	**Baia Mare**	**38.49**	**311**	⇑P	P	01 30 57.3	+6.4
STIP	**Stip**	**38.51**	**302**	*i* P	**P**	**01 30 48.8**	**-2.2**
GZR	**Gura Zlata**	**38.53**	**308**	⇓P	P	01 30 58.3	+7.0
GZR	**Gura Zlata**	**38.53**	**308**	⇓P	P	01 30 58.3	+7.0
MARR	**Marisel-Cluj**	**38.53**	**310**	⇑P	**P**	**01 30 51.7**	**+0.4**
LYN	**LuoYang**	**38.58**	**70**	⇓*i*P	**P**	**01 30 54.3**	**+2.6**
LYN				S	**S**	**01 36 55.6**	**+8.7**
LYN				pmax	pmax		
	comp=N,24nm,0.6s						
LYN				LR	LR		
	comp=N,2µm,14.7s						
LYN				LR	LR		
	comp=N,240nm,11.8s						
LYN				LR	LR		
	comp=N,1µm,16.1s						
LVV	**L'vov**	**38.69**	**315**	*e*P	**P**	**01 30 53.8**	**+1.3**
DRGR		**38.83**	**310**	⇓P	**P**	**01 30 53.6**	**-0.2**
DRGR		**38.83**	**310**	⇓P	**P**	**01 30 53.6**	**-0.2**
NACGM	**Naroch**	**38.91**	**323**	*e*P	**P**	**01 30 55.7**	**+1.5**
	comp=E,2µm,1.1s						
SURR	**Surduc**	**39.04**	**308**	⇑P	**P**	**01 30 55.8**	**+0.3**
BOVS	**Bovan**	**39.05**	**305**	⇑P	**P**	**01 30 56.2**	**+0.7**
TRPA	**Tarpa**	**39.22**	**312**	⇑P	**P**	**01 30 57.2**	**+0.2**
BZS	**Buzias**	**39.37**	**308**	⇓P	**P**	**01 30 59.5**	**+1.3**
BZS	**Buzias**	**39.37**	**308**	⇓P	**P**	**01 30 59.5**	**+1.3**
KULM	**Kulim**	**39.39**	**120**	P	**P**	**01 31 01.0**	**+2.3**
KULM				IAmb	IAmb	01 31 05.1	
	comp=Z,24nm,1.1s						
SIRR	**Siria**	**39.45**	**309**	⇓P	**P**	**01 31 00.0**	**+1.1**
KBN	**Korca**	**39.50**	**300**	IAmb	IAmb	01 31 04.8	
	comp=Z,20nm,1.0s						
OHR	**Ohrid**	**39.51**	**301**	*i* P	**P**	**01 30 58.9**	**-0.6**
ISAL	**Salakas**	**39.53**	**324**	*e*P	**P**	**01 30 59.8**	**+0.4**
LODK	**Lodwar**	**39.56**	**236**	P	**P**	**01 31 02.2**	**+2.1**
PUL	**Pulkovo**	**39.66**	**332**	⇑*e*P	**P**	**01 31 02.6**	**+2.2**
PUL				pmax	pmax		
	comp=Z,44nm,0.8s						
PSI	**Prapat**	**39.78**	**125**	P	**P**	**01 31 06.8**	**+4.7**
PSI	**Prapat**	**39.78**	**125**	P	**P**	**01 31 04.1**	**+2.0**
PSI				pmax	pmax		
	comp=Z,19nm,1.0s						
RPSI	**Rantau Prapat**	**39.85**	**125**	P	**P**	**01 31 04.1**	**+1.6**
RPSI				IAmb	IAmb	01 31 10.7	
	comp=Z,19nm,1.0s						
QIZ	**Qiongzhong**	**39.94**	**95**	P	**P**	**01 31 05.8**	**+2.5**
QIZ				S	**S**	**01 37 09.9**	**+2.2**
QIZ				LR	LR		
	comp=Z,490nm,16.7s						
QIZ				LR	LR		
	comp=Z,290nm,18.3s						
QIZ				LR	LR		
	comp=Z,220nm,17.5s						
HNS	**HongShan**	**40.22**	**65**	⇑P	**P**	**01 31 06.3**	**+0.9**
HNS				S	**S**	**01 37 16.3**	**+4.8**
HNS				pmax	pmax		
	comp=Z,11nm,1.2s						
HNS				LR	LR		
	comp=Z,540nm,14.7s						
HNS				LR	LR		
	comp=Z,690nm,15.7s						
HNS				LR	LR		
	comp=Z,710nm,16.1s						
SJES	**Sjenica**	**40.26**	**304**	*e*P	**P**	**01 31 04.6**	**-1.2**
DIVS	**Divibare**	**40.33**	**305**	*e*P	**P**	**01 31 05.4**	**-0.9**
VSU	**Vasula**	**40.55**	**328**	*ce*P	**P**	**01 31 09.0**	**+1.2**
VSU				pmax	pmax		
	comp=Z,61nm,0.8s						
VSU	**Vasula**	**40.55**	**328**	*e*P	**P**	**01 31 08.4**	**+0.6**
FRGS	**Fruska Gora**	**40.57**	**307**	*e*P	**P**	**01 31 08.6**	**+0.4**
PABE	**Paberze**	**40.62**	**323**	P	**P**	**01 31 08.1**	**-0.4**
PABE				IAmb	IAmb	01 31 12.0	
	comp=Z,24nm,0.9s						
PABE	**Paberze**	**40.62**	**323**	*e*P	**P**	**01 31 08.4**	**-0.1**
WHN	**Wuhan**	**40.66**	**76**	P	**P**	**01 31 10.4**	**+1.3**
WHN				pP	**pP**	**01 31 14.8**	**-0.4**
WHN				sP	**sP**	**01 31 18.5**	**+0.5**
WHN				PP	**PnPn**	**01 32 50.8**	**+3.9**
WHN				pmax	pmax		
	comp=Z,57nm,0.9s						
WHN				pmax	pmax		
	comp=Z,520nm,3.7s						
WHN				LR	LR		
	comp=Z,5µm,18.0s						
WHN				LR	LR		
	comp=Z,990nm,10.5s						
WHN				LR	LR		
	comp=Z,2µm,15.9s						
RUDO	**Rudo**	**40.73**	**304**	*e*P	**P**	**01 31 08.3**	**-1.3**
PDG	**Podgorica**	**40.73**	**302**	⇓P	**P**	**01 31 07.4**	**-2.1**
PDG	**Podgorica**	**40.73**	**302**	P	**P**	**01 31 07.4**	**-2.1**
DRME	**Dracevica, Mon**	**40.77**	**302**	*e*P	**P**	**01 31 07.1**	**-2.8**
UPM	**Unac-Piva**	**41.04**	**304**	*e*P	**P**	**01 31 12.8**	**+0.5**
HAPS	**Han Pijesak,BI**	**41.07**	**305**	*e*P	**P**	**01 31 10.8**	**-1.7**
BRY	**Bratogost**	**41.29**	**303**	*e*P	**P**	**01 31 13.0**	**-1.3**
HCY	**Herceg Novi**	**41.30**	**302**	*e*P	**P**	**01 31 11.1**	**-3.1**
XLT	**XiLinHaoTe**	**41.39**	**55**	*e*P	**P**	**01 31 16.5**	**+1.4**
XLT				pP	pP	01 31 21.1	-0.1
XLT				S	**S**	**01 37 34.5**	**+5.5**
XLT				sS	sS	01 37 39.0	-1.0
XLT				pmax	pmax		
	comp=Z,13nm,1.2s						
XLT				pmax	pmax		
	comp=Z,81nm,3.9s						
XLT				LR	LR		
	comp=Z,48nm,17.0s						
XLT				LR	LR		
	comp=Z,340nm,14.6s						
XLT				LR	LR		
	comp=Z,460nm,15.9s						
TREB	**Trebinje**	**41.41**	**303**	*e*P	**P**	**01 31 13.6**	**-1.6**
LANS	**Liptovska Anna**	**41.43**	**313**	*e*P	**P**	**01 31 18.3**	**+3.0**
LANS	**Liptovska Anna**	**41.43**	**313**	*e*P	**P**	**01 31 18.3**	**+3.0**
KMBO	**Kilima Mbogo**	**41.49**	**229**	P	**P**	**01 31 16.8**	**+0.4**
KMBO	**Kilima Mbogo**	**41.49**	**229**	⇓*e*P	**P**	**01 31 17.2**	**+0.8**
KMBO	**Kilima Mbogo**	**41.49**	**229**	*i* P	**P**	**01 31 18.2**	**+1.8**
	SNR=5.6						
MORH	**Mrgy, Hungar**	**41.51**	**308**	⇑P	**P**	**01 31 15.0**	**-0.9**
VYHS	**Vyhne**	**41.72**	**312**	*e*P	**P**	**01 31 20.4**	**+2.8**
VYHS	**Vyhne**	**41.72**	**312**	*e*P	**P**	**01 31 20.4**	**+2.8**
PBUR	**Paburge**	**41.89**	**323**	*e*P	**P**	**01 31 18.7**	**-0.1**
KIBK	**Kibwezi**	**41.89**	**227**	P	**P**	**01 31 20.5**	**+1.1**
STON	**Ston**	**41.90**	**303**	*e*P	P	01 31 13.4	-5.7
MTSE	**Matsula**	**42.02**	**328**	*e*P	**P**	**01 31 20.5**	**+0.6**
NRIK	**Noril'sk**	**42.08**	**11**	P	**P**	**01 31 20.7**	**+0.5**
	comp=Z,23nm,1.0s,baz=200,slow=6.5,SNR=24						
NRIK				LR	LR	01 50 42.0	
	comp=Z,482nm,18.4s,baz=200,slow=39						
	comp=Z,23nm,1.0s						
NRIK	**Noril'sk**	**42.08**	**11**	P	**P**	**01 31 20.5**	**+0.2**
NRIK				IAmb	IAmb	01 31 23.1	
	comp=Z,33nm,1.1s						
NRIK	**Noril'sk**	**42.08**	**11**	*d i*P	**P**	**01 31 21.0**	**+0.8**
NRIK				pmax	pmax		
	comp=Z,26nm,1.0s						
TIA	**Tai'an**	**42.23**	**67**	P	**P**	**01 31 23.1**	**+1.1**
TIA				pmax	pmax		
	comp=Z,11nm,1.0s						
TIA				LR	LR		
	comp=Z,430nm,13.0s						
TIA				LR	LR		
	comp=Z,440nm,11.6s						
TIA				LR	LR		
	comp=Z,500nm,19.1s						
FINES	**FINESS Array B**	**42.32**	**332**	P	**P**	**01 31 23.3**	**+1.0**
	comp=Z,7.9nm,0.8s,baz=123,slow=14,SNR=16						
FINES				PP	**PP**	**01 32 58.3**	**-2.0**
	comp=Z,3.5nm,0.9s,baz=98,slow=10.0,SNR=2.3						
FINES				LR	LR	01 52 21.1	
	comp=Z,466nm,18.3s,baz=120,slow=41						
	comp=Z,7.9nm,0.8s						
FINES	**FINESS Array B**	**42.32**	**332**	P	**P**	**01 31 22.7**	**+0.4**
SRKY	**Kupres RS**	**42.35**	**305**	*e*P	**P**	**01 31 24.0**	**+1.0**
BLY	**Banja Luka**	**42.39**	**306**	*e*P	**P**	**01 31 20.8**	**-2.3**
OKC	**Ostrava-Krasne**	**42.40**	**313**	*e*P	**P**	**01 31 26.1**	**+2.9**
OKC	**Ostrava-Krasne**	**42.40**	**313**	*e*P	**P**	**01 31 26.1**	**+2.9**
MGRS	**Mrkonjic Grad**	**42.44**	**305**	*e*P	**P**	**01 31 24.8**	**+1.2**
MEF	**Metsahovi**	**42.44**	**330**	*e*P	**P**	**01 31 23.8**	**+0.6**
MAUC	**Maruska**	**42.52**	**313**	*e*P	**P**	**01 31 27.8**	**+3.6**
JAVC	**Velka Javorina**	**42.54**	**312**	*e*P	**P**	**01 31 26.1**	**+1.7**
TIP	**Timpagrande**	**42.59**	**298**	⇓P	**P**	**01 31 23.3**	**-1.6**
MATE	**Matera**	**42.60**	**300**	⇓P	**P**	**01 31 22.8**	**-2.1**
A051A	**Mrakovica**	**42.60**	**306**	*e*P	**P**	**01 31 24.1**	**-0.9**
MODS	**Modra-Piesok**	**42.73**	**311**	*e*P	**P**	**01 31 27.5**	**+1.7**
MODS	**Modra-Piesok**	**42.73**	**311**	*e*P	**P**	**01 31 27.5**	**+1.7**
MORC	**Moravsky Berou**	**42.78**	**313**	⇓P	**P**	**01 31 28.9**	**+2.6**
MORC	**Moravsky Berou**	**42.78**	**313**	P	**P**	**01 31 26.0**	**-0.3**
MORC	**Moravsky Berou**	**42.78**	**313**	*e*P	**P**	**01 31 27.1**	**+0.8**
MORC	**Moravsky Berou**	**42.78**	**313**	P	**P**	**01 31 26.0**	**-0.3**
MORC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
A050A	**Klekovaca**	**42.84**	**305**	*e*P	**P**	**01 31 27.7**	**+0.8**
BOD	**Bodaibo**	**43.24**	**35**	*e*P	**P**	**01 31 28.9**	**-0.9**
BOD				pmax	pmax		
	comp=Z,14nm,1.7s						
CUC	**Castrocucco**	**43.30**	**299**	P	**P**	**01 31 30.1**	**-0.5**
VRAC	**Vranov**	**43.31**	**312**	⇓P	**P**	**01 31 33.0**	**+2.5**
VRAC	**Vranov**	**43.31**	**312**	LR	LR	01 55 36.9	
	comp=Z,164nm,18.1s,baz=147,slow=45						
VRAC	**Vranov**	**43.31**	**312**	*e*P	**P**	**01 31 32.8**	**+2.2**
VRAC	**Vranov**	**43.31**	**312**	⇓P	**P**	**01 31 33.0**	**+2.5**
KRLC	**Kraliky**	**43.31**	**314**	*e*P	**P**	**01 31 30.0**	**-0.6**
KRLC	**Kraliky**	**43.31**	**314**	*e*P	**P**	**01 31 30.0**	**-0.6**
SGRT	**San Giovanni R**	**43.33**	**301**	IAmb	IAmb	01 31 34.3	
	comp=Z,14nm,0.7s						
KRUC	**Moravsky**	**43.40**	**312**	*e*P	**P**	**01 31 33.0**	**+1.7**
LVZ	**Lovozero**	**43.51**	**343**	⇑*e*P	**P**	**01 31 34.1**	**+2.2**
LVZ				pmax	pmax		
	comp=Z,59nm,2.5s						
APA	**Apatity**	**43.60**	**342**	⇓*i*P	**P**	**01 31 31.9**	**-0.7**
APA				MLR	MLR		
	comp=Z,800nm,16.0s						
DPC	**Dobruska-Polom**	**43.65**	**314**	*e*P	**P**	**01 31 33.5**	**+0.2**
DPC				*e*pP	**pP**	**01 31 36.9**	**-2.9**
DPC				AMS	AMS	01 55 30.0	
	comp=Z,300nm,16.1s						
DPC	**Dobruska-Polom**	**43.65**	**314**	*e*P	**P**	**01 31 33.5**	**+0.2**
DPC				*e*		01 31 36.9	
DPC				MLR	MLR		
	comp=Z,300nm,16.1s						
CRES	**Cresnjev**	**43.68**	**307**	*e*P	**P**	**01 31 32.2**	**-1.4**
OSTC	**Ostas**	**43.75**	**314**	*e*P	**P**	**01 31 34.2**	**+0.1**
OSTC				*e*pP	**pP**	**01 31 37.6**	**-3.0**
OSTC	**Ostas**	**43.75**	**314**	*e*P	**P**	**01 31 34.2**	**+0.1**
OSTC				*e*		01 31 37.6	
ARSA	**Arzberg**	**43.76**	**309**	pP	**P**	**01 31 36.6**	**+2.3**
	comp=Z,2.7nm,0.6s						
BOJS	**Bojanci**	**43.80**	**307**	*e*P	**P**	**01 31 35.2**	**+0.6**
UPC	**Upice**	**43.87**	**314**	*e*P	**P**	**01 31 39.3**	**+4.3**
UPC	**Upice**	**43.87**	**314**	*e*P	**P**	**01 31 39.3**	**+4.3**
SOKA	**Soboth**	**44.04**	**308**	*e*P	**P**	**01 31 36.0**	**-0.6**
	comp=Z,3.2nm,0.9s						
SDSI	**Sungai Dareh**	**44.17**	**126**	P	**P**	**01 31 40.1**	**+2.3**
	comp=Z,12nm,1.5s						
NJ2	**Nanjing**	**44.20**	**73**	*e*P	**P**	**01 31 37.6**	**-0.3**
NJ2				pP	**pP**	**01 31 43.9**	**-0.1**
NJ2				sP	**sP**	**01 31 48.4**	**+1.6**
NJ2				PcS	**PcS**	**01 37 15.6**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,140nm,3.8s						
NJ2				LR	LR		
	comp=Z,1µm,15.6s						
NJ2				LR	LR		
	comp=Z,410nm,15.6s						
NJ2				LR	LR		
	comp=Z,760nm,21.9s						
OBKA	**Obir**	**44.36**	**308**	*e*P	**P**	**01 31 38.2**	**-1.0**
	comp=Z,3.2nm,1.4s						
OBKA	**Obir**	**44.36**	**308**	*e*P	**P**	**01 31 37.0**	**-2.2**
CEY	**Cerknica**	**44.40**	**307**	*e*P	**P**	**01 31 37.0**	**-2.4**
HIA	**Hailar**	**44.45**	**48**	⇑*e*P	**P**	**01 31 40.8**	**+1.0**
HIA				pmax	pmax		
	comp=Z,20nm,1.6s						
VAE	**Valguarnera**	**44.54**	**295**	LR	LR	01 51 41.6	
	comp=Z,153nm,20.7s,baz=146,slow=38						
SKDS	**Skadanscina**	**44.68**	**307**	*e*P	**P**	**01 31 40.9**	**-0.7**
PRU	**Pruhonice**	**44.73**	**313**	*e*P	**P**	**01 31 44.7**	**+2.8**
PRU				AMS	AMS	01 52 20.0	
	comp=Z,300nm,20.1s						
PRU	**Pruhonice**	**44.73**	**313**	*e*P	**P**	**01 31 44.7**	**+2.8**
PRU				MLR	MLR		
	comp=Z,300nm,20.1s						
CKRC	**Cesky Krumlov**	**44.74**	**311**	*e*P	**P**	**01 31 42.0**	**0.0**
CKRC	**Cesky Krumlov**	**44.74**	**311**	*e*P	**P**	**01 31 42.0**	**0.0**
PVCC	**Panska Ves**	**44.79**	**314**	AMS	AMS	01 55 10.0	
	comp=Z,400nm,22.3s						
SABO	**M.te Sabotino**	**44.99**	**307**	IAmb	IAmb	01 31 59.6	
	comp=Z,6.8nm,0.9s						
CAMP	**Campotosto**	**45.06**	**302**	IAmb	IAmb	01 31 49.4	
	comp=Z,12nm,0.9s						
AQU	**L'Aquila**	**45.06**	**302**	IAmb	IAmb	01 31 53.9	
	comp=Z,17nm,0.9s						
GEC2	**GERESS Array S**	**45.14**	**311**	IAmb	IAmb	01 31 57.4	
	comp=Z,27nm,1.9s						
GERES	**GERESS Array B**	**45.14**	**311**	P	**P**	**01 31 44.6**	**-0.7**
	comp=Z,2.0nm,0.7s,baz=98,slow=6.9,SNR=15						
	comp=Z,2.0nm,0.7s						
GERES	**GERESS Array B**	**45.14**	**311**	P	**P**	**01 31 45.5**	**+0.2**
BLEU	**Blekinge**	**45.23**	**322**	*i* P	**P**	**01 31 44.8**	**-0.9**
KBA	**Koelnbreinsper**	**45.23**	**309**	*e*P	**P**	**01 31 46.5**	**+0.4**
	comp=Z,14nm,1.4s						
BRG	**Berggiesshubel**	**45.23**	**314**	*e*P	**P**	**01 31 50.1**	**+4.2**
BRG				Amp		01 32 03.6	
	comp=Z,7.6nm,1.1s						
BRG	**Berggiesshubel**	**45.23**	**314**	*e*P	**P**	**01 31 50.0**	**+4.2**
BRG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BRG				MLR	MLR		
	comp=N,322nm,19.6s						
KHC	**Kasperske Hory**	**45.25**	**312**	*e*P	**P**	**01 31 48.8**	**+2.7**
KHC				*e*pP	**pP**	**01 31 51.6**	**-1.0**
KHC	**Kasperske Hory**	**45.25**	**312**	⇑*e*P	**P**	**01 31 48.6**	**+2.5**
KHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
FDMO	**Fiordimonte**	**45.29**	**303**	IAmb	IAmb	01 32 11.7	
	comp=Z,10nm,0.9s						
BSD	**Bornholm Skovb**	**45.43**	**320**	*e*P	**P**	**01 31 49.0**	**+1.6**
BSD	**Bornholm Skovb**	**45.43**	**320**	*i* P	**P**	**01 31 45.7**	**-1.7**
BSD				IAmb	IAmb	01 31 49.6	
	comp=Z,16nm,0.8s						
MBAR	**Mbarara**	**45.66**	**236**	LR	LR	01 54 07.2	
	comp=Z,219nm,18.4s,baz=344,slow=40						
CESX	**Cesi**	**45.67**	**303**	IAmb	IAmb	01 31 53.4	
	comp=Z,13nm,0.7s						
ABTA	**Abfaltersbach**	**45.78**	**308**	*e*pP	**P**	**01 31 52.7**	**+2.3**
	comp=Z,6.0nm,0.9s						
CIMO	**Cimolais**	**45.81**	**308**	IAmb	IAmb	01 32 10.5	
	comp=Z,10.0nm,1.4s						
CLL	**Collm**	**45.88**	**315**	*e*Px	Px	01 31 54.0	
	comp=Z,4.0nm,1.1s						
CLL				*e*sP	sP	01 32 00.0	+0.5
CLL				*e*PP	**PP**	**01 33 37.0**	**-1.4**
CLL				*e*sPP		01 33 46.0	
CLL				*e*S	**S**	**01 38 32.0**	**-2.2**
CLL				*e*SS	**ScS**	**01 41 48.0**	**+2.2**
CLL				*e*x	x	01 43 48.0	
CLL	**Collm**	**45.88**	**315**	*e*P	**P**	**01 31 54.0**	**+3.0**
CLL				*e*S	**S**	**01 38 32.0**	**-2.2**
CLL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
DEL	**Delary**	**46.31**	**322**	*i* P	**P**	**01 31 54.4**	**+0.1**
TEOL	**Teolo**	**46.32**	**306**	IAmb	IAmb	01 31 59.9	
	comp=Z,13nm,0.9s						
SSE	**Sheshan**	**46.33**	**73**	P	**P**	**01 31 57.0**	**+2.2**
SSE				S	**S**	**01 38 38.5**	**-2.7**
SSE				pmax	pmax		
	comp=Z,12nm,1.3s						
SSE				pmax	pmax		
	comp=Z,90nm,4.1s						
SSE				LR	LR		
	comp=Z,330nm,17.5s						
SSE				LR	LR		
	comp=Z,160nm,16.5s						
LUNU	**Lund**	**46.36**	**321**	*i* P	**P**	**01 31 54.2**	**-0.5**
WTTA	**Wattenberg**	**46.40**	**309**	*e*pP	pP	01 32 00.0	-1.9
	comp=Z,4.3nm,0.6s						
VADS	**Vadso**	**46.43**	**343**	*e*P	**P**	**01 31 56.2**	**+1.1**
WATA	**Walderalm**	**46.45**	**309**	*e*P	**P**	**01 31 55.5**	**-0.3**
	comp=Z,4.7nm,1.2s						
OSSC	**Osservatorio P**	**46.63**	**304**	IAmb	IAmb	01 32 18.2	
	comp=Z,10nm,0.9s						
BJUU	**Bjuv**	**46.69**	**321**	*i* P	**P**	**01 31 57.4**	**+0.2**
SQTA	**Sankt Quirin**	**46.69**	**309**	*e*pP	**P**	**01 31 59.6**	**+2.0**
	comp=Z,7.2nm,1.4s						
MOTA	**Moosalm**	**46.77**	**309**	*e*pP	**P**	**01 31 59.8**	**+1.6**
	comp=Z,9.5nm,1.3s						
GRF	**Grafenberg Arr**	**46.83**	**312**	*e*P	**P**	**01 32 02.6**	**+4.1**
	comp=Z,3.0nm,0.7s,baz=104,slow=8.1						
RETA	**Reutte**	**47.01**	**309**	*e*pP	**P**	**01 32 01.8**	**+1.7**
	comp=Z,1.4nm,0.6s						
FETA	**Feichten**	**47.01**	**309**	*e*P	**P**	**01 31 59.1**	**-1.1**
	comp=Z,9.4nm,1.0s						
FABU	**Falkenberg**	**47.05**	**322**	*i* P	**P**	**01 31 59.4**	**-0.7**
ARA0	**ARCESS Array S**	**47.09**	**341**	*e*P	**P**	**01 32 00.6**	**+0.4**
ARCES	**ARCESS Array B**	**47.09**	**341**	P	**P**	**01 32 00.2**	**-0.1**
	comp=Z,15nm,0.8s,baz=131,slow=7.9,SNR=22						
ARCES				LR	LR	01 53 36.0	
	comp=Z,408nm,18.1s,baz=120,slow=38						
	comp=Z,15nm,0.8s						
ARCES	**ARCESS Array B**	**47.09**	**341**	P	**P**	**01 31 60.0**	**-0.2**
ARCES	**ARCESS Array B**	**47.09**	**341**	P	**P**	**01 32 00.0**	**-0.2**
ARCES				pmax	pmax		
	comp=Z,52nm,1.4s						
BORU	**Boraas**	**47.17**	**323**	*i* P	**P**	**01 32 00.9**	**-0.1**
KTK1	**Kautokeino**	**47.44**	**340**	*e*P	**P**	**01 32 03.2**	**+0.3**
ONAU	**Onsala**	**47.56**	**323**	*i* P	**P**	**01 32 05.4**	**+1.3**
DAVOX	**Davos/Dischmat**	**47.59**	**308**	LR	LR	01 56 39.7	
	comp=Z,86nm,18.8s,baz=91,slow=42						
DAVA	**Damuels**	**47.60**	**309**	*e*pP	**P**	**01 32 06.7**	**+2.0**
	comp=Z,7.7nm,1.0s						
TJOU	**Tjoern**	**47.86**	**324**	*i* P	**P**	**01 32 06.2**	**-0.1**
SSLB	**Suanglung**	**48.03**	**83**	P	**P**	**01 32 09.7**	**+1.5**
CN2	**Changchun**	**48.16**	**56**	P	**P**	**01 32 09.3**	**+0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				LR	LR		
	comp=Z,500nm,14.0s						
CN2				LR	LR		
	comp=Z,300nm,14.0s						
CN2				LR	LR		
	comp=Z,400nm,15.0s						
HAMF	**Hammerfest**	**48.25**	**342**	*e*P	**P**	**01 32 09.4**	**+0.2**
PPBI	**Pangkal Pinang**	**48.41**	**123**	P	**P**	**01 32 12.9**	**+1.8**
SSRD	**Sdr. Stenderup**	**48.47**	**320**	*i* P	**P**	**01 32 13.7**	**+2.7**
NC602	**NORSAR Array S**	**48.54**	**327**	*e*P	**P**	**01 32 12.2**	**+0.6**
JETT	**Jettan, Norway**	**48.58**	**340**	*e*P	**P**	**01 32 12.4**	**+0.6**
NB2	**NORSAR Subarra**	**48.78**	**328**	P	**P**	**01 32 11.9**	**-1.6**

```
      comp=Z,4.1nm,0.8s,baz=107,slow=7.9
NB2   NORSAR Subarra  48.78 328   P        P       01 32 11.9 -1.6
      baz=107,slow=7.9
NOA   NORSAR Array B  48.78 328   P        P       01 32 12.6 -0.9
      comp=Z,2.7nm,0.8s,baz=107,slow=7.5,SNR=14
NOA                               LR       LR      01 55 14.6
      comp=Z,86nm,18.9s,baz=95,slow=39
      comp=Z,2.7nm,0.8s
KEST  Kesra           48.80 294   P        P       01 32 14.6 +0.4
      comp=Z,10nm,0.9s,baz=354,slow=1.0,SNR=9.3
KEST                              LR       LR      01 57 11.4
      comp=Z,137nm,19.2s,baz=318,slow=42
      comp=Z,10nm,0.9s
KEST  Kesra           48.80 294   IAmb     IAmb    01 32 30.8
      comp=Z,13nm,0.8s
MUD   Monsted U'grnd  48.87 321 i P        P       01 32 15.7 +1.6
TRO   Tromso          49.06 340 eP         P       01 32 16.0 +0.6
FAUS  Fauske          49.23 336 eP         P       01 32 17.4 +0.6
KONO  Kongsberg       49.23 325 eP         P       01 32 17.7 +0.8
NSS   Namsos          49.45 332 eP         P       01 32 18.4 -0.1
STEI  Steigen         49.47 337 eP         P       01 32 18.9 +0.3
BNX   BinXian         49.48  53 ⇑P         P       01 32 19.0 -0.1
BNX                               pmax     pmax
      comp=Z,4.0nm,0.5s
BNX                               pmax     pmax
      comp=Z,53nm,3.6s
HEH   HeiHe           49.49  47 eP         P       01 32 19.0  0.0
HEH                               pmax     pmax
      comp=Z,12nm,0.9s
HEH                               pmax     pmax
      comp=Z,130nm,5.2s
ZEA   Zeya            49.60  42 eP         P       01 32 21.3 +1.5
ZEA                               pmax     pmax
      comp=Z,10.0nm,1.2s
ZEA                               MLR      MLR
      comp=E,200nm,14.0s
ZEA                               MLR      MLR
      comp=Z,200nm,16.0s
BNI   Bardonecchia    49.85 306   IAmb     IAmb    01 32 34.5
      comp=Z,14nm,1.1s
SBUM  Sibu            50.20 113   P        P       01 32 26.0 +1.2
SBUM                              IAmb     IAmb    01 32 31.3
      comp=Z,12nm,1.0s
SNART Snartemo        50.21 323 eP         P       01 32 24.8 +0.4
TJN   Taejon          50.41  65⇓eP         P       01 32 26.1 -0.1
KS19  Wonju Array Si  50.63  64   P        P       01 32 27.5 -0.4
KS19                              IAmb     IAmb    01 32 38.4
      comp=Z,13nm,0.9s
KSAR  Wonju Array Be  50.65  64   P        P       01 32 27.7 -0.3
KSAR  Wonju Array Be  50.65  64   P        P       01 32 27.7 -0.3
KSRS  Korea Array     50.68  64   P        P       01 32 28.2  0.0
      comp=Z,7.6nm,0.8s,baz=270,slow=7.3,SNR=24
KSRS                              LR       LR      01 57 28.0
      comp=Z,190nm,19.4s,baz=255,slow=40
      comp=Z,7.6nm,0.8s
MDJ   Mudanjiang      51.09  54   P        P       01 32 30.8 -0.5
MDJ                               pP       pP      01 32 37.4 -0.1
MDJ                               sP       sP      01 32 39.4 -0.9
MDJ                               PcP      PcP     01 33 44.8 -2.1
MDJ                               PP       PP      01 34 27.1 -0.7
MDJ                               PcS      PcS     01 37 43.1 -1.3
MDJ                               S        S       01 39 49.0 +1.0
MDJ                               ScS      ScS     01 42 19.4 -1.5
MDJ                               pmax     pmax
      comp=Z,10.0nm,2.0s
MDJ                               pmax     pmax
      comp=Z,62nm,4.2s
MDJ                               LR       LR
      comp=Z,330nm,14.9s
MDJ                               LR       LR
      comp=Z,610nm,14.5s
MDJ                               LR       LR
      comp=Z,760nm,17.3s
ABPO  Ambohimpanom    51.49 204   P        P       01 32 36.0 +1.4
ABPO                              IAmb     IAmb    01 32 36.8
      comp=Z,13nm,0.9s
ABPO  Ambohimpanom    51.49 204   P        P       01 32 36.0 +1.4
ABPO                              pmax     pmax
      comp=Z,13nm,0.9s
HOPEN Hopen           51.64 348 eP         P       01 32 37.1 +2.3
YAK   Yakutsk         51.95  32   LR       LR      01 56 55.1
      comp=Z,296nm,18.7s,baz=268,slow=39
YAK   Yakutsk         51.95  32 eP         P       01 32 36.3 -1.1
YAK                             e*PP       sP      01 32 45.9 -0.4
YAK                             e                  01 33 50.3
YAK                             e                  01 34 41.1
YAK                             ePPP       PPP     01 35 34.3
YAK                             eS         S       01 39 59.5 +0.2
YAK                             e*SS       sS      01 40 14.9 +4.9
YAK                             e                  01 42 26.6
YAK                             eSS        SS      01 43 38.1 +2.3
YAK                               pmax     pmax
      comp=Z,26nm,1.1s
YAK                               pmax     pmax
      comp=N,7.0nm,1.7s
YAK                               pmax     pmax
      comp=E,12nm,1.8s
YAK                               pmax     pmax
      comp=Z,169nm,6.3s
YAK                               pmax     pmax
      comp=N,63nm,4.4s
YAK                               pmax     pmax
      comp=E,84nm,5.4s
YAK                               smax     smax
      comp=N,30nm,2.3s
YAK                               smax     smax
      comp=E,37nm,2.1s
YAK                               MLR      MLR
      comp=Z,425nm,19.0s
YAK                               MLR      MLR
      comp=N,83nm,16.0s
YAK                               MLR      MLR
      comp=E,306nm,20.0s
KLR   Kul'dur         52.30  48   LR       LR      01 58 08.7
      comp=E,396nm,19.8s,baz=256,slow=40
KLR   Kul'dur         52.30  48⇓eP         P       01 32 40.3 +0.1
KLR                               pmax     pmax
      comp=Z,13nm,1.6s
USRK  Ussuriysk Ar.   52.84  55   LR       LR      01 58 01.5
      comp=Z,406nm,19.2s,baz=276,slow=39
JOW   Kunigami        53.41  77   LR       LR      01 56 56.7
      comp=Z,325nm,19.2s,baz=166,slow=38
MYLDM Lahad Datu      53.85 106   P        P       01 32 53.6 +1.5
TIXI  Tiksi           53.91  20   LR       LR      01 57 45.6
      comp=Z,251nm,19.0s,baz=338,slow=38
TIXI  Tiksi           53.91  20   P        P       01 32 51.2 -0.5
TIXI                              IAmb     IAmb    01 32 54.4
      comp=Z,9.9nm,0.7s
TIXI  Tiksi           53.91  20deP         P       01 32 51.1 -0.6
TIXI                              pmax     pmax
      comp=Z,12nm,0.8s
JNU   Nakatsue        53.91  68   LR       LR      01 59 26.0
      comp=Z,332nm,18.6s,baz=284,slow=40
SPITS Spitsbergen Ar  54.17 349   LR       LR      01 59 50.2
      comp=Z,223nm,19.1s,baz=88,slow=40
VOI   Vohitsoka       54.30 204   P        P       01 32 57.0 +1.8
VOI   Vohitsoka       54.30 204   P        P       01 32 56.6 +1.3
      SNR=7.0
TAM   Tamanrasset     55.37 279   P        P       01 33 02.9 -0.4
TAM                               IAmb     IAmb    01 33 05.5
      comp=Z,17nm,1.2s
TAM   Tamanrasset     55.37 279   P        P       01 33 02.9 -0.4
TAM                               pmax     pmax
      comp=Z,17nm,1.2s
EKA   Eskdalemuir Ar  55.73 319   LR       LR      02 00 57.2
      comp=Z,281nm,18.1s,baz=76,slow=40
BKB   Balikpapan      56.15 114   P        P       01 33 21.3  +13
MPSI  Mapaga          57.67 110   P        P       01 33 20.3 +0.8
      comp=Z,18nm,1.1s,comp=Z,844nm
LSZ   Lusaka          57.98 226   LR       LR      01 58 42.1
      comp=Z,165nm,18.9s,baz=40,slow=36
JMIC  Jan Mayen       58.28 338   LR       LR      01 59 34.2
      comp=Z,204nm,19.1s,baz=108,slow=37
ESDC  Sonseca Array   58.41 301   P        P       01 33 23.4 -1.1
      comp=Z,1.9nm,0.7s,baz=63,slow=6.9,SNR=14
      comp=Z,1.9nm,0.7s
ESDC  Sonseca Array   58.41 301   IAmb     IAmb    01 33 26.6
      comp=Z,21nm,1.8s
MJAR  Matsushiro Arr  58.92  63   P        P       01 33 27.8 -0.2
      comp=Z,3.9nm,0.9s,baz=295,slow=11,SNR=5.5
MJAR                              LR       LR      02 01 46.1
      comp=Z,162nm,18.5s,baz=282,slow=39
      comp=Z,3.9nm,0.9s
DAV   Davao City (W)  58.94 100   LR       LR      02 02 58.1
      comp=Z,162nm,18.1s,baz=322,slow=40
YSS   Yuzh-Sakhalins  59.89  50⇑eP         P       01 33 34.6 +0.1
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YSS                               pmax     pmax
      comp=Z,31nm,1.7s
ASAJ  Asahikawa       60.38  53   LR       LR      02 02 59.9
      comp=Z,266nm,18.1s,baz=328,slow=39
NOR   Nord            60.65 350 i P        P       01 33 39.3 +0.1
NOR                               IAmb     IAmb    01 33 41.8
      comp=Z,13nm,1.1s
KAPI  Kappang         60.66 115   P        P       01 33 40.1 -0.1
      comp=Z,2.4nm,0.3s,baz=201,slow=17,SNR=1.3
KAPI                              LR       LR      02 02 38.4
      comp=Z,107nm,19.7s,baz=300,slow=39
      comp=Z,2.4nm,0.3s
MDT   Midelt          60.71 293   LR       LR      02 05 52.9
      comp=Z,155nm,18.0s,baz=136,slow=42
TWSI  Taliwang, Sumb  60.74 120   P        P       01 33 40.7 -0.1
      comp=Z,14nm,1.6s
DAG   Danmarks Havn   61.10 345 i P        P       01 33 41.3 -1.0
DAG                               IAmb     IAmb    01 33 45.5
      comp=Z,14nm,1.0s
DBG   Daneborg        61.70 342 i P        P       01 33 45.7 -0.7
BSSI  Bau Bau, Buton  61.93 116   P        P       01 33 50.7 +1.9
MA2   Magadan         62.27  35   LR       LR      02 02 43.8
      comp=Z,419nm,18.1s,baz=274,slow=38
SEY   Seymchan        62.44  31⇑eP         P       01 33 51.7 +0.2
SEY                               pmax     pmax
      comp=Z,19nm,1.3s
TOA0  Torodi Ar. Sit  62.50 270   P        P       01 33 52.6 -0.1
TOA0  Torodi Ar. Sit  62.50 270   P        P       01 33 52.5 -0.2
      SNR=36
TORD  Torodi Ar. Bea  62.50 270   P        P       01 33 52.2 -0.5
      comp=Z,17nm,0.5s,baz=54,slow=5.4,SNR=5.3
TORD                              LR       LR      02 04 46.7
      comp=Z,300nm,18.9s,baz=64,slow=40
      comp=Z,17nm,0.5s
TORD  Torodi Ar. Bea  62.50 270   P        P       01 33 53.2 +0.5
BORG  Borgarnes       63.62 331   LR       LR      02 03 32.8
      comp=Z,554nm,19.1s,baz=116,slow=38
SANI  Sanana          64.04 108   P        P       01 34 06.8 +3.9
SANI  Sanana          64.04 108   P        P       01 34 02.6 -0.3
      comp=Z,16nm,1.0s
LBMI  Labuha          64.54 106   P        P       01 34 08.5 +2.3
      comp=Z,52nm,0.5s,comp=Z,2µm
NLAI  Namlea          65.62 109   P        P       01 34 15.7 +2.6
BILL  Bilibino        66.74  24   P        P       01 34 19.8 +0.3
BILL  Bilibino        66.74  24c iP        P       01 34 20.4 +0.9
BILL                            i *SP      pP      01 34 25.6 -0.6
BILL                            i                  01 34 31.0
BILL                                               01 34 42.0
BILL                                               01 36 43.0
BILL                            ePPP       PPP     01 38 21.0
BILL                              S        S       01 43 15.0 +4.8
BILL                              pmax     pmax
      comp=Z,14nm,1.7s
BILL                              MLR      MLR
      comp=Z,286nm,15.0s
LBTB  Lobatse         66.98 221   LR       LR      02 03 52.6
      comp=Z,124nm,19.7s,baz=40,slow=36
LBTB  Lobatse         66.98 221   P        P       01 34 22.8 +1.1
LBTB                              IAmb     IAmb    01 34 24.9
      comp=Z,12nm,0.9s
LBTB  Lobatse         66.98 221   P        P       01 34 22.8 +1.1
LBTB                              pmax     pmax
      comp=Z,13nm,0.9s
SUMG  Summit          67.18 342 i P        P       01 34 22.6 -0.2
SUMG                              IAmb     IAmb    01 34 27.3
      comp=Z,11nm,1.0s
PETK  Petropavlovsk-  67.63  41   P        P       01 34 24.4 -1.1
      comp=Z,4.0nm,1.0s,baz=251,slow=4.5,SNR=5.2
PETK                              LR       LR      02 07 56.1
      comp=Z,345nm,18.3s,baz=289,slow=40
      comp=Z,4.0nm,1.0s
TSUM  Tsumeb          67.78 231   LR       LR      02 06 17.9
      comp=Z,195nm,19.1s,baz=30,slow=38
TSUM  Tsumeb          67.78 231   P        P       01 34 27.2 +0.2
TSUM                              IAmb     IAmb    01 34 30.3
      comp=Z,13nm,1.2s
BOSA  Boshof          69.96 219   P        P       01 34 40.6 +0.3
      comp=Z,6.1nm,0.8s,baz=19,slow=7.1,SNR=7.6
BOSA                              LR       LR      02 04 46.9
      comp=Z,86nm,20.1s,baz=33,slow=35
      comp=Z,6.1nm,0.8s
DBIC  Dimbokro        71.18 267   P        P       01 34 48.4 +0.4
      comp=Z,24nm,0.8s,baz=68,slow=7.0,SNR=20
DBIC                              LR       LR      02 09 38.1
      comp=Z,251nm,18.7s,baz=63,slow=39
      comp=Z,24nm,0.8s
DBIC  Dimbokro        71.18 267   P        P       01 34 48.0  0.0
DBIC  Dimbokro        71.18 267   P        P       01 34 48.0  0.0
DBIC                              pmax     pmax
      comp=Z,88nm,1.5s
KIC   Kosan Boka      71.23 267⇑eP         P       01 34 48.4 +0.1
      comp=Z,61nm,0.8s
TIC   Toumodi         71.34 267⇑eP         P       01 34 49.1 +0.1
      comp=Z,50nm,0.8s
LIC   Lamto           71.54 267⇑eP         P       01 34 50.1 -0.1
      comp=Z,63nm,0.8s
DY2G  Dye2            72.49 337 i P        P       01 34 54.2 -1.1
DY2G                              IAmb     IAmb    01 34 59.3
      comp=Z,35nm,1.1s
GUMO  Guam            72.80  84   LR       LR      02 09 44.5
      comp=Z,42nm,19.2s,baz=77,slow=38
SFJD  Kangerlussuaq   73.63 339   LR       LR      02 08 01.3
      comp=Z,243nm,19.4s,baz=68,slow=36
SUR   Sutherland      75.30 219   LR       LR      02 09 17.7
      comp=Z,94nm,19.2s,baz=41,slow=36
RES   Resolute Bay    75.95 355   LR       LR      02 13 20.3
      comp=Z,201nm,20.1s,baz=18,slow=39
RES   Resolute Bay    75.95 355   P        P       01 35 15.2 +0.2
RES                               IAmb     IAmb    01 35 17.2
      comp=Z,27nm,2.0s
RES   Resolute Bay    75.95 355   P        P       01 35 15.2 +0.2
RES                               pmax     pmax
      comp=Z,27nm,2.0s
TNA   Tin City        76.69  21   P        P       01 35 19.6 +0.3
TNA   Tin City        76.69  21   P        P       01 35 19.5 +0.1
      baz=312,SNR=5.7
BBTS  Babate          77.73 280   LR       LR      02 12 57.7
      comp=Z,355nm,19.9s,baz=60,slow=38
ANM   Nome            78.17  21   IAmb     IAmb    01 35 30.8
      comp=Z,34nm,2.0s
ANM   Nome            78.17  21   P        P       01 35 28.1 +0.4
      baz=315,SNR=9.8
C24K  Franklin Bluff  78.21  12   P        P       01 35 28.0 +0.2
      baz=328
D23K  Nanushuk River  78.47  13   P        P       01 35 29.5 +0.2
      baz=327
D24K  Happy Valley    78.67  12   P        P       01 35 30.6 +0.2
      baz=328
C26K  Camden Bay      78.69  11   P        P       01 35 30.7 +0.2
      baz=332
A36M  Sachs Harbour   78.94   4   P        P       01 35 31.9 +0.1
      baz=349,SNR=42
D25K  Kavik River     78.97  12   P        P       01 35 32.5 +0.4
      baz=330
C27K  Jago River      79.15  11   P        P       01 35 33.3 +0.3
      baz=333
F21K  Alatna River    79.31  15   P        P       01 35 33.9 -0.1
      baz=325
F22K  John River      79.37  14   P        P       01 35 34.6 +0.3
      baz=326
E23K  Chandalar       79.44  13   P        P       01 35 34.7 -0.1
      baz=328
WRKA  Warakurna       79.49 126   P        P       01 35 39.0 +3.4
E24K  Your Creek      79.66  13   P        P       01 35 35.6 -0.3
      baz=329
G21K  Allakaket       79.89  15   P        P       01 35 36.4 -0.7
      baz=325
G22K  Bettles         80.00  15   P        P       01 35 37.9 +0.2
      baz=326
COLD  Coldfoot        80.03  14   IAmb     IAmb    01 35 42.8
      comp=Z,8.9nm,0.9s
COLD  Coldfoot        80.03  14   P        P       01 35 37.8 -0.1
      baz=327
E25K  Arctic Village  80.17  12   P        P       01 35 37.9 -0.7
      baz=331,SNR=11
F24K  Squaw Lake      80.25  13   P        P       01 35 38.4 -0.7
      baz=329
GCSA  Galena City Sc  80.47  18   P        P       01 35 40.2  0.0
      baz=322
G23K  Bananza Creek   80.50  14   P        P       01 35 40.7 +0.2
      baz=328,SNR=6.6
F25K  Christian Rive  80.61  12   P        P       01 35 40.9 -0.2
      baz=331
H21K  Melozitna Rive  80.76  16   IAmb     IAmb    01 35 44.0
      comp=Z,7.5nm,0.9s
H21K  Melozitna Rive  80.76  16   P        P       01 35 41.5 -0.3
      baz=325,SNR=13
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E27K  Coleen River    80.78  11   P        P       01 35 42.0 +0.1
      baz=335
F26K  Sheenjek River  80.80  12   P        P       01 35 42.0  0.0
      baz=333
WB0   Warramunga Arr  80.85 119   P        P       01 35 44.4 +1.4
WRA   Warramunga Arr  80.91 119   P        P       01 35 43.4 +0.1
      comp=Z,5.8nm,0.9s,baz=321,slow=4.8,SNR=26
WRA                               LR       LR      02 15 20.2
      comp=Z,70nm,18.1s,baz=282,slow=38
      comp=Z,5.8nm,0.9s
WRAB  Tennant Creek   80.91 119   P        P       01 35 44.3 +1.0
WRAB                              IAmb     IAmb    01 35 49.2
      comp=Z,14nm,1.1s
WRAB  Tennant Creek   80.91 119   P        P       01 35 45.0 +1.7
WRAB  Tennant Creek   80.91 119⇑eP         P       01 35 43.8 +0.5
WRAB                              pmax     pmax
      comp=Z,12nm,1.0s
WB2   Warramunga Arr  80.92 119   P        P       01 35 43.3 -0.1
WB2                               IAmb     IAmb    01 35 47.6
      comp=Z,11nm,1.1s
G24K  Hadweenzic Riv  81.04  13   P        P       01 35 43.0 -0.3
      baz=330
FRB   Frobisher Bay   81.25 342   P        P       01 35 44.4  0.0
      comp=Z,4.2nm,0.9s,baz=60,slow=0.6,SNR=7.2
FRB                               LR       LR      02 13 06.5
      comp=Z,119nm,19.4s,baz=24,slow=37
      comp=Z,4.2nm,0.9s
G25K  Bearman Lake    81.26  13   P        P       01 35 44.5 +0.1
      baz=331
I21K  Tanana          81.35  16   IAmb     IAmb    01 35 47.5
      comp=Z,7.3nm,0.8s
I21K  Tanana          81.35  16   P        P       01 35 45.2 +0.3
      baz=326,SNR=7.4
H23K  Yukon River     81.36  14   IAmb     IAmb    01 35 50.0
      comp=Z,8.5nm,0.9s
H23K  Yukon River     81.36  14   P        P       01 35 44.9 -0.1
      baz=328
G26K  Porcupine Rive  81.53  12   P        P       01 35 45.6 -0.2
      baz=333
C36M  Paulatuk        81.62   4   P        P       01 35 46.0 -0.2
C36M                              IAmb     IAmb    01 35 47.5
      comp=Z,8.0nm,0.8s
C36M  Paulatuk        81.62   4   P        P       01 35 46.1 -0.1
      baz=350,SNR=14
H24K  Noodor Dome     81.70  14   IAmb     IAmb    01 35 52.0
      comp=Z,7.6nm,0.9s
H24K  Noodor Dome     81.70  14   P        P       01 35 47.1 +0.2
      baz=330
MLY   Manley          81.76  15   P        P       01 35 47.3 +0.1
      baz=327,SNR=13
INK   Inuvik          81.79   8   LR       LR      02 17 03.0
      comp=Z,113nm,20.3s,baz=334,slow=39
INK   Inuvik          81.79   8   IAmb     IAmb    01 35 51.2
      comp=Z,10nm,0.8s
INK   Inuvik          81.79   8   P        P       01 35 47.0 -0.2
      baz=342,SNR=18
I23K  Minto, Yukon-K  81.98  15   IAmb     IAmb    01 35 51.9
      comp=Z,7.5nm,0.9s
I23K  Minto, Yukon-K  81.98  15   P        P       01 35 48.6 +0.4
      baz=328,SNR=8.5
G27K  Doyon Strip     82.02  11   P        P       01 35 48.5  0.0
      baz=335
TTA   Tatalina        82.14  18   P        P       01 35 49.9 +0.6
      baz=323
K20K  Telida          82.33  17   IAmb     IAmb    01 35 52.8
      comp=Z,10nm,0.8s
K20K  Telida          82.33  17   P        P       01 35 50.7 +0.6
      baz=324,SNR=12
CHUM  Lake Minchumin  82.34  17   P        P       01 35 50.2 +0.1
      baz=326,SNR=10
MDM   Murphy Dome     82.39  14   IAmb     IAmb    01 35 54.3
      comp=Z,10.0nm,0.7s
POKR  Poker Plat Res  82.42  14   IAmb     IAmb    01 35 58.0
      comp=Z,11nm,0.9s
POKR  Poker Plat Res  82.42  14   P        P       01 35 50.7 +0.1
      baz=330
PRP   Porcupine Dome  82.47  13   P        P       01 35 51.2 +0.2
      baz=332,SNR=5.8
BPAW  Bear Paw Mtn.   82.49  16   P        P       01 35 51.3 +0.3
BPAW                              IAmb     IAmb    01 35 53.5
      comp=Z,5.8nm,0.8s
BPAW  Bear Paw Mtn.   82.49  16   P        P       01 35 51.3 +0.3
      baz=327,SNR=7.4
NEA2  Nenana          82.52  15   IAmb     IAmb    01 35 55.0
      comp=Z,9.8nm,0.8s
NEA2  Nenana          82.52  15   P        P       01 35 51.0 -0.1
      baz=329,SNR=12
TCOL  CIGO, UAF Yank  82.54  14   P        P       01 35 51.1 -0.1
      baz=330
COLA  College         82.54  14   P        P       01 35 52.6 +1.4
COLA  College         82.54  14⇓eP         P       01 35 51.5 +0.3
COLA                              pmax     pmax
      comp=Z,9.0nm,1.0s
COLA  College         82.54  14   P        P       01 35 51.7 +0.5
      baz=330
H27K  Steamboat Moun  82.57  11   P        P       01 35 51.2 -0.2
      baz=335
F31M  Tsiigehtchic    82.59   8   P        P       01 35 50.7 -0.7
      baz=342,SNR=8.8
G30M  tAoh Zraii Nji  82.70   9   P        P       01 35 51.7 -0.4
      baz=340
AS31  Alice Springs   82.73 122   P        P       01 35 53.7 +0.8
ASAR  Alice Springs   82.73 122   P        P       01 35 53.2 +0.4
      comp=Z,6.0nm,0.8s,baz=309,slow=5.3,SNR=44
ASAR                              PP       PP      01 39 02.7 -0.5
      comp=Z,1.5nm,1.0s,baz=321,slow=7.2,SNR=2.9
ASAR                              LR       LR      02 14 15.7
      comp=Z,64nm,21.5s,baz=292,slow=37
      comp=Z,6.0nm,0.8s
ASAR  Alice Springs   82.73 122   P        P       01 35 52.9  0.0
ASAR  Alice Springs   82.73 122   P        P       01 35 52.9  0.0
CAST  Castle Rocks    82.79  17   P        P       01 35 52.2 -0.3
      baz=326,SNR=19
ILAR  Eielson Array   82.84  14   P        P       01 35 52.0 -0.7
      comp=Z,1.9nm,0.6s,baz=326,slow=3.7,SNR=17
ILAR                              LR       LR      02 20 13.4
      comp=Z,113nm,18.6s,baz=298,slow=41
      comp=Z,1.9nm,0.6s
L19K  White Mountain  83.07  18   P        P       01 35 53.6 -0.5
      baz=324
L20K  Farewell, AK    83.09  18   P        P       01 35 53.7 -0.5
      baz=325
I26K  Coal Creek Min  83.11  12   IAmb     IAmb    01 35 58.3
      comp=Z,7.0nm,0.8s
I26K  Coal Creek Min  83.11  12   P        P       01 35 54.2  0.0
      baz=334
I27K  Kandik River    83.13  12   P        P       01 35 54.0 -0.3
      baz=335
HDA   Harding Lake    83.14  14   P        P       01 35 54.4  0.0
      baz=330
PPLA  Purkeypile      83.19  17   P        P       01 35 54.7 -0.2
      baz=326
TRF   Thorofare Moun  83.20  16   P        P       01 35 55.2 +0.3
      baz=328
EPYK  Eagle Plains    83.21  10   IAmb     IAmb    01 35 56.4
      comp=Z,8.6nm,0.9s
EPYK  Eagle Plains    83.21  10   P        P       01 35 55.0 +0.3
      baz=339
N16K  Nishlik Lake    83.26  21   P        P       01 35 55.0 -0.1
      baz=321
MCK   McKinley        83.28  15   IAmb     IAmb    01 35 58.9
      comp=Z,6.8nm,0.8s
MCK   McKinley        83.28  15   P        P       01 35 55.1  0.0
      baz=329
M19K  Big River Lodg  83.42  18   P        P       01 35 55.8 -0.1
      baz=324
RND   Reindeer        83.58  15   IAmb     IAmb    01 36 10.0
      comp=Z,5.0nm,0.8s
I29M  Ogilvie Camp,   83.91  10   P        P       01 35 58.1 -0.2
      baz=338
K24K  Donnelly Dome   83.92  14   P        P       01 35 58.4 -0.1
      baz=331
EGAK  Eagle           83.96  12   IAmb     IAmb    01 36 03.3
      comp=Z,6.6nm,0.9s
EGAK  Eagle           83.96  12   P        P       01 35 58.4 -0.1
      baz=335
SKT   Skwentna        84.13  17   IAmb     IAmb    01 36 03.2
      comp=Z,7.2nm,1.0s
SKT   Skwentna        84.13  17   P        P       01 35 59.6 +0.1
      baz=327
SCRK  Sand Creek      84.14  13   IAmb     IAmb    01 36 03.1
      comp=Z,8.5nm,1.1s
SCRK  Sand Creek      84.14  13   P        P       01 35 59.4 -0.3
      baz=333,SNR=7.5
O16K  Kokwok River B  84.16  21   P        P       01 35 59.9 +0.3
      baz=321
RIDG  Independent Ri  84.18  14   P        P       01 35 59.4 -0.3
      baz=332
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N19K	**Bonanza Creek**	84.28	19	IAmb	IAmb	01 36 03.1	
	comp=Z,8.2nm,0.8s						
N19K	**Bonanza Creek**	84.28	19	P	P	01 36 00.5	+0.1
	baz=324						
O17K	**Koliganek Bris**	84.33	21	P	P	01 36 00.7	+0.2
	baz=322						
K27K	**Chicken**	84.47	13	IAmb	IAmb	01 36 06.0	
	comp=Z,9.3nm,0.9s						
K27K	**Chicken**	84.47	13	P	P	01 36 02.3	+1.1
	baz=335						
P16K	**Nushagak River**	84.63	22	P	P	01 36 02.3	+0.3
	baz=322						
PAX	**Paxson**	84.73	14	P	P	01 36 02.4	-0.1
	baz=332						
SUA	**Susitna One**	84.77	17	P	P	01 36 03.0	+0.2
	baz=327						
O19K	**Port Alsworth**	84.83	19	P	P	01 36 03.6	+0.6
	baz=324						
O18K	**Koktuh Hills**	84.84	20	P	P	01 36 04.2	+1.0
	baz=324						
DAWY	**Dawson**	84.92	11	P	P	01 36 04.2	+0.7
DAWY				IAmb	IAmb	01 36 07.4	
	comp=Z,9.8nm,0.8s						
DAWY	**Dawson**	84.92	11	P	P	01 36 04.2	+0.7
	baz=337,SNR=14						
PMR	**Palmer**	85.07	17	P	P	01 36 07.7	+3.5
	comp=Z,7.4nm,0.9s						
PMR	**Palmer**	85.07	17	P	P	01 36 04.4	+0.3
	baz=329						
SML	**Sawmill**	85.08	16	P	P	01 36 04.7	+0.4
	baz=329						
L26K	**Log Cabin Wild**	85.12	13	P	P	01 36 05.0	+0.5
	baz=334						
P18K	**Big Mountain,**	85.21	20	P	P	01 36 05.4	+0.4
	baz=324						
M23K	**Glacier View**	85.24	16	P	P	01 36 05.7	+0.6
	baz=330						
HARP	**HAARP**	85.30	15	P	P	01 36 05.9	+0.5
	baz=332						
SCM	**Sheep Creek Mo**	85.30	16	P	P	01 36 06.5	+1.0
	baz=330						
M24K	**Tolsona, Glenn**	85.33	15	P	P	01 36 06.4	+0.8
	baz=331						
Q16K	**King Salmon**	85.34	21	P	P	01 36 06.8	+1.2
	baz=323						
RC01	**Rabbit Creek A**	85.34	17	IAmb	IAmb	01 36 07.4	
	comp=Z,10nm,0.8s						
RC01	**Rabbit Creek A**	85.34	17	P	P	01 36 06.3	+0.7
	baz=328						
QIS	**Mount Isa**	85.35	116	P	P	01 36 08.7	+2.5
KNK	**Knik Glacier**	85.39	16	P	P	01 36 06.7	+0.9
	baz=329						
L27K	**Beaver Creek,**	85.39	13	IAmb	IAmb	01 36 08.5	
	comp=Z,5.8nm,0.9s						
L27K	**Beaver Creek,**	85.39	13	P	P	01 36 06.9	+1.0
	baz=335						
BCAR	**Beaver Creek A**	85.40	13	P	P	01 36 06.1	+0.2
K29M	**Barlow Dome**	85.45	11	P	P	01 36 07.1	+0.9
	baz=338,SNR=37						
M26K	**Nabesna, AK**	85.76	14	IAmb	IAmb	01 36 21.7	
	comp=Z,12nm,1.5s						
M26K	**Nabesna, AK**	85.76	14	P	P	01 36 08.7	+1.0
	baz=334						
KLU	**Klutina**	85.93	15	IAmb	IAmb	01 36 10.8	
	comp=Z,7.4nm,1.0s						
KLU	**Klutina**	85.93	15	P	P	01 36 09.7	+1.1
	baz=331						
MAYO	**Mayo, Yukon**	85.94	10	P	P	01 36 09.7	+1.2
	baz=340						
M27K	**Edge Creek, AK**	86.02	13	IAmb	IAmb	01 36 14.1	
	comp=Z,8.6nm,0.9s						
M27K	**Edge Creek, AK**	86.02	13	P	P	01 36 10.0	+0.9
	baz=335						
L29M	**L29M**	86.03	11	P	P	01 36 10.0	+1.0
	baz=338						
N25K	**Chitina, Valde**	86.13	15	P	P	01 36 10.2	+0.7
	baz=332						
BRSE	**Bradley Lake S**	86.22	18	P	P	01 36 10.1	+0.1
	baz=327						
SEW	**Seward**	86.26	17	P	P	01 36 10.4	+0.3
	baz=328						
OOD	**Oodnadatta**	86.44	124	P	P	01 36 14.9	+3.5
M30M	**Minto, Yukon**	86.75	11	P	P	01 36 13.1	+0.6
	baz=339						
EYAK	**Cordova Ski Ar**	86.80	16	P	P	01 36 13.2	+0.5
	baz=332						
YUK3	**Moose Creek**	86.83	13	P	P	01 36 14.3	+1.0
	baz=336						
KDAK	**Kodiak Island**	87.33	20	P	P	01 36 15.8	+0.4
	comp=Z,12nm,0.9s,baz=343,slow=20,SNR=2.8						
KDAK				LR	LR	02 20 24.3	
	comp=Z,165nm,20.8s,baz=312,slow=39						
	comp=Z,12nm,0.9s						
KDAK	**Kodiak Island**	87.33	20	P	P	01 36 16.0	+0.6
	baz=326						
M31M	**Drury Creek, Y**	87.48	10	IAmb	IAmb	01 36 18.6	
	comp=Z,5.8nm,0.9s						
M31M	**Drury Creek, Y**	87.48	10	P	P	01 36 16.7	+0.6
	baz=341						
MMPY	**Sheldon Lake,**	87.53	8	P	P	01 36 17.3	+1.0
	baz=344						
YUK4	**Talbot Arm**	87.57	12	P	P	01 36 17.1	+0.3
	baz=338						
FARO	**Faro, Yukon**	87.61	10	P	P	01 36 17.5	+0.8
	baz=342						
Q23K	**Middleton Isla**	87.64	16	P	P	01 36 18.0	+1.2
	baz=331						
SCHQ	**Schefferville**	87.70	335	LR	LR	02 17 33.9	
	comp=Z,109nm,18.0s,baz=52,slow=37						
WRGLY	**Wrigley**	87.72	5	P	P	01 36 18.2	+1.1
	baz=351						
N30M	**Aishikik Lake**	87.75	11	P	P	01 36 18.1	+0.6
	baz=339						
N31M	**Braeburn, Yuko**	87.94	11	IAmb	IAmb	01 36 20.5	
	comp=Z,6.1nm,0.8s						
N31M	**Braeburn, Yuko**	87.94	11	P	P	01 36 19.1	+0.8
	baz=340						
YUK6	**Outpost Mounta**	88.00	12	P	P	01 36 19.0	+0.1
	baz=338						
HYT	**Haines Junctio**	88.27	12	IAmb	IAmb	01 36 22.7	
	comp=Z,6.4nm,0.9s						
HYT	**Haines Junctio**	88.27	12	P	P	01 36 21.3	+1.2
	baz=339						
PINM	**Pinnacle**	88.41	13	P	P	01 36 21.5	+0.9
	baz=336						
O29M	**Mount Kennedy**	88.55	13	P	P	01 36 21.7	+0.3
	baz=338						
O30N	**Mendenhall**	88.56	11	P	P	01 36 21.7	+0.4
	baz=340						
YKA	**Yellowknife Ar**	88.85	1	P	P	01 36 22.8	+0.2
	comp=Z,6.8nm,0.9s,baz=350,slow=4.8,SNR=61						
YKA				LR	LR	02 21 46.6	
	comp=Z,150nm,19.5s,baz=327,slow=39						
	comp=Z,6.8nm,0.9s						
PNL	**Peninsula**	88.98	13	P	P	01 36 24.1	+0.8
	baz=337						
P30M	**Million Dollar**	89.02	12	P	P	01 36 24.0	+0.5
	baz=339						
P33M	**Teslin, Yukon**	89.62	10	IAmb	IAmb	01 36 30.1	
	comp=Z,7.6nm,0.7s						
P33M	**Teslin, Yukon**	89.62	10	P	P	01 36 26.3	0.0
	baz=343						
PLBC	**Pleasant Camp**	89.75	12	P	P	01 36 26.9	0.0
	baz=340						
SKAG	**Skagway**	89.93	11	P	P	01 36 28.3	+0.6
	baz=340						
P32M	**Atlin**	90.08	11	P	P	01 36 29.4	+1.0
	baz=342						
INKA	**Innaminka**	90.12	122	P	P	01 36 32.4	+3.4
WTLY	**Watson Lake, Y**	90.26	8	IAmb	IAmb	01 36 33.7	
	comp=Z,4.6nm,0.7s						
WTLY	**Watson Lake, Y**	90.26	8	P	P	01 36 29.9	+0.6
	baz=346						
CTA	**Charters Tower**	90.40	113	LR	LR	02 23 22.4	
	comp=Z,35nm,18.1s,baz=260,slow=40						
DLBC	**Dease Lake**	91.73	9	LR	LR	02 21 20.2	
	comp=Z,95nm,21.8s,baz=328,slow=38						
S34M	**Telegraph Cree**	92.08	10	P	P	01 36 38.3	+0.6
	baz=344						
STKA	**Stephens Creek**	92.96	125	P	P	01 36 42.8	+0.7
	comp=Z,3.3nm,0.9s,baz=326,slow=5.4,SNR=5.9						
STKA				LR	LR	02 23 24.6	
	comp=Z,98nm,18.7s,baz=254,slow=39						
	comp=Z,3.3nm,0.9s						
PKME	**Peaks-Kenny Pk**	96.22	331	P	P	01 36 56.7	-0.2
	baz=37						
HNR	**Honiara**	96.81	97	LR	LR	02 25 26.7	
	comp=Z,216nm,18.7s,baz=346,slow=38						
BBB	**Bella Bella**	98.07	10	LR	LR	02 26 39.5	
	comp=Z,51nm,20.4s,baz=288,slow=39						
ULM	**Lac du Bonnet**	99.73	349	LR	LR	02 27 20.8	
	comp=Z,112nm,18.2s,baz=1.5,slow=38						
EYMN	**Ely**	101.10	346	P	Pdif	01 37 18.5	-0.3
	baz=19						
ECSD	**EROS Data Cent**	106.16	348	P	PKiKP	01 41 53.0	0.0
	baz=15						
PLCA	**Paso Flores**	143.78	240	PKP	PKPbc	01 43 02.7	+1.1
	comp=Z,1.6nm,0.8s,baz=151,slow=6.4,SNR=5.2						
BO02	**Sierra Bellavi**	144.11	250	PKPdf	PKPdf	01 43 05.5	+0.8
LL02	**Futaleuf**	144.41	235	PKPdf	PKPdf	01 43 05.8	+1.0
GO06	**Curarrehue**	144.58	242	PKPdf	PKPdf	01 43 05.6	+0.1
LL03	**Petrohue**	145.13	239	PKPbc	PKPab	01 43 05.9	+0.1
LL05	**Los Muermos**	145.89	238	PKPbc	PKPab	01 43 08.8	+0.3

DRS **24** *01:23:59.3±0.0, 41.°26N×43.°92E, h16^{km}*
MOS **24** *01:23:59.3±0.0, 41.°49N×43.°91E, h3^{km}, MPVA4.3*
ISK **24** *01:24:00.5, 41.°49N×43.°95E, h5^{km}, ML3.6/11*
IDC **24** *01:24:00.2±0.8, 41.°51N×44.°11E, h0^{km}, mb2.8/1, mbtmp3.4/7, ML2.8/6, MS2.7/3, Error ellipse: s-maj=17.9km s-min=7.7km az=71.0*
NORS **24** *01:24:00.7±0.0, 41.°50N×43.°90E, h7^{km}, MPVA4.4*
TIF **24** *01:24:00.7, 41.°48N×43.°94E, h13^{km}*
AZER **24** *01:24:02.8±0.1, 41.°47N×44.°26E, h2^{km}, Error ellipse: s-maj=1.5km s-min=1.1km az=323.0*
NSSP **24** *01:24:02.6, 41.°42N×43.°95E, h10^{km}, Ms3.5*
DDA **24** *01:24:02.8±0.0, 41.°45N×43.°80E, h18^{km}, MW3.6*
CFUSG **24** *01:24:04.1, 41.°27N×43.°75E, h27^{km}, Georgia Magtype MSH 3.2 from 2 stations*
ISC 24 01:24:01.1±0.9, **41.°45N**±0.°01×**43.°97E**±0.°01, **h7**^{km}±6^{km}, **n202**, σ**1.^{s}60**/358, **13C-14D, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRLG	**Trialeti**	0.14	45	*e*Pg	Pg	01 24 04.1	0.0
TRLG				*e*Sg	Sg	01 24 06.1	+0.1
TRLG	**Trialeti**	0.14	45	PG	Pg	01 24 04.1	0.0
TRLG	**Trialeti**	0.14	45	P	Pg	01 24 04.1	0.0
TRLG				S	Sg	01 24 06.1	+0.1
DMNI	**Dmanisi**	0.20	125	P	Pg	01 24 06.0	+0.8
DMNI				S	Sg	01 24 09.3	+1.5
BRNG	**Burnasheti**	0.21	328	PG	Pg	01 24 05.5	+0.1
BRNG	**Burnasheti**	0.21	328	P	Pg	01 24 05.5	+0.1
BRNG				S	Sg	01 24 08.9	+0.7
BGD	**Bogdanovka**	0.34	238	PG	Pg	01 24 08.3	+0.5
BGD				S	Sb	01 24 13.6	-1.7
BGD	**Bogdanovka**	0.34	238	P	Pg	01 24 08.3	+0.5
BGD				S	Sb	01 24 13.6	-1.7
AKH	**Akhalkalaki**	0.36	265	Pg	Pg	01 24 07.9	-0.4
AKH				Sg	Sg	01 24 13.4	+0.3
AKH	**Akhalkalaki**	0.36	265	*e*Pg	Pg	01 24 08.3	0.0
AKH				*e*Sg	Sg	01 24 13.3	+0.3
AKH	**Akhalkalaki**	0.36	265	PG	Pg	01 24 08.3	0.0
AKH				S	Sg	01 24 13.4	+0.3
AKH	**Akhalkalaki**	0.36	265	P	Pg	01 24 08.3	0.0
AKH				S	Sg	01 24 13.4	+0.3
STE	**Stepanavan**	0.54	146	⇓*i*P	Pb	01 24 12.3	-0.6
STE				⇓*i*S	Sb	01 24 20.5	-0.5
STE	**Stepanavan**	0.54	146	PG	Pb	01 24 12.2	-0.8
SEAG	**Tbilisi Sea**	0.70	63	PG	Pg	01 24 15.0	+0.4
SEAG				S	Sb	01 24 25.2	-0.4
SEAG	**Tbilisi Sea**	0.70	63	P	Pg	01 24 15.0	+0.4
SEAG				S	Sb	01 24 25.2	-0.4
EAK	**Akyaka**	0.81	200	SPECP		01 24 16.0	
EAK				P	Pg	01 24 16.8	+0.1
EAK				S	Sb	01 24 28.0	-0.8
ABS	**Abastumani**	0.92	290	*e*Pg	Pg	01 24 18.2	-0.7
ABS	**Abastumani**	0.92	290	PG	Pg	01 24 18.2	-0.7
ABS	**Abastumani**	0.92	290	P	Pg	01 24 18.2	-0.7
EPOS	**Posof**	0.94	274	P	Pg	01 24 18.6	-0.5
EPOS				S	Sg	01 24 29.2	-2.2
AHAN	**Ardahan-Merkez**	1.05	255	SPECP		01 24 21.0	
AHAN				P	Pg	01 24 21.1	-0.3
KARS	**Kars**	1.06	220	Pn	Pb	01 24 21.8	-0.1
KARS				Sn	Sn	01 24 36.9	-0.8
KARS	**Kars**	1.06	220	PG	Pn	01 24 22.2	-0.4
AMBZ	**Amberd**	1.08	168	⇓*i*P	Pb	01 24 22.2	0.0
AMBZ				⇑*i*S	Sn	01 24 37.6	-0.7
GUDG	**Gudauri**	1.09	20	*e*Pg	Pg	01 24 21.5	-0.5
GUDG				*e*Sg	Sg	01 24 36.1	0.0
GUDG	**Gudauri**	1.09	20	PG	Pg	01 24 21.5	-0.5
GUDG				S	Sg	01 24 36.1	0.0
GUDG	**Gudauri**	1.09	20	P	Pg	01 24 21.5	-0.5
GUDG				S	Sg	01 24 36.1	0.0
QZX	**Qazax, Azerbai**	1.12	110	P	Pg	01 24 21.8	-0.8
	SNR=610						
QZX				S	Sb	01 24 37.8	+0.1
DIGO	**Kars**	1.12	204	SPECP		01 24 22.0	
DIGO				P	Pg	01 24 22.6	-0.1
DIGO				S	Sb	01 24 37.7	-0.4
BOZK	**Kars-Merkez-Bo**	1.14	222	SPECP		01 24 23.0	
BOZK				P	Pb	01 24 23.2	-0.1
BOZK				S	Sb	01 24 37.9	-0.5
ARUZ	**Aruch**	1.16	176	⇓*i*P	Pn	01 24 24.8	+0.8
ARUZ				⇑*i*S	Sn	01 24 41.5	+1.3
TKB	**Tkibuli**	1.16	321	PG	Pg	01 24 22.5	-1.0
TKB				S	Sg	01 24 38.1	-0.5
TKB	**Tkibuli**	1.16	321	P	Pg	01 24 22.5	-1.0
TKB				S	Sg	01 24 38.1	-0.5
ONI	**Oni**	1.21	341	Pn	Pb	01 24 22.9	-1.5
ONI				Sn	Sg	01 24 39.3	-0.7
ONI	**Oni**	1.21	341	*e*Pg	Pb	01 24 23.2	-1.3
ONI				*e*Sg	Sg	01 24 39.5	-0.6
ONI	**Oni**	1.21	341	PG	Pb	01 24 23.2	-1.3
ONI				S	Sg	01 24 39.5	-0.6
ONI	**Oni**	1.21	341	P	Pb	01 24 23.2	-1.3
ONI				S	Sg	01 24 39.5	-0.6
KAPZ	**Kaputan**	1.25	154	⇓*i*P	Pg	01 24 25.1	0.0
KAPZ				⇑*i*S	Sn	01 24 42.3	-0.1
KAPZ	**Kaputan**	1.25	154	PG	Pb	01 24 24.9	-0.3
PNSH	**Pansheti**	1.28	22	PG	Pn	01 24 24.9	-0.8
PNSH				S	Sg	01 24 42.6	+0.2
PNSH	**Pansheti**	1.28	22	P	Pn	01 24 24.9	-0.8
PNSH				S	Sg	01 24 42.6	+0.2
METS	**Metsamor**	1.30	176	⇑*i*P	Pg	01 24 26.1	+0.1
METS				⇓*i*S	Sn	01 24 45.0	+1.6
METS	**Metsamor**	1.30	176	P	Pg	01 24 26.0	+0.1
LACR	**Lac**	1.40	10	*i* Pg	Pn	01 24 27.1	-0.2
LACR				*e*Sg	Sn	01 24 45.9	-0.2
LACR	**Lac**	1.40	10	⇑*i*PG	Pn	01 24 27.1	-0.2
LACR				*e*S	Sn	01 24 45.9	-0.2
GNI	**Garni**	1.42	156	Pg	Pg	01 24 28.4	+0.1
	125nm,0.3s,baz=310,slow=5.5,SNR=465						
GNI				Lg	Lg	01 24 48.5	
	112nm,0.3s,baz=66,slow=20,SNR=17						
GNI	**Garni**	1.42	156	⇓*i*P	Pg	01 24 28.5	+0.1
GNI				⇓*i*S	Sg	01 24 49.2	+2.5
GNI	**Garni**	1.42	156	Pn	Pg	01 24 28.2	-0.1
GNI	**Garni**	1.42	156	*e*Pg	Pg	01 24 28.6	+0.3
GNI				*e*Sg	Sg	01 24 48.8	+2.1
GNI	**Garni**	1.42	156	*d i*PG	Pg	01 24 28.2	-0.1
GNI				*i* S	Sg	01 24 48.9	+2.1
GNI				pmax	pmax		
	comp=Z,607nm,0.7s						
TASB	**TASBURUN-IGDIR**	1.47	172	Pn	Pb	01 24 28.4	-0.5
DIGR	**Digorskoe uzhe**	1.48	349	*i* Pg	Pn	01 24 28.3	-0.1
DIGR				*e*Sg	Sg	01 24 49.1	+0.3
DIGR	**Digorskoe uzhe**	1.48	349	⇓*i*PG	Pn	01 24 28.4	-0.1
DIGR				*e*S	Sg	01 24 49.6	+0.8
SHTL	**Shatili**	1.50	36	PG	Pb	01 24 28.9	-0.5
SHTL	**Shatili**	1.50	36	P	Pb	01 24 28.9	-0.5
SHTL				S	Sg	01 24 48.8	-0.4
SENK	**Senkaya-Erzuru**	1.51	235	Pn	Pb	01 24 29.2	-0.5
GDB	**GEDABAY**	1.53	118	P	Pn	01 24 28.3	-0.8
	SNR=29						
GDB				S	Sn	01 24 48.3	-1.0
NRKZ	**NAREK**	1.53	160	⇓*i*P	Pb	01 24 30.0	0.0
NRKZ				⇑*i*S	Sg	01 24 50.9	+0.5
IGDI	**IGDIR**	1.58	177	P	Pb	01 24 30.1	-0.6
IGDI				S	Sn	01 24 50.2	-0.2
DAGI	**Agillar**	1.60	257	P	Pb	01 24 30.3	-0.7
DDFL	**Dedoflistskaro**	1.61	89	PN	Pg	01 24 32.0	0.0
DDFL				S	Sg	01 24 53.8	+0.9
DDFL	**Dedoflistskaro**	1.61	89	P	Pg	01 24 32.0	0.0
DDFL				S	Sg	01 24 53.8	+0.9
KORR	**Kora**	1.64	2	*e*Pg	Pg	01 24 32.1	-0.6
KORR				*e*Sg	Sg	01 24 55.0	+1.1
KORR	**Kora**	1.64	2	*e*PN	Pg	01 24 32.0	-0.6
KORR				*e*S	Sg	01 24 56.6	+2.7
KORR				pmax	pmax		
	comp=Z,211nm,0.4s						
VLKR	**Vladikavkaz**	1.68	18	*e*Pg	Pg	01 24 33.7	+0.3
VLKR				*e*Sg	Sg	01 24 57.6	+2.3
VLKR	**Vladikavkaz**	1.68	18	*e*PN	Pg	01 24 33.7	+0.3
VLKR				*e*S	Sg	01 24 57.6	+2.3
BATM	**Batumi**	1.72	276	PN	Pn	01 24 31.8	+0.3
BATM				S	Sb	01 24 54.5	-0.4
BATM	**Batumi**	1.72	276	P	Pn	01 24 31.8	+0.3
BATM				S	Sb	01 24 54.5	-0.4
DBOC	**Borcka**	1.74	267	SPECP		01 24 32.0	
DBOC				P	Pn	01 24 32.4	+0.5
DBOC				S	Sn	01 24 52.9	-1.4
KMGR	**Komgaron**	1.74	22	*e*Pg	Pg	01 24 34.2	-0.3
KMGR				*e*Sg	Sg	01 24 59.4	+2.3
KMGR	**Komgaron**	1.74	22	*e*PN	Pg	01 24 34.2	-0.3
KMGR				*e*S	Sg	01 24 59.4	+2.3
LGD	**Lagodekhi**	1.74	76	*e*Pg	Pb	01 24 33.1	-0.4
LGD				*e*Sg	Sg	01 24 58.1	+0.9
LGD	**Lagodekhi**	1.74	76	PN	Pb	01 24 33.1	-0.4
LGD				S	Sg	01 24 58.1	+0.9
LGD	**Lagodekhi**	1.74	76	P	Pb	01 24 33.1	-0.4
LGD				S	Sg	01 24 58.1	+0.9
ARNR	**Ardon**	1.75	7	*i* Pg	Pg	01 24 34.5	-0.2
ARNR				*e*Sg	Sg	01 24 58.8	+1.4
ARNR	**Ardon**	1.75	7	⇑*i*PN	Pg	01 24 34.5	-0.2
ARNR				*e*S	Sg	01 24 58.8	+1.4
DDEM	**Demirkent**	1.77	253	P	Pb	01 24 33.1	-0.8
DDEM				S	Sn	01 24 53.3	-1.8
DBAD	**Bademkaya**	1.77	257	P	Pb	01 24 33.4	-0.7
LSNR	**Lesken**	1.83	357	*e*Pg	Pg	01 24 35.7	-0.6
LSNR				*e*Sg	Sg	01 25 00.8	+0.7
LSNR	**Lesken**	1.83	357	*e*PN	Pg	01 24 35.7	-0.6
LSNR				*e*S	Sg	01 25 00.8	+0.7
HYR	**Heyderabad**	1.85	159	P	Pg	01 24 35.9	-0.6
	SNR=47						
HYR				S	Sg	01 25 04.3	+3.7
HOPA	**Hopa-Artvin**	1.90	269	Pn	Pn	01 24 34.8	+0.8
DYDN	**Diyadin**	1.91	187	SPECP		01 24 37.0	
DYDN				P	P	01 24 37.0	+2.6
DYDN				S	Sg	01 25 01.8	-0.8
STDR	**Stavd-Durt**	1.92	2	*i* Pg	Pb	01 24 36.7	+0.1
STDR				*e*Sg	Sg	01 25 03.8	+0.8
STDR	**Stavd-Durt**	1.92	2	⇑*i*PN	Pg	01 24 38.4	+0.4
STDR				*e*S	Sg	01 25 05.3	+2.3
EATA	**Eleskirt**	1.94	216	SPECP		01 24 37.0	
EATA				P	Pb	01 24 37.1	0.0
EATA				S	Sg	01 25 02.5	-1.0
GANJ	**Ganja**	1.95	113	P	Pn	01 24 35.3	+0.6
	SNR=164						
GANJ				S	Sn	01 25 00.2	+0.8
GANJ	**Ganja**	1.95	113	PN	Pb	01 24 35.9	-1.1
BTKR	**Batakoyurt**	1.97	12	*e*Pg	Pb	01 24 38.0	+0.6
BTKR				*e*Sg	Sg	01 25 07.5	+3.0
BTKR	**Batakoyurt**	1.97	12	*e*PN	Pb	01 24 38.0	+0.6
BTKR				*e*S	Sg	01 25 07.5	+3.0
ZKTA	**Zakatala**	2.00	84	P	Pb	01 24 36.7	-1.1
	SNR=80						
ZKTA				S	Sg	01 25 04.7	-0.6
ZKTA	**Zakatala**	2.00	84	PN	Pb	01 24 36.4	-1.4
AGRB	**Hanur-Agry**	2.01	202	Pn	Pb	01 24 37.0	-1.2
NEY	**Neytrino**	2.03	333	*e*Pg	Pb	01 24 38.0	-0.4
NEY				*e*Sg	Sb	01 25 04.0	0.0
NEY	**Neytrino**	2.03	333	*ce*PN	Pb	01 24 37.1	-1.4
NCK	**Nalchik**	2.07	352	*e*Pg	Pb	01 24 38.9	-0.2
NCK				*e*Sg	Sg	01 25 07.8	+0.2
NCK	**Nalchik**	2.07	352	*ce*PN	Pb	01 24 38.4	-0.7
NCK				*e*S	Sg	01 25 09.3	+1.7
NCK				pmax	pmax		
	comp=Z,220nm,0.8s						
BTLR	**Botlikh**	2.07	53	*e*Pg	Pb	01 24 38.2	-1.0
	comp=Z,164nm,0.5s						
BTLR				*e*Sg	Sg	01 25 06.7	-1.0
	comp=Z,695nm,0.8s						
BTLR	**Botlikh**	2.07	53	*e*PN	Pb	01 24 38.1	-1.0
BTLR				*i* S	Sg	01 25 07.7	0.0
BTLR				pmax	pmax		
	comp=Z,164nm,0.5s						
BTLR				smax	smax		
	comp=E,401nm,0.7s						
HOMI	**Horasan**	2.10	229	P	Pb	01 24 40.2	+0.5
HOMI				S	Sb	01 25 06.3	+0.1
KOPR	**Koprukoy-ERZUR**	2.17	229	Pn	Pb	01 24 39.4	-1.4
GROC	**Groznyy**	2.22	37	*e*Pn	Pb	01 24 42.0	+0.4
	comp=E,4.0nm,0.5s						
GROC				*e*Sn	Sg	01 25 12.6	+0.2
	comp=E,151nm,0.6s						
GROC	**Groznyy**	2.22	37	*e*PN	Pg	01 24 43.2	-0.4
GROC				*e*		01 25 13.3	
GROC				smax	smax		
	comp=E,1µm,0.6s						
GROC				smax	smax		
	comp=N,696nm,0.8s						
XNZR	**Khunzakh**	2.31	61	*e*Pn	Pb	01 24 42.6	-0.7
	comp=N,122nm,0.4s						
XNZR				*e*Sn	Sg	01 25 13.9	-1.5
	comp=N,870nm,0.5s						
HNZR	**Khunzah**	2.33	61	*e*PN	Pb	01 24 42.6	-0.9
HNZR				*e*S	Sb	01 25 13.9	+1.3
HNZR				*i* S	Sg	01 25 14.6	-1.3
HNZR				pmax	pmax		
	comp=Z,122nm,0.4s						
HNZR				smax	smax		
	comp=E,174nm,0.4s						
HNZR				smax	smax		
	comp=N,152nm,0.6s						
HNZR				smax	smax		
	comp=E,195nm,0.6s						
TRKR	**Terskaya**	2.34	14	*e*Pn	Pb	01 24 42.2	-1.5
TRKR				*e*Sn	Sb	01 25 13.3	+0.4
TRKR	**Terskaya**	2.34	14	*e*PN	Pb	01 24 42.2	-1.5
TRKR				*e*S	Sb	01 25 13.3	+0.4
SBZ	**Shahbuz**	2.37	149	P	Pb	01 24 45.1	+0.8
	SNR=123						
SBZ				S	Sg	01 25 17.2	-0.2
KBTC	**Kuba-Taba**	2.41	350	*e*Pn	Pb	01 24 42.8	-2.0
KBTC				*e*Sn	Sg	01 25 16.6	-1.8
KBTC	**Kuba-Taba**	2.41	350	*e*PN	Pb	01 24 45.6	+0.8
KBTC				*e*S	Sg	01 25 19.1	+0.6
KBZ	**Khabaz**	2.42	341	Pn	Pb	01 24 43.4	-1.6
	comp=E,3.9nm,0.3s,baz=165,slow=5.8,SNR=54						
KBZ				Lg	Lg	01 25 14.8	
	comp=E,5.4nm,0.3s,baz=182,slow=13,SNR=7.5						
KBZ				LR	LR	01 25 43.2	
	comp=E,57nm,21.6s,baz=87,slow=43						
	comp=E,17nm,0.4s						
KBZ	**Khabaz**	2.42	341	*e*Pn	Pb	01 24 42.9	-2.0
KBZ				*e*Sn	Sb	01 25 15.1	+0.1
KBZ	**Khabaz**	2.42	341	*d i*PN	Pn	01 24 42.7	+1.6
GNBR	**Gunib**	2.42	66	*e*Pn	Pb	01 24 44.1	-1.0
	comp=E,128nm,0.5s						
GNBR				*e*Sn	Sg	01 25 17.0	-2.0
	comp=E,453nm,0.4s						
GNBR	**Gunib**	2.42	66	*e*PN	Pb	01 24 44.1	-1.0
GNBR				*e*S	Sg	01 25 16.9	-2.0
GNBR				*i* S	Sg	01 25 17.7	-1.2
GNBR				pmax	pmax		
	comp=Z,128nm,0.5s						
GNBR				smax	smax		
	comp=E,565nm,0.3s						
GNBR				smax	smax		
	comp=N,352nm,0.6s						
GNBR				smax	smax		
	comp=E,532nm,0.8s						
KMKR	**Kumukh**	2.44	73	*e*Pn	Pb	01 24 44.1	-1.4
	comp=E,4.0nm,0.2s						
KMKR				*e*Sn	Sb	01 25 16.5	+0.8
	comp=E,351nm,0.6s						
KMKR	**Kumukh**	2.44	73	*e*PN	Pb	01 24 44.0	-1.4
KMKR				*i* S	Sb	01 25 17.0	+1.3
KMKR				pmax	pmax		
	comp=Z,5.0nm,0.2s						
KMKR				smax	smax		
	comp=E,798nm,0.2s						
SEKA	**Sheki**	2.44	94	P	Pn	01 24 42.4	+0.9
	SNR=300						
SEKA				S	Sb	01 25 17.0	+1.3
SEKA	**Sheki**	2.44	94	PN	Pn	01 24 42.7	+1.2
MNGR	**Mingechevir, A**	2.44	105	P	Pb	01 24 44.1	-1.3
	SNR=26						

MNGR				S	Sb	01 25 17.1	+1.4
MNGR	Mingechevir, A	2.44	105	PN	Pb	01 24 44.1	-1.3
CHOM	Cayeli-Rize	2.45	263	Pn	Pn	01 24 43.0	+1.5
UNCR	Uncukul	2.45	58	ePn	Pb	01 24 44.9	-0.7
	comp=E,163nm,0.5s						
UNCR				eSn	Sg	01 25 18.0	-1.9
	comp=E,145nm,0.4s						
UNCR	Uncukul	2.45	58	ePN	Pb	01 24 44.9	-0.7
UNCR				eS	Sg	01 25 18.0	-1.9
UNCR				i S	Sb	01 25 19.1	+3.0
UNCR				pmax	pmax		
	comp=Z,163nm,0.5s						
UNCR				smax	smax		
	comp=N,356nm,0.5s						
UNCR				smax	smax		
	comp=E,454nm,0.4s						
UNCR				smax	smax		
	comp=E,552nm,0.6s						
SHA1	Shidzhatmaz	2.49	337	ePn	Pb	01 24 44.6	-1.8
SHA1				eSn	Sb	01 25 17.4	+0.1
SHA1	Shidzhatmaz	2.49	337	d iPN	Pn	01 24 44.1	+1.8
ARKR	Arakani	2.53	62	ePn	Pb	01 24 46.5	-0.5
	comp=E,1.0nm,0.6s						
ARKR				eSn	Sb	01 25 20.0	+1.6
	comp=E,990nm,0.7s						
ARKR	Arakani	2.53	62	ePN	Pb	01 24 46.4	-0.5
ARKR				eS	Sb	01 25 19.9	+1.6
ARKR				i S	Sg	01 25 20.6	-1.8
ARKR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARKR				smax	smax		
	comp=N,230nm,0.5s						
ARKR				smax	smax		
	comp=E,146nm,0.4s						
ARKR				smax	smax		
	comp=N,173nm,0.4s						
DOMR	Dombai	2.54	317	ePn	Pb	01 24 45.1	-2.0
DOMR				eSn	Sb	01 25 17.5	-1.1
MLAZ	Malazgirt-MUS	2.55	206	Pn	Pn	01 24 44.7	+1.7
NAX	Nakhchivan	2.55	152	P	Pg	01 24 49.0	-1.0
	SNR=114						
NAX				S	Sg	01 25 22.6	-0.4
NAX	Nakhchivan	2.55	152	PN	Pb	01 24 48.2	+0.9
DLMR	Dylym	2.55	50	ePn	Pb	01 24 46.9	-0.5
	comp=N,167nm,0.3s						
DLMR				eSn	Sg	01 25 21.3	-1.9
	comp=N,144nm,0.7s						
DLMR	Dylym	2.55	50	ePN	Pb	01 24 46.8	-0.5
DLMR				eS	Sg	01 25 21.2	-1.9
DLMR				i S	Sb	01 25 22.0	+3.0
DLMR				pmax	pmax		
	comp=Z,168nm,0.3s						
DLMR				smax	smax		
	comp=E,991nm,0.7s						
DLMR				smax	smax		
	comp=N,816nm,0.6s						
DLMR				smax	smax		
	comp=E,887nm,0.6s						
KRIK	Erzurum-spir	2.56	245	SPECP		01 24 45.0	
KRIK				P	Pb	01 24 45.2	-2.3
DBC	Dubki	2.64	52	ePn	Pb	01 24 48.3	-0.6
DBC				eSn	Sb	01 25 22.6	+1.1
DBC	Dubki	2.64	52	ePN	Pb	01 24 48.2	-0.6
DBC				i S	Sb	01 25 22.3	+0.8
DBC				pmax	pmax		
	comp=Z,59nm,0.6s						
DBC				smax	smax		
	comp=E,157nm,0.6s						
GRS	Goris	2.65	136	⇓iP	Pb	01 24 49.9	+0.9
GRS				⇑iS	Sb	01 25 23.8	+2.0
IZDR	Rize	2.66	257	SPECP		01 24 46.0	
IZDR				P	Pn	01 24 46.2	+1.6
IZDR				S	Sb	01 25 20.5	-1.5
KVAR	Kislovodsk Arr	2.68	340	Pn	Pn	01 24 46.9	+2.1
	baz=272,slow=23						
KVAR				Lg	Lg	01 25 24.9	
	baz=242,slow=18						
	comp=E,5.7nm,0.3s						
KIV	Kislovodsk	2.68	340	Pn	Pn	01 24 45.5	+0.6
KIV	Kislovodsk	2.68	340	ePn	Pn	01 24 46.3	+1.4
KIV				eSn	Sn	01 25 19.8	+2.1
KIV	Kislovodsk	2.68	340	ePN	Pn	01 24 46.6	+1.7
KIV				eS	Sb	01 25 20.0	-2.7
KIV				pmax	pmax		
	comp=Z,58nm,1.0s						
BRDA	Brd	2.70	115	P	Pb	01 24 49.4	-0.5
	SNR=5.7						
BRDA				S	Sb	01 25 25.1	+1.9
BEYR	Belyy Ugol+	2.70	342	ePn	Pn	01 24 47.0	+1.9
BEYR				eSn	Sb	01 25 22.1	-1.2
BUJR	Buynaksk	2.71	58	ePn	Pb	01 24 48.8	-1.2
BUJR				eSn	Sb	01 25 24.0	+0.6
AGDM	Agdam	2.73	118	P	Pb	01 24 49.1	-1.2
	SNR=26						
AGDM				S	Sb	01 25 24.8	+0.9
OZAP	Van, Ozalp-Mer	2.78	180	P	Pb	01 24 49.4	-1.9
AKT	Akhty	2.82	88	ePn	Pn	01 24 48.0	+1.3
	comp=Z,82nm,0.5s						
AKT				eSn	Sb	01 25 24.2	-2.6
	comp=Z,168nm,0.6s						
AKT	Akhty	2.82	88	ePN	Pn	01 24 48.1	+1.3
AKT				e		01 24 56.7	
AKT				eS	Sb	01 25 27.5	+0.7
AKT				e		01 25 36.2	
AKT				e		01 25 43.8	
AKT				pmax	pmax		
	comp=Z,78nm,0.5s						
AKT				smax	smax		
	comp=N,282nm,0.4s						
AKT				smax	smax		
	comp=E,113nm,0.3s						
AKT				smax	smax		
	comp=N,260nm,0.4s						
AKT				MLR	MLR		
	comp=Z,115nm,2.0s						
ARXR	Arkhyz	2.91	318	ePn	Pb	01 24 51.8	-1.7
ARXR				eSn	Sn	01 25 24.6	+1.2
ARXR	Arkhyz	2.91	318	i PN	Pb	01 24 51.0	-2.4
SGKR	Sergokala	2.93	69	ePn	Pb	01 24 51.6	-2.1
	comp=Z,1.0nm,0.4s						
SGKR				eSn	Sb	01 25 29.6	-0.2
	comp=Z,170nm,0.6s						
SGKR	Sergokala	2.93	69	ePN	Pb	01 24 51.6	-2.1
SGKR				eS	Sb	01 25 29.5	-0.2
SGKR				i S	Sg	01 25 31.0	-4.2
SGKR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SGKR				pmax	pmax		
	comp=N,104nm,0.5s						
SGKR				smax	smax		
	comp=N,136nm,0.4s						
SGKR				smax	smax		
	comp=E,169nm,0.6s						
SGKR				smax	smax		
	comp=E,110nm,0.6s						
ORD	Ordubad	2.95	148	P	Pb	01 24 54.3	+0.1
	SNR=45						
ORD				S	Sb	01 25 31.9	+1.4
QBL	Gabala	2.96	98	P	Pb	01 24 52.1	-2.1
	SNR=9.0						
QBL				S	Sb	01 25 29.6	-1.0
MAK	Makhachkala	3.03	59	ePn	Pb	01 24 56.2	+0.8
MAK				eSn	Sb	01 25 34.4	+1.8
MAK	Makhachkala	3.03	59	ePN	Pb	01 24 54.2	-1.2
MAK				e		01 25 00.8	
MAK				e		01 25 03.0	
MAK				eS	Sb	01 25 34.0	+1.4
MAK				e		01 25 41.9	
MAK				e		01 25 48.5	
MAK				pmax	pmax		
	comp=Z,114nm,0.4s						
MAK				smax	smax		
	comp=E,263nm,0.7s						
MAK				smax	smax		
	comp=E,323nm,0.4s						
MAK				MLR	MLR		
	comp=Z,171nm,7.0s						
ZRD	Zardab	3.04	111	P	Pb	01 24 54.6	-1.1
	SNR=14						
ZRD				S	Sb	01 25 31.9	-1.2
XNQ	Khinaliq	3.15	94	P	Pn	01 24 54.0	+2.6
	SNR=15						
XNQ				S	Sb	01 25 34.5	-1.8
QSAR	Qusar	3.22	87	P	Pb	01 24 55.6	-3.1
	SNR=62						
QSAR				S	Sb	01 25 35.1	-3.2
BLQ	Beylaqan	3.23	121	P	Pb	01 24 56.9	-1.9
	SNR=10						
BLQ				S	Sb	01 25 36.8	-1.5
QRD	Qoradiz	3.23	127	P	Pb	01 24 57.2	-1.7
	SNR=15						
QRD				S	Sb	01 25 36.9	-1.6
IML	Ismayilli	3.25	100	P	Pn	01 24 55.1	+2.6
IML				S	Sb	01 25 36.1	-2.8
DRN	Derbent	3.31	78	ePn	Pb	01 24 56.7	-3.4
DRN				eSn	Sb	01 25 37.9	-2.8
DRN	Derbent	3.31	78	i PN	Pb	01 24 56.8	-3.4
DRN				eS	Sb	01 25 39.4	-1.3
DRN				pmax	pmax		
	comp=Z,44nm,0.3s						
KDMR	Kurdemir	3.36	107	P	Pn	01 24 56.7	+2.6
KDMR				S	Sb	01 25 40.0	-2.2
QUBA	Quba, Azerbaij	3.40	90	P	Pn	01 24 57.4	+2.7
	SNR=7.4						
QUBA				S	Sn	01 25 37.9	+2.6
ALER	Alexandrovskoy	3.41	347	ePn	Pn	01 24 56.9	+2.2
ALER				eSn	Sn	01 25 38.1	+2.7
VSLR	Vesyoloye	3.54	306	ePn	Pn	01 24 58.2	+1.6
VSLR				eSn	Sn	01 25 40.1	+1.3
RPOR	Krasnaya Polya	3.55	311	ePn	Pn	01 24 58.7	+2.1
RPOR				eSn	Sn	01 25 41.7	+2.8
PQL	Pirkuli	3.55	99	P	Pn	01 24 59.3	+2.5
	SNR=13						
PQL				S	Sn	01 25 42.2	+3.1
GOF	Gofitskoye	3.67	350	⇑ePN	Pg	01 25 09.5	-2.0
GOF				eS	Sg	01 25 57.4	-1.7
GOF				pmax	pmax		
	comp=Z,21nm,0.5s						
GOF				smax	smax		
	comp=E,44nm,0.6s						
GOF				smax	smax		
	comp=N,69nm,0.6s						
SIZA	Siyzn	3.73	94	P	Pn	01 25 02.0	+2.7
	SNR=12						
SIZA				S	Sn	01 25 46.4	+2.9
SAAT	Saatly	3.74	114	P	Pn	01 25 02.4	+3.2
SAAT				S	Sb	01 25 48.6	-4.3
ATGJ	Altiaghaj	3.79	97	P	Pn	01 25 02.8	+2.7
ATGJ				S	Sb	01 25 51.3	-3.4
SOC	Sochi	3.80	306	ePn	Pn	01 25 01.4	+1.2
SOC				eSn	Sn	01 25 44.5	-0.7
SOC	Sochi	3.80	306	ePN	Pn	01 25 00.8	+0.6
SOC				ePPP	PPP	01 25 12.3	
SOC				e		01 25 44.8	
SOC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SOC				smax	smax		
	comp=N,22nm,0.5s						
SOC				MLR	MLR		
	comp=Z,61nm,12.0s						
GUZR	Guzeripl'	3.82	313	ePn	Pn	01 25 02.6	+2.2
GUZR				eSn	Sn	01 25 47.5	+1.9
GUZR	Guzeripl'	3.82	313	c iPN	Pn	01 25 02.4	+2.0
GBS	Qobustan	3.87	102	P	Pn	01 25 04.8	+3.7
	SNR=7.1						
GBS				S	Sb	01 25 53.5	-3.3
GLBA	Clilabad	4.03	122	P	Pb	01 25 09.6	-2.9
	SNR=8.6						
GLBA				S	Sb	01 25 58.4	-3.0
YRD	Yardimli	4.13	126	P	Pb	01 25 12.6	-1.7
	SNR=6.6						
YRD				S	Sb	01 25 59.6	-4.8
LRK	Lerik	4.37	128	P	Pn	01 25 12.4	+4.3
	SNR=9.3						
LRK				S	Sb	01 26 07.9	-3.3
GOYR	Goytkh	4.39	311	ePn	Pn	01 25 10.3	+2.1
GOYR				eSn	Sn	01 26 02.0	+2.4
ASTR	Astara	4.69	126	P	Pb	01 25 17.9	-5.8
ASTR				S	Sb	01 26 14.7	-5.6
ANN	Anapa	5.84	307	ePn	Pn	01 25 31.4	+3.2
ANN				eSn	Sn	01 26 39.0	+3.6
ANN	Anapa	5.84	307	eP	Pn	01 25 31.1	+2.9
ANN				eS	Sn	01 26 37.8	+2.4
ANN				pmax	pmax		
	comp=Z,15nm,0.7s						
SUDU	Sudak	7.41	301	eP	Pn	01 25 52.9	+3.2
SUDU				Pm		01 25 55.6	
	comp=Z,5.0nm,0.5s						
SUDU				eS	Sn	01 27 16.6	+2.7
SUDU				Sm		01 36 17.1	
	comp=N,6.0nm,0.5s						
SUDU				Sm		01 36 17.1	
	comp=E,1.0nm,0.5s						
YAL	Yalta	7.82	296	eP	Pn	01 25 58.5	+3.3
YAL				Pm		01 25 59.1	
	comp=Z,9.0nm,0.5s						
SIM	Simferopol'	8.01	299	eP	Pn	01 26 00.9	+3.0
SIM				Pm		01 25 08.1	
	comp=Z,11nm,0.3s						
SIM				eS	Sn	01 27 30.2	+1.5
SIM				Sm		01 27 31.1	
	comp=N,7.0nm,0.5s						
SIM				Sm		01 27 31.1	
	comp=E,4.0nm,0.3s						
SIM	Simferopol'	8.01	299	eP	Pn	01 26 00.4	+2.5
SIM				S	Sn	01 27 29.4	+0.7
SIM				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SIM				smax	smax		
	comp=E,16nm,0.9s						
BRTR	Keskin Array B	8.05	261	Pn	Pn	01 26 03.4	+4.7
	baz=78,slow=12,SNR=4.2						
BRTR				LR	LR	01 29 19.4	
	comp=E,70nm,19.2s,baz=114,slow=39						
	comp=E,0.6nm,0.9s						
SEV	Sevastopol'	8.16	296	eP	Pn	01 26 01.2	+1.2
SEV				Pm		01 26 05.5	
	comp=Z,3.0nm,0.4s						
SEV	Sevastopol'	8.16	296	ePn	Pn	01 26 01.2	+1.2
SEV	Sevastopol'	8.16	296	eP	Pn	01 26 01.2	+1.2
BELG	Belogornoye	11.23	12	Pn	Pn	01 26 39.7	-2.3
	comp=Z,0.1nm,0.3s,baz=111,slow=20,SNR=1.5						
	comp=Z,1.3nm,0.5s						
AKTO	Aktyubinsk	13.26	43	Pn	Pn	01 27 06.1	-3.6
	comp=Z,0.1nm,0.3s,baz=225,slow=16,SNR=3.1						
	comp=Z,1.2nm,0.6s						
MLR	Muntele Rosu	13.70	293	LR	LR	01 34 46.6	
	comp=Z,61nm,19.3s,baz=147,slow=47						
ARU	Arti	17.74	27	P	Pn	01 28 07.3	-1.1
	baz=180,slow=4.7,SNR=3.6						
	comp=Z,1.6nm,0.6s						
GERES	GERESS Array B	22.49	299	P	P	01 29 01.7	+0.6
	comp=Z,0.1nm,0.4s,baz=84,slow=9.2,SNR=1.9						
	comp=Z,0.1nm,0.4s						

ROM 24 01:25:45.9±0.1, 42.°860N±0.°003×13.°027E±0.°006, h10km, ML1.1/7, 1C-2D, Error ellipse: s-maj=0.4km s-min=0.3km az=98.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	Norcia	0.07	112	P	Pg	01 25 48.5	+0.3
NRCA				S	Sg	01 25 50.0	+0.3
NRCA				AML	AML		
	comp=E,326µm,1.5s						
NRCA				AML	AML		
	comp=E,318µm,0.2s						
NRCA				AML	AML		
	comp=N,236µm,0.2s						
NRCA				AML	AML		
	comp=E,326µm,0.5s						
NRCA				AML	AML		
	comp=N,354µm,0.7s						
T1212	Cascia, Frazio	0.11	173	P	Pg	01 25 49.2	+0.6
T1212				S	Sg	01 25 51.4	+0.8
T1212				AML	AML		
	comp=N,254µm,0.1s						
T1212				AML	AML		
	comp=E,268µm,0.2s						
T1212				AML	AML		
	comp=N,267µm,0.1s						
T1212				AML	AML		
	comp=E,280µm,1.4s						
T1212				AML	AML		
	comp=E,280µm,0.6s						
T1245	Castelsantange	0.12	92	P	Pg	01 25 49.3	+0.4
T1245				S	Sg	01 25 51.4	+0.5
T1245				AML	AML		
	comp=E,156µm,1.5s						
T1245				AML	AML		
	comp=N,165µm,0.6s						
MC2	Monte Cornacci	0.13	66	P	Pg	01 25 49.6	+0.6
MC2				S	Sg	01 25 52.0	+0.6
T1214	Arquata del Tr	0.17	127	⇓P	Pg	01 25 50.1	+0.6
T1214				S	Sg	01 25 52.8	+0.7
FDMO	Fiordimonte	0.18	14	⇑P	Pg	01 25 50.5	+0.7
FDMO				AML	AML		
	comp=E,40µm,1.0s						
FDMO				AML	AML		
	comp=N,33µm,0.2s						
T1218	Civita (PG)	0.20	161	P	Pg	01 25 50.6	+0.5
T1218				S	Sg	01 25 54.0	+1.0
T1256	Bolognola (MC)	0.21	45	P	Pg	01 25 50.9	+0.6
T1256				S	Sg	01 25 54.2	+1.0
T1256				AML	AML		
	comp=N,38µm,0.1s						
T1256				AML	AML		
	comp=N,38µm,0.1s						
T1256				AML	AML		
	comp=E,35µm,0.4s						
ASSB	Assisi San Ben	0.33	304	⇓P	Pg	01 25 53.0	+0.6
ASSB				S	Sb	01 25 58.0	-1.2
ASSB				AML	AML		
	comp=E,32µm,0.2s						
ASSB				AML	AML		
	comp=N,30µm,1.2s						
ASSB				AML	AML		
	comp=N,30µm,0.8s						
RM33	Pellescritta (	0.38	158	P	Pg	01 25 53.8	+0.5
SNTG	Esanatoglia	0.40	351	P	Pg	01 25 54.2	+0.4
SNTG				S	Sb	01 26 00.5	-0.8
SNTG				AML	AML		
	comp=E,19µm,1.2s						
SNTG				AML	AML		
	comp=N,16µm,1.3s						
SNTG				AML	AML		
	comp=E,19µm,0.8s						
SNTG				AML	AML		
	comp=N,16µm,0.7s						

TIR 24 01:26:50.2, 40.°47N×21.°02E, h7km±2km, Md2.4, Ml1.1, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	Korca	0.24	311	P	Pg	01 26 55.8	+1.0
	baz=311						
KBN				S	Sg	01 26 59.2	+1.1
	baz=311						
KBN				AMP			
	comp=N,0.2nm,0.5s,baz=311						
FNA	Florina	0.41	40	P	Pg	01 26 58.8	+0.6
	baz=41						
FNA				S	Sb	01 27 05.1	-1.3
	baz=41						
LSK	Leskovik	0.46	226	P	Pg	01 26 59.4	+0.5
	baz=226						
LSK				S	Sb	01 27 06.5	-1.1
	baz=226						
LSK				AMP			
	comp=N,0.1nm,0.1s,baz=226						
IGT	Igoumenitsa	1.08	210	P	Pg	01 27 10.7	-0.1
	baz=210						

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*MOS **24** 01:30:33.6±0.0, 41.°46N×43.°90E, h3km, MPVA3.5*
*ISK **24** 01:30:35.1, 41.°49N×43.°95E, h6km, ML2.8/6*
*NORS **24** 01:30:35.0±0.0, 41.°52N×43.°86E, h5km, MPVA3.7*
*TIF **24** 01:30:35.1, 41.°48N×43.°95E, h15km*
*DDA **24** 01:30:37.2±0.0, 41.°45N×43.°78E, h7km±2km, ML2.5*
*DRS **24** 01:30:39.1±0.0, 41.°10N×44.°14E, h20km*

ISC 24 01:30:35.4±0.8, 41.°46N±0.°02×43.°96E±0.°01, h11km±5km, n73, σ1.s05/133, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRLG	Trialeti	0.13	54	ePg	Pg	01 30 38.5	-0.2
TRLG				eSg	Sg	01 30 40.5	-0.6
TRLG	Trialeti	0.13	54	P	Pg	01 30 38.5	-0.2
TRLG				S	Sg	01 30 40.5	-0.6
BRNG	Burnasheti	0.19	328	P	Pg	01 30 39.9	+0.2
BRNG				S	Sg	01 30 43.3	+0.8
DMNI	Dmanisi	0.22	128	ePg	Pg	01 30 40.3	+0.3
DMNI	Dmanisi	0.22	128	P	Pg	01 30 40.3	+0.3
BGD	Bogdanovka	0.34	234	ePg	Pg	01 30 42.6	+0.4
BGD				eSg	Sb	01 30 47.8	-1.2
BGD	Bogdanovka	0.34	234	P	Pg	01 30 42.6	+0.4
BGD				S	Sb	01 30 47.8	-1.2
AKH	Akhalkalaki	0.36	262	Pg	Pg	01 30 42.7	+0.1
AKH	Akhalkalaki	0.36	262	ePg	Pg	01 30 42.7	+0.1
AKH				eSg	Sg	01 30 47.8	+0.4
AKH	Akhalkalaki	0.36	262	P	Pg	01 30 42.7	+0.1
AKH				S	Sg	01 30 47.8	+0.4
SEAG	Tbilisi Sea	0.70	64	P	Pb	01 30 49.3	-0.4
EAK	Akyaka	0.82	199	P	Pg	01 30 51.1	-0.1
EAK				S	Sg	01 31 02.3	+0.3
EAK				i AML	AML	01 31 03.0	
	comp=E,572nm,0.6s						
EAK				i AML	AML	01 31 04.0	
	comp=N,563nm,0.2s						
ABS	Abastumani	0.91	289	ePg	Pg	01 30 52.5	-0.5
ABS				eSg	Sb	01 31 05.1	-0.4
ABS	Abastumani	0.91	289	P	Pg	01 30 52.5	-0.5
ABS				S	Sb	01 31 05.1	-0.4
EPOS	Posof	0.93	273	P	Pg	01 30 53.0	-0.4
EPOS				i AML	AML	01 31 12.0	
	comp=N,158nm,0.4s						
AHAN	Ardahan-Merkez	1.05	254	P	Pb	01 30 55.4	-0.3
AHAN				S	Sg	01 31 08.6	-0.8
DGRG	David-gareji	1.06	90	P	Pb	01 30 56.0	+0.2
DGRG				S	Sn	01 31 11.1	0.0
KARS	Kars	1.07	219	Pn	Pn	01 30 56.4	-0.1
KARS				Sn	Sn	01 31 11.4	0.0
GUDG	Gudauri	1.07	21	P	Pb	01 30 55.9	-0.2
GUDG				S	Sb	01 31 10.8	+0.5
DIGO	Kars	1.14	203	P	Pg	01 30 57.2	-0.1
DIGO				S	Sg	01 31 12.3	+0.2
TKB	Tkibuli	1.14	321	ePg	Pb	01 30 56.9	-0.4
TKB				eSg	Sn	01 31 12.4	-0.7
TKB	Tkibuli	1.14	321	P	Pb	01 30 56.9	-0.4
TKB				S	Sn	01 31 12.4	-0.7
BOZK	Kars-Merkez-Bo	1.15	221	P	Pb	01 30 57.6	+0.2
BOZK				S	Sb	01 31 12.7	+0.4
BOZK				i AML	AML	01 31 14.0	
	comp=N,96nm,0.2s						
BOZK				i AML	AML	01 31 21.0	
	comp=E,110nm,0.7s						
ONI	Oni	1.19	342	Pn	Pg	01 30 57.6	-0.7
ONI				Sn	Sn	01 31 14.0	-0.3
ONI	Oni	1.19	342	P	Pg	01 30 57.5	-0.7
ONI				S	Sn	01 31 13.9	-0.3
PNSH	Pansheti	1.27	22	P	Pn	01 30 59.5	+0.3
PNSH				S	Sn	01 31 16.7	+0.3
LACR	Lac	1.39	10	ePg	Pg	01 31 01.6	-0.5
LACR				eSg	Sn	01 31 20.0	+0.7
GNI	Garni	1.44	155	Pn	Pg	01 31 02.9	-0.2
GNI	Garni	1.44	155	ePg	Pb	01 31 02.4	0.0
GNI				eSg	Sg	01 31 23.6	+1.8
DIGR	Digorskoe uzhe	1.46	349	ePg	Pg	01 31 02.8	-0.7
DIGR				eSg	Sg	01 31 23.1	+0.5
SHTL	Shatili	1.49	36	P	Pb	01 31 03.2	+0.1
SHTL				S	Sg	01 31 23.2	-0.1
TASB	TASBURUN-IGDIR	1.49	172	Pn	Pb	01 31 03.5	+0.3
SENK	Senkaya-Erzuru	1.52	234	Pn	Pg	01 31 04.1	-0.4
DAGI	Agillar	1.59	257	P	Pb	01 31 04.9	0.0
DAGI				S	Sb	01 31 25.4	+0.3
IGDI	IGDIR	1.59	177	P	Pn	01 31 04.5	+0.8
DDFL	Dedoflistskaro	1.62	90	P	Pg	01 31 06.4	-0.1
DDFL				S	Sg	01 31 27.5	-0.1
KORR	Kora	1.62	3	i Pg	Pg	01 31 07.1	+0.5
KORR				eSg	Sg	01 31 29.3	+1.7
VLKR	Vladikavkaz	1.67	18	ePg	Pg	01 31 08.2	+0.7
VLKR				eSg	Sg	01 31 32.2	+3.1
BATM	Batumi	1.71	275	ePg	Pb	01 31 06.2	-0.6
BATM				eSg	Sb	01 31 28.8	+0.5
BATM	Batumi	1.71	275	P	Pb	01 31 06.2	-0.6
BATM				S	Sb	01 31 28.8	+0.5
KMGR	Komgaron	1.73	23	ePg	Pg	01 31 08.7	+0.1
KMGR				eSg	Sg	01 31 33.8	+2.7
DBOC	Borcka	1.73	267	P	Pb	01 31 06.8	-0.4
DBOC				S	Sb	01 31 29.0	0.0

DBOC				i AML	AML	01 31 32.0	
	comp=E,62nm,0.2s						
ARNR	**Ardon**	1.73	8	ePg	Pg	01 31 09.4	+0.7
ARNR				eSg	Sg	01 31 34.0	+2.8
LGD	**Lagodekhi**	1.75	77	ePg	Pb	01 31 07.5	-0.1
LGD				eSg	Sg	01 31 31.9	+0.2
LGD	**Lagodekhi**	1.75	77	P	Pb	01 31 07.5	-0.1
LGD				S	Sg	01 31 31.9	+0.2
DDEM	**Demirkent**	1.76	252	P	Pb	01 31 07.7	-0.1
DDEM				S	Sn	01 31 28.9	+0.4
DDEM				i AML	AML	01 31 32.0	
	comp=N,123nm,0.3s						
DDEM				i AML	AML	01 31 35.0	
	comp=E,101nm,0.4s						
DBAD	**Bademkaya**	1.77	256	P	Pb	01 31 07.9	+0.1
DBAD				S	Sb	01 31 30.4	+0.3
DBAD				i AML	AML	01 31 32.0	
	comp=N,102nm,0.8s						
DBAD				i AML	AML	01 31 32.0	
	comp=E,57nm,0.5s						
LSNR	**Lesken**	1.82	357	ePg	Pg	01 31 10.1	-0.2
LSNR				eSg	Sg	01 31 35.7	+1.9
HOPA	**Hopa-Artvin**	1.89	269	Pn	Pb	01 31 08.9	-1.1
STDR	**Stavd-Durt**	1.91	2	ePg	Pg	01 31 11.5	-0.5
STDR				eSg	Sg	01 31 39.2	+2.5
EATA	**Eleskirt**	1.95	215	P	Pb	01 31 11.7	+0.5
BTKR	**Batakoyurt**	1.96	13	ePg	Pg	01 31 12.3	-0.6
BTKR				eSg	Sg	01 31 40.0	+1.7
NEY	**Neytrino**	2.01	333	ePg	Pb	01 31 12.3	+0.3
NEY				eSg	Sg	01 31 38.3	-1.7
BTLR	**Botlikh**	2.07	54	ePg	Pg	01 31 15.1	+0.1
	17nm,0.8s						
BTLR				eSg	Sg	01 31 42.7	+0.8
	20nm,0.4s						
HOMI	**Horasan**	2.11	228	P	Pb	01 31 14.1	+0.3
HOMI				i AML	AML	01 31 49.0	
	comp=E,23nm,0.9s						
HOMI				i AML	AML	01 31 59.0	
	comp=N,27nm,1.1s						
GROC	**Groznyy**	2.21	37	ePn	Pg	01 31 18.5	+0.8
	4.0nm,0.6s						
GROC				eSn	Sg	01 31 48.0	+1.6
	141nm,0.6s						
XNZR	**Khunzakh**	2.31	61	ePn	Pb	01 31 17.4	+0.2
	20nm,0.3s						
XNZR				eSn	Sb	01 31 47.4	+1.5
	79nm,0.6s						
KBTC	**Kuba-Taba**	2.39	350	ePn	Pg	01 31 20.0	-1.2
KBTC				eSn	Sg	01 31 52.9	+0.8
KBZ	**Khabaz**	2.40	341	ePn	Pb	01 31 18.0	-0.6
KBZ				eSn	Sg	01 31 50.5	-1.9
GNBR	**Gunib**	2.42	67	ePn	Pb	01 31 18.1	-1.0
	20nm,0.5s						
GNBR				eSn	Sb	01 31 48.3	-0.7
	39nm,0.5s						
KMKR	**Kumukh**	2.44	73	ePn	Pb	01 31 18.5	-0.9
	2.0nm,0.5s						
KMKR				eSn	Sb	01 31 48.2	-1.4
	39nm,0.3s						
UNCR	**Uncukul**	2.45	58	ePn	Pb	01 31 20.3	+0.8
	20nm,0.3s						
UNCR				eSn	Sg	01 31 52.0	-2.2
	23nm,0.4s						
SHA1	**Shidzhatmaz**	2.47	337	ePn	Pb	01 31 19.3	-0.6
SHA1				eSn	Sb	01 31 51.6	+1.2
DOMR	**Dombai**	2.52	317	ePn	Pb	01 31 20.4	-0.4
DOMR				eSn	Sg	01 31 53.5	-2.8
ARKR	**Arakani**	2.53	62	ePn	Pb	01 31 21.1	+0.2
	1.0nm,0.4s						
ARKR				eSn	Sb	01 31 53.2	+1.1
	108nm,0.4s						
DLMR	**Dylym**	2.55	50	ePn	Pb	01 31 22.2	+1.0
	25nm,0.4s						
DLMR				eSn	Sg	01 31 55.5	-1.9
	48nm,0.4s						
DBC	**Dubki**	2.64	53	ePn	Pb	01 31 23.8	+1.1
	8.0nm,0.5s						
DBC				eSn	Sg	01 31 58.0	-2.2
	20nm,0.4s						
BUJR	**Buynaksk**	2.71	59	ePn	Pb	01 31 23.9	+0.1
BUJR				eSn	Sg	01 31 59.8	-2.6
AKT	**Akhty**	2.83	88	ePn	Pn	01 31 22.4	+1.7
AKT				eSn	Sb	01 31 59.9	-0.9
ARXR	**Arkhyz**	2.89	317	ePn	Pb	01 31 26.3	-0.7
ARXR				eSn	Sb	01 32 01.9	-0.5
SGKR	**Sergokala**	2.93	69	ePn	Pb	01 31 25.6	-2.1
	1.0nm,0.4s						
SGKR				eSn	Sb	01 32 01.2	-2.3
	20nm,0.4s						
KSMR	**Kasumkent**	3.13	86	ePn	Pb	01 31 28.3	-2.8
KSMR				eSn	Sb	01 32 06.9	-2.4
VSLR	**Vesyoloye**	3.53	306	ePn	Pn	01 31 31.0	+0.8

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*MOS **24** 01:33:58.7±0.0, 41°.47N×43°.89E, h3^{km}, MPVA3.4*
*TIF **24** 01:34:00.0, 41°.48N×43°.95E, h11^{km}*
*ISK **24** 01:34:00.1, 41°.48N×43°.95E, h10^{km}, ML2.7/9*
*NORS **24** 01:34:00.9±0.0, 41°.53N×43°.83E, h8^{km}, MPVA3.5*
*DDA **24** 01:34:01.8±0.0, 41°.47N×43°.94E, h8^{km}±1^{km}, ML2.4*
*DRS **24** 01:34:03.1±0.0, 41°.34N×43°.78E, h21^{km}*
ISC 24 01:34:00.8±0.9**, 41°.46N**±0°.01×**43°.94E**±0°.01**, h8**^{km}±6^{km}**,**
n80, σ1^{s}04/147**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRLG	**Trialeti**	0.14	58	ePg	Pg	01 34 03.6	-0.3
TRLG				eSg	Sg	01 34 05.7	-0.5
TRLG	**Trialeti**	0.14	58	P	Pg	01 34 03.6	-0.3
TRLG				S	Sg	01 34 05.7	-0.5
BRNG	**Burnasheti**	0.18	331	P	Pg	01 34 05.0	+0.4
BRNG				S	Sg	01 34 08.5	+1.2
DMNI	**Dmanisi**	0.23	126	ePg	Pg	01 34 05.5	0.0
DMNI				eSg	Sg	01 34 08.8	+0.2
DMNI	**Dmanisi**	0.23	126	P	Pg	01 34 05.5	0.0
DMNI				S	Sg	01 34 08.8	+0.2
BGD	**Bogdanovka**	0.33	233	ePg	Pg	01 34 07.8	+0.4
BGD				eSg	Sg	01 34 12.9	+1.2
BGD	**Bogdanovka**	0.33	233	P	Pg	01 34 07.8	+0.4
BGD				S	Sg	01 34 12.9	+1.2
AKH	**Akhalkalaki**	0.34	261	Pg	Pg	01 34 07.8	+0.2
AKH				Sg	Sg	01 34 12.5	+0.3
AKH	**Akhalkalaki**	0.34	261	ePg	Pg	01 34 07.8	+0.2
AKH				eSg	Sg	01 34 12.9	+0.8
AKH	**Akhalkalaki**	0.34	261	P	Pg	01 34 07.8	+0.2
AKH				S	Sg	01 34 12.9	+0.8
SEAG	**Tbilisi Sea**	0.71	65	ePg	Pg	01 34 14.4	-0.1
SEAG	**Tbilisi Sea**	0.71	65	P	Pg	01 34 14.4	-0.1
EAK	**Akyaka**	0.82	198	P	Pg	01 34 16.3	-0.2
EAK				S	Sg	01 34 27.0	-0.2
ABS	**Abastumani**	0.90	289	ePg	Pg	01 34 17.6	-0.4
ABS				eSg	Sb	01 34 30.1	-0.7
ABS	**Abastumani**	0.90	289	P	Pg	01 34 17.6	-0.4
ABS				S	Sb	01 34 30.1	-0.7
EPOS	**Posof**	0.91	273	P	Pg	01 34 18.2	-0.2
EPOS				i AML	AML	01 34 37.0	
	comp=N,119nm,0.5s						
AHAN	**Ardahan-Merkez**	1.04	254	P	Pg	01 34 20.6	-0.1
DGRG	**David-gareji**	1.07	90	P	Pg	01 34 21.2	-0.3
DGRG				S	Sb	01 34 36.4	+0.5
GUDG	**Gudauri**	1.08	22	ePg	Pg	01 34 21.0	-0.5
GUDG				eSg	Sb	01 34 35.9	-0.3
GUDG	**Gudauri**	1.08	22	P	Pg	01 34 21.0	-0.5
GUDG				S	Sb	01 34 35.9	-0.3
DIGO	**Kars**	1.13	203	P	Pg	01 34 20.4	-2.2
DIGO				S	Sg	01 34 36.4	-0.9
TKB	**Tkibuli**	1.13	322	ePg	Pg	01 34 22.1	-0.5
TKB				eSg	Sb	01 34 37.7	0.0
TKB	**Tkibuli**	1.13	322	P	Pg	01 34 22.1	-0.5
TKB				S	Sb	01 34 37.7	0.0
ONI	**Oni**	1.18	342	Pn	Pb	01 34 22.7	-0.9
ONI				Sn	Sn	01 34 39.4	-0.7
ONI	**Oni**	1.18	342	ePg	Pb	01 34 22.6	-1.0
ONI				eSg	Sg	01 34 38.9	0.0
ONI	**Oni**	1.18	342	P	Pb	01 34 22.6	-1.0
ONI				S	Sg	01 34 38.9	0.0
PNSH	**Pansheti**	1.27	23	P	Pn	01 34 24.5	-0.6
LACR	**Lac**	1.39	11	ePg	Pb	01 34 26.7	-0.4
LACR				eSg	Sg	01 34 45.4	-0.1
GNI	**Garni**	1.45	155	Pn	Pn	01 34 27.1	-0.4
GNI				Sn	Sb	01 34 47.1	+0.4
GNI	**Garni**	1.45	155	ePg	Pb	01 34 28.0	-0.1
GNI				eSg	Sg	01 34 48.4	+1.1
DIGR	**Digorskoe uzhe**	1.46	349	ePg	Pb	01 34 28.0	-0.4
DIGR				eSg	Sg	01 34 48.1	+0.4
SHTL	**Shatili**	1.49	37	P	Pb	01 34 28.5	-0.4
SHTL				S	Sb	01 34 47.8	-0.3
TASB	**TASBURUN-IGDIR**	1.50	171	Pn	Pn	01 34 27.7	-0.3
DAGI	**Agillar**	1.58	257	P	Pb	01 34 30.0	-0.3
DAGI				S	Sb	01 34 50.1	-0.3
IGDI	**IGDIR**	1.60	176	P	Pn	01 34 29.5	0.0
IGDI				S	Sb	01 34 50.9	-0.1
KORR	**Kora**	1.62	3	ePg	Pg	01 34 32.0	+0.1
KORR				eSg	Sg	01 34 54.3	+1.3
DDFL	**Dedoflistskaro**	1.64	90	P	Pb	01 34 31.4	+0.2
DDFL				S	Sg	01 34 55.7	+2.3
VLKR	**Vladikavkaz**	1.67	19	ePg	Pg	01 34 34.0	+1.1
VLKR				eSg	Sg	01 34 57.3	+2.7
BATM	**Batumi**	1.69	275	ePg	Pb	01 34 31.4	-0.8
BATM				eSg	Sb	01 34 53.1	-0.6
BATM	**Batumi**	1.69	275	P	Pb	01 34 31.4	-0.8
BATM				S	Sb	01 34 53.1	-0.6
DBOC	**Borcka**	1.72	267	P	Pb	01 34 31.8	-0.8
DBOC				S	Sb	01 34 54.4	0.0
DBOC				i AML	AML	01 34 57.0	
	comp=E,48nm,0.2s						
ARNR	**Ardon**	1.73	8	ePg	Pg	01 34 34.2	+0.1
ARNR				eSg	Sg	01 34 58.3	+1.8
KMGR	**Komgaron**	1.73	23	ePg	Pg	01 34 33.7	-0.4
KMGR				eSg	Sg	01 34 58.9	+2.4
DDEM	**Demirkent**	1.75	252	P	Pb	01 34 32.5	-0.8
DDEM				S	Sn	01 34 54.3	+0.1
DDEM				i AML	AML	01 35 01.0	
	comp=E,58nm,0.3s						
DDEM				i AML	AML	01 35 02.0	
	comp=N,88nm,0.3s						
DBAD	**Bademkaya**	1.75	256	P	Pb	01 34 32.9	-0.4
DBAD				S	Sb	01 34 55.4	-0.1
DBAD				i AML	AML	01 34 57.0	
	comp=E,43nm,0.4s						
LGD	**Lagodekhi**	1.76	77	ePg	Pb	01 34 32.7	-0.7
LGD				eSg	Sg	01 34 57.5	+0.1
LGD	**Lagodekhi**	1.76	77	P	Pb	01 34 32.7	-0.7
LGD				S	Sg	01 34 57.5	+0.1
LSNR	**Lesken**	1.81	357	ePg	Pg	01 34 35.4	-0.3
LSNR				eSg	Sg	01 35 00.9	+1.8
HOPA	**Hopa-Artvin**	1.88	268	Pn	Pn	01 34 33.0	-0.2
STDR	**Stavd-Durt**	1.91	3	ePg	Pg	01 34 37.3	0.0
STDR				eSg	Sg	01 35 03.5	+1.5
EATA	**Eleskirt**	1.94	215	P	Pb	01 34 36.7	0.0
EATA				S	Sn	01 35 00.3	+1.1
BTKR	**Batakoyurt**	1.96	13	ePg	Pg	01 34 38.0	-0.3
BTKR				eSg	Sg	01 35 06.3	+2.5
NEY	**Neytrino**	2.00	334	ePg	Pb	01 34 37.5	-0.1
NEY				eSg	Sb	01 35 03.4	+0.7
AGRB	**Hanur-Agry**	2.02	201	Pn	Pn	01 34 35.7	+0.3
BTLR	**Botlikh**	2.08	54	ePg	Pb	01 34 38.2	-0.7
	14nm,0.5s						
BTLR				eSg	Sb	01 35 06.0	+1.1
	57nm,0.6s						
HOMI	**Horasan**	2.10	228	P	Pb	01 34 39.9	+0.6
KOPR	**Koprukoy-ERZUR**	2.17	228	Pn	Pn	01 34 37.0	-0.3
GROC	**Groznyy**	2.21	38	ePn	Pb	01 34 41.9	+0.8
	3.0nm,0.5s						
GROC				eSn	Sg	01 35 12.6	+0.6
	20nm,0.5s						
XNZR	**Khunzakh**	2.32	61	ePn	Pb	01 34 42.6	-0.4
	16nm,0.4s						
XNZR				eSn	Sg	01 35 14.1	-1.4
	128nm,0.3s						
KBTC	**Kuba-Taba**	2.38	351	ePn	Pg	01 34 46.1	-0.4
KBTC				eSn	Sg	01 35 17.6	+0.2
KBZ	**Khabaz**	2.39	342	ePn	Pb	01 34 43.0	-1.1
KBZ				eSn	Sg	01 35 15.5	-2.2
CHOM	**Cayeli-Rize**	2.43	262	Pn	Pn	01 34 41.5	+0.7
GNBR	**Gunib**	2.44	67	ePn	Pb	01 34 44.7	-0.3
	14nm,0.3s						
GNBR				eSn	Sg	01 35 17.1	-2.0
	27nm,0.7s						
KMKR	**Kumukh**	2.45	73	ePn	Pb	01 34 44.0	-1.2
	2.0nm,0.5s						
KMKR				eSn	Sb	01 35 15.9	+0.2
	59nm,0.3s						
UNCR	**Uncukul**	2.46	59	ePn	Pb	01 34 45.3	0.0
	9.0nm,0.4s						
UNCR				eSn	Sg	01 35 18.4	-1.5
	16nm,0.4s						
SHA1	**Shidzhatmaz**	2.46	338	ePn	Pb	01 34 44.1	-1.3
SHA1				eSn	Sb	01 35 16.8	+0.7
DOMR	**Dombai**	2.51	318	ePn	Pb	01 34 45.6	-0.6
DOMR				eSn	Sb	01 35 16.4	-0.9
ARKR	**Arakani**	2.54	62	ePn	Pb	01 34 45.9	-0.8
	1.0nm,0.4s						
ARKR				eSn	Sb	01 35 19.5	+1.4
	93nm,0.4s						
DLMR	**Dylym**	2.56	50	ePn	Pb	01 34 46.0	-1.0
	18nm,0.7s						
DLMR				eSn	Sb	01 35 20.0	+1.4
	8.0nm,0.5s						
DBC	**Dubki**	2.65	53	ePn	Pb	01 34 46.9	-1.6
	7.0nm,0.6s						
DBC				eSn	Sb	01 35 22.2	+1.0
	35nm,0.6s						
KIV	**Kislovodsk**	2.66	340	Pn	Pn	01 34 44.5	+0.5
KIV	**Kislovodsk**	2.66	340	ePn	Pb	01 34 46.3	-2.4
KIV				eSn	Sb	01 35 20.5	-1.0
BUJR	**Buynaksk**	2.72	59	ePn	Pb	01 34 48.6	-1.1
	9.0nm,0.4s						
BUJR				eSn	Sb	01 35 24.7	+1.5
	35nm,0.4s						
AKT	**Akhty**	2.85	88	ePn	Pn	01 34 48.4	+1.8
	8.0nm,0.4s						
AKT				eSn	Sb	01 35 24.7	-2.2
	18nm,0.7s						
ARXR	**Arkhyz**	2.88	318	ePn	Pn	01 34 48.6	+1.5
ARXR				eSn	Sb	01 35 26.1	-1.9
SGKR	**Sergokala**	2.94	69	ePn	Pb	01 34 51.4	-2.1
	1.0nm,0.2s						
SGKR				eSn	Sb	01 35 29.2	-0.4
	18nm,0.7s						
BAYT	**Aydıntepe-Bayb**	3.07	251	Pn	Pn	01 34 51.0	+1.2
ALER	**Alexandrovskoy**	3.38	347	ePn	Pn	01 34 52.6	-1.3
ALER				eSn	Sb	01 35 39.9	-2.4
VSLR	**Vesyoloye**	3.52	306	ePn	Pn	01 34 55.5	-0.3
VSLR				eSn	Sn	01 35 36.1	-1.4
GUZR	**Guzeripl'**	3.79	313	ePn	Pn	01 35 02.8	+3.2
GUZR				eSn	Sn	01 35 47.3	+3.0

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*ISK **24** 01:45:45.4, 33°.53N×27°.58E, h84^{km}, ML3.1/15*
*NIC **24** 01:45:51.3±0.0, 33°.79N×28°.01E, h32^{km}±35^{km}, Ml2.5/6*
ISC 24 01:45:45.5±1.8**, 33°.49N**±0°.10×**27°.66E**±0°.05**, h90**^{km}±53^{km}**,**
n29, σ1^{s}60/38**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	2.09	349	Pn	Pn	01 46 19.3	+0.3
KARP				Sn	Sn	01 46 43.7	-0.8
KARP	**Karpathos**	2.09	349	P	Pn	01 46 20.9	+1.9
KARP				S	Sn	01 46 44.9	+0.5
KARP				AML	AML	01 46 52.3	
	0.1nm,0.5s						
KARP				AML	AML	01 46 52.3	
	0.1nm,0.5s						
KARP				AML	AML	01 46 58.7	
	0.1nm,0.8s						
KARP				AML	AML	01 46 58.7	
	0.1nm,0.8s						
ARG	**Arkhangelos**	2.74	8	Pn	Pn	01 46 28.5	+0.9
ARG				Sn	Sn	01 47 00.7	+0.8
ARG	**Arkhangelos**	2.74	8	P	Pn	01 46 28.8	+1.2
ARG				S	Sn	01 46 57.7	-2.2
ARG				AML	AML	01 47 07.3	
ARG				AML	AML	01 47 07.3	
ARG				AML	AML	01 47 15.8	
ARG				AML	AML	01 47 15.8	
IDI	**Anoyia**	2.91	309	Pn	Pn	01 46 30.3	+0.4
IDI				Sn	Sn	01 47 02.9	-1.1
OSC1	**CSNet OBS 1**	3.02	89	S	Sn	01 47 05.9	-0.7
KSL	**Kastellorizon**	3.09	30	P	Pn	01 46 32.8	+0.6
KSL				S	Sn	01 47 05.4	-2.7
KSL				AML	AML	01 47 09.8	
KSL				AML	AML	01 47 09.8	
KSL				AML	AML	01 47 13.9	
	0.1nm,0.4s						
KSL				AML	AML	01 47 13.9	
	0.1nm,0.4s						
AKAS	**Kas**	3.17	30	Pn	Pn	01 46 34.4	+1.0
DAT	**Datca**	3.23	359	Pn	Pn	01 46 35.2	+1.0
GVD	**Gavdhos**	3.25	295	Pn	Pn	01 46 34.7	+0.3
GVDS	**Gavdos**	3.25	295	Pn	Pn	01 46 34.8	+0.4
TURN	**Turunc**	3.31	8	Pn	Pn	01 46 35.9	+0.7
FETY	**Fethiye**	3.34	20	Pn	Pn	01 46 36.9	+1.2
DALY	**Dalyan (Mula)**	3.41	13	Pn	Pn	01 46 37.7	+1.1
IMMV	**Iera Moni Meta**	3.62	304	Pn	Pn	01 46 40.4	+1.0
ELL	**Elmali**	3.73	29	Pn	Pn	01 46 42.3	+1.3
ELL	**Elmali**	3.73	29	P	Pn	01 46 42.9	+1.8
KORT	**Korkueli**	4.13	31	Pn	Pn	01 46 48.1	+1.6
AKMS	**Akamas**	4.16	67	P	Pn	01 46 47.6	+0.9
AKMS				S	Sn	01 47 31.3	-2.9
AKMS				AML	AML	01 47 38.8	
	0.2nm,0.5s						
AKMS				AML	AML	01 47 38.8	
	0.2nm,0.5s						
AKMS				AML	AML	01 47 40.0	
	0.3nm,0.5s						
AKMS				AML	AML	01 47 40.0	
	0.3nm,0.5s						
APMY	**Acipayam-Deniz**	4.19	18	Pn	Pn	01 46 48.6	+1.4
NATA	**Nata**	4.27	71	S	Sn	01 47 34.4	-2.4
ALFC	**Alefka**	4.41	67	P	Pn	01 46 52.3	+2.2
ALFC				S	Sn	01 47 38.1	-2.2
ALFC				AML	AML	01 47 46.4	
	0.2nm,0.5s						
ALFC				AML	AML	01 47 46.4	
	0.2nm,0.5s						
ALFC				AML	AML	01 47 47.2	
	0.2nm,0.3s						
ALFC				AML	AML	01 47 47.2	
	0.2nm,0.3s						
SZAC	**Souni**	4.51	72	P	Pn	01 46 54.0	+2.5
SZAC				S	Sn	01 47 40.9	-1.9
SZAC				AML	AML	01 47 48.5	
	0.2nm,0.4s						
SZAC				AML	AML	01 47 48.5	
	0.2nm,0.4s						
SZAC				AML	AML	01 47 49.7	
	0.3nm,0.3s						
SZAC				AML	AML	01 47 49.7	
	0.3nm,0.3s						
TROD	**Troodos**	4.55	70	S	Sn	01 47 42.0	-1.9
GAZI	**Gazipasa**	4.70	53	Pn	Pn	01 46 55.6	+1.5
ASGA	**Asgata**	4.81	73	S	Sn	01 47 49.1	-0.9
CSS	**Mathiatis**	4.92	71	S	Sn	01 47 51.0	-1.7
MVOU	**Mavrovouni**	5.17	71	P	Pn	01 47 02.2	+1.8
SEYD	**Seydisehir-KON**	5.18	40	Pn	Pn	01 47 02.2	+1.5

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*SOF **24** 02:02:39.2, 45°.56N×26°.46E, h100^{km}, MD3.1*
BUC 24 02:02:39.1±0.3**, 45°.62N×26°.51E, h85**^{km}±2^{km}**, ml3.3**/33**,**
30C-32D, Error ellipse: s-maj=1.8km s-min=1.5km
az=24.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BISRR	**Bisoca**	0.16	118	⇑P	Pn	02 02 52.1	+0.7
BISRR				⇑S	Sn	02 03 01.1	+0.6
NEHR	**Nehoiu**	0.25	217	⇓P	Pn	02 02 52.5	+0.7
NEHR				⇓S	Sn	02 03 02.0	+1.0
PLOR	**Plostina**	0.25	24	⇑P	Pn	02 02 52.2	+0.4
PLOR				⇑S	Sn	02 03 01.8	+0.6
VRI	**Vrincioaia**	0.29	32	⇓P	Pn	02 02 52.5	+0.6
VRI				⇑S	Sn	02 03 01.5	+0.1
COVR	**Voineasa-Covas**	0.31	316	⇓P	Pn	02 02 52.3	+0.3
COVR				⇓S	Sn	02 03 01.4	-0.2
ODBI	**Odobesti**	0.41	70	⇑P	Pn	02 02 53.6	+1.0
ODBI				⇑S	Sn	02 03 03.5	+0.9
MLR	**Muntele Rosu**	0.42	252	⇑P	Pn	02 02 53.5	+0.6
MLR				⇓S	Sn	02 03 03.9	+0.9
ISR	**Istrita**	0.51	177	⇑S	Sn	02 03 03.8	-0.3
SECR		0.67	208	⇓S	Sn	02 03 07.1	+0.5
OZUR		0.69	313	⇑P	Pn	02 02 55.0	-0.1
OZUR				⇑S	Sn	02 03 06.3	-0.8
TUDR		0.82	92	⇓S	Sn	02 03 10.1	+0.9
DOPR	**Dopca**	0.85	294	⇑P	Pn	02 02 56.6	-0.2
DOPR				⇓S	Sn	02 03 09.9	-0.2
IZVR	**Izvoarele**	0.89	95	⇓P	Pn	02 02 57.8	+0.7
IZVR				⇑S	Sn	02 03 10.5	-0.1
TESR	**Tescani**	0.89	6	⇑P	Pn	02 02 57.4	+0.2
TESR				⇓S	Sn	02 03 10.7	-0.1
SULR		0.96	191	⇑P	Pn	02 02 58.8	+0.8
SULR				⇑S	Sn	02 03 13.3	+1.2
VOIR		1.04	260	⇓P	Pn	02 02 59.2	+0.2
VOIR				⇓S	Sn	02 03 13.6	-0.4
MTUR	**Matau**	1.09	249	⇑P	Pn	02 03 00.1	+0.4
VLDR	**Vladesti**	1.12	78	⇑P	Pn	02 03 00.7	+0.8
VLDR				⇑S	Sn	02 03 16.4	+0.9
CFR	**Carcaliu**	1.23	111	⇓P	Pn	02 03 01.5	+0.3
CFR				⇓S	Sn	02 03 17.7	-0.2
ARR	**Arges**	1.34	260	⇑P	Pn	02 03 03.2	+0.5
ARR				⇓S	Sn	02 03 20.3	-0.1
BIZ	**Bicaz**	1.34	348	⇑S	Sn	02 03 21.3	+0.8
VASR	**Vaslui**	1.35	41	⇓S	Sn	02 03 20.9	+0.3
HARR	**Harsova**	1.37	132	⇑P	Pn	02 03 03.5	+0.6
SGRR	**Singureni**	1.45	195	⇓S	Sn	02 03 23.9	+1.2
RASA	**Rasa**	1.48	162	⇓S	Sn	02 03 23.9	+0.5
TLBR	**Topalu**	1.53	134	⇓P	Pn	02 03 05.7	+0.6
TLBR				⇓S	Sn	02 03 24.7	0.0
HUMR	**Humele**	1.54	225	⇓P	Pn	02 03 05.2	+0.1
HUMR				⇑S	Sn	02 03 24.5	-0.2
TPGR	**Topolog**	1.55	119	⇓P	Pn	02 03 05.6	+0.2
TPGR				⇓S	Sn	02 03 25.1	0.0
TLCR		1.68	104	⇓P	Pn	02 03 06.4	-0.6
TLCR				⇑S	Sn	02 03 27.9	-0.1
IAS	**Iasi**	1.73	24	⇑S	Sn	02 03 28.6	-0.6
ICOR	**Ion Corvin**	1.77	148	⇓P	Pn	02 03 08.5	+0.5
ICOR				⇑S	Sn	02 03 29.0	-1.0
TIRR	**Tirgusor**	1.78	130	⇓P	Pn	02 03 08.8	+0.5
TIRR				⇓S	Sn	02 03 29.7	-0.7
MFTR	**Murfatlar**	1.99	136	⇓P	Pn	02 03 11.4	+0.5
MFTR				⇑S	Sn	02 03 34.7	-0.4
MILM	**Milestii Mici**	2.06	50	eP	Pn	02 03 11.1	-0.8
	9.0nm,0.4s						
MILM				eS	Sn	02 03 33.8	-3.1
	9.0nm,0.2s						
KIS	**Kishinev**	2.11	49	eP	Pn	02 03 13.0	+0.4
	10.0nm,0.1s						
KIS				eS	Sn	02 03 37.3	-0.8
	23nm,0.2s						
BURAR	**Bucovina Array**	2.18	336	⇑P	Pn	02 03 14.8	+1.2
PSN	**Preselentsi**	2.28	148	i P	Pn	02 03 15.9	+1.1
SZH	**Strazhica**	2.39	190	i P	Pn	02 03 16.4	0.0
PRD	**Provadia**	2.51	165	i P	Pn	02 03 19.1	+1.2
MARR	**Marisel-Cluj**	2.58	295	⇓P	Pn	02 03 19.3	+0.4
MARR				⇓S	Sn	02 03 49.3	-0.2
ROIA	**ROIAK**	2.61	166	i P	Pn	02 03 20.1	+0.9
DRGR		2.88	295	⇑P	Pn	02 03 22.6	-0.3
HERR	**Herculane**	2.98	257	⇑P	Pn	02 03 23.7	-0.5
JMB	**Yambol**	3.16	179	i P	Pn	02 03 26.8	+0.2
SEV	**Sevastopol'**	5.18	99	⇓eP	Pn	02 03 53.9	-0.2
SEV	**Sevastopol'**	5.18	99	Pm		02 03 54.0	
	comp=Z,2.0nm,0.3s						
SEV	**Sevastopol'**	5.18	99	i S	Sn	02 04 51.6	-1.0
SEV	**Sevastopol'**	5.18	99	Sm		02 04 53.2	
	comp=N,4.0nm,0.4s						
SEV	**Sevastopol'**	5.18	99	Sm		02 04 53.2	
	comp=E,2.0nm,0.4s						
SUDU	**Sudak**	6.04	94	eS	Sn	02 05 10.9	-2.6
SUDU				Sm		02 05 15.1	
	comp=N,3.0nm,0.4s						
SUDU				Sm		02 05 15.1	
	comp=E,1.0nm,0.3s						

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*IDC **24** 02:24:17.4±0.9, 6°.76N×126°.78E, h0^{km}, mb3.7/7,*
mbtmp3.7/7, MS3.0/3, Error ellipse: s-maj=30.1km
s-min=17.6km az=53.0
*MAN **24** 02:24:23.1, 6°.40N×126°.30E, h12^{km}, mb4.8, ML3.7, MS3.7*
ISC 24 02:24:19.3±1.6**, 6°.48N**±0°.05×**126°.30E**±0°.06**, h13**^{km}±10^{km}**,**
n21, σ1^{s}55/27**, mb3.7**/7**, 7C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	0.47	355	⇑eP	Pn	02 24 34.0	+2.3
MATI				eS	Sn	02 24 40.6	+0.7
DAV	**Davao City (W)**	0.93	310	Pg	Pn	02 24 41.3	+3.3
	88nm,0.3s,baz=12,slow=3.6,SNR=10						
DAV				Lg	Lg	02 24 53.0	

	191nm,0.3s,baz=176,slow=22,SNR=25						
CDOP	**Cateel, Davao**	**1.31**	**6**	⇑*i*P	**Pg**	**02 24 45.2**	**+0.8**
KCP	**Kidapawan**	**1.31**	**294**	⇓*e*P	**Pg**	**02 24 46.3**	**+1.8**
KCP				*i* S	**Sg**	**02 25 02.3**	**+0.7**
GSPH	**General Santos**	**1.39**	**254**	⇓*i*P	**Pg**	**02 24 45.0**	**-1.1**
GSPH				*i* S	**Sg**	**02 25 02.6**	**-1.7**
BIPH	**Bislig**	**1.70**	**2**	⇑*i*P	**Pb**	**02 24 50.7**	**+0.4**
BIPH				*i* S	**Sg**	**02 25 14.0**	**+0.1**
SKMP	**Bagumbayan, Su**	**1.74**	**271**	⇑*e*P	**Pg**	**02 24 52.2**	**-0.5**
SKMP				*e*S	**Sn**	**02 25 10.2**	**-1.1**
CTBH	**Cotabato--PC H**	**2.17**	**290**	⇑*i*P	**Pg**	**02 25 00.4**	**-0.4**
CTBH				*i* S	**Sn**	**02 25 21.7**	**-0.1**
BUTP	**Butuan**	**2.56**	**345**	⇓*e*P	**Pg**	**02 25 06.8**	**-1.7**
BUTP				*e*S	**Sg**	**02 25 39.2**	**-2.6**
GLSP	**General Luna,**	**3.29**	**357**	⇑*e*P	**Pb**	**02 25 16.2**	**-1.3**
GLSP				*e*S	**Sb**	**02 25 56.5**	**-1.0**
SCPH	**Surigao**	**3.38**	**346**	⇑*e*P	**Pb**	**02 25 20.6**	**+1.5**
SCPH				*e*S	**Sg**	**02 26 07.2**	**-0.8**
KAPI	**Kappang**	**13.15**	**210**	LR	LR	02 32 32.2	
	comp=Z,67nm,18.9s,baz=90,slow=36						
JOW	**Kunigami**	**20.33**	**5**	LR	LR	02 36 01.4	
	comp=Z,50nm,19.9s,baz=48,slow=35						
WRA	**Warramunga Arr**	**27.42**	**163**	P	**P**	**02 30 06.6**	**+1.7**
	0.4nm,0.5s,baz=342,slow=10,SNR=4.4						
	0.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**29.19**	**297**	LR	LR	02 41 42.3	
	comp=Z,18nm,21.7s,baz=200,slow=35						
ASAR	**Alice Springs**	**30.87**	**166**	P	**P**	**02 30 37.0**	**+1.4**
	0.4nm,0.4s,baz=343,slow=6.9,SNR=2.3						
	0.4nm,0.4s						
STKA	**Stephens Creek**	**40.84**	**160**	P	**P**	**02 32 01.4**	**+0.5**
	2.2nm,0.8s,baz=353,slow=16,SNR=4.2						
	2.2nm,0.8s						
SONM	**Songino Array**	**44.58**	**341**	P	**P**	**02 32 29.9**	**-1.3**
	0.2nm,0.3s,baz=168,slow=7.4,SNR=2.0						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**55.08**	**324**	P	**P**	**02 33 51.4**	**+0.4**
	1.3nm,0.7s,baz=108,slow=8.4,SNR=16						
	1.3nm,0.7s						
ILAR	**Eielson Array**	**82.83**	**26**	P	**P**	**02 36 41.6**	**-1.5**
	0.1nm,0.6s,baz=229,slow=5.5,SNR=4.4						
	0.1nm,0.6s						
YKA	**Yellowknife Ar**	**97.19**	**24**	P	**P**	**02 37 49.7**	**-1.8**
	0.2nm,0.9s,baz=288,slow=4.3,SNR=2.8						
	0.2nm,0.9s						

BJI ***24*** *02:43:47.7±0.0,36°.25N×142°.51E,h6*^{km}*,mb4.6/65, mB4.9/47,Ms4.7/62,Ms7 4.5/60*

IDC ***24*** *02:43:48.6±0.6,36°.03N×142°.48E,h0*^{km}*,mb4.2/22, mbtmp4.2/28,ML3.5/5,MS4.0/56,Error ellipse: s-maj=14.6km s-min=13.2km az=116.0*

NIED ***24*** *02:43:50.9,36°.18N×142°.54E,h58*^{km}*,MW4.6,Moment Tensor Solution. s3 Moment tensor: Scale* 10^{15}*Nm;* M_{rr}*7.09;* $M_{\theta\theta}$*-0.20;* $M_{\phi\phi}$*-6.89;* $M_{r\theta}$*2.67;* $M_{\theta\phi}$*-3.97;* $M_{\phi r}$*4.28; Fault plane solution:* M_0*9.39000×*10^{15} *NP1:*ϕ_s*30.00000°, δ61.00000°,λ95.00000°. NP2:*ϕ_s*199.00000°,δ29.00000°, λ81.00000°.*

NEIC ***24*** *02:43:51.0±1.5,36°.17N±0°.06×142°.5E±0°.1,h10*^{km}*±1*^{km}*, mb4.8/71 Error ellipse: s-maj=14.0km s-min=10.1km az=105.0*

JMA ***24*** *02:43:50.9±0.3,36°.2N±0°.6×14°3E±°,h58*^{km}*,MD4.7/33, MW4.7/33,FAR E OFF KANTO*

BGR ***24*** *02:44:10.5,38°.00N×143°.50E,h33*^{km}*,mb4.5*

ISC 24 02:43:51.1±0.7**,36°.17N**±0°.04×**142°.50E**±0°.04**,h15**^{km}±3^{km}**, n272,**σ1^{s}**.52**/205**,mb4.7**/94**,MS4.2**/72**,1C-4D,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**1.41**	**251**	P	**Pn**	**02 44 15.3**	**-0.9**
CHOJ				*e*S	**Sn**	**02 44 33.2**	**-1.4**
CHOJ	**Chosi**	**1.41**	**251**	A	A	02 44 15.3	
	comp=E,12nm,6.2s,comp=E,11nm,4.0s						
JHYU	**Hitachinakayam**	**1.56**	**277**	P	**Pn**	**02 44 17.3**	**-1.0**
JHYU				*e*S	**Sn**	**02 44 37.1**	**-1.1**
JHYU	**Hitachinakayam**	**1.56**	**277**	A	A	02 44 17.3	
	comp=E,14nm,5.2s,comp=E,11nm,7.7s						
JIHU	**Itakohorinouch**	**1.61**	**263**	*e*P	**Pn**	**02 44 18.6**	**-0.5**
JIHU	**Itakohorinouch**	**1.61**	**263**	A	A	02 44 18.6	
	comp=E,42nm,5.2s,comp=E,32nm,6.6s						
JHO	**Hitachi**	**1.62**	**286**	P	**Pn**	**02 44 17.8**	**-1.4**
JHO	**Hitachi**	**1.62**	**286**	A	A	02 44 17.8	
	comp=E,7.0nm,4.3s,comp=E,7.0nm,4.3s						
ONAJ	**Iwakimizuishiy**	**1.66**	**305**	P	**Pn**	**02 44 18.4**	**-1.3**
ONAJ	**Iwakimizuishiy**	**1.66**	**305**	A	A	02 44 18.4	
	comp=E,11nm,8.7s,comp=E,9.0nm,9.7s						
JSMT	**Sammumatsuo**	**1.75**	**253**	A	A	02 44 20.0	
	comp=E,40nm,6.3s,comp=E,34nm,5.8s						
JFK	**Kawauchi**	**1.77**	**313**	P	**Pn**	**02 44 19.8**	**-1.6**
JFK				*e*S	**Sn**	**02 44 41.5**	**-2.1**
JFK	**Kawauchi**	**1.77**	**313**	A	A	02 44 19.8	
	comp=E,9.0nm,5.4s,comp=E,8.0nm,7.7s						
JYT	**Yasato**	**1.87**	**273**	A	A	02 44 21.7	
	comp=E,6.0nm,10.5s,comp=E,10.0nm,4.4s						
BSO1	**Boso 1**	**1.96**	**220**	P	**Pn**	**02 44 23.0**	**-0.4**
JCN	**Nagara**	**2.01**	**249**	A	A	02 44 23.8	
	comp=E,31nm,4.4s,comp=E,32nm,4.9s						
BSO3	**Boso 3**	**2.12**	**231**	P	**Pn**	**02 44 25.5**	**-0.3**
JKUC	**kamogawauchiur**	**2.13**	**242**	A	A	02 44 25.4	
	comp=E,10.0nm,12.6s,comp=E,11nm,5.0s						
JMM	**Marumori**	**2.18**	**322**		**Pn**	**02 44 25.4**	**-1.5**
JMM	**Marumori**	**2.18**	**322**	P	**Pn**	**02 44 25.4**	**-1.5**
JMM				S	**Sn**	**02 44 51.5**	**-2.1**
JOTO	**OTAMA OYAMA**	**2.23**	**309**	P	**Pn**	**02 44 27.2**	**-0.3**
JOTO				*e*S	**Sn**	**02 44 55.2**	**+0.4**
JOTO	**OTAMA OYAMA**	**2.23**	**309**	A	A	02 44 27.2	
	comp=E,11nm,1.5s,comp=E,13nm,1.3s						
JSB	**Shiboa**	**2.23**	**292**	A	A	02 44 26.7	
	comp=E,15nm,4.1s,comp=E,15nm,4.8s						
TATJ	**Tateyama 2**	**2.41**	**243**	A	A	02 44 29.4	
	comp=E,15nm,16.1s,comp=E,14nm,3.8s						
JAG	**Ashikaga**	**2.48**	**277**	P	**Pn**	**02 44 30.0**	**-1.0**
JYO	**Yokosk**	**2.49**	**249**	A	A	02 44 30.5	
	comp=E,15nm,4.2s,comp=E,14nm,8.1s						
JFY	**Yanaizu**	**2.56**	**300**	A	A	02 44 31.4	
	comp=E,5.0nm,6.5s,comp=E,4.0nm,5.7s						
JOU	**Okura**	**2.64**	**327**	A	A	02 44 32.2	
	comp=E,8.0nm,4.4s,comp=E,9.0nm,6.6s						
JOFO	**Osakifurukawao**	**2.74**	**333**	A	A	02 44 33.5	
	comp=E,31nm,3.2s,comp=E,20nm,3.3s						
JYS	**Shirataka**	**2.83**	**317**	A	A	02 44 34.9	
	comp=E,6.0nm,3.1s,comp=E,6.0nm,1.7s						
JRY	**Ryogami san**	**2.92**	**268**	P	**Pn**	**02 44 36.2**	**-0.9**
JOD2	**Odawara 2**	**2.92**	**253**	P	**Pn**	**02 44 36.3**	**-0.8**
JOD2				*e*S	**Sn**	**02 45 12.8**	**+0.8**
JMK	**Ichinoseki**	**2.96**	**340**	*e*P	**Pn**	**02 44 36.7**	**-0.9**
JMK				*e*S	**Sn**	**02 45 11.2**	**-1.7**
JNS	**Sasagawa**	**3.03**	**304**	*e*S	**Sn**	**02 45 16.1**	**+1.3**
JNS	**Sasagawa**	**3.03**	**304**	A	A	02 45 16.1	
	comp=E,4.0nm,6.8s,comp=E,3.0nm,5.5s						
JGK	**Kuni**	**3.14**	**278**	A	A	02 44 39.6	
	comp=E,4.0nm,4.6s,comp=E,4.0nm,5.5s						
JYK	**Kaneyama**	**3.23**	**329**	P	**Pn**	**02 44 40.4**	**-1.0**
MJAR	**Matsushiro Arr**	**3.48**	**277**	Pn	**Pn**	**02 44 44.5**	**-0.3**
	2.6nm,0.3s,baz=100,slow=7.6,SNR=69						
MJAR				Sn	**Sn**	**02 45 27.5**	**+1.6**
	1.2nm,0.3s,baz=103,slow=8.9,SNR=4.8						
MJAR				LR	LR	02 46 26.3	
	comp=Z,2μm,20.3s,baz=106,slow=45						
	58nm,0.8s						
MAJO	**Matsushiro**	**3.49**	**277**	Pn	**Pn**	**02 44 45.1**	**+0.3**
MJB9	**Matsu-Tunnel**	**3.49**	**277**	Pn	**Pn**	**02 44 46.3**	**+1.3**
JYYZ	**Yamagatayuza**	**3.50**	**325**	A	A	02 44 44.3	
	comp=E,21nm,4.1s,comp=E,30nm,6.2s						
JRG	**Rokugo**	**3.55**	**336**	A	A	02 44 44.9	
	comp=E,5.0nm,4.4s,comp=E,6.0nm,4.9s						
JHJ2	**Mitsune**	**3.77**	**217**	Pn	**Pn**	**02 44 46.6**	**-2.1**
JSD	**Sado**	**3.87**	**300**		**Pn**	**02 44 50.6**	**+0.5**
JGF	**Kuroka**	**4.21**	**264**	Pn	**Pn**	**02 44 53.8**	**-1.1**
INU	**Inuyama**	**4.53**	**261**	Pn	**Pn**	**02 44 57.8**	**-1.4**
JTM	**Tenmabayashi**	**4.75**	**347**	Pn	**Pn**	**02 45 02.3**	**+0.2**
ERM	**Erimo**	**5.86**	**5**		**Pn**	**02 45 15.8**	**-1.6**
JMN	**Monobe**	**7.49**	**254**	Pn	**Pn**	**02 45 38.8**	**-1.0**
JHS	**Saijyo**	**7.73**	**264**	Pn	**Pn**	**02 45 42.9**	**-0.4**
ASAJ	**Asahikawa**	**7.94**	**1**	Pn	**Pn**	**02 45 45.3**	**-0.7**
	1.4nm,0.3s,baz=191,slow=17,SNR=2.5						
ASAJ				Sn	**Sn**	**02 47 13.7**	**-1.9**
	baz=275,slow=25						
	8.0nm,0.3s						
JKA	**Kamikawa-asahi**	**7.94**	**1**	Pn	**Pn**	**02 45 45.6**	**-0.4**
JCJ	**Chichijima**	**9.05**	**182**	Pn	**Pn**	**02 45 57.6**	**-3.7**
	30nm,0.3s,baz=278,slow=20,SNR=13						
JCJ				Sn	Sn	02 47 33.0	-10
	11nm,0.3s,baz=271,slow=22,SNR=2.3						
JNU	**Nakatsue**	**10.04**	**256**	Pn	**Pn**	**02 46 14.5**	**-0.5**
	0.1nm,0.3s,baz=106,slow=4.1,SNR=4.3						
JNU				LR	LR	02 50 36.6	
	comp=Z,1μm,19.2s,baz=78,slow=41						
	12nm,0.9s						
YSS	**Yuzh-Sakhalins**	**10.78**	**1**	Pn	**Pn**	**02 46 24.4**	**-0.4**
USA0B	**Ussuriysk Arra**	**11.35**	**318**	Pn	**Pn**	**02 46 33.6**	**+0.9**
USRK	**Ussuriysk Ar.**	**11.35**	**318**	Pn	**Pn**	**02 46 32.4**	**-0.3**
	0.7nm,0.3s,baz=122,slow=14,SNR=13						
USRK				LR	LR	02 50 41.2	
	comp=Z,1μm,18.6s,baz=126,slow=36						
	6.1nm,0.6s						
USRK	**Ussuriysk Ar.**	**11.35**	**318**		**Pn**	**02 46 32.8**	**+0.1**
KSRS	**Korea Array**	**11.76**	**281**	Pn	**Pn**	**02 46 37.5**	**-0.8**
	0.2nm,0.3s,baz=92,slow=13,SNR=8.4						
KSRS				LR	LR	02 50 58.7	
	comp=Z,234nm,21.2s,baz=85,slow=36						
	5.9nm,0.9s						
KSAR	**Wonju Array Be**	**11.79**	**281**		**Pn**	**02 46 38.8**	**+0.1**
KS19	**Wonju Array Si**	**11.80**	**281**		**Pn**	**02 46 39.9**	**+0.9**
MDJ	**Mudanjiang**	**12.95**	**315**	P	**Pn**	**02 46 56.5**	**+1.9**
MDJ				pP		02 47 02.1	
MDJ				S	**Sn**	**02 49 19.3**	**+0.9**
MDJ				ScP	**ScP**	**02 56 03.4**	**+2.6**
MDJ				PcS	**PcS**	**02 56 05.8**	**+3.4**
MDJ				ScS	**ScS**	**02 59 38.3**	**+1.2**
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,230nm,9.0s						
MDJ				LR	LR		
	comp=N,1μm,12.3s						
MDJ				LR	LR		
	comp=E,1μm,13.9s						
MDJ				LR	LR		
	comp=Z,650nm,13.4s						
MDJ	**Mudanjiang**	**12.95**	**315**	Pn	**Pn**	**02 46 53.1**	**-1.4**
BNX	**BinXian**	**14.86**	**315**	⇓P	**Pn**	**02 47 17.9**	**-2.8**
BNX				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BNX				pmax	pmax		
	comp=Z,94nm,4.4s						
CN2	**Changchun**	**15.12**	**305**	P	**Pn**	**02 47 23.4**	**-0.7**
CN2				S	**Sn**	**02 50 07.3**	**-3.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,300nm,9.0s						
CN2				LR	LR		
	comp=N,2μm,13.0s						
CN2				LR	LR		
	comp=E,1μm,13.0s						
CN2				LR	LR		
	comp=Z,2μm,14.0s						
KLR	**Kul'dur**	**15.24**	**332**	Pn	**Pn**	**02 47 23.7**	**-2.0**
	0.2nm,0.3s,baz=179,slow=17,SNR=2.5						
KLR				LR	LR	02 53 13.8	
	comp=Z,678nm,18.6s,baz=144,slow=37						
DL2	**Dalian**	**16.78**	**286**	P	**Pn**	**02 47 43.9**	**-1.6**
DL2				S	**Sn**	**02 50 47.4**	**-4.2**
DL2				pmax	pmax		
	comp=Z,19nm,0.8s						
DL2				pmax	pmax		
	comp=Z,230nm,5.3s						
DL2				LR	LR		
	comp=N,630nm,12.5s						
DL2				LR	LR		
	comp=E,1μm,12.8s						
DL2				LR	LR		
	comp=Z,1μm,13.4s						
SSE	**Sheshan**	**18.45**	**260**	P	**P**	**02 48 05.4**	**-0.8**
SSE				S	**Sn**	**02 51 31.3**	**-0.8**
SSE				pmax	pmax		
	comp=Z,11nm,0.7s						
SSE				pmax	pmax		
	comp=Z,71nm,4.0s						
SSE				LR	LR		
	comp=N,380nm,16.1s						
SSE				LR	LR		
	comp=E,440nm,16.8s						
NJ2	**Nanjing**	**19.99**	**265**	*e*P	**P**	**02 48 24.3**	**+1.2**
NJ2				pP	**sP**	**02 48 28.1**	**+0.8**
NJ2				S	**S**	**02 52 09.1**	**+1.6**
NJ2				sS	**sS**	**02 52 12.3**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,340nm,11.7s						
NJ2				LR	LR		
	comp=N,1μm,15.2s						
NJ2				LR	LR		
	comp=E,460nm,13.7s						
NJ2				LR	LR		
	comp=Z,880nm,14.7s						
PEA0B	**Petropavlovsk-**	**20.02**	**27**	P	**P**	**02 48 20.1**	**-3.2**
PETK	**Petropavlovsk-**	**20.02**	**27**	P	Pn	02 48 24.8	-0.3
	5.8nm,1.1s,baz=213,slow=11,SNR=5.0						
PETK				LR	LR	02 57 40.2	
	comp=Z,180nm,18.6s,baz=211,slow=41						
	5.8nm,1.1s						
PETK	**Petropavlovsk-**	**20.02**	**27**	P	**P**	**02 48 21.7**	**-1.6**
PET	**Petropavlovsk**	**20.32**	**29**	P	**P**	**02 48 25.1**	**-1.4**
TIA	**Tai'an**	**20.47**	**278**	P	**P**	**02 48 26.5**	**-1.8**
TIA				S	**S**	**02 52 18.0**	**+1.0**
TIA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TIA				pmax	pmax		
	comp=Z,140nm,5.8s						
TIA				LR	LR		
	comp=N,850nm,12.2s						
TIA				LR	LR		
	comp=E,460nm,12.7s						
TIA				LR	LR		
	comp=Z,630nm,9.4s						
BJT	**Baijiatuau**	**21.05**	**288**	P	**P**	**02 48 33.0**	**-1.5**
HIA	**Hailar**	**21.13**	**315**	P	**P**	**02 48 36.3**	**+0.9**
XLT	**XiLinHaoTe**	**21.59**	**299**	*e*P	**P**	**02 48 38.3**	**-2.1**
XLT				S	**S**	**02 52 40.5**	**+1.3**
XLT				sS	Sn	02 52 47.0	-0.9
XLT				pmax	pmax		
	comp=Z,28nm,1.3s						
XLT				pmax	pmax		
	comp=Z,100nm,4.2s						
XLT				LR	LR		
	comp=E,2μm,13.5s						
XLT				LR	LR		
	comp=Z,2μm,14.9s						
HNS	**HongShan**	**22.27**	**281**	⇓P	**P**	**02 48 46.3**	**-1.3**
HNS				S	**S**	**02 52 52.4**	**+0.3**
HNS				pmax	pmax		
	comp=Z,14nm,0.9s						
HNS				LR	LR		
	comp=N,860nm,15.9s						
HNS				LR	LR		
	comp=E,770nm,13.0s						
HNS				LR	LR		
	comp=Z,1μm,13.5s						
GUMO	**Guam**	**22.58**	**174**	LR	LR	02 57 51.3	
	comp=Z,109nm,21.1s,baz=24,slow=38						
MA2	**Magadan**	**24.03**	**10**	LR	LR	02 59 28.9	
	comp=Z,351nm,18.5s,baz=184,slow=39						
LYN	**LuoYang**	**24.50**	**275**	⇑P	**P**	**02 49 10.4**	**+0.5**
LYN				S	**S**	**02 53 30.6**	**+0.8**
LYN				pmax	pmax		
	comp=Z,17nm,0.8s						
LYN				LR	LR		
	comp=N,880nm,13.2s						
LYN				LR	LR		
	comp=E,440nm,12.3s						
LYN				LR	LR		
	comp=Z,780nm,13.3s						
HHC	**Hu-ho-hao-te**	**24.59**	**290**	*e*P	**P**	**02 49 11.3**	**+0.6**
HHC				S	**S**	**02 53 32.3**	**+1.0**
HHC				sS	sS	02 53 42.4	+5.9
HHC				pmax	pmax		
	comp=Z,35nm,0.9s						
HHC				pmax	pmax		
	comp=Z,300nm,5.3s						
HHC				LR	LR		
	comp=N,1μm,13.6s						
HHC				LR	LR		
	comp=E,1μm,14.6s						
HHC				LR	LR		
	comp=Z,2μm,13.3s						
BTO	**Baotou**	**25.76**	**290**	*e*P	**P**	**02 49 23.4**	**+2.1**
BTO				S	**S**	**02 53 55.8**	**+5.8**
BTO				pmax	pmax		
	comp=Z,79nm,1.0s						
BTO				pmax	pmax		
	comp=Z,620nm,9.1s						
BTO				LR	LR		
	comp=N,2μm,14.9s						
BTO				LR	LR		
	comp=E,3μm,13.5s						
BTO				LR	LR		
	comp=Z,3μm,14.6s						
H11N2	**WAKE ISLAND Hy**	**26.95**	**121**	T	T	03 17 38.9	
	baz=312,slow=75,SNR=47						
H11N1	**WAKE ISLAND Hy**	**26.96**	**121**	T	T	03 17 39.5	
	baz=312,slow=75,SNR=24						
H11N3	**WAKE ISLAND Hy**	**26.97**	**121**	T	T	03 17 40.5	
	baz=312,slow=75,SNR=19						
YAK	**Yakutsk**	**27.11**	**347**	LR	LR	03 00 30.5	
	comp=Z,483nm,18.6s,baz=127,slow=37						
XAN	**Xi'an**	**27.48**	**276**	*e*P	**P**	**02 49 36.6**	**-0.3**
XAN				pP	pwP	02 49 47.8	+1.0
XAN				S	**S**	**02 54 16.9**	**-0.3**
XAN				pmax	pmax		
	comp=Z,18nm,1.3s						
XAN				LR	LR		
	comp=N,400nm,14.2s						
XAN				LR	LR		
	comp=E,370nm,13.7s						
XAN				LR	LR		
	comp=Z,500nm,16.7s						
SEY	**Seymchan**	**27.48**	**10**	P	**P**	**02 49 38.9**	**+2.4**
	2.7nm,0.8s,baz=146,slow=14,SNR=4.9						
	2.7nm,0.8s						
H11S1	**WAKE ISLAND Hy**	**27.66**	**123**	T	T	03 18 34.5	
	baz=314,slow=76,SNR=53						
H11S3	**WAKE ISLAND Hy**	**27.66**	**123**	T	T	03 18 35.1	
	baz=314,slow=76,SNR=59						
H11S2	**WAKE ISLAND Hy**	**27.67**	**123**	T	T	03 18 34.9	
	baz=314,slow=76,SNR=47						
SHEM	**Shemya Is, Ala**	**27.68**	**43**	LR	LR	02 59 26.8	
	comp=Z,149nm,20.7s,baz=310,slow=34						
ENH	**Enshi**	**28.15**	**268**	P	**P**	**02 49 41.5**	**-1.4**
ULN	**Ulaanbaatar**	**28.57**	**305**	P	**P**	**02 49 46.6**	**0.0**
ULN				IAmb	IAmb	02 50 06.3	
	comp=Z,18nm,1.1s						
SONM	**Songino Array**	**29.00**	**305**	P	**P**	**02 49 50.5**	**+0.1**
	comp=Z,10nm,1.0s,baz=109,slow=8.3,SNR=32						
	comp=Z,10nm,1.0s						
SONM	**Songino Array**	**29.00**	**305**	P	**P**	**02 49 50.4**	**0.0**
SONM				IAmb	IAmb	02 50 03.1	
	comp=Z,15nm,1.1s						
LZH	**Lanzhou**	**31.09**	**281**	*e*P	**P**	**02 50 09.1**	**+0.1**
LZH				pP	sP	02 50 13.3	+0.3
LZH				sP	pwP	02 50 17.3	-1.7
LZH				S	**S**	**02 55 12.3**	**-1.7**
LZH				sS	sS	02 55 18.8	-0.5
LZH				SS	**SnSn**	**02 56 55.3**	**+0.1**
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				pmax	pmax		
	comp=Z,260nm,4.1s						
LZH				LR	LR		
	comp=Z,260nm,11.3s						
LZH				LR	LR		
	comp=Z,890nm,12.9s						
LZH				LR	LR		
	comp=Z,880nm,14.1s						
GYA	**Guiyang**	**31.96**	**263**	*e*P	**P**	**02 50 16.8**	**+0.1**
GYA				S	**S**	**02 55 29.8**	**+2.1**
GYA				pmax	pmax		
	comp=Z,23nm,0.7s						
GYA				LR	LR		
	comp=Z,450nm,13.5s						
GYA				LR	LR		
	comp=Z,710nm,13.4s						
GYA				LR	LR		
	comp=Z,930nm,13.1s						
CD2	**Chengdu**	**32.56**	**272**	P	**P**	**02 50 24.0**	**+2.1**
CD2				S	**S**	**02 55 38.9**	**+1.9**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CD2				pmax	pmax		
	comp=Z,90nm,9.8s						
CD2				LR	LR		
	comp=Z,470nm,11.5s						
CD2				LR	LR		
	comp=Z,330nm,14.2s						
CD2				LR	LR		
	comp=Z,730nm,15.7s						
QIZ	**Qiongzhong**	**33.39**	**248**	P	**P**	**02 50 28.4**	**-0.8**
QIZ				S	**S**	**02 55 56.0**	**+6.1**
QIZ				pmax	pmax		
	comp=Z,160nm,4.8s						
QIZ				LR	LR		
	comp=Z,370nm,14.8s						
QIZ				LR	LR		
	comp=Z,270nm,12.3s						
QIZ				LR	LR		
	comp=Z,310nm,16.0s						
GTA	**Gaotai**	**33.66**	**289**	*e*P	**P**	**02 50 32.3**	**+0.8**
GTA				sP	pwP	02 50 43.1	+1.5
GTA				pmax	pmax		
	comp=Z,12nm,1.3s						
GTA				LR	LR		
	comp=Z,380nm,13.5s						
GTA				LR	LR		
	comp=Z,310nm,13.5s						
GTA				LR	LR		
	comp=Z,280nm,13.8s						
BILL	**Bilibino**	**34.62**	**15**	P	**P**	**02 50 37.7**	**-1.6**
KMI	**Kunming**	**35.71**	**263**	⇓P	**P**	**02 50 49.1**	**-0.4**
KMI				sP	sP	02 50 54.9	+1.6
KMI				PP	**PP**	**02 52 10.8**	**+0.2**
KMI				S	**S**	**02 56 22.3**	**-3.8**
KMI				pmax	pmax		
	comp=Z,18nm,0.6s						
KMI				LR	LR		
	comp=Z,230nm,12.8s						
KMI				LR	LR		
	comp=Z,330nm,13.9s						
KMI				LR	LR		
	comp=Z,600nm,15.1s						
PZH	**PanZhiHua**	**35.90**	**266**	P	**P**	**02 50 52.8**	**+1.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,4.3s						
TIXI	**Tiksi**	**36.26**	**353**	P	**P**	**02 50 53.9**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=270,slow=23,SNR=1.1						
TIXI				LR	LR	03 06 42.2	
	comp=Z,260nm,18.3s,baz=332,slow=38						
	comp=Z,0.6nm,0.3s						
MYLDM	**Lahad Datu**	**37.91**	**221**	P	**P**	**02 51 06.6**	**-1.4**
MYLDM				IAmb	IAmb	02 51 12.7	
	comp=Z,26nm,1.1s						
GOMU	**GeErMu**	**38.18**	**285**	P	**P**	**02 51 11.1**	**+0.6**
GOMU				pP	sP	02 51 16.1	+1.5
GOMU				sP	pwP	02 51 17.5	-3.1
GOMU				S	**S**	**02 56 59.6**	**-4.1**
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,95nm,4.5s						
GOMU				LR	LR		
	comp=Z,120nm,10.4s						
GOMU				LR	LR		
	comp=Z,200nm,12.2s						
GOMU				LR	LR		
	comp=Z,200nm,12.6s						
TNCH	**TengChong**	**39.16**	**266**	*e*P	**P**	**02 51 17.9**	**-0.7**
TOLI2	**Tolitoli**	**40.28**	**215**	P	**P**	**02 51 23.9**	**-3.9**
ANM	**Nome**	**41.88**	**31**	P	**P**	**02 51 37.9**	**-2.6**
ANM				IAmb	IAmb	02 51 54.5	
	comp=Z,28nm,2.0s						
CHTO	**Chiang Mai**	**41.94**	**258**	P	**P**	**02 51 39.8**	**-1.8**
WMQ	**Urumqi**	**42.01**	**298**	*e*P	**P**	**02 51 42.6**	**+0.7**
WMQ				sP	pwP	02 51 53.5	+1.5
WMQ				PcP	**PcP**	**02 53 38.1**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,22nm,0.9s						
WMQ				LR	LR		
	comp=Z,560nm,14.9s						
WMQ				LR	LR		
	comp=Z,190nm,16.1s						
WMQ				LR	LR		

	comp=Z,140nm,16.1s						
CMAR	**Chiang Mai Arr**	**42.14**	**257**	P	**P**	**02 51 42.5**	**-0.7**
	comp=Z,4.4nm,0.3s,baz=45,slow=7.8,SNR=7.8						
CMAR				LR	LR	03 11 09.5	
	comp=Z,136nm,19.6s,baz=60,slow=39						
	comp=Z,4.4nm,0.3s						
ZAA0	**Zalesovo Array**	**43.14**	**313**	P	**P**	**02 51 51.3**	**+0.4**
ZAA0				IAmb	IAmb	02 52 02.2	
	comp=Z,18nm,1.1s						
ZALV	**Zalesovo Beam**	**43.14**	**313**	P	**P**	**02 51 51.2**	**+0.4**
	comp=Z,5.5nm,0.8s,baz=98,slow=6.1,SNR=11						
ZALV				PcP	**PcP**	**02 53 40.4**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=108,slow=4.7,SNR=1.8						
ZALV				LR	LR	03 09 35.7	
	comp=Z,132nm,19.6s,baz=94,slow=36						
	comp=Z,5.5nm,0.8s						
SHL	**Shillong**	**44.28**	**271**	P	**P**	**02 51 59.6**	**-1.0**
SHL				IAmb	IAmb	02 52 25.9	
	comp=Z,5.4nm,0.5s						
NRIK	**Noril'sk**	**44.42**	**335**	P	**P**	**02 52 01.6**	**+0.7**
	comp=Z,1.2nm,0.4s,baz=88,slow=4.9,SNR=1.6						
	comp=Z,1.2nm,0.4s						
MK31	**Makanchi Array**	**45.32**	**303**	P	**P**	**02 52 08.2**	**-0.2**
MK31				IAmb	IAmb	02 52 20.4	
	comp=Z,14nm,1.0s						
MKAR	**Makanchi Array**	**45.32**	**303**	P	**P**	**02 52 08.6**	**+0.1**
	comp=Z,8.4nm,0.8s,baz=89,slow=9.0,SNR=36						
MKAR				LR	LR	03 11 04.4	
	comp=Z,117nm,18.4s,baz=107,slow=36						
	comp=Z,8.4nm,0.8s						
MAKZ	**Makanchi**	**45.53**	**303**	P	**P**	**02 52 11.0**	**+0.8**
BRDH	**Bariadhala**	**45.81**	**267**	LR	LR	03 12 07.0	
	comp=Z,148nm,20.1s,baz=96,slow=37						
TAPN	**Taplejung**	**46.88**	**275**	*e*P	**P**	**02 52 23.4**	**+2.1**
KURK	**Kurchatov**	**47.15**	**309**	P	**P**	**02 52 22.7**	**-0.1**
KURBB	**Kurchatov Arra**	**47.22**	**309**	LR	LR	03 12 54.6	
	comp=Z,150nm,18.9s,baz=153,slow=37						
H21K	**Melozitna Rive**	**47.31**	**31**	IAmb	IAmb	02 52 29.6	
	comp=Z,8.4nm,1.4s						
RAMN	**Ramite**	**47.95**	**275**	*e*P	**P**	**02 52 29.5**	**-0.1**
	comp=Z,22nm,0.8s						
JIRN	**Jiri**	**47.98**	**277**	*e*P	**P**	**02 52 30.7**	**+0.8**
GUN	**Gumba**	**48.12**	**277**	*e*P	**P**	**02 52 32.6**	**+1.6**
MLY	**Manley**	**48.12**	**32**	P	**P**	**02 52 30.1**	**-0.1**
HNR	**Honiara**	**48.24**	**157**	LR	LR	03 13 56.0	
	comp=Z,876nm,18.3s,baz=340,slow=38						
H23K	**Yukon River**	**48.66**	**31**	IAmb	IAmb	02 53 04.8	
	comp=Z,9.0nm,1.2s						
MDM	**Murphy Dome**	**49.19**	**32**	IAmb	IAmb	02 52 51.9	
	comp=Z,6.7nm,0.9s						
TARG	**Taragay, Kyrgy**	**49.57**	**297**	IAmb	IAmb	02 52 48.2	
	comp=Z,14nm,1.0s						
DANN	**Dangsing**	**49.63**	**279**	*e*P	**P**	**02 52 42.5**	**-0.1**
IL31		**49.76**	**32**	P	**P**	**02 52 43.4**	**+0.8**
IL31				IAmb	IAmb	02 52 53.6	
	comp=Z,21nm,1.9s						
ILAR	**Eielson Array**	**49.76**	**32**	P	**P**	**02 52 43.2**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=265,slow=5.9,SNR=22						
	comp=Z,1.8nm,0.8s						
KDJ	**Kajisay**	**49.91**	**298**	P	**P**	**02 52 44.8**	**+0.4**
MTN	**Manton Dam**	**49.91**	**195**	IAmb	IAmb	02 52 47.8	
	comp=Z,12nm,0.8s						
PYUN	**Piuthan**	**50.36**	**279**	*e*P	**P**	**02 52 47.8**	**-0.2**
BOOM	**Boomskoye usch**	**50.69**	**299**	P	**P**	**02 52 50.2**	**-0.1**
BOOM				IAmb	IAmb	02 53 03.0	
	comp=Z,12nm,1.0s						
NRN	**Naryn**	**50.95**	**297**	P	**P**	**02 52 52.1**	**-0.3**
NRN				IAmb	IAmb	02 53 05.0	
	comp=Z,12nm,1.4s						
KSH	**Kashi**	**51.56**	**295**	P	**P**	**02 52 59.8**	**+3.0**
KSH				pP	pwP	02 53 05.6	-1.2
KSH				PcP	**PcP**	**02 54 11.0**	**+0.3**
KSH				PcS	**PcS**	**02 58 09.9**	**+1.2**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KSH				LR	LR		
	comp=Z,340nm,12.7s						
KSH				LR	LR		
	comp=Z,370nm,15.0s						
KSH				LR	LR		
	comp=Z,550nm,14.9s						
AAK	**Ala-Archa**	**51.67**	**299**	LR	LR	03 16 09.1	
	comp=Z,218nm,19.4s,baz=68,slow=38						
AAK	**Ala-Archa**	**51.67**	**299**	P	**P**	**02 52 58.4**	**+0.8**
BVAR	**Borovoye Array**	**51.80**	**313**	LR	LR	03 17 41.5	
	comp=Z,194nm,18.4s,baz=80,slow=39						
BRVK	**Borovoye**	**51.86**	**313**	P	**P**	**02 52 59.1**	**+0.5**
BRVK				IAmb	IAmb	02 53 10.3	
	comp=Z,8.5nm,1.1s						
EPYK	**Eagle Plains**	**53.84**	**30**	IAmb	IAmb	02 53 27.1	
	comp=Z,9.4nm,0.9s						
KK31	**Karatay Array**	**54.32**	**301**	P	**P**	**02 53 17.6**	**+0.6**
KKAR	**Karatay Array**	**54.32**	**301**	P	**P**	**02 53 17.6**	**+0.6**
INK	**Inuvik**	**54.76**	**27**	P	**P**	**02 53 19.7**	**+0.1**
BTK	**Batken**	**55.12**	**297**	P	**P**	**02 53 22.9**	**0.0**
BTK				IAmb	IAmb	02 53 34.5	
	comp=Z,9.1nm,0.9s						
NIL	**Nilore**	**55.72**	**289**	P	**P**	**02 53 26.3**	**-0.9**
NIL				IAmb	IAmb	02 53 39.3	
	comp=Z,6.1nm,0.7s						
CTA	**Charters Tower**	**56.06**	**176**	LR	LR	03 24 39.0	
	comp=Z,15nm,18.0s,baz=276,slow=44						
WB0	**Warramunga Arr**	**56.16**	**189**	P	**P**	**02 53 29.5**	**-0.8**
WB0				IAmb	IAmb	02 53 41.5	
	comp=Z,11nm,1.1s						
WRAB	**Tennant Creek**	**56.33**	**189**	P	**P**	**02 53 31.5**	**0.0**
WB2	**Warramunga Arr**	**56.34**	**189**	P	**P**	**02 53 30.8**	**-0.8**
WB2				IAmb	IAmb	02 53 42.8	
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**56.34**	**189**	P	**P**	**02 53 30.4**	**-1.2**
	comp=Z,7.8nm,1.0s,baz=4.4,slow=7.2,SNR=20						
	comp=Z,7.8nm,1.0s						
ARU	**Arti**	**57.59**	**319**	LR	LR	03 20 32.2	
	comp=Z,222nm,18.9s,baz=71,slow=38						
ARU	**Arti**	**57.59**	**319**	P	**P**	**02 53 39.9**	**-0.2**
KBL	**Kabul**	**58.55**	**292**	P	**P**	**02 53 47.7**	**+0.3**
KBL				IAmb	IAmb	02 53 59.1	
	comp=Z,12nm,1.1s						
ABKAR	**Akbulak array**	**59.17**	**311**	P	**P**	**02 53 50.7**	**-0.5**
ABKAR				IAmb	IAmb	02 54 02.9	
	comp=Z,10nm,1.0s						
AKTO	**Aktyubinsk**	**59.90**	**313**	LR	LR	03 22 48.3	
	comp=Z,176nm,18.1s,baz=52,slow=39						
ASAR	**Alice Springs**	**60.06**	**189**	P	**P**	**02 53 56.8**	**-0.8**
	comp=Z,3.8nm,0.9s,baz=6.8,slow=6.2,SNR=19						
ASAR				LR	LR	03 19 13.5	
	comp=Z,53nm,21.7s,baz=1.0,slow=36						
	comp=Z,3.8nm,0.9s						
ASAR	**Alice Springs**	**60.06**	**189**	P	**P**	**02 53 58.5**	**+0.8**
KIRV	**Kirov**	**61.46**	**323**	LR	LR	03 21 42.7	
	comp=Z,136nm,21.0s,baz=67,slow=37						
SPITS	**Spitsbergen Ar**	**61.54**	**349**	LR	LR	03 24 08.8	
	comp=Z,249nm,18.2s,baz=2.5,slow=39						
NOR	**Nord**	**61.97**	**357**	*e*P	**P**	**02 54 10.2**	**+0.3**
NOR				IAmb	IAmb	02 54 21.7	
	comp=Z,5.4nm,1.1s						
DZM	**Mont Dzumac**	**62.19**	**155**	LR	LR	03 22 28.6	
	comp=Z,68nm,18.0s,baz=27,slow=37						
PALK	**Pallekele**	**63.05**	**259**	LR	LR	03 22 03.1	
	comp=Z,71nm,21.4s,baz=150,slow=36						
RES	**Resolute Bay**	**63.22**	**15**	P	**P**	**02 54 19.2**	**+0.9**
RES				IAmb	IAmb	02 54 30.1	
	comp=Z,8.6nm,1.1s						
MSVF	**Nonsavu**	**63.28**	**142**	LR	LR	03 16 57.2	
	comp=Z,87nm,19.6s,baz=84,slow=32						
YKA	**Yellowknife Ar**	**64.12**	**30**	P	**P**	**02 54 25.3**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=298,slow=6.8,SNR=10						
	comp=Z,0.8nm,0.8s						
KLMR	**Klimovskoe**	**64.95**	**328**	*e*P	**P**	**02 54 31.3**	**+1.4**
KLMR				AMP		02 54 39.4	
	comp=Z,34nm,2.3s						
KLMR				*e*PP	**PP**	**02 56 53.8**	**+1.5**
KLMR				LQ	LQ	03 21 48.1	
KLMR				LQ	LQ	03 21 48.1	
KLMR				LR	LR	03 24 01.4	
KLMR				AMP		03 26 36.4	
	comp=Z,554nm,14.6s						
GEYT	**Alibeck**	**65.02**	**300**	P	**P**	**02 54 31.2**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=45,slow=6.3,SNR=2.4						
GEYT				LR	LR	03 27 32.2	
	comp=Z,91nm,18.1s,baz=32,slow=40						
	comp=Z,1.2nm,0.6s						
GYA0B	**ALIBECK ARRAY**	**65.02**	**300**	P	**P**	**02 54 31.6**	**+0.8**
BELG	**Belogornoye**	**65.03**	**318**	LR	LR	03 23 54.0	
	comp=Z,126nm,18.2s,baz=120,slow=37						
ARCES	**ARCESS Array B**	**65.11**	**340**	LR	LR	03 24 57.2	
	comp=Z,81nm,21.3s,baz=24,slow=38						
AFI	**Afiamalu**	**65.91**	**130**	LR	LR	03 25 14.3	
	comp=Z,33nm,18.0s,baz=21,slow=38						
NEEM	**North Greenlan**	**66.34**	**3**	*e*P	**P**	**02 54 38.0**	**-1.0**
DAG	**Danmarks Havn**	**66.71**	**355**	*e*P	**P**	**02 54 40.5**	**-0.4**
STKA	**Stephens Creek**	**67.69**	**181**	P	**P**	**02 54 46.2**	**-1.4**
	comp=Z,1.2nm,0.7s,baz=335,slow=14,SNR=2.2						
STKA				LR	LR	03 33 41.5	
	comp=Z,35nm,18.0s,baz=22,slow=44						
	comp=Z,1.2nm,0.7s						
BBOO	**Buckleboo**	**68.88**	**186**	P	**P**	**02 54 55.1**	**-0.1**
FINES	**FINESS Array B**	**69.98**	**333**	P	**P**	**02 55 02.0**	**+0.3**
	comp=Z,3.9nm,0.9s,baz=120,slow=6.8,SNR=5.2						
FINES				LR	LR	03 30 20.6	
	comp=Z,271nm,19.8s,baz=36,slow=40						
	comp=Z,3.9nm,0.9s						
FINES	**FINESS Array B**	**69.98**	**333**	P	**P**	**02 55 01.7**	**0.0**
SUMG	**Summit**	**71.55**	**0**	*e*P	**P**	**02 55 11.2**	**-0.4**
WSAR	**Wadi Sarin**	**71.94**	**286**	LR	LR	03 30 50.1	
	comp=Z,64nm,18.3s,baz=82,slow=39						
KBZ	**Khabaz**	**72.13**	**311**	P	**P**	**02 55 15.3**	**+0.3**
	comp=Z,3.1nm,0.8s,baz=8.7,slow=3.6,SNR=9.8						
KBZ				LR	LR	03 27 48.1	
	comp=Z,116nm,18.5s,baz=39,slow=37						
	comp=Z,3.1nm,0.8s						
KIV	**Kislovodsk**	**72.13**	**312**	P	**P**	**02 55 15.8**	**+0.6**
ONI	**Oni**	**72.41**	**310**	P	**P**	**02 55 17.4**	**+0.6**
ONI				IAmb	IAmb	02 55 29.2	
	comp=Z,8.8nm,1.0s						
GNI	**Garni**	**72.92**	**307**	LR	LR	03 29 32.9	
	comp=Z,50nm,18.6s,baz=47,slow=38						
MNK	**Minsk**	**73.70**	**326**	*i* P	P	02 55 35.0	+11
	comp=E,2.0nm,1.2s						
MNK				*i* P	P	02 55 35.0	+11
	comp=N,20nm,1.1s						
MNK				*i* P	P	02 55 35.0	+11
	comp=Z,17nm,1.0s,baz=51						
MNK				*i* PP	PP	02 58 28.2	+20
MNK				*i* S	S	03 05 19.4	+25
MNK				*i* SS	SS	03 11 28.0	
MNK				*i* SSS	SSS	03 14 18.5	
MNK				*i* LQ	LQ	03 24 04.4	
MNK				*i* LR	LR	03 27 25.9	
MNK				*i* LRM	MLR	03 32 33.4	
	comp=N,800nm,31.3s						
MNK				*i* LRM	MLR	03 32 43.6	
	comp=Z,384nm,16.2s						
MNK				*i* LRM	MLR	03 32 48.1	
	comp=E,32nm,13.9s						
NACGM	**Naroch**	**73.93**	**327**	*e*P	P	02 55 36.3	+11
	comp=Z,23nm,1.1s,baz=48						
KVN	**Kaiserville**	**74.59**	**53**	P	**P**	**02 55 30.2**	**+0.3**
KVN				IAmb	IAmb	02 55 57.5	
	comp=Z,5.4nm,0.8s						
LHV	**Little Huntoon**	**74.77**	**54**	IAmb	IAmb	02 55 59.9	
	comp=Z,8.9nm,1.0s						
NVAR	**Mina Array Bea**	**74.80**	**53**	P	**P**	**02 55 31.4**	**+0.2**
	comp=Z,2.7nm,0.9s,baz=278,slow=5.4,SNR=14						
	comp=Z,2.7nm,0.9s						
NVAR	**Mina Array Bea**	**74.80**	**53**	P	**P**	**02 55 32.2**	**+1.1**
HFS	**Hagfors**	**75.23**	**336**	LR	LR	03 31 19.0	
	comp=Z,175nm,19.1s,baz=44,slow=38						
NOA	**NORSAR Array B**	**75.32**	**338**	P	**P**	**02 55 34.0**	**+0.5**
	comp=Z,1.8nm,1.1s,baz=39,slow=5.8,SNR=4.2						
NOA				LR	LR	03 35 01.2	
	comp=Z,158nm,18.1s,baz=35,slow=41						
	comp=Z,1.8nm,1.1s						
DUG	**Dugway, Tooele**	**77.26**	**49**	IAmb	IAmb	02 56 12.9	
	comp=Z,7.3nm,0.8s						
PDAR	**Pinedale Array**	**77.64**	**46**	P	**P**	**02 55 48.7**	**+1.4**
	comp=Z,0.7nm,0.7s,baz=282,slow=3.0,SNR=7.3						
	comp=Z,0.7nm,0.7s						
PDAR	**Pinedale Array**	**77.64**	**46**	P	**P**	**02 55 47.6**	**+0.3**
MILM	**Milestii Mici**	**78.17**	**320**	*e*P	**P**	**02 55 46.0**	**-3.8**
MILM				*e*L	L	03 32 57.0	
MILM				LRM	MLR	03 34 05.0	
	comp=Z,500nm,16.6s						
PFO	**Pinyon Flats O**	**78.79**	**57**	LR	LR	03 26 39.0	
	comp=Z,66nm,20.7s,baz=250,slow=33						
RAR	**Rarotonga**	**78.94**	**127**	LR	LR	03 22 47.8	
	comp=Z,90nm,21.4s,baz=280,slow=30						
P17A	**Butcher Ranch,**	**78.96**	**49**	IAmb	IAmb	02 56 23.8	
	comp=Z,16nm,1.3s						
SRU	**San Rafael Swe**	**79.32**	**49**	P	**P**	**02 55 57.4**	**+0.8**
SRU				IAmb	IAmb	02 56 24.0	
	comp=Z,10nm,0.8s						
BUR08	**Bucovina Ar. S**	**79.52**	**322**	P	**P**	**02 55 58.0**	**+0.6**
BRTR	**Keskin Array B**	**80.08**	**312**	P	**P**	**02 56 01.1**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=104,slow=5.2,SNR=5.5						
	comp=Z,0.8nm,0.8s						
BRTR	**Keskin Array B**	**80.08**	**312**	P	**P**	**02 56 00.5**	**-0.1**
OJC	**Ojcow**	**80.24**	**327**	P	**P**	**02 55 56.9**	**-4.2**
OJC				IAmb	IAmb	02 56 13.1	
	comp=Z,11nm,1.0s						
MLR	**Muntele Rosu**	**80.61**	**320**	LR	LR	03 34 08.2	
	comp=Z,219nm,18.1s,baz=44,slow=37						
URZ	**Urewera**	**80.68**	**153**	LR	LR	03 26 00.9	
	comp=Z,92nm,21.1s,baz=45,slow=31						
PV03	**Paradox Valley**	**80.88**	**49**	P	**P**	**02 56 05.0**	**0.0**
PV03				IAmb	IAmb	02 56 32.7	
	comp=Z,8.6nm,0.8s						
PV13	**Radium Mtn., P**	**80.95**	**49**	IAmb	IAmb	02 56 33.1	
	comp=Z,11nm,0.8s						
BSEG	**Bad Segeberg**	**81.22**	**334**	*e*P	P	02 56 16.8	+11
	comp=Z,5.6nm,0.8s,baz=37,slow=5.3						
MORC	**Moravsky Berou**	**81.56**	**328**	*e*P	P	02 56 18.7	+11
DPC	**Dobruska-Polom**	**81.65**	**328**	*e*P	**P**	**02 56 11.6**	**+2.9**
DPC				*e*x	x	02 56 19.7	
DPC				AMS	AMS	03 36 50.0	
	comp=Z,400nm,15.7s						
KRLC	**Kraliky**	**81.66**	**328**	*e*P	**P**	**02 56 09.4**	**+0.7**
KRLC				*e*x	x	02 56 19.9	
KRLC				AMS	AMS	03 37 20.0	
	comp=Z,400nm,19.0s						
RAYN	**Ar Rayn**	**81.80**	**293**	P	**P**	**02 56 10.2**	**+0.3**
RAYN				IAmb	IAmb	02 56 21.5	
	comp=Z,9.8nm,1.1s						
VYHS	**Vyhne**	**81.93**	**326**	*e*P	**P**	**02 56 12.3**	**+2.2**
FLTG	**Flechtingen**	**82.16**	**332**	*e*P	P	02 56 21.7	+11
	comp=Z,5.9nm,0.8s,baz=37,slow=5.3						
JAVC	**Velka Javorina**	**82.18**	**327**	*e*P	P	02 56 23.3	+12
BRG	**Berggiesshubel**	**82.24**	**330**	*e*P	**P**	**02 56 14.0**	**+2.4**
BRG				Amp		02 56 14.9	
	comp=Z,4.6nm,1.1s						
BRG	**Berggiesshubel**	**82.24**	**330**	P	P	02 56 22.8	+11
BRG				Amp		02 56 23.5	
	comp=Z,4.6nm,0.9s						
BRG				Amp		03 36 51.0	
	comp=E,0.2nm,12.4s						
BRG				Amp		03 36 57.0	
	comp=Z,0.5nm,16.0s						
BRG				Amp		03 37 01.0	
	comp=N,0.4nm,18.8s						
BRG	**Berggiesshubel**	**82.24**	**330**	*e*P	P	02 56 22.6	+11
	comp=N,2.7nm,0.8s,baz=37,slow=5.3						
CLL	**Collm**	**82.28**	**331**	P	**P**	**02 56 12.5**	**+0.6**
CLL				IAmb	IAmb	02 56 23.2	
	comp=Z,9.5nm,0.9s						
CLL	**Collm**	**82.28**	**331**	*e*P	**P**	**02 56 12.0**	**+0.1**
	comp=Z,6.0nm,1.1s						
CLL				*e*PP	**PP**	**02 59 18.0**	**-1.7**
CLL	**Collm**	**82.28**	**331**	⇓*i*P	P	02 56 22.5	+11
	comp=Z,12nm,1.0s						
CLL	**Collm**	**82.28**	**331**	*e*P	P	02 56 22.6	+11
	comp=Z,6.8nm,0.8s,baz=37,slow=5.3						
VRAC	**Vranov**	**82.32**	**328**	LR	LR	03 34 45.9	
	comp=Z,128nm,19.0s,baz=4.0,slow=37						
VRAC	**Vranov**	**82.32**	**328**	*e*P	P	02 56 23.3	+11
FBE	**Freiberg**	**82.44**	**330**	*e*P	P	02 56 23.5	+11
	comp=Z,4.6nm,0.8s,baz=37,slow=5.3						
KRUC	**Moravsky**	**82.59**	**328**	*e*P	P	02 56 24.2	+11
PRU	**Pruhonice**	**82.67**	**329**	*e*P	**P**	**02 56 16.6**	**+2.6**
PRU				*e*x	x	02 56 25.5	
PRU				AMS	AMS	03 36 50.0	
	comp=Z,300nm,13.6s						
NEUB	**Neuenburg**	**82.84**	**331**	*e*P	P	02 56 25.7	+11
	comp=Z,7.8nm,0.8s,baz=37,slow=5.3						
CLZ	**Clausthal**	**82.87**	**332**	*e*P	P	02 56 25.5	+11
	comp=Z,9.7nm,1.0s,baz=37,slow=5.3						
MMAI	**Mount Meron Ar**	**83.18**	**306**	LR	LR	03 37 07.8	
	comp=Z,107nm,18.1s,baz=108,slow=38						
GUNZ	**Gunzen**	**83.28**	**330**	*e*P	P	02 56 27.9	+11
	comp=Z,3.5nm,0.8s,baz=37,slow=5.3						
WERN	**Wernitzgruen**	**83.33**	**330**	*e*P	P	02 56 28.2	+11
	comp=Z,2.8nm,0.8s,baz=37,slow=5.3						
NKC	**Novy Kostel**	**83.34**	**330**	AMS	AMS	03 37 20.0	
	comp=Z,400nm,12.7s						
PPT	**Papeete**	**83.46**	**117**	LR	LR	03 28 34.7	
	comp=Z,69nm,19.3s,baz=338,slow=32						
RPZ	**Rata Peaks**	**83.64**	**160**	LR	LR	03 27 26.1	
	comp=Z,65nm,21.9s,baz=356,slow=31						
RONA	**Rosalia, Austr**	**83.66**	**327**	*e*pP	pP	02 56 30.6	+8.3
	comp=Z,6.9nm,1.0s						
MANZ	**Manzenberg**	**83.67**	**330**	*e*P	P	02 56 30.0	+11
	comp=Z,0.5nm,0.8s,baz=37,slow=5.3						
CKRC	**Cesky Krumlov**	**83.67**	**328**	*e*P	**P**	**02 56 19.9**	**+0.7**
CKRC				*e*x	x	02 56 29.8	
CONA	**Conrad Observa**	**83.68**	**327**	*e*pP	pP	02 56 30.7	+8.2
	comp=Z,6.6nm,1.0s						
KHC	**Kasperske Hory**	**83.74**	**329**	*e*P	**P**	**02 56 19.9**	**+0.4**
KHC				*e*x	x	02 56 30.2	
ROTZ	**Rotzenmuhle**	**83.80**	**330**	*e*P	P	02 56 30.7	+11
	comp=Z,1.0nm,1.0s,baz=37,slow=5.3						
GEC2	**GERESS Array S**	**83.91**	**329**	*e*P	P	02 56 31.4	+11
	comp=Z,2.8nm,0.9s,baz=37,slow=5.3						
GERES	**GERESS Array B**	**83.91**	**329**	P	**P**	**02 56 20.7**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=26,slow=3.4,SNR=7.5						
GERES				LR	LR	03 36 22.1	
	comp=Z,148nm,18.2s,baz=28,slow=38						
	comp=Z,0.4nm,0.5s						
GERES	**GERESS Array B**	**83.91**	**329**	P	**P**	**02 56 20.9**	**+0.4**
EKA	**Eskdalemuir Ar**	**84.24**	**341**	LR	LR	03 40 55.8	
	comp=Z,104nm,18.6s,baz=342,slow=41						
GRF	**Grafenberg Arr**	**84.25**	**331**	*e*P	P	02 56 33.0	+11
	comp=Z,8.0nm,0.9s,baz=37,slow=5.3						
ANMO	**Albuquerque**	**84.47**	**50**	P	**P**	**02 56 24.0**	**+0.2**
ANMO				IAmb	IAmb	02 56 30.3	
	comp=Z,7.5nm,1.4s						
DIVS	**Divibare**	**84.60**	**322**	IAmb	IAmb	02 56 35.7	
	comp=Z,4.4nm,0.9s						
BIOA	**Bad Ischl, Aus**	**84.83**	**328**	*e*pP	pP	02 56 36.5	+8.2
	comp=Z,5.4nm,1.0s						
SOKA	**Soboth**	**85.00**	**327**	*e*P	**P**	**02 56 26.1**	**+0.1**
	comp=Z,2.4nm,1.5s						
SOKA				*e*pP	**pwP**	**02 56 37.1**	**+1.2**
	comp=Z,6.4nm,1.2s						
RJOB	**Jochberg**	**85.15**	**329**	*e*P	P	02 56 38.1	+11
	comp=Z,3.6nm,0.9s,baz=37,slow=5.3						
EIL	**Elat**	**85.58**	**304**	LR	LR	03 38 14.8	
	comp=Z,35nm,19.4s,baz=54,slow=38						
ABTA	**Abfaltersbach**	**86.04**	**328**	*e*pP	pP	02 56 42.3	+7.9
	comp=Z,4.7nm,1.1s						
PDG	**Podgorica**	**86.18**	**322**	P	**P**	**02 56 32.8**	**+1.0**
RETA	**Reutte**	**86.19**	**330**	*e*pP	pP	02 56 43.2	+8.1
	comp=Z,6.1nm,1.0s						
BFO	**Black Forest**	**86.48**	**331**	*e*P	P	02 56 44.2	+11
	comp=Z,5.5nm,0.9s,baz=37,slow=5.3						
DAVOX	**Davos/Dischmat**	**87.12**	**330**	LR	LR	03 39 03.2	
	comp=Z,230nm,18.6s,baz=30,slow=38						
IDI	**Anoyia**	**88.22**	**314**	LR	LR	03 43 48.9	
	comp=Z,38nm,18.5s,baz=352,slow=41						
TXAR	**Lajitas Array**	**89.95**	**53**	P	**P**	**02 56 50.0**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=317,slow=5.1,SNR=6.6						
	comp=Z,0.9nm,0.8s						
TXAR	**Lajitas Array**	**89.95**	**53**	P	**P**	**02 56 51.0**	**+0.8**
SADO	**Sadowa**	**91.05**	**28**	LR	LR	03 40 25.1	
	comp=Z,33nm,20.8s,baz=116,slow=37						
VAE	**Valguarnera**	**92.36**	**321**	LR	LR	03 45 48.5	
	comp=Z,101nm,18.8s,baz=84,slow=40						
KEST	**Kesra**	**96.24**	**323**	LR	LR	03 46 32.6	
	comp=Z,115nm,18.9s,baz=302,slow=39						
ESDC	**Sonseca Array**	**98.45**	**334**	LR	LR	03 46 21.0	
	comp=Z,176nm,18.5s,baz=16,slow=38						

ROM 24 02:56:09.0±0.0**, 42°.819N**±0°.002×**13°.053E**±0°.004**,**
h10km**, ML1.8**/28**, 3C-4D, Error ellipse: s-maj=0.3km**
s-min=0.2km az=120.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.05**	**72**	P	Pg	02 56 11.4	+0.2
NRCA				S	Sg	02 56 12.8	+0.1
NRCA				AML	AML		
	comp=E,2280µm,0.2s						
NRCA				AML	AML		
	comp=N,1335µm,0.1s						
NRCA				AML	AML		
	comp=E,2440µm,0.2s						
NRCA				AML	AML		
	comp=N,1500µm,0.1s						
NRCA				AML	AML		
	comp=E,2280µm,1.8s						
NRCA				AML	AML		
	comp=E,2440µm,1.8s						
T1212	**Cascia, Frazio**	**0.07**	**185**	⇑P	Pg	02 56 11.8	+0.4
T1212				S	Sg	02 56 13.4	+0.3
T1212				AML	AML		
	comp=E,1069µm,0.4s						
T1212				AML	AML		
	comp=N,941µm,0.4s						
T1212				AML	AML		
	comp=N,878µm,0.4s						
T1212				AML	AML		
	comp=E,970µm,0.4s						
T1216	**Preci, Frazion**	**0.08**	**341**	⇓P	Pg	02 56 11.9	+0.5
T1216				S	Sg	02 56 13.7	+0.4
T1216				AML	AML		
	comp=E,712µm,0.2s						
T1216				AML	AML		
	comp=N,977µm,0.8s						
T1216				AML	AML		
	comp=N,977µm,1.2s						
T1245	**Castelsantange**	**0.11**	**69**	P	Pg	02 56 12.3	+0.4
T1245				S	Sg	02 56 14.5	+0.4
T1245				AML	AML		
	comp=N,1090µm,0.5s						
T1245				AML	AML		
	comp=N,1050µm,0.5s						
T1245				AML	AML		
	comp=E,1210µm,0.3s						
T1245				AML	AML		
	comp=N,1090µm,1.5s						
T1245				AML	AML		
	comp=E,1220µm,0.3s						
T1214	**Arquata del Tr**	**0.13**	**117**	⇓P	Pg	02 56 12.7	+0.5
T1214				S	Sg	02 56 14.9	+0.4
T1214				AML	AML		
	comp=E,578µm,0.1s						
T1214				AML	AML		
	comp=N,612µm,1.1s						
T1214				AML	AML		
	comp=E,542µm,0.2s						
T1214				AML	AML		
	comp=N,574µm,0.2s						
MC2	**Monte Cornacci**	**0.14**	**47**	P	Pg	02 56 12.9	+0.5
MC2				S	Sg	02 56 15.6	+0.8
T1217	**Poggiodomo (PG**	**0.14**	**220**	P	Pg	02 56 12.8	+0.5
T1217				S	Sg	02 56 15.4	+0.7
T1217				AML	AML		
	comp=E,171µm,1.1s						
T1217				AML	AML		
	comp=N,206µm,0.3s						
T1218	**Civita (PG)**	**0.16**	**163**	P	Pg	02 56 13.1	+0.5
T1218				AML	AML		
	comp=E,203µm,1.5s						
T1218				AML	AML		
	comp=N,185µm,1.4s						
T1218				AML	AML		
	comp=E,198µm,1.5s						
T1218				AML	AML		
	comp=N,169µm,1.2s						
T1218				AML	AML		
	comp=E,203µm,1.5s						
T1218				AML	AML		
	comp=E,198µm,1.5s						
T1218				AML	AML		
	comp=N,168µm,1.2s						
T1218				AML	AML		
	comp=E,198µm,0.5s						
T1218				AML	AML		
	comp=E,203µm,0.5s						
T1218				AML	AML		
	comp=N,168µm,0.8s						
T1218				AML	AML		
	comp=N,184µm,1.4s						
CESI	**CESI - Serrava**	**0.22**	**330**	P	Pg	02 56 14.2	+0.6
CESI				S	Sg	02 56 18.0	+1.3
CESI				AML	AML		
	comp=E,108µm,0.5s						
CESI				AML	AML		
	comp=N,290µm,0.3s						
FDMO	**Fiordimonte**	**0.22**	**7**	⇓P	Pg	02 56 14.2	+0.6
FDMO				S	Sg	02 56 17.9	+1.1
FDMO				AML	AML		

	comp=N,117µm,0.2s						
FDMO				AML	AML		
	comp=E,142µm,0.2s						
FDMO				AML	AML		
	comp=E,142µm,1.8s						
T1256	**Bolognola (MC)**	**0.23**	**34**	P	Pg	02 56 14.4	+0.6
T1256				S	Sg	02 56 18.3	+1.2
T1256				AML	AML		
	comp=E,160µm,0.3s						
T1256				AML	AML		
	comp=N,126µm,0.2s						
T1256				AML	AML		
	comp=E,160µm,1.7s						
T1219	**Muccia, Frazio**	**0.24**	**352**	⇓P	Pg	02 56 14.5	+0.5
T1219				S	Sg	02 56 18.4	+1.0
T1219				AML	AML		
	comp=E,112µm,0.2s						
T1219				AML	AML		
	comp=N,97µm,0.4s						
SMA1	**SAN MARTINO**	**0.28**	**132**	P	Pb	02 56 15.5	-0.7
SMA1				AML	AML		
	comp=E,1052µm,0.8s						
SMA1				AML	AML		
	comp=N,826µm,1.1s						
SMA1				AML	AML		
	comp=N,826µm,0.9s						
T1241	**Roccafluvione,**	**0.28**	**82**	⇑P	Pg	02 56 15.2	+0.5
T1241				AML	AML		
	comp=N,77µm,0.7s						
T1241				AML	AML		
	comp=E,135µm,0.2s						
ARRO	**Arrone**	**0.32**	**222**	P	Pg	02 56 15.9	+0.5
ARRO				AML	AML		
	comp=E,60µm,0.2s						
ARRO				AML	AML		
	comp=N,69µm,0.1s						
GUMA	**Gualdo di Mace**	**0.32**	**40**	⇑P	Pb	02 56 16.4	-0.5
GUMA				AML	AML		
	comp=N,206µm,0.5s						
GUMA				AML	AML		
	comp=E,202µm,0.3s						
T1211	**Morro Reatino**	**0.32**	**207**	P	Pb	02 56 16.2	-0.6
T1211				AML	AML		
	comp=E,114µm,0.2s						
T1211				AML	AML		
	comp=N,116µm,0.3s						
RM33	**Pellescritta (**	**0.33**	**159**	P	Pg	02 56 16.0	+0.3
RM33				AML	AML		
	comp=E,478µm,1.0s						
RM33				AML	AML		
	comp=E,420µm,1.0s						
RM33				AML	AML		
	comp=N,381µm,0.6s						
RM33				AML	AML		
	comp=N,363µm,0.3s						
MOMA	**Monte Martano**	**0.36**	**268**	P	Pg	02 56 16.7	+0.6
MOMA				AML	AML		
	comp=N,55µm,0.9s						
MOMA				AML	AML		
	comp=E,68µm,0.8s						
MOMA				AML	AML		
	comp=N,55µm,1.1s						
MOMA				AML	AML		
	comp=E,68µm,1.2s						
ASSB	**Assisi San Ben**	**0.37**	**308**	P	Pg	02 56 16.7	+0.3
ASSB				AML	AML		
	comp=E,67µm,1.4s						
ASSB				AML	AML		
	comp=N,62µm,0.9s						
ASSB				AML	AML		
	comp=N,62µm,1.1s						
CAMP	**Campotosto**	**0.39**	**137**	P	Pg	02 56 15.2	-1.5
CAMP				S	Sg	02 56 16.4	-5.4
CAMP				AML	AML		
	comp=E,768µm,0.5s						
CAMP				AML	AML		
	comp=N,544µm,0.2s						
T1247	**Pizzolo (AQ)**	**0.42**	**154**	P	Pg	02 56 16.1	-1.1
T1247				S	Sg	02 56 18.1	-4.7
T1247				AML	AML		
	comp=E,2545µm,1.5s						
T1247				AML	AML		
	comp=N,2770µm,0.2s						
T1247				AML	AML		
	comp=E,2545µm,0.5s						
OFFI	**Offida**	**0.48**	**76**	AML	AML		
	comp=E,107µm,1.1s						
OFFI				AML	AML		
	comp=N,188µm,0.4s						
GIGS	**Gran Sasso**	**0.53**	**134**	AML	AML		
	comp=N,110µm,0.8s						
GIGS				AML	AML		
	comp=E,211µm,0.2s						
GIGS				AML	AML		
	comp=N,110µm,1.2s						
AQU	**L'Aquila**	**0.53**	**151**	AML	AML		
	comp=N,256µm,1.6s						
AQU				AML	AML		
	comp=E,270µm,1.1s						
AQU				AML	AML		
	comp=N,256µm,0.4s						
AQU				AML	AML		
	comp=N,256µm,0.2s						
AQU				AML	AML		
	comp=E,250µm,1.1s						
CING	**Cingoli**	**0.57**	**11**	AML	AML		
	comp=E,26µm,1.4s						
CING				AML	AML		
	comp=N,21µm,0.1s						
CING				AML	AML		
	comp=E,26µm,0.6s						
FAGN	**Fagnano**	**0.68**	**144**	AML	AML		
	comp=N,364µm,0.5s						
FAGN				AML	AML		
	comp=E,400µm,0.5s						
VCEL	**Villa Celiera**	**0.72**	**126**	AML	AML		
	comp=N,190µm,0.7s						
VCEL				AML	AML		
	comp=E,134µm,1.1s						
T0110	**Collepietro**	**0.80**	**138**	AML	AML		
	comp=E,134µm,0.3s						
T0110				AML	AML		
	comp=N,113µm,0.3s						

ROM 24 02:57:04.5±0.0**, 42°.535N**±0°.003×**13°.355E**±0°.004**,**
h10^{km}**, ML1.8**/37**, 6C-5D, Error ellipse: s-maj=0.3km**
s-min=0.3km az=186.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.04**	**89**	P	Pg	02 57 06.8	+0.2
CAMP				S	Sg	02 57 08.1	0.0
CAMP				AML	AML		
	comp=E,1610µm,0.3s						
CAMP				AML	AML		
	comp=N,1190µm,0.7s						
SMA1	**SAN MARTINO**	**0.10**	**352**	P	Pg	02 57 07.5	+0.3
SMA1				S	Sg	02 57 09.9	+0.7
SMA1				AML	AML		
	comp=E,2340µm,0.8s						
SMA1				AML	AML		
	comp=N,1680µm,0.4s						
SMA1				AML	AML		
	comp=N,1680µm,1.6s						
SMA1				AML	AML		
	comp=E,2340µm,1.2s						
T1247	**Pizzolo (AQ)**	**0.10**	**204**	P	Pg	02 57 07.8	+0.6
T1247				S	Sg	02 57 09.8	+0.6
T1247				AML	AML		
	comp=E,5745µm,1.5s						
T1247				AML	AML		
	comp=N,6650µm,0.1s						
T1247				AML	AML		
	comp=E,5745µm,0.5s						
RM33	**Pellescritta (**	**0.11**	**256**	P	Pg	02 57 07.7	+0.4
RM33				AML	AML		
	comp=N,764µm,1.5s						
RM33				AML	AML		
	comp=N,772µm,1.5s						
RM33				AML	AML		
	comp=E,1010µm,1.0s						
RM33				AML	AML		
	comp=N,764µm,1.5s						
RM33				AML	AML		
	comp=E,976µm,1.0s						
RM33				AML	AML		
	comp=N,772µm,1.5s						
RM33				AML	AML		
	comp=N,772µm,0.5s						
RM33				AML	AML		
	comp=N,764µm,0.5s						
RM33				AML	AML		
	comp=E,976µm,1.0s						
RM33				AML	AML		
	comp=E,1010µm,1.0s						
T1246	**Crognaleto (TE**	**0.11**	**65**	P	Pg	02 57 07.9	+0.5
T1246				S	Sg	02 57 10.1	+0.6
GIGS	**Gran Sasso**	**0.18**	**118**	P	Pg	02 57 08.9	+0.6
GIGS				S	Sg	02 57 12.0	+0.9
GIGS				AML	AML		
	comp=N,301µm,0.8s						
GIGS				AML	AML		
	comp=E,542µm,0.2s						
AQU	**L'Aquila**	**0.18**	**169**	P	Pg	02 57 09.1	+0.7
AQU				AML	AML		
	comp=E,688µm,1.1s						
AQU				AML	AML		
	comp=N,584µm,0.3s						
AQU				AML	AML		
	comp=N,594µm,1.6s						
AQU				AML	AML		
	comp=E,650µm,1.1s						
TERO	**Teramo**	**0.20**	**64**	P	Pg	02 57 09.3	+0.5
TERO				S	Sg	02 57 12.8	+1.0
TERO				AML	AML		
	comp=E,838µm,0.3s						
TERO				AML	AML		
	comp=N,930µm,0.2s						
TERO				AML	AML		
	comp=E,924µm,0.3s						
TERO				AML	AML		
	comp=N,1042µm,0.2s						
TERO				AML	AML		
	comp=E,838µm,0.3s						
T1218	**Civita (PG)**	**0.22**	**307**	P	Pg	02 57 09.6	+0.5
T1218				S	Sg	02 57 13.3	+1.0
T1214	**Arquata del Tr**	**0.25**	**334**	P	Pg	02 57 10.2	+0.6
T1214				AML	AML		
	comp=E,401µm,1.0s						
T1214				AML	AML		
	comp=N,342µm,1.3s						
T1214				AML	AML		
	comp=E,372µm,1.0s						
T1214				AML	AML		
	comp=E,400µm,1.0s						
T1214				AML	AML		
	comp=N,342µm,1.3s						
T1214				AML	AML		
	comp=E,400µm,1.0s						
T1214				AML	AML		
	comp=N,270µm,0.4s						
T1214				AML	AML		
	comp=N,342µm,0.7s						
T1214				AML	AML		
	comp=E,372µm,1.0s						
T1222	**Castel Sant'An**	**0.27**	**241**	P	Pg	02 57 10.4	+0.4
T1222				S	Sb	02 57 15.0	-1.1
T1222				AML	AML		
	comp=E,245µm,0.3s						
T1222				AML	AML		
	comp=N,242µm,0.3s						
T1222				AML	AML		
	comp=N,242µm,0.3s						
T1212	**Cascia, Frazio**	**0.32**	**314**	P	Pg	02 57 11.1	+0.3
T1212				S	Sg	02 57 16.1	+1.0
T1212				AML	AML		
	comp=E,340µm,0.4s						
T1212				AML	AML		
	comp=N,381µm,0.3s						
T1212				AML	AML		
	comp=E,292µm,0.4s						
T1212				AML	AML		
	comp=N,354µm,0.3s						
T1212				AML	AML		
	comp=E,340µm,0.4s						
T1212				AML	AML		
	comp=N,354µm,0.3s						
T1212				AML	AML		
	comp=N,381µm,0.4s						
T1212				AML	AML		
	comp=E,292µm,0.4s						
FAGN	**Fagnano**	**0.32**	**148**	P	Pg	02 57 11.3	+0.5
FAGN				AML	AML		
	comp=E,941µm,0.4s						
FAGN				AML	AML		
	comp=N,758µm,0.5s						
FAGN				AML	AML		
	comp=E,941µm,1.6s						
FIAM	**Fiamignano**	**0.32**	**213**	P	Pg	02 57 11.6	+0.6
FIAM				AML	AML		
	comp=N,210µm,0.2s						
FIAM				AML	AML		
	comp=E,221µm,0.4s						
T1241	**Roccafluvione,**	**0.33**	**10**	P	Pg	02 57 11.3	+0.3
T1241				AML	AML		
	comp=E,196µm,0.9s						
T1241				AML	AML		
	comp=N,130µm,0.7s						
T1241				AML	AML		
	comp=E,196µm,1.1s						
T1245	**Castelsantange**	**0.34**	**339**	P	Pg	02 57 11.9	+0.5
T1245				S	Sb	02 57 18.1	-0.3
T1245				AML	AML		
	comp=N,406µm,1.4s						
T1245				AML	AML		
	comp=E,386µm,0.3s						
T1245				AML	AML		
	comp=E,388µm,0.2s						
T1245				AML	AML		
	comp=N,398µm,0.4s						
NRCA	**Norcia**	**0.35**	**329**	P	Pg	02 57 11.8	+0.4
NRCA				AML	AML		
	comp=E,712µm,0.1s						
NRCA				AML	AML		
	comp=N,580µm,0.2s						
T1217	**Poggiodomo (PG**	**0.36**	**300**	P	Pg	02 57 12.0	+0.4
T1217				AML	AML		
	comp=N,154µm,0.8s						
T1217				AML	AML		
	comp=E,110µm,0.8s						
T1211	**Morro Reatino**	**0.37**	**270**	⇑P	Pg	02 57 12.0	+0.2
T1211				AML	AML		
	comp=N,235µm,1.4s						
T1211				AML	AML		
	comp=N,191µm,0.4s						
T1211				AML	AML		
	comp=E,172µm,0.1s						
T1211				AML	AML		
	comp=N,235µm,0.6s						
T1211				AML	AML		
	comp=E,184µm,0.1s						
T1211				AML	AML		
	comp=N,190µm,0.4s						
VCEL	**Villa Celiera**	**0.39**	**111**	P	Pb	02 57 12.8	-0.6
VCEL				AML	AML		
	comp=N,487µm,0.7s						
VCEL				AML	AML		
	comp=E,325µm,1.1s						
VCEL				AML	AML		
	comp=N,487µm,1.3s						
VCEL				AML	AML		
	comp=E,325µm,0.9s						
MC2	**Monte Cornacci**	**0.40**	**342**	P	Pg	02 57 12.8	+0.4
T1216	**Preci, Frazion**	**0.43**	**325**	P	Pg	02 57 13.3	+0.3
T1216				AML	AML		
	comp=E,180µm,1.0s						
T1216				AML	AML		
	comp=N,225µm,0.4s						
ARRO	**Arrone**	**0.44**	**276**	⇑P	Pg	02 57 13.3	+0.2
ARRO				AML	AML		
	comp=E,67µm,1.0s						
ARRO				AML	AML		
	comp=E,67µm,1.0s						
ARRO				AML	AML		
	comp=N,91µm,0.6s						
ARRO				AML	AML		
	comp=E,67µm,1.0s						
T0110	**Collepietro**	**0.44**	**134**	P	Pb	02 57 13.8	-0.6
T0110				AML	AML		
	comp=E,335µm,0.3s						
T0110				AML	AML		
	comp=N,278µm,0.3s						
T0110				AML	AML		
	comp=N,278µm,1.7s						
OFFI	**Offida**	**0.47**	**31**	P	Pb	02 57 15.0	+0.2
OFFI				AML	AML		
	comp=N,336µm,0.8s						
OFFI				AML	AML		
	comp=E,232µm,0.7s						
T1256	**Bolognola (MC)**	**0.48**	**349**	P	Pg	02 57 14.2	+0.3
T1256				AML	AML		
	comp=E,79µm,0.3s						
T1256				AML	AML		
	comp=N,84µm,0.2s						
PTQR	**Pietraquaria**	**0.51**	**176**	⇓P	Pg	02 57 14.7	+0.2
PTQR				AML	AML		
	comp=N,48µm,0.3s						
PTQR				AML	AML		
	comp=E,45µm,0.2s						
GUMA	**Gualdo di Mace**	**0.53**	**358**	⇑P	Pb	02 57 16.2	+0.3
GUMA				AML	AML		
	comp=E,232µm,0.2s						
GUMA				AML	AML		
	comp=N,222µm,0.4s						
FDMO	**Fiordimonte**	**0.54**	**339**	P	Pg	02 57 15.0	+0.1
FDMO				AML	AML		
	comp=E,103µm,0.2s						
FDMO				AML	AML		
	comp=N,102µm,1.1s						
FDMO				AML	AML		
	comp=N,102µm,0.9s						
FDMO				AML	AML		
	comp=E,103µm,1.8s						
T1219	**Muccia, Frazio**	**0.58**	**334**	P	Pg	02 57 15.8	+0.1
T1219				AML	AML		
	comp=E,132µm,0.2s						
T1219				AML	AML		
	comp=E,132µm,0.2s						
T1219				AML	AML		
	comp=N,146µm,0.2s						
T1220	**Camerino, Fraz**	**0.61**	**341**	⇓P	Pg	02 57 13.9	-2.3
MOMA	**Monte Martano**	**0.64**	**295**	⇑P	Pb	02 57 18.0	+0.2
MOMA				S	Sb	02 57 27.1	+0.4
MOMA				AML	AML		
	comp=E,114µm,0.4s						
MOMA				AML	AML		
	comp=N,116µm,0.5s						
INTR	**Introdacqua**	**0.66**	**142**	P	Pg	02 57 17.4	+0.1
INTR				AML	AML		
	comp=E,55µm,1.0s						
INTR				AML	AML		
	comp=N,104µm,0.9s						
INTR				AML	AML		
	comp=E,55µm,1.0s						
VVLD	**Villa Vallelon**	**0.69**	**163**	⇑P	Pb	02 57 18.8	+0.2
VVLD				AML	AML		
	comp=N,28µm,1.3s						
VVLD				AML	AML		
	comp=E,38µm,1.1s						
VVLD				AML	AML		
	comp=N,28µm,0.7s						
ASSB	**Assisi San Ben**	**0.72**	**315**	P	Pb	02 57 19.0	-0.2
ASSB				AML	AML		
	comp=E,69µm,0.3s						
ASSB				AML	AML		
	comp=N,59µm,0.2s						
SNTG	**Esanatoglia**	**0.78**	**337**	⇑P	Pg	02 57 19.6	0.0
SNTG				AML	AML		
	comp=E,29µm,0.8s						
SNTG				AML	AML		
	comp=N,32µm,0.5s						
SNTG				AML	AML		
	comp=N,32µm,1.5s						
SNTG				AML	AML		
	comp=E,29µm,1.2s						
LPEL	**Lama dei Pelig**	**0.79**	**128**	⇓P	Pg	02 57 19.5	-0.1
LPEL				S	Sb	02 57 31.6	+0.7
LPEL				AML	AML		
	comp=E,78µm,0.3s						
LPEL				AML	AML		
	comp=E,78µm,0.3s						
LPEL				AML	AML		
	comp=N,69µm,0.2s						
EL6	**Elcito**	**0.81**	**347**	P	Pg	02 57 20.1	-0.1
CING	**Cingoli**	**0.85**	**352**	⇓P	Pg	02 57 20.8	-0.1
CING				AML	AML		
	comp=E,58µm,1.4s						
CING				AML	AML		
	comp=N,42µm,0.8s						
CING				AML	AML		
	comp=E,58µm,0.6s						
CING				AML	AML		
	comp=N,42µm,1.2s						
FOSV	**Fossato di Vic**	**0.88**	**330**	⇓P	Pg	02 57 21.4	0.0
FOSV				AML	AML		
	comp=E,26µm,0.7s						
FOSV				AML	AML		
	comp=N,40µm,0.6s						
FOSV				AML	AML		
	comp=E,26µm,1.3s						
FOSV				AML	AML		
	comp=N,40µm,1.4s						
MGAB	**Montegabbione**	**0.99**	**293**	P	Pb	02 57 23.7	0.0
MGAB				AML	AML		
	comp=E,52µm,0.5s						
MGAB				AML	AML		
	comp=N,52µm,0.4s						
ARVD	**Arcevia**	**1.01**	**343**	P	Pg	02 57 23.8	-0.1
ARVD				AML	AML		
	comp=E,25µm,1.1s						
ARVD				AML	AML		
	comp=N,18µm,0.8s						
ARVD				AML	AML		
	comp=E,25µm,0.9s						

IDC 24 03:01:43.6±6.7**, 6°.08S×147°.24E, h95**^{km}±50^{km}**, mb3.6**/2**,**
mbtmp4.0/4**, Error ellipse: s-maj=72.3km s-min=51.2km**
az=89.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.31**	**181**	P	Pn	03 02 33.2	-0.2
	42nm,0.3s,baz=231,slow=22,SNR=11						
PMG				S	Sn	03 03 12.5	+0.7
	64nm,0.3s,baz=309,slow=7.6,SNR=9.8						
WRA	**Warramunga Arr**	**18.63**	**221**	P	P	03 05 53.6	-0.3
	3.5nm,0.6s,baz=40,slow=12,SNR=44						
ASAR	**Alice Springs**	**21.69**	**215**	P	P	03 06 26.9	0.0
	1.0nm,0.4s,baz=51,slow=9.1,SNR=26						
	1.0nm,0.4s						
STKA	**Stephens Creek**	**26.20**	**191**	P	P	03 07 09.6	0.0
	2.0nm,0.5s,baz=8.1,slow=7.1,SNR=5.7						
	2.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**145.35**	**284**	PKPbc	PKPdf	03 21 10.9	-0.6
	0.6nm,0.3s,baz=70,slow=5.1,SNR=1.7						

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*IDC **24** 03:03:22.1±0.8, 38°.65N×119°.43E, h0^{km}, mb3.7/14,*
mbtmp3.8/20, ML3.6/6, MS3.4/10, Error ellipse:
s-maj=21.8km s-min=13.5km az=18.0
*NEIC **24** 03:03:23.5±1.4, 38°.5N±0°.1×119°.29E±0°.07, h10^{km}±2^{km},*
mb4.3/13, Error ellipse: s-maj=21.2km s-min=5.9km
az=202.0
*BJI **24** 03:03:27.0±0.0, 38°.81N×119°.50E, h15^{km}, mb4.4/7,*
mB4.6/3, ML4.2/14, Ms3.9/5, Ms7 3.6/5
*KEA **24** 03:03:27.2, 38°.75N×119°.69E, h16^{km}, ML4.2/5*
ISC 24 03:03:23.9±0.4**, 38°.76N**±0°.04×**119°.54E**±0°.03**, h10**^{km}**, n64,**
σ**1^{s}92**/89**, mb4.1**/21**, 2D, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DL2	**Dalian**	**1.64**	**84**	⇓*i*Pn	**Pb**	**03 03 54.4**	**+0.3**
DL2				Pg	**Pg**	**03 03 58.3**	**+3.0**
DL2				Sg	**Sg**	**03 04 20.9**	**+4.4**
DL2				smax	smax		
	comp=N,10µm,0.8s						
DL2				smax	smax		
	comp=E,2µm,0.6s						
BJT	**Baijiatuau**	**2.90**	**297**		**Pn**	**03 04 09.9**	**-0.2**
BJI	**Beijing**	**2.90**	**297**	Pn	**Pn**	**03 04 09.8**	**-0.3**
BJI				Sn	**Sn**	**03 04 41.8**	**-3.3**
BJI				Sg	**Sg**	**03 05 00.3**	**+3.2**
BJI				smax	smax		
	comp=N,400nm,0.6s						
BJI				smax	smax		
	comp=E,460nm,0.6s						
TIA	**Tai'an**	**3.19**	**218**	Pn	**Pn**	**03 04 14.3**	**+0.3**
TIA				Pg	**Pg**	**03 04 26.6**	**+1.7**

TIA				Sn	**Sn**	**03 04 53.4**	**+1.3**
TIA				Sg	**Sg**	**03 05 06.0**	**-0.2**
TIA				smax	smax		
	comp=N,510nm,0.9s						
TIA				smax	smax		
	comp=E,640nm,0.7s						
HNS	**HongShan**	**4.05**	**252**	⇓Pn	**Pn**	**03 04 25.9**	**+0.1**
HNS				Pg	**Pg**	**03 04 41.3**	**-0.1**
HNS				Sg	**Sg**	**03 05 33.8**	**0.0**
HNS				smax	smax		
	comp=N,540nm,0.8s						
HNS				smax	smax		
	comp=E,570nm,0.8s						
SUJ	**Sinuiju**	**4.06**	**69**	Pn	**Pn**	**03 04 26.6**	**+0.6**
SUJ				Pg	**Pg**	**03 04 40.6**	**-1.1**
SUJ				Sg	**Sg**	**03 05 33.9**	**-0.5**
SUJ				AML	AML		
	comp=N,806nm,0.4s						
SUJ				AML	AML		
	comp=E,651nm,0.1s						
SUJ				AML	AML		
	comp=Z,519nm,0.4s						
PYAG	**Pyongyang**	**4.86**	**85**	Pn	**Pn**	**03 04 38.1**	**+1.1**
PYAG				Pg	**Pg**	**03 04 55.3**	**-1.7**
PYAG				Sg	**Sg**	**03 05 57.3**	**-2.6**
PYAG				AML	AML		
	comp=N,353nm,0.3s						
PYAG				AML	AML		
	comp=E,233nm,0.2s						
PYAG				AML	AML		
	comp=Z,117nm,0.2s						
HJU	**Haeju**	**4.91**	**96**	Pn	**Pn**	**03 04 38.6**	**+0.9**
HJU				Pg	**Pg**	**03 04 56.7**	**-1.3**
HJU				Sg	**Sg**	**03 05 59.9**	**-1.7**
HJU				AML	AML		
	comp=N,434nm,0.2s						
HJU				AML	AML		
	comp=E,455nm,0.5s						
HJU				AML	AML		
	comp=Z,267nm,0.4s						
PYS	**Pyongsong**	**4.94**	**82**	Pn	**Pn**	**03 04 39.1**	**+0.9**
PYS				Pg	**Pg**	**03 04 57.9**	**-0.6**
PYS				Sg	**Sg**	**03 06 00.8**	**-1.8**
PYS				AML	AML		
	comp=N,696nm,0.4s						
PYS				AML	AML		
	comp=E,339nm,0.1s						
PYS				AML	AML		
	comp=Z,284nm,0.6s						
INCN	**Inchon**	**5.74**	**101**	Pn	**Pn**	**03 04 49.9**	**+0.8**
XLT	**XiLinHaoTe**	**5.76**	**334**	*e*Pn	**Pn**	**03 04 49.8**	**+0.4**
XLT				Sn	**Sn**	**03 05 53.4**	**-2.2**
XLT				smax	smax		
	comp=Z,350nm,1.1s						
HHU	**Hamhung**	**6.30**	**77**	Pn	**Pn**	**03 04 57.4**	**+0.6**
HHU				Sg	**Sg**	**03 06 43.4**	**-2.7**
HHU				AML	AML		
	comp=N,251nm,0.6s						
HHU				AML	AML		
	comp=E,166nm,0.2s						
HHU				AML	AML		
	comp=Z,109nm,0.6s						
KS19	**Wonju Array Si**	**6.68**	**98**	Pn	**Pn**	**03 05 03.8**	**+1.7**
KSAR	**Wonju Array Be**	**6.71**	**99**		**Pn**	**03 05 03.3**	**+0.9**
CN2	**Changchun**	**6.72**	**40**	Pg	**Pg**	**03 05 30.9**	**-1.6**
CN2				Sg	**Sg**	**03 06 55.5**	**-4.0**
CN2				smax	smax		
	comp=N,160nm,1.0s						
CN2				smax	smax		
	comp=E,150nm,1.0s						
KSRS	**Korea Array**	**6.74**	**99**	Pn	**Pn**	**03 05 04.3**	**+1.5**
	comp=E,4.4nm,0.3s,baz=287,slow=14,SNR=52						
KSRS				Sn	**Sn**	**03 06 16.6**	**-3.0**
	comp=E,3.6nm,0.3s,baz=282,slow=24,SNR=7.6						
KSRS				Lg	Lg	03 06 58.5	
	comp=E,5.6nm,0.3s,baz=283,slow=23,SNR=4.0						
KSRS				LR	LR	03 08 09.4	
	comp=E,345nm,18.4s,baz=290,slow=42						
	comp=E,10.0nm,0.3s						
LYN	**LuoYang**	**7.07**	**236**	*e*Pn	**Pn**	**03 05 06.8**	**-0.5**
LYN				Sn	**Sn**	**03 06 26.3**	**-1.4**
LYN				Sg	**Sg**	**03 07 08.4**	**-2.2**
LYN				smax	smax		
	comp=E,79nm,0.8s						
LYN				smax	smax		
	comp=E,93nm,0.8s						
LYN				LR	LR		
	comp=E,440nm,10.8s						
LYN				LR	LR		
	comp=E,560nm,13.2s						
LYN				LR	LR		
	comp=E,450nm,14.2s						
BTO	**Baotou**	**7.57**	**287**	*e*Pg	**Pg**	**03 05 50.4**	**+1.6**
BTO				Sg	**Sg**	**03 07 21.0**	**-5.7**
BTO				smax	smax		
	comp=N,410nm,1.0s						
BTO				smax	smax		
	comp=E,310nm,1.0s						
JTU	**Tsushima**	**8.98**	**115**	Pn	**Pn**	**03 05 34.4**	**+0.9**
HIA	**Hailar**	**10.51**	**1**	Pn	**Pn**	**03 05 57.4**	**+2.9**
JNU	**Nakatsue**	**10.77**	**118**	Pn	**Pn**	**03 05 58.4**	**+0.2**
	comp=E,0.3nm,0.3s,baz=18,slow=16,SNR=1.8						
JNU				Sn	**Sn**	**03 07 58.2**	**-0.7**
	comp=E,0.5nm,0.3s,baz=193,slow=15,SNR=1.5						
JNU				Lg	Lg	03 09 02.0	
	comp=E,0.5nm,0.3s,baz=18,slow=18,SNR=2.1						
JNU				LR	LR	03 10 03.5	
	comp=E,116nm,21.6s,baz=336,slow=37						
	comp=E,8.4nm,1.1s						
USA0B	**Ussuriysk Arra**	**10.80**	**56**	Pn	**Pn**	**03 06 02.4**	**+3.9**
USRK	**Ussuriysk Ar.**	**10.80**	**56**	Pn	**Pn**	**03 05 59.8**	**+1.3**
	comp=E,0.6nm,0.3s,baz=244,slow=13,SNR=8.1						
USRK				Sn	**Sn**	**03 08 05.6**	**+6.2**
	comp=E,0.5nm,0.3s,baz=171,slow=17,SNR=7.0						
USRK				Lg	Lg	03 08 60.0	
	comp=E,0.4nm,0.3s,baz=244,slow=26,SNR=4.3						
USRK				LR	LR	03 09 57.3	
	comp=E,199nm,18.1s,baz=229,slow=36						
	comp=E,1.3nm,0.3s						
ULN	**Ulaanbaatar**	**12.85**	**319**		**Pn**	**03 06 26.1**	**-0.5**
SONM	**Songino Array**	**13.17**	**318**	Pn	**Pn**	**03 06 30.1**	**-0.9**
	comp=E,0.9nm,0.3s,baz=134,slow=14,SNR=11						
SONM				Sn	**Sn**	**03 08 57.9**	**+0.3**
	comp=E,0.1nm,0.3s,baz=120,slow=22,SNR=1.8						
SONM				Lg	Lg	03 10 16.0	
	comp=E,0.2nm,0.3s,baz=124,slow=28,SNR=4.0						
SONM				LR	LR	03 12 20.2	
	comp=E,308nm,19.3s,baz=165,slow=41						
	comp=E,1.2nm,0.3s						
SONM	**Songino Array**	**13.17**	**318**	Pn	**Pn**	**03 06 30.3**	**-0.8**
KLR	**Kul'dur**	**13.65**	**36**	Pn	**Pn**	**03 06 40.6**	**+3.2**
	comp=E,0.1nm,0.3s,baz=225,slow=11,SNR=6.0						
KLR				Sn	Sn	03 09 18.4	+9.5
	comp=E,0.1nm,0.3s,baz=273,slow=23,SNR=2.3						
KLR				Lg	Lg	03 10 35.0	
	comp=E,0.1nm,0.3s,baz=123,slow=22,SNR=4.3						
KLR				LR	LR	03 13 11.5	
	comp=E,52nm,19.5s,baz=156,slow=43						
	comp=E,1.5nm,0.8s						
JOW	**Kunigami**	**13.97**	**146**	LR	LR	03 13 04.7	
	comp=E,86nm,18.4s,baz=152,slow=42						
MJAR	**Matsushiro Arr**	**14.96**	**93**	Pn	**P**	**03 07 00.1**	**-0.8**
	baz=292,slow=11,SNR=4.7						
MJAR				LR	LR	03 12 46.9	
	comp=E,157nm,19.8s,baz=290,slow=38						
GTA	**Gaotai**	**15.34**	**279**	*e*P	**P**	**03 07 09.9**	**+4.7**
GTA				pP	sP	03 07 16.1	+6.8
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA				LR	LR		
	comp=N,210nm,15.3s						
GTA				LR	LR		
	comp=E,270nm,13.4s						
GTA				LR	LR		
	comp=Z,450nm,13.4s						
ASAJ	**Asahikawa**	**18.07**	**65**	P	**P**	**03 07 36.8**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=269,slow=12,SNR=4.0						
ASAJ				LR	LR	03 13 57.3	
	comp=Z,108nm,18.6s,baz=119,slow=35						
	comp=Z,6.9nm,0.8s						
GOMU	**GeErMu**	**19.77**	**270**	P	**Pn**	**03 07 57.9**	**+1.9**
GOMU				pP	sP	03 08 01.5	+2.9
YAK	**Yakutsk**	**24.12**	**12**	LR	LR	03 18 48.0	
	comp=Z,82nm,18.4s,baz=246,slow=38						
WMQ	**Urumqi**	**24.37**	**292**	*e*P	**P**	**03 08 44.8**	**+2.7**
WMQ				sP	sP	03 08 51.1	+4.7
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
ZALV	**Zalesovo Beam**	**28.02**	**314**	P	**P**	**03 09 14.9**	**+0.1**
MK31	**Makanchi Array**	**28.28**	**299**	P	**P**	**03 09 16.2**	**-1.1**
MKAR	**Makanchi Array**	**28.28**	**299**	P	**P**	**03 09 17.3**	**0.0**
	comp=Z,0.4nm,0.7s,baz=95,slow=9.4,SNR=2.8						
MKAR				LR	LR	03 21 33.2	
	comp=Z,135nm,18.1s,baz=96,slow=39						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**28.28**	**299**	P	**P**	**03 09 16.2**	**-1.1**
KURK	**Kurchatov**	**31.04**	**306**	P	**P**	**03 09 41.6**	**0.0**
KURK				IAmb	IAmb	03 09 52.5	
	comp=Z,5.7nm,1.4s						
KURBB	**Kurchatov Arra**	**31.08**	**306**	P	**P**	**03 09 42.8**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=96,slow=9.4,SNR=5.3						
	comp=Z,0.8nm,0.7s						
AAK	**Ala-Archa**	**34.06**	**291**	P	**P**	**03 10 06.7**	**-1.8**
AAK				IAmb	IAmb	03 10 19.0	
	comp=Z,2.0nm,0.7s						
BVAR	**Borovoye Array**	**36.31**	**310**	P	**P**	**03 10 26.9**	**-0.6**
	comp=Z,1.9nm,0.8s,baz=94,slow=10,SNR=11						
	comp=Z,1.9nm,0.8s						
BRVK	**Borovoye**	**36.38**	**310**	P	**P**	**03 10 26.9**	**-1.1**
BRVK				IAmb	IAmb	03 10 38.2	
	comp=Z,4.5nm,0.9s						
KK31	**Karatay Array**	**36.87**	**293**	P	**P**	**03 10 31.4**	**-1.0**
KK31				IAmb	IAmb	03 10 42.7	
	comp=Z,3.5nm,0.9s						
KKAR	**Karatay Array**	**36.87**	**293**	P	**P**	**03 10 30.9**	**-1.5**
NIL	**Nilore**	**37.39**	**277**	P	**P**	**03 10 34.3**	**-2.6**
GAR	**Garm**	**37.94**	**286**	P	**P**	**03 10 40.3**	**-1.3**
GAR				IAmb	IAmb	03 10 58.2	
	comp=Z,4.3nm,0.7s						
ABKAR	**Akbulak array**	**43.09**	**304**	P	**P**	**03 11 22.5**	**-1.5**
ARU	**Arti**	**43.19**	**315**	P	**P**	**03 11 25.1**	**+0.5**
	comp=Z,1.6nm,0.3s,baz=112,slow=7.1,SNR=4.5						
	comp=Z,1.6nm,0.3s						
ARU	**Arti**	**43.19**	**315**	P	**P**	**03 11 23.2**	**-1.4**
ARU				IAmb	IAmb	03 11 34.4	
	comp=Z,4.3nm,0.8s						
GEYT	**Alibeck**	**47.36**	**289**	P	**P**	**03 11 58.2**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=0.0,slow=4.3,SNR=1.9						
	comp=Z,0.7nm,0.3s						
GEYT	**Alibeck**	**47.36**	**289**	P	**P**	**03 11 56.6**	**-1.5**
TNA	**Tin City**	**48.35**	**32**	P	**P**	**03 12 06.6**	**+1.3**
TNA				IAmb	IAmb	03 12 08.1	
	comp=Z,3.6nm,1.1s						
BMAR	**Burnt Mountain**	**57.03**	**27**	P	**P**	**03 13 12.0**	**+2.5**
ILAR	**Eielson Array**	**57.15**	**31**	P	**P**	**03 13 11.4**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=283,slow=7.7,SNR=6.8						
	comp=Z,0.4nm,0.8s						
FINES	**FINESS Array B**	**58.39**	**326**	P	**P**	**03 13 18.9**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=72,slow=6.2,SNR=6.5						
	comp=Z,0.9nm,0.5s						
WRA	**Warramunga Arr**	**60.02**	**164**	P	**P**	**03 13 29.3**	**-1.4**
	comp=Z,0.4nm,0.9s,baz=351,slow=7.0,SNR=1.6						
	comp=Z,0.4nm,0.9s						
ASAR	**Alice Springs**	**63.54**	**165**	P	**P**	**03 13 54.0**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=325,slow=5.7,SNR=1.7						
	comp=Z,0.3nm,0.7s						
BRTR	**Keskin Array B**	**63.90**	**301**	P	**P**	**03 13 57.5**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=64,slow=5.1,SNR=2.3						
	comp=Z,0.3nm,0.6s						
NB2	**NORSAR Subarra**	**64.85**	**329**	P	**P**	**03 14 03.1**	**+0.4**
	comp=Z,9.9nm,1.7s,baz=54,slow=6.5						
NOA	**NORSAR Array B**	**64.85**	**329**	P	**P**	**03 14 02.4**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=57,slow=6.3,SNR=4.8						
	comp=Z,1.4nm,0.8s						
YKA	**Yellowknife Ar**	**70.15**	**24**	P	**P**	**03 14 36.4**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=319,slow=5.7,SNR=16						
	comp=Z,0.6nm,0.7s						
NVAR	**Mina Array Bea**	**86.61**	**42**	P	**P**	**03 16 07.0**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=335,slow=4.0,SNR=2.3						
	comp=Z,0.1nm,0.3s						
PDAR	**Pinedale Array**	**87.43**	**34**	P	**P**	**03 16 11.5**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=321,slow=7.0,SNR=2.2						
	comp=Z,0.2nm,0.5s						

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*SOME **24** 03:28:17.5, 37°.68N×71°.93E, h15^{km}*

*NNC **24** 03:28:28.1±3.1, 37°.29N×70°.14E, h273^{km}±35^{km}, mb2.1, mpv2.7, Error ellipse: s-maj=35.0km s-min=26.8km az=23.0*

ISC 24 03:28:19.7±9.4**, 36°.6N**±0°.8×**70°.1E**±0°.2**, h250**^{km}**, n12, σ0^{s}.57**/12**, 1C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	**Iuzhnay**	**5.56**	**360**	*e*Pg	**Pn**	**03 29 42.4**	**0.0**
	17nm,0.2s						
IUG				*e*Lg	Lg	03 30 43.6	
	73nm,0.3s						
AML	**Almayashu**	**6.22**	**26**	P	**Pn**	**03 29 50.4**	**-0.5**
	SNR=27						
KK31	**Karatay Array**	**6.52**	**3**	⇑P	**Pn**	**03 29 54.4**	**+0.1**
	0.3nm,0.3s,baz=172,slow=12,SNR=8.6						
KK31				⇓S	S	03 31 04.2	-5.9
	3.8nm,0.7s,baz=176,slow=17,SNR=6.6						
UCH	**Uchtor**	**6.61**	**30**	P	**Pn**	**03 29 55.6**	**-0.3**
	SNR=6.9						
MRKS	**Merke**	**6.62**	**21**	*e*Pg	**Pn**	**03 29 55.5**	**-0.2**
	3.0nm,0.3s						
MRKS				*e*Lg	Lg	03 31 06.2	
	8.2nm,0.4s						
EKS2	**Erkin-Say**	**6.72**	**24**	P	**Pn**	**03 29 57.0**	**+0.2**
	SNR=5.6						
AAK	**Ala-Archa**	**6.95**	**28**	P	**Pn**	**03 29 59.9**	**0.0**
	SNR=5.9						
ULHL	**Ulahol**	**7.41**	**38**	P	**Pn**	**03 30 05.3**	**-0.4**
	SNR=16						
KST	**Kastek**	**7.89**	**33**	*e*Pg	**Pn**	**03 30 13.1**	**+1.4**
	2.1nm,0.2s						
KST				*e*Lg	Lg	03 31 36.4	
	7.0nm,0.4s						
TNSS	**Tian-Shan**	**8.35**	**37**	*e*Pg	**Pn**	**03 30 18.3**	**+0.6**
	2.0nm,0.2s						
TNSS				*e*Lg	Lg	03 31 45.4	
	1.8nm,0.3s						
MK31	**Makanchi Array**	**13.68**	**38**	P	**P**	**03 31 24.5**	**-0.4**
	1.1nm,0.8s,baz=225,slow=13,SNR=6.5						
AB31	**Akbulak array**	**14.65**	**333**	P	**Pn**	**03 31 35.8**	**+0.2**
	1.3nm,0.8s,baz=150,slow=12,SNR=11						

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*OSPL **24** 03:31:33.1±3.3, 20°.11N×70°.43W, h0^{km}±18^{km}, ML3.0*

*SSNC **24** 03:31:34.4±0.5, 20°.09N×70°.75W, h5^{km}±3^{km}, MD3.2, ML4.0*

ISC 24 03:31:31.0±1.9**, 20°.09N**±0°.03×**70°.56W**±0°.06**, h7**^{km}±15^{km}**, n13, σ1^{s}.09**/19**, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SC01	**Santiago de lo**	**0.68**	**193**	*i* P	**Pb**	**03 31 45.8**	**+0.5**
LODA1	**ITESIL, Dajabo**	**1.21**	**243**	*e*S	**Sn**	**03 32 14.1**	**+3.1**
SDDR	**Presa de Saban**	**1.30**	**212**	*e*P	**Pn**	**03 31 55.7**	**0.0**
SDDR				*e*S	**Sg**	**03 32 11.7**	**-1.2**
SDDR				IAML		03 32 17.3	
	comp=Z,11μm,0.3s						
SDDR				IAML		03 32 17.6	
	17μm,0.2s						
SDDR	**Presa de Saban**	**1.30**	**212**	*i* P	**Pn**	**03 31 56.0**	**+0.3**
SDDR				IAML		03 32 15.3	
	comp=Z,120nm,0.5s						
GRTK	**Grand Turk**	**1.51**	**339**	*e*P	**Pb**	**03 31 59.1**	**-0.3**
GRTK				*e*S	**Sn**	**03 32 17.8**	**-0.7**
GRTK				IAML		03 32 22.4	
	comp=Z,26μm,0.2s						
GRTK				IAML		03 32 22.6	
	comp=Z,8μm,0.2s						
GRTK	**Grand Turk**	**1.51**	**339**	*i* P	**Pb**	**03 31 59.4**	**-0.1**
GRTK				*e*S	**Sg**	**03 32 20.9**	**+1.3**
GRTK				IAML		03 32 24.8	
	comp=Z,248nm,0.8s						
SDD	**Santo Domingo**	**1.74**	**159**	*i* P	**Pn**	**03 32 01.9**	**+0.2**
SDD				*e*S	**Sn**	**03 32 23.5**	**-0.6**
PODR	**Polo**	**2.03**	**200**	*i* P	**Pb**	**03 32 08.3**	**-0.2**
PODR				*e*S	**Sg**	**03 32 37.5**	**+1.1**
PAPH	**Port-au-Prince**	**2.27**	**227**	*i* P	**Pb**	**03 32 11.4**	**-1.0**
PAPH				IAML		03 32 46.6	
	comp=Z,28nm,0.4s						
LOPE2	**Hotel El Peder**	**2.34**	**209**	*i* P	**Pb**	**03 32 12.6**	**-0.9**
LOPE2				IAML		03 32 45.8	
	comp=Z,66nm,1.2s						
MASC	**Masc**	**3.45**	**272**	*e*P	**Pn**	**03 32 24.9**	**-0.3**
MASC				*e*S	**Sn**	**03 33 06.0**	**-0.4**
MASC				IAML		03 33 08.9	
	comp=N,6.0nm,0.4s						
MASC				IAML		03 33 08.9	
	comp=E,6.1nm,0.3s						
CRPR	**Cabo Rojo, PR**	**3.87**	**122**	*i* P	**Pn**	**03 32 30.9**	**-0.1**
CRPR				IAML		03 33 19.0	
	comp=Z,63nm,1.4s						
GTBY	**Guantanamo Bay**	**4.28**	**269**	*e*P	**Pn**	**03 32 36.0**	**-0.7**

IDC 24 03:36:25.3±25.0**, 24°.68S**×**179°.20W, h188**^{km}±172^{km}**, mb3.3**/2**, mbtmp3.9**/3**, ML4.9**/1**, Error ellipse: s-maj=293.7km s-min=43.5km az=139.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**7.37**	**339**	P	Pn	03 38 10.5	+0.1
	0.7nm,0.3s,baz=140,slow=14,SNR=4.3						
	8.8nm,0.8s						
ASAR	**Alice Springs**	**42.63**	**261**	P	P	03 44 03.3	-0.2
	1.4nm,0.4s,baz=90,slow=7.3,SNR=32						
	1.4nm,0.4s						
WRA	**Warramunga Arr**	**43.09**	**267**	P	P	03 44 06.8	-0.3
	0.3nm,0.4s,baz=105,slow=7.3,SNR=9.3						
	0.3nm,0.4s						
NOA	**NORSAR Array B**	**142.95**	**352**	PKhKP	PKPpre	03 55 22.2	
	0.4nm,0.6s,baz=7.8,slow=2.2,SNR=3.8						
BRTR	**Keskin Array B**	**148.62**	**307**	PKPbc	PKPbc	03 55 50.2	-0.2
	0.5nm,0.6s,baz=88,slow=2.9,SNR=4.7						

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*IDC **24** 04:15:24.8±1.0, 36°.32N×142°.34E, h0^{km}, mb3.5/8, mbtmp3.5/12, ML3.1/4, MS2.4/1, Error ellipse: s-maj=24.3km s-min=22.1km az=26.0*

*JMA **24** 04:15:26.2±0.3, 36°.2N±0°.6×14°2E±°, h74^{km}, MV3.0/27, FAR E OFF KANTO*

ISC 24 04:15:27.2±0.8**, 36°.25N**±0°.05×**142°.31E**±0°.07**, h18**^{km}**, n32, σ0^{s}.87**/31**, mb3.6**/8**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**1.29**	**246**	*e*P	**Pn**	**04 15 49.9**	**-0.5**
JHYU	**Hitachinakayam**	**1.39**	**274**	P	**Pn**	**04 15 51.7**	**-0.1**
JHYU				*e*S	**Sb**	**04 16 10.1**	**0.0**
JHO	**Hitachi**	**1.45**	**285**	P	**Pn**	**04 15 52.1**	**-0.4**
JHO				*e*S	**Sb**	**04 16 12.0**	**+0.3**
ONAJ	**Iwakimizuishiy**	**1.48**	**306**	*e*P	**Pn**	**04 15 52.6**	**-0.5**
JFK	**Kawauchi**	**1.60**	**315**	*e*P	**Pn**	**04 15 53.9**	**-0.8**
JFK				S	**Sb**	**04 16 15.8**	**-0.5**
BSO1	**Boso 1**	**1.92**	**215**	*e*P	**Pn**	**04 15 57.6**	**-0.9**
JOTO	**OTAMA OYAMA**	**2.05**	**310**	P	**Pn**	**04 16 02.0**	**+1.1**
JAG	**Ashikaga**	**2.31**	**275**	P	**Pn**	**04 16 04.7**	**+0.3**
JRY	**Ryogami san**	**2.77**	**266**	*e*P	**Pn**	**04 16 10.6**	**-0.1**
JOD2	**Odawara 2**	**2.79**	**250**	P	**Pn**	**04 16 10.8**	**-0.3**
JOD2				*e*S	**Sn**	**04 16 44.0**	**-0.3**
JMK	**Ichinoseki**	**2.84**	**343**	P	**Pn**	**04 16 11.0**	**-0.6**
JMK				*e*S	**Sn**	**04 16 45.2**	**-0.1**
JYK	**Kaneyama**	**3.08**	**330**	*e*P	**Pn**	**04 16 14.2**	**-0.8**
JYN	**Shimob**	**3.14**	**257**	P	**Pn**	**04 16 17.6**	**+1.7**
MJAR	**Matsushiro Arr**	**3.32**	**276**	Pn	**Pn**	**04 16 18.7**	**+0.4**
	0.5nm,0.3s,baz=103,slow=8.0,SNR=13						
MJAR				LR	LR	04 17 59.5	
	comp=Z,58nm,20.1s,baz=134,slow=46						
	3.7nm,0.4s						
MAT	**Matsushiro**	**3.32**	**276**	P	**Pn**	**04 16 19.6**	**+1.3**
USRK	**Ussuriysk Ar.**	**11.19**	**318**	Pn	**Pn**	**04 18 07.2**	**+1.0**
	0.2nm,0.3s,baz=95,slow=20,SNR=2.5						
	1.1nm,0.6s						
KSRS	**Korea Array**	**11.59**	**280**	Pn	**Pn**	**04 18 10.0**	**-1.7**
	0.4nm,0.3s,baz=100,slow=14,SNR=1.4						
	0.4nm,0.3s						
KLR	**Kul'dur**	**15.10**	**333**	Pn	**Pn**	**04 18 58.9**	**-0.6**
	0.1nm,0.3s,baz=199,slow=7.0,SNR=1.8						
	0.4nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**27.13**	**121**	T	T	04 49 16.5	
	baz=312,slow=74,SNR=4.6						
H11N1	**WAKE ISLAND Hy**	**27.14**	**121**	T	T	04 49 15.3	
	baz=312,slow=74,SNR=4.3						
H11N3	**WAKE ISLAND Hy**	**27.15**	**121**	T	T	04 49 17.5	
	baz=312,slow=74,SNR=3.8						
H11S1	**WAKE ISLAND Hy**	**27.83**	**123**	T	T	04 50 12.6	
	baz=314,slow=76,SNR=6.5						
H11S3	**WAKE ISLAND Hy**	**27.83**	**123**	T	T	04 50 09.1	
	baz=314,slow=76,SNR=5.2						
H11S2	**WAKE ISLAND Hy**	**27.85**	**123**	T	T	04 50 12.2	
	baz=314,slow=76,SNR=3.9						
SONM	**Songino Array**	**28.82**	**305**	P	**P**	**04 21 24.5**	**+0.1**
	1.3nm,0.8s,baz=107,slow=10,SNR=5.6						
	1.3nm,0.8s						
ZALV	**Zalesovo Beam**	**42.98**	**313**	P	**P**	**04 23 24.6**	**-0.5**
	0.5nm,0.3s,baz=113,slow=3.3,SNR=1.8						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**45.15**	**303**	P	**P**	**04 23 42.8**	**+0.2**
	1.1nm,0.6s,baz=87,slow=10,SNR=5.4						
	1.1nm,0.6s						
ILAR	**Eielson Array**	**49.78**	**32**	P	**P**	**04 24 17.1**	**-1.2**
	0.2nm,0.8s,baz=266,slow=8.0,SNR=2.1						
	0.2nm,0.8s						
WRA	**Warramunga Arr**	**56.39**	**189**	P	**P**	**04 25 07.3**	**-0.2**
	0.6nm,1.0s,baz=12,slow=7.6,SNR=3.0						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**60.12**	**189**	P	**P**	**04 25 35.6**	**+2.0**
	0.1nm,0.3s,baz=2.1,slow=7.4,SNR=1.5						
	0.1nm,0.3s						
YKA	**Yellowknife Ar**	**64.13**	**30**	P	**P**	**04 25 59.8**	**-0.3**
	0.1nm,0.7s,baz=304,slow=6.6,SNR=2.5						
	0.1nm,0.7s						
NVAR	**Mina Array Bea**	**74.88**	**53**	P	**P**	**04 27 08.4**	**+1.2**
	0.2nm,0.4s,baz=311,slow=5.5,SNR=1.7						
	0.2nm,0.4s						

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*MED_RC **24** 04:24:29.0±0.6, 37°.54N×23°.88E, h157^{km}±8^{km}, MW4.4/13, Moment Tensor Solution.Mantle waves: s13,c17; Duration: 1^{s}.0 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.57±.33; $M_{\theta\theta}$-2.80±.34; $M_{\phi\phi}$4.37±.33; $M_{r\theta}$-1.85±.34; $M_{\theta\phi}$-0.10±.36; $M_{\phi r}$-0.75±.41; Best double couple: $M_0$4.32000×10^{15} NP1:ϕ_s38.00000°, δ71.00000°, λ-33.00000°. NP2:ϕ_s140.00000°, δ59.00000°, λ-158.00000°. Principal axes: T 4.4600, Plg7.0000°, Azm91.0000°; N -0.3000, Plg53.0000°, Azm191.0000°; P -4.1700, Plg36.0000°, Azm356.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*PDG **24** 04:24:30.4±0.5, 37°.56N×23°.83E, h180^{km}±1^{km}, ML4.7/13 Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*

*ATH **24** 04:24:30.2, 37°.57N×23°.89E, h165^{km}±1^{km}, ML4.4/32, Error ellipse: s-maj=1.4km s-min=0.7km az=264.0*

*IDC **24** 04:24:30.7±0.9, 37°.66N×23°.99E, h162^{km}±8^{km}, mb4.1/30, mbtmp4.5/45, MS2.9/2, Error ellipse: s-maj=9.2km s-min=8.2km az=156.0*

*NEIC **24** 04:24:30.8±1.6, 37°.60N±0°.06×23°.91E±0°.07, h168^{km}±7^{km}, mb4.6/82, Error ellipse: s-maj=9.7km s-min=8.2km az=204.0*

*ISK **24** 04:24:30.2, 37°.55N×23°.92E, h166^{km}±2^{km}, ML4.1/27*

*BEO **24** 04:24:31.6±0.7, 37°.74N×23°.54E, h8^{km}±7^{km}, ML3.9/16*

*MOS **24** 04:24:31.2±0.9, 37°.69N×24°.03E, h176^{km}, mb4.4/21, Error ellipse: s-maj=5.3km s-min=3.0km az=97.2*

*THE **24** 04:24:32.6, 37°.54N×23°.88E, h150^{km}±31^{km}, ML4.4/16, Error ellipse: s-maj=31.6km s-min=1.0km az=0.0*

*DDA **24** 04:24:34.0±0.0, 37°.68N×23°.99E, h102^{km}±38^{km}, MW4.2*

*GII **24** 04:24:35.2±0.0, 36°.82N×24°.87E, h5^{km}, mb4.3/2, MD4.2/2, Mm4.1/8*

ISC 24 04:24:29.8±0.4**, 37°.59N**±0°.03×**23°.96E**±0°.03**, h160**^{km}±3^{km}**, n801, σ1^{s}.84**/927**, mb4.7**/108**, 91C-53D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLY	**Voula,Athens**	**0.29**	**333**	P	**Pn**	**04 24 52.9**	**+1.5**
VLY				S	**Sn**	**04 25 08.5**	**+0.4**
	8μm,0.6s						
VLY	**Voula,Athens**	**0.29**	**333**	P	**Pn**	**04 24 52.9**	**+1.5**
VLY				S	**Sn**	**04 25 08.5**	**+0.4**
VLY				AML	AML	04 25 08.9	
	comp=E,16182μm,0.7s						
VLY				AML	AML	04 25 09.2	
	comp=N,13990μm,0.6s						
ATHU	**Athens Univers**	**0.40**	**339**	P	**Pn**	**04 24 53.3**	**+1.5**
ATHU				S	**Sn**	**04 25 09.2**	**+0.5**
	comp=N,2μm,0.6s						
ATHU	**Athens Univers**	**0.40**	**339**	P	**Pn**	**04 24 53.4**	**+1.5**
ATHU				S	**Sn**	**04 25 09.1**	**+0.3**
ATH	**Athens Observa**	**0.43**	**333**	P	**Pn**	**04 24 53.5**	**+1.6**
ATH				S	**Sn**	**04 25 09.6**	**+0.7**

	comp=N,5µm,0.7s						
ATH	**Athens Observa**	**0.43**	**333**	P	**Pn**	**04 24 53.5**	**+1.6**
ATH				S	**Sn**	**04 25 09.3**	**+0.5**
ATH				AML	AML	04 25 09.9	
	comp=E,8068µm,0.7s						
ATH				AML	AML	04 25 10.3	
	comp=N,12631µm,0.7s						
PTL	**Penteli**	**0.46**	**350**	P	**Pn**	**04 24 54.7**	**+2.6**
PTL				S	**Sn**	**04 25 10.2**	**+0.9**
	comp=N,3µm,0.6s						
PTL	**Penteli**	**0.46**	**350**	P	**Pn**	**04 24 54.2**	**+2.1**
PTL				S	**Sn**	**04 25 10.1**	**+0.8**
PTL				AML	AML	04 25 11.1	
	comp=E,7197µm,0.8s						
PTL				AML	AML	04 25 11.3	
	comp=N,4042µm,0.5s						
YDRA	**Hydra**	**0.46**	**239**	P	**Pn**	**04 24 52.3**	**+0.3**
YDRA				S	**Sn**	**04 25 08.7**	**-0.3**
DION	**Dionisos Attik**	**0.49**	**357**	P	**Pn**	**04 24 54.7**	**+2.5**
DION				S	**Sn**	**04 25 10.7**	**+1.3**
	comp=N,7µm,0.8s						
DION	**Dionisos Attik**	**0.49**	**357**	P	**Pn**	**04 24 54.3**	**+2.1**
DION				S	**Sn**	**04 25 10.6**	**+1.1**
DION				AML	AML	04 25 11.4	
	comp=E,8881µm,0.8s						
DION				AML	AML	04 25 11.7	
	comp=N,10577µm,0.9s						
EPID	**Epidavros**	**0.67**	**272**	P	**Pn**	**04 24 54.5**	**+1.4**
EPID				S	**Sn**	**04 25 11.3**	**+0.3**
	comp=N,8µm,0.8s						
EPID	**Epidavros**	**0.67**	**272**	P	**Pn**	**04 24 54.6**	**+1.4**
EPID				S	**Sn**	**04 25 11.4**	**+0.3**
KRND	**KRANIDI**	**0.68**	**252**	P	**Pn**	**04 24 54.5**	**+1.4**
KRND				S	**Sn**	**04 25 11.7**	**+0.7**
	comp=N,29µm,0.6s						
KRND	**KRANIDI**	**0.68**	**252**	P	**Pn**	**04 24 54.6**	**+1.4**
KRND				S	**Sn**	**04 25 11.5**	**+0.5**
KRND				AML	AML	04 25 12.1	
	comp=N,81124µm,0.6s						
KRND				AML	AML	04 25 12.5	
	comp=E,34000µm,0.6s						
VILL	**Villia**	**0.77**	**318**	P	**Pn**	**04 24 55.3**	**+1.5**
VILL				S	**Sn**	**04 25 12.7**	**+0.4**
EREA	**Eretria**	**0.83**	**358**	P	**Pn**	**04 24 55.9**	**+1.7**
EREA				S	**Sn**	**04 25 13.5**	**+0.5**
EREA	**Eretria**	**0.83**	**358**	P	**Pn**	**04 24 55.9**	**+1.7**
EREA				S	**Sn**	**04 25 13.5**	**+0.5**
EREA				AML	AML	04 25 14.3	
	comp=E,3405µm,0.7s						
EREA				AML	AML	04 25 14.9	
	comp=N,1601µm,0.7s						
VIL2	**Platees**	**0.83**	**319**	P	**Pn**	**04 24 55.3**	**+1.1**
VIL2				S	**Sn**	**04 25 12.4**	**-0.6**
VIL2				AML	AML	04 25 13.3	
	comp=N,7010µm,0.7s						
VIL2				AML	AML	04 25 13.5	
	comp=E,14835µm,0.8s						
LOUT	**Loutraki**	**0.88**	**297**	P	**Pn**	**04 24 55.9**	**+1.4**
LOUT				S	**Sn**	**04 25 13.9**	**+0.4**
	comp=E,4µm,0.6s						
LOUT	**Loutraki**	**0.88**	**297**	P	**Pn**	**04 24 55.9**	**+1.4**
LOUT				S	**Sn**	**04 25 12.9**	**-0.6**
TNSA	**Tinos**	**0.95**	**93**	P	**Pn**	**04 24 57.7**	**+2.6**
TNSA				S	**Sn**	**04 25 16.0**	**+1.6**
MHLO	**Agia Marina, M**	**0.97**	**159**	P	**Pn**	**04 24 56.8**	**+1.6**
MHLO	**Agia Marina, M**	**0.97**	**159**	P	**Pn**	**04 24 56.9**	**+1.6**
KYMI	**Kymi, Euboea I**	**1.05**	**6**	P	**Pn**	**04 24 57.4**	**+1.5**
KYMI				S	**Sn**	**04 25 16.9**	**+1.0**
	comp=E,1µm,0.7s						
KYMI	**Kymi, Euboea I**	**1.05**	**6**	P	**Pn**	**04 24 57.3**	**+1.5**
KYMI				S	**Sn**	**04 25 16.8**	**+0.9**
THAL	**Thalero**	**1.12**	**294**	P	**Pn**	**04 24 57.7**	**+1.3**
THAL				S	**Sn**	**04 25 17.1**	**+0.2**
	comp=E,12µm,0.6s						
THAL	**Thalero**	**1.12**	**294**	P	**Pn**	**04 24 57.7**	**+1.3**
THAL				S	**Sn**	**04 25 16.7**	**-0.3**
THAL				AML	AML	04 25 26.9	
	comp=E,23975µm,0.3s						
THAL				AML	AML	04 25 27.4	
	comp=N,22110µm,0.5s						
MNVA	**Monemvasia**	**1.17**	**220**	P	**Pn**	**04 24 58.4**	**+1.6**
MNVA				S	**Sn**	**04 25 17.1**	**-0.5**
VLI	**Veliai**	**1.20**	**224**	P	**Pn**	**04 24 58.2**	**+1.0**
VLI				S	**Sn**	**04 25 17.1**	**-1.0**
	comp=N,17µm,0.5s						
VLI	**Veliai**	**1.20**	**224**	P	**Pn**	**04 24 58.2**	**+1.0**
VLI				S	**Sn**	**04 25 17.1**	**-1.0**
VLI				AML	AML	04 25 18.1	
	comp=E,31141µm,0.4s						
VLI				AML	AML	04 25 19.4	
	comp=N,37579µm,0.6s						
LKR	**Lokris**	**1.30**	**325**	P	**Pn**	**04 24 59.3**	**+1.2**
LKR				AML	AML	04 25 21.7	
	comp=N,3614µm,0.6s						
LKR				AML	AML	04 25 22.8	
	comp=E,1843µm,0.4s						
ATAL	**Atalanti**	**1.33**	**326**	P	**Pn**	**04 24 59.6**	**+1.2**
ATAL	**Atalanti**	**1.33**	**326**	P	**Pn**	**04 24 59.6**	**+1.2**
ATAL				S	**Sn**	**04 25 20.5**	**+0.1**
ATAL				AML	AML	04 25 21.1	
	comp=E,2917µm,1.1s						
ATAL				AML	AML	04 25 22.2	
	comp=N,4900µm,0.8s						
GUR	**Goura**	**1.33**	**285**	P	**Pn**	**04 24 59.6**	**+1.1**
GUR				S	**Sn**	**04 25 20.6**	**+0.1**
	comp=N,22µm,0.4s						
GUR	**Goura**	**1.33**	**285**	P	**Pn**	**04 24 59.2**	**+0.7**
GUR				S	**Sn**	**04 25 20.2**	**-0.3**
GUR				AML	AML	04 25 23.0	
	comp=N,39856µm,0.4s						
GUR				AML	AML	04 25 23.8	
	comp=E,45785µm,0.3s						
DLFA	**Delphi**	**1.46**	**308**	P	**Pn**	**04 25 00.7**	**+1.0**
DLFA				S	**Sn**	**04 25 22.5**	**-0.1**
KLV	**Kalavryta, Ach**	**1.50**	**288**	P	**Pn**	**04 25 01.2**	**+1.0**
KLV				S	**Sn**	**04 25 23.8**	**+0.3**
KLV	**Kalavryta, Ach**	**1.50**	**288**	P	**Pn**	**04 25 01.2**	**+1.0**
KLV				S	**Sn**	**04 25 22.8**	**-0.7**
KLV				AML	AML	04 25 25.0	
	comp=E,12191µm,0.4s						
KLV				AML	AML	04 25 27.1	
	comp=N,8273µm,0.6s						
KTHA	**Kythira Island**	**1.52**	**209**	P	**Pn**	**04 25 01.5**	**+1.2**
KTHA				S	**Sn**	**04 25 23.2**	**-0.4**
	comp=N,21µm,0.4s						
KTHA	**Kythira Island**	**1.52**	**209**	Pn	**Pn**	**04 25 01.3**	**+1.0**
KTHA				Sn	**Sn**	**04 25 23.3**	**-0.4**
KTHA	**Kythira Island**	**1.52**	**209**	P	**Pn**	**04 25 01.5**	**+1.2**
KTHA				S	**Sn**	**04 25 23.2**	**-0.4**
KTHA				AML	AML	04 25 24.3	
	comp=E,46097µm,0.4s						
KTHA				AML	AML	04 25 24.4	
	comp=N,36644µm,0.3s						
ALNA	**Alonissos**	**1.56**	**357**	P	**Pn**	**04 25 01.8**	**+1.2**
AXAR	**Agios Charalam**	**1.56**	**319**	P	**Pn**	**04 25 02.2**	**+1.5**
AXAR	**Agios Charalam**	**1.56**	**319**	P	**Pn**	**04 25 02.2**	**+1.5**
AXAR				S	**Sn**	**04 25 25.1**	**+0.5**
AXAR				AML	AML	04 25 36.9	
	comp=N,6749µm,0.6s						
AXAR				AML	AML	04 25 37.1	
	comp=E,6140µm,0.6s						
PSRA	**Psara**	**1.58**	**53**	P	**Pn**	**04 25 03.6**	**+2.8**
SAP3	**Santorini-Thir**	**1.60**	**136**	P	**Pn**	**04 25 03.1**	**+2.0**
SAP3	**Santorini-Thir**	**1.60**	**136**	P	**Pn**	**04 25 03.1**	**+2.0**
CMBO	**Columbo, Santo**	**1.61**	**134**	P	**Pn**	**04 25 03.2**	**+2.0**
CMBO	**Columbo, Santo**	**1.61**	**134**	P	**Pn**	**04 25 03.2**	**+2.0**
ALIK	**Aliki, Aigiali**	**1.61**	**295**	P	**Pn**	**04 25 02.6**	**+1.5**
THR5	**Thira Island,**	**1.61**	**136**	P	**Pn**	**04 25 03.1**	**+1.9**
THR2	**Thira island,**	**1.64**	**134**	P	**Pn**	**04 25 03.2**	**+1.7**
THT2	**Imerovigli**	**1.64**	**134**	P	**Pn**	**04 25 03.6**	**+2.0**
THR3	**Thira Island,**	**1.65**	**135**	P	**Pn**	**04 25 03.7**	**+2.1**
THR9	**Santorini-Faro**	**1.66**	**137**	P	**Pn**	**04 25 03.7**	**+1.9**
THR9	**Santorini-Faro**	**1.66**	**137**	P	**Pn**	**04 25 03.6**	**+1.9**
ITM	**Ithomi**	**1.67**	**256**	P	**Pn**	**04 25 03.9**	**+2.0**
ITM				S	**Sn**	**04 25 27.1**	**+0.5**
	comp=E,5µm,0.3s						
ITM	**Ithomi**	**1.67**	**256**	Pn	**Pn**	**04 25 03.8**	**+1.9**
ITM				Sn	**Sn**	**04 25 26.8**	**+0.2**
ITM	**Ithomi**	**1.67**	**256**		**Pn**	**04 25 03.9**	**+1.9**
ITM	**Ithomi**	**1.67**	**256**	⇑P	**Pn**	**04 25 03.8**	**+1.9**
ITM	**Ithomi**	**1.67**	**256**	P	**Pn**	**04 25 03.0**	**+1.1**
ITM				AML	AML	04 25 29.6	
	comp=E,13809µm,0.4s						
ITM				AML	AML	04 25 31.0	
	comp=N,7752µm,0.5s						
TRIZ	**Trizonia**	**1.68**	**298**	P	**Pn**	**04 25 03.6**	**+1.6**
THR6	**Thira Island,**	**1.69**	**137**	P	**Pn**	**04 25 03.3**	**+1.3**
THR6	**Thira Island,**	**1.69**	**137**	P	**Pn**	**04 25 03.3**	**+1.3**
THR8	**Santorini-Mono**	**1.69**	**134**	P	**Pn**	**04 25 03.9**	**+1.8**
THR8	**Santorini-Mono**	**1.69**	**134**	P	**Pn**	**04 25 03.7**	**+1.7**
LAKA	**Lakka**	**1.70**	**293**	P	**Pn**	**04 25 02.9**	**+0.8**
LAKA				S	**Sn**	**04 25 27.3**	**+0.2**
LAKA	**Lakka**	**1.70**	**293**	P	**Pn**	**04 25 03.0**	**+0.9**
LAKA				S	**Sn**	**04 25 26.8**	**-0.3**
LAKA				AML	AML	04 25 28.6	
	comp=N,4781µm,0.5s						
LAKA				AML	AML	04 25 28.9	
	comp=E,4950µm,0.5s						
SANT	**Santorini**	**1.71**	**135**	⇓P	**Pn**	**04 25 03.6**	**+1.2**
SANT				⇓S	**Sn**	**04 25 26.5**	**-0.8**
SANT	**Santorini**	**1.71**	**135**	P	**Pn**	**04 25 04.0**	**+1.7**
SANT	**Santorini**	**1.71**	**135**	Pn	**Pn**	**04 25 03.7**	**+1.4**
SANT	**Santorini**	**1.71**	**135**		**Pn**	**04 25 04.1**	**+1.8**
SANT	**Santorini**	**1.71**	**135**	P	**Pn**	**04 25 03.9**	**+1.7**
SANT	**Santorini**	**1.71**	**135**	P	**Pn**	**04 25 04.0**	**+1.7**
SERG	**Sergoula**	**1.71**	**299**	P	**Pn**	**04 25 03.5**	**+1.2**
SERG	**Sergoula**	**1.71**	**299**	P	**Pn**	**04 25 03.3**	**+1.0**
SERG				S	**Sn**	**04 25 27.6**	**+0.2**
ANKY	**Antikythira Is**	**1.80**	**197**	P	**Pn**	**04 25 04.4**	**+1.1**
ANKY				S	**Sn**	**04 25 28.5**	**-0.5**
	comp=E,13µm,0.5s						
ANKY	**Antikythira Is**	**1.80**	**197**	P	**Pn**	**04 25 04.4**	**+1.1**
ANKY				S	**Sn**	**04 25 28.2**	**-0.8**
ANKY				AML	AML	04 25 28.8	
	comp=E,27078µm,0.5s						
ANKY				AML	AML	04 25 28.8	
	comp=N,23743µm,0.6s						
NEO	**Neokhori**	**1.81**	**341**	P	**Pn**	**04 25 04.6**	**+1.2**
NEO	**Neokhori**	**1.81**	**341**	P	**Pn**	**04 25 04.5**	**+1.2**
NEO				AML	AML	04 25 30.9	
	comp=E,1412µm,0.8s						
NEO				AML	AML	04 25 31.6	
	comp=N,1780µm,0.7s						
DRO	**Drossia**	**1.82**	**282**	P	**Pn**	**04 25 05.3**	**+1.8**
DRO	**Drossia**	**1.82**	**282**	P	**Pn**	**04 25 04.8**	**+1.3**
DRO				S	**Sn**	**04 25 28.8**	**-0.6**
DRO				AML	AML	04 25 36.3	
	comp=N,17666µm,0.5s						
DRO				AML	AML	04 25 38.4	
	comp=E,16017µm,0.7s						
EFP	**Efpalio**	**1.83**	**298**	P	**Pn**	**04 25 04.7**	**+1.2**
EFP	**Efpalio**	**1.83**	**298**	P	**Pn**	**04 25 04.4**	**+1.0**
EFP				S	**Sn**	**04 25 29.7**	**+0.1**
EFP				AML	AML	04 25 33.8	
	comp=N,6420µm,0.5s						
EFP				AML	AML	04 25 34.4	
	comp=E,6595µm,0.4s						
CHOS	**Chios island**	**1.83**	**64**	Pn	**Pn**	**04 25 05.9**	**+2.2**
CHOS				Sn	**Sn**	**04 25 31.4**	**+1.6**
CHOS	**Chios island**	**1.83**	**64**	P	**Pn**	**04 25 05.8**	**+2.2**
XOR	**Xorichti**	**1.87**	**341**	P	**Pn**	**04 25 05.1**	**+1.1**
XOR	**Xorichti**	**1.87**	**341**	P	**Pn**	**04 25 05.2**	**+1.2**
ANX	**Ano Chora**	**1.90**	**302**	P	**Pn**	**04 25 05.5**	**+1.1**
ANX	**Ano Chora**	**1.90**	**302**	P	**Pn**	**04 25 05.4**	**+1.1**
ANX				S	**Sn**	**04 25 30.0**	**-1.1**
ANX				AML	AML	04 25 32.4	
	comp=N,15918µm,0.5s						
ANX				AML	AML	04 25 37.9	
	comp=E,10851µm,0.4s						
PYL	**PYLOS**	**1.90**	**249**	P	**Pn**	**04 25 05.4**	**+1.0**
PYL				S	**Sn**	**04 25 30.7**	**-0.3**
	comp=E,8µm,0.3s						
PYL	**PYLOS**	**1.90**	**249**	P	**Pn**	**04 25 04.9**	**+0.5**
PYL				S	**Sn**	**04 25 30.8**	**-0.3**
PYL				AML	AML	04 25 32.2	
	comp=N,16533µm,0.4s						
PYL				AML	AML	04 25 32.8	
	comp=E,13796µm,0.3s						
AGG	**Agios Georgios**	**1.92**	**319**	P	**Pn**	**04 25 06.0**	**+1.4**
AGG	**Agios Georgios**	**1.92**	**319**	Pn	**Pn**	**04 25 05.9**	**+1.4**
AGG				Sn	**Sn**	**04 25 32.1**	**+0.6**
AGG	**Agios Georgios**	**1.92**	**319**		**Pn**	**04 25 06.0**	**+1.4**
AGG	**Agios Georgios**	**1.92**	**319**	P	**Pn**	**04 25 05.9**	**+1.4**
AGG				S	**Sn**	**04 25 30.0**	**-1.5**
AGG	**Agios Georgios**	**1.92**	**319**	⇑P	**Pn**	**04 25 06.0**	**+1.4**
AGG	**Agios Georgios**	**1.92**	**319**	P	**Pn**	**04 25 06.0**	**+1.4**
AGG	**Agios Georgios**	**1.92**	**319**	P	**Pn**	**04 25 05.9**	**+1.3**
AGG				S	**Sn**	**04 25 31.0**	**-0.5**
MAKR	**Makrakomi, Fth**	**2.02**	**315**	P	**Pn**	**04 25 07.3**	**+1.5**
MAKR	**Makrakomi, Fth**	**2.02**	**315**	P	**Pn**	**04 25 07.2**	**+1.5**
MAKR				S	**Sn**	**04 25 33.7**	**+0.1**
MAKR				AML	AML	04 25 35.8	
	comp=N,11055µm,0.3s						
MAKR				AML	AML	04 25 36.3	
	comp=E,14179µm,0.6s						
RODP	**Rodopos**	**2.03**	**185**	P	**Pn**	**04 25 06.8**	**+0.9**
RODP	**Rodopos**	**2.03**	**185**	Pn	**Pn**	**04 25 06.8**	**+0.9**
RODP				Sn	**Sn**	**04 25 33.5**	**-0.2**
CHAN	**Chania**	**2.07**	**178**	P	**Pn**	**04 25 06.8**	**+0.5**
CHAN				AML	AML	04 25 34.4	
	comp=N,16889µm,0.5s						
CHAN				AML	AML	04 25 35.4	
	comp=E,17863µm,0.3s						
IMMV	**Iera Moni Meta**	**2.13**	**180**	P	**Pn**	**04 25 07.6**	**+0.6**
IMMV	**Iera Moni Meta**	**2.13**	**180**	Pn	**Pn**	**04 25 07.6**	**+0.6**
IMMV				Sn	**Sn**	**04 25 35.2**	**-0.4**
IMMV	**Iera Moni Meta**	**2.13**	**180**	P	**Pn**	**04 25 07.7**	**+0.6**
IMMV				AML	AML	04 25 39.5	
	comp=E,13981µm,0.3s						
IMMV				AML	AML	04 25 42.0	
	comp=N,14753µm,0.4s						
EVR	**Evrytania**	**2.15**	**309**	P	**Pn**	**04 25 09.7**	**+2.4**
EVR	**Evrytania**	**2.15**	**309**	P	**Pn**	**04 25 08.6**	**+1.4**
EVR				AML	AML	04 25 39.5	
	comp=E,4002µm,0.3s						
EVR				AML	AML	04 25 41.0	
	comp=N,4043µm,0.6s						
PVO	**Paravola**	**2.18**	**299**	P	**Pn**	**04 25 09.3**	**+1.8**
PVO	**Paravola**	**2.18**	**299**	P	**Pn**	**04 25 09.0**	**+1.5**
SIGR	**SIGRI**	**2.20**	**42**	Pn	**Pn**	**04 25 09.5**	**+1.8**
SIGR	**SIGRI**	**2.20**	**42**	P	**Pn**	**04 25 09.6**	**+1.8**
KARB	**zmir-Karabur**	**2.21**	**60**	SPECP		04 25 10.0	
KARB				P	**Pn**	**04 25 10.1**	**+2.2**
URLA	**Izmir**	**2.22**	**69**	Pn	**Pn**	**04 25 10.4**	**+2.4**
URLA				Sn	**Sn**	**04 25 39.1**	**+1.6**
URLA	**Izmir**	**2.22**	**69**	SPECP		04 25 10.0	
URLA				P	**Pn**	**04 25 10.2**	**+2.3**
URLA				S	**Sn**	**04 25 37.0**	**-0.5**
PRNS	**Prines Rethymn**	**2.26**	**169**	P	**Pn**	**04 25 09.2**	**+0.6**
SMG	**Samos**	**2.28**	**86**	P	**Pn**	**04 25 10.8**	**+2.0**
SMG	**Samos**	**2.28**	**86**	P	**Pn**	**04 25 11.0**	**+2.2**
SMG				AML	AML	04 25 42.4	
	comp=N,1341µm,1.3s						
SMG				AML	AML	04 25 42.8	
	comp=E,2842µm,0.9s						
DGB	**zmir**	**2.36**	**78**	P	**Pn**	**04 25 11.9**	**+2.3**
DGB				S	**Sn**	**04 25 38.8**	**-1.6**
KNDR	**Palaiochora Ch**	**2.36**	**186**	P	**Pn**	**04 25 11.3**	**+1.5**
KNDR	**Palaiochora Ch**	**2.36**	**186**	Pn	**Pn**	**04 25 11.3**	**+1.5**
KNDR	**Palaiochora Ch**	**2.36**	**186**	P	**Pn**	**04 25 11.2**	**+1.5**
KNDR				AML	AML	04 25 45.0	
	comp=E,17110µm,0.4s						
KNDR				AML	AML	04 25 45.5	
	comp=N,12472µm,0.3s						
LRSO	**Larissa Observ**	**2.41**	**330**	P	**Pn**	**04 25 11.6**	**+1.3**
IDI	**Anoyia**	**2.42**	**162**	⇓P	**Pn**	**04 25 10.8**	**+0.3**
IDI	**Anoyia**	**2.42**	**162**	P	**Pn**	**04 25 10.6**	**+0.1**
	comp=N,332nm,0.3s,baz=347,slow=6.6,SNR=2630						
IDI				S	**Sn**	**04 25 40.0**	**-1.9**
	comp=N,1µm,0.3s,baz=60,slow=20,SNR=22						
IDI				LR	LR	04 25 58.7	
	comp=N,183nm,18.5s,baz=295,slow=36						
IDI	**Anoyia**	**2.42**	**162**	P	**Pn**	**04 25 10.7**	**+0.3**
IDI	**Anoyia**	**2.42**	**162**	Pn	**Pn**	**04 25 10.8**	**+0.3**
IDI	**Anoyia**	**2.42**	**162**	⇑P	**Pn**	**04 25 10.1**	**-0.3**
IDI	**Anoyia**	**2.42**	**162**	P	**Pn**	**04 25 10.6**	**+0.1**
IDI	**Anoyia**	**2.42**	**162**	P	**Pn**	**04 25 10.8**	**+0.3**
IDI				AML	AML	04 25 41.5	
	comp=E,7361µm,0.4s						
IDI				AML	AML	04 25 41.6	
	comp=N,8550µm,0.4s						
IACM	**Heraklion**	**2.45**	**158**	P	**Pn**	**04 25 11.0**	**+0.2**
HRKL	**Herakleio**	**2.45**	**158**	P	**Pn**	**04 25 11.2**	**+0.4**
HRKL	**Herakleio**	**2.45**	**158**	Pn	**Pn**	**04 25 11.3**	**+0.4**
HRKL	**Herakleio**	**2.45**	**158**	P	**Pn**	**04 25 11.3**	**+0.4**
PRK	**Paraskevi**	**2.45**	**47**	P	**Pn**	**04 25 12.6**	**+1.8**
LTHK	**Lithakia**	**2.48**	**274**	P	**Pn**	**04 25 11.8**	**+0.7**
LIA	**Limnos Island**	**2.49**	**22**	P	**Pn**	**04 25 12.5**	**+1.3**
THL	**Klokotos Trika**	**2.49**	**323**	P	**Pn**	**04 25 12.3**	**+1.1**
THL	**Klokotos Trika**	**2.49**	**323**	P	**Pn**	**04 25 12.0**	**+0.8**
THL				S	**Sn**	**04 25 42.9**	**-0.5**
THL				AML	AML	04 25 44.4	
	comp=N,2197µm,0.5s						
THL				AML	AML	04 25 44.9	
	comp=E,3289µm,0.5s						
TYRN	**Tyrnavos**	**2.51**	**328**	P	**Pn**	**04 25 12.1**	**+0.7**
KOSK	**Kos Island**	**2.55**	**108**	Pn	**Pn**	**04 25 13.9**	**+2.0**
KOSK	**Kos Island**	**2.55**	**108**	P	**Pn**	**04 25 14.5**	**+2.6**
BLCB	**Balcova**	**2.56**	**71**	Pn	**Pn**	**04 25 14.3**	**+2.3**
BLCB	**Balcova**	**2.56**	**71**	SPECP		04 25 14.0	
BLCB				P	**Pn**	**04 25 14.1**	**+2.1**
KOCA	**Canakkale, Ayv**	**2.56**	**41**	P	**Pn**	**04 25 13.3**	**+1.3**
TMBK	**Timbaki Herakl**	**2.60**	**165**	P	**Pn**	**04 25 13.6**	**+1.1**
TMBK				S	**Sn**	**04 25 46.6**	**+1.0**
GCAM	**G?zelcaml?**	**2.60**	**87**	Pn	**Pn**	**04 25 15.2**	**+2.7**
GCAM	**G?zelcaml?**	**2.60**	**87**	P	**Pn**	**04 25 14.7**	**+2.2**
GCAM				S	**Sn**	**04 25 43.5**	**-2.0**
BODT	**Bodrum**	**2.72**	**100**	Pn	**Pn**	**04 25 16.3**	**+2.3**
BODT	**Bodrum**	**2.72**	**100**	SPECP		04 25 16.0	
BODT				P	**Pn**	**04 25 16.7**	**+2.6**
BODT				S	**Sn**	**04 25 47.4**	**-0.9**
PSDA	**Pessada-Kefalo**	**2.73**	**282**	P	**Pn**	**04 25 14.7**	**+0.6**
VLS	**Valsamata**	**2.73**	**283**	P	**Pn**	**04 25 14.6**	**+0.4**
OUR	**Ouranopolis**	**2.74**	**0**	Pn	**Pn**	**04 25 15.8**	**+1.6**
OUR	**Ouranopolis**	**2.74**	**0**	P	**Pn**	**04 25 15.6**	**+1.4**
AYVA	**Ayvalik**	**2.74**	**50**	SPECP		04 25 16.0	
AYVA				P	**Pn**	**04 25 16.1**	**+1.9**
GVDS	**Gavdos**	**2.74**	**178**	Pn	**Pn**	**04 25 15.3**	**+0.9**
DKL	**Dikili**	**2.75**	**57**	Pn	**Pn**	**04 25 16.5**	**+2.2**
DKL	**Dikili**	**2.75**	**57**	SPECP		04 25 15.0	
DKL				P	**Pn**	**04 25 16.0**	**+1.7**
GVD	**Gavdhos**	**2.75**	**178**	Pn	**Pn**	**04 25 15.3**	**+0.9**
GVD	**Gavdhos**	**2.75**	**178**	P	**Pn**	**04 25 15.0**	**+0.6**
GVD				AML	AML	04 25 53.2	
	comp=E,21965µm,0.3s						
GVD				AML	AML	04 25 54.4	
	comp=N,20119µm,0.3s						
LIT	**Litokhoron**	**2.76**	**336**		**Pn**	**04 25 15.7**	**+1.2**
LIT	**Litokhoron**	**2.76**	**336**	P	**Pn**	**04 25 15.5**	**+1.0**
LIT				S	**Sn**	**04 25 47.1**	**-2.1**
LIT	**Litokhoron**	**2.76**	**336**	⇑P	**Pn**	**04 25 15.6**	**+1.2**
LIT	**Litokhoron**	**2.76**	**336**	P	**Pn**	**04 25 15.7**	**+1.2**
LIT	**Litokhoron**	**2.76**	**336**	P	**Pn**	**04 25 15.6**	**+1.2**
BOZC	**Bozcaada**	**2.78**	**35**	Pn	**Pn**	**04 25 16.1**	**+1.4**
BOZC	**Bozcaada**	**2.78**	**35**	P	**Pn**	**04 25 16.2**	**+1.4**
EVGI	**Lefkada island**	**2.80**	**293**	P	**Pn**	**04 25 15.9**	**+0.9**
ZEDA	**zmir-Bergama**	**2.81**	**60**	SPECP		04 25 17.0	
ZEDA				P	**Pn**	**04 25 17.1**	**+2.0**
FSK	**Fiskardo**	**2.82**	**289**	P	**Pn**	**04 25 15.5**	**+0.2**
LKD2	**Lefkada island**	**2.87**	**296**	P	**Pn**	**04 25 17.0**	**+1.2**
KEF4	**Livadi, Kephal**	**2.88**	**284**	P	**Pn**	**04 25 16.4**	**+0.5**
TSLK	**Tsoukalades, L**	**2.88**	**296**	P	**Pn**	**04 25 16.2**	**+0.2**
EZN	**Ezine**	**2.90**	**39**	Pn	**Pn**	**04 25 17.3**	**+1.1**
EZN	**Ezine**	**2.90**	**39**	P	**Pn**	**04 25 17.5**	**+1.4**
STIA	**Sitia Lasithi**	**2.94**	**144**	P	**Pn**	**04 25 17.5**	**+0.8**
FRMA	**Ierapetra Chan**	**2.94**	**150**	P	**Pn**	**04 25 18.4**	**+1.6**
GADA	**Gvkgeada**	**3.00**	**30**	Pn	**Pn**	**04 25 19.0**	**+1.5**
DAT	**Datca**	**3.01**	**106**	Pn	**Pn**	**04 25 19.9**	**+2.1**
MLSB	**Milas**	**3.05**	**94**	Pn	**Pn**	**04 25 20.1**	**+2.0**
ZKR	**Zakros**	**3.07**	**143**	Pn	**Pn**	**04 25 19.4**	**+1.0**
ZKR	**Zakros**	**3.07**	**143**	P	**Pn**	**04 25 19.4**	**+1.0**
BUHA	**Balikesir, Bur**	**3.10**	**51**	SPECP		04 25 20.0	
BUHA				P	**Pn**	**04 25 20.2**	**+1.5**
CNKL	**anakkale-Mer**	**3.11**	**37**	P	**Pn**	**04 25 20.5**	**+1.7**
KPRO	**Kipourio**	**3.11**	**320**	P	**Pn**	**04 25 20.1**	**+1.1**
SMTH	**Samothraki Isl**	**3.12**	**23**	P	**Pn**	**04 25 20.0**	**+1.0**
THE	**Thessaloniki**	**3.13**	**346**	P	**Pn**	**04 25 20.3**	**+1.2**
COMU	**Canakkale**	**3.18**	**37**	Pn	**Pn**	**04 25 21.7**	**+2.0**
JAN	**Janina**	**3.19**	**311**	P	**Pn**	**04 25 21.6**	**+1.7**
KZN	**Kozani**	**3.21**	**328**	P	**Pn**	**04 25 22.1**	**+2.0**
KOKK	**Kokkinochori,**	**3.22**	**0**	P	**Pn**	**04 25 20.9**	**+0.6**
SOH	**Sokhos**	**3.26**	**352**	P	**Pn**	**04 25 22.2**	**+1.4**
SOH	**Sokhos**	**3.26**	**352**	P	**Pn**	**04 25 22.4**	**+1.6**
KARP	**Karpathos**	**3.28**	**127**	Pn	**Pn**	**04 25 22.3**	**+1.1**
KARP	**Karpathos**	**3.28**	**127**	Pn	**Pn**	**04 25 22.2**	**+1.1**
KARP	**Karpathos**	**3.28**	**127**	P	**Pn**	**04 25 22.2**	**+1.1**
KARP	**Karpathos**	**3.28**	**127**	P	**Pn**	**04 25 22.2**	**+1.0**
PENT	**Pentalofos**	**3.41**	**321**	P	**Pn**	**04 25 23.7**	**+1.0**
IGT	**Igoumenitsa**	**3.44**	**305**	*e*Pn	**Pn**	**04 25 23.2**	**+0.1**
IGT	**Igoumenitsa**	**3.44**	**305**	P	**Pn**	**04 25 23.4**	**+0.4**
SRS	**Serrai**	**3.53**	**355**	P	**Pn**	**04 25 25.2**	**+1.0**
SRS	**Serrai**	**3.53**	**355**	*e*Pn	**Pn**	**04 25 25.1**	**+0.9**
SRS	**Serrai**	**3.53**	**355**	P	**Pn**	**04 25 25.5**	**+1.3**
GRG	**Griva**	**3.57**	**341**	P	**Pn**	**04 25 25.4**	**+0.6**
GRG	**Griva**	**3.57**	**341**	P	**Pn**	**04 25 25.5**	**+0.8**
ARG	**Arkhangelos**	**3.61**	**111**	Pn	**Pn**	**04 25 27.8**	**+2.6**
ARG	**Arkhangelos**	**3.61**	**111**	⇓P	**Pn**	**04 25 27.9**	**+2.8**
ARG	**Arkhangelos**	**3.61**	**111**	P	**Pn**	**04 25 27.8**	**+2.6**
ARG	**Arkhangelos**	**3.61**	**111**	P	**Pn**	**04 25 28.0**	**+2.8**
ERIK	**Erikli-Kesan**	**3.66**	**32**	SPECP		04 25 25.0	
ERIK				P	**Pn**	**04 25 25.4**	**-0.3**
ALN	**Alexandroupoli**	**3.68**	**25**		**Pn**	**04 25 27.4**	**+1.3**
ALN	**Alexandroupoli**	**3.68**	**25**	SPECP		04 25 27.0	
ALN				P	**Pn**	**04 25 27.3**	**+1.3**
ALN				S	**Sn**	**04 26 04.0**	**-5.8**
ALN	**Alexandroupoli**	**3.68**	**25**	⇑P	**Pn**	**04 25 27.1**	**+1.1**
ALN	**Alexandroupoli**	**3.68**	**25**	P	**Pn**	**04 25 27.4**	**+1.3**
BALB	**Balikesir**	**3.69**	**55**	Pn	**Pn**	**04 25 28.7**	**+2.5**
MANT	**Manisa**	**3.74**	**75**	Pn	**Pn**	**04 25 29.6**	**+2.6**
RDO	**Rodhopi**	**3.75**	**18**		**Pn**	**04 25 28.4**	**+1.4**
RDO	**Rodhopi**	**3.75**	**18**	⇑P	**Pn**	**04 25 28.5**	**+1.4**
RDO	**Rodhopi**	**3.75**	**18**	P	**Pn**	**04 25 28.4**	**+1.4**
NVR	**Nevrokopi**	**3.75**	**359**	P	**Pn**	**04 25 29.3**	**+2.2**
BKES	**Balkesir-Mer**	**3.77**	**54**	SPECP		04 25 29.0	
BKES				P	**Pn**	**04 25 29.2**	**+2.0**
FNA	**Florina**	**3.77**	**329**	Pn	**Pn**	**04 25 28.0**	**+0.7**
FNA	**Florina**	**3.77**	**329**	P	**Pn**	**04 25 28.0**	**+0.7**
FNA				S	**Sn**	**04 26 08.0**	**-4.1**
FNA	**Florina**	**3.77**	**329**	⇑P	**Pn**	**04 25 26.7**	**-0.6**
FNA	**Florina**	**3.77**	**329**	P	**Pn**	**04 25 28.0**	**+0.7**
FNA	**Florina**	**3.77**	**329**	*e*Pn	**Pn**	**04 25 26.4**	**-0.9**
FNA				*e*Sn	**Sn**	**04 26 06.1**	**-6.0**
FNA	**Florina**	**3.77**	**329**	P	**Pn**	**04 25 27.9**	**+0.7**
KASA	**Kassiopi**	**3.82**	**306**	P	**Pn**	**04 25 28.5**	**+0.6**
VAY	**Valandovo**	**3.88**	**344**	*e*Pn	**Pn**	**04 25 28.4**	**-0.2**
VAY	**Valandovo**	**3.88**	**344**	*i* Pn	**Pn**	**04 25 30.0**	**+1.3**
VAY				*i* Sn	**Sn**	**04 26 18.9**	**+4.4**
KEK	**Kerkira**	**3.89**	**304**	Pn	**Pn**	**04 25 30.2**	**+1.4**
KEK	**Kerkira**	**3.89**	**304**	⇑P	**Pn**	**04 25 30.2**	**+1.4**
KEK	**Kerkira**	**3.89**	**304**	P	**Pn**	**04 25 30.1**	**+1.4**
KBN	**Korca**	**3.91**	**322**		**Pn**	**04 25 30.1**	**+1.0**
KBN	**Korca**	**3.91**	**322**	P	**Pn**	**04 25 30.1**	**+1.0**
OHR	**Ohrid**	**4.29**	**326**	*e*Pn	**Pn**	**04 25 33.3**	**-0.7**
OHR				*e*Sn	**Sn**	**04 26 18.8**	**-5.3**
OHR	**Ohrid**	**4.29**	**326**	*i* Pn	**Pn**	**04 25 34.8**	**+0.8**
OHR				*i* Sn	**Sn**	**04 26 22.3**	**-1.8**
STIP	**Stip**	**4.32**	**342**	*i* Pn	**Pn**	**04 25 35.3**	**+0.9**
VLO	**Vlora**	**4.51**	**311**		**Pn**	**04 25 37.5**	**+0.7**
VLO	**Vlora**	**4.51**	**311**	P	**Pn**	**04 25 37.6**	**+0.7**
PLD	**Plovdiv**	**4.54**	**7**	*e*Pn	**Pn**	**04 25 39.4**	**+2.1**
AKAS	**Kas**	**4.72**	**105**		**Pn**	**04 25 42.9**	**+3.1**
AKAS	**Kas**	**4.72**	**105**	SPECP		04 25 42.0	
AKAS				P	**Pn**	**04 25 42.5**	**+2.7**
AKAS				S	**Sn**	**04 26 30.9**	**-3.5**
SKO	**Skopje**	**4.79**	**337**	P	**Pn**	**04 25 41.1**	**+0.6**
SKO	**Skopje**	**4.79**	**337**	*e*Pn	**Pn**	**04 25 39.8**	**-0.7**
SKO	**Skopje**	**4.79**	**337**	*i* Pn	**Pn**	**04 25 41.5**	**+1.0**
ELL	**Elmali**	**4.82**	**98**		**Pn**	**04 25 44.3**	**+3.2**
ELL	**Elmali**	**4.82**	**98**	⇓P	**Pn**	**04 25 44.5**	**+3.4**
ELL	**Elmali**	**4.82**	**98**	P	**Pn**	**04 25 44.3**	**+3.2**
TIR	**Tirane**	**4.91**	**321**	⇑P	**Pn**	**04 25 40.0**	**-2.1**
TIR				⇓S	**Sn**	**04 26 35.5**	**-3.2**
TIR	**Tirane**	**4.91**	**321**	Pn	**Pn**	**04 25 42.3**	**+0.2**
TIR	**Tirane**	**4.91**	**321**	⇑P	**Pn**	**04 25 42.4**	**+0.2**
TIR	**Tirane**	**4.91**	**321**	P	**Pn**	**04 25 42.3**	**+0.2**
SCTE	**Santa Cesarea**	**4.96**	**302**	Pn	**Pn**	**04 25 42.2**	**-0.5**
VTS	**Vitosha**	**5.05**	**354**	*e*Pn	**Pn**	**04 25 44.9**	**+0.8**
VTS	**Vitosha**	**5.05**	**354**	*e*Pg	Pn	04 25 59.0	+15
PRVS	**Prvonek**	**5.12**	**344**	*e*Pn	**Pn**	**04 25 45.7**	**+0.8**
KORT	**Korkueli**	**5.13**	**95**	P	**Pn**	**04 25 48.8**	**+3.7**
KORT				S	**Sn**	**04 26 41.6**	**-2.4**
ISP	**Isparta**	**5.21**	**85**	Pn	**Pn**	**04 25 48.8**	**+2.7**
ISP	**Isparta**	**5.21**	**85**	Pn	**Pn**	**04 25 45.3**	**-0.8**
ISP	**Isparta**	**5.21**	**85**	⇑*e*P	**Pn**	**04 25 46.0**	**-0.1**
AKUM	**Antalya-Kumluc**	**5.26**	**102**	SPECP		04 25 49.0	
AKUM				P	**Pn**	**04 25 49.2**	**+2.5**
AKUM				S	**Sn**	**04 26 44.2**	**-2.8**

BARS	Barje	5.47	343	ePn	Pn	04 25 49.8	+0.3
BARS				eSn	Sn	04 26 49.4	-2.6
BORA	Eskisehir	5.56	64	Pn	Pn	04 25 52.5	+1.6
ULC	Ulcinj	5.68	322	⇑iPn	Pn	04 25 51.0	-1.3
ULC				iSn	Sn	04 26 52.7	-4.2
ZAPS	Zavoj	5.77	350	ePn	Pn	04 25 55.0	+1.6
PVY	Plav	5.86	330	⇓iPn	Pn	04 25 54.3	-0.5
PVY				iSn	Sn	04 26 58.6	-2.9
TIP	Timpagrande	5.88	288	⇑P	Pn	04 25 54.7	-0.3
TIP	Timpagrande	5.88	288	Pn	Pn	04 25 54.6	-0.3
TIP	Timpagrande	5.88	288	⇑P	Pn	04 25 54.7	-0.3
TIP				⇑S	Sn	04 27 00.6	-1.1
DRME	Dracevica, Mon	5.88	323	⇑iPn	Pn	04 25 53.4	-1.5
DRME	Dracevica, Mon	5.88	323	⇓iPn	Pn	04 25 53.7	-1.2
DRME				iSn	Sn	04 26 57.7	-3.9
PDG	Podgorica	6.03	325	Pn	Pn	04 25 55.8	-1.2
PDG	Podgorica	6.03	325	⇑P	Pn	04 25 55.7	-1.2
PDG				⇑S	Sn	04 27 00.5	-4.7
PDG	Podgorica	6.03	325	⇑iPn	Pn	04 25 56.0	-0.9
PDG				iSn	Sn	04 27 01.5	-3.7
BUM	Brajici-Budva	6.11	322	⇓iPn	Pn	04 25 56.5	-1.5
BUM				iSn	Sn	04 27 02.9	-4.2
IVA	Berane	6.12	331	⇓iPn	Pn	04 25 57.8	-0.4
IVA				iSn	Sn	04 27 04.7	-2.9
KOME	Kolasin	6.26	328	⇑iPn	Pn	04 25 59.8	-0.2
KOME				iSn	Sn	04 27 07.8	-3.0
RAZG	Razgrad	6.27	17	⇑P	Pn	04 26 00.7	+0.6
BOVS	Bovan	6.28	345	⇑P	Pn	04 26 00.7	+0.5
BOVS	Bovan	6.28	345	ePn	Pn	04 26 00.9	+0.8
CEME	Cevo	6.28	324	⇓iPn	Pn	04 25 58.8	-1.5
CEME				iSn	Sn	04 27 07.5	-3.8
MDUB	Mudurnu	6.32	61	⇑P	Pn	04 26 03.7	+2.8
ZAGS	Zajecar	6.35	349	ePn	Pn	04 26 02.1	+1.0
VLAD	Vladila	6.41	3	⇓P	Pn	04 26 02.2	+0.3
HCY	Herceg Novi	6.41	321	ePn	Pn	04 25 59.7	-2.3
HCY	Herceg Novi	6.41	321	⇓iPn	Pn	04 25 59.9	-2.1
HCY				iSn	Sn	04 27 10.0	-4.3
CEL	Celeste	6.41	278		Pn	04 26 01.4	-0.7
CEL	Celeste	6.41	278	⇑P	Pn	04 26 01.4	-0.7
SJES	Sjenica	6.43	333	ePn	Pn	04 26 01.7	-0.6
SJES				eSn	Sn	04 27 10.6	-4.3
SJES	Sjenica	6.43	333	⇑iPn	Pn	04 26 01.7	-0.6
NKME	Niksic	6.44	325	⇑iPn	Pn	04 26 00.9	-1.4
NKME				iSn	Sn	04 27 11.3	-3.7
COPA	Copaceanca	6.61	8	⇑P	Pn	04 26 04.2	-0.3
IVAS	Ivanjica	6.64	335	ePn	Pn	04 26 03.7	-1.4
IVAS				eSn	Sn	04 27 15.0	-4.9
TREB	Trebinje	6.68	322	ePn	Pn	04 26 03.3	-2.3
PLE	Pljevlja	6.71	330	⇓iPn	Pn	04 26 05.4	-0.6
PLE				iSn	Sn	04 27 18.3	-3.3
PUNG	Punghina	6.73	354	⇑P	Pn	04 26 07.0	+0.9
BRY	Bratogost	6.73	324	ePn	Pn	04 26 04.8	-1.5
BRY	Bratogost	6.73	324	⇑iPn	Pn	04 26 04.8	-1.5
BRY				iSn	Sn	04 27 18.1	-4.1
GRUS	Gruza	6.76	340	ePn	Pn	04 26 07.1	+0.6
GRUS				eSn	Sn	04 27 19.7	-2.8
UPM	Unac-Piva	6.80	327	ePn	Pn	04 26 06.7	-0.6
UPM	Unac-Piva	6.80	327	⇑iPn	Pn	04 26 06.6	-0.7
UPM				iSn	Sn	04 27 20.5	-3.5
GAZI	Gazipasa	6.83	99	P	Pn	04 26 08.2	+0.7
GAZI				S	Sn	04 27 16.6	-7.7
KDZE	Karadeniz Ereo	6.88	55	⇑P	Pn	04 26 10.7	+2.6
MRVN	Minervino Murg	6.95	302	⇑P	Pn	04 26 07.8	-1.3
RUDO	Rudo	6.96	331	ePn	Pn	04 26 07.2	-2.0
STON	Ston	7.12	320	ePn	Pn	04 26 08.3	-3.1
DJES	Djerdap	7.15	352	⇑P	Pn	04 26 12.5	+0.7
TRUS	Trudelj	7.15	339	ePn	Pn	04 26 12.2	+0.4
TRUS				eSn	Sn	04 27 29.4	-2.6
BBLS	Lazići	7.16	333	ePn	Pn	04 26 10.5	-1.4
BBLS				eSn	Sn	04 27 26.8	-5.5
BBLS	Lazići	7.16	333	ePn	Pn	04 26 10.6	-1.4
DIVS	Divibare	7.16	336	⇑P	Pn	04 26 11.4	-0.5
DIVS	Divibare	7.16	336	ePn	Pn	04 26 11.5	-0.5
DIVS				eSn	Sn	04 27 27.2	-5.2
DIVS	Divibare	7.16	336	ePn	Pn	04 26 10.9	-1.1
ANTO	Ankara	7.27	69	⇑P	Pn	04 26 17.0	+3.6
ANTO	Ankara	7.27	69		Pn	04 26 15.9	+2.5
ANTO	Ankara	7.27	69	P	Pn	04 26 15.9	+2.5
SULR		7.29	13	⇑P	Pn	04 26 13.5	0.0
HERR	Herculane	7.38	351	⇓P	Pn	04 26 15.2	+0.5
MDVR	Moldovita	7.38	347	⇑P	Pn	04 26 15.6	+0.7
HAPS	Han Pijesak,BI	7.52	331	ePn	Pn	04 26 15.3	-1.4
VAE	Valguarnera	7.59	272	P	Pn	04 26 17.8	+0.1
	comp=N,48nm,0.7s,baz=168,slow=6.6,SNR=14						
VAE				S	Sn	04 27 38.4	-4.2
	comp=N,42nm,0.4s,baz=79,slow=21,SNR=6.1						
RAFF	Raffo Rosso	7.65	270	Pn	Pn	04 26 17.6	-0.8
MTUR	Matau	7.67	6	⇑P	Pn	04 26 19.4	+0.6
MTUR	Matau	7.67	6	P	Pn	04 26 19.4	+0.6
TEKS	Tekeris	7.71	336	ePn	Pn	04 26 18.0	-1.3
TEKS				eSn	Sn	04 27 40.4	-5.1
TEKS	Tekeris	7.71	336	ePn	Pn	04 26 16.6	-2.7
ISR	Istrita	7.77	14	⇑P	Pn	04 26 20.8	+0.8
ISR	Istrita	7.77	14	P	Pn	04 26 20.8	+0.8
ARR	Arges	7.79	3	⇑P	Pn	04 26 20.1	-0.2
GZR	Gura Zlata	7.85	354	⇑P	Pn	04 26 22.1	+1.1
GZR	Gura Zlata	7.85	354	P	Pn	04 26 22.1	+1.1
LOT	Lotru	7.85	359	⇓P	Pn	04 26 21.6	+0.4
BR131	Keskin Array S	7.87	71	c iP	Pn	04 26 24.3	+2.9
BRTR	Keskin Array B	7.87	71	P	Pn	04 26 23.4	+2.0
	comp=N,14nm,0.8s,baz=254,slow=14,SNR=84						
VOIR		7.88	6	⇓P	Pn	04 26 21.6	0.0
VOIR		7.88	6	P	Pn	04 26 21.5	0.0
TPGR	Topolog	8.00	23	⇓P	Pn	04 26 26.2	+3.2
CSS	Mathiatis	8.01	106	Pn	Pn	04 26 22.3	-0.9
CSS				Sn	Sn	04 27 45.5	-7.1
CSS	Mathiatis	8.01	106	P	Pn	04 26 23.3	+0.1
NEHR	Nehoiu	8.02	12	⇑P	Pn	04 26 23.7	+0.4
MLR	Muntele Rosu	8.03	10	⇓P	Pn	04 26 24.5	+0.9
MLR	Muntele Rosu	8.03	10	P	Pn	04 26 24.1	+0.6
	comp=N,6.6nm,0.7s,baz=214,slow=3.7,SNR=14						
MLR	Muntele Rosu	8.03	10	Pn	Pn	04 26 24.2	+0.7
LFK	Lefkose	8.05	104	P	Pn	04 26 23.0	-0.9
LFK				S	Sn	04 27 46.5	-7.2
FRGS	Fruska Gora	8.18	339	⇑P	Pn	04 26 25.0	-0.5
FRGS	Fruska Gora	8.18	339	ePn	Pn	04 26 24.8	-0.6
FRGS				eSn	Sn	04 27 52.2	-4.4
FRGS	Fruska Gora	8.18	339	ePn	Pn	04 26 24.2	-1.2
CFR	Carcaliu	8.20	21	⇑P	Pn	04 26 25.2	-0.5
CFR	Carcaliu	8.20	21	P	Pn	04 26 25.2	-0.5
BZS	Buzias	8.21	348	⇑P	Pn	04 26 26.5	+0.7
BZS	Buzias	8.21	348	P	Pn	04 26 26.5	+0.7
BISRR	Bisoca	8.21	14	⇑P	Pn	04 26 26.2	+0.3
SURR	Surduc	8.27	351	⇑P	Pn	04 26 26.8	+0.2
ILGA	Ilgaz	8.31	62	Pn	Pn	04 26 28.3	+0.9
DEV	Deva	8.32	355	⇓P	Pn	04 26 28.2	+0.8
DEV	Deva	8.32	355	P	Pn	04 26 28.1	+0.8
COVR	Voineasa-Covas	8.42	11	⇓P	Pn	04 26 30.1	+1.5
PLOR	Plostina	8.49	13	⇓P	Pn	04 26 30.7	+1.0
PLOR	Plostina	8.49	13	P	Pn	04 26 30.6	+1.0
VRI	Vrincioaia	8.52	13	⇑P	Pn	04 26 31.3	+1.4
VRI	Vrincioaia	8.52	13	P	Pn	04 26 31.3	+1.4
MGRS	Mrkonjic Grad	8.57	325	ePn	Pn	04 26 29.2	-1.5
BLY	Banja Luka	8.79	327	⇑P	Pn	04 26 31.7	-1.7
BLY				⇑S	Sn	04 28 04.4	-6.8
BLY	Banja Luka	8.79	327	ePn	Pn	04 26 31.6	-1.9
SIRR	Siria	8.84	350	⇓P	Pn	04 26 34.8	+0.6
A050A	Klekovaca	8.88	323	ePn	Pn	04 26 33.5	-1.3
A052A	Srbac	8.93	329	ePn	Pn	04 26 33.6	-1.8
MARR	Marisel-Cluj	9.10	356	⇑P	Pn	04 26 39.0	+1.3
A051A	Mrakovica	9.12	327	ePn	Pn	04 26 35.6	-2.3
TESR	Tescani	9.13	12	⇓P	Pn	04 26 38.7	+0.6
DRGR		9.24	355	⇑P	Pn	04 26 40.0	+0.5
DRGR		9.24	355	P	Pn	04 26 40.0	+0.5
AQU	L'Aquila	9.40	304	⇑P	Pn	04 26 43.7	+2.1
MORH	Mrgy, Hungar	9.48	337	⇑P	Pn	04 26 41.6	-1.0
MESR	Meseseni	9.58	356	⇑P	Pn	04 26 45.4	+1.4
GUMA	Gualdo di Mace	9.78	307		Pn	04 26 46.5	-0.2
BURAR	Bucovina Array	10.06	5	⇑P	Pn	04 26 51.9	+1.5
BURAR	Bucovina Array	10.06	5	P	Pn	04 26 51.8	+1.5
BUR08	Bucovina Ar. S	10.09	5	Pn	Pn	04 26 51.1	+0.3
HNTI	Hanita	10.20	113	Pn	Pn	04 26 51.0	-1.3
HNTI				Sn	Sn	04 28 36.7	-8.6
BOJS	Bojanci	10.25	323	iPn	Pn	04 26 51.0	-1.7
BOJS				eSn	Sn	04 28 37.1	-9.1
BOJS	Bojanci	10.25	323	⇑iPn	Pn	04 26 51.1	-1.7
HWQ	Hawqa	10.26	105	eP	Pn	04 26 53.5	+0.3
OFRI	`Ofer	10.30	116	Pn	Pn	04 26 52.0	-1.6
OFRI				Sn	Sn	04 28 40.2	-7.5
BEIL	Beino	10.35	103	eP	Pn	04 26 54.7	+0.4
ZAHL	Zahle	10.38	107	eP	Pn	04 26 54.3	-0.4
BLGI	Bet Lehem HaGe	10.39	114	Sn	Sn	04 28 41.1	-8.7
CRES	Cresnjev	10.39	325	iPn	Pn	04 26 52.5	-2.1
CRES	Cresnjev	10.39	325	ePn	Pn	04 26 52.6	-2.1
MMA0B	Mount Meron ar	10.40	113	Pn	Pn	04 26 53.2	-1.8
MMA0B				Sn	Sn	04 28 41.7	-8.6
MMAI	Mount Meron Ar	10.40	113	P	Pn	04 26 54.0	-0.9
	comp=N,7.9nm,0.3s,baz=302,slow=13,SNR=38						
MMAI				S	Sn	04 28 41.6	-8.7
	comp=N,18nm,0.4s,baz=310,slow=28,SNR=17						
MGAB	Montegabbione	10.50	304	⇑P	Pn	04 26 56.8	+0.7
RCY	Rachaya	10.50	109	eP	Pn	04 26 55.8	-0.5
GEM	Giv'at Ha'Em	10.50	111	Pn	Pn	04 26 55.2	-1.0
GEM				Sn	Sn	04 28 45.2	-7.3
GEM	Giv'at Ha'Em	10.50	111	P	Pn	04 26 55.8	-0.4
NATI	Neve Ativ	10.53	111	Pn	Pn	04 26 55.8	-0.8
NATI				Sn	Sn	04 28 45.1	-8.1
SLTI	Sal'it	10.54	117	Pn	Pn	04 26 55.2	-1.6
SLTI				Sn	Sn	04 28 46.0	-7.6
VISS	Visnje	10.66	323	iPn	Pn	04 26 56.1	-2.2
MMLI	Mount Malkishu	10.71	115	Pn	Pn	04 26 57.8	-1.2
MMLI				Sn	Sn	04 28 48.3	-9.3
PSZ	Piszkesteto	10.74	345	⇓P	Pn	04 27 01.9	+2.5
PSZ	Piszkesteto	10.74	345	P	Pn	04 27 01.8	+2.5
SALP	Salfit	10.74	118	Pn	Pn	04 26 58.5	-0.9
SALP				Sn	Sn	04 28 50.3	-8.2
SHMJ	Saham	10.81	113	P	Pn	04 27 00.3	0.0
CEY	Cerknica	10.82	322	ePn	Pn	04 26 58.4	-1.9
AMAZ	Amatzia	10.86	121	Pn	Pn	04 27 00.4	-0.6
AMAZ				Sn	Sn	04 28 52.0	-9.3
QRNJ	Al-Qirein	10.87	115	P	Pn	04 27 00.5	-0.5
HMDT	Nahal Hemdat	10.88	116	Pn	Pn	04 27 00.4	-0.8
HMDT				Sn	Sn	04 28 54.4	-7.3
SKDS	Skadanscina	10.89	320	iPn	Pn	04 26 58.9	-2.3
SKDS				iSn	Sn	04 28 51.9	-10
SKDS	Skadanscina	10.89	320	ePn	Pn	04 26 58.3	-2.9
KZIT	Kziot	10.90	125	Pn	Pn	04 27 00.5	-1.0
KZIT				Sn	Sn	04 28 52.9	-9.4
VNDS	Vrh nad Dolski	10.95	324	iPn	Pn	04 27 00.2	-1.8
VNDS				iSn	Sn	04 28 52.9	-10
SORM	Soroca	11.02	16	⇓P	Pn	04 27 05.7	+2.9
SORM	Soroca	11.02	16	P	Pn	04 27 05.6	+2.9
YTIR	Yattir	11.10	121	Pn	Pn	04 27 03.5	-0.7
YTIR				Sn	Sn	04 28 58.1	-9.0
YTIR	Yattir	11.10	121	P	Pn	04 27 03.7	-0.5
TRI	Trieste	11.13	320	⇑P	Pn	04 27 03.6	-0.7
DSI	Dead Sea	11.16	119	Pn	Pn	04 27 04.1	-0.7
DSI				Sn	Sn	04 29 00.8	-7.6
DSI	Dead Sea	11.16	119	P	Pn	04 27 04.7	-0.1
PERS	Pernice	11.16	327	iPn	Pn	04 27 03.4	-1.5
SOKA	Soboth	11.23	327	iPn	Pn	04 27 04.2	-1.6
	comp=N,1.6nm,0.2s,SNR=9.0						
SOKA				iSn	Sn	04 29 03.3	-6.8
	comp=N,4.3nm,0.4s						
MDBI	Mazsada	11.30	120	Pn	Pn	04 27 05.5	-1.1
MDBI				Sn	Sn	04 29 02.8	-8.8
MDBI	Mazsada	11.30	120	P	Pn	04 27 06.5	-0.1
MSBI	Mazada	11.30	120	Pn	Pn	04 27 06.0	-0.6
MSBI				Sn	Sn	04 29 03.7	-7.9
OBKA	Obir	11.32	325	ePn	Pn	04 27 05.6	-1.3
	comp=N,1.7nm,0.2s,SNR=10.0						
OBKA				eSn	Sn	04 29 07.8	-4.4
	comp=N,13nm,0.5s						
OBKA	Obir	11.32	325	ePn	Pn	04 27 05.1	-1.8
RMNI	Mount Ramon	11.34	125	Pn	Pn	04 27 06.0	-1.3
LISJ	El Lisan	11.42	120	P	Pn	04 27 08.7	+0.5
HSUJ	Al Zarqa	11.44	115	P	Pn	04 27 10.0	+1.5
GHAJ	Ghor Haditha	11.44	120		Pn	04 27 09.0	+0.5
GHAJ	Ghor Haditha	11.44	120	Pn	Pn	04 27 07.9	-0.6
SOP	Sopron	11.46	334	P	Pn	04 27 10.8	+2.2
WALJ	Wala	11.46	118	P	Pn	04 27 09.2	+0.4
ARSA	Arzberg	11.48	330	iPn	Pn	04 27 09.7	+0.8
	comp=N,5.2nm,0.6s						
ARSA				eSn	Sn	04 29 11.8	-4.2
	comp=N,5.7nm,0.6s						
ARSA	Arzberg	11.48	330	⇑P	Pn	04 27 10.3	+1.3
CADS	Cadrg	11.50	322	iPn	Pn	04 27 07.6	-1.6
CADS				eSn	Sn	04 29 08.0	-8.5
VYHS	Vyhne	11.52	343	eP	Pn	04 27 11.6	+2.2
VYHS				eS	Sn	04 29 20.6	+3.8
VYHS	Vyhne	11.52	343	eP	Pn	04 27 11.6	+2.2
VYHS				eS	Sn	04 29 20.6	+3.8
RONA	Rosalia, Austr	11.56	333	iPn	Pn	04 27 12.1	+2.1
	comp=N,7.5nm,0.7s,SNR=6.0						
RONA				eSn	Sn	04 29 17.9	0.0
	comp=N,5.5nm,0.5s						
KRMI	Paran Flat	11.64	127	Pn	Pn	04 27 09.5	-1.6
ZFRI	Zfri	11.64	124	Pn	Pn	04 27 10.5	-0.6
ZFRI	Zfri	11.64	124	P	Pn	04 27 09.8	-1.3
PRNI	Paran	11.66	125	Pn	Pn	04 27 10.5	-0.9
PRNI	Paran	11.66	125	P	Pn	04 27 11.2	-0.2
PRED	Cave del Predi	11.74	322		Pn	04 27 11.5	-0.8
PTCC	Patocco-Chiusa	11.82	322	⇑P	Pn	04 27 12.4	-0.9
PTCC				⇑S	Sn	04 29 17.3	-6.7
SWQJ	Swaqa	11.82	119	P	Pn	04 27 14.0	+0.5
MODS	Modra-Piesok	11.83	338	eP	Pn	04 27 16.5	+3.1
MODS	Modra-Piesok	11.83	338	eP	Pn	04 27 16.5	+3.1
MODS				e		04 27 22.5	
KEST	Kesra	11.89	265	P	Pn	04 27 16.4	+2.0
	comp=N,11nm,0.5s,baz=6.4,slow=7.1,SNR=24						
KEST				S	Sn	04 29 23.1	-2.9
	comp=N,3.1nm,0.6s,baz=47,slow=18,SNR=1.9						
KEST	Kesra	11.89	265	Pn	Pn	04 27 13.2	-1.2
HRFI	Mount Harif	11.89	126	Pn	Pn	04 27 13.1	-1.3
ASF	Jabal al Asfar	11.91	113	P	Pn	04 27 15.8	+1.0
	comp=N,5.0nm,0.3s,baz=310,slow=8.3,SNR=19						
ASF				S	Sn	04 29 19.6	-7.1
	comp=N,7.9nm,0.4s,baz=355,slow=12,SNR=2.3						
ASF	Jabal al Asfar	11.91	113	P	Pn	04 27 15.0	+0.3
CONA	Conrad Observa	11.91	333	iPn	Pn	04 27 15.9	+1.3
	comp=N,2.1nm,0.4s						
MBRI	Mt Berech	11.98	127	Pn	Pn	04 27 14.8	-0.8
MBRI	Mt Berech	11.98	127	P	Pn	04 27 15.6	0.0
STHS	Stebnicka Huta	11.98	351	eP	P	04 27 21.8	+0.1
STHS	Stebnicka Huta	11.98	351	eP	P	04 27 21.8	+0.1
STAL	STALIGIAL	12.04	320		Pn	04 27 15.5	-0.7
TEOL	Teolo	12.04	314		Pn	04 27 15.4	-0.8
EIL	Elat	12.09	128	P	Pn	04 27 16.3	-0.6
	comp=N,9.6nm,0.3s,baz=324,slow=8.7,SNR=61						
EIL				S	Sn	04 29 21.5	-9.2
	comp=N,69nm,0.5s,baz=321,slow=15,SNR=14						
EIL	Elat	12.09	128	Pn	Pn	04 27 16.0	-0.9
AQBJ	Aqaba	12.11	127	P	Pn	04 27 17.7	+0.5
NIE	Niedzica	12.12	349	eP	P	04 27 21.0	-2.1
JAVC	Velka Javorina	12.15	340	ePN	Pn	04 27 20.5	+2.8
JAVC				e		04 27 26.1	
HSNJ	Maan	12.17	124	P	Pn	04 27 18.9	+0.8
KBA	Koelnbreinsper	12.30	324	iPn	Pn	04 27 18.6	-1.0
	comp=N,0.8nm,0.3s,SNR=6.0						
KBA				eSn	Sn	04 29 27.4	-8.5
	comp=N,5.9nm,0.5s						
KBA	Koelnbreinsper	12.30	324	⇑P	Pn	04 27 18.6	-1.0
KBA	Koelnbreinsper	12.30	324	P	P	04 27 24.3	-1.1
CTI	Castel Tesino	12.47	317		Pn	04 27 21.5	-0.3
CTI	Castel Tesino	12.47	317	P	Pn	04 27 21.5	-0.3
ABTA	Abfaltersbach	12.47	321	iPn	Pn	04 27 21.0	-0.8
	comp=N,3.1nm,0.2s,SNR=15						
MOA	Molln	12.48	328	ePn	Pn	04 27 23.6	+1.8
	comp=N,6.6nm,0.5s,SNR=6.8						
MAUC	Maruska	12.58	341	eP	P	04 27 31.1	+2.8
BIOA	Bad Ischl, Aus	12.62	326	ePn	Pn	04 27 24.3	+0.6
	comp=N,1.2nm,0.3s						
BIOA				eP	P	04 27 30.7	+1.9
	comp=N,7.7nm,0.3s						
BIOA				eSn	Sn	04 29 42.7	-0.7
	comp=N,9.3nm,0.5s						
KTUT	Trabzon	12.70	70	⇓P	P	04 27 29.4	-0.3
KRUC	Moravsky	12.71	337	ePN	P	04 27 27.3	-2.4
KRUC				e		04 27 31.4	
VRAC	Vranov	12.87	338	⇑P	Pn	04 27 28.8	+2.0
VRAC	Vranov	12.87	338	P	Pn	04 27 28.3	+1.5
	comp=N,4.6nm,0.5s,baz=161,slow=9.7,SNR=4.9						
VRAC	Vranov	12.87	338	ePN	Pn	04 27 28.2	+1.5
VRAC				e		04 27 33.4	
OJC	Ojcow	12.97	348	eP	P	04 27 33.5	+0.9
MORC	Moravsky Berou	13.03	341	⇑P	Pn	04 27 31.1	+2.2
MORC	Moravsky Berou	13.03	341	Pn	Pn	04 27 28.8	-0.1
MORC	Moravsky Berou	13.03	341	ePN	Pn	04 27 30.9	+2.0
MORC				e		04 27 35.5	
MORC	Moravsky Berou	13.03	341	P	Pn	04 27 28.8	-0.1
KOPT	Kop Dagi	13.12	74	Pn	Pn	04 27 30.6	+0.2
TREC	Trest	13.21	335	eP	Pn	04 27 33.2	+2.1
TREC	Trest	13.21	335	eP	Pn	04 27 33.2	+2.1
CKRC	Cesky Krumlov	13.23	331	eP	Pn	04 27 33.4	+1.9
CKRC				ex	x	04 27 38.1	
CKRC	Cesky Krumlov	13.23	331	eP	Pn	04 27 33.4	+1.9
WTTA	Wattenberg	13.26	321	iPn	Pn	04 27 32.4	+0.4
	comp=N,3.3nm,0.2s						
WATA	Walderalm	13.34	321	iPn	Pn	04 27 34.2	+1.2
	comp=N,22nm,0.6s,SNR=7.5						
SQTA	Sankt Quirin	13.45	320	iPn	Pn	04 27 35.2	+0.9
	comp=N,9.9nm,0.6s,SNR=13						
GERES	GERESS Array B	13.49	330	P	Pn	04 27 36.1	+1.3
	comp=N,34nm,0.6s,baz=126,slow=13,SNR=111						
GERES				S	Sn	04 30 01.4	-2.9
	comp=N,1.5nm,0.5s,baz=147,slow=22,SNR=5.5						
GERES				ScP	ScP	04 36 06.8	-0.4
	comp=N,0.3nm,0.4s,baz=103,slow=4.2,SNR=4.8						
KRLC	Kraliky	13.50	340	eP	P	04 27 36.9	-1.7
KRLC				ex	x	04 27 40.7	
KRLC	Kraliky	13.50	340	eP	P	04 27 36.9	-1.7
FETA	Feichten	13.57	318	iPn	P	04 27 37.7	-1.8
	comp=N,12nm,0.6s,SNR=13						
FETA				eSn	Sn	04 29 57.1	-9.3
	comp=N,12nm,0.8s						
FUORN	Ofenpass-Fuorn	13.58	316		P	04 27 38.0	-1.7
MOTA	Moosalm	13.59	320	ePn	Pn	04 27 37.7	+1.6
	comp=N,9.1nm,0.5s						
KHC	Kasperske Hory	13.77	330	Pn	Pn	04 27 38.9	+0.6
KHC	Kasperske Hory	13.77	330	eP	P	04 27 40.0	-1.5
KHC				ex	x	04 27 43.9	
KHC				ex	x	04 30 05.0	
KHC	Kasperske Hory	13.77	330	⇑P	P	04 27 40.0	-1.5
KHC	Kasperske Hory	13.77	330	deP	Pn	04 27 39.3	+1.0
KHC				pmax	pmax		
	comp=Z,25nm,0.5s						
RETA	Reutte	13.86	320	ePn	Pn	04 27 40.2	+0.8
	comp=Z,9.9nm,0.6s						
DPC	Dobruska-Polom	13.88	339	eP	P	04 27 41.5	-1.3
DPC				ex	x	04 27 44.8	
DPC	Dobruska-Polom	13.88	339	eP	P	04 27 41.5	-1.3
DAVOX	Davos/Dischmat	13.89	316	P	P	04 27 41.7	-1.3
	comp=Z,7.5nm,0.5s,baz=191,slow=19,SNR=15						
DAVOX				S	Sn	04 30 06.1	-7.9
	comp=Z,7.3nm,0.6s,baz=141,slow=23,SNR=3.5						
DAVOX				LR	LR	04 34 21.6	
	comp=Z,56nm,19.5s,baz=262,slow=43						
GOPC	GO Pecny, Ondr	13.97	335	eP	Pn	04 27 42.3	+1.5
GOPC				ex	x	04 27 45.6	
GOPC	GO Pecny, Ondr	13.97	335	eP	Pn	04 27 42.3	+1.5
OSTC	Ostas	14.10	339	eP	P	04 27 43.9	-1.2
OSTC				ex	x	04 27 47.0	
OSTC	Ostas	14.10	339	eP	P	04 27 43.9	-1.2
UPC	Upice	14.11	339	eP	P	04 27 44.3	-1.0
UPC				ex	x	04 27 47.3	
UPC	Upice	14.11	339	eP	P	04 27 44.3	-1.0
PRU	Pruhonice	14.12	334	eP	Pn	04 27 43.6	+1.0
PRU				ex	x	04 27 47.2	
PRU	Pruhonice	14.12	334	eP	Pn	04 27 43.6	+1.0
CHVC	Chvalec	14.17	339	eP	P	04 27 45.0	-0.9
CHVC	Chvalec	14.17	339	eP	P	04 27 45.0	-0.9
DAVA	Damuels	14.19	317	iPn	P	04 27 46.3	0.0
	comp=Z,14nm,0.6s,SNR=8.3						
DAVA	Damuels	14.19	317	⇓P	P	04 27 46.7	+0.3
DAVA				⇑S	Sn	04 30 16.0	-5.2
KSP	Ksiaz	14.33	340	eP	P	04 27 47.1	-0.6
KSP	Ksiaz	14.33	340	⇓P	P	04 27 46.9	-0.8
BRG	Berggiesshubel	15.07	335	eP	P	04 27 55.5	-0.5
BRG				Amp		04 27 55.8	
	comp=Z,5.2nm,0.9s						
BRG	Berggiesshubel	15.07	335	iP	P	04 27 57.9	+2.0
BRG				Amp		04 27 58.6	
	comp=Z,16nm,0.7s						
BRG	Berggiesshubel	15.07	335	eP	P	04 27 55.4	-0.5
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRG				pmax	pmax		
	comp=Z,17nm,0.7s						
NKC	Novy Kostel	15.09	331	eP	P	04 27 56.1	-0.1
NKC				ex	x	04 27 58.6	
NKC	Novy Kostel	15.09	331	eP	P	04 27 56.1	-0.1
LPL	La Plagne	15.12	307	P	P	04 27 58.4	+1.7
KARS	Kars	15.15	73		P	04 27 57.2	+0.2
KARS				IAmb	IAmb	04 28 01.9	
	comp=Z,36nm,0.9s						
KARS	Kars	15.15	73	P	P	04 27 57.2	+0.2
KARS				pmax	pmax		
	comp=Z,37nm,0.9s						
GRA1	Grafenberg Arr	15.18	327		Pn	04 27 56.1	+0.2
GRF	Grafenberg Arr	15.18	327	P	Pn	04 27 56.1	+0.2
GRF				pmax	pmax		
	comp=Z,61nm,0.8s						
GRFO	Grafenberg	15.18	327	P	P	04 28 00.2	+3.0
SLE	Schleitheim	15.23	317	P	P	04 27 57.6	-0.1
KIV	Kislovodsk	15.53	60	eP	P	04 28 01.0	-0.2
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KVAR	Kislovodsk Arr	15.54	60	P	P	04 28 02.1	+0.9
	comp=Z,0.7nm,0.3s,baz=263,slow=19,SNR=1.3						
AKH	Akhalkalaki	15.55	70		Pn	04 28 00.7	+0.1
AKH				IAmb	IAmb	04 28 05.2	
	comp=Z,26nm,0.9s						
AKH	Akhalkalaki	15.55	70	P	Pn	04 28 00.7	+0.1
AKH				pmax	pmax		
	comp=Z,26nm,0.9s						
KBZ	Khabaz	15.61	61	P	P	04 28 03.2	+1.4
	comp=Z,3.8nm,0.7s,baz=277,slow=8.5,SNR=14						
MOX	Moxa	15.75	330	P	P	04 28 05.3	+1.9
CLL	Collm	15.76	334	IAmb	IAmb	04 28 05.1	
	comp=Z,20nm,0.8s						
CLL	Collm	15.76	334	iP	P	04 28 03.8	+0.3
	comp=Z,24nm,0.8s						
CLL				ix	x	04 28 06.3	
CLL	Collm	15.76	334	iP	P	04 28 03.8	+0.3
GKP	Gorka Klasztor	16.36	346	eP	Pn	04 28 11.3	+1.1
GKP	Gorka Klasztor	16.36	346	eP	Pn	04 28 11.3	+1.1
GNI	Garni	16.38	75	P	Pn	04 28 12.6	+1.8
	comp=Z,3.6nm,0.4s,baz=346,slow=2.1,SNR=6.4						
GNI	Garni	16.38	75		Pn	04 28 12.8	+2.1
GNI				IAmb	IAmb	04 28 15.3	
	comp=Z,21nm,1.2s						
GNI	Garni	16.38	75	⇓eP	Pn	04 28 11.1	+0.3
NAX	Nakhchivan	16.96	78	P	Pn	04 28 18.4	+0.8
MNK	Minsk	17.13	8	iP	P	04 28 17.6	-0.9
	comp=E,5.0nm,1.4s						
MNK				iP	P	04 28 17.6	-0.9
	comp=N,132nm,1.2s						
MNK				iP	P	04 28 17.6	-0.9
	comp=Z,68nm,0.8s,baz=191						
MNK				ipP	pP	04 28 44.7	-0.8
MNK				iS	S	04 31 28.2	-0.5
MNK	Minsk	17.13	8	iP	P	04 28 17.6	-0.9
MNK				iS	S	04 31 28.2	-0.5
MNK				pmax	pmax		
	comp=Z,68nm,0.8s						
MNK				pmax	pmax		
	comp=E,5.0nm,1.4s						
MNK				pmax	pmax		
	comp=N,132nm,1.2s						
VSR	Storozhevoye	17.37	34	eP	Pn	04 28 22.2	-0.2
VSR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
NACGM	Naroch	17.42	5	eP	Pn	04 28 22.5	-0.4
	comp=Z,53nm,1.3s,baz=188						
WLF	Walferdange	17.61	319	IAmb	IAmb	04 28 28.5	
	comp=Z,19nm,0.9s						
WLF	Walferdange	17.61	319	dP	Pn	04 28 25.1	-0.1
	comp=Z,14nm,0.9s						
GANJ	Ganja	17.61	73	P	Pn	04 28 25.6	+0.3
VORR	Voronezh	17.72	33	eP	P	04 28 23.9	-1.1
VORR				pmax	pmax		
	comp=Z,11nm,0.5s						
SSF	Saint Saulge	17.80	309	P	Pn	04 28 27.1	-0.4
PABE	Paberze	17.92	0	eP	P	04 28 26.5	-0.7
ISAL	Salakas	18.05	4	eP	P	04 28 27.2	-1.3
ISAL				IAmb	IAmb	04 28 37.2	
	comp=Z,17nm,0.3s						
BHOU	Houvegnez	18.10	321	dP	Pn	04 28 37.3	+6.3
BTNL	Ternell	18.18	321	dP	Pn	04 28 32.1	+0.2
	comp=Z,22nm,0.9s						
MNGR	Mingechevir, A	18.19	73	P	Pn	04 28 31.9	-0.3
IZAR	Zarasai	18.23	4	IAmb	IAmb	04 28 27.5	
	comp=Z,4.4nm,0.5s						
MEM	Membach	18.26	321	dP	Pn	04 28 32.7	-0.1
	comp=Z,31nm,0.8s						
LPSR	Galich'ya Gora	18.30	30	eP	P	04 28 31.7	+0.4

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LPSR                                 pmax     pmax
      comp=Z,10.0nm,0.4s
SEKA  Sheki            18.30  71   P       Pn      04 28 33.9 +0.3
RCHB  Rochefort        18.38 319  dP       P       04 28 32.1 -0.2
      comp=Z,12nm,0.8s
VSVD  Vaisvydziai      18.40 360  eP       P       04 28 30.7 -1.6
BSTI  Sart Tilman      18.46 321  dP       P       04 28 33.3 +0.2
      comp=Z,7.2nm,0.7s
PBUR  Paburge          18.49 356  eP       P       04 28 32.7 -0.7
BCLA  Clavier          18.50 320  dP       Pn      04 28 35.6 -0.1
      comp=Z,20nm,0.7s
VRH   Novokhopyorsk    18.54  37  eP       Pn      04 28 35.8 -0.3
VRH                                pmax    pmax
      comp=Z,51nm,0.6s
BSD   Bornholm Skovb   18.58 344 ⇓P        P       04 28 33.5 -0.9
BSD   Bornholm Skovb   18.58 344  eP       P       04 28 33.1 -1.2
BSD   Bornholm Skovb   18.58 344  i P      P       04 28 32.9 -1.5
BGES  Gesves           18.59 319  dP       Pn      04 28 36.0 -0.7
      comp=Z,8.7nm,1.0s
DOU   Dourbes          18.68 318  dP       P       04 28 36.6 +1.1
      comp=Z,14nm,0.6s
BMRD  Maredsous        18.70 319  dP       Pn      04 28 37.7 -0.4
      comp=Z,14nm,0.8s
CLF   Chambon-Foret    18.97 310 ⇑P        Pn      04 28 41.2  0.0
SNF   Seneffe          19.08 319  dP       Pn      04 28 41.8 -0.6
      comp=Z,30nm,0.8s
LUNU  Lund             19.40 342  i P      P       04 28 42.4 -0.8
LLD   Lille Linde      19.45 340  i P      P       04 28 45.2 +1.4
BLEU  Blekinge         19.50 346  i P      P       04 28 42.2 -2.2
OBN   Obninsk          19.51  22   P       P       04 28 44.4  0.0
      comp=Z,7.3nm,0.4s,baz=135,slow=5.7,SNR=4.9
OBN   Obninsk          19.51  22   P       P       04 28 44.7 +0.3
OBN   Obninsk          19.51  22d iP       P       04 28 44.6 +0.1
OBN                                pmax    pmax
      comp=Z,31nm,0.8s
COP   Copenhagen       19.71 340  i P      P       04 28 47.2 +0.6
COP                                IAmb    IAmb    04 28 51.3
      comp=Z,72nm,0.7s
BJUU  Bjuv             19.90 342  i P      P       04 28 48.4 -0.2
DEL   Delary           20.06 344  i P      P       04 28 49.1 -1.3
SLIT  Slitere, Latvi   20.08 357  eP       P       04 28 49.6 -0.9
SSRD  Sdr. Stenderup   20.36 336  i P      P       04 28 53.8 +0.3
SSRD                               IAmb    IAmb    04 28 57.6
      comp=Z,127nm,0.6s
MOS   Moscow           20.36  23  eP       P       04 28 53.8 +0.2
MOS                               eS       S       04 32 29.1 -3.7
MOS                                pmax    pmax
      comp=Z,46nm,0.8s
FABU  Falkenberg       20.81 343  i P      P       04 28 57.6 -0.7
VSU   Vasula           20.96   4d iP       P       04 28 59.4 -0.6
VSU                                pmax    pmax
      comp=Z,40nm,0.9s
VSU   Vasula           20.96   4  eP       P       04 28 59.1 -0.9
MTSE  Matsula          21.14 360  eP       P       04 29 00.8 -1.0
MUD   Monsted U'grnd   21.31 337 ⇑P        P       04 29 04.1 +0.4
MUD   Monsted U'grnd   21.31 337  i P      P       04 29 03.6 -0.1
MUD                                IAmb    IAmb    04 29 07.0
      comp=Z,20nm,0.6s
ONAU  Onsala           21.36 342  i P      P       04 29 03.2 -1.0
BORU  Boraas           21.37 343  i P      P       04 29 03.3 -1.0
TAM   Tamanrasset      21.66 232   P       P       04 29 09.2 +1.3
TAM   Tamanrasset      21.66 232   P       P       04 29 09.2 +1.3
TAM                                pmax    pmax
      comp=Z,5.0nm,0.8s
GOET  G??ttrup         21.78 338  i P      P       04 29 08.6 -0.1
ESBB  Sonseca Array    21.88 284   P       P       04 29 10.8 +0.8
ESBB                               IAmb    IAmb    04 29 13.1
      comp=Z,14nm,0.8s
ESDC  Sonseca Array    21.88 284   P       P       04 29 09.5 -0.5
      comp=Z,13nm,0.7s,baz=78,slow=10,SNR=90
      comp=Z,13nm,0.7s
ESDC  Sonseca Array    21.88 284   P       P       04 29 10.8 +0.8
TJOU  Tjoern           22.00 342  i P      P       04 29 10.0 -0.9
JSA   Saint Aubin      22.13 310  eP       P       04 29 12.1 -0.2
JSA                                IAmb    IAmb    04 29 14.7
      comp=Z,133nm,1.6s
PAB   San Pablo        22.19 284   P       P       04 29 14.3 +1.2
PAB                                IAmb    IAmb    04 29 15.9
      comp=Z,16nm,0.8s
PAB   San Pablo        22.19 284 ⇑P        P       04 29 14.0 +0.9
PAB   San Pablo        22.19 284   P       P       04 29 14.3 +1.2
PAB                                pmax    pmax
      comp=Z,16nm,0.8s
BELG  Belogornoye      22.20  41   P       P       04 29 13.2 +0.3
      comp=Z,14nm,0.5s,baz=320,slow=1.6,SNR=14
BELG                               S       S       04 33 03.0 -2.5
      comp=Z,6.4nm,0.6s,baz=324,slow=23,SNR=3.0
      comp=Z,14nm,0.5s
BELG  Belogornoye      22.20  41ceP        P       04 29 13.9 +1.0
BELG                               pmax    pmax
      comp=Z,3.0nm,1.1s
WACR  West Acre        22.21 320  eP       P       04 29 13.6 +0.6
WACR                               IAmb    IAmb    04 29 14.4
      comp=Z,141nm,0.8s
WOL   Wolverton        22.47 316  eP       P       04 29 15.5  0.0
PUL   Pulkovo          22.57   8ceP        P       04 29 17.7 +1.4
PUL                                pmax    pmax
      comp=Z,273nm,0.7s
MEF   Metsahovi        22.65   1  eP       P       04 29 16.3 -0.7
SWN1  Swindon          22.89 316⇑eP        P       04 29 20.3 +1.0
STRU  Stroemstad       23.00 343  i P      P       04 29 18.7 -1.6
HOMB  Homborsund       23.03 339  i P      P       04 29 19.4 -1.2
HOMB  Homborsund       23.03 339  eP       P       04 29 20.4 -0.1
HOMB                               IAmb    IAmb    04 29 21.0
      comp=Z,23nm,0.6s
LMK   Market Rasen     23.10 321  eP       P       04 29 22.2 +1.0
RAYN  Ar Rayn          23.18 121   P       P       04 29 23.8 +1.4
RAYN  Ar Rayn          23.18 121   P       P       04 29 23.8 +1.4
RAYN                               pmax    pmax
      comp=Z,3.0nm,0.9s
STRD  Stroud           23.21 316⇑eP        P       04 29 23.1 +0.8
STRD                               IAmb    IAmb    04 29 23.8
      comp=Z,82nm,0.8s
SNART Snartemo         23.47 338  i P      P       04 29 25.1 +0.5
SNART Snartemo         23.47 338  eP       P       04 29 25.7 +1.1
SNART                              IAmb    IAmb    04 29 31.2
      comp=Z,88nm,1.2s
HFS   Hagfors          23.49 347   P       P       04 29 24.5 -0.3
      comp=Z,8.0nm,0.4s,baz=153,slow=10.0,SNR=63
HFS                                PcP     PcP     04 33 05.4 -0.2
      comp=Z,0.8nm,0.4s,baz=192,slow=2.7,SNR=2.1
      comp=Z,8.0nm,0.4s
MONM  Monmouth         23.59 316⇑eP        P       04 29 26.4 +0.6
MONM                               IAmb    IAmb    04 29 27.5
      comp=Z,53nm,0.9s
MCH1  Michaelchurch    23.77 316⇑eP        P       04 29 27.5 +0.1
LBWR  Ladybower, Pea   23.77 320  eP       P       04 29 28.0 +0.6
MDT   Midelt           23.78 267   P       P       04 29 29.2 +1.3
      comp=Z,2.2nm,0.8s,baz=49,slow=3.7,SNR=2.3
MDT                                S       S       04 33 34.2 +2.5
      comp=Z,3.5nm,0.8s,baz=125,slow=18,SNR=3.7
      comp=Z,2.2nm,0.8s
STNC  Stoke            23.86 319⇑eP        P       04 29 29.6 +1.4
STNC                               IAmb    IAmb    04 29 30.4
      comp=Z,71nm,0.7s
FINES FINESS Array B   23.91   3   P       P       04 29 28.4 -0.2
      comp=Z,18nm,0.5s,baz=162,slow=9.9,SNR=120
FINES                              PcP     PcP     04 33 06.8 +0.3
      comp=Z,3.7nm,0.6s,baz=166,slow=1.0,SNR=7.2
FINES                              ScP     ScP     04 36 28.7 -1.1
      comp=Z,1.6nm,0.8s,baz=132,slow=2.8,SNR=4.5
      comp=Z,18nm,0.5s
FINES FINESS Array B   23.91   3   P       P       04 29 28.5 -0.1
FINES FINESS Array B   23.91   3  i P      P       04 29 28.6  0.0
FINES                              pmax    pmax
      comp=Z,18nm,0.5s
OSL   Oslo             23.91 343  eP       P       04 29 28.7 +0.1
OSL                                IAmb    IAmb    04 29 29.0
      comp=Z,35nm,0.7s
KONO  Kongsberg        23.93 342⇓eP        P       04 29 28.7  0.0
KONO                               pmax    pmax
      comp=Z,15nm,1.7s
KONO  Kongsberg        23.93 342  eP       P       04 29 28.8  0.0
KONO                               IAML            04 29 29.1
      comp=Z,3.7nm,0.5s
HLM1  Long Mynd        23.94 317  eP       P       04 29 29.5 +0.5
HPK   Haverah Park     24.02 321  eP       P       04 29 30.3 +0.7
HPK                                IAmb    IAmb    04 29 31.6
      comp=Z,33nm,0.6s
MVO   Moncorvo         24.16 288  eP       P       04 29 32.8 +1.7
HTL   Hartland         24.20 313⇑eP        P       04 29 31.5 +0.3
FOEL  Foel Wylfa       24.29 318  eP       P       04 29 32.7 +0.5
FOEL                               IAmb    IAmb    04 29 34.7
      comp=Z,39nm,0.8s
NC602 NORSAR Array S   24.46 345  eP       P       04 29 33.2 -0.4
NC602                              IAmb    IAmb    04 29 35.1
      comp=Z,22nm,0.6s
LLW   Llanuwychllyn    24.52 317  eP       P       04 29 35.0 +0.8
PMRV  Marv??o          24.55 284  eP       P       04 29 35.8 +1.2
MTE   Manteigas        24.58 286  eP       P       04 29 36.6 +1.6
BLS5  Blasjo           24.58 338  eP       P       04 29 34.9 +0.1
BLS5                               IAmb    IAmb    04 29 37.0
      comp=Z,36nm,0.6s
EDMD  Edmundbyers      24.66 323  eP       P       04 29 35.9 +0.4
EDMD                               IAmb    IAmb    04 29 37.7
      comp=Z,35nm,0.9s
RSBS  Rosebush, Pemb   24.73 315  eP       P       04 29 37.0 +0.9
PESTR Estremoz         24.76 283  eP       P       04 29 37.7 +1.1
KMY   Karmoy           24.78 337  eP       P       04 29 36.7 +0.2
KMY                                IAmb    IAmb    04 29 42.8
      comp=Z,25nm,0.9s
NB2   NORSAR Subarra   24.81 345   P       P       04 29 36.3 -0.5
      comp=Z,4.8nm,0.5s,baz=159,slow=10
NB2   NORSAR Subarra   24.81 345   P       P       04 29 36.3 -0.5
      baz=159,slow=10
NOA   NORSAR Array B   24.81 345   P       P       04 29 36.4 -0.4
      comp=Z,2.3nm,0.5s,baz=147,slow=8.8,SNR=42
NOA                                PcP     PcP     04 33 09.3 +0.7
      comp=Z,2.2nm,0.9s,baz=130,slow=2.6,SNR=3.7
NOA                                ScP     ScP     04 36 31.6 -0.8
      comp=Z,1.2nm,0.7s,baz=135,slow=3.1,SNR=3.5
      comp=Z,2.3nm,0.5s
NBO00 NORSAR Array S   24.89 345   P       P       04 29 37.3 -0.2
NBO00                              IAmb    IAmb    04 29 50.0
      comp=Z,41nm,1.2s
ODD1  Odda             24.94 339  eP       P       04 29 40.0 +2.1
PVAQ  Vaqueiros        25.08 279  eP       P       04 29 40.6 +1.1
KESW  Keswick, Cumbr   25.09 321  eP       P       04 29 40.4 +1.1
KESW                               IAmb    IAmb    04 29 42.5
      comp=Z,51nm,0.7s
WLF1  Llynfaes         25.11 318  eP       P       04 29 40.5 +0.9
WLF1                               IAmb    IAmb    04 29 43.7
      comp=Z,68nm,1.1s
EVO   Evora            25.13 282  eP       P       04 29 41.3 +1.4
SKAR  Skarslia         25.14 342  eP       P       04 29 40.9 +1.0
SKAR                               IAML            04 29 42.5
      comp=Z,2.7nm,0.4s
YRC   Rhoscolyn        25.19 318  eP       P       04 29 41.2 +1.0
KLMR  Klimovskoe       25.27  18  eP       P       04 29 38.2 -2.7
KLMR                               AMP             04 29 41.2
      comp=Z,21nm,0.8s
KLMR  Klimovskoe       25.27  18  eP       P       04 29 38.1 -2.8
KLMR                               pmax    pmax
      comp=Z,21nm,0.8s
EKA   Eskdalemuir Ar   25.51 323   P       P       04 29 43.9 +0.8
      comp=Z,41nm,0.4s,baz=119,slow=9.1,SNR=227
EKA                                PcP     PcP     04 33 11.2 +1.1
      comp=Z,0.9nm,0.5s,baz=109,slow=2.0,SNR=5.3
ESK   Eskdalemuir      25.52 323⇑eP        P       04 29 44.1 +0.8
ESK                                IAmb    IAmb    04 29 46.7
      comp=Z,80nm,0.5s
ESK   Eskdalemuir      25.52 323 ⇑P        P       04 29 44.0 +0.7
WIM   Isle of Man      25.66 319  eP       P       04 29 45.5 +1.0
EDI   Edinburgh        25.85 324  eP       P       04 29 46.8 +0.6
EDI                                IAmb    IAmb    04 29 49.7
      comp=Z,80nm,0.5s
NEWG  New Galloway     25.92 322  eP       P       04 29 47.5 +0.7
NEWG                               IAmb    IAmb    04 29 50.6
      comp=Z,16nm,0.6s
GAL1  Galloway         26.03 321⇑eP        P       04 29 48.4 +0.6
GAL1                               IAmb    IAmb    04 29 49.8
      comp=Z,34nm,1.0s
HYA   Hoyanger         26.10 340  eP       P       04 29 51.2 +2.9
DOMB  Dombas           26.16 344  eP       P       04 29 49.7 +0.7
DOMB                               IAmb    IAmb    04 29 51.2
      comp=Z,178nm,2.0s
INVG  Invergeldie, C   26.53 324  eP       P       04 29 52.3  0.0
INVG                               IAmb    IAmb    04 29 53.9
      comp=Z,23nm,0.9s
KIRV  Kirov            26.73  30   P       P       04 29 53.7 -0.3
      comp=Z,15nm,0.5s,baz=241,slow=2.6,SNR=6.6
      comp=Z,15nm,0.5s
KIRV  Kirov            26.73  30d iP       P       04 29 53.6 -0.4
CLGH  Cloghs, Cushen   26.84 320  eP       P       04 29 55.6 +0.5
CLGH                               IAmb    IAmb    04 29 56.8
      comp=Z,38nm,0.9s
LAWE  Loch Awe, Argy   27.08 323  eP       P       04 29 57.4 +0.2
AKTO  Aktyubinsk       27.39  51   P       P       04 30 00.8 +0.7
      comp=Z,1.1nm,0.5s,baz=292,slow=1.6,SNR=3.2
      comp=Z,1.1nm,0.5s
IDGL  Inch Island, C   27.55 320  eP       P       04 30 01.7 +0.2
KPL   Plockton         27.77 325  eP       P       04 30 02.9 -0.3
NSS   Namsos           27.91 349  eP       P       04 30 04.5  0.0
ARU   Arti             29.73  39   P       P       04 30 21.4 +0.7
      comp=Z,5.2nm,0.2s,baz=293,slow=7.9,SNR=4.1
      comp=Z,5.2nm,0.2s
ARU   Arti             29.73  39d iP       P       04 30 20.6 -0.1
ARU                                *PP     pP      04 30 53.7 -0.4
ARU                                                04 31 20.9
ARU                                S       S       04 35 04.4 -0.4
ARU                                pmax    pmax
      comp=Z,23nm,3.7s
FAUS  Fauske           30.24 353  eP       P       04 30 25.4 +0.3
TOA0  Torodi Ar. Sit   31.42 225   P       P       04 30 36.4 +0.4
TORD  Torodi Ar. Bea   31.42 225   P       P       04 30 36.8 +0.8
      comp=Z,6.0nm,0.2s,baz=32,slow=9.0,SNR=2.4
      comp=Z,6.0nm,0.2s
KTK1  Kautokeino       31.48 359  eP       P       04 30 35.9 -0.1
KTK1                               IAML            04 30 37.7
      comp=Z,2.8nm,0.5s
ARA0  ARCESS Array S   32.01   1  eP       P       04 30 40.3 -0.3
ARCES ARCESS Array B   32.01   1   P       P       04 30 40.1 -0.6
      comp=Z,4.7nm,0.5s,baz=182,slow=8.0,SNR=35
ARCES                              PcP     PcP     04 33 26.2 -0.1
      comp=Z,3.9nm,0.8s,baz=188,slow=3.3,SNR=6.1
ARCES                              ScP     ScP     04 36 53.4 -1.3
      comp=Z,1.4nm,0.6s,baz=222,slow=1.6,SNR=7.0
      comp=Z,4.7nm,0.5s
BRVK  Borovoye         35.37  49⇓eP        P       04 31 10.6 +0.8
BRVK                               pmax    pmax
      comp=Z,7.0nm,2.5s
GAR   Garm             36.10  73   P       P       04 31 16.8 +0.4
HOPEN Hopen            39.02   0  eP       P       04 31 40.6 +0.4
HOPEN                              IAML            04 31 41.1
      comp=Z,4.6nm,0.4s
KSH   Kashi            40.25  71   P       P       04 31 51.6 +0.5
KSH                                pP      pP      04 32 28.0 +2.4
KSH                                pmax    pmax
      comp=Z,4.0nm,0.8s
KSH                                LR      LR
      comp=N,200nm,13.0s
KSH                                LR      LR
      comp=E,110nm,11.7s
DBIC  Dimbokro         40.41 228   P       P       04 31 53.9 +1.5
      comp=E,3.2nm,0.7s,baz=38,slow=6.4,SNR=8.9
      comp=E,3.2nm,0.7s
KURK  Kurchatov        40.45  53   P       P       04 31 52.3  0.0
KURK  Kurchatov        40.45  53⇑eP        P       04 31 52.5 +0.2
KURK                               pmax    pmax
      comp=Z,1.0nm,0.8s
SCO   Scoresbysund     40.72 338  i P      P       04 31 55.3 +1.0
SCO                                IAmb    IAmb    04 31 57.3
      comp=Z,22nm,0.9s
SPA0  Spitsbergen Ar   40.82 358  eP       P       04 31 55.3 +0.2
SPA0                               IAML            04 31 56.4
      comp=Z,1.7nm,0.4s
KBS   Kingsbay         41.74 357  eP       P       04 32 03.6 +1.1
DBG   Daneborg         42.31 344  i P      P       04 32 08.0 +0.9
MK31  Makanchi Array   43.29  59   P       P       04 32 15.0 -0.5
MK31  Makanchi Array   43.29  59   P       P       04 32 15.0 -0.5
MK31                               pmax    pmax
      comp=Z,3.0nm,0.6s
MKAR  Makanchi Array   43.29  59   P       P       04 32 15.9 +0.4
      comp=Z,4.4nm,0.6s,baz=278,slow=6.8,SNR=48
MKAR                               PcP     PcP     04 34 01.5  0.0
      comp=Z,1.1nm,0.5s,baz=285,slow=4.3,SNR=4.2
MKAR                               ScP     ScP     04 37 37.0 -0.7
      comp=Z,1.1nm,0.7s,baz=272,slow=3.9,SNR=10
      comp=Z,4.4nm,0.6s
DAG   Danmarks Havn    43.47 347  i P      P       04 32 15.5 -1.0
DAG                                IAmb    IAmb    04 32 15.7
      comp=Z,17nm,1.0s
ZAA0  Zalesovo Array   44.06  48   P       P       04 32 21.6 +0.1
ZAA0                               IAmb    IAmb    04 32 22.4
      comp=Z,5.3nm,0.6s
ZALV  Zalesovo Beam    44.06  48   P       P       04 32 21.4 -0.1
      comp=Z,5.2nm,0.5s,baz=273,slow=8.6,SNR=19
ZALV                               ScP     ScP     04 37 40.1 -0.5
      comp=Z,0.7nm,0.5s,baz=287,slow=5.9,SNR=2.1
      comp=Z,5.2nm,0.5s
ICESG Greenland Ices   46.08 333  i P      P       04 32 37.6 -0.1
NRIK  Noril'sk         46.11  26   P       P       04 32 38.4 +1.0
      comp=Z,9.6nm,0.5s,baz=248,slow=3.7,SNR=15
      comp=Z,9.6nm,0.5s
NRIK  Noril'sk         46.11  26   P       P       04 32 37.9 +0.5
NRIK                               IAmb    IAmb    04 32 39.4
      comp=Z,12nm,0.9s
NRIK  Noril'sk         46.11  26d iP       P       04 32 38.5 +1.0
NRIK                               pmax    pmax
      comp=Z,12nm,0.9s
DGZ   Jazzator, Alta   46.18  54⇑eP        P       04 32 38.0 -0.5
DGZ                                pmax    pmax
      comp=Z,1.0nm,0.7s
SUMG  Summit           46.37 338  i P      P       04 32 39.5 -0.4
NOR   Nord             46.41 352  i P      P       04 32 39.0 -0.7
WMQ   Urumqi           47.65  61  eP       P       04 32 50.5 +0.6
WMQ                                pmax    pmax
      comp=Z,11nm,0.7s
DY2G  Dye2             48.38 330 ⇑P        P       04 32 57.0 +1.7
DY2G  Dye2             48.38 330  i P      P       04 32 56.1 +0.8
SFJD  Kangerlussuaq    50.09 330  i P      P       04 33 08.3 +0.3
NEEM  North Greenlan   50.38 344  i P      P       04 33 10.5 +0.1
TULEG Thule            54.44 343 ⇑P        P       04 33 40.5 +0.5
DRLN  Deer Lake        57.58 310 ⇑P        P       04 34 03.8 +1.2
SONM  Songino Array    58.71  51   P       P       04 34 10.6 -0.1
      comp=Z,1.5nm,0.7s,baz=280,slow=7.4,SNR=4.9
      comp=Z,1.5nm,0.7s
ULN   Ulaanbaatar      59.11  51ceP        P       04 34 13.7 +0.3
ULN                                pmax    pmax
      comp=Z,6.0nm,2.5s
TIXI  Tiksi            59.24  21   P       P       04 34 13.5 -0.2
      comp=Z,2.6nm,0.7s,baz=270,slow=20,SNR=14
      comp=Z,2.6nm,0.7s
TIXI  Tiksi            59.24  21   P       P       04 34 13.7  0.0
TIXI  Tiksi            59.24  21 ⇑P        P       04 34 13.9 +0.3
TIXI  Tiksi            59.24  21⇑eP        P       04 34 14.0 +0.3
TIXI                               pmax    pmax
      comp=Z,2.0nm,0.8s
SCHQ  Schefferville    60.72 318   P       P       04 34 24.8 +0.7
      comp=Z,15nm,0.4s,baz=64,slow=5.0,SNR=106
      comp=Z,15nm,0.4s
SCHQ  Schefferville    60.72 318   P       P       04 34 23.6 -0.5
HHC   Hu-ho-hao-te     65.10  57  eP       P       04 34 54.8 +1.4
HHC                                pmax    pmax
      comp=Z,12nm,0.7s
HHC                                pmax    pmax
      comp=Z,250nm,5.8s
BOSA  Boshof           65.87 179   P       P       04 35 00.7 +2.4
      comp=Z,2.6nm,0.5s,baz=358,slow=8.5,SNR=10.0
      comp=Z,2.6nm,0.5s
HIA   Hailar           66.01  46⇑eP        P       04 34 58.3 -0.7
HIA                                pmax    pmax
      comp=Z,3.0nm,0.8s
CMAR  Chiang Mai Arr   67.26  84   P       P       04 35 07.7 +0.3
      comp=Z,1.2nm,0.3s,baz=305,slow=7.5,SNR=5.7
      comp=Z,1.2nm,0.3s
CMAR  Chiang Mai Arr   67.26  84  i P      P       04 35 08.1 +0.8
CMAR                               pmax    pmax
      comp=Z,1.0nm,0.3s
A36M  Sachs Harbour    68.59 350   IAmb    IAmb    04 35 16.3
      comp=Z,7.0nm,0.7s
TRQ   Mont Tremblant   69.18 313   IAmb    IAmb    04 35 21.6
      comp=Z,13nm,0.9s
BILL  Bilibino         70.95  14⇓eP        P       04 35 28.8 -0.5
BILL                                               04 38 13.0
BILL                               S       S       04 44 30.0 -1.5
BILL                               SSS     SSS     04 52 23.0
BILL                               pmax    pmax
      comp=Z,5.0nm,1.6s
FCC   Fort Churchill   71.11 331   P       P       04 35 30.8 +0.5
FCC   Fort Churchill   71.11 331   P       P       04 35 30.8 +0.5
FCC                                pmax    pmax
      comp=Z,4.0nm,0.9s
SEY   Seymchan         71.68  22   P       P       04 35 33.7  0.0
      comp=Z,2.5nm,0.6s,baz=323,slow=3.8,SNR=8.9
      comp=Z,2.5nm,0.6s
WHN   Wuhan            72.39  65   P       P       04 35 42.0 +3.5
MA2   Magadan          73.70  25   P       P       04 35 46.1 +0.4
      comp=Z,4.2nm,0.5s,baz=330,slow=20,SNR=1.8
      comp=Z,4.2nm,0.5s
M55A  Ridgway          74.38 310   P       P       04 35 50.8 +0.8
NJ2   Nanjing          74.73  61  eP       P       04 35 51.8 -0.4
NJ2                                pP      pP      04 36 31.1 +0.1
NJ2                                sP      sP      04 36 46.8 -1.2
NJ2                                pmax    pmax
      comp=Z,10.0nm,0.6s
NJ2                                pmax    pmax
      comp=Z,110nm,10.5s
YKA   Yellowknife Ar   74.84 341   P       P       04 35 52.6 +0.4
      comp=Z,5.0nm,0.7s,baz=33,slow=5.2,SNR=117
      comp=Z,5.0nm,0.7s
IMAR  Indian Mountai   76.74 359   P       P       04 36 02.8 -0.2
FFC   Flin Flon        77.04 331   P       P       04 36 04.6 -0.2
FFC                                IAmb    IAmb    04 36 06.5
      comp=Z,6.2nm,0.7s
FFC   Flin Flon        77.04 331   P       P       04 36 04.6 -0.2
FFC                                pmax    pmax
      comp=Z,6.0nm,0.7s
KSRS  Korea Array      77.56  52   P       P       04 36 07.6 -0.4
      comp=Z,2.1nm,0.8s,baz=316,slow=4.9,SNR=5.7
      comp=Z,2.1nm,0.8s
ILAR  Eielson Array    77.72 356   P       P       04 36 08.3 -0.1
      comp=Z,0.4nm,0.5s,baz=339,slow=3.4,SNR=11
      comp=Z,0.4nm,0.5s
ULM   Lac du Bonnet    77.76 325   P       P       04 36 09.3 +0.4
      comp=Z,4.0nm,0.4s,baz=38,slow=5.6,SNR=6.3
      comp=Z,4.0nm,0.4s
DAWY  Dawson           77.82 353   P       P       04 36 09.3 +0.2
HDA   Harding Lake     78.08 356   P       P       04 36 10.5 +0.1
M31M  Drury Creek, Y   79.02 350   IAmb    IAmb    04 36 18.3
      comp=Z,11nm,1.4s
F36A  Milaca           79.73 321   IAmb    IAmb    04 36 21.3
      comp=Z,8.1nm,0.7s
T50A  Nancy            80.83 310   P       P       04 36 25.5 -0.3
T50A                               IAmb    IAmb    04 36 28.6
      comp=Z,11nm,0.9s
I37A  Lemond, Waseca   80.96 320   IAmb    IAmb    04 36 28.6
      comp=Z,20nm,0.9s
U49A  Red Boiling Sp   81.74 310   IAmb    IAmb    04 36 32.8
      comp=Z,9.4nm,0.7s
W50A  Signal Mountai   82.31 309   IAmb    IAmb    04 36 36.5
      comp=Z,18nm,1.1s
WAPA  Wapiti River     82.37 340   P       P       04 36 33.7 +0.1
WAPA                               IAmb    IAmb    04 36 36.0
      comp=Z,15nm,1.1s
ECSD  EROS Data Cent   82.79 321   IAmb    IAmb    04 36 38.0
      comp=Z,9.1nm,0.9s
S44A  Carbondale       83.03 313   IAmb    IAmb    04 36 39.4
      comp=Z,14nm,0.7s
P40A  Paris            83.36 316   IAmb    IAmb    04 36 40.8
      comp=Z,9.1nm,0.7s
FVM   French Village   83.51 314   IAmb    IAmb    04 36 42.2
      comp=Z,12nm,0.8s
X48A  Hartselle        83.87 309   IAmb    IAmb    04 36 43.8
      comp=Z,11nm,0.8s
CCM   Cathedral Cave   83.93 314   P       P       04 36 42.1 +0.3
CCM                                IAmb    IAmb    04 36 44.1
      comp=Z,9.9nm,0.7s
CCM   Cathedral Cave   83.93 314   P       P       04 36 42.1 +0.3
CCM                                pmax    pmax
      comp=Z,10.0nm,0.7s
P38A  Dawn             84.11 316   IAmb    IAmb    04 36 45.0
      comp=Z,10nm,0.7s
R40A  Maddies Statio   84.34 315   IAmb    IAmb    04 36 46.5
      comp=Z,12nm,0.8s
INU   Inuyama          84.52  49   P       P       04 36 44.6 -0.3
T42A  Van Buren        84.55 313   IAmb    IAmb    04 36 47.5
      comp=Z,13nm,0.8s
LRAL  Lakeview Retre   84.78 308   IAmb    IAmb    04 36 48.8
      comp=Z,14nm,0.8s
LCAR  Lake Charles     85.25 313   IAmb    IAmb    04 36 51.1
      comp=Z,9.6nm,0.8s
S39A  Bolivar          85.36 315   IAmb    IAmb    04 36 51.4
      comp=Z,7.7nm,0.7s
BDFB  Brasilia         85.75 247   P       P       04 36 53.4 +2.0
      comp=Z,3.0nm,0.8s,baz=54,slow=6.2,SNR=4.5
      comp=Z,3.0nm,0.8s
RSSD  Black Hills      86.03 325   P       P       04 36 53.2 +0.6
RSSD                               IAmb    IAmb    04 36 54.7
      comp=Z,4.1nm,0.7s
RSSD  Black Hills      86.03 325   P       P       04 36 53.2 +0.6
RSSD                               pmax    pmax
      comp=Z,4.0nm,0.7s
U38A  Gravette         86.84 315   IAmb    IAmb    04 36 58.4
      comp=Z,8.5nm,0.7s
MSO   Missoula         87.88 333   IAmb    IAmb    04 37 03.0
      comp=Z,4.9nm,0.8s
SDV   Santo Domingo    88.26 280   P       P       04 37 04.4 +0.8
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	comp=Z,1.3nm,0.5s,baz=324,slow=8.7,SNR=2.1						
	comp=Z,1.3nm,0.5s						
K22A	Casper	88.31	326	IAmb	IAmb	04 37 04.6	
	comp=Z,8.6nm,0.8s						
PDAR	Pinedale Array	89.53	328	P	P	04 37 09.2	-0.1
	comp=Z,1.1nm,0.7s,baz=71,slow=4.4,SNR=12						
	comp=Z,1.1nm,0.7s						
PDAR	Pinedale Array	89.53	328	P	P	04 37 09.0	-0.2
ISCO	Idaho Springs	90.15	324	P	P	04 37 13.0	+0.7
ISCO				IAmb	IAmb	04 37 14.2	
	comp=Z,5.8nm,0.7s						
ISCO	Idaho Springs	90.15	324	P	P	04 37 13.0	+0.7
ISCO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
O20A	White River Ci	91.09	325	IAmb	IAmb	04 37 18.1	
	comp=Z,9.7nm,1.2s						
HWUT	Hardware Ranch	91.33	328	IAmb	IAmb	04 37 19.6	
	comp=Z,5.8nm,0.8s						
MFID	Camas Ranch	91.49	332	IAmb	IAmb	04 37 20.3	
	comp=Z,6.5nm,1.1s						
SDCO	Great Sand Dun	91.72	322	P	P	04 37 18.8	-0.7
SDCO				IAmb	IAmb	04 37 21.1	
	comp=Z,5.7nm,1.1s						
S22A	4UR Ranch, Cre	92.36	323	IAmb	IAmb	04 37 24.4	
	comp=Z,3.5nm,0.9s						
TXAR	Lajitas Array	97.32	316	P	Pdif	04 37 46.6	+1.5
	comp=Z,0.7nm,0.6s,baz=51,slow=4.5,SNR=4.7						
	comp=Z,0.7nm,0.6s						
ELIB	Princess Elisa	109.24	180	dPKiKP	PKiKP	04 42 39.1	-0.6
ELIB				dPP	PP	04 43 10.0	-2.0
PLCA	Paso Flores	116.25	238	PKP	PKiKP	04 42 54.5	+0.5
	comp=Z,1.0nm,0.9s,baz=40,slow=5.8,SNR=1.8						
WRA	Warramunga Arr	117.78	95	PKP	PKPdf	04 42 57.1	-0.3
	comp=Z,0.6nm,0.4s,baz=314,slow=1.5,SNR=15						
ASAR	Alice Springs	119.40	98	PKP	PKPdf	04 43 00.6	+0.1
	comp=Z,1.7nm,0.5s,baz=310,slow=1.5,SNR=26						
STKA	Stephens Creek	129.25	103	PKP	PKiKP	04 43 19.6	-0.1
	comp=Z,0.5nm,0.3s,baz=11,slow=9.6,SNR=3.3						

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*NEIC **24** 04:32:32.6±1.6, 44°.1N±0°.1×148°.9E±0°.1, h40km±11km, mb4.2/16, Error ellipse: s-maj=18.4km s-min=12.4km az=149.0*
*MOS **24** 04:32:33.6±1.0, 44°.39N×148°.77E, h53km, mb4.3/8, Error ellipse: s-maj=10.0km s-min=7.6km az=61.0*
*SKHL **24** 04:32:34.4±0.2, 44°.40N×148°.80E, h59km±3km, mb5.3/5*
*IDC **24** 04:32:35.9±2.5, 44°.46N×148°.61E, h56km±22km, mb3.7/14, mbtmp3.9/20, ML3.6/6, MS3.1/12, Error ellipse: s-maj=24.3km s-min=15.0km az=154.0*
*JMA **24** 04:32:35.1±0.5, 44°N±2°×14°8E±°, h0km, MV4.7/32, SE OFF ETOROFU*
*NIED **24** 04:32:35.1, 44°.02N×148°.38E, h0km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.05; $M_{\theta\theta}$0.02; $M_{\phi\phi}$-1.08; $M_{r\theta}$1.45; $M_{\theta\phi}$-1.21; $M_{\phi r}$0.01; Fault plane solution: $M_0$2.17000×10^{15} NP1:ϕ_s67.00000°, δ71.00000°, λ129.00000°. NP2:ϕ_s180.00000°, δ43.00000°, λ29.00000°.*
ISC 24 04:32:34.1±1.1**, 44°.23N**±0°.05×**148°.81E**±0°.07**, h49**km±9km**,**
n130, σ1s36/135**, mb4.1**/31**, MS3.0**/5**, 5C-7D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.21	327	d iPN	Pn	04 32 53.1	-1.5
KUR				eS	Sn	04 33 07.6	-2.3
KUR				pmax	pmax		
	comp=N,1µm,0.4s						
KUR				pmax	pmax		
	comp=E,801nm,0.4s						
KUR				pmax	pmax		
	comp=Z,4µm,0.4s						
KUR				smax	smax		
	comp=N,5µm,0.5s						
KUR				smax	smax		
	comp=E,2µm,0.3s						
KUR	Kuril'sk	1.21	327	i P	Pn	04 32 53.3	-1.3
KUR				AMB	AMB	04 32 53.8	
	comp=E,3µm,0.4s						
KUR				eS	Sn	04 33 07.6	-2.3
KUR				A	A	04 33 10.3	
	comp=E,5µm,0.4s						
KUR				A	A	04 33 10.3	
	comp=E,2µm,0.4s						
SHO	Shikotan	1.47	257	ePN	Pn	04 32 57.2	-0.9
SHO				eS	Sn	04 33 13.9	-2.3
SHO				smax	smax		
	comp=E,2µm,0.4s						
SHO				smax	smax		
	comp=N,2µm,0.2s						
SHO	Shikotan	1.47	257	i P	Pn	04 32 57.5	-0.7
SHO				eS	Sn	04 33 14.3	-1.9
SHO				A	A	04 33 19.0	
	comp=N,3µm,0.4s						
SHO				A	A	04 33 19.0	
	comp=N,2µm,0.4s						
YUK	Yuzh-Kuril'sk	2.13	266	ePN	Pn	04 33 08.5	+1.3
YUK				eS	Sn	04 33 33.1	+0.7
YUK				pmax	pmax		
	comp=N,156nm,0.2s						
YUK				pmax	pmax		
	comp=E,125nm,0.2s						
YUK				pmax	pmax		
	comp=Z,541nm,0.2s						
YUK				smax	smax		
	comp=N,2µm,0.3s						
YUK				smax	smax		
	comp=E,3µm,0.4s						
YUK	Yuzh-Kuril'sk	2.13	266	i P	Pn	04 33 08.2	+1.0
YUK				AMB	AMB	04 33 09.0	
	comp=E,540nm,0.2s						
YUK				eS	Sn	04 33 32.5	+0.1
YUK				A	A	04 33 35.9	
	comp=E,2µm,0.3s						
YUK				A	A	04 33 35.9	
	comp=E,2µm,0.3s						
NEM2	Nemuro 2	2.38	250	eP	Pn	04 33 11.0	+0.4
NEM2				eS	Sn	04 33 36.9	-1.7
NMR	Nemuro--Hokkai	2.39	250	ePN	Pn	04 33 11.3	+0.6
NMR				eS	Sn	04 33 38.9	+0.1
NMR	Nemuro--Hokkai	2.39	250	eP	Pn	04 33 11.3	+0.6
NMR				eS	Sn	04 33 38.9	+0.1
RUSJ	Misakicho	2.56	268	ePN	Pn	04 33 14.2	+1.1
RUSJ				eS	Sn	04 33 43.1	0.0
JRA	Rausu	2.67	265	eP	Pn	04 33 15.5	+0.9
JNSB	Nemuroshibetsu	2.78	262	eP	Pn	04 33 17.7	+1.6
JKHN	Kushirohamanak	2.88	248	eP	Pn	04 33 18.3	+0.8
JNK	Nakash	3.02	259	eP	Pn	04 33 20.2	+0.8
JNK				eS	Sn	04 33 53.8	-0.6
AKK	Akkeshi	3.12	249	i P	Pn	04 33 22.4	+1.6
JAK	Akkeshi	3.23	249	eP	Pn	04 33 22.9	+0.6
JAK				eS	Sn	04 33 58.6	-0.8
JTKR	Abashiri--Toko	3.54	268	eP	Pn	04 33 27.6	+1.2
JAR	Ashorobuto	3.77	257	eP	Pn	04 33 31.4	+1.8
JAR				eS	Sn	04 34 13.7	+1.0
JCH	Churui	4.28	250	eP	Pn	04 33 38.7	+2.0
JKK2	Kamakawa 2	4.38	267	eP	Pn	04 33 40.1	+2.0
JKA	Kamikawa-asahi	4.47	271		Pn	04 33 40.8	+1.5
JKA	Kamikawa-asahi	4.47	271	eP	Pn	04 33 41.2	+2.0
ASAJ	Asahikawa	4.47	271	P	Pn	04 33 41.1	+1.9
	comp=E,3.3nm,0.3s,baz=147,slow=23,SNR=5.7						
ASAJ				LR	LR	04 35 35.3	
	comp=E,298nm,19.1s,baz=116,slow=41						
	comp=E,8.5nm,0.5s						
JSE	Soyaes	4.50	282	eP	Pn	04 33 42.7	+3.0
ERM	Erimo	4.69	244	Pn	Pn	04 33 40.5	-1.8
ERM	Erimo	4.69	244	dePN	Pn	04 33 44.6	+2.3
JNBK	Urakawa-nobuka	4.83	248	eP	Pn	04 33 45.9	+1.6
JNBK				eS	Sn	04 34 39.8	+0.9
JWK2	Keihoku	5.04	285	eP	Pn	04 33 50.8	+3.7
YSS	Yuzh-Sakhalins	5.05	305	Pn	Pn	04 33 45.8	-1.4
YSS	Yuzh-Sakhalins	5.05	305	ePN	Pn	04 33 47.9	+0.7
YSS				eS	Sn	04 34 42.8	-1.3
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				smax	smax		
	comp=E,30nm,1.2s						
YSS	Yuzh-Sakhalins	5.05	305	eP	Pn	04 33 47.9	+0.7
YSS				AMB	AMB	04 33 49.0	
	comp=E,20nm,0.8s						
YSS				eS	Sn	04 34 42.8	-1.3
YSS				A	A	04 34 49.0	
	comp=E,20nm,0.8s						
YSS				A	A	04 34 49.0	
	comp=E,30nm,0.8s						
JRBN	Rebuntou	5.64	285	eP	Pn	04 33 58.4	+3.2
JOT	Ohata	6.38	246	eP	Pn	04 34 06.5	+1.1
JOT				eS	Sn	04 35 14.0	-2.8
JANG	Nango	6.64	237	eP	Pn	04 34 09.1	+0.1
JANG				eS	Sn	04 35 18.0	-5.3
JTM	Tenmabayashi	6.67	242	Pn	Pn	04 34 06.4	-3.1
JOSM	Okushiri--Mats	7.15	256	eP	Pn	04 34 18.5	+2.4
JOSM				eS	Sn	04 35 35.9	0.0
TYV	Tymovskoe	7.83	330	eP	Pn	04 34 26.5	+1.2
TYV				AMB	AMB	04 34 27.0	
	comp=E,10.0nm,0.5s						
SKR	Severo-Kuril's	8.14	35	ePN	Pn	04 34 30.0	+0.5
SKR				pmax	pmax		
	comp=Z,17nm,0.2s						
SKR	Severo-Kuril's	8.14	35	eP	Pn	04 34 29.6	+0.1
SKR				AMB	AMB	04 34 30.2	
	comp=Z,20nm,0.2s						
JMM	Marumori	8.77	226	Pn	Pn	04 34 36.1	-2.2
PAU	Pauzhetka	9.02	34	eP	Pn	04 34 42.3	+0.7
PAU				AMB	AMB	04 34 46.9	
	comp=Z,10.0nm,0.2s						
OKH	Okha	10.10	340	eP	Pn	04 34 57.7	+1.4
OKH				AMB	AMB	04 34 59.0	
	comp=Z,40nm,0.4s						
KHBR	Khabarovsk	10.41	299	eP	Pn	04 35 02.0	+1.4
NKL	Nikolayevsk	10.41	332	eP	Pn	04 35 01.3	+0.7
NKL				AMB	AMB	04 35 05.4	
	comp=Z,10.0nm,0.4s						
PEA0B	Petropavlovsk-	10.65	30		Pn	04 35 03.7	-0.1
PEA0B	Petropavlovsk-	10.65	30	dePN	Pn	04 35 03.9	+0.1
PETK	Petropavlovsk-	10.65	30	P	Pn	04 35 02.6	-1.3
	comp=Z,1.3nm,0.3s,baz=210,slow=15,SNR=18						
PETK				LR	LR	04 38 55.8	
	comp=Z,103nm,21.9s,baz=187,slow=36						
	comp=Z,4.5nm,0.5s						
PETK	Petropavlovsk-	10.65	30		Pn	04 35 03.2	-0.6
PETK	Petropavlovsk-	10.65	30	PN	Pn	04 35 03.2	-0.6
PET	Petropavlovsk	10.94	33	eP	Pn	04 35 06.9	-0.9
MJAR	Matsushiro Arr	11.14	230	P	Pn	04 35 12.0	+1.4
	comp=Z,0.1nm,0.3s,baz=29,slow=15,SNR=1.5						
MJAR				LR	LR	04 39 33.0	
	comp=Z,59nm,19.9s,baz=96,slow=37						
	comp=Z,1.1nm,0.3s						
USRK	Ussuriysk Ar.	12.07	276	P	Pn	04 35 21.7	-1.6
	comp=Z,0.3nm,0.3s,baz=98,slow=20,SNR=1.4						
USRK				LR	LR	04 40 00.5	
	comp=Z,95nm,19.1s,baz=111,slow=37						
	comp=Z,1.6nm,0.6s						
USRK	Ussuriysk Ar.	12.07	276	Pn	Pn	04 35 25.1	+1.7
KLR	Kul'dur	12.72	299	P	P	04 35 36.0	-6.0
	comp=Z,3.0nm,0.9s,baz=100,slow=15,SNR=15						
KLR				LR	LR	04 40 33.7	
	comp=Z,80nm,19.1s,baz=74,slow=38						
KLR	Kul'dur	12.72	299	deP	Pn	04 35 35.6	+3.5
KLR	Kul'dur	12.72	299	⇑iPN	P	04 35 36.9	-5.1
KLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KLR	Kul'dur	12.72	299	eP	Pn	04 35 32.1	0.0
KLR	Kul'dur	12.72	299	pmax	pmax		
	comp=Z,3.0nm,1.0s						
MDJ	Mudanjiang	13.74	278	Pn	Pn	04 35 46.8	+0.6
MA2	Magadan	15.42	4	LR	LR	04 41 32.1	
	comp=Z,62nm,18.5s,baz=312,slow=35						
HEH	HeiHe	15.71	300	eP	P	04 36 14.4	-0.8
HEH				pmax	pmax		
	comp=Z,8.0nm,1.3s						
HEH				pmax	pmax		
	comp=Z,210nm,5.4s						
KSRS	Korea Array	17.17	254	P	P	04 36 32.5	+1.1
	comp=Z,0.3nm,0.3s,baz=54,slow=10,SNR=1.1						
KSRS				LR	LR	04 43 23.5	
	comp=Z,49nm,18.7s,baz=55,slow=38						
	comp=Z,0.8nm,0.4s						
JNU	Nakatsue	17.82	238	LR	LR	04 42 29.1	
	comp=Z,52nm,18.9s,baz=41,slow=33						
SEY	Seymchan	18.86	5	P	P	04 36 47.4	-2.4
	comp=Z,0.4nm,0.3s,baz=172,slow=8.8,SNR=8.9						
	comp=Z,3.2nm,0.6s						
SEY	Seymchan	18.86	5	⇓eP	P	04 36 48.1	-1.7
SEY				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YAK	Yakutsk	21.06	335	LR	LR	04 45 39.5	
	comp=Z,66nm,19.7s,baz=108,slow=38						
BILL	Bilibino	25.58	15	⇑eP	P	04 37 57.0	-1.1
BILL				e*PP	pP	04 38 11.9	+1.5
BILL						04 38 36.0	
BILL				pmax	pmax		
	comp=Z,6.0nm,2.1s						
BILL				MLR	MLR		
	comp=Z,40nm,19.0s						
BILL	Bilibino	25.58	15	eP	P	04 37 57.0	-1.1
H11N2	WAKE ISLAND Hy	28.71	142	T	T	05 09 20.7	
	baz=333,slow=76,SNR=181						
H11N1	WAKE ISLAND Hy	28.73	143	T	T	05 09 17.1	
	baz=333,slow=76,SNR=117						
H11N3	WAKE ISLAND Hy	28.73	142	T	T	05 09 17.4	
	baz=333,slow=76,SNR=118						
SONM	Songino Array	29.39	292	P	P	04 38 32.2	-0.5
	comp=Z,0.3nm,0.5s,baz=89,slow=6.6,SNR=1.7						
	comp=Z,0.3nm,0.5s						
H11S1	WAKE ISLAND Hy	29.71	144	T	T	05 10 35.2	
	baz=334,slow=76,SNR=151						
H11S3	WAKE ISLAND Hy	29.72	144	T	T	05 10 34.7	
	baz=334,slow=76,SNR=174						
H11S2	WAKE ISLAND Hy	29.73	144	T	T	05 10 39.0	
	baz=334,slow=76,SNR=110						
IMAR	Indian Mountai	37.58	34	P	P	04 39 43.2	-0.2
CAST	Castle Rocks	38.11	39	P	P	04 39 46.7	-1.2
CAST				IAmb	IAmb	04 39 50.5	
	comp=Z,3.1nm,0.7s						
H23K	Yukon River	39.28	35	P	P	04 39 56.7	-1.0
H23K				IAmb	IAmb	04 40 01.6	
	comp=Z,3.3nm,0.7s						
MDM	Murphy Dome	39.82	36	P	P	04 40 01.2	-1.0
WRH	Wood River Hil	39.88	37	P	P	04 40 03.3	+0.6
WRH				IAmb	IAmb	04 40 04.6	
	comp=Z,6.3nm,1.5s						
COLA	College	39.98	36	⇑eP	P	04 40 03.3	-0.1
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
IL31		40.39	37	P	P	04 40 06.6	-0.2
ILAR	Eielson Array	40.39	37	P	P	04 40 07.2	+0.3
	comp=Z,0.9nm,0.7s,baz=267,slow=8.1,SNR=17						
	comp=Z,0.9nm,0.7s						
PZH	PanZhiHua	41.64	261	P	P	04 40 14.9	-2.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.2s						
ZALV	Zalesovo Beam	41.67	307	PcP	PcP	04 42 13.7	+0.3
	comp=Z,1.2nm,0.5s,baz=90,slow=2.2,SNR=6.1						
SCRK	Sand Creek	41.70	38	P	P	04 40 17.7	-0.1
K27K	Chicken	42.53	37	P	P	04 40 24.1	-0.3
L27K	Beaver Creek,	42.76	39	IAmb	IAmb	04 40 30.1	
	comp=Z,3.5nm,0.8s						
EGAK	Eagle	42.84	36	IAmb	IAmb	04 40 28.0	
	comp=Z,3.8nm,0.9s						
HYT	Haines Junctio	45.18	42	P	P	04 40 46.6	+0.8
HYT				IAmb	IAmb	04 40 49.3	
	comp=Z,3.6nm,0.8s						
INK	Inuvik	45.38	31	IAmb	IAmb	04 40 48.7	
	comp=Z,3.2nm,1.0s						
MK31	Makanchi Array	45.42	298	P	P	04 40 48.1	+0.3
MK31	Makanchi Array	45.42	298	P	P	04 40 48.1	+0.3
MK31				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	45.42	298	P	P	04 40 47.8	0.0
	comp=Z,0.6nm,0.6s,baz=72,slow=7.4,SNR=8.3						
MKAR				PcP	PcP	04 42 26.9	+0.6
	comp=Z,0.6nm,0.7s,baz=56,slow=4.6,SNR=4.5						
	comp=Z,0.6nm,0.6s						
MAKZ	Makanchi	45.62	298	P	P	04 40 49.1	-0.3
MAKZ				IAmb	IAmb	04 40 56.7	
	comp=Z,2.6nm,0.7s						
MAKZ	Makanchi	45.62	298	P	P	04 40 49.1	-0.3
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SIJI	Sorong	47.55	204	LR	LR	04 59 29.0	
	comp=Z,13nm,21.0s,baz=174,slow=34						
CMAR	Chiang Mai Arr	48.81	255	LR	LR	05 03 51.5	
	comp=Z,24nm,18.6s,baz=280,slow=38						
BRVK	Borovoye	50.17	310	⇑eP	P	04 41 24.8	+0.4
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BRVK	Borovoye	50.17	310	eP	P	04 41 24.8	+0.4
AAK	Ala-Archa	52.23	296	⇑eP	P	04 41 41.2	+1.0
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AAK	Ala-Archa	52.23	296	eP	P	04 41 41.2	+1.0
KSH	Kashi	52.80	292	P	P	04 41 50.3	+5.8
YKA	Yellowknife Ar	54.74	34	P	P	04 41 59.0	+0.9
	comp=Z,2.1nm,0.7s,baz=298,slow=6.7,SNR=33						
YKA				PcP	PcP	04 42 59.9	-0.2
	comp=Z,0.1nm,0.5s,baz=303,slow=3.5,SNR=0.6						
	comp=Z,2.1nm,0.7s						
ABKAR	Akbulak array	57.69	309	P	P	04 42 19.3	-0.1
FFC	Flin Flon	64.60	37	P	P	04 43 06.3	+0.3
FFC	Flin Flon	64.60	37	P	P	04 43 06.3	+0.3
FFC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FINES	FINESS Array B	64.99	334	P	P	04 43 06.7	-1.7
	comp=Z,1.5nm,0.5s,baz=26,slow=7.8,SNR=8.8						
	comp=Z,1.5nm,0.5s						
FINES	FINESS Array B	64.99	334	i P	P	04 43 07.5	-0.9
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WRA	Warramunga Arr	65.22	195	P	P	04 43 11.7	+1.3
	comp=Z,0.7nm,0.8s,baz=22,slow=6.3,SNR=3.5						
	comp=Z,0.7nm,0.8s						
NVAR	Mina Array Bea	66.31	59	P	P	04 43 19.0	+1.3
	comp=Z,0.9nm,0.5s,baz=297,slow=7.2,SNR=11						
	comp=Z,0.9nm,0.5s						
PDAR	Pinedale Array	68.68	51	P	P	04 43 33.8	+1.1
	comp=Z,0.3nm,0.5s,baz=208,slow=2.7,SNR=4.5						
	comp=Z,0.3nm,0.5s						
NB2	NORSAR Subarra	69.58	339	P	P	04 43 37.1	-0.5
	comp=Z,4.3nm,1.0s,baz=30,slow=6.2						
NOA	NORSAR Array B	69.58	339	P	P	04 43 36.9	-0.7
	comp=Z,1.0nm,0.6s,baz=31,slow=6.7,SNR=13						
	comp=Z,1.0nm,0.6s						
KIV	Kislovodsk	70.33	313	eP	P	04 43 42.8	+0.3
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KIV	Kislovodsk	70.33	313	eP	P	04 43 42.8	+0.3
ULM	Lac du Bonnet	70.39	38	P	P	04 43 43.5	+0.8
	comp=Z,2.4nm,0.6s,baz=287,slow=6.4,SNR=3.7						
	comp=Z,2.4nm,0.6s						
SCHQ	Schefferville	76.77	20	P	P	04 44 20.1	0.0
	comp=Z,3.3nm,0.8s,baz=306,slow=5.7,SNR=4.5						
SCHQ				LR	LR	05 23 34.9	
	comp=Z,62nm,18.9s,baz=64,slow=40						
	comp=Z,3.3nm,0.8s						
CLL	Collm	77.43	333	⇓iP	P	04 44 24.1	+0.3
	comp=Z,6.0nm,0.6s						
CLL				ePP	PP	04 47 17.0	-1.0
CLL	Collm	77.43	333	⇓iP	P	04 44 24.1	+0.3
CLL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KHC	Kasperske Hory	79.11	332	eP	P	04 44 33.8	+0.6
KHC				ePCP	PcP	04 44 41.4	-0.1
KHC	Kasperske Hory	79.11	332	eP	P	04 44 33.8	+0.6
KHC				e		04 44 41.4	
CKRC	Cesky Krumlov	79.13	331	eP	P	04 44 33.6	+0.3
CKRC	Cesky Krumlov	79.13	331	eP	P	04 44 33.6	+0.3
GERES	GERESS Array B	79.32	332	P	P	04 44 34.2	-0.2
	comp=Z,0.4nm,0.4s,baz=46,slow=7.6,SNR=6.2						
	comp=Z,0.4nm,0.4s						
TXAR	Lajitas Array	81.39	57	P	P	04 44 47.2	+1.3
	comp=Z,1.1nm,0.5s,baz=299,slow=4.2,SNR=14						
	comp=Z,1.1nm,0.5s						
ESDC	Sonseca Array	92.94	339	P	P	04 45 41.0	-1.0
	comp=Z,0.3nm,0.5s,baz=10,slow=4.3,SNR=1.5						
	comp=Z,0.3nm,0.5s						
TORD	Torodi Ar. Bea	115.53	324	PKP	PKiKP	04 51 10.3	-0.7
	comp=Z,0.9nm,0.3s,baz=27,slow=1.5,SNR=1.4						
NNA	Nana	129.43	65	i PKIKP	PKPdf	04 51 38.7	+1.1
BDFB	Brasilia	148.13	32	PKPbc	PKPbc	04 52 14.1	-0.7
	comp=Z,2.0nm,0.9s,baz=310,slow=17,SNR=3.2						

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*NEIC **24** 04:34:14.7±2.4, 13°.37S±0°.07×75°.21W±0°.05, h92km±7km, mb4.4/33, Error ellipse: s-maj=10.7km s-min=7.2km az=194.0*
*IDC **24** 04:34:14.7±1.2, 13°.42S×75°.40W, h99km±11km, mb3.9/12, mbtmp4.2/18, MS3.2/8, Error ellipse: s-maj=22.7km s-min=10.4km az=59.0*
*VAO **24** 04:34:15.6±0.7, 13°.31S×75°.21W, h83km, mb4.4*
ISC 24 04:34:14.9±0.4**, 13°.39S**±0°.06×**75°.24W**±0°.07**, h101**km**,**
n125, σ1s35/116**, mb4.2**/19**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.10	312	P	Pn	04 34 48.0	-0.8
	638nm,0.3s,baz=134,slow=14,SNR=426						
NNA				S	Sn	04 35 12.6	-2.1
	4µm,0.3s,baz=151,slow=13,SNR=28						
NNA				LR	LR	04 35 30.2	
	comp=Z,456nm,18.9s,baz=290,slow=38						
NNA	Nana	2.10	312	Pn	Pn	04 34 48.1	-0.7
NNA				Sn	Sn	04 35 12.2	-2.6
CZSB	Cruzeiro do Su	6.16	24		Pn	04 35 42.9	-0.5
CZSB	Cruzeiro do Su	6.16	24	eP	Pn	04 35 42.7	-0.7
PB18	Visviri	6.94	128	Pn	Pn	04 35 52.7	-1.8
ATAH	Atahualpa	6.95	333	P	Pn	04 35 52.9	-1.6
	7.6nm,0.3s,baz=166,slow=4.9,SNR=22						
ATAH				S	Sn	04 37 12.0	-0.3
	41nm,0.5s,baz=73,slow=14,SNR=1.8						
ATAH				LR	LR	04 38 60.0	
	comp=Z,115nm,20.5s,baz=144,slow=41						
PB12	IPOC Station P	7.02	138	Pn	Pn	04 35 53.4	-1.7
PB16	IPOC Station P	7.39	132	Pn	Pn	04 35 59.1	-1.5
MNMC	Minye Minye	7.87	137		Pn	04 36 05.5	-1.3
PB11	IPOC Station P	8.29	141		Pn	04 36 11.0	-1.4
GO01	Chusmiza	8.52	138	Pn	Pn	04 36 14.7	-1.2
PB08	IPOC Station P	8.89	140		Pn	04 36 19.3	-1.5
PB01	IPOC Station P	9.38	145		Pn	04 36 27.5	+0.2
PB02	IPOC Station P	9.39	148		Pn	04 36 27.2	-0.2
ETMB	Extrema	9.53	69	Pn	Pn	04 36 28.7	-0.6
ETMB	Extrema	9.53	69	eP	Pn	04 36 29.1	-0.1
PB07	IPOC Station P	9.73	149	Pn	Pn	04 36 31.8	-0.3
PB03	IPOC Station P	10.07	150		Pn	04 36 37.8	+1.1
MCRA	Macar, Loja	10.10	332		Pn	04 36 37.3	+0.2
PB09	IPOC Station P	10.12	146		Pn	04 36 38.2	+0.7
TBTG	Tabatinga, AM	10.55	30		Pn	04 36 41.2	-2.0
TBTG	Tabatinga, AM	10.55	30	eP	Pn	04 36 41.6	-1.6
LVC	Limon Verde	10.96	148	P	Pn	04 36 49.1	+0.1
	1.7nm,0.3s,baz=355,slow=7.7,SNR=2.8						
LVC				S	Sn	04 38 42.2	-7.6
	2.9nm,0.3s,baz=7.3,slow=12,SNR=1.7						
LVC				LR	LR	04 40 43.9	
	comp=Z,37nm,20.7s,baz=322,slow=35						
LVC	Limon Verde	10.96	148	Pn	Pn	04 36 48.7	-0.3
LVC	Limon Verde	10.96	148	eP	Pn	04 36 49.8	+0.7
PB15	IPOC Station P	11.19	152	Pn	Pn	04 36 50.3	-1.7
PORT	Chimborazo Vol	12.36	343		Pn	04 37 06.1	-1.9
SAML	Samuel	12.63	71	Pn	Pn	04 37 09.1	-1.9
SAML	Samuel	12.63	71	eP	Pn	04 37 09.5	-1.5
SLOR	San Lorenzo -	12.99	345		Pn	04 37 14.9	-1.3
SIV	San Ignacio	13.95	102	P	Pn	04 37 28.7	+0.5
	2.3nm,0.8s,baz=274,slow=9.4,SNR=7.2						
SIV				LR	LR	04 43 15.2	
	comp=Z,58nm,19.2s,baz=302,slow=38						
TEFE	Tefe	14.36	48	eP	Pn	04 37 31.7	-1.8
BBSD	Serra de San D	14.61	107	eP	Pn	04 37 35.7	-1.0
AC06	Mina Casimiro	14.62	163	Pn	Pn	04 37 37.3	+0.4
VILB	Vilhena	14.65	90	Pn	Pn	04 37 36.1	-1.2
VILB	Vilhena	14.65	90	eP	Pn	04 37 36.2	-1.1
SGCB	S£o Gabriel d	15.49	32	eP	Pn	04 37 45.2	-2.7
PTLB	Pontes e Lacer	15.73	99	Pn	Pn	04 37 50.3	-0.6
PTLB	Pontes e Lacer	15.73	99	eP	Pn	04 37 50.8	-0.1
AC05	El Transito	16.05	164	Pn	Pn	04 37 53.5	-1.3
MACA	Manacapuru-AM	17.62	56		P	04 38 12.3	-1.3
MACA	Manacapuru-AM	17.62	56	eP	Pn	04 38 14.3	+0.2
CO03	El Pedregal	17.86	167	P	P	04 38 16.1	-0.2
ROSC	El Rosal	18.14	3	P	Pn	04 38 21.8	+1.1
	7.2nm,0.6s,baz=121,slow=20,SNR=4.5						
ROSC	El Rosal	18.14	3	P	Pn	04 38 21.4	+0.7
ROSC				IAmb	IAmb	04 38 29.6	
	comp=Z,19nm,0.6s						
PDRB	Porto dos Gac	18.16	86	eP	P	04 38 19.9	+0.2
MURT	Porto Murtinho	18.70	119	eP	Pn	04 38 27.6	+0.6
TICA	Tres Isletas	19.01	135	eP	Pn	04 38 31.4	+0.8
BDQN	Bodoquena, MS	19.02	114	eP	Pn	04 38 31.4	+0.6
SALV	Santo Antonio	19.08	100	eP	P	04 38 30.6	+1.0
CLDB	Colider	19.17	85	eP	Pn	04 38 32.9	+0.3
CFA	Coronel Fontan	19.23	162	P	P	04 38 32.5	+1.3
	comp=Z,6.1nm,0.8s,baz=339,slow=11,SNR=8.9						
VA06	Catapilco	19.42	170	IAmb	IAmb	04 38 39.7	
	comp=Z,12nm,0.8s						
ESFA	Espinillo Form	19.54	129	eP	Pn	04 38 37.5	+0.8

VA03	**San Esteban**	**19.75**	**168**	IAmb	IAmb	04 38 43.5	
	comp=Z,23nm,0.8s						
ROC1	**El Roble**	**19.87**	**170**	IAmb	IAmb	04 38 44.6	
	comp=Z,12nm,0.8s						
AQDB	**Aquidauana**	**19.96**	**113**	P	**P**	**04 38 40.4**	**+1.2**
AQDB	**Aquidauana**	**19.96**	**113**	*e*P	**Pn**	**04 38 41.5**	**-0.3**
PP1B	**Ponte de Pedra**	**20.06**	**105**	*e*P	**P**	**04 38 41.4**	**+1.1**
PEL	**Peldehue**	**20.09**	**169**	P	**P**	**04 38 42.7**	**+2.1**
PEL				IAmb	IAmb	04 38 46.5	
	comp=Z,28nm,0.9s						
MT02	**Curacav**	**20.13**	**170**	IAmb	IAmb	04 38 47.2	
	comp=Z,18nm,1.0s						
MT08	**Bocatoma Ro**	**20.52**	**167**	IAmb	IAmb	04 38 52.0	
	comp=Z,22nm,0.8s						
NPGB	**Novo Progresso**	**20.55**	**74**	*e*P	**P**	**04 38 46.2**	**+0.6**
MT13	**San Alfonso**	**20.75**	**168**		**P**	**04 38 47.5**	**-0.3**
MT13				IAmb	IAmb	04 38 54.2	
	comp=Z,27nm,1.0s						
LMEL	**Las Melosas**	**20.87**	**168**	IAmb	IAmb	04 38 54.7	
	comp=Z,17nm,1.1s						
CPUP	**Villa Florida**	**21.16**	**130**	P	**P**	**04 38 52.6**	**+0.6**
	comp=Z,6.3nm,1.1s,baz=310,slow=9.7,SNR=5.8						
	comp=Z,6.3nm,1.1s						
CPUP	**Villa Florida**	**21.16**	**130**	P	**P**	**04 38 52.1**	**+0.1**
CPUP	**Villa Florida**	**21.16**	**130**	*e*P	**P**	**04 38 53.3**	**+1.2**
ITTB	**Itaituba**	**21.24**	**67**	*e*P	**P**	**04 38 53.9**	**+0.9**
BO01	**Tunca**	**21.24**	**170**	P	**P**	**04 38 54.6**	**+1.8**
BO01				IAmb	IAmb	04 38 58.0	
	comp=Z,18nm,1.2s						
AMBA	**Amambai (Brazi**	**21.43**	**119**	*e*P	**P**	**04 38 56.6**	**+1.7**
BOAV	**Boa Vista**	**21.43**	**44**	P	**P**	**04 38 55.0**	**-0.1**
BOAV				IAmb	IAmb	04 39 02.8	
	comp=Z,20nm,1.0s						
BOAV	**Boa Vista**	**21.43**	**44**	*e*P	**P**	**04 38 56.1**	**+1.1**
BO02	**Sierra Bellavi**	**21.68**	**170**	IAmb	IAmb	04 39 15.4	
	comp=Z,15nm,1.2s						
MECA	**Mercedes**	**22.38**	**138**	*e*P	**P**	**04 39 05.2**	**+0.3**
SDV	**Santo Domingo**	**22.60**	**12**	P	**P**	**04 39 07.8**	**+0.3**
	comp=Z,23nm,0.5s,baz=195,slow=12,SNR=14						
SDV				LR	LR	04 49 00.5	
	comp=Z,59nm,20.9s,baz=189,slow=39						
	comp=Z,23nm,0.5s						
SDV	**Santo Domingo**	**22.60**	**12**	P	**P**	**04 39 08.1**	**+0.6**
SDV	**Santo Domingo**	**22.60**	**12**	*e*P	**P**	**04 39 08.2**	**+0.7**
ARAG	**Araguaiana, MT**	**22.79**	**99**	*e*P	**P**	**04 39 09.0**	**-0.3**
AZCA	**Azaras, Argent**	**23.14**	**132**	*e*P	**P**	**04 39 13.8**	**+1.3**
BAUV	**El Baul**	**23.32**	**18**	P	**P**	**04 39 13.6**	**-0.6**
SNDB	**Serra Nova Dou**	**23.40**	**89**	*e*P	**P**	**04 39 16.1**	**+1.0**
ITQB	**Itaqui**	**23.65**	**136**	P	**P**	**04 39 17.4**	**+0.2**
ITQB	**Itaqui**	**23.65**	**136**	*e*P	**P**	**04 39 18.5**	**+1.3**
PCMB	**Pacaembu**	**24.26**	**113**	*e*P	**P**	**04 39 23.5**	**+0.7**
CRSM	**Crissiumal (Br**	**24.26**	**129**	*e*P	**P**	**04 39 23.8**	**+1.1**
FRBT	**Francisco Belt**	**24.30**	**124**	*e*P	**P**	**04 39 24.7**	**+1.6**
PTGB	**Pitanga**	**24.59**	**121**	*e*P	**P**	**04 39 28.0**	**+2.2**
PCRV	**Puerto La Cruz**	**25.67**	**25**	P	**P**	**04 39 38.0**	**+2.4**
	comp=Z,5.2nm,0.8s,baz=173,slow=8.1,SNR=2.3						
	comp=Z,5.2nm,0.8s						
IPMB	**Ipameri, GO**	**26.41**	**103**	*e*P	**P**	**04 39 42.1**	**-0.2**
SMTB	**Santa Maria do**	**27.49**	**83**	*e*P	**P**	**04 39 53.8**	**+1.7**
PLCA	**Paso Flores**	**27.54**	**172**	P	**P**	**04 39 52.3**	**0.0**
	comp=Z,3.9nm,0.7s,baz=344,slow=11,SNR=18						
PLCA				LR	LR	04 48 35.2	
	comp=Z,58nm,19.7s,baz=65,slow=31						
	comp=Z,3.9nm,0.7s						
MDP	**Montagnes des**	**29.00**	**52**	LR	LR	04 52 37.7	
	comp=Z,106nm,18.3s,baz=174,slow=38						
RPN	**Rapa Nui**	**34.65**	**241**	LR	LR	04 50 40.6	
	comp=Z,64nm,18.1s,baz=133,slow=29						
TXAR	**Lajitas Array**	**50.57**	**327**	P	**P**	**04 43 02.7**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=158,slow=11,SNR=8.3						
	comp=Z,1.2nm,0.8s						
TXAR	**Lajitas Array**	**50.57**	**327**	P	**P**	**04 43 03.7**	**+0.2**
HDIL	**Hopedale**	**55.24**	**347**	P	**P**	**04 43 38.7**	**+1.2**
LONY	**Lake Ozonia**	**57.74**	**1**	P	**P**	**04 43 52.5**	**-2.6**
SDCO	**Great Sand Dun**	**58.26**	**332**	P	**P**	**04 43 60.0**	**+0.6**
ECSD	**EROS Data Cent**	**60.11**	**342**	P	**P**	**04 44 11.7**	**+0.1**
DUG	**Dugway, Tooele**	**63.72**	**329**	IAmb	IAmb	04 44 38.4	
	comp=Z,8.2nm,1.2s						
PDAR	**Pinedale Array**	**64.14**	**333**	P	**P**	**04 44 38.8**	**0.0**
	comp=Z,0.8nm,0.9s,baz=134,slow=8.6,SNR=5.2						
	comp=Z,0.8nm,0.9s						
NVAR	**Mina Array Bea**	**65.42**	**324**	P	**P**	**04 44 48.0**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=153,slow=7.6,SNR=4.2						
	comp=Z,0.6nm,0.8s						
FLWY	**Flagg Ranch**	**65.69**	**333**	P	**P**	**04 44 49.7**	**+0.9**
FLWY				IAmb	IAmb	04 44 51.0	
	comp=Z,6.8nm,0.8s						
ULM	**Lac du Bonnet**	**65.91**	**346**	P	**P**	**04 44 48.4**	**-1.5**
	comp=Z,3.3nm,0.7s,baz=193,slow=5.7,SNR=5.3						
	comp=Z,3.3nm,0.7s						
GCMT	**Greycliff**	**66.60**	**334**	P	**P**	**04 44 55.5**	**+1.0**
BELA	**Belgrano 2**	**67.59**	**171**	P	**P**	**04 45 02.0**	**+1.8**
BELA				IAmb	IAmb	04 45 02.8	
	comp=Z,8.0nm,1.1s						
QSPA	**South Pole Qui**	**76.75**	**180**	P	**P**	**04 45 55.6**	**+0.5**
QSPA				IAmb	IAmb	04 45 57.4	
	comp=Z,5.8nm,1.1s						
TORD	**Torodi Ar. Bea**	**80.66**	**74**	P	**P**	**04 46 17.1**	**-0.2**
	comp=Z,4.2nm,0.3s,baz=258,slow=3.9,SNR=2.7						
	comp=Z,4.2nm,0.3s						
YKA	**Yellowknife Ar**	**81.64**	**343**	P	**P**	**04 46 21.1**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=142,slow=6.0,SNR=32						
	comp=Z,1.6nm,0.8s						
ESDC	**Sonseca Array**	**84.56**	**47**	P	**P**	**04 46 38.4**	**+1.3**
	comp=Z,0.8nm,0.9s,baz=252,slow=5.2,SNR=2.6						
	comp=Z,0.8nm,0.9s						
SUMG	**Summit**	**89.12**	**10**	*i*P	**P**	**04 47 00.0**	**+1.1**
ILAR	**Eielson Array**	**94.40**	**336**	P	**P**	**04 47 22.6**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=165,slow=3.0,SNR=4.2						
	comp=Z,0.3nm,0.8s						
H11S2	**WAKE ISLAND Hy**	**120.46**	**284**	T	T	07 03 49.8	
	baz=94,slow=74,SNR=5.5						
H11S1	**WAKE ISLAND Hy**	**120.46**	**284**	T	T	07 03 50.6	
	baz=94,slow=74,SNR=4.4						
H11S3	**WAKE ISLAND Hy**	**120.47**	**284**	T	T	07 03 51.1	
	baz=94,slow=74,SNR=6.6						
ASAR	**Alice Springs**	**133.43**	**218**	PKP	**PKPdf**	**04 53 20.5**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=140,slow=2.1,SNR=7.3						
WRA	**Warramunga Arr**	**135.90**	**222**	PKP	**PKPdf**	**04 53 25.4**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=136,slow=1.9,SNR=17						
ZALV	**Zalesovo Beam**	**136.59**	**17**	PKP	**PKPdf**	**04 53 25.9**	**+0.9**
	comp=Z,2.9nm,0.7s,baz=318,slow=2.0,SNR=7.9						
MKAR	**Makanchi Array**	**141.73**	**25**	PKP	**PKPdf**	**04 53 34.2**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=336,slow=2.7,SNR=6.7						
SONM	**Songino Array**	**145.64**	**358**	PKPbc	**PKPdf**	**04 53 42.5**	**+0.8**
	comp=Z,4.0nm,0.9s,baz=342,slow=1.8,SNR=17						
XLT	**XiLinHaoTe**	**148.09**	**344**	*e*PKPbc	**PKPbc**	**04 53 49.8**	**+0.7**
KSRS	**Korea Array**	**148.36**	**323**	PKPbc	**PKPdf**	**04 53 46.8**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=55,slow=1.4,SNR=4.6						
GTA	**Gaotai**	**153.72**	**9**	*e*PKPbc	**PKiKP**	**04 54 03.5**	**+0.8**
PZH	**PanZhiHua**	**166.66**	**12**	PKP	**PKPdf**	**04 54 10.3**	**+0.9**

ROM 24 04:40:17.2±0.1, 42°.931N±0°.003×13°.185E±0°.004, h13^{km}, ML1.3/9, 3C-2D, Error ellipse: s-maj=0.3km s-min=0.1km az=133.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MC2	**Monte Cornacci**	**0.02**	**168**	P	Pg	04 40 19.9	+0.2
MC2				S	Sg	04 40 21.5	+0.1
T1245	**Castelsantange**	**0.07**	**178**	P	Pg	04 40 20.2	+0.2
T1245				S	Sg	04 40 22.2	+0.2
T1245				AML	AML		
	comp=E,326µm,0.2s						
T1245				AML	AML		
	comp=N,397µm,1.5s						
T1245				AML	AML		
	comp=N,420µm,1.5s						
T1245				AML	AML		
	comp=N,420µm,0.5s						
T1245				AML	AML		
	comp=N,397µm,0.5s						
T1245				AML	AML		
	comp=E,372µm,0.2s						
T1256	**Bolognola (MC)**	**0.08**	**22**	⇑P	Pg	04 40 20.3	+0.2
T1256				S	Sg	04 40 22.2	0.0
T1256				AML	AML		
	comp=E,144µm,0.8s						
T1256				AML	AML		
	comp=N,259µm,0.4s						
MMO1	**Montemonaco**	**0.11**	**107**	P	Pg	04 40 20.6	+0.3
MMO1				S	Sg	04 40 22.8	+0.3
NRCA	**Norcia**	**0.11**	**208**	P	Pg	04 40 20.6	+0.3
NRCA				S	Sg	04 40 22.8	+0.2
NRCA				AML	AML		
	comp=E,506µm,0.2s						
NRCA				AML	AML		
	comp=N,314µm,0.2s						
NRCA				AML	AML		
	comp=E,506µm,1.8s						
FDMO	**Fiordimonte**	**0.13**	**326**	P	Pg	04 40 20.8	+0.3
FDMO				AML	AML		
	comp=E,85µm,0.5s						
FDMO				AML	AML		
	comp=N,115µm,0.4s						
T1216	**Preci, Frazion**	**0.13**	**252**	P	Pg	04 40 20.9	+0.4
T1216				S	Sg	04 40 23.4	+0.5
T1214	**Arquata del Tr**	**0.17**	**174**	P	Pg	04 40 19.3	-1.9
T1214				S	Sg	04 40 21.7	-2.4
T1219	**Muccia, Frazio**	**0.18**	**314**	P	Pg	04 40 21.5	+0.2
T1219				AML	AML		
	comp=N,87µm,0.7s						
T1219				AML	AML		
	comp=E,90µm,1.2s						
T1220	**Camerino, Fraz**	**0.19**	**339**	P	Pg	04 40 21.8	+0.3
T1220				AML	AML		
	comp=E,114µm,1.4s						
T1220				AML	AML		
	comp=N,178µm,0.2s						
T1220				AML	AML		
	comp=E,114µm,0.6s						
T1241	**Roccafluvione,**	**0.20**	**112**	P	Pg	04 40 22.1	+0.5
T1241				S	Sb	04 40 25.5	-0.9
T1241				AML	AML		
	comp=E,167µm,0.6s						
T1241				AML	AML		
	comp=N,326µm,0.2s						
T1241				AML	AML		
	comp=E,167µm,1.4s						
T1212	**Cascia, Frazio**	**0.21**	**210**	P	Pg	04 40 22.2	+0.5
T1212				S	Sg	04 40 25.8	+0.9
T1212				AML	AML		
	comp=E,135µm,0.2s						
T1212				AML	AML		
	comp=N,137µm,0.1s						
T1218	**Civita (PG)**	**0.27**	**191**	P	Pg	04 40 22.9	+0.1
T1218				S	Sb	04 40 27.5	-0.9
SMA1	**SAN MARTINO**	**0.32**	**160**	S	Sg	04 40 24.1	-4.0
SMA1				AML	AML		
	comp=E,26µm,1.4s						
SMA1				AML	AML		
	comp=E,26µm,0.6s						
SMA1				AML	AML		
	comp=N,18µm,1.4s						
SNTG	**Esanatoglia**	**0.37**	**331**	⇑P	Pg	04 40 24.9	+0.2
EL6	**Elcito**	**0.40**	**351**	⇑P	Pg	04 40 25.6	+0.3
RM33	**Pellescritta (**	**0.42**	**177**	P	Pg	04 40 25.8	+0.2
ARRO	**Arrone**	**0.47**	**221**	P	Pg	04 40 25.4	-1.0
APEC	**Apecchio**	**0.84**	**319**	⇓P	Pg	04 40 27.8	-5.7
MA9	**Marino**	**1.22**	**199**	S	Sb	04 40 47.7	-8.2
TOLF	**Tolfa**	**1.23**	**226**	⇓P	Pn	04 40 32.8	-7.4

ROM 24 04:40:49.7±0.1, 43°.047N±0°.003×13°.034E±0°.004, h6^{km}, ML0.9/7, 2C-1D, Error ellipse: s-maj=0.3km s-min=0.1km az=239.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1219	**Muccia, Frazio**	**0.02**	**294**	P	Pg	04 40 51.0	+0.1
T1219				S	Sg	04 40 51.8	-0.1
FDMO	**Fiordimonte**	**0.04**	**105**	P	Pg	04 40 51.2	+0.1
FDMO				S	Sg	04 40 52.1	+0.1
FDMO				AML	AML		
	comp=N,850µm,0.1s						
FDMO				AML	AML		
	comp=E,545µm,0.1s						
T1220	**Camerino, Fraz**	**0.07**	**32**	P	Pg	04 40 52.0	+0.4
T1220				S	Sg	04 40 53.5	+0.7
CESI	**CESI - Serrava**	**0.10**	**246**	P	Pg	04 40 52.7	+0.7
CESI				AML	AML		
	comp=E,81µm,0.5s						
CESI				AML	AML		
	comp=N,76µm,1.3s						
CESI				AML	AML		
	comp=N,76µm,0.7s						
T1256	**Bolognola (MC)**	**0.15**	**106**	P	Pg	04 40 53.3	+0.5
T1256				S	Sg	04 40 56.1	+1.2
T1256				AML	AML		
	comp=N,75µm,1.3s						
T1256				AML	AML		
	comp=E,70µm,0.3s						
T1216	**Preci, Frazion**	**0.16**	**184**	P	Pg	04 40 53.8	+0.9
MC2	**Monte Cornacci**	**0.18**	**139**	S	Sg	04 40 57.6	+1.8
SNTG	**Esanatoglia**	**0.22**	**342**	P	Pg	04 40 54.6	+0.5
SNTG				AML	AML		
	comp=N,24µm,1.1s						
SNTG				AML	AML		
	comp=E,27µm,0.5s						
NRCA	**Norcia**	**0.22**	**165**	⇑P	Pg	04 40 54.8	+0.7
NRCA				S	Sg	04 40 58.7	+1.6
NRCA				AML	AML		
	comp=N,108µm,0.3s						
NRCA				AML	AML		
	comp=N,108µm,1.7s						
NRCA				AML	AML		
	comp=E,104µm,0.2s						
T1245	**Castelsantange**	**0.22**	**149**	P	Pg	04 40 54.8	+0.6
T1245				AML	AML		
	comp=E,59µm,0.3s						
T1245				AML	AML		
	comp=N,80µm,1.0s						
MMO1	**Montemonaco**	**0.26**	**124**	P	Pg	04 40 55.5	+0.6
MMO1				S	Sg	04 40 59.8	+1.5
ASSB	**Assisi San Ben**	**0.28**	**269**	P	Pg	04 40 55.8	+0.7
ASSB				S	Sb	04 41 00.5	-1.6
ASSB				AML	AML		
	comp=N,45µm,1.2s						
ASSB				AML	AML		
	comp=N,45µm,0.8s						
ASSB				AML	AML		
	comp=E,45µm,0.4s						
EL6	**Elcito**	**0.29**	**10**	P	Pg	04 40 56.0	+0.6
EL6				S	Sb	04 41 01.0	-1.5
T1212	**Cascia, Frazio**	**0.29**	**179**	⇓P	Pg	04 40 56.2	+0.7
T1212				S	Sb	04 41 01.2	-1.5
T1241	**Roccafluvione,**	**0.35**	**123**	P	Pg	04 40 57.2	+0.7
T1241				S	Sb	04 41 02.9	-1.2
T1241				AML	AML		
	comp=E,25µm,1.1s						
T1241				AML	AML		
	comp=N,26µm,0.8s						
T1218	**Civita (PG)**	**0.38**	**171**	⇑P	Pg	04 40 57.7	+0.5
PP3	**Marolino**	**0.54**	**52**	S	Sb	04 41 09.1	-0.3

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*SKHL **24** 05:10:01.7±0.2, 44°.30N×148°.80E, h58^{km}±4^{km}, mb5.2/7*

*MOS **24** 05:10:01.9±1.1, 44°.49N×148°.69E, h52^{km}, mb3.7/4, Error ellipse: s-maj=10.5km s-min=8.6km az=53.6*

*JMA **24** 05:10:01.7±0.6, 44°N±2°×14°8E±°, h0^{km}, MV4.3/26, SE OFF ETOROFU*

*NIED **24** 05:10:01.7, 44°.03N×148°.44E, h0^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.99; $M_{\theta\theta}$1.77; $M_{\phi\phi}$-4.76; $M_{r\theta}$6.84; $M_{\theta\phi}$-4.04; $M_{\phi r}$0.93; Fault plane solution: $M_0$8.96000×10^{14} NP1:ϕ_s65.00000°, δ77.00000°, λ127.00000°. NP2:ϕ_s171.00000°, δ39.00000°, λ20.00000°.*

*IDC **24** 05:10:03.3±3.0, 44°.67N×148°.75E, h42^{km}±27^{km}, mb3.5/11, mbtmp3.7/16, ML3.3/5, MS3.0/4 Error ellipse: s-maj=28.7km s-min=17.5km az=152.0*

ISC 24 05:10:00.7±2.9, 44°.30N±0°.05×148°.86E±0°.06, h30^{km}±21^{km}, n71, σ1^{s}66/83, mb3.7/14, 6C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.17**	**323**	⇓*i*PN	**Pn**	**05 10 20.8**	**-0.2**
KUR				*e*S	**Sn**	**05 10 35.0**	**-1.0**
KUR				pmax	pmax		
	comp=Z,3µm,0.4s						
KUR				pmax	pmax		
	comp=N,738nm,0.5s						
KUR				pmax	pmax		
	comp=E,408nm,0.4s						
KUR				smax	smax		
	comp=N,5µm,0.4s						
KUR				smax	smax		
	comp=E,2µm,0.4s						
KUR	**Kuril'sk**	**1.17**	**323**	*i*P	**Pn**	**05 10 20.8**	**-0.2**
KUR				AMB	AMB	05 10 21.3	
	comp=E,740nm,0.5s						
KUR				AMB	AMB	05 10 21.3	
	comp=E,410nm,0.5s						
KUR				AMB	AMB	05 10 21.3	
	comp=E,3µm,0.5s						
KUR				*e*S	**Sn**	**05 10 35.0**	**-1.0**
KUR				A	A	05 10 37.7	
	comp=E,5µm,0.4s						
KUR				A	A	05 10 37.7	
	comp=E,2µm,0.4s						
SHO	**Shikotan**	**1.53**	**254**	*e*PN	**Pn**	**05 10 24.8**	**-1.1**
SHO				*e*S	**Sn**	**05 10 42.2**	**-2.5**
SHO				pmax	pmax		
	comp=Z,54nm,0.1s						
SHO				pmax	pmax		
	comp=N,58nm,0.2s						
SHO				smax	smax		
	comp=E,955nm,0.4s						
SHO				smax	smax		
	comp=N,1µm,0.3s						
SHO	**Shikotan**	**1.53**	**254**	*e*P	**Pn**	**05 10 24.8**	**-1.1**
SHO				AMB	AMB	05 10 29.0	
	comp=N,90nm,0.2s						
SHO				*e*S	**Sn**	**05 10 42.2**	**-2.5**
SHO				A	A	05 10 46.4	
	comp=N,1µm,0.3s						
SHO				A	A	05 10 46.4	
	comp=N,960nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.18**	**264**	*e*PN	**Pn**	**05 10 35.5**	**+0.7**
YUK				*e*S	**Sn**	**05 11 01.4**	**+0.7**
YUK				pmax	pmax		
	comp=E,121nm,0.2s						
YUK				pmax	pmax		
	comp=Z,625nm,0.2s						
YUK				pmax	pmax		
	comp=N,175nm,0.1s						
YUK				smax	smax		
	comp=N,1µm,0.3s						
YUK				smax	smax		
	comp=E,916nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**2.18**	**264**	*e*P	**Pn**	**05 10 35.2**	**+0.4**
YUK				AMB	AMB	05 10 36.9	
	comp=E,180nm,0.3s						
YUK				AMB	AMB	05 10 36.9	
	comp=E,120nm,0.3s						
YUK				AMB	AMB	05 10 36.9	
	comp=E,630nm,0.3s						
YUK				*e*S	**Sn**	**05 11 00.4**	**-0.3**
YUK				A	A	05 11 03.5	
	comp=E,1µm,0.3s						
YUK				A	A	05 11 03.5	
	comp=E,920nm,0.3s						
NEM2	**Nemuro 2**	**2.44**	**249**	*e*P	**Pn**	**05 10 38.2**	**-0.3**
NEM2				*e*S	**Sn**	**05 11 05.4**	**-1.9**
NMR	**Nemuro--Hokkai**	**2.45**	**249**	*e*PN	**Pn**	**05 10 38.6**	**0.0**
NMR				*e*S	**Sn**	**05 11 06.7**	**-0.8**
NMR	**Nemuro--Hokkai**	**2.45**	**249**	*e*P	**Pn**	**05 10 38.8**	**+0.2**
NMR				*e*S	**Sn**	**05 11 06.7**	**-0.8**
RUSJ	**Misakicho**	**2.61**	**267**	*e*PN	**Pn**	**05 10 42.0**	**+1.2**
RUSJ				*e*S	**Sn**	**05 11 12.7**	**+1.3**
JRA	**Rausu**	**2.72**	**264**	*e*P	**Pn**	**05 10 43.3**	**+1.0**
JRA				*e*S	**Sn**	**05 11 13.7**	**-0.4**
JNSB	**Nemuroshibetsu**	**2.83**	**261**	*e*P	**Pn**	**05 10 44.4**	**+0.6**
JKHN	**Kushirohamanak**	**2.95**	**247**	*e*P	**Pn**	**05 10 45.5**	**+0.1**
JNK	**Nakash**	**3.08**	**258**	*e*P	**Pn**	**05 10 47.8**	**+0.5**
JNK				*e*S	**Sn**	**05 11 22.5**	**-0.5**
AKK	**Akkeshi**	**3.19**	**248**	*e*P	**Pn**	**05 10 48.9**	**+0.2**
JAK	**Akkeshi**	**3.29**	**248**	*e*P	**Pn**	**05 10 50.3**	**+0.1**
JAK				*e*S	**Sn**	**05 11 26.5**	**-1.8**
JTKR	**Abashiri--Toko**	**3.58**	**266**	*e*P	**Pn**	**05 10 56.0**	**+1.9**
JAR	**Ashorobuto**	**3.82**	**257**	*e*P	**Pn**	**05 10 58.9**	**+1.4**
JCH	**Churui**	**4.34**	**249**	*e*P	**Pn**	**05 11 05.3**	**+0.6**
JKK2	**Kamakawa 2**	**4.43**	**267**	*e*P	**Pn**	**05 11 08.4**	**+2.6**
JKA	**Kamikawa-asahi**	**4.51**	**270**	*e*P	**Pn**	**05 11 09.4**	**+2.5**
ASAJ	**Asahikawa**	**4.51**	**270**	P	**Pn**	**05 11 09.3**	**+2.4**
	comp=E,1.4nm,0.3s,baz=88,slow=33,SNR=2.6						
ASAJ				S	**Sn**	**05 12 03.5**	**+5.2**
	comp=E,11nm,0.5s,baz=53,slow=26,SNR=1.2						
	comp=E,4.2nm,0.3s						
ERM	**Erimo**	**4.76**	**243**	*ce*PN	**Pn**	**05 11 12.8**	**+2.5**
JNBK	**Urakawa-nobuka**	**4.90**	**248**	*e*P	**Pn**	**05 11 13.4**	**+1.1**
YSS	**Yuzh-Sakhalins**	**5.04**	**304**	*e*PN	**Pn**	**05 11 15.3**	**+1.2**
YSS				*e*S	**Sn**	**05 12 10.0**	**-1.3**
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS				smax	smax		
	comp=N,20nm,1.0s						
YSS	**Yuzh-Sakhalins**	**5.04**	**304**	*e*P	**Pn**	**05 11 15.3**	**+1.2**
YSS				AMB	AMB	05 11 16.5	
	comp=N,30nm,0.8s						
YSS				*e*S	**Sn**	**05 12 10.0**	**-1.3**
YSS				A	A	05 12 11.6	
	comp=N,20nm,1.0s						
JOT	**Ohata**	**6.44**	**246**	*e*P	**Pn**	**05 11 34.0**	**+0.5**
JOT				*e*S	**Sn**	**05 12 42.5**	**-3.4**
JOSM	**Okushiri--Mats**	**7.21**	**255**	*e*P	**Pn**	**05 11 45.3**	**+1.3**
TYV	**Tymovskoe**	**7.79**	**330**	*e*PN	Pn	05 12 00.8	+8.9
TYV				*e*S	Sn	05 13 29.3	+10
TYV				pmax	pmax		
	comp=Z,200nm,2.8s						
TYV				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TYV				smax	smax		
	comp=N,11nm,1.2s						
TYV				smax	smax		
	comp=E,8.0nm,1.2s						
TYV				smax	smax		
	comp=E,200nm,4.2s						
TYV	**Tymovskoe**	**7.79**	**330**	*e*P	**Pn**	**05 11 53.3**	**+1.4**
TYV				AMB	AMB	05 11 54.3	
	comp=E,30nm,0.3s						
TYV				*e*S	**Sn**	**05 13 16.4**	**-2.6**
TYV				A	A	05 13 22.9	
	comp=E,20nm,0.5s						
TYV				A	A	05 13 22.9	
	comp=E,30nm,0.5s						
SKR	**Severo-Kuril's**	**8.05**	**35**	*e*PN	**Pn**	**05 11 57.5**	**+2.0**
SKR				pmax	pmax		
	comp=Z,20nm,0.3s						
SKR	**Severo-Kuril's**	**8.05**	**35**	*e*P	**Pn**	**05 11 57.5**	**+2.0**
SKR				AMB	AMB	05 11 59.7	
	comp=Z,50nm,0.4s						
PAU	**Pauzhetka**	**8.94**	**34**	*e*P	**Pn**	**05 12 09.8**	**+2.2**
PAU				AMB	AMB	05 12 11.0	
	comp=Z,10.0nm,0.3s						
PEA0B	**Petropavlovsk-**	**10.56**	**30**	⇑*e*PN	**Pn**	**05 12 31.0**	**+1.1**
PETK	**Petropavlovsk-**	**10.56**	**30**	P	**Pn**	**05 12 27.3**	**-2.6**
	comp=Z,0.3nm,0.3s,baz=170,slow=23,SNR=2.6						
PETK				LR	LR	05 16 23.6	
	comp=Z,43nm,20.1s,baz=191,slow=37						
	comp=Z,3.0nm,0.5s						
PET	**Petropavlovsk**	**10.86**	**33**	⇑*e*PN	**Pn**	**05 12 31.6**	**-2.3**
PET	**Petropavlovsk**	**10.86**	**33**	*e*P	**Pn**	**05 12 35.5**	**+1.6**
PET				AMB	AMB	05 12 36.9	
	comp=Z,10.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**12.11**	**275**	P	**Pn**	**05 12 50.1**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=105,slow=17,SNR=1.7						
	comp=Z,0.5nm,0.3s						
KLR	**Kul'dur**	**12.72**	**299**	P	**Pn**	**05 13 03.6**	**+4.2**
	comp=Z,1.2nm,0.7s,baz=101,slow=14,SNR=6.3						
KLR				LR	LR	05 18 24.6	
	comp=Z,35nm,18.2s,baz=18,slow=40						
KLR	**Kul'dur**	**12.72**	**299**	⇑*e*PN	**Pn**	**05 12 59.8**	**+0.4**
KLR	**Kul'dur**	**12.72**	**299**	*e*P	**Pn**	**05 12 59.8**	**+0.4**
KSRS	**Korea Array**	**17.23**	**254**	P	**P**	**05 14 00.8**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=58,slow=12,SNR=2.1						
KSRS				LR	LR	05 20 50.0	
	comp=Z,26nm,18.6s,baz=90,slow=37						
	comp=Z,1.4nm,0.9s						
SEY	**Seymchan**	**18.78**	**5**	P	**P**	**05 14 15.3**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=203,slow=6.3,SNR=6.4						
	comp=Z,2.3nm,0.7s						
SEY	**Seymchan**	**18.78**	**5**	⇓*e*P	**P**	**05 14 16.6**	**-0.6**
SEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SEY	**Seymchan**	**18.78**	**5**	*e*P	**P**	**05 14 16.6**	**-0.6**
BILL	**Bilibino**	**25.50**	**15**	⇑*e*P	**P**	**05 15 26.8**	**+0.9**
BILL				S	**S**	**05 19 54.0**	**+3.0**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.2s						
BILL	**Bilibino**	**25.50**	**15**	*e*P	**P**	**05 15 26.8**	**+0.9**
H11N2	**WAKE ISLAND Hy**	**28.75**	**143**	T	T	05 46 36.7	
	baz=333,slow=76,SNR=231						
H11N1	**WAKE ISLAND Hy**	**28.76**	**143**	T	T	05 46 49.1	

	baz=333,slow=76,SNR=201						
H11N3	**WAKE ISLAND Hy**	28.77	143	T	T	05 46 40.2	
	baz=333,slow=76,SNR=201						
TIXI	**Tiksi**	29.08	347	⇑eP	P	05 15 56.0	-2.0
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.4s						
H11S1	**WAKE ISLAND Hy**	29.75	144	T	T	05 48 02.2	
	baz=334,slow=76,SNR=314						
H11S3	**WAKE ISLAND Hy**	29.76	144	T	T	05 48 03.2	
	baz=334,slow=76,SNR=205						
H11S2	**WAKE ISLAND Hy**	29.77	144	T	T	05 48 04.5	
	baz=334,slow=76,SNR=222						
ILAR	**Eielson Array**	40.31	37	P	P	05 17 32.9	-2.0
	comp=Z,0.4nm,0.5s,baz=270,slow=7.9,SNR=9.8						
	comp=Z,0.4nm,0.5s						
ILAR	**Eielson Array**	40.31	37	eP	P	05 17 34.7	-0.2
MKAR	**Makanchi Array**	45.42	298	P	P	05 18 16.3	-0.2
	comp=Z,0.4nm,0.6s,baz=73,slow=8.7,SNR=4.9						
MKAR				PcP	PcP	05 19 54.8	-0.5
	comp=Z,0.4nm,0.8s,baz=65,slow=5.1,SNR=3.7						
	comp=Z,0.4nm,0.6s						
AAK	**Ala-Archa**	52.23	296	⇓eP	P	05 19 08.5	-0.5
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AAK	**Ala-Archa**	52.23	296	eP	P	05 19 08.5	-0.5
YKA	**Yellowknife Ar**	54.65	34	P	P	05 19 26.4	+0.1
	comp=Z,1.1nm,0.7s,baz=298,slow=6.9,SNR=19						
	comp=Z,1.1nm,0.7s						
YKA	**Yellowknife Ar**	54.65	34	eP	P	05 19 26.8	+0.6
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	**ARCESS Array B**	59.16	340	P	P	05 19 58.4	+0.3
	comp=Z,4.5nm,1.0s,baz=337,slow=8.8,SNR=1.6						
	comp=Z,4.5nm,1.0s						
FINES	**FINESS Array B**	64.94	334	P	P	05 20 34.4	-2.5
	comp=Z,1.8nm,0.7s,baz=24,slow=6.5,SNR=4.5						
	comp=Z,1.8nm,0.7s						
FINES	**FINESS Array B**	64.94	334	eP	P	05 20 36.3	-0.6
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRA	**Warramunga Arr**	65.30	195	P	P	05 20 43.0	+3.3
	comp=Z,0.3nm,0.8s,baz=0.9,slow=3.3,SNR=1.3						
	comp=Z,0.3nm,0.8s						
NVAR	**Mina Array Bea**	66.24	59	P	P	05 20 46.7	+0.7
	comp=Z,0.5nm,0.5s,baz=297,slow=7.2,SNR=6.3						
	comp=Z,0.5nm,0.5s						
PDAR	**Pinedale Array**	68.61	51	P	P	05 21 00.6	-0.4
	comp=Z,0.1nm,0.4s,baz=312,slow=8.4,SNR=2.0						
	comp=Z,0.1nm,0.4s						
NOA	**NORSAR Array B**	69.53	340	P	P	05 21 04.4	-1.7
	comp=Z,0.5nm,0.6s,baz=31,slow=6.2,SNR=3.3						
	comp=Z,0.5nm,0.6s						
MLR	**Muntele Rosu**	77.28	323	LR	LR	05 58 44.3	
	comp=Z,54nm,18.4s,baz=336,slow=38						
GERES	**GERESS Array B**	79.27	332	P	P	05 22 01.5	-1.5
	comp=Z,1.0nm,1.0s,baz=46,slow=4.6,SNR=2.5						
	comp=Z,1.0nm,1.0s						
TXAR	**Lajitas Array**	81.31	57	P	P	05 22 14.7	+0.4
	comp=Z,0.5nm,0.5s,baz=312,slow=3.1,SNR=9.5						
	comp=Z,0.5nm,0.5s						

PGC 24 05:45:56.2±1.5**,50°.53N×130°.11W,h10**^{km}**,MLSn3.0**/17**,**
Mw3.6/17**,191km west of Pt. Hardy, Bc Vancouver**
Island, Canada Region,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	1.27	84	P	Pn	05 46 18.1	-1.9
HOLB				S	Sb	05 46 33.0	-3.5
PACB	**Port Alice, BC**	1.68	92	Pn	Pn	05 46 23.4	-2.1
PACB				Sn	Sn	05 46 42.9	-4.1
MAYB	**Maynard**	1.88	93	Pn	Pn	05 46 26.6	-1.9
HG4B	**Hotspring**	1.90	339	Sn	Sn	05 46 48.2	-4.3
BBB	**Bella Bella**	2.08	36	Pn	Pn	05 46 30.0	-1.0
BBB				Sn	Sn	05 46 53.6	-3.4
BNB	**Barry Inlet**	2.29	334	Pn	Pn	05 46 33.1	-1.0
WOSB	**Woss**	2.30	98	Pn	Pn	05 46 32.7	-1.4
WOSB				Sn	Sn	05 46 58.4	-4.1
NCRB	**Newcastle Ridg**	2.59	91	Pn	Pn	05 46 36.8	-1.5
GDR	**Gold River**	2.73	104	Pn	Pn	05 46 38.2	-1.8
BNKB	**Banks Island**	2.81	3	Pn	Pn	05 46 39.9	-1.3
BNKB				Sn	Sn	05 47 10.9	-4.2
SPLB	**Strathcona Par**	2.93	101	Pn	Pn	05 46 40.9	-1.9
BNAB	**Bonilla**	2.99	354	Pn	Pn	05 46 42.3	-1.3
BNAB				Sn	Sn	05 47 15.4	-4.0
CBB	**Campbell River**	3.08	97	Pn	Pn	05 46 43.9	-1.0
CBB				Sn	Sn	05 47 18.0	-3.8
HWKB	**Hawksbury Isla**	3.13	10	Pn	Pn	05 46 44.7	-0.9
HWKB				Sn	Sn	05 47 20.8	-2.3
GRNB	**Grenville Isla**	3.33	2	Pn	Pn	05 46 47.4	-0.9
GRNB				Sn	Sn	05 47 24.8	-3.0
MBLB	**Minette Bay Lo**	3.63	14	Sn	Sn	05 47 32.7	-2.5
KITB	**Kitimat**	3.67	14	Pn	Pn	05 46 52.7	-0.2
KITB				Sn	Sn	05 47 33.5	-2.7
RUBB	**Prince Rupert**	3.81	359	Pn	Pn	05 46 54.6	-0.2
RUBB				Sn	Sn	05 47 36.8	-2.8
MGB	**Mount Grey**	3.83	111	Pn	Pn	05 46 54.7	-0.6
WPB	**Watts Point**	4.53	98	Pn	Pn	05 47 05.0	+0.3
HNBB	**Haney**	5.03	101	Pn	Pn	05 47 12.5	+0.9
MCW	**Mount Constitu**	5.08	109	Pn	Pn	05 47 12.9	+0.5
LLLB	**Lillooet**	5.25	86	Pn	Pn	05 47 14.7	+0.1
VDB	**Vedder Mountai**	5.40	103	Pn	Pn	05 47 17.5	+0.8
JCW	**Jim Creek**	5.83	110	Pn	Pn	05 47 23.4	+0.8
B06A	**Marblemount**	5.96	106	Pn	Pn	05 47 24.9	+0.4
RPW	**Rockport**	5.97	107	Pn	Pn	05 47 25.2	+0.6
T35M	**Bob Quinn**	6.47	359	Pn	Pn	05 47 33.1	+1.8

IDC ***24*** *05:47:34.0±4.4, 44°.45N×146°.48E, h139^{km}±41^{km}, mb3.1/5, mbtmp3.6/7, Error ellipse: s-maj=35.9km s-min=19.8km az=152.0*
MOS ***24*** *05:47:35.3±1.1, 44°.62N×146°.40E, h164^{km}, mb4.0/1, Error ellipse: s-maj=27.3km s-min=17.9km az=64.7*
SKHL ***24*** *05:47:36.0±0.3, 44°.40N×146°.60E, h158^{km}±3^{km}, mb4.5/5, msha5.1/5*
JMA ***24*** *05:47:37.4±0.4, 44°N±1°×14°6E±°, h166^{km}±3^{km}, MV3.5/34, NEAR KUNASHIRI ISLAND*
ISC 24 05:47:36.3±0.8**,44°.42N**±0°.07×**146°.58E**±0°.06**,h168**^{km}±6^{km}**,**
n36,σ**1**^{s}**01**/48**,mb3.4**/5**,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	0.58	162	ePN	Pn	05 48 00.5	+0.5
SHO				eS	Sn	05 48 17.8	-0.4
SHO				pmax	pmax		
	comp=Z,161nm,0.2s						
SHO				pmax	pmax		
	comp=E,57nm,0.1s						
SHO				pmax	pmax		
	comp=N,72nm,0.2s						
SHO				smax	smax		
	comp=E,1µm,0.4s						
SHO				smax	smax		
	comp=N,2µm,0.2s						
SHO	**Shikotan**	0.58	162	eP	Pn	05 48 00.5	+0.5
SHO				AMB	AMB	05 48 00.8	
	comp=N,160nm,0.3s						
SHO				eS	Sn	05 48 17.8	-0.4
SHO				A	A	05 48 18.9	
	comp=N,2µm,0.4s						
SHO				A	A	05 48 18.9	
	comp=N,1µm,0.4s						
YUK	**Yuzh-Kuril'sk**	0.64	233	ePN	Pn	05 48 01.3	+1.0
YUK				eS	Sn	05 48 19.7	+1.0
YUK				pmax	pmax		
	comp=N,81nm,0.2s						
YUK				pmax	pmax		
	comp=E,97nm,0.2s						
YUK				pmax	pmax		
	comp=Z,213nm,0.2s						
YUK				smax	smax		
	comp=E,777nm,0.4s						
YUK				smax	smax		
	comp=N,507nm,0.2s						
YUK	**Yuzh-Kuril'sk**	0.64	233	eP	Pn	05 48 00.5	+0.2
YUK				AMB	AMB	05 48 03.2	
	comp=N,210nm,0.3s						
YUK				eS	Sn	05 48 18.3	-0.4
YUK				A	A	05 48 22.7	
	comp=N,510nm,0.4s						
YUK				A	A	05 48 22.7	
	comp=N,780nm,0.4s						
RUSJ	**Misakicho**	1.01	252	ePN	Pn	05 48 03.2	+0.4
RUSJ				eS	Sn	05 48 22.6	-0.5
JRA	**Rausu**	1.15	246	eP	Pn	05 48 04.5	+0.5
NEM2	**Nemuro 2**	1.22	210	P	Pn	05 48 05.1	+0.5
NEM2				eS	Sn	05 48 25.6	-0.7
NMR	**Nemuro--Hokkai**	1.22	211	ePN	Pn	05 48 05.0	+0.4
NMR				eS	Sn	05 48 25.8	-0.5
NMR	**Nemuro--Hokkai**	1.22	211	eP	Pn	05 48 05.0	+0.4
NMR				eS	Sn	05 48 25.8	-0.5
KUR	**Kuril'sk**	1.23	48	eP	Pn	05 48 05.1	+0.6
KUR				AMB	AMB	05 48 05.5	
	comp=N,120nm,0.4s						
KUR				eS	Sn	05 48 25.8	-0.6
KUR				A	A	05 48 27.8	
	comp=N,100nm,0.3s						
KUR				A	A	05 48 27.8	
	comp=N,40nm,0.3s						
JNSB	**Nemuroshibetsu**	1.30	241	eP	Pn	05 48 06.2	+0.9
JNK	**Nakash**	1.58	239	eP	Pn	05 48 08.7	+0.7
JKHN	**Kushirohamanak**	1.69	218	eP	Pn	05 48 09.9	+0.8
JKHN				eS	Sn	05 48 34.7	+0.3
AKK	**Akkeshi**	1.89	222	i P	Pn	05 48 11.9	+0.7
AKK				eS	Sn	05 48 37.9	-0.3
JTKR	**Abashiri--Toko**	1.97	258	eP	Pn	05 48 12.5	+0.4
JTKR				eS	Sn	05 48 39.6	-0.2
JAK	**Akkeshi**	1.97	224	eP	Pn	05 48 13.0	+0.8
JAK				eS	Sn	05 48 39.5	-0.4
JAR	**Ashorobuto**	2.32	242	eP	Pn	05 48 17.3	+1.1
JAR				eS	Sn	05 48 48.3	+1.3
JMP	**Maruseppu**	2.35	261	eP	Pn	05 48 16.8	+0.3
JOB	**Onbets**	2.50	234	P	Pn	05 48 19.5	+1.2
JKK2	**Kamakawa 2**	2.81	260	eP	Pn	05 48 22.7	+0.7
JKK2				eS	Sn	05 48 58.0	+0.5
ASAJ	**Asahikawa**	2.88	265	eP	Pn	05 48 23.9	+1.1
ASAJ				eS	Sn	05 48 59.4	+0.5
JCH	**Churui**	2.96	233	eP	Pn	05 48 24.5	+0.7
JCH				eS	Sn	05 48 59.2	-1.5
JNBK	**Urakawa-nobuka**	3.52	234	eP	Pn	05 48 30.6	-0.2
JNBK				eS	Sn	05 49 09.3	-3.9
USRK	**Ussuriysk Ar.**	10.46	274	P	Pn	05 49 59.8	-2.2
	comp=N,3.8nm,0.8s,baz=100,slow=12,SNR=5.3						
PETK	**Petropavlovsk-**	11.36	36	P	Pn	05 50 11.8	-1.9
	comp=N,0.6nm,0.4s,baz=186,slow=20,SNR=2.3						
SONM	**Songino Array**	27.84	291	P	P	05 53 09.6	-0.3
	comp=N,0.4nm,0.4s,baz=88,slow=7.9,SNR=3.1						
	comp=N,0.4nm,0.4s						
H11N2	**WAKE ISLAND Hy**	29.88	139	T	T	06 24 48.0	
	baz=330,slow=75,SNR=19						
H11N1	**WAKE ISLAND Hy**	29.89	139	T	T	06 24 48.8	
	baz=330,slow=75,SNR=15						
H11N3	**WAKE ISLAND Hy**	29.90	139	T	T	06 24 55.2	
	baz=330,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	30.85	140	T	T	06 26 03.6	
	baz=330,slow=76,SNR=31						
H11S3	**WAKE ISLAND Hy**	30.85	140	T	T	06 26 05.7	
	baz=330,slow=76,SNR=24						
H11S2	**WAKE ISLAND Hy**	30.87	140	T	T	06 26 06.3	
	baz=330,slow=76,SNR=21						
ILAR	**Eielson Array**	41.19	37	P	P	05 55 04.8	+0.9
	comp=N,0.4nm,0.8s,baz=259,slow=6.2,SNR=6.0						
	comp=N,0.4nm,0.8s						
MKAR	**Makanchi Array**	43.91	297	P	P	05 55 25.9	-0.2
	comp=N,0.8nm,0.8s,baz=85,slow=7.8,SNR=7.0						
	comp=N,0.8nm,0.8s						
YKA	**Yellowknife Ar**	55.47	34	P	P	05 56 53.8	+0.7
	comp=N,0.1nm,0.8s,baz=304,slow=7.3,SNR=2.1						
	comp=N,0.1nm,0.8s						
WRA	**Warramunga Arr**	65.02	193	P	P	05 57 59.3	+0.9
	comp=N,2.0nm,1.4s,baz=8.9,slow=6.6,SNR=1.9						
	comp=N,2.0nm,1.4s						

MDD ***24*** *05:55:37.9±0.6, 35°.32N×3°.81W, h10^{km}±3^{km}, mb_Lg2.5/14, Error ellipse: s-maj=3.6km s-min=2.8km az=3.0*
INMG ***24*** *05:55:37.2±1.5, 35°.28N×3°.82W, h9^{km}, ML2.1, Error ellipse: s-maj=5.1km s-min=3.6km az=18.0*
CNRM ***24*** *05:55:38.1, 35°.45N×3°.77W, h17^{km}, ml2.3*
SFS ***24*** *05:55:38.8, 35°.33N×3°.89W, h34^{km}, ML2.5/8, ML2.6/8, MLv2.5/8*
ISC 24 05:55:35.8±1.2**,35°.45N**±0°.02×**3°.77W**±0°.02**,h6**^{km}±10^{km}**,**
n42,σ**1**^{s}**46**/81**,Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	0.27	211	P	Pb	05 55 43.8	+0.6
PALE				S	Sb	05 55 47.9	-0.1
PVLZ	**Peæn de**	0.52	238	P	Pb	05 55 47.1	-0.2
PVLZ				S	Sg	05 55 53.2	+0.7
GOG	**Mont Gurugu**	0.67	110	P	Pn	05 55 51.5	-0.5
GOG				S	Sn	05 56 01.1	-1.8
EMEL	**Melilla**	0.68	103	Pg	Pn	05 55 50.7	-1.3
EMEL				Sg	Sb	05 55 59.8	+0.1
WMELI	**Melilla**	0.68	101	P	Pn	05 55 51.6	-0.4
WMELI				S	Sn	05 56 03.7	+0.7
EALB	**Alboran**	0.77	51	S	Sn	05 56 04.8	-0.4
EALB				P	Pn	05 55 53.7	+0.5
EALB	**Alboran**	0.77	51	Pg	Pn	05 55 53.2	0.0
EALB				Sg	Sn	05 56 04.5	-0.7
EALB				i Vmb_Lg		05 56 05.9	
CHAS	**Isla Isabel II**	1.12	103	P	Pn	05 55 57.8	-0.3
CHAS				S	Sn	05 56 14.2	+0.2
TAF	**Taforalt**	1.28	119	P	Pn	05 56 01.0	+0.7
TAF				S	Sn	05 56 18.4	+0.6
CHEFC	**Chefchaouen**	1.33	256	P	Pg	05 56 02.2	+0.9
CHEFC				S	Sn	05 56 20.3	+1.1
EMIJ	**Mijas**	1.38	324	S	Sb	05 56 18.4	-1.5
EMIJ				P	Pb	05 56 02.4	+0.3
EMIJ	**Mijas**	1.38	324	Pn	Pb	05 56 02.5	+0.5
EMIJ				Sn	Sb	05 56 18.7	-1.2
EMIJ				i Vmb_Lg		05 56 25.6	
CEU	**Ceuta**	1.38	289	P	Pn	05 56 00.0	-1.6
CEU				S	Sb	05 56 15.3	-4.7
ECEU	**Ceuta**	1.38	289	Pn	Pn	05 56 01.1	-0.6
ECEU				Sn	Sb	05 56 17.7	-2.4
ECEU				i Vmb_Lg		05 56 22.7	
EMAL	**Malaga-Limoner**	1.41	338	P	Pg	05 56 03.2	+0.3
EMAL				S	Sn	05 56 20.4	-0.6
ELGU	**Los Guajares,**	1.42	5	P	Pb	05 56 02.8	0.0
ELGU				S	Sn	05 56 21.3	0.0
ELGU	**Los Guajares,**	1.42	5	Pn	Pb	05 56 02.7	0.0
ELGU				Sn	Sg	05 56 22.2	+0.7
ELGU				i Vmb_Lg		05 56 24.8	
JBK	**JBK**	1.49	138	P	Pg	05 56 04.4	0.0
JBK				S	Sg	05 56 22.6	-1.0
EBER	**Berja**	1.61	26	S	Sb	05 56 26.6	-0.1
EBER				P	Pb	05 56 05.9	-0.2
EBER	**Berja**	1.61	26	Pn	Pb	05 56 06.0	-0.2
EBER				Sn	Sn	05 56 26.0	-0.2
EBER				i Vmb_Lg		05 56 31.7	
EGOR	**Sierra Gorda,**	1.68	351	S	Sb	05 56 29.0	+0.3
EGOR				P	Pg	05 56 07.9	-0.1
EGOR	**Sierra Gorda,**	1.68	351	Pn	Pb	05 56 07.7	+0.4
EGOR				Sn	Sb	05 56 29.1	+0.4
EGOR				i Vmb_Lg		05 56 38.5	
ENIJ	**Nijar**	1.97	39	Pn	Pb	05 56 11.8	-0.4
ENIJ				Sn	Sn	05 56 33.5	-1.4
ENIJ				i Vmb_Lg		05 56 36.0	
LCRM	**LCR**	1.98	207	P	Pg	05 56 13.5	-0.2
LCRM				S	Sg	05 56 38.8	-0.5
EQES	**Quesada**	2.41	13	Pn	Pb	05 56 19.7	-0.1
EQES				Sn	Sb	05 56 48.9	-0.9
EQES				i Vmb_Lg		05 56 57.9	
MD31	**MD31**	2.71	198	P	Pn	05 56 21.9	+2.0
MD31				S	Sn	05 56 54.5	+1.5
MDT	**Midelt**	2.72	195	P	Pn	05 56 20.9	+0.7
MDT				S	Sn	05 56 55.4	+2.0
EADA	**Adamuz**	2.79	347	Pn	Pb	05 56 23.8	-2.3
EADA				Sn	Sn	05 56 57.4	+2.4
EADA				i Vmb_Lg		05 57 03.5	
ECAB	**El Cabril**	2.94	334	Pn	Pn	05 56 25.0	+1.9
ECAB				Sn	Sn	05 57 00.5	+1.8
ECAB				i Vmb_Lg		05 57 06.0	
EMIN	**Mina Concepcio**	3.29	316	Pn	Pn	05 56 29.6	+1.7
EMIN				i Vmb_Lg		05 57 12.2	
EGRO	**El Granado**	3.65	306	Pn	Pn	05 56 34.1	+1.3
EGRO				Sn	Sn	05 57 13.9	-2.2
EGRO				i Vmb_Lg		05 57 23.6	
ETOB	**Tobarra**	3.65	28	Sg	Sn	05 57 18.6	+2.3
ETOB				Pg	Pb	05 56 37.0	-3.8
ETOB	**Tobarra**	3.65	28	Pn	Pn	05 56 36.6	+3.7
ETOB				Sn	Sn	05 57 18.8	+2.5
PVAQ	**Vaqueiros**	3.73	303	P	Pn	05 56 35.5	+1.5
PVAQ				S	Sn	05 57 18.1	-0.2
PVAQ	**Vaqueiros**	3.73	303	eP	Pn	05 56 35.5	+1.5
PVAQ				eS	Sn	05 57 16.4	-1.9
PVAQ				A	A	05 57 18.3	
	4.2nm,0.5s						
PBAR	**Barrancos**	3.78	317	eP	Pn	05 56 36.5	+1.9
PBAR				eS	Sn	05 57 19.4	0.0
PBDV	**Barranco-do-Ve**	3.81	299	eP	Pn	05 56 36.5	+1.4
PBDV				eS	Sn	05 57 18.8	-1.4
PCVE	**Castro Verde**	4.07	304	eS	Sn	05 57 25.4	-1.2
PAB	**San Pablo**	4.11	354	Pn	Pn	05 56 41.6	+2.3
EBAD	**Badajoz**	4.20	323	Pn	Pn	05 56 41.6	+1.2
EBAD				Sn	Sn	05 57 28.5	-1.2
EBAD				i Vmb_Lg		05 57 34.0	
MESJ	**Messejana**	4.30	305	eP	Pn	05 56 44.1	+2.3
MESJ				eS	Sn	05 57 31.6	-0.7
PNCL	**Nicolau / Gran**	4.65	306	eP	Pn	05 56 48.2	+1.6
PNCL				eS	Sn	05 57 39.3	-1.7

SOME ***24*** *05:57:06.1, 39°.52N×73°.08E, h0^{km}*
KRNET ***24*** *05:57:08.1±0.1, 39°.28N×73°.60E, mb3.4*
NNC ***24*** *05:57:11.3±2.6, 39°.44N×73°.59E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=19.4km s-min=9.9km az=177.0*
ISC 24 05:57:08.4±1.3**,39°.51N**±0°.05×**73°.57E**±0°.03**,h10**^{km}**,n49,**
σ**1**^{s}**75**/62**,21C-4D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	1.18	329	⇑iP	Pg	05 57 34.4	+3.3
	baz=33						
OHH				⇑iS	Sn	05 57 53.8	+6.6
	baz=33						
DRK	**Karamyk**	1.37	269	⇓iP	Pg	05 57 34.9	+0.1
	baz=79						
DRK				⇓iS	Sg	05 57 54.6	+2.0
	baz=79						
BTK	**Batken**	2.19	285	⇑iP	Pg	05 57 49.1	-1.3
	baz=91						
BTK				⇑iS	Sg	05 58 19.1	+0.3
	baz=91						
ARLS	**Aral**	2.42	13	⇑eP	Pg	05 57 53.9	-0.8
	baz=12						
ARLS				⇑iS	Sg	05 58 27.3	+1.3
	baz=12						
GAR	**Garm**	2.58	260	⇑iP	Pb	05 57 53.1	-1.7
	baz=65						
GAR				⇑iS	Sb	05 58 26.0	-0.6
	baz=65						
ARK	**Arkit**	2.59	332	⇑eP	Pg	05 57 56.4	-1.7
	baz=34						
ARK				⇑iS	Sg	05 58 31.6	-0.1
	baz=34						
AML	**Almayashu**	2.62	2	P	Pg	05 57 59.1	+0.5
	SNR=29						
AML	**Almayashu**	2.62	2	⇑eP	Pg	05 57 57.2	-1.4
	baz=1.0						
AML				⇑iS	Sg	05 58 33.1	+0.5
	baz=1.0						
NRN	**Naryn**	2.67	43	⇑eP	Pb	05 57 56.4	-0.1
	baz=39						
NRN				⇑iS	Sg	05 58 31.6	-2.5
	baz=39						
TRKS	**Terek-Say**	2.74	318	⇑eP	Pb	05 57 57.2	-0.4
	baz=20						
TRKS				⇑iS	Sb	05 58 33.1	+1.8
	baz=20						
UCH	**Uchtor**	2.81	14	P	Pg	05 58 02.4	+0.2
	SNR=15						
UCH	**Uchtor**	2.81	14	⇑eP	Pb	05 57 59.8	+0.9
	baz=13						
UCH				⇑iS	Sg	05 58 37.2	-1.4
	baz=13						
MNAS	**Manas**	3.08	345	⇑eP	Pb	05 58 03.3	-0.1
	baz=46						
MNAS				⇑iS	Sg	05 58 43.9	-3.5
	baz=46						
EKS2	**Erkin-Say**	3.15	3	P	Pg	05 58 08.0	-0.8
	SNR=6.5						
AAK	**Ala-Archa**	3.20	12	P	Pg	05 58 08.3	-1.5
	SNR=9.5						
MRKS	**Merke**	3.24	355	Pg	Pb	05 58 07.4	+1.3
	2.5nm,0.3s						
MRKS				Lg	Lg	05 58 52.3	
	55nm,0.5s						
MRKS	**Merke**	3.24	355	ePg	Pb	05 58 07.4	+1.3
	1.9nm,0.2s						
MRKS				eLg	Lg	05 58 52.3	
	55nm,0.2s						
KBK	**Karagaybulak**	3.31	18	P	Pg	05 58 10.7	-1.1
	SNR=5.8						
ULHL	**Ulahol**	3.40	36	P	Pg	05 58 16.1	+2.6
	SNR=17						
IUG	**Iuzhnay**	3.76	316	Pg	Pb	05 58 12.5	-2.4
	29nm,0.3s						
IUG				Lg	Lg	05 59 01.2	
	52nm,0.4s						
IUG	**Iuzhnay**	3.76	316	ePg	Pb	05 58 12.5	-2.4
	21nm,0.2s						
IUG				eLg	Lg	05 59 01.2	
	52nm,0.3s						
KST	**Kastek**	3.96	26	Pg	Pg	05 58 23.2	-1.1
	2.9nm,0.3s						
KST				Lg	Lg	05 59 19.5	
	35nm,0.7s						
KST	**Kastek**	3.96	26	ePg	Pg	05 58 23.4	-0.9
	2.9nm,0.3s						
KST				eLg	Lg	05 59 19.8	
	35nm,0.7s						
DGS	**Degeres**	4.08	23	Pg	Pg	05 58 25.2	-1.4
	7.9nm,0.6s						
DGS				Lg	Lg	05 59 22.8	
	21nm,0.8s						
DGS	**Degeres**	4.08	23	ePg	Pg	05 58 25.2	-1.4
	5.0nm,0.3s						
DGS				eLg	Lg	05 59 22.8	
	19nm,0.4s						
IZV	**Izvestkoviy**	4.20	32	Pg	Pg	05 58 27.9	-0.9
	4.4nm,0.7s						
IZV				Lg	Lg	05 59 27.8	
	24nm,0.8s						
IZV	**Izvestkoviy**	4.20	32	ePg	Pg	05 58 27.9	-0.9
	4.4nm,0.7s						
IZV				eLg	Lg	05 59 27.8	
	24nm,0.8s						
MTBS	**Maitube**	4.21	30	Pg	Pg	05 58 28.0	-1.0
	8.2nm,0.5s						
MTBS				Lg	Lg	05 59 28.0	
	13nm,0.4s						
MTBS	**Maitube**	4.21	30	ePg	Pg	05 58 28.0	-1.0
	4.9nm,0.3s						
MTBS				eLg	Lg	05 59 28.0	
	15nm,0.2s						
KK31	**Karatay Array**	4.26	328	Pn	Pb	05 58 20.1	-3.4
	1.5nm,0.5s,baz=143,slow=12,SNR=23						
KK31				⇓Pg	Pg	05 58 31.0	+0.9
	3.5nm,0.5s,baz=136,slow=12,SNR=4.4						
KK31				⇓Sn	Sb	05 59 12.4	-2.6
	12nm,0.8s,baz=154,slow=25,SNR=3.7						
KK31				⇑Lg	Lg	05 59 29.4	
	5.2nm,0.5s,baz=158,slow=14,SNR=3.8						
TNSS	**Tian-Shan**	4.34	35	Pg	Pg	05 58 31.3	-0.3
	14nm,0.5s						
TNSS				Lg	Lg	05 59 33.6	
	13nm,0.5s						
TNSS	**Tian-Shan**	4.34	35	ePg	Pg	05 58 31.3	-0.3
	5.3nm,0.3s						
TNSS				eLg	Lg	05 59 33.6	
	13nm,0.5s						
MDOK	**Medeo**	4.49	35	Pg	Pg	05 58 33.3	-1.1
	4.2nm,0.3s						
MDOK				Lg	Lg	05 59 37.0	
	24nm,0.5s						
MDOK	**Medeo**	4.49	35	ePg	Pg	05 58 33.3	-1.1
	4.2nm,0.3s						
MDOK				eLg	Lg	05 59 37.0	
	24nm,0.5s						
KOTS	**Kotyrbulak**	4.57	34	Pg	Pg	05 58 35.2	-0.8
	7.4nm,0.4s						
KOTS				Lg	Lg	05 59 40.4	
	53nm,0.8s						
KOTS	**Kotyrbulak**	4.57	34	ePg	Pg	05 58 35.2	-0.8
	3.6nm,0.3s						
KOTS				eLg	Lg	05 59 40.4	
	53nm,0.8s						
KTBS	**Karatobe**	4.80	28	Pg	Pg	05 58 38.8	-1.5
	4.9nm,0.6s						
KTBS				Lg	Lg	05 59 46.6	

	28nm,0.4s						
KTBS	**Karatobe**	**4.80**	**28**	*e*Pg	**Pg**	**05 58 38.8**	**-1.5**
	4.2nm,0.3s						
KTBS				*e*Lg	Lg	05 59 46.6	
	28nm,0.3s						
KUU	**Kurty**	**4.84**	**24**	Pg	**Pg**	**05 58 39.3**	**-1.8**
	1.6nm,0.2s						
KUU				Lg	Lg	05 59 47.5	
	20nm,0.3s						
KUU	**Kurty**	**4.84**	**24**	*e*Pg	**Pg**	**05 58 39.3**	**-1.8**
	1.1nm,0.1s						
KUU				*e*Lg	Lg	05 59 47.5	
	21nm,0.3s						
UZB	**Uzynbulak**	**5.48**	**47**	Pg	**Pg**	**05 58 53.5**	**+0.2**
	8.2nm,0.3s						
UZB				Lg	Lg	06 00 11.8	
	7.0nm,0.7s						
UZB	**Uzynbulak**	**5.48**	**47**	*e*Pg	**Pg**	**05 58 53.5**	**+0.2**
	8.2nm,0.3s						
UZB				*e*Lg	Lg	06 00 11.8	
	7.0nm,0.7s						
KPKS	**Kokpek**	**5.51**	**43**	Pg	**Pg**	**05 58 53.5**	**-0.4**
	5.4nm,0.2s						
KPKS				Lg	Lg	06 00 11.9	
	10nm,0.3s						
KPKS	**Kokpek**	**5.51**	**43**	*e*Pg	**Pg**	**05 58 53.5**	**-0.4**
	2.5nm,0.1s						
KPKS				*e*Lg	Lg	06 00 11.9	
	12nm,0.3s						
BTLS	**Baital**	**5.54**	**3**	Pg	**Pg**	**05 58 51.9**	**-2.6**
	2.2nm,0.5s						
BTLS				Lg	Lg	06 00 09.2	
	4.4nm,0.4s						
BTLS	**Baital**	**5.54**	**3**	*e*Pg	**Pg**	**05 58 51.9**	**-2.6**
	1.5nm,0.3s						
BTLS				*e*Lg	Lg	06 00 09.2	
	4.1nm,0.3s						
ARXS	**Arharly**	**5.67**	**33**	Pg	**Pg**	**05 58 56.2**	**-0.8**
	4.2nm,0.2s						
ARXS				Lg	Lg	06 00 16.5	
	9.7nm,0.4s						
ARXS	**Arharly**	**5.67**	**33**	*e*Pg	**Pg**	**05 58 56.2**	**-0.8**
	4.2nm,0.2s						
ARXS				*e*Lg	Lg	06 00 16.5	
	16nm,0.3s						
PDGK	**Podgornoye**	**5.86**	**47**	Pg	**Pg**	**05 59 00.7**	**+0.1**
	1.5nm,0.4s						
PDGK				Lg	Lg	06 00 24.1	
	3.3nm,0.6s						

IDC 24 06:18:04.6±4.4**,22°44S**×**148°04E,h0km,mbtmp3.2**/4**,**
ML3.2/4**,Error ellipse: s-maj=43.8km s-min=19.9km**
az=84.0,Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**2.88**	**324**	Pn	Pn	06 18 52.4	+0.7
	3.6nm,0.3s,baz=141,slow=18,SNR=46						
CTA				Sn	Sn	06 19 29.5	+2.4
	6.3nm,0.3s,baz=131,slow=18,SNR=8.4						
CTA				Lg	Lg	06 19 36.2	
	8.9nm,0.3s,baz=225,slow=19,SNR=9.4						
	7.0nm,0.3s						
STKA	**Stephens Creek**	**11.01**	**210**	Pn	Pn	06 20 42.6	-0.8
	0.1nm,0.3s,baz=21,slow=13,SNR=4.7						
STKA				Sn	Sn	06 22 45.9	-1.4
	0.1nm,0.3s,baz=72,slow=20,SNR=2.8						
STKA				Lg	Lg	06 23 56.1	
	baz=333,slow=16,SNR=1.8						
	1.0nm,0.8s						
WRA	**Warramunga Arr**	**13.02**	**278**	Pn	Pn	06 21 10.2	-0.8
	0.1nm,0.3s,baz=98,slow=12,SNR=13						
WRA				Lg	Lg	06 24 57.7	
	baz=103,slow=24,SNR=3.2						
	0.2nm,0.8s						
ASAR	**Alice Springs**	**13.07**	**262**	Pn	Pn	06 21 11.1	-0.6
	0.1nm,0.3s,baz=82,slow=14,SNR=2.4						
ASAR				Lg	Lg	06 25 00.1	
	baz=83,slow=24,SNR=3.3						
	0.1nm,0.3s						

ROM 24 06:24:39.2±0.2**,42°986N**±0°004×**13°044E**±0°005**,**
h4km±1km**,ML1.1**/3**,1C-1D,Error ellipse: s-maj=0.4km**
s-min=0.1km az=126.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.03**	**169**	P	Pg	06 24 40.3	0.0
FDMO	**Fiordimonte**	**0.06**	**32**	P	Pg	06 24 40.7	0.0
FDMO				S	Sg	06 24 42.0	+0.3
T1219	**Muccia, Frazio**	**0.07**	**339**	P	Pg	06 24 40.9	0.0
T1219				S	Sg	06 24 42.2	+0.1
T1219				AML	AML		
	comp=E,257µm,0.1s						
T1219				AML	AML		
	comp=E,264µm,0.1s						
T1219				AML	AML		
	comp=N,253µm,0.3s						
T1219				AML	AML		
	comp=E,257µm,0.1s						
T1219				AML	AML		
	comp=N,263µm,0.2s						
T1219				AML	AML		
	comp=N,252µm,0.3s						
T1219				AML	AML		
	comp=E,264µm,0.1s						
T1216	**Preci, Frazion**	**0.10**	**191**	P	Pg	06 24 41.3	+0.1
T1216				S	Sg	06 24 43.5	+0.8
CESI	**CESI - Serrava**	**0.10**	**280**	P	Pg	06 24 41.7	+0.3
CESI				S	Sg	06 24 43.8	+0.8
T1220	**Camerino, Fraz**	**0.13**	**15**	P	Pg	06 24 42.2	+0.3
T1220				S	Sg	06 24 44.9	+1.3
T1220				AML	AML		
	comp=E,307µm,0.3s						
T1220				AML	AML		
	comp=N,244µm,1.1s						
MC2	**Monte Cornacci**	**0.13**	**124**	⇓P	Pg	06 24 45.1	+3.1
T1256	**Bolognola (MC)**	**0.14**	**81**	P	Pg	06 24 42.4	+0.4
CSP1	**Cessapalombo**	**0.16**	**48**	P	Pg	06 24 42.8	+0.3
CSP1				S	Sg	06 24 45.7	+1.1
CSP1				AML	AML		
	comp=E,57µm,0.4s						
CSP1				AML	AML		
	comp=N,74µm,0.8s						
T1214	**Arquata del Tr**	**0.26**	**152**	⇑P	Pn	06 24 49.4	-0.5

ROM 24 06:25:17.3±0.0**,42°813N**±0°002×**13°145E**±0°003**,**
h10km,ML1.2/7**,2C-1D,Error ellipse: s-maj=0.2km**
s-min=0.2km az=265.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.03**	**312**	P	Pg	06 25 19.6	+0.2
NRCA				S	Sg	06 25 20.9	0.0
NRCA				AML	AML		
	comp=N,576µm,0.1s						
NRCA				AML	AML		
	comp=N,617µm,0.2s						
NRCA				AML	AML		
	comp=E,378µm,0.7s						
NRCA				AML	AML		
	comp=E,395µm,0.1s						
T1245	**Castelsantange**	**0.05**	**36**	P	Pg	06 25 19.9	+0.3
T1245				S	Sg	06 25 21.6	+0.3
T1245				AML	AML		
	comp=N,452µm,1.4s						
T1245				AML	AML		
	comp=N,424µm,0.4s						
T1245				AML	AML		
	comp=E,636µm,0.7s						
T1245				AML	AML		
	comp=N,452µm,1.4s						
T1245				AML	AML		
	comp=E,604µm,0.7s						
T1245				AML	AML		
	comp=E,604µm,1.3s						
T1245				AML	AML		
	comp=N,452µm,0.6s						
T1245				AML	AML		
	comp=E,636µm,1.3s						
T1214	**Arquata del Tr**	**0.07**	**139**	P	Pg	06 25 20.0	+0.2
T1214				S	Sg	06 25 21.8	+0.2
T1212	**Cascia, Frazio**	**0.10**	**230**	P	Pg	06 25 20.5	+0.5
T1212				S	Sg	06 25 22.5	+0.5
T1212				AML	AML		
	comp=E,222µm,0.2s						
T1212				AML	AML		
	comp=N,284µm,0.2s						
MC2	**Monte Cornacci**	**0.10**	**18**	P	Pg	06 25 20.7	+0.4
T1216	**Preci, Frazion**	**0.12**	**310**	P	Pg	06 25 20.7	+0.4
T1216				S	Sg	06 25 23.3	+0.8
T1218	**Civita (PG)**	**0.14**	**189**	P	Pg	06 25 21.2	+0.5
T1218				S	Sg	06 25 23.9	+0.8
T1218				AML	AML		
	comp=E,120µm,0.8s						
T1218				AML	AML		
	comp=E,72µm,0.3s						
T1218				AML	AML		
	comp=N,143µm,1.4s						
T1218				AML	AML		
	comp=E,120µm,0.7s						
T1218				AML	AML		
	comp=N,144µm,0.5s						
T1218				AML	AML		
	comp=E,72µm,0.3s						
T1218				AML	AML		
	comp=E,120µm,1.3s						
T1218				AML	AML		
	comp=E,72µm,1.7s						
T1218				AML	AML		
	comp=N,144µm,1.5s						
T1218				AML	AML		
	comp=N,143µm,1.4s						
MMO1	**Montemonaco**	**0.16**	**57**	P	Pg	06 25 21.4	+0.4
MMO1				S	Sg	06 25 24.5	+1.0
T1217	**Poggiodomo (PG**	**0.19**	**237**	P	Pg	06 25 22.0	+0.6
T1217				S	Sg	06 25 25.3	+1.1
T1256	**Bolognola (MC)**	**0.20**	**17**	P	Pg	06 25 22.2	+0.5
T1256				S	Sg	06 25 25.7	+1.0
T1256				AML	AML		
	comp=E,66µm,0.9s						
T1256				AML	AML		
	comp=N,70µm,0.3s						
T1241	**Roccafluvione,**	**0.21**	**78**	P	Pg	06 25 22.3	+0.5
T1241				S	Sg	06 25 26.1	+1.1
T1241				AML	AML		
	comp=N,24µm,0.4s						
T1241				AML	AML		
	comp=E,44µm,1.3s						
FDMO	**Fiordimonte**	**0.23**	**349**	P	Pg	06 25 22.6	+0.5
FDMO				AML	AML		
	comp=N,29µm,0.9s						
FDMO				AML	AML		
	comp=N,29µm,1.1s						
FDMO				AML	AML		
	comp=E,34µm,0.8s						
SMA1	**SAN MARTINO**	**0.23**	**142**	⇑P	Pg	06 25 22.7	+0.5
T1219	**Muccia, Frazio**	**0.26**	**337**	P	Pg	06 25 23.3	+0.5
T1219				S	Sb	06 25 27.6	-1.1
CSP1	**Cessapalombo**	**0.28**	**9**	P	Pg	06 25 23.7	+0.6
T1220	**Camerino, Fraz**	**0.30**	**352**	P	Pg	06 25 24.0	+0.6
T1220				S	Sb	06 25 29.1	-0.7
RM33	**Pellescritta (**	**0.31**	**170**	⇑P	Pg	06 25 24.0	+0.5
RM33				AML	AML		
	comp=N,27µm,1.5s						
RM33				AML	AML		
	comp=N,27µm,0.5s						
RM33				AML	AML		
	comp=E,19µm,1.3s						
TERO	**Teramo**	**0.39**	**119**	P	Pg	06 25 25.3	+0.3
TERO				AML	AML		
	comp=E,18µm,1.3s						
TERO				AML	AML		
	comp=N,22µm,0.7s						
PP3	**Marolino**	**0.66**	**31**	⇓P	Pg	06 25 28.4	-1.8

DJA 24 06:26:14.9±0.3**,11°S**±4°×**11°6E**±°**,h10km,M4.1**/10**,**
mb4.4/5**,mB5.4**/1**,MLv4.0**/10**,Mw(mB)4.9**/1**,South of**
Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**2.03**	**348**	P	Pn	06 26 49.4	+0.2
DNP	**Denpasar**	**2.16**	**351**	P	Pn	06 26 51.0	0.0
TWSI	**Taliwang, Sumb**	**2.44**	**32**	P	Pn	06 26 54.8	0.0
JAGI	**Jajag, Banyuwa**	**2.72**	**329**	P	Pn	06 26 59.3	+0.6
SRBI	**Singaraja**	**2.74**	**353**	P	Pn	06 27 00.1	+1.1
PLAI	**Plampang**	**2.94**	**48**	P	Pn	06 27 01.5	-0.2
ABJI	**Asem Bagus**	**3.28**	**336**	P	Pn	06 27 04.9	-1.5
GMJI	**Gumukmas**	**3.29**	**320**	P	Pn	06 27 06.6	+0.1
BLJI	**Banyuglugur**	**3.62**	**327**	P	Pn	06 27 10.8	-0.3
PWJI	**Pagerwojo**	**4.64**	**306**	P	Pn	06 27 24.0	-1.1
BASI	**Baing, Sumba**	**4.96**	**84**	P	Pn	06 27 28.9	-0.6
BSSI	**Bau Bau, Buton**	**6.73**	**47**	P	Pn	06 27 54.1	+0.3
	16nm,0.6s,0.1nm						

*IDC **24** 07:21:04.2±1.6, 54°66N×83°84E, h0km, mbtmp3.0/3,*
ML2.6/3, Error ellipse: s-maj=15.5km s-min=9.7km
az=17.0
ISC 24 07:21:03.9±3.5**,54°7N**±0°3×**84°0E**±0°2**,h10km,n8,**σ**1ˢ62**/6**,**
1C-4D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.90**	**146**	I	I	07 27 10.0	
	baz=318,slow=320,SNR=1.0						
ZALV	**Zalesovo Beam**	**0.91**	**146**	Pg	**Pg**	**07 21 20.5**	**-0.9**
	2.2nm,0.3s,baz=322,slow=16,SNR=21						
ZALV				Lg	Lg	07 21 35.3	
	5.8nm,0.3s,baz=323,slow=29,SNR=19						
KURK	**Kurchatov**	**5.14**	**221**	⇓Pg	**Pn**	**07 22 21.1**	**+0.2**
	0.8nm,0.5s						
KURK				⇓Lg	Lg	07 22 46.5	
	4.4nm,1.1s						
KURBB	**Kurchatov Arra**	**5.25**	**221**	Pn	**Pn**	**07 22 23.4**	**+1.0**
	0.1nm,0.3s,baz=40,slow=13,SNR=7.0						
KURBB				Lg	Lg	07 23 48.0	
	0.1nm,0.3s,baz=38,slow=31,SNR=3.3						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**5.25**	**221**	⇓Pg	**Pn**	**07 22 20.6**	**-1.8**
	1.2nm,0.7s,baz=239,slow=14						
KURBB				⇑Lg	Lg	07 22 45.3	
	7.1nm,0.8s						
MK31	**Makanchi Array**	**7.99**	**188**	⇓Sn	Sn	07 24 00.2	-30
	0.4nm,0.6s,baz=181,slow=24,SNR=3.2						
MKAR	**Makanchi Array**	**7.99**	**188**	Pn	**Pn**	**07 23 01.6**	**+1.6**
	0.1nm,0.3s,baz=10,slow=13,SNR=4.8						
MKAR				Lg	Lg	07 25 17.0	
	0.1nm,0.3s,baz=12,slow=29,SNR=3.5						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**8.20**	**264**	Pn	**Pn**	**07 23 02.2**	**-0.6**
	0.1nm,0.3s,baz=68,slow=14,SNR=7.3						
	0.9nm,0.3s						

IEPN 24 07:23:13.0,85°00N×**13°72E,h10km,North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZFI	**Zemlya Franca-**	**5.80**	**117**	*e*P	Pn	07 24 36.1	-2.7
ZFI				S	Sn	07 25 37.9	-7.3
	12nm,2.7s						
OMEGA	**Omega**	**5.82**	**117**	*e*P	Pn	07 24 36.7	-2.5
OMEGA				*e*S	Sn	07 25 39.2	-6.7
	12nm,1.5s						
KBS	**Kingsbay**	**6.12**	**183**	*e*P	Pn	07 24 40.6	-2.6
KBS				*e*S	Sn	07 25 46.3	-6.8
SPA0	**Spitsbergen Ar**	**6.88**	**175**	*e*P	Pn	07 24 52.2	-1.4
SPA0				S	Sn	07 26 05.0	-6.7

BER 24 07:23:54.1±1.6**,78°55N**×**3°31W,h10km,ML1.4,**
Confirmed Earthquake,Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**3.01**	**75**	*e*P	Pn	07 24 41.4	-0.4
KBS				*e*S	Sn	07 25 13.6	-4.2
KBS				IAML		07 25 14.8	
	comp=Z,3.0nm,0.7s						
DAG	**Danmarks Havn**	**3.74**	**249**	*e*P	Pn	07 24 50.5	-1.2
DAG				*e*S	Sn	07 25 31.1	-4.6
NOR	**Nord**	**3.83**	**329**	*e*P	Pn	07 24 51.0	-1.9

*IDC **24** 07:24:30.5±1.1, 30°42N×67°40E, h0km, mb3.6/9,*
mbtmp3.7/10, ML3.6/1, MS3.1/5, Error ellipse:
s-maj=29.9km s-min=23.4km az=99.0
ISC 24 07:24:31.4±1.0**,30°3N**±0°1×**67°2E**±0°2**,h10km,n14,**
σ**2ˢ19**/11**,mb3.7**/8**,MS2.9**/4**,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**10.39**	**229**	Pn	**Pn**	**07 27 02.3**	**+1.8**
	0.5nm,0.3s,baz=83,slow=6.5,SNR=7.6						
WSAR				Sn	**Sn**	**07 28 53.2**	**-3.9**
	0.2nm,0.3s,baz=30,slow=5.6,SNR=1.5						
	1.5nm,0.4s						
GEYT	**Alibeck**	**10.69**	**318**	LR	LR	07 31 43.8	
	comp=Z,42nm,18.4s,baz=267,slow=40						
MKAR	**Makanchi Array**	**20.20**	**31**	P	**P**	**07 29 03.4**	**-2.8**
	0.7nm,0.5s,baz=211,slow=9.6,SNR=9.5						
MKAR				LR	LR	07 38 17.0	
	comp=Z,45nm,20.9s,baz=151,slow=41						
	0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**22.00**	**20**	P	**P**	**07 29 22.8**	**-2.8**
	0.6nm,0.6s,baz=212,slow=8.7,SNR=4.2						
	0.6nm,0.6s						
BVAR	**Borovoye Array**	**22.82**	**5**	P	**P**	**07 29 33.4**	**-0.9**
	0.7nm,0.5s,baz=187,slow=8.4,SNR=5.2						
	0.7nm,0.5s						
PALK	**Pallekele**	**26.19**	**148**	LR	LR	07 41 42.4	
	comp=Z,54nm,20.3s,baz=321,slow=39						
ZALV	**Zalesovo Beam**	**26.85**	**23**	P	**P**	**07 30 12.4**	**+0.5**
	1.1nm,0.4s,baz=238,slow=8.5,SNR=5.1						
	1.1nm,0.4s						
CMAR	**Chiang Mai Arr**	**31.13**	**105**	LR	LR	07 45 56.7	
	comp=Z,16nm,18.6s,baz=300,slow=42						
ARCES	**ARCESS Array B**	**45.80**	**341**	P	**P**	**07 32 53.8**	**+0.8**
	2.1nm,0.9s,baz=139,slow=5.8,SNR=1.3						
	2.1nm,0.9s						
EKA	**Eskdalemuir Ar**	**54.67**	**319**	LR	LR	07 59 44.2	
	comp=Z,73nm,18.4s,baz=324,slow=39						
ESDC	**Sonseca Array**	**57.67**	**300**	P	**P**	**07 34 23.4**	**+1.3**
	0.8nm,0.7s,baz=78,slow=6.8,SNR=4.5						
	0.8nm,0.7s						
WRA	**Warramunga Arr**	**81.62**	**119**	P	**P**	**07 36 50.0**	**0.0**
	0.3nm,0.9s,baz=316,slow=5.4,SNR=1.9						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**83.51**	**122**	P	**P**	**07 37 00.4**	**+0.6**
	0.2nm,0.6s,baz=314,slow=5.7,SNR=6.8						
	0.2nm,0.6s						
YKA	**Yellowknife Ar**	**87.52**	**1**	P	**P**	**07 37 19.4**	**+0.3**
	0.7nm,0.7s,baz=349,slow=4.6,SNR=17						
	0.7nm,0.7s						

*DNK **24** 07:27:48.2±2.7, 83°02N×6°13W, h36km±74km, ML1.5*
BER 24 07:27:50.1±1.4**,82°62N**×**6°20W,h10km,ML1.7,**
Confirmed Earthquake,North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOR	**Nord**	**1.77**	**240**	*i* P	Pn	07 28 18.0	-2.7
NOR				*i* S	Sn	07 28 40.5	-2.7
NOR				IAML		07 28 48.1	
	comp=Z,5.1nm,0.5s						
NOR	**Nord**	**1.77**	**240**	*e*P	Pn	07 28 17.9	-2.8
NOR				*e*S	Sn	07 28 40.9	-2.4
KBS	**Kingsbay**	**4.69**	**133**	*i* P	Pn	07 28 58.2	-2.6
KBS	**Kingsbay**	**4.69**	**133**	*e*P	Pn	07 28 58.4	-2.3
KBS				*e*S	Sn	07 29 49.4	-5.7
KBS				IAML		07 29 54.6	
	comp=Z,2.5nm,0.5s						
BRBB	**Barentsburg B**	**5.64**	**133**	*e*P	Pn	07 29 12.5	-1.4
BRBA	**Barentsburg A**	**5.67**	**133**	*e*P	Pn	07 29 12.9	-1.3
SPA0	**Spitsbergen Ar**	**5.78**	**128**	*e*P	Pn	07 29 13.4	-2.4
SPA0				*e*S	Sn	07 30 15.0	-6.9
SPA0				IAML		07 30 25.1	
	comp=Z,2.4nm,0.9s						
DAG	**Danmarks Havn**	**6.27**	**207**	*e*P	Pn	07 29 21.6	-0.8
HSPB	**Hornsund (broa**	**6.76**	**135**	*e*P	Pn	07 29 26.6	-2.5
NEEM	**North Greenlan**	**9.02**	**260**	*i* P	Pn	07 29 53.0	-7.4
SUMG	**Summit**	**11.91**	**231**	*i* P	Pn	07 30 35.9	-4.1

*TAP **24** 07:30:29.6, 24°95N×122°22E, h14km, ML3.2, D*
*JMA **24** 07:30:30.3±0.1, 24°9N±0°8×122°3E±0°3, h43km, MV2.3/4,*
TAIWAN REGION
ISC 24 07:30:28.2±1.4**,24°97N**±0°04×**122°27E**±0°03**,h14km**±10km**,**
n57,σ**0ˢ58**/78**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.26**	**280**	*i* P	**Pb**	**07 30 34.9**	**+0.2**
	baz=280						
TWB1				S	**Sb**	**07 30 38.4**	**-0.5**
	baz=280						
EGS		**0.33**	**249**	*e*P	**Pb**	**07 30 36.1**	**+0.3**
	baz=243						
EGS				*e*S	**Sb**	**07 30 40.2**	**-0.7**
	baz=243						
SXI1	**Grass Mountain**	**0.38**	**290**	*i* P	**Pb**	**07 30 37.5**	**+0.8**
	baz=290						
SXI1				S	**Sb**	**07 30 42.6**	**+0.1**
	baz=290						
TIPB	**Shuangxi**	**0.40**	**271**	P	**Pb**	**07 30 37.8**	**+0.7**
	baz=274						
TIPB				*e*S	**Sb**	**07 30 42.7**	**-0.4**
	baz=274						
ILA	**Ilan**	**0.51**	**247**	*e*P	**Pn**	**07 30 39.9**	**-1.2**
	baz=247						
TWC	**Suao**	**0.52**	**227**	*e*P	**Pb**	**07 30 39.5**	**+0.4**
	baz=220						
TWC				*e*S	**Sg**	**07 30 44.6**	**-0.8**
	baz=220						
TWE	**Neicheng**	**0.60**	**246**	*e*P	**Pn**	**07 30 41.2**	**-1.0**
	baz=246						
NDS	**Dongshan**	**0.60**	**237**	*e*P	**Pb**	**07 30 41.1**	**+0.6**
	baz=230						
NDS				*e*S	**Sb**	**07 30 49.6**	**+0.8**
	baz=230						
TWA	**Mucha**	**0.62**	**272**	*e*P	**Pn**	**07 30 42.4**	**-0.3**
	baz=263						
FUSB	**Fushanzhiwuyua**	**0.65**	**252**	*e*P	**Pb**	**07 30 41.8**	**+0.4**
	baz=252						
YM01	**YM01**	**0.66**	**286**	P	**Pn**	**07 30 43.0**	**-0.1**
	baz=288						
YM01				*e*S	**Sb**	**07 30 51.2**	**+0.7**
	baz=288						
NHDH	**Xindian Distri**	**0.67**	**270**	*e*P	**Pn**	**07 30 43.1**	**-0.2**
	baz=271						
NHDH				*e*S	**Sb**	**07 30 51.6**	**+0.7**
	baz=271						
TWY	**Chenhua**	**0.68**	**297**	P	**Pn**	**07 30 43.2**	**-0.2**
	baz=287						
TWY				*e*S	**Sn**	**07 30 52.4**	**-1.4**
	baz=287						
EWUT	**Wuta**	**0.68**	**221**	*e*P	**Pb**	**07 30 42.5**	**+0.6**
	baz=211						
EWUT				*e*S	**Sg**	**07 30 49.8**	**-0.7**
	baz=211						
TATO	**Taipei**	**0.71**	**271**	P	**Pn**	**07 30 43.8**	**0.0**
ANP	**Anpu**	**0.71**	**288**	*e*P	**Pb**	**07 30 42.8**	**+0.3**
	baz=290						
ENTT	**Nioudou**	**0.71**	**243**	*e*P	**Pn**	**07 30 43.3**	**-0.6**
	baz=243						
ENTT				*e*S	**Sg**	**07 30 51.3**	**-0.2**
	baz=243						
ENA	**Nanau**	**0.72**	**222**	*e*P	**Pb**	**07 30 42.7**	**+0.2**
	baz=214						
NWLT	**Wulai**	**0.72**	**255**	*e*P	**Pn**	**07 30 43.8**	**-0.2**
	baz=256						
NWLT				*e*S	**Sb**	**07 30 52.4**	**+0.1**
	baz=256						
TWS1	**Kuangyinshan**	**0.78**	**280**	*e*P	**Pn**	**07 30 45.2**	**+0.4**
	baz=282						
TWS1				*e*S	**Sn**	**07 30 57.2**	**+0.9**
	baz=282						
LATG	**Datong**	**0.80**	**238**	*e*P	**Pn**	**07 30 44.8**	**-0.4**
	baz=238						
JYNG	**Yonagunijimaku**	**0.80**	**129**	P	**Pn**	**07 30 45.1**	**0.0**
JYNG				*e*S	**Sn**	**07 30 55.9**	**-0.9**
YOJ	**Yonaguni jima**	**0.84**	**126**	P	**Pn**	**07 30 45.5**	**-0.2**
YOJ				*e*S	**Sb**	**07 30 56.5**	**+0.7**
YOJ	**Yonaguni jima**	**0.84**	**126**	*e*P	**Pb**	**07 30 44.7**	**0.0**
	baz=124						
YHNB	**Yeheng**	**0.86**	**250**	P	**Pn**	**07 30 46.0**	**0.0**
YHNB	**Yeheng**	**0.86**	**250**	*e*P	**Pn**	**07 30 45.4**	**-0.6**
	baz=251						
NSK	**Sanguang**	**0.87**	**251**	*e*P	**Pn**	**07 30 46.2**	**+0.1**
	baz=251						
NSK				*e*S	**Sn**	**07 30 57.8**	**-0.9**
	baz=251						
NNSB	**Datong**	**0.96**	**237**	*e*P	**Pn**	**07 30 47.4**	**-0.1**

	baz=237						
NNS	**Nan Shan**	**0.97**	**237**	*e*P	**Pn**	**07 30 47.9**	**+0.4**
	baz=237						
ETL	**Fush Village**	**0.99**	**216**	*e*P	**Pn**	**07 30 47.6**	**-0.2**
	baz=211						
NACB	**Ninganchiao**	**1.00**	**218**	P	**Pn**	**07 30 47.7**	**-0.1**
NACB	**Ninganchiao**	**1.00**	**218**	*e*P	**Pg**	**07 30 47.5**	**0.0**
	baz=209						
NACB				*e*S	**Sb**	**07 30 58.9**	**-1.4**
	baz=209						
ETLH	**Xiulin Townshi**	**1.04**	**224**	*e*P	**Pn**	**07 30 48.8**	**+0.4**
	baz=224						
ETLH				*e*S	**Sn**	**07 31 03.4**	**+0.5**
	baz=224						
TWD	**Chiawan**	**1.07**	**215**	P	**Pg**	**07 30 49.1**	**+0.2**
	baz=215						
TWD				*e*S	**Sg**	**07 31 02.9**	**0.0**
	baz=215						
NFF	**Wufeng Townshi**	**1.09**	**253**	*e*P	**Pg**	**07 30 49.8**	**+0.4**
	baz=267						
LIOB	**Emei**	**1.18**	**255**	*e*P	**Pg**	**07 30 50.8**	**-0.2**
	baz=256						
TWT	**Tachien**	**1.22**	**235**	*e*P	**Pg**	**07 30 52.3**	**+0.5**
	baz=225						
WHF	**Hehuan Shan**	**1.22**	**228**	*e*P	**Pg**	**07 30 52.0**	**+0.1**
	baz=228						
CHGB	**Renai**	**1.34**	**228**	*e*P	**Pg**	**07 30 54.8**	**+0.7**
	baz=229						
CHGB				*e*S	**Sg**	**07 31 11.6**	**0.0**
	baz=229						
WHP	**Taichung City**	**1.38**	**241**	*e*P	**Pg**	**07 30 55.3**	**+0.5**
	baz=232						
OWD	**Renai**	**1.41**	**225**	*e*P	**Pg**	**07 30 55.4**	**0.0**
	baz=225						
WUSB	**Renai**	**1.43**	**227**	*e*P	**Pg**	**07 30 56.0**	**+0.4**
	baz=219						
VWDT	**VWDT**	**1.58**	**221**	*e*P	**Pg**	**07 30 58.1**	**-0.5**
	baz=228						
VWDT				*e*S	**Sb**	**07 31 18.1**	**+0.9**
	baz=228						
SMLT	**Sun Moon Lake**	**1.65**	**229**	*e*P	**Pb**	**07 30 58.5**	**+0.1**
	baz=230						
HGSD	**Ruisui**	**1.66**	**208**	*e*P	**Pb**	**07 30 59.2**	**+0.7**
	baz=195						
TYC	**Yuchr**	**1.66**	**231**	*e*P	**Pb**	**07 30 58.8**	**+0.2**
	baz=224						
SSLB	**Suanglung**	**1.68**	**226**	P	**Pb**	**07 30 59.5**	**+0.6**
SSLB	**Suanglung**	**1.68**	**226**	*e*P	**Pg**	**07 31 00.0**	**-0.4**
	baz=227						
EHY	**Hungye**	**1.69**	**211**	*e*P	**Pn**	**07 30 58.1**	**+0.8**
	baz=212						
YULB	**Yu-li**	**1.80**	**210**	P	**Pb**	**07 31 01.3**	**+0.3**
YULB	**Yu-li**	**1.80**	**210**	*e*P	**Pn**	**07 30 59.0**	**+0.1**
	baz=212						
WHYT	**Xinyi Township**	**1.81**	**226**	*e*P	**Pb**	**07 31 01.8**	**+0.7**
	baz=227						
ALS	**Alishan**	**1.97**	**223**	*e*P	**Pb**	**07 31 04.7**	**+0.6**
	baz=207						
CHN5	**Tsauling**	**1.99**	**227**	*e*P	**Pb**	**07 31 04.1**	**-0.2**
	baz=230						
EDH	**Donghe**	**2.17**	**204**	*e*P	**Pn**	**07 31 05.1**	**+1.1**
	baz=190						
CHN4	**Tsaushan**	**2.22**	**224**	*e*P	**Pb**	**07 31 08.4**	**+0.3**
	baz=227						
TPUB	**Ta-pu**	**2.23**	**222**	*e*P	**Pb**	**07 31 07.3**	**-1.1**
	baz=208						

NNC 24 07:31:54.6±1.4**, 53°.50N**×**90°.40E, h9**^{km}±7^{km}**, mb3.7, mpv3.4, 8C-2D, Error ellipse: s-maj=11.9km s-min=8.1km az=10.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**3.35**	**280**	⇑Pn	Pn	07 32 47.3	+0.2
	1.4nm,0.5s						
ZAA0				⇑Lg	Lg	07 33 41.2	
	21nm,0.9s						
KURK	**Kurchatov**	**7.77**	**254**	⇑Pn	Pn	07 33 47.4	-0.5
	2.8nm,0.7s						
KURK				⇑Sn	Sn	07 35 17.2	+1.2
	16nm,0.9s						
KURK				⇑Lg	Lg	07 36 02.6	
	50nm,1.3s						
KURBB	**Kurchatov Arra**	**7.87**	**253**	⇓Pn	Pn	07 33 48.7	-0.4
	4.0nm,0.5s						
KURBB				⇑Sn	Sn	07 35 19.2	+1.1
	60nm,1.1s						
KURBB				⇑Lg	Lg	07 36 03.7	
	61nm,1.0s						
MK31	**Makanchi Array**	**8.49**	**221**	⇑Pn	Pn	07 33 58.4	+0.6
	0.5nm,0.5s,baz=38,slow=12,SNR=22						
MK31				⇓Lg	Lg	07 36 23.5	
	19nm,1.1s,baz=39,slow=24,SNR=4.1						

NOU 24 07:34:11.9, 14°.92S×**167°.26E, h0**^{km}**, MLv4.3**/9**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**2.93**	**162**	P	Pn	07 35 00.5	+0.8
KOUNC	**Koumac, New Ca**	**6.28**	**206**	P	Pn	07 35 45.5	-0.3
YATNC	**Mamie plateau,**	**7.11**	**183**	P	Pn	07 35 56.5	-0.8
DZM	**Mont Dzumac**	**7.16**	**186**	P	Pn	07 35 57.5	-0.5
NOUC	**Port Laguerre**	**7.20**	**187**	P	Pn	07 35 58.5	0.0

IDC 24 07:35:30.8±1.7**, 6°.89S**×**129°.42E, h0**^{km}**, mb3.2**/1**, mbtmp3.1**/3**, ML3.3**/2**, MS3.0**/1**, Error ellipse: s-maj=143.4km s-min=33.9km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.25**	**17**	LR	LR	07 39 44.9	
	comp=Z,143nm,21.7s,baz=281,slow=41						
WRA	**Warramunga Arr**	**13.83**	**160**	Pn	Pn	07 38 48.4	+0.1
	0.2nm,0.3s,baz=334,slow=13,SNR=16						
WRA				Sn	Sn	07 41 12.9	-10
	0.2nm,0.3s,baz=332,slow=22,SNR=6.6						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**17.23**	**166**	P	Pn	07 39 33.4	+0.4
	0.1nm,0.3s,baz=344,slow=13,SNR=1.6						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**67.82**	**327**	P	P	07 46 31.0	+0.3
	0.1nm,0.6s,baz=139,slow=6.5,SNR=2.1						
	0.1nm,0.6s						
TXAR	**Lajitas Array**	**125.36**	**59**	PKP	PKPdf	07 54 33.8	-0.7
	0.1nm,0.4s,baz=260,slow=2.2,SNR=1.8						

ROM 24 07:50:19.0±0.1**, 42°.794N**±0°.004×**13°.054E**±0°.005**, h11**^{km}**, ML1.2**/6**, 2C, Error ellipse: s-maj=0.4km s-min=0.3km az=132.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1212	**Cascia, Frazio**	**0.04**	**189**	P	Pg	07 50 21.4	+0.2
T1212				S	Sg	07 50 22.6	0.0
T1212				AML	AML		
	comp=E,338µm,0.2s						
T1212				AML	AML		
	comp=N,260µm,0.2s						
T1212				AML	AML		
	comp=N,269µm,0.2s						
NRCA	**Norcia**	**0.06**	**48**	P	Pg	07 50 21.5	+0.2
NRCA				S	Sg	07 50 23.0	+0.1
NRCA				AML	AML		
	comp=E,228µm,0.1s						
NRCA				AML	AML		
	comp=N,314µm,0.1s						
NRCA				AML	AML		
	comp=N,284µm,0.1s						
NRCA				AML	AML		
	comp=E,227µm,0.2s						
T1216	**Preci, Frazion**	**0.10**	**345**	⇑P	Pg	07 50 22.2	+0.5
T1216				S	Sg	07 50 24.3	+0.6
T1216				AML	AML		
	comp=E,64µm,0.1s						
T1216				AML	AML		
	comp=N,123µm,0.1s						
T1245	**Castelsantange**	**0.12**	**58**	P	Pg	07 50 22.5	+0.5
T1245				S	Sg	07 50 24.8	+0.5
T1245				AML	AML		
	comp=E,141µm,0.3s						
T1245				AML	AML		
	comp=N,284µm,0.6s						
T1214	**Arquata del Tr**	**0.12**	**107**	P	Pg	07 50 22.5	+0.4
T1214				S	Sg	07 50 24.7	+0.5
T1214				AML	AML		
	comp=N,62µm,0.5s						
T1217	**Poggiodomo (PG**	**0.12**	**228**	P	Pg	07 50 22.5	+0.4
T1217				S	Sg	07 50 24.8	+0.5
MC2	**Monte Cornacci**	**0.16**	**40**	P	Pg	07 50 23.2	+0.6
MC2				S	Sg	07 50 26.4	+1.1
MMO1	**Montemonaco**	**0.23**	**62**	P	Pg	07 50 24.2	+0.5
MMO1				S	Sg	07 50 28.0	+1.0
FDMO	**Fiordimonte**	**0.24**	**6**	⇑P	Pg	07 50 24.6	+0.6
FDMO				S	Sg	07 50 28.7	+1.2
FDMO				AML	AML		
	comp=N,25µm,0.3s						
FDMO				AML	AML		
	comp=E,25µm,0.3s						
T1256	**Bolognola (MC)**	**0.25**	**31**	P	Pg	07 50 24.9	+0.7
T1256				S	Sg	07 50 28.7	+1.1
T1256				AML	AML		
	comp=N,20µm,0.8s						
T1219	**Muccia, Frazio**	**0.26**	**353**	P	Pg	07 50 24.9	+0.4
T1219				S	Sg	07 50 29.3	+1.2
T1211	**Morro Reatino**	**0.30**	**209**	P	Pb	07 50 26.0	-0.4
T1211				S	Sb	07 50 30.9	-0.6
T1247	**Pizzolo (AQ)**	**0.40**	**153**	S	Sb	07 50 33.6	-0.6
VVLD	**Villa Vallelon**	**1.01**	**155**	AML	AML		
	comp=E,61µm,0.1s						
VVLD				AML	AML		
	comp=N,41µm,0.4s						

ROM 24 07:50:23.0±0.2**, 43°.901N**±0°.008×**12°.105E**±0°.007**, h25**^{km}±1^{km}**, ML1.5**/8**, 1C, Error ellipse: s-maj=0.9km s-min=0.2km az=24.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASQU	**Asqua**	**0.25**	**246**	P	Pb	07 50 29.4	-0.1
ASQU				S	Sb	07 50 34.3	+0.5
RSM	**Repubblica di**	**0.25**	**83**	P	Pb	07 50 29.6	+0.2
RSM				S	Sb	07 50 34.3	+0.5
PARC	**Parchiule**	**0.27**	**159**	P	Pb	07 50 29.5	-0.2
PARC				S	Sb	07 50 34.4	+0.2
PARC				AML	AML		
	comp=E,115µm,0.2s						
PARC				AML	AML		
	comp=N,72µm,0.4s						
CRE	**Caprese Michel**	**0.30**	**202**	⇑P	Pb	07 50 30.3	+0.1
CRE				S	Sb	07 50 36.0	+0.9
CRE				AML	AML		
	comp=N,120µm,1.2s						
CRE				AML	AML		
	comp=E,77µm,0.8s						
CRE				AML	AML		
	comp=N,120µm,0.8s						
LMD	**Lutirano**	**0.34**	**302**	P	Pb	07 50 30.4	-0.3
LMD				S	Sb	07 50 36.5	+0.6
LMD				AML	AML		
	comp=E,116µm,0.2s						
LMD				AML	AML		
	comp=N,110µm,1.1s						
LMD				AML	AML		
	comp=N,110µm,0.9s						
BADI	**Badiali**	**0.40**	**165**	P	Pb	07 50 31.7	0.0
RUFI	**Rufina**	**0.43**	**262**	P	Pb	07 50 32.6	+0.4
NARO	**Abbazia di Nar**	**0.45**	**130**	P	Pb	07 50 32.4	0.0
NARO				S	Sb	07 50 39.6	+0.8
NARO				AML	AML		
	comp=N,56µm,0.2s						
NARO				AML	AML		
	comp=E,44µm,1.2s						
PIEI	**Pieia**	**0.48**	**139**	P	Pb	07 50 32.6	-0.4
PIEI				S	Sb	07 50 40.8	+1.1
PIEI				AML	AML		
	comp=E,54µm,0.1s						
PIEI				AML	AML		
	comp=N,26µm,0.7s						
BRIS	**BRISIGHELLA**	**0.50**	**300**	P	Pb	07 50 32.3	-0.9
BRIS				AML	AML		
	comp=N,94µm,0.6s						
BRIS				AML	AML		
	comp=E,118µm,0.2s						
BRIS				AML	AML		
	comp=N,94µm,1.4s						
MPAG	**Monte Paganucc**	**0.55**	**120**	P	Pb	07 50 33.9	-0.2
MPAG				S	Sb	07 50 42.6	+1.0
MPAG				AML	AML		
	comp=E,41µm,0.2s						
MPAG				AML	AML		
	comp=N,48µm,0.2s						
MPAG				AML	AML		
	comp=N,48µm,0.2s						
SEI	**Scarperia**	**0.56**	**286**	AML	AML		
	comp=N,260µm,0.7s						
SEI				AML	AML		
	comp=E,96µm,0.5s						

IDC 24 07:54:37.8±294.0**, 56°.68N**×**41°.57E, h0**^{km}**, Error ellipse: s-maj=114.9km s-min=54.4km az=94.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**2.40**	**273**	I	I	08 09 20.0	
	0.2nm,1.3s,baz=90,slow=315,SNR=9.9						
I31KZ	**AKTYUBINSK INF**	**11.62**	**116**	I	I	09 01 00.0	
	baz=316,slow=308,SNR=1.7						
I46RU	**ZALESOVO INFRA**	**24.46**	**78**	I	I	10 27 10.0	
	baz=297,slow=329,SNR=0.6						

IDC 24 07:55:13.4±3.0**, 54°.16N**×**87°.16E, h0**^{km}**, mbtmp2.6**/2**, ML2.3**/2**, Error ellipse: s-maj=24.6km s-min=16.7km az=67.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.40**	**262**	I	I	08 03 30.0	
	baz=81,slow=336,SNR=2.0						
ZALV	**Zalesovo Beam**	**1.40**	**262**	Pn	Pn	07 55 38.6	-1.5
	0.6nm,0.3s,baz=79,slow=16,SNR=5.4						
ZALV				Lg	Lg	07 55 57.4	
	0.5nm,0.3s,baz=84,slow=27,SNR=1.9						
KURBB	**Kurchatov Arra**	**6.36**	**240**	Pn	Pn	07 56 49.5	+1.2
	baz=56,slow=14,SNR=6.8						
KURBB				Sn	Sn	07 58 01.8	+0.2
	baz=59,slow=5.5,SNR=1.3						
KURBB				Lg	Lg	07 58 32.6	
	baz=60,slow=31,SNR=1.5						
	0.9nm,0.8s						
MKAR	**Makanchi Array**	**8.00**	**205**	Pn	Pn	07 57 11.7	+0.8
	0.1nm,0.3s,baz=16,slow=11,SNR=2.5						
MKAR				Sn	Sn	07 58 42.4	+0.4
	0.1nm,0.3s,baz=26,slow=28,SNR=6.2						
MKAR				Lg	Lg	07 59 27.4	
	baz=28,slow=28,SNR=2.0						
	0.1nm,0.4s						

ROM 24 08:06:30.0±0.2**, 43°.91N**±0°.01×**12°.13E**±0°.01**, h26**^{km}±1^{km}**, ML0.9**/2**, 2C-2D, Error ellipse: s-maj=1.4km s-min=0.3km az=30.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPGN	**Carpegna, Ital**	**0.18**	**128**	P	Pb	08 06 35.5	-0.1
CPGN				S	Sb	08 06 39.9	+0.4
ASQU	**Asqua**	**0.27**	**245**	P	Pb	08 06 36.6	-0.1
ASQU				S	Sb	08 06 41.5	+0.3
ASQU				AML	AML		
	comp=E,41µm,0.3s						
ASQU				AML	AML		
	comp=N,43µm,0.4s						
PARC	**Parchiule**	**0.28**	**163**	P	Pb	08 06 36.8	+0.1
PARC				S	Sb	08 06 41.6	+0.3
PARC				AML	AML		
	comp=E,22µm,0.2s						
PARC				AML	AML		
	comp=N,19µm,1.4s						
PARC				AML	AML		
	comp=N,19µm,0.6s						
CRE	**Caprese Michel**	**0.32**	**204**	P	Pb	08 06 37.6	+0.2
CRE				S	Sb	08 06 43.5	+1.1
LMD	**Lutirano**	**0.34**	**299**	P	Pb	08 06 37.9	+0.2
LMD				S	Sb	08 06 43.7	+0.7
BRSN	**Barisano**	**0.37**	**355**	AML	AML		
	comp=E,558µm,0.1s						
BRSN				AML	AML		
	comp=N,562µm,0.3s						
IMOL	**Imola, Italy**	**0.53**	**329**	AML	AML		
	comp=E,951µm,0.7s						
IMOL				AML	AML		
	comp=E,951µm,1.3s						
IMOL				AML	AML		
	comp=N,946µm,0.7s						
SEI	**Scarperia**	**0.57**	**285**	AML	AML		
	comp=N,513µm,0.1s						
SEI				AML	AML		
	comp=E,443µm,0.1s						
GSCL	**Gusciola**	**1.19**	**292**	P	Pn	08 06 50.0	-1.1
GSCL				AML	AML		
	comp=N,54µm,1.5s						
GSCL				AML	AML		
	comp=N,54µm,0.5s						
GSCL				AML	AML		
	comp=E,49µm,1.0s						
T1245	**Castelsantange**	**1.31**	**143**	P	Pn	08 06 46.7	-6.1
T1245				AML	AML		
	comp=E,58µm,0.2s						
T1245				AML	AML		
	comp=N,72µm,0.4s						
T1217	**Poggiodomo (PG**	**1.33**	**154**	S	Sn	08 07 07.0	-3.0
MMO1	**Montemonaco**	**1.34**	**139**	P	Pn	08 06 50.4	-2.7
T1247	**Pizzolo (AQ)**	**1.70**	**149**	⇑P	Pn	08 06 57.2	-0.8
T1247				S	Sn	08 07 18.7	-0.4
T1247	**Pizzolo (AQ)**	**1.70**	**149**	⇑P	Pn	08 06 57.2	-0.8
LEOD	**Capriano del C**	**2.10**	**318**	⇓P	Pb	08 07 09.2	+1.8
SARZ	**Sarezzano**	**2.50**	**294**	P	Pn	08 07 05.9	-3.0
SARZ				S	Sb	08 07 48.9	+4.6
SARZ				AML	AML		
	comp=E,198µm,0.7s						
SARZ				AML	AML		
	comp=E,198µm,1.3s						
SARZ				AML	AML		
	comp=N,363µm,0.1s						
EUCT	**Pavia**	**2.50**	**302**	⇓P	Pb	08 07 13.3	-0.8
EUCT				AML	AML		
	comp=N,1345µm,1.5s						
EUCT				AML	AML		
	comp=N,1345µm,0.5s						
EUCT				AML	AML		
	comp=E,1410µm,0.9s						

ROM 24 08:06:47.3±0.1**, 42°.883N**±0°.004×**13°.090E**±0°.006**, h10**^{km}**, ML0.7**/1**, 8C-3D, Error ellipse: s-maj=0.5km s-min=0.3km az=252.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1216	**Preci, Frazion**	**0.05**	**278**	⇓P	Pg	08 06 49.4	-0.1
T1216				S	Sg	08 06 51.6	+0.6
T1245	**Castelsantange**	**0.08**	**110**	P	Pg	08 06 50.2	+0.3
T1245				S	Sg	08 06 52.0	+0.4
T1245				AML	AML		
	comp=E,58µm,0.2s						
T1245				AML	AML		
	comp=N,72µm,0.4s						
T1245				AML	AML		
	comp=E,58µm,0.2s						
MC2	**Monte Cornacci**	**0.08**	**68**	⇓P	Pg	08 06 50.3	+0.4
MC2				S	Sg	08 06 52.3	+0.5
MC2	**Monte Cornacci**	**0.08**	**68**	⇓P	Pg	08 06 50.3	+0.4
T1212	**Cascia, Frazio**	**0.14**	**194**	⇑P	Pg	08 06 51.1	+0.5
T1212	**Cascia, Frazio**	**0.14**	**194**	⇑P	Pg	08 06 51.1	+0.5
T1212				S	Sg	08 06 53.6	+0.8
T1212	**Cascia, Frazio**	**0.14**	**194**	⇑P	Pg	08 06 51.1	+0.5
FDMO	**Fiordimonte**	**0.15**	**359**	P	Pg	08 06 51.4	+0.6
FDMO				S	Sg	08 06 54.0	+0.8
MMO1	**Montemonaco**	**0.17**	**85**	P	Pg	08 06 51.6	+0.4
MMO1				S	Sg	08 06 54.5	+0.6
T1219	**Muccia, Frazio**	**0.18**	**341**	P	Pg	08 06 51.8	+0.5
T1219				S	Sg	08 06 55.1	+1.1
CSP1	**Cessapalombo**	**0.23**	**22**	P	Pg	08 06 52.5	+0.4
CSP1				S	Sg	08 06 57.0	+1.7
T1220	**Camerino, Fraz**	**0.23**	**360**	P	Pg	08 06 52.5	+0.5
T1220				S	Sg	08 06 57.1	+1.9
ATFO	**Monte Foce - G**	**0.61**	**322**	⇑P	Pg	08 06 50.8	-8.4
FSSB	**Fossombrone**	**0.84**	**344**	⇑P	Pg	08 06 49.9	-14
PTQR	**Pietraquaria**	**0.89**	**165**	S	Sn	08 07 25.0	+6.0
PTQR	**Pietraquaria**	**0.89**	**165**	S	Sn	08 07 25.0	+6.0
TRIV	**Trivento**	**1.56**	**135**	S	Sn	08 07 33.0	-2.3
CRTO	**Cratere Ovest,**	**2.29**	**154**	⇑P	Pn	08 07 24.3	-0.9
CRTO				AML	AML		
CRTO				AML	AML		
CRTO				AML	AML		
CRTO	**Cratere Ovest,**	**2.29**	**154**	⇑P	Pn	08 07 24.3	-0.9
CRTO	**Cratere Ovest,**	**2.29**	**154**	⇑P	Pn	08 07 24.3	-0.9
CRTO				AML	AML		
CRTO				AML	AML		
CRTO				AML	AML		
CRTO				AML	AML		

IDC ***24*** *08:10:15.2±1.7, 30°.31S×177°.36W, h0*^{km}*, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=39.9km s-min=20.6km az=82.0*

ISC 24 08:10:19.7±1.5**, 30°.48S**±0°.08×**177°.7W**±0°.3**, h33**^{km}**, n13,** σ**1**^{s}**.76**/9**, mb4.0**/4**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.23**	**352**	Pn	**Pn**	**08 10 38.9**	**-1.7**
	1µm,0.3s,baz=100,slow=17,SNR=52						
RAO				Sn	**Sn**	**08 10 55.6**	**-0.5**
	1µm,0.3s,baz=114,slow=23,SNR=24						
URZ	**Urewera**	**8.85**	**207**	Pn	**Pn**	**08 12 23.5**	**-1.8**
	0.5nm,0.3s,baz=359,slow=4.4,SNR=6.1						
URZ				Sn	**Sn**	**08 14 02.5**	**-1.4**
	2.3nm,0.3s,baz=58,slow=4.1,SNR=2.4						
STKA	**Stephens Creek**	**34.69**	**257**	P	P	08 17 11.3	+4.9
	2.4nm,0.6s,baz=98,slow=11,SNR=12						
	2.4nm,0.6s						
ASAR	**Alice Springs**	**43.33**	**267**	P	**P**	**08 18 21.6**	**+2.6**
	0.8nm,0.5s,baz=105,slow=7.3,SNR=12						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**44.33**	**272**	P	**P**	**08 18 28.3**	**+1.4**
	0.8nm,0.3s,baz=111,slow=8.0,SNR=24						
	0.8nm,0.3s						
VNDA	**Vanda**	**48.04**	**186**	P	**P**	**08 18 56.5**	**+1.2**
	1.7nm,1.0s,baz=0.0,slow=5.1,SNR=3.1						
	1.7nm,1.0s						
KURBB	**Kurchatov Arra**	**121.31**	**314**	PKP	**PKiKP**	**08 29 09.6**	**+0.5**
	0.1nm,0.5s,baz=90,slow=1.8,SNR=1.9						
H10S2	**ASCENSION HYDR**	**137.56**	**155**	T	T	11 03 50.9	
	baz=201						
H10S3	**ASCENSION HYDR**	**137.56**	**155**	T	T	11 03 47.0	
	baz=19						
H10N3	**ASCENSION HYDR**	**138.64**	**154**	T	T	11 05 16.6	
	baz=204,slow=74,SNR=12						
H10N1	**ASCENSION HYDR**	**138.65**	**154**	T	T	11 05 17.4	
	baz=204,slow=74,SNR=19						
H10N2	**ASCENSION HYDR**	**138.66**	**154**	T	T	11 05 18.1	
	baz=204,slow=74,SNR=15						
FINES	**FINESS Array B**	**145.29**	**340**	PKPbc	**PKPbc**	**08 29 53.5**	**+0.4**
	1.4nm,0.5s,baz=45,slow=4.1,SNR=13						

DJA ***24*** *08:18:14.3±1.0, 2°S±4°×10°0E±°, h11*^{km}*±9*^{km}*, M3.5/7, MLv3.5/7*

IDC ***24*** *08:18:47.4±23.0, 0°.17N×102°.57E, h289*^{km}*±247*^{km}*, mb2.8/4, mbtmp3.5/4, Error ellipse: s-maj=270.4km s-min=24.7km az=55.0*

ISC 24 08:18:14.0±1.1**, 1°.72S**±0°.07×**99°.76E**±0°.08**, h33**^{km}**, n10,** σ**2**^{s}**.02**/11**, mb3.5**/4**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPSI	**Pulau Pagai**	**1.06**	**167**	P	**Pn**	**08 18 34.9**	**+2.3**
PDSI	**Padang**	**1.06**	**41**	P	**Pn**	**08 18 33.9**	**+1.2**
PDSI				S	**Sn**	**08 18 47.5**	**+1.1**
SDSI	**Sungai Dareh**	**1.84**	**65**	P	**Pn**	**08 18 45.7**	**+2.4**
PBSI	**Pulau Batu**	**2.22**	**318**	P	**Pn**	**08 18 51.0**	**+2.4**
MASI	**Maura Aman, Be**	**2.85**	**120**	P	**Pn**	**08 18 59.1**	**+1.9**
WRA	**Warramunga Arr**	**38.34**	**121**	P	**P**	**08 25 30.7**	**-1.4**
	0.3nm,0.8s,baz=307,slow=9.1,SNR=5.5						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**39.61**	**126**	P	**P**	**08 25 42.0**	**-0.8**
	0.3nm,0.6s,baz=300,slow=8.1,SNR=5.2						
	0.3nm,0.6s						

MKAR	**Makanchi Array**	**50.70**	**345**	P	**P**	**08 27 10.5**	**0.0**
	0.4nm,0.5s,baz=154,slow=7.7,SNR=6.8						
	0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**56.85**	**350**	P	**P**	**08 27 53.4**	**-1.9**
	0.8nm,0.5s,baz=145,slow=5.3,SNR=2.1						
	0.8nm,0.5s						
TXAR	**Lajitas Array**	**144.62**	**37**	PKP	**PKPab**	**08 37 44.9**	**-1.8**
	1.9nm,1.3s,baz=258,slow=0.8,SNR=3.9						

*IDC **24** 08:19:02.0±1.0, 30°.41S×177°.46W, h0^{km}, mb4.0/4, mbtmp4.1/5, ML3.5/1, MS3.5/6, Error ellipse: s-maj=34.2km s-min=22.9km az=150.0*

ISC 24 08:19:06.2±0.8**, 30°.48S**±0°.08×**177°.5W**±0°.1**, h33^{km}, n21,** σ**2^{s}19**/20**, mb3.9**/4**, MS3.4**/4**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.27**	**344**	Pn	**Pn**	**08 19 26.4**	**-1.3**
	1μm,0.3s,baz=102,slow=5.0,SNR=45						
RAO				Sn	**Sn**	**08 19 40.6**	**-3.1**
	1μm,0.3s,baz=106,slow=23,SNR=26						
RAO				LR	LR	08 19 46.2	
	comp=Z,139nm,18.6s,baz=138,slow=36						
URZ	**Urewera**	**8.93**	**208**	Pn	**Pn**	**08 21 10.8**	**-2.1**
	1.8nm,0.3s,baz=2.3,slow=5.0,SNR=11						
URZ				Sn	**Sn**	**08 22 50.3**	**-2.1**
	3.3nm,0.3s,baz=0.4,slow=21,SNR=2.6						
MSVF	**Nonsavu**	**13.32**	**341**	LR	LR	08 26 38.4	
	comp=Z,153nm,18.7s,baz=169,slow=34						
RPZ	**Rata Peaks**	**16.02**	**211**	Pn	**Pn**	**08 22 45.6**	**-3.5**
	0.6nm,0.3s,baz=25,slow=13,SNR=2.5						
RPZ				Sn	Sn	08 25 29.0	-17
	0.4nm,0.3s,baz=154,slow=19,SNR=1.1						
DZM	**Mont Dzumac**	**16.63**	**296**	LR	LR	08 28 14.5	
	comp=Z,200nm,18.7s,baz=195,slow=33						
RAR	**Rarotonga**	**18.43**	**64**	P	**P**	**08 23 15.9**	**-3.0**
	1.5nm,0.3s,baz=31,slow=19,SNR=2.8						
	3.2nm,0.3s						
CTA	**Charters Tower**	**34.22**	**279**	LR	LR	08 38 12.1	
	comp=Z,90nm,20.0s,baz=92,slow=34						
STKA	**Stephens Creek**	**34.86**	**257**	P	**P**	**08 25 55.8**	**+1.4**
	2.8nm,0.5s,baz=119,slow=13,SNR=6.7						
	2.8nm,0.5s						
PMG	**Port Moresby**	**39.01**	**295**	LR	LR	08 40 25.9	
	comp=Z,48nm,21.6s,baz=130,slow=33						
ASAR	**Alice Springs**	**43.52**	**267**	P	**P**	**08 27 07.2**	**+0.2**
	0.9nm,0.5s,baz=105,slow=7.6,SNR=18						
ASAR				PcP	**PcP**	**08 28 57.5**	**+3.0**
	0.4nm,0.8s,baz=118,slow=3.6,SNR=2.3						
ASAR				ScP	**ScP**	**08 32 47.5**	**+4.0**
	0.5nm,1.0s,baz=125,slow=4.5,SNR=4.7						
	0.9nm,0.5s						
WRA	**Warramunga Arr**	**44.51**	**272**	P	**P**	**08 27 15.5**	**+0.6**
	1.1nm,0.4s,baz=111,slow=8.0,SNR=45						
WRA				LR	LR	08 44 27.7	
	comp=Z,79nm,19.9s,baz=130,slow=34						
	1.1nm,0.4s						
GUMO	**Guam**	**56.83**	**315**	LR	LR	08 50 53.9	
	comp=Z,20nm,19.3s,baz=124,slow=34						
NVAR	**Mina Array Bea**	**88.02**	**42**	P	**P**	**08 31 54.7**	**+1.4**
	0.1nm,0.4s,baz=208,slow=5.0,SNR=3.1						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**118.14**	**310**	PKP	**PKPdf**	**08 37 49.9**	**+0.3**
	0.2nm,0.6s,baz=72,slow=4.7,SNR=1.8						
KURBB	**Kurchatov Arra**	**121.44**	**314**	PKP	**PKPdf**	**08 37 55.6**	**-0.2**
	0.4nm,0.5s,baz=110,slow=2.8,SNR=2.9						
BVAR	**Borovoye Array**	**126.75**	**316**	PKP	**PKPdf**	**08 38 06.0**	**+0.1**
	0.5nm,0.5s,baz=107,slow=1.5,SNR=2.6						
ARCES	**ARCESS Array B**	**138.76**	**348**	PKP	**PKPdf**	**08 38 27.5**	**-0.5**
	4.2nm,0.9s,baz=348,slow=4.0,SNR=1.7						
FINES	**FINESS Array B**	**145.36**	**340**	PKPbc	**PKPab**	**08 38 40.9**	**+0.8**
	4.1nm,0.5s,baz=49,slow=3.2,SNR=24						
NOA	**NORSAR Array B**	**148.89**	**352**	PKPbc	**PKPbc**	**08 38 49.3**	**-0.6**
	0.6nm,0.6s,baz=16,slow=4.3,SNR=3.5						
AKASG	**Malin Array Be**	**151.61**	**323**	PKPbc	**PKiKP**	**08 38 57.9**	**+0.8**
	0.8nm,0.4s,baz=42,slow=3.0,SNR=6.7						
BRTR	**Keskin Array B**	**153.00**	**298**	PKPbc	**PKiKP**	**08 39 03.5**	**+2.9**
	0.4nm,0.4s,baz=128,slow=3.6,SNR=3.2						

*BJI **24** 08:53:11.0±0.0, 7°.60S×128°.10E, h164^{km}, mb4.6/39, mB4.8/20*

*NEIC **24** 08:53:13.8±1.9, 7°.56S±0°.09×128°.10E±0°.07, h165^{km}±7^{km}, mb4.6/44, Error ellipse: s-maj=13.2km s-min=10.1km az=202.0*

*DJA **24** 08:53:13.1±0.2, 8°S±2°×12°8E±°, h155^{km}±3^{km}, M4.7/36, mB5.2/12, mb4.7/36, MLv4.9/15, Mw(mB)4.5/12*

*IDC **24** 08:53:14.1±2.9, 7°.42S×128°.13E, h170^{km}±28^{km}, mb4.0/20, mbtmp4.5/22, MS3.0/4, Error ellipse: s-maj=22.3km s-min=12.0km az=57.0*

ISC 24 08:53:11.7±0.3**, 7°.51S**±0°.05×**128°.08E**±0°.06**, h142^{km}, n171,** σ**1^{s}59**/171**, mb4.6**/48**, 1C-4D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**3.23**	**99**	Pn	**Pn**	**08 54 03.5**	**+1.7**
SAUI	**Saumlaki**	**3.23**	**99**	P	**Pn**	**08 54 03.4**	**+1.7**
AAI	**Ambon**	**3.80**	**2**	P	**Pn**	**08 54 11.4**	**+2.2**
MSAI	**Masohi**	**4.22**	**12**	P	**Pn**	**08 54 16.7**	**+1.9**
NLAI	**Namlea**	**4.36**	**347**	P	Pn	08 54 20.6	+4.1
SOEI	**Soe**	**4.38**	**239**	Pn	**Pn**	**08 54 19.1**	**+2.3**
SOEI	**Soe**	**4.38**	**239**	P	**Pn**	**08 54 19.7**	**+2.8**
SOEI	**Soe**	**4.38**	**239**	P	**Pn**	**08 54 19.2**	**+2.3**
SANI	**Sanana**	**5.81**	**339**	P	**Pn**	**08 54 39.2**	**+3.3**
SANI	**Sanana**	**5.81**	**339**	P	**Pn**	**08 54 38.8**	**+2.9**
	136nm,0.7s,1μm0.5nm						
MMRI	**Maumere**	**5.89**	**259**	P	**Pn**	**08 54 39.6**	**+2.7**
	83nm,0.5s,0.8nm						
MTN	**Manton Dam**	**6.09**	**151**	Pn	**Pn**	**08 54 40.3**	**+0.6**
KDU	**Kakadu**	**6.72**	**140**	P	**Pn**	**08 54 48.5**	**+0.5**
LBMI	**Labuha**	**6.85**	**355**	P	**Pn**	**08 54 53.1**	**+3.3**
	100nm,0.9s,2μm0.4nm						
SIJI	**Sorong**	**7.33**	**26**	LR	LR	08 58 02.5	
	comp=Z,99nm,20.6s,baz=211,slow=40						
BSSI	**Bau Bau, Buton**	**7.65**	**280**	P	**Pn**	**08 55 03.5**	**+2.9**
	44nm,0.8s,0.2nm						
BASI	**Baing, Sumba**	**7.88**	**250**	P	**Pn**	**08 55 04.0**	**+0.4**
	150nm,0.7s,2μm2.1nm						
KNRA	**Kununurra**	**8.14**	**175**	Pn	**Pn**	**08 55 06.3**	**-0.8**
KNRA	**Kununurra**	**8.14**	**175**	P	**Pn**	**08 55 07.1**	**0.0**
BKSI	**Bulukumba**	**8.20**	**285**	P	**Pn**	**08 55 10.5**	**+2.7**
	32nm,1.0s						
LUWI	**Luwuk**	**8.32**	**320**	Pn	**Pn**	**08 55 13.3**	**+3.8**
RKPI	**Ransiki, Papua**	**8.52**	**46**	P	**Pn**	**08 55 11.9**	**-0.2**
	215nm,0.6s,7μm						
KAPI	**Kappang**	**8.64**	**286**	P	**Pn**	**08 55 16.0**	**+2.2**
	9.9nm,0.6s,baz=110,slow=8.0,SNR=6.3						
KAPI	**Kappang**	**8.64**	**286**	Pn	**Pn**	**08 55 16.6**	**+2.9**
PLAI	**Plampang**	**10.28**	**262**	P	**Pn**	**08 55 34.6**	**-1.0**
PLAI	**Plampang**	**10.28**	**262**	P	**Pn**	**08 55 34.3**	**-1.3**
	74nm,0.5s						
FITZ	**Fitzroy Crossi**	**10.79**	**192**	Pn	**Pn**	**08 55 40.2**	**-2.1**
FITZ	**Fitzroy Crossi**	**10.79**	**192**	P	**Pn**	**08 55 40.2**	**-2.1**
TWSI	**Taliwang, Sumb**	**11.15**	**263**	P	**Pn**	**08 55 46.8**	**-0.4**
	22nm,0.5s						
TOLI2	**Tolitoli**	**11.24**	**319**	P	**Pn**	**08 55 50.9**	**+2.5**
BKB	**Balikpapan**	**12.76**	**299**		**P**	**08 56 17.3**	**+3.7**
WRAB	**Tennant Creek**	**13.77**	**154**	P	**Pn**	**08 56 18.8**	**-2.3**
WRA	**Warramunga Arr**	**13.77**	**154**	P	**Pn**	**08 56 18.1**	**-3.0**
	79nm,0.6s,baz=321,slow=14,SNR=313						
WRA				S	Sn	08 58 42.1	-11
	72nm,0.7s,baz=328,slow=23,SNR=9.5						
WRA				LR	LR	09 02 27.3	
	comp=Z,88nm,18.1s,baz=292,slow=40						
WRA	**Warramunga Arr**	**13.77**	**154**		**Pn**	**08 56 18.6**	**-2.5**
WB1	**Warramunga Ar.**	**13.79**	**154**	P	**Pn**	**08 56 19.0**	**-2.3**
JAGI	**Jajag, Banyuwa**	**13.82**	**265**		**Pn**	**08 56 22.9**	**+1.1**
JAGI	**Jajag, Banyuwa**	**13.82**	**265**	P	**P**	**08 56 24.1**	**-1.4**
JAGI	**Jajag, Banyuwa**	**13.82**	**265**	P	**Pn**	**08 56 22.1**	**+0.3**
	35nm,0.9s						
GMJI	**Gumukmas**	**14.51**	**266**	P	**Pn**	**08 56 30.1**	**-0.4**
	19nm,1.0s						
MTKI	**Muara Teweh, K**	**14.67**	**296**	P	**P**	**08 56 35.9**	**+1.0**
	76nm,0.7s						
MBWA	**Marble Bar**	**15.78**	**210**		**Pn**	**08 56 46.3**	**+0.1**
MBWA				IAmb	IAmb	08 57 03.0	
	comp=Z,19nm,0.8s						
MBWA	**Marble Bar**	**15.78**	**210**	P	**Pn**	**08 56 46.2**	**-0.1**
MYLDM	**Lahad Datu**	**15.82**	**323**	P	**P**	**08 56 49.8**	**+2.2**
MYLDM				IAmb	IAmb	08 57 05.3	
	comp=Z,28nm,1.1s						
PSA00	**Pilbara Seismi**	**16.08**	**209**		**Pn**	**08 56 49.9**	**0.0**
PSA00	**Pilbara Seismi**	**16.08**	**209**	P	**Pn**	**08 56 49.9**	**0.0**
PWJI	**Pagerwojo**	**16.13**	**267**	P	**P**	**08 56 51.5**	**+0.4**
COEN	**Coen**	**16.15**	**115**	P	**P**	**08 56 51.5**	**+0.1**
COEN	**Coen**	**16.15**	**115**	P	**P**	**08 56 52.2**	**+0.8**
AS31	**Alice Springs**	**17.01**	**161**		**P**	**08 57 00.4**	**-0.4**
ASAR	**Alice Springs**	**17.01**	**161**	P	**P**	**08 57 00.7**	**-0.1**
	comp=Z,83nm,0.6s,baz=337,slow=9.5,SNR=771						
ASAR				S	S	08 59 58.4	-13
	comp=Z,7.1nm,0.6s,baz=328,slow=16,SNR=4.1						
ASAR	**Alice Springs**	**17.01**	**161**		**Pn**	**08 57 01.0**	**-0.2**
AS01	**Alice Springs**	**17.02**	**161**	P	**Pn**	**08 57 01.4**	**0.0**
QIS	**Mount Isa**	**17.11**	**140**	P	**Pn**	**08 57 03.0**	**+0.5**
UGM	**Wanagama**	**17.40**	**268**	P	**P**	**08 57 04.5**	**-0.6**
UGM	**Wanagama**	**17.40**	**268**	P	**P**	**08 57 04.7**	**-0.5**
UGM	**Wanagama**	**17.40**	**268**	P	**P**	**08 57 04.2**	**-1.0**
	comp=Z,118nm,1.3s						
WRKA	**Warakurna**	**17.43**	**179**	P	**Pn**	**08 57 05.9**	**-0.4**
KKM	**Kota Kinabalu**	**17.93**	**318**	P	**Pn**	**08 57 14.1**	**+1.7**
KKM				IAmb	IAmb	08 57 22.4	
	comp=Z,35nm,1.0s						
SBUM	**Sibu**	**18.66**	**301**	P	**Pn**	**08 57 21.1**	**+0.2**
KPJI	**Karang Pucung**	**18.99**	**269**	P	**P**	**08 57 21.3**	**-1.2**
	comp=Z,46nm,0.7s						
CMJI	**Cimerak**	**19.45**	**268**	P	**P**	**08 57 25.6**	**-1.9**
	comp=Z,68nm,0.9s						
GIRL	**Giralia**	**20.09**	**220**	P	**P**	**08 57 35.9**	**+1.5**
BBJI	**Bungbulang**	**20.25**	**269**	P	**P**	**08 57 34.4**	**-1.8**
CNJI	**Cibinong**	**20.77**	**269**	P	**P**	**08 57 39.5**	**-2.2**
	comp=Z,48nm,0.9s,comp=Z,4μm						
OOD	**Oodnadatta**	**21.42**	**161**	P	**P**	**08 57 49.0**	**+0.5**
CTA	**Charters Tower**	**21.60**	**127**	P	**P**	**08 57 50.9**	**+0.3**
	comp=Z,3.1nm,0.5s,baz=302,slow=10,SNR=9.1						
	comp=Z,3.1nm,0.5s						
CTAO	**Charters Tower**	**21.60**	**127**	P	**P**	**08 57 50.5**	**0.0**
CTAO	**Charters Tower**	**21.60**	**127**	P	**P**	**08 57 51.3**	**+0.7**
FORT	**Forrest**	**23.15**	**180**	P	**P**	**08 58 05.9**	**+0.3**
FORT	**Forrest**	**23.15**	**180**	P	**P**	**08 58 06.3**	**+0.7**
MULG	**Mulgathing**	**23.34**	**167**	P	**P**	**08 58 08.1**	**+0.8**
INKA	**Innaminka**	**23.43**	**151**	P	**P**	**08 58 09.3**	**+1.2**
MORW	**Morawa**	**24.26**	**206**	P	**P**	**08 58 16.5**	**+0.8**
MORW				IAmb	IAmb	08 58 44.6	
	comp=Z,11nm,0.5s						
MORW	**Morawa**	**24.26**	**206**	P	**P**	**08 58 17.7**	**+2.0**
KMBL	**Kambalda**	**24.43**	**193**	P	**P**	**08 58 18.1**	**+0.9**
LCRK	**Leigh Creek**	**24.72**	**159**	P	**P**	**08 58 20.8**	**+0.9**
BLDU	**Ballidu**	**25.33**	**203**	P	**P**	**08 58 26.5**	**+1.1**
MYKOM	**Kota Tinggi**	**25.88**	**290**	P	**P**	**08 58 30.4**	**-0.1**
BBOO	**Buckleboo**	**26.24**	**165**	P	**P**	**08 58 33.8**	**+0.2**
BBOO				IAmb	IAmb	08 58 54.5	
	comp=Z,11nm,0.7s						
BBOO	**Buckleboo**	**26.24**	**165**	P	**P**	**08 58 34.4**	**+0.8**
NWAO	**Narrogin (SRO)**	**27.22**	**200**	P	**P**	**08 58 40.4**	**-2.0**
STKA	**Stephens Creek**	**27.32**	**154**	P	**P**	**08 58 43.6**	**+0.3**
	comp=Z,2.5nm,0.5s,baz=327,slow=10.0,SNR=16						
	comp=Z,2.5nm,0.5s						
STKA	**Stephens Creek**	**27.32**	**154**	P	**P**	**08 58 42.3**	**-1.0**
STKA	**Stephens Creek**	**27.32**	**154**	P	**P**	**08 58 44.0**	**+0.7**
HTT	**Hallett**	**27.68**	**160**	P	**P**	**08 58 47.8**	**+1.3**
EIDS	**Eidsvold**	**28.24**	**132**	P	**P**	**08 58 54.3**	**+2.8**
	comp=Z,9.4nm,2.3s						
CMSA	**Cobar Meteorol**	**29.01**	**148**	P	**P**	**08 58 59.4**	**+1.1**
KULM	**Kulim**	**30.17**	**294**	P	**P**	**08 59 08.8**	**0.0**
KULM				IAmb	IAmb	08 59 09.8	
	comp=Z,15nm,0.9s						
RPSI	**Rantau Prapat**	**30.80**	**288**	P	**P**	**08 59 13.7**	**-0.6**
TPUB	**Ta-pu**	**31.48**	**347**	P	**P**	**08 59 20.6**	**+0.5**
ARPS	**Mount Arapiles**	**31.71**	**159**	P	**P**	**08 59 23.5**	**+1.5**
SRIT	**Nakonsritamara**	**32.58**	**299**	P	**P**	**08 59 29.8**	**-0.1**
MLSI	**Meulaboh, Aceh**	**33.70**	**289**	P	**P**	**08 59 38.1**	**-1.6**
JOW	**Kunigami**	**34.14**	**0**	LR	LR	09 14 13.1	
	comp=Z,15nm,18.7s,baz=132,slow=37						
CMAR	**Chiang Mai Arr**	**38.63**	**312**	P	**P**	**09 00 21.9**	**+0.4**
	comp=Z,4.8nm,0.7s,baz=142,slow=7.2,SNR=17						
	comp=Z,4.8nm,0.7s						
CRAI	**Chiangrai**	**38.76**	**316**	P	**P**	**09 00 22.7**	**+0.1**
CRAI				IAmb	IAmb	09 00 23.7	
	comp=Z,11nm,1.2s						
CHTO	**Chiang Mai**	**38.85**	**313**	P	**P**	**09 00 23.0**	**-0.4**
WHN	**Wuhan**	**40.06**	**341**	P	**P**	**09 00 33.6**	**+0.4**
WHN				pmax	pmax		
	comp=Z,56nm,0.9s						
NJ2	**Nanjing**	**40.31**	**348**	*e*P	**P**	**09 00 37.1**	**+1.9**
NJ2				pP	**pwP**	**09 01 14.3**	**+2.9**
NJ2				sP	sP	09 01 30.3	+10
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,45nm,8.4s						
KMI	**Kunming**	**40.75**	**324**	⇑P	**P**	**09 00 39.3**	**+0.1**
KMI				pmax	pmax		
	comp=Z,18nm,1.1s						
PZH	**PanZhiHua**	**42.38**	**324**	P	**P**	**09 00 55.6**	**+3.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.3s						
KSRS	**Korea Array**	**44.73**	**360**	P	**P**	**09 01 10.2**	**-0.6**
	comp=Z,3.3nm,0.7s,baz=176,slow=9.7,SNR=18						
	comp=Z,3.3nm,0.7s						
MJAR	**Matsushiro Arr**	**44.84**	**12**	P	**P**	**09 01 09.3**	**-2.5**
	comp=Z,1.7nm,0.6s,baz=180,slow=9.5,SNR=4.0						
	comp=Z,1.7nm,0.6s						
XAN	**Xi'an**	**45.14**	**337**	P	**P**	**09 01 13.0**	**-1.2**
XAN				pmax	pmax		
	comp=Z,16nm,0.8s						
HNS	**HongShan**	**46.39**	**345**	⇓P	**P**	**09 01 23.3**	**-0.6**
HNS				pmax	pmax		
	comp=Z,22nm,0.9s						
SHL	**Shillong**	**48.16**	**314**	P	**P**	**09 01 36.8**	**-1.3**
SHL				IAmb	IAmb	09 01 41.8	
	comp=Z,11nm,0.6s						
LZH	**Lanzhou**	**48.99**	**334**	*e*P	**P**	**09 01 44.4**	**+0.2**
LZH				pP	pwP	09 02 18.8	-1.7
LZH				sP	sP	09 02 35.1	+4.3
LZH				pmax	pmax		
	comp=Z,28nm,1.1s						
HHC	**Hu-ho-hao-te**	**50.47**	**344**	*e*P	**P**	**09 01 58.8**	**+3.6**
HHC				pmax	pmax		
	comp=Z,20nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,4.6s						
CN2	**Changchun**	**51.13**	**358**	P	**P**	**09 01 59.4**	**-0.5**
USRK	**Ussuriysk Ar.**	**51.59**	**4**	P	**P**	**09 02 02.6**	**-0.7**
	comp=Z,1.8nm,0.4s,baz=184,slow=7.4,SNR=4.3						
	comp=Z,1.8nm,0.4s						
MDJ	**Mudanjiang**	**51.91**	**1**	P	**P**	**09 02 07.0**	**+1.3**
MDJ				pP	pwP	09 02 46.3	+3.4
MDJ				sP	PcP	09 03 05.5	-11
MDJ				PcP	sP	09 03 13.6	+21
MDJ				S	**S**	**09 09 22.4**	**+4.9**
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,140nm,4.5s						
ODAN	**Odare**	**52.17**	**312**	*e*P	**P**	**09 02 07.5**	**-0.8**
TAPN	**Taplejung**	**52.22**	**313**	*e*P	**P**	**09 02 08.4**	**-0.3**
XLT	**XiLinHaoTe**	**52.31**	**349**	*e*P	**P**	**09 02 08.3**	**-0.5**
XLT				pmax	pmax		
	comp=Z,16nm,0.9s						
XLT				pmax	pmax		
	comp=Z,59nm,4.9s						
RAMN	**Ramite**	**52.80**	**312**	*e*P	**P**	**09 02 12.5**	**-0.5**
	comp=Z,69nm,0.7s						
ASAJ	**Asahikawa**	**53.04**	**13**	P	**P**	**09 02 13.2**	**-0.8**
	comp=Z,12nm,1.2s,baz=231,slow=13,SNR=2.2						
	comp=Z,12nm,1.2s						
JIRN	**Jiri**	**53.50**	**313**	*e*P	**P**	**09 02 17.6**	**-0.6**
GTA	**Gaotai**	**53.53**	**333**	*e*P	**P**	**09 02 18.1**	**+0.2**
GTA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BKZ	**Black Stump Fm**	**53.61**	**134**	P	**P**	**09 02 18.0**	**-0.5**
BKZ				IAmb	IAmb	09 02 27.0	
	comp=Z,30nm,1.5s						
GUN	**Gumba**	**53.87**	**313**	*e*P	**P**	**09 02 20.0**	**-0.9**
	comp=Z,38nm,0.5s						
PKI	**Pulchoki**	**54.03**	**312**	*e*P	**P**	**09 02 20.9**	**-1.1**
	comp=Z,20nm,0.5s						
PKIN	**Phulchoki**	**54.04**	**312**	*e*P	**P**	**09 02 21.0**	**-1.0**
	comp=Z,18nm,0.5s						
DMN	**Daman**	**54.27**	**312**	*e*P	**P**	**09 02 23.2**	**-0.5**
GKN	**Gorkha**	**54.83**	**312**	*e*P	**P**	**09 02 27.1**	**-0.5**
	comp=Z,28nm,0.3s						
KOLN	**Koldanda**	**55.48**	**311**	*e*P	**P**	**09 02 31.5**	**-0.8**
DANN	**Dangsing**	**55.67**	**312**	*e*P	**P**	**09 02 32.6**	**-1.2**
	comp=Z,65nm,1.1s						
PYUN	**Piuthan**	**56.11**	**311**	*e*P	**P**	**09 02 35.9**	**-0.9**
	comp=Z,101nm,1.0s						
ULN	**Ulaanbaatar**	**58.18**	**343**	P	**P**	**09 02 51.0**	**0.0**
ULN				IAmb	IAmb	09 02 52.0	
	comp=Z,9.1nm,0.9s						
SONM	**Songino Array**	**58.34**	**343**	P	**P**	**09 02 51.8**	**-0.2**
	comp=Z,6.7nm,0.8s,baz=162,slow=8.2,SNR=32						
	comp=Z,6.7nm,0.8s						
SONM	**Songino Array**	**58.34**	**343**	P	**P**	**09 02 52.3**	**+0.3**
SONM				IAmb	IAmb	09 02 53.5	
	comp=Z,7.1nm,0.9s						
NIUE	**Niue**	**61.15**	**108**	P	**P**	**09 03 10.9**	**-0.7**
WMQ	**Urumqi**	**62.80**	**328**	*e*P	**P**	**09 03 24.5**	**+2.2**
NIL	**Nilore**	**66.12**	**312**	P	**P**	**09 03 42.7**	**-1.3**
MK31	**Makanchi Array**	**67.62**	**328**	P	**P**	**09 03 52.4**	**-0.8**
MKAR	**Makanchi Array**	**67.62**	**328**	P	**P**	**09 03 52.7**	**-0.6**
	comp=Z,2.7nm,0.6s,baz=116,slow=9.0,SNR=42						
	comp=Z,2.7nm,0.6s						
MKAR	**Makanchi Array**	**67.62**	**328**	P	**P**	**09 03 52.0**	**-1.3**
MAKZ	**Makanchi**	**67.80**	**328**	P	**P**	**09 03 53.2**	**-1.1**
MAKZ				IAmb	IAmb	09 04 11.4	
	comp=Z,3.6nm,0.5s						
NRN	**Naryn**	**68.12**	**320**	P	**P**	**09 03 55.5**	**-1.4**
YAK	**Yakutsk**	**69.34**	**1**	P	**P**	**09 04 01.0**	**-2.5**
	comp=Z,9.3nm,0.5s,baz=155,slow=3.2,SNR=1.8						
	comp=Z,9.3nm,0.5s						
KBL	**Kabul**	**69.64**	**311**	P	**P**	**09 04 05.2**	**-1.1**
KBL				IAmb	IAmb	09 04 06.2	
	comp=Z,4.5nm,0.7s						
AAK	**Ala-Archa**	**69.71**	**321**	P	**P**	**09 04 06.0**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=184,slow=5.9,SNR=5.5						
	comp=Z,1.9nm,0.7s						
AAK	**Ala-Archa**	**69.71**	**321**	P	**P**	**09 04 05.9**	**-0.5**
GAR	**Garm**	**70.68**	**316**	P	**P**	**09 04 11.4**	**-1.1**
GAR				IAmb	IAmb	09 04 13.8	
	comp=Z,9.7nm,1.0s						
ZAA0	**Zalesovo Array**	**71.21**	**335**	P	**P**	**09 04 14.0**	**-1.1**
ZAA0				IAmb	IAmb	09 04 15.3	
	comp=Z,19nm,1.4s						
ZALV	**Zalesovo Beam**	**71.21**	**335**	P	**P**	**09 04 13.1**	**-2.0**
	comp=Z,3.0nm,0.5s,baz=122,slow=5.4,SNR=15						
	comp=Z,3.0nm,0.5s						
ZALV	**Zalesovo Beam**	**71.21**	**335**	P	**P**	**09 04 13.7**	**-1.3**
CHGR	**Chuyangaron**	**71.34**	**315**	P	**P**	**09 04 15.6**	**-0.8**
CHGR				IAmb	IAmb	09 04 16.3	
	comp=Z,14nm,1.0s						
KURBB	**Kurchatov Arra**	**71.96**	**329**	P	**P**	**09 04 18.9**	**-0.8**
	comp=Z,5.8nm,0.6s,baz=131,slow=5.0,SNR=49						
	comp=Z,5.8nm,0.6s						
KURK	**Kurchatov**	**71.97**	**329**	P	**P**	**09 04 19.5**	**-0.2**
KURK				IAmb	IAmb	09 04 20.7	
	comp=Z,17nm,1.1s						
KK31	**Karatay Array**	**72.48**	**320**	P	**P**	**09 04 22.1**	**-0.9**
KKAR	**Karatay Array**	**72.48**	**320**	P	**P**	**09 04 22.1**	**-0.9**
WSAR	**Wadi Sarin**	**74.38**	**297**	P	**P**	**09 04 34.2**	**-0.3**
	comp=Z,4.2nm,0.9s,baz=170,slow=11,SNR=1.4						
	comp=Z,4.2nm,0.9s						
BVAR	**Borovoye Array**	**77.49**	**328**	P	**P**	**09 04 48.6**	**-2.8**
	comp=Z,1.8nm,0.5s,baz=120,slow=8.5,SNR=7.2						
	comp=Z,1.8nm,0.5s						
BRVK	**Borovoye**	**77.56**	**328**	P	**P**	**09 04 50.8**	**-1.1**
BRVK				IAmb	IAmb	09 04 52.0	
	comp=Z,9.2nm,1.1s						
TIXI	**Tiksi**	**79.00**	**0**	P	**P**	**09 04 57.6**	**-1.7**
	comp=Z,5.0nm,0.5s,baz=90,slow=4.0,SNR=15						
	comp=Z,5.0nm,0.5s						
TIXI	**Tiksi**	**79.00**	**0**	P	**P**	**09 04 57.3**	**-2.1**
GEYT	**Alibeck**	**79.09**	**311**	P	**P**	**09 04 59.3**	**-1.4**
	comp=Z,2.1nm,0.6s,baz=204,slow=14,SNR=3.7						
	comp=Z,2.1nm,0.6s						
GEYT	**Alibeck**	**79.09**	**311**	P	**P**	**09 04 60.0**	**-0.7**
ABKAR	**Akbulak array**	**81.73**	**322**	P	**P**	**09 05 12.9**	**-1.5**
AKTO	**Aktyubinsk**	**83.31**	**323**	P	**P**	**09 05 20.8**	**-1.9**
	comp=Z,2.4nm,0.7s,baz=85,slow=4.4,SNR=6.7						
	comp=Z,2.4nm,0.7s						
ARU	**Arti**	**85.14**	**329**	P	**P**	**09 05 30.4**	**-1.3**
	comp=Z,3.2nm,0.3s,baz=107,slow=19,SNR=5.8						
	comp=Z,3.2nm,0.3s						
ARU	**Arti**	**85.14**	**329**	P	**P**	**09 05 30.6**	**-1.1**
ARU				IAmb	IAmb	09 05 30.9	
	comp=Z,5.2nm,0.8s						
RAYN	**Ar Rayn**	**86.21**	**294**	P	**P**	**09 05 36.7**	**-1.1**
ELIB	**Princess Elisa**	**87.43**	**198**	*d*P	**P**	**09 05 44.1**	**+1.2**
	comp=Z,11nm,0.9s						
ELIB				*d*pP	**pwP**	**09 06 20.6**	**-0.7**
ELIB				*d*sP	**sP**	**09 06 38.9**	**+6.1**
KBZ	**Khabaz**	**91.66**	**314**	P	**P**	**09 06 01.4**	**-1.5**
	comp=Z,1.1nm,0.8s,baz=78,slow=1.7,SNR=4.0						
	comp=Z,1.1nm,0.8s						
TROLL	**Troll, Antarti**	**93.19**	**195**	P	**P**	**09 06 11.0**	**+1.3**
BELA	**Belgrano 2**	**94.20**	**184**	P	**P**	**09 06 13.9**	**-0.2**
BELA				IAmb	IAmb	09 06 14.5	
	comp=Z,3.9nm,0.6s						
OBN	**Obninsk**	**96.97**	**325**	LR	LR	09 54 47.9	
	comp=Z,10nm,20.8s,baz=352,slow=38						
SPITS	**Spitsbergen Ar**	**101.69**	**349**	Pdiff	**Pdif**	**09 06 46.2**	**-1.5**
	comp=Z,4.5nm,0.9s,baz=82,slow=6.0,SNR=7.6						
TXAR	**Lajitas Array**	**126.83**	**59**	PKP	**PKiKP**	**09 11 59.4**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=359,slow=12,SNR=4.9						
CPUP	**Villa Florida**	**145.95**	**171**	PKPbc	**PKPbc**	**09 12 35.0**	**-0.4**
	comp=Z,2.0nm,0.5s,baz=165,slow=0.8,SNR=6.4						

*AZER **24** 08:54:19.6±0.7, 40°.41N×41°.79E, h4^{km}±23^{km}, Error ellipse: s-maj=74.2km s-min=3.6km az=273.0*

*ISK **24** 08:54:23.6, 40°.04N×42°.24E, h5^{km}, ML4.1/24*

*TIF **24** 08:54:23.1, 40°.03N×42°.24E, h1^{km}±1^{km}*

*TEH **24** 08:54:24.5, 40°.04N×42°.25E, h6^{km}±35^{km}, ML3.9*

*NSSP **24** 08:54:24.0, 39°.98N×42°.27E, h12^{km}, Ms4.0*

*DDA **24** 08:54:24.4±0.0, 40°.02N×42°.24E, h7^{km}±2^{km}, MW4.1*

*NEIC **24** 08:54:25.2±2.0, 40°.01N±0°.01×42°.19E±0°.05, h4^{km}±6^{km}, mb4.2/20, Error ellipse: s-maj=5.3km s-min=2.0km az=94.0*

*CFUSG **24** 08:54:25.9, 40°.10N×42°.21E, h5^{km}, mb3.5/1, Eastern Turkey Magtype MSH 3.4 from 2 stations*

*MOS **24** 08:54:25.1±1.1, 40°.02N×42°.25E, h11^{km}, mb4.3/12, Error ellipse: s-maj=5.7km s-min=3.6km az=72.3*

*IDC **24** 08:54:26.6±2.3, 40°.04N×42°.26E, h14^{km}±15^{km}, mb4.0/17, mbtmp4.0/23, ML3.6/5, MS3.2/8, Error ellipse: s-maj=13.5km s-min=7.9km az=176.0*

ISC 24 08:54:25.3±1.0**, 40°.04N**±0°.01×**42°.24E**±0°.01**, h2^{km}**±6^{km}**, n267,** σ**1^{s}68**/333**, mb4.2**/44**, MS3.1**/4**, 11C-10D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOMI	**Horasan**	**0.25**	**271**	SPECP		08 54 29.0	
HOMI				P	**Pg**	**08 54 29.8**	**-0.3**
HOMI				S	**Sg**	**08 54 34.2**	**+0.7**
HOMI				*i* AML	AML	08 54 40.0	
	comp=N,7μm,0.5s						
EATA	**Eleskirt**	**0.27**	**132**	SPECP		08 54 30.0	
EATA				P	**Pg**	**08 54 30.3**	**-0.1**
EATA				S	**Sg**	**08 54 35.0**	**+1.1**
EATA				*i* AML	AML	08 54 35.0	
	comp=E,3μm,0.4s						
EATA				*i* AML	AML	08 54 38.0	
	comp=N,2μm,0.4s						
EATA	**Eleskirt**	**0.27**	**132**	Pg	**Pg**	**08 54 30.4**	**-0.1**
KOPR	**Koprukoy-ERZUR**	**0.30**	**260**	Pg	**Pg**	**08 54 30.8**	**-0.2**
KOPR				Sg	**Sg**	**08 54 35.9**	**+1.0**
KOPR	**Koprukoy-ERZUR**	**0.30**	**260**	Pg	**Pg**	**08 54 30.7**	**-0.2**
SENK	**Senkaya-Erzuru**	**0.53**	**10**	Pg	**Pg**	**08 54 35.1**	**-0.3**
SENK				Sg	**Sg**	**08 54 43.3**	**+1.1**
SENK	**Senkaya-Erzuru**	**0.53**	**10**	Pg	**Pg**	**08 54 34.9**	**-0.5**
AGRB	**Hanur-Agry**	**0.75**	**128**	Pg	**Pg**	**08 54 39.0**	**-0.6**
AGRB				Sg	**Sg**	**08 54 50.3**	**+1.0**
AGRB	**Hanur-Agry**	**0.75**	**128**	Pg	**Pg**	**08 54 39.0**	**-0.6**
BOZK	**Kars-Merkez-Bo**	**0.79**	**46**	P	**Pg**	**08 54 39.5**	**-0.8**
BOZK				S	**Sg**	**08 54 51.1**	**+0.5**
BOZK				*i* AML	AML	08 54 54.0	
	comp=E,4μm,0.6s						
KARS	**Kars**	**0.87**	**48**	Pg	**Pg**	**08 54 41.1**	**-0.9**
KARS				Sg	**Sb**	**08 54 54.7**	**-0.7**
KARS	**Kars**	**0.87**	**48**		**Pg**	**08 54 40.5**	**-1.5**
KARS				Sg	**Sb**	**08 54 54.6**	**-0.8**
KARS	**Kars**	**0.87**	**48**	PG	**Pg**	**08 54 40.5**	**-1.5**
KARS						08 54 54.6	
KARS	**Kars**	**0.87**	**48**	Pg	**Pg**	**08 54 41.0**	**-0.9**
DDEM	**Demirkent**	**0.93**	**337**	SPECP		08 54 42.0	
DDEM				P	**Pg**	**08 54 42.2**	**-0.8**
DDEM				S	**Sg**	**08 54 55.0**	**0.0**
DDEM				*i* AML	AML	08 55 03.0	
	comp=N,1μm,0.5s						
MLAZ	**Malazgirt-MUS**	**0.93**	**165**	Pg	**Pg**	**08 54 41.9**	**-1.2**
DIGO	**Kars**	**0.95**	**67**	P	**Pg**	**08 54 42.2**	**-1.2**

DIGO				S	Sb	08 54 56.5	-1.2
DIGO				*i* AML	AML	08 55 01.0	
	comp=N,1µm,0.4s						
DIGO				*i* AML	AML	08 55 04.0	
	comp=E,1µm,0.5s						
DIGO	**Kars**	0.95	67	Pg	Pg	08 54 41.9	-1.5
EMRE	**Erzurum,Aziziy**	0.97	270	SPECP		08 54 43.0	
EMRE				P	Pg	08 54 43.1	-0.7
EMRE				S	Sb	08 54 57.8	-0.4
EMRE				*i* AML	AML	08 54 59.0	
	comp=N,7µm,0.4s						
EMRE				*i* AML	AML	08 55 00.0	
	comp=E,1µm,0.5s						
KRIK	**Erzurum-spir**	1.04	287	SPECP		08 54 44.0	
KRIK				P	Pg	08 54 44.7	-0.6
KRIK				S	Sb	08 55 00.4	0.0
KRIK				*i* AML	AML	08 55 01.0	
	comp=N,3µm,0.5s						
DBAD	**Bademkaya**	1.06	337	SPECP		08 54 44.0	
DBAD				P	Pg	08 54 44.6	-0.9
DBAD				S	Sg	08 54 59.6	+0.3
DBAD				*i* AML	AML	08 55 02.0	
	comp=E,4µm,0.4s						
DBAD				*i* AML	AML	08 55 08.0	
	comp=N,3µm,0.7s						
DAGI	**Agillar**	1.06	347	SPECP		08 54 44.0	
DAGI				P	Pg	08 54 44.6	-1.1
DAGI				S	Sb	08 55 01.3	+0.4
DAGI				*i* AML	AML	08 55 02.0	
	comp=E,5µm,0.4s						
DAGI				*i* AML	AML	08 55 03.0	
	comp=N,4µm,0.5s						
ECAT	**Cat-ERZURUM**	1.06	246	P	Pg	08 54 44.2	-1.5
ECAT				S	Sb	08 55 01.8	+0.8
VRTB	**Varto-Mus**	1.07	215	Pg	Pg	08 54 45.5	-0.2
VRTB	**Varto-Mus**	1.07	215	SPECP		08 54 44.0	
VRTB				P	Pg	08 54 44.5	-1.2
VRTB				S	Sn	08 55 02.3	-0.6
VRTB				*i* AML	AML	08 55 16.0	
	comp=E,4µm,0.7s						
VRTB				*i* AML	AML	08 55 28.0	
	comp=N,3µm,0.9s						
VRTB	**Varto-Mus**	1.07	215	Pg	Pg	08 54 45.2	-0.5
AHAN	**Ardahan-Merkez**	1.16	15	SPECP		08 54 46.0	
AHAN				P	Pg	08 54 46.8	-0.7
AHAN				S	Sb	08 55 04.0	+0.3
AHAN				*i* AML	AML	08 55 09.0	
	comp=E,7µm,0.5s						
VNNZ	**Vanand**	1.22	87	⇓*i*P	Pn	08 54 49.1	-0.4
VNNZ				⇑*i*S	Sn	08 55 08.7	+2.1
DYDN	**Diyadin**	1.23	114	SPECP		08 54 47.0	
DYDN				P	Pg	08 54 47.1	-1.6
DYDN				S	Sb	08 55 05.2	-0.5
DYDN				*i* AML	AML	08 55 09.0	
	comp=E,3µm,0.6s						
DYDN				*i* AML	AML	08 55 11.0	
	comp=N,4µm,0.6s						
DYDN	**Diyadin**	1.23	114	Pg	Pg	08 54 47.4	-1.4
EAK	**Akyaka**	1.23	58	SPECP		08 54 47.0	
EAK				P	Pg	08 54 47.8	-1.1
EAK				S	Sn	08 55 09.7	+2.7
ADCV	**BITLIS_Adilcev**	1.29	163	SPECP		08 54 48.0	
ADCV				P	Pg	08 54 48.2	-1.8
ADCV				S	Sb	08 55 07.5	+0.1
ADCV	**BITLIS_Adilcev**	1.29	163	Pg	Pg	08 54 47.9	-2.1
KOPT	**Kop Dagi**	1.33	269	Pn	Pg	08 54 49.5	-1.4
KOPT	**Kop Dagi**	1.33	269	SPECP		08 54 49.0	
KOPT				P	Pg	08 54 49.7	-1.1
KOPT				S	Sn	08 55 10.2	+0.5
KOPT				*i* AML	AML	08 55 12.0	
	comp=N,3µm,0.7s						
KOPT				*i* AML	AML	08 55 19.0	
	comp=E,2µm,0.7s						
DBOC	**Borcka**	1.37	342	SPECP		08 54 49.0	
DBOC				P	Pn	08 54 49.8	-1.7
DBOC				S	Sg	08 55 09.2	-0.1
DBOC				*i* AML	AML	08 55 10.0	
	comp=E,4µm,0.5s						
MUSM	**Mu-Merkez**	1.43	203	SPECP		08 54 50.0	
MUSM				P	Pn	08 54 50.6	-1.8
MUSM				S	Sg	08 55 11.2	-0.1
MUSM	**Mu-Merkez**	1.43	203	Pg	Pn	08 54 51.2	-1.2
SLHN	**Bingol, Solhan**	1.43	221	SPECP		08 54 51.0	
SLHN				P	Pn	08 54 51.3	-1.1
SLHN				S	Sn	08 55 14.7	+2.8
SLHN				*i* AML	AML	08 55 16.0	
	comp=N,1µm,0.8s						
SLHN				*i* AML	AML	08 55 29.0	
	comp=E,2µm,0.8s						
YEDI	**Yedisu-Bingol**	1.44	246	Pn	Pn	08 54 51.8	-0.7
YEDI	**Yedisu-Bingol**	1.44	246	Pg	Pn	08 54 51.8	-0.7
ARUZ	**Aruch**	1.44	80	⇓*i*P	Pg	08 54 54.1	+1.2
ARUZ				⇓*i*S	Sn	08 55 16.0	+3.9
HOPA	**Hopa-Artvin**	1.47	336	Pn	Pn	08 54 52.2	-0.6
VMUR	**Van-Muradiye**	1.48	135	SPECP		08 54 51.0	
VMUR				P	Pn	08 54 51.7	-1.3
VMUR				S	Sn	08 55 15.8	+2.8
VMUR				*i* AML	AML	08 55 18.0	
	comp=E,4µm,1.1s						
VMUR				*i* AML	AML	08 55 18.0	
	comp=N,3µm,1.0s						
VMUR	**Van-Muradiye**	1.48	135	Pg	Pn	08 54 51.6	-1.5
IZDR	**Rize**	1.48	301	SPECP		08 54 51.0	
IZDR				P	Pn	08 54 52.0	-1.0
IZDR				S	Sb	08 55 12.4	-0.4
IZDR				*i* AML	AML	08 55 14.0	
	comp=N,2µm,0.5s						
IZDR				*i* AML	AML	08 55 14.0	
	comp=E,2µm,0.4s						
GURO	**Guroymak-BITLI**	1.50	186	Pn	Pn	08 54 52.2	-1.1
GURO	**Guroymak-BITLI**	1.50	186		Pn	08 54 51.3	-2.0
GURO	**Guroymak-BITLI**	1.50	186	Pg	Pn	08 54 51.9	-1.4
EPOS	**Posof**	1.51	14	SPECP		08 54 52.0	
EPOS				P	Pn	08 54 53.0	-0.4
EPOS				S	Sg	08 55 14.4	+0.7
EPOS				*i* AML	AML	08 55 21.0	
	comp=E,2µm,0.8s						
EPOS				*i* AML	AML	08 55 24.0	
	comp=N,3µm,0.7s						
CHOM	**Cayeli-Rize**	1.54	314	Pn	Pn	08 54 53.3	-0.5
TASB	**TASBURUN-IGDIR**	1.54	92	Pn	Pn	08 54 53.6	-0.3
CHAY	**Cayeli-Rize**	1.55	313	Pn	Pn	08 54 53.7	-0.2
AMBZ	**Amberd**	1.59	77	⇑*i*P	Pn	08 54 54.2	-0.5
AMBZ				⇑*i*S	Sg	08 55 16.6	+0.3
BNGB	**Bingl**	1.60	229	Pn	Pn	08 54 54.2	-0.5
BGD	**Bogdanovka**	1.60	40	PG	Pn	08 54 54.5	-0.4
BGD				S	Sg	08 55 17.6	+0.8
BGD	**Bogdanovka**	1.60	40	P	Pn	08 54 54.5	-0.4
BGD				S	Sg	08 55 17.6	+0.8
BATM	**Batumi**	1.61	345	PN	Pn	08 54 53.9	-0.9
BATM				S	Sg	08 55 16.8	-0.3
BATM	**Batumi**	1.61	345	P	Pn	08 54 53.9	-0.9
BATM				S	Sg	08 55 16.8	-0.3
BLIS	**Bitlis-Merkez**	1.63	183	SPECP		08 54 54.0	
BLIS				P	Pn	08 54 54.2	-1.0
BLIS				S	Sg	08 55 17.9	+0.4
BLIS				*i* AML	AML	08 55 19.0	
	comp=E,2µm,0.7s						
BLIS				*i* AML	AML	08 55 24.0	
	comp=N,2µm,0.7s						
BAYT	**Aydıntepe-Bayb**	1.64	283	Pn	Pn	08 54 55.2	-0.1
AKH	**Akhalkalaki**	1.67	35	Pn	Pn	08 54 55.6	-0.1
AKH	**Akhalkalaki**	1.67	35	Pn	Pn	08 54 55.6	-0.1
AKH	**Akhalkalaki**	1.67	35	PN	Pn	08 54 55.7	-0.1
AKH				S	Sg	08 55 18.8	0.0
AKH	**Akhalkalaki**	1.67	35	P	Pn	08 54 55.7	-0.1
AKH				S	Sg	08 55 18.8	0.0
VANB	**Van**	1.70	148	Pn	Pb	08 54 56.6	-0.7
TVAN	**Van**	1.76	149	SPECP		08 54 57.0	
TVAN				P	Pn	08 54 57.4	+0.4
TVAN				S	Sg	08 55 25.7	+3.7
TVAN				*i* AML	AML	08 55 37.0	
	comp=N,701nm,0.7s						
ABS	**Abastumani**	1.77	14	PN	Pn	08 54 57.2	+0.1
ABS				S	Sg	08 55 22.4	+0.3
ABS	**Abastumani**	1.77	14	P	Pn	08 54 57.2	+0.1
ABS				S	Sg	08 55 22.4	+0.3
AKDM	**Akdamar-Van**	1.81	161	Pn	Pn	08 54 56.8	-0.8
GEVA	**Gevas**	1.84	159	Pn	Pn	08 54 56.8	-1.4
GEVA	**Gevas**	1.84	159	SPECP		08 54 58.0	
GEVA				P	Pn	08 54 58.1	0.0
GEVA				S	Sg	08 55 24.9	+0.5
GEVA				*i* AML	AML	08 55 26.0	
	comp=N,1µm,0.7s						
NRKZ	**NAREK**	1.86	91	*e*P	Pn	08 54 58.4	+0.1
NRKZ				*e*S	Sb	08 55 23.8	-0.1
STE	**Stepanavan**	1.89	59	⇓*i*P	Pb	08 55 00.0	-0.6
STE				⇓S	Sg	08 55 26.4	+0.5
KAPZ	**Kaputan**	1.91	81	⇑*i*P	Pn	08 54 59.3	+0.2
KAPZ				⇑*i*S	Sb	08 55 25.4	+0.1
GNI	**Garni**	1.93	86	Pn	Pn	08 54 59.4	+0.2
	34nm,0.3s,baz=298,slow=5.4,SNR=44						
GNI				Lg	Lg	08 55 29.4	
	40nm,0.3s,baz=249,slow=16,SNR=5.7						
GNI				LR	LR	08 55 59.7	
	comp=Z,244nm,20.6s,baz=39,slow=49						
GNI	**Garni**	1.93	86	⇓*i*P	Pn	08 54 59.2	0.0
GNI				⇑*i*S	Sb	08 55 25.0	-0.8
GNI	**Garni**	1.93	86	Pn	Pn	08 54 59.2	0.0
GNI	**Garni**	1.93	86	Pn	Pn	08 54 58.4	-0.8
GNI	**Garni**	1.93	86	*c i*PN	Pn	08 54 58.8	-0.4
OZAP	**Van, Ozalp-Mer**	1.94	135	SPECP		08 55 01.0	
OZAP				P	Pb	08 55 01.3	-0.2
OZAP				S	Sg	08 55 30.5	+2.9
BRNG	**Burnasheti**	1.99	37	PN	Pb	08 55 01.0	-1.3
BRNG				S	Sg	08 55 28.6	-0.5
BRNG	**Burnasheti**	1.99	37	P	Pb	08 55 01.0	-1.3
BRNG				S	Sg	08 55 28.6	-0.5
ERZN	**Erzincan**	1.99	258	Pn	Pn	08 54 59.9	-0.2
MAKU	**Maku**	2.01	109	Pn	Pn	08 55 00.3	-0.1
HYR	**Heyderabad**	2.04	98	P	Pg	08 55 03.8	-0.5
	SNR=36						
HYR				S	Sg	08 55 36.2	+5.4
TRLG	**Trialeti**	2.06	43	PN	Pn	08 55 01.3	+0.2
TRLG	**Trialeti**	2.06	43	P	Pn	08 55 01.3	+0.2
MACK	**Trabzon**	2.08	296	SPECP		08 55 02.0	
MACK				P	Pb	08 55 03.0	-0.9
MACK				S	Sg	08 55 33.0	+0.8
MACK				*i* AML	AML	08 55 36.0	
	comp=E,2µm,0.4s						
MACK				*i* AML	AML	08 55 36.0	
	comp=N,2µm,0.4s						
KTUT	**Trabzon**	2.10	297	Pn	Pn	08 55 02.3	+0.8
PERV	**Siirt/Pervari-**	2.11	173	P	Pn	08 55 02.8	+1.0
PERV				S	Sg	08 55 32.5	-0.4
KZRT	**Kazreti**	2.12	50	PN	Pn	08 55 02.3	+0.4
KZRT				S	Sb	08 55 30.8	-0.6
KZRT	**Kazreti**	2.12	50	P	Pn	08 55 02.3	+0.4
KZRT				S	Sb	08 55 30.8	-0.6
EZC	**Erzincan**	2.24	263	PN	Pn	08 54 59.4	-4.1
BTMN	**Batman**	2.28	200	SPECP		08 55 04.0	
BTMN				P	Pn	08 55 04.2	+0.2
TNCL	**Tunceli-Merkez**	2.28	247	SPECP		08 55 02.0	
TNCL				P	Pn	08 55 04.1	0.0
KELT	**Kelkit**	2.29	274	P	Pb	08 55 05.9	-1.6
KELT				S	Sg	08 55 44.5	+5.7
TKB	**Tkibuli**	2.38	14	PN	Pn	08 55 06.0	+0.7
TKB				S	Sb	08 55 37.8	-0.8
TKB	**Tkibuli**	2.38	14	P	Pn	08 55 06.0	+0.7
TKB				S	Sb	08 55 37.8	-0.8
QZX	**Qazax, Azerbai**	2.60	66	P	Pn	08 55 08.8	+0.4
	SNR=39						
QZX				S	Sg	08 55 47.2	-1.5
SEAG	**Tbilisi Sea**	2.60	48	PN	Pn	08 55 08.7	+0.3
SEAG	**Tbilisi Sea**	2.60	48	P	Pn	08 55 08.7	+0.3
SBZ	**Shahbuz**	2.64	103	P	Pb	08 55 12.6	-0.8
	SNR=68						
SBZ				S	Sg	08 55 51.8	+1.8
DYBB	**Diyarbakir**	2.65	219	Pn	Pn	08 55 09.1	0.0
NAX	**Nakhchivan**	2.66	108	P	Pb	08 55 13.0	-0.7
	SNR=35						
NAX	**Nakhchivan**	2.66	108	PN	Pb	08 55 13.0	-0.7
ALUC	**Giresun/Alucra**	2.67	278	P	Pb	08 55 11.9	-2.1
ONI	**Oni**	2.71	19	Pn	Pn	08 55 10.3	+0.4
ONI	**Oni**	2.71	19		Pn	08 55 10.2	+0.4
ONI	**Oni**	2.71	19	PN	Pn	08 55 10.6	+0.7
ONI	**Oni**	2.71	19	P	Pn	08 55 10.6	+0.7
MIDY	**Mardin/Midyat-**	2.71	194	P	Pb	08 55 13.2	-1.4
HAKT	**HAKKARI**	2.73	155	P	Pb	08 55 13.9	-1.2
GDB	**GEDABAY**	2.77	75	P	Pn	08 55 11.7	+0.8
	SNR=56						
GDB				S	Sg	08 55 52.9	-1.5
MAZI	**Mazidag**	2.93	209	Pn	Pn	08 55 12.9	-0.2
GUDG	**Gudauri**	2.95	34	PN	Pn	08 55 14.0	+0.6
GUDG	**Gudauri**	2.95	34	P	Pn	08 55 14.0	+0.6
KEMA	**Kemaliye**	2.99	256	SPECP		08 55 15.0	
KEMA				P	P	08 55 15.0	+1.2
IMRD	**Marand**	3.00	115	Pn	Pn	08 55 15.2	+1.2
ZEI	**Tsey**	3.02	24	*e*PN	Pn	08 55 13.9	-0.4
ZEI				pmax	pmax		
	comp=Z,90nm,0.6s						
SUSE	**Susehri**	3.10	274	P	Pn	08 55 17.5	+2.2
ORD	**Ordubad**	3.11	110	P	Pb	08 55 20.0	-1.4
	SNR=24						
ORD				S	Sg	08 56 05.6	+0.2
ARPR	**Arapgir-MALATY**	3.16	254	Pn	Pn	08 55 16.3	+0.1
ISHB	**Shabestar**	3.16	123	Pn	Pn	08 55 17.5	+1.2
GANJ	**Ganja**	3.18	78	P	Pn	08 55 17.4	+1.0
	SNR=11						
GANJ				S	Sb	08 56 01.3	-0.5
GANJ	**Ganja**	3.18	78	PN	Pn	08 55 17.4	+1.0
NEY	**Neytrino**	3.22	6	*ce*PN	Pn	08 55 18.9	+1.8
SHTL	**Shatili**	3.41	39	PN	Pn	08 55 20.7	+1.0
SHTL	**Shatili**	3.41	39	P	Pn	08 55 20.7	+1.0
ARXR	**Arkhyz**	3.59	349	*i* PN	Pn	08 55 23.2	+1.1
NCK	**Nalchik**	3.60	16	*i* PN	Pn	08 55 23.5	+1.4
ZKTA	**Zakatala**	3.69	63	P	Pn	08 55 23.3	0.0
	SNR=20						
ZKTA				S	Sb	08 56 11.8	-4.6
SHA1	**Shidzhatmaz**	3.71	5	*i* PN	Pn	08 55 24.9	+1.1
KBZ	**Khabaz**	3.72	7	Pn	Pn	08 55 24.6	+0.9
	comp=Z,1.2nm,0.3s,baz=196,slow=11,SNR=24						
KBZ				LR	LR	08 57 16.4	
	comp=Z,142nm,21.1s,baz=258,slow=46						
	comp=Z,5.9nm,0.5s						
URFA	**Urfa**	3.72	227	Pn	Pn	08 55 24.5	+0.6
CUKAN	**kangal_SIVAS**	3.75	260	P	Pn	08 55 26.5	+2.2
IAZR	**Azarshahr**	3.76	128	Pn	Pn	08 55 25.4	+0.9
RSDY	**Resadiye-TOKAT**	3.77	277	Pn	Pn	08 55 25.3	+0.8
KIV	**Kislovodsk**	3.92	5	Pn	Pn	08 55 28.1	+1.4
KIV	**Kislovodsk**	3.92	5	*e*PN	Pn	08 55 28.2	+1.5
KIV				pmax	pmax		
	comp=Z,38nm,1.0s						
KIV				MLR	MLR		
	comp=Z,7.0nm,7.0s						
KVAR	**Kislovodsk Arr**	3.92	5	Pn	Pn	08 55 27.8	+1.1
	baz=160,slow=5.3						
KVAR				Lg	Lg	08 56 30.5	
	baz=292,slow=11						
	comp=Z,5.6nm,0.5s						
RPOR	**Krasnaya Polya**	3.94	339	*i* PN	Pn	08 55 27.1	+0.3
SEKA	**Sheki**	3.95	71	P	Pn	08 55 27.9	+0.9
SEKA				S	Sb	08 56 20.7	-3.3
SEKA	**Sheki**	3.95	71	PN	Pn	08 55 27.9	+0.9
BTLR	**Botlikh**	3.98	48	*i* PN	Pn	08 55 29.8	+2.4
SOC	**Sochi**	4.01	333	*e*PN	Pn	08 55 26.9	-0.8
SOC				*e*		08 56 14.4	
SOC				pmax	pmax		
	comp=Z,61nm,0.6s						
SOC				MLR	MLR		
	comp=Z,82nm,12.0s						
IHRS	**Heris**	4.11	113	Pn	Pn	08 55 31.6	+2.3
GROC	**Groznyy**	4.13	39	*e*PN	Pb	08 55 40.7	+2.0
GROC				*e*		08 56 18.5	
GROC				*e*		08 56 41.0	
GROC				smax	smax		
	comp=E,92nm,0.8s						
GROC				smax	smax		
	comp=N,317nm,1.8s						
GROC				smax	smax		
	comp=E,280nm,1.5s						
AKCA	**Adyaman/G¶l**	4.20	239	P	Pn	08 55 30.3	-0.1
GUZR	**Guzeripl'**	4.25	339	*c i*PN	Pn	08 55 32.3	+1.1
MAHB	**Mahabad**	4.26	139	Pn	Pn	08 55 32.7	+1.4
GNBR	**Gunib**	4.27	55	*i* PN	Pn	08 55 33.5	+2.2
QBL	**Gabala**	4.37	76	P	Pn	08 55 34.6	+1.9
	SNR=7.8						
QBL				S	Sn	08 56 29.0	+4.9
AKT	**Akhty**	4.41	69	*e*PN	Pn	08 55 31.6	-1.8
AKT				*e*		08 55 45.5	
AKT				*i* S	Sn	08 56 24.8	-0.6
AKT				*e*		08 56 40.6	
AKT				*e*		08 56 50.7	
AKT				pmax	pmax		
	comp=Z,22nm,0.9s						
AKT				smax	smax		
	comp=E,43nm,0.7s						
AKT				smax	smax		
	comp=N,79nm,1.1s						
AKT				smax	smax		
	comp=N,36nm,1.1s						
AKT				MLR	MLR		
	comp=Z,41nm,2.0s						
DBC	**Dubki**	4.55	48	*i* PN	Pn	08 55 36.6	+1.3
XNQ	**Khinaliq**	4.63	74	P	Pn	08 55 37.3	+0.8
	SNR=5.8						
XNQ				S	Sn	08 56 36.5	+5.5
YRD	**Yardimli**	4.78	102	P	Pn	08 55 42.5	+3.9
	SNR=13						
YRD				S	Sb	08 56 44.6	-3.4
QSAR	**Qusar**	4.81	70	P	Pn	08 55 39.1	+0.4
MAK	**Makhachkala**	4.92	52	*e*PN	Pn	08 55 37.7	-2.4
MAK				*e*S	Sn	08 56 35.6	-2.0
MAK				pmax	pmax		
	comp=Z,48nm,0.4s						
MAK				MLR	MLR		
	comp=Z,264nm,7.0s						
DRN	**Derbent**	5.02	65	*i* PN	Pn	08 55 43.6	+2.0
SIZA	**Siyzn**	5.18	76	P	Pn	08 55 45.9	+2.0
SIZA				S	Sn	08 56 50.4	+6.1
ANN	**Anapa**	5.93	325	*e*P	Pn	08 55 54.7	+0.6
ANN				*e*S	Sn	08 57 05.5	+2.8
ANN				pmax	pmax		
	comp=Z,16nm,0.5s						
IDHR	**Dehrash**	6.27	147	Pn	Pn	08 55 59.8	+0.8
BR131	**Keskin Array S**	6.62	270	*i* P	Pn	08 56 06.6	+2.9
BRTR	**Keskin Array B**	6.62	270	Pn	Pn	08 56 06.7	+3.0
	comp=Z,2.0nm,1.0s,baz=106,slow=13,SNR=7.5						
BRTR				Pg	Pb	08 56 23.6	+2.4
	baz=47,slow=9.2,SNR=4.2						
BRTR				LR	LR	08 59 03.5	
	comp=Z,109nm,21.2s,baz=87,slow=42						
SUDU	**Sudak**	7.21	315	*e*P	Pn	08 56 14.4	+2.7
SUDU				*e*S	Sn	08 57 36.5	+2.3
SUDU	**Sudak**	7.21	315	*e*P	Pn	08 56 14.4	+2.7
SUDU				Pm		08 56 17.0	
	comp=Z,13nm,0.4s						
SUDU				*e*S	Sn	08 57 36.5	+2.3
SUDU				Sm		08 57 41.5	
	comp=N,29nm,0.7s						
SUDU				Sm		08 57 41.5	
	comp=E,8.0nm,0.6s						
YAL	**Yalta**	7.46	309	*e*P	Pn	08 56 16.7	+1.7
YAL				Pm		08 56 19.2	
	comp=Z,29nm,0.3s						
SIM	**Simferopol'**	7.75	312	*e*P	Pn	08 56 26.6	+7.6
SIM				S	Sn	08 57 54.3	+7.0
SIM				pmax	pmax		
	comp=Z,14nm,0.7s						
SIM				smax	smax		
	comp=N,40nm,0.9s						
SEV	**Sevastopol'**	7.78	308	*e*P	Pn	08 56 18.9	-0.6
SEV				Pm		08 56 22.5	
	comp=Z,4.0nm,0.3s						
SEV				*e*S	Sn	08 57 45.7	-2.4
SEV				Sm		08 57 47.4	
	comp=N,2.0nm,0.3s						
SEV				Sm		08 57 47.4	
	comp=E,4.0nm,0.5s						
SEV	**Sevastopol'**	7.78	308	*e*P	Pn	08 56 18.9	-0.6
SEV				*e*S	Sn	08 57 45.7	-2.4
ASF	**Jabal al Asfar**	8.96	210	Pn	Pn	08 56 35.5	-0.3
	comp=E,0.1nm,0.3s,baz=96,slow=15,SNR=2.4						
	comp=E,1.1nm,0.5s						
BELG	**Belogornoye**	12.90	15	*i* P	Pn	08 57 30.4	+0.9
MLR	**Muntele Rosu**	13.14	300	Pn	Pn	08 57 34.5	+1.4
	comp=E,0.3nm,0.3s,baz=87,slow=14,SNR=1.6						
	comp=E,1.6nm,0.5s						
BURAR	**Bucovina Array**	14.41	307	⇓P	Pn	08 57 44.0	-6.3
BURAR				⇑S	P	08 58 00.8	+3.4
IDI	**Anoyia**	14.53	256	LR	LR	09 03 24.5	
	comp=E,53nm,19.6s,baz=96,slow=37						
AKTO	**Aktyubinsk**	15.18	42	Pn	Pn	08 57 57.1	-3.5
	comp=E,0.3nm,0.3s,baz=241,slow=7.9,SNR=5.3						
	comp=E,1.5nm,0.4s						
OBN	**Obninsk**	15.55	348	⇓*e*P	Pn	08 58 05.6	+0.2
OBN				*i* S	Sn	09 00 51.0	-7.1
OBN				pmax	pmax		
	comp=Z,11nm,0.5s						
ABKAR	**Akbulak array**	15.58	48		Pn	08 58 04.4	-1.4
RAYN	**Ar Rayn**	16.70	170	Pn	Pn	08 58 19.2	-1.3
RAYN	**Ar Rayn**	16.70	170	P	Pn	08 58 19.2	-1.3
RAYN				pmax	pmax		
	comp=Z,16nm,1.4s						
NACGM	**Naroch**	18.11	330	*e*P	Pn	08 58 29.5	-8.3
	comp=Z,13nm,0.8s,baz=139						
KIRV	**Kirov**	19.12	12	*i* P	Pn	08 58 50.9	+0.8
ARU	**Arti**	19.59	28	P	Pn	08 58 56.8	+1.1
	comp=Z,4.4nm,0.4s,baz=206,slow=6.5,SNR=7.9						
ARU				LR	LR	09 08 14.5	
	comp=Z,68nm,18.2s,baz=330,slow=42						
ARU	**Arti**	19.59	28	*d i*P	Pn	08 58 56.3	+0.6
ARU				S	S	09 02 40.4	+4.3
ARU				pmax	pmax		
	comp=Z,20nm,2.0s						
TIP	**Timpagrande**	19.63	276	P	P	08 58 53.3	-1.9
RONA	**Rosalia, Austr**	20.14	301	*e*P	Pn	08 59 02.3	-0.1
	comp=Z,15nm,1.1s						
CUC	**Castrocucco**	20.21	278	P	P	08 59 01.0	-0.5
CONA	**Conrad Observa**	20.48	301	*i* P	Pn	08 59 06.7	+0.3
	comp=Z,8.1nm,0.9s						
ARSA	**Arzberg**	20.56	299	*e*pP	Pn	08 59 10.3	+2.9
	comp=Z,5.1nm,1.0s						
SOKA	**Soboth**	20.80	298	*e*Pn	Pn	08 59 09.2	-1.0
	comp=Z,9.6nm,1.2s						
CHGR	**Chuyangaron**	20.84	85	P	P	08 59 08.3	-0.1
CHGR				IAmb	IAmb	08 59 17.3	
	comp=Z,17nm,0.9s						
CHGR	**Chuyangaron**	20.84	85	P	P	08 59 08.3	-0.1
CHGR				pmax	pmax		
	comp=Z,17nm,0.9s						
KLMR	**Klimovskoe**	20.91	356	*e*P	P	08 59 07.5	-1.2
KLMR				AMP		08 59 13.5	
	comp=Z,56nm,1.8s						
KLMR	**Klimovskoe**	20.91	356	*e*P	P	08 59 07.5	-1.2
KLMR				pmax	pmax		
	comp=Z,56nm,1.8s						
VSU	**Vasula**	20.93	337	*i* P	Pn	08 59 11.4	-0.1
VSU				pmax	pmax		
	comp=Z,62nm,1.1s						
OBKA	**Obir**	21.10	297	*e*Pn	P	08 59 12.4	+1.3
	comp=Z,3.8nm,0.8s						
CHVC	**Chvalec**	21.11	309	*e*P	P	08 59 16.9	+5.8
CHVC	**Chvalec**	21.11	309	*e*P	P	08 59 16.9	+5.8
KK31	**Karatay Array**	21.33	73	P	P	08 59 13.0	-0.6
KK31				IAmb	IAmb	08 59 20.2	
	comp=Z,11nm,1.2s						
KK31	**Karatay Array**	21.33	73	P	P	08 59 13.0	-0.6
KK31				pmax	pmax		
	comp=Z,11nm,1.2s						
KKAR	**Karatay Array**	21.33	73	P	P	08 59 13.3	-0.3
KKAR	**Karatay Array**	21.33	73	P	P	08 59 13.3	-0.3
GAR	**Garm**	21.66	84	P	P	08 59 18.3	+1.2
SABO	**M.te Sabotino**	21.70	295	P	P	08 59 16.8	-0.6
SABO				IAmb	IAmb	08 59 22.0	
	comp=Z,30nm,1.2s						
WSAR	**Wadi Sarin**	21.75	136	P	P	08 59 20.3	+2.2
	comp=Z,9.9nm,1.0s,baz=294,slow=12,SNR=1.5						
AQU	**L'Aquila**	21.78	286	P	P	08 59 14.2	-4.1
AQU				IAmb	IAmb	08 59 23.5	
	comp=Z,13nm,0.8s						
AQU	**L'Aquila**	21.78	286	P	P	08 59 14.3	-4.1
AQU				pmax	pmax		
	comp=Z,13nm,0.8s						
BIOA	**Bad Ischl, Aus**	21.90	300	*e*pP	pP	08 59 21.7	+1.2
	comp=Z,9.6nm,1.2s						
KBA	**Koelnbreinsper**	22.00	298	*e*P	P	08 59 22.0	+1.1
	comp=Z,10nm,0.9s						
KBA	**Koelnbreinsper**	22.00	298	P	P	08 59 21.8	+0.9
GERES	**GERESS Array B**	22.09	303	P	P	08 59 22.8	+1.1
	comp=Z,1.5nm,0.8s,baz=119,slow=11,SNR=6.0						
	comp=Z,1.5nm,0.8s						
KHC	**Kasperske Hory**	22.23	304	*e*P	P	08 59 26.7	+3.6
KHC	**Kasperske Hory**	22.23	304	*i* P	P	08 59 23.9	+0.8
KHC				pmax	pmax		
	comp=Z,7µm,1.0s						
DRK	**Karamyk**	22.69	82	P	P	08 59 25.0	-3.4
DRK				IAmb	IAmb	08 59 34.1	
	comp=Z,15nm,1.4s						

BRVK	Borovoye	23.09	46	P	P	08 59 32.5	+0.4
BRVK				IAmb	IAmb	08 59 43.9	
	comp=Z,4.9nm,0.9s						
BRVK	Borovoye	23.09	46	i P	P	08 59 34.7	+2.5
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BVAR	Borovoye Array	23.14	46	P	P	08 59 33.2	+0.5
	comp=Z,2.7nm,0.8s,baz=260,slow=7.4,SNR=9.6						
	comp=Z,2.7nm,0.8s						
CLL	Collm	23.17	309	P	P	08 59 33.4	+0.4
CLL				IAmb	IAmb	08 59 41.6	
	comp=Z,10nm,1.3s						
CLL	Collm	23.17	309	eP	P	08 59 33.0	0.0
CLL				i x	x	08 59 35.7	
	comp=Z,6.0nm,1.1s						
CLL				ex	x	08 59 39.0	
CLL	Collm	23.17	309	eP	P	08 59 33.0	0.0
CLL				i		08 59 35.7	
WTTA	Wattenberg	23.18	298	epP	pP	08 59 34.3	0.0
	comp=Z,12nm,0.9s						
WATA	Walderalm	23.23	298	pP	pP	08 59 35.7	+0.9
	comp=Z,4.6nm,0.6s						
SQTA	Sankt Quirin	23.46	298	epP	pP	08 59 37.2	0.0
	comp=Z,9.0nm,0.7s						
MOTA	Moosalm	23.55	298	eP	P	08 59 36.1	-1.0
	comp=Z,14nm,1.1s						
FINES	FINESS Array B	23.61	340	P	P	08 59 38.3	+1.0
	comp=Z,2.9nm,0.8s,baz=147,slow=14,SNR=9.6						
	comp=Z,2.9nm,0.8s						
FINES	FINESS Array B	23.61	340	P	P	08 59 36.1	-1.2
FINES	FINESS Array B	23.61	340	P	P	08 59 36.1	-1.2
FETA	Feichten	23.77	297	epP	P	08 59 39.7	+0.5
	comp=Z,13nm,0.9s						
FUORN	Ofenpass-Fuorn	24.05	296	P	P	08 59 42.9	+0.8
FUORN				IAmb	IAmb	08 59 47.2	
	comp=Z,8.2nm,0.8s						
AAK	Ala-Archa	24.28	73	P	P	08 59 42.9	-1.2
AAK	Ala-Archa	24.28	73	i P	P	08 59 45.0	+0.9
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
DAVOX	Davos/Dischmat	24.33	297	P	P	08 59 44.3	-0.2
	comp=Z,8.9nm,0.6s,baz=125,slow=12,SNR=12						
	comp=Z,8.9nm,0.6s						
DAVA	Damuels	24.37	298	i pP	P	08 59 44.8	-0.1
	comp=Z,12nm,0.7s						
SLE	Schleitheim	25.35	299	P	P	08 59 54.7	+1.1
NRN	Naryn	25.53	76	P	P	08 59 56.2	+0.6
NRN				IAmb	IAmb	09 00 06.9	
	comp=Z,5.6nm,1.3s						
NRN	Naryn	25.53	76	P	P	08 59 56.2	+0.6
NRN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
HFS	Hagfors	26.83	328	P	P	09 00 06.1	-0.7
	comp=Z,2.7nm,0.7s,baz=168,slow=24,SNR=9.0						
HFS				LR	LR	09 11 57.2	
	comp=Z,24nm,21.9s,baz=59,slow=39						
	comp=Z,2.7nm,0.7s						
KURBB	Kurchatov Arra	27.36	55	P	P	09 00 11.6	-0.1
	comp=Z,1.9nm,0.6s,baz=266,slow=9.0,SNR=14						
	comp=Z,1.9nm,0.6s						
KURK	Kurchatov	27.43	55	P	P	09 00 11.9	-0.4
KURK				IAmb	IAmb	09 00 13.6	
	comp=Z,4.7nm,1.0s						
KURK	Kurchatov	27.43	55	P	P	09 00 11.9	-0.4
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NOA	NORSAR Array B	28.36	328	P	P	09 00 20.2	-0.3
	comp=Z,0.6nm,0.8s,baz=125,slow=8.8,SNR=2.0						
NOA				LR	LR	09 11 27.3	
	comp=Z,28nm,18.2s,baz=300,slow=36						
	comp=Z,0.6nm,0.8s						
MK31	Makanchi Array	29.62	63	P	P	09 00 31.6	-0.3
MK31	Makanchi Array	29.62	63	P	P	09 00 31.6	-0.3
MK31				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	29.62	63	P	P	09 00 32.2	+0.4
	comp=Z,1.5nm,0.7s,baz=278,slow=7.1,SNR=15						
	comp=Z,1.5nm,0.7s						
MKAR	Makanchi Array	29.62	63	P	P	09 00 31.7	-0.1
MKAR	Makanchi Array	29.62	63	P	P	09 00 31.7	-0.1
ARCES	ARCESS Array B	30.86	349	LR	LR	09 14 39.0	
	comp=Z,63nm,18.1s,baz=206,slow=39						
ZAA0	Zalesovo Array	31.68	50	P	P	09 00 48.0	-1.9
ZALV	Zalesovo Beam	31.68	50	P	P	09 00 49.0	-0.9
	comp=Z,2.2nm,0.5s,baz=255,slow=10,SNR=8.3						
	comp=Z,2.2nm,0.5s						
ZALV	Zalesovo Beam	31.68	50	P	P	09 00 48.1	-1.8
ZALV	Zalesovo Beam	31.68	50	P	P	09 00 48.1	-1.8
DGZ	Jazzator, Alta	33.01	58	i P	P	09 01 02.6	+0.8
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
WMQ	Urumqi	33.70	68	eP	P	09 01 10.6	+2.7
ESDC	Sonseca Array	35.16	285	P	P	09 01 19.3	-1.1
	comp=Z,1.2nm,0.9s,baz=81,slow=9.2,SNR=4.5						
	comp=Z,1.2nm,0.9s						
TORD	Torodi Ar. Bea	44.51	245	P	P	09 02 37.2	-1.1
	comp=Z,4.2nm,0.3s,baz=39,slow=9.3,SNR=1.8						
	comp=Z,4.2nm,0.3s						
ULN	Ulaanbaatar	46.07	58	ceP	P	09 02 50.1	-0.6
ULN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
PZH	PanZhiHua	50.69	86	P	P	09 03 26.6	+0.1
PZH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,4.4s						
HHC	Hu-ho-hao-te	51.46	65	eP	P	09 03 31.0	-1.1
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,4.9s						
TIXI	Tiksi	51.53	24	i P	P	09 03 31.9	-0.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s						
DBIC	Dimbokro	53.62	245	P	P	09 03 46.1	-2.2
	comp=Z,2.6nm,0.6s,baz=72,slow=3.7,SNR=5.2						
	comp=Z,2.6nm,0.6s						
KLR	Kul'dur	60.78	49	P	P	09 04 38.0	-0.5
	comp=Z,1.0nm,0.5s,baz=290,slow=4.1,SNR=4.4						
	comp=Z,1.0nm,0.5s						
FRB	Frobisher Bay	63.08	332	P	P	09 04 53.2	-0.4
	comp=Z,3.0nm,0.9s,baz=53,slow=8.3,SNR=7.2						
	comp=Z,3.0nm,0.9s						
KSRS	Korea Array	64.28	62	P	P	09 05 01.4	-0.7
	comp=Z,2.7nm,0.8s,baz=294,slow=6.9,SNR=11						
	comp=Z,2.7nm,0.8s						
BILL	Bilibino	64.40	20	⇓eP	P	09 05 04.9	+2.6
BILL				e		09 05 07.8	
BILL						09 05 38.0	
BILL						09 07 27.0	
BILL				S	S	09 13 39.0	-2.3
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MJAR	Matsushiro Arr	71.61	58	P	P	09 05 47.7	-0.5
	comp=Z,2.5nm,0.9s,baz=307,slow=9.0,SNR=4.7						
	comp=Z,2.5nm,0.9s						
YKA	Yellowknife Ar	76.12	349	P	P	09 06 13.2	-1.0
	comp=Z,0.6nm,0.9s,baz=17,slow=5.6,SNR=7.4						
YKA				LR	LR	09 39 55.2	
	comp=Z,114nm,20.4s,baz=168,slow=36						
	comp=Z,0.6nm,0.9s						

IDC 24 08:58:01.1±1.8**, 49°.96S×30°.35E, h0^{km}, mb3.7**/2**, mbtmp3.7**/2**, MS3.1**/2**, Error ellipse: s-maj=275.2km s-min=45.0km az=32.0, South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	Sutherland	18.94	334	LR	LR	09 08 10.9	
	comp=Z,41nm,21.0s,baz=134,slow=32						
LSZ	Lusaka	34.63	356	LR	LR	09 18 21.1	
	comp=Z,40nm,18.1s,baz=264,slow=35						
ASAR	Alice Springs	80.45	115	P	P	09 10 14.7	-0.1
	0.5nm,0.6s,baz=211,slow=5.0,SNR=7.4						
	0.5nm,0.6s						
WRA	Warramunga Arr	83.57	113	P	P	09 10 31.2	0.0
	0.6nm,0.8s,baz=209,slow=3.4,SNR=3.3						
	0.6nm,0.8s						
NVAR	Mina Array Bea	154.93	255	PKP	PKPdf	09 17 55.5	0.0
	0.2nm,0.6s,baz=160,slow=2.9,SNR=2.6						
YKA	Yellowknife Ar	157.17	317	PKPab	PKPab	09 18 27.6	-0.6
	0.4nm,0.7s,baz=95,slow=4.7,SNR=6.0						

IDC ***24*** *09:00:53.9±0.5, 3°.42N×79°.36W, h0^{km}, mb4.9/26, mbtmp4.9/33, ML4.5/7, MS4.2/63, Error ellipse: s-maj=17.5km s-min=10.1km az=56.0*

MOS ***24*** *09:00:55.9±1.2, 3°.32N×79°.47W, h25^{km}, mb5.4/49, Error ellipse: s-maj=9.3km s-min=4.8km az=105.1*

NEIC ***24*** *09:00:56.0±1.8, 3°.31N±0°.05×79°.41W±0°.07, h9^{km}±2^{km}, mb5.3/614, Mww5.2/34, Error ellipse: s-maj=9.8km s-min=6.9km az=69.0*

NEIC ***24*** *09:00:56.2, 3°.30N×79°.39W, h16^{km}, Moment Tensor Solution. Duration: 2^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-7.81; $M_{\theta\theta}$5.91; $M_{\phi\phi}$1.90; $M_{r\theta}$4.20; $M_{\theta\phi}$0.11; $M_{\phi r}$-1.56; Fault plane solution: $M_0$8.16000×10^{16} NP1: ϕ_s279.28000°, δ61.37000°, λ-82.50000°. NP2: ϕ_s83.92000°, δ29.52000°, λ-103.44000°. Principal axes: T 7.1116, Plg16.0000°, Azm4.0000°; N 2.0951, Plg7.0000°, Azm96.0000°; P -9.2067, Plg73.0000°, Azm207.0000°;*

UPA ***24*** *09:00:56.6±3.9, 3°.62N×79°.35W, h0^{km}±69^{km}, MW4.6*

RSNC ***24*** *09:00:56.0±1.2, 3°.38N×79°.48W, h32^{km}±12^{km}, ML4.3, Mw4.5*

NEIC ***24*** *09:00:56.2, 3°.30N×79°.39W, h16^{km}*

GCMT ***24*** *09:00:59.0±0.1, 3°.31N±0°.01×79°.59W±0°.01, h12^{km}, MW5.2/139, Moment Tensor Solution. s102,c145; s139,c246; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.65±.01; $M_{\theta\theta}$0.60±.01; $M_{\phi\phi}$0.04±.01; $M_{r\theta}$0.46±.02; $M_{\theta\phi}$-0.01±.01; $M_{\phi r}$0.23±.03; Best double couple: $M_0$0.80700×10^{17} NP1: ϕ_s255.00000°, δ65.00000°, λ-103.00000°. NP2: ϕ_s103.00000°, δ28.00000°, λ-65.00000°. Principal axes: T 0.7570, Plg19.0000°, Azm354.0000°; N 0.0990, Plg12.0000°, Azm260.0000°; P -0.8570, Plg68.0000°, Azm140.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***24*** *09:01:14.4, 6°.21N×78°.11W, h24^{km}, mb5.2*

ISC 24 09:00:56.0±0.5**, 3°.31N**±0°.03×**79°.48W**±0°.03**, h19^{km}**±2^{km}**, h19^{km}:pP-P, n1479, σ1^{s}54**/1440**, mb5.3**/360**, MS4.2**/70**, 12C-7D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GR1C	Gorgona, Isla	1.35	103	eP	Pn	09 01 17.5	-2.4
GR1C				eS	Sn	09 01 33.6	-3.6
TUMC	Tumaco	1.66	153		Pn	09 01 23.1	-1.0
TUMC				Sn	Sn	09 01 43.4	-1.4
TUMC	Tumaco	1.66	153	eP	Pn	09 01 23.0	-1.0
TUMC				eS	Sn	09 01 43.2	-1.6
MAPC	Malpelo	2.23	288	eP	Pn	09 01 30.1	-1.9
MAPC				eS	Sn	09 01 53.9	-5.1
MALC	Bahia Malaga	2.26	72	⇑iP	Pn	09 01 31.4	-1.0
MALC				eS	Sn	09 01 56.0	-3.7
MALC				i		09 02 00.8	
	comp=Z,3µm,0.3s						
BBAC	Balboa, Cauca	2.57	120	⇑iP	Pn	09 01 35.3	-1.6
BBAC				eS	Sn	09 02 04.3	-3.5
BBAC				i		09 02 05.9	
	comp=Z,885nm,0.6s						
PIZC	Pizarro, Choco	2.69	52	eP	Pn	09 01 35.6	-2.6
PIZC				eS	Sn	09 02 05.6	-4.6
JAMC	Jamundi, Valle	2.81	92	eP	Pn	09 01 38.8	-1.4
JAMC				eS	Sn	09 02 09.2	-4.4
JAMC				i		09 02 11.0	
	comp=Z,1µm,0.7s						
POPC	Popayan, Colom	2.91	105	eP	Pn	09 01 39.6	-1.9
POPC				eS	Sn	09 02 14.2	-1.9
POPC				i		09 02 15.6	
	comp=Z,485nm,0.3s						
GCUF	Volcan Galeras	2.97	134	eP	Pn	09 01 42.7	0.0
GCUF				eS	Sn	09 02 17.1	-1.0
GCUF				i		09 02 19.9	
	comp=Z,1µm,0.8s						
CRUC	La Cruz	3.06	124	eP	Pn	09 01 44.0	+0.2
CRUC				eS	Sn	09 02 20.5	+0.4
TULM	Tulcn-Chalpat	3.08	147		Pn	09 01 43.8	-0.3
TULM	Tulcn-Chalpat	3.08	147	eP	Pn	09 01 44.1	0.0
TULM				eS	Sn	09 02 20.9	+0.1
PAC1	Pacto, Paraso	3.10	167	eP	Pn	09 01 42.0	-2.0
CUSE	Cuicocha Este	3.17	160	eP	Pn	09 01 44.7	-0.6
CUSE				eS	Sn	09 02 20.4	-2.5
YOTC	Yotoco, Valle	3.21	78	eP	Pn	09 01 43.8	-1.7
YOTC				eS	Sn	09 02 20.2	-3.1
OTAV	Otavalo	3.22	161		Pn	09 01 44.2	-1.8
OTAV	Otavalo	3.22	161	P	Pn	09 01 44.2	-1.8
IMBA	Imbabura, San	3.27	157		Pn	09 01 47.2	+0.5
PULU	Pululahua	3.41	163		Pn	09 01 48.3	-0.2
PLMC	San Jos del P	3.57	63	eP	Pn	09 01 48.2	-2.3
PLMC				eS	Sn	09 02 27.9	-4.2
BETC	Betania	4.08	99	eP	Pn	09 02 00.2	+2.6
BETC				eS	Sn	09 02 44.6	-0.3
SLOR	San Lorenzo -	4.13	166		Pn	09 01 59.8	+1.3
GARC	Garzon, Huila	4.14	105	eP	Pn	09 01 59.7	+1.2
FLOC	Florencia	4.19	114	eP	Pn	09 01 59.6	+0.6
FLOC				eS	Sn	09 02 46.1	-1.4
FLOC				i		09 02 50.1	
	comp=Z,240nm,0.5s						
ANIL	Santa Ana	4.24	74	eP	Pn	09 01 59.9	0.0
ANIL				eS	Sn	09 02 51.2	+2.2
ORTC	Ortega, Tolima	4.27	82	⇑iP	Pn	09 02 01.2	+1.0
ORTC				eS	Sn	09 02 51.3	+1.8
ORTC				i		09 02 52.7	
	comp=Z,423nm,0.2s						
CBOC	Ciudad Bolivar	4.29	54	eP	Pn	09 01 58.4	-2.1
PCRI3	Pocri, Los San	4.37	352	i P	Pn	09 01 58.9	-2.6
RECRC	Villamaria, Ca	4.44	68	eP	Pn	09 02 03.5	+0.7
AZU	Azuero	4.53	350	i P	Pn	09 02 00.6	-3.0
AZU				i S	Sn	09 02 49.4	-6.3
MARI3	Mariato, Verag	4.57	341	i P	Pn	09 02 01.4	-2.8
MARI3				i S	Sn	09 02 52.7	-4.1
PRAC	Prado	4.61	85	eP	Pn	09 02 05.9	+1.1
PRAC				eS	Sn	09 02 59.7	+1.9
PESE3	Pese, Herrera	4.71	346	i P	Pn	09 02 03.4	-2.7
PESE3				i S	Sn	09 02 54.1	-6.1
CHIT3	Chitre	4.71	349	i P	Pn	09 02 03.4	-2.7
CHIT3				i S	Sn	09 02 53.1	-7.2
PORT	Chimborazo Vol	4.79	171		Pn	09 02 09.3	+1.5
CHSH	Refugio Sur-Vo	4.81	173		Pn	09 02 08.3	+0.4
DBBC	Dabeiba	4.92	41	eP	Pn	09 02 10.5	+1.3
DBBC				eS	Sn	09 03 03.9	-1.8
STIA3	Santiago, Vera	4.99	343	i P	Pn	09 02 07.9	-2.0
STIA3				i S	Sn	09 03 03.2	-3.9
CRIS3	El Cristo, Coc	5.04	347	i P	Pn	09 02 08.9	-1.8
CRIS3				i S	Sn	09 03 04.9	-3.6
SFRA3	San Francisco,	5.13	343	i P	Pn	09 02 10.1	-1.8
SFRA3				i S	Sn	09 03 07.7	-2.9
CALO3	Calobre, Verag	5.16	345	i P	Pn	09 02 10.8	-1.5
CALO3				i S	Sn	09 03 07.7	-3.8
PNME	Penonome	5.21	351	i P	Pn	09 02 11.9	-1.2
VTON	El Valle, Cocl	5.31	353	i P	Pn	09 02 13.9	-0.5
VTON				i S	Sn	09 03 17.2	+2.1
ROSC	El Rosal	5.37	73	Pn	Pn	09 02 15.6	0.0
	comp=Z,97nm,0.3s,baz=306,slow=5.9,SNR=108						
ROSC				Sn	Sn	09 03 12.8	-4.4
	baz=125,slow=19						
ROSC				LR	LR	09 04 50.6	
	comp=Z,6µm,20.0s,baz=284,slow=45						
	comp=Z,204nm,0.3s						
ROSC	El Rosal	5.37	73		Pn	09 02 17.2	+1.6
ROSC	El Rosal	5.37	73	eP	Pn	09 02 17.6	+2.0
NANC3	Nancito, Chiri	5.39	336	i P	Pn	09 02 13.8	-1.7
APAC	Apartado, Choc	5.40	32	eP	Pn	09 02 17.7	+2.1
APAC				i		09 02 50.1	
	comp=Z,157nm,0.5s						
UPD2	Meteti	5.41	16	i P	Pn	09 02 14.4	-1.4
SAFE3	Santa Fe, Vera	5.42	343	i P	Pn	09 02 15.8	-0.1
SAFE3				i S	Sn	09 03 15.9	-1.8
CHOR3	La Chorrera	5.56	357	i P	Pn	09 02 17.8	-0.1
CHOR3				i S	Sn	09 03 16.3	-5.0
SALI	Salinas	5.66	195	Pn	Pn	09 02 19.8	+0.6
MACC	Macarena, Meta	5.75	101	eP	Pn	09 02 21.5	+1.1
MACC				eS	Sn	09 03 23.7	-2.2
GAMB1	Gamboa	5.78	358	i P	Pn	09 02 20.9	0.0
GAMB1				i S	Sn	09 03 23.1	-3.6
BCIP	Isla Barro Col	5.83	357	Pn	Pn	09 02 21.6	+0.1
BCIP	Isla Barro Col	5.83	357	i P	Pn	09 02 21.2	-0.3
BCIP				i S	Sn	09 03 23.6	-4.4
BCIP	Isla Barro Col	5.83	357	P	Pn	09 02 21.7	+0.1
VILC	Villavicencio,	5.83	82	eP	Pn	09 02 23.7	+2.0
VILC				eS	Sn	09 03 23.3	-4.9
LOCO3	Loma Colorada,	5.85	330	i P	Pn	09 02 20.7	-1.1
LOCO3				i S	Sn	09 03 26.7	-1.7
SPBC	San Pablo de B	5.88	66	eP	Pn	09 02 23.3	+1.0
CHIC	Chingaza	5.89	77	eP	Pn	09 02 24.1	+1.4
CHIC				eS	Sn	09 03 20.5	-9.4
DVD	David	5.89	330	i P	Pn	09 02 21.2	-1.1
DVD				i S	Sn	09 03 26.1	-3.3
CNTA3	Canitas, Panam	5.91	6	i P	Pn	09 02 22.5	-0.1
UREC	San Jos de Ur	5.91	42	eP	Pn	09 02 24.5	+1.8
PTBC	PUERTO BERRIO,	5.95	57	eP	Pn	09 02 23.1	-0.1
SABA3	Sabanitas, Col	6.01	357	i P	Pn	09 02 24.2	+0.2
LESP3	La Esperanza,	6.04	327	i P	Pn	09 02 28.5	+4.1
BCO2	Palmira	6.17	331	i P	Pn	09 02 25.2	-1.2
BCO2				i S	Sn	09 03 33.3	-3.3
LNBQ3	Los Naranjos,	6.19	332	i P	Pn	09 02 25.3	-1.4
ZARC	Zaragoza, Cauc	6.21	48	eP	Pn	09 02 27.3	+0.6
CDITO	Canoas	6.22	327		Pn	09 02 26.4	-0.5
CDITO	Canoas	6.22	327	i P	Pn	09 02 25.8	-1.2
CDITO				i S	Sn	09 03 36.3	-1.3
CDITO	Canoas	6.22	327	eP	Pn	09 02 24.6	-2.3
BC3P	Paso Ancho	6.29	331	i P	Pn	09 02 26.7	-1.4
BC3P				i S	Sn	09 03 37.7	-2.0
BRU2	Volcan	6.32	330		Pn	09 02 27.2	-1.1
BRU2	Volcan	6.32	330	i P	Pn	09 02 27.0	-1.4
BRU2				i S	Sn	09 03 38.5	-1.7
BRU2	Volcan	6.32	330	eP	Pn	09 02 26.6	-1.7
LCBC	Los crdobas,	6.33	29	eP	Pn	09 02 31.4	+3.0
LCBC				eS	Sn	09 03 42.2	+2.1
MLIR3	Monte Lirio, C	6.38	329	i P	Pn	09 02 29.1	-0.1
MLIR3				i S	Sn	09 03 42.6	+0.9
FITO	Golfito	6.42	326	eP	Pn	09 02 28.8	-0.9
EDAD	Golfito	6.45	326	eP	Pn	09 02 28.7	-1.4
JIME	Puerto Jimenez	6.45	324	eP	Pn	09 02 28.8	-1.3
VITO	San Vito	6.48	328	eP	Pn	09 02 31.1	+0.5
EDSV	San Vito	6.48	328	eP	Pn	09 02 30.4	-0.2
EDP2	Potrero Grande	6.76	327	eP	Pn	09 02 34.1	-0.1
CNI2	El Empalme, Bo	6.76	334	i P	Pn	09 02 34.9	+0.5
CNI2				i S	Sn	09 03 50.4	-0.5
PLAN	Los Planes de	6.77	322	eP	Pn	09 02 33.1	-1.4
EDPN	Palmar Norte	6.87	325	eP	Pn	09 02 35.5	-0.3
BRRC	Barranca, Sant	6.88	56	eP	Pn	09 02 37.1	+1.2
BRRC				eS	Sn	09 03 51.4	-2.3
GUVC	San Jose del G	6.89	96	eP	Pn	09 02 36.6	+0.5
EDBA	Buenos Aires	6.93	327	eP	Pn	09 02 39.0	+2.2
BURE	Buenos Aires	6.97	327	eP	Pn	09 02 37.1	-0.2
SRBA	San Rafael, Bu	7.04	327		Pn	09 02 37.4	-0.8
SRBA	San Rafael, Bu	7.04	327	eP	Pn	09 02 36.9	-1.4
BARC	Barichara	7.08	62	eP	Pn	09 02 39.5	+0.6
BARC				eS	Sn	09 04 01.2	+2.2
BRIBI	Bribri	7.11	332	eP	Pn	09 02 39.5	+0.4
PEZE	Perez Zeledon,	7.34	326		Pn	09 02 42.7	+0.3
PEZE	Perez Zeledon,	7.34	326	eP	Pn	09 02 42.6	+0.3
EDDO	Dominical	7.34	324	eP	Pn	09 02 42.8	+0.6
ZELE	Perez Zeledon	7.34	325	eP	Pn	09 02 43.3	+0.9
BUS1	Rivas	7.51	326	eP	Pn	09 02 45.1	0.0
CDM	Cerro de Muert	7.52	326	eP	Pn	09 02 45.5	+0.3
MRVA	Moravia de Chi	7.58	329	eP	Pn	09 02 46.6	+0.9
MCRA	Macar, Loja	7.64	184		Pn	09 02 46.9	+0.5
LLNJ	Naranjito	7.65	323	eP	Pn	09 02 46.8	+0.2
RIMA	Rio Macho	7.75	326		Pn	09 02 47.5	-0.6
RIMA	Rio Macho	7.75	326	eP	Pn	09 02 47.2	-1.0
RAZU	San Marcos de	7.76	325	eP	Pn	09 02 48.1	0.0
BATAN	Batan	7.78	330		Pn	09 02 48.5	+0.2
BATAN	Batan	7.78	330	i P	Pn	09 02 50.3	+2.0
REPA	Paraso	7.81	326	eP	Pn	09 02 49.1	+0.2
ABE2	San Pablo	7.81	325	eP	Pn	09 02 50.0	+1.1
RVSTA	Santa Teresita	7.81	328	eP	Pn	09 02 51.1	+2.3
LCR2	La Lucha 2	7.81	325	eP	Pn	09 02 48.2	-0.7
PCAYA	Pacayas	7.85	327	eP	Pn	09 02 51.0	+1.5
LCOCO	El Coco	7.86	329	eP	Pn	09 02 52.3	+2.9
RAFA	San Farael, Vo	7.88	327	eP	Pn	09 02 51.0	+1.0
RVLA	Villa Bonita	7.89	329	eP	Pn	09 02 51.9	+2.0
CVTR	Volcan Turrial	7.91	328	Pn	Pn	09 02 53.2	+2.8
ICR3	Volcano Irazu	7.91	327	eP	Pn	09 02 53.9	+3.4
OCM	Ochomogo	7.91	326	eP	Pn	09 02 50.6	+0.2
HAYA	Volcan Irazu	7.92	327	eP	Pn	09 02 52.3	+1.7
VICA	Volcano Irazu	7.92	327	eP	Pn	09 02 52.7	+2.0
ACOS	Acosta	7.95	324	eP	Pn	09 02 51.3	+0.6
AMPA	Desamparados	7.97	325	eP	Pn	09 02 52.4	+1.3
CORON	Coronado	8.00	326	eP	Pn	09 02 54.0	+2.5
LUPE	Guadalupe	8.01	326	eP	Pn	09 02 52.5	+0.9
CVIMO	Finca Echandi	8.01	327	eP	Pn	09 02 53.4	+1.7
DOMI	Santo Domingo	8.06	326	eP	Pn	09 02 54.1	+1.8
SANTA	Santa Ana	8.07	325	eP	Pn	09 02 52.2	-0.2
HDC3	Heredia 3	8.09	326	eP	Pn	09 02 52.0	-0.7
HDC	Heredia	8.09	326		Pn	09 02 53.0	+0.4
HDC	Heredia	8.09	326	i P	Pn	09 02 54.2	+1.6
HDC				i S	Sn	09 04 22.5	-1.2
HDC	Heredia	8.09	326	eP	Pn	09 02 53.6	+1.0
BELE	Belen	8.11	325	eP	Pn	09 02 53.5	+0.6
JACO	JACO, Garabito	8.14	321		Pn	09 02 52.9	-0.4
JACO	JACO, Garabito	8.14	321	eP	Pn	09 02 52.7	-0.6
CARI	Cariari	8.18	329	eP	Pn	09 02 55.8	+1.9
TCS1	Tacares	8.22	325	eP	Pn	09 02 54.1	-0.4
RIFO	Rio Frio, Sara	8.24	328	eP	Pn	09 02 54.5	-0.2
CRPO	Crater poas	8.31	326	eP	Pn	09 02 56.6	+0.7
CBL1	Cabuya	8.37	319	eP	Pn	09 02 55.6	-0.7
LAFE	Finca La Fe, P	8.41	320	eP	Pn	09 02 57.4	+0.4
CPMI	Catarata Coope	8.47	325	eP	Pn	09 02 56.6	-1.4
LL1C	La Loma 1 Cana	8.55	43	eP	Pn	09 03 02.4	+3.5
NYURE	Nandayure	8.77	320	eP	Pn	09 03 02.3	+0.4
VACR	Volcan Arenal	8.79	324	eP	Pn	09 03 03.6	+1.4
JTS	Las Juntas de	8.81	322	Pn	Pn	09 03 03.2	+0.7
	comp=Z,8.8nm,0.3s,baz=127,slow=4.3,SNR=30						
JTS				Sn	Sn	09 04 37.3	-4.0
	comp=Z,6.4nm,0.3s,baz=329,slow=22,SNR=12						
	comp=Z,25nm,0.4s						
JTS	Las Juntas de	8.81	322		Pn	09 03 03.8	+1.3
JTS	Las Juntas de	8.81	322	i P	Pn	09 03 03.6	+1.1
JTS				i S	Sn	09 04 37.9	-3.4
JTS	Las Juntas de	8.81	322	i P	Pn	09 03 02.9	+0.4
JTS	Las Juntas de	8.81	322	eP	Pn	09 03 02.3	-0.2
POPE	POPE, Guanacas	8.83	320	eP	Pn	09 03 02.6	-0.2
COVE	Coope Vega, Sa	8.84	327		Pn	09 03 03.5	+0.7
COVE	Coope Vega, Sa	8.84	327	eP	Pn	09 03 06.5	+3.7
INDI	Punta indio, G	8.84	318	eP	Pn	09 03 02.0	-0.9
DUNO	Dulce Nombre,	8.99	319		Pn	09 03 05.0	0.0
NICO	Nicoya	9.00	319	eP	Pn	09 03 05.4	+0.3
SAJU	San Juanillo,	9.13	318	eP	Pn	09 03 05.7	-1.1
ORTG	Ortega, Santa	9.18	320		Pn	09 03 08.1	+0.5
ORTG	Ortega, Santa	9.18	320	eP	Pn	09 03 07.4	-0.3
BAGA	Bagaces	9.18	322	eP	Pn	09 03 09.5	+1.9
SACU	Santa Cruz	9.19	319	eP	Pn	09 03 08.1	+0.4
ALIBA	Liberia Airpor	9.41	321	eP	Pn	09 03 11.4	+0.7
ELI1	Hacienda Flor	9.46	321	eP	Pn	09 03 11.3	0.0
HZTE	Horizontes, Gu	9.54	321		Pn	09 03 14.0	+1.6
HZTE	Horizontes, Gu	9.54	321	eP	Pn	09 03 14.6	+2.2
ESPN	Las Esperanzas	10.04	332		Pn	09 03 21.2	+1.9
CRJC	Cerrejon, Guaj	10.08	40	eP	Pn	09 03 19.9	-0.1
PRVC	Isla de Provid	10.18	350		Pn	09 03 22.4	+1.1
ACON	Acoyapa	10.29	327		Pn	09 03 24.5	+1.8
SDV	Santo Domingo	10.40	57	Pn	Pn	09 03 23.0	-1.4
	comp=Z,50nm,0.3s,baz=210,slow=3.3,SNR=46						
SDV				Sn	Sn	09 05 15.7	-4.9
	comp=Z,5.0nm,0.3s,baz=24,slow=16,SNR=2.5						
SDV				LR	LR	09 07 48.4	
	comp=Z,3µm,19.5s,baz=222,slow=40						
	comp=Z,86nm,0.3s						
SDV	Santo Domingo	10.40	57		Pn	09 03 24.4	-0.1
ATAH	Atahualpa	10.43	174	Pn	Pn	09 03 26.4	+1.4
	comp=Z,3.4nm,0.3s,baz=349,slow=9.5,SNR=22						
ATAH				Sn	Sn	09 05 20.1	-1.6
	comp=Z,0.6nm,0.3s,baz=39,slow=22,SNR=2.5						
ATAH				LR	LR	09 07 33.5	
	comp=Z,4µm,18.8s,baz=343,slow=38						
	comp=Z,29nm,0.7s						
BOAB	BOACO BROADBAN	10.95	326	Pn	Pn	09 03 33.3	+1.5
URIC	Uribia, Colomb	11.17	41		Pn	09 03 33.9	-0.8
URIC	Uribia, Colomb	11.17	41	eP	Pn	09 03 33.9	-0.8
MATN	Matagalpa	11.49	327		Pn	09 03 41.1	+1.8
PAYG	Puerto Ayora	11.50	250	Pn	Pn	09 03 41.4	+2.1
CNGN	Cerro Negro	11.59	322	Pn	Pn	09 03 41.6	+1.0
CRIN	San Cristobal	11.96	322	Pn	Pn	09 03 46.7	+0.9
TBTG	Tabatinga, AM	12.12	128		Pn	09 03 46.6	-1.2
BAUV	El Baul	12.68	63	Pn	Pn	09 03 52.7	-2.8
CZSB	Cruzeiro do Su	12.88	148		Pn	09 03 57.7	-0.6
TGUH	Tegucigalpa,Un	13.16	325		Pn	09 04 03.4	+1.2
HATO	Hato, Curacao	13.65	49		Pn	09 04 07.6	-1.1
ESQI	Esquipulas	14.82	320		Pn	09 04 24.8	0.0
BIRV	Birongo	14.92	61	Pn	Pn	09 04 24.8	-1.3
MTDJ	Mount Denham	14.95	7	Pn	Pn	09 04 25.8	-0.8
NNA	Nana	15.42	170	Pn	Pn	09 04 32.1	-0.6
	comp=Z,2.6nm,0.3s,baz=314,slow=12,SNR=3.3						
	comp=Z,9.7nm,0.5s						
NNA	Nana	15.42	170		Pn	09 04 33.6	+0.9

NNA				IAmb	IAmb	09 04 41.0	
	comp=Z,164nm,1.0s						
NNA	Nana	15.42	170	P	Pn	09 04 33.6	+0.9
NNA				pmax	pmax		
	comp=Z,164nm,1.0s						
PCRV	Puerto La Cruz	16.24	64	Pn	Pn	09 04 41.2	-2.2
	comp=Z,2.1nm,0.3s,baz=263,slow=3.7,SNR=12						
PCRV				LR	LR	09 12 27.0	
	comp=Z,2µm,19.6s,slow=43						
	comp=Z,20nm,0.7s						
PAPH	Port-au-Prince	16.68	24	Pn	Pn	09 04 48.3	-0.6
GTBY	Guantanamo Bay	17.06	14	Pn	Pn	09 04 53.7	0.0
GTBY				IAmb	IAmb	09 05 00.2	
	comp=Z,495nm,1.4s						
SDDR	Presa de Saban	17.52	27	Pn	Pn	09 04 59.5	0.0
SDDR				IAmb	IAmb	09 05 06.6	
	comp=Z,200nm,1.1s						
SDD	Santo Domingo	17.74	31		Pn	09 05 01.9	-0.1
CCIG	Comitan	17.92	317		P	09 05 06.0	+0.9
DR12	Loma Pena Alta	18.29	32	P	P	09 05 09.4	+0.4
ETMB	Extrema	18.57	135	P	P	09 05 10.5	-1.5
PCDR	Punta Cana, DR	18.62	35		Pn	09 05 13.2	+0.4
TEIG	Tepich	18.88	334	P	Pn	09 05 16.7	+0.6
BOAV	Boa Vista	18.96	92		P	09 05 15.3	-1.0
CRPR	Cabo Rojo, PR	18.99	39	P	Pn	09 05 16.9	-0.4
CRPR				IAmb	IAmb	09 05 29.6	
	comp=Z,113nm,0.8s						
MLPR	Magueyes Islan	19.00	39		Pn	09 05 17.2	-0.3
PRSN	Puerto Rico Se	19.12	38	P	P	09 05 18.1	+0.1
TPP	Pointe-a-Pierr	19.20	68	*e*P	Pn	09 05 20.9	+0.9
OBIP	Obispado Ponce	19.33	40	P	P	09 05 19.9	-0.5
OBIP				IAmb	IAmb	09 05 32.8	
	comp=Z,128nm,0.9s						
TRN	Trinidad (W)	19.36	67	*e*P	P	09 05 15.6	-5.1
CELP	Cerrillos	19.37	40	P	P	09 05 21.3	+0.4
UUPR	Utuado, UPR, P	19.42	39	P	P	09 05 21.3	0.0
AOPR	Arecibo Observ	19.46	39	P	P	09 05 22.4	+0.5
AOPR	Arecibo Observ	19.46	39	*e*P	Pn	09 05 23.6	+0.5
SOR	Soroa	19.67	350	P	Pn	09 05 25.8	+0.3
SOR	Soroa	19.67	350	P	Pn	09 05 25.8	+0.3
SOR				pmax	pmax		
	comp=Z,142nm,1.6s						
SJG	San Juan	19.68	41	P	P	09 05 23.7	-0.4
	comp=Z,2.0nm,0.3s,baz=209,slow=8.9,SNR=13						
SJG				LR	LR	09 12 35.9	
	comp=Z,843nm,21.7s,baz=210,slow=36						
	comp=Z,30nm,0.7s						
SJG	San Juan	19.68	41	P	P	09 05 23.9	-0.2
SJG	San Juan	19.68	41	P	P	09 05 23.9	-0.2
SJG				pmax	pmax		
	comp=Z,92nm,1.1s						
SJG	San Juan	19.68	41	*e*P	P	09 05 24.3	+0.1
EMPR	Esperanza - Ma	19.70	39	P	P	09 05 24.7	+0.3
GRGR	Grenville	19.71	63	P	P	09 05 24.3	-0.3
GRGR	Grenville	19.71	63	*e*P	P	09 05 21.1	-3.4
GRHS	Sauteurs	19.76	62	*e*P	P	09 05 23.5	-1.6
GRTK	Grand Turk	19.84	23	P	P	09 05 26.3	+0.4
MACA	Manacapuru-AM	19.86	109	P	P	09 05 25.9	-0.3
GCPR	Guaynabo City	19.86	40	P	P	09 05 26.6	+0.4
HUMP	Col San Antoni	19.90	41	P	P	09 05 26.5	0.0
HUMP				IAmb	IAmb	09 05 33.4	
	comp=Z,104nm,0.8s						
CBYP	Canovanas	19.98	41	P	P	09 05 28.1	+0.5
CBYP				IAmb	IAmb	09 05 41.0	
	comp=Z,142nm,0.8s						
MTP	Monte Pirata	20.06	42		P	09 05 28.7	+0.3
MTP				IAmb	IAmb	09 05 41.1	
	comp=Z,94nm,0.8s						
GCMP	Grenada, Carri	20.06	62	*e*P	P	09 05 27.2	-1.2
TPR	Prospect	20.13	66	*e*P	P	09 05 28.2	-0.9
SAML	Samuel	20.30	127	P	P	09 05 30.7	-0.3
SAML	Samuel	20.30	127	P	P	09 05 30.7	-0.3
SAML				pmax	pmax		
	comp=Z,39nm,0.8s						
CDVI	St. Croix	20.36	44		P	09 05 32.2	+0.6
CUPR	Culebra, Puert	20.39	42		P	09 05 32.5	+0.5
CUPR				IAmb	IAmb	09 05 37.9	
	comp=Z,146nm,0.8s						
TOSP	Speyside	20.39	66	P	P	09 05 31.6	-0.3
TOSP				IAmb	IAmb	09 05 41.3	
	comp=Z,118nm,0.9s						
TOSP	Speyside	20.39	66	*e*P	Pn	09 05 33.2	-0.9
CMIG	Matias Romero	20.40	313	P	P	09 05 31.8	-0.3
	comp=Z,8.5nm,0.8s,baz=115,slow=7.1,SNR=13						
CMIG				LR	LR	09 12 29.0	
	comp=Z,844nm,18.6s,baz=144,slow=34						
	comp=Z,8.5nm,0.8s						
SVB	Belmont	20.56	60	P	P	09 05 33.9	0.0
SVB				IAmb	IAmb	09 05 50.0	
	comp=Z,224nm,1.0s						
MCLT	Moule a Chique	21.03	59	P	P	09 05 41.3	+2.4
MCLT	Moule a Chique	21.03	59	*e*P	P	09 05 39.1	+0.2
SLBI	Saint Lucia, B	21.15	59	*e*P	P	09 05 41.4	+1.2
SLBI	Saint Lucia, B	21.15	59	*e*P	P	09 05 42.7	+2.5
BIM	Bigot	21.31	57	P	P	09 05 41.8	-0.2
BIM	Bigot	21.31	57	*e*P	P	09 05 37.4	-4.5
FDF	Fort de France	21.35	57	P	P	09 05 42.6	+0.3
FDF	Fort de France	21.35	57	P	P	09 05 42.7	+0.3
FDF				pmax	pmax		
	comp=Z,257nm,0.9s						
FDF	Fort de France	21.35	57	*e*P	P	09 05 41.0	-1.4
SABA	Saba	21.36	47	P	P	09 05 41.9	-0.5
SABA				IAmb	IAmb	09 05 48.2	
	comp=Z,184nm,1.1s						
SABA	Saba	21.36	47	*e*P	P	09 05 43.0	+0.6
SVN	Savane Anatole	21.39	56	P	P	09 05 42.1	-0.7
MPOM	Morne Pois Mar	21.45	58	P	P	09 05 43.2	-0.2
MPOM				IAmb	IAmb	09 05 56.6	
	comp=Z,159nm,0.8s						
MPOM	Morne Pois Mar	21.45	58	*e*P	P	09 05 44.2	+0.8
H05S1	Guadeloupe/Mar	21.46	58	P	P	09 05 44.5	+1.0
MBFL	Flemmings, Mon	21.59	51	*e*P	P	09 05 45.5	+0.5
MLYT	Lee's Yard	21.60	51	*e*P	P	09 05 38.1	-6.8
ILAM	Ilet Lapin Mar	21.60	57	*e*P	P	09 05 43.6	-1.4
GDHS	Morne Mazeau,	21.67	52	P	P	09 05 46.2	+0.3
CBE	Ff, Capester	21.68	53	P	P	09 05 45.7	-0.2
CBE	Ff, Capester	21.68	53	*e*P	P	09 05 46.1	+0.1
SMRT	St. Maarten	21.75	46	P	P	09 05 45.4	-1.3
MAGL	Barre de l'ile	21.88	54	*e*P	P	09 05 46.2	-1.8
ABD	La Joyeuse, An	22.00	52	P	P	09 05 46.9	-2.4
ABD	La Joyeuse, An	22.00	52	*e*P	P	09 05 53.8	+4.4
ANBD	Bethesda, Anti	22.12	51	*e*P	P	09 05 51.3	+0.8
H05N1	Guadeloupe/Mar	22.26	53	P	P	09 05 52.5	+0.3
ANWB	Willy Bob	22.47	49	P	P	09 05 53.5	-0.9
PB18	Visviri	22.99	155	P	P	09 06 00.6	+0.3
PB18	Visviri	22.99	155	⇑*i*P	P	09 06 03.6	+3.3
TLIG	Tlapa	23.47	308	P	P	09 06 05.7	+0.8
PB12	IPOC Station P	23.57	158	*i* P	P	09 06 07.5	+1.8
PB16	IPOC Station P	23.64	156	⇓*i*P	P	09 06 08.8	+1.8
MNMC	Minye Minye	24.33	157	P	P	09 06 13.7	+0.6
MNMC	Minye Minye	24.33	157	⇓*i*P	P	09 06 15.5	+2.5
DWPF	Disney Wildern	24.74	356	P	P	09 06 17.6	+1.2
DWPF	Disney Wildern	24.74	356	P	P	09 06 17.6	+1.2
	baz=175						
PB11	IPOC Station P	24.87	158	P	P	09 06 18.7	+0.8
PB11	IPOC Station P	24.87	158	*e*P	P	09 06 19.8	+1.9
GO01	Chusmiza	24.97	156	⇓*i*P	P	09 06 21.9	+2.8
VILB	Vilhena	25.05	131	P	P	09 06 19.8	+0.4
TA02	Huaiquique	25.16	159	P	P	09 06 21.5	+1.2
PB08	IPOC Station P	25.41	157	⇓*i*P	P	09 06 25.5	+2.5
TA01	Diego Aracena	25.42	159	P	P	09 06 22.2	-0.4
PB01	IPOC Station P	26.11	158	*e*P	P	09 06 30.9	+2.0
PB02	IPOC Station P	26.21	159	*e*P	P	09 06 34.4	+4.4
SIV	San Ignacio	26.44	137	P	P	09 06 32.7	+0.7
	comp=Z,27nm,0.8s,baz=314,slow=9.2,SNR=36						
SIV				LR	LR	09 17 08.7	
	comp=Z,2µm,18.6s,baz=324,slow=37						
	comp=Z,27nm,0.8s						
PB07	IPOC Station P	26.59	160	P	P	09 06 31.8	-1.6
PB07				IAmb	IAmb	09 06 47.5	
	comp=Z,44nm,0.9s						
MDP	Montagnes des	26.83	85	P	P	09 06 33.9	-1.6
	comp=Z,14nm,0.9s,baz=264,slow=10,SNR=2.4						
MDP				LR	LR	09 18 09.9	
	comp=Z,1µm,18.4s,baz=286,slow=39						
	comp=Z,14nm,0.9s						
PB09	IPOC Station P	26.89	159	P	P	09 06 34.5	-1.6
PB09	IPOC Station P	26.89	159	*e*P	P	09 06 38.8	+2.7
PB03	IPOC Station P	26.94	160	P	P	09 06 35.4	-1.2
PB03				IAmb	IAmb	09 06 48.4	
	comp=Z,42nm,0.8s						
PB04	IPOC Station P	27.07	161	IAmb	IAmb	09 07 04.9	
	comp=Z,156nm,1.6s						
PB04	IPOC Station P	27.07	161	*e*P	P	09 06 40.6	+2.9
LVC	Limon Verde	27.75	159	P	P	09 06 47.0	+2.9
	comp=Z,28nm,1.1s,baz=337,slow=6.3,SNR=14						
LVC				LR	LR	09 19 38.3	
	comp=Z,1µm,18.4s,baz=341,slow=40						
	comp=Z,28nm,1.1s						
LVC	Limon Verde	27.75	159	P	P	09 06 44.5	+0.4
LVC				IAmb	IAmb	09 07 10.3	
	comp=Z,52nm,0.9s						
LVC	Limon Verde	27.75	159	P	P	09 06 44.5	+0.4
LVC				pmax	pmax		
	comp=Z,52nm,0.9s						
TIGA	Tifton	28.25	353	P	P	09 06 48.5	+0.5
TIGA				IAmb	IAmb	09 06 50.1	
	comp=Z,116nm,1.4s						
TIGA	Tifton	28.25	353	P	P	09 06 49.1	+1.1
	baz=171						
BRAL	Brewton	28.62	346	P	P	09 06 52.4	+1.1
	baz=164						
250A	Grady	29.23	348	P	P	09 06 57.5	+0.8
250A				IAmb	IAmb	09 06 58.8	
	comp=Z,41nm,1.1s						
250A	Grady	29.23	348	P	P	09 06 57.7	+1.0
	baz=166						
154A	Montrose	29.35	354	P	P	09 06 57.8	-0.1
154A	Montrose	29.35	354	P	P	09 06 59.4	+1.6
	baz=172,SNR=8.8						
346A	Big Creek Wild	29.48	342	P	P	09 06 59.6	+0.6
	baz=159						
ZAIG	Zacatecas	29.57	313	P	P	09 07 01.6	+1.4
152A	Waverly Hall	29.62	351	P	P	09 07 00.9	+0.7
	baz=169,SNR=7.0						
NHSC	New Hope	29.66	359	P	P	09 07 02.2	+1.7
	baz=178,SNR=5.4						
NHSC	New Hope	29.66	359	P	P	09 07 02.9	+2.4
	baz=178,SNR=5.4						
GO02	Mina Guanaco	29.88	162	P	P	09 07 03.0	0.0
344A	Westbrook Farm	29.94	340	P	P	09 07 04.9	+1.9
	baz=157						
HAW	Hawthorne Fire	29.97	356	P	P	09 07 04.9	+1.6
	baz=176,SNR=14						
Z51A	Franklin	30.33	351	P	P	09 07 06.4	-0.1
Z51A				IAmb	IAmb	09 07 08.4	
	comp=Z,118nm,1.7s						
Z51A	Franklin	30.33	351	P	P	09 07 06.9	+0.4
	baz=168,SNR=6.1						
LRAL	Lakeview Retre	30.40	347	P	P	09 07 07.8	+0.7
LRAL				IAmb	IAmb	09 07 08.8	
	comp=Z,43nm,1.1s						
LRAL	Lakeview Retre	30.40	347	P	P	09 07 08.0	+0.8
	baz=165,SNR=10						
Y60A	Bolivia	30.57	2	P	P	09 07 10.3	+1.7
Y60A	Bolivia	30.57	2	P	P	09 07 10.0	+1.5
	baz=182						
Y60A				P	P	09 07 10.0	+1.5
	baz=182						
Y57A	Sumter	30.57	359	P	P	09 07 09.5	+1.0
Y57A	Sumter	30.57	359	P	P	09 07 10.3	+1.7
	baz=178						
Y57A				P	P	09 07 10.3	+1.7
	baz=178						
VBMS	Vicksburg	30.57	341	P	P	09 07 09.4	+0.7
	baz=158						
HKT	Hockley	30.70	331	P	P	09 07 09.8	+0.1
HKT				IAmb	IAmb	09 08 12.9	
	comp=Z,62nm,1.8s						
HKT	Hockley	30.70	331	*i* P	P	09 07 08.5	-1.2
HKT				pmax	pmax		
	comp=Z,15nm,1.1s						
Y52A	Lilburn	30.70	353	P	P	09 07 10.2	+0.4
Y52A				IAmb	IAmb	09 07 11.8	
	comp=Z,56nm,1.3s						
Y52A	Lilburn	30.70	353	P	P	09 07 10.2	+0.4
	baz=171,SNR=5.7						
Y52A				P	P	09 07 10.2	+0.4
	baz=171,SNR=5.7						
Z47A	Carrollton	30.81	346	IAmb	IAmb	09 07 12.9	
	comp=Z,52nm,1.2s						
Z47A	Carrollton	30.81	346	P	P	09 07 11.2	+0.5
	baz=163						
735A	Kenedy	30.81	327	P	P	09 07 10.0	-0.8
735A				IAmb	IAmb	09 07 12.7	
	comp=Z,35nm,0.8s						
735A	Kenedy	30.81	327	P	P	09 07 12.1	+1.3
	baz=142						
JSC	Jenkinsville	30.86	357	P	P	09 07 12.7	+1.5
JSC	Jenkinsville	30.86	357	P	P	09 07 12.7	+1.5
JSC				pmax	pmax		
	comp=Z,83nm,0.9s						
JSC	Jenkinsville	30.86	357	P	P	09 07 12.7	+1.5
	baz=176,SNR=19						
HODGE	Hodges	30.88	356	P	P	09 07 12.6	+1.3
HODGE	Hodges	30.88	356	P	P	09 07 12.7	+1.3
	baz=174,SNR=19						
Y49A	Blount Mountai	31.08	349	P	P	09 07 13.7	+0.6
X58A	Rowland	31.09	0	P	P	09 07 13.6	+0.4
X58A				IAmb	IAmb	09 07 15.6	
	comp=Z,42nm,1.1s						
X58A	Rowland	31.09	0	P	P	09 07 14.8	+1.6
	baz=180						
X58A				P	P	09 07 14.8	+1.6
	baz=180						
BIRD	Birdtown, Kers	31.20	358	IAmb	IAmb	09 07 16.4	
	comp=Z,46nm,1.0s						
BIRD	Birdtown, Kers	31.20	358	P	P	09 07 15.7	+1.6
	baz=178,SNR=8.3						
833A	Chaparral WMA,	31.29	325	IAmb	IAmb	09 07 20.1	
	comp=Z,36nm,1.1s						
833A	Chaparral WMA,	31.29	325	P	P	09 07 16.2	+1.2
	baz=139,SNR=7.8						
833A	Chaparral WMA,	31.29	325	P	P	09 07 16.4	+1.4
	baz=139,SNR=7.8						
143A	Socs Landing,	31.31	340	P	P	09 07 15.1	0.0
143A				IAmb	IAmb	09 07 19.4	
	comp=Z,42nm,1.1s						
PAULI	Pauline	31.43	356	IAmb	IAmb	09 07 18.7	
	comp=Z,67nm,1.1s						
PAULI	Pauline	31.43	356	P	P	09 07 18.2	+2.0
	baz=175,SNR=12						
X51A	Calhoun	31.50	351	IAmb	IAmb	09 07 18.5	
	comp=Z,40nm,1.1s						
X51A	Calhoun	31.50	351	P	P	09 07 16.5	-0.3
	baz=170,SNR=6.6						
X51A				P	P	09 07 16.5	-0.3
	baz=170,SNR=6.6						
FPAL	Fort Paine	31.60	350	P	P	09 07 18.5	+0.8
FPAL				IAmb	IAmb	09 07 19.2	
	comp=Z,52nm,1.3s						
CASEE	Lake Jocassee	31.69	355	P	P	09 07 20.1	+1.6
	baz=173,SNR=31						
W57A	Gilead	31.69	359	P	P	09 07 19.5	+1.0
	baz=179,SNR=12						
W57A				P	P	09 07 19.5	+1.0
	baz=179,SNR=12						
KMSC	Kings Mountain	31.72	357	P	P	09 07 20.2	+1.4
KMSC	Kings Mountain	31.72	357	P	P	09 07 20.3	+1.5
	baz=176,SNR=21						
KMSC	Kings Mountain	31.72	357	P	P	09 07 20.1	+1.4
	baz=176,SNR=21						
X48A	Hartselle	31.78	348	P	P	09 07 19.5	+0.3
	baz=165,SNR=5.2						
CNNC	Cliffs of the	31.81	2	P	P	09 07 20.4	+0.9
	baz=183						
Y45A	Yeager Farm, C	31.82	344	P	P	09 07 20.9	+1.3
	baz=161,SNR=8.6						
W52A	Murphy	31.90	353	P	P	09 07 21.2	+0.9
W52A				IAmb	IAmb	09 07 22.4	
	comp=Z,35nm,0.9s						
W52A	Murphy	31.90	353	P	P	09 07 21.4	+1.1
	baz=171,SNR=10						
GO03	Copiap	31.99	164	P	P	09 07 21.2	-0.1
BBSR	BB Station	32.07	24	P	P	09 07 23.6	+1.8
W50A	Signal Mountai	32.19	351	P	P	09 07 23.5	+0.6
W50A				IAmb	IAmb	09 07 24.6	
	comp=Z,68nm,1.4s						
W50A	Signal Mountai	32.19	351	P	P	09 07 23.6	+0.6
	baz=169,SNR=9.0						
435B	Jarrell	32.24	330	IAmb	IAmb	09 07 27.2	
	comp=Z,39nm,1.1s						
435B	Jarrell	32.24	330	P	P	09 07 24.0	+0.6
	baz=144						
435B	Jarrell	32.24	330	P	P	09 07 24.3	+1.0
	baz=144						
SWET	Sewanee	32.31	350	P	P	09 07 24.4	+0.4
CPCT	Cooper Cave	32.32	352	P	P	09 07 25.2	+1.1
V58A	Windy Hill, Pi	32.33	1	P	P	09 07 25.3	+1.2
V58A	Windy Hill, Pi	32.33	1	P	P	09 07 25.3	+1.2
	baz=180,SNR=23						
V58A				P	P	09 07 25.3	+1.2
	baz=180,SNR=23						
V53A	Saluda	32.35	355	IAmb	IAmb	09 07 26.4	
	comp=Z,37nm,0.8s						
V53A	Saluda	32.35	355	P	P	09 07 25.2	+0.9
	baz=174,SNR=12						
V53A				P	P	09 07 25.2	+0.9
	baz=174,SNR=12						
AC04	Llanos de Chal	32.36	166	P	P	09 07 26.3	+1.9
AC04				IAmb	IAmb	09 07 28.3	
	comp=Z,61nm,1.6s						
OXF	Oxford	32.39	345	IAmb	IAmb	09 07 48.9	
	comp=Z,40nm,0.8s						
OXF	Oxford	32.39	345	P	P	09 07 25.0	+0.4
	baz=161						
V55A	Taylorsville	32.43	357	P	P	09 07 26.5	+1.5
V55A	Taylorsville	32.43	357	P	P	09 07 26.5	+1.5
	baz=177,SNR=9.2						
V55A				P	P	09 07 26.5	+1.5
	baz=177,SNR=9.2						
TKL	Tuckaleechee C	32.44	353	LR	LR	09 19 31.3	
	comp=Z,681nm,22.0s,baz=180,slow=35						
TKL	Tuckaleechee C	32.44	353	P	P	09 07 26.1	+1.1
TKL	Tuckaleechee C	32.44	353	P	P	09 07 26.1	+1.1
TKL				pmax	pmax		
	comp=Z,20nm,0.9s						
TKL	Tuckaleechee C	32.44	353	P	P	09 07 25.9	+0.9
	baz=172,SNR=6.5						
PLAL	Pickwick Lake	32.51	347	P	P	09 07 25.4	-0.3
V52A	Sevierville	32.60	354	IAmb	IAmb	09 07 28.3	
	comp=Z,34nm,0.8s						
V52A	Sevierville	32.60	354	P	P	09 07 27.2	+0.7
	baz=172,SNR=11						
V51A	Loudon	32.65	353	IAmb	IAmb	09 07 28.9	
	comp=Z,57nm,1.1s						
V51A	Loudon	32.65	353	P	P	09 07 27.7	+0.8
	baz=171,SNR=12						
WLAR	White Oak Lake	32.80	339	P	P	09 07 29.1	+0.9
U56A	King	32.89	359	P	P	09 07 30.7	+1.7
U56A	King	32.89	359	P	P	09 07 30.7	+1.7
	baz=178,SNR=17						
U56A				P	P	09 07 30.7	+1.7
	baz=178,SNR=17						
U59A	Littleton	32.92	3	IAmb	IAmb	09 07 31.8	
	comp=Z,38nm,1.2s						
U59A	Littleton	32.92	3	P	P	09 07 30.6	+1.4
	baz=183						
U59A				P	P	09 07 30.6	+1.4
	baz=183						
W45A	Hickory Valley	32.95	345	IAmb	IAmb	09 07 33.9	
	comp=Z,34nm,0.9s						
W45A	Hickory Valley	32.95	345	P	P	09 07 29.9	+0.4
	baz=162						
V48A	Smith Brothers	32.98	349	P	P	09 07 30.1	+0.3
V48A	Smith Brothers	32.98	349	P	P	09 07 30.1	+0.3
	baz=166,SNR=20						
U54A	Nelsons Funny	33.12	357	P	P	09 07 32.3	+1.2
U54A	Nelsons Funny	33.12	357	P	P	09 07 32.3	+1.2
	baz=176,SNR=11						
U54A				P	P	09 07 32.3	+1.2
	baz=176,SNR=11						
Z38A	Mt. Pleasant	33.14	336	IAmb	IAmb	09 07 33.6	
	comp=Z,45nm,1.0s						
JCT	Junction City	33.16	327	P	P	09 07 32.6	+1.1
JCT				IAmb	IAmb	09 07 33.6	
	comp=Z,46nm,1.4s						
JCT	Junction City	33.16	327	P	P	09 07 32.6	+1.1
JCT				pmax	pmax		
	comp=Z,46nm,1.5s						
JCT	Junction City	33.16	327	P	P	09 07 32.3	+0.8
	baz=141,SNR=9.1						
JCT	Junction City	33.16	327	P	P	09 07 32.6	+1.1
	baz=141,SNR=9.1						
WHTX	Lake Whitney,	33.16	331	P	P	09 07 31.8	+0.3
WHTX				IAmb	IAmb	09 07 32.9	
	comp=Z,36nm,1.0s						
WHTX	Lake Whitney,	33.16	331	P	P	09 07 31.7	+0.3
	baz=146						
AQDB	Aquidauana	33.21	136	P	P	09 07 31.6	-0.4
AQDB				IAmb	IAmb	09 07 39.1	
	comp=Z,20nm,0.7s						
LCO	Las Campanas	33.22	166	P	P	09 07 34.1	+1.8
LCO				IAmb	IAmb	09 07 35.5	
	comp=Z,25nm,0.9s						
LCO	Las Campanas	33.22	166	P	P	09 07 34.1	+1.8
LCO				pmax	pmax		
	comp=Z,25nm,0.9s						
CLTN	Cedars of Leba	33.23	350	P	P	09 07 32.4	+0.4
TZTN	Tazewell	33.29	354	P	P	09 07 33.7	+1.2
TZTN	Tazewell	33.29	354	P	P	09 07 33.2	+0.8
	baz=172,SNR=9.8						
FW16	Waxahatchie	33.31	333	P	P	09 07 33.1	+0.4
FW16				IAmb	IAmb	09 07 34.2	
	comp=Z,40nm,0.8s						
X40A	Basin Creek Fa	33.42	340	P	P	09 07 33.8	+0.2
	baz=155,SNR=7.7						
X40A				P	P	09 07 33.8	+0.2
	baz=155,SNR=7.7						
FW13	Cleburne	33.45	332	IAmb	IAmb	09 07 35.2	
	comp=Z,24nm,1.0s						
UALR	University of	33.52	341	P	P	09 07 34.6	+0.1
T57A	Hurt	33.53	0	P	P	09 07 35.8	+1.2
T57A	Hurt	33.53	0	P	P	09 07 36.0	+1.4
	baz=180,SNR=31						
T57A				P	P	09 07 36.0	+1.4
	baz=180,SNR=31						
T59A	Double "B" Far	33.55	3	IAmb	IAmb	09 07 37.2	
	comp=Z,56nm,1.1s						
T59A	Double "B" Far	33.55	3	P	P	09 07 36.1	+1.4
	baz=183,SNR=12						
T59A				P	P	09 07 36.1	+1.4
	baz=183,SNR=12						
U49A	Red Boiling Sp	33.55	351	P	P	09 07 35.1	+0.3
U49A				IAmb	IAmb	09 07 36.3	
	comp=Z,58nm,1.4s						
U49A	Red Boiling Sp	33.55	351	P	P	09 07 35.1	+0.3
	baz=168,SNR=8.2						
WVT	Waverly	33.56	348	P	P	09 07 34.3	-0.5
WVT	Waverly	33.56	348	P	P	09 07 34.3	-0.5
WVT				pmax	pmax		
	comp=Z,14nm,0.8s						
MIAR	Mount Ida	33.73	339	P	P	09 07 36.5	+0.1
MIAR				IAmb	IAmb	09 07 37.4	
	comp=Z,33nm,1.1s						
MIAR	Mount Ida	33.73	339	P	P	09 07 36.5	+0.1
MIAR				pmax	pmax		
	comp=Z,33nm,1.1s						
MIAR	Mount Ida	33.73	339	P	P	09 07 36.8	+0.4
	baz=154,SNR=14						
BLA	Blacksburg	33.75	359	P	P	09 07 38.2	+1.6
BLA	Blacksburg	33.75	359	P	P	09 07 38.2	+1.6
BLA				pmax	pmax		
	comp=Z,95nm,1.1s						
BLA	Blacksburg	33.75	359	P	P	09 07 37.8	+1.2
	baz=178,SNR=14						
BLA	Blacksburg	33.75	359	P	P	09 07 38.4	+1.8
	baz=178,SNR=14						
T60A	Surry	33.77	4	P	P	09 07 38.4	+1.8
	baz=185						
T60A				P	P	09 07 38.4	+1.8
	baz=185						
T50A	Nancy	33.91	352	P	P	09 07 38.6	+0.7
T50A				IAmb	IAmb	09 07 39.5	
	comp=Z,34nm,1.1s						
T50A	Nancy	33.91	352	P	P	09 07 38.5	+0.6
	baz=170						
T50A				P	P	09 07 38.5	+0.6
	baz=170						
LNXT	Lenox	33.92	345	P	P	09 07 38.5	+0.6
CO05	La Serena	33.97	167	IAmb	IAmb	09 07 42.2	
	comp=Z,53nm,1.1s						
WHAR	Wooly Hollow	33.97	341	P	P	09 07 38.5	+0.1
FW06	Azle	34.02	332	IAmb	IAmb	09 07 40.5	
	comp=Z,35nm,1.0s						
T47A	Sharon Grove	34.25	349	IAmb	IAmb	09 07 41.7	
	comp=Z,86nm,1.5s						
T47A	Sharon Grove	34.25	349	P	P	09 07 40.8	0.0
	baz=166,SNR=8.7						
CO01	Juntas del Tor	34.29	165	P	P	09 07 42.6	+1.1
CO01				IAmb	IAmb	09 07 53.6	
	comp=Z,64nm,1.6s						
S57A	Dark Hollow, R	34.30	1	P	P	09 07 41.9	+0.7
S57A				IAmb	IAmb	09 07 43.6	
	comp=Z,80nm,1.4s						
S57A	Dark Hollow, R	34.30	1	P	P	09 07 42.4	+1.2
	baz=181,SNR=9.7						

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S57A                              P     P     09 07 42.4 +1.2
      baz=181,SNR=9.7
GO04  Tololo Observa    34.31 167 P     P     09 07 41.5 -0.2
LCAR  Lake Charles      34.34 343 P     P     09 07 41.4 -0.2
LCAR                              IAmb  IAmb  09 07 43.1
      comp=Z,44nm,1.0s
LCAR  Lake Charles      34.34 343 P     P     09 07 41.4 -0.2
      baz=159,SNR=28
HPIG                    34.35 316 P     P     09 07 44.1 +2.1
S54A  Dingess, Beckl    34.37 357 P     P     09 07 43.0 +1.1
      baz=177,SNR=9.1
S54A                              P     P     09 07 43.0 +1.1
      baz=177,SNR=9.1
S51A  Beattyville       34.38 354 P     P     09 07 42.7 +0.7
S51A  Beattyville       34.38 354 P     P     09 07 42.7 +0.7
      baz=173,SNR=17
S51A                              P     P     09 07 42.7 +0.7
      baz=173,SNR=17
X37A  Clayton           34.45 336 P     P     09 07 43.1 +0.5
X37A  Clayton           34.45 336 P     P     09 07 43.3 +0.6
      baz=151,SNR=5.8
R58B  Mineral           34.52   2 IAmb  IAmb  09 07 45.7
      comp=Z,42nm,1.0s
R58B  Mineral           34.52   2 P     P     09 07 44.8 +1.6
      baz=183,SNR=10
R58B                              P     P     09 07 44.8 +1.6
      baz=183,SNR=10
TX32  Lajitas Array     34.60 321 P     P     09 07 45.9 +1.8
TXAR  Lajitas Array     34.60 321 P     P     09 07 46.1 +2.0
      comp=Z,4.4nm,0.9s,baz=143,slow=9.4,SNR=24
TXAR                              PcP   PcP   09 10 19.8 +1.2
      comp=Z,5.9nm,1.1s,baz=134,slow=5.4,SNR=8.8
TXAR                              LR    LR    09 23 14.7
      comp=Z,263nm,19.7s,baz=140,slow=39
      comp=Z,4.4nm,0.9s
TXAR  Lajitas Array     34.60 321 P     P     09 07 46.2 +2.1
TX31  Lajitas Ar. Si    34.60 321 P     P     09 07 46.4 +2.3
TX31                              IAmb  IAmb  09 08 07.7
      comp=Z,35nm,1.1s
TX31  Lajitas Ar. Si    34.60 321 P     P     09 07 46.1 +2.0
      baz=134,SNR=11
CO06  Fray Jorge        34.61 168 IAmb  IAmb  09 07 47.9
      comp=Z,54nm,1.2s
LOOK  Love County       34.70 334 IAmb  IAmb  09 07 46.5
      comp=Z,51nm,0.9s
ABTX  Abilene, Hawle    34.76 329 P     P     09 07 45.9 +0.6
      baz=143,SNR=6.9
ABTX  Abilene, Hawle    34.76 329 P     P     09 07 46.1 +0.8
      baz=143,SNR=6.9
CBN   Corbin Frederi    34.79   3 IAmb  IAmb  09 07 48.3
      comp=Z,61nm,1.1s
CBN   Corbin Frederi    34.79   3 P     P     09 07 47.0 +1.5
      baz=184
R55A  Marlinton         34.82 359 P     P     09 07 47.4 +1.6
R55A  Marlinton         34.82 359 P     P     09 07 47.5 +1.7
      baz=179,SNR=15
R55A                              P     P     09 07 47.5 +1.7
      baz=179,SNR=15
R53A  Hurricane         34.93 357 P     P     09 07 47.6 +0.9
R53A                              IAmb  IAmb  09 07 48.6
      comp=Z,64nm,0.9s
R53A  Hurricane         34.93 357 P     P     09 07 47.7 +0.9
      baz=176,SNR=14
R53A                              P     P     09 07 47.7 +0.9
      baz=176,SNR=14
CO03  El Pedregal       34.98 167 P     P     09 07 48.1 +0.8
CO03                              IAmb  IAmb  09 07 51.3
      comp=Z,68nm,1.1s
R50A  Paris             35.09 353 IAmb  IAmb  09 07 49.7
      comp=Z,63nm,1.0s
R50A  Paris             35.09 353 P     P     09 07 48.5 +0.4
      baz=171,SNR=18
R50A                              P     P     09 07 48.5 +0.4
      baz=171,SNR=18
CGM3  Cape Girardeau    35.10 346 IAmb  IAmb  09 07 48.9
      comp=Z,44nm,1.3s
U40A  Yellville         35.13 341 P     P     09 07 48.6 +0.1
      baz=156,SNR=42
U40A                              P     P     09 07 48.6 +0.1
      baz=156,SNR=42
R49A  Shelbyville       35.21 352 P     P     09 07 49.2 +0.1
R49A                              IAmb  IAmb  09 07 50.2
      comp=Z,55nm,1.0s
R49A  Shelbyville       35.21 352 P     P     09 07 49.2 +0.1
      baz=170,SNR=13
R49A                              P     P     09 07 49.2 +0.1
      baz=170,SNR=13
T42A  Van Buren         35.22 344 P     P     09 07 48.5 -0.7
T42A                              IAmb  IAmb  09 07 49.9
      comp=Z,92nm,1.6s
T42A  Van Buren         35.22 344 P     P     09 07 48.6 -0.7
      baz=160,SNR=16
USIN  University of     35.30 349 P     P     09 07 49.6 -0.3
WCI   Wyandotte Cave    35.31 351 P     P     09 07 49.9 -0.1
WCI                               IAmb  IAmb  09 07 50.9
      comp=Z,40nm,0.8s
WCI   Wyandotte Cave    35.31 351 P     P     09 07 49.9 -0.1
WCI                               pmax  pmax
      comp=Z,40nm,0.9s
WCI   Wyandotte Cave    35.31 351 P     P     09 07 49.6 -0.3
      baz=168
WCI   Wyandotte Cave    35.31 351 P     P     09 07 49.8 -0.2
      baz=168,SNR=14
S44A  Carbondale        35.38 347 IAmb  IAmb  09 07 52.0
      comp=Z,31nm,0.9s
S44A  Carbondale        35.38 347 P     P     09 07 50.5 -0.1
      baz=163,SNR=6.3
SIUC  Southern Illin    35.39 347 IAmb  IAmb  09 07 52.1
      comp=Z,47nm,1.1s
HHAR  Hobbs             35.42 340 P     P     09 07 51.0 -0.1
HHAR                              IAmb  IAmb  09 07 51.9
      comp=Z,48nm,1.2s
Q54A  Coxs Mills        35.53 358 IAmb  IAmb  09 07 54.0
      comp=Z,56nm,1.1s
Q54A  Coxs Mills        35.53 358 P     P     09 07 52.8 +0.9
      baz=178,SNR=9.9
Q54A                              P     P     09 07 52.8 +0.9
      baz=178,SNR=9.9
W35A  Tecumseh          35.56 335       P     09 07 51.9 -0.2
W35A                              IAmb  IAmb  09 07 52.6
      comp=Z,58nm,1.3s
Q56A  Snyder Ridge,     35.57   0 P     P     09 07 54.4 +2.1
      baz=180,SNR=13
Q56A                              P     P     09 07 54.4 +2.1
      baz=180,SNR=13
Q52A  Bidwell           35.58 356 P     P     09 07 53.2 +1.0
Q52A  Bidwell           35.58 356 P     P     09 07 53.1 +0.8
      baz=175,SNR=16
Q52A                              P     P     09 07 53.1 +0.8
      baz=175,SNR=16
RLO   Rose Lookout      35.71 338 IAmb  IAmb  09 07 54.5
      comp=Z,47nm,0.9s
U38A  Gravette          35.72 339 IAmb  IAmb  09 07 54.3
      comp=Z,64nm,1.4s
U38A  Gravette          35.72 339 P     P     09 07 53.5 -0.1
      baz=154,SNR=17
TUL1  Leonard           35.78 337       P     09 07 53.4 -0.6
TUL1                              IAmb  IAmb  09 07 55.0
      comp=Z,37nm,0.9s
TUL1  Leonard           35.78 337 P     P     09 07 53.9 -0.1
      baz=151,SNR=13
TUL1  Leonard           35.78 337 P     P     09 07 53.9 -0.1
      baz=151,SNR=13
FNO   Franklin          35.87 335 IAmb  IAmb  09 07 57.7
      comp=Z,39nm,1.0s
ODSA  Odessa            35.93 325 P     P     09 07 56.1 +0.6
ODSA                              IAmb  IAmb  09 08 01.6
      comp=Z,25nm,0.9s
FVM   French Village    35.94 345 P     P     09 07 55.3 -0.1
FVM                               IAmb  IAmb  09 07 56.8
      comp=Z,57nm,1.0s
FVM   French Village    35.94 345 P     P     09 07 55.3 -0.1
FVM                               pmax  pmax
      comp=Z,57nm,1.0s
FVM   French Village    35.94 345 P     P     09 07 55.5 +0.1
      baz=161,SNR=18
DEOK  Depew             36.00 336       P     09 07 56.0 +0.1
DEOK                              IAmb  IAmb  09 07 56.7
      comp=Z,52nm,0.9s
OKCSW OKLAHOMA CITY     36.01 335 P     P     09 07 55.5 -0.6
OKCSW                             IAmb  IAmb  09 07 60.0
      comp=Z,37nm,0.5s
SDMD  Soldier’s Deli    36.02   3 P     P     09 07 57.7 +1.7
      baz=184,SNR=8.5
P57A  Homestead Farm    36.04   2 P     P     09 07 57.1 +0.9
P57A                              IAmb  IAmb  09 07 59.6
      comp=Z,69nm,1.0s
P57A  Homestead Farm    36.04   2 P     P     09 07 58.2 +2.1
      baz=182,SNR=21
P57A                              P     P     09 07 58.2 +2.1
      baz=182,SNR=21
WMOK  Wichita Mounta    36.05 332 P     P     09 07 56.3 -0.2
      baz=146,SNR=8.0
WMOK  Wichita Mounta    36.05 332 P     P     09 07 56.6 +0.2
      baz=146,SNR=8.0
P53A  Whipple           36.06 357 P     P     09 07 57.4 +1.0
      baz=177,SNR=18
P53A                              P     P     09 07 57.4 +1.0
      baz=177,SNR=18
POST  Post              36.07 328 P     P     09 07 57.6 +0.9
POST                              IAmb  IAmb  09 08 01.6
      comp=Z,31nm,1.1s
OLIL  Olney             36.13 349 P     P     09 07 56.5 -0.5
OLIL                              IAmb  IAmb  09 07 57.6
      comp=Z,54nm,0.8s
OLIL  Olney             36.13 349 P     P     09 07 56.5 -0.5
      baz=165,SNR=9.5
ZON   Zonda             36.15 164 IAmb  IAmb  09 08 01.5
      comp=Z,81nm,1.4s
P51A  Williamsport      36.16 355 P     P     09 07 57.6 +0.4
      baz=174,SNR=7.1
P51A                              P     P     09 07 57.6 +0.4
      baz=174,SNR=7.1
MCWV  Mont Chateau      36.19 360 P     P     09 07 57.3 -0.1
      baz=179
CCM   Cathedral Cave    36.22 344 P     P     09 07 56.9 -0.9
CCM                               IAmb  IAmb  09 07 58.2
      comp=Z,72nm,1.3s
CCM   Cathedral Cave    36.22 344 P     P     09 07 56.9 -0.9
CCM                               pmax  pmax
      comp=Z,72nm,1.3s
CCM   Cathedral Cave    36.22 344 P     P     09 07 57.1 -0.7
      baz=160
CCM   Cathedral Cave    36.22 344 P     P     09 07 57.0 -0.9
      baz=160,SNR=23
LPIG  La Paz            36.22 308 LR    LR    09 21 43.6
      comp=Z,225nm,18.2s,baz=118,slow=34
P52A  Corning           36.24 357 P     P     09 07 58.4 +0.4
      baz=175,SNR=14
BLO   Bloomington       36.27 351 P     P     09 07 58.1 -0.1
BLO   Bloomington       36.27 351 P     P     09 07 58.1 -0.1
BLO                               pmax  pmax
      comp=Z,85nm,0.8s
CFA   Coronel Fontan    36.33 164 P     P     09 08 01.3 +2.5
      comp=Z,24nm,0.7s,baz=338,slow=8.2,SNR=106
CFA                               LR    LR    09 25 43.2
      comp=Z,379nm,18.3s,baz=360,slow=41
      comp=Z,24nm,0.7s
OK033 Mehan             36.35 336       P     09 07 58.5 -0.5
OK033                             IAmb  IAmb  09 07 59.6
      comp=Z,50nm,0.9s
OK029 Liberty Lake      36.35 335       P     09 07 59.0  0.0
OK029                             IAmb  IAmb  09 07 59.4
      comp=Z,35nm,0.8s
QUOK  Quay              36.37 336 IAmb  IAmb  09 07 59.9
      comp=Z,59nm,1.0s
P49A  Miami Univ. Ec    36.37 353 P     P     09 07 59.0 -0.1
P49A                              IAmb  IAmb  09 07 59.7
      comp=Z,75nm,1.1s
P49A  Miami Univ. Ec    36.37 353 P     P     09 07 58.4 -0.7
      baz=171,SNR=15
P49A  Miami Univ. Ec    36.37 353 P     P     09 07 58.6 -0.5
      baz=171,SNR=15
BDFB  Brasilia          36.39 122 P     P     09 08 00.7 +1.1
      comp=Z,1.3nm,0.4s,baz=293,slow=16,SNR=3.5
BDFB                              LR    LR    09 22 59.6
      comp=Z,419nm,18.3s,baz=303,slow=36
      comp=Z,1.3nm,0.4s
P48A  Milroy            36.39 352 P     P     09 07 58.7 -0.5
P48A  Milroy            36.39 352 P     P     09 07 58.7 -0.5
      baz=170,SNR=17
P48A                              P     P     09 07 58.7 -0.5
      baz=170,SNR=17
CPUP  Villa Florida     36.43 145 P     P     09 07 59.0 -0.8
      comp=Z,9.4nm,1.0s,baz=328,slow=8.9,SNR=9.6
      comp=Z,9.4nm,1.0s
CPUP  Villa Florida     36.43 145 P     P     09 07 59.7  0.0
CPUP  Villa Florida     36.43 145 P     P     09 07 59.0 -0.8
Q44A  Meyer Farm, Va    36.48 347 P     P     09 07 59.3 -0.7
Q44A                              IAmb  IAmb  09 08 00.4
      comp=Z,64nm,1.1s
Q44A  Meyer Farm, Va    36.48 347 P     P     09 07 59.5 -0.5
      baz=164,SNR=14
S39A  Bolivar           36.50 341 P     P     09 07 59.7 -0.5
S39A                              IAmb  IAmb  09 08 00.9
      comp=Z,37nm,1.0s
S39A  Bolivar           36.50 341 P     P     09 07 59.7 -0.5
      baz=156,SNR=24
GEDE  Greenville        36.51   5 P     P     09 08 01.9 +1.7
      baz=186
VA06  Catapilco         36.51 168 P     P     09 08 01.0 +0.7
SLM   Saint Louis       36.51 346 P     P     09 08 00.1 -0.1
SLM                               IAmb  IAmb  09 08 00.9
      comp=Z,58nm,1.1s
SLM   Saint Louis       36.51 346 P     P     09 08 00.1 -0.1
SLM                               pmax  pmax
      comp=Z,58nm,1.2s
WUPA  West Chester U    36.63   5 P     P     09 08 01.9 +0.6
OK048 Pawnee Station    36.67 336       P     09 08 02.1 +0.4
OK048                             IAmb  IAmb  09 08 03.6
      comp=Z,112nm,1.6s
O52A  Adamsville        36.70 357 P     P     09 08 02.1 +0.2
O52A                              IAmb  IAmb  09 08 03.5
      comp=Z,61nm,0.8s
O52A  Adamsville        36.70 357 P     P     09 08 02.6 +0.6
      baz=176,SNR=13
O52A                              P     P     09 08 02.6 +0.6
      baz=176,SNR=13
O54A  Avella            36.72 359 P     P     09 08 02.9 +0.8
O54A  Avella            36.72 359 P     P     09 08 02.8 +0.8
      baz=178,SNR=20
O54A                              P     P     09 08 02.8 +0.8
      baz=178,SNR=20
R40A  Maddies Statio    36.73 343 IAmb  IAmb  09 08 02.6
      comp=Z,116nm,1.8s
R40A  Maddies Statio    36.73 343 P     P     09 08 01.7 -0.4
      baz=158,SNR=11
CLNB  Carlsbad          36.80 324 P     P     09 08 05.1 +2.2
O53A  New Philadelph    36.81 358 P     P     09 08 03.5 +0.8
O53A  New Philadelph    36.81 358 P     P     09 08 03.7 +0.9
      baz=177,SNR=22
P46A  Rosedale          36.82 350 IAmb  IAmb  09 08 03.1
      comp=Z,42nm,0.9s
P46A  Rosedale          36.82 350 P     P     09 08 02.4 -0.4
      baz=167,SNR=7.6
VA03  San Esteban       36.86 167 IAmb  IAmb  09 08 07.5
      comp=Z,81nm,1.0s
VA01  Torpederas        36.88 169 IAmb  IAmb  09 08 07.3
      comp=Z,109nm,1.6s
ACSO  Alum Creek Sta    36.90 356 P     P     09 08 03.9 +0.4
ACSO  Alum Creek Sta    36.90 356 P     P     09 08 03.6 +0.1
      baz=174,SNR=16
ACSO  Alum Creek Sta    36.90 356 P     P     09 08 04.0 +0.4
      baz=174,SNR=16
T35A  Sooner Cattle     36.94 337 P     P     09 08 03.9 -0.1
T35A                              IAmb  IAmb  09 08 05.2
      comp=Z,56nm,1.1s
T35B  Sooner Cattle     36.94 337 P     P     09 08 03.9 -0.1
      baz=151,SNR=9.3
ROC1  El Roble          36.96 168 IAmb  IAmb  09 08 15.9
      comp=Z,46nm,0.6s
O49A  Covington         36.98 354 P     P     09 08 04.3 +0.1
O49A                              IAmb  IAmb  09 08 05.0
      comp=Z,60nm,1.1s
O49A  Covington         36.98 354 P     P     09 08 03.9 -0.3
      baz=172,SNR=12
O49A                              P     P     09 08 03.9 -0.3
      baz=172,SNR=12
BLOK  Blackwell         37.08 336 IAmb  IAmb  09 08 06.2
      comp=Z,52nm,0.9s
O48B  Farmland          37.14 353 P     P     09 08 04.9 -0.7
      baz=170,SNR=18
O48B  Farmland          37.14 353 P     P     09 08 05.1 -0.5
      baz=170,SNR=18
PANJ  Princeton         37.16   6 P     P     09 08 08.0 +2.3
      baz=188,SNR=8.9
SSPA  Standing Stone    37.19   2 P     P     09 08 05.6 -0.4
SSPA                              IAmb  IAmb  09 08 08.7
      comp=Z,72nm,1.0s
SSPA  Standing Stone    37.19   2 P     P     09 08 07.6 +1.5
      baz=182
SSPA  Standing Stone    37.19   2 P     P     09 08 07.7 +1.7
      baz=182,SNR=15
PEL   Peldehue          37.20 168 IAmb  IAmb  09 08 10.2
      comp=Z,51nm,1.1s
MT02  Curacav           37.21 168 P     P     09 08 06.4 +0.1
MNTX  Cornudas Mount    37.30 322 P     P     09 08 08.2 +1.1
      baz=134,SNR=67
MNTX  Cornudas Mount    37.30 322 P     P     09 08 09.2 +2.0
      baz=134,SNR=67
P43A  Skaggs, Pawnee    37.30 347 IAmb  IAmb  09 08 07.5
      comp=Z,98nm,1.2s
P43A  Skaggs, Pawnee    37.30 347 P     P     09 08 06.7 -0.2
      baz=163,SNR=15
LUPA  Lehigh Univers    37.31   5 IAmb  IAmb  09 08 10.3
      comp=Z,82nm,1.0s
N53A  Lisbon            37.35 358 P     P     09 08 08.1 +0.7
N53A                              IAmb  IAmb  09 08 09.1
      comp=Z,74nm,1.1s
N53A  Lisbon            37.35 358 P     P     09 08 08.1 +0.7
      baz=178,SNR=8.0
N53A                              P     P     09 08 08.1 +0.7
      baz=178,SNR=8.0
MT05  Renca             37.42 168 P     P     09 08 08.8 +0.6
ELIS  Ellis County      37.44 333 IAmb  IAmb  09 08 09.9
      comp=Z,44nm,0.8s
MSTX  Muleshoe          37.44 327 P     P     09 08 09.3 +0.9
MSTX  Muleshoe          37.44 327 P     P     09 08 08.9 +0.5
      baz=140,SNR=8.2
MSTX  Muleshoe          37.44 327 P     P     09 08 09.5 +1.1
      baz=140,SNR=8.2
N58A  Sunbury           37.45   3 IAmb  IAmb  09 08 11.1
      comp=Z,44nm,1.0s
N58A  Sunbury           37.45   3 P     P     09 08 09.9 +1.7
      baz=184,SNR=12
N58A                              P     P     09 08 09.9 +1.7
      baz=184,SNR=12
U32A  Winter Ranch,     37.51 334 IAmb  IAmb  09 08 12.0
      comp=Z,59nm,0.9s
OK032 Salt Plains WL    37.53 335       P     09 08 09.1 +0.1
N51A  Ashland           37.53 356 IAmb  IAmb  09 08 10.0
      comp=Z,60nm,0.8s
N51A  Ashland           37.53 356 P     P     09 08 09.2 +0.2
      baz=175,SNR=6.1
N51A                              P     P     09 08 09.2 +0.2
      baz=175,SNR=6.1
SFIN  Lafayette         37.54 350 P     P     09 08 08.2 -0.8
SFIN                              IAmb  IAmb  09 08 08.8
      comp=Z,83nm,1.6s
SFIN  Lafayette         37.54 350 P     P     09 08 08.1 -0.9
      baz=167,SNR=5.7
SFIN  Lafayette         37.54 350 P     P     09 08 07.8 -1.2
      baz=167,SNR=5.7
MT03  Universidad Ad    37.57 168 P     P     09 08 08.9 -0.5
O44A  Mansfield         37.57 349 P     P     09 08 08.8 -0.4
O44A                              IAmb  IAmb  09 08 09.4
      comp=Z,60nm,1.1s
O44A  Mansfield         37.57 349 P     P     09 08 08.6 -0.6
      baz=165,SNR=8.4
MT08  Bocatoma Ro       37.63 167 IAmb  IAmb  09 08 19.8
      comp=Z,62nm,0.8s
N49A  Columbus Grove    37.69 354 IAmb  IAmb  09 08 11.1
      comp=Z,108nm,1.6s
N49A  Columbus Grove    37.69 354 P     P     09 08 09.9 -0.3
      baz=172,SNR=6.4
N49A                              P     P     09 08 09.9 -0.3
      baz=172,SNR=6.4
NOKA  Waynoka           37.70 334 IAmb  IAmb  09 08 11.5
      comp=Z,58nm,0.9s
MT01  Popeta            37.78 169 P     P     09 08 11.8 +0.7
KAN08 Anthony NE Sta    37.79 336 P     P     09 08 12.0 +0.8
KAN08                             IAmb  IAmb  09 09 29.0
      comp=Z,56nm,0.9s
P40A  Paris             37.82 344 P     P     09 08 10.7 -0.7
      baz=159,SNR=6.1
N47A  Urbana            37.82 352 IAmb  IAmb  09 08 11.6
      comp=Z,92nm,1.1s
N47A  Urbana            37.82 352 P     P     09 08 10.7 -0.7
      baz=170,SNR=12
N47A                              P     P     09 08 10.7 -0.7
      baz=170,SNR=12
ODNJ  Ogdensburg        37.87   6 P     P     09 08 13.2 +1.5
ODNJ  Ogdensburg        37.87   6 P     P     09 08 13.8 +2.1
      baz=188
PAL   Palisades         37.87   7 P     P     09 08 13.0 +1.3
PAL   Palisades         37.87   7 P     P     09 08 13.0 +1.3
PAL                               pmax  pmax
      comp=Z,35nm,1.1s
PAL   Palisades         37.87   7 P     P     09 08 12.9 +1.3
      baz=189
M57A  Sunshine Farm,    37.92   3 P     P     09 08 13.7 +1.4
M57A  Sunshine Farm,    37.92   3 P     P     09 08 14.1 +1.9
      baz=184,SNR=34
M57A                              P     P     09 08 14.1 +1.9
      baz=184,SNR=34
LMEL  Las Melosas       37.98 167 IAmb  IAmb  09 08 17.3
      comp=Z,46nm,1.1s
M53A  WI Miller and     37.98 359 IAmb  IAmb  09 08 14.5
      comp=Z,67nm,1.1s
M53A  WI Miller and     37.98 359 P     P     09 08 13.3 +0.6
      baz=178,SNR=5.0
M55A  Ridgway           38.00   1 P     P     09 08 14.2 +1.3
M55A                              IAmb  IAmb  09 08 15.2
      comp=Z,55nm,1.2s
M55A  Ridgway           38.00   1 P     P     09 08 14.0 +1.1
      baz=181,SNR=6.7
M55A                              P     P     09 08 14.0 +1.1
      baz=181,SNR=6.7
M50A  Fremont           38.06 356 P     P     09 08 13.9 +0.5
M50A  Fremont           38.06 356 P     P     09 08 13.7 +0.3
      baz=174,SNR=12
M50A                              P     P     09 08 13.7 +0.3
      baz=174,SNR=12
WSPT  Westport, CT      38.10   8 IAmb  IAmb  09 08 16.2
      comp=Z,93nm,1.2s
M52A  Chesterland       38.10 358 P     P     09 08 14.2 +0.5
      baz=177
M52A                              P     P     09 08 14.2 +0.5
      baz=177
HDIL  Hopedale          38.13 348 P     P     09 08 12.9 -1.0
HDIL                              IAmb  IAmb  09 08 13.7
      comp=Z,52nm,0.8s
HDIL  Hopedale          38.13 348 P     P     09 08 12.4 -1.5
      baz=164,SNR=8.8
HDIL  Hopedale          38.13 348 P     P     09 08 13.0 -1.0
      baz=164,SNR=8.8
ALLY  Alegheny Colle    38.18 359 P     P     09 08 14.8 +0.4
ALLY                              IAmb  IAmb  09 08 16.2
      comp=Z,80nm,1.0s
ALLY  Alegheny Colle    38.18 359 P     P     09 08 15.4 +1.0
      baz=179
KSPA  Keystone Colle    38.23   5 P     P     09 08 16.3 +1.5
KSPA  Keystone Colle    38.23   5 P     P     09 08 16.4 +1.5
      baz=186,SNR=20
BRNY  Black Rk. Fore    38.26   7 P     P     09 08 16.6 +1.5
      baz=189,SNR=7.0
YLE   Yale              38.30   8 IAmb  IAmb  09 08 18.9
      comp=Z,64nm,1.2s
BO01  Tunca             38.32 169 IAmb  IAmb  09 08 19.4
      comp=Z,117nm,1.5s
P38A  Dawn              38.34 342 P     P     09 08 15.0 -0.7
P38A  Dawn              38.34 342 P     P     09 08 15.0 -0.7
      baz=157,SNR=10
M63A  Gales Ferry       38.52   9 P     P     09 08 18.0 +0.9
M63A                              IAmb  IAmb  09 08 20.3
      comp=Z,91nm,1.1s
M63A  Gales Ferry       38.52   9 P     P     09 08 19.1 +2.0
      baz=192,SNR=10
M63A                              P     P     09 08 19.1 +2.0
      baz=192,SNR=10
NPNY  Mohonk Preserv    38.58   6 P     P     09 08 19.5 +1.8
      baz=188,SNR=8.9
N41A  Harden Midland    38.62 346 P     P     09 08 16.9 -1.2
ERPA  Erie              38.65 359 P     P     09 08 18.8 +0.5
ERPA                              IAmb  IAmb  09 08 20.0
      comp=Z,53nm,0.9s
ERPA  Erie              38.65 359 P     P     09 08 18.4 +0.1
      baz=179
L56A  Greenwood         38.70   2 P     P     09 08 20.4 +1.6
L56A                              IAmb  IAmb  09 08 21.3
      comp=Z,76nm,1.1s
L56A  Greenwood         38.70   2 P     P     09 08 20.4 +1.6
      baz=183,SNR=16
L56A                              P     P     09 08 20.4 +1.6
      baz=183,SNR=16
BO02  Sierra Bellavi    38.77 169 IAmb  IAmb  09 08 23.5
      comp=Z,132nm,1.8s
BINY  Binghamton        38.85   4 P     P     09 08 21.8 +1.8
BINY  Binghamton        38.85   4 P     P     09 08 21.2 +1.2
      baz=185,SNR=18
BINY  Binghamton        38.85   4 P     P     09 08 22.0 +1.9
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               baz=185,SNR=18
UCCT  U. Connecticut   38.87   9  P      P       09 08 21.6 +1.4
UCCT                              IAmb   IAmb    09 08 22.9
               comp=Z,77nm,1.3s
KSU1  Kansas State U   38.89 339  P      P       09 08 19.9  -0.5
               baz=152,SNR=22
KSU1  Kansas State U   38.89 339  P      P       09 08 20.4   0.0
               baz=152,SNR=22
WVNY  West Valley, N   38.94   1  P      P       09 08 22.1 +1.3
WVNY                              IAmb   IAmb    09 08 23.1
               comp=Z,72nm,1.1s
WVNY  West Valley, N   38.94   1  P      P       09 08 21.2 +0.4
               baz=181,SNR=9.3
AAM   Ann Arbor        39.01 355  P      P       09 08 21.0  -0.3
               baz=173
L46A  Eue Claire       39.02 352  P      P       09 08 20.1  -1.4
BRYW  Bryant College   39.10   9  IAmb   IAmb    09 09 05.6
               comp=Z,153nm,2.0s
R32A  Long Quarter,    39.11 336  P      P       09 08 22.9 +0.5
R32A                              IAmb   IAmb    09 08 23.9
               comp=Z,80nm,1.1s
R32A  Long Quarter,    39.11 336  P      P       09 08 22.8 +0.5
               baz=148,SNR=9.6
MMNY  Mt. Morris Dam   39.28   2  P      P       09 08 24.9 +1.3
MMNY                              IAmb   IAmb    09 08 25.8
               comp=Z,150nm,1.4s
N38A  Joes South For   39.33 343  IAmb   IAmb    09 08 24.4
               comp=Z,79nm,1.1s
N38A  Joes South For   39.33 343  P      P       09 08 23.0  -1.0
               baz=158
K57A  Scipio Center    39.35   3  P      P       09 08 25.5 +1.4
               baz=184,SNR=20
121A  Cookes Peak, D   39.36 321  IAmb   IAmb    09 08 29.2
               comp=Z,65nm,0.9s
121A  Cookes Peak, D   39.36 321  P      P       09 08 28.0 +3.4
               baz=132,SNR=40
121A  Cookes Peak, D   39.36 321  P      P       09 08 28.2 +3.5
               baz=132,SNR=40
K50A  Casco            39.40 356  P      P       09 08 24.6  -0.1
K50A                              IAmb   IAmb    09 08 25.4
               comp=Z,71nm,1.1s
K50A  Casco            39.40 356  P      P       09 08 24.5  -0.1
               baz=175
K50A                              P      P       09 08 24.5  -0.1
               baz=175
ITQB  Itaqui           39.43 148  P      P       09 08 24.9  -0.1
ITQB                              IAmb   IAmb    09 08 26.5
               comp=Z,79nm,1.5s
L44A  Lake County Fo   39.43 350  P      P       09 08 25.7 +0.9
               baz=167
L61B  Northampton      39.45   8  P      P       09 08 25.5 +0.5
               baz=190
L61B  Northampton      39.45   8  P      P       09 08 26.6 +1.6
               baz=190
HCNY  Howe Caverns     39.48   6  P      P       09 08 27.1 +1.8
               baz=188,SNR=7.6
BCX   Boston College   39.56  10  IAmb   IAmb    09 08 29.2
               comp=Z,185nm,1.8s
319A  Douglas          39.58 318  P      P       09 08 28.4 +1.9
ML02  Panimavida       39.59 170  P      P       09 08 26.2  -0.1
ML02                              IAmb   IAmb    09 08 29.6
               comp=Z,89nm,1.4s
L42A  Oliver, Polo     39.59 348  P      P       09 08 25.1  -1.1
L42A                              IAmb   IAmb    09 08 25.9
               comp=Z,68nm,1.1s
L42A  Oliver, Polo     39.59 348  P      P       09 08 25.0  -1.3
               baz=164,SNR=6.8
HRV   Adam Dziewonsk   39.67   9  P      P       09 08 26.4  -0.4
HRV                               IAmb   IAmb    09 08 29.7
               comp=Z,54nm,1.0s
HRV   Adam Dziewonsk   39.67   9  P      P       09 08 26.4  -0.4
HRV                               pmax   pmax
               comp=Z,55nm,1.0s
HRV   Adam Dziewonsk   39.67   9  P      P       09 08 28.1 +1.3
               baz=192
HRV   Adam Dziewonsk   39.67   9  P      P       09 08 28.9 +2.1
               baz=192,SNR=6.2
MEDO  Medina           39.70   1  IAmb   IAmb    09 08 29.1
               comp=Z,78nm,1.1s
K62A  Royalston        39.72   8  P      P       09 08 28.8 +1.5
K62A                              IAmb   IAmb    09 08 30.1
               comp=Z,109nm,1.4s
K62A  Royalston        39.72   8  P      P       09 08 29.0 +1.7
               baz=191,SNR=6.8
K62A                              P      P       09 08 29.0 +1.7
               baz=191,SNR=6.8
BNM   Barren Site      39.76 324  P      P       09 08 30.8 +2.8
Y22A  Socorro          39.81 323  P      P       09 08 31.6 +3.2
               baz=134,SNR=18
J55A  Hilton           39.82   2  P      P       09 08 28.8 +0.7
J55A                              IAmb   IAmb    09 08 30.1
               comp=Z,71nm,1.1s
J55A  Hilton           39.82   2  P      P       09 08 29.2 +1.1
               baz=182,SNR=5.8
J55A                              P      P       09 08 29.2 +1.1
               baz=182,SNR=5.8
J56A  Wolcott          39.87   3  P      P       09 08 29.1 +0.6
J56A  Wolcott          39.87   3  P      P       09 08 29.6 +1.1
               baz=184,SNR=13
J56A                              P      P       09 08 29.6 +1.1
               baz=184,SNR=13
CBKS  Cedar Bluff      39.87 335  P      P       09 08 29.3 +0.6
CBKS                              IAmb   IAmb    09 08 30.6
               comp=Z,77nm,1.1s
CBKS  Cedar Bluff      39.87 335  P      P       09 08 29.3 +0.6
CBKS                              pmax   pmax
               comp=Z,77nm,1.1s
CBKS  Cedar Bluff      39.87 335  P      P       09 08 29.1 +0.4
               baz=147,SNR=13
CBKS  Cedar Bluff      39.87 335  P      P       09 08 30.0 +1.3
               baz=147,SNR=13
Y22D  IRIS PASSCAL I   39.88 323  IAmb   IAmb    09 08 38.8
               comp=Z,57nm,0.9s
Y22D  IRIS PASSCAL I   39.88 323  P      P       09 08 30.4 +1.5
               baz=134
Y22F  Passcal Instru   39.88 323  P      P       09 08 29.7 +0.8
               baz=134
L40A  Anamosa          39.99 346  IAmb   IAmb    09 08 29.5
               comp=Z,71nm,1.2s
L40A  Anamosa          39.99 346  P      P       09 08 28.4  -1.2
               baz=162,SNR=12
J47A  Sunmer           40.05 354  IAmb   IAmb    09 08 30.5
               comp=Z,161nm,1.8s
J47A  Sunmer           40.05 354  P      P       09 08 29.5  -0.5
               baz=172,SNR=6.1
J47A                              P      P       09 08 29.5  -0.5
               baz=172,SNR=6.1
J57A  Williamstown     40.05   4  IAmb   IAmb    09 08 32.2
               comp=Z,49nm,0.8s
J57A  Williamstown     40.05   4  P      P       09 08 31.4 +1.4
               baz=185,SNR=9.2
J57A                              P      P       09 08 31.4 +1.4
               baz=185,SNR=9.2
J58A  Remsen           40.06   5  IAmb   IAmb    09 08 32.6
               comp=Z,82nm,1.0s
J58A  Remsen           40.06   5  P      P       09 08 31.6 +1.5
               baz=186,SNR=18
J58A                              P      P       09 08 31.6 +1.5
               baz=186,SNR=18
N35A  Tabor            40.13 341  IAmb   IAmb    09 08 30.9
               comp=Z,54nm,0.9s
N35A  Tabor            40.13 341  P      P       09 08 30.2  -0.5
               baz=154,SNR=6.3
DUN6  Lazy B Ranch     40.21 320  IAmb   IAmb    09 08 35.8
               comp=Z,58nm,0.9s
ANMO  Albuquerque      40.22 325  LR     LR      09 27 34.4
               comp=Z,257nm,21.0s,baz=247,slow=40
ANMO  Albuquerque      40.22 325  P      P       09 08 34.3 +2.5
ANMO                              IAmb   IAmb    09 08 36.1
               comp=Z,82nm,0.9s
ANMO  Albuquerque      40.22 325ceP      P       09 08 32.5 +0.7
ANMO                              pmax   pmax
               comp=Z,117nm,1.3s
ANMO  Albuquerque      40.22 325  P      P       09 08 34.0 +2.2
               baz=136
ANMO  Albuquerque      40.22 325  P      P       09 08 34.4 +2.7
               baz=136,SNR=133
ITAB  Concordia        40.23 141  P      P       09 08 30.3  -1.4
ITAB                              IAmb   IAmb    09 09 19.4
               comp=Z,114nm,1.7s
J59A  Piesco           40.23   6  IAmb   IAmb    09 08 34.1
               comp=Z,86nm,0.9s
J59A  Piesco           40.23   6  P      P       09 08 33.1 +1.5
               baz=188,SNR=20
J59A                              P      P       09 08 33.1 +1.5
               baz=188,SNR=20
ACCN  Adirondack Com   40.24   7  P      P       09 08 32.8 +1.1
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ACCN  Adirondack Com   40.24   7  P      P       09 08 33.7 +2.1
               baz=189,SNR=8.6
J61A  Chester          40.34   8  P      P       09 08 34.6 +2.2
               baz=190,SNR=5.6
J61A                              P      P       09 08 34.6 +2.2
               baz=190,SNR=5.6
UNH   University of    40.35  10  P      P       09 08 34.2 +1.8
               baz=193
SCIA  State Center     40.35 344  IAmb   IAmb    09 08 32.8
               comp=Z,84nm,0.9s
SCIA  State Center     40.35 344  P      P       09 08 31.4  -1.2
               baz=158,SNR=7.8
SCIA  State Center     40.35 344  P      P       09 08 31.9  -0.7
               baz=158,SNR=7.8
PECO  Prince Edward    40.52   3  P      P       09 08 34.4 +0.6
PECO                              IAmb   IAmb    09 08 35.7
               comp=Z,100nm,1.1s
I49A  Point Hope       40.57 356  P      P       09 08 34.4 +0.1
I49A  Point Hope       40.57 356  P      P       09 08 34.2  -0.1
               baz=175
I49A                              P      P       09 08 34.2  -0.1
               baz=175
JFWS  Jewell Farm      40.59 348  P      P       09 08 33.4  -1.1
JFWS                              IAmb   IAmb    09 08 34.3
               comp=Z,58nm,0.9s
JFWS  Jewell Farm      40.59 348  P      P       09 08 33.4  -1.1
JFWS                              pmax   pmax
               comp=Z,58nm,1.0s
JFWS  Jewell Farm      40.59 348  P      P       09 08 32.9  -1.6
               baz=163,SNR=14
JFWS  Jewell Farm      40.59 348  P      P       09 08 33.4  -1.1
               baz=163,SNR=14
N33B  J Bar K, Exete   40.64 339  P      P       09 08 35.1 +0.2
               baz=152,SNR=6.9
WCNY  West Carthage    40.65   4  P      P       09 08 36.4 +1.5
               baz=186,SNR=11
T25A  Trinidad         40.72 329  IAmb   IAmb    09 08 39.6
               comp=Z,57nm,0.9s
T25A  Trinidad         40.72 329  P      P       09 08 38.1 +2.1
               baz=140,SNR=16
NCB   Newcomb          40.76   6  IAmb   IAmb    09 08 38.5
               comp=Z,100nm,1.4s
NCB   Newcomb          40.76   6  P      P       09 08 37.4 +1.5
               baz=188,SNR=9.4
MCVT  Middlebury Col   40.88   7  P      P       09 08 38.6 +1.7
               baz=190
K38A  Parkersburg      40.93 345  P      P       09 08 36.7  -0.6
K38A                              IAmb   IAmb    09 08 37.1
               comp=Z,68nm,1.1s
K38A  Parkersburg      40.93 345  P      P       09 08 36.4  -0.9
               baz=159,SNR=6.5
DELO  Deloro Mine      41.08   2  IAmb   IAmb    09 08 40.8
               comp=Z,53nm,1.0s
TUC   Tucson           41.16 318  P      P       09 08 41.8 +2.3
TUC   Tucson           41.16 318  P      P       09 08 41.8 +2.3
TUC                               pmax   pmax
               comp=Z,50nm,1.5s
TUC   Tucson           41.16 318  P      P       09 08 41.5 +2.0
               baz=128
I42A  Draeger Farm,    41.27 350  P      P       09 08 39.1  -1.0
I42A                              IAmb   IAmb    09 08 40.2
               comp=Z,67nm,1.0s
I42A  Draeger Farm,    41.27 350  P      P       09 08 39.0  -1.1
               baz=166,SNR=10
VT1   Waterbury        41.29   7  P      P       09 08 41.5 +1.3
VT1                               IAmb   IAmb    09 08 43.2
               comp=Z,66nm,1.2s
VT1   Waterbury        41.29   7  P      P       09 08 41.7 +1.5
               baz=190,SNR=9.3
SADO  Sadowa           41.30   0  P      P       09 08 39.7  -0.5
               comp=Z,33nm,1.1s,baz=198,slow=5.8,SNR=9.9
SADO                              LR     LR      09 26 35.9
               comp=Z,327nm,18.1s,baz=168,slow=37
               comp=Z,33nm,1.1s
SADO  Sadowa           41.30   0  P      P       09 08 40.6 +0.4
SADO                              IAmb   IAmb    09 08 41.5
               comp=Z,59nm,1.2s
LBNH  Lisbon           41.31   8  P      P       09 08 42.4 +2.0
LBNH                              IAmb   IAmb    09 08 43.4
               comp=Z,53nm,1.1s
LBNH  Lisbon           41.31   8  P      P       09 08 42.4 +2.0
LBNH                              pmax   pmax
               comp=Z,53nm,1.2s
LBNH  Lisbon           41.31   8  P      P       09 08 42.0 +1.6
               baz=191
KSCO  Kaye Shedlock’   41.31 332  IAmb   IAmb    09 08 44.1
               comp=Z,52nm,0.7s
KSCO  Kaye Shedlock’   41.31 332  P      P       09 08 42.5 +1.8
               baz=144
I63A  Otisfield        41.33  10  P      P       09 08 42.3 +1.7
I63A  Otisfield        41.33  10  P      P       09 08 42.1 +1.6
               baz=193
I63A                              P      P       09 08 42.1 +1.6
               baz=193
L34A  Svendsen Farm,   41.36 341  IAmb   IAmb    09 08 40.7
               comp=Z,47nm,0.8s
L34A  Svendsen Farm,   41.36 341  P      P       09 08 39.7  -1.2
               baz=154,SNR=12
LONY  Lake Ozonia      41.37   5  P      P       09 08 42.1 +1.2
LONY                              IAmb   IAmb    09 08 43.2
               comp=Z,93nm,1.4s
LONY  Lake Ozonia      41.37   5  P      P       09 08 42.0 +1.1
               baz=187,SNR=15
BGNE  Belgrade         41.48 339  P      P       09 08 41.7  -0.2
BGNE                              IAmb   IAmb    09 08 42.8
               comp=Z,69nm,1.1s
BGNE  Belgrade         41.48 339  P      P       09 08 42.2 +0.3
               baz=151,SNR=6.0
BGNE  Belgrade         41.48 339  P      P       09 08 42.0 +0.2
               baz=151,SNR=6.0
BMNY  Brushton-Moira   41.60   5  P      P       09 08 43.9 +1.2
               baz=187,SNR=14
GLMI  Grayling         41.60 354  P      P       09 08 42.6  -0.1
               baz=172
I40A  Norwalk          41.60 348  P      P       09 08 41.6  -1.2
               baz=163,SNR=7.6
FRNY  Flat Rock        41.68   6  P      P       09 08 44.9 +1.4
FRNY                              IAmb   IAmb    09 08 46.1
               comp=Z,67nm,1.3s
FRNY  Flat Rock        41.68   6  P      P       09 08 45.0 +1.5
               baz=189,SNR=7.7
SDCO  Great Sand Dun   41.74 329  IAmb   IAmb    09 08 48.0
               comp=Z,71nm,1.1s
SDCO  Great Sand Dun   41.74 329  P      P       09 08 46.8 +2.3
               baz=139,SNR=91
SDCO  Great Sand Dun   41.74 329  P      P       09 08 47.0 +2.6
               baz=139,SNR=91
H62A  Milan            41.75   9  P      P       09 08 44.6 +0.6
RPN   Rapa Nui         41.78 222  LR     LR      09 21 42.2
               comp=Z,817nm,18.6s,baz=48,slow=30
G45A  Suttons Bay      41.92 353  P      P       09 08 44.7  -0.7
G45A                              IAmb   IAmb    09 08 45.6
               comp=Z,69nm,0.8s
G45A  Suttons Bay      41.92 353  P      P       09 08 44.7  -0.7
               baz=171,SNR=9.2
G45A                              P      P       09 08 44.7  -0.7
               baz=171,SNR=9.2
W18A  Petrified Fore   42.29 322  IAmb   IAmb    09 08 53.4
               comp=Z,127nm,1.4s
W18A  Petrified Fore   42.29 322  P      P       09 08 51.2 +2.4
               baz=132,SNR=35
214A  Organ Pipe Nat   42.33 316  P      P       09 08 52.3 +3.2
               baz=126,SNR=15
I37B  Waseca           42.37 345  P      P       09 08 47.3  -1.8
               baz=159,SNR=6.0
S22A  4UR Ranch, Cre   42.45 327  P      P       09 08 51.0 +0.8
S22A  4UR Ranch, Cre   42.45 327  P      P       09 08 52.5 +2.3
               baz=137,SNR=26
G62A  West of Eustis   42.48   9  P      P       09 08 50.3 +0.3
G62A                              IAmb   IAmb    09 08 53.2
               comp=Z,69nm,1.1s
G62A  West of Eustis   42.48   9  P      P       09 08 52.2 +2.3
               baz=193,SNR=11
G62A                              P      P       09 08 52.2 +2.3
               baz=193,SNR=11
Q24A  Divide           42.49 330  P      P       09 08 51.7 +1.2
Q24A  Divide           42.49 330  P      P       09 08 52.2 +1.6
               baz=140,SNR=9.8
PIX   Pinacate         42.56 315  P      P       09 08 50.7  -0.1
OGNE  Ogallala         42.62 335  P      P       09 08 51.5 +0.2
OGNE                              IAmb   IAmb    09 08 53.6
               comp=Z,100nm,1.1s
OGNE  Ogallala         42.62 335  P      P       09 08 52.4 +1.1
               baz=146,SNR=18
OGNE  Ogallala         42.62 335  P      P       09 08 52.8 +1.5
               baz=146,SNR=18
PLTB  Pedras Altas     42.68 147  P      P       09 08 51.7  -0.1
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PKME  Peaks-Kenny Pk   42.74  11  P      P       09 08 53.8 +1.8
               baz=195
K31A  O'Neill          42.76 339  P      P       09 08 52.3   0.0
K31A  O'Neill          42.76 339  P      P       09 08 52.6 +0.3
               baz=151,SNR=20
G40A  Rib Lake         42.84 349  IAmb   IAmb    09 08 53.1
               comp=Z,59nm,1.0s
G40A  Rib Lake         42.84 349  P      P       09 08 52.1  -0.8
               baz=164,SNR=28
F42A  Maple Grove Fa   42.96 351  P      P       09 08 53.5  -0.3
F42A                              IAmb   IAmb    09 08 54.1
               comp=Z,49nm,1.1s
F42A  Maple Grove Fa   42.96 351  P      P       09 08 53.2  -0.6
               baz=167
TRQ   Mont Tremblant   42.96   5  IAmb   IAmb    09 08 55.9
               comp=Z,49nm,0.9s
MVCO  Mesa Verde       42.99 325  P      P       09 08 56.6 +2.1
               baz=135
ECSD  EROS Data Cent   43.03 342  P      P       09 08 53.3  -1.1
ECSD                              IAmb   IAmb    09 08 54.4
               comp=Z,52nm,1.1s
ECSD  EROS Data Cent   43.03 342  P      P       09 08 53.3  -1.1
               baz=154,SNR=34
LPA   La Plata         43.07 154 eP      P       09 08 53.3  -1.5
LPA                               pP     pwP     09 09 03.3  -1.2
LPA                               sP     sP      09 09 10.4 +8.6
LPA                               PP     PP      09 10 29.7  -5.4
LPA                               pPP            09 10 40.5
LPA                               PPP    PPP     09 11 03.5
LPA                               S      S       09 15 22.4 +2.5
LPA                               sS     sS      09 15 31.8 +3.6
LPA                               PPS    PPS     09 15 41.0
LPA                               PKIKP  PKiKP   09 17 45.2  -3.2
LPA                               SS     ScS     09 18 54.0  -0.8
LPA                               SSS    SSS     09 19 16.7
LPA                               SKIKP          09 21 18.7
LPA                               PKIKS          09 21 23.8
LPA                               SKIKS          09 25 07.5
E46A  Sault Ste Mari   43.10 355  IAmb   IAmb    09 08 55.4
               comp=Z,56nm,0.9s
E46A  Sault Ste Mari   43.10 355  P      P       09 08 54.3  -0.6
               baz=173,SNR=12
F62A  Pittston Farm,   43.23  10  P      P       09 08 57.5 +1.5
               baz=194
F62A                              P      P       09 08 57.5 +1.5
               baz=194
GO06  Curarrehue       43.31 171  P      P       09 08 58.8 +1.9
SPMN  Marine on St.    43.36 346  P      P       09 08 55.8  -1.3
               baz=160,SNR=35
SPMN  Marine on St.    43.36 346  P      P       09 08 56.0  -1.1
               baz=160,SNR=35
ISCO  Idaho Springs    43.36 330  P      P       09 08 58.9 +1.3
ISCO  Idaho Springs    43.36 330  P      P       09 08 58.9 +1.3
ISCO                              pmax   pmax
               comp=Z,37nm,1.3s
ISCO  Idaho Springs    43.36 330  P      P       09 08 59.0 +1.4
               baz=140,SNR=27
ISCO  Idaho Springs    43.36 330  P      P       09 08 59.5 +1.9
               baz=140,SNR=27
E43A  Lone Tree Farm   43.40 352  P      P       09 08 56.8  -0.6
E43A                              IAmb   IAmb    09 08 57.7
               comp=Z,50nm,0.8s
E43A  Lone Tree Farm   43.40 352  P      P       09 08 56.8  -0.6
               baz=169,SNR=11
COWI  Conover          43.45 350  P      P       09 08 57.5  -0.4
113A  Mohawk Valley,   43.46 316  P      P       09 08 59.4 +1.3
F64A  Sherman          43.49  11  P      P       09 08 59.3 +1.2
F64A  Sherman          43.49  11  P      P       09 08 59.9 +1.8
               baz=196
F64A                              P      P       09 08 59.9 +1.8
               baz=196
WUAZ  Wupatki          43.56 321  P      P       09 09 01.4 +2.3
WUAZ                              IAmb   IAmb    09 09 03.5
               comp=Z,62nm,1.0s
WUAZ  Wupatki          43.56 321  P      P       09 09 01.5 +2.4
               baz=130,SNR=12
SMCO  Snowmass         43.58 329  P      P       09 09 00.9 +1.5
SMCO                              IAmb   IAmb    09 09 05.2
               comp=Z,68nm,1.3s
Y14A  Wickenburg       43.63 318  P      P       09 09 00.7 +1.1
PV15  Paradox Valley   43.78 327  P      P       09 09 03.2 +2.4
PV15                              IAmb   IAmb    09 09 05.2
               comp=Z,63nm,1.1s
PV13  Radium Mtn., P   43.84 326  IAmb   IAmb    09 09 05.3
               comp=Z,66nm,1.3s
PV11  David Mesa, Pa   43.96 326  IAmb   IAmb    09 09 06.3
               comp=Z,85nm,1.5s
E62A  Clayton Lake     44.01  10  P      P       09 09 04.3 +2.0
E62A  Clayton Lake     44.01  10  P      P       09 09 04.5 +2.2
               baz=194,SNR=17
E62A                              P      P       09 09 04.5 +2.2
               baz=194,SNR=17
E63A  Oxbow            44.02  11  P      P       09 09 04.0 +1.7
               baz=196,SNR=5.4
E63A                              P      P       09 09 04.0 +1.7
               baz=196,SNR=5.4
PV10  Paradox Valley   44.11 326  P      P       09 09 04.3 +0.8
F36A  Milaca           44.13 346  P      P       09 09 01.9  -1.4
F36A  Milaca           44.13 346  P      P       09 09 01.9  -1.4
               baz=160,SNR=39
TRQA  Tornquist        44.24 160  P      P       09 09 05.2 +0.9
TRQA                              IAmb   IAmb    09 09 07.1
               comp=Z,68nm,1.4s
TRQA  Tornquist        44.24 160  P      P       09 09 05.2 +0.9
TRQA                              pmax   pmax
               comp=Z,68nm,1.4s
LMN   Caledonia Moun   44.28  15  IAmb   IAmb    09 09 06.7
               comp=Z,51nm,1.2s
LATQ  La Tuque         44.29   7  P      P       09 09 05.9 +1.4
D41A  Chassel          44.29 351  P      P       09 09 04.5   0.0
D41A  Chassel          44.29 351  P      P       09 09 04.4  -0.2
               baz=167,SNR=24
GLA   Glamis           44.35 316  P      P       09 09 08.2 +2.9
               baz=124
N23A  Red Feather La   44.36 331  P      P       09 09 07.1 +1.5
               baz=140,SNR=18
E38A  The Farm, Brul   44.39 348  P      P       09 09 04.4  -0.9
               baz=162,SNR=27
SUSD  Miller           44.42 340  P      P       09 09 04.8  -0.9
SUSD                              IAmb   IAmb    09 09 05.7
               comp=Z,62nm,0.9s
SUSD  Miller           44.42 340  P      P       09 09 04.7  -1.0
               baz=152,SNR=8.3
SUSD  Miller           44.42 340  P      P       09 09 04.9  -0.9
               baz=152,SNR=8.3
PHWY  Pilot Hill       44.45 332  P      P       09 09 07.5 +1.2
D62A  Allapoint, All   44.54  10  P      P       09 09 08.1 +1.5
D62A  Allapoint, All   44.54  10  P      P       09 09 08.0 +1.5
               baz=195,SNR=16
D62A                              P      P       09 09 08.0 +1.5
               baz=195,SNR=16
BLYC  Blythe           44.54 317  P      P       09 09 07.3 +0.5
PLCA  Paso Flores      44.58 170  LR     LR      09 24 54.0
               comp=Z,275nm,21.5s,baz=21,slow=32
PDMCI Parker Dam,Lak   44.61 318  P      P       09 09 09.9 +2.6
               baz=126,SNR=8.7
LMQ   La Malbaie       44.78   9  P      P       09 09 09.1 +0.7
LMQ                               IAmb   IAmb    09 09 10.9
               comp=Z,42nm,0.9s
F33A  5 Mile Ranch,    44.84 343  P      P       09 09 07.6  -1.4
F33A  5 Mile Ranch,    44.84 343  P      P       09 09 07.6  -1.4
               baz=156,SNR=27
YUH   Yuha Desert      44.90 315  P      P       09 09 10.2 +0.5
W13A  Hualapai Mount   44.91 319  P      P       09 09 11.3 +1.3
W13A                              IAmb   IAmb    09 09 16.2
               comp=Z,30nm,1.1s
O20A  White River Ci   44.95 329  P      P       09 09 12.0 +1.8
               baz=137,SNR=7.7
SWSC  Sam W. Stewart   44.98 315  P      P       09 09 11.7 +1.4
               baz=123
IKP   In-Ko-Pah, Jac   45.03 315  P      P       09 09 12.4 +1.6
               baz=123
BC3   Big Chuckawall   45.13 316  P      P       09 09 13.9 +2.3
               baz=124
NEE2  Needles Airpor   45.20 318  P      P       09 09 14.7 +2.7
               baz=126
IRM   Iron Mountain    45.20 317  P      P       09 09 15.2 +3.1
               baz=125,SNR=7.2
BATG  Bathurst New B   45.32  13  P      P       09 09 14.0 +1.3
BATG                              IAmb   IAmb    09 09 14.8
               comp=Z,24nm,0.9s
MONP2 Monument Peak    45.39 315  P      P       09 09 16.5 +2.7
               baz=123
SRU   San Rafael Swe   45.45 326  IAmb   IAmb    09 09 19.5
               comp=Z,47nm,1.1s
EYMN  Ely              45.66 349  P      P       09 09 14.4  -1.0
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EYMN                              IAmb    IAmb    09 09 15.4
      comp=Z,42nm,0.9s
EYMN  Ely               45.66 349   P       P       09 09 14.5  -0.9
      baz=163,SNR=18
Q16A  Castle Valley     45.69 325   P       P       09 09 16.9 +0.8
BELC  Belle Mtn. Jos    45.70 316   P       P       09 09 18.9 +2.7
      baz=124,SNR=6.6
TPFO  Pinon Flats       45.79 316   P       P       09 09 20.2 +3.2
      baz=123
PFO   Pinyon Flats O    45.80 316 i P       P       09 09 18.0 +1.0
PFO                                 pmax    pmax
      comp=Z,38nm,2.0s
PFO   Pinyon Flats O    45.80 316   P       P       09 09 20.0 +3.1
      baz=123
P17A  Butcher Ranch,    45.83 326   P       P       09 09 19.0 +1.9
P17A                                IAmb    IAmb    09 09 22.6
      comp=Z,40nm,1.3s
109C  Camp Elliot, M    45.87 314   P       P       09 09 20.6 +3.3
      baz=122
GMRC  Granite Mounta    45.91 317   P       P       09 09 20.3 +2.5
      baz=125,SNR=9.6
V12A  Nelson            45.92 319   P       P       09 09 19.7 +1.9
V12A                                IAmb    IAmb    09 09 23.6
      comp=Z,24nm,1.0s
SZCU  Shurtz Canyon     45.95 322   P       P       09 09 20.3 +2.1
RDMU  Red Mountain      45.96 328   P       P       09 09 19.9 +1.7
RDMU                                IAmb    IAmb    09 09 20.9
      comp=Z,42nm,1.2s
K22A  Casper            46.00 332   IAmb    IAmb    09 09 21.0
      comp=Z,45nm,0.9s
K22A  Casper            46.00 332   P       P       09 09 19.7 +1.3
      baz=141,SNR=27
K22A  Casper            46.00 332   P       P       09 09 20.1 +1.7
      baz=141,SNR=27
RSSD  Black Hills       46.07 335   P       P       09 09 20.3 +1.3
RSSD  Black Hills       46.07 335   P       P       09 09 20.3 +1.3
RSSD                                pmax    pmax
      comp=Z,71nm,0.9s
RSSD  Black Hills       46.07 335   P       P       09 09 20.6 +1.6
      baz=145
RSSD  Black Hills       46.07 335   P       P       09 09 20.7 +1.6
      baz=145,SNR=45
TCRU  Three Creeks R    46.22 324   P       P       09 09 21.1 +0.8
MURC  Murrieta          46.31 315   P       P       09 09 24.5 +3.6
      baz=122
HEC   Hector,Ludlow     46.39 317   P       P       09 09 24.9 +3.3
      baz=124
TUQ   Turquoise Moun    46.45 318   P       P       09 09 25.4 +3.3
      baz=125
BBRC  Big Bear Solar    46.48 316   P       P       09 09 25.5 +3.1
      baz=123
GO07  Milladeo Hill,    46.50 174   P       P       09 09 22.5 +0.4
B35A  Bob, Littlefor    46.52 347   P       P       09 09 20.9  -1.3
      baz=160,SNR=13
SHPR  Sheep Range       46.58 320   P       P       09 09 26.0 +2.9
MPU   Maple Canyon      46.70 326   IAmb    IAmb    09 09 29.2
      comp=Z,33nm,1.4s
LL02  Futaleuf          46.79 172   P       P       09 09 25.8 +1.4
RRX   Edison Barstow    46.87 317   P       P       09 09 28.5 +3.3
      baz=124
E28A  Huff              46.88 340   P       P       09 09 25.1   0.0
      baz=150,SNR=12
SHOC  Shoshone, Teco    46.96 318   P       P       09 09 29.3 +3.4
      baz=125,SNR=6.9
GSC   Goldstone, Bar    46.97 317   P       P       09 09 29.3 +3.2
      baz=124,SNR=8.9
BFSC  Mount Baldy Ra    46.98 316   P       P       09 09 28.7 +2.5
      baz=122
AGMN  Agassiz Nation    46.98 345   P       P       09 09 24.8  -1.0
AGMN                                IAmb    IAmb    09 09 26.0
      comp=Z,30nm,1.1s
AGMN  Agassiz Nation    46.98 345   P       P       09 09 24.5  -1.3
      baz=157,SNR=12
AGMN  Agassiz Nation    46.98 345   P       P       09 09 25.0  -0.8
      baz=157,SNR=12
PRN   Pahroc Range      47.05 321   P       P       09 09 29.1 +2.4
CTU   Camp Tracy        47.23 326   P       P       09 09 29.7 +1.6
CTU                                 IAmb    IAmb    09 09 33.3
      comp=Z,37nm,1.2s
DUG   Dugway, Tooele    47.49 325   IAmb    IAmb    09 09 35.7
      comp=Z,32nm,1.4s
DUG   Dugway, Tooele    47.49 325   P       P       09 09 32.1 +2.0
      baz=132,SNR=21
TPNV  Topopah Spring    47.55 319   IAmb    IAmb    09 09 36.8
      comp=Z,36nm,1.6s
TPNV  Topopah Spring    47.55 319   P       P       09 09 33.5 +2.9
      baz=126,SNR=9.5
BW06  Boulder Array     47.55 330   IAmb    IAmb    09 09 48.5
      comp=Z,31nm,1.2s
BW06  Boulder Array     47.55 330   P       P       09 09 31.6 +1.0
      baz=137,SNR=27
PD31  Pinedale Array    47.55 330   P       P       09 09 31.4 +0.7
PD31                                IAmb    IAmb    09 09 48.5
      comp=Z,28nm,1.2s
PDAR  Pinedale Array    47.55 330   P       P       09 09 31.3 +0.7
      comp=Z,8.4nm,1.0s,baz=142,slow=7.5,SNR=33
PDAR                                PcP     PcP     09 11 02.3 +1.8
      comp=Z,1.5nm,0.8s,baz=131,slow=5.3,SNR=1.7
PDAR                                LR      LR      09 31 28.3
      comp=Z,140nm,19.8s,baz=129,slow=39
      comp=Z,8.4nm,1.0s
PDAR  Pinedale Array    47.55 330   P       P       09 09 31.1 +0.4
EDW2  Edwards Air Fo    47.56 316   P       P       09 09 33.3 +2.7
      baz=123,SNR=7.1
SPR3  Spring Creek 3    47.60 323   P       P       09 09 32.1 +0.9
SPR3                                IAmb    IAmb    09 09 36.5
      comp=Z,37nm,1.4s
S11A  Rachel            47.64 321   IAmb    IAmb    09 09 47.0
      comp=Z,32nm,1.2s
MDND  Maddock           47.64 342   P       P       09 09 30.8  -0.2
      baz=152
MDND  Maddock           47.64 342   P       P       09 09 31.1 +0.1
      baz=152
LRMC  Laurel Mtn Rad    47.67 317   P       P       09 09 34.1 +2.6
      baz=123
FURC  Furnace Creek,    47.67 319   P       P       09 09 34.6 +3.2
      baz=125,SNR=8.6
HWUT  Hardware Ranch    47.76 327   P       P       09 09 33.8 +1.5
HWUT                                IAmb    IAmb    09 09 34.6
      comp=Z,21nm,1.1s
MPMC  Manual Prospec    47.86 318   P       P       09 09 35.6 +2.5
      baz=124
Q12A  Willow Creek R    47.92 323   P       P       09 09 35.2 +1.7
Q12A                                IAmb    IAmb    09 09 37.3
      comp=Z,25nm,1.2s
R11B  Troy Canyon, C    47.96 321   P       P       09 09 36.4 +2.6
      baz=128
SPUT  South Promonto    48.03 327   IAmb    IAmb    09 09 37.6
      comp=Z,31nm,1.1s
BGU   Big Grassy Mou    48.10 326   P       P       09 09 36.5 +1.7
ARVC  Arvin             48.27 316   P       P       09 09 38.6 +2.6
      baz=122
GRAC  Grapevine Rang    48.30 319   P       P       09 09 37.3 +1.0
GRAC                                IAmb    IAmb    09 09 54.0
      comp=Z,28nm,1.3s
GRAC  Grapevine Rang    48.30 319   P       P       09 09 39.5 +3.1
      baz=125
ISA   Isabella, Lake    48.31 317   P       P       09 09 39.2 +2.7
      baz=123
AHID  Auburn Hatcher    48.33 329   P       P       09 09 37.7 +1.1
CWC   Cottonwood Cre    48.47 318   P       P       09 09 40.9 +3.1
      baz=124
SNOW  Snow King Moun    48.66 330   IAmb    IAmb    09 09 44.2
      comp=Z,52nm,1.2s
ULM   Lac du Bonnet     48.79 346   P       P       09 09 38.7  -1.1
      comp=Z,83nm,0.8s,baz=156,slow=8.0,SNR=87
ULM                                 LR      LR      09 31 05.6
      comp=Z,96nm,18.6s,baz=163,slow=37
      comp=Z,83nm,0.8s
ULM   Lac du Bonnet     48.79 346   P       P       09 09 38.7  -1.1
VES   Vestal, Richgr    48.82 317   P       P       09 09 42.8 +2.5
      baz=122,SNR=12
PKM   Mcpherson Peak    48.83 315   P       P       09 09 42.5 +1.8
      baz=121
MOOW  Moose Ponds       48.86 330   P       P       09 09 41.7 +1.0
FXWY  Fox Creek         48.92 330   IAmb    IAmb    09 09 45.9
      comp=Z,34nm,1.3s
LAO   LASA Array        49.06 336   P       P       09 09 42.7 +0.7
LAO   LASA Array        49.06 336   P       P       09 09 43.1 +1.1
      baz=144
FLWY  Flagg Ranch       49.08 330   P       P       09 09 44.1 +1.7
FLWY                                IAmb    IAmb    09 09 45.1
      comp=Z,52nm,1.2s
COYC  Coyhaique         49.11 173   P       P       09 09 43.5 +1.3
RLMT  Red Lodge         49.16 332   IAmb    IAmb    09 09 45.0
      comp=Z,30nm,1.0s
RLMT  Red Lodge         49.16 332   P       P       09 09 44.2 +1.1
      baz=139,SNR=23
SMMC  Simmler           49.18 315   P       P       09 09 45.0 +1.9
      baz=121
ELK   Elko              49.25 324   LR      LR      09 32 22.4
      comp=Z,450nm,18.7s,baz=134,slow=38
H17A  Grant Village     49.25 331   P       P       09 09 45.6 +1.9
      baz=137
LKWY  Lake              49.28 331   P       P       09 09 45.6 +1.6
LKWY  Lake              49.28 331   P       P       09 09 45.7 +1.6
LKWY                                pmax    pmax
      comp=Z,10.0nm,0.8s
YMP   Mirror Lake Pl    49.30 331   P       P       09 09 44.6 +0.4
DRLN  Deer Lake         49.47  19   P       P       09 09 45.6 +0.6
YMR   Madison River     49.64 331   IAmb    IAmb    09 09 49.6
      comp=Z,21nm,0.8s
NV11  Mina Array Sit    49.64 320   P       P       09 09 49.1 +2.4
NV11                                IAmb    IAmb    09 09 52.6
      comp=Z,39nm,1.4s
NVAR  Mina Array Bea    49.73 320   P       P       09 09 49.4 +1.9
      comp=Z,12nm,1.0s,baz=132,slow=7.2,SNR=36
NVAR                                PcP     PcP     09 11 09.8 +1.4
      comp=Z,3.3nm,0.9s,baz=123,slow=4.0,SNR=4.1
NVAR                                LR      LR      09 31 18.1
      comp=Z,247nm,18.3s,baz=138,slow=37
      comp=Z,12nm,1.0s
NVAR  Mina Array Bea    49.73 320   P       P       09 09 49.7 +2.2
DGMT  Dagmar            49.74 339   IAmb    IAmb    09 09 48.4
      comp=Z,25nm,0.7s
DGMT  Dagmar            49.74 339   P       P       09 09 48.4 +1.2
      baz=147,SNR=12
LHV   Little Huntoon    49.76 320   IAmb    IAmb    09 09 53.8
      comp=Z,65nm,1.5s
GCMT  Greycliff         49.85 333   P       P       09 09 49.2 +1.0
KVN   Kaiserville       49.96 321   P       P       09 09 50.3 +1.1
KVN   Kaiserville       49.96 321   P       P       09 09 50.3 +1.1
KVN                                 pmax    pmax
      comp=Z,32nm,1.4s
WAKR  Walker            50.51 319   IAmb    IAmb    09 10 00.2
      comp=Z,34nm,1.3s
HLID  Hailey            50.63 327   P       P       09 09 55.8 +1.6
HLID  Hailey            50.63 327   P       P       09 09 55.2 +1.1
      baz=132,SNR=9.2
BOZ   Bozeman (W)       50.63 331   P       P       09 09 55.6 +1.5
BOZ                                 IAmb    IAmb    09 09 56.7
      comp=Z,38nm,1.1s
BOZ   Bozeman (W)       50.63 331   P       P       09 09 55.6 +1.5
BOZ                                 pmax    pmax
      comp=Z,38nm,1.2s
BOZ   Bozeman (W)       50.63 331   P       P       09 09 55.7 +1.5
      baz=137,SNR=46
YERR  Yerington         50.65 320   IAmb    IAmb    09 10 00.1
      comp=Z,75nm,1.8s
MCMT  McKenzie Canyo    50.69 330   P       P       09 09 56.8 +2.1
CMB   Columbia Colle    50.88 318   P       P       09 09 58.2 +2.2
CMB   Columbia Colle    50.88 318   P       P       09 09 58.2 +2.2
CMB                                 pmax    pmax
      comp=Z,19nm,1.6s
DLMT  Dillon            50.94 330   IAmb    IAmb    09 10 01.1
      comp=Z,16nm,0.4s
MFID  Camas Ranch       51.30 326   IAmb    IAmb    09 10 05.3
      comp=Z,47nm,1.4s
HRY   Holter Researc    51.54 332   P       P       09 10 02.2 +1.3
EGMT  Eagleton          51.59 334   P       P       09 10 02.2 +1.0
EGMT                                IAmb    IAmb    09 10 03.3
      comp=Z,34nm,1.1s
EGMT  Eagleton          51.59 334   P       P       09 10 01.5 +0.3
      baz=140,SNR=13
GO08  Villa O'Higgin    51.91 174   IAmb    IAmb    09 10 07.7
      comp=Z,76nm,1.9s
WVOR  Wild Horse Val    52.29 324   P       P       09 10 08.6 +2.0
WVOR  Wild Horse Val    52.29 324   P       P       09 10 08.6 +2.0
WVOR                                pmax    pmax
      comp=Z,128nm,1.4s
SCHQ  Schefferville     52.39   9   P       P       09 10 07.4 +0.5
      comp=Z,50nm,0.8s,baz=216,slow=5.4,SNR=48
SCHQ                                LR      LR      09 34 32.7
      comp=Z,176nm,18.1s,baz=224,slow=39
      comp=Z,50nm,0.8s
SCHQ  Schefferville     52.39   9   P       P       09 10 07.5 +0.5
PLID  Pearl Lake        52.50 328   P       P       09 10 09.0 +0.9
MSO   Missoula          52.64 331   P       P       09 10 10.2 +1.3
MSO   Missoula          52.64 331   P       P       09 10 10.3 +1.3
      baz=135,SNR=9.1
J08A  Circle Bar Ran    52.76 325   P       P       09 10 11.5 +1.5
J08A                                IAmb    IAmb    09 10 12.8
      comp=Z,31nm,1.1s
BMO   Blue Mountains    53.04 327   P       P       09 10 13.3 +1.2
BMO   Blue Mountains    53.04 327   P       P       09 10 13.3 +1.2
BMO                                 pmax    pmax
      comp=Z,17nm,1.4s
I07A  Izee              53.79 325   P       P       09 10 19.1 +1.5
G08A  Pilot Rock        54.23 326   IAmb    IAmb    09 10 25.8
      comp=Z,46nm,1.3s
YBH   Yreka Blue Hor    54.38 321   LR      LR      09 36 09.6
      comp=Z,217nm,19.4s,baz=134,slow=39
FFC   Flin Flon         54.43 344   P       P       09 10 21.9   0.0
FFC                                 IAmb    IAmb    09 10 22.9
      comp=Z,36nm,0.9s
FFC   Flin Flon         54.43 344   P       P       09 10 21.9   0.0
FFC                                 pmax    pmax
      comp=Z,36nm,1.0s
PINE  Pine Mountain     54.45 324   P       P       09 10 24.2 +1.6
PINE                                IAmb    IAmb    09 10 25.5
      comp=Z,30nm,1.1s
I05D  Terrebonne, OR    55.01 324   P       P       09 10 27.9 +1.6
I05D                                IAmb    IAmb    09 10 31.2
      comp=Z,57nm,1.3s
NEW   Newport           55.19 330   LR      LR      09 35 27.9
      comp=Z,213nm,21.9s,baz=143,slow=38
NEW   Newport           55.19 330   P       P       09 10 28.4 +0.8
NEW   Newport           55.19 330   P       P       09 10 28.4 +0.8
NEW                                 pmax    pmax
      comp=Z,13nm,0.9s
NEW   Newport           55.19 330   P       P       09 10 28.5 +0.9
      baz=132,SNR=7.6
I04A  Tendick Farm,     55.33 323   P       P       09 10 28.6  -0.1
H04A  Detroit Lake      55.70 324   IAmb    IAmb    09 10 36.0
      comp=Z,34nm,1.2s
HOOD  Mount Hood Mea    55.76 325   P       P       09 10 32.8 +0.9
B08A  Colville Reser    56.37 329   P       P       09 10 37.1 +1.1
LTY   Liberty           56.38 327   IAmb    IAmb    09 10 41.1
      comp=Z,77nm,1.8s
FCC   Fort Churchill    56.47 351   IAmb    IAmb    09 10 36.6
      comp=Z,38nm,0.8s
EFI   East Falkland     57.73 164ceP        P       09 10 46.0 +0.5
EFI                                 pmax    pmax
      comp=Z,129nm,2.5s
LLLB  Lillooet          59.08 330   P       P       09 10 56.6 +1.6
BRLDA Berland Lookou    59.32 335   P       P       09 10 57.5 +0.8
CBB   Campbell River    60.53 328   P       P       09 11 05.5 +0.5
FRB   Frobisher Bay     60.84   6   LR      LR      09 39 03.6
      comp=Z,83nm,19.7s,baz=198,slow=38
WAPA  Wapiti River      60.85 335   P       P       09 11 07.5 +0.3
TAOE  Nuku Hiva Isla    61.67 258 eLR       LR      09 29 33.5
      comp=Z,758nm,25.7s
BBTS  Babate            63.01  75   LR      LR      09 36 13.8
      comp=Z,214nm,22.0s,baz=244,slow=34
BBB   Bella Bella       63.17 329   P       P       09 11 24.6 +2.0
      comp=Z,32nm,1.1s,baz=96,slow=8.4,SNR=4.2
BBB                                 LR      LR      09 40 54.1
      comp=Z,107nm,21.0s,baz=120,slow=38
      comp=Z,32nm,1.1s
NUUK  Nuuk              64.00  13 i P       P       09 11 27.0  -1.0
NUUK                                IAmb    IAmb    09 11 36.2
      comp=Z,50nm,1.0s
YKA   Yellowknife Ar    64.54 343   P       P       09 11 31.6   0.0
      comp=Z,25nm,0.9s,baz=136,slow=6.5,SNR=319
      comp=Z,25nm,0.9s
KOTAN Kotaneelee Air    66.07 337   P       P       09 11 42.3 +0.8
      baz=130,SNR=14
LIRD  Liard River Hi    66.43 336   P       P       09 11 45.0 +1.2
      baz=128,SNR=20
V35K  Ketchikan         66.59 331   P       P       09 11 46.7 +1.7
      baz=121
SFJD  Kangerlussuaq     66.65  12   LR      LR      09 41 14.9
      comp=Z,180nm,19.6s,baz=217,slow=36
SFJD  Kangerlussuaq     66.65  12   P       P       09 11 44.6  -0.5
SFJD                                IAmb    IAmb    09 11 45.3
      comp=Z,21nm,1.1s
SFJD  Kangerlussuaq     66.65  12   P       P       09 11 44.6  -0.5
SFJD                                pmax    pmax
      comp=Z,21nm,1.1s
SFJD  Kangerlussuaq     66.65  12 i P       P       09 11 43.4  -1.7
SFJD                                IAmb    IAmb    09 11 45.0
      comp=Z,14nm,0.8s
T35M  Bob Quinn         66.82 333   P       P       09 11 48.1 +1.7
      baz=123
DY2G  Dye2              67.19  14 i P       P       09 11 47.6  -1.2
DY2G                                IAmb    IAmb    09 11 56.6
      comp=Z,29nm,0.8s
CRAG  Craig             67.41 330   P       P       09 11 51.6 +1.5
      baz=119
WRAK  Wrangell Islan    67.51 331   P       P       09 11 52.9 +2.2
      baz=120
DLBC  Dease Lake        67.52 334   P       P       09 11 52.5 +1.7
      comp=Z,20nm,0.9s,baz=138,slow=6.0,SNR=32
DLBC                                LR      LR      09 43 02.2
      comp=Z,322nm,21.2s,baz=105,slow=38
      comp=Z,20nm,0.9s
DLBC  Dease Lake        67.52 334   IAmb    IAmb    09 11 56.0
      comp=Z,33nm,1.1s
DLBC  Dease Lake        67.52 334   P       P       09 11 53.0 +2.1
      baz=123,SNR=15
S34M  Telegraph Cree    67.72 333   P       P       09 11 54.2 +2.1
      baz=122,SNR=8.3
U33K  Whale Pass        67.73 331   P       P       09 11 53.4 +1.3
      baz=120
WRGLY Wrigley           67.89 340   P       P       09 11 54.2 +1.2
      baz=132,SNR=9.1
WTLY  Watson Lake, Y    67.94 336   IAmb    IAmb    09 11 58.1
      comp=Z,47nm,1.5s
WTLY  Watson Lake, Y    67.94 336   P       P       09 11 55.0 +1.6
      baz=125,SNR=12
T33K  Petersburg        68.00 332   P       P       09 11 55.4 +1.6
      baz=120
ISOG  Isortoq, Green    68.41  17 i P       P       09 11 55.4  -0.7
ISOG                                IAmb    IAmb    09 12 04.2
      comp=Z,39nm,0.8s
ISOG                              eP        P       09 12 04.2 +8.0
ILULI Ilulissat         68.47  11 i P       P       09 11 55.1  -1.4
ILULI                               IAmb    IAmb    09 12 04.6
      comp=Z,34nm,0.8s
Q32M  Nakina River      68.78 334   P       P       09 12 00.9 +1.9
      baz=121
ANGG  Ammassalik, Gr    68.85  17 i P       P       09 11 57.5  -1.4
ANGG                                IAmb    IAmb    09 11 59.2
      comp=Z,35nm,0.9s
PMSA  Palmer Station    68.86 173   LR      LR      09 38 23.7
      comp=Z,112nm,20.6s,baz=342,slow=33
S32K  Killisnoo         69.09 332   P       P       09 12 02.2 +1.6
      baz=119
JIS   Juneau Island     69.39 332   IAmb    IAmb    09 12 07.5
      comp=Z,24nm,1.1s
R32K  Eaglecrest        69.45 332   P       P       09 12 04.8 +1.9
      baz=119
P33M  Teslin, Yukon     69.68 335   P       P       09 12 06.0 +1.7
P33M                                IAmb    IAmb    09 12 14.2
      comp=Z,22nm,1.1s
P33M  Teslin, Yukon     69.68 335   P       P       09 12 06.2 +1.8
      baz=121,SNR=14
P32M  Atlin             69.75 334   P       P       09 12 06.2 +1.5
      baz=120,SNR=9.9
BESE  Bessie Mountai    69.76 333   P       P       09 12 05.5 +0.6
BESE                                IAmb    IAmb    09 12 10.0
      comp=Z,41nm,1.3s
S31K  Pelican           70.11 332   P       P       09 12 09.6 +2.7
      baz=117
NUUG  Nuugaatsiaq       70.16   9 i P       P       09 12 06.3  -0.6
SKAG  Skagway           70.40 333   P       P       09 12 10.2 +1.6
SKAG                                IAmb    IAmb    09 12 13.6
      comp=Z,46nm,1.8s
SKAG  Skagway           70.40 333   P       P       09 12 10.2 +1.6
      baz=119
ICESG Greenland Ices    70.81  14 i P       P       09 12 09.7  -1.7
ICESG                               IAmb    IAmb    09 12 19.0
      comp=Z,56nm,0.8s
PLBC  Pleasant Camp     70.86 333   P       P       09 12 12.7 +1.2
      baz=118
FARO  Faro, Yukon       70.95 336   P       P       09 12 13.6 +1.5
      baz=121,SNR=9.0
M31M  Drury Creek, Y    71.36 336   P       P       09 12 16.2 +1.7
      baz=120,SNR=9.5
O30N  Mendenhall        71.36 334   P       P       09 12 16.3 +1.7
      baz=118,SNR=21
P30M  Million Dollar    71.44 334   P       P       09 12 17.5 +2.5
      baz=117
N31M  Braeburn, Yuko    71.57 335   IAmb    IAmb    09 12 25.7
      comp=Z,27nm,0.9s
N31M  Braeburn, Yuko    71.57 335   P       P       09 12 17.7 +1.9
      baz=119,SNR=13
RES   Resolute Bay      71.88 356   P       P       09 12 16.4  -0.9
      comp=Z,9.9nm,0.9s,baz=179,slow=9.6,SNR=29
RES                                 LR      LR      09 43 14.8
      comp=Z,253nm,21.8s,baz=186,slow=35
      comp=Z,9.9nm,0.9s
HYT   Haines Junctio    72.00 334   P       P       09 12 19.2 +0.7
HYT                                 IAmb    IAmb    09 12 23.9
      comp=Z,33nm,1.7s
HYT   Haines Junctio    72.00 334   P       P       09 12 21.4 +2.9
      baz=117,SNR=7.6
N30M  Aishikik Lake     72.11 335   P       P       09 12 21.4 +2.2
      baz=118
PPT   Papeete           72.11 250   LR      LR      09 34 43.6
      comp=Z,56nm,18.5s,baz=117,slow=28
PPT2  Papeete2          72.12 250 eLR       LR      09 34 23.0
      comp=Z,183nm,28.2s
PPT2                              eLR       LR      09 34 23.4
      comp=Z,222nm,23.5s
C36M  Paulatuk          72.19 345   P       P       09 12 18.5  -0.8
C36M  Paulatuk          72.19 345   P       P       09 12 21.2 +1.9
      baz=132
O29M  Mount Kennedy     72.24 333   P       P       09 12 22.2 +2.2
      baz=116
PNL   Peninsula         72.34 333   P       P       09 12 22.3 +1.9
      baz=115
KULLO Kullorsuaq        72.40   6 i P       P       09 12 19.6  -0.9
KULLO                               IAmb    IAmb    09 12 28.7
      comp=Z,40nm,1.2s
YUK6  Outpost Mounta    72.43 334   P       P       09 12 23.1 +1.9
      baz=116
M30M  Minto, Yukon      72.52 336   IAmb    IAmb    09 12 26.2
      comp=Z,30nm,1.0s
M30M  Minto, Yukon      72.52 336   P       P       09 12 23.2 +1.7
      baz=118,SNR=25
BCPM  Bancas Point      72.57 333   IAmb    IAmb    09 12 32.0
      comp=Z,27nm,1.0s
PFVI  Vila Bisbo        72.62  52 eP        P       09 12 24.6 +2.0
MAYO  Mayo, Yukon       72.65 337   P       P       09 12 24.0 +1.8
MAYO  Mayo, Yukon       72.65 337   P       P       09 12 24.5 +2.3
      baz=119,SNR=9.1
YUK4  Talbot Arm        72.73 334   P       P       09 12 25.2 +2.2
      baz=116,SNR=8.6
PTEO  Sao Teotonio      72.77  52 i LQ      LQ      09 12 32.3
MORF  Marmelete         72.79  52 eP        P       09 12 25.0 +1.4
MORF  Marmelete         72.79  52 eP        P       09 12 25.1 +1.4
MORF                              i LQ      LQ      09 12 32.3
MORF  Marmelete         72.79  52 eP        P       09 12 25.0 +1.4
MORF                                IAmb    IAmb    09 12 33.7
      comp=Z,48nm,1.0s
PINM  Pinnacle          72.91 333   P       P       09 12 25.6 +1.7
      baz=114
PNCL  Nicolau / Gran    73.01  51 i LQ      LQ      09 12 33.4
TBI   Tubuai            73.05 245 eS        SKiKP   09 21 55.1  -2.4
      comp=Z,724nm,32.8s
TBI   Tubuai            73.05 245 eLR       LR      09 34 49.0
      comp=Z,3µm,25.5s
TBI                               eLR       LR      09 34 49.2
      comp=Z,1µm,28.8s
M29M  Somme Creek       73.14 335   P       P       09 12 28.2 +2.9
      baz=116
O28M  Mount Upton       73.16 333   P       P       09 12 28.2 +2.5
      baz=114
YUK8  Steele Glacier    73.19 334   P       P       09 12 27.7 +2.0
      baz=115
MESJ  Messejana         73.21  52 eP        P       09 12 27.8 +1.8
L29M  L29M              73.31 336   P       P       09 12 28.1 +1.9
      baz=117
PCVE  Castro Verde      73.32  52 i LQ      LQ      09 12 35.1
PBDV  Barranco-do-Ve    73.34  52 i LQ      LQ      09 12 35.7
PCAS  Casmilo, Conde    73.36  49 eP        P       09 12 27.3 +0.4
PCAS                              i LQ      LQ      09 12 35.5
PMTG  Montargil         73.40  50 i LQ      LQ      09 12 35.1
K29M  Barlow Dome       73.41 337   P       P       09 12 28.4 +1.6
      baz=118
TULEG Thule             73.41   3   IAmb    IAmb    09 12 34.4
      comp=Z,28nm,1.2s
COI   Coimbra           73.45  49 i LQ      LQ      09 12 36.8
SUMG  Summit            73.65  12 i P       P       09 12 27.7  -0.7
SUMG                                IAmb    IAmb    09 12 36.9
      comp=Z,93nm,0.9s
YUK3  Moose Creek       73.70 334   P       P       09 12 30.5 +1.8
      baz=114,SNR=8.2
PESTR Estremoz          73.86  51 eP        P       09 12 29.9   0.0
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PESTR                                  A      A      09 12 34.1
       comp=Z,55nm,1.4s
PESTR                                i LQ     LQ     09 12 37.0
F31M   Tsiigehtchic       73.87 341    P      P      09 12 30.7 +1.4
       baz=122,SNR=26
BORG   Borgarnes          73.88  22    LR     LR     09 40 49.0
       comp=Z,186nm,19.9s,baz=204,slow=32
PVIS   Viseu              73.93  49  i LQ     LQ     09 12 37.6
BARN   Barnard Glacie     73.94 333    P      P      09 12 30.6 +0.6
J29M   Klondike Camp      73.96 337    P      P      09 12 32.1 +2.1
       baz=117
PCBR   Castelo Branco     74.10  50  eP       P      09 12 31.6 +0.4
PCBR                                 i LQ     LQ     09 12 38.7
PCBR                                   A      A      09 12 40.7
       comp=Z,49nm,1.5s
PMRV   Marv??o            74.10  50  i LQ     LQ     09 12 38.4
POLO   Lamas de Olo       74.11  48  eP       P      09 12 31.8 +0.4
POLO                                 i LQ     LQ     09 12 39.0
POLO                                   A      A      09 12 44.2
       comp=Z,34nm,1.8s
BVCY   Beaver Creek       74.14 335    P      P      09 12 33.0 +1.9
       baz=114,SNR=13
PBAR   Barrancos          74.18  51  eP       P      09 12 32.5 +0.8
PBAR                                 i LQ     LQ     09 12 38.9
TIC    Toumodi            74.20  84⇑iPKP1     P      09 12 40.1 +7.8
       comp=Z,25nm,0.8s
LIC    Lamto              74.21  84⇓iPKP1     P      09 12 39.9 +7.6
       comp=Z,52nm,0.9s
DAWY   Dawson             74.24 337    P      P      09 12 32.9 +1.3
       baz=116,SNR=17
INK    Inuvik             74.27 342    P      P      09 12 32.4 +0.8
       comp=Z,19nm,0.9s,baz=99,slow=6.5,SNR=44
INK                                    LR     LR     09 46 54.9
       comp=Z,349nm,19.8s,baz=130,slow=37
       comp=Z,19nm,0.9s
INK    Inuvik             74.27 342    P      P      09 12 32.9 +1.3
INK                                    IAmb   IAmb   09 12 41.0
       comp=Z,51nm,1.1s
INK    Inuvik             74.27 342    P      P      09 12 32.9 +1.3
INK                                    pmax   pmax
       comp=Z,51nm,1.1s
INK    Inuvik             74.27 342    P      P      09 12 32.7 +1.1
       baz=123,SNR=33
A36M   Sachs Harbour      74.27 347    P      P      09 12 30.6  -0.9
       baz=132,SNR=63
EPYK   Eagle Plains       74.32 339    P      P      09 12 33.1 +1.1
EPYK                                   IAmb   IAmb   09 12 41.7
       comp=Z,43nm,1.0s
EPYK   Eagle Plains       74.32 339    P      P      09 12 33.5 +1.5
       baz=119,SNR=14
DBIC   Dimbokro           74.37  84    P      P      09 12 33.4 +0.1
       comp=Z,17nm,1.2s,baz=299,slow=4.1,SNR=5.4
DBIC                                   LR     LR     09 44 19.9
       comp=Z,194nm,18.2s,baz=240,slow=35
       comp=Z,17nm,1.2s
DBIC   Dimbokro           74.37  84    P      P      09 12 32.2  -1.0
I29M   Ogilvie Camp,      74.42 338    P      P      09 12 33.5 +1.0
I29M                                   IAmb   IAmb   09 12 42.2
       comp=Z,32nm,1.0s
I29M   Ogilvie Camp,      74.42 338    P      P      09 12 34.2 +1.6
       baz=118,SNR=20
G30M   tAoh Zraii Nji     74.45 340    P      P      09 12 33.6 +0.8
       baz=120
KIC    Kosan Boka         74.49  84⇑ePKP1     P      09 12 41.0 +7.0
       comp=Z,45nm,0.9s
M27K   Edge Creek, AK     74.55 335    IAmb   IAmb   09 12 38.7
       comp=Z,42nm,1.5s
M27K   Edge Creek, AK     74.55 335    P      P      09 12 36.0 +2.5
       baz=113
MVO    Moncorvo           74.65  48  i LQ     LQ     09 12 42.6
MCARA  McCarthy VSAT      74.67 333    P      P      09 12 36.7 +2.6
MCARA                                  IAmb   IAmb   09 12 46.6
       comp=Z,25nm,1.0s
MCARA  McCarthy VSAT      74.67 333    P      P      09 12 36.2 +2.0
       baz=112,SNR=8.1
BCAR   Beaver Creek A     74.79 335    P      P      09 12 36.8 +2.0
L27K   Beaver Creek,      74.81 335    P      P      09 12 37.0 +2.2
L27K                                   IAmb   IAmb   09 12 45.1
       comp=Z,32nm,0.9s
L27K   Beaver Creek,      74.81 335    P      P      09 12 37.1 +2.2
       baz=114
PBRG   Braganca           74.96  48  eP       P      09 12 37.5 +1.2
PBRG                                 i LQ     LQ     09 12 44.7
PBRG                                   A      A      09 12 51.4
       comp=Z,57nm,1.8s
M26K   Nabesna, AK        75.05 334    IAmb   IAmb   09 12 41.1
       comp=Z,39nm,1.6s
M26K   Nabesna, AK        75.05 334    P      P      09 12 38.2 +1.9
       baz=112
EGAK   Eagle              75.24 337    P      P      09 12 38.4 +1.0
EGAK                                   IAmb   IAmb   09 12 42.0
       comp=Z,34nm,1.2s
EGAK   Eagle              75.24 337    P      P      09 12 38.5 +1.1
       baz=115,SNR=16
K27K   Chicken            75.30 336    IAmb   IAmb   09 12 48.0
       comp=Z,24nm,1.1s
K27K   Chicken            75.30 336    P      P      09 12 39.4 +1.7
       baz=114
L26K   Log Cabin Wild     75.43 335    P      P      09 12 40.3 +1.8
L26K   Log Cabin Wild     75.43 335    P      P      09 12 39.9 +1.4
       baz=112,SNR=12
N25K   Chitina, Valde     75.46 333    P      P      09 12 40.5 +1.7
       baz=111
MDT    Midelt             75.51  57    LR     LR     09 43 46.1
       comp=Z,98nm,20.4s,baz=341,slow=34
Q23K   Middleton Isla     75.54 331    P      P      09 12 41.0 +1.9
       baz=108
NEEM   North Greenlan     75.64   6  i P      P      09 12 38.9  -0.9
NEEM                                   IAmb   IAmb   09 12 48.6
       comp=Z,80nm,0.9s
I27K   Kandik River       75.76 338    P      P      09 12 41.9 +1.5
       baz=114
DOT    Dot Lake           75.97 335    IAmb   IAmb   09 12 51.3
       comp=Z,34nm,0.9s
HARP   HAARP              75.98 334    P      P      09 12 43.2 +1.6
       baz=110
H27K   Steamboat Moun     75.99 338    P      P      09 12 43.3 +1.6
       baz=115
KLU    Klutina            76.01 333    P      P      09 12 43.2 +1.3
       baz=109
SCRK   Sand Creek         76.06 336    IAmb   IAmb   09 12 47.0
       comp=Z,17nm,0.8s
SCRK   Sand Creek         76.06 336    P      P      09 12 44.0 +1.8
       baz=112,SNR=21
I26K   Coal Creek Min     76.23 337    IAmb   IAmb   09 12 47.4
       comp=Z,32nm,1.4s
I26K   Coal Creek Min     76.23 337    P      P      09 12 44.4 +1.5
       baz=113
G27K   Doyon Strip        76.28 339    P      P      09 12 44.0 +0.7
       baz=115
PAX    Paxson             76.32 335    P      P      09 12 44.8 +1.2
       baz=110,SNR=6.5
RIDG   Independent Ri     76.32 335    P      P      09 12 44.6 +0.9
RIDG                                   IAmb   IAmb   09 12 53.4
       comp=Z,36nm,1.0s
RIDG   Independent Ri     76.32 335    P      P      09 12 44.7 +1.1
       baz=111,SNR=14
M24K   Tolsona, Glenn     76.33 334    P      P      09 12 44.9 +1.2
       baz=109
PAB    San Pablo          76.45  50    P      P      09 12 45.4 +0.6
PAB                                    IAmb   IAmb   09 12 54.5
       comp=Z,25nm,1.1s
PAB    San Pablo          76.45  50    P      P      09 12 45.4 +0.6
PAB                                    pmax   pmax
       comp=Z,25nm,1.1s
SCO    Scoresbysund       76.47  17  i P      P      09 12 43.0  -1.2
K24K   Donnelly Dome      76.73 335    P      P      09 12 47.2 +1.3
       baz=110,SNR=10
ESDC   Sonseca Array      76.76  50    P      P      09 12 47.4 +0.8
       comp=Z,12nm,1.1s,baz=270,slow=5.1,SNR=19
ESDC                                   LR     LR     09 40 26.7
       comp=Z,86nm,20.6s,baz=269,slow=31
       comp=Z,12nm,1.1s
ESDC   Sonseca Array      76.76  50    P      P      09 12 46.9 +0.3
ESDC                                   IAmb   IAmb   09 12 51.0
       comp=Z,27nm,1.4s
SCM    Sheep Creek Mo     76.76 333    IAmb   IAmb   09 12 48.6
       comp=Z,44nm,1.2s
SCM    Sheep Creek Mo     76.76 333    P      P      09 12 47.2 +1.1
       baz=108
ESBB   Sonseca Array      76.76  50    IAmb   IAmb   09 12 50.9
       comp=Z,34nm,1.4s
E27K   Coleen River       76.84 340    P      P      09 12 47.4 +0.9
       baz=115
PWL    Port Wells         76.92 332    P      P      09 12 47.9 +0.8
       baz=107
M23K   Glacier View       76.92 333    P      P      09 12 48.1 +1.1
       baz=108
G26K   Porcupine Rive     77.11 339    P      P      09 12 48.6 +0.7
       baz=113
KNK    Knik Glacier       77.14 333    IAmb   IAmb   09 12 58.2
       comp=Z,31nm,1.1s
KNK    Knik Glacier       77.14 333    P      P      09 12 49.2 +0.9
       baz=107,SNR=5.5
SML    Sawmill            77.20 333    P      P      09 12 50.0 +1.4
       baz=107
PRP    Porcupine Dome     77.23 337    IAmb   IAmb   09 12 53.2
       comp=Z,27nm,1.3s
PRP    Porcupine Dome     77.23 337    P      P      09 12 49.8 +0.9
       baz=111,SNR=12
HDA    Harding Lake       77.42 336    P      P      09 12 50.8 +1.1
HDA    Harding Lake       77.42 336    P      P      09 12 50.4 +0.7
       baz=109,SNR=24
GHO    Glory Hole Cre     77.46 333    P      P      09 12 51.7 +1.6
GHO                                    IAmb   IAmb   09 12 59.8
       comp=Z,38nm,1.1s
O22K   Cooper Landing     77.47 331    P      P      09 12 50.9 +0.9
       baz=106
PMR    Palmer             77.50 333    P      P      09 12 51.3 +1.1
       baz=106
IL31                      77.52 336    P      P      09 12 51.1 +0.9
ILAR   Eielson Array      77.52 336    P      P      09 12 50.9 +0.7
       comp=Z,8.1nm,0.9s,baz=116,slow=4.0,SNR=69
ILAR                                   PP     PP     09 15 45.3 +0.3
       comp=Z,2.7nm,1.0s,baz=110,slow=6.4,SNR=7.3
ILAR                                   LR     LR     09 48 54.9
       comp=Z,196nm,20.7s,baz=98,slow=37
       comp=Z,8.1nm,0.9s
F26K   Sheenjek River     77.52 339    P      P      09 12 51.9 +1.6
       baz=112
BMAR   Burnt Mountain     77.58 339    P      P      09 12 52.0 +1.4
RC01   Rabbit Creek A     77.64 332    P      P      09 12 52.5 +1.5
       baz=106
BRSE   Bradley Lake S     77.77 331    P      P      09 12 53.4 +1.6
       baz=105
CCB    Clear Creek Bu     77.85 336    P      P      09 12 53.9 +1.9
CCB                                    IAmb   IAmb   09 12 56.9
       comp=Z,30nm,1.6s
POKR   Poker Plat Res     77.85 336    P      P      09 12 53.3 +1.2
       baz=109
G25K   Bearman Lake       77.89 338    P      P      09 12 53.8 +1.6
       baz=110
RND    Reindeer           77.91 334    P      P      09 12 54.2 +1.7
RND                                    IAmb   IAmb   09 13 02.1
       comp=Z,32nm,0.9s
RND    Reindeer           77.91 334    P      P      09 12 54.2 +1.7
RND                                    pmax   pmax
       comp=Z,32nm,0.9s
COLA   College            77.94 336    P      P      09 12 53.9 +1.3
COLA                                   IAmb   IAmb   09 13 01.6
       comp=Z,36nm,1.4s
COLA   College            77.94 336    P      P      09 12 53.9 +1.3
COLA                                   pmax   pmax
       comp=Z,36nm,1.4s
COLA   College            77.94 336    P      P      09 12 54.5 +2.0
       baz=108
TCOL   CIGO, UAF Yank     77.94 336    P      P      09 12 53.9 +1.3
TCOL                                   IAmb   IAmb   09 13 01.6
       comp=Z,37nm,1.4s
TCOL   CIGO, UAF Yank     77.94 336    P      P      09 12 54.3 +1.7
       baz=108
F25K   Christian Rive     78.02 339    P      P      09 12 54.7 +1.6
       baz=111
MCK    McKinley           78.04 335    IAmb   IAmb   09 13 03.9
       comp=Z,19nm,0.9s
MCK    McKinley           78.04 335    P      P      09 12 54.4 +1.1
       baz=107,SNR=9.5
MDM    Murphy Dome        78.12 336    IAmb   IAmb   09 12 57.8
       comp=Z,24nm,1.2s
C27K   Jago River         78.13 341    P      P      09 12 54.5 +0.9
       baz=113
E25K   Arctic Village     78.18 340    P      P      09 12 55.3 +1.4
       baz=111,SNR=26
HOM    Homer              78.19 330    P      P      09 12 55.6 +1.6
       baz=104
SUA    Susitna One        78.22 332    IAmb   IAmb   09 13 03.7
       comp=Z,22nm,0.8s
SUA    Susitna One        78.22 332    P      P      09 12 55.4 +1.1
       baz=105,SNR=9.2
KDAK   Kodiak Island      78.24 328    LR     LR     09 49 03.6
       comp=Z,97nm,21.4s,baz=115,slow=37
CUT    Chulitna           78.25 333    P      P      09 12 56.0 +1.7
CUT    Chulitna           78.25 333    P      P      09 12 55.0 +0.7
       baz=106
H24K   Noodor Dome        78.26 337    P      P      09 12 55.8 +1.4
H24K                                   IAmb   IAmb   09 12 59.1
       comp=Z,58nm,1.4s
H24K   Noodor Dome        78.26 337    P      P      09 12 55.7 +1.4
       baz=108
Q20K   Shuyak Island      78.33 329    P      P      09 12 56.0 +1.2
       baz=103
NEA2   Nenana             78.35 336    IAmb   IAmb   09 13 04.0
       comp=Z,28nm,1.0s
NEA2   Nenana             78.35 336    P      P      09 12 55.6 +0.7
       baz=107,SNR=16
G24K   Hadweenzic Riv     78.38 338    P      P      09 12 56.4 +1.4
       baz=109
TRF    Thorofare Moun     78.54 334    P      P      09 12 57.2 +1.1
TRF                                    IAmb   IAmb   09 13 05.2
       comp=Z,25nm,1.0s
TRF    Thorofare Moun     78.54 334    P      P      09 12 57.4 +1.2
       baz=106
C26K   Camden Bay         78.63 341    P      P      09 12 57.9 +1.6
       baz=112,SNR=25
I23K   Minto, Yukon-K     78.64 336    P      P      09 12 57.8 +1.4
I23K                                   IAmb   IAmb   09 13 00.9
       comp=Z,51nm,1.4s
I23K   Minto, Yukon-K     78.64 336    P      P      09 12 57.6 +1.2
       baz=107,SNR=16
SKT    Skwentna           78.71 333    P      P      09 12 58.4 +1.5
SKT                                    IAmb   IAmb   09 13 06.1
       comp=Z,43nm,1.1s
SKT    Skwentna           78.71 333    P      P      09 12 57.6 +0.7
       baz=104,SNR=8.9
O20K   Slope Mountain     78.77 331    P      P      09 12 58.1 +0.7
       baz=103
F24K   Squaw Lake         78.80 339    P      P      09 12 58.5 +1.1
       baz=109,SNR=14
KTH    Kantishna Hill     78.84 334    IAmb   IAmb   09 13 07.1
       comp=Z,28nm,1.2s
D25K   Kavik River        78.89 341    P      P      09 12 58.8 +0.9
       baz=111
H23K   Yukon River        78.91 337    P      P      09 12 59.1 +1.1
       baz=107
RSO    Redoubt South      78.92 331    P      P      09 13 00.0 +1.6
ILSW   Iliamna Southw     79.00 331    IAmb   IAmb   09 13 08.5
       comp=Z,22nm,0.9s
BPAW   Bear Paw Mtn.      79.02 335    P      P      09 12 59.6 +1.0
BPAW                                   IAmb   IAmb   09 13 08.1
       comp=Z,39nm,1.2s
BPAW   Bear Paw Mtn.      79.02 335    P      P      09 12 59.6 +1.0
       baz=105,SNR=20
Q19K   Cape Douglas,      79.03 329    P      P      09 12 59.7 +0.9
       baz=102
MLY    Manley             79.16 336    IAmb   IAmb   09 13 03.5
       comp=Z,34nm,1.2s
MLY    Manley             79.16 336    P      P      09 13 00.1 +0.7
       baz=106,SNR=20
PPLA   Purkeypile         79.23 334    P      P      09 13 01.1 +1.1
       baz=104
CAST   Castle Rocks       79.31 334    P      P      09 13 00.9 +0.7
CAST   Castle Rocks       79.31 334    P      P      09 13 00.6 +0.4
       baz=104,SNR=9.7
G23K   Bananza Creek      79.35 338    P      P      09 13 01.8 +1.4
       baz=107,SNR=15
M20K   Styx River         79.42 332    P      P      09 13 02.1 +1.1
ESK    Eskdalemuir        79.49  34    P      P      09 13 01.7 +0.4
ESK                                    IAmb   IAmb   09 13 09.8
       comp=Z,27nm,0.8s
ESK    Eskdalemuir        79.49  34    P      P      09 13 01.7 +0.4
ESK                                    pmax   pmax
       comp=Z,27nm,0.9s
EKA    Eskdalemuir Ar     79.52  34    LR     LR     09 43 06.6
       comp=Z,154nm,21.7s,baz=277,slow=32
CHUM   Lake Minchumin     79.53 335    P      P      09 13 01.8 +0.5
       baz=104,SNR=7.3
COLD   Coldfoot           79.57 338    P      P      09 13 03.5 +2.0
COLD   Coldfoot           79.57 338    P      P      09 13 03.3 +1.8
       baz=106
E23K   Chandalar          79.60 339    P      P      09 13 02.9 +1.2
       baz=107
O19K   Port Alsworth      79.63 331    P      P      09 13 02.6 +0.7
O19K   Port Alsworth      79.63 331    P      P      09 13 02.8 +0.9
       baz=102
Q18K   Katmai Hardscr     79.67 329    P      P      09 13 03.5 +1.1
       baz=101
I21K   Tanana             79.71 336    P      P      09 13 03.0 +0.8
       baz=104,SNR=11
C24K   Franklin Bluff     79.79 341    P      P      09 13 03.7 +1.0
       baz=108
N19K   Bonanza Creek      79.83 331    P      P      09 13 03.9 +0.7
       baz=102
L20K   Farewell, AK       79.89 333    P      P      09 13 04.0 +0.5
       baz=102
P18K   Big Mountain,      79.92 330    P      P      09 13 04.3 +0.7
       baz=101
O18K   Koktuh Hills       80.00 330    P      P      09 13 04.3 +0.3
       baz=101
M19K   Big River Lodg     80.01 332    P      P      09 13 05.3 +1.3
M19K   Big River Lodg     80.01 332    P      P      09 13 04.7 +0.7
       baz=102
Q17K   Contact Creek      80.06 329    P      P      09 13 05.3 +0.8
       baz=100
H21K   Melozitna Rive     80.16 336    P      P      09 13 05.5 +0.7
       baz=104,SNR=5.1
K20K   Telida             80.17 334    P      P      09 13 05.8 +0.9
K20K                                   IAmb   IAmb   09 13 08.7
       comp=Z,36nm,1.3s
K20K   Telida             80.17 334    P      P      09 13 05.8 +0.9
       baz=102,SNR=9.6
R17K   Ugashik Creek      80.22 328    P      P      09 13 06.6 +1.4
       baz=99
D23K   Nanushuk River     80.24 340    P      P      09 13 06.9 +1.8
       baz=106
L19K   White Mountain     80.28 333    P      P      09 13 06.4 +0.9
L19K   White Mountain     80.28 333    P      P      09 13 06.7 +1.2
       baz=101
DAG    Danmarks Havn      80.34  12  i P      P      09 13 04.1  -1.4
DAG                                    IAmb   IAmb   09 13 13.5
       comp=Z,25nm,1.0s
E22K   Anaktuvuk Pass     80.41 339    P      P      09 13 07.7 +1.6
       baz=105
Q16K   King Salmon        80.52 329    P      P      09 13 08.6 +1.8
       baz=99
IMAR   Indian Mountai     80.61 336    P      P      09 13 08.2 +1.0
G21K   Allakaket          80.64 337    P      P      09 13 08.8 +1.5
       baz=103,SNR=14
TOA0   Torodi Ar. Sit     80.67  77    P      P      09 13 09.1 +0.5
TORD   Torodi Ar. Bea     80.67  77    P      P      09 13 09.9 +1.4
       comp=Z,7.4nm,0.4s,baz=284,slow=5.9,SNR=3.5
TORD                                   LR     LR     09 47 22.2
       comp=Z,163nm,21.9s,baz=266,slow=35
       comp=Z,7.4nm,0.4s
JMIC   Jan Mayen          80.75  18    LR     LR     09 43 37.8
       comp=Z,43nm,20.8s,baz=255,slow=32
F21K   Alatna River       80.80 338    P      P      09 13 09.5 +1.3
       baz=104
R16K   Pilot Point        80.83 328    P      P      09 13 09.8 +1.3
       baz=98
O17K   Koliganek Bris     80.92 330    P      P      09 13 09.8 +0.9
       baz=99,SNR=9.3
TTA    Tatalina           80.95 333    P      P      09 13 10.0 +0.9
TTA    Tatalina           80.95 333    P      P      09 13 10.0 +0.9
TTA                                    pmax   pmax
       comp=Z,15nm,1.2s
TTA    Tatalina           80.95 333    P      P      09 13 10.3 +1.2
       baz=100,SNR=6.2
CHGN   Chignik            81.12 326    P      P      09 13 11.1 +1.1
       baz=97
P16K   Nushagak River     81.26 329    P      P      09 13 11.7 +0.9
       baz=98
O16K   Kokwok River B     81.40 330    P      P      09 13 12.5 +1.0
       baz=98
GCSA   Galena City Sc     81.65 335    P      P      09 13 13.8 +1.1
       baz=100,SNR=7.9
N16K   Nishlik Lake       81.85 331    P      P      09 13 15.2 +1.3
       baz=98
RAR    Rarotonga          82.15 248    LR     LR     09 43 12.3
       comp=Z,95nm,19.4s,baz=108,slow=31
SDPT   Sand Point         82.17 325    P      P      09 13 17.0 +1.5
       baz=96
NOR    Nord               82.89   8  i P      P      09 13 18.4  -0.5
NOR                                    IAmb   IAmb   09 13 27.6
       comp=Z,21nm,1.1s
S12K   Black Hills        83.09 326    P      P      09 13 21.7 +1.3
       baz=94
SSB    Saint Sauveur      83.46  45    P      P      09 13 24.1 +1.5
SSB                                    IAmb   IAmb   09 13 32.0
       comp=Z,13nm,0.8s
SSB    Saint Sauveur      83.46  45    P      P      09 13 24.1 +1.5
SSB                                    pmax   pmax
       comp=Z,13nm,0.8s
FALS   False Pass         83.81 325    P      P      09 13 25.7 +1.6
FALS   False Pass         83.81 325    P      P      09 13 25.5 +1.4
       baz=93
TAM    Tamanrasset        84.13  68    IAmb   IAmb   09 13 36.8
       comp=Z,20nm,0.9s
RDOG   Red Dog Mine       84.49 338    P      P      09 13 28.9 +1.5
RDOG                                   IAmb   IAmb   09 13 36.5
       comp=Z,15nm,0.8s
RDOG   Red Dog Mine       84.49 338    P      P      09 13 28.7 +1.4
       baz=95
MEM    Membach            84.60  40  dP       P      09 13 29.4 +1.1
BELA   Belgrano 2         84.63 171    P      P      09 13 28.7 +0.8
BELA                                   IAmb   IAmb   09 15 13.9
       comp=Z,17nm,0.7s
WLF    Walferdange        84.67  41    P      P      09 13 28.6  -0.1
WLF    Walferdange        84.67  41    P      P      09 13 28.6  -0.1
WLF                                    pmax   pmax
       comp=Z,26nm,0.7s
WLF    Walferdange        84.67  41  eP       P      09 13 29.5 +0.9
       comp=Z,21nm,0.8s,baz=273,slow=5.0
BNI    Bardonecchia       84.97  45    P      P      09 13 32.2 +1.8
BNI                                    IAmb   IAmb   09 13 40.3
       comp=Z,25nm,1.1s
BNI    Bardonecchia       84.97  45    P      P      09 13 32.2 +1.8
BNI                                    pmax   pmax
       comp=Z,25nm,1.1s
ANM    Nome               85.26 334    P      P      09 13 32.5 +1.2
       baz=92,SNR=6.4
AHRW   Bad Neuenahr-A     85.28  40  eP       P      09 13 32.1 +0.5
       baz=273,slow=5.0
ECH    Echery             85.31  42    P      P      09 13 32.5 +0.6
ECH                                    IAmb   IAmb   09 13 41.0
       comp=Z,23nm,1.0s
ECH    Echery             85.31  42    P      P      09 13 32.5 +0.6
ECH                                    pmax   pmax
       comp=Z,23nm,1.0s
UNV    Unalaska Valle     85.59 324    P      P      09 13 34.7 +1.6
       baz=90
BFO    Black Forest       86.10  42  eP       P      09 13 36.4 +0.5
       comp=Z,11nm,1.1s,baz=273,slow=5.0
KASTN  Kahler Asten       86.13  39  eP       P      09 13 36.6 +0.7
       baz=273,slow=5.0
TNS    Taunus Mts         86.16  40  eP       P      09 13 37.4 +1.2
       comp=Z,26nm,1.2s,baz=273,slow=5.0
TNA    Tin City           86.37 335    P      P      09 13 38.4 +1.6
       baz=90,SNR=11
STU    Stuttgart          86.67  41  eP       P      09 13 39.4 +0.8
       comp=Z,75nm,0.9s,baz=273,slow=5.0
RETH   Rethem/Aller,      86.69  38  eP       P      09 13 39.6 +1.1
       comp=Z,29nm,1.1s,baz=273,slow=5.0
KBS    Kingsbay           87.06  11    P      P      09 13 40.7 +0.9
KBS    Kingsbay           87.06  11ceP        P      09 13 40.8 +0.9
KBS                                    pmax   pmax
       comp=Z,55nm,1.3s
KEST   Kesra              87.14  55    LR     LR     09 47 56.0
       comp=Z,60nm,21.6s,baz=198,slow=32
NRDL   Niedersach Rie     87.15  38  eP       P      09 13 41.6 +0.8
       baz=273,slow=5.0
DAVA   Damuels            87.16  43  eP       P      09 13 42.7 +1.5
       comp=Z,40nm,0.8s
DAVOX  Davos/Dischmat     87.18  43    LR     LR     09 50 49.1
       comp=Z,61nm,18.7s,baz=263,slow=34
BSEG   Bad Segeberg       87.23  36  eP       P      09 13 42.1 +0.9
       baz=273,slow=5.0
UBR    Ueberruh           87.31  43  eP       P      09 13 42.6 +0.7
       baz=273,slow=5.0
CLZ    Clausthal          87.34  38  eP       P      09 13 42.9 +1.0
       comp=Z,21nm,1.1s,baz=273,slow=5.0
CLZ                                  epP      pwP    09 13 50.0  -1.6
NB2    NORSAR Subarra     87.47  29    P      P      09 13 43.2 +0.9
       comp=Z,32nm,1.1s,baz=273,slow=4.8
NB2    NORSAR Subarra     87.47  29    P      P      09 13 43.2 +0.9
       baz=273,slow=4.8
NOA    NORSAR Array B     87.47  29    P      P      09 13 43.1 +0.8
       comp=Z,5.9nm,0.9s,baz=49,slow=22,SNR=15
NOA                                    LR     LR     09 49 40.7
       comp=Z,40nm,19.6s,baz=290,slow=34
       comp=Z,5.9nm,0.9s
FETA   Feichten           87.75  43  eP       P      09 13 45.4 +1.3
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	comp=Z,28nm,1.2s						
RETA	Reutte	87.75	43	eP	P	09 13 45.1	+1.1
	comp=Z,20nm,1.5s						
FLTG	Flechtingen	87.85	38	eP	P	09 13 45.1	+0.9
	baz=273,slow=5.0						
FLTG				epP	pwP	09 13 52.4	-1.6
GRF	Grafenberg Arr	87.96	41	eP	P	09 13 46.2	+1.4
	baz=273,slow=5.0						
GRF				epP	pwP	09 13 53.1	-1.5
SPITS	Spitsbergen Ar	87.99	12	LR	LR	09 54 04.5	
	comp=Z,160nm,19.3s,baz=222,slow=36						
MOTA	Moosalm	87.99	43	eP	P	09 13 46.0	+0.7
	comp=Z,18nm,1.5s						
SQTA	Sankt Quirin	88.07	43	eP	P	09 13 47.2	+1.7
	comp=Z,10.0nm,0.7s						
MOX	Moxa	88.17	40	eP	P	09 13 47.0	+1.2
	baz=273,slow=5.0						
WATA	Walderalm	88.31	43	eP	P	09 13 48.7	+1.9
	comp=Z,9.1nm,0.9s						
WTTA	Wattenberg	88.36	43	eP	P	09 13 48.8	+1.8
	comp=Z,15nm,1.1s						
TEOL	Teolo	88.48	45	P	P	09 13 47.1	-0.3
MANZ	Manzenberg	88.52	40	eP	P	09 13 48.8	+1.3
	baz=273,slow=5.0						
MANZ				epP	pwP	09 13 55.7	-1.6
PLN	Plauen	88.52	40	eP	P	09 13 48.7	+1.2
	comp=Z,17nm,1.3s,baz=273,slow=5.0						
PLN				epP	pwP	09 13 56.0	-1.2
ROTZ	Rotzenmuhle	88.60	40	eP	P	09 13 49.2	+1.3
	baz=273,slow=5.0						
ROTZ				epP	pwP	09 13 56.4	-1.2
WERD	Werda	88.62	40	eP	P	09 13 49.4	+1.4
	baz=273,slow=5.0						
WERD				epP	pwP	09 13 56.4	-1.4
GUNZ	Gunzen	88.64	40	eP	P	09 13 49.4	+1.3
	baz=273,slow=5.0						
WERN	Wernitzgruen	88.67	40	eP	P	09 13 49.6	+1.4
	baz=273,slow=5.0						
WERN				epP	pwP	09 13 56.7	-1.3
TANN	Tannenbergstha	88.72	40	eP	P	09 13 49.8	+1.3
	comp=Z,13nm,1.0s,baz=273,slow=5.0						
TANN				epP	pwP	09 13 57.0	-1.3
NKC	Novy Kostel	88.72	40	eP	P	09 13 50.9	+2.4
NKC				ex	x	09 13 57.7	
NKC	Novy Kostel	88.72	40	eP	P	09 13 50.9	+2.4
NKC				e		09 13 57.7	
HFS	Hagfors	88.75	30	LR	LR	09 48 38.4	
	comp=Z,148nm,21.3s,baz=270,slow=32						
SNAA	Sanae	88.93	162	LR	LR	09 54 16.2	
	comp=Z,110nm,20.0s,baz=291,slow=36						
SNAA	Sanae	88.93	162	ceP	P	09 13 48.4	-0.6
SNAA				pmax	pmax		
	comp=Z,26nm,2.5s						
CIMO	Cimolais	88.97	44	IAmb	IAmb	09 14 01.7	
	comp=Z,17nm,0.9s						
ABTA	Abfaltersbach	88.99	43	eP	P	09 13 51.7	+1.8
	comp=Z,11nm,1.0s						
CLL	Collm	89.00	39	P	P	09 13 50.0	+0.3
CLL	Collm	89.00	39	i P	P	09 13 50.7	+1.0
	comp=Z,10.0nm,1.1s						
CLL				i x	x	09 13 58.5	
	comp=Z,16nm,1.1s						
CLL				eS	S	09 24 41.0	+3.9
CLL				ePS	PnS	09 25 41.0	-1.7
CLL	Collm	89.00	39	i P	P	09 13 50.7	+1.0
CLL				i		09 13 58.5	
CLL				eS	S	09 24 41.0	+3.9
CLL				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CLL	Collm	89.00	39	eP	P	09 13 51.1	+1.4
	baz=273,slow=5.0						
RJOB	Jochberg	89.11	42	eP	P	09 13 51.8	+1.4
	baz=273,slow=5.0						
STAL	STALIGIAL	89.16	44	IAmb	IAmb	09 13 59.8	
	comp=Z,30nm,1.2s						
FBE	Freiberg	89.25	39	eP	P	09 13 52.5	+1.6
	baz=273,slow=5.0						
KHC	Kasperske Hory	89.53	41	IAmb	IAmb	09 13 57.2	
	comp=Z,28nm,1.7s						
KHC	Kasperske Hory	89.53	41	eP	P	09 13 54.0	+1.7
KHC				ex	x	09 14 00.9	
KHC	Kasperske Hory	89.53	41	eP	P	09 13 54.0	+1.7
KHC				e		09 14 00.9	
KBA	Koelnbreinsper	89.53	43	ePcP	PcP	09 13 54.6	+0.7
	comp=Z,18nm,1.7s						
BRG	Berggiesshubel	89.63	39	eP	P	09 13 55.1	+2.5
BRG				Amp		09 14 00.5	
	comp=Z,7.1nm,1.2s						
BRG				Amp		09 46 24.0	
	comp=Z,0.2nm,15.3s						
BRG	Berggiesshubel	89.63	39	eP	P	09 13 55.1	+2.5
BRG				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BRG	Berggiesshubel	89.63	39	eP	P	09 13 54.5	+1.8
	baz=273,slow=5.0						
GEC2	GERESS Array S	89.64	41	eP	P	09 13 54.9	+2.1
	comp=Z,6.5nm,1.1s,baz=273,slow=5.0						
GERES	GERESS Array B	89.64	41	P	P	09 13 54.0	+1.2
	comp=Z,0.8nm,0.6s,baz=285,slow=2.1,SNR=6.9						
GERES				LR	LR	09 51 54.2	
	comp=Z,60nm,18.6s,baz=266,slow=34						
	comp=Z,0.8nm,0.6s						
BIOA	Bad Ischl, Aus	89.69	42	ePcP	PcP	09 13 55.4	+1.0
	comp=Z,15nm,1.0s						
SABO	M.te Sabotino	89.79	44	P	P	09 13 54.1	+0.5
SABO				IAmb	IAmb	09 14 18.2	
	comp=Z,50nm,1.7s						
MOA	Molln	90.09	42	ePcP	PcP	09 13 57.9	+1.8
	comp=Z,11nm,1.3s						
OSTC	Ostas	91.10	39	eP	P	09 14 01.3	+1.8
OSTC				ex	x	09 14 08.7	
OSTC	Ostas	91.10	39	eP	P	09 14 01.3	+1.8
OSTC				e		09 14 08.7	
VAE	Valguarnera	91.10	53	LR	LR	09 52 14.3	
	comp=Z,91nm,19.4s,baz=298,slow=34						
CONA	Conrad Observa	91.16	42	eP	P	09 14 01.8	+1.8
	comp=Z,4.9nm,1.3s						
DPC	Dobruska-Polom	91.19	40	eP	P	09 14 01.8	+1.8
DPC				ex	x	09 14 09.2	
DPC	Dobruska-Polom	91.19	40	eP	P	09 14 01.8	+1.8
DPC				e		09 14 09.2	
VRAC	Vranov	91.48	41	LR	LR	09 52 44.1	
	comp=Z,87nm,19.1s,baz=280,slow=34						
ARCES	ARCESS Array B	92.13	20	P	P	09 14 03.0	-0.9
	comp=Z,3.8nm,0.7s,baz=318,slow=1.6,SNR=8.0						
ARCES				LR	LR	09 48 42.2	
	comp=Z,80nm,21.6s,baz=292,slow=31						
	comp=Z,3.8nm,0.7s						
ARCES	ARCESS Array B	92.13	20	P	P	09 14 03.0	-0.9
AFI	Afiamalu	93.01	256	LR	LR	09 45 19.4	
	comp=Z,100nm,20.4s,baz=89,slow=29						
QSPA	South Pole Qui	93.33	180	LR	LR	09 50 08.3	
	comp=Z,142nm,19.9s,baz=152,slow=32						
FINES	FINESS Array B	94.50	28	P	P	09 14 14.9	0.0
	comp=Z,2.4nm,0.8s,baz=278,slow=6.9,SNR=4.4						
FINES				PKKP	PKKPdf	09 31 14.6	-0.6
	comp=Z,0.6nm,0.6s,baz=111,slow=3.1,SNR=3.3						
FINES				LR	LR	09 54 03.3	
	comp=Z,66nm,20.5s,baz=293,slow=34						
	comp=Z,2.4nm,0.8s						
DIVS	Divibare	94.51	45	P	P	09 14 16.1	+0.6
DIVS				IAmb	IAmb	09 14 25.6	
	comp=Z,11nm,1.0s						
BILL	Bilibino	95.81	340	P	P	09 14 21.5	+0.7
BILL				IAmb	IAmb	09 14 35.3	
	comp=Z,16nm,1.4s						
BILL	Bilibino	95.81	340	⇑eP	P	09 14 22.4	+1.6
BILL				i		09 14 29.5	
BILL				e		09 14 34.5	
BILL						09 18 14.0	
BILL				eSS	SS	09 32 22.0	+15
BILL				SSS	SSS	09 35 56.0	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,79nm,22.0s						
ELIB	Princess Elisa	97.10	162	dP	Pdif	09 14 27.4	+0.6
SHEM	Shemya Is, Ala	97.25	324	LR	LR	09 58 17.6	
	comp=Z,69nm,20.7s,baz=325,slow=35						
TSUM	Tsumeb	97.75	109	LR	LR	09 57 17.0	
	comp=Z,175nm,18.6s,baz=334,slow=35						
MLR	Muntele Rosu	98.40	43	LR	LR	09 55 30.9	
	comp=Z,68nm,19.9s,baz=279,slow=33						
MLR	Muntele Rosu	98.40	43	P	Pdif	09 14 34.3	+1.0
MLR	Muntele Rosu	98.40	43	P	Pdif	09 14 34.3	+1.1
MLR				pmax	pmax		
	comp=Z,12nm,1.0s						
RAO	Raoul Island	98.96	241	LR	LR	09 48 54.3	
	comp=Z,54nm,19.0s,baz=222,slow=29						
VNDA	Vanda	99.21	191	LR	LR	09 50 55.6	
	comp=Z,145nm,20.5s,baz=119,slow=30						
IDI	Anoyia	99.78	54	LR	LR	09 59 40.0	
	comp=Z,19nm,18.6s,baz=272,slow=35						
TIXI	Tiksi	102.94	351	PKKPbc	PKKPbc	09 30 53.1	+0.3
	comp=Z,2.0nm,0.4s,baz=270,slow=19,SNR=6.2						
NRIK	Noril'sk	106.96	5	PP	PP	09 19 34.3	-1.9
	comp=Z,0.8nm,0.3s,baz=329,slow=5.3,SNR=3.7						
KIV	Kislovodsk	110.14	41	i PKIKP	PKiKP	09 19 25.0	-2.0
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,69nm,21.0s						
H11N3	WAKE ISLAND Hy	110.94	292	T	T	11 19 34.3	
	baz=79,slow=75,SNR=7.2						
H11N2	WAKE ISLAND Hy	110.95	292	T	T	11 19 39.2	
	baz=79,slow=75,SNR=5.5						
H11N1	WAKE ISLAND Hy	110.96	292	T	T	11 19 39.9	
	baz=79,slow=75,SNR=4.8						
DZM	Mont Dzumac	113.52	247	eLR	LR	09 53 34.6	
	comp=Z,75nm,22.4s						
KLR	Kul'dur	121.09	337	PP	PP	09 21 13.7	-2.8
	comp=Z,1.8nm,1.0s,baz=8.1,slow=13,SNR=3.0						
ZALV	Zalesovo Beam	121.46	11	PKP	PKPdf	09 19 48.4	+0.1
	comp=Z,0.9nm,0.3s,baz=219,slow=1.9,SNR=6.0						
ZALV				PP	PP	09 21 16.4	-2.4
	comp=Z,0.4nm,0.4s,baz=336,slow=10,SNR=2.7						
ZALV	Zalesovo Beam	121.46	11	PKPdf	PKPdf	09 19 47.9	-0.4
KURK	Kurchatov	123.00	16	i PKIKP	PKPdf	09 19 50.9	-0.4
GEYT	Alibeck	123.23	40	PKhKP	PKPpre	09 19 47.9	
	comp=Z,1.0nm,0.4s,baz=25,slow=39,SNR=1.3						
GEYT				PKP	PKiKP	09 19 52.8	+0.3
	comp=Z,1.8nm,0.5s,baz=248,slow=7.8,SNR=3.8						
MDJ	Mudanjiang	125.67	335	PKP	PKPdf	09 19 56.4	-0.2
MDJ				AMB	AMB		
	comp=Z,150nm,4.7s						
MDJ				LR	LR		
	comp=Z,120nm,6.8s						
MDJ				LR	LR		
	comp=Z,150nm,4.9s						
MDJ				LR	LR		
	comp=Z,250nm,19.3s						
DGZ	Jazzator, Alta	126.00	10	i PKIKP	PKPdf	09 19 57.5	+0.2
ZAK	Zakamensk	126.47	358	ePKIKP	PKPdf	09 19 56.2	-1.9
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
MJAR	Matsushiro Arr	127.03	322	PKP	PKPdf	09 19 59.1	-0.3
	comp=Z,1.0nm,0.3s,baz=162,slow=28,SNR=6.6						
MKAR	Makanchi Array	127.58	16	PKP	PKPdf	09 20 00.2	-0.1
	comp=Z,1.2nm,0.8s,baz=299,slow=2.5,SNR=6.6						
MKAR				PP	PP	09 21 50.2	-10
	comp=Z,0.2nm,0.7s,baz=325,slow=1.8,SNR=3.4						
MKAR	Makanchi Array	127.58	16		PKPdf	09 20 00.5	+0.3
MKAR	Makanchi Array	127.58	16	PKIKP	PKPdf	09 20 00.5	+0.3
AAK	Ala-Archa	128.56	24	PKPdf	PKiKP	09 20 02.9	-0.2
AAK	Ala-Archa	128.56	24	PKIKP	PKiKP	09 20 02.9	-0.2
ULN	Ulaanbaatar	128.72	354	PKPdf	PKiKP	09 20 03.5	+0.3
ULN	Ulaanbaatar	128.72	354	PKIKP	PKiKP	09 20 03.5	+0.3
SONM	Songino Array	128.81	355	PKP	PKPdf	09 20 02.9	+0.2
	comp=Z,5.4nm,0.9s,baz=242,slow=0.6,SNR=20						
SONM	Songino Array	128.81	355	PKPdf	PKiKP	09 20 03.3	0.0
SONM	Songino Array	128.81	355	PKIKP	PKiKP	09 20 03.3	0.0
XLT	XiLinHaoTe	130.97	345	ePKP	PKiKP	09 20 07.6	-0.2
XLT				LR	LR		
	comp=Z,13nm,17.4s						
XLT				LR	LR		
	comp=Z,95nm,13.2s						
XLT				LR	LR		
	comp=Z,200nm,19.2s						
WMQ	Urumqi	131.69	12	ePKP	PKiKP	09 20 10.6	+1.4
WMQ				LR	LR		
	comp=Z,120nm,21.7s						
KSH	Kashi	131.77	26	PKP	PKiKP	09 20 10.8	+1.2
KSH				PP	PP	09 22 35.9	+8.2
KSH				SKS	SKSdf	09 27 21.6	+2.2
KSH				SKKS	SKKSac	09 29 27.8	+3.4
KSH				LR	LR		
	comp=Z,330nm,15.9s						
KSH				LR	LR		
	comp=Z,200nm,15.7s						
STKA	Stephens Creek	132.09	229	PKP	PKPdf	09 20 08.6	-0.6
	comp=Z,1.1nm,0.3s,baz=79,slow=3.9,SNR=4.9						
KSRS	Korea Array	132.12	330	PKP	PKPdf	09 20 07.9	-1.1
	comp=Z,2.1nm,0.8s,baz=20,slow=1.0,SNR=12						
HHC	Hu-ho-hao-te	134.91	348	eP	PKPdf	09 20 10.0	-4.4
GTA	Gaotai	137.49	1	ePKP	PKiKP	09 20 20.4	-0.8
GTA				LR	LR		
	comp=Z,98nm,18.5s						
GTA				LR	LR		
	comp=Z,220nm,18.5s						
GTA				LR	LR		
	comp=Z,100nm,17.4s						
GOMU	GeErMu	140.34	7	PKP	PKiKP	09 20 26.4	-1.0
GOMU				AMB	AMB		
	comp=Z,62nm,4.1s						
LZH	Lanzhou	140.69	356	ePKP	PKPdf	09 20 20.8	-4.5
LZH				sPKP		09 20 29.3	
NJ2	Nanjing	140.76	335	ePKP	PKPdf	09 20 25.4	+0.2
NJ2				sPKP		09 20 31.8	
ASAR	Alice Springs	141.92	235	PKhKP	PKPpre	09 20 21.4	
	comp=Z,2.8nm,0.4s,baz=119,slow=3.7,SNR=79						
ASAR				PP	PP	09 23 29.8	-2.5
	comp=Z,0.4nm,0.7s,baz=128,slow=5.8,SNR=4.2						
ASAR				SKP		09 24 04.2	
	comp=Z,1.1nm,1.1s,baz=131,slow=4.6,SNR=4.1						
XAN	Xi'an	142.02	349	PKP	PKPdf	09 20 28.5	+1.0
WRA	Warramunga Arr	143.10	241	PKhKP	PKPpre	09 20 26.5	
	comp=Z,35nm,1.0s,baz=110,slow=2.9,SNR=175						
WRA				PP	PP	09 23 34.4	-5.2
	comp=Z,0.4nm,1.0s,baz=173,slow=7.6,SNR=2.8						
WRA	Warramunga Arr	143.10	241		PKPbc	09 20 26.9	+0.3
WRA	Warramunga Arr	143.10	241	PKIKP	PKPbc	09 20 26.9	+0.3
WB0	Warramunga Arr	143.12	241	PKPdf	PKPbc	09 20 27.0	+0.3
PYUN	Piuthan	144.51	27	eP	PKPbc	09 20 31.2	+0.4
DANN	Dangsing	144.64	26	eP	PKPdf	09 20 32.1	-0.5
	comp=Z,139nm,1.0s						
YOJ	Yonaguni jima	144.78	323	PKPdf	PKPab	09 20 31.1	-0.3
YOJ	Yonaguni jima	144.78	323	PKIKP	PKPab	09 20 31.1	-0.3
KOLN	Koldanda	145.07	27	eP	PKPbc	09 20 31.5	-1.1
	comp=Z,112nm,1.1s						
GKN	Gorkha	145.32	25	eP	PKPdf	09 20 34.0	+0.3
ENH	Enshi	145.53	346		PKPab	09 20 34.4	+0.4
KKN	Kakani	145.78	24	eP	PKPab	09 20 35.4	+0.1
	comp=Z,559nm,1.7s						
CD2	Chengdu	145.84	355	PKPbc	PKPab	09 20 35.3	+0.1
CD2				sPKP		09 20 41.9	
DMN	Daman	145.86	25	eP	PKPab	09 20 35.6	0.0
	comp=Z,251nm,1.3s						
GUN	Gumba	145.91	24	eP	PKPab	09 20 36.3	+0.4
	comp=Z,344nm,1.0s						
PKIN	Phulchoki	146.01	24	eP	PKPab	09 20 36.1	-0.1
PKI	Pulchoki	146.02	24	eP	PKPab	09 20 36.2	-0.1
	comp=Z,170nm,1.4s						
JIRN	Jiri	146.26	23	eP	PKPbc	09 20 36.8	+0.2
	comp=Z,111nm,0.9s						
RAMN	Ramite	147.06	23	eP	PKPdf	09 20 37.4	+0.7
	comp=Z,202nm,1.6s						
TPUB	Ta-pu	147.08	324	PKPbc	PKPbc	09 20 39.2	+0.6
TAPN	Taplejung	147.11	21	eP	PKPbc	09 20 39.2	+0.2
ODAN	Odare	147.44	22	eP	PKPbc	09 20 38.7	-1.1
	comp=Z,208nm,1.6s						
MTN	Manton Dam	148.28	251	PKPbc	PKPbc	09 20 41.5	-0.6
FAKI	Fak Fak	148.31	270	PKPbc	PKPbc	09 20 42.9	+0.6
KNRA	Kununurra	149.60	244		PKPbc	09 20 45.9	+0.6
KNRA					sPKPbc	09 20 51.3	-1.3
GYA	Guiyang	149.82	349	ePKPbc	PKPbc	09 20 46.3	+0.5
HYB	Hyderabad	150.11	46	ePKiKP	PKiKP	09 20 47.3	-0.2
PZH	PanZhiHua	150.34	358	PKPbc	PKPbc	09 20 47.5	+0.4
MORW	Morawa	150.43	208	PKPbc	PKPbc	09 20 46.9	-0.3
FITZ	Fitzroy Crossi	151.33	237	PKPbc	PKPbc	09 20 49.6	+0.1
FITZ				PKPab	PKPab	09 20 57.8	+0.3
KMI	Kunming	151.66	356	⇑PKPbc	PKPdf	09 20 46.9	+2.8
KMI				sPKP		09 20 50.9	
KAAM	Kaadhehdhoo	152.24	83	PKPdf	PKPdf	09 20 42.5	-2.4
KAAM				PKPbc	sPKPdf	09 20 51.5	-0.7
KAAM				PKPab	PKPab	09 21 01.0	-0.5
QIZ	Qiongzhong	155.98	338	PKP	PKPdf	09 20 50.8	+0.7
QIZ				PP	PP	09 24 54.3	+1.6
QIZ				LR	LR		
	comp=Z,170nm,18.3s						
QIZ				LR	LR		
	comp=Z,170nm,23.1s						
QIZ				LR	LR		
	comp=Z,180nm,12.7s						
CRAI	Chiangrai	156.61	0	PKPdf	PKPdf	09 20 50.9	-0.1
CRAI					PKPab	09 21 18.8	-0.8
CHTO	Chiang Mai	157.97	4	PKPdf	PKPdf	09 20 51.3	-1.3
CHTO				PKPab	PKPab	09 21 24.9	-0.6
CHTO	Chiang Mai	157.97	4	PKIKP	PKPdf	09 20 51.3	-1.3
CHTO						09 21 24.9	
CMAR	Chiang Mai Arr	158.32	4	PKP	PKPdf	09 20 53.8	+0.7
	comp=Z,1.5nm,0.3s,baz=296,slow=2.6,SNR=13						
CMAR				PKPab	PKPab	09 21 26.9	-0.2
	comp=Z,4.7nm,0.7s,baz=336,slow=5.0,SNR=12						
CMAR				PP	PP	09 25 04.2	-1.1
	comp=Z,0.8nm,0.3s,baz=350,slow=4.3,SNR=4.7						
TOLI2	Tolitoli	159.27	282	PKPdf	PKPdf	09 20 53.0	-1.3
TOLI2				PKPab	PKPab	09 21 31.8	+0.2
JAGI	Jajag, Banyuwa	165.50	249	PKPdf	PKPdf	09 20 59.2	-1.4
JAGI				PKPab	PKPab	09 21 57.3	-1.6
KSM	Kuching	169.12	296	PKPdf	PKPdf	09 21 02.5	-0.7
KSM					PKPab	09 22 15.4	+0.5
PSI	Prapat	173.73	15	PKP2	PKPab	09 22 33.7	-1.3
PSI						10 21 03.2	
RPSI	Rantau Prapat	173.83	15	PKPdf	PKPdf	09 21 03.2	-2.3
RPSI				PKPab	PKPab	09 22 33.7	-1.6
MNAI	Manna	177.35	247	PKPdf	PKPdf	09 21 03.7	-2.7
MNAI				PKPab	PKPab	09 22 48.8	-2.6

VAO 24 09:06:02.0±0.3, 2.59S×49.53W, h0km, mbR3.5, Brazil

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TMAB	Tom-Au,PA,Br	1.45	81	eP	Pn	09 06 29.4	-0.1
TMAB				eS	Sg	09 06 47.4	-1.2
MCPB	Macapa, AP	3.36	311	eP	Pn	09 06 55.8	0.0
MCPB				eS	Sn	09 07 37.0	+0.5
PRPB	Parauapebas	3.57	185	eP	Pn	09 06 58.6	-0.1
MALB	Monte Alegre	4.79	279	eP	Pn	09 07 15.2	-0.3
ROSB	Rosrio	5.41	93	eP	Pn	09 07 23.6	-0.3
ITTB	Itaituba	6.44	254	eP	Pn	09 07 38.2	0.0
SMTB	Santa Maria do	6.52	163	eP	Pn	09 07 38.4	-0.9
SMTB				eS	Sn	09 08 55.6	+1.1
SNDB	Serra Nova Dou	9.48	191	eP	Pn	09 08 19.6	-0.5
CLDB	Colider	10.31	217	eP	Pn	09 08 31.2	-0.2
SDBA	SAO DESIDERIO	10.78	155	eP	Pn	09 08 37.8	+0.1
MACA	Manacapuru-AM	11.15	267	eP	Pn	09 08 42.8	-0.1
ETMB	Extrema	18.06	246	eP	Pn	09 10 14.3	-0.3

TAP ***24*** *09:13:43.0, 25.68N×122.46E, h254km, ML3.6, D*
JMA ***24*** *09:13:45.1±0.3, 26°N±2°×122.4E±0.9, h221km, MV3.6/14,*
NW OFF ISHIGAKIJIMA IS

ISC 24 09:13:44.2±2.5, 25.4N±0.1×122.49E±0.04, h246km±14km, n65, σ0.59/100, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.60	229	eP	Pn	09 14 17.3	+0.4
	baz=208						
SXI1	Grass Mountain	0.63	241	eP	Pn	09 14 17.3	+0.1
	baz=222						
SXI1				S	S	09 14 43.1	+0.2
	baz=222						
TIPB	Shuangxi	0.74	235	eP	Pn	09 14 17.5	0.0
	baz=219						
TIPB				eS	S	09 14 43.5	-0.2
	baz=219						
TWY	Chenhua	0.81	261	eP	Pn	09 14 18.5	+0.7
	baz=249						
TWA	Mucha	0.92	243	eP	Pn	09 14 19.5	+1.1
	baz=237						
TWC	Suao	0.98	216	eP	Pn	09 14 18.6	0.0
	baz=201						
TWC				eS	S	09 14 45.8	+0.1
	baz=201						
EOS2	EOS2	1.00	193	eP	Pn	09 14 19.2	+0.5
	baz=199						
EOS2				eS	S	09 14 46.5	+0.7
	baz=199						
TWE	Neicheng	1.01	228	eP	Pn	09 14 19.8	+0.9
	baz=216						
FUSB	Fushanzhiwuyua	1.04	232	P	Pn	09 14 19.2	+0.1
	baz=218						
FUSB				S	S	09 14 46.6	+0.1
	baz=218						
YOJ	Yonaguni jima	1.05	153	eP	Pn	09 14 18.9	-0.2
YOJ				eS	S	09 14 46.0	-0.5
YOJ	Yonaguni jima	1.05	153	eP	Pn	09 14 18.6	-0.5
	baz=165						
NWLT	Wulai	1.09	235	P	Pn	09 14 19.3	-0.1
	baz=228						
NWLT				eS	S	09 14 46.6	-0.3
	baz=228						
EOS3	EOS3	1.12	188	P	Pn	09 14 19.8	+0.4
	baz=192						
EOS3				eS	S	09 14 48.3	+1.3
	baz=192						
ENTT	Nioudou	1.13	228	P	Pn	09 14 20.0	+0.4
	baz=218						
ENTT				eS	S	09 14 47.4	0.0
	baz=218						
EWUT	Wuta	1.15	214	eS	S	09 14 48.0	+0.5
	baz=201						
ENA	Nanau	1.18	215	eP	Pn	09 14 19.9	-0.1
	baz=201						
ENA				eS	S	09 14 48.2	+0.2
	baz=201						
NDT	Datong Townshi	1.19	228	P	Pn	09 14 20.4	+0.4
	baz=226						
NDT				eS	S	09 14 48.2	+0.2
	baz=226						
LATG	Datong	1.23	226	P	Pn	09 14 21.0	+0.6
	baz=224						
LATG				eS	S	09 14 48.5	-0.2
	baz=224						
YHNB	Yeheng	1.24	234	P	Pn	09 14 20.2	-0.2
	baz=217						
YHNB				eS	S	09 14 47.4	-1.4
	baz=217						
NSK	Sanguang	1.25	235	eP	Pn	09 14 20.3	-0.1
	baz=217						
NSK				eS	S	09 14 48.2	-0.7
	baz=217						
EOS4	EOS4	1.28	187	eP	Pn	09 14 20.4	+0.3
	baz=181						
NNS	Nan Shan	1.39	227	eP	Pn	09 14 21.8	+0.3
	baz=222						
NNS				eS	S	09 14 50.5	-0.3
	baz=222						
NNSB	Datong	1.39	226	eP	Pn	09 14 21.6	+0.1
	baz=215						
NNSH	Datong	1.39	226	eP	Pn	09 14 21.8	+0.3
	baz=218						
NFF	Wufeng Townshi	1.46	239	eP	Pn	09 14 21.8	-0.2
	baz=236						
NFF				eS	S	09 14 49.8	-1.7
	baz=236						
NACB	Ninganchiao	1.47	214	eP	Pn	09 14 22.0	+0.1
	baz=216						
NACB				eS	S	09 14 50.7	-0.8
	baz=216						
ETLH	Xiulin Townshi	1.50	218	eP	Pn	09 14 22.3	+0.1
	baz=214						
ETLH				eS	S	09 14 51.8	-0.4
	baz=214						
LIOB	Emei	1.53	241	eP	Pn	09 14 22.4	0.0
	baz=232						
LIOB				eS	S	09 14 52.2	-0.2
	baz=232						
TWD	Chiawan	1.54	212	eP	Pn	09 14 21.9	-0.6
	baz=215						
IRIF	Iriomote-Funau	1.55	133	P	Pn	09 14 22.9	+0.3
IRIF				S	S	09 14 51.5	-1.1
NSTT	Nanjuang	1.55	241	eP	Pn	09 14 22.3	-0.2
	baz=232						
NSTT				eS	S	09 14 51.7	-0.9
	baz=232						
HWA	Hwalien	1.63	210	eP	Pn	09 14 23.7	+0.5
	baz=200						
TWT	Tachien	1.65	226	eP	Pn	09 14 24.0	+0.4
	baz=220						
TDCB	Techi	1.66	227	eP	Pn	09 14 24.2	+0.5
	baz=220						
WHF	Hehuan Shan	1.67	222	P	Pn	09 14 24.4	+0.4
	baz=211						
WHF				eS	S	09 14 55.2	-0.1

	baz=211						
ETM	**Tongmen**	**1.69**	**213**	*e*P	**Pn**	**09 14 23.4**	**-0.3**
	baz=207						
TEYL	**Yanliau Villag**	**1.73**	**208**	*e*P	**Pn**	**09 14 24.3**	**+0.3**
	baz=204						
CHGB	**Renai**	**1.79**	**222**	*e*P	**Pn**	**09 14 25.6**	**+0.8**
	baz=212						
CHGB				*e*S	**S**	**09 14 56.5**	**-0.1**
	baz=212						
WHP	**Taichung City**	**1.79**	**232**	*e*P	**Pn**	**09 14 25.0**	**+0.3**
	baz=225						
HATJ	**Hateruma jima**	**1.80**	**138**	P	**Pn**	**09 14 25.8**	**+1.2**
HATJ				*e*S	**S**	**09 14 56.6**	**+0.3**
JKRS	**Kuro-shima**	**1.80**	**130**	P	**Pn**	**09 14 25.3**	**+0.7**
JKRS				S	**S**	**09 14 56.1**	**-0.2**
JIJ	**Ishigaki jima**	**1.82**	**124**	P	**Pn**	**09 14 24.9**	**+0.2**
JIJ				S	**S**	**09 14 55.3**	**-1.3**
JISG	**Ishigakijimahi**	**1.84**	**116**	P	**Pn**	**09 14 25.3**	**+0.4**
JISG				S	**S**	**09 14 56.0**	**-0.9**
OWD	**Renai**	**1.87**	**220**	*e*P	**Pn**	**09 14 26.0**	**+0.6**
	baz=218						
WUSB	**Renai**	**1.88**	**222**	*e*P	**Pn**	**09 14 25.9**	**+0.5**
	baz=220						
WUSB				*e*S	**S**	**09 14 58.0**	**+0.2**
	baz=220						
WCS	**Beigang Elemen**	**1.96**	**227**	*e*P	**Pn**	**09 14 26.1**	**+0.1**
	baz=227						
VWDT	**VWDT**	**2.05**	**217**	*e*P	**Pn**	**09 14 27.8**	**+1.0**
	baz=212						
SMLT	**Sun Moon Lake**	**2.09**	**224**	*e*P	**Pn**	**09 14 27.6**	**+0.3**
	baz=225						
TYC	**Yuchr**	**2.10**	**225**	*e*P	**Pn**	**09 14 27.6**	**+0.3**
	baz=225						
SSLB	**Suanglung**	**2.13**	**221**	*i* P	**Pn**	**09 14 27.7**	**+0.1**
	baz=223						
SSLB				S	**S**	**09 15 01.2**	**-0.5**
	baz=223						
HGSD	**Ruisui**	**2.13**	**207**	*e*P	**Pn**	**09 14 28.0**	**+0.4**
	baz=209						
JTJ	**Tarama**	**2.15**	**110**	P	**Pn**	**09 14 28.4**	**+0.7**
JTJ				S	**S**	**09 15 01.4**	**-0.4**
WHYT	**Xinyi Township**	**2.26**	**222**	P	**Pn**	**09 14 29.1**	**+0.2**
	baz=212						
WHYT				*e*S	**S**	**09 15 03.7**	**-0.3**
	baz=212						
YULB	**Yu-li**	**2.27**	**209**	*e*P	**Pn**	**09 14 28.2**	**-0.8**
	baz=202						
CHN5	**Tsauling**	**2.44**	**223**	P	**Pn**	**09 14 31.1**	**+0.4**
	baz=223						
JIRB	**Irabujima**	**2.50**	**103**	P	**Pn**	**09 14 31.7**	**+0.5**
JIRB				S	**S**	**09 15 06.8**	**-1.4**
JIKM	**Ikemajima**	**2.55**	**100**	*e*P	**Pn**	**09 14 32.4**	**+0.8**
JIKM				*e*S	**S**	**09 15 08.2**	**-0.8**
JMJ2	**Miyako jima3**	**2.66**	**104**	P	**Pn**	**09 14 33.7**	**+0.9**
JMJ2				S	**S**	**09 15 10.3**	**-0.7**
CHN4	**Tsaushan**	**2.67**	**221**	*e*P	**Pn**	**09 14 33.3**	**+0.3**
	baz=221						
TPUB	**Ta-pu**	**2.69**	**219**	*e*P	**Pn**	**09 14 33.3**	**+0.1**
	baz=221						
STYH	**Taoyuan**	**2.71**	**215**	*e*P	**Pn**	**09 14 33.7**	**+0.3**
	baz=216						
JOGS	**Gusukube**	**2.72**	**103**	P	**Pn**	**09 14 34.3**	**+0.9**
JOGS				S	**S**	**09 15 11.8**	**-0.5**
WTP	**Ta-pu**	**2.74**	**219**	*e*P	**Pn**	**09 14 33.9**	**+0.1**
	baz=221						
TWK	**Hsinying**	**2.80**	**221**	*e*P	**Pn**	**09 14 34.4**	**0.0**
	baz=217						
CHN1	**Nanshi**	**2.84**	**219**	*e*P	**Pn**	**09 14 35.0**	**+0.2**
	baz=220						

*SOME **24** 09:15:28.4, 42°.23N×80°.52E, h5^{km}*
*KRNET **24** 09:15:29.5±0.1, 42°.25N×80°.55E, mb2.8*
*NNC **24** 09:15:29.6±1.2, 42°.28N×80°.55E, h0^{km}, mb3.8, mpv3.6, Error ellipse: s-maj=7.6km s-min=7.0km az=88.0*
ISC 24 09:15:29.8±2.2**, 42°.24N**±0°.06×**80°.47E**±0°.08**, h20**^{km}±9^{km}**, n46,** σ1^{s}**67**/65**, 15C-4D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**1.18**	**322**	P	**Pb**	**09 15 49.2**	**-2.5**
	20nm,0.1s						
SHLS				S	**Sb**	**09 16 04.2**	**-2.4**
	64nm,0.4s						
SHLS	**Shalkode**	**1.18**	**322**	*e*P	**Pb**	**09 15 49.1**	**-2.5**
	19nm,0.1s						
SHLS				*e*S	**Sb**	**09 16 04.2**	**-2.4**
	54nm,0.2s						
PDGK	**Podgornoye**	**1.31**	**327**	P	**Pg**	**09 15 54.3**	**-0.8**
	5.2nm,0.2s						
PDGK				S	**Sg**	**09 16 12.8**	**+0.5**
	11nm,0.4s						
PDGK	**Podgornoye**	**1.31**	**327**	⇑P	**Pb**	**09 15 53.6**	**-0.1**
	5.2nm,0.4s						
PDGK				⇑S	**Sn**	**09 16 10.9**	**+0.9**
	16nm,0.6s						
UZB	**Uzynbulak**	**1.40**	**311**	P	**Pg**	**09 15 56.4**	**-0.5**
	8.6nm,0.1s						
UZB				S	**Sg**	**09 16 16.6**	**+1.4**
	22nm,0.3s						
UZB	**Uzynbulak**	**1.40**	**311**	*e*P	**Pg**	**09 15 55.7**	**-1.2**
	8.6nm,0.1s						
UZB				*e*S	**Sg**	**09 16 15.3**	**+0.1**
	11nm,0.2s						
PRZ	**Przheval'sk**	**1.55**	**280**	⇑*i*P	**Pg**	**09 15 59.9**	**+0.2**
	baz=80						
PRZ				⇑*i*S	**Sg**	**09 16 21.8**	**+1.8**
	baz=80						
SATY	**Saty**	**1.73**	**299**	P	**Pg**	**09 16 02.5**	**-0.5**
	17nm,0.3s						
SATY				S	**Sg**	**09 16 27.3**	**+1.7**
	40nm,0.2s						
SATY	**Saty**	**1.73**	**299**	*e*P	**Pg**	**09 16 02.5**	**-0.5**
	17nm,0.2s						
SATY				*e*S	**Sg**	**09 16 27.3**	**+1.7**
	40nm,0.2s						
ZHN	**Zhinishke**	**1.76**	**303**	P	**Pg**	**09 16 02.9**	**-0.8**
	18nm,0.2s						
ZHN				S	**Sg**	**09 16 27.8**	**+1.1**
	78nm,0.1s						
ZHN	**Zhinishke**	**1.76**	**303**	*e*P	**Pg**	**09 16 02.9**	**-0.8**
	16nm,0.1s						
ZHN				*e*S	**Sg**	**09 16 27.9**	**+1.1**
	78nm,0.1s						
KPKS	**Kokpek**	**1.80**	**314**	P	**Pg**	**09 16 03.0**	**-1.4**
	38nm,0.3s						
KPKS				S	**Sg**	**09 16 28.1**	**+0.3**
	66nm,0.3s						
KPKS	**Kokpek**	**1.80**	**314**	*e*P	**Pg**	**09 16 03.0**	**-1.4**
	38nm,0.3s						
KPKS				⇑*i*S	**Sg**	**09 16 28.1**	**+0.3**
	66nm,0.3s						
TARG	**Taragay, Kyrgy**	**2.05**	**257**	⇑*i*P	**Pg**	**09 16 08.0**	**-1.2**
	baz=57						
TARG				⇑*i*S	**Sg**	**09 16 36.5**	**+0.7**
	baz=57						
KURS	**Kuram**	**2.10**	**307**	Pg	**Pg**	**09 16 08.6**	**-1.6**
	24nm,0.3s						
KURS				Lg	Lg	09 16 37.5	
	17nm,0.3s						
KURS	**Kuram**	**2.10**	**307**	*e*Pg	**Pg**	**09 16 08.6**	**-1.6**
	24nm,0.3s						
KURS				*e*Lg	Lg	09 16 37.5	
	17nm,0.2s						
ANVS	**Anan'yevo**	**2.14**	**286**	⇓*i*P	**Pg**	**09 16 09.2**	**-1.7**
	baz=85						
ANVS				⇓*i*S	**Sg**	**09 16 38.5**	**-0.2**
	baz=85						
DJR	**Jarkent**	**2.15**	**347**	Pg	**Pb**	**09 16 08.1**	**-0.1**
	4.2nm,0.3s						
DJR				Lg	Lg	09 16 36.6	
	52nm,0.3s						
DJR	**Jarkent**	**2.15**	**347**	*e*Pg	**Pb**	**09 16 08.1**	**-0.1**
	4.2nm,0.3s						
DJR				*e*Lg	Lg	09 16 36.6	
	52nm,0.2s						
BLB	**Baldybastay**	**2.36**	**323**	Pg	**Pb**	**09 16 12.6**	**+0.9**
	36nm,0.3s						
BLB				Lg	Lg	09 16 44.5	
	70nm,0.2s						
KDJ	**Kajisay**	**2.44**	**269**	⇑*e*P	**Pb**	**09 16 13.6**	**+0.5**
	baz=68						
KDJ				⇑*i*S	**Sb**	**09 16 45.6**	**+2.7**
	baz=68						
KOTS	**Kotyrbulak**	**2.66**	**293**	Pg	**Pb**	**09 16 18.4**	**+1.5**
	9.2nm,0.2s						
KOTS				Lg	Lg	09 16 54.6	
	46nm,0.2s						
KOTS	**Kotyrbulak**	**2.66**	**293**	*e*Pg	**Pb**	**09 16 18.4**	**+1.5**
	9.2nm,0.1s						
KOTS				*e*Lg	Lg	09 16 54.6	
	46nm,0.2s						
MDOK	**Medeo**	**2.68**	**291**	⇑Pg	**Pb**	**09 16 18.2**	**+0.9**
	9.9nm,0.5s						
MDOK				Pg	**Pb**	**09 16 18.7**	**+1.5**
	14nm,0.2s						
MDOK				Lg	Lg	09 16 55.2	
	22nm,0.3s						
MDOK				⇑Lg	Lg	09 16 55.4	
	15nm,0.5s						
MDOK	**Medeo**	**2.68**	**291**	*e*Pg	**Pb**	**09 16 18.7**	**+1.5**
	14nm,0.2s						
MDOK				*e*Lg	Lg	09 16 55.2	
	22nm,0.2s						
TNSS	**Tian-Shan**	**2.72**	**288**	Pg	**Pg**	**09 16 19.9**	**-2.1**
	9.1nm,0.3s						
TNSS				Lg	Lg	09 16 56.9	
	13nm,0.1s						
TNSS	**Tian-Shan**	**2.72**	**288**	*e*Pg	**Pg**	**09 16 19.9**	**-2.1**
	9.1nm,0.2s						
TNSS				*e*Lg	Lg	09 16 56.9	
	13nm,0.1s						
ARXS	**Arharly**	**2.76**	**317**	Pg	**Pb**	**09 16 19.9**	**+1.4**
	5.1nm,0.3s						
ARXS				Lg	Lg	09 16 56.9	
	11nm,0.3s						
ARXS	**Arharly**	**2.76**	**317**	*e*Pg	**Pb**	**09 16 19.9**	**+1.4**
	4.2nm,0.1s						
ARXS				*e*Lg	Lg	09 16 56.9	
	14nm,0.3s						
IZV	**Izvestkoviy**	**2.95**	**287**	Pg	**Pb**	**09 16 23.5**	**+1.7**
	4.7nm,0.1s						
IZV				Lg	Lg	09 17 03.0	
	19nm,0.3s						
IZV	**Izvestkoviy**	**2.95**	**287**	*e*Pg	**Pb**	**09 16 23.5**	**+1.7**
	4.7nm,0.1s						
IZV				*e*Lg	Lg	09 17 03.0	
	18nm,0.3s						
CHKK	**Chushkaly**	**3.02**	**304**	Pg	**Pg**	**09 16 25.0**	**-2.6**
	2.6nm,0.1s						
CHKK				Lg	Lg	09 17 06.0	
	15nm,0.2s						
CHKK	**Chushkaly**	**3.02**	**304**	*e*Pg	**Pg**	**09 16 25.0**	**-2.6**
	2.6nm,0.1s						
CHKK				*e*Lg	Lg	09 17 06.0	
	15nm,0.1s						
MTBS	**Maitube**	**3.11**	**288**	Pg	**Pb**	**09 16 26.2**	**+1.8**
	3.2nm,0.2s						
MTBS				Lg	Lg	09 17 07.8	
	16nm,0.2s						
MTBS	**Maitube**	**3.11**	**288**	*e*Pg	**Pb**	**09 16 26.2**	**+1.8**
	3.2nm,0.2s						
MTBS				*e*Lg	Lg	09 17 07.8	
	16nm,0.2s						
ULHL	**Ulahol**	**3.14**	**272**	⇑*i*P	**Pb**	**09 16 23.3**	**-1.7**
	baz=71						
ULHL				⇑*i*S	**Sb**	**09 17 02.6**	**-0.3**
	baz=71						
KTBS	**Karatobe**	**3.14**	**299**	Pg	**Pb**	**09 16 27.0**	**+1.9**
	4.5nm,0.5s						
KTBS				Lg	Lg	09 17 09.0	
	38nm,0.2s						
KTBS	**Karatobe**	**3.14**	**299**	*e*Pg	**Pb**	**09 16 26.9**	**+1.9**
	2.8nm,0.2s						
KTBS				*e*Lg	Lg	09 17 09.0	
	38nm,0.2s						
KST	**Kastek**	**3.42**	**285**	Pg	**Pb**	**09 16 31.7**	**+2.0**
	5.6nm,0.2s						
KST				Lg	Lg	09 17 17.5	
	19nm,0.2s						
KST	**Kastek**	**3.42**	**285**	*e*Pg	**Pb**	**09 16 31.7**	**+2.0**
	5.6nm,0.2s						
KST				*e*Lg	Lg	09 17 17.5	
	19nm,0.2s						
NRN	**Naryn**	**3.43**	**258**	⇑*i*P	**Pb**	**09 16 27.8**	**-2.3**
	baz=58						
NRN				⇑*i*S	**Sb**	**09 17 10.1**	**-1.4**
	baz=58						
KUU	**Kurty**	**3.45**	**300**	Pg	**Pb**	**09 16 32.5**	**+2.3**
	2.8nm,0.3s						
KUU				Lg	Lg	09 17 18.7	
	12nm,0.3s						
KUU	**Kurty**	**3.45**	**300**	⇓*i*Pg	**Pb**	**09 16 32.5**	**+2.3**
	1.5nm,0.2s						
KUU				*e*Lg	Lg	09 17 18.7	
	12nm,0.2s						
DGS	**Degeres**	**3.60**	**288**	Pg	**Pb**	**09 16 35.3**	**+2.4**
	3.6nm,0.2s						
DGS				Lg	Lg	09 17 23.4	
	8.8nm,0.2s						
DGS	**Degeres**	**3.60**	**288**	*e*Pg	**Pb**	**09 16 35.3**	**+2.4**
	3.6nm,0.2s						
DGS				*e*Lg	Lg	09 17 23.4	
	10nm,0.3s						
MK31	**Makanchi Array**	**4.74**	**15**	Pg	**Pb**	**09 16 55.2**	**+3.0**
	0.6nm,0.4s,baz=187,slow=15,SNR=24						
MK31				⇓Lg	Lg	09 17 57.1	
	3.4nm,0.7s,baz=198,slow=29,SNR=6.1						

*HVO **24** 09:22:06.4±0.8, 19°.17N±0°.03×155°.47W±0°.03, h37^{km}±3^{km}, ML2.5/11, ML2.7/49(NEIC), Error ellipse: s-maj=4.6km s-min=3.0km az=140.0*
NEIC 24 09:22:05.0±0.6**, 19°.18N**±0°.03×**155°.49W**±0°.02**, h40**^{km}±2^{km}**, Error ellipse: s-maj=3.7km s-min=2.0km az=165.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HTC	**Hot Caves**	**0.10**	**56**		Pn	09 22 12.2	-0.2
HPO	**Honuapo**	**0.11**	**215**		Pn	09 22 12.1	-0.2
HPO					Sn	09 22 16.2	-1.5
KHU	**Kahuku**	**0.14**	**299**		Pn	09 22 12.4	-0.2
KHU					Sn	09 22 16.8	-1.4
AIN	**Ainahou**	**0.19**	**9**		Pn	09 22 13.0	+0.2
AIN					Sn	09 22 17.6	-0.7
AIN				IAML		09 22 19.9	
	comp=E,1µm,0.3s						
HLP	**Hilina Pali**	**0.21**	**56**		Pn	09 22 12.8	+0.2
HLP				IAML		09 22 17.4	
	comp=E,720nm,2.0s						
HLP				IAML		09 22 26.1	
	comp=N,702nm,0.5s						
SDHHI	**Sand Hill**	**0.28**	**41**		Pn	09 22 13.3	+0.1
SDHHI					Sn	09 22 18.3	-0.8
WRMHI	**West Rim**	**0.29**	**38**		Pn	09 22 13.3	0.0
RIM	**Rim**	**0.29**	**43**		Pn	09 22 13.4	0.0
RIM				IAML		09 22 19.0	
	comp=E,768nm,0.9s						
RIM				IAML		09 22 27.5	
	comp=N,1µm,1.3s						
KKO	**Keanakako`i**	**0.30**	**44**		Pn	09 22 13.6	+0.1
KKO				IAML		09 22 19.8	
	comp=E,1µm,1.2s						
UWE	**Uwekahuna**	**0.30**	**37**		Pn	09 22 13.5	0.0
UWE					Sn	09 22 19.0	-0.5
OBL	**Observatory Le**	**0.30**	**39**		Pn	09 22 13.4	0.0
UWB	**Uwekahuna B**	**0.32**	**39**		Pn	09 22 13.4	-0.1
UWB				IAML		09 22 28.0	
	comp=N,419nm,1.2s						
BYL	**Byron's Ledge**	**0.32**	**43**		Pn	09 22 13.5	0.0
BYL				IAML		09 22 20.5	
	comp=E,588nm,1.1s						
BYL				IAML		09 22 26.7	
	comp=N,689nm,1.1s						
MWH	**Moku‘aweowe**	**0.32**	**341**		Pn	09 22 14.0	-0.1
PUH	**Pauahi**	**0.32**	**53**		Pn	09 22 13.6	-0.1
PUH					Sn	09 22 18.8	-0.9
SBLHI	**Steaming Bluff**	**0.32**	**40**		Pn	09 22 13.6	-0.1
SBLHI					Sn	09 22 18.8	-1.0
SBLHI				IAML		09 22 19.1	
	comp=E,618nm,0.4s						
SBLHI				IAML		09 22 19.1	
	comp=N,768nm,0.7s						
HATHI	**Halema‘uma‘u T**	**0.32**	**42**		Pn	09 22 13.7	0.0
HATHI				IAML		09 22 22.6	
	comp=N,624nm,0.8s						
HATHI				IAML		09 22 29.0	
	comp=E,670nm,0.7s						
MLH	**Mauna Loa**	**0.33**	**17**		Pn	09 22 14.0	+0.2
MLH					Sn	09 22 19.6	-0.5
MLH				IAML		09 22 19.8	
	comp=E,468nm,0.4s						
MLH				IAML		09 22 21.9	
	comp=N,522nm,0.1s						
RSD	**Rainshed**	**0.34**	**35**		Pn	09 22 13.8	-0.1
RSD					Sn	09 22 19.8	-0.5
RSD				IAML		09 22 24.9	
	comp=N,379nm,1.2s						
KNHH	**Kane Nui o Ham**	**0.36**	**57**		Pn	09 22 14.0	0.0
MLOA	**Mauna Loa Obse**	**0.36**	**347**		Pn	09 22 14.4	0.0
MLOA					Sn	09 22 20.2	-0.9
ALEP	**Alea Permanent**	**0.39**	**338**		Pn	09 22 14.5	-0.1
STCH	**Steam Cracks**	**0.40**	**59**		Pn	09 22 14.4	-0.1
NPOC	**North of Pu‘u**	**0.42**	**59**		Pn	09 22 14.6	-0.1
NPOC					Sn	09 22 20.5	-1.0
NPOC				IAML		09 22 25.7	
	comp=N,401nm,0.6s						
JCUZ	**Jacuzzi**	**0.42**	**61**		Pn	09 22 14.7	0.0
HMH	**Humu‘ula Sheep**	**0.42**	**1**		Pn	09 22 15.4	+0.4
HMH					Sn	09 22 21.9	-0.1
HMH				IAML		09 22 22.1	
	comp=N,684nm,0.4s						
HMH				IAML		09 22 22.9	
	comp=E,491nm,0.3s						
CPH	**Captain Cook**	**0.51**	**307**		Pn	09 22 15.8	-0.1
CPH					Sn	09 22 22.6	-0.9
JOKA	**Jonika Flow**	**0.52**	**61**		Pn	09 22 15.8	-0.3
JOKA					Sn	09 22 22.6	-1.3
KHLU	**Kahalu`u**	**0.56**	**317**		Pn	09 22 16.6	-0.1
KHLU					Sn	09 22 23.8	-1.1
KHLU				IAML		09 22 24.1	
	comp=N,632nm,0.1s						
KHLU				IAML		09 22 24.0	
	comp=E,341nm,0.9s						
POHA	**Pohakuloa**	**0.58**	**356**	Pn	Pn	09 22 16.9	-0.2
POHA				IAML		09 22 29.4	
	comp=E,339nm,0.2s						
POHA				IAML		09 22 30.3	
	comp=E,332nm,0.2s						
HUH	**Hualalai**	**0.60**	**327**		Pn	09 22 17.5	+0.2
HUH					Sn	09 22 26.1	0.0
HUH				IAML		09 22 29.1	
	comp=E,476nm,0.2s						
HUH				IAML		09 22 29.9	
	comp=N,564nm,0.2s						
HPAH	**Hawaii Prepara**	**0.87**	**347**		Pn	09 22 20.5	-0.4
MHA	**Mahukona**	**1.08**	**339**	Pn	Pn	09 22 23.5	-0.1
KHLH	**Kahului Airpor**	**1.92**	**333**	Pn	Pn	09 22 35.8	+0.6
HON	**Honolulu**	**3.18**	**313**	Pn	Pn	09 22 52.6	+0.1

ROM 24 09:39:45.4±0.1**, 42°.978N**±0°.002×**13°.203E**±0°.004**, h6**^{km}**, ML1.4**/10**, 2C-3D, Error ellipse: s-maj=0.3km s-min=0.1km az=243.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1256	**Bolognola (MC)**	**0.03**	**31**	⇑P	Pg	09 39 46.7	-0.1
T1256				S	Sg	09 39 47.5	-0.4
MC2	**Monte Cornacci**	**0.07**	**188**	⇓P	Pg	09 39 47.5	+0.2
MC2				S	Sg	09 39 48.9	+0.3
FDMO	**Fiordimonte**	**0.10**	**305**	⇓P	Pg	09 39 48.0	+0.4
FDMO				S	Sg	09 39 50.1	+0.8
FDMO				AML	AML		
	comp=E,198µm,0.2s						
FDMO				AML	AML		
	comp=N,222µm,1.2s						
FDMO				AML	AML		
	comp=N,222µm,0.8s						
MMO1	**Montemonaco**	**0.12**	**131**	P	Pg	09 39 48.3	+0.3
MMO1				S	Sg	09 39 50.5	+0.8
T1245	**Castelsantange**	**0.12**	**185**	P	Pg	09 39 48.4	+0.4
T1245				S	Sg	09 39 50.7	+0.9
T1245				AML	AML		
	comp=E,588µm,0.4s						
T1245				AML	AML		
	comp=N,486µm,0.2s						
T1245				AML	AML		
	comp=E,497µm,0.4s						
T1245				AML	AML		
	comp=N,488µm,0.2s						
GUMA	**Gualdo di Mace**	**0.13**	**49**	P	Pg	09 39 48.9	+0.7
GUMA				AML	AML		
	comp=E,416µm,0.5s						
GUMA				AML	AML		
	comp=N,325µm,1.6s						
GUMA				AML	AML		
	comp=N,325µm,0.4s						
T1220	**Camerino, Fraz**	**0.16**	**328**	P	Pg	09 39 49.1	+0.5
T1220				S	Sg	09 39 52.0	+1.3
T1220				AML	AML		
	comp=E,538µm,1.2s						
T1220				AML	AML		
	comp=N,668µm,0.3s						
T1220				AML	AML		
	comp=E,538µm,1.3s						
T1220				AML	AML		
	comp=E,538µm,0.7s						
T1220				AML	AML		
	comp=N,669µm,0.3s						
NRCA	**Norcia**	**0.16**	**204**	⇓P	Pg	09 39 49.1	+0.4
NRCA				AML	AML		
	comp=E,338µm,1.3s						
NRCA				AML	AML		
	comp=N,290µm,0.5s						
NRCA				AML	AML		
	comp=E,338µm,0.7s						
T1219	**Muccia, Frazio**	**0.16**	**298**	P	Pg	09 39 49.2	+0.5
T1219				S	Sg	09 39 52.2	+1.2
T1219				AML	AML		
	comp=E,129µm,1.3s						
T1219				AML	AML		
	comp=N,125µm,0.4s						
T1219				AML	AML		
	comp=E,129µm,0.7s						
T1241	**Roccafluvione,**	**0.21**	**126**	P	Pg	09 39 50.2	+0.6
T1241				S	Sg	09 39 53.6	+1.3
T1241				AML	AML		
	comp=N,65µm,0.6s						
T1241				AML	AML		
	comp=E,98µm,1.3s						
T1241				AML	AML		
	comp=E,98µm,0.7s						
T1241				AML	AML		
	comp=N,65µm,1.4s						
T1214	**Arquata del Tr**	**0.22**	**179**	P	Pg	09 39 50.3	+0.5
T1214				S	Sg	09 39 54.2	+1.5
T1214				AML	AML		
	comp=N,148µm,0.9s						
T1214				AML	AML		
	comp=E,111µm,1.0s						
T1212	**Cascia, Frazio**	**0.26**	**207**	P	Pg	09 39 51.0	+0.5
T1212				S	Sg	09 39 55.4	+1.5
T1212				AML	AML		
	comp=E,103µm,0.3s						
T1212				AML	AML		
	comp=N,131µm,1.0s						
T1212				AML	AML		
	comp=N,131µm,1.0s						
SNTG	**Esanatoglia**	**0.34**	**325**	P	Pg	09 39 52.7	+0.7
SNTG				S	Sb	09 39 58.3	-1.2
SNTG				AML	AML		
	comp=N,34µm,0.3s						
SNTG				AML	AML		
	comp=E,31µm,1.0s						
SNTG				AML	AML		
	comp=N,34µm,1.7s						
EL6	**Elcito**	**0.36**	**348**	S	Sb	09 40 00.3	+0.1
PP3	**Marolino**	**0.50**	**37**	⇑P	Pb	09 39 56.4	-0.2

ROM 24 09:40:25.2±0.0**, 42°.912N**±0°.002×**13°.087E**±0°.003**, h13**^{km}**, ML2.3**/41**, 22C-13D, Error ellipse: s-maj=0.2km s-min=0.1km az=94.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1216	**Preci, Frazion**	**0.05**	**247**	P	Pg	09 40 28.0	+0.2
T1216				S	Sg	09 40 30.0	+0.3
T1216				AML	AML		
	comp=N,9205µm,0.3s						
T1216				AML	AML		
	comp=E,8385µm,0.3s						
T1216				AML	AML		
	comp=N,9210µm,0.3s						
T1216				AML	AML		

	comp=E,8385μm,0.3s						
FEMA	**Monte Fema**	**0.06**	**332**	P	Pg	09 40 28.1	+0.1
FEMA				S	Sg	09 40 30.1	+0.2
FEMA				AML	AML		
	comp=N,11135μm,0.4s						
FEMA				AML	AML		
	comp=E,14700μm,0.9s						
FEMA				AML	AML		
	comp=N,11140μm,0.4s						
MC2	**Monte Cornacci**	**0.08**	**89**	P	Pg	09 40 28.3	+0.1
MC2				S	Sg	09 40 30.5	+0.2
NRCA	**Norcia**	**0.08**	**165**	⇓P	Pg	09 40 28.3	+0.2
NRCA				S	Sg	09 40 30.3	+0.2
NRCA				AML	AML		
	comp=N,8875μm,1.0s						
NRCA				AML	AML		
	comp=E,21850μm,0.1s						
NRCA				AML	AML		
	comp=N,8870μm,1.0s						
NRCA				AML	AML		
	comp=N,9675μm,0.2s						
NRCA				AML	AML		
	comp=N,8870μm,0.9s						
NRCA				AML	AML		
	comp=E,23050μm,0.2s						
T1245	**Castelsantange**	**0.09**	**127**	⇓P	Pg	09 40 28.5	+0.2
T1245				S	Sg	09 40 30.7	+0.2
T1245				AML	AML		
	comp=E,10950μm,1.0s						
T1245				AML	AML		
	comp=N,10700μm,0.7s						
T1245				AML	AML		
	comp=E,11550μm,0.3s						
T1245				AML	AML		
	comp=N,9855μm,1.4s						
FDMO	**Fiordimonte**	**0.12**	**0**	P	Pg	09 40 28.8	+0.2
FDMO				S	Sg	09 40 31.2	+0.3
FDMO				AML	AML		
	comp=N,4960μm,0.5s						
FDMO				AML	AML		
	comp=E,4300μm,0.3s						
T1256	**Bolognola (MC)**	**0.14**	**47**	⇑P	Pg	09 40 29.1	+0.2
T1256				S	Sg	09 40 31.9	+0.5
T1256				AML	AML		
	comp=N,2150μm,0.6s						
T1256				AML	AML		
	comp=E,2125μm,0.5s						
T1256				AML	AML		
	comp=N,2275μm,0.6s						
T1256				AML	AML		
	comp=E,2135μm,0.5s						
CESI	**CESI - Serrava**	**0.16**	**305**	P	Pg	09 40 29.5	+0.3
CESI				S	Sg	09 40 32.5	+0.7
CESI				AML	AML		
	comp=N,6845μm,0.5s						
CESI				AML	AML		
	comp=E,4665μm,0.2s						
T1212	**Cascia, Frazio**	**0.16**	**191**	P	Pg	09 40 29.6	+0.4
T1212				S	Sg	09 40 32.5	+0.7
T1212				AML	AML		
	comp=N,4640μm,0.5s						
T1212				AML	AML		
	comp=E,4480μm,0.1s						
T1212				AML	AML		
	comp=N,4740μm,0.5s						
T1212				AML	AML		
	comp=N,4640μm,1.5s						
T1212				AML	AML		
	comp=E,4330μm,0.1s						
T1212				AML	AML		
	comp=N,4740μm,1.5s						
MMO1	**Montemonaco**	**0.18**	**94**	⇑P	Pg	09 40 29.6	+0.3
MMO1				S	Sg	09 40 32.7	+0.5
T1214	**Arquata del Tr**	**0.18**	**149**	⇓P	Pg	09 40 29.7	+0.3
T1214				S	Sg	09 40 33.0	+0.7
T1214				AML	AML		
	comp=E,1975μm,0.2s						
T1214				AML	AML		
	comp=N,2365μm,1.5s						
T1214				AML	AML		
	comp=E,1980μm,0.2s						
T1214				AML	AML		
	comp=N,2325μm,1.5s						
T1214				AML	AML		
	comp=E,1900μm,0.2s						
T1214				AML	AML		
	comp=N,2365μm,1.5s						
T1214				AML	AML		
	comp=E,1895μm,0.2s						
T1214				AML	AML		
	comp=N,2325μm,0.5s						
T1214				AML	AML		
	comp=N,2365μm,0.5s						
T1220	**Camerino, Fraz**	**0.20**	**0**	⇑P	Pg	09 40 29.9	+0.2
T1220				S	Sg	09 40 33.5	+0.8
T1220				AML	AML		
	comp=E,5340μm,1.2s						
T1220				AML	AML		
	comp=E,5340μm,1.3s						
T1220				AML	AML		
	comp=N,6795μm,0.2s						
T1220				AML	AML		
	comp=N,6795μm,1.8s						
T1220				AML	AML		
	comp=E,5340μm,0.7s						
T1217	**Poggiodomo (PG**	**0.23**	**210**	⇓P	Pg	09 40 30.6	+0.4
T1217				S	Sb	09 40 34.5	-0.8
T1217				AML	AML		
	comp=E,2220μm,0.1s						
T1217				AML	AML		
	comp=E,1980μm,0.1s						
T1217				AML	AML		
	comp=N,2380μm,0.2s						
T1217				AML	AML		
	comp=N,2465μm,0.2s						
GUMA	**Gualdo di Mace**	**0.24**	**50**	⇑P	Pb	09 40 30.8	-0.5
GUMA				S	Sb	09 40 35.1	-0.3
GUMA				AML	AML		
	comp=E,1935μm,0.4s						
GUMA				AML	AML		
	comp=N,2965μm,0.6s						
GUMA				AML	AML		
	comp=E,2125μm,1.1s						
GUMA				AML	AML		
	comp=N,3210μm,0.4s						
GUMA				AML	AML		
	comp=E,2125μm,0.9s						
T1218	**Civita (PG)**	**0.24**	**175**	P	Pg	09 40 30.7	+0.3
T1218				S	Sb	09 40 35.0	-0.7
T1218				AML	AML		
	comp=N,1475μm,0.2s						
T1218				AML	AML		
	comp=N,1470μm,0.2s						
T1218				AML	AML		
	comp=E,1215μm,0.7s						
T1218				AML	AML		
	comp=N,1470μm,0.2s						
T1218				AML	AML		
	comp=E,1265μm,0.4s						
T1218				AML	AML		
	comp=N,1475μm,0.2s						
SEF1	**Sefro**	**0.26**	**337**	P	Pg	09 40 30.9	+0.3
T1241	**Roccafluvione,**	**0.26**	**102**	⇑P	Pg	09 40 30.9	+0.2
T1241				S	Sg	09 40 35.2	+0.8
T1241				AML	AML		
	comp=E,1105μm,0.8s						
T1241				AML	AML		
	comp=E,1047μm,0.8s						
T1241				AML	AML		
	comp=N,1680μm,0.3s						
T1241				AML	AML		
	comp=E,1047μm,1.2s						
T1241				AML	AML		
	comp=E,1105μm,1.2s						
T1241				AML	AML		
	comp=N,1675μm,0.3s						
MDAR	**Monte D'Aria**	**0.28**	**8**	⇓P	Pg	09 40 31.4	+0.3
GAG1	**Gagliole**	**0.33**	**358**	⇑P	Pb	09 40 32.4	-0.4
SMA1	**SAN MARTINO**	**0.34**	**147**	P	Pg	09 40 31.9	-0.1
SMA1				AML	AML		
	comp=E,608μm,0.2s						
SMA1				AML	AML		
	comp=N,502μm,1.1s						
ASSB	**Assisi San Ben**	**0.34**	**293**	⇑P	Pg	09 40 32.3	+0.2
ASSB				AML	AML		
	comp=E,1360μm,0.1s						
ASSB				AML	AML		
	comp=N,1805μm,0.2s						
SNTG	**Esanatoglia**	**0.36**	**343**	⇓P	Pg	09 40 32.7	+0.2
SNTG				AML	AML		
	comp=E,301μm,1.4s						
SNTG				AML	AML		
	comp=N,328μm,1.0s						
SNTG				AML	AML		
	comp=E,301μm,0.6s						
MOMA	**Monte Martano**	**0.40**	**254**	⇑P	Pg	09 40 33.4	+0.2
MOMA				AML	AML		
	comp=E,1435μm,0.2s						
MOMA				AML	AML		
	comp=N,924μm,1.6s						
MOMA				AML	AML		
	comp=N,924μm,1.6s						
MOMA				AML	AML		
	comp=E,1480μm,0.2s						
MOMA				AML	AML		
	comp=N,936μm,1.6s						
MOMA				AML	AML		
	comp=E,1435μm,1.8s						
MOMA				AML	AML		
	comp=N,936μm,0.4s						
MOMA				AML	AML		
	comp=N,924μm,0.4s						
ARRO	**Arrone**	**0.41**	**216**	⇓P	Pg	09 40 33.8	+0.4
ARRO				AML	AML		
	comp=E,1085μm,0.2s						
ARRO				AML	AML		
	comp=N,727μm,0.2s						
RM33	**Pellescritta (**	**0.41**	**167**	P	Pg	09 40 33.6	+0.1
RM33				AML	AML		
	comp=E,472μm,0.3s						
RM33				AML	AML		
	comp=N,408μm,1.2s						
RM33				AML	AML		
	comp=E,444μm,0.3s						
RM33				AML	AML		
	comp=N,408μm,0.8s						
RM33				AML	AML		
	comp=E,472μm,1.7s						
RM33				AML	AML		
	comp=E,444μm,1.7s						
RM33				AML	AML		
	comp=N,390μm,1.0s						
T1211	**Morro Reatino**	**0.41**	**204**	P	Pg	09 40 33.7	+0.2
T1211				AML	AML		
	comp=E,1385μm,0.3s						
T1211				AML	AML		
	comp=N,1480μm,0.3s						
T1211				AML	AML		
	comp=N,1440μm,0.3s						
T1211				AML	AML		
	comp=E,1385μm,0.3s						
T1211				AML	AML		
	comp=N,1440μm,0.3s						
T1211				AML	AML		
	comp=N,1480μm,0.3s						
T1211				AML	AML		
	comp=E,1385μm,0.3s						
EL6	**Elcito**	**0.42**	**2**	⇑P	Pg	09 40 33.6	+0.1
EL6				AML	AML		
	comp=E,804μm,0.2s						
EL6				AML	AML		
	comp=N,768μm,1.4s						
EL6				AML	AML		
	comp=E,804μm,1.8s						
EL6				AML	AML		
	comp=N,768μm,0.6s						
ATCC	**AVT- Casa Cast**	**0.43**	**310**	⇑P	Pg	09 40 33.9	+0.2
ATCC				AML	AML		
	comp=E,764μm,0.6s						
ATCC				AML	AML		
	comp=N,540μm,0.1s						
OFFI	**Offida**	**0.44**	**87**	⇑P	Pb	09 40 35.0	+0.2
OFFI				AML	AML		
	comp=E,510μm,0.8s						
OFFI				AML	AML		
	comp=N,676μm,0.6s						
OFFI				AML	AML		
	comp=E,510μm,1.2s						
CAMP	**Campotosto**	**0.45**	**148**	⇑P	Pg	09 40 34.0	0.0
CAMP				AML	AML		
	comp=N,206μm,0.2s						
CAMP				AML	AML		
	comp=E,371μm,0.2s						
CING	**Cingoli**	**0.47**	**10**	⇑P	Pg	09 40 34.5	0.0
CING				AML	AML		
	comp=E,458μm,0.2s						
CING				AML	AML		
	comp=N,498μm,0.1s						
TERO	**Teramo**	**0.48**	**127**	⇑P	Pg	09 40 34.6	-0.1
TERO				AML	AML		
	comp=E,387μm,1.0s						
TERO				AML	AML		
	comp=N,396μm,0.5s						
TERO				AML	AML		
	comp=N,396μm,1.5s						
TERO				AML	AML		
	comp=N,358μm,0.3s						
TERO				AML	AML		
	comp=E,414μm,1.0s						
TERO				AML	AML		
	comp=E,387μm,1.0s						
CESX	**Cesi**	**0.48**	**231**	⇑P	Pg	09 40 34.7	+0.1
CESX				AML	AML		
	comp=E,830μm,0.6s						
CESX				AML	AML		
	comp=N,810μm,0.6s						
T1222	**Castel Sant'An**	**0.51**	**184**	⇑P	Pg	09 40 35.4	+0.2
T1222				AML	AML		
	comp=E,410μm,0.2s						
T1222				AML	AML		
	comp=N,264μm,0.8s						
MURB	**Monte Urbino**	**0.54**	**311**	⇑P	Pg	09 40 35.9	+0.1
MURB				AML	AML		
	comp=E,955μm,1.6s						
MURB				AML	AML		
	comp=E,854μm,1.6s						
MURB				AML	AML		
	comp=N,672μm,0.2s						
MURB				AML	AML		
	comp=N,736μm,0.9s						
MURB				AML	AML		
	comp=E,955μm,0.4s						
MURB				AML	AML		
	comp=E,854μm,0.4s						
MURB				AML	AML		
	comp=N,672μm,1.8s						
GIGS	**Gran Sasso**	**0.58**	**142**	P	Pg	09 40 36.3	-0.3
GIGS				AML	AML		
	comp=E,69μm,1.6s						
GIGS				AML	AML		
	comp=N,57μm,0.4s						
GIGS				AML	AML		
	comp=E,69μm,0.4s						
GIGS				AML	AML		
	comp=N,57μm,1.6s						
ATFO	**Monte Foce - G**	**0.59**	**320**	⇓P	Pg	09 40 36.9	+0.1
ATFO				AML	AML		
	comp=N,138μm,0.3s						
ATFO				AML	AML		
	comp=E,172μm,1.2s						
ATFO				AML	AML		
	comp=E,172μm,0.8s						
ARVD	**Arcevia**	**0.60**	**350**	P	Pg	09 40 37.1	+0.3
ARVD				S	Sb	09 40 46.6	+0.8
ARVD				AML	AML		
	comp=N,126μm,0.2s						
ARVD				AML	AML		
	comp=E,218μm,0.3s						
PP3	**Marolino**	**0.60**	**39**	⇓P	Pb	09 40 38.0	+0.4
PP3				AML	AML		
	comp=E,518μm,1.6s						
PP3				AML	AML		
	comp=N,630μm,0.2s						
PP3				AML	AML		
	comp=E,518μm,1.6s						
PP3				AML	AML		
	comp=N,630μm,0.2s						
PP3				AML	AML		
	comp=E,434μm,1.0s						
PP3				AML	AML		
	comp=N,622μm,0.2s						
PP3				AML	AML		
	comp=E,518μm,0.4s						
ATTE	**AVT- Monte Tez**	**0.61**	**298**	⇑P	Pg	09 40 37.3	+0.2
ATTE				AML	AML		
	comp=E,136μm,0.9s						
ATTE				AML	AML		
	comp=N,120μm,1.1s						
FIAM	**Fiamignano**	**0.64**	**178**	⇑P	Pg	09 40 37.8	0.0
FIAM				AML	AML		
	comp=E,140μm,0.9s						
FIAM				AML	AML		
	comp=N,148μm,0.5s						
FIAM				AML	AML		
	comp=N,148μm,1.5s						
FRON	**Frontone**	**0.66**	**337**	P	Pg	09 40 38.1	0.0
FRON				AML	AML		
	comp=E,142μm,0.3s						
FRON				AML	AML		
	comp=N,194μm,1.5s						
ATVO	**AVT- Monte Val**	**0.69**	**314**	⇑P	Pg	09 40 38.6	+0.1
ATVO				S	Sb	09 40 49.5	+1.1
ATVO				AML	AML		
	comp=E,159μm,0.7s						
ATVO				AML	AML		
	comp=N,123μm,0.4s						
MGAB	**Montegabbione**	**0.72**	**270**	P	Pg	09 40 39.1	0.0
MGAB				AML	AML		
	comp=E,288μm,0.3s						
MGAB				AML	AML		
	comp=N,388μm,0.6s						
MGAB				AML	AML		
	comp=N,388μm,0.6s						
MGAB				AML	AML		
	comp=N,388μm,1.4s						
MGAB				AML	AML		
	comp=N,388μm,1.4s						
MGAB				AML	AML		
	comp=E,283μm,0.2s						
ATPI	**Pietralunga -**	**0.73**	**317**	⇓P	Pb	09 40 39.9	+0.1
ATPI				AML	AML		
	comp=N,88μm,0.6s						
ATPI				AML	AML		
	comp=E,102μm,0.5s						
PIEI	**Pieia**	**0.74**	**327**	P	Pg	09 40 39.5	-0.1
PIEI				S	Sb	09 40 51.2	+1.2
PIEI				AML	AML		
	comp=E,145μm,0.2s						
PIEI				AML	AML		
	comp=N,105μm,1.0s						
MPAG	**Monte Paganucc**	**0.76**	**342**	P	Pg	09 40 39.9	+0.1
MPAG				S	Sn	09 40 52.3	-0.6
MPAG				AML	AML		
	comp=N,106μm,0.3s						
MPAG				AML	AML		
	comp=E,133μm,0.4s						
VCEL	**Villa Celiera**	**0.76**	**133**	⇓P	Pb	09 40 40.6	+0.3
VCEL				AML	AML		
	comp=E,216μm,0.2s						
VCEL				AML	AML		
	comp=N,196μm,0.3s						
VCEL				AML	AML		
	comp=N,196μm,1.7s						
FSSB	**Fossombrone**	**0.81**	**344**	P	Pg	09 40 41.0	+0.1
FSSB				AML	AML		
	comp=N,492μm,0.4s						
FSSB				AML	AML		
	comp=E,372μm,0.3s						
T0110	**Collepietro**	**0.85**	**143**	P	Pg	09 40 41.3	-0.4
T0110				AML	AML		
	comp=E,220μm,0.4s						
T0110				AML	AML		
	comp=N,189μm,0.4s						
BADI	**Badiali**	**0.86**	**314**	⇑P	Pb	09 40 42.2	+0.3
CAFI	**Castiglion Fio**	**0.92**	**297**	P	Pb	09 40 43.0	0.0
CAFI				S	Sn	09 40 57.1	+0.2
CAFI				AML	AML		
	comp=E,73μm,0.5s						
CAFI				AML	AML		
	comp=N,66μm,1.0s						
PARC	**Parchiule**	**0.96**	**320**	⇑P	Pn	09 40 44.4	0.0
PARC				AML	AML		
	comp=N,67μm,0.8s						
PARC				AML	AML		
	comp=E,80μm,0.8s						
CRE	**Caprese Michel**	**1.09**	**311**	⇓P	Pn	09 40 47.5	+1.2
TOLF	**Tolfa**	**1.17**	**224**	⇓P	Pb	09 40 47.4	+0.2
TOLF				AML	AML		
	comp=E,56μm,0.4s						
TOLF				AML	AML		
	comp=N,65μm,1.0s						

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*GCG **24** 09:40:55.2±0.5, 14°.15N×92°.22W, h97^{km}±12^{km}, MD3.8*

*MEX **24** 09:40:58.2±0.5, 13°.98N×92°.24W, h10^{km}, MD3.9*

ISC 24 09:40:57.1±3.5**, 14°.1N**±0°.1×**92°.15W**±0°.05**, h10**^{km}±24^{km}**,**
n14, σ1^{s}.28/25**, 1C, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SULM	**Suchitepequez,**	**0.61**	**70**	⇑*e*P	**Pn**	**09 41 11.9**	**+0.2**
THIG		**0.81**	**352**	*e*	**Pn**	**09 41 15.7**	**+1.2**
THIG				*e*		09 41 27.3	
STG3	**Santiaguito 3,**	**0.83**	**43**	*e*P	**Pb**	**09 41 14.3**	**+0.6**
STG3				*e*S	**Sn**	**09 41 29.7**	**+2.3**
CHUJ	**Union Juarez**	**0.99**	**3**	*e*P	**Pb**	**09 41 16.4**	**0.0**
CHUJ				*e*S	**Sn**	**09 41 30.9**	**-0.5**
PATR	**El Naranjo**	**1.01**	**356**	*e*P	**Pb**	**09 41 16.2**	**-0.7**
PATR				*e*S	**Sb**	**09 41 30.2**	**-0.1**
PAVE	**Pavencul**	**1.09**	**359**	*e*P	**Pb**	**09 41 17.4**	**-0.7**
PAVE				*e*S	**Sb**	**09 41 32.4**	**-0.1**
FUG	**Fuego 3**	**1.32**	**75**	*e*P	**Pn**	**09 41 20.4**	**-1.3**
FUG				*e*S	**Sn**	**09 41 38.5**	**-1.0**
PCG	**Pacaya**	**1.53**	**79**	*e*P	**Pn**	**09 41 23.6**	**-1.0**
PCG				*e*S	**Sn**	**09 41 45.3**	**+0.6**
NBG	**Las Nubes**	**1.82**	**74**	*e*P	**Pn**	**09 41 29.0**	**+0.3**
PCIG		**1.90**	**327**	*e*P	**Pn**	**09 41 27.4**	**-2.2**
PCIG				*e*S	**Sn**	**09 41 51.3**	**-2.2**
CCIG	**Comitan**	**2.17**	**0**	*e*P	**Pb**	**09 41 36.6**	**+0.1**
CCIG				*e*S	**Sb**	**09 42 03.5**	**-0.1**
TGIG		**2.82**	**341**	*e*P	**Pn**	**09 41 40.8**	**-1.5**
TGIG				*e*S	**Sn**	**09 42 16.9**	**+0.5**
CMIG	**Matias Romero**	**3.97**	**319**	*e*P	**Pn**	**09 41 59.5**	**+1.5**
CMIG				*e*S	**Sn**	**09 42 44.5**	**-0.1**
NEUV	**Arroyo Zacate**	**5.02**	**316**	*e*P	**Pn**	**09 42 15.3**	**+2.8**
NEUV				*e*S	**Sn**	**09 43 10.7**	**+0.1**

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*MEX **24** 09:47:48.9±0.6, 13°.78N×92°.16W, h67^{km}±62^{km}, MD3.9*

*GCG **24** 09:47:56.1±0.6, 14°.31N×91°.97W, h49^{km}±10^{km}, MD3.7*

ISC 24 09:47:52.1±2.7**, 14°.0N**±0°.1×**92°.21W**±0°.06**, h32**^{km}±16^{km}**,**
n13, σ1^{s}.32/25**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SULM	**Suchitepequez,**	**0.68**	**67**	*e*P	**Pn**	**09 48 06.0**	**+0.5**
THIG		**0.87**	**356**	*e*P	**Pn**	**09 48 07.0**	**-1.1**
THIG				*e*S	**Sn**	**09 48 22.3**	**+2.6**
STG3	**Santiaguito 3,**	**0.92**	**43**	*e*P	**Pn**	**09 48 08.4**	**-0.5**
STG3				*e*S	**Sn**	**09 48 18.4**	**-2.7**
CHUJ	**Union Juarez**	**1.06**	**5**	*e*P	**Pn**	**09 48 10.3**	**-0.6**
CHUJ				*e*S	**Sn**	**09 48 25.6**	**+0.9**
PATR	**El Naranjo**	**1.08**	**359**	*e*P	**Pn**	**09 48 10.1**	**-1.1**
PATR				*e*S	**Sb**	**09 48 27.4**	**+1.2**
PAVE	**Pavencul**	**1.15**	**2**	*e*P	**Pn**	**09 48 11.4**	**-0.8**
PAVE				*e*S	**Sb**	**09 48 29.4**	**+1.0**
FUG	**Fuego 3**	**1.39**	**73**	*e*P	**Pn**	**09 48 14.1**	**-1.3**
FUG				*e*S	**Sn**	**09 48 30.9**	**-1.8**
PCG	**Pacaya**	**1.59**	**77**	*e*P	**Pn**	**09 48 18.8**	**+0.5**
PCG				*e*S	**Sn**	**09 48 39.5**	**+1.6**
NBG	**Las Nubes**	**1.89**	**73**	*e*P	**Pn**	**09 48 23.2**	**+0.9**
NBG				*e*S	**Sn**	**09 48 46.2**	**+1.0**
PCIG		**1.93**	**330**	*e*P	**Pn**	**09 48 21.9**	**-0.7**
PCIG				*e*S	**Sn**	**09 48 45.9**	**+0.2**
CCIG	**Comitan**	**2.24**	**2**	*e*P	**Pb**	**09 48 30.8**	**-1.2**
CCIG				*e*S	**Sb**	**09 49 00.8**	**+1.4**
TGIG		**2.87**	**342**	*e*P	**Pn**	**09 48 35.4**	**-0.3**
TGIG				*e*S	**Sn**	**09 49 10.0**	**+0.9**
CMIG	**Matias Romero**	**3.98**	**320**	*e*P	**Pn**	**09 48 50.8**	**-0.2**
CMIG				*e*S	**Sn**	**09 49 37.2**	**+0.6**

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*IDC **24** 10:02:33.9±3.3, 66°.96N×135°.66W, h0^{km}, mb3.3/2,*
mbtmp3.1/4, ML3.3/2, Error ellipse: s-maj=72.7km
s-min=14.9km az=0.0

*PGC **24** 10:02:36.8±0.3, 66°.78N×135°.81W, h9^{km}, ML3.7/22, 94km*

Wsw of Fort McPherson, Nt Northern Yukon Territory, Canada

ANF ***24*** *10:02:37.3±0.3, 66°.73N×135°.82W, h12^{km}±1^{km}, ML3.8/38, ML3.8/39, Error ellipse: s-maj=1.6km s-min=1.2km az=100.0*

ISC 24 10:02:36.8±0.7**, 66°.73N**±0°.03×**135°.67W**±0°.03**, h20**^{km}±4^{km}**, n123, σ1^{s}.47**/166**, Northern Yukon Territory**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
G30M	tAoh Zraii Nji	0.33	319	P	Pb	10 02 43.9	-0.1
	baz=141						
G30M				S	Sb	10 02 48.0	-0.9
	baz=141						
EPYK	Eagle Plains	0.56	230	P	Pb	10 02 47.2	-0.7
EPYK				S	Sb	10 02 54.2	-1.3
EPYK	Eagle Plains	0.56	230	P	Pb	10 02 47.2	-0.7
	baz=41,SNR=836						
EPYK				S	Sb	10 02 54.2	-1.3
	baz=41						
F31M	Tsiigehtchic	1.04	46	P	Pn	10 02 57.2	+1.1
	baz=232,SNR=1000						
F31M				S	Sn	10 03 12.3	+2.3
	baz=232						
I29M	Ogilvie Camp,	1.75	219	P	Pn	10 03 06.8	+0.9
I29M				Sn	Sb	10 03 28.9	-0.7
I29M	Ogilvie Camp,	1.75	219	P	Pn	10 03 06.9	+0.9
	baz=34,SNR=234						
I29M				Sb	Sb	10 03 31.7	+2.0
	baz=34						
INK	Inuvik	1.78	27	P	Pb	10 03 07.8	-0.9
INK				Sn	Sb	10 03 30.3	-0.3
INK	Inuvik	1.78	27	P	Pb	10 03 07.8	-0.9
	baz=211,SNR=1000						
INK				Sb	Sb	10 03 34.1	+3.5
	baz=211						
G27K	Doyon Strip	2.37	275	P	Pn	10 03 15.1	+0.5
G27K				Sg	Sb	10 03 47.9	+0.3
G27K	Doyon Strip	2.37	275	P	Pn	10 03 15.2	+0.7
	baz=88,SNR=232						
G27K				Sb	Sb	10 03 48.1	+0.4
	baz=88						
H27K	Steamboat Moun	2.40	261	P	Pn	10 03 15.4	+0.5
H27K				Sn	Sn	10 03 43.1	-0.6
H27K				Sg	Sb	10 03 48.9	+0.4
H27K	Steamboat Moun	2.40	261	P	Pn	10 03 15.7	+0.7
	baz=74						
H27K				S	Sn	10 03 44.9	+1.2
	baz=74						
J29M	Klondike Camp	2.52	206	P	Pn	10 03 18.2	+1.6
J29M				Sn	Sn	10 03 48.5	+1.8
I27K	Kandik River	2.67	248	Pn	Pn	10 03 18.7	+0.1
I27K				Sn	Sn	10 03 50.6	+0.4
I27K				Sg	Sb	10 03 57.8	+1.7
I27K	Kandik River	2.67	248	P	Pn	10 03 18.8	+0.1
	baz=61						
I27K				Sb	Sb	10 03 57.7	+1.6
	baz=61						
E27K	Coleen River	2.71	305	P	Pn	10 03 20.1	+0.9
	baz=120						
E27K				Sb	Sb	10 03 59.0	+1.7
	baz=120						
EGAK	Eagle	3.00	232	P	Pn	10 03 23.0	-0.1
	baz=45,SNR=93						
K29M	Barlow Dome	3.00	196	Pn	Pn	10 03 24.7	+1.4
K29M				Sn	Sn	10 03 59.8	+1.1
K29M				Sg	Sb	10 04 09.1	+3.3
K29M	Barlow Dome	3.00	196	P	Pn	10 03 24.5	+1.2
	baz=13,SNR=122						
K29M				S	Sn	10 04 00.9	+2.2
	baz=13						
DAWY	Dawson	3.10	212	Pn	Pn	10 03 25.4	+0.9
DAWY				Sn	Sn	10 04 02.2	+1.3
DAWY	Dawson	3.10	212	P	Pn	10 03 25.2	+0.7
	baz=27,SNR=283						
DAWY				S	Sn	10 04 02.9	+2.1
	baz=27						
MAYO	Mayo, Yukon	3.15	182	Sn	Sn	10 04 03.7	+1.5
MAYO	Mayo, Yukon	3.15	182	P	Pn	10 03 26.6	+1.4
	baz=0.6						
G26K	Porcupine Rive	3.21	278	P	Pn	10 03 26.3	+0.3
	baz=89						
G26K				Sb	Sb	10 04 13.0	+1.2
	baz=89						
I26K	Coal Creek Min	3.38	248	P	Pn	10 03 28.3	+0.1
	baz=60						
I26K				Sb	Sb	10 04 18.1	+1.7
	baz=60						
F26K	Sheenjek River	3.44	290	P	Pn	10 03 29.4	+0.3
	baz=102,SNR=88						
L29M	L29M	3.79	197	Pn	Pn	10 03 34.4	+0.4
L29M				Sn	Sn	10 04 16.8	-1.0
L29M	L29M	3.79	197	P	Pn	10 03 35.1	+1.2
	baz=14						
K27K	Chicken	3.81	228	Pn	Pn	10 03 34.2	0.0
K27K				Sn	Sn	10 04 18.0	-0.4
K27K	Chicken	3.81	228	P	Pn	10 03 34.3	0.0
	baz=41						
NOWN	Norman Wells,	3.93	107	Pn	Pn	10 03 35.9	0.0
F25K	Christian Rive	3.98	287	P	Pn	10 03 37.2	+0.5
	baz=98						
F25K				Sb	Sb	10 04 38.2	+4.3
	baz=98						
E25K	Arctic Village	4.06	295	P	Pn	10 03 38.9	+1.1
	baz=105,SNR=35						
G25K	Bearman Lake	4.14	275	P	Pn	10 03 39.1	+0.4
	baz=85						
C27K	Jago River	4.18	318	P	Pn	10 03 40.7	+1.4
	baz=130						
PRP	Porcupine Dome	4.19	258	P	Pn	10 03 39.7	+0.2
	baz=68						
M30M	Minto, Yukon	4.20	187	Pn	Pn	10 03 40.9	+1.2
M30M				Sn	Sn	10 04 28.8	+0.7
M30M	Minto, Yukon	4.20	187	P	Pn	10 03 40.9	+1.2
	baz=5.3,SNR=100						
SCRK	Sand Creek	4.45	235	P	Pn	10 03 43.5	+0.4
	baz=47,SNR=21						
M29M	Somme Creek	4.47	197	Pn	Pn	10 03 44.8	+1.4
M29M				Sn	Sn	10 04 33.6	-1.2
M29M	Somme Creek	4.47	197	P	Pn	10 03 44.8	+1.4
	baz=14						
L27K	Beaver Creek,	4.52	218	Pn	Pn	10 03 44.9	+0.8
L27K	Beaver Creek,	4.52	218	P	Pn	10 03 45.0	+1.0
	baz=32,SNR=100						
M31M	Drury Creek, Y	4.58	172	Pn	Pn	10 03 46.1	+1.2
M31M	Drury Creek, Y	4.58	172	P	Pn	10 03 46.0	+1.2
	baz=353,SNR=12						
FARO	Faro, Yukon	4.63	166	Pn	Pn	10 03 47.1	+1.6
FARO				Sn	Sn	10 04 40.1	+1.5
FARO	Faro, Yukon	4.63	166	P	Pn	10 03 46.9	+1.4
	baz=348,SNR=22						
C26K	Camden Bay	4.69	317	P	Pn	10 03 47.5	+1.3
	baz=129						
DOT	Dot Lake	4.70	233	Pn	Pn	10 03 46.6	+0.1
F24K	Squaw Lake	4.83	285	P	Pn	10 03 48.7	+0.4
	baz=93						
BVCY	Beaver Creek	4.88	210	Pn	Pn	10 03 49.9	+1.0
BVCY				Sn	Sn	10 04 43.8	-0.9
BVCY	Beaver Creek	4.88	210	P	Pn	10 03 50.2	+1.3
	baz=24,SNR=61						
RIDG	Independent Ri	4.89	236	P	Pn	10 03 49.5	+0.4
	baz=47						
L26K	Log Cabin Wild	4.95	225	P	Pn	10 03 50.6	+0.7
	baz=37						
H24K	Noodor Dome	5.01	265	P	Pn	10 03 50.6	-0.1
	baz=74						
ILAR	Eielson Array	5.03	252	Pn	Pn	10 03 50.3	-0.6
	0.2nm,0.3s,baz=55,slow=13,SNR=10						
ILAR				Sn	Sn	10 04 47.9	-0.4
	1.6nm,0.3s,baz=56,slow=16,SNR=2.5						
ILAR				Lg	Lg	10 05 06.8	
	4.5nm,0.3s,baz=54,slow=29,SNR=8.1						
	0.2nm,0.3s						
C36M	Paulatuk	5.08	54	Pn	Pn	10 03 51.8	+0.2
C36M				Sn	Sn	10 04 46.9	-2.6
C36M	Paulatuk	5.08	54	P	Pn	10 03 52.0	+0.3
	baz=245,SNR=171						
E24K	Your Creek	5.12	291	P	Pn	10 03 53.2	+0.9
	baz=99						
M27K	Edge Creek, AK	5.14	214	Pn	Pn	10 03 53.2	+0.5
M27K	Edge Creek, AK	5.14	214	P	Pn	10 03 53.3	+0.6
	baz=28,SNR=42						
HDA	Harding Lake	5.23	249	P	Pn	10 03 53.2	-0.5
	baz=58						
N31M	Braeburn, Yuko	5.27	181	Pn	Pn	10 03 55.9	+1.6
N31M	Braeburn, Yuko	5.27	181	P	Pn	10 03 55.8	+1.5
	baz=360,SNR=20						
N30M	Aishikik Lake	5.33	187	Pn	Pn	10 03 56.7	+1.5
N30M				Sn	Sn	10 04 54.5	-1.4
N30M	Aishikik Lake	5.33	187	P	Pn	10 03 56.4	+1.2
	baz=5.4						
M26K	Nabesna, AK	5.37	219	P	Pn	10 03 56.4	+0.7
	baz=32						
YUK3	Moose Creek	5.39	205	Pn	Pn	10 03 57.3	+1.1
YUK3				Sn	Sn	10 04 55.9	-1.8
YUK3	Moose Creek	5.39	205	P	Pn	10 03 57.1	+0.9
	baz=20,SNR=46						
YUK2	White River	5.45	207	Pn	Pn	10 03 57.7	+0.8
E23K	Chandalar	5.54	290	P	Pn	10 03 59.2	+1.2
	baz=97						
YUK4	Talbot Arm	5.56	195	Pn	Pn	10 03 58.4	-0.1
YUK4	Talbot Arm	5.56	195	P	Pn	10 03 58.6	0.0
	baz=11,SNR=54						
PAX	Paxson	5.63	232	P	Pn	10 04 00.7	+1.4
	baz=43						
H23K	Yukon River	5.67	267	P	Pn	10 03 59.9	+0.1
	baz=74						
G23K	Bananza Creek	5.69	276	P	Pn	10 04 00.9	+0.8
	baz=83						
C24K	Franklin Bluff	5.70	308	P	Pn	10 04 01.5	+1.4
	baz=116						
YUK5	Granite Creek	5.71	191	Pn	Pn	10 04 01.9	+1.4
YUK5				Sn	Sn	10 05 04.4	-0.8
COLD	Coldfoot	5.72	282	Pn	Pn	10 04 00.5	0.0
COLD				Sn	Sn	10 05 02.5	-2.9
COLD	Coldfoot	5.72	282	P	Pn	10 04 01.4	+1.0
	baz=88						
YUK8	Steele Glacier	5.76	200	Pn	Pn	10 04 02.4	+1.1
YUK8				Sn	Sn	10 05 06.3	-0.4
YUK8	Steele Glacier	5.76	200	P	Pn	10 04 02.3	+1.1
	baz=16,SNR=37						
I23K	Minto, Yukon-K	5.82	260	P	Pn	10 04 02.8	+1.1
	baz=67						
YUK6	Outpost Mounta	5.93	193	Pn	Pn	10 04 05.1	+1.5
YUK6	Outpost Mounta	5.93	193	P	Pn	10 04 05.1	+1.5
	baz=9.8,SNR=114						
NEA2	Nenana	5.94	255	P	Pn	10 04 04.5	+1.0
	baz=62						
HARP	HAARP	5.96	228	P	Pn	10 04 04.3	+0.5
	baz=38						
HYT	Haines Junctio	5.99	189	Pn	Pn	10 04 05.0	+0.8
HYT	Haines Junctio	5.99	189	P	Pn	10 04 05.7	+1.4
	baz=6.4,SNR=18						
O30N	Mendenhall	5.99	182	P	Pn	10 04 05.3	+1.1
	baz=1.1,SNR=24						
D23K	Nanushuk River	6.10	298	P	Pn	10 04 06.5	+0.9
	baz=104						
WRGLY	Wrigley	6.26	118	P	Pn	10 04 09.6	+1.8
	baz=310						
MCARA	McCarthy VSAT	6.26	214	P	Pn	10 04 09.1	+1.3
	baz=27						
O28M	Mount Upton	6.31	201	Pn	Pn	10 04 10.1	+1.3
O28M				Sn	Sn	10 05 16.3	-4.0
O28M	Mount Upton	6.31	201	P	Pn	10 04 10.7	+1.9
	baz=16						
YUK7	Dusty Glacier	6.32	191	Pn	Pn	10 04 10.5	+1.6
MCK	McKinley	6.33	248	P	Pn	10 04 10.4	+1.5
	baz=55						
E22K	Anaktuvuk Pass	6.37	290	P	Pn	10 04 10.7	+1.3
	baz=95						
MLY	Manley	6.41	262	P	Pn	10 04 11.1	+1.2
	baz=67						
A36M	Sachs Harbour	6.43	30	Pn	Pn	10 04 10.6	+0.6
A36M				Sn	Sn	10 05 20.2	-2.5
A36M	Sachs Harbour	6.43	30	P	Pn	10 04 10.7	+0.6
	baz=221,SNR=74						
BALM	Baldy	6.43	210	Pn	Pn	10 04 10.9	+0.7
O29M	Mount Kennedy	6.58	193	Pn	Pn	10 04 13.2	+0.8
O29M	Mount Kennedy	6.58	193	P	Pn	10 04 13.9	+1.4
	baz=9.6						
P30M	Million Dollar	6.66	186	Pn	Pn	10 04 14.5	+1.0
P30M	Million Dollar	6.66	186	P	Pn	10 04 15.1	+1.7
	baz=3.9,SNR=9.2						
P33M	Teslin, Yukon	6.67	168	Pn	Pn	10 04 14.3	+0.8
P33M	Teslin, Yukon	6.67	168	P	Pn	10 04 14.8	+1.2
	baz=350						
F21K	Alatna River	7.00	282	P	Pn	10 04 19.2	+1.2
	baz=86						
G21K	Allakaket	7.10	276	P	Pn	10 04 19.5	+0.2
	baz=80						
P32M	Atlin	7.22	172	Pn	Pn	10 04 22.7	+1.5
SKAG	Skagway	7.30	179	P	Pn	10 04 23.3	+1.2
	baz=358						
WTLY	Watson Lake, Y	7.32	152	Pn	Pn	10 04 23.3	+0.9
KUKN	Kugluktuk,NWT	8.03	73	Pn	Pn	10 04 31.7	-0.4
KUKN				Sn	Sn	10 05 56.0	-6.2
NBC2	NorthernBC 2	9.14	133	Pn	Pn	10 04 48.1	+0.7
FNBB	Fort Nelson	9.75	138	Pn	Pn	10 04 56.9	+1.2
YKA	Yellowknife Ar	9.96	105	Pn	Pn	10 04 56.6	-2.0
	0.6nm,0.3s,baz=309,slow=12,SNR=25						
YKA				Sn	Sn	10 06 43.8	-5.8
	1.0nm,0.3s,baz=304,slow=22,SNR=8.2						
YKA				Lg	Lg	10 07 42.3	
	0.4nm,0.3s,baz=298,slow=27,SNR=5.1						
	0.6nm,0.4s						
T35M	Bob Quinn	10.11	163	Pn	Pn	10 05 02.8	+2.2
NBC6	NorthernBC 6	10.47	134	Pn	Pn	10 05 05.4	-0.2
EUNU	Eureka	18.41	25	Pn	Pn	10 06 50.3	0.0
ILON	Igloolik, Nuna	19.75	58	Pn	Pn	10 07 06.9	+0.5
PDAR	Pinedale Array	27.93	136	P	P	10 08 27.1	+1.6
	0.3nm,0.7s,baz=338,slow=7.0,SNR=2.4						
	0.3nm,0.7s						
NVAR	Mina Array Bea	30.02	152	P	P	10 08 47.6	+3.5
	0.1nm,0.4s,baz=330,slow=5.2,SNR=1.6						
	0.1nm,0.4s						

IDC ***24*** *10:09:31.9±3.3, 14°.33N×91°.66W, h0^{km}, mb3.7/3, mbtmp3.6/5, ML3.4/2, MS3.2/3, Error ellipse: s-maj=119.2km s-min=47.9km az=37.0*

MEX ***24*** *10:09:32.7±0.7, 13°.63N×92°.39W, h16^{km}, MD4.1*

GCG ***24*** *10:09:33.8±0.9, 14°.03N×92°.45W, h82^{km}±29^{km}, MD4.0*

ISC 24 10:09:32.3±2.0**, 13°.91N**±0°.07×**92°.41W**±0°.04**, h4**^{km}±12^{km}**, n25, σ1^{s}.12**/34**, mb3.7**/3**, MS3.1**/3**, 1C, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SULM	Suchitepequez,	0.91	64	⇑*e*P	Pb	10 09 51.8	+1.3
THIG		1.00	8	*i* P	Pb	10 09 52.5	+0.4
THIG				*e*S	Sn	10 10 07.9	+0.2
STG3	Santiaguito 3,	1.14	46	*e*P	Pg	10 09 54.2	+0.1
STG3				*e*S	Sb	10 10 11.4	+1.6
CHUJ	Union Juarez	1.21	14	*i* P	Pg	10 09 55.0	-0.6
CHUJ				*i* S	Sb	10 10 12.9	+0.9
PATR	El Naranjo	1.21	8	*i* P	Pg	10 09 55.2	-0.3
PATR				*i* S	Sn	10 10 13.3	+0.1
PAVE	Pavencul	1.29	10	*i* P	Pn	10 09 56.5	-0.9
PAVE				*i* S	Sb	10 10 14.7	+0.3
FUG	Fuego 3	1.61	70	*e*P	Pn	10 09 59.5	-2.2
PCG	Pacaya	1.81	75	*e*P	Pn	10 10 04.9	+0.4
PCG				*e*S	Sn	10 10 28.1	+0.1
PCIG		1.95	336	*i* P	Pn	10 10 05.6	-0.6
PCIG				*i* S	Sn	10 10 30.7	-0.4
NBG	Las Nubes	2.11	71	*e*P	Pn	10 10 08.5	-0.1
CCIG	Comitan	2.37	6	*i* P	Pb	10 10 14.4	-1.3
CCIG				*e*S	Sb	10 10 44.8	-0.7
TGIG		2.93	346	*e*P	Pn	10 10 20.0	+0.2
TGIG				*e*S	Sn	10 10 56.0	+0.5
CMIG	Matias Romero	3.96	323	Pn	Pn	10 10 34.9	+1.0
	2.5nm,0.3s,baz=144,slow=12,SNR=26						
CMIG				Sn	Sn	10 11 21.1	+0.3
	5.7nm,0.3s,baz=77,slow=16,SNR=2.5						
	5.8nm,0.3s						
CMIG	Matias Romero	3.96	323	*e*P	Pn	10 10 34.3	+0.4
CMIG				*e*S	Sn	10 11 21.3	+0.5
HUIG	Huatulco	4.03	298	*e*P	Pn	10 10 33.0	-1.8
HUIG				*e*		10 11 15.2	
PEIG	Puerto Escondi	5.03	295	*e*P	Pn	10 10 48.0	-0.6
PEIG				*e*		10 11 40.9	
VHO	Vista Hermosa	5.22	308	*e*	Pn	10 10 54.3	+2.9
VHO				*e*		10 11 50.8	
TXAR	Lajitas Array	18.55	328	P	Pn	10 13 51.6	+1.2
	baz=143,slow=10,SNR=5.5						
	0.7nm,0.9s						
TKL	Tuckaleechee C	23.00	18	LR	LR	10 25 23.8	
	comp=Z,67nm,18.5s,baz=292,slow=42						
SJG	San Juan	25.57	77	LR	LR	10 25 26.5	
	comp=Z,32nm,18.2s,baz=256,slow=38						
SADO	Sadowa	32.76	18	LR	LR	10 29 13.6	
	comp=Z,41nm,18.1s,baz=152,slow=37						
NVAR	Mina Array Bea	33.49	322	P	P	10 16 15.2	+2.0
	0.7nm,0.7s,baz=121,slow=8.9,SNR=6.1						
	0.7nm,0.7s						
YKA	Yellowknife Ar	51.02	347	P	P	10 18 33.8	-1.4
	1.3nm,0.7s,baz=150,slow=7.6,SNR=22						
YKA				PcP	PcP	10 19 49.8	-1.4
	0.1nm,0.6s,baz=150,slow=3.7,SNR=4.1						
	1.3nm,0.7s						
ILAR	Eielson Array	62.76	337	P	P	10 19 57.8	-0.7
	0.4nm,0.8s,baz=128,slow=5.8,SNR=5.2						
	0.4nm,0.8s						
CMAR	Chiang Mai Arr	145.94	341	PKPbc	PKPdf	10 29 13.1	-0.4
	1.0nm,0.4s,baz=334,slow=4.0,SNR=10						

IDC 24 10:11:37.6±7.5**, 23°.00N×92°.33E, h0**^{km}**, mb3.3**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=542.7km s-min=29.1km az=61.0, India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	25.09	344	P	P	10 17 03.9	0.0
	0.4nm,0.4s,baz=152,slow=8.8,SNR=7.5						
	0.4nm,0.4s						
WRA	Warramunga Arr	59.18	133	P	P	10 21 41.2	+0.5
	0.1nm,0.4s,baz=320,slow=7.6,SNR=1.5						
	0.1nm,0.4s						
ASAR	Alice Springs	61.51	136	P	P	10 21 56.0	-0.6
	0.3nm,0.9s,baz=316,slow=7.8,SNR=2.1						
	0.3nm,0.9s						

IDC ***24*** *10:33:57.9±3.7, 5°.13S×129°.75E, h180^{km}±38^{km}, mb3.6/11, mbtmp4.1/14, Error ellipse: s-maj=25.9km s-min=15.0km az=77.0*

NEIC ***24*** *10:33:58.4±1.8, 5°.12S±0°.06×129°.81E±0°.08, h185^{km}±8^{km}, mb4.4/45, Error ellipse: s-maj=11.9km s-min=9.3km az=95.0*

DJA ***24*** *10:33:59.3±0.2, 5°S±3°×13°0E±°, h192^{km}±4^{km}, M4.3/17, mB4.8/5, mb4.3/17, MLv4.5/16, Mw(mB)4.0/5*

ISC 24 10:33:58.8±0.4**, 5°.19S**±0°.04×**129°.84E**±0°.06**, h200**^{km}**, n106, σ1^{s}.51**/110**, mb4.3**/26**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	0.67	5	P	Pn	10 34 26.3	-0.4
MSAI	Masohi	2.05	334	P	Pn	10 34 36.3	-1.6
AAI	Ambon	2.22	312	P	Pn	10 34 38.1	-1.6
SAUI	Saumlaki	3.13	153	Pn	Pn	10 34 48.4	-1.6
SAUI				Sn	Sn	10 35 31.3	+1.2
SAUI	Saumlaki	3.13	153	P	Pn	10 34 51.8	+1.8
FAKI	Fak Fak	3.29	47	Pn	Pn	10 34 51.6	-0.4
FAKI				Sn	Sn	10 35 31.0	-2.7
FAKI	Fak Fak	3.29	47	P	Pn	10 34 51.2	-0.8
NLAI	Namlea	3.35	305	P	Pn	10 34 53.7	+1.0
SANI	Sanana	4.96	309	P	Pn	10 35 10.5	-2.2
LBMI	Labuha	5.09	333	P	Pn	10 35 14.0	-0.5
	46nm,0.4s,0.5nm						
SOEI	Soe	7.15	230	Pn	Pn	10 35 40.0	-1.2
SOEI	Soe	7.15	230	P	Pn	10 35 42.7	+1.5
	46nm,1.1s,0.3nm						
SRPI	Serui, Papua	7.19	63	P	Pn	10 35 41.8	+0.3
	74nm,0.7s,0.9nm						
MTN	Manton Dam	7.71	171	Pn	Pn	10 35 48.1	-0.2
LUWI	Luwuk	8.18	300	Pn	Pn	10 35 52.6	-1.8
MMRI	Maumere	8.29	245	Pn	Pn	10 35 56.7	+0.8
BKSI	Bulukumba	9.68	269	P	Pn	10 36 14.9	+0.9
	28nm,1.0s,447nm						
MRSI	Marisa	9.70	305	P	Pn	10 36 13.4	-0.8
	66nm,0.8s,870nm						
KAPI	Kappang	10.05	271	P	Pn	10 36 16.5	-2.3
	4.2nm,0.3s,baz=63,slow=5.9,SNR=5.9						
KAPI	Kappang	10.05	271	Pn	Pn	10 36 17.8	-1.1
KNRA	Kununurra	10.47	186	Pn	Pn	10 36 23.5	-0.7
TOLI2	Tolitoli	11.01	304		Pn	10 36 30.6	-0.5
MPSI	Mapaga	11.35	299	P	Pn	10 36 35.9	+0.4
	15nm,0.8s						
FITZ	Fitzroy Crossi	13.47	197	Pn	Pn	10 37 02.0	-0.2
WB0	Warramunga Arr	15.15	163	Pn	Pn	10 37 21.4	-1.5
WRAB	Tennant Creek	15.29	164	Pn	P	10 37 23.7	-1.3
WRAB				IAmb	IAmb	10 37 51.6	
	comp=Z,18nm,1.5s						
WRA	Warramunga Arr	15.30	164	P	P	10 37 24.7	-0.4
	comp=Z,2.4nm,0.4s,baz=341,slow=12,SNR=25						
WRA				S	S	10 40 06.5	-8.3
	comp=Z,4.2nm,0.4s,baz=334,slow=22,SNR=6.2						
WRA	Warramunga Arr	15.30	164	Pn	Pn	10 37 23.0	-1.8
WB2	Warramunga Arr	15.30	164	Pn	Pn	10 37 22.8	-2.0
WB2				IAmb	IAmb	10 37 48.5	
	comp=Z,16nm,1.4s						
MYLDM	Lahad Datu	15.31	312	Pn	Pn	10 37 21.6	-3.4
MYLDM				IAmb	IAmb	10 37 38.0	
	comp=Z,28nm,1.1s						
COEN	Coen	15.76	124	P	Pn	10 37 32.3	+1.9
COEN				IAmb	IAmb	10 37 40.5	
	comp=Z,41nm,1.4s						
JAGI	Jajag, Banyuwa	15.91	257	P	P	10 37 31.3	-0.7
JAGI				IAmb	IAmb	10 37 48.4	
	comp=Z,34nm,1.2s						
GMJI	Gumukmas	16.57	258	P	Pn	10 37 39.9	-0.2
	comp=Z,22nm,1.0s						
KKM	Kota Kinabalu	17.60	309	P	P	10 37 47.7	-2.8
KKM				IAmb	IAmb	10 37 53.4	
	comp=Z,32nm,1.0s						
PMG	Port Moresby	17.68	105	P	Pn	10 37 57.2	+4.1
	comp=Z,20nm,0.9s,baz=331,slow=4.1,SNR=6.0						
PMG	Port Moresby	17.68	105	P	P	10 37 49.7	-1.5
PMG				IAmb	IAmb	10 38 01.1	
	comp=Z,21nm,0.8s						
MBWA	Marble Bar	18.66	211	P	P	10 38 01.4	-0.4
MBWA				IAmb	IAmb	10 38 03.0	
	comp=Z,23nm,0.9s						
AS31	Alice Springs	18.78	168		Pn	10 38 05.8	-0.2
AS31				IAmb	IAmb	10 38 06.8	
	comp=Z,7.5nm,0.6s						
ASAR	Alice Springs	18.78	168	P	Pn	10 38 05.9	-0.2
	comp=Z,17nm,0.5s,baz=348,slow=11,SNR=372						
ASAR				S	S	10 41 24.5	-1.8
	comp=Z,3.3nm,0.6s,baz=347,slow=19,SNR=14						
ASAR	Alice Springs	18.78	168		Pn	10 38 05.8	-0.3
PSA00	Pilbara Seismi	18.95	210	P	P	10 38 05.0	0.0
PSA00	Pilbara Seismi	18.95	210	P	P	10 38 04.6	-0.4
PSA00				IAmb	IAmb	10 38 06.2	
	comp=Z,16nm,1.1s						
SBUM	Sibu	19.17	293	P	P	10 38 07.0	-0.5
SBUM				IAmb	IAmb	10 38 12.1	
	comp=Z,6.8nm,0.6s						
FORT	Forrest	25.51	184	P	P	10 39 10.5	+1.6
FORT				IAmb	IAmb	10 39 21.3	
	comp=Z,18nm,1.1s						
MORW	Morawa	27.11	207	P	P	10 39 23.1	-0.2
MORW				IAmb	IAmb	10 39 46.5	
	comp=Z,17nm,1.2s						
BBOO	Buckleboo	28.08	169	P	P	10 39 34.0	+2.1
BBOO				IAmb	IAmb	10 40 06.9	
	comp=Z,11nm,1.3s						
EIDS	Eidsvold	28.58	137	P	P	10 39 37.0	+0.5
EIDS				IAmb	IAmb	10 39 57.5	
	comp=Z,15nm,1.5s						
NWAO	Narrogin (SRO)	30.00	202	P	P	10 39 49.4	+0.5
	comp=Z,7.3nm,0.7s,baz=30,slow=9.0,SNR=7.5						
	comp=Z,7.3nm,0.7s						
NWAO	Narrogin (SRO)	30.00	202	P	P	10 39 47.6	-1.2
HNR	Honiara	30.14	100	P	P	10 39 49.4	-0.9
YOJ	Yonaguni jima	30.22	348	P	P	10 39 50.0	-0.8
NACB	Ninganchiao	30.28	345	P	P	10 39 50.2	-1.1
PHRA	Phrae	37.50	310	P	P	10 40 54.3	+0.6
CM31	Chiang Mai Arr	38.48	308	P	P	10 41 00.7	-1.1
CM31				IAmb	IAmb	10 41 02.6	
	comp=Z,4.1nm,0.6s						
CMAR	Chiang Mai Arr	38.48	308	P	P	10 41 02.1	+0.3
	comp=Z,2.5nm,0.5s,baz=135,slow=7.0,SNR=11						
	comp=Z,2.5nm,0.5s						
CMAR	Chiang Mai Arr	38.48	308	P	P	10 41 01.6	-0.3
CHTO	Chiang Mai	38.68	309	P	P	10 41 03.5	0.0
PZH	PanZhiHua	41.64	321	P	P	10 41 30.3	+2.4
PZH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.5s						
MJAR	Matsushiro Arr	42.25	10	P	P	10 41 32.0	-0.5
	comp=Z,1.9nm,0.7s,baz=178,slow=8.5,SNR=5.5						
	comp=Z,1.9nm,0.7s						
KSRS	Korea Array	42.47	358	P	P	10 41 33.6	-0.6
	comp=Z,0.7nm,0.6s,baz=172,slow=9.5,SNR=3.1						

	comp=Z,0.7nm,0.6s						
JMM	Marumori	44.03	12	P	P	10 41 47.0	+0.3
JTM	Tenmabayashi	46.90	12	P	P	10 42 09.7	+0.6
SHL	Shillong	47.88	311	P	P	10 42 17.2	-0.1
SHL				IAmb	IAmb	10 42 17.5	
	comp=Z,6.0nm,0.5s						
HHC	Hu-ho-hao-te	48.79	342	*e*P	P	10 42 26.9	+3.1
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,6.7s						
USRK	Ussuriysk Ar.	49.20	2	P	P	10 42 27.5	+0.8
	comp=Z,1.1nm,0.6s,baz=198,slow=9.1,SNR=2.8						
	comp=Z,1.1nm,0.6s						
USRK	Ussuriysk Ar.	49.20	2	P	P	10 42 26.0	-0.7
TAPN	Taplejung	51.99	311	*e*P	P	10 42 47.9	-0.3
	comp=Z,26nm,0.4s						
RAMN	Ramite	52.62	310	*e*P	P	10 42 53.0	+0.1
	comp=Z,48nm,0.5s						
JIRN	Jiri	53.30	310	*e*P	P	10 42 57.5	-0.4
	comp=Z,18nm,0.5s						
GUN	Gumba	53.66	310	*e*P	P	10 43 00.3	-0.3
	comp=Z,37nm,0.7s						
PKI	Pulchoki	53.85	310	*e*P	P	10 43 01.3	-0.6
DMN	Daman	54.10	310	*e*P	P	10 43 03.2	-0.4
GKN	Gorkha	54.66	310	*e*P	P	10 43 07.2	-0.3
	comp=Z,25nm,0.3s						
KOLN	Koldanda	55.34	309	*e*P	P	10 43 12.3	-0.2
KOLN	Koldanda	55.34	309	*e*P	P	10 43 12.8	+0.3
	comp=Z,73nm,0.4s						
DANN	Dangsing	55.50	310	*e*P	P	10 43 13.1	-0.6
PYUN	Piuthan	55.97	309	*e*P	P	10 43 16.9	-0.1
SONM	Songino Array	56.69	341	P	P	10 43 23.0	+1.4
	comp=Z,0.3nm,0.4s,baz=146,slow=5.9,SNR=2.5						
	comp=Z,0.3nm,0.4s						
WMQ	Urumqi	61.81	327	*e*P	P	10 43 59.8	+3.2
PETK	Petropavlovsk-	62.67	18	P	P	10 44 03.1	+1.0
	comp=Z,2.1nm,0.9s,baz=216,slow=6.4,SNR=3.0						
	comp=Z,2.1nm,0.9s						
PETK	Petropavlovsk-	62.67	18	P	P	10 44 02.7	+0.6
NIL	Nilore	65.93	310	P	P	10 44 23.9	+0.2
KSH	Kashi	66.59	317	P	P	10 44 31.3	+3.4
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MK31	Makanchi Array	66.64	326	P	P	10 44 29.1	+1.2
MKAR	Makanchi Array	66.64	326	P	P	10 44 28.4	+0.4
	comp=Z,3.1nm,0.6s,baz=116,slow=7.5,SNR=19						
	comp=Z,3.1nm,0.6s						
MKAR	Makanchi Array	66.64	326	P	P	10 44 28.7	+0.8
MAKZ	Makanchi	66.82	326	P	P	10 44 28.8	-0.3
MAKZ				IAmb	IAmb	10 44 29.6	
	comp=Z,5.3nm,0.7s						
KDJ	Kajisay	67.09	320	P	P	10 44 29.2	-1.9
BOOM	Boomskoye usch	68.07	320	P	P	10 44 37.7	+0.5
AAK	Ala-Archa	69.07	319	P	P	10 44 44.2	+0.9
KBL	Kabul	69.49	310	P	P	10 44 45.6	-0.6
KBL				IAmb	IAmb	10 44 47.1	
	comp=Z,4.8nm,1.1s						
ZAA0	Zalesovo Array	69.91	334	P	P	10 44 48.9	+0.9
ZALV	Zalesovo Beam	69.91	334	P	P	10 44 48.3	+0.3
	comp=Z,0.6nm,0.5s,baz=108,slow=4.8,SNR=4.5						
	comp=Z,0.6nm,0.5s						
SEY	Seymchan	70.07	11	P	P	10 44 50.7	+1.9
	comp=Z,2.1nm,0.6s,baz=186,slow=6.9,SNR=5.3						
	comp=Z,2.1nm,0.6s						
GAR	Garm	70.29	314	P	P	10 44 51.2	+0.3
GAR				IAmb	IAmb	10 44 53.0	
	comp=Z,5.8nm,0.9s						
BTK	Batken	70.38	316	P	P	10 44 51.8	+0.5
BTK				IAmb	IAmb	10 45 00.7	
	comp=Z,3.4nm,0.5s						
AMKA	Amchitka	70.39	30	P	P	10 44 50.5	-0.5
KURK	Kurchatov	70.91	328	P	P	10 44 55.2	+1.1
KURK				IAmb	IAmb	10 44 55.7	
	comp=Z,5.9nm,0.8s						
KK31	Karatay Array	71.89	318	P	P	10 45 00.9	+0.7
KKAR	Karatay Array	71.89	318	P	P	10 45 00.2	0.0
NRIK	Noril'sk	79.78	346	P	P	10 45 44.5	+0.3
ABKAR	Akbulak array	81.01	321	P	P	10 45 51.1	-0.2
RAYN	Ar Rayn	86.88	294	P	P	10 46 22.2	+0.6
RAYN				IAmb	IAmb	10 46 22.9	
	comp=Z,7.1nm,1.1s						
ILAR	Eielson Array	91.79	25	P	P	10 46 44.6	+1.0
	comp=Z,0.4nm,0.9s,baz=280,slow=6.3,SNR=2.2						
	comp=Z,0.4nm,0.9s						
BMAR	Burnt Mountain	93.05	23	P	P	10 46 49.5	+0.1
CPUP	Villa Florida	147.90	168	PKPbc	PKPbc	10 53 21.1	0.0
	comp=Z,0.8nm,0.5s,baz=190,slow=7.9,SNR=3.0						

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*IDC **24** 10:37:17.2±0.9, 3.°96S×81.°05W, h0^{km}, mb4.0/7, mbtmp4.2/10, ML3.7/3, MS3.7/27, Error ellipse: s-maj=30.5km s-min=15.3km az=58.0*

*NEIC **24** 10:37:22.7±2.1, 3.°97S±0.°01×80.°87W±0.°06, h31^{km}±6^{km}, mb4.4/57, Error ellipse: s-maj=9.0km s-min=2.0km az=90.0*

*VAO **24** 10:37:24.5±0.7, 4.°06S×80.°82W, h35^{km}, mb4.6*

ISC 24 10:37:22.7±0.5**, 3.°96S**±0.°05×**80.°91W**±0.°06**, h39^{km}, n149, σ1ˢ19**/133**, mb4.4**/30**, MS3.8**/23**, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARNL	Arenillas	0.93	64		Pn	10 37 39.5	+0.2
ARNL				Sn	Sn	10 37 51.9	+0.4
MCRA	Macar, Loja	1.04	113		Pn	10 37 40.0	-0.7
MCRA				Sn	Sn	10 37 54.0	-0.1
SALI	Salinas	1.76	357	Pn	Pn	10 37 49.8	-0.9
CHSH	Refugio Sur-Vo	3.18	40		Pn	10 38 11.8	+1.0
PORT	Chimborazo Vol	3.27	41	Pn	Pn	10 38 12.8	+0.9
SLOR	San Lorenzo -	4.01	37	Pn	Pn	10 38 23.4	+1.3
ATAH	Atahualpa	4.03	142	Pn	Pn	10 38 22.3	+0.1
	9.3nm,0.3s,baz=358,slow=10,SNR=82						
ATAH				Sn	Sn	10 39 12.0	+3.5
	69nm,0.3s,baz=160,slow=19,SNR=8.3						
	61nm,0.7s						
PULU	Pululahua	4.62	31		Pn	10 38 31.7	+1.3
OTAV	Otavalo	4.83	31		Pn	10 38 34.4	+1.0
OTAV	Otavalo	4.83	31	*e*P	Pn	10 38 34.9	+1.5
IMBA	Imbabura, San	5.00	33	Pn	Pn	10 38 37.1	+1.4
TULM	Tulcn-Chalpat	5.59	34	Pn	Pn	10 38 45.5	+1.7
NNA	Nana	8.94	153	Pn	Pn	10 39 29.2	-0.2
	1.5nm,0.3s,baz=246,slow=14,SNR=1.7						
NNA				Sn	Sn	10 41 12.6	+3.8
	2.1nm,0.3s,baz=337,slow=18,SNR=1.7						
NNA				Lg	Lg	10 41 52.4	
	7.4nm,0.3s,baz=253,slow=14,SNR=6.7						
NNA				LR	LR	10 43 42.6	
	comp=Z,272nm,18.4s,baz=309,slow=43						
	4.7nm,0.4s						
NNA	Nana	8.94	153	Pn	Pn	10 39 27.3	-2.1
CZSB	Cruzeiro do Su	8.98	115	Pn	Pn	10 39 29.6	-0.3
CZSB	Cruzeiro do Su	8.98	115	*e*P	Pn	10 39 29.7	-0.3
PAYG	Puerto Ayora	9.92	289	Pn	Pn	10 39 42.5	-0.3
ROSC	El Rosal	10.94	37	LR	LR	10 44 48.0	
	comp=Z,1µm,19.1s,baz=238,slow=41						
ROSC	El Rosal	10.94	37	Pn	Pn	10 39 55.4	-1.8
TBTG	Tabatinga, AM	10.97	92		Pn	10 39 56.4	-0.9
TBTG	Tabatinga, AM	10.97	92	*e*P	Pn	10 39 56.4	-0.9
RIMA	Rio Macho	13.95	348	Pn	Pn	10 40 37.9	-0.1
SGCB	S£o Gabriel d	14.38	75	*e*P	Pn	10 40 44.7	+0.9
JTS	Las Juntas de	14.71	344	LR	LR	10 45 39.3	
	comp=Z,273nm,18.9s,baz=153,slow=34						
ORTG	Ortega, Santa	14.93	342	Pn	Pn	10 40 50.7	-0.5
HZTE	Horizontes, Gu	15.30	342	Pn	Pn	10 40 55.4	-0.6
ETMB	Extrema	15.70	113		Pn	10 40 58.4	-2.9
ETMB				IAmb	IAmb	10 41 16.5	
	comp=Z,18nm,0.9s						
ETMB	Extrema	15.70	113	*e*P	Pn	10 40 58.6	-2.6
TEFE	Tefe	16.25	89	*e*P	Pn	10 41 08.4	+0.2
SDV	Santo Domingo	16.36	39	Pn	Pn	10 41 11.0	+1.1
	comp=Z,1.3nm,0.3s,baz=217,slow=9.3,SNR=23						
SDV				LR	LR	10 48 30.7	
	comp=Z,601nm,21.3s,baz=218,slow=41						
	comp=Z,39nm,0.9s						
SDV	Santo Domingo	16.36	39	*e*P	Pn	10 41 11.3	+1.5
MATN	Matagalpa	17.50	344		Pn	10 41 24.5	+0.5
PB18	Visviri	17.58	141	Pn	Pn	10 41 23.5	-1.9
PB18				IAmb	IAmb	10 41 52.2	
	comp=Z,17nm,0.8s						
CRIN	San Cristobal	17.64	340	Pn	Pn	10 41 25.1	-0.5
PB12	IPOC Station P	17.87	145	Pn	Pn	10 41 26.1	-2.4
PB12				IAmb	IAmb	10 41 40.5	
	comp=Z,28nm,1.2s						
URIC	Uribia, Colomb	17.91	30		Pn	10 41 28.6	-0.2
PB16	IPOC Station P	18.13	143	Pn	Pn	10 41 28.8	-3.4
BAUV	El Baul	18.13	45	P	P	10 41 33.6	+2.0
SAML	Samuel	18.29	107	P	P	10 41 33.9	+0.5
SAML	Samuel	18.29	107	*e*P	Pn	10 41 34.4	+0.7
MNMC	Minye Minye	18.70	145	P	P	10 41 36.3	-1.9
GO01	Chusmiza	19.35	145	P	P	10 41 42.1	-3.4
HATO	Hato, Curacao	19.95	36	P	P	10 41 51.0	-0.6
MACA	Manacapuru-AM	20.20	88	P	P	10 41 54.3	-0.1
MACA	Manacapuru-AM	20.20	88	*e*P	P	10 41 55.0	+0.6
PB01	IPOC Station P	20.29	148	P	P	10 41 54.6	-0.8
PB02	IPOC Station P	20.31	149	P	P	10 41 55.1	-0.5
PB02				IAmb	IAmb	10 42 19.7	
	comp=Z,35nm,1.4s						
BIRV	Birongo	20.45	45	P	P	10 41 58.4	+1.4
PB07	IPOC Station P	20.65	150	P	P	10 41 59.3	-0.1
PB07				IAmb	IAmb	10 42 05.1	
	comp=Z,11nm,0.9s						
PB03	IPOC Station P	20.99	150	P	P	10 42 03.3	+0.3
PB03				IAmb	IAmb	10 42 08.6	
	comp=Z,13nm,0.9s						
PB09	IPOC Station P	21.04	148	P	P	10 42 02.4	-1.2
PB09				IAmb	IAmb	10 42 25.6	
	comp=Z,28nm,1.2s						
BOAV	Boa Vista	21.33	73	P	P	10 42 06.9	+0.3
BOAV				IAmb	IAmb	10 42 15.2	
	comp=Z,14nm,1.2s						
BOAV	Boa Vista	21.33	73	*e*P	P	10 42 07.4	+0.9
PCRV	Puerto La Cruz	21.44	49	P	P	10 42 09.4	+1.6
	comp=Z,13nm,0.8s,baz=164,slow=2.9,SNR=5.8						
	comp=Z,13nm,0.8s						
LVC	Limon Verde	21.88	149	P	P	10 42 14.5	+1.7
	comp=Z,9.2nm,0.9s,baz=280,slow=7.8,SNR=5.7						
LVC				LR	LR	10 50 55.1	
	comp=Z,127nm,21.3s,baz=326,slow=37						
	comp=Z,9.2nm,0.9s						
LVC	Limon Verde	21.88	149	P	P	10 42 13.0	+0.2
LVC				IAmb	IAmb	10 42 17.8	
	comp=Z,9.8nm,0.9s						
VILB	Vilhena	22.33	115	P	P	10 42 15.8	-1.5
VILB				IAmb	IAmb	10 42 44.7	
	comp=Z,17nm,0.9s						
VILB	Vilhena	22.33	115	*e*P	P	10 42 17.6	+0.3
SIV	San Ignacio	22.87	123	P	P	10 42 23.2	+0.1
	comp=Z,4.0nm,0.6s,baz=290,slow=9.1,SNR=18						
SIV				LR	LR	10 52 04.0	
	comp=Z,286nm,18.4s,baz=311,slow=39						
	comp=Z,4.0nm,0.6s						
FSCY	Frank Sound, G	23.12	359	P	P	10 42 23.0	-2.5
GO02	Mina Guanaco	23.73	154	P	P	10 42 31.8	+0.1
GO02				IAmb	IAmb	10 42 35.1	
	comp=Z,8.2nm,0.7s						
BBSD	Serra de San D	23.86	125	*e*P	P	10 42 33.4	+0.7
PTLB	Pontes e Lacer	24.28	120	P	P	10 42 37.9	+1.4
PTLB				IAmb	IAmb	10 42 39.5	
	comp=Z,6.3nm,0.8s						
PTLB	Pontes e Lacer	24.28	120	*e*P	P	10 42 37.5	+1.0
CMIG	Matias Romero	25.06	327	LR	LR	10 50 41.0	
	comp=Z,96nm,21.6s,baz=150,slow=32						
ITTB	Itaituba	25.11	92	*e*P	P	10 42 45.2	+1.0
NPGB	Novo Progresso	25.61	98	*e*P	P	10 42 49.0	+0.3
SJG	San Juan	26.32	33	P	P	10 42 56.0	+1.0
	comp=Z,5.2nm,0.3s,baz=244,slow=3.7,SNR=4.6						
SJG				LR	LR	10 54 53.8	
	comp=Z,146nm,21.4s,baz=196,slow=40						
CBYP	Canovanas	26.61	33	P	P	10 42 56.7	-1.0
MALB	Monte Alegre	26.69	86	*e*P	P	10 42 59.4	+0.9
AC05	El Transito	26.73	159	P	P	10 42 58.3	-0.5
LCO	Las Campanas	26.74	160	P	P	10 42 58.2	-0.9
CDVI	St. Croix	26.81	36	P	P	10 42 58.7	-0.8
BIM	Bigot	26.90	47	P	P	10 43 00.7	+0.3
CUPR	Culebra, Puert	26.96	34	P	P	10 42 59.1	-1.6
CUPR				IAmb	IAmb	10 43 06.7	
	comp=Z,9.5nm,0.8s						
SALV	Santo Antonio	27.48	117	*e*P	P	10 43 07.1	+1.6
MURT	Porto Murtinho	28.66	130	*e*P	P	10 43 16.4	+0.5
BDQN	Bodoquena, MS	28.67	127	*e*P	P	10 43 16.8	+0.7
MCPB	Macapa, AP	29.05	84	*e*P	P	10 43 20.6	+1.0
RVDE	Rio Verde (Bra	29.46	123	*e*P	P	10 43 24.3	+1.1
MDP	Montagnes des	29.64	73	LR	LR	10 55 48.1	
	comp=Z,524nm,18.1s,baz=249,slow=37						
CFA	Coronel Fontan	29.97	158	LR	LR	10 54 03.6	
	comp=Z,96nm,19.5s,baz=342,slow=34						
ARAG	Araguaiana, MT	30.90	114	*e*P	P	10 43 36.5	+0.5
MT09	Talagante	31.08	164	P	P	10 43 36.4	-1.1
LMEL	Las Melosas	31.37	163	P	P	10 43 40.6	+0.5
LMEL				IAmb	IAmb	10 44 00.2	
	comp=Z,7.3nm,1.2s						
AMBA	Amambai (Brazi	31.37	129	*e*P	P	10 43 41.1	+1.1
CPUP	Villa Florida	31.70	137	LR	LR	10 59 04.2	
	comp=Z,174nm,20.1s,baz=320,slow=41						
CPUP	Villa Florida	31.70	137	*e*P	P	10 43 43.0	+0.2
ITRB	Iturama	33.65	120	*e*P	P	10 44 00.7	+0.7
AZCA	Azaras, Argent	33.75	138	*e*P	P	10 44 02.2	+1.5
FRBT	Francisco Belt	34.52	132	*e*P	P	10 44 07.8	+0.2
PTGB	Pitanga	34.59	129	*e*P	P	10 44 08.5	+0.3
IPMB	Ipameri, GO	34.91	116	*e*P	P	10 44 11.3	+0.3
RPN	Rapa Nui	35.61	227	LR	LR	10 55 24.4	
	comp=Z,128nm,18.6s,baz=56,slow=31						
RODS	Rosario do Sul	35.76	140	*e*P	P	10 44 20.4	+2.3
BB19B	Bebedouro	35.77	121	*e*P	P	10 44 18.5	+0.1
ITAB	Concordia	35.92	133	*e*P	P	10 44 18.5	-1.1
SDBA	SAO DESIDERIO	36.57	105	*e*P	P	10 44 25.7	+0.3
TIJ01	Guaruva-PR	37.28	128	*e*P	P	10 44 30.8	-0.5
Z47A	Carrollton	37.57	350	P	P	10 44 33.0	-0.4
JANB	Januaria	37.67	110	*e*P	P	10 44 34.8	+0.1
VAO	Valinhos	37.88	123	*e*P	P	10 44 36.5	+0.1
TKL	Tuckaleechee C	39.50	356	LR	LR	11 01 01.0	
	comp=Z,128nm,18.7s,baz=180,slow=36						
TXAR	Lajitas Array	39.66	328	PcP	PcP	10 46 57.8	+0.2
	comp=Z,0.3nm,0.7s,baz=145,slow=6.6,SNR=2.8						
UALR	University of	40.00	345	P	P	10 44 54.7	+1.0
UALR				IAmb	IAmb	10 45 00.7	
	comp=Z,5.9nm,0.8s						
MIAR	Mount Ida	40.11	344	P	P	10 44 54.3	-0.4
WHAR	Wooly Hollow	40.48	346	P	P	10 44 58.7	+1.0
WHAR				IAmb	IAmb	10 45 16.5	
	comp=Z,10nm,1.2s						
LCAR	Lake Charles	40.96	347	P	P	10 45 02.1	+0.5
LCAR				IAmb	IAmb	10 45 31.7	
	comp=Z,6.6nm,1.0s						
FCAR	Ozark Folk Cen	41.01	346	P	P	10 45 03.3	+1.2
FCAR				IAmb	IAmb	10 45 03.9	
	comp=Z,5.3nm,0.8s						
T42A	Van Buren	41.87	348	P	P	10 45 07.9	-1.2
T42A				IAmb	IAmb	10 45 10.5	
	comp=Z,13nm,1.4s						
FNO	Franklin	41.97	340	P	P	10 45 11.8	+1.7
TUL1	Leonard	42.04	342	P	P	10 45 10.9	+0.4
TUL1				IAmb	IAmb	10 45 13.0	
	comp=Z,9.8nm,0.8s						
RLO	Rose Lookout	42.04	343	P	P	10 45 12.1	+1.5
RLO				IAmb	IAmb	10 45 15.2	
	comp=Z,22nm,0.8s						
U38A	Gravette	42.11	344	P	P	10 45 12.5	+1.4
U38A				IAmb	IAmb	10 45 13.6	
	comp=Z,6.6nm,0.8s						
SIUC	Southern Illin	42.17	350	P	P	10 45 11.4	-0.2
OK030	Cody Creek RV	42.37	341	P	P	10 45 13.8	+0.6
S39A	Bolivar	43.01	346	P	P	10 45 18.7	+0.3
S39A				IAmb	IAmb	10 45 20.5	
	comp=Z,8.5nm,0.9s						
W18A	Petrified Fore	47.37	328	P	P	10 45 53.1	-0.2
W18A				IAmb	IAmb	10 45 58.5	
	comp=Z,4.1nm,0.9s						
SADO	Sadowa	48.53	2	LR	LR	11 07 13.3	
	comp=Z,82nm,18.5s,baz=174,slow=37						
PDAR	Pinedale Array	53.25	334	P	P	10 46 38.1	+0.4
	comp=Z,1.0nm,0.8s,baz=126,slow=9.3,SNR=9.9						
PDAR				LR	LR	11 10 14.8	
	comp=Z,22nm,18.9s,baz=94,slow=37						
	comp=Z,1.0nm,0.8s						
HWUT	Hardware Ranch	53.25	331	P	P	10 46 38.6	+0.9
HWUT				IAmb	IAmb	10 46 40.0	
	comp=Z,3.8nm,0.8s						
SPUT	South Promonto	53.45	331	P	P	10 46 40.1	+0.9
SPUT				IAmb	IAmb	10 46 41.8	
	comp=Z,10.0nm,1.4s						
AGMN	Agassiz Nation	53.66	348	P	P	10 46 41.0	+0.7
AGMN				IAmb	IAmb	10 46 42.1	
	comp=Z,5.5nm,1.1s						
AHID	Auburn Hatcher	53.94	333	P	P	10 46 43.7	+1.0
AHID				IAmb	IAmb	10 47 02.4	
	comp=Z,4.8nm,1.2s						
ELK	Elko	54.45	328	LR	LR	11 09 17.1	
	comp=Z,78nm,18.9s,baz=136,slow=35						
NVAR	Mina Array Bea	54.54	324	P	P	10 46 47.6	+0.3
	comp=Z,0.5nm,0.6s,baz=118,slow=3.3,SNR=5.4						
	comp=Z,0.5nm,0.6s						
ULM	Lac du Bonnet	55.51	348	P	P	10 46 54.2	+0.5
ULM				IAmb	IAmb	10 46 55.0	
	comp=Z,5.4nm,1.0s						
GCMT	Greycliff	55.74	336	P	P	10 46 56.2	+0.6
HLID	Hailey	56.11	331	P	P	10 47 00.1	+1.7
BOZ	Bozeman (W)	56.40	334	P	P	10 47 01.7	+1.3
YBH	Yreka Blue Hor	59.26	325	LR	LR	11 11 26.4	
	comp=Z,50nm,19.0s,baz=114,slow=35						
NEW	Newport	60.87	333	LR	LR	11 14 45.3	
	comp=Z,36nm,18.0s,baz=218,slow=37						
FCC	Fort Churchill	63.40	352	P	P	10 47 48.5	+0.6
FCC				IAmb	IAmb	10 47 49.3	
	comp=Z,2.0nm,0.9s						
BBTS	Babate	66.40	72	LR	LR	11 14 44.5	
	comp=Z,134nm,21.2s,baz=260,slow=34						
PPT	Papeete	68.48	253	LR	LR	11 09 49.8	
	comp=Z,85nm,18.2s,baz=7.0,slow=29						
YKA	Yellowknife Ar	71.05	344	P	P	10 48 36.0	-0.4
	comp=Z,0.4nm,0.8s,baz=142,slow=6.0,SNR=5.8						
	comp=Z,0.4nm,0.8s						
DBIC	Dimbokro	76.65	82	P	P	10 49 10.8	+0.6
	comp=Z,4.3nm,0.7s,baz=282,slow=5.6,SNR=7.6						
DBIC				LR	LR	11 21 15.2	
	comp=Z,50nm,18.1s,baz=284,slow=34						
	comp=Z,4.3nm,0.7s						
RES	Resolute Bay	78.98	356	LR	LR	11 23 40.6	
	comp=Z,40nm,20.1s,baz=24,slow=35						
INK	Inuvik	80.70	343	LR	LR	11 27 23.4	
	comp=Z,37nm,18.3s,baz=256,slow=37						
SUMG	Summit	81.00	12	*i* P	P	10 49 33.0	-0.4
NOA	NORSAR Array B	94.47	29	LR	LR	11 34 04.8	
	comp=Z,15nm,18.9s,baz=305,slow=36						
HFS	Hagfors	95.70	30	LR	LR	11 27 50.1	
	comp=Z,34nm,20.8s,baz=314,slow=32						
TSUM	Tsumeb	96.71	110	LR	LR	11 31 36.5	
	comp=Z,64nm,21.2s,baz=353,slow=34						
SUR	Sutherland	97.75	123	LR	LR	11 33 50.4	
	comp=Z,62nm,18.0s,baz=268,slow=35						
ZALV	Zalesovo Beam	128.81	11	PKP	PKPdf	10 56 25.1	-0.9
	comp=Z,1.3nm,0.7s,baz=321,slow=2.1,SNR=6.0						
MKAR	Makanchi Array	134.91	16	PKP	PKPdf	10 56 38.0	+0.2
	comp=Z,0.5nm,0.8s,baz=5.7,slow=1.2,SNR=4.5						
ASAR	Alice Springs	136.36	229	PKP	PKPdf	10 56 41.2	+0.1
	comp=Z,0.5nm,0.8s,baz=111,slow=2.4,SNR=3.1						
WRA	Warramunga Arr	138.01	234	PKP	PKPdf	10 56 44.1	-0.2
	comp=Z,0.6nm,0.8s,baz=103,slow=2.4,SNR=3.5						
PZH	PanZhiHua	157.44	354	PKP	PKPdf	10 57 15.6	0.0

KRSC 24 10:39:28.6±2.0**, 48.°26N×153.°94E, h180^{km}**±42^{km}**, Ml3.9, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.81	30	*e*P	Pn	10 40 17.2	+2.5
SKR				*e*S	Sn	10 40 51.4	+0.6
PAU	Pauzhetka	3.71	29	*e*S	Sn	10 41 12.0	+1.3
KDTR	Khodutka, Kamc	4.44	35	*e*P	Pn	10 40 36.4	+1.3
KDTR				*e*S	Sn	10 41 24.1	-3.3
MTVR	Mutnovka	5.02	31	*e*P	Pn	10 40 45.4	+2.6
MTVR				*e*S	Sn	10 41 39.8	-1.4
GRL	Gorelyy	5.04	30	*e*P	Pn	10 40 45.5	+2.5
GRL				*e*S	Sn	10 41 39.9	-1.6
APC	Apacha	5.10	23	*e*P	Pn	10 40 45.4	+1.8
KUR	Kuril'sk	5.16	236	*e*P	Pn	10 40 42.9	-1.6
DALK	Dalny	5.67	31	*e*P	Pn	10 40 52.6	+1.5
UGLR	Uglovaya	5.84	30	*e*P	Pn	10 40 56.2	+2.8
KOK	Koryaka	5.85	29	*e*P	Pn	10 40 56.3	+2.8
AVH	Avacha	5.86	29	*e*P	Pn	10 40 56.7	+3.0
SMAR	Somma	5.88	30	*e*P	Pn	10 40 57.2	+3.2
KRX	Arik	5.91	29	*e*P	Pn	10 40 56.8	+2.5
GNL	Ganaly	6.00	23	*e*P	Pn	10 40 57.9	+2.5
SPN	Mys Shipunski	6.19	36	*e*P	Pn	10 40 59.5	+1.6
BKI	Bering	10.19	43	*e*P	Pn	10 41 52.8	+2.5

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*IDC **24** 10:45:10.4±1.9, 5.°94S×130.°76E, h0^{km}, mb3.9/2, mbtmp4.0/4, ML4.2/2, Error ellipse: s-maj=129.2km s-min=28.4km az=73.0*

*DJA **24** 10:45:22.0±0.3, 6°S±3°×13°1E±°, h120^{km}±9^{km}, M4.4/11, mb4.2/10, mB5.3/5, MLv4.4/11, Mw(mB)4.7/5*

ISC 24 10:45:21.4±0.7**, 6.°04S**±0.°06×**131.°02E**±0.°09**, h86^{km}, n28, σ1ˢ56**/28**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.87	324	P	Pn	10 45 54.0	+2.2
BNDI	Bandanaira	1.87	324	P	Pn	10 45 53.8	+2.0
BNDI				S	Sn	10 46 18.1	+3.2
SAUI	Saumlaki	1.95	172	P	Pn	10 45 56.5	+3.7
FAKI	Fak Fak	3.33	22	P	Pn	10 46 12.3	+0.9
FAKI	Fak Fak	3.33	22	P	Pn	10 46 12.0	+0.6
RKPI	Ransiki, Papua	5.50	35	P	Pn	10 46 42.1	+1.3
	74nm,0.9s,5µm0.9nm						
SANI	Sanana	6.39	308	P	Pn	10 46 53.0	0.0
	8.0nm,0.9s,0.1nm						
LBMI	Labuha	6.41	327	P	Pn	10 46 53.3	0.0
	52nm,0.9s,0.3nm						
KDU	Kakadu	6.76	168	P	Pn	10 46 57.8	-0.2
MTN	Manton Dam	6.76	179	P	Pn	10 46 59.3	+1.3
SOEI	Soe	7.63	241	P	Pn	10 47 11.2	+1.1
	36nm,1.5s,0.2nm						
LUWI	Luwuk	9.61	301	P	Pn	10 47 38.4	+1.5
KNRA	Kununurra	9.83	193	P	Pn	10 47 38.9	-1.0
PLAI	Plampang	13.42	257	P	Pn	10 48 27.3	-1.0
	10nm,0.9s						
WRA	Warramunga Arr	14.19	167	Pn	Pn	10 48 33.3	-5.1
	1.1nm,0.3s,baz=348,slow=13,SNR=30						
WRA				Sn	Sn	10 51 00.0	-15
	0.2nm,0.3s,baz=156,slow=43,SNR=2.2						
	2.7nm,0.5s						
COEN	Coen	14.32	124	P	Pn	10 48 41.4	+1.3
QIS	Mount Isa	16.67	151	P	Pn	10 49 09.5	-0.2
MTSU	Mount Surprise	17.69	134	P	Pn	10 49 23.4	+1.1
ASAR	Alice Springs	17.74	171	P	P	10 49 21.6	-1.0
	1.1nm,0.3s,baz=345,slow=8.0,SNR=51						
ASAR				S	Sn	10 52 25.2	-15
	0.3nm,0.7s,baz=12,slow=12,SNR=1.3						
	4.5nm,0.7s						
AS01	Alice Springs	17.75	171	P	P	10 49 22.2	-0.5
WRKA	Warakurna	19.07	188	P	P	10 49 37.2	+0.1
OOD	Oodnadatta	22.09	169	P	P	10 50 09.4	-0.1
INKA	Innaminka	23.48	158	P	P	10 50 24.7	+1.2
MULG	Mulgathing	24.28	174	P	P	10 50 30.7	0.0
LCRK	Leigh Creek	25.21	165	P	P	10 50 41.0	+1.9
BBOO	Buckleboo	27.05	171	P	P	10 50 55.0	-0.7
SONM	Songino Array	57.87	341	P	P	10 55 01.6	-2.7
	0.3nm,0.6s,baz=147,slow=5.5,SNR=2.2						
	0.3nm,0.6s						
MKAR	Makanchi Array	67.99	326	P	P	10 56 10.8	-0.6
	2.2nm,0.6s,baz=120,slow=8.2,SNR=26						
	2.2nm,0.6s						

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*NEIC **24** 10:50:36.6±1.3, 21.°7S±0.°1×178.°6W±0.°1, h558^{km}±10^{km}, mb4.4/23, Error ellipse: s-maj=20.7km s-min=15.7km az=164.0*

*IDC **24** 10:50:37.3±2.8, 21.°76S×178.°76W, h554^{km}±23^{km}, mb3.2/10, mbtmp4.2/12, Error ellipse: s-maj=47.7km s-min=15.5km az=145.0*

ISC 24 10:50:36.1±0.6**, 21.°78S**±0.°10×**178.°66W**±0.°08**, h550^{km}, n44, σ1ˢ00**/46**, mb4.1**/22**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.08	322	P	P	10 52 07.3	+0.5
	95nm,0.5s,baz=135,slow=16,SNR=80						
MSVF				S	S	10 53 21.6	+0.9
	8.7nm,0.8s,baz=170,slow=22,SNR=0.9						
RAO	Raoul Island	7.47	175	P	P	10 52 28.0	-0.5
NIUE	Niue	8.62	73	P	P	10 52 39.5	-0.6
AFI	Afiamalu	10.21	41	P	P	10 52 55.5	-0.9
DZM	Mont Dzumac	13.83	266	P	P	10 53 35.5	+1.8
	3.1nm,0.5s,baz=120,slow=21,SNR=6.9						
DZM	Mont Dzumac	13.83	266	P	P	10 53 33.9	+0.3
EIDS	Eidsvold	27.93	257	P	P	10 55 43.7	+1.0
EIDS				IAmb	IAmb	10 55 50.9	
	comp=Z,19nm,1.2s						
CTA	Charters Tower	32.77	266	P	P	10 56 24.6	+0.2

	comp=Z,3.1nm,0.4s,baz=92,slow=9.6,SNR=13						
	comp=Z,3.1nm,0.4s						
CTAO	**Charters Tower**	**32.77**	**266**	P	**P**	**10 56 24.2**	**-0.2**
CTAO				IAmb	IAmb	10 57 03.9	
	comp=Z,22nm,1.4s						
TOO	**Toolangi**	**34.65**	**235**	P	**P**	**10 56 41.0**	**+1.1**
TOO				IAmb	IAmb	10 56 43.8	
	comp=Z,11nm,1.1s						
STKA	**Stephens Creek**	**36.69**	**246**	P	**P**	**10 56 56.8**	**-0.1**
	comp=Z,2.7nm,0.5s,baz=110,slow=8.3,SNR=6.4						
	comp=Z,2.7nm,0.5s						
STKA	**Stephens Creek**	**36.69**	**246**	P	**P**	**10 56 56.3**	**-0.6**
COEN	**Coen**	**37.07**	**276**	P	**P**	**10 57 00.5**	**+0.3**
COEN				IAmb	IAmb	10 57 17.8	
	comp=Z,20nm,1.4s						
BBOO	**Buckleboo**	**41.43**	**245**	P	**P**	**10 57 34.1**	**-1.1**
BBOO				IAmb	IAmb	10 57 41.9	
	comp=Z,17nm,1.4s						
AS31	**Alice Springs**	**43.63**	**258**	P	**P**	**10 57 52.2**	**-0.4**
ASAR	**Alice Springs**	**43.64**	**258**	P	**P**	**10 57 52.5**	**0.0**
	comp=Z,4.9nm,0.8s,baz=101,slow=7.9,SNR=40						
ASAR				PcP	**pP**	**10 59 28.3**	**-1.7**
	comp=Z,0.7nm,0.6s,baz=107,slow=4.1,SNR=6.1						
	comp=Z,4.9nm,0.8s						
ASAR	**Alice Springs**	**43.64**	**258**	P	**P**	**10 57 52.4**	**-0.2**
WB0	**Warramunga Arr**	**43.81**	**264**	P	**P**	**10 57 53.7**	**-0.2**
WB0				IAmb	IAmb	10 57 54.0	
	comp=Z,4.7nm,0.7s						
WB2	**Warramunga Arr**	**43.81**	**263**	P	**P**	**10 57 52.9**	**-1.1**
WB2				IAmb	IAmb	10 57 54.2	
	comp=Z,4.4nm,0.8s						
WRAB	**Tennant Creek**	**43.82**	**264**	P	**P**	**10 57 53.1**	**-0.9**
WRAB				IAmb	IAmb	10 58 13.3	
	comp=Z,8.2nm,1.2s						
WRA	**Warramunga Arr**	**43.83**	**263**	P	**P**	**10 57 53.6**	**-0.5**
	comp=Z,3.6nm,0.8s,baz=96,slow=5.9,SNR=21						
	comp=Z,3.6nm,0.8s						
WRA	**Warramunga Arr**	**43.83**	**263**	P	**P**	**10 57 53.4**	**-0.7**
FORT	**Forrest**	**48.23**	**248**	P	**P**	**10 58 26.4**	**-0.8**
MTN	**Manton Dam**	**48.57**	**272**	P	**P**	**10 58 29.6**	**-0.4**
MTN				IAmb	IAmb	10 58 32.7	
	comp=Z,30nm,1.4s						
KNRA	**Kununurra**	**49.97**	**267**	P	**P**	**10 58 40.6**	**+0.3**
KNRA				IAmb	IAmb	10 59 11.0	
	comp=Z,23nm,1.3s						
FITZ	**Fitzroy Crossi**	**52.26**	**264**	P	**P**	**10 58 57.1**	**+0.2**
MBWA	**Marble Bar**	**56.98**	**258**	P	**P**	**10 59 30.0**	**+0.1**
MBWA				IAmb	IAmb	10 59 51.7	
	comp=Z,28nm,1.4s						
NWAO	**Narrogin (SRO)**	**57.25**	**244**	P	**P**	**10 59 32.1**	**+0.5**
TOLI2	**Tolitoli**	**63.27**	**283**	P	**P**	**11 00 10.9**	**-0.8**
TOLI2				IAmb	IAmb	11 00 12.8	
	comp=Z,3.8nm,0.9s						
QSPA	**South Pole Qui**	**68.29**	**180**	P	**P**	**11 00 42.8**	**+0.5**
MJAR	**Matsushiro Arr**	**70.88**	**324**	P	**P**	**11 00 58.3**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=164,slow=5.1,SNR=2.4						
	comp=Z,0.9nm,0.5s						
NACB	**Ninganchiao**	**73.89**	**305**	P	**P**	**11 01 13.5**	**-2.1**
TPUB	**Ta-pu**	**74.16**	**304**	P	**P**	**11 01 16.1**	**-1.0**
SSLB	**Suanglung**	**74.17**	**304**	P	**P**	**11 01 14.8**	**-2.4**
SSLB				IAmb	IAmb	11 01 18.1	
	comp=Z,11nm,0.9s						
FALS	**False Pass**	**77.44**	**9**	P	**P**	**11 01 34.1**	**-0.4**
KSAR	**Wonju Array Be**	**77.45**	**319**	P	**P**	**11 01 34.4**	**-0.6**
NVAR	**Mina Array Bea**	**82.38**	**44**	P	**P**	**11 02 02.5**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=216,slow=7.3,SNR=3.0						
	comp=Z,0.5nm,0.6s						
TXAR	**Lajitas Array**	**88.26**	**58**	P	**P**	**11 02 31.3**	**+1.8**
	comp=Z,0.4nm,0.8s,baz=220,slow=4.9,SNR=4.2						
	comp=Z,0.4nm,0.8s						
ILAR	**Eielson Array**	**89.69**	**13**	P	**P**	**11 02 35.2**	**0.0**
	comp=Z,0.2nm,0.4s,baz=218,slow=5.2,SNR=5.2						
	comp=Z,0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**89.96**	**290**	P	**P**	**11 02 39.5**	**+2.0**
	comp=Z,1.0nm,0.3s,baz=131,slow=3.0,SNR=12						
	comp=Z,1.0nm,0.3s						
PDAR	**Pinedale Array**	**90.31**	**43**	P	**P**	**11 02 39.4**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=215,slow=7.2,SNR=3.6						
	comp=Z,0.4nm,0.7s						
ARCES	**ARCESS Array B**	**130.06**	**349**	PKP	**PKPdf**	**11 08 42.6**	**-0.3**
	comp=Z,3.4nm,1.0s,baz=62,slow=2.1,SNR=4.6						
BRTR	**Keskin Array B**	**147.22**	**310**	PKPbc	**PKPbc**	**11 09 16.7**	**-1.6**
	comp=Z,1.2nm,0.7s,baz=113,slow=2.2,SNR=5.1						
CLL	**Collm**	**149.15**	**346**	*i* PKPbc	**PKiKP**	**11 09 22.3**	**-1.1**
	comp=Z,4.0nm,0.6s						

IDC 24 10:56:44.3±4.0**,7°.48S**×**154°.88E,h0**^{km}**,mb3.5**/4**,**
mbtmp3.5/4**,Error ellipse: s-maj=113.7km**
s-min=41.5km az=103.0,Bougainville-Solomon Islands
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.45**	**236**	P	P	11 01 55.2	-0.3
	1.5nm,0.9s,baz=66,slow=10.0,SNR=3.0						
	1.5nm,0.9s						
ASAR	**Alice Springs**	**25.77**	**229**	P	P	11 02 17.3	+0.2
	0.2nm,0.6s,baz=61,slow=9.2,SNR=4.9						
	0.2nm,0.6s						
STKA	**Stephens Creek**	**27.25**	**205**	P	P	11 02 30.4	0.0
	1.1nm,0.7s,baz=14,slow=13,SNR=3.2						
	1.1nm,0.7s						
MKAR	**Makanchi Array**	**83.69**	**319**	P	P	11 09 15.1	0.0
	0.3nm,0.8s,baz=104,slow=6.1,SNR=2.4						
	0.3nm,0.8s						

DJA ***24*** *11:00:07.5±1.4, 1°S±13°×13°9E±°, h10*^{km}*, M4.5/7, mb4.6/3,*
mB5.6/1, MLv4.5/7, Mw(mB)5.0/1
IDC ***24*** *11:00:09.7±4.3, 2°.05S×139°.19E, h0*^{km}*, mb3.8/4,*
mbtmp3.8/5, ML4.1/1, MS3.0/2, Error ellipse:
s-maj=189.4km s-min=24.4km az=88.0
ISC 24 11:00:15.1±1.0**,2°.37S**±0°.08×**138°.99E**±0°.07**,h35**^{km}**,n17,**
σ**2**^{s}**.45**/12**,mb3.6**/4**,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.47**	**324**	P	**Pn**	**11 00 26.6**	**+1.2**
GENI	**Genyem**	**1.20**	**101**	P	**Pn**	**11 00 36.0**	**+0.6**
SRPI	**Serui, Papua**	**2.79**	**280**	P	**Pn**	**11 00 58.1**	**+0.8**
RKPI	**Ransiki, Papua**	**4.88**	**280**	P	**Pn**	**11 01 24.8**	**-1.3**
	49nm,0.9s,5µm0.4nm						
FAKI	**Fak Fak**	**6.75**	**265**	P	**Pn**	**11 01 54.2**	**+2.3**
SIJI	**Sorong**	**7.86**	**281**	LR	LR	11 05 25.1	
	comp=Z,74nm,19.8s,baz=3.5,slow=39						
WRA	**Warramunga Arr**	**18.04**	**194**	P	**P**	**11 04 26.1**	**+2.6**
	0.7nm,0.3s,baz=18,slow=12,SNR=37						
WRA				S	**Sn**	**11 07 39.0**	**-4.6**
	0.3nm,0.5s,baz=13,slow=22,SNR=2.5						
WRA				LR	LR	11 12 27.7	
	comp=Z,60nm,21.2s,baz=314,slow=40						
	1.1nm,0.4s						
ASAR	**Alice Springs**	**21.73**	**193**	P	**P**	**11 05 06.9**	**+3.3**
	1.2nm,0.7s,baz=9.1,slow=11,SNR=20						
ASAR				S	**S**	**11 09 02.6**	**+0.3**
	0.1nm,0.6s,baz=6.8,slow=19,SNR=1.4						
	1.2nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**34.25**	**52**	T	T	11 42 38.2	
	baz=236,slow=75,SNR=8.9						
H11S2	**WAKE ISLAND Hy**	**34.27**	**52**	T	T	11 42 40.2	
	baz=236,slow=75,SNR=5.4						
H11S1	**WAKE ISLAND Hy**	**34.27**	**52**	T	T	11 42 43.7	
	baz=236,slow=75,SNR=7.4						
H11N1	**WAKE ISLAND Hy**	**35.11**	**50**	T	T	11 43 40.1	
	baz=233						
H11N2	**WAKE ISLAND Hy**	**35.12**	**50**	T	T	11 43 45.7	
	baz=233						
H11N3	**WAKE ISLAND Hy**	**35.12**	**50**	T	T	11 43 46.5	
	baz=233						
MKAR	**Makanchi Array**	**69.69**	**322**	P	**P**	**11 11 19.2**	**-2.3**
	0.5nm,0.6s,baz=112,slow=6.3,SNR=3.7						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**73.61**	**325**	P	**P**	**11 11 44.9**	**0.0**
	0.2nm,0.4s,baz=113,slow=6.4,SNR=2.6						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**79.20**	**325**	P	**P**	**11 12 16.1**	**-0.4**
	1.8nm,0.6s,baz=101,slow=7.5,SNR=8.2						
	1.8nm,0.6s						

IDC 24 11:04:49.6±5.5**,7°.04S**×**105°.01E,h0**^{km}**,mb3.4**/3**,**
mbtmp3.4/3**,Error ellipse: s-maj=227.7km**
s-min=33.9km az=50.0,Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W3	**Cape Leeuwin H**	**28.96**	**164**	T	T	11 41 14.6	
	baz=344,slow=76,SNR=30						
H01W1	**Cape Leeuwin H**	**28.98**	**164**	T	T	11 41 13.7	
	baz=344,slow=76,SNR=42						
H01W2	**Cape Leeuwin H**	**28.98**	**164**	T	T	11 41 16.4	
	baz=344,slow=76,SNR=29						
WRA	**Warramunga Arr**	**31.20**	**117**	P	P	11 11 10.7	-0.2
	0.1nm,0.3s,baz=291,slow=8.8,SNR=1.2						
	0.1nm,0.3s						
H08S2	**Diego Garcia H**	**32.25**	**267**	T	T	11 45 37.2	
	baz=91,slow=76,SNR=119						
H08S3	**Diego Garcia H**	**32.26**	**267**	T	T	11 45 39.1	
	baz=91,slow=76,SNR=179						
H08S1	**Diego Carcia H**	**32.27**	**267**	T	T	11 45 40.4	
	baz=91,slow=76,SNR=122						
SONM	**Songino Array**	**54.65**	**1**	P	P	11 14 20.2	-0.1
	0.3nm,0.4s,baz=177,slow=8.3,SNR=1.9						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**57.27**	**342**	P	P	11 14 38.8	-0.2
	0.2nm,0.3s,baz=155,slow=8.1,SNR=5.6						
	0.2nm,0.3s						
TXAR	**Lajitas Array**	**145.05**	**47**	PKPbc	PKPbc	11 24 28.6	-0.6
	0.2nm,0.4s,baz=272,slow=1.2,SNR=6.8						

KRNET ***24*** *11:13:58.8±0.1, 41°.05N×69°.72E, h12*^{km}*, mb2.5*
ISC 24 11:13:58.9±1.1**,41°.07N**±0°.04×**69°.73E**±0°.05**,h12**^{km}±14^{km}**,**
n7,σ**0**^{s}**.75**/13**,7C-6D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAS	**Tashkent**	**0.42**	**309**	⇑*i*P	**Pg**	**11 14 07.3**	**+0.2**
	baz=11						
TAS				⇑*i*S	**Sg**	**11 14 13.3**	**+0.6**
	baz=11						
TRKS	**Terek-Say**	**1.16**	**66**	⇑*i*P	**Pb**	**11 14 21.0**	**0.0**
	baz=69						
TRKS				⇑*i*S	**Sn**	**11 14 37.6**	**+0.5**
	baz=69						
BTK	**Batken**	**1.30**	**140**	⇑*i*P	**Pg**	**11 14 23.7**	**-0.3**
	baz=40						
BTK				⇑*i*S	**Sg**	**11 14 41.7**	**+0.8**
	baz=40						
ARK	**Arkit**	**1.83**	**66**	⇓*e*P	**Pg**	**11 14 33.6**	**-0.5**
	baz=65						
ARK				⇓*i*S	**Sg**	**11 14 58.5**	**+0.6**
	baz=65						
GAR	**Garm**	**2.11**	**167**	⇓*e*P	**Pb**	**11 14 37.1**	**-0.1**
	baz=67						
GAR				⇓*i*S	**Sg**	**11 15 06.0**	**-0.8**
	baz=67						
KK31	**Karatay Array**	**2.12**	**16**	⇑P	**Pb**	**11 14 35.9**	**-1.3**
	3.2nm,0.7s,baz=310,slow=16,SNR=30						
KK31				S	Sn	11 14 47.8	-13
	8.5nm,0.6s,baz=312,slow=32,SNR=18						
MNAS	**Manas**	**2.52**	**55**	⇓*i*P	**Pb**	**11 14 43.6**	**-0.5**
	baz=54						
MNAS				⇓*e*S	**Sb**	**11 15 15.9**	**+0.8**
	baz=54						

ISK ***24*** *11:18:14.8, 39°.54N×26°.02E, h6*^{km}*, ML2.5/17*
DDA ***24*** *11:18:15.7±0.0, 39°.48N×26°.10E, h7*^{km}*±4*^{km}*, ML2.5*
ATH ***24*** *11:18:15.6, 39°.54N×26°.00E, h10*^{km}*±1*^{km}*, ML2.2/4, Error*
ellipse: s-maj=2.2km s-min=0.9km az=247.0
THE ***24*** *11:18:15.6, 39°.54N×26°.01E, h8*^{km}*±1*^{km}*, ML2.1/3, Error*
ellipse: s-maj=1.8km s-min=0.6km az=68.0
ISC 24 11:18:14.9±0.9**,39°.56N**±0°.02×**26°.00E**±0°.02**,h10**^{km}±7^{km}**,**
n43,σ**0**^{s}**.56**/66**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GPNR	**Gulpinar-Canak**	**0.15**	**136**	Pg	**Pg**	**11 18 17.9**	**-0.2**
GPNR				Sg	**Sg**	**11 18 20.3**	**-0.1**
BOZC	**Bozcaada**	**0.28**	**8**	Pg	**Pb**	**11 18 21.4**	**-0.6**
BOZC				Sg	**Sb**	**11 18 26.2**	**-0.6**
EZN	**Ezine**	**0.36**	**43**	P	**Pb**	**11 18 22.6**	**-0.8**
EZN				S	**Sb**	**11 18 28.5**	**-0.6**
	215nm,0.1s						
EZN	**Ezine**	**0.36**	**43**	Pg	**Pb**	**11 18 22.7**	**-0.7**
EZN				Sg	**Sb**	**11 18 28.2**	**-0.9**
SIGR	**SIGRI**	**0.37**	**198**	Pg	**Pg**	**11 18 22.3**	**+0.2**
SIGR				Sg	**Sg**	**11 18 27.5**	**+0.5**
SIGR	**SIGRI**	**0.37**	**198**	P	**Pg**	**11 18 22.2**	**0.0**
SIGR				S	**Sg**	**11 18 27.3**	**+0.3**
SIGR				AML	AML	11 18 29.2	
	comp=E,1105µm,0.3s						
SIGR				AML	AML	11 18 29.9	
	comp=N,1174µm,0.3s						
PRK	**Paraskevi**	**0.38**	**146**	P	**Pg**	**11 18 22.6**	**+0.3**
PRK				S	**Sg**	**11 18 28.1**	**+0.8**
	comp=N,482nm,0.4s						
PRK	**Paraskevi**	**0.38**	**146**	P	**Pg**	**11 18 22.6**	**+0.3**
PRK				S	**Sg**	**11 18 27.4**	**+0.1**
PRK				AML	AML	11 18 28.2	
	comp=N,876µm,0.3s						
PRK				AML	AML	11 18 28.8	
	comp=E,1056µm,0.5s						
BAYC	**CANAKKALE_Bayr**	**0.46**	**67**	P	**Pg**	**11 18 24.0**	**+0.2**
BAYC				S	**Sg**	**11 18 30.0**	**+0.1**
BAYC				*i* AML	AML	11 18 30.0	
	comp=E,351nm,0.3s						
AYVA	**Ayvalik**	**0.59**	**115**	P	**Pg**	**11 18 24.7**	**-1.6**
GADA	**Gvkgeada**	**0.63**	**353**	Pg	**Pb**	**11 18 27.7**	**-0.3**
COMU	**Canakkale**	**0.65**	**34**	Pg	**Pb**	**11 18 28.6**	**+0.3**
LIA	**Limnos Island**	**0.72**	**298**	P	**Pb**	**11 18 29.4**	**0.0**
LIA	**Limnos Island**	**0.72**	**298**	P	**Pb**	**11 18 29.3**	**0.0**
LIA				S	**Sb**	**11 18 39.2**	**0.0**
LIA				AML	AML	11 18 43.4	
	comp=E,647µm,0.4s						
LIA				AML	AML	11 18 43.9	
	comp=N,874µm,0.3s						
BUHA	**Balikesir, Bur**	**0.83**	**94**	P	**Pg**	**11 18 31.0**	**+0.1**
BUHA				S	**Sn**	**11 18 44.4**	**-0.5**
DKL	**Dikili**	**0.85**	**125**	Pg	**Pg**	**11 18 31.4**	**+0.1**
GELI	**Tayfur-Gelibol**	**0.91**	**23**	Pg	**Pb**	**11 18 32.9**	**+0.2**
GELI				Sg	**Sn**	**11 18 46.5**	**-0.4**
CANM	**Can-anakkale**	**0.93**	**61**	Pg	**Pb**	**11 18 33.2**	**+0.2**
CANM				Sg	**Sn**	**11 18 46.5**	**-0.7**
SMTH	**Samothraki Isl**	**0.98**	**338**	P	**Pn**	**11 18 34.2**	**-0.5**
SMTH	**Samothraki Isl**	**0.98**	**338**	P	**Pn**	**11 18 34.3**	**-0.3**
SMTH				S	**Sn**	**11 18 47.6**	**-1.0**
SMTH				AML	AML	11 18 50.1	
	comp=E,221µm,0.5s						
SMTH				AML	AML	11 18 50.2	
	comp=N,297µm,0.3s						
LPK	**Lapseki**	**1.00**	**35**	Pg	**Pb**	**11 18 34.4**	**+0.2**
LPK				Sg	**Sn**	**11 18 48.7**	**-0.3**
CHOS	**Chios island**	**1.17**	**178**	P	**Pg**	**11 18 37.4**	**0.0**
CHOS				S	**Sb**	**11 18 53.1**	**+0.6**
	comp=N,212nm,0.4s						
CHOS	**Chios island**	**1.17**	**178**	Pn	**Pn**	**11 18 37.6**	**+0.2**
CHOS	**Chios island**	**1.17**	**178**	P	**Pg**	**11 18 37.2**	**-0.3**
CHOS				S	**Sg**	**11 18 52.0**	**-0.7**
ERIK	**Erikli-Kesan**	**1.18**	**19**	Pn	**Pn**	**11 18 37.7**	**+0.4**
ENEZ	**Enez**	**1.18**	**6**	P	**Pn**	**11 18 38.0**	**+0.6**
ENEZ	**Enez**	**1.18**	**6**	Pn	**Pn**	**11 18 38.5**	**+1.1**
BALY	**Balya**	**1.26**	**81**	P	**Pg**	**11 18 39.3**	**+0.3**
BALY				S	**Sn**	**11 18 55.8**	**+0.2**
BALY				*i* AML	AML	11 18 57.0	
	comp=N,70nm,0.4s						
URLA	**Izmir**	**1.29**	**159**	Pn	**Pn**	**11 18 39.2**	**+0.3**
KRBG	**Karabiga-Canak**	**1.30**	**50**	Pn	**Pg**	**11 18 39.9**	**+0.1**
ALN	**Alexandroupoli**	**1.33**	**1**	Pn	**Pg**	**11 18 40.7**	**+0.2**
ALN	**Alexandroupoli**	**1.33**	**1**	P	**Pg**	**11 18 40.3**	**-0.2**
STEP	**BALIKESIR_Sava**	**1.34**	**97**	P	**Pg**	**11 18 40.7**	**+0.1**
STEP				S	**Sb**	**11 18 57.7**	**+0.4**
KESN	**Edirne-Kesan**	**1.36**	**22**	P	**Pn**	**11 18 40.4**	**+0.1**
KESN				S	**Sn**	**11 19 00.6**	**+1.9**
KESN				*i* AML	AML	11 19 02.0	
	comp=N,98nm,0.3s						
KESN				*i* AML	AML	11 19 05.0	
	comp=N,106nm,0.4s						
KNL	**Balıkesir**	**1.37**	**58**	P	**Pg**	**11 18 41.1**	**0.0**
KNL				S	**Sg**	**11 19 00.2**	**+1.3**
KNL				*i* AML	AML	11 19 02.0	
	comp=N,150nm,0.5s						
KNL				*i* AML	AML	11 19 39.0	
	comp=N,123nm,2.0s						
GONE	**Gonen-Balikesi**	**1.38**	**69**	Pn	**Pb**	**11 18 40.9**	**+0.1**
THAS	**Thassos island**	**1.44**	**317**	P	**Pn**	**11 18 41.0**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.44**	**38**	Pn	**Pb**	**11 18 42.0**	**+0.2**
BKES	**Balkesir-Mer**	**1.50**	**83**	P	**Pg**	**11 18 43.7**	**+0.1**
BKES				S	**Sg**	**11 19 02.8**	**-0.2**
RDO	**Rodhopi**	**1.62**	**347**	Pn	**Pb**	**11 18 44.7**	**-0.2**
EDC	**Edincik**	**1.63**	**61**	Pn	**Pb**	**11 18 44.7**	**-0.3**
BAND	**Balkesir-Ban**	**1.80**	**63**	P	**Pb**	**11 18 48.1**	**+0.2**
BAND				S	**Sb**	**11 19 10.3**	**-0.1**
DURS	**Dursunbey**	**1.91**	**88**	P	**Pb**	**11 18 49.1**	**-0.8**

IDC ***24*** *11:23:09.7±1.7, 30°.86N×49°.26E, h0*^{km}*, mb3.7/10,*
mbtmp3.8/13, ML3.6/3, MS2.7/1, Error ellipse:
s-maj=35.5km s-min=21.6km az=12.0
ISN ***24*** *11:23:11.9±0.9, 30°.73N×49°.12E, h13*^{km}*±107*^{km}*, ML3.7*
TEH ***24*** *11:23:11.9, 30°.80N×49°.29E, h12*^{km}*±18*^{km}*, ML3.7*
ISC 24 11:23:11.8±0.7**,30°.79N**±0°.06×**49°.29E**±0°.05**,h10**^{km}**,n58,**
σ**1**^{s}**.83**/61**,mb3.6**/8**,Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AHWZ	**Ahwaz**	**0.77**	**314**	Pg	**Pg**	**11 23 27.0**	**+0.4**
ABEH	**Behbahan**	**0.85**	**103**	Pg	**Pg**	**11 23 29.1**	**+0.9**
AMIS	**Naft Sefid**	**0.87**	**0**	Pg	**Pg**	**11 23 27.8**	**-0.7**
KLNJ	**Kolanjah**	**1.99**	**83**	Pn	**Pn**	**11 23 47.7**	**+1.9**
IBRJ	**Brojen**	**2.02**	**56**	Pn	**Pn**	**11 23 48.0**	**+1.9**
SHK1	**Shahrekord**	**2.05**	**41**	Pn	**Pn**	**11 23 48.3**	**+1.7**
IPIR	**Pirpir**	**2.33**	**36**	Pn	**Pn**	**11 23 52.5**	**+2.0**
KAZ1	**Kazerun**	**2.35**	**119**	Pn	**Pn**	**11 23 52.4**	**+1.9**
AHBU	**AHRAM**	**2.60**	**137**	Pn	**Pn**	**11 23 55.7**	**+1.9**
IRAM	**Ramesheh**	**2.84**	**68**	Pn	**Pn**	**11 23 59.3**	**+1.9**
IGAR	**Gharneh**	**2.85**	**55**	Pn	**Pn**	**11 23 59.5**	**+2.0**
RAFI	**Al-Rafai**	**2.87**	**290**	*e*Pn	**Pn**	**11 23 59.5**	**+1.9**
RAFI				*e*Sn	**Sn**	**11 24 34.0**	**+1.8**
RAFI				AML	AML	11 24 35.3	
	comp=E,333nm,0.5s						
RAFI				AML	AML	11 24 53.1	
	comp=N,346nm,0.4s						
DSBU	**Dashti - Bushe**	**2.97**	**144**	Pn	**Pn**	**11 24 00.5**	**+1.5**
IKFM	**Kafar-mosalman**	**2.98**	**336**	Pn	**Pn**	**11 24 01.6**	**+2.4**
IDOB	**Doab**	**3.13**	**343**	Pn	**Pn**	**11 24 03.3**	**+2.0**
IKLH	**Kolahrood**	**3.18**	**37**	Pn	**Pn**	**11 24 04.1**	**+2.0**
IZEF	**Zefreh**	**3.33**	**50**	Pn	**Pn**	**11 24 06.2**	**+2.0**
QAMS	**Qamsar**	**3.44**	**31**	Pn	**Pn**	**11 24 08.1**	**+2.5**
HSAM	**Samen**	**3.46**	**351**	Pn	**Pn**	**11 24 07.8**	**+1.9**
IBDR	**Badra**	**3.67**	**310**	*e*Pn	**Pn**	**11 24 11.0**	**+2.4**
IBDR				*e*Sn	**Sn**	**11 24 53.5**	**+1.6**
IKOM	**Komasi**	**3.69**	**336**	Pn	**Pn**	**11 24 09.7**	**+0.7**
KCHF	**Cheshme Sefid,**	**3.96**	**332**	Pn	**Pn**	**11 24 14.4**	**+1.7**
KRSH	**Karshahi**	**3.98**	**37**	Pn	**Pn**	**11 24 14.9**	**+1.9**
IGHG	**Ghaleghazi**	**4.21**	**328**	Pn	**Pn**	**11 24 18.0**	**+1.8**
IQOM	**Qom**	**4.31**	**20**	Pn	**Pn**	**11 24 19.2**	**+1.6**
ISFB	**Sefidab**	**4.34**	**34**	Pn	**Pn**	**11 24 19.0**	**+1.1**
ANAR	**Anarak**	**4.47**	**57**	Pn	**Pn**	**11 24 21.2**	**+1.5**
IDHR	**Dehrash**	**4.60**	**329**	Pn	**Pn**	**11 24 22.7**	**+1.1**
ICHK	**Chekchek**	**4.61**	**70**	Pn	**Pn**	**11 24 24.2**	**+2.5**
IMEH	**Mehriz**	**4.61**	**81**	Pn	**Pn**	**11 24 23.5**	**+1.8**
IRAZ	**Razeghan**	**4.63**	**7**	Pn	**Pn**	**11 24 23.9**	**+1.9**
IVRN	**Varamin**	**4.67**	**25**	Pn	**Pn**	**11 24 23.6**	**+1.3**
BHD	**Baghdad**	**4.84**	**302**	*e*Pn	**Pn**	**11 24 27.0**	**+2.3**
BHD				*e*Sn	**Sn**	**11 25 22.0**	**+1.2**
BHD				AML	AML	11 25 48.7	
	comp=E,274nm,0.4s						
IDMV	**Damavand**	**5.30**	**25**	Pn	**Pn**	**11 24 33.4**	**+2.2**
ILAS	**Lasjerd**	**5.52**	**33**	Pn	**Pn**	**11 24 35.4**	**+1.2**
IFIR	**Firoozkooh**	**5.64**	**30**	Pn	**Pn**	**11 24 38.1**	**+2.1**
QALM	**Alamut, Qazvin**	**5.74**	**11**	Pn	**Pn**	**11 24 39.3**	**+2.1**
KLST	**Kelardasht - M**	**5.90**	**14**	Pn	**Pn**	**11 24 41.2**	**+1.7**
MZPU	**Pul - Mazandar**	**5.94**	**18**	Pn	**Pn**	**11 24 42.9**	**+2.8**
IPRN	**Peran**	**6.00**	**24**	Pn	**Pn**	**11 24 43.6**	**+2.9**
IKRK	**Kirkuk**	**6.19**	**319**	*e*Pn	**Pn**	**11 24 46.0**	**+2.8**
IKRK				*e*Sn	**Sn**	**11 25 55.5**	**+1.4**
IKRK				AML	AML	11 26 06.4	
	comp=N,45nm,0.2s						
IKRK				AML	AML	11 26 12.1	
	comp=E,57nm,0.2s						
TKDS	**Koohdasht(Taba**	**7.21**	**65**	Pn	**Pn**	**11 24 58.6**	**+1.2**
SBZV	**Sabzevar**	**8.90**	**49**	Pn	**Pn**	**11 25 22.5**	**+1.8**
ASF	**Jabal al Asfar**	**10.67**	**281**	Pn	**Pn**	**11 25 42.9**	**-1.8**
	comp=E,0.5nm,0.3s,baz=72,slow=8.4,SNR=5.6						
	comp=E,1.0nm,0.3s						
WSAR	**Wadi Sarin**	**11.22**	**130**	Pn	**Pn**	**11 25 50.6**	**-1.7**
	comp=E,0.7nm,0.3s,baz=342,slow=9.6,SNR=11						
WSAR				Sn	Sn	11 27 49.2	-8.6
	comp=E,0.2nm,0.3s,baz=331,slow=17,SNR=2.1						
	comp=E,3.8nm,0.4s						
EIL	**Elat**	**12.45**	**268**	LR	LR	11 31 51.6	
	comp=E,33nm,19.1s,baz=241,slow=42						
BRTR	**Keskin Array B**	**15.56**	**309**	Pn	**Pn**	**11 26 53.3**	**+1.9**
	comp=E,0.1nm,0.3s,baz=132,slow=13,SNR=5.5						
	comp=E,0.8nm,0.6s						
AKTO	**Aktyubinsk**	**20.68**	**16**	P	**P**	**11 27 50.6**	**-1.2**
	comp=E,1.5nm,0.7s,baz=223,slow=4.2,SNR=4.8						
	comp=E,1.5nm,0.7s						
IDI	**Anoyia**	**20.92**	**289**	P	**P**	**11 27 54.7**	**+0.1**
	comp=E,4.4nm,0.5s,baz=0.1,slow=3.5,SNR=6.7						
	comp=E,4.4nm,0.5s						
BELG	**Belogornoye**	**21.62**	**357**	P	**P**	**11 27 58.8**	**-3.0**
	comp=E,9.6nm,0.7s,baz=215,slow=2.6,SNR=5.8						
	comp=E,9.6nm,0.7s						
BVAR	**Borovoye Array**	**27.01**	**29**	P	**P**	**11 28 53.8**	**0.0**
	comp=E,0.3nm,0.3s,baz=226,slow=12,SNR=1.8						
	comp=E,0.3nm,0.3s						
MKAR	**Makanchi Array**	**30.01**	**48**	P	**P**	**11 29 20.9**	**+0.3**
	comp=E,0.1nm,0.4s,baz=247,slow=11,SNR=2.1						
	comp=E,0.1nm,0.4s						
FINES	**FINESS Array B**	**34.23**	**340**	P	**P**	**11 29 56.0**	**-1.4**
	comp=E,1.4nm,0.7s,baz=156,slow=9.6,SNR=8.9						
	comp=E,1.4nm,0.7s						
NB2	**NORSAR Subarra**	**39.22**	**332**	P	**P**	**11 30 38.3**	**-1.7**
	comp=Z,2.8nm,1.0s,baz=124,slow=8.6						
NOA	**NORSAR Array B**	**39.22**	**332**	P	**P**	**11 30 37.9**	**-2.1**
	comp=Z,1.2nm,0.7s,baz=124,slow=8.3,SNR=4.1						
	comp=Z,1.2nm,0.7s						
KSRS	**Korea Array**	**63.68**	**61**	P	**P**	**11 33 42.3**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=301,slow=5.4,SNR=2.4						
	comp=Z,0.5nm,0.5s						
ILAR	**Eielson Array**	**83.91**	**7**	P	**P**	**11 35 42.0**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=320,slow=3.5,SNR=2.5						
	comp=Z,0.2nm,0.6s						
YKA	**Yellowknife Ar**	**86.14**	**353**	P	**P**	**11 35 52.2**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=25,slow=5.6,SNR=4.5						
	comp=Z,0.2nm,0.7s						

IDC ***24*** *11:46:40.6±7.2, 35°.13N×141°.19E, h59*^{km}*±53*^{km}*, mb3.0/3,*
mbtmp3.2/4, ML2.5/1, Error ellipse: s-maj=93.0km
s-min=30.3km az=58.0
JMA ***24*** *11:46:46.8±0.3, 34°.7N±0°.8×140°.1E±1°.0, h82*^{km}*±2*^{km}*,*
MV2.9/38, SE OFF BOSO PENINSULA
ISC 24 11:46:47.2±1.0**,34°.73N**±0°.04×**140°.15E**±0°.05**,h83**^{km}±7^{km}**,**
n23,σ**0**^{s}**.66**/31**,mb3.4**/3**,Near east coast of eastern**
Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO4	**Boso 4**	**0.30**	**31**	*i* P	**Pn**	**11 46 60.0**	**+0.3**
BSO3	**Boso 3**	**0.31**	**76**	*i* P	**Pn**	**11 46 59.7**	**+0.2**
TATJ	**Tateyama 2**	**0.37**	**325**	*i* P	**Pn**	**11 47 00.6**	**+0.3**
TATJ				S	**Sn**	**11 47 11.2**	**+1.3**
JKUC	**kamogawauchiur**	**0.43**	**6**	*i* P	**Pn**	**11 47 00.6**	**-0.1**
JKUC				S	**Sn**	**11 47 10.9**	**+0.2**
KTR	**Katsuura**	**0.44**	**18**	*i* P	**Pn**	**11 47 00.7**	**-0.1**
KTR				S	**Sn**	**11 47 11.1**	**+0.3**
JIM2	**Oshima 3**	**0.59**	**269**	*i* P	**Pn**	**11 47 01.5**	**-0.6**
JIM2				S	**Sn**	**11 47 12.1**	**-1.0**
BSO1	**Boso 1**	**0.69**	**96**	*i* P	**Pn**	**11 47 02.5**	**+0.1**
JMYK	**Miyake Tsubota**	**0.83**	**217**	P	**Pn**	**11 47 04.7**	**+0.2**
JMYK				S	**Sn**	**11 47 18.0**	**+0.7**
JMKN	**Mikurajimanish**	**0.95**	**209**	P	**Pn**	**11 47 06.0**	**+0.1**
JMKN				S	**Sn**	**11 47 20.1**	**+0.3**
JOD2	**Odawara 2**	**1.02**	**302**	*i* P	**Pn**	**11 47 06.2**	**-0.5**
JOD2				S	**Sn**	**11 47 20.6**	**-0.7**
JIZS	**Izushimoda**	**1.04**	**270**	P	**Pn**	**11 47 06.9**	**0.0**
JIZS				S	**Sn**	**11 47 21.8**	**+0.1**
JFNN	**Fujinakano**	**1.29**	**292**	P	**Pn**	**11 47 10.1**	**+0.2**
JYN	**Shimob**	**1.52**	**301**	*i* P	**Pn**	**11 47 13.4**	**+0.5**
JYN				S	**Sn**	**11 47 33.8**	**+1.4**
SHZ3	**Shizuoka 3**	**1.63**	**282**	P	**Pn**	**11 47 15.0**	**+0.7**
JHJ2	**Mitsune**	**1.64**	**190**	P	**Pn**	**11 47 15.3**	**+0.9**
JRY	**Ryogami san**	**1.64**	**322**	*i* P	**Pn**	**11 47 14.7**	**+0.3**
JRY				*e*S	**Sn**	**11 47 35.3**	**+0.2**
MJAR	**Matsushiro Arr**	**2.40**	**319**	P	**Pn**	**11 47 24.5**	**0.0**
	0.7nm,0.3s,baz=136,slow=12,SNR=43						
MJAR				S	**Sn**	**11 47 54.8**	**+1.7**
	6.2nm,0.4s,baz=158,slow=8.5,SNR=6.2						
	2.7nm,0.3s						

H11N2	WAKE ISLAND Hy	27.97	115	T	T	12 21 47.6	
	baz=308,slow=75,SNR=7.6						
H11N1	WAKE ISLAND Hy	27.98	115	T	T	12 21 48.1	
	baz=308,slow=75,SNR=5.4						
H11N3	WAKE ISLAND Hy	27.99	115	T	T	12 21 49.3	
	baz=308,slow=75,SNR=6.0						
MKAR	Makanchi Array	44.51	304	P	P	11 54 50.0	-0.3
	0.3nm,0.5s,baz=86,slow=9.4,SNR=4.2						
	0.3nm,0.5s						
WRA	Warramunga Arr	54.65	187	P	P	11 56 06.7	-0.8
	0.3nm,0.5s,baz=23,slow=7.1,SNR=19						
	0.3nm,0.5s						
ASAR	Alice Springs	58.38	187	P	P	11 56 33.6	-0.3
	0.1nm,0.5s,baz=23,slow=11,SNR=5.8						
	0.1nm,0.5s						

NOU 24 12:02:11.1, 11°.84S×167°.32E, h93^{km}, mb4.3/7, Santa Cruz Islands, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	5.91	172	P	Pn	12 03 35.7	-0.5
KOUNC	Koumac, New Ca	9.14	198	P	Pn	12 04 20.1	0.0
YATNC	Mamie plateau,	10.17	182	P	Pn	12 04 33.6	-0.6
DZM	Mont Dzumac	10.21	185	P	Pn	12 04 35.5	+0.7

HEL 24 12:05:22.4±0.1, 64°.72N×24°.70E, h0^{km}, ML1.1, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OBF4	Vikkela, Lumij	0.20	60	PG	Pg	12 05 26.1	-0.2
OBF4				SG	Sg	12 05 29.0	+0.2
OBF0	Syolatti, Pyha	0.29	222	PG	Pg	12 05 28.0	0.0
	baz=45						
OBF0				SG	Sg	12 05 28.4	-3.4
OUF	Merijarvi	0.35	177	PG	Pg	12 05 28.7	-0.3
	baz=353						
OUF				SG	Sg	12 05 33.2	-0.4
OUL	Oulu	0.63	53	PG	Pg	12 05 34.2	-0.3
OUL				SG	Sg	12 05 42.4	-0.3
OBF8	Ulkokalla	0.66	235	PB	Pg	12 05 35.1	0.0
OBF8				MSG		12 05 43.4	
	comp=Z,2.3nm,0.2s						
KALU	Kalix	1.28	335	PN	Pg	12 05 46.7	-0.2
KALU				SB	Sb	12 06 03.9	-0.4
TOF	Tornio	1.38	354	PN	Pg	12 05 48.3	-0.5
TOF				MSG		12 06 03.9	
	comp=Z,1.4nm,0.2s						
TOF				SG	Sg	12 06 06.0	-0.7
UMAU	Umeaa	1.94	246	PG	Pn	12 05 57.5	+0.9
UMAU				SG	Sb	12 06 23.9	+0.6
RNF	Rovaniemi	1.98	15	PG	Pb	12 05 58.4	-0.8
RNF				SG	Sn	12 06 23.5	+0.9
ERTU	Ertsjaerv	2.12	332	PG	Pb	12 06 00.5	-1.1
	baz=152						
ERTU				SG	Sb	12 06 28.5	+0.1
MSF	Maaselka	2.18	55	PG	Pn	12 06 01.0	+1.0
	baz=241						
MSF				SG	Sn	12 06 29.0	+1.3
RMF	Romuvaara	2.32	100	PG	Pb	12 06 03.9	-1.2
RMF				MSG		12 06 31.1	
	comp=Z,1.4nm,0.2s						
RMF				SG	Sb	12 06 33.8	-0.5
PAJU	Pajala	2.41	345	PG	Pb	12 06 04.9	-1.6
	baz=165						
PAJU				SG	Sb	12 06 35.7	-1.1
OLKF	Oulanka, Finla	2.54	48	MSG		12 06 37.3	
	comp=Z,0.7nm,0.2s						
OLKF				SB	Sb	12 06 38.9	-1.6
KU6	Riekki	2.54	57	MSG		12 06 37.5	
	comp=Z,0.7nm,0.2s						
KU6				SB	Sb	12 06 38.8	-1.8
KLF	Kolari	2.55	354	MSG		12 06 37.5	
	comp=Z,0.6nm,0.2s						
KLF				SG	Sb	12 06 40.0	-0.8
KEF	Keuruu	2.56	178	MSG		12 06 37.8	
	comp=Z,0.9nm,0.2s						
KEF				SG	Sb	12 06 40.0	-1.1
KAF	Kangasniemi	2.71	164	MSG		12 06 42.2	
	comp=Z,1.7nm,0.2s						
KAF				SG	Sb	12 06 44.2	-1.2
SGF	Sodankyl	2.84	14	SG	Sb	12 06 50.9	+1.8

IDC ***24*** *12:22:28.0±0.9, 51°.14N×156°.62E, h0^{km}, mb3.5/11, mbtmp3.6/14, ML2.8/3, MS3.5/20, Error ellipse: s-maj=25.2km s-min=16.7km az=119.0*

ISC 24 12:22:29.8±0.8, 51°.13N±0°.10×156°.8E±0°.1, h10^{km}, n42, σ1^{s}.15/15, mb3.6/11, MS3.5/18, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	Petropavlovsk-	2.07	16	Pn	Pn	12 23 03.0	-1.6
	4.6nm,0.3s,baz=198,slow=9.3,SNR=9.8						
PETK				Sn	Sb	12 23 32.9	-0.3
	5.9nm,0.3s,baz=187,slow=19,SNR=1.9						
	54nm,0.8s						
I44RU	PETROPAVLOVSK-	2.07	16	I	I	12 33 30.0	
	baz=197,slow=331,SNR=1.3						
ASAJ	Asahikawa	11.84	239	Pn	Pn	12 25 19.0	+0.5
	0.1nm,0.3s,baz=124,slow=27,SNR=1.8						
	8.1nm,1.2s						
SEY	Seymchan	12.07	350	Pn	Pn	12 25 22.7	+1.1
	0.1nm,0.3s,baz=222,slow=11,SNR=2.0						
	0.3nm,0.3s						
KLR	Kul'dur	16.11	273	LR	LR	12 33 32.4	
	comp=Z,141nm,19.3s,baz=77,slow=41						
MJAR	Matsushiro Arr	19.70	229	LR	LR	12 35 47.0	
	comp=Z,128nm,18.1s,baz=48,slow=41						
TIXI	Tiksi	24.09	339	P	P	12 27 43.3	-1.7
	0.9nm,0.3s,baz=90,slow=20,SNR=3.0						
	0.9nm,0.3s						
KSRS	Korea Array	24.56	247	LR	LR	12 36 44.3	
	comp=Z,63nm,21.5s,baz=65,slow=35						
JNU	Nakatsue	26.09	236	LR	LR	12 39 22.6	
	comp=Z,80nm,18.5s,baz=42,slow=39						
KDAK	Kodiak Island	29.59	57	LR	LR	12 40 59.0	
	comp=Z,49nm,20.2s,baz=256,slow=38						
ILAR	Eielson Array	31.66	43	P	P	12 28 51.9	-0.9
	0.3nm,0.8s,baz=262,slow=8.1,SNR=2.3						
	0.3nm,0.8s						
H11N2	WAKE ISLAND Hy	32.34	162	T	T	13 02 54.3	
	baz=350,slow=74,SNR=12						
H11N1	WAKE ISLAND Hy	32.35	162	T	T	13 02 53.8	
	baz=350						
H11N3	WAKE ISLAND Hy	32.35	162	T	T	13 02 53.2	
	baz=350,slow=74,SNR=17						
SONM	Songino Array	32.36	284	LR	LR	12 42 53.2	
	comp=Z,51nm,19.4s,baz=7.0,slow=38						
H11S1	WAKE ISLAND Hy	33.49	163	T	T	13 04 14.7	
	baz=348,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	33.50	163	T	T	13 04 15.0	
	baz=348,slow=76,SNR=26						
H11S2	WAKE ISLAND Hy	33.51	163	T	T	13 04 16.1	
	baz=348,slow=76,SNR=9.2						
INK	Inuvik	36.68	36	P	P	12 29 37.2	+1.0
	1.3nm,0.8s,baz=281,slow=5.9,SNR=4.4						
	1.3nm,0.8s						
DLBC	Dease Lake	40.88	50	LR	LR	12 49 05.2	
	comp=Z,66nm,18.9s,baz=275,slow=39						
BBB	Bella Bella	44.65	58	LR	LR	12 47 46.4	
	comp=Z,78nm,19.9s,baz=299,slow=34						
RES	Resolute Bay	45.91	21	P	P	12 30 53.4	+1.6
	0.7nm,0.6s,baz=283,slow=4.6,SNR=4.1						
RES				LR	LR	12 52 30.7	
	comp=Z,50nm,18.5s,baz=37,slow=39						
	0.7nm,0.6s						
YKA	Yellowknife Ar	46.00	40	P	P	12 30 54.5	+1.7
	1.0nm,0.9s,baz=296,slow=7.6,SNR=7.6						
	1.0nm,0.9s						
MKAR	Makanchi Array	47.14	295	P	P	12 31 01.6	-0.4
	0.3nm,0.6s,baz=62,slow=6.0,SNR=4.2						
MKAR				LR	LR	12 50 45.2	
	comp=Z,57nm,19.9s,baz=42,slow=36						
	0.3nm,0.6s						
NEW	Newport	52.69	57	LR	LR	12 52 06.8	
	comp=Z,43nm,21.6s,baz=285,slow=34						
ARU	Arti	53.43	317	LR	LR	12 56 43.5	
	comp=Z,50nm,18.1s,baz=24,slow=38						
YBH	Yreka Blue Hor	53.67	66	LR	LR	12 54 12.2	
	comp=Z,33nm,18.1s,baz=330,slow=35						
AAK	Ala-Archa	54.08	295	LR	LR	12 56 48.4	
	comp=Z,49nm,20.3s,baz=68,slow=38						
CMAR	Chiang Mai Arr	55.73	256	LR	LR	12 57 31.1	
	comp=Z,28nm,18.3s,baz=65,slow=38						
AKTO	Aktyubinsk	57.60	312	LR	LR	12 59 26.2	
	comp=Z,36nm,21.3s,baz=73,slow=39						
NVAR	Mina Array Bea	58.38	67	P	P	12 32 24.9	-0.6
	0.1nm,0.6s,baz=282,slow=8.9,SNR=1.6						
	0.1nm,0.6s						
ELK	Elko	58.57	63	LR	LR	12 56 40.1	
	comp=Z,26nm,18.6s,baz=9.0,slow=35						
PDAR	Pinedale Array	60.30	58	P	P	12 32 38.9	+0.2
	0.2nm,0.7s,baz=320,slow=2.7,SNR=2.3						
	0.2nm,0.7s						
NOA	NORSAR Array B	64.82	342	LR	LR	13 07 07.4	
	comp=Z,28nm,18.3s,baz=320,slow=41						
TXAR	Lajitas Array	73.33	64	P	P	12 34 01.2	-0.5
	0.5nm,0.9s,baz=290,slow=4.2,SNR=4.9						
	0.5nm,0.9s						
WRA	Warramunga Arr	73.45	202	P	P	12 34 01.7	-0.5
	0.9nm,1.0s,baz=17,slow=5.7,SNR=3.7						
	0.9nm,1.0s						
VRAC	Vranov	74.31	334	LR	LR	13 12 37.4	
	comp=Z,35nm,18.1s,baz=358,slow=40						
MLR	Muntele Rosu	74.80	327	LR	LR	13 08 34.2	
	comp=Z,66nm,18.5s,baz=43,slow=37						
ASAR	Alice Springs	77.14	201	P	P	12 34 22.7	-0.7
	0.3nm,0.5s,baz=12,slow=5.1,SNR=2.0						
	0.3nm,0.5s						
H03N2	Juan Fernandez	136.30	88	T	T	15 13 14.3	
	baz=314,slow=77,SNR=6.3						
H03N1	Juan Fernandez	136.31	88	T	T	15 13 18.6	
	baz=314,slow=77,SNR=7.1						
H03N3	Juan Fernandez	136.31	88	T	T	15 13 14.3	
	baz=314,slow=77,SNR=8.3						

IDC ***24*** *12:28:29.1±2.0, 63°.93N×28°.54E, h0^{km}, mbtmp2.9/2, ML2.0/2, Error ellipse: s-maj=45.6km s-min=10.6km az=97.0*

HEL ***24*** *12:28:29.2±0.1, 64°.00N×28°.15E, h0^{km}, ML1.6, Suspected explosion*

ISC 24 12:28:27.8±0.8, 63°.96N±0°.02×28°.13E±0°.03, h0^{km}, n26, σ1^{s}.30/46, Finland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RMF	Romuvaara	0.83	71	PB	Pb	12 28 44.8	-0.3
RMF				MSG		12 28 54.4	
	comp=Z,6.7nm,0.2s						
RMF				SB	Sb	12 28 55.4	-1.5
OUL	Oulu	1.49	321	PG	Pb	12 28 56.2	-0.1
OUL				SN	Sg	12 29 15.5	-0.1
OUF	Merijarvi	1.54	287	PG	Pn	12 28 56.7	+0.2
OUF				MSG		12 29 15.3	
	comp=Z,8.2nm,0.2s						
OUF				SG	Sn	12 29 17.3	0.0
OBF4	Vikkela, Lumij	1.57	304	PG	Pb	12 28 57.4	-0.3
	baz=117						
OBF4				MSG		12 29 15.9	
	comp=Z,3.7nm,0.2s						
OBF4				SN	Sg	12 29 18.6	+0.3
JOF	Joensuu	1.77	125	PG	Pg	12 29 01.1	-0.6
	baz=304						
JOF				SN	Sg	12 29 24.6	0.0
OBF0	Syolatti, Pyha	1.79	289	PG	Pb	12 29 01.1	-0.3
OBF0				MSG		12 29 22.3	
	comp=Z,6.1nm,0.2s						
OBF0				SG	Sb	12 29 24.3	0.0
MSF	Maaselka	2.00	11	PG	Pb	12 29 04.2	-0.8
	baz=195						
MSF				SG	Sb	12 29 29.7	-0.8
KAF	Kangasniemi	2.03	205	PB	Pb	12 29 05.4	-0.2
KAF				MSG		12 29 30.6	
	comp=Z,3.1nm,0.2s						
KAF				SG	Sg	12 29 32.2	-0.7
OBF8	Ulkokalla	2.09	282	PG	Pb	12 29 06.1	-0.4
OBF8				MSG		12 29 31.1	
	comp=Z,2.7nm,0.2s						
OBF8				SG	Sg	12 29 34.5	-0.3
KU6	Riekki	2.21	19	PG	Pb	12 29 08.2	-0.4
KU6				MSG		12 29 33.5	
	comp=Z,1.7nm,0.2s						
KU6				SG	Sb	12 29 35.9	-0.5
KEF	Keuruu	2.33	221	PG	Pb	12 29 10.5	-0.2
KEF				MSG		12 29 39.2	
	comp=Z,2.4nm,0.2s						
KEF				SG	Sb	12 29 41.0	+1.0
OLKF	Oulanka, Finla	2.43	12	PG	Pb	12 29 12.2	-0.2
	baz=192						
OLKF				MSG		12 29 39.9	
	comp=Z,1.8nm,0.2s						
OLKF				SG	Sb	12 29 42.7	-0.2
RUF	Ruokolahti	2.57	171	PG	Pb	12 29 14.6	-0.2
RUF				MSG		12 29 46.2	
	comp=Z,3.0nm,0.2s						
RUF				SG	Sb	12 29 48.0	+1.1
TOF	Tornio	2.67	325	PB	Pb	12 29 14.8	-1.7
TOF				MSG		12 29 47.2	
	comp=Z,1.1nm,0.2s						
TOF				SG	Sb	12 29 50.4	+0.6
FIA0	FINESS Array S	2.70	201	PB	Pb	12 29 15.8	-1.0
	baz=20						
FIA0				MSG		12 29 49.8	
	comp=Z,1.4nm,0.2s						
FIA0				SB	Sb	12 29 50.6	+0.1
FINES	FINESS Array B	2.70	201	Pn	Pb	12 29 15.9	-1.0
	comp=Z,0.7nm,0.3s,baz=25,slow=16,SNR=21						
FINES				Sn	Sb	12 29 50.5	+0.1
	comp=Z,0.6nm,0.3s,baz=24,slow=24,SNR=15						
	comp=Z,2.4nm,0.5s						
KALU	Kalix	2.79	315	SB	Sn	12 29 50.0	+2.0
RNF	Rovaniemi	2.81	342	PB	Pb	12 29 16.9	-1.9
RNF				SG	Sb	12 29 53.0	-0.6
UMAU	Umeaa	3.29	272	PN	Pn	12 29 21.6	+1.1
ERTU	Ertsjaerv	3.61	319	PN	Pn	12 29 27.3	+2.3
KLF	Kolari	3.72	334	PN	Pn	12 29 28.7	+2.3
KLF				SN	Sn	12 30 11.2	+0.3
PAJU	Pajala	3.72	328	PN	Pn	12 29 29.1	+2.7
PAJU				SN	Sn	12 30 12.6	+1.6
HEL1	Helsinki	4.09	203	PN	Pn	12 29 31.4	-0.1
HEMU	Hemsoen	4.73	259	PN	Pn	12 29 41.9	+1.6
HEMU				SG	Sg	12 30 55.1	-4.5
ARCES	ARCESS Array B	5.70	351	Pn	Pn	12 29 55.3	+1.7
	comp=Z,0.1nm,0.3s,baz=169,slow=15,SNR=1.2						
ARCES				Sn	Sn	12 30 57.6	-2.0
	comp=Z,0.1nm,0.3s,baz=168,slow=23,SNR=1.5						
ARCES				Lg	Lg	12 31 20.5	
	comp=Z,0.1nm,0.3s,baz=167,slow=31,SNR=5.6						
	comp=Z,2.9nm,0.9s						
I43RU	DUBNA INFRASON	8.54	144	I	I	13 20 30.0	
	baz=335,slow=324,SNR=1.8						

IDC ***24*** *12:35:14.4±1.8, 36°.20N×142°.60E, h0^{km}, mb3.7/5, mbtmp3.6/8, ML3.2/3, Error ellipse: s-maj=45.2km s-min=23.6km az=68.0*

JMA ***24*** *12:35:16.6±0.2, 36°.2N±0°.5×142°.6E±1°.0, h35^{km}, MV3.5/23, FAR E OFF KANTO*

ISC 24 12:35:16.1±1.1, 36°.20N±0°.06×142°.62E±0°.08, h18^{km}, n26, σ1^{s}.34/26, mb3.6/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	1.51	251	P	Pn	12 35 41.8	-0.4
CHOJ				*e*S	Sn	12 36 00.1	-1.4
JHYU	Hitachinakayam	1.65	275	P	Pn	12 35 43.9	-0.2
JHYU				*e*S	Sn	12 36 03.9	-1.0
JHO	Hitachi	1.70	284	P	Pn	12 35 44.4	-0.5
JHO				S	Sn	12 36 04.9	-1.3
ONAJ	Iwakimizuishiy	1.72	302	P	Pn	12 35 45.0	-0.2
ONAJ				S	Sn	12 36 06.2	-0.5
JFK	Kawauchi	1.82	310	P	Pn	12 35 46.2	-0.3
JFK				S	Sn	12 36 08.3	-0.9
BSO1	Boso 1	2.05	221	P	Pn	12 35 49.5	+0.4
JAG	Ashikaga	2.57	276	*i* P	Pn	12 35 56.7	-0.1
JMK	Ichinoseki	2.96	338	P	Pn	12 36 02.7	+0.5
JRY	Ryogami san	3.02	268	P	Pn	12 36 02.8	-0.2
JOD2	Odawara 2	3.02	253	P	Pn	12 36 03.0	-0.1
JOM	Ohasama	3.43	343	P	Pn	12 36 09.3	+0.6
MJAR	Matsushiro Arr	3.58	277	Pn	Pn	12 36 09.9	-0.8
	0.6nm,0.3s,baz=234,slow=9.2,SNR=30						
	4.0nm,0.4s						
ASAJ	Asahikawa	7.91	360	Pn	Pn	12 37 10.1	0.0
	0.7nm,0.3s,baz=227,slow=2.9,SNR=12						
ASAJ				Sn	Sn	12 38 35.5	-3.5
	0.2nm,0.3s,baz=224,slow=17,SNR=1.4						
	2.3nm,0.3s						
JCJ	Chichijima	9.09	182	Pn	Pn	12 37 23.1	-3.3
	3.8nm,0.3s,baz=279,slow=19,SNR=1.6						
JCJ				Sn	Sn	12 38 56.4	-12
	3.7nm,0.3s,baz=286,slow=22,SNR=1.4						
KSRS	Korea Array	11.85	280	Pn	Pn	12 38 05.4	+1.3
	0.1nm,0.3s,baz=113,slow=15,SNR=2.5						
	0.3nm,0.3s						
H11N2	WAKE ISLAND Hy	26.89	121	T	T	13 09 04.5	
	baz=313,slow=75,SNR=17						
H11N1	WAKE ISLAND Hy	26.90	121	T	T	13 09 10.0	
	baz=313,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	26.91	121	T	T	13 09 07.3	
	baz=313,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	27.59	123	T	T	13 09 59.9	
	baz=314,slow=74,SNR=11						
H11S3	WAKE ISLAND Hy	27.59	123	T	T	13 10 00.5	
	baz=314,slow=74,SNR=12						
H11S2	WAKE ISLAND Hy	27.61	123	T	T	13 09 59.9	
	baz=314						
SONM	Songino Array	29.05	305	P	P	12 41 15.2	-0.1
	0.6nm,0.6s,baz=105,slow=9.7,SNR=4.9						
	0.6nm,0.6s						
MKAR	Makanchi Array	45.38	303	P	P	12 43 35.2	+1.8
	0.5nm,0.6s,baz=91,slow=9.7,SNR=8.5						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	47.28	309	P	P	12 43 49.5	+1.4
	0.3nm,0.3s,baz=83,slow=7.5,SNR=13						
	0.3nm,0.3s						
WRA	Warramunga Arr	56.39	189	P	P	12 44 56.9	+0.5
	1.8nm,1.3s,baz=11,slow=7.4,SNR=2.7						
	1.8nm,1.3s						
ASAR	Alice Springs	60.11	189	P	P	12 45 24.0	+1.6
	0.1nm,0.3s,baz=16,slow=11,SNR=2.6						
	0.1nm,0.3s						

IDC 24 12:44:13.2±4.1, 10°.44N×91°.50E, h0^{km}, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=158.1km s-min=26.9km az=66.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S3	Diego Garcia H	26.09	227	T	T	13 17 18.6	
	baz=47,slow=75,SNR=42						
H08S2	Diego Garcia H	26.09	227	T	T	13 17 16.9	
	baz=47,slow=75,SNR=24						
H08S1	Diego Carcia H	26.11	227	T	T	13 17 20.1	
	baz=47,slow=75,SNR=23						
MKAR	Makanchi Array	37.07	349	P	P	12 51 24.9	-0.2
	0.3nm,0.8s,baz=168,slow=7.4,SNR=2.5						
	0.3nm,0.8s						
SONM	Songino Array	39.33	16	P	P	12 51 44.4	0.0
	0.2nm,0.3s,baz=218,slow=9.6,SNR=2.7						
	0.2nm,0.3s						
WRA	Warramunga Arr	51.86	126	P	P	12 53 23.0	-0.8
	0.4nm,0.8s,baz=306,slow=8.6,SNR=5.4						
	0.4nm,0.8s						
ASAR	Alice Springs	53.55	130	P	P	12 53 36.8	+0.5
	0.3nm,0.5s,baz=302,slow=6.8,SNR=6.1						
	0.3nm,0.5s						

IDC 24 12:54:40.7±8.1, 31°.94S×179°.98E, h376^{km}±95^{km}, mb2.8/2, mbtmp3.6/3, Error ellipse: s-maj=106.0km s-min=44.5km az=2.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.73	200	P	P	12 56 21.5	0.0
	2.5nm,0.3s,baz=352,slow=4.9,SNR=14						
URZ				S	S	12 57 40.9	-1.0
	3.8nm,0.3s,baz=314,slow=24,SNR=13						
ASAR	Alice Springs	41.33	270	P	P	13 01 51.8	+0.2
	0.3nm,0.6s,baz=104,slow=7.0,SNR=7.4						
	0.3nm,0.6s						
WRA	Warramunga Arr	42.46	275	P	P	13 02 00.2	-0.4
	0.6nm,0.5s,baz=113,slow=7.6,SNR=15						
	0.6nm,0.5s						
FINES	FINESS Array B	145.95	338	PKPbc	PKPdf	13 13 35.0	+0.5
	0.6nm,0.5s,baz=46,slow=4.0,SNR=4.9						

BUL 24 13:04:51.7±0.2, 25°.46S×28°.77E, h10^{km}, MD3.8, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	Lobatse	2.91	278	*i* P	Pn	13 05 37.8	-0.3
LBTB				*i* S	Sn	13 06 11.3	-1.8
LBTB	Lobatse	2.91	278	*i* P	Pn	13 05 39.3	+1.2
LBTB				*i* S	Sn	13 06 10.8	-2.4
MOPA	Mopani	3.08	52	*i* P	Pn	13 05 40.1	-0.4
MOPA				*i* S	Sn	13 06 15.4	-2.0
MOPA	Mopani	3.08	52	*i* P	Pn	13 05 41.1	+0.6
MOPA				*i* S	Sn	13 06 14.6	-2.8
MUSN	Musina, Limpop	3.31	18	*i* P	Pn	13 05 43.2	-0.5
MUSN				*i* S	Sn	13 06 21.0	-2.2
MUSN	Musina, Limpop	3.31	18	*i* P	Pn	13 05 44.8	+1.0
MUSN				*i* S	Sn	13 06 19.1	-4.1
BOSA	Boshof	4.43	224	*i* P	Pn	13 05 58.5	-0.7
BOSA				*i* S	Sn	13 06 47.5	-3.4
BOSA	Boshof	4.43	224	*i* P	Pn	13 05 58.8	-0.3
BOSA				*i* S	Sn	13 06 45.9	-5.1

MAN ***24*** *13:18:42.5, 5°.09N×124°.98E, h39^{km}, mb4.4, ML3.2, MS3.0*

DJA ***24*** *13:18:43.2±0.4, 5°N±3°×12°5E±°, h68^{km}±8^{km}, M4.3/12, mB5.0/5, mb4.3/10, MLv4.3/12, Mw(mB)4.3/5*

NEIC ***24*** *13:18:44.0±1.0, 5°.0N±0°.1×125°.1E±0°.1, h65^{km}±10^{km}, mb4.2/12, Error ellipse: s-maj=19.0km s-min=12.3km az=46.0*

IDC ***24*** *13:18:46.2±2.3, 5°.04N×125°.17E, h95^{km}±19^{km}, mb3.6/7, mbtmp3.9/8, Error ellipse: s-maj=47.1km s-min=13.6km az=83.0*

ISC 24 13:18:42.5±0.9, 5°.02N±0°.04×124°.98E±0°.06, h60^{km}±10^{km}, n50, σ1^{s}.20/55, mb4.0/11, 2C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	General Santos	1.06	358	⇓*i*P	Pn	13 18 60.0	-1.6
GSPH				*i* S	Sn	13 19 13.5	-2.1
SGSI	Sangihe	1.43	158	P	Pn	13 19 05.8	-0.5
SGSI				S	Sn	13 19 23.6	-0.5
SKMP	Bagumbayan, Su	1.56	344	⇓*e*P	Pn	13 19 07.5	-0.5
SKMP				*e*S	Sn	13 19 26.2	-1.0
KCP	Kidapawan	1.98	3	⇓*i*P	Pn	13 19 14.1	+0.3
KCP				*i* S	Sn	13 19 38.6	+1.0
DAV	Davao City (W)	2.12	16	P	Pn	13 19 18.0	+2.3
	199nm,0.3s,baz=46,slow=22,SNR=1.9						
DAV				S	Sn	13 19 45.5	+4.5
	256nm,0.3s,baz=64,slow=23,SNR=8.8						
CDOP	Cateel, Davao	3.11	28	*e*P	Pn	13 19 28.9	-0.2
PAGZ	Pagadian	3.23	331	⇓*e*P	Pn	13 19 31.7	+0.9
PAGZ				*e*S	Sn	13 20 07.6	-0.5
CGP	Cagayan de Oro	3.43	355	⇓*e*P	Pn	13 19 33.9	+0.4
CGP				*e*S	Sn	13 19 51.4	-22
BIPH	Bislig	3.43	23	⇑*e*P	Pn	13 19 32.2	-1.4
BIPH				*e*S	Sn	13 19 50.7	-22
ZCP	Zamboanga City	3.46	303	⇑*e*P	Pn	13 19 34.5	+0.5
ZCP				*e*S	Sn	13 20 12.3	-1.4
GTOI	Gorontalo	4.78	204	P	Pn	13 19 51.8	-0.2
TNTI	Ternate	4.84	150		Pn	13 19 53.5	+0.6
TNTI	Ternate	4.84	150	P	Pn	13 19 52.2	-0.7
MRSI	Marisa	5.44	214	P	Pn	13 20 02.0	+1.0
	36nm,0.5s,767nm0.5nm						
TOLI2	Tolitoli	5.71	227		Pn	13 20 04.5	-0.3
LBMI	Labuha	6.15	156	P	Pn	13 20 11.1	+0.2
	31nm,0.8s,1μm0.2nm						
MYLDM	Lahad Datu	6.46	272		Pn	13 20 18.1	+3.0
MPSI	Mapaga	6.88	228	P	Pn	13 20 21.9	+1.0
SANI	Sanana	7.09	172	P	Pn	13 20 22.9	-0.8
NLAI	Namlea	8.47	166	P	Pn	13 20 42.4	-0.2
	15nm,0.7s						
FAKI	Fak Fak	10.71	137	Pn	Pn	13 21 13.1	-0.2
FAKI	Fak Fak	10.71	137	P	Pn	13 21 11.3	-2.0
	14nm,1.2s						
BLJI	Banyuglugur	17.02	222	P	Pn	13 22 36.9	+0.2
	30nm,0.5s						
MTN	Manton Dam	18.77	161	P	P	13 22 56.6	-0.3
KNRA	Kununurra	20.90	170		P	13 23 19.9	-0.1
KNRA				IAmb	IAmb	13 23 22.2	
	comp=Z,12nm,0.7s						
FITZ	Fitzroy Crossi	22.98	178	P	P	13 23 42.8	+0.6
WB0	Warramunga Arr	26.31	160	P	P	13 24 12.6	-0.2
WB0				IAmb	IAmb	13 24 33.5	

	comp=Z,7.8nm,1.2s						
WRAB	Tennant Creek	26.45	160	P	P	13 24 13.7	-0.4
WRAB				IAmb	IAmb	13 24 25.8	
	comp=Z,7.1nm,1.2s						
WRA	Warramunga Arr	26.45	160	P	P	13 24 13.1	-1.0
	comp=Z,1.3nm,0.8s,baz=338,slow=10,SNR=19						
	comp=Z,1.3nm,0.8s						
WRA	Warramunga Arr	26.45	160	P	P	13 24 13.7	-0.4
WB2	Warramunga Arr	26.46	160	P	P	13 24 13.1	-1.1
WB2				IAmb	IAmb	13 24 30.7	
	comp=Z,13nm,1.5s						
AS31	Alice Springs	29.81	163	P	P	13 24 44.6	+0.6
ASAR	Alice Springs	29.81	163	P	P	13 24 44.0	0.0
	comp=Z,0.6nm,0.6s,baz=336,slow=7.0,SNR=26						
ASAR				PcP	PcP	13 27 45.8	-0.6
	comp=Z,0.2nm,0.6s,baz=351,slow=2.3,SNR=2.0						
	comp=Z,0.6nm,0.6s						
ASAR	Alice Springs	29.81	163	P	P	13 24 44.8	+0.8
MJAR	Matsushiro Arr	33.64	19	P	P	13 25 15.5	-2.0
	comp=Z,1.1nm,0.6s,baz=198,slow=9.8,SNR=2.3						
	comp=Z,1.1nm,0.6s						
FORT	Forrest	35.71	175	P	P	13 25 35.5	+0.1
BBOO	Buckleboo	39.06	165	P	P	13 26 03.9	+0.2
BBOO				IAmb	IAmb	13 26 23.3	
	comp=Z,10nm,1.3s						
STKA	Stephens Creek	39.96	158	P	P	13 26 11.9	+0.7
	comp=Z,3.7nm,0.7s,baz=329,slow=8.2,SNR=10						
	comp=Z,3.7nm,0.7s						
STKA	Stephens Creek	39.96	158	P	P	13 26 12.1	+0.9
STKA				IAmb	IAmb	13 26 12.7	
	comp=Z,1.1nm,0.9s						
H11N1	WAKE ISLAND Hy	43.31	67	T	T	14 12 28.0	
	baz=255,slow=75,SNR=11						
H11N2	WAKE ISLAND Hy	43.32	67	T	T	14 12 24.6	
	baz=255,slow=75,SNR=15						
H11N3	WAKE ISLAND Hy	43.33	67	T	T	14 12 25.4	
	baz=255,slow=75,SNR=13						
PETK	Petropavlovsk-	54.93	23	P	P	13 28 06.9	-0.2
	comp=Z,1.2nm,0.6s,baz=219,slow=6.6,SNR=5.5						
	comp=Z,1.2nm,0.6s						
PETK	Petropavlovsk-	54.93	23	P	P	13 28 07.0	-0.1
MKAR	Makanchi Array	55.52	326	P	P	13 28 12.0	+0.5
	comp=Z,0.5nm,0.5s,baz=121,slow=8.4,SNR=8.4						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	55.52	326	P	P	13 28 12.6	+1.0
MAKZ	Makanchi	55.70	325	P	P	13 28 13.7	+0.8
ILAR	Eielson Array	84.70	25	P	P	13 31 07.8	-1.9
	comp=Z,0.5nm,0.8s,baz=249,slow=5.7,SNR=6.7						
	comp=Z,0.5nm,0.8s						
BMAR	Burnt Mountain	85.57	23	P	P	13 31 14.4	+0.3
TXAR	Lajitas Array	122.16	51	PKP	PKiKP	13 37 31.6	0.0
	comp=Z,0.2nm,0.6s,baz=347,slow=1.2,SNR=3.5						

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*IDC **24** 13:31:36.1±2.7, 7°.19S×124°.44E, h576^{km}±43^{km}, mb2.9/5, mbtmp3.8/8, Error ellipse: s-maj=138.6km s-min=14.7km az=57.0*

ISC 24 13:31:34.6±0.9**, 6°.9S**±0°.2×**124°.9E**±0°.3**, h550**^{km}**, n8,** σ**0**^{s}.**79**/9**, mb3.4**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	5.47	290	P	P	13 33 08.6	+0.1
	28nm,0.5s,baz=133,slow=5.7,SNR=9.8						
WRA	Warramunga Arr	15.85	146	P	P	13 34 52.6	-0.1
	0.6nm,0.3s,baz=322,slow=11,SNR=57						
WRA				S	S	13 37 34.3	-0.5
	0.9nm,0.9s,baz=317,slow=19,SNR=5.2						
ASAR	Alice Springs	18.76	154	P	P	13 35 19.6	+0.2
	0.8nm,0.5s,baz=331,slow=9.5,SNR=38						
STKA	Stephens Creek	29.31	150	P	P	13 36 53.5	+0.4
	1.3nm,0.5s,baz=333,slow=9.5,SNR=4.8						
	1.3nm,0.5s						
SONM	Songino Array	56.92	345	P	P	13 40 28.7	+1.0
	0.4nm,0.6s,baz=152,slow=6.5,SNR=2.6						
	0.4nm,0.6s						
MKAR	Makanchi Array	65.48	329	P	P	13 41 23.3	-0.4
	0.7nm,0.6s,baz=127,slow=8.1,SNR=9.7						
	0.7nm,0.6s						
ZALV	Zalesovo Beam	69.36	336	P	P	13 41 46.0	-1.3
	0.5nm,0.3s,baz=298,slow=8.7,SNR=4.3						
	0.5nm,0.3s						
KURBB	Kurchatov Arra	69.88	331	P	P	13 41 49.6	-0.8
	0.5nm,0.7s,baz=138,slow=5.3,SNR=7.6						
	0.5nm,0.7s						

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*IDC **24** 13:35:03.6±0.6, 1°.06S×67°.76E, h0^{km}, mb4.2/26, mbtmp4.3/27, ML5.1/1, MS4.5/72, Error ellipse: s-maj=17.4km s-min=14.6km az=170.0*

*BJI **24** 13:35:04.6±0.0, 1°.12S×67°.92E, h4^{km}, mb4.7/35, mB5.0/27, Ms4.9/32, Ms7 4.6/30*

*NEIC **24** 13:35:07.2±2.8, 1°.05S±0°.06×67°.60E±0°.08, h10^{km}±1^{km}, mb4.8/37, Mwb5.3/22, Error ellipse: s-maj=14.6km s-min=7.6km az=121.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.45; $M_{\theta\theta}$-1.27; $M_{\phi\phi}$0.82; $M_{r\theta}$0.16; $M_{\theta\phi}$-0.28; $M_{\phi r}$-0.40; Fault plane solution: $M_0$1.22000×10^{17} NP1:ϕ_s122.64000°, δ70.75000°, λ153.63000°. NP2:ϕ_s221.92000°, δ65.21000°, λ21.30000°. Principal axes: T 1.1157, Plg32.0000°, Azm81.0000°; N 0.1950, Plg58.0000°, Azm269.0000°; P -1.3107, Plg4.0000°, Azm173.0000°;*

*NEIC **24** 13:35:07.2, 1°.05S×67°.60E, h10^{km}*

*GCMT **24** 13:35:08.2±0.1, 1°.12S±0°.01×67°.60E±0°.01, h12^{km}, MW5.4/154, Moment Tensor Solution. s117,c186; s154,c307; Duration: 1^{s}.2 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.13±.02; $M_{\theta\theta}$-1.22±.01; $M_{\phi\phi}$1.35±.01; $M_{r\theta}$-0.22±.04; $M_{\theta\phi}$-0.39±.01; $M_{\phi r}$-0.15±.04; Best double couple: $M_0$1.37100×10^{17} NP1:ϕ_s36.00000°, δ85.00000°, λ-11.00000°. NP2:ϕ_s127.00000°, δ79.00000°, λ-175.00000°. Principal axes: T 1.4170, Plg4.0000°, Azm82.0000°; N -0.0930, Plg78.0000°, Azm192.0000°; P -1.3260, Plg11.0000°, Azm351.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 13:35:06.4±0.4**, 1°.12S**±0°.06×**67°.69E**±0°.05**, h15**^{km}**, n168,** σ**2**^{s}.**04**/123**, mb4.7**/54**, MS4.6**/86**, 1C-4D, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAAM	Kaadhehdhoo	5.54	73	Pn	Pn	13 36 24.5	-3.9
KAAM				Sn	Sn	13 37 26.3	-5.6
DGAR	Diego Garcia	7.85	143	Pn	Pn	13 37 03.4	+3.3
MNCI	Minicoy	10.77	30	Pn	Pn	13 37 41.5	+1.3
MSEY	Mahe Island	12.69	254	Pn	Pn	13 38 03.9	-2.8
PCHI	Peechi	14.43	36	⇓*e*P	Pn	13 38 31.9	+1.6
PCHI				*e*S	Sn	13 41 12.3	+2.1
PALK	Pallekele	15.43	57	Pn	Pn	13 38 42.1	-1.7
	8.2nm,0.3s,baz=346,slow=12,SNR=34						
PALK				Sn	Sn	13 41 24.7	-10
	3.5nm,0.3s,baz=143,slow=10,SNR=6.6						
	16nm,0.3s						
PALK	Pallekele	15.43	57	Pn	Pn	13 38 42.0	-1.7
WSAR	Wadi Sarin	25.77	341	LR	LR	13 48 34.0	
	comp=Z,3µm,20.7s,baz=172,slow=32						
ATD	Arta Tunnel	27.71	298	LR	LR	13 49 33.2	
	comp=Z,46nm,20.9s,baz=114,slow=31						
KMBO	Kilima Mbogo	30.43	270	LR	LR	13 51 03.3	
	comp=Z,19nm,21.0s,baz=86,slow=32						
KOLN	Koldanda	32.54	27	*e*P	P	13 41 37.0	-0.3
LODK	Lodwar	32.63	278	P	P	13 41 36.7	-1.4
GKN	Gorkha	33.22	28	*e*P	P	13 41 42.9	-0.3
BRDH	Bariadhala	33.23	43	LR	LR	13 57 32.1	
	comp=Z,2µm,18.0s,baz=304,slow=41						
RAMN	Ramite	33.33	32	*e*P	P	13 41 44.8	+0.5
	31nm,1.0s						
ODAN	Odare	33.68	33	*e*P	P	13 41 47.6	+0.3
SDSI	Sungai Dareh	33.73	90	P	P	13 41 46.0	-1.7
TAPN	Taplejung	34.24	33	*e*P	P	13 41 52.8	+0.5
	77nm,1.1s						
NIL	Nilore	34.98	8	P	P	13 41 59.7	+1.4
NIL				IAmb	IAmb	13 42 15.3	
	comp=Z,20nm,0.9s						
SHL	Shillong	35.38	40	P	P	13 42 02.2	+0.2
KBL	Kabul	35.50	2	P	P	13 42 03.8	+0.9
KBL				IAmb	IAmb	13 42 09.7	
	comp=Z,22nm,1.4s						
CMAR	Chiang Mai Arr	36.37	56	P	P	13 42 10.0	-0.4
	comp=Z,4.1nm,0.9s,baz=244,slow=10,SNR=34						
CMAR				LR	LR	13 56 28.0	
	comp=Z,577nm,18.1s,baz=245,slow=35						
	comp=Z,4.1nm,0.9s						
CHTO	Chiang Mai	36.55	56	P	P	13 42 11.5	-0.4
MBAR	Mbarara	36.95	270	P	P	13 42 15.3	-0.3
	comp=Z,3.1nm,0.2s,baz=72,slow=13,SNR=5.3						
MBAR				LR	LR	13 55 08.7	
	comp=Z,830nm,21.6s,baz=64,slow=32						
	comp=Z,3.1nm,0.2s						
MBAR	Mbarara	36.95	270	P	P	13 42 14.1	-1.5
PHRA	Phrae	37.47	57	P	P	13 42 19.5	-0.2
PHRA				IAmb	IAmb	13 42 21.0	
	comp=Z,31nm,0.9s						
LSA	Lhasa	37.96	34	⇑P	P	13 42 25.6	+1.3
LSA				pmax	pmax		
	comp=Z,14nm,0.8s						
LSA	Lhasa	37.96	34	P	P	13 42 25.4	+1.0
LSA				IAmb	IAmb	13 42 31.6	
	comp=Z,25nm,1.0s						
TNCH	TengChong	39.59	47	P	P	13 42 37.0	-0.7
TNCH				pP	pP	13 42 41.8	+0.6
TNCH				PP	PnPn	13 44 10.9	-0.8
TNCH				S	S	13 48 42.5	+2.1
TNCH				sS	sS	13 48 48.3	+2.0
TNCH				pmax	pmax		
	comp=Z,250nm,4.4s						
TNCH				LR	LR		
	comp=Z,530nm,21.9s						
TNCH				LR	LR		
	comp=Z,350nm,23.2s						
TNCH				LR	LR		
	comp=Z,910nm,19.9s						
CHGR	Chuyangaron	39.61	2	P	P	13 42 37.7	+0.2
GEYT	Alibeck	39.85	348	P	P	13 42 38.3	-1.2
	comp=Z,1.5nm,0.6s,baz=157,slow=7.8,SNR=3.5						
GEYT				LR	LR	13 58 21.5	
	comp=Z,1µm,20.3s,baz=164,slow=35						
	comp=Z,1.5nm,0.6s						
GAR	Garm	40.00	3	P	P	13 42 40.2	-0.7
BTK	Batken	41.08	4	P	P	13 42 49.7	0.0
BTK				IAmb	IAmb	13 43 06.8	
	comp=Z,20nm,0.9s						
LSZ	Lusaka	41.44	248	P	P	13 42 53.6	+0.5
	comp=Z,2.2nm,0.4s,baz=77,slow=8.0,SNR=4.8						
LSZ				LR	LR	13 58 15.9	
	comp=Z,811nm,19.2s,baz=86,slow=34						
	comp=Z,2.2nm,0.4s						
NRN	Naryn	43.02	9	P	P	13 43 07.1	+1.3
EIL	Elat	43.75	317	P	P	13 43 11.5	-0.1
	comp=Z,5.4nm,0.6s,baz=121,slow=5.9,SNR=1.7						
EIL				LR	LR	13 58 60.0	
	comp=Z,1µm,18.2s,baz=110,slow=33						
	comp=Z,5.4nm,0.6s						
KDJ	Kajisay	43.90	10	P	P	13 43 12.9	+0.2
KDJ				IAmb	IAmb	13 43 29.8	
	comp=Z,14nm,0.9s						
AAK	Ala-Archa	43.99	7	P	P	13 43 12.7	-0.8
	comp=Z,4.3nm,1.0s,baz=210,slow=10,SNR=8.3						
AAK				LR	LR	14 01 55.4	
	comp=Z,473nm,21.3s,baz=196,slow=37						
	comp=Z,4.3nm,1.0s						
AAK	Ala-Archa	43.99	7	P	P	13 43 14.6	+1.1
AAK				IAmb	IAmb	13 43 25.0	
	comp=Z,17nm,1.4s						
BOOM	Boomskoye usch	44.05	9	P	P	13 43 14.6	+0.7
BOOM				IAmb	IAmb	13 43 25.7	
	comp=Z,14nm,1.2s						
KK31	Karatay Array	44.10	3	P	P	13 43 15.4	+1.3
KK31				IAmb	IAmb	13 44 48.1	
	comp=Z,12nm,1.1s						
KKAR	Karatay Array	44.10	3	P	P	13 43 16.1	+2.0
KKAR				IAmb	IAmb	13 44 48.1	
	comp=Z,12nm,1.1s						
KKAR	Karatay Array	44.10	3	P	P	13 43 15.2	+1.1
ASF	Jabal al Asfar	44.11	321	P	P	13 43 14.1	-0.3
	comp=Z,14nm,0.7s,baz=96,slow=13,SNR=1.6						
	comp=Z,14nm,0.7s						
GOMU	GeErMu	44.90	31	P	P	13 43 22.5	+1.4
GOMU				pP	sP	13 43 27.0	+0.9
GOMU				sP	pwP	13 43 28.1	-1.2
GOMU				S	S	13 49 54.8	-4.1
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GOMU				LR	LR		
	comp=Z,610nm,13.1s						
GOMU				LR	LR		
	comp=Z,380nm,17.0s						
GOMU				LR	LR		
	comp=Z,620nm,14.8s						
GOMU	GeErMu	44.90	31	PcP	S	13 49 54.9	-4.0
MMAI	Mount Meron Ar	45.61	321	LR	LR	13 59 49.0	
	comp=Z,478nm,20.3s,baz=208,slow=33						
QIZ	Qiongzhong	45.98	62	P	P	13 43 33.6	+4.1
QIZ				S	S	13 50 17.5	+3.3
QIZ				LR	LR		
	comp=Z,510nm,16.7s						
QIZ				LR	LR		
	comp=Z,490nm,25.0s						
QIZ				LR	LR		
	comp=Z,630nm,24.6s						
GNI	Garni	46.12	336	LR	LR	14 02 36.3	
	comp=Z,703nm,21.5s,baz=146,slow=36						
GYA	Guiyang	46.51	51	*e*P	P	13 43 33.4	-0.3
GYA				PP	PP	13 45 23.1	-0.1
GYA				S	S	13 50 24.5	+2.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,92nm,3.5s						
GYA				LR	LR		
	comp=Z,370nm,13.3s						
GYA				LR	LR		
	comp=Z,460nm,16.9s						
GYA				LR	LR		
	comp=Z,570nm,19.0s						
LBTB	Lobatse	47.05	236	LR	LR	14 00 23.3	
	comp=Z,790nm,21.7s,baz=66,slow=32						
SRBI	Singaraja	47.83	100	P	P	13 43 42.2	-1.8
	comp=Z,18nm,1.5s						
BOSA	Boshof	48.85	232	P	P	13 43 52.0	+0.2
	comp=Z,1.9nm,0.7s,baz=51,slow=8.0,SNR=4.5						
BOSA				LR	LR	14 01 09.0	
	comp=Z,607nm,21.0s,baz=71,slow=32						
	comp=Z,1.9nm,0.7s						
MK31	Makanchi Array	49.41	13	P	P	13 43 54.6	-1.1
MKAR	Makanchi Array	49.41	13	P	P	13 43 53.7	-2.0
	comp=Z,1.7nm,0.8s,baz=195,slow=7.0,SNR=17						
	comp=Z,1.7nm,0.8s						
MKAR	Makanchi Array	49.41	13	P	P	13 43 54.2	-1.5
TWSI	Taliwang, Sumb	49.54	100	P	P	13 43 55.2	-2.0
	comp=Z,21nm,2.1s						
KBZ	Khabaz	49.87	337	P	P	13 43 57.6	-1.5
	comp=Z,5.8nm,0.9s,baz=166,slow=7.6,SNR=5.6						
KBZ				LR	LR	14 04 25.2	
	comp=Z,513nm,21.4s,baz=156,slow=35						
	comp=Z,5.8nm,0.9s						
LZH	Lanzhou	50.02	39	*e*P	P	13 44 04.3	+3.6
LZH				pP	pwP	13 44 09.8	+0.7
LZH				sP	sP	13 44 12.6	+6.9
LZH				S	S	13 51 15.3	+3.9
LZH				pmax	pmax		
	comp=Z,28nm,1.1s						
LZH				pmax	pmax		
	comp=Z,90nm,5.5s						
LZH				LR	LR		
	comp=Z,390nm,15.8s						
LZH				LR	LR		
	comp=Z,490nm,16.5s						
LZH				LR	LR		
	comp=Z,940nm,18.0s						
ABKAR	Akbulak array	50.62	353	P	P	13 44 03.4	-1.4
ABKAR	Akbulak array	50.62	353	P	P	13 44 03.0	-1.8
BRTR	Keskin Array B	51.21	326	P	P	13 44 07.2	-2.3
	comp=Z,2.0nm,0.9s,baz=123,slow=14,SNR=1.9						
BRTR				LR	LR	14 05 44.9	
	comp=Z,627nm,18.8s,baz=151,slow=36						
	comp=Z,2.0nm,0.9s						
BRTR	Keskin Array B	51.21	326		P	13 44 10.1	+0.5
AKTO	Aktyubinsk	52.02	352	LR	LR	14 07 22.9	
	comp=Z,203nm,20.6s,baz=129,slow=37						
KAPI	Kappang	52.12	95	LR	LR	14 06 30.3	
	comp=Z,558nm,18.6s,baz=264,slow=36						
XAN	Xi'an	52.15	44	⇓*i*P	P	13 44 15.6	-1.0
XAN				pP	pP	13 44 19.8	-0.8
XAN				S	S	13 51 38.1	-2.6
XAN				pmax	pmax		
	comp=Z,15nm,0.9s						
XAN				pmax	pmax		
	comp=Z,100nm,4.2s						
XAN				LR	LR		
	comp=Z,340nm,17.9s						
XAN				LR	LR		
	comp=Z,330nm,16.5s						
XAN				LR	LR		
	comp=Z,750nm,23.4s						
MPSI	Mapaga	52.23	89	P	P	13 44 16.1	-1.3
	comp=Z,18nm,1.1s						
TSUM	Tsumeb	52.24	247	LR	LR	14 04 43.0	
	comp=Z,1µm,19.2s,baz=87,slow=34						
KURBB	Kurchatov Arra	52.38	9	P	P	13 44 16.2	-1.6
	comp=Z,5.2nm,1.1s,baz=206,slow=7.9,SNR=15						
KURBB				LR	LR	14 06 33.6	
	comp=Z,686nm,21.4s,baz=196,slow=36						
	comp=Z,5.2nm,1.1s						
KURK	Kurchatov	52.48	9	P	P	13 44 19.3	+0.6
KURK				IAmb	IAmb	13 44 34.8	
	comp=Z,20nm,1.1s						
BKSI	Bulukumba	52.50	96	P	P	13 44 17.6	-1.8
	comp=Z,13nm,1.0s						
BSSI	Bau Bau, Buton	52.91	97	P	P	13 44 20.6	-1.9
	comp=Z,33nm,1.4s,comp=Z,1µm						
HRKL	Herakleio	53.79	317	P	P	13 44 34.7	+6.1
IDI	Anoyia	53.92	317	LR	LR	14 08 50.8	
	comp=Z,168nm,18.6s,baz=100,slow=38						
SUR	Sutherland	53.94	230	LR	LR	14 06 03.8	
	comp=Z,481nm,18.4s,baz=68,slow=34						
BVAR	Borovoye Array	54.00	2	P	P	13 44 29.7	-0.1
	comp=Z,1.3nm,0.8s,baz=176,slow=5.9,SNR=9.2						
BVAR				LR	LR	14 08 38.2	
	comp=Z,317nm,19.1s,baz=189,slow=37						
	comp=Z,1.3nm,0.8s						
BRVK	Borovoye	54.03	2	P	P	13 44 31.9	+1.9
WHN	Wuhan	54.40	51	P	P	13 44 38.1	+5.0
PSA00	Pilbara Seismi	54.69	116	P	P	13 44 37.9	+2.5
PSA00				IAmb	IAmb	13 44 40.6	
	comp=Z,24nm,1.4s						
H01W3	Cape Leeuwin H	54.73	133	T	T	14 43 52.6	
	baz=300,slow=75,SNR=6.1						
H01W2	Cape Leeuwin H	54.73	133	T	T	14 43 46.7	
	baz=300,slow=75,SNR=6.5						
H01W1	Cape Leeuwin H	54.75	133	T	T	14 43 49.8	
	baz=300,slow=75,SNR=8.2						
TGY	Tagaytay City	54.85	72	LR	LR	14 05 24.4	
	comp=Z,777nm,21.0s,baz=338,slow=33						
BELG	Belogornoye	55.94	345	LR	LR	14 09 36.3	
	comp=Z,655nm,21.6s,baz=144,slow=37						
ATH	Athens Observa	56.17	319	P	P	13 44 40.8	-5.0
NWAO	Narrogin (SRO)	56.21	130	LR	LR	14 04 45.5	
	comp=Z,378nm,19.4s,baz=248,slow=32						
SMTH	Samothraki Isl	56.44	322	P	P	13 44 42.5	-5.2
ZAA0	Zalesovo Array	56.70	12	P	P	13 44 48.8	-0.5
ZAA0				IAmb	IAmb	13 44 59.7	
	comp=Z,16nm,1.1s						
ZALV	Zalesovo Beam	56.70	12	P	P	13 44 48.3	-0.9
	comp=Z,2.4nm,0.8s,baz=209,slow=8.0,SNR=9.1						
ZALV				LR	LR	14 09 41.1	
	comp=Z,454nm,21.6s,baz=208,slow=37						
	comp=Z,2.4nm,0.8s						
ZALV	Zalesovo Beam	56.70	12	P	P	13 44 48.2	-1.0
ARU	Arti	57.84	354	P	P	13 44 57.4	+0.1
	comp=Z,1.0nm,0.3s,baz=179,slow=7.8,SNR=6.3						
ARU				LR	LR	14 11 03.2	
	comp=Z,309nm,18.9s,baz=162,slow=37						
	comp=Z,1.0nm,0.3s						
ARU	Arti	57.84	354	P	P	13 44 58.0	+0.7
DAV	Davao City (W)	58.33	81	LR	LR	14 11 05.2	
	comp=Z,356nm,18.5s,baz=256,slow=37						
SONM	Songino Array	59.25	29	P	P	13 45 06.9	-0.6
	comp=Z,2.5nm,0.9s,baz=222,slow=6.0,SNR=14						
	comp=Z,2.5nm,0.9s						
SONM	Songino Array	59.25	29	P	P	13 45 07.0	-0.4
SONM				IAmb	IAmb	13 45 24.4	
	comp=Z,12nm,1.1s						
MLR	Muntele Rosu	59.28	327	LR	LR	14 11 20.1	
	comp=Z,430nm,18.4s,baz=135,slow=37						
ULN	Ulaanbaatar	59.59	30	P	P	13 45 11.0	+1.1
SSE	Sheshan	59.99	53	P	P	13 45 12.6	-0.1
SSE				S	S	13 53 28.0	+3.1
SSE				pmax	pmax		
	comp=Z,25nm,0.7s						
SSE				pmax	pmax		
	comp=Z,41nm,4.6s						
SSE				LR	LR		
	comp=Z,160nm,17.9s						
SSE				LR	LR		
	comp=Z,160nm,17.5s						
KIRV	Kirov	61.27	349	LR	LR	14 14 15.1	
	comp=Z,238nm,18.0s,baz=165,slow=38						
OBN	Obninsk	61.59	340	LR	LR	14 12 06.5	
	comp=Z,45nm,20.4s,baz=141,slow=36						
VAE	Valguarnera	62.37	314	LR	LR	14 11 15.6	
	comp=Z,156nm,18.8s,baz=136,slow=35						
SIJI	Sorong	63.56	90	LR	LR	14 13 20.5	
	comp=Z,220nm,21.4s,baz=249,slow=36						
JOW	Kunigami	64.53	60	LR	LR	14 15 19.6	
	comp=Z,329nm,18.6s,baz=276,slow=38						
VYHS	Vyhne	64.97	326	*e*P	P	13 45 49.0	+3.3
NACGM	Naroch	65.13	335	*e*P	P	13 45 46.5	0.0
	comp=Z,31nm,1.3s,baz=134						
MAW	Mawson	66.44	182	LR	LR	14 09 45.6	
	comp=Z,373nm,18.1s,baz=360,slow=31						
VRAC	Vranov	66.66	326	LR	LR	14 17 22.7	
	comp=Z,164nm,18.2s,baz=126,slow=38						
TORD	Torodi Ar. Bea	66.93	285	LR	LR	14 15 37.7	
	comp=Z,710nm,18.1s,baz=91,slow=36						
KSRS	Korea Array	67.47	48	P	P	13 46 00.4	-1.5
	comp=Z,2.8nm,1.0s,baz=257,slow=6.7,SNR=7.5						
KSRS				LR	LR	14 17 23.2	
	comp=Z,425nm,19.5s,baz=240,slow=38						
	comp=Z,2.8nm,1.0s						
WRA	Warramunga Arr	67.70	111	P	P	13 46 02.8	-0.9
	comp=Z,9.9nm,1.1s,baz=283,slow=6.1,SNR=16						
WRA				LR	LR	14 11 52.6	
	comp=Z,497nm,21.5s,baz=283,slow=33						
	comp=Z,9.9nm,1.1s						
WRA	Warramunga Arr	67.70	111	P	P	13 46 04.7	+0.9
WRAB	Tennant Creek	67.71	111	P	P	13 46 05.5	+1.7
WB2	Warramunga Arr	67.71	111		P	13 46 03.8	0.0
WB0	Warramunga Arr	67.73	111	P	P	13 46 05.6	+1.6
ASAR	Alice Springs	67.82	115	P	P	13 46 03.9	-0.6
	comp=Z,2.8nm,0.9s,baz=284,slow=5.5,SNR=8.9						
ASAR				LR	LR	14 11 11.4	
	comp=Z,416nm,21.9s,baz=283,slow=32						
	comp=Z,2.8nm,0.9s						
ASAR	Alice Springs	67.82	115	P	P	13 46 05.8	+1.3
AS31	Alice Springs	67.82	115	P	P	13 46 06.2	+1.7
AS31				IAmb	IAmb	13 46 37.4	
	comp=Z,4.4nm,0.8s						
GERES	GERESS Array B	68.06	325	P	P	13 46 06.2	+0.7
	comp=Z,0.7nm,0.7s,baz=113,slow=7.6,SNR=2.6						
	comp=Z,0.7nm,0.7s						
CN2	Changchun	68.11	41	P	P	13 46 07.3	+1.4
CN2				S	S	13 55 07.8	+2.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=Z,400nm,15.0s						
CN2				LR	LR		
	comp=Z,300nm,15.0s						
CN2				LR	LR		
	comp=Z,300nm,17.0s						
JNU	Nakatsue	68.42	54	LR	LR	14 17 10.3	
	comp=Z,411nm,19.3s,baz=256,slow=37						
DAVOX	Davos/Dischmat	69.40	322	LR	LR	14 16 51.8	
	comp=Z,204nm,21.3s,baz=88,slow=36						
CLL	Collm	69.66	327	*e*P	P	13 46 15.0	-0.3
	comp=Z,32nm,2.2s						
CLL				*e*S	S	13 55 23.0	-0.3
CLL				*e*PS	PnS	13 55 54.0	+4.2
CLL				*e*SS	SS	13 59 50.0	-1.7
CLL				*e*SSS	SSS	14 03 24.0	
CLL				*e*SSSS		14 04 24.0	
FINES	FINESS Array B	70.00	340	LR	LR	14 20 02.1	
	comp=Z,327nm,18.9s,baz=138,slow=39						
BNX	BinXian	70.17	40	⇓P	P	13 46 22.5	+3.9
BNX				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BNX				pmax	pmax		
	comp=Z,150nm,5.0s						
NRIK	Noril'sk	71.61	7	LR	LR	14 19 32.5	
	comp=Z,447nm,20.2s,baz=199,slow=37						
HEH	HeiHe	72.02	36	*e*P	P	13 46 30.8	+1.1
HEH				pP	pP	13 46 33.8	0.0
HEH				sP	pwP	13 46 36.4	-0.8
HEH				S	S	13 55 54.6	+3.7
HEH				SS	SS	14 00 32.8	+4.8
HEH				pmax	pmax		
	comp=Z,12nm,1.3s						

HEH				pmax	pmax		
	comp=Z,86nm,4.3s						
HEH				LR	LR		
	comp=Z,380nm,15.6s						
HEH				LR	LR		
	comp=Z,420nm,18.2s						
HEH				LR	LR		
	comp=Z,590nm,16.9s						
USRK	Ussuriysk Ar.	72.64	43	P	P	13 46 33.2	-0.3
	comp=Z,1.5nm,0.8s,baz=251,slow=14,SNR=3.1						
USRK				LR	LR	14 20 19.6	
	comp=Z,175nm,20.6s,baz=239,slow=37						
	comp=Z,1.5nm,0.8s						
DBIC	Dimbokro	72.81	277	P	P	13 46 36.0	+0.8
	comp=Z,2.7nm,0.8s,baz=106,slow=7.4,SNR=2.2						
DBIC				LR	LR	14 18 07.7	
	comp=Z,364nm,20.3s,baz=96,slow=36						
	comp=Z,2.7nm,0.8s						
HFS	Hagfors	73.90	335	LR	LR	14 19 26.5	
	comp=Z,216nm,21.2s,baz=125,slow=36						
KLR	Kul'dur	74.22	38	P	P	13 46 41.1	-1.7
	comp=Z,1.3nm,0.7s,baz=262,slow=7.5,SNR=4.3						
	comp=Z,1.3nm,0.7s						
MJAR	Matsushiro Arr	75.11	52	P	P	13 46 47.1	-1.2
	comp=Z,1.3nm,0.7s,baz=256,slow=9.0,SNR=2.3						
MJAR				LR	LR	14 20 50.4	
	comp=Z,222nm,19.6s,baz=234,slow=37						
	comp=Z,1.3nm,0.7s						
NOA	NORSAR Array B	75.42	335	P	P	13 46 48.9	-0.6
	comp=Z,0.7nm,0.8s,baz=125,slow=8.7,SNR=4.6						
NOA				LR	LR	14 21 48.9	
	comp=Z,167nm,20.2s,baz=120,slow=37						
	comp=Z,0.7nm,0.8s						
NOA	NORSAR Array B	75.42	335	P	P	13 46 48.9	-0.6
STKA	Stephens Creek	75.76	123	LR	LR	14 17 07.6	
	comp=Z,363nm,20.8s,baz=270,slow=33						
MDT	Midelt	75.79	304	LR	LR	14 19 16.7	
	comp=Z,447nm,21.1s,baz=120,slow=35						
ARCES	ARCESS Array B	75.98	346	LR	LR	14 21 52.9	
	comp=Z,384nm,20.5s,baz=125,slow=37						
ELIB	Princess Elisa	76.03	193	*d*PcP	PcP	13 47 04.7	-0.5
ESDC	Sonseca Array	76.67	311	LR	LR	14 17 23.3	
	comp=Z,130nm,21.6s,baz=103,slow=33						
JCJ	Chichijima	76.73	62	LR	LR	14 19 24.3	
	comp=Z,134nm,20.8s,baz=13,slow=35						
GUMO	Guam	77.81	76	LR	LR	14 19 56.1	
	comp=Z,178nm,20.5s,baz=262,slow=35						
YAK	Yakutsk	78.22	25	LR	LR	14 22 04.3	
	comp=Z,456nm,21.7s,baz=248,slow=36						
CTA	Charters Tower	78.87	110	LR	LR	14 18 09.8	
	comp=Z,545nm,21.9s,baz=269,slow=33						
PMG	Port Moresby	79.43	99	LR	LR	14 22 56.3	
	comp=Z,241nm,20.4s,baz=274,slow=36						
ASAJ	Asahikawa	79.98	45	LR	LR	14 25 21.0	
	comp=Z,123nm,19.3s,baz=273,slow=38						
TIXI	Tiksi	82.29	16	P	P	13 47 26.2	-0.8
	comp=Z,3.7nm,1.0s,baz=90,slow=24,SNR=13						
TIXI				LR	LR	14 25 05.5	
	comp=Z,460nm,21.5s,baz=181,slow=36						
	comp=Z,3.7nm,1.0s						
TIXI	Tiksi	82.29	16	P	P	13 47 27.1	+0.2
TIXI				IAmb	IAmb	13 47 43.5	
	comp=Z,17nm,1.2s						
SNAA	Sanae	82.88	197	LR	LR	14 17 01.9	
	comp=Z,177nm,19.0s,baz=81,slow=30						
SPITS	Spitsbergen Ar	83.70	351	LR	LR	14 29 18.4	
	comp=Z,113nm,18.4s,baz=115,slow=39						
KRVT	Keravat (AS076	84.27	94	LR	LR	14 23 07.1	
	comp=Z,120nm,21.5s,baz=48,slow=34						
BBTS	Babate	84.69	285	LR	LR	14 25 47.3	
	comp=Z,793nm,19.0s,baz=72,slow=36						
JMIC	Jan Mayen	86.57	341	LR	LR	14 28 57.6	
	comp=Z,181nm,18.2s,baz=61,slow=37						
SEY	Seymchan	88.57	27	LR	LR	14 28 57.2	
	comp=Z,315nm,19.6s,baz=318,slow=36						
QSPA	South Pole Qui	88.87	180	LR	LR	14 23 55.4	
	comp=Z,250nm,18.2s,baz=284,slow=33						
VNDA	Vanda	89.82	167	LR	LR	14 23 32.2	
	comp=Z,361nm,18.9s,baz=258,slow=32						
BORG	Borgarnes	90.59	335	LR	LR	14 30 07.5	
	comp=Z,248nm,20.0s,baz=110,slow=36						
PETK	Petropavlovsk-	90.89	37	LR	LR	14 30 58.5	
	comp=Z,202nm,19.0s,baz=271,slow=37						
HNR	Honiara	92.04	99	LR	LR	14 30 22.2	
	comp=Z,1µm,20.0s,baz=257,slow=36						
DZM	Mont Dzumac	97.69	112	*e*SS	SS	14 06 43.8	-3.8
	comp=Z,167nm,33.1s						
DZM	Mont Dzumac	97.69	112	*e*LR	LR	14 20 14.0	
	comp=Z,770nm,22.2s						
DZM	Mont Dzumac	97.69	112	LR	LR	14 28 42.7	
	comp=Z,464nm,21.6s,baz=246,slow=33						
RPZ	Rata Peaks	98.87	134	LR	LR	14 22 32.1	
	comp=Z,118nm,20.7s,baz=268,slow=29						
YKA	Yellowknife Ar	118.76	1	PKP	PKPdf	13 53 52.7	-1.1
	comp=Z,0.2nm,0.7s,baz=360,slow=1.7,SNR=2.2						
TBI	Tubuai	136.45	126	*e*LR	LR	14 38 09.7	
	comp=Z,1µm,26.2s						
TBI				*e*LR	LR	14 38 09.9	
	comp=Z,3µm,22.2s						
PDAR	Pinedale Array	138.47	357	PKP	PKPdf	13 54 33.0	+0.8
	comp=Z,0.4nm,0.6s,baz=35,slow=3.3,SNR=2.8						
PPT2	Papeete2	138.86	119	*e*LR	LR	14 39 18.0	
	comp=Z,413nm,25.2s						
PPT2				*e*LR	LR	14 39 18.2	
	comp=Z,312nm,34.8s						
NVAR	Mina Array Bea	142.47	8	PKP	PKPdf	13 54 40.8	+1.2
	comp=Z,0.2nm,0.6s,baz=16,slow=1.3,SNR=1.4						
TAOE	Nuku Hiva Isla	150.54	110	*e*LR	LR	14 44 43.7	
	comp=Z,397nm,27.8s						
TXAR	Lajitas Array	150.76	344	PKPbc	PKPbc	13 54 58.7	-0.4
	comp=Z,2.4nm,0.8s,baz=104,slow=1.4,SNR=9.7						

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*AEIC **24** 13:38:08.4±2.6, 51.°76N±0.°09×169.°8W±0.°1, h16^{km}±6^{km}, Error ellipse: s-maj=14.4km s-min=9.1km az=149.0*

*NEIC **24** 13:38:09.1±2.3, 51.°78N±0.°06×169.°8W±0.°1, h27^{km}±9^{km}, mb3.7/7, ML3.6/6, ML3.0(AEIC), Error ellipse: s-maj=13.5km s-min=4.6km az=124.0*

*IDC **24** 13:38:12.7±1.1, 53.°35N×170.°58W, h0^{km}, mb3.7/12, mbtmp3.7/15, ML3.2/3, Error ellipse: s-maj=32.4km s-min=14.0km az=166.0*

ISC 24 13:38:13.4±0.6, **53.°09N**±0.°08×**170.°58W**±0.°04, **h10**^{km}, **n32**, σ**1.^{s}70**/34, **mb3.8**/13, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLES	Cleveland East	0.49	122		Pn	13 38 28.2	+1.7
CLES				IAML		13 38 48.0	
	comp=E,2µm,0.3s						
CLES				IAML		13 38 49.5	
	comp=N,2µm,0.5s						
NIKH	Nikolski High	1.05	96		Pg	13 38 31.6	-1.9
NIKH					Sn	13 38 50.1	+1.3
UNV	Unalaska Valle	2.55	71		Pn	13 38 54.6	-0.2
UNV					Sb	13 39 29.6	-1.0
AKUT	Akutan	3.05	68	Pn	Pn	13 39 01.9	+0.3
AKUT				IAML		13 40 09.8	
	comp=E,50nm,1.4s						
ADK	Adak	3.92	255	Pn	Pn	13 39 12.0	-1.5
ADK				IAML		13 40 04.3	
	comp=E,108nm,3.4s						
SPIA	Saint Paul Isl	4.10	3	Pn	Pg	13 39 31.8	-0.1
P18K	Big Mountain,	10.61	47	Pn	Pn	13 40 50.0	+4.7
Q19K	Cape Douglas,	11.12	52	Pn	Pn	13 40 54.7	+2.3
KDAK	Kodiak Island	11.24	58	Pn	Pn	13 40 52.4	-1.5
	comp=E,0.3nm,0.3s,baz=214,slow=4.8,SNR=14						
KDAK				Sn	Sn	13 42 55.3	-4.2
	comp=E,0.1nm,0.3s,baz=341,slow=21,SNR=1.7						
	comp=E,5.5nm,0.9s						
KDAK	Kodiak Island	11.24	58	Pn	Pn	13 40 52.6	-1.3
ILAR	Eielson Array	16.79	37	Pn	Pn	13 42 04.0	-4.4
	baz=236,slow=12,SNR=1.7						
	comp=E,0.4nm,1.0s						
MCARA	McCarthy VSAT	16.96	50	Pn	Pn	13 42 09.7	-0.8
MCARA				IAmb	IAmb	13 42 42.8	
	comp=Z,8.7nm,1.1s						
SCRK	Sand Creek	17.50	41		P	13 42 18.8	+0.3
I26K	Coal Creek Min	18.43	38	P	P	13 42 29.5	+1.0
I26K				IAmb	IAmb	13 42 53.1	
	comp=Z,3.8nm,1.2s						
EGAK	Eagle	18.95	40	P	Pn	13 42 35.8	+0.8
EGAK				IAmb	IAmb	13 42 53.9	
	comp=Z,5.2nm,1.4s						
PEA0B	Petropavlovsk-	18.97	283	P	Pn	13 42 35.8	+0.5
PETK	Petropavlovsk-	18.97	283	P	P	13 42 35.3	+0.7
	comp=Z,0.5nm,0.3s,baz=93,slow=11,SNR=14						
	comp=Z,1.6nm,0.5s						
BMAR	Burnt Mountain	19.08	31	P	Pn	13 42 39.8	+3.2
EPYK	Eagle Plains	21.28	38	P	P	13 43 00.7	+1.0
EPYK				IAmb	IAmb	13 43 39.6	
	comp=Z,8.7nm,1.4s						
INK	Inuvik	23.16	35	P	P	13 43 18.7	-0.9
	comp=Z,0.7nm,0.4s,baz=226,slow=6.9,SNR=8.2						
	comp=Z,0.7nm,0.4s						
INK	Inuvik	23.16	35	P	P	13 43 20.4	+0.9
INK				IAmb	IAmb	13 43 38.8	
	comp=Z,2.5nm,1.1s						
YKA	Yellowknife Ar	30.33	50	P	P	13 44 24.3	-0.3
	comp=Z,0.5nm,1.0s,baz=273,slow=7.8,SNR=9.4						
	comp=Z,0.5nm,1.0s						
NVAR	Mina Array Bea	38.41	91	P	P	13 45 36.8	+1.7
	comp=Z,0.1nm,0.4s,baz=310,slow=9.9,SNR=1.4						
	comp=Z,0.1nm,0.4s						
PDAR	Pinedale Array	40.99	79	P	P	13 45 57.9	+1.3
	comp=Z,0.2nm,0.6s,baz=316,slow=2.5,SNR=2.3						
	comp=Z,0.2nm,0.6s						
KSRS	Korea Array	44.59	275	P	P	13 46 27.0	+1.5
	comp=Z,0.6nm,0.5s,baz=78,slow=41,SNR=2.4						
	comp=Z,0.6nm,0.5s						
SONM	Songino Array	50.30	300	P	P	13 47 10.6	+0.7
	comp=Z,0.5nm,0.6s,baz=32,slow=6.4,SNR=1.9						
	comp=Z,0.5nm,0.6s						
KURBB	Kurchatov Arra	61.45	317	P	P	13 48 30.4	+0.8
	comp=Z,1.5nm,0.2s,baz=37,slow=6.3,SNR=1.9						
	comp=Z,1.5nm,0.2s						
BVAR	Borovoye Array	62.69	324	P	P	13 48 37.6	-0.3
	comp=Z,0.7nm,0.4s,baz=52,slow=5.7,SNR=6.8						
	comp=Z,0.7nm,0.4s						
MKAR	Makanchi Array	62.77	312	P	P	13 48 38.4	-0.2
	comp=Z,0.6nm,0.9s,baz=38,slow=7.3,SNR=2.4						
	comp=Z,0.6nm,0.9s						
FINES	FINESS Array B	65.05	351	P	P	13 48 50.9	-2.3
	comp=Z,1.1nm,0.8s,baz=20,slow=14,SNR=1.1						
	comp=Z,1.1nm,0.8s						
CMAR	Chiang Mai Arr	75.74	282	P	P	13 49 58.1	-1.2
	comp=Z,0.6nm,0.6s,baz=30,slow=6.2,SNR=5.3						
	comp=Z,0.6nm,0.6s						
ASAR	Alice Springs	90.30	229	P	P	13 51 15.4	+1.1
	comp=Z,0.3nm,0.7s,baz=42,slow=5.1,SNR=4.4						
	comp=Z,0.3nm,0.7s						

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*NEIC **24** 13:39:12.1±1.7, 18.°0S±0.°1×178.°2W±0.°1, h570^{km}±9^{km}, mb4.4/31, Error ellipse: s-maj=21.3km s-min=16.4km az=138.0*

*IDC **24** 13:39:13.1±0.9, 18.°02S×178.°24W, h585^{km}±9^{km}, mb3.6/22, mbtmp4.5/26, Error ellipse: s-maj=16.8km s-min=11.4km az=147.0*

ISC 24 13:39:13.0±0.4, **18.°04S**±0.°09×**178.°19W**±0.°07, **h590**^{km}, **n105**, σ**0.^{s}97**/108, **mb4.3**/37, **1C-1D**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.60	274	P	P	13 40 34.9	-0.2
	394nm,0.7s,baz=137,slow=4.5,SNR=258						
MSVF				S	S	13 41 42.0	+0.1
	31nm,1.1s,baz=160,slow=21,SNR=8.4						
MSVF	Nonsavu	3.60	274	P	P	13 40 35.5	+0.4
AFI	Afiamalu	7.41	57	P	P	13 41 04.8	-1.7
	126nm,0.6s,baz=32,slow=0.7,SNR=22						
AFI				S	S	13 42 34.9	-4.5
	15nm,0.3s,baz=0.5,slow=22,SNR=2.1						
AFI	Afiamalu	7.41	57	P	P	13 41 04.1	-2.4
NIUE	Niue	7.90	99	P	P	13 41 09.8	-1.2
LIFNC	LIFOU	14.02	256	P	P	13 42 09.1	-3.1
PINNC	Pines Island,	14.22	249	P	P	13 42 12.7	-1.4
OUENC	Ouen Island, N	14.71	250	P	P	13 42 17.4	-1.3
DZM	Mont Dzumac	14.99	252	P	P	13 42 19.9	-1.5
	11nm,0.5s,baz=127,slow=18,SNR=22						
DZM	Mont Dzumac	14.99	252	P	P	13 42 20.7	-0.7
ONTNC	Ouen Toro	15.03	251	P	P	13 42 20.7	-1.1
ONTNC				IAmb	IAmb	13 42 56.5	
	comp=Z,26nm,1.0s						
KOUNC	Koumac, New Ca	16.73	259	P	P	13 42 38.0	+0.5
RAR	Rarotonga	17.63	103	P	P	13 42 46.0	+0.3
	comp=Z,9.7nm,0.7s,baz=261,slow=8.1,SNR=4.6						
URZ	Urewera	20.56	191	P	P	13 43 12.3	+0.3
	comp=Z,5.9nm,0.8s,baz=200,slow=17,SNR=2.5						
	comp=Z,5.9nm,0.8s						
MRNZ	Matariki Terra	24.54	197	P	P	13 43 47.2	-0.2
LTZ	Lake Taylor	25.96	196	P	P	13 44 00.6	+0.6
MLZ	Mavora Lakes	29.54	200	P	P	13 44 31.5	+0.4
ARMA	Armidale	30.06	240	P	P	13 44 36.3	+0.4
ARMA				IAmb	IAmb	13 44 37.2	
	comp=Z,11nm,0.8s						
CTAO	Charters Tower	33.63	261	P	P	13 45 06.0	-0.3
CAN	Canberra	33.79	233	P	P	13 45 07.5	+0.1
TOO	Toolangi	37.25	231	P	P	13 45 36.6	+0.7
COEN	Coen	37.32	271	P	P	13 45 36.7	0.0
COEN				IAmb	IAmb	13 45 37.9	
	comp=Z,5.2nm,0.8s						
STKA	Stephens Creek	38.75	241	P	P	13 45 48.3	+0.2
	comp=Z,7.2nm,0.6s,baz=84,slow=9.9,SNR=25						
	comp=Z,7.2nm,0.6s						
STKA	Stephens Creek	38.75	241	P	P	13 45 48.7	+0.6
BBOO	Buckleboo	43.53	241	P	P	13 46 25.9	+0.1
BBOO				IAmb	IAmb	13 46 26.5	
	comp=Z,12nm,1.0s						
WB0	Warramunga Arr	44.78	260	P	P	13 46 34.6	-1.1
WB2	Warramunga Arr	44.80	260	P	P	13 46 35.2	-0.6
WB2				IAmb	IAmb	13 46 39.6	
	comp=Z,10nm,1.2s						
WRA	Warramunga Arr	44.82	260	P	P	13 46 35.2	-0.7
	comp=Z,2.5nm,0.7s,baz=85,slow=6.8,SNR=24						
WRA				PcP	PcP	13 48 05.1	+0.1
	comp=Z,0.8nm,0.7s,baz=95,slow=3.5,SNR=2.6						
	comp=Z,2.5nm,0.7s						
WRA	Warramunga Arr	44.82	260	P	P	13 46 35.3	-0.7
AS31	Alice Springs	44.96	254	P	P	13 46 36.7	-0.3
ASAR	Alice Springs	44.96	254	P	P	13 46 36.7	-0.3
	comp=Z,14nm,0.6s,baz=88,slow=8.6,SNR=161						
ASAR				PcP	PcP	13 48 05.6	+0.2
	comp=Z,0.8nm,0.5s,baz=105,slow=3.6,SNR=4.7						
ASAR				S	S	13 52 31.0	-2.5
	comp=Z,1.1nm,1.0s,baz=91,slow=15,SNR=8.1						
	comp=Z,14nm,0.6s						
FORT	Forrest	50.14	245	P	P	13 47 14.7	-0.8
FORT				IAmb	IAmb	13 47 23.1	
	comp=Z,19nm,1.1s						
MJAR	Matsushiro Arr	68.14	323	P	P	13 49 15.1	-0.2
	comp=Z,6.3nm,0.6s,baz=159,slow=5.7,SNR=27						
	comp=Z,6.3nm,0.6s						
MAJO	Matsushiro	68.14	323	P	P	13 49 15.6	+0.3
MAJO				IAmb	IAmb	13 49 16.2	
	comp=Z,14nm,1.1s						
JHS	Saijyo	70.14	319	P	P	13 49 27.8	+0.5
JNU	Nakatsue	70.38	316	P	P	13 49 27.2	-1.5
	comp=Z,9.1nm,1.0s,baz=132,slow=17,SNR=2.8						
	comp=Z,9.1nm,1.0s						
ASAJ	Asahikawa	71.50	331	P	P	13 49 35.7	+0.7
	comp=Z,5.2nm,0.6s,baz=224,slow=5.4,SNR=13						
	comp=Z,5.2nm,0.6s						
QSPA	South Pole Qui	72.01	180	P	P	13 49 37.9	0.0
PEA0B	Petropavlovsk-	73.86	345	P	P	13 49 48.2	-0.1
PEA0B				IAmb	IAmb	13 49 49.6	
	comp=Z,12nm,0.7s						
PETK	Petropavlovsk-	73.86	345	P	P	13 49 48.4	0.0
	comp=Z,6.9nm,0.6s,baz=133,slow=8.3,SNR=14						
	comp=Z,6.9nm,0.6s						
PETK	Petropavlovsk-	73.86	345	P	P	13 49 48.2	-0.1
KSRS	Korea Array	74.94	318	P	P	13 49 55.3	+0.6
	comp=Z,1.2nm,0.7s,baz=130,slow=6.4,SNR=8.1						
	comp=Z,1.2nm,0.7s						
USRK	Ussuriysk Ar.	76.84	326	P	P	13 50 05.8	+0.7
	comp=Z,2.5nm,0.7s,baz=135,slow=18,SNR=2.4						
	comp=Z,2.5nm,0.7s						
KDAK	Kodiak Island	78.48	14	P	P	13 50 14.1	+0.6
	comp=Z,7.6nm,0.9s,baz=174,slow=3.5,SNR=4.1						
	comp=Z,7.6nm,0.9s						
NVAR	Mina Array Bea	79.37	44	P	P	13 50 20.7	+1.6
	comp=Z,1.0nm,0.8s,baz=221,slow=9.0,SNR=6.1						
	comp=Z,1.0nm,0.8s						
P18K	Big Mountain,	79.41	12	P	P	13 50 18.8	+0.3
P18K				IAmb	IAmb	13 50 19.4	
	comp=Z,9.7nm,0.8s						
BNX	BinXian	80.33	325	⇑P	P	13 50 24.6	+1.1
BNX				pmax	pmax		
	comp=Z,14nm,0.8s						
BNX				pmax	pmax		
	comp=Z,130nm,5.1s						
O19K	Port Alsworth	80.33	12	P	P	13 50 23.2	0.0
O19K				IAmb	IAmb	13 50 24.2	
	comp=Z,16nm,0.8s						
KLR	Kul'dur	80.33	329	P	P	13 50 24.4	+0.9
	comp=Z,1.3nm,0.7s,baz=62,slow=8.5,SNR=4.8						
	comp=Z,1.3nm,0.7s						
SUA	Susitna One	82.22	13	P	P	13 50 33.5	+0.5
SUA				IAmb	IAmb	13 50 33.8	
	comp=Z,7.8nm,0.6s						
K20K	Telida	83.30	11	P	P	13 50 39.1	+0.9
K20K				IAmb	IAmb	13 50 39.6	
	comp=Z,8.6nm,0.8s						
TNA	Tin City	83.71	4	P	P	13 50 40.6	+0.5
TNA				IAmb	IAmb	13 50 41.9	
	comp=Z,5.6nm,1.0s						
N25K	Chitina, Valde	83.77	15	P	P	13 50 41.3	+0.6
N25K				IAmb	IAmb	13 50 42.1	
	comp=Z,8.9nm,0.8s						
SEY	Seymchan	83.95	347	P	P	13 50 41.5	+0.1
	comp=Z,7.8nm,0.6s,baz=143,slow=5.9,SNR=45						
	comp=Z,7.8nm,0.6s						
TRF	Thorofare Moun	84.10	12	P	P	13 50 42.4	0.0
TRF				IAmb	IAmb	13 50 43.3	
	comp=Z,13nm,0.7s						
IMAR	Indian Mountai	85.78	10	P	P	13 50 50.7	+0.4
TXAR	Lajitas Array	85.89	58	P	P	13 50 53.6	+1.9
	comp=Z,0.5nm,0.7s,baz=211,slow=5.2,SNR=4.7						
	comp=Z,0.5nm,0.7s						
IL31		85.97	13	P	P	13 50 50.9	-0.2
ILAR	Eielson Array	85.97	13	P	P	13 50 50.9	-0.3
	comp=Z,1.7nm,0.4s,baz=222,slow=4.9,SNR=45						
	comp=Z,1.7nm,0.4s						
ILAR	Eielson Array	85.97	13	P	P	13 50 51.6	+0.5
M30M	Minto, Yukon	86.70	18	P	P	13 50 55.5	+0.8
M30M				IAmb	IAmb	13 50 56.0	
	comp=Z,4.0nm,0.7s						
DAWY	Dawson	87.16	16	P	P	13 50 57.8	+1.0
PDAR	Pinedale Array	87.30	43	P	P	13 50 59.2	+1.0
	comp=Z,0.8nm,0.6s,baz=237,slow=2.6,SNR=9.2						
	comp=Z,0.8nm,0.6s						
CMAR	Chiang Mai Arr	89.13	290	P	P	13 51 08.4	+1.4
	comp=Z,2.6nm,0.9s,baz=104,slow=2.7,SNR=9.6						
	comp=Z,2.6nm,0.9s						
INK	Inuvik	91.96	15	P	P	13 51 19.1	+0.2
	comp=Z,2.3nm,0.7s,baz=233,slow=4.2,SNR=11						
	comp=Z,2.3nm,0.7s						
INK	Inuvik	91.96	15	P	P	13 51 18.9	0.0
INK				IAmb	IAmb	13 51 19.7	
	comp=Z,3.5nm,0.9s						
SONM	Songino Array	93.79	319	P	P	13 51 28.5	+0.5
	comp=Z,0.5nm,0.6s,baz=107,slow=4.8,SNR=3.5						
	comp=Z,0.5nm,0.6s						
YKA	Yellowknife Ar	94.36	25	P	P	13 51 30.4	+0.3
	comp=Z,0.5nm,0.6s,baz=244,slow=4.6,SNR=10						
	comp=Z,0.5nm,0.6s						
TIXI	Tiksi	96.34	345	P	P	13 51 38.1	-0.6
	comp=Z,1.2nm,0.7s,baz=271,slow=21,SNR=3.6						
	comp=Z,1.2nm,0.7s						
BVAR	Borovoye Array	117.08	321	PKP	PKPdf	13 56 51.4	-0.1
	comp=Z,1.2nm,0.5s,baz=71,slow=0.8,SNR=10						
ARCES	ARCESS Array B	126.48	350	PKP	PKPdf	13 57 08.6	-0.5
	comp=Z,2.1nm,0.7s,baz=57,slow=3.3,SNR=6.3						
BUR08	Bucovina Ar. S	144.82	332	PKPdf	PKPbc	13 57 45.1	+0.8
BR131	Keskin Array S	145.03	315		PKPdf	13 57 45.2	+0.9
BRTR	Keskin Array B	145.03	315	PKP	PKPbc	13 57 46.0	+0.8
	comp=Z,2.1nm,0.4s,baz=72,slow=2.0,SNR=16						
BRTR	Keskin Array B	145.03	315	PKPdf	PKPdf	13 57 45.1	+0.8
OSTC	Ostas	145.58	344	*e*PKP	PKPbc	13 57 47.5	+1.2
CHVC	Chvalec	145.59	344	*e*PKP	PKPbc	13 57 47.2	+0.8
CLL	Collm	145.64	348	PKPdf	PKPbc	13 57 46.5	+0.1
CLL	Collm	145.64	348	⇓*i*PKPbc	PKPbc	13 57 47.1	+0.7
	comp=Z,15nm,0.9s						
DPC	Dobruska-Polom	145.74	343	*e*PKP	PKPbc	13 57 48.0	+1.2
BRG	Berggiesshubel	145.85	346	*i* PKP	PKPbc	13 57 48.0	+1.0
BRG				Amp		13 57 48.8	
	comp=Z,9.0nm,0.9s						
BRG				Amp		14 10 56.0	
	comp=Z,0.2nm,20.6s						
BRG				Amp		14 11 00.0	
	comp=N,0.4nm,16.6s						
BRG				Amp		14 11 01.0	
	comp=E,0.5nm,24.8s						
KRLC	Kraliky	145.86	343	*e*PKP	PKPbc	13 57 48.0	+0.9
MAUC	Maruska	146.18	341	*e*PKP	PKPbc	13 57 49.4	+1.3
PRU	Pruhonice	146.53	345	*e*PKP	PKPbc	13 57 49.8	+0.9
VRAC	Vranov	146.60	342	*e*PKP	PKPbc	13 57 50.0	+0.8
KRUC	Moravsky	146.88	342	*e*PKP	PKPbc	13 57 50.7	+0.8
KHC	Kasperske Hory	147.56	346	*e*PKP	PKPbc	13 57 52.5	+0.8
CKRC	Cesky Krumlov	147.67	344	*e*PKP	PKPbc	13 57 52.9	+0.9
GERES	GERESS Array B	147.80	345	PKPbc	PKPbc	13 57 53.2	+0.8
	comp=E,3.7nm,0.6s,baz=32,slow=3.3,SNR=21						
GERES	GERESS Array B	147.80	345		PKPbc	13 57 52.9	+0.4
CONA	Conrad Observa	148.06	342	*i* PKP	PKPbc	13 57 54.2	+1.1
	comp=E,5.7nm,0.8s						
RONA	Rosalia, Austr	148.13	341	*i* PKP	PKPbc	13 57 54.2	+1.0
	comp=E,12nm,1.5s						
MOA	Molln	148.57	344	*i* PKP	PKPbc	13 57 54.6	+0.4
	comp=E,2.8nm,0.7s						
BIOA	Bad Ischl, Aus	148.88	344	*i* PKP	PKPbc	13 57 55.4	+0.4
	comp=E,6.3nm,0.8s						
SOKA	Soboth	149.43	342	*e*PKP	PKPbc	13 57 56.6	+0.2
	comp=E,3.4nm,0.8s						
KBA	Koelnbreinsper	149.53	344	*i* PKP	PKPbc	13 57 57.4	+0.6
	comp=E,4.8nm,0.6s						
WTTA	Wattenberg	149.76	347	*i* PKP	PKPbc	13 57 58.0	+0.7
	comp=E,9.7nm,0.5s						
MOTA	Moosalm	149.80	347	*i* PKP	PKPbc	13 57 58.0	+0.6
	comp=E,5.3nm,0.7s						
MYKA	Terra Mystica	149.86	344	*i* PKP	PKPbc	13 57 57.3	-0.2
	comp=E,4.2nm,0.5s						
SQTA	Sankt Quirin	149.89	347	*e*PKP	PKPbc	13 57 58.2	+0.6
	comp=E,6.3nm,0.6s						
ABTA	Abfaltersbach	150.04	345	*i* PKP	PKPbc	13 57 57.9	0.0
	comp=E,9.7nm,0.7s						
DAVA	Damuels	150.09	349	*e*PKP	PKPbc	13 57 58.8	+0.7
	comp=E,6.3nm,0.7s						
FETA	Feichten	150.18	348	*i* PKP	PKPbc	13 57 59.0	+0.7
	comp=E,6.1nm,0.8s						
STAL	STALIGIAL	150.45	345		PKPbc	13 57 58.9	+0.1
FNA	Florina	151.77	327		PKPbc	13 58 01.2	-0.7

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*DSN **24** 13:39:52.4±4.9, 33.°91N×46.°75E, h10^{km}, Ms4.1/9, Error ellipse: s-maj=57.0km s-min=12.8km az=158.0*

*ISN **24** 13:39:52.7±1.2, 33.°92N×46.°77E, h6^{km}±5^{km}, ML4.4*

*MOS **24** 13:39:52.1±1.1, 33.°71N×46.°82E, h15^{km}, mb4.6/21, Error ellipse: s-maj=7.5km s-min=4.4km az=110.9*

*NEIC **24** 13:39:53.9±2.2, 33.°86N±0.°08×46.°94E±0.°07, h10^{km}±1^{km}, mb4.6/38, Error ellipse: s-maj=15.7km s-min=6.1km az=31.0*

*TEH **24** 13:39:53.4, 33.°94N×46.°85E, h11^{km}±28^{km}, ML4.1*

*IDC **24** 13:39:58.0±1.7, 33.°73N×46.°86E, h48^{km}±16^{km}, mb4.0/25, mbtmp4.2/37, ML4.0/12, MS3.7/5, Error ellipse: s-maj=15.0km s-min=10.2km az=151.0*

*SGS **24** 13:40:00.4, 33.°68N×46.°50E, h6^{km}, Ml4.7*

*OMAN **24** 13:40:01.8±0.4, 33.°37N×47.°32E, h10^{km}, mb5.8/29, ms4.2/21, Error ellipse: s-maj=15.4km s-min=6.3km az=232.0*

*GII **24** 13:40:04.6±0.0, 33.°77N×46.°79E, h10^{km}*

ISC 24 13:39:52.8±0.5, **33.°77N**±0.°03×**46.°85E**±0.°03, **h9**^{km}±3^{km}, **n378**, σ**2.^{s}18**/441, **mb4.4**/63, **MS3.9**/9, **12C-15D**, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCHF	Cheshme Sefid,	0.53	18	Pg	Pg	13 40 01.3	-2.0
IGHG	Ghaleghazi	0.61	338	Pg	Pg	13 40 03.2	-1.4
KER	Kermanshah	0.66	21	Pg	Pg	13 40 03.6	-2.0
IKOM	Komasi	0.69	53	Pg	Pg	13 40 05.6	-0.5
IKFM	Kafar-mosalman	0.87	106	Pg	Pn	13 40 11.6	+0.4
IKFM				Sg	Sn	13 40 25.7	+1.8
IDHR	Dehrash	1.00	338	Pg	Pg	13 40 09.9	-2.3
IDHR				Sg	Sg	13 40 22.5	-2.8
IBDR	Badra	1.01	230	*e*Pg	Pn	13 40 14.0	+0.9
IBDR				*e*Sg	Sn	13 40 28.0	+0.6
IBDR				AML	AML	13 40 37.1	
	comp=E,9µm,0.5s						
IBDR				AML	AML	13 40 38.4	
	comp=N,8µm,0.7s						
IBZA	Bozab	1.10	50	Pg	Pg	13 40 12.2	-1.7
IDOB	Doab	1.11	89	Pg	Pn	13 40 15.0	+0.2
HSAM	Samen	1.52	73	Pg	Pb	13 40 21.5	+0.1
BHD	Baghdad	2.12	257	*e*Pn	Pb	13 40 30.0	-1.4
BHD				*e*Sn	Sb	13 40 57.0	-0.8
BHD				AML	AML	13 41 10.8	
	comp=E,5µm,0.5s						
RAFI	Al-Rafai	2.13	197	*e*Pn	Pb	13 40 32.0	+0.4

RAFI				*e*Sn	Sg	13 41 02.0	+0.7
RAFI				AML	AML	13 41 18.2	
	comp=N,1µm,0.4s						
RAFI				AML	AML	13 41 30.2	
	comp=E,1µm,0.5s						
HAGD	Aghdareh	2.17	60	Pn	Pb	13 40 31.3	-1.1
IKRK	Kirkuk	2.63	309	*e*Pn	Pn	13 40 35.0	-0.5
IKRK				*e*Sn	Sn	13 41 07.0	-0.6
IKRK				AML	AML	13 41 21.9	
	comp=N,4µm,0.2s						
IKRK				AML	AML	13 41 29.4	
	comp=E,5µm,0.7s						
AHWZ	Ahwaz	2.87	148	Pn	Pb	13 40 42.9	-1.2
AMIS	Naft Sefid	2.94	135	Pn	Pb	13 40 43.7	-1.7
IRAZ	Razeghan	3.02	56	Pn	Pn	13 40 42.9	+1.8
MAHB	Mahabad	3.13	343	Pn	Pn	13 40 43.2	+0.7
IHSH	Hashtrud	3.55	5	Pn	Pn	13 40 49.2	+0.8
IPIR	Pirpir	3.56	107	Pn	Pn	13 40 51.8	+3.3
IQOM	Qom	3.66	72	Pn	Pn	13 40 51.6	+1.8
SHK1	Shahrekord	3.68	112	Pn	Pn	13 40 53.9	+3.8
IMHD	Mahdasht	3.68	58	Pn	Pn	13 40 51.4	+1.3
QAMS	Qamsar	3.79	89	Pn	Pn	13 40 54.8	+3.1
IGZV	Ghazvin	3.81	46	Pn	Pn	13 40 52.7	+0.8
IAZR	Azarshahr	3.97	350	Pn	Pn	13 40 54.3	+0.2
IKLH	Kolahrood	3.98	95	Pn	Pn	13 40 57.1	+2.8
IHSB	Hasanabad	4.02	64	Pn	Pn	13 40 55.6	+1.0
MSL	Mosul	4.04	312	*e*Pn	Pn	13 40 55.0	+0.2
MSL				*e*Sn	Sn	13 41 41.0	-1.2
MSL				AML	AML	13 42 08.1	
	comp=N,1µm,0.6s						
MSL				AML	AML	13 42 09.3	
	comp=E,1µm,0.4s						
QALM	Alamut, Qazvin	4.10	48	Pn	Pn	13 40 57.1	+1.3
ISRB	Sarab	4.10	9	Pn	Pn	13 40 56.5	+0.6
IBRJ	Brojen	4.15	115	Pn	Pn	13 40 59.1	+2.5
IVRN	Varamin	4.22	72	Pn	Pn	13 40 59.3	+1.9
KRSH	Karshahi	4.41	86	Pn	Pn	13 41 02.2	+2.2
KLST	Kelardasht - M	4.41	50	Pn	Pn	13 41 02.1	+1.9
ISFB	Sefidab	4.52	81	Pn	Pn	13 41 03.7	+2.2
IHRS	Heris	4.54	2	Pn	Pn	13 41 02.5	+0.5
IGAR	Gharneh	4.57	106	Pn	Pn	13 41 05.1	+2.7
ISHB	Shabestar	4.62	348	Pn	Pn	13 41 03.8	+0.8
IDMV	Damavand	4.64	66	Pn	Pn	13 41 04.9	+1.5
IZEF	Zefreh	4.67	99	Pn	Pn	13 41 06.8	+3.0
MZPU	Pul - Mazandar	4.70	54	Pn	Pn	13 41 06.1	+2.0
KLNJ	Kolanjah	4.87	123	Pn	Pn	13 41 09.0	+2.4
IMRD	Marand	5.02	350	Pn	Pn	13 41 10.8	+2.3
IRAM	Ramesheh	5.05	111	Pn	Pn	13 41 12.0	+3.0
IPRN	Peran	5.14	60	Pn	Pn	13 41 12.1	+2.1
IFIR	Firoozkooh	5.21	67	Pn	Pn	13 41 14.0	+2.8
SARAR	Arar	5.37	232	P	Pn	13 41 15.9	+2.8
SARAR	Arar	5.37	232	S	Sn	13 42 13.8	-1.2
GEVA	Gevas	5.48	327	Pn	Pn	13 41 14.7	0.0
KFJS2	Khafji	5.56	166	P	Pn	13 41 20.9	+5.1
KFJS2	Khafji	5.56	166	S	Sn	13 42 23.0	+3.2
ISHM	Shahmirzad	5.68	67	Pn	Pn	13 41 19.2	+1.6
ANAR	Anarak	5.78	94	Pn	Pn	13 41 20.8	+1.9
MAKU	Maku	5.84	343	Pn	Pn	13 41 21.1	+1.3
GURO	Guroymak-BITLI	6.16	322		Pn	13 41 25.0	+0.9
IGLO	Ghaloghah	6.34	63	Pn	Pn	13 41 29.6	+2.9
RQBS	RQBS	6.45	187	S	Sn	13 42 39.9	-1.9
RQBS	RQBS	6.45	187	P	Pn	13 41 32.2	+4.2
DSBU	Dashti - Bushe	6.58	144	Pn	Pn	13 41 33.6	+3.8
GNI	Garni	6.59	346	P	Pn	13 41 32.1	+2.0
	comp=E,1.9nm,0.3s,baz=264,slow=6.8,SNR=2.7						
GNI				S	Sn	13 42 47.1	+1.7
	comp=E,26nm,0.7s,baz=156,slow=20,SNR=1.5						
	comp=E,6.9nm,0.5s						
GNI	Garni	6.59	346	P	Pb	13 41 45.4	-2.3
SSKAK	SSKAK	6.73	235	P	Pn	13 41 34.3	+2.6
SSKAK	SSKAK	6.73	235	S	Sn	13 42 42.8	-5.7
WELAS	Turaif	6.97	256	S	Sn	13 42 49.1	-5.5
WELAS	Turaif	6.97	256	P	Pn	13 41 35.4	+0.2
AKT	Akhty	7.73	5	*e*P	Pn	13 41 48.5	+2.9
AKT				*e*S	Sn	13 43 21.2	+7.8
AKT				pmax	pmax		
	comp=Z,11nm,0.8s						
AKT				smax	smax		
	comp=N,5.0nm,0.4s						
AKT				smax	smax		
	comp=E,13nm,0.4s						
ASF	Jabal al Asfar	8.51	262	P	Pn	13 41 57.8	+1.5
	comp=E,1.0nm,0.3s,baz=78,slow=8.5,SNR=8.6						
ASF				S	Sn	13 43 30.4	-2.1
	comp=E,18nm,0.4s,baz=245,slow=14,SNR=7.1						
	comp=E,2.8nm,0.4s						
TKDS	Koohdasht(Taba	8.57	88	Pn	Pn	13 41 59.5	+2.4
SHMA	Al-Shehemyia	8.65	155	P	Pn	13 42 04.1	+5.9
SHMA				S	Sn	13 43 35.1	-0.9
MAK	Makhachkala	9.20	3	*e*P	Pn	13 42 02.6	-3.0
MAK				*e*S	Sn	13 43 46.6	-2.5
MAK				pmax	pmax		
	comp=Z,33nm,0.4s						
MAK				MLR	MLR		
	comp=Z,421nm,11.0s						
SBZV	Sabzevar	9.20	70	Pn	Pn	13 42 08.9	+3.0
ONI	Oni	9.20	344		Pn	13 42 09.5	+3.7
ONI	Oni	9.20	344	P	Pn	13 42 09.5	+3.7
ZEI	Tsey	9.30	346	*e*P	Pn	13 42 11.9	+4.7
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.5s						
GEM	Giv'at Ha'Em	9.36	270	Pn	Pn	13 42 18.4	+11
MMA0	Mount Meron ar	9.60	269	Pn	Pn	13 42 21.9	+11
MMAI	Mount Meron Ar	9.60	269	P	Pn	13 42 13.8	+2.6
	comp=Z,1.4nm,0.3s,baz=79,slow=14,SNR=3.5						
MMAI				S	Sn	13 44 00.5	+1.3
	comp=Z,4.0nm,0.5s,baz=83,slow=15,SNR=1.8						
MMAI				LR	LR	13 46 54.8	
	comp=Z,388nm,18.7s,baz=175,slow=43						
	comp=Z,1.1nm,0.4s						
OFRI	`Ofer	10.01	267	Pn	Pn	13 42 28.3	+12
YTIR	Yattir	10.18	260	Pn	Pn	13 42 30.7	+11
RAYN	Ar Rayn	10.28	187	Pn	Pn	13 42 23.0	+2.4
RAYN	Ar Rayn	10.28	187	P	Pn	13 42 22.7	+2.1
RAYN	Ar Rayn	10.28	187	*i* P	Pn	13 42 22.3	+1.7
	SNR=10						
RAYN	Ar Rayn	10.28	187	P	Pn	13 42 22.6	+2.1
RAYN				S	Sn	13 44 16.5	+0.6
IEMG	Emamgholi	10.28	66	Pn	Pn	13 42 23.0	+2.2
KBZ	Khabaz	10.41	344	P	Pn	13 42 25.8	+3.5
	comp=Z,0.2nm,0.3s,baz=178,slow=7.1,SNR=3.8						
	comp=Z,1.3nm,0.6s						
KVAR	Kislovodsk Arr	10.67	344	P	Pn	13 42 28.8	+2.8
	baz=135,slow=19						
	comp=Z,1.9nm,0.3s						
KIV	Kislovodsk	10.68	344	*e*P	Pn	13 42 27.4	+1.4
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,36nm,11.0s						
HRFI	Mount Harif	10.70	253	Pn	Pn	13 42 36.9	+11
EIL	Elat	10.92	251	P	Pn	13 42 31.5	+2.2
	comp=Z,0.5nm,0.3s,baz=60,slow=11,SNR=4.3						
EIL				S	Sn	13 44 31.2	-0.3
	comp=Z,7.5nm,0.6s,baz=75,slow=15,SNR=0.9						
EIL				LR	LR	13 47 47.9	
	comp=Z,328nm,19.3s,baz=62,slow=43						
	comp=Z,2.0nm,0.4s						
EIL	Elat	10.92	251	Pn	Pn	13 42 40.8	+12
EIL	Elat	10.92	251	Pn	Pn	13 42 41.0	+12
GHWR	Ruwais	11.10	150	P	Pn	13 42 35.6	+3.9
GHWR				P	Pn	13 42 35.6	+3.9
GHWR				S	Sn	13 44 34.7	-1.3
GHWR				S	Sn	13 44 34.7	-1.3
SHME	Shamm	11.14	131	P	Pn	13 42 34.5	+2.2
SHME	Shamm	11.14	131	P	Pn	13 42 34.6	+2.3
UMQ	Umm Al-Quwin	11.23	135	P	Pn	13 42 32.0	-1.5
SOC	Sochi	11.27	333	*e*P	Pn	13 42 34.6	+0.6
SOC				*e*		13 44 42.4	
SOC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SOC				MLR	MLR		
	comp=Z,348nm,13.0s						
BANOM	Banah	11.33	131	*i* P	Pn	13 42 36.2	+1.3
	SNR=14						
BANOM	Banah	11.33	131	P	Pn	13 42 36.5	+1.5
	SNR=15						
BANOM				S	Sn	13 44 38.4	-3.2
AJN	Ajban	11.60	140	P	Pn	13 42 41.0	+2.4
AJN				P	Pn	13 42 41.0	+2.4
AJN				S	Sn	13 44 45.4	-2.8
AJN				S	Sn	13 44 45.4	-2.8
NAZ	Nazwa, Dubai	11.64	136	*i* P	Pn	13 42 41.7	+2.5
	SNR=13						
NAZ	Nazwa, Dubai	11.64	136	P	Pn	13 42 41.9	+2.7
NAZ				S	Sn	13 44 45.2	-4.0
MASF	Masafi	11.64	133	P	Pn	13 42 40.8	+1.6
MASF				S	Sn	13 44 43.5	-5.9
MSFE	Esma-Masafi	11.65	134	*i* P	Pn	13 42 40.7	+1.4
	SNR=7.3						
MZWR	Madinat Zayed	11.72	146	P	Pn	13 42 43.7	+3.4
MZWR				P	Pn	13 42 43.7	+3.4
MZWR				S	Sn	13 44 48.4	-2.8
MZWR				S	Sn	13 44 48.4	-2.8
ASUD	Al Ashush, Dub	11.74	139	*i* P	Pn	13 42 43.3	+2.8
	SNR=8.8						
ASUD	Al Ashush, Dub	11.74	139	P	Pn	13 42 43.2	+2.8
ASUD				S	Sn	13 44 48.7	-2.9
MDH	Madha	11.78	133	P	Pn	13 42 42.3	+1.3
MDH				P	Pn	13 42 42.3	+1.3
MDH				S	Sn	13 44 48.0	-4.7
MDH				S	Sn	13 44 48.0	-4.7
FAQ	Al Faqa, Dubai	11.79	137	P	Pn	13 42 43.5	+2.3
FAQ	Al Faqa, Dubai	11.79	137	P	Pn	13 42 43.7	+2.5
FAQ				P	Pn	13 42 43.7	+2.5
FAQ				S	Sn	13 44 49.0	-3.9
FAQ				S	Sn	13 44 49.0	-3.9
UOSS	Minazif	11.99	135	Pn	Pn	13 42 45.9	+2.0
UOSS	Minazif	11.99	135	P	Pn	13 42 45.8	+1.8
UOSS	Minazif	11.99	135	P	Pn	13 42 45.6	+1.7
UOSS				S	Sn	13 44 51.6	-6.2
HATD	Hatta, Dubai	12.04	135	P	Pn	13 42 46.3	+1.7
HATD	Hatta, Dubai	12.04	135	P	Pn	13 42 46.4	+1.7
HATD				S	Sn	13 44 54.6	-4.4
ASHO	Ashiyiah	12.10	136	*i* P	Pn	13 42 46.9	+1.4
	SNR=12						
ASHO	Ashiyiah	12.10	136	P	Pn	13 42 46.5	+1.0
ASHO				P	Pn	13 42 46.5	+1.0
ASHO				S	Sn	13 44 55.9	-4.7
ASHO				S	Sn	13 44 55.9	-4.7
BR131	Keskin Array S	12.14	303	Pn	Pn	13 42 48.4	+2.3
BR131	Keskin Array S	12.14	303	P	Pn	13 42 48.4	+2.3
BRTR	Keskin Array B	12.14	303	P	Pn	13 42 48.9	+2.8
	comp=Z,0.1nm,0.3s,baz=116,slow=11,SNR=9.8						
BRTR				LR	LR	13 47 57.3	
	comp=Z,274nm,18.5s,baz=138,slow=39						
	comp=Z,1.6nm,0.8s						
BRTR	Keskin Array B	12.14	303	Pn	Pn	13 42 48.0	+1.9
BRTR	Keskin Array B	12.14	303	*e*P	Pn	13 42 50.0	+3.9
MZR	Muzera	12.21	150	*i* P	Pn	13 42 49.9	+3.0
	SNR=18						
MZR	Muzera	12.21	150	P	Pn	13 42 49.7	+2.8
MZR				P	Pn	13 42 49.7	+2.8
MZR				S	Sn	13 45 01.9	-1.2
MZR				S	Sn	13 45 01.9	-1.2
JASK	Jask - Hormozg	12.38	127	P	Pn	13 42 49.1	-0.2
JASK				S	Sn	13 45 01.0	-6.5
ALNE	Al Ain	12.42	139	*i* P	Pn	13 42 52.2	+2.3
	SNR=9.2						
ALNE	Al Ain	12.42	139	P	Pn	13 42 52.1	+2.3
	SNR=5.4						
ALNE				P	Pn	13 42 52.1	+2.3
	SNR=5.4						
ALNE				S	Sn	13 45 05.1	-3.3
ALNE				S	Sn	13 45 05.1	-3.3
SOHO	SOHO	12.80	136	P	Pn	13 42 56.1	+1.1
SOHO	SOHO	12.80	136	P	Pn	13 42 55.9	+0.9
SOHO				P	Pn	13 42 55.9	+0.9
SOHO				S	Sn	13 45 13.3	-4.4
SOHO				S	Sn	13 45 13.3	-4.4
UMZA	Um Al Zommool	13.22	144	P	Pn	13 43 02.4	+1.6
UMZA				P	Pn	13 43 02.4	+1.6
UMZA				S	Sn	13 45 23.8	-4.1
UMZA				S	Sn	13 45 23.8	-4.1
ARQ	Araqi	13.42	138	P	Pn	13 43 04.6	+1.1
	SNR=8.3						
ARQ				P	Pn	13 43 04.6	+1.1
	SNR=8.3						
ARQ				S	Sn	13 45 29.9	-3.0
ARQ				S	Sn	13 45 29.9	-3.0
HOQ	Hoqain	13.68	135	P	Pn	13 43 09.6	+2.6
HOQ				S	Sn	13 45 34.3	-4.8
BIDO	Bidbid	14.21	133	P	Pn	13 43 14.9	+0.5
BIDO				S	Sn	13 45 46.6	-5.5
BSY	Bisya	14.27	138	P	Pn	13 43 16.0	+0.9
BSY				P	Pn	13 43 16.0	+0.9
BSY				S	Sn	13 45 48.7	-4.8
BSY				S	Sn	13 45 48.7	-4.8
SMDO	Samad	14.51	134	P	Pn	13 43 19.6	+1.0
SMDO				P	Pn	13 43 19.6	+1.0
SMDO				S	Sn	13 45 54.3	-5.3
SMDO				S	Sn	13 45 54.3	-5.3
WSAR	Wadi Sarin	14.73	132	P	Pn	13 43 21.9	+0.5
	comp=Z,1.6nm,0.3s,baz=316,slow=12,SNR=12						
WSAR				S	Sn	13 45 59.0	-5.8
	comp=Z,9.4nm,0.8s,baz=151,slow=19,SNR=2.4						
	comp=Z,5.7nm,0.5s						
WSAR	Wadi Sarin	14.73	132	P	Pn	13 43 20.8	-0.6
WSAR				S	Sn	13 45 57.4	-7.4
SIM	Simferopol'	14.87	322	P	P	13 43 31.3	+2.3
SIM				pmax	pmax		
	comp=Z,15nm,0.6s						
NGCH	Negor - Chabah	14.98	120	P	Pn	13 43 23.8	-1.0
NGCH				S	Sn	13 46 01.3	-10
JMDO	Jabal Madar	15.07	136	P	Pn	13 43 26.8	+0.7
JMDO				P	Pn	13 43 26.8	+0.7
WBK	Wadi Bani Khal	15.40	133	P	Pn	13 43 31.5	+1.1
WBK				S	Sn	13 46 19.3	-2.0
MANT	Manisa	15.51	293	P	P	13 43 37.1	+0.7
MANT				IAmb	IAmb	13 43 38.4	
	comp=Z,39nm,1.0s						
JLN	Jalan Bani Buh	16.02	133	P	Pn	13 43 38.7	+0.3
JLN				P	Pn	13 43 38.7	+0.3
MHTO	MHTO	16.10	139	P	Pn	13 43 39.6	+0.2
MHTO				P	Pn	13 43 39.6	+0.2
MHTO				S	Sn	13 46 31.9	-6.1
MHTO				S	Sn	13 46 31.9	-6.1
KARP	Karpathos	16.30	282	P	P	13 43 45.9	+0.9
DQM	DQM	16.75	143	P	Pn	13 43 47.1	-0.6
DQM				P	Pn	13 43 47.1	-0.6
DQM				S	Sn	13 46 50.6	-3.2
DQM				S	Sn	13 46 50.6	-3.2
WHFO	Wadi Hawf	16.96	157	P	Pn	13 43 49.9	-0.5
ABTO	Aybut	17.34	159	P	Pn	13 43 54.8	-0.4
RBK	Rabkut	17.49	156	P	Pn	13 43 56.4	-0.6
SHAO	Shalim	17.54	151	P	P	13 43 58.9	+0.2
DMTO	DMTO	17.56	154	P	Pn	13 43 57.4	-0.5
SANT	Santorini	17.70	284	P	P	13 44 00.9	+0.5
TIRR	Tirgusor	17.81	312	⇑P	P	13 44 02.1	+0.6
TIRR	Tirgusor	17.81	312	P	P	13 44 02.1	+0.6
VRH	Novokhopyorsk	17.82	349	*e*P	Pn	13 44 00.5	-0.4
VRH				pmax	pmax		
	comp=Z,20nm,1.1s						
TPGR	Topolog	18.01	313	⇑P	P	13 44 04.4	+0.5
VORD	Divnogorie	18.05	344	*e*P	Pn	13 44 02.7	-1.1
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
IDI	Anoyia	18.15	281	⇓P	P	13 44 06.5	+1.0
IDI	Anoyia	18.15	281	P	P	13 44 06.8	+1.3
	comp=Z,3.6nm,0.3s,baz=77,slow=18,SNR=25						
	comp=Z,25nm,0.7s						
IDI	Anoyia	18.15	281	P	P	13 44 06.4	+0.9
IDI	Anoyia	18.15	281		P	13 44 05.9	+0.4
IDI				IAmb	IAmb	13 44 09.9	
	comp=Z,28nm,0.7s						
VSR	Storozhevoye	18.32	344	*e*P	Pn	13 44 05.0	-2.0
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
RDO	Rodhopi	18.43	300	P	Pn	13 44 09.8	+1.4
RDO				IAmb	IAmb	13 44 11.6	
	comp=Z,30nm,0.8s						
AKTO	Aktyubinsk	18.57	23	P	Pn	13 44 10.2	+0.1
	comp=Z,0.2nm,0.3s,baz=217,slow=11,SNR=4.8						
	comp=Z,2.8nm,0.8s						
BELG	Belogornoye	18.63	1	P	Pn	13 44 13.5	+2.7
	comp=Z,0.5nm,0.3s,baz=190,slow=15,SNR=4.8						
	comp=Z,25nm,0.9s						
BELG	Belogornoye	18.63	1	*i* P	Pn	13 44 13.7	+3.0
BELG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VORR	Voronezh	18.73	345	*e*P	P	13 44 09.2	-2.5
VORR				pmax	pmax		
	comp=Z,19nm,0.6s						
IMMV	Iera Moni Meta	18.89	282	P	Pn	13 44 15.2	+1.1
ANKY	Antikythira Is	19.44	283	P	Pn	13 44 20.4	-0.3
VILL	Villia	19.53	290	P	Pn	13 44 22.1	+0.2
PLOR	Plostina	19.59	314	⇓P	P	13 44 21.7	+0.4
PLOR	Plostina	19.59	314	P	P	13 44 21.6	+0.4
KTHA	Kythira Island	19.63	284	P	P	13 44 21.6	-0.1
LPSR	Galich'ya Gora	19.67	346	*e*P	P	13 44 18.8	-3.1
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
VLI	Veliai	19.74	285	P	P	13 44 22.2	-0.6
ATAL	Atalanti	19.82	291	P	Pn	13 44 24.9	-0.3
MLR	Muntele Rosu	19.84	312	P	Pn	13 44 26.3	+0.7
	comp=Z,0.5nm,0.3s,baz=99,slow=19,SNR=6.1						
	comp=Z,3.7nm,0.6s						
MLR	Muntele Rosu	19.84	312	P	Pn	13 44 25.6	0.0
MLR	Muntele Rosu	19.84	312	P	Pn	13 44 25.6	0.0
MLR				pmax	pmax		
	comp=Z,11nm,0.9s						
COVR	Voineasa-Covas	19.86	314	⇑P	P	13 44 24.8	+0.7
TESR	Tescani	19.94	316	⇑P	P	13 44 24.3	-0.7
SORM	Soroca	19.95	321	⇑P	P	13 44 23.7	-1.4
SORM	Soroca	19.95	321	P	P	13 44 23.6	-1.4
AXAR	Agios Charalam	20.11	291	P	Pn	13 44 28.4	-0.3
OZUR		20.24	314	⇓P	P	13 44 28.7	+0.5
MTUR	Matau	20.27	311	⇓P	Pn	13 44 29.8	-0.8
MTUR	Matau	20.27	311	P	Pn	13 44 29.7	-0.9
GUR	Goura	20.27	289	P	P	13 44 29.3	+0.5
KNT	Kendrikon	20.35	298	P	P	13 44 28.8	-0.7
VOIR		20.37	311	⇓P	P	13 44 30.5	+0.7
VOIR		20.37	311	P	P	13 44 30.4	+0.7
AGG	Agios Georgios	20.39	292	P	P	13 44 30.8	+0.8
AGG	Agios Georgios	20.39	292	P	Pn	13 44 31.3	-0.8
AGG	Agios Georgios	20.39	292	P	Pn	13 44 31.3	-0.8
AGG				pmax	pmax		
	comp=Z,7.0nm,0.7s						
DOPR	Dopca	20.41	313	⇓P	P	13 44 30.2	+0.1
KLV	Kalavryta, Ach	20.43	289	P	P	13 44 30.2	-0.3
LIT	Litokhoron	20.44	295	P	P	13 44 31.1	+0.7
LIT				IAmb	IAmb	13 44 31.8	
	comp=Z,28nm,1.0s						
LIT	Litokhoron	20.44	295	P	P	13 44 31.2	+0.7
LIT				pmax	pmax		
	comp=Z,28nm,1.0s						
SERG	Sergoula	20.54	290	P	Pn	13 44 32.7	-1.1
ITM	Ithomi	20.56	287	P	P	13 44 31.5	-0.3
ITM	Ithomi	20.56	287	P	P	13 44 31.0	-0.9
ITM				IAmb	IAmb	13 44 32.4	
	comp=Z,40nm,0.8s						
ARR	Arges	20.60	311	⇑P	P	13 44 33.1	+0.9
EFP	Efpalio	20.66	290	P	P	13 44 32.8	0.0
ANX	Ano Chora	20.66	291	P	P	13 44 33.2	+0.2
KK31	Karatay Array	20.69	56	P	Pn	13 44 35.9	+0.4
KK31	Karatay Array	20.69	56	P	Pn	13 44 35.9	+0.4
KK31				pmax	pmax		
	comp=Z,13nm,1.1s						
KKAR	Karatay Array	20.69	56	P	Pn	13 44 35.9	+0.4
KKAR	Karatay Array	20.69	56	P	Pn	13 44 36.2	+0.7
KKAR	Karatay Array	20.69	56	P	Pn	13 44 36.2	+0.7
PYL	PYLOS	20.70	286	P	P	13 44 32.0	-1.3
THL	Klokotos Trika	20.71	293	P	P	13 44 33.7	+0.3
DRO	Drossia	20.77	289	P	P	13 44 35.0	+0.9
EVR	Evrytania	20.79	292	P	P	13 44 35.2	+0.9
PVO	Paravola	20.97	291	P	P	13 44 35.8	-0.4
STIP	Stip	21.00	299	*i* P	P	13 44 34.9	-1.7
LOT	Lotru	21.18	310	⇑P	P	13 44 38.2	-0.4
BURAR	Bucovina Array	21.36	317	⇓P	P	13 44 40.1	-0.3
BURAR	Bucovina Array	21.36	317	P	P	13 44 39.7	-0.7
BURAR	Bucovina Array	21.36	317	P	P	13 44 40.5	+0.1
BUR08	Bucovina Ar. S	21.39	317	P	P	13 44 40.0	-0.7
BUR08				IAmb	IAmb	13 44 51.4	
	comp=Z,24nm,1.4s						
FNA	Florina	21.40	296	P	P	13 44 40.7	-0.2
FNA	Florina	21.40	296	P	P	13 44 41.0	+0.1
FNA	Florina	21.40	296	P	P	13 44 41.0	+0.1
FNA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NYDR	Nydri-Lefkada	21.63	291	P	P	13 44 42.0	-1.2
EVGI	Lefkada island	21.65	290	P	P	13 44 42.5	-1.0
LKD2	Lefkada island	21.67	291	P	P	13 44 43.0	-0.7
PSDA	Pessada-Kefalo	21.67	289	P	P	13 44 42.7	-1.0
VLS	Valsamata	21.67	289	P	P	13 44 43.1	-0.7
FSK	Fiskardo	21.71	290	P	P	13 44 42.6	-1.6
GZR	Gura Zlata	21.80	309	⇓P	P	13 44 44.1	-1.0
KEF4	Livadi, Kephal	21.81	289	P	P	13 44 44.4	-0.8
KBN	Korca	21.81	296	P	P	13 44 47.4	+2.1
KBN				IAmb	IAmb	13 44 49.6	
	comp=Z,46nm,1.0s						
KBN	Korca	21.81	296	P	P	13 44 47.4	+2.1
KBN				pmax	pmax		
	comp=Z,46nm,1.0s						
HERR	Herculane	21.83	308	⇑P	P	13 44 45.9	+0.5
DMLN	Damoulianata-K	21.85	289	P	P	13 44 44.7	-0.9
BOVS	Bovan	21.88	304	⇓P	P	13 44 45.8	-0.1
OHR	Ohrid	21.89	297	*i* P	P	13 44 49.2	+3.0
MARR	Marisel-Cluj	22.14	313	⇓P	P	13 44 48.4	-0.4
MDVR	Moldovita	22.26	307	⇓P	P	13 44 49.5	-0.6
PHP	Peshkopia	22.27	298	P	P	13 44 51.7	+1.5
KEK	Kerkira	22.43	293	P	P	13 44 51.5	-0.4
KEK	Kerkira	22.43	293	P	P	13 44 51.9	+0.1
KEK				IAmb	IAmb	13 45 28.9	
	comp=Z,17nm,0.7s						
DRGR		22.44	313	⇑P	P	13 44 51.6	-0.4
DRGR		22.44	313	P	P	13 44 51.6	-0.4
OBN	Obninsk	22.52	344	⇓*e*P	P	13 44 52.9	+0.2
OBN				*PP	sP	13 44 58.0	+0.9
OBN				*e**SP	pP	13 45 00.6	+4.9
OBN				*e*PPP	PPP	13 45 21.8	
OBN						13 48 49.0	
OBN				S	S	13 49 05.0	+5.4
OBN				SS	SnSn	13 49 36.0	+7.7
OBN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,195nm,17.0s						
TIR	Tirane	22.63	297	P	P	13 44 54.4	+0.4
TIR	Tirane	22.63	297	P	P	13 44 54.4	+0.4
TIR				pmax	pmax		
	comp=Z,33nm,0.7s						
SIRR	Siria	22.87	311	⇑P	P	13 44 56.1	-0.4
MOS	Moscow	22.88	347	*e*P	P	13 45 01.2	+4.7
DIVS	Divibare	23.20	304	P	P	13 44 59.0	-1.1
KSH	Kashi	24.01	68	P	P	13 45 04.6	-3.4
KSH				pP	pP	13 45 09.8	-1.4
KSH				sP	sP	13 45 12.6	0.0
KSH				PP	PnPn	13 45 37.8	+1.3
KSH				sS	S	13 49 21.6	-3.5
KSH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KSH				LR	LR		
	comp=N,520nm,12.7s						
KSH				LR	LR		
	comp=E,1µm,18.1s						
KSH				LR	LR		
	comp=Z,500nm,17.6s						
ARU	Arti	24.06	16	P	P	13 45 10.2	+2.0
	comp=Z,4.9nm,0.7s,baz=182,slow=8.9,SNR=5.5						
	comp=Z,4.9nm,0.7s						
ARU	Arti	24.06	16*d*	*i*P	P	13 44 59.1	-9.0
ARU						13 45 52.8	
ARU				pmax	pmax		
	comp=Z,19nm,1.8s						
MNK	Minsk	24.65	333	*i* P	P	13 45 10.4	-3.2
	comp=E,7.0nm,1.5s						
MNK				*i* P	pP	13 45 13.2	-3.6
	comp=N,30nm,1.0s						
MNK				*i* P	pP	13 45 13.2	-3.6
	comp=Z,28nm,1.4s,baz=140						
MNK				*i* PP	PnPn	13 45 44.4	-0.5
MNK				*i* S	S	13 49 31.1	-3.8
MNK				*i* SS	SnSn	13 50 51.6	+31
MNK				*i* LQ	LQ	13 52 55.6	
MNK				*i* LR	LR	13 54 24.9	
MNK				*i* LRM	MLR	13 55 13.5	
	comp=E,88nm,15.3s						
MNK				*i* LRM	MLR	13 55 31.4	
	comp=Z,238nm,29.4s						
MNK				*i* LRM	MLR	13 55 40.3	
	comp=N,1µm,16.6s						
MNK	Minsk	24.65	333	*i* P	P	13 45 10.4	-3.2
MNK				*i*		13 45 44.4	
MNK				*i* S	S	13 49 31.0	-3.8
MNK				*i* SS	SnSn	13 50 51.5	+31
MNK				pmax	pmax		
	comp=E,7.0nm,1.5s						
MNK				pmax	pmax		
	comp=Z,28nm,1.4s						

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MNK                                    pmax    pmax
       comp=N,30nm,1.0s
MNK                                    MLR     MLR
       comp=E,88nm,15.0s
MNK                                    MLR     MLR
       comp=Z,238nm,29.0s
MNK                                    MLR     MLR
       comp=N,1µm,17.0s
TIP    Timpagrande        24.73 291  ⇓P        P       13 45 14.8 +0.2
TIP    Timpagrande        24.73 291   P        P       13 45 14.3 -0.2
KIRV   Kirov              24.88   3   P        P       13 45 17.8 +2.2
       comp=N,6.2nm,0.6s,baz=186,slow=11,SNR=3.9
       comp=N,6.2nm,0.6s
KIRV   Kirov              24.88   3  i P       P       13 45 16.5 +0.9
MATE   Matera             24.89 295  ⇑P        P       13 45 15.1 -0.7
CEL    Celeste            25.37 289   P        P       13 45 21.6 +1.3
LANS   Liptovska Anna     25.45 315  eP        P       13 45 23.1 +2.1
LANS   Liptovska Anna     25.45 315  eP        P       13 45 23.0 +2.1
CUC    Castrocucco        25.51 293   P        P       13 45 22.8 +1.2
BRVK   Borovoye           25.52  34   P        P       13 45 23.4 +1.9
BRVK                                  IAmb     IAmb    13 45 27.6
       comp=Z,12nm,0.9s
BRVK   Borovoye           25.52  34   P        P       13 45 23.4 +1.9
BRVK                                  pmax     pmax
       comp=Z,12nm,1.0s
VYHS   Vyhne              25.54 314  eP        P       13 45 22.2 +0.5
VYHS                                  pmax     pmax
       comp=Z,7.0nm,1.1s
VYHS   Vyhne              25.54 314  eP        P       13 45 22.2 +0.5
VYHS                                 e                 13 57 50.4
BVAR   Borovoye Array     25.55  34   P        P       13 45 22.7 +0.9
       comp=Z,11nm,0.8s,baz=221,slow=9.5,SNR=19
       comp=Z,11nm,0.8s
SGRT   San Giovanni R     25.75 297   P        P       13 45 22.2 -1.5
SGRT                                  IAmb     IAmb    13 45 45.7
       comp=Z,14nm,0.8s
OJC    Ojcow              25.77 318  eP        P       13 45 23.3 -0.4
OJC    Ojcow              25.77 318   P        P       13 45 23.6 -0.2
OJC                                   IAmb     IAmb    13 45 25.5
       comp=Z,16nm,0.9s
OJC    Ojcow              25.77 318   P        P       13 45 23.6 -0.2
OJC                                   pmax     pmax
       comp=Z,16nm,0.9s
JAVC   Velka Javorina     26.39 314  eP        P       13 45 30.0 +0.5
SMOL   Smolenice          26.40 313  eP        P       13 45 30.1 +0.6
MODS   Modra-Piesok       26.44 312  eP        P       13 45 30.7 +0.8
MODS   Modra-Piesok       26.44 312  eP        P       13 45 30.7 +0.8
MAUC   Maruska            26.51 315  eP        P       13 45 30.3 -0.2
VAE    Valguarnera        26.55 287   P        P       13 45 32.9 +1.8
       comp=Z,12nm,0.7s,baz=122,slow=14,SNR=1.9
       comp=Z,12nm,0.7s
RAFF   Raffo Rosso        26.60 287   P        P       13 45 34.6 +3.1
RONA   Rosalia, Austr     26.81 310  eP        P       13 45 33.1 -0.1
       comp=Z,6.6nm,0.8s
MORC   Moravsky Berou     26.85 315  ⇓P        P       13 45 33.5 -0.1
MORC   Moravsky Berou     26.85 315  eP        P       13 45 33.0 -0.7
MORC   Moravsky Berou     26.85 315   P        P       13 45 33.5 -0.1
INTR   Introdacqua        27.14 297   P        P       13 45 36.1 -0.3
INTR                                  IAmb     IAmb    13 45 46.2
       comp=Z,11nm,1.0s
CONA   Conrad Observa     27.16 311  eP        P       13 45 36.2 -0.2
       comp=Z,6.4nm,1.1s
VRAC   Vranov             27.22 314  eP        P       13 45 36.6 -0.3
KRUC   Moravsky           27.24 313  eP        P       13 45 36.7 -0.4
SOKA   Soboth             27.30 308  eP        P       13 45 38.4 +0.7
       comp=Z,3.8nm,1.0s
KRLC   Kraliky            27.43 316  eP        P       13 45 38.0 -0.8
KRLC   Kraliky            27.43 316  eP        P       13 45 38.0 -0.8
KLMR   Klimovskoe         27.52 352  eP        P       13 45 36.7 -2.7
KLMR                                  AMP              13 45 49.8
       comp=Z,10.0nm,1.2s
KLMR                                  LR       LR      14 09 02.6
KLMR                                  AMP              14 16 28.0
       comp=Z,622nm,14.1s
KLMR   Klimovskoe         27.52 352  eP        P       13 45 36.6 -2.8
KLMR                                  pmax     pmax
       comp=Z,10.0nm,1.2s
CAMP   Campotosto         27.57 298   P        P       13 45 41.3 +1.0
OBKA   Obir               27.57 307  eP        P       13 45 41.3 +1.1
       comp=Z,5.5nm,1.0s
DPC    Dobruska-Polom     27.81 316  eP        P       13 45 41.9 -0.3
DPC    Dobruska-Polom     27.81 316  eP        P       13 45 41.9 -0.3
NRCA   Norcia             27.82 299   P        P       13 45 43.0 +0.6
NRCA                                  IAmb     IAmb    13 45 43.9
       comp=Z,15nm,0.8s
FDMO   Fiordimonte        27.87 299   P        P       13 45 42.6 -0.2
OSTC   Ostas              27.96 316  eP        P       13 45 43.0 -0.5
OSTC   Ostas              27.96 316  eP        P       13 45 43.0 -0.5
CHVC   Chvalec            28.06 316  eP        P       13 45 43.6 -0.9
CHVC   Chvalec            28.06 316  eP        P       13 45 43.6 -0.9
CESX   Cesi               28.19 298   P        P       13 45 46.3 +0.7
CESX                                  IAmb     IAmb    13 45 48.3
       comp=Z,15nm,0.9s
CKRC   Cesky Krumlov      28.44 312   AMS      AMS     14 10 40.0
       comp=Z,300nm,23.6s
KBA    Koelnbreinsper     28.52 308  i P       P       13 45 48.5 -0.3
       comp=Z,3.2nm,0.9s
KURBB  Kurchatov Arra     28.60  44   P        P       13 45 50.1 +1.0
       comp=Z,2.0nm,0.7s,baz=251,slow=8.9,SNR=7.6
       comp=Z,2.0nm,0.7s
KURK   Kurchatov          28.69  44  i P       P       13 45 50.4 +0.4
KURK                                  pmax     pmax
       comp=Z,7.0nm,1.4s
GERES  GERESS Array B     28.82 311   P        P       13 45 50.9 -0.5
       comp=Z,0.4nm,0.6s,baz=124,slow=7.2,SNR=3.5
       comp=Z,0.4nm,0.6s
GERES  GERESS Array B     28.82 311  eP        P       13 45 53.0 +1.6
GERES                                 pmax     pmax
       comp=Z,1.0nm,0.6s
WTTA   Wattenberg         29.70 308  i P       P       13 45 58.3 -0.9
       comp=Z,6.5nm,0.8s
MK31   Makanchi Array     29.74  53   P        P       13 46 00.6 +1.1
MK31                                  IAmb     IAmb    13 46 06.2
       comp=Z,7.9nm,0.8s
MK31   Makanchi Array     29.74  53   P        P       13 46 00.6 +1.1
MK31                                  pmax     pmax
       comp=Z,8.0nm,0.8s
MKAR   Makanchi Array     29.74  53   P        P       13 46 00.3 +0.9
       comp=Z,3.2nm,0.7s,baz=248,slow=11,SNR=19
       comp=Z,3.2nm,0.7s
MKAR   Makanchi Array     29.74  53   P        P       13 46 00.1 +0.6
MKAR   Makanchi Array     29.74  53  i P       P       13 46 00.6 +1.1
MKAR                                  pmax     pmax
       comp=Z,2.0nm,0.5s
WATA   Walderalm          29.76 308  eP        P       13 45 59.6 -0.1
       comp=Z,2.9nm,0.5s
CLL    Collm              30.12 316  eP        P       13 46 03.0 +0.3
CLL                                  ePPP      PPP     13 47 09.0
CLL                                  ePPPP             13 47 17.0
CLL    Collm              30.12 316  eP        P       13 46 03.0 +0.3
FETA   Feichten           30.24 307  eP        P       13 46 03.4 -0.7
       comp=Z,6.4nm,1.0s
FINES  FINESS Array B     30.75 341   P        P       13 46 07.4 -0.6
       comp=Z,1.1nm,0.6s,baz=164,slow=7.7,SNR=4.3
       comp=Z,1.1nm,0.6s
FINES  FINESS Array B     30.75 341  i P       P       13 46 06.5 -1.6
FINES                                 pmax     pmax
       comp=Z,2.0nm,0.8s
KEST   Kesra              30.75 284   P        P       13 46 10.1 +1.5
       comp=Z,9.5nm,1.1s,baz=231,slow=1.0,SNR=4.1
       comp=Z,9.5nm,1.1s
DAVA   Damuels            30.87 307  i P       P       13 46 08.3 -1.2
       comp=Z,5.8nm,0.7s
PYUN   Piuthan            31.41  90  eP        P       13 46 16.1 +1.6
DANN   Dangsing           31.96  90  eP        P       13 46 20.4 +0.9
BNI    Bardonecchia       32.70 302   P        P       13 46 25.8 +0.1
BNI    Bardonecchia       32.70 302   P        P       13 46 25.8 +0.1
BNI                                   pmax     pmax
       comp=Z,45nm,1.0s
GKN    Gorkha             32.81  90  eP        P       13 46 28.1 +1.3
ZALV   Zalesovo Beam      33.45  41   P        P       13 46 31.9 +0.1
       comp=Z,3.5nm,0.6s,baz=242,slow=9.0,SNR=7.3
       comp=Z,3.5nm,0.6s
ZALV   Zalesovo Beam      33.45  41  eP        P       13 46 33.7 +1.8
ZALV                                  pmax     pmax
       comp=Z,4.0nm,0.6s
PKI    Pulchoki           33.60  90  eP        P       13 46 35.1 +1.2
DGZ    Jazzator, Alta     33.74  50  i P       P       13 46 35.3 +0.6
DGZ                                   pmax     pmax
       comp=Z,11nm,1.5s
GUN    Gumba              33.88  89  eP        P       13 46 37.1 +0.8
       comp=Z,38nm,1.0s
JIRN   Jiri               34.22  89  eP        P       13 46 40.2 +0.9
       comp=Z,22nm,0.7s
RAMN   Ramite             34.81  90  eP        P       13 46 44.5 +0.2
       comp=Z,19nm,0.7s
NB2    NORSAR Subarra     35.63 331   P        P       13 46 48.7 -2.0
       comp=Z,16nm,2.0s,baz=126,slow=9.3
ARCES  ARCESS Array B     37.74 348   P        P       13 47 07.6 -1.0
       comp=Z,3.1nm,0.9s,baz=154,slow=8.5,SNR=1.6
       comp=Z,3.1nm,0.9s
TAM    Tamanrasset        37.77 264   P        P       13 47 11.4 +1.8
TAM                                   IAmb     IAmb    13 47 13.2
       comp=Z,14nm,1.4s
TAM    Tamanrasset        37.77 264   P        P       13 47 11.4 +1.8
TAM                                   pmax     pmax
       comp=Z,14nm,1.4s
GOMU   GeErMu             39.06  72   P        P       13 47 22.8 +2.2
GOMU                                  pP       sP      13 47 26.0 +0.8
GOMU                                  sP       pP      13 47 27.8 +3.9
GOMU                                  PP       PnPn    13 49 12.8  +20
GOMU                                  S        S       13 52 51.9  -28
GOMU                                  sS       ScP     13 53 08.3  -11
GOMU                                  SS       SnSn    13 55 04.3  -67
GOMU                                  pmax     pmax
       comp=Z,2.0nm,0.5s
GOMU                                  pmax     pmax
       comp=Z,70nm,4.7s
GOMU                                  LR       LR
       comp=N,610nm,13.5s
GOMU                                  LR       LR
       comp=E,360nm,14.8s
GOMU                                  LR       LR
       comp=Z,620nm,15.3s
ESDC   Sonseca Array      40.71 293   P        P       13 47 33.1 -0.7
       comp=Z,6.5nm,1.0s,baz=73,slow=9.1,SNR=14
       comp=Z,6.5nm,1.0s
ESDC   Sonseca Array      40.71 293   P        P       13 47 33.8  0.0
NRIK   Noril'sk           42.16  20   P        P       13 47 45.7 +0.5
       comp=Z,0.8nm,0.3s,baz=210,slow=14,SNR=1.8
       comp=Z,0.8nm,0.3s
MVO    Moncorvo           42.81 296  eP        P       13 47 50.8 -0.3
PVRL   Vila Real          43.31 296  eP        P       13 47 55.0 -0.1
PBAR   Barrancos          43.32 292  eP        P       13 47 54.9 -0.2
POLO   Lamas de Olo       43.36 297  eP        P       13 47 55.1 -0.4
POLO                                  A        A       13 48 00.6
       comp=Z,21nm,1.6s
PCBR   Castelo Branco     43.36 294  eP        P       13 47 55.4  0.0
PESTR  Estremoz           43.62 293  eP        P       13 47 57.6 +0.1
PGAV   Gavieira, Arco     43.62 298  eP        P       13 47 57.8 +0.1
TOA0   Torodi Ar. Sit     45.79 254   P        P       13 48 15.2 +0.2
TOA0                                  IAmb     IAmb    13 48 16.5
       comp=Z,4.8nm,0.9s
TORD   Torodi Ar. Bea     45.79 254   P        P       13 48 16.2 +1.1
       comp=Z,7.3nm,0.5s,baz=128,slow=30,SNR=2.6
       comp=Z,7.3nm,0.5s
SONM   Songino Array      46.11  54   P        P       13 48 17.6 +0.1
       comp=Z,0.2nm,0.5s,baz=262,slow=9.9,SNR=1.1
SONM                                  PcP      PcP     13 49 52.3 -1.2
       comp=Z,0.4nm,0.6s,baz=259,slow=1.5,SNR=3.0
SONM                                  LR       LR      14 10 49.6
       comp=Z,1µm,18.6s,baz=221,slow=40
SPITS  Spitsbergen Ar     46.42 352   P        P       13 48 19.7 +0.4
SPITS                                 pmax     pmax
       comp=Z,58nm,1.5s
CMAR   Chiang Mai Arr     48.71  95   P        P       13 48 37.4 -0.5
       comp=Z,0.9nm,0.7s,baz=292,slow=8.0,SNR=7.9
       comp=Z,0.9nm,0.7s
CMAR   Chiang Mai Arr     48.71  95  eP        P       13 48 37.8 -0.1
CMAR                                  pmax     pmax
       comp=Z,1.0nm,0.6s
OPO    Ambohidratompo     52.05 180   LR       LR      14 12 47.0
       comp=Z,104nm,18.3s,baz=202,slow=38
DBIC   Dimbokro           54.78 253   P        P       13 49 23.8 +0.5
       comp=Z,2.3nm,0.4s,baz=39,slow=6.4,SNR=7.8
       comp=Z,2.3nm,0.4s
HEH    HeiHe              59.21  47  eP        P       13 49 52.0 -2.2
HEH                                   pmax     pmax
       comp=Z,6.0nm,1.5s
HEH                                   pmax     pmax
       comp=Z,110nm,5.6s
KLR    Kul'dur            62.21  48   P        P       13 50 13.9 -0.6
       comp=Z,0.4nm,0.4s,baz=263,slow=8.1,SNR=1.8
       comp=Z,0.4nm,0.4s
KLR    Kul'dur            62.21  48   P        P       13 50 14.0 -0.6
KSRS   Korea Array        64.03  61   P        P       13 50 26.2 -0.7
       comp=Z,0.8nm,0.6s,baz=288,slow=7.6,SNR=4.3
       comp=Z,0.8nm,0.6s
BOSA   Boshof             65.33 201   P        P       13 50 34.9 -0.5
       comp=Z,5.7nm,0.9s,baz=39,slow=5.2,SNR=4.3
       comp=Z,5.7nm,0.9s
BILL   Bilibino           68.98  21⇑iP         P       13 50 55.3 -2.8
BILL                                 e*PP      pP      13 50 58.0 -3.5
BILL                                 i *SP     sP      13 51 04.9 +2.1
BILL                                 e                 13 51 20.0
BILL                                  pmax     pmax
       comp=Z,2.0nm,0.9s
BILL                                  MLR      MLR
       comp=Z,97nm,18.0s
A36M   Sachs Harbour      74.39 357            P       13 51 29.8 -0.7
A36M                                  IAmb     IAmb    13 51 40.0
       comp=Z,6.3nm,0.8s
SCHQ   Schefferville      75.07 327   P        P       13 51 34.5 -0.3
       comp=Z,2.5nm,0.7s,baz=33,slow=3.1,SNR=6.9
       comp=Z,2.5nm,0.7s
SCHQ   Schefferville      75.07 327   P        P       13 51 34.3 -0.4
SCHQ                                  IAmb     IAmb    13 51 54.0
       comp=Z,9.0nm,1.4s
INK    Inuvik             78.24   0   P        P       13 51 53.0 +0.6
       comp=Z,1.3nm,0.8s,baz=14,slow=6.9,SNR=3.6
       comp=Z,1.3nm,0.8s
INK    Inuvik             78.24   0   P        P       13 51 53.0 +0.6
H21K   Melozitna Rive     79.73   8   P        P       13 52 00.5 -0.2
H21K                                  IAmb     IAmb    13 52 02.3
       comp=Z,11nm,1.5s
H23K   Yukon River        79.92   7   P        P       13 52 01.7 -0.1
ILAR   Eielson Array      81.20   6   P        P       13 52 07.6 -1.0
       comp=Z,0.5nm,0.6s,baz=321,slow=4.8,SNR=5.8
       comp=Z,0.5nm,0.6s
SHEM   Shemya Is, Ala     82.39  29   LR       LR      14 31 58.2
       comp=Z,61nm,21.7s,baz=7.0,slow=38
YKA    Yellowknife Ar     82.92 351   P        P       13 52 16.5 -1.1
       comp=Z,1.5nm,0.8s,baz=15,slow=5.5,SNR=22
       comp=Z,1.5nm,0.8s
DLBC   Dease Lake         88.11 358   P        P       13 52 43.5 -0.1
       comp=Z,5.3nm,1.1s,baz=20,slow=11,SNR=3.6
       comp=Z,5.3nm,1.1s
WRA    Warramunga Arr     98.82 108   P        P       13 53 32.1 -1.3
       comp=Z,0.3nm,0.8s,baz=317,slow=4.0,SNR=2.1
       comp=Z,0.3nm,0.8s
ASAR   Alice Springs     100.46 111   P        Pdif    13 53 40.9 +0.2
       comp=Z,0.2nm,0.7s,baz=312,slow=4.6,SNR=1.5
```

IDC 24 14:37:25.7±2.6**, 5°.81S**×**130°.81E, h0**^{km}**, mb3.5**/1**,**
mbtmp3.3/3**, ML3.1**/2**, Error ellipse: s-maj=151.0km**
s-min=15.7km az=75.0, Banda Sea

```
Code   Station Name        Δ°   AZ°   Phase ID            Time     Res
                                      Op       ISC     h  m  s     ISC
WRA    Warramunga Arr     14.47 167   Pn       Pn      14 40 53.6 +1.7
       0.1nm,0.3s,baz=348,slow=13,SNR=16
WRA                                   Sn       Sn      14 43 28.0 -5.2
       0.3nm,0.3s,baz=312,slow=9.0,SNR=8.8
       0.4nm,0.5s
ASAR   Alice Springs      18.01 171   P        P       14 41 38.8 +0.6
       baz=352,slow=10,SNR=1.7
ASAR                                  S        Sn      14 44 59.9 +0.6
       0.5nm,0.6s,baz=356,slow=26,SNR=4.6
       0.4nm,0.8s
MKAR   Makanchi Array     67.68 326   P        P       14 48 24.7 -0.1
       0.2nm,0.4s,baz=114,slow=8.1,SNR=6.1
       0.2nm,0.4s
```

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*WEL **24** 14:40:21.2±0.5, 42°S±4°×17°4E±°, h11^{km}±4^{km}, M3.0/24,*
ML3.3/26, MLv3.0/24, Error ellipse: s-maj=0.0km
s-min=0.0km az=150.6, confirmed
*NOU **24** 14:40:25.6, 42°.00S×173°.61E, h14^{km}, MLv3.7/8, South*
Island, New Zealand
ISC 24 14:40:20.6±1.1**, 41°.97S**±0°.03×**174°.10E**±0°.03**, h13**^{km}±10^{km}**,**
n80, σ0^{s}.97/85**, Cook Strait**

```
Code   Station Name        Δ°   AZ°   Phase ID            Time     Res
                                      Op       ISC     h  m  s     ISC
CMWZ   Cape Campbell       0.23  21   P        Pb      14 40 27.0 +0.3
BSWZ   Blackbirch Sta      0.30 326   P        Pg      14 40 26.9 +0.1
BSWZ                                  S        Sg      14 40 30.4 -0.6
TUWZ   Tuamarina           0.55 347   P        Pg      14 40 31.5 +0.2
TUWZ                                  S        Sg      14 40 38.4 -0.2
KHZ    Kahutara            0.62 223   P        Pn      14 40 35.1 +0.1
KHZ    Kahutara            0.62 223   P        Pn      14 40 35.1 +0.1
TCW    Tory Channel        0.77  10   P        Pb      14 40 35.5 -0.2
WEL    Wellington          0.84  36   P        Pn      14 40 38.4 +0.2
THZ    Tophouse            0.92 282   P        Pg      14 40 38.7 +0.4
THZ                                   S        Sb      14 40 50.1 -0.5
NNZ    Nelson              0.92 324   P        Pb      14 40 38.1 -0.3
NNZ                                   S        Sb      14 40 49.9 -0.7
PLWZ   Palliser            0.95  66   P        Pn      14 40 40.0 +0.4
CAW    Cannon Point        1.12  40   P        Pg      14 40 42.6 +0.5
CAW                                   S        Sg      14 40 58.2 +1.5
PAWZ   Paruwai Farm        1.15  60   P        Pb      14 40 42.6 +0.3
MRNZ   Matariki Terra      1.16 299   P        Pg      14 40 42.8 -0.1
DUWZ   D'Urville Isla      1.17 353   P        Pn      14 40 42.3 -0.3
KIW    Kapiti Island       1.26  29   P        Pg      14 40 44.8  0.0
TKNZ   Takaka Hill         1.27 317   P        Pb      14 40 44.2 -0.1
GVZ    Greta Valley S      1.28 218   P        Pg      14 40 45.2 +0.1
TRWZ   Traveller           1.31  65   P        Pn      14 40 44.5 -0.1
MTW    Mount Morrison      1.32  53   P        Pn      14 40 44.9 +0.1
OGWZ   Otaki Gorge         1.40  35   P        Pb      14 40 46.4 -0.1
HOWZ   Holdsworth Sta      1.50  45   P        Pn      14 40 47.3 +0.1
LTZ    Lake Taylor         1.58 238   P        Pb      14 40 49.5 -0.2
TMWZ   Te Maipa            1.59  58   P        Pn      14 40 48.3 -0.2
AMCZ   Amberley            1.62 221   P        Pb      14 40 49.6 -0.7
QRZ    Quartz Range        1.64 313   P        Pb      14 40 50.8  0.0
QRZ    Quartz Range        1.64 313   P        Pb      14 40 50.7  0.0
MRZ    Mangatainoka R      1.71  41   P        Pn      14 40 50.3 +0.2
DSZ    Denniston Nort      1.73 277   P        Pb      14 40 52.2 -0.1
TIWZ   Tintock             1.79  49   P        Pn      14 40 51.0 -0.2
PRWZ   Pori Road           1.99  46   P        Pn      14 40 53.8 -0.2
POWZ   Post Office Ro      2.01  39   P        Pn      14 40 54.5 +0.2
MQZ    McQueen's Vall      2.04 211   P        Pn      14 40 54.2 -0.4
OXZ    Oxford              2.04 228   P        Pn      14 40 54.8 +0.1
BFZ    Birch Farm          2.06  52   P        Pn      14 40 54.2 -0.7
AKCZ   Akaroa Harbour      2.10 204   P        Pn      14 40 55.7 +0.3
INZ    Inchbonnie          2.11 248   P        Pn      14 40 56.8 +1.2
RACZ   Rakaia              2.28 219   P        Pn      14 40 58.0 +0.2
DVHZ   Dannevirke          2.28  44   P        Pn      14 40 57.2 -0.7
WAZ    Wanganui            2.31  17   P        Pb      14 41 02.4 +0.4
TSZ    Takapari Road       2.37  37   P        Pn      14 40 59.0 -0.1
MHCZ   Mount Hutt          2.44 229   P        Pn      14 40 60.0 -0.2
LREZ   Lake Rotokare       2.51   5   P        Pb      14 41 06.5 +1.0
WACZ   Wakanui South       2.58 219   P        Pn      14 41 02.2 +0.2
PREZ   Palmer Road         2.62   1   P        Pb      14 41 07.6 +0.2
KHEZ   Kahui Hut           2.67 359   P        Pb      14 41 08.5 +0.2
KHEZ   Kahui Hut           2.67 359   P        Pb      14 41 08.0 -0.3
NEZ    North Egmont        2.69 360   P        Pb      14 41 08.4 -0.2
NBEZ   Newall Road No      2.70 356   P        Pg      14 41 10.9 -1.4
WVZ    Waitaha Valley      2.73 245   P        Pn      14 41 05.2 +1.2
PKE    Pukeiti             2.77 358   P        Pb      14 41 08.2 -1.7
PKVZ   Pokaka              2.83  20   P        Pb      14 41 11.9 +0.9
RPZ    Rata Peaks          2.84 231   P        Pn      14 41 06.2 +0.5
RPZ    Rata Peaks          2.84 231   P        Pn      14 41 06.0 +0.4
MOVZ   Moawhango           2.85  27   P        Pb      14 41 11.2 -0.1
WNVZ   Wahianoa            2.87  24   P        Pb      14 41 08.9 -2.8
TRVZ   Turoa               2.88  23   P        Pb      14 41 11.5 -0.5
VRZ    Vera Road           2.88  10   P        Pb      14 41 09.9 -1.9
BHHZ   Black Hill Sta      2.89  32   P        Pn      14 41 06.9 +0.6
ARCZ   Arundel             2.92 226   P        Pn      14 41 07.1 +0.3
TUVZ   Tukino              2.94  24   P        Pb      14 41 10.2 -2.7
NGZ    Ngauruhoe           3.01  23   P        Pb      14 41 14.0 -0.1
SNVZ   South Ngauruho      3.01  23   P        Pb      14 41 13.0 -1.2
OTVZ   Oturere             3.04  24   P        Pb      14 41 14.7  0.0
NNVZ   North Ngauruho      3.06  23   P        Pn      14 41 10.7 +2.0
WTVZ   West Tongariro      3.06  22   P        Pb      14 41 14.5 -0.5
ETVZ   East Tongariro      3.08  24   P        Pb      14 41 15.0 -0.3
TMVZ   Te Maari            3.10  24   P        Pb      14 41 13.4 -2.2
GCSZ   Gaunt Creek Bo      3.10 243   P        Pn      14 41 10.8 +1.7
NTVZ   North Tongarir      3.10  23   P        Pb      14 41 16.5 +0.8
TMZ    Timaru              3.31 222   P        Pn      14 41 12.2  0.0
BKZ    Black Stump Fm      3.34  34   P        Pb      14 41 21.7 +2.1
HIZ    Hauiti              3.50  10   P        Pb      14 41 20.1 -2.2
HIZ    Hauiti              3.50  10   P        Pb      14 41 20.0 -2.2
FOZ    Fox Glacier         3.52 242   P        Pn      14 41 16.5 +1.5
TLZ    Tolley Road         3.79  17   P        Pn      14 41 21.0 +2.3
ODZ    Otahua Downs        3.98 218   P        Pn      14 41 21.6 +0.4
ODZ    Otahua Downs        3.98 218   P        Pn      14 41 20.9 -0.3
JCZ    Jackson Bay         4.43 240   P        Pn      14 41 29.1 +1.5
JCZ    Jackson Bay         4.43 240   P        Pn      14 41 28.9 +1.3
EAZ    Earnscleugh         4.77 225   P        Pn      14 41 32.3 +0.1
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*IDC **24** 14:40:15.7±2.1, 0°.43S×98°.58E, h0^{km}, mb3.9/8,*
mbtmp3.9/9, ML4.4/1, Error ellipse: s-maj=70.7km
s-min=17.8km az=63.0
ISC 24 14:40:20.5±2.3**, 0°.4S**±0°.2×**98°.6E**±0°.5**, h32**^{km}**, n15, σ0^{s}.79**/9**,**
mb4.0/8**, Southern Sumatera**

```
Code   Station Name        Δ°   AZ°   Phase ID            Time     Res
                                      Op       ISC     h  m  s     ISC
CMAR   Chiang Mai Arr     18.76   1   P        Pn      14 44 38.2 +0.6
       0.5nm,0.3s,baz=189,slow=11,SNR=14
       1.4nm,0.5s
H08S2  Diego Garcia H     26.99 254   T        T       15 13 27.0
       baz=76,slow=75,SNR=2554
H08S3  Diego Garcia H     27.00 254   T        T       15 13 32.6
       baz=76,slow=75,SNR=3505
H08S1  Diego Carcia H     27.01 254   T        T       15 13 31.8
       baz=76,slow=75,SNR=2877
H01W3  Cape Leeuwin H     37.24 159   T        T       15 26 45.1
       baz=334
H01W2  Cape Leeuwin H     37.25 159   T        T       15 26 46.7
       baz=334
H01W1  Cape Leeuwin H     37.25 159   T        T       15 26 42.0
       baz=334
WRA    Warramunga Arr     40.01 121   P        P       14 47 52.2 -0.5
       0.5nm,0.6s,baz=302,slow=8.9,SNR=7.3
       0.5nm,0.6s
ASAR   Alice Springs      41.32 127   P        P       14 48 03.5 -0.1
       0.5nm,0.6s,baz=297,slow=7.8,SNR=10
       0.5nm,0.6s
KSRS   Korea Array        46.42  33   P        P       14 48 44.7 +0.5
       1.0nm,0.7s,baz=221,slow=8.1,SNR=4.1
       1.0nm,0.7s
SONM   Songino Array      48.54   7   P        P       14 49 01.2 +0.5
       3.1nm,0.6s,baz=186,slow=8.8,SNR=13
       3.1nm,0.6s
MKAR   Makanchi Array     49.14 345   P        P       14 49 05.1 -0.2
       1.3nm,0.6s,baz=150,slow=8.0,SNR=18
       1.3nm,0.6s
STKA   Stephens Creek     51.25 132   P        P       14 49 22.1 +0.6
       0.5nm,0.3s,baz=311,slow=6.4,SNR=4.6
       0.5nm,0.3s
USRK   Ussuriysk Ar.      53.46  30   P        P       14 49 36.1 -1.5
       1.5nm,0.7s,baz=238,slow=11,SNR=4.5
       1.5nm,0.7s
ZALV   Zalesovo Beam      55.37 350   P        P       14 49 51.0 -0.4
       1.2nm,0.7s,baz=163,slow=4.2,SNR=6.0
       1.2nm,0.7s
```

ROM 24 14:57:51.6±0.0**, 42°.723N**±0°.003×**13°.200E**±0°.004**,**
h11^{km}**, Md0.7**/4**, 2C-2D, Error ellipse: s-maj=0.3km**
s-min=0.2km az=247.0, Central Italy

```
Code   Station Name        Δ°   AZ°   Phase ID            Time     Res
                                      Op       ISC     h  m  s     ISC
T1214  Arquata del Tr      0.04  11   AML      AML
       comp=N,2625µm,0.2s
T1214                                 AML      AML
       comp=E,454µm,0.8s
T1214                                 AML      AML
       comp=N,465µm,0.2s
T1214                                 AML      AML
       comp=E,405µm,0.1s
T1214                                 AML      AML
       comp=N,443µm,0.2s
T1214                                 AML      AML
       comp=E,3500µm,0.3s
T1214                                 AML      AML
       comp=N,2870µm,0.2s
T1214                                 AML      AML
       comp=E,3035µm,0.3s
T1218  Civita (PG)         0.08 229   P        Pg      14 57 54.6 +0.4
T1218                                 S        Sg      14 57 56.5 +0.4
T1218                                 AML      AML
       comp=N,89500µm,0.4s
T1218                                 AML      AML
       comp=N,72500µm,0.5s
T1218                                 AML      AML
       comp=E,30650µm,0.2s
T1218                                 AML      AML
       comp=N,73050µm,0.5s
T1218                                 AML      AML
       comp=E,32200µm,0.2s
T1218                                 AML      AML
```

```
      comp=N,89250µm,0.4s
T1218                             AML   AML
      comp=N,89550µm,0.4s
T1218                             END
T1212 Cascia, Frazio     0.12 284 ⇑P    Pg    14 57 55.2 +0.5
T1212                             S     Sg    14 57 57.4 +0.5
T1212                             AML   AML
      comp=E,6640µm,0.6s
T1212                             AML   AML
      comp=E,6420µm,0.6s
T1212                             AML   AML
      comp=N,4030µm,0.9s
T1212                             AML   AML
      comp=N,4000µm,1.5s
T1212                             AML   AML
      comp=E,6415µm,0.6s
T1212                             AML   AML
      comp=E,6640µm,0.6s
T1212                             AML   AML
      comp=N,5390µm,1.2s
T1212                             AML   AML
      comp=E,6420µm,0.6s
T1212                             AML   AML
      comp=N,5435µm,1.2s
T1212                             END
NRCA  Norcia             0.13 330 ⇑P    Pg    14 57 55.2 +0.4
NRCA                              S     Sg    14 57 57.4 +0.3
NRCA                              AML   AML
      comp=E,40700µm,0.4s
NRCA                              AML   AML
      comp=N,31200µm,0.1s
NRCA                              AML   AML
      comp=E,44350µm,0.5s
NRCA                              AML   AML
      comp=N,33600µm,0.5s
NRCA                              AML   AML
      comp=E,40700µm,0.4s
NRCA                              AML   AML
      comp=N,31200µm,0.1s
T1245 Castelsantange     0.13 356 P     Pg    14 57 55.4 +0.5
T1245                             S     Sg    14 57 58.3 +0.9
T1245                             AML   AML
      comp=E,11755µm,0.6s
T1245                             AML   AML
      comp=N,13600µm,0.7s
T1245                             AML   AML
      comp=E,11750µm,0.6s
T1245                             AML   AML
      comp=N,13850µm,0.7s
T1245                             AML   AML
      comp=N,13600µm,0.7s
T1245                             AML   AML
      comp=E,11850µm,0.7s
MC2   Monte Cornacci     0.19 358 P     Pg    14 57 56.4 +0.5
MC2                               S     Sg    14 57 59.9 +1.0
T1217 Poggiodomo (PG     0.20 267 P     Pg    14 57 56.5 +0.6
T1217                             S     Sg    14 58 00.0 +1.1
T1217                             AML   AML
      comp=E,3675µm,0.8s
T1217                             AML   AML
      comp=N,5245µm,0.3s
T1217                             AML   AML
      comp=E,3675µm,0.9s
T1217                             AML   AML
      comp=N,5220µm,0.3s
T1217                             AML   AML
      comp=E,3035µm,0.9s
T1217                             AML   AML
      comp=N,5245µm,0.4s
T1217                             AML   AML
      comp=N,5215µm,0.3s
T1217                             AML   AML
      comp=E,3040µm,0.8s
T1217                             AML   AML
      comp=N,5240µm,0.3s
MMO1  Montemonaco        0.20  28 P     Pg    14 57 56.4 +0.4
MMO1                              S     Sg    14 58 00.1 +1.2
RM33  Pellescritta (     0.21 177 P     Pg    14 57 56.8 +0.6
RM33                              S     Sg    14 58 00.4 +1.1
RM33                              AML   AML
      comp=N,3435µm,1.1s
RM33                              AML   AML
      comp=E,3985µm,1.2s
RM33                              AML   AML
      comp=N,3440µm,1.0s
RM33                              AML   AML
      comp=E,3925µm,1.2s
RM33                              AML   AML
      comp=N,3485µm,1.0s
T1216 Preci, Frazion     0.21 322 P     Pg    14 57 56.8 +0.6
T1216                             S     Sg    14 58 00.5 +1.2
T1216                             AML   AML
      comp=E,3900µm,0.3s
T1216                             AML   AML
      comp=N,5355µm,0.3s
T1216                             AML   AML
      comp=E,3905µm,0.3s
T1216                             AML   AML
      comp=N,5360µm,0.3s
T1241 Roccafluvione,     0.22  52 ⇓P    Pg    14 57 56.0  -0.3
T1241                             AML   AML
      comp=E,5295µm,0.9s
T1241                             AML   AML
      comp=N,3970µm,0.3s
T1241                             AML   AML
      comp=N,4080µm,0.3s
T1241                             AML   AML
      comp=E,5295µm,0.9s
T1241                             AML   AML
      comp=N,3970µm,0.3s
T1241                             AML   AML
      comp=E,5040µm,0.9s
T1241                             AML   AML
      comp=E,3345µm,0.4s
T1241                             AML   AML
      comp=N,3600µm,0.2s
T1241                             AML   AML
      comp=E,2925µm,0.2s
T1241                             AML   AML
      comp=N,3530µm,0.2s
FEMA  Monte Fema         0.26 335 AML   AML
      comp=N,4610µm,0.3s
FEMA                              AML   AML
      comp=E,6555µm,0.3s
T1256 Bolognola (MC)     0.28   4 AML   AML
      comp=E,2660µm,0.5s
T1256                             AML   AML
      comp=N,3095µm,1.3s
T1247 Pizzolo (AQ)       0.29 165 AML   AML
      comp=E,2405µm,0.2s
T1247                             AML   AML
      comp=N,3265µm,1.1s
TERO  Teramo             0.32 108 P     Pg    14 57 58.4 +0.4
TERO                              S     Sg    14 58 03.2 +1.0
TERO                              AML   AML
      comp=E,1240µm,0.3s
TERO                              AML   AML
      comp=N,1880µm,0.5s
TERO                              AML   AML
      comp=E,1360µm,0.3s
TERO                              AML   AML
      comp=N,1985µm,0.5s
T1211 Morro Reatino      0.32 233 AML   AML
      comp=E,1490µm,0.4s
T1211                             AML   AML
      comp=E,1485µm,0.3s
T1211                             AML   AML
      comp=N,2590µm,0.6s
T1211                             AML   AML
      comp=N,2585µm,0.6s
FDMO  Fiordimonte        0.32 345 P     Pg    14 57 58.3 +0.1
FDMO                              AML   AML
      comp=E,1515µm,0.6s
FDMO                              AML   AML
      comp=N,2635µm,1.1s
FDMO                              END
T1222 Castel Sant’An     0.34 201 AML   AML
      comp=N,716µm,0.7s
T1222                             AML   AML
      comp=E,1117µm,1.0s
T1222                             AML   AML
      comp=N,682µm,0.7s
T1222                             AML   AML
      comp=E,1141µm,1.0s
CESI  CESI - Serrava     0.35 322 AML   AML
      comp=N,3685µm,0.3s
CESI                              AML   AML
      comp=E,1835µm,0.4s
T1219 Muccia, Frazio     0.36 337 AML   AML
      comp=N,4325µm,1.0s
T1219                             AML   AML
      comp=E,4340µm,0.3s
T1219                             AML   AML
      comp=E,4520µm,0.3s
T1219                             AML   AML
      comp=N,3950µm,1.0s
T1220 Camerino, Fraz     0.40 348 AML   AML
      comp=N,8710µm,0.4s
T1220                             AML   AML
      comp=E,9460µm,0.5s
SEF1  Sefro              0.46 336 P     Pg    14 58 00.8   0.0
MOMA  Monte Martano      0.47 280 AML   AML
      comp=N,992µm,0.2s
MOMA                              AML   AML
      comp=E,798µm,0.3s
MOMA                              AML   AML
      comp=E,831µm,0.2s
MOMA                              AML   AML
      comp=N,1067µm,0.2s
CESX  Cesi               0.47 256 AML   AML
      comp=E,654µm,1.6s
CESX                              AML   AML
      comp=N,548µm,0.4s
FAGN  Fagnano            0.54 148 AML   AML
      comp=E,2815µm,0.7s
FAGN                              AML   AML
      comp=N,1580µm,0.6s
SNTG  Esanatoglia        0.56 340 AML   AML
      comp=N,499µm,1.6s
SNTG                              AML   AML
      comp=E,531µm,0.6s
SNTG                              AML   AML
      comp=N,508µm,0.4s
SNTG                              AML   AML
      comp=E,548µm,0.5s
LPEL  Lama dei Pelig     0.99 133 ⇓P    Pg    14 58 08.0  -2.8
LPEL                              AML   AML
      comp=E,362µm,1.0s
LPEL                              AML   AML
      comp=N,284µm,0.6s
DUGI  Dugi Otok          1.86  46 ePn   Pg    14 58 30.8 +3.6
ZIRJ  Zirje              2.02  62 ePn   Pg    14 58 33.2 +3.0
ZIRJ                              Sn    Sg    14 58 59.3 +2.9
VIRC  Vir                2.07  40 ePn   Pg    14 58 33.8 +2.5
VIRC                              Sn    Sg    14 58 59.1 +1.0
KIJV  Kijevo             2.67  60 ePn   Pg    14 58 43.6 +0.9
KIJV                              Sn    Sg    14 59 16.2  -1.0
OBKA  Obir               3.91  14 i Pn  Pb    14 59 00.6 +0.1
      comp=N,2.6nm,0.6s
OBKA                              eSg   Sg    15 00 08.4  +11
      comp=N,7.4nm,0.5s
ABTA  Abfaltersbach      4.05 353 i Pn  Pb    14 59 01.2  -1.8
      comp=N,2.2nm,0.4s
ABTA                              i Sn  Sb    14 59 51.6  -0.5
      comp=N,2.9nm,0.6s
```

ROM 24 14:57:58.4±0.1, 42°.723N±0°.003×13°.202E±0°.005,
h10^{km}, ML2.7/41, 9C-21D, Error ellipse: s-maj=0.4km
s-min=0.3km az=244.0, Central Italy

```
Code  Station Name        Δ°  AZ°   Phase ID            Time     Res
                                  Op    ISC          h  m  s     ISC
T1214 Arquata del Tr     0.04   8 P     Pg    14 58 00.7 +0.2
T1214                             S     Sg    14 58 02.0  -0.1
T1214                             AML   AML
      comp=E,44250µm,1.1s
T1214                             AML   AML
      comp=E,47200µm,1.1s
T1214                             AML   AML
      comp=E,44200µm,1.1s
T1214                             AML   AML
      comp=N,62450µm,0.3s
T1214                             AML   AML
      comp=E,47250µm,1.1s
T1214                             AML   AML
      comp=N,62850µm,0.3s
T1214                             AML   AML
      comp=N,62400µm,0.3s
T1218 Civita (PG)        0.08 230 P     Pg    14 58 01.4 +0.4
T1218                             S     Sg    14 58 03.3 +0.6
T1218                             AML   AML
      comp=N,89500µm,0.4s
T1218                             AML   AML
      comp=N,89250µm,0.4s
T1218                             AML   AML
      comp=E,30650µm,0.2s
T1218                             AML   AML
      comp=N,89550µm,0.4s
T1218                             AML   AML
      comp=E,32200µm,0.2s
T1212 Cascia, Frazio     0.12 284 P     Pg    14 58 01.9 +0.5
T1212                             S     Sg    14 58 04.1 +0.6
T1212                             AML   AML
      comp=E,6645µm,0.6s
T1212                             AML   AML
      comp=N,4000µm,1.5s
T1212                             AML   AML
      comp=N,5430µm,1.2s
T1212                             AML   AML
      comp=E,6415µm,0.6s
T1212                             AML   AML
      comp=N,5435µm,1.2s
T1212                             AML   AML
      comp=N,5390µm,1.2s
T1212                             AML   AML
      comp=N,5390µm,0.8s
T1212                             AML   AML
      comp=N,5435µm,0.8s
T1212                             AML   AML
      comp=E,6420µm,0.6s
T1212                             AML   AML
      comp=E,6640µm,0.6s
NRCA  Norcia             0.13 330 P     Pg    14 58 02.0 +0.5
NRCA                              S     Sg    14 58 04.2 +0.5
NRCA                              AML   AML
      comp=N,33600µm,0.5s
NRCA                              AML   AML
      comp=E,40700µm,0.4s
NRCA                              AML   AML
      comp=E,40700µm,0.4s
NRCA                              AML   AML
      comp=N,31200µm,0.1s
NRCA                              AML   AML
      comp=E,44350µm,0.5s
T1245 Castelsantange     0.13 356 P     Pg    14 58 02.1 +0.4
T1245                             S     Sg    14 58 04.7 +0.7
T1245                             AML   AML
      comp=N,13600µm,0.7s
T1245                             AML   AML
      comp=E,11750µm,0.6s
T1245                             AML   AML
      comp=E,11795µm,0.6s
T1245                             AML   AML
      comp=N,13600µm,0.7s
T1245                             AML   AML
      comp=E,11755µm,0.6s
T1245                             AML   AML
      comp=E,11850µm,0.7s
T1245                             AML   AML
      comp=N,13850µm,0.7s
T1245                             AML   AML
      comp=N,13850µm,1.3s
T1245                             AML   AML
      comp=N,13600µm,1.3s
SMA1  SAN MARTINO        0.14 133 P     Pg    14 58 02.2 +0.6
SMA1                              S     Sg    14 58 04.8 +0.9
SMA1                              AML   AML
      comp=E,11060µm,0.5s
SMA1                              AML   AML
      comp=N,8480µm,0.2s
MMO1  Montemonaco        0.20  27 P     Pg    14 58 03.1 +0.4
MMO1                              S     Sg    14 58 06.8 +1.2
T1217 Poggiodomo (PG     0.20 267 AML   AML
      comp=N,5240µm,0.3s
T1217                             AML   AML
      comp=E,3675µm,0.8s
T1217                             AML   AML
      comp=N,5215µm,0.3s
T1217                             AML   AML
      comp=E,3040µm,0.8s
CAMP  Campotosto         0.24 141 P     Pg    14 58 03.8 +0.4
CAMP                              S     Sg    14 58 07.8 +1.1
CAMP                              AML   AML
      comp=E,1920µm,0.7s
CAMP                              AML   AML
      comp=N,1850µm,0.3s
FEMA  Monte Fema         0.26 335 P     Pg    14 58 04.3 +0.5
FEMA                              S     Sg    14 58 08.7 +1.2
FEMA                              AML   AML
      comp=E,6555µm,0.3s
FEMA                              AML   AML
      comp=N,4610µm,0.4s
FEMA                              AML   AML
      comp=E,6555µm,0.3s
FEMA                              AML   AML
      comp=N,4605µm,0.3s
T1256 Bolognola (MC)     0.28   4 AML   AML
      comp=N,3095µm,0.7s
T1256                             AML   AML
      comp=E,2660µm,0.5s
T1256                             AML   AML
      comp=N,3095µm,1.3s
T1256                             AML   AML
      comp=E,2660µm,1.5s
T1247 Pizzolo (AQ)       0.29 166 AML   AML
      comp=N,3260µm,1.1s
T1247                             AML   AML
      comp=E,2400µm,0.2s
TERO  Teramo             0.31 108 AML   AML
      comp=E,1240µm,0.3s
TERO                              AML   AML
      comp=N,1985µm,0.5s
TERO                              AML   AML
      comp=N,1880µm,0.5s
TERO                              AML   AML
      comp=E,1360µm,0.3s
T1211 Morro Reatino      0.32 234 AML   AML
      comp=E,1485µm,0.4s
T1211                             AML   AML
      comp=N,2595µm,0.6s
T1211                             AML   AML
      comp=N,2580µm,0.6s
T1211                             AML   AML
      comp=E,1490µm,0.4s
FDMO  Fiordimonte        0.33 345 P     Pg    14 58 05.3 +0.4
FDMO                              S     Sb    14 58 10.5  -1.1
FDMO                              AML   AML
      comp=N,2635µm,1.1s
FDMO                              AML   AML
      comp=N,2635µm,0.9s
FDMO                              AML   AML
      comp=E,1515µm,0.6s
T1222 Castel Sant’An     0.34 201 AML   AML
      comp=N,683µm,0.8s
T1222                             AML   AML
      comp=E,1117µm,1.0s
T1222                             AML   AML
      comp=E,1145µm,1.0s
T1222                             AML   AML
      comp=E,1117µm,1.0s
T1222                             AML   AML
      comp=E,1145µm,1.0s
T1222                             AML   AML
      comp=N,716µm,0.8s
ARRO  Arrone             0.35 246 ⇓P    Pg    14 58 06.0 +0.7
ARRO                              AML   AML
      comp=E,768µm,1.1s
ARRO                              AML   AML
      comp=N,712µm,1.0s
GUMA  Gualdo di Mace     0.35  16 P     Pb    14 58 06.2  -0.6
GUMA                              S     Sb    14 58 12.4  -0.1
GUMA                              AML   AML
      comp=E,8175µm,0.4s
GUMA                              AML   AML
      comp=N,8050µm,0.6s
GUMA                              AML   AML
      comp=E,8175µm,0.4s
GUMA                              AML   AML
      comp=E,8435µm,0.4s
GUMA                              AML   AML
      comp=N,9390µm,0.6s
GUMA                              AML   AML
      comp=N,8050µm,0.6s
CESI  CESI - Serrava     0.36 322 P     Pg    14 58 06.0 +0.4
CESI                              S     Sb    14 58 11.8  -0.8
CESI                              AML   AML
      comp=E,1835µm,0.4s
CESI                              AML   AML
      comp=N,3685µm,0.3s
T1219 Muccia, Frazio     0.36 337 AML   AML
      comp=N,3945µm,1.0s
T1219                             AML   AML
      comp=E,4340µm,0.3s
T1219                             AML   AML
      comp=E,4520µm,0.3s
T1219                             AML   AML
      comp=N,4325µm,1.0s
GIGS  Gran Sasso         0.39 135 ⇓P    Pn    14 58 09.1  -1.0
T1220 Camerino, Fraz     0.40 348 AML   AML
      comp=E,9420µm,0.5s
T1220                             AML   AML
      comp=N,8720µm,0.4s
AQU   L'Aquila           0.40 158 AML   AML
      comp=E,1431µm,1.1s
AQU                               AML   AML
      comp=N,1275µm,0.3s
AQU                               AML   AML
      comp=N,1300µm,0.3s
AQU                               AML   AML
      comp=E,1371µm,1.1s
OFFI  Offida             0.41  59 AML   AML
      comp=N,5405µm,0.3s
OFFI                              AML   AML
      comp=E,4935µm,0.3s
FIAM  Fiamignano         0.46 188 AML   AML
      comp=E,684µm,0.5s
FIAM                              AML   AML
      comp=N,891µm,1.1s
CESX  Cesi               0.47 256 AML   AML
      comp=N,548µm,0.4s
CESX                              AML   AML
      comp=E,654µm,1.6s
CESX                              AML   AML
      comp=E,654µm,0.4s
MOMA  Monte Martano      0.47 280 AML   AML
      comp=N,1067µm,0.2s
MOMA                              AML   AML
      comp=N,994µm,0.2s
MOMA                              AML   AML
      comp=E,831µm,0.2s
MOMA                              AML   AML
      comp=E,798µm,0.3s
ASSB  Assisi San Ben     0.51 309 P     Pg    14 58 08.6 +0.2
ASSB                              AML   AML
      comp=N,744µm,0.8s
ASSB                              AML   AML
      comp=E,574µm,0.3s
GAG1  Gagliole           0.52 349 ⇑P    Pb    14 58 09.4  -0.3
FAGN  Fagnano            0.54 148 AML   AML
      comp=N,1580µm,0.6s
FAGN                              AML   AML
      comp=N,1580µm,1.4s
FAGN                              AML   AML
      comp=E,2815µm,0.7s
SNTG  Esanatoglia        0.56 340 S     Sb    14 58 18.7 +0.1
SNTG                              AML   AML
      comp=N,508µm,0.4s
SNTG                              AML   AML
      comp=E,548µm,0.5s
SNTG                              AML   AML
      comp=N,499µm,1.6s
SNTG                              AML   AML
      comp=E,531µm,0.6s
SNTG                              AML   AML
      comp=N,508µm,1.6s
VCEL  Villa Celiera      0.57 125 ⇓P    Pb    14 58 10.2  -0.4
VCEL                              S     Sb    14 58 20.0 +1.1
VCEL                              AML   AML
      comp=E,837µm,0.5s
VCEL                              AML   AML
      comp=N,791µm,0.9s
EL6   Elcito             0.61 353 ⇑P    Pg    14 58 10.3 +0.1
EL6                               AML   AML
      comp=N,1330µm,0.5s
EL6                               AML   AML
      comp=N,1330µm,1.5s
EL6                               AML   AML
      comp=E,934µm,0.4s
ATCC  AVT- Casa Cast     0.62 318 ⇓P    Pg    14 58 10.7 +0.3
ATCC                              AML   AML
      comp=E,703µm,0.6s
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ATCC                                AML     AML
           comp=N,555µm,0.6s
CING   Cingoli             0.65 360 ⇑P      Pg       14 58 11.1  0.0
CING                                AML     AML
           comp=E,708µm,1.6s
CING                                AML     AML
           comp=E,708µm,0.4s
CING                                AML     AML
           comp=N,762µm,0.5s
T0110  Collepietro         0.66 139 ⇓P      Pg       14 58 11.1  0.0
T0110                               AML     AML
           comp=N,1255µm,0.4s
T0110                               AML     AML
           comp=E,1100µm,0.5s
FOSV   Fossato di Vic      0.66 331 ⇓P      Pg       14 58 11.3 +0.2
FOSV                                AML     AML
           comp=N,638µm,0.5s
FOSV                                AML     AML
           comp=N,638µm,1.5s
FOSV                                AML     AML
           comp=E,426µm,0.2s
SRES   S.Oreste - Sor      0.70 227 ⇓P      Pg       14 58 12.1 +0.1
SRES                                AML     AML
           comp=E,184µm,0.2s
SRES                                AML     AML
           comp=N,189µm,0.5s
SRES                                AML     AML
           comp=N,189µm,1.5s
PTQR   Pietraquaria        0.72 168 ⇓P      Pg       14 58 11.9 -0.4
PTQR                                AML     AML
           comp=E,190µm,1.1s
PTQR                                AML     AML
           comp=N,158µm,0.6s
PTQR                                AML     AML
           comp=N,158µm,1.4s
PP3    Marolino            0.72  24  P      Pb       14 58 12.9 -0.1
PP3                                 AML     AML
           comp=E,3515µm,0.5s
PP3                                 AML     AML
           comp=N,4260µm,0.4s
PP3                                 AML     AML
           comp=E,3125µm,0.6s
PP3                                 AML     AML
           comp=N,4440µm,0.4s
PP3                                 AML     AML
           comp=E,3125µm,1.4s
PP3                                 AML     AML
           comp=E,3515µm,1.5s
MURB   Monte Urbino        0.73 318 ⇑P      Pb       14 58 13.0 -0.3
MURB                                AML     AML
           comp=N,732µm,0.7s
MURB                                AML     AML
           comp=E,1049µm,0.3s
MURB                                AML     AML
           comp=N,802µm,0.8s
MURB                                AML     AML
           comp=E,968µm,0.4s
MURB                                AML     AML
           comp=N,732µm,0.7s
MURB                                AML     AML
           comp=N,732µm,1.3s
MURB                                AML     AML
           comp=N,802µm,1.2s
SSFR   Montelago di S      0.78 337 ⇓P      Pg       14 58 13.5 +0.1
SSFR                                AML     AML
           comp=E,1017µm,0.2s
SSFR                                AML     AML
           comp=N,894µm,0.2s
SSFR                                AML     AML
           comp=N,1104µm,0.2s
SSFR                                AML     AML
           comp=E,950µm,0.2s
CERT   Cerreto             0.79 192 ⇓P      Pg       14 58 13.2 -0.4
CERT                                AML     AML
           comp=E,434µm,1.4s
CERT                                AML     AML
           comp=N,330µm,0.4s
CERT                                AML     AML
           comp=E,434µm,0.6s
ATFO   Monte Foce - G      0.79 325 ⇑P      Pb       14 58 14.0 -0.3
ATFO                                AML     AML
           comp=E,304µm,0.6s
ATFO                                AML     AML
           comp=N,298µm,0.5s
ATFO                                AML     AML
           comp=N,298µm,1.5s
ATFO                                AML     AML
           comp=E,304µm,1.4s
ARVD   Arcevia             0.80 346 ⇓P      Pg       14 58 13.8  0.0
ARVD                                 S      Sb       14 58 26.4 +1.2
ARVD                                AML     AML
           comp=E,301µm,0.8s
ARVD                                AML     AML
           comp=N,269µm,0.5s
MGAB   Montegabbione       0.82 284  P      Pn       14 58 15.8 -0.3
MGAB                                AML     AML
           comp=E,520µm,0.7s
MGAB                                AML     AML
           comp=N,386µm,0.5s
MGAB                                AML     AML
           comp=E,550µm,0.7s
MGAB                                AML     AML
           comp=N,388µm,0.6s
MGAB                                AML     AML
           comp=N,386µm,1.5s
MGAB                                AML     AML
           comp=E,550µm,1.3s
MGAB                                AML     AML
           comp=E,520µm,1.3s
FRON   Frontone            0.87 336 ⇓P      Pg       14 58 15.2  0.0
FRON                                AML     AML
           comp=E,310µm,0.9s
FRON                                AML     AML
           comp=N,448µm,0.4s
ATVO   AVT- Monte Val      0.88 319 ⇑P      Pg       14 58 15.5 +0.1
ATVO                                AML     AML
           comp=N,260µm,0.6s
ATVO                                AML     AML
           comp=E,191µm,1.2s
ATVO                                AML     AML
           comp=N,260µm,1.4s
INTR   Introdacqua         0.88 144 ⇓P      Pg       14 58 14.9 -0.5
INTR                                AML     AML
           comp=E,346nm,0.7s
INTR                                AML     AML
           comp=N,492nm,0.8s
INTR                                AML     AML
           comp=N,658µm,0.7s
INTR                                AML     AML
           comp=E,346nm,0.8s
INTR                                AML     AML
           comp=N,492nm,0.8s
INTR                                AML     AML
           comp=E,324µm,0.7s
ATPI   Pietralunga -       0.93 321 ⇓P      Pg       14 58 16.2 -0.2
ATPI                                AML     AML
           comp=E,258µm,0.6s
ATPI                                AML     AML
           comp=N,218µm,0.8s
ATPI                                AML     AML
           comp=E,258µm,1.4s
PIEI   Pieia               0.95 329 ⇓P      Pg       14 58 16.4 -0.3
PIEI                                 S      Sn       14 58 31.6 +0.2
PIEI                                AML     AML
           comp=E,204µm,0.8s
PIEI                                AML     AML
           comp=N,200µm,0.8s
MPAG   Monte Paganucc      0.96 340 ⇓P      Pg       14 58 16.5 -0.4
MPAG                                 S      Sn       14 58 32.7 +0.9
MPAG                                AML     AML
           comp=N,296µm,0.7s
MPAG                                AML     AML
           comp=E,348µm,0.4s
MPAG                                AML     AML
           comp=E,348µm,1.6s
LPEL   Lama dei Pelig      0.99 133 ⇓P      Pg       14 58 17.4 -0.1
LPEL                                AML     AML
           comp=E,362µm,1.0s
LPEL                                AML     AML
           comp=N,284µm,0.6s
LPEL                                AML     AML
           comp=E,362µm,1.0s
FSSB   Fossombrone         1.02 342 ⇓P      Pg       14 58 17.9 -0.1
FSSB                                 S      Sn       14 58 34.2 +1.1
FSSB                                AML     AML
           comp=N,1075µm,0.3s
FSSB                                AML     AML
           comp=E,836µm,0.5s
BADI   Badiali             1.05 319 ⇓P      Pn       14 58 19.0 -0.2
POFI   Posta Fibreno       1.07 159 ⇑P      Pn       14 58 20.5 +1.0
CAFI   Castiglion Fio      1.09 304 ⇓P      Pn       14 58 20.9 +1.1
TOLF   Tolfa               1.11 234 ⇑P      Pn       14 58 20.6 +0.7
GIUL   Giuliano Di Ro      1.16 178 ⇑P      Pg       14 58 22.1 +1.3
CMPO   Campotto Po         2.12 332  S      Sn       14 59 01.4 +1.3
CMPO                                AML     AML
           comp=E,2505µm,0.1s
CMPO                                AML     AML
           comp=N,4260µm,0.0s
SGRT   San Giovanni R      2.12 116 ⇓P      Pb       14 58 35.8 -1.1
MORI   Morici              2.16  57 ePn     Pb       14 58 38.3 +0.8
CARD   Cardoso             2.37 304  S      Sn       14 59 05.8 -0.7
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BER ***24*** *14:59:04.8±3.5, 76°.66N×29°.88E, h15^{km}±21^{km}, ML2.1, ML2.6(NAO), Confirmed Earthquake*
NAO ***24*** *14:59:05.4±2.5, 76°.61N×29°.06E, h16^{km}±15^{km}, ML2.6*
IEPN ***24*** *14:59:05.0, 76°.79N×29°.04E, h10^{km}*
KOLA ***24*** *14:59:05.4, 76°.51N×30°.86E, h0^{km}, ML2.1, Barents Sea*
ISC 24 14:59:00.9±0.9**, 76°.66N**±0°.04×**29°.74E**±0°.04**, h10^{km}, n30, σ2^{s}22**/54**, 1C, Barents Sea**

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Code   Station Name          Δ°   AZ°   Phase ID          Time      Res
                                        Op     ISC       h  m  s    ISC
HOPEN  Hopen               1.11 265  Pg     Pn       14 59 23.8 +1.3
HOPEN                                Lg     Lg       14 59 37.0
HOPEN  Hopen               1.11 265 eP      Pn       14 59 23.6 +1.1
HOPEN                               eS      Sb       14 59 37.3 +0.6
HOPEN  Hopen               1.11 265 eP      Pn       14 59 23.8 +1.3
HOPEN                               eS      Sb       14 59 37.1 +0.4
HOPEN                                IAML            14 59 40.6
           comp=Z,75nm,0.3s
HSPB   Hornsund (broa      3.27 283  Pn     Pn       14 59 54.1 +2.1
HSPB                                 Sn     Sn       15 00 30.3 -0.6
HSPB                                 Lg     Lg       15 00 45.1
HSPB   Hornsund (broa      3.27 283 eP      Pn       14 59 53.9 +1.9
HSPB                                eS      Sn       15 00 30.1 -0.8
HSPB   Hornsund (broa      3.27 283 eP      Pn       14 59 54.3 +2.3
HSPB                                eS      Sn       15 00 30.3 -0.6
HSPB                                 IAML            15 00 48.2
           comp=Z,7.5nm,0.6s
SPA0   Spitsbergen Ar      3.29 304  Pn     Pn       14 59 54.6 +2.2
           baz=119,slow=16
SPA0                                 Sn     Sn       15 00 30.3 -1.3
           baz=120,slow=28
SPA0                                 Lg     Lg       15 00 45.4
           baz=123,slow=37
SPA0   Spitsbergen Ar      3.29 304⇑iP      Pn       14 59 54.6 +2.2
SPA0                                i S     Sn       15 00 30.1 -1.5
SPA0   Spitsbergen Ar      3.29 304  Pn     Pn       14 59 54.6 +2.2
           baz=119,slow=16
SPA0                                 Sn     Sn       15 00 30.3 -1.3
           baz=120,slow=28
SPA0                                 Sg     Sg       15 00 45.4 -1.2
           baz=123,slow=37
BJO1   Bjornoya            3.45 236  Sn     Sn       15 00 36.7 +1.4
BJO1                                 Lg     Lg       15 00 49.4
BJO1   Bjornoya            3.45 236  P      Pn       14 59 58.4 +3.9
BJO1                                 S      Sn       15 00 38.2 +2.8
BJO1   Bjornoya            3.45 236 eSg     Sg       15 00 50.0 -1.4
BRBA   Barentsburg A       3.68 300  Pn     Pn       15 00 00.1 +2.3
BRBA                                 Sn     Sn       15 00 40.1 -1.1
BRBA   Barentsburg A       3.68 300 eP      Pn       14 59 59.8 +2.1
BRBA                                eS      Sn       15 00 41.2 +0.1
BRBA                                 IAML            15 00 45.8
           comp=Z,14nm,0.3s
BRBB   Barentsburg B       3.69 300  Pn     Pn       15 00 00.2 +2.3
BRBB                                 Sn     Sn       15 00 40.2 -1.2
BRBB   Barentsburg B       3.69 300 eP      Pn       15 00 00.3 +2.3
BRBB                                eS      Sn       15 00 40.4 -1.0
KBS    Kingsbay            4.39 310  Pn     Pn       15 00 09.1 +1.5
KBS                                  Sn     Sn       15 00 56.7 -2.0
KBS    Kingsbay            4.39 310 eP      Pn       15 00 08.6 +1.1
KBS                                 eS      Sn       15 00 56.4 -2.2
KBS    Kingsbay            4.39 310 eP      Pn       15 00 09.2 +1.7
KBS                                 eS      Sn       15 00 56.7 -2.0
KBS                                  IAML            15 01 00.4
           comp=Z,5.1nm,0.4s
KBS                                 e                15 01 20.1
OMEGA  Omega               5.41  32  P      Pn       15 00 24.1 +2.7
OMEGA                               eS      Sn       15 01 23.8 +0.2
           comp=Z,15nm,1.5s
ZFI    Zemlya Franca-      5.42  32 eP      Pn       15 00 24.5 +2.9
ZFI                                 eS      Sn       15 01 24.2 +0.5
           comp=Z,14nm,2.0s
ZFI2   Zemlya Franca-      5.42  32 eS      Sn       15 01 23.8  0.0
VADS   Vadso               6.58 181  P      Pn       15 00 38.4 +1.0
VADS                                 S      Sn       15 01 51.1 -1.2
KEV    Kevo                6.99 188  Pn     Pn       15 00 45.9 +2.8
KEV                                  Sn     Sn       15 02 01.1 -1.3
KEV    Kevo                6.99 188  Pn     Pn       15 00 45.9 +2.8
ARA0   ARCESS Array S      7.26 192  Pn     Pn       15 00 49.4 +2.4
           baz=16,slow=11
ARA0   ARCESS Array S      7.26 192  Pn     Pn       15 00 49.4 +2.4
           baz=16,slow=11
ARCES  ARCESS Array B      7.26 192  P      Pn       15 00 50.5 +3.6
ARCES                                S      Sn       15 02 07.1 -2.2
APA0   Apatity Array       9.15 172  Pn     Pn       15 01 15.4 +2.6
APA0                                 Sn     Sn       15 02 50.1 -5.5
           baz=348,slow=28
APA0   Apatity Array       9.15 172  Pn     Pn       15 01 15.4 +2.6
APA0                                 Sn     Sn       15 02 50.1 -5.5
           baz=348,slow=28
```

HEL 24 15:01:34.8±0.3**, 67°.98N×25°.39E, h0^{km}, ML0.7, Explosion, Finland**

```
Code   Station Name          Δ°   AZ°   Phase ID          Time      Res
                                        Op     ISC       h  m  s    ISC
SGF    Sodankyl            0.69 141  PG     Pg       15 01 47.3 -0.7
HEF    Hetta               0.78 305  PG     Pg       15 01 49.1 -0.6
HEF                                  MSG             15 01 58.9
           comp=Z,0.8nm,0.2s
HEF                                  SB     Sb       15 02 01.4 -0.8
KLF    Kolari              0.92 217  PG     Pg       15 01 50.5 -2.0
KLF                                  MSG             15 02 03.3
           comp=Z,0.7nm,0.2s
KLF                                  SB     Sn       15 02 08.0 -0.9
LANU   Lannavaara          1.28 275  PG     Pg       15 01 57.9 -1.4
LANU                                 SN     Sb       15 02 16.3 -0.4
PAJU   Pajala              1.30 224  PG     Pg       15 01 58.4 -1.2
PAJU                                 SN     Sn       15 02 19.2 +1.0
KTK1   Kautokeino          1.31 324  PN     Pg       15 01 59.1 -0.7
RNF    Rovaniemi           1.40 170  PG     Pn       15 02 00.1 -1.4
RNF                                  SN     Sn       15 02 22.4 +1.8
ARA0   ARCESS Array S      1.57   2  PN     Pn       15 02 04.1 +0.2
ARA0   ARCESS Array S      1.57   2  Sn     Pn       15 02 04.5 +0.6
           baz=12,slow=22
VRF    Varrio              1.62  96  PN     Pn       15 02 03.9 -0.6
VRF                                  MSG             15 02 23.0
           comp=Z,1.0nm,0.2s
VRF                                  SN     Sn       15 02 25.8 -0.3
ERTU   Ertsjaerv           1.89 223  PG     Pn       15 02 08.5 +0.2
ERTU                                 SG     Sg       15 02 35.1 -0.4
```

IDC 24 15:05:54.0±2.4**, 3°.19N×127°.57E, h0^{km}, mb3.2**/3**, mbtmp3.2**/3**, MS3.6**/1**, Error ellipse: s-maj=174.6km s-min=27.7km az=67.0, Talaud Islands**

```
Code   Station Name          Δ°   AZ°   Phase ID          Time      Res
                                        Op     ISC       h  m  s    ISC
WRA    Warramunga Arr     23.93 164  P      P        15 11 10.1 +0.2
       0.2nm,0.6s,baz=344,slow=10,SNR=5.8
       0.2nm,0.6s
ASAR   Alice Springs      27.40 167  P      P        15 11 41.1 -0.3
       0.2nm,0.8s,baz=350,slow=7.1,SNR=4.4
       0.2nm,0.8s
SONM   Songino Array      48.08 341  LR     LR       15 36 28.5
       comp=Z,59nm,18.8s,baz=118,slow=38
MKAR   Makanchi Array     58.48 325  P      P        15 15 52.0  0.0
       0.3nm,0.5s,baz=111,slow=6.3,SNR=3.8
       0.3nm,0.5s
```

TAP 24 15:09:13.6, 24°.61N×122°.29E, h84^{km}, ML1.8, D, Taiwan region

```
Code   Station Name          Δ°   AZ°   Phase ID          Time      Res
                                        Op     ISC       h  m  s    ISC
EOS2   EOS2                0.20 195 eP      Pn       15 09 26.1 +0.3
           baz=222
TWC    Suao                0.40 270 eP      Pn       15 09 27.1 +0.2
           baz=270
TWC                                 eS      Sn       15 09 36.4 -0.5
           baz=270
ENA    Nanau               0.53 250 eS      Sn       15 09 39.1 +0.4
           baz=249
TIPB   Shuangxi            0.55 311  S      Sn       15 09 38.6 -0.5
           baz=311
TWE    Neicheng            0.57 281 eP      Pn       15 09 28.2 -0.1
           baz=281
TWE                                 eS      Sn       15 09 39.7 +0.3
           baz=281
FUSB   Fushanzhiwuyua      0.65 283  P      Pn       15 09 29.5 +0.3
           baz=289
FUSB                                 S      Sn       15 09 40.8  0.0
           baz=289
ENTT   Nioudou             0.66 273 eP      Pn       15 09 30.0 +0.8
           baz=272
ENTT                                eS      Sn       15 09 41.5 +0.7
           baz=272
LATG   Datong              0.70 264  P      Pn       15 09 30.4 +0.7
           baz=260
LATG                                eS      Sn       15 09 42.4 +0.8
           baz=260
NDT    Datong Townshi      0.70 270 eP      Pn       15 09 30.6 +1.0
           baz=271
NDT                                  S      Sn       15 09 42.4 +0.7
           baz=271
NWLT   Wulai               0.73 283 eP      Pn       15 09 30.9 +0.9
           baz=291
NWLT                                eS      Sn       15 09 42.2  0.0
           baz=291
TWA    Mucha               0.74 300 eS      Sn       15 09 40.1 -2.1
           baz=294
NACB   Ninganchiao         0.77 236 eP      Pn       15 09 29.6 -0.7
           baz=230
NACB                                eS      Sn       15 09 42.2 -0.5
           baz=230
YHNB   Yeheng              0.83 274  P      Pn       15 09 31.5 +0.5
           baz=274
YHNB                                 S      Sn       15 09 44.7 +0.6
           baz=274
ETLH   Xiulin Townshi      0.84 241 eP      Pn       15 09 30.3 -0.8
           baz=234
ETLH                                eS      Sn       15 09 44.3 +0.1
           baz=234
NNSB   Datong              0.84 258  P      Pn       15 09 31.5 +0.2
           baz=251
NNSB                                eS      Sn       15 09 44.9 +0.5
           baz=251
NSK    Sanguang            0.85 275  P      Pn       15 09 31.8 +0.5
           baz=274
NSK                                  S      Sn       15 09 45.0 +0.6
           baz=274
NFF    Wufeng Townshi      1.06 271 eP      Pn       15 09 34.2 +0.5
           baz=277
NFF                                 eS      Sn       15 09 49.7 +0.9
           baz=277
OWD    Renai               1.21 237 eP      Pn       15 09 37.4 +1.8
           baz=232
OWD                                 eS      Sn       15 09 51.9 -0.1
           baz=232
WUSB   Renai               1.23 240 eP      Pn       15 09 36.2 +0.3
           baz=235
WUSB                                eS      Sn       15 09 52.9 +0.3
           baz=235
VWDT   VWDT                1.35 231 eS      Sn       15 09 55.5 +0.5
           baz=225
SSLB   Suanglung           1.47 236 eP      Pn       15 09 40.1 +1.4
           baz=228
WHYT   Xinyi Township      1.59 235 eP      Pn       15 09 41.7 +1.3
           baz=228
WHYT                                eS      Sn       15 10 02.9 +2.3
           baz=228
```

JMA 24 15:09:26.1±0.3**, 24°.1N**±0°.7×**12°4E**±°**, h22^{km}**±2^{km}**, MV0.6**/6**, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands**

```
Code   Station Name          Δ°   AZ°   Phase ID          Time      Res
                                        Op     ISC       h  m  s    ISC
HATJ   Hateruma jima       0.25  89 eP      Pb       15 09 32.1 -0.2
HATJ                                eS      Sb       15 09 36.1 -0.4
IRIF   Iriomote-Funau      0.34  33  P      Pb       15 09 33.4  0.0
IRIF                                eS      Sb       15 09 38.4 -0.1
JKRS   Kuro-shima          0.48  67 eS      Sb       15 09 43.0 +0.5
JIJ    Ishigaki jima       0.64  61 eS      Sb       15 09 46.8 -0.5
JISG   Ishigakijimahi      0.89  53 eP      Pb       15 09 42.7 -0.2
```

JMA ***24*** *15:14:12.6±0.2, 36°.2N±0°.5×14°2E±°, h78^{km}, MV3.0/28, FAR E OFF KANTO*
IDC ***24*** *15:14:15.8±1.7, 36°.89N×142°.08E, h0^{km}, mb3.4/5, mbtmp3.4/7, ML2.7/2, MS3.3/2, Error ellipse: s-maj=43.3km s-min=22.3km az=77.0*
ISC 24 15:14:14.1±3.4**, 36°.19N**±0°.07×**142°.4E**±0°.1**, h23^{km}**±21^{km}**, n28, σ1^{s}17**/21**, mb3.5**/5**, Off east coast of Honshu**

```
Code   Station Name          Δ°   AZ°   Phase ID          Time      Res
                                        Op     ISC       h  m  s    ISC
CHOJ   Chosi               1.31 249  P      Pn       15 14 36.6 -0.3
CHOJ                                eS      Sb       15 14 55.0 +0.7
JHYU   Hitachinakayam      1.44 277  P      Pn       15 14 38.5 -0.3
JHYU                                 S      Sb       15 14 58.5 +0.4
JHO    Hitachi             1.50 287  P      Pn       15 14 39.2 -0.5
JHO                                  S      Sb       15 14 59.5 -0.4
JFK    Kawauchi            1.67 315  S      Sn       15 15 03.1 +0.3
BSO1   Boso 1              1.90 217 eP      Pn       15 14 44.2 -0.4
JOTO   OTAMA OYAMA         2.12 311  P      Pn       15 14 48.7 +0.5
JOTO                                 S      Sn       15 15 14.8 +0.9
JAG    Ashikaga            2.36 277  P      Pn       15 14 51.5 +0.1
JAG                                 eS      Sn       15 15 20.4 +0.8
JRY    Ryogami san         2.80 268  P      Pn       15 14 57.6  0.0
JOD2   Odawara 2           2.81 252  P      Pn       15 14 57.6 -0.1
JMK    Ichinoseki          2.90 342  P      Pn       15 14 57.8 -1.1
JMK                                  S      Sn       15 15 32.2 -0.9
MJAR   Matsushiro Arr      3.37 277  Pn     Pn       15 15 05.7 +0.4
       0.3nm,0.3s,baz=117,slow=8.2,SNR=4.9
MJAR                                 Sn     Sn       15 15 40.4 -4.2
       0.2nm,0.3s,baz=98,slow=9.8,SNR=5.2
       1.6nm,0.3s
ASAJ   Asahikawa           7.92   1  Pn     Pn       15 16 02.6 -5.2
       0.2nm,0.3s,baz=222,slow=12,SNR=2.0
ASAJ                                 Sn     Sn       15 17 25.2  -12
       0.1nm,0.3s,baz=270,slow=18,SNR=1.3
       5.2nm,1.1s
JOW    Kunigami           15.19 236  LR     LR       15 22 36.3
       comp=Z,74nm,19.6s,baz=112,slow=32
H11N2  WAKE ISLAND Hy     27.07 121  T      T        15 47 57.3
       baz=313,slow=75,SNR=16
H11N1  WAKE ISLAND Hy     27.07 121  T      T        15 48 02.2
       baz=313,slow=75,SNR=14
H11N3  WAKE ISLAND Hy     27.08 121  T      T        15 48 04.3
       baz=313,slow=75,SNR=11
H11S1  WAKE ISLAND Hy     27.76 123  T      T        15 48 52.7
       baz=315,slow=76,SNR=7.4
H11S3  WAKE ISLAND Hy     27.77 123  T      T        15 48 58.8
       baz=315,slow=76,SNR=10
H11S2  WAKE ISLAND Hy     27.78 123  T      T        15 48 56.3
       baz=315,slow=76,SNR=6.9
SONM   Songino Array      28.89 305  P      P        15 20 11.8 +0.6
       0.5nm,0.6s,baz=101,slow=8.7,SNR=3.3
       0.5nm,0.6s
MKAR   Makanchi Array     45.21 303  P      P        15 22 29.5 +0.2
       0.3nm,0.6s,baz=90,slow=11,SNR=5.6
       0.3nm,0.6s
KURBB  Kurchatov Arra     47.12 309  P      P        15 22 44.8 +0.5
       0.2nm,0.4s,baz=83,slow=7.9,SNR=4.0
       0.2nm,0.4s
WRA    Warramunga Arr     56.34 189  P      P        15 24 02.8 +9.5
       0.3nm,0.6s,baz=5.3,slow=7.4,SNR=2.2
       0.3nm,0.6s
ASAR   Alice Springs      60.06 189  P      P        15 24 29.4  +10
       0.3nm,0.8s,baz=17,slow=13,SNR=5.2
       0.3nm,0.8s
JMIC   Jan Mayen          71.11 350  LR     LR       15 58 02.7
       comp=Z,32nm,19.1s,baz=220,slow=37
H03N2  Juan Fernandez    146.17  98  T      T        18 16 39.9
       baz=289,slow=76
H03N3  Juan Fernandez    146.18  98  T      T        18 16 40.6
       baz=289,slow=76
H03N1  Juan Fernandez    146.19  98  T      T        18 16 40.8
       baz=289,slow=76
```

NEIC **24** *15:14:27.9±1.9, 21°.52S±0°.06×67°.74W±0°.06, h182^{km}±11^{km}, mb4.3/12, ML4.1(GUC), Error ellipse: s-maj=11.1km s-min=3.5km az=138.0*
SJA **24** *15:14:28.3±1.7, 21°.46S×67°.58W, h150^{km}, ML4.2, MW3.9, Hypocentre not reviewed by the ISC*
IDC **24** *15:14:28.4±1.3, 21°.44S×67°.50W, h146^{km}±14^{km}, mb3.6/2, mbtmp4.1/5, Error ellipse: s-maj=25.4km s-min=17.0km az=170.0*
SCB **24** *15:14:29.1±1.3, 21°.50S×67°.72W, h156^{km}±16^{km}, ML4.2/3, MW3.5, Error ellipse: s-maj=6.5km s-min=4.2km az=1.0*
VAO **24** *15:14:29.0±0.5, 21°.08S×67°.73W, h124^{km}, mb4.2*
GUC **24** *15:14:30.1±0.7, 21°.45S×67°.78W, h170^{km}±7^{km}, ML3.9*
ISC 24 15:14:27.9±0.6**, 21°.48S**±0°.04×**67°.70W**±0°.05**, h165**^{km}±7^{km}**, n102, σ1^{s}.68**/121**, mb4.4**/4**, 6C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	1.47	257		Pn	15 14 60.0	+1.5
PB09	IPOC Station P	1.47	257	eP	Pn	15 15 00.4	+1.9
PB09				eS	Sn	15 15 23.0	+1.0
PB09				IAML		15 15 27.3	
	comp=E,302nm,0.4s						
PB09	IPOC Station P	1.47	257	Pg	Pn	15 14 59.8	+1.3
PB09	IPOC Station P	1.47	257	eP		15 15 00.5	
PB09				eS		15 15 24.9	
LVC	Limon Verde	1.59	225	P	Pn	15 15 01.6	+1.6
	comp=E,40nm,0.3s,baz=45,slow=11,SNR=137						
LVC				S	Sn	15 15 25.7	+1.1
	comp=E,69nm,0.4s,baz=239,slow=19,SNR=20						
LVC	Limon Verde	1.59	225	Pn	Pn	15 15 00.7	+0.8
LVC	Limon Verde	1.59	225	⇓iP	Pn	15 15 01.5	+1.6
LVC				eS	Sn	15 15 26.2	+1.5
LVC	Limon Verde	1.59	225	Pg	Pn	15 15 01.7	+1.8
LVC	Limon Verde	1.59	225	eP	Pn	15 15 01.5	+1.6
LVC	Limon Verde	1.59	225	eP		15 15 01.6	
LVC				eS		15 15 25.7	
PB01	IPOC Station P	1.73	284		Pn	15 15 01.6	+0.6
PB01	IPOC Station P	1.73	284	eP	Pn	15 15 01.9	+0.9
PB01				eS	Sn	15 15 26.6	0.0
PB01				IAML		15 15 28.6	
	comp=N,1µm,0.3s						
PB01	IPOC Station P	1.73	284	Pg	Pn	15 15 01.9	+0.9
PB01				Sg	Sn	15 15 27.3	+0.7
PB01				IAML		15 15 28.5	
	comp=N,1µm,0.2s						
PB01	IPOC Station P	1.73	284	eP		15 15 01.9	
PB01				eS		15 15 27.4	
PB01				IAML		15 15 29.1	
	comp=Z,959nm,0.2s						
PB08	IPOC Station P	1.91	314		Pn	15 15 04.7	+1.4
PB08	IPOC Station P	1.91	314	⇑iP	Pn	15 15 04.8	+1.4
PB08				eS	Sn	15 15 31.6	+1.0
PB08				IAML		15 15 34.2	
	comp=N,982nm,0.7s						
PB08	IPOC Station P	1.91	314	Pg	Pn	15 15 04.9	+1.6
PB08	IPOC Station P	1.91	314	eP		15 15 04.8	
PB08				eS		15 15 31.9	
PB08				IAML		15 15 34.6	
	comp=Z,539nm,0.2s						
MOCB	Mochara	1.93	84	Pg	Pn	15 15 04.9	+1.2
PB03	IPOC Station P	1.99	253		Pn	15 15 05.0	+0.9
PB03	IPOC Station P	1.99	253	eP	Pn	15 15 05.1	+1.1
PB03				eS	Sn	15 15 32.0	+0.1
PB03				IAML		15 15 33.4	
	comp=N,445nm,0.1s						
PB03	IPOC Station P	1.99	253	Pg	Pn	15 15 05.1	+1.1
PB03	IPOC Station P	1.99	253	eP		15 15 05.1	
PB03				eS		15 15 32.9	
PB07	IPOC Station P	2.05	263		Pn	15 15 05.3	+0.6
PB07	IPOC Station P	2.05	263	⇑iP	Pn	15 15 05.8	+1.2
PB07				eS	Sn	15 15 33.2	0.0
PB07				IAML		15 15 34.5	
	comp=N,2µm,0.2s						
PB07	IPOC Station P	2.05	263	Pg	Pn	15 15 05.9	+1.2
PB07				Sg	Sn	15 15 33.4	+0.3
PB07				IAML		15 15 35.0	
	comp=N,816nm,0.4s						
PB07	IPOC Station P	2.05	263	eP		15 15 05.8	
PB07				eS		15 15 33.2	
PB07				IAML		15 15 34.8	
	comp=Z,948nm,0.5s						
PB02	IPOC Station P	2.06	274		Pn	15 15 05.2	+0.5
PB02	IPOC Station P	2.06	274	⇑iP	Pn	15 15 05.5	+0.8
PB02				eS	Sn	15 15 32.9	-0.2
PB02	IPOC Station P	2.06	274	Pg	Pn	15 15 05.7	+1.0
PB02				Sg	Sn	15 15 33.2	+0.1
PB02				IAML		15 15 33.9	
	comp=Z,3µm,0.1s						
PB02	IPOC Station P	2.06	274	eP		15 15 05.8	
PB02				eS		15 15 33.3	
PB02				IAML		15 15 34.3	
	comp=Z,2µm,0.4s						
PB06	IPOC Station P	2.12	235	Pg	Pn	15 15 06.8	+1.3
PB06	IPOC Station P	2.12	235	eP		15 15 06.7	
PB06				eS		15 15 36.1	
GO01	Chusmiza	2.28	322	Pn	Pn	15 15 08.7	+1.0
GO01	Chusmiza	2.28	322	⇑iP	Pn	15 15 08.7	+1.0
GO01				eS	Sn	15 15 39.4	+0.9
GO01	Chusmiza	2.28	322	Pg	Pn	15 15 09.0	+1.3
GO01	Chusmiza	2.28	322	eP		15 15 09.0	
GO01				eS		15 15 40.5	
GO01				eS		15 15 42.8	
PB15	IPOC Station P	2.38	223		Pn	15 15 10.3	+1.8
PB15	IPOC Station P	2.38	223	eP	Pn	15 15 10.5	+2.0
PB15				eS	Sn	15 15 42.5	+2.5
PB15	IPOC Station P	2.38	223	eS		15 15 41.9	
PB15				IAML		15 15 45.8	
	comp=Z,1µm,0.2s						
PB04	IPOC Station P	2.43	249		Pn	15 15 09.5	+0.4
PB04	IPOC Station P	2.43	249	Pg	Pn	15 15 10.6	+1.5
PB04	IPOC Station P	2.43	249	eP		15 15 11.0	
PB04				eS		15 15 41.5	
TA01	Diego Aracena	2.49	291	Pn	Pn	15 15 09.9	+0.2
TA01	Diego Aracena	2.49	291	eP	Pn	15 15 10.1	+0.4
TA01				eS	Sn	15 15 40.8	-1.2
TA01	Diego Aracena	2.49	291	Pg	Pn	15 15 10.3	+0.7
TA01	Diego Aracena	2.49	291	eP		15 15 10.2	
TA01				eS		15 15 41.1	
TA01				IAML		15 15 42.0	
	comp=Z,549nm,0.3s						
PB11	IPOC Station P	2.51	313		Pn	15 15 10.0	0.0
PB11	IPOC Station P	2.51	313	⇑iP	Pn	15 15 10.7	+0.6
PB11				eS	Sn	15 15 41.6	-1.1
PB11	IPOC Station P	2.51	313	eP		15 15 10.6	
PB11				eS		15 15 42.8	
PB11				IAML		15 15 44.2	
	comp=Z,1µm,0.2s						
TA02	Huaiquique	2.58	297		Pn	15 15 11.0	+0.3
TA02	Huaiquique	2.58	297	eP	Pn	15 15 11.1	+0.5
TA02				eS	Sn	15 15 42.7	-1.1
TA02	Huaiquique	2.58	297	Pg	Pn	15 15 11.3	+0.7
TA02	Huaiquique	2.58	297	eP		15 15 11.2	
TA02				eS		15 15 42.6	
TA02				IAML		15 15 46.4	
	comp=Z,763nm,0.1s						
HJA	Humahuaca	2.73	129	eP		15 15 15.3	
HJA				eS		15 15 51.2	
MNMC	Minye Minye	2.94	322		Pn	15 15 16.5	+1.1
MNMC	Minye Minye	2.94	322	⇑iP	Pn	15 15 16.6	+1.2
MNMC				eS	Sn	15 15 52.3	0.0
MNMCX	Minye Minye	2.94	322	eP		15 15 16.6	
MNMCX				eS		15 15 52.4	
MNMCX				IAML		15 15 54.1	
	comp=Z,2µm,0.4s						
PB10	IPOC Station P	3.33	232	eP	Pn	15 15 22.1	+2.1
PB10				eS	Sn	15 15 58.7	-1.8
PB10	IPOC Station P	3.33	232	eP		15 15 21.0	
PB10				eS		15 15 59.0	
PB16	IPOC Station P	3.56	331		Pn	15 15 25.2	+1.6
PB16	IPOC Station P	3.56	331	i P		15 15 25.2	
PB16				eS		15 16 06.9	
PB12	IPOC Station P	3.77	319		Pn	15 15 24.7	-1.1
PB12	IPOC Station P	3.77	319	eP	Pn	15 15 24.9	-0.9
PB12				eS	Sn	15 16 07.6	-3.3
SOET	ToroToro	3.79	28	Pg	Pn	15 15 27.5	+1.3
GO02	Mina Guanaco	4.06	205	Pn	Pn	15 15 30.8	+1.2
GO02	Mina Guanaco	4.06	205	Pg	Pn	15 15 30.5	+1.0
GO02	Mina Guanaco	4.06	205	eS		15 16 18.2	
GO02				IAML		15 16 24.5	
	comp=Z,201nm,0.2s						
PB18	Visviri	4.22	336	Pn	Pn	15 15 31.2	-0.8
BBOE	La Paz, Chanca	4.65	357	Pg	Pn	15 15 40.0	+2.4
BBOD	La Paz, Gloria	4.89	350	Pg	Pn	15 15 43.1	+2.4
AC01	Pan de Azucar	5.35	209		Pn	15 15 44.0	-2.1
AC02	Maricunga	5.49	193		Pn	15 15 47.2	-1.2
AC06	Mina Casimiro	6.33	202		Pn	15 15 57.2	-1.9
GO03	Copiap	6.51	200	Pn	Pn	15 15 59.2	-2.3
AC05	El Transito	7.69	197		Pn	15 16 15.3	-1.9
BBSD	Serra de San D	7.94	59	eP	Pn	15 16 18.3	-2.1
SIV	San Ignacio	8.32	50	P	Pn	15 16 23.5	-2.0
	comp=Z,7.9nm,0.4s,baz=253,slow=10.0,SNR=26						
SIV				S	Sn	15 17 50.1	-8.3
	comp=Z,3.5nm,0.3s,baz=290,slow=5.2,SNR=8.1						
CO01	Juntas del Tor	8.73	194		Pn	15 16 29.8	-1.3
GO04	Tololo Observa	9.09	197		Pn	15 16 32.5	-3.5
CO03	El Pedregal	9.70	195	Pn	Pn	15 16 41.2	-2.5
CO06	Fray Jorge	9.81	200	Pn	Pn	15 16 43.2	-2.0
CFA	Coronel Fontan	10.10	183	P	Pn	15 16 49.7	+0.8
	comp=Z,4.4nm,0.3s,baz=32,slow=17,SNR=25						
CFA				S	Sn	15 18 33.4	-7.5
	comp=Z,1.5nm,0.3s,baz=242,slow=23,SNR=2.0						
PTLB	Pontes e Lacer	10.10	55	Pn	Pn	15 16 46.5	-2.5
CO02	Combarbal	10.12	196	Pn	Pn	15 16 46.6	-2.7
CPUP	Villa Florida	10.64	119	P	Pn	15 16 56.6	+0.5
	comp=Z,2.1nm,0.8s,baz=283,slow=11,SNR=4.5						
CPUP				S	Sn	15 18 49.8	-4.3
	comp=Z,2.5nm,0.5s,baz=310,slow=9.4,SNR=2.9						
ROC1	El Roble	11.82	194	Pn	Pn	15 17 11.1	-0.6
MT02	Curacav	12.12	194	Pn	Pn	15 17 15.2	-0.1
MT09	Talagante	12.59	193	Pn	Pn	15 17 20.2	-1.2
MT01	Popeta	12.73	194		Pn	15 17 22.2	-0.8
BO01	Tunca	13.20	192		Pn	15 17 27.2	-1.8
BO02	Sierra Bellavi	13.54	191	Pn	Pn	15 17 31.2	-2.2
CRSM	Crissiumal (Br	13.79	118	eP	P	15 17 41.1	+1.5
GO05	Huala	13.98	195	Pn	Pn	15 17 37.3	-1.6
RODS	Rosario do Sul	14.29	131	eP	P	15 17 47.3	+2.2
PTGB	Pitanga	14.74	106	eP	P	15 17 53.4	+3.1
ALGR	Alto Alegre (B	15.14	122	eP	P	15 17 57.5	+2.8
ITAB	Concordia	15.29	115		Pn	15 17 55.1	-0.1
ITAB				IAmb	IAmb	15 17 59.1	
	comp=Z,11nm,0.8s						
ITAB	Concordia	15.29	115	eP	P	15 17 59.1	+2.8
PCMB	Pacaembu	15.29	93	eP	Pn	15 17 57.4	+2.1
PLTB	Pedras Altas	16.22	132	P	P	15 18 05.4	-1.2
FRTB	Fartura	16.87	100	eP	Pn	15 18 16.8	+2.3
CNLB	Canela	17.09	121	eP	Pn	15 18 20.6	+3.5
TRQA	Tornquist	17.24	165		P	15 18 13.7	-4.0
TRQA				IAmb	IAmb	15 18 22.9	
	comp=Z,5.3nm,0.6s						
SNDB	Serra Nova Dou	18.32	62	eP	P	15 18 31.0	+1.3
GO06	Curarrehue	18.33	189		P	15 18 27.6	-2.1
GO06				IAmb	IAmb	15 18 35.9	
	comp=Z,6.0nm,0.7s						
LL04	Puerto Octay	19.78	191	P	P	15 18 42.8	-2.4
LL04				IAmb	IAmb	15 18 48.2	
	comp=Z,7.6nm,0.6s						
ITTB	Itaituba	20.60	36	eP	P	15 18 54.6	+0.4
SGCB	S£o Gabriel d	21.24	2	eP	P	15 19 00.8	-0.3
LL06	Loncomilla	21.27	192	P	P	15 19 00.3	-0.8
LL06				IAmb	IAmb	15 19 04.0	
	comp=Z,26nm,1.1s						
TULM	Tulcn-Chalpat	24.16	335	P	P	15 19 26.5	-3.0
BOAV	Boa Vista	24.75	17	P	P	15 19 33.0	-1.3
MG02	Cerro Sombrero	31.27	182	P	P	15 20 30.4	-1.5
MG03	Isla Dawson	32.38	183	P	P	15 20 40.6	-1.0
MG03				IAmb	IAmb	15 20 48.3	
	comp=Z,14nm,1.1s						
BCIP	Isla Barro Col	32.71	337	P	P	15 20 42.7	-2.1
MLPR	Magueyes Islan	39.21	1	P	P	15 21 38.3	-1.8
PDAR	Pinedale Array	74.66	329	P	P	15 25 52.1	+2.8
	comp=Z,0.3nm,0.5s,baz=126,slow=8.8,SNR=6.8						
	comp=Z,0.3nm,0.5s						
YKA	Yellowknife Ar	91.55	340	P	P	15 27 17.9	+2.7
	comp=Z,1.4nm,0.7s,baz=133,slow=4.5,SNR=28						
	comp=Z,1.4nm,0.7s						
ASAR	Alice Springs	130.44	206	PKP	PKiKP	15 33 22.3	+1.9
	comp=Z,0.9nm,1.2s,baz=140,slow=2.0,SNR=1.8						
WRA	Warramunga Arr	133.53	209	PKP	PKiKP	15 33 28.0	+1.3
	comp=Z,0.1nm,0.6s,baz=150,slow=1.5,SNR=1.3						
MKAR	Makanchi Array	144.95	37	PKP	PKPdf	15 33 48.0	+2.7
	comp=Z,1.6nm,0.7s,baz=320,slow=3.7,SNR=21						

ISK **24** *15:19:05.7, 39°.55N×26°.10E, h12^{km}, ML4.3/22*
SOF **24** *15:19:05.1, 39°.67N×26°.12E, h2^{km}, MD4.3*
IDC **24** *15:19:05.1±0.8, 39°.56N×26°.03E, h0^{km}, mb3.7/12, mbtmp3.8/20, ML3.8/8, MS3.2/20, Error ellipse: s-maj=14.8km s-min=11.3km az=63.0*
DDA **24** *15:19:06.2±0.0, 39°.55N×26°.11E, h10^{km}, MW4.2*
ATH **24** *15:19:06.6, 39°.55N×26°.09E, h12^{km}, ML4.0/25, Error ellipse: s-maj=1.2km s-min=0.5km az=236.0*
THE **24** *15:19:06.7, 39°.55N×26°.12E, h9^{km}, ML4.2/12, Error ellipse: s-maj=0.8km s-min=0.4km az=119.0*
MCSM **24** *15:19:06.9±0.5, 40°N±4°×2°6E±°, h7^{km}±2^{km}, mb4.4*
NEIC **24** *15:19:06.8±2.0, 39°.54N±0°.02×26°.13E±0°.06, h12^{km}±7^{km}, mb4.4/8, Error ellipse: s-maj=7.0km s-min=2.3km az=69.0*
GII **24** *15:19:07.6±0.0, 38°.99N×26°.00E, h1^{km}, Mm4.1/5*
CFUSG **24** *15:19:13.3, 39°.65N×26°.83E, h39^{km}, mb3.5/4, Western Turkey Magtype MSH 3.6 from 4 stations*
ISC 24 15:19:06.6±0.7**, 39°.56N**±0°.01×**26°.11E**±0°.02**, h12**^{km}±4^{km}**, n300, σ1^{s}.40**/353**, mb3.7**/16**, MS3.2**/15**, 15C-18D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.06	157	P	Pg	15 19 08.5	-0.5
KOCA				S	Sg	15 19 10.0	-0.8
GPNR	Gulpinar-Canak	0.10	169	Pg	Pg	15 19 08.9	-0.6
GPNR				Sg	Sg	15 19 10.7	-0.9
BOZC	Bozcaada	0.29	352	Pg	Pg	15 19 12.4	-0.2
BOZC				Sg	Sg	15 19 16.9	+0.3
BOZC	Bozcaada	0.29	352	SPECP		15 19 12.0	
BOZC				P	Pg	15 19 12.4	-0.2
BOZC				S	Sg	15 19 16.7	+0.1
BOZC				i AML	AML	15 19 17.0	
	comp=N,4µm,0.4s						
BOZC				i AML	AML	15 19 17.0	
	comp=E,3µm,0.4s						
EZN	Ezine	0.32	32	P	Pg	15 19 13.0	-0.1
EZN				S	Sg	15 19 17.9	+0.5
	89µm,0.4s						
EZN	Ezine	0.32	32	Pg	Pg	15 19 12.9	-0.1
EZN				Sg	Sg	15 19 17.8	+0.4
EZN	Ezine	0.32	32	Pg	Pg	15 19 12.9	-0.1
PRK	Paraskevi	0.34	158	P	Pg	15 19 13.4	0.0
PRK				S	Sg	15 19 18.3	+0.4
	307µm,0.4s						
PRK	Paraskevi	0.34	158	P	Pg	15 19 13.3	-0.1
PRK				S	Sg	15 19 18.2	+0.3
PRK				AML	AML	15 19 20.2	
PRK				AML	AML	15 19 20.4	
BAYC	CANAKKALE_Bayr	0.39	61	SPECP		15 19 14.0	
BAYC				P	Pg	15 19 14.1	-0.3
BAYC				i AML	AML	15 19 19.0	
	comp=E,5µm,0.3s						
BAYC				S	Sg	15 19 19.3	-0.2
BAYC				i AML	AML	15 19 20.0	
	comp=N,4µm,0.6s						
SIGR	SIGRI	0.40	210	P	Pg	15 19 14.2	-0.3
SIGR				S	Sg	15 19 20.0	+0.2
	73µm,0.3s						
SIGR	SIGRI	0.40	210	Pg	Pg	15 19 14.2	-0.3
SIGR				Sg	Sg	15 19 19.7	-0.1
SIGR	SIGRI	0.40	210	Pg	Pg	15 19 14.1	-0.4
SIGR	SIGRI	0.40	210	P	Pg	15 19 14.0	-0.4
SIGR				S	Sg	15 19 19.5	-0.3
SIGR				AML	AML	15 19 20.5	
SIGR				AML	AML	15 19 20.9	
ECEA	Canakkale, Ece	0.49	6	SPECP		15 19 16.0	
ECEA				P	Pg	15 19 16.3	+0.1
ECEA				S	Sb	15 19 24.0	-0.3
ECEA				i AML	AML	15 19 25.0	
	comp=N,9µm,0.6s						
AYVA	Ayvalik	0.51	119	P	Pg	15 19 16.5	-0.2
AYVA				S	Sg	15 19 24.2	+0.7
AYVA				i AML	AML	15 19 25.0	
	comp=E,8µm,0.4s						
AYVA				i AML	AML	15 19 29.0	
	comp=N,1µm,0.4s						
COMU	Canakkale	0.61	27	Pg	Pg	15 19 18.4	-0.1
GOKA	anakkale-Gk	0.65	346	SPECP		15 19 18.0	
GOKA				P	Pg	15 19 18.9	-0.4
GOKA				S	Sg	15 19 27.9	0.0
GOKA				i AML	AML	15 19 28.0	
	comp=E,1µm,0.5s						
GOKA				i AML	AML	15 19 39.0	
	comp=N,2µm,0.5s						
GADA	Gvkgeada	0.65	346	Pg	Pg	15 19 18.7	-0.7
BUHA	Balikesir, Bur	0.75	94	SPECP		15 19 20.0	
BUHA				P	Pg	15 19 20.9	-0.3
BUHA				S	Sg	15 19 31.4	+0.4
BUHA				i AML	AML	15 19 35.0	
	comp=N,9µm,0.6s						
DKL	Dikili	0.79	128	Pg	Pg	15 19 21.4	-0.4
LIA	Limnos Island	0.79	296	P	Pg	15 19 21.7	-0.2
LIA				S	Sn	15 19 34.7	-0.6
	43µm,0.7s						
LIA	Limnos Island	0.79	296	Pg	Pg	15 19 21.4	-0.5
LIA	Limnos Island	0.79	296	P	Pg	15 19 21.5	-0.4
LIA				S	Sg	15 19 31.9	-0.4
LIA				AML	AML	15 19 34.6	
	comp=E,87909µm,0.4s						
LIA				AML	AML	15 19 36.5	
	comp=N,83009µm,0.4s						
CANM	Can-anakkale	0.86	58	Pg	Pg	15 19 22.6	-0.6
GELI	Tayfur-Gelibol	0.89	18	Pg	Pg	15 19 23.2	-0.6
KARB	zmir-Karabur	0.92	165	SPECP		15 19 23.0	
KARB				P	Pg	15 19 23.9	-0.5
KARB				S	Sb	15 19 37.3	+0.6
KARB				i AML	AML	15 19 40.0	
	comp=N,1µm,0.4s						
ZEDA	zmir-Bergama	0.95	128	P	Pg	15 19 24.5	-0.6
ZEDA				S	Sg	15 19 37.3	-0.2
ZEDA				i AML	AML	15 19 40.0	
	comp=N,9µm,0.7s						
LPK	Lapseki	0.96	31	Pg	Pg	15 19 24.5	-0.6
SMTH	Samothraki Isl	1.02	334	P	Pg	15 19 25.5	-0.7
SMTH				S	Sb	15 19 40.0	+0.5
	comp=N,9µm,0.5s						
SMTH	Samothraki Isl	1.02	334	Pg	Pg	15 19 25.3	-0.9
SMTH	Samothraki Isl	1.02	334	P	Pg	15 19 25.1	-1.1
SMTH				S	Sg	15 19 39.2	-0.3
SMTH				AML	AML	15 19 41.7	
	comp=N,13156µm,0.3s						
SMTH				AML	AML	15 19 41.9	
	comp=E,19325µm,0.5s						
PSRA	Psara	1.10	203	P	Pb	15 19 27.5	0.0
PSRA				AML	AML	15 19 46.2	
	comp=E,92281µm,0.3s						
PSRA				AML	AML	15 19 46.6	
	comp=N,46591µm,0.3s						
CAVK	Edirne/Enez-Ca	1.14	2	SPECP		15 19 27.0	
CAVK				P	Pb	15 19 27.7	-0.5
CAVK				S	Sn	15 19 44.1	+0.3
CAVK				i AML	AML	15 19 51.0	
	comp=N,5µm,0.9s						
CAVK				i AML	AML	15 19 53.0	
	comp=N,3µm,0.4s						
ERIK	Erikli-Kesan	1.16	15	Pn	Pb	15 19 27.8	-0.7
CHOS	Chios island	1.17	182	P	Pb	15 19 27.9	-0.9
CHOS				S	Sg	15 19 44.3	0.0
	comp=N,18µm,0.3s						
CHOS	Chios island	1.17	182	Pn	Pb	15 19 27.9	-0.9
CHOS	Chios island	1.17	182	P	Pb	15 19 27.6	-1.2
CHOS				S	Sb	15 19 43.5	-0.4
CHOS				AML	AML	15 19 47.5	
	comp=E,37394µm,0.3s						
CHOS				AML	AML	15 19 49.0	
	comp=N,35049µm,0.4s						
ENEZ	Enez	1.18	2	P	Pb	15 19 28.3	-0.6
ENEZ				S	Sn	15 19 45.4	+0.5
	comp=N,9µm,1.0s						
ENEZ	Enez	1.18	2	Pn	Pb	15 19 28.4	-0.5
BALY	Balya	1.18	81	SPECP		15 19 28.0	
BALY				P	Pb	15 19 28.5	-0.4
BALY				S	Sb	15 19 44.3	+0.1
BALY				i AML	AML	15 19 46.0	
	comp=N,5µm,0.6s						
BALY				i AML	AML	15 19 46.0	
	comp=N,1µm,0.7s						
KRBG	Karabiga-Canak	1.24	47	Pn	Pn	15 19 29.3	-0.4
URLA	Izmir	1.25	162	Pn	Pn	15 19 29.2	-0.7
URLA	Izmir	1.25	162	SPECP		15 19 29.0	
URLA				P	Pn	15 19 29.3	-0.7
URLA				S	Sb	15 19 45.9	-0.4
URLA				i AML	AML	15 19 49.0	
	comp=N,10µm,0.6s						
URLA				i AML	AML	15 19 49.0	
	comp=N,1µm,0.4s						
STEP	BALIKESIR_Sava	1.26	98	SPECP		15 19 29.0	
STEP				P	Pn	15 19 29.9	-0.1
STEP				S	Sn	15 19 47.8	+0.9
STEP				i AML	AML	15 19 55.0	
	comp=N,6µm,0.5s						
STEP				i AML	AML	15 19 56.0	
	comp=N,7µm,0.7s						
KNL	Balıkesir	1.30	56	SPECP		15 19 30.0	
KNL				P	Pn	15 19 30.9	+0.3
KNL				S	Sg	15 19 48.8	+0.2
KNL				i AML	AML	15 19 49.0	
	comp=N,4µm,0.6s						
KNL				i AML	AML	15 19 54.0	
	comp=N,2µm,0.5s						
GONE	Gonen-Balikesi	1.31	68	Pn	Pn	15 19 30.7	0.0
ALN	Alexandroupoli	1.34	358	P	Pn	15 19 30.6	-0.5
ALN				S	Sb	15 19 48.6	-0.2
	comp=N,8µm,0.7s						
ALN	Alexandroupoli	1.34	358	Pn	Pn	15 19 30.6	-0.5
ALN	Alexandroupoli	1.34	358		Pn	15 19 30.7	-0.5
ALN	Alexandroupoli	1.34	358	P	Pn	15 19 30.1	-1.0
ALN				S	Sb	15 19 48.3	-0.5
ALN				AML	AML	15 19 50.3	
	comp=E,22028µm,0.7s						
ALN				AML	AML	15 19 51.1	
	comp=N,8554µm,0.6s						
KESN	Edirne-Kesan	1.34	19	SPECP		15 19 30.0	
KESN				P	Pn	15 19 30.6	-0.9
KESN				S	Sb	15 19 49.1	-0.1
KESN				i AML	AML	15 19 51.0	
	comp=N,7µm,0.9s						
KESN				i AML	AML	15 19 55.0	
	comp=N,4µm,0.4s						
ZEYE	Izmir, Urla-Ze	1.35	167	SPECP		15 19 30.0	
ZEYE				P	Pn	15 19 30.5	-0.8
ZEYE				S	Sg	15 19 49.9	-0.2
ZEYE				i AML	AML	15 19 53.0	
	comp=N,6µm,0.7s						
ZEYE				i AML	AML	15 19 54.0	
	comp=N,9µm,0.6s						
BALB	Balikesir	1.37	86	Pn	Pn	15 19 31.2	-0.3
BALB	Balikesir	1.37	86	Pn	Pn	15 19 31.2	-0.3
BLCB	Balcova	1.38	148	P	Pn	15 19 31.2	-0.4
BLCB				S	Sb	15 19 49.8	0.0
BLCB	Balcova	1.38	148	Pn	Pn	15 19 31.4	-0.2
RKY	Sarkoy-Tekirda	1.40	36	Pn	Pn	15 19 31.9	-0.1
BKES	Balkesir-Mer	1.42	82	SPECP		15 19 32.0	
BKES				P	Pn	15 19 32.0	-0.2
BKES				S	Sb	15 19 51.6	+0.7
BKES				i AML	AML	15 19 57.0	
	comp=N,4µm,0.3s						
AKS	Akhisar	1.49	117	Pn	Pn	15 19 32.6	-0.6
AKHS	Akhisar	1.49	117	SPECP		15 19 32.0	
AKHS				P	Pn	15 19 33.0	-0.2
AKHS				S	Sg	15 19 55.8	+1.3
AKHS				i AML	AML	15 19 58.0	
	comp=N,2µm,0.4s						
THAS	Thassos island	1.50	315	P	Pn	15 19 32.5	-0.7
THAS				S	Sn	15 19 53.3	+0.6
	comp=N,4µm,0.5s						
THAS	Thassos island	1.50	315	P	Pn	15 19 32.0	-1.2
THAS				S	Sn	15 19 51.0	-1.7
THAS				AML	AML	15 19 52.1	
	comp=N,11097µm,0.5s						
THAS				AML	AML	15 19 55.2	
	comp=E,5522µm,0.6s						
EDC	Edincik	1.56	59	Pn	Pn	15 19 34.4	+0.2
DGB	zmir	1.62	158	P	Pn	15 19 34.4	-0.5
DGB				S	Sb	15 19 57.7	+0.9
DGB				i AML	AML	15 20 02.0	
	comp=E,2µm,0.5s						
DGB				i AML	AML	15 20 03.0	
	comp=E,2µm,0.4s						
UKOP	Uzunkopru-Edir	1.62	14	Pn	Pn	15 19 34.9	-0.1
GOMA	Golmarmara-Man	1.64	120	Pn	Pn	15 19 35.8	+0.5
RDO	Rodhopi	1.65	345	P	Pn	15 19 35.0	-0.3
RDO				S	Sn	15 19 56.5	+0.1

	comp=E,2µm,0.5s						
RDO	Rodhopi	1.65	345	Pn	Pn	15 19 34.8	-0.5
RDO	Rodhopi	1.65	345		Pn	15 19 35.1	-0.3
RDO	Rodhopi	1.65	345	P	Pn	15 19 34.5	-0.8
RDO				S	Sn	15 19 55.5	-0.9
RDO				AML	AML	15 20 01.4	
	comp=E,3654µm,0.6s						
RDO				AML	AML	15 20 06.4	
	comp=N,3353µm,0.4s						
BAND	Balkesir-Ban	1.73	62	P	Pn	15 19 36.3	-0.1
BAND				S	Sn	15 19 58.6	+0.2
BAND				*i* AML	AML	15 20 04.0	
	comp=N,3µm,0.3s						
BAND				*i* AML	AML	15 20 06.0	
	comp=N,2µm,0.3s						
TKR	Tekirdag	1.80	37	Pn	Pn	15 19 37.9	+0.4
OUR	Ouranopolis	1.81	296	P	Pn	15 19 37.1	-0.5
OUR				S	Sn	15 20 01.3	+0.9
	comp=N,3µm,0.6s						
OUR	Ouranopolis	1.81	296	Pn	Pn	15 19 37.1	-0.5
OUR	Ouranopolis	1.81	296	P	Pn	15 19 36.8	-0.8
OUR				S	Sn	15 19 58.7	-1.7
OUR				AML	AML	15 20 07.9	
	comp=E,5212µm,0.5s						
OUR				AML	AML	15 20 11.0	
	comp=N,8379µm,0.7s						
KYMI	Kymi, Euboea I	1.81	240	P	Pn	15 19 36.5	-1.1
KYMI	Kymi, Euboea I	1.81	240	P	Pn	15 19 36.3	-1.4
KYMI				S	Sn	15 19 59.5	-1.0
KYMI				AML	AML	15 20 06.8	
	comp=N,7496µm,0.6s						
KYMI				AML	AML	15 20 06.8	
	comp=E,4028µm,0.6s						
DURS	Dursunbey	1.83	88	P	Pn	15 19 37.8	-0.2
DURS				SPECP		15 19 39.0	
DURS				S	Sn	15 20 01.0	0.0
DURS				*i* AML	AML	15 20 06.0	
	comp=E,3µm,0.3s						
DURS				*i* AML	AML	15 20 08.0	
	comp=E,6µm,0.7s						
KCTX	Karacabey (Bur	1.87	67	Pn	Pn	15 19 38.2	-0.2
KAVA	Kavala	1.89	320	P	Pn	15 19 38.1	-0.5
KAVA				S	Sn	15 20 03.2	+0.9
	comp=E,3µm,0.8s						
KAVA	Kavala	1.89	320	P	Pn	15 19 37.9	-0.8
KAVA				S	Sn	15 20 00.3	-2.0
SMG	Samos	1.93	163	P	Pn	15 19 38.6	-0.7
SMG	Samos	1.93	163	P	Pn	15 19 38.5	-0.7
SMG				S	Sn	15 20 03.0	-0.5
SMG				AML	AML	15 20 10.9	
	comp=E,32472µm,0.6s						
SMG				AML	AML	15 20 11.4	
	comp=N,25739µm,0.5s						
DST	Dursunbey	1.94	88	Pn	Pn	15 19 39.8	+0.4
CRLT	Corlu	2.00	38	Pn	Pn	15 19 40.6	+0.3
BOTS	Marmara Eregli	2.03	44	Pn	Pn	15 19 40.9	+0.4
EREA	Eretria	2.04	237	P	Pn	15 19 39.7	-1.1
EREA	Eretria	2.04	237	P	Pn	15 19 39.6	-1.1
EREA				AML	AML	15 20 15.7	
	comp=N,3472µm,0.6s						
EREA				AML	AML	15 20 22.8	
	comp=E,2858µm,0.5s						
KOKK	Kokkinochori,	2.05	309	P	Pn	15 19 40.2	-0.7
KOKK	Kokkinochori,	2.05	309	P	Pn	15 19 40.0	-0.9
GCAM	G?zelcaml?	2.05	154	Pn	Pn	15 19 40.8	-0.1
GCAM	G?zelcaml?	2.05	154	SPECP		15 19 42.0	
GCAM				P	Pb	15 19 42.8	-1.0
GCAM				S	Sb	15 20 10.5	+1.2
GCAM				*i* AML	AML	15 20 13.0	
	comp=E,2µm,1.2s						
GCAM				*i* AML	AML	15 20 16.0	
	comp=E,3µm,0.6s						
DEMI	Demirci	2.09	103	SPECP		15 19 41.0	
DEMI				P	Pn	15 19 41.8	+0.3
KDZ	Kurdzhali	2.16	346	*i* P	Pn	15 19 42.1	-0.3
MANT	Manisa	2.19	118	Pn	Pn	15 19 43.0	0.0
KULA	Kula-Manisa	2.24	117	Pn	Pn	15 19 43.9	+0.3
NEO	Neokhori	2.25	265	P	Pn	15 19 43.0	-0.6
NEO	Neokhori	2.25	265	P	Pn	15 19 42.6	-1.1
NEO				AML	AML	15 20 25.7	
	comp=E,1714µm,0.5s						
NEO				AML	AML	15 20 29.7	
	comp=N,1718µm,0.6s						
DION	Dionisos Attik	2.25	230	P	Pn	15 19 43.5	-0.1
DION				AML	AML	15 20 23.5	
	comp=N,2672µm,0.6s						
DION				AML	AML	15 20 29.2	
	comp=E,3126µm,0.5s						
XOR	Xorichti	2.27	266	P	Pn	15 19 42.7	-1.2
SMAA	Simav-Kutahya	2.27	101	Pn	Pn	15 19 44.3	+0.3
SIMA	Simav-Kutahya	2.28	101	Pn	Pn	15 19 44.4	+0.3
PTL	Penteli	2.31	230	P	Pn	15 19 44.7	+0.2
PTL				AML	AML	15 20 22.2	
	comp=N,1528µm,0.8s						
PTL				AML	AML	15 20 32.4	
	comp=E,1972µm,0.8s						
RZN	Rozhen	2.38	334	*i* P	Pn	15 19 45.7	+0.1
ATHU	Athens Univers	2.41	230	P	Pn	15 19 46.7	+0.8
ATHU				AML	AML	15 20 26.8	
	comp=N,859µm,0.6s						
ATHU				AML	AML	15 20 30.7	
	comp=E,381µm,0.6s						
SOH	Sokhos	2.46	302	P	Pn	15 19 46.5	-0.1
SOH				AML	AML	15 20 27.4	
	comp=E,7185µm,0.6s						
SOH				AML	AML	15 20 30.0	
	comp=N,4199µm,0.8s						
SRS	Serrai	2.48	310	P	Pn	15 19 46.2	-0.5
SRS				AML	AML	15 20 26.2	
	comp=N,2019µm,0.9s						
SRS				AML	AML	15 20 27.3	
	comp=E,4604µm,0.5s						
NVR	Nevrokopi	2.48	317	P	Pn	15 19 47.4	+0.5
NVR				AML	AML	15 20 29.6	
	comp=N,1212µm,0.5s						
NVR				AML	AML	15 20 31.8	
	comp=E,1721µm,0.6s						
VLY	Voula,Athens	2.48	228	P	Pn	15 19 46.3	-0.5
VLY				AML	AML	15 20 27.1	
	comp=N,2317µm,0.7s						
VLY				AML	AML	15 20 33.8	
	comp=E,2475µm,0.8s						
HORT	Hortiatis	2.53	295	P	Pn	15 19 47.7	+0.1
ATAL	Atalanti	2.55	251	P	Pn	15 19 46.9	-0.8
ATAL				AML	AML	15 20 33.5	
	comp=N,1476µm,0.8s						
ATAL				AML	AML	15 20 42.5	
	comp=E,738µm,1.2s						
VIL2	Platees	2.59	240	P	Pn	15 19 47.1	-1.3
VIL2				AML	AML	15 20 34.5	
	comp=N,1775µm,0.7s						
VIL2				AML	AML	15 20 35.9	
	comp=E,3362µm,0.9s						
MMB	Musomiste	2.72	319	*i* P	Pn	15 19 49.7	-0.5
AXAR	Agios Charalam	2.79	255	P	Pn	15 19 50.8	-0.3
AXAR				AML	AML	15 20 47.1	
	comp=N,1802µm,0.8s						
AXAR				AML	AML	15 20 52.3	
	comp=E,1333µm,1.0s						
LIT	Litokhoron	2.84	282	Pn	Pn	15 19 51.6	-0.1
LIT	Litokhoron	2.84	282	P	Pn	15 19 51.3	-0.5
LOUT	Loutraki	2.91	238	P	Pn	15 19 51.5	-1.2
LOUT				AML	AML	15 20 45.1	
	comp=E,478µm,0.5s						
LOUT				AML	AML	15 20 45.7	
	comp=N,320µm,0.5s						
JMB	Yambol	2.93	7	*i* P	Pn	15 19 53.2	+0.2
KNT	Kendrikon	2.93	304	P	Pn	15 19 52.4	-0.6
AGG	Agios Georgios	2.98	261		Pn	15 19 53.4	-0.3
AGG	Agios Georgios	2.98	261	P	Pn	15 19 52.9	-0.8
THL	Klokotos Trika	3.16	271	P	Pn	15 19 56.0	-0.2
SANT	Santorini	3.22	189	⇓P	Pn	15 19 55.9	-1.1
SANT	Santorini	3.22	189	Pn	Pn	15 19 55.6	-1.4
VAY	Valandovo	3.23	304	*i* Pn	Pn	15 19 59.7	+2.6
KKB	Krupnik	3.26	316	*i* P	Pn	15 19 57.4	-0.1
PGB	Panagyurishte	3.33	334	*i* P	Pn	15 19 58.4	-0.2
GUR	Goura	3.36	242	P	Pn	15 19 58.2	-0.7
BORA	Eskisehir	3.37	83	Pn	Pn	15 19 59.5	+0.4
ANX	Ano Chora	3.40	255	P	Pn	15 19 59.6	+0.1
KLV	Kalavryta, Ach	3.44	245	P	Pn	15 19 59.4	-0.7
LAKA	Lakka	3.48	249	P	Pn	15 20 00.2	-0.4
STIP	Stip	3.67	307	*i* Pn	Pn	15 20 02.2	-1.0
ARG	Arkhangelos	3.70	154	Pn	Pn	15 20 03.7	+0.2
SZH	Strazhica	3.71	358	*i* P	Pn	15 20 03.8	+0.1
VTS	Vitosha	3.75	326	*i* P	Pn	15 20 05.1	+0.7
PRD	Provadia	3.77	15	*i* P	Pn	15 20 04.2	-0.3
VLI	Veliai	3.78	222	P	Pn	15 20 03.5	-1.2
FNA	Florina	3.83	290	Pn	Pn	15 20 06.4	+1.1
ISP	Isparta	3.86	115	Pn	Pn	15 20 05.3	-0.6
ISP				Sn	Sn	15 20 53.4	+2.1
MDUB	Mudurnu	4.01	75	Pn	Pn	15 20 09.1	+1.1
RAZG	Razgrad	4.02	4	⇑P	Pn	15 20 08.6	+0.7
ITM	Ithomi	4.05	235		Pn	15 20 08.8	+0.3
ITM	Ithomi	4.05	235	P	Pn	15 20 09.4	+1.0
KARP	Karpathos	4.09	168	Pn	Pn	15 20 08.5	-0.5
KARP	Karpathos	4.09	168	P	Pn	15 20 08.4	-0.5
KALB	Balgarevo	4.22	24	⇓P	Pn	15 20 11.8	+1.1
SKO	Skopje	4.29	306	*i* Pn	Pn	15 20 16.0	+4.3
AKAS	Kas	4.32	139		Pn	15 20 13.6	+1.4
OHR	Ohrid	4.34	293	*i* Pn	Pn	15 20 14.8	+2.3
IDI	Anoyia	4.37	193	⇓P	Pn	15 20 12.1	-0.7
IDI	Anoyia	4.37	193	Pn	Pn	15 20 12.2	-0.7
	comp=N,2.7nm,0.3s,baz=339,slow=13,SNR=18						
IDI				Sn	Sn	15 21 02.7	-1.0
	comp=N,6.0nm,0.3s,baz=317,slow=18,SNR=1.9						
IDI				Lg	Lg	15 21 25.7	
	comp=N,5.8nm,0.3s,baz=239,slow=3.8,SNR=3.6						
IDI				LR	LR	15 22 04.7	
	comp=N,236nm,19.8s,baz=34,slow=41						
	comp=N,14nm,0.5s						
IDI	Anoyia	4.37	193	Pn	Pn	15 20 11.6	-1.3
KDZE	Karadeniz Ereo	4.43	65	⇓P	Pn	15 20 13.0	-0.7
KEK	Kerkira	4.87	274		Pn	15 20 21.5	+1.8
ANTO	Ankara	5.17	84		Pn	15 20 23.5	-0.3
TIRR	Tirgusor	5.19	19	⇑P	Pn	15 20 24.1	+0.1
TIRR	Tirgusor	5.19	19	Pn	Pn	15 20 23.9	-0.1
BOVS	Bovan	5.24	322	⇑P	Pn	15 20 25.1	+0.3
HARR	Harsova	5.31	14	⇓P	Pn	15 20 26.0	+0.4
TPGR	Topolog	5.57	17	⇓P	Pn	15 20 29.4	+0.1
MTUR	Matau	5.72	353	⇑P	Pn	15 20 32.5	+1.1
DJES	Djerdap	5.76	334	⇑P	Pn	15 20 31.8	-0.1
CFR	Carcaliu	5.81	14	⇓P	Pn	15 20 32.7	+0.1
BR131	Keskin Array S	5.82	86		Pn	15 20 33.7	+0.9
BRTR	Keskin Array B	5.82	86	Pn	Pn	15 20 34.0	+1.2
	comp=N,7.6nm,0.3s,baz=257,slow=13,SNR=87						
BRTR				Sn	Sn	15 21 39.4	-0.1
	comp=N,2.1nm,0.3s,baz=278,slow=22,SNR=1.1						
BRTR				Lg	Lg	15 22 16.2	
	comp=N,1.4nm,0.3s,baz=273,slow=24,SNR=6.6						
BRTR				LR	LR	15 23 09.2	
	comp=N,222nm,19.8s,baz=262,slow=42						
	comp=N,18nm,0.4s						
BRTR	Keskin Array B	5.82	86	Pn	Pn	15 20 33.5	+0.7
DRME	Dracevica, Mon	5.87	299	*e*Pn	Pn	15 20 36.7	+3.3
SCTE	Santa Cesarea	5.91	277		Pn	15 20 35.5	+1.6
ARR	Arges	5.91	350	⇑P	Pn	15 20 34.5	+0.5
SJES	Sjenica	5.91	311	*e*Pn	Pn	15 20 35.2	+1.1
PDG	Podgorica	5.93	301	Pn	Pn	15 20 37.7	+3.6
VOIR		5.93	353	⇓P	Pn	15 20 35.1	+0.8
MLR	Muntele Rosu	5.93	359	⇓P	Pn	15 20 35.9	+1.5
MLR	Muntele Rosu	5.93	359	Pn	Pn	15 20 35.3	+0.9
	comp=N,5.1nm,0.3s,baz=245,slow=2.6,SNR=46						
MLR				Lg	Lg	15 22 13.8	
	baz=186,slow=18						
	comp=N,22nm,0.6s						
MLR	Muntele Rosu	5.93	359	Pn	Pn	15 20 35.2	+0.8
TLCR		5.97	19	⇓P	Pn	15 20 35.4	+0.6
COVR	Voineasa-Covas	6.29	1	⇓P	Pn	15 20 40.5	+1.4
PLOR	Plostina	6.30	3	⇑P	Pn	15 20 41.6	+2.2
VRI	Vrincioaia	6.32	4	⇑P	Pn	15 20 41.3	+1.7
GZR	Gura Zlata	6.33	338	⇓P	Pn	15 20 39.7	0.0
DOPR	Dopca	6.43	356	⇓P	Pn	15 20 41.9	+0.8
DIVS	Divibare	6.44	317	Pn	Pn	15 20 41.4	+0.1
DIVS	Divibare	6.44	317	*e*Pn	Pn	15 20 41.3	0.0
BZK	Bozkurt	6.46	66	⇑P	Pn	15 20 39.3	-2.1
BZK	Bozkurt	6.46	66		Pn	15 20 38.7	-2.7
RUDO	Rudo	6.48	311	*e*Pn	Pn	15 20 42.1	+0.4
UPM	Unac-Piva	6.53	306	*e*Pn	Pn	15 20 44.8	+2.2
OZUR		6.54	358	⇑P	Pn	15 20 43.9	+1.3
BBLS	Lazići	6.61	313	*e*Pn	Pn	15 20 45.5	+1.9
BRY	Bratogost	6.61	303	*e*Pn	Pn	15 20 46.8	+3.1
TREB	Trebinje	6.65	301	*e*Pn	Pn	15 20 47.4	+3.3
SURR	Surduc	6.85	336	⇑P	Pn	15 20 47.0	+0.1
BZS	Buzias	6.90	333	⇑P	Pn	15 20 47.8	+0.2
TESR	Tescani	6.96	3	⇓P	Pn	15 20 49.5	+1.1
TEKS	Tekeris	6.99	318	*e*Pn	Pn	15 20 47.0	-1.8
HAPS	Han Pijesak,Bl	7.00	313	*e*Pn	Pn	15 20 51.5	+2.5
STON	Ston	7.15	300	*e*Pn	Pn	15 20 55.9	+5.0
TIP	Timpagrande	7.25	270	⇑P	Pn	15 20 53.7	+1.2
TIP	Timpagrande	7.25	270	Pn	Pn	15 20 53.1	+0.7
FRGS	Fruska Gora	7.28	322	*e*Pn	Pb	15 21 06.8	-6.1
CSS	Mathiatis	7.36	126	Pn	Pn	15 20 53.2	-0.7
CSS				Sn	Sn	15 22 15.9	-1.4
MARR	Marisel-Cluj	7.44	344	⇓P	Pn	15 20 55.1	0.0
SEV	Sevastopol'	7.51	46	⇓*i*P	Pn	15 20 54.9	-1.0
SEV				Pm		15 20 55.5	
	comp=Z,13nm,0.3s						
SEV				*i* S	Sn	15 22 14.7	-6.3
SEV				Sm		15 22 16.8	
	comp=N,54nm,0.6s						
SEV				Sm		15 22 16.8	
	comp=E,23nm,0.4s						
DRGR		7.64	342	⇑P	Pn	15 20 58.3	+0.5
YAL	Yalta	7.75	48	⇓*e*P	Pn	15 20 58.8	-0.4
YAL				Pm		15 20 59.3	
	comp=Z,25nm,0.4s						
YAL				*e*S	Sn	15 22 20.1	-6.8
YAL				Sm		15 22 22.4	
	comp=N,25nm,0.5s,comp=E,60nm,0.5s						
CUC	Castrocucco	7.94	276		Pn	15 21 03.1	+1.3
SIM	Simferopol'	8.02	45	*e*P	Pn	15 21 03.5	+0.7
SIM				Pm		15 21 03.9	
	comp=Z,41nm,0.4s						
SIM				*e*S	Sn	15 22 27.6	-5.8
SIM				Sm		15 22 31.6	
	comp=N,152nm,0.8s						
SIM				Sm		15 22 31.6	
	comp=E,25nm,0.5s						
BURAR	Bucovina Array	8.08	356	⇑P	Pn	15 21 04.9	+1.1
BURAR	Bucovina Array	8.08	356	Pn	Pn	15 21 05.6	+1.8
BUR08	Bucovina Ar. S	8.11	356	Pn	Pn	15 21 04.8	+0.6
BLY	Banja Luka	8.41	311	*e*Pn	Pn	15 21 11.7	+3.4
SUDU	Sudak	8.48	48	⇓*i*P	Pn	15 21 08.9	-0.2
SUDU				Pm		15 21 09.4	
	comp=Z,10.0nm,0.5s						
SUDU				*e*S	Sn	15 22 38.7	-6.0
SUDU				Sm		15 22 42.9	
	comp=N,57nm,0.5s						
SUDU				Sm		15 22 42.9	
	comp=E,9.0nm,0.4s						
A050A	Klekovaca	8.66	308	*e*Pn	Pn	15 21 13.7	+2.0
A051A	Mrakovica	8.73	312	*e*Pn	Pn	15 21 15.0	+2.3
PAOL	Paolisi	8.94	283		Pn	15 21 15.3	-0.3
KMPD	K-Podol'skiy	9.01	1	Pn	Pn	15 21 16.8	+0.4
	comp=E,18nm,0.9s						
RAFF	Raffo Rosso	9.51	260		Pn	15 21 22.5	-0.8
HNTI	Hanita	9.76	129	Pn	Pn	15 21 25.6	-1.1
HNTI				Sn	Sn	15 23 13.2	-3.0
MMA0B	Mount Meron ar	9.94	128	Pn	Pn	15 21 28.3	-1.0
MMA0B				Sn	Sn	15 23 17.7	-3.1
MMAI	Mount Meron Ar	9.94	128	Pn	Pn	15 21 28.2	-1.1
	comp=E,3.0nm,0.3s,baz=322,slow=12,SNR=5.8						
MMAI				LR	LR	15 27 06.6	
	comp=E,90nm,18.2s,baz=34,slow=48						
	comp=E,2.0nm,0.3s						
GEM	Giv'at Ha'Em	9.97	126	Pn	Pn	15 21 28.8	-0.8
GEM				Sn	Sn	15 23 19.7	-1.7
BOJS	Bojanci	9.97	310	*e*Pn	Pn	15 21 31.6	+2.0
NATI	Neve Ativ	9.98	126	Pn	Pn	15 21 28.9	-0.8
CRES	Cresnjev	10.03	312	*e*Pn	Pn	15 21 33.3	+2.8
VYHS	Vyhne	10.35	332	*e*PN	Pn	15 21 37.4	+2.6
MMLI	Mount Malkishu	10.36	130	Pn	Pn	15 21 34.5	-0.5
LUBAR	Lubar, Ukraine	10.43	6	Pn	Pn	15 21 35.5	-0.4
	comp=E,7.0nm,1.0s						
LUBAR				pP		15 21 38.1	
	comp=E,7.0nm,1.0s						
LUBAR				sP		15 21 40.3	
	comp=E,7.0nm,1.0s						
SALP	Salfit	10.49	133	Pn	Pn	15 21 35.4	-1.4
SALP				Sn	Sn	15 23 30.6	-3.7
HMDT	Nahal Hemdat	10.55	131	Pn	Pn	15 21 36.2	-1.4
HMDT				Sn	Sn	15 23 32.8	-2.9
CEY	Cerknica	10.59	309	*e*Pn	Pn	15 21 40.6	+2.5
SKDS	Skadanscina	10.74	308	*e*Pn	Pn	15 21 39.9	-0.3
RONA	Rosalia, Austr	10.80	322	*i* Pn	Pn	15 21 42.2	+1.1
	comp=E,2.0nm,0.5s						
MODS	Modra-Piesok	10.86	327	*e*PN	Pn	15 21 46.1	+4.2
ARSA	Arzberg	10.88	318	*i* Pn	Pn	15 21 42.8	+0.8
	comp=E,2.1nm,0.4s						
OBKA	Obir	10.94	313	*e*Pn	Pn	15 21 42.9	-0.1
	comp=E,1.2nm,0.3s						
OBKA	Obir	10.94	313	*e*Pn	Pn	15 21 46.4	+3.4
CONA	Conrad Observa	11.17	322	*i* Pn	Pn	15 21 46.6	+0.5
	comp=E,1.9nm,0.5s						
AK07	Malin Array Si	11.21	10	Pn	Pn	15 21 46.5	0.0
AK05	Malin Array Si	11.28	10	Pn	Pn	15 21 49.0	+1.6
AK15	Malin Array Si	11.34	10	Pn	Pn	15 21 49.8	+1.5
AKBB	Malin Array Si	11.36	10	Pn	Pn	15 21 50.7	+2.1
AK04	Malin Array Si	11.37	10	Pn	Pn	15 21 50.1	+1.4
AK22	Malin Array Si	11.40	10	Pn	Pn	15 21 49.9	+0.8
AK23	Malin Array Si	11.41	10	Pn	Pn	15 21 49.2	0.0
AK21	Malin Array Si	11.41	9	Pn	Pn	15 21 51.2	+2.0
ASF	Jabal al Asfar	11.43	127	Pn	Pn	15 21 48.5	-1.3
	comp=E,0.3nm,0.3s,baz=334,slow=11,SNR=1.7						
	comp=E,0.7nm,0.3s						
PRED	Cave del Predi	11.47	311	Pn	Pn	15 21 52.0	+1.8
MYKA	Terra Mystica	11.53	312	*i* Pn	Pn	15 21 52.2	+1.2
	comp=E,4.0nm,0.9s						
PRNI	Paran	11.72	139	Pn	Pn	15 21 52.6	-1.1
KRMI	Paran Flat	11.77	140	Pn	Pn	15 21 52.4	-2.0
CLUD	Cludinico	11.88	310	Pn	Pn	15 21 57.0	+1.3
KBA	Koelnbreinsper	11.95	313	*e*Pn	Pn	15 21 59.8	+3.1
	comp=E,1.1nm,0.3s						
HRFI	Mount Harif	11.99	140	Pn	Pn	15 21 56.1	-1.3
HRFI				Sn	Sn	15 24 05.4	-5.7
ABTA	Abfaltersbach	12.25	310	*e*Pn	Pn	15 22 03.1	+2.3
	comp=E,2.8nm,0.5s,SNR=4.9						
EIL	Elat	12.25	141	Pn	Pn	15 21 59.5	-1.4
	comp=E,0.4nm,0.3s,baz=20,slow=21,SNR=2.3						
	comp=E,2.2nm,0.5s						
EIL	Elat	12.25	141	Pn	Pn	15 21 58.9	-2.0
GERES	GERESS Array B	12.85	320	Pn	Pn	15 22 08.3	-0.8
	comp=E,0.1nm,0.3s,baz=120,slow=5.8,SNR=1.7						
	comp=E,0.3nm,0.2s						
WTTA	Wattenberg	13.03	311	*i* Pn	Pn	15 22 14.5	+2.9
	comp=E,4.3nm,0.5s						
WATA	Walderalm	13.10	311	*i* Pn	Pn	15 22 14.2	+1.7
	comp=E,3.9nm,0.5s						
KBZ	Khabaz	13.23	66	Pn	Pn	15 22 17.8	+3.6
	comp=E,0.1nm,0.3s,baz=245,slow=5.8,SNR=2.1						
	comp=E,0.4nm,0.3s						
MOTA	Moosalm	13.38	310	*i* Pn	Pn	15 22 18.0	+1.7
	comp=E,2.7nm,0.4s						
FETA	Feichten	13.45	309	*e*Pn	Pn	15 22 17.7	+0.4
	comp=E,0.6nm,0.4s						
DAVOX	Davos/Dischmat	13.86	307	Pn	Pn	15 22 24.6	+1.7
	comp=E,0.5nm,0.3s,baz=147,slow=15,SNR=8.3						
DAVOX				LR	LR	15 27 47.1	
	comp=E,109nm,19.8s,baz=335,slow=38						
GNI	Garni	14.33	82	LR	LR	15 28 22.2	
	comp=E,70nm,18.2s,baz=334,slow=39						
CLL	Collm	14.89	326	*e*PP	P	15 22 46.0	+3.4
NACGM	Naroch	15.36	1	*e*P	Pn	15 22 43.4	+0.4
	comp=Z,21nm,1.0s,baz=182						
FINES	FINESS Array B	21.91	360	P	P	15 23 58.6	-0.8
	comp=Z,3.1nm,0.9s,baz=179,slow=9.2,SNR=3.4						
FINES				LR	LR	15 32 29.5	
	comp=Z,78nm,20.2s,baz=360,slow=37						
	comp=Z,3.1nm,0.9s						
FINES	FINESS Array B	21.91	360	P	P	15 23 58.4	-1.0
HFS	Hagfors	22.03	343	P	P	15 23 59.5	-1.1
	comp=Z,1.5nm,0.7s,baz=155,slow=11,SNR=2.0						
HFS				LR	LR	15 33 07.5	
	comp=Z,120nm,18.0s,baz=322,slow=38						
	comp=Z,1.5nm,0.7s						
ESDC	Sonseca Array	23.12	280	P	P	15 24 13.7	+1.2
	comp=Z,2.3nm,0.9s,baz=74,slow=10,SNR=9.3						
	comp=Z,2.3nm,0.9s						
NAO01	NORSAR Array S	23.32	341	P	P	15 24 14.0	-0.3
NB2	NORSAR Subarra	23.41	342	P	P	15 24 14.1	-1.1
	comp=Z,4.7nm,0.8s,baz=145,slow=9.3						
NOA	NORSAR Array B	23.41	342	P	P	15 24 14.1	-1.1
	comp=Z,1.1nm,0.7s,baz=145,slow=9.3,SNR=8.6						
NOA				LR	LR	15 34 36.5	
	comp=Z,53nm,19.4s,baz=285,slow=40						
	comp=Z,1.1nm,0.7s						
KIRV	Kirov	24.19	30	LR	LR	15 33 58.5	
	comp=Z,79nm,19.3s,baz=267,slow=37						
AKTO	Aktyubinsk	24.86	54	LR	LR	15 38 36.6	
	comp=Z,32nm,19.9s,baz=178,slow=47						
GEYT	Alibeck	24.95	83	P	P	15 24 31.6	+1.8
	comp=Z,6.4nm,1.0s,baz=297,slow=9.5,SNR=11						
	comp=Z,6.4nm,1.0s						
EKA	Eskdalemuir Ar	25.06	319	P	P	15 24 31.0	+0.5
	comp=Z,2.6nm,0.5s,baz=113,slow=9.3,SNR=14						
EKA				LR	LR	15 35 01.1	
	comp=Z,63nm,20.8s,baz=323,slow=38						
	comp=Z,2.6nm,0.5s						
ESK	Eskdalemuir	25.07	319	P	P	15 24 30.0	-0.7
ESK				IAmb	IAmb	15 24 41.2	
	comp=Z,14nm,1.1s						
ABKAR	Akbulak array	25.85	57	P	P	15 24 36.0	-1.8
PVAQ	Vaqueiros	26.48	276	P	P	15 24 42.4	-1.2
PVAQ				IAmb	IAmb	15 24 48.5	
	comp=Z,5.6nm,0.9s						
ARU	Arti	27.15	41	LR	LR	15 36 46.6	
	comp=Z,40nm,18.6s,baz=234,slow=39						
UOSS	Minazif	29.16	111	P	P	15 25 07.2	-0.5
ARCES	ARCESS Array B	30.04	360	LR	LR	15 38 33.1	
	comp=Z,58nm,20.0s,baz=185,slow=39						
ARCES	ARCESS Array B	30.04	360	P	P	15 25 15.1	0.0
ARCES				IAmb	IAmb	15 25 26.3	
	comp=Z,11nm,1.1s						
WSAR	Wadi Sarin	31.96	111	LR	LR	15 42 39.4	
	comp=Z,36nm,18.2s,baz=270,slow=44						
TOA0	Torodi Ar. Sit	33.99	226	P	P	15 25 49.5	-0.7
TOA0				IAmb	IAmb	15 25 53.9	
	comp=Z,2.6nm,0.7s						
AAK	Ala-Archa	36.20	69	LR	LR	15 45 56.4	
	comp=Z,42nm,18.4s,baz=105,slow=44						
KURBB	Kurchatov Arra	37.88	55	P	P	15 26 24.1	+0.9
	comp=Z,0.6nm,0.8s,baz=280,slow=8.8,SNR=5.3						
	comp=Z,0.6nm,0.8s						
KURK	Kurchatov	37.93	55	P	P	15 26 21.7	-2.0
MKAR	Makanchi Array	40.84	61	P	P	15 26 50.4	+2.3
	comp=Z,0.7nm,0.6s,baz=286,slow=6.1,SNR=12						
	comp=Z,0.7nm,0.6s						
ZALV	Zalesovo Beam	41.50	50	P	P	15 26 54.9	+1.5
	comp=Z,0.8nm,0.5s,baz=266,slow=5.8,SNR=2.7						
ZALV				LR	LR	15 47 36.5	
	comp=Z,34nm,19.1s,baz=5.0,slow=41						
	comp=Z,0.8nm,0.5s						
YAK	Yakutsk	61.72	31	LR	LR	15 57 32.2	
	comp=Z,32nm,18.4s,baz=130,slow=37						
CMAR	Chiang Mai Arr	65.41	86	LR	LR	16 02 35.1	
	comp=Z,7.4nm,19.7s,baz=80,slow=40						
YKA	Yellowknife Ar	73.50	342	P	P	15 30 38.2	-0.4
	comp=Z,0.2nm,0.7s,baz=34,slow=4.5,SNR=2.4						
	comp=Z,0.2nm,0.7s						
KSRS	Korea Array	75.04	54	P	P	15 30 48.1	+0.1
	comp=Z,0.6nm,0.7s,baz=317,slow=3.7,SNR=2.3						
KSRS				LR	LR	16 07 57.1	
	comp=Z,16nm,18.4s,baz=100,slow=39						
	comp=Z,0.6nm,0.7s						
ILAR	Eielson Array	75.86	357	P	P	15 30 52.8	+0.4
	comp=Z,0.2nm,0.8s,baz=32,slow=5.3,SNR=2.4						
	comp=Z,0.2nm,0.8s						
ASAJ	Asahikawa	78.95	41	LR	LR	16 11 40.4	
	comp=Z,47nm,18.5s,baz=178,slow=40						
ASAR	Alice Springs	118.02	99	PKP	PKiKP	15 37 54.5	+1.0
	comp=Z,0.3nm,1.0s,baz=303,slow=1.9,SNR=1.5						

IDC ***24*** *15:38:34.9±0.6, 9°.39S×159°.23E, h0^{km}, mb4.0/11, mbtmp4.0/12, ML3.7/1, MS3.5/13, Error ellipse: s-maj=20.1km s-min=12.8km az=172.0*

NEIC ***24*** *15:38:40.6±2.4, 9°.4S±0°.2×159°.4E±0°.1, h51^{km}±10^{km}, mb4.2/16, Error ellipse: s-maj=25.0km s-min=16.3km az=180.0*

ISC 24 15:38:40.0±0.6, **9°.40S**±0°.10×**159°.21E**±0°.07, **h35^{km}, n40, σ1^{s}.28**/34, **mb4.2**/18, **MS3.5**/9, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	0.73	93	Pn	Pn	15 38 52.7	-1.1
	50µm,0.3s,baz=237,slow=6.4,SNR=541						
HNR				Sn	Sn	15 39 03.5	-0.3
	54µm,0.3s,baz=54,slow=16,SNR=9.5						
KRVT	Keravat (AS076	8.74	305	LR	LR	15 44 30.0	
	comp=Z,330nm,18.1s,baz=265,slow=41						
PMG	Port Moresby	11.89	269	LR	LR	15 45 45.3	
	comp=Z,262nm,20.0s,baz=108,slow=36						
DZM	Mont Dzumac	14.39	152	Pn	Pn	15 42 03.1	+1.7

	0.2nm,0.3s,baz=284,slow=22,SNR=2.6						
DZM				LR	LR	15 46 37.1	
	comp=Z,145nm,19.2s,baz=14,slow=34						
CTA	**Charters Tower**	16.41	228	Pn	P	15 42 28.8	-1.4
	0.2nm,0.3s,baz=333,slow=15,SNR=1.4						
CTA				LR	LR	15 48 29.3	
	comp=Z,73nm,18.2s,baz=52,slow=36						
	4.2nm,0.9s						
CTAO	**Charters Tower**	16.41	228	Pn	Pn	15 42 27.3	-0.5
CTAO				IAmb	IAmb	15 43 02.0	
	comp=Z,25nm,1.4s						
ARMA	**Armidale**	22.08	198	P	P	15 43 32.2	0.0
ARMA				IAmb	IAmb	15 43 52.2	
	comp=Z,16nm,1.1s						
WB0	**Warramunga Arr**	26.09	244	P	P	15 44 11.3	+0.6
WB0				IAmb	IAmb	15 44 25.9	
	comp=Z,6.5nm,0.9s						
WRAB	**Tennant Creek**	26.19	244	P	P	15 44 11.7	+0.1
WRAB				IAmb	IAmb	15 44 16.7	
	comp=Z,4.6nm,0.7s						
WB2	**Warramunga Arr**	26.19	244	P	P	15 44 11.2	-0.4
WB2				IAmb	IAmb	15 44 17.4	
	comp=Z,4.9nm,0.8s						
WRA	**Warramunga Arr**	26.20	244	P	P	15 44 12.0	+0.4
	comp=Z,2.7nm,0.6s,baz=69,slow=10.0,SNR=34						
WRA				PcP	PcP	15 47 38.6	+0.4
	comp=Z,0.7nm,0.6s,baz=70,slow=2.8,SNR=6.2						
	comp=Z,2.7nm,0.6s						
WRA	**Warramunga Arr**	26.20	244	P	P	15 44 10.8	-0.9
STKA	**Stephens Creek**	27.70	214	P	P	15 44 23.6	-1.4
	comp=Z,0.9nm,0.4s,baz=20,slow=12,SNR=6.7						
STKA				LR	LR	15 54 49.6	
	comp=Z,92nm,18.3s,baz=194,slow=35						
	comp=Z,0.9nm,0.4s						
STKA	**Stephens Creek**	27.70	214	P	P	15 44 29.4	+4.4
AS31	**Alice Springs**	28.03	236	P	P	15 44 27.6	-0.5
ASAR	**Alice Springs**	28.03	236	P	P	15 44 27.6	-0.5
	comp=Z,0.9nm,0.6s,baz=62,slow=10,SNR=39						
ASAR				PcP	PcP	15 47 43.0	+0.5
	comp=Z,0.4nm,0.7s,baz=64,slow=1.5,SNR=4.9						
ASAR				LR	LR	15 54 55.8	
	comp=Z,89nm,18.1s,baz=64,slow=35						
	comp=Z,0.9nm,0.6s						
ASAR	**Alice Springs**	28.03	236	P	P	15 44 26.4	-1.7
AFI	**Afiamalu**	28.76	102	LR	LR	15 54 00.9	
	comp=Z,120nm,20.6s,baz=46,slow=32						
KNRA	**Kununurra**	30.34	255	P	P	15 44 48.2	-0.4
BBOO	**Buckleboo**	31.62	219	P	P	15 45 00.1	+0.3
URZ	**Urewera**	32.94	154	LR	LR	15 56 28.1	
	comp=Z,103nm,18.2s,baz=44,slow=33						
FITZ	**Fitzroy Crossi**	33.68	251	P	P	15 45 19.5	+1.6
RPZ	**Rata Peaks**	35.71	165	LR	LR	15 57 38.8	
	comp=Z,50nm,19.3s,baz=12,slow=32						
FORT	**Forrest**	35.96	229	P	P	15 45 36.0	-1.5
KAPI	**Kappang**	39.37	274	P	P	15 46 06.4	-0.1
KAPI				IAmb	IAmb	15 46 19.6	
	comp=Z,4.1nm,0.8s						
TOLI2	**Tolitoli**	39.66	283	P	P	15 46 07.3	-1.7
TOLI2				IAmb	IAmb	15 46 31.0	
	comp=Z,4.1nm,0.8s						
RAR	**Rarotonga**	41.15	111	LR	LR	16 02 34.0	
	comp=Z,30nm,19.8s,baz=90,slow=35						
JOW	**Kunigami**	46.88	321	LR	LR	16 07 06.1	
	comp=Z,70nm,19.1s,baz=324,slow=36						
PETK	**Petropavlovsk-**	62.27	359	P	P	15 48 58.8	+0.5
	comp=Z,1.9nm,0.9s,baz=179,slow=8.9,SNR=4.1						
	comp=Z,1.9nm,0.9s						
CMAR	**Chiang Mai Arr**	65.57	295	P	P	15 49 21.7	+1.0
	comp=Z,0.3nm,0.5s,baz=124,slow=4.0,SNR=2.2						
	comp=Z,0.3nm,0.5s						
VNDA	**Vanda**	68.11	179	P	P	15 49 37.4	+1.5
	comp=Z,2.1nm,0.8s,baz=341,slow=6.2,SNR=8.5						
	comp=Z,2.1nm,0.8s						
VNDA	**Vanda**	68.11	179	P	P	15 49 33.8	-2.1
SONM	**Songino Array**	73.62	326	P	P	15 50 11.0	+1.1
	comp=Z,0.4nm,0.5s,baz=193,slow=4.4,SNR=3.8						
	comp=Z,0.4nm,0.5s						
QSPA	**South Pole Qui**	80.59	180	P	P	15 50 48.7	-0.2
QSPA				IAmb	IAmb	15 51 12.0	
	comp=Z,6.3nm,1.4s						
ILAR	**Eielson Array**	84.11	20	P	P	15 51 07.0	+0.1
	comp=Z,0.4nm,0.5s,baz=251,slow=5.3,SNR=8.3						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	87.96	318	P	P	15 51 26.6	+0.2
	comp=Z,1.0nm,0.6s,baz=98,slow=6.3,SNR=12						
	comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	88.50	325	P	P	15 51 28.9	+0.2
	comp=Z,0.4nm,0.4s,baz=116,slow=6.8,SNR=2.2						
	comp=Z,0.4nm,0.4s						
NVAR	**Mina Array Bea**	89.95	51	P	P	15 51 35.5	-0.7
	comp=Z,1.8nm,1.1s,baz=262,slow=4.3,SNR=3.8						
	comp=Z,1.8nm,1.1s						
LPIG	**La Paz**	94.22	66	LR	LR	16 27 21.5	
	comp=Z,29nm,18.5s,baz=30,slow=31						
ANMO	**Albuquerque**	98.85	56	LR	LR	16 34 52.7	
	comp=Z,15nm,18.6s,baz=82,slow=34						

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*KRNET **24** 16:18:03.4±0.1,39°.59N×77°.26E,mb2.5*
*SOME **24** 16:18:05.0,39°.88N×77°.38E,h10^{km}*
*NNC **24** 16:18:06.3±0.8,39°.93N×77°.40E,h0^{km},mb3.5,mpv3.3,*
Error ellipse: s-maj=5.1km s-min=4.6km az=168.0
ISC 24 16:18:05.4±3.3**,39°.7N**±0°.2×**77°.38E**±0°.07**,h17^{km},n39,**
σ**0^{s}.85**/46**,14C-3D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	**Naryn**	2.04	329	⇑*i*P	Pn	16 18 38.8	-0.4
	baz=32						
NRN				⇑*i*S	Sn	16 19 04.9	+0.4
	baz=32						
KDJ	**Kajisay**	2.45	357	⇑*i*P	Pn	16 18 45.3	+0.5
	baz=59						
KDJ				⇑*i*S	Sn	16 19 15.9	+1.5
	baz=59						
ULHL	**Ulahol**	2.70	342	⇑*i*P	Pn	16 18 48.5	+0.3
	baz=44						
ULHL				⇑*i*S	Sn	16 19 21.4	+0.8
	baz=44						
ARLS	**Aral**	3.18	314	⇑*i*P	Pn	16 18 54.5	-0.3
	baz=16						
ARLS				⇑*i*S	Sn	16 19 31.4	-1.0
	baz=16						
UCH	**Uchtor**	3.34	320	⇓*e*P	Pn	16 18 57.2	-0.1
	baz=23						
UCH				⇓*i*S	Sn	16 19 36.0	-0.8
	baz=23						
TNSS	**Tian-Shan**	3.37	355	Pg	Pb	16 19 03.8	-1.0
	2.9nm,0.2s						
TNSS				Lg	Lg	16 19 46.2	
	4.2nm,1.0s						
TNSS	**Tian-Shan**	3.37	355	*e*Pg	Pb	16 19 03.8	-1.0
	2.9nm,0.2s						
TNSS				*e*Lg	Lg	16 19 46.2	
	6.1nm,0.2s						
IZV	**Izvestkoviy**	3.40	351	Pg	Pb	16 19 04.6	-0.6
	0.8nm,0.2s						
IZV				Lg	Lg	16 19 47.4	
	10nm,0.3s						
IZV	**Izvestkoviy**	3.40	351	*e*Pg	Pb	16 19 04.6	-0.6
	0.8nm,0.2s						
IZV				*e*Lg	Lg	16 19 47.4	
	10nm,0.2s						
SATY	**Saty**	3.46	13	Pg	Pb	16 19 05.6	-0.7
	2.2nm,0.4s						
SATY				Lg	Lg	16 19 49.2	
	11nm,0.6s						
SATY	**Saty**	3.46	13	*e*Pg	Pb	16 19 05.6	-0.7
	2.2nm,0.4s						
SATY				*e*Lg	Lg	16 19 49.2	
	11nm,0.6s						
MDOK	**Medeo**	3.48	356	Pg	Pb	16 19 04.7	-2.0
	1.8nm,0.4s						
MDOK				Pg	Pg	16 19 05.9	-6.3
	3.8nm,0.3s						
MDOK				⇑Lg	Lg	16 19 49.4	
	8.0nm,0.6s						
MDOK				Lg	Lg	16 19 49.9	
	8.8nm,0.3s						
MDOK	**Medeo**	3.48	356	*e*Pg	Pb	16 19 05.9	-0.8
	3.8nm,0.3s						
MDOK				*e*Lg	Lg	16 19 49.9	
	11nm,0.3s						
KBK	**Karagaybulak**	3.49	329	⇑*i*P	Pn	16 18 59.1	0.0
	baz=31						
KBK				⇑*i*S	Sn	16 19 40.0	-0.1
	baz=31						
TKM2	**Tokmak 2**	3.50	338	⇑*i*P	Pn	16 18 59.5	+0.3
	baz=40						
TKM2				⇑*i*S	Sn	16 19 40.6	+0.2
	baz=40						
MTBS	**Maitube**	3.52	349	Pg	Pb	16 19 05.8	-1.4
	1.6nm,0.1s						
MTBS				Lg	Lg	16 19 49.8	
	8.2nm,0.3s						
MTBS	**Maitube**	3.52	349	*e*Pg	Pb	16 19 05.8	-1.4
	1.6nm,0.1s						
MTBS				*e*Lg	Lg	16 19 49.8	
	8.2nm,0.3s						
KST	**Kastek**	3.52	343	Pg	Pb	16 19 06.4	-0.9
	1.0nm,0.2s						
KST				Lg	Lg	16 19 50.6	
	7.8nm,0.5s						
KST	**Kastek**	3.52	343	*e*Pg	Pb	16 19 06.4	-0.9
	1.0nm,0.2s						
KST				*e*Lg	Lg	16 19 50.6	
	7.8nm,0.5s						
KOTS	**Kotyrbulak**	3.55	357	Pg	Pb	16 19 07.3	-0.6
	4.1nm,0.5s						
KOTS				Lg	Lg	16 19 52.3	
	15nm,0.0s						
KOTS	**Kotyrbulak**	3.55	357	*e*Pg	Pb	16 19 07.3	-0.6
	4.2nm,0.1s						
KOTS				*e*Lg	Lg	16 19 52.3	
	21nm,0.3s						
DGS	**Degeres**	3.75	342	Pg	Pb	16 19 10.8	-0.5
	1.0nm,0.3s						
DGS				Lg	Lg	16 19 58.3	
	7.0nm,0.5s						
DGS	**Degeres**	3.75	342	*e*Pg	Pb	16 19 10.8	-0.5
	1.0nm,0.1s						
DGS				*e*Lg	Lg	16 19 58.3	
	7.0nm,0.5s						
KPKS	**Kokpek**	3.90	14	Pg	Pb	16 19 13.0	-0.9
	6.2nm,0.5s						
KPKS				Lg	Lg	16 20 01.8	
	6.1nm,0.3s						
KPKS	**Kokpek**	3.90	14	*e*Pg	Pb	16 19 13.0	-0.9
	6.2nm,0.2s						
KPKS				*e*Lg	Lg	16 20 01.8	
	8.2nm,0.2s						
PDGK	**Podgornoye**	3.97	23	Pg	Pb	16 19 14.0	-1.0
	2.6nm,0.4s						
PDGK				Lg	Lg	16 20 03.3	
	1.8nm,0.5s						
PDGK	**Podgornoye**	3.97	23	⇓Pg	Pb	16 19 13.3	-1.7
	4.2nm,0.6s						
PDGK				⇑Lg	Lg	16 20 04.4	
	3.3nm,0.7s						
KTBS	**Karatobe**	4.06	353	Pg	Pb	16 19 16.0	-0.4
	1.0nm,0.0s						
KTBS				Lg	Lg	16 20 07.2	
	15nm,0.6s						
KTBS	**Karatobe**	4.06	353	*e*Pg	Pb	16 19 16.0	-0.4
	1.0nm,0.1s						
KTBS				*e*Lg	Lg	16 20 07.2	
	15nm,0.6s						
CHKK	**Chushkaly**	4.18	356	Pg	Pb	16 19 18.4	0.0
	1.7nm,0.1s						
CHKK				Lg	Lg	16 20 11.5	
	7.2nm,0.2s						
CHKK	**Chushkaly**	4.18	356	*e*Pg	Pb	16 19 18.4	0.0
	1.7nm,0.1s						
CHKK				*e*Lg	Lg	16 20 11.5	
	6.9nm,0.1s						
SGDS	**Sogindy**	4.29	332	Pg	Pb	16 19 20.8	+0.4
	1.5nm,0.6s						
SGDS				Lg	Lg	16 20 15.2	
	4.3nm,0.5s						
MRKS	**Merke**	4.38	316	Pg	Pb	16 19 22.6	+0.7
	1.6nm,0.2s						
MRKS				Lg	Lg	16 20 18.4	
	3.9nm,0.7s						
MRKS	**Merke**	4.38	316	*e*Pg	Pb	16 19 22.6	+0.7
	1.6nm,0.2s						
MRKS				*e*Lg	Lg	16 20 18.4	
	3.8nm,0.2s						
BLB	**Baldybastay**	4.49	10	Pg	Pb	16 19 23.8	0.0
	3.3nm,0.3s						
BLB				Lg	Lg	16 20 20.5	
	10.0nm,0.4s						
ARXS	**Arharly**	4.54	4	Pg	Pb	16 19 25.2	+0.6
	0.1nm,0.1s						
ARXS				Lg	Lg	16 20 23.2	
	8.1nm,0.4s						
ARXS	**Arharly**	4.54	4	*e*Pg	Pb	16 19 25.2	+0.6
	0.1nm,0.1s						
ARXS				*e*Lg	Lg	16 20 23.2	
	8.1nm,0.3s						
DJR	**Jarkent**	4.98	20	Pg	Pb	16 19 33.3	+1.1
	1.2nm,0.2s						
DJR				Lg	Lg	16 20 36.8	
	1.7nm,0.4s						
DJR	**Jarkent**	4.98	20	*e*Pg	Pb	16 19 33.3	+1.1
	1.2nm,0.2s						
DJR				*e*Lg	Lg	16 20 36.8	
	1.7nm,0.4s						

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*TAP **24** 16:20:40.0,24°.27N×120°.68E,h24^{km},ML3.7,B*
*JMA **24** 16:20:40.9±0.2,24°.2N±0°.5×120°.7E±0°.9,h44^{km}±4^{km},*
MV2.8/9,TAIWAN REGION
ISC 24 16:20:40.1±0.8**,24°.28N**±0°.01×**120°.66E**±0°.01**,h27^{km}**±4^{km}**,**
n172,σ**1^{s}.01**/324**,14C-46D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WDJ	**Dajia District**	0.07	348	⇑*i*P	Pb	16 20 44.7	-0.2
	baz=334						
WDJ				*i* S	Sb	16 20 48.0	-0.1
	baz=334						
TWQ1	**Liyutan**	0.13	57	⇑*i*P	Pb	16 20 45.1	-0.2
	baz=49						
TWQ1				*i* S	Sb	16 20 48.9	+0.1
	baz=49						
TCU	**Taichung**	0.13	172	⇑*i*P	Pb	16 20 45.3	0.0
	baz=179						
TCU				*i* S	Sb	16 20 49.2	+0.4
	baz=179						
NSY	**Sanyi**	0.17	35	⇑*e*P	Pn	16 20 45.9	-1.0
	baz=29						
WCHH	**Zhanghua**	0.22	205	⇑*i*P	Pn	16 20 46.2	-1.4
	baz=211						
WCHH				S	Sb	16 20 50.8	+0.5
	baz=211						
WHP	**Taichung City**	0.26	90	⇑*i*P	Pn	16 20 46.8	-1.5
	baz=88						
WHP				S	Sn	16 20 51.3	-2.2
	baz=88						
NMLH	**Miaoli**	0.29	25	⇓*i*P	Pn	16 20 47.4	-1.2
	baz=20						
NMLH				*i* S	Sn	16 20 52.4	-1.5
	baz=20						
WCS	**Beigang Elemen**	0.32	133	⇓*i*P	Pn	16 20 47.6	-1.4
	baz=135						
WCS				S	Sb	16 20 53.0	+0.4
	baz=135						
WYL	**Yuanlin Townsh**	0.32	193	P	Pb	16 20 47.7	+0.1
	baz=197						
WYL				*e*S	Sb	16 20 53.8	+1.1
	baz=197						
DPDB	**Guoxing**	0.35	135	⇓*i*P	Pn	16 20 48.0	-1.4
	baz=137						
DPDB				S	Sb	16 20 53.9	+0.5
	baz=137						
WNT1	**Nantou City**	0.37	177	*i* P	Pb	16 20 48.6	+0.3
	baz=180						
WNT1				S	Sb	16 20 55.0	+1.1
	baz=180						
WPL	**Puli Township**	0.38	134	⇓*i*P	Pb	16 20 48.5	0.0
	baz=136						
WPL				*e*S	Sn	16 20 54.3	-1.9
	baz=136						
WNT	**Mingjian**	0.40	176	⇓*i*P	Pb	16 20 49.0	+0.3
	baz=179						
WNT				*i* S	Sb	16 20 55.7	+1.1
	baz=179						
TYC	**Yuchr**	0.41	154	⇓*i*P	Pb	16 20 49.1	+0.1
	baz=155						
TYC				S	Sn	16 20 56.0	-1.1
	baz=155						
NJN	**Zhunan**	0.45	26	P	Pb	16 20 50.1	+0.5
	baz=22						
NJN				S	Sb	16 20 57.6	+1.6
	baz=22						
SMLT	**Sun Moon Lake**	0.45	151	⇓*i*P	Pb	16 20 49.8	+0.1
	baz=152						
SMLT				S	Sn	16 20 57.2	-0.9
	baz=152						
WRL	**Guolierlin Hig**	0.45	214	⇓*i*P	Pb	16 20 49.5	-0.2
	baz=217						
WRL				S	Sb	16 20 56.7	+0.5
	baz=217						
TDCB	**Techi**	0.46	93	⇓*i*P	Pb	16 20 49.8	0.0
	baz=92						
TDCB				S	Sb	16 20 56.0	-0.5
	baz=92						
WJS	**Zhushan**	0.46	172	⇓*i*P	Pb	16 20 49.9	+0.1
	baz=175						
WJS				S	Sn	16 20 57.0	-1.1
	baz=175						
NSTT	**Nanjuang**	0.47	42	⇓*i*P	Pb	16 20 50.2	+0.2
	baz=40						
NSTT				S	Sb	16 20 57.3	+0.7
	baz=40						
TWT	**Tachien**	0.47	93	⇓*i*P	Pb	16 20 49.9	-0.1
	baz=93						
TWT				S	Sb	16 20 56.3	-0.6
	baz=93						
LIOB	**Emei**	0.49	42	⇓*i*P	Pb	16 20 50.5	+0.3
	baz=39						
LIOB				*e*S	Sb	16 20 57.9	+0.8
	baz=39						
WUSB	**Renai**	0.51	124	⇓*i*P	Pb	16 20 50.7	+0.1
	baz=125						
WUSB				S	Sn	16 20 58.2	-1.4
	baz=125						
CHGB	**Renai**	0.52	115	⇓*i*P	Pb	16 20 51.1	+0.2
	baz=115						
CHGB				S	Sn	16 20 58.9	-1.1
	baz=115						
WTCT	**Ta-ch'eng**	0.54	220	*i* P	Pn	16 20 51.0	-1.0
	baz=222						
WTCT				S	Sn	16 20 59.6	-0.4
	baz=222						
NFF	**Wufeng Townshi**	0.55	50	*i* P	Pn	16 20 51.3	-0.9
	baz=48						
NFF				*e*S	Sb	16 20 58.8	0.0
	baz=48						
SSLB	**Suanglung**	0.56	151	P	Pb	16 20 51.1	-0.3
SSLB	**Suanglung**	0.56	151	⇓*i*P	Pb	16 20 51.1	-0.3
	baz=153						
SSLB				*e*S	Sb	16 20 59.0	0.0
	baz=153						
WHF	**Hehuan Shan**	0.57	103	⇓*i*P	Pn	16 20 52.4	-0.4
	baz=103						
WHF				*e*S	Sn	16 21 00.8	-0.7
	baz=103						
OWD	**Renai**	0.57	124	P	Pb	16 20 51.8	+0.1
	baz=125						
OWD				*e*S	Sn	16 21 00.1	-1.1
	baz=125						
SBCB	**Hsinchu**	0.59	30	P	Pn	16 20 52.5	-0.3
	baz=28						
SBCB				S	Sb	16 21 01.6	+1.6
	baz=28						
HSN	**Hsinchu**	0.59	29	P	Pb	16 20 53.1	+1.1
	baz=28						
HSN				*e*S	Sb	16 21 03.0	+2.9
	baz=28						
WDLH	**Douliu**	0.60	191	⇓*i*P	Pn	16 20 52.1	-0.7
	baz=193						
WDLH				S	Sb	16 21 01.1	+1.0
	baz=193						
WGK	**Gukeng**	0.60	188	⇓*i*P	Pb	16 20 52.2	+0.3
	baz=190						
WGK				S	Sb	16 21 01.6	+1.5
	baz=190						
HSN1	**Hsinchu**	0.60	33	*e*P	Pn	16 20 52.5	-0.3
	baz=31						
HSN1				*e*S	Sb	16 21 01.8	+1.7
	baz=31						
NJD	**Zhudong**	0.60	41	*e*P	Pn	16 20 52.5	-0.3
	baz=38						
NJD				*e*S	Sb	16 21 01.8	+1.6
	baz=38						
WHYT	**Xinyi Township**	0.61	163	⇓*i*P	Pn	16 20 52.0	-0.9
	baz=165						
WHYT				S	Sn	16 21 00.9	-1.0
	baz=165						
WMLT	**Mailiao**	0.62	220	*e*P	Pn	16 20 52.7	-0.3
	baz=222						
WMLT				*e*S	Sb	16 21 02.1	+1.5
	baz=222						
WTK	**Tuku**	0.64	203	⇓*i*P	Pn	16 20 52.5	-0.8
	baz=205						
WTK				S	Sb	16 21 01.9	+0.7
	baz=205						
NNS	**Nan Shan**	0.67	76	*e*P	Pn	16 20 53.4	-0.6
	baz=75						
NNS				*e*S	Sn	16 21 02.1	-1.5
	baz=75						
CHN5	**Tsauling**	0.68	178	⇓*i*P	Pn	16 20 53.3	-0.7
	baz=180						
CHN5				S	Sb	16 21 03.1	+0.6
	baz=180						
NNSB	**Datong**	0.68	77	⇑*i*P	Pn	16 20 53.3	-0.8
	baz=76						
NNSB				*e*S	Sn	16 21 01.9	-1.9
	baz=76						
NNSH	**Datong**	0.68	77	*e*P	Pn	16 20 53.2	-0.8
	baz=76						
NNSH				*e*S	Sn	16 21 01.8	-2.0
	baz=76						
VWDT	**VWDT**	0.68	140	⇓*i*P	Pb	16 20 53.7	+0.3
	baz=141						
VWDT				S	Sb	16 21 03.3	+0.7
	baz=141						
WSF	**Szhu**	0.75	212	P	Pn	16 20 54.3	-0.6
	baz=213						
WSF				S	Sb	16 21 05.5	+1.1
	baz=213						
NSK	**Sanguang**	0.75	58	⇑P	Pn	16 20 54.5	-0.4
	baz=57						
NSK				*e*S	Sn	16 21 04.9	-0.7
	baz=57						
ETLH	**Xiulin Townshi**	0.76	95	P	Pb	16 20 54.6	-0.1
	baz=95						
ETLH				*e*S	Sb	16 21 05.0	+0.2
	baz=95						
CHN2	**Minshiung**	0.76	193	P	Pb	16 20 54.8	+0.1
	baz=195						
CHN2				*e*S	Sb	16 21 06.2	+1.5
	baz=195						
YHNB	**Yeheng**	0.76	59	P	Pn	16 20 54.8	-0.3
YHNB	**Yeheng**	0.76	59	⇑*i*P	Pn	16 20 54.6	-0.6
	baz=58						
YHNB				*e*S	Sn	16 21 04.7	-1.1
	baz=58						
ALS	**Alishan**	0.78	170	⇓*i*P	Pb	16 20 55.1	-0.1
	baz=171						
ALS				*e*S	Sb	16 21 06.3	+0.8
	baz=171						
CHY	**Chiayi**	0.81	195	⇓*i*P	Pn	16 20 55.3	-0.3
	baz=197						
CHY				*e*S	Sb	16 21 06.7	+0.7
	baz=197						
NHW	**Xinwu Township**	0.81	26	*e*P	Pn	16 20 55.9	+0.1
	baz=24						
NHW				*e*S	Sb	16 21 07.7	+1.5
	baz=24						
ETM	**Tongmen**	0.82	112	*e*P	Pb	16 20 55.7	-0.1
	baz=112						
ETM				*e*S	Sb	16 21 06.6	0.0
	baz=112						
YUS	**Yu-Shan**	0.83	161	⇓P	Pb	16 20 56.1	-0.1
	baz=162						
YUS				*e*S	Sb	16 21 07.3	+0.1
	baz=162						
LATG	**Datong**	0.83	72	⇑P	Pn	16 20 55.7	-0.4
	baz=71						
LATG				*e*S	Sn	16 21 06.5	-1.0
	baz=71						
WCKO	**Fanlu**	0.84	183	⇓*i*P	Pn	16 20 55.7	-0.4
	baz=185						
WCKO				*e*S	Sb	16 21 07.7	+0.7
	baz=185						
NCUH	**Zhongli**	0.84	35	*e*P	Pn	16 20 55.9	-0.2
	baz=33						
NCUH				*e*S	Sb	16 21 07.9	+0.9
	baz=33						
NCU	**National Centr**	0.84	35	*e*P	Pn	16 20 56.1	-0.1
	baz=34						
NCU				*e*S	Sb	16 21 07.9	+0.9

	baz=34						
NDT	**Datong Townshi**	**0.84**	**67**	*e*P	**Pn**	**16 20 56.1**	**-0.1**
	baz=66						
NDT				*e*S	**Sn**	**16 21 06.6**	**-1.2**
	baz=66						
ESL	**Shilin**	**0.85**	**123**	⇓P	**Pb**	**16 20 56.4**	**+0.2**
	baz=123						
ESL				*e*S	**Sb**	**16 21 07.7**	**+0.5**
	baz=123						
WSL	**Shuilin Townsh**	**0.85**	**208**	⇓*i*P	**Pn**	**16 20 55.9**	**-0.4**
	baz=209						
WSL				*e*S	**Sb**	**16 21 07.9**	**+0.7**
	baz=209						
NACB	**Ninganchiao**	**0.86**	**97**	P	**Pb**	**16 20 56.5**	**+0.1**
NACB	**Ninganchiao**	**0.86**	**97**	⇓P	**Pb**	**16 20 56.1**	**-0.3**
	baz=97						
NACB				*e*S	**Sb**	**16 21 07.2**	**-0.4**
	baz=97						
TWD	**Chiawan**	**0.88**	**103**	*e*P	**Pb**	**16 20 56.7**	**-0.1**
	baz=103						
TWD				*e*S	**Sb**	**16 21 07.9**	**-0.2**
	baz=103						
ETL	**Fush Village**	**0.89**	**97**	*e*P	**Pn**	**16 20 56.5**	**-0.4**
	baz=97						
ETL				*e*S	**Sb**	**16 21 08.3**	**-0.2**
	baz=97						
ENTT	**Nioudou**	**0.90**	**66**	⇑P	**Pn**	**16 20 56.9**	**-0.1**
	baz=66						
ENTT				*e*S	**Sn**	**16 21 08.6**	**-0.6**
	baz=66						
HWA	**Hwalien**	**0.92**	**109**	*e*P	**Pb**	**16 20 57.5**	**+0.1**
	baz=109						
HWA				*e*S	**Sb**	**16 21 10.3**	**+1.1**
	baz=109						
NWLT	**Wulai**	**0.92**	**57**	⇑P	**Pn**	**16 20 56.8**	**-0.4**
	baz=56						
NWLT				*e*S	**Sn**	**16 21 08.7**	**-0.8**
	baz=56						
CHN4	**Tsaushan**	**0.93**	**184**	⇓*i*P	**Pb**	**16 20 57.3**	**-0.2**
	baz=185						
CHN4				*e*S	**Sb**	**16 21 10.5**	**+1.1**
	baz=185						
NTY	**Taoyuan**	**0.93**	**39**	*e*P	**Pn**	**16 20 57.5**	**+0.2**
	baz=38						
EGFH	**Guangfu**	**0.93**	**131**	⇓*i*P	**Pb**	**16 20 57.5**	**-0.1**
	baz=131						
EGFH				*e*S	**Sb**	**16 21 10.0**	**+0.5**
	baz=131						
TEYL	**Yanliau Villag**	**0.95**	**115**	*e*P	**Pn**	**16 20 57.4**	**-0.3**
	baz=113						
TEYL				*e*S	**Sb**	**16 21 09.8**	**-0.3**
	baz=113						
TPUB	**Ta-pu**	**0.97**	**181**	P	**Pb**	**16 20 57.9**	**-0.4**
TPUB	**Ta-pu**	**0.97**	**181**	⇓*i*P	**Pb**	**16 20 57.9**	**-0.4**
	baz=183						
TPUB				*e*S	**Sb**	**16 21 11.3**	**+0.5**
	baz=183						
FUSB	**Fushanzhiwuyua**	**0.97**	**60**	*e*P	**Pn**	**16 20 57.8**	**-0.2**
	baz=59						
FUSB				*e*S	**Sn**	**16 21 10.4**	**-0.6**
	baz=59						
ICHU	**Yijhu**	**0.98**	**201**	*e*P	**Pn**	**16 20 57.9**	**-0.1**
	baz=202						
ICHU				*e*S	**Sb**	**16 21 11.7**	**+0.8**
	baz=202						
EHY	**Hungye**	**0.98**	**141**	⇓*e*P	**Pb**	**16 20 58.6**	**+0.2**
	baz=142						
EHY				*e*S	**Sb**	**16 21 11.7**	**+0.7**
	baz=142						
TEGC	**Jichi Village**	**0.99**	**125**	*e*P	**Pb**	**16 20 59.0**	**+0.5**
	baz=125						
TEGC				*e*S	**Sb**	**16 21 12.8**	**+1.6**
	baz=125						
ENA	**Nanau**	**1.00**	**81**	*e*P	**Pn**	**16 20 58.1**	**-0.2**
	baz=81						
ENA				*e*S	**Sb**	**16 21 12.1**	**+0.6**
	baz=81						
CHN8	**Yiju**	**1.01**	**204**	*e*P	**Pb**	**16 20 58.7**	**-0.3**
	baz=205						
CHN8				*e*S	**Sb**	**16 21 13.6**	**+1.7**
	baz=205						
TWK	**Hsinying**	**1.02**	**189**	⇓*e*P	**Pb**	**16 20 58.7**	**-0.4**
	baz=190						
TWK				*e*S	**Sb**	**16 21 12.9**	**+0.7**
	baz=190						
TWE	**Neicheng**	**1.02**	**64**	*e*P	**Pb**	**16 20 58.9**	**-0.2**
	baz=64						
TWE				*e*S	**Sb**	**16 21 12.5**	**+0.4**
	baz=64						
TATO	**Taipei**	**1.03**	**47**	P	**Pb**	**16 21 00.0**	**+0.8**
TATO	**Taipei**	**1.03**	**47**	*e*P	**Pb**	**16 20 59.4**	**+0.1**
	baz=47						
TATO				*e*S	**Sb**	**16 21 13.1**	**+0.7**
	baz=47						
NDS	**Dongshan**	**1.03**	**70**	*e*P	**Pb**	**16 20 59.2**	**-0.1**
	baz=69						
NDS				*e*S	**Sb**	**16 21 13.1**	**+0.8**
	baz=69						
WTP	**Ta-pu**	**1.03**	**182**	⇓*e*P	**Pn**	**16 20 58.7**	**0.0**
	baz=183						
WTP				*e*S	**Sb**	**16 21 13.0**	**+0.6**
	baz=183						
EWUT	**Wuta**	**1.04**	**81**	*e*P	**Pn**	**16 20 58.6**	**-0.2**
	baz=80						
EWUT				*e*S	**Sn**	**16 21 11.9**	**-0.5**
	baz=80						
NHDH	**Xindian Distri**	**1.04**	**49**	*e*P	**Pn**	**16 20 59.2**	**+0.3**
	baz=48						
NHDH				*e*S	**Sb**	**16 21 13.4**	**+0.6**
	baz=48						
HGSD	**Ruisui**	**1.05**	**138**	⇓*e*P	**Pb**	**16 21 00.0**	**+0.4**
	baz=139						
HGSD				*e*S	**Sb**	**16 21 14.4**	**+1.4**
	baz=139						
YULB	**Yu-li**	**1.06**	**146**	P	**Pb**	**16 20 59.7**	**-0.1**
YULB	**Yu-li**	**1.06**	**146**	⇓*i*P	**Pb**	**16 20 59.8**	**-0.1**
	baz=147						
YULB				*e*S	**Sb**	**16 21 13.9**	**+0.7**
	baz=147						
SNST	**Tainan City**	**1.06**	**188**	*e*P	**Pb**	**16 21 00.9**	**+1.0**
	baz=189						
SNST				*e*S	**Sb**	**16 21 15.7**	**+2.4**
	baz=189						
TWS1	**Kuangyinshan**	**1.07**	**40**	*e*P	**Pn**	**16 20 59.2**	**-0.1**
	baz=39						
TWS1				*e*S	**Sb**	**16 21 13.8**	**+0.1**
	baz=39						
TAP	**Taipei**	**1.08**	**45**	*e*P	**Pb**	**16 21 00.3**	**+0.2**
	baz=45						
TAP				*e*S	**Sb**	**16 21 14.4**	**+0.5**
	baz=45						
TWF1	**Yuli**	**1.09**	**147**	⇓*e*P	**Pb**	**16 21 00.4**	**+0.1**
	baz=148						
TWF1				*e*S	**Sb**	**16 21 15.1**	**+0.8**
	baz=148						
TAP1	**Taipei**	**1.09**	**46**	*e*P	**Pn**	**16 20 60.0**	**+0.4**
	baz=45						
TAP1				*e*S	**Sb**	**16 21 14.8**	**+0.5**
	baz=45						
CHN1	**Nanshi**	**1.09**	**186**	⇓*e*P	**Pb**	**16 20 59.8**	**-0.6**
	baz=187						
CHN1				*e*S	**Sb**	**16 21 14.9**	**+0.6**
	baz=187						
TWA	**Mucha**	**1.10**	**50**	*e*P	**Pb**	**16 21 00.7**	**+0.3**
	baz=50						
TWA				*e*S	**Sb**	**16 21 15.4**	**+1.1**
	baz=50						
EYUL	**Yuli**	**1.11**	**147**	⇓*e*P	**Pb**	**16 21 00.6**	**0.0**
	baz=148						
EYUL				*e*S	**Sb**	**16 21 15.4**	**+0.7**
	baz=148						
STYH	**Taoyuan**	**1.11**	**174**	⇓*e*P	**Pb**	**16 20 59.9**	**-0.7**
	baz=175						
STYH				*e*S	**Sb**	**16 21 15.2**	**+0.6**
	baz=175						
STYT	**Tauyuan**	**1.11**	**175**	*e*P	**Pb**	**16 21 00.2**	**-0.5**
	baz=176						
STYT				*e*S	**Sb**	**16 21 15.1**	**+0.2**
	baz=176						
ELDTW	**Lidau**	**1.13**	**163**	⇓*e*P	**Pb**	**16 21 00.6**	**-0.5**
	baz=164						
ELDTW				*e*S	**Sb**	**16 21 15.6**	**+0.1**
	baz=164						
TWC	**Suao**	**1.14**	**73**	*e*P	**Pb**	**16 21 00.9**	**-0.1**
	baz=73						
TWC				*e*S	**Sb**	**16 21 16.3**	**+0.9**
	baz=73						
NTST	**Danshui**	**1.14**	**39**	*e*P	**Pn**	**16 21 00.1**	**-0.2**
	baz=38						
NTST				*e*S	**Sn**	**16 21 14.6**	**-0.4**
	baz=38						
SCLT	**Jiali**	**1.18**	**201**	*e*P	**Pb**	**16 21 01.3**	**-0.5**
	baz=202						
SCLT				*e*S	**Sb**	**16 21 18.4**	**+1.8**
	baz=202						
SSHA	**Shanhua**	**1.19**	**197**	*e*P	**Pb**	**16 21 01.9**	**0.0**
	baz=198						
SSHA				*e*S	**Sb**	**16 21 19.2**	**+2.4**
	baz=198						
SGST	**Jiashian**	**1.19**	**183**	⇓*e*P	**Pn**	**16 21 00.5**	**-0.5**
	baz=184						
SGST				*e*S	**Sb**	**16 21 17.1**	**0.0**
	baz=184						
ANP	**Anpu**	**1.20**	**41**	*e*P	**Pn**	**16 21 00.8**	**-0.3**
	baz=40						
ANP				*e*S	**Sn**	**16 21 15.5**	**-1.0**
	baz=40						
YM01	**YM01**	**1.20**	**44**	*e*P	**Pn**	**16 21 00.8**	**-0.3**
	baz=43						
YM01				*e*S	**Sn**	**16 21 15.8**	**-0.7**
	baz=43						
ECBN	**Changbin**	**1.20**	**143**	*e*P	**Pb**	**16 21 02.9**	**+0.7**
	baz=143						
ECBN				*e*S	**Sb**	**16 21 19.9**	**+2.6**
	baz=143						
FULB	**Fuli**	**1.22**	**151**	⇓*e*P	**Pb**	**16 21 03.1**	**+0.5**
	baz=152						
FULB				*e*S	**Sb**	**16 21 20.1**	**+2.2**
	baz=152						
CHN3	**Shinhua**	**1.23**	**193**	*e*P	**Pb**	**16 21 02.8**	**+0.2**
	baz=194						
CHN3				*e*S	**Sb**	**16 21 21.5**	**+3.5**
	baz=194						
EHD	**Haiduan**	**1.23**	**156**	⇓*e*P	**Pb**	**16 21 02.2**	**-0.5**
	baz=157						
EHD				*e*S	**Sb**	**16 21 18.3**	**+0.1**
	baz=157						
PNG	**Penghu**	**1.23**	**235**	*e*P	**Pn**	**16 21 00.6**	**-1.0**
	baz=236						
PNG				*e*S	**Sb**	**16 21 18.4**	**+0.2**
	baz=236						
TSCK	**Chigu Township**	**1.24**	**205**	*e*P	**Pb**	**16 21 02.3**	**-0.5**
	baz=206						
TSCK				*e*S	**Sb**	**16 21 19.2**	**+0.8**
	baz=206						
PHUB	**P'eng-hu**	**1.25**	**233**	⇑*e*P	**Pn**	**16 21 00.7**	**-1.1**
	baz=233						
PHUB				*e*S	**Sb**	**16 21 18.9**	**+0.2**
	baz=233						
TIPB	**Shuangxi**	**1.27**	**57**	⇑*e*P	**Pn**	**16 21 02.0**	**-0.1**
	baz=56						
TIPB				*e*S	**Sn**	**16 21 18.6**	**+0.3**
	baz=56						
SLGT	**Liugui**	**1.28**	**180**	*e*P	**Pb**	**16 21 03.6**	**+0.1**
	baz=182						
SLGT				*e*S	**Sb**	**16 21 21.9**	**+2.3**
	baz=182						
SHHT	**Tainan City**	**1.28**	**193**	*e*P	**Pn**	**16 20 59.2**	**-3.0**
	baz=194						
SHHT				*e*S	**Sn**	**16 21 18.5**	**0.0**
	baz=194						
ECS	**Chishang**	**1.28**	**156**	*e*P	**Pb**	**16 21 03.6**	**0.0**
	baz=157						
ECS				*e*S	**Sb**	**16 21 21.3**	**+1.6**
	baz=157						
EGS		**1.29**	**64**	*e*P	**Pb**	**16 21 03.8**	**+0.1**
	baz=64						
WFSB	**Wu-fen Shan**	**1.29**	**52**	*e*P	**Pb**	**16 21 04.7**	**+1.0**
	baz=51						
WFSB				*e*S	**Sn**	**16 21 19.1**	**+0.3**
	baz=51						
VWUC	**VWUC**	**1.31**	**303**	*e*P	**Pn**	**16 21 01.4**	**-1.2**
	baz=303						
VWUC				*e*S	**Sn**	**16 21 17.4**	**-1.7**
	baz=303						
TWY	**Chenhua**	**1.31**	**41**	*e*P	**Pn**	**16 21 03.0**	**+0.4**
	baz=40						
TWY				*e*S	**Sb**	**16 21 20.1**	**-0.3**
	baz=40						
TNOU	**National Taiwa**	**1.34**	**49**	*e*S	**Sb**	**16 21 21.1**	**-0.1**
	baz=49						
CHKT	**Chengkung**	**1.34**	**151**	*e*P	**Pb**	**16 21 04.8**	**+0.2**
	baz=152						
CHKT				*e*S	**Sb**	**16 21 23.0**	**+1.6**
	baz=152						
TAI	**Tainan**	**1.34**	**198**	*e*S	**Sb**	**16 21 24.3**	**+2.9**
	baz=199						
WDGT	**Dungji**	**1.36**	**222**	*e*P	**Pn**	**16 21 02.4**	**-0.9**
	baz=223						
WDGT				*e*S	**Sb**	**16 21 21.8**	**-0.2**
	baz=223						
SXI1	**Grass Mountain**	**1.37**	**53**	*e*P	**Pn**	**16 21 03.9**	**+0.3**
	baz=53						
SXI1				*e*S	**Sb**	**16 21 23.2**	**+0.8**
	baz=53						
SCST	**Cishan**	**1.39**	**186**	*e*P	**Pb**	**16 21 05.3**	**-0.2**
	baz=187						
SCST				*e*S	**Sb**	**16 21 23.8**	**+0.9**
	baz=187						
TWB1	**Santiao Chiao**	**1.41**	**59**	*e*P	**Pn**	**16 21 04.0**	**0.0**
	baz=58						
TWB1				*e*S	**Sn**	**16 21 22.3**	**+0.6**
	baz=58						
EDH	**Donghe**	**1.43**	**155**	*e*P	**Pb**	**16 21 05.8**	**-0.3**
	baz=156						
EDH				*e*S	**Sb**	**16 21 25.4**	**+1.5**
	baz=156						
LONT	**Longtian**	**1.43**	**162**	*e*P	**Pb**	**16 21 05.8**	**-0.3**
	baz=163						
LONT				*e*S	**Sb**	**16 21 24.8**	**+0.8**
	baz=163						
EOS2	**EOS2**	**1.44**	**84**	*e*P	**Pb**	**16 21 06.7**	**+0.4**
	baz=84						
EOS2				*e*S	**Sb**	**16 21 25.0**	**+0.9**
	baz=84						
TWM1	**Shoushan**	**1.46**	**188**	*e*P	**Pb**	**16 21 07.2**	**+0.5**
	baz=189						
TWM1				*e*S	**Sb**	**16 21 30.0**	**+5.2**
	baz=189						
TWG	**Pinlang**	**1.50**	**165**	*e*P	**Pb**	**16 21 06.9**	**-0.3**
	baz=166						
TWG				*e*S	**Sb**	**16 21 26.9**	**+1.0**
	baz=166						
TWGBT	**Beinan**	**1.50**	**165**	P	**Pb**	**16 21 07.0**	**-0.4**
TWGBT	**Beinan**	**1.50**	**165**	*e*P	**Pb**	**16 21 06.9**	**-0.4**
	baz=166						
TWGBT				*e*S	**Sb**	**16 21 26.9**	**+0.9**
	baz=166						
EOS3	**EOS3**	**1.52**	**89**	*e*P	**Pb**	**16 21 07.3**	**-0.1**
	baz=89						
EOS3				*e*S	**Sb**	**16 21 27.1**	**+0.9**
	baz=89						
EOS4	**EOS4**	**1.52**	**96**	*e*P	**Pb**	**16 21 06.4**	**-1.0**
	baz=96						
EOS4				*e*S	**Sb**	**16 21 27.2**	**+0.9**
	baz=96						
SSD	**Sandimen**	**1.52**	**181**	*e*P	**Pb**	**16 21 06.7**	**-1.0**
	baz=181						
SSD				*e*S	**Sb**	**16 21 27.3**	**+0.7**
	baz=181						
VCHM	**Qimei**	**1.55**	**227**	*e*P	**Pn**	**16 21 05.0**	**-0.9**
	baz=227						
VCHM				*e*S	**Sn**	**16 21 25.9**	**+0.8**
	baz=227						
SGLT	**Jiouru**	**1.55**	**186**	*e*P	**Pb**	**16 21 08.8**	**+0.6**
	baz=186						
SGLT				*e*S	**Sb**	**16 21 29.9**	**+2.5**
	baz=186						
TTN	**Taitung**	**1.58**	**163**	*e*P	**Pb**	**16 21 09.0**	**+0.3**
	baz=164						
PTMZ	**Houxiangcun**	**1.59**	**299**	*e*P	**Pn**	**16 21 05.5**	**-0.9**
	baz=298						
PTMZ				*e*S	**Sn**	**16 21 24.4**	**-1.7**
	baz=298						
MASBT	**Mashibuluo**	**1.66**	**181**	*e*P	**Pb**	**16 21 08.4**	**-1.5**
	baz=182						
MASBT				*e*S	**Sb**	**16 21 31.2**	**+0.8**
	baz=182						
ECL	**Taimali**	**1.69**	**171**	*e*P	**Pb**	**16 21 09.3**	**-1.3**
	baz=171						
ECL				*e*S	**Sb**	**16 21 32.8**	**+1.3**
	baz=171						
LDUT	**Ludao**	**1.76**	**155**	*e*P	**Pb**	**16 21 09.9**	**-1.8**
	baz=156						
LDUT				*e*S	**Sb**	**16 21 33.2**	**-0.2**
	baz=156						
EAST	**Anshuo**	**1.89**	**175**	*e*P	**Pb**	**16 21 12.1**	**-1.9**
	baz=175						
EAST				*e*S	**Sb**	**16 21 36.8**	**-0.5**
	baz=175						
SCZT	**Fangliau**	**1.90**	**181**	*e*P	**Pn**	**16 21 11.7**	**+1.0**
	baz=182						
SCZT				*e*S	**Sb**	**16 21 36.8**	**-0.5**
	baz=182						
TAWH	**Dawu Township**	**1.94**	**174**	*e*P	**Pb**	**16 21 12.7**	**-2.0**
	baz=174						
TAWH				*e*S	**Sb**	**16 21 40.2**	**+1.7**
	baz=174						
MATB	**Ma-tsu**	**1.97**	**341**	*e*P	**Pn**	**16 21 10.9**	**-0.8**
	baz=340						
MATB				*e*S	**Sn**	**16 21 33.2**	**-2.4**
	baz=340						
MSUT	**Lienchiang**	**2.00**	**341**	*e*P	**Pn**	**16 21 12.7**	**+0.7**
	baz=340						
MSUT				*e*S	**Sn**	**16 21 36.4**	**+0.2**
	baz=340						
KNMB	**Chin-men Tao**	**2.08**	**276**	*e*P	**Pn**	**16 21 12.8**	**-0.3**
	baz=275						
KNMB				*e*S	**Sn**	**16 21 40.5**	**+2.4**
	baz=275						
JYNG	**Yonagunijimaku**	**2.09**	**85**	*e*S	**Sn**	**16 21 39.1**	**+0.6**
YOJ	**Yonaguni jima**	**2.15**	**85**	P	**Pn**	**16 21 15.7**	**+1.5**
YOJ	**Yonaguni jima**	**2.15**	**85**	*e*P	**Pb**	**16 21 16.1**	**-2.3**
	baz=85						
SMST	**Manzhou Townsh**	**2.25**	**176**	*e*P	**Pn**	**16 21 15.9**	**+0.4**
	baz=176						
SMST				*e*S	**Sb**	**16 21 44.2**	**-3.4**
	baz=176						
HEN	**Hengchun**	**2.26**	**178**	*e*P	**Pn**	**16 21 16.8**	**+1.1**
	baz=179						
HEN				*e*S	**Sn**	**16 21 43.6**	**+0.9**
	baz=179						
TWKBT	**Hengchun**	**2.33**	**176**	*e*P	**Pn**	**16 21 17.8**	**+1.1**
	baz=177						
MHZQ	**Yeshan**	**2.34**	**321**	*e*P	**Pn**	**16 21 16.5**	**-0.2**
	baz=321						
MHZQ				*e*S	**Sb**	**16 21 50.3**	**+0.3**
	baz=321						
LAY	**Lan-yu**	**2.38**	**160**	*e*P	**Pn**	**16 21 18.2**	**+0.9**
	baz=160						
LAY				*e*S	**Sn**	**16 21 47.2**	**+1.7**
	baz=160						
LYJJ	**Jianjiangzhen**	**2.40**	**340**	*e*P	**Pn**	**16 21 17.4**	**-0.3**
	baz=340						
LYJJ				*e*S	**Sn**	**16 21 44.3**	**-1.9**
	baz=340						
AXDP	**Jialang**	**2.52**	**285**	*e*P	**Pn**	**16 21 19.1**	**-0.2**
	baz=284						
XPSS	**Dashiqiu**	**2.67**	**351**	*e*P	**Pn**	**16 21 20.8**	**-0.6**
	baz=350						
XPSS				*e*S	**Sn**	**16 21 52.1**	**-0.7**
	baz=350						
ZPLA	**Ao Xicun**	**2.68**	**263**	*e*P	**Pn**	**16 21 21.0**	**-0.4**
	baz=263						
ZPLA				*e*S	**Sn**	**16 21 51.1**	**-1.8**
	baz=263						
IRIF	**Iriomote-Funau**	**2.80**	**88**	*e*S	**Sn**	**16 21 56.8**	**+0.7**
DSXP	**Dongshan**	**3.01**	**260**	*e*P	**Pn**	**16 21 25.4**	**-0.6**
	baz=259						
DSXP				*e*S	**Sn**	**16 22 00.6**	**-0.5**
	baz=259						
JKRS	**Kuro-shima**	**3.06**	**90**	*e*S	**Sn**	**16 22 03.6**	**+1.2**
JIJ	**Ishigaki jima**	**3.18**	**88**	*e*P	**Pn**	**16 21 29.4**	**+1.0**
JIJ				S	**Sn**	**16 22 05.2**	**-0.2**
JISG	**Ishigakijimahi**	**3.34**	**84**	P	**Pn**	**16 21 31.6**	**+1.0**
JISG				*e*S	**Sn**	**16 22 09.9**	**+0.5**

BJI ***24*** *16:43:24.3±0.0, 26°.62N×127°.43E, h76^{km}, mb5.0/78, mB4.8/58, Ms4.5/80, Ms7 4.2/70*

MOS ***24*** *16:43:24.9±0.9, 26°.92N×127°.19E, h75^{km}, mb5.8/89, MS4.2/5, Error ellipse: s-maj=5.7km s-min=3.5km az=117.5*

NEIC ***24*** *16:43:27.1±2.0, 26°.89N±0°.07×127°.22E±0°.06, h77^{km}±4^{km}, mb5.5/299, Mwb5.2/7, Mww5.1/23, Error ellipse: s-maj=9.9km s-min=8.1km az=163.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-3.79; $M_{\theta\theta}$-5.89; $M_{\phi\phi}$9.67; $M_{r\theta}$-3.08; $M_{\theta\phi}$0.01; $M_{\phi r}$-1.21; Fault plane solution: $M_0$9.07000×10^{16} NP1:ϕ_s38.66000°, δ69.58000°, λ-30.83000°. NP2:ϕ_s140.42000°, δ61.29000°, λ-156.56000°. Principal axes: T 9.7877, Plg5.0000°, Azm91.0000°; N -1.6649, Plg54.0000°, Azm188.0000°; P -8.1229, Plg36.0000°, Azm357.0000°;*

IDC ***24*** *16:43:27.4±0.5, 26°.96N×127°.20E, h82^{km}±4^{km}, mb4.9/33, mbtmp5.2/36, MS3.9/64 Error ellipse: s-maj=9.2km s-min=7.7km az=9.0*

NEIC ***24*** *16:43:27.3, 26°.90N×127°.20E, h79^{km}*

NEIC ***24*** *16:43:27, 26°.52N×127°.77E, h80^{km}, Moment Tensor Solution. Duration: 1^{s}8 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.11; $M_{\theta\theta}$-1.68; $M_{\phi\phi}$4.79; $M_{r\theta}$-2.82; $M_{\theta\phi}$1.94; $M_{\phi r}$-0.22; Fault plane solution: $M_0$5.43000×10^{16} NP1:ϕ_s48.21000°, δ63.04000°, λ-45.09000°. NP2:ϕ_s162.66000°, δ50.86000°, λ-144.24000°. Principal axes: T 5.4444, Plg7.0000°, Azm108.0000°; N -0.0347, Plg39.0000°, Azm204.0000°; P -5.4097, Plg50.0000°, Azm9.0000°;*

NEIC ***24*** *16:43:27, 26°.92N×127°.21E, h80^{km}*

NIED ***24*** *16:43:28.2, 26°.84N×127°.20E, h87^{km}, MW5.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.94; $M_{\theta\theta}$-2.44; $M_{\phi\phi}$4.38; $M_{r\theta}$-2.73; $M_{\theta\phi}$0.19; $M_{\phi r}$-1.14; Fault plane solution: $M_0$4.81000×10^{16} NP1:ϕ_s39.00000°, δ71.00000°, λ-42.00000°. NP2:ϕ_s145.00000°, δ51.00000°, λ-155.00000°.*

JMA ***24*** *16:43:28.2±0.2, 27°N±1°×127°.2E±0°.8, h87^{km}±2^{km}, MD5.1/11, MW5.1/11, NW OFF OKINAWAJIMA IS*

JMA Felt III J1 at NW OFF OKINAWAJIMA IS .

GCMT ***24*** *16:43:29.1±0.2, 26°.75N±0°.01×127°.26E±0°.01, h95^{km}±1^{km}, MW5.2/116, Moment Tensor Solution. s88,c120; s116,c197; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.51±.01; $M_{\theta\theta}$-0.26±.01; $M_{\phi\phi}$0.77±.01; $M_{r\theta}$-0.32±.01; $M_{\theta\phi}$0.07±.01; $M_{\phi r}$-0.12±.01; Best double couple: $M_0$0.76500×10^{17} NP1:ϕ_s33.00000°, δ60.00000°, λ-51.00000°. NP2:ϕ_s154.00000°, δ48.00000°, λ-137.00000°. Principal axes: T 0.7970, Plg7.0000°, Azm96.0000°; N -0.0650, Plg33.0000°, Azm190.0000°; P -0.7320, Plg56.0000°, Azm356.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***24*** *16:43:30.4, 26°.96N×127°.14E, h90^{km}, mb6.0*

ISC 24 16:43:27.4±0.2**, 26°.85N**±0°.03×**127°.28E**±0°.03**, h85**^{km}±1^{km}**, h86**^{km}**:pP-P, n1667, σ1^{s}43**/1789**, mb5.5**/385**, 101C-87D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGN	**Aguni-jima**	**0.26**	**187**	P	**Pn**	**16 43 41.0**	**+0.9**
JAGN				S	**Sn**	**16 43 50.7**	**+1.3**
JAGN	**Aguni-jima**	**0.26**	**187**	A	A	16 43 41.0	
	comp=E,287nm,1.9s,comp=E,501nm,0.9s						
JIH	**Iheya**	**0.64**	**73**	P	**Pn**	**16 43 44.9**	**+2.0**
JIH				S	**Sn**	**16 43 56.8**	**+2.4**
JIH	**Iheya**	**0.64**	**73**	A	A	16 43 44.9	
	comp=E,179nm,1.2s,comp=E,246nm,1.9s						
JKE	**Kume jima 2**	**0.69**	**220**	P	**Pn**	**16 43 43.8**	**+0.4**
JKE				S	**Sn**	**16 43 55.1**	**-0.1**
JKE	**Kume jima 2**	**0.69**	**220**	A	A	16 43 43.8	
	comp=E,354nm,1.2s,comp=E,231nm,1.1s						
JNTH	**Nagotoyohara**	**0.74**	**116**	*i* P	**Pn**	**16 43 45.6**	**+1.6**
JNTH				S	**Sn**	**16 43 58.1**	**+1.9**
JNTH	**Nagotoyohara**	**0.74**	**116**	A	A	16 43 45.6	
	comp=E,419nm,2.1s,comp=E,347nm,1.0s						
JJT3	**Tamagusuku3**	**0.84**	**147**	P	**Pn**	**16 43 46.8**	**+1.9**
JJT3				*e*S	**Sn**	**16 44 00.7**	**+2.6**
JJT3	**Tamagusuku3**	**0.84**	**147**	A	A	16 43 46.8	
	comp=E,639nm,2.0s,comp=E,782nm,1.5s						
JOW	**Kunigami**	**0.89**	**91**	P	**Pn**	**16 43 47.5**	**+2.0**
	46µm,0.2s,baz=229,slow=5.7						
JOW				S	**Sn**	**16 44 00.9**	**+1.9**
	50µm,0.3s,baz=103,slow=28,SNR=18						
JOW	**Kunigami**	**0.89**	**91**	Pn	**Pn**	**16 43 47.4**	**+1.8**
JOW				Sn	**Sn**	**16 44 00.7**	**+1.6**
JOW	**Kunigami**	**0.89**	**91**	P	**Pn**	**16 43 47.6**	**+2.0**
JOW	**Kunigami**	**0.89**	**91**	P	**Pn**	**16 43 47.3**	**+1.8**
JOW				S	**Sn**	**16 44 01.1**	**+2.0**
JOW	**Kunigami**	**0.89**	**91**	A	A	16 43 47.3	

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       comp=E,277nm,0.3s,comp=E,208nm,0.9s
JYRO   Yoronjima          1.06  80 i P     Pn      16 43 49.2 +1.7
JYRO                                 S     Sn      16 44 04.6 +2.1
JYRO   Yoronjima          1.06  80   A     A       16 43 49.2
       comp=E,71nm,3.0s,comp=E,102nm,0.9s
JOKE   Okinoerabujima     1.26  66 i P     Pn      16 43 51.6 +1.7
JOKE                                eS     Sn      16 44 09.3 +2.5
JOKE   Okinoerabujima     1.26  66   A     A       16 43 51.6
       comp=E,38nm,2.6s,comp=E,42nm,1.2s
JTK    Tokunoshima        1.75  58   P     Pn      16 43 57.8 +1.5
JTK                                  S     Sn      16 44 20.2 +2.1
JTK    Tokunoshima        1.75  58   A     A       16 43 57.8
       comp=E,23nm,3.7s,comp=E,40nm,2.5s
JAMN   Amaminishikomi     2.18  50   A     A       16 44 04.1
       comp=E,10.0nm,2.7s,comp=E,14nm,1.8s
JAM    Amami Oshima       2.58  52   A     A       16 44 09.7
       comp=E,11nm,2.4s,comp=E,10.0nm,4.1s
JIKM   Ikemajima          2.65 224   A     A       16 44 08.9
       comp=E,29nm,2.7s,comp=E,41nm,2.7s
JOGS   Gusukube           2.68 219   A     A       16 44 09.3
       comp=E,53nm,2.4s,comp=E,48nm,1.6s
JMJ    Miyako jima 2      2.71 222   P     Pn      16 44 09.9 +1.0
JMJ2   Miyako jima3       2.74 220   A     A       16 44 10.1
       comp=E,44nm,3.6s,comp=E,29nm,3.5s
JIRB   Irabujima          2.77 224   A     A       16 44 10.5
       comp=E,21nm,4.0s,comp=E,23nm,2.9s
JZK    Kikaishima         2.80  58   A     A       16 44 12.7
       comp=E,43nm,3.0s,comp=E,59nm,2.6s
JTAJ   Takarajima         2.85  36   A     A       16 44 13.3
       comp=E,16nm,2.6s,comp=E,13nm,3.4s
JTJ    Tarama             3.20 227   A     A       16 44 16.4
       comp=E,25nm,2.5s,comp=E,20nm,2.2s
JISG   Ishigakijimahi     3.50 231   A     A       16 44 20.5
       comp=E,20nm,0.5s,comp=E,18nm,0.5s
JMZ    Minamidaito 2      3.68 105   Pn    Pn      16 44 21.2 -0.9
JMZ    Minamidaito 2      3.68 105   P     Pn      16 44 22.0 -0.1
JMZ    Minamidaito 2      3.68 105   A     A       16 44 24.9
       comp=E,23nm,0.9s,comp=E,24nm,3.2s
JKDJ   Kitadaitoujima     3.71 103   A     A       16 44 25.3
       comp=E,26nm,1.3s,comp=E,24nm,2.5s
JNN    Nakanoshima        3.76  37   A     A       16 44 25.8
       comp=E,8.0nm,1.6s,comp=E,9.0nm,1.6s
JIJ    Ishigaki jima      3.76 230   A     A       16 44 24.1
       comp=E,6.0nm,5.2s,comp=E,7.0nm,1.6s
JKRS   Kuro-shima         3.94 229   A     A       16 44 26.6
       comp=E,23nm,1.9s,comp=E,21nm,4.0s
IRIF   Iriomote-Funau     4.07 233   A     A       16 44 28.4
       comp=E,7.0nm,3.1s,comp=E,9.0nm,1.9s
HATJ   Hateruma jima      4.20 229   A     A       16 44 30.2
       comp=E,15nm,1.9s,comp=E,13nm,3.7s
YOJ    Yonaguni jima      4.53 239   Pn    Pn      16 44 32.9 -0.7
YOJ    Yonaguni jima      4.53 239   P     Pn      16 44 33.3 -0.3
YOJ    Yonaguni jima      4.53 239   A     A       16 44 34.7
       comp=E,4.0nm,2.2s,comp=E,3.0nm,4.9s
YOJ    Yonaguni jima      4.53 239   P     Pn      16 44 32.9 -0.7
JMTN   Minamitane         4.75  41   A     A       16 44 39.6
       comp=E,4.0nm,8.2s,comp=E,5.0nm,4.7s
JTN    Tanegashima 3      4.99  40   A     A       16 44 42.9
       comp=E,3.0nm,3.0s,comp=E,3.0nm,6.4s
JSU    Suzuyama           5.41  30   Pn    Pn      16 44 47.6 +2.1
JSU    Suzuyama           5.41  30   P     Pn      16 44 48.3 +2.8
TATO   Taipei             5.54 252         Pn      16 44 48.6 +1.2
TATO   Taipei             5.54 252   P     Pn      16 44 49.2 +1.8
TATO   Taipei             5.54 252   P     Pn      16 44 48.5 +1.1
YHNB   Yeheng             5.75 249         Pn      16 44 51.2 +0.9
YHNB   Yeheng             5.75 249   P     Pn      16 44 52.0 +1.7
NACB   Ninganchiao        5.79 244         Pn      16 44 49.1 -1.6
NACB   Ninganchiao        5.79 244   P     Pn      16 44 49.4 -1.4
YULB   Yu-li              6.42 239         Pn      16 44 55.9 -3.6
YULB   Yu-li              6.42 239   P     Pn      16 44 56.4 -3.0
SSLB   Suanglung          6.49 243   Pn    Pn      16 44 58.5 -1.8
SSLB   Suanglung          6.49 243   P     Pn      16 44 59.1 -1.2
SSE    Sheshan            6.81 310   P     Pn      16 45 06.8 +2.2
SSE                                  S     Sn      16 46 17.6 -3.1
SSE                                  smax  smax
       comp=N,97nm,0.8s
SSE                                  smax  smax
       comp=E,91nm,0.8s
SSE                                  LR    LR
       comp=N,1µm,6.7s
SSE                                  LR    LR
       comp=E,1µm,6.7s
TWGBT  Beinan             6.92 236   P     Pn      16 45 02.8 -3.4
TWG    Pinlang            6.92 236         Pn      16 45 01.9 -4.3
JNU    Nakatsue           6.99  26   P     Pn      16 45 09.3 +2.2
       167nm,0.8s,baz=207,slow=4.1,SNR=91
JNU                                  S     Sn      16 46 29.2 +4.2
       54nm,0.5s,baz=1.7,slow=18,SNR=1.3
JNU                                  LR    LR      16 47 29.3
       comp=Z,547nm,19.5s,baz=182,slow=35
JNU    Nakatsue           6.99  26   Pn    Pn      16 45 09.8 +2.7
JNU    Nakatsue           6.99  26   P     Pn      16 45 10.2 +3.1
TPUB   Ta-pu              6.99 241         Pn      16 45 04.1 -3.1
TPUB   Ta-pu              6.99 241   P     Pn      16 45 06.3 -0.9
JTU    Tsushima           7.86  13   Pn    Pn      16 45 19.4 +0.4
JTU    Tsushima           7.86  13   P     Pn      16 45 23.2 +4.2
BBP    Basco              8.03 218⇓eP    Pn      16 45 17.5 -3.8
KNMB   Chin-men Tao       8.37 255   Pn    Pn      16 45 25.2 -0.8
JMN    Monobe             8.91  38   Pn    Pn      16 45 32.9 -0.5
JMN    Monobe             8.91  38   P     Pn      16 45 33.4  0.0
NJ2    Nanjing            8.99 307 ⇑P     Pn      16 45 35.8 +1.4
NJ2                                  sP            16 46 02.0
NJ2                                  S     Sn      16 47 11.3 -2.6
NJ2                                  ScP   ScP     16 55 15.0 -0.6
NJ2                                  pmax  pmax
       comp=Z,61nm,1.1s
NJ2                                  pmax  pmax
       comp=Z,300nm,3.5s
NJ2                                  LR    LR
       comp=N,3µm,8.1s
NJ2                                  LR    LR
       comp=E,2µm,5.7s
NJ2                                  LR    LR
       comp=Z,900nm,4.4s
CICP   Calayan Island     9.24 216⇓iP    Pn      16 45 35.2 -2.8
TJN    Taejon             9.50   0         Pn      16 45 44.9 +3.6
TJN    Taejon             9.50   0   P     Pn      16 45 45.5 +4.2
       1µm,1.5s
TJN    Taejon             9.50   0ceP    Pn      16 45 41.8 +0.5
JHS    Saijyo             9.54  30   Pn    Pn      16 45 40.4 -1.5
SGCP   Gonzaga            9.84 210⇑iP    Pn      16 45 43.5 -2.6
PACPP  Pamplona Cagay     9.98 214⇑iP    Pn      16 45 45.0 -3.0
CVP    Callao Caves      10.41 210⇓eP    Pn      16 45 52.7 -1.1
CVP                                 i S    Sn      16 47 37.1  -12
KSAR   Wonju Array Be    10.57   3         Pn      16 45 57.8 +1.9
KSAR   Wonju Array Be    10.57   3   P     Pn      16 45 57.8 +1.9
KSRS   Korea Array       10.59   3   P     Pn      16 45 58.5 +2.4
       78nm,1.0s,baz=183,slow=14,SNR=180
KSRS                                 S     Sn      16 47 53.3 +0.6
       1.7nm,0.6s,baz=199,slow=12,SNR=0.7
KSRS                                 LR    LR      16 50 19.3
       comp=Z,338nm,19.0s,baz=185,slow=39
INCN   Inchon            10.62 357   Pn    Pn      16 46 00.1 +3.5
INCN   Inchon            10.62 357   P     Pn      16 46 00.1 +3.5
       185nm,1.2s
INCN   Inchon            10.62 357   P     Pn      16 46 00.1 +3.5
INCN   Inchon            10.62 357   P     Pn      16 45 51.3 -5.2
KS19   Wonju Array Si    10.63   3         Pn      16 45 59.3 +2.6
INU    Inuyama           11.88  42   Pn    Pn      16 46 15.3 +1.6
INU    Inuyama           11.88  42   P     Pn      16 46 15.9 +2.2
WHN    Wuhan             11.93 291⇑iP    Pn      16 46 15.8 +1.4
WHN                                  S     Sn      16 48 33.5 +7.9
WHN                                  LR    LR
       comp=E,3µm,3.8s
WHN                                  LR    LR
       comp=Z,4µm,6.8s
JGF    Kuroka            12.26  42         Pn      16 46 20.9 +2.0
JGF    Kuroka            12.26  42   P     Pn      16 46 21.4 +2.5
JHJ2   Mitsune           12.53  57   Pn    Pn      16 46 22.4 -0.1
PCPH   Palayan           12.62 208⇑eP    Pn      16 46 22.3 -1.5
TIA    Tai'an            12.72 320   P     Pn      16 46 27.9 +2.8
TIA                                  S     Sn      16 48 51.6 +6.8
TIA                                  pmax  pmax
       comp=Z,47nm,1.0s
TIA                                  pmax  pmax
       comp=Z,170nm,3.5s
TIA                                  LR    LR
       comp=E,1µm,8.9s
TIA                                  LR    LR
       comp=Z,510nm,6.9s
CNSH   ChangSha          12.80 279 ⇑P     Pn      16 46 27.0 +0.8
CNSH                                 S     Sn      16 48 50.5 +3.6
CNSH                                 LR    LR
       comp=N,3µm,6.4s
CNSH                                 LR    LR
       comp=E,1µm,3.5s
DL2    Dalian            12.92 340   P     Pn      16 46 30.8 +3.1
DL2                                  pP    P       16 46 43.4 +8.4
DL2                                  S     Sn      16 48 57.5 +7.9
DL2                                  pmax  pmax
       comp=Z,240nm,10.9s
DL2                                  LR    LR
       comp=N,800nm,11.0s
DL2                                  LR    LR
       comp=E,1µm,13.1s
GZH    Guangzhou         13.18 257   P     Pn      16 46 23.8 -7.5
GZH                                  S     Sn      16 48 45.5  -11
GZH                                  pmax  pmax
       comp=Z,25nm,0.8s
JCNP   Jose Panganiba    13.21 200 i P     Pn      16 46 30.3 -1.4
JCJ    Chichijima        13.30  86   P     Pn      16 46 32.6 -0.1
       71nm,0.3s,baz=285,slow=22,SNR=23
JCJ                                  S     Sn      16 48 53.0 -5.8
       108nm,0.9s,baz=269,slow=20,SNR=1.9
JCJ                                  LR    LR      16 50 54.5
       comp=Z,609nm,21.2s,baz=309,slow=34
JCJ    Chichijima        13.30  86   Pn    Pn      16 46 34.0 +1.2
MAJO   Matsushiro        13.40  41         Pn      16 46 36.4 +2.3
MAJO   Matsushiro        13.40  41   P     P       16 46 37.3 -3.1
MAJO   Matsushiro        13.40  41   P     Pn      16 46 36.4 +2.3
MJAR   Matsushiro Arr    13.40  41   P     Pn      16 46 33.2 -0.8
       4.4nm,0.9s,baz=242,slow=13,SNR=11
MJAR                                 LR    LR      16 51 59.8
       comp=Z,206nm,19.2s,baz=220,slow=38
MJB9   Matsu-Tunnel      13.40  41   Pn    Pn      16 46 36.6 +2.5
TGY    Tagaytay City     14.00 206   LR    LR      16 52 46.8
       comp=Z,162nm,18.1s,baz=3.5,slow=40
JSD    Sado              14.49  37   Pn    Pn      16 46 47.7 -0.5
LYN    LuoYang           14.86 305 ⇑P     P       16 46 56.3 -0.4
LYN                                  S     Sn      16 49 41.3 +4.5
LYN                                  pmax  pmax
       comp=Z,530nm,0.8s
HNS    HongShan          14.95 318 ⇓P     P       16 46 55.9 -1.7
HNS                                  pP    Pn      16 47 08.0  +14
HNS                                  sP            16 47 19.1
HNS                                  S     Sn      16 49 44.5 +5.6
HNS                                  SS    S       16 50 00.8 +9.5
HNS                                  pmax  pmax
       comp=Z,210nm,1.4s
HNS                                  LR    LR
       comp=N,840nm,8.8s
HNS                                  LR    LR
       comp=Z,550nm,12.0s
SNY    Shenyang          15.25 349 ⇓P     P       16 47 00.3 -0.5
SNY                                  pP    pP      16 47 13.6 -3.3
SNY                                  sP    sP      16 47 23.4 -4.2
SNY                                  S     Sn      16 49 50.4 +4.5
SNY                                  pmax  pmax
       comp=Z,72nm,1.1s
SNY                                  pmax  pmax
       comp=Z,890nm,3.7s
SNY                                  LR    LR
       comp=N,410nm,10.9s
SNY                                  LR    LR
       comp=E,260nm,8.2s
SNY                                  LR    LR
       comp=Z,380nm,14.9s
JMM    Marumori          15.82  43         Pn      16 47 02.4 -2.8
JMM    Marumori          15.82  43   P     P       16 47 06.9 -0.4
ENH    Enshi             16.00 286   P     P       16 47 10.4 +1.0
       69nm,1.3s
BJT    Baijiatuau        16.06 328   P     P       16 47 09.8 -0.1
BJT    Baijiatuau        16.06 328   P     P       16 47 11.7 +1.8
BJT    Baijiatuau        16.06 328   P     P       16 47 09.8 -0.1
BJT                                  pmax  pmax
       comp=Z,84nm,0.8s
BJI    Beijing           16.07 328   P     P       16 47 09.8 -0.2
BJI                                  pP    pP      16 47 26.8 +0.7
BJI                                  sP    sP      16 47 38.8 +2.1
BJI                                  S     Sn      16 50 08.1 +2.2
BJI                                  PcP   PcP     16 51 59.5 +0.1
BJI                                  pmax  pmax
       comp=Z,46nm,1.2s
TIY    Taiyuan           16.56 315   P     P       16 47 16.5 +1.0
TIY                                  sP    sP      16 47 40.6 -1.6
TIY                                  S     S       16 50 22.0 -2.4
TIY                                  pmax  pmax
       comp=Z,58nm,1.2s
TIY                                  pmax  pmax
       comp=Z,680nm,5.1s
TIY                                  LR    LR
       comp=Z,610nm,11.7s
TIY                                  LR    LR
       comp=Z,430nm,9.9s
TIY                                  LR    LR
       comp=Z,400nm,9.9s
MSLP   Maasin            16.79 188⇓iP    P       16 47 22.3 +4.2
CN2    Changchun         16.98 355   P     P       16 47 21.6 +1.6
CN2                                  S     Sn      16 50 25.4 -2.3
CN2                                  PcP   PcP     16 52 01.3 +0.5
CN2                                  pmax  pmax
       comp=Z,270nm,0.8s
XAN    Xi'an             17.36 299   P     P       16 47 24.6 +0.2
XAN                                  S     Sn      16 50 35.8 -1.4
XAN                                  pmax  pmax
       comp=Z,55nm,1.0s
XAN                                  pmax  pmax
       comp=Z,320nm,4.0s
XAN                                  LR    LR
       comp=Z,670nm,6.9s
XAN                                  LR    LR
       comp=Z,570nm,6.9s
XAN                                  LR    LR
       comp=Z,600nm,11.7s
TBP    Tagbilaran        17.37 191  eP     P       16 47 28.4 +3.8
CNOP   Candoni, Negro    17.49 195⇑eP    Pn      16 47 33.1 +7.2
USA0B  Ussuriysk Arra    17.72  11   P     P       16 47 27.8 -0.4
USA0B  Ussuriysk Arra    17.72  11   P     P       16 47 27.8 -0.4
USA0B                                pmax  pmax
       comp=Z,27nm,0.9s
USRK   Ussuriysk Ar.     17.72  11   P     P       16 47 27.8 -0.4
       comp=Z,6.7nm,0.6s,baz=191,slow=12,SNR=32
USRK                                 LR    LR      16 53 42.4
       comp=Z,284nm,21.0s,baz=183,slow=35
USRK   Ussuriysk Ar.     17.72  11   P     P       16 47 26.8 -1.4
MDJ    Mudanjiang        17.83   5   P     P       16 47 29.3  0.0
MDJ                                  pP    pP      16 47 43.8 -1.7
MDJ                                  sP    sP      16 47 55.0 -1.1
MDJ                                  S     Sn      16 50 47.1 -1.0
MDJ                                  sS    sS      16 51 15.5 -0.9
MDJ                                  PcP   PcP     16 52 02.1  0.0
MDJ                                  PcS   PcS     16 55 40.4 +2.0
MDJ                                  ScS   ScS     16 59 10.6 +0.6
MDJ                                  pmax  pmax
       comp=Z,20nm,0.9s
MDJ                                  pmax  pmax
       comp=Z,270nm,9.7s
MDJ                                  LR    LR
       comp=Z,350nm,10.0s
MDJ                                  LR    LR
       comp=Z,430nm,17.5s
MDJ                                  LR    LR
       comp=Z,820nm,24.7s
MDJ    Mudanjiang        17.83   5   P     P       16 47 28.4 -0.9
MDJ    Mudanjiang        17.83   5   P     Pn      16 47 31.7 +1.9
QIZ    Qiongzhong        17.84 248   P     Pn      16 47 30.1  0.0
QIZ                                  pP    pwP     16 47 47.0 -0.9
QIZ                                  sP    sP      16 47 57.8 +1.5
QIZ                                  S     Sn      16 50 49.0 +0.3
QIZ                                  pmax  pmax
       comp=Z,130nm,5.4s
JTM    Tenmabayashi      17.98  36   P     P       16 47 27.8 -3.2
GYA    Guiyang           18.43 273 ⇑P     Pn      16 47 39.1 +1.7
GYA                                  pP    pwP     16 47 56.0 +1.3
GYA                                  S     Sn      16 51 06.0 +2.8
GYA                                  pmax  pmax
       comp=Z,25nm,0.7s
GYA                                  pmax  pmax
       comp=Z,810nm,3.5s
GYA                                  LR    LR
       comp=Z,400nm,7.6s
GYA                                  LR    LR
       comp=Z,650nm,9.2s
GYA                                  LR    LR
       comp=Z,620nm,12.4s
CGP    Cagayan de Oro    18.46 188⇓eP    Pn      16 47 37.7 +0.1
DCPH   Dipolog City      18.55 192⇓eP    P       16 47 35.5 -2.0
BIPH   Bislig            18.59 183⇓eP    P       16 47 37.2 -0.6
PPR    Puerto Princes    18.81 207⇑iP    Pn      16 47 43.8 +2.0
BNX    BinXian           18.85   0 ⇑P     Pn      16 47 41.5 -0.5
BNX                                  pP    pwP     16 47 58.8  0.0
BNX                                  sP    sP      16 48 05.1 -2.3
BNX                                  S     Sn      16 51 12.8 +0.1
BNX                                  pmax  pmax
       comp=Z,41nm,1.0s
BNX                                  pmax  pmax
       comp=Z,400nm,11.3s
BNX                                  LR    LR
       comp=Z,270nm,7.8s
BNX                                  LR    LR
       comp=Z,470nm,12.3s
BNX                                  LR    LR
       comp=Z,380nm,16.1s
CDOP   Cateel, Davao     18.98 183⇑iP    P       16 47 41.8 -0.4
HHC    Hu-ho-hao-te      19.07 321⇓iP    Pn      16 47 44.6 -0.2
HHC                                  S     Sn      16 51 18.4 +0.1
HHC                                  SS    SnSn    16 51 46.9  +13
HHC                                  pmax  pmax
       comp=Z,190nm,1.0s
HHC                                  pmax  pmax
       comp=Z,900nm,4.6s
HHC                                  LR    LR
       comp=Z,880nm,10.6s
HHC                                  LR    LR
       comp=Z,800nm,9.2s
XLT    XiLinHaoTe        19.27 335⇓iP    P       16 47 46.0 +0.7
XLT                                  pP    pP      16 47 59.3 -2.3
XLT                                  sP    sP      16 48 09.3 -2.9
XLT                                  S     S       16 51 19.1  0.0
XLT                                  SS    SnSn    16 51 49.8  +11
XLT                                  pmax  pmax
       comp=Z,170nm,1.0s
XLT                                  pmax  pmax
       comp=Z,740nm,3.6s
XLT                                  LR    LR
       comp=Z,860nm,19.6s
XLT                                  LR    LR
       comp=Z,430nm,19.2s
DAV    Davao City (W)    19.74 185   LR    LR      16 55 01.2
       comp=Z,386nm,21.6s,baz=22,slow=35
BTO    Baotou            19.81 318  eP     Pn      16 47 53.6 +0.1
BTO                                  S     S       16 51 32.4 +2.7
BTO                                  pmax  pmax
       comp=Z,120nm,1.5s
BTO                                  pmax  pmax
       comp=Z,2µm,5.2s
BTO                                  LR    LR
       comp=Z,2µm,7.9s
BTO                                  LR    LR
       comp=Z,2µm,9.2s
ERM    Erimo             19.96  37   P     P       16 47 50.8 -1.8
ERM    Erimo             19.96  37   P     P       16 47 52.3 -0.3
ERM    Erimo             19.96  37   P     P       16 47 50.8 -1.8
ERM                                  pmax  pmax
       comp=Z,42nm,0.7s
JEM    Erimo             19.96  37   P     P       16 47 52.0 -0.6
CD2    Chengdu           20.98 287 ⇑P     P       16 48 02.5 -1.4
CD2                                  pP    pwP     16 48 22.5 +0.1
CD2                                  S     S       16 51 47.5 -5.4
CD2                                  pmax  pmax
       comp=Z,70nm,0.9s
CD2                                  pmax  pmax
       comp=Z,170nm,3.9s
CD2                                  LR    LR
       comp=Z,780nm,11.4s
CD2                                  LR    LR
       comp=Z,770nm,10.4s
CD2                                  LR    LR
       comp=Z,950nm,10.2s
GUMO   Guam              21.09 125   P     P       16 48 06.4 +1.3
       comp=Z,165nm,0.9s,baz=34,slow=19,SNR=5.3
       comp=Z,165nm,0.9s
GUMO   Guam              21.09 125   P     P       16 48 06.9 +1.8
ASAJ   Asahikawa         21.21  32   P     P       16 48 04.0 -2.1
       comp=Z,6.1nm,0.3s,baz=234,slow=11,SNR=39
ASAJ                                 LR    LR      16 57 09.5
       comp=Z,243nm,21.6s,baz=219,slow=39
       comp=Z,6.1nm,0.3s
JKA    Kamikawa-asahi    21.21  32   P     P       16 48 03.4 -2.7
LZH    Lanzhou           21.96 301⇓iP    P       16 48 14.0 -0.4
LZH                                  pP    pP      16 48 30.0 -1.1
LZH                                  sP    sP      16 48 40.8 -0.8
LZH                                  PP    PnPn    16 48 43.8 +3.6
LZH                                  S     S       16 52 08.4 -3.7
LZH                                  PcP   PcP     16 52 11.6 +1.5
LZH                                  sS    sS      16 52 39.0 -1.2
LZH                                  SS    SnSn    16 52 50.5 +5.6
LZH                                  ScP   ScP     16 55 43.3 +3.5
LZH                                  ScS   ScS     16 59 28.3 +3.6
LZH                                  pmax  pmax
       comp=Z,43nm,1.0s
LZH                                  pmax  pmax
       comp=Z,310nm,4.8s
LZH                                  LR    LR
       comp=Z,810nm,12.2s
LZH                                  LR    LR
       comp=Z,430nm,12.7s
LZH                                  LR    LR
       comp=Z,730nm,15.3s
KMI    Kunming           22.12 271 ⇑P     P       16 48 16.3  0.0
KMI                                  pP    pP      16 48 29.3 -3.6
KMI                                  S     S       16 52 10.5 -4.6
KMI                                  sS    sS      16 52 41.1 -2.5
KMI                                  pmax  pmax
       comp=Z,29nm,1.1s
KMI                                  pmax  pmax
       comp=Z,470nm,10.4s
KMI                                  LR    LR
       comp=Z,2µm,9.9s
KMI                                  LR    LR
       comp=Z,500nm,8.0s
KMI                                  LR    LR
       comp=Z,310nm,11.5s
KLR    Kul'dur           22.61   8   P     P       16 48 19.1 -1.8
       comp=Z,28nm,1.0s,baz=199,slow=7.7,SNR=27
KLR                                  LR    LR      16 56 49.7
       comp=Z,184nm,21.1s,baz=186,slow=36
       comp=Z,28nm,1.0s
KLR    Kul'dur           22.61   8ceP    P       16 48 20.2 -0.8
KLR                                  pmax  pmax
       comp=Z,38nm,1.3s
YUK    Yuzh-Kuril'sk     22.79  36 i P     P       16 48 22.0 -0.8
PZH    PanZhiHua         22.81 275   P     P       16 48 22.3 -1.2
PZH                                  pP    pwP     16 48 41.4 -1.2
PZH                                  sP    sP      16 48 51.9 +1.3
PZH                                  S     S       16 52 18.6 -7.8
PZH                                  pmax  pmax
       comp=Z,20nm,1.2s
PZH                                  pmax  pmax
       comp=Z,390nm,6.3s
PZH                                  LR    LR
       comp=Z,2µm,21.6s
PZH                                  LR    LR
       comp=Z,1µm,20.2s
PZH                                  LR    LR
       comp=Z,1µm,21.3s
DLV    T  Lat            23.06 234   P     P       16 48 25.7 -0.3
MYLDM  Lahad Datu        23.12 203   P     P       16 48 27.8 +1.4
HIA    Hailar            23.13 347   P     P       16 48 22.5 -3.7
HIA    Hailar            23.13 347   P     P       16 48 22.5 -3.7
HIA                                  pmax  pmax
       comp=Z,15nm,0.8s
SHO    Shikotan          23.20  38  eP     P       16 48 26.5 -0.3
SHO                                 eS     S       16 52 34.1 +2.2
SHO                                  pmax  pmax
       comp=Z,65nm,0.9s
SHO                                  pmax  pmax
       comp=E,24nm,0.7s
SHO                                  pmax  pmax
       comp=N,16nm,1.0s
KKM    Kota Kinabalu     23.22 209   P     P       16 48 25.2 -2.3
HEH    HeiHe             23.37   0  eP     P       16 48 27.4 -1.0
HEH                                  pP    pP      16 48 44.6 -1.2
HEH                                  PcP   PcP     16 52 12.3 -0.1
HEH                                  S     S       16 52 33.6 -0.9
HEH                                  ScP   ScP     16 55 45.3 +2.4
HEH                                  pmax  pmax
       comp=N,13nm,0.8s
HEH                                  pmax  pmax
       comp=N,250nm,6.4s
YSS    Yuzh-Sakhalins    23.49  27   P     P       16 48 29.4 -0.1
YSS    Yuzh-Sakhalins    23.49  27  eP     P       16 48 28.5 -1.0
YSS                                 eS     S       16 52 32.4 -4.2
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YSS				pmax	pmax		
	comp=Z,400nm,2.1s						
YSS				pmax	pmax		
	comp=Z,70nm,1.1s						
KUR	Kuril'sk	24.65	37	i P	P	16 48 39.9	-0.1
KUR				pmax	pmax		
	comp=Z,103nm,0.8s						
GRNR	Gornyy	24.88	14	⇑iP	P	16 48 40.9	-1.2
GRNR				eS	S	16 52 59.8	+0.9
GRNR				pmax	pmax		
	comp=N,1.0nm,0.8s						
GRNR				pmax	pmax		
	comp=E,1.0nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GRNR				smax	smax		
	comp=N,1.0nm,0.6s						
GRNR				MLR	MLR		
	comp=E,580nm,20.0s						
GRNR				MLR	MLR		
	comp=N,110nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,190nm,19.0s						
CRAI	Chiangrai	25.50	261	P	P	16 48 47.1	-0.9
CRAI				ScP	ScP	16 55 54.3	+4.9
TNCH	TengChong	25.91	272	P	P	16 48 51.6	-0.2
TNCH				pP	pwP	16 49 14.3	+1.3
TNCH				sP	sP	16 49 20.9	+0.5
TNCH				PP	PnPn	16 49 31.6	-2.5
TNCH				PcP	PcP	16 52 19.8	+1.0
TNCH				S	S	16 53 10.9	-5.1
TNCH				sS	sS	16 53 48.8	-0.4
TNCH				pmax	pmax		
	comp=Z,15nm,0.9s						
TNCH				pmax	pmax		
	comp=Z,67nm,5.6s						
TNCH				LR	LR		
	comp=Z,430nm,7.8s						
TNCH				LR	LR		
	comp=Z,540nm,10.5s						
TNCH				LR	LR		
	comp=Z,660nm,15.6s						
TNTI	Ternate	25.93	180	P	P	16 48 55.5	+3.7
TNTI	Ternate	25.93	180	P	P	16 48 52.1	+0.3
	comp=Z,95nm,1.0s,comp=Z,949nm						
GTA	Gaotai	26.08	306	eP	P	16 48 51.9	-1.3
GTA				pP	pP	16 49 13.0	+1.0
GTA				sP	sP	16 49 26.8	+5.0
GTA				PcP	PcP	16 52 20.1	+1.2
GTA				S	S	16 53 18.0	-0.4
GTA				sS	sS	16 53 48.8	-2.8
GTA				ScP	ScP	16 55 53.3	+2.4
GTA				PcS	PcS	16 55 59.6	-0.3
GTA				ScS	ScS	16 59 39.5	-1.4
GTA				pmax	pmax		
	comp=Z,51nm,1.4s						
GTA				pmax	pmax		
	comp=Z,150nm,4.6s						
GTA				LR	LR		
	comp=Z,290nm,12.0s						
GTA				LR	LR		
	comp=Z,250nm,11.6s						
GTA				LR	LR		
	comp=Z,340nm,12.4s						
PHRA	Phrae	26.27	257	P	P	16 48 54.4	-0.5
ULN	Ulaanbaatar	26.28	328	P	P	16 48 53.9	-1.1
ULN				IAmb	IAmb	16 48 58.3	
	comp=Z,284nm,1.5s						
ULN				ScP	ScP	16 55 51.2	-0.2
ULN	Ulaanbaatar	26.28	328	ceP	P	16 48 53.7	-1.3
ULN				pmax	pmax		
	comp=Z,227nm,1.7s						
ULN	Ulaanbaatar	26.28	328	P	P	16 48 54.7	-0.3
TOLI2	Tolitoli	26.34	195	P	P	16 48 55.9	+0.4
TOLI2				IAmb	IAmb	16 49 19.0	
	comp=Z,137nm,1.1s						
TOLI2	Tolitoli	26.34	195	P	P	16 48 56.0	+0.4
SONM	Songino Array	26.57	328	P	P	16 48 57.0	-0.6
	comp=Z,124nm,0.8s,baz=143,slow=9.3,SNR=98						
SONM				PcP	PcP	16 52 19.2	-0.6
	comp=Z,4.6nm,0.7s,baz=164,slow=3.1,SNR=5.2						
SONM				ScP	ScP	16 55 51.1	-1.1
	comp=Z,7.5nm,1.0s,baz=167,slow=2.7,SNR=10						
SONM				PKiKP	PKiKP	16 59 57.1	-1.1
	comp=Z,1.2nm,0.9s,baz=170,slow=1.3,SNR=4.6						
SONM				LR	LR	17 00 47.5	
	comp=Z,413nm,18.1s,baz=138,slow=39						
	comp=Z,124nm,0.8s						
SONM	Songino Array	26.57	328	P	P	16 48 56.0	-1.5
SONM				IAmb	IAmb	16 49 01.1	
	comp=Z,119nm,0.7s						
SONM				ScP	ScP	16 55 51.1	-1.1
TYV	Tymovskoe	26.69	22	eP	P	16 49 00.9	+2.5
TYV				eS	S	16 53 35.7	+8.3
TYV				pmax	pmax		
	comp=Z,11nm,1.1s						
TYV				pmax	pmax		
	comp=Z,200nm,3.1s						
TYV				smax	smax		
	comp=E,200nm,6.7s						
MRSI	Marisa	26.72	192	P	P	16 48 58.8	-0.2
	comp=E,72nm,0.9s,comp=E,1µm						
ZEA	Zeya	26.86	360	eP	P	16 49 00.4	+0.5
ZEA				pmax	pmax		
	comp=Z,100nm,4.8s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,16.0s						
CHTO	Chiang Mai	27.27	259	P	P	16 49 03.5	-0.5
CHTO				PcP	PcP	16 52 22.7	+0.9
MPSI	Mapaga	27.30	196	P	P	16 49 04.5	+0.3
	comp=Z,68nm,1.1s,comp=Z,729nm						
LBMI	Labuha	27.33	180	P	P	16 49 05.5	+1.1
	comp=Z,133nm,1.0s,comp=Z,1µm						
CM31	Chiang Mai Arr	27.41	258	P	P	16 49 02.2	-2.9
CM31	Chiang Mai Arr	27.41	258	P	P	16 49 05.6	+0.4
	SNR=5.8						
CMAR	Chiang Mai Arr	27.41	258	P	P	16 49 05.3	+0.2
	comp=Z,5.3nm,0.7s,baz=58,slow=7.9,SNR=57						
CMAR				pP	pP	16 49 24.9	+0.7
	comp=Z,3.0nm,0.6s,baz=62,slow=7.5,SNR=3.5						
CMAR				PcP	PcP	16 52 23.1	+1.0
	comp=Z,11nm,0.8s,baz=44,slow=1.0,SNR=24						
CMAR				ScP	ScP	16 55 55.2	+0.1
	comp=Z,1.1nm,0.8s,baz=19,slow=1.9,SNR=5.5						
CMAR				LR	LR	17 00 29.7	
	comp=Z,237nm,20.9s,baz=70,slow=37						
	comp=Z,5.3nm,0.7s						
CMAR	Chiang Mai Arr	27.41	258	P	P	16 49 05.1	-0.1
CMAR				PcP	PcP	16 52 23.0	+0.9
SBUM	Sibu	28.23	213	P	P	16 49 12.6	+0.1
MND	Mandalay	28.74	267	P	P	16 49 17.3	+0.3
SANI	Sanana	28.76	183	P	P	16 49 18.0	+0.9
SANI	Sanana	28.76	183	P	P	16 49 18.4	+1.3
	comp=Z,151nm,0.8s,comp=Z,928nm						
GOMU	GeErMu	29.09	297	P	P	16 49 19.9	-0.5
GOMU				S	S	16 54 15.1	+8.8
GOMU				sS	sS	16 54 37.4	-2.3
GOMU				pmax	pmax		
	comp=Z,9.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,56nm,3.9s						
ZAK	Zakamensk	29.82	328	eP	P	16 49 24.5	-1.8
ZAK				e		16 56 01.2	
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.5s						
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SRPI	Serui, Papua	29.83	162	P	P	16 49 29.5	+2.8
	comp=Z,52nm,1.0s						
NLAI	Namlea	29.91	180	P	P	16 49 30.0	+2.6
	comp=Z,21nm,0.8s,comp=Z,5µm						
FAKI	Fak Fak	29.98	170	P	P	16 49 28.0	0.0
FAKI				IAmb	IAmb	16 49 53.5	
	comp=Z,63nm,0.9s						
FAKI	Fak Fak	29.98	170	P	P	16 49 28.5	+0.5
FAKI	Fak Fak	29.98	170	P	P	16 49 28.2	+0.2
	comp=Z,89nm,1.1s						
KSM	Kuching	30.04	216	P	P	16 49 29.4	+0.8
KSM	Kuching	30.04	216	P	P	16 49 29.3	+0.8
AAI	Ambon	30.37	178	P	P	16 49 32.5	+1.1
	comp=Z,75nm,1.0s						
IRK	Irkutsk	30.69	332	eP	P	16 49 32.6	-1.3
IRK				pmax	pmax		
	comp=Z,50nm,3.1s						
SHL	Shillong	31.72	276	P	P	16 49 43.4	-0.1
SHL	Shillong	31.72	276	P	P	16 49 43.4	-0.1
SHL				pmax	pmax		
	comp=Z,35nm,0.8s						
SHL	Shillong	31.72	276	P	P	16 49 42.9	-0.6
	SNR=9.8						
MOY	Mondy	31.75	328	eP	P	16 49 42.6	-0.8
MOY				pmax	pmax		
	comp=Z,29nm,1.3s						
LSA	Lhasa	31.87	284	P	P	16 49 44.4	-0.7
LSA				pmax	pmax		
	comp=Z,26nm,0.6s						
LSA				LR	LR		
	comp=Z,310nm,13.5s						
LSA				LR	LR		
	comp=Z,290nm,17.8s						
LSA				LR	LR		
	comp=Z,440nm,15.7s						
LSA	Lhasa	31.87	284	P	P	16 49 45.9	+0.8
LSA	Lhasa	31.87	284	P	P	16 49 45.9	+0.8
LSA				pmax	pmax		
	comp=Z,15nm,0.6s						
LSA	Lhasa	31.87	284	P	P	16 49 45.4	+0.3
LSA	Lhasa	31.87	284	P	P	16 49 45.4	+0.3
LSA	Lhasa	31.87	284	P	P	16 49 45.5	+0.3
LSA				sP	sP	16 50 17.8	+3.7
SRIT	Nakonsritamara	31.89	240	P	P	16 49 46.5	+1.7
SKR	Severo-Kuril's	32.38	35	ceP	P	16 49 48.8	+0.1
BBKI	Banjar Baru	32.45	204	P	P	16 49 50.4	+0.7
	comp=Z,220nm,0.8s,comp=Z,5µm						
KAPI	Kappang	32.50	194	LR	LR	17 01 59.8	
	comp=Z,172nm,20.8s,baz=356,slow=34						
KAPI	Kappang	32.50	194	P	P	16 49 52.8	+2.6
	comp=Z,13nm,1.1s						
KULM	Kulim	33.24	235	P	P	16 49 57.1	+0.5
KULM				PcP	PcP	16 52 38.0	+0.6
BSSI	Bau Bau, Buton	33.45	192	P	P	16 50 00.3	+1.9
	comp=Z,33nm,0.7s						
IPM	Ipoh	33.52	233	P	P	16 49 59.2	+0.1
IPM				IAmb	IAmb	16 50 00.2	
	comp=Z,52nm,0.8s						
IPM				PcP	PcP	16 52 38.8	+0.5
IPM	Ipoh	33.52	233	P	P	16 49 59.2	+0.1
MYKOM	Kota Tinggi	33.56	226	P	P	16 50 00.1	+0.6
MYKOM				IAmb	IAmb	16 50 04.0	
	comp=Z,33nm,0.8s						
MYKOM				PcP	PcP	16 52 38.9	+0.6
PEA0B	Petropavlovsk-	34.62	32	P	P	16 50 07.9	-0.3
PEA0B				IAmb	IAmb	16 50 12.6	
	comp=Z,61nm,1.0s						
PEA0B	Petropavlovsk-	34.62	32	ceP	P	16 50 07.6	-0.6
PETK	Petropavlovsk-	34.62	32	P	P	16 50 07.2	-1.0
	comp=Z,19nm,0.8s,baz=192,slow=0.8,SNR=62						
PETK				PcP	PcP	16 52 40.0	-0.7
	comp=Z,6.8nm,0.9s,baz=223,slow=7.9,SNR=4.7						
	comp=Z,19nm,0.8s						
PETK	Petropavlovsk-	34.62	32	P	P	16 50 08.0	-0.2
DSRI	Dabo	34.87	222	P	P	16 50 11.4	+0.6
	comp=Z,14nm,1.3s						
PET	Petropavlovsk	35.03	33	P	P	16 50 12.0	+0.3
PET				IAmb	IAmb	16 50 14.9	
	comp=Z,121nm,1.3s						
PET	Petropavlovsk	35.03	33	P	P	16 50 12.1	+0.3
PET	Petropavlovsk	35.03	33	⇓iP	P	16 50 11.3	-0.4
PET				eS	S	16 55 34.2	-3.4
PET				pmax	pmax		
	comp=Z,136nm,1.6s						
PET				pmax	pmax		
	comp=Z,200nm,7.9s						
PET				MLR	MLR		
	comp=Z,300nm,13.0s						
PET				MLR	MLR		
	comp=Z,100nm,12.0s						
TAPN	Taplejung	35.13	280	eP	P	16 50 12.3	-1.0
YAK	Yakutsk	35.21	2	P	P	16 50 10.8	-2.3
	comp=Z,7.8nm,0.3s,baz=9.8,slow=2.4,SNR=19						
YAK				PcP	PcP	16 52 41.9	-0.4
	comp=Z,5.7nm,0.3s,baz=166,slow=0.8,SNR=5.5						
YAK				LR	LR	17 04 02.1	
	comp=Z,130nm,21.1s,baz=188,slow=35						
	comp=Z,7.8nm,0.3s						
YAK	Yakutsk	35.21	2	P	P	16 50 10.8	-2.3
YAK				IAmb	IAmb	16 50 16.0	
	comp=Z,40nm,0.8s						
YAK	Yakutsk	35.21	2	eP	P	16 50 11.8	-1.3
YAK				e*PP	pP	16 50 33.3	+0.7
YAK				e		16 52 41.3	
YAK				eS	S	16 55 39.0	-1.1
YAK				e*SS	sS	16 56 10.1	-3.7
YAK				pmax	pmax		
	comp=Z,53nm,1.4s						
YAK				pmax	pmax		
	comp=N,21nm,1.1s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,176nm,4.0s						
YAK				pmax	pmax		
	comp=N,44nm,4.0s						
YAK				pmax	pmax		
	comp=E,45nm,3.6s						
YAK				smax	smax		
	comp=E,98nm,5.8s						
YAK				smax	smax		
	comp=N,64nm,6.9s						
YAK	Yakutsk	35.21	2	P	P	16 50 11.1	-2.0
YAK				sP	sP	16 50 42.6	+0.2
PPBI	Pangkal Pinang	35.33	219	P	P	16 50 15.6	+0.9
ODAN	Odare	35.49	279	eP	P	16 50 15.1	-1.2
	comp=N,321nm,0.6s						
MMRI	Maumere	35.61	189	P	P	16 50 16.2	-0.9
MMRI				IAmb	IAmb	16 50 40.1	
	comp=Z,55nm,1.2s						
MMRI	Maumere	35.61	189	P	P	16 50 18.7	+1.6
	comp=Z,42nm,1.1s						
PBA	Port Blair	35.79	252	P	P	16 50 18.3	-0.4
PBA				IAmb	IAmb	16 50 22.2	
	comp=Z,32nm,0.6s						
WMQ	Urumqi	36.06	308	⇑P	P	16 50 20.3	-0.5
WMQ				pP	pwP	16 50 42.9	+0.4
WMQ				sP	sP	16 50 53.3	+3.4
WMQ				PP	PP	16 51 44.3	0.0
WMQ				PcP	PcP	16 52 46.1	+0.8
WMQ				pmax	pmax		
	comp=Z,31nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,210nm,3.7s						
WMQ				LR	LR		
	comp=Z,520nm,16.1s						
WMQ				LR	LR		
	comp=Z,320nm,24.9s						
RAMN	Ramite	36.17	280	eP	P	16 50 21.4	-0.7
	comp=Z,64nm,0.5s						
PSI	Prapat	36.19	233	P	P	16 50 22.8	+0.6
JIRN	Jiri	36.42	281	eP	P	16 50 23.7	-0.7
	comp=Z,56nm,0.5s						
BKNI	Bangkinang	36.50	228	P	P	16 50 27.1	+2.4
	comp=Z,151nm,1.0s						
BKNI	Bangkinang	36.50	228	P	P	16 50 24.0	-0.7
	comp=Z,108nm,1.0s						
PLAI	Plampang	36.65	196	P	P	16 50 25.4	-0.5
GUN	Gumba	36.65	281	eP	P	16 50 25.0	-1.4
	comp=Z,100nm,0.6s						
UWJI	Ujung Watu	36.66	208	P	P	16 50 26.6	+0.6
	comp=Z,50nm,1.1s						
MLSI	Meulaboh, Aceh	37.07	238	P	P	16 50 29.4	-0.2
	comp=Z,104nm,0.7s						
PKI	Pulchoki	37.12	281	eP	P	16 50 29.4	-0.9
	comp=Z,118nm,0.5s						
PKIN	Phulchoki	37.13	281	eP	P	16 50 29.3	-1.0
	comp=Z,134nm,0.5s						
SDSI	Sungai Dareh	37.19	226	P	P	16 50 31.5	+1.0
	comp=Z,16nm,1.1s						
KKN	Kakani	37.20	281	eP	P	16 50 29.4	-1.4
	comp=Z,212nm,0.8s						
DMN	Daman	37.38	281	eP	P	16 50 31.1	-1.3
	comp=Z,86nm,0.6s						
GKN	Gorkha	37.73	282	eP	P	16 50 33.8	-1.4
	comp=Z,142nm,0.5s						
PWJI	Pagerwojo	37.78	206	P	P	16 50 35.7	+0.3
	comp=Z,61nm,0.9s						
PDSI	Padang	37.80	227	P	P	16 50 35.4	-0.4
	comp=Z,15nm,0.8s						
DGZ	Jazzator, Alta	38.09	318	⇑iP	P	16 50 37.1	-0.9
DGZ				pmax	pmax		
	comp=Z,11nm,0.6s						
UGM	Wanagama	38.19	208	P	P	16 50 37.7	-1.3
UGM				IAmb	IAmb	16 51 01.1	
	comp=Z,119nm,1.3s						
GSI	Gunungsitoli	38.19	233	P	P	16 50 38.5	-0.6
GSI	Gunungsitoli	38.19	233	P	P	16 50 38.7	-0.3
GSI	Gunungsitoli	38.19	233	P	P	16 50 38.4	-0.6
	comp=Z,32nm,0.9s						
KPJI	Karang Pucung	38.36	210	P	P	16 50 41.9	+1.6
	comp=Z,76nm,0.9s						
MASI	Maura Aman, Be	38.39	223	P	P	16 50 41.8	+1.1
	comp=Z,140nm,0.8s						
DANN	Dangsing	38.44	283	eP	P	16 50 40.3	-1.1
	comp=Z,223nm,0.6s						
CBJI	Citeko	38.54	214	P	P	16 50 45.5	+3.6
	comp=Z,104nm,0.9s,comp=Z,3µm						
KSI	Kapahiang	38.58	222	P	P	16 50 43.0	+0.7
	comp=Z,68nm,1.1s,comp=Z,3µm						
KOLN	Koldanda	38.67	282	eP	P	16 50 42.3	-0.9
	comp=Z,131nm,0.9s						
ZSN	Zaisan	38.96	313	eP	P	16 50 44.1	-1.1
	baz=313						
ZSN	Zaisan	38.96	313	eP	P	16 50 44.0	-1.1
KASI	Kota Agung	39.02	218	P	P	16 50 56.9	+11
SISI	Saibi	39.02	229	P	P	16 50 46.2	+0.2
	comp=Z,50nm,1.0s						
BBJI	Bungbulang	39.06	212	P	P	16 50 45.9	-0.4
RABL	Rabaul	39.13	138	P	P	16 50 46.0	-0.8
RABL				IAmb	IAmb	16 50 50.2	
	comp=Z,101nm,0.8s						
RABL	Rabaul	39.13	138	P	P	16 50 49.5	+2.6
PYUN	Piuthan	39.15	282	eP	P	16 50 46.2	-1.0
	comp=Z,76nm,0.6s						
MTN	Manton Dam	39.63	174	P	P	16 50 49.7	-1.2
MTN				IAmb	IAmb	16 51 15.3	
	comp=Z,59nm,0.9s						
SEY	Seymchan	39.68	18	P	P	16 50 50.1	-0.7
	comp=Z,11nm,0.6s,baz=218,slow=13,SNR=44						
SEY				PcP	PcP	16 52 56.3	+0.4
	comp=Z,8.1nm,0.7s,baz=196,slow=4.8,SNR=4.2						
	comp=Z,11nm,0.6s						
SEY	Seymchan	39.68	18	ceP	P	16 50 49.6	-1.3
SEY				pmax	pmax		
	comp=Z,41nm,1.7s						
MK31	Makanchi Array	40.49	312	P	P	16 50 56.9	-1.0
MK31				PcP	PcP	16 52 58.1	-0.8
MK31	Makanchi Array	40.49	312	c iP	P	16 50 56.8	-1.0
MKAR	Makanchi Array	40.49	312	P	P	16 50 57.1	-0.8
	comp=Z,20nm,0.4s,baz=90,slow=9.4,SNR=201						
MKAR				PcP	PcP	16 52 59.2	+0.3
	comp=Z,29nm,0.7s,baz=86,slow=3.5,SNR=16						
MKAR				ScP	ScP	16 56 41.0	+0.3
	comp=Z,7.2nm,0.9s,baz=100,slow=5.0,SNR=12						
MKAR				LR	LR	17 09 15.0	
	comp=Z,115nm,19.0s,baz=144,slow=38						
	comp=Z,20nm,0.4s						
MKAR	Makanchi Array	40.49	312	P	P	16 50 55.8	-2.1
MKAR				PcP	PcP	16 52 58.3	-0.7
MKAR				ScP	ScP	16 56 41.6	+0.9
MAKZ	Makanchi	40.70	312	P	P	16 50 58.8	-0.8
PMG	Port Moresby	40.88	149	LR	LR	17 06 15.3	
	comp=Z,129nm,19.3s,baz=311,slow=33						
PMG	Port Moresby	40.88	149	P	P	16 51 02.1	+0.8
PMG	Port Moresby	40.88	149	P	P	16 51 02.1	+0.8
PMG				pmax	pmax		
	comp=Z,28nm,0.7s						
ZAA0	Zalesovo Array	41.24	323	P	P	16 51 02.0	-1.8
ZAA0				IAmb	IAmb	16 51 04.7	
	comp=Z,68nm,1.3s						
ZAA0				PcP	PcP	16 53 00.7	-0.5
ZALV	Zalesovo Beam	41.24	323	P	P	16 51 02.3	-1.6
	comp=Z,20nm,0.4s,baz=112,slow=7.9,SNR=98						
ZALV				pP	pP	16 51 22.9	-0.8
	comp=Z,17nm,0.7s,baz=109,slow=8.7,SNR=3.7						
ZALV				PcP	PcP	16 53 00.8	-0.4
	comp=Z,6.5nm,0.4s,baz=114,slow=4.4,SNR=6.6						
ZALV				ScP	ScP	16 56 42.3	-1.1
	comp=Z,4.8nm,0.7s,baz=125,slow=4.2,SNR=5.4						
ZALV				LR	LR	17 09 25.0	
	comp=Z,244nm,19.8s,baz=110,slow=38						
	comp=Z,20nm,0.4s						
ZALV	Zalesovo Beam	41.24	323	P	P	16 51 01.6	-2.2
ZALV				PcP	PcP	16 53 00.5	-0.6
ZALV				ScP	ScP	16 56 43.0	-0.5
SHLS	Shalkode	41.83	306	eP	P	16 51 05.4	-3.6
	baz=306						
SHLS	Shalkode	41.83	306	eP	P	16 51 05.4	-3.6
UZB	Uzynbulak	42.14	306	eP	P	16 51 10.8	-0.8
	baz=306						
UZB	Uzynbulak	42.14	306	eP	P	16 51 10.8	-0.8
KNRA	Kununurra	42.30	178	P	P	16 51 12.8	0.0
KNRA				IAmb	IAmb	16 51 38.2	
	comp=Z,77nm,0.9s						
KNRA	Kununurra	42.30	178	P	P	16 51 15.2	+2.4
KPKS	Kokpek	42.42	306	eP	P	16 51 13.0	-0.9
	baz=306						
KPKS	Kokpek	42.42	306	eP	P	16 51 12.9	-0.9
PRZ	Przheval'sk	42.53	304	P	P	16 51 13.4	-1.4
PRZ	Przheval'sk	42.53	304	P	P	16 51 13.4	-1.4
PRZ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SATY	Saty	42.58	305	eP	P	16 51 14.4	-0.8
	baz=305						
SATY	Saty	42.58	305	eP	P	16 51 14.3	-0.8
TDK	Taldyqorghan	42.82	308	eP	P	16 51 16.6	-0.3
	comp=Z,50nm,0.7s,baz=308						
TDK	Taldyqorghan	42.82	308	eP	P	16 51 16.6	-0.3
TDK				pmax	pmax		
	comp=Z,50nm,0.7s						
KDJ	Kajisay	43.40	304	P	P	16 51 21.7	-0.1
KDJ	Kajisay	43.40	304	P	P	16 51 21.7	-0.1
KDJ				pmax	pmax		
	comp=Z,23nm,0.8s						
COEN	Coen	43.40	157	P	P	16 51 22.4	+0.6
COEN	Coen	43.40	157	P	P	16 51 22.9	+1.1
MDOK	Medeo	43.58	305	eP	P	16 51 22.6	-0.7
	baz=305						
MDOK	Medeo	43.58	305	eP	P	16 51 22.5	-0.7
TNSS	Tian-Shan	43.65	305	eP	P	16 51 23.0	-1.1
	baz=305						
TNSS	Tian-Shan	43.65	305	eP	P	16 51 22.9	-1.1
AAA	Alma-Ata	43.68	305	eP	P	16 51 23.2	-0.7
	baz=305						
AAA	Alma-Ata	43.68	305	eP	P	16 51 23.1	-0.8
CHKK	Chushkaly	43.69	306	eP	P	16 51 23.0	-1.0
	baz=306						
CHKK	Chushkaly	43.69	306	eP	P	16 51 22.9	-1.0
KURK	Kurchatov	43.78	316	P	P	16 51 23.4	-1.1
KURK				IAmb	IAmb	16 51 25.0	
	comp=Z,43nm,0.6s						
KURK	Kurchatov	43.78	316	ceP	P	16 51 23.1	-1.4
KURK				pmax	pmax		
	comp=Z,73nm,1.3s						
KURK	Kurchatov	43.78	316	P	P	16 51 23.5	-1.0
KURK	Kurchatov	43.78	316	P	P	16 51 21.7	-2.8
KURK				sP	pwP	16 51 48.9	+2.2
KURBB	Kurchatov Arra	43.82	316	LR	LR	17 09 55.4	
	comp=Z,120nm,21.4s,baz=149,slow=36						
ULHL	Ulahol	44.11	304	P	P	16 51 27.8	+0.3
	SNR=10						
KUU	Kurty	44.16	306	eP	P	16 51 27.3	-0.4
	comp=Z,29nm,0.8s,baz=306						
KUU	Kurty	44.16	306	eP	P	16 51 27.3	-0.4
KUU				pmax	pmax		
	comp=Z,29nm,0.8s						
KSH	Kashi	44.21	300	P	P	16 51 31.6	+3.3
KSH				pP	pwP	16 51 51.8	+1.3
KSH				sP	sP	16 51 58.9	+1.2
KSH				PcP	PP	16 53 13.0	+0.2
KSH				ScP	ScP	16 56 59.0	+3.1
KSH				PcS	PcS	16 57 06.9	+1.9
KSH				S	S	16 58 01.0	+5.4
KSH				ScS	ScS	17 01 19.5	+1.0
KSH				pmax	pmax		
	comp=Z,16nm,0.7s						
KSH				pmax	pmax		
	comp=Z,160nm,5.7s						
KSH				LR	LR		
	comp=Z,220nm,13.0s						
KSH				LR	LR		
	comp=Z,280nm,15.0s						
KSH				LR	LR		
	comp=Z,170nm,16.2s						
NRN	Naryn	44.24	303	P	P	16 51 28.9	+0.1
NRN	Naryn	44.24	303	P	P	16 51 28.9	+0.1
NRN				pmax	pmax		

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      comp=Z,53nm,1.3s
TKM2  Tokmak 2         44.62 305   P        P       16 51 31.5 -0.2
      SNR=58
FITZ  Fitzroy Crossi   44.71 182   P        P       16 51 32.6 +0.5
TIXI  Tiksi            44.85   1   P        P       16 51 31.3 -1.4
      comp=Z,9.2nm,0.3s,baz=90,slow=23,SNR=40
TIXI                               LR       LR      17 11 12.5
      comp=Z,248nm,20.6s,baz=357,slow=37
      comp=Z,9.2nm,0.3s
TIXI  Tiksi            44.85   1   P        P       16 51 31.2 -1.4
TIXI                               PcP      PcP     16 53 11.3 -1.6
TIXI  Tiksi            44.85   1ceP         P       16 51 31.6 -1.1
TIXI                               pmax     pmax
      comp=Z,31nm,1.7s
TIXI  Tiksi            44.85   1   P        P       16 51 31.1 -1.5
TIXI                               sP       sP      16 52 01.3 -1.1
KBK   Karagaybulak     45.09 304   P        P       16 51 36.1 +0.8
      SNR=25
CHMS  Chumysh          45.25 305   P        P       16 51 36.9 +0.5
      SNR=22
SGDS  Sogindy          45.36 306  eP        P       16 51 36.8 -0.6
      baz=306
SGDS  Sogindy          45.36 306  eP        P       16 51 36.7 -0.6
UCH   Uchtor           45.39 304   P        P       16 51 38.3 +0.3
      SNR=74
AAK   Ala-Archa        45.42 304   P        P       16 51 37.7 -0.2
      SNR=12
AAK   Ala-Archa        45.42 304   LR       LR      17 10 48.2
      comp=Z,176nm,18.9s,baz=74,slow=36
AAK   Ala-Archa        45.42 304   P        P       16 51 37.0 -0.8
AAK   Ala-Archa        45.42 304ceP         P       16 51 37.6 -0.2
AAK                                pmax     pmax
      comp=Z,26nm,1.7s
AAK   Ala-Archa        45.42 304 i P        P       16 51 37.4 -0.5
      SNR=18
AAK   Ala-Archa        45.42 304   P        P       16 51 37.7 -0.2
AAK                                P        P       16 51 37.7 -0.2
AAK   Ala-Archa        45.42 304   P        P       16 51 36.9 -1.0
USP   Ospenovka        45.45 305   P        P       16 51 37.6 -0.3
      SNR=19
HYB   Hyderabad        45.87 269  eP        P       16 51 41.3 -0.3
HYB                                IVmB_BB          16 51 41.6
      comp=Z,119nm,0.5s
BTLS  Baital           45.90 308  eP        P       16 51 40.6 -0.8
      baz=308
BTLS  Baital           45.90 308  eP        P       16 51 40.6 -0.8
EKS2  Erkin-Say        45.95 304   P        P       16 51 42.4 +0.4
      SNR=15
AML   Almayashu        45.99 304   P        P       16 51 43.1 +0.4
      SNR=21
OHH   Osh              46.66 301   P        P       16 51 48.3 +0.7
NIL   Nilore           46.72 292   P        P       16 51 46.6 -1.5
NIL                                IAmb     IAmb    16 51 48.5
      comp=Z,82nm,1.1s
NIL   Nilore           46.72 292   P        P       16 51 46.6 -1.5
NIL                                pmax     pmax
      comp=Z,82nm,1.1s
NIL   Nilore           46.72 292   P        P       16 51 46.5 -1.5
NIL                                pP       sP      16 52 15.0 -2.7
WB0   Warramunga Arr   46.85 171   P        P       16 51 48.9 -0.2
WRAB  Tennant Creek    47.01 171   P        P       16 51 49.9 -0.4
WRAB                               IAmb     IAmb    16 52 16.0
      comp=Z,63nm,1.3s
WRAB  Tennant Creek    47.01 171   P        P       16 51 50.2 -0.1
WRAB  Tennant Creek    47.01 171   P        P       16 51 49.9 -0.4
WRAB                               pmax     pmax
      comp=Z,63nm,1.3s
WRA   Warramunga Arr   47.02 171   P        P       16 51 50.0 -0.3
      comp=Z,14nm,0.6s,baz=352,slow=8.4,SNR=52
WRA                                pP       pP      16 52 11.8 +1.0
      comp=Z,23nm,0.9s,baz=347,slow=8.4,SNR=10
WRA                                LR       LR      17 11 12.9
      comp=Z,107nm,20.1s,baz=334,slow=35
      comp=Z,14nm,0.6s
WRA   Warramunga Arr   47.02 171   P        P       16 51 49.1 -1.3
WB2   Warramunga Arr   47.02 171   P        P       16 51 49.6 -0.7
ARK   Arkit            47.28 303   P        P       16 51 52.8 +0.4
BILL  Bilibino         47.35  19   P        P       16 51 51.9 -0.5
BILL                               IAmb     IAmb    16 51 54.5
      comp=Z,83nm,1.1s
BILL                               PcP      PcP     16 53 22.3 +0.4
BILL  Bilibino         47.35  19c iP        P       16 51 52.7 +0.3
BILL                              e*PP      pP      16 52 09.0 -3.9
BILL                              i *SP     sP      16 52 24.1 +1.6
BILL                              i                 16 53 22.3
BILL                                                16 53 44.0
BILL                               SS       SS      17 02 08.0 +0.2
BILL                               pmax     pmax
      comp=Z,139nm,1.7s
BILL                               MLR      MLR
      comp=Z,51nm,6.0s
BILL  Bilibino         47.35  19   P        P       16 51 51.7 -0.7
BRZS  Berezniki        47.38 314  eP        P       16 51 52.4 -0.5
      baz=314
BRZS  Berezniki        47.38 314  eP        P       16 51 52.3 -0.5
MTSU  Mount Surprise   47.68 158   P        P       16 51 56.6 +1.1
DZA   Taraz            47.76 305  eP        P       16 51 54.9 -1.1
      baz=305
DZA   Taraz            47.76 305  eP        P       16 51 54.8 -1.1
TRKS  Terek-Say        47.90 303   P        P       16 51 57.4 +0.2
BTK   Batken           48.18 301   P        P       16 51 58.7 -0.6
BTK   Batken           48.18 301   P        P       16 51 58.7 -0.6
BTK                                pmax     pmax
      comp=Z,9.0nm,0.9s
PALK  Pallekele        48.26 255   LR       LR      17 12 27.8
      comp=Z,114nm,21.7s,baz=163,slow=36
PALK  Pallekele        48.26 255   P        P       16 52 00.4 +0.2
PALK  Pallekele        48.26 255 i P        P       16 52 00.8 +0.6
PALK                               pmax     pmax
      comp=Z,27nm,0.7s
MBWA  Marble Bar       48.28 189   P        P       16 52 03.4 +3.4
KK31  Karatay Array    48.36 305   P        P       16 52 01.3 +0.7
KK31                               IAmb     IAmb    16 52 02.6
      comp=Z,93nm,1.5s
KK31                               PcP      PcP     16 53 25.2 -0.7
KK31  Karatay Array    48.36 305   P        P       16 52 01.3 +0.7
KK31                                                16 53 25.3
KK31                               pmax     pmax
      comp=Z,93nm,1.5s
KKAR  Karatay Array    48.36 305   P        P       16 52 00.9 +0.3
KKAR                               ScP      ScP     16 57 13.6 +0.6
KKAR  Karatay Array    48.36 305   P        P       16 52 01.4 +0.8
KKAR                               IAmb     IAmb    16 52 02.6
      comp=Z,93nm,1.5s
KKAR  Karatay Array    48.36 305   P        P       16 52 00.9 +0.3
NRIK  Noril'sk         48.40 342   P        P       16 51 58.7 -1.8
      comp=Z,9.0nm,0.5s,baz=123,slow=7.7,SNR=23
NRIK                               PcP      PcP     16 53 25.6 +0.1
      comp=Z,28nm,0.7s,baz=119,slow=4.2,SNR=13
NRIK                               ScP      ScP     16 57 14.0 +1.4
      comp=Z,2.1nm,0.4s,baz=146,slow=2.4,SNR=5.1
NRIK                               LR       LR      17 14 13.0
      comp=Z,274nm,20.1s,baz=138,slow=38
      comp=Z,9.0nm,0.5s
NRIK  Noril'sk         48.40 342   P        P       16 51 59.9 -0.6
NRIK                               IAmb     IAmb    16 52 01.2
      comp=Z,55nm,1.4s
NRIK                               PcP      PcP     16 53 25.5  0.0
NRIK  Noril'sk         48.40 342ceP         P       16 51 58.9 -1.6
NRIK                               pmax     pmax
      comp=Z,35nm,1.3s
GAR   Garm             48.62 299   P        P       16 52 01.8 -1.0
GAR                                IAmb     IAmb    16 52 03.7
      comp=Z,63nm,1.0s
GAR                                ScP      ScP     16 57 15.0 +0.7
QIS   Mount Isa        48.62 165   P        P       16 52 03.2 +0.5
PSA00 Pilbara Seismi   48.67 189   P        P       16 52 02.9 -0.2
IUG   Iuzhnay          48.72 304  eP        P       16 52 02.7 -0.8
      baz=304
IUG   Iuzhnay          48.72 304  eP        P       16 52 02.6 -0.8
CHM   Chimkent         49.03 304  eP        P       16 52 05.0 -0.8
      comp=Z,43nm,1.2s,baz=304
CHM   Chimkent         49.03 304  eP        P       16 52 05.0 -0.8
CHM                                pmax     pmax
      comp=Z,43nm,1.2s
BVAR  Borovoye Array   49.25 318   LR       LR      17 13 34.8
      comp=Z,216nm,21.1s,baz=95,slow=37
BRVK  Borovoye         49.31 318   P        P       16 52 06.5 -1.2
BRVK                               IAmb     IAmb    16 52 09.3
      comp=Z,63nm,0.8s
BRVK  Borovoye         49.31 318ceP         P       16 52 06.7 -1.0
BRVK                               pmax     pmax
      comp=Z,114nm,1.3s
BRVK  Borovoye         49.31 318   P        P       16 52 06.1 -1.6
BRVK  Borovoye         49.31 318   P        P       16 52 05.5 -2.2
BRVK                               sP       pwP     16 52 33.2 +3.1
CHGR  Chuyangaron      49.54 299   P        P       16 52 09.5 -0.3
CHGR                               IAmb     IAmb    16 52 11.4
      comp=Z,69nm,0.7s
CHGR                               PcP      PcP     16 53 30.6 +0.2
CHGR                               ScP      ScP     16 57 19.0 +0.7
CHGR  Chuyangaron      49.54 299   P        P       16 52 09.5 -0.3
CHGR                                                16 53 30.6
CHGR                               pmax     pmax
      comp=Z,69nm,0.7s
KBL   Kabul            50.08 294   P        P       16 52 13.9 -0.1
KBL   Kabul            50.08 294   P        P       16 52 13.9 -0.1
KBL                                pmax     pmax
      comp=Z,86nm,0.7s
KBL   Kabul            50.08 294   P        P       16 52 14.3 +0.3
      SNR=58
CTAO  Charters Tower   50.16 157   P        P       16 52 14.5 +0.1
CTAO                               IAmb     IAmb    16 52 38.6
      comp=Z,76nm,1.3s
CTAO  Charters Tower   50.16 157   P        P       16 52 14.5 +0.1
CTAO                               pmax     pmax
      comp=Z,76nm,1.3s
AS31  Alice Springs    50.63 172   P        P       16 52 18.2 +0.3
ASAR  Alice Springs    50.63 172   P        P       16 52 18.1 +0.2
      comp=Z,9.0nm,0.5s,baz=0.6,slow=6.5,SNR=49
ASAR                               pP       pP      16 52 39.1 +0.5
      comp=Z,6.2nm,0.5s,baz=1.0,slow=7.6,SNR=5.8
ASAR                               PcP      PcP     16 53 34.9 +0.5
      comp=Z,11nm,0.7s,baz=353,slow=4.3,SNR=7.0
ASAR                               LR       LR      17 13 47.4
      comp=Z,100nm,19.8s,baz=358,slow=36
      comp=Z,9.0nm,0.5s
ASAR  Alice Springs    50.63 172   P        P       16 52 18.0  0.0
AS01  Alice Springs    50.63 172   P        P       16 52 19.2 +1.2
WRKA  Warakurna        51.59 179   P        P       16 52 25.7 +0.5
SPIA  Saint Paul Isl   53.01  37   P        P       16 52 36.3 +1.0
      baz=263
NIKH  Nikolski High    53.43  43   P        P       16 52 39.1 +0.6
      baz=267
MNCI  Minicoy          54.46 261   P        P       16 52 45.6 -0.9
OOD   Oodnadatta       54.93 171   P        P       16 52 49.5  0.0
SVE   Sverdlovsk       55.25 322  eP        P       16 52 51.7 +0.1
SVE                                pmax     pmax
      comp=Z,80nm,1.2s
TNA   Tin City         55.47  27   P        P       16 52 53.5 +0.6
TNA   Tin City         55.47  27   P        P       16 52 54.3 +1.3
      baz=259,SNR=182
QLP   Quilpie          55.58 162   P        P       16 52 54.3 +0.1
ABKAR Akbulak array    55.60 313   P        P       16 52 53.5 -0.7
ABKAR                              IAmb     IAmb    16 52 54.9
      comp=Z,134nm,1.5s
ABKAR Akbulak array    55.60 313   P        P       16 52 52.3 -1.9
ABKAR                              ScP      ScP     16 57 44.1 -0.1
INKA  Innaminka        55.80 166   P        P       16 52 56.6 +0.8
ANM   Nome             56.37  29   P        P       16 52 58.6 -0.9
ANM   Nome             56.37  29   P        P       16 52 58.6 -0.9
ANM                                pmax     pmax
      comp=Z,168nm,0.8s
ANM   Nome             56.37  29   P        P       16 53 01.2 +1.7
      baz=262,SNR=153
ARU   Arti             56.38 322   LR       LR      17 19 05.4
      comp=Z,254nm,20.4s,baz=88,slow=38
ARU   Arti             56.38 322   P        P       16 52 58.3 -1.3
ARU                                IAmb     IAmb    16 53 00.3
      comp=Z,69nm,1.1s
ARU   Arti             56.38 322c iP        P       16 52 58.4 -1.2
ARU                                *PP      pwP     16 53 22.8 +0.3
ARU                                                 16 53 52.1
ARU                                                 16 55 01.9
ARU                                S        S       17 00 43.8 +0.2
ARU                                SS       SS      17 04 25.2 -6.1
ARU                                pmax     pmax
      comp=Z,72nm,1.1s
ARU   Arti             56.38 322   P        P       16 52 57.6 -2.1
ARU                                sP       pwP     16 53 24.8 +2.3
MORW  Morawa           56.64 192   P        P       16 53 01.5 -0.2
MORW                               IAmb     IAmb    16 53 06.3
      comp=Z,56nm,1.3s
MORW  Morawa           56.64 192   P        P       16 53 02.0 +0.3
AKTO  Aktyubinsk       56.79 314   LR       LR      17 20 41.8
      comp=Z,101nm,18.4s,baz=91,slow=39
RMQ   Roma             56.92 157   P        P       16 53 06.6 +2.8
MULG  Mulgathing       57.18 173   P        P       16 53 05.6 +0.1
FORT  Forrest          57.31 179   P        P       16 53 06.4 -0.1
FORT                               IAmb     IAmb    16 53 10.9
      comp=Z,30nm,0.8s
FORT  Forrest          57.31 179   P        P       16 53 06.9 +0.5
RDOG  Red Dog Mine     57.85  25   P        P       16 53 09.6 -0.2
RDOG                               IAmb     IAmb    16 53 12.6
      comp=Z,46nm,0.9s
RDOG  Red Dog Mine     57.85  25   P        P       16 53 10.8 +1.0
      baz=262,SNR=15
LCRK  Leigh Creek      57.93 169   P        P       16 53 11.4 +0.6
BLDU  Ballidu          58.03 191   P        P       16 53 11.8 +0.3
KMBL  Kambalda         58.12 185   P        P       16 53 11.9 -0.2
GEYT  Alibeck          58.24 300   P        P       16 53 13.5 +0.4
      comp=Z,25nm,0.6s,baz=54,slow=2.6,SNR=78
GEYT                               PcP      PcP     16 54 03.2 -0.4
      comp=Z,7.7nm,0.6s,baz=46,slow=4.2,SNR=4.6
GEYT                               ScP      ScP     16 57 56.8 +0.6
      comp=Z,2.8nm,0.9s,baz=64,slow=3.4,SNR=3.8
GEYT                               LR       LR      17 20 29.1
      comp=Z,130nm,20.9s,baz=92,slow=38
      comp=Z,25nm,0.6s
GEYT  Alibeck          58.24 300   P        P       16 53 13.2 +0.1
GYA0B ALIBECK ARRAY    58.24 300   P        P       16 53 13.3 +0.2
GYA0B                              IAmb     IAmb    16 53 14.6
      comp=Z,75nm,1.2s
KAAM  Kaadhehdhoo      58.31 253   P        P       16 53 13.3 -0.5
KAAM                               IAmb     IAmb    16 53 15.5
      comp=Z,46nm,1.0s
KAAM  Kaadhehdhoo      58.31 253   P        P       16 53 14.7 +0.9
SDPT  Sand Point       58.37  40   P        P       16 53 13.3 -0.3
SDPT                               IAmb     IAmb    16 53 35.7
      comp=Z,42nm,0.9s
SDPT  Sand Point       58.37  40   P        P       16 53 14.1 +0.4
      baz=272
NGCH  Negor - Chabah   58.78 285   P        P       16 53 18.1 +1.1
KLBR  Kellerberrin     58.82 190   P        P       16 53 16.9 -0.1
N16K  Nishlik Lake     59.16  34   P        P       16 53 20.7 +1.6
      baz=271
AULRC Lightning Ridg   59.37 159   P        P       16 53 23.8 +3.0
CHGN  Chignik          59.49  39   P        P       16 53 20.5 -0.9
CHGN                               IAmb     IAmb    16 53 25.6
      comp=Z,46nm,0.7s
CHGN  Chignik          59.49  39   P        P       16 53 21.3 -0.1
      baz=273,SNR=6.9
O16K  Kokwok River B   59.52  35   P        P       16 53 22.4 +0.9
      baz=272,SNR=35
P16K  Nushagak River   59.59  35   P        P       16 53 23.3 +1.3
      baz=272,SNR=8.9
R16K  Pilot Point      59.88  37   P        P       16 53 25.4 +1.4
      baz=273
BBOO  Buckleboo        59.92 171   P        P       16 53 24.8 +0.2
BBOO  Buckleboo        59.92 171   P        P       16 53 24.7 +0.2
STKA  Stephens Creek   59.98 166   P        P       16 53 25.4 +0.4
      comp=Z,12nm,0.6s,baz=339,slow=7.5,SNR=18
STKA                               pP       pP      16 53 46.1 -0.1
      comp=Z,10.0nm,0.7s,baz=273,slow=10,SNR=4.7
STKA                               LR       LR      17 18 26.4
      comp=Z,54nm,21.7s,baz=12,slow=35
      comp=Z,12nm,0.6s
STKA  Stephens Creek   59.98 166   P        P       16 53 25.0 +0.1
STKA  Stephens Creek   59.98 166   P        P       16 53 25.3 +0.4
STKA  Stephens Creek   59.98 166   P        P       16 53 25.0 +0.1
STKA                               pmax     pmax
      comp=Z,3.0nm,0.7s
O17K  Koliganek Bris   60.02  34   P        P       16 53 26.0 +1.1
      baz=272,SNR=16
GCSA  Galena City Sc   60.03  29   P        P       16 53 25.8 +0.8
      baz=270
NWAO  Narrogin (SRO)   60.21 190   P        P       16 53 26.4 -0.1
NWAO  Narrogin (SRO)   60.21 190   P        P       16 53 26.8 +0.3
NWAO  Narrogin (SRO)   60.21 190   P        P       16 53 27.0 +0.5
NWAO  Narrogin (SRO)   60.21 190   P        P       16 53 26.4 -0.1
NWAO                               pmax     pmax
      comp=Z,59nm,0.7s
NWAO  Narrogin (SRO)   60.21 190   P        P       16 53 30.5 +4.0
Q16K  King Salmon      60.30  36   P        P       16 53 27.9 +1.1
      baz=274,SNR=13
A21K  Barrow           60.37  21   P        P       16 53 28.0 +0.9
      baz=266
P17K  Kvichak River    60.38  35   P        P       16 53 28.8 +1.4
      baz=273
TTA   Tatalina         60.43  31   P        P       16 53 28.6 +0.8
TTA   Tatalina         60.43  31   P        P       16 53 29.1 +1.3
TTA   Tatalina         60.43  31   P        P       16 53 28.6 +0.8
TTA                                pmax     pmax
      comp=Z,121nm,1.4s
TTA   Tatalina         60.43  31   P        P       16 53 29.0 +1.1
      baz=272,SNR=32
R17K  Ugashik Creek    60.51  37   P        P       16 53 30.0 +1.7
      baz=274
CMSA  Cobar Meteorol   60.66 162   P        P       16 53 31.0 +1.4
SVW2  Sparrevohn       60.71  33   P        P       16 53 29.5 -0.1
SVW2                               IAmb     IAmb    16 53 32.5
      comp=Z,76nm,1.2s
SVW2  Sparrevohn       60.71  33   P        P       16 53 31.1 +1.4
Q17K  Contact Creek    60.73  36   P        P       16 53 29.9 -0.1
      baz=274,SNR=7.5
HTT   Hallett          60.96 169   P        P       16 53 32.7 +1.0
O18K  Koktuh Hills     60.97  34   P        P       16 53 30.7 -0.8
O18K  Koktuh Hills     60.97  34   P        P       16 53 32.9 +1.4
      baz=274,SNR=24
P18K  Big Mountain,    60.99  35   P        P       16 53 32.0 +0.4
P18K                               IAmb     IAmb    16 53 33.9
      comp=Z,70nm,1.0s
P18K  Big Mountain,    60.99  35   P        P       16 53 32.6 +1.0
      baz=274,SNR=20
L19K  White Mountain   61.00  32   P        P       16 53 32.9 +1.3
L19K  White Mountain   61.00  32   P        P       16 53 33.3 +1.7
      baz=273
Q18K  Katmai Hardscr   61.16  36   P        P       16 53 32.8 -0.1
      baz=275,SNR=5.4
M19K  Big River Lodg   61.23  32   P        P       16 53 34.5 +1.3
M19K                               IAmb     IAmb    16 53 36.3
      comp=Z,101nm,1.4s
M19K  Big River Lodg   61.23  32   P        P       16 53 34.6 +1.4
      baz=274
KIRV  Kirov            61.24 324   LR       LR      17 21 54.2
      comp=Z,216nm,20.1s,baz=81,slow=38
KIRV  Kirov            61.24 324ceP         P       16 53 32.3 -1.0
N19K  Bonanza Creek    61.26  33   P        P       16 53 34.8 +1.3
N19K                               IAmb     IAmb    16 53 36.2
      comp=Z,67nm,1.3s
N19K  Bonanza Creek    61.26  33   P        P       16 53 35.0 +1.5
      baz=274
JLN   Jalan Bani Buh   61.29 282   P        P       16 53 34.2  0.0
K20K  Telida           61.30  30   P        P       16 53 35.1 +1.5
K20K  Telida           61.30  30   P        P       16 53 35.5 +1.8
      baz=273
IMAR  Indian Mountai   61.32  27   P        P       16 53 34.4 +0.7
O19K  Port Alsworth    61.38  34   P        P       16 53 35.3 +1.1
O19K  Port Alsworth    61.38  34   P        P       16 53 35.8 +1.6
      baz=275,SNR=17
F21K  Alatna River     61.40  26   P        P       16 53 35.1 +0.8
      baz=272
G21K  Allakaket        61.41  27   P        P       16 53 35.7 +1.4
      baz=272
L20K  Farewell, AK     61.43  31   P        P       16 53 36.3 +1.7
      baz=274,SNR=36
JASK  Jask - Hormozg   61.45 286   P        P       16 53 35.2 -0.1
WBK   Wadi Bani Khal   61.52 282   P        P       16 53 36.1 +0.3
ARMA  Armidale         61.52 156   P        P       16 53 34.9 -0.7
WSAR  Wadi Sarin       61.61 283   LR       LR      17 22 21.2
      comp=Z,128nm,21.0s,baz=102,slow=38
WSAR  Wadi Sarin       61.61 283   P        P       16 53 36.7 +0.3
DZM   Mont Dzumac      61.66 138  eP        P       16 53 38.3 +1.6
      comp=Z,47nm,1.2s
DZM                               epP       pP      16 53 58.0 -0.1
      comp=Z,106nm,1.2s
DZM                               eS        S       17 01 52.9 +0.1
      comp=Z,108nm,24.8s
DZM   Mont Dzumac      61.66 138  eLR       LR      17 12 02.8
      comp=Z,220nm,25.2s
DZM   Mont Dzumac      61.66 138   P        P       16 53 39.9 +3.2
H21K  Melozitna Rive   61.73  28   P        P       16 53 37.1 +0.7
H21K  Melozitna Rive   61.73  28   P        P       16 53 38.0 +1.6
      baz=273
M20K  Styx River       61.83  32   P        P       16 53 38.6 +1.3
M20K                               IAmb     IAmb    16 53 39.7
      comp=Z,44nm,0.8s
M20K  Styx River       61.83  32   P        P       16 53 39.1 +1.8
      baz=275,SNR=34
Q19K  Cape Douglas,    61.84  35   P        P       16 53 37.3  0.0
Q19K  Cape Douglas,    61.84  35   P        P       16 53 37.6 +0.2
      baz=276,SNR=7.1
F22K  John River       61.89  25   P        P       16 53 39.2 +1.7
      baz=272
RKGY  Rocky Gully      61.90 190   P        P       16 53 39.2 +1.3
BIDO  Bidbid           61.96 284   P        P       16 53 39.0 +0.3
P19K  Oil Pt           61.98  34   P        P       16 53 39.2 +0.9
P19K  Oil Pt           61.98  34   P        P       16 53 38.9 +0.6
      baz=276
ILSW  Iliamna Southw   61.99  34   P        P       16 53 37.6 -0.8
ILSW                               IAmb     IAmb    16 53 40.0
      comp=Z,22nm,0.8s
E22K  Anaktuvuk Pass   62.00  25   P        P       16 53 39.6 +1.3
      baz=272
CHUM  Lake Minchumin   62.05  30   P        P       16 53 40.4 +1.9
      baz=274,SNR=38
I21K  Tanana           62.10  28   P        P       16 53 39.5 +0.6
I21K  Tanana           62.10  28   P        P       16 53 40.8 +1.9
      baz=274
RSO   Redoubt South    62.14  33   P        P       16 53 40.4 +0.9
SMDO  Samad            62.18 283   P        P       16 53 40.2 -0.1
SMDO                               P        P       16 53 40.2 -0.1
G22K  Bettles          62.18  26   P        P       16 53 40.4 +0.9
      baz=273
PPLA  Purkeypile       62.18  31   P        P       16 53 40.7 +1.0
PPLA                               IAmb     IAmb    16 53 41.8
      comp=Z,53nm,0.8s
PPLA  Purkeypile       62.18  31   P        P       16 53 41.2 +1.5
      baz=275,SNR=24
CAST  Castle Rocks     62.19  30   P        P       16 53 40.8 +1.3
CAST  Castle Rocks     62.19  30   P        P       16 53 41.1 +1.6
      baz=275,SNR=62
OHAK  Old Harbor       62.22  37   P        P       16 53 39.4 -0.4
OHAK                               IAmb     IAmb    16 53 46.8
      comp=Z,34nm,1.0s
OHAK  Old Harbor       62.22  37   P        P       16 53 40.3 +0.5
OHAK  Old Harbor       62.22  37   P        P       16 53 40.4 +0.5
      baz=277
O20K  Slope Mountain   62.24  34   P        P       16 53 40.2 +0.1
      baz=276,SNR=9.6
JMDO  Jabal Madar      62.36 282   P        P       16 53 41.5 +0.1
JMDO                               P        P       16 53 41.5 +0.1
D23K  Nanushuk River   62.38  24   P        P       16 53 42.5 +1.7
      baz=273
SPU   Mount Spurr      62.41  33   P        P       16 53 42.1 +0.9
Q20K  Shuyak Island    62.52  36   P        P       16 53 42.2 +0.3
      baz=277
KDAK  Kodiak Island    62.53  37   LR       LR      17 22 29.8
      comp=Z,37nm,20.1s,baz=254,slow=38
KDAK  Kodiak Island    62.53  37   P        P       16 53 42.2 +0.3
KDAK  Kodiak Island    62.53  37 i P        P       16 53 41.5 -0.4
KDAK                               pmax     pmax
      comp=Z,157nm,0.9s
KDAK  Kodiak Island    62.53  37   P        P       16 53 42.2 +0.3
      baz=277
SKT   Skwentna         62.57  32   P        P       16 53 42.8 +0.6
SKT                                IAmb     IAmb    16 53 43.7
      comp=Z,39nm,0.8s
SKT   Skwentna         62.57  32   P        P       16 53 42.7 +0.5
      baz=276,SNR=21
BPAW  Bear Paw Mtn.    62.61  29   P        P       16 53 43.3 +0.9
BPAW  Bear Paw Mtn.    62.61  29   P        P       16 53 43.8 +1.4
      baz=275,SNR=54
MLY   Manley           62.63  28   P        P       16 53 44.0 +1.4
MLY   Manley           62.63  28   P        P       16 53 44.1 +1.6
      baz=275,SNR=171
HOQ   Hoqain           62.65 284   P        P       16 53 43.5 +0.1
COLD  Coldfoot         62.67  26   P        P       16 53 43.7 +0.9
COLD                               IAmb     IAmb    16 53 46.2
      comp=Z,44nm,0.9s
COLD  Coldfoot         62.67  26   P        P       16 53 44.0 +1.3
      baz=274
KTH   Kantishna Hill   62.69  30   P        P       16 53 43.9 +0.9
KTH                                IAmb     IAmb    16 53 44.7
      comp=Z,42nm,1.0s
BANOM Banah            62.77 287 i P        P       16 53 44.1 -0.1
      SNR=6.2
BANOM Banah            62.77 287   P        P       16 53 44.3 +0.1
HOM   Homer            62.78  34   P        P       16 53 44.1 +0.6
      baz=277
G23K  Bananza Creek    62.78  26   P        P       16 53 45.0 +1.5
      baz=275
E23K  Chandalar        62.83  25   P        P       16 53 45.4 +1.5
      baz=275
SHME  Shamm            62.87 287   P        P       16 53 44.8 +0.1
SHME  Shamm            62.87 287   P        P       16 53 44.9 +0.2
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CAPN	Captain Cook N	62.89	33	P	P	16 53 45.5	+1.3
CAPN	Captain Cook N	62.89	33	P	P	16 53 45.5	+1.3
	baz=277,SNR=5.8						
MHTO	MHTO	62.94	281	P	P	16 53 44.7	-0.5
	SNR=5.3						
MHTO				P	P	16 53 44.7	-0.5
	SNR=5.3						
TRF	Thorofare Moun	62.98	30	P	P	16 53 45.8	+0.7
TRF	Thorofare Moun	62.98	30	P	P	16 53 45.7	+0.6
	baz=276,SNR=16						
SUA	Susitna One	63.00	32	P	P	16 53 45.5	+0.4
SUA	Susitna One	63.00	32	P	P	16 53 45.6	+0.4
	baz=277,SNR=44						
CNPM	China Poot	63.00	34	P	P	16 53 44.9	-0.1
CNPM				IAmb	IAmb	16 53 48.4	
	comp=Z,54nm,0.9s						
BSY	Bisya	63.02	283	P	P	16 53 45.7	-0.1
BSY				P	P	16 53 45.7	-0.1
C24K	Franklin Bluff	63.03	23	P	P	16 53 46.2	+1.2
	baz=274						
BELG	Belogornoye	63.04	317	LR	LR	17 24 38.6	
	comp=Z,117nm,18.6s,baz=84,slow=39						
BELG	Belogornoye	63.04	317	*d* *i*P	P	16 53 44.1	-1.3
BELG				pmax	pmax		
	comp=Z,17nm,0.8s						
H23K	Yukon River	63.06	27	P	P	16 53 46.9	+1.5
H23K	Yukon River	63.06	27	P	P	16 53 47.3	+2.0
	baz=276						
DGAR	Diego Garcia	63.08	245	P	P	16 53 48.2	+2.1
CUT	Chulitna	63.11	31	P	P	16 53 46.2	+0.5
CUT	Chulitna	63.11	31	P	P	16 53 46.3	+0.6
	baz=277,SNR=18						
SOHO	SOHO	63.14	285	*i* P	P	16 53 46.1	-0.5
	SNR=16						
SOHO	SOHO	63.14	285	P	P	16 53 46.3	-0.2
SOHO				P	P	16 53 46.3	-0.2
BRLK	Bradley Lake	63.15	34	P	P	16 53 46.1	0.0
UOSS	Minazif	63.16	286	P	P	16 53 45.7	-1.0
UOSS	Minazif	63.16	286	P	P	16 53 45.5	-1.2
UOSS	Minazif	63.16	286	P	P	16 53 46.6	-0.1
I23K	Minto, Yukon-K	63.20	28	P	P	16 53 46.7	+0.5
I23K				IAmb	IAmb	16 53 48.9	
	comp=Z,79nm,1.1s						
I23K	Minto, Yukon-K	63.20	28	P	P	16 53 47.5	+1.3
	baz=276,SNR=52						
BRSE	Bradley Lake S	63.22	34	P	P	16 53 47.6	+1.1
	baz=278,SNR=16						
E24K	Your Creek	63.25	25	P	P	16 53 48.1	+1.5
	baz=276,SNR=190						
HATD	Hatta, Dubai	63.26	286	P	P	16 53 47.1	-0.3
HATD	Hatta, Dubai	63.26	286	P	P	16 53 47.5	+0.1
HATD				P	P	16 53 47.5	+0.1
BWN	Browne	63.27	29	P	P	16 53 48.0	+1.2
ASHO	Ashiyiah	63.37	286	*i* P	P	16 53 47.6	-0.6
	SNR=11						
ASHO	Ashiyiah	63.37	286	P	P	16 53 48.1	-0.1
NEA2	Nenana	63.39	29	P	P	16 53 48.6	+1.1
NEA2	Nenana	63.39	29	P	P	16 53 48.7	+1.2
	baz=277,SNR=137						
ARQ	Araqi	63.41	284	P	P	16 53 48.3	-0.1
ARQ				P	P	16 53 48.3	-0.1
RC01	Rabbit Creek A	63.53	33	P	P	16 53 48.9	+0.3
RC01				IAmb	IAmb	16 53 50.7	
	comp=Z,44nm,0.9s						
RC01	Rabbit Creek A	63.53	33	P	P	16 53 48.8	+0.3
	baz=278,SNR=17						
F24K	Squaw Lake	63.53	25	P	P	16 53 50.0	+1.5
	baz=276,SNR=167						
MCK	McKinley	63.55	30	P	P	16 53 49.1	+0.5
MCK	McKinley	63.55	30	P	P	16 53 49.2	+0.5
MCK	McKinley	63.55	30	P	P	16 53 49.2	+0.5
	baz=277,SNR=77						
NAZ	Nazwa, Dubai	63.62	286	P	P	16 53 48.9	-0.8
NAZ	Nazwa, Dubai	63.62	286	P	P	16 53 49.7	0.0
O22K	Cooper Landing	63.62	33	P	P	16 53 49.5	+0.4
O22K	Cooper Landing	63.62	33	P	P	16 53 49.2	+0.1
	baz=278,SNR=11						
RND	Reindeer	63.63	30	P	P	16 53 49.4	+0.1
RND	Reindeer	63.63	30	P	P	16 53 49.4	+0.1
RND				pmax	pmax		
	comp=Z,109nm,0.8s						
DQM	DQM	63.69	280	P	P	16 53 50.5	+0.3
DQM				P	P	16 53 50.5	+0.3
MDM	Murphy Dome	63.70	28	P	P	16 53 50.9	+1.3
H24K	Noodor Dome	63.74	27	P	P	16 53 51.1	+1.2
H24K	Noodor Dome	63.74	27	P	P	16 53 51.5	+1.7
	baz=277						
PMR	Palmer	63.75	32	P	P	16 53 50.6	+0.7
PMR				IAmb	IAmb	16 53 51.3	
	comp=Z,58nm,1.0s						
PMR	Palmer	63.75	32	P	P	16 53 50.0	+0.1
PMR	Palmer	63.75	32	P	P	16 53 50.6	+0.7
PMR				pmax	pmax		
	comp=Z,58nm,1.0s						
PMR	Palmer	63.75	32	P	P	16 53 50.3	+0.3
	baz=278,SNR=17						
FAQ	Al Faqa, Dubai	63.75	286	*i* P	P	16 53 50.1	-0.5
	SNR=16						
FAQ	Al Faqa, Dubai	63.75	286	P	P	16 53 50.5	-0.1
G24K	Hadweenzic Riv	63.79	26	P	P	16 53 51.9	+1.8
	baz=277						
GHO	Glory Hole Cre	63.82	32	P	P	16 53 51.0	+0.4
GHO				IAmb	IAmb	16 53 52.0	
	comp=Z,41nm,0.8s						
WRH	Wood River Hil	63.83	29	P	P	16 53 50.9	+0.5
WRH				IAmb	IAmb	16 53 53.3	
	comp=Z,79nm,1.2s						
ALNE	Al Ain	63.84	285	*i* P	P	16 53 51.2	0.0
	SNR=16						
ALNE	Al Ain	63.84	285	P	P	16 53 51.4	+0.2
	SNR=5.6						
ALNE				P	P	16 53 51.4	+0.2
	SNR=5.6						
TCOL	CIGO, UAF Yank	63.87	28	P	P	16 53 51.0	+0.3
	baz=278						
COLA	College	63.87	28	P	P	16 53 51.7	+1.0
COLA	College	63.87	28	*i* P	P	16 53 51.3	+0.6
COLA				pmax	pmax		
	comp=Z,34nm,0.8s						
COLA	College	63.87	28	P	P	16 53 51.0	+0.3
	baz=278						
COLA	College	63.87	28	P	P	16 53 50.2	-0.4
D25K	Kavik River	63.88	23	P	P	16 53 51.9	+1.2
	baz=277						
CCB	Clear Creek Bu	63.92	29	P	P	16 53 51.2	+0.2
POKR	Poker Plat Res	64.02	28	P	P	16 53 52.6	+0.9
POKR	Poker Plat Res	64.02	28	P	P	16 53 52.8	+1.1
	baz=278,SNR=46						
ASUD	Al Ashush, Dub	64.02	286	P	P	16 53 52.4	+0.1
ASUD	Al Ashush, Dub	64.02	286	P	P	16 53 52.6	+0.3
ASUD				P	P	16 53 52.6	+0.3
YNG	Young	64.03	161	P	P	16 53 54.2	+2.2
KNK	Knik Glacier	64.10	32	P	P	16 53 52.8	+0.5
KNK				IAmb	IAmb	16 53 53.9	
	comp=Z,94nm,0.8s						
KNK	Knik Glacier	64.10	32	P	P	16 53 52.9	+0.6
	baz=279,SNR=26						
SML	Sawmill	64.10	32	P	P	16 53 52.8	+0.5
SML				IAmb	IAmb	16 53 53.9	
	comp=Z,65nm,0.9s						
SML	Sawmill	64.10	32	P	P	16 53 52.8	+0.5
	baz=279,SNR=19						
PWL	Port Wells	64.24	33	P	P	16 53 53.4	+0.1
PWL				IAmb	IAmb	16 53 54.6	
	comp=Z,88nm,0.8s						
PWL	Port Wells	64.24	33	P	P	16 53 53.5	+0.3
	baz=279,SNR=10						
IL31		64.30	28	P	P	16 53 53.2	-0.2
ILAR	Eielson Array	64.30	28	P	P	16 53 53.2	-0.3
	comp=Z,8.3nm,0.8s,baz=267,slow=3.5,SNR=86						
	comp=Z,8.3nm,0.8s						
ILAR	Eielson Array	64.30	28	P	P	16 53 53.3	-0.2
IL03	Eielson Array	64.31	28	P	P	16 53 53.0	-0.6
C26K	Camden Bay	64.32	23	P	P	16 53 55.5	+2.0
	baz=278						
G25K	Bearman Lake	64.32	26	P	P	16 53 55.6	+2.0
	baz=278						
HDA	Harding Lake	64.32	29	P	P	16 53 53.6	0.0
HDA				IAmb	IAmb	16 53 54.7	
	comp=Z,99nm,0.9s						
HDA	Harding Lake	64.32	29	P	P	16 53 53.7	0.0
	baz=279,SNR=85						
E25K	Arctic Village	64.33	25	P	P	16 53 55.5	+1.8
	baz=278,SNR=147						
F25K	Christian Rive	64.38	25	P	P	16 53 56.1	+2.0
	baz=278						
M23K	Glacier View	64.38	32	P	P	16 53 54.6	+0.4
	baz=279,SNR=35						
SCM	Sheep Creek Mo	64.56	32	P	P	16 53 56.3	+0.9
SCM				IAmb	IAmb	16 53 57.3	
	comp=Z,112nm,0.9s						
SCM	Sheep Creek Mo	64.56	32	P	P	16 53 56.3	+0.9
SCM				pmax	pmax		
	comp=Z,112nm,0.9s						
SCM	Sheep Creek Mo	64.56	32	P	P	16 53 56.2	+0.9
	baz=280,SNR=37						
FYU	Fort Yukon	64.70	26	P	P	16 53 57.1	+1.1
FYU				IAmb	IAmb	16 53 59.2	
	comp=Z,144nm,1.2s						
PRP	Porcupine Dome	64.75	27	P	P	16 53 56.7	+0.1
PRP				IAmb	IAmb	16 53 58.8	
	comp=Z,40nm,1.0s						
PRP	Porcupine Dome	64.75	27	P	P	16 53 56.7	+0.1
	baz=280,SNR=50						
ARPS	Mount Arapiles	64.75	167	P	P	16 53 57.3	+0.6
C27K	Jago River	64.77	23	P	P	16 53 58.2	+1.6
	baz=279						
UMZA	Um Al Zommool	64.80	284	P	P	16 53 56.9	-0.6
UMZA				P	P	16 53 56.9	-0.6
BMAR	Burnt Mountain	64.81	25	P	P	16 53 58.3	+1.5
P23K	Montague Islan	64.85	34	P	P	16 53 58.0	+0.9
	baz=280						
K24K	Donnelly Dome	64.93	29	P	P	16 53 57.9	+0.3
	baz=280,SNR=48						
F26K	Sheenjek River	64.93	25	P	P	16 53 59.8	+2.1
	baz=280						
M24K	Tolsona, Glenn	65.05	31	P	P	16 54 00.0	+1.5
M24K	Tolsona, Glenn	65.05	31	P	P	16 53 59.9	+1.4
	baz=280,SNR=23						
CAN	Canberra	65.16	161	P	P	16 54 01.5	+2.1
CAN	Canberra	65.16	161	P	P	16 54 01.5	+2.1
CAN				pmax	pmax		
	comp=Z,17nm,0.8s						
G26K	Porcupine Rive	65.20	26	P	P	16 54 01.2	+1.9
	baz=280						
PAX	Paxson	65.22	30	P	P	16 54 00.3	+0.7
PAX				IAmb	IAmb	16 54 02.5	
	comp=Z,50nm,0.8s						
PAX	Paxson	65.22	30	P	P	16 54 00.3	+0.7
PAX				pmax	pmax		
	comp=Z,50nm,0.8s						
PAX	Paxson	65.22	30	P	P	16 54 00.4	+0.7
	baz=281,SNR=67						
LKRN	Lenkeran, Azer	65.22	302	P	P	16 54 00.0	+0.1
AKT	Akhty	65.28	306	⇓*i*P	P	16 54 00.1	-0.3
AKT				*e**PP	pP	16 54 22.9	+1.2
AKT				*e*		16 54 30.2	
AKT				pmax	pmax		
	comp=Z,66nm,0.8s						
KLU	Klutina	65.28	32	P	P	16 54 01.0	+0.9
KLU				IAmb	IAmb	16 54 02.0	
	comp=Z,53nm,0.8s						
KLU	Klutina	65.28	32	P	P	16 54 00.8	+0.8
	baz=281,SNR=26						
RIDG	Independent Ri	65.35	29	P	P	16 54 00.5	+0.2
RIDG	Independent Ri	65.35	29	P	P	16 54 00.6	+0.2
	baz=281,SNR=51						
DIV	Divide	65.42	32	P	P	16 54 02.3	+1.3
HARP	HAARP	65.47	31	P	P	16 54 02.3	+1.1
	baz=281,SNR=32						
EYAK	Cordova Ski Ar	65.55	33	P	P	16 54 03.1	+1.5
EYAK	Cordova Ski Ar	65.55	33	P	P	16 54 02.5	+0.9
	baz=282						
MZWR	Madinat Zayed	65.55	285	P	P	16 54 01.7	-0.7
MZWR				P	P	16 54 01.7	-0.7
SCRK	Sand Creek	65.68	29	P	P	16 54 02.9	+0.3
SCRK				IAmb	IAmb	16 54 05.0	
	comp=Z,85nm,1.1s						
SCRK	Sand Creek	65.68	29	P	P	16 54 03.1	+0.5
	baz=282,SNR=59						
DOT	Dot Lake	65.71	29	P	P	16 54 02.9	+0.2
DOT				IAmb	IAmb	16 54 04.1	
	comp=Z,76nm,0.8s						
SEKA	Sheki	65.74	305	P	P	16 54 02.8	-0.5
I26K	Coal Creek Min	65.76	27	P	P	16 54 03.3	+0.3
I26K				IAmb	IAmb	16 54 04.4	
	comp=Z,48nm,1.1s						
I26K	Coal Creek Min	65.76	27	P	P	16 54 03.3	+0.3
	baz=282						
E27K	Coleen River	65.79	24	P	P	16 54 04.9	+1.7
	baz=282						
KLMR	Klimovskoe	65.87	328	*e*P	P	16 54 00.8	-2.9
KLMR				AMP		16 54 03.7	
	comp=Z,71nm,1.0s						
KLMR				*e*PcP	PcP	16 54 31.2	-2.8
KLMR	Klimovskoe	65.87	328	*e*P	P	16 54 00.7	-2.9
KLMR				*e*		16 54 31.2	
KLMR				pmax	pmax		
	comp=Z,71nm,1.0s						
N25K	Chitina, Valde	65.88	32	P	P	16 54 04.9	+1.0
N25K				IAmb	IAmb	16 54 08.8	
	comp=Z,29nm,0.8s						
N25K	Chitina, Valde	65.88	32	P	P	16 54 04.9	+1.0
	baz=282,SNR=18						
MNGR	Mingechevir, A	65.93	305	P	P	16 54 04.5	0.0
BRAT	Ballarat	65.94	166	P	P	16 54 08.0	+3.7
MENT	Mentasta	66.01	30	P	P	16 54 05.8	+1.2
MENT				IAmb	IAmb	16 54 06.8	
	comp=Z,80nm,0.8s						
MENT	Mentasta	66.01	30	P	P	16 54 05.6	+1.0
ZKTA	Zakatala	66.04	306	P	P	16 54 05.0	-0.2
G27K	Doyon Strip	66.05	26	P	P	16 54 06.6	+1.8
	baz=282						
L26K	Log Cabin Wild	66.15	30	P	P	16 54 05.7	+0.1
L26K				IAmb	IAmb	16 54 07.9	
	comp=Z,54nm,0.9s						
L26K	Log Cabin Wild	66.15	30	P	P	16 54 06.7	+1.2
	baz=282,SNR=44						
MZR	Muzera	66.16	285	*i* P	P	16 54 06.0	-0.2
	SNR=12						
MZR	Muzera	66.16	285	P	P	16 54 05.9	-0.4
MZR				P	P	16 54 05.9	-0.4
GROC	Groznyy	66.22	308	*e*P	P	16 54 05.8	-0.5
GROC				*e*S	S	17 02 53.9	+5.2
H27K	Steamboat Moun	66.22	26	P	P	16 54 07.9	+2.0
	baz=283						
MSVF	Nonsavu	66.27	126	*i* P	P	16 54 07.0	+0.1
MSVF				pmax	pmax		
	comp=Z,28nm,1.7s						
GLB	Gilahina Butte	66.29	32	P	P	16 54 07.3	+0.9
GLB				IAmb	IAmb	16 54 08.6	
	comp=Z,57nm,0.8s						
TOO	Toolangi	66.33	164	P	P	16 54 07.3	+0.4
TOO	Toolangi	66.33	164	P	P	16 54 09.7	+2.8
TOO	Toolangi	66.33	164	P	P	16 54 07.3	+0.4
TOO				pmax	pmax		
	comp=Z,12nm,0.9s						
I27K	Kandik River	66.33	27	P	P	16 54 08.4	+1.7
	baz=283						
LVZ	Lovozero	66.40	336	P	P	16 54 05.5	-1.6
LVZ	Lovozero	66.40	336	P	P	16 54 05.5	-1.6
LVZ				pmax	pmax		
	comp=Z,26nm,0.9s						
M26K	Nabesna, AK	66.45	31	P	P	16 54 07.6	+0.1
M26K	Nabesna, AK	66.45	31	P	P	16 54 08.7	+1.2
	baz=283						
K27K	Chicken	66.49	29	P	P	16 54 08.6	+1.0
K27K				IAmb	IAmb	16 54 09.6	
	comp=Z,48nm,0.8s						
K27K	Chicken	66.49	29	P	P	16 54 09.1	+1.5
	baz=283						
VRDI	Verde Repeater	66.50	32	P	P	16 54 08.8	+0.8
VRDI				IAmb	IAmb	16 54 09.9	
	comp=Z,60nm,0.8s						
GANJ	Ganja	66.53	305	P	P	16 54 07.9	-0.4
MCARA	McCarthy VSAT	66.67	32	P	P	16 54 10.1	+1.3
MCARA				IAmb	IAmb	16 54 12.3	
	comp=Z,79nm,0.9s						
MCARA	McCarthy VSAT	66.67	32	P	P	16 54 09.8	+1.0
	baz=283,SNR=33						
EGAK	Eagle	66.70	28	P	P	16 54 09.8	+0.8
EGAK				IAmb	IAmb	16 54 10.7	
	comp=Z,28nm,0.8s						
EGAK	Eagle	66.70	28	P	P	16 54 09.6	+0.6
	baz=284,SNR=48						
DMTO	DMTO	66.78	279	P	P	16 54 10.2	0.0
L27K	Beaver Creek,	66.82	30	P	P	16 54 11.2	+1.4
L27K				IAmb	IAmb	16 54 12.3	
	comp=Z,39nm,0.8s						
L27K	Beaver Creek,	66.82	30	P	P	16 54 11.2	+1.4
	baz=284						
BCAR	Beaver Creek A	66.84	30	P	P	16 54 11.3	+1.3
VRH	Novokhopyorsk	66.88	317	⇓*i*P	P	16 54 09.1	-1.2
VRH				*e*		16 54 36.4	
VRH				pmax	pmax		
	comp=Z,92nm,0.8s						
HOPEN	Hopen	66.91	346	*e*P	P	16 54 10.8	+0.7
APA	Apatity	66.94	335	⇓*i*P	P	16 54 08.6	-1.8
APA				*i*		16 54 38.9	
APA				pmax	pmax		
	comp=Z,38nm,0.8s						
APA				MLR	MLR		
	comp=Z,1µm,17.0s						
M27K	Edge Creek, AK	66.97	30	P	P	16 54 12.1	+1.1
M27K				IAmb	IAmb	16 54 13.0	
	comp=Z,52nm,0.8s						
M27K	Edge Creek, AK	66.97	30	P	P	16 54 12.0	+1.1
	baz=284						
SHMA	Al-Shehemyia	67.34	288	P	P	16 54 13.1	-0.6
BARN	Barnard Glacie	67.39	32	P	P	16 54 14.7	+1.1
BARN				IAmb	IAmb	16 54 15.7	
	comp=Z,43nm,0.8s						
BVCY	Beaver Creek	67.41	30	P	P	16 54 14.7	+1.2
	baz=285,SNR=8.3						
RBK	Rabkut	67.51	279	P	P	16 54 14.4	-0.5
	SNR=12						
RBK				P	P	16 54 14.4	-0.5
	SNR=12						
NAX	Nakhchivan	67.55	304	P	P	16 54 14.8	-0.1
DAWY	Dawson	67.62	28	P	P	16 54 15.6	+0.7
DAWY				IAmb	IAmb	16 54 16.9	
	comp=Z,32nm,0.8s						
DAWY	Dawson	67.62	28	P	P	16 54 15.9	+1.0
	baz=285,SNR=34						
GOF	Gofitskoye	67.64	310	⇑*e*P	P	16 54 15.4	+0.2
GOF				pmax	pmax		
	comp=Z,316nm,0.8s						
VADS	Vadso	67.66	339	*e*P	P	16 54 14.4	-0.5
ZEI	Tsey	67.67	308	*e*P	P	16 54 12.6	-3.2
ZEI				pmax	pmax		
	comp=Z,131nm,0.9s						
I29M	Ogilvie Camp,	67.72	27	P	P	16 54 16.8	+1.3
	baz=286,SNR=40						
WHFO	Wadi Hawf	67.74	279	P	P	16 54 15.3	-1.0
WHFO				P	P	16 54 15.3	-1.0
YUK3	Moose Creek	67.76	31	P	P	16 54 16.9	+0.9
	baz=285,SNR=28						
GNI	Garni	67.82	305	LR	LR	17 27 56.2	
	comp=Z,72nm,19.7s,baz=82,slow=39						
GNI	Garni	67.82	305	*e*P	P	16 54 15.8	-0.9
GNI	Garni	67.82	305	*c* *e*P	P	16 54 17.5	+0.8
GNI				pmax	pmax		
	comp=Z,84nm,1.7s						
GNI	Garni	67.82	305	P	P	16 54 17.7	+1.0
GNI				P	P	16 54 17.7	+1.0
GNI	Garni	67.82	305	P	P	16 54 15.8	-0.9
SPB2	Spitsbergen Ar	68.05	348	P	P	16 54 17.1	-0.2
SPB2				IAmb	IAmb	16 54 44.6	
	comp=Z,53nm,0.9s						
ONI	Oni	68.05	308	*e*P	P	16 54 18.4	+0.4
ONI	Oni	68.05	308	P	P	16 54 17.7	-0.3
ONI				IAmb	IAmb	16 54 19.8	
	comp=Z,74nm,0.8s						
ONI	Oni	68.05	308	P	P	16 54 17.7	-0.3
ONI				pmax	pmax		
	comp=Z,73nm,0.8s						
SPA0	Spitsbergen Ar	68.05	348	*e*P	P	16 54 16.9	-0.4
SPA0				IAmb	IAmb	16 54 17.4	
	comp=Z,20nm,0.7s						
SPITS	Spitsbergen Ar	68.05	348	LR	LR	17 29 04.7	
	comp=Z,51nm,18.2s,baz=9.0,slow=40						
SPITS	Spitsbergen Ar	68.05	348	P	P	16 54 16.8	-0.5
SPITS				pmax	pmax		
	comp=Z,83nm,1.1s						
MOS	Moscow	68.07	322	*e*P	P	16 54 16.0	-1.7
MOS				*e*		16 54 42.5	
MOS				pmax	pmax		
	comp=Z,117nm,0.7s						
EPYK	Eagle Plains	68.07	26	P	P	16 54 18.6	+1.0
EPYK	Eagle Plains	68.07	26	P	P	16 54 18.6	+1.0
	baz=287,SNR=111						
G30M	tAoh Zraii Nji	68.08	25	P	P	16 54 18.5	+0.8
	baz=287						
KBZ	Khabaz	68.11	309	P	P	16 54 18.1	-0.1
	comp=Z,135nm,0.8s,baz=90,slow=4.6,SNR=386						
KBZ				LR	LR	17 27 06.4	
	comp=Z,80nm,21.6s,baz=61,slow=38						
KBZ	Khabaz	68.11	309	*c* *e*P	P	16 54 17.9	-0.3
KBZ				pmax	pmax		
	comp=Z,171nm,0.9s						
O28M	Mount Upton	68.16	32	P	P	16 54 19.9	+1.3
	baz=286						
LPSR	Galich'ya Gora	68.18	319	*e*P	P	16 54 17.3	-1.2
LPSR				pmax	pmax		
	comp=Z,60nm,0.7s						
KVAR	Kislovodsk Arr	68.18	309	LR	LR	17 26 50.3	
	comp=Z,75nm,21.4s,baz=236,slow=38						
KIV	Kislovodsk	68.19	309	⇓P	P	16 54 19.3	+0.5
KIV	Kislovodsk	68.19	309	*e*P	P	16 54 18.7	-0.2
KIV	Kislovodsk	68.19	309	P	P	16 54 19.4	+0.5
KIV	Kislovodsk	68.19	309	*e*P	P	16 54 19.0	+0.1
KIV				pmax	pmax		
	comp=Z,217nm,1.1s						
KIV				MLR	MLR		
	comp=Z,83nm,17.0s						
KIV	Kislovodsk	68.19	309	*i* P	P	16 54 19.1	+0.3
	SNR=24						
KIV	Kislovodsk	68.19	309	P	P	16 54 19.5	+0.7
KIV				P	P	16 54 19.5	+0.7
KIV	Kislovodsk	68.19	309	P	P	16 54 18.2	-0.7
YUK8	Steele Glacier	68.21	31	P	P	16 54 20.1	+1.2
	baz=286,SNR=18						
VORR	Voronezh	68.27	318	⇓*i*P	P	16 54 18.5	-0.6
VORR				*e*		16 54 44.2	
VORR				pmax	pmax		
	comp=Z,135nm,0.7s						
SHA1	Shidzhatmaz	68.27	309	*d* *i*P	P	16 54 19.0	-0.6
PCA	Pinnacle	68.31	33	P	P	16 54 20.3	+1.0
PCA				IAmb	IAmb	16 54 21.6	
	comp=Z,85nm,0.8s						
PINM	Pinnacle	68.31	33	P	P	16 54 20.5	+1.2
	baz=286,SNR=18						
AKH	Akhalkalaki	68.36	306	*e*P	P	16 54 20.8	+0.7
ABTO	Aybut	68.37	279	P	P	16 54 20.0	-0.4
	SNR=8.6						
VSR	Storozhevoye	68.42	317	*e*P	P	16 54 18.5	-1.5
VSR				pmax	pmax		
	comp=Z,60nm,0.8s						
L29M	L29M	68.43	29	P	P	16 54 21.9	+2.0
	baz=287						
M29M	Somme Creek	68.48	30	P	P	16 54 22.2	+1.8
	baz=287						
KBS	Kingsbay	68.48	349	P	P	16 54 19.0	-0.9
KBS	Kingsbay	68.48	349	P	P	16 54 19.0	-0.9
KBS				pmax	pmax		
	comp=Z,26nm,0.9s						
KBS	Kingsbay	68.48	349	*e*P	P	16 54 19.8	-0.2
K29M	Barlow Dome	68.48	28	P	P	16 54 21.8	+1.5
	baz=287						
KEV	Kevo	68.55	338	P	P	16 54 20.0	-0.5
KEV				IAmb	IAmb	16 54 20.6	
	comp=Z,36nm,0.8s						
KEV	Kevo	68.55	338	P	P	16 54 20.0	-0.5
KEV				pmax	pmax		
	comp=Z,36nm,0.8s						
BCPM	Bancas Point	68.65	33	P	P	16 54 20.8	-0.6
BCPM				IAmb	IAmb	16 54 23.9	
	comp=Z,68nm,1.1s						
INK	Inuvik	68.66	23	P	P	16 54 21.7	+0.6
INK	Inuvik	68.66	23	P	P	16 54 21.7	+0.6
INK				pmax	pmax		
	comp=Z,154nm,1.0s						
INK	Inuvik	68.66	23	P	P	16 54 22.0	+0.9
	baz=289,SNR=151						
YUK4	Talbot Arm	68.71	31	P	P	16 54 23.4	+1.5
	baz=287,SNR=37						
OBN	Obninsk	68.82	322	⇑P	P	16 54 21.6	-0.8
OBN	Obninsk	68.82	322	LR	LR	17 26 34.2	
	comp=Z,57nm,21.8s,baz=39,slow=38						
OBN	Obninsk	68.82	322	*d* *i*P	P	16 54 21.3	-1.1
OBN				*e*		16 54 46.2	
OBN				*e*		16 56 56.3	
OBN				pmax	pmax		
	comp=Z,93nm,1.3s						
OBN				MLR	MLR		

	comp=Z,195nm,5.0s						
PNL	Peninsula	68.85	33	P	P	16 54 23.8	+1.2
PNL	Peninsula	68.85	33	P	P	16 54 24.0	+1.4
	baz=287,SNR=6.7						
F31M	Tsiigehtchic	68.86	24	P	P	16 54 23.1	+0.6
	baz=289,SNR=76						
YUK6	Outpost Mounta	68.96	31	P	P	16 54 25.3	+1.7
	baz=288,SNR=23						
O29M	Mount Kennedy	69.06	32	P	P	16 54 25.5	+1.5
	baz=288						
ARA0	ARCESS Array S	69.12	338	eP	P	16 54 23.6	-0.4
ARA0				IAmb	IAmb	16 54 24.0	
	comp=Z,52nm,1.1s						
ARCES	ARCESS Array B	69.12	338	P	P	16 54 23.4	-0.6
	comp=Z,5.6nm,0.4s,baz=66,slow=7.3,SNR=82						
ARCES				PcP	PcP	16 54 47.9	+0.4
	comp=Z,14nm,0.7s,baz=90,slow=4.9,SNR=5.2						
ARCES				LR	LR	17 29 48.2	
	comp=Z,112nm,20.0s,baz=91,slow=40						
	comp=Z,5.6nm,0.4s						
ARCES	ARCESS Array B	69.12	338	P	P	16 54 23.4	-0.6
ARCES				IAmb	IAmb	16 54 26.6	
	comp=Z,75nm,1.4s						
M30M	Minto, Yukon	69.18	30	P	P	16 54 26.4	+1.8
M30M	Minto, Yukon	69.18	30	P	P	16 54 26.2	+1.6
	baz=288,SNR=46						
MAYO	Mayo, Yukon	69.25	28	P	P	16 54 24.9	-0.1
MAYO				IAmb	IAmb	16 54 27.6	
	comp=Z,92nm,0.8s						
MAYO	Mayo, Yukon	69.25	28	P	P	16 54 26.6	+1.6
	baz=288,SNR=8.6						
AGRB	Hanur-Agry	69.28	305	eP	P	16 54 26.2	+0.3
HAMF	Hammerfest	69.30	340	eP	P	16 54 24.2	-0.9
N30M	Aishikik Lake	69.39	31	P	P	16 54 27.6	+1.6
	baz=288						
HYT	Haines Junctio	69.40	31	P	P	16 54 27.6	+1.5
HYT				IAmb	IAmb	16 54 28.8	
	comp=Z,64nm,0.9s						
HYT	Haines Junctio	69.40	31	P	P	16 54 27.8	+1.7
	baz=288,SNR=47						
GEVA	Gevas	69.63	303	P	P	16 54 27.7	-0.3
GEVA				IAmb	IAmb	16 54 29.0	
	comp=Z,68nm,0.8s						
AKDM	Akdamar-Van	69.68	303	eP	P	16 54 28.9	+0.6
P30M	Million Dollar	69.88	32	P	P	16 54 30.4	+1.4
	baz=289						
A36M	Sachs Harbour	69.91	18	P	P	16 54 28.8	0.0
A36M	Sachs Harbour	69.91	18	P	P	16 54 29.6	+0.8
	baz=295,SNR=182						
N31M	Braeburn, Yuko	69.98	30	P	P	16 54 30.4	+0.9
N31M				IAmb	IAmb	16 54 32.4	
	comp=Z,83nm,0.9s						
N31M	Braeburn, Yuko	69.98	30	P	P	16 54 31.2	+1.6
	baz=289,SNR=38						
KTK1	Kautokeino	70.06	338	eP	P	16 54 29.3	-0.5
KTK1				IAmb	IAmb	16 54 29.7	
	comp=Z,31nm,0.8s						
O30N	Mendenhall	70.07	31	P	P	16 54 31.5	+1.4
	baz=289,SNR=29						
NOR	Nord	70.24	355	i P	P	16 54 28.9	-1.9
SOC	Sochi	70.35	310	c iP	P	16 54 30.9	-1.2
SOC				e*PP	PcP	16 54 52.9	-0.3
SOC				ePPP	PPP	16 58 52.1	
SOC				eS	S	17 03 37.9	+0.1
SOC				pmax	pmax		
	comp=Z,137nm,0.6s						
M31M	Drury Creek, Y	70.36	30	P	P	16 54 33.0	+1.2
M31M				IAmb	IAmb	16 54 34.1	
	comp=Z,41nm,0.8s						
M31M	Drury Creek, Y	70.36	30	P	P	16 54 33.1	+1.3
	baz=290,SNR=49						
PLBC	Pleasant Camp	70.38	33	P	P	16 54 33.3	+1.3
	baz=290,SNR=24						
PUL	Pulkovo	70.56	328	ceP	P	16 54 31.3	-1.7
PUL				pmax	pmax		
	comp=Z,137nm,0.7s						
ALE	Alert	70.75	1	P	P	16 54 32.3	-1.6
ALE				pP	PcP	16 54 54.3	+0.1
JETT	Jettan, Norway	70.76	339	eP	P	16 54 33.9	-0.3
JETT				IAmb	IAmb	16 54 35.2	
	comp=Z,43nm,0.8s						
FARO	Faro, Yukon	70.81	29	P	P	16 54 34.5	0.0
FARO	Faro, Yukon	70.81	29	P	P	16 54 36.0	+1.4
	baz=291,SNR=154						
SKAG	Skagway	70.88	32	P	P	16 54 36.5	+1.6
SKAG				IAmb	IAmb	16 54 37.7	
	comp=Z,67nm,0.9s						
SKAG	Skagway	70.88	32	P	P	16 54 36.6	+1.6
SKAG	Skagway	70.88	32	P	P	16 54 36.5	+1.6
	baz=290,SNR=25						
S31K	Pelican	70.96	34	P	P	16 54 36.7	+1.3
	baz=290,SNR=7.0						
KOPT	Kop Dagi	70.96	306	P	P	16 54 36.5	+0.3
KOPT				IAmb	IAmb	16 54 38.5	
	comp=Z,89nm,1.2s						
R31K	City Hall, Gus	71.04	34	P	P	16 54 37.4	+1.4
	baz=290						
KTUT	Trabzon	71.16	307	⇓P	P	16 54 36.9	-0.1
BNGB	Bingl	71.17	305	eP	P	16 54 37.3	0.0
TRO	Tromso	71.19	339	eP	P	16 54 35.9	-0.8
C36M	Paulatuk	71.42	21	P	P	16 54 38.7	+0.6
	baz=297,SNR=12						
ANN	Anapa	71.51	311	eP	P	16 54 37.6	-1.4
ANN				e*PP	PcP	16 54 57.4	-0.6
ANN				eS	S	17 03 50.0	-1.1
ANN				pmax	pmax		
	comp=Z,230nm,0.8s						
MMPY	Sheldon Lake,	71.56	29	P	P	16 54 40.8	+1.7
	baz=293,SNR=50						
P32M	Atlin	71.60	32	P	P	16 54 40.7	+1.3
	baz=292,SNR=19						
R32K	Eaglecrest	71.69	33	P	P	16 54 41.5	+1.6
	baz=291,SNR=7.0						
AFI	Afiamalu	71.70	117	LR	LR	17 20 01.2	
	comp=Z,92nm,19.6s,baz=67,slow=30						
SIT	Sitka	71.73	35	P	P	16 54 42.0	+1.9
SIT	Sitka	71.73	35	P	P	16 54 41.6	+1.5
	baz=291,SNR=5.5						
EUNU	Eureka	71.75	6	P	P	16 54 39.7	-0.3
EUNU				IAmb	IAmb	16 54 42.1	
	comp=Z,63nm,0.8s						
JIS	Juneau Island	71.76	33	P	P	16 54 41.5	+1.2
JIS				IAmb	IAmb	16 54 43.1	
	comp=Z,65nm,1.1s						
JIS	Juneau Island	71.76	33	P	P	16 54 42.2	+1.9
P33M	Teslin, Yukon	71.79	31	P	P	16 54 41.8	+1.2
P33M				IAmb	IAmb	16 54 43.2	
	comp=Z,62nm,1.0s						
P33M	Teslin, Yukon	71.79	31	P	P	16 54 42.0	+1.5
	baz=292,SNR=40						
FIA1	FINESS Array S	71.90	330	P	P	16 54 40.2	-0.9
FIA1				IAmb	IAmb	16 54 41.3	
	comp=Z,81nm,0.8s						
FINES	FINESS Array B	71.91	330	P	P	16 54 40.6	-0.5
	comp=Z,75nm,0.6s,baz=60,slow=6.0,SNR=288						
FINES				LR	LR	17 29 04.5	
	comp=Z,215nm,19.4s,baz=68,slow=38						
	comp=Z,75nm,0.6s						
FINES	FINESS Array B	71.91	330	P	P	16 54 40.2	-0.9
DYBB	Diyarbakir	71.92	304	eP	P	16 54 41.9	+0.1
S32K	Killisnoo	71.96	34	P	P	16 54 42.8	+1.3
	baz=292						
Q32M	Nakina River	72.53	32	P	P	16 54 46.7	+1.5
	baz=293						
VSU	Vasula	72.77	327	eP	P	16 54 46.3	0.0
RAYN	Ar Rayn	72.81	288	P	P	16 54 45.7	-1.6
RAYN				IAmb	IAmb	16 54 48.1	
	comp=Z,57nm,1.1s						
RAYN	Ar Rayn	72.81	288	P	P	16 54 45.7	-1.6
RAYN				pmax	pmax		
	comp=Z,57nm,1.1s						
RAYN	Ar Rayn	72.81	288	i P	P	16 54 47.3	0.0
	SNR=39						
RAYN	Ar Rayn	72.81	288	P	P	16 54 47.3	0.0
ARPR	Arapgir-MALATY	72.84	305	eP	P	16 54 47.8	+0.4
URFA	Urfa	73.08	304	eP	P	16 54 48.7	0.0
MEF	Metsahovi	73.15	329	eP	P	16 54 48.2	-0.3
STEI	Steigen	73.19	339	eP	P	16 54 47.8	-0.8
STEI				IAmb	IAmb	16 54 48.2	
	comp=Z,97nm,1.2s						
U33K	Whale Pass	73.22	35	P	P	16 54 50.4	+1.4
	baz=293						
FAUS	Fauske	73.45	338	eP	P	16 54 49.3	-0.8
FAUS				IAmb	IAmb	16 54 49.8	
	comp=Z,50nm,0.9s						
CRAG	Craig	73.47	36	P	P	16 54 51.4	+1.0
	baz=293						
WRAK	Wrangell Islan	73.49	35	P	P	16 54 51.8	+1.2
	baz=294,SNR=5.2						
S34M	Telegraph Cree	73.50	33	P	P	16 54 52.0	+1.4
	baz=294,SNR=8.9						
SVSK	Karacayir	73.52	307	eP	P	16 54 51.2	+0.2
DARE	Darende-Malaty	73.65	305	eP	P	16 54 52.4	+0.3
SIM	Simferopol'	73.66	312	eP	P	16 54 51.5	-0.3
SIM						16 55 07.0	
SIM				pmax	pmax		
	comp=Z,175nm,0.8s						
TOKT	Tokat	73.69	307	eP	P	16 54 51.9	-0.3
MNK	Minsk	73.75	323	i P	P	16 54 52.4	+0.3
	comp=E,16nm,1.6s						
MNK				i P	P	16 54 52.4	+0.3
	comp=N,49nm,0.9s						
MNK				i P	P	16 54 52.4	+0.3
	comp=Z,97nm,0.9s,baz=66						
MNK				i pP	pP	16 55 15.7	+1.8
MNK				i PP	PP	16 57 37.3	+0.1
MNK				i PPP	PPP	16 59 39.9	
MNK				i S	S	17 04 19.3	+2.9
MNK				i sS	ScS	17 04 56.3	+2.2
MNK				i SS	SS	17 10 13.7	+73
MNK				i SSS	SSS	17 12 23.0	
MNK				i LQ	LQ	17 22 27.0	
MNK				i LR	LR	17 26 58.5	
MNK				i LRM	MLR	17 29 24.1	
	comp=E,51nm,25.1s						
MNK				i LRM	MLR	17 29 40.5	
	comp=Z,271nm,24.1s						
MNK				i LRM	MLR	17 30 45.4	
	comp=N,330nm,17.2s						
MNK	Minsk	73.75	323	i P	P	16 54 52.4	+0.3
MNK				i *PP	pP	16 55 15.7	+1.8
MNK				i		16 57 37.2	
MNK				i S	S	17 04 19.2	+2.9
MNK				i *SS	ScS	17 04 56.2	+2.2
MNK				pmax	pmax		
	comp=Z,97nm,0.9s						
MNK				pmax	pmax		
	comp=E,16nm,1.6s						
MNK				pmax	pmax		
	comp=N,49nm,0.9s						
MNK				MLR	MLR		
	comp=E,51nm,25.0s						
MNK				MLR	MLR		
	comp=Z,271nm,24.0s						
MNK				MLR	MLR		
	comp=N,330nm,17.0s						
KVT	Kavak	73.77	308	eP	P	16 54 52.5	-0.1
DLBC	Dease Lake	73.81	32	P	P	16 54 54.2	+1.7
	baz=295,SNR=15						
MTSE	Matsula	74.06	328	eP	P	16 54 53.9	0.0
DIKM	Dikmen	74.11	309	⇑P	P	16 54 54.7	+0.2
DIKM	Dikmen	74.11	309	eP	P	16 54 54.2	-0.3
NACGM	Naroch	74.17	324	eP	P	16 54 54.8	+0.2
	comp=Z,163nm,0.9s,baz=66						
ISAL	Salakas	74.24	325	eP	P	16 54 55.4	+0.4
T35M	Bob Quinn	74.32	34	P	P	16 54 57.0	+1.5
	baz=295,SNR=5.4						
MOR8	Moi Rana	74.36	337	eP	P	16 54 53.1	-2.4
MOR8				IAmb	IAmb	16 54 54.1	
	comp=Z,58nm,1.1s						
GAZ	Gaziantep	74.37	304	eP	P	16 54 56.2	0.0
KMRS	Kahramanmaras	74.47	304	eP	P	16 54 56.8	0.0
SARI	SarD1z-Kayseri	74.49	305	eP	P	16 54 57.1	+0.1
WRGLY	Wrigley	74.51	26	P	P	16 54 57.7	+1.3
	baz=299,SNR=6.0						
DAG	Danmarks Havn	74.53	352	i P	P	16 54 54.1	-2.2
DAG				IAmb	IAmb	16 54 56.6	
	comp=Z,89nm,0.9s						
KONS	Konsvik	74.64	338	eP	P	16 54 56.8	-0.3
BNN	Bunyan	74.74	306	eP	P	16 54 58.1	-0.3
BNN	Bunyan	74.74	306	P	P	16 54 56.8	-1.6
YOZ	Yozgat	74.82	307	eP	P	16 54 58.3	-0.6
BZK	Bozkurt	74.86	310	P	P	16 54 55.7	-3.1
RES	Resolute Bay	75.10	11	LR	LR	17 32 49.3	
	comp=Z,42nm,18.1s,baz=360,slow=40						
RES	Resolute Bay	75.10	11	P	P	16 55 00.0	+0.4
RES	Resolute Bay	75.10	11	P	P	16 55 00.0	+0.4
RES				pmax	pmax		
	comp=Z,154nm,0.8s						
CORM	Corum	75.10	308	eP	P	16 55 00.6	+0.1
VSVD	Vaisvydziai	75.19	326	eP	P	16 55 00.6	+0.1
LIRD	Liard River Hi	75.20	30	P	P	16 55 02.1	+1.6
	baz=298,SNR=48						
SLIT	Slitere, Latvi	75.26	327	eP	P	16 55 00.1	-0.7
KOZT	Kozan	75.28	305	eP	P	16 55 00.8	-0.6
PABE	Paberze	75.38	325	P	P	16 55 01.3	-0.2
PABE	Paberze	75.38	325	eP	P	16 55 01.5	-0.1
YAYL	Yayladag	75.62	303	eP	P	16 55 03.2	-0.3
CANT	Cankiri	75.65	308	eP	P	16 55 02.9	-0.6
KOTAN	Kotaneelee Air	75.77	29	P	P	16 55 04.9	+1.1
	baz=299,SNR=15						
NEEM	North Greenlan	75.94	360	i P	P	16 55 03.6	-1.2
NEEM				IAmb	IAmb	16 55 06.0	
	comp=Z,173nm,0.9s						
BR131	Keskin Array S	75.98	308	P	P	16 55 05.5	0.0
BR131	Keskin Array S	75.98	308	P	P	16 55 05.5	0.0
BR131				pmax	pmax		
	comp=Z,174nm,0.9s						
BR131	Keskin Array S	75.98	308	P	P	16 55 05.0	-0.5
	SNR=93						
BRTR	Keskin Array B	75.98	308	P	P	16 55 05.4	-0.1
	comp=Z,92nm,0.8s,baz=97,slow=5.1,SNR=451						
	comp=Z,92nm,0.8s						
BRTR	Keskin Array B	75.98	308	P	P	16 55 04.6	-0.9
BRTR	Keskin Array B	75.98	308	i P	P	16 55 05.0	-0.5
BRTR				pmax	pmax		
	comp=Z,93nm,0.8s						
MSEY	Mahe Island	76.01	257	i P	P	16 55 05.8	-0.1
	SNR=6.3						
MSEY	Mahe Island	76.01	257	P	P	16 55 06.0	0.0
SORM	Soroca	76.07	317	⇓P	P	16 55 04.8	-0.8
SORM	Soroca	76.07	317	P	P	16 55 04.8	-0.8
NSS	Namsos	76.12	336	eP	P	16 55 04.7	-0.9
NSS				IAmb	IAmb	16 55 05.8	
	comp=Z,38nm,0.8s						
PBUR	Paburge	76.17	326	eP	P	16 55 06.2	+0.2
KIS	Kishinev	76.26	316	eP	P	16 55 05.7	-1.0
	comp=Z,110nm,0.6s						
KIS	Kishinev	76.26	316	eP	P	16 55 05.7	-1.0
KIS				pmax	pmax		
	comp=Z,110nm,0.6s						
MILM	Milestii Mici	76.30	316	⇓iP	P	16 55 04.0	-2.9
	comp=Z,84nm,0.7s						
MILM	Milestii Mici	76.30	316	d iP	P	16 55 04.0	-2.9
MILM				e		16 55 13.0	
MILM				pmax	pmax		
	comp=Z,80nm,0.7s						
SERE	Sereflikochisa	76.34	307	eP	P	16 55 06.9	-0.7
TULEG	Thule	76.37	4	P	P	16 55 05.9	-0.9
TULEG				IAmb	IAmb	16 55 07.5	
	comp=Z,98nm,0.9s						
TULEG	Thule	76.37	4	i P	P	16 55 04.8	-2.0
TULEG				IAmb	IAmb	16 55 07.2	
	comp=Z,101nm,0.9s						
AFSR	Afar-Bala (An	76.50	307	eP	P	16 55 07.9	-0.5
ANTO	Ankara	76.52	308	⇓P	P	16 55 08.0	-0.5
ANTO	Ankara	76.52	308	eP	P	16 55 07.9	-0.6
ANTO	Ankara	76.52	308	P	P	16 55 08.3	-0.2
ANTO				IAmb	IAmb	16 55 09.3	
	comp=Z,88nm,0.8s						
ANTO	Ankara	76.52	308	P	P	16 55 08.3	-0.2
ANTO				pmax	pmax		
	comp=Z,88nm,0.8s						
ANTO	Ankara	76.52	308	P	P	16 55 08.7	+0.2
YESY	Yesilyurt	76.68	306	eP	P	16 55 09.1	-0.4
KULU	Kulu	76.71	307	eP	P	16 55 09.3	-0.3
LEOM	Leova	76.84	315	⇑P	P	16 55 09.7	-0.3
LEOM	Leova	76.84	315	P	P	16 55 09.6	-0.3
DBG	Daneborg	76.87	351	i P	P	16 55 07.6	-2.1
DBG				IAmb	IAmb	16 55 10.1	
	comp=Z,105nm,0.9s						
KDZE	Karadeniz Ereo	76.88	310	⇓P	P	16 55 09.7	-0.7
IAS	Iasi	76.96	316	⇑P	P	16 55 10.4	-0.4
IAS	Iasi	76.96	316	P	P	16 55 10.3	-0.4
TLCR		77.02	314	⇑P	P	16 55 11.0	-0.1
TLCR		77.02	314	P	P	16 55 10.9	-0.1
VLDR	Vladesti	77.21	315	⇑P	P	16 55 12.4	+0.3
BIR	Birlad	77.31	315	⇑P	P	16 55 13.1	+0.4
BIR	Birlad	77.31	315	P	P	16 55 13.0	+0.4
SCTR	Scanteiesti	77.33	315	⇑P	P	16 55 13.2	+0.4
IKL	Isikli	77.34	304	eP	P	16 55 11.8	-1.2
MMAI	Mount Meron Ar	77.35	301	LR	LR	17 36 29.1	
	comp=Z,36nm,18.1s,baz=116,slow=41						
MDUB	Mudurnu	77.39	309	eP	P	16 55 12.8	-0.6
MDUB	Mudurnu	77.39	309	P	P	16 55 12.1	-1.4
TPGR	Topolog	77.41	314	⇑P	P	16 55 13.3	-0.1
CFR	Carcaliu	77.46	314	⇑P	P	16 55 13.3	-0.2
CFR	Carcaliu	77.46	314	P	P	16 55 13.3	-0.2
TBLU	Trondheim	77.47	336	eP	P	16 55 11.9	-1.3
AKKU	Akkuyu-Mersin	77.47	304	eP	P	16 55 12.7	-1.1
LADK	Ladik-KONYA	77.50	306	eP	P	16 55 13.0	-1.1
SLCR	Slobozia Conac	77.51	315	⇓P	P	16 55 14.1	+0.3
GHRR		77.54	315	⇑P	P	16 55 14.5	+0.5
KIZT	Kizilcal	77.57	307	eP	P	16 55 13.6	-0.9
TIRR	Tirgusor	77.59	314	⇓P	P	16 55 14.2	0.0
TIRR	Tirgusor	77.59	314	eP	P	16 55 13.8	-0.4
TIRR	Tirgusor	77.59	314	P	P	16 55 12.0	-2.2
TIRR	Tirgusor	77.59	314	P	P	16 55 12.0	-2.2
TIRR				pmax	pmax		
	comp=Z,144nm,1.0s						
SVRH	Sivrihisar-ESK	77.59	308	eP	P	16 55 13.7	-0.8
KONT	Konya--Tatoy	77.61	306	eP	P	16 55 13.4	-1.2
BERE	Bereket-Mersin	77.64	304	eP	P	16 55 14.2	-0.7
MFTR	Murfatlar	77.70	313	⇑P	P	16 55 15.0	+0.2
PANC	Panciu	77.78	315	⇓P	P	16 55 16.1	+0.8
TLBR	Topalu	77.79	314	⇑P	P	16 55 15.5	+0.2
HARR	Harsova	77.80	314	⇑P	P	16 55 15.7	+0.2
HARR	Harsova	77.80	314	P	P	16 55 15.6	+0.2
TEKE	Tekeli-Mersin	77.80	304	eP	P	16 55 14.5	-1.1
TESR	Tescani	77.81	316	⇓P	P	16 55 15.4	-0.1
LFK	Lefkose	77.85	303	eP	P	16 55 15.2	-0.8
HFS	Hagfors	77.88	332	LR	LR	17 31 53.9	
	comp=Z,99nm,20.2s,baz=49,slow=37						
GULT	Gulveren	77.88	309	eP	P	16 55 15.3	-0.8
LVV	L'vov	77.90	320	eP	P	16 55 15.1	-0.8
LVV				e		17 05 38.8	
LVV				MLR	MLR		
	comp=E,600nm,17.0s						
LVV				MLR	MLR		
	comp=N,200nm,20.0s						
LVV				MLR	MLR		
	comp=Z,200nm,18.0s						
VRI	Vrincioaia	78.05	315	⇑P	P	16 55 17.3	+0.4
VRI	Vrincioaia	78.05	315	eP	P	16 55 16.9	+0.1
VRI	Vrincioaia	78.05	315	P	P	16 55 17.2	+0.4
PSN	Preselentsi	78.07	313	i P	P	16 55 16.9	-0.1
PLOR	Plostina	78.11	315	⇑P	P	16 55 17.5	+0.3
PLOR	Plostina	78.11	315	P	P	16 55 17.5	+0.3
GRER		78.11	315	⇑P	P	16 55 17.9	+0.7
CSS	Mathiatis	78.13	303	eP	P	16 55 16.5	-1.0
CSS	Mathiatis	78.13	303	P	P	16 55 17.0	-0.5
CSS				IAmb	IAmb	16 55 18.0	
	comp=Z,99nm,0.8s						
ICOR	Ion Corvin	78.13	313	⇑P	P	16 55 17.9	+0.6
NC405	NORSAR Array S	78.14	333	P	P	16 55 16.5	-0.5
BORA	Eskisehir	78.16	309	P	P	16 55 16.1	-1.6
BUR08	Bucovina Ar. S	78.20	318	P	P	16 55 17.7	0.0
BUR08				IAmb	IAmb	16 55 18.6	
	comp=Z,44nm,0.8s						
BURAR	Bucovina Array	78.20	317	⇓P	P	16 55 17.9	+0.2
BURAR	Bucovina Array	78.20	317	P	P	16 55 17.6	-0.1
BURAR				IAmb	IAmb	16 55 18.9	
	comp=Z,63nm,0.7s						
BURAR	Bucovina Array	78.20	317	P	P	16 55 17.9	+0.2
BISRR	Bisoca	78.20	315	⇑P	P	16 55 18.5	+0.7
NC303	NORSAR Array S	78.21	334	P	P	16 55 16.7	-0.7
NC303				IAmb	IAmb	16 55 17.7	
	comp=Z,62nm,1.1s						
SEYD	Seydisehir-KON	78.21	306	eP	P	16 55 17.2	-0.8
HSY	Hisarkoy	78.25	303	eP	P	16 55 17.2	-0.9
YKA	Yellowknife Ar	78.32	25	P	P	16 55 18.7	+0.7
	comp=Z,42nm,0.8s,baz=297,slow=5.4,SNR=426						
YKA				PKiKP	PKiKP	17 00 52.9	-1.0
	comp=Z,0.3nm,0.6s,baz=327,slow=1.5,SNR=4.2						
YKA				LR	LR	17 31 55.6	
	comp=Z,44nm,20.2s,baz=320,slow=37						
	comp=Z,42nm,0.8s						
NB201	NORSAR Array S	78.34	333	P	P	16 55 16.7	-1.5
GAZI	Gazipasa	78.35	305	eP	P	16 55 17.3	-1.4
NB2	NORSAR Subarra	78.38	333	P	P	16 55 17.1	-1.3
	comp=Z,35nm,0.6s,baz=54,slow=5.6						
NB2	NORSAR Subarra	78.38	333	P	P	16 55 17.1	-1.3
	baz=54,slow=5.6						
NOA	NORSAR Array B	78.38	333	P	P	16 55 17.4	-1.1
	comp=Z,29nm,0.6s,baz=58,slow=5.1,SNR=133						
NOA				LR	LR	17 33 48.4	
	comp=Z,141nm,18.2s,baz=40,slow=39						
	comp=Z,29nm,0.6s						
COVR	Voineasa-Covas	78.39	316	⇑P	P	16 55 18.9	+0.2
LEF	Lefka	78.39	303	eP	P	16 55 17.9	-1.0
NC204	NORSAR Array S	78.42	334	P	P	16 55 17.8	-0.9
NC602	NORSAR Array S	78.42	333	P	P	16 55 17.2	-1.4
NC602				IAmb	IAmb	16 55 17.9	
	comp=Z,43nm,0.9s						
NC602	NORSAR Array S	78.42	333	eP	P	16 55 17.4	-1.1
ISR	Istrita	78.50	315	⇑P	P	16 55 20.0	+0.6
ISR	Istrita	78.50	315	P	P	16 55 20.0	+0.6
NEHR	Nehoiu	78.52	315	⇑P	P	16 55 20.0	+0.6
OZUR		78.54	316	⇑P	P	16 55 20.3	+0.7
NBO00	NORSAR Array S	78.56	334	P	P	16 55 18.6	-0.7
NBO00				IAmb	IAmb	16 55 19.0	
	comp=Z,58nm,0.9s						
LEHL	Lehliu	78.61	314	⇑P	P	16 55 20.5	+0.6
ISK	Istanbul-Kandi	78.61	310	P	P	16 55 19.4	-0.6
YLV	Yalova	78.61	310	eP	P	16 55 19.4	-0.7
NAO01	NORSAR Array S	78.62	333	P	P	16 55 18.8	-0.9
NAO01				IAmb	IAmb	16 55 29.7	
	comp=Z,94nm,1.5s						
DOMB	Dombas	78.63	335	eP	P	16 55 19.3	-0.4
DOMB				IAmb	IAmb	16 55 19.7	
	comp=Z,52nm,0.8s						
SHUT	Suhut-Afyon	78.65	307	eP	P	16 55 20.0	-0.4
MLR	Muntele Rosu	78.71	315	⇑P	P	16 55 20.7	0.0
MLR	Muntele Rosu	78.71	315	LR	LR	17 32 18.3	
	comp=Z,155nm,20.9s,baz=53,slow=37						
MLR	Muntele Rosu	78.71	315	eP	P	16 55 20.2	-0.4
MLR	Muntele Rosu	78.71	315	P	P	16 55 19.1	-1.5
MLR				IAmb	IAmb	16 55 22.1	
	comp=Z,63nm,1.0s						
MLR	Muntele Rosu	78.71	315	P	P	16 55 19.1	-1.5
MLR				pmax	pmax		
	comp=Z,63nm,1.0s						
BEL	Belsk	78.76	323	eP	P	16 55 20.8	+0.2
KULLO	Kullorsuaq	78.78	1	i P	P	16 55 18.7	-1.6
SUTC	Sutluce-Ispart	78.79	306	eP	P	16 55 20.1	-1.1
PRD	Provadia	78.79	313	i P	P	16 55 21.6	+0.7
SECR		78.84	315	⇓P	P	16 55 21.8	+0.6
DOPR	Dopca	78.84	316	⇓P	P	16 55 21.9	+0.7
MOL	Molde	78.87	336	eP	P	16 55 21.0	0.0
SULR		78.88	314	⇑P	P	16 55 22.2	+0.8
ARCR	ARCALIA	78.96	317	⇓P	P	16 55 22.8	+0.9
ARMT	Armutlu	78.97	310	eP	P	16 55 20.7	-1.3
ISP	Isparta	78.98	307	P	P	16 55 19.9	-2.3
ISP				IAmb	IAmb	16 55 22.2	
	comp=Z,96nm,0.8s						
ISP	Isparta	78.98	307	P	P	16 55 19.9	-2.3
ISP				pmax	pmax		
	comp=Z,96nm,0.8s						
BLEU	Blekinge	79.00	328	i P	P	16 55 19.8	-2.0
TVSB	Tavsanli	79.03	309	eP	P	16 55 21.9	-0.6
SLVT	Silivri	79.12	311	eP	P	16 55 22.6	-0.2
BMR	Baia Mare	79.21	318	⇑P	P	16 55 23.8	+0.7
BMR	Baia Mare	79.21	318	P	P	16 55 23.8	+0.7
RAZG	Razgrad	79.21	313	⇑P	P	16 55 23.6	+0.3
OSL	Oslo	79.22	333	eP	P	16 55 22.6	-0.3
OSL				IAmb	IAmb	16 55 23.0	
	comp=Z,74nm,0.7s						
VOIR		79.29	316	⇑P	P	16 55 23.5	-0.3
VOIR		79.29	316	P	P	16 55 23.5	-0.3
AKN	Aaknes	79.32	336	eP	P	16 55 23.2	-0.3
AKN				IAmb	IAmb	16 55 24.0	
	comp=Z,62nm,0.9s						
KORT	Korkueli	79.46	306	eP	P	16 55 24.5	-0.4
STRU	Stroemstad	79.55	332	i P	P	16 55 22.1	-2.6
TRPA	Tarpa	79.56	319	⇓P	P	16 55 25.4	+0.4
ARR	Arges	79.59	316	⇓P	P	16 55 25.8	+0.4
BORU	Boraas	79.67	330	i P	P	16 55 22.9	-2.5
STHS	Stebnicka Huta	79.69	320	eP	P	16 55 25.1	-0.6
STHS				pmax	pmax		
	comp=Z,30nm,1.2s						
STHS	Stebnicka Huta	79.69	320	eP	P	16 55 25.1	-0.6
SZH	Strazhica	79.72	313	i P	P	16 55 25.9	-0.1
SKAR	Skarslia	79.74	334	eP	P	16 55 25.9	0.0

SKAR				IAmb	IAmb	16 55 26.4	
	comp=Z,46nm,0.9s						
EDC	Edincik	79.75	310	eP	P	16 55 25.9	-0.3
HUMR	Humele	79.76	315	⇑P	P	16 55 26.0	-0.1
MESR	Meseseni	79.78	318	⇓P	P	16 55 27.2	+0.9
COPA	Copaceanca	79.79	314	⇑P	P	16 55 26.2	-0.1
DEL	Delary	79.82	329	iP	P	16 55 24.2	-2.1
KONO	Kongsberg	79.85	333	P	P	16 55 24.1	-2.3
KONO	Kongsberg	79.85	333	P	P	16 55 24.1	-2.3
KONO				pmax	pmax		
	comp=Z,18nm,1.0s						
KONO	Kongsberg	79.85	333	eP	P	16 55 25.9	-0.4
ELL	Elmali	79.89	306	P	P	16 55 26.8	-0.4
ELL	Elmali	79.89	306	P	P	16 55 26.8	-0.4
ELL				pmax	pmax		
	comp=Z,552nm,0.6s						
MARR	Marisel-Cluj	79.90	317	⇑P	P	16 55 27.5	+0.4
GKP	Gorka Klasztor	79.91	325	eP	P	16 55 26.7	0.0
GKP	Gorka Klasztor	79.91	325	eP	P	16 55 26.8	0.0
TJOU	Tjoern	79.94	331	iP	P	16 55 25.5	-1.4
ATD	Arta Tunnel	79.97	278	P	P	16 55 28.9	+1.0
KULA	Kula-Manisa	80.00	308	P	P	16 55 26.6	-1.1
FABU	Falkenberg	80.05	330	iP	P	16 55 25.3	-2.2
BALB	Balikesir	80.05	309	eP	P	16 55 27.2	-0.6
NNZ	Nelson	80.07	147	P	P	16 55 27.1	-0.5
BSD	Bornholm Skovb	80.07	327	eP	P	16 55 27.7	+0.1
BSD	Bornholm Skovb	80.07	327	iP	P	16 55 26.2	-1.4
BSD				IAmb	IAmb	16 55 27.9	
	comp=Z,103nm,0.7s						
LOT	Lotru	80.09	316	⇑P	P	16 55 28.4	+0.3
DRGR		80.10	318	⇑P	P	16 55 28.4	+0.3
DRGR		80.10	318	eP	P	16 55 27.9	-0.2
DRGR		80.10	318	P	P	16 55 28.3	+0.3
OJC	Ojcow	80.10	322	eP	P	16 55 27.9	0.0
OJC	Ojcow	80.10	322	P	P	16 55 27.7	-0.2
OJC	Ojcow	80.10	322	P	P	16 55 27.7	-0.2
OJC				pmax	pmax		
	comp=Z,161nm,1.2s						
KRBG	Karabiga-Canak	80.11	310	eP	P	16 55 27.6	-0.6
ONAU	Onsala	80.18	330	iP	P	16 55 25.5	-2.7
NIE	Niedzica	80.22	321	eP	P	16 55 29.7	+1.1
UKOP	Uzunkopru-Edir	80.23	311	eP	P	16 55 28.9	+0.1
CAME	Cameli-Denizli	80.24	306	eP	P	16 55 27.5	-1.6
HYA	Hoyanger	80.25	335	eP	P	16 55 28.3	-0.1
HYA				IAmb	IAmb	16 55 28.7	
	comp=Z,56nm,0.9s						
AKAS	Kas	80.33	306	eP	P	16 55 27.9	-1.7
AKAS	Kas	80.33	306	P	P	16 55 28.1	-1.6
SUMG	Summit	80.36	356	iP	P	16 55 28.9	-0.5
SUMG				IAmb	IAmb	16 55 31.0	
	comp=Z,258nm,0.8s						
KSL	Kastellorizon	80.39	306	P	P	16 55 27.6	-2.1
FOO	Floro	80.40	336	eP	P	16 55 28.4	-0.8
BJUU	Bjuv	80.43	329	iP	P	16 55 27.9	-1.7
LUNU	Lund	80.48	328	iP	P	16 55 28.0	-1.8
SCO	Scoresbysund	80.50	350	P	P	16 55 29.8	+0.2
SCO	Scoresbysund	80.50	350	P	P	16 55 29.8	+0.2
SCO				pmax	pmax		
	comp=Z,159nm,1.0s						
SCO	Scoresbysund	80.50	350	iP	P	16 55 28.4	-1.2
SCO				IAmb	IAmb	16 55 30.9	
	comp=Z,160nm,1.0s						
ERIK	Erikli-Kesan	80.52	311	eP	P	16 55 30.1	-0.2
FETY	Fethiye	80.53	306	eP	P	16 55 28.0	-2.6
DIM	Dimitrovgrad	80.54	312	iP	P	16 55 30.9	+0.5
UPNV	Upernavik	80.60	1	iP	P	16 55 28.9	-1.3
UPNV				IAmb	IAmb	16 55 30.9	
	comp=Z,63nm,0.8s						
GELI	Tayfur-Gelibol	80.67	311	eP	P	16 55 30.8	-0.4
GZR	Gura Zlata	80.73	316	⇑P	P	16 55 31.6	+0.1
GZR	Gura Zlata	80.73	316	P	P	16 55 31.6	+0.1
ALN	Alexandroupoli	80.73	311	P	P	16 55 28.7	-2.8
ALN	Alexandroupoli	80.73	311	eP	P	16 55 30.8	-0.7
ALN	Alexandroupoli	80.73	311	P	P	16 55 31.0	-0.5
ALN				IAmb	IAmb	16 55 32.0	
	comp=Z,84nm,0.9s						
ALN	Alexandroupoli	80.73	311	P	P	16 55 31.0	-0.5
ALN				pmax	pmax		
	comp=Z,84nm,0.9s						
ENEZ	Enez	80.73	311	P	P	16 55 30.9	-0.6
ENEZ	Enez	80.73	311	eP	P	16 55 30.8	-0.7
KDZ	Kurdzhali	80.81	312	iP	P	16 55 31.8	-0.1
SRE	Strehaia	80.81	315	⇓P	P	16 55 32.5	+0.7
SRE	Strehaia	80.81	315	P	P	16 55 32.5	+0.7
LANS	Liptovska Anna	80.83	321	eP	P	16 55 32.7	+0.8
LANS				pmax	pmax		
	comp=Z,19nm,1.5s						
LANS	Liptovska Anna	80.83	321	eP	P	16 55 32.7	+0.8
ODD1	Odda	80.88	334	eP	P	16 55 31.6	-0.3
ODD1				IAmb	IAmb	16 55 32.2	
	comp=Z,33nm,0.9s						
YER	Yerkesik	80.89	307	P	P	16 55 31.6	-0.9
YER	Yerkesik	80.89	307	eP	P	16 55 32.1	-0.4
COP	Copenhagen	80.93	329	iP	P	16 55 31.7	-0.5
COP				IAmb	IAmb	16 55 33.1	
	comp=Z,173nm,0.7s						
SURR	Surduc	80.95	317	⇑P	P	16 55 32.8	+0.2
RDO	Rodhopi	80.96	312	P	P	16 55 31.7	-1.0
RDO	Rodhopi	80.96	312	eP	P	16 55 32.2	-0.5
RDO	Rodhopi	80.96	312	P	P	16 55 32.2	-0.5
RDO				IAmb	IAmb	16 55 33.3	
	comp=Z,101nm,0.8s						
SIRR	Siria	80.98	317	⇑P	P	16 55 33.0	+0.2
EZN	Ezine	81.03	310	P	P	16 55 32.1	-1.0
PLD	Plovdiv	81.06	313	eP	P	16 55 33.2	0.0
PLD	Plovdiv	81.06	313	iP	P	16 55 33.0	-0.2
ASK	Askoy	81.06	335	eP	P	16 55 32.5	-0.3
MPEP	Malo Peshtene	81.10	314	iP	P	16 55 33.9	+0.5
HOMB	Homborsund	81.13	332	iP	P	16 55 31.4	-1.9
HOMB	Homborsund	81.13	332	eP	P	16 55 33.0	-0.2
HOMB				IAmb	IAmb	16 55 34.1	
	comp=Z,14nm,0.7s						
RGN	Rugen	81.16	327	eP	P	16 55 33.8	+0.4
	comp=Z,171nm,1.2s,baz=53,slow=5.0						
PUNG	Punghina	81.17	315	⇓P	P	16 55 34.2	+0.5
MLSB	Milas	81.17	307	eP	P	16 55 33.3	-0.7
HERR	Herculane	81.20	316	⇑P	P	16 55 34.0	+0.2
PSZ	Piszkesteto	81.21	319	⇑P	P	16 55 34.4	+0.4
PSZ	Piszkesteto	81.21	319	P	P	16 55 34.3	+0.4
OKC	Ostrava-Krasne	81.21	322	eP	P	16 55 33.7	-0.2
OKC	Ostrava-Krasne	81.21	322	eP	P	16 55 33.7	-0.2
LLD	Lille Linde	81.23	328	iP	P	16 55 33.6	-0.2
LLD				IAmb	IAmb	16 55 35.0	
	comp=Z,85nm,0.8s						
DJES	Djerdap	81.24	316	⇓P	P	16 55 34.3	+0.2
RZN	Rozhen	81.25	312	iP	P	16 55 34.2	-0.3
BLS5	Blasjo	81.25	334	eP	P	16 55 33.7	-0.3
BLS5				IAmb	IAmb	16 55 35.4	
	comp=Z,62nm,1.1s						
SMTH	Samothraki Isl	81.28	311	P	P	16 55 32.5	-1.9
BZS	Buzias	81.33	317	⇑P	P	16 55 34.3	-0.3
BZS	Buzias	81.33	317	eP	P	16 55 33.6	-1.0
BZS	Buzias	81.33	317	P	P	16 55 34.3	-0.3
ARG	Arkhangelos	81.41	306	P	P	16 55 34.5	-0.7
ARG				IAmb	IAmb	16 55 35.6	
	comp=Z,95nm,0.9s						
ARG	Arkhangelos	81.41	306	P	P	16 55 34.5	-0.7
ARG				pmax	pmax		
	comp=Z,95nm,0.9s						
URLA	Izmir	81.52	309	eP	P	16 55 35.1	-0.7
VYHS	Vyhne	81.52	320	eP	P	16 55 36.0	+0.4
VYHS				pmax	pmax		
	comp=Z,86nm,1.2s						
VYHS	Vyhne	81.52	320	eP	P	16 55 36.0	+0.4
MORC	Moravsky Berou	81.58	322	⇓P	P	16 55 36.2	+0.4
MORC	Moravsky Berou	81.58	322	P	P	16 55 35.0	-0.9
MORC				IAmb	IAmb	16 55 38.7	
	comp=Z,32nm,0.8s						
MORC	Moravsky Berou	81.58	322	eP	P	16 55 35.9	0.0
MORC	Moravsky Berou	81.58	322	P	P	16 55 35.0	-0.9
MORC				pmax	pmax		
	comp=Z,32nm,0.8s						
SNART	Snartemo	81.63	333	iP	P	16 55 34.1	-1.8
SNART	Snartemo	81.63	333	eP	P	16 55 35.3	-0.6
SNART				IAmb	IAmb	16 55 36.2	
	comp=Z,150nm,1.1s						
MAUC	Maruska	81.64	321	eP	P	16 55 36.4	+0.2
SIGR	SIGRI	81.64	310	P	P	16 55 35.5	-0.8
SIGR	SIGRI	81.64	310	eP	P	16 55 35.3	-1.0
MDVR	Moldovita	81.68	316	⇑P	P	16 55 36.5	0.0
KSP	Ksiaz	81.69	323	eP	P	16 55 36.5	+0.1
KAVA	Kavala	81.71	312	P	P	16 55 35.0	-1.7
THAS	Thassos island	81.76	311	P	P	16 55 33.7	-3.2
VTS	Vitosha	81.78	314	iP	P	16 55 36.9	-0.3
LIA	Limnos Island	81.78	311	P	P	16 55 35.6	-1.4
KRLC	Kraliky	81.84	322	eP	P	16 55 37.2	0.0
KRLC	Kraliky	81.84	322	eP	P	16 55 37.2	0.0
KMY	Karmoy	81.86	334	eP	P	16 55 37.1	0.0
OSTC	Ostas	81.88	323	eP	P	16 55 37.4	0.0
OSTC	Ostas	81.88	323	eP	P	16 55 37.4	0.0
DPC	Dobruska-Polom	81.94	323	eP	P	16 55 38.1	+0.4
DPC	Dobruska-Polom	81.94	323	eP	P	16 55 38.1	+0.4
MMB	Musomiste	81.95	313	iP	P	16 55 37.5	-0.5
MUD	Monsted U'grnd	81.95	330	iP	P	16 55 36.6	-1.0
MUD				IAmb	IAmb	16 55 38.3	
	comp=Z,69nm,0.8s						
CHVC	Chvalec	81.95	323	eP	P	16 55 37.8	0.0
CHVC	Chvalec	81.95	323	eP	P	16 55 37.8	0.0
NVR	Nevrokopi	81.98	312	P	P	16 55 38.3	+0.2
JAVC	Velka Javorina	81.99	321	eP	P	16 55 39.3	+1.2
UPC	Upice	82.02	323	eP	P	16 55 38.1	0.0
UPC	Upice	82.02	323	eP	P	16 55 38.1	0.0
RUE	Ruedersdorf	82.09	326	eP	P	16 55 39.0	+0.6
RUE	Ruedersdorf	82.09	326	eP	P	16 55 38.8	+0.4
	comp=Z,119nm,0.8s,baz=53,slow=5.0						
KOKK	Kokkinochori,	82.14	312	P	P	16 55 38.2	-0.7
KKB	Krupnik	82.24	313	iP	P	16 55 39.3	-0.1
SRS	Serrai	82.27	312	P	P	16 55 38.4	-1.2
SRS	Serrai	82.27	312	eP	P	16 55 38.7	-0.9
SMOL	Smolenice	82.31	321	eP	P	16 55 40.7	+1.0
SMOL				pmax	pmax		
	comp=Z,46nm,1.2s						
SSRD	Sdr. Stenderup	82.34	329	iP	P	16 55 40.0	+0.4
SSRD				IAmb	IAmb	16 55 40.8	
	comp=Z,162nm,0.7s						
VRAC	Vranov	82.35	322	⇓P	P	16 55 40.6	+0.7
VRAC	Vranov	82.35	322	LR	LR	17 33 46.9	
	comp=Z,178nm,20.0s,baz=50,slow=37						
VRAC	Vranov	82.35	322	eP	P	16 55 40.2	+0.3
VRAC	Vranov	82.35	322	P	P	16 55 40.6	+0.7
OUR	Ouranopolis	82.38	311	P	P	16 55 39.0	-1.2
OUR	Ouranopolis	82.38	311	eP	P	16 55 39.4	-0.8
KARP	Karpathos	82.41	306	P	P	16 55 40.2	-0.3
MODS	Modra-Piesok	82.47	321	eP	P	16 55 41.3	+0.7
MODS				pmax	pmax		
	comp=Z,114nm,1.2s						
MODS	Modra-Piesok	82.47	321	eP	P	16 55 41.2	+0.7
KRUC	Moravsky	82.59	322	eP	P	16 55 41.3	+0.2
FRGS	Fruska Gora	82.66	317	⇑P	P	16 55 41.8	+0.3
FRGS	Fruska Gora	82.66	317	⇓iP	P	16 55 41.4	-0.2
KNT	Kendrikon	82.70	312	P	P	16 55 40.2	-1.6
KNT	Kendrikon	82.70	312	eP	P	16 55 40.3	-1.6
PVCC	Panska Ves	82.78	324	eP	P	16 55 42.3	+0.2
PVCC	Panska Ves	82.78	324	eP	P	16 55 42.3	+0.2
MORH	Mrgy, Hungar	82.82	318	⇓P	P	16 55 42.2	-0.2
VAY	Valandovo	82.84	313	iP	P	16 55 42.1	-0.4
HORT	Hortiatis	82.84	312	eP	P	16 55 41.1	-1.6
STIP	Stip	82.91	313	iP	P	16 55 41.8	-1.1
BRG	Berggiesshubel	82.92	324	iP	P	16 55 42.9	+0.2
BRG				Amp		16 55 44.8	
	comp=Z,57nm,1.1s						
BRG	Berggiesshubel	82.92	324	P	P	16 55 59.2	+16
BRG				Amp		16 56 00.3	
	comp=Z,9.5nm,0.8s						
BRG	Berggiesshubel	82.92	324	iP	P	16 55 42.9	+0.2
BRG						16 55 59.2	
BRG				pmax	pmax		
	comp=Z,57nm,1.1s						
BRG				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BRG	Berggiesshubel	82.92	324	eP	P	16 55 42.7	0.0
	comp=Z,57nm,1.0s,baz=53,slow=5.0						
BSEG	Bad Segeberg	82.95	328	eP	P	16 55 42.5	-0.3
	comp=Z,90nm,0.8s,baz=53,slow=5.0						
TREC	Trest	82.97	322	eP	P	16 55 43.4	+0.3
TREC	Trest	82.97	322	eP	P	16 55 43.4	+0.3
GOPC	GO Pecny, Ondr	83.00	323	eP	P	16 55 43.5	+0.2
GOPC	GO Pecny, Ondr	83.00	323	eP	P	16 55 43.5	+0.2
DIVS	Divibare	83.09	316	P	P	16 55 43.2	-0.7
DIVS				IAmb	IAmb	16 55 45.2	
	comp=Z,76nm,1.0s						
DIVS	Divibare	83.09	316	⇓iP	P	16 55 43.3	-0.7
PRU	Pruhonice	83.09	323	eP	P	16 55 43.9	+0.2
PRU	Pruhonice	83.09	323	eP	P	16 55 43.9	+0.2
KYMI	Kymi, Euboea I	83.12	310	P	P	16 55 42.7	-1.4
GRG	Griva	83.13	312	P	P	16 55 43.1	-1.0
GRG	Griva	83.13	312	eP	P	16 55 43.1	-1.0
TEKS	Tekeris	83.15	317	⇑iP	P	16 55 43.2	-0.9
CLL	Collm	83.16	325	P	P	16 55 43.8	-0.2
CLL				IAmb	IAmb	16 55 45.9	
	comp=Z,82nm,0.8s						
CLL	Collm	83.16	325	⇓iP	P	16 55 44.0	0.0
	comp=Z,85nm,0.8s						
CLL				epP	pP	16 56 07.0	+0.7
CLL				e(PP)		16 59 04.0	
CLL				ePS	PnS	17 07 01.0	+2.8
CLL				eSSSS		17 17 36.0	
CLL				AMS	AMS	17 35 00.0	
	comp=Z,200nm,21.0s						
CLL	Collm	83.16	325	⇓iP	P	16 55 44.0	0.0
CLL				e*PP	pP	16 56 07.0	+0.7
CLL				pmax	pmax		
	comp=Z,85nm,0.8s						
CLL	Collm	83.16	325	eP	P	16 55 43.9	0.0
	comp=Z,85nm,0.8s,baz=53,slow=5.0						
FBE	Freiberg	83.19	324	eP	P	16 55 44.1	-0.1
	comp=Z,71nm,0.9s,baz=53,slow=5.0						
SKO	Skopje	83.25	314	iP	P	16 55 45.2	+0.5
ZKR	Zakros	83.30	306	P	P	16 55 44.4	-0.6
RONA	Rosalia, Austr	83.39	321	iP	P	16 55 45.4	+0.1
	comp=Z,16nm,1.2s,SNR=7.1						
FLTG	Flechtingen	83.45	326	eP	P	16 55 45.4	-0.1
	comp=Z,122nm,1.2s,baz=53,slow=5.0						
LIT	Litokhoron	83.49	312	P	P	16 55 44.6	-1.4
LIT	Litokhoron	83.49	312	eP	P	16 55 44.7	-1.3
LIT	Litokhoron	83.49	312	P	P	16 55 44.7	-1.3
LIT				IAmb	IAmb	16 55 47.1	
	comp=Z,50nm,0.8s						
LIT	Litokhoron	83.49	312	P	P	16 55 44.7	-1.3
LIT				pmax	pmax		
	comp=Z,50nm,0.8s						
CONA	Conrad Observa	83.51	321	iP	P	16 55 46.5	+0.5
	comp=Z,47nm,0.7s,SNR=29						
SJES	Sjenica	83.53	315	⇓iP	P	16 55 46.2	0.0
BBLS	Lazići	83.58	316	⇓iP	P	16 55 46.1	-0.3
VLY	Voula,Athens	83.71	309	P	P	16 55 44.6	-2.5
HAPS	Han Pijesak,BI	83.74	317	⇓iP	P	16 55 47.4	+0.1
IVA	Berane	83.78	315	⇓iP	P	16 55 47.4	-0.1
ATAL	Atalanti	83.83	310	P	P	16 55 45.5	-2.2
NEUB	Neuenburg	83.84	325	eP	P	16 55 47.3	-0.2
	comp=Z,183nm,1.3s,baz=53,slow=5.0						
ASSE	Asse, Remlinge	83.85	326	eP	P	16 55 47.4	0.0
	comp=Z,179nm,1.9s,baz=53,slow=5.0						
LON	Longmire	83.86	40	P	P	16 55 47.2	-0.5
LON	Longmire	83.86	40	P	P	16 55 47.3	-0.5
LON				pmax	pmax		
	comp=Z,27nm,1.1s						
PLE	Pljevlja	83.86	316	⇓iP	P	16 55 47.0	-0.9
ICESG	Greenland Ices	83.86	355	iP	P	16 55 47.1	-0.6
ICESG				IAmb	IAmb	16 55 49.0	
	comp=Z,175nm,0.8s						
KZN	Kozani	83.87	312	P	P	16 55 47.2	-0.8
CKRC	Cesky Krumlov	83.88	322	eP	P	16 55 48.2	+0.4
CKRC	Cesky Krumlov	83.88	322	eP	P	16 55 48.2	+0.4
VILL	Villia	83.89	310	P	P	16 55 46.0	-2.1
FNA	Florina	83.89	313	P	P	16 55 46.6	-1.4
FNA	Florina	83.89	313	P	P	16 55 46.9	-1.1
FNA	Florina	83.89	313	P	P	16 55 46.9	-1.1
FNA				pmax	pmax		
	comp=Z,22nm,0.9s						
NRDL	Niedersach Rie	83.91	327	eP	P	16 55 47.7	-0.1
	comp=Z,96nm,1.1s,baz=53,slow=5.0						
HLG	Helgoland	83.93	329	eP	P	16 55 47.9	0.0
	comp=Z,150nm,1.1s,baz=53,slow=5.0						
TANN	Tannenbergstha	83.95	324	eP	P	16 55 48.0	-0.2
	comp=Z,71nm,1.7s,baz=53,slow=5.0						
WERD	Werda	84.01	324	eP	P	16 55 48.3	-0.1
	comp=Z,56nm,1.0s,baz=53,slow=5.0						
KOME	Kolasin	84.03	315	⇓iP	P	16 55 48.2	-0.6
AXAR	Agios Charalam	84.04	310	P	P	16 55 46.8	-2.0
PHP	Peshkopia	84.04	314	P	P	16 55 47.5	-1.3
GUNZ	Gunzen	84.05	324	eP	P	16 55 48.7	+0.1
	comp=Z,132nm,1.4s,baz=53,slow=5.0						
NKC	Novy Kostel	84.06	324	eP	P	16 55 48.9	+0.2
NKC	Novy Kostel	84.06	324	eP	P	16 55 48.9	+0.2
PLN	Plauen	84.07	324	eP	P	16 55 48.8	+0.1
	comp=Z,60nm,1.2s,baz=53,slow=5.0						
WERN	Wernitzgruen	84.07	324	eP	P	16 55 48.6	-0.1
	comp=Z,111nm,0.9s,baz=53,slow=5.0						
ARSA	Arzberg	84.07	320	iP	P	16 55 48.7	-0.1
	comp=Z,17nm,0.9s,SNR=8.0						
THL	Klokotos Trika	84.08	311	P	P	16 55 46.7	-2.2
KHC	Kasperske Hory	84.10	323	eP	P	16 55 48.5	-0.4
KHC				epP	pP	16 56 06.5	-4.8
KHC	Kasperske Hory	84.10	323	eP	P	16 55 48.5	-0.4
KHC				e		16 56 06.5	
OHR	Ohrid	84.10	313	iP	P	16 55 48.7	-0.4
RETH	Rethem/Aller,	84.13	327	eP	P	16 55 49.0	+0.2
	comp=Z,201nm,1.0s,baz=53,slow=5.0						
AGG	Agios Georgios	84.14	311	P	P	16 55 47.3	-2.0
AGG	Agios Georgios	84.14	311	eP	P	16 55 47.2	-2.0
AGG	Agios Georgios	84.14	311	P	P	16 55 47.6	-1.7
AGG	Agios Georgios	84.14	311	P	P	16 55 47.6	-1.7
AGG				pmax	pmax		
	comp=Z,22nm,0.8s						
IDI	Anoyia	84.17	307	P	P	16 55 48.1	-1.5
IDI	Anoyia	84.17	307	P	P	16 55 48.1	-1.5
IDI				IAmb	IAmb	16 55 52.2	
	comp=Z,66nm,0.9s						
CLZ	Clausthal	84.17	326	eP	P	16 55 49.2	0.0
	comp=Z,290nm,0.9s,baz=53,slow=5.0						
GEC2	GERESS Array S	84.19	323	P	P	16 55 48.2	-1.2
GEC2				IAmb	IAmb	16 55 50.8	
	comp=Z,42nm,0.8s						
GEC2	GERESS Array S	84.19	323	eP	P	16 55 49.5	+0.1
	comp=Z,54nm,0.8s,baz=53,slow=5.0						
GERES	GERESS Array B	84.19	323	P	P	16 55 49.4	-0.1
	comp=Z,30nm,0.7s,baz=54,slow=5.0,SNR=14						
GERES				LR	LR	17 36 03.9	
	comp=Z,180nm,21.0s,baz=72,slow=38						
	comp=Z,30nm,0.7s						
GERES	GERESS Array B	84.19	323	P	P	16 55 49.1	-0.4
ILULI	Ilulissat	84.21	359	iP	P	16 55 47.8	-1.2
ILULI				IAmb	IAmb	16 55 50.7	
	comp=Z,99nm,0.9s						
UPM	Unac-Piva	84.23	316	⇓iP	P	16 55 49.0	-0.8
UPM	Unac-Piva	84.23	316	⇓iP	P	16 55 49.1	-0.8
MOX	Moxa	84.26	325	eP	P	16 55 49.8	+0.1
	baz=53,slow=5.0						
MAKR	Makrakomi, Fth	84.27	311	P	P	16 55 47.9	-2.1
KBN	Korca	84.36	313	P	P	16 55 49.2	-1.2
B08A	Colville Reser	84.36	38	P	P	16 55 50.6	+0.3
B08A				IAmb	IAmb	16 55 52.4	
	comp=Z,46nm,0.9s						
KRND	KRANIDI	84.38	309	P	P	16 55 59.6	+9.1
MANZ	Manzenberg	84.39	324	eP	P	16 55 50.6	+0.3
	comp=Z,18nm,1.1s,baz=53,slow=5.0						
PDG	Podgorica	84.42	315	⇑P	P	16 55 50.6	0.0
PDG	Podgorica	84.42	315	P	P	16 55 50.5	0.0
PDG	Podgorica	84.42	315	⇓iP	P	16 55 50.2	-0.4
NKME	Niksic	84.43	315	⇓iP	P	16 55 50.4	-0.3
MOA	Molln	84.44	321	iP	P	16 55 50.9	+0.2
	comp=Z,16nm,0.8s,SNR=9.4						
ROTZ	Rotzenmuhle	84.46	324	eP	P	16 55 51.0	+0.3
	baz=53,slow=5.0						
BLY	Banja Luka	84.46	318	⇓iP	P	16 55 50.7	-0.1
A051A	Mrakovica	84.49	318	⇓iP	P	16 55 50.5	-0.5
GTTG	Gottingen	84.56	326	eP	P	16 55 51.5	+0.4
	comp=Z,230nm,0.9s,baz=53,slow=5.0						
CEME	Cevo	84.57	315	⇓iP	P	16 55 50.8	-0.6
DRME	Dracevica, Mon	84.59	315	⇓iP	P	16 55 51.1	-0.4
DRME	Dracevica, Mon	84.59	315	⇓iP	P	16 55 51.1	-0.4
TIR	Tirane	84.59	314	⇑P	P	16 55 51.7	+0.2
TIR	Tirane	84.59	314	P	P	16 55 51.0	-0.4
TIR	Tirane	84.59	314	eP	P	16 55 51.1	-0.4
TIR	Tirane	84.59	314	P	P	16 55 51.6	+0.2
BRY	Bratogost	84.62	316	⇑iP	P	16 55 51.3	-0.5
BRY	Bratogost	84.62	316	⇓iP	P	16 55 50.8	-1.0
SERG	Sergoula	84.62	310	P	P	16 55 49.5	-2.3
ANX	Ano Chora	84.63	311	P	P	16 55 50.2	-1.7
ULC	Ulcinj	84.66	315	⇓iP	P	16 55 51.2	-0.7
GUR	Goura	84.67	310	P	P	16 55 48.9	-3.2
SOKA	Soboth	84.67	320	iP	P	16 55 51.7	-0.2
	comp=Z,22nm,0.7s,SNR=20						
MGRS	Mrkonjic Grad	84.70	318	eP	P	16 55 52.4	+0.4
BUM	Brajici-Budva	84.71	315	⇓iP	P	16 55 51.6	-0.6
EFP	Efpalio	84.72	310	P	P	16 55 50.5	-1.7
LSK	Leskovik	84.72	312	P	P	16 55 51.3	-1.0
IMMV	Iera Moni Meta	84.74	307	P	P	16 55 51.8	-0.6
IMMV	Iera Moni Meta	84.74	307	eP	P	16 55 51.8	-0.6
KLV	Kalavryta, Ach	84.75	310	P	P	16 55 50.3	-2.1
H04A	Detroit Lake	84.76	42	P	P	16 55 52.2	-0.2
H04A				IAmb	IAmb	16 55 54.6	
	comp=Z,67nm,1.5s						
LAKA	Lakka	84.76	310	P	P	16 55 50.6	-1.9
TREB	Trebinje	84.83	316	⇑iP	P	16 55 51.9	-0.8
SRKY	Kupres RS	84.84	317	⇑iP	P	16 55 52.5	-0.3
RODP	Rodopos	84.85	307	P	P	16 55 51.5	-1.4
BIOA	Bad Ischl, Aus	84.88	322	iP	P	16 55 52.9	0.0
	comp=Z,54nm,1.4s,SNR=17						
HCY	Herceg Novi	84.89	315	⇑iP	P	16 55 52.3	-0.7
HCY	Herceg Novi	84.89	315	⇓iP	P	16 55 52.2	-0.7
CRES	Cresnjev	84.90	319	⇓iP	P	16 55 52.7	-0.3
GVDS	Gavdos	84.96	306	P	P	16 55 52.5	-0.9
GVDS	Gavdos	84.96	306	eP	P	16 55 52.6	-0.9
GVD	Gavdhos	84.97	306	P	P	16 55 52.3	-1.2
GVD	Gavdhos	84.97	306	eP	P	16 55 52.4	-1.1
KTHA	Kythira Island	85.00	308	P	P	16 55 51.7	-2.0
A050A	Klekovaca	85.00	318	⇓iP	P	16 55 53.3	-0.3
ANKY	Antikythira Is	85.02	308	P	P	16 55 51.8	-2.0
GRA1	Grafenberg Arr	85.02	324	P	P	16 55 51.3	-2.2
GRF	Grafenberg Arr	85.02	324	P	P	16 55 51.3	-2.2
GRF				pmax	pmax		
	comp=Z,177nm,1.1s						
GRF	Grafenberg Arr	85.02	324	eP	P	16 55 54.0	+0.4
	comp=Z,202nm,1.1s,baz=53,slow=5.0						
OBKA	Obir	85.04	320	iP	P	16 55 53.3	-0.5
	comp=Z,43nm,1.3s,SNR=16						
OBKA	Obir	85.04	320	⇓iP	P	16 55 52.8	-1.0
KNDR	Palaiochora Ch	85.06	307	P	P	16 55 53.2	-0.7
DRO	Drossia	85.09	310	P	P	16 55 53.1	-1.0
STON	Ston	85.16	316	⇓iP	P	16 55 53.0	-1.3
IBBN	Ibbenburen	85.17	328	eP	P	16 55 54.6	+0.5
	comp=Z,285nm,0.8s,baz=53,slow=5.0						
BOJS	Bojanci	85.20	319	⇓iP	P	16 55 54.3	-0.1
IGT	Igoumenitsa	85.22	312	P	P	16 55 53.1	-1.6
RAR	Rarotonga	85.25	116	LR	LR	17 26 37.7	
	comp=Z,61nm,20.6s,baz=302,slow=30						
RJOB	Jochberg	85.32	322	eP	P	16 55 55.4	+0.2
	comp=Z,98nm,0.9s,baz=53,slow=5.0						
ITM	Ithomi	85.33	309	P	P	16 55 54.0	-1.3
ITM	Ithomi	85.33	309	P	P	16 55 54.3	-1.0
TSLK	Tsoukalades, L	85.36	311	P	P	16 55 54.2	-1.2
LKD2	Lefkada island	85.38	311	P	P	16 55 53.8	-1.7
LKD2	Lefkada island	85.38	311	eP	P	16 55 54.3	-1.2
NYDR	Nydri-Lefkada	85.39	311	P	P	16 55 54.0	-1.5
KBA	Koelnbreinsper	85.40	321	iP	P	16 55 55.2	-0.4
	comp=Z,32nm,0.7s,SNR=27						
HUMO	Hull Mountain	85.41	44	P	P	16 55 55.9	+0.3
EVGI	Lefkada island	85.47	311	P	P	16 55 54.5	-1.4
KEK	Kerkira	85.47	312	P	P	16 55 55.5	-0.5
KEK	Kerkira	85.47	312	P	P	16 55 56.0	0.0
KEK				IAmb	IAmb	16 55 56.9	
	comp=Z,83nm,0.9s						
MYKA	Terra Mystica	85.49	321	iP	P	16 55 55.2	-0.8
	comp=Z,25nm,0.8s,SNR=16						
KASTN	Kahler Asten	85.53	326	eP	P	16 55 56.3	+0.3
	comp=Z,79nm,0.8s,baz=53,slow=5.0						
CEY	Cerknica	85.54	320	⇓iP	P	16 55 55.6	-0.6
PYL	PYLOS	85.60	309	P	P	16 55 54.1	-2.5
FSK	Fiskardo	85.61	311	P	P	16 55 54.5	-2.1
NEW	Newport	85.62	37	P	P	16 55 57.3	+0.8
	comp=Z,20nm,0.9s,baz=299,slow=3.9,SNR=16						
NEW				LR	LR	17 33 46.4	
	comp=Z,27nm,20.2s,baz=312,slow=35						
	comp=Z,20nm,0.9s						
NEW	Newport	85.62	37	P	P	16 55 57.4	+0.9
	baz=306,SNR=11						
PRED	Cave del Predi	85.64	321	P	P	16 55 55.0	-1.7
VLS	Valsamata	85.74	311	P	P	16 55 55.5	-1.8
BIGH	Upper Bighouse	85.79	337	eP	P	16 55 56.0	-1.1
DMLN	Damoulianata-K	85.85	311	P	P	16 55 56.4	-1.5
SKDS	Skadanscina	85.89	320	⇓iP	P	16 55 57.1	-0.8
FUR	Furstenfeldbru	85.90	323	eP	P	16 55 58.2	+0.3
	comp=Z,160nm,1.0s,baz=53,slow=5.0						
BUG	Bochum--Univer	85.95	327	eP	P	16 55 58.2	+0.2
	comp=Z,82nm,1.0s,baz=53,slow=5.0						
CLUD	Cludinico	86.02	321	P	P	16 55 57.5	-1.1

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YBH   Yreka Blue Hor   86.04  45   P      P      16 55 60.0 +1.2
      comp=Z,20nm,1.0s,baz=220,slow=1.3,SNR=14
YBH                                LR     LR     17 27 42.8
      comp=Z,37nm,22.0s,baz=320,slow=31
      comp=Z,20nm,1.0s
YBH   Yreka Blue Hor   86.04  45   P      P      16 56 00.0 +1.2
ABTA  Abfaltersbach    86.06 321 i P      P      16 55 57.7 -1.1
      comp=Z,57nm,0.7s,SNR=45
TNS   Taunus Mts       86.13 326 eP     P      16 55 59.0  0.0
      comp=Z,68nm,1.7s,baz=53,slow=5.0
STAL  STALIGIAL        86.23 321   P      P      16 55 58.5 -1.1
STAL                               IAmb   IAmb   16 55 59.5
      comp=Z,76nm,0.9s
WATA  Walderalm        86.23 322 i P      P      16 55 59.1 -0.6
      comp=Z,51nm,0.8s,SNR=19
WTTA  Wattenberg       86.24 322 i PcP    P      16 55 59.5 -0.3
      comp=Z,78nm,0.8s,SNR=38
CIMO  Cimolais         86.35 321   P      P      16 55 59.1 -1.1
CIMO                               IAmb   IAmb   16 55 60.0
      comp=Z,38nm,0.7s
SFJD  Kangerlussuaq    86.43 359   LR     LR     17 36 25.4
      comp=Z,72nm,19.4s,baz=6.0,slow=37
SFJD  Kangerlussuaq    86.43 359   P      P      16 55 59.6 -0.5
SFJD                               IAmb   IAmb   16 56 01.0
      comp=Z,45nm,0.7s
SFJD  Kangerlussuaq    86.43 359   P      P      16 55 59.6 -0.5
SFJD                               pmax   pmax
      comp=Z,45nm,0.7s
SFJD  Kangerlussuaq    86.43 359 i P      P      16 55 58.3 -1.8
DRUM  Mains of Drumt   86.43 335⇑eP     P      16 55 59.6 -0.7
DRUM                               IAmb   IAmb   16 56 00.1
      comp=Z,56nm,0.7s
MOTA  Moosalm          86.48 322 i P      P      16 56 00.2 -0.7
      comp=Z,43nm,0.7s,SNR=18
SQTA  Sankt Quirin     86.50 322 i P      P      16 56 00.4 -0.6
      comp=Z,82nm,1.2s,SNR=23
LINV  Loch Inver, As   86.51 337⇑eP     P      16 55 60.0 -0.6
LINV                               IAmb   IAmb   16 56 00.6
      comp=Z,66nm,0.9s
RETA  Reutte           86.58 323 i P      P      16 56 00.8 -0.5
      comp=Z,19nm,0.8s,SNR=11
AHRW  Bad Neuenahr-A   86.61 326 eP     P      16 56 01.2 -0.1
      comp=Z,42nm,0.8s,baz=53,slow=5.0
STU   Stuttgart        86.64 324 eP     P      16 56 01.4 -0.1
      comp=Z,235nm,0.8s,baz=53,slow=5.0
UBR   Ueberruh         86.82 323 eP     P      16 56 02.4 -0.1
      comp=Z,112nm,0.9s,baz=53,slow=5.0
WALA  Waterton Lakes   86.84  35   P      P      16 56 02.5 -0.1
DY2G  Dye2             86.84 357 i P      P      16 56 01.7 -0.7
DY2G                               IAmb   IAmb   16 56 04.3
      comp=Z,99nm,0.7s
FETA  Feichten         86.88 322 i P      P      16 56 02.4 -0.5
      comp=Z,61nm,1.2s,SNR=20
SGRT  San Giovanni R   86.98 316   P      P      16 56 02.4 -1.0
MATE  Matera           86.98 314 ⇑P      P      16 56 02.6 -0.7
BTNL  Ternell          87.05 327 dP     P      16 56 03.2 -0.3
      comp=Z,16nm,0.8s
LEWI  Lewis, Hebride   87.08 338 eP     P      16 56 02.4 -1.0
LEWI                               IAmb   IAmb   16 56 03.5
      comp=Z,93nm,0.9s
MEM   Membach          87.09 327 dP     P      16 56 03.2 -0.5
      comp=Z,34nm,0.8s
DAVA  Damuels          87.18 323 i PcP    P      16 56 03.9 -0.5
      comp=Z,75nm,0.8s,SNR=25
BHOU  Houvegnez        87.26 327 dP     P      16 56 04.5  0.0
      comp=Z,17nm,0.8s
KPL   Plockton         87.28 337⇑eP     P      16 56 03.8 -0.6
KPL                                IAmb   IAmb   16 56 04.4
      comp=Z,83nm,0.8s
BSTI  Sart Tilman      87.32 327 dP     P      16 56 04.8  0.0
TEOL  Teolo            87.34 320   P      P      16 56 04.5 -0.6
BFO   Black Forest     87.36 324   P      P      16 56 04.6 -0.5
BFO                                IAmb   IAmb   16 56 07.5
      comp=Z,27nm,0.7s
BFO   Black Forest     87.36 324   P      P      16 56 04.6 -0.5
BFO                                pmax   pmax
      comp=Z,27nm,0.7s
BFO   Black Forest     87.36 324 eP     P      16 56 05.0  0.0
      comp=Z,34nm,0.9s,baz=53,slow=5.0
INVG  Invergeldie, C   87.38 335 eP     P      16 56 03.6 -1.3
FUORN Ofenpass-Fuorn   87.38 322   P      P      16 56 04.9 -0.5
MOD   Modoc Plateau    87.44  44   P      P      16 56 06.3 +0.6
MOD                                IAmb   IAmb   16 56 08.2
      comp=Z,45nm,1.1s
DAVOX Davos/Dischmat   87.49 322   LR     LR     17 38 32.4
      comp=Z,218nm,20.1s,baz=47,slow=38
BMO   Blue Mountains   87.53  40   P      P      16 56 06.9 +0.8
BMO   Blue Mountains   87.53  40   P      P      16 56 06.9 +0.8
BMO                                pmax   pmax
      comp=Z,18nm,1.0s
BCLA  Clavier          87.56 327 dP     P      16 56 05.2 -0.7
      comp=Z,14nm,0.8s
BCLA                             dpP    pP     16 56 27.1 -1.3
GDLE  Glaisdale, N Y   87.57 333 eP     P      16 56 04.6 -1.3
WLF   Walferdange      87.63 326   P      P      16 56 05.8 -0.5
WLF                                IAmb   IAmb   16 56 07.8
      comp=Z,62nm,0.8s
WLF   Walferdange      87.63 326   P      P      16 56 05.8 -0.5
WLF                                pmax   pmax
      comp=Z,62nm,0.8s
WLF   Walferdange      87.63 326 dP     P      16 56 06.4 +0.1
      comp=Z,56nm,0.8s
WLF   Walferdange      87.63 326 eP     P      16 56 06.5 +0.3
      comp=Z,69nm,0.8s,baz=53,slow=5.0
BGES  Gesves           87.68 327 dP     P      16 56 06.0 -0.6
      comp=Z,11nm,1.0s
GUMA  Gualdo di Mace   87.71 318          P      16 56 07.8 +0.9
GUMA                               IAmb   IAmb   16 56 08.5
      comp=Z,92nm,0.9s
J08A  Circle Bar Ran   87.72  42   P      P      16 56 08.3 +1.3
EDMD  Edmundbyers      87.74 333⇑eP     P      16 56 06.2 -0.5
TIP   Timpagrande      87.75 313 ⇓P      P      16 56 07.0 -0.2
TIP   Timpagrande      87.75 313   P      P      16 56 05.8 -1.3
TIP                                IAmb   IAmb   16 56 07.8
      comp=Z,22nm,0.6s
RCHB  Rochefort        87.76 327 dP     P      16 56 06.1 -0.7
      comp=Z,47nm,0.8s
SALO  Salr             87.84 321   P      P      16 56 06.6 -0.8
EKA   Eskdalemuir Ar   87.85 334   LR     LR     17 39 03.5
      comp=Z,134nm,19.5s,baz=358,slow=38
FDMO  Fiordimonte      87.88 318   P      P      16 56 07.7 +0.1
ESK   Eskdalemuir      87.88 334 eP     P      16 56 05.9 -1.4
ESK                                IAmb   IAmb   16 56 07.2
      comp=Z,36nm,1.0s
ESK   Eskdalemuir      87.88 334   P      P      16 56 06.2 -1.1
ESK                                IAmb   IAmb   16 56 07.5
      comp=Z,35nm,0.9s
ESK   Eskdalemuir      87.88 334   P      P      16 56 06.2 -1.1
ESK                                pmax   pmax
      comp=Z,35nm,1.0s
INTR  Introdacqua      87.97 317   P      P      16 56 07.9 -0.3
INTR                               IAmb   IAmb   16 56 10.2
      comp=Z,30nm,0.9s
CAMP  Campotosto       87.97 317   P      P      16 56 07.9 -0.3
CAMP                               IAmb   IAmb   16 56 09.5
      comp=Z,60nm,0.8s
NRCA  Norcia           87.98 318   P      P      16 56 07.7 -0.5
SNF   Seneffe          87.99 328 dP     P      16 56 07.6 -0.3
      comp=Z,37nm,0.9s
PGBU  Glenifferbraes   88.00 335 eP     P      16 56 07.5 -0.4
PGBU                               IAmb   IAmb   16 56 09.4
      comp=Z,60nm,0.9s
LAWE  Loch Awe, Argy   88.00 336 eP     P      16 56 06.3 -1.5
ECH   Echery           88.04 325   P      P      16 56 07.7 -0.6
ECH                                IAmb   IAmb   16 56 09.5
      comp=Z,24nm,0.9s
ECH   Echery           88.04 325   P      P      16 56 07.7 -0.6
ECH                                pmax   pmax
      comp=Z,24nm,0.9s
FCC   Fort Churchill   88.05  20   P      P      16 56 08.2 +0.2
FCC   Fort Churchill   88.05  20   P      P      16 56 08.2 +0.2
FCC                                pmax   pmax
      comp=Z,96nm,0.9s
MURB  Monte Urbino     88.08 318   P      P      16 56 09.2 +0.6
DOU   Dourbes          88.11 327 dP     P      16 56 08.0 -0.6
      comp=Z,40nm,0.9s
WACR  West Acre        88.15 331⇑eP     P      16 56 08.2 -0.5
WACR                               IAmb   IAmb   16 56 08.6
      comp=Z,200nm,0.9s
WVOR  Wild Horse Val   88.16  43   P      P      16 56 10.5 +1.4
WVOR  Wild Horse Val   88.16  43   P      P      16 56 10.5 +1.4
WVOR                               pmax   pmax
      comp=Z,19nm,1.2s
MSO   Missoula         88.21  37   P      P      16 56 09.8 +0.6
MSO   Missoula         88.21  37   P      P      16 56 09.6 +0.4
      baz=309,SNR=8.5
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HPK   Haverah Park     88.23 333 eP     P      16 56 08.1 -0.9
ZCCA  Zocca            88.34 320   P      P      16 56 11.3 +1.5
ZCCA                               IAmb   IAmb   16 56 22.1
      comp=Z,67nm,0.9s
FFC   Flin Flon        88.41  26   P      P      16 56 09.9  0.0
FFC   Flin Flon        88.41  26   P      P      16 56 09.9  0.0
FFC                                pmax   pmax
      comp=Z,78nm,0.9s
NEWG  New Galloway     88.42 335 eP     P      16 56 09.0 -0.9
NEWG                               IAmb   IAmb   16 56 09.7
      comp=Z,39nm,1.2s
CESX  Cesi             88.43 318   P      P      16 56 09.5 -0.7
CESX                               IAmb   IAmb   16 56 10.7
      comp=Z,22nm,0.8s
ELMS  Elmsett, Ipswi   88.43 330 eP     P      16 56 09.2 -0.7
ELMS                               IAmb   IAmb   16 56 09.9
      comp=Z,126nm,0.8s
LBWR  Ladybower, Pea   88.67 332⇑eP     P      16 56 10.5 -0.6
LBWR                               IAmb   IAmb   16 56 11.2
      comp=Z,64nm,0.9s
GAL1  Galloway         88.79 335 eP     P      16 56 10.1 -1.5
GAL1                               IAmb   IAmb   16 56 11.4
      comp=Z,34nm,0.9s
FRB   Frobisher Bay    88.85   7   LR     LR     17 37 54.9
      comp=Z,72nm,20.4s,baz=14,slow=37
SENIN Lac Senin/Sane   89.14 323   P      P      16 56 12.9 -0.9
CLGH  Cloghs, Cushen   89.16 335 eP     P      16 56 12.2 -1.1
CLGH                               IAmb   IAmb   16 56 13.2
      comp=Z,39nm,0.7s
CLGH                             e                16 56 36.9
IOMK  Kirk Michael     89.19 334 eP     P      16 56 12.6 -0.9
IOMK                               IAmb   IAmb   16 56 14.1
      comp=Z,119nm,1.4s
MSSA  Maissana         89.19 321   P      P      16 56 12.3 -1.5
MSSA                               IAmb   IAmb   16 56 14.6
      comp=Z,93nm,1.5s
PAHR  Pah Rah Range    89.26  45   P      P      16 56 15.1 +0.7
WIM   Isle of Man      89.32 334 eP     P      16 56 13.4 -0.7
CASP  Castiglione de   89.34 319   P      P      16 56 12.6 -1.9
CASP                               IAmb   IAmb   16 56 14.8
      comp=Z,36nm,0.9s
HMNX  Herstmonceux     89.58 330 eP     P      16 56 15.0 -0.4
EGMT  Eagleton         89.62  34   P      P      16 56 15.8  0.0
EGMT                               IAmb   IAmb   16 56 18.0
      comp=Z,53nm,0.9s
EGMT  Eagleton         89.62  34   P      P      16 56 16.7 +0.9
      baz=312
LRM   Limekiln Ridge   89.64  37   P      P      16 56 16.8 +0.6
IDGL  Inch Island, C   89.68 336 eP     P      16 56 14.8 -0.9
GMM   Mts of Mourne    89.74 335⇑eP     P      16 56 15.3 -0.8
SSW   Stow on the Wo   89.76 331 eP     P      16 56 16.2 -0.1
HLM1  Long Mynd        89.80 332⇑eP     P      16 56 15.4 -1.1
HLM1                               IAmb   IAmb   16 56 16.5
      comp=Z,20nm,0.9s
WLF1  Llynfaes         89.85 333 eP     P      16 56 15.1 -1.5
WLF1                               IAmb   IAmb   16 56 18.5
      comp=Z,152nm,1.5s
DLMT  Dillon           89.86  38   P      P      16 56 16.9 -0.2
DLMT                               IAmb   IAmb   16 56 19.7
      comp=Z,67nm,1.2s
LLW   Llanuwychllyn    89.88 333 eP     P      16 56 15.1 -1.7
YRC   Rhoscolyn        89.95 333 eP     P      16 56 15.9 -1.1
WOL   Wolverton        89.96 331 eP     P      16 56 15.7 -1.5
HLID  Hailey           89.97  40   P      P      16 56 17.4 -0.3
HLID  Hailey           89.97  40   P      P      16 56 19.4 +1.8
      baz=308,SNR=19
ABPO  Ambohimpanom     89.97 249   P      P      16 56 15.7 -2.2
ABPO  Ambohimpanom     89.97 249   P      P      16 56 15.7 -2.2
ABPO                               pmax   pmax
      comp=Z,11nm,0.9s
STRD  Stroud           90.04 331⇑eP     P      16 56 17.1 -0.4
MCMT  McKenzie Canyo   90.06  38   P      P      16 56 17.4 -0.7
SWN1  Swindon          90.07 331⇑eP     P      16 56 17.4 -0.2
BMN   Battle Mountai   90.19  44   P      P      16 56 19.1 +0.4
BMN   Battle Mountai   90.19  44   P      P      16 56 19.1 +0.4
BOZ   Bozeman (W)      90.23  37   P      P      16 56 18.4 -0.3
BOZ   Bozeman (W)      90.23  37   P      P      16 56 18.5 -0.3
BOZ                                pmax   pmax
      comp=Z,17nm,1.0s
BOZ   Bozeman (W)      90.23  37   P      P      16 56 19.9 +1.1
      baz=310
MONM  Monmouth         90.26 332⇑eP     P      16 56 18.0 -0.6
MONM                               IAmb   IAmb   16 56 18.6
      comp=Z,82nm,0.7s
BNI   Bardonecchia     90.31 322   P      P      16 56 18.0 -1.2
BNI   Bardonecchia     90.31 322   P      P      16 56 18.0 -1.2
BNI                                pmax   pmax
      comp=Z,18nm,1.0s
KIBK  Kibwezi          90.36 268   P      P      16 56 19.2 -0.7
KIBK  Kibwezi          90.36 268   P      P      16 56 20.4 +0.6
RAFF  Raffo Rosso      90.41 313   P      P      16 56 19.1 -0.4
KVN   Kaiserville      90.45  45   P      P      16 56 20.1 +0.1
KVN                                IAmb   IAmb   16 56 22.5
      comp=Z,21nm,1.2s
KVN   Kaiserville      90.45  45   P      P      16 56 20.1 +0.1
KVN                                pmax   pmax
      comp=Z,21nm,1.2s
KMBO  Kilima Mbogo     90.53 269   P      P      16 56 19.2 -1.6
KMBO  Kilima Mbogo     90.53 269   P      P      16 56 19.2 -1.6
KMBO                               pmax   pmax
      comp=Z,8.0nm,1.1s
KMBO  Kilima Mbogo     90.53 269 i P      P      16 56 21.3 +0.5
      SNR=7.3
LHV   Little Huntoon   90.66  46   P      P      16 56 22.4 +1.7
LHV                                IAmb   IAmb   16 56 23.9
      comp=Z,25nm,1.2s
NVAR  Mina Array Bea   90.69  46   P      P      16 56 22.5 +1.3
      comp=Z,8.5nm,1.1s,baz=273,slow=4.9,SNR=22
NVAR                               LR     LR     17 30 47.0
      comp=Z,50nm,20.2s,baz=336,slow=31
      comp=Z,8.5nm,1.1s
NVAR  Mina Array Bea   90.69  46   P      P      16 56 21.4 +0.3
QLMT  Earthquake Lak   90.83  37   P      P      16 56 23.3 +1.6
RSBS  Rosebush, Pemb   90.99 333 eP     P      16 56 20.9 -1.0
RSBS                               IAmb   IAmb   16 56 22.0
      comp=Z,29nm,0.9s
GCMT  Greycliff        91.14  36   P      P      16 56 23.8 +0.8
ELK   Elko             91.21  42   P      P      16 56 25.1 +1.5
      comp=Z,6.0nm,0.9s,baz=309,slow=4.1,SNR=16
ELK                                LR     LR     17 37 17.2
      comp=Z,14nm,19.3s,baz=344,slow=35
      comp=Z,6.0nm,0.9s
ELK   Elko             91.21  42   P      P      16 56 22.0 -1.6
SSB   Saint Sauveur    91.32 324   P      P      16 56 21.5 -2.2
SSB                                IAmb   IAmb   16 56 23.8
      comp=Z,13nm,0.9s
SSB   Saint Sauveur    91.32 324   P      P      16 56 21.5 -2.2
SSB                                pmax   pmax
      comp=Z,13nm,0.9s
TIN   Tinemaha, Big    91.53  47   P      P      16 56 26.3 +1.3
      baz=306
LKWY  Lake             91.56  37   P      P      16 56 27.8 +2.7
LKWY                               IAmb   IAmb   16 56 29.4
      comp=Z,40nm,0.9s
LKWY  Lake             91.56  37   P      P      16 56 27.8 +2.7
LKWY                               pmax   pmax
      comp=Z,40nm,1.0s
H17A  Grant Village    91.58  37   P      P      16 56 28.3 +3.1
H17A                               IAmb   IAmb   16 56 29.7
      comp=Z,47nm,1.1s
H17A  Grant Village    91.58  37   P      P      16 56 28.5 +3.3
      baz=311,SNR=26
TPH   Tonopah          91.58  45   P      P      16 56 26.4 +1.1
TPH   Tonopah          91.58  45   P      P      16 56 26.4 +1.1
TPH                                pmax   pmax
      comp=Z,91nm,1.0s
HTL   Hartland         91.60 332 eP     P      16 56 24.0 -0.7
HTL                                IAmb   IAmb   16 56 25.2
      comp=Z,73nm,0.8s
VES   Vestal, Richgr   91.67  48   P      P      16 56 26.0 +0.6
      baz=305
PKM   Mcpherson Peak   91.72  49   P      P      16 56 27.5 +1.5
      baz=305
RLMT  Red Lodge        91.80  36   P      P      16 56 27.6 +1.4
      baz=312
LCH   Last Change Ra   91.81  46          P      16 56 27.6 +1.4
LCH                                IAmb   IAmb   16 56 28.6
      comp=Z,13nm,1.0s
PPT   Papeete          91.89 109   LR     LR     17 32 07.8
      comp=Z,92nm,19.1s,baz=304,slow=32
CWC   Cottonwood Cre   91.99  47   P      P      16 56 27.7 +0.6
      baz=306
DGMT  Dagmar           92.01  31   P      P      16 56 27.5 +0.7
      baz=316
HVU   Hansel Valley    92.03  40   P      P      16 56 25.4 -1.7
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HVU                                IAmb   IAmb   16 56 30.0
      comp=Z,24nm,0.9s
HVU   Hansel Valley    92.03  40   P      P      16 56 25.5 -1.7
HVU                                pmax   pmax
      comp=Z,24nm,0.9s
ISA   Isabella, Lake   92.18  48   P      P      16 56 28.2 +0.3
      baz=306
IVI   Ivigtut          92.18 358   P      P      16 56 26.3 -1.0
LAO   LASA Array       92.29  34   P      P      16 56 29.3 +1.1
      baz=314
R11B  Troy Canyon, C   92.45  44   P      P      16 56 30.5 +1.2
      baz=307,SNR=15
SPUT  South Promonto   92.51  41   P      P      16 56 28.2 -1.3
SPUT                               IAmb   IAmb   16 56 53.3
      comp=Z,10nm,0.7s
CCA1  Carnmenellis     92.52 332 eP     P      16 56 28.0 -1.1
CCA1                               IAmb   IAmb   16 56 29.1
      comp=Z,67nm,0.8s
MPMC  Manual Prospec   92.60  47   P      P      16 56 31.0 +1.0
      baz=306,SNR=17
OSI   Osito Audit: C   92.61  49   P      P      16 56 31.0 +1.1
      baz=305
FURC  Furnace Creek,   92.76  47   P      P      16 56 32.0 +1.6
      baz=307,SNR=5.2
LRMC  Laurel Mtn Rad   92.81  48   P      P      16 56 31.9 +1.0
      baz=306,SNR=18
SNCC  San Nicolas Is   92.85  50   P      P      16 56 32.3 +1.3
      baz=305
TPNV  Topopah Spring   92.87  46   P      P      16 56 32.3 +1.0
      baz=307,SNR=9.4
EDW2  Edwards Air Fo   92.95  48   P      P      16 56 32.7 +1.2
      baz=306,SNR=8.9
DUG   Dugway, Tooele   93.00  42   P      P      16 56 30.4 -1.3
DUG                                IAmb   IAmb   16 56 34.4
      comp=Z,17nm,1.1s
DUG   Dugway, Tooele   93.00  42   P      P      16 56 30.4 -1.3
DUG                                pmax   pmax
      comp=Z,17nm,1.1s
DUG   Dugway, Tooele   93.00  42   P      P      16 56 33.1 +1.4
      baz=309,SNR=8.2
DECC  Green Verdugo    93.09  49   P      P      16 56 33.0 +0.9
      baz=306
BW06  Boulder Array    93.21  38   P      P      16 56 33.1 +0.4
      baz=312
PDAR  Pinedale Array   93.21  38   P      P      16 56 33.4 +0.6
      comp=Z,6.2nm,0.9s,baz=348,slow=2.1,SNR=28
      comp=Z,6.2nm,0.9s
FMP   Fort Macarthur   93.43  49   P      P      16 56 34.6 +1.0
      baz=306
SHOC  Shoshone, Teco   93.48  47   P      P      16 56 34.8 +1.0
      baz=307
GSC   Goldstone, Bar   93.49  47   P      P      16 56 35.0 +1.0
      baz=307,SNR=14
CIS   Catalina Islan   93.52  50   P      P      16 56 35.1 +1.0
      baz=306
BSUT  Blindstream Ca   93.99  40   P      P      16 56 36.5  0.0
BSUT                               IAmb   IAmb   16 56 39.3
      comp=Z,16nm,1.3s
TUQ   Turquoise Moun   93.99  47   P      P      16 56 37.7 +1.4
      baz=307,SNR=6.2
BBRC  Big Bear Solar   94.03  48   P      P      16 56 37.5 +0.8
      baz=306
HEC   Hector,Ludlow    94.08  48   P      P      16 56 37.6 +0.9
      baz=307,SNR=8.5
MURC  Murrieta         94.23  49   P      P      16 56 38.2 +0.8
      baz=306
ULM   Lac du Bonnet    94.24  26   P      P      16 56 36.8 -0.2
      comp=Z,12nm,0.7s,baz=324,slow=4.2,SNR=25
ULM                                LR     LR     17 43 20.4
      comp=Z,40nm,18.5s,baz=312,slow=38
      comp=Z,12nm,0.7s
ULM   Lac du Bonnet    94.24  26   P      P      16 56 35.9 -1.1
ULM                                IAmb   IAmb   16 56 37.9
      comp=Z,16nm,0.8s
MDND  Maddock          94.55  30   P      P      16 56 39.2 +0.7
      baz=319
KEST  Kesra            94.55 314   P      P      16 56 38.4 -0.4
      comp=Z,9.3nm,0.9s,baz=257,slow=5.0,SNR=7.4
KEST                               LR     LR     17 45 08.5
      comp=Z,66nm,18.1s,baz=289,slow=39
      comp=Z,9.3nm,0.9s
KEST  Kesra            94.55 314   P      P      16 56 39.0 +0.2
GMRC  Granite Mounta   94.55  47   P      P      16 56 39.9 +1.0
      baz=307,SNR=7.5
TBI   Tubuai           94.63 114 eLR    LR     17 27 19.2
      comp=Z,1μm,31.5s
TBI                              eLR    LR     17 27 19.4
      comp=Z,905nm,34.2s
PFO   Pinyon Flats O   94.72  49   P      P      16 56 40.7 +0.9
      comp=Z,16nm,1.0s,baz=311,slow=5.0,SNR=12
PFO                                LR     LR     17 31 38.0
      comp=Z,48nm,21.0s,baz=274,slow=30
      comp=Z,16nm,1.0s
PFO   Pinyon Flats O   94.72  49   P      P      16 56 40.8 +1.1
      baz=307,SNR=9.5
TPFO  Pinon Flats      94.73  49   P      P      16 56 40.7 +0.9
      baz=307,SNR=8.1
MTPU  Mount Pierson    94.74  43   P      P      16 56 39.1 -0.9
BELC  Belle Mtn. Jos   94.80  48   P      P      16 56 40.8 +0.7
      baz=307,SNR=5.4
K22A  Casper           94.93  37   P      P      16 56 40.8 +0.2
      baz=314
KNB   Kanab            95.00  44   P      P      16 56 41.3 +0.3
KNB                                IAmb   IAmb   16 56 43.7
      comp=Z,9.9nm,0.8s
KNB   Kanab            95.00  44   P      P      16 56 41.3 +0.3
KNB                                pmax   pmax
      comp=Z,10.0nm,0.8s
MONP2 Monument Peak    95.17  49   P      P      16 56 42.5 +0.6
      baz=307
RSSD  Black Hills      95.19  34   P      P      16 56 42.2 +0.4
      baz=316
IRM   Iron Mountain    95.27  48   P      P      16 56 43.1 +1.0
      baz=308,SNR=6.3
BC3   Big Chuckawall   95.37  48   P      P      16 56 43.8 +1.1
      baz=307,SNR=6.5
IKP   In-Ko-Pah, Jac   95.53  49   P      P      16 56 44.6 +1.2
      baz=307
SWSC  Sam W. Stewart   95.56  49   P      P      16 56 44.7 +1.3
      baz=307
O20A  White River Ci   95.70  39   P      P      16 56 45.0 +0.9
      baz=312
AGMN  Agassiz Nation   95.79  27   P      P      16 56 43.5 -0.7
      baz=322
MBAR  Mbarara          96.11 272   LR     LR     17 40 18.9
      comp=Z,27nm,21.9s,baz=52,slow=36
GLA   Glamis           96.15  48   P      P      16 56 47.3 +1.1
      baz=308
TAOE  Nuku Hiva Isla   96.22  97 eLR    LR     17 28 02.9
      comp=Z,393nm,26.3s
N23A  Red Feather La   96.46  38   P      P      16 56 48.6 +1.0
      baz=314
WUAZ  Wupatki          96.85  45   P      P      16 56 50.5 +1.1
      baz=310
ISCO  Idaho Springs    97.40  38   P      P      16 56 51.4 -0.6
      baz=314
MVCO  Mesa Verde       97.50  42   P      P      16 56 51.7 -0.7
      baz=312
SCHQ  Schefferville    97.75   8   P      P      16 56 51.9 -1.0
      comp=Z,9.6nm,0.9s,baz=18,slow=4.2,SNR=8.7
SCHQ                               LR     LR     17 43 44.8
      comp=Z,44nm,20.4s,baz=42,slow=37
      comp=Z,9.6nm,0.9s
EYMN  Ely              97.80  25   P      P      16 56 52.9 -0.4
      baz=326
S22A  4UR Ranch, Cre   98.12  40   P      P      16 56 54.8 -0.4
      baz=313
TUC   Tucson           99.28  47   P      Pdif   16 56 59.5 -0.8
      baz=310
ESDC  Sonseca Array    99.72 324   P      Pdif   16 57 01.2 -0.9
      comp=Z,9.9nm,0.9s,baz=30,slow=4.3,SNR=42
ESDC                               LR     LR     17 49 02.5
      comp=Z,93nm,18.5s,baz=50,slow=40
      comp=Z,9.9nm,0.9s
MVO   Moncorvo        100.17 327 ePdif  Pdif   16 57 03.2 -0.9
POLO  Lamas de Olo    100.38 327 ePdif  Pdif   16 57 04.1 -0.9
PVRL  Vila Real       100.42 327 ePdif  Pdif   16 57 04.4 -0.7
PVIS  Viseu           100.94 327 ePdif  Pdif   16 57 06.9 -0.5
MTE   Manteigas       101.01 327 ePdif  Pdif   16 57 07.3 -0.5
PMRV  Marv??o         101.67 326 ePdif  Pdif   16 57 10.3 -0.4
PESTR Estremoz        102.20 326 ePdif  Pdif   16 57 12.3 -0.7
PMTG  Montargil       102.36 326 ePdif  Pdif   16 57 12.4 -1.3
PBAR  Barrancos       102.44 325 ePdif  Pdif   16 57 13.7 -0.4
EVO   Evora           102.67 326 ePdif  Pdif   16 57 14.4 -0.7
PBEJ  Beja            102.98 325 ePdif  Pdif   16 57 15.9 -0.6
PNCL  Nicolau / Gran  103.25 326 ePdif  Pdif   16 57 17.4 -0.3
MESJ  Messejana       103.30 325 ePdif  Pdif   16 57 17.8 -0.1
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PVAQ	**Vaqueiros**	**103.38**	**325**	*e*Pdif	**Pdif**	**16 57 17.9**	**-0.4**
BOSA	**Boshof**	**112.19**	**248**	PKiKP	**PKiKP**	**17 01 52.6**	**-1.1**
	comp=Z,1.6nm,0.5s,baz=101,slow=3.3,SNR=5.0						
TORD	**Torodi Ar. Bea**	**113.89**	**300**	PKiKP	**PKiKP**	**17 01 56.5**	**-0.6**
	comp=Z,3.8nm,0.7s,baz=26,slow=2.7,SNR=12						
ELIB	**Princess Elisa**	**119.60**	**200**	*d*PKP	**PKPdf**	**17 02 06.1**	**-0.5**
DBIC	**Dimbokro**	**122.92**	**299**	PKP	**PKPdf**	**17 02 14.3**	**-0.3**
	comp=Z,12nm,0.7s,baz=42,slow=0.7,SNR=19						
KIC	**Kosan Boka**	**123.02**	**298**	⇑*i*P	**PKPdf**	**17 02 14.6**	**-0.2**
	comp=Z,34nm,0.7s						
TIC	**Toumodi**	**123.07**	**299**	⇑*i*P	**PKPdf**	**17 02 12.3**	**-2.6**
	comp=Z,8.1nm,0.3s						
LIC	**Lamto**	**123.33**	**298**	⇑*i*P	**PKPdf**	**17 02 15.0**	**-0.4**
	comp=Z,37nm,0.5s						
TROLL	**Troll, Antarti**	**125.82**	**198**	PKPdf	**PKiKP**	**17 02 19.3**	**+0.3**
TROLL	**Troll, Antarti**	**125.82**	**198**	pPKPdf	pPKPdf	17 02 43.9	+1.7
SNAA	**Sanae**	**127.47**	**198**	PKPdf	**PKPdf**	**17 02 18.7**	**-2.9**
VNA2	**Neumayer--Watz**	**129.11**	**198**	PKPdf	**PKiKP**	**17 02 25.1**	**-0.3**
	baz=85,slow=1.0						
BAUV	**El Baul**	**141.44**	**25**		PKPpre	17 02 42.0	
ROSC	**El Rosal**	**142.19**	**37**	PKP	**PKPdf**	**17 02 51.0**	**-0.2**
	comp=Z,24nm,0.9s,baz=86,slow=12,SNR=6.5						
ROSC	**El Rosal**	**142.19**	**37**	PKIKP	**PKPdf**	**17 02 51.0**	**-0.2**
OTAV	**Otavalo**	**143.41**	**47**	*e*P	PKPbc	17 02 50.9	+0.1
BOAV	**Boa Vista**	**149.97**	**16**		**PKPbc**	**17 03 08.5**	**-0.3**
SGCB	**S£o Gabriel d**	**150.07**	**30**	*e*P	**PKPdf**	**17 03 04.9**	**+0.9**
TBTG	**Tabatinga, AM**	**152.11**	**39**	*e*P	**PKPdf**	**17 03 08.2**	**+1.0**
CZSB	**Cruzeiro do Su**	**153.14**	**49**	*e*P	**PKPdf**	**17 03 09.4**	**+0.7**
TEFE	**Tefe**	**154.14**	**28**	*e*P	**PKPdf**	**17 03 10.0**	**-0.1**
PRPB	**Parauapebas**	**159.25**	**352**	*e*P	**PKPdf**	**17 03 17.3**	**+0.7**
LPAZ	**La Paz**	**162.25**	**57**	PKP	**PKPdf**	**17 03 21.2**	**+0.7**
	comp=Z,7.8nm,1.1s,baz=343,slow=2.5,SNR=10.0						
LPAZ				PKPab	**PKPab**	**17 04 07.5**	**-0.4**
	comp=Z,7.4nm,1.0s,baz=342,slow=3.2,SNR=4.8						
BDFB	**Brasilia**	**168.02**	**338**	PKP	**PKPdf**	**17 03 24.9**	**+0.1**
	comp=Z,13nm,0.8s,baz=186,slow=1.8,SNR=18						
BDFB				PKPab	**PKPab**	**17 04 31.3**	**-1.2**
	comp=Z,29nm,0.9s,baz=38,slow=2.8,SNR=22						
CPUP	**Villa Florida**	**175.84**	**84**	PKP	**PKPdf**	**17 03 28.8**	**+0.8**
	comp=Z,2.9nm,0.8s,baz=334,slow=3.7,SNR=5.7						
CPUP				PKPab	**PKPab**	**17 05 09.0**	**+1.8**
	comp=Z,1.9nm,0.9s,baz=358,slow=7.1,SNR=3.4						

JMA 24 16:44:07.0±0.0,32°.7N±0°.1×130°.7E±0°.2,h9^{km},MV0.6/31, NW KUMAMOTO PREF,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIU3	**Izumi3**	**0.17**	**149**	*i* P	Pg	16 44 10.8	+0.2
JIU3				*e*S	Sg	16 44 13.6	+0.5
JTA	**Tamana**	**0.31**	**331**	P	Pg	16 44 13.3	+0.2
JTZ	**Takazaki**	**0.85**	**158**	*e*P	Pb	16 44 23.9	-0.2

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*TUL **24** 16:55:34.9±0.5,36°.14N±0°.01×97°.82W±0°.01,h6^{km}±7^{km}, ML3.6,mb_Lg3.4/98(NEIC),ML3.7/70(NEIC),Error ellipse: s-maj=2.1km s-min=0.8km az=150.0*

*ANF **24** 16:55:34.8±0.2,36°.16N×97°.84W,h5^{km},ML4.1/9,Error ellipse: s-maj=2.6km s-min=1.9km az=176.0*

*NEIC **24** 16:55:35.6±0.5,36°.134N±0°.006×97°.82W±0°.02,h5^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=2.5km az=115.0*

ISC 24 16:55:34.6±1.2,36°.13N±0°.02×97°.82W±0°.02,h5^{km}±11^{km}, n123,σ0^{s}.70/89,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.40**	**340**	Pg	**Pg**	**16 55 42.7**	**+0.4**
CROK				IAML		16 55 55.0	
	comp=N,6µm,0.3s						
OK029	**Liberty Lake**	**0.45**	**139**	Pg	**Pg**	**16 55 43.8**	**+0.6**
OK029				Sg	**Sg**	**16 55 50.2**	**+1.2**
OK029				IAML		16 55 50.5	
	comp=N,7µm,0.4s						
OK009	**Oakdale Elemen**	**0.64**	**150**	Pg	**Pg**	**16 55 47.4**	**+0.6**
OK005	**Luther M Schoo**	**0.70**	**133**	Pg	**Pg**	**16 55 48.1**	**+0.1**
OK033	**Mehan**	**0.72**	**97**	Pg	**Pg**	**16 55 48.7**	**+0.3**
OK033				IAML		16 55 58.9	
	comp=N,3µm,0.5s						
GC02	**Grant County #**	**0.72**	**357**	Pg	**Pg**	**16 55 48.5**	**+0.1**
OK032	**Salt Plains WL**	**0.74**	**335**		**Pg**	**16 55 48.9**	**0.0**
OK032				IAML		16 56 05.5	
	comp=N,3µm,0.2s						
OK048	**Pawnee Station**	**0.76**	**68**		**Pg**	**16 55 49.4**	**+0.2**
OKCSW	**OKLAHOMA CITY**	**0.79**	**157**		**Pg**	**16 55 50.0**	**+0.2**
OKCSW				IAmb_Lg		16 56 01.2	
	comp=Z,643nm,1.0s						
OKCSW				IAML		16 56 04.7	
	comp=N,2µm,0.3s						
OKCSW				IAML		16 56 05.9	
	comp=E,2µm,0.4s						
BLOK	**Blackwell**	**0.79**	**37**		**Pg**	**16 55 50.1**	**+0.2**
BLOK				IAML		16 56 04.0	
	comp=E,3µm,0.2s						
BLOK				IAML		16 56 06.2	
	comp=N,3µm,0.2s						
OK031	**S. Brethren Rd**	**0.81**	**102**	Pg	**Pg**	**16 55 50.0**	**-0.2**
OK031				IAML		16 56 01.8	
	comp=N,4µm,0.4s						
OK038	**West end E0370**	**0.82**	**295**		**Pg**	**16 55 50.4**	**-0.1**
KAN14	**Manchester OK**	**0.83**	**352**		**Pg**	**16 55 50.2**	**-0.4**
KAN14				IAML		16 56 04.3	
	comp=N,2µm,0.1s						
KAN14				IAML		16 56 06.1	
	comp=E,2µm,0.1s						
OK052	**Battle Ridge R**	**0.83**	**99**		**Pg**	**16 55 50.8**	**+0.2**
OK052				IAML		16 56 02.5	
	comp=E,3µm,0.3s						
CSTR	**Hydro, Custer**	**0.86**	**236**	Pg	**Pg**	**16 55 51.3**	**+0.2**
OK030	**Cody Creek RV**	**0.86**	**103**		**Pg**	**16 55 51.4**	**+0.2**
OK030				IAML		16 56 05.8	
	comp=E,2µm,0.1s						
OK051	**E0350 and S346**	**0.88**	**64**		**Pg**	**16 55 51.5**	**+0.1**
OK051				IAML		16 56 08.8	
	comp=E,2µm,0.2s						
OK051				IAML		16 56 12.9	
	comp=E,3µm,0.2s						
QUOK	**Quay**	**0.90**	**87**	Pg	**Pg**	**16 55 52.0**	**+0.1**
QUOK				IAML		16 56 06.8	
	comp=N,2µm,0.3s						
QUOK				IAML		16 56 06.8	
	comp=E,2µm,0.2s						
KAN17	**Caldwell West**	**0.91**	**3**		**Pg**	**16 55 52.1**	**0.0**
KAN17				IAML		16 56 07.8	
	comp=E,3µm,0.3s						
KAN13	**South Haven SW**	**0.92**	**17**		**Pg**	**16 55 52.3**	**0.0**
OK035	**E0210 Rd and N**	**0.92**	**309**	Pg	**Pg**	**16 55 52.2**	**-0.1**
OK035				IAML		16 56 06.1	
	comp=E,2µm,0.2s						
OK035				IAML		16 56 07.3	
	comp=E,3µm,0.3s						
FNO	**Franklin**	**0.94**	**159**	Pg	**Pg**	**16 55 52.6**	**0.0**
KAN05	**Bluff City Nor**	**0.98**	**357**		**Pg**	**16 55 53.3**	**-0.1**
U32A	**Winter Ranch,**	**0.99**	**285**	Pg	**Pg**	**16 55 53.6**	**0.0**
U32A				IAML		16 56 12.3	
	comp=N,2µm,0.5s						
U32A	**Winter Ranch,**	**0.99**	**285**	P	**Pg**	**16 55 53.6**	**0.0**
	baz=104,SNR=37						
U32A				S	**Sb**	**16 56 07.0**	**-0.7**
	baz=104						
KAN09	**Caldwell North**	**1.02**	**9**		**Pg**	**16 55 54.0**	**-0.2**
KAN01	**Argonia South**	**1.02**	**3**		**Pg**	**16 55 54.1**	**-0.2**
KAN01				IAML		16 56 10.3	
	comp=E,2µm,0.3s						
KAN01				IAML		16 56 12.6	
	comp=N,1µm,0.2s						
NOKA	**Waynoka**	**1.03**	**300**		**Pg**	**16 55 54.0**	**-0.4**
NOKA				IAML		16 56 15.8	
	comp=E,2µm,0.3s						
KAN08	**Anthony NE Sta**	**1.10**	**354**		**Pb**	**16 55 55.5**	**-0.7**
DEOK	**Depew**	**1.11**	**105**	Pg	**Pb**	**16 55 55.5**	**-0.8**
DEOK				IAML		16 56 13.1	
	comp=E,2µm,0.2s						
KAN06	**Argonia West S**	**1.11**	**358**		**Pb**	**16 55 55.8**	**-0.7**
KAN06				IAML		16 56 13.1	
	comp=E,2µm,0.3s						
KAN06				IAML		16 56 13.1	
	comp=N,1µm,0.3s						
KS20	**Mayfield South**	**1.12**	**11**		**Pb**	**16 55 55.8**	**-0.7**
KS21	**Milan North St**	**1.16**	**6**		**Pb**	**16 55 56.5**	**-0.7**
KS21	**Milan North St**	**1.16**	**6**	IAML		16 56 14.5	
	comp=N,2µm,0.2s						
KS21				IAML		16 56 16.8	
	comp=N,2µm,0.1s						
W35A	**Tecumseh**	**1.24**	**142**	Pg	**Pn**	**16 55 57.8**	**-0.9**
W35A				IAML		16 56 19.0	
	comp=N,1µm,0.3s						
ELIS	**Ellis County**	**1.30**	**268**	Pg	**Pb**	**16 55 59.2**	**-0.4**
ELIS				IAML		16 56 18.7	
	comp=N,2µm,0.3s						
T35A	**Sooner Cattle**	**1.31**	**53**	Pg	**Pb**	**16 55 59.3**	**-0.5**
T35A				IAML		16 56 20.2	
	comp=N,1µm,0.4s						
T35A				IAML		16 56 22.8	
	comp=E,1µm,0.4s						
T35B	**Sooner Cattle**	**1.31**	**53**	P	**Pn**	**16 55 59.3**	**-0.4**
	baz=234,SNR=526						
T35B				S	**Sn**	**16 56 16.8**	**-0.8**
	baz=234						
X34A	**Smith Ranch, M**	**1.53**	**180**	Pg	**Pb**	**16 56 03.4**	**0.0**
WMOK	**Wichita Mounta**	**1.60**	**210**		**Pn**	**16 56 03.6**	**0.0**
WMOK				IAmb_Lg		16 56 27.5	
	comp=Z,222nm,0.8s						
WMOK	**Wichita Mounta**	**1.60**	**210**	P	**Pn**	**16 56 03.5**	**-0.1**
	baz=29,SNR=134						
WMOK				S	**Sb**	**16 56 25.0**	**-0.1**
	baz=29						
TUL1	**Leonard**	**1.66**	**97**		**Pn**	**16 56 04.6**	**+0.2**
TUL1	**Leonard**	**1.66**	**97**	P	**Pn**	**16 56 04.7**	**+0.2**
	baz=278,SNR=105						
TUL1				S	**Sg**	**16 56 27.4**	**-0.5**
	baz=278						
LOOK	**Love County**	**2.20**	**166**	Pn	**Pb**	**16 56 13.1**	**-1.7**
LOOK				IAmb_Lg		16 56 48.2	
	comp=Z,128nm,0.7s						
RLO	**Rose Lookout**	**2.26**	**88**	Pn	**Pn**	**16 56 13.1**	**+0.4**
R32A	**Long Quarter,**	**2.40**	**343**		**Pn**	**16 56 15.8**	**+1.2**
X37A	**Clayton**	**2.52**	**127**	Pn	**Pn**	**16 56 17.5**	**+1.2**
X37A				IAmb_Lg		16 57 00.3	
	comp=Z,172nm,0.8s						
X37A	**Clayton**	**2.52**	**127**	P	**Pn**	**16 56 17.2**	**+0.9**
	baz=308,SNR=63						
X37A				S	**Sb**	**16 56 49.8**	**-2.0**
	baz=308						
U38A	**Gravette**	**2.79**	**83**	Pn	**Pn**	**16 56 20.5**	**+0.5**
Z35A	**Perchaven, San**	**2.83**	**170**	Pn	**Pn**	**16 56 21.3**	**+0.8**
CBKS	**Cedar Bluff**	**3.08**	**331**	Pn	**Pn**	**16 56 24.7**	**+0.6**
KSU1	**Kansas State U**	**3.12**	**18**	Pn	**Pn**	**16 56 24.8**	**+0.3**
HHAR	**Hobbs**	**3.14**	**86**		**Pn**	**16 56 25.3**	**+0.4**
FW06	**Azle**	**3.16**	**176**	Pn	**Pn**	**16 56 26.4**	**+1.3**
AMTX	**Amarillo**	**3.39**	**250**		**Pn**	**16 56 29.9**	**+1.6**
AMTX				IAmb_Lg		16 57 27.0	
	comp=Z,93nm,0.8s						
FW07	**Weatherford**	**3.42**	**180**	Pn	**Pn**	**16 56 28.7**	**+0.1**
FW07				IAmb_Lg		16 57 22.5	
	comp=Z,27nm,0.8s						
Z38A	**Mt. Pleasant**	**3.69**	**140**	Pn	**Pn**	**16 56 33.1**	**+0.7**
FW16	**Waxahatchie**	**3.72**	**168**	IAmb_Lg		16 57 40.5	
	comp=Z,88nm,0.9s						
FW14	**Alvarado**	**3.76**	**172**	IAmb_Lg		16 57 37.8	
	comp=Z,40nm,0.8s						
FW13	**Cleburne**	**3.78**	**175**	IAmb_Lg		16 57 42.1	
	comp=Z,49nm,0.7s						
MIAR	**Mount Ida**	**3.81**	**113**		**Pn**	**16 56 35.0**	**+1.0**
MIAR				IAmb_Lg		16 57 43.7	
	comp=Z,109nm,0.9s						
MIAR	**Mount Ida**	**3.81**	**113**	P	**Pn**	**16 56 35.2**	**+1.2**
	baz=296,SNR=8.3						
MIAR				S	**Sn**	**16 57 21.0**	**+1.7**
	baz=296						
ABTX	**Abilene, Hawle**	**3.81**	**204**	IAmb_Lg		16 57 39.9	
	comp=Z,83nm,0.7s						
S39A	**Bolivar**	**3.92**	**65**		**Pn**	**16 56 36.1**	**+0.5**
S39A				IAmb_Lg		16 57 41.7	
	comp=Z,64nm,0.8s						
S39A	**Bolivar**	**3.92**	**65**	P	**Pn**	**16 56 36.0**	**+0.5**
	baz=248,SNR=23						
WHTX	**Lake Whitney,**	**4.14**	**176**		**Pn**	**16 56 39.1**	**+0.6**
WHTX	**Lake Whitney,**	**4.14**	**176**	P	**Pn**	**16 56 39.3**	**+0.8**
	baz=356,SNR=8.5						
POST	**Post**	**4.31**	**226**	IAmb_Lg		16 57 58.3	
	comp=Z,100nm,0.8s						
X40A	**Basin Creek Fa**	**4.39**	**110**		**Pn**	**16 56 42.8**	**+0.8**
237A	**Washetta, Mont**	**4.44**	**157**	Pn	**Pn**	**16 56 42.7**	**0.0**
WLAR	**White Oak Lake**	**4.57**	**121**	IAmb_Lg		16 58 05.6	
	comp=Z,113nm,0.9s						
WHAR	**Wooly Hollow**	**4.58**	**99**	Pn	**Pn**	**16 56 44.7**	**+0.1**
WHAR				IAmb_Lg		16 58 06.5	
	comp=Z,62nm,0.7s						
MSTX	**Muleshoe**	**4.60**	**243**	Pn	**Pn**	**16 56 45.0**	**0.0**
N33A	**J Bar K, Exete**	**4.61**	**3**	IAmb_Lg		16 58 13.7	
	comp=Z,64nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.62**	**91**	IAmb_Lg		16 58 02.5	
	comp=Z,70nm,0.7s						
UALR	**University of**	**4.67**	**105**	IAmb_Lg		16 58 12.0	
	comp=Z,125nm,0.9s						
KSCO	**Kaye Shedlock'**	**4.78**	**308**	IAmb_Lg		16 58 06.7	
	comp=Z,78nm,0.7s						
P38A	**Dawn**	**4.86**	**43**	Pn	**Pn**	**16 56 49.9**	**+1.5**
P38A				IAmb_Lg		16 58 12.2	
	comp=Z,66nm,0.7s						
R40A	**Maddies Statio**	**4.92**	**62**		**Pn**	**16 56 49.6**	**+0.3**
R40A				IAmb_Lg		16 58 10.1	
	comp=Z,55nm,0.8s						
R40A	**Maddies Statio**	**4.92**	**62**	P	**Pn**	**16 56 49.6**	**+0.3**
	baz=246,SNR=7.2						
BGNE	**Belgrade**	**5.28**	**357**		**Pn**	**16 56 53.4**	**-0.8**
435B	**Jarrell**	**5.34**	**178**	IAmb_Lg		16 58 28.8	
	comp=Z,89nm,0.8s						
LCAR	**Lake Charles**	**5.39**	**89**	Pn	**Pn**	**16 56 55.7**	**-0.1**
LCAR				IAmb_Lg		16 58 30.3	
	comp=Z,48nm,0.7s						
T25A	**Trinidad**	**5.40**	**283**		**Pn**	**16 56 56.1**	**+0.1**
CCM	**Cathedral Cave**	**5.59**	**68**		**Pn**	**16 56 58.5**	**-0.1**
CCM				IAmb_Lg		16 58 38.4	
	comp=Z,69nm,1.1s						
CCM	**Cathedral Cave**	**5.59**	**68**	P	**Pn**	**16 56 58.5**	**-0.1**
	baz=252						
ODSA	**Odessa**	**5.60**	**226**	IAmb_Lg		16 58 41.2	
	comp=Z,25nm,0.9s						
P40A	**Paris**	**5.69**	**52**		**Pn**	**16 56 59.9**	**+0.1**
OGNE	**Ogallala**	**5.83**	**327**	IAmb_Lg		16 58 46.8	
	comp=Z,92nm,0.8s						
JCT	**Junction City**	**5.88**	**197**		**Pn**	**16 57 02.2**	**-0.3**
N38A	**Joes South For**	**5.88**	**36**	Pn	**Pn**	**16 57 02.8**	**+0.4**
L34A	**Svendsen Farm,**	**5.93**	**10**	S	**Sn**	**16 58 13.3**	**+1.7**
	baz=191						
PBMO	**Poplar Bluff**	**5.99**	**82**	IAmb_Lg		16 58 45.2	
	comp=Z,79nm,0.8s						
FVM	**French Village**	**6.19**	**70**	Pn	**Pn**	**16 57 06.9**	**+0.2**
FVM				IAmb_Lg		16 58 55.1	
	comp=Z,56nm,0.8s						
FVM	**French Village**	**6.19**	**70**	P	**Pn**	**16 57 06.9**	**+0.2**
	baz=255,SNR=6.2						
SDCO	**Great Sand Dun**	**6.36**	**287**	Pn	**Pn**	**16 57 10.9**	**+1.6**
Q24A	**Divide**	**6.47**	**298**	IAmb_Lg		16 59 17.9	
	comp=Z,39nm,0.8s						
SLM	**Saint Louis**	**6.53**	**65**	IAmb_Lg		16 59 08.7	
	comp=Z,44nm,0.8s						
CGM3	**Cape Girardeau**	**6.66**	**78**	IAmb_Lg		16 59 11.6	
	comp=Z,32nm,0.7s						
BRIGG	**Briggsdale**	**6.77**	**313**	IAmb_Lg		16 59 16.9	
	comp=Z,48nm,0.9s						
OXF	**Oxford**	**7.06**	**101**	IAmb_Lg		16 59 24.0	
	comp=Z,66nm,0.7s						
W45A	**Hickory Valley**	**7.09**	**95**	IAmb_Lg		16 59 28.0	
	comp=Z,80nm,0.9s						
N41A	**Harden Midland**	**7.12**	**48**	IAmb_Lg		16 59 24.3	
	comp=Z,77nm,0.8s						
Y45A	**Yeager Farm, C**	**7.16**	**106**	IAmb_Lg		16 59 39.5	
	comp=Z,54nm,0.9s						
ISCO	**Idaho Springs**	**7.17**	**303**	IAmb_Lg		16 59 28.9	
	comp=Z,31nm,0.7s						
P43A	**Skaggs, Pawnee**	**7.44**	**59**	IAmb_Lg		16 59 36.9	
	comp=Z,63nm,0.9s						
Q44A	**Meyer Farm, Va**	**7.52**	**66**	IAmb_Lg		16 59 37.6	
	comp=Z,50nm,0.9s						
ECSD	**EROS Data Cent**	**7.65**	**7**	P	**Pn**	**16 57 26.8**	**+0.1**
	baz=187						
833A	**Chaparral WMA,**	**7.90**	**190**	IAmb_Lg		16 59 54.0	
	comp=Z,46nm,1.0s						
N23A	**Red Feather La**	**7.95**	**309**	IAmb_Lg		16 59 56.0	
	comp=Z,51nm,0.8s						
PLAL	**Pickwick Lake**	**8.02**	**95**	IAmb_Lg		16 59 49.5	
	comp=Z,26nm,0.8s						
OLIL	**Olney**	**8.15**	**69**	IAmb_Lg		17 00 16.5	
	comp=Z,53nm,1.1s						
SUSD	**Miller**	**8.35**	**354**	IAmb_Lg		17 00 04.7	
	comp=Z,41nm,0.8s						
O44A	**Mansfield**	**8.39**	**59**	IAmb_Lg		17 00 16.0	
	comp=Z,44nm,1.0s						
L42A	**Oliver, Polo**	**8.63**	**45**	IAmb_Lg		17 00 28.6	
	comp=Z,53nm,0.9s						
JFWS	**Jewell Farm**	**8.95**	**38**	IAmb_Lg		17 00 23.7	
	comp=Z,55nm,0.8s						
RWWY	**Rawlins**	**9.18**	**310**	IAmb_Lg		17 00 34.3	
	comp=Z,26nm,1.0s						
M44A	**Midewin, Midew**	**9.26**	**53**	IAmb_Lg		17 00 41.1	
	comp=Z,34nm,0.8s						
K22A	**Casper**	**9.37**	**317**	IAmb_Lg		17 00 48.4	
	comp=Z,53nm,1.2s						
I40A	**Norwalk**	**9.51**	**33**	IAmb_Lg		17 00 38.9	
	comp=Z,44nm,1.0s						
F33A	**5 Mile Ranch,**	**9.77**	**6**	IAmb_Lg		17 00 45.1	
	comp=Z,19nm,0.9s						
K43A	**Burlington**	**9.84**	**45**	IAmb_Lg		17 00 52.0	
	comp=Z,42nm,0.8s						
SPMN	**Marine on St.**	**9.85**	**21**	IAmb_Lg		17 00 59.0	
	comp=Z,20nm,0.7s						

IDC 24 17:03:40.6±1.9,5°.85S×154°.39E,h0^{km},mb3.6/3, mbtmp3.6/4,ML3.0/1,MS3.8/2,Error ellipse: s-maj=36.7km s-min=30.4km az=109.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.81**	**303**	Pn	Pn	17 04 27.0	+0.2
	2.3nm,0.3s,baz=323,slow=2.4,SNR=12						
KRVT				Sn	Sb	17 05 04.4	-2.3
	22nm,0.3s,baz=307,slow=19,SNR=5.9						
	9.8nm,0.4s						
WRA	**Warramunga Arr**	**24.00**	**232**	P	P	17 08 57.0	-0.3
	1.8nm,0.8s,baz=54,slow=9.7,SNR=16						
	1.8nm,0.8s						
ASAR	**Alice Springs**	**26.50**	**226**	P	P	17 09 20.1	+0.1
	0.7nm,0.9s,baz=61,slow=8.3,SNR=6.3						
	0.7nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**27.07**	**26**	T	T	17 37 43.4	
	baz=208,slow=76,SNR=5.7						
H11S2	**WAKE ISLAND Hy**	**27.07**	**26**	T	T	17 37 48.5	
	baz=208,slow=76,SNR=3.3						
H11S1	**WAKE ISLAND Hy**	**27.08**	**26**	T	T	17 37 48.5	
	baz=208,slow=76,SNR=4.7						
RPZ	**Rata Peaks**	**40.46**	**161**	LR	LR	17 24 45.2	
	comp=Z,112nm,21.4s,baz=316,slow=31						
ILAR	**Eielson Array**	**82.54**	**22**	P	P	17 16 05.0	-0.1
	0.4nm,0.8s,baz=226,slow=4.8,SNR=3.3						
	0.4nm,0.8s						
QSPA	**South Pole Qui**	**84.11**	**180**	LR	LR	17 50 21.9	
	comp=Z,64nm,18.6s,baz=22,slow=33						

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*NEIC **24** 17:13:57.5±1.6,6°.66S±0°.10×127°.6E±0°.1,h411^{km}±5^{km}, mb4.1/21,Error ellipse: s-maj=17.9km s-min=13.2km az=66.0*

*IDC **24** 17:13:58.8±2.1,6°.77S×127°.50E,h433^{km}±27^{km},mb3.3/9, mbtmp4.2/12,Error ellipse: s-maj=27.5km s-min=9.9km az=67.0*

*DJA **24** 17:13:58.1±0.3,7°S±3°×12°8E±°,h412^{km}±6^{km},M4.1/15, mB4.5/3,mb4.0/13,MLv4.3/15,Mw(mB)3.6/3*

ISC 24 17:13:56.7±0.4,6°.73S±0°.05×127°.55E±0°.06,h408^{km},n103, σ1^{s}.45/112,mb3.9/19,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**3.09**	**12**	P	**P**	**17 15 02.9**	**+1.6**
BNDI	**Bandanaira**	**3.21**	**47**	P	**P**	**17 15 03.9**	**+1.7**
NLAI	**Namlea**	**3.50**	**353**	P	**P**	**17 15 07.3**	**+2.6**
NLAI				S	**S**	**17 16 01.8**	**+1.9**
SAUI	**Saumlaki**	**3.93**	**109**	P	**P**	**17 15 10.0**	**+1.5**
SAUI				S	**S**	**17 16 04.2**	**-2.8**
SAUI	**Saumlaki**	**3.93**	**109**	P	**P**	**17 15 10.9**	**+2.4**
SAUI	**Saumlaki**	**3.93**	**109**	P	**P**	**17 15 10.5**	**+2.0**
SOEI	**Soe**	**4.42**	**227**		**P**	**17 15 15.2**	**+1.8**
SOEI				S	**S**	**17 16 12.1**	**-3.7**
SOEI	**Soe**	**4.42**	**227**	P	**P**	**17 15 15.3**	**+2.0**
SOEI	**Soe**	**4.42**	**227**	P	**P**	**17 15 15.4**	**+2.1**
SANI	**Sanana**	**4.90**	**341**	P	**P**	**17 15 18.5**	**+0.5**
SANI	**Sanana**	**4.90**	**341**	P	**P**	**17 15 18.4**	**+0.5**
MMRI	**Maumere**	**5.59**	**250**	P	**P**	**17 15 25.2**	**+0.1**
MMRI				S	**S**	**17 16 34.4**	**-3.1**
MMRI	**Maumere**	**5.59**	**250**	P	**P**	**17 15 26.6**	**+1.5**
MMRI	**Maumere**	**5.59**	**250**	P	**P**	**17 15 27.9**	**+2.8**
	28nm,0.8s,0.1nm						
FAKI	**Fak Fak**	**6.02**	**51**	P	**P**	**17 15 29.9**	**+0.2**
FAKI				S	**S**	**17 16 40.3**	**-5.6**
FAKI	**Fak Fak**	**6.02**	**51**	P	**P**	**17 15 29.8**	**+0.1**
FAKI	**Fak Fak**	**6.02**	**51**	P	**P**	**17 15 29.8**	**+0.1**
	48nm,0.7s,0.3nm						
MTN	**Manton Dam**	**7.03**	**150**	P	**P**	**17 15 42.5**	**+1.2**
MTN	**Manton Dam**	**7.03**	**150**	P	**P**	**17 15 42.9**	**+1.5**
BSSI	**Bau Bau, Buton**	**7.04**	**274**	P	**P**	**17 15 42.8**	**+1.3**
	35nm,0.8s,0.1nm						
LUWI	**Luwuk**	**7.39**	**320**	P	**P**	**17 15 46.4**	**+1.0**
BKSI	**Bulukumba**	**7.51**	**280**	P	**P**	**17 15 47.9**	**+1.1**
	27nm,0.7s,0.1nm						
KDU	**Kakadu**	**7.66**	**141**	P	**P**	**17 15 49.3**	**+1.0**
BASI	**Baing, Sumba**	**7.71**	**243**	P	**P**	**17 15 50.9**	**+1.9**
	70nm,0.7s,0.4nm						
KAPI	**Kappang**	**7.94**	**282**	P	**P**	**17 15 53.7**	**+2.2**
	13nm,0.4s,baz=99,slow=6.5,SNR=10						
KAPI	**Kappang**	**7.94**	**282**	P	**P**	**17 15 53.1**	**+1.6**
SPSI	**Sidrap Palu**	**8.21**	**289**	P	**P**	**17 15 56.0**	**+1.6**
	17nm,0.7s						
RKPI	**Ransiki, Papua**	**8.40**	**52**	P	**P**	**17 15 59.3**	**+2.7**
	52nm,1.2s						
KNRA	**Kununurra**	**8.97**	**172**	P	**P**	**17 16 04.2**	**+1.4**
KNRA	**Kununurra**	**8.97**	**172**	P	**P**	**17 16 04.5**	**+1.7**
PLAI	**Plampang**	**9.90**	**257**	P	**P**	**17 16 13.1**	**0.0**
PLAI	**Plampang**	**9.90**	**257**	P	**P**	**17 16 14.6**	**+1.5**
	18nm,0.8s						
TOLI2	**Tolitoli**	**10.31**	**319**	P	**P**	**17 16 18.1**	**+0.4**
TOLI2	**Tolitoli**	**10.31**	**319**	P	**P**	**17 16 18.0**	**+0.4**
TWSI	**Taliwang, Sumb**	**10.75**	**259**	P	**P**	**17 16 24.5**	**+1.9**
	7.9nm,1.1s,632nm						
JAGI	**Jajag, Banyuwa**	**13.39**	**262**	P	**P**	**17 16 52.9**	**+1.3**
WB0	**Warramunga Arr**	**14.57**	**153**		**P**	**17 17 05.0**	**+0.7**
WRAB	**Tennant Creek**	**14.69**	**154**	P	**P**	**17 17 06.3**	**+0.6**
WRAB					**S**	**17 19 39.7**	**-2.4**
WRAB	**Tennant Creek**	**14.69**	**154**	P	**P**	**17 17 06.5**	**+0.8**
WRA	**Warramunga Arr**	**14.70**	**154**	P	**P**	**17 17 06.6**	**+0.8**
	20nm,0.6s,baz=334,slow=11,SNR=255						
WRA				S	**S**	**17 19 39.6**	**-2.5**
	3.3nm,0.7s,baz=328,slow=20,SNR=14						
WRA	**Warramunga Arr**	**14.70**	**154**	P	**P**	**17 17 05.3**	**-0.4**
WB2	**Warramunga Arr**	**14.70**	**154**		**P**	**17 17 06.5**	**+0.7**
COEN	**Coen**	**16.96**	**116**	P	**P**	**17 17 30.7**	**+0.6**
COEN				IAmb	IAmb	17 17 31.3	
	comp=Z,11nm,0.9s						
COEN	**Coen**	**16.96**	**116**	P	**P**	**17 17 30.7**	**+0.6**
AS31	**Alice Springs**	**17.91**	**161**		**P**	**17 17 40.8**	**+0.6**
ASAR	**Alice Springs**	**17.91**	**161**	P	**P**	**17 17 40.8**	**+0.7**
	comp=Z,4.6nm,0.4s,baz=349,slow=13,SNR=183						
ASAR				S	**S**	**17 20 43.9**	**-1.0**
	comp=Z,1.5nm,0.6s,baz=334,slow=18,SNR=9.7						
ASAR	**Alice Springs**	**17.91**	**161**		**P**	**17 17 40.5**	**+0.3**
AS01	**Alice Springs**	**17.93**	**161**	P	**P**	**17 17 41.1**	**+0.8**
QIS	**Mount Isa**	**18.05**	**141**	P	**P**	**17 17 42.3**	**+0.8**
WRKA	**Warakurna**	**18.22**	**178**	P	**P**	**17 17 44.2**	**+0.9**
PMG	**Port Moresby**	**19.60**	**99**	P	**P**	**17 17 57.4**	**+0.2**
MTSU	**Mount Surprise**	**19.89**	**126**	P	**P**	**17 18 00.7**	**+0.8**
OOD	**Oodnadatta**	**22.33**	**161**	P	**P**	**17 18 22.6**	**+0.7**
CTAO	**Charters Tower**	**22.49**	**128**	P	**P**	**17 18 24.1**	**+0.6**
CTAO				IAmb	IAmb	17 18 25.2	
	comp=Z,21nm,1.4s						
FORT	**Forrest**	**23.93**	**179**	P	**P**	**17 18 37.1**	**+0.8**
FORT				IAmb	IAmb	17 19 07.6	
	comp=Z,15nm,1.0s						
FORT	**Forrest**	**23.93**	**179**	P	**P**	**17 18 37.0**	**+0.8**
MULG	**Mulgathing**	**24.22**	**166**	P	**P**	**17 18 39.7**	**+0.9**
INKA	**Innaminka**	**24.36**	**151**	P	**P**	**17 18 41.5**	**+1.3**
LCRK	**Leigh Creek**	**25.64**	**158**	P	**P**	**17 18 52.1**	**+0.6**
GUMO	**Guam**	**26.52**	**40**	P	**P**	**17 18 57.5**	**-2.0**
BBOO	**Buckleboo**	**27.13**	**164**	P	**P**	**17 19 05.5**	**+0.8**
BBOO				IAmb	IAmb	17 19 47.9	
	comp=Z,5.1nm,1.2s						
BBOO	**Buckleboo**	**27.13**	**164**	P	**P**	**17 19 05.7**	**+1.0**
RK1H	**Rockhampton Ha**	**27.59**	**129**	P	**P**	**17 19 09.6**	**+0.7**
NWAO	**Narrogin (SRO)**	**27.77**	**199**	P	**P**	**17 19 09.9**	**-0.5**
STKA	**Stephens Creek**	**28.25**	**154**	P	**P**	**17 19 15.6**	**+0.9**
	comp=Z,4.0nm,0.4s,baz=336,slow=8.0,SNR=21						
	comp=Z,4.0nm,0.4s						
STKA	**Stephens Creek**	**28.25**	**154**	P	**P**	**17 19 15.6**	**+0.9**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	28.25	154	P	P	17 19 15.5	+0.9
HTT	Hallett	28.59	160	P	P	17 19 18.9	+1.3
CMSA	Cobar Meteorol	29.95	148	P	P	17 19 31.0	+1.5
ARPS	Mount Arapiles	32.63	158	P	P	17 19 54.0	+1.4
CAN	Canberra	34.62	148	P	P	17 20 11.7	+2.0
CAN				IAmb	IAmb	17 20 35.3	
	comp=Z,19nm,1.2s						
CAN	Canberra	34.62	148	P	P	17 20 11.7	+2.0
TOO	Toolangi	34.77	155	P	P	17 20 13.0	+2.1
TOO				IAmb	IAmb	17 20 43.8	
	comp=Z,17nm,1.3s						
CMAR	Chiang Mai Arr	37.72	312	P	P	17 20 35.2	-0.5
	comp=Z,0.5nm,0.6s,baz=142,slow=6.4,SNR=6.0						
	comp=Z,0.5nm,0.6s						
KSRS	Korea Array	43.95	0	P	P	17 21 24.4	-1.1
	comp=Z,0.7nm,0.7s,baz=180,slow=11,SNR=4.2						
	comp=Z,0.7nm,0.7s						
MJAR	Matsushiro Arr	44.19	12	P	P	17 21 26.5	-1.0
	comp=Z,2.1nm,0.8s,baz=181,slow=9.6,SNR=4.4						
	comp=Z,2.1nm,0.8s						
USRK	Ussuriysk Ar.	50.85	4	P	P	17 22 18.3	+0.5
	comp=Z,1.7nm,0.6s,baz=205,slow=12,SNR=6.4						
	comp=Z,1.7nm,0.6s						
TAPN	Taplejung	51.30	313	*e*P	P	17 22 21.1	-0.8
RAMN	Ramite	51.89	312	*e*P	P	17 22 25.4	-0.7
JKA	Kamikawa-asahi	52.41	14	P	P	17 22 28.4	-0.8
JKA				IAmb	IAmb	17 23 00.4	
	comp=Z,22nm,1.4s						
JIRN	Jiri	52.59	312	*e*P	P	17 22 30.1	-1.2
PKI	Pulchoki	53.12	312	*e*P	P	17 22 34.1	-0.9
PKIN	Phulchoki	53.13	312	*e*P	P	17 22 34.0	-1.1
TUWZ	Tuamarina	53.72	138	P	P	17 22 38.5	-0.2
GKN	Gorkha	53.92	312	*e*P	P	17 22 39.9	-0.7
DANN	Dangsing	54.76	312	*e*P	P	17 22 46.0	-0.7
PYUN	Piuthan	55.20	311	*e*P	P	17 22 48.9	-0.8
ULN	Ulaanbaatar	57.29	344	P	P	17 23 03.4	-0.5
SONM	Songino Array	57.45	343	P	P	17 23 05.6	+0.7
	comp=Z,1.0nm,0.8s,baz=169,slow=9.3,SNR=8.8						
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	57.45	343	P	P	17 23 04.5	-0.4
PEA0B	Petropavlovsk-	64.86	20	P	P	17 23 54.8	+1.1
PETK	Petropavlovsk-	64.86	20	P	P	17 23 55.0	+1.3
	comp=Z,1.6nm,0.6s,baz=171,slow=3.3,SNR=6.5						
	comp=Z,1.6nm,0.6s						
PETK	Petropavlovsk-	64.86	20	P	P	17 23 54.9	+1.2
MK31	Makanchi Array	66.69	328	P	P	17 24 05.2	-0.2
MKAR	Makanchi Array	66.69	328	P	P	17 24 05.5	+0.1
	comp=Z,1.1nm,0.4s,baz=118,slow=8.4,SNR=25						
MKAR				PcP	PcP	17 24 30.9	0.0
	comp=Z,0.6nm,0.7s,baz=140,slow=4.9,SNR=4.4						
	comp=Z,1.1nm,0.4s						
ZAA0	Zalesovo Array	70.28	335	P	P	17 24 25.9	-1.3
ZAA0				IAmb	IAmb	17 24 27.5	
	comp=Z,2.3nm,0.9s						
ZALV	Zalesovo Beam	70.28	335	P	P	17 24 26.4	-0.7
	comp=Z,2.4nm,0.6s,baz=141,slow=6.0,SNR=11						
	comp=Z,2.4nm,0.6s						
ZALV	Zalesovo Beam	70.28	335	P	P	17 24 26.3	-0.9
KURK	Kurchatov	71.03	330	P	P	17 24 31.7	-0.1
KURK				IAmb	IAmb	17 24 33.2	
	comp=Z,3.9nm,0.9s						
BRVK	Borovoye	76.62	329	P	P	17 25 05.3	+1.6
BRVK				IAmb	IAmb	17 25 07.2	
	comp=Z,1.8nm,0.7s						
TIXI	Tiksi	78.22	0	P	P	17 25 12.0	0.0
TIXI				IAmb	IAmb	17 25 12.6	
	comp=Z,1.8nm,0.5s						
ABKAR	Akbulak array	80.79	322	P	P	17 25 25.7	-0.6
ABKAR	Akbulak array	80.79	322	P	P	17 25 25.6	-0.6
ABKAR				IAmb	IAmb	17 26 00.2	
	comp=Z,2.7nm,1.5s						

BEO ***24*** *17:26:45.3±0.3, 42°.43N×23°.50E, h0^{km}, ML2.2/8*
THE ***24*** *17:26:46.4, 42°.38N×23°.33E, h3^{km}±1^{km}, ML2.5/7, Error ellipse: s-maj=2.2km s-min=1.3km az=296.0*
ISK ***24*** *17:26:46.7, 42°.22N×23°.54E, h5^{km}, ML2.5/12*
ISC 24 17:26:44.4±1.1, **42°.41N**±0°.02×**23°.49E**±0°.02, **h1**^{km}±10^{km}, **n42**, σ**1^{s}.12**/69, **8C-5D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VTS	Vitosha	0.28	319	*e*Pg	Pg	17 26 50.7	+0.9
VTS				*e*Sg	Sg	17 26 53.0	-0.5
BOSS	Bosilegrad	0.75	277	*e*Pg	Pg	17 26 59.8	+1.1
BOSS				*e*Sg	Sg	17 27 08.3	-0.2
PLD	Plovdiv	0.95	108	Pg	Pn	17 27 04.2	-0.7
PLD	Plovdiv	0.95	108	*e*Pg	Pn	17 27 04.0	-0.9
PLD				*e*Sg	Sg	17 27 13.6	-1.3
PRVS	Prvonek	1.05	276	*e*Pg	Pg	17 27 05.2	+0.7
PRVS				*e*Sg	Sg	17 27 18.9	+0.8
ZAPS	Zavoj	1.07	324	*e*Pg	Pg	17 27 05.2	+0.3
ZAPS				*e*Sg	Sg	17 27 19.5	+0.7
NVR	Nevrokopi	1.09	165	P	Pn	17 27 07.5	+0.6
NVR				S	Sn	17 27 23.4	+0.8
	300nm,0.4s						
STIP	Stip	1.20	234	*i* Pn	Pg	17 27 05.3	-2.1
STIP				*i* Sn	Sg	17 27 19.9	-3.0
VAY	Valandovo	1.28	213	*i* Pn	Pg	17 27 10.4	+1.5
VAY				*i* Sn	Sn	17 27 29.7	+2.5
SRS	Serrai	1.29	176	P	Pg	17 27 10.0	+0.9
SRS				S	Sn	17 27 29.3	+1.8
	132nm,0.2s						
BARS	Barje	1.30	289	*e*Pg	Pn	17 27 09.7	0.0
BARS				*e*Sg	Sb	17 27 26.4	-0.5
KNT	Kendrikon	1.32	200	P	Pn	17 27 09.5	-0.5
KNT				S	Sn	17 27 28.2	0.0
	135nm,0.3s						
KNT	Kendrikon	1.32	200	Pn	Pn	17 27 09.5	-0.5
KNT				Sn	Sg	17 27 27.0	+0.3
SOH	Sokhos	1.58	184	P	Pg	17 27 15.1	+0.4
SOH				S	Sg	17 27 36.0	+0.7
	115nm,0.4s						
KAVA	Kavala	1.60	151	P	Pg	17 27 14.8	-0.3
KAVA				S	Sg	17 27 37.8	+1.9
	198nm,0.2s						
KDZ	Kurdzhali	1.62	117	Pn	Pg	17 27 15.2	-0.3
KDZ				Sn	Sg	17 27 36.2	-0.3
KOKK	Kokkinochori,	1.63	166	P	Pg	17 27 15.7	+0.1
KOKK				S	Sg	17 27 37.4	+0.6
	70nm,0.5s						
GRG	Griva	1.66	210	Pn	Pg	17 27 16.3	+0.1
ZAGS	Zajecar	1.68	327	*e*Pg	Pb	17 27 15.9	-0.2
ZAGS				*e*Sg	Sb	17 27 37.4	-0.4
BOVS	Bovan	1.79	314	⇑P	Pb	17 27 17.9	-0.1
BOVS				⇑S	Sn	17 27 39.0	-1.0
BOVS	Bovan	1.79	314	*e*Pn	Pn	17 27 17.1	+0.6
BOVS				*e*Sg	Sb	17 27 41.1	+0.1
HORT	Hortiatis	1.83	189	Pn	Pb	17 27 17.9	-0.8
HORT				Sn	Sb	17 27 40.9	-1.2
SELS	Selova	1.92	296	*e*Pn	Pn	17 27 18.4	+0.1
SELS				*e*Sg	Sb	17 27 45.7	+0.9
RDO	Rodhopi	1.98	129	P	Pb	17 27 20.8	-0.5
RDO				S	Sg	17 27 48.7	+0.6
	80nm,0.2s						
RDO	Rodhopi	1.98	129	Pn	Pb	17 27 20.9	-0.4
RDO				Sn	Sb	17 27 45.4	-1.1
THAS	Thassos island	2.02	152	P	Pb	17 27 21.6	-0.3
OUR	Ouranopolis	2.10	170	Pn	Pn	17 27 21.6	+0.9
OUR				Sn	Sn	17 27 47.2	-0.3
ALN	Alexandroupoli	2.44	127	Pn	Pb	17 27 27.5	-1.5
EDRB	Edirne	2.49	102	Pn	Pb	17 27 29.0	-0.8
RAZG	Razgrad	2.50	61	⇑S	Sb	17 28 02.3	+0.9
GRUS	Gruza	2.51	307	*e*Pn	Pn	17 27 26.9	+0.5
HERR	Herculane	2.59	343	⇑P	Pn	17 27 27.0	-0.5
HERR				⇓S	Sn	17 27 58.3	-1.4
MDVR	Moldovita	2.70	332	⇑P	Pn	17 27 29.6	+0.5
MDVR				⇑S	Sn	17 28 01.5	-0.9
ERIK	Erikli-Kesan	2.86	126	Pn	Pb	17 27 33.3	-2.9
GADA	Gvkgeada	2.86	140	Pn	Pn	17 27 32.9	+1.7
GELI	Tayfur-Gelibol	3.01	131	Pn	Pn	17 27 35.4	+2.2
GZR	Gura Zlata	3.03	350	⇓P	Pn	17 27 34.0	+0.4
GZR				⇑S	Sn	17 28 09.7	-0.9
LOT	Lotru	3.05	4	⇓S	Sn	17 28 10.3	-0.8
DIVS	Divibare	3.06	305	*e*Pn	Pn	17 27 34.0	0.0
VOIR		3.23	20	⇑P	Pn	17 27 37.4	+1.0
BZS	Buzias	3.48	338	⇓P	Pn	17 27 39.8	+0.1
VRI	Vrincioaia	4.17	33	⇓P	Pn	17 27 52.0	+2.8

GII ***24*** *17:35:21.3±0.0, 30°.52N×31°.95E, h6^{km}, MD2.9/5, Mm2.8/12*
HLW ***24*** *17:35:21.1, 30°.25N×31°.94E, h4^{km}±2^{km}, Ml3.4*
ISC 24 17:35:19.4±1.6, **30°.37N**±0°.05×**31°.91E**±0°.04, **h4**^{km}±13^{km}, **n33**, σ**1^{s}.00**/49, **2D, Egypt**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOT	Kottamia	0.45	188	⇑P	Pg	17 35 28.2	+0.2
	baz=197						
HHAG	Hagoal	0.45	158	P	Pg	17 35 27.9	-0.1
	baz=154						
HLW	Helwan	0.71	224	S	Sg	17 35 42.0	-0.2
	baz=234						
GLL	Jalalah	0.81	192	P	Pg	17 35 34.4	-0.5
	baz=197						
HSAF	As Saff	0.81	202	⇓P	Pg	17 35 34.8	-0.2
	baz=209						
SUZ	Suez	0.96	123	P	Pg	17 35 37.8	0.0
	baz=117						
HMYD	Mayadein	1.12	239	P	Pg	17 35 41.8	+1.0
	baz=246						
ZAF	Zafarana	1.22	153	P	Pg	17 35 41.8	-1.0
	baz=150						
HNAT	Natroun	1.34	237	⇑P	Pn	17 35 45.4	+0.5
	baz=243						
NBNS	Bani Suef	1.82	197	⇑P	Pn	17 35 51.5	-0.1
	baz=200						
HRDS	Abu Rudays	2.05	143	P	Pn	17 35 53.0	-1.8
	baz=141						
KZIT	Kziot	2.21	75	Pn	Pn	17 35 57.8	+0.9
KZIT				Sn	Sn	17 36 24.7	0.0
KRMI	Paran Flat	2.45	95	Pn	Pn	17 36 00.7	+0.4
KRMI				Sn	Sn	17 36 32.7	+2.0
RMNI	Mount Ramon	2.48	84	Pn	Pn	17 36 01.0	+0.4
HKAT	Jabal Katrina	2.59	135	P	Pn	17 36 01.6	-0.7
	baz=133						
MBRI	Mt Berech	2.67	102	Pn	Pn	17 36 04.2	+0.9
MBRI				Sn	Sn	17 36 38.6	+2.4
PRNI	Paran	2.68	90	Pn	Pn	17 36 03.9	+0.6
HRFI	Mount Harif	2.73	96	Pn	Pn	17 36 05.8	+1.7
HRFI				Sn	Sn	17 36 38.0	+0.4
EIL	Elat	2.73	104	Pn	Pn	17 36 05.0	+0.9
EIL				Sn	Sn	17 36 39.0	+1.4
TAMRE	El Minia	2.82	198	⇓P	Pn	17 36 05.3	0.0
	baz=200						
ZFRI	Zfri	2.83	86	Pn	Pn	17 36 05.4	0.0
ZFRI				Sn	Sn	17 36 40.0	0.0
AMAZ	Amatzia	2.83	65	Sn	Sn	17 36 39.3	-0.8
YTIR	Yattir	2.93	70	Pn	Pn	17 36 06.8	-0.1
YTIR				Sn	Sn	17 36 42.5	-0.1
DSI	Dead Sea	3.21	67	Pn	Pn	17 36 11.8	+1.1
DSI				Sn	Sn	17 36 49.5	+0.1
SLTI	Sal'it	3.27	54	Pn	Pn	17 36 12.3	+0.9
SLTI				Sn	Sn	17 36 49.5	-1.2
GHAJ	Ghor Haditha	3.28	73	Pn	Pn	17 36 12.3	+0.7
GHAJ				Sn	Sn	17 36 51.0	-0.1
OFRI	`Ofer	3.46	49	Pn	Pn	17 36 14.5	+0.5
OFRI				Sn	Sn	17 36 54.2	-1.3
HMDT	Nahal Hemdat	3.62	58	Pn	Pn	17 36 17.3	+1.0
MMLI	Mount Malkishu	3.64	55	Pn	Pn	17 36 17.5	+0.9
MMLI				Sn	Sn	17 36 59.0	-1.1
HNTI	Hanita	3.88	45	Pn	Pn	17 36 20.5	+0.7
HNTI				Sn	Sn	17 37 03.9	-2.0
MMA0B	Mount Meron ar	3.98	48	Pn	Pn	17 36 21.7	+0.4
MMA0B				Sn	Sn	17 37 06.6	-1.8
GEM	Giv'at Ha'Em	4.27	48	Pn	Pn	17 36 26.0	+0.8
GEM				Sn	Sn	17 37 14.2	-1.3
NATI	Neve Ativ	4.35	48	Pn	Pn	17 36 26.5	+0.2
NATI				Sn	Sn	17 37 16.4	-1.0

IDC ***24*** *17:38:02.7±6.2, 24°.27N×141°.61E, h145^{km}±114^{km}, mb3.0/3, mbtmp3.5/4, ML3.8/1, Error ellipse: s-maj=209.4km s-min=23.8km az=73.0*
NEIC ***24*** *17:38:04.4±1.9, 24°.4N±0°.1×141°.3E±0°.3, h145^{km}±18^{km}, mb4.3/4, Error ellipse: s-maj=33.9km s-min=17.5km az=92.0*
ISC 24 17:38:03.9±1.0, **24°.38N**±0°.09×**141°.3E**±0°.2, **h148**^{km}, **n11**, σ**1^{s}.39**/13, **mb3.4**/5, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	2.83	17	P	Pn	17 38 50.0	+0.9
	15nm,0.3s,baz=20,slow=9.4,SNR=54						
JCJ				S	Sn	17 39 23.3	-0.7
	59nm,0.3s,baz=70,slow=23,SNR=16						
	50nm,0.3s						
JCJ	Chichijima	2.83	17	Pn	Pn	17 38 50.1	+1.1
JCJ				Sn	Sn	17 39 22.5	-1.4
JHJ2	Mitsune	8.79	352	Pn	Pn	17 40 07.3	-0.6
KNRA	Kununurra	41.64	198	P	P	17 45 38.7	+0.9
KNRA				IAmb	IAmb	17 45 56.5	
	comp=Z,16nm,1.1s						
WB0	Warramunga Arr	44.39	189	P	P	17 45 58.5	-1.3
WB0				IAmb	IAmb	17 46 08.8	
	comp=Z,5.4nm,1.3s						
CTAO	Charters Tower	44.46	173	P	P	17 46 01.4	+0.9
WRAB	Tennant Creek	44.56	189	P	P	17 45 59.5	-1.7
WRA	Warramunga Arr	44.57	189	P	P	17 45 59.6	-1.6
	comp=Z,0.8nm,0.8s,baz=12,slow=7.8,SNR=7.3						
	comp=Z,0.8nm,0.8s						
ASAR	Alice Springs	48.29	189	P	P	17 46 28.6	-1.7
	comp=Z,0.3nm,1.0s,baz=11,slow=14,SNR=4.8						
	comp=Z,0.3nm,1.0s						
MKAR	Makanchi Array	51.60	311	P	P	17 46 56.5	+1.4
	comp=Z,0.3nm,0.4s,baz=87,slow=9.1,SNR=7.7						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	51.60	311	P	P	17 46 55.8	+0.7

GII ***24*** *17:40:09.2±0.0, 30°.42N×31°.88E, h1^{km}±2^{km}, Mm3.0/1*
HLW ***24*** *17:40:11.0, 30°.28N×31°.93E, h3^{km}±2^{km}, Ml3.3*
ISC 24 17:40:10.0±1.4, **30°.4N**±0°.1×**31°.88E**±0°.06, **h10**^{km}, **n16**, σ**0^{s}.76**/18, **Egypt**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOT	Kottamia	0.48	185	P	Pg	17 40 18.6	-0.7
	baz=194						
HHAG	Hagoal	0.49	157	⇑P	Pg	17 40 18.4	-1.2
	baz=155						
HLW	Helwan	0.71	221	S	Sg	17 40 33.2	+0.2
	baz=231						
HSAF	As Saff	0.83	200	P	Pg	17 40 25.0	-1.0
	baz=207						
GLL	Jalalah	0.84	190	P	Pg	17 40 25.1	-1.0
	baz=196						
SUZ	Suez	1.00	124	P	Pg	17 40 28.2	-1.0
	baz=118						
HMYD	Mayadein	1.11	237	P	Pn	17 40 32.0	+0.4
	baz=245						
HNAT	Natroun	1.33	235	⇑P	Pb	17 40 35.5	+0.4
	baz=241						
KZIT	Kziot	2.23	76	Pn	Pn	17 40 47.7	+0.7
MBRI	Mt Berech	2.70	102	Pn	Pn	17 40 54.1	+0.5
HRFI	Mount Harif	2.76	97	Pn	Pn	17 40 54.4	0.0
HRFI				Sn	Sn	17 41 28.2	+0.4
EIL	Elat	2.77	105	Pn	Pn	17 40 54.7	+0.3
EIL				Sn	Sn	17 41 29.3	+1.4
AMAZ	Amatzia	2.84	66	Pn	Pn	17 40 55.1	-0.4
ZFRI	Zfri	2.85	86	Pn	Pn	17 40 55.9	+0.3
GHAJ	Ghor Haditha	3.30	73	Pn	Pn	17 41 01.9	+0.2
HMDT	Nahal Hemdat	3.63	59	Pn	Pn	17 41 05.9	-0.3

SOF ***24*** *17:40:26.6, 42°.41N×23°.52E, h13^{km}, MD3.1*
ISK ***24*** *17:40:27.4, 42°.36N×23°.56E, h5^{km}, ML3.3/21*
BEO ***24*** *17:40:27.4±0.3, 42°.45N×23°.52E, h5^{km}±2^{km}, ML2.8/15*
THE ***24*** *17:40:29.1, 42°.37N×23°.35E, h6^{km}±1^{km}, ML2.9/9, Error ellipse: s-maj=2.0km s-min=1.5km az=12.0*
ISC 24 17:40:27.3±1.0, **42°.42N**±0°.02×**23°.51E**±0°.02, **h6**^{km}±8^{km}, **n74**, σ**0^{s}.71**/101, **10C-9D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLNA	Plana	0.08	313	*i* P	Pg	17 40 29.6	+0.3
VTS	Vitosha	0.28	315	*e*Pg	Pg	17 40 32.6	-0.2
VTS				*e*Sg	Sg	17 40 36.5	-0.1
VTS	Vitosha	0.28	315	*i* P	Pg	17 40 32.8	0.0
PGB	Panagyurishte	0.51	75	*i* P	Pg	17 40 36.9	-0.1
KKB	Krupnik	0.64	210	*i* P	Pg	17 40 39.7	+0.2
BOSS	Bosilegrad	0.76	276	*e*Pg	Pg	17 40 41.7	-0.2
BOSS				*e*Sg	Sg	17 40 52.0	+0.2
MMB	Musomiste	0.85	169	*i* P	Pb	17 40 44.0	-0.4
PLD	Plovdiv	0.94	109	Pg	Pg	17 40 44.7	-0.7
PLD				Sg	Sg	17 40 57.5	-0.1
PLD	Plovdiv	0.94	109	*e*Pg	Pg	17 40 44.7	-0.7
PLD				*e*Sg	Sg	17 40 56.5	-1.1
PLD	Plovdiv	0.94	109	*i* P	Pg	17 40 44.7	-0.7
PRVS	Prvonek	1.06	275	*e*Pg	Pg	17 40 47.4	-0.2
PRVS				*e*Sg	Sg	17 41 01.2	-0.2
ZAPS	Zavoj	1.07	323	*e*Pg	Pg	17 40 47.5	-0.3
ZAPS				*e*Sg	Sg	17 41 01.6	0.0
NVR	Nevrokopi	1.10	166	P	Pn	17 40 49.5	+0.2
NVR				S	Sn	17 41 05.3	+0.5
	925nm,0.4s						
RZN	Rozhen	1.16	129	*i* P	Pg	17 40 49.2	-0.4
VAY	Valandovo	1.30	213	*i* Pn	Pn	17 40 52.0	0.0
SRS	Serrai	1.30	177	P	Pn	17 40 51.9	-0.1
SRS				S	Sn	17 41 10.6	+0.9
	452nm,0.4s						
BARS	Barje	1.31	288	*e*Pg	Pn	17 40 51.4	-0.7
BARS				*e*Sg	Sb	17 41 08.2	-1.1
KNT	Kendrikon	1.34	200	P	Pn	17 40 51.8	-0.7
KNT				S	Sg	17 41 10.3	+0.1
	555nm,0.3s						
KNT	Kendrikon	1.34	200	Pn	Pn	17 40 52.6	+0.1
KNT				Sn	Sn	17 41 11.2	+0.6
PVL	Pavlikeni	1.56	59	*i* P	Pn	17 40 53.4	-2.1
SOH	Sokhos	1.60	184	P	Pb	17 40 56.7	-0.6
SOH				S	Sb	17 41 17.5	-0.2
	438nm,0.5s						
KAVA	Kavala	1.61	152	P	Pb	17 40 56.8	-0.6
KAVA				S	Sg	17 41 18.6	-0.4
	600nm,0.2s						
KDZ	Kurdzhali	1.62	118	Pn	Pn	17 40 55.7	-0.6
KDZ				Sn	Sn	17 41 16.5	-1.0
KOKK	Kokkinochori,	1.64	167	P	Pb	17 40 57.6	-0.4
KOKK				S	Sg	17 41 19.5	-0.6
	240nm,0.5s						
ZAGS	Zajecar	1.68	327	*e*Pn	Pn	17 40 56.9	-0.2
ZAGS				*e*Sg	Sn	17 41 19.2	+0.3
GRG	Griva	1.68	210	Pn	Pn	17 40 57.2	0.0
GRG				Sn	Sb	17 41 20.0	0.0
VLAD	Vladila	1.71	22	⇑P	Pn	17 40 57.5	-0.1
BOVS	Bovan	1.79	313	⇓P	Pn	17 40 58.7	0.0
BOVS				⇑S	Sn	17 41 22.7	+0.9
BOVS	Bovan	1.79	313	*e*Pn	Pn	17 40 58.8	0.0
BOVS				*e*Sn	Sn	17 41 22.9	+1.1
HORT	Hortiatis	1.85	190	P	Pn	17 41 00.2	+0.7
HORT				S	Sn	17 41 23.4	+0.2
	122nm,0.4s						
HORT	Hortiatis	1.85	190	Pn	Pn	17 40 59.6	+0.1
SELS	Selova	1.93	295	*e*Pn	Pn	17 41 00.5	-0.1
SELS				*e*Sg	Sb	17 41 28.1	+0.9
SZH	Strazhica	1.98	64	*i* P	Pb	17 41 04.3	+0.7
RDO	Rodhopi	1.98	129	P	Pb	17 41 04.0	+0.3
RDO				S	Sg	17 41 30.6	-0.3
	245nm,0.2s						
RDO	Rodhopi	1.98	129	Pn	Pn	17 41 01.6	+0.3
THAS	Thassos island	2.03	153	P	Pn	17 41 02.4	+0.5
THAS				S	Sb	17 41 30.1	+0.1
	180nm,0.4s						
OUR	Ouranopolis	2.12	170	P	Pn	17 41 03.7	+0.6
OUR	Ouranopolis	2.12	170	Pn	Pn	17 41 03.3	+0.2
FNA	Florina	2.29	225	P	Pn	17 41 05.0	-0.6
KUBS	Kucevo	2.40	327	*e*Pn	Pn	17 41 07.1	+0.1
ALN	Alexandroupoli	2.44	128	Pn	Pn	17 41 08.2	+0.6
EDRB	Edirne	2.48	102	Pn	Pn	17 41 08.7	+0.6
GRUS	Gruza	2.51	307	*e*Pn	Pn	17 41 08.5	-0.1
GRUS				*e*Sn	Sn	17 41 39.5	-0.1
HERR	Herculane	2.58	343	⇑P	Pn	17 41 08.8	-0.8
ENEZ	Enez	2.60	129	Pn	Pn	17 41 10.5	+0.7
UKOP	Uzunkopru-Edir	2.67	118	Pn	Pn	17 41 11.7	+0.9
MDVR	Moldovita	2.69	332	⇑P	Pn	17 41 11.2	0.0
MDVR				⇑S	Sn	17 41 44.1	-0.1
IVAS	Ivanjica	2.72	296	*e*Pn	Pn	17 41 11.2	-0.3
SJES	Sjenica	2.73	289	*e*Pn	Pn	17 41 13.2	+1.5
ERIK	Erikli-Kesan	2.85	127	Pn	Pn	17 41 14.2	+0.9
GADA	Gvkgeada	2.87	140	Pn	Pn	17 41 14.2	+0.7
TRUS	Trudelj	2.89	310	*e*Pn	Pn	17 41 13.9	+0.1
GELI	Tayfur-Gelibol	3.01	131	Pn	Pn	17 41 16.5	+1.0
GZR	Gura Zlata	3.02	350	⇓P	Pn	17 41 15.0	-0.6
MTUR	Matau	3.02	21	⇓P	Pn	17 41 16.0	+0.2
LOT	Lotru	3.03	4	⇑P	Pn	17 41 15.9	0.0
LOT				⇑S	Sn	17 41 51.9	-0.7
DIVS	Divibare	3.07	304	*e*Pn	Pn	17 41 16.3	0.0
DIVS				*e*Sn	Sn	17 41 52.0	-1.3
LPK	Lapseki	3.19	129	Pn	Pn	17 41 19.2	+1.3
BOZC	Bozcaada	3.21	142	Pn	Pn	17 41 19.2	+0.9
VOIR		3.21	20	⇓P	Pn	17 41 19.5	+1.1
COMU	Canakkale	3.22	135	Pn	Pn	17 41 19.1	+0.7
RKY	Sarkoy-Tekirda	3.25	121	Pn	Pn	17 41 19.9	+1.0
BZS	Buzias	3.47	338	⇑P	Pn	17 41 21.8	-0.1
SURR	Surduc	3.48	344	⇓P	Pn	17 41 22.2	+0.3
KRBG	Karabiga-Canak	3.50	124	Pn	Pn	17 41 23.3	+1.1
AGG	Agios Georgios	3.51	195	Pn	Pn	17 41 23.5	+1.1
MLR	Muntele Rosu	3.54	29	⇑P	Pn	17 41 24.0	+1.1
CANM	Can-anakkale	3.60	131	Pn	Pn	17 41 24.5	+1.0
SIGR	SIGRI	3.67	150	Pn	Pn	17 41 25.4	+0.9
VRI	Vrincioaia	4.15	33	⇓P	Pn	17 41 32.9	+1.7
MARR	Marisel-Cluj	4.26	356	⇓P	Pn	17 41 33.1	+0.3
CFR	Carcaliu	4.34	49	⇑P	Pn	17 41 34.8	+1.1
DRGR		4.41	353	⇓P	Pn	17 41 34.2	-0.6
VLDR	Vladesti	4.75	42	⇓P	Pn	17 41 41.2	+1.8

GII 24 17:40:35.6±0.0, **30°.13N**×**31°.73E**, **h7**^{km}, **Mm3.5**/1, **Egypt**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZIT	Kziot	2.43	71	Pn	Pn	17 41 15.5	-0.2
KZIT				Sn	Sn	17 41 44.5	-1.1
KZIT	Kziot	2.43	71	Sn	Pn	17 41 15.6	-0.1
KRMI	Paran Flat	2.59	90	Pn	Pn	17 41 17.5	-0.5
KRMI				Sn	Sn	17 41 50.3	+0.5
EIL	Elat	2.83	99	Pn	Pn	17 41 21.0	-0.3
EIL				Sn	Sn	17 41 56.9	+1.2
PRNI	Paran	2.84	85	Pn	Pn	17 41 21.0	-0.4
HRFI	Mount Harif	2.87	91	Pn	Pn	17 41 20.8	-1.0
HRFI				Sn	Sn	17 41 56.7	+0.2

IDC ***24*** *17:42:35.9±7.6, 35°.63N×21°.71E, h0^{km}, mb4.1/2, mbtmp3.9/4, ML3.3/2, MS2.3/1, Error ellipse: s-maj=140.8km s-min=43.4km az=31.0*
ATH ***24*** *17:42:39.6, 36°.09N×22°.22E, h11^{km}±2^{km}, ML3.2/5, Error ellipse: s-maj=2.5km s-min=0.8km az=50.0*
THE ***24*** *17:42:40.8, 36°.12N×22°.27E, h3^{km}±1^{km}, ML3.1/9, Error ellipse: s-maj=1.6km s-min=0.5km az=35.0*
ISC 24 17:42:40.5±0.9, **36°.08N**±0°.04×**22°.23E**±0°.04, **h10**^{km}, **n41**, σ**1^{s}.15**/56, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTHA	Kythira Island	0.70	75	P	Pg	17 42 53.4	-0.7
KTHA				S	Sg	17 43 02.5	-0.7
	2µm,0.2s						
KTHA	Kythira Island	0.70	75	P	Pg	17 42 53.4	-0.7
KTHA				S	Sg	17 43 02.0	-1.2
KTHA				AML	AML	17 43 03.5	
	comp=E,3520µm,0.2s						
KTHA				AML	AML	17 43 05.0	
	comp=N,2422µm,0.2s						
VLI	Veliai	0.86	42	P	Pg	17 42 56.4	-0.7
VLI				S	Sg	17 43 07.8	-0.4
	comp=N,2µm,0.5s						
VLI	Veliai	0.86	42	P	Pg	17 42 56.3	-0.7
VLI				S	Sg	17 43 07.3	-0.9
VLI				AML	AML	17 43 10.7	
	comp=N,3366µm,0.5s						
VLI				AML	AML	17 43 10.8	
	comp=E,2970µm,0.5s						
ANKY	Antikythira Is	0.90	103	P	Pg	17 42 57.0	-0.8
ANKY				S	Sb	17 43 10.2	0.0
	comp=E,1µm,0.5s						
ANKY	Antikythira Is	0.90	103	P	Pg	17 42 57.0	-0.8
ANKY				S	Sb	17 43 09.6	-0.6
ANKY				AML	AML	17 43 20.4	
	comp=N,2353µm,0.5s						
ANKY				AML	AML	17 43 20.8	
	comp=E,2920µm,0.5s						
PYL	PYLOS	0.90	334	P	Pg	17 42 56.7	-1.2
PYL				S	Sb	17 43 10.1	-0.3
	comp=E,2µm,0.6s						
PYL	PYLOS	0.90	334	P	Pg	17 42 56.5	-1.4
PYL				S	Sb	17 43 09.7	-0.7

PYL				AML	AML	17 43 16.2	
	comp=E,4639µm,0.6s						
PYL				AML	AML	17 43 18.0	
	comp=N,2656µm,0.4s						
ITM	**Ithomi**	**1.12**	**348**	P	**Pg**	**17 43 01.3**	**-0.8**
ITM				S	**Sn**	**17 43 17.2**	**-0.7**
	comp=N,1µm,0.5s						
ITM	**Ithomi**	**1.12**	**348**	P	**Pg**	**17 43 01.3**	**-0.8**
ITM				S	**Sg**	**17 43 15.6**	**-1.2**
ITM				AML	AML	17 43 21.4	
	comp=E,2686µm,0.6s						
ITM				AML	AML	17 43 22.7	
	comp=N,3032µm,0.4s						
RODP	**Rodopos**	**1.35**	**112**	P	**Pg**	**17 43 05.7**	**-0.7**
RODP				S	**Sg**	**17 43 24.6**	**+0.7**
	comp=N,270nm,0.5s						
KNDR	**Palaiochora Ch**	**1.46**	**125**	P	**Pn**	**17 43 06.1**	**-0.8**
KNDR				S	**Sb**	**17 43 26.0**	**-0.3**
	comp=N,290nm,0.8s						
KNDR	**Palaiochora Ch**	**1.46**	**125**	P	**Pn**	**17 43 05.8**	**-1.1**
IMMV	**Iera Moni Meta**	**1.55**	**113**	P	**Pb**	**17 43 08.7**	**-0.7**
IMMV				S	**Sg**	**17 43 29.6**	**-0.9**
	comp=N,742nm,0.7s						
IMMV	**Iera Moni Meta**	**1.55**	**113**	P	**Pb**	**17 43 08.4**	**-1.0**
CHAN	**Chania**	**1.58**	**110**	P	**Pb**	**17 43 09.0**	**-0.8**
EPID	**Epidavros**	**1.69**	**25**	P	**Pg**	**17 43 11.8**	**-1.2**
GUR	**Goura**	**1.85**	**3**	P	**Pn**	**17 43 12.7**	**+0.2**
MHLO	**Agia Marina, M**	**1.86**	**70**	P	**Pb**	**17 43 14.0**	**-0.6**
DRO	**Drossia**	**1.91**	**348**	P	**Pn**	**17 43 13.3**	**+0.1**
DRO	**Drossia**	**1.91**	**348**	P	**Pb**	**17 43 14.5**	**-1.1**
KLV	**Kalavryta, Ach**	**1.96**	**358**	P	**Pn**	**17 43 14.2**	**+0.2**
KLV				S	**Sn**	**17 43 38.8**	**+0.2**
	comp=N,230nm,0.7s						
KLV	**Kalavryta, Ach**	**1.96**	**358**	P	**Pn**	**17 43 14.1**	**+0.2**
LTHK	**Lithakia**	**1.97**	**326**	P	**Pn**	**17 43 14.1**	**+0.1**
RLS	**Riolos of Patr**	**2.06**	**343**	P	**Pb**	**17 43 17.6**	**-0.5**
LAKA	**Lakka**	**2.17**	**355**	P	**Pb**	**17 43 18.4**	**-1.4**
VLY	**Voula,Athens**	**2.17**	**35**	P	**Pb**	**17 43 18.5**	**-1.4**
ATHU	**Athens Univers**	**2.26**	**33**	P	**Pb**	**17 43 19.7**	**-1.8**
VIL2	**Platees**	**2.28**	**21**	P	**Pb**	**17 43 20.3**	**-1.6**
IDI	**Anoyia**	**2.31**	**109**	Pn	**Pb**	**17 43 20.8**	**-1.5**
	comp=N,3.4nm,0.3s,baz=277,slow=17,SNR=11						
IDI				Sn	**Sb**	**17 43 51.1**	**+0.3**
	comp=N,8.0nm,0.3s,baz=349,slow=22,SNR=1.9						
IDI				LR	LR	17 44 34.4	
	comp=N,54nm,19.7s,baz=318,slow=45						
	comp=N,32nm,0.5s						
IDI	**Anoyia**	**2.31**	**109**	P	**Pb**	**17 43 19.9**	**-2.4**
EFP	**Efpalio**	**2.36**	**354**	P	**Pn**	**17 43 20.1**	**+0.8**
DION	**Dionisos Attik**	**2.42**	**34**	P	**Pb**	**17 43 22.5**	**-1.6**
PSDA	**Pessada-Kefalo**	**2.42**	**328**	P	**Pn**	**17 43 21.1**	**+1.0**
VLS	**Valsamata**	**2.47**	**328**	P	**Pn**	**17 43 21.7**	**+0.9**
ANX	**Ano Chora**	**2.52**	**355**	P	**Pn**	**17 43 22.3**	**+0.7**
KYMI	**Kymi, Euboea I**	**2.95**	**30**	P	**Pn**	**17 43 29.1**	**+1.6**
IGT	**Igoumenitsa**	**3.76**	**337**	P	**Pn**	**17 43 39.2**	**+0.6**
KBZ	**Khabaz**	**17.57**	**58**	P	**P**	**17 46 50.4**	**+3.8**
	comp=N,0.1nm,0.3s,baz=250,slow=11,SNR=4.1						
	comp=N,0.5nm,0.4s						
MKAR	**Makanchi Array**	**45.27**	**57**	P	**P**	**17 50 58.4**	**+0.2**
	comp=N,0.9nm,0.5s,baz=282,slow=6.6,SNR=12						
	comp=N,0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**46.10**	**47**	P	**P**	**17 51 07.2**	**+2.6**
	comp=N,1.3nm,0.3s,baz=271,slow=8.1,SNR=8.2						
	comp=N,1.3nm,0.3s						

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*VIE **24** 17:47:08.2, 46°.35N×13°.00E, h9^{km}, mb1.9/18, ml2.5/21*
7 km SSW of Tolmezzo
*PRU **24** 17:47:10.3±0.0, 46°.40N×13°.01E, h12^{km}*
ROM 24 17:47:08.0±0.1**, 46°.339N**±0°.005×**13°.026E**±0°.006**,**
h8^{km}, ML2.5/29**, 7C-13D, Error ellipse: s-maj=0.5km**
s-min=0.4km az=174.0, Austria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOO	**Bordano**	**0.06**	**111**	⇓*e*Pg	Pg	17 47 10.3	+0.5
BOO				*e*Sg	Sg	17 47 11.5	+0.5
BOO	**Bordano**	**0.06**	**111**	P	Pg	17 47 10.3	+0.6
BOO				S	Sg	17 47 11.5	+0.5
FUSE	**Fusea**	**0.08**	**347**	⇑*e*Pg	Pg	17 47 10.6	+0.6
FUSE				*e*Sg	Sg	17 47 12.0	+0.5
FUSE	**Fusea**	**0.08**	**347**	P	Pg	17 47 10.6	+0.5
FUSE				S	Sg	17 47 12.2	+0.7
GEPF	**Gemona**	**0.10**	**130**	P	Pg	17 47 10.9	+0.6
GEPF				S	Sg	17 47 12.9	+1.0
GEPF				AML	AML		
	comp=N,8650µm,0.2s						
GEPF				AML	AML		
	comp=E,5990µm,0.2s						
MPRI	**Monte Prat**	**0.10**	**195**	⇑*e*Pg	Pg	17 47 10.9	+0.5
MPRI				*e*Sg	Sg	17 47 12.7	+0.7
MPRI	**Monte Prat**	**0.10**	**195**	⇑P	Pg	17 47 10.9	+0.5
MPRI				S	Sg	17 47 12.7	+0.6
MPRI				AML	AML		
	comp=N,5900µm,0.4s						
MPRI				AML	AML		
	comp=E,6345µm,0.3s						
MPRI				AML	AML		
	comp=N,7645µm,0.4s						
MPRI				AML	AML		
	comp=E,8210µm,0.3s						
BUA	**Buia**	**0.14**	**151**	⇑*e*Pg	Pg	17 47 11.5	+0.6
BUA				*e*Sg	Sg	17 47 14.1	+1.1
CLUD	**Cludinico**	**0.15**	**320**	⇓*e*Pg	Pg	17 47 11.9	+0.6
CLUD				*e*Sg	Sg	17 47 14.4	+0.9
CLUD	**Cludinico**	**0.15**	**320**	P	Pg	17 47 11.9	+0.6
CLUD				S	Sg	17 47 14.4	+0.9
CLUD				AML	AML		
	comp=E,1240µm,1.3s						
CLUD				AML	AML		
	comp=N,894µm,0.4s						
CLUD				AML	AML		
	comp=N,855µm,0.4s						
CLUD				AML	AML		
	comp=E,1295µm,0.5s						
CLUD				AML	AML		
	comp=N,855µm,1.6s						
CLUD				AML	AML		
	comp=E,1240µm,0.7s						
CLUD				AML	AML		
	comp=N,894µm,1.6s						
BAD	**Bernadia**	**0.18**	**124**	⇓*e*Pg	Pg	17 47 12.3	+0.6
BAD				*e*Sg	Sg	17 47 15.5	+1.3
BAD	**Bernadia**	**0.18**	**124**	P	Pg	17 47 12.3	+0.6
BAD				S	Sg	17 47 15.6	+1.3
VINO	**Villanova**	**0.20**	**115**	⇓*e*Pg	Pg	17 47 12.5	+0.5
VINO				*e*Sg	Sg	17 47 16.0	+1.4
VINO	**Villanova**	**0.20**	**115**	⇓P	Pg	17 47 12.5	+0.5
VINO				S	Sg	17 47 15.8	+1.1
VINO				AML	AML		
	comp=E,678µm,0.1s						
VINO				AML	AML		
	comp=N,988µm,0.3s						
ZOU	**Zoufplan**	**0.22**	**350**	⇓*e*Pg	Pg	17 47 13.2	+0.8
ZOU				*e*Sg	Sg	17 47 17.3	+1.7
ZOU	**Zoufplan**	**0.22**	**350**	P	Pg	17 47 13.3	+0.8
ZOU				S	Sg	17 47 17.1	+1.6
ZOU				AML	AML		
	comp=E,768µm,1.2s						
ZOU				AML	AML		
	comp=N,588µm,0.6s						
ZOU				AML	AML		
	comp=E,779µm,0.1s						
ZOU				AML	AML		
	comp=N,588µm,0.6s						
ZOU				AML	AML		
	comp=E,768µm,0.8s						
PLRO	**Paularo**	**0.23**	**22**	⇓*e*Pg	Pg	17 47 13.3	+0.7
PLRO				*e*Sg	Sg	17 47 17.4	+1.7
PLRO	**Paularo**	**0.23**	**22**	P	Pg	17 47 13.3	+0.7
PLRO				S	Sg	17 47 17.6	+1.9
STAL	**STALIGIAL**	**0.23**	**250**	P	Pg	17 47 12.8	+0.2
STAL				S	Sg	17 47 16.6	+0.8
STAL				AML	AML		
	comp=E,1515µm,1.4s						
STAL				AML	AML		
	comp=E,1840µm,1.3s						
STAL				AML	AML		
	comp=N,1515µm,0.7s						
STAL				AML	AML		
	comp=N,2220µm,0.7s						
STAL				AML	AML		
	comp=N,1515µm,1.3s						
STAL				AML	AML		
	comp=E,1515µm,0.6s						
PTCC	**Patocco-Chiusa**	**0.24**	**74**	⇓P	Pg	17 47 13.1	+0.4
PTCC				S	Sg	17 47 17.2	+1.3
PTCC				AML	AML		
	comp=E,510µm,1.2s						
PTCC				AML	AML		
	comp=N,708µm,1.0s						
PTCC				AML	AML		
	comp=E,510µm,0.8s						
FVI	**Forni Avoltri**	**0.31**	**327**	P	Pg	17 47 14.5	+0.4
FVI				S	Sg	17 47 19.2	+1.0
FVI				AML	AML		
	comp=E,900µm,0.1s						
FVI				AML	AML		
	comp=N,776µm,0.4s						
FVI				AML	AML		
	comp=N,776µm,1.6s						
CSMI	**Casera Mimoias**	**0.31**	**304**	⇑*e*Pg	Pg	17 47 14.6	+0.4
CSMI				*e*Sg	Sg	17 47 19.5	+1.2
COLI	**Coloredo**	**0.32**	**130**	⇑*e*Pg	Pg	17 47 14.9	+0.7
MLNI	**Malnisio**	**0.34**	**237**	⇑*e*Pg	Pg	17 47 15.0	+0.2
ROBS	**Robic**	**0.35**	**106**	*i* Pg	Pg	17 47 14.8	+0.1
ROBS				*i* Sg	Sg	17 47 20.4	+1.0
ROBS				IAML		17 47 21.6	
	comp=Z,46nm,0.1s						
LSR	**Lussari**	**0.37**	**68**	⇓*e*Pg	Pg	17 47 15.7	+0.4
LSR				*e*Sg	Sb	17 47 22.0	-1.1
PRED	**Cave del Predi**	**0.39**	**74**	⇓*e*Pg	Pg	17 47 15.7	+0.1
PRED	**Cave del Predi**	**0.39**	**74**	P	Pg	17 47 15.6	0.0
ACOM	**Acomizza, Ital**	**0.40**	**58**	⇓*e*Pg	Pg	17 47 16.3	+0.5
ACOM				*e*Sg	Sb	17 47 22.6	-1.1
ACOM	**Acomizza, Ital**	**0.40**	**58**	P	Pg	17 47 16.2	+0.4
ACOM				S	Sb	17 47 23.1	-0.7
ACOM				AML	AML		
	comp=N,1455µm,0.5s						
ACOM				AML	AML		
	comp=E,2335µm,0.3s						
ACOM				AML	AML		
	comp=N,1520µm,0.5s						
ACOM				AML	AML		
	comp=N,1455µm,1.5s						
ACOM				AML	AML		
	comp=N,1520µm,1.5s						
ACOM				AML	AML		
	comp=E,2385µm,0.3s						
CIMO	**Cimolais**	**0.41**	**266**	⇓*e*Pg	Pg	17 47 15.6	-0.4
CIMO				*e*Sg	Sg	17 47 21.7	+0.4
CIMO	**Cimolais**	**0.41**	**266**	P	Pg	17 47 15.4	-0.5
CIMO				S	Sg	17 47 21.8	+0.5
CIMO				AML	AML		
	comp=E,164µm,1.2s						
CIMO				AML	AML		
	comp=E,150µm,1.2s						
CIMO				AML	AML		
	comp=E,164µm,1.2s						
CIMO				AML	AML		
	comp=N,197µm,0.2s						
CIMO				AML	AML		
	comp=E,164µm,0.8s						
CIMO				AML	AML		
	comp=N,196µm,0.2s						
CIMO				AML	AML		
	comp=E,150µm,0.8s						
TLI	**Talmassons**	**0.42**	**173**	Pg	Pg	17 47 16.6	+0.5
DRE	**Drenchia**	**0.46**	**111**	⇓*e*Pg	Pg	17 47 16.9	0.0
DRE				*e*Sg	Sb	17 47 24.7	-0.6
DRE	**Drenchia**	**0.46**	**111**	P	Pg	17 47 16.9	0.0
POLC	**Polcenigo**	**0.48**	**230**	P	Pg	17 47 17.8	+0.6
POLC				S	Sb	17 47 26.1	+0.2
POLC				AML	AML		
	comp=E,490µm,0.5s						
POLC				AML	AML		
	comp=N,612µm,1.5s						
POLC				AML	AML		
	comp=E,490µm,1.5s						
CSO	**Casso**	**0.49**	**263**	*e*Pg	Pg	17 47 17.2	-0.3
CADS	**Cadrg**	**0.51**	**102**	*i* Pg	Pg	17 47 17.4	-0.3
CADS				*e*Sg	Sb	17 47 26.1	-0.6
CADS				IAML		17 47 27.6	
	comp=Z,16nm,0.1s						
MYKA	**Terra Mystica**	**0.52**	**55**	*i* Pg	Pg	17 47 18.5	+0.5
	comp=Z,21nm,0.2s,SNR=52						
MYKA				*i* Sg	Sb	17 47 26.2	-0.9
	comp=Z,36nm,0.2s						
CAE	**Caneva**	**0.53**	**231**	*e*Pg	Pg	17 47 18.4	+0.2
SABO	**M.te Sabotino**	**0.54**	**132**	*e*Pg	Pg	17 47 18.9	+0.6
SABO	**M.te Sabotino**	**0.54**	**132**	P	Pg	17 47 18.9	+0.5
SABO				S	Sb	17 47 28.2	+0.6
SABO				AML	AML		
	comp=E,600µm,0.3s						
SABO				AML	AML		
	comp=E,2465µm,0.3s						
SABO				AML	AML		
	comp=N,1805µm,0.2s						
SABO				AML	AML		
	comp=N,496µm,0.3s						
ABTA	**Abfaltersbach**	**0.54**	**319**	*i* Pg	Pg	17 47 18.8	+0.3
	comp=N,1.4nm,0.1s,SNR=14						
ABTA				*i* Sg	Sg	17 47 26.4	+0.9
	comp=N,18nm,0.1s						
FRE8	**Fregona**	**0.57**	**235**	P	Pg	17 47 19.1	+0.2
AFL	**Alpe Faloria**	**0.62**	**288**	*e*Pg	Pb	17 47 20.5	-0.6
VOJS	**Vojsko**	**0.67**	**117**	*i* Pg	Pg	17 47 20.5	-0.4
VOJS				*i* Sg	Sb	17 47 31.6	+0.2
VOJS				IAML		17 47 33.0	
	comp=Z,20nm,0.1s						
GORS	**Gorjuse**	**0.67**	**92**	*i* Pg	Pg	17 47 20.4	-0.5
GORS				*e*Sg	Sb	17 47 30.7	-0.8
GORS				IAML		17 47 33.2	
	comp=Z,20nm,0.1s						
AGOR	**Agordo**	**0.68**	**266**	*e*Pg	Pb	17 47 22.0	-0.1
AGOR	**Agordo**	**0.68**	**266**	P	Pb	17 47 22.1	-0.1
AGOR				S	Sb	17 47 31.6	-0.2
AGOR				AML	AML		
	comp=N,178µm,0.3s						
AGOR				AML	AML		
	comp=E,159µm,0.4s						
VARN	**Col Varnada, M**	**0.73**	**242**	*e*Pg	Pg	17 47 21.6	-0.3
VARN	**Col Varnada, M**	**0.73**	**242**	P	Pg	17 47 21.3	-0.7
VARN				AML	AML		
	comp=E,350µm,0.3s						
VARN				AML	AML		
	comp=E,350µm,0.3s						
VARN				AML	AML		
	comp=N,307µm,0.3s						
VARN				AML	AML		
	comp=E,348µm,0.2s						
VARN				AML	AML		
	comp=N,293µm,0.3s						
FAU	**Forcella Aurin**	**0.73**	**262**	*e*Pg	Pg	17 47 22.1	0.0
KBA	**Koelnbreinsper**	**0.77**	**16**	*i* Pg	Pb	17 47 23.6	-0.2
	comp=N,2.1nm,0.1s,SNR=21						
KBA				*i* Sg	Sb	17 47 34.0	-0.5
	comp=N,33nm,0.2s						
TRI	**Trieste**	**0.81**	**141**	P	Pg	17 47 23.2	-0.4
TRI				AML	AML		
	comp=N,60µm,1.1s						
TRI				AML	AML		
	comp=E,125µm,0.6s						
TRI				AML	AML		
	comp=N,60µm,0.9s						
MTLO	**Montello**	**0.83**	**231**	*e*Pg	Pb	17 47 24.4	-0.3
JAVS	**Javornik**	**0.85**	**121**	*i* Pg	Pg	17 47 23.6	-0.7
JAVS				*i* Sg	Sb	17 47 37.6	+1.0
JAVS				IAML		17 47 45.5	
	comp=Z,14nm,0.1s						
RISI	**Rein**	**0.89**	**313**	P	Pb	17 47 25.9	0.0
RISI				S	Sb	17 47 37.9	-0.2
RISI				AML	AML		
	comp=N,246µm,0.6s						
RISI				AML	AML		
	comp=E,254µm,0.6s						
BRES	**Bressanone**	**0.96**	**292**	AML	AML		
	comp=N,131µm,1.2s						
BRES				AML	AML		
	comp=E,123µm,1.3s						
BRES				AML	AML		
	comp=N,132µm,1.2s						
BRES				AML	AML		
	comp=E,122µm,1.3s						
BRES				AML	AML		
	comp=E,122µm,0.7s						
BRES				AML	AML		
	comp=N,131µm,0.8s						
CGRP	**Cima Grappa**	**0.97**	**242**	P	Pg	17 47 25.8	-0.8
CGRP				AML	AML		
	comp=N,156µm,0.6s						
CGRP				AML	AML		
	comp=E,222µm,1.3s						
CTI	**Castel Tesino**	**1.00**	**254**	P	Pb	17 47 28.0	+0.3
CTI				AML	AML		
	comp=E,772µm,0.1s						
CTI				AML	AML		
	comp=N,761µm,0.2s						
OBKA	**Obir**	**1.07**	**80**	*i* Pg	Pg	17 47 28.6	+0.1
	comp=N,1.6nm,0.1s,SNR=9.5						
OBKA				Sg	Sn	17 47 43.8	-0.6
	comp=N,13nm,0.2s						
LJU	**Ljubljana**	**1.08**	**105**	AML	AML		
	comp=N,1265µm,1.1s						
LJU				AML	AML		
	comp=E,1395µm,0.5s						
LJU				AML	AML		
	comp=N,1265µm,0.9s						
APPI	**Appiano**	**1.25**	**277**	P	Pg	17 47 32.3	+0.3
APPI				AML	AML		
	comp=E,238µm,0.3s						
APPI				AML	AML		
	comp=N,230µm,0.4s						
APPI				AML	AML		
	comp=N,230µm,1.6s						
WTTA	**Wattenberg**	**1.33**	**315**	*i* Pg	Pg	17 47 33.8	+0.4
	comp=N,1.8nm,0.1s,SNR=10						
WTTA				*e*Sg	Sn	17 47 51.2	+0.2
	comp=N,10nm,0.3s						
DOSS	**Dosso del Somm**	**1.36**	**251**	P	Pg	17 47 34.0	0.0
DOSS				AML	AML		
	comp=E,566µm,0.3s						
DOSS				AML	AML		
	comp=E,522µm,0.5s						
DOSS				AML	AML		
	comp=N,482µm,0.5s						
DOSS				AML	AML		
	comp=N,590µm,0.3s						
DOSS				AML	AML		
	comp=E,566µm,0.3s						
WATA	**Walderalm**	**1.41**	**316**	*e*Pg	Pg	17 47 35.8	+0.8
	comp=E,3.5nm,0.2s						
WATA				*e*Sg	Sg	17 47 53.7	+0.4
	comp=E,6.7nm,0.2s						
BIOA	**Bad Ischl, Aus**	**1.42**	**17**	*e*Sg	Sg	17 47 54.9	+1.4
	comp=E,27nm,0.5s,SNR=4.8						
SOKA	**Soboth**	**1.43**	**76**	*e*Pn	Pn	17 47 34.2	-0.1
	comp=E,0.8nm,0.1s						
SOKA				*e*Sn	Sg	17 47 53.9	+0.1
	comp=E,2.6nm,0.2s						
RIY	**Rijeka**	**1.44**	**134**	Sn	Sg	17 47 56.0	+1.8
GAGG	**Gaggia**	**1.46**	**261**	P	Pg	17 47 35.8	-0.1
GAGG				AML	AML		
	comp=N,364µm,0.2s						
GAGG				AML	AML		
	comp=E,386µm,0.2s						
GAGG				AML	AML		
	comp=N,240µm,0.3s						
GAGG				AML	AML		
	comp=E,209µm,1.1s						
GAGG				AML	AML		
	comp=N,364µm,0.2s						
LUSI	**Trento, Gardas**	**1.50**	**256**	P	Pb	17 47 36.4	+0.3
LUSI				AML	AML		
	comp=E,338µm,0.2s						
LUSI				AML	AML		
	comp=N,770µm,0.3s						
LUSI				AML	AML		
	comp=E,338µm,1.8s						
BRJN	**Brijuni**	**1.52**	**160**	P	Pb	17 47 36.6	+0.2
SMRN	**Sveta Marina**	**1.52**	**148**	*e*Pn	Pb	17 47 36.3	-0.1
SMRN				Sn	Sg	17 47 56.9	0.0
ROVR	**Rover Verones**	**1.53**	**244**	P	Pb	17 47 36.5	-0.2
ROVR				AML	AML		
	comp=E,112µm,0.4s						
ROVR				AML	AML		
	comp=N,162µm,0.7s						
ROVR				AML	AML		
	comp=E,112µm,1.6s						
SQTA	**Sankt Quirin**	**1.53**	**306**	*e*Pg	Pb	17 47 36.8	+0.2
	comp=E,5.1nm,0.2s						
SQTA				*e*Sg	Sg	17 47 57.5	+0.4
	comp=E,12nm,0.4s						
MOTA	**Moosalm**	**1.66**	**308**	*e*Pg	Pg	17 47 39.5	-0.3
	comp=E,1.7nm,0.2s						
MOTA				*e*Sg	Sg	17 48 02.8	+1.5
	comp=E,10nm,0.2s						
FETA	**Feichten**	**1.72**	**294**	*e*Pg	Pg	17 47 40.7	-0.3
	comp=E,1.1nm,0.2s						
FETA				*e*Sg	Sg	17 48 03.8	+0.5
	comp=E,3.7nm,0.3s						
MOA	**Molln**	**1.73**	**29**	*e*Pg	Pb	17 47 40.5	+0.4
	comp=E,2.2nm,0.3s						
MOA				*i* Sg	Sg	17 48 05.4	+1.8
	comp=E,3.3nm,0.3s						
MAGA	**Magasa**	**1.76**	**252**	P	Pb	17 47 40.4	-0.3
MAGA				AML	AML		
	comp=N,266µm,1.1s						
MAGA				AML	AML		
	comp=E,468µm,0.4s						
MAGA				AML	AML		
	comp=N,266µm,0.9s						
BOJS	**Bojanci**	**1.76**	**117**	AML	AML		
	comp=E,237µm,0.2s						
BOJS				AML	AML		
	comp=N,324µm,0.3s						
MABI	**Malga Bissina**	**1.77**	**262**	P	Pb	17 47 40.8	0.0
MABI				AML	AML		
	comp=E,80µm,0.2s						
MABI				AML	AML		
	comp=N,148µm,0.2s						
BRMO	**Bormio**	**1.84**	**275**	P	Pg	17 47 42.7	-0.6
BRMO				AML	AML		
	comp=E,40µm,1.1s						
BRMO				AML	AML		
	comp=N,63µm,0.5s						
BRMO				AML	AML		
	comp=E,40µm,0.9s						
OZLJ	**Ozalj**	**1.85**	**112**	*e*Pn	Pn	17 47 41.0	+1.0
OZLJ				Sn	Sb	17 48 05.2	0.0
RETA	**Reutte**	**1.93**	**307**	*e*Pg	Pg	17 47 45.2	+0.2
	comp=E,1.7nm,0.2s						
RETA				*e*Sg	Sg	17 48 12.0	+2.0
	comp=E,12nm,0.3s						
ARSA	**Arzberg**	**1.94**	**61**	*e*Pn	Pn	17 47 42.0	+0.7
	comp=E,1.0nm,0.2s						
ARSA				*e*Sg	Sg	17 48 11.0	+0.6
	comp=E,2.3nm,0.3s						
PTJ	**Puntijarka**	**2.09**	**101**	*e*Pn	Pb	17 47 46.1	-0.1
PLIT	**Plitvice**	**2.34**	**128**	Sn	Sn	17 48 16.7	+1.0
DAVA	**Damuels**	**2.36**	**295**	*e*Pg	Pg	17 47 53.4	+0.3
	comp=E,4.8nm,0.4s						
DAVA				*e*Sg	Sg	17 48 24.6	+0.9
	comp=E,8.5nm,0.3s						
VIRC	**Vir**	**2.50**	**144**	*e*Pn	Pn	17 47 49.4	+0.5
CONA	**Conrad Observa**	**2.50**	**50**	*e*Pn	Pn	17 47 50.2	+1.1
	comp=E,1.9nm,0.3s						
CONA				*e*Sn	Sb	17 48 22.3	-2.0
	comp=E,0.6nm,0.2s						
RONA	**Rosalia, Austr**	**2.62**	**58**	*i* Pn	Pn	17 47 51.2	+0.5
	comp=E,0.2nm,0.1s						
CKRC	**Cesky Krumlov**	**2.63**	**19**	*e*SG	Sg	17 48 32.0	-0.4
	comp=E,4.9nm,0.4s						
DUGI	**Dugi Otok**	**2.75**	**148**	*e*Pn	Pn	17 47 53.2	+0.8
KHC	**Kasperske Hory**	**2.82**	**7**	*e*PN	Pn	17 47 54.5	+1.1
KHC				*e*SN	Sb	17 48 30.5	-2.8
KHC				*e*SG	Sg	17 48 38.5	0.0
MORI	**Morici**	**3.12**	**142**	*e*Pn	Pn	17 47 59.2	+1.8
ZIRJ	**Zirje**	**3.26**	**144**	*e*Pn	Pn	17 48 01.4	+2.0
ZIRJ				Sn	Sn	17 48 39.4	+0.9
PRU	**Pruhonice**	**3.79**	**15**	*e*SG	Sg	17 49 08.8	-0.8
NKC	**Novy Kostel**	**3.92**	**355**	*e*SG	Sg	17 49 13.3	-0.4
RICI	**Ricice**	**4.07**	**133**	*e*Pg	Pb	17 48 20.3	+0.3
RICI				Sg	Pb	17 48 21.8	+1.9
DPC	**Dobruska-Polom**	**4.58**	**27**	*e*SG	Sg	17 49 33.0	-1.8

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*IDC **24** 17:48:41.5±1.7, 38°.28N×141°.92E, h0^{km}, mb3.4/3,*
mbtmp3.2/5, ML2.1/2, Error ellipse: s-maj=51.2km
s-min=23.8km az=90.0
*JMA **24** 17:48:45.3±0.1, 38°.4N±0°.3×142°.1E±0°.7, h35^{km}±1^{km},*
MV3.3/39, E OFF MIYAGI PREF
ISC 24 17:48:44.3±1.6**, 38°.35N**±0°.04×**142°.02E**±0°.07**, h18**^{km}±4^{km}**,**
n22, σ1^{s}**31**/26**, mb3.5**/3**, 10D, Near east coast of eastern**

Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.43**	**265**	⇓*i*P	**Pn**	**17 48 56.2**	**+0.6**
JIKH				⇓S	**Sn**	**17 49 03.6**	**+0.7**
JIO	**Ouri**	**0.53**	**281**	⇓P	**Pn**	**17 48 57.7**	**+0.7**
JIO				⇓S	**Sn**	**17 49 06.0**	**+0.6**
JKMT	**Kesennumamotoy**	**0.62**	**317**	⇓*i*P	**Pn**	**17 48 58.2**	**0.0**
JKMT				⇓S	**Sn**	**17 49 07.1**	**-0.6**
OFUJ	**Ofunato**	**0.78**	**340**	⇓*i*P	**Pn**	**17 48 59.5**	**-0.8**
OFUJ				⇓S	**Sg**	**17 49 09.4**	**-0.5**
JMK	**Ichinoseki**	**0.86**	**314**	⇓*i*P	**Pn**	**17 49 01.7**	**+0.3**
JMK				⇓S	**Sn**	**17 49 13.4**	**-0.1**
JOU	**Okura**	**1.06**	**271**	P	**Pg**	**17 49 05.9**	**+1.0**
JOU				S	**Sg**	**17 49 20.6**	**+1.8**
JMM	**Marumori**	**1.08**	**244**	P	**Pg**	**17 49 05.3**	**+0.1**
JMM				S	**Sg**	**17 49 20.2**	**+0.8**
JOM	**Ohasama**	**1.25**	**334**	*i* P	**Pb**	**17 49 07.1**	**-0.3**
JOM				S	**Sb**	**17 49 22.7**	**-0.5**
JFK	**Kawauchi**	**1.33**	**223**	P	**Pb**	**17 49 08.5**	**-0.2**
JFK				*e*S	**Sb**	**17 49 25.4**	**-0.2**
JYK	**Kaneyama**	**1.41**	**294**	P	**Pg**	**17 49 10.5**	**-1.1**
JRG	**Rokugo**	**1.50**	**314**	P	**Pg**	**17 49 12.0**	**-1.2**
MJAR	**Matsushiro Arr**	**3.53**	**240**	Pn	**Pn**	**17 49 36.1**	**-2.0**
	baz=59,slow=9.4,SNR=1.7						
	0.7nm,0.5s						
ASAJ	**Asahikawa**	**5.78**	**4**	Pn	**Pn**	**17 50 09.4**	**+0.5**
	0.1nm,0.3s,baz=20,slow=22,SNR=1.7						
ASAJ				Sn	**Sn**	**17 51 19.5**	**+4.7**
	baz=310,slow=26						
	5.2nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**28.45**	**124**	T	T	18 24 25.2	
	baz=316,slow=75,SNR=9.8						
H11N1	**WAKE ISLAND Hy**	**28.45**	**124**	T	T	18 24 47.4	
	baz=316,slow=75,SNR=3.4						
H11N3	**WAKE ISLAND Hy**	**28.46**	**124**	T	T	18 24 30.5	
	baz=316,slow=75,SNR=3.8						
H11S1	**WAKE ISLAND Hy**	**29.21**	**126**	T	T	18 25 24.8	
	baz=318,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.21**	**126**	T	T	18 25 44.9	
	baz=318,slow=74						
H11S2	**WAKE ISLAND Hy**	**29.22**	**126**	T	T	18 25 27.7	
	baz=318						
ZALV	**Zalesovo Beam**	**41.39**	**311**	P	**P**	**17 56 28.8**	**-0.3**
	0.4nm,0.5s,baz=90,slow=8.6,SNR=2.5						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**58.43**	**188**	P	**P**	**17 58 38.5**	**-0.4**
	0.6nm,1.1s,baz=5.9,slow=6.9,SNR=6.6						
	0.6nm,1.1s						
ASAR	**Alice Springs**	**62.16**	**188**	P	**P**	**17 59 03.9**	**-0.5**
	0.2nm,0.8s,baz=8.4,slow=6.3,SNR=1.5						
	0.2nm,0.8s						

DJA ***24*** *17:56:15.8±0.8, 2°S±8°×14°0E±°, h10^{km}, M4.4/6, mb4.5/4, MLv4.3/6*

IDC ***24*** *17:56:16.5±1.1, 2°.17S×139°.27E, h0^{km}, mb3.8/5, mbtmp3.9/7, ML3.9/1, MS3.3/14, Error ellipse: s-maj=39.5km s-min=20.5km az=75.0*

NEIC ***24*** *17:56:22.5±1.1, 2°.20S±0°.07×139°.33E±0°.08, h46^{km}±6^{km}, mb4.4/24, Error ellipse: s-maj=12.5km s-min=9.9km az=115.0*

ISC 24 17:56:19.6±0.6**, 2°.16S**±0°.08×**139°.40E**±0°.05**, h27**^{km}**, n56, σ0^{s}99**/44**, mb4.3**/12**, MS3.4**/11**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.71**	**283**	P	**Pb**	**17 56 31.7**	**-1.7**
SMPI				S	**Sn**	**17 56 45.4**	**+1.5**
GENI	**Genyem**	**0.88**	**120**	P	**Pn**	**17 56 34.7**	**-1.5**
GENI				S	**Sb**	**17 56 47.3**	**-0.4**
SRPI	**Serui, Papua**	**3.17**	**275**	P	**Pn**	**17 57 07.7**	**-0.1**
RKPI	**Ransiki, Papua**	**5.26**	**277**	P	**Pn**	**17 57 37.0**	**+0.5**
	57nm,0.7s,0.3nm						
FAKI	**Fak Fak**	**7.19**	**264**	Pn	**Pn**	**17 58 03.7**	**+0.7**
FAKI	**Fak Fak**	**7.19**	**264**	P	**Pn**	**17 58 03.4**	**+0.4**
	31nm,0.7s,0.2nm						
PMG	**Port Moresby**	**10.55**	**133**	Pn	**Pn**	**17 58 51.1**	**+1.9**
	4.7nm,0.7s,baz=179,slow=14,SNR=1.9						
PMG	**Port Moresby**	**10.55**	**133**	Pn	**Pn**	**17 58 51.5**	**+2.3**
COEN	**Coen**	**12.30**	**163**	Pn	**Pn**	**17 59 14.2**	**+1.0**
MTN	**Manton Dam**	**13.41**	**217**	Pn	**Pn**	**17 59 29.0**	**+0.7**
DAV	**Davao City (W)**	**16.56**	**304**	LR	LR	18 04 58.1	
	comp=Z,114nm,20.1s,baz=58,slow=32						
SOEI	**Soe**	**16.83**	**243**	P	**P**	**18 00 15.1**	**-0.5**
SOEI				IAmb	IAmb	18 00 29.9	
	comp=Z,30nm,0.8s						
KNRA	**Kununurra**	**17.04**	**217**	P	**P**	**18 00 17.9**	**+0.2**
KNRA				IAmb	IAmb	18 00 43.1	
	comp=Z,32nm,1.1s						
WB0	**Warramunga Arr**	**18.18**	**195**	P	**P**	**18 00 31.1**	**+0.8**
WB0				IAmb	IAmb	18 00 44.0	
	comp=Z,21nm,1.3s						
WB2	**Warramunga Arr**	**18.36**	**195**	P	**P**	**18 00 32.0**	**-0.3**
WB2				IAmb	IAmb	18 00 45.5	
	comp=Z,13nm,0.9s						
WRA	**Warramunga Arr**	**18.36**	**195**	P	**Pn**	**18 00 32.5**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=19,slow=12,SNR=23						
WRA				S	Sn	18 03 42.9	-14
	comp=Z,0.6nm,0.6s,baz=13,slow=24,SNR=2.6						
	comp=Z,4.0nm,0.8s						
WRA	**Warramunga Arr**	**18.36**	**195**	P	**P**	**18 00 32.0**	**-0.3**
TOLI2	**Tolitoli**	**18.90**	**280**	P	**P**	**18 00 35.7**	**-2.5**
CTA	**Charters Tower**	**19.04**	**160**	LR	LR	18 08 30.7	
	comp=Z,107nm,20.8s,baz=342,slow=38						
CTAO	**Charters Tower**	**19.04**	**160**	P	**P**	**18 00 40.2**	**+0.4**
CTAO				IAmb	IAmb	18 00 41.0	
	comp=Z,22nm,1.2s						
KAPI	**Kappang**	**19.81**	**261**	LR	LR	18 10 49.3	
	comp=Z,42nm,18.8s,baz=90,slow=44						
FITZ	**Fitzroy Crossi**	**20.82**	**220**	P	**P**	**18 00 58.4**	**-0.7**
HNR	**Honiara**	**21.67**	**110**	P	**P**	**18 01 09.1**	**+0.7**
AS31	**Alice Springs**	**22.04**	**194**	P	**P**	**18 01 11.5**	**-0.8**
ASAR	**Alice Springs**	**22.04**	**194**	P	**P**	**18 01 12.4**	**+0.1**
	comp=Z,2.1nm,0.6s,baz=19,slow=10,SNR=40						
ASAR				S	S	18 05 03.1	-11
	comp=Z,0.3nm,0.9s,baz=240,slow=38,SNR=1.7						
ASAR				LR	LR	18 10 51.9	
	comp=Z,43nm,20.5s,baz=28,slow=40						
	comp=Z,2.1nm,0.6s						
ASAR	**Alice Springs**	**22.04**	**194**	P	**P**	**18 01 11.2**	**-1.1**
MYLDM	**Lahad Datu**	**22.11**	**289**	P	**P**	**18 01 12.3**	**-0.8**
MYLDM				IAmb	IAmb	18 01 37.2	
	comp=Z,21nm,1.1s						
TGY	**Tagaytay City**	**24.41**	**312**	LR	LR	18 10 57.7	
	comp=Z,40nm,21.2s,baz=123,slow=36						
EIDS	**Eidsvold**	**25.68**	**155**	P	**P**	**18 01 47.6**	**+0.2**
EIDS				IAmb	IAmb	18 02 23.6	
	comp=Z,22nm,1.4s						
MBWA	**Marble Bar**	**26.91**	**224**	P	**P**	**18 01 58.9**	**+0.2**
MBWA				IAmb	IAmb	18 02 10.3	
	comp=Z,25nm,1.2s						
PSA00	**Pilbara Seismi**	**27.11**	**223**	P	**P**	**18 01 59.6**	**-0.9**
PSA00				IAmb	IAmb	18 02 35.2	
	comp=Z,14nm,1.5s						
PSA00	**Pilbara Seismi**	**27.11**	**223**	P	**P**	**18 02 00.2**	**-0.3**
PSA00				IAmb	IAmb	18 02 22.2	
	comp=Z,29nm,1.4s						
STKA	**Stephens Creek**	**29.64**	**176**	P	**P**	**18 02 23.1**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=341,slow=13,SNR=2.1						
STKA				LR	LR	18 15 19.1	
	comp=Z,142nm,19.7s,baz=4.2,slow=39						
	comp=Z,0.4nm,0.4s						
FORT	**Forrest**	**30.43**	**200**	P	**P**	**18 02 28.9**	**-0.9**
BBOO	**Buckleboo**	**30.66**	**186**	P	**P**	**18 02 31.2**	**-0.6**
BBOO				IAmb	IAmb	18 02 37.8	
	comp=Z,8.9nm,1.2s						
DZM	**Mont Dzumac**	**32.91**	**129**	LR	LR	18 14 20.7	
	comp=Z,85nm,20.2s,baz=352,slow=33						
H11S3	**WAKE ISLAND Hy**	**33.80**	**51**	T	T	18 38 30.4	
	baz=236,slow=75,SNR=33						
H11S2	**WAKE ISLAND Hy**	**33.81**	**51**	T	T	18 38 31.2	
	baz=236,slow=75,SNR=41						
H11S1	**WAKE ISLAND Hy**	**33.81**	**51**	T	T	18 38 31.9	
	baz=236,slow=75,SNR=29						
WAKE	**Wake Island**	**34.22**	**50**	P	**P**	**18 03 02.4**	**-0.9**
MORW	**Morawa**	**34.80**	**217**	P	**P**	**18 03 08.1**	**-0.1**
JNU	**Nakatsue**	**36.00**	**348**	LR	LR	18 15 02.9	
	comp=Z,42nm,20.0s,baz=162,slow=31						
KSRS	**Korea Array**	**40.82**	**346**	LR	LR	18 18 18.4	
	comp=Z,26nm,21.9s,baz=140,slow=32						
MSVF	**Nonsavu**	**40.96**	**115**	LR	LR	18 21 00.3	
	comp=Z,96nm,18.1s,baz=120,slow=36						
GSI	**Gunungsitoli**	**41.96**	**274**	P	**P**	**18 04 06.9**	**-1.7**
CMAR	**Chiang Mai Arr**	**44.77**	**299**	P	**P**	**18 04 31.4**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=120,slow=6.8,SNR=12						
CMAR				LR	LR	18 21 42.4	
	comp=Z,16nm,21.3s,baz=255,slow=34						
	comp=Z,1.2nm,0.8s						
RPZ	**Rata Peaks**	**50.02**	**150**	LR	LR	18 27 00.5	
	comp=Z,68nm,18.3s,baz=336,slow=37						
PETK	**Petropavlovsk-**	**57.17**	**13**	LR	LR	18 29 12.9	
	comp=Z,28nm,20.7s,baz=109,slow=34						
SONM	**Songino Array**	**57.52**	**334**	LR	LR	18 33 02.2	
	comp=Z,35nm,18.2s,baz=108,slow=38						
CLES	**Cleveland East**	**69.25**	**30**	P	**P**	**18 07 24.8**	**+0.8**
CLES				IAmb	IAmb	18 07 26.2	
	comp=Z,316nm,0.8s						
MK31	**Makanchi Array**	**69.78**	**322**	P	**P**	**18 07 28.1**	**+0.6**
MK31				IAmb	IAmb	18 07 51.5	
	comp=Z,2.4nm,1.1s						
MKAR	**Makanchi Array**	**69.78**	**322**	P	**P**	**18 07 28.4**	**+0.9**
	comp=Z,1.5nm,0.8s,baz=115,slow=8.6,SNR=14						
	comp=Z,1.5nm,0.8s						
MKAR	**Makanchi Array**	**69.78**	**322**	P	**P**	**18 07 27.6**	**+0.1**
NIL	**Nilore**	**71.55**	**306**	P	**P**	**18 07 39.1**	**+0.4**
NIL				IAmb	IAmb	18 07 40.8	
	comp=Z,4.1nm,0.9s						
KURK	**Kurchatov**	**73.66**	**325**	P	**P**	**18 07 50.5**	**-0.3**
ILAR	**Eielson Array**	**85.05**	**24**	P	**P**	**18 08 54.1**	**+1.5**
	comp=Z,0.8nm,0.9s,baz=258,slow=4.8,SNR=6.2						
	comp=Z,0.8nm,0.9s						

HLW ***24*** *18:10:30.0, 30°.28N×31°.93E, h2^{km}±2^{km}, Ml4.1*

GII ***24*** *18:10:32.8±0.3, 30°.41N×31°.80E, h31^{km}, Mm3.4/9*

ISC 24 18:10:28.7±1.5**, 30°.37N**±0°.05×**31°.89E**±0°.05**, h10**^{km}±13^{km}**, n32, σ0^{s}91**/50**, 1D, Egypt**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOT	**Kottamia**	**0.44**	**187**	P	**Pg**	**18 10 37.6**	**+0.2**
	baz=194						
KOT				S	**Sg**	**18 10 43.0**	**-0.2**
	baz=194						
HHAG	**Hagoal**	**0.45**	**156**	P	**Pg**	**18 10 37.3**	**-0.3**
	baz=155						
HLW	**Helwan**	**0.69**	**223**	S	**Sb**	**18 10 52.1**	**-0.5**
	baz=231						
HSAF	**As Saff**	**0.80**	**201**	⇓P	**Pg**	**18 10 44.1**	**0.0**
	baz=207						
GLL	**Jalalah**	**0.80**	**191**	P	**Pg**	**18 10 44.0**	**-0.2**
	baz=196						
SUZ	**Suez**	**0.97**	**122**	P	**Pb**	**18 10 47.1**	**-0.5**
	baz=118						
HMYD	**Mayadein**	**1.10**	**239**	⇑P	**Pg**	**18 10 51.1**	**+1.1**
	baz=245						
HNAT	**Natroun**	**1.32**	**237**	P	**Pg**	**18 10 54.6**	**+0.4**
	baz=241						
NBNS	**Bani Suef**	**1.81**	**197**	P	**Pb**	**18 11 01.0**	**-1.1**
	baz=199						
KZIT	**Kziot**	**2.23**	**75**	Pn	**Pn**	**18 11 06.8**	**+1.1**
KZIT				Sn	**Sn**	**18 11 33.2**	**-0.1**
KRMI	**Paran Flat**	**2.46**	**95**	Pn	**Pn**	**18 11 09.2**	**+0.2**
KRMI				Sn	**Sn**	**18 11 39.5**	**+0.3**
MBRI	**Mt Berech**	**2.68**	**102**	Pn	**Pn**	**18 11 12.6**	**+0.6**
MBRI				Sn	**Sn**	**18 11 45.9**	**+1.3**
PRNI	**Paran**	**2.69**	**90**	Pn	**Pn**	**18 11 12.9**	**+0.8**
PRNI				Sn	**Sn**	**18 11 45.0**	**+0.2**
EIL	**Elat**	**2.74**	**104**	Pn	**Pn**	**18 11 13.1**	**+0.3**
EIL				Sn	**Sn**	**18 11 46.6**	**+0.6**
HRFI	**Mount Harif**	**2.74**	**96**	Pn	**Pn**	**18 11 14.5**	**+1.6**
HRFI				Sn	**Sn**	**18 11 45.9**	**-0.2**
ZFRI	**Zfri**	**2.84**	**85**	Pn	**Pn**	**18 11 14.5**	**+0.3**
ZFRI				Sn	**Sn**	**18 11 48.4**	**-0.1**
AMAZ	**Amatzia**	**2.85**	**65**	Pn	**Pn**	**18 11 15.8**	**+1.5**
AMAZ				Sn	**Sn**	**18 11 48.4**	**-0.2**
HDHB	**Dhahab**	**2.89**	**124**	P	**Pn**	**18 11 15.6**	**+0.8**
	baz=122						
YTIR	**Yattir**	**2.95**	**69**	Pn	**Pn**	**18 11 16.6**	**+0.9**
YTIR				Sn	**Sn**	**18 11 51.4**	**+0.2**
MSBI	**Mazada**	**3.13**	**72**	Sn	**Sn**	**18 11 55.6**	**+0.2**
DSI	**Dead Sea**	**3.23**	**67**	Pn	**Pn**	**18 11 21.5**	**+2.0**
SLTI	**Sal'it**	**3.28**	**54**	Pn	**Pn**	**18 11 21.4**	**+1.2**
SLTI				Sn	**Sn**	**18 11 58.4**	**-0.9**
GHAJ	**Ghor Haditha**	**3.30**	**73**	Pn	**Pn**	**18 11 21.5**	**+1.1**
UJAP	**Al Uja**	**3.45**	**62**	Pn	**Pn**	**18 11 24.1**	**+1.6**
UJAP				Sn	**Sn**	**18 12 02.6**	**-0.7**
OFRI	**`Ofer**	**3.47**	**49**	Sn	**Sn**	**18 12 02.7**	**-1.3**
HMDT	**Nahal Hemdat**	**3.64**	**58**	Pn	**Pn**	**18 11 26.2**	**+1.1**
HMDT				Sn	**Sn**	**18 12 07.9**	**-0.1**
MMLI	**Mount Malkishu**	**3.66**	**55**	Pn	**Pn**	**18 11 26.8**	**+1.4**
MMLI				Sn	**Sn**	**18 12 08.1**	**-0.6**
BLGI	**Bet Lehem HaGe**	**3.67**	**49**	Pn	**Pn**	**18 11 25.8**	**+0.2**
BLGI				Sn	**Sn**	**18 12 07.9**	**-1.1**
HNTI	**Hanita**	**3.89**	**45**	Pn	**Pn**	**18 11 28.8**	**+0.2**
HNTI				Sn	**Sn**	**18 12 13.2**	**-1.2**
MMA0B	**Mount Meron ar**	**3.99**	**48**	Sn	**Sn**	**18 12 15.6**	**-1.4**
GEM	**Giv'at Ha'Em**	**4.29**	**48**	Pn	**Pn**	**18 11 34.9**	**+0.9**
GEM				Sn	**Sn**	**18 12 23.3**	**-0.8**
NATI	**Neve Ativ**	**4.37**	**48**	Pn	**Pn**	**18 11 36.2**	**+1.1**
NATI				Sn	**Sn**	**18 12 25.2**	**-0.8**

ISK ***24*** *18:14:18.9, 40°.90N×22°.77E, h5^{km}, ML2.8/15*

SKO ***24*** *18:14:18.0, 40°.91N×22°.77E, h23^{km}, ML3.1*

THE ***24*** *18:14:19.2, 40°.91N×22°.78E, h10^{km}±1^{km}, ML2.4/9, Error ellipse: s-maj=1.2km s-min=0.5km az=2.0*

ATH ***24*** *18:14:19.4, 40°.90N×22°.77E, h7^{km}±1^{km}, ML2.5/9, Error ellipse: s-maj=1.8km s-min=0.8km az=357.0*

BEO ***24*** *18:14:20.2±0.4, 40°.90N×22°.76E, h0^{km}±2^{km}, ML2.2/8*

ISC 24 18:14:19.3±0.9**, 40°.91N**±0°.02×**22°.77E**±0°.01**, h11**^{km}±7^{km}**, n68, σ0^{s}72**/108**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNT	**Kendrikon**	**0.28**	**21**	P	**Pg**	**18 14 24.4**	**-0.5**
KNT				S	**Sg**	**18 14 28.5**	**-0.2**
	2μm,0.1s						
KNT	**Kendrikon**	**0.28**	**21**	Pg	**Pg**	**18 14 24.5**	**-0.5**
KNT	**Kendrikon**	**0.28**	**21**	*i* Pg	**Pg**	**18 14 24.4**	**-0.5**
KNT				*i* Sg	**Sg**	**18 14 28.5**	**-0.2**
KNT	**Kendrikon**	**0.28**	**21**	P	**Pg**	**18 14 24.4**	**-0.5**
KNT				S	**Sg**	**18 14 27.9**	**-0.9**
KNT				AML	AML	18 14 27.9	
	comp=E,3159μm,0.1s						
KNT				AML	AML	18 14 28.2	
	comp=N,4217μm,0.1s						
GRG	**Griva**	**0.28**	**281**	P	**Pg**	**18 14 25.2**	**+0.1**
GRG				S	**Sg**	**18 14 29.8**	**+0.8**
	comp=N,2μm,0.2s						
GRG	**Griva**	**0.28**	**281**	Pg	**Pg**	**18 14 25.2**	**+0.1**
GRG				Sg	**Sg**	**18 14 29.5**	**+0.5**
GRG	**Griva**	**0.28**	**281**	*i* Pg	**Pg**	**18 14 25.2**	**+0.1**
GRG				*i* Sg	**Sg**	**18 14 29.8**	**+0.8**
GRG	**Griva**	**0.28**	**281**	P	**Pg**	**18 14 25.1**	**0.0**
GRG				S	**Sg**	**18 14 29.5**	**+0.5**
GRG				AML	AML	18 14 30.0	
	comp=E,3148μm,0.2s						
GRG				AML	AML	18 14 30.1	
	comp=N,3694μm,0.2s						
THE	**Thessaloniki**	**0.31**	**151**	P	**Pg**	**18 14 25.4**	**-0.2**
THE				S	**Sg**	**18 14 29.6**	**-0.1**
	comp=N,1μm,0.2s						
THE	**Thessaloniki**	**0.31**	**151**	*i* Pg	**Pg**	**18 14 25.4**	**-0.2**
THE				*i* Sg	**Sg**	**18 14 29.6**	**-0.1**
THE	**Thessaloniki**	**0.31**	**151**	P	**Pg**	**18 14 25.0**	**-0.5**
THE				S	**Sg**	**18 14 29.5**	**-0.2**
THE				AML	AML	18 14 29.9	
	comp=E,2324μm,0.2s						
THE				AML	AML	18 14 31.5	
	comp=N,1874μm,0.2s						
HORT	**Hortiatis**	**0.40**	**140**	P	**Pg**	**18 14 27.1**	**-0.1**
HORT	**Hortiatis**	**0.40**	**140**	Pg	**Pg**	**18 14 27.0**	**-0.1**
HORT				Sg	**Sg**	**18 14 32.9**	**+0.4**
HORT	**Hortiatis**	**0.40**	**140**	P	**Pg**	**18 14 26.8**	**-0.4**
HORT				S	**Sg**	**18 14 32.5**	**0.0**
HORT				AML	AML	18 14 34.1	
	comp=E,1734μm,0.2s						
HORT				AML	AML	18 14 34.3	
	comp=N,1032μm,0.1s						
VAY	**Valandovo**	**0.44**	**340**	*e*Pg	**Pg**	**18 14 28.0**	**0.0**
VAY				*e*Sg	**Sg**	**18 14 34.2**	**+0.3**
VAY	**Valandovo**	**0.44**	**340**	*i* Pg	**Pg**	**18 14 28.0**	**0.0**
VAY				*i* Sg	**Sg**	**18 14 34.2**	**+0.3**
VAY				*e*Lg	Lg	18 14 34.5	
	comp=N,566nm,0.3s						
SOH	**Sokhos**	**0.45**	**100**	P	**Pg**	**18 14 28.3**	**+0.1**
SOH				S	**Sg**	**18 14 34.5**	**+0.3**
	comp=N,698nm,0.2s						
SOH	**Sokhos**	**0.45**	**100**	*i* Pg	**Pg**	**18 14 28.4**	**+0.1**
SOH				*i* Sg	**Sb**	**18 14 35.8**	**-0.4**
SOH	**Sokhos**	**0.45**	**100**	P	**Pg**	**18 14 28.3**	**+0.1**
SOH				S	**Sg**	**18 14 34.6**	**+0.3**
SOH				AML	AML	18 14 37.7	
	comp=N,2518μm,0.2s						
SOH				AML	AML	18 14 38.0	
	comp=E,2887μm,0.2s						
SRS	**Serrai**	**0.66**	**71**	P	**Pg**	**18 14 31.7**	**-0.4**
SRS				S	**Sg**	**18 14 40.4**	**-0.4**
	comp=E,180nm,0.2s						
SRS	**Serrai**	**0.66**	**71**	*e*Pg	**Pg**	**18 14 31.7**	**-0.4**
SRS				*e*Sg	**Sg**	**18 14 40.6**	**-0.2**
SRS	**Serrai**	**0.66**	**71**	*i* Pg	**Pg**	**18 14 31.8**	**-0.4**
SRS				*i* Sg	**Sg**	**18 14 40.6**	**-0.2**
SRS	**Serrai**	**0.66**	**71**	P	**Pg**	**18 14 31.6**	**-0.4**
SRS				S	**Sg**	**18 14 40.0**	**-0.7**
SRS				AML	AML	18 14 41.2	
	comp=E,371μm,0.1s						
SRS				AML	AML	18 14 41.2	
	comp=N,379μm,0.2s						
LIT	**Litokhoron**	**0.83**	**195**	P	**Pg**	**18 14 34.7**	**-0.7**
LIT	**Litokhoron**	**0.83**	**195**	*i* Pg	**Pg**	**18 14 34.7**	**-0.7**
LIT	**Litokhoron**	**0.83**	**195**	P	**Pg**	**18 14 34.6**	**-0.7**
STIP	**Stip**	**0.90**	**331**	*i* Pg	**Pg**	**18 14 35.2**	**-1.5**
STIP				*i* Sg	**Sg**	**18 14 47.5**	**-1.0**
STIP				*e*Lg	Lg	18 14 49.5	
	comp=N,68nm,0.4s						
KOKK	**Kokkinochori,**	**0.94**	**95**	P	**Pg**	**18 14 36.6**	**-0.8**
KOKK				S	**Sb**	**18 14 50.5**	**+0.4**
	comp=N,88nm,0.3s						
KOKK	**Kokkinochori,**	**0.94**	**95**	P	**Pg**	**18 14 36.4**	**-1.0**
KOKK				S	**Sb**	**18 14 49.9**	**-0.1**
NVR	**Nevrokopi**	**0.94**	**61**	P	**Pb**	**18 14 38.1**	**+0.4**
NVR				S	**Sb**	**18 14 50.5**	**+0.4**
NVR	**Nevrokopi**	**0.94**	**61**	P	**Pb**	**18 14 37.9**	**+0.2**
NVR				S	**Sb**	**18 14 50.4**	**+0.2**
NVR				AML	AML	18 14 53.7	
	comp=E,452μm,0.2s						
NVR				AML	AML	18 14 54.0	
	comp=N,566μm,0.4s						
KZN	**Kozani**	**0.97**	**232**	P	**Pb**	**18 14 38.3**	**+0.2**
FNA	**Florina**	**1.06**	**264**	P	**Pg**	**18 14 39.0**	**-0.7**
FNA				S	**Sb**	**18 14 54.0**	**+0.3**
	comp=N,92nm,0.5s						
FNA	**Florina**	**1.06**	**264**	*e*Pg	**Pg**	**18 14 39.1**	**-0.7**
FNA				*e*Sg	**Sb**	**18 14 54.1**	**+0.3**
FNA	**Florina**	**1.06**	**264**	*i* Pg	**Pg**	**18 14 39.1**	**-0.7**
FNA				*i* Sg	**Sb**	**18 14 54.5**	**+0.8**
FNA	**Florina**	**1.06**	**264**	P	**Pg**	**18 14 39.0**	**-0.7**
FNA				S	**Sb**	**18 14 53.8**	**+0.1**
OUR	**Ouranopolis**	**1.08**	**121**	P	**Pg**	**18 14 39.5**	**-0.7**
OUR				S	**Sn**	**18 14 55.7**	**+0.2**
	comp=N,270nm,0.4s						
OUR	**Ouranopolis**	**1.08**	**121**	Pg	**Pg**	**18 14 39.7**	**-0.5**
OUR				Sg	**Sb**	**18 14 54.9**	**+0.6**
OUR	**Ouranopolis**	**1.08**	**121**	P	**Pg**	**18 14 39.2**	**-0.9**
OUR				S	**Sb**	**18 14 54.8**	**+0.6**
OUR				AML	AML	18 14 57.6	
	comp=E,674μm,0.6s						
OUR				AML	AML	18 14 59.2	
	comp=N,587μm,0.3s						
KVLA	**Kavala**	**1.23**	**88**	P	**Pn**	**18 14 43.2**	**+0.7**
KAVA	**Kavala**	**1.32**	**85**	P	**Pn**	**18 14 43.5**	**-0.3**
KAVA				S	**Sb**	**18 15 00.8**	**-0.4**
	comp=N,238nm,0.2s						
KAVA	**Kavala**	**1.32**	**85**	P	**Pn**	**18 14 43.5**	**-0.3**
THL	**Klokotos Trika**	**1.46**	**204**	P	**Pn**	**18 14 45.2**	**-0.4**
OHR	**Ohrid**	**1.50**	**279**	*e*Pn	**Pb**	**18 14 47.4**	**+0.1**
OHR				*e*Sn	**Sg**	**18 15 08.3**	**+0.6**
THAS	**Thassos island**	**1.51**	**101**	P	**Pn**	**18 14 45.7**	**-0.6**
THAS				S	**Sn**	**18 15 05.8**	**-0.2**
THAS				AML	AML	18 15 09.5	
	comp=N,165μm,0.3s						
THAS				AML	AML	18 15 10.3	
	comp=E,247μm,0.3s						
XOR	**Xorichti**	**1.57**	**168**	P	**Pn**	**18 14 46.3**	**-0.9**
BOSS	**Bosilegrad**	**1.60**	**352**	*e*Pg	**Pg**	**18 14 50.2**	**+0.1**
NEO	**Neokhori**	**1.63**	**168**	P	**Pn**	**18 14 47.4**	**-0.7**
PRVS	**Prvonek**	**1.68**	**342**	*e*Pn	**Pb**	**18 14 50.2**	**-0.2**
PRVS				*e*Sn	**Sg**	**18 15 12.9**	**-0.6**
VTS	**Vitosha**	**1.75**	**11**	*e*Pn	**Pb**	**18 14 51.3**	**-0.2**
VTS				*e*Sn	**Sb**	**18 15 14.2**	**+0.7**
PLD	**Plovdiv**	**1.88**	**50**	Pn	**Pb**	**18 14 52.9**	**-0.8**
PLD	**Plovdiv**	**1.88**	**50**	*e*Pn	**Pg**	**18 14 55.1**	**-0.4**
PLD				*e*Sg	**Sg**	**18 15 20.9**	**+1.0**
AGG	**Agios Georgios**	**1.91**	**190**	Pn	**Pn**	**18 14 51.8**	**-0.1**
AGG	**Agios Georgios**	**1.91**	**190**	P	**Pn**	**18 14 51.5**	**-0.4**
LIA	**Limnos Island**	**2.10**	**118**	P	**Pn**	**18 14 54.0**	**-0.4**
RDO	**Rodhopi**	**2.11**	**83**	Pn	**Pn**	**18 14 56.1**	**+1.6**
RDO	**Rodhopi**	**2.11**	**83**	P	**Pb**	**18 14 57.2**	**-0.3**
KDZ	**Kurdzhali**	**2.13**	**69**	Pn	**Pn**	**18 14 55.5**	**+0.6**
SMTH	**Samothraki Isl**	**2.15**	**101**	P	**Pn**	**18 14 55.4**	**+0.3**
ZAPS	**Zavoj**	**2.37**	**358**	*e*Pn	**Pb**	**18 15 00.5**	**-1.6**
ZAPS				*e*Sn	**Sb**	**18 15 30.2**	**-1.1**
ANX	**Ano Chora**	**2.40**	**196**	P	**Pn**	**18 14 58.7**	**0.0**
ALN	**Alexandroupoli**	**2.48**	**89**	Pn	**Pn**	**18 15 01.5**	**+1.8**
GADA	**Gvkgeada**	**2.49**	**106**	Pn	**Pn**	**18 15 01.4**	**+1.6**
ENEZ	**Enez**	**2.57**	**93**	Pn	**Pn**	**18 15 02.6**	**+1.7**
ERIK	**Erikli-Kesan**	**2.85**	**93**	Pn	**Pn**	**18 15 06.5**	**+1.7**
GELI	**Tayfur-Gelibol**	**2.86**	**99**	Pn	**Pn**	**18 15 06.7**	**+1.8**
UKOP	**Uzunkopru-Edir**	**2.93**	**84**	Pn	**Pn**	**18 15 07.7**	**+1.8**
EDRB	**Edirne**	**3.14**	**71**	Pn	**Pn**	**18 15 10.6**	**+1.9**

NEIC ***24*** *18:16:05.3±1.1, 20°.5S±0°.3×172°.6W±0°.2, h10^{km}±2^{km}, mb4.6/17, Error ellipse: s-maj=45.1km s-min=29.7km az=344.0*

IDC ***24*** *18:16:12.4±27.0, 20°.56S×173°.96W, h0^{km}, mb4.0/4, mbtmp4.0/4, MS3.3/1, Error ellipse: s-maj=499.1km s-min=154.1km az=76.0*

ISC 24 18:16:05.5±4.9**, 20°.5S**±0°.7×**172°.8W**±0°.5**, h10**^{km}**, n23, σ0^{s}80**/22**, mb4.5**/11**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAN	**Canberra**	**36.64**	**238**	P	**P**	**18 23 13.3**	**+0.9**
CAN				IAmb	IAmb	18 23 20.9	
	comp=Z,14nm,1.1s						
CTA	**Charters Tower**	**38.38**	**263**	P	**P**	**18 23 26.7**	**-0.6**
	comp=Z,4.4nm,1.0s,baz=90,slow=12,SNR=5.6						
	comp=Z,4.4nm,1.0s						
CTAO	**Charters Tower**	**38.38**	**263**	P	**P**	**18 23 27.0**	**-0.3**
CTAO				IAmb	IAmb	18 23 57.6	
	comp=Z,17nm,1.2s						
TOO	**Toolangi**	**39.92**	**236**	P	**P**	**18 23 40.5**	**+0.5**
TOO				IAmb	IAmb	18 24 04.1	
	comp=Z,16nm,1.4s						
STKA	**Stephens Creek**	**42.23**	**245**	P	**P**	**18 23 58.8**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=90,slow=9.7,SNR=5.1						
	comp=Z,1.4nm,0.5s						
STKA	**Stephens Creek**	**42.23**	**245**	P	**P**	**18 23 58.6**	**-0.4**
BBOO	**Buckleboo**	**46.96**	**244**	P	**P**	**18 24 36.0**	**-0.9**
BBOO				IAmb	IAmb	18 24 36.6	
	comp=Z,3.5nm,1.0s						
AS31	**Alice Springs**	**49.30**	**256**	P	**P**	**18 24 54.5**	**-0.6**
ASAR	**Alice Springs**	**49.30**	**256**	P	**P**	**18 24 54.5**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=100,slow=7.6,SNR=30						
	comp=Z,1.4nm,0.6s						
ASAR	**Alice Springs**	**49.30**	**256**	P	**P**	**18 24 54.3**	**-0.8**
WB0	**Warramunga Arr**	**49.45**	**261**	P	**P**	**18 24 55.7**	**-0.6**
WB0				IAmb	IAmb	18 25 33.7	
	comp=Z,8.1nm,1.4s						
WRAB	**Tennant Creek**	**49.46**	**261**	P	**P**	**18 24 55.7**	**-0.7**
WRAB				IAmb	IAmb	18 25 13.5	
	comp=Z,7.0nm,1.4s						
WRA	**Warramunga Arr**	**49.47**	**261**	P	**P**	**18 24 55.9**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=95,slow=8.2,SNR=42						
	comp=Z,0.5nm,0.4s						
WRA	**Warramunga Arr**	**49.47**	**261**	P	**P**	**18 24 55.5**	**-0.9**
FORT	**Forrest**	**53.81**	**246**	P	**P**	**18 25 28.5**	**-0.2**
MTN	**Manton Dam**	**54.09**	**269**	P	**P**	**18 25 31.3**	**+0.4**
KNRA	**Kununurra**	**55.57**	**265**	P	**P**	**18 25 42.9**	**+1.3**
KNRA				IAmb	IAmb	18 25 47.6	
	comp=Z,23nm,1.2s						
FITZ	**Fitzroy Crossi**	**57.90**	**261**	P	**P**	**18 25 59.9**	**+1.7**
SIJI	**Sorong**	**58.02**	**282**	LR	LR	18 51 43.5	
	comp=Z,27nm,18.3s,baz=148,slow=37						
MBWA	**Marble Bar**	**62.65**	**256**	P	**P**	**18 26 31.7**	**+1.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	62.76	243	P	P	18 26 30.9	-0.4
NWAO	Narrogin (SRO)	62.76	243	P	P	18 26 30.9	-0.4
NWAO				IAmb	IAmb	18 27 05.8	
	comp=Z,113nm,1.4s						
QSPA	South Pole Qui	69.57	180	P	P	18 27 14.3	-0.3
QSPA				IAmb	IAmb	18 27 32.1	
	comp=Z,7.3nm,1.5s						

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*NEIC **24** 18:25:39.4±2.4, 53°2N±0°1×164°26W±0°09, h10^{km}±2^{km}, mb3.7/4, ML3.2/6, ML3.0(AEIC), Error ellipse: s-maj=18.2km s-min=7.8km az=160.0*

*AEIC **24** 18:25:41.4±2.5, 53°3N±0°1×164°34W±0°10, h8^{km}±7^{km}, Error ellipse: s-maj=17.5km s-min=8.1km az=172.0*

ISC 24 18:25:39.8±1.7, **53°2N**±0°2×**164°25W**±0°07, **h24**^{km}, **n35**, σ**1^{s}00**/35, **Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKUT	Akutan	1.33	318		Pn	18 26 02.0	-0.9
AKUT				IAML		18 26 20.0	
	comp=E,385nm,0.5s						
UNV	Unalaska Valle	1.51	298		Pn	18 26 04.6	-0.8
UNV	Unalaska Valle	1.51	298		Sb	18 26 25.3	-0.5
FALS	False Pass	1.77	16		Pn	18 26 09.1	+0.2
NIKH	Nikolski High	2.78	268	Pn	Pn	18 26 22.9	+0.1
SDPT	Sand Point	3.12	44	Pn	Pn	18 26 28.9	+1.5
SDPT				IAML		18 27 06.2	
	comp=N,64nm,0.3s						
CHGN	Chignik	4.62	45	Pn	Pn	18 26 47.0	-1.0
CHGN				IAML		18 27 44.2	
	comp=E,23nm,1.5s						
CHGN				IAML		18 27 51.2	
	comp=N,17nm,2.6s						
SPIA	Saint Paul Isl	5.29	322	Pn	Pn	18 26 55.4	-1.8
ADK	Adak	7.69	265	Pn	Pn	18 27 31.4	+1.2
P18K	Big Mountain,	8.01	35	Pn	Pn	18 27 33.9	-0.7
KDAK	Kodiak Island	8.09	50	Pn	Pn	18 27 36.8	+1.3
Q19K	Cape Douglas,	8.28	42	Pn	Pn	18 27 38.9	+0.6
SVW2	Sparrevohn	9.24	27	Pn	Pn	18 27 51.6	+0.2
M20K	Styx River	10.58	30	Pn	Pn	18 28 11.2	+1.5
SUA	Susitna One	11.05	36	Pn	Pn	18 28 16.5	+0.2
K20K	Telida	11.53	24	Pn	Pn	18 28 23.4	+0.7
PWL	Port Wells	11.59	42	Pn	Pn	18 28 23.9	+0.4
PPLA	Purkeypile	11.65	28	Pn	Pn	18 28 24.4	0.0
Q23K	Middleton Isla	11.74	51	Pn	Pn	18 28 25.2	-0.4
MID	Middleton Isla	11.74	51	Pn	Pn	18 28 25.2	-0.4
SCM	Sheep Creek Mo	12.55	39	Pn	Pn	18 28 36.0	-0.6
KLU	Klutina	12.91	42	Pn	Pn	18 28 40.3	-1.3
N25K	Chitina, Valde	13.51	43	Pn	Pn	18 28 49.2	-0.7
I21K	Tanana	13.56	22	Pn	Pn	18 28 51.3	+0.9
H21K	Melozitna Rive	13.79	20	Pn	Pn	18 28 54.5	+0.9
VRDI	Verde Repeater	13.82	46	Pn	Pn	18 28 52.1	-2.0
RIDG	Independent Ri	14.61	36	Pn	Pn	18 29 06.9	+2.2
M27K	Edge Creek, AK	15.00	43	Pn	Pn	18 29 10.2	+0.1
SCRK	Sand Creek	15.06	36	Pn	Pn	18 29 11.0	+0.2
BCAR	Beaver Creek A	15.38	41	Pn	Pn	18 29 14.7	-0.3
PRP	Porcupine Dome	15.55	30	Pn	Pn	18 29 17.8	+0.5
PRP				IAmb	IAmb	18 29 54.1	
	comp=Z,5.4nm,1.5s						
I26K	Coal Creek Min	16.16	33	Pn	Pn	18 29 25.9	+0.9
BMAR	Burnt Mountain	17.18	26	P	P	18 29 38.9	-0.5
INK	Inuvik	21.00	32	P	P	18 30 20.0	-1.0
INK				IAmb	IAmb	18 30 25.8	
	comp=Z,4.4nm,1.1s						
C36M	Paulatuk	24.55	33	P	P	18 30 58.0	+0.9

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*IDC **24** 18:31:57.7±0.9, 19°08N×66°77W, h0^{km}, mb3.6/7, mbtmp3.7/9, ML3.6/2, MS3.1/6, Error ellipse: s-maj=30.2km s-min=15.9km az=62.0*

*OSPL **24** 18:31:58.2±3.1, 19°24N×66°28W, h31^{km}±194^{km}, ML4.2*

*RSPR **24** 18:32:02.5, 19°04N×66°74W, h37^{km}±9^{km}, MD3.8/13*

*NEIC **24** 18:32:02.2±2.2, 18°99N±0°02×66°70W±0°05, h44^{km}±8^{km}, mb4.3/24, ML4.1/44, Mwr3.7/18, ML4.0/13(RSPR), Error ellipse: s-maj=6.7km s-min=2.1km az=71.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}2.83; $M_{\theta\theta}$-3.89; $M_{\phi\phi}$1.06; $M_{r\theta}$0.38; $M_{\theta\phi}$1.88; $M_{\phi r}$2.06; Fault plane solution: $M_0$4.48000×10^{14} NP1: ϕ_s319.81000°, δ57.95000°, λ135.50000°. NP2: ϕ_s77.36000°, δ53.55000°, λ41.28000°. Principal axes: T 4.4229, Plg53.0000°, Azm286.0000°; N 0.1150, Plg37.0000°, Azm111.0000°; P -4.5379, Plg3.0000°, Azm19.0000°;*

*NEIC **24** 18:32:02.5, 19°04N×66°74W, h37^{km}*

ISC 24 18:32:01.2±0.5, **19°03N**±0°04×**66°73W**±0°03, **h35**^{km}, **n123**, σ**1^{s}59**/134, **mb4.2**/15, **MS3.2**/4, **8C-7D**, **Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	Esperanza - Ma	0.58	161	⇑eP	Pn	18 32 13.9	+0.9
EMPR	Esperanza - Ma	0.58	161	eS	Sn	18 32 21.8	+0.6
EMPR	Esperanza - Ma	0.58	161		Pn	18 32 13.6	+0.6
EMPR				Sn	Sn	18 32 21.3	0.0
EMPR				IAML		18 32 23.1	
	comp=E,16μm,0.6s						
EMPR				IAML		18 32 24.2	
	comp=N,10μm,0.6s						
AGPR	Aguadilla, PR	0.67	213	⇓eP	Pn	18 32 13.8	-0.3
AGPR	Aguadilla, PR	0.67	213	Sn	Sn	18 32 22.3	-1.1
AGPR	Aguadilla, PR	0.67	213	i P	Pn	18 32 13.9	-0.3
AGPR				IAML		18 32 25.2	
	comp=Z,3μm,0.2s						
AOPR	Arecibo Observ	0.68	182	⇓eP	Pn	18 32 14.5	+0.1
AOPR	Arecibo Observ	0.68	182	Sn	Sn	18 32 22.1	-1.7
UUPR	Utuado, UPR, P	0.77	179	⇓eP	Pn	18 32 15.8	+0.1
UUPR	Utuado, UPR, P	0.77	179	Sn	Sn	18 32 25.5	-0.6
PRSN	Puerto Rico Se	0.90	206		Pn	18 32 17.1	-0.2
GCPR	Guaynabo City	0.94	139		Pn	18 32 18.3	+0.3
IDE	Isla Desecheo	0.95	228	⇑iP	Pn	18 32 18.4	+0.2
IDE	Isla Desecheo	0.95	228		Pn	18 32 18.4	+0.2
CELP	Cerrillos	0.96	171		Pn	18 32 18.6	+0.3
CELP				IAML		18 32 36.2	
	comp=E,3μm,0.3s						
CELP				IAML		18 32 40.0	
	comp=N,3μm,0.5s						
OBIP	Obispado Ponce	0.99	173	⇓iP	Pn	18 32 18.1	-0.5
OBIP	Obispado Ponce	0.99	173	eS	Sn	18 32 30.7	-0.6
OBIP	Obispado Ponce	0.99	173		Pn	18 32 18.1	-0.5
OBIP	Obispado Ponce	0.99	173		Sn	18 32 30.7	-0.6
OBIP	Obispado Ponce	0.99	173	IAML		18 32 34.7	
	comp=E,3μm,0.3s						
OBIP				IAML		18 32 35.0	
	comp=N,2μm,0.4s						
GBPR	Guanica, Bosqu	1.06	188	⇑eP	Pn	18 32 20.4	+0.9
GBPR	Guanica, Bosqu	1.06	188	eS	Sn	18 32 34.1	+1.1
GBPR	Guanica, Bosqu	1.06	188		Pn	18 32 20.4	+0.9
GBPR					Sn	18 32 34.1	+1.1
SJG	San Juan	1.06	149	Pn	Pn	18 32 20.2	+0.6
	comp=N,67nm,0.3s,baz=332,slow=15,SNR=39						
SJG				Sn	Sn	18 32 33.3	+0.1
	comp=N,448nm,0.3s,baz=34,slow=21,SNR=17						
SJG				LR	LR	18 32 47.0	
	comp=N,50nm,21.1s,baz=266,slow=44						
SJG	San Juan	1.06	149		Pn	18 32 20.1	+0.4
SJG				IAML		18 32 41.2	
	comp=N,3μm,0.3s						
SJG				IAML		18 32 41.6	
	comp=N,4μm,0.3s						
CRPR	Cabo Rojo, PR	1.08	200	⇓eP	Pn	18 32 20.1	+0.3
CRPR	Cabo Rojo, PR	1.08	200	eS	Sn	18 32 33.6	+0.1
CRPR	Cabo Rojo, PR	1.08	200		Pn	18 32 20.1	+0.3
CRPR				IAML		18 32 37.6	
	comp=E,2μm,0.2s						
CRPR	Cabo Rojo, PR	1.08	200		Sn	18 32 33.6	+0.1
MLPR	Magueyes Islan	1.09	196	⇓eP	Pn	18 32 20.5	+0.4
MLPR	Magueyes Islan	1.09	196	eS	Sn	18 32 34.3	+0.3
MLPR	Magueyes Islan	1.09	196		Pn	18 32 20.4	+0.4
MLPR	Magueyes Islan	1.09	196		Sn	18 32 34.3	+0.3
MLPR	Magueyes Islan	1.09	196	IAML		18 32 36.3	
	comp=N,2μm,0.2s						
MLPR				IAML		18 32 36.6	
	comp=E,2μm,0.3s						
CBYP	Canovanas	1.12	132	⇑eP	Pn	18 32 20.8	+0.3
CBYP	Canovanas	1.12	132		Pn	18 32 20.5	+0.1
IGPR	InterUniversit	1.21	151	⇑eP	Pn	18 32 22.3	+0.7
IGPR	InterUniversit	1.21	151		Pn	18 32 22.3	+0.7
HUMP	Col San Antoni	1.21	136	⇑eP	Pn	18 32 22.2	+0.5
HUMP	Col San Antoni	1.21	136	eS	Sn	18 32 37.4	+0.5
HUMP	Col San Antoni	1.21	136		Pn	18 32 22.1	+0.5
HUMP				IAML		18 32 44.1	
	comp=E,3μm,0.2s						
HUMP	Col San Antoni	1.21	136		Sn	18 32 37.4	+0.5
MTP	Monte Pirata	1.45	129	⇑eP	Pn	18 32 25.6	+0.6
MTP	Monte Pirata	1.45	129		Pn	18 32 25.4	+0.4
CUPR	Culebra, Puert	1.55	117	⇑eP	Pn	18 32 26.4	+0.1
CUPR	Culebra, Puert	1.55	117	eS	Sn	18 32 45.3	+0.1
CUPR	Culebra, Puert	1.55	117		Pn	18 32 26.2	-0.1
CUPR	Culebra, Puert	1.55	117		Sn	18 32 45.3	+0.1
CUPR	Culebra, Puert	1.55	117	IAML		18 32 48.2	
	comp=E,986nm,0.5s						
CUPR				IAML		18 32 48.3	
	comp=N,552nm,0.6s						
PCDR	Punta Cana, DR	1.65	252	⇑eP	Pn	18 32 29.5	+1.8
PCDR	Punta Cana, DR	1.65	252	eS	Sn	18 32 51.8	+4.2
PCDR	Punta Cana, DR	1.65	252		Pn	18 32 29.3	+1.6
PCDR	Punta Cana, DR	1.65	252		Sn	18 32 51.8	+4.2
PCDR	Punta Cana, DR	1.65	252	IAML		18 32 54.4	
	comp=E,1μm,0.5s						
PCDR				IAML		18 32 56.6	
	comp=N,3μm,0.7s						
PCDR	Punta Cana, DR	1.65	252	i P	Pn	18 32 29.6	+2.0
PCDR				eS	Sn	18 32 52.2	+4.6
PCDR				IAML		18 32 53.3	
	comp=Z,2μm,0.4s						
CDVI	St. Croix	2.25	124	⇓eP	Pn	18 32 38.7	+2.6
CDVI	St. Croix	2.25	124	eS	Sn	18 33 03.7	+1.0
CDVI	St. Croix	2.25	124		Pn	18 32 38.5	+2.4
CDVI	St. Croix	2.25	124		Sn	18 33 03.7	+1.0
CDVI	St. Croix	2.25	124	IAML		18 33 27.6	
	comp=N,2μm,0.7s						
CDVI				IAML		18 33 33.1	
	comp=E,2μm,0.5s						
SDD	Santo Domingo	3.07	260		Pn	18 32 47.6	+0.4
SDD				IAML		18 33 41.8	
	comp=E,1μm,0.7s						
SDD				IAML		18 33 41.9	
	comp=N,1μm,0.8s						
SABA	Saba	3.60	112	Pn	Pn	18 32 54.1	-0.4
SABA				IAML		18 33 44.4	
	comp=N,323nm,0.6s						
SABA				IAML		18 33 47.4	
	comp=E,445nm,0.7s						
SMRT	St. Maarten	3.60	105		Pn	18 32 55.1	+0.5
SMRT				IAML		18 33 46.2	
	comp=N,295nm,0.5s						
SMRT				IAML		18 33 54.5	
	comp=E,307nm,0.4s						
SC01	Santiago de lo	3.80	277		Pn	18 32 57.7	+0.4
SDDR	Presa de Saban	4.31	270		Pn	18 33 06.8	+2.4
SDDR	Presa de Saban	4.31	270	i P	Pn	18 33 06.7	+2.4
SDDR				IAML		18 34 17.9	
	comp=Z,257nm,0.7s						
GRTK	Grand Turk	4.82	302	Pn	Pn	18 33 10.8	-0.5
GRTK				IAML		18 34 36.7	
	comp=Z,201nm,3.0s						
GRTK	Grand Turk	4.82	302	i P	Pn	18 33 10.9	-0.3
GRTK				eS	Sn	18 34 01.6	-4.2
GRTK				IAML		18 34 06.1	
	comp=Z,189nm,1.4s						
ANWB	Willy Bob	4.89	105	Pn	Pn	18 33 13.4	+1.2
ANWB				IAML		18 34 29.3	
	comp=Z,101nm,1.4s						
ANWB				IAML		18 34 39.0	
	comp=Z,112nm,1.1s						
PAPH	Port-au-Prince	5.30	265	Pn	Pn	18 33 17.9	-0.1
GDHS	Morne Mazeau,	5.47	119	Pn	Pn	18 33 22.0	+1.7
ABD	La Joyeuse, An	5.60	116	Pn	Pn	18 33 21.8	-0.3
MAGL	Barre de l'ile	6.03	120	Pn	Pn	18 33 29.6	+1.5
SVN	Savane Anatole	6.76	127	Pn	Pn	18 33 38.2	+0.2
BIM	Bigot	7.04	129	Pn	Pn	18 33 42.9	+1.1
MASC	Masc	7.16	280	i P	Pn	18 33 41.9	-1.7
MASC				IAML		18 35 00.4	
	comp=Z,33nm,1.7s						
AUA1	Aruba	7.21	206	Pn	Pn	18 33 45.8	+1.5
MPOM	Morne Pois Mar	7.24	128	Pn	Pn	18 33 44.6	0.0
SVB	Belmont	7.77	137	Pn	Pn	18 33 51.6	-0.4
GTBY	Guantanamo Bay	7.96	278	Pn	Pn	18 33 53.1	-1.3
BIRV	Birongo	8.51	177	Pn	Pn	18 34 02.6	+0.5
URIC	Uribia, Colomb	8.88	216	Pn	Pn	18 34 06.8	-0.3
PCRV	Puerto La Cruz	9.03	167	Pn	Pn	18 34 11.7	+2.4
	comp=Z,1.5nm,0.3s,baz=11,slow=2.6,SNR=8.3						
PCRV				Sn	Sn	18 35 44.9	-4.9
	comp=Z,0.9nm,0.3s,baz=88,slow=22,SNR=2.1						
	comp=Z,3.7nm,0.4s						
BAUV	El Baul	10.11	187		Pn	18 34 24.9	+1.0
SDV	Santo Domingo	10.77	201	Pn	Pn	18 34 35.0	+1.8
	comp=Z,1.5nm,0.3s,baz=2.8,slow=8.4,SNR=4.1						
SDV				Sn	Sn	18 36 30.8	-1.9
	comp=Z,0.7nm,0.3s,baz=340,slow=24,SNR=2.1						
SDV				LR	LR	18 38 53.9	
	comp=Z,47nm,21.6s,baz=8.5,slow=38						
	comp=Z,3.6nm,0.3s						
SDV	Santo Domingo	10.77	201	Pn	Pn	18 34 34.6	+1.4
BBSR	BB Station	13.41	7	Pn	Pn	18 35 09.2	+0.1
061Z	Ochoppi	14.76	300	Pn	Pn	18 35 26.1	-1.4
SOR	Soroa	15.66	287	Pn	P	18 35 40.9	-2.2
SOR				IAmb	IAmb	18 36 03.9	
	comp=Z,39nm,1.3s						
ROSC	El Rosal	15.93	209	LR	LR	18 42 03.3	
	comp=Z,53nm,21.4s,baz=56,slow=38						
BOAV	Boa Vista	17.61	159		P	18 36 04.4	-0.4
656A	Willston	17.70	309		P	18 36 06.1	+0.5
T59A	Double "B" Far	20.24	334	P	P	18 36 32.5	-1.0
T59A					sP	18 36 42.7	-2.0
T59A				IAmb	IAmb	18 36 59.2	
	comp=Z,16nm,1.3s						
T57A	Hurt	21.00	331	P	P	18 36 41.1	-0.6
T57A					pwP	18 36 56.0	-1.3
R58B	Mineral	21.23	335	P	P	18 36 42.5	-1.5
R58B					pwP	18 36 58.1	-1.4
R58B				IAmb	IAmb	18 37 06.1	
	comp=Z,19nm,1.4s						
BG3	Lake Jocassee	21.43	321		P	18 36 44.3	-2.0
BG3					pwP	18 36 59.8	-2.4
BG3				IAmb	IAmb	18 37 19.1	
	comp=Z,14nm,1.3s						
S57A	Dark Hollow, R	21.50	333	P	P	18 36 44.2	-2.9
S57A					pwP	18 37 01.9	-0.7
S57A					S	18 40 44.0	+0.4
V53A	Saluda	21.83	323	P	P	18 36 49.7	-1.0
V53A					pwP	18 37 05.5	-1.0
V53A					S	18 40 51.8	+1.7
OTAV	Otavalo	21.93	213	P	P	18 36 52.0	-0.3
OTAV				IAmb	IAmb	18 36 56.8	
	comp=Z,12nm,1.0s						
WUPA	West Chester U	22.20	342	P	P	18 36 53.5	-0.9
WUPA					pwP	18 37 10.2	-0.9
TKL	Tuckaleechee C	22.38	321	P	P	18 36 54.3	-2.3
TKL					pwP	18 37 12.4	-0.1
TKL				IAmb	IAmb	18 37 16.1	
	comp=Z,11nm,1.1s						
Q56A	Snyder Ridge,	22.68	334	P	P	18 36 58.8	-0.8
Q56A					pwP	18 37 16.3	+1.2
Q56A				IAmb	IAmb	18 37 22.7	
	comp=Z,21nm,1.2s						
L61B	Northampton	23.89	349	P	P	18 37 08.9	-2.7
L61B					pwP	18 37 33.0	+4.6
O54A	Avella	24.13	334	P	P	18 37 11.9	-2.0
O54A					pwP	18 37 36.5	+5.5
O54A				IAmb	IAmb	18 37 39.4	
	comp=Z,12nm,1.1s						
I62A	Tamworth	25.07	352	P	P	18 37 22.4	0.0
I62A					pwP	18 37 50.9	+12
J59A	Piesco	25.23	347	P	P	18 37 22.6	-1.2
J59A					pwP	18 37 50.9	+10
MCRA	Macar, Loja	26.65	211	P	P	18 37 36.1	-0.9
MCRA				IAmb	IAmb	18 37 40.9	
	comp=Z,5.9nm,0.6s						
U38A	Gravette	29.85	311	P	P	18 38 05.6	+0.3
U38A				IAmb	IAmb	18 38 05.7	
	comp=Z,8.6nm,1.4s						
Z35A	Perchaven, San	30.74	304	P	P	18 38 12.4	-0.9
TXAR	Lajitas Array	35.09	294	P	P	18 38 53.1	+1.7
	comp=Z,0.8nm,0.7s,baz=101,slow=9.3,SNR=5.6						
TXAR				LR	LR	18 57 51.4	
	comp=Z,24nm,18.6s,baz=340,slow=44						
	comp=Z,0.8nm,0.7s						
LPAZ	La Paz	35.12	182	P	P	18 38 53.5	+1.3
	comp=Z,1.0nm,0.4s,baz=72,slow=1.0,SNR=4.0						
	comp=Z,1.0nm,0.4s						
LPAZ	La Paz	35.12	182	P	P	18 38 51.7	-0.5
GO01	Chusmiza	38.53	184	P	P	18 39 18.2	-2.9
PB11	IPOC Station P	38.66	184	P	P	18 39 19.5	-2.3
PDAR	Pinedale Array	43.10	313	P	P	18 40 00.4	+2.1
	comp=Z,0.4nm,0.8s,baz=106,slow=8.5,SNR=4.0						
	comp=Z,0.4nm,0.8s						
NVAR	Mina Array Bea	48.52	305	P	P	18 40 42.1	+0.9
	comp=Z,0.2nm,0.3s,baz=91,slow=5.6,SNR=2.4						
	comp=Z,0.2nm,0.3s						
SFJD	Kangerlussuaq	49.06	8	LR	LR	19 00 42.9	
	comp=Z,43nm,19.4s,baz=100,slow=35						
YKA	Yellowknife Ar	54.43	335	P	P	18 41 24.1	-0.6
	comp=Z,0.2nm,0.4s,baz=109,slow=7.2,SNR=3.1						
	comp=Z,0.2nm,0.4s						
ESDC	Sonseca Array	57.30	55	P	P	18 41 48.5	+2.7
	comp=Z,0.9nm,0.7s,baz=274,slow=9.4,SNR=6.2						
	comp=Z,0.9nm,0.7s						
ILAR	Eielson Array	68.77	333	P	P	18 43 02.4	+0.9
	comp=Z,0.4nm,0.7s,baz=94,slow=3.8,SNR=4.7						
	comp=Z,0.4nm,0.7s						
OBN	Obninsk	81.94	34	LR	LR	19 18 26.0	
	comp=Z,7.3nm,20.9s,baz=130,slow=34						
TIXI	Tiksi	88.92	355	LR	LR	19 26 36.5	
	comp=Z,17nm,18.2s,baz=174,slow=37						
PZH	PanZhiHua	133.38	14	PKP	PKPdf	18 51 14.3	-0.2

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*BEO **24** 18:34:47.2±0.3, 42°45N×23°50E, h5^{km}±2^{km}, ML2.2/11*

*ISK **24** 18:34:47.2, 42°30N×23°50E, h5^{km}, ML2.7/10*

*THE **24** 18:34:48.8, 42°37N×23°38E, h7^{km}, ML2.5/8, Error ellipse: s-maj=1.6km s-min=1.2km az=17.0*

ISC 24 18:34:46.5±1.1, **42°39N**±0°02×**23°42E**±0°02, **h6**^{km}±10^{km}, **n48**, σ**1^{s}33**/72, **10C-2D**, **Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VTS	Vitosha	0.27	329	ePg	Pg	18 34 52.2	+0.4
VTS				eSg	Sg	18 34 55.9	+0.5
BOSS	Bosilegrad	0.70	279	ePg	Pb	18 35 01.4	+0.2
BOSS				eSg	Sb	18 35 11.1	-0.1
PLD	Plovdiv	0.99	106	Pg	Pb	18 35 05.5	-0.6
PLD	Plovdiv	0.99	106	ePg	Pg	18 35 05.3	-0.2
PLD				eSg	Sg	18 35 16.7	-1.7
PRVS	Prvonek	1.00	277	ePg	Pn	18 35 07.0	-0.2
PRVS				eSg	Sn	18 35 20.8	-0.9
ZAPS	Zavoj	1.06	327	ePg	Pg	18 35 06.4	-0.4
ZAPS				eSg	Sg	18 35 20.8	+0.3
NVR	Nevrokopi	1.09	162	P	Pn	18 35 09.1	+0.8
NVR				S	Sn	18 35 24.7	+1.0
	312nm,0.4s						
STIP	Stip	1.15	233	i Pn	Pb	18 35 05.5	-3.3
STIP				i Sn	Sb	18 35 21.3	-2.7
VAY	Valandovo	1.24	211	i Pn	Pg	18 35 12.1	+1.8
VAY				i Sn	Sn	18 35 29.9	+2.5
BARS	Barje	1.26	290	ePg	Pg	18 35 11.7	+1.0
BARS				eSg	Sn	18 35 28.3	+0.3
SRS	Serrai	1.28	174	P	Pg	18 35 11.5	+0.5
SRS				S	Sn	18 35 30.0	+1.7
	140nm,0.3s						
KNT	Kendrikon	1.29	198	P	Pg	18 35 11.1	0.0
KNT				S	Sg	18 35 30.2	+2.4
	102nm,0.3s						
KNT	Kendrikon	1.29	198	Pn	Pg	18 35 11.6	+0.5
KNT				Sn	Sg	18 35 29.7	+1.9
SOH	Sokhos	1.57	182	P	Pg	18 35 15.9	-0.6
KAVA	Kavala	1.61	149	P	Pg	18 35 16.6	-0.8
KAVA				S	Sg	18 35 38.6	+0.3
	192nm,0.2s						
GRG	Griva	1.62	208	P	Pb	18 35 16.9	+0.1
GRG	Griva	1.62	208	Pn	Pg	18 35 17.4	-0.2
GRG				Sn	Sg	18 35 39.3	+0.7
KOKK	Kokkinochori,	1.63	164	P	Pg	18 35 16.9	-0.8
KOKK				S	Sg	18 35 38.7	-0.1
	58nm,0.5s						
KDZ	Kurdzhali	1.66	116	Pn	Pn	18 35 15.9	-0.3
KDZ				Sn	Sb	18 35 38.1	-0.5
ZAGS	Zajecar	1.67	329	ePn	Pb	18 35 16.8	-0.8
ZAGS				eSg	Sb	18 35 39.5	+0.6
BOVS	Bovan	1.77	315	⇑P	Pb	18 35 18.9	-0.5
BOVS				⇓S	Sn	18 35 39.0	-1.6
BOVS	Bovan	1.77	315	ePn	Pn	18 35 18.0	+0.3
BOVS				eSg	Sg	18 35 43.2	-0.2
HORT	Hortiatis	1.81	188	Pn	Pb	18 35 19.8	-0.2
SELS	Selova	1.89	297	ePn	Pn	18 35 20.1	+0.8
SELS				eSg	Sg	18 35 47.1	0.0
RDO	Rodhopi	2.01	127	P	Pb	18 35 23.1	-0.4
RDO				S	Sb	18 35 49.0	+0.3
	105nm,0.2s						
RDO	Rodhopi	2.01	127	Pn	Pb	18 35 22.3	-1.2
THAS	Thassos island	2.03	151	P	Pb	18 35 22.9	-0.9
THAS				S	Sb	18 35 48.7	-0.5
	55nm,0.4s						
OUR	Ouranopolis	2.10	168	P	Pb	18 35 23.1	-1.8
OUR				S	Sb	18 35 50.4	-0.7
	72nm,0.3s						
OUR	Ouranopolis	2.10	168	Pn	Pb	18 35 23.3	-1.6
COPA	Copaceanca	2.18	36	⇓P	Pb	18 35 26.2	-0.2
ALN	Alexandroupoli	2.47	126	Pn	Pb	18 35 28.9	-2.3
GRUS	Gruza	2.48	308	ePn	Pn	18 35 28.2	+0.7
GRUS				eSn	Sb	18 36 00.1	-2.3
EDRB	Edirne	2.53	101	Pn	Pb	18 35 30.1	-2.2
RAZG	Razgrad	2.55	61	⇑P	Pb	18 35 33.5	+0.8
HERR	Herculane	2.60	344	⇑P	Pn	18 35 29.1	0.0
ENEZ	Enez	2.63	128	Pn	Pb	18 35 31.3	-2.7
IVAS	Ivanjica	2.68	297	ePn	Pn	18 35 30.4	+0.2
MDVR	Moldovita	2.70	333	⇑P	Pn	18 35 31.3	+0.8
UKOP	Uzunkopru-Edir	2.71	117	Pn	Pb	18 35 32.6	-2.8
GADA	Gvkgeada	2.88	139	Pn	Pn	18 35 34.8	+1.9
ERIK	Erikli-Kesan	2.89	125	Pn	Pn	18 35 34.9	+1.9
DIVS	Divibare	3.03	305	ePn	Pn	18 35 34.8	-0.3
GZR	Gura Zlata	3.04	351	⇑P	Pn	18 35 35.3	+0.1
VOIR		3.27	21	⇑P	Pn	18 35 39.8	+1.4
BZS	Buzias	3.48	339	⇑P	Pn	18 35 41.0	-0.2
MLR	Muntele Rosu	3.60	30	⇑P	Pn	18 35 44.5	+1.6
PLOR	Plostina	4.17	33	⇑P	Pn	18 35 53.4	+2.6
VRI	Vrincioaia	4.21	33	⇑P	Pn	18 35 53.8	+2.5

WEL 24 18:40:59.3±0.6, **45°S**±3°×**16°8E**±°, **h51**^{km}±6^{km}, **M3.5**/12, **ML3.6**/15, **MLv3.5**/12, **Error ellipse: s-maj=0.0km s-min=0.0km az=119.7, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.31	30	P	Pn	18 41 10.5	+1.9
MSZ				S	Sn	18 41 18.8	+3.5
MLZ	Mavora Lakes	0.52	146	P	Pn	18 41 12.1	+1.2
MLZ				S	Sn	18 41 22.0	+2.8
DCZ	Deep Cove	0.65	217	P	Pn	18 41 12.3	-0.2
DCZ				S	Sn	18 41 23.9	+1.9
WKZ	Wanaka	0.94	83	P	Pn	18 41 17.8	+1.5
WKZ				S	Sn	18 41 31.5	+2.7
WHZ	Wether Hill Ro	0.96	170	P	Pn	18 41 16.9	+0.2
WHZ				S	Sn	18 41 30.4	+1.1
JCZ	Jackson Bay	1.16	42	P	Pn	18 41 19.9	+0.5
JCZ				S	Sn	18 41 37.2	+3.0
EAZ	Earnscleugh	1.17	105	P	Pn	18 41 20.6	+1.2
EAZ				S	Sn	18 41 36.0	+1.7
PYZ	Puysegur Point	1.42	210	P	Pn	18 41 23.7	+0.9
TUZ	Tuapeka	1.69	127	P	Pn	18 41 27.1	+0.7
TUZ				S	Sn	18 41 47.2	+0.3
LBZ	Lake Benmore	1.85	73	P	Pn	18 41 28.6	-0.1
LBZ				S	Sn	18 41 49.8	-1.2
SYZ	Scrubby Hill	1.89	148	P	Pn	18 41 29.3	+0.3
SYZ				S	Sn	18 41 51.8	+0.2
APZ	The Paps	1.90	174	P	Pn	18 41 29.1	-0.2
FOZ	Fox Glacier	2.07	48	P	Pn	18 41 31.1	-0.6
ODZ	Otahua Downs	2.09	94	P	Pn	18 41 31.8	0.0
ODZ				S	Sn	18 41 54.8	-1.9
HHSZ	Highcliff Hill	2.25	116	P	Pn	18 41 34.8	+0.8
TMZ	Timaru	2.42	78	P	Pn	18 41 35.7	-0.8
GCSZ	Gaunt Creek Bo	2.49	50	P	Pn	18 41 37.1	-0.3
ARCZ	Arundel	2.68	69	P	Pn	18 41 38.8	-1.2
RPZ	Rata Peaks	2.70	64	P	Pn	18 41 39.3	-0.9
WVZ	Waitaha Valley	2.88	51	P	Pn	18 41 43.0	+0.3
INZ	Inchbonnie	3.50	52	P	Pn	18 41 51.3	+0.1
OXZ	Oxford	3.51	64	P	Pn	18 41 50.1	-1.3
LTZ	Lake Taylor	3.95	58	P	Pn	18 41 55.6	-1.8
GVZ	Greta Valley S	4.33	65	P	Pn	18 42 00.6	-2.0
DSZ	Denniston Nort	4.38	45	P	Pn	18 42 02.9	-0.4
THZ	Tophouse	4.95	52	P	Pn	18 42 09.6	-1.5
MRNZ	Matariki Terra	5.12	48	P	Pn	18 42 13.8	+0.4
QRZ	Quartz Range	5.43	42	P	Pn	18 42 17.2	-0.5
TKNZ	Takaka Hill	5.49	46	P	Pn	18 42 18.9	+0.4
DUWZ	D'Urville Isla	6.16	50	P	Pn	18 42 30.2	+2.4

PKE	Pukeiti	7.40	41	P	Pn	18 42 45.9	+1.1
OTVZ	Oturere	8.27	48	P	Pn	18 42 58.7	+2.0
TMVZ	Te Maari	8.32	48	P	Pn	18 42 55.5	-1.9
WCZ	Waipu Caves	10.31	32	P	Pn	18 43 25.5	+0.9

IDC ***24*** *18:44:01.3±1.5, 44°.31N×105°.57W, h0km, mb3.4/1, mbtmp3.3/4, ML3.1/3, MS2.5/1, Error ellipse: s-maj=41.9km s-min=8.7km az=143.0*

NEIC ***24*** *18:44:01.6±2.4, 44°.39N±0°.05×105°.48W±0°.07, h0km±2km, ML3.2/64, Error ellipse: s-maj=9.1km s-min=8.2km az=16.0*

ANF ***24*** *18:44:03.3±0.2, 44°.33N×105°.42W, h0km, ML3.5/13, Error ellipse: s-maj=2.5km s-min=2.0km az=179.0*

ISC 24 18:44:01.6±0.7**, 44°.44N**±0°.03×**105°.41W**±0°.03**, h0**km**, n62, σ1ˢ.53**/72**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.04	108		Pg	18 44 22.6	+1.1
RSSD	Black Hills	1.04	108	P	Pg	18 44 22.6	+1.1
	baz=282						
RSSD				S	Sb	18 44 37.7	+0.9
	baz=282						
K22A	Casper	1.97	205		Pn	18 44 36.5	+0.1
K22A	Casper	1.97	205	P	Pn	18 44 36.6	+0.2
	baz=25,SNR=68						
K22A				S	Sn	18 45 01.6	-0.3
	baz=25						
LAO	LASA Array	2.32	346		Pb	18 44 42.8	-1.5
LAO	LASA Array	2.32	346	P	Pb	18 44 43.9	-0.5
	baz=166,SNR=10						
LAO				S	Sg	18 45 15.6	-0.5
	baz=166						
RLMT	Red Lodge	2.83	285		Pn	18 44 48.6	+0.3
RLMT				IAML		18 45 39.6	
	51nm,0.7s						
RLMT				IAML		18 45 43.3	
	46nm,0.6s						
RLMT	Red Lodge	2.83	285	P	Pn	18 44 49.6	+1.3
	baz=105,SNR=39						
RLMT				Sb	Sg	18 45 32.2	-0.4
	baz=105						
RWWY	Rawlins	3.05	206		Pn	18 44 51.0	-0.4
RWWY				IAML		18 45 42.4	
	72nm,1.0s						
RWWY				IAML		18 45 44.4	
	50nm,1.0s						
PHWY	Pilot Hill	3.14	181		Pn	18 44 52.5	-0.2
PHWY				IAML		18 45 49.5	
	39nm,0.4s						
PHWY				IAML		18 45 53.5	
	55nm,1.3s						
GCMT	Greycliff	3.30	296		Pn	18 44 56.5	+1.8
YMP	Mirror Lake Pl	3.41	277		Pn	18 44 55.6	-0.7
YMP				IAML		18 46 00.2	
	comp=E,77nm,0.9s						
YMP				IAML		18 46 03.1	
	comp=N,67nm,0.7s						
BW06	Boulder Array	3.45	242		Pn	18 44 57.7	+0.8
BW06				IAML		18 45 53.6	
	comp=N,40nm,0.8s						
BW06	Boulder Array	3.45	242	P	Pn	18 44 57.7	+0.8
	baz=61,SNR=33						
BW06				Sb	Sb	18 45 47.2	+0.9
	baz=61						
PD31	Pinedale Array	3.45	242		Pn	18 44 57.3	+0.5
PDAR	Pinedale Array	3.45	242	Pn	Pn	18 44 57.4	+0.5
	comp=N,1.6nm,0.3s,baz=67,slow=14,SNR=39						
PDAR				Pg	Pb	18 45 03.7	0.0
	comp=N,9.3nm,0.3s,baz=66,slow=17,SNR=30						
PDAR				Lg	Lg	18 45 44.0	
	comp=N,9.7nm,0.3s,baz=66,slow=33,SNR=19						
PDAR				LR	LR	18 46 34.7	
	comp=N,77nm,21.8s,baz=20,slow=47						
	comp=N,2.1nm,0.3s						
PDAR	Pinedale Array	3.45	242		Pn	18 44 57.7	+0.9
N23A	Red Feather La	3.57	187	Pn	Pn	18 44 58.7	+0.3
N23A				IAML		18 46 08.0	
	comp=E,49nm,1.0s						
N23A	Red Feather La	3.57	187	P	Pn	18 44 58.8	+0.3
	baz=6.2,SNR=21						
N23A				Sb	Sb	18 45 51.0	+1.3
	baz=6.2						
LKWY	Lake	3.58	274		Pn	18 44 58.8	+0.2
LKWY				IAML		18 45 23.5	
	comp=E,36nm,0.6s						
LKWY				IAML		18 47 02.6	
	comp=E,27nm,4.6s						
H17A	Grant Village	3.70	271		Pn	18 45 00.5	+0.2
H17A				IAML		18 46 13.4	
	comp=N,22nm,2.5s						
H17A	Grant Village	3.70	271	P	Pn	18 45 02.1	+1.7
	baz=89,SNR=5.9						
H17A				Sb	Sg	18 45 57.7	-2.9
	baz=89						
YNR	Norris Junctio	3.78	276		Pn	18 45 00.0	-1.3
FLWY	Flagg Ranch	3.82	266		Pn	18 45 00.6	-1.3
FLWY				IAML		18 46 13.7	
	comp=N,46nm,1.4s						
MOOW	Moose Ponds	3.91	262		Pn	18 45 01.8	-1.4
BRIGG	Briggsdale	3.94	168	Pn	Pn	18 45 02.7	-0.8
YMR	Madison River	3.98	275		Pn	18 45 02.5	-1.6
YMR				IAML		18 46 15.9	
	comp=E,46nm,1.0s						
YMR				IAML		18 46 17.2	
	comp=N,40nm,1.0s						
SNOW	Snow King Moun	3.98	258		Pn	18 45 02.3	-1.9
SNOW				IAML		18 46 14.6	
	comp=N,34nm,1.4s						
SNOW				IAML		18 46 25.9	
	comp=N,37nm,2.5s						
IMW	Indian Meadow	4.02	264		Pn	18 45 03.5	-1.2
IMW				IAML		18 46 14.0	
	comp=N,25nm,0.9s						
IMW				IAML		18 46 17.7	
	comp=N,31nm,0.8s						
DGMT	Dagmar	4.11	11		Pn	18 45 05.3	-0.5
DGMT	Dagmar	4.11	11	P	Pn	18 45 09.6	+3.9
	baz=192						
DGMT				Sb	Sg	18 46 13.7	-0.1
	baz=192						
FXWY	Fox Creek	4.13	261		Pn	18 45 03.3	-2.9
OGNE	Ogallala	4.29	143		Pn	18 45 08.7	+0.4
AHID	Auburn Hatcher	4.46	250		Pn	18 45 09.5	-1.3
AHID				IAML		18 46 26.2	
	comp=N,24nm,2.0s						
AHID				IAML		18 46 31.6	
	comp=N,16nm,1.1s						
BOZ	Bozeman (W)	4.56	287	S	Sn	18 46 09.1	+3.3
	baz=104						
SUSD	Miller	4.62	88		Pn	18 45 10.8	-1.9
ISCO	Idaho Springs	4.64	182		Pn	18 45 11.4	-1.9
ISCO	Idaho Springs	4.64	182	S	Sn	18 46 08.2	+0.1
	baz=1.8						
EGMT	Eagleton	4.68	321		Pn	18 45 12.7	-0.9
EGMT	Eagleton	4.68	321	Sb	Sg	18 46 29.5	-2.5
	baz=139						
O20A	White River Ci	4.79	207		Pn	18 45 12.9	-2.4
O20A	White River Ci	4.79	207	P	Pn	18 45 15.9	+0.7
	baz=26,SNR=8.4						
O20A				S	Sn	18 46 12.4	+0.8
	baz=26						
RDMU	Red Mountain	4.94	220		Pn	18 45 14.1	-3.3
RDMU				IAML		18 46 36.0	
	comp=E,19nm,1.2s						
RDMU				IAML		18 46 42.6	
	comp=N,25nm,0.9s						
HRY	Holter Researc	5.05	299		Pn	18 45 17.7	-1.0
DLMT	Dillon	5.19	283		Pn	18 45 20.0	-0.7
DLMT				IAML		18 46 09.4	
	comp=N,19nm,4.9s						
MDND	Maddock	5.28	48	P	Pn	18 45 24.6	+2.9
	baz=231						
MDND				Sb	Sg	18 46 46.8	-4.3
	baz=231						
HWUT	Hardware Ranch	5.33	240		Pn	18 45 21.6	-1.0
HWUT				IAML		18 47 12.0	
	comp=N,18nm,1.2s						
TCUT	Toone Canyon	5.53	235		Pn	18 45 24.1	-1.3
P17A	Butcher Ranch,	6.36	220		Pn	18 45 34.4	-2.4
ECSD	EROS Data Cent	6.37	93	P	Pn	18 45 38.5	+1.7
	baz=278						
MSO	Missoula	6.44	295	P	Pn	18 45 38.7	+0.9
	baz=110						
PV07	Paradox Valley	6.47	203		Pn	18 45 36.7	-1.7
SRU	San Rafael Swe	6.56	217		Pn	18 45 37.8	-1.7
SDCO	Great Sand Dun	6.69	181	P	Pn	18 45 42.3	+0.8
	baz=0.5						
TMUT	Trail Mountain	6.72	222		Pn	18 45 41.0	-0.9
PV13	Radium Mtn., P	6.78	203		Pn	18 45 41.2	-1.4
DUG	Dugway, Tooele	6.94	235	P	Pn	18 45 45.2	+0.5
	baz=50						
Q16A	Castle Valley	7.01	220		Pn	18 45 44.8	-0.9
I10CA	LAC DU BONNET	8.59	45	I	I	19 37 35.2	
	comp=N,0.1nm,1.7s,baz=226,slow=323,SNR=10						
ULM	Lac du Bonnet	8.69	45	Pn	Pn	18 46 09.5	+1.0
	comp=N,0.8nm,0.3s,baz=227,slow=13,SNR=3.3						
ULM				Lg	Lg	18 48 34.2	
	comp=N,0.3nm,0.3s,baz=134,slow=20,SNR=3.5						
	comp=N,1.5nm,0.3s						
YKA	Yellowknife Ar	18.86	347	P	Pn	18 48 23.5	0.0
	comp=N,0.1nm,0.3s,baz=164,slow=12,SNR=5.0						
	comp=N,0.5nm,0.7s						
MKAR	Makanchi Array	88.89	355	P	P	18 56 57.3	-0.4
	comp=N,0.1nm,0.5s,baz=13,slow=5.2,SNR=2.4						
	comp=N,0.1nm,0.5s						

WEL ***24*** *19:18:28.7±0.3, 42°S±3°×17°4E±°, h12km±2km, M2.9/17, ML3.1/20, MLv2.9/17, Error ellipse: s-maj=0.0km s-min=0.0km az=158.0, confirmed*

NOU ***24*** *19:18:29.7, 41°.73S×174°.26E, h0km, MLv3.5/8, Cook Strait, New Zealand*

ISC 24 19:18:29.2±0.9**, 41°.75S**±0°.03×**174°.30E**±0°.02**, h17**km±6km**, n71, σ1ˢ.62**/86**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.07	271	P	Pg	19 18 32.3	-0.1
CMWZ				S	Sg	19 18 35.2	+0.6
BSWZ	Blackbirch Sta	0.32	276	P	Pg	19 18 35.3	-0.7
BSWZ				S	Sg	19 18 40.1	-0.5
TUWZ	Tuamarina	0.42	320	P	Pg	19 18 36.7	-0.9
TUWZ				S	Sg	19 18 42.3	-1.1
SNZO	South Karori	0.53	35	P	Pg	19 18 39.5	-0.3
TCW	Tory Channel	0.54	358	P	Pg	19 18 38.9	-1.1
PLWZ	Palliser	0.74	76	P	Pb	19 18 44.2	+0.7
CAW	Cannon Point	0.86	42	P	Pg	19 18 45.3	-0.6
CAW				S	Sb	19 18 58.3	+1.4
NNZ	Nelson	0.87	307	P	Pg	19 18 44.7	-1.5
NNZ				S	Sg	19 18 56.7	-1.0
KHZ	Kahutara	0.87	220	P	Pg	19 18 46.1	-0.1
KHZ	Kahutara	0.87	220	P	Pg	19 18 46.2	0.0
KHZ				S	Sb	19 18 58.8	+1.6
PAWZ	Paruwai Farm	0.92	67	P	Pg	19 18 46.7	-0.4
DUWZ	D'Urville Isla	0.99	343	P	Pg	19 18 46.7	-1.7
KIW	Kapiti Island	1.00	28	P	Pg	19 18 47.3	-1.2
KIW				S	Sb	19 19 01.7	+0.8
THZ	Tophouse	1.04	269	P	Pg	19 18 48.1	-1.3
THZ				S	Sb	19 19 03.1	+0.9
MTW	Mount Morrison	1.08	57	P	Pg	19 18 48.8	-1.3
MTW				S	Sg	19 19 04.2	0.0
TRWZ	Traveller	1.10	72	P	Pg	19 18 49.0	-1.5
TRWZ				S	Sg	19 19 04.2	-0.7
OGWZ	Otaki Gorge	1.14	35	P	Pg	19 18 49.9	-1.3
OGWZ				S	Sg	19 19 05.6	-0.6
MRNZ	Matariki Terra	1.21	286	P	Pg	19 18 51.0	-1.5
MRNZ				S	Sb	19 19 07.7	+0.8
TKNZ	Takaka Hill	1.24	305	P	Pg	19 18 51.0	-2.0
TKNZ				S	Sg	19 19 07.8	-1.4
HOWZ	Holdsworth Sta	1.25	47	P	Pg	19 18 51.1	-2.2
MRZ	Mangatainoka R	1.46	42	P	Pn	19 18 54.0	-0.6
MRZ				S	Sb	19 19 13.3	-0.6
GVZ	Greta Valley S	1.54	217	P	Pn	19 18 55.0	-0.8
QRZ	Quartz Range	1.62	304	P	Pn	19 18 57.3	+0.4
QRZ	Quartz Range	1.62	304	P	Pn	19 18 57.3	+0.4
QRZ				S	Sn	19 19 17.9	+0.5
PRWZ	Pori Road	1.74	47	P	Pn	19 18 57.2	-1.3
POWZ	Post Office Ro	1.75	40	P	Pn	19 18 58.1	-0.6
BFZ	Birch Farm	1.81	55	P	Pn	19 19 01.1	+1.5
BFZ	Birch Farm	1.81	55	P	Pn	19 18 58.2	-1.4
LTZ	Lake Taylor	1.82	235	P	Pn	19 18 59.2	-0.6
DSZ	Denniston Nort	1.87	269	P	Pn	19 19 01.0	+0.7
DVHZ	Dannevirke	2.02	45	P	Pb	19 19 06.4	+0.9
WAZ	Wanganui	2.06	15	P	Pn	19 19 05.3	+2.3
TSZ	Takapari Road	2.11	37	P	Pb	19 19 07.3	+0.4
MQZ	McQueen's Vall	2.30	211	P	Pn	19 19 04.0	-2.3
PNHZ	Pukenui	2.33	39	P	Pn	19 19 05.7	-1.0
INZ	Inchbonnie	2.33	244	P	Pn	19 19 08.4	+1.7
NMEZ	Namu Road	2.36	352	P	Pb	19 19 11.1	0.0
PREZ	Palmer Road	2.41	357	P	Pb	19 19 11.1	-0.9
KHEZ	Kahui Hut	2.46	355	P	Pn	19 19 11.0	+2.4
KHEZ	Kahui Hut	2.46	355	P	Pn	19 19 11.5	+2.9
NEZ	North Egmont	2.48	356	P	Pn	19 19 11.4	+2.5
NBEZ	Newall Road No	2.50	352	P	Pn	19 19 11.7	+2.6
PKE	Pukeiti	2.56	355	P	Pn	19 19 11.9	+1.9
PKVZ	Pokaka	2.58	18	P	Pn	19 19 13.3	+3.1
MOVZ	Moawhango	2.59	26	P	Pb	19 19 13.9	-1.3
WNVZ	Wahianoa	2.62	23	P	Pn	19 19 11.5	+0.8
BHHZ	Black Hill Sta	2.63	31	P	Pn	19 19 10.5	-0.3
TRVZ	Turoa	2.63	22	P	Pn	19 19 13.9	+2.9
VRZ	Vera Road	2.65	8	P	Pn	19 19 13.7	+2.7
WHVZ	Whangaehu Hut	2.65	22	P	Pb	19 19 15.6	-0.7
FWVZ	Far West T-bar	2.67	21	P	Pb	19 19 15.0	-1.6
TUVZ	Tukino	2.69	23	P	Pb	19 19 15.5	-1.3
NGZ	Ngauruhoe	2.76	22	P	Pb	19 19 16.3	-1.8
SNVZ	South Ngauruho	2.76	22	P	Pb	19 19 16.4	-1.7
OTVZ	Oturere	2.79	22	P	Pn	19 19 13.6	+0.5
NNVZ	North Ngauruho	2.80	21	P	Pb	19 19 17.2	-1.6
WTVZ	West Tongariro	2.81	21	P	Pn	19 19 17.0	+3.6
TWVZ	Taurewa	2.81	18	P	Pn	19 19 16.9	+3.5
ETVZ	East Tongariro	2.83	23	P	Pn	19 19 14.2	+0.6
KWHZ	Kaweka Forest	2.83	36	P	Pb	19 19 20.1	+0.9
TMVZ	Te Maari	2.84	23	P	Pn	19 19 16.8	+3.0
KRVZ	Karewarewa	2.84	22	P	Pb	19 19 18.6	-0.9
NTVZ	North Tongarir	2.85	22	P	Pn	19 19 14.3	+0.3
WVZ	Waitaha Valley	2.95	242	P	Pb	19 19 20.5	-0.7
KATZ	Kakaramea	2.97	21	P	Pb	19 19 21.7	0.0
BKZ	Black Stump Fm	3.08	34	P	Pn	19 19 20.6	+3.6
BKZ	Black Stump Fm	3.08	34	P	Pb	19 19 21.9	-1.6
HIZ	Hauiti	3.26	8	P	Pn	19 19 22.6	+3.1
HIZ	Hauiti	3.26	8	P	Pn	19 19 22.0	+2.5
MTHZ	Maungataniwha	3.49	35	P	Pb	19 19 30.4	0.0
JCZ	Jackson Bay	4.67	238	P	Pn	19 19 41.9	+3.0

DSN ***24*** *19:25:31.4±0.8, 26°.86N×56°.09E, h10km, ML2.3/6, Error ellipse: s-maj=30.5km s-min=5.5km az=79.0*

TEH ***24*** *19:25:31.2, 26°.85N×55°.80E, h12km±23km, ML2.6*

ISC 24 19:25:31.3±1.1**, 26°.85N**±0°.04×**55°.92E**±0°.08**, h14**km**, n11, σ0ˢ.87**/14**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENO	Geno	0.60	22	Pg	Pb	19 25 43.9	+0.2
GENO				Sg	Sn	19 25 53.6	-1.6
SHME	Shamm	0.82	166	P	Pg	19 25 46.7	-0.5
SHME				S	Sg	19 25 58.4	+0.5
IBND	Bandar-abas	0.82	42	Pg	Pn	19 25 48.5	+0.1
BANOM	Banah	0.98	160	P	Pb	19 25 49.2	-0.8
BANOM				S	Sg	19 26 03.9	+0.9
MSFE	Esma-Masafi	1.50	172	P	Pn	19 25 58.2	+0.4
MDH	Madha	1.58	167	P	Pn	19 25 59.1	+0.3
LAR1	LAR	1.60	301	Pg	Pn	19 26 00.1	+0.8
UOSS	Minazif	1.91	172	P	Pn	19 26 04.1	+0.6
JASK	Jask - Hormozg	2.00	119	Pn	Pb	19 26 08.2	+0.7
HATD	Hatta, Dubai	2.02	174	P	Pb	19 26 07.0	-0.8
ASHO	Ashiyiah	2.15	177	P	Pn	19 26 08.1	+1.2

DDA ***24*** *19:27:08.1±0.0, 39°.54N×26°.09E, h8km±1km, ML2.6*

ISK ***24*** *19:27:08.2, 39°.56N×26°.10E, h6km, ML2.8/21*

ATH ***24*** *19:27:09.1, 39°.54N×26°.10E, h12km±2km, ML2.5/8, Error ellipse: s-maj=3.0km s-min=0.8km az=222.0*

THE ***24*** *19:27:09.0, 39°.55N×26°.09E, h5km±1km, ML2.5/10, Error ellipse: s-maj=1.3km s-min=0.4km az=130.0*

ISC 24 19:27:08.1±0.8**, 39°.55N**±0°.01×**26°.13E**±0°.02**, h11**km±5km**, n57, σ0ˢ.67**/89**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	Canakkale, Ayv	0.05	175	P	Pg	19 27 10.1	-0.2
GPNR	Gulpinar-Canak	0.09	180	Pg	Pg	19 27 10.9	+0.1
GPNR				Sg	Sg	19 27 12.7	0.0
BOZC	Bozcaada	0.30	348	Pg	Pb	19 27 14.7	-0.7
BOZC				Sg	Sb	19 27 19.2	-1.2
BOZC	Bozcaada	0.30	348	P	Pg	19 27 14.0	-0.1
BOZC				P	Pb	19 27 14.6	-0.9
BOZC				S	Sg	19 27 18.7	+0.5
BOZC				S	Sb	19 27 18.8	-1.5
BOZC				*i* AML	AML	19 27 19.0	
	comp=N,693nm,0.4s						
BOZC				*i* AML	AML	19 27 19.0	
	comp=E,762nm,0.4s						
EZN	Ezine	0.31	28	P	Pb	19 27 15.2	-0.5
EZN				S	Sb	19 27 20.2	-0.6
	1µm,0.3s						
EZN	Ezine	0.31	28	Pg	Pb	19 27 15.2	-0.5
EZN				Sg	Sb	19 27 19.7	-1.1
PRK	Paraskevi	0.32	160	P	Pb	19 27 15.5	-0.4
PRK				S	Sb	19 27 20.7	-0.3
	2µm,0.4s						
PRK	Paraskevi	0.32	160	P	Pb	19 27 15.4	-0.4
PRK				S	Sb	19 27 20.2	-0.8
PRK				AML	AML	19 27 20.8	
	comp=N,4823µm,0.3s						
PRK				AML	AML	19 27 22.4	
	comp=E,3173µm,0.3s						
BAYC	CANAKKALE_Bayr	0.37	59	P	Pb	19 27 15.8	-0.9
BAYC				S	Sg	19 27 20.6	+0.1
BAYC				*i* AML	AML	19 27 21.0	
	comp=E,682nm,0.3s						
SIGR	SIGRI	0.40	213	P	Pb	19 27 16.4	-0.8
SIGR				S	Sb	19 27 22.3	-1.0
	comp=E,1µm,0.3s						
SIGR	SIGRI	0.40	213	Pg	Pb	19 27 16.4	-0.8
SIGR				Sg	Sb	19 27 22.3	-1.0
SIGR	SIGRI	0.40	213	P	Pb	19 27 16.3	-0.9
SIGR				S	Sg	19 27 22.0	+0.6
SIGR				AML	AML	19 27 24.4	
	comp=N,2557µm,0.3s						
SIGR				AML	AML	19 27 24.4	
	comp=E,1726µm,0.2s						
AYVA	Ayvalik	0.49	119	P	Pb	19 27 18.3	-0.5
ECEA	Canakkale, Ece	0.49	4	P	Pb	19 27 18.2	-0.6
ECEA				S	Sb	19 27 25.5	-0.5
ECEA				*i* AML	AML	19 27 26.0	
	comp=E,494nm,0.4s						
COMU	Canakkale	0.61	25	Pg	Pb	19 27 20.5	-0.2
COMU				Sg	Sb	19 27 29.7	+0.4
GOKA	anakkale-Gk	0.66	345	P	Pb	19 27 21.2	-0.4
GOKA				S	Sb	19 27 30.8	-0.1
GOKA				*i* AML	AML	19 27 31.0	
	comp=E,531nm,0.6s						
GADA	Gvkgeada	0.67	344	Pg	Pg	19 27 21.0	0.0
GADA				Sg	Sb	19 27 30.3	-0.6
BUHA	Balikesir, Bur	0.73	94	P	Pn	19 27 23.3	-1.0
BUHA				S	Sb	19 27 32.3	-0.5
DKL	Dikili	0.77	128	Pg	Pn	19 27 24.1	-0.7
LIA	Limnos Island	0.81	296	P	Pb	19 27 24.2	0.0
LIA				S	Sb	19 27 35.1	0.0
	comp=E,568nm,0.3s						
LIA	Limnos Island	0.81	296	P	Pb	19 27 24.0	-0.1
LIA				S	Sb	19 27 35.7	+0.6
LIA				AML	AML	19 27 37.2	
	comp=E,1060µm,0.4s						
LIA				AML	AML	19 27 39.0	
	comp=N,1202µm,0.3s						
CANM	Can-anakkale	0.85	57	Pg	Pn	19 27 25.3	-0.6
GELI	Tayfur-Gelibol	0.89	17	Pg	Pb	19 27 25.4	-0.1
KARB	zmir-Karabur	0.91	166	P	Pb	19 27 25.8	-0.1
KARB				S	Sb	19 27 38.7	+0.7
KARB				*i* AML	AML	19 27 40.0	
	comp=N,237nm,0.3s						
ZEDA	zmir-Bergama	0.94	128	P	Pn	19 27 27.0	-0.1
ZEDA				S	Sb	19 27 38.5	-0.2
LPK	Lapseki	0.95	30	Pg	Pn	19 27 26.9	-0.5
SMTH	Samothraki Isl	1.03	333	P	Pb	19 27 28.1	+0.2
SMTH				S	Sb	19 27 42.5	+1.1
	comp=N,182nm,0.1s						
SMTH	Samothraki Isl	1.03	333	P	Pb	19 27 27.9	0.0
SMTH				S	Sg	19 27 41.3	-0.1
SMTH				AML	AML	19 27 44.3	
	comp=N,382µm,0.2s						
SMTH				AML	AML	19 27 44.6	
	comp=E,338µm,0.1s						
PSRA	Psara	1.10	204	P	Pn	19 27 29.7	+0.4
CAVK	Edirne/Enez-Ca	1.14	1	P	Pn	19 27 30.6	+0.7
CAVK				S	Sn	19 27 45.9	+0.3
CAVK				*i* AML	AML	19 27 48.0	
	comp=E,112nm,0.3s						
ERIK	Erikli-Kesan	1.16	14	Pn	Pb	19 27 29.9	-0.2
BALY	Balya	1.16	80	P	Pn	19 27 32.1	+1.8
CHOS	Chios island	1.16	183	P	Pb	19 27 30.2	0.0
CHOS				S	Sn	19 27 47.0	+0.8
	comp=E,270nm,0.3s						
CHOS	Chios island	1.16	183	Pn	Pn	19 27 30.9	+0.6
CHOS	Chios island	1.16	183	P	Pb	19 27 30.1	-0.2
CHOS				AML	AML	19 27 51.1	
	comp=N,461µm,0.3s						
CHOS				AML	AML	19 27 53.9	
	comp=E,784µm,0.3s						
ENEZ	Enez	1.19	1	P	Pn	19 27 31.0	+0.4
ENEZ				S	Sn	19 27 48.8	+2.2
	comp=E,332nm,0.3s						
ENEZ	Enez	1.19	1	Pn	Pn	19 27 31.0	+0.4
KRBG	Karabiga-Canak	1.23	46	Pn	Pn	19 27 31.8	+0.7
STEP	BALIKESIR_Sava	1.24	98	P	Pn	19 27 32.0	+0.7
URLA	Izmir	1.24	163	Pn	Pn	19 27 31.4	0.0
URLA	Izmir	1.24	163	P	Pg	19 27 31.0	-0.9
GONE	Gonen-Balikesi	1.29	67	Pn	Pg	19 27 33.6	+0.6
ALN	Alexandroupoli	1.35	357	P	Pg	19 27 33.4	-0.6
ALN				S	Sn	19 27 52.0	+1.4
	comp=E,225nm,0.4s						
ALN	Alexandroupoli	1.35	357	Pn	Pg	19 27 33.5	-0.6
ALN	Alexandroupoli	1.35	357	P	Pg	19 27 33.3	-0.6
ALN				AML	AML	19 27 53.0	
	comp=E,569µm,0.5s						
ALN				AML	AML	19 27 53.1	
	comp=N,332µm,0.4s						
BALB	Balikesir	1.35	86	Pn	Pg	19 27 33.9	-0.2
BLCB	Balcova	1.36	148	Pn	Pg	19 27 34.6	+0.4
RKY	Sarkoy-Tekirda	1.39	35	Pn	Pg	19 27 34.5	-0.3
THAS	Thassos island	1.51	315	P	Pn	19 27 34.8	-0.3
THAS				S	Sb	19 27 55.7	+0.4
	comp=N,60nm,0.4s						
THAS	Thassos island	1.51	315	P	Pn	19 27 34.8	-0.3
THAS				S	Sn	19 27 53.6	-1.1
THAS				AML	AML	19 27 54.3	
	comp=N,98µm,0.4s						
THAS				AML	AML	19 27 58.5	
	comp=E,112µm,0.6s						
EDC	Edincik	1.55	59	Pn	Pg	19 27 37.3	-0.5
UKOP	Uzunkopru-Edir	1.62	13	Pn	Pb	19 27 37.9	-0.1
RDO	Rodhopi	1.66	344	P	Pb	19 27 38.2	-0.4
RDO				S	Sn	19 27 59.3	+1.0
	comp=E,55nm,0.5s						
RDO	Rodhopi	1.66	344	Pn	Pb	19 27 38.2	-0.4
RDO	Rodhopi	1.66	344	P	Pn	19 27 37.2	+0.2
RDO				S	Sn	19 27 57.8	-0.5
RDO				AML	AML	19 28 02.3	
	comp=N,127µm,0.5s						
RDO				AML	AML	19 28 06.4	
	comp=E,81µm,0.3s						
KAVA	Kavala	1.90	320	P	Pn	19 27 40.6	+0.2
KAVA	Kavala	1.90	320	P	Pn	19 27 40.2	-0.2

NOU 24 19:50:32.8, 17°.52S×168°.58E, h87km**, MLv4.0**/12**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	0.43	241	P	Pn	19 50 48.3	+1.6
LIFNC	LIFOU	3.48	201	P	Pn	19 51 23.2	-1.5
YATNC	Mamie plateau,	4.79	199	P	Pn	19 51 42.0	-0.5
DZM	Mont Dzumac	4.95	204	P	Pn	19 51 44.7	-0.2
NOUC	Port Laguerre	5.04	205	P	Pn	19 51 46.1	+0.2
OUENC	Ouen Island, N	5.14	198	P	Pn	19 51 47.4	+0.1
ONTNC	Ouen Toro	5.17	202	P	Pn	19 51 48.5	+0.8

IDC ***24*** *20:15:41.2±0.7, 0°.80S×134°.66E, h0km, mb4.1/11, mbtmp4.1/12, ML4.3/1, MS3.4/18, Error ellipse: s-maj=39.2km s-min=13.9km az=68.0*

DJA ***24*** *20:15:45.1±0.5, 1°S±6°×13°5E±°, h10km, M4.5/13, mB4.9/4, mb4.6/8, MLv4.5/13, Mw(mB)4.2/4*

*NEIC **24** 20:15:45.5±2.1, 0°.92S±0°.10×134°.7E±0°.1, h31^{km}±6^{km}, mb4.4/29, Error ellipse: s-maj=16.3km s-min=13.9km az=89.0*

ISC 24 20:15:44.9±0.5**, 0°.96S**±0°.05×**134°.62E**±0°.06**, h27^{km}, n80, σ1^{s}.48**/70**, mb4.3**/21**, MS3.4**/12**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKPI	Ransiki, Papua	0.71	219	P	Pb	20 15 58.3	-0.3
SRPI	Serui, Papua	1.85	119	P	Pb	20 16 17.4	-0.7
FAKI	Fak Fak	3.07	231	Pn	Pn	20 16 31.7	+0.1
FAKI	Fak Fak	3.07	231	P	Pn	20 16 32.4	+0.8
SIJI	Sorong	3.36	271	LR	LR	20 17 55.6	
	comp=Z,416nm,21.4s,baz=9.5,slow=40						
SMPI	Sarmi	4.21	104	P	Pn	20 16 50.2	+2.8
BNDI	Bandanaira	5.89	233	P	Pn	20 17 11.5	+1.0
	99nm,0.5s,1.1nm						
MSAI	Masohi	6.16	247	P	Pn	20 17 15.0	+0.8
	11nm,0.5s,167nm0.1nm						
AAI	Ambon	6.97	247	P	Pn	20 17 27.7	+2.4
	82nm,0.6s,968nm0.3nm						
LBMI	Labuha	7.13	273	P	Pn	20 17 29.2	+1.7
	27nm,1.2s,0.2nm						
NLAI	Namlea	7.85	253	P	Pn	20 17 39.4	+2.0
	14nm,1.0s,4µm0.1nm						
DAV	Davao City (W)	12.04	312	LR	LR	20 23 50.7	
	comp=Z,79nm,18.5s,baz=116,slow=41						
MTN	Manton Dam	12.30	196	Pn	Pn	20 18 38.7	+0.2
MTN					Sn	20 20 51.8	-3.0
SOEI	Soe	13.51	229	Pn	Pn	20 18 56.2	+1.2
TOLI2	Tolitoli	13.99	278		P	20 19 10.2	+1.0
PMG	Port Moresby	15.03	124	LR	LR	20 26 43.4	
	comp=Z,163nm,22.0s,baz=316,slow=44						
BKSI	Bulukumba	15.11	253	P	Pn	20 19 19.4	+2.7
KAPI	Kappang	15.38	255	LR	LR	20 26 05.3	
	comp=Z,87nm,20.6s,baz=68,slow=40						
COEN	Coen	15.44	147	Pn	Pn	20 19 21.0	0.0
KNRA	Kununurra	15.73	201	Pn	Pn	20 19 23.1	-1.6
KNRA				IAmb	IAmb	20 19 57.2	
	comp=Z,18nm,0.7s						
GUMO	Guam	17.67	35	LR	LR	20 26 19.0	
	comp=Z,47nm,20.6s,baz=209,slow=36						
WB0	Warramunga Arr	18.69	181		P	20 20 01.3	0.0
WB0				IAmb	IAmb	20 20 14.4	
	comp=Z,15nm,1.0s						
WRAB	Tennant Creek	18.86	181	P	P	20 20 01.7	-1.4
WRAB	Tennant Creek	18.86	181	P	Pn	20 20 04.0	+0.2
WB2	Warramunga Arr	18.87	181	P	P	20 20 03.2	0.0
WB2				IAmb	IAmb	20 20 32.3	
	comp=Z,14nm,1.0s						
WRA	Warramunga Arr	18.87	181	P	Pn	20 20 04.1	+0.2
	comp=Z,0.9nm,0.3s,baz=360,slow=12,SNR=77						
WRA				S	Sn	20 23 28.6	-5.9
	comp=Z,0.7nm,0.8s,baz=5.0,slow=21,SNR=2.1						
WRA				LR	LR	20 28 14.1	
	comp=Z,239nm,19.8s,baz=348,slow=40						
	comp=Z,6.3nm,0.6s						
WRA	Warramunga Arr	18.87	181	P	P	20 20 02.5	-0.7
FITZ	Fitzroy Crossi	19.18	207	P	P	20 20 06.9	+0.2
FITZ	Fitzroy Crossi	19.18	207	P	Pn	20 20 08.2	+0.5
KKM	Kota Kinabalu	19.65	291	P	P	20 20 12.1	+0.2
QIS	Mount Isa	20.08	166	P	Pn	20 20 19.8	+1.4
TGY	Tagaytay City	20.19	318	LR	LR	20 28 18.7	
	comp=Z,94nm,20.1s,baz=154,slow=38						
CTA	Charters Tower	22.16	150	P	P	20 20 41.4	+2.5
	comp=Z,3.7nm,0.6s,baz=314,slow=13,SNR=6.0						
	comp=Z,3.7nm,0.6s						
CTAO	Charters Tower	22.16	150	P	P	20 20 40.0	+1.1
CTAO				IAmb	IAmb	20 21 05.3	
	comp=Z,21nm,1.1s						
AS01	Alice Springs	22.58	182	P	P	20 20 45.4	+2.0
AS31	Alice Springs	22.58	182	P	P	20 20 44.0	+0.6
ASAR	Alice Springs	22.58	182	P	P	20 20 44.6	+1.2
	comp=Z,5.9nm,0.6s,baz=11,slow=10.0,SNR=89						
ASAR				S	S	20 24 47.7	-1.8
	comp=Z,3.2nm,1.1s,baz=5.1,slow=26,SNR=8.8						
ASAR				LR	LR	20 30 21.6	
	comp=Z,318nm,18.8s,baz=359,slow=39						
	comp=Z,5.9nm,0.6s						
ASAR	Alice Springs	22.58	182	P	P	20 20 43.8	+0.3
WRKA	Warakurna	24.71	194	P	P	20 21 04.8	+0.8
MBWA	Marble Bar	24.79	215	P	P	20 21 04.3	-0.4
PSA00	Pilbara Seismi	25.05	214	P	P	20 21 06.7	-0.4
QLP	Quilpie	27.10	161	P	P	20 21 27.7	+2.1
JOW	Kunigami	28.30	348	LR	LR	20 31 17.3	
	comp=Z,91nm,20.5s,baz=102,slow=33						
STKA	Stephens Creek	31.45	169	P	P	20 22 05.2	+1.1
	comp=Z,4.4nm,0.9s,baz=349,slow=8.3,SNR=11						
	comp=Z,4.4nm,0.9s						
STKA	Stephens Creek	31.45	169	P	P	20 22 05.2	+1.1
BBOO	Buckleboo	31.71	178	P	P	20 22 05.7	-0.8
BBOO				IAmb	IAmb	20 22 33.6	
	comp=Z,8.4nm,1.2s						
JNU	Nakatsue	34.08	354	LR	LR	20 36 26.8	
	comp=Z,47nm,18.0s,baz=192,slow=37						
MJAR	Matsushiro Arr	37.46	5	LR	LR	20 37 04.9	
	comp=Z,72nm,18.8s,baz=186,slow=34						
MAJO	Matsushiro	37.46	5	P	P	20 22 53.4	-2.7
CMAR	Chiang Mai Arr	40.03	301	P	P	20 23 17.9	-0.1
	comp=Z,0.8nm,0.4s,baz=117,slow=6.7,SNR=11						
CMAR				PcP	PcP	20 25 23.8	+1.0
	comp=Z,0.2nm,0.3s,baz=156,slow=2.0,SNR=4.7						
CMAR				LR	LR	20 40 50.3	
	comp=Z,20nm,18.3s,baz=110,slow=38						
	comp=Z,0.8nm,0.4s						
CMAR	Chiang Mai Arr	40.03	301	P	P	20 23 17.1	-0.9
CHTO	Chiang Mai	40.18	301	P	P	20 23 18.2	-1.0
ASAJ	Asahikawa	45.44	8	LR	LR	20 40 20.1	
	comp=Z,38nm,18.9s,baz=174,slow=33						
SONM	Songino Array	54.46	337	P	P	20 25 09.7	-0.5
	comp=Z,0.5nm,0.8s,baz=148,slow=8.5,SNR=3.5						
SONM				LR	LR	20 47 48.2	
	comp=Z,43nm,19.7s,baz=146,slow=36						
	comp=Z,0.5nm,0.8s						
PETK	Petropavlovsk-	57.23	16	LR	LR	20 51 01.9	
	comp=Z,28nm,19.4s,baz=146,slow=37						
MK31	Makanchi Array	65.94	323	P	P	20 26 28.1	-0.6
MK31				IAmb	IAmb	20 26 29.5	
	comp=Z,3.5nm,1.1s						
MKAR	Makanchi Array	65.94	323	P	P	20 26 28.8	+0.1
	comp=Z,1.2nm,0.4s,baz=105,slow=8.7,SNR=25						
	comp=Z,1.2nm,0.4s						
TARG	Taragay, Kyrgy	66.51	317	P	P	20 26 31.2	-1.7
TARG				IAmb	IAmb	20 26 42.7	
	comp=Z,3.3nm,1.0s						
KDJ	Kajisay	67.10	317	P	P	20 26 37.0	+0.6
NRN	Naryn	67.64	316	P	P	20 26 39.5	-0.5
NRN				IAmb	IAmb	20 26 41.1	
	comp=Z,1.8nm,0.8s						
ZALV	Zalesovo Beam	68.41	331	P	P	20 26 43.1	-1.0
	comp=Z,1.1nm,0.8s,baz=117,slow=5.5,SNR=6.7						
ZALV				LR	LR	20 55 49.7	
	comp=Z,37nm,19.6s,baz=44,slow=35						
	comp=Z,1.1nm,0.8s						
KURK	Kurchatov	69.97	326	P	P	20 26 53.1	-0.8
KURK				IAmb	IAmb	20 26 54.1	
	comp=Z,3.8nm,1.1s						
KURBB	Kurchatov Arra	69.97	326	P	P	20 26 53.8	-0.1
	comp=Z,1.8nm,0.8s,baz=118,slow=5.7,SNR=16						
	comp=Z,1.8nm,0.8s						
BTK	Batken	70.85	313	P	P	20 26 59.7	+0.1
BTK				IAmb	IAmb	20 27 00.3	
	comp=Z,3.7nm,1.1s						
GAR	Garm	70.89	312	P	P	20 26 59.9	0.0
KK31	Karatay Array	72.03	316	P	P	20 27 05.2	-1.5
KK31				IAmb	IAmb	20 27 07.7	
	comp=Z,3.3nm,0.7s						
KKAR	Karatay Array	72.03	316	P	P	20 27 06.7	0.0
TIXI	Tiksi	72.58	358	P	P	20 27 06.9	-2.4
TIXI				IAmb	IAmb	20 27 10.3	
	comp=Z,3.9nm,1.2s						
BRVK	Borovoye	75.64	326	P	P	20 27 26.4	-1.0
BRVK				IAmb	IAmb	20 27 27.8	
	comp=Z,3.3nm,1.1s						
PPT	Papeete	76.18	108	LR	LR	20 59 03.9	
	comp=Z,30nm,18.8s,baz=352,slow=34						
VNDA	Vanda	77.90	174	P	P	20 27 41.4	+1.6
	comp=Z,1.1nm,0.7s,baz=330,slow=6.5,SNR=6.5						
	comp=Z,1.1nm,0.7s						
VNDA	Vanda	77.90	174	P	P	20 27 41.6	+1.8
ANM	Nome	78.41	22	P	P	20 27 44.9	+2.0
ANM				IAmb	IAmb	20 27 48.3	
	comp=Z,3.5nm,0.8s						
GEYT	Alibeck	79.96	309	P	P	20 27 52.6	+0.7
	comp=Z,3.6nm,0.8s,baz=241,slow=2.6,SNR=7.3						
	comp=Z,3.6nm,0.8s						
GEYT	Alibeck	79.96	309	P	P	20 27 53.0	+1.0
GEYT				IAmb	IAmb	20 27 53.6	
	comp=Z,4.3nm,0.8s						
ABKAR	Akbulak array	80.76	320	P	P	20 27 55.3	-0.6
ILAR	Eielson Array	85.96	25	P	P	20 28 21.6	-0.8
	comp=Z,1.7nm,0.8s,baz=253,slow=5.2,SNR=14						
	comp=Z,1.7nm,0.8s						
QSPA	South Pole Qui	88.98	180	LR	LR	21 09 42.1	
	comp=Z,109nm,18.0s,baz=20,slow=36						
CPUP	Villa Florida	150.52	158	PKPbc	PKiKP	20 35 35.6	-0.1
	comp=Z,5.2nm,0.8s,baz=180,slow=3.0,SNR=10						
LPAZ	La Paz	151.75	128	PKPbc	PKiKP	20 35 40.3	+1.0
	comp=Z,2.7nm,0.9s,baz=167,slow=1.3,SNR=7.5						

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*IDC **24** 20:21:39.9±1.5, 31°.28N×126°.65E, h0^{km}, mb3.3/2, mbtmp3.3/4, ML3.1/2, Error ellipse: s-maj=31.1km s-min=19.4km az=101.0*

*JMA **24** 20:21:39.2±0.6, 31°N±1°×12°7E±°, h2^{km}, MV3.2/12, EAST CHINA SEA REGION*

ISC 24 20:21:42.7±1.4**, 31°.21N**±0°.08×**127°.60E**±0°.08**, h10^{km}, n8, σ1^{s}.62**/11**, mb3.1**/3**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFU	Fukue jima 2	1.74	34	P	Pn	20 22 11.3	-1.7
JFU				*e*S	Sb	20 22 34.9	-1.8
JSJ	Shimokoshiki	1.87	75	*e*P	Pn	20 22 14.2	-0.6
JNU	Nakatsue	3.37	55	Pn	Pb	20 22 43.7	+1.1
	1.2nm,0.3s,baz=231,slow=6.5,SNR=10						
JNU				Sn	Sg	20 23 31.9	+0.9
	2.3nm,0.3s,baz=24,slow=17,SNR=5.9						
	9.2nm,0.9s						
JTU	Tsushima	3.63	24	*e*P	Pn	20 22 38.4	-0.6
KSRS	Korea Array	6.23	2	Pn	Pn	20 23 12.6	-2.2
	0.6nm,0.3s,baz=185,slow=14,SNR=7.3						
KSRS				Pg	Pb	20 23 34.0	+2.6
	0.5nm,0.3s,baz=179,slow=17,SNR=8.8						
KSRS				Sn	Sn	20 24 26.4	+0.4
	0.8nm,0.3s,baz=184,slow=25,SNR=4.4						
KSRS				Lg	Lg	20 24 57.2	
	1.0nm,0.3s,baz=189,slow=30,SNR=6.4						
	1.0nm,0.4s						
SONM	Songino Array	23.19	322	P	P	20 26 49.6	-0.1
	0.5nm,0.8s,baz=118,slow=9.8,SNR=3.5						
MKAR	Makanchi Array	37.94	307	P	P	20 28 52.9	-7.4
	0.1nm,0.4s,baz=87,slow=7.4,SNR=1.6						
	0.1nm,0.4s						
ASAR	Alice Springs	54.90	173	P	P	20 31 13.6	-0.1
	0.7nm,0.9s,baz=345,slow=6.2,SNR=6.1						
	0.7nm,0.9s						

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*AEIC **24** 20:29:00.6±2.7, 51°.7N±0°.2×179°.5W±0°.2, h92^{km}±7^{km}, Error ellipse: s-maj=34.5km s-min=1.9km az=157.0*

NEIC 24 20:28:59.5±1.0**, 52°.1N**±0°.3×**179°.6W**±0°.2**, h65^{km}**±43^{km}**, mb3.9**/19**, ML3.5**(AEIC)**, Error ellipse: s-maj=49.9km s-min=6.4km az=165.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	Amchitka	0.97	223		Pn	20 29 17.0	-0.3
AMKA				Sn	Sn	20 29 30.4	-0.1
KIWB	Kanaga Island	1.56	98		Pn	20 29 24.7	-0.4
ADK	Adak	1.84	95		Pn	20 29 29.0	+0.2
ADK				Sn	Sn	20 29 51.1	0.0
UNV	Unalaska Valle	8.13	72	Pn	Pn	20 30 56.7	+2.1
SDPT	Sand Point	11.81	66	Pn	Pn	20 31 44.6	-0.2
CHGN	Chignik	13.11	63	Pn	Pn	20 32 02.2	-0.3
O18K	Koktuh Hills	15.66	51		P	20 32 38.2	-0.5
O18K				IAmb	IAmb	20 32 56.7	
	comp=Z,22nm,1.4s						
SVW2	Sparrevohn	15.94	46		P	20 32 43.8	+2.0
SVW2				IAmb	IAmb	20 33 11.9	
	comp=Z,13nm,1.4s						
OHAK	Old Harbor	16.04	61	Pn	Pn	20 32 39.9	-0.7
OHAK				IAmb	IAmb	20 33 03.2	
	comp=Z,22nm,1.4s						
Q19K	Cape Douglas,	16.16	55		P	20 32 45.6	+1.2
KDAK	Kodiak Island	16.49	59	Pn	Pn	20 32 44.5	-1.8
P19K	Oil Pt	16.55	52		P	20 32 50.0	+1.3
CNPM	China Poot	17.51	54	P	Pn	20 32 59.0	+0.1
BRLK	Bradley Lake	17.73	53	P	Pn	20 33 01.1	-0.5
SKT	Skwentna	18.07	46	P	Pn	20 33 06.4	+0.7
SKT				IAmb	IAmb	20 33 09.5	
	comp=Z,4.2nm,0.9s						
SUA	Susitna One	18.25	48	P	P	20 33 07.4	0.0
SUA				IAmb	IAmb	20 33 33.4	
	comp=Z,11nm,1.4s						
CAST	Castle Rocks	18.39	41	P	Pn	20 33 11.0	+1.3
CUT	Chulitna	18.77	45	P	P	20 33 13.1	+0.1
MLY	Manley	19.64	38	P	Pn	20 33 24.7	+0.2
SCM	Sheep Creek Mo	19.92	48	P	P	20 33 25.5	-0.1
M24K	Tolsona, Glenn	20.52	48	P	P	20 33 31.9	-0.2
M24K				IAmb	IAmb	20 33 36.7	
	comp=Z,9.2nm,1.1s						
H24K	Noodor Dome	21.07	37	P	P	20 33 37.5	-0.5
RIDG	Independent Ri	21.53	44	P	P	20 33 41.5	-1.5
RIDG				IAmb	IAmb	20 33 49.8	
	comp=Z,4.8nm,1.4s						
SCRK	Sand Creek	21.97	43	P	P	20 33 46.8	-0.9
SCRK				IAmb	IAmb	20 34 20.1	
	comp=Z,4.0nm,1.4s						
L27K	Beaver Creek,	22.69	46	P	P	20 33 53.9	-1.5
BCAR	Beaver Creek A	22.71	46	P	P	20 33 54.3	-1.2

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*WEL **24** 20:32:49.8±0.3, 41°S±3°×17°4E±°, h29^{km}±3^{km}, M3.2/31, ML3.5/31, MLv3.2/31, Error ellipse: s-maj=0.0km s-min=0.0km az=171.9, confirmed*

*NOU **24** 20:32:49.4, 40°.83S×174°.37E, h15^{km}, MLv3.6/9, Cook Strait, New Zealand*

ISC 24 20:32:49.6±1.6**, 40°.91S**±0°.03×**174°.41E**±0°.03**, h24^{km}**±17^{km}**, n97, σ1^{s}.09**/103**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TCW	Tory Channel	0.32	199	P	Pn	20 32 59.1	+0.4
TCW				S	Sn	20 33 05.8	+1.2
KIW	Kapiti Island	0.38	82	P	Pn	20 32 59.8	+0.2
KIW				S	Sn	20 33 07.1	+0.9
DUWZ	D'Urville Isla	0.39	286	P	Pn	20 32 59.1	-0.6
DUWZ				S	Sn	20 33 06.7	+0.3
SNZO	South Karori	0.46	151	P	Pn	20 33 00.8	+0.2
WEL	Wellington	0.46	144	P	Pn	20 33 00.9	+0.2
WEL				S	Sn	20 33 09.0	+0.9
CAW	Cannon Point	0.53	112	P	Pn	20 33 01.7	0.0
CAW				S	Sn	20 33 10.8	+0.8
OGWZ	Otaki Gorge	0.58	81	P	Pn	20 33 02.5	+0.1
OGWZ				S	Sn	20 33 11.9	+0.7
TUWZ	Tuamarina	0.63	214	P	Pn	20 33 02.5	-0.5
HOWZ	Holdsworth Sta	0.84	89	P	Pn	20 33 05.4	-0.5
NNZ	Nelson	0.84	248	P	Pn	20 33 05.2	-0.7
CMWZ	Cape Campbell	0.85	190	P	Pb	20 33 06.5	+0.8
MTW	Mount Morrison	0.86	107	P	Pn	20 33 05.3	-0.9
BSWZ	Blackbirch Sta	0.90	207	P	Pn	20 33 06.4	-0.3
PAWZ	Paruwai Farm	0.90	122	P	Pn	20 33 05.8	-1.0
PLWZ	Palliser	0.91	136	P	Pn	20 33 05.9	-1.1
MRZ	Mangatainoka R	0.92	75	P	Pn	20 33 06.6	-0.4
TRWZ	Traveller	1.08	117	P	Pb	20 33 09.7	+0.1
TKNZ	Takaka Hill	1.10	263	P	Pn	20 33 08.9	-0.8
TIWZ	Tintock	1.13	84	P	Pn	20 33 10.2	+0.3
TMWZ	Te Maipa	1.14	100	P	Pn	20 33 09.4	-0.6
POWZ	Post Office Ro	1.16	64	P	Pb	20 33 10.9	-0.1
WAZ	Wanganui	1.24	21	P	Pn	20 33 11.3	-0.1
PRWZ	Pori Road	1.24	74	P	Pn	20 33 11.2	-0.2
MRNZ	Matariki Terra	1.34	248	P	Pn	20 33 12.6	-0.2
BFZ	Birch Farm	1.41	81	P	Pn	20 33 14.6	+0.8
BFZ	Birch Farm	1.41	81	P	Pn	20 33 13.0	-0.8
THZ	Tophouse	1.42	233	P	Pn	20 33 13.6	-0.3
QRZ	Quartz Range	1.43	273	P	Pn	20 33 13.1	-0.9
QRZ	Quartz Range	1.43	273	P	Pn	20 33 12.9	-1.2
LREZ	Lake Rotokare	1.45	360	P	Pn	20 33 14.2	-0.2
DVHZ	Dannevirke	1.47	66	P	Pn	20 33 15.0	+0.4
NMEZ	Namu Road	1.55	345	P	Pn	20 33 16.5	+0.8
PREZ	Palmer Road	1.58	353	P	Pn	20 33 16.5	+0.4
KHZ	Kahutara	1.64	203	P	Pn	20 33 15.8	-1.1
KHEZ	Kahui Hut	1.64	349	P	Pn	20 33 17.7	+0.6
KHEZ	Kahui Hut	1.64	349	P	Pn	20 33 16.9	-0.1
NEZ	North Egmont	1.66	352	P	Pn	20 33 17.3	+0.1
PNHZ	Pukenui	1.69	54	P	Pn	20 33 15.8	-1.8
NBEZ	Newall Road No	1.69	346	P	Pn	20 33 17.5	-0.2
MTVZ	Mangateitei	1.73	28	P	Pn	20 33 17.9	-0.3
DREZ	Durham Road	1.73	355	P	Pn	20 33 18.8	+0.7
PKE	Pukeiti	1.75	349	P	Pn	20 33 18.3	-0.1
PKVZ	Pokaka	1.77	24	P	Pn	20 33 18.4	-0.4
VRZ	Vera Road	1.81	9	P	Pn	20 33 19.1	-0.1
MOVZ	Moawhango	1.82	35	P	Pn	20 33 18.4	-1.1
WNVZ	Wahianoa	1.83	30	P	Pn	20 33 19.1	-0.5
TRVZ	Turoa	1.83	29	P	Pn	20 33 19.4	-0.4
MHEZ	Mangahewa	1.83	358	P	Pn	20 33 20.1	+0.5
DRZ	Dome Shelter	1.86	29	P	Pn	20 33 20.0	-0.2
WHVZ	Whangaehu Hut	1.86	29	P	Pn	20 33 19.9	-0.3
FWVZ	Far West T-bar	1.87	28	P	Pn	20 33 20.0	-0.4
TUVZ	Tukino	1.90	31	P	Pn	20 33 20.4	-0.2
BHHZ	Black Hill Sta	1.90	42	P	Pn	20 33 19.6	-1.1
NGZ	Ngauruhoe	1.96	28	P	Pn	20 33 21.2	-0.3
SNVZ	South Ngauruho	1.96	29	P	Pn	20 33 21.2	-0.3
OTVZ	Oturere	1.99	29	P	Pn	20 33 21.5	-0.5
TWVZ	Taurewa	2.00	24	P	Pn	20 33 21.3	-0.7
NNVZ	North Ngauruho	2.00	28	P	Pn	20 33 21.7	-0.4
WTVZ	West Tongariro	2.01	27	P	Pn	20 33 21.6	-0.5
ETVZ	East Tongariro	2.04	30	P	Pn	20 33 21.9	-0.6
KRVZ	Karewarewa	2.05	28	P	Pn	20 33 22.2	-0.4
TMVZ	Te Maari	2.05	29	P	Pn	20 33 22.2	-0.5
NTVZ	North Tongarir	2.06	29	P	Pn	20 33 22.5	-0.3
DSZ	Denniston Nort	2.13	246	P	Pn	20 33 22.8	-1.0
KWHZ	Kaweka Forest	2.14	47	P	Pn	20 33 22.2	-1.7
KATZ	Kakaramea	2.17	27	P	Pn	20 33 24.1	-0.3
MCHZ	McNeill Hill	2.28	51	P	Pb	20 33 30.4	+0.3
GVZ	Greta Valley S	2.30	206	P	Pn	20 33 24.1	-1.9
RATZ	Rangitukua	2.30	28	P	Pn	20 33 26.5	+0.5
BKZ	Black Stump Fm	2.37	43	P	Pn	20 33 26.2	-0.8
BKZ	Black Stump Fm	2.37	43	P	Pn	20 33 24.9	-2.1
HIZ	Hauiti	2.42	8	P	Pn	20 33 27.3	-0.4
HIZ	Hauiti	2.42	8	P	Pn	20 33 27.3	-0.4
WATZ	Wairara	2.42	25	P	Pn	20 33 29.8	+2.0
LTZ	Lake Taylor	2.46	220	P	Pn	20 33 26.8	-1.5
NMHZ	Naumai	2.58	46	P	Pb	20 33 35.2	-0.1
MRHZ	Matea Rd	2.59	37	P	Pn	20 33 28.6	-1.4
TLZ	Tolley Road	2.72	19	P	Pn	20 33 31.3	-0.6
MTHZ	Maungataniwha	2.78	43	P	Pn	20 33 29.9	-2.7
INZ	Inchbonnie	2.86	230	P	Pn	20 33 32.9	-0.8
OXZ	Oxford	2.99	215	P	Pn	20 33 35.1	-0.4
RTZ	Ruatahuna	3.03	42	P	Pn	20 33 33.5	-2.7
MQZ	McQueen's Vall	3.08	204	P	Pn	20 33 33.2	-3.5
TOZ	Tahuroa Road	3.29	15	P	Pn	20 33 39.6	+0.1
MHCZ	Mount Hutt	3.36	218	P	Pn	20 33 40.2	-0.5
MARZ	Manawahe	3.41	32	P	Pn	20 33 38.8	-2.5
WVZ	Waitaha Valley	3.49	231	P	Pn	20 33 41.7	-0.6
RPZ	Rata Peaks	3.75	221	P	Pn	20 33 48.0	+2.1
RPZ	Rata Peaks	3.75	221	P	Pn	20 33 48.2	+2.3
AWAZ	Awhitu Peninsu	3.85	3	P	Pn	20 33 46.7	-0.6
GCSZ	Gaunt Creek Bo	3.87	230	P	Pn	20 33 46.3	-1.3
WIAZ	Waiheke Island	4.15	8	P	Pn	20 33 51.1	-0.3
TMZ	Timaru	4.28	215	P	Pn	20 33 50.7	-2.5
FOZ	Fox Glacier	4.30	231	P	Pn	20 33 51.6	-1.9
ODZ	Otahua Downs	4.97	213	P	Pn	20 34 05.0	+2.3
JCZ	Jackson Bay	5.22	231	P	Pn	20 34 06.2	-0.1
JCZ	Jackson Bay	5.22	231	P	Pn	20 34 03.7	-2.5

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*ISK **24** 21:07:15.7, 41°.38N×43°.75E, h5^{km}, ML2.4/9*

*NORS **24** 21:07:15.4±0.0, 41°.47N×43°.79E, h2^{km}, MPVA2.8*

*TIF **24** 21:07:15.5, 41°.37N×43°.76E, h8^{km}*

*DDA **24** 21:07:16.2±0.0, 41°.36N×43°.68E, h7^{km}±3^{km}, ML2.1*

ISC 24 21:07:16.2±0.9**, 41°.36N**±0°.02×**43°.75E**±0°.02**, h10^{km}**±6^{km}**, n41, σ0^{s}.62**/71**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BGD	Bogdanovka	0.15	230	P	Pg	21 07 19.5	-0.1
BGD				S	Sg	21 07 22.0	0.0
AKH	Akhalkalaki	0.20	285	Pg	Pg	21 07 20.5	0.0
AKH				Sg	Sg	21 07 23.4	0.0
AKH	Akhalkalaki	0.20	285	P	Pg	21 07 20.4	0.0
AKH				S	Sg	21 07 23.5	+0.2
TRLG	Trialeti	0.32	56	P	Pg	21 07 22.6	-0.1
TRLG				S	Sg	21 07 27.2	+0.3
DMNI	Dmanisi	0.33	95	P	Pg	21 07 22.8	-0.1
DMNI				S	Sg	21 07 27.6	+0.3
KZRT	Kazreti	0.49	87	P	Pg	21 07 25.6	-0.1
KZRT				S	Sg	21 07 32.1	-0.1
EAK	Akyaka	0.68	189	P	Pg	21 07 28.5	-0.8
EAK				S	Sg	21 07 38.1	-0.1
EAK				*i* AML	AML	21 07 39.0	
	comp=N,109nm,0.4s						
EAK				*i* AML	AML	21 07 39.0	
	comp=E,153nm,0.5s						
EPOS	Posof	0.78	281	P	Pg	21 07 30.9	-0.3
ABS	Abastumani	0.81	300	P	Pg	21 07 31.6	-0.1
ABS				S	Sb	21 07 43.1	-0.3
AHAN	Ardahan-Merkez	0.87	257	P	Pg	21 07 32.6	-0.4
AHAN				S	Sg	21 07 44.0	-0.3
AHAN				*i* AML	AML	21 07 50.0	
	comp=N,37nm,0.6s						
KARS	Kars	0.89	215	Pg	Pb	21 07 33.7	-0.1
KARS				Sg	Sb	21 07 46.1	+0.3
SEAG	Tbilisi Sea	0.89	63	P	Pb	21 07 33.3	-0.4
SEAG				S	Sb	21 07 45.7	0.0
BOZK	Kars-Merkez-Bo	0.96	218	P	Pg	21 07 33.9	-0.9
BOZK				S	Sb	21 07 48.0	0.0
DIGO	Kars	0.98	197	P	Pg	21 07 34.6	-0.6
TKB	Tkibuli	1.14	331	P	Pb	21 07 37.8	-0.3
TKB				S	Sn	21 07 53.8	-0.3
DGRG	David-gareji	1.23	85	P	Pn	21 07 39.4	-0.1
DGRG				S	Sn	21 07 57.1	+1.0
GUDG	Gudauri	1.23	26	P	Pn	21 07 39.6	-0.1
GUDG				S	Sn	21 07 58.5	+2.0
ONI	Oni	1.25	350	Pn	Pg	21 07 39.4	-0.8
ONI	Oni	1.25	350	P	Pn	21 07 39.7	-0.2
ONI				S	Sn	21 07 57.2	+0.4
SENK	Senkaya-Erzuru	1.32	234	Pn	Pg	21 07 41.7	+0.1
DAGI	Agillar	1.41	259	P	Pn	21 07 42.0	-0.1
DAGI				S	Sb	21 08 00.7	-0.1
TASB	TASBURUN-IGDIR	1.42	165	Pn	Pb	21 07 42.9	0.0
GNI	Garni	1.42	148	Pn	Pb	21 07 42.9	0.0
GNI				Sn	Sg	21 08 02.9	+0.9
PNSH	Pansheti	1.43	27	P	Pg	21 07 42.8	-0.8
PNSH				S	Sg	21 08 02.4	+0.2
ZEI	Tsey	1.43	4	*e*Pg	Pg	21 07 43.3	-0.4
ZEI				*e*Sg	Sg	21 08 03.6	+1.3
IGDI	IGDIR	1.51	170	P	Pn	21 07 43.0	-0.4
IGDI				S	Sn	21 08 02.3	-0.8
LACR	Lac	1.52	15	*e*Pg	Pg	21 07 44.9	-0.5
LACR				*i* Sg	Sg	21 08 06.1	+0.9
DIGR	Digorskoe uzhe	1.54	355	*e*Pg	Pg	21 07 45.2	-0.6
DIGR				*e*Sg	Sg	21 08 07.1	+1.2
BATM	Batumi	1.56	280	P	Pb	21 07 44.9	-0.4
BATM				S	Sg	21 08 05.7	-0.8
DBOC	Borcka	1.57	270	P	Pb	21 07 44.8	-0.6
DDEM	Demirkent	1.58	254	P	Pn	21 07 44.9	+0.5
DDEM				S	Sb	21 08 05.6	-0.1
DDEM				*i* AML	AML	21 08 07.0	
	comp=N,56nm,0.3s						
DBAD	Bademkaya	1.59	258	P	Pb	21 07 45.3	-0.4
DBAD				S	Sn	21 08 05.2	+0.1
DBAD				*i* AML	AML	21 08 09.0	
	comp=N,24nm,0.7s						
DBAD				*i* AML	AML	21 08 09.0	
	comp=E,30nm,0.3s						
SHTL	Shatili	1.67	38	P	Pg	21 07 47.1	-1.0
SHTL				S	Sg	21 08 09.9	+0.1
HOPA	Hopa-Artvin	1.73	272	Pn	Pb	21 07 47.5	-0.6
EATA	Eleskirt	1.77	213	P	Pn	21 07 48.2	+0.9
DDFL	Dedoflistskaro	1.78	86	P	Pg	21 07 50.5	+0.1
ARNR	Ardon	1.86	12	*e*Pg	Pb	21 07 50.0	-0.4
ARNR				*e*Sg	Sg	21 08 16.4	+0.4
AGRB	Hanur-Agry	1.87	198	Pn	Pn	21 07 49.4	+0.9
LGD	Lagodekhi	1.93	75	P	Pb	21 07 51.3	-0.2
LGD				S	Sg	21 08 17.9	-0.3
BTLR	Botlikh	2.26	54	*e*Pg	Pb	21 07 56.5	-0.6
BTLR				*e*Sg	Sg	21 08 27.2	-1.5
CHOM	Cayeli-Rize	2.27	264	Pn	Pn	21 07 55.3	+1.5

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*IDC **24** 21:19:43.5±1.8, 34°.51N×138°.84E, h0^{km}, mb3.4/2, mbtmp3.4/3, ML2.9/1, Error ellipse: s-maj=92.8km s-min=21.9km az=82.0*

*JMA **24** 21:19:46.5±0.2, 35°.1N±0°.6×140°.0E±0°.7, h68^{km}±1^{km}, MV3.1/39, SOUTHERN BOSO PENINSULA*

ISC 24 21:19:47.1±1.1,**35°.07N**±0°.04×**140°.02E**±0°.05,**h66**^{km}±7^{km},
n25,σ**0ˢ.53**/30,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TATJ	Tateyama 2	0.11	251	S	Sn	21 20 04.6	+0.7
JKUC	kamogawauchiur	0.17	58	*i* P	Pn	21 19 56.8	-0.3
JKUC				S	Sn	21 20 04.0	-0.4
KTR	Katsuura	0.26	72	*i* P	Pn	21 19 57.3	-0.2
KTR				S	Sn	21 20 04.7	-0.4
BSO4	Boso 4	0.27	106	*i* P	Pn	21 19 57.8	+0.4
BSO4				X		21 20 06.2	
JYO	Yokosk	0.33	298	*i* P	Pn	21 19 58.2	+0.3
JYO				S	Sn	21 20 06.7	+0.8
BSO3	Boso 3	0.48	123	*i* P	Pn	21 19 59.2	+0.2
BSO3				X		21 20 08.5	
JIM2	Oshima 3	0.59	234	*i* P	Pn	21 20 00.1	-0.4
JIM2				S	Sn	21 20 09.5	-0.9
JOD2	Odawara 2	0.79	285	*i* P	Pn	21 20 02.2	-0.5
JOD2				S	Sn	21 20 13.3	-0.9
BSO1	Boso 1	0.89	117	P	Pn	21 20 03.1	-0.4
BSO1				X		21 20 15.1	
JIZS	Izushimoda	1.00	250	P	Pn	21 20 05.2	-0.1
JIZS				S	Sn	21 20 18.4	-0.5
JMYK	Miyake Tsubota	1.08	201	P	Pn	21 20 06.2	-0.1
JMYK				S	Sn	21 20 20.8	+0.1
JFNN	Fujinakano	1.10	277	P	Pn	21 20 06.7	+0.1
JMKN	Mikurajimanish	1.22	197	S	Sn	21 20 23.8	-0.2
JYN	Shimob	1.28	290	*i* P	Pn	21 20 09.0	-0.1
JYN				S	Sn	21 20 25.6	+0.1
JRY	Ryogami san	1.31	316	*i* P	Pn	21 20 09.3	-0.1
JRY				*e*S	Sn	21 20 26.3	0.0
JAG	Ashikaga	1.43	341	*i* P	Pn	21 20 10.3	-0.6
JAG				S	Sn	21 20 28.0	-1.0
MJAR	Matsushiro Arr	2.08	316	Pn	Pn	21 20 20.2	+0.5
	4.5nm,0.3s,baz=164,slow=13,SNR=80						
MJAR				Sn	Sn	21 20 45.4	+0.8
	3.9nm,0.3s,baz=153,slow=26,SNR=18						
	35nm,0.3s						
H11N2	WAKE ISLAND Hy	28.21	116	T	T	21 55 19.3	
	baz=308,slow=75,SNR=9.3						
H11N1	WAKE ISLAND Hy	28.22	116	T	T	21 55 18.6	
	baz=308,slow=75,SNR=8.9						
H11N3	WAKE ISLAND Hy	28.23	116	T	T	21 55 19.5	
	baz=308,slow=75,SNR=8.7						
H11S1	WAKE ISLAND Hy	28.84	118	T	T	21 56 02.5	
	baz=310,slow=76,SNR=8.5						
H11S3	WAKE ISLAND Hy	28.84	118	T	T	21 56 04.5	
	baz=310,slow=76,SNR=6.9						
H11S2	WAKE ISLAND Hy	28.86	118	T	T	21 56 05.7	
	baz=310,slow=76,SNR=8.7						
WRA	Warramunga Arr	54.97	187	P	P	21 29 11.2	-0.3
	0.4nm,0.6s,baz=1.6,slow=7.7,SNR=10						
	0.4nm,0.6s						
ASAR	Alice Springs	58.70	187	P	P	21 29 38.6	+0.8
	0.1nm,0.4s,baz=8.7,slow=13,SNR=2.0						
	0.1nm,0.4s						

NIED ***24*** *22:02:55.8, 45°.84N×143°.12E, h346^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.18; $M_{\theta\theta}$0.08; $M_{\phi\phi}$-0.27; $M_{r\theta}$0.59; $M_{\theta\phi}$-0.05; $M_{\phi r}$-1.10; Fault plane solution: $M_0$1.27000×10^{15} NP1: ϕ_s153.00000°, δ86.00000°, λ82.00000°. NP2: ϕ_s36.00000°, δ9.00000°, λ154.00000°.*

JMA ***24*** *22:02:55.8±0.3, 46°N±1°×14°3E±°, h346^{km}±2^{km}, MV4.0/40, NE OFF HOKKAIDO*

NEIC ***24*** *22:02:56.3±1.6, 45°.90N±0°.08×143°.1E±0°.1, h338^{km}±6^{km}, mb4.1/105, Error ellipse: s-maj=14.5km s-min=10.5km az=109.0*

SKHL ***24*** *22:02:56.6±0.6, 45°.74N×143°.28E, h334^{km}±1^{km}, mb4.5/2, msh4.4/5*

IDC ***24*** *22:02:56.0±0.6, 45°.99N×143°.08E, h330^{km}±6^{km}, mb3.4/16, mbtmp4.1/22, Error ellipse: s-maj=12.4km s-min=10.0km az=154.0*

ISC 24 22:02:55.9±0.5,**45°.80N**±0°.05×**143°.21E**±0°.04,**h340**^{km}±5^{km},
n204,σ**1ˢ.10**/233,**mb4.0**/71,**1C-1D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSE	Soyaes	0.95	208	*e*P	Pn	22 03 41.0	+0.5
JWK2	Keihoku	1.04	243	*e*P	Pn	22 03 41.5	+0.8
JWK2				*e*S	S	22 04 16.9	+0.2
YSS	Yuzh-Sakhalins	1.19	345	Pn	Pn	22 03 41.3	+0.1
YSS	Yuzh-Sakhalins	1.19	345	*i* P	Pn	22 03 41.5	+0.2
YSS				AMB	AMB	22 03 42.6	
	150nm,0.4s						
YSS				*e*S	S	22 04 16.8	-0.9
YSS				A	A	22 04 17.3	
	500nm,2.0s						
YSS				A	A	22 04 17.7	
	280nm,0.8s						
YSS				A	A	22 04 17.7	
	90nm,0.8s						
KHLM	Kholmsk	1.48	328	*e*P	Pn	22 03 43.1	+0.3
KHLM				AMB	AMB	22 03 43.2	
	91nm,0.4s						
KHLM				*e*S	S	22 04 19.6	-0.9
KHLM				A	A	22 04 20.0	
	469nm,0.7s						
KHLM				A	A	22 04 20.0	
	483nm,0.7s						
JRR	Rishiri	1.49	244	*e*P	Pn	22 03 43.5	+0.5
JRBN	Rebuntou	1.55	257	*e*P	Pn	22 03 43.1	-0.2
JRBN				*e*S	S	22 04 19.8	-1.5
JSS	Shosan	1.70	215	*e*P	Pn	22 03 45.2	+1.0
ASAJ	Asahikawa	1.74	195	P	Pn	22 03 45.8	+1.1
	168nm,0.6s,baz=2.6,slow=4.8,SNR=250						
ASAJ				S	S	22 04 23.9	+0.3
	13nm,0.5s,baz=256,slow=32,SNR=8.2						
ASAJ	Asahikawa	1.74	195	*e*P	Pn	22 03 45.7	+1.1
ASAJ				*e*S	S	22 04 24.3	+0.8
JKA	Kamikawa-asahi	1.74	195	Pn	Pn	22 03 45.7	+1.1
JMP	Maruseppu	1.80	176	*e*P	Pn	22 03 46.0	+1.0
JMP				*e*S	S	22 04 24.7	+0.3
JYG	Yagishiri	1.87	223	*e*P	Pn	22 03 46.0	+0.7
JTKR	Abashiri--Toko	1.90	165	*e*P	Pn	22 03 46.9	+1.3
JTKR				*e*S	S	22 04 26.9	+1.4
JKK2	Kamakawa 2	1.96	190	*e*P	Pn	22 03 47.2	+1.2
JKK2				*e*S	S	22 04 27.6	+1.3
JRA	Rausu	2.31	143	*e*P	Pn	22 03 50.1	+1.5
JRA				*e*S	S	22 04 33.1	+2.2
JHR	Hokuryu	2.31	208	*e*P	Pn	22 03 49.7	+1.0
JAR	Ashorobuto	2.54	171	*e*P	Pn	22 03 52.0	+1.5
JAR				*e*S	S	22 04 35.5	+1.1
YUK	Yuzh-Kuril'sk	2.58	132	*e*S	S	22 04 37.3	+2.3
YUK				A	A	22 04 39.8	
	548nm,0.7s						
YUK				A	A	22 04 39.8	
	409nm,0.7s						
JAK	Akkeshi	3.00	159	*e*P	Pn	22 03 54.7	+0.1
JAK				*e*S	S	22 04 40.2	-1.5
AKK	Akkeshi	3.02	157	*i* P	Pn	22 03 54.5	-0.2
AKK				AMB	AMB	22 03 55.1	
	32nm,0.2s						
AKK				*e*S	S	22 04 39.7	-2.3
AKK				A	A	22 04 41.2	
	483nm,0.4s						
AKK				A	A	22 04 41.2	
	485nm,0.4s						
NMR	Nemuro--Hokkai	3.03	143	*i* P	Pn	22 03 54.0	-0.8
NMR				AMB	AMB	22 03 55.4	
	21nm,0.4s						
NMR				*e*S	S	22 04 39.3	-2.8
NMR				A	A	22 04 43.0	
	181nm,0.4s						
NMR				A	A	22 04 43.0	
	251nm,0.4s						
NEM2	Nemuro 2	3.04	142	*e*P	Pn	22 03 53.8	-1.0
NEM2				*e*S	S	22 04 39.2	-3.0
JCH	Churui	3.19	178	*e*P	Pn	22 03 56.1	-0.2
JCH				*e*S	S	22 04 41.5	-3.4
JEW	Eniwo	3.22	204	*e*P	Pn	22 03 58.0	+1.4
JEW				*e*S	S	22 04 47.1	+1.7
SHO	Shikotan	3.22	126	*i* P	Pn	22 03 55.6	-1.0
SHO				AMB	AMB	22 03 55.9	
	13nm,0.5s						
SHO				AMB	AMB	22 03 57.6	
	407nm,4.0s						
SHO				*e*S	S	22 04 42.7	-2.6
SHO				A	A	22 04 42.8	
	614nm,5.5s						
SHO				A	A	22 04 43.8	
	127nm,0.3s						
SHO				A	A	22 04 43.8	
	182nm,0.3s						
JNBK	Urakawa-nobuka	3.54	185	*e*P	Pn	22 03 59.6	-0.1
JNBK				*e*S	S	22 04 48.4	-2.6
ERM	Erimo	3.79	181		Pn	22 04 03.1	+0.9
JOSM	Okushiri--Mats	4.59	217	*e*P	Pn	22 04 10.8	+0.2
JOT	Ohata	4.69	200	*e*P	Pn	22 04 11.3	-0.4
JOT				*e*S	S	22 05 08.2	-4.6
TEY	Ternei	4.71	263	*e*P	Pn	22 04 12.2	+0.4
TEY				AMB	AMB	22 04 12.4	
	30nm,0.4s						
TEY				*e*S	S	22 05 12.8	-0.3
TEY				A	A	22 05 12.9	
	7.0nm,1.0s						
TEY				A	A	22 05 12.9	
	15nm,1.0s						
JOMM	Oshimamatsumae	4.87	210	*e*P	Pn	22 04 13.6	0.0
TYV	Tymovskoe	5.08	356	*e*P	Pn	22 04 14.5	-1.2
TYV				AMB	AMB	22 04 15.0	
	13nm,0.6s						
TYV				AMB	AMB	22 04 17.6	
	100nm,2.6s						
TYV				*e*S	S	22 05 17.3	-3.0
TYV				A	A	22 05 19.0	
	12nm,1.4s						
TYV				A	A	22 05 19.0	
	21nm,1.4s						
TYV				A	A	22 05 22.3	
	100nm,4.4s						
TYV				A	A	22 05 22.3	
	200nm,4.4s						
JTM	Tenmabayashi	5.25	198	Pn	Pn	22 04 17.6	-0.3
NKL	Nikolayevsk	7.54	348	*e*P	Pn	22 04 46.7	+2.6
NKL				AMB	AMB	22 04 47.3	
	3.0nm,0.4s						
USA0B	Ussuriysk Arra	8.11	263	Pn	Pn	22 04 51.0	-0.2
USRK	Ussuriysk Ar.	8.11	263	P	Pn	22 04 51.3	+0.1
	7.4nm,0.5s,baz=69,slow=12,SNR=23						
USRK	Ussuriysk Ar.	8.11	263		Pn	22 04 51.1	0.0
JMM	Marumori	8.13	194		Pn	22 04 51.8	+0.3
JMM					S	22 06 22.9	-2.8
KLR	Kul'dur	8.48	298	P	Pn	22 04 55.0	-0.4
	4.2nm,0.6s,baz=114,slow=11,SNR=18						
JSD	Sado	8.59	207		Pn	22 04 57.2	+0.3
MDJ	Mudanjiang	9.68	268		Pn	22 05 11.0	+1.0
SKR	Severo-Kuril's	9.90	56	*e*P	P	22 05 13.9	-0.5
SKR				AMB	AMB	22 05 14.7	
	84nm,0.7s						
MJB9	Matsu-Tunnel	9.98	204		P	22 05 16.2	+0.6
MAJO	Matsushiro	9.99	204		P	22 05 15.4	-0.3
MJAR	Matsushiro Arr	9.99	204	P	P	22 05 15.4	-0.2
	10nm,0.7s,baz=24,slow=10,SNR=26						
BNX	BinXian	11.04	275	⇑P	Pn	22 05 25.4	-0.8
BNX				pmax	pmax		
	comp=Z,14nm,0.9s						
BNX				pmax	pmax		
	comp=Z,73nm,5.1s						
JGF	Kuroka	11.11	206	P	P	22 05 28.2	0.0
INU	Inuyama	11.45	206		P	22 05 32.2	+0.4
HEH	HeiHe	11.47	299	*e*P	Pn	22 05 29.8	-1.4
HEH				pmax	pmax		
	comp=Z,20nm,0.9s						
HEH				pmax	pmax		
	comp=Z,81nm,4.7s						
PEA0B	Petropavlovsk-	11.92	47		P	22 05 37.0	+0.2
PETK	Petropavlovsk-	11.92	47	P	P	22 05 37.5	+0.7
	comp=Z,1.5nm,0.5s,baz=231,slow=13,SNR=5.0						
PETK	Petropavlovsk-	11.92	47		P	22 05 37.2	+0.4
CN2	Changchun	12.77	267	P	P	22 05 45.3	-1.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KSRS	Korea Array	14.13	239	P	Pn	22 06 03.2	+0.4
	comp=Z,2.4nm,0.8s,baz=48,slow=10,SNR=8.8						
SEY	Seymchan	17.94	14	P	P	22 06 41.8	-0.5
	comp=Z,16nm,0.4s,baz=201,slow=7.9,SNR=49						
XLT	XiLinHaoTe	19.30	274	⇓*i*P	P	22 06 57.8	+0.7
XLT				sP	sP	22 08 34.8	+3.9
XLT				S	S	22 10 15.0	-1.5
XLT				pmax	pmax		
	comp=Z,50nm,5.4s						
XLT				pmax	pmax		
	comp=Z,23nm,0.6s						
HHC	Hu-ho-hao-te	23.45	269	*e*P	P	22 07 37.5	+1.5
HHC				pmax	pmax		
	comp=Z,26nm,1.1s						
HHC				pmax	pmax		
	comp=Z,250nm,5.2s						
ULN	Ulaanbaatar	24.68	288	P	P	22 07 46.6	-0.4
ULN				IAmb	IAmb	22 07 47.3	
	comp=Z,4.7nm,0.7s						
SONM	Songino Array	25.12	288	P	P	22 07 50.4	-0.5
	comp=Z,2.3nm,0.5s,baz=85,slow=8.9,SNR=24						
SONM				ScP	ScP	22 14 21.8	+1.2
	comp=Z,1.1nm,0.8s,baz=140,slow=2.1,SNR=7.8						
	comp=Z,2.3nm,0.5s						
SONM	Songino Array	25.12	288	P	P	22 07 50.4	-0.5
GTA	Gaotai	32.26	274	*e*P	P	22 08 54.8	+1.0
GTA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TNA	Tin City	32.73	35	P	P	22 08 56.5	-0.7
TNA				IAmb	IAmb	22 08 59.1	
	comp=Z,14nm,2.0s						
RDOG	Red Dog Mine	35.20	32	P	P	22 09 15.2	-3.2
RDOG				IAmb	IAmb	22 09 49.8	
	comp=Z,6.8nm,0.7s						
CHGN	Chignik	37.09	52	P	P	22 09 33.8	-0.5
GOMU	GeErMu	37.26	273	P	P	22 09 36.3	-0.2
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,58nm,5.5s						
ZALV	Zalesovo Beam	37.52	304	P	P	22 09 37.3	-0.7
	comp=Z,0.6nm,0.4s,baz=84,slow=12,SNR=4.4						
ZALV				PcP	PcP	22 11 48.3	+0.4
	comp=Z,0.4nm,0.5s,baz=90,slow=3.3,SNR=1.8						
	comp=Z,0.6nm,0.4s						
PZH	PanZhiHua	38.10	254	P	P	22 09 44.0	+0.7
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,6.2s						
O18K	Koktuh Hills	38.29	46	P	P	22 09 45.1	+0.8
O18K				IAmb	IAmb	22 10 08.2	
	comp=Z,21nm,1.6s						
P18K	Big Mountain,	38.34	47	P	P	22 09 45.5	+0.8
K20K	Telida	38.52	40	P	P	22 09 46.1	-0.1
K20K				IAmb	IAmb	22 10 17.5	
	comp=Z,26nm,1.9s						
IMAR	Indian Mountai	38.58	36	P	P	22 09 45.7	-0.8
WMQ	Urumqi	38.76	288	*e*P	P	22 09 49.5	+1.0
H21K	Melozitna Rive	38.97	36	P	P	22 09 49.4	-0.5
H21K				IAmb	IAmb	22 10 37.1	
	comp=Z,23nm,2.0s						
M20K	Styx River	39.07	42	P	P	22 09 51.5	+0.7
M20K				IAmb	IAmb	22 09 52.8	
	comp=Z,17nm,1.7s						
Q19K	Cape Douglas,	39.21	47	P	P	22 09 52.1	+0.2
ILSW	Iliamna Southw	39.30	45	P	P	22 09 53.5	+0.8
P19K	Oil Pt	39.31	46	P	P	22 09 51.8	-0.8
CAST	Castle Rocks	39.41	40	P	P	22 09 53.4	-0.1
PPLA	Purkeypile	39.41	41	P	P	22 09 54.5	+0.9
PPLA				IAmb	IAmb	22 10 19.0	
	comp=Z,23nm,1.6s						
SPU	Mount Spurr	39.67	43	P	P	22 09 55.8	+0.2
SKT	Skwentna	39.81	42	P	P	22 09 57.1	+0.3
SKT				IAmb	IAmb	22 10 41.9	
	comp=Z,13nm,1.8s						
BPAW	Bear Paw Mtn.	39.83	39	P	P	22 09 57.4	+0.5
BPAW				IAmb	IAmb	22 10 00.1	
	comp=Z,15nm,1.8s						
MLY	Manley	39.87	37	P	P	22 09 58.0	+0.8
KTH	Kantishna Hill	39.91	40	P	P	22 09 58.0	+0.3
KTH				IAmb	IAmb	22 10 44.4	
	comp=Z,21nm,1.8s						
TRF	Thorofare Moun	40.21	40	P	P	22 10 00.1	-0.1
TRF				IAmb	IAmb	22 10 46.5	
	comp=Z,22nm,1.8s						
SUA	Susitna One	40.25	43	P	P	22 10 00.4	-0.1
SUA				IAmb	IAmb	22 10 01.9	
	comp=Z,15nm,1.6s						
H23K	Yukon River	40.31	36	P	P	22 10 00.6	-0.1
CNPM	China Poot	40.33	46	P	P	22 10 01.4	+0.4
I23K	Minto, Yukon-K	40.44	37	P	P	22 10 01.9	+0.2
I23K				IAmb	IAmb	22 10 08.3	
	comp=Z,16nm,2.0s						
BRLK	Bradley Lake	40.46	45	P	P	22 10 02.1	0.0
NEA2	Nenana	40.62	38	P	P	22 10 03.2	-0.1
MCK	McKinley	40.78	39	P	P	22 10 05.1	+0.5
MCK				IAmb	IAmb	22 10 38.9	
	comp=Z,16nm,1.6s						
RND	Reindeer	40.85	40	P	P	22 10 04.2	-1.0
RND				IAmb	IAmb	22 10 27.4	
	comp=Z,21nm,1.9s						
MDM	Murphy Dome	40.94	37	P	P	22 10 05.2	-0.7
H24K	Noodor Dome	40.99	36	P	P	22 10 06.4	+0.1
H24K				IAmb	IAmb	22 10 48.4	
	comp=Z,16nm,1.8s						
PMR	Palmer	41.00	42	P	P	22 10 06.5	+0.2
PMR				IAmb	IAmb	22 10 47.1	
	comp=Z,12nm,1.4s						
WRH	Wood River Hil	41.05	38	P	P	22 10 07.6	+0.8
WRH				IAmb	IAmb	22 10 20.7	
	comp=Z,12nm,1.7s						
GHO	Glory Hole Cre	41.07	42	P	P	22 10 06.6	-0.4
GHO				IAmb	IAmb	22 10 12.3	
	comp=Z,31nm,1.8s						
CCB	Clear Creek Bu	41.15	38	P	P	22 10 07.0	-0.5
CCB				IAmb	IAmb	22 10 53.0	
	comp=Z,14nm,1.8s						
MK31	Makanchi Array	41.16	294	P	P	22 10 07.4	-0.5
MKAR	Makanchi Array	41.16	294	P	P	22 10 07.2	-0.7
	comp=Z,1.4nm,0.6s,baz=79,slow=9.0,SNR=22						
MKAR				PcP	PcP	22 12 00.3	+0.6
	comp=Z,0.1nm,0.4s,baz=46,slow=4.2,SNR=1.7						
MKAR				ScP	ScP	22 15 17.0	+0.7
	comp=Z,0.3nm,0.6s,baz=83,slow=4.5,SNR=2.4						
	comp=Z,1.4nm,0.6s						
MKAR	Makanchi Array	41.16	294	P	P	22 10 07.6	-0.3
POKR	Poker Plat Res	41.25	37	P	P	22 10 08.2	-0.2
POKR				IAmb	IAmb	22 11 07.0	
	comp=Z,20nm,1.9s						
SML	Sawmill	41.34	42	P	P	22 10 09.8	+0.6
SML				IAmb	IAmb	22 10 46.2	
	comp=Z,29nm,1.8s						
KNK	Knik Glacier	41.35	43	P	P	22 10 09.0	-0.2
PWL	Port Wells	41.51	43	P	P	22 10 10.1	-0.4
PWL				IAmb	IAmb	22 10 45.8	
	comp=Z,26nm,1.2s						
IL31		41.53	37	P	P	22 10 10.1	-0.4
IL31				IAmb	IAmb	22 10 14.6	
	comp=Z,13nm,1.8s						
ILAR	Eielson Array	41.53	37	P	P	22 10 10.2	-0.3
	comp=Z,1.0nm,0.6s,baz=276,slow=9.3,SNR=18						
ILAR				PcP	PcP	22 12 00.3	-0.3
	comp=Z,0.2nm,0.5s,baz=302,slow=4.4,SNR=1.7						
	comp=Z,1.0nm,0.6s						
ILAR	Eielson Array	41.53	37	P	P	22 10 10.6	0.0
IL03	Eielson Array	41.54	37	P	P	22 10 10.4	-0.3
HDA	Harding Lake	41.55	38	P	P	22 10 09.9	-0.9
HDA				IAmb	IAmb	22 10 35.1	
	comp=Z,18nm,1.8s						
SCM	Sheep Creek Mo	41.80	42	P	P	22 10 13.5	+0.6
SCM				IAmb	IAmb	22 10 56.3	
	comp=Z,30nm,1.5s						
FYU	Fort Yukon	41.97	35	P	P	22 10 14.1	-0.1
FYU				IAmb	IAmb	22 10 55.9	
	comp=Z,32nm,1.8s						
PRP	Porcupine Dome	41.99	36	P	P	22 10 14.2	-0.3
KURK	Kurchatov	42.06	301	P	P	22 10 14.0	-1.0
BMAR	Burnt Mountain	42.12	33	P	P	22 10 15.0	-0.4
M24K	Tolsona, Glenn	42.28	41	P	P	22 10 17.8	+1.0
KLU	Klutina	42.53	42	P	P	22 10 18.9	+0.1
KLU				IAmb	IAmb	22 10 53.7	
	comp=Z,39nm,1.9s						
RIDG	Independent Ri	42.57	39	P	P	22 10 18.1	-0.9
RIDG				IAmb	IAmb	22 10 19.1	
	comp=Z,15nm,1.6s						
SCRK	Sand Creek	42.90	38	P	P	22 10 20.6	-1.1
SCRK				IAmb	IAmb	22 10 21.0	
	comp=Z,20nm,1.8s						
N25K	Chitina, Valde	43.12	42	P	P	22 10 24.3	+0.9
N25K				IAmb	IAmb	22 11 12.5	
	comp=Z,36nm,1.9s						
MENT	Mentasta	43.23	40	P	P	22 10 26.1	+1.9
CRAI	Chiangrai	43.33	248	P	P	22 10 26.3	+0.8
GLB	Gilahina Butte	43.53	42	P	P	22 10 27.5	+0.9
GLB				IAmb	IAmb	22 11 00.7	
	comp=Z,23nm,1.9s						
VRDI	Verde Repeater	43.75	42	P	P	22 10 29.4	+0.9
VRDI				IAmb	IAmb	22 11 19.4	
	comp=Z,18nm,1.6s						
MCARA	McCarthy VSAT	43.91	42	P	P	22 10 30.6	+1.0
MCARA				IAmb	IAmb	22 11 02.5	
	comp=Z,10nm,1.3s						
EGAK	Eagle	43.94	37	P	P	22 10 28.7	-1.0
BCAR	Beaver Creek A	44.06	39	P	P	22 10 31.5	+0.7
M27K	Edge Creek, AK	44.19	40	P	P	22 10 32.4	+0.5
BARN	Barnard Glacie	44.63	42	P	P	22 10 36.5	+1.0
BARN				IAmb	IAmb	22 11 28.7	
	comp=Z,27nm,1.8s						
PHRA	Phrae	44.68	247	P	P	22 10 37.6	+1.5
DAWY	Dawson	44.85	37	P	P	22 10 37.0	0.0
CHTO	Chiang Mai	45.28	248	P	P	22 10 42.0	+1.1
EPYK	Eagle Plains	45.37	34	P	P	22 10 40.7	-0.3
EPYK				IAmb	IAmb	22 11 36.8	
	comp=Z,23nm,1.8s						
YKU2	Yakutat	46.03	44	P	P	22 10 47.4	+1.3
INK	Inuvik	46.06	31	P	P	22 10 45.6	-0.6
INK				IAmb	IAmb	22 11 30.4	
	comp=Z,11nm,1.7s						
BRVK	Borovoye	46.07	307	P	P	22 10 46.7	+0.2
M30M	Minto, Yukon	46.40	39	P	P	22 10 49.6	+0.6
KDJ	Kajisay	46.45	290	P	P	22 10 50.0	+0.1
HYT	Haines Junctio	46.63	41	P	P	22 10 52.4	+1.5
HYT				IAmb	IAmb	22 10 55.8	
	comp=Z,25nm,2.0s						
N31M	Braeburn, Yuko	47.20	40	P	P	22 10 54.4	-0.7
N31M				IAmb	IAmb	22 11 27.4	
	comp=Z,12nm,1.4s						
TAPN	Taplejung	47.23	267	*e*P	P	22 10 56.7	+0.5
	comp=Z,6.5nm,0.4s						
NRN	Naryn	47.55	290	P	P	22 10 58.3	-0.1
M31M	Drury Creek, Y	47.58	39	P	P	22 10 58.5	+0.5
A36M	Sachs Harbour	47.68	25	P	P	22 10 57.4	-1.2
AAK	Ala-Archa	47.96	292	P	P	22 11 01.6	+0.2
JIRN	Jiri	48.10	268	*e*P	P	22 11 03.4	+0.5
	comp=Z,4.8nm,0.2s						
GUN	Gumba	48.17	269	*e*P	P	22 11 03.5	+0.2
	comp=Z,11nm,0.4s						
RAMN	Ramite	48.26	267	*e*P	P	22 11 03.9	0.0
	comp=Z,16nm,0.6s						
KSH	Kashi	48.52	288	P	P	22 11 10.0	+4.4
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PKI	Pulchoki	48.70	269	*e*P	P	22 11 06.9	-0.5
PKIN	Phulchoki	48.71	269	*e*P	P	22 11 07.2	-0.1
	comp=Z,6.1nm,0.5s						
C36M	Paulatuk	48.98	28	P	P	22 11 08.2	-0.2
GKN	Gorkha	48.98	270	*e*P	P	22 11 09.4	+0.2
	comp=Z,7.3nm,0.4s						
P33M	Teslin, Yukon	49.02	41	P	P	22 11 10.1	+1.1
P33M				IAmb	IAmb	22 11 54.6	
	comp=Z,9.2nm,1.6s						
DANN	Dangsing	49.38	271	*e*P	P	22 11 13.1	+0.7
	comp=Z,14nm,0.2s						
KOLN	Koldanda	49.85	270	*e*P	P	22 11 16.6	+0.8
PYUN	Piuthan	50.07	271	*e*P	P	22 11 17.9	+0.4
	comp=Z,8.3nm,0.5s						
KK31	Karatay Array	50.29	295	P	P	22 11 18.2	-0.4
KKAR	Karatay Array	50.29	295	P	P	22 11 18.2	-0.4
BTK	Batken	51.65	291	P	P	22 11 28.8	0.0
BTK				IAmb	IAmb	22 11 29.5	
	comp=Z,5.8nm,0.5s						
GAR	Garm	52.54	290	P	P	22 11 35.3	-0.1
GAR				IAmb	IAmb	22 11 36.1	
	comp=Z,12nm,1.2s						
CHGR	Chuyangaron	53.48	290	P	P	22 11 42.1	0.0
ABKAR	Akbulak array	53.59	306	P	P	22 11 41.8	-0.8
RES	Resolute Bay	53.80	16	P	P	22 11 42.8	-0.9
RES				IAmb	IAmb	22 11 43.3	
	comp=Z,4.8nm,0.6s						
YKA	Yellowknife Ar	55.64	33	P	P	22 11 56.9	-0.1
	comp=Z,2.6nm,0.6s,baz=304,slow=6.6,SNR=49						
	comp=Z,2.6nm,0.6s						
GEYT	Alibeck	61.00	296	P	P	22 12 34.3	+0.1
	comp=Z,2.2nm,0.4s,baz=18,slow=5.3,SNR=7.1						
	comp=Z,2.2nm,0.4s						
GEYT	Alibeck	61.00	296	P	P	22 12 34.3	+0.1

GEYT				IAmb	IAmb	22 12 35.0	
	comp=Z,6.0nm,1.1s						
FIA1	FINESS Array S	61.74	331	P	P	22 12 37.4	-1.3
FINES	FINESS Array B	61.74	331	P	P	22 12 37.4	-1.3
	comp=Z,1.8nm,0.5s,baz=45,slow=7.1,SNR=14						
	comp=Z,1.8nm,0.5s						
I04A	Tendick Farm,	62.99	54	P	P	22 12 49.0	+1.8
PINE	Pine Mountain	63.82	53	P	P	22 12 55.1	+2.2
G08A	Pilot Rock	63.97	51	P	P	22 12 54.5	+0.9
G08A				IAmb	IAmb	22 12 59.1	
	comp=Z,5.2nm,0.7s						
FCC	Fort Churchill	65.61	29	P	P	22 13 03.6	-0.1
FCC				IAmb	IAmb	22 13 04.1	
	comp=Z,7.8nm,1.2s						
FFC	Flin Flon	65.68	35	P	P	22 13 04.9	+0.6
PLID	Pearl Lake	65.70	50	P	P	22 13 05.5	+0.7
WRA	Warramunga Arr	65.92	189	P	P	22 13 07.9	+1.7
	comp=Z,0.4nm,0.6s,baz=7.4,slow=6.9,SNR=2.5						
	comp=Z,0.4nm,0.6s						
WRA	Warramunga Arr	65.92	189	P	P	22 13 06.3	+0.1
KBZ	Khabaz	66.33	309	P	P	22 13 09.6	+1.1
	comp=Z,1.7nm,0.8s,baz=67,slow=6.9,SNR=7.8						
	comp=Z,1.7nm,0.8s						
NBO00	NORSAR Array S	66.77	337	P	P	22 13 09.3	-1.8
LRM	Limekiln Ridge	67.07	47	P	P	22 13 13.9	+0.5
KVN	Kaiserville	68.53	56	P	P	22 13 24.0	+1.5
KVN				IAmb	IAmb	22 13 24.9	
	comp=Z,4.0nm,0.7s						
NVAR	Mina Array Bea	68.83	56	P	P	22 13 26.0	+1.6
	comp=Z,2.0nm,0.7s,baz=297,slow=6.5,SNR=8.9						
	comp=Z,2.0nm,0.7s						
NVAR	Mina Array Bea	68.83	56	P	P	22 13 25.5	+1.1
ASAR	Alice Springs	69.65	189	P	P	22 13 31.7	+2.5
	comp=Z,0.6nm,0.5s,baz=3.3,slow=5.2,SNR=16						
	comp=Z,0.6nm,0.5s						
BW06	Boulder Array	70.68	48	P	P	22 13 36.2	+0.7
BW06				IAmb	IAmb	22 13 37.1	
	comp=Z,2.3nm,0.8s						
PD31	Pinedale Array	70.68	48	P	P	22 13 36.5	+1.0
PD31				IAmb	IAmb	22 13 37.2	
	comp=Z,1.9nm,0.8s						
PDAR	Pinedale Array	70.68	48	P	P	22 13 36.4	+0.8
	comp=Z,1.5nm,0.6s,baz=283,slow=1.8,SNR=11						
	comp=Z,1.5nm,0.6s						
ULM	Lac du Bonnet	71.51	36	P	P	22 13 39.9	-0.1
	comp=Z,1.6nm,0.5s,baz=280,slow=7.8,SNR=3.2						
	comp=Z,1.6nm,0.5s						
BURAR	Bucovina Array	72.30	321	P	P	22 13 44.9	0.0
BRTR	Keskin Array B	74.08	311	P	P	22 13 55.5	0.0
	comp=Z,0.7nm,0.5s,baz=56,slow=3.6,SNR=7.9						
	comp=Z,0.7nm,0.5s						
BRTR	Keskin Array B	74.08	311	P	P	22 13 55.7	+0.2
EYMN	Ely	75.09	35	P	P	22 14 00.7	-0.1
F36A	Milaca	75.94	37	P	P	22 14 04.3	-1.4
ECSD	EROS Data Cent	76.27	40	P	P	22 14 07.7	+0.2
PIX	Pinacate	76.44	59	P	P	22 14 07.1	-1.6
SCHQ	Schefferville	76.56	17	P	P	22 14 08.7	-0.3
	comp=Z,3.0nm,0.9s,baz=246,slow=17,SNR=5.4						
	comp=Z,3.0nm,0.9s						
SCHQ	Schefferville	76.56	17	P	P	22 14 08.8	-0.1
ALN	Alexandroupoli	77.06	316	P	P	22 14 11.2	-0.8
ALN				IAmb	IAmb	22 14 22.1	
	comp=Z,6.4nm,1.3s						
PRED	Cave del Predi	78.02	327	P	P	22 14 16.6	-0.6
PRED				IAmb	IAmb	22 14 26.1	
	comp=Z,6.7nm,1.6s						
RAYN	Ar Rayn	78.61	292	P	P	22 14 20.6	-0.2
TX31	Lajitas Ar. Si	83.78	54	P	P	22 14 49.0	+1.3
TXAR	Lajitas Array	83.78	54	P	P	22 14 49.2	+1.4
	comp=Z,0.6nm,0.4s,baz=296,slow=4.8,SNR=15						
	comp=Z,0.6nm,0.4s						

*KOLA **24** 22:15:53.6, 79°.58N×17°.42E, h0km, ML2.5, Error ellipse: s-maj=8.1km s-min=6.4km az=30.0, Spitsbergen*
*BER **24** 22:15:54.3±2.1, 79°.64N×17°.82E, h5km±9km, ML2.4, ML2.9(NAO), Confirmed Earthquake*
*IEPN **24** 22:15:54.0, 79°.67N×17°.83E, h10km*
*NAO **24** 22:15:55.2±2.7, 79°.60N×17°.33E, h16km±11km, ML2.9*
ISC 24 22:15:53.5±1.5**, 79°.61N**±0°.05×**17°.63E**±0°.04**, h16**km±10km**, n31, σ1ˢ.88**/59**, 1C, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.27	240	Pn	Pb	22 16 16.8	-0.1
KBS				Pg	Pg	22 16 17.8	-0.1
KBS				Lg	Lg	22 16 34.5	
KBS	Kingsbay	1.27	240	*e*P	Pn	22 16 16.6	+0.2
KBS				*e*S	Sb	22 16 32.3	-0.6
KBS	Kingsbay	1.27	240	P	Pn	22 16 16.7	+0.2
KBS				S	Sb	22 16 32.9	0.0
KBS	Kingsbay	1.27	240	*e*P	Pb	22 16 16.8	-0.1
KBS				*e*S	Sn	22 16 33.6	+0.6
KBS				IAML		22 16 35.2	
	comp=Z,309nm,0.2s						
SPA0	Spitsbergen Ar	1.46	190	Pn	Pn	22 16 20.0	+0.9
	baz=17,slow=18						
SPA0				Pg	Pg	22 16 21.5	0.0
	baz=13,slow=16						
SPA0				Lg	Lg	22 16 40.6	
	baz=23,slow=28						
SPA0	Spitsbergen Ar	1.46	190	⇑*i*P	Pn	22 16 20.0	+0.9
SPA0				*i* S	Sb	22 16 39.4	+1.0
SPA0	Spitsbergen Ar	1.46	190	Pn	Pn	22 16 20.0	+0.9
	baz=17,slow=18						
SPA0				Pg	Pg	22 16 21.5	0.0
	baz=13,slow=16						
SPA0				Sg	Sg	22 16 40.6	0.0
	baz=23,slow=28						
SPA0				IAML		22 16 47.4	
	comp=Z,56nm,0.4s						
SPITS	Spitsbergen Ar	1.46	190	P	Pn	22 16 19.9	+0.9
SPITS				S	Sg	22 16 40.5	0.0
BRBB	Barentsburg B	1.66	205	Pn	Pn	22 16 22.9	+1.0
BRBB				Sn	Sn	22 16 43.9	+1.1
BRBB	Barentsburg B	1.66	205	P	Pn	22 16 22.7	+0.8
BRBB				S	Sn	22 16 43.7	+0.9
BRBB	Barentsburg B	1.66	205	*e*P	Pn	22 16 22.9	+1.0
BRBB				*e*S	Sn	22 16 43.6	+0.8
BRBA	Barentsburg A	1.70	205	Pn	Pn	22 16 23.4	+1.1
BRBA				Sn	Sn	22 16 44.6	+1.0
BRBA	Barentsburg A	1.70	205	*e*P	Pn	22 16 23.4	+1.1
BRBA				*e*S	Sn	22 16 44.2	+0.7
BRBA				IAML		22 16 48.7	
	comp=Z,83nm,0.5s						
HSPB	Hornsund (broa	2.66	190	Pn	Pb	22 16 38.5	-2.0
HSPB				Sn	Sn	22 17 08.8	+1.6
HSPB				Lg	Lg	22 17 19.4	
HSPB	Hornsund (broa	2.66	190	*e*P	Pn	22 16 37.8	+2.3
HSPB				S	Sn	22 17 09.3	+2.0
HSPB	Hornsund (broa	2.66	190	P	Pn	22 16 38.2	+2.7
HSPB				S	Sn	22 17 10.3	+3.0
HSPB	Hornsund (broa	2.66	190	*e*P	Pn	22 16 36.8	+1.3
HSPB				*e*S	Sn	22 17 08.6	+1.3
HSPB				*e*		22 17 19.4	
HSPB				IAML		22 17 28.9	
	comp=Z,26nm,0.4s						
HOPEN	Hopen	3.47	150	Pn	Pn	22 16 47.0	+0.4
HOPEN				Sn	Sn	22 17 27.3	0.0
HOPEN				Lg	Lg	22 17 45.1	
HOPEN	Hopen	3.47	150	*e*P	Pn	22 16 47.0	+0.4
HOPEN				*e*S	Sn	22 17 27.2	-0.1
HOPEN	Hopen	3.47	150	*e*P	Pn	22 16 47.3	+0.6
HOPEN				*e*S	Sn	22 17 27.5	+0.2
HOPEN				IAML		22 17 47.3	
	comp=Z,19nm,0.3s						
BJO1	Bjornoya	5.15	176	*e*P	Pn	22 17 09.5	-0.2
BJO1				*e*S	Sn	22 18 05.9	-2.6
BJO1	Bjornoya	5.15	176	*e*P	Pn	22 17 09.7	+0.1
BJO1				*e*S	Sn	22 18 06.1	-2.4
BJO1				IAML		22 18 13.8	
	comp=Z,11nm,0.8s						
BJO1				*e*		22 18 37.4	
ZFI	Zemlya Franca-	5.21	62	*e*P	Pn	22 17 10.9	+0.3
ZFI				*e*S	Sn	22 18 06.1	-4.1
	comp=Z,16nm,0.2s						
ZFI2	Zemlya Franca-	5.21	62	*e*P	Pn	22 17 10.8	+0.3
ZFI2				*e*S	Sn	22 18 06.4	-3.8
	comp=Z,21nm,0.3s						
OMEGA	Omega	5.23	63	*e*P	Pn	22 17 11.0	+0.2
OMEGA				*e*S	Sn	22 18 06.9	-3.7
	comp=Z,15nm,1.2s						
DAG	Danmarks Havn	7.84	268	*i* P	Pn	22 17 46.0	-0.5
DAG	Danmarks Havn	7.84	268	*e*P	Pn	22 17 46.4	-0.2
DAG				*e*S	Sn	22 19 08.3	-6.5
VADS	Vadso	9.98	156	P	Pn	22 18 17.6	+1.7
VADS				S	Sn	22 20 01.2	-6.2
ARA0	ARCESS Array S	10.33	164	Pn	Pn	22 18 21.2	+0.6
	baz=356,slow=12						
ARA0				Sn	Sn	22 20 06.6	-9.2
	baz=3.0,slow=18						
ARA0	ARCESS Array S	10.33	164	Pn	Pn	22 18 21.2	+0.6
	baz=356,slow=12						
ARCES	ARCESS Array B	10.33	164	P	Pn	22 18 21.1	+0.5
ARCES				S	Sn	22 20 07.4	-8.4

IDC 24 22:19:03.5±1.6**, 16°.93N×94°.97E, h0**km**, mb3.5**/4**, mbtmp3.5**/5**, ML3.9**/1**, MS3.4**/3**, Error ellipse: s-maj=41.0km s-min=25.2km az=45.0, Near south coast of Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	4.08	68	Pn	Pn	22 20 07.2	-0.1
	1.9nm,0.3s,baz=253,slow=15,SNR=5.3						
CMAR				Sn	Sn	22 20 56.4	+0.6
	1.4nm,0.3s,baz=252,slow=18,SNR=6.0						
	4.0nm,0.3s						
MKAR	Makanchi Array	31.58	343	P	P	22 25 28.7	+0.8
	0.3nm,0.7s,baz=154,slow=9.1,SNR=4.3						
	0.3nm,0.7s						
KAPI	Kappang	32.79	130	LR	LR	22 41 41.7	
	comp=Z,53nm,18.1s,baz=104,slow=41						
JNU	Nakatsue	36.10	57	LR	LR	22 40 36.8	
	comp=Z,38nm,20.0s,baz=288,slow=36						
ZALV	Zalesovo Beam	37.78	350	P	P	22 26 21.3	+0.1
	0.8nm,0.7s,baz=163,slow=10,SNR=3.7						
	0.8nm,0.7s						
WRA	Warramunga Arr	53.27	132	P	P	22 28 24.4	-0.1
	0.1nm,0.4s,baz=311,slow=7.4,SNR=5.4						
	0.1nm,0.4s						
TIXI	Tiksi	58.25	12	LR	LR	22 55 59.4	
	comp=Z,38nm,18.0s,baz=180,slow=38						
NOA	NORSAR Array B	72.33	329	P	P	22 30 30.3	-0.7
	0.6nm,0.7s,baz=85,slow=5.8,SNR=3.8						
	0.6nm,0.7s						

*SJA **24** 22:19:32.6±1.2, 27°.58S×69°.39W, h90km, ML3.7, MW3.7, Hypocentre not reviewed by the ISC*
*NEIC **24** 22:19:32.9±2.9, 27°.56S±0°.04×69°.60W±0°.04, h115km±7km, mb4.2/4, ML3.8(GUC), Error ellipse: s-maj=6.8km s-min=4.2km az=157.0*
*GUC **24** 22:19:33.8±0.4, 27°.54S×69°.57W, h115km±2km, ML3.7*
ISC 24 22:19:32.5±0.9**, 27°.57S**±0°.04×**69°.55W**±0°.07**, h118**km±7km**, n55, σ1ˢ.37**/72**, 3C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO03	Copiap	0.61	268		Pn	22 19 51.7	+0.6
GO03				Sn	Sn	22 20 05.2	+0.1
GO03	Copiap	0.61	268	*e*P	Pn	22 19 51.4	+0.4
GO03				*i* S	Sn	22 20 04.6	-0.4
GO03				IAML		22 20 05.8	
	comp=E,5µm,0.1s						
GO03	Copiap	0.61	268	*e*P		22 19 51.8	
GO03				*e*S		22 20 05.5	
GO03				IAML		22 20 05.9	
	comp=Z,3µm,0.1s						
AC06	Mina Casimiro	0.74	287		Pn	22 19 52.7	+0.6
AC06				Sn	Sn	22 20 06.8	-0.1
AC06	Mina Casimiro	0.74	287	*e*P	Pn	22 19 52.4	+0.3
AC06				*i* S	Sn	22 20 06.5	-0.3
AC06				IAML		22 20 08.2	
	comp=N,2µm,0.2s						
AC02	Maricunga	0.83	27	Pn	Pn	22 19 53.8	+0.4
AC02				Sn	Sn	22 20 09.0	-0.1
AC02	Maricunga	0.83	27	⇑*i*P	Pn	22 19 53.6	+0.3
AC02				*i* S	Sn	22 20 08.8	-0.2
AC02				IAML		22 20 10.9	
	comp=N,2µm,0.5s						
AC02	Maricunga	0.83	27	*e*P		22 19 53.8	
AC02				*e*S		22 20 08.9	
AC02				IAML		22 20 12.0	
	comp=Z,683nm,0.5s						
AC05	El Transito	1.41	207	Pn	Pn	22 20 00.0	+1.1
AC05				Sn	Sn	22 20 20.4	+1.4
AC05	El Transito	1.41	207	⇑*i*P	Pn	22 20 00.1	+1.1
AC05				*i* S	Sn	22 20 20.0	+1.0
AC05				IAML		22 20 21.9	
	comp=E,1µm,0.1s						
AC05	El Transito	1.41	207	*e*P		22 20 00.0	
AC05				*e*S		22 20 20.8	
AC05				IAML		22 20 22.1	
	comp=Z,912nm,0.3s						
AC04	Llanos de Chal	1.49	245	Pn	Pn	22 20 00.7	+1.0
AC04				Sn	Sn	22 20 21.8	+1.4
AC04	Llanos de Chal	1.49	245	*e*P	Pn	22 20 00.8	+1.1
AC04				*e*S	Sn	22 20 21.3	+1.0
AC04				IAML		22 20 24.2	
	comp=E,601nm,0.2s						
AC04	Llanos de Chal	1.49	245	*e*P		22 20 00.8	
AC04				*e*S		22 20 22.6	
AC01	Pan de Azucar	1.70	326	Pn	Pn	22 20 03.5	+1.2
AC01				Sn	Sn	22 20 25.5	+0.6
AC01	Pan de Azucar	1.70	326	*e*P	Pn	22 20 02.8	+0.5
AC01				*e*S	Sn	22 20 24.8	-0.1
AC01				IAML		22 20 27.9	
	comp=E,771nm,0.2s						
AC01	Pan de Azucar	1.70	326	*e*P		22 20 03.4	
AC01				*e*S		22 20 26.6	
AC01				IAML		22 20 27.8	
	comp=Z,340nm,0.6s						
LCO	Las Campanas	1.75	215		Pn	22 20 04.0	+0.8
LCO	Las Campanas	1.75	215	*e*P	Pn	22 20 03.9	+0.8
LCO				*e*S	Sn	22 20 27.9	+1.4
LCO	Las Campanas	1.75	215	*e*P		22 20 04.1	
LCO				*e*S		22 20 28.2	
GO02	Mina Guanaco	2.40	359	Pn	Pn	22 20 12.4	+1.1
GO02	Mina Guanaco	2.40	359	⇑*i*P	Pn	22 20 12.5	+1.2
GO02				*e*S	Sn	22 20 42.2	+1.2
GO02				IAML		22 20 48.6	
	comp=E,744nm,0.8s						
GO02	Mina Guanaco	2.40	359	*e*P		22 20 12.5	
GO02				*e*S		22 20 41.4	
GO02				*e*S		22 20 45.7	
GO02				IAML		22 20 52.6	
	comp=Z,277nm,0.4s						
CO01	Juntas del Tor	2.44	191		Pn	22 20 13.7	+1.9
CO01	Juntas del Tor	2.44	191	*e*P	Pn	22 20 13.8	+2.0
CO01				*i* S	Sn	22 20 43.8	+1.9
CO01				IAML		22 20 48.5	
	comp=E,264nm,0.8s						
CO01	Juntas del Tor	2.44	191	*e*P		22 20 13.9	
CO01				*e*S		22 20 39.7	
CO01				*e*S		22 20 45.0	
CO01				IAML		22 20 47.9	
	comp=Z,138nm,0.6s						
CO05	La Serena	2.77	212		Pn	22 20 15.9	+0.2
CO05	La Serena	2.77	212	*e*P	Pn	22 20 16.1	+0.4
CO05				*i* S	Sn	22 20 43.0	-6.0
GO04	Tololo Observa	2.81	203		Pn	22 20 16.9	+0.4
GO04	Tololo Observa	2.81	203	*e*P	Pn	22 20 17.0	+0.4
GO04				*e*S	Sn	22 20 52.4	+2.0
GO04	Tololo Observa	2.81	203	*e*P		22 20 17.2	
GO04				*e*S		22 20 50.2	
GO04				IAML		22 20 52.0	
	comp=Z,414nm,0.7s						
PB14	IPOC Station P	3.03	345	Pn	Pn	22 20 20.1	+0.5
PB14	IPOC Station P	3.03	345	*e*P	Pn	22 20 20.2	+0.7
PB14	IPOC Station P	3.03	345	*e*P		22 20 20.2	
PB14				*e*S		22 20 56.1	
PB14				IAML		22 20 59.7	
	comp=Z,150nm,0.6s						
DOCA	Reserva Natura	3.39	173	*e*P		22 20 25.7	
DOCA				*e*S		22 21 04.6	
DOCA				*e*S		22 21 05.0	
CO03	El Pedregal	3.40	197	*e*P		22 20 24.8	
CO03				*e*S		22 21 05.0	
CO03				IAML		22 21 06.7	
	comp=Z,126nm,0.3s						
CO03	El Pedregal	3.40	197		Pn	22 20 24.8	+0.6
CYA	Choya	3.43	105	*e*P		22 20 24.4	
CYA				*e*S		22 21 01.5	
CYA				IAML		22 21 02.3	
	comp=Z,78nm,0.3s						
CO06	Fray Jorge	3.59	210	Pn	Pn	22 20 25.9	-0.6
CO02	Combarbal	3.83	199		Pn	22 20 29.5	-0.4
CO02	Combarbal	3.83	199	*e*P		22 20 29.8	
CO02				*e*S		22 21 14.6	
CO02				IAML		22 21 19.6	
	comp=Z,127nm,0.7s						
ZON	Zonda	4.03	169		Pn	22 20 33.5	+1.0
PB10	IPOC Station P	4.14	347		Pn	22 20 33.3	-0.7
PB10	IPOC Station P	4.14	347	*e*P		22 20 33.6	
PB10				*e*S		22 21 19.9	
PB10				IAML		22 21 37.7	
	comp=Z,42nm,0.4s						
CFA	Coronel Fontan	4.18	164	*e*P		22 20 35.1	
CFA				*e*S		22 21 21.2	
RTLS	Leoncito	4.22	177	*e*P		22 20 36.5	
RTLS				*e*S		22 21 23.7	
RTLS				IAML		22 21 26.5	
	comp=Z,158nm,0.3s						
PB15	IPOC Station P	4.35	1		Pn	22 20 36.6	-0.3
PB15	IPOC Station P	4.35	1	*e*P		22 20 37.3	
PB15				*e*S		22 21 27.2	
PB15				IAML		22 21 29.6	
	comp=Z,264nm,0.3s						
PB06	IPOC Station P	4.85	360	*e*P		22 20 43.2	
PB06				*e*S		22 21 36.6	
PB06				IAML		22 22 02.0	
	comp=Z,41nm,0.5s						
LVC	Limon Verde	4.98	7		Pn	22 20 44.8	-0.7
LVC	Limon Verde	4.98	7	*e*P		22 20 45.7	
LVC				*e*S		22 21 41.3	
LVC				*e*S		22 21 41.4	
LVC				*e*S		22 21 43.2	
LVC				IAML		22 22 09.5	
	comp=Z,50nm,0.5s						
ASAL	Salagasta	5.04	173	*e*P		22 20 47.2	
ASAL				*e*S		22 21 39.7	
ASAL				IAML		22 21 44.9	
	comp=Z,20nm,0.4s						
VA06	Catapilco	5.20	196		Pn	22 20 47.6	-0.5
VA03	San Esteban	5.24	189		Pn	22 20 48.9	+0.1
VA03	San Esteban	5.24	189	*e*P		22 20 49.3	
VA03				IAML		22 21 50.4	
	comp=Z,60nm,0.4s						
PB04	IPOC Station P	5.25	354		Pn	22 20 47.4	-1.6
PB04	IPOC Station P	5.25	354	*e*P		22 20 39.0	
PB04				IAML		22 22 17.4	
	comp=Z,45nm,0.6s						
PB03	IPOC Station P	5.50	358		Pn	22 20 51.5	-1.0
ROC1	El Roble	5.53	193	Pn	Pn	22 20 53.1	+0.3
PB09	IPOC Station P	5.76	3	Pn	Pn	22 20 55.4	-0.5
MT02	Curacav	5.83	193		Pn	22 20 54.9	-1.7
PB07	IPOC Station P	5.83	357		Pn	22 20 55.2	-1.7
MT08	Bocatoma Ro	5.87	184		Pn	22 20 56.6	-0.7
MT05	Renca	5.89	190	Pn	Pn	22 20 56.7	-0.8
MT03	Universidad Ad	5.96	188	Pn	Pn	22 20 60.0	+1.5
MT03					Sn	22 22 04.3	-1.2
MT13	San Alfonso	6.18	186		Pn	22 21 02.1	+0.6
PB02	IPOC Station P	6.24	357	Pn	Pn	22 21 01.5	-0.8
LMEL	Las Melosas	6.28	185		Pn	22 21 00.6	-2.2
MT09	Talagante	6.30	191	Pn	Pn	22 21 00.8	-2.4
MT01	Popeta	6.44	193		Pn	22 21 03.0	-1.8
PB01	IPOC Station P	6.50	1		Pn	22 21 04.5	-1.4
GO01	Chusmiza	7.88	2	Pn	Pn	22 21 24.1	-0.7
PB16	IPOC Station P	9.20	0	Pn	Pn	22 21 42.3	-0.4
TRQA	Tornquist	12.23	151		Pn	22 22 21.2	-1.6
GO08	Villa O'Higgin	20.99	186	P	Pn	22 24 08.9	-1.1
MG05	Puerto Natales	24.18	184	P	P	22 24 35.5	-2.2
MG05				IAmb	IAmb	22 24 44.0	
	comp=Z,9.3nm,0.9s						
MG03	Isla Dawson	26.26	181	P	P	22 24 59.5	+3.0
URIC	Uribia, Colomb	39.11	356	P	P	22 26 49.8	+1.3
URIC				IAmb	IAmb	22 26 52.0	
	comp=Z,4.4nm,0.9s						

IDC 24 22:34:45.3±1.2**, 0°.73N×122°.21E, h0**km**, mb3.5**/4**, mbtmp3.5**/4**, MS3.2**/2**, Error ellipse: s-maj=186.4km s-min=21.8km az=62.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	9.20	100	LR	LR	22 40 52.1	
	comp=Z,37nm,19.3s,baz=264,slow=40						
WRA	Warramunga Arr	23.74	151	P	P	22 39 59.3	-0.1
	0.9nm,0.6s,baz=327,slow=10,SNR=26						
	0.9nm,0.6s						
ASAR	Alice Springs	26.78	156	P	P	22 40 27.3	+0.1
	0.3nm,0.6s,baz=345,slow=15,SNR=7.3						
	0.3nm,0.6s						
MKAR	Makanchi Array	57.58	329	P	P	22 44 37.5	+0.5
	0.2nm,0.4s,baz=131,slow=8.7,SNR=4.7						
	0.2nm,0.4s						
ZALV	Zalesovo Beam	61.33	336	P	P	22 45 02.0	-0.7
	0.3nm,0.3s,baz=142,slow=7.3,SNR=3.7						
	0.3nm,0.3s						
AKTO	Aktyubinsk	73.25	323	LR	LR	23 20 34.5	
	comp=Z,50nm,19.7s,baz=230,slow=38						

IDC 24 22:53:52.9±4.8**, 30°.17S×178°.38W, h0**km**, mb3.2**/2**, mbtmp3.2**/2**, Error ellipse: s-maj=261.0km s-min=73.8km az=167.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.79	267	P	P	23 01 53.1	+0.4
	0.2nm,0.7s,baz=110,slow=7.3,SNR=1.7						
	0.2nm,0.7s						
WRA	Warramunga Arr	43.76	272	P	P	23 01 59.9	-0.6
	0.2nm,0.4s,baz=113,slow=8.1,SNR=6.9						
	0.2nm,0.4s						
FINES	FINESS Array B	144.81	340	PKP	PKPbc	23 13 30.6	+0.4
	0.6nm,0.6s,baz=46,slow=4.0,SNR=4.1						

*IDC **24** 22:57:41.5±2.1, 19°.30S×167°.92E, h0km, mb3.7/4, mbtmp3.7/5, ML3.7/1, MS3.2/4, Error ellipse: s-maj=65.2km s-min=30.0km az=128.0*
*NOU **24** 22:57:41.6, 19°.20S×167°.73E, h0km, MLv4.1/10, Vanuatu Islands Region*
ISC 24 22:57:42.9±1.1**, 19°.27S**±0°.07×**167°.8E**±0°.1**, h10**km**, n12, σ1ˢ.03**/12**, mb3.9**/4**, MS3.4**/3**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.57	12	P	Pn	22 58 09.7	-1.1
LIFNC	LIFOU	1.61	200	P	Pn	22 58 10.1	-1.2
YATNC	Mamie plateau,	2.92	198	P	Pn	22 58 28.9	-0.5
DZM	Mont Dzumac	3.08	205	Pn	Pn	22 58 31.6	-0.2
	9.7nm,0.3s,baz=351,slow=5.2,SNR=367						
DZM				LR	LR	22 59 05.0	
	comp=Z,122nm,20.4s,baz=34,slow=27						
DZM				Sn	Sn	22 59 06.8	-1.9
	21nm,0.3s,baz=136,slow=23,SNR=20						
	24nm,0.3s						
NOUC	Port Laguerre	3.17	207	P	Pn	22 58 33.3	+0.5
OUENC	Ouen Island, N	3.27	196	P	Pn	22 58 34.7	+0.5
KOUNC	Koumac, New Ca	3.58	248	P	Pn	22 58 37.8	-0.7
CTA	Charters Tower	20.34	264	P	Pn	23 02 32.7	+11
	13nm,1.0s,baz=98,slow=11,SNR=5.4						
CTA				LR	LR	23 08 39.1	
	comp=Z,64nm,19.0s,baz=88,slow=32						
WRA	Warramunga Arr	31.54	263	P	P	23 04 05.8	+0.2
	0.4nm,0.8s,baz=89,slow=8.0,SNR=2.7						
WRA				LR	LR	23 15 51.5	
	comp=Z,75nm,18.8s,baz=228,slow=34						
	0.4nm,0.8s						
ASAR	Alice Springs	31.84	256	P	P	23 04 08.9	+0.7
	0.7nm,0.4s,baz=83,slow=8.2,SNR=12						
ASAR				LR	LR	23 15 58.0	
	comp=Z,84nm,18.8s,baz=119,slow=34						
	0.7nm,0.4s						
SONM	Songino Array	86.45	324	P	P	23 10 27.1	+1.2
	0.6nm,0.8s,baz=126,slow=4.4,SNR=4.1						
	0.6nm,0.8s						
ILAR	Eielson Array	90.65	18	P	P	23 10 45.2	0.0
	0.4nm,0.6s,baz=239,slow=4.8,SNR=6.8						
	0.4nm,0.6s						

*UCR **24** 22:58:17.6±1.6, 12°.63N×84°.19W, h5km, MW4.3*
*INET **24** 22:58:18.5±2.0, 12°.55N×84°.10W, h6km±7km, MW4.0*
ISC 24 22:58:16.4±1.7**, 12°.62N**±0°.04×**84°.10W**±0°.04**, h4**km±12km**, n45, σ1ˢ.00**/68**, 1D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESPN	Las Esperanzas	0.47	204	eP	Pg	22 58 26.0	+0.7
ESPN				eS	Sg	22 58 32.1	+0.7
ACON	Acoyapa	1.23	238	eP	Pn	22 58 39.1	-1.4
ACON				eS	Sb	22 58 54.9	-1.6
ACON	Acoyapa	1.23	238	eP	Pn	22 58 38.9	-1.6
BOAB	BOACO BROADBAN	1.54	264	eP	Pn	22 58 44.4	-0.2
BOAB				eS	Sn	22 59 04.4	-0.6
MATN	Matagalpa	1.80	280	eP	Pn	22 58 48.4	0.0
MATN				eS	Sn	22 59 12.2	+0.4
CONN	Concepcion	1.82	235	eP	Pn	22 58 48.9	+0.3
CONN				eS	Sn	22 59 12.0	-0.1
VERA	Finca Concepci	1.91	203	eP	Pn	22 58 50.0	+0.3
VERA				eS	Sn	22 59 15.8	+1.5
COVE	Coope Vega, Sa	1.91	189	eP	Pn	22 58 50.2	+0.4
COVE				eS	Sn	22 59 15.3	+1.0
CANAL	Canalete	2.01	208	i P	Pn	22 58 51.4	+0.3
VMAR	Armenia, Volca	2.05	209	eP	Pn	22 58 52.1	+0.3
VMAR				eP	Pb	22 58 52.2	-2.1
VMAR				i S	Sn	22 59 19.3	+1.5
PTEN	Parque Tenorio	2.08	205	⇓iP	Pn	22 58 53.1	+0.9
WILN	Americas 2	2.09	258	eP	Pn	22 58 52.9	+0.7
WILN				eS	Sn	22 59 19.3	+0.7
MGAN	Managua	2.15	258	eP	Pn	22 58 53.7	+0.7
MGAN				eP	Pb	22 58 54.3	-1.6
ITAL	Pital	2.16	184	eP	Pn	22 58 54.4	+1.2
VORI	VORI	2.17	214	eP	Pn	22 58 54.1	+0.6
RCON	San Juan de Ri	2.18	293	eP	Pn	22 58 54.4	+0.8
RCON				eS	Sn	22 59 22.1	+1.0
VACR	Volcan Arenal	2.21	195	eP	Pn	22 58 55.7	+1.8
CUI	Cuipilapa	2.21	208	eP	Pn	22 58 54.8	+0.9
COLC	Colonia	2.22	209	eP	Pn	22 58 54.6	+0.5
ARE1	Arenal 1	2.23	196	eP	Pn	22 58 54.7	+0.5
ARE1	Arenal 1	2.23	196	eP	Pn	22 58 55.8	+1.5
SOCE	Pocosol	2.28	193	eP	Pn	22 58 55.8	+0.9
CPMI	Catarata Coope	2.34	187	eP	Pn	22 58 57.5	+1.6
MOMN	Momotombo	2.39	265	eP	Pn	22 58 56.6	+0.2
MOMN				eS	Sn	22 59 25.4	-0.8
HZTE	Horizontes, Gu	2.39	218	eP	Pn	22 58 57.3	+0.9
JTS	Las Juntas de	2.46	200	eP	Pn	22 58 56.8	-0.6
JTS				eS	Sn	22 59 29.9	+1.9
JTS	Las Juntas de	2.46	200	eP	Pn	22 58 56.8	-0.6
COPN	Copaltepe	2.47	260	eP	Pn	22 58 58.0	+0.6
CNGN	Cerro Negro	2.54	268	eP	Pn	22 58 59.6	+1.2
CNGN				eS	Sn	22 59 30.7	+0.8
CNGN	Cerro Negro	2.54	268	eP	Pb	22 59 01.1	-1.5
CNGN				eS	Sb	22 59 33.9	-0.3
RVLA	Villa Bonita	2.55	168	eP	Pn	22 58 59.2	+0.6
LCOCO	El Coco	2.58	168	eP	Pn	22 59 01.2	+2.2
LCOCO				eS	Sb	22 59 34.8	-0.6
BATAN	Batan	2.61	164	eP	Pn	22 59 01.1	+1.8
ORTG	Ortega, Santa	2.61	211	eP	Pn	22 58 59.2	-0.3
HAYA	Volcan Irazu	2.64	174	eP	Pn	22 58 59.6	-0.5
PRVC	Isla de Provid	2.77	74	eP	Pn	22 59 01.9	+0.3
PRVC				eS	Sn	22 59 34.7	-1.0
PRVC				i		22 59 52.9	
	comp=Z,118nm,0.4s						
CRIN	San Cristobal	2.88	272	eP	Pn	22 59 02.8	-0.4
CRIN				eS	Sn	22 59 38.7	+0.5
CRIN	San Cristobal	2.88	272	eP	Pb	22 59 07.3	-1.1
CRIN				eS	Sb	22 59 44.8	+0.8
ABE2	San Pablo	2.90	179	eP	Pn	22 59 03.5	-0.1
LAFE	Finca La Fe, P	2.91	196	eP	Pn	22 59 03.6	+0.1
CDM	Cerro de Muert	3.07	174	eP	Pn	22 59 05.8	-0.3
CDM				eS	Sn	22 59 43.8	+0.2
CDM	Cerro de Muert	3.07	174	eP	Pn	22 59 05.9	-0.2
BUS1	Rivas	3.07	173	eP	Pn	22 59 05.8	-0.3
TGUH	Tegucigalpa,Un	3.40	295	eP	Pn	22 59 11.0	+0.6
TGUH				eS	Sb	23 00 01.1	+2.0
TGUH				i		23 00 13.7	
	comp=Z,192nm,0.4s						
BRU2	Volcan	4.05	160	eP	Pn	22 59 19.8	+0.4
BRU2				eS	Sn	23 00 06.7	-0.6
BRU2				i		23 00 13.5	
	comp=Z,19nm,0.6s						

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*ISK **24** 22:58:36.0, 38°.34N×44°.18E, h1km, ML2.5/7*
*DDA **24** 22:58:38.6±0.0, 38°.43N×44°.11E, h7km±7km, ML2.0*
ISC 24 22:58:38.1±1.3**, 38°.41N**±0°.03×**44°.16E**±0°.05**, h9**km±10km**,**
n14, σ0ˢ75/23**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.28	333	P	Pg	22 58 43.2	-0.7
OZAP				S	Sg	22 58 49.0	+1.3
OZAP				i AML	AML	22 58 49.0	
	comp=N,272nm,0.4s						
OZAP				i AML	AML	22 58 51.0	
	comp=E,252nm,0.2s						
TVAN	Van	0.60	282	P	Pg	22 58 49.0	-0.8
TVAN				S	Sn	22 59 02.3	-0.7
TVAN				i AML	AML	22 59 04.0	
	comp=E,128nm,0.5s						
TVAN				i AML	AML	22 59 07.0	
	comp=N,99nm,0.6s						
VANB	Van	0.63	287	Pg	Pg	22 58 49.3	-1.0
VANB				Sg	Sg	22 58 58.9	+0.3
VMUR	Van-Muradiye	0.74	322	P	Pg	22 58 52.1	-0.3
VMUR				S	Sn	22 59 05.6	-0.8
VMUR				i AML	AML	22 59 07.0	
	comp=N,145nm,0.4s						
VMUR				i AML	AML	22 59 08.0	
	comp=E,129nm,0.4s						
YOVA	Hakkari_Yksek	0.83	173	P	Pb	22 58 54.4	-0.3
YOVA				S	Sn	22 59 09.0	+0.4
YOVA				i AML	AML	22 59 13.0	
	comp=N,43nm,0.8s						
YOVA				i AML	AML	22 59 14.0	
	comp=E,36nm,0.4s						
GEVA	Gevas	0.87	264	P	Pg	22 58 53.6	-1.2
GEVA				S	Sb	22 59 08.0	+0.7
GEVA				i AML	AML	22 59 11.0	
	comp=N,102nm,0.3s						
GEVA				i AML	AML	22 59 12.0	
	comp=E,89nm,0.3s						
HAKT	HAKKARI	0.92	203	P	Pg	22 58 55.4	-0.4
HAKT				S	Sn	22 59 10.8	-0.1
HAKT				i AML	AML	22 59 13.0	
	comp=N,72nm,0.4s						
HAKT				i AML	AML	22 59 16.0	
	comp=E,83nm,0.4s						
AKDM	Akdamar-Van	0.93	265	Pg	Pg	22 58 55.1	-0.9
AKDM				Sg	Sb	22 59 09.3	+0.3
PERV	Siirt/Pervari-	1.36	251	P	Pb	22 59 03.9	+0.2
MLAZ	Malazgirt-MUS	1.46	301	Pn	Pn	22 59 05.1	+0.4
MLAZ				Sn	Sg	22 59 26.2	+1.3
AGRB	Hanur-Agry	1.48	322	Pn	Pn	22 59 05.4	+0.3
TASB	TASBURUN-IGDIR	1.57	2	Pn	Pb	22 59 07.1	-0.3
GURO	Guroymak-BITLI	1.68	276	Pn	Pn	22 59 07.9	+0.2
GNI	Garni	1.80	14	Pn	Pb	22 59 10.9	-0.3

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*MOS **24** 23:37:29.3±0.8, 48°.90N×156°.54E, h32km, mb4.3/1, Error ellipse: s-maj=31.8km s-min=4.8km az=79.5*
*KRSC **24** 23:37:33.6±2.0, 49°.39N×157°.03E, h15km±34km, Ml4.3*
*IDC **24** 23:37:36.9±3.5, 49°.42N×155°.86E, h89km±33km, mb3.3/8, mbtmp3.7/10, MS2.8/1, Error ellipse: s-maj=35.3km s-min=15.9km az=140.0*
ISC 24 23:37:31.4±0.8**, 49°.10N**±0°.08×**156°.45E**±0°.10**, h34**km**, n59,**
σ2ˢ03/69**, mb3.6**/8**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.60	352	ePN	Pb	23 37 58.0	-2.3
SKR				pmax	pmax		
	comp=Z,25nm,0.3s						
SKR	Severo-Kuril's	1.60	352	eP	Pb	23 37 57.8	-2.4
SKR				eS	Sn	23 38 15.3	-1.3
PAU	Pauzhetka	2.38	5	PN	Pb	23 38 10.9	-2.6
PAU	Pauzhetka	2.38	5	eP	Pb	23 38 10.9	-2.6
PAU				eS	Sn	23 38 36.6	+0.8
KDTR	Khodutka, Kamc	2.90	20	PN	Pn	23 38 16.6	+1.5
KDTR	Khodutka, Kamc	2.90	20	eP	Pn	23 38 16.6	+1.5
KDTR				eS	Sn	23 38 47.8	-1.0
MTVR	Mutnovka	3.56	17	PN	Pn	23 38 26.3	+2.0
MTVR	Mutnovka	3.56	17	eP	Pn	23 38 26.3	+2.0
MTVR				eS	Sn	23 39 04.5	-0.7
RUS	Russkaya	3.58	21	PN	Pn	23 38 25.9	+1.5
RUS	Russkaya	3.58	21	eP	Pn	23 38 25.9	+1.5
GRL	Gorelyy	3.60	16	PN	Pn	23 38 27.3	+2.4
GRL	Gorelyy	3.60	16	eP	Pn	23 38 27.3	+2.4
GRL				eS	Sn	23 39 06.2	-0.1
APC	Apacha	3.85	6	PN	Pn	23 38 30.6	+2.4
APC	Apacha	3.85	6	eP	Pn	23 38 30.6	+2.4
KRMR	Karymshinskiy	3.88	15	PN	Pn	23 38 31.6	+3.0
KRMR	Karymshinskiy	3.88	15	eP	Pn	23 38 31.6	+3.0
KRMR				eS	Sn	23 39 14.6	+1.7
PETK	Petropavlovsk-	4.09	11	P	Pn	23 38 33.3	+1.9
	comp=Z,20nm,0.5s,baz=184,slow=16,SNR=78						
PETK				S	Sn	23 39 19.5	+1.4
	comp=Z,5.3nm,0.5s,baz=108,slow=16,SNR=0.9						
PET	Petropavlovsk	4.16	19	ePN	Pn	23 38 34.4	+2.0
PET				pmax	pmax		
	comp=Z,53nm,0.7s						
PET	Petropavlovsk	4.16	19	eP	Pn	23 38 34.7	+2.2
PET				eS	Sn	23 39 19.8	-0.1
DALK	Dalny	4.19	19	PN	Pn	23 38 34.5	+1.7
DALK	Dalny	4.19	19	eP	Pn	23 38 34.5	+1.7
DALK				eS	Sn	23 39 19.8	-0.7
UGLR	Uglovaya	4.37	19	PN	Pn	23 38 38.0	+2.6
UGLR	Uglovaya	4.37	19	eP	Pn	23 38 38.0	+2.6
UGLR				eS	Sn	23 39 26.1	+0.9
AVH	Avacha	4.41	18	PN	Pn	23 38 39.1	+3.2
AVH	Avacha	4.41	18	eP	Pn	23 38 39.1	+3.2
AVH				eS	Sn	23 39 26.3	+0.3
KOK	Koryaka	4.41	17	PN	Pn	23 38 39.1	+3.1
KOK	Koryaka	4.41	17	eP	Pn	23 38 39.1	+3.1
KOK				eS	Sn	23 39 27.3	+1.1
SMAR	Somma	4.42	19	PN	Pn	23 38 38.5	+2.3
SMAR	Somma	4.42	19	eP	Pn	23 38 38.5	+2.3
SMAR				eS	Sn	23 39 26.8	+0.2
KRER	Koryakskii	4.45	18	PN	Pn	23 38 39.3	+2.8
KRER	Koryakskii	4.45	18	eP	Pn	23 38 39.3	+2.8
KRER				eS	Sn	23 39 27.0	-0.2
SDLR	Sedlovina	4.45	19	PN	Pn	23 38 38.2	+1.7
SDLR	Sedlovina	4.45	19	eP	Pn	23 38 38.2	+1.7
SDLR				eS	Sn	23 39 25.2	-1.9
NLC	Nalytchevo	4.46	23	eS	Sn	23 39 25.0	-2.2
KRX	Arik	4.48	17	PN	Pn	23 38 39.9	+2.9
KRX	Arik	4.48	17	eP	Pn	23 38 39.9	+2.9
KRX				eS	Sn	23 39 29.6	+1.7
SPN	Mys Shipunski	4.59	28	PN	Pn	23 38 39.5	+1.2
SPN	Mys Shipunski	4.59	28	eP	Pn	23 38 39.5	+1.2
SPN				eS	Sn	23 39 29.1	-1.2
GNL	Ganaly	4.69	11	PN	Pn	23 38 42.5	+2.6
GNL	Ganaly	4.69	11	eP	Pn	23 38 42.5	+2.6
TUMD	Tumrok D	6.57	20	eP	Pn	23 39 09.0	+3.5
TUMD				eS	Sn	23 40 17.5	-1.8
TUMR	Tumrok	6.59	19	PN	Pn	23 39 09.0	+3.1
TUMR	Tumrok	6.59	19	eP	Pn	23 39 10.3	+4.4
KLR	Kul'dur	16.14	280	P	Pn	23 41 16.2	+0.7
	comp=Z,0.7nm,0.4s,baz=88,slow=9.7,SNR=4.4						
MJAR	Matsushiro Arr	18.29	233	P	P	23 41 42.2	0.0
	comp=Z,1.7nm,0.7s,baz=25,slow=11,SNR=6.5						
KSRS	Korea Array	23.66	251	P	P	23 42 38.6	-1.0
	comp=Z,1.9nm,0.8s,baz=49,slow=9.7,SNR=5.6						
KSRS				LR	LR	23 50 49.1	
	comp=Z,22nm,19.9s,baz=15,slow=34						
	comp=Z,1.9nm,0.8s						
H11N2	WAKE ISLAND Hy	30.48	160	T	T	00 16 41.7	
	baz=346,slow=76,SNR=7.7						
H11N1	WAKE ISLAND Hy	30.50	160	T	T	00 16 43.7	
	baz=346,slow=76,SNR=7.0						
H11N3	WAKE ISLAND Hy	30.50	160	T	T	00 16 41.5	
	baz=346,slow=76,SNR=2.5						
H11S1	WAKE ISLAND Hy	31.62	161	T	T	00 18 04.8	
	baz=347,slow=76,SNR=48						
H11S3	WAKE ISLAND Hy	31.64	161	T	T	00 18 09.5	
	baz=347,slow=76,SNR=74						
H11S2	WAKE ISLAND Hy	31.64	161	T	T	00 18 10.6	
	baz=347,slow=76,SNR=54						
ILAR	Eielson Array	33.30	41	P	P	23 44 05.4	0.0
	comp=Z,0.4nm,0.9s,baz=248,slow=6.7,SNR=5.4						
	comp=Z,0.4nm,0.9s						
YKA	Yellowknife Ar	47.69	39	P	P	23 46 04.4	+0.4
	comp=Z,0.4nm,0.6s,baz=295,slow=7.3,SNR=5.3						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	47.87	297	P	P	23 46 00.4	-5.3
	comp=Z,0.4nm,0.7s,baz=58,slow=7.4,SNR=6.5						
	comp=Z,0.4nm,0.7s						
CMAR	Chiang Mai Arr	55.09	258	P	P	23 46 59.0	-1.0
	comp=Z,1.1nm,0.3s,baz=20,slow=6.9,SNR=4.7						
	comp=Z,1.1nm,0.3s						
WRA	Warramunga Arr	71.50	202	P	P	23 48 48.2	-0.3
	comp=Z,0.9nm,0.9s,baz=17,slow=6.2,SNR=4.6						
	comp=Z,0.9nm,0.9s						
TXAR	Lajitas Array	74.40	63	P	P	23 49 06.5	+0.6
	comp=Z,0.4nm,0.7s,baz=296,slow=4.5,SNR=4.0						
	comp=Z,0.4nm,0.7s						
ASAR	Alice Springs	75.19	201	P	P	23 49 10.6	+0.4
	comp=Z,0.4nm,0.5s,baz=15,slow=5.3,SNR=5.6						
	comp=Z,0.4nm,0.5s						

SOME 24 23:46:06.0, 42°.30N×81°.02E, h15km**, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	1.43	307	eP	Pn	23 46 28.1	-3.4
	1.7nm,0.5s						
SHLS				eS	Sn	23 46 44.3	-5.9
	5.6nm,0.2s						
UZB	Uzynbulak	1.70	301	eP	Pb	23 46 37.5	+0.5
	3.3nm,0.1s						
UZB				eS	Sg	23 47 00.1	-0.6
	3.1nm,0.1s						
SATY	Saty	2.07	292	ePg	Pb	23 46 43.9	+0.6
	0.9nm,0.5s						
SATY				eLg	Lg	23 47 11.3	
	4.2nm,0.3s						
KPKS	Kokpek	2.07	305	ePg	Pb	23 46 43.6	+0.3
	2.6nm,0.3s						
KPKS				eLg	Lg	23 47 10.8	
	5.1nm,0.2s						
KOTS	Kotyrbulak	3.02	289	ePg	Pb	23 47 01.1	+1.5
	1.3nm,0.4s						
KOTS				eLg	Lg	23 47 40.6	
	5.6nm,0.5s						
MDOK	Medeo	3.05	288	ePg	Pb	23 47 01.3	+1.2
	0.4nm,0.7s						
MDOK				eLg	Lg	23 47 41.0	
	2.2nm,0.6s						

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*BJI **24** 23:49:44.1±0.0, 57°.09N×157°.45W, h5km, mb4.5/33, mB5.0/16, Ms4.9/18, Ms7 4.6/18*
*NEIC **24** 23:49:48.2, 57°.20N×157°.48W, h7km*
*NEIC **24** 23:49:48.7±1.6, 57°.23N±0°.04×157°.58W±0°.08, h7km±3km, Error ellipse: s-maj=7.2km s-min=4.9km az=124.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.57; $M_{\theta\theta}$-0.85; $M_{\phi\phi}$0.28; $M_{r\theta}$0.33; $M_{\theta\phi}$0.02; $M_{\phi r}$0.86; Fault plane solution: $M_0$1.19000×10^{16} NP1:ϕ_s51.33000°, δ71.48000°, λ53.85000°. NP2:ϕ_s297.84000°, δ40.03000°, λ150.41000°. Principal axes: T 1.3340, Plg50.0000°, Azm281.0000°; N -0.3730, Plg34.0000°, Azm64.0000°; P -0.9610, Plg18.0000°, Azm167.0000°;*
*NEIC **24** 23:49:48.1, 57°.19N×157°.48W, h12km*
*AEIC **24** 23:49:48.2±1.8, 57°.20N±0°.04×157°.48W±0°.08, h7km±3km, ML4.5, mb4.9/377(NEIC), ML4.7/40(NEIC), Mwr4.7/46(NEIC), Mww4.8/35(NEIC), Error ellipse: s-maj=7.2km s-min=4.9km az=127.0*
*ANF **24** 23:49:48.1±0.5, 57°.24N×157°.64W, h0km±3km, ML4.9/32, Error ellipse: s-maj=3.1km s-min=1.9km az=113.0*
*NEIC **24** 23:49:48.1, 56°.89N×157°.11W, h12km, Moment Tensor Solution. Duration: 1ˢ3 Moment tensor: Scale 10^{16}Nm; M_{rr}1.60; $M_{\theta\theta}$-1.58; $M_{\phi\phi}$-0.02; $M_{r\theta}$1.18; $M_{\theta\phi}$-0.61; $M_{\phi r}$0.90; Fault plane solution: $M_0$2.25000×10^{16} NP1:ϕ_s58.67000°, δ65.89000°, λ78.77000°. NP2:ϕ_s264.60000°, δ26.46000°, λ113.53000°. Principal axes: T 2.2051, Plg67.0000°, Azm308.0000°; N 0.0987, Plg10.0000°, Azm63.0000°; P -2.3038, Plg20.0000°, Azm157.0000°;*
*MOS **24** 23:49:51.6±0.8, 57°.34N×157°.45W, h41km, mb5.0/64, MS4.4/4 Error ellipse: s-maj=8.4km s-min=5.4km az=94.3*
*GCMT **24** 23:49:51.2±0.3, 57°.31N±0°.02×157°.37W±0°.05, h12km, MW4.8/93, Moment Tensor Solution. s29,c32; s93,c138; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.98±.06; $M_{\theta\theta}$-1.90±.05; $M_{\phi\phi}$-0.07±.06; $M_{r\theta}$0.04±.23; $M_{\theta\phi}$-0.90±.06; $M_{\phi r}$-0.91±.28; Best double couple: $M_0$2.32300×10^{16} NP1:ϕ_s227.00000°, δ53.00000°, λ62.00000°. NP2: ϕ_s89.00000°, δ45.00000°, λ122.00000°. Principal axes: T 2.3540, Plg67.0000°, Azm77.0000°; N -0.0610, Plg22.0000°, Azm244.0000°; P -2.2910, Plg4.0000°, Azm336.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **24** 23:49:54.2±1.6, 57°.38N×157°.53W, h46km±15km, mb4.1/27, mbtmp4.3/31, ML3.9/4, MS4.0/64 Error ellipse: s-maj=16.0km s-min=9.7km az=7.0*
ISC 24 23:49:49.5±0.9**, 57°.21N**±0°.03×**157°.57W**±0°.03**, h16**km±5km**,**
n932, σ1ˢ08/917**, mb4.8**/263**, MS4.1**/76**, 13C-2D, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
R16K	Pilot Point	0.36	360	P	Pg	23 49 55.9	-1.0
	baz=173,SNR=761						
R16K				S	Sb	23 50 01.7	-1.1
	baz=173						
R17K	Ugashik Creek	0.77	56	P	Pg	23 50 01.6	-3.0
	baz=234						
CHGN	Chignik	1.02	207	Pg	Pg	23 50 06.8	-2.5
CHGN				Sg	Sg	23 50 21.5	-1.2
CHGN				IAML		23 50 23.2	
	comp=N,20μm,0.5s						
CHGN				IAML		23 50 28.4	
	comp=E,22μm,0.6s						
CHGN	Chignik	1.02	207	P	Pg	23 50 06.7	-2.7
	baz=29,SNR=556						
CHGN				S	Sg	23 50 21.2	-1.5
	baz=29						
Q17K	Contact Creek	1.39	40	P	Pn	23 50 12.6	-1.7
	baz=220,SNR=1000						
Q17K				S	Sb	23 50 31.1	-1.6
	baz=220						
Q16K	King Salmon	1.55	18	P	Pn	23 50 15.6	-0.8
	baz=197,SNR=591						
Q16K				S	Sb	23 50 36.4	-0.7
	baz=197						
P16K	Nushagak River	1.84	353	P	Pn	23 50 20.3	0.0
	baz=172,SNR=377						
Q18K	Katmai Hardscr	1.99	42	P	Pn	23 50 21.5	-1.0
	baz=223,SNR=429						
Q18K				S	Sb	23 50 48.2	-1.6
	baz=223						
P17K	Kvichak River	2.08	16	P	Pn	23 50 22.8	-0.9
	baz=196,SNR=325						
OHAK	Old Harbor	2.33	88	Pn	Pn	23 50 27.0	-0.1
OHAK				Sn	Sn	23 50 56.6	+1.2
OHAK				IAML		23 51 05.0	
	comp=E,3μm,1.3s						
OHAK	Old Harbor	2.33	88	P	Pn	23 50 27.3	+0.2
OHAK	Old Harbor	2.33	88	P	Pn	23 50 27.0	-0.1
	baz=271,SNR=148						
OHAK				S	Sb	23 50 57.6	-2.0
	baz=271						
O16K	Kokwok River B	2.40	354	P	Pn	23 50 27.4	-0.7
	baz=172						
SDPT	Sand Point	2.47	222		Pn	23 50 29.4	+0.3
SDPT	Sand Point	2.47	222	P	Pn	23 50 30.0	+0.9
SDPT	Sand Point	2.47	222	P	Pn	23 50 29.2	+0.1
	baz=41						
SDPT				S	Sn	23 51 01.5	+2.6
	baz=41						
P18K	Big Mountain,	2.51	29	Pn	Pn	23 50 28.5	-1.2
P18K				Sn	Sn	23 51 01.4	+1.5
P18K	Big Mountain,	2.51	29	P	Pn	23 50 28.7	-1.0
	baz=209,SNR=230						
O17K	Koliganek Bris	2.58	5	P	Pn	23 50 29.8	-0.8
	baz=185,SNR=296						
Q19K	Cape Douglas,	2.71	49	Pn	Pn	23 50 31.7	-0.6
Q19K				IAML		23 51 35.2	
	comp=N,4μm,1.1s						
Q19K	Cape Douglas,	2.71	49	P	Pn	23 50 31.7	-0.6
	baz=231,SNR=41						
KDAK	Kodiak Island	2.75	76	P	Pn	23 50 33.0	0.0
	comp=N,64nm,0.3s,baz=214,slow=3.8,SNR=344						
KDAK				S	Sn	23 51 07.8	+1.9
	comp=N,744nm,1.0s,baz=90,slow=18,SNR=7.3						
KDAK				LR	LR	23 51 39.7	
	comp=N,695nm,18.6s,baz=254,slow=39						
	comp=N,391nm,0.6s						
KDAK	Kodiak Island	2.75	76	Pn	Pn	23 50 32.9	-0.1
KDAK	Kodiak Island	2.75	76	P	Pn	23 50 33.0	0.0
	baz=260						
S12K	Black Hills	2.91	241	P	Pn	23 50 35.4	+0.2
	baz=58,SNR=31						
S12K				Sb	Sb	23 51 18.8	+2.4
	baz=58						
O18K	Koktuh Hills	2.92	24		Pn	23 50 34.8	-0.6
O18K				IAML		23 51 22.1	
	comp=E,2μm,0.8s						
O18K				IAML		23 51 26.7	
	comp=N,2μm,0.8s						
O18K	Koktuh Hills	2.92	24	P	Pn	23 50 34.7	-0.7
	baz=205,SNR=102						
Q20K	Shuyak Island	3.10	61	P	Pn	23 50 38.5	+0.8
	baz=245,SNR=10						
Q20K				S	Sn	23 51 16.6	+2.3
	baz=245						
N16K	Nishlik Lake	3.33	350	P	Pn	23 50 40.5	-0.4
	baz=168,SNR=93						
N16K				Sb	Sb	23 51 29.3	+0.9
	baz=168						
P19K	Oil Pt	3.35	41		Pn	23 50 40.8	-0.3
P19K				IAML		23 51 38.0	
	comp=N,2μm,0.9s						
P19K				IAML		23 51 43.2	
	comp=E,2μm,0.8s						
P19K	Oil Pt	3.35	41	P	Pn	23 50 41.1	-0.1
	baz=224						
P19K				Sb	Sb	23 51 30.7	+1.9
	baz=224						
O19K	Port Alsworth	3.44	28	Pn	Pn	23 50 41.9	-0.4
O19K	Port Alsworth	3.44	28	P	Pn	23 50 41.7	-0.7
	baz=210,SNR=46						
O19K				Sn	Sb	23 51 32.8	+1.4
	baz=210						
ILSW	Iliamna Southw	3.62	38		Pn	23 50 44.6	-0.4
ILSW				IAML		23 51 44.8	
	comp=N,860nm,1.1s						
ILSW				IAML		23 51 47.4	
	comp=E,724nm,1.0s						
O20K	Slope Mountain	3.87	40	P	Pn	23 50 48.4	+0.1
	baz=223						
O20K				S	Sn	23 51 37.1	+3.7
	baz=223						
N19K	Bonanza Creek	3.95	23	Pn	Pn	23 50 49.2	-0.3
N19K				IAML		23 51 52.8	
	comp=E,1μm,1.5s						
N19K				IAML		23 51 56.1	
	comp=N,968nm,1.2s						
N19K	Bonanza Creek	3.95	23	P	Pn	23 50 49.1	-0.4
	baz=204,SNR=50						
N19K				Sb	Sb	23 51 47.7	+1.4
	baz=204						
HOM	Homer	3.97	49	Pn	Pn	23 50 48.9	-0.7
HOM				IAML		23 52 14.8	
	comp=E,2μm,1.9s						
HOM	Homer	3.97	49	P	Pn	23 50 48.4	-1.2
	baz=234						
HOM				S	Sn	23 51 38.2	+2.5
	baz=234						
SVW2	Sparrevohn	4.03	14	Pn	Pn	23 50 49.8	-0.7
SVW2				IAML		23 52 19.7	
	comp=E,584nm,1.7s						
SVW2	Sparrevohn	4.03	14	P	Pn	23 50 50.6	+0.1
FALS	False Pass	4.04	237		Pn	23 50 51.4	+0.8
FALS	False Pass	4.04	237	P	Pn	23 50 53.6	+3.0
FALS	False Pass	4.04	237	P	Pn	23 50 49.6	-1.0
	baz=52						
CNPM	China Poot	4.06	53	Pn	Pn	23 50 51.3	+0.3
RSO	Redoubt South	4.11	36		Pn	23 50 51.8	0.0
BRLK	Bradley Lake	4.34	51		Pn	23 50 55.5	+0.7
BRSE	Bradley Lake S	4.39	52		Pn	23 50 55.9	+0.4
BRSE	Bradley Lake S	4.39	52	P	Pn	23 50 56.3	+0.8
	baz=237,SNR=11						
BRSE				Sn	Sb	23 52 01.8	+2.9
	baz=237						
SPCR	Spurr Chakacha	4.86	32	P	Pn	23 51 01.6	-0.3
	baz=216,SNR=28						
SPCR				Sb	Sb	23 52 14.9	+2.6
	baz=216						
CAPN	Captain Cook N	4.87	40		Pn	23 51 02.4	+0.4
CAPN	Captain Cook N	4.87	40	P	Pn	23 51 02.1	+0.1
	baz=225						

CAPN				Sb	Sb	23 52 17.5	+4.9
	baz=225						
SPU	Mount Spurr	4.89	33		Pn	23 51 02.5	+0.2
M19K	Big River Lodg	4.98	18		Pn	23 51 03.2	-0.4
M19K				IAML		23 52 31.4	
	comp=E,471nm,1.3s						
M19K				IAML		23 53 02.1	
	comp=N,393nm,1.7s						
M19K	Big River Lodg	4.98	18	P	Pn	23 51 03.1	-0.4
	baz=200,SNR=72						
SLKM	Skilak Lake	5.05	46		Pn	23 51 05.2	+0.7
L19K	White Mountain	5.17	14	Pn	Pn	23 51 05.5	-0.7
L19K				IAML		23 52 40.0	
	comp=N,553nm,1.9s						
L19K				IAML		23 52 40.7	
	comp=E,670nm,1.9s						
L19K	White Mountain	5.17	14	P	Pn	23 51 05.3	-0.8
	baz=196						
M20K	Styx River	5.20	24	Pn	Pn	23 51 07.0	+0.3
M20K				IAML		23 52 35.8	
	comp=E,468nm,1.8s						
M20K				IAML		23 52 42.9	
	comp=N,528nm,2.1s						
M20K	Styx River	5.20	24	P	Pn	23 51 07.2	+0.6
	baz=207						
M20K				Sb	Sb	23 52 26.2	+4.0
	baz=207						
O22K	Cooper Landing	5.23	48		Pn	23 51 08.4	+1.5
O22K	Cooper Landing	5.23	48	P	Pn	23 51 08.0	+1.0
	baz=234						
FIS	Fire Island	5.46	41		Pn	23 51 12.5	+2.4
SUA	Susitna One	5.51	36	Pn	Pn	23 51 11.7	+0.7
SUA	Susitna One	5.51	36	P	Pn	23 51 12.8	+1.8
	baz=222,SNR=48						
AKUT	Akutan	5.57	240		Pn	23 51 12.2	+0.6
RC01	Rabbit Creek A	5.60	43	Pn	Pn	23 51 12.8	+0.7
RC01	Rabbit Creek A	5.60	43	P	Pn	23 51 12.4	+0.3
	baz=229,SNR=17						
L20K	Farewell, AK	5.60	18	P	Pn	23 51 11.6	-0.5
	baz=200						
SKT	Skwentna	5.68	30	Pn	Pn	23 51 14.4	+1.2
SKT	Skwentna	5.68	30	P	Pn	23 51 14.1	+1.0
	baz=215,SNR=21						
TTA	Tatalina	5.79	7	Pn	Pn	23 51 13.6	-1.1
TTA	Tatalina	5.79	7	P	Pn	23 51 14.1	-0.6
TTA	Tatalina	5.79	7	P	Pn	23 51 13.6	-1.1
TTA	Tatalina	5.79	7	P	Pn	23 51 13.5	-1.2
	baz=188,SNR=19						
P23K	Montague Islan	6.00	58	P	Pn	23 51 19.7	+2.1
	baz=246						
PWL	Port Wells	6.01	49	Pn	Pn	23 51 17.9	+0.2
PWL	Port Wells	6.01	49	P	Pn	23 51 17.8	+0.1
	baz=236						
UNV	Unalaska Valle	6.09	240		Pn	23 51 19.8	+1.0
UNV	Unalaska Valle	6.09	240	P	Pn	23 51 22.0	+3.2
UNV	Unalaska Valle	6.09	240	P	Pn	23 51 20.0	+1.2
	baz=53						
PMR	Palmer	6.15	41	Pn	Pn	23 51 20.7	+1.1
PMR	Palmer	6.15	41	P	Pn	23 51 21.1	+1.5
PMR	Palmer	6.15	41	P	Pn	23 51 20.7	+1.1
PMR	Palmer	6.15	41	P	Pn	23 51 19.6	+0.1
	baz=228,SNR=9.4						
KNK	Knik Glacier	6.28	44		Pn	23 51 21.1	-0.3
KNK	Knik Glacier	6.28	44	P	Pn	23 51 22.8	+1.3
	baz=232,SNR=12						
PPLA	Purkeypile	6.30	23	Pn	Pn	23 51 22.3	+0.5
PPLA	Purkeypile	6.30	23	P	Pn	23 51 22.5	+0.6
	baz=207,SNR=10						
GHO	Glory Hole Cre	6.35	40		Pn	23 51 22.8	+0.4
CUT	Chulitna	6.38	32		Pn	23 51 23.9	+1.3
CUT	Chulitna	6.38	32	P	Pn	23 51 23.2	+0.5
	baz=218						
K20K	Telida	6.41	14		Pn	23 51 22.2	-0.9
K20K	Telida	6.41	14	P	Pn	23 51 23.0	-0.1
	baz=197,SNR=18						
SML	Sawmill	6.58	42		Pn	23 51 25.8	+0.3
SML	Sawmill	6.58	42	P	Pn	23 51 26.6	+1.1
	baz=229,SNR=9.6						
CAST	Castle Rocks	6.79	21	Pn	Pn	23 51 28.2	-0.3
CAST	Castle Rocks	6.79	21	P	Pn	23 51 28.3	-0.1
	baz=206,SNR=22						
M23K	Glacier View	6.79	43	P	Pn	23 51 29.6	+1.1
	baz=232,SNR=8.3						
SPIA	Saint Paul Isl	6.89	275		Pn	23 51 30.3	+0.6
SPIA	Saint Paul Isl	6.89	275	P	Pn	23 51 29.7	0.0
	baz=84						
SCM	Sheep Creek Mo	6.97	44		Pn	23 51 31.9	+1.0
SCM	Sheep Creek Mo	6.97	44	P	Pn	23 51 31.9	+1.0
SCM	Sheep Creek Mo	6.97	44	P	Pn	23 51 31.4	+0.5
	baz=232						
EYAK	Cordova Ski Ar	6.98	56	Pn	Pn	23 51 29.8	-1.1
EYAK	Cordova Ski Ar	6.98	56	P	Pn	23 51 30.1	-0.9
	baz=246						
KTH	Kantishna Hill	7.16	25	Pn	Pn	23 51 34.0	+0.5
CHUM	Lake Minchumin	7.17	19		Pn	23 51 33.4	-0.2
CHUM	Lake Minchumin	7.17	19	P	Pn	23 51 33.9	+0.2
	baz=203,SNR=34						
DIV	Divide	7.22	52		Pn	23 51 34.2	-0.2
TRF	Thorofare Moun	7.22	27		Pn	23 51 35.8	+1.4
TRF	Thorofare Moun	7.22	27	P	Pn	23 51 34.6	+0.2
	baz=213,SNR=28						
KLU	Klutina	7.33	49		Pn	23 51 35.7	-0.3
KLU	Klutina	7.33	49	P	Pn	23 51 36.4	+0.4
	baz=239,SNR=10.0						
RND	Reindeer	7.57	31		Pn	23 51 40.7	+1.6
RND	Reindeer	7.57	31	P	Pn	23 51 40.7	+1.6
GCSA	Galena City Sc	7.57	2		Pn	23 51 39.1	+0.2
GCSA	Galena City Sc	7.57	2	P	Pn	23 51 38.9	-0.1
	baz=182						
M24K	Tolsona, Glenn	7.57	45		Pn	23 51 39.7	+0.5
M24K	Tolsona, Glenn	7.57	45	P	Pn	23 51 39.5	+0.4
	baz=234						
BPAW	Bear Paw Mtn.	7.62	22	Pn	Pn	23 51 40.0	+0.2
BPAW	Bear Paw Mtn.	7.62	22	P	Pn	23 51 41.1	+1.2
	baz=208,SNR=37						
MCK	McKinley	7.80	29		Pn	23 51 43.8	+1.5
MCK	McKinley	7.80	29	P	Pn	23 51 43.8	+1.5
MCK	McKinley	7.80	29	P	Pn	23 51 43.6	+1.3
	baz=217,SNR=7.2						
N25K	Chitina, Valde	7.94	51		Pn	23 51 45.8	+1.5
N25K	Chitina, Valde	7.94	51	P	Pn	23 51 46.7	+2.4
	baz=242,SNR=7.3						
BWN	Browne	8.03	26		Pn	23 51 47.4	+2.1
HARP	HAARP	8.13	45	P	Pn	23 51 48.0	+1.2
	baz=236						
GLB	Gilahina Butte	8.21	53		Pn	23 51 48.0	+0.2
VRDI	Verde Repeater	8.28	55	Pn	Pn	23 51 49.0	0.0
ANM	Nome	8.29	336	Pn	Pn	23 51 49.1	+0.2
ANM	Nome	8.29	336	P	Pn	23 51 49.1	+0.2
ANM	Nome	8.29	336	P	Pn	23 51 48.8	-0.1
	baz=149,SNR=41						
PAX	Paxson	8.35	41		Pn	23 51 50.1	+0.3
PAX	Paxson	8.35	41	P	Pn	23 51 50.2	+0.3
PAX	Paxson	8.35	41	P	Pn	23 51 51.1	+1.2
	baz=231,SNR=12						
I21K	Tanana	8.43	16		Pn	23 51 51.4	+0.5
I21K	Tanana	8.43	16	P	Pn	23 51 51.6	+0.7
	baz=201,SNR=66						
NEA2	Nenana	8.48	26		Pn	23 51 52.4	+0.9
NEA2	Nenana	8.48	26	P	Pn	23 51 52.9	+1.4
	baz=213,SNR=32						
MLY	Manley	8.51	20		Pn	23 51 52.0	0.0
MLY	Manley	8.51	20	P	Pn	23 51 52.3	+0.4
	baz=206,SNR=15						
MCARA	McCarthy VSAT	8.53	55		Pn	23 51 53.0	+0.8
MCARA	McCarthy VSAT	8.53	55	P	Pn	23 51 53.6	+1.4
	baz=247						
WRH	Wood River Hil	8.62	28		Pn	23 51 54.1	+0.7
H21K	Melozitna Rive	8.77	13		Pn	23 51 54.4	-1.1
H21K	Melozitna Rive	8.77	13	P	Pn	23 51 55.1	-0.5
	baz=197						
K24K	Donnelly Dome	8.79	36	P	Pn	23 51 57.6	+1.8
	baz=226,SNR=11						
CCB	Clear Creek Bu	8.83	28	Pn	Pn	23 51 56.4	0.0
HDA	Harding Lake	8.88	31		Pn	23 51 57.5	+0.5
HDA	Harding Lake	8.88	31	P	Pn	23 51 57.3	+0.3
	baz=220,SNR=24						
I23K	Minto, Yukon-K	8.89	23		Pn	23 51 57.1	+0.1
I23K	Minto, Yukon-K	8.89	23	P	Pn	23 51 58.8	+1.8
	baz=210,SNR=26						
MENT	Mentasta	8.98	45	Pn	Pn	23 51 57.7	-0.7
MDM	Murphy Dome	8.98	26		Pn	23 51 59.2	+0.8
IMAR	Indian Mountai	8.99	10	Pn	Pn	23 51 57.5	-0.9
M26K	Nabesna, AK	8.99	49		Pn	23 51 58.9	+0.4
M26K	Nabesna, AK	8.99	49	P	Pn	23 51 59.6	+1.1
	baz=241						
TCOL	CIGO, UAF Yank	9.00	27		Pn	23 51 59.1	+0.4
TCOL	CIGO, UAF Yank	9.00	27	P	Pn	23 51 58.7	0.0
	baz=216						
COLA	College	9.01	27		Pn	23 51 59.3	+0.6
COLA	College	9.01	27	P	Pn	23 52 00.0	+1.3
COLA	College	9.01	27	P	Pn	23 51 59.3	+0.6
COLA	College	9.01	27	P	Pn	23 51 58.4	-0.3
	baz=216						
BARN	Barnard Glacie	9.04	58	Pn	Pn	23 51 59.0	-0.3
RIDG	Independent Ri	9.06	38		Pn	23 51 59.9	+0.4
RIDG	Independent Ri	9.06	38	P	Pn	23 52 00.3	+0.8
	baz=229						
L26K	Log Cabin Wild	9.17	45		Pn	23 52 00.9	-0.1
L26K	Log Cabin Wild	9.17	45	P	Pn	23 52 02.1	+1.0
	baz=237						
IL31		9.18	30		Pn	23 52 01.2	+0.2
ILAR	Eielson Array	9.18	30	P	Pn	23 52 01.8	+0.8
	comp=N,1.2nm,0.3s,baz=216,slow=14,SNR=58						
	comp=N,6.4nm,0.5s						
ILAR	Eielson Array	9.18	30	Pn	Pn	23 52 00.7	-0.3
ILAR	Eielson Array	9.18	30	P	Pn	23 52 00.7	-0.3
IL03	Eielson Array	9.19	30	Pn	Pn	23 52 01.7	+0.5
DOT	Dot Lake	9.27	40		Pn	23 52 03.2	+0.8
POKR	Poker Plat Res	9.31	27		Pn	23 52 03.1	+0.3
POKR	Poker Plat Res	9.31	27	P	Pn	23 52 03.5	+0.7
	baz=216,SNR=7.3						
M27K	Edge Creek, AK	9.43	50		Pn	23 52 04.8	+0.1
M27K	Edge Creek, AK	9.43	50	P	Pn	23 52 05.0	+0.3
	baz=244						
H23K	Yukon River	9.44	21		Pn	23 52 05.5	+0.8
H23K	Yukon River	9.44	21	P	Pn	23 52 05.2	+0.4
	baz=207						
PCA	Pinnacle	9.47	65		Pn	23 52 05.2	+0.1
PINM	Pinnacle	9.47	65	P	Pn	23 52 04.8	-0.4
	baz=260						
SCRK	Sand Creek	9.50	39	Pn	Pn	23 52 06.4	+0.7
SCRK	Sand Creek	9.50	39	P	Pn	23 52 06.3	+0.7
	baz=230						
G21K	Allakaket	9.53	10	P	Pn	23 52 05.5	-0.4
	baz=193						
O28M	Mount Upton	9.64	61	P	Pn	23 52 08.4	+0.6
	baz=256						
TNA	Tin City	9.72	334	Pn	Pn	23 52 08.6	+0.1
TNA	Tin City	9.72	334	P	Pn	23 52 09.0	+0.5
	baz=144,SNR=23						
BCPM	Bancas Point	9.76	66		Pn	23 52 09.2	+0.2
L27K	Beaver Creek,	9.78	47		Pn	23 52 09.8	+0.4
L27K	Beaver Creek,	9.78	47	P	Pn	23 52 10.0	+0.6
	baz=240						
H24K	Noodor Dome	9.80	24		Pn	23 52 09.3	-0.3
H24K	Noodor Dome	9.80	24	P	Pn	23 52 10.3	+0.7
	baz=212						
BCAR	Beaver Creek A	9.80	47	Pn	Pn	23 52 09.9	+0.3
YUK3	Moose Creek	9.82	55	P	Pn	23 52 11.2	+1.1
	baz=250,SNR=17						
PNL	Peninsula	9.84	68	P	Pn	23 52 09.3	-0.9
PNL	Peninsula	9.84	68	P	Pn	23 52 09.2	-0.9
	baz=263						
BVCY	Beaver Creek	9.88	51	P	Pn	23 52 09.6	-1.2
	baz=245						
YUK8	Steele Glacier	9.98	58	P	Pn	23 52 12.6	+0.3
	baz=254,SNR=8.9						
PRP	Porcupine Dome	10.12	30		Pn	23 52 13.8	-0.3
PRP	Porcupine Dome	10.12	30	P	Pn	23 52 13.9	-0.2
	baz=220,SNR=13						
G23K	Bananza Creek	10.16	17	P	Pn	23 52 14.8	+0.2
	baz=204						
K27K	Chicken	10.21	42	Pn	Pn	23 52 15.7	+0.5
K27K	Chicken	10.21	42	P	Pn	23 52 16.3	+1.1
	baz=235						
F21K	Alatna River	10.22	9	P	Pn	23 52 15.6	+0.2
	baz=192						
O29M	Mount Kennedy	10.33	65	P	Pn	23 52 17.4	+0.3
	baz=261						
YUK4	Talbot Arm	10.52	59	P	Pn	23 52 21.4	+1.8
	baz=255						
YUK6	Outpost Mounta	10.56	61	P	Pn	23 52 20.5	+0.3
	baz=258						
COLD	Coldfoot	10.61	16	Pn	Pn	23 52 22.0	+1.3
COLD	Coldfoot	10.61	16	P	Pn	23 52 22.7	+2.0
	baz=202						
G24K	Hadweenzic Riv	10.62	22	P	Pn	23 52 21.5	+0.7
	baz=211						
F22K	John River	10.63	11	P	Pn	23 52 21.0	+0.1
	baz=196,SNR=45						
I26K	Coal Creek Min	10.65	34		Pn	23 52 22.5	+1.3
I26K	Coal Creek Min	10.65	34	P	Pn	23 52 22.1	+0.9
	baz=227						
M29M	Somme Creek	10.93	53	P	Pn	23 52 25.2	0.0
	baz=250						
HYT	Haines Junctio	10.94	62		Pn	23 52 25.4	0.0
HYT	Haines Junctio	10.94	62	P	Pn	23 52 26.6	+1.3
	baz=259						
EGAK	Eagle	10.97	40		Pn	23 52 26.8	+1.2
EGAK	Eagle	10.97	40	P	Pn	23 52 25.6	+0.1
	baz=234						
G25K	Bearman Lake	10.97	24	P	Pn	23 52 25.2	-0.4
	baz=214						
FYU	Fort Yukon	11.02	27		Pn	23 52 27.0	+0.8
P30M	Million Dollar	11.11	66	P	Pn	23 52 27.8	+0.3
	baz=264						
RDOG	Red Dog Mine	11.15	350		Pn	23 52 28.9	+0.8
RDOG	Red Dog Mine	11.15	350	P	Pn	23 52 28.2	+0.1
	baz=165						
DAWY	Dawson	11.23	45		Pn	23 52 30.7	+1.5
DAWY	Dawson	11.23	45	P	Pn	23 52 29.8	+0.6
	baz=240						
F24K	Squaw Lake	11.26	19	P	Pn	23 52 30.0	+0.4
	baz=208						
N30M	Aishikik Lake	11.27	59	P	Pn	23 52 29.8	0.0
	baz=257						
L29M	L29M	11.31	50	P	Pn	23 52 30.4	0.0
	baz=247						
I27K	Kandik River	11.33	36	P	Pn	23 52 31.5	+0.9
	baz=229						
PLBC	Pleasant Camp	11.36	70	P	Pn	23 52 31.0	+0.1
	baz=268						
E23K	Chandalar	11.47	15	P	Pn	23 52 33.1	+0.6
	baz=202						
S31K	Pelican	11.47	77	P	Pn	23 52 31.4	-1.0
	baz=275						
O30N	Mendenhall	11.62	63	P	Pn	23 52 35.6	+1.0
	baz=261						
E24K	Your Creek	11.65	17	P	Pn	23 52 36.2	+1.2
	baz=205,SNR=30						
G26K	Porcupine Rive	11.68	28	P	Pn	23 52 34.7	-0.5
	baz=220						
M30M	Minto, Yukon	11.71	54		Pn	23 52 36.2	+0.5
M30M	Minto, Yukon	11.71	54	P	Pn	23 52 36.0	+0.3
	baz=252						
F25K	Christian Rive	11.76	23	P	Pn	23 52 36.8	+0.3
	baz=213						
H27K	Steamboat Moun	11.78	33	P	Pn	23 52 36.8	+0.2
	baz=227						
BMAR	Burnt Mountain	11.86	25		Pn	23 52 37.4	-0.4
K29M	Barlow Dome	11.86	48	P	Pn	23 52 38.5	+0.6
	baz=245						
SKAG	Skagway	11.89	70	Pn	Pn	23 52 39.1	+1.0
N31M	Braeburn, Yuko	11.89	60		Pn	23 52 38.4	+0.1
G27K	Doyon Strip	12.14	31	P	Pn	23 52 42.0	+0.4
	baz=225						
BESE	Bessie Mountai	12.15	74	Pn	Pn	23 52 42.6	+0.8
F26K	Sheenjek River	12.18	25	P	Pn	23 52 42.4	+0.3
	baz=217						
D23K	Nanushuk River	12.19	12	P	Pn	23 52 42.6	+0.4
	baz=198						
E25K	Arctic Village	12.22	22	P	Pn	23 52 43.7	+1.0
	baz=212,SNR=16						
I29M	Ogilvie Camp,	12.30	41		Pn	23 52 43.9	+0.1
R32K	Eaglecrest	12.35	75	P	Pn	23 52 45.1	+0.7
	baz=275						
S32K	Killisnoo	12.41	79	P	Pn	23 52 45.6	+0.4
	baz=278						
JIS	Juneau Island	12.42	75	Pn	Pn	23 52 44.7	-0.7
D24K	Happy Valley	12.60	14	P	Pn	23 52 49.1	+1.3
	baz=202						
M31M	Drury Creek, Y	12.69	57		Pn	23 52 50.7	+1.7
M31M	Drury Creek, Y	12.69	57	P	Pn	23 52 50.3	+1.2
	baz=257						
P32M	Atlin	12.71	69	P	Pn	23 52 49.9	+0.4
	baz=269						
D25K	Kavik River	13.12	18	P	Pn	23 52 53.9	-1.1
	baz=208						
N32M	Quiet Lake	13.12	62	P	Pn	23 52 56.4	+1.3
	baz=263						
C24K	Franklin Bluff	13.14	14	P	Pn	23 52 56.0	+0.8
	baz=201						
E27K	Coleen River	13.16	27	P	Pn	23 52 54.5	-1.1
	baz=221						
FARO	Faro, Yukon	13.17	58		Pn	23 52 56.6	+0.9
FARO	Faro, Yukon	13.17	58	P	Pn	23 52 56.4	+0.7
	baz=258						
P33M	Teslin, Yukon	13.18	66		Pn	23 52 57.0	+1.1
P33M	Teslin, Yukon	13.18	66	P	Pn	23 52 57.3	+1.4
	baz=268						
EPYK	Eagle Plains	13.40	38		Pn	23 52 58.1	-0.6
EPYK	Eagle Plains	13.40	38	P	Pn	23 52 58.8	0.0
	baz=236						
Q32M	Nakina River	13.47	72	P	Pn	23 53 00.8	+0.8
	baz=273						
C27K	Jago River	13.86	21	P	Pn	23 53 04.9	-0.1
	baz=213						
C26K	Camden Bay	13.89	18	P	Pn	23 53 05.7	+0.3
	baz=210						
G30M	tAoh Zraii Nji	13.90	37	P	Pn	23 53 05.6	0.0
	baz=235						
A21K	Barrow	14.17	1	P	P	23 53 14.8	-1.8
S34M	Telegraph Cree	14.18	76	P	Pn	23 53 09.4	0.0
	baz=278						
MMPY	Sheldon Lake,	14.20	57	P	Pn	23 53 10.5	+0.8
	baz=259,SNR=20						
DLBC	Dease Lake	14.69	74	P	Pn	23 53 18.2	+1.7
	comp=N,0.3nm,0.3s,baz=257,slow=14,SNR=7.1						
DLBC				LR	LR	23 59 23.5	
	comp=N,231nm,21.3s,baz=276,slow=39						
	comp=N,5.6nm,1.2s						
DLBC	Dease Lake	14.69	74		P	23 53 19.4	-3.2
DLBC	Dease Lake	14.69	74	P	Pn	23 53 17.1	+0.7
	baz=277,SNR=5.6						
T35M	Bob Quinn	14.81	79	P	Pn	23 53 17.2	-1.0
	baz=282						
F31M	Tsiigehtchic	14.96	37	P	Pn	23 53 19.0	-1.0
	baz=238						
WTLY	Watson Lake, Y	15.19	67	P	Pn	23 53 22.3	-0.9
	baz=272						
INK	Inuvik	15.50	35	P	Pn	23 53 25.9	-1.2
	comp=N,0.2nm,0.3s,baz=225,slow=13,SNR=5.4						
INK				LR	LR	23 59 18.2	
	comp=N,830nm,20.5s,baz=236,slow=37						
	comp=N,1.5nm,0.4s						
INK	Inuvik	15.50	35		Pn	23 53 26.2	-0.9
INK	Inuvik	15.50	35	P	Pn	23 53 26.2	-0.9
INK				pmax	pmax		
	comp=Z,14nm,0.9s						
INK	Inuvik	15.50	35	P	Pn	23 53 25.8	-1.4
	baz=236						
LIRD	Liard River Hi	16.60	69	P	P	23 53 42.3	-1.4
	baz=276						
KOTAN	Kotaneelee Air	17.56	66	P	P	23 53 54.0	-0.3
	baz=275,SNR=8.5						
BBB	Bella Bella	17.67	94	LR	LR	23 58 53.2	
	comp=Z,219nm,20.9s,baz=276,slow=30						
C36M	Paulatuk	19.02	37	P	P	23 54 08.7	-1.6
	baz=247						
BILL	Bilibino	19.50	318	P	Pn	23 54 17.2	+0.4
BILL				IAmb	IAmb	23 54 21.7	
	comp=Z,71nm,1.4s						
BILL	Bilibino	19.50	318*c*	*i*P	Pn	23 54 18.2	+1.4
BILL				*i*S	Sn	23 57 53.0	-1.9
BILL				pmax	pmax		
	comp=Z,60nm,1.4s						
BILL				MLR	MLR		
	comp=Z,1µm,16.0s						
A36M	Sachs Harbour	19.88	29	P	P	23 54 17.1	-2.5
A36M	Sachs Harbour	19.88	29	P	P	23 54 17.4	-2.2
	baz=239,SNR=22						
WAPA	Wapiti River	21.23	79	P	P	23 54 33.8	-0.6
WAPA				IAmb	IAmb	23 54 41.4	
	comp=Z,48nm,1.0s						
HILA	High Level	21.38	69	P	P	23 54 36.4	+0.4
LLLB	Lillooet	21.84	92	P	P	23 54 41.2	+0.2
LLLB				IAmb	IAmb	23 54 50.4	
	comp=Z,83nm,1.7s						
YKA	Yellowknife Ar	21.88	58	P	P	23 54 40.8	-0.5
	comp=Z,11nm,0.9s,baz=272,slow=9.7,SNR=83						
YKA				PcP	PcP	23 58 40.6	+0.7
	comp=Z,1.6nm,1.0s,baz=280,slow=1.7,SNR=6.2						
YKA				ScP	ScP	00 02 13.9	-2.2
	comp=Z,1.3nm,1.1s,baz=277,slow=2.4,SNR=8.2						
YKA				LR	LR	00 04 00.0	
	comp=Z,593nm,18.6s,baz=284,slow=39						
	comp=Z,11nm,0.9s						
YKA	Yellowknife Ar	21.88	58	*i* P	P	23 54 41.0	-0.3
YKA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
B04A	Port Angeles	22.40	99	P	P	23 54 48.9	+2.0
B04A				IAmb	IAmb	23 55 13.5	
	comp=Z,66nm,1.3s						
NLWA	Neilton Lookou	22.61	101	P	P	23 54 50.2	+1.0
NLWA				IAmb	IAmb	23 54 58.9	
	comp=Z,125nm,1.6s						
BRLDA	Berland Lookou	22.64	81	P	P	23 54 49.4	-0.3
F04D	Rainier, OR	23.89	103	P	P	23 55 01.9	-0.2
PET	Petropavlovsk	25.05	279	P	P	23 55 13.1	+0.5
PET	Petropavlovsk	25.05	279	*e*P	P	23 55 13.4	+0.8
PET				*e*S	S	23 59 28.0	-7.9
PET				pmax	pmax		
	comp=Z,90nm,1.5s						
SEY	Seymchan	25.05	304	P	P	23 55 13.1	+0.5
	comp=Z,6.6nm,0.6s,baz=93,slow=8.5,SNR=16						
SEY				LR	LR	00 05 46.5	
	comp=Z,437nm,19.0s,baz=182,slow=38						
	comp=Z,6.6nm,0.6s						
SEY	Seymchan	25.05	304*c*	*e*P	P	23 55 13.6	+1.0
SEY				pmax	pmax		
	comp=Z,33nm,1.7s						
HOOD	Mount Hood Mea	25.11	103	P	P	23 55 13.8	+0.3
EDM	Edmonton	25.20	80	P	P	23 55 14.3	+0.3
EDM	Edmonton	25.20	80	P	P	23 55 14.3	+0.3
EDM				pmax	pmax		
	comp=Z,75nm,1.1s						
H04A	Detroit Lake	25.25	104	P	P	23 55 15.1	+0.4
G05A	Wamic	25.34	103	P	P	23 55 15.4	0.0
D08A	Wollman Farm,	25.47	97	P	P	23 55 15.0	-1.5
D08A				IAmb	IAmb	23 55 33.0	
	comp=Z,16nm,1.0s						
PEA0B	Petropavlovsk-	25.52	280	P	P	23 55 16.3	-0.6
PEA0B	Petropavlovsk-	25.52	280*c*	*e*P	P	23 55 17.3	+0.4
PETK	Petropavlovsk-	25.52	280	P	P	23 55 19.3	+2.4
	comp=Z,3.9nm,0.8s,baz=66,slow=11,SNR=5.5						
	comp=Z,3.9nm,0.8s						
PETK	Petropavlovsk-	25.52	280	P	P	23 55 16.6	-0.3
PETK	Petropavlovsk-	25.52	280	P	P	23 55 16.6	-0.3
HAWA	Hanford	25.55	99	P	P	23 55 15.9	-1.4
HAWA				IAmb	IAmb	23 55 27.0	
	comp=Z,21nm,1.1s						
NEW	Newport	25.73	93	P	P	23 55 19.6	+0.7
	comp=Z,5.8nm,0.8s,baz=302,slow=9.5,SNR=5.1						
NEW				LR	LR	00 04 36.6	
	comp=Z,167nm,20.5s,baz=291,slow=34						
	comp=Z,5.8nm,0.8s						
NEW	Newport	25.73	93	P	P	23 55 19.4	+0.5
NEW	Newport	25.73	93	P	P	23 55 19.4	+0.5
NEW				pmax	pmax		
	comp=Z,19nm,1.3s						
I04A	Tendick Farm,	25.75	106	P	P	23 55 20.0	+0.8
DBO	Dodson Butte	25.79	108	P	P	23 55 19.4	-0.1
DBO				IAmb	IAmb	23 55 25.9	
	comp=Z,40nm,1.1s						
J04A	Umpqua Nationa	26.29	107	P	P	23 55 24.7	+0.5
PINE	Pine Mountain	26.52	105	P	P	23 55 26.5	+0.2
PINE				IAmb	IAmb	23 55 32.6	
	comp=Z,32nm,1.1s						
G08A	Pilot Rock	26.57	100	P	P	23 55 24.5	-2.2
J05D	Fort Rock, OR	26.71	106	P	P	23 55 30.1	+2.1
K04D	Chiloquin, OR	26.91	107	P	P	23 55 31.5	+1.8
WALA	Waterton Lakes	27.02	89	P	P	23 55 30.2	-0.5
WALA				IAmb	IAmb	23 55 34.0	
	comp=Z,37nm,1.6s						
YBH	Yreka Blue Hor	27.06	110	P	P	23 55 32.4	+1.4
	comp=Z,4.9nm,1.0s,baz=311,slow=9.3,SNR=4.4						
YBH				LR	LR	00 04 10.5	
	comp=Z,226nm,19.0s,baz=318,slow=32						
	comp=Z,4.9nm,1.0s						
YBH	Yreka Blue Hor	27.06	110	P	P	23 55 32.2	+1.2
YBH				IAmb	IAmb	23 55 38.3	
	comp=Z,74nm,1.8s						
YBH	Yreka Blue Hor	27.06	110	P	P	23 55 32.2	+1.2
YBH				pmax	pmax		
	comp=Z,74nm,1.8s						
I07A	Izee	27.08	103	P	P	23 55 31.7	+0.5

I07A				IAmb	IAmb	23 56 00.1	
	comp=Z,44nm,1.7s						
K05A	**Summer Lake**	**27.28**	**106**	P	**P**	**23 55 33.4**	**+0.2**
K05A				IAmb	IAmb	23 55 39.3	
	comp=Z,59nm,1.5s						
BMO	**Blue Mountains**	**27.74**	**99**	P	**P**	**23 55 36.8**	**-0.4**
BMO	**Blue Mountains**	**27.74**	**99**	P	**P**	**23 55 36.8**	**-0.4**
BMO				pmax	pmax		
	comp=Z,23nm,1.8s						
J08A	**Circle Bar Ran**	**28.12**	**103**	P	**P**	**23 55 41.2**	**+0.6**
MOD	**Modoc Plateau**	**28.18**	**107**	P	**P**	**23 55 40.1**	**-1.1**
MOD				IAmb	IAmb	23 55 43.9	
	comp=Z,32nm,1.8s						
PLID	**Pearl Lake**	**28.29**	**97**	P	**P**	**23 55 42.5**	**+0.2**
MSO	**Missoula**	**28.31**	**93**	P	**P**	**23 55 41.9**	**-0.4**
WVOR	**Wild Horse Val**	**28.67**	**104**	P	**P**	**23 55 45.5**	**0.0**
WVOR				IAmb	IAmb	23 55 50.9	
	comp=Z,19nm,1.2s						
WVOR	**Wild Horse Val**	**28.67**	**104**	P	**P**	**23 55 45.5**	**0.0**
WVOR				pmax	pmax		
	comp=Z,19nm,1.2s						
RES	**Resolute Bay**	**28.93**	**29**	P	**P**	**23 55 46.9**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=290,slow=7.7,SNR=6.5						
	comp=Z,0.5nm,0.7s						
HOPS	**Hopland Field**	**28.93**	**114**	P	**P**	**23 55 49.5**	**+1.9**
PLTX	**Planet X, Gerl**	**29.48**	**108**	P	**P**	**23 55 55.2**	**+2.6**
PLTX				IAmb	IAmb	23 55 59.7	
	comp=Z,22nm,0.6s						
MFID	**Camas Ranch**	**29.49**	**100**	P	**P**	**23 55 53.4**	**+0.6**
HRY	**Holter Researc**	**29.53**	**91**	P	**P**	**23 55 53.9**	**+0.8**
EGMT	**Eagleton**	**29.87**	**87**	P	**P**	**23 55 55.5**	**-0.6**
EGMT				IAmb	IAmb	23 55 59.8	
	comp=Z,21nm,1.3s						
DLMT	**Dillon**	**29.96**	**94**	P	**P**	**23 55 56.8**	**-0.1**
AFDM	**Forest Hills D**	**30.02**	**112**	P	**P**	**23 55 59.9**	**+2.6**
HLID	**Hailey**	**30.15**	**98**	P	**P**	**23 55 58.5**	**-0.2**
MCMT	**McKenzie Canyo**	**30.16**	**95**	P	**P**	**23 56 00.2**	**+1.3**
PAHR	**Pah Rah Range**	**30.26**	**109**	P	**P**	**23 56 00.1**	**+0.5**
FFC	**Flin Flon**	**30.48**	**71**	P	**P**	**23 56 01.3**	**0.0**
FFC				IAmb	IAmb	23 56 03.8	
	comp=Z,24nm,1.9s						
FFC	**Flin Flon**	**30.48**	**71**	P	**P**	**23 56 01.3**	**0.0**
FFC				pmax	pmax		
	comp=Z,24nm,1.9s						
BMN	**Battle Mountai**	**30.85**	**105**	P	**P**	**23 56 05.1**	**+0.3**
BMN	**Battle Mountai**	**30.85**	**105**	P	**P**	**23 56 05.1**	**+0.3**
BMN				pmax	pmax		
	comp=Z,13nm,1.4s						
QLMT	**Earthquake Lak**	**30.93**	**93**	P	**P**	**23 56 07.2**	**+1.6**
CMB	**Columbia Colle**	**31.01**	**112**	P	**P**	**23 56 07.5**	**+1.3**
CMB				IAmb	IAmb	23 56 09.4	
	comp=Z,18nm,1.4s						
CMB	**Columbia Colle**	**31.01**	**112**	P	**P**	**23 56 07.5**	**+1.3**
CMB				pmax	pmax		
	comp=Z,18nm,1.4s						
WAKR	**Walker**	**31.13**	**110**	P	**P**	**23 56 07.6**	**+0.2**
YMR	**Madison River**	**31.29**	**93**	IAmb	IAmb	23 56 14.2	
	comp=Z,22nm,1.2s						
KVN	**Kaiserville**	**31.41**	**108**	P	**P**	**23 56 10.5**	**+0.7**
KVN				IAmb	IAmb	23 56 13.0	
	comp=Z,25nm,1.5s						
KVN	**Kaiserville**	**31.41**	**108**	P	**P**	**23 56 10.5**	**+0.7**
KVN				pmax	pmax		
	comp=Z,25nm,1.5s						
YNR	**Norris Junctio**	**31.42**	**93**	P	**P**	**23 56 11.0**	**+1.1**
YNR				IAmb	IAmb	23 56 15.8	
	comp=Z,17nm,1.4s						
YUF	**Upper Falls**	**31.51**	**93**	P	**P**	**23 56 11.2**	**+0.5**
YUF				IAmb	IAmb	23 56 37.2	
	comp=Z,10nm,0.7s						
LKWY	**Lake**	**31.66**	**93**	P	**P**	**23 56 12.9**	**+0.8**
LKWY	**Lake**	**31.66**	**93**	P	**P**	**23 56 12.9**	**+0.8**
LKWY				pmax	pmax		
	comp=Z,11nm,1.3s						
ELK	**Elko**	**31.67**	**103**	LR	LR	00 07 07.6	
	comp=Z,149nm,18.3s,baz=310,slow=33						
ELK	**Elko**	**31.67**	**103**	P	**P**	**23 56 12.6**	**+0.5**
ELK				IAmb	IAmb	23 56 17.4	
	comp=Z,14nm,1.1s						
ELK	**Elko**	**31.67**	**103**	P	**P**	**23 56 12.6**	**+0.5**
ELK				pmax	pmax		
	comp=Z,14nm,1.2s						
H17A	**Grant Village**	**31.68**	**93**	P	**P**	**23 56 13.5**	**+1.2**
H17A				IAmb	IAmb	23 56 19.0	
	comp=Z,12nm,1.2s						
H17A	**Grant Village**	**31.68**	**93**	P	**P**	**23 56 11.8**	**-0.5**
	baz=311,SNR=5.4						
YMP	**Mirror Lake Pl**	**31.68**	**93**	P	**P**	**23 56 12.5**	**+0.1**
YMP				IAmb	IAmb	23 56 21.1	
	comp=Z,14nm,1.2s						
NVAR	**Mina Array Bea**	**31.77**	**109**	P	**P**	**23 56 14.5**	**+1.5**
	comp=Z,5.1nm,0.9s,baz=304,slow=8.7,SNR=20						
NVAR				LR	LR	00 07 08.3	
	comp=Z,363nm,19.1s,baz=304,slow=32						
	comp=Z,5.1nm,0.9s						
NVAR	**Mina Array Bea**	**31.77**	**109**	P	**P**	**23 56 14.4**	**+1.3**
LHV	**Little Huntoon**	**31.80**	**110**	P	**P**	**23 56 14.3**	**+1.3**
LHV				IAmb	IAmb	23 56 19.8	
	comp=Z,30nm,1.4s						
IMW	**Indian Meadow**	**31.81**	**94**	P	**P**	**23 56 09.8**	**-3.7**
IMW				IAmb	IAmb	23 56 13.2	
	comp=Z,8.3nm,0.8s						
FLWY	**Flagg Ranch**	**31.82**	**94**	P	**P**	**23 56 13.8**	**+0.4**
FLWY				IAmb	IAmb	23 56 30.5	
	comp=Z,21nm,1.1s						
NV11	**Mina Array Sit**	**31.84**	**109**	P	**P**	**23 56 14.6**	**+1.0**
NV11				IAmb	IAmb	23 56 23.6	
	comp=Z,10nm,1.1s						
RLMT	**Red Lodge**	**31.92**	**91**	P	**P**	**23 56 15.9**	**+1.6**
RLMT				IAmb	IAmb	23 56 19.4	
	comp=Z,25nm,1.4s						
FXWY	**Fox Creek**	**31.93**	**95**	P	**P**	**23 56 15.4**	**+0.9**
FXWY				IAmb	IAmb	23 56 20.1	
	comp=Z,15nm,1.6s						
MDPB	**Devils Postpil**	**31.98**	**111**	P	**P**	**23 56 15.6**	**+0.7**
MDPB				IAmb	IAmb	23 56 21.6	
	comp=Z,23nm,1.2s						
MOOW	**Moose Ponds**	**32.01**	**94**	P	**P**	**23 56 16.1**	**+1.0**
MOOW				IAmb	IAmb	23 56 20.1	
	comp=Z,19nm,1.8s						
OMMB	**Old Mammoth Mi**	**32.03**	**111**	P	**P**	**23 56 15.8**	**+0.3**
OMMB				IAmb	IAmb	23 56 19.8	
	comp=Z,19nm,1.1s						
TPAW	**Teton Pass**	**32.07**	**95**	P	**P**	**23 56 15.6**	**-0.1**
HVU	**Hansel Valley**	**32.25**	**99**	P	**P**	**23 56 16.1**	**-1.0**
HVU	**Hansel Valley**	**32.25**	**99**	P	**P**	**23 56 16.2**	**-1.0**
HVU				pmax	pmax		
	comp=Z,12nm,1.3s						
TIXI	**Tiksi**	**32.37**	**325**	LR	LR	00 10 14.1	
	comp=Z,287nm,18.3s,baz=98,slow=38						
TIXI	**Tiksi**	**32.37**	**325**	P	**P**	**23 56 18.5**	**+0.8**
TIXI				IAmb	IAmb	23 56 21.3	
	comp=Z,15nm,1.2s						
TIXI	**Tiksi**	**32.37**	**325**	*ce*P	**P**	**23 56 18.3**	**+0.6**
TIXI				pmax	pmax		
	comp=Z,22nm,1.7s						
AHID	**Auburn Hatcher**	**32.48**	**96**	P	**P**	**23 56 19.9**	**+0.7**
FCC	**Fort Churchill**	**32.58**	**60**	P	**P**	**23 56 19.8**	**+0.2**
FCC				IAmb	IAmb	23 56 23.2	
	comp=Z,19nm,1.2s						
FCC	**Fort Churchill**	**32.58**	**60**	P	**P**	**23 56 19.8**	**+0.2**
FCC				pmax	pmax		
	comp=Z,19nm,1.3s						
TPH	**Tonopah**	**32.59**	**108**	P	**P**	**23 56 20.4**	**+0.2**
TPH	**Tonopah**	**32.59**	**108**	P	**P**	**23 56 20.4**	**+0.2**
TPH				pmax	pmax		
	comp=Z,102nm,1.4s						
LAO	**LASA Array**	**32.59**	**86**	P	**P**	**23 56 20.4**	**+0.3**
LAO				IAmb	IAmb	23 56 33.5	
	comp=Z,12nm,0.6s						
DGMT	**Dagmar**	**32.62**	**82**	P	**P**	**23 56 20.7**	**+0.6**
DGMT				IAmb	IAmb	23 56 24.0	
	comp=Z,12nm,0.7s						
BGU	**Big Grassy Mou**	**32.72**	**100**	P	**P**	**23 56 23.0**	**+1.7**
DSP	**Deep Springs**	**32.75**	**110**	P	**P**	**23 56 21.5**	**+0.2**
LCH	**Last Change Ra**	**33.02**	**110**	IAmb	IAmb	23 56 29.8	
	comp=Z,31nm,1.4s						
HWUT	**Hardware Ranch**	**33.02**	**98**	P	**P**	**23 56 23.5**	**-0.5**
Q12A	**Willow Creek R**	**33.12**	**105**	P	**P**	**23 56 24.9**	**+0.1**
Q12A				IAmb	IAmb	23 56 30.0	
	comp=Z,19nm,1.2s						
R11B	**Troy Canyon, C**	**33.24**	**106**	P	**P**	**23 56 27.1**	**+1.3**
	baz=318,SNR=14						
BW06	**Boulder Array**	**33.31**	**95**	P	**P**	**23 56 27.2**	**+0.7**
PD31	**Pinedale Array**	**33.31**	**95**	P	**P**	**23 56 26.8**	**+0.2**
PDAR	**Pinedale Array**	**33.31**	**95**	P	**P**	**23 56 27.3**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=318,slow=3.3,SNR=12						
PDAR				LR	LR	00 09 42.0	
	comp=Z,46nm,18.1s,baz=321,slow=36						
	comp=Z,1.0nm,0.6s						
SMMC	**Simmler**	**33.33**	**115**	P	**P**	**23 56 28.3**	**+1.8**
	baz=323						
GRAC	**Grapevine Rang**	**33.34**	**110**	P	**P**	**23 56 27.9**	**+1.3**
GRAC	**Grapevine Rang**	**33.34**	**110**	P	**P**	**23 56 28.6**	**+2.0**
	baz=320						
DUG	**Dugway, Tooele**	**33.35**	**101**	P	**P**	**23 56 27.2**	**+0.4**
DUG	**Dugway, Tooele**	**33.35**	**101**	P	**P**	**23 56 27.2**	**+0.4**
DUG				pmax	pmax		
	comp=Z,10.0nm,1.3s						
VES	**Vestal, Richgr**	**33.37**	**113**	P	**P**	**23 56 28.4**	**+1.7**
	baz=322						
CWC	**Cottonwood Cre**	**33.41**	**111**	P	**P**	**23 56 29.0**	**+1.7**
	baz=321						
SPR3	**Spring Creek 3**	**33.41**	**104**	P	**P**	**23 56 27.6**	**+0.1**
SPR3				IAmb	IAmb	23 56 33.5	
	comp=Z,17nm,1.3s						
TCUT	**Toone Canyon**	**33.45**	**99**	P	**P**	**23 56 28.7**	**+0.9**
TCUT				IAmb	IAmb	23 56 32.8	
	comp=Z,47nm,1.9s						
CTU	**Camp Tracy**	**33.57**	**99**	P	**P**	**23 56 29.4**	**+0.7**
S11A	**Rachel**	**33.68**	**107**	P	**P**	**23 56 31.4**	**+1.7**
PKM	**Mcpherson Peak**	**33.76**	**115**	P	**P**	**23 56 31.6**	**+1.2**
	baz=323						
ISA	**Isabella, Lake**	**33.81**	**113**	P	**P**	**23 56 31.8**	**+1.1**
ISA				IAmb	IAmb	23 56 35.8	
	comp=Z,35nm,1.6s						
ISA	**Isabella, Lake**	**33.81**	**113**	P	**P**	**23 56 31.8**	**+1.1**
ISA				pmax	pmax		
	comp=Z,35nm,1.6s						
ISA	**Isabella, Lake**	**33.81**	**113**	P	**P**	**23 56 32.2**	**+1.4**
	baz=322						
WCT	**Wildcat Mounta**	**33.88**	**109**	P	**P**	**23 56 31.8**	**+0.5**
WCT				IAmb	IAmb	23 56 34.6	
	comp=Z,27nm,1.3s						
BCW	**Bitter Crk WRg**	**33.92**	**115**	P	**P**	**23 56 32.1**	**+0.4**
NLU	**North Lily Min**	**33.92**	**101**	P	**P**	**23 56 31.7**	**-0.1**
TPNV	**Topopah Spring**	**33.95**	**109**	P	**P**	**23 56 33.0**	**+1.0**
TPNV				IAmb	IAmb	23 56 37.5	
	comp=Z,30nm,1.2s						
TPNV	**Topopah Spring**	**33.95**	**109**	P	**P**	**23 56 33.0**	**+1.0**
TPNV				pmax	pmax		
	comp=Z,30nm,1.2s						
MPMC	**Manual Prospec**	**34.00**	**111**	P	**P**	**23 56 34.6**	**+2.0**
	baz=321,SNR=10						
FURC	**Furnace Creek,**	**34.01**	**110**	P	**P**	**23 56 33.5**	**+1.2**
	baz=321						
ARVC	**Arvin**	**34.06**	**114**	P	**P**	**23 56 34.4**	**+1.6**
	baz=323						
MPU	**Maple Canyon**	**34.11**	**100**	P	**P**	**23 56 33.7**	**+0.2**
BSUT	**Blindstream Ca**	**34.21**	**99**	P	**P**	**23 56 35.4**	**+0.9**
BSUT				IAmb	IAmb	23 56 40.1	
	comp=Z,10nm,1.0s						
PRN	**Pahroc Range**	**34.22**	**107**	P	**P**	**23 56 35.0**	**+0.6**
PRN				IAmb	IAmb	23 56 40.5	
	comp=Z,38nm,1.6s						
GWY	**Greenwater Val**	**34.32**	**110**	P	**P**	**23 56 36.6**	**+1.3**
GWY				IAmb	IAmb	23 56 40.5	
	comp=Z,32nm,1.3s						
LRMC	**Laurel Mtn Rad**	**34.36**	**112**	P	**P**	**23 56 37.1**	**+1.6**
	baz=322						
QSM	**Queen of Sheba**	**34.39**	**111**	P	**P**	**23 56 36.3**	**+0.6**
QSM				IAmb	IAmb	23 56 41.9	
	comp=Z,24nm,1.3s						
CCAC	**Calif City Air**	**34.45**	**113**	P	**P**	**23 56 37.0**	**+0.7**
CCAC				IAmb	IAmb	23 57 01.4	
	comp=Z,7.7nm,0.6s						
EDW2	**Edwards Air Fo**	**34.67**	**113**	P	**P**	**23 56 38.5**	**+0.3**
	baz=323						
TCRU	**Three Creeks R**	**34.70**	**103**	P	**P**	**23 56 40.2**	**+1.6**
TCRU				IAmb	IAmb	23 56 44.7	
	comp=Z,22nm,1.3s						
SHOC	**Shoshone, Teco**	**34.74**	**110**	P	**P**	**23 56 40.6**	**+1.8**
	baz=321						
RDMU	**Red Mountain**	**34.83**	**98**	P	**P**	**23 56 39.3**	**-0.3**
RDMU				IAmb	IAmb	23 57 02.6	
	comp=Z,27nm,1.8s						
SHPR	**Sheep Range**	**34.85**	**108**	P	**P**	**23 56 41.0**	**+1.2**
TMUT	**Trail Mountain**	**34.86**	**101**	P	**P**	**23 56 40.3**	**+0.3**
MVU	**Marysvale**	**34.90**	**103**	P	**P**	**23 56 41.5**	**+1.2**
MSU	**Marysvale**	**34.91**	**103**	P	**P**	**23 56 41.8**	**+1.4**
MSU	**Marysvale**	**34.91**	**103**	P	**P**	**23 56 41.8**	**+1.4**
GSC	**Goldstone, Bar**	**34.94**	**111**	IAmb	IAmb	23 56 45.9	
	comp=Z,27nm,1.2s						
GSC	**Goldstone, Bar**	**34.94**	**111**	P	**P**	**23 56 42.3**	**+1.7**
	baz=322,SNR=8.7						
P17A	**Butcher Ranch,**	**34.98**	**100**	P	**P**	**23 56 39.9**	**-1.0**
CCUT	**Cedar City**	**35.00**	**105**	P	**P**	**23 56 41.4**	**+0.2**
CCUT				IAmb	IAmb	23 56 46.2	
	comp=Z,22nm,1.6s						
K22A	**Casper**	**35.04**	**92**	P	**P**	**23 56 40.5**	**-1.0**
K22A				IAmb	IAmb	23 56 46.2	
	comp=Z,17nm,1.4s						
K22A	**Casper**	**35.04**	**92**	P	**P**	**23 56 42.3**	**+0.9**
	baz=313						
SZCU	**Shurtz Canyon**	**35.11**	**105**	P	**P**	**23 56 42.8**	**+0.6**
PASC	**Pasadena Art C**	**35.14**	**114**	P	**P**	**23 56 41.9**	**-0.3**
PASC				IAmb	IAmb	23 56 45.0	
	comp=Z,37nm,1.4s						
Q16A	**Castle Valley**	**35.15**	**101**	P	**P**	**23 56 43.4**	**+1.0**
Q16A				IAmb	IAmb	23 56 47.7	
	comp=Z,29nm,1.4s						
MTPU	**Mount Pierson**	**35.26**	**103**	P	**P**	**23 56 44.0**	**+0.5**
TUQ	**Turquoise Moun**	**35.28**	**110**	P	**P**	**23 56 45.2**	**+1.7**
	baz=321						
YAK	**Yakutsk**	**35.31**	**309**	LR	LR	00 12 36.3	
	comp=Z,630nm,18.6s,baz=78,slow=39						
YAK	**Yakutsk**	**35.31**	**309**	P	**P**	**23 56 44.1**	**+0.8**
YAK	**Yakutsk**	**35.31**	**309**	*e*P	**P**	**23 56 43.1**	**-0.2**
YAK				*e*S	**S**	**00 02 16.0**	**-0.3**
YAK				e*SS	sS	00 02 36.1	+12
YAK				*e*SS	**SnSn**	**00 04 26.9**	**-7.4**
YAK				pmax	pmax		
	comp=Z,46nm,1.3s						
YAK				pmax	pmax		
	comp=N,14nm,1.1s						
YAK				pmax	pmax		
	comp=E,31nm,1.2s						
YAK				smax	smax		
	comp=N,71nm,3.2s						
YAK				MLR	MLR		
	comp=Z,602nm,15.0s						
YAK				MLR	MLR		
	comp=N,323nm,15.0s						
YAK				MLR	MLR		
	comp=E,401nm,15.0s						
RWWY	**Rawlins**	**35.32**	**94**	P	**P**	**23 56 43.5**	**-0.5**
RWWY				IAmb	IAmb	23 56 46.9	
	comp=Z,48nm,1.8s						
BFSC	**Mount Baldy Ra**	**35.35**	**113**	P	**P**	**23 56 45.6**	**+1.5**
	baz=323						
SRU	**San Rafael Swe**	**35.36**	**100**	P	**P**	**23 56 44.8**	**+0.6**
SRU				IAmb	IAmb	23 56 54.2	
	comp=Z,20nm,0.9s						
SRU	**San Rafael Swe**	**35.36**	**100**	P	**P**	**23 56 44.8**	**+0.6**
SRU				pmax	pmax		
	comp=Z,20nm,0.9s						
RSSD	**Black Hills**	**35.42**	**88**	P	**P**	**23 56 45.5**	**+0.8**
RSSD				IAmb	IAmb	23 56 48.9	
	comp=Z,16nm,1.1s						
RSSD	**Black Hills**	**35.42**	**88**	P	**P**	**23 56 45.5**	**+0.8**
RSSD				pmax	pmax		
	comp=Z,17nm,1.1s						
FMP	**Fort Macarthur**	**35.45**	**115**	P	**P**	**23 56 45.8**	**+1.0**
	baz=324						
MDND	**Maddock**	**35.46**	**80**	P	**P**	**23 56 45.7**	**+0.9**
MDND	**Maddock**	**35.46**	**80**	P	**P**	**23 56 45.6**	**+0.8**
	baz=307						
LCMT	**Little Creek M**	**35.47**	**105**	P	**P**	**23 56 45.4**	**+0.3**
LCMT				IAmb	IAmb	23 56 50.3	
	comp=Z,16nm,1.4s						
HEC	**Hector,Ludlow**	**35.55**	**111**	P	**P**	**23 56 47.1**	**+1.3**
	baz=322						
V12A	**Nelson**	**35.61**	**109**	P	**P**	**23 56 47.4**	**+1.1**
V12A				IAmb	IAmb	23 56 51.9	
	comp=Z,45nm,1.5s						
PKCU	**Pink Cliffs**	**35.63**	**104**	P	**P**	**23 56 47.6**	**+0.8**
PKCU				IAmb	IAmb	23 56 55.4	
	comp=Z,37nm,1.6s						
E28A	**Huff**	**35.66**	**82**	P	**P**	**23 56 47.5**	**+1.0**
KNB	**Kanab**	**35.68**	**105**	P	**P**	**23 56 47.3**	**+0.3**
KNB				IAmb	IAmb	23 56 52.3	
	comp=Z,20nm,1.4s						
KNB	**Kanab**	**35.68**	**105**	P	**P**	**23 56 47.3**	**+0.3**
KNB				pmax	pmax		
	comp=Z,20nm,1.4s						
O20A	**White River Ci**	**35.85**	**97**	P	**P**	**23 56 47.7**	**-0.7**
O20A	**White River Ci**	**35.85**	**97**	P	**P**	**23 56 49.8**	**+1.3**
	baz=315,SNR=5.6						
GMRC	**Granite Mounta**	**35.93**	**110**	P	**P**	**23 56 50.5**	**+1.4**
	baz=322,SNR=9.2						
ELS	**Elsinore Mount**	**35.94**	**114**	P	**P**	**23 56 49.6**	**+0.6**
ULM	**Lac du Bonnet**	**36.01**	**74**	P	**P**	**23 56 49.9**	**+0.4**
	comp=Z,7.1nm,0.9s,baz=304,slow=11,SNR=7.5						
ULM				LR	LR	00 11 57.4	
	comp=Z,111nm,18.1s,baz=294,slow=37						
	comp=Z,7.1nm,0.9s						
ULM	**Lac du Bonnet**	**36.01**	**74**	P	**P**	**23 56 49.5**	**0.0**
ULM				IAmb	IAmb	23 56 55.4	
	comp=Z,13nm,1.1s						
ULM	**Lac du Bonnet**	**36.01**	**74**	P	**P**	**23 56 49.5**	**0.0**
ULM				pmax	pmax		
	comp=Z,13nm,1.1s						
MURC	**Murrieta**	**36.09**	**113**	P	**P**	**23 56 51.7**	**+1.3**
	baz=323						
KHLH	**Kahului Airpor**	**36.28**	**178**	P	**P**	**23 56 51.8**	**-0.2**
BELC	**Belle Mtn. Jos**	**36.37**	**112**	P	**P**	**23 56 54.1**	**+1.2**
	baz=323,SNR=6.2						
PFO	**Pinyon Flats O**	**36.45**	**113**	P	**P**	**23 56 54.3**	**+0.8**
PFO				IAmb	IAmb	23 56 59.2	
	comp=Z,33nm,1.6s						
PFO	**Pinyon Flats O**	**36.45**	**113**	*i* P	**P**	**23 56 54.1**	**+0.6**
PFO				pmax	pmax		
	comp=Z,37nm,1.5s						
PFO	**Pinyon Flats O**	**36.45**	**113**	P	**P**	**23 56 55.3**	**+1.7**
	baz=323						
TPFO	**Pinon Flats**	**36.46**	**113**	P	**P**	**23 56 55.3**	**+1.7**
	baz=323,SNR=5.3						
PMD	**Palm Desert**	**36.46**	**112**	P	**P**	**23 56 54.2**	**+0.7**
PMD				IAmb	IAmb	23 56 58.8	
	comp=Z,32nm,1.6s						
NEE2	**Needles Airpor**	**36.47**	**109**	P	**P**	**23 56 55.3**	**+1.7**
	baz=322						
N23A	**Red Feather La**	**36.56**	**94**	P	**P**	**23 56 55.1**	**+0.5**
N23A	**Red Feather La**	**36.56**	**94**	P	**P**	**23 56 55.3**	**+0.7**
	baz=314						
PV21	**Cone Mtn., Par**	**36.59**	**99**	P	**P**	**23 56 55.2**	**+0.4**
W13A	**Hualapai Mount**	**36.59**	**108**	P	**P**	**23 56 55.8**	**+0.9**
W13A				IAmb	IAmb	23 57 13.9	
	comp=Z,17nm,1.3s						
PV23	**Carpenter Ridg**	**36.65**	**100**	P	**P**	**23 56 55.5**	**+0.2**
IRM	**Iron Mountain**	**36.68**	**111**	P	**P**	**23 56 56.5**	**+1.1**
	baz=322,SNR=18						
PV10	**Paradox Valley**	**36.69**	**100**	P	**P**	**23 56 56.3**	**+0.6**
PV14	**Lion Creek, Pa**	**36.70**	**100**	P	**P**	**23 56 54.6**	**-1.1**
PV14				IAmb	IAmb	23 57 00.0	
	comp=Z,27nm,1.8s						
PV22	**Blue Mesa, Par**	**36.71**	**99**	P	**P**	**23 56 55.5**	**-0.3**
PV20	**West Nyswonger**	**36.75**	**100**	P	**P**	**23 56 55.8**	**-0.3**
PV19	**Morning Glory**	**36.77**	**100**	P	**P**	**23 56 56.0**	**-0.4**
PV19				IAmb	IAmb	23 57 01.6	
	comp=Z,26nm,1.9s						
PV17	**East Wray Mesa**	**36.80**	**100**	P	**P**	**23 56 57.4**	**+0.8**
PV17				IAmb	IAmb	23 57 24.2	
	comp=Z,42nm,2.0s						
PV16	**Nyswonger Mesa**	**36.80**	**100**	P	**P**	**23 56 57.9**	**+1.3**
PV16				IAmb	IAmb	23 57 03.2	
	comp=Z,39nm,2.0s						
PV11	**David Mesa, Pa**	**36.83**	**100**	P	**P**	**23 56 58.6**	**+1.8**
PV11				IAmb	IAmb	23 57 06.7	
	comp=Z,19nm,1.3s						
PV07	**Paradox Valley**	**36.85**	**99**	P	**P**	**23 56 57.0**	**0.0**
PV18	**Skein Mesa, Pa**	**36.85**	**100**	P	**P**	**23 56 56.8**	**-0.2**
PV12	**Saucer Basin,**	**36.86**	**100**	P	**P**	**23 56 57.3**	**+0.2**
PV05	**Paradox Valley**	**36.87**	**100**	P	**P**	**23 56 57.0**	**-0.2**
PV03	**Paradox Valley**	**36.88**	**100**	P	**P**	**23 56 56.6**	**-0.6**
BC3	**Big Chuckawall**	**36.92**	**111**	P	**P**	**23 56 58.6**	**+1.0**
	baz=323						
PV13	**Radium Mtn., P**	**36.96**	**100**	P	**P**	**23 56 57.8**	**-0.2**
PV02	**Paradox Valley**	**36.97**	**100**	P	**P**	**23 56 58.0**	**-0.1**
PV15	**Paradox Valley**	**37.01**	**99**	P	**P**	**23 56 57.9**	**-0.5**
PV15				IAmb	IAmb	23 57 02.7	
	comp=Z,16nm,1.1s						
MONP2	**Monument Peak**	**37.04**	**113**	P	**P**	**23 56 59.5**	**+0.8**
	baz=324						
PDMCI	**Parker Dam,Lak**	**37.08**	**109**	P	**P**	**23 56 60.0**	**+1.2**
	baz=322						
BAR	**Barrett**	**37.09**	**114**	P	**P**	**23 57 00.8**	**+1.9**
BAR				IAmb	IAmb	23 57 04.1	
	comp=Z,32nm,1.4s						
PV01	**Paradox Valley**	**37.12**	**99**	P	**P**	**23 56 58.8**	**-0.5**
AGMN	**Agassiz Nation**	**37.18**	**77**	P	**P**	**23 56 59.6**	**+0.1**
SMCO	**Snowmass**	**37.22**	**97**	P	**P**	**23 57 00.6**	**+0.2**
SWSC	**Sam W. Stewart**	**37.31**	**112**	P	**P**	**23 57 02.0**	**+1.3**
	baz=323						
BLYC	**Blythe**	**37.32**	**110**	P	**P**	**23 57 01.4**	**+0.6**
BLYC				IAmb	IAmb	23 57 06.0	
	comp=Z,26nm,1.1s						
CBX	**Cerro Bola**	**37.39**	**114**	P	**P**	**23 57 01.8**	**+0.3**
CBX				IAmb	IAmb	23 57 07.0	
	comp=Z,33nm,1.7s						
IKP	**In-Ko-Pah, Jac**	**37.39**	**113**	P	**P**	**23 57 02.8**	**+1.2**
	baz=324						
YUH	**Yuha Desert**	**37.49**	**113**	P	**P**	**23 57 02.5**	**+0.3**
YUH				IAmb	IAmb	23 57 07.2	
	comp=Z,31nm,1.6s						
WUAZ	**Wupatki**	**37.58**	**105**	P	**P**	**23 57 03.8**	**+0.6**
GLA	**Glamis**	**37.72**	**111**	P	**P**	**23 57 06.1**	**+1.9**
GLA				IAmb	IAmb	23 57 09.2	
	comp=Z,22nm,1.2s						
GLA	**Glamis**	**37.72**	**111**	P	**P**	**23 57 06.1**	**+1.9**
GLA				pmax	pmax		
	comp=Z,22nm,1.2s						
GLA	**Glamis**	**37.72**	**111**	P	**P**	**23 57 05.3**	**+1.1**
	baz=323						
Y14A	**Wickenburg**	**37.95**	**108**	P	**P**	**23 57 07.5**	**+1.3**
SUSD	**Miller**	**37.96**	**84**	P	**P**	**23 57 06.7**	**+0.6**
SUSD				IAmb	IAmb	23 57 14.8	
	comp=Z,30nm,1.1s						
SUSD	**Miller**	**37.96**	**84**	P	**P**	**23 57 06.3**	**+0.2**
	baz=311						
B35A	**Bob, Littlefor**	**38.27**	**75**	P	**P**	**23 57 08.5**	**-0.2**
B35A				IAmb	IAmb	23 57 12.0	
	comp=Z,20nm,1.4s						
S22A	**4UR Ranch, Cre**	**38.34**	**98**	P	**P**	**23 57 10.1**	**+0.5**
S22A	**4UR Ranch, Cre**	**38.34**	**98**	P	**P**	**23 57 10.7**	**+1.0**
	baz=317						
Q24A	**Divide**	**38.36**	**95**	P	**P**	**23 57 10.1**	**+0.1**
Q24A	**Divide**	**38.36**	**95**	P	**P**	**23 57 10.7**	**+0.8**
	baz=316						
X16A	**Lo Mia Camp, P**	**38.39**	**106**	P	**P**	**23 57 10.3**	**+0.2**
113A	**Mohawk Valley,**	**38.48**	**110**	P	**P**	**23 57 12.4**	**+1.8**
F33A	**5 Mile Ranch,**	**38.49**	**80**	P	**P**	**23 57 10.8**	**+0.3**
OGNE	**Ogallala**	**38.65**	**90**	P	**P**	**23 57 13.3**	**+1.2**
OGNE				IAmb	IAmb	23 57 18.5	
	comp=Z,11nm,0.7s						
W18A	**Petrified Fore**	**38.75**	**104**	P	**P**	**23 57 13.3**	**+0.3**
W18A				IAmb	IAmb	23 57 18.0	
	comp=Z,43nm,1.8s						
ASAJ	**Asahikawa**	**38.83**	**277**	LR	LR	00 14 39.4	
	comp=Z,110nm,18.9s,baz=16,slow=38						
SDCO	**Great Sand Dun**	**39.05**	**97**	P	**P**	**23 57 15.0**	**-0.7**
X18A	**Snowflake**	**39.09**	**105**	P	**P**	**23 57 15.4**	**-0.5**
X18A					**P**	**23 57 16.3**	**+0.4**
K31A	**O'Neill**	**39.28**	**86**	P	**P**	**23 57 18.1**	**+0.9**
K31A				IAmb	IAmb	23 57 20.3	
	comp=Z,17nm,0.6s						
SFX	**San Felipe**	**39.33**	**113**	P	**P**	**23 57 19.6**	**+2.0**
SFX				IAmb	IAmb	23 57 23.3	
	comp=Z,35nm,1.4s						
PIX	**Pinacate**	**39.60**	**111**	P	**P**	**23 57 19.6**	**-0.4**
214A	**Organ Pipe Nat**	**39.62**	**110**	P	**P**	**23 57 20.7**	**+0.6**
214A	**Organ Pipe Nat**	**39.62**	**110**	P	**P**	**23 57 21.5**	**+1.4**
	baz=323,SNR=7.0						
KSCO	**Kaye Shedlock’**	**39.69**	**93**	P	**P**	**23 57 20.5**	**-0.3**
KSCO				IAmb	IAmb	23 57 25.3	
	comp=Z,67nm,1.6s						
KSCO	**Kaye Shedlock’**	**39.69**	**93**	P	**P**	**23 57 21.1**	**+0.3**
	baz=316						
ECSD	**EROS Data Cent**	**39.70**	**83**	P	**P**	**23 57 19.5**	**-1.1**
EYMN	**Ely**	**39.70**	**74**	P	**P**	**23 57 20.5**	**-0.2**
EYMN				IAmb	IAmb	23 57 27.0	
	comp=Z,21nm,0.9s						
F36A	**Milaca**	**39.95**	**78**	P	**P**	**23 57 22.6**	**-0.2**
T25A	**Trinidad**	**40.09**	**97**	P	**P**	**23 57 25.2**	**+1.0**
T25A	**Trinidad**	**40.09**	**97**	P	**P**	**23 57 25.1**	**+0.9**
	baz=318						

TUC	**Tucson**	**40.38**	**108**	P	**P**	**23 57 26.9**	**+0.4**
TUC				IAmb	IAmb	23 57 31.9	
	comp=Z,29nm,1.6s						
TUC	**Tucson**	**40.38**	**108**	P	**P**	**23 57 26.9**	**+0.4**
TUC				pmax	pmax		
	comp=Z,29nm,1.6s						
BGNE	**Belgrade**	**40.44**	**87**	P	**P**	**23 57 27.2**	**+0.3**
BGNE	**Belgrade**	**40.44**	**87**	P	**P**	**23 57 26.8**	**-0.1**
	baz=314						
E38A	**The Farm, Brul**	**40.52**	**76**	IAmb	IAmb	23 57 33.0	
	comp=Z,31nm,1.2s						
ANMO	**Albuquerque**	**40.62**	**101**	LR	LR	00 13 34.2	
	comp=Z,121nm,18.9s,baz=44,slow=35						
ANMO	**Albuquerque**	**40.62**	**101**	P	**P**	**23 57 28.9**	**+0.3**
ANMO	**Albuquerque**	**40.62**	**101**	P	**P**	**23 57 28.9**	**+0.3**
ANMO				pmax	pmax		
	comp=Z,12nm,1.8s						
SPMN	**Marine on St.**	**40.75**	**78**	P	**P**	**23 57 29.5**	**+0.1**
SPMN				IAmb	IAmb	23 57 30.8	
	comp=Z,74nm,1.8s						
SPMN	**Marine on St.**	**40.75**	**78**	P	**P**	**23 57 29.5**	**+0.1**
	baz=311,SNR=5.3						
L34A	**Svendsen Farm,**	**41.02**	**85**	P	**P**	**23 57 31.7**	**0.0**
L34A				IAmb	IAmb	23 57 34.7	
	comp=Z,22nm,1.0s						
Y22D	**IRIS PASSCAL I**	**41.04**	**102**	P	**P**	**23 57 31.4**	**-0.7**
	baz=320						
Y22F	**Passcal Instru**	**41.04**	**102**	P	**P**	**23 57 31.2**	**-0.8**
	baz=320						
DUN6	**Lazy B Ranch**	**41.07**	**106**	P	**P**	**23 57 32.2**	**-0.1**
DUN6				IAmb	IAmb	23 57 42.6	
	comp=Z,53nm,1.5s						
BNM	**Barren Site**	**41.14**	**102**	P	**P**	**23 57 33.6**	**+0.7**
I37A	**Lemond, Waseca**	**41.24**	**80**	P	**P**	**23 57 33.5**	**+0.1**
I37A				IAmb	IAmb	23 57 39.3	
	comp=Z,38nm,1.1s						
KLR	**Kul'dur**	**41.27**	**290**	LR	LR	00 16 56.1	
	comp=Z,196nm,18.1s,baz=56,slow=39						
KLR	**Kul'dur**	**41.27**	**290**	*ce*P	**P**	**23 57 33.4**	**-0.2**
KLR				pmax	pmax		
	comp=Z,20nm,1.7s						
N33A	**J Bar K, Exete**	**41.29**	**87**	P	**P**	**23 57 33.7**	**-0.1**
N33A				IAmb	IAmb	23 57 37.9	
	comp=Z,44nm,1.1s						
CBKS	**Cedar Bluff**	**41.41**	**91**	P	**P**	**23 57 35.4**	**+0.5**
CBKS				IAmb	IAmb	23 57 37.6	
	comp=Z,36nm,1.2s						
CBKS	**Cedar Bluff**	**41.41**	**91**	P	**P**	**23 57 35.4**	**+0.5**
CBKS				pmax	pmax		
	comp=Z,36nm,1.3s						
121A	**Cookes Peak, D**	**41.77**	**104**	P	**P**	**23 57 38.8**	**+0.7**
121A	**Cookes Peak, D**	**41.77**	**104**	P	**P**	**23 57 38.3**	**+0.2**
	baz=322						
319A	**Douglas**	**41.90**	**107**	P	**P**	**23 57 39.4**	**+0.3**
N35A	**Tabor**	**42.19**	**85**	P	**P**	**23 57 40.6**	**-0.6**
R32A	**Long Quarter,**	**42.25**	**90**	P	**P**	**23 57 41.5**	**-0.3**
R32A				IAmb	IAmb	23 57 43.3	
	comp=Z,17nm,1.1s						
SCIA	**State Center**	**42.77**	**82**	P	**P**	**23 57 46.6**	**+0.7**
SCIA				IAmb	IAmb	23 57 46.9	
	comp=Z,42nm,1.5s						
I40A	**Norwalk**	**42.81**	**78**	IAmb	IAmb	23 57 50.6	
	comp=Z,20nm,0.6s						
F42A	**Maple Grove Fa**	**42.87**	**74**	P	**P**	**23 57 47.3**	**+0.6**
F42A				IAmb	IAmb	23 57 48.9	
	comp=Z,56nm,1.6s						
KSU1	**Kansas State U**	**42.90**	**88**	P	**P**	**23 57 46.6**	**-0.4**
KSU1				IAmb	IAmb	23 57 48.0	
	comp=Z,16nm,1.0s						
HSIG		**42.93**	**111**	P	**P**	**23 57 49.0**	**+1.6**
HSIG				IAmb	IAmb	23 57 52.1	
	comp=Z,31nm,1.4s						
E43A	**Lone Tree Farm**	**43.06**	**73**	P	**P**	**23 57 48.8**	**+0.6**
E43A				IAmb	IAmb	23 57 53.5	
	comp=Z,32nm,1.4s						
MSTX	**Muleshoe**	**43.34**	**98**	P	**P**	**23 57 50.3**	**-0.5**
	baz=320						
KAN12	**Harper NE Stat**	**43.45**	**91**	P	**P**	**23 57 51.2**	**-0.3**
OK035	**E0210 Rd and N**	**43.49**	**92**	P	**P**	**23 57 52.4**	**+0.5**
OK035				IAmb	IAmb	23 57 55.4	
	comp=Z,22nm,0.8s						
KAN08	**Anthony NE Sta**	**43.52**	**91**	P	**P**	**23 57 51.1**	**-0.9**
KAN08				IAmb	IAmb	23 57 55.4	
	comp=Z,33nm,1.6s						
N38A	**Joes South For**	**43.54**	**83**	P	**P**	**23 57 52.2**	**+0.1**
N38A				IAmb	IAmb	23 57 56.9	
	comp=Z,16nm,0.8s						
U32A	**Winter Ranch,**	**43.58**	**93**	P	**P**	**23 57 52.8**	**+0.2**
U32A				IAmb	IAmb	23 57 53.6	
	comp=Z,36nm,1.4s						
ELIS	**Ellis County**	**43.58**	**93**	P	**P**	**23 57 52.8**	**+0.2**
ELIS				IAmb	IAmb	23 57 56.6	
	comp=Z,43nm,1.4s						
OK038	**West end E0370**	**43.65**	**92**	P	**P**	**23 57 53.6**	**+0.5**
OK038				IAmb	IAmb	23 58 12.6	
	comp=Z,19nm,1.0s						
JFWS	**Jewell Farm**	**43.67**	**79**	P	**P**	**23 57 52.1**	**-1.1**
	baz=313						
OK032	**Salt Plains WL**	**43.70**	**92**	P	**P**	**23 57 54.2**	**+0.8**
OK032				IAmb	IAmb	23 57 57.2	
	comp=Z,26nm,1.4s						
KAN14	**Manchester OK**	**43.72**	**91**	P	**P**	**23 57 54.4**	**+0.7**
KAN14				IAmb	IAmb	23 58 11.7	
	comp=Z,24nm,1.6s						
L40A	**Anamosa**	**43.74**	**81**	P	**P**	**23 57 53.4**	**-0.3**
L40A				IAmb	IAmb	23 57 59.5	
	comp=Z,16nm,0.8s						
KS20	**Mayfield South**	**43.74**	**91**	P	**P**	**23 57 53.6**	**-0.3**
KS20				IAmb	IAmb	23 57 57.1	
	comp=Z,40nm,1.5s						
KAN09	**Caldwell North**	**43.77**	**91**	P	**P**	**23 57 53.9**	**-0.2**
KAN09				IAmb	IAmb	23 57 58.1	
	comp=Z,21nm,1.2s						
GDL2	**Guadalupe Moun**	**43.84**	**101**	P	**P**	**23 57 55.2**	**+0.4**
KAN13	**South Haven SW**	**43.94**	**91**	P	**P**	**23 57 56.2**	**+0.8**
KAN13				IAmb	IAmb	23 57 59.4	
	comp=Z,14nm,1.0s						
CLNB	**Carlsbad**	**44.05**	**101**	P	**P**	**23 57 56.8**	**+0.2**
JMM	**Marumori**	**44.16**	**271**	P	**P**	**23 57 58.1**	**+1.0**
JMM				IAmb	IAmb	23 58 00.3	
	comp=Z,28nm,1.1s						
P38A	**Dawn**	**44.20**	**85**	P	**P**	**23 57 57.1**	**-0.4**
P38A				IAmb	IAmb	23 58 03.2	
	comp=Z,13nm,0.9s						
CSTR	**Hydro, Custer**	**44.29**	**93**	P	**P**	**23 57 58.7**	**+0.5**
USRK	**Ussuriysk Ar.**	**44.44**	**285**	LR	LR	00 18 17.5	
	comp=Z,137nm,18.0s,baz=33,slow=38						
OK048	**Pawnee Station**	**44.67**	**91**	P	**P**	**23 58 03.4**	**+2.1**
OK048				IAmb	IAmb	23 58 05.2	
	comp=Z,22nm,1.5s						
SPITS	**Spitsbergen Ar**	**44.81**	**2**	LR	LR	00 16 41.6	
	comp=Z,279nm,19.5s,baz=330,slow=36						
SFJD	**Kangerlussuaq**	**44.83**	**32**	LR	LR	00 16 02.6	
	comp=Z,190nm,19.0s,baz=318,slow=35						
OK029	**Liberty Lake**	**44.85**	**92**	P	**P**	**23 58 03.0**	**+0.3**
OK029				IAmb	IAmb	23 58 06.0	
	comp=Z,18nm,1.2s						
ODSA	**Odessa**	**44.88**	**100**	P	**P**	**23 58 03.5**	**+0.4**
ODSA				IAmb	IAmb	23 58 07.1	
	comp=Z,12nm,1.0s						
N41A	**Harden Midland**	**44.88**	**82**	P	**P**	**23 58 01.9**	**-0.9**
N41A				IAmb	IAmb	23 58 08.3	
	comp=Z,20nm,0.8s						
WMOK	**Wichita Mounta**	**44.92**	**94**	P	**P**	**23 58 03.0**	**-0.3**
WMOK				IAmb	IAmb	23 58 04.8	
	comp=Z,34nm,1.8s						
WMOK	**Wichita Mounta**	**44.92**	**94**	P	**P**	**23 58 03.0**	**-0.3**
WMOK				pmax	pmax		
	comp=Z,34nm,1.8s						
OK052	**Battle Ridge R**	**45.06**	**91**	P	**P**	**23 58 03.9**	**-0.4**
OK052				IAmb	IAmb	23 58 06.0	
	comp=Z,17nm,1.2s						
P40A	**Paris**	**45.07**	**84**	P	**P**	**23 58 03.0**	**-1.4**
P40A				IAmb	IAmb	23 58 11.3	
	comp=Z,19nm,1.1s						
OK030	**Cody Creek RV**	**45.12**	**91**	P	**P**	**23 58 05.5**	**+0.6**
OK030				IAmb	IAmb	23 58 08.9	
	comp=Z,20nm,1.2s						
OKCSW	**OKLAHOMA CITY**	**45.15**	**92**	P	**P**	**23 58 05.4**	**+0.3**
FNO	**Franklin**	**45.28**	**92**	P	**P**	**23 58 07.1**	**+1.0**
NRIK	**Noril'sk**	**45.32**	**333**	P	**P**	**23 58 07.0**	**+1.0**
	comp=Z,6.4nm,0.9s,baz=46,slow=7.1,SNR=11						
NRIK				LR	LR	00 19 13.5	
	comp=Z,171nm,19.8s,baz=30,slow=39						
	comp=Z,6.4nm,0.9s						
NRIK	**Noril'sk**	**45.32**	**333**	P	**P**	**23 58 06.4**	**+0.5**
NRIK				IAmb	IAmb	23 58 10.7	
	comp=Z,15nm,1.1s						
NRIK	**Noril'sk**	**45.32**	**333**	*ce*P	**P**	**23 58 06.8**	**+0.8**
NRIK				pmax	pmax		
	comp=Z,16nm,1.2s						
DEOK	**Depew**	**45.34**	**91**	P	**P**	**23 58 04.8**	**-1.8**
GLMI	**Grayling**	**45.34**	**73**	P	**P**	**23 58 07.2**	**+0.8**
GLMI				IAmb	IAmb	23 58 10.0	
	comp=Z,19nm,0.8s						
MDJ	**Mudanjiang**	**45.41**	**287**	P	**P**	**23 58 02.6**	**-4.5**
MDJ	**Mudanjiang**	**45.41**	**287**	sP	sP	23 58 12.8	-1.4
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,110nm,4.7s						
MDJ				LR	LR		
	comp=N,200nm,11.9s						
MDJ				LR	LR		
	comp=E,340nm,16.1s						
MDJ				LR	LR		
	comp=Z,310nm,16.5s						
MDJ	**Mudanjiang**	**45.41**	**287**	P	**P**	**23 58 06.3**	**-0.8**
MDJ				sP	pP	23 58 10.1	-2.0
MDJ				PcP	**PcP**	**23 59 45.8**	**-0.2**
MDJ				PP	**PP**	**23 59 57.0**	**+3.9**
MDJ				S	**S**	**00 04 48.4**	**+1.0**
MDJ				pmax	pmax		
	comp=Z,6.0nm,2.0s						
MDJ				pmax	pmax		
	comp=Z,82nm,5.1s						
MDJ				LR	LR		
	comp=Z,200nm,10.8s						
MDJ				LR	LR		
	comp=Z,340nm,15.4s						
MDJ				LR	LR		
	comp=Z,310nm,21.7s						
W35A	**Tecumseh**	**45.65**	**92**	P	**P**	**23 58 08.4**	**-0.6**
TUL1	**Leonard**	**45.67**	**90**	P	**P**	**23 58 09.1**	**-0.1**
TUL1				IAmb	IAmb	23 58 29.4	
	comp=Z,28nm,1.8s						
TUL1	**Leonard**	**45.67**	**90**	P	**P**	**23 58 09.2**	**0.0**
	baz=318						
BNX	**BinXian**	**45.78**	**289**	⇑P	**P**	**23 58 10.8**	**+0.8**
BNX				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BNX				pmax	pmax		
	comp=Z,190nm,5.1s						
HDIL	**Hopedale**	**45.83**	**81**	P	**P**	**23 58 09.9**	**-0.5**
R40A	**Maddies Statio**	**45.84**	**85**	P	**P**	**23 58 09.6**	**-1.0**
R40A				IAmb	IAmb	23 58 12.8	
	comp=Z,8.6nm,0.9s						
U38A	**Gravette**	**46.04**	**89**	P	**P**	**23 58 11.2**	**-1.0**
ABTX	**Abilene, Hawle**	**46.05**	**97**	P	**P**	**23 58 12.2**	**-0.1**
ABTX				IAmb	IAmb	23 58 15.9	
	comp=Z,21nm,1.1s						
ABTX	**Abilene, Hawle**	**46.05**	**97**	P	**P**	**23 58 12.5**	**+0.2**
	baz=320						
LOOK	**Love County**	**46.35**	**93**	P	**P**	**23 58 14.9**	**+0.3**
LOOK				IAmb	IAmb	23 58 17.0	
	comp=Z,12nm,0.8s						
P43A	**Skaggs, Pawnee**	**46.36**	**82**	P	**P**	**23 58 13.5**	**-1.1**
HHAR	**Hobbs**	**46.40**	**88**	P	**P**	**23 58 14.4**	**-0.6**
HHAR				IAmb	IAmb	23 58 17.9	
	comp=Z,22nm,1.8s						
TX31	**Lajitas Ar. Si**	**46.46**	**103**	P	**P**	**23 58 16.0**	**+0.4**
TX32	**Lajitas Array**	**46.46**	**103**	P	**P**	**23 58 16.1**	**+0.4**
TX32				IAmb	IAmb	23 58 42.8	
	comp=Z,11nm,1.4s						
TXAR	**Lajitas Array**	**46.46**	**103**	P	**P**	**23 58 16.6**	**+1.0**
	comp=Z,3.1nm,1.0s,baz=319,slow=5.5,SNR=18						
TXAR				LR	LR	00 15 57.4	
	comp=Z,139nm,20.8s,baz=312,slow=34						
	comp=Z,3.1nm,1.0s						
TXAR	**Lajitas Array**	**46.46**	**103**	P	**P**	**23 58 15.4**	**-0.2**
TXAR	**Lajitas Array**	**46.46**	**103**	P	**P**	**23 58 15.4**	**-0.2**
MJB9	**Matsu-Tunnel**	**46.53**	**272**	P	**P**	**23 58 17.0**	**+1.0**
MAJO	**Matsushiro**	**46.53**	**272**	P	**P**	**23 58 16.4**	**+0.4**
MAJO	**Matsushiro**	**46.53**	**272**	P	**P**	**23 58 16.4**	**+0.4**
MAJO				pmax	pmax		
	comp=Z,27nm,1.3s						
MJAR	**Matsushiro Arr**	**46.53**	**272**	P	**P**	**23 58 16.4**	**+0.4**
	comp=Z,6.0nm,1.1s,baz=20,slow=6.1,SNR=8.7						
	comp=Z,6.0nm,1.1s						
X37A	**Clayton**	**46.88**	**91**	P	**P**	**23 58 19.1**	**+0.3**
FVM	**French Village**	**47.06**	**84**	P	**P**	**23 58 19.6**	**-0.5**
FVM	**French Village**	**47.06**	**84**	P	**P**	**23 58 19.6**	**-0.5**
FVM				pmax	pmax		
	comp=Z,28nm,1.5s						
SFIN	**Lafayette**	**47.13**	**79**	P	**P**	**23 58 20.9**	**+0.3**
SFIN	**Lafayette**	**47.13**	**79**	P	**P**	**23 58 20.1**	**-0.5**
	baz=316						
SCHQ	**Schefferville**	**47.13**	**52**	P	**P**	**23 58 18.4**	**-2.0**
	comp=Z,11nm,1.1s,baz=288,slow=7.7,SNR=9.8						
SCHQ				LR	LR	00 18 30.7	
	comp=Z,175nm,18.9s,baz=176,slow=36						
	comp=Z,11nm,1.1s						
SCHQ	**Schefferville**	**47.13**	**52**	P	**P**	**23 58 20.2**	**-0.3**
Q44A	**Meyer Farm, Va**	**47.16**	**82**	P	**P**	**23 58 19.3**	**-1.5**
LPIG	**La Paz**	**47.30**	**114**	LR	LR	00 15 21.5	
	comp=Z,118nm,20.7s,baz=12,slow=32						
HPIG		**47.34**	**107**	P	**P**	**23 58 22.4**	**-0.2**
HPIG				IAmb	IAmb	23 58 29.4	
	comp=Z,29nm,1.8s						
T42A	**Van Buren**	**47.40**	**85**	P	**P**	**23 58 21.6**	**-1.1**
T42A				IAmb	IAmb	23 58 24.5	
	comp=Z,24nm,1.7s						
L48A	**N Adams**	**47.43**	**76**	P	**P**	**23 58 23.3**	**+0.3**
FW13	**Cleburne**	**47.46**	**95**	P	**P**	**23 58 22.4**	**-0.9**
FW13				IAmb	IAmb	23 58 24.6	
	comp=Z,62nm,1.8s						
N47A	**Urbana**	**47.52**	**78**	P	**P**	**23 58 22.6**	**-1.0**
FW14	**Alvarado**	**47.55**	**95**	P	**P**	**23 58 24.6**	**+0.6**
FW14				IAmb	IAmb	23 58 47.5	
	comp=Z,18nm,1.0s						
P46A	**Rosedale**	**47.62**	**80**	P	**P**	**23 58 24.1**	**-0.3**
JCT	**Junction City**	**47.63**	**99**	P	**P**	**23 58 24.8**	**+0.2**
JCT	**Junction City**	**47.63**	**99**	P	**P**	**23 58 24.8**	**+0.2**
JCT				pmax	pmax		
	comp=Z,34nm,1.4s						
WHTX	**Lake Whitney,**	**47.72**	**95**	P	**P**	**23 58 25.3**	**0.0**
WHTX				IAmb	IAmb	23 58 40.6	
	comp=Z,12nm,0.7s						
WHTX	**Lake Whitney,**	**47.72**	**95**	P	**P**	**23 58 25.3**	**0.0**
	baz=320						
OLIL	**Olney**	**47.77**	**82**	P	**P**	**23 58 24.7**	**-0.9**
MIAR	**Mount Ida**	**47.89**	**90**	P	**P**	**23 58 25.8**	**-0.8**
MIAR				IAmb	IAmb	23 58 27.6	
	comp=Z,10nm,1.1s						
MIAR	**Mount Ida**	**47.89**	**90**	P	**P**	**23 58 25.8**	**-0.8**
MIAR				pmax	pmax		
	comp=Z,11nm,1.1s						
S44A	**Carbondale**	**47.91**	**83**	P	**P**	**23 58 25.9**	**-0.8**
SIUC	**Southern Illin**	**47.91**	**83**	P	**P**	**23 58 26.4**	**-0.3**
CN2	**Changchun**	**48.13**	**289**	P	**P**	**23 58 28.9**	**+0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SADO	**Sadowa**	**48.19**	**69**	LR	LR	00 19 34.7	
	comp=Z,162nm,19.0s,baz=317,slow=37						
O48B	**Farmland**	**48.25**	**78**	P	**P**	**23 58 28.0**	**-1.3**
	baz=316						
N49A	**Columbus Grove**	**48.29**	**77**	P	**P**	**23 58 29.6**	**0.0**
BLO	**Bloomington**	**48.30**	**80**	P	**P**	**23 58 29.0**	**-0.8**
BLO	**Bloomington**	**48.30**	**80**	P	**P**	**23 58 29.0**	**-0.8**
PARMO	**Parma**	**48.40**	**85**	P	**P**	**23 58 30.1**	**-0.4**
435B	**Jarrell**	**48.59**	**96**	P	**P**	**23 58 31.7**	**-0.3**
435B	**Jarrell**	**48.59**	**96**	P	**P**	**23 58 32.8**	**+0.8**
	baz=321						
P48A	**Milroy**	**48.68**	**79**	P	**P**	**23 58 31.6**	**-1.1**
P49A	**Miami Univ. Ec**	**49.01**	**78**	P	**P**	**23 58 33.8**	**-1.4**
	baz=317						
TRQ	**Mont Tremblant**	**49.48**	**65**	P	**P**	**23 58 38.1**	**-0.6**
LATQ	**La Tuque**	**49.53**	**63**	P	**P**	**23 58 39.6**	**+0.6**
LATQ				IAmb	IAmb	23 58 43.1	
	comp=Z,14nm,1.2s						
833A	**Chaparral WMA,**	**49.54**	**100**	P	**P**	**23 58 39.4**	**+0.1**
833A				IAmb	IAmb	23 58 41.1	
	comp=Z,31nm,1.6s						
833A	**Chaparral WMA,**	**49.54**	**100**	P	**P**	**23 58 40.1**	**+0.8**
	baz=323						
T47A	**Sharon Grove**	**49.59**	**82**	P	**P**	**23 58 38.7**	**-0.9**
T47A				IAmb	IAmb	23 58 43.3	
	comp=Z,26nm,1.4s						
M53A	**WI Miller and**	**49.77**	**74**	P	**P**	**23 58 40.5**	**-0.4**
	baz=316						
W45A	**Hickory Valley**	**49.82**	**86**	P	**P**	**23 58 42.0**	**+0.6**
PECO	**Prince Edward**	**49.88**	**69**	P	**P**	**23 58 42.5**	**+0.9**
PECO				IAmb	IAmb	23 59 07.2	
	comp=Z,34nm,1.6s						
O52A	**Adamsville**	**50.11**	**76**	P	**P**	**23 58 43.6**	**0.0**
O52A				IAmb	IAmb	23 58 56.7	
	comp=Z,39nm,1.6s						
R50A	**Paris**	**50.13**	**79**	P	**P**	**23 58 42.9**	**-0.8**
R50A				IAmb	IAmb	23 58 44.1	
	comp=Z,23nm,1.0s						
N53A	**Lisbon**	**50.14**	**74**	P	**P**	**23 58 43.4**	**-0.4**
N53A				IAmb	IAmb	23 58 46.4	
	comp=Z,25nm,1.2s						
HKT	**Hockley**	**50.18**	**96**	P	**P**	**23 58 44.1**	**0.0**
HKT				IAmb	IAmb	23 58 45.6	
	comp=Z,23nm,1.4s						
HKT	**Hockley**	**50.18**	**96**	P	**P**	**23 58 44.1**	**0.0**
HKT				pmax	pmax		
	comp=Z,23nm,1.5s						
OXF	**Oxford**	**50.18**	**86**	P	**P**	**23 58 44.1**	**-0.1**
OXF	**Oxford**	**50.18**	**86**	P	**P**	**23 58 44.1**	**-0.1**
OXF				pmax	pmax		
	comp=Z,83nm,1.2s						
JMIC	**Jan Mayen**	**50.23**	**13**	LR	LR	00 21 19.2	
	comp=Z,205nm,19.4s,baz=88,slow=38						
P52A	**Corning**	**50.31**	**76**	P	**P**	**23 58 44.2**	**-0.9**
	baz=317						
PLAL	**Pickwick Lake**	**50.55**	**85**	P	**P**	**23 58 46.6**	**-0.4**
LMQ	**La Malbaie**	**50.59**	**61**	P	**P**	**23 58 46.4**	**-0.7**
Y45A	**Yeager Farm, C**	**50.60**	**87**	P	**P**	**23 58 45.4**	**-1.9**
CLTN	**Cedars of Leba**	**50.67**	**83**	P	**P**	**23 58 47.2**	**-0.6**
CLTN				IAmb	IAmb	23 58 49.0	
	comp=Z,14nm,0.9s						
M55A	**Ridgway**	**50.74**	**72**	P	**P**	**23 58 47.6**	**-0.7**
M55A				IAmb	IAmb	23 58 57.1	
	comp=Z,28nm,1.1s						
T50A	**Nancy**	**50.78**	**81**	P	**P**	**23 58 48.3**	**-0.3**
T50A				IAmb	IAmb	23 58 52.7	
	comp=Z,7.5nm,0.8s						
O54A	**Avella**	**50.83**	**74**	P	**P**	**23 58 48.0**	**-1.0**
O54A				IAmb	IAmb	23 58 57.1	
	comp=Z,17nm,1.0s						
S51A	**Beattyville**	**50.99**	**79**	IAmb	IAmb	23 58 58.4	
	comp=Z,18nm,1.0s						
J58A	**Remsen**	**51.15**	**68**	P	**P**	**23 58 51.0**	**-0.4**
J58A				IAmb	IAmb	23 58 53.8	
	comp=Z,37nm,1.6s						
R53A	**Hurricane**	**51.36**	**77**	P	**P**	**23 58 51.9**	**-1.0**
R53A				IAmb	IAmb	23 59 06.3	
	comp=Z,37nm,1.6s						
KSRS	**Korea Array**	**51.41**	**281**	P	**P**	**23 58 54.0**	**+0.7**
	comp=Z,4.8nm,1.0s,baz=43,slow=6.7,SNR=14						
	comp=Z,4.8nm,1.0s						
KSAR	**Wonju Array Be**	**51.44**	**281**	P	**P**	**23 58 53.7**	**+0.1**
KSAR	**Wonju Array Be**	**51.44**	**281**	P	**P**	**23 58 53.7**	**+0.1**
X48A	**Hartselle**	**51.51**	**84**	P	**P**	**23 58 53.3**	**-0.8**
X48A				IAmb	IAmb	23 58 54.3	
	comp=Z,16nm,1.2s						
BINY	**Binghamton**	**51.64**	**70**	P	**P**	**23 58 55.2**	**+0.2**
BINY				IAmb	IAmb	23 58 56.1	
	comp=Z,24nm,1.1s						
146A	**Union**	**51.80**	**88**	P	**P**	**23 58 55.2**	**-1.1**
SSPA	**Standing Stone**	**51.80**	**72**	P	**P**	**23 58 56.1**	**-0.1**
SSPA				IAmb	IAmb	23 58 59.2	
	comp=Z,19nm,1.1s						
SSPA	**Standing Stone**	**51.80**	**72**	P	**P**	**23 58 55.5**	**-0.7**
	baz=317						
TZTN	**Tazewell**	**51.83**	**80**	P	**P**	**23 58 55.9**	**-0.7**
	baz=318						
W50A	**Signal Mountai**	**51.88**	**82**	P	**P**	**23 58 56.4**	**-0.6**
W50A				IAmb	IAmb	23 58 57.4	
	comp=Z,17nm,1.2s						
L59A	**Walton**	**52.12**	**69**	P	**P**	**23 58 58.6**	**-0.1**
L59A				IAmb	IAmb	23 59 04.4	
	comp=Z,29nm,1.1s						
N58A	**Sunbury**	**52.25**	**71**	P	**P**	**23 58 59.4**	**-0.2**
N58A				IAmb	IAmb	23 59 01.1	
	comp=Z,37nm,1.6s						
V52A	**Sevierville**	**52.33**	**81**	P	**P**	**23 58 59.6**	**-0.6**
ZAIG	**Zacatecas**	**52.35**	**107**	P	**P**	**23 59 00.4**	**-0.5**
R55A	**Marlinton**	**52.36**	**76**	P	**P**	**23 59 01.2**	**+0.6**
TKL	**Tuckaleechee C**	**52.37**	**81**	LR	LR	00 23 43.4	
	comp=Z,102nm,18.0s,baz=335,slow=39						
TKL	**Tuckaleechee C**	**52.37**	**81**	P	**P**	**23 59 00.8**	**+0.2**
TKL				IAmb	IAmb	23 59 03.0	
	comp=Z,46nm,1.9s						
TKL	**Tuckaleechee C**	**52.37**	**81**	P	**P**	**23 59 00.8**	**+0.2**
TKL				pmax	pmax		
	comp=Z,46nm,1.9s						
W52A	**Murphy**	**52.71**	**81**	P	**P**	**23 59 02.7**	**-0.4**
W52A				IAmb	IAmb	23 59 11.1	
	comp=Z,9.7nm,0.8s						
U54A	**Nelsons Funny**	**52.77**	**79**	P	**P**	**23 59 03.8**	**+0.2**
V53A	**Saluda**	**52.88**	**80**	P	**P**	**23 59 03.7**	**-0.7**
V53A				IAmb	IAmb	23 59 13.0	
	comp=Z,21nm,1.2s						
JNU	**Nakatsue**	**53.07**	**275**	LR	LR	00 20 20.1	
	comp=Z,65nm,21.9s,baz=66,slow=34						
LUPA	**Lehigh Univers**	**53.12**	**71**	P	**P**	**23 59 05.7**	**-0.4**
ODNJ	**Ogdensburg**	**53.16**	**70**	P	**P**	**23 59 05.9**	**-0.4**
ODNJ				IAmb	IAmb	23 59 11.2	
	comp=Z,32nm,1.3s						
ARCES	**ARCESS Array B**	**53.53**	**359**	LR	LR	00 22 45.9	
	comp=Z,143nm,18.6s,baz=320,slow=37						
ZAK	**Zakamensk**	**53.90**	**309**	*e*P	**P**	**23 59 11.2**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.6s						
KMSC	**Kings Mountain**	**54.07**	**79**	P	**P**	**23 59 12.7**	**-0.3**
	baz=319						
ULN	**Ulaanbaatar**	**54.13**	**304**	P	**P**	**23 59 13.7**	**+0.2**
ULN	**Ulaanbaatar**	**54.13**	**304**	P	**P**	**23 59 13.7**	**+0.2**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
SONM	**Songino Array**	**54.45**	**305**	P	**P**	**23 59 16.2**	**+0.5**
	comp=Z,3.4nm,0.7s,baz=38,slow=4.9,SNR=21						
	comp=Z,3.4nm,0.7s						
SONM	**Songino Array**	**54.45**	**305**	P	**P**	**23 59 16.3**	**+0.5**
SONM				IAmb	IAmb	23 59 19.5	
	comp=Z,13nm,1.3s						
SONM	**Songino Array**	**54.45**	**305**	P	**P**	**23 59 16.3**	**+0.5**
SONM				pmax	pmax		
	comp=Z,13nm,1.3s						
T59A	**Double "B" Far**	**54.69**	**75**	P	**P**	**23 59 17.9**	**+0.3**
V58A	**Windy Hill, Pi**	**54.76**	**77**	P	**P**	**23 59 17.4**	**-0.6**
V58A				IAmb	IAmb	23 59 28.6	
	comp=Z,16nm,1.1s						
HHC	**Hu-ho-hao-te**	**57.28**	**296**	*e*P	**P**	**23 59 37.0**	**+0.8**
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,250nm,4.9s						
HHC				LR	LR		
	comp=Z,470nm,14.0s						
HHC				LR	LR		
	comp=Z,390nm,14.2s						
HHC				LR	LR		
	comp=Z,600nm,15.7s						
ZAA0	**Zalesovo Array**	**58.15**	**322**	P	**P**	**23 59 42.8**	**+0.8**
ZALV	**Zalesovo Beam**	**58.15**	**322**	P	**P**	**23 59 41.9**	**0.0**
	comp=Z,1.2nm,0.7s,baz=38,slow=7.5,SNR=8.5						
ZALV				LR	LR	00 27 13.3	
	comp=Z,418nm,18.6s,baz=42,slow=39						
	comp=Z,1.2nm,0.7s						
ZALV	**Zalesovo Beam**	**58.15**	**322**	*i* P	**P**	**23 59 44.0**	**+2.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HNS	**HongShan**	**58.35**	**291**	⇓P	**P**	**23 59 44.3**	**+0.7**
HNS				S	**S**	**00 07 46.0**	**+0.7**
HNS				pmax	pmax		
	comp=Z,7.0nm,1.3s						
HNS				LR	LR		
	comp=Z,280nm,20.7s						
HNS				LR	LR		
	comp=Z,240nm,18.1s						
TLIG	**Tlapa**	**58.74**	**107**	P	**P**	**23 59 45.8**	**-0.8**
NJ2	**Nanjing**	**60.34**	**284**	*e*P	**P**	**23 59 56.1**	**-1.3**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,180nm,8.3s						
NJ2	**Nanjing**	**60.34**	**284**	*e*P	**P**	**23 59 58.3**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,150nm,7.5s						
DGZ	**Jazzator, Alta**	**60.74**	**318**	*i* P	**P**	**00 00 00.1**	**0.0**

DGZ				pmax	pmax		
	comp=Z,15nm,1.7s						
GUMO	Guam	61.34	249	LR	LR	00 26 49.5	
	comp=Z,31nm,19.0s,baz=94,slow=36						
KLMR	Klimovskoe	61.51	351	eP	P	00 00 00.3	-4.7
KLMR				AMP		00 00 03.7	
	comp=Z,38nm,1.9s						
KLMR				ePcP	PcP	00 00 44.7	-1.9
KLMR				LR	LR	00 22 38.1	
KLMR				AMP		00 28 24.7	
	comp=Z,355nm,16.1s						
KLMR	Klimovskoe	61.51	351	eP	P	00 00 00.2	-4.7
KLMR				e		00 00 44.7	
KLMR				pmax	pmax		
	comp=Z,38nm,1.9s						
KLMR				MLR	MLR		
	comp=Z,355nm,16.0s						
FINES	FINESS Array B	61.65	358	P	P	00 00 05.0	-0.8
	comp=Z,4.2nm,1.1s,baz=101,slow=7.2,SNR=4.8						
FINES				LR	LR	00 30 57.3	
	comp=Z,78nm,18.1s,baz=16,slow=40						
	comp=Z,4.2nm,1.1s						
LYN	LuoYang	61.71	290	⇓iP	P	00 00 07.0	+0.3
LYN				pmax	pmax		
	comp=Z,13nm,1.3s						
LYN				pmax	pmax		
	comp=Z,97nm,3.0s						
LYN				LR	LR		
	comp=Z,180nm,21.5s						
LYN				LR	LR		
	comp=Z,160nm,20.2s						
LYN				LR	LR		
	comp=Z,170nm,16.2s						
NOA	NORSAR Array B	61.76	6	P	P	00 00 05.4	-1.3
	comp=Z,0.8nm,0.8s,baz=353,slow=6.8,SNR=3.7						
NOA				LR	LR	00 28 48.0	
	comp=Z,80nm,18.6s,baz=355,slow=38						
	comp=Z,0.8nm,0.8s						
KIRV	Kirov	62.56	344	LR	LR	00 30 29.3	
	comp=Z,274nm,20.6s,baz=15,slow=39						
HFS	Hagfors	62.79	5	LR	LR	00 26 13.8	
	comp=Z,98nm,21.7s,baz=319,slow=35						
KURK	Kurchatov	62.92	324	P	P	00 00 15.7	+1.2
KURK	Kurchatov	62.92	324	P	P	00 00 15.7	+1.2
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARU	Arti	63.03	338	LR	LR	00 30 48.5	
	comp=Z,256nm,20.1s,baz=348,slow=39						
ARU	Arti	63.03	338	P	P	00 00 14.5	-0.7
ARU				IAmb	IAmb	00 00 15.8	
	comp=Z,13nm,1.4s						
ARU	Arti	63.03	338	c iP	P	00 00 13.8	-1.4
ARU				S	S	00 08 44.2	-0.3
ARU				SS	SS	00 12 45.2	-3.9
ARU				pmax	pmax		
	comp=Z,15nm,1.5s						
KURBB	Kurchatov Arra	63.03	324	LR	LR	00 28 05.9	
	comp=Z,200nm,20.9s,baz=176,slow=36						
BRVK	Borovoye	63.35	330	P	P	00 00 17.5	+0.1
BRVK				IAmb	IAmb	00 00 19.9	
	comp=Z,7.8nm,1.3s						
BRVK	Borovoye	63.35	330	ceP	P	00 00 17.2	-0.1
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
BVAR	Borovoye Array	63.35	330	LR	LR	00 33 16.5	
	comp=Z,204nm,18.6s,baz=11,slow=41						
PETF	Flores	63.88	99	P	P	00 00 21.8	+0.5
GTA	Gaotai	63.99	303	eP	P	00 00 22.6	+0.6
GTA				sP	sP	00 00 29.6	+0.4
GTA				PcP	PcP	00 01 00.8	+3.5
GTA				pmax	pmax		
	comp=Z,6.0nm,1.5s						
GTA				LR	LR		
	comp=Z,490nm,16.7s						
GTA				LR	LR		
	comp=Z,330nm,16.7s						
GTA				LR	LR		
	comp=Z,620nm,16.4s						
LZH	Lanzhou	64.77	298	eP	P	00 00 27.3	+0.1
LZH				pmax	pmax		
	comp=Z,14nm,1.2s						
LZH				LR	LR		
	comp=Z,380nm,16.8s						
LZH				LR	LR		
	comp=Z,620nm,15.5s						
LZH				LR	LR		
	comp=Z,370nm,16.5s						
MK31	Makanchi Array	65.04	319	P	P	00 00 28.5	-0.1
MK31	Makanchi Array	65.04	319	i P	P	00 00 28.4	-0.2
MKAR	Makanchi Array	65.04	319	P	P	00 00 27.7	-0.9
	comp=Z,1.5nm,0.9s,baz=42,slow=5.5,SNR=5.6						
MKAR				PP	PP	00 02 51.0	-0.1
	comp=Z,1.4nm,1.0s,baz=49,slow=8.5,SNR=3.7						
	comp=Z,1.5nm,0.9s						
MKAR	Makanchi Array	65.04	319	P	P	00 00 28.8	+0.2
MKAR	Makanchi Array	65.04	319	P	P	00 00 28.8	+0.2
WMQ	Urumqi	65.53	314	eP	P	00 00 34.6	+2.7
WMQ				LR	LR		
	comp=Z,280nm,21.3s						
WMQ				LR	LR		
	comp=Z,450nm,17.9s						
WMQ				LR	LR		
	comp=Z,360nm,21.3s						
ESK	Eskdalemuir	65.92	16	P	P	00 00 36.1	+2.0
ESK	Eskdalemuir	65.92	16	P	P	00 00 36.1	+2.0
ESK				pmax	pmax		
	comp=Z,31nm,1.7s						
ENH	Enshi	66.63	290	P	P	00 00 39.3	+0.2
TAOE	Nuku Hiva Isla	67.37	161	eLR	LR	00 20 34.8	
	comp=Z,366nm,25.0s						
OBN	Obninsk	67.44	351	LR	LR	00 35 33.2	
	comp=Z,19nm,18.6s,baz=2.5,slow=41						
OBN	Obninsk	67.44	351	P	P	00 00 44.7	+0.9
OBN	Obninsk	67.44	351	eP	P	00 00 42.1	-1.7
OBN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
PABE	Paberze	67.63	359	P	P	00 00 44.8	-0.2
AKTO	Aktyubinsk	68.77	336	LR	LR	00 34 38.7	
	comp=Z,246nm,18.1s,baz=0.5,slow=39						
BELG	Belogornoye	68.82	344	LR	LR	00 34 21.3	
	comp=Z,430nm,20.0s,baz=357,slow=39						
BELG	Belogornoye	68.82	344	eP	P	00 00 51.0	-1.4
BELG				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GOMU	GeErMu	68.89	304	P	P	00 00 55.9	+2.2
GOMU				pP	sP	00 01 00.8	-0.1
GOMU				sP	pP	00 01 01.8	+2.9
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,74nm,5.2s						
GOMU				LR	LR		
	comp=Z,330nm,14.7s						
GOMU				LR	LR		
	comp=Z,280nm,14.9s						
GOMU				LR	LR		
	comp=Z,490nm,14.9s						
ABKAR	Akbulak array	69.45	335	P	P	00 00 56.2	-0.2
AAK	Ala-Archa	71.37	322	P	P	00 01 09.7	+1.1
AAK	Ala-Archa	71.37	322	i P	P	00 01 08.4	-0.1
AAK				pmax	pmax		
	comp=Z,19nm,5.4s						
CLL	Collm	71.56	6	eP	P	00 01 10.0	+0.7
	comp=Z,6.0nm,1.2s						
CLL	Collm	71.56	6	eP	P	00 01 10.0	+0.7
CLL				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KK31	Karatay Array	72.24	325	P	P	00 01 13.9	+0.3
KK31	Karatay Array	72.24	325	P	P	00 01 13.9	+0.3
KK31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KKAR	Karatay Array	72.24	325	P	P	00 01 14.1	+0.6
KKAR	Karatay Array	72.24	325	P	P	00 01 14.1	+0.6
OSTC	Ostas	72.47	4	eP	P	00 01 14.4	-0.4
OSTC	Ostas	72.47	4	eP	P	00 01 14.4	-0.4
DPC	Dobruska-Polom	72.68	4	eP	P	00 01 15.3	-0.8
DPC	Dobruska-Polom	72.68	4	eP	P	00 01 15.3	-0.8
KRLC	Kraliky	72.97	4	eP	P	00 01 17.5	-0.3
KRLC	Kraliky	72.97	4	eP	P	00 01 17.5	-0.3
KRVT	Keravat (AS076	73.55	233	P	P	00 01 22.5	+0.9
	comp=Z,175nm,0.3s,baz=150,slow=20,SNR=48						
PZH	PanZhiHua	73.62	293	P	P	00 01 21.3	-0.8
PZH				S	SKiKP	00 10 48.9	-2.2
PZH				pmax	pmax		
	comp=Z,10.0nm,1.4s						
PZH				pmax	pmax		
	comp=Z,90nm,4.6s						
PZH				LR	LR		
	comp=Z,270nm,19.1s						
PZH				LR	LR		
	comp=Z,320nm,18.0s						
PZH				LR	LR		
	comp=Z,260nm,19.6s						
KSH	Kashi	73.64	320	P	P	00 01 25.4	+3.4
KSH				pP	sP	00 01 28.4	-0.9
KSH				sP	pP	00 01 31.1	+3.8
KSH				pmax	pmax		
	comp=Z,4.0nm,1.7s						
KSH				pmax	pmax		
	comp=Z,120nm,5.0s						
KSH				LR	LR		
	comp=Z,380nm,17.8s						
KSH				LR	LR		
	comp=Z,440nm,17.9s						
KSH				LR	LR		
	comp=Z,620nm,15.5s						
VRAC	Vranov	73.73	4	LR	LR	00 35 09.3	
	comp=Z,95nm,18.6s,baz=346,slow=37						
VRAC	Vranov	73.73	4	eP	P	00 01 22.3	0.0
KHC	Kasperske Hory	73.77	6	eP	P	00 01 22.5	0.0
KHC	Kasperske Hory	73.77	6	eP	P	00 01 22.5	0.0
KRUC	Moravsky	73.97	4	eP	P	00 01 23.4	-0.3
GERES	GERESS Array B	74.06	6	P	P	00 01 23.4	-0.9
	comp=Z,0.5nm,0.6s,baz=286,slow=5.4,SNR=5.7						
	comp=Z,0.5nm,0.6s						
GERES	GERESS Array B	74.06	6	P	P	00 01 23.2	-1.1
GERES	GERESS Array B	74.06	6	P	P	00 01 23.2	-1.1
KMI	Kunming	74.26	292	⇑P	P	00 01 26.5	+0.5
KMI				sP	sP	00 01 30.8	-2.4
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
KMI				LR	LR		
	comp=Z,170nm,20.9s						
KMI				LR	LR		
	comp=Z,140nm,16.3s						
KMI				LR	LR		
	comp=Z,210nm,19.3s						
HNR	Honiara	74.97	224	LR	LR	00 27 39.8	
	comp=Z,1µm,21.0s,baz=102,slow=30						
CONA	Conrad Observa	75.08	5	epP	P	00 01 30.6	+0.4
	comp=Z,10.0nm,1.8s						
MOA	Molln	75.08	6	epP	P	00 01 31.4	+1.2
	comp=Z,5.5nm,1.3s						
BIOA	Bad Ischl, Aus	75.21	6	i pP	P	00 01 30.9	0.0
	comp=Z,3.4nm,1.2s						
RETA	Reutte	75.22	8	epP	P	00 01 31.0	0.0
	comp=Z,7.6nm,1.5s						
RONA	Rosalia, Austr	75.33	4	i P	P	00 01 30.7	-0.9
	comp=Z,3.7nm,0.9s						
WATA	Walderalm	75.43	8	epP	P	00 01 32.3	0.0
	comp=Z,17nm,2.1s						
BUR08	Bucovina Ar. S	75.48	358	P	P	00 01 32.7	+0.1
BUR08				IAmb	IAmb	00 01 34.6	
	comp=Z,15nm,1.8s						
WTTA	Wattenberg	75.50	8	i pP	P	00 01 33.0	+0.2
	comp=Z,8.0nm,1.4s						
BURAR	Bucovina Array	75.51	358	P	P	00 01 32.3	-0.4
SQTA	Sankt Quirin	75.52	8	epP	P	00 01 33.0	+0.2
	comp=Z,8.9nm,1.2s						
KBA	Koelnbreinsper	75.80	6	epP	P	00 01 35.1	+0.6
	comp=Z,12nm,1.3s						
DAVOX	Davos/Dischmat	75.85	9	LR	LR	00 38 01.6	
	comp=Z,46nm,18.5s,baz=343,slow=38						
GAR	Garm	76.02	323	P	P	00 01 35.8	-0.1
GAR				IAmb	IAmb	00 01 40.5	
	comp=Z,29nm,1.8s						
SOKA	Soboth	76.29	5	epP	P	00 01 37.4	+0.2
	comp=Z,8.4nm,1.5s						
OBKA	Obir	76.44	6	i P	P	00 01 36.9	-1.1
	comp=Z,6.4nm,0.9s						
PRED	Cave del Predi	76.45	6	P	P	00 01 38.2	+0.1
PRED				IAmb	IAmb	00 01 39.5	
	comp=Z,12nm,1.5s						
GOF	Gofitskoye	76.65	345	⇑eP	P	00 01 38.8	-0.3
GOF				pmax	pmax		
	comp=Z,27nm,1.1s						
CHGR	Chuyangaron	76.70	324	P	P	00 01 40.5	+0.8
CHGR				IAmb	IAmb	00 01 44.9	
	comp=Z,24nm,1.4s						
CHGR	Chuyangaron	76.70	324	P	P	00 01 40.5	+0.8
CHGR				pmax	pmax		
	comp=Z,24nm,1.4s						
MSVF	Nonsavu	77.39	204	LR	LR	00 27 43.7	
	comp=Z,127nm,21.0s,baz=2.9,slow=29						
MLR	Muntele Rosu	77.62	357	IAmb	IAmb	00 01 49.2	
	comp=Z,9.7nm,1.5s						
KVAR	Kislovodsk Arr	77.78	345	LR	LR	00 39 03.7	
	comp=Z,149nm,21.2s,baz=263,slow=38						
KIV	Kislovodsk	77.78	345	P	P	00 01 45.6	+0.1
KIV	Kislovodsk	77.78	345	eP	P	00 01 44.4	-1.2
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,126nm,18.0s						
KBZ	Khabaz	77.97	345	LR	LR	00 39 06.0	
	comp=Z,196nm,21.7s,baz=17,slow=38						
KBZ	Khabaz	77.97	345	ceP	P	00 01 45.9	-0.6
KBZ				pmax	pmax		
	comp=Z,8.0nm,1.4s						
SHA1	Shidzhatmaz	78.00	345	i P	P	00 01 46.4	-0.6
NCK	Nalchik	78.10	344	i P	P	00 01 47.6	+0.3
NCK				pmax	pmax		
	comp=Z,20nm,1.4s						
ZEI	Tsey	78.75	344	eP	P	00 01 52.8	+1.7
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.5s						
DIVS	Divibare	79.04	2	P	P	00 01 53.2	+0.7
CRAI	Chiangrai	79.53	291	P	P	00 01 54.9	-0.6
CRAI				IAmb	IAmb	00 01 56.1	
	comp=Z,11nm,1.2s						
MURB	Monte Urbino	79.55	7	P	P	00 01 55.7	+0.4
MURB				IAmb	IAmb	00 02 06.5	
	comp=Z,38nm,1.7s						
FDMO	Fiordimonte	79.81	7	P	P	00 01 56.8	+0.1
FDMO				IAmb	IAmb	00 01 58.0	
	comp=Z,14nm,1.4s						
NIL	Nilore	79.86	319	P	P	00 01 58.0	+0.9
NIL	Nilore	79.86	319	P	P	00 01 58.0	+0.9
NIL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
NRCA	Norcia	80.01	7	P	P	00 01 58.8	+0.9
NRCA				IAmb	IAmb	00 02 01.3	
	comp=Z,20nm,1.8s						
AKH	Akhalkalaki	80.16	344	P	P	00 01 58.8	0.0
AKH				IAmb	IAmb	00 02 17.5	
	comp=Z,46nm,2.0s						
AKH	Akhalkalaki	80.16	344	P	P	00 01 58.8	0.0
AKH				pmax	pmax		
	comp=Z,47nm,2.0s						
PMG	Port Moresby	80.23	235	P	P	00 02 00.3	+1.1
	comp=Z,7.1nm,0.4s,baz=312,slow=6.3,SNR=4.0						
PMG				LR	LR	00 31 22.7	
	comp=Z,60nm,21.6s,baz=335,slow=31						
	comp=Z,7.1nm,0.4s						
TBI	Tubuai	80.54	172	eLR	LR	00 26 40.9	
	comp=Z,4µm,24.0s						
TBI				eLR	LR	00 26 41.2	
	comp=Z,1µm,29.2s						
GEYT	Alibeck	80.55	332	P	P	00 02 01.1	+0.3
	comp=Z,0.7nm,0.5s,baz=92,slow=10,SNR=4.4						
	comp=Z,0.7nm,0.5s						
GEYT	Alibeck	80.55	332	P	P	00 02 01.2	+0.5
GEYT	Alibeck	80.55	332	P	P	00 02 01.3	+0.5
GEYT				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GYA0B	ALIBECK ARRAY	80.55	332	P	P	00 02 01.2	+0.5
SDV	Santo Domingo	80.94	88	P	P	00 02 02.8	-0.5
ESDC	Sonseca Array	80.95	20	P	P	00 02 02.5	-0.4
	comp=Z,3.2nm,1.1s,baz=349,slow=4.5,SNR=6.9						
ESDC				LR	LR	00 37 47.9	
	comp=Z,84nm,22.0s,baz=347,slow=36						
	comp=Z,3.2nm,1.1s						
ESDC	Sonseca Array	80.95	20	P	P	00 02 03.0	+0.1
KARS	Kars	80.98	344	P	P	00 02 03.6	+0.5
KARS	Kars	80.98	344	P	P	00 02 03.7	+0.5
KARS				pmax	pmax		
	comp=Z,30nm,1.2s						
PHRA	Phrae	81.05	290	P	P	00 02 03.4	-0.3
GNI	Garni	81.20	343	LR	LR	00 43 17.8	
	comp=Z,249nm,19.7s,baz=6.5,slow=40						
GNI	Garni	81.20	343	ceP	P	00 02 05.1	+0.7
GNI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
CHTO	Chiang Mai	81.44	291	P	P	00 02 04.9	-0.9
CHTO	Chiang Mai	81.44	291	P	P	00 02 04.9	-0.9
STIP	Stip	81.46	0	i P	P	00 02 04.2	-1.3
CMAR	Chiang Mai Arr	81.74	291	P	P	00 02 07.5	+0.2
	comp=Z,1.7nm,0.4s,baz=20,slow=5.4,SNR=23						
CMAR				LR	LR	00 41 39.0	
	comp=Z,53nm,19.1s,baz=25,slow=38						
	comp=Z,1.7nm,0.4s						
CMAR	Chiang Mai Arr	81.74	291	i P	P	00 02 07.0	-0.3
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FAKI	Fak Fak	81.85	252	P	P	00 02 08.1	+0.2
RDO	Rodhopi	81.97	358	P	P	00 02 08.2	+0.1
RDO				IAmb	IAmb	00 02 10.6	
	comp=Z,6.4nm,1.0s						
OHR	Ohrid	82.03	1	i P	P	00 02 08.2	-0.4
RUSC	La Rusia	82.09	91	P	P	00 02 08.2	-1.6
RUSC				IAmb	IAmb	00 02 13.8	
	comp=Z,18nm,1.2s						
TOKA	Tokat	82.11	349	P	P	00 02 08.7	-0.3
ALN	Alexandroupoli	82.21	357	P	P	00 02 09.5	+0.1
ALN				IAmb	IAmb	00 02 10.2	
	comp=Z,8.4nm,1.2s						
ALN	Alexandroupoli	82.21	357	P	P	00 02 09.5	+0.1
ALN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BAUV	El Baul	82.30	86	P	P	00 02 09.9	-0.4
FNA	Florina	82.36	1	P	P	00 02 09.9	-0.5
FNA	Florina	82.36	1	P	P	00 02 09.9	-0.5
FNA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
MDUB	Mudurnu	82.40	353	P	P	00 02 10.9	+0.3
ANTO	Ankara	82.89	352	P	P	00 02 12.6	-0.5
ANTO				IAmb	IAmb	00 02 17.5	
	comp=Z,7.3nm,0.8s						
ANTO	Ankara	82.89	352	P	P	00 02 12.6	-0.5
ANTO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BR131	Keskin Array S	82.96	351	P	P	00 02 13.2	-0.4
BR131				IAmb	IAmb	00 02 16.0	
	comp=Z,12nm,1.4s						
BR131	Keskin Array S	82.96	351	P	P	00 02 13.2	-0.4
BR131				pmax	pmax		
	comp=Z,12nm,1.4s						
BRTR	Keskin Array B	82.97	351	P	P	00 02 13.6	0.0
	comp=Z,2.6nm,1.1s,baz=7.8,slow=2.7,SNR=15						
BRTR				LR	LR	00 46 28.1	
	comp=Z,46nm,18.0s,baz=16,slow=41						
	comp=Z,2.6nm,1.1s						
BRTR	Keskin Array B	82.97	351	P	P	00 02 12.7	-0.9
BRTR	Keskin Array B	82.97	351	i P	P	00 02 13.6	0.0
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CUC	Castrocucco	83.00	5	P	P	00 02 11.8	-1.9
BORA	Eskisehir	83.03	354	P	P	00 02 13.5	-0.4
BORA				IAmb	IAmb	00 02 15.4	
	comp=Z,8.5nm,1.2s						
LIT	Litokhoron	83.05	360	P	P	00 02 12.9	-1.0
LIT	Litokhoron	83.05	360	P	P	00 02 12.9	-1.0
LIT				pmax	pmax		
	comp=Z,5.0nm,1.1s						
PCRV	Puerto La Cruz	83.12	82	LR	LR	00 41 30.9	
	comp=Z,121nm,19.0s,slow=37						
BNN	Bunyan	83.63	349	P	P	00 02 17.5	+0.4
KOUNC	Koumac, New Ca	83.79	216	P	P	00 02 18.0	+0.4
TULM	Tulcn-Chalpat	83.86	98	P	P	00 02 18.2	-0.7
MANT	Manisa	84.52	355	P	P	00 02 20.6	-1.1
MANT				IAmb	IAmb	00 02 22.0	
	comp=Z,4.6nm,0.9s						
TOLI2	Tolitoli	84.54	264	P	P	00 02 20.2	-1.5
DZM	Mont Dzumac	84.55	213	eLR	LR	00 28 33.3	
	comp=Z,148nm,25.2s						
DZM	Mont Dzumac	84.55	213	LR	LR	00 34 03.6	
	comp=Z,56nm,19.5s,baz=26,slow=31						
DZM	Mont Dzumac	84.55	213	P	P	00 02 22.5	+0.8
SLOR	San Lorenzo -	84.69	100	P	P	00 02 22.7	-0.4
SLOR				IAmb	IAmb	00 02 44.1	
	comp=Z,3.3nm,0.7s						
KEST	Kesra	86.75	11	LR	LR	00 45 24.1	
	comp=Z,70nm,18.3s,baz=332,slow=38						
MCRA	Macar, Loja	86.97	103	P	P	00 02 34.2	+0.3
MDT	Midelt	87.45	23	LR	LR	00 42 19.1	
	comp=Z,36nm,21.9s,baz=356,slow=36						
CSS	Mathiatis	87.72	351	P	P	00 02 35.7	-1.5
IDI	Anoyia	87.83	358	LR	LR	00 44 55.5	
	comp=Z,34nm,20.6s,baz=330,slow=38						
MMAI	Mount Meron Ar	89.45	349	LR	LR	00 49 08.0	
	comp=Z,35nm,18.5s,baz=78,slow=40						
CTA	Charters Tower	90.10	231	P	P	00 02 50.0	+1.5
	comp=Z,12nm,1.0s,baz=39,slow=7.4,SNR=4.0						
CTA				LR	LR	00 36 41.0	
	comp=Z,34nm,19.9s,baz=84,slow=31						
	comp=Z,12nm,1.0s						
CTAO	Charters Tower	90.10	231	P	P	00 02 49.1	+0.7
CTAO	Charters Tower	90.10	231	P	P	00 02 49.1	+0.7
CTAO				pmax	pmax		
	comp=Z,38nm,1.3s						
RPN	Rapa Nui	93.30	138	LR	LR	00 34 32.5	
	comp=Z,69nm,21.7s,baz=346,slow=29						
MDP	Montagnes des	93.76	75	LR	LR	00 44 08.8	
	comp=Z,28nm,20.9s,baz=296,slow=35						
WSAR	Wadi Sarin	94.28	327	LR	LR	00 52 12.5	
	comp=Z,97nm,18.4s,baz=36,slow=40						
NNA	Nana	95.01	104	LR	LR	00 46 00.1	
	comp=Z,36nm,18.2s,baz=322,slow=35						
WRA	Warramunga Arr	95.36	241	P	P	00 03 12.1	-0.7
	comp=Z,0.9nm,1.0s,baz=36,slow=5.9,SNR=3.8						
	comp=Z,0.9nm,1.0s						
URZ	Urewera	97.48	200	LR	LR	00 40 51.6	
	comp=Z,74nm,20.2s,baz=88,slow=31						
ASAR	Alice Springs	98.76	240	LR	LR	00 42 00.2	
	comp=Z,55nm,21.9s,baz=16,slow=32						
BOSA	Boshof	151.34	355	PKPbc	PKPbc	00 09 41.5	-0.6
	comp=Z,3.2nm,0.8s,baz=72,slow=1.8,SNR=4.9						

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*IDC **24** 23:50:50.5±2.0, 3.°19S×129.°08E, h0^{km}, mb3.7/2, mbtmp3.9/4, ML3.8/2, Error ellipse: s-maj=57.9km s-min=20.8km az=65.0*

*DJA **24** 23:50:52.7±0.4, 3°S±3°×12°9E±°, h12^{km}±4^{km}, M4.2/14, mb4.4/6, mB5.8/1, MLv4.0/14, Mw(mB)5.4/1*

ISC 24 23:50:54.1±1.0, **3.°10S**±0.°07×**129.°00E**±0.°06, **h33^{km}, n16, σ1.^{s}49**/20, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.26	197	P	Pb	23 51 00.9	-0.4
MSAI				S	Sb	23 51 07.1	+0.9
AAI	Ambon	1.00	234	P	Pb	23 51 12.4	-0.5
AAI				S	Sb	23 51 27.2	+1.4
BNDI	Bandanaira	1.68	148	P	Pb	23 51 23.9	-0.5
NLAI	Namlea	1.91	266	P	Pn	23 51 24.8	+0.5
LBMI	Labuha	2.87	328	P	Pn	23 51 36.7	-0.9
SANI	Sanana	3.19	289	P	Pn	23 51 39.7	-2.3
FAKI	Fak Fak	3.25	87	P	Pn	23 51 43.8	+1.0
TNTI	Ternate	4.18	337	P	Pn	23 51 54.1	-1.5
RKPI	Ransiki, Papua	5.41	73	P	Pn	23 52 13.6	+1.1
	57nm,0.6s,9µm1.1nm						
MRSI	Marisa	7.90	297	P	Pn	23 52 45.7	-1.1
	27nm,0.8s,0.1nm						
SOEI	Soe	8.12	215	P	Pn	23 52 50.4	+0.6
	25nm,0.8s						
SPSI	Sidrap Palu	9.26	264	P	Pn	23 53 04.7	-0.7
	8.5nm,0.5s						
KAPI	Kappang	9.42	258	Pn	Pn	23 53 08.1	+0.4
	1.1nm,0.3s,baz=85,slow=20,SNR=1.8						
	3.3nm,0.3s						
WRA	Warramunga Arr	17.53	163	P	Pn	23 54 55.5	-0.6
	0.3nm,0.3s,baz=345,slow=12,SNR=16						
WRA				S	Sn	23 58 10.9	+0.4
	0.5nm,0.6s,baz=345,slow=25,SNR=2.1						
	1.9nm,0.7s						
ASAR	Alice Springs	20.99	167	P	P	23 55 34.9	0.0
	3.9nm,0.6s,baz=349,slow=12,SNR=37						
ASAR				S	S	23 59 23.0	-4.0
	1.0nm,0.8s,baz=351,slow=24,SNR=3.7						
	3.9nm,0.6s						
MKAR	Makanchi Array	64.44	326	P	P	00 01 29.5	+2.2
	0.5nm,0.7s,baz=117,slow=5.2,SNR=3.5						
	0.5nm,0.7s						

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*JMA **25** 00:26:12.6±0.4, 34°N±1°×14°1E±°, h43^{km}±3^{km}, MV3.9/35, FAR SE OFF BOSO PEN*

*NIED **25** 00:26:12.6, 34°.13N×141°.10E, h43^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-7.06; $M_{\theta\theta}$6.47; $M_{\phi\phi}$0.60; $M_{r\theta}$-3.93; $M_{\theta\phi}$-2.67; $M_{\phi r}$2.24; Fault plane solution: $M_0$8.57000×10^{14} NP1: ϕ_s116.00000°, δ61.00000°, λ-85.00000°. NP2: ϕ_s286.00000°, δ29.00000°, λ-98.00000°.*

*IDC **25** 00:26:13.9±3.0, 34°.16N×141°.06E, h37^{km}±25^{km}, mb3.6/17, mbtmp3.9/22, ML3.9/5, MS3.1/3 Error ellipse: s-maj=20.1km s-min=14.4km az=76.0*

ISC 25 00:26:10.1±1.5**, 34°.08N**±0°.04×**141°.11E**±0°.06**, h14**^{km}±9^{km}**, n52, σ1^{s}19**/51**, mb3.9**/17**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	0.58	349	iP	Pn	00 26 23.8	+0.4
BSO3	Boso 3	0.87	326	iP	Pn	00 26 28.6	+0.9
BSO3				X		00 26 40.8	
BSO4	Boso 4	1.10	325	iP	Pg	00 26 32.4	+0.9
KTR	Katsuura	1.25	329	iP	Pg	00 26 33.9	-0.2
KTR				S	Sg	00 26 49.4	-1.0
JMKN	Mikurajimanish	1.27	262	iP	Pg	00 26 34.8	+0.1
JMKN				S	Sg	00 26 50.4	-0.8
JKUC	kamogawauchiur	1.31	325	iP	Pg	00 26 34.6	-0.7
JKUC				eS	Sn	00 26 50.7	-0.5
JHJ2	Mitsune	1.45	228	P	Pg	00 26 38.7	+0.7
JHJ2	Mitsune	1.45	228	P	Pg	00 26 38.4	+0.4
JIM2	Oshima 3	1.52	295	P	Pn	00 26 37.2	+0.3
JTHY	Toshimahigashi	1.57	287	P	Pb	00 26 38.5	-0.4
JTHY				S	Sb	00 26 57.5	-1.1
KTJ3	Kamata3	1.88	297	iP	Pn	00 26 42.0	+0.1
KTJ3				S	Sn	00 27 02.8	-2.6
JIZS	Izushimoda	1.95	290	P	Pn	00 26 43.5	+0.7
JOD2	Odawara 2	2.04	306	iP	Pn	00 26 44.5	+0.5
MJAR	Matsushiro Arr	3.41	317	Pn	Pn	00 27 04.2	+1.3
	1.7nm,0.3s,baz=142,slow=14,SNR=51						
MJAR				Sn	Sn	00 27 42.7	-0.4
	2.8nm,0.3s,baz=277,slow=31,SNR=9.5						
	14nm,0.6s						
MAJO	Matsushiro	3.41	317	P	Pn	00 27 04.9	+2.0
JGF	Kuroka	3.44	297	P	Pn	00 27 05.6	+2.3
INU	Inuyama	3.60	292	P	Pn	00 27 07.9	+2.5
JMM	Marumori	3.78	356	P	Pn	00 27 08.3	+0.3
JSD	Sado	4.57	331	P	Pn	00 27 19.8	+1.0
JTM	Tenmabayashi	6.69	360	P	Pn	00 27 47.6	-0.3
JCJ	Chichijima	7.03	172	Pn	Pn	00 27 54.6	+2.1
	17nm,0.3s,baz=285,slow=23,SNR=8.4						
JCJ				Sn	Sn	00 29 08.1	-4.2
	6.4nm,0.3s,baz=270,slow=16,SNR=1.6						
	40nm,0.3s						
ASAJ	Asahikawa	10.09	6	Pn	Pn	00 28 33.7	-0.8
	2.3nm,0.3s,baz=232,slow=17,SNR=4.4						
ASAJ				Sn	Sn	00 30 16.4	-11
	0.5nm,0.3s,baz=273,slow=32,SNR=1.9						
	5.9nm,0.3s						
KSRS	Korea Array	11.22	291	LR	LR	00 33 02.4	
	comp=Z,39nm,18.8s,baz=50,slow=36						
USRK	Ussuriysk Ar.	12.32	328	Pn	Pn	00 29 06.2	+1.1
	0.3nm,0.3s,baz=142,slow=14,SNR=4.1						
	1.3nm,0.6s						
KLR	Kul'dur	16.65	338	Pn	Pn	00 30 02.8	-0.1
	0.2nm,0.3s,baz=155,slow=13,SNR=4.7						
	0.8nm,0.5s						
H11N2	WAKE ISLAND Hy	26.98	115	T	T	01 01 18.2	
	baz=309,slow=74,SNR=5.3						
H11N1	WAKE ISLAND Hy	26.99	115	T	T	01 01 53.1	
	baz=309,SNR=5.6						
H11N3	WAKE ISLAND Hy	27.00	115	T	T	01 01 31.7	
	baz=309,slow=74,SNR=4.9						
TGY	Tagaytay City	27.01	227	LR	LR	00 42 37.3	
	comp=Z,62nm,19.5s,baz=351,slow=36						
H11S3	WAKE ISLAND Hy	27.59	118	T	T	01 02 14.5	
	baz=312						
H11S1	WAKE ISLAND Hy	27.59	118	T	T	01 02 16.5	
	baz=312						
H11S2	WAKE ISLAND Hy	27.60	118	T	T	01 02 19.1	
	baz=312						
YAK	Yakutsk	28.90	349	LR	LR	00 44 37.9	
	comp=Z,38nm,18.8s,baz=80,slow=38						
SONM	Songino Array	29.32	308	P	P	00 32 13.2	+0.8
	0.8nm,0.6s,baz=106,slow=8.2,SNR=5.9						
	0.8nm,0.6s						
ZALV	Zalesovo Beam	43.76	315	P	P	00 34 15.4	+0.4
	0.4nm,0.4s,baz=109,slow=7.8,SNR=4.5						
ZALV				PcP	PcP	00 36 00.8	-0.7
	0.4nm,0.4s,baz=90,slow=4.3,SNR=2.2						
	0.4nm,0.4s						
MKAR	Makanchi Array	45.53	305	P	P	00 34 29.0	-0.2
	1.0nm,0.6s,baz=90,slow=9.7,SNR=18						
	1.0nm,0.6s						
ILAR	Eielson Array	52.13	31	P	P	00 35 19.6	0.0
	0.6nm,0.8s,baz=257,slow=6.0,SNR=6.3						
	0.6nm,0.8s						
WRA	Warramunga Arr	54.11	188	P	P	00 35 34.7	+0.1
	1.6nm,0.6s,baz=1.3,slow=7.5,SNR=22						
	1.6nm,0.6s						
INK	Inuvik	57.13	26	P	P	00 35 56.1	+0.4
	0.9nm,0.5s,baz=264,slow=10,SNR=3.1						
	0.9nm,0.5s						
ASAR	Alice Springs	57.84	188	P	P	00 36 02.8	+1.5
	1.0nm,0.8s,baz=11,slow=8.4,SNR=11						
	1.0nm,0.8s						
YKA	Yellowknife Ar	66.49	29	P	P	00 36 58.3	-0.6
	0.4nm,0.9s,baz=300,slow=6.1,SNR=4.8						
	0.4nm,0.9s						
ARCES	ARCESS Array B	66.67	340	P	P	00 36 59.7	-0.2
	3.1nm,0.9s,baz=44,slow=5.4,SNR=8.7						
	3.1nm,0.9s						
FINES	FINESS Array B	71.31	333	P	P	00 37 28.3	-0.6
	0.8nm,0.4s,baz=64,slow=6.3,SNR=11						
	0.8nm,0.4s						
KBZ	Khabaz	72.64	311	P	P	00 37 37.1	0.0
	2.0nm,1.0s,baz=72,slow=16,SNR=5.8						
	2.0nm,1.0s						
NB2	NORSAR Subarra	76.81	337	P	P	00 38 00.2	-0.9
	comp=Z,0.9nm,0.7s,baz=40,slow=5.9						
NOA	NORSAR Array B	76.81	337	P	P	00 38 00.2	-0.9
	comp=Z,0.8nm,0.6s,baz=40,slow=5.7,SNR=5.3						
	comp=Z,0.8nm,0.6s						
NVAR	Mina Array Bea	76.97	52	P	P	00 38 03.6	+0.9
	comp=Z,0.2nm,0.3s,baz=297,slow=6.0,SNR=2.4						
	comp=Z,0.2nm,0.3s						
PDAR	Pinedale Array	79.92	45	P	P	00 38 19.3	+0.4
	comp=Z,0.3nm,0.7s,baz=304,slow=1.6,SNR=4.2						
	comp=Z,0.3nm,0.7s						
BRTR	Keskin Array B	80.62	312	P	P	00 38 22.8	+0.2
	comp=Z,0.4nm,0.7s,baz=93,slow=4.9,SNR=3.8						
	comp=Z,0.4nm,0.7s						
GERES	GERESS Array B	85.08	328	P	P	00 38 44.9	-0.6
	comp=Z,0.5nm,0.5s,baz=30,slow=8.0,SNR=2.9						
	comp=Z,0.5nm,0.5s						
TXAR	Lajitas Array	92.12	52	P	P	00 39 20.3	+0.9
	comp=Z,0.2nm,0.5s,baz=299,slow=1.9,SNR=3.9						
	comp=Z,0.2nm,0.5s						
LPAZ	La Paz	148.32	63	PKPbc	PKPbc	00 45 58.8	+1.5
	comp=Z,0.6nm,0.3s,baz=336,slow=5.0,SNR=4.6						

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*IDC **25** 00:34:26.7±1.0, 11°.14N×87°.88W, h0^{km}, mb3.9/9, mbtmp3.9/12, ML4.2/2, MS3.4/20, Error ellipse: s-maj=33.2km s-min=16.5km az=42.0*

*INET **25** 00:34:30.0±1.4, 11°.28N×87°.99W, h15^{km}±9^{km}, MW4.4*

*NEIC **25** 00:34:31.5, 11°.38N×87°.77W, h21^{km}*

*UCR **25** 00:34:31.1±1.6, 11°.25N×87°.97W, h35^{km}±53^{km}, MW3.8, mb4.1(NEIC)*

*NEIC **25** 00:34:32.1±1.9, 11°.40N±0°.07×87°.72W±0°.07, h26^{km}±6^{km}, mb4.4/53, Mwr4.1/19, Error ellipse: s-maj=12.1km s-min=7.6km az=225.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.69; $M_{\theta\theta}$1.13; $M_{\phi\phi}$-0.44; $M_{r\theta}$-0.44; $M_{\theta\phi}$1.10; $M_{\phi r}$0.61; Fault plane solution: $M_0$1.65000×10^{15} NP1: ϕ_s204.75000°, δ61.31000°, λ-152.24000°. NP2: ϕ_s100.57000°, δ65.89000°, λ-31.73000°. Principal axes: T 1.6994, Plg3.0000°, Azm154.0000°; N -0.0950, Plg51.0000°, Azm247.0000°; P -1.6044, Plg39.0000°, Azm61.0000°;*

*SNET **25** 00:34:33.4±0.8, 11°.46N×88°.00W, h34^{km}±59^{km}, ML3.8*

ISC 25 00:34:28.4±1.5**, 11°.34N**±0°.04×**87°.86W**±0°.04**, h8**^{km}±9^{km}**, n202, σ1^{s}34**/209**, mb4.3**/34**, MS3.5**/19**, 3C, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	1.49	56	eP	Pg	00 34 56.8	-0.3
CRIN	San Cristobal	1.57	30	Pn	Pn	00 34 56.7	+0.1
CRIN	San Cristobal	1.57	30	eP	Pg	00 34 58.0	-0.5
CRIN				eS	Sg	00 35 19.0	+0.1
CRIN	San Cristobal	1.57	30	eP	Pg	00 34 58.0	-0.5
TEL3	Telica 3	1.57	39	eP	Pg	00 34 58.2	-0.5
TELN	Telica	1.61	38	eP	Pg	00 34 58.3	-1.0
CNGN	Cerro Negro	1.62	44	Pn	Pn	00 34 57.5	+0.2
CNGN	Cerro Negro	1.62	44	eP	Pg	00 34 58.6	-0.9
MOMN	Momotombo	1.67	50	eP	Pb	00 34 59.1	-0.4
MOMN				eS	Sg	00 35 22.3	+0.1
TISN	Laguna Tiscapa	1.75	63	eP	Pb	00 35 00.3	-0.5
MGAN	Managua	1.77	63	eP	Pn	00 34 59.7	+0.4
MGAN				eP	Pb	00 34 59.9	-1.2
WILN	Americas 2	1.83	63	eP	Pb	00 35 01.6	-0.6
WILN				eS	Sg	00 35 26.8	-0.4
NADN	Granada	1.83	77	eP	Pb	00 35 01.8	-0.5
HUEN		1.92	59	eP	Pb	00 35 02.8	-1.0
HUEN				eS	Sg	00 35 30.0	-0.4
CNCH	Conchagua	1.93	1	eP	Pn	00 35 02.4	+0.8
LCY	Lacayo	2.12	348	eP	Pn	00 35 04.8	+0.5
PACA	Pacayal	2.17	348	eP	Pn	00 35 05.8	+0.9
PACA	Pacayal	2.17	348	eP	Pn	00 35 05.9	+0.9
PACA				eS	Sn	00 35 32.1	0.0
LCRUZ	La Cruz	2.20	97	eS	Sb	00 35 35.4	-0.5
TECA	Tecapa	2.23	344	eP	Pn	00 35 06.5	+0.5
COEB	Comit de Eme	2.25	343	eP	Pn	00 35 06.5	+0.5
HZTE	Horizontes, Gu	2.30	105		Pn	00 35 06.8	+0.1
HZTE	Horizontes, Gu	2.30	105	eP	Pn	00 35 07.5	+0.7
HZTE				eS	Sn	00 35 35.6	+0.3
HZTE	Horizontes, Gu	2.30	105	eP	Pn	00 35 07.7	+1.0
HATIL	Hatillo	2.36	116	eP	Pn	00 35 06.7	-0.7
ELI1	Hacienda Flor	2.36	107	eP	Pn	00 35 07.0	-0.5
ELI1				eS	Sn	00 35 37.5	+0.7
ALIBA	Liberia Airpor	2.39	108	eP	Pn	00 35 09.2	+1.3
BOAB	BOACO BROADBAN	2.41	63		Pn	00 35 07.8	-0.4
GBS3	Finca Las Img	2.42	103	⇑eP	Pn	00 35 09.2	+0.9
LAPC	Finca la Perla	2.44	103	⇑eP	Pn	00 35 09.6	+0.9
LAPC				eS	Sn	00 35 39.0	+0.2
SAJU	San Juanillo,	2.46	121	eP	Pg	00 35 15.8	+0.2
BUEV	Buena Vista	2.46	102	eP	Pn	00 35 10.4	+1.4
MATN	Matagalpa	2.46	50	Pn	Pn	00 35 09.8	+0.8
MATN	Matagalpa	2.46	50	eP	Pn	00 35 10.1	+1.1
MATN				eS	Sb	00 35 41.4	-2.2
GB1A	Borinquen Arri	2.47	102	eP	Pn	00 35 10.4	+1.4
SCLA	Alcaldia de Sa	2.50	340	eP	Pn	00 35 10.3	+0.9
SCLA				eS	Sn	00 35 39.5	-0.7
SCLA				IAML		00 35 44.0	
	comp=Z,343nm,0.5s						
GPS3	Bodega del ICE	2.51	103	eP	Pn	00 35 09.6	-0.1
VORI	VORI	2.52	102	eP	Pb	00 35 13.0	-1.0
BUAI	Buenos Aires	2.52	100	eP	Pn	00 35 11.1	+1.4
GPS1	Guardaparques	2.52	103	eP	Pn	00 35 10.8	+1.0
GPS2	Hotel Rincn d	2.53	103	eP	Pn	00 35 10.8	+0.9
SJTE	Alcalda de S	2.53	334	eP	Pn	00 35 10.2	+0.3
SJTE				eS	Sn	00 35 38.5	-2.4
GP14	Hacienda Santa	2.53	103	eP	Pn	00 35 11.0	+1.1
ORTG	Ortega, Santa	2.55	112	Pn	Pn	00 35 10.1	0.0
ORTG	Ortega, Santa	2.55	112	eP	Pn	00 35 10.3	+0.1
GP77	Hacienda Santa	2.55	103	eP	Pn	00 35 12.6	+2.4
JUD3	Juan Diaz 3	2.56	117	eP	Pn	00 35 09.8	-0.4
LFRS	El Faro	2.56	333	eP	Pn	00 35 10.1	-0.2
PAVA	Las Pavas	2.59	336	eP	Pn	00 35 11.6	+0.9
PAVA				eS	Sn	00 35 40.5	-1.9
DUNO	Dulce Nombre,	2.64	118	Pn	Pn	00 35 11.2	-0.1
GUAB	Guayabo de Bag	2.65	103	eP	Pn	00 35 09.9	-1.7
MESS	Mesas	2.68	103	eP	Pn	00 35 13.9	+2.0
CLARA	Aguas Claras	2.69	102	eP	Pn	00 35 14.3	+2.2
ACON	Acoyapa	2.70	76	Pn	Pn	00 35 12.3	+0.1
ACON	Acoyapa	2.70	76	eP	Pn	00 35 12.5	+0.3
HORNC	Hornillas	2.70	103	eP	Pn	00 35 14.2	+1.9
CUI	Cuipilapa	2.73	104	eP	Pn	00 35 14.2	+1.6
INDI	Punta indio, G	2.74	122	eP	Pn	00 35 12.1	-0.6
VMAR	Armenia, Volca	2.74	101	eP	Pn	00 35 14.4	+1.7
VMAR				eP	Pb	00 35 14.7	-3.0
PMON	Piamonte	2.76	329	eP	Pn	00 35 13.4	+0.4
TGUH	Tegucigalpa,Un	2.76	12	Pn	Pn	00 35 14.1	+1.0
TGUH	Tegucigalpa,Un	2.76	12	eP	Pn	00 35 14.4	+1.3
TGUH	Tegucigalpa,Un	2.76	12	eP	Pn	00 35 14.5	+1.3
P5NO	Presa 5 de nov	2.77	342	eP	Pn	00 35 14.1	+0.9
JAYA	Jayaque - finc	2.78	326	eP	Pn	00 35 13.2	-0.2
JAYA				IAML		00 35 47.1	
	comp=Z,889nm,0.4s						
CANAL	Canalete	2.79	100	eP	Pn	00 35 15.1	+1.7
MOTZ	Rio Naranjo	2.81	103	eP	Pn	00 35 15.8	+2.1
POPE	POPE, Guanacas	2.84	116	eP	Pn	00 35 13.9	-0.3
ACAL	Aguas Claras	2.86	104	eP	Pn	00 35 16.6	+2.2
PTEN	Parque Tenorio	2.88	102	⇑iP	Pn	00 35 16.6	+1.9
PTEN				eS	Sn	00 35 53.6	+3.9
VERA	Finca Concepci	2.97	99	eP	Pb	00 35 19.9	-1.8
CEVE	Cerro Verde	3.02	325	eP	Pn	00 35 17.3	+0.6
CEVE				eS	Sn	00 35 51.8	-1.4
SBLS	San Blas	3.03	325	eP	Pn	00 35 17.6	+0.7
JTS	Las Juntas de	3.04	110	Pn	Pn	00 35 17.5	+0.7
	comp=Z,36nm,0.3s,baz=314,slow=18,SNR=73						
JTS				Sn	Sn	00 35 53.5	+0.2
	comp=Z,21nm,0.3s,baz=29,slow=23,SNR=7.0						
	comp=Z,77nm,0.3s						
JTS	Las Juntas de	3.04	110	Pn	Pn	00 35 17.7	+1.0
JTS	Las Juntas de	3.04	110	eP	Pn	00 35 17.9	+1.1
JTS	Las Juntas de	3.04	110	eP	Pn	00 35 17.8	+1.0
TABAC	Tabacon	3.15	105	eP	Pn	00 35 20.1	+1.8
NUBE	Las Nubes	3.17	324	eP	Pn	00 35 19.2	+0.5
NUBE				IAML		00 35 59.8	
	comp=Z,217nm,0.3s						
CASO	Castillo	3.19	106	eP	Pn	00 35 20.7	+1.7
CEDE	Laguna Cedeo	3.21	105	eP	Pn	00 35 21.1	+1.9
FORC	Fortuna	3.25	105	eP	Pn	00 35 21.5	+1.8
LAFE	Finca La Fe, P	3.27	117	eP	Pn	00 35 19.5	-0.5
LAFE				eS	Sn	00 35 56.9	-2.2
LAFE	Finca La Fe, P	3.27	117	eP	Pn	00 35 19.8	-0.2
SOCE	Pocosol	3.32	106	eP	Pn	00 35 22.1	+1.4
COVE	Coope Vega, Sa	3.45	100	Pn	Pn	00 35 23.3	+0.8
ESQI	Esquipulas	3.52	336	Pn	Pn	00 35 25.3	+1.8
JACO	JACO, Garabito	3.56	118	Pn	Pn	00 35 25.5	+1.5
CPMI	Catarata Coope	3.57	107	eP	Pn	00 35 25.9	+1.6
ACOS	Acosta	3.94	113	eP	Pn	00 35 31.2	+1.8
ABE2	San Pablo	4.08	113	eP	Pn	00 35 32.9	+1.6
OCM	Ochomogo	4.09	110	eP	Pn	00 35 32.8	+1.3
LCR2	La Lucha 2	4.11	112	eP	Pn	00 35 33.4	+1.7
LCR2	La Lucha 2	4.11	112	eP	Pn	00 35 33.7	+2.0
HAYA	Volcan Irazu	4.17	109	eP	Pn	00 35 34.8	+2.0
ICR3	Volcano Irazu	4.18	108	eP	Pn	00 35 35.3	+2.4
RIMA	Rio Macho	4.22	111		Pn	00 35 34.5	+1.2
RIMA	Rio Macho	4.22	111	eP	Pn	00 35 35.5	+2.2
RIMA	Rio Macho	4.22	111	eP	Pn	00 35 35.6	+2.2
CDM	Cerro de Muert	4.40	113	eP	Pn	00 35 37.2	+1.3
CDM	Cerro de Muert	4.40	113	eP	Pn	00 35 37.4	+1.4
BUS1	Rivas	4.41	113	eP	Pn	00 35 37.7	+1.6
PEZE	Perez Zeledon,	4.55	115	Pn	Pn	00 35 38.7	+1.0
PEZE	Perez Zeledon,	4.55	115	eP	Pn	00 35 39.4	+1.8
BATAN	Batan	4.57	105	Pn	Pn	00 35 39.0	+1.0
SRBA	San Rafael, Bu	4.89	115	Pn	Pn	00 35 43.4	+1.0
SRBA				Sn	Sn	00 36 36.7	-2.7
EDBA	Buenos Aires	5.00	115	eP	Pn	00 35 45.1	+1.3
EDAD	Golfito	5.33	120	eP	Pn	00 35 49.9	+1.5
CDITO	Canoas	5.62	119	Pn	Pn	00 35 52.7	+0.3
BRU2	Volcan	5.68	116	Pn	Pn	00 35 52.8	-0.5
PETF	Flores	5.88	341	Pn	Pn	00 35 56.6	+0.7
CCIG	Comitan	6.44	320	Pn	Pn	00 36 04.3	+0.6
CMIG	Matias Romero	8.89	311	Pn	Pn	00 36 38.0	+0.6
	comp=Z,2.2nm,0.3s,baz=130,slow=11,SNR=16						
CMIG				Sn	Sn	00 38 15.3	-2.5
	comp=Z,0.4nm,0.3s,baz=335,slow=20,SNR=2.5						
	comp=Z,4.7nm,0.3s						
TLIG	Tlapa	12.07	302	Pn	Pn	00 37 24.1	+3.0
ROSC	El Rosal	14.87	115	Pn	Pn	00 37 59.0	-0.5
SLOR	San Lorenzo -	15.17	142	Pn	Pn	00 38 04.2	+0.5
CHSH	Refugio Sur-Vo	15.57	144		Pn	00 38 10.9	+1.9
RUSC	La Rusia	15.57	109	Pn	Pn	00 38 06.8	-2.1
PORT	Chimborazo Vol	15.60	144		Pn	00 38 11.0	+1.7
PORT				IAmb	IAmb	00 38 28.7	
	comp=Z,26nm,1.2s						
SDV	Santo Domingo	17.13	97	Pn	Pn	00 38 29.8	+1.2
	comp=Z,2.4nm,0.5s,baz=290,slow=12,SNR=2.4						
SDV				LR	LR	00 46 26.5	
	comp=Z,74nm,18.2s,baz=187,slow=42						
SDV	Santo Domingo	17.13	97	P	Pn	00 38 30.3	+1.7
HATO	Hato, Curacao	18.52	86	P	P	00 38 43.2	-2.2
BAUV	El Baul	19.65	95	P	P	00 38 57.6	-0.2
BAUV				IAmb	IAmb	00 39 12.5	
	comp=Z,17nm,1.1s						
833A	Chaparral WMA,	20.06	329	P	P	00 39 02.3	+0.1
833A				IAmb	IAmb	00 39 17.0	
	comp=Z,12nm,0.7s						
ATAH	Atahualpa	20.63	152	LR	LR	00 46 22.6	
	comp=Z,40nm,18.8s,baz=341,slow=35						
152A	Waverly Hall	21.43	7	P	P	00 39 18.7	+1.8
152A				IAmb	IAmb	00 39 21.9	
	comp=Z,16nm,1.2s						
257A	Skidaway Islan	21.48	16	P	P	00 39 17.6	+0.1
AOPR	Arecibo Observ	21.54	69	P	P	00 39 18.7	+0.3
UUPR	Utuado, UPR, P	21.55	69	P	P	00 39 16.7	-1.7
OBIP	Obispado Ponce	21.60	70	P	P	00 39 17.4	-1.6
OBIP				IAmb	IAmb	00 39 27.1	
	comp=Z,28nm,1.1s						
LRAL	Lakeview Retre	21.61	2	P	P	00 39 20.5	+1.6
LRAL				IAmb	IAmb	00 39 29.4	
	comp=Z,16nm,1.4s						
CELP	Cerrillos	21.63	69	P	P	00 39 17.3	-2.0
SJG	San Juan	22.03	70	P	P	00 39 30.2	+6.6
	comp=Z,5.5nm,0.5s,baz=266,slow=13,SNR=2.2						
JCT	Junction City	22.04	332	P	P	00 39 24.6	+1.0
Y49A	Blount Mountai	22.45	3	P	P	00 39 27.1	-0.9
Y52A	Lilburn	22.69	8	P	P	00 39 31.9	+1.4
Y52A				IAmb	IAmb	00 39 51.8	
	comp=Z,14nm,1.1s						
WLAR	White Oak Lake	22.76	349	P	P	00 39 32.6	+1.3
WLAR				IAmb	IAmb	00 39 35.0	
	comp=Z,13nm,1.0s						
TX32	Lajitas Array	23.20	323	P	P	00 39 36.9	+0.9
TXAR	Lajitas Array	23.20	323	P	P	00 39 37.0	+1.0
	comp=Z,1.4nm,0.8s,baz=147,slow=8.6,SNR=8.9						
	comp=Z,1.4nm,0.8s						
TX31	Lajitas Ar. Si	23.20	323	P	P	00 39 37.0	+1.0
TX31				IAmb	IAmb	00 39 50.6	
	comp=Z,8.9nm,0.8s						
MIAR	Mount Ida	23.68	348	P	P	00 39 40.9	+0.2
ABTX	Abilene, Hawle	23.80	335	P	P	00 39 41.7	-0.1
ABTX				IAmb	IAmb	00 39 43.4	
	comp=Z,18nm,1.1s						
W50A	Signal Mountai	23.87	5	P	P	00 39 42.1	-0.3
PAULI	Pauline	24.02	12	P	P	00 39 44.4	+0.6
PAULI				IAmb	IAmb	00 39 48.9	
	comp=Z,21nm,1.4s						
TKL	Tuckaleechee C	24.49	8	P	P	00 39 50.0	+1.8
	comp=Z,2.6nm,0.8s,baz=183,slow=6.5,SNR=4.2						
TKL				LR	LR	00 51 09.2	
	comp=Z,53nm,18.5s,baz=172,slow=41						
	comp=Z,2.6nm,0.8s						
V52A	Sevierville	24.70	8	P	P	00 39 51.5	+1.5
V52A				IAmb	IAmb	00 40 10.2	
	comp=Z,9.2nm,1.1s						
FCAR	Ozark Folk Cen	24.75	352	P	P	00 39 48.9	-1.6
FCAR				IAmb	IAmb	00 39 50.2	
	comp=Z,7.0nm,0.9s						
W57A	Gilead	24.76	16	P	P	00 39 49.8	-0.8
W57A				IAmb	IAmb	00 40 11.2	
	comp=Z,24nm,1.5s						
LPIG	La Paz	24.82	304	LR	LR	00 49 52.4	
	comp=Z,67nm,18.1s,baz=52,slow=37						
POST	Post	24.99	332	P	P	00 39 52.9	+0.1
POST				IAmb	IAmb	00 39 54.5	
	comp=Z,16nm,1.2s						
W35A	Tecumseh	25.09	342	P	P	00 39 53.9	+0.4
W35A				IAmb	IAmb	00 40 14.1	
	comp=Z,15nm,1.2s						
FNO	Franklin	25.34	342	P	P	00 39 56.7	+0.8
OK052	Battle Ridge R	25.85	343	P	P	00 40 00.7	+0.2
OK052				IAmb	IAmb	00 40 02.8	
	comp=Z,11nm,0.9s						
OK029	Liberty Lake	25.86	342	P	P	00 40 01.6	+1.1
OK029				IAmb	IAmb	00 40 21.5	
	comp=Z,9.2nm,0.7s						
OK051	E0350 and S346	26.34	344	P	P	00 40 06.5	+1.6
S39A	Bolivar	26.70	350	P	P	00 40 07.4	-0.7
S39A				IAmb	IAmb	00 40 17.0	
	comp=Z,5.0nm,0.7s						
X16A	Lo Mia Camp, P	31.47	321	P	P	00 40 51.8	+1.0
SAML	Samuel	31.75	128	P	P	00 40 51.8	-1.5
SAML				IAmb	IAmb	00 41 00.3	
	comp=Z,3.0nm,0.7s						
LPAZ	La Paz	33.68	144	LR	LR	00 54 22.1	
	comp=Z,60nm,20.0s,baz=308,slow=36						
KNB	Kanab	34.03	323	P	P	00 41 14.6	+1.4
KNB				IAmb	IAmb	00 41 16.8	
	comp=Z,8.7nm,1.3s						
SADO	Sadowa	34.15	11	LR	LR	00 56 10.5	
	comp=Z,73nm,18.1s,baz=114,slow=38						
PFO	Pinyon Flats O	34.29	315	LR	LR	00 56 03.8	
	comp=Z,45nm,19.8s,baz=232,slow=38						
V12A	Nelson	34.45	319	P	P	00 41 17.4	+0.6
V12A				IAmb	IAmb	00 41 19.9	
	comp=Z,6.5nm,1.2s						
PDAR	Pinedale Array	36.57	333	P	P	00 41 36.6	+1.5
	comp=Z,0.3nm,0.7s,baz=131,slow=11,SNR=2.3						
	comp=Z,0.3nm,0.7s						
Q09A	Carvers	37.83	321	P	P	00 41 45.6	-0.2
SIV	San Ignacio	37.95	135	LR	LR	00 56 35.4	
	comp=Z,73nm,19.8s,baz=314,slow=35						
NV11	Mina Array Sit	38.19	320	P	P	00 41 50.0	+1.2
NV11				IAmb	IAmb	00 41 52.3	
	comp=Z,6.2nm,0.9s						
NVAR	Mina Array Bea	38.28	320	P	P	00 41 52.0	+2.3
	comp=Z,6.3nm,1.0s,baz=134,slow=7.7,SNR=22						
NVAR				LR	LR	00 57 11.0	
	comp=Z,31nm,19.7s,baz=240,slow=36						
	comp=Z,6.3nm,1.0s						
NVAR	Mina Array Bea	38.28	320	P	P	00 41 50.2	+0.5
LHV	Little Huntoon	38.30	320	P	P	00 41 50.2	+0.7
LHV				IAmb	IAmb	00 41 53.4	
	comp=Z,9.4nm,0.9s						
MDPB	Devils Postpil	38.31	318	P	P	00 41 50.4	+0.3
LVC	Limon Verde	38.51	151	LR	LR	00 58 02.7	
	comp=Z,32nm,20.3s,baz=328,slow=37						
KVN	Kaiserville	38.53	321	P	P	00 41 53.1	+1.4
BMN	Battle Mountai	38.87	323	P	P	00 41 55.0	+0.5
BMN				IAmb	IAmb	00 41 59.2	
	comp=Z,8.7nm,1.4s						
YERR	Yerington	39.20	320	P	P	00 41 57.9	+0.5
YERR				IAmb	IAmb	00 42 00.5	
	comp=Z,17nm,1.4s						
ULM	Lac du Bonnet	39.36	352	P	P	00 41 59.9	+1.7
	comp=Z,1.1nm,0.4s,baz=159,slow=14,SNR=2.2						
ULM				LR	LR	00 58 57.3	
	comp=Z,79nm,21.3s,baz=198,slow=37						
	comp=Z,1.1nm,0.4s						
HLID	Hailey	39.48	329	P	P	00 41 59.6	0.0
LMN	Caledonia Moun	39.61	25	P	P	00 41 59.9	-0.5
MCMT	McKenzie Canyo	39.67	332	P	P	00 42 02.5	+1.3
YBH	Yreka Blue Hor	42.95	321	LR	LR	01 00 44.6	
	comp=Z,44nm,18.1s,baz=278,slow=37						
RPN	Rapa Nui	43.55	208	LR	LR	00 55 18.0	
	comp=Z,77nm,20.7s,baz=48,slow=29						
NEW	Newport	44.19	332	LR	LR	01 03 12.4	
	comp=Z,40nm,18.9s,baz=154,slow=39						
SCHQ	Schefferville	46.45	17	P	P	00 42 55.2	-0.5
	comp=Z,1.1nm,0.5s,baz=208,slow=17,SNR=7.3						
SCHQ				LR	LR	01 03 41.3	
	comp=Z,66nm,18.5s,baz=112,slow=38						
	comp=Z,1.1nm,0.5s						
FRB	Frobisher Bay	54.09	10	LR	LR	01 08 52.9	
	comp=Z,75nm,18.0s,baz=294,slow=38						
PLCA	Paso Flores	54.23	164	P	P	00 43 52.0	-2.8
	comp=Z,1.4nm,0.8s,baz=336,slow=9.7,SNR=4.2						
	comp=Z,1.4nm,0.8s						
YKA	Yellowknife Ar	54.58	345	P	P	00 43 56.5	-0.5
	comp=Z,0.5nm,0.8s,baz=134,slow=8.0,SNR=7.1						
YKA				PcP	PcP	00 45 00.2	+0.1
	comp=Z,0.2nm,0.7s,baz=142,slow=4.4,SNR=5.7						
YKA				LR	LR	01 08 38.2	
	comp=Z,61nm,21.0s,baz=318,slow=38						
	comp=Z,0.5nm,0.8s						
SFJD	Kangerlussuaq	60.89	16	LR	LR	01 12 20.5	
	comp=Z,76nm,18.2s,baz=132,slow=37						
RES	Resolute Bay	63.45	358	LR	LR	01 14 24.1	
	comp=Z,55nm,18.7s,baz=356,slow=38						
INK	Inuvik	64.14	343	LR	LR	01 16 27.4	
	comp=Z,37nm,18.1s,baz=282,slow=39						
HDA	Harding Lake	66.75	336	P	P	00 45 20.2	+0.2
BRLK	Bradley Lake	66.82	331	P	P	00 45 21.5	+0.9
IL03	Eielson Array	66.86	336	P	P	00 45 20.3	-0.4
ILAR	Eielson Array	66.87	336	P	P	00 45 20.9	+0.1
	comp=Z,2.5nm,1.1s,baz=123,slow=4.7,SNR=14						
	comp=Z,2.5nm,1.1s						
ILAR	Eielson Array	66.87	336	P	P	00 45 20.7	-0.1
RND	Reindeer	67.14	335	P	P	00 45 23.2	+0.6
BMAR	Burnt Mountain	67.17	340	P	P	00 45 23.8	+1.0
BPAW	Bear Paw Mtn.	68.28	335	P	P	00 45 29.5	-0.2
MLY	Manley	68.49	336	P	P	00 45 31.3	+0.2

TORD	Torodi Ar. Bea	87.04	77	P	P	00 47 14.6	-0.7
	comp=Z,0.7nm,0.4s,baz=286,slow=4.3,SNR=2.2						
WRA	Warramunga Arr	138.57	253	PKP	PKPdf	00 53 55.2	-0.6
	comp=Z,0.8nm,1.1s,baz=94,slow=2.5,SNR=4.7						
PZH	PanZhiHua	141.25	346	PKP	PKPdf	00 54 00.1	-0.6
CMAR	Chiang Mai Arr	149.64	347	PKPbc	PKPbc	00 54 19.7	0.0
	comp=Z,1.1nm,0.3s,baz=338,slow=3.5,SNR=11						

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*CNRM **25** 00:34:45.3, 36°.01N×0°.72W, h30^{km}, ml2.5*
*MDD **25** 00:34:47.1±1.0, 36°.17N×0°.70W, h0^{km}, mb_Lg2.5/10, Error ellipse: s-maj=7.6km s-min=4.5km az=149.0*
ISC 25 00:34:43.8±1.3**, 35°.99N**±0°.04×**0°.68W**±0°.05**, h15**^{km}±12^{km}**, n33, σ1**^{s}**.16**/56**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USTO	Oran	0.28	158	P	Pg	00 34 50.0	+0.3
ODJA	Bouhanifia	0.79	147	P	Pn	00 35 11.0	+11
ENIJ	Nijar	1.58	309	S	Sn	00 35 30.7	-0.6
ENIJ				P	Pb	00 35 12.7	+0.1
ENIJ	Nijar	1.58	309	Pn	Pb	00 35 12.3	-0.3
ENIJ				Sn	Sn	00 35 31.4	0.0
ENIJ				*i* Vmb_Lg		00 35 35.9	
CART	Cartagena	1.62	351	P	Pn	00 35 12.0	+0.2
CART				S	Sn	00 35 30.8	-1.5
CART	Cartagena	1.62	351	S	Sn	00 35 31.7	-0.6
CART				P	Pb	00 35 12.6	-0.7
CHAS	Isla Isabel II	1.64	241	P	Pn	00 35 12.7	+0.7
CHAS				S	Sn	00 35 32.4	-0.5
TAF	Taforalt	1.84	231	P	Pn	00 35 15.7	+0.7
TAF				S	Sn	00 35 35.9	-2.0
TLOR	Lorca, Murcia	1.85	334	S	Sn	00 35 38.7	+0.6
TLOR				P	Pb	00 35 16.9	-0.4
EMUR	La Murta	1.90	346	P	Pb	00 35 17.1	-1.2
EMUR				S	Sn	00 35 39.9	+0.4
EMUR	La Murta	1.90	346	Pn	Pb	00 35 18.1	-0.1
EMUR				Sn	Sn	00 35 38.7	-0.8
EMUR				*i* Vmb_Lg		00 35 42.2	
EBER	Berja	2.00	298	P	Pb	00 35 18.8	-1.2
EBER				S	Sb	00 35 43.9	-0.9
EBER	Berja	2.00	298	Pn	Pb	00 35 19.1	-0.9
EBER				Sn	Sn	00 35 43.1	+1.1
EBER				*i* Vmb_Lg		00 35 47.7	
ETRV	Los Montesinos	2.03	358	Pn	Pb	00 35 20.1	-0.2
ETRV				Sn	Sn	00 35 42.8	+0.3
ETRV				*i* Vmb_Lg		00 35 46.3	
GOG	Mont Gurugu	2.04	249	P	Pn	00 35 16.2	-1.5
GOG				S	Sn	00 35 43.5	+0.6
EZAR	Zarzadilla de	2.05	337	Pn	Pb	00 35 19.3	-1.5
EZAR				Sn	Sn	00 35 41.9	-1.3
JBK	JBK	2.26	224	P	Pn	00 35 22.0	+1.2
EQUE	Quentar	2.53	299	Pn	Pb	00 35 27.8	-1.2
EQUE				Sn	Sn	00 35 57.4	+2.3
EQUE				*i* Vmb_Lg		00 36 01.1	
ELGU	Los Guajares,	2.54	291	S	Sn	00 35 55.0	-0.1
ELGU				P	Pn	00 35 26.1	+1.6
ELGU	Los Guajares,	2.54	291	Pn	Pn	00 35 25.5	+1.0
ELGU				Sn	Sn	00 35 55.8	+0.7
EQES	Quesada	2.64	314	Pg	Pb	00 35 29.7	-1.1
EQES				Sn	Sn	00 35 59.2	+1.5
EQES				*i* Vmb_Lg		00 36 06.2	
EBEN2	Beniarda presa	2.71	8	Pn	Pn	00 35 26.2	-0.6
EBEN2				Sn	Sn	00 35 59.0	-0.3
EBEN2				*i* Vmb_Lg		00 36 06.6	
ETOB	Tobarra	2.74	346	S	Sn	00 36 01.7	+1.5
ETOB				P	Pb	00 35 30.4	-2.1
ETOB	Tobarra	2.74	346	Pn	Pn	00 35 29.7	+2.4
ETOB				Sn	Sn	00 35 59.7	-0.4
ETOB				*i* Vmb_Lg		00 36 06.4	
EGOR	Sierra Gorda,	2.98	293	Pg	Pb	00 35 36.1	-0.6
EGOR				Sn	Sn	00 36 07.9	+1.6
AKLM	AKL	3.00	241	P	Pn	00 35 32.4	+1.6
AKLM				S	Sn	00 36 06.8	+0.3
TDRA	Tendrara	3.15	201	P	Pn	00 35 34.9	+1.9
EVIV	Cofrentes, Val	3.29	354	Sn	Sn	00 36 13.4	-0.3
EVIV				*i* Vmb_Lg		00 36 24.2	
EMIJ	Mijas	3.36	281	P	Pn	00 35 36.0	+0.3
EIBI	Ibiza	3.43	27	P	Pn	00 35 38.7	+1.9
EIBI	Ibiza	3.43	27	Pn	Pn	00 35 38.6	+1.9
EIBI				Sn	Sn	00 36 16.0	-1.2
MDT	Midelt	4.54	227	P	Pn	00 35 51.3	-0.8
MD31	MD31	4.59	228	P	Pn	00 35 53.4	+0.6

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*AEIC **25** 01:00:38.4±1.7, 57°.17N±0°.04×157°.43W±0°.07, h6^{km}±4^{km}, ML4.0, mb4.4/28(NEIC), ML4.2/38(NEIC), Error ellipse: s-maj=6.6km s-min=5.3km az=149.0*
*ANF **25** 01:00:38.1±0.2, 57°.19N×157°.47W, h0^{km}, ML4.4/29, Error ellipse: s-maj=2.6km s-min=1.7km az=127.0*
*NEIC **25** 01:00:39.0±1.5, 57°.17N±0°.05×157°.56W±0°.05, h8^{km}±4^{km}, Error ellipse: s-maj=7.7km s-min=3.0km az=157.0*
*IDC **25** 01:00:44.0±2.6, 57°.32N×157°.51W, h43^{km}±23^{km}, mb3.7/18, mbtmp3.9/22, ML3.4/4, MS3.4/9, Error ellipse: s-maj=25.1km s-min=12.0km az=19.0*
ISC 25 01:00:38.1±1.2**, 57°.17N**±0°.03×**157°.52W**±0°.03**, h5**^{km}±7^{km}**, n293, σ1**^{s}**.08**/300**, mb4.3**/32**, MS3.6**/8**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
R16K	Pilot Point	0.40	355	P	Pg	01 00 45.9	+0.1
	baz=169,SNR=26						
R16K				S	Sg	01 00 51.5	+0.4
	baz=169						
R17K	Ugashik Creek	0.77	52	P	Pg	01 00 51.9	-1.0
	baz=230						
R17K				S	Sg	01 01 03.0	+0.2
	baz=230						
CHGN	Chignik	1.00	210		Pg	01 00 56.9	-0.4
CHGN				Sg	Sg	01 01 10.9	+0.7
CHGN				IAML		01 01 12.6	
	comp=N,5µm,0.8s						
CHGN				IAML		01 01 15.7	
	comp=E,4µm,0.8s						
CHGN	Chignik	1.00	210	P	Pg	01 00 56.9	-0.4
	baz=32,SNR=74						
CHGN				S	Sg	01 01 11.3	+1.0
	baz=32						
Q17K	Contact Creek	1.40	38	P	Pn	01 01 03.5	-0.9
	baz=218,SNR=105						
Q17K				S	Sb	01 01 20.9	-2.0
	baz=218						
Q16K	King Salmon	1.58	17	P	Pn	01 01 05.8	-0.8
	baz=196						
Q16K				S	Sn	01 01 26.7	-0.7
	baz=196						
P16K	Nushagak River	1.88	352	P	Pn	01 01 10.5	-0.3
	baz=171,SNR=20						
P16K				S	Sb	01 01 36.2	-0.5
	baz=171						
Q18K	Katmai Hardscr	2.00	41	P	Pn	01 01 11.7	-0.8
	baz=222,SNR=60						
Q18K				S	Sn	01 01 38.6	+0.7
	baz=222						
P17K	Kvichak River	2.11	15	P	Pn	01 01 13.8	-0.2
	baz=195,SNR=15						
P17K				S	Sb	01 01 41.7	-1.5
	baz=195						
OHAK	Old Harbor	2.30	87	Pn	Pn	01 01 17.1	+0.5
OHAK				Sn	Sn	01 01 46.1	+0.9
OHAK	Old Harbor	2.30	87	P	Pn	01 01 17.5	+0.9
OHAK	Old Harbor	2.30	87	P	Pn	01 01 17.0	+0.5
	baz=270,SNR=38						
OHAK				S	Sb	01 01 47.2	-1.4
	baz=270						
O16K	Kokwok River B	2.45	353	P	Pn	01 01 19.4	+0.8
	baz=172						
SDPT	Sand Point	2.46	223	Pn	Pn	01 01 19.2	+0.4
SDPT				IAML		01 01 59.0	
	comp=E,1µm,1.2s						
SDPT				IAML		01 02 05.4	
	comp=N,829nm,1.6s						
SDPT	Sand Point	2.46	223	P	Pn	01 01 19.0	+0.2
	baz=42,SNR=16						
SDPT				Sb	Sg	01 01 56.8	-0.3
	baz=42						
P18K	Big Mountain,	2.53	27	Pn	Pn	01 01 18.8	-1.1
P18K				IAML		01 02 02.0	
	comp=E,888nm,1.0s						
P18K	Big Mountain,	2.53	27	P	Pn	01 01 19.2	-0.6
	baz=208,SNR=23						
O17K	Koliganek Bris	2.62	5	P	Pn	01 01 20.6	-0.3
	baz=184,SNR=27						
Q19K	Cape Douglas,	2.71	48	Pn	Pn	01 01 22.1	-0.1
Q19K	Cape Douglas,	2.71	48	P	Pn	01 01 21.3	-1.0
	baz=230,SNR=18						
KDAK	Kodiak Island	2.73	75	P	Pn	01 01 23.9	+1.4
	comp=E,4.3nm,0.3s,baz=284,slow=12,SNR=4.3						
KDAK				S	Sn	01 01 56.6	+0.7
	comp=E,137nm,0.6s,baz=290,slow=17,SNR=1.6						
	comp=E,268nm,0.5s						
KDAK	Kodiak Island	2.73	75	Pn	Pn	01 01 22.7	+0.3
KDAK	Kodiak Island	2.73	75	P	Pn	01 01 22.8	+0.3
	baz=259						
S12K	Black Hills	2.92	242	P	Pn	01 01 25.6	+0.5
	baz=58,SNR=13						
O18K	Koktuh Hills	2.95	23	Pn	Pn	01 01 25.9	+0.3
O18K				IAML		01 02 12.9	
	comp=N,840nm,0.5s						
O18K				IAML		01 02 13.4	
	comp=E,1µm,0.9s						
O18K	Koktuh Hills	2.95	23	P	Pn	01 01 24.9	-0.7
	baz=204,SNR=20						
Q20K	Shuyak Island	3.09	60	P	Pn	01 01 28.6	+1.2
	baz=244						
Q20K				S	Sn	01 02 06.6	+1.9
	baz=244						
P19K	Oil Pt	3.36	40		Pn	01 01 32.5	+1.3
P19K	Oil Pt	3.36	40	P	Pn	01 01 31.6	+0.4
	baz=223,SNR=12						
P19K				Sb	Sb	01 02 21.1	+2.0
	baz=223						
N16K	Nishlik Lake	3.38	349	P	Pn	01 01 31.5	+0.1
	baz=168						
O19K	Port Alsworth	3.46	27	P	Pn	01 01 33.0	+0.5
	baz=209						
ILSW	Iliamna Southw	3.63	37		Pn	01 01 34.1	-0.9
ILSW				IAML		01 02 30.9	
	comp=N,414nm,0.8s						
ILSW				IAML		01 02 34.2	
	comp=E,379nm,0.8s						
O20K	Slope Mountain	3.88	39	P	Pn	01 01 39.1	+0.8
	baz=223,SNR=24						
HOM	Homer	3.97	49		Pn	01 01 40.8	+1.3
HOM				IAML		01 02 51.5	
	comp=E,467nm,0.9s						
HOM				IAML		01 03 22.7	
	comp=N,551nm,1.2s						
N19K	Bonanza Creek	3.98	22		Pn	01 01 39.8	+0.1
N19K				IAML		01 02 43.1	
	comp=E,511nm,0.9s						
N19K				IAML		01 02 50.4	
	comp=N,424nm,1.0s						
N19K	Bonanza Creek	3.98	22	P	Pn	01 01 39.8	+0.1
	baz=204						
FALS	False Pass	4.04	237		Pn	01 01 42.3	+1.8
SVW2	Sparrevohn	4.06	13	Pn	Pn	01 01 40.7	-0.2
SVW2				IAML		01 02 51.7	
	comp=E,384nm,0.7s						
SVW2				IAML		01 02 51.8	
	comp=N,258nm,0.6s						
SVW2	Sparrevohn	4.06	13	P	Pn	01 01 41.1	+0.3
CNPM	China Poot	4.07	52	Pn	Pn	01 01 42.1	+1.2
RSO	Redoubt South	4.13	35		Pn	01 01 42.7	+0.9
BRLK	Bradley Lake	4.34	50		Pn	01 01 45.6	+0.9
BRSE	Bradley Lake S	4.39	51		Pn	01 01 46.3	+1.0
BRSE	Bradley Lake S	4.39	51	P	Pn	01 01 45.7	+0.3
	baz=237						
SPCR	Spurr Chakacha	4.88	32	P	Pn	01 01 53.5	+1.4
	baz=216,SNR=12						
SPCR				Sb	Sb	01 03 04.7	+1.9
	baz=216						
CAPN	Captain Cook N	4.88	40		Pn	01 01 53.8	+1.8
SPU	Mount Spurr	4.91	33		Pn	01 01 53.6	+1.2
M19K	Big River Lodg	5.01	17	IAML		01 03 24.2	
	comp=E,217nm,0.8s						
M19K				IAML		01 03 35.5	
	comp=N,177nm,0.9s						
M19K	Big River Lodg	5.01	17	P	Pn	01 01 53.4	-0.4
	baz=199						
L19K	White Mountain	5.20	14	IAML		01 03 37.5	
	comp=N,221nm,0.9s						
L19K	White Mountain	5.20	14	P	Pn	01 01 56.4	-0.1
	baz=196						
M20K	Styx River	5.23	23	IAML		01 03 24.9	
	comp=E,162nm,0.8s						
M20K				IAML		01 03 32.7	
	comp=N,125nm,0.9s						
M20K	Styx River	5.23	23	P	Pn	01 01 57.2	+0.4
	baz=207						
O22K	Cooper Landing	5.23	47		Pn	01 01 59.3	+2.4
O22K	Cooper Landing	5.23	47	P	Pn	01 01 56.4	-0.4
	baz=234,SNR=8.5						
FIS	Fire Island	5.47	40		Pn	01 02 00.7	+0.5
SUA	Susitna One	5.53	36	Pn	Pn	01 02 01.7	+0.7
SUA	Susitna One	5.53	36	P	Pn	01 02 01.1	+0.1
	baz=221,SNR=20						
AKUT	Akutan	5.58	240	Pn	Pn	01 02 01.9	+0.4
RC01	Rabbit Creek A	5.61	42	Pn	Pn	01 02 02.7	+0.7
RC01	Rabbit Creek A	5.61	42	P	Pn	01 02 02.2	+0.1
	baz=228						
L20K	Farewell, AK	5.63	17	P	Pn	01 02 02.8	+0.4
	baz=200						
SKT	Skwentna	5.70	30	Pn	Pn	01 02 04.6	+1.3
SKT	Skwentna	5.70	30	P	Pn	01 02 03.3	0.0
	baz=214						
TTA	Tatalina	5.83	7	Pn	Pn	01 02 05.3	+0.2
TTA	Tatalina	5.83	7	P	Pn	01 02 04.1	-1.0
TTA	Tatalina	5.83	7	P	Pn	01 02 04.4	-0.7
	baz=188						
P23K	Montague Islan	6.00	58	P	Pn	01 02 07.4	0.0
	baz=246						
PWL	Port Wells	6.01	48	Pn	Pn	01 02 07.3	-0.2
PWL	Port Wells	6.01	48	P	Pn	01 02 07.0	-0.6
	baz=236						
UNV	Unalaska Valle	6.10	241	Pn	Pn	01 02 07.8	-0.9
UNV	Unalaska Valle	6.10	241	P	Pn	01 02 09.7	+1.0
	baz=53						
PMR	Palmer	6.16	41	Pn	Pn	01 02 10.2	+0.6
PMR	Palmer	6.16	41	P	Pn	01 02 09.6	0.0
	baz=227						
KNK	Knik Glacier	6.29	44		Pn	01 02 12.1	+0.6
KNK	Knik Glacier	6.29	44	P	Pn	01 02 11.7	+0.3
	baz=231						
PPLA	Purkeypile	6.33	23		Pn	01 02 12.8	+0.8
PPLA	Purkeypile	6.33	23	P	Pn	01 02 12.5	+0.4
	baz=207						
GHO	Glory Hole Cre	6.36	40		Pn	01 02 13.8	+1.4
CUT	Chulitna	6.39	32		Pn	01 02 13.0	+0.2
K20K	Telida	6.44	14	P	Pn	01 02 13.1	-0.3
	baz=197						
SML	Sawmill	6.59	41		Pn	01 02 16.7	+1.2
SML	Sawmill	6.59	41	P	Pn	01 02 15.3	-0.3
	baz=229						
M23K	Glacier View	6.80	43	P	Pn	01 02 18.0	-0.4
	baz=231						
CAST	Castle Rocks	6.82	21		Pn	01 02 18.5	-0.2
CAST	Castle Rocks	6.82	21	P	Pn	01 02 18.9	+0.2
	baz=205,SNR=7.6						
SPIA	Saint Paul Isl	6.92	275	Pn	Pn	01 02 20.4	+0.3
SPIA	Saint Paul Isl	6.92	275	P	Pn	01 02 20.2	+0.1
	baz=85						
EYAK	Cordova Ski Ar	6.98	56	P	Pn	01 02 23.1	+2.4
EYAK	Cordova Ski Ar	6.98	56	P	Pn	01 02 21.0	+0.2
	baz=246						
SCM	Sheep Creek Mo	6.98	44	Pn	Pn	01 02 21.7	+0.8
KTH	Kantishna Hill	7.18	24	Pn	Pn	01 02 23.9	+0.2
CHUM	Lake Minchumin	7.20	19	P	Pn	01 02 24.2	+0.3
	baz=203,SNR=9.0						
TRF	Thorofare Moun	7.25	27		Pn	01 02 26.0	+1.4
TRF	Thorofare Moun	7.25	27	P	Pn	01 02 24.5	-0.1
	baz=212,SNR=9.2						
KLU	Klutina	7.34	49		Pn	01 02 26.5	+0.7
KLU	Klutina	7.34	49	P	Pn	01 02 25.5	-0.3
	baz=239,SNR=7.6						
RND	Reindeer	7.59	31	Pn	Pn	01 02 31.2	+2.0
GCSA	Galena City Sc	7.61	2	P	Pn	01 02 29.6	+0.2
	baz=182						
BPAW	Bear Paw Mtn.	7.65	22	P	Pn	01 02 32.7	+2.7
	baz=207,SNR=16						
MCK	McKinley	7.82	29	Pn	Pn	01 02 33.6	+1.2
MCK	McKinley	7.82	29	P	Pn	01 02 32.7	+0.3
	baz=216						
N25K	Chitina, Valde	7.95	51	Pn	Pn	01 02 34.1	0.0
N25K	Chitina, Valde	7.95	51	P	Pn	01 02 33.1	-1.0
	baz=242						
HARP	HAARP	8.14	45	P	Pn	01 02 36.0	-0.7
	baz=235						
VRDI	Verde Repeater	8.28	55	Pn	Pn	01 02 38.9	+0.1
ANM	Nome	8.34	336	Pn	Pn	01 02 39.5	0.0
ANM	Nome	8.34	336	P	Pn	01 02 40.0	+0.5
	baz=149,SNR=28						
PAX	Paxson	8.36	41	Pn	Pn	01 02 39.9	0.0
PAX	Paxson	8.36	41	P	Pn	01 02 36.5	-3.3
	baz=231						
I21K	Tanana	8.47	16	P	Pn	01 02 40.9	-0.3
	baz=201						
NEA2	Nenana	8.50	25		Pn	01 02 42.7	+1.1
NEA2	Nenana	8.50	25	P	Pn	01 02 42.5	+0.8
	baz=212,SNR=7.1						
MCARA	McCarthy VSAT	8.53	54	P	Pn	01 02 40.3	-1.8
	baz=246						
MLY	Manley	8.54	20	P	Pn	01 02 43.3	+1.1
	baz=205,SNR=13						
WRH	Wood River Hil	8.64	28		Pn	01 02 44.6	+1.1
KIAG	Kiagna River	8.66	58		Pn	01 02 44.6	+0.5
BALM	Baldy	8.71	57		Pn	01 02 45.1	+0.5
H21K	Melozitna Rive	8.81	13	P	Pn	01 02 44.9	-1.0
	baz=197						
K24K	Donnelly Dome	8.81	36	P	Pn	01 02 47.8	+1.9
	baz=226,SNR=8.8						
CCB	Clear Creek Bu	8.86	28	Pn	Pn	01 02 47.3	+0.8
HDA	Harding Lake	8.90	31	P	Pn	01 02 48.6	+1.4
	baz=220,SNR=6.0						
I23K	Minto, Yukon-K	8.91	23	P	Pn	01 02 49.4	+2.1
	baz=210,SNR=12						
M26K	Nabesna, AK	8.99	48	P	Pn	01 02 50.1	+1.6
	baz=241						
IMAR	Indian Mountai	9.02	10	Pn	Pn	01 02 48.6	-0.2
BARN	Barnard Glacie	9.03	58		Pn	01 02 50.2	+1.1
RIDG	Independent Ri	9.07	38	P	Pn	01 02 50.8	+1.3
	baz=229						
ILAR	Eielson Array	9.20	30	P	Pn	01 02 51.5	+0.4
	comp=N,0.7nm,0.3s,baz=216,slow=13,SNR=24						
ILAR				Lg	Lg	01 05 20.2	
	comp=N,0.1nm,0.3s,baz=217,slow=28,SNR=4.4						
ILAR				LR	LR	01 06 41.3	
	comp=N,143nm,19.3s,baz=236,slow=39						
	comp=N,3.5nm,0.5s						
DOT	Dot Lake	9.28	40		Pn	01 02 53.1	+0.7
POKR	Poker Plat Res	9.33	27	P	Pn	01 02 52.3	-0.7
	baz=216						
M27K	Edge Creek, AK	9.43	50	P	Pn	01 02 55.1	+0.5
	baz=243						
PINM	Pinnacle	9.46	65	P	Pn	01 02 55.5	+0.6
	baz=259						
H23K	Yukon River	9.47	20	P	Pn	01 02 55.1	+0.1
	baz=207,SNR=14						
SCRK	Sand Creek	9.52	39	Pn	Pn	01 02 56.4	+0.7
SCRK	Sand Creek	9.52	39	P	Pn	01 02 57.1	+1.4
	baz=230						
G21K	Allakaket	9.57	10	P	Pn	01 02 56.8	+0.5
	baz=193						
O28M	Mount Upton	9.64	61	P	Pn	01 02 57.3	-0.2
	baz=256						
TNA	Tin City	9.77	334	Pn	Pn	01 02 59.9	+0.9
TNA	Tin City	9.77	334	P	Pn	01 02 59.8	+0.7
	baz=144						
L27K	Beaver Creek,	9.79	46	P	Pn	01 02 59.7	+0.4
	baz=240						
BCAR	Beaver Creek A	9.81	46	Pn	Pn	01 02 59.5	-0.1
YUK3	Moose Creek	9.81	55	P	Pn	01 03 00.7	+0.8
	baz=249						
H24K	Noodor Dome	9.82	24	P	Pn	01 03 00.6	+0.8
	baz=212						
PNL	Peninsula	9.82	68	P	Pn	01 02 59.7	-0.1
	baz=263						
BVCY	Beaver Creek	9.89	51	P	Pn	01 03 00.1	-0.6
	baz=245						
YUK8	Steele Glacier	9.97	58	P	Pn	01 03 02.9	+0.8
	baz=253						
PRP	Porcupine Dome	10.14	29		Pn	01 03 04.9	+0.7
PRP	Porcupine Dome	10.14	29	P	Pn	01 03 04.8	+0.6
	baz=220						
G23K	Bananza Creek	10.19	17	P	Pn	01 03 05.5	+0.6
	baz=203						
K27K	Chicken	10.22	41	P	Pn	01 03 05.7	+0.5
	baz=235						
F21K	Alatna River	10.26	9	P	Pn	01 03 05.5	-0.2
	baz=192						
O29M	Mount Kennedy	10.32	64	P	Pn	01 03 07.0	+0.3
	baz=260						
YUK4	Talbot Arm	10.51	59	P	Pn	01 03 10.6	+1.3
	baz=254						
YUK6	Outpost Mounta	10.55	61	P	Pn	01 03 10.6	+0.7
	baz=257						
COLD	Coldfoot	10.64	16	P	Pn	01 03 13.6	+2.6
	baz=202						
G24K	Hadweenzic Riv	10.65	22	P	Pn	01 03 12.1	+1.0
	baz=211						
F22K	John River	10.66	11	P	Pn	01 03 11.7	+0.5
	baz=196						
I26K	Coal Creek Min	10.67	34	P	Pn	01 03 12.2	+0.8
	baz=227						
M29M	Somme Creek	10.93	53	P	Pn	01 03 15.7	+0.7
	baz=250						
EGAK	Eagle	10.98	39		Pn	01 03 16.4	+0.8
EGAK	Eagle	10.98	39	P	Pn	01 03 16.1	+0.5
	baz=233						
G25K	Bearman Lake	11.00	24	P	Pn	01 03 16.6	+0.8
	baz=214						
FYU	Fort Yukon	11.04	26	Pn	Pn	01 03 16.6	+0.2
P30M	Million Dollar	11.10	66	P	Pn	01 03 17.8	+0.6
	baz=263						
DAWY	Dawson	11.24	45	Pn	Pn	01 03 19.5	+0.4
DAWY	Dawson	11.24	45	P	Pn	01 03 19.0	-0.1
	baz=240						
N30M	Aishikik Lake	11.27	59	P	Pn	01 03 20.2	+0.6
	baz=256						
F24K	Squaw Lake	11.29	19	P	Pn	01 03 19.9	+0.1
	baz=208						
PLBC	Pleasant Camp	11.35	70	P	Pn	01 03 20.0	-0.6
	baz=267						
I27K	Kandik River	11.35	35	P	Pn	01 03 20.9	+0.2
	baz=229						
S31K	Pelican	11.45	77	P	Pn	01 03 20.9	-1.1
	baz=275						
E23K	Chandalar	11.50	15	P	Pn	01 03 24.1	+1.3
	baz=202						
O30N	Mendenhall	11.61	63	P	Pn	01 03 25.6	+1.3
	baz=261						
E24K	Your Creek	11.69	17	P	Pn	01 03 26.3	+1.0
	baz=205,SNR=7.2						
G26K	Porcupine Rive	11.70	27	P	Pn	01 03 23.4	-2.0
	baz=219						
F25K	Christian Rive	11.79	23	P	Pn	01 03 27.6	+0.9
	baz=213						
H27K	Steamboat Moun	11.79	33	P	Pn	01 03 26.5	-0.2
	baz=227						
K29M	Barlow Dome	11.87	47	P	Pn	01 03 27.6	-0.3
	baz=245						
J29M	Klondike Camp	11.87	44		Pn	01 03 29.9	+2.0
BMAR	Burnt Mountain	11.89	25	Pn	Pn	01 03 27.0	-1.0
G27K	Doyon Strip	12.16	31	P	Pn	01 03 29.6	-2.1
	baz=225						
F26K	Sheenjek River	12.20	25	P	Pn	01 03 30.5	-1.8
	baz=216						
D23K	Nanushuk River	12.22	12	P	Pn	01 03 33.7	+1.1
	baz=198						
E25K	Arctic Village	12.25	21	P	Pn	01 03 33.2	+0.2
	baz=212,SNR=5.2						
D24K	Happy Valley	12.63	14	P	Pn	01 03 39.9	+1.8
	baz=202						
M31M	Drury Creek, Y	12.68	57	P	Pn	01 03 40.7	+1.8
	baz=257						
N32M	Quiet Lake	13.12	62	P	Pn	01 03 46.5	+1.7
	baz=263						
D25K	Kavik River	13.15	18	P	Pn	01 03 45.7	+0.5
	baz=207						
FARO	Faro, Yukon	13.16	57		Pn	01 03 45.9	+0.4
FARO	Faro, Yukon	13.16	57	P	Pn	01 03 45.1	-0.4
	baz=258						
P33M	Teslin, Yukon	13.17	66	Pn	Pn	01 03 46.9	+1.4
P33M	Teslin, Yukon	13.17	66	P	Pn	01 03 42.9	-2.7
	baz=267						
C24K	Franklin Bluff	13.18	14	P	Pn	01 03 48.9	+3.3
	baz=201,SNR=8.7						
E27K	Coleen River	13.19	27	P	Pn	01 03 45.8	+0.1
	baz=221						
EPYK	Eagle Plains	13.41	38		Pn	01 03 48.7	-0.1
EPYK	Eagle Plains	13.41	38	P	Pn	01 03 49.9	+1.1
	baz=236						
C27K	Jago River	13.89	20	P	Pn	01 03 57.4	+2.1
	baz=213						
G30M	tAoh Zraii Nji	13.92	36	P	Pn	01 03 55.1	-0.6

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      baz=235
C26K  Camden Bay         13.92  18  P      Pn     01 03 55.5 -0.2
      baz=209
MMPY  Sheldon Lake,      14.19  57  P      Pn     01 04 01.0 +1.5
      baz=259,SNR=6.6
DLBC  Dease Lake         14.67  73  P      Pn     01 04 07.6 +1.6
      comp=N,0.1nm,0.3s,baz=249,slow=14,SNR=2.0
      comp=N,1.4nm,0.8s
DLBC  Dease Lake         14.67  73  Pn     Pn     01 04 08.1 +2.1
F31M  Tsiigehtchic       14.98  37  P      Pn     01 04 08.8 -1.3
      baz=238
INK   Inuvik             15.52  34  P      Pn     01 04 16.1 -1.2
      comp=N,0.2nm,0.3s,baz=230,slow=16,SNR=5.4
INK                                 S      Sn     01 07 12.3 +3.1
      comp=N,0.5nm,0.5s,baz=246,slow=10.0,SNR=1.4
      comp=N,1.3nm,0.7s
INK   Inuvik             15.52  34  Pn     Pn     01 04 17.4 +0.1
INK   Inuvik             15.52  34  P      Pn     01 04 16.0 -1.2
      baz=236
KOTAN Kotaneelee Air     17.55  66  P      Pn     01 04 43.1  0.0
      baz=275
WRGLY Wrigley            17.81  56  P      Pn     01 04 45.9 -0.4
      baz=266
C36M  Paulatuk           19.03  37  P      P      01 04 58.9 -1.6
C36M  Paulatuk           19.03  37  P      P      01 04 58.3 -2.2
      baz=247
BILL  Bilibino           19.55 318         P      01 05 05.8 -0.4
A36M  Sachs Harbour      19.90  29  P      P      01 05 06.6 -3.3
      baz=239,SNR=12
YKA   Yellowknife Ar     21.88  58  P      P      01 05 31.1 -0.2
      comp=N,4.6nm,0.9s,baz=273,slow=9.8,SNR=61
YKA                                 PcP    PcP    01 09 29.9 -0.4
      comp=N,0.4nm,0.7s,baz=276,slow=2.1,SNR=6.0
      comp=N,4.6nm,0.9s
SEY   Seymchan           25.10 304  P      P      01 06 03.3 +0.1
      comp=N,4.3nm,0.6s,baz=93,slow=10,SNR=16
      comp=N,4.3nm,0.6s
EDM   Edmonton           25.17  80  P      P      01 06 03.8 -0.2
EDM                                 IAmb   IAmb   01 06 08.5
      comp=Z,8.3nm,0.7s
PETK  Petropavlovsk-     25.56 280  P      P      01 06 08.1 +0.7
      comp=Z,1.7nm,0.6s,baz=68,slow=13,SNR=2.3
      comp=Z,1.7nm,0.6s
J05D  Fort Rock, OR      26.67 106  P      P      01 06 19.2 +1.4
YBH   Yreka Blue Hor     27.01 110  LR     LR     01 15 03.0
      comp=Z,27nm,20.1s,baz=336,slow=32
NVAR  Mina Array Bea     31.73 109  P      P      01 07 05.4 +2.6
      comp=Z,2.6nm,0.8s,baz=306,slow=8.3,SNR=13
NVAR                                LR     LR     01 17 24.2
      comp=Z,75nm,19.0s,baz=279,slow=31
      comp=Z,2.6nm,0.8s
NVAR  Mina Array Bea     31.73 109  P      P      01 07 04.4 +1.6
TIXI  Tiksi              32.42 325  P      P      01 07 08.9 +0.5
      comp=Z,1.3nm,0.4s,baz=90,slow=23,SNR=7.0
      comp=Z,1.3nm,0.4s
TIXI  Tiksi              32.42 325  P      P      01 07 08.7 +0.4
TIXI                                IAmb   IAmb   01 07 11.0
      comp=Z,2.5nm,0.7s
FCC   Fort Churchill     32.57  60  P      P      01 07 09.8 +0.1
FCC                                 IAmb   IAmb   01 07 12.6
      comp=Z,3.7nm,0.9s
R11B  Troy Canyon, C     33.20 106  P      P      01 07 16.9 +1.2
      baz=318,SNR=9.4
PD31  Pinedale Array     33.28  95  P      P      01 07 16.3 -0.2
PDAR  Pinedale Array     33.28  95  P      P      01 07 17.4 +0.9
      comp=Z,0.7nm,0.5s,baz=322,slow=5.0,SNR=9.6
      comp=Z,0.7nm,0.5s
PDAR  Pinedale Array     33.28  95  P      P      01 07 16.2 -0.2
PKM   Mcpherson Peak     33.72 115  P      P      01 07 22.8 +2.6
      baz=323
TPNV  Topopah Spring     33.91 109  P      P      01 07 20.0 -1.9
      baz=320
BSUT  Blindstream Ca     34.17  99  P      P      01 07 25.2 +0.8
BSUT                                IAmb   IAmb   01 07 29.3
      comp=Z,2.9nm,0.8s
GWY   Greenwater Val     34.28 110  P      P      01 07 25.3 +0.2
GWY                                 IAmb   IAmb   01 07 30.3
      comp=Z,4.8nm,0.8s
GSC   Goldstone, Bar     34.90 111  P      P      01 07 29.8 -0.5
      baz=322
RSSD  Black Hills        35.38  88  P      P      01 07 35.0 +0.3
RSSD                                IAmb   IAmb   01 07 39.3
      comp=Z,4.4nm,0.8s
RSSD  Black Hills        35.38  88  P      P      01 07 34.8 +0.1
      baz=311
V12A  Nelson             35.57 109  IAmb   IAmb   01 07 41.7
      comp=Z,4.5nm,0.8s
O20A  White River Ci     35.81  97  P      P      01 07 38.1 -0.2
      baz=315
GMRC  Granite Mounta     35.88 110  P      P      01 07 40.2 +1.3
      baz=322
BELC  Belle Mtn. Jos     36.33 112  P      P      01 07 43.8 +1.1
      baz=323
IRM   Iron Mountain      36.64 111  P      P      01 07 46.2 +1.0
      baz=322
AGMN  Agassiz Nation     37.16  77  P      P      01 07 47.9 -1.6
      baz=308
BLYC  Blythe             37.28 110  IAmb   IAmb   01 07 55.4
      comp=Z,5.6nm,0.7s
Q24A  Divide             38.32  95  P      P      01 07 58.0 -1.8
      baz=316
SDCO  Great Sand Dun     39.02  97  P      P      01 08 04.6 -1.1
      baz=317
214A  Organ Pipe Nat     39.57 110  P      P      01 08 11.2 +1.2
      baz=323
ECSD  EROS Data Cent     39.67  83  P      P      01 08 11.4 +0.8
      baz=312
EYMN  Ely                39.68  74  P      P      01 08 10.8 +0.1
EYMN                                IAmb   IAmb   01 08 13.3
      comp=Z,5.7nm,0.7s
EYMN  Ely                39.68  74  P      P      01 08 10.2 -0.5
      baz=309
ANMO  Albuquerque        40.58 101  LR     LR     01 25 43.7
      comp=Z,26nm,18.2s,baz=96,slow=37
SPMN  Marine on St.      40.73  78  P      P      01 08 20.1 +0.7
SPMN                                IAmb   IAmb   01 08 23.9
      comp=Z,8.1nm,0.6s
SPMN  Marine on St.      40.73  78  P      P      01 08 19.0 -0.5
      baz=311
G40A  Rib Lake           42.09  76  P      P      01 08 30.8 +0.3
G40A                                IAmb   IAmb   01 08 33.0
      comp=Z,5.2nm,0.7s
JFWS  Jewell Farm        43.65  79  P      P      01 08 43.0 -0.2
      baz=313
MNTX  Cornudas Mount     43.65 103  P      P      01 08 44.3 +0.9
      baz=322
NRIK  Noril'sk           45.37 333  P      P      01 08 57.5 +0.9
      comp=Z,1.5nm,0.4s,baz=62,slow=7.6,SNR=4.3
      comp=Z,1.5nm,0.4s
HDIL  Hopedale           45.80  81  P      P      01 08 59.0 -1.4
      baz=315
R40A  Maddies Statio     45.81  85  P      P      01 09 01.0 +0.4
R40A                                IAmb   IAmb   01 09 01.6
      comp=Z,3.3nm,0.8s
ABTX  Abilene, Hawle     46.02  97  P      P      01 09 01.6 -0.7
      baz=320
P43A  Skaggs, Pawnee     46.33  82  P      P      01 09 04.0 -0.7
TX31  Lajitas Ar. Si     46.42 103  P      P      01 09 06.2 +0.7
TXAR  Lajitas Array      46.42 103  P      P      01 09 06.8 +1.2
      comp=Z,1.6nm,0.8s,baz=316,slow=5.5,SNR=14
      comp=Z,1.6nm,0.8s
TXAR  Lajitas Array      46.42 103  P      P      01 09 06.0 +0.4
CCM   Cathedral Cave     46.54  85  P      P      01 09 04.2 -2.1
      baz=317
SFIN  Lafayette          47.11  79  P      P      01 09 09.5 -1.2
      baz=316
SCHQ  Schefferville      47.14  52  P      P      01 09 10.2 -0.6
      comp=Z,2.9nm,0.7s,baz=313,slow=7.3,SNR=9.9
      comp=Z,2.9nm,0.7s
JCT   Junction City      47.59  99  P      P      01 09 13.7 -0.9
      baz=322
O48B  Farmland           48.23  78  P      P      01 09 17.3 -2.1
      baz=316
WCI   Wyandotte Cave     49.09  81  P      P      01 09 24.7 -1.4
      baz=317
ACSO  Alum Creek Sta     49.40  76  P      P      01 09 27.0 -1.4
      baz=316
R50A  Paris              50.10  79  P      P      01 09 33.5 -0.3
KSRS  Korea Array        51.45 281  P      P      01 09 43.7 -0.1
      comp=Z,1.8nm,0.9s,baz=38,slow=8.9,SNR=3.0
      comp=Z,1.8nm,0.9s
ARCES ARCESS Array B     53.58 359  P      P      01 10 01.0 +1.8
      comp=Z,2.4nm,0.8s,baz=0.8,slow=6.3,SNR=1.6
SONM  Songino Array      54.49 305  P      P      01 10 06.5 +0.1
      comp=Z,1.3nm,0.7s,baz=42,slow=5.2,SNR=13
SONM                                LR     LR     01 32 55.5
      comp=Z,50nm,18.7s,baz=58,slow=36
      comp=Z,1.3nm,0.7s
HHC   Hu-ho-hao-te       57.33 296 eP      P      01 10 26.0 -0.8
HHC                                 pmax   pmax
      comp=Z,13nm,1.1s
HHC                                 pmax   pmax
      comp=Z,160nm,5.3s
ZALV  Zalesovo Beam      58.20 322  P      P      01 10 33.5 +0.9
      comp=Z,0.2nm,0.4s,baz=15,slow=6.0,SNR=4.1
      comp=Z,0.2nm,0.4s
KURBB Kurchatov Arra     63.08 324  LR     LR     01 41 08.5
      comp=Z,85nm,19.0s,baz=211,slow=38
BVAR  Borovoye Array     63.40 330  LR     LR     01 44 05.5
      comp=Z,45nm,19.9s,baz=341,slow=41
MK31  Makanchi Array     65.09 319  P      P      01 11 20.4 +1.2
MKAR  Makanchi Array     65.09 319  P      P      01 11 19.5 +0.3
      comp=Z,0.4nm,0.7s,baz=42,slow=6.9,SNR=5.2
      comp=Z,0.4nm,0.7s
MKAR  Makanchi Array     65.09 319  P      P      01 11 20.0 +0.7
WMQ   Urumqi             65.59 314 eP      P      01 11 25.3 +2.8
ABKAR Akbulak array      69.50 335  P      P      01 11 46.8 -0.3
PZH   PanZhiHua          73.67 293  P      P      01 12 14.3 +1.6
PZH                                 pmax   pmax
      comp=Z,10.0nm,0.5s
PZH                                 pmax   pmax
      comp=Z,90nm,6.5s
GERES GERESS Array B     74.10   6  P      P      01 12 14.0 -0.9
      comp=Z,0.4nm,0.7s,baz=10,slow=6.1,SNR=3.9
      comp=Z,0.4nm,0.7s
MSVF  Nonsavu            77.36 204  LR     LR     01 37 45.0
      comp=Z,38nm,21.7s,baz=3.4,slow=29
NIL   Nilore             79.91 319  P      P      01 12 47.9 +0.2
SDV   Santo Domingo      80.91  88  LR     LR     01 49 04.7
      comp=Z,26nm,20.6s,baz=117,slow=36
ESDC  Sonseca Array      80.97  20  P      P      01 12 52.5 -0.9
      comp=Z,0.5nm,0.8s,baz=346,slow=5.3,SNR=2.7
      comp=Z,0.5nm,0.8s
CMAR  Chiang Mai Arr     81.79 291  P      P      01 12 57.1 -0.8
      comp=Z,1.3nm,0.3s,baz=12,slow=5.8,SNR=8.5
      comp=Z,1.3nm,0.3s
BR131 Keskin Array S     83.01 351  P      P      01 13 02.8 -1.4
BR131                               IAmb   IAmb   01 13 03.9
      comp=Z,2.7nm,0.9s
BRTR  Keskin Array B     83.01 351  P      P      01 13 03.2 -1.0
      comp=Z,0.9nm,0.9s,baz=56,slow=3.6,SNR=6.0
      comp=Z,0.9nm,0.9s
WRA   Warramunga Arr     95.37 241  P      P      01 14 02.1 -1.0
      comp=Z,0.2nm,0.7s,baz=35,slow=5.8,SNR=1.7
      comp=Z,0.2nm,0.7s
QSPA  South Pole Qui    146.96 180  PKPbc  PKPbc  01 20 19.7 -0.4
      comp=Z,4.6nm,0.7s,baz=104,slow=0.2,SNR=20
BOSA  Boshof            151.39 355  PKPbc  PKPbc  01 20 30.7 -1.8
      comp=Z,2.6nm,0.9s,baz=59,slow=5.9,SNR=3.6
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BJI ***25*** *02:05:54.9±0.0, 25°.10N×95°.06E, h102^{km}, mb4.4/32, mB4.7/16*

MOS ***25*** *02:05:55.0±0.9, 25°.01N×95°.09E, h113^{km}, mb4.5/23, Error ellipse: s-maj=12.5km s-min=5.2km az=124.0*

NDI ***25*** *02:05:56.5±3.3, 25°.10N×94°.97E, h112^{km}±16^{km}, ML4.5, mb4.5(NEIC)*

NEIC ***25*** *02:05:56.4±1.8, 25°.05N±0°.04×95°.02E±0°.08, h104^{km}±5^{km}, mb4.5/38, Error ellipse: s-maj=10.8km s-min=5.5km az=96.0*

IDC ***25*** *02:05:56.0±0.6, 24°.95N×95°.12E, h107^{km}±5^{km}, mb4.0/24, mbtmp4.4/26, MS3.5/4, Error ellipse: s-maj=10.6km s-min=9.3km az=46.0*

ISC 25 02:05:55.7±0.4**, 25°.07N**±0°.03×**95°.01E**±0°.04**, h101**^{km}±4^{km}**, h101**^{km}**:pP-P, n235,** σ1^{s}.**50**/269**, mb4.4**/79**, 12C-5D, Myanmar-India border region**

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Code  Station Name        Δ°   AZ°   Phase ID        Time       Res
                                     Op     ISC     h  m  s     ISC
IMP   Imphal              1.00 256 eP      Pn     02 06 16.9 +0.7
IMP                                eS      Sn     02 06 32.2 +0.5
IMP                                 IAML          02 06 32.8
      comp=N,3µm,0.3s
KOHI  KOHIMA              1.04 308 eP      Pn     02 06 17.1 +0.3
KOHI                               eS      Sn     02 06 33.7 +1.0
KOHI                                IAML          02 06 40.0
      comp=E,3µm,0.7s
MOKO  MOKOCHONG           1.32 340 eP      Pn     02 06 20.9 +0.9
MOKO                               eS      Sn     02 06 39.3 +0.9
MOKO                               eS             02 06 39.5
MOKO                                IAML          02 06 40.0
      comp=E,6µm,0.5s
JORH  JORHAT              1.80 338 eS      Sn     02 06 49.1 +0.5
SILR  SILCHAR             2.03 262 eS      Sn     02 06 56.2 +2.3
SILR                                IAML          02 06 59.6
      comp=N,5µm,0.3s
SILR                                IAML          02 07 00.5
      comp=E,6µm,0.4s
ITAN  ITANAGAR            2.37 331 eP      Pn     02 06 33.9 +0.7
ITAN                               eS      Sn     02 07 01.4 -0.4
ITAN                               eS      Sn     02 07 01.4 -0.4
ITAN                                IAML          02 07 03.4
      comp=N,9µm,0.2s
ITAN                                IAML          02 07 03.6
      comp=E,5µm,0.1s
LKP   Lekhapani           2.37  18 eP      Pn     02 06 33.4 +0.3
LKP                                eS      Sn     02 07 02.8 +1.0
LKP                                 IAML          02 07 07.5
      comp=E,2µm,0.2s
TEZP  TEZPUR              2.52 308 eP      Pn     02 06 35.1  0.0
TEZP                               eS      Sn     02 07 03.7 -1.6
TEZP                                IAML          02 07 05.5
      comp=N,17µm,0.1s
ZIRO  ZIRO                2.66 337 eP      Pn     02 06 37.2 +0.1
ZIRO                               eS      Sn     02 07 07.4 -1.5
ZIRO                                IAML          02 07 08.8
      comp=E,6µm,0.3s
ZIRO                                IAML          02 07 08.9
      comp=N,8µm,0.3s
SHL   Shillong            2.88 281  Pn     Pn     02 06 39.9 -0.1
SHL   Shillong            2.88 281  P      Pn     02 06 39.9 -0.1
SAIH  SAIHA               3.17 216 eP      Pn     02 06 44.2 +0.3
SAIH                               eS      Sn     02 07 20.0 -1.1
SAIH                                IAML          02 07 21.8
      comp=N,2µm,0.4s
SAIH                                IAML          02 07 24.8
      comp=E,3µm,0.4s
TNCH  TengChong           3.18  90 eP      Pn     02 06 44.5 +0.5
TNCH                                S      Sn     02 07 20.9 -0.4
TNCH                                smax   smax
      comp=E,560nm,0.5s
TNCH                                smax   smax
      comp=E,420nm,0.5s
GUWA  GUWAHATI            3.20 291 eP      Pn     02 06 44.0 -0.1
GUWA                               eS      Sn     02 07 19.1 -2.5
GUWA                                IAML          02 07 21.8
      comp=N,2µm,0.1s
GUWA                                IAML          02 07 21.8
      comp=E,1µm,0.1s
MND   Mandalay            3.21 161  Pn     Pn     02 06 43.5 -0.7
BRDH  Bariadhala          3.90 233  P      Pn     02 06 52.9 -0.7
      comp=E,136nm,0.3s,baz=270,slow=20,SNR=11
BRDH                                S      Sn     02 07 37.9 -0.5
      comp=E,1µm,0.3s,baz=270,slow=20,SNR=14
LSA   Lhasa               5.75 324  P      Pn     02 07 21.1 +2.1
LSA                                 smax   smax
      comp=E,130nm,0.6s
LSA                                 smax   smax
      comp=E,120nm,0.7s
LSA   Lhasa               5.75 324  Pn     Pn     02 07 20.0 +1.0
LSA   Lhasa               5.75 324  P      Pn     02 07 20.0 +1.0
GTK   Tadong              6.18 293 eP      Pn     02 07 26.9 +2.3
GTK                                eS      Sn     02 08 31.6 -2.3
PZH   PanZhiHua           6.23  75  P      Pn     02 07 28.0 +2.8
PZH                                 pmax   pmax
      comp=E,40nm,0.8s
PZH                                 pmax   pmax
      comp=E,80nm,4.9s
CRAI  Chiangrai           6.91 133  Pn     Pn     02 07 33.7 -0.6
TAPN  Taplejung           6.94 291 ePn     Pn     02 07 35.7 +0.6
TAPN                               eSn     Sn     02 08 53.4 +0.7
      comp=E,107nm,0.3s
CHTO  Chiang Mai          7.22 149  Pn     Pn     02 07 38.7 +0.1
CHTO  Chiang Mai          7.22 149  P      Pn     02 07 38.7 +0.1
CM31  Chiang Mai Arr      7.53 150         Pn     02 07 42.8  0.0
CMAR  Chiang Mai Arr      7.53 150  P      Pn     02 07 42.5 -0.3
      comp=E,13nm,0.5s,baz=328,slow=13,SNR=75
CMAR  Chiang Mai Arr      7.53 150         Pn     02 07 43.1 +0.3
CMAR  Chiang Mai Arr      7.53 150  P      Pn     02 07 43.1 +0.3
RAMN  Ramite              7.80 286 ePn     Pn     02 07 46.9 +0.2
RAMN                               eSn     Sn     02 09 09.9 -3.5
      comp=E,67nm,0.3s
PHRA  Phrae               8.14 142  Pn     Pn     02 07 51.5 +0.3
JIRN  Jiri                8.32 290 ePn     Pn     02 07 54.0 +0.1
JIRN                               eSn     Sn     02 09 25.9 -0.5
      comp=E,125nm,0.3s
BOK   Bokaro              8.42 263 eP      Pn     02 07 54.0 -0.9
BOK                                eS      Sn     02 09 22.1 -6.1
GUN   Gumba               8.66 291 ePn     Pn     02 07 58.3 -0.1
GUN                                eSn     Sn     02 09 33.4 -1.1
      comp=E,56nm,0.3s
PKI   Pulchoki            8.97 288 ePn     Pn     02 08 02.0 -0.7
PKI                                eSn     Sn     02 09 39.2 -2.9
      comp=E,36nm,0.4s
PKIN  Phulchoki           8.98 288 ePn     Pn     02 08 02.0 -0.8
PKIN                               eSn     Sn     02 09 39.7 -2.6
      comp=E,107nm,0.4s
DMN   Daman               9.24 288 ePn     Pn     02 08 04.3 -2.0
DMN                                eSn     Sn     02 09 46.1 -2.5
      comp=E,17nm,0.2s
GKN   Gorkha              9.74 290 ePn     Pn     02 08 12.1 -0.9
GKN                                eSn     Sn     02 09 58.4 -2.2
      comp=E,59nm,0.3s
DANN  Dangsing           10.58 290 ePn     Pn     02 08 21.8 -2.7
DANN                               eSn     Sn     02 10 18.7 -2.5
      comp=E,27nm,0.3s
GOMU  GeErMu             11.09 359  P      Pn     02 08 29.8 -1.7
GOMU                                pP     P      02 08 33.6 -8.4
GOMU                                pmax   pmax
      comp=E,7.0nm,1.0s
GOMU                                pmax   pmax
      comp=E,110nm,4.6s
PYUN  Piuthan            11.18 288 ePn     Pn     02 08 29.8 -2.7
PYUN                               eSn     Sn     02 10 30.2 -5.4
      comp=E,89nm,0.6s
LZH   Lanzhou            13.35  33 eP      P      02 09 07.8 +0.7
LZH                                 sP     Pn     02 09 38.1  +37
LZH                                 pmax   pmax
      comp=Z,19nm,1.1s
PBA   Port Blair         13.52 190  Pn     Pn     02 09 03.0 -0.4
GTA   Gaotai             14.86  15 eP      P      02 09 24.5 +0.7
GTA                                 pP     Pn     02 09 34.8  +14
GTA                                 pmax   pmax
      comp=Z,9.0nm,0.9s
BHPL  Bhopal             16.16 267 eP      Pn     02 09 36.6 -0.3
HYB   Hyderabad          17.12 247 eP      P      02 09 49.3 +0.4
WMQ   Urumqi             19.64 344 eP      Pn     02 10 19.3 +0.7
LHMI  Lhok Sumawe        19.82 174  P      Pn     02 10 22.6 +1.7
      comp=Z,122nm,0.5s
NIL   Nilore             20.77 299  P      P      02 10 29.2 +0.6
NIL                                 IAmb   IAmb   02 10 34.4
      comp=Z,9.9nm,0.5s
NIL   Nilore             20.77 299  P      P      02 10 29.2 +0.6
NIL                                 pmax   pmax
      comp=Z,10.0nm,0.5s
HHC   Hu-ho-hao-te       20.93  37 eP      P      02 10 30.3  0.0
HHC                                 pmax   pmax
      comp=Z,19nm,0.8s
HHC                                 pmax   pmax
      comp=Z,130nm,5.5s
KSH   Kashi              21.54 317  P      P      02 10 38.8 +2.0
KSH                                 pP     pP     02 11 02.0 +5.4
KSH                                 sP     sP     02 11 14.8 +5.3
KSH                                 PcP    PcP    02 14 35.6 +0.2
KSH                                 sS     sS     02 15 02.5 +0.1
KSH                                 ScP    ScP    02 18 03.9 +0.6
KSH                                 pmax   pmax
      comp=Z,10.0nm,0.7s
KSH                                 pmax   pmax
      comp=Z,120nm,7.8s
KSH                                 LR     LR
      comp=Z,200nm,7.1s
KSH                                 LR     LR
      comp=Z,60nm,6.8s
TSI   Tuntungan          21.72 170  P      P      02 10 44.2 +5.4
NJ2   Nanjing            22.04  66 eP      P      02 10 41.0 -1.0
NJ2                                 pP     pP     02 11 00.0 -1.7
NJ2                                 sP     sP     02 11 12.8 -1.6
NJ2                                 pmax   pmax
      comp=Z,7.0nm,0.5s
NJ2                                 pmax   pmax
      comp=Z,210nm,4.5s
PRZ   Przheval'sk        22.12 326  P      P      02 10 41.7 -1.3
PRZ   Przheval'sk        22.12 326  P      P      02 10 41.7 -1.3
PRZ                                 pmax   pmax
      comp=Z,1.0nm,0.8s
PALK  Pallekele          22.37 220  P      P      02 10 45.8  0.0
      comp=Z,1.5nm,0.3s,baz=130,slow=16,SNR=2.1
      comp=Z,1.5nm,0.3s
PSI   Prapat             22.46 170  P      P      02 10 46.9 +0.2
PSI                                 pmax   pmax
      comp=Z,11nm,1.2s
KDJ   Kajisay            22.51 323  P      P      02 10 47.9 +0.8
KDJ   Kajisay            22.51 323  P      P      02 10 47.9 +0.8
KDJ                                 pmax   pmax
      comp=Z,12nm,1.0s
RPSI  Rantau Prapat      22.57 170  P      P      02 10 46.9 -0.7
ULHL  Ulahol             23.10 322  P      P      02 10 55.4 +2.4
      SNR=8.8
GSI   Gunungsitoli       23.76 174  P      P      02 10 59.0 +0.1
GSI                                 IAmb   IAmb   02 10 59.9
      comp=Z,32nm,1.3s
GSI   Gunungsitoli       23.76 174  P      P      02 11 04.3 +5.4
      comp=Z,20nm,0.9s
TKM2  Tokmak 2           23.91 323  P      P      02 11 02.9 +2.6
      SNR=14
MK31  Makanchi Array     23.94 338  P      P      02 11 01.9 +1.5
MK31  Makanchi Array     23.94 338c iP     P      02 11 02.3 +2.0
MKAR  Makanchi Array     23.94 338  P      P      02 11 02.3 +2.0
      comp=Z,25nm,0.5s,baz=149,slow=9.2,SNR=393
MKAR                                PcP    PcP    02 14 40.2 +0.2
      comp=Z,0.7nm,0.5s,baz=214,slow=2.6,SNR=5.0
MKAR                                S      S      02 15 10.3 +0.8
      comp=Z,0.3nm,0.8s,baz=160,slow=13,SNR=1.9
MKAR                                ScP    ScP    02 18 08.4 -0.9
      comp=Z,0.5nm,0.6s,baz=106,slow=4.8,SNR=4.9
      comp=Z,25nm,0.5s
MKAR  Makanchi Array     23.94 338 iP      P      02 11 02.4 +2.1
MKAR                                pmax   pmax
      comp=Z,25nm,0.5s
UCH   Uchtor             24.07 320  P      P      02 11 05.0 +3.0
      SNR=9.3
KBK   Karagaybulak       24.09 322  P      P      02 11 05.5 +3.6
      SNR=7.1
AAK   Ala-Archa          24.34 321  P      P      02 11 07.4 +3.3
      SNR=5.6
AAK   Ala-Archa          24.34 321  P      P      02 11 06.4 +2.2
      comp=Z,3.0nm,0.6s,baz=145,slow=6.5,SNR=17
AAK                                 PcP    PcP    02 14 42.1 +0.9
      comp=Z,1.4nm,0.4s,baz=154,slow=3.9,SNR=6.1
      comp=Z,3.0nm,0.6s
AAK   Ala-Archa          24.34 321  P      P      02 11 06.0 +1.9
AAK   Ala-Archa          24.34 321ceP      P      02 11 04.6 +0.5
AAK                                 pmax   pmax
      comp=Z,4.0nm,0.8s
KBL   Kabul              24.37 299  P      P      02 11 05.8 +1.2
KBL                                 IAmb   IAmb   02 11 07.6
      comp=Z,6.4nm,0.6s
KBL   Kabul              24.37 299  P      P      02 11 05.8 +1.2
KBL                                 pmax   pmax
      comp=Z,6.0nm,0.6s
SONM  Songino Array      24.44  19  P      P      02 11 05.5 +0.5
      comp=Z,2.8nm,0.5s,baz=197,slow=10,SNR=26
SONM                                ScP    ScP    02 18 09.8 -1.0
      comp=Z,0.3nm,0.5s,baz=202,slow=3.2,SNR=2.6
      comp=Z,2.8nm,0.5s
SONM  Songino Array      24.44  19  P      P      02 11 04.8 -0.2
SONM  Songino Array      24.44  19  P      P      02 11 04.8 -0.2
SONM                                pmax   pmax
      comp=Z,3.0nm,0.8s
AML   Almayashu          24.49 319  P      P      02 11 08.4 +2.6
      SNR=6.0
ULN   Ulaanbaatar        24.66  20  P      P      02 11 07.3 +0.3
ULN   Ulaanbaatar        24.66  20ceP      P      02 11 07.2 +0.2
ULN                                 pmax   pmax
      comp=Z,6.0nm,0.9s
USP   Ospenovka          24.74 322  P      P      02 11 10.2 +2.5
      SNR=7.0
EKS2  Erkin-Say          24.76 320  P      P      02 11 11.1 +3.1
      SNR=6.0
GAR   Garm               25.02 310  IAmb   IAmb   02 11 14.1
      comp=Z,28nm,0.9s
BTK   Batken             25.17 312  IAmb   IAmb   02 11 16.5
      comp=Z,10nm,0.7s
PBSI  Pulau Batu         25.18 172  P      P      02 11 18.2 +6.4
      comp=Z,39nm,0.8s
DGZ   Jazzator, Alta     25.29 348 iP      P      02 11 13.4 +0.7
DGZ                                 pmax   pmax
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	comp=Z,5.0nm,0.6s						
KK31	Karatay Array	26.96	318	P	P	02 11 28.4	+0.7
KK31					PcP	02 14 46.8	-0.2
KK31	Karatay Array	26.96	318	P	P	02 11 28.4	+0.7
KK31						02 14 46.8	
KK31				pmax	pmax		
	comp=Z,3.0nm,1.4s						
KKAR	Karatay Array	26.96	318	P	P	02 11 28.3	+0.6
KKAR					PcP	02 14 46.7	-0.3
KKAR	Karatay Array	26.96	318	P	P	02 11 28.3	+0.6
KKAR						02 14 46.7	
KURBB	Kurchatov Arra	28.50	338	P	P	02 11 42.9	+1.6
	comp=Z,8.1nm,0.5s,baz=148,slow=9.4,SNR=62						
KURBB				PcP	PcP	02 14 50.3	-0.2
	comp=Z,3.6nm,0.4s,baz=154,slow=2.2,SNR=23						
	comp=Z,8.1nm,0.5s						
KURK	Kurchatov	28.55	338	P	P	02 11 42.2	+0.5
KURK	Kurchatov	28.55	338	ceP	P	02 11 43.3	+1.6
KURK				pmax	pmax		
	comp=Z,11nm,0.7s						
ZAA0	Zalesovo Array	29.83	348	P	P	02 11 53.1	+0.1
ZAA0				IAmb	IAmb	02 11 54.8	
	comp=Z,4.9nm,0.6s						
ZALV	Zalesovo Beam	29.83	348	P	P	02 11 54.3	+1.3
	comp=Z,5.4nm,0.4s,baz=171,slow=9.1,SNR=26						
ZALV				PcP	PcP	02 14 52.0	-1.9
	comp=Z,0.6nm,0.3s,baz=190,slow=8.7,SNR=2.8						
	comp=Z,5.4nm,0.4s						
ZALV	Zalesovo Beam	29.83	348	i P	P	02 11 54.4	+1.4
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.4s						
JOW	Kunigami	29.91	79	P	P	02 11 52.8	-1.3
	comp=Z,16nm,0.8s,baz=115,slow=21,SNR=1.6						
	comp=Z,16nm,0.8s						
BVAR	Borovoye Array	33.51	333	LR	LR	02 26 34.6	
	comp=Z,56nm,21.9s,baz=99,slow=37						
BRVK	Borovoye	33.57	333	P	P	02 12 26.7	+0.8
BRVK				IAmb	IAmb	02 12 28.2	
	comp=Z,6.5nm,0.9s						
BRVK	Borovoye	33.57	333	ceP	P	02 12 26.8	+0.9
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
GEYT	Alibeck	33.75	301	P	P	02 12 30.4	+2.7
	comp=Z,1.8nm,0.8s,baz=91,slow=6.3,SNR=3.5						
	comp=Z,1.8nm,0.8s						
BBKI	Banjar Baru	34.28	143	P	P	02 12 33.8	+1.4
ABKAR	Akbulak array	36.42	321	P	P	02 12 51.4	+1.0
ZEA	Zeya	37.37	31	eP	P	02 12 53.7	-4.7
SPSI	Sidrap Palu	37.57	137	P	P	02 13 04.6	+4.2
	comp=Z,12nm,0.4s						
KAPI	Kappang	38.38	138	LR	LR	02 32 18.7	
	comp=Z,41nm,20.5s,baz=255,slow=41						
MJAR	Matsushiro Arr	38.53	62	P	P	02 13 07.2	-1.2
	comp=Z,0.5nm,0.3s,baz=256,slow=11,SNR=4.2						
	comp=Z,0.5nm,0.3s						
BKSI	Bulukumba	38.84	138	P	P	02 13 16.5	+5.4
	comp=Z,11nm,0.6s						
SVE	Sverdlovsk	40.23	331	deP	P	02 13 24.1	+2.0
SVE				pmax	pmax		
	comp=Z,21nm,0.6s						
LBMI	Labuha	40.51	124	P	P	02 13 28.0	+3.0
ARU	Arti	40.92	330	P	P	02 13 28.5	+0.7
ARU				IAmb	IAmb	02 13 30.0	
	comp=Z,8.6nm,0.6s						
ARU	Arti	40.92	330	ceP	P	02 13 28.8	+1.0
ARU				pmax	pmax		
	comp=Z,21nm,1.5s						
GNI	Garni	44.36	303	P	P	02 13 57.4	+1.2
GNI				IAmb	IAmb	02 14 00.7	
	comp=Z,14nm,1.4s						
GNI	Garni	44.36	303	ceP	P	02 13 55.3	-0.9
GNI				pmax	pmax		
	comp=Z,11nm,1.4s						
NRIK	Noril'sk	44.51	356	P	P	02 13 57.0	+0.3
	comp=Z,7.1nm,0.3s,baz=151,slow=5.9,SNR=13						
	comp=Z,7.1nm,0.3s						
NRIK	Noril'sk	44.51	356	P	P	02 13 56.3	-0.4
NRIK				IAmb	IAmb	02 13 58.3	
	comp=Z,8.4nm,0.8s						
NRIK	Noril'sk	44.51	356	ceP	P	02 13 57.8	+1.1
NRIK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ZEI	Tsey	45.22	306	eP	P	02 14 03.1	+0.1
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ONI	Oni	45.53	306	IAmb	IAmb	02 14 09.4	
	comp=Z,4.3nm,0.6s						
KBZ	Khabaz	46.05	307	P	P	02 14 10.6	+1.4
	comp=Z,0.9nm,0.4s,baz=128,slow=2.5,SNR=5.4						
	comp=Z,0.9nm,0.4s						
SHA1	Shidzhatmaz	46.23	307	i P	P	02 14 11.5	+0.6
KIV	Kislovodsk	46.23	308	P	P	02 14 11.6	+0.8
KIV				IAmb	IAmb	02 14 14.0	
	comp=Z,7.2nm,0.7s						
KIV	Kislovodsk	46.23	308	eP	P	02 14 12.3	+1.5
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIRV	Kirov	46.26	329	ceP	P	02 14 11.2	+0.6
SOC	Sochi	48.34	307	eP	P	02 14 26.0	-1.0
SOC				ePPP	PPP	02 17 11.3	
SOC				eS	S	02 21 18.8	-0.8
SOC				eSSS	SSS	02 26 10.9	
SOC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SOC				MLR	MLR		
	comp=Z,67nm,17.0s						
ANN	Anapa	50.05	308	eP	P	02 14 39.0	-1.0
ANN				e*PP	pP	02 15 03.5	-1.2
ANN				e		02 15 56.6	
ANN				eS	S	02 21 42.7	-0.7
ANN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TIXI	Tiksi	50.34	13	P	P	02 14 41.2	-0.6
TIXI	Tiksi	50.34	13	ceP	P	02 14 41.1	-0.6
TIXI				pmax	pmax		
	comp=Z,22nm,1.7s						
OBN	Obninsk	51.86	322	eP	P	02 14 53.1	-0.3
OBN				e		02 16 04.5	
OBN				e		02 16 49.3	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BR131	Keskin Array S	52.89	302	P	P	02 15 01.9	+0.4
BR131				IAmb	IAmb	02 15 04.2	
	comp=Z,6.7nm,1.2s						
BR131	Keskin Array S	52.89	302	P	P	02 15 01.9	+0.4
BR131				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BRTR	Keskin Array B	52.89	302	P	P	02 15 02.4	+0.9
	comp=Z,1.5nm,0.5s,baz=124,slow=7.3,SNR=27						
	comp=Z,1.5nm,0.5s						
BORA	Eskisehir	55.33	302	P	P	02 15 19.6	+0.5
BORA				IAmb	IAmb	02 15 20.4	
	comp=Z,5.7nm,0.8s						
SORM	Soroca	56.39	312	⇑P	P	02 15 26.6	+0.2
SORM	Soroca	56.39	312	P	P	02 15 26.6	+0.2
CFR	Carcaliu	56.65	309	P	P	02 15 28.8	+0.5
CFR	Carcaliu	56.65	309	P	P	02 15 28.7	+0.5
VRI	Vrincioaia	57.59	310	⇓P	P	02 15 36.2	+1.1
VRI	Vrincioaia	57.59	310	P	P	02 15 36.1	+1.1
TESR	Tescani	57.61	311	P	P	02 15 35.2	+0.1
PLOR	Plostina	57.65	310	⇓P	P	02 15 37.6	+2.1
PLOR	Plostina	57.65	310	P	P	02 15 37.5	+2.1
MLR	Muntele Rosu	58.17	309	⇓P	P	02 15 41.2	+2.0
MLR	Muntele Rosu	58.17	309	P	P	02 15 41.1	+2.0
FINES	FINESS Array B	58.25	328	P	P	02 15 40.1	+0.9
	comp=Z,2.4nm,0.3s,baz=93,slow=6.4,SNR=36						
	comp=Z,2.4nm,0.3s						
FINES	FINESS Array B	58.25	328	P	P	02 15 39.3	+0.1
FINES	FINESS Array B	58.25	328	i P	P	02 15 40.0	+0.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.3s						
VADS	Vadso	58.41	339	eP	P	02 15 41.4	+1.2
BURAR	Bucovina Array	58.52	312	⇑P	P	02 15 42.3	+0.7
BURAR	Bucovina Array	58.52	312	P	P	02 15 42.2	+0.7
BUR08	Bucovina Ar. S	58.53	312	IAmb	IAmb	02 15 43.7	
	comp=Z,6.5nm,1.4s						
VOIR		58.80	309	⇓P	P	02 15 44.3	+0.8
VOIR		58.80	309	P	P	02 15 44.3	+0.8
WRA	Warramunga Arr	58.86	136	P	P	02 15 42.7	-1.4
	comp=Z,1.3nm,0.4s,baz=320,slow=7.5,SNR=51						
WRA				pP	pP	02 16 09.4	+0.4
	comp=Z,2.2nm,0.7s,baz=323,slow=7.4,SNR=5.6						
	comp=Z,1.3nm,0.4s						
ARCR	ARCALIA	59.14	311	P	P	02 15 47.5	+1.8
ARA0	ARCESS Array S	59.59	338	eP	P	02 15 49.5	+1.1
ARCES	ARCESS Array B	59.59	338	P	P	02 15 49.1	+0.7
	comp=Z,1.6nm,0.5s,baz=105,slow=6.5,SNR=22						
	comp=Z,1.6nm,0.5s						
BILL	Bilibino	59.99	24	eP	P	02 15 50.6	-0.6
BILL				e		02 18 02.8	
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KTK1	Kautokeino	60.31	337	eP	P	02 15 54.3	+1.0
HAMF	Hammerfest	60.39	339	eP	P	02 15 55.0	+1.2
JETT	Jettan, Norway	61.37	337	eP	P	02 16 01.6	+1.1
AS31	Alice Springs	61.38	139	P	P	02 16 00.1	-1.2
ASAR	Alice Springs	61.38	139	P	P	02 16 00.1	-1.2
	comp=Z,0.8nm,0.4s,baz=322,slow=6.8,SNR=22						
ASAR				pP	pP	02 16 26.3	-0.1
	comp=Z,1.5nm,0.7s,baz=322,slow=7.1,SNR=5.8						
	comp=Z,0.8nm,0.4s						
AGG	Agios Georgios	61.67	302	P	P	02 16 02.2	-0.8
AGG	Agios Georgios	61.67	302	P	P	02 16 02.3	-0.8
AGG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TRO	Tromso	61.89	337	eP	P	02 16 04.7	+0.7
ITM	Ithomi	62.34	300	P	P	02 16 06.9	-0.7
VYHS	Vyhne	62.69	313	eP	P	02 16 10.4	+0.7
VYHS	Vyhne	62.69	313	eP	P	02 16 10.4	+0.7
FAUS	Fauske	63.18	335	eP	P	02 16 13.2	+0.6
STEI	Steigen	63.19	335	eP	P	02 16 13.0	+0.4
SPA0	Spitsbergen Ar	63.31	347	eP	P	02 16 14.1	+0.7
HSPB	Hornsund (broa	63.39	346	eP	P	02 16 14.6	+0.8
MOR8	Moi Rana	63.55	333	eP	P	02 16 15.0	-0.1
LOF	Lofoten	63.83	336	eP	P	02 16 17.0	+0.2
VRAC	Vranov	64.04	315	P	P	02 16 19.8	+1.2
VRAC	Vranov	64.04	315	P	P	02 16 19.8	+1.2
KONS	Konsvik	64.07	334	eP	P	02 16 19.2	+0.8
NC405	NORSAR Array S	65.18	328	P	P	02 16 25.8	0.0
NC602	NORSAR Array S	65.31	328	eP	P	02 16 27.1	+0.5
NB2	NORSAR Subarra	65.43	328	P	P	02 16 27.9	+0.4
	comp=Z,3.5nm,0.6s,baz=83,slow=6.5						
NB2	NORSAR Subarra	65.43	328	P	P	02 16 27.9	+0.4
	baz=83,slow=6.5						
NOA	NORSAR Array B	65.43	328	P	P	02 16 27.8	+0.4
	comp=Z,4.3nm,0.6s,baz=82,slow=6.4,SNR=20						
	comp=Z,4.3nm,0.6s						
MOA	Molln	65.81	313	i P	P	02 16 30.8	+0.6
	comp=Z,2.4nm,0.5s						
OSL	Oslo	65.82	327	eP	P	02 16 31.0	+1.1
GERES	GERESS Array B	65.99	314	P	P	02 16 32.1	+0.7
	comp=Z,2.0nm,0.5s,baz=64,slow=6.8,SNR=27						
GERES				pP	pP	02 16 58.5	+1.3
	comp=Z,0.5nm,0.5s,baz=79,slow=7.1,SNR=2.6						
	comp=Z,2.0nm,0.5s						
BIOA	Bad Ischl, Aus	66.26	313	i P	P	02 16 33.5	+0.5
	comp=Z,1.5nm,0.5s						
KONO	Kongsberg	66.43	326	eP	P	02 16 34.5	+0.6
KBA	Koelnbreinsper	66.58	313	i P	P	02 16 34.0	-1.3
	comp=Z,4.1nm,1.1s						
SKAR	Skarslia	66.89	328	eP	P	02 16 38.6	+1.7
ABTA	Abfaltersbach	67.21	312	i P	P	02 16 38.5	-0.7
	comp=Z,1.6nm,0.8s						
AKN	Aaknes	67.24	329	eP	P	02 16 40.5	+1.5
WTTA	Wattenberg	67.68	313	i P	P	02 16 42.0	-0.2
	comp=Z,2.4nm,0.5s						
WATA	Walderalm	67.70	313	i P	P	02 16 41.6	-0.7
	comp=Z,2.5nm,0.8s						
HYA	Hoyanger	67.81	328	eP	P	02 16 43.2	+0.7
ODD1	Odda	67.86	327	eP	P	02 16 44.1	+1.2
SNART	Snartemo	67.89	325	eP	P	02 16 44.2	+1.2
SQTA	Sankt Quirin	67.97	313	i P	P	02 16 43.8	-0.2
	comp=Z,3.8nm,0.5s						
MOTA	Moosalm	68.01	313	i P	P	02 16 44.2	-0.1
	comp=Z,3.7nm,0.7s						
RETA	Reutte	68.20	313	i P	P	02 16 45.6	+0.3
	comp=Z,3.8nm,0.5s						
FOO	Floro	68.26	329	eP	P	02 16 46.1	+0.8
ASK	Askoy	68.44	328	eP	P	02 16 47.2	+0.8
NOR	Nord	68.44	352	i P	P	02 16 45.0	-1.1
NOR				IAmb	IAmb	02 16 46.0	
	comp=Z,1.7nm,0.5s						
WLF	Walferdange	70.61	316	P	P	02 16 60.0	0.0
WLF	Walferdange	70.61	316	P	P	02 17 00.0	0.0
WLF				pmax	pmax		
	comp=Z,13nm,0.8s						
DAG	Danmarks Havn	70.96	347	i P	P	02 17 01.8	+0.2
DAG				IAmb	IAmb	02 17 02.2	
	comp=Z,1.5nm,0.5s						
STKA	Stephens Creek	72.01	139	P	P	02 17 07.5	-1.1
	comp=Z,0.6nm,0.3s,baz=309,slow=13,SNR=3.6						
	comp=Z,0.6nm,0.3s						
KEST	Kesra	72.50	302	P	P	02 17 12.6	+0.8
	comp=Z,7.1nm,0.9s,baz=18,slow=4.8,SNR=5.3						
	comp=Z,7.1nm,0.9s						
DBG	Daneborg	72.52	345	i P	P	02 17 10.2	-0.8
DBG				IAmb	IAmb	02 17 13.4	
	comp=Z,1.0nm,0.6s						
SCO	Scoresbysund	75.01	342	i P	P	02 17 27.0	+1.4
NEEM	North Greenlan	75.72	353	i P	P	02 17 30.1	+0.1
NEEM				IAmb	IAmb	02 17 32.0	
	comp=Z,17nm,0.7s						
SUMG	Summit	77.65	347	i P	P	02 17 40.1	-0.9
SUMG				IAmb	IAmb	02 17 41.5	
	comp=Z,5.9nm,0.6s						
BMAR	Burnt Mountain	77.78	20	P	P	02 17 41.5	0.0
TULEG	Thule	78.13	356	P	P	02 17 43.3	+0.1
TULEG				IAmb	IAmb	02 17 44.0	
	comp=Z,10.0nm,0.7s						
TULEG	Thule	78.13	356	i P	P	02 17 42.0	-1.2
TULEG				IAmb	IAmb	02 17 43.5	
	comp=Z,9.9nm,0.7s						
ILAR	Eielson Array	78.60	23	P	P	02 17 44.4	-1.5
	comp=Z,0.4nm,0.5s,baz=293,slow=4.7,SNR=7.5						
	comp=Z,0.4nm,0.5s						
KULLO	Kullorsuaq	78.97	353	i P	P	02 17 47.3	-0.5
KULLO				IAmb	IAmb	02 17 48.5	
	comp=Z,14nm,0.7s						
A36M	Sachs Harbour	79.33	12	P	P	02 17 49.4	-0.3
UPNV	Upernavik	80.46	352	i P	P	02 17 55.7	-0.2
UPNV				IAmb	IAmb	02 17 56.4	
	comp=Z,8.1nm,0.7s						
ICESG	Greenland Ices	80.53	345	i P	P	02 17 56.3	-0.5
ICESG				IAmb	IAmb	02 17 58.0	
	comp=Z,8.8nm,0.4s						
ESDC	Sonseca Array	80.86	309	P	P	02 17 59.3	+0.6
	comp=Z,0.9nm,0.6s,baz=46,slow=4.6,SNR=18						
	comp=Z,0.9nm,0.6s						
BCAR	Beaver Creek A	81.43	23	P	P	02 18 00.9	-0.3
C36M	Paulatuk	81.70	13	P	P	02 18 01.9	-0.6
C36M				IAmb	IAmb	02 18 02.6	
	comp=Z,5.1nm,0.8s						
DY2G	Dye2	84.15	345	i P	P	02 18 15.3	-0.2
DY2G				IAmb	IAmb	02 18 16.0	
	comp=Z,7.1nm,0.5s						
SFJD	Kangerlussuaq	84.65	347	i P	P	02 18 16.2	-1.4
SFJD				IAmb	IAmb	02 18 18.2	
	comp=Z,6.9nm,0.5s						
BOSA	Boshof	85.69	236	LR	LR	02 57 20.8	
	comp=Z,34nm,19.1s,baz=54,slow=36						
TORD	Torodi Ar. Bea	87.47	283	P	P	02 18 33.2	+0.7
	comp=Z,1.7nm,0.5s,baz=55,slow=4.1,SNR=8.8						
TORD				pP	pP	02 19 01.9	+2.3
	comp=Z,118nm,0.4s,baz=63,slow=4.6,SNR=2.5						
YKA	Yellowknife Ar	89.59	13	P	P	02 18 40.4	-1.2
	comp=Z,0.3nm,0.7s,baz=328,slow=4.5,SNR=4.0						
	comp=Z,0.3nm,0.7s						
SUR	Sutherland	90.90	235	LR	LR	03 01 00.9	
	comp=Z,26nm,18.1s,baz=178,slow=36						
SCHQ	Schefferville	98.91	349	P	P	02 19 24.1	-0.3
	comp=Z,0.8nm,0.4s,baz=342,slow=6.4,SNR=6.1						
	comp=Z,0.8nm,0.4s						
BDFB	Brasilia	144.19	278	PKP	PKPbc	02 25 19.1	+0.1
	comp=Z,4.6nm,0.8s,baz=53,slow=5.1,SNR=6.3						
BDFB				pPKP	pPKPdf	02 25 47.2	-1.5
	comp=Z,4.7nm,0.8s,baz=28,slow=22,SNR=3.5						
ROSC	El Rosal	148.51	339	PKPbc	PKiKP	02 25 32.9	-0.6
	comp=Z,33nm,0.4s,baz=117,slow=2.7,SNR=16						

MAN 25 02:06:06.8, 9°.66N×126°.33E, h20km, mb4.3, ML3.1, MS2.8, 6C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.24	303	⇓iP	Pb	02 06 13.2	+0.7
GLSP				eS	Sb	02 06 17.8	+1.4
SCPH	Surigao	0.84	279	⇓eP	Pb	02 06 21.6	-1.0
SCPH				eS	Sb	02 06 32.9	-0.6
BUTP	Butuan	0.97	226	⇑eP	Pb	02 06 24.8	-0.2
BUTP				eS	Sn	02 06 39.5	+0.9
BIPH	Bislig	1.46	179	⇑eP	Pn	02 06 31.7	-0.4
BIPH				eS	Sn	02 06 50.7	0.0
MSLP	Maasin	1.52	288	⇑eP	Pb	02 06 34.0	-0.4
MSLP				eS	Sn	02 06 51.8	-0.4
CGP	Cagayan de Oro	2.01	234	⇓eP	Pn	02 06 41.0	+1.4
CGP				eS	Sn	02 07 04.3	+0.2
TABP	Talibon, Bohol	2.01	283	⇑iP	Pn	02 06 40.3	+0.7
TABP				i S	Sn	02 07 05.2	+0.9
TBP	Tagbilaran	2.43	271	eP	Pn	02 06 43.8	-1.6
TBP				i S	Sn	02 07 15.7	+1.1
DCPH	Dipolog City	3.13	250	⇑eP	Pn	02 06 56.8	+1.8
RCP	Roxas	4.00	299	⇑iP	Pn	02 07 09.3	+2.3

BJI **25** *03:01:50.7±0.0, 11°.45S×166°.59E, h26km, mb4.8/40, mB5.0/25, Ms4.7/9, Ms7 4.4/9*

IDC **25** *03:01:55.3±3.5, 11°.43S×166°.43E, h57km±31km, mb4.1/16, mbtmp4.3/18, ML3.4/2, MS4.0/58, Error ellipse: s-maj=22.1km s-min=16.0km az=73.0*

NEIC **25** *03:01:55.4±2.3, 11°.35S±0°.10×166°.14E±0°.08, h38km±6km, mb4.8/31, Error ellipse: s-maj=15.2km s-min=9.5km az=209.0*

NOU **25** *03:01:56.8, 11°.63S×166°.00E, h0km, mb4.9/10, Santa Cruz Islands*

GCMT **25** *03:01:57.4±0.2, 11°.53S±0°.02×165°.98E±0°.01, h46km, MW5.1/95, Moment Tensor Solution. s95,c120; s85,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.85±.14; $M_{\theta\theta}$-0.14±.13; $M_{\phi\phi}$-4.70±.11; $M_{r\theta}$-0.27±.10; $M_{\theta\phi}$0.97±.10; $M_{\phi r}$2.00±.10; Best double couple: $M_0$5.27500×10^{16} NP1:ϕ_s350.00000°, δ56.00000°, λ92.00000°. NP2:ϕ_s167.00000°, δ34.00000°, λ87.00000°. Principal axes: T 5.2530, Plg79.0000°, Azm266.0000°; N 0.0480, Plg1.0000°, Azm169.0000°; P -5.2960, Plg11.0000°, Azm79.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 03:01:53.0±0.5, 11°.55S±0°.06×166°.44E±0°.07, h34km±1km, h34km:pP-P, n137, σ1s.81/100, mb4.8/49, MS4.1/62, 2C-3D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	6.37	165	P	Pn	03 03 34.1	+10
HNR	Honiara	6.72	288	P	Pn	03 03 31.2	+1.7
	4μm,0.8s,baz=218,slow=3.5,SNR=3.7						
HNR				S	Sn	03 04 41.0	-3.9
	3μm,0.8s,baz=154,slow=16,SNR=1.8						
HNR				LR	LR	03 06 26.0	
	comp=Z,27μm,20.5s,baz=122,slow=40						
HNR	Honiara	6.72	288	Pn	Pn	03 03 25.9	-3.6
HNR	Honiara	6.72	288	P	Pn	03 03 31.5	+2.0
KOUNC	Koumac, New Ca	9.18	193	Pn	Pn	03 04 05.5	+2.3
KOUNC	Koumac, New Ca	9.18	193	P	Pn	03 04 07.8	+4.6
YATNC	Mamie plateau,	10.46	178	P	Pn	03 04 27.1	+6.4
DZM	Mont Dzumac	10.46	180	ePn	Pn	03 04 23.7	+2.9
	58nm,1.1s						
DZM				eSn	Sn	03 06 13.3	-3.6
	103nm,1.1s						
DZM				eLR	LR	03 06 50.6	
	comp=Z,3μm,25.8s						
DZM	Mont Dzumac	10.46	180	P	Pn	03 04 24.4	+3.6
	2.2nm,0.3s,baz=270,slow=8.6,SNR=24						
DZM				S	Sn	03 06 14.4	-2.5
	11nm,0.7s,baz=91,slow=16,SNR=1.4						
DZM				LR	LR	03 07 12.9	
	comp=Z,174nm,21.6s,baz=29,slow=30						
	4.1nm,0.3s						
DZM	Mont Dzumac	10.46	180	Pn	Pn	03 04 24.9	+4.1
DZM	Mont Dzumac	10.46	180	P	Pn	03 04 26.1	+5.3
NOUC	Port Laguerre	10.49	181	P	Pn	03 04 26.6	+5.5
ONTNC	Ouen Toro	10.70	180	Pn	Pn	03 04 27.9	+3.9
ONTNC	Ouen Toro	10.70	180	P	Pn	03 04 31.4	+7.5
OUENC	Ouen Island, N	10.81	178	Pn	Pn	03 04 30.8	+5.3
OUENC	Ouen Island, N	10.81	178	P	Pn	03 04 33.4	+7.9
PINNC	Pines Island,	11.04	175	Pn	Pn	03 04 34.9	+6.3
MSVF	Nonsavu	12.80	120	P	P	03 05 00.2	-3.2
	3.2nm,0.7s,baz=289,slow=23,SNR=3.1						
MSVF				LR	LR	03 08 56.6	
	comp=Z,1μm,21.1s,baz=307,slow=33						
KRVT	Keravat (AS076	15.98	296	LR	LR	03 12 19.3	
	comp=Z,444nm,19.5s,baz=255,slow=39						
PMG	Port Moresby	19.08	275	P	Pn	03 06 14.7	+0.8
	0.8nm,0.3s,baz=83,slow=2.1,SNR=3.0						
PMG				LR	LR	03 13 04.7	
	comp=Z,873nm,21.0s,baz=126,slow=35						
	11nm,0.8s						
EIDS	Eidsvold	20.00	224	P	P	03 06 21.6	-1.3
CTA	Charters Tower	21.18	244	P	P	03 06 36.9	+1.2
	10nm,0.9s,baz=64,slow=10,SNR=6.2						
CTA				LR	LR	03 13 37.6	
	comp=Z,795nm,21.1s,baz=81,slow=33						
	10nm,0.9s						
CTAO	Charters Tower	21.18	244	P	P	03 06 33.4	-2.3
AFI	Afiamalu	21.38	99	LR	LR	03 13 21.2	
	comp=Z,439nm,20.5s,baz=288,slow=32						
ARMA	Armidale	23.27	214	P	P	03 06 59.3	+1.4
ARMA				IAmb	IAmb	03 07 01.4	
	comp=Z,42nm,1.0s						
URZ	Urewera	28.25	162	P	P	03 07 43.9	+0.8
	comp=Z,4.8nm,0.8s,baz=135,slow=11,SNR=1.7						
URZ				LR	LR	03 17 20.0	
	comp=Z,478nm,20.8s,baz=72,slow=33						
	comp=Z,4.8nm,0.8s						
H11S2	WAKE ISLAND Hy	29.85	1	T	T	03 38 43.7	
	baz=181,slow=76,SNR=21						
H11S3	WAKE ISLAND Hy	29.86	0	T	T	03 38 43.9	
	baz=181,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	29.87	0	T	T	03 38 45.1	
	baz=181,slow=76,SNR=7.5						
STKA	Stephens Creek	30.55	225	P	P	03 08 04.3	+0.7
	comp=Z,9.8nm,0.8s,baz=36,slow=8.7,SNR=24						
STKA				LR	LR	03 19 27.2	
	comp=Z,632nm,21.4s,baz=42,slow=34						
	comp=Z,9.8nm,0.8s						
STKA	Stephens Creek	30.55	225	P	P	03 08 04.4	+0.8
WRAB	Tennant Creek	31.94	251	P	P	03 08 14.2	-1.8
WRAB				IAmb	IAmb	03 08 16.7	
	comp=Z,20nm,1.1s						
WRA	Warramunga Arr	31.95	251	P	P	03 08 15.6	-0.5
	comp=Z,12nm,0.9s,baz=82,slow=9.1,SNR=56						
WRA				PcP	PcP	03 11 05.5	-0.5
	comp=Z,0.4nm,0.6s,baz=84,slow=2.4,SNR=4.7						
WRA				LR	LR	03 19 39.4	
	comp=Z,415nm,22.0s,baz=98,slow=33						
	comp=Z,12nm,0.9s						
WRA	Warramunga Arr	31.95	251	P	P	03 08 14.7	-1.4
RPZ	Rata Peaks	32.29	174	P	P	03 08 20.1	+1.3
	comp=Z,7.5nm,0.6s,baz=288,slow=5.3,SNR=8.9						
RPZ				LR	LR	03 20 15.1	
	comp=Z,280nm,20.3s,baz=346,slow=34						
	comp=Z,7.5nm,0.6s						
GUMO	Guam	32.89	319	LR	LR	03 22 10.9	
	comp=Z,101nm,20.0s,baz=116,slow=37						
AS31	Alice Springs	33.18	244	P	P	03 08 25.6	-1.2
ASAR	Alice Springs	33.18	244	P	P	03 08 26.0	-0.9
	comp=Z,8.1nm,0.8s,baz=74,slow=9.5,SNR=93						
ASAR				PcP	PcP	03 11 08.8	-0.5
	comp=Z,1.9nm,0.9s,baz=89,slow=3.4,SNR=5.8						
ASAR				LR	LR	03 20 33.2	
	comp=Z,459nm,21.3s,baz=74,slow=34						
	comp=Z,8.1nm,0.8s						
ASAR	Alice Springs	33.18	244	P	P	03 08 25.4	-1.5
RAR	Rarotonga	33.74	111	LR	LR	03 19 32.5	
	comp=Z,316nm,20.3s,baz=281,slow=31						
SIJI	Sorong	36.49	284	LR	LR	03 25 05.5	
	comp=Z,239nm,20.5s,baz=92,slow=38						
PPT	Papeete	42.92	103	LR	LR	03 25 12.7	
	comp=Z,210nm,20.5s,baz=277,slow=32						
TBI	Tubuai	43.51	112	eSS	SS	03 19 49.2	+13
	comp=Z,754nm,32.5s						
TBI				eLR	LR	03 22 16.9	
	comp=Z,4μm,29.2s						
DAV	Davao City (W)	44.66	293	LR	LR	03 28 55.4	
	comp=Z,70nm,19.4s,baz=112,slow=36						
PSA00	Pilbara Seismi	45.61	251	P	P	03 10 10.6	+0.1
PSA00				IAmb	IAmb	03 10 11.5	
	comp=Z,11nm,1.1s						
MBWA	Marble Bar	45.68	252	P	P	03 10 10.6	-0.4
MBWA	Marble Bar	45.68	252	P	P	03 10 10.8	-0.2
MBWA				pP	pP	03 10 20.1	-0.4
MBWA				sP	sP	03 10 27.5	+3.0
KAPI	Kappang	46.61	274	LR	LR	03 32 10.3	
	comp=Z,53nm,19.4s,baz=107,slow=39						

KAPI	**Kappang**	**46.61**	**274**	P	**P**	**03 10 18.6**	**+0.2**
TOLI2	**Tolitoli**	**47.08**	**282**	P	**P**	**03 10 20.7**	**-1.4**
TOLI2				IAmb	IAmb	03 10 22.3	
	comp=Z,12nm,1.0s						
NWAO	**Narrogin (SRO)**	**49.75**	**237**	LR	LR	03 31 33.3	
	comp=Z,661nm,19.7s,baz=70,slow=36						
NWAO	**Narrogin (SRO)**	**49.75**	**237**	P	**P**	**03 10 41.1**	**-1.3**
NWAO				pP	**pP**	**03 10 50.1**	**-1.9**
NWAO				sP	**pwP**	**03 10 55.2**	**+0.9**
MORW	**Morawa**	**49.98**	**242**	P	**P**	**03 10 44.1**	**-0.2**
TAOE	**Nuku Hiva Isla**	**52.58**	**92**	*e*LR	LR	03 26 29.0	
	comp=Z,262nm,23.8s						
JOW	**Kunigami**	**53.19**	**316**	LR	LR	03 33 17.8	
	comp=Z,99nm,20.0s,baz=52,slow=36						
MJAR	**Matsushiro Arr**	**54.73**	**332**	P	**P**	**03 11 18.0**	**-1.3**
	comp=Z,2.4nm,1.0s,baz=170,slow=9.7,SNR=3.8						
MJAR				LR	LR	03 32 29.0	
	comp=Z,79nm,21.6s,baz=144,slow=34						
	comp=Z,2.4nm,1.0s						
SBUM	**Sibu**	**55.67**	**281**	P	**P**	**03 11 25.2**	**-1.2**
JNU	**Nakatsue**	**55.89**	**324**	LR	LR	03 33 03.9	
	comp=Z,51nm,20.1s,baz=126,slow=34						
DRV	**Dumont d'Urvil**	**57.85**	**192**	P	**P**	**03 11 40.4**	**-0.7**
DRV				pP	**pP**	**03 11 51.9**	**+1.0**
CNJI	**Cibinong**	**58.58**	**268**	P	**P**	**03 11 46.8**	**-0.3**
	comp=Z,15nm,1.3s						
ASAJ	**Asahikawa**	**59.50**	**340**	LR	LR	03 32 54.1	
	comp=Z,144nm,21.8s,baz=321,slow=31						
KSRS	**Korea Array**	**60.68**	**325**	LR	LR	03 36 15.4	
	comp=Z,54nm,20.7s,baz=145,slow=34						
NJ2	**Nanjing**	**62.86**	**315**	*e*P	**P**	**03 12 18.1**	**+2.3**
NJ2				pP	**pP**	**03 12 24.0**	**-1.9**
NJ2				sP	**sP**	**03 12 27.5**	**-2.1**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,170nm,4.3s						
QIZ	**Qiongzhong**	**63.52**	**298**	P	**P**	**03 12 23.3**	**+2.8**
QIZ				PP	**PP**	**03 14 40.8**	**+0.2**
QIZ				S	**S**	**03 20 53.5**	**+1.5**
QIZ				SS	**SS**	**03 25 01.3**	**+1.4**
QIZ				pmax	pmax		
	comp=Z,170nm,4.5s						
QIZ				LR	LR		
	comp=Z,140nm,27.1s						
QIZ				LR	LR		
	comp=Z,190nm,25.5s						
QIZ				LR	LR		
	comp=Z,210nm,22.3s						
USRK	**Ussuriysk Ar.**	**63.70**	**333**	P	**P**	**03 12 19.7**	**-1.5**
	comp=Z,3.1nm,0.9s,baz=97,slow=6.0,SNR=6.2						
	comp=Z,3.1nm,0.9s						
USRK	**Ussuriysk Ar.**	**63.70**	**333**	P	**P**	**03 12 20.6**	**-0.6**
SHEM	**Shemya Is, Ala**	**64.36**	**5**	LR	LR	03 33 25.6	
	comp=Z,201nm,21.6s,baz=358,slow=29						
PETK	**Petropavlovsk-**	**64.84**	**354**	LR	LR	03 34 36.4	
	comp=Z,139nm,21.9s,baz=151,slow=30						
MDJ	**Mudanjiang**	**65.11**	**332**	P	**P**	**03 12 33.0**	**+2.6**
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,170nm,5.8s						
VNDA	**Vanda**	**66.00**	**181**	P	**P**	**03 12 36.2**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=346,slow=8.0,SNR=1.8						
VNDA				LR	LR	03 36 59.6	
	comp=Z,114nm,21.1s,baz=338,slow=32						
	comp=Z,1.0nm,0.8s						
CN2	**Changchun**	**66.53**	**329**	P	**P**	**03 12 39.3**	**-0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
IPM	**Ipoh**	**66.98**	**280**	P	**P**	**03 12 42.6**	**-0.5**
KLR	**Kul'dur**	**67.79**	**336**	LR	LR	03 37 29.9	
	comp=Z,75nm,21.4s,baz=164,slow=32						
CCD	**Concordia, Ant**	**67.84**	**191**	P	**P**	**03 12 46.9**	**-1.1**
RPSI	**Rantau Prapat**	**68.59**	**278**	P	**P**	**03 12 52.5**	**-0.7**
RPSI				IAmb	IAmb	03 12 53.7	
	comp=Z,9.7nm,1.1s						
LYN	**LuoYang**	**68.69**	**314**	*e*P	**P**	**03 12 53.6**	**+0.2**
HNS	**HongShan**	**68.71**	**318**	⇓P	**P**	**03 12 54.0**	**+0.5**
HNS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GYA	**Guiyang**	**69.26**	**304**	⇓P	P	03 13 03.5	+6.2
GYA				pmax	pmax		
	comp=Z,18nm,1.1s						
SRIT	**Nakonsritamara**	**69.41**	**284**	P	**P**	**03 12 58.2**	**-0.2**
XLT	**XiLinHaoTe**	**71.67**	**324**	⇓*i*P	**P**	**03 13 12.5**	**+0.9**
XLT				pmax	pmax		
	comp=Z,15nm,0.9s						
XLT				pmax	pmax		
	comp=Z,110nm,5.3s						
KMI	**Kunming**	**71.97**	**301**	⇑P	**P**	**03 13 15.3**	**+1.3**
KMI				pmax	pmax		
	comp=Z,14nm,0.9s						
KMI				LR	LR		
	comp=Z,110nm,23.9s						
KMI				LR	LR		
	comp=Z,170nm,24.7s						
KMI				LR	LR		
	comp=Z,190nm,30.0s						
CRAI	**Chiangrai**	**72.25**	**296**	P	**P**	**03 13 15.1**	**-0.3**
CRAI				IAmb	IAmb	03 13 17.4	
	comp=Z,13nm,1.2s						
HHC	**Hu-ho-hao-te**	**72.66**	**319**	*e*P	**P**	**03 13 20.3**	**+2.7**
HHC				pmax	pmax		
	comp=Z,22nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,5.7s						
HHC				LR	LR		
	comp=Z,260nm,14.6s						
HHC				LR	LR		
	comp=Z,300nm,15.9s						
HHC				LR	LR		
	comp=Z,430nm,15.9s						
CM31	**Chiang Mai Arr**	**72.94**	**293**	P	**P**	**03 13 19.3**	**-0.3**
CM31				IAmb	IAmb	03 13 21.7	
	comp=Z,12nm,0.9s						
CMAR	**Chiang Mai Arr**	**72.94**	**293**	P	**P**	**03 13 19.3**	**-0.3**
	comp=Z,3.7nm,0.7s,baz=117,slow=4.3,SNR=24						
CMAR				LR	LR	03 42 53.6	
	comp=Z,43nm,21.8s,baz=90,slow=34						
	comp=Z,3.7nm,0.7s						
CHTO	**Chiang Mai**	**73.05**	**294**	P	**P**	**03 13 21.1**	**+0.8**
PZH	**PanZhiHua**	**73.32**	**302**	P	**P**	**03 13 24.6**	**+2.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,110nm,5.5s						
CD2	**Chengdu**	**73.45**	**307**	P	**P**	**03 13 22.8**	**+0.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BTO	**Baotou**	**73.52**	**319**	*e*P	**P**	**03 13 24.6**	**+1.9**
BTO				pP	**pP**	**03 13 31.8**	**-1.1**
BTO				sP	**sP**	**03 13 35.6**	**-1.0**
BTO				PP	**PP**	**03 16 10.4**	**+3.3**
BTO				S	**SKiKP**	**03 22 53.8**	**+2.8**
BTO				sS	**sS**	**03 23 09.4**	**+2.4**
BTO				pmax	pmax		
	comp=Z,20nm,0.7s						
BTO				pmax	pmax		
	comp=Z,690nm,5.7s						
BTO				LR	LR		
	comp=Z,490nm,17.2s						
BTO				LR	LR		
	comp=Z,560nm,12.7s						
BTO				LR	LR		
	comp=Z,430nm,17.3s						
SEY	**Seymchan**	**75.05**	**353**	LR	LR	03 42 18.8	
	comp=Z,148nm,19.8s,baz=320,slow=32						
LZH	**Lanzhou**	**75.60**	**312**	*e*P	**P**	**03 13 36.4**	**+1.4**
LZH				pP	pP	03 13 43.3	-1.9
LZH				sP	PcP	03 13 47.4	-0.4
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
KDAK	**Kodiak Island**	**76.80**	**21**	LR	LR	03 41 35.8	
	comp=Z,203nm,19.9s,baz=238,slow=31						
P18K	**Big Mountain,**	**77.15**	**19**	IAmb	IAmb	03 13 44.0	
	comp=Z,11nm,1.0s						
QSPA	**South Pole Qui**	**78.45**	**180**	LR	LR	03 46 17.8	
	comp=Z,73nm,19.3s,baz=28,slow=34						
QSPA	**South Pole Qui**	**78.45**	**180**	P	**P**	**03 13 50.9**	**+0.4**
QSPA				IAmb	IAmb	03 13 50.9	
	comp=Z,12nm,0.9s						
YAK	**Yakutsk**	**78.77**	**343**	LR	LR	03 49 18.4	
	comp=Z,58nm,18.3s,baz=126,slow=36						
ULN	**Ulaanbaatar**	**79.11**	**324**	P	**P**	**03 13 54.3**	**0.0**
ULN				IAmb	IAmb	03 13 55.7	
	comp=Z,7.4nm,1.0s						
SONM	**Songino Array**	**79.48**	**324**	P	**P**	**03 13 55.3**	**-1.1**
	comp=Z,2.5nm,1.0s,baz=144,slow=5.5,SNR=13						
SONM				LR	LR	03 49 06.3	
	comp=Z,34nm,19.1s,baz=129,slow=36						
	comp=Z,2.5nm,1.0s						
SONM	**Songino Array**	**79.48**	**324**	P	**P**	**03 13 55.5**	**-0.8**
RPN	**Rapa Nui**	**79.74**	**116**	LR	LR	03 43 12.6	
	comp=Z,57nm,21.5s,baz=278,slow=31						
GTA	**Gaotai**	**79.90**	**314**	*e*P	**P**	**03 13 59.3**	**+0.5**
GTA				sP	sP	03 14 15.4	+2.6
GTA				pmax	pmax		
	comp=Z,12nm,1.2s						
GTA				LR	LR		
	comp=Z,94nm,13.8s						
GTA				LR	LR		
	comp=Z,120nm,15.3s						
GTA				LR	LR		
	comp=Z,99nm,17.5s						
BRDH	**Bariadhala**	**80.73**	**295**	LR	LR	03 50 15.4	
	comp=Z,34nm,20.1s,baz=174,slow=36						
GOMU	**GeErMu**	**82.36**	**309**	P	**P**	**03 14 10.8**	**-1.5**
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,37nm,3.9s						
HDA	**Harding Lake**	**83.50**	**19**	P	**P**	**03 14 18.1**	**+1.0**
HDA				IAmb	IAmb	03 14 18.4	
	comp=Z,7.0nm,1.1s						
YBH	**Yreka Blue Hor**	**83.76**	**45**	LR	LR	03 50 38.3	
	comp=Z,30nm,18.4s,baz=271,slow=35						
ILAR	**Eielson Array**	**83.78**	**18**	P	**P**	**03 14 17.1**	**-1.4**
	comp=Z,1.2nm,1.0s,baz=238,slow=5.5,SNR=5.6						
ILAR				LR	LR	03 44 25.0	
	comp=Z,66nm,20.6s,baz=184,slow=30						
	comp=Z,1.2nm,1.0s						
DOT	**Dot Lake**	**83.92**	**20**	IAmb	IAmb	03 14 37.4	
	comp=Z,6.3nm,1.0s						
SCRK	**Sand Creek**	**84.16**	**20**	P	**P**	**03 14 21.8**	**+1.2**
SCRK				IAmb	IAmb	03 14 38.9	
	comp=Z,6.2nm,1.1s						
MAW	**Mawson**	**84.51**	**202**	LR	LR	03 44 43.0	
	comp=Z,130nm,21.6s,baz=98,slow=30						
BBB	**Bella Bella**	**84.61**	**34**	LR	LR	03 43 35.2	
	comp=Z,135nm,21.3s,baz=266,slow=30						
EGAK	**Eagle**	**85.62**	**20**	P	**P**	**03 14 29.4**	**+1.6**
EGAK				IAmb	IAmb	03 14 46.8	
	comp=Z,8.6nm,1.3s						
PFO	**Pinyon Flats O**	**85.82**	**55**	LR	LR	03 44 47.2	
	comp=Z,149nm,20.8s,baz=248,slow=30						
NVAR	**Mina Array Bea**	**85.83**	**50**	P	**P**	**03 14 29.1**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=224,slow=5.0,SNR=2.0						
NVAR				LR	LR	03 44 40.2	
	comp=Z,241nm,21.8s,baz=234,slow=30						
	comp=Z,0.2nm,0.5s						
GWY	**Greenwater Val**	**86.40**	**52**	P	**P**	**03 14 35.1**	**+2.6**
GWY				IAmb	IAmb	03 14 36.6	
	comp=Z,6.2nm,0.8s						
DLBC	**Dease Lake**	**86.53**	**28**	LR	LR	03 45 14.1	
	comp=Z,67nm,19.7s,baz=284,slow=30						
TIXI	**Tiksi**	**86.72**	**349**	LR	LR	03 48 41.0	
	comp=Z,62nm,21.0s,baz=3.5,slow=32						
PALK	**Pallekele**	**87.29**	**278**	LR	LR	03 56 47.4	
	comp=Z,67nm,20.1s,baz=238,slow=38						
LPIG	**La Paz**	**88.60**	**65**	LR	LR	03 43 54.9	
	comp=Z,51nm,21.6s,baz=278,slow=28						
ELK	**Elko**	**88.78**	**48**	LR	LR	03 47 10.3	
	comp=Z,117nm,19.9s,baz=266,slow=31						
SPR3	**Spring Creek 3**	**88.97**	**50**	P	**P**	**03 14 45.8**	**+0.8**
SPR3				IAmb	IAmb	03 15 03.8	
	comp=Z,8.4nm,1.6s						
NEW	**Newport**	**89.68**	**41**	LR	LR	03 46 58.2	
	comp=Z,85nm,21.4s,baz=264,slow=30						
WMQ	**Urumqi**	**89.93**	**315**	⇑*i*P	**P**	**03 14 48.8**	**-0.3**
WMQ				pP	pP	03 14 57.0	-2.5
WMQ				sP	sP	03 14 59.9	-3.2
WMQ				pmax	pmax		
	comp=Z,20nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,8.0nm,3.7s						
WMQ				LR	LR		
	comp=Z,140nm,20.1s						
INK	**Inuvik**	**90.16**	**19**	LR	LR	03 48 28.0	
	comp=Z,123nm,21.3s,baz=212,slow=31						
PDAR	**Pinedale Array**	**93.39**	**47**	LR	LR	03 50 29.5	
	comp=Z,53nm,19.4s,baz=287,slow=31						
ANMO	**Albuquerque**	**94.17**	**55**	LR	LR	03 49 50.2	
	comp=Z,96nm,20.6s,baz=354,slow=30						
MK31	**Makanchi Array**	**94.36**	**317**	P	**P**	**03 15 08.1**	**-1.3**
MK31				IAmb	IAmb	03 15 10.0	
	comp=Z,6.5nm,1.1s						
MKAR	**Makanchi Array**	**94.36**	**317**	P	**P**	**03 15 08.8**	**-0.6**
	comp=Z,5.3nm,0.9s,baz=101,slow=5.5,SNR=30						
MKAR				LR	LR	03 57 23.6	
	comp=Z,30nm,21.8s,baz=56,slow=35						
	comp=Z,5.3nm,0.9s						
ZAA0	**Zalesovo Array**	**94.36**	**324**	P	**P**	**03 15 07.2**	**-2.0**
ZALV	**Zalesovo Beam**	**94.36**	**324**	P	**P**	**03 15 08.1**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=110,slow=6.9,SNR=5.9						
ZALV				LR	LR	03 56 20.0	
	comp=Z,42nm,21.0s,baz=78,slow=35						
	comp=Z,0.8nm,0.5s						
ZALV	**Zalesovo Beam**	**94.36**	**324**	P	**P**	**03 15 07.4**	**-1.8**
YKA	**Yellowknife Ar**	**95.11**	**27**	P	**P**	**03 15 10.3**	**-2.1**
	comp=Z,0.1nm,0.6s,baz=257,slow=4.7,SNR=1.9						
YKA				LR	LR	03 51 15.7	
	comp=Z,62nm,20.5s,baz=308,slow=31						
	comp=Z,0.1nm,0.6s						
TXAR	**Lajitas Array**	**95.47**	**61**	LR	LR	03 50 48.8	
	comp=Z,104nm,20.2s,baz=256,slow=31						
SNAA	**Sanae**	**96.66**	**183**	LR	LR	03 56 23.4	
	comp=Z,62nm,20.0s,baz=115,slow=34						
NRIK	**Noril'sk**	**96.83**	**339**	LR	LR	03 55 43.8	
	comp=Z,92nm,21.8s,baz=126,slow=33						
KURBB	**Kurchatov Arra**	**97.50**	**320**	LR	LR	03 59 01.8	
	comp=Z,40nm,21.8s,baz=187,slow=35						
KSH	**Kashi**	**97.60**	**309**	P	Pdif	03 15 29.6	+5.1
KSH				LR	LR		
	comp=Z,110nm,5.4s						
KSH				LR	LR		
	comp=Z,240nm,8.3s						
AAK	**Ala-Archa**	**99.14**	**312**	LR	LR	04 02 56.2	
	comp=Z,33nm,18.4s,baz=56,slow=37						

IDC 25 03:15:30.9±1.9**,6°.63S**×**128°.61E,h0**^{km}**,mb3.3**/1**,**
mbtmp3.5/4**,ML3.7**/3**,MS3.6**/1**,Error ellipse:**
s-maj=70.0km s-min=29.6km az=79.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.30**	**25**	Pn	Pn	03 17 05.1	-0.1
	0.7nm,0.3s,baz=250,slow=21,SNR=3.7						
SIJI				Sn	Sn	03 18 05.4	-13
	6.8nm,0.3s,baz=207,slow=22,SNR=14						
	4.4nm,0.3s						
WRA	**Warramunga Arr**	**14.36**	**158**	Pn	Pn	03 18 55.0	-0.7
	0.4nm,0.3s,baz=333,slow=14,SNR=14						
WRA				Sn	Sn	03 21 22.6	-13
	0.5nm,0.3s,baz=348,slow=22,SNR=8.8						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**17.69**	**164**	P	Pn	03 19 39.3	+0.3
	0.3nm,0.3s,baz=346,slow=11,SNR=14						
ASAR				S	Sn	03 22 45.5	-11
	0.4nm,0.8s,baz=359,slow=27,SNR=2.7						
	0.8nm,0.5s						
AFI	**Afiamalu**	**58.98**	**102**	LR	LR	03 47 57.3	
	comp=Z,54nm,21.4s,baz=54,slow=33						
MKAR	**Makanchi Array**	**67.16**	**327**	P	P	03 26 26.9	+0.1
	0.2nm,0.5s,baz=120,slow=7.6,SNR=2.2						
	0.2nm,0.5s						

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*GCG **25** 03:22:38.1±0.5,13°.66N×91°.65W,h50^{km}±6^{km},MD3.4*
*SNET **25** 03:22:40.9±0.7,13°.82N×91°.34W,h19^{km}±4^{km},ML2.8*
ISC 25 03:22:37.7±3.0**,13°.7N**±0°.2×**91°.6W**±0°.1**,h28**^{km}**,n7,**
σ**0^{s}.83**/10**,Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**1.06**	**1**	*e*P	**Pb**	**03 22 57.2**	**-0.3**
FUG	**Fuego 3**	**1.07**	**42**	*e*P	**Pb**	**03 22 57.9**	**+0.1**
PCG	**Pacaya**	**1.21**	**52**	*e*P	**Pb**	**03 22 60.0**	**0.0**
NBG	**Las Nubes**	**1.52**	**52**	*e*P	**Pb**	**03 23 05.6**	**+0.2**
NBG				*e*S	**Sb**	**03 23 25.1**	**+0.7**
NUBE	**Las Nubes**	**1.77**	**82**	*e*P	**Pn**	**03 23 07.1**	**+0.5**
NUBE				*e*S	**Sn**	**03 23 26.8**	**-1.6**
NUBE				IAML		03 23 30.8	
	comp=Z,36nm,0.3s						
CEVE	**Cerro Verde**	**1.92**	**84**	*e*P	**Pn**	**03 23 09.2**	**+0.5**
CEVE				IAML		03 23 40.0	
	comp=Z,181nm,0.3s						
JAYA	**Jayaque - finc**	**2.08**	**90**	*e*P	**Pn**	**03 23 11.4**	**+0.6**
JAYA				*e*S	**Sn**	**03 23 34.9**	**-1.0**
JAYA				IAML		03 23 40.4	
	comp=Z,172nm,0.2s						

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*NOU **25** 03:29:22.5,21°.92S×178°.59W,h635^{km},MLv4.1/4,Fiji Islands Region*
*IDC **25** 03:29:28.0±2.1,21°.46S×178°.73W,h582^{km}±21^{km},mb3.2/7, mbtmp4.2/9,Error ellipse: s-maj=24.2km s-min=19.5km az=98.0*
ISC 25 03:29:29.1±0.9**,21°.4S**±0°.1×**178°.8W**±0°.2**,h600**^{km}**,n17,**
σ**1^{s}.00**/18**,mb3.9**/7**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**3.18**	**359**	P	**P**	**03 30 48.4**	**-1.1**
MSVF	**Nonsavu**	**4.75**	**320**	P	**P**	**03 30 59.0**	**-1.3**
	25nm,0.6s,baz=201,slow=4.3,SNR=6.5						
MSVF	**Nonsavu**	**4.75**	**320**	P	**P**	**03 30 59.3**	**-1.0**
TAVE	**Taveuni**	**4.82**	**347**	P	**P**	**03 31 00.2**	**-0.6**
YSA	**Yasawairara**	**5.84**	**323**	P	**P**	**03 31 08.3**	**-0.7**
URZ	**Urewera**	**17.14**	**191**	P	**P**	**03 32 54.4**	**-2.4**
	3.9nm,0.3s,baz=8.0,slow=2.7,SNR=12						
CTA	**Charters Tower**	**32.70**	**266**	P	**P**	**03 35 14.2**	**+0.2**
	3.3nm,0.4s,baz=94,slow=9.9,SNR=6.1						
	3.3nm,0.4s						
STKA	**Stephens Creek**	**36.74**	**245**	P	**P**	**03 35 47.8**	**+0.3**
	1.8nm,0.6s,baz=89,slow=11,SNR=6.7						
	1.8nm,0.6s						
ASAR	**Alice Springs**	**43.62**	**258**	P	**P**	**03 36 42.4**	**+0.2**
	3.2nm,0.5s,baz=93,slow=7.8,SNR=60						
ASAR				PcP	**PcP**	**03 38 17.1**	**+1.3**
	0.4nm,0.6s,baz=117,slow=4.2,SNR=5.5						
	3.2nm,0.5s						
WRA	**Warramunga Arr**	**43.77**	**263**	P	**P**	**03 36 42.9**	**-0.5**
	2.8nm,0.7s,baz=96,slow=7.6,SNR=105						
	2.8nm,0.7s						
QSPA	**South Pole Qui**	**68.64**	**180**	P	**P**	**03 39 34.6**	**+1.2**
	1.4nm,0.8s,baz=84,slow=1.8,SNR=6.8						
	1.4nm,0.8s						
MJAR	**Matsushiro Arr**	**70.54**	**324**	P	**P**	**03 39 45.6**	**+0.7**
	0.8nm,0.6s,baz=138,slow=6.2,SNR=2.1						
	0.8nm,0.6s						
ILAR	**Eielson Array**	**89.38**	**13**	P	**P**	**03 41 22.1**	**-0.3**
	0.1nm,0.4s,baz=219,slow=5.6,SNR=5.8						
	0.1nm,0.4s						
ARCES	**ARCESS Array B**	**129.70**	**349**	PKP	**PKiKP**	**03 47 31.5**	**+0.3**
	5.3nm,1.0s,baz=22,slow=3.9,SNR=4.6						
FINES	**FINESS Array B**	**136.46**	**343**	PKP	**PKPdf**	**03 47 43.7**	**+0.6**
	1.7nm,0.9s,baz=35,slow=5.1,SNR=3.7						
BRTR	**Keskin Array B**	**146.92**	**311**	PKPbc	**PKPbc**	**03 48 05.0**	**-0.6**
	0.7nm,0.6s,baz=176,slow=2.2,SNR=7.1						
GERES	**GERESS Array B**	**150.89**	**343**	PKPbc	**PKPbc**	**03 48 15.0**	**+0.1**
	0.6nm,0.7s,baz=39,slow=3.8,SNR=2.6						

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*JMA **25** 03:47:07.1±0.1,24°.0N±0°.5×121°.3E±0°.6,h65^{km},MV3.0/11, TAIWAN REGION*
*TAP **25** 03:47:07.3,24°.07N×121°.32E,h67^{km},ML3.6,B*
ISC 25 03:47:06.9±1.2**,24°.05N**±0°.02×**121°.28E**±0°.02**,h77**^{km}±4^{km}**,**
n160,σ**0^{s}.78**/308**,32C-7D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CHGB	**Renai**	**0.10**	**276**	⇑*i*P	**Pn**	**03 47 18.5**	**+0.2**
	baz=265						
CHGB				S	**Sn**	**03 47 26.1**	**-0.5**
	baz=265						
WHF	**Hehuan Shan**	**0.10**	**353**	⇑*i*P	**Pn**	**03 47 18.8**	**+0.2**
	baz=330						
WHF				*i* S	**Sn**	**03 47 26.6**	**-0.4**
	baz=330						
OWD	**Renai**	**0.13**	**225**	⇑*i*P	**Pn**	**03 47 18.3**	**+0.1**
	baz=228						
OWD				*e*S	**Sn**	**03 47 25.8**	**-0.8**
	baz=228						
WUSB	**Renai**	**0.16**	**249**	⇑*i*P	**Pn**	**03 47 18.4**	**+0.1**
	baz=247						
WUSB				S	**Sn**	**03 47 26.1**	**-0.5**
	baz=247						
ETM	**Tongmen**	**0.21**	**113**	*i* P	**Pn**	**03 47 17.8**	**-0.5**
	baz=123						
ETM				*e*S	**Sn**	**03 47 25.7**	**-1.1**
	baz=123						
TWT	**Tachien**	**0.22**	**335**	*e*P	**Pn**	**03 47 18.7**	**0.0**
	baz=321						
TWT				*e*S	**Sn**	**03 47 26.5**	**-0.7**
	baz=321						
TDCB	**Techi**	**0.23**	**332**	⇑*i*P	**Pn**	**03 47 18.7**	**+0.1**
	baz=321						
TDCB				*e*S	**Sn**	**03 47 26.3**	**-0.9**
	baz=321						
ETLH	**Xiulin Townshi**	**0.24**	**50**	⇓*i*P	**Pn**	**03 47 18.7**	**+0.1**
	baz=48						
ETLH				S	**Sn**	**03 47 26.8**	**-0.4**
	baz=48						
ESL	**Shilin**	**0.27**	**149**	*i* P	**Pn**	**03 47 18.0**	**-0.6**
	baz=156						
ESL				*e*S	**Sn**	**03 47 25.5**	**-1.8**
	baz=156						
TWD	**Chiawan**	**0.29**	**84**	⇓*i*P	**Pn**	**03 47 18.0**	**-0.7**
	baz=88						
TWD				*e*S	**Sn**	**03 47 26.8**	**-0.7**
	baz=88						
WPL	**Puli Township**	**0.30**	**263**	⇑*e*P	**Pn**	**03 47 19.1**	**+0.3**
	baz=260						
WPL				*e*S	**Sn**	**03 47 27.2**	**-0.3**
	baz=260						
HWA	**Hwalien**	**0.31**	**104**	*e*P	**Pn**	**03 47 18.8**	**-0.1**
	baz=109						
HWA				*e*S	**Sn**	**03 47 28.0**	**+0.4**
	baz=109						
NACB	**Ninganchiao**	**0.31**	**67**	P	**Pn**	**03 47 18.2**	**-0.7**
NACB	**Ninganchiao**	**0.31**	**67**	⇓*i*P	**Pn**	**03 47 18.2**	**-0.7**
	baz=68						
NACB				*e*S	**Sn**	**03 47 27.3**	**-0.4**
	baz=68						
VWDT	**VWDT**	**0.32**	**203**	⇑*i*P	**Pn**	**03 47 19.6**	**+0.7**
	baz=207						
VWDT				S	**Sn**	**03 47 28.3**	**+0.5**
	baz=207						
DPDB	**Guoxing**	**0.32**	**267**	⇑*i*P	**Pn**	**03 47 19.3**	**+0.3**
	baz=264						
DPDB				S	**Sn**	**03 47 27.8**	**-0.1**
	baz=264						
ETL	**Fush Village**	**0.33**	**71**	*e*P	**Pn**	**03 47 18.3**	**-0.7**
	baz=73						
ETL				*e*S	**Sn**	**03 47 26.6**	**-1.4**
	baz=73						
WCS	**Beigang Elemen**	**0.34**	**271**	⇑*i*P	**Pn**	**03 47 19.3**	**+0.3**
	baz=268						
WCS				*i* S	**Sn**	**03 47 27.7**	**-0.3**
	baz=268						
TEYL	**Yanliau Villag**	**0.34**	**122**	*e*P	**Pn**	**03 47 19.0**	**-0.1**
	baz=123						
TEYL				*e*S	**Sn**	**03 47 27.5**	**-0.5**
	baz=123						
WHP	**Taichung City**	**0.38**	**307**	⇑*i*P	**Pn**	**03 47 19.6**	**+0.1**
	baz=301						
WHP				*e*S	**Sn**	**03 47 28.0**	**-0.7**
	baz=301						
SMLT	**Sun Moon Lake**	**0.38**	**245**	⇑*i*P	**Pn**	**03 47 19.8**	**+0.3**
	baz=243						
SMLT				S	**Sn**	**03 47 29.0**	**+0.2**
	baz=243						
NNSB	**Datong**	**0.39**	**14**	*e*P	**Pn**	**03 47 20.5**	**+0.9**
	baz=10.0						
NNSB				*e*S	**Sn**	**03 47 29.8**	**+0.9**
	baz=10.0						
NNSH	**Datong**	**0.39**	**14**	*e*P	**Pn**	**03 47 20.7**	**+1.1**
	baz=10.0						
NNSH				*e*S	**Sn**	**03 47 29.6**	**+0.7**
	baz=10.0						
SSLB	**Suanglung**	**0.40**	**229**	P	**Pn**	**03 47 19.5**	**0.0**
SSLB	**Suanglung**	**0.40**	**229**	⇑*i*P	**Pn**	**03 47 19.7**	**+0.2**
	baz=230						
SSLB				S	**Sn**	**03 47 28.6**	**-0.2**
	baz=230						
NNS	**Nan Shan**	**0.40**	**12**	*e*P	**Pn**	**03 47 20.6**	**+1.0**
	baz=9.0						
NNS				*e*S	**Sn**	**03 47 29.7**	**+0.6**
	baz=9.0						

EGFH	**Guangfu**	0.40	160	eP	Pn	03 47 18.6	-1.0
	baz=166						
EGFH				eS	Sn	03 47 26.9	-1.9
	baz=166						
TYC	**Yuchr**	0.41	250	⇑iP	Pn	03 47 19.9	+0.3
	baz=248						
TYC				S	Sn	03 47 29.1	+0.2
	baz=248						
TEGC	**Jichi Village**	0.41	145	eP	Pn	03 47 19.2	-0.4
	baz=150						
TEGC				eS	Sn	03 47 28.8	-0.2
	baz=150						
WHYT	**Xinyi Township**	0.53	228	⇑iP	Pn	03 47 20.9	+0.3
	baz=229						
WHYT				S	Sn	03 47 31.1	+0.4
	baz=229						
LATG	**Datong**	0.53	25	P	Pn	03 47 21.4	+0.6
	baz=22						
LATG				eS	Sn	03 47 31.6	+0.6
	baz=22						
EHY	**Hungye**	0.54	176	⇑eP	Pn	03 47 19.9	-0.8
	baz=179						
EHY				eS	Sn	03 47 30.9	0.0
	baz=179						
TWQ1	**Liyutan**	0.55	303	⇑iP	Pn	03 47 20.9	+0.1
	baz=299						
TWQ1				S	Sn	03 47 30.8	-0.3
	baz=299						
WJS	**Zhushan**	0.55	246	i P	Pn	03 47 21.3	+0.5
	baz=245						
WJS				eS	Sn	03 47 31.5	+0.4
	baz=245						
TCU	**Taichung**	0.56	280	i P	Pn	03 47 21.2	+0.4
	baz=277						
TCU				S	Sn	03 47 31.8	+0.6
	baz=277						
ENA	**Nanau**	0.57	48	P	Pn	03 47 20.6	-0.3
	baz=48						
ENA				eS	Sn	03 47 31.1	-0.2
	baz=48						
WNT1	**Nantou City**	0.57	256	eP	Pn	03 47 21.4	+0.5
	baz=254						
WNT1				eS	Sn	03 47 32.2	+0.9
	baz=254						
WNT	**Mingjian**	0.57	253	⇑iP	Pn	03 47 21.5	+0.6
	baz=251						
WNT				eS	Sn	03 47 32.1	+0.8
	baz=251						
HGSD	**Ruisui**	0.57	166	P	Pn	03 47 20.7	-0.3
	baz=170						
HGSD				eS	Sn	03 47 31.3	0.0
	baz=170						
NDT	**Datong Townshi**	0.59	21	P	Pn	03 47 22.2	+1.0
	baz=19						
NDT				eS	Sn	03 47 32.6	+0.9
	baz=19						
NSY	**Sanyi**	0.60	308	eP	Pn	03 47 21.7	+0.5
	baz=304						
NSY				eS	Sn	03 47 32.3	+0.4
	baz=304						
NFF	**Wufeng Townshi**	0.60	346	⇑iP	Pn	03 47 21.5	+0.2
	baz=342						
NFF				S	Sn	03 47 31.6	-0.4
	baz=342						
EWUT	**Wuta**	0.60	49	eP	Pn	03 47 21.1	-0.2
	baz=48						
EWUT				eS	Sn	03 47 31.2	-0.7
	baz=48						
YHNB	**Yeheng**	0.62	8	P	Pn	03 47 22.4	+0.8
YHNB	**Yeheng**	0.62	8	i P	Pn	03 47 22.1	+0.5
	baz=5.0						
YHNB				S	Sn	03 47 32.9	+0.4
	baz=5.0						
NSK	**Sanguang**	0.63	7	P	Pn	03 47 22.3	+0.7
	baz=4.0						
NSK				eS	Sn	03 47 32.9	+0.4
	baz=4.0						
NSTT	**Nanjuang**	0.63	336	eP	Pn	03 47 21.9	+0.3
	baz=333						
NSTT				eS	Sn	03 47 32.1	-0.3
	baz=333						
YUS	**Yu-Shan**	0.63	208	⇑P	Pn	03 47 22.5	+0.4
	baz=209						
YUS				eS	Sn	03 47 34.3	+1.0
	baz=209						
LIOB	**Emei**	0.64	338	P	Pn	03 47 22.0	+0.3
	baz=334						
LIOB				eS	Sn	03 47 32.8	+0.2
	baz=334						
ENTT	**Nioudou**	0.64	24	eP	Pn	03 47 22.6	+0.9
	baz=23						
ENTT				eS	Sn	03 47 33.5	+0.8
	baz=23						
WYL	**Yuanlin Townsh**	0.65	262	eP	Pn	03 47 22.3	+0.6
	baz=261						
WYL				eS	Sn	03 47 33.8	+1.2
	baz=261						
WDJ	**Dajia District**	0.65	297	P	Pn	03 47 22.1	+0.3
	baz=294						
WDJ				eS	Sn	03 47 32.9	0.0
	baz=294						
YULB	**Yu-li**	0.65	178	P	Pn	03 47 22.5	+0.7
YULB	**Yu-li**	0.65	178	⇑P	Pn	03 47 21.0	-0.8
	baz=182						
YULB				eS	Sn	03 47 33.1	+0.2
	baz=182						
NMLH	**Miaoli**	0.66	318	eP	Pn	03 47 22.1	+0.3
	baz=314						
NMLH				eS	Sn	03 47 32.9	0.0
	baz=314						
WCHH	**Zhanghua**	0.66	273	P	Pn	03 47 22.2	+0.4
	baz=271						
WCHH				eS	Sn	03 47 33.6	+0.7
	baz=271						
ALS	**Alishan**	0.69	219	⇑iP	Pn	03 47 22.9	+0.4
	baz=219						
ALS				eS	Sn	03 47 34.4	+0.4
	baz=219						
TWF1	**Yuli**	0.69	179	⇑P	Pn	03 47 21.5	-0.8
	baz=181						
TWF1				eS	Sn	03 47 32.2	-1.4
	baz=181						
EYUL	**Yuli**	0.70	177	eP	Pn	03 47 21.6	-0.7
	baz=180						
EYUL				eS	Sn	03 47 33.5	-0.2
	baz=180						
NDS	**Dongshan**	0.70	34	eP	Pn	03 47 22.6	+0.3
	baz=33						
NDS				eS	Sn	03 47 34.1	+0.3
	baz=33						
NJD	**Zhudong**	0.70	346	eP	Pn	03 47 23.2	+0.9
	baz=342						
NJD				eS	Sn	03 47 34.7	+0.9
	baz=342						
CHN5	**Tsauling**	0.71	231	⇑iP	Pn	03 47 22.9	+0.4
	baz=231						
CHN5				eS	Sn	03 47 34.3	+0.3
	baz=231						
ECBN	**Changbin**	0.75	168	eP	Pn	03 47 22.9	+0.1
	baz=171						
ECBN				eS	Sn	03 47 34.6	0.0
	baz=171						
WGK	**Gukeng**	0.75	241	eP	Pn	03 47 23.6	+0.8
	baz=241						
WGK				eS	Sn	03 47 36.4	+1.8
	baz=241						
NWLT	**Wulai**	0.75	16	⇑P	Pn	03 47 23.5	+0.6
	baz=14						
NWLT				eS	Sn	03 47 35.1	+0.3
	baz=14						
TWE	**Neicheng**	0.76	28	eP	Pn	03 47 23.6	+0.7
	baz=27						
TWE				eS	Sn	03 47 35.3	+0.6
	baz=27						
FUSB	**Fushanzhiwuyua**	0.76	22	eP	Pn	03 47 24.0	+1.0
	baz=20						
FUSB				eS	Sn	03 47 36.0	+1.0
	baz=20						
TWC	**Suao**	0.76	43	eP	Pn	03 47 23.3	+0.3
	baz=43						
TWC				eS	Sn	03 47 35.1	+0.3
	baz=43						
HSN1	**Hsinchu**	0.76	342	eP	Pn	03 47 23.6	+0.6
	baz=339						
HSN1				eS	Sn	03 47 35.7	+0.8
	baz=339						
WDLH	**Douliu**	0.77	242	P	Pn	03 47 23.6	+0.6
	baz=242						
WDLH				eS	Sn	03 47 35.9	+0.9
	baz=242						
SBCB	**Hsinchu**	0.79	340	eP	Pn	03 47 23.7	+0.5
	baz=337						
SBCB				eS	Sn	03 47 36.0	+0.6
	baz=337						
HSN	**Hsinchu**	0.80	339	eP	Pn	03 47 24.4	+1.1
	baz=340						
HSN				eS	Sn	03 47 36.7	+1.1
	baz=340						
WRL	**Guolierlin Hig**	0.84	260	eP	Pn	03 47 24.1	+0.4
	baz=259						
WRL				eS	Sn	03 47 36.5	+0.1
	baz=259						
FULB	**Fuli**	0.85	179	eP	Pn	03 47 23.8	-0.1
	baz=181						
FULB				eS	Sn	03 47 36.7	+0.1
	baz=181						
WCKO	**Fanlu**	0.87	226	⇑eP	Pn	03 47 24.7	+0.5
	baz=226						
WCKO				eS	Sn	03 47 37.7	+0.7
	baz=226						
ELDTW	**Lidau**	0.89	196	eP	Pn	03 47 25.1	+0.5
	baz=197						
ELDTW				eS	Sn	03 47 38.6	+1.0
	baz=197						
WTK	**Tuku**	0.89	246	P	Pn	03 47 24.8	+0.4
	baz=246						
WTK				eS	Sn	03 47 38.5	+1.1
	baz=246						
CHN2	**Minshiung**	0.90	235	eP	Pn	03 47 25.9	+1.4
	baz=235						
CHN2				eS	Sn	03 47 39.3	+1.7
	baz=235						
EHD	**Haiduan**	0.90	184	eP	Pn	03 47 23.6	-1.0
	baz=186						
EHD				eS	Sn	03 47 38.2	+0.5
	baz=186						
NCUH	**Zhongli**	0.92	355	eP	Pn	03 47 25.2	+0.4
	baz=352						
NCUH				eS	Sn	03 47 38.3	+0.2
	baz=352						
NCU	**National Centr**	0.92	355	eP	Pn	03 47 25.3	+0.5
	baz=353						
NCU				eS	Sn	03 47 38.8	+0.6
	baz=353						
WTCT	**Ta-ch'eng**	0.93	259	eP	Pn	03 47 25.5	+0.6
	baz=258						
WTCT				eS	Sn	03 47 39.4	+1.1
	baz=258						
CHN4	**Tsaushan**	0.94	222	⇑P	Pn	03 47 25.5	+0.5
	baz=223						
CHN4				eS	Sn	03 47 39.2	+0.7
	baz=223						
NHDH	**Xindian Distri**	0.94	14	eP	Pn	03 47 25.6	+0.6
	baz=12						
NHDH				eS	Sn	03 47 38.9	+0.5
	baz=12						
TATO	**Taipei**	0.94	12	eP	Pn	03 47 25.6	+0.5
	baz=10.0						
TATO				eS	Sn	03 47 39.0	+0.5
	baz=10.0						
EOS2	**EOS2**	0.94	67	i P	Pn	03 47 26.0	+1.1
	baz=67						
EOS2				eS	Sn	03 47 39.7	+1.4
	baz=67						
NTY	**Taoyuan**	0.95	1	eP	Pn	03 47 25.8	+0.7
	baz=359						
NTY				eS	Sn	03 47 39.5	+0.8
	baz=359						
CHKT	**Chengkung**	0.95	175	eP	Pn	03 47 24.9	-0.2
	baz=177						
CHKT				eS	Sn	03 47 39.0	+0.3
	baz=177						
ECS	**Chishang**	0.95	183	eP	Pn	03 47 26.8	+1.6
	baz=185						
ECS				eS	Sn	03 47 39.3	+0.5
	baz=185						
EOS4	**EOS4**	0.95	86	i P	Pn	03 47 24.7	0.0
	baz=87						
EOS4				eS	Sn	03 47 38.3	+0.2
	baz=87						
TPUB	**Ta-pu**	0.95	219	P	Pn	03 47 25.5	+0.3
TPUB	**Ta-pu**	0.95	219	⇑P	Pn	03 47 25.5	+0.3
	baz=219						
TPUB				eS	Sn	03 47 39.1	+0.3
	baz=219						
CHY	**Chiayi**	0.96	235	eP	Pn	03 47 25.9	+0.7
	baz=235						
CHY				eS	Sn	03 47 39.2	+0.4
	baz=235						
TWA	**Mucha**	0.97	17	eP	Pn	03 47 26.2	+0.8
	baz=15						
TWA				eS	Sn	03 47 40.2	+1.0
	baz=15						
EOS3	**EOS3**	0.98	76	⇓eP	Pn	03 47 26.1	+0.8
	baz=77						
EOS3				eS	Sn	03 47 40.8	+1.7
	baz=77						
STYH	**Taoyuan**	0.99	208	eP	Pn	03 47 26.1	+0.5
	baz=209						
STYH				eS	Sn	03 47 39.9	+0.4
	baz=209						
EGS		0.99	37	eP	Pn	03 47 27.0	+1.4
	baz=37						
EGS				eS	Sn	03 47 41.5	+1.9
	baz=37						
WMLT	**Mailiao**	1.00	256	eP	Pn	03 47 27.1	+1.5
	baz=255						
WMLT				eS	Sn	03 47 41.3	+1.6
	baz=255						
STYT	**Tauyuan**	1.00	209	eP	Pn	03 47 26.3	+0.5
	baz=209						
STYT				eS	Sn	03 47 40.5	+0.5
	baz=209						
WTP	**Ta-pu**	1.00	217	eP	Pn	03 47 26.3	+0.4
	baz=218						
WTP				eS	Sn	03 47 40.3	+0.3
	baz=218						
TIPB	**Shuangxi**	1.04	28	eP	Pn	03 47 26.4	0.0
	baz=27						
TIPB				eS	Sn	03 47 41.5	+0.7
	baz=27						
WSF	**Szhu**	1.05	247	eP	Pn	03 47 26.8	+0.5
	baz=247						
WSF				eS	Sn	03 47 42.1	+1.2
	baz=247						
TWS1	**Kuangyinshan**	1.05	7	eP	Pn	03 47 27.0	+0.6
	baz=5.0						
TWS1				eS	Sn	03 47 41.9	+1.0
	baz=5.0						
TWK	**Hsinying**	1.06	223	⇑eP	Pn	03 47 26.9	+0.3
	baz=223						
TWK				eS	Sn	03 47 41.9	+0.7
	baz=223						
EDH	**Donghe**	1.07	179	eP	Pn	03 47 26.0	-0.6
	baz=181						
EDH				eS	Sn	03 47 42.1	+0.8
	baz=181						
SNST	**Tainan City**	1.09	221	eP	Pn	03 47 28.8	+1.9
	baz=222						
SNST				eS	Sn	03 47 43.9	+2.0
	baz=222						
WSL	**Shuilin Townsh**	1.10	242	⇓eP	Pn	03 47 27.3	+0.4
	baz=241						
WSL				eS	Sn	03 47 42.4	+0.6
	baz=241						
CHN1	**Nanshi**	1.10	219	⇑eP	Pn	03 47 27.3	+0.3
	baz=219						
CHN1				eS	Sn	03 47 42.3	+0.3
	baz=219						
WFSB	**Wu-fen Shan**	1.11	24	eP	Pn	03 47 28.2	+1.0
	baz=23						
WFSB				eS	Sn	03 47 42.8	+0.5
	baz=23						
NTST	**Danshui**	1.12	8	eP	Pn	03 47 27.8	+0.6
	baz=6.0						
NTST				eS	Sn	03 47 43.2	+0.8
	baz=6.0						
YM01	**YM01**	1.12	14	⇑eP	Pn	03 47 27.6	+0.3
	baz=12						
YM01				eS	Sn	03 47 42.5	-0.1
	baz=12						
ICHU	**Yijhu**	1.14	233	eP	Pn	03 47 27.8	+0.3
	baz=233						
ICHU				eS	Sn	03 47 43.0	0.0
	baz=233						
LONT	**Longtian**	1.15	187	eP	Pn	03 47 26.9	-0.6
	baz=188						
LONT				eS	Sn	03 47 43.0	0.0
	baz=188						
ANP	**Anpu**	1.15	11	eP	Pn	03 47 28.1	+0.3
	baz=10.0						
ANP				eS	Sn	03 47 44.0	+0.7
	baz=10.0						
TWB1	**Santiao Chiao**	1.15	34	eP	Pn	03 47 28.9	+1.3
	baz=34						
TWB1				eS	Sn	03 47 43.5	+0.3
	baz=34						
SGST	**Jiashian**	1.16	214	eP	Pn	03 47 27.4	-0.3
	baz=214						
SGST				eS	Sn	03 47 42.8	-0.4
	baz=214						
YM08	**YM08**	1.17	14	eP	Pn	03 47 28.4	+0.5
	baz=13						
YM08				eS	Sn	03 47 42.7	-0.8
	baz=13						
SXI1	**Grass Mountain**	1.17	27	eP	Pn	03 47 28.6	+0.6
	baz=27						
SXI1				eS	Sn	03 47 44.0	+0.2
	baz=27						
CHN8	**Yiju**	1.20	235	eP	Pn	03 47 29.1	+0.9
	baz=234						
CHN8				eS	Sn	03 47 45.0	+0.8
	baz=234						
TWG	**Pinlang**	1.24	189	eP	Pn	03 47 28.2	-0.5
	baz=190						
TWG				eS	Sn	03 47 44.3	-0.8
	baz=190						
TWGBT	**Beinan**	1.24	189	P	Pn	03 47 30.0	+1.3
TWGBT	**Beinan**	1.24	189	eP	Pn	03 47 28.2	-0.6
	baz=190						
TWGBT				eS	Sn	03 47 44.0	-1.1
	baz=190						
TWY	**Chenhua**	1.25	13	eP	Pn	03 47 29.6	+0.7
	baz=12						
TWY				eS	Sn	03 47 46.4	+0.9
	baz=12						
SCLT	**Jiali**	1.32	229	eP	Pn	03 47 30.4	+0.7
	baz=229						
SCLT				eS	Sn	03 47 48.2	+1.2
	baz=229						
SCST	**Cishan**	1.36	212	eP	Pn	03 47 31.3	+1.0
	baz=213						
SCST				eS	Sn	03 47 48.9	+0.9
	baz=213						
LDUT	**Ludao**	1.38	173	eP	Pn	03 47 29.8	-0.8
	baz=174						
LDUT				eS	Sn	03 47 48.1	-0.2
	baz=174						
TSCK	**Chigu Township**	1.42	231	eP	Pn	03 47 31.3	+0.4
	baz=231						
TSCK				eS	Sn	03 47 49.4	+0.3
	baz=231						
SSD	**Sandimen**	1.43	205	eP	Pn	03 47 31.9	+0.7
	baz=205						
SSD				eS	Sn	03 47 50.2	+0.8
	baz=205						
MASBT	**Mashibuluo**	1.55	203	⇑eP	Pn	03 47 33.4	+0.6
	baz=203						
MASBT				eS	Sn	03 47 52.5	+0.2
	baz=203						
JYNG	**Yonagunijimaku**	1.57	75	eP	Pn	03 47 33.4	+0.4
JYNG				eS	Sn	03 47 52.3	-0.5
YOJ	**Yonaguni jima**	1.63	75	P	Pn	03 47 34.2	+0.4
YOJ	**Yonaguni jima**	1.63	75	P	Pn	03 47 34.3	+0.4
YOJ				eS	Sn	03 47 53.9	-0.3
YOJ	**Yonaguni jima**	1.63	75	eP	Pn	03 47 34.1	+0.4
	baz=76						
YOJ				eS	Sn	03 47 54.1	-0.1
	baz=76						
PNG	**Penghu**	1.65	253	⇑eP	Pn	03 47 33.7	-0.3
	baz=253						
PNG				eS	Sn	03 47 53.6	-0.9
	baz=253						
PHUB	**P'eng-hu**	1.65	251	eP	Pn	03 47 33.7	-0.3
	baz=251						
PHUB				eS	Sn	03 47 53.4	-1.3
	baz=251						
WDGT	**Dungji**	1.68	242	eP	Pn	03 47 34.5	+0.1
	baz=242						
WDGT				eS	Sn	03 47 54.5	-0.8
	baz=242						
EAST	**Anshuo**	1.71	194	eP	Pn	03 47 36.0	+1.1
	baz=194						
EAST				eS	Sn	03 47 58.4	+2.5
	baz=194						
SCZT	**Fangliau**	1.78	200	eP	Pn	03 47 36.3	+0.6
	baz=201						
SCZT				eS	Sn	03 47 58.4	+0.8
	baz=201						
VCHM	**Qimei**	1.89	244	eP	Pn	03 47 37.1	-0.1
	baz=244						
VCHM				eS	Sn	03 47 59.7	-0.6
	baz=244						
VWUC	**VWUC**	1.91	300	⇓eP	Pn	03 47 37.2	-0.2
	baz=298						
VWUC				eS	Sn	03 47 58.9	-1.8
	baz=298						
LAY	**Lan-yu**	2.02	173	eP	Pn	03 47 38.1	-0.9
	baz=174						
LAY				eS	Sn	03 48 02.9	-0.5
	baz=174						
SMST	**Manzhou Townsh**	2.06	191	eP	Pn	03 47 40.0	+0.5
	baz=192						
SMST				eS	Sn	03 48 04.5	+0.1
	baz=192						
TWK1	**Hengchun**	2.14	192	eP	Pn	03 47 41.2	+0.7
	baz=192						
TWKBT	**Hengchun**	2.14	192	eP	Pn	03 47 41.0	+0.4
	baz=192						
PTMZ	**Houxiangcun**	2.20	297	⇓eP	Pn	03 47 41.1	-0.2
	baz=296						
PTMZ				eS	Sn	03 48 05.7	-2.0
	baz=296						
IRIF	**Iriomote-Funau**	2.26	82	P	Pn	03 47 42.4	+0.3
IRIF				S	Sn	03 48 08.6	-0.5
HATJ	**Hateruma jima**	2.31	89	P	Pn	03 47 43.4	+0.6
HATJ				eS	Sn	03 48 10.3	0.0
MATB	**Ma-tsu**	2.42	330	eP	Pn	03 47 43.9	-0.4
	baz=329						
MATB				eS	Sn	03 48 10.9	-2.1
	baz=329						
MSUT	**Lienchiang**	2.44	330	eP	Pn	03 47 44.7	+0.1
	baz=329						
MSUT				eS	Sn	03 48 11.9	-1.7
	baz=329						
JKRS	**Kuro-shima**	2.50	85	P	Pn	03 47 46.3	+0.9
KNM	**Kinmen**	2.62	279	eP	Pn	03 47 48.3	+1.3
	baz=277						
KNM				eS	Sn	03 48 19.0	+1.1
	baz=277						
JIJ	**Ishigaki jima**	2.63	83	P	Pn	03 47 47.5	+0.3
JIJ				S	Sn	03 48 17.6	-0.6
KNMB	**Chin-men Tao**	2.67	279	eP	Pn	03 47 47.2	-0.4
	baz=278						
KNMB				eS	Sn	03 48 16.8	-2.2
	baz=278						
JISG	**Ishigakijimahi**	2.82	78	P	Pn	03 47 50.1	+0.4
JISG				S	Sn	03 48 21.9	-0.7
LYJJ	**Jianjiangzhen**	2.84	331	eP	Pn	03 47 50.0	0.0
	baz=330						
LYJJ				eS	Sn	03 48 21.6	-1.6
	baz=330						
MHZQ	**Yeshan**	2.88	316	eP	Pn	03 47 50.5	-0.1
	baz=314						
MHZQ				eS	Sn	03 48 22.8	-1.4
	baz=314						
XPSS	**Dashiqiu**	3.03	341	eP	Pn	03 47 51.6	-0.9
	baz=340						
XPSS				eS	Sn	03 48 25.3	-2.5
	baz=340						
AXDP	**Jialang**	3.13	286	eP	Pn	03 47 53.7	-0.2
	baz=285						
JTJ	**Tarama**	3.18	79	P	Pn	03 47 55.4	+0.8
ZPLA	**Ao Xicun**	3.23	269	eP	Pn	03 47 54.9	-0.3
	baz=268						
ZPLA				eS	Sn	03 48 31.2	-1.4
	baz=268						

*JMA **25** 04:11:14.4±0.1, 37°.0N±0°.1×141°.2E±0°.4, h20^{km}, MV3.0/33,*
E OFF FUKUSHIMA PREF
*IDC **25** 04:11:14.7±2.7, 36°.59N×141°.26E, h0^{km}, mb3.1/2,*
mbtmp3.0/3, ML1.8/1, MS3.1/1, Error ellipse: s-maj=55.6km

s-min=31.3km az=39.0

ISC 25 04:11:12.8±2.0,**37°.01N**±0°.04×**141°.21E**±0°.09,**h10**^{km}±13^{km},**n17,**σ**0^{s}.69**/17,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.34	286	*i* P	Pb	04 11 21.1	+0.1
ONAJ				*e*S	Sb	04 11 26.2	-0.4
JFK	Kawauchi	0.45	323	*i* P	Pb	04 11 22.7	-0.1
JFK				S	Sb	04 11 28.6	-1.0
JFFD	Fukushimafurud	0.53	279	*i* P	Pb	04 11 24.2	+0.1
JFFD				S	Sg	04 11 31.2	+1.1
JHO	Hitachi	0.65	233	P	Pb	04 11 26.7	+0.5
JHO				S	Sb	04 11 35.4	0.0
JOTO	OTAMA OYAMA	0.89	308	*i* P	Pb	04 11 30.8	+0.5
JOTO				S	Sb	04 11 42.4	+0.1
JMM	Marumori	0.92	339	*i* P	Pb	04 11 30.6	-0.2
JMM				S	Sg	04 11 42.3	-0.1
JYT	Yasato	1.13	227	P	Pg	04 11 34.5	0.0
JYT				*e*S	Sg	04 11 48.5	-0.7
MJAR	Matsushiro Arr	2.46	260	Pn	Pb	04 11 55.4	-1.6
	0.2nm,0.3s,baz=83,slow=15,SNR=9.1						
MJAR				Sn	Sb	04 12 27.7	+0.4
	0.3nm,0.3s,baz=189,slow=28,SNR=6.2						
	3.3nm,0.7s						
H11N2	WAKE ISLAND Hy	28.27	120	T	T	04 46 42.5	
	baz=314,slow=75,SNR=8.3						
H11N1	WAKE ISLAND Hy	28.28	121	T	T	04 46 43.1	
	baz=314,slow=75,SNR=8.5						
H11N3	WAKE ISLAND Hy	28.29	120	T	T	04 46 43.6	
	baz=314,slow=75,SNR=8.4						
H11S1	WAKE ISLAND Hy	28.98	123	T	T	04 47 35.9	
	baz=314						
H11S3	WAKE ISLAND Hy	28.98	123	T	T	04 47 33.2	
	baz=314						
H11S2	WAKE ISLAND Hy	29.00	123	T	T	04 47 38.3	
	baz=314						
CMAR	Chiang Mai Arr	41.34	255	LR	LR	04 36 18.1	
	comp=Z,22nm,18.5s,baz=185,slow=36						
MKAR	Makanchi Array	44.00	302	P	P	04 19 26.0	+5.8
	0.1nm,0.5s,baz=77,slow=6.5,SNR=1.5						
	0.1nm,0.5s						
WRA	Warramunga Arr	57.01	188	P	P	04 20 59.1	+0.4
	0.2nm,0.7s,baz=2.5,slow=7.2,SNR=6.2						
	0.2nm,0.7s						

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*IDC **25** 04:44:45.0±1.4,10°.16N×93°.31E,h0^{km},mb3.7/6, mbtmp3.7/7,ML3.8/1,MS3.2/1,Error ellipse: s-maj=56.7km s-min=21.9km az=56.0*

ISC 25 04:44:48.8±1.3,**10°.2N**±0°.2×**93°.4E**±0°.2,**h24**^{km}**,n11,** σ**0^{s}.61**/7,**mb3.7**/6,**Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	9.78	33	Pn	Pn	04 47 07.8	-0.3
	0.3nm,0.3s,baz=228,slow=15,SNR=1.0						
	0.9nm,0.3s						
H08S3	Diego Garcia H	27.35	230	T	T	05 19 39.4	
	baz=49						
H08S2	Diego Garcia H	27.36	230	T	T	05 19 37.5	
	baz=49						
H08S1	Diego Carcia H	27.37	230	T	T	05 19 39.7	
	baz=49						
WSAR	Wadi Sarin	35.60	296	LR	LR	05 06 48.4	
	comp=Z,34nm,18.3s,baz=196,slow=37						
MKAR	Makanchi Array	37.63	347	P	P	04 52 02.3	+0.4
	0.4nm,0.7s,baz=142,slow=6.1,SNR=4.8						
	0.4nm,0.7s						
GEYT	Alibeck	41.97	317	P	P	04 52 37.3	-0.8
	1.1nm,0.5s,baz=125,slow=9.5,SNR=1.4						
	1.1nm,0.5s						
ZALV	Zalesovo Beam	44.13	353	P	P	04 52 55.8	+0.6
	0.9nm,0.3s,baz=187,slow=9.0,SNR=5.6						
	0.9nm,0.3s						
WRA	Warramunga Arr	50.24	127	P	P	04 53 43.4	-0.1
	0.3nm,0.6s,baz=306,slow=8.5,SNR=7.1						
	0.3nm,0.6s						
ASAR	Alice Springs	52.00	131	P	P	04 53 56.6	0.0
	0.2nm,0.5s,baz=310,slow=7.3,SNR=1.8						
	0.2nm,0.5s						
ARCES	ARCESS Array B	72.81	340	P	P	04 56 15.6	+0.5
	2.1nm,0.8s,baz=104,slow=6.6,SNR=2.0						
	2.1nm,0.8s						

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*IPEC **25** 04:57:11.7±0.3,51°.58N×16°.25E,h0^{km},ML1.8/5,Error ellipse: s-maj=1.9km s-min=1.1km az=28.0*

PRU 25 04:57:14.4±0.0,**51°.49N**×**16°.14E,h0**^{km}**,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.66	171	*e*Pg	Pg	04 57 26.2	-0.7
KSP				*e*Sg	Sg	04 57 35.7	+0.3
CHVC	Chvalec	0.91	183	*e*PG	Pg	04 57 30.8	-0.9
CHVC				*e*SG	Sg	04 57 44.0	+0.6
	comp=Z,7.5nm,0.2s						
OSTC	Ostas	0.94	177	*e*PG	Pg	04 57 31.2	-1.1
OSTC				*e*SG	Sg	04 57 44.9	+0.5
UPC	Upice	0.99	185	*e*PG	Pg	04 57 32.3	-1.0
UPC				*e*SG	Sg	04 57 46.5	+0.4
	comp=Z,19nm,0.3s						
DPC	Dobruska-Polom	1.15	174	*e*PG	Pg	04 57 33.8	-2.6
DPC				*e*SG	Sg	04 57 50.6	-0.6
	comp=Z,6.5nm,0.4s						
PVCC	Panska Ves	1.38	226	*e*PG	Pg	04 57 39.6	-1.3
PVCC				*e*SG	Sg	04 57 58.9	+0.1
	comp=Z,41nm,0.2s						
KRLC	Kraliky	1.47	164	*e*PG	Pn	04 57 41.6	-0.6
KRLC				*e*SG	Sg	04 58 01.0	-0.7
	comp=Z,9.0nm,0.5s						
BRG	Berggiesshubel	1.52	247	Pg	Pn	04 57 41.9	-0.9
BRG				Amp		04 57 46.8	
	comp=Z,6.6nm,0.4s						
BRG	Berggiesshubel	1.52	247	Sg	Sg	04 58 02.4	-0.6
BRG				Amp		04 58 03.2	
	comp=Z,27nm,0.3s						
GOPC	GO Pecny, Ondr	1.80	209	*e*SG	Sb	04 58 11.3	+0.1
PRU	Pruhonice	1.81	215	*e*PG	Pn	04 57 46.5	-0.4
PRU				*e*SG	Sb	04 58 11.3	-0.4
	comp=Z,6.8nm,0.3s						
MORC	Moravsky Berou	1.93	152	*e*Pn	Pn	04 57 46.5	-2.1
	baz=336						
MORC				*e*Sg	Sn	04 58 13.8	+0.2
	comp=Z,4.4nm,0.2s,baz=336						
CLL	Collm	1.97	266	*e*Pg	Pn	04 57 50.0	+0.9
CLL				*e*Sg	Sb	04 58 16.0	-0.3
	comp=Z,6.0nm,0.4s						
VRAC	Vranov	2.20	172	*e*Pn	Pn	04 57 51.0	-1.2
	baz=355						
VRAC				*e*Sg	Sb	04 58 23.4	+0.5
	comp=Z,5.2nm,0.3s,baz=355						
KRUC	Moravsky	2.44	176	*e*Sg	Sb	04 58 30.8	+1.2
	comp=Z,3.4nm,0.4s,baz=358						
NKC	Novy Kostel	2.66	243	*e*PG	Pb	04 58 02.9	+0.1
NKC				*e*SG	Sg	04 58 39.4	-0.3
	comp=Z,12nm,0.3s						
KHC	Kasperske Hory	2.88	216	*e*PG	Pb	04 58 07.5	+0.9
KHC				*e*SG	Sg	04 58 45.0	-1.8
CKRC	Cesky Krumlov	2.92	204	*e*SG	Sb	04 58 45.8	+2.2
LANS	Liptovska Anna	3.17	136	*e*SG	Sb	04 58 52.7	+2.0
MODS	Modra-Piesok	3.21	166	*e*SG	Sg	04 58 57.1	-0.2

JMA 25 04:59:15.7±0.3,**37°.3N**±0°.8×**14°4E**±°,**h59**^{km}**,MV3.9**/27,**FAR E OFF NORTH HONSHU,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.54	296	*i* P	Pn	04 59 55.7	+1.2
JIKH				*e*S	Sn	05 00 25.6	+1.4
JIO	Ouri	2.68	298	P	Pn	04 59 57.8	+1.4
JIO				S	Sn	05 00 29.4	+1.7
JKMT	Kesennumamotoy	2.77	305	P	Pn	04 59 58.8	+1.1
JKMT				S	Sn	05 00 31.0	+1.0
JFK	Kawauchi	2.80	273	P	Pn	04 59 59.0	+0.9
JFK				S	Sn	05 00 31.3	+0.6
OFUJ	Ofunato	2.81	311	P	Pn	04 59 59.2	+1.0
OFUJ				S	Sn	05 00 31.4	+0.5
JMST	Minamisoumatoc	2.82	281	P	Pn	04 59 59.1	+0.8
JMST				S	Sn	05 00 32.2	+1.1
JMK	Ichinoseki	3.02	305	*e*P	Pn	05 00 02.8	+1.7
JMK				S	Sn	05 00 37.4	+1.4
JOTO	OTAMA OYAMA	3.24	277	P	Pn	05 00 06.3	+2.3
JOTO				S	Sn	05 00 44.0	+2.5
JRY	Ryogami san	4.58	256	P	Pn	05 00 23.0	+0.6
JRY				S	Sn	05 01 13.5	-0.8
JOD2	Odawara 2	4.71	247	*e*P	Pn	05 00 25.8	+1.5
JOD2				*e*S	Sn	05 01 16.3	-1.4
JOT	Ohata	4.87	329	*e*P	Pn	05 00 28.6	+2.2
JOT				*e*S	Sn	05 01 20.6	-0.7
JCH	Churui	5.42	352	*e*P	Pn	05 00 33.2	-0.6
JOSM	Okushiri--Mats	6.13	323	*e*P	Pn	05 00 45.3	+1.7
JTKR	Abashiri--Toko	6.72	357	*e*S	Sn	05 02 03.4	-3.5
JHR	Hokuryu	6.79	344	*e*P	Pn	05 00 54.5	+1.8
JHR				*e*S	Sn	05 02 08.1	-0.5

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*IDC **25** 05:03:52.2±3.6,4°.39S×144°.48E,h108^{km}±34^{km},mb3.7/9, mbtmp4.1/11,MS2.7/1,Error ellipse: s-maj=28.8km s-min=17.1km az=88.0*

ISC 25 05:03:51.9±0.7,**4°.45S**±0°.08×**144°.5E**±0°.1,**h100**^{km}**,n19,** σ**1^{s}.83**/22,**mb3.8**/9,**Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.58	152	P	Pn	05 05 13.2	+0.8
	36nm,0.4s,baz=2.2,slow=6.0,SNR=15						
PMG				S	Sn	05 06 12.6	-2.7
	49nm,0.7s,baz=27,slow=7.6,SNR=2.1						
PMG				LR	LR	05 08 03.8	
	comp=Z,67nm,19.2s,baz=335,slow=44						
PMG	Port Moresby	5.58	152	P	Pn	05 05 14.2	+1.7
WRAB	Tennant Creek	18.30	212	P	P	05 07 58.5	+0.3
WRA	Warramunga Arr	18.31	212	P	P	05 07 58.6	+0.3
	3.0nm,0.4s,baz=42,slow=9.1,SNR=98						
KNRA	Kununurra	19.08	233	P	Pn	05 08 08.5	-0.1
AS01	Alice Springs	21.65	207	P	P	05 08 34.7	+0.3
ASAR	Alice Springs	21.67	207	P	P	05 08 34.8	+0.2
	1.9nm,0.5s,baz=36,slow=7.7,SNR=33						
ASAR				S	S	05 12 25.8	-3.2
	0.3nm,0.7s,baz=27,slow=21,SNR=3.4						
	1.9nm,0.5s						
QLP	Quilpie	22.00	181	P	P	05 08 41.6	+3.5
OOD	Oodnadatta	24.69	199	P	P	05 09 04.8	+1.2
WRKA	Warakurna	25.72	216	P	P	05 09 13.4	+0.2
STKA	Stephens Creek	27.42	185	P	P	05 09 28.5	+0.3
	1.1nm,0.6s,baz=325,slow=11,SNR=3.3						
	1.1nm,0.6s						
MULG	Mulgathing	27.52	200	P	P	05 09 30.1	+0.9
DZM	Mont Dzumac	27.54	131	P	P	05 09 29.7	+0.2
	1.6nm,0.6s,baz=330,slow=24,SNR=1.5						
	1.6nm,0.6s						
KSRS	Korea Array	44.46	341	P	P	05 11 52.7	-0.4
	2.4nm,0.7s,baz=159,slow=8.7,SNR=7.5						
	2.4nm,0.7s						
PETK	Petropavlovsk-	58.42	9	P	P	05 13 37.3	+0.4
	2.2nm,0.7s,baz=166,slow=7.5,SNR=4.6						
	2.2nm,0.7s						
VNDA	Vanda	73.60	176	P	P	05 15 14.0	+0.2
	1.4nm,0.6s,baz=335,slow=6.9,SNR=10.0						
	1.4nm,0.6s						
MKAR	Makanchi Array	74.74	321	P	P	05 15 20.0	-1.0
	0.8nm,0.5s,baz=94,slow=8.5,SNR=13						
MKAR				pP	pP	05 15 50.8	+4.2
	0.6nm,0.7s,baz=106,slow=7.3,SNR=4.2						
	0.8nm,0.5s						
ZALV	Zalesovo Beam	76.40	328	P	P	05 15 27.8	-2.5
	0.7nm,0.4s,baz=120,slow=6.7,SNR=2.9						
	0.7nm,0.4s						
ILAR	Eielson Array	85.05	24	P	P	05 16 14.6	-1.6
	2.0nm,0.7s,baz=256,slow=5.1,SNR=23						
	2.0nm,0.7s						

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*KRNET **25** 05:08:37.5±0.1,40°.63N×79°.35E,mb2.4*
*SOME **25** 05:08:38.3,40°.83N×79°.65E,h15^{km}*
*NNC **25** 05:08:42.0±1.3,40°.96N×79°.54E,h0^{km},mb3.5,mpv3.2, Error ellipse: s-maj=8.5km s-min=7.2km az=167.0*

ISC 25 05:08:37.7±2.4,**40°.8N**±0°.1×**79°.64E**±0°.07,**h10**^{km}**,n41,** σ**1^{s}.53**/50,**12C-6D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.68	305	⇓*e*P	Pn	05 09 07.4	-0.1
	baz=14						
TARG				⇓*e*S	Sb	05 09 29.2	-1.1
	baz=14						
PRZ	Przheval'sk	1.94	332	⇓*i*P	Pg	05 09 14.2	-0.7
	baz=39						
PRZ				⇓*i*S	Sg	05 09 40.8	+0.8
	baz=39						
KDJ	Kajisay	2.29	307	⇑*i*P	Pn	05 09 16.9	+1.2
	baz=13						
KDJ				⇑*i*S	Sb	05 09 45.9	-1.7
	baz=13						
SHLS	Shalkode	2.38	357	Pg	Pg	05 09 23.3	0.0
	12nm,0.2s						
SHLS				Lg	Lg	05 09 53.4	
	35nm,0.3s						
SHLS	Shalkode	2.38	357	*e*Pg	Pb	05 09 21.7	+1.0
	12nm,0.2s						
SHLS				*e*Lg	Lg	05 09 52.9	
	35nm,0.3s						
UZB	Uzynbulak	2.41	349	Pg	Pb	05 09 22.2	+1.0
	7.4nm,0.3s						
UZB				Lg	Lg	05 09 52.9	
	21nm,0.4s						
UZB	Uzynbulak	2.41	349	*e*Pg	Pb	05 09 21.7	+0.4
	7.4nm,0.3s						
UZB				*e*Lg	Lg	05 09 52.9	
	21nm,0.4s						
SATY	Saty	2.46	338	Pg	Pg	05 09 24.4	-0.3
	12nm,0.3s						
SATY				Lg	Lg	05 09 55.4	
	51nm,0.2s						
SATY	Saty	2.46	338	*e*Pg	Pb	05 09 23.2	+1.2
	12nm,0.3s						
SATY				*e*Lg	Lg	05 09 55.4	
	51nm,0.2s						
ANVS	Anan'yevo	2.48	324	⇑*e*P	Pb	05 09 21.0	-1.6
	baz=30						
ANVS				⇑*i*S	Sb	05 09 53.1	-0.2
	baz=30						
KPKS	Kokpek	2.77	345	Pg	Pb	05 09 28.9	+1.4
	7.5nm,0.4s						
KPKS				Lg	Lg	05 10 03.2	
	32nm,0.3s						
KPKS	Kokpek	2.77	345	*e*Pg	Pb	05 09 27.0	-0.5
	7.5nm,0.4s						
KPKS				*e*Lg	Lg	05 10 02.0	
	32nm,0.3s						
NRN	Naryn	2.83	284	⇑*i*P	Pn	05 09 23.7	+0.4
	baz=88						
NRN				⇑*e*S	Sn	05 09 57.1	-0.4
	baz=88						
KURS	Kuram	2.92	338	Pg	Pg	05 09 32.9	-0.7
	3.3nm,0.3s						
KURS				Lg	Lg	05 10 10.3	
	40nm,0.6s						
KURS	Kuram	2.92	338	*e*Pg	Pb	05 09 30.9	+1.0
	3.3nm,0.3s						
KURS				*e*Lg	Lg	05 10 08.9	
	40nm,0.6s						
ULHL	Ulahol	2.94	301	⇑*e*P	Pn	05 09 25.9	+1.2
	baz=6.0						
ULHL				⇑*e*S	Sn	05 10 01.0	+0.8
	baz=6.0						
TNSS	Tian-Shan	3.02	319	Pg	Pg	05 09 34.7	-0.9
	3.6nm,0.4s						
TNSS				Lg	Lg	05 10 13.0	
	8.2nm,0.5s						
TNSS	Tian-Shan	3.02	319	*e*Pg	Pb	05 09 33.6	+1.7
	3.6nm,0.4s						
TNSS				*e*Lg	Lg	05 10 13.3	
	8.2nm,0.5s						
MDOK	Medeo	3.06	322	⇓Pg	Pb	05 09 33.3	+0.9
	3.8nm,0.5s						
MDOK				Pg	Pg	05 09 34.0	-2.4
	5.3nm,0.5s						
MDOK				Lg	Lg	05 10 12.6	
	11nm,0.6s						
MDOK				⇓Lg	Lg	05 10 14.5	
	12nm,0.8s						
MDOK	Medeo	3.06	322	*e*Pg	Pb	05 09 33.8	+1.3
	5.3nm,0.5s						
MDOK				*e*Lg	Lg	05 10 13.3	
	11nm,0.6s						
KOTS	Kotyrbulak	3.09	323	Pg	Pg	05 09 36.0	-0.9
	4.5nm,0.3s						
KOTS				Lg	Lg	05 10 15.4	
	20nm,0.4s						
KOTS	Kotyrbulak	3.09	323	*e*Pg	Pb	05 09 34.7	+1.8
	4.5nm,0.3s						
KOTS				*e*Lg	Lg	05 10 15.6	
	20nm,0.4s						
BOOM	Boomskoye usch	3.26	303	⇑*i*P	Pn	05 09 30.2	+1.2
	baz=7.0						
BOOM				⇑*e*S	Sn	05 10 08.8	+0.9
	baz=7.0						
MTBS	Maitube	3.35	315	Pg	Pg	05 09 39.7	-2.3
	2.1nm,0.2s						
MTBS				Lg	Lg	05 10 21.5	
	4.8nm,0.5s						
MTBS	Maitube	3.35	315	*e*Pg	Pb	05 09 38.6	+1.3
	2.1nm,0.2s						
MTBS				*e*Lg	Lg	05 10 21.8	
	4.8nm,0.5s						
BLB	Baldybastay	3.42	346	Pg	Pb	05 09 41.1	+2.5
	3.2nm,0.2s						
BLB				Lg	Lg	05 10 24.4	
	14nm,0.3s						
DJR	Jarkent	3.55	2	Pg	Pb	05 09 43.3	+2.7
	1.6nm,0.4s						
DJR				Lg	Lg	05 10 27.9	
	4.1nm,0.3s						
DJR	Jarkent	3.55	2	*e*Pg	Pb	05 09 41.8	+1.1
	1.6nm,0.4s						
DJR				*e*Lg	Lg	05 10 27.5	
	4.1nm,0.3s						
KST	Kastek	3.55	311	Pg	Pg	05 09 43.9	-1.9
	2.2nm,0.4s						
KST				Lg	Lg	05 10 28.7	
	14nm,0.6s						
KST	Kastek	3.55	311	*e*Pg	Pb	05 09 42.5	+1.7
	2.2nm,0.4s						
KST				*e*Lg	Lg	05 10 29.0	
	14nm,0.6s						
CHKK	Chushkaly	3.65	328	Pg	Pg	05 09 46.0	-1.5
	1.0nm,0.1s						
CHKK				Lg	Lg	05 10 32.5	
	21nm,0.5s						
CHKK	Chushkaly	3.65	328	*e*Pg	Pb	05 09 44.6	+2.4
	1.0nm,0.1s						
CHKK				*e*Lg	Lg	05 10 32.0	
	21nm,0.5s						
KTBS	Karatobe	3.66	324	Pg	Pg	05 09 46.2	-1.6
	1.2nm,0.4s						
KTBS				Lg	Lg	05 10 32.7	
	9.3nm,0.4s						
KTBS	Karatobe	3.66	324	*e*Pg	Pb	05 09 44.2	+1.7
	1.2nm,0.4s						
KTBS				*e*Lg	Lg	05 10 31.8	
	9.3nm,0.4s						
ARXS	Arharly	3.68	339	Pg	Pb	05 09 45.1	+2.2
	1.9nm,0.3s						
ARXS				Lg	Lg	05 10 32.0	
	11nm,0.3s						
ARXS	Arharly	3.68	339	*e*Pg	Pb	05 09 44.8	+1.9
	1.9nm,0.3s						
ARXS				*e*Lg	Lg	05 10 32.7	
	11nm,0.3s						
DGS	Degeres	3.79	312	Pg	Pg	05 09 48.0	-2.3
	2.6nm,0.6s						
DGS				Lg	Lg	05 10 35.9	
	8.9nm,0.5s						
DGS	Degeres	3.79	312	*e*Pg	Pb	05 09 46.5	+1.7
	2.6nm,0.6s						
DGS				*e*Lg	Lg	05 10 35.7	
	8.9nm,0.5s						
KUU	Kurty	3.96	323	Pg	Pb	05 09 50.3	+2.8
	0.9nm,0.2s						
KUU				Lg	Lg	05 10 39.8	
	5.7nm,0.7s						
KUU	Kurty	3.96	323	*e*Pg	Pb	05 09 48.9	+1.4
	0.9nm,0.2s						
KUU				*e*Lg	Lg	05 10 39.7	
	5.7nm,0.7s						
MK31	Makanchi Array	6.31	17	⇑Pn	Pn	05 10 09.4	-1.4
	0.3nm,0.5s,baz=201,slow=11,SNR=4.3						
MK31				⇑Sn	Sn	05 11 21.3	-1.6
	0.3nm,0.4s,baz=202,slow=24,SNR=3.5						

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*IDC **25** 05:10:33.4±1.1,12°.52N×143°.74E,h0^{km},mb4.0/7, mbtmp3.9/7,MS3.3/3,Error ellipse: s-maj=72.3km s-min=15.2km az=119.0*

ISC 25 05:10:37.6±1.2,**12°.4N**±0°.3×**143°.9E**±0°.5,**h27**^{km}**,n18,** σ**0^{s}.76**/11,**mb3.8**/7,**MS3.3**/3,**South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.46	39	Pn	Pn	05 11 01.5	-0.8
	35nm,0.3s,baz=191,slow=11,SNR=13						
GUMO				LR	LR	05 11 18.3	
	comp=Z,163nm,18.6s,baz=250,slow=29						
GUMO				Sn	Sb	05 11 22.6	+0.2
	36nm,0.3s,baz=68,slow=21,SNR=7.2						
H11S3	WAKE ISLAND Hy	22.73	72	T	T	05 39 27.0	
	baz=258,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	22.75	72	T	T	05 39 27.5	
	baz=258,slow=75,SNR=14						
H11S2	WAKE ISLAND Hy	22.75	72	T	T	05 39 27.1	
	baz=258,slow=75,SNR=15						
H11N1	WAKE ISLAND Hy	23.20	69	T	T	05 40 00.7	
	baz=255,slow=75,SNR=46						
H11N2	WAKE ISLAND Hy	23.21	69	T	T	05 40 01.0	
	baz=255,slow=75,SNR=36						
H11N3	WAKE ISLAND Hy	23.22	69	T	T	05 40 03.2	
	baz=255,slow=75,SNR=32						
WRA	Warramunga Arr	33.53	196	P	P	05 17 15.1	-0.2
	4.1nm,0.6s,baz=20,slow=9.8,SNR=52						
	4.1nm,0.6s						
ASAR	Alice Springs	37.20	195	P	P	05 17 46.6	-0.2
	0.8nm,0.6s,baz=22,slow=13,SNR=19						
ASAR				PcP	PcP	05 20 06.9	+0.3
	0.5nm,0.9s,baz=31,slow=2.7,SNR=4.5						
	0.8nm,0.6s						
CMAR	Chiang Mai Arr	43.69	284	LR	LR	05 36 31.4	
	comp=Z,29nm,19.5s,baz=80,slow=36						
STKA	Stephens Creek	44.12	183	P	P	05 18 43.6	-0.2
	0.6nm,0.2s,baz=349,slow=9.7,SNR=3.0						
	0.6nm,0.2s						
AFI	Afiamalu	51.11	119	LR	LR	05 38 19.2	
	comp=Z,25nm,18.6s,baz=120,slow=32						
ILAR	Eielson Array	69.99	25	P	P	05 21 46.1	-0.5
	0.4nm,0.5s,baz=250,slow=5.8,SNR=7.9						
	0.4nm,0.5s						
YKA	Yellowknife Ar	84.29	27	P	P	05 23 07.0	+0.1
	0.3nm,0.5s,baz=283,slow=4.8,SNR=13						
	0.3nm,0.5s						
YBH	Yreka Blue Hor	84.31	49	LR	LR	05 52 44.7	
	comp=Z,31nm,20.8s,baz=316,slow=30						
NVAR	Mina Array Bea	88.35	51	P	P	05 23 29.2	+1.5
	1.5nm,0.7s,baz=261,slow=5.5,SNR=14						
	1.5nm,0.7s						
PDAR	Pinedale Array	93.42	45	P	P	05 23 52.0	+0.9
	0.1nm,0.5s,baz=312,slow=5.9,SNR=2.2						
	0.1nm,0.5s						
LPAZ	La Paz	148.73	101	PKPbc	PKiKP	05 30 25.1	-0.5
	1.6nm,0.7s,baz=336,slow=3.6,SNR=5.2						

WEL 25 05:12:40.4±0.7,**45°S**±3°×**16°8E**±°,**h79**^{km}±6^{km},**M3.0**/6, **ML3.2**/14,**MLv3.0**/6,**Error ellipse: s-maj=0.0km s-min=0.0km az=120.1,confirmed,South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.17	279	P	Pn	05 12 52.9	+0.9
MSZ				S	Sn	05 13 03.0	+2.5
WKZ	Wanaka	0.62	102	P	Pn	05 12 57.3	+2.0
WKZ				S	Sn	05 13 09.7	+3.4
MLZ	Mavora Lakes	0.67	183	P	Pn	05 12 56.4	+0.7
MLZ				S	Sn	05 13 09.1	+2.0
JCZ	Jackson Bay	0.77	36	P	Pn	05 12 57.4	+0.5
JCZ				S	Sn	05 13 11.8	+2.7
EAZ	Earnscleugh	0.97	124	P	Pn	05 13 00.6	+1.5
EAZ				S	Sn	05 13 15.2	+2.1
DCZ	Deep Cove	1.05	223	P	Pn	05 12 58.7	-1.3
WHZ	Wether Hill Ro	1.20	187	P	Pn	05 13 02.2	+0.3
WHZ				S	Sn	05 13 18.9	+0.9
LBZ	Lake Benmore	1.48	78	P	Pn	05 13 06.0	+0.5
LBZ				S	Sn	05 13 25.2	+0.8
TUZ	Tuapeka	1.63	141	P	Pn	05 13 08.4	+1.1
TUZ				S	Sn	05 13 27.9	+0.2
FOZ	Fox Glacier	1.67	46	P	Pn	05 13 07.8	-0.1
ODZ	Otahua Downs	1.80	102	P	Pn	05 13 10.2	+0.6
ODZ				S	Sn	05 13 32.0	+0.2
SYZ	Scrubby Hill	1.96	160	P	Pn	05 13 12.5	+0.7

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SYZ                                S     Sn       05 13 35.5  -0.1
TMZ    Timaru              2.06  82 P     Pn       05 13 12.9  -0.1
TMZ                                S     Sn       05 13 36.8  -1.2
GCSZ   Gaunt Creek Bo      2.09  49 P     Pn       05 13 12.7  -0.7
GCSZ                               S     Sn       05 13 38.1  -0.5
HHSZ   Highcliff Hill      2.09 125 P     Pn       05 13 14.8  +1.3
HHSZ                               S     Sn       05 13 38.8  +0.1
APZ    The Paps            2.14 183 P     Pn       05 13 14.5  +0.4
APZ                                S     Sn       05 13 39.6  -0.3
ARCZ   Arundel             2.29  72 P     Pn       05 13 15.5  -0.7
WVZ    Waitaha Valley      2.47  50 P     Pn       05 13 17.8  -0.8
WACZ   Wakanui South       2.75  75 P     Pn       05 13 23.5  +1.2
WACZ                               S     Sn       05 13 52.5  -2.0
RACZ   Rakaia              3.02  73 P     Pn       05 13 26.8  +0.8
INZ    Inchbonnie          3.09  51 P     Pn       05 13 25.9  -1.0
OXZ    Oxford              3.12  65 P     Pn       05 13 25.0  -2.3
MQZ    McQueen's Vall      3.38  74 P     Pn       05 13 31.0  +0.2
LTZ    Lake Taylor         3.54  59 P     Pn       05 13 31.4  -1.7
AMCZ   Amberley            3.58  66 P     Pn       05 13 31.2  -2.4
GVZ    Greta Valley S      3.93  66 P     Pn       05 13 38.9  +0.5
DSZ    Denniston Nort      3.98  43 P     Pn       05 13 37.7  -1.3
TKNZ   Takaka Hill         5.08  46 P     Pn       05 13 52.9  -1.3
RUGZ   Raukumara Rang      9.82  50 P     Pn       05 15 03.4  +4.7
HAZ    Te Kaha            10.03  50 P     Pn       05 15 00.6  -0.8
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RSNC ***25*** *05:45:27.5±1.9, 5°.04N×72°.88W, h0km±7km, ML2.7*
IDC ***25*** *05:45:30.4±3.5, 5°.00N×72°.80W, h50km±26km, mb2.8/1, mbtmp3.2/2, ML2.5/1, Error ellipse: s-maj=46.2km s-min=10.4km az=147.0*
ISC 25 05:45:25.6±1.1, **5°.03N**±0°.03×**72°.85W**±0°.04, **h5**km±7km, **n24, σ1s.35**/45, **3D, Colombia**

```
Code   Station Name         Δ°   AZ°     Phase ID          Time       Res
                                        Op       ISC       h  m  s    ISC
RUSC   La Rusia            0.89 345⇓eP       Pb       05 45 43.4  -0.4
RUSC                                eS       Sb       05 45 55.5  -0.6
CHIC   Chingaza            0.96 246  eP       Pg       05 45 43.3  -0.8
CHIC                                eS       Sg       05 45 56.5  -0.2
CHIC                                i                 05 45 57.2
       comp=Z,89nm,0.3s
PTGC   Puerto Gaitan,      1.09 139⇓eP       Pn       05 45 47.7  +0.2
PTGC                                eS       Sn       05 46 03.7  +0.6
PTGC                                i                 05 46 10.4
       comp=Z,240nm,0.5s
VILC   Villavicencio,      1.24 223  eP       Pn       05 45 48.4  -1.4
VILC                                eS       Sn       05 46 08.0  +1.1
VILC                                i                 05 46 13.0
       comp=Z,212nm,0.4s
SPBC   San Pablo de B      1.36 297  eP       Pn       05 45 51.1  -0.3
SPBC                                eS       Sb       05 46 08.3  -1.2
SPBC                                i                 05 46 13.1
       comp=Z,128nm,0.3s
ROSC   El Rosal            1.48 263   P       Pg       05 45 54.8  +0.8
       comp=Z,138nm,0.3s,baz=80,slow=17,SNR=125
ROSC                                 S       Sg       05 46 14.7  +1.5
       comp=Z,57nm,0.4s,baz=60,slow=18,SNR=7.1
BARC   Barichara           1.59 348  eP       Pg       05 45 56.2  +0.1
BARC                                eS       Sg       05 46 18.1  +1.5
BARC                                i                 05 46 24.1
       comp=Z,83nm,0.4s
PTBC   PUERTO BERRIO,      2.19 313  eP       Pn       05 46 02.7   0.0
PTBC                                eS       Sb       05 46 32.6  -0.6
PTBC                                i                 05 46 37.4
       comp=Z,57nm,0.4s
BRRC   Barranca, Sant      2.23 338  eP       Pb       05 46 06.9  +0.4
BRRC                                eS       Sg       05 46 36.8  -0.6
BRRC                                i                 05 46 42.9
       comp=Z,34nm,0.4s
PAMC   Pamplona, Colo      2.30   4  eP       Pb       05 46 06.6  -1.2
PAMC                                eS       Sg       05 46 39.2  -0.4
PAMC                                i                 05 46 44.6
       comp=Z,16nm,0.3s
PRAC   Prado               2.41 237⇓eP       Pn       05 46 07.3  +1.5
PRAC                                eS       Sb       05 46 39.2  -0.5
PRAC                                i                 05 46 45.1
       comp=Z,47nm,0.3s
GUVC   San Jose del G      2.48 175  eP       Pn       05 46 07.8  +1.2
GUVC                                eS       Sn       05 46 39.3  +2.0
GUVC                                i                 05 46 45.0
       comp=Z,86nm,0.2s
ANIL   Santa Ana           2.60 258  eP       Pn       05 46 10.2  +1.6
ANIL                                eS       Sn       05 46 42.8  +2.1
ANIL                                i                 05 46 47.8
       comp=Z,87nm,0.3s
ORTC   Ortega, Tolima      2.63 245  eP       Pn       05 46 09.2  +0.3
ORTC                                eS       Sb       05 46 45.3  -0.7
ORTC                                i                 05 46 49.1
       comp=Z,30nm,0.5s
MACC   Macarena, Meta      3.03 199  eP       Pn       05 46 14.4  +0.1
MACC                                eS       Sn       05 46 51.0   0.0
MACC                                i                 05 47 14.7
       comp=Z,55nm,0.4s
ZARC   Zaragoza, Cauc      3.16 321  eP       Pn       05 46 18.6  +2.6
ZARC                                i                 05 47 05.8
       comp=Z,14nm,0.4s
CBOC   Ciudad Bolivar      3.25 285  eP       Pb       05 46 21.4  -2.6
CBOC                                eS       Sb       05 47 03.7  -0.3
BETC   Betania             3.48 228  eP       Pb       05 46 27.8   0.0
BETC                                eS       Sb       05 47 11.4  +1.0
UREC   San Jos de Ur       3.80 316  eP       Pn       05 46 24.5  -0.3
UREC                                eS       Sn       05 47 12.2  +2.4
UREC                                i                 05 47 24.2
       comp=Z,6.2nm,0.2s
GARC   Garzon, Huila       3.86 223  eP       Pn       05 46 29.2  +3.3
GARC                                i                 05 47 27.0
       comp=Z,44nm,0.2s
SDV    Santo Domingo       4.42  30   P       Pn       05 46 35.6  +2.1
       comp=Z,2.2nm,0.3s,baz=194,slow=17,SNR=13
SDV                                  S       Sn       05 47 26.0  +0.5
       comp=Z,2.4nm,0.3s,baz=252,slow=20,SNR=1.6
       comp=Z,4.0nm,0.3s
TXAR   Lajitas Array      37.86 313   P       P        05 52 43.7   0.0
       comp=Z,0.3nm,0.9s,baz=131,slow=9.7,SNR=1.6
TXAR                                 PcP     PcP      05 54 57.6  -2.6
       comp=Z,0.2nm,0.8s,baz=146,slow=3.8,SNR=2.0
       comp=Z,0.3nm,0.9s
ASAR   Alice Springs     148.25 232   PKPbc   PKPdf    06 05 11.0  +0.5
       comp=Z,0.4nm,0.9s,baz=102,slow=3.9,SNR=2.3
WRA    Warramunga Arr    149.67 238   PKP     PKPdf    06 05 11.2  -1.7
       comp=Z,0.7nm,0.9s,baz=109,slow=3.0,SNR=3.4
WRA                                  PKPbc   pPKPdf   06 05 15.1   0.0
       comp=Z,0.7nm,0.9s,baz=110,slow=3.0,SNR=9.5
```

IDC 25 05:57:30.0±24.0, **34°.15N**×**38°.40W, h0**km, **mb3.4**/3, **mbtmp3.4**/3, **MS3.4**/7, **Error ellipse: s-maj=918.1km s-min=50.5km az=176.0, Northern Mid-Atlantic Ridge**

```
Code   Station Name         Δ°   AZ°     Phase ID          Time       Res
                                        Op       ISC       h  m  s    ISC
SCHQ   Schefferville      28.63 325  LR       LR       06 13 50.1
       comp=Z,64nm,21.8s,baz=160,slow=34
FRB    Frobisher Bay      34.97 337  LR       LR       06 20 01.0
       comp=Z,56nm,18.1s,baz=90,slow=39
TKL    Tuckaleechee C     36.99 286  LR       LR       06 18 24.8
       comp=Z,42nm,19.1s,baz=22,slow=34
KEST   Kesra              38.87  74  LR       LR       06 17 36.2
       comp=Z,57nm,20.8s,baz=222,slow=31
ULM    Lac du Bonnet      44.38 309  LR       LR       06 22 39.7
       comp=Z,61nm,21.1s,baz=124,slow=34
H10N2  ASCENSION HYDR47.51 147  T        T        06 56 06.3
       baz=331,slow=75,SNR=89
H10N3  ASCENSION HYDR47.51 147  T        T        06 56 06.5
       baz=331,slow=75,SNR=91
H10N1  ASCENSION HYDR47.53 147  T        T        06 56 07.7
       baz=331,slow=75,SNR=85
H10S3  ASCENSION HYDR48.43 148  T        T        06 57 13.6
       baz=331,slow=74,SNR=33
H10S2  ASCENSION HYDR48.44 148  T        T        06 57 13.6
       baz=249,slow=74,SNR=20
YKA    Yellowknife Ar     54.07 326  LR       LR       06 27 22.9
       comp=Z,67nm,20.2s,baz=294,slow=33
PDAR   Pinedale Array     54.88 302  P        P        06 07 02.7  +0.2
       1.1nm,1.0s,baz=67,slow=8.0,SNR=5.6
       1.1nm,1.0s
ANMO   Albuquerque        55.02 292  LR       LR       06 29 22.1
       comp=Z,39nm,19.1s,baz=137,slow=35
NVAR   Mina Array Bea     62.60 299  P        P        06 07 55.9  -0.4
       0.2nm,0.5s,baz=90,slow=4.5,SNR=1.5
       0.2nm,0.5s
MKAR   Makanchi Array     83.39  36  P        P        06 09 59.1   0.0
       0.1nm,0.5s,baz=332,slow=5.2,SNR=2.4
       0.1nm,0.5s
```

KRNET ***25*** *06:07:40.3±0.1, 39°.37N×72°.69E, h15km, mb3.2*
SOME ***25*** *06:07:49.1, 39°.88N×72°.50E, h10km*
NNC ***25*** *06:07:50.5±2.0, 39°.91N×72°.53E, h0km, mb3.7, mpv3.5, Error ellipse: s-maj=16.5km s-min=7.9km az=174.0*
ISC 25 06:07:44.1±0.9, **39°.69N**±0°.04×**72°.51E**±0°.03, **h10**km, **n56, σ2s.08**/77, **20C-25D, Kyrgyzstan**

```
Code   Station Name         Δ°   AZ°     Phase ID          Time       Res
                                        Op       ISC       h  m  s    ISC
DRK    Karamyk             0.59 249⇑iP       Pg       06 07 53.8  -1.8
       baz=79
DRK                                 ⇑iS       Sg       06 08 03.6  +0.2
       baz=79
OHH    Osh                 0.86  14⇓iP       Pn       06 08 02.2  -0.1
       baz=4.0
OHH                                 ⇓iS       Sn       06 08 18.2  +3.2
       baz=4.0
BTK    Batken              1.35 286⇓iP       Pg       06 08 10.2  +0.1
       baz=96
BTK                                 ⇓iS       Sn       06 08 31.9  +4.7
       baz=96
GAR    Garm                1.84 249⇓iP       Pn       06 08 15.1  -0.7
       baz=59
GAR                                 ⇓iS       Sb       06 08 40.6  -0.3
       baz=59
TRKS   Terek-Say           2.12 331⇑iP       Pb       06 08 22.5  -0.1
       baz=31
TRKS                                ⇑iS       Sg       06 08 53.3  +1.2
       baz=31
ARK    Arkit               2.15 349⇑iP       Pg       06 08 23.9  -1.3
       baz=47
ARK                                 ⇑iS       Sg       06 08 55.6  +2.5
       baz=47
ARLS   Aral                2.57  32⇑iP       Pn       06 08 27.8  +1.9
       baz=26
ARLS                                ⇑iS       Sb       06 09 02.7  +0.7
       baz=26
AML    Almayashu           2.60  20⇓iP       Pb       06 08 29.3  -1.7
       baz=15
AML                                 ⇓iS       Sg       06 09 05.1  -2.5
       baz=15
MNAS   Manas               2.79 360⇓iP       Pb       06 08 32.7  -1.5
       baz=57
MNAS                                ⇓iS       Sg       06 09 10.9  -3.0
       baz=57
CHGR   Chuyangaron         2.80 249⇓iP       Pn       06 08 28.8  -0.2
       baz=57
CHGR                                ⇓iS       Sn       06 09 04.3  +1.3
       baz=57
UCH    Uchtor              2.95  30⇑iP       Pn       06 08 33.5  +2.0
       baz=25
UCH                                 ⇑iS       Sb       06 09 12.5  -0.9
       baz=25
IUG    Iuzhnay             3.09 323   Pg      Pg       06 08 42.4  -1.0
       29nm,0.1s
IUG                                   Lg      Lg       06 09 20.3
       44nm,0.3s
IUG    Iuzhnay             3.09 323  ePg      Pg       06 08 43.2  -0.2
       29nm,0.1s
IUG                                  eLg      Lg       06 09 21.8
       44nm,0.3s
MRKS   Merke               3.10  10   Pg      Pg       06 08 43.1  -0.4
       12nm,0.4s
MRKS                                  Lg      Lg       06 09 21.8
       21nm,0.5s
MRKS   Merke               3.10  10  ePg      Pg       06 08 43.1  -0.4
       12nm,0.4s
MRKS                                 eLg      Lg       06 09 21.8
       21nm,0.5s
EKS2   Erkin-Say           3.12  17⇓iP       Pb       06 08 36.4  -3.3
       baz=14
EKS2                                ⇓iS       Sb       06 09 17.4  -0.4
       baz=14
NRN    Naryn               3.18  56⇑iP       Pn       06 08 34.2  -0.2
       baz=50
NRN                                 ⇑iS       Sn       06 09 13.8  +1.3
       baz=50
AAK    Ala-Archa           3.30  26⇓iP       Pn       06 08 38.4  +2.4
       baz=22
AAK                                 ⇓iS       Sb       06 09 21.0  -2.2
       baz=22
KBK    Karagaybulak        3.49  31⇓iP       Pn       06 08 40.8  +2.3
       baz=27
KBK                                 ⇓iS       Sb       06 09 24.8  -3.7
       baz=27
CHMS   Chumysh             3.71  26⇓iP       Pn       06 08 44.0  +2.5
       baz=23
CHMS                                ⇓iS       Sb       06 09 30.5  -4.3
       baz=23
KK31   Karatay Array       3.73 337   Pn      Pb       06 08 46.9  -3.1
       1.3nm,0.3s,baz=150,slow=11,SNR=34
KK31                                 ⇓Sn      Sb       06 09 35.6  +0.3
       6.3nm,0.3s,baz=150,slow=24,SNR=6.6
ULHL   Ulahol              3.81  47⇑iP       Pn       06 08 44.0  +1.0
       baz=42
ULHL                                ⇑iS       Sn       06 09 30.5  +2.6
       baz=42
BOOM   Boomskoye usch      3.81  42⇓iP       Pn       06 08 44.6  +1.6
       baz=37
BOOM                                ⇓iS       Sn       06 09 31.5  +3.5
       baz=37
USP    Ospenovka           3.87  22⇓iP       Pn       06 08 46.5  +2.8
       baz=19
USP                                 ⇓iS       Sb       06 09 34.9  -4.6
       baz=19
TKM2   Tokmak 2            3.98  35⇑iP       Pn       06 08 47.3  +2.0
       baz=31
TKM2                                ⇑iS       Sn       06 09 36.3  +4.2
       baz=31
SGDS   Sogindy             4.08  22   Pg      Pg       06 09 02.8  +0.6
       2.2nm,0.2s
SGDS                                  Lg      Lg       06 09 55.5
       5.7nm,0.7s
KST    Kastek              4.24  37   Pg      Pg       06 09 05.9  +0.6
       2.9nm,0.4s
KST                                   Lg      Lg       06 10 00.8
       9.1nm,0.6s
KST    Kastek              4.24  37  ePg      Pg       06 09 05.9  +0.6
       2.9nm,0.4s
KST                                  eLg      Lg       06 10 00.8
       9.1nm,0.6s
KDJ    Kajisay             4.30  54⇑iP       Pn       06 08 50.3  +0.6
       baz=50
KDJ                                 ⇑iS       Sn       06 09 41.6  +1.7
       baz=50
DGS    Degeres             4.31  34   Pg      Pg       06 09 06.4  -0.3
       4.2nm,0.5s
DGS                                   Lg      Lg       06 10 02.7
       9.5nm,0.6s
DGS    Degeres             4.31  34  ePg      Pg       06 09 07.2  +0.5
       5.0nm,0.6s
DGS                                  eLg      Lg       06 10 03.0
       9.5nm,0.6s
MTBS   Maitube             4.53  39   Pg      Pg       06 09 10.3  -0.4
       1.9nm,0.4s
MTBS                                  Lg      Lg       06 10 08.4
       7.3nm,0.4s
MTBS   Maitube             4.53  39  ePg      Pg       06 09 10.3  -0.4
       1.9nm,0.4s
MTBS                                 eLg      Lg       06 10 08.4
       7.3nm,0.4s
IZV    Izvestkoviy         4.55  41   Pg      Pg       06 09 10.1  -1.1
       0.6nm,0.1s
IZV                                   Lg      Lg       06 10 08.1
       18nm,0.5s
IZV    Izvestkoviy         4.55  41  ePg      Pg       06 09 10.1  -1.1
       0.6nm,0.1s
IZV                                  eLg      Lg       06 10 08.1
       18nm,0.5s
TNSS   Tian-Shan           4.72  44   Pg      Pg       06 09 12.6  -2.0
       2.2nm,0.4s
TNSS                                  Lg      Lg       06 10 12.3
       6.9nm,0.6s
TNSS   Tian-Shan           4.72  44  ePg      Pg       06 09 12.6  -2.0
       2.2nm,0.4s
TNSS                                 eLg      Lg       06 10 12.3
       6.9nm,0.6s
MDOK   Medeo               4.87  43   Pg      Pg       06 09 16.6  -0.6
       3.2nm,0.3s
MDOK                                  Lg      Lg       06 10 19.1
       6.8nm,0.5s
MDOK   Medeo               4.87  43  ePg      Pg       06 09 16.6  -0.6
       3.2nm,0.3s
MDOK                                 eLg      Lg       06 10 19.1
       6.8nm,0.5s
KOTS   Kotyrbulak          4.95  43   Pg      Pg       06 09 18.4  -0.4
       4.2nm,0.4s
KOTS                                  Lg      Lg       06 10 22.3
       16nm,0.5s
KOTS   Kotyrbulak          4.95  43  ePg      Pg       06 09 18.4  -0.4
       4.2nm,0.4s
KOTS                                 eLg      Lg       06 10 22.3
       16nm,0.5s
KUU    Kurty               5.08  33   Pg      Pg       06 09 20.4  -1.0
       1.2nm,0.4s
KUU                                   Lg      Lg       06 10 25.6
       4.2nm,0.5s
KUU    Kurty               5.08  33  ePg      Pg       06 09 20.4  -1.0
       1.2nm,0.4s
KUU                                  eLg      Lg       06 10 25.6
       4.2nm,0.5s
KTBS   Karatobe            5.09  36   Pg      Pg       06 09 20.4  -1.1
       2.0nm,0.4s
KTBS                                  Lg      Lg       06 10 25.6
       8.0nm,0.5s
KTBS   Karatobe            5.09  36  ePg      Pg       06 09 20.4  -1.1
       2.0nm,0.4s
KTBS                                 eLg      Lg       06 10 25.6
       8.0nm,0.5s
CHKK   Chushkaly           5.34  37   Pg      Pg       06 09 26.9  +0.6
       0.4nm,0.0s
CHKK                                  Lg      Lg       06 10 36.8
       3.7nm,0.3s
CHKK   Chushkaly           5.34  37  ePg      Pg       06 09 26.9  +0.6
       0.4nm,0.0s
CHKK                                 eLg      Lg       06 10 36.8
       3.7nm,0.3s
BTLS   Baital              5.47  11   Pg      Pg       06 09 25.5  -3.2
       1.5nm,0.3s
BTLS                                  Lg      Lg       06 10 34.4
       2.6nm,0.5s
BTLS   Baital              5.47  11  ePg      Pg       06 09 25.5  -3.2
       1.5nm,0.3s
BTLS                                 eLg      Lg       06 10 34.4
       2.6nm,0.5s
UZB    Uzynbulak           5.99  53   Pg      Pb       06 09 33.0  +4.4
       2.6nm,0.2s
UZB                                   Lg      Lg       06 10 47.3
       1.3nm,0.3s
UZB    Uzynbulak           5.99  53  ePg      Pg       06 09 35.0  -3.8
       2.5nm,0.5s
UZB                                  eLg      Lg       06 10 51.1
       2.7nm,1.1s
ARXS   Arharly             6.01  40   Pg      Pg       06 09 37.2  -2.0
       0.4nm,0.2s
ARXS                                  Lg      Lg       06 10 54.4
       4.6nm,0.4s
ARXS   Arharly             6.01  40  ePg      Pg       06 09 37.2  -2.0
       0.4nm,0.2s
ARXS                                 eLg      Lg       06 10 54.4
       4.6nm,0.4s
BLB    Baldybastay         6.26  43   Pg      Pg       06 09 40.9  -3.0
       1.4nm,0.2s
BLB                                   Lg      Lg       06 11 00.8
       3.4nm,0.5s
AB31   Akbulak array      13.10 321 ⇑P       Pn       06 10 54.4  +4.3
       0.2nm,0.3s,baz=131,slow=14,SNR=6.1
AKTO   Aktyubinsk         14.81 321 ⇑P       P        06 11 19.6  +0.1
       1.3nm,0.6s
```

NOU 25 06:20:22.2, 15°.31S×**166°.99E, h2**km, **MLv4.1**/7, **Vanuatu Islands, Vanuatu Islands**

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Code   Station Name         Δ°   AZ°     Phase ID          Time       Res
                                        Op       ISC       h  m  s    ISC
KOUNC  Koumac, New Ca      5.81 206  P        Pn       06 21 49.1  -0.4
YATNC  Mamie plateau,      6.71 181  P        Pn       06 22 00.9  -1.0
DZM    Mont Dzumac         6.75 184  P        Pn       06 22 03.5  +1.1
```

IDC ***25*** *06:22:59.5±3.8, 36°.41N×71°.15E, h52km±30km, mb3.5/9, mbtmp3.9/13, ML4.0/5, Error ellipse: s-maj=32.1km s-min=20.6km az=175.0*
NEIC ***25*** *06:23:05.0±0.9, 36°.78N±0°.06×70°.97E±0°.09, h80km±8km, mb4.3/9, Error ellipse: s-maj=10.3km s-min=8.9km az=103.0*
NNC ***25*** *06:23:09.8±7.2, 37°.17N×71°.18E, h127km±78km, mb3.5, mpv4.0, Error ellipse: s-maj=70.8km s-min=45.4km az=19.0*
ISC 25 06:23:05.4±0.5, **36°.73N**±0°.05×**71°.16E**±0°.05, **h100**km, **n80, σ2s.41**/87, **mb3.9**/16, **2C-2D, Afghanistan-Tajikistan border region**

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Code   Station Name         Δ°   AZ°     Phase ID          Time       Res
                                        Op       ISC       h  m  s    ISC
GAR    Garm                2.37 344              Pn       06 23 41.2  -1.6
CHGR   Chuyangaron         2.50 321              Pn       06 23 41.8  -2.7
KBL    Kabul               2.78 219              Pn       06 23 47.9  -0.6
CEP    Cherat              2.96 168  P        Pn       06 23 52.0  +1.2
CEP                                  S        Sn       06 24 28.0  +2.3
BTK    Batken              3.34 356              Pn       06 23 55.7  -0.1
CHCP   Chirah Chowk        3.51 150  P        Pn       06 23 58.7  +0.6
NIL    Nilore              3.52 150  Pn       Pn       06 23 59.0  +0.9
THW    Thamme Wali         3.95 173  P        Pn       06 24 03.5  -0.5
KSH    Kashi               4.71  52  P        Pn       06 24 10.4  -3.9
KSH                                  sP                06 24 31.3
KSH                                  S        Sn       06 25 01.9  -5.9
KSH                                  pmax     pmax
       comp=Z,220nm,0.6s
KSH                                  smax     smax
       comp=N,230nm,0.6s
KSH                                  smax     smax
       comp=E,110nm,0.7s
KSH                                  LR       LR
       comp=N,1µm,7.0s
KSH                                  LR       LR
       comp=E,1µm,7.6s
KSH                                  LR       LR
       comp=Z,630nm,8.6s
TAS    Tashkent            4.82 343  Pn       Pn       06 24 13.6  -2.0
JMU    Jammu               5.05 141 eP        Pn       06 24 18.7  -0.1
JMU                                 eS        Sn       06 25 14.7  -1.2
THN    Thein Dam           5.70 137 eP        Pn       06 24 27.8  +0.2
THN                                 eS        Sn       06 25 29.4  -2.3
AML    Almayashu           5.74  19  P        Pn       06 24 28.6  +0.1
       SNR=158
NRN    Naryn               6.02  37  Pn       Pn       06 24 31.7  -0.5
UCH    Uchtor              6.08  24  P        Pn       06 24 33.1   0.0
       SNR=40
EKS2   Erkin-Say           6.26  18  P        Pn       06 24 35.8  +0.5
       SNR=44
KK31   Karatay Array       6.39 356  Pn       Pn       06 24 35.8  -1.2
KK31   Karatay Array       6.39 356 ⇑Pn       Pn       06 24 35.7  -1.2
       comp=Z,5.1nm,0.3s,baz=174,slow=12,SNR=81
KK31                                ⇓Sn       Sn       06 25 43.1  -5.3
       comp=Z,7.6nm,0.3s,baz=187,slow=17,SNR=7.3
KKAR   Karatay Array       6.39 356  Pn       Pn       06 24 35.5  -1.5
AAK    Ala-Archa           6.44  23  P        Pn       06 24 38.3  +0.6
       SNR=62
AAK    Ala-Archa           6.44  23  P        Pn       06 24 37.8   0.0
       comp=Z,17nm,0.3s,baz=184,slow=6.5,SNR=143
AAK                                  S        Sn       06 25 46.4  -3.4
       comp=Z,19nm,0.5s,baz=129,slow=2.7,SNR=4.2
AAK                                  Lg       Lg       06 26 28.1
       comp=Z,1.6nm,0.3s,baz=41,slow=20,SNR=1.5
KBK    Karagaybulak        6.60  25  P        Pn       06 24 41.4  +1.4
       SNR=8.7
FRU1   Bishkek             6.64  23  Pn       Pn       06 24 40.7  +0.4
ULHL   Ulahol              6.77  34  P        Pn       06 24 42.7  +0.4
       SNR=11
BOOM   Boomskoye usch      6.84  31           Pn       06 24 43.2   0.0
CHMS   Chumysh             6.85  23  P        Pn       06 24 43.5  +0.4
       SNR=30
BHK    Bhakra              6.86 139 eS        Sn       06 25 55.6  -4.4
USP    Ospenovka           7.02  20  P        Pn       06 24 45.2  -0.3
       SNR=12
TKM2   Tokmak 2            7.07  28  P        Pn       06 24 46.8  +0.5
       SNR=43
KDJ    Kajisay             7.13  39  Pn       Pn       06 24 47.3  +0.1
SMLA   Simla               7.49 136 eP        Pn       06 24 50.2  -1.7
SMLA                                eP                 06 24 50.2
SMLA                                eS        Sn       06 26 09.2  -6.1
SMLA                                eS                 06 26 11.4
SMLA                                 IAML              06 26 12.3
       comp=N,87nm,0.4s
SMLA                                 IAML              06 26 12.3
       comp=N,84nm,0.4s
SMLA                                 IAML              06 26 13.1
       comp=E,64nm,0.3s
SMLA                                 IAML              06 26 13.1
       comp=E,63nm,0.3s
```

KUDL	**Kundal**	**9.67**	**151**	*e*P	**Pn**	**06 25 17.7**	**-3.9**
KUDL				*e*S	Sn	06 26 57.1	-11
GEYT	**Alibeck**	**10.46**	**281**	P	Pn	06 25 26.7	-5.6
	comp=E,0.3nm,0.3s,baz=97,slow=12,SNR=1.4						
GEYT				S	Sn	06 27 13.9	-14
	comp=E,4.9nm,0.5s,baz=118,slow=13,SNR=3.5						
	comp=E,0.9nm,0.3s						
MK31	**Makanchi Array**	**13.03**	**36**	Pn	**Pn**	**06 26 05.7**	**-0.9**
MK31	**Makanchi Array**	**13.03**	**36**	P	**Pn**	**06 26 05.3**	**-1.3**
	comp=E,1.1nm,0.3s,baz=224,slow=14,SNR=40						
MKAR	**Makanchi Array**	**13.03**	**36**	P	**Pn**	**06 26 05.5**	**-1.1**
	comp=E,0.4nm,0.3s,baz=225,slow=15,SNR=45						
	comp=E,2.7nm,0.6s						
MKAR	**Makanchi Array**	**13.03**	**36**	Pn	**Pn**	**06 26 06.0**	**-0.6**
PYUN	**Piuthan**	**13.18**	**127**	*e*P	**Pn**	**06 26 04.2**	**-4.6**
	comp=E,13nm,0.3s						
DANN	**Dangsing**	**13.51**	**125**	*e*P	**Pn**	**06 26 09.3**	**-3.9**
	comp=E,13nm,0.3s						
GKN	**Gorkha**	**14.32**	**124**	*e*P	**Pn**	**06 26 19.5**	**-4.1**
	comp=E,15nm,0.3s						
WMQ	**Urumqi**	**14.46**	**56**	*e*P	**P**	**06 26 27.3**	**-1.8**
WMQ				pP	Pn	06 26 35.5	+10
WMQ				sP		06 26 55.4	
WMQ				S	**Sn**	**06 29 08.4**	**+3.8**
WMQ				pmax	pmax		
	comp=Z,28nm,1.1s						
WMQ				smax	smax		
	comp=N,17nm,0.7s						
KURBB	**Kurchatov Arra**	**14.87**	**19**	P	**Pn**	**06 26 25.9**	**-4.3**
	comp=N,0.4nm,0.4s,baz=207,slow=10,SNR=4.0						
KURBB				Lg	Lg	06 30 56.7	
	baz=221,slow=31,SNR=4.6						
AB31	**Akbulak array**	**14.95**	**330**	⇓P	**Pn**	**06 26 27.7**	**-3.6**
	comp=N,1.2nm,0.5s,baz=150,slow=12,SNR=7.0						
KURK	**Kurchatov**	**14.98**	**19**	Pn	**Pn**	**06 26 33.0**	**+1.4**
PKI	**Pulchoki**	**15.12**	**123**	*e*P	**Pn**	**06 26 30.3**	**-3.7**
	comp=N,8.2nm,0.3s						
GUN	**Gumba**	**15.22**	**121**	*e*P	**Pn**	**06 26 31.7**	**-3.6**
	comp=N,5.9nm,0.3s						
JIRN	**Jiri**	**15.59**	**121**	*e*P	**Pn**	**06 26 36.2**	**-3.8**
	comp=N,9.9nm,0.3s						
BVAR	**Borovoye Array**	**16.31**	**358**	P	**Pn**	**06 26 46.2**	**-2.0**
	comp=N,2.3nm,0.6s,baz=157,slow=10,SNR=7.3						
RAMN	**Ramite**	**16.33**	**122**	*e*P	**Pn**	**06 26 46.4**	**-2.6**
	comp=N,8.8nm,0.5s						
BRVK	**Borovoye**	**16.34**	**358**	P	**P**	**06 26 49.8**	**0.0**
AKTO	**Aktyubinsk**	**16.65**	**330**	P	**Pn**	**06 26 51.6**	**-0.9**
	comp=N,0.7nm,0.3s,baz=143,slow=8.0,SNR=18						
	comp=N,7.2nm,0.7s						
AKTO	**Aktyubinsk**	**16.65**	**330**	⇑P	**Pn**	**06 26 52.3**	**-0.2**
	comp=N,4.8nm,0.8s						
TAPN	**Taplejung**	**16.84**	**119**	*e*P	**Pn**	**06 26 52.6**	**-2.8**
	comp=N,7.6nm,0.3s						
GOMU	**GeErMu**	**19.03**	**84**	P	**Pn**	**06 27 27.3**	**+5.6**
GOMU				pP	pP	06 27 31.0	-9.2
GOMU				sP	P	06 27 32.5	+13
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,60nm,4.0s						
ZAA0	**Zalesovo Array**	**19.66**	**25**	P	**P**	**06 27 26.0**	**-0.1**
ZAA0				IAmb	IAmb	06 27 26.7	
	comp=Z,7.9nm,0.5s						
ZALV	**Zalesovo Beam**	**19.66**	**25**	P	**P**	**06 27 26.0**	**-0.1**
	comp=Z,2.5nm,0.3s,baz=221,slow=11,SNR=32						
	comp=Z,9.4nm,0.4s						
ZALV	**Zalesovo Beam**	**19.66**	**25**	P	**P**	**06 27 26.2**	**+0.1**
ARU	**Arti**	**21.46**	**341**	P	**P**	**06 27 45.6**	**+0.1**
	comp=Z,2.1nm,0.4s,baz=148,slow=11,SNR=3.3						
	comp=Z,2.1nm,0.4s						
ARU	**Arti**	**21.46**	**341**	P	**P**	**06 27 45.4**	**-0.1**
GTA	**Gaotai**	**22.68**	**74**	*e*P	**P**	**06 28 02.0**	**+3.4**
GTA				sP	sP	06 28 33.0	+0.7
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PZH	**PanZhiHua**	**27.86**	**103**	P	**P**	**06 28 50.5**	**+4.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,4.7s						
SONM	**Songino Array**	**28.10**	**56**	P	**P**	**06 28 47.9**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=273,slow=8.5,SNR=4.1						
	comp=Z,0.5nm,0.6s						
HHC	**Hu-ho-hao-te**	**31.57**	**70**	*e*P	**P**	**06 29 22.8**	**+4.4**
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,100nm,4.3s						
FINES	**FINESS Array B**	**37.37**	**326**	P	**P**	**06 30 08.9**	**+1.0**
	comp=Z,1.6nm,0.9s,baz=128,slow=12,SNR=3.5						
	comp=Z,1.6nm,0.9s						
ARCES	**ARCESS Array B**	**40.98**	**337**	P	**P**	**06 30 39.6**	**+1.5**
	comp=Z,0.6nm,0.3s,baz=113,slow=8.7,SNR=12						
	comp=Z,0.6nm,0.3s						
NB201	**NORSAR Array S**	**44.24**	**323**	P	**P**	**06 31 05.0**	**+0.5**
NB2	**NORSAR Subarra**	**44.28**	**323**	P	**P**	**06 31 05.4**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.28**	**323**	P	**P**	**06 31 04.7**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=107,slow=7.2,SNR=4.4						
	comp=Z,0.4nm,0.4s						
ESDC	**Sonseca Array**	**57.46**	**298**	P	**P**	**06 32 45.0**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=67,slow=8.1,SNR=1.7						
	comp=Z,0.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**65.85**	**269**	P	**P**	**06 33 39.9**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=50,slow=6.2,SNR=1.7						
A36M	**Sachs Harbour**	**70.97**	**5**	P	**P**	**06 34 13.2**	**+1.7**
A36M				IAmb	IAmb	06 34 14.0	
	comp=Z,1.9nm,0.8s						
IMAR	**Indian Mountai**	**71.92**	**18**	P	**P**	**06 34 17.9**	**+0.5**
BMAR	**Burnt Mountain**	**72.69**	**14**	P	**P**	**06 34 24.0**	**+2.0**
C36M	**Paulatuk**	**73.64**	**6**	P	**P**	**06 34 28.4**	**+0.9**
C36M				IAmb	IAmb	06 34 29.3	
	comp=Z,3.4nm,0.5s						
INK	**Inuvik**	**73.66**	**9**	P	**P**	**06 34 29.1**	**+1.5**
	comp=Z,0.6nm,0.7s,baz=343,slow=8.0,SNR=2.6						
	comp=Z,0.6nm,0.7s						
INK	**Inuvik**	**73.66**	**9**	P	**P**	**06 34 29.2**	**+1.6**
INK				IAmb	IAmb	06 34 36.1	
	comp=Z,3.8nm,1.4s						
ROSA	**Rosais**	**74.44**	**307**	P	**P**	**06 34 33.2**	**+0.5**
BARN	**Barnard Glacie**	**78.94**	**16**	P	**P**	**06 35 00.7**	**+2.9**
BARN				IAmb	IAmb	06 35 33.8	
	comp=Z,7.6nm,1.2s						
YKA	**Yellowknife Ar**	**81.01**	**3**	P	**P**	**06 35 10.2**	**+1.5**
	comp=Z,0.9nm,0.7s,baz=350,slow=5.4,SNR=24						
	comp=Z,0.9nm,0.7s						
WRA	**Warramunga Arr**	**82.00**	**122**	P	**P**	**06 35 12.9**	**-1.6**
	comp=Z,0.2nm,0.8s,baz=320,slow=4.7,SNR=1.5						
	comp=Z,0.2nm,0.8s						

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*IDC **25** 06:24:07.1±1.5, 37°.12N×72°.01E, h0^{km}, mb3.7/7, mbtmp3.9/10, ML3.9/2, MS3.2/2, Error ellipse: s-maj=38.0km s-min=24.0km az=26.0*

ISC 25 06:24:18.7±1.4**, 36°.7N**±0°.3×**71°.3E**±0°.1**, h100**^{km}**, n11, σ1^{s}.76**/9**, mb3.5**/7**, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GEYT	**Alibeck**	**10.57**	**280**	Pn	**Pn**	**06 26 45.4**	**-1.8**
	0.9nm,0.3s,baz=113,slow=9.7,SNR=2.4						
GEYT				Sn	**Sn**	**06 28 43.3**	**-0.3**
	1.6nm,0.3s,baz=154,slow=24,SNR=1.3						
	3.3nm,0.5s						
BVAR	**Borovoye Array**	**16.30**	**358**	LR	LR	06 33 43.3	
	comp=Z,55nm,19.1s,baz=284,slow=36						
AKTO	**Aktyubinsk**	**16.70**	**329**	Pn	Pn	06 27 59.5	-6.9
	0.4nm,0.3s,baz=121,slow=7.1,SNR=3.9						
	6.3nm,0.8s						
ZALV	**Zalesovo Beam**	**19.60**	**24**	P	P	06 28 28.6	-10
	1.8nm,0.5s,baz=220,slow=8.8,SNR=1.6						
GNI	**Garni**	**21.06**	**287**	P	**P**	**06 28 58.0**	**+3.1**
	3.2nm,0.4s,baz=23,slow=19,SNR=1.3						
GNI				LR	LR	06 38 58.6	
	comp=Z,78nm,18.0s,baz=322,slow=42						
	3.2nm,0.4s						
KBZ	**Khabaz**	**22.72**	**297**	P	**P**	**06 29 13.2**	**+1.2**
	0.8nm,0.3s,baz=184,slow=16,SNR=1.6						
	0.8nm,0.3s						
AKASG	**Malin Array Be**	**32.99**	**308**	P	**P**	**06 30 44.2**	**+0.3**
	0.1nm,0.3s,baz=83,slow=8.8,SNR=1.3						
	0.1nm,0.3s						
FINES	**FINESS Array B**	**37.43**	**326**	P	**P**	**06 31 22.9**	**+1.1**
	1.6nm,0.7s,baz=119,slow=10,SNR=1.9						
	1.6nm,0.7s						
ARCES	**ARCESS Array B**	**41.02**	**337**	P	**P**	**06 31 51.8**	**+0.2**
	2.5nm,0.9s,baz=112,slow=8.8,SNR=1.5						
	2.5nm,0.9s						
YKA	**Yellowknife Ar**	**81.00**	**3**	P	**P**	**06 36 20.3**	**-1.6**
	0.2nm,0.5s,baz=351,slow=5.4,SNR=2.4						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**81.90**	**122**	P	**P**	**06 36 27.6**	**+0.3**
	0.4nm,0.7s,baz=322,slow=5.0,SNR=5.7						
	0.4nm,0.7s						

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*STR **25** 06:25:32.6±1.7, 46°N±12°×1°2E±1°2, h10^{km}, MLv2.9/9, Error ellipse: s-maj=0.0km s-min=0.0km az=47.1, preliminary*

*VIE **25** 06:25:37.8, 46°.39N×10°.77E, h10^{km}, mb2.0/13, ml2.7/17 14 km SSW of St.Gertraud*

*ROM **25** 06:25:38.4±0.1, 46°.370N±0°.003×10°.735E±0°.003, h12^{km}, ML2.5/99, Error ellipse: s-maj=0.3km s-min=0.2km az=221.0*

*LDG **25** 06:25:38.6±0.1, 46°.36N×10°.83E, h12^{km}, Ml2.5/3, Error ellipse: s-maj=3.3km s-min=2.7km az=18.0*

*ZUR **25** 06:25:38.3, 46°.37N×10°.75E, h6^{km}±2^{km}, MLh2.4/77, Error ellipse: s-maj=5174.7km s-min=915.0km az=185.0*

*PRU **25** 06:25:39.8±0.0, 46°.40N×10°.85E, h0^{km}*

ISC 25 06:25:38.4±0.8**, 46°.38N**±0°.01×**10°.76E**±0°.01**, h13**^{km}±4^{km}**, n156, σ0^{s}.93**/227**, 15C-23D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CARE	**Lago del Cares**	**0.07**	**317**	⇓*e*Pg	**Pg**	**06 25 41.2**	**-0.2**
CARE				*e*Sg	**Sg**	**06 25 42.6**	**-0.9**
CARE	**Lago del Cares**	**0.07**	**317**	⇓P	**Pg**	**06 25 41.2**	**-0.2**
CARE				S	**Sg**	**06 25 42.6**	**-0.9**
CARE				AML	AML		
	comp=E,6545µm,0.1s						
CARE				AML	AML		
	comp=N,9840µm,0.2s						
CARE				AML	AML		
	comp=N,9848µm,0.2s						
CARE				AML	AML		
	comp=E,6546µm,0.1s						
OZOL	**Ozolo**	**0.20**	**82**	⇑*e*Pg	**Pg**	**06 25 42.9**	**-0.1**
OZOL				*e*Sg	**Sg**	**06 25 45.9**	**-0.2**
MOSI	**Grossmontoni**	**0.28**	**329**	⇓P	**Pg**	**06 25 44.6**	**+0.2**
MOSI				S	**Sg**	**06 25 48.8**	**+0.4**
MOSI				AML	AML		
	comp=N,1475µm,0.8s						
MOSI				AML	AML		
	comp=E,1040µm,0.3s						
MOSI	**Grossmontoni**	**0.28**	**329**	⇓Pg	**Pg**	**06 25 44.6**	**+0.2**
MOSI				Sg	**Sg**	**06 25 48.8**	**+0.4**
BORM	**Bormio**	**0.28**	**289**	⇓P	**Pg**	**06 25 44.5**	**+0.1**
BORM				S	**Sg**	**06 25 48.4**	**+0.1**
BORM				AML	AML		
	comp=E,2840µm,0.2s						
BORM				AML	AML		
	comp=N,2870µm,0.1s						
BRMO	**Bormio**	**0.28**	**290**	⇓P	**Pg**	**06 25 44.5**	**+0.1**
BRMO				S	**Sg**	**06 25 48.4**	**0.0**
BRMO				AML	AML		
	comp=E,1775µm,0.3s						
BRMO				AML	AML		
	comp=N,1960µm,0.1s						
BRMO	**Bormio**	**0.28**	**290**	P	**Pg**	**06 25 44.5**	**+0.1**
BRMO				S	**Sg**	**06 25 48.4**	**0.0**
BRMO	**Bormio**	**0.28**	**290**	⇓Pg	**Pg**	**06 25 44.5**	**+0.1**
BRMO				Sg	**Sg**	**06 25 48.3**	**-0.2**
GAGG	**Gaggia**	**0.32**	**155**	⇓*e*Pg	**Pg**	**06 25 45.1**	**0.0**
GAGG				*e*Sg	**Sg**	**06 25 49.5**	**0.0**
GAGG	**Gaggia**	**0.32**	**155**	⇓P	**Pg**	**06 25 45.1**	**0.0**
GAGG				S	**Sg**	**06 25 49.7**	**+0.1**
GAGG				AML	AML		
	comp=N,776µm,0.2s						
GAGG				AML	AML		
	comp=E,830µm,0.2s						
GAGG				AML	AML		
	comp=N,830µm,1.1s						
GAGG				AML	AML		
	comp=E,778µm,1.1s						
GAGG				AML	AML		
	comp=N,830µm,0.9s						
GAGG				AML	AML		
	comp=E,778µm,0.9s						
GAGG	**Gaggia**	**0.32**	**155**	P	**Pg**	**06 25 45.1**	**0.0**
GAGG				S	**Sg**	**06 25 49.7**	**+0.1**
APPI	**Appiano**	**0.34**	**72**	⇑P	**Pg**	**06 25 45.3**	**0.0**
APPI				S	**Sg**	**06 25 50.0**	**0.0**
APPI				AML	AML		
	comp=N,3230µm,0.2s						
APPI				AML	AML		
	comp=E,3550µm,0.2s						
MABI	**Malga Bissina**	**0.36**	**208**	⇑P	**Pg**	**06 25 45.8**	**-0.1**
MABI				S	**Sg**	**06 25 50.5**	**-0.3**
MABI				AML	AML		
	comp=N,2505µm,0.1s						
MABI				AML	AML		
	comp=E,1780µm,0.2s						
MABI	**Malga Bissina**	**0.36**	**208**	P	**Pg**	**06 25 45.8**	**-0.1**
MABI				S	**Sg**	**06 25 50.6**	**-0.3**
MABI	**Malga Bissina**	**0.36**	**208**	⇑Pg	**Pg**	**06 25 45.8**	**-0.1**
MABI				Sg	**Sg**	**06 25 50.5**	**-0.3**
BOSI	**Bolzano**	**0.40**	**73**	AML	AML		
	comp=N,744µm,0.4s						
BOSI				AML	AML		
	comp=E,1135µm,1.6s						
BOSI				AML	AML		
	comp=E,1135µm,0.4s						
BOSI	**Bolzano**	**0.40**	**73**	⇑Pg	**Pg**	**06 25 46.6**	**+0.1**
RONC	**Roncone**	**0.41**	**194**	⇑*e*Pg	**Pg**	**06 25 46.6**	**0.0**
RONC				*e*Sg	**Sg**	**06 25 52.1**	**-0.1**
RONC	**Roncone**	**0.41**	**194**	⇑P	**Pg**	**06 25 46.6**	**0.0**
RONC				S	**Sg**	**06 25 52.1**	**-0.1**
FUORN	**Ofenpass-Fuorn**	**0.42**	**306**	⇓Pg	**Pg**	**06 25 46.7**	**-0.2**
FUORN				Sg	**Sg**	**06 25 52.4**	**-0.2**
LUSI	**Trento, Gardas**	**0.44**	**163**	⇓P	**Pg**	**06 25 47.0**	**-0.2**
LUSI				S	**Sg**	**06 25 52.9**	**0.0**
LUSI				AML	AML		
	comp=E,2070µm,0.1s						
LUSI				AML	AML		
	comp=N,2915µm,0.5s						
LUSI	**Trento, Gardas**	**0.44**	**163**	⇓Pg	**Pg**	**06 25 46.9**	**-0.2**
LUSI				Sg	**Sg**	**06 25 53.0**	**0.0**
BERNI	**Berninapass**	**0.51**	**274**	AML	AML		
	comp=N,616µm,0.2s						
BERNI				AML	AML		
	comp=E,830µm,0.6s						
BERNI				AML	AML		
	comp=E,830µm,1.4s						
BERNI	**Berninapass**	**0.51**	**274**	P	**Pg**	**06 25 48.4**	**-0.2**
BERNI				S	**Sg**	**06 25 55.0**	**-0.4**
BERNI	**Berninapass**	**0.51**	**274**	⇑Pg	**Pg**	**06 25 48.4**	**-0.2**
BERNI				Sg	**Sg**	**06 25 55.0**	**-0.4**
PANI	**Panarotta**	**0.52**	**129**	⇓*e*Pg	**Pg**	**06 25 48.6**	**0.0**
SCUC	**Scuol-Clozza**	**0.53**	**323**	⇓Pg	**Pg**	**06 25 48.8**	**0.0**
SARD	**Ardez Schule,**	**0.55**	**316**	⇓Pg	**Pg**	**06 25 49.3**	**0.0**
VARA	**Varagna**	**0.56**	**170**	*e*Pg	**Pg**	**06 25 49.3**	**-0.1**
VARA				*e*Sg	**Sb**	**06 25 57.6**	**-0.6**
VARA	**Varagna**	**0.56**	**170**	P	**Pg**	**06 25 49.5**	**0.0**
VARA				S	**Sb**	**06 25 57.6**	**-0.6**
ZIAN	**Ziano**	**0.57**	**100**	*e*Pg	**Pg**	**06 25 49.7**	**+0.2**
DOSS	**Dosso del Somm**	**0.58**	**149**	⇓*e*Pg	**Pg**	**06 25 49.8**	**0.0**
DOSS	**Dosso del Somm**	**0.58**	**149**	⇓P	**Pg**	**06 25 49.8**	**0.0**
DOSS				S	**Sg**	**06 25 57.6**	**+0.1**
DOSS				AML	AML		
	comp=E,250µm,0.9s						
DOSS				AML	AML		
	comp=N,238µm,1.1s						
DOSS				AML	AML		
	comp=N,244µm,0.9s						
DOSS				AML	AML		
	comp=E,249µm,0.9s						
DOSS				AML	AML		
	comp=E,242µm,0.6s						
DOSS				AML	AML		
	comp=E,242µm,1.4s						
DOSS				AML	AML		
	comp=N,238µm,0.9s						
DOSS				AML	AML		
	comp=N,244µm,0.9s						
DOSS	**Dosso del Somm**	**0.58**	**149**	P	**Pg**	**06 25 49.8**	**0.0**
DOSS				S	**Sg**	**06 25 57.4**	**-0.1**
BAG8	**Bagolino**	**0.59**	**200**	⇓P	**Pg**	**06 25 49.9**	**-0.1**
BAG8				S	**Sg**	**06 25 57.4**	**-0.4**
BAG8	**Bagolino**	**0.59**	**200**	P	**Pg**	**06 25 49.9**	**-0.1**
BAG8				S	**Sg**	**06 25 57.6**	**-0.2**
MAGA	**Magasa**	**0.61**	**189**	⇓P	**Pg**	**06 25 50.0**	**-0.3**
MAGA				S	**Sg**	**06 25 57.9**	**-0.5**
MAGA				AML	AML		
	comp=N,1395µm,0.5s						
MAGA				AML	AML		
	comp=E,1810µm,0.3s						
FETA	**Feichten**	**0.65**	**358**	*i* Pg	**Pg**	**06 25 50.9**	**-0.2**
	comp=E,3.5nm,0.1s,SNR=27						
FETA				*i* Sg	**Sg**	**06 25 59.1**	**-0.5**
	comp=E,28nm,0.1s						
FETA	**Feichten**	**0.65**	**358**	Pg	**Pg**	**06 25 50.8**	**-0.2**
FETA				Sg	**Sg**	**06 25 58.8**	**-0.8**
FETA	**Feichten**	**0.65**	**358**	Pg	**Pg**	**06 25 50.8**	**-0.2**
FETA				Sg	**Sg**	**06 25 59.1**	**-0.5**
GARGN	**Gargnano BS**	**0.69**	**186**	*e*Pg	**Pg**	**06 25 51.4**	**-0.4**
GARGN				*e*Sg	**Sb**	**06 26 01.3**	**-0.6**
BALD	**Monte Baldo**	**0.69**	**177**	*e*Pg	**Pg**	**06 25 52.1**	**+0.1**
BALD				*e*Sg	**Sb**	**06 26 01.4**	**-0.6**
BALD	**Monte Baldo**	**0.69**	**177**	P	**Pg**	**06 25 52.1**	**+0.1**
BALD				S	**Sb**	**06 26 01.5**	**-0.6**
BALD	**Monte Baldo**	**0.69**	**177**	P	**Pg**	**06 25 52.0**	**0.0**
BALD				S	**Sb**	**06 26 01.5**	**-0.6**
CTI	**Castel Tesino**	**0.70**	**118**	⇓P	**Pg**	**06 25 51.9**	**-0.2**
CTI				S	**Sg**	**06 26 01.0**	**-0.3**
CTI				AML	AML		
	comp=E,512µm,0.2s						
CTI				AML	AML		
	comp=N,436µm,0.2s						
CTI				AML	AML		
	comp=N,436µm,1.8s						
CTI				AML	AML		
	comp=E,402µm,0.5s						
CTI	**Castel Tesino**	**0.70**	**118**	P	**Pg**	**06 25 51.9**	**-0.2**
CTI				S	**Sg**	**06 26 01.2**	**0.0**
ROSI	**Rosskopf**	**0.71**	**39**	⇑P	**Pg**	**06 25 51.8**	**-0.5**
ROSI				S	**Sg**	**06 26 01.5**	**-0.2**
ROSI				AML	AML		
	comp=N,292µm,0.7s						
ROSI				AML	AML		
	comp=E,185µm,0.6s						
ROSI				AML	AML		
	comp=N,292µm,1.3s						
ROSI	**Rosskopf**	**0.71**	**39**	⇑Pg	**Pg**	**06 25 51.8**	**-0.5**
DAVOX	**Davos/Dischmat**	**0.73**	**304**	AML	AML		
	comp=E,182µm,1.2s						
DAVOX				AML	AML		
	comp=N,265µm,0.5s						
DAVOX				AML	AML		
	comp=E,182µm,0.8s						
DAVOX	**Davos/Dischmat**	**0.73**	**304**	P	**Pg**	**06 25 52.5**	**-0.1**
DAVOX				S	**Sg**	**06 26 02.2**	**0.0**
DAVOX	**Davos/Dischmat**	**0.73**	**304**	Pg	**Pg**	**06 25 52.3**	**-0.3**
DAVOX				Sg	**Sg**	**06 26 02.2**	**0.0**
BRES	**Bressanone**	**0.74**	**64**	AML	AML		
	comp=E,230µm,0.1s						
BRES				AML	AML		
	comp=N,296µm,0.2s						
ZONE	**Zone**	**0.76**	**216**	P	**Pg**	**06 25 52.9**	**-0.3**
ZONE				S	**Sg**	**06 26 02.5**	**-0.6**
ZONE				AML	AML		
	comp=E,216µm,0.7s						
ZONE				AML	AML		
	comp=N,1335µm,0.2s						
ZONE				AML	AML		
	comp=N,318µm,0.2s						
ZONE				AML	AML		
	comp=E,682µm,0.1s						
ROVR	**Rover Verones**	**0.76**	**163**	⇓P	**Pg**	**06 25 53.1**	**-0.1**
ROVR				S	**Sg**	**06 26 02.6**	**-0.6**
ROVR				AML	AML		
	comp=E,3290µm,1.0s						
ROVR				AML	AML		
	comp=N,787µm,0.2s						
ROVR				AML	AML		
	comp=N,788µm,0.2s						
ROVR				AML	AML		
	comp=E,139µm,0.5s						
ROVR				AML	AML		
	comp=E,3290µm,1.0s						
ROVR				AML	AML		
	comp=N,322µm,0.2s						
SALO	**Salr**	**0.78**	**192**	P	**Pg**	**06 25 53.2**	**-0.3**
SALO				S	**Sb**	**06 26 03.9**	**-0.4**
SALO				AML	AML		
	comp=N,318µm,0.2s						
SALO				AML	AML		
	comp=E,305µm,0.2s						
SALO				AML	AML		
	comp=E,334µm,0.2s						
SALO				AML	AML		
	comp=N,325µm,0.2s						
SALO	**Salr**	**0.78**	**192**	P	**Pg**	**06 25 53.2**	**-0.3**
SALO				S	**Sb**	**06 26 04.2**	**-0.1**
SALO	**Salr**	**0.78**	**192**	⇑Pg	**Pg**	**06 25 53.2**	**-0.3**
MARN	**Marana (Italy)**	**0.80**	**157**	*e*Pg	**Pg**	**06 25 53.8**	**-0.2**
MARN				*e*Sg	**Sb**	**06 26 05.0**	**0.0**
MARN	**Marana (Italy)**	**0.80**	**157**	⇓P	**Pg**	**06 25 53.8**	**-0.2**
MARN				S	**Sg**	**06 26 03.9**	**-0.6**
FAU	**Forcella Aurin**	**0.86**	**99**	*e*Pg	**Pg**	**06 25 54.8**	**-0.2**
CGRP	**Cima Grappa**	**0.88**	**124**	*e*Pg	**Pg**	**06 25 55.2**	**-0.3**
CGRP				*e*Sg	**Sb**	**06 26 07.5**	**+0.1**
CGRP	**Cima Grappa**	**0.88**	**124**	⇓P	**Pg**	**06 25 55.1**	**-0.3**
CGRP				S	**Sg**	**06 26 06.7**	**-0.2**
CGRP				AML	AML		
	comp=E,238µm,1.3s						
CGRP				AML	AML		
	comp=N,188µm,0.7s						
CGRP				AML	AML		
	comp=E,153µm,0.2s						
CGRP				AML	AML		
	comp=E,238µm,1.3s						
CGRP				AML	AML		
	comp=N,188µm,0.7s						
CGRP				AML	AML		
	comp=N,164µm,0.6s						
CGRP				AML	AML		
	comp=N,160µm,3.0s						
CGRP				AML	AML		
	comp=E,238µm,0.7s						
CGRP				AML	AML		
	comp=N,115µm,0.9s						
CGRP				AML	AML		
	comp=N,188µm,1.3s						
CGRP	**Cima Grappa**	**0.88**	**124**	Pg	**Pg**	**06 25 55.0**	**-0.4**
AGOR	**Agordo**	**0.90**	**96**	*e*Pg	**Pg**	**06 25 55.7**	**-0.1**
AGOR	**Agordo**	**0.90**	**96**	P	**Pg**	**06 25 55.4**	**-0.3**
AGOR				S	**Sg**	**06 26 06.8**	**-0.7**
AGOR				AML	AML		
	comp=E,171µm,0.3s						
AGOR				AML	AML		
	comp=N,242µm,0.3s						
AGOR	**Agordo**	**0.90**	**96**	Pg	**Pg**	**06 25 55.4**	**-0.3**
AGOR				Sg	**Sg**	**06 26 06.6**	**-0.9**
GRDM	**Monte Maddalen**	**0.90**	**202**	*e*Pg	**Pg**	**06 25 55.5**	**-0.3**
GRDM				*e*Sg	**Sb**	**06 26 08.0**	**+0.2**
SQTA	**Sankt Quirin**	**0.90**	**20**	*i* Pg	**Pg**	**06 25 55.5**	**-0.3**
	comp=N,30nm,0.1s,SNR=46						
SQTA				*e*Sg	**Sg**	**06 26 07.0**	**-0.6**
	comp=N,22nm,0.1s						
VDL	**Val di Lei**	**0.91**	**277**	P	**Pg**	**06 25 55.1**	**-1.1**
VDL				S	**Sg**	**06 26 07.3**	**-0.8**
VDL	**Val di Lei**	**0.91**	**277**	Pg	**Pg**	**06 25 55.0**	**-1.1**
MDI	**Monti di Nese**	**0.94**	**231**	P	**Pg**	**06 25 56.1**	**-0.6**
MDI				AML	AML		
	comp=E,258µm,1.0s						
MDI				AML	AML		
	comp=N,202µm,0.1s						
MDI				AML	AML		
	comp=E,258µm,1.0s						
MDI	**Monti di Nese**	**0.94**	**231**	P	**Pg**	**06 25 56.1**	**-0.6**
MDI				S	**Sb**	**06 26 09.2**	**0.0**
MDI	**Monti di Nese**	**0.94**	**231**	⇑Pg	**Pg**	**06 25 56.0**	**-0.6**
ASOL	**Asolo**	**0.98**	**126**	P	**Pb**	**06 25 57.7**	**+0.3**
TUE	**Stuetta**	**0.98**	**276**	S	**Sg**	**06 26 09.4**	**-0.9**
MOTA	**Moosalm**	**1.00**	**14**	*i* Pg	**Pg**	**06 25 57.5**	**-0.2**
	comp=E,7.4nm,0.1s,SNR=21						
MOTA				*e*Sg	**Sg**	**06 26 09.9**	**-0.8**
	comp=E,14nm,0.1s						
VARN	**Col Varnada, M**	**1.01**	**112**	P	**Pg**	**06 25 57.2**	**-0.7**
VARN				S	**Sg**	**06 26 11.1**	**0.0**
VARN				AML	AML		
	comp=E,484µm,0.4s						
VARN				AML	AML		
	comp=E,462µm,0.4s						
VARN				AML	AML		
	comp=N,334µm,0.2s						

VARN				AML	AML		
	comp=N,289µm,0.3s						
VARN				AML	AML		
	comp=N,273µm,0.3s						
VARN				AML	AML		
	comp=E,463µm,0.3s						
VARN				AML	AML		
	comp=N,325µm,0.3s						
ZOVE	**Zovencedo**	**1.05**	**151**	⇑P	**Pb**	**06 25 58.6**	**+0.1**
ZOVE				S	**Sg**	**06 26 12.9**	**+0.5**
WTTA	**Wattenberg**	**1.07**	**34**	*e*Pg	**Pb**	**06 25 58.8**	**-0.2**
	comp=N,3.8nm,0.1s,SNR=13						
WTTA				*e*Sg	**Sg**	**06 26 13.0**	**-0.1**
	comp=N,8.1nm,0.2s						
WTTA	**Wattenberg**	**1.07**	**34**	P	**Pb**	**06 25 58.4**	**-0.6**
WTTA				S	**Sg**	**06 26 13.2**	**+0.1**
WTTA				AML	AML		
	comp=N,50µm,1.3s						
WTTA				AML	AML		
	comp=E,57µm,1.1s						
WTTA				AML	AML		
	comp=N,50µm,1.3s						
WTTA				AML	AML		
	comp=E,57µm,0.9s						
WTTA				AML	AML		
	comp=N,50µm,0.7s						
WTTA				AML	AML		
	comp=N,41µm,0.8s						
WTTA	**Wattenberg**	**1.07**	**34**	Pg	**Pb**	**06 25 58.4**	**-0.6**
RISI	**Rein**	**1.07**	**57**	⇑P	**Pb**	**06 25 58.5**	**-0.5**
RISI				S	**Sg**	**06 26 12.7**	**-0.5**
RISI				AML	AML		
	comp=E,452µm,0.5s						
RISI				AML	AML		
	comp=N,458µm,0.2s						
RISI				AML	AML		
	comp=E,443µm,0.7s						
RISI	**Rein**	**1.07**	**57**	⇑Pg	**Pb**	**06 25 58.5**	**-0.5**
RISI				Sg	**Sg**	**06 26 12.6**	**-0.5**
DAVA	**Damuels**	**1.09**	**327**	*e*Pg	**Pb**	**06 25 59.0**	**-0.3**
	comp=E,2.5nm,0.2s,SNR=24						
DAVA				*i* Sg	**Sn**	**06 26 14.5**	**-0.2**
	comp=E,13nm,0.2s						
DAVA	**Damuels**	**1.09**	**327**	Pg	**Pb**	**06 25 59.0**	**-0.3**
RETA	**Reutte**	**1.11**	**0**	*i* Pg	**Pb**	**06 25 59.3**	**-0.2**
	comp=E,1.0nm,0.1s						
RETA				*e*Sg	**Sg**	**06 26 14.8**	**+0.5**
	comp=E,96nm,0.3s						
WATA	**Walderalm**	**1.11**	**30**	*i* Pg	**Pb**	**06 25 59.4**	**-0.3**
	comp=E,4.1nm,0.1s,SNR=13						
WATA				*e*Sg	**Sb**	**06 26 14.3**	**+0.2**
	comp=E,8.3nm,0.1s						
PLONS	**Plons/SG**	**1.16**	**306**	Pg	**Pb**	**06 26 00.3**	**-0.2**
CIMO	**Cimolais**	**1.17**	**93**	P	**Pb**	**06 26 00.3**	**-0.2**
CIMO				S	**Sb**	**06 26 15.2**	**-0.3**
CIMO				AML	AML		
	comp=E,80µm,1.1s						
CIMO				AML	AML		
	comp=N,106µm,0.7s						
CIMO				AML	AML		
	comp=N,106µm,1.3s						
CIMO				AML	AML		
	comp=N,106µm,0.9s						
CIMO				AML	AML		
	comp=E,80µm,0.9s						
CIMO				AML	AML		
	comp=E,80µm,0.3s						
FRE8	**Fregona**	**1.17**	**108**	P	**Pg**	**06 26 01.4**	**+0.6**
TEOL	**Teolo**	**1.20**	**148**	P	**Pb**	**06 26 01.2**	**+0.1**
TEOL				S	**Sn**	**06 26 17.3**	**+0.2**
TEOL				AML	AML		
	comp=N,247µm,0.5s						
TEOL				AML	AML		
	comp=E,250µm,0.3s						
CAE	**Caneva**	**1.22**	**107**	P	**Pn**	**06 26 01.7**	**+0.4**
POLC	**Polcenigo**	**1.26**	**106**	P	**Pg**	**06 26 02.6**	**0.0**
POLC				AML	AML		
	comp=E,570µm,0.4s						
POLC				AML	AML		
	comp=N,596µm,1.0s						
POLC				AML	AML		
	comp=N,596µm,1.0s						
POLC				AML	AML		
	comp=E,570µm,1.6s						
ABTA	**Abfaltersbach**	**1.27**	**72**	*e*Pg	**Pn**	**06 26 01.8**	**-0.1**
	comp=E,25nm,0.1s,SNR=117						
ABTA				*e*Sg	**Sb**	**06 26 18.4**	**0.0**
	comp=E,58nm,0.2s						
MUGIO	**Muggio**	**1.28**	**250**	AML	AML		
	comp=E,107µm,0.2s						
MUGIO				AML	AML		
	comp=N,90µm,1.5s						
MUGIO	**Muggio**	**1.28**	**250**	P	**Pn**	**06 26 01.9**	**-0.2**
MUGIO	**Muggio**	**1.28**	**250**	Pg	**Pn**	**06 26 01.8**	**-0.3**
STAL	**STALIGIAL**	**1.36**	**94**	P	**Pn**	**06 26 03.7**	**+0.6**
STAL				AML	AML		
	comp=N,448µm,1.3s						
STAL				AML	AML		
	comp=E,380µm,0.2s						
STAL				AML	AML		
	comp=E,424µm,0.2s						
STAL				AML	AML		
	comp=N,448µm,0.7s						
STAL				AML	AML		
	comp=N,373µm,0.5s						
STAL				AML	AML		
	comp=E,380µm,1.8s						
FVI	**Forni Avoltri**	**1.41**	**80**	P	**Pn**	**06 26 04.5**	**+0.5**
FVI				AML	AML		
	comp=N,123µm,0.7s						
FVI				AML	AML		
	comp=E,170µm,0.3s						
FUSIO	**Fusio**	**1.45**	**274**	AML	AML		
	comp=N,84µm,0.8s						
FUSIO				AML	AML		
	comp=E,72µm,0.2s						
FUSIO				AML	AML		
	comp=N,84µm,1.2s						
FUSIO	**Fusio**	**1.45**	**274**	P	**Pb**	**06 26 05.3**	**-0.1**
CLUD	**Cludinico**	**1.47**	**86**	P	**Pb**	**06 26 05.8**	**+0.1**
CLUD				AML	AML		
	comp=N,82µm,1.3s						
CLUD				AML	AML		
	comp=N,82µm,0.7s						
CLUD				AML	AML		
	comp=E,63µm,1.1s						
ZOU	**Zoufplan**	**1.54**	**82**	P	**Pb**	**06 26 06.9**	**-0.1**
ZOU				AML	AML		
	comp=E,118µm,0.6s						
ZOU				AML	AML		
	comp=N,114µm,1.2s						
ZOU				AML	AML		
	comp=E,100µm,0.7s						
ZOU				AML	AML		
	comp=E,118µm,1.4s						
ZOU				AML	AML		
	comp=N,98µm,0.5s						
ZOU				AML	AML		
	comp=E,100µm,1.3s						
GEPF	**Gemona**	**1.65**	**93**	P	**Pb**	**06 26 09.2**	**+0.5**
GEPF				AML	AML		
	comp=E,218µm,0.6s						
GEPF				AML	AML		
	comp=N,215µm,0.4s						
VINO	**Villanova**	**1.75**	**93**	P	**Pb**	**06 26 11.0**	**+0.5**
VINO				AML	AML		
	comp=E,81µm,0.6s						
VINO				AML	AML		
	comp=N,144µm,0.5s						
VINO				AML	AML		
	comp=N,144µm,1.5s						
ZUR	**Degenried**	**1.79**	**304**	Sg	**Sg**	**06 26 37.4**	**+1.3**
ZUR	**Degenried**	**1.79**	**304**	P	**Pg**	**06 26 13.1**	**+0.2**
PTCC	**Patocco-Chiusa**	**1.79**	**88**	P	**Pb**	**06 26 11.7**	**+0.4**
PTCC				AML	AML		
	comp=N,98µm,1.0s						
PTCC				AML	AML		
	comp=E,88µm,0.3s						
ACOM	**Acomizza, Ital**	**1.91**	**84**	P	**Pb**	**06 26 12.9**	**-0.3**
ACOM				AML	AML		
	comp=N,144µm,1.3s						
ACOM				AML	AML		
	comp=N,132µm,1.3s						
ACOM				AML	AML		
	comp=E,160µm,1.4s						
ACOM				AML	AML		
	comp=E,151µm,0.4s						
KBA	**Koelnbreinsper**	**1.91**	**68**	*e*Pg	**Pb**	**06 26 13.1**	**-0.2**
	comp=E,6.3nm,0.3s						
KBA				*e*Sg	**Sb**	**06 26 37.9**	**+0.8**
	comp=E,7.4nm,0.2s						
MYKA	**Terra Mystica**	**2.01**	**82**	*e*Pg	**Pb**	**06 26 15.4**	**+0.6**
	comp=E,2.4nm,0.2s						
MYKA				*e*Sg	**Sg**	**06 26 42.4**	**-0.5**
	comp=E,3.4nm,0.2s						
SABO	**M.te Sabotino**	**2.01**	**100**	AML	AML		
	comp=E,815µm,0.8s						
SABO				AML	AML		
	comp=E,194µm,0.8s						
SABO				AML	AML		
	comp=N,734µm,0.8s						
SABO				AML	AML		
	comp=N,205µm,0.8s						
SABO				AML	AML		
	comp=E,815µm,1.2s						
SABO				AML	AML		
	comp=E,194µm,1.2s						
GSCL	**Gusciola**	**2.03**	**183**	AML	AML		
	comp=E,75µm,1.5s						
GSCL				AML	AML		
	comp=E,75µm,0.5s						
GSCL				AML	AML		
	comp=N,79µm,0.8s						
EMBD	**Embd, Matterta**	**2.04**	**267**	P	**Pb**	**06 26 15.3**	**-0.1**
GORR	**Gorreto**	**2.05**	**211**	P	**Pb**	**06 26 14.6**	**-0.9**
SLE	**Schleitheim**	**2.08**	**313**	Pg	**Pb**	**06 26 15.3**	**-0.8**
SLE	**Schleitheim**	**2.08**	**313**	Sg	**Sg**	**06 26 45.7**	**+0.4**
SULZ	**Cheisacher**	**2.15**	**303**	Sg	**Sg**	**06 26 48.5**	**+1.0**
SULZ	**Cheisacher**	**2.15**	**303**	P	**Pb**	**06 26 17.2**	**0.0**
TRI	**Trieste**	**2.20**	**107**	P	**Pb**	**06 26 16.9**	**-1.1**
TRI				AML	AML		
	comp=N,75µm,0.9s						
TRI				AML	AML		
	comp=E,85µm,0.5s						
TRI				AML	AML		
	comp=N,75µm,1.1s						
BALST	**Balsthal**	**2.31**	**296**	S	**Sg**	**06 26 52.9**	**+0.2**
BALST	**Balsthal**	**2.31**	**296**	P	**Pb**	**06 26 19.6**	**-0.5**
DIX	**Grande Dixence**	**2.35**	**264**	P	**Pb**	**06 26 20.7**	**0.0**
DIX	**Grande Dixence**	**2.35**	**264**	S	**Sg**	**06 26 52.0**	**-1.9**
BIOA	**Bad Ischl, Aus**	**2.37**	**55**	*e*Pg	**Pg**	**06 26 23.5**	**-0.3**
	comp=N,3.3nm,0.2s						
BIOA				Sg	**Sg**	**06 26 54.0**	**-0.4**
	comp=N,6.4nm,0.3s						
KIZ	**Kirchzarten**	**2.50**	**310**	P	**Pb**	**06 26 21.4**	**-1.8**
KIZ	**Kirchzarten**	**2.50**	**310**	S	**Sg**	**06 26 58.1**	**-0.6**
OBKA	**Obir**	**2.62**	**86**	*i* Pg	**Pg**	**06 26 27.4**	**-1.3**
	comp=N,2.9nm,0.3s						
OBKA				*e*Sg	**Sg**	**06 27 01.9**	**-0.8**
	comp=N,4.2nm,0.3s						
BOURR	**Bourrignon**	**2.63**	**294**	S	**Sg**	**06 27 02.5**	**-0.3**
BOURR	**Bourrignon**	**2.63**	**294**	P	**Pb**	**06 26 23.1**	**-2.3**
AIGLE	**Aigle**	**2.64**	**271**	P	**Pb**	**06 26 25.9**	**+0.3**
MOA	**Molln**	**2.81**	**57**	*i* Pg	**Pg**	**06 26 31.1**	**-1.2**
	comp=N,1.4nm,0.2s						
MOA				*i* Sg	**Sb**	**06 27 02.9**	**0.0**
	comp=N,7.2nm,0.4s						
CHMF	**Charmoille**	**2.95**	**289**	P	**Pb**	**06 26 28.2**	**-2.8**
HINF	**Hinteralfeld**	**3.03**	**300**	*e*Pn	**Pn**	**06 26 26.6**	**+0.4**
HINF	**Hinteralfeld**	**3.03**	**300**	*e*P	**Pb**	**06 26 29.3**	**-3.0**
HINF				*e*Sg	**Sg**	**06 27 14.5**	**-1.3**
	comp=N,3.3nm,0.3s						
ECH	**Echery**	**3.06**	**308**	P	**Pn**	**06 26 29.0**	**+2.3**
CDF	**Champ du Feu**	**3.12**	**312**	*e*Pn	**Pn**	**06 26 27.2**	**-0.3**
CDF	**Champ du Feu**	**3.12**	**312**	*e*P	**Pn**	**06 26 29.9**	**+2.4**
CDF				*e*Sg	**Sg**	**06 27 18.6**	**-0.1**
	comp=N,2.6nm,0.3s						
MBDF	**Montbardon**	**3.25**	**241**	*e*Pn	**Pn**	**06 26 29.1**	**-0.2**
MBDF	**Montbardon**	**3.25**	**241**	*e*P	**Pn**	**06 26 31.1**	**+1.8**
KHC	**Kasperske Hory**	**3.35**	**34**	*e*PN	**Pn**	**06 26 32.0**	**+1.5**
KHC				*e*PG	**Pb**	**06 26 39.5**	**+1.8**
KHC				*e*SG	**Sg**	**06 27 24.0**	**-1.9**
HAU	**Haudompre**	**3.42**	**300**	*e*Pn	**Pn**	**06 26 31.6**	**+0.1**
HAU	**Haudompre**	**3.42**	**300**	*e*P	**Pn**	**06 26 34.5**	**+3.0**
HAU				*e*Sg	**Sg**	**06 27 27.8**	**-0.5**
	comp=N,7.3nm,0.5s						
CKRC	**Cesky Krumlov**	**3.43**	**43**	*e*PG	**Pb**	**06 26 39.9**	**+0.9**
CKRC				*e*SG	**Sg**	**06 27 25.6**	**-2.8**
	comp=N,3.3nm,0.5s						
SBF	**Sospel**	**3.44**	**224**	*e*Pn	**Pn**	**06 26 31.2**	**-0.7**
SBF	**Sospel**	**3.44**	**224**	*e*P	**Pn**	**06 26 34.2**	**+2.3**
ORIF	**Oris-en-Rattie**	**3.72**	**249**	*e*P	**Pn**	**06 26 39.1**	**+3.4**
T1216	**Preci, Frazion**	**3.84**	**154**	AML	AML		
	comp=N,134µm,0.3s						
T1216				AML	AML		
	comp=E,110µm,0.1s						
SMRF	**Simiane la Rot**	**4.38**	**239**	*e*Pn	**Pn**	**06 26 43.6**	**-1.1**
VIVF	**Saint-Julien-l**	**4.53**	**253**	*e*P	**Pn**	**06 26 50.1**	**+3.3**
SMF	**Signal de Mont**	**4.79**	**276**	*e*P	**Pn**	**06 26 53.5**	**+3.3**
LOR	**Lormes**	**4.82**	**283**	*e*P	**Pn**	**06 26 54.4**	**+3.7**
	baz=109						
SSF	**Saint Saulge**	**5.04**	**280**	*e*P	**Pn**	**06 26 57.5**	**+3.8**
AVF	**Avril sur Loir**	**5.12**	**277**	*e*P	**Pn**	**06 26 58.9**	**+4.0**
GIVF	**Givet**	**5.44**	**315**	*e*Pn	**Pn**	**06 26 58.4**	**-0.8**

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*IDC **25** 06:34:21.9±2.6, 18°.61N×145°.63E, h223^{km}±25^{km}, mb3.4/12, mbtmp3.9/14, Error ellipse: s-maj=25.2km s-min=12.1km az=88.0*

*NEIC **25** 06:34:21.6±1.3, 18°.6N±0°.1×145°.6E±0°.2, h208^{km}±3^{km}, mb4.1/27, Error ellipse: s-maj=24.3km s-min=15.2km az=100.0*

ISC 25 06:34:20.2±0.5**, 18°.60N**±0°.06×**145°.5E**±0°.1**, h200**^{km}**, n50,** σ**0^{s}.89**/55**, mb4.0**/26**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.03**	**187**	P	**Pn**	**06 35 36.2**	**+1.2**
	15nm,0.5s,baz=0.9,slow=24,SNR=1.1						
GUMO				S	**Sn**	**06 36 33.0**	**-1.0**
	22nm,0.4s,baz=272,slow=17,SNR=1.4						
MJAR	**Matsushiro Arr**	**19.00**	**342**	P	**P**	**06 38 28.2**	**+1.4**
	0.8nm,0.5s,baz=171,slow=9.9,SNR=2.8						
NACB	**Ninganchiao**	**22.95**	**288**	P	**P**	**06 39 05.6**	**-1.6**
ASAJ	**Asahikawa**	**25.56**	**355**	P	**P**	**06 39 31.4**	**+0.9**
	1.8nm,0.6s,baz=146,slow=30,SNR=1.6						
	1.8nm,0.6s						
MTN	**Manton Dam**	**34.32**	**205**	P	**P**	**06 40 47.8**	**-0.1**
KNRA	**Kununurra**	**37.85**	**207**	P	**P**	**06 41 19.2**	**+1.3**
WRAB	**Tennant Creek**	**39.84**	**197**	P	**P**	**06 41 35.0**	**+0.7**
WRAB				IAmb	IAmb	06 42 18.6	
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**39.85**	**197**	P	**P**	**06 41 34.5**	**+0.1**
	comp=Z,1.4nm,0.3s,baz=13,slow=8.4,SNR=47						
WRA				PcP	**PcP**	**06 43 35.1**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=15,slow=3.2,SNR=8.2						
	comp=Z,1.4nm,0.3s						
WRA	**Warramunga Arr**	**39.85**	**197**	P	**P**	**06 41 33.9**	**-0.5**
SONM	**Songino Array**	**43.12**	**322**	P	**P**	**06 42 00.9**	**0.0**
	comp=Z,0.6nm,0.5s,baz=136,slow=9.8,SNR=4.7						
	comp=Z,0.6nm,0.5s						
SONM	**Songino Array**	**43.12**	**322**	P	**P**	**06 42 01.4**	**+0.5**
AS31	**Alice Springs**	**43.52**	**196**	P	**P**	**06 42 04.7**	**+0.6**
ASAR	**Alice Springs**	**43.52**	**196**	P	**P**	**06 42 03.6**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=26,slow=7.2,SNR=3.7						
ASAR				PcP	**PcP**	**06 43 47.7**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=23,slow=4.1,SNR=1.9						
	comp=Z,0.2nm,0.3s						
ASAR	**Alice Springs**	**43.52**	**196**	P	**P**	**06 42 05.1**	**+1.0**
DZM	**Mont Dzumac**	**45.31**	**152**	P	**P**	**06 42 18.3**	**-0.2**
	comp=Z,1.6nm,0.5s,baz=206,slow=20,SNR=5.7						
	comp=Z,1.6nm,0.5s						
MBWA	**Marble Bar**	**46.90**	**214**	P	**P**	**06 42 31.2**	**+0.4**
MBWA				IAmb	IAmb	06 42 54.2	
	comp=Z,8.3nm,1.1s						
FORT	**Forrest**	**51.89**	**199**	P	**P**	**06 43 07.8**	**-0.5**
FORT				IAmb	IAmb	06 43 24.0	
	comp=Z,12nm,1.1s						
BBOO	**Buckleboo**	**51.92**	**190**	P	**P**	**06 43 09.0**	**+0.5**
BBOO				IAmb	IAmb	06 43 17.1	
	comp=Z,11nm,1.4s						
MORW	**Morawa**	**55.29**	**212**	P	**P**	**06 43 33.4**	**+0.3**
MK31	**Makanchi Array**	**58.41**	**314**	P	**P**	**06 43 55.6**	**+0.7**
MKAR	**Makanchi Array**	**58.41**	**314**	P	**P**	**06 43 55.0**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=96,slow=7.0,SNR=4.7						
MKAR				PcP	**PcP**	**06 44 42.4**	**-1.0**
	comp=Z,0.1nm,0.4s,baz=83,slow=4.9,SNR=1.7						
	comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	**58.41**	**314**	P	**P**	**06 43 55.3**	**+0.4**
SKT	**Skwentna**	**61.10**	**29**	P	**P**	**06 44 12.7**	**-0.3**
SKT				IAmb	IAmb	06 44 39.6	
	comp=Z,8.8nm,1.4s						
CAST	**Castle Rocks**	**61.25**	**27**	P	**P**	**06 44 14.2**	**+0.3**
IMAR	**Indian Mountai**	**61.37**	**24**	P	**P**	**06 44 15.5**	**+0.9**
H21K	**Melozitna Rive**	**61.63**	**24**	P	**P**	**06 44 16.5**	**+0.1**
H21K				IAmb	IAmb	06 44 22.1	
	comp=Z,4.2nm,1.5s						
KTH	**Kantishna Hill**	**61.79**	**27**	P	**P**	**06 44 17.6**	**0.0**
KTH				IAmb	IAmb	06 44 26.4	
	comp=Z,6.4nm,1.4s						
TRF	**Thorofare Moun**	**62.04**	**27**	P	**P**	**06 44 19.2**	**-0.1**
TRF				IAmb	IAmb	06 44 54.4	
	comp=Z,6.9nm,1.4s						
KNK	**Knik Glacier**	**62.39**	**30**	P	**P**	**06 44 21.4**	**-0.1**
BOOM	**Boomskoye usch**	**62.74**	**309**	P	**P**	**06 44 25.5**	**+1.1**
BOOM				IAmb	IAmb	06 44 27.6	
	comp=Z,3.3nm,1.4s						
I23K	**Minto, Yukon-K**	**62.87**	**26**	P	**P**	**06 44 25.3**	**+0.7**
I23K				IAmb	IAmb	06 44 29.7	
	comp=Z,3.5nm,1.4s						
MDM	**Murphy Dome**	**63.28**	**26**	P	**P**	**06 44 28.3**	**+0.9**
MDM				IAmb	IAmb	06 44 43.0	
	comp=Z,4.7nm,1.5s						
ILAR	**Eielson Array**	**63.80**	**26**	P	**P**	**06 44 28.3**	**-2.4**
	comp=Z,0.4nm,0.7s,baz=266,slow=5.5,SNR=3.6						
	comp=Z,0.4nm,0.7s						
RIDG	**Independent Ri**	**64.48**	**28**	P	**P**	**06 44 34.8**	**-0.4**
RIDG				IAmb	IAmb	06 45 16.3	
	comp=Z,7.5nm,1.5s						
BMAR	**Burnt Mountain**	**65.27**	**24**	P	**P**	**06 44 40.9**	**+0.7**
BCAR	**Beaver Creek A**	**65.74**	**28**	P	**P**	**06 44 43.3**	**0.0**
BRVK	**Borovoye**	**66.51**	**320**	P	**P**	**06 44 48.4**	**+0.1**
BRVK				IAmb	IAmb	06 44 49.2	
	comp=Z,1.8nm,0.6s						
KKAR	**Karatay Array**	**66.70**	**310**	P	**P**	**06 44 50.2**	**+0.4**
INK	**Inuvik**	**69.52**	**23**	P	**P**	**06 45 06.2**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=345,slow=4.8,SNR=3.0						
	comp=Z,0.9nm,0.7s						
INK	**Inuvik**	**69.52**	**23**	P	**P**	**06 45 07.0**	**+0.3**
INK				IAmb	IAmb	06 45 20.3	
	comp=Z,4.7nm,1.5s						
C36M	**Paulatuk**	**72.90**	**22**	P	**P**	**06 45 26.5**	**-0.4**
ABKAR	**Akbulak array**	**73.30**	**317**	P	**P**	**06 45 28.7**	**-1.0**
EUNU	**Eureka**	**77.84**	**8**	P	**P**	**06 45 54.9**	**-0.2**
EUNU				IAmb	IAmb	06 46 13.3	
	comp=Z,3.1nm,1.2s						
YKA	**Yellowknife Ar**	**78.15**	**28**	P	**P**	**06 45 56.2**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=290,slow=5.3,SNR=7.3						
YKA				pP	**pP**	**06 46 44.9**	**+0.8**
	comp=Z,0.1nm,0.5s,baz=290,slow=5.6,SNR=3.8						
	comp=Z,0.3nm,0.6s						
ARCES	**ARCESS Array B**	**82.53**	**342**	P	**P**	**06 46 19.2**	**-1.0**
	comp=Z,2.5nm,0.9s,baz=80,slow=7.5,SNR=5.2						
	comp=Z,2.5nm,0.9s						
NVAR	**Mina Array Bea**	**83.33**	**52**	P	**P**	**06 46 24.1**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=273,slow=5.8,SNR=4.4						
	comp=Z,0.4nm,0.6s						
NVAR	**Mina Array Bea**	**83.33**	**52**	P	**P**	**06 46 26.1**	**+0.9**
FINES	**FINESS Array B**	**86.90**	**335**	P	**P**	**06 46 40.0**	**-2.1**
	comp=Z,4.6nm,1.1s,baz=67,slow=4.1,SNR=10						
	comp=Z,4.6nm,1.1s						
FINES	**FINESS Array B**	**86.90**	**335**	P	**P**	**06 46 40.2**	**-1.9**
NBO00	**NORSAR Array S**	**92.76**	**340**	P	**P**	**06 47 10.3**	**+0.8**

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*TAP **25** 06:37:05.2, 24°.57N×122°.44E, h85^{km}, ML3.0, C*

*JMA **25** 06:37:05.5±0.2, 24°N±3°×122°.4E±0°.7, h84^{km}±1^{km}, MV2.4/9, NW OFF ISHIGAKIJIMA IS*

ISC 25 06:37:05.6±1.5**, 24°.54N**±0°.04×**122°.43E**±0°.03**, h82**^{km}±9^{km}**, n59,** σ**0^{s}.67**/101**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.21**	**237**	*e*P	**Pn**	**06 37 18.3**	**+0.8**
	baz=246						
JYNG	**Yonagunijimaku**	**0.48**	**100**	P	**Pn**	**06 37 19.5**	**+0.2**
JYNG				*e*S	**Sn**	**06 37 29.7**	**+0.3**
TWC	**Suao**	**0.53**	**278**	S	**Sn**	**06 37 29.8**	**-0.5**
	baz=277						
YOJ	**Yonaguni jima**	**0.53**	**98**	*e*P	**Pn**	**06 37 19.9**	**+0.2**
YOJ				*e*S	**Sn**	**06 37 30.6**	**+0.3**
YOJ	**Yonaguni jima**	**0.53**	**98**	P	**Pn**	**06 37 19.4**	**-0.4**
	baz=106						
YOJ				S	**Sn**	**06 37 30.3**	**0.0**
	baz=106						
EWUT	**Wuta**	**0.60**	**262**	*i* P	**Pn**	**06 37 20.8**	**+0.4**
	baz=256						
EWUT				*e*S	**Sn**	**06 37 31.1**	**-0.3**
	baz=256						
TWB1	**Santiao Chiao**	**0.62**	**320**	*i* P	**Pn**	**06 37 20.4**	**-0.2**
	baz=310						
TWB1				S	**Sn**	**06 37 31.0**	**-0.7**
	baz=310						
ENA	**Nanau**	**0.64**	**260**	P	**Pn**	**06 37 21.1**	**+0.3**
	baz=253						
ENA				S	**Sn**	**06 37 32.6**	**+0.6**
	baz=253						
NDS	**Dongshan**	**0.66**	**279**	S	**Sn**	**06 37 32.3**	**-0.1**
	baz=278						
TIPB	**Shuangxi**	**0.70**	**308**	*i* P	**Pn**	**06 37 21.2**	**-0.2**
	baz=305						
TIPB				*e*S	**Sn**	**06 37 32.6**	**-0.6**
	baz=305						
TWE	**Neicheng**	**0.72**	**285**	P	**Pn**	**06 37 21.9**	**+0.3**
	baz=282						
TWE				S	**Sn**	**06 37 33.4**	**0.0**
	baz=282						
SXI1	**Grass Mountain**	**0.75**	**318**	P	**Pn**	**06 37 22.1**	**+0.1**
	baz=311						
SXI1				S	**Sn**	**06 37 34.3**	**+0.1**
	baz=311						
ENTT	**Nioudou**	**0.79**	**278**	P	**Pn**	**06 37 23.1**	**+0.7**
	baz=275						
ENTT				S	**Sn**	**06 37 35.6**	**+0.7**
	baz=275						
WFSB	**Wu-fen Shan**	**0.80**	**312**	*i* P	**Pn**	**06 37 22.6**	**+0.2**
	baz=304						
WFSB				*e*S	**Sn**	**06 37 34.9**	**-0.1**
	baz=304						
FUSB	**Fushanzhiwuyua**	**0.80**	**286**	P	**Pn**	**06 37 22.7**	**+0.1**
	baz=290						
FUSB				*e*S	**Sn**	**06 37 34.7**	**-0.4**
	baz=290						
LATG	**Datong**	**0.82**	**270**	P	**Pn**	**06 37 23.1**	**+0.2**
	baz=268						
LATG				S	**Sn**	**06 37 36.0**	**+0.3**
	baz=268						
ETL	**Fush Village**	**0.83**	**243**	P	**Pn**	**06 37 22.8**	**0.0**
	baz=235						
ETL				*e*S	**Sn**	**06 37 35.9**	**+0.3**
	baz=235						
NACB	**Ninganchiao**	**0.84**	**245**	P	**Pn**	**06 37 22.6**	**-0.4**
	baz=243						
NACB				*e*S	**Sn**	**06 37 35.3**	**-0.6**
	baz=243						
NWLT	**Wulai**	**0.88**	**286**	*e*P	**Pn**	**06 37 23.6**	**+0.3**
	baz=291						
NWLT				*e*S	**Sn**	**06 37 36.2**	**-0.4**
	baz=291						
TWD	**Chiawan**	**0.89**	**239**	*e*P	**Pn**	**06 37 22.7**	**-0.7**
	baz=231						
TWD				*e*S	**Sn**	**06 37 36.5**	**-0.2**
	baz=231						
TWA	**Mucha**	**0.89**	**300**	S	**Sn**	**06 37 36.1**	**-0.7**
	baz=290						
ETLH	**Xiulin Townshi**	**0.93**	**249**	*e*P	**Pn**	**06 37 23.7**	**-0.2**
	baz=248						
ETLH				*e*S	**Sn**	**06 37 37.2**	**-0.5**
	baz=248						
NHDH	**Xindian Distri**	**0.93**	**298**	S	**Sn**	**06 37 36.7**	**-0.9**
	baz=295						
NNSB	**Datong**	**0.96**	**264**	*i* P	**Pn**	**06 37 24.5**	**+0.1**
	baz=255						
NNSB				*e*S	**Sn**	**06 37 38.2**	**-0.2**
	baz=255						
NNSH	**Datong**	**0.96**	**264**	*e*P	**Pn**	**06 37 24.5**	**+0.1**
	baz=255						
NNSH				*e*S	**Sn**	**06 37 38.4**	**-0.1**
	baz=255						
NNS	**Nan Shan**	**0.97**	**265**	*e*P	**Pn**	**06 37 24.7**	**+0.2**
	baz=255						
NNS				S	**Sn**	**06 37 38.3**	**-0.3**
	baz=255						
YHNB	**Yeheng**	**0.97**	**278**	P	**Pn**	**06 37 24.8**	**+0.4**
	baz=276						
YHNB				S	**Sn**	**06 37 38.6**	**0.0**
	baz=276						
NSK	**Sanguang**	**0.99**	**278**	P	**Pn**	**06 37 25.0**	**+0.3**
	baz=276						

NSK				S	Sn	06 37 38.8	-0.1
	baz=276						
YM01	**YM01**	0.99	308	*e*P	Pn	06 37 23.9	-0.8
	baz=298						
YM01				*e*S	Sn	06 37 38.4	-0.6
	baz=298						
YM08	**YM08**	1.00	311	*e*P	Pn	06 37 24.7	-0.1
	baz=300						
YM08				*e*S	Sn	06 37 38.1	-1.1
	baz=300						
WHF	**Hehuan Shan**	1.13	250	P	Pn	06 37 26.8	0.0
	baz=248						
WHF				*e*S	Sn	06 37 42.0	-0.6
	baz=248						
TWT	**Tachien**	1.18	256	*e*P	Pn	06 37 27.7	+0.6
	baz=255						
TWT				*e*S	Sn	06 37 44.2	+1.0
	baz=255						
NFF	**Wufeng Townshi**	1.20	275	*e*P	Pn	06 37 27.5	+0.3
	baz=280						
NFF				*e*S	Sn	06 37 43.4	-0.1
	baz=280						
IRIF	**Iriomote-Funau**	1.20	99	P	Pn	06 37 27.1	-0.1
IRIF				S	Sn	06 37 43.7	+0.3
NCUH	**Zhongli**	1.21	291	*e*S	Sn	06 37 44.0	+0.4
	baz=289						
CHGB	**Renai**	1.24	248	P	Pn	06 37 28.1	+0.2
	baz=240						
CHGB				S	Sn	06 37 44.9	+0.3
	baz=240						
EGFH	**Guangfu**	1.26	227	*e*P	Pn	06 37 27.0	-0.9
	baz=221						
OWD	**Renai**	1.28	243	*e*P	Pn	06 37 28.4	0.0
	baz=237						
OWD				*e*S	Sn	06 37 44.7	-0.8
	baz=237						
LIOB	**Emei**	1.29	275	*e*P	Pn	06 37 28.7	+0.4
	baz=273						
LIOB				*e*S	Sn	06 37 45.6	+0.1
	baz=273						
WUSB	**Renai**	1.31	246	*e*P	Pn	06 37 29.2	+0.4
	baz=240						
WUSB				*e*S	Sn	06 37 46.1	0.0
	baz=240						
WHP	**Taichung City**	1.38	260	P	Pn	06 37 30.9	+1.4
	baz=256						
WHP				*e*S	Sn	06 37 48.6	+1.0
	baz=256						
HGSD	**Ruisui**	1.39	222	*e*P	Pn	06 37 30.6	+1.1
	baz=221						
HGSD				*e*S	Sn	06 37 47.2	-0.4
	baz=221						
VWDT	**VWDT**	1.41	237	P	Pn	06 37 30.3	+0.5
	baz=230						
VWDT				*e*S	Sn	06 37 48.0	-0.1
	baz=230						
EHY	**Hungye**	1.44	225	*e*P	Pn	06 37 29.2	-1.0
	baz=232						
WCS	**Beigang Elemen**	1.47	251	*e*P	Pn	06 37 31.5	+1.0
	baz=250						
WCS				*e*S	Sn	06 37 50.4	+1.0
	baz=250						
JKRS	**Kuro-shima**	1.47	101	P	Pn	06 37 31.2	+0.6
YULB	**Yu-li**	1.54	223	*e*P	Pn	06 37 30.7	-0.8
	baz=230						
YULB				*e*S	Sn	06 37 49.1	-2.0
	baz=230						
SMLT	**Sun Moon Lake**	1.54	245	*e*P	Pn	06 37 33.1	+1.4
	baz=237						
SSLB	**Suanglung**	1.54	241	*e*P	Pn	06 37 32.8	+1.2
	baz=234						
TYC	**Yuchr**	1.57	247	*e*P	Pn	06 37 33.3	+1.4
	baz=239						
TYC				*e*S	Sn	06 37 54.2	+2.5
	baz=239						
JIJ	**Ishigaki jima**	1.57	96	P	Pn	06 37 31.9	0.0
JIJ				*e*S	Sn	06 37 51.8	0.0
FULB	**Fuli**	1.69	218	*e*P	Pn	06 37 33.7	+0.2
	baz=211						
FULB				*e*S	Sn	06 37 54.8	+0.1
	baz=211						
YUS	**Yu-Shan**	1.71	233	*e*P	Pn	06 37 34.5	+0.4
	baz=232						
JISG	**Ishigakijimahi**	1.71	88	P	Pn	06 37 33.8	+0.1
EHD	**Haiduan**	1.78	219	*e*P	Pn	06 37 33.5	-1.2
	baz=219						
CHN5	**Tsauling**	1.85	240	*e*P	Pn	06 37 36.4	+0.7
	baz=230						
EDH	**Donghe**	1.87	214	*e*P	Pn	06 37 35.1	-0.7
	baz=209						
EDH				*e*S	Sn	06 37 57.5	-1.3
	baz=209						
JTJ	**Tarama**	2.07	87	P	Pn	06 37 38.9	+0.4
VWUC	**VWUC**	2.75	280	P	Pn	06 37 46.8	-0.7
	baz=279						

IDC 25 06:45:00.2±4.5**, 5°.20S×152°.50E, h60**^{km}±42^{km}**, mb3.2**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=61.4km s-min=23.7km az=117.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	1.01	332	P	Pn	06 45 18.4	+0.1
	2μm,0.3s,baz=168,slow=4.3,SNR=256						
KRVT				S	Sn	06 45 32.2	+0.4
	983nm,0.3s,baz=158,slow=19,SNR=30						
WRA	**Warramunga Arr**	22.95	229	P	P	06 49 58.3	-1.5
	0.8nm,0.4s,baz=54,slow=9.8,SNR=11 0.8nm,0.4s						
ASAR	**Alice Springs**	25.65	222	P	P	06 50 25.8	+1.2
	0.6nm,0.8s,baz=53,slow=9.0,SNR=8.7 0.6nm,0.8s						
ILAR	**Eielson Array**	82.64	22	P	P	06 57 16.8	-0.1
	0.2nm,0.6s,baz=235,slow=6.2,SNR=1.7 0.2nm,0.6s						

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*SOME **25** 06:52:27.1, 42°.32N×79°.85E, h10*^{km}
*KRNET **25** 06:52:27.3±0.1, 42°.38N×80°.05E, h26*^{km}*, mb2.8*
*NNC **25** 06:52:28.0±1.1, 42°.37N×79°.91E, h0*^{km}*, mb3.4, mpv3.2, Error ellipse: s-maj=7.0km s-min=5.4km az=156.0*
ISC 25 06:52:28.3±2.2**, 42°.39N**±0°.06×**79°.93E**±0°.06**, h4**^{km}±11^{km}**, n41,** σ**0**^{s}**.53**/60**, 16C-1D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	1.01	319	P	Pg	06 52 47.3	-0.3
	10nm,0.1s						
UZB				S	Sg	06 53 01.3	+0.6
	42nm,0.2s						
UZB	**Uzynbulak**	1.01	319	*e*P	Pg	06 52 47.3	-0.3
	baz=16						
UZB				*e*S	Sb	06 53 01.8	-0.3
	baz=16						
UZB	**Uzynbulak**	1.01	319	*e*P	Pg	06 52 47.3	-0.3
	10nm,0.1s						
UZB				*e*S	Sb	06 53 01.8	-0.3
	42nm,0.2s						
PRZ	**Przheval'sk**	1.13	275	⇑*i*P	Pg	06 52 50.1	+0.1
	baz=76						
PRZ				⇑*i*S	Sn	06 53 06.6	-0.6
	baz=76						
ZHN	**Zhinishke**	1.35	306	*e*P	Pn	06 52 53.8	-0.1
	baz=4.0						
ZHN				*e*S	Sg	06 53 12.7	+1.2
	baz=4.0						
ZHN	**Zhinishke**	1.35	306	*e*P	Pn	06 52 53.8	-0.1
	6.2nm,0.1s						
ZHN				*e*S	Sg	06 53 12.8	+1.2
	50nm,0.3s						
KPKS	**Kokpek**	1.41	320	P	Pn	06 52 54.5	-0.3
	16nm,0.1s						
KPKS				S	Sg	06 53 14.2	+0.6
	44nm,0.3s						
KPKS	**Kokpek**	1.41	320	*e*P	Pn	06 52 54.5	-0.3
	baz=18						
KPKS				*e*S	Sg	06 53 14.3	+0.6
	baz=18						
KPKS	**Kokpek**	1.41	320	*e*P	Pn	06 52 54.5	-0.3
	16nm,0.1s						
KPKS				*e*S	Sg	06 53 14.2	+0.6
	44nm,0.3s						
KURS	**Kuram**	1.69	311	P	Pb	06 52 59.7	-0.3
	4.9nm,0.3s						
KURS				S	Sg	06 53 22.7	0.0
	4.9nm,0.2s						
KURS	**Kuram**	1.69	311	*e*P	Pb	06 52 59.7	-0.3
	4.9nm,0.3s						
KURS				*e*S	Sg	06 53 22.7	0.0
	4.9nm,0.2s						
TARG	**Taragay, Kyrgy**	1.71	248	⇑*e*P	Pn	06 52 59.1	-0.1
	baz=50						
TARG				⇑*i*S	Sb	06 53 22.7	+0.1
	baz=50						
ANVS	**Anan'yevo**	1.71	284	⇑*i*P	Pn	06 52 59.3	+0.2
	baz=84						
ANVS				⇑*i*S	Sg	06 53 23.2	-0.2
	baz=84						
DJR	**Jarkent**	1.94	357	Pg	Pb	06 53 04.4	+0.1
	1.5nm,0.1s						
DJR				Lg	Lg	06 53 31.0	
	60nm,0.2s						
DJR	**Jarkent**	1.94	357	*e*Pg	Pb	06 53 04.4	+0.1
	1.5nm,0.1s						
DJR				*e*Lg	Lg	06 53 31.0	
	60nm,0.2s						
BLB	**Baldybastay**	2.01	329	Pg	Pb	06 53 05.0	-0.4
	18nm,0.2s						
BLB				Lg	Lg	06 53 32.4	
	42nm,0.3s						
KDJ	**Kajisay**	2.06	264	⇑*i*P	Pn	06 53 03.6	-0.1
	baz=64						
KDJ				⇑*e*S	Sb	06 53 30.9	-1.3
	baz=64						
KOTS	**Kotyrbulak**	2.24	293	Pg	Pb	06 53 09.5	+0.2
	3.7nm,0.2s						
KOTS				Lg	Lg	06 53 39.6	
	18nm,0.3s						
KOTS	**Kotyrbulak**	2.24	293	*e*P	Pb	06 53 09.5	+0.2
	3.7nm,0.2s						
KOTS				*e*S	Sg	06 53 39.6	-0.5
	18nm,0.3s						
MDOK	**Medeo**	2.26	291	Pg	Pn	06 53 08.0	+1.5
	4.4nm,0.3s						
MDOK				Lg	Lg	06 53 38.7	
	9.4nm,0.3s						
MDOK	**Medeo**	2.26	291	*e*Pg	Pb	06 53 09.0	-0.7
	4.4nm,0.3s						
MDOK				*e*Lg	Lg	06 53 38.7	
	9.4nm,0.3s						
TNSS	**Tian-Shan**	2.29	287	Pg	Pb	06 53 10.3	0.0
	3.3nm,0.2s						
TNSS				Lg	Lg	06 53 40.6	
	2.9nm,0.2s						
TNSS	**Tian-Shan**	2.29	287	*e*Pg	Pb	06 53 10.3	0.0
	3.3nm,0.2s						
TNSS				*e*Lg	Lg	06 53 40.5	
	2.9nm,0.2s						
ARXS	**Arharly**	2.38	321	Pg	Pb	06 53 11.4	-0.4
	1.3nm,0.1s						
ARXS				Lg	Lg	06 53 43.1	
	28nm,0.4s						
ARXS	**Arharly**	2.38	321	*e*Pg	Pb	06 53 11.4	-0.4
	1.3nm,0.1s						
ARXS				*e*Lg	Lg	06 53 43.1	
	28nm,0.4s						
CHKK	**Chushkaly**	2.60	305	Pg	Pb	06 53 15.0	-0.5
	2.3nm,0.2s						
CHKK				Lg	Lg	06 53 49.2	
	16nm,0.2s						
CHKK	**Chushkaly**	2.60	305	*e*Pg	Pb	06 53 15.0	-0.5
	2.3nm,0.2s						
CHKK				*e*Lg	Lg	06 53 49.2	
	16nm,0.2s						
MTBS	**Maitube**	2.68	287	Pg	Pb	06 53 16.0	-0.8
	3.7nm,0.2s						
MTBS				Lg	Lg	06 53 50.8	
	8.0nm,0.5s						
MTBS	**Maitube**	2.68	287	*e*Pg	Pb	06 53 16.0	-0.8
	3.7nm,0.2s						
MTBS				*e*Lg	Lg	06 53 50.8	
	8.0nm,0.5s						
KTBS	**Karatobe**	2.72	300	Pg	Pb	06 53 17.3	-0.2
	3.2nm,0.1s						
KTBS				Lg	Lg	06 53 53.0	
	42nm,0.2s						
KTBS	**Karatobe**	2.72	300	*e*Pg	Pb	06 53 17.3	-0.2
	3.2nm,0.1s						
KTBS				*e*Lg	Lg	06 53 53.0	
	42nm,0.2s						
ULHL	**Ulahol**	2.74	268	⇑*e*P	Pn	06 53 13.3	+0.2
	baz=69						
ULHL				⇑*e*S	Sn	06 53 47.6	+0.8
	baz=69						
BOOM	**Boomskoye usch**	2.95	273	⇑*e*P	Pn	06 53 16.3	+0.2
	baz=74						
BOOM				⇑*i*S	Sn	06 53 52.9	+0.9
	baz=74						
KST	**Kastek**	2.99	284	Pg	Pb	06 53 22.0	-0.2
	2.1nm,0.3s						
KST				Lg	Lg	06 54 01.0	
	4.7nm,0.6s						
KST	**Kastek**	2.99	284	*e*Pg	Pb	06 53 22.0	-0.2
	2.1nm,0.3s						
KST				*e*Lg	Lg	06 54 01.0	
	4.7nm,0.6s						
KUU	**Kurty**	3.02	301	Pg	Pb	06 53 22.2	-0.5
	1.4nm,0.1s						
KUU				Lg	Lg	06 54 01.2	
	9.1nm,0.2s						
KUU	**Kurty**	3.02	301	*e*Pg	Pb	06 53 22.2	-0.5
	1.4nm,0.1s						
KUU				*e*Lg	Lg	06 54 01.2	
	9.1nm,0.2s						
DGS	**Degeres**	3.17	287	Pg	Pb	06 53 25.8	+0.5
	2.0nm,0.3s						
DGS				Lg	Lg	06 54 07.8	
	7.7nm,0.4s						
DGS	**Degeres**	3.17	287	*e*Pg	Pb	06 53 25.8	+0.5
	2.0nm,0.3s						
DGS				*e*Lg	Lg	06 54 07.8	
	7.7nm,0.4s						
TKM2	**Tokmak 2**	3.24	281	⇑*i*P	Pn	06 53 20.2	+0.2
	baz=81						
TKM2				⇑*e*S	Sn	06 53 59.5	+0.4
	baz=81						
MK31	**Makanchi Array**	4.71	20	⇓Pn	Pn	06 53 40.3	+0.2
	0.1nm,0.2s,baz=203,slow=14,SNR=3.1						
MK31				⇑Sn	Sn	06 54 35.4	+0.1
	0.1nm,0.2s						
MK31				⇑Lg	Lg	06 54 55.6	
	0.4nm,0.5s,baz=201,slow=27						

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*SJA **25** 06:59:21.4±1.0, 19°.86S×69°.11W, h121*^{km}*±3*^{km}*, ML5.0, MW4.7, Hypocentre not reviewed by the ISC*
*NEIC **25** 06:59:22.1±2.5, 19°.86S±0°.05×69°.00W±0°.08, h103*^{km}*±5*^{km}*, mb5.0/39, Mww4.8/22, Mwr5.0(GUC), Error ellipse: s-maj=10.8km s-min=6.8km az=87.0*
*NEIC **25** 06:59:22.9, 19°.85S×69°.00W, h110*^{km}*, Moment Tensor Solution. Duration: 1*^{s}*.4 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*-1.05;* $M_{\theta\theta}$*0.31;* $M_{\phi\phi}$*0.74;* $M_{r\theta}$*0.78;* $M_{\theta\phi}$*-0.57;* $M_{\phi r}$*-1.73; Fault plane solution:* M_0*2.19000×10*^{16} *NP1:* ϕ_s*334.34000°, δ75.26000°, λ-85.01000°. NP2:* ϕ_s*135.39000°, δ15.54000°, λ-108.30000°. Principal axes: T 2.2177, Plg30.0000°, Azm60.0000°; N -0.0565, Plg5.0000°, Azm153.0000°; P -2.1612, Plg59.0000°, Azm251.0000°;*
*NEIC **25** 06:59:22.9, 19°.85S×69°.11W, h110*^{km}
*MOS **25** 06:59:22.9±1.2, 19°.83S×68°.82W, h123*^{km}*, mb4.7/9, Error ellipse: s-maj=17.4km s-min=8.6km az=101.6*
*GUC **25** 06:59:23.2±0.8, 19°.85S×69°.00W, h109*^{km}*±3*^{km}*, ML5.0*
*VAO **25** 06:59:23.4±0.4, 19°.70S×68°.90W, h113*^{km}*, mb4.9*
*IDC **25** 06:59:23.3±0.5, 19°.78S×68°.84W, h117*^{km}*±3*^{km}*, mb4.3/16, mbtmp4.7/21, MS3.6/11, Error ellipse: s-maj=14.6km s-min=10.5km az=84.0*
*GCMT **25** 06:59:28.1±0.3, 19°.68S±0°.02×69°.01W±0°.03, h120*^{km}*±3*^{km}*, MW4.9/95, Moment Tensor Solution. s21,c24; s95,c120; Duration: 0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*-2.12±.10;* $M_{\theta\theta}$*0.54±.11;* $M_{\phi\phi}$*1.58±.14;* $M_{r\theta}$*0.53±.07;* $M_{\theta\phi}$*-1.49±.10;* $M_{\phi r}$*-1.63±.10; Best double couple:* M_0*2.94500×10*^{16} *NP1:* ϕ_s*336.00000°, δ63.00000°, λ-77.00000°. NP2:* ϕ_s*130.00000°, δ29.00000°, λ-113.00000°. Principal axes: T 3.1530, Plg17.0000°, Azm57.0000°; N -0.4140, Plg11.0000°, Azm151.0000°; P -2.7360, Plg69.0000°, Azm272.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 25 06:59:22.0±0.3**, 19°.86S**±0°.03×**69°.02W**±0°.05**, h111**^{km}±3^{km}**, h111**^{km}**:pP-P, n280,** σ**1**^{s}**.50**/312**, mb4.9**/45**, 27C-11D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO01	**Chusmiza**	0.25	319		Pn	06 59 38.9	+0.6
GO01	**Chusmiza**	0.25	319	⇓*e*P	Pn	06 59 38.9	+0.6
GO01				*e*S	Sn	06 59 51.2	+0.8
GO01	**Chusmiza**	0.25	319	*e*P		06 59 40.0	
GO01				*e*S		06 59 51.9	
PB08	**IPOC Station P**	0.31	204		Pn	06 59 39.2	+0.9
PB08	**IPOC Station P**	0.31	204	⇓*e*P	Pn	06 59 39.2	+0.9
PB08				*e*S	Sn	06 59 51.4	+0.7
PB08	**IPOC Station P**	0.31	204	*e*P		06 59 40.0	
PB08				*e*S		06 59 52.3	
PB08				IAML		06 59 53.1	
	comp=Z,87μm,0.2s						
PB11	**IPOC Station P**	0.60	279	Pn	Pn	06 59 40.3	+0.5
PB11	**IPOC Station P**	0.60	279	⇑*i*P	Pn	06 59 40.3	+0.5
PB11				*i* S	Sn	06 59 53.8	+0.6
PB11				IAML		06 59 54.4	
	comp=N,74μm,0.3s						
PB11	**IPOC Station P**	0.60	279	*e*P		06 59 40.3	
PB11				*e*S		06 59 54.4	
PB11				IAML		06 59 56.0	
	comp=Z,39μm,0.4s						
MNMC	**Minye Minye**	0.90	323		Pn	06 59 43.5	+0.9
MNMC	**Minye Minye**	0.90	323	⇑*e*P	Pn	06 59 43.5	+0.9
MNMC				*e*S	Sn	06 59 59.4	+1.3
MNMC				IAML		07 00 01.7	
	comp=N,102μm,0.2s						
MNMCX	**Minye Minye**	0.90	323	*e*P		06 59 43.5	
MNMCX				*e*S		06 59 59.7	
MNMCX				IAML		07 00 00.6	
	comp=Z,52μm,0.4s						
TA02	**Huaiquique**	1.12	248	Pn	Pn	06 59 45.2	+0.7
TA02	**Huaiquique**	1.12	248	⇑*i*P	Pn	06 59 45.2	+0.7
TA02				*e*S	Sn	07 00 02.3	+0.8
TA02				IAML		07 00 03.5	
	comp=E,31μm,0.1s						
TA02	**Huaiquique**	1.12	248	*e*P		06 59 44.0	
TA02				*e*S		07 00 03.7	
TA02				IAML		07 00 06.2	
	comp=Z,16μm,0.1s						
PB01	**IPOC Station P**	1.26	200		Pn	06 59 46.8	+0.6
PB01	**IPOC Station P**	1.26	200	⇑*i*P	Pn	06 59 47.2	+1.1
PB01				*i* S	Sn	07 00 05.7	+1.3
PB01				IAML		07 00 06.2	
	comp=N,39μm,0.3s						
PB01	**IPOC Station P**	1.26	200	*e*P		06 59 46.0	
PB01				*e*P		06 59 47.2	
PB01				*e*S		07 00 06.0	
PB01				IAML		07 00 07.6	
	comp=Z,16μm,0.2s						
TA01	**Diego Aracena**	1.30	237	Pn	Pn	06 59 46.6	+0.1
TA01	**Diego Aracena**	1.30	237	⇑*i*P	Pn	06 59 46.9	+0.4
TA01				*e*S	Sn	07 00 05.4	+0.4
TA01	**Diego Aracena**	1.30	237	*e*P		06 59 41.4	
TA01				*e*P		06 59 46.0	
PB16	**IPOC Station P**	1.58	343	Pn	Pn	06 59 51.5	+1.0
PB16	**IPOC Station P**	1.58	343	⇓*i*P	Pn	06 59 52.0	+1.6
PB16				*e*S	Sn	07 00 13.5	+1.6
PB16	**IPOC Station P**	1.58	343	*e*P		06 59 51.0	
PB16				*e*S		07 00 16.6	
PB02	**IPOC Station P**	1.67	209		Pn	06 59 51.9	+0.9
PB02	**IPOC Station P**	1.67	209	⇑*i*P	Pn	06 59 51.8	+0.9
PB02				*e*S	Sn	07 00 13.2	+0.1
PB02				IAML		07 00 23.2	
	comp=E,21μm,0.4s						
PB02	**IPOC Station P**	1.67	209	*e*P		06 59 51.0	
PB02				*e*S		07 00 16.6	
PB02				IAML		07 00 21.7	
	comp=Z,23μm,0.4s						
PB12	**IPOC Station P**	1.75	315	Pn	Pn	06 59 52.4	+0.5
PB12	**IPOC Station P**	1.75	315	⇑*i*P	Pn	06 59 52.1	+0.1
PB12				*e*S	Sn	07 00 13.9	-0.9
PB12	**IPOC Station P**	1.75	315	*e*P		06 59 51.0	
PB12				*e*P		06 59 52.2	
PB12				*e*S		07 00 14.9	
PB12				IAML		07 00 21.2	
	comp=Z,5μm,0.7s						
AP01	**Chacalluta**	1.93	320		Pn	06 59 54.8	+0.7
AP01	**Chacalluta**	1.93	320	*e*P	Pn	06 59 55.0	+0.8
AP01				*e*S	Sn	07 00 19.0	+0.3
AP01				IAML		07 00 26.7	
	comp=N,15μm,0.4s						
AP01	**Chacalluta**	1.93	320	*e*P		06 59 54.0	
AP01				*e*S		07 00 19.6	
AP01				IAML		07 00 33.7	
	comp=Z,7μm,0.9s						
PB09	**IPOC Station P**	1.94	186		Pn	06 59 56.2	+1.8
PB09	**IPOC Station P**	1.94	186	⇑*i*P	Pn	06 59 55.9	+1.5
PB09				*e*S	Sn	07 00 20.7	+1.5
PB09				IAML		07 00 25.1	
	comp=N,11μm,0.5s						
PB09	**IPOC Station P**	1.94	186	*e*P		06 59 55.0	
PB09				*e*P		06 59 56.0	
PB09				*e*S		07 00 17.4	
PB09				IAML		07 00 25.6	
	comp=Z,9μm,0.5s						
PB07	**IPOC Station P**	2.03	203		Pn	06 59 56.5	+1.0
PB07	**IPOC Station P**	2.03	203	⇑*i*P	Pn	06 59 56.2	+0.6
PB07				*e*S	Sn	07 00 21.6	+0.5
PB07				IAML		07 00 30.4	
	comp=E,10μm,0.4s						
PB07	**IPOC Station P**	2.03	203	*e*P		06 59 55.0	
PB07				*e*P		06 59 56.0	
PB07				*e*S		07 00 22.9	
PB07				IAML		07 00 25.6	
	comp=Z,8μm,0.5s						
PB18	**Visviri**	2.30	349	Pn	Pn	07 00 02.0	+2.6
PB18	**Visviri**	2.30	349	⇑*i*P	Pn	07 00 02.4	+3.1
PB18				*e*S	Sn	07 00 29.6	+1.8
PB04	**IPOC Station P**	2.68	203	Pn	Pn	07 00 04.5	+0.6
PB04	**IPOC Station P**	2.68	203	⇑*i*P	Pn	07 00 03.9	-0.1
PB04				*e*S	Sn	07 00 30.5	-5.7
PB04	**IPOC Station P**	2.68	203	*e*P		07 00 04.0	
PB04				*e*S		07 00 36.6	
PB04				IAML		07 00 42.1	
	comp=Z,4μm,0.5s						
LVC	**Limon Verde**	2.74	178	P	Pn	07 00 06.4	+1.5
	comp=Z,1μm,0.4s,baz=24,slow=9.0,SNR=356						
LVC				S	Sn	07 00 36.0	-1.9
	comp=Z,2μm,0.4s,baz=343,slow=10,SNR=17						
LVC	**Limon Verde**	2.74	178	Pn	Pn	07 00 07.8	+2.9
LVC	**Limon Verde**	2.74	178	P	Pn	07 00 07.8	+2.9
LVC	**Limon Verde**	2.74	178	*e*P	Pn	07 00 06.9	+2.0
LVC	**Limon Verde**	2.74	178	*e*P		07 00 06.3	
LVC				*e*S		07 00 41.4	
PB06	**IPOC Station P**	2.88	190	*e*P		07 00 07.1	
PB06				*e*S		07 00 40.6	
PB06				IAML		07 00 50.6	
	comp=Z,3μm,0.4s						
PB15	**IPOC Station P**	3.36	187		Pn	07 00 14.6	+1.6
PB15	**IPOC Station P**	3.36	187	⇑*e*P	Pn	07 00 13.6	+0.6
PB15	**IPOC Station P**	3.36	187	*e*P		07 00 13.9	
PB15				*e*S		07 00 54.0	
PB15				IAML		07 01 16.7	
	comp=Z,7μm,0.3s						
LPAZ	**La Paz**	3.65	14	P	Pn	07 00 19.1	+1.8
	comp=Z,300nm,0.4s,baz=199,slow=4.7,SNR=1005						
LPAZ	**La Paz**	3.65	14	Pn	Pn	07 00 19.9	+2.7
LPAZ	**La Paz**	3.65	14	P	Pn	07 00 19.9	+2.7
LPAZ	**La Paz**	3.65	14	⇑*i*P	Pn	07 00 19.7	+2.5
LPAZ	**La Paz**	3.65	14	*e*P		07 00 20.0	
PB10	**IPOC Station P**	3.91	201		Pn	07 00 19.2	-0.9
PB10	**IPOC Station P**	3.91	201	⇑*i*P	Pn	07 00 18.8	-1.3
PB10	**IPOC Station P**	3.91	201	*e*P		07 00 13.9	
PB10				*e*P		07 00 19.6	
PB10				*e*S		07 01 07.9	
HJA	**Humahuaca**	4.74	135	*e*P		07 00 34.0	
HJA				*e*S		07 01 12.4	
PB14	**IPOC Station P**	4.92	195		Pn	07 00 34.2	+0.2
PB14	**IPOC Station P**	4.92	195	*e*P		07 00 28.4	
PB14				IAML		07 02 00.1	
	comp=Z,856nm,1.3s						
GO02	**Mina Guanaco**	5.31	186		Pn	07 00 39.8	+0.5
AC01	**Pan de Azucar**	6.43	193		Pn	07 00 52.6	-1.6
AC06	**Mina Casimiro**	7.57	189	Pn	Pn	07 01 07.5	-2.0
BBSD	**Serra de San D**	8.41	73	*e*P	Pn	07 01 18.8	-2.2
SIV	**San Ignacio**	8.49	64	P	Pn	07 01 20.0	-2.1
	comp=Z,310nm,0.5s,baz=254,slow=10,SNR=2300						
CO01	**Juntas del Tor**	10.12	185		Pn	07 01 42.1	-2.4

TICA	Tres Isletas	10.27	131	eP	Pn	07 01 46.6	+0.4
ETMB	Extrema	10.34	16	Pn	Pn	07 01 45.5	-1.8
ETMB	Extrema	10.34	16	eP	Pn	07 01 45.2	-2.1
PTLB	Pontes e Lacer	10.39	67	eP	Pn	07 01 45.2	-2.7
MURT	Porto Murtinho	10.83	102	eP	Pn	07 01 51.5	-2.3
NNA	Nana	10.85	315	S	Sn	07 03 47.5	-6.2
	comp=Z,5.3nm,0.3s,baz=226,slow=14,SNR=1.1						
VACA	Villa Angela C	10.86	137	eP	Pn	07 01 54.9	+0.7
VILB	Vilhena	10.89	52	eP	Pn	07 01 52.2	-2.6
ESFA	Espinillo Form	10.98	119	eP	Pn	07 01 55.4	-0.5
BDQN	Bodoquena, MS	11.54	95	eP	Pn	07 02 00.3	-3.1
CFA	Coronel Fontan	11.72	177	P	Pn	07 02 02.0	-3.8
	comp=Z,2.8nm,0.3s,baz=4.2,slow=16,SNR=24						
SAML	Samuel	12.23	28	eP	Pn	07 02 09.1	-3.4
AQDB	Aquidauana	12.53	95	eP	Pn	07 02 14.4	-2.0
CPUP	Villa Florida	12.54	123	P	Pn	07 02 15.9	-0.6
	comp=Z,11nm,0.7s,baz=298,slow=10,SNR=33						
CPUP				LR	LR	07 08 25.2	
	comp=Z,146nm,18.4s,baz=316,slow=44						
CZSB	Cruzeiro do Su	12.57	343	eP	Pn	07 02 14.7	-2.3
VA06	Catapilco	12.82	189	Pn	Pn	07 02 17.8	-2.3
VA03	San Esteban	12.93	186	Pn	Pn	07 02 21.0	-0.7
RVDE	Rio Verde (Bra	13.31	89	eP	Pn	07 02 23.1	-3.6
AMBA	Amambai (Brazi	13.42	106	eP	Pn	07 02 27.2	-0.8
PP1B	Ponte de Pedra	13.59	83	eP	Pn	07 02 28.9	-1.3
MECA	Mercedes	13.62	136	eP	Pn	07 02 31.3	+0.7
MT09	Talagante	13.97	187		Pn	07 02 34.7	-0.6
BO01	Tunca	14.59	187		Pn	07 02 42.3	-0.8
MCR1	Marechal Candi	14.62	111	eP	Pn	07 02 43.1	-0.3
ITQB	Itaqui	14.90	133		Pn	07 02 48.0	+1.1
ITQB	Itaqui	14.90	133	eP	Pn	07 02 47.8	+0.9
C2SB	Chapadao do Su	15.32	89	eP	Pn	07 02 52.3	0.0
CLDB	Colider	15.56	57	eP	Pn	07 02 54.0	-1.4
ATAH	Atahualpa	15.58	323	P	P	07 02 57.5	-0.4
	comp=Z,8.1nm,0.9s,baz=166,slow=8.6,SNR=5.4						
TBTG	Tabatinga, AM	15.60	357	eP	Pn	07 02 55.0	-0.9
CRSM	Crissiumal (Br	15.68	122	eP	P	07 02 57.7	-0.8
FRBT	Francisco Belt	15.91	115	eP	Pn	07 02 59.9	+0.2
RODS	Rosario do Sul	16.29	133	eP	P	07 03 04.8	-0.5
PTGB	Pitanga	16.42	110	eP	Pn	07 03 05.9	-0.1
PCMB	Pacaembu	16.71	99	eP	P	07 03 10.2	+0.3
TEFE	Tefe	16.80	15	eP	Pn	07 03 09.1	-1.6
ALGR	Alto Alegre (B	17.07	125	eP	P	07 03 14.1	+0.3
ITAB	Concordia	17.13	119	P	Pn	07 03 15.2	+0.6
ITAB	Concordia	17.13	119	eP	P	07 03 13.7	-0.8
ITRB	Iturama	17.57	93	eP	Pn	07 03 19.4	-0.6
CPSB	Cacapava Do Su	17.57	130	eP	Pn	07 03 19.8	-0.1
PLTB	Pedras Altas	18.23	134	P	P	07 03 26.5	-0.1
PLTB	Pedras Altas	18.23	134	eP	P	07 03 25.9	-0.7
NPGB	Novo Progresso	18.39	48	eP	P	07 03 26.5	-1.9
FRTB	Fartura	18.42	104	eP	P	07 03 28.5	-0.3
MACA	Manacapuru-AM	18.48	27	eP	P	07 03 28.6	-0.9
SNDB	Serra Nova Dou	18.75	68	eP	P	07 03 31.8	-0.6
CNLB	Canela	19.00	123	eP	P	07 03 35.0	-0.1
TRQA	Tornquist	19.14	163	P	P	07 03 36.7	+0.2
TRQA	Tornquist	19.14	163	P	P	07 03 36.7	+0.2
BB19B	Bebedouro	19.24	97	eP	P	07 03 37.1	-0.7
TIJ01	Guaruva-PR	19.26	110	eP	P	07 03 38.7	+0.7
SGCB	S£o Gabriel d	19.71	6	eP	P	07 03 41.3	-1.5
GO06	Curarrehue	19.77	186	P	P	07 03 44.7	+1.2
IPMB	Ipameri, GO	19.77	88	eP	P	07 03 42.7	-0.9
LR03	Panguipulli	19.92	188	P	P	07 03 46.0	+1.1
ITTB	Itaituba	20.12	42	eP	P	07 03 45.2	-2.1
RCLB	Rio Claro- Sao	20.21	101	eP	P	07 03 47.2	-1.0
SPB	Sao Paulo	20.39	104	eP	P	07 03 50.1	-0.1
BDFB	Brasilia	20.44	82	P	P	07 03 49.6	-1.2
	comp=Z,20nm,0.6s,baz=265,slow=11,SNR=38						
BDFB				LR	LR	07 12 55.5	
	comp=Z,224nm,18.4s,baz=351,slow=40						
	comp=Z,20nm,0.6s						
BDFB	Brasilia	20.44	82	P	P	07 03 50.1	-0.7
BDFB	Brasilia	20.44	82	P	P	07 03 50.1	-0.7
BDFB	Brasilia	20.44	82	eP	P	07 03 50.3	-0.5
PET01	Itanhaem-SP	20.62	106	eP	P	07 03 51.9	-0.7
VAO	Valinhos	20.77	103	eP	P	07 03 53.0	-1.3
PIAT	Ana Tenorio	20.81	333	eP	Pn	07 03 57.8	-0.8
PLCA	Paso Flores	20.85	183	P	P	07 03 56.1	+1.2
	comp=Z,35nm,1.1s,baz=9.8,slow=12,SNR=45						
	comp=Z,35nm,1.1s						
LL04	Puerto Octay	21.18	187	P	P	07 03 57.6	-0.9
PMNB	Patos De Minas	21.37	90	eP	P	07 03 59.4	-1.4
LL03	Petrohue	21.41	187	P	P	07 04 01.7	+0.8
OTAV	Otavalo	22.00	334	eP	P	07 04 06.3	-1.6
PARB	Paraibuna	22.03	103	eP	P	07 04 05.9	-1.8
FLOC	Florencia	22.28	342	eP	P	07 04 08.4	-1.8
GUVC	San Jose del G	22.54	351	eP	P	07 04 12.3	-0.6
LL06	Loncomilla	22.63	189	P	P	07 04 14.5	+0.9
MALB	Monte Alegre	22.99	41	eP	P	07 04 14.6	-2.7
PRPB	Parauapebas	23.09	57	eP	P	07 04 15.9	-2.4
BBAC	Balboa, Cauca	23.19	339	eP	P	07 04 20.5	+1.0
LL02	Futaleuf	23.39	185	P	P	07 04 21.1	+0.3
SMTB	Santa Maria do	23.43	65	eP	P	07 04 20.6	-0.9
POPC	Popayan, Colom	23.49	341	eP	P	07 04 23.3	+1.1
BOAV	Boa Vista	23.64	22	P	P	07 04 21.9	-1.4
BOAV	Boa Vista	23.64	22	eP	P	07 04 22.3	-1.0
BOAV	Boa Vista	23.64	22	eP	P	07 04 22.5	-0.8
VAS01	Vassouras-RJ	23.98	100	eP	P	07 04 27.0	+0.6
JANB	Januaria	24.04	82	eP	P	07 04 25.3	-1.7
PTGC	Puerto Gaitan,	24.10	352	eP	P	07 04 26.9	-0.5
SDBA	SAO DESIDERIO	24.30	76	eP	P	07 04 28.5	-0.9
ORTC	Ortega, Tolima	24.40	345	eP	P	07 04 29.9	-0.3
GR1C	Gorgona, Isla	24.43	337	eP	P	07 04 33.4	+3.0
AY01	Puyuhuapi	24.68	186	P	P	07 04 32.3	-0.1
DUB01	Friburgo-RJ	24.97	100	eP	P	07 04 35.9	+0.4
ROSC	El Rosal	25.09	347	P	P	07 04 38.1	+1.2
	comp=Z,4.5nm,0.4s,baz=188,slow=19,SNR=2.5						
ROSC				LR	LR	07 15 29.5	
	comp=Z,117nm,20.8s,baz=212,slow=39						
	comp=Z,4.5nm,0.4s						
MCPB	Macapa, AP	25.52	43	eP	P	07 04 40.2	-0.2
PLMC	San Jos del P	25.62	343	eP	P	07 04 41.8	+0.4
COYC	Coyhaique	25.77	185	P	P	07 04 42.2	-0.1
COYC				IAmb	IAmb	07 04 44.2	
	comp=Z,29nm,0.9s						
RUSC	La Rusia	25.90	351	eP	P	07 04 44.7	+0.4
SJMB	Sao Joao De Ma	26.29	92	eP	P	07 04 46.9	-0.4
CBOC	Ciudad Bolivar	26.47	344	eP	P	07 04 49.4	+0.3
ALF01	Guarapari-ES	26.55	97	eP	P	07 04 50.2	+0.6
BARC	Barichara	26.60	351	eP	P	07 04 50.2	-0.2
PTBC	PUERTO BERRIO,	26.77	348	eP	P	07 04 49.2	-2.4
TMAB	Tom-Au,PA,Br	26.83	52	eP	P	07 04 52.2	0.0
ZARC	Zaragoza, Cauc	27.78	348	eP	P	07 04 57.9	-2.7
GUA01	Guaratinga, BA	27.93	88	eP	P	07 05 01.3	-0.6
SDV	Santo Domingo	28.61	357	P	P	07 05 07.1	-1.0
	comp=Z,6.0nm,0.5s,baz=189,slow=11,SNR=4.2						
SDV				LR	LR	07 17 38.4	
	comp=Z,114nm,19.8s,baz=170,slow=38						
	comp=Z,6.0nm,0.5s						
SDV	Santo Domingo	28.61	357	P	P	07 05 06.6	-1.5
SDV	Santo Domingo	28.61	357	eP	P	07 05 07.5	-0.7
BAUV	El Baul	28.63	2	P	P	07 05 07.4	-0.8
BAUV				IAmb	IAmb	07 05 08.7	
	comp=Z,54nm,1.0s						
MDP	Montagnes des	29.57	35	P	P	07 05 15.9	-0.6
	comp=Z,22nm,1.2s,baz=211,slow=12,SNR=5.3						
	comp=Z,22nm,1.2s						
PCRV	Puerto La Cruz	30.15	9	P	P	07 05 21.4	-0.3
	comp=Z,8.3nm,0.3s,baz=226,slow=4.4,SNR=17						
	comp=Z,8.3nm,0.3s						
MG02	Cerro Sombrero	32.86	180	P	P	07 05 46.9	+1.9
EFI	East Falkland	32.90	167	d iP	P	07 05 46.1	+0.7
EFI				pmax	pmax		
	comp=Z,66nm,1.7s						
JTS	Las Juntas de	33.82	331	LR	LR	07 19 59.1	
	comp=Z,83nm,20.4s,baz=155,slow=36						
MG03	Isla Dawson	33.95	182	P	P	07 05 55.5	+1.0
MG03				IAmb	IAmb	07 05 57.1	
	comp=Z,24nm,0.8s						
BIM	Bigot	35.04	13	P	P	07 06 02.6	-1.7
RCBR	Riachuelo	35.08	71	eP	P	07 06 05.5	+0.7
FDF	Fort de France	35.23	13	P	P	07 06 04.4	-1.6
FDF	Fort de France	35.23	13	P	P	07 06 04.4	-1.6
FDF				pmax	pmax		
	comp=Z,57nm,1.1s						
FDF	Fort de France	35.23	13	P	P	07 06 04.1	-1.9
CRPR	Cabo Rojo, PR	37.67	3	P	P	07 06 25.0	-1.5
HUMP	Col San Antoni	37.89	5	P	P	07 06 27.3	-1.1
AOPR	Arecibo Observ	38.03	3	P	P	07 06 28.6	-1.0
AOPR				IAmb	IAmb	07 07 01.9	
	comp=Z,32nm,1.0s						
PCDR	Punta Cana, DR	38.14	1	P	P	07 06 30.7	+0.2
LRAL	Lakeview Retre	55.33	342	P	P	07 08 44.9	+0.7
LRAL				IAmb	IAmb	07 10 39.9	
	comp=Z,41nm,1.9s						
W50A	Signal Mountai	56.90	344	P	P	07 08 54.8	-0.6
W50A				IAmb	IAmb	07 09 01.3	
	comp=Z,15nm,1.1s						
TKL	Tuckaleechee C	56.95	346	LR	LR	07 34 53.4	
	comp=Z,35nm,19.5s,baz=236,slow=37						
CLTN	Cedars of Leba	58.01	343	P	P	07 09 04.1	+1.0
CLTN				IAmb	IAmb	07 09 09.8	
	comp=Z,7.9nm,0.9s						
S54A	Dingess, Beckl	58.50	349	P	P	07 09 07.1	+0.5
S54A				IAmb	IAmb	07 09 36.4	
	comp=Z,35nm,1.2s						
TXAR	Lajitas Array	59.23	325	P	P	07 09 12.3	+0.5
	comp=Z,1.4nm,0.9s,baz=140,slow=7.0,SNR=12						
TXAR				pP	pP	07 09 40.1	+0.4
	comp=Z,1.9nm,1.1s,baz=142,slow=6.3,SNR=4.1						
	comp=Z,1.4nm,0.9s						
TXAR	Lajitas Array	59.23	325	P	P	07 09 12.1	+0.2
TXAR	Lajitas Array	59.23	325	P	P	07 09 12.1	+0.2
TX32	Lajitas Array	59.23	325	P	P	07 09 11.9	+0.1
TX32				IAmb	IAmb	07 09 46.8	
	comp=Z,14nm,1.8s						
X37A	Clayton	59.66	335		P	07 09 15.5	+0.9
X37A				IAmb	IAmb	07 09 16.7	
	comp=Z,15nm,0.9s						
ABTX	Abilene, Hawle	59.84	330	P	P	07 09 16.4	+0.5
ABTX				IAmb	IAmb	07 09 45.7	
	comp=Z,11nm,0.9s						
P53A	Whipple	60.16	349	P	P	07 09 18.2	+0.3
P53A				IAmb	IAmb	07 09 25.7	
	comp=Z,22nm,1.0s						
BELA	Belgrano 2	60.38	172	P	P	07 09 20.5	+1.4
BELA				IAmb	IAmb	07 09 22.3	
	comp=Z,28nm,1.3s						
CCM	Cathedral Cave	61.28	340	P	P	07 09 25.5	0.0
CCM				IAmb	IAmb	07 09 26.4	
	comp=Z,11nm,1.1s						
CCM	Cathedral Cave	61.28	340	P	P	07 09 25.5	0.0
CCM				pmax	pmax		
	comp=Z,11nm,1.2s						
CCM	Cathedral Cave	61.28	340	P	P	07 09 24.7	-0.8
OK052	Battle Ridge R	61.46	335	P	P	07 09 26.9	+0.1
OK052				IAmb	IAmb	07 09 28.1	
	comp=Z,17nm,0.5s						
VNA3	Neumayer Olymp	61.66	162	P	P	07 09 28.6	+0.8
R40A	Maddies Statio	61.82	339	P	P	07 09 28.9	-0.3
SNAA	Sanae	63.86	161	P	P	07 09 43.8	+1.4
SNAA	Sanae	63.86	161	P	P	07 09 43.5	+1.1
SNAA				IAmb	IAmb	07 09 46.2	
	comp=Z,27nm,1.3s						
SNAA	Sanae	63.86	161	ceP	P	07 09 44.1	+1.7
SNAA				pmax	pmax		
	comp=Z,24nm,1.2s						
SADO	Sadowa	64.97	352	LR	LR	07 41 13.5	
	comp=Z,49nm,18.0s,baz=80,slow=39						
ANMO	Albuquerque	65.07	327	⇑eP	P	07 09 51.9	+1.0
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.7s						
ANMO	Albuquerque	65.07	327	P	P	07 09 51.0	0.0
ANMO				pP	pP	07 10 19.6	+0.3
TROLL	Troll, Antarti	65.58	161	P	P	07 09 55.3	+1.7
BGNE	Belgrade	66.67	336	P	P	07 10 00.7	-0.1
LIC	Lamto	68.04	74	⇑iP	P	07 10 09.1	-0.9
	comp=Z,51nm,0.4s						
TIC	Toumodi	68.22	74	⇓iP	P	07 10 10.8	-0.4
	comp=Z,8.1nm,0.2s						
SPMN	Marine on St.	68.29	342	P	P	07 10 11.1	+0.1
SPMN				IAmb	IAmb	07 10 52.5	
	comp=Z,24nm,1.7s						
KIC	Kosan Boka	68.36	74	⇑iP	P	07 10 11.2	-0.8
	comp=Z,77nm,0.5s						
DBIC	Dimbokro	68.38	74	P	P	07 10 11.4	-0.7
	comp=Z,42nm,0.6s,baz=245,slow=6.0,SNR=80						
DBIC				LR	LR	07 39 03.6	
	comp=Z,51nm,19.6s,baz=290,slow=35						
	comp=Z,42nm,0.6s						
DBIC	Dimbokro	68.38	74	P	P	07 10 11.8	-0.3
DBIC	Dimbokro	68.38	74	P	P	07 10 11.8	-0.3
DBIC				pmax	pmax		
	comp=Z,81nm,1.0s						
DBIC	Dimbokro	68.38	74	P	P	07 10 10.4	-1.7
PFO	Pinyon Flats O	69.80	319	⇑eP	P	07 10 22.4	+1.7
PFO				pmax	pmax		
	comp=Z,15nm,1.2s						
PFO	Pinyon Flats O	69.80	319	P	P	07 10 22.1	+1.5
KNB	Kanab	70.04	324	P	P	07 10 25.0	+2.9
KNB				IAmb	IAmb	07 10 25.9	
	comp=Z,19nm,1.1s						
KNB	Kanab	70.04	324	P	P	07 10 25.0	+2.9
KNB				pmax	pmax		
	comp=Z,19nm,1.1s						
QSPA	South Pole Qui	70.33	180	P	P	07 10 25.6	+2.1
	comp=Z,21nm,0.9s,baz=152,slow=3.9,SNR=36						
	comp=Z,21nm,0.9s						
QSPA	South Pole Qui	70.33	180	P	P	07 10 25.5	+2.1
QSPA				IAmb	IAmb	07 10 26.8	
	comp=Z,23nm,1.0s						
QSPA	South Pole Qui	70.33	180	P	P	07 10 24.2	+0.8
QSPA				pP	pP	07 10 51.6	-0.8
QSPA				sP	sP	07 11 06.0	+1.1
SRU	San Rafael Swe	70.35	327	P	P	07 10 25.0	+1.0
SRU	San Rafael Swe	70.35	327	P	P	07 10 25.0	+1.0
SRU				pmax	pmax		
	comp=Z,8.0nm,0.8s						
RSSD	Black Hills	71.28	334	P	P	07 10 30.2	+0.7
RSSD	Black Hills	71.28	334	P	P	07 10 30.3	+0.7
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.9s						
RSSD	Black Hills	71.28	334	P	P	07 10 30.2	+0.7
RSSD				pP	pP	07 11 00.2	+1.7
MPU	Maple Canyon	71.59	327	P	P	07 10 32.7	+1.2
ELIB	Princess Elisa	72.02	161	dP	P	07 10 33.8	+0.3
	comp=Z,8.7nm,1.2s						
ELIB				dPcP	PcP	07 10 51.3	-0.2
SPR3	Spring Creek 3	72.29	324	P	P	07 10 37.1	+1.3
DUG	Dugway, Tooele	72.34	326	P	P	07 10 37.5	+1.6
DUG	Dugway, Tooele	72.34	326	P	P	07 10 37.5	+1.6
DUG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PDAR	Pinedale Array	72.64	330	P	P	07 10 38.4	+0.6
	comp=Z,1.1nm,0.8s,baz=129,slow=5.5,SNR=8.1						
	comp=Z,1.1nm,0.8s						
HWUT	Hardware Ranch	72.74	328	P	P	07 10 38.5	+0.2
ULM	Lac du Bonnet	73.73	342	P	P	07 10 43.4	-0.2
	comp=Z,2.1nm,0.5s,baz=151,slow=5.2,SNR=5.6						
ULM				pP	pP	07 11 12.8	-0.1
	comp=Z,3.5nm,0.6s,baz=136,slow=6.5,SNR=3.2						
	comp=Z,2.1nm,0.5s						
NVAR	Mina Array Bea	74.14	322	P	P	07 10 48.1	+1.5
	comp=Z,3.2nm,0.9s,baz=158,slow=6.9,SNR=16						
NVAR				pP	pP	07 11 17.0	+1.5
	comp=Z,2.6nm,1.0s,baz=150,slow=6.1,SNR=5.2						
	comp=Z,3.2nm,0.9s						
SCHQ	Schefferville	74.41	1	P	P	07 10 47.2	-0.3
	comp=Z,3.9nm,0.8s,baz=204,slow=5.9,SNR=6.3						
	comp=Z,3.9nm,0.8s						
GCMT	Greycliff	75.02	332	P	P	07 10 52.3	+0.8
TOA0	Torodi Ar. Sit	76.91	71	P	P	07 11 01.6	-1.0
TOA0				IAmb	IAmb	07 11 03.9	
	comp=Z,16nm,0.8s						
TORD	Torodi Ar. Bea	76.91	71	P	P	07 11 02.0	-0.6
	comp=Z,116nm,0.3s,baz=243,slow=6.5,SNR=4.0						
TORD				LR	LR	07 43 47.6	
	comp=Z,65nm,19.4s,baz=284,slow=35						
VNDA	Vanda	78.44	190	P	P	07 11 11.4	+1.4
	comp=Z,2.2nm,0.9s,baz=150,slow=4.4,SNR=7.3						
	comp=Z,2.2nm,0.9s						
EDM	Edmonton	82.24	335	P	P	07 11 30.9	+0.2
EDM				IAmb	IAmb	07 11 31.9	
	comp=Z,19nm,0.8s						
EDM	Edmonton	82.24	335	P	P	07 11 30.9	+0.2
EDM				pmax	pmax		
	comp=Z,19nm,0.8s						
ESDC	Sonseca Array	84.74	45	P	P	07 11 44.0	+0.1
	comp=Z,4.5nm,1.1s,baz=248,slow=6.1,SNR=6.4						
ESDC				pP	pP	07 12 14.7	+0.7
	comp=Z,3.5nm,1.0s,baz=250,slow=5.5,SNR=5.4						
	comp=Z,4.5nm,1.1s						
LBTB	Lobatse	85.80	115	LR	LR	07 45 59.9	
	comp=Z,41nm,18.6s,baz=174,slow=33						
SFJD	Kangerlussuaq	87.68	7	LR	LR	07 52 20.2	
	comp=Z,27nm,19.5s,baz=110,slow=36						
YKA	Yellowknife Ar	89.61	341	P	P	07 12 07.4	+0.8
	comp=Z,9.9nm,0.9s,baz=135,slow=4.9,SNR=143						
YKA				pP	pP	07 12 37.5	+0.6
	comp=Z,2.8nm,0.6s,baz=132,slow=5.1,SNR=4.8						
	comp=Z,9.9nm,0.9s						
NOA	NORSAR Array B	102.55	29	PKKPbc	PKKPbc	07 29 08.8	+1.0
	comp=Z,1.1nm,0.6s,baz=129,slow=4.6,SNR=7.2						
NACGM	Naroch	109.31	38	ePdif	Pdif	07 13 36.5	+0.8
	baz=264						
MNK	Minsk	109.89	38	i P	Pdif	07 13 35.4	-2.9
	comp=E,3.0nm,0.8s						
MNK				i P	Pdif	07 13 35.4	-2.9
	comp=N,27nm,0.7s						
MNK				i P	Pdif	07 13 35.4	-2.9
	comp=Z,6.0nm,0.7s,baz=264						
MNK				i pP	pPdif	07 14 06.0	-2.7
MNK				i PP	PP	07 18 13.5	-0.7
MNK				i PPP	PPP	07 20 30.3	
MNK				i SKP		07 21 04.4	
MNK				i SS	SS	07 33 32.5	+2.2
MNK				i SSS	SSS	07 37 39.5	
MNK				i LRM	MLR	08 05 03.4	
	comp=Z,170nm,16.0s						
MNK				i LRM	MLR	08 05 19.6	
	comp=N,850nm,16.6s						
MNK				i LRM	MLR	08 05 31.1	
	comp=E,12nm,10.8s						
MNK	Minsk	109.89	38	i P	Pdif	07 13 35.3	-2.9
MNK				i		07 18 13.5	
MNK				i SS	SS	07 33 32.5	+2.1
MNK				i SSS	SSS	07 37 39.4	
MNK				pmax	pmax		
	comp=N,27nm,0.7s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MNK				MLR	MLR		
	comp=Z,170nm,16.0s						
MNK				MLR	MLR		
	comp=N,850nm,17.0s						
MNK				MLR	MLR		
	comp=E,12nm,11.0s						
OBN	Obninsk	114.94	38	i PKIKP	PKiKP	07 17 49.1	-0.3
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
STKA	Stephens Creek	120.78	210	⇑iPKIKP	PKiKP	07 18 02.5	+0.8
BILL	Bilibino	120.96	339	ePKIKP	PKiKP	07 18 01.5	+0.7
BILL				e		07 18 31.4	
BILL				e		07 19 33.6	
BILL				ePPP	PPP	07 22 09.0	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BELG	Belogornoye	121.70	40	⇓iPKIKP	PKPdf	07 18 01.2	-1.3
ARU	Arti	126.85	33	⇓iPKIKP	PKiKP	07 18 13.3	+0.5
TIXI	Tiksi	127.16	353	⇓ePKIKP	PKPdf	07 18 12.0	-0.5
SEY	Seymchan	128.55	337	⇑iPKIKP	PKiKP	07 18 17.1	+1.1
ASAR	Alice Springs	131.31	208	PKP	PKPdf	07 18 22.4	+0.4
	comp=Z,2.1nm,0.8s,baz=120,slow=1.6,SNR=23						
ASAR				pPKP	pPKPdf	07 18 53.3	+0.1
	comp=Z,0.6nm,0.4s,baz=115,slow=1.6,SNR=3.4						
ASAR				SKPbc	SKPbc	07 21 35.9	-1.1
	comp=Z,1.9nm,1.0s,baz=143,slow=4.2,SNR=9.1						
WRA	Warramunga Arr	134.30	211	PKhKP	PKPpre	07 18 16.5	
	comp=Z,0.5nm,0.9s,baz=190,slow=1.4,SNR=4.9						
WRA				PKP	PKPdf	07 18 28.3	+0.7
	comp=Z,1.4nm,0.5s,baz=148,slow=1.7,SNR=34						
WRA				pPKP	pPKPdf	07 18 59.3	+0.4
	comp=Z,0.5nm,0.4s,baz=147,slow=1.6,SNR=2.1						
WRA				SKPbc	SKPbc	07 21 45.7	-1.6
	comp=Z,1.6nm,1.0s,baz=156,slow=3.0,SNR=7.6						
WRAB	Tennant Creek	134.31	211	⇑iPKIKP	PKPdf	07 18 27.8	+0.1
KURK	Kurchatov	140.00	32	P	Pdif	07 15 47.0	-5.3
ZALV	Zalesovo Beam	140.51	24	PKP	PKPdf	07 18 36.2	-1.7
	comp=Z,0.7nm,0.4s,baz=302,slow=2.7,SNR=3.6						
AAK	Ala-Archa	141.84	45	pPKP	pPKPdf	07 19 12.0	-0.5
	comp=Z,2.6nm,0.6s,baz=332,slow=20,SNR=3.6						
ZEA	Zeya	143.94	344	ePKIKP	PKPdf	07 18 43.5	-0.6
KSH	Kashi	144.13	49	PKP	PKiKP	07 18 47.0	-1.6
KSH				pPKP	pPKPdf	07 19 13.0	-3.7
KSH				sPKP		07 19 24.3	
KSH				SKS	SKSdf	07 25 42.3	-2.3
MK31	Makanchi Array	144.36	34	⇑ePKIKP	PKPdf	07 18 44.6	-0.5
MKAR	Makanchi Array	144.36	34	PKP	PKPbc	07 18 44.3	+0.5
	comp=Z,0.6nm,0.4s,baz=335,slow=2.6,SNR=13						
MKAR				pPKP	pPKPdf	07 19 16.8	+0.1
	comp=Z,0.6nm,0.5s,baz=315,slow=4.3,SNR=3.5						
MKAR				SKPbc	SKPbc	07 22 13.3	-0.8
	comp=Z,0.7nm,0.9s,baz=318,slow=1.9,SNR=2.9						
MKAR	Makanchi Array	144.36	34	c iPKIKP	PKPdf	07 18 46.4	+1.3
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
DGZ	Jazzator, Alta	144.79	27	⇓iPKIKP	PKPdf	07 18 46.1	+0.2
ERM	Erimo	144.97	316	⇑ePKIKP	PKPdf	07 18 46.4	+0.2
KLR	Kul'dur	146.29	335	PKPbc	PKPdf	07 18 48.9	+0.6
	comp=Z,3.8nm,0.8s,baz=16,slow=3.5,SNR=13						
KLR				pPKPbc	pPKPab	07 19 21.2	-0.1
	comp=Z,2.7nm,0.9s,baz=78,slow=5.3,SNR=2.4						
KLR	Kul'dur	146.29	335	⇑ePKP2	PKPbc	07 18 49.6	0.0
HEH	HeiHe	146.98	341	eP	PKiKP	07 18 54.0	+0.1
HEH				pmax	pmax		
	comp=Z,14nm,0.9s						
HEH				pmax	pmax		
	comp=Z,180nm,5.5s						
MOY	Mondy	147.30	12	ePKP2	PKiKP	07 18 56.6	+1.8
MOY				pmax	pmax		
	comp=Z,16nm,1.7s						
ZAK	Zakamensk	148.93	10	ePKP2	PKiKP	07 18 57.8	-0.3
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
WMQ	Urumqi	149.18	34	eP	PKPdf	07 18 53.8	+0.5
USRK	Ussuriysk Ar.	150.06	329	PKPbc	PKiKP	07 19 00.8	+0.3
	comp=Z,8.0nm,0.9s,baz=4.3,slow=0.6,SNR=15						
BNX	BinXian	150.85	336	⇑P	PKiKP	07 19 02.0	-0.1
BNX				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BNX				pmax	pmax		
	comp=Z,63nm,5.4s						
MJAR	Matsushiro Arr	150.95	311	PKPbc	PKPbc	07 19 02.2	+0.1
	comp=Z,3.4nm,0.7s,baz=78,slow=1.7,SNR=12						
MJAR				pPKPbc	pPKPbc	07 19 34.3	+1.0
	comp=Z,1.2nm,0.5s,baz=92,slow=0.9,SNR=2.4						
SONM	Songino Array	151.84	7	PKP	PKPdf	07 18 58.2	+0.8
	comp=Z,0.9nm,0.9s,baz=222,slow=2.0,SNR=5.4						
SONM				PKPbc	PKiKP	07 19 04.9	+0.6
	comp=Z,0.9nm,0.3s,baz=301,slow=1.6,SNR=14						
SONM				pPKPbc	pPKPbc	07 19 35.6	+0.3
	comp=Z,3.2nm,0.6s,baz=303,slow=1.2,SNR=6.4						
GTA	Gaotai	158.27	24	ePKPbc	PKPdf	07 19 08.0	+1.6
HHC	Hu-ho-hao-te	159.07	359	eP	PKPdf	07 19 08.0	+0.7
BTO	Baotou	159.30	2	ePKP	PKPdf	07 19 14.5	+6.9
BTO				PP	PP	07 23 34.0	+8.3
LZH	Lanzhou	162.66	20	PKP	PKPdf	07 19 12.5	+1.1
LZH				pPKP	pPKPdf	07 19 37.5	-5.7
LZH				sPKP		07 19 46.0	
LZH				PKP	PKPab	07 20 04.5	+4.3
NJ2	Nanjing	165.95	331	eP	PKPdf	07 19 13.3	-0.9
NJ2				pP	pPKPdf	07 19 42.5	-3.4
NJ2				sP	sPKPdf	07 19 55.3	-2.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,140nm,3.8s						
PZH	PanZhiHua	169.24	50	PKP	PKPdf	07 19 15.5	-1.4

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*IDC **25** 07:12:14.7±4.9, 36°.24N×71°.07E, h81^{km}±31^{km}, mb3.3/5, mbtmp3.7/9, Error ellipse: s-maj=52.5km s-min=19.1km az=151.0*

*NNC **25** 07:12:24.5±11.0, 37°.09N×69°.81E, h0^{km}, mb3.9, mpv3.8, Error ellipse: s-maj=121.4km s-min=80.8km az=153.0*

ISC 25 07:12:23.2±1.5**, 36°.7N**±0°.1×**70°.8E**±0°.1**, h150^{km}, n14, σ2^{s}.34**/17**, mb3.6**/5**, 2C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.37	358	⇓P	Pn	07 13 54.2	-0.6
	3.2nm,0.3s,baz=182,slow=14,SNR=40						
KK31				⇓S	Sn	07 15 06.4	-0.1
	1.9nm,0.3s,baz=189,slow=24,SNR=5.6						
AAK	Ala-Archa	6.55	25	P	Pn	07 13 54.5	-2.8
	2.2nm,0.3s,baz=209,slow=9.8,SNR=11						
AAK				S	Sn	07 15 09.5	-1.5
	2.8nm,0.7s,baz=324,slow=21,SNR=6.9						
GEYT	Alibeck	10.17	281	P	Pn	07 14 42.6	-3.0
	2.0nm,0.4s,baz=125,slow=10,SNR=9.6						
GEYT				S	Sn	07 16 35.7	-2.4
	1.4nm,0.3s,baz=125,slow=48,SNR=2.1						

MKAR	Makanchi Array	13.20	37	P	Pn	07 15 23.2	-1.7
	0.1nm,0.5s,baz=220,slow=14,SNR=1.7						
AB31	Akbulak array	14.80	331	⇑P	P	07 15 46.3	-0.7
	0.4nm,0.3s,baz=138,slow=13,SNR=46						
KURBB	Kurchatov Arra	14.95	19	P	P	07 15 47.0	-1.7
	0.4nm,0.6s,baz=206,slow=10.0,SNR=6.6						
AKTO	Aktyubinsk	16.50	330	P	Pn	07 16 07.8	+2.0
	1.4nm,0.3s,baz=145,slow=16,SNR=5.1						
AKTO	Aktyubinsk	16.50	330	⇑P	Pn	07 16 09.2	+3.4
	1.4nm,0.7s						
ZALV	Zalesovo Beam	19.77	25	P	P	07 16 41.4	-0.1
	0.9nm,0.3s,baz=201,slow=9.9,SNR=4.0						
	0.9nm,0.3s						
FINES	FINESS Array B	37.20	326	P	P	07 19 23.5	+3.9
	1.0nm,0.9s,baz=120,slow=11,SNR=4.7						
	1.0nm,0.9s						
ARCES	ARCESS Array B	40.87	338	P	P	07 19 53.6	+3.6
	3.2nm,1.0s,baz=99,slow=7.6,SNR=6.3						
	3.2nm,1.0s						
NOA	NORSAR Array B	44.10	323	P	P	07 20 17.1	+0.9
	0.4nm,0.6s,baz=104,slow=7.5,SNR=2.1						
	0.4nm,0.6s						
TORD	Torodi Ar. Bea	65.56	268	P	P	07 22 50.8	-0.3
	1.1nm,0.3s,baz=54,slow=5.7,SNR=1.4						
YKA	Yellowknife Ar	81.02	3	P	P	07 24 21.8	+0.9
	0.1nm,0.4s,baz=345,slow=4.9,SNR=3.2						
	0.1nm,0.4s						

IDC ***25*** *07:19:44.4±4.3, 36°.95N×71°.78E, h95^{km}±27^{km}, mb3.7/10, mbtmp4.1/15, Error ellipse: s-maj=45.6km s-min=18.8km az=156.0*

SOME ***25*** *07:19:47.9, 38°.48N×72°.30E, h10^{km}*

MOS ***25*** *07:19:48.0±0.9, 37°.29N×71°.67E, h124^{km}, mb4.2/6, Error ellipse: s-maj=11.4km s-min=5.6km az=87.6*

NEIC ***25*** *07:19:49.2±1.5, 37°.36N±0°.06×71°.68E±0°.08, h115^{km}±7^{km}, mb4.3/18, Error ellipse: s-maj=10.2km s-min=8.1km az=123.0*

NNC ***25*** *07:19:53.4±9.1, 37°.79N×70°.50E, h0^{km}, mb4.4, mpv4.3, Error ellipse: s-maj=117.6km s-min=67.9km az=126.0*

ISC 25 07:19:46.1±0.5**, 37°.13N**±0°.05×**71°.67E**±0°.05**, h100**^{km}**, n133,** σ**1^{s}.65**/130**, mb4.1**/27**, 8C-7D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.15	331	Pn	Pn	07 20 22.9	+2.0
DRK	Karamyk	2.35	2		Pn	07 20 21.4	-2.2
CHGR	Chuyangaron	2.51	308	Pn	Pn	07 20 26.7	+1.3
CHGR	Chuyangaron	2.51	308	PN	Pn	07 20 26.7	+1.3
BTK	Batken	3.00	347		Pn	07 20 35.0	+3.0
BTK	Batken	3.00	347	PN	Pn	07 20 35.0	+3.0
CEP	Cherat	3.30	177	P	Pn	07 20 42.7	+6.7
CEP				S	Sn	07 21 24.0	+9.5
KBL	Kabul	3.35	220	Pn	Pn	07 20 42.1	+5.4
KBL	Kabul	3.35	220	PN	Pn	07 20 42.2	+5.4
CHCP	Chirah Chowk	3.70	159	P	Pn	07 20 47.3	+6.0
NIL	Nilore	3.70	159	Pn	Pn	07 20 47.5	+6.3
NIL	Nilore	3.70	159	PN	Pn	07 20 47.6	+6.3
KSH	Kashi	4.14	53	P	Pn	07 20 45.3	-2.0
KSH				sP		07 21 09.5	
KSH				S	Sn	07 21 26.8	-8.0
KSH				pmax	pmax		
	comp=Z,140nm,0.6s						
KSH				smax	smax		
	comp=N,370nm,1.0s						
KSH				smax	smax		
	comp=E,230nm,0.6s						
KSH				LR	LR		
	comp=N,170nm,7.6s						
KSH				LR	LR		
	comp=E,120nm,5.5s						
KSH				LR	LR		
	comp=Z,180nm,7.5s						
THW	Thamme Wali	4.32	179	P	Pn	07 20 55.0	+5.3
JMU	Jammu	5.14	148	*e*S	Sn	07 21 59.6	+0.9
IUG	Iuzhnay	5.17	346	*e*Pg	Pn	07 21 03.3	+2.1
	comp=Z,22nm,0.3s						
IUG				*e*Lg	Lg	07 21 56.2	
	comp=Z,52nm,0.5s						
AML	Almayashu	5.24	17	P	Pn	07 21 03.6	+1.2
	SNR=42						
NRN	Naryn	5.46	37		Pn	07 21 05.9	+0.6
NRN	Naryn	5.46	37	PN	Pn	07 21 05.9	+0.6
UCH	Uchtor	5.55	22	P	Pn	07 21 08.3	+1.7
	SNR=23						
MRKS	Merke	5.74	12	*e*Pg	Pn	07 21 11.5	+2.6
	comp=Z,14nm,0.3s						
MRKS				*e*Lg	Lg	07 22 10.4	
	comp=Z,92nm,0.4s						
THN	Thein Dam	5.74	143	*e*P	Pn	07 21 13.7	+4.7
THN				*e*S	Sn	07 22 14.1	+0.6
THN				IAML		07 22 15.6	
	comp=E,213nm,0.4s						
THN				IAML		07 22 19.7	
	comp=N,236nm,0.3s						
EKS2	Erkin-Say	5.76	16	P	Pn	07 21 11.4	+2.1
	SNR=23						
DZA	Taraz	5.77	358	*e*Pg	Pn	07 21 11.3	+2.0
	comp=N,139nm,0.3s						
DZA				*e*Lg	Lg	07 22 09.5	
	comp=N,122nm,0.3s						
AAK	Ala-Archa	5.92	21	P	Pn	07 21 13.5	+2.1
	SNR=33						
AAK	Ala-Archa	5.92	21	P	Pn	07 21 13.2	+1.8
	comp=N,20nm,0.3s,baz=164,slow=3.4,SNR=54						
AAK				S	Sn	07 22 15.8	-2.1
	comp=N,24nm,0.5s,baz=130,slow=23,SNR=24						
AAK	Ala-Archa	5.92	21	Pn	Pn	07 21 12.8	+1.4
AAK	Ala-Archa	5.92	21	*c e*PN	Pn	07 21 13.3	+1.9
KK31	Karatay Array	6.04	352	Pn	Pn	07 21 13.9	+1.0
KK31	Karatay Array	6.04	352	⇑P	Pn	07 21 14.1	+1.2
	comp=N,12nm,0.3s,baz=174,slow=13,SNR=178						
KK31				⇑S	Sn	07 22 16.7	-3.8
	comp=N,12nm,0.4s,baz=170,slow=37,SNR=3.5						
KK31	Karatay Array	6.04	352	PN	Pn	07 21 13.9	+1.0
KKAR	Karatay Array	6.04	352		Pn	07 21 13.6	+0.7
KKAR	Karatay Array	6.04	352	PN	Pn	07 21 13.6	+0.7
DHRM	DHARAMSHALA	6.18	141	*e*P	Pn	07 21 17.6	+2.5
DHRM				*e*S	Sn	07 22 23.7	-0.8
DHRM				IAML		07 22 26.3	
	comp=E,657nm,0.6s						
ULHL	Ulahol	6.21	33	P	Pn	07 21 17.2	+1.7
	SNR=8.1						
BOOM	Boomskoye usch	6.29	30		Pn	07 21 17.7	+1.3
BOOM	Boomskoye usch	6.29	30	PN	Pn	07 21 17.7	+1.3
CHMS	Chumysh	6.32	21	P	Pn	07 21 18.7	+1.9
	SNR=7.3						
USP	Ospenovka	6.51	19	P	Pn	07 21 20.6	+1.3
	SNR=5.8						
TKM2	Tokmak 2	6.53	26	P	Pn	07 21 21.5	+1.8
	SNR=9.6						
TARG	Taragay, Kyrgy	6.61	44		Pn	07 21 22.4	+1.4
TARG	Taragay, Kyrgy	6.61	44	PN	Pn	07 21 22.4	+1.4
KST	Kastek	6.76	28	*e*Pg	Pn	07 21 27.2	+4.3
	comp=E,2.8nm,0.4s						
KST				*e*Lg	Lg	07 22 37.3	
	comp=E,14nm,0.6s						
DGS	Degeres	6.87	26	*e*Pg	Pn	07 21 28.6	+4.3
	comp=E,5.6nm,0.6s						
DGS				*e*Lg	Lg	07 22 38.9	
	comp=E,6.5nm,0.6s						
BHK	Bhakra	6.92	144	*e*S	Sn	07 22 40.6	-1.5
BHK				IAML		07 22 44.2	
	comp=E,218nm,0.5s						
BHK				IAML		07 22 44.4	
	comp=N,110nm,0.2s						
SMLA	Simla	7.52	141	*e*P	Pn	07 21 35.4	+2.4
SMLA				*e*P		07 21 35.6	
SMLA				*e*S	Sn	07 22 52.9	-3.7
SMLA				*e*S		07 22 53.0	
SMLA				*e*S		07 22 53.1	
SMLA				IAML		07 22 57.2	
	comp=E,135nm,0.3s						
SMLA				IAML		07 22 57.2	
	comp=E,149nm,0.3s						
SMLA				IAML		07 22 58.7	
	comp=N,126nm,0.2s						
SMLA				IAML		07 22 58.7	
	comp=N,145nm,0.2s						
BTLS	Baital	8.11	12	*e*Pg	Pn	07 21 54.7	+14
	comp=N,1.0nm,0.2s						
BTLS				*e*Lg	Lg	07 23 23.6	
	comp=N,5.9nm,0.5s						
KUDL	Kundal	9.83	154	*e*S	Sn	07 23 49.0	-4.1
GEYT	Alibeck	10.79	278	P	Pn	07 22 16.0	-1.6
	comp=N,4.2nm,0.3s,baz=109,slow=11,SNR=18						
GEYT				S	Sn	07 24 10.0	-6.4
	comp=N,5.0nm,0.5s,baz=334,slow=27,SNR=8.1						
GEYT	Alibeck	10.79	278		Pn	07 22 16.1	-1.6
GEYT	Alibeck	10.79	278	P	Pn	07 22 16.1	-1.6
GYA0B	ALIBECK ARRAY	10.79	278		Pn	07 22 16.8	-0.8
MKAR	Makanchi Array	12.47	36	P	Pn	07 22 40.2	+0.3
	comp=N,0.4nm,0.4s,baz=223,slow=11,SNR=3.3						
PYUN	Piuthan	13.11	130	*e*P	Pn	07 22 47.1	-1.5
	comp=N,24nm,0.4s						
DANN	Dangsing	13.41	127	*e*P	Pn	07 22 50.9	-1.8
	comp=N,16nm,0.4s						
WMQ	Urumqi	13.90	56	*e*P	P	07 23 02.3	-1.3
WMQ				pmax	pmax		
	comp=Z,20nm,0.6s						
WMQ				smax	smax		
	comp=N,16nm,0.5s						
WMQ				smax	smax		
	comp=E,30nm,0.3s						
GKN	Gorkha	14.21	126	*e*P	Pn	07 23 01.8	-1.1
	comp=E,23nm,0.3s						
KURBB	Kurchatov Arra	14.36	18	P	Pn	07 23 02.4	-2.1
	comp=E,0.3nm,0.8s,baz=205,slow=11,SNR=3.3						
KURK	Kurchatov	14.47	18	⇑*e*P	P	07 23 09.0	-0.8
KURK				pmax	pmax		
	comp=Z,6.0nm,2.1s						
DMN	Daman	14.78	126	*e*P	Pn	07 23 08.8	-1.5
	comp=Z,19nm,0.4s						
AB31	Akbulak array	14.81	329	P	Pn	07 23 09.5	-0.8
	comp=Z,1.4nm,0.5s,baz=137,slow=15,SNR=32						
ABKAR	Akbulak array	14.81	329	Pn	Pn	07 23 08.5	-1.8
PKIN	Phulchoki	14.99	125	*e*P	Pn	07 23 12.0	-1.0
	comp=Z,13nm,0.4s						
PKI	Pulchoki	15.00	125	*e*P	Pn	07 23 12.4	-0.8
	comp=Z,7.3nm,0.2s						
GUN	Gumba	15.09	123	*e*P	Pn	07 23 12.5	-1.8
	comp=Z,11nm,0.3s						
JIRN	Jiri	15.46	123	*e*P	Pn	07 23 17.8	-1.2
	comp=Z,42nm,0.4s						
BVAR	Borovoye Array	15.93	357	P	Pn	07 23 24.0	-0.2
	comp=Z,1.3nm,0.4s,baz=156,slow=10,SNR=8.5						
BRVK	Borovoye	15.96	357	P	Pn	07 23 25.0	+0.3
BRVK	Borovoye	15.96	357	⇓*e*P	P	07 23 26.4	+0.1
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
RAMN	Ramite	16.20	124	*e*P	Pn	07 23 26.1	-2.1
	comp=Z,25nm,0.4s						
AKTO	Aktyubinsk	16.52	328	P	Pn	07 23 32.6	+1.0
	comp=Z,5.8nm,0.4s,baz=134,slow=9.5,SNR=18						
AKTO	Aktyubinsk	16.52	328	⇑P	Pn	07 23 32.4	+0.7
	comp=Z,3.2nm,0.5s						
TAPN	Taplejung	16.69	121	*e*P	Pn	07 23 32.2	-2.0
	comp=Z,5.0nm,0.3s						
DGZ	Jazzator, Alta	16.96	37	⇑*e*P	Pn	07 23 37.1	-0.1
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.4s						
ZAA0	Zalesovo Array	19.12	24	P	P	07 24 00.7	-0.3
ZALV	Zalesovo Beam	19.12	24	P	P	07 24 00.7	-0.3
	comp=Z,2.0nm,0.3s,baz=219,slow=10,SNR=11						
ZALV	Zalesovo Beam	19.12	24	P	P	07 24 00.4	-0.6
ZALV	Zalesovo Beam	19.12	24	*i* P	P	07 24 00.8	-0.2
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
SHL	Shillong	20.71	118	P	Pn	07 24 20.4	-1.5
SHL				IAmb	IAmb	07 24 44.0	
	comp=Z,11nm,0.3s						
SHL	Shillong	20.71	118	P	Pn	07 24 20.4	-1.5
SHL				pmax	pmax		
	comp=Z,11nm,0.3s						
ARU	Arti	21.23	340	P	P	07 24 23.0	-0.7
	comp=Z,4.0nm,0.2s,baz=132,slow=5.1,SNR=4.2						
	comp=Z,4.0nm,0.2s						
ARU	Arti	21.23	340	P	P	07 24 23.3	-0.4
ARU	Arti	21.23	340	*c i*P	P	07 24 24.0	+0.3
ARU						07 24 53.7	
ARU				S	S	07 28 13.0	-0.8
ARU				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BELG	Belogornoye	22.75	320	⇓*i*P	P	07 24 40.2	+0.5
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PZH	PanZhiHua	27.56	104	P	P	07 25 26.5	+2.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,40nm,4.9s						
ULN	Ulaanbaatar	27.98	56	⇓*e*P	P	07 25 27.2	-0.2
ULN				pmax	pmax		
	comp=Z,6.0nm,2.4s						
BR131	Keskin Array S	29.76	287	⇓*e*P	P	07 25 43.4	+0.1
OBN	Obninsk	29.82	318	*e*P	P	07 25 42.6	-0.8
OBN				*e**PP	pP	07 26 10.0	+3.1
OBN				*e*		07 26 44.9	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HHC	Hu-ho-hao-te	31.05	71	*e*P	P	07 25 59.0	+4.4
HHC				pmax	pmax		
	comp=Z,27nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,5.6s						
AKASG	Malin Array Be	32.98	308	P	P	07 26 11.3	+0.1
	comp=Z,0.2nm,0.3s,baz=81,slow=5.6,SNR=4.1						
	comp=Z,0.2nm,0.3s						
AKASG	Malin Array Be	32.98	308	*i* P	P	07 26 11.8	+0.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NRIK	Noril'sk	33.42	10	P	P	07 26 15.1	+0.3
	comp=Z,0.9nm,0.3s,baz=213,slow=1.5,SNR=4.3						
	comp=Z,0.9nm,0.3s						
NRIK	Noril'sk	33.42	10	⇓*e*P	P	07 26 15.3	+0.5
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FINES	FINESS Array B	37.27	325	P	P	07 26 48.4	+0.5
	comp=Z,1.6nm,0.4s,baz=118,slow=9.0,SNR=23						
	comp=Z,1.6nm,0.4s						
FINES	FINESS Array B	37.27	325	*i* P	P	07 26 48.7	+0.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
VADS	Vadso	39.92	339	*e*P	P	07 27 10.8	+0.9
ARA0	ARCESS Array S	40.77	337	*e*P	P	07 27 18.0	+1.0
ARCES	ARCESS Array B	40.77	337	P	P	07 27 17.5	+0.5
	comp=Z,1.4nm,0.4s,baz=112,slow=8.1,SNR=22						
	comp=Z,1.4nm,0.4s						
ARCES	ARCESS Array B	40.77	337	P	P	07 27 17.4	+0.4
ARCES	ARCESS Array B	40.77	337	P	P	07 27 17.4	+0.4
ARCES				pmax	pmax		
	comp=Z,31nm,1.5s						
KTK1	Kautokeino	41.26	336	*e*P	P	07 27 21.4	+0.4
JETT	Jettan, Norway	42.41	336	*e*P	P	07 27 31.6	+1.3
YAK	Yakutsk	43.15	36	⇑*e*P	P	07 27 37.7	+1.4
YAK				pmax	pmax		
	comp=Z,19nm,0.6s						
MOR8	Moi Rana	43.54	330	*e*P	P	07 27 39.2	-0.3
NC602	NORSAR Array S	44.03	322	P	P	07 27 43.4	-0.1
NC602	NORSAR Array S	44.03	322	*e*P	P	07 27 43.8	+0.3
NC303	NORSAR Array S	44.15	323	P	P	07 27 44.7	+0.3
NB2	NORSAR Subarra	44.21	323	P	P	07 27 45.2	+0.2
	comp=Z,1.7nm,0.5s,baz=93,slow=7.9						
NB2	NORSAR Subarra	44.21	323	P	P	07 27 45.2	+0.2
	baz=93,slow=7.9						
NOA	NORSAR Array B	44.21	323	P	P	07 27 45.1	+0.2
	comp=Z,1.7nm,0.6s,baz=108,slow=7.2,SNR=12						
	comp=Z,1.7nm,0.6s						
KONO	Kongsberg	44.94	321	P	P	07 27 51.0	+0.3
KONO	Kongsberg	44.94	321	P	P	07 27 51.0	+0.3
KONO				pmax	pmax		
	comp=Z,55nm,1.5s						
TIXI	Tiksi	44.99	22	⇓*e*P	P	07 27 50.4	-0.6
TIXI				pmax	pmax		
	comp=Z,8.0nm,3.0s						
USA0B	Ussuriysk Arra	45.40	61	⇓*e*P	P	07 27 54.9	+0.4
LODK	Lodwar	47.27	234	P	P	07 28 12.7	+3.1
LODK				IAmb	IAmb	07 28 51.7	
	comp=Z,3.1nm,1.0s						
ESDC	Sonseca Array	57.64	298	P	P	07 29 26.6	+0.7
	comp=Z,0.9nm,0.5s,baz=60,slow=7.7,SNR=9.8						
	comp=Z,0.9nm,0.5s						
TORD	Torodi Ar. Bea	66.27	269	P	P	07 30 23.2	-0.7
	comp=Z,9.1nm,0.3s,baz=40,slow=5.1,SNR=4.1						
A36M	Sachs Harbour	70.53	6	P	P	07 30 49.6	0.0
A36M				IAmb	IAmb	07 30 50.5	
	comp=Z,2.4nm,0.8s						
IMAR	Indian Mountai	71.42	18	P	P	07 30 54.2	-0.9
BMAR	Burnt Mountain	72.21	14	P	P	07 31 00.0	+0.2
INK	Inuvik	73.20	10	P	P	07 31 05.3	-0.3
	comp=Z,0.9nm,0.5s,baz=335,slow=7.4,SNR=12						
	comp=Z,0.9nm,0.5s						
INK	Inuvik	73.20	10	P	P	07 31 05.5	-0.1
INK	Inuvik	73.20	10	P	P	07 31 05.5	-0.1
INK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
K20K	Telida	73.44	20	P	P	07 31 06.8	-0.3
K20K				IAmb	IAmb	07 31 30.7	
	comp=Z,5.1nm,1.4s						
CAST	Castle Rocks	73.92	19	P	P	07 31 09.7	-0.2
CAST				IAmb	IAmb	07 31 48.0	
	comp=Z,3.7nm,1.3s						
ILAR	Eielson Array	74.03	16	P	P	07 31 09.2	-1.3
	comp=Z,0.3nm,0.8s,baz=319,slow=4.8,SNR=4.6						
	comp=Z,0.3nm,0.8s						
KTH	Kantishna Hill	74.10	18	P	P	07 31 10.5	-0.5
KTH				IAmb	IAmb	07 31 11.7	
	comp=Z,7.3nm,1.3s						
SCRK	Sand Creek	75.35	15	P	P	07 31 18.0	-0.3
SCRK				IAmb	IAmb	07 31 41.2	
	comp=Z,6.6nm,1.4s						
SML	Sawmill	76.22	18	P	P	07 31 22.4	-0.8
SML				IAmb	IAmb	07 31 59.6	
	comp=Z,8.5nm,1.2s						
SCM	Sheep Creek Mo	76.45	18	P	P	07 31 23.9	-0.7
SCM				IAmb	IAmb	07 32 06.5	
	comp=Z,15nm,1.3s						
SCM	Sheep Creek Mo	76.45	18	P	P	07 31 23.9	-0.7
SCM				pmax	pmax		
	comp=Z,15nm,1.3s						
BCAR	Beaver Creek A	76.62	15	P	P	07 31 25.6	+0.2
YKA	Yellowknife Ar	80.60	3	P	P	07 31 46.9	-0.3
	comp=Z,0.7nm,0.4s,baz=351,slow=5.4,SNR=20						
	comp=Z,0.7nm,0.4s						

TEH ***25*** *07:38:37.3, 28°.37N×57°.22E, h8^{km}±45^{km}, ML4.3*

NEIC ***25*** *07:38:37.0±1.8, 28°.27N±0°.08×57°.1E±0°.1, h10^{km}±1^{km}, mb4.5/49, Error ellipse: s-maj=16.0km s-min=12.5km az=107.0*

MOS ***25*** *07:38:37.2±0.9, 28°.30N×57°.12E, h25^{km}, mb4.5/27, Error ellipse: s-maj=8.1km s-min=5.0km az=98.9*

OMAN ***25*** *07:38:40.3±0.4, 28°.21N×57°.10E, h10^{km}±5^{km}, mb4.9/9, ml4.0/17, Error ellipse: s-maj=7.8km s-min=1.8km az=29.0*

IDC ***25*** *07:38:40.6±1.9, 28°.25N×57°.12E, h42^{km}±20^{km}, mb3.9/23, mbtmp4.1/29, ML3.9/6, MS3.5/5, Error ellipse: s-maj=13.1km s-min=11.0km az=64.0*

DSN ***25*** *07:38:41.5±1.9, 28°.05N×57°.36E, h10^{km}, ML3.9/9, Error ellipse: s-maj=52.7km s-min=13.4km az=127.0*

ISC 25 07:38:38.1±0.8**, 28°.32N**±0°.03×**57°.18E**±0°.03**, h17**^{km}±3^{km}**, n299,** σ**1^{s}.62**/301**, mb4.4**/76**, MS3.5**/4**, 10C-13D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNJ	Kahnooj	0.59	128	Pg	Pg	07 38 50.1	+0.3
IBND	Bandar-abas	1.03	213	Pg	Pb	07 38 59.3	+1.8
GENO	Geno	1.28	225	Pg	Pn	07 39 03.4	+2.1
BNDS	Bandar-Abbas	1.28	225	Pg	Pg	07 39 03.5	+0.7
NGRK	Negar Kerman	1.38	344	Pg	Pn	07 39 03.4	+0.5
NGRK				Sg	Sb	07 39 22.2	+1.0
KBAM	BAM	1.38	54	Pg	Pn	07 39 02.7	0.0
KBAM				Sg	Sn	07 39 20.2	-0.5
CHMN	Cheshme madani	1.57	11	Pg	Pn	07 39 06.4	+0.9
KRBR	Kerman	1.70	348	Pg	Pn	07 39 08.4	+1.2
TVBK	TV Kerman	1.70	348	Pg	Pn	07 39 08.9	+1.6
KHGB	Koh Gabri	2.14	344	Pn	Pn	07 39 15.8	+2.5
SHME	Shamm	2.44	203	*e*P	Pn	07 39 18.3	+1.2
	SNR=55						
SHME				S	Sn	07 39 48.2	+1.7
SHME	Shamm	2.44	203	P	Pn	07 39 18.3	+1.2
	SNR=55						
SHME				S	Sn	07 39 49.7	+3.2
SHME	Shamm	2.44	203	Pn	Pn	07 39 18.5	+1.4
BANOM	Banah	2.51	198	*e*P	Pn	07 39 19.3	+1.3
	SNR=30						
BANOM	Banah	2.51	198	P	Pn	07 39 19.5	+1.4
	SNR=105						
BANOM				S	Sb	07 39 53.6	+0.3
BANOM	Banah	2.51	198	Pn	Pn	07 39 19.4	+1.3
JASK	Jask - Hormozg	2.52	166	P	Pn	07 39 20.1	+2.0
JASK	Jask - Hormozg	2.52	166	Pn	Pn	07 39 20.3	+2.1
LAR1	LAR	2.56	256	Pn	Pn	07 39 21.0	+2.2
ZRDN	Zarand Kerman	2.70	348	Pn	Pn	07 39 23.3	+2.4
MASF	Masafi	3.07	197	P	Pn	07 39 28.2	+2.3
MSFE	Esma-Masafi	3.08	197	P	Pn	07 39 28.4	+2.5
MSFE	Esma-Masafi	3.08	197	Pn	Pn	07 39 27.4	+1.4
UMQ	Umm Al-Quwin	3.09	206	P	Pn	07 39 26.3	+0.3
UMQ	Umm Al-Quwin	3.09	206	Pn	Pn	07 39 28.3	+2.2
MDH	Madha	3.11	195	P	Pn	07 39 26.7	+0.4
MDH	Madha	3.11	195	P	Pn	07 39 26.8	+0.5
MDH	Madha	3.11	195	Pn	Pn	07 39 27.3	+1.0
ZHDN	Zahedan	3.36	70	Pn	Pn	07 39 32.4	+2.4
UOSS	Minazif	3.47	195		Pn	07 39 31.8	+0.5
UOSS	Minazif	3.47	195	P	Pn	07 39 33.8	+2.5
UOSS	Minazif	3.47	195	P	Pn	07 39 33.1	+1.8
IBAF	Bafgh	3.55	337	Pn	Pn	07 39 34.9	+2.4
NAZ	Nazwa, Dubai	3.58	203	P	Pn	07 39 36.7	+3.9
NAZ				S	Sn	07 40 18.3	+3.6
NAZ	Nazwa, Dubai	3.58	203	Pn	Pn	07 39 35.1	+2.3
HATD	Hatta, Dubai	3.60	195	P	Pn	07 39 34.0	+0.9
HATD	Hatta, Dubai	3.60	195	P	Pn	07 39 36.5	+3.5
HATD	Hatta, Dubai	3.60	195	Pn	Pn	07 39 35.8	+2.7
QIR1	Qir	3.65	273	Pn	Pn	07 39 36.6	+2.9
LMD1	Lamerd	3.69	256	Pn	Pn	07 39 36.8	+2.6
ASHO	Ashiyiah	3.75	196	*i* P	Pn	07 39 37.3	+2.1
	SNR=12						
ASHO	Ashiyiah	3.75	196	P	Pn	07 39 37.8	+2.6
	SNR=14						
ASHO	Ashiyiah	3.75	196	Pn	Pn	07 39 37.4	+2.1
IMEH	Mehriz	3.79	325	Pn	Pn	07 39 39.0	+3.1
FAQ	Al Faqa, Dubai	3.83	202	*i* P	Pn	07 39 39.0	+2.8
	SNR=11						
FAQ	Al Faqa, Dubai	3.83	202	P	Pn	07 39 37.3	+1.1
	SNR=11						
FAQ	Al Faqa, Dubai	3.83	202	Pn	Pn	07 39 37.4	+1.2
NHDN	Nehbandan	3.95	38	Pn	Pn	07 39 39.9	+1.9
CHBR	Chabahar	4.00	132	Pn	Pn	07 39 40.8	+2.2
BSRN	Basiran	4.01	24	Pn	Pn	07 39 40.8	+2.0
ASUD	Al Ashush, Dub	4.03	205	*i* P	Pn	07 39 41.6	+2.6
	SNR=107						
ASUD	Al Ashush, Dub	4.03	205	P	Pn	07 39 41.6	+2.6
	SNR=107						
ASUD				S	Sn	07 40 28.1	+2.3
ESRB	Sir Abu	4.05	221	Pn	Pn	07 39 40.4	+1.1
SOHO	SOHO	4.21	188	P	Pn	07 39 41.1	-0.3
SOHO	SOHO	4.21	188	Pn	Pn	07 39 41.1	-0.3
AJN	Ajban	4.22	208	*i* P	Pn	07 39 43.8	+2.2
	SNR=12						
AJN	Ajban	4.22	208	P	Pn	07 39 43.7	+2.1
	SNR=7.8						
AJN	Ajban	4.22	208	Pn	Pn	07 39 43.2	+1.6
IKOO	Kooshah	4.39	21	Pn	Pn	07 39 46.3	+2.2
ALNE	Al Ain	4.43	197	P	Pn	07 39 47.1	+2.6
ALNE	Al Ain	4.43	197	Pn	Pn	07 39 47.0	+2.5
ICHK	Chekchek	4.59	329	Pn	Pn	07 39 50.0	+3.1
NGCH	Negor - Chabah	4.60	129	P	Pn	07 39 49.4	+2.6
	SNR=11						
NGCH	Negor - Chabah	4.60	129	Pn	Pn	07 39 49.2	+2.4
YZKH	Yazd	4.64	332	Pn	Pn	07 39 50.6	+3.2
SRVN	Saravan	4.71	100	Pn	Pn	07 39 50.8	+2.4
HOQ	Hoqain	4.71	179	P	Pn	07 39 49.0	+0.5
	SNR=15						
HOQ				S	Sn	07 40 43.5	+0.7
TPRV	Parvadeh(Tabas	4.72	355	Pn	Pn	07 39 51.4	+2.9
BIDO	Bidbid	4.85	170	P	Pn	07 39 50.5	+0.2
	SNR=5.9						
BIDO				S	Sn	07 40 47.3	+1.3
BIDO	Bidbid	4.85	170	Pn	Pn	07 39 50.3	+0.1
ARQ	Araqi	4.99	187	P	Pn	07 39 55.0	+2.7
	SNR=17						
AHBU	AHRAM	5.20	277	Pn	Pn	07 39 58.1	+3.0
DSBU	Dashti - Bushe	5.22	272	Pn	Pn	07 39 57.3	+2.0
WSAR	Wadi Sarin	5.22	165	P	Pn	07 39 56.6	+1.3
	11nm,0.3s,baz=14,slow=8.0,SNR=76						
WSAR				S	Sn	07 40 52.6	-2.6
	64nm,0.5s,baz=91,slow=22,SNR=10						
	22nm,0.3s						
TKDS	Koohdasht(Taba	5.28	359	Pn	Pn	07 39 59.1	+2.8
SMDO	Samad	5.29	171	P	Pn	07 39 57.9	+1.5
	SNR=12						

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IMON  Monand             5.31  23  Pn     Pn     07 40 00.0 +3.2
TABS  Tabas              5.32 359  Pn     Pn     07 40 00.3 +3.6
AFRZ  Afriz              5.33  17  Pn     Pn     07 39 59.7 +2.7
MZWR  Madinat Zayed      5.42 214  Pn     Pn     07 39 59.2 +1.1
IRAM  Ramesheh           5.42 311  Pn     Pn     07 40 00.6 +2.3
BSY   Bisya              5.55 180  P      Pn     07 40 02.3 +2.4
      SNR=9.7
BSY                                S      Sn     07 41 06.3 +3.0
KLNJ  Kolanjah           5.55 300  Pn     Pn     07 40 02.5 +2.2
TNSJ  Nastanj            5.65 355  Pn     Pn     07 40 03.6 +2.2
ANAR  Anarak             5.69 329  Pn     Pn     07 40 04.7 +2.8
GHWR  Ruwais             5.81 223  Pn     Pn     07 40 04.5 +1.0
UMZA  Um Al Zommool      5.87 199  Pn     Pn     07 40 06.0 +1.7
WBK   Wadi Bani Khal     5.91 164  P      Pn     07 40 05.7 +0.8
      SNR=5.1
WBK                                S      Sn     07 41 12.1 -0.1
SHRT  Shahrakht          5.95  26  Pn     Pn     07 40 06.4 +1.0
JMDO  Jabal Madar        5.98 172  P      Pn     07 40 06.7 +0.9
JMDO                               S      Sn     07 41 14.1 +0.2
IGAR  Gharneh            6.03 314  Pn     Pn     07 40 09.1 +2.5
SHMA  Al-Shehemyia       6.06 248  P      Pn     07 40 06.8 -0.1
IZEF  Zefreh             6.19 319  Pn     Pn     07 40 11.2 +2.3
IBRJ  Brojen             6.25 306  Pn     Pn     07 40 12.5 +2.7
MZR   Muzera             6.26 213  P      Pn     07 40 09.4 -0.2
MZR   Muzera             6.26 213  Pn     Pn     07 40 11.2 +1.6
SAKB  Bahrain            6.36 250  P      Pn     07 40 12.0 +1.0
SAKB                               S      Sn     07 41 21.6 -1.6
JLN   Jalan Bani Buh     6.46 161  P      Pn     07 40 12.6 +0.2
JLN                                S      Sn     07 41 25.2 -0.6
SHK1  Shahrekord         6.75 308  Pn     Pn     07 40 19.1 +2.5
IKLH  Kolahrood          6.93 317  Pn     Pn     07 40 21.8 +2.7
IPIR  Pirpir             6.96 310  Pn     Pn     07 40 22.1 +2.6
KRSH  Karshahi           7.10 324  Pn     Pn     07 40 24.6 +3.3
MHTO  MHTO               7.33 174  P      Pn     07 40 25.1 +0.8
      SNR=8.3
MHTO                               S      Sn     07 41 46.5 -0.7
QAMS  Qamsar             7.33 319  Pn     Pn     07 40 27.1 +2.5
ISFB  Sefidab            7.35 326  Pn     Pn     07 40 27.7 +3.0
TBJM  Torbat-e-JAM       7.43  20  Pn     Pn     07 40 28.7 +2.9
AMIS  Naft Sefid         7.62 298  Pn     Pn     07 40 30.7 +2.4
SHRO  Shahrood           7.71 353  Pn     Pn     07 40 33.0 +3.2
SBZV  Sabzevar           8.06   2  Pn     Pn     07 40 37.5 +3.0
IVRN  Varamin            8.12 326  Pn     Pn     07 40 37.8 +2.6
IPAY  Payeh              8.26  10  Pn     Pn     07 40 40.5 +3.3
DQM   DQM                8.36 178  P      Pn     07 40 37.3 -1.2
DQM                                S      Sn     07 42 09.5 -2.9
IAKL  Akhelmad           8.37   9  Pn     Pn     07 40 41.7 +2.9
GEYT  Alibeck            9.62   4  P      Pn     07 40 57.3 +1.6
      1.1nm,0.3s,baz=184,slow=14,SNR=2.4
GEYT                               Lg     Lg     07 43 42.3
      1.0nm,0.3s,baz=211,slow=30,SNR=2.2
GEYT                               LR     LR     07 45 06.3
      comp=Z,193nm,19.8s,baz=160,slow=40
      1.3nm,0.3s
GEYT  Alibeck            9.62   4  Pn     Pn     07 40 56.7 +1.0
GEYT  Alibeck            9.62   4  P      Pn     07 40 56.7 +1.0
GYA0B ALIBECK ARRAY      9.62   4  Pn     Pn     07 40 57.6 +1.9
SHAO  Shalim            10.35 188  P      Pn     07 41 03.8 -1.9
      SNR=6.7
DMTO  DMTO              10.75 191  P      Pn     07 41 09.1 -2.1
      SNR=22
WHFO  Wadi Hawf         10.81 198  P      Pn     07 41 09.5 -2.6
RAYN  Ar Rayn           11.54 248  Pn     Pn     07 41 19.3 -2.8
RAYN  Ar Rayn           11.54 248  P      Pn     07 41 19.3 -2.8
GAR   Garm              15.25  42  P      Pn     07 42 17.8 +5.1
GAR                                IAmb   IAmb   07 42 19.2
      comp=Z,11nm,0.8s
GEVA  Gevas             15.43 314  P      Pn     07 42 17.4 +2.3
GNI   Garni             15.64 322  P      Pn     07 42 19.6 +1.8
      comp=Z,1.3nm,0.3s,baz=1.2,slow=5.6,SNR=1.8
      comp=Z,3.5nm,0.3s
GNI   Garni             15.64 322ceP      Pn     07 42 16.8 -1.0
GURO  Guroymak-BITLI    16.23 313  P      Pn     07 42 26.5 +1.1
GURO                               IAmb   IAmb   07 42 38.0
      comp=Z,12nm,0.4s
BTK   Batken            16.24  40  P      Pn     07 42 26.8 +1.3
BTK   Batken            16.24  40  P      Pn     07 42 26.8 +1.3
BTK                                pmax   pmax
      comp=Z,9.0nm,1.2s
AKH   Akhalkalaki       17.20 323  P      Pn     07 42 39.3 +1.7
AKH   Akhalkalaki       17.20 323  P      Pn     07 42 39.3 +1.7
AKH                                pmax   pmax
      comp=Z,14nm,0.9s
ZEI   Tsey              18.00 327 eP      Pn     07 42 48.3 +0.7
ZEI                                pmax   pmax
      comp=Z,6.0nm,0.8s
KK31  Karatay Array     18.27  33         Pn     07 42 51.4 +0.7
KK31  Karatay Array     18.27  33  P      Pn     07 42 51.4 +0.7
KK31                               pmax   pmax
      comp=Z,5.0nm,0.9s
KKAR  Karatay Array     18.27  33         Pn     07 42 51.4 +0.8
KKAR  Karatay Array     18.27  33  P      Pn     07 42 51.4 +0.8
NCK   Nalchik           18.68 328⇓eP      P      07 42 55.1 -0.2
NCK                                pmax   pmax
      comp=Z,16nm,0.4s
GAZ   Gaziantep         18.95 303  P      P      07 42 58.1 -0.3
KSH   Kashi             19.15  49  P      P      07 42 58.5 -2.1
KSH                                pP     pP     07 43 08.0 +2.2
KSH                                sP     sP     07 43 12.0 +3.6
KSH                                PP     PnPn   07 43 15.0 +0.7
KSH                                sS     Sn     07 46 38.3 +2.6
KSH                                pmax   pmax
      comp=Z,14nm,0.9s
KSH                                LR     LR
      comp=N,120nm,6.4s
KSH                                LR     LR
      comp=E,87nm,5.3s
KBZ   Khabaz            19.19 327  P      P      07 43 00.6 -0.2
      comp=E,0.1nm,0.3s,baz=175,slow=13,SNR=1.2
      comp=E,1.3nm,0.6s
KBZ   Khabaz            19.19 327⇓eP      P      07 43 00.7 -0.2
KBZ                                pmax   pmax
      comp=Z,3.0nm,0.9s
MMAI  Mount Meron Ar    19.30 289  P      P      07 43 02.6 +0.3
      comp=Z,0.5nm,0.3s,baz=102,slow=13,SNR=3.2
      comp=Z,0.5nm,0.3s
KIV   Kislovodsk        19.46 327 eP      P      07 43 03.5 -0.5
KIV                                pmax   pmax
      comp=Z,8.0nm,1.0s
EIL   Elat              19.49 279  P      P      07 43 04.3 +0.1
      comp=Z,0.2nm,0.3s,baz=177,slow=22,SNR=1.5
      comp=Z,2.1nm,0.6s
AAK   Ala-Archa         20.02  40  P      P      07 43 11.1 +1.0
      comp=Z,2.8nm,0.8s,baz=270,slow=5.2,SNR=6.4
      comp=Z,2.8nm,0.8s
AAK   Ala-Archa         20.02  40  P      P      07 43 10.8 +0.6
AAK   Ala-Archa         20.02  40⇑eP      P      07 43 11.7 +1.6
AAK                                pmax   pmax
      comp=Z,5.0nm,1.0s
NRN   Naryn             20.18  45  P      P      07 43 12.7 +0.6
NRN   Naryn             20.18  45  P      P      07 43 12.7 +0.6
NRN                                pmax   pmax
      comp=Z,6.0nm,0.8s
BNN   Bunyan            20.60 306  P      P      07 43 16.3 -0.1
BOOM  Boomskoye usch    20.77  42  P      P      07 43 19.8 +1.6
BOOM                               IAmb   IAmb   07 43 21.8
      comp=Z,16nm,1.4s
BOOM  Boomskoye usch    20.77  42  P      P      07 43 19.8 +1.6
BOOM                               pmax   pmax
      comp=Z,16nm,1.4s
ABKAR Akbulak array     21.02   5  P      P      07 43 21.6 +0.9
KDJ   Kajisay           21.31  44  P      P      07 43 25.3 +1.2
KDJ                                IAmb   IAmb   07 43 28.4
      comp=Z,13nm,1.1s
KDJ   Kajisay           21.31  44  P      P      07 43 25.3 +1.2
KDJ                                pmax   pmax
      comp=Z,13nm,1.1s
AKTO  Aktyubinsk        22.10   1  P      P      07 43 33.4 +1.1
      comp=Z,9.0nm,0.4s,baz=177,slow=9.3,SNR=25
AKTO                               LR     LR     07 54 23.6
      comp=Z,89nm,19.2s,baz=216,slow=42
      comp=Z,9.0nm,0.4s
BR131 Keskin Array S    22.52 306  P      P      07 43 36.6 -0.5
BR131                              IAmb   IAmb   07 43 39.1
      comp=Z,8.0nm,0.8s
BR131 Keskin Array S    22.52 306⇓eP      P      07 43 37.6 +0.5
BRTR  Keskin Array B    22.52 306  P      P      07 43 37.0  0.0
      comp=Z,5.4nm,0.8s,baz=125,slow=11,SNR=27
      comp=Z,5.4nm,0.8s
BRTR  Keskin Array B    22.52 306  P      P      07 43 36.9 -0.2
BRTR  Keskin Array B    22.52 306ceP      P      07 43 37.7 +0.6
BRTR                               pmax   pmax
      comp=Z,6.0nm,0.9s
PYUN  Piuthan           22.74  84 eP      P      07 43 40.4 +0.8
      comp=Z,18nm,0.7s
ANN   Anapa             22.76 322 eP      P      07 43 36.0 -3.4
ANN                               e*PP    pP     07 43 45.7 +0.9
ANN                               ePPP    PPP    07 44 11.5
ANN                               eS      S      07 47 42.0 -5.4
ANN                                pmax   pmax
      comp=Z,41nm,1.1s
ANTO  Ankara            23.18 306  P      P      07 43 43.5 -0.3
ANTO                               IAmb   IAmb   07 43 46.0
      comp=Z,8.7nm,0.5s
ANTO  Ankara            23.18 306  P      P      07 43 43.5 -0.3
ANTO                               pmax   pmax
      comp=Z,9.0nm,0.5s
DANN  Dangsing          23.38  84 eP      P      07 43 47.4 +1.1
MDUB  Mudurnu           24.54 306  P      P      07 43 55.7 -1.2
BORA  Eskisehir         24.86 305  P      P      07 43 59.3 -0.5
BORA                               IAmb   IAmb   07 44 03.3
      comp=Z,6.3nm,0.8s
PKI   Pulchoki          24.93  85 eP      P      07 44 00.5 -0.3
BELG  Belogornoye       25.09 346  P      P      07 44 01.3 -0.2
      comp=Z,12nm,0.8s,baz=257,slow=1.9,SNR=4.5
      comp=Z,12nm,0.8s
BELG  Belogornoye       25.09 346ceP      P      07 44 00.7 -0.8
BELG                               pmax   pmax
      comp=Z,3.0nm,0.9s
GUN   Gumba             25.30  84 eP      P      07 44 05.3 +1.2
      comp=Z,46nm,0.9s
JIRN  Jiri              25.60  85 eP      P      07 44 08.3 +1.3
      comp=Z,10nm,0.4s
RAMN  Ramite            26.07  86 eP      P      07 44 11.0 -0.1
      comp=Z,6.0nm,0.4s
BVAR  Borovoye Array    26.55  18  P      P      07 44 15.2 +0.4
      comp=Z,5.4nm,0.8s,baz=199,slow=8.8,SNR=20
BVAR                               LR     LR     07 56 12.0
      comp=Z,118nm,19.4s,baz=272,slow=40
      comp=Z,5.4nm,0.8s
BRVK  Borovoye          26.55  18  P      P      07 44 15.3 +0.4
BRVK  Borovoye          26.55  18  P      P      07 44 15.3 +0.4
BRVK                               pmax   pmax
      comp=Z,3.0nm,0.8s
MK31  Makanchi Array    26.95  40  P      P      07 44 18.8 +0.2
MK31  Makanchi Array    26.95  40deP      P      07 44 19.1 +0.5
MKAR  Makanchi Array    26.95  40  P      P      07 44 18.9 +0.3
      comp=Z,1.1nm,0.5s,baz=222,slow=8.4,SNR=19
      comp=Z,1.1nm,0.5s
MKAR  Makanchi Array    26.95  40ceP      P      07 44 19.2 +0.6
MKAR                               pmax   pmax
      comp=Z,1.0nm,0.4s
KURBB Kurchatov Arra    27.52  30  P      P      07 44 23.4 -0.2
      comp=Z,1.0nm,0.8s,baz=230,slow=8.5,SNR=11
      comp=Z,1.0nm,0.8s
KURK  Kurchatov         27.63  30⇓eP      P      07 44 25.4 +0.8
KURK                               pmax   pmax
      comp=Z,19nm,4.5s
ARU   Arti              28.11   2⇓eP      P      07 44 28.8  0.0
IDI   Anoyia            28.22 292  P      P      07 44 30.4 +0.2
      comp=Z,4.5nm,0.8s,baz=15,slow=11,SNR=2.0
      comp=Z,4.5nm,0.8s
IDI   Anoyia            28.22 292  P      P      07 44 30.0 -0.1
IDI                                IAmb   IAmb   07 44 52.3
      comp=Z,15nm,1.1s
WMQ   Urumqi            28.91  49 eP      P      07 44 44.0 +7.8
WMQ                                pmax   pmax
      comp=Z,7.0nm,1.5s
OBN   Obninsk           30.64 337 eP      P      07 44 51.2  0.0
OBN                               e              07 45 52.6
OBN                                pmax   pmax
      comp=Z,6.0nm,1.1s
KIRV  Kirov             30.74 352⇓eP      P      07 44 52.3 +0.3
AKASG Malin Array Be    30.75 324  P      P      07 44 51.2 -1.0
      comp=Z,1.5nm,0.3s,baz=131,slow=8.3,SNR=9.8
      comp=Z,1.5nm,0.3s
AKASG Malin Array Be    30.75 324ceP      P      07 44 51.4 -0.8
AKASG                              pmax   pmax
      comp=Z,2.0nm,0.3s
AKBB  Malin Array Si    30.75 324⇓eP      P      07 44 51.2 -1.0
AKBB                               pmax   pmax
      comp=Z,6.0nm,0.6s
ITM   Ithomi            30.80 296  P      P      07 44 52.0 -0.8
ITM                                IAmb   IAmb   07 45 19.9
      comp=Z,13nm,1.4s
BURAR Bucovina Array    31.40 317  P      P      07 44 57.8 -0.4
DGZ   Jazzator, Alta    31.42  39⇑iP      P      07 44 59.2 +0.8
DGZ                                pmax   pmax
      comp=Z,2.0nm,0.6s
BUR08 Bucovina Ar. S    31.42 317  P      P      07 44 58.4  0.0
BUR08                              IAmb   IAmb   07 45 11.2
      comp=Z,3.9nm,1.1s
ZAA0  Zalesovo Array    32.62  31  P      P      07 45 08.6  0.0
ZAA0                               IAmb   IAmb   07 45 09.4
      comp=Z,4.3nm,0.8s
ZALV  Zalesovo Beam     32.62  31  P      P      07 45 08.9 +0.3
      comp=Z,3.4nm,0.3s,baz=240,slow=9.2,SNR=13
      comp=Z,3.4nm,0.3s
ZALV  Zalesovo Beam     32.62  31  P      P      07 45 08.8 +0.1
LANS  Liptovska Anna    35.52 316 eP      P      07 45 35.1 +1.1
LANS                               pmax   pmax
      comp=Z,2.0nm,0.9s
LANS  Liptovska Anna    35.52 316 eP      P      07 45 35.1 +1.1
VYHS  Vyhne             35.68 315 eP      P      07 45 35.1 -0.2
VYHS                               pmax   pmax
      comp=Z,4.0nm,1.1s
VYHS  Vyhne             35.68 315 eP      P      07 45 35.1 -0.2
OJC   Ojcow             35.74 318  P      P      07 45 35.8  0.0
OJC   Ojcow             35.74 318  P      P      07 45 35.8  0.0
OJC                                pmax   pmax
      comp=Z,19nm,0.5s
PABE  Paberze           36.13 328  P      P      07 45 38.9 -0.1
JAVC  Velka Javorina    36.53 315 eP      P      07 45 43.2 +0.6
VSU   Vasula            36.78 334deP      P      07 45 44.3 -0.2
VSU                                pmax   pmax
      comp=Z,32nm,0.6s
GTA   Gaotai            36.79  61 eP      P      07 45 46.0 +1.0
GTA                                pP     sP     07 45 54.5 +1.2
GTA                                pmax   pmax
      comp=Z,7.0nm,0.7s
MORC  Moravsky Berou    36.92 316  P      P      07 45 45.1 -0.9
MORC                               IAmb   IAmb   07 45 46.0
      comp=Z,4.9nm,0.7s
MORC  Moravsky Berou    36.92 316 eP      P      07 45 45.1 -0.9
MORC  Moravsky Berou    36.92 316  P      P      07 45 45.1 -0.9
MORC                               pmax   pmax
      comp=Z,5.0nm,0.7s
RONA  Rosalia, Austr    37.04 313 i P     P      07 45 46.7 -0.3
      comp=Z,4.4nm,0.6s
VRAC  Vranov            37.34 315 eP      P      07 45 48.6 -0.9
KRUC  Moravsky          37.39 315 eP      P      07 45 49.4 -0.5
KLNR  Kaliningrad       37.48 325⇑eP      P      07 45 50.5  0.0
KLNR                               pmax   pmax
      comp=Z,71nm,0.6s
KRLC  Kraliky           37.49 317 eP      P      07 45 49.8 -0.9
KRLC  Kraliky           37.49 317 eP      P      07 45 49.8 -0.9
DPC   Dobruska-Polom    37.86 317 eP      P      07 45 53.2 -0.7
DPC   Dobruska-Polom    37.86 317 eP      P      07 45 53.2 -0.7
OSTC  Ostas             37.99 317 eP      P      07 45 54.4 -0.6
OSTC  Ostas             37.99 317 eP      P      07 45 54.4 -0.6
CHVC  Chvalec           38.10 317 eP      P      07 45 55.5 -0.4
CHVC  Chvalec           38.10 317 eP      P      07 45 55.5 -0.4
MBAR  Mbarara           38.33 226  LR     LR     08 03 43.3
      comp=Z,89nm,18.0s,baz=309,slow=39
MOA   Molln             38.40 312 i P     P      07 45 57.5 -1.0
      comp=Z,6.3nm,0.6s
BIOA  Bad Ischl, Aus    38.77 312 i P     P      07 46 01.1 -0.5
      comp=Z,11nm,1.1s
KBA   Koelnbreinsper    38.82 311 i P     P      07 46 01.7 -0.5
      comp=Z,3.8nm,0.9s
GERES GERESS Array B    39.02 314  P      P      07 46 03.2 -0.6
      comp=Z,1.8nm,0.6s,baz=113,slow=8.8,SNR=16
      comp=Z,1.8nm,0.6s
GERES GERESS Array B    39.02 314  P      P      07 46 02.7 -1.0
FINES FINESS Array B    39.05 337  P      P      07 46 03.1 -0.6
      comp=Z,2.1nm,0.4s,baz=134,slow=9.5,SNR=34
      comp=Z,2.1nm,0.4s
FINES FINESS Array B    39.05 337  P      P      07 46 02.9 -0.8
FINES FINESS Array B    39.05 337 i P     P      07 46 03.2 -0.5
FINES                              pmax   pmax
      comp=Z,2.0nm,0.4s
KHC   Kasperske Hory    39.18 314 eP      P      07 46 04.0 -1.0
KHC   Kasperske Hory    39.18 314 eP      P      07 46 04.0 -1.0
PZH   PanZhiHua         39.44  82  P      P      07 46 08.0 +0.5
PZH                                pmax   pmax
      comp=Z,10.0nm,0.5s
PZH                                pmax   pmax
      comp=Z,70nm,5.5s
TEOL  Teolo             39.62 308  P      P      07 46 07.6 -1.1
TEOL                               IAmb   IAmb   07 46 08.4
      comp=Z,12nm,0.9s
WTTA  Wattenberg        40.00 311 i P     P      07 46 11.1 -1.0
      comp=Z,7.5nm,0.5s
WATA  Walderalm         40.05 311 eP      P      07 46 11.8 -0.6
      comp=Z,6.3nm,0.7s
CLL   Collm             40.16 317 eP      P      07 46 12.0 -1.1
      comp=Z,8.0nm,1.0s
CLL                               epP     pP     07 46 15.0 -4.0
CLL   Collm             40.16 317 eP      P      07 46 12.0 -1.1
CLL                                pmax   pmax
      comp=Z,8.0nm,1.0s
SQTA  Sankt Quirin      40.27 311 i P     P      07 46 13.1 -1.1
      comp=Z,9.5nm,0.5s,SNR=5.2
MOTA  Moosalm           40.37 311 i P     P      07 46 13.6 -1.4
      comp=Z,6.2nm,0.7s
FETA  Feichten          40.56 310 eP      P      07 46 15.6 -1.0
      comp=Z,17nm,1.2s
RETA  Reutte            40.62 311 eP      P      07 46 15.5 -1.6
      comp=Z,3.6nm,0.6s,SNR=5.1
FUORN Ofenpass-Fuorn    40.80 310  P      P      07 46 18.5 -0.2
FUORN                              IAmb   IAmb   07 46 19.4
      comp=Z,4.5nm,0.7s
MSSA  Maissana          40.99 306  P      P      07 46 18.5 -1.7
DAVA  Damuels           41.18 311 eP      P      07 46 20.6 -1.2
      comp=Z,11nm,0.6s,SNR=4.9
SONM  Songino Array     42.55  49  P      P      07 46 33.6 +0.7
      comp=Z,1.6nm,0.7s,baz=254,slow=8.7,SNR=12
      comp=Z,1.6nm,0.7s
SONM  Songino Array     42.55  49  P      P      07 46 33.6 +0.7
SENIN Lac Senin/Sane    42.79 309  P      P      07 46 33.2 -1.8
ULN   Ulaanbaatar       42.99  49  P      P      07 46 36.8 +0.3
ULN   Ulaanbaatar       42.99  49  P      P      07 46 36.8 +0.3
ULN                                pmax   pmax
      comp=Z,3.0nm,0.8s
SSB   Saint Sauveur     44.61 307  P      P      07 46 48.0 -1.4
SSB   Saint Sauveur     44.61 307  P      P      07 46 48.1 -1.4
SSB                                pmax   pmax
      comp=Z,12nm,1.0s
NRIK  Noril'sk          44.67  15  P      P      07 46 49.6  0.0
      comp=Z,1.4nm,0.5s,baz=216,slow=3.5,SNR=5.0
      comp=Z,1.4nm,0.5s
NRIK  Noril'sk          44.67  15⇑eP      P      07 46 49.7 +0.2
NRIK                               pmax   pmax
      comp=Z,3.0nm,0.8s
NB2   NORSAR Subarra    44.73 330  P      P      07 46 48.3 -1.8
      comp=Z,2.5nm,1.1s,baz=112,slow=7.9
NOA   NORSAR Array B    44.73 330  P      P      07 46 48.1 -2.0
      comp=Z,0.9nm,0.7s,baz=115,slow=7.8,SNR=4.5
      comp=Z,0.9nm,0.7s
KEV   Kevo              44.95 346  P      P      07 46 51.3 -0.4
KEV   Kevo              44.95 346  P      P      07 46 51.3 -0.4
KEV                                pmax   pmax
      comp=Z,40nm,1.3s
ARCES ARCESS Array B    45.12 345  P      P      07 46 52.5 -0.6
      comp=Z,0.9nm,0.4s,baz=136,slow=8.3,SNR=16
ARCES                              PcP    PcP    07 48 31.5 -1.9
      comp=Z,1.4nm,0.9s,baz=132,slow=5.4,SNR=1.1
      comp=Z,0.9nm,0.4s
ARCES ARCESS Array B    45.12 345  P      P      07 46 52.6 -0.5
ARCES ARCESS Array B    45.12 345  P      P      07 46 52.6 -0.5
ARCES                              pmax   pmax
      comp=Z,27nm,1.4s
HHC   Hu-ho-hao-te      45.82  59 eP      P      07 47 00.8 +1.6
HHC                                pmax   pmax
      comp=Z,28nm,1.1s
HHC                                pmax   pmax
      comp=Z,120nm,5.3s
ESDC  Sonseca Array     51.06 300  P      P      07 47 38.4 -1.2
      comp=Z,0.4nm,0.4s,baz=76,slow=7.4,SNR=7.8
      comp=Z,0.4nm,0.4s
TOA0  Torodi Ar. Sit    53.61 266  P      P      07 47 56.7 -2.0
TOA0                               IAmb   IAmb   07 48 11.2
      comp=Z,7.4nm,1.4s
TORD  Torodi Ar. Bea    53.61 266  P      P      07 47 57.3 -1.4
      comp=Z,1.4nm,0.4s,baz=62,slow=7.0,SNR=1.5
TORD                               LR     LR     08 13 45.9
      comp=Z,67nm,18.7s,baz=350,slow=39
YAK   Yakutsk           57.24  32⇓eP      P      07 48 24.3 +0.2
YAK                                pmax   pmax
      comp=Z,8.0nm,0.4s
TIXI  Tiksi             57.63  21  P      P      07 48 26.1 -0.7
TIXI                               IAmb   IAmb   07 48 27.5
      comp=Z,3.1nm,0.6s
TIXI  Tiksi             57.63  21⇓eP      P      07 48 26.4 -0.4
TIXI                               pmax   pmax
      comp=Z,6.0nm,1.5s
KSRS  Korea Array       58.86  61  P      P      07 48 34.6 -1.2
      comp=Z,0.7nm,0.3s,baz=279,slow=6.7,SNR=2.3
      comp=Z,0.7nm,0.3s
KLR   Kul'dur           59.33  47⇓eP      P      07 48 38.0 -1.0
KLR                                pmax   pmax
      comp=Z,11nm,2.5s
DAG   Danmarks Havn     59.41 345 i P     P      07 48 37.4 -1.7
DAG                                IAmb   IAmb   07 48 39.1
      comp=Z,1.2nm,0.5s
DBG   Daneborg          59.58 342 i P     P      07 48 41.0 +0.7
BOSA  Boshof            64.33 211  P      P      07 49 12.0 -0.9
      comp=Z,3.1nm,0.9s,baz=337,slow=16,SNR=3.2
      comp=Z,3.1nm,0.9s
SUMG  Summit            64.92 341 i P     P      07 49 15.4 -1.2
ICESG Greenland Ices    66.25 337 i P     P      07 49 23.4 -1.8
SEY   Seymchan          67.48  30⇓iP      P      07 49 32.6 -0.1
SEY                                pmax   pmax
      comp=Z,3.0nm,0.8s
CMLA  Cha da Macela     67.88 302 i P     P      07 49 36.7 +1.0
BILL  Bilibino          70.81  22 eP      P      07 49 54.1 +0.9
BILL                               pmax   pmax
      comp=Z,6.0nm,1.7s
A36M  Sachs Harbour     79.96   1  P      P      07 50 44.7 -1.0
A36M                               IAmb   IAmb   07 50 46.4
      comp=Z,7.8nm,1.0s
BPAW  Bear Paw Mtn.     85.26  12  P      P      07 51 13.1 -0.5
BPAW                               IAmb   IAmb   07 51 13.5
      comp=Z,2.2nm,0.6s
ILAR  Eielson Array     85.34  10  P      P      07 51 11.8 -2.0
      comp=Z,0.4nm,0.6s,baz=316,slow=4.9,SNR=10.0
      comp=Z,0.4nm,0.6s
CAST  Castle Rocks      85.68  13  P      P      07 51 14.6 -1.0
CAST                               IAmb   IAmb   07 51 15.7
      comp=Z,3.1nm,0.7s
EGAK  Eagle             86.11   8  P      P      07 51 17.0 -0.7
EGAK                               IAmb   IAmb   07 51 17.5
      comp=Z,2.4nm,0.8s
DAWY  Dawson            87.01   7  P      P      07 51 21.2 -1.0
DAWY                               IAmb   IAmb   07 51 22.3
      comp=Z,2.1nm,0.9s
SKT   Skwentna          87.09  13  P      P      07 51 20.8 -1.8
SKT                                IAmb   IAmb   07 51 31.2
      comp=Z,6.9nm,1.4s
BCAR  Beaver Creek A    87.69   9  P      P      07 51 25.1 -0.4
SUA   Susitna One       87.72  13  P      P      07 51 24.5 -1.2
WB0   Warramunga Arr    88.56 113  P      P      07 51 29.5 -0.7
WRA   Warramunga Arr    88.61 113  P      P      07 51 30.6 +0.1
      comp=Z,1.4nm,0.9s,baz=317,slow=4.1,SNR=13
      comp=Z,1.4nm,0.9s
WRA   Warramunga Arr    88.61 113 i P     P      07 51 31.0 +0.5
WRA                                pmax   pmax
      comp=Z,2.0nm,0.9s
WRAB  Tennant Creek     88.61 113⇑eP      P      07 51 30.9 +0.4
WRAB                               pmax   pmax
      comp=Z,11nm,1.8s
BRLK  Bradley Lake      89.24  14  P      P      07 51 31.3 -1.5
YKA   Yellowknife Ar    89.27 356  P      P      07 51 31.9 -1.0
      comp=Z,1.0nm,0.8s,baz=1.9,slow=4.9,SNR=21
      comp=Z,1.0nm,0.8s
YKA   Yellowknife Ar    89.27 356 i P     P      07 51 32.5 -0.4
YKA                                pmax   pmax
      comp=Z,1.0nm,0.6s
ASAR  Alice Springs     90.16 117  P      P      07 51 37.3 -0.4
      comp=Z,0.4nm,0.5s,baz=308,slow=4.7,SNR=9.7
      comp=Z,0.4nm,0.5s
HYT   Haines Junctio    90.38   7  P      P      07 51 37.8 -0.5
HYT                                IAmb   IAmb   07 52 14.4
      comp=Z,7.1nm,1.5s
```

GEN ***25*** *07:43:29.1, 44.°16N×11.°15E, h12km±1km, Ml1.8*

ROM 25 07:43:14.7±0.1**, 44.°148N**±0.°005×**11.°130E**±0.°007**,**
h9km**, ML1.9**/25**, 7C-3D, Error ellipse: s-maj=0.6km**
s-min=0.5km az=193.0, Northern Italy

```
Code  Station Name       Δ°   AZ°   Phase ID          Time     Res
                                   Op     ISC       h  m  s   ISC
FNVD  Fontana Vidola     0.02 346 ⇓P      Pg     07 43 16.5  0.0
FNVD                               S      Sg     07 43 18.0 +0.2
```

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SEI	**Scarperia**	**0.19**	**120**	P	Pg	07 43 18.9	+0.3
SEI				S	Sg	07 43 22.4	+1.1
SEI				AML	AML		
	comp=E,326µm,0.3s						
SEI				AML	AML		
	comp=N,525µm,0.4s						
SEI	**Scarperia**	**0.19**	**120**	P	Pg	07 43 34.4	+16
SEI				S	Sg	07 43 37.6	+16
MPPT	**Montemurlo**	**0.19**	**189**	⇑P	Pg	07 43 19.4	+0.7
MPPT				S	Sg	07 43 22.9	+1.4
MPPT				AML	AML		
	comp=E,397µm,0.2s						
MPPT				AML	AML		
	comp=N,592µm,0.6s						
MPPT				AML	AML		
	comp=N,574µm,0.2s						
MPPT				AML	AML		
	comp=E,397µm,0.2s						
ZCCA	**Zocca**	**0.23**	**332**	⇑P	Pg	07 43 20.4	+1.0
ZCCA				AML	AML		
	comp=E,760µm,0.3s						
ZCCA				AML	AML		
	comp=N,828µm,0.3s						
ZCCA				AML	AML		
	comp=E,648µm,0.3s						
ZCCA				AML	AML		
	comp=N,829µm,0.3s						
ZCCA	**Zocca**	**0.23**	**332**	P	Pg	07 43 35.4	+16
ZCCA				S	Sg	07 43 40.5	+18
POPM	**Popiglio**	**0.29**	**249**	⇑P	Pg	07 43 20.9	+0.5
POPM				S	Sg	07 43 25.5	+1.2
POPM				AML	AML		
	comp=E,660µm,0.1s						
POPM				AML	AML		
	comp=N,415µm,0.3s						
POPM				AML	AML		
	comp=E,660µm,1.9s						
POPM	**Popiglio**	**0.29**	**249**	P	Pn	07 43 35.9	+11
POPM				S	Sb	07 43 40.8	+14
MTRZ	**Monterenzio**	**0.33**	**47**	⇑P	Pg	07 43 20.8	-0.5
MTRZ				S	Sg	07 43 25.9	+0.2
MTRZ				AML	AML		
	comp=E,494µm,0.4s						
MTRZ				AML	AML		
	comp=N,524µm,1.2s						
MTRZ				AML	AML		
	comp=E,507µm,0.4s						
MTRZ				AML	AML		
	comp=N,552µm,1.2s						
MTRZ				AML	AML		
	comp=E,494µm,1.6s						
MTRZ				AML	AML		
	comp=N,524µm,0.8s						
MTRZ				AML	AML		
	comp=E,507µm,1.6s						
MTRZ				AML	AML		
	comp=N,552µm,0.8s						
MTRZ	**Monterenzio**	**0.33**	**47**	P	Pn	07 43 35.9	+10
CRMI	**Carmignano**	**0.38**	**198**	⇑P	Pg	07 43 22.4	+0.3
CRMI				S	Sb	07 43 29.0	-0.4
CRMI				AML	AML		
	comp=N,53µm,0.9s						
CRMI				AML	AML		
	comp=N,51µm,0.9s						
CRMI				AML	AML		
	comp=E,92µm,0.4s						
CRMI				AML	AML		
	comp=E,95µm,0.4s						
CRMI	**Carmignano**	**0.38**	**198**	P	Pn	07 43 37.5	+11
CRMI				S	Sb	07 43 43.9	+14
BDI	**Bagni Di Lucca**	**0.39**	**258**	⇓P	Pg	07 43 22.6	+0.2
BDI				S	Sg	07 43 28.8	+1.2
BDI				AML	AML		
	comp=E,334µm,1.0s						
BDI				AML	AML		
	comp=N,375µm,0.2s						
BDI				AML	AML		
	comp=E,129µm,1.1s						
BDI				AML	AML		
	comp=E,39µm,1.5s						
BDI				AML	AML		
	comp=N,152µm,0.2s						
BDI	**Bagni Di Lucca**	**0.39**	**258**	P	Pn	07 43 37.7	+11
BDI				S	Sb	07 43 43.8	+14
RUFI	**Rufina**	**0.41**	**138**	P	Pn	07 43 39.3	+12
LMD	**Lutirano**	**0.42**	**99**	P	Pn	07 43 38.0	+11
LMD				S	Sb	07 43 45.1	+14
GSCL	**Gusciola**	**0.44**	**298**	P	Pn	07 43 38.7	+11
GSCL				S	Sb	07 43 45.7	+14
CARD	**Cardoso**	**0.48**	**256**	P	Pn	07 43 39.3	+12
CARD				S	Sb	07 43 46.8	+14
MAIM	**Mastiano**	**0.52**	**243**	P	Pn	07 43 41.0	+13
MAIM				S	Sn	07 43 48.4	+11
SARO	**Sassorosso**	**0.53**	**274**	⇑P	Pg	07 43 25.3	+0.4
SARO				S	Sb	07 43 33.7	-0.1
SARO				AML	AML		
	comp=E,222µm,0.4s						
SARO				AML	AML		
	comp=E,222µm,1.6s						
SARO				AML	AML		
	comp=N,224µm,0.4s						
SARO	**Sassorosso**	**0.53**	**274**	P	Pn	07 43 40.1	+12
VLC	**Villacollemand**	**0.54**	**272**	P	Pg	07 43 25.4	+0.3
VLC				S	Sb	07 43 33.9	-0.2
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
	comp=E,17961µm,0.8s						
VLC				AML	AML		
	comp=N,18669µm,1.7s						
VLC				AML	AML		
VLC				AML	AML		
VLC	**Villacollemand**	**0.54**	**272**	P	Pn	07 43 40.5	+12
VLC				S	Sn	07 43 48.5	+11
ASQU	**Asqua**	**0.59**	**126**	P	Pn	07 43 41.6	+12
ASQU				S	Sn	07 43 51.2	+12
PII	**Pisa**	**0.61**	**226**	AML	AML		
	comp=N,138µm,1.1s						
PII				AML	AML		
	comp=N,138µm,0.9s						
PII				AML	AML		
	comp=E,146µm,1.3s						
PII	**Pisa**	**0.61**	**226**	P	Pn	07 43 42.0	+13
OSSC	**Osservatorio P**	**0.63**	**172**	S	Sg	07 43 28.7	-6.4
OSSC	**Osservatorio P**	**0.63**	**172**	P	Pn	07 43 43.7	+14
OSSC				S	Sn	07 43 52.3	+12
CSNT	**Castellina Chi**	**0.69**	**170**	S	Sg	07 43 29.2	-7.7
NDIM	**Novi di Modena**	**0.76**	**347**	⇑P	Pg	07 43 27.9	-1.4
FROS	**Frosini**	**0.94**	**179**	AML	AML		
	comp=N,134µm,0.8s						
FROS				AML	AML		
	comp=E,210µm,0.2s						
EUCT	**Pavia**	**1.77**	**307**	S	Sg	07 44 11.5	-0.1
T1216	**Preci, Frazion**	**1.86**	**132**	P	Pn	07 43 40.5	-6.2
TRI	**Trieste**	**2.44**	**49**	⇓P	Pn	07 43 55.9	+1.3
LAV9	**Lanuvio**	**2.72**	**154**	S	Sn	07 44 33.0	+1.4
VVLD	**Villa Vallelon**	**2.92**	**140**	P	Pn	07 44 01.0	-0.3
VVLD				AML	AML		
	comp=N,20µm,0.6s						
VVLD				AML	AML		
	comp=N,20µm,1.4s						
VVLD				AML	AML		
	comp=E,25µm,0.1s						
CRTO	**Cratere Ovest,**	**4.12**	**143**	S	Sn	07 45 09.8	+3.6
VTIR	**Vesuvio Tirone**	**4.13**	**143**	P	Pn	07 44 09.5	-8.5

*ROM **25** 07:43:29.6±0.1, 44°.156N±0°.004×11°.129E±0°.004, h10^{km}, ML2.1/28, Error ellipse: s-maj=0.4km s-min=0.3km az=18.0*

ISC 25 07:43:29.6±0.9**, 44°.15N**±0°.03×**11°.13E**±0°.02**, h10**^{km}±5^{km}**, n29, σ1^{s}68**/31**, 6C-4D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNVD	**Fontana Vidola**	**0.02**	**347**	⇓P	**Pg**	**07 43 31.5**	**0.0**
FNVD				S	**Sg**	**07 43 33.1**	**+0.3**
SEI	**Scarperia**	**0.19**	**120**	P	**Pg**	**07 43 34.1**	**+0.5**
SEI				S	**Sg**	**07 43 37.5**	**+1.2**
SEI				AML	AML		
	comp=E,1315µm,0.4s						
SEI				AML	AML		
	comp=N,2220µm,0.5s						
SEI				AML	AML		
	comp=E,1206µm,0.7s						
SEI				AML	AML		
	comp=N,1148µm,1.6s						
SEI				AML	AML		
	comp=N,2220µm,1.5s						
MPPT	**Montemurlo**	**0.19**	**188**	⇑P	**Pg**	**07 43 34.5**	**+0.8**
MPPT				S	**Sg**	**07 43 38.1**	**+1.6**
MPPT				AML	AML		
	comp=N,2835µm,0.6s						
MPPT				AML	AML		
	comp=E,1890µm,0.2s						
ZCCA	**Zocca**	**0.23**	**332**	P	**Pg**	**07 43 35.0**	**+0.7**
ZCCA				AML	AML		
	comp=E,649µm,0.3s						
ZCCA				AML	AML		
	comp=N,829µm,0.3s						
ZCCA				AML	AML		
	comp=E,648µm,0.3s						
ZCCA				AML	AML		
	comp=E,760µm,0.3s						
ZCCA				AML	AML		
	comp=N,829µm,0.3s						
ZCCA				AML	AML		
	comp=N,828µm,0.3s						
BRIS	**BRISIGHELLA**	**0.28**	**90**	AML	AML		
	comp=E,265µm,0.4s						
BRIS				AML	AML		
	comp=N,242µm,0.3s						
POPM	**Popiglio**	**0.29**	**249**	⇑P	**Pg**	**07 43 35.9**	**+0.5**
POPM				S	**Sb**	**07 43 40.6**	**-1.2**
POPM				AML	AML		
	comp=E,1555µm,0.7s						
POPM				AML	AML		
	comp=N,1555µm,0.2s						
POPM				AML	AML		
	comp=E,1555µm,1.3s						
MTRZ	**Monterenzio**	**0.33**	**47**	⇑P	**Pg**	**07 43 35.8**	**-0.4**
MTRZ				AML	AML		
	comp=N,666µm,1.0s						
MTRZ				AML	AML		
	comp=E,582µm,1.1s						
MTRZ				AML	AML		
	comp=N,654µm,1.0s						
MTRZ				AML	AML		
	comp=E,616µm,1.1s						
MTRZ				AML	AML		
	comp=E,616µm,0.9s						
MTRZ				AML	AML		
	comp=E,582µm,0.9s						
MTRZ				AML	AML		
	comp=N,666µm,1.0s						
CRMI	**Carmignano**	**0.38**	**198**	⇑P	**Pg**	**07 43 37.4**	**+0.4**
CRMI				S	**Sb**	**07 43 43.8**	**-0.6**
CRMI				AML	AML		
	comp=E,413µm,0.4s						
CRMI				AML	AML		
	comp=N,187µm,0.6s						
CRMI				AML	AML		
	comp=E,410µm,0.4s						
CRMI				AML	AML		
	comp=N,173µm,0.2s						
RUFI	**Rufina**	**0.41**	**138**	AML	AML		
	comp=N,142µm,0.6s						
RUFI				AML	AML		
	comp=E,153µm,0.3s						
RUFI				AML	AML		
	comp=E,153µm,1.7s						
LMD	**Lutirano**	**0.42**	**99**	P	**Pg**	**07 43 38.2**	**+0.3**
LMD				S	**Sb**	**07 43 45.0**	**-0.7**
LMD				AML	AML		
	comp=E,150µm,1.4s						
LMD				AML	AML		
	comp=N,142µm,0.9s						
LMD				AML	AML		
	comp=E,150µm,0.6s						
LMD				AML	AML		
	comp=N,102µm,1.3s						
LMD				AML	AML		
	comp=E,96µm,2.0s						
GSCL	**Gusciola**	**0.44**	**298**	P	**Pg**	**07 43 38.4**	**+0.2**
GSCL				AML	AML		
	comp=N,146µm,1.5s						
GSCL				AML	AML		
	comp=E,178µm,0.4s						
GSCL				AML	AML		
	comp=E,178µm,1.6s						
GSCL				AML	AML		
	comp=N,146µm,0.5s						
CARD	**Cardoso**	**0.48**	**256**	P	**Pg**	**07 43 39.2**	**+0.2**
CARD				S	**Sb**	**07 43 46.4**	**-1.0**
CARD				AML	AML		
	comp=N,282µm,0.1s						
CARD				AML	AML		
	comp=N,282µm,1.9s						
CARD				AML	AML		
	comp=E,210µm,0.3s						
MAIM	**Mastiano**	**0.52**	**243**	AML	AML		
	comp=E,122µm,1.3s						
MAIM				AML	AML		
	comp=N,150µm,0.4s						
MAIM				AML	AML		
	comp=N,150µm,1.6s						
SARO	**Sassorosso**	**0.53**	**274**	⇑P	**Pg**	**07 43 40.3**	**+0.4**
SARO				AML	AML		
	comp=E,222µm,0.4s						
SARO				AML	AML		
	comp=N,224µm,0.4s						
SARO				AML	AML		
	comp=E,222µm,1.6s						
VLC	**Villacollemand**	**0.54**	**271**	⇓P	**Pg**	**07 43 40.4**	**+0.4**
VLC				S	**Sb**	**07 43 48.4**	**-0.5**
VLC				AML	AML		
	comp=E,32900µm,1.5s						
VLC				AML	AML		
	comp=N,32850µm,0.8s						
VLC				AML	AML		
	comp=E,32850µm,1.5s						
VLC				AML	AML		
VLC				AML	AML		
	comp=N,32850µm,1.2s						
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
	comp=E,32850µm,0.5s						
PII	**Pisa**	**0.61**	**226**	AML	AML		
	comp=E,230µm,0.4s						
PII				AML	AML		
	comp=N,313µm,0.4s						
OSSC	**Osservatorio P**	**0.63**	**172**	AML	AML		
	comp=E,127µm,0.4s						
OSSC				AML	AML		
	comp=N,143µm,1.3s						
CRE	**Caprese Michel**	**0.80**	**131**	AML	AML		
	comp=N,214µm,1.6s						
CRE				AML	AML		
	comp=N,214µm,0.4s						
CRE				AML	AML		
	comp=E,110µm,0.4s						
SBPO	**S.Benedetto Po**	**0.92**	**351**	⇑P	**Pg**	**07 43 47.0**	**-0.3**
MSSA	**Maissana**	**1.17**	**279**	P	**Pn**	**07 43 52.8**	**+0.6**
VENL	**Venezia Lido**	**1.55**	**35**	⇓P	**Pg**	**07 44 00.0**	**+0.7**
EUCT	**Pavia**	**1.77**	**307**	S	**Sg**	**07 44 29.9**	**+3.4**
NRCA	**Norcia**	**1.95**	**132**	S	**Sg**	**07 44 35.7**	**+3.3**
NRCA				AML	AML		
	comp=N,159µm,0.1s						
NRCA				AML	AML		
	comp=E,212µm,0.2s						
T1212	**Cascia, Frazio**	**1.97**	**134**	S	**Sg**	**07 44 36.6**	**+3.6**
T1245	**Castelsantange**	**1.98**	**130**	S	**Sg**	**07 44 36.0**	**+2.8**
T1245				AML	AML		
	comp=E,89µm,1.4s						
T1245				AML	AML		
	comp=N,103µm,0.3s						
T1245				AML	AML		
	comp=E,89µm,0.6s						
T1214	**Arquata del Tr**	**2.05**	**132**	S	**Sg**	**07 44 36.0**	**+0.4**
T1214				AML	AML		
	comp=E,98µm,0.1s						
T1214				AML	AML		
	comp=N,117µm,0.1s						
MPRI	**Monte Prat**	**2.47**	**31**	⇓P	**Pg**	**07 44 18.6**	**+1.6**
SAMA	**S.Maria delle**	**2.60**	**155**	S	**Sn**	**07 44 44.7**	**+1.3**
SAMA				AML	AML		
	comp=N,451µm,1.0s						
SAMA				AML	AML		
	comp=N,451µm,1.0s						
SAMA				AML	AML		
	comp=E,593µm,0.1s						
MCRV	**Calabrutti - M**	**4.50**	**137**	P	**Pb**	**07 44 44.6**	**-4.2**

ROM 25 08:36:15.4±0.2**, 42°.854N**±0°.003×**13°.070E**±0°.005**, h10**^{km}**, ML1.2**/2**, 2C, Error ellipse: s-maj=0.4km s-min=0.1km az=75.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.05**	**315**	P	Pg	08 36 17.7	+0.3
T1216				S	Sg	08 36 19.4	+0.4
T1245	**Castelsantange**	**0.09**	**88**	P	Pg	08 36 18.3	+0.3
T1245				S	Sg	08 36 20.2	+0.4
T1245				AML	AML		
	comp=N,382µm,0.3s						
T1245				AML	AML		
	comp=E,318µm,0.7s						
T1212	**Cascia, Frazio**	**0.10**	**190**	P	Pg	08 36 18.5	+0.4
T1212				S	Sg	08 36 20.5	+0.5
MC2	**Monte Cornacci**	**0.11**	**56**	P	Pg	08 36 18.6	+0.4
T1214	**Arquata del Tr**	**0.14**	**133**	P	Pg	08 36 19.0	+0.3
T1214				S	Sg	08 36 21.5	+0.6
FDMO	**Fiordimonte**	**0.18**	**4**	P	Pg	08 36 19.8	+0.5
FDMO				S	Sg	08 36 23.0	+1.0
FDMO				AML	AML		
	comp=E,44µm,0.2s						
FDMO				AML	AML		
	comp=N,88µm,0.3s						
FDMO				AML	AML		
	comp=N,88µm,1.7s						
MMO1	**Montemonaco**	**0.19**	**76**	P	Pg	08 36 20.0	+0.5
MMO1	**Montemonaco**	**0.19**	**76**	P	Pg	08 36 20.0	+0.5
MMO1	**Montemonaco**	**0.19**	**76**	P	Pg	08 36 20.0	+0.5
SMA1	**SAN MARTINO**	**0.30**	**139**	AML	AML		
	comp=N,364µm,0.8s						
SMA1				AML	AML		
	comp=E,356µm,0.4s						
TERO	**Teramo**	**0.46**	**120**	S	Sb	08 36 33.8	+1.3
TERO				AML	AML		
	comp=E,70µm,1.3s						
TERO				AML	AML		
	comp=E,70µm,0.7s						
TERO				AML	AML		
	comp=N,94µm,1.4s						
GIGS	**Gran Sasso**	**0.55**	**137**	S	Sb	08 36 35.5	+0.4
GIGS				AML	AML		
	comp=E,33µm,0.7s						
GIGS				AML	AML		
	comp=N,30µm,0.3s						
IMOL	**Imola, Italy**	**1.79**	**328**	⇑P	Pn	08 36 45.2	-1.2
IMOL	**Imola, Italy**	**1.79**	**328**	⇑P	Pn	08 36 45.2	-1.2

ROM 25 08:36:40.2±0.1**, 44°.152N**±0°.004×**11°.137E**±0°.006**, h10**^{km}**, ML1.5**/10**, 4D, Error ellipse: s-maj=0.4km s-min=0.4km az=209.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNVD	**Fontana Vidola**	**0.02**	**327**	P	Pg	08 36 42.2	0.0
FNVD				S	Sg	08 36 43.7	+0.1
FNVD				AML	AML		
	comp=E,1323µm,0.1s						
FNVD				AML	AML		
	comp=N,2340µm,0.2s						
MTCR	**Monte La Croce**	**0.16**	**219**	P	Pg	08 36 44.3	+0.5
MTCR				S	Sg	08 36 47.4	+1.0
MTCR				AML	AML		
	comp=E,227µm,0.3s						
MTCR				AML	AML		
	comp=N,229µm,1.2s						
MTCR				AML	AML		
	comp=N,184µm,0.2s						
MTCR				AML	AML		
	comp=E,202µm,0.2s						
MTCR				END			
SEI	**Scarperia**	**0.18**	**122**	P	Pb	08 36 45.0	-0.7
SEI				S	Sg	08 36 48.1	+1.1
SEI				END			
SEI				END			
MPPT	**Montemurlo**	**0.20**	**190**	P	Pg	08 36 45.0	+0.6
MPPT				S	Sg	08 36 48.6	+1.4
MPPT				AML	AML		
	comp=E,84µm,0.7s						
MPPT				AML	AML		
	comp=N,164µm,0.6s						
MPPT				AML	AML		
	comp=E,59µm,0.3s						
MPPT				AML	AML		
	comp=N,112µm,0.2s						
MPPT				END			
ZCCA	**Zocca**	**0.23**	**330**	P	Pb	08 36 46.0	-0.5
ZCCA				END			
POPM	**Popiglio**	**0.29**	**249**	P	Pg	08 36 46.5	+0.4
POPM				S	Sg	08 36 51.2	+1.1
POPM				AML	AML		
	comp=E,128µm,0.4s						
POPM				AML	AML		
	comp=N,192µm,0.3s						
POPM				AML	AML		
	comp=E,126µm,0.1s						
POPM				END			
NDIM	**Novi di Modena**	**0.76**	**347**	⇓P	Pn	08 36 56.7	-0.1
NDIM	**Novi di Modena**	**0.76**	**347**	⇓P	Pn	08 36 56.7	-0.1
NDIM	**Novi di Modena**	**0.76**	**347**	⇓P	Pn	08 36 56.7	-0.1
NDIM	**Novi di Modena**	**0.76**	**347**	⇓P	Pn	08 36 56.7	-0.1
NDIM				AML	AML		
	comp=E,1038µm,1.4s						
NDIM				AML	AML		
	comp=N,1155µm,0.3s						
NDIM				AML	AML		
	comp=E,1024µm,1.4s						
NDIM				AML	AML		
	comp=N,1245µm,0.3s						
NOV	**Novara**	**6.82**	**152**	AML	AML		
	comp=E,105µm,1.5s						
NOV				AML	AML		
	comp=N,77µm,0.5s						

*IDC **25** 08:39:37.8±2.0, 40°.13N×50°.20E, h0^{km}, mb3.7/4, mbtmp3.7/10, ML3.4/6, MS3.7/1, Error ellipse: s-maj=33.2km s-min=17.2km az=6.0*

*TEH **25** 08:39:47.0, 40°.34N×50°.63E, h60^{km}, ML3.7*

*AZER **25** 08:39:48.4±0.1, 40°.41N×50°.36E, h60^{km}±1^{km}, Error ellipse: s-maj=2.0km s-min=1.0km az=245.0*

ISC 25 08:39:47.0±0.8**, 40°.49N**±0°.04×**50°.60E**±0°.05**, h75**^{km}±7^{km}**, n85, σ1^{s}60**/115**, mb3.4**/4**, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GALA	**Gala**	**0.35**	**258**	P	**Pn**	**08 39 58.6**	**-0.4**
	SNR=7.3						
GALA				S	**Sn**	**08 40 09.8**	**+2.0**
GALA	**Gala**	**0.35**	**258**	Pg	**Pn**	**08 39 57.8**	**-1.2**
NDR	**Nardaran**	**0.47**	**282**	P	**Pn**	**08 39 59.6**	**-0.4**
	SNR=40						
NDR				S	**Sn**	**08 40 10.0**	**+0.4**
NDR	**Nardaran**	**0.47**	**282**	Pg	**Pn**	**08 39 59.8**	**-0.2**
GOBA	**Gobu**	**0.67**	**263**	P	**Pn**	**08 40 02.9**	**+1.1**
	SNR=9.2						
GOBA				S	**Sn**	**08 40 12.7**	**-0.2**
GOBA	**Gobu**	**0.67**	**263**	Pg	**Pn**	**08 40 02.1**	**+0.2**
GBS	**Qobustan**	**1.26**	**273**	P	**Pn**	**08 40 09.6**	**+0.5**
	SNR=14						
GBS				S	**Sn**	**08 40 26.2**	**+0.5**
GBS	**Qobustan**	**1.26**	**273**	Pg	**Pn**	**08 40 09.6**	**+0.5**
ATGJ	**Altiaghaj**	**1.32**	**287**	P	**Pn**	**08 40 10.0**	**+0.2**
ATGJ				S	**Sn**	**08 40 28.7**	**+1.7**
ATGJ	**Altiaghaj**	**1.32**	**287**	Pg	**Pn**	**08 40 10.0**	**+0.2**
ALIB	**Äli-Bayra**	**1.33**	**247**	P	**Pn**	**08 40 10.2**	**+0.4**
	SNR=4.8						
ALIB				S	**Sn**	**08 40 31.0**	**+4.0**
ALIB	**Äli-Bayra**	**1.33**	**247**	Pg	**Pn**	**08 40 10.2**	**+0.4**
SIZA	**Siyzn**	**1.42**	**295**	Pn	**Pn**	**08 40 12.1**	**+1.0**
	SNR=5.4						
SIZA				Sn	**Sn**	**08 40 29.7**	**+0.4**
SIZA	**Siyzn**	**1.42**	**295**	Pg	**Pn**	**08 40 12.1**	**+1.0**
PQL	**Pirkuli**	**1.56**	**282**	Pn	**Pn**	**08 40 13.0**	**0.0**
	SNR=5.3						
PQL				Sn	**Sn**	**08 40 34.0**	**+1.4**
PQL	**Pirkuli**	**1.56**	**282**	Pg	**Pn**	**08 40 13.0**	**0.0**
QUBA	**Quba, Azerbaij**	**1.82**	**299**	Pn	**Pn**	**08 40 18.1**	**+1.8**

QUBA				Sn	Sn	08 40 38.4	-0.2
KDMR	Kurdemir	1.84	267	Sn	Sn	08 40 39.2	+0.1
QUB	Quba	1.92	299	Pn	Pn	08 40 18.1	+0.4
XNQ	Khinaliq	1.99	291	Pn	Pn	08 40 18.5	-0.2
	SNR=11						
XNQ				Sn	Sn	08 40 42.1	-0.8
XNQ	Khinaliq	1.99	291	Pn	Pn	08 40 19.1	+0.4
QSAR	Qusar	2.04	301	Pn	Pn	08 40 19.6	+0.3
QSAR				Sn	Sn	08 40 44.3	+0.3
QSAR	Qusar	2.04	301	Pn	Pn	08 40 19.6	+0.3
GLBA	Clilabad	2.10	235	Pn	Pn	08 40 21.6	+1.5
GLBA				Sn	Sn	08 40 43.4	-1.9
QBL	Gabala	2.15	283	Pn	Pn	08 40 20.9	+0.2
QBL				Sn	Sn	08 40 45.0	-1.5
QBL	Gabala	2.15	283	Pn	Pn	08 40 20.6	-0.1
ZRD	Zardab	2.23	266	Pn	Pn	08 40 21.1	-0.7
ZRD				Sn	Sn	08 40 48.0	-0.5
LKRN	Lenkeran, Azer	2.26	219	Pn	Pn	08 40 21.9	-0.4
LKRN				Sn	Sn	08 40 46.7	-2.4
LKRN	Lenkeran, Azer	2.26	219	Pn	Pn	08 40 21.8	-0.4
ASTR	Astara	2.38	217	Pn	Pn	08 40 24.4	+0.6
ASTR				Sn	Sn	08 40 50.0	-2.0
ASTR	Astara	2.38	217	Pn	Pn	08 40 24.4	+0.6
YRD	Yardimli	2.40	230	Pn	Pn	08 40 24.9	+0.7
YRD				Sn	Sn	08 40 49.9	-3.0
YRD	Yardimli	2.40	230	Pn	Pn	08 40 25.2	+0.9
BLQ	Beylaqan	2.45	253	Sn	Sn	08 40 51.9	-1.9
GAS1	Astara - Iran	2.50	214	Pn	Pn	08 40 25.1	-0.3
LRK	Lerik	2.54	224	Pn	Pn	08 40 26.3	+0.2
LRK				Sn	Sn	08 40 53.6	-2.4
SEKA	Sheki	2.68	287	Pn	Pn	08 40 28.5	+0.6
	SNR=8.2						
SEKA				Sn	Sn	08 40 59.0	-0.4
SEKA	Sheki	2.68	287	Pn	Pn	08 40 27.9	0.0
MNGR	Mingechevir, A	2.69	277	Sn	Sn	08 41 00.9	+1.4
AGDM	Agdam	2.69	263	Pn	Pn	08 40 29.5	+1.4
AGDM				Sn	Sn	08 40 58.6	-1.1
QRD	Qoradiz	2.72	249	Pn	Pn	08 40 30.4	+2.0
QRD				Sn	Sn	08 40 58.8	-1.4
ZKTA	Zakatala	3.22	292	Sn	Sn	08 41 12.5	+0.1
GANJ	Ganja	3.26	274	Pn	Pn	08 40 36.2	+0.4
GANJ				Sn	Sn	08 41 10.1	-3.4
ISRB	Sarab	3.50	222	Pn	Pn	08 40 39.5	+0.3
GDB	GEDABAY	3.69	275	Pn	Pn	08 40 43.5	+1.7
GDB				Sn	Sn	08 41 20.5	-3.8
JIR1	Jirandeh	3.82	190	Pn	Pn	08 40 42.7	-0.9
ORD	Ordubad	3.88	248	Pn	Pn	08 40 45.4	+1.2
ORD				Sn	Sn	08 41 26.8	-1.7
KLST	Kelardasht - M	3.98	175	Pn	Pn	08 40 44.6	-1.2
QZX	Qazax, Azerbai	4.01	280	Pn	Pn	08 40 45.6	-0.4
QZX				Sn	Sn	08 41 29.3	-2.4
SBZ	Shahbuz	4.03	256	Pn	Pn	08 40 47.6	+1.3
SBZ				Sn	Sn	08 41 32.4	+0.1
QALM	Alamut, Qazvin	4.05	179	Pn	Pn	08 40 45.4	-1.3
IGZV	Ghazvin	4.10	184	Pn	Pn	08 40 47.1	-0.4
IHSH	Hashtrud	4.10	220	Pn	Pn	08 40 47.3	-0.3
MZPU	Pul - Mazandar	4.11	169	Pn	Pn	08 40 46.9	-0.7
IMRD	Marand	4.17	246	Pn	Pn	08 40 50.1	+1.7
IPRN	Peran	4.45	162	Pn	Pn	08 40 51.5	-0.6
SHTL	Shatili	4.62	300	P	Pn	08 40 55.8	+1.3
SHTL				S	Sn	08 41 46.2	-0.7
IGLO	Ghaloghah	4.72	146	Pn	Pn	08 40 55.2	-0.6
IMHD	Mahdasht	4.79	179	Pn	Pn	08 40 57.2	+0.4
IMND	Minoodasht	4.95	129	Pn	Pn	08 40 58.4	-0.4
TRLG	Trialeti	5.03	284	P	Pn	08 41 01.2	+1.2
TRLG				S	Sn	08 41 54.3	-2.5
IDMV	Damavand	5.03	167	Pn	Pn	08 41 00.9	+0.8
IRAZ	Razeghan	5.10	186	Pn	Pn	08 41 01.0	0.0
MRVT	Maraveh tapeh	5.12	122	Pn	Pn	08 41 01.3	+0.1
IFIR	Firoozkooh	5.13	160	Pn	Pn	08 41 01.8	+0.3
ISHM	Shahmirzad	5.13	155	Pn	Pn	08 41 01.6	+0.1
IVRN	Varamin	5.55	170	Pn	Pn	08 41 07.4	+0.3
IANJ	Anjilo	5.65	151	Pn	Pn	08 41 10.2	+1.6
ISFB	Sefidab	6.26	167	Pn	Pn	08 41 17.6	+0.8
GEYT	Alibeck	6.37	111	Pn	Pn	08 41 15.2	-3.0
	0.7nm,0.3s,baz=291,slow=21,SNR=5.3						
GEYT				Sn	Sn	08 42 27.6	-2.0
	1.1nm,0.3s,baz=277,slow=23,SNR=1.9						
	1.6nm,0.4s						
KBZ	Khabaz	6.58	302	Pn	Pn	08 41 16.8	-4.1
	0.2nm,0.3s,baz=115,slow=19,SNR=1.7						
KBZ				Sn	Sn	08 42 28.6	-5.9
	0.1nm,0.3s,baz=158,slow=14,SNR=1.2						
	0.4nm,0.3s						
SBZV	Sabzevar	6.86	124	Pn	Pn	08 41 25.5	+0.5
IEMG	Emamgholi	6.99	113	Pn	Pn	08 41 27.9	+1.0
IAKL	Akhelmad	7.48	119	Pn	Pn	08 41 34.5	+0.9
IKRD	Kardeh	7.90	115	Pn	Pn	08 41 38.7	-0.6
AFRZ	Afriz	9.74	134	Pn	Pn	08 42 05.5	+1.1
AKTO	Aktyubinsk	11.22	25	Pn	Pn	08 42 23.6	-0.8
	0.7nm,0.3s,baz=201,slow=12,SNR=12						
AKTO				Sn	Sn	08 44 22.7	-5.2
	0.6nm,0.3s,baz=262,slow=23,SNR=6.0						
	2.0nm,0.4s						
BELG	Belogornoye	12.09	351	Pn	Pn	08 42 34.7	-1.3
	0.3nm,0.3s,baz=180,slow=15,SNR=2.1						
BELG				Sn	Sn	08 44 40.6	-8.2
	1.3nm,0.3s,baz=127,slow=21,SNR=4.2						
	4.1nm,0.7s						
AKASG	Malin Array Be	18.05	312	P	P	08 43 51.5	-0.4
	0.8nm,0.3s,baz=116,slow=12,SNR=1.7						
	0.5nm,0.3s						
BVAR	Borovoye Array	18.39	40	P	Pn	08 43 59.1	+2.5
	baz=230,slow=11,SNR=4.3						
	0.6nm,0.5s						
KURBB	Kurchatov Arra	21.91	53	P	P	08 44 36.5	+2.7
	1.2nm,0.8s,baz=257,slow=11,SNR=7.1						
	1.2nm,0.8s						
MKAR	Makanchi Array	23.68	64	P	P	08 44 55.4	+3.8
	0.9nm,0.7s,baz=266,slow=8.4,SNR=11						
	0.9nm,0.7s						
VRAC	Vranov	25.47	302	LR	LR	08 57 17.4	
	comp=Z,176nm,18.5s,baz=345,slow=42						
FINES	FINESS Array B	25.76	333	P	P	08 45 12.7	+2.4
	0.6nm,0.4s,baz=141,slow=9.0,SNR=7.0						
	0.6nm,0.4s						
HFS	Hagfors	30.10	323	P	P	08 45 50.5	+1.5
	2.1nm,0.7s,baz=119,slow=8.6,SNR=5.4						
	2.1nm,0.7s						

DJA ***25*** *08:43:03.5±0.6, 5°S±5°×15°5E±°, h255^{km}±4^{km}, M4.6/24, mB5.1/8, mb4.8/24, MLv4.7/2, Mw(mB)4.4/8*

BJI ***25*** *08:43:04.6±0.0, 5°.68S×154°.84E, h249^{km}, mb4.6/44, mB4.7/24*

IDC ***25*** *08:43:04.4±0.8, 5°.75S×154°.74E, h232^{km}±6^{km}, mb4.3/23, mbtmp4.8/27, Error ellipse: s-maj=12.5km s-min=7.6km az=70.0*

NEIC ***25*** *08:43:06.5±1.4, 5°.74S±0°.08×154°.71E±0°.08, h248^{km}±7^{km}, mb4.7/78, Error ellipse: s-maj=13.1km s-min=10.3km az=217.0*

ISC 25 08:43:03.3±0.7**, 5°.77S**±0°.04×**154°.82E**±0°.05**, h223**^{km}±6^{km}**, n454,** σ1§**32**/464**, mb4.7**/77**, 2C-1D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.08	301		Pn	08 43 58.2	+3.0
RABL	Rabaul	3.08	301	P	Pn	08 43 58.7	+3.5
KRVT	Keravat (AS076	3.14	297	P	Pn	08 43 57.7	+1.8
	896nm,0.6s,baz=242,slow=1.9,SNR=81						
KRVT				S	Sn	08 44 38.1	+0.9
	2µm,0.6s,baz=203,slow=22,SNR=27						
HNR	Honiara	6.25	126	P	Pn	08 44 37.3	+3.1
	3µm,0.5s,baz=231,slow=3.8,SNR=9.7						
HNR	Honiara	6.25	126		Pn	08 44 37.6	+3.4
HNR	Honiara	6.25	126	P	Pn	08 44 38.2	+4.0
PMG	Port Moresby	8.41	244	P	Pn	08 45 04.9	+3.1
	12nm,0.5s,baz=329,slow=22,SNR=2.5						
PMG				S	Sn	08 46 42.9	+5.9
	16nm,0.9s,baz=126,slow=17,SNR=0.9						
PMG	Port Moresby	8.41	244		Pn	08 45 06.2	+4.3
PMG	Port Moresby	8.41	244	P	Pn	08 45 08.9	+7.0
PMG	Port Moresby	8.41	244	P	Pn	08 45 09.0	+7.1
PATS	Pohnpei	13.00	16	P	P	08 46 00.5	-2.2
	baz=13						
PATS	Pohnpei	13.00	16	P	P	08 46 04.6	+1.9
COEN	Coen	14.06	234	P	P	08 46 17.0	+2.5
	baz=14,SNR=8.3						
COEN	Coen	14.06	234	P	P	08 46 17.0	+2.5
COEN	Coen	14.06	234	P	P	08 46 17.8	+3.4
GENI	Genyem	14.95	282	P	P	08 46 23.4	-0.9
GENI	Genyem	14.95	282	P	P	08 46 26.8	+2.5
	179nm,0.9s						
MTSU	Mount Surprise	16.00	219	P	Pn	08 46 38.7	+1.9
	baz=16,SNR=24						
MTSU	Mount Surprise	16.00	219	P	Pn	08 46 39.7	+2.9
CTA	Charters Tower	16.49	210	P	Pn	08 46 43.1	+0.6
	10nm,0.5s,baz=27,slow=11,SNR=26						
CTAO	Charters Tower	16.49	210	P	Pn	08 46 44.1	+1.6
CTAO				IAmb	IAmb	08 46 45.7	
	comp=Z,16nm,0.7s						
SMPI	Sarmi	16.50	283	P	Pn	08 46 43.5	+0.8
	comp=Z,393nm,1.2s,comp=Z,4µm						
KOUNC	Koumac, New Ca	17.33	149	P	Pn	08 46 53.0	+0.6
KOUNC				IAmb	IAmb	08 47 24.0	
	comp=Z,15nm,0.8s						
RK1H	Rockhampton Ha	18.00	193	P	Pn	08 47 00.7	+0.4
TARA	Tarawa	19.41	69	P	Pn	08 47 15.9	-1.1
DZM	Mont Dzumac	19.72	146	P	P	08 47 18.2	+1.9
	comp=Z,15nm,0.9s,baz=268,slow=7.4,SNR=18						
DZM	Mont Dzumac	19.72	146		P	08 47 18.0	+1.7
DZM				IAmb	IAmb	08 47 26.6	
	comp=Z,43nm,1.5s						
DZM	Mont Dzumac	19.72	146	P	P	08 47 18.4	+2.1
EIDS	Eidsvold	19.81	190	P	P	08 47 19.6	+2.3
	baz=20,SNR=9.4						
EIDS	Eidsvold	19.81	190	P	P	08 47 19.5	+2.3
EIDS				IAmb	IAmb	08 47 21.9	
	comp=Z,16nm,0.7s						
EIDS	Eidsvold	19.81	190	P	P	08 47 19.5	+2.3
OUENC	Ouen Island, N	20.22	146	P	P	08 47 22.8	+1.2
QIS	Mount Isa	20.84	224	P	P	08 47 29.2	+1.1
	baz=21,SNR=30						
QIS	Mount Isa	20.84	224	P	P	08 47 29.3	+1.1
RMQ	Roma	21.40	195	P	P	08 47 35.5	+1.7
	baz=22,SNR=18						
RMQ	Roma	21.40	195	P	P	08 47 36.0	+2.2
AUWSH	Wavell State H	21.58	184	P	P	08 47 37.4	+1.9
GC1S	Gold Coast 1 S	22.30	183	P	P	08 47 44.1	+1.7
FAKI	Fak Fak	22.68	276	P	P	08 47 45.5	-0.6
FAKI	Fak Fak	22.68	276	P	P	08 47 45.3	-0.7
	comp=Z,50nm,1.3s						
QLP	Quilpie	23.03	205	P	P	08 47 50.0	+0.9
	baz=23,SNR=21						
QLP	Quilpie	23.03	205	P	P	08 47 49.9	+0.9
KDU	Kakadu	23.09	251	P	P	08 47 49.4	-0.2
	baz=23,SNR=41						
KDU	Kakadu	23.09	251	P	P	08 47 49.5	-0.2
WB0	Warramunga Arr	24.25	233	P	P	08 48 00.5	+0.3
WC3	Warramunga Arr	24.37	233	P	P	08 48 01.7	+0.4
	baz=24						
WRAB	Tennant Creek	24.38	233	P	P	08 48 01.3	-0.1
WRAB	Tennant Creek	24.38	233	P	P	08 48 01.6	+0.2
WRA	Warramunga Arr	24.39	233	P	P	08 48 01.9	+0.4
	comp=Z,28nm,0.6s,baz=59,slow=9.9,SNR=268						
WRA				pP	pwP	08 48 42.8	-5.3
	comp=Z,11nm,0.9s,baz=58,slow=10,SNR=2.9						
WRA				PcP	PcP	08 51 33.8	-0.8
	comp=Z,1.2nm,0.6s,baz=58,slow=2.6,SNR=2.8						
WRA				S	S	08 51 58.2	-6.4
	comp=Z,0.7nm,0.5s,baz=60,slow=13,SNR=3.6						
WRA				ScP	ScP	08 54 49.4	-2.7
	comp=Z,0.8nm,0.8s,baz=56,slow=2.9,SNR=3.4						
	comp=Z,28nm,0.6s						
WRA	Warramunga Arr	24.39	233	P	P	08 48 00.8	-0.7
MTN	Manton Dam	24.39	252	P	P	08 48 01.9	+0.3
AULRC	Lightning Ridg	24.40	195	P	P	08 48 03.6	+2.1
ARMA	Armidale	24.70	187	P	P	08 48 06.1	+1.9
	baz=25,SNR=30						
ARMA	Armidale	24.70	187	P	P	08 48 06.3	+2.0
AUPHS	Peel High Scho	25.46	188	P	P	08 48 13.0	+1.9
INKA	Innaminka	25.62	210	P	P	08 48 13.1	+0.7
H11S3	WAKE ISLAND Hy	26.80	26	T	T	09 16 59.9	
	baz=205,slow=74						
H11S2	WAKE ISLAND Hy	26.81	26	T	T	09 17 31.9	
	baz=205						
H11S1	WAKE ISLAND Hy	26.82	26	T	T	09 17 17.0	
	baz=205,slow=74						
AS01	Alice Springs	26.83	226	P	P	08 48 23.4	0.0
	comp=Z,24nm,0.9s						
AS31	Alice Springs	26.86	226	P	P	08 48 23.5	-0.2
ASAR	Alice Springs	26.87	226	P	P	08 48 23.8	+0.1
	comp=Z,11nm,0.5s,baz=63,slow=8.9,SNR=158						
ASAR				pP	pwP	08 49 08.1	-5.0
	comp=Z,11nm,0.8s,baz=62,slow=9.5,SNR=7.2						
ASAR				PcP	PcP	08 51 39.6	-0.6
	comp=Z,2.2nm,0.6s,baz=60,slow=2.5,SNR=5.7						
ASAR				S	S	08 52 39.4	-4.3
	comp=Z,4.6nm,0.7s,baz=56,slow=14,SNR=12						
ASAR				ScP	SS	08 54 56.4	+10
	comp=Z,0.4nm,0.6s,baz=72,slow=3.0,SNR=2.4						
	comp=Z,11nm,0.5s						
ASAR	Alice Springs	26.87	226	P	P	08 48 23.7	-0.1
CMSA	Cobar Meteorol	27.02	197	P	P	08 48 25.7	+0.7
	baz=27,SNR=18						
CMSA	Cobar Meteorol	27.02	197	P	P	08 48 26.0	+1.0
KNRA	Kununurra	27.39	247	P	P	08 48 28.1	-0.3
	baz=28,SNR=6.3						
KNRA	Kununurra	27.39	247	P	P	08 48 27.8	-0.7
KNRA				IAmb	IAmb	08 48 31.4	
	comp=Z,30nm,1.3s						
MGCD	Mangrove Creek	27.52	187	P	P	08 48 30.2	+0.8
	baz=28,SNR=8.1						
RIV	Riverview	28.12	186	P	P	08 48 36.3	+1.7
	baz=28						
OOD	Oodnadatta	28.46	218	P	P	08 48 38.0	+0.2
STKA	Stephens Creek	28.77	204	P	P	08 48 41.0	+0.5
	comp=Z,26nm,0.7s,baz=12,slow=8.1,SNR=76						
STKA				pP	pwP	08 49 25.6	-4.6
	comp=Z,10.0nm,0.9s,baz=7.8,slow=9.3,SNR=2.4						
STKA				S	S	08 53 09.0	-4.3
	comp=Z,2.7nm,0.9s,baz=3.2,slow=19,SNR=4.0						
	comp=Z,26nm,0.7s						
STKA	Stephens Creek	28.77	204	P	P	08 48 41.0	+0.5
	baz=29,SNR=58						
STKA	Stephens Creek	28.77	204	P	P	08 48 40.9	+0.4
STKA	Stephens Creek	28.77	204	P	P	08 48 40.9	+0.5
LCRK	Leigh Creek	29.10	210	P	P	08 48 43.9	+0.5
CAN	Canberra	29.89	190	P	P	08 48 52.4	+2.0
CAN				IAmb	IAmb	08 48 53.8	
	comp=Z,15nm,0.9s						
FITZ	Fitzroy Crossi	31.00	244	P	P	08 48 59.1	-1.2
FITZ	Fitzroy Crossi	31.00	244	P	P	08 48 59.7	-0.6
	comp=Z,3.1nm,0.9s						
HTT	Hallett	31.24	206	P	P	08 49 03.0	+0.8
	baz=32,SNR=23						
HTT	Hallett	31.24	206	P	P	08 49 03.0	+0.8
MULG	Mulgathing	31.25	216	P	P	08 49 02.0	-0.3
WHYH	Whyalla	31.52	208	P	P	08 49 05.2	+0.6
MILA	Mila	31.56	189	P	P	08 49 07.0	+2.0
	baz=32,SNR=4.1						
WRKA	Warakurna	31.83	230	P	P	08 49 06.9	-0.6
	baz=32,SNR=32						
WRKA	Warakurna	31.83	230	P	P	08 49 06.9	-0.6
BBOO	Buckleboo	32.08	211	P	P	08 49 09.9	+0.3
	baz=32,SNR=172						
BBOO	Buckleboo	32.08	211	P	P	08 49 09.7	+0.1
BBOO	Buckleboo	32.08	211	P	P	08 49 09.8	+0.3
TOO	Toolangi	32.78	194	P	P	08 49 17.0	+1.5
	baz=33,SNR=5.9						
TOO	Toolangi	32.78	194	P	P	08 49 16.4	+0.9
ARPS	Mount Arapiles	33.06	199	P	P	08 49 19.1	+1.2
	baz=33,SNR=20						
ARPS	Mount Arapiles	33.06	199	P	P	08 49 19.2	+1.2
BRAT	Ballarat	33.15	196	P	P	08 49 20.4	+1.7
FORT	Forrest	35.36	222	P	P	08 49 37.9	+0.1
	baz=36,SNR=161						
FORT	Forrest	35.36	222	P	P	08 49 37.7	-0.2
FORT	Forrest	35.36	222	P	P	08 49 37.8	0.0
MPSI	Mapaga	35.39	279	P	P	08 49 37.0	-1.3
	comp=Z,12nm,0.5s,comp=Z,687nm						
NIUE	Niue	36.78	114	P	P	08 49 47.4	-2.7
	baz=37						
PLAI	Plampang	36.86	263	P	P	08 49 48.0	-2.7
	comp=Z,48nm,0.7s						
MOO	Moorlands	37.14	189	P	P	08 49 55.0	+2.3
	baz=37,SNR=9.0						
MBWA	Marble Bar	37.27	242	P	P	08 49 53.0	-1.1
MBWA				IAmb	IAmb	08 49 54.0	
	comp=Z,22nm,0.6s						
MBWA	Marble Bar	37.27	242	P	P	08 49 53.5	-0.6
PSA00	Pilbara Seismi	37.31	242	P	P	08 49 53.0	-1.4
PSA00				IAmb	IAmb	08 49 55.5	
	comp=Z,22nm,0.6s						
PSA00	Pilbara Seismi	37.31	242	P	P	08 49 53.2	-1.2
PSA00				IAmb	IAmb	08 49 54.4	
	comp=Z,7.9nm,0.7s						
PSA00	Pilbara Seismi	37.31	242	P	P	08 49 53.7	-0.7
TAU	Tasmania Unive	37.58	189	P	P	08 49 58.0	+1.7
TAU	Tasmania Unive	37.58	189	P	P	08 49 58.0	+1.7
AUTAR	Taroona High S	37.60	189	P	P	08 49 58.2	+1.7
TWSI	Taliwang, Sumb	37.74	263	P	P	08 49 56.3	-1.8
	comp=Z,26nm,1.6s						
URZ	Urewera	38.15	151	P	P	08 50 01.8	+0.6
	comp=Z,2.8nm,0.8s,baz=281,slow=18,SNR=1.6						
	comp=Z,2.8nm,0.8s						
RTZ	Ruatahuna	38.37	152	P	P	08 50 03.5	+0.4
IGBI	Denpasar	39.45	263	P	P	08 50 10.4	-2.0
LTZ	Lake Taylor	39.97	160	P	P	08 50 17.1	+0.8
KMBL	Kambalda	40.00	226	P	P	08 50 16.4	-0.2
	baz=40,SNR=20						
KMBL	Kambalda	40.00	226	P	P	08 50 16.4	-0.2
	comp=Z,73nm,0.7s						
GIRL	Giralia	42.58	243	P	P	08 50 38.2	+0.5
	baz=43,SNR=3.8						
GIRL	Giralia	42.58	243	P	P	08 50 37.3	-0.4
KLBR	Kellerberrin	43.15	229	P	P	08 50 41.1	-1.0
	baz=43,SNR=12						
KLBR	Kellerberrin	43.15	229	P	P	08 50 41.1	-1.0
MORW	Morawa	43.34	233	P	P	08 50 42.8	-0.9
	baz=44,SNR=26						
MORW	Morawa	43.34	233	P	P	08 50 42.5	-1.2
MORW				IAmb	IAmb	08 50 43.6	
	comp=Z,25nm,0.6s						
MORW	Morawa	43.34	233	P	P	08 50 43.0	-0.7
BLDU	Ballidu	43.48	231	P	P	08 50 43.9	-1.0
	baz=44,SNR=22						
UGM	Wanagama	44.02	265	P	P	08 50 48.4	-1.0
NWAO	Narrogin (SRO)	44.18	227	P	P	08 50 49.5	-0.8
	baz=44,SNR=5.6						
NWAO				P	P	08 50 49.5	-0.8
	baz=44,SNR=5.6						
NWAO	Narrogin (SRO)	44.18	227	P	P	08 50 49.0	-1.3
MUN	Mundaring	44.49	229	P	P	08 50 52.1	-0.7
	baz=45,SNR=6.8						
JNU	Nakatsue	44.86	331	P	P	08 50 55.4	-0.3
	comp=Z,4.2nm,1.0s,baz=185,slow=11,SNR=1.3						
	comp=Z,4.2nm,1.0s						
MJAR	Matsushiro Arr	44.88	341	P	P	08 50 55.1	-0.7
	comp=Z,2.2nm,0.7s,baz=168,slow=8.0,SNR=9.9						
MJAR				PcP	PcP	08 52 32.6	-0.7
	comp=Z,1.6nm,0.6s,baz=169,slow=4.7,SNR=4.4						
	comp=Z,2.2nm,0.7s						
JTM	Tenmabayashi	48.02	346	P	P	08 51 20.3	+0.2
JTM				IAmb	IAmb	08 51 30.7	
	comp=Z,78nm,1.4s						
KSRS	Korea Array	49.78	332	P	P	08 51 33.5	0.0
	comp=Z,2.0nm,0.6s,baz=145,slow=7.1,SNR=7.6						
KSRS				PcP	PcP	08 52 51.0	+0.1
	comp=Z,2.0nm,0.9s,baz=121,slow=5.8,SNR=3.7						
	comp=Z,2.0nm,0.6s						
JKA	Kamikawa-asahi	50.87	349	P	P	08 51 42.2	+0.8
JKA				IAmb	IAmb	08 51 43.4	
	comp=Z,12nm,0.5s						
NJ2	Nanjing	50.87	320	*e*P	P	08 51 43.0	+1.3
NJ2				pP	pwP	08 52 35.5	+1.5
NJ2				sP	PcP	08 53 02.3	+7.3
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,160nm,3.7s						
WHN	Wuhan	52.95	315	P	P	08 51 58.0	+0.9
SDSI	Sungai Dareh	53.49	273	P	P	08 51 59.3	-2.1
	comp=Z,12nm,0.6s						
USRK	Ussuriysk Ar.	53.83	340	P	P	08 52 03.3	+0.1
	comp=Z,2.9nm,0.5s,baz=150,slow=7.9,SNR=10						
	comp=Z,2.9nm,0.5s						
MDJ	Mudanjiang	55.05	338	P	P	08 52 13.0	+1.0
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,110nm,6.1s						
KULM	Kulim	55.19	280	P	P	08 52 12.3	-1.2
BNX	BinXian	56.82	337	⇓P	P	08 52 24.5	0.0
BNX				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BNX				pmax	pmax		
	comp=Z,130nm,4.6s						
PEA0B	Petropavlovsk-	58.71	2	P	P	08 52 38.6	+1.2
PETK	Petropavlovsk-	58.71	2	P	P	08 52 38.1	+0.7
	comp=Z,13nm,0.6s,baz=168,slow=7.6,SNR=32						
	comp=Z,13nm,0.6s						
PETK	Petropavlovsk-	58.71	2	P	P	08 52 37.1	-0.3
CMAR	Chiang Mai Arr	60.11	295	P	P	08 52 48.5	+0.8
	comp=Z,2.6nm,0.4s,baz=115,slow=5.0,SNR=22						
	comp=Z,2.6nm,0.4s						
XLT	XiLinHaoTe	60.53	329	⇑*i*P	P	08 52 50.5	+0.3
XLT				pmax	pmax		
	comp=Z,9.0nm,0.6s						
XLT				pmax	pmax		
	comp=Z,94nm,4.9s						
PZH	PanZhiHua	60.58	305	P	P	08 52 51.8	+0.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,110nm,5.5s						
CD2	Chengdu	60.90	310	P	P	08 52 52.8	-0.1
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
HHC	Hu-ho-hao-te	61.01	324	*e*P	P	08 52 54.5	+1.0
HHC				pmax	pmax		
	comp=Z,19nm,0.9s						
HHC				pmax	pmax		
	comp=Z,250nm,5.7s						
BTO	Baotou	61.78	322	*e*P	P	08 53 01.5	+2.8
BTO				pP	sP	08 53 57.3	-15
BTO				sP	pwP	08 54 23.0	+30
BTO				S	S	09 01 04.5	+0.5
BTO				sS	ScS	09 02 43.3	+15
BTO				pmax	pmax		
	comp=Z,22nm,0.6s						
BTO				pmax	pmax		
	comp=Z,220nm,5.1s						
BTO				LR	LR		
	comp=Z,280nm,7.9s						
BTO				LR	LR		
	comp=Z,550nm,16.2s						
BTO				LR	LR		
	comp=Z,620nm,6.3s						
ADK	Adak	62.38	19	P	P	08 53 03.1	+0.9
LZH	Lanzhou	63.33	315	*e*P	P	08 53 10.3	+1.2
LZH				pP	sP	08 54 10.8	-12
LZH				sP	pwP	08 54 33.5	+30
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
UNV	Unalaska Valle	67.68	24	P	P	08 53 36.6	+0.3
UNV	Unalaska Valle	67.68	24	P	P	08 53 36.7	+0.5
	baz=222						
GTA	Gaotai	67.73	317	*e*P	P	08 53 38.3	+1.1
GTA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SONM	Songino Array	68.22	327	P	P	08 53 40.8	+0.8
	comp=Z,3.4nm,0.4s,baz=144,slow=5.4,SNR=37						
	comp=Z,3.4nm,0.4s						
SONM	Songino Array	68.22	327	P	P	08 53 40.4	+0.4
SPIA	Saint Paul Isl	68.87	20	P	P	08 53 43.8	+0.2
	baz=218						
S12K	Black Hills	70.81	24	P	P	08 53 55.6	+0.1
	baz=226						
SDPT	Sand Point	71.22	25	P	P	08 53 57.8	-0.1
	baz=228						
VNDA	Vanda	71.80	178	P	P	08 54 01.5	+0.4
	comp=Z,3.2nm,0.8s,baz=329,slow=6.6,SNR=9.9						
	comp=Z,3.2nm,0.8s						
VNDA	Vanda	71.80	178	P	P	08 54 01.6	+0.4
CHGN	Chignik	72.72	25	P	P	08 54 06.8	0.0
	baz=229						
RAMN	Ramite	73.47	300	*e*P	P	08 54 11.5	-0.7
	comp=Z,12nm,0.6s						
R16K	Pilot Point	73.90	24	P	P	08 54 13.4	-0.3
	baz=230,SNR=7.1						
JIRN	Jiri	74.01	301	*e*P	P	08 54 15.3	-0.1
	comp=Z,19nm,0.7s						
BILL	Bilibino	74.08	4	P	P	08 54 15.3	+0.8
GUN	Gumba	74.34	301	*e*P	P	08 54 16.9	-0.4
	comp=Z,38nm,0.7s						
R17K	Ugashik Creek	74.44	25	P	P	08 54 16.8	0.0
	baz=231						
PKI	Pulchoki	74.66	300	*e*P	P	08 54 18.3	-0.8
	comp=Z,14nm,0.5s						
PKIN	Phulchoki	74.67	300	*e*P	P	08 54 18.3	-0.8
P16K	Nushagak River	74.68	23	P	P	08 54 18.3	+0.2
	baz=229						

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DMN   Daman            74.92 300 eP     P      08 54 20.7 +0.1
Q16K  King Salmon      74.98  24 P      P      08 54 19.9 +0.1
      baz=231
O16K  Kokwok River B   75.01  23 P      P      08 54 20.3 +0.3
      baz=229
Q17K  Contact Creek    75.04  25 P      P      08 54 20.4 +0.1
      baz=231,SNR=9.8
N16K  Nishlik Lake     75.34  22 P      P      08 54 22.4 +0.5
      baz=228
GKN   Gorkha           75.43 301 eP     P      08 54 23.2 -0.1
      comp=Z,17nm,0.4s
OHAK  Old Harbor       75.51  26 P      P      08 54 23.2 +0.3
      baz=234
O17K  Koliganek Bris   75.52  23 P      P      08 54 23.0 +0.2
      baz=230
Q18K  Katmai Hardscr   75.64  24 P      P      08 54 23.9 +0.2
      baz=232,SNR=16
P18K  Big Mountain,    76.01  24 P      P      08 54 25.8  0.0
      baz=232
ANM   Nome             76.11  17 P      P      08 54 26.9 +0.8
ANM   Nome             76.11  17 P      P      08 54 26.6 +0.4
      baz=221
KDAK  Kodiak Island    76.15  26 P      P      08 54 26.8 +0.3
      baz=235
TNA   Tin City         76.19  15 P      P      08 54 26.1 -0.5
TNA                              IAmb   IAmb   08 54 28.4
      comp=Z,11nm,0.9s
TNA   Tin City         76.19  15 P      P      08 54 26.9 +0.3
      baz=218
DANN  Dangsing         76.26 301 eP     P      08 54 27.1 -1.1
      comp=Z,32nm,0.7s
O18K  Koktuh Hills     76.31  23 P      P      08 54 27.8 +0.4
      baz=232
Q19K  Cape Douglas,    76.37  25 P      P      08 54 27.8  0.0
      baz=233
PYUN  Piuthan          76.86 300 eP     P      08 54 30.8 -0.6
O19K  Port Alsworth    76.87  23 P      P      08 54 30.7 +0.2
      baz=232
SVW2  Sparrevohn       76.94  22 P      P      08 54 31.7 +0.8
SVW2                             IAmb   IAmb   08 54 34.3
      comp=Z,16nm,1.1s
P19K  Oil Pt           76.98  24 P      P      08 54 31.4 +0.2
      baz=234
N19K  Bonanza Creek    77.18  23 P      P      08 54 32.5 +0.1
N19K  Bonanza Creek    77.18  23 P      P      08 54 32.4 +0.1
      baz=232
ILSW  Iliamna Southw   77.21  24 P      P      08 54 32.5  0.0
O20K  Slope Mountain   77.48  24 P      P      08 54 33.6 -0.4
      baz=234
HOM   Homer            77.64  25 P      P      08 54 35.1 +0.4
      baz=235
CNPM  China Poot       77.73  25 P      P      08 54 35.5 +0.2
WMQ   Urumqi           77.82 317⇑iP     P      08 54 37.3 +1.1
WMQ                              pmax   pmax
      comp=Z,17nm,1.1s
M19K  Big River Lodg   77.89  22 P      P      08 54 37.2 +1.1
M19K                             IAmb   IAmb   08 54 38.7
      comp=Z,28nm,1.3s
M19K  Big River Lodg   77.89  22 P      P      08 54 37.2 +1.1
      baz=232
L19K  White Mountain   77.89  22 P      P      08 54 36.9 +0.7
      baz=232
TTA   Tatalina         77.95  21 P      P      08 54 37.1 +0.5
      baz=230,SNR=7.9
BRSE  Bradley Lake S   78.06  25 P      P      08 54 37.7 +0.6
      baz=236
SPCR  Spurr Chakacha   78.30  23 P      P      08 54 38.9 +0.4
      baz=234
M20K  Styx River       78.35  22 P      P      08 54 39.7 +1.0
M20K                             IAmb   IAmb   08 54 40.8
      comp=Z,10nm,0.9s
M20K  Styx River       78.35  22 P      P      08 54 39.4 +0.6
      baz=233
L20K  Farewell, AK     78.43  22 P      P      08 54 39.4 +0.2
      baz=232
GCSA  Galena City Sc   78.83  19 P      P      08 54 41.7 +0.6
      baz=229,SNR=9.7
O22K  Cooper Landing   78.89  25 P      P      08 54 42.0 +0.4
      baz=237
K20K  Telida           78.90  21 P      P      08 54 42.3 +0.6
K20K                             IAmb   IAmb   08 54 43.9
      comp=Z,11nm,1.0s
K20K  Telida           78.90  21 P      P      08 54 42.2 +0.6
      baz=232,SNR=8.5
SKT   Skwentna         79.02  23 P      P      08 54 42.1 -0.3
      baz=235
SUA   Susitna One      79.03  23 P      P      08 54 41.8 -0.7
SUA                              IAmb   IAmb   08 54 43.2
      comp=Z,13nm,1.0s
SUA   Susitna One      79.03  23 P      P      08 54 42.4 -0.2
      baz=236,SNR=5.6
TIXI  Tiksi            79.13 352 P      P      08 54 42.4 -0.3
RC01  Rabbit Creek A   79.23  24 P      P      08 54 43.7 +0.3
RC01                             IAmb   IAmb   08 54 44.8
      comp=Z,15nm,0.7s
RC01  Rabbit Creek A   79.23  24 P      P      08 54 43.4  0.0
      baz=237,SNR=11
PPLA  Purkeypile       79.31  22 P      P      08 54 43.6 -0.4
      baz=234
RDOG  Red Dog Mine     79.39  15 P      P      08 54 45.1 +0.9
RDOG  Red Dog Mine     79.39  15 P      P      08 54 44.6 +0.4
      baz=223
CAST  Castle Rocks     79.66  21 P      P      08 54 45.5 -0.3
      baz=234,SNR=11
PWL   Port Wells       79.68  25 P      P      08 54 45.8 -0.1
      baz=238
PMR   Palmer           79.75  24 P      P      08 54 45.8 -0.4
PMR                              IAmb   IAmb   08 54 47.4
      comp=Z,11nm,1.0s
PMR   Palmer           79.75  24 P      P      08 54 45.9 -0.4
      baz=237,SNR=6.0
CUT   Chulitna         79.75  23 P      P      08 54 45.3 -0.9
      baz=236
CHUM  Lake Minchumin   79.85  21 P      P      08 54 47.1 +0.4
      baz=234,SNR=12
KNK   Knik Glacier     79.92  24 P      P      08 54 47.2  0.0
      baz=238
SML   Sawmill          80.18  24 P      P      08 54 48.5 -0.1
      baz=238,SNR=8.3
TRF   Thorofare Moun   80.33  22 P      P      08 54 49.3 -0.3
      baz=236,SNR=6.4
M23K  Glacier View     80.42  24 P      P      08 54 49.4 -0.4
      baz=238
BPAW  Bear Paw Mtn.    80.45  21 P      P      08 54 49.5 -0.5
      baz=235,SNR=5.0
SCM   Sheep Creek Mo   80.60  24 P      P      08 54 51.2 +0.3
SCM                              IAmb   IAmb   08 54 52.3
      comp=Z,9.0nm,0.8s
SCM   Sheep Creek Mo   80.60  24 P      P      08 54 51.2 +0.3
      baz=239
EYAK  Cordova Ski Ar   80.61  26 P      P      08 54 51.2 +0.4
      baz=240
I21K  Tanana           80.73  20 P      P      08 54 51.9 +0.5
I21K                             IAmb   IAmb   08 54 53.4
      comp=Z,12nm,0.9s
I21K  Tanana           80.73  20 P      P      08 54 52.0 +0.5
      baz=234
H21K  Melozitna Rive   80.74  19 P      P      08 54 51.6 +0.1
      baz=233
MCK   McKinley         81.00  22 P      P      08 54 52.1 -0.8
      baz=237,SNR=20
KLU   Klutina          81.00  25 P      P      08 54 53.5 +0.5
KLU                              IAmb   IAmb   08 54 55.7
      comp=Z,29nm,1.3s
KLU   Klutina          81.00  25 P      P      08 54 53.7 +0.7
      baz=240,SNR=10
G21K  Allakaket        81.04  19 P      P      08 54 53.3 +0.3
      baz=232
MLY   Manley           81.08  20 P      P      08 54 53.2 -0.1
      baz=235,SNR=14
M24K  Tolsona, Glenn   81.21  24 P      P      08 54 53.8 -0.3
      baz=240
NEA2  Nenana           81.42  21 P      P      08 54 54.5 -0.5
      baz=237,SNR=6.7
F21K  Alatna River     81.48  18 P      P      08 54 55.3 -0.1
      baz=232
N25K  Chitina, Valde   81.61  25 P      P      08 54 56.3 +0.1
      baz=241
I23K  Minto, Yukon-K   81.62  21 P      P      08 54 55.8 -0.3
      baz=236
WRH   Wood River Hil   81.71  22 P      P      08 54 56.0 -0.5
HARP  HAARP            81.77  24 P      P      08 54 57.3 +0.3
      baz=241
MDM   Murphy Dome      81.92  21 P      P      08 54 56.9 -0.8
MDM                              IAmb   IAmb   08 54 58.2
      comp=Z,15nm,1.3s
PAX   Paxson           81.93  23 P      P      08 54 58.2 +0.3
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      baz=240
H23K  Yukon River      81.94  20 P      P      08 54 58.0 +0.2
      baz=236
TCOL  CIGO, UAF Yank   82.01  21 P      P      08 54 57.0 -1.1
      baz=238,SNR=6.6
COLA  College          82.01  21 P      P      08 54 57.7 -0.4
      baz=238
F22K  John River       82.06  18 P      P      08 54 58.6 +0.3
      baz=233
HDA   Harding Lake     82.10  22 P      P      08 54 57.9 -0.7
HDA                              IAmb   IAmb   08 54 59.9
      comp=Z,15nm,1.3s
HDA   Harding Lake     82.10  22 P      P      08 54 58.4 -0.2
      baz=239,SNR=13
MCARA McCarthy VSAT    82.17  25 P      P      08 54 59.8 +0.7
      baz=243,SNR=5.3
K24K  Donnelly Dome    82.23  23 P      P      08 54 59.7 +0.4
      baz=240
G23K  Bananza Creek    82.28  19 P      P      08 55 00.2 +0.7
      baz=236
POKR  Poker Plat Res   82.29  21 P      P      08 54 58.8 -0.8
      baz=238
ILAR  Eielson Array    82.31  22 P      P      08 54 58.7 -1.0
      comp=Z,3.3nm,0.5s,baz=241,slow=5.1,SNR=102
      comp=Z,3.3nm,0.5s
ILAR  Eielson Array    82.31  22 P      P      08 54 59.1 -0.5
MK31  Makanchi Array   82.38 319 P      P      08 55 00.2 -0.2
MKAR  Makanchi Array   82.38 319 P      P      08 55 00.2 -0.2
      comp=Z,27nm,0.7s,baz=103,slow=5.2,SNR=235
      comp=Z,27nm,0.7s
MKAR  Makanchi Array   82.38 319 P      P      08 55 00.5  0.0
COLD  Coldfoot         82.52  19 P      P      08 55 01.1 +0.4
      baz=235
H24K  Noodor Dome      82.52  20 P      P      08 55 00.9 +0.1
      baz=238
RIDG  Independent Ri   82.55  23 P      P      08 55 01.6 +0.5
RIDG                             IAmb   IAmb   08 55 03.2
      comp=Z,18nm,1.2s
RIDG  Independent Ri   82.55  23 P      P      08 55 01.0  0.0
      baz=241,SNR=8.2
MENT  Mentasta         82.61  24 P      P      08 55 01.6 +0.3
MENT                             IAmb   IAmb   08 55 03.0
      comp=Z,7.8nm,0.5s
M26K  Nabesna, AK      82.66  25 P      P      08 55 02.5 +0.9
      baz=243
L26K  Log Cabin Wild   82.80  24 P      P      08 55 03.0 +0.7
L26K                             IAmb   IAmb   08 55 04.2
      comp=Z,17nm,1.4s
L26K  Log Cabin Wild   82.80  24 P      P      08 55 02.5 +0.2
      baz=242,SNR=10
PINM  Pinnacle         82.83  27 P      P      08 55 02.7 +0.1
      baz=245
SCRK  Sand Creek       83.00  23 P      P      08 55 03.6 +0.1
SCRK  Sand Creek       83.00  23 P      P      08 55 03.0 -0.4
      baz=242,SNR=9.6
PNL   Peninsula        83.05  28 P      P      08 55 04.0 +0.4
      baz=246
ZALV  Zalesovo Beam    83.08 326 P      P      08 55 02.9 -0.9
      comp=Z,9.9nm,0.6s,baz=114,slow=5.5,SNR=46
      comp=Z,9.9nm,0.6s
M27K  Edge Creek, AK   83.10  25 P      P      08 55 04.4 +0.4
      baz=244
G24K  Hadweenzic Riv   83.12  20 P      P      08 55 04.7 +0.9
      baz=238
O28M  Mount Upton      83.14  27 P      P      08 55 05.1 +0.7
      baz=245
E23K  Chandalar        83.17  18 P      P      08 55 04.8 +0.7
      baz=236
PRP   Porcupine Dome   83.19  21 P      P      08 55 04.7 +0.4
      baz=240
A21K  Barrow           83.25  14 P      P      08 55 04.1 -0.2
      baz=229
D23K  Nanushuk River   83.37  17 P      P      08 55 06.0 +0.9
      baz=235
F24K  Squaw Lake       83.42  19 P      P      08 55 06.7 +1.3
      baz=238
L27K  Beaver Creek,    83.44  24 P      P      08 55 06.1 +0.5
L27K  Beaver Creek,    83.44  24 P      P      08 55 06.9 +1.3
      baz=244
YUK3  Moose Creek      83.45  26 P      P      08 55 06.4 +0.5
      baz=245
BCAR  Beaver Creek A   83.46  24 P      P      08 55 06.2 +0.5
E24K  Your Creek       83.53  18 P      P      08 55 06.4 +0.5
      baz=237
YUK8  Steele Glacier   83.55  26 P      P      08 55 07.1 +0.7
      baz=246,SNR=6.6
BVCY  Beaver Creek     83.55  25 P      P      08 55 07.0 +0.9
      baz=245
G25K  Bearman Lake     83.62  20 P      P      08 55 06.9 +0.6
      baz=239
O29M  Mount Kennedy    83.68  27 P      P      08 55 07.9 +0.9
      baz=247
K27K  Chicken          83.77  23 P      P      08 55 08.0 +0.8
K27K                             IAmb   IAmb   08 55 09.8
      comp=Z,13nm,1.1s
K27K  Chicken          83.77  23 P      P      08 55 08.5 +1.3
      baz=243
S31K  Pelican          83.92  30 P      P      08 55 08.7 +0.8
      baz=249
I26K  Coal Creek Min   83.95  22 P      P      08 55 08.2 +0.1
I26K  Coal Creek Min   83.95  22 P      P      08 55 08.0 -0.1
      baz=242
YUK6  Outpost Mounta   84.03  27 P      P      08 55 09.4 +0.6
      baz=247
YUK4  Talbot Arm       84.06  26 P      P      08 55 10.1 +1.1
      baz=247,SNR=5.3
QSPA  South Pole Qui   84.19 180 P      P      08 55 09.3 -0.2
QSPA                             IAmb   IAmb   08 55 10.0
      comp=Z,8.0nm,0.7s
F25K  Christian Rive   84.20  19 P      P      08 55 10.2 +0.9
      baz=240
TARG  Taragay, Kyrgy   84.20 313 P      P      08 55 09.1 -1.2
TARG                             IAmb   IAmb   08 55 11.5
      comp=Z,8.7nm,0.9s
R31K  City Hall, Gus   84.32  30 P      P      08 55 10.5 +0.5
      baz=250
P30M  Million Dollar   84.36  28 P      P      08 55 11.1 +0.9
      baz=248
HYT   Haines Junctio   84.37  27 P      P      08 55 11.1 +0.7
HYT                              IAmb   IAmb   08 55 12.3
      comp=Z,9.5nm,0.7s
HYT   Haines Junctio   84.37  27 P      P      08 55 11.1 +0.7
      baz=248,SNR=11
C24K  Franklin Bluff   84.38  17 P      P      08 55 10.9 +0.8
      baz=237
PLBC  Pleasant Camp    84.39  29 P      P      08 55 10.8 +0.4
      baz=249
EGAK  Eagle            84.46  23 P      P      08 55 11.4 +0.8
      baz=244,SNR=11
BMAR  Burnt Mountain   84.47  20 P      P      08 55 11.6 +0.9
E25K  Arctic Village   84.49  19 P      P      08 55 11.6 +0.8
      baz=240
G26K  Porcupine Rive   84.51  20 P      P      08 55 11.8 +1.0
      baz=241
M29M  Somme Creek      84.58  25 P      P      08 55 12.5 +1.1
      baz=247
I27K  Kandik River     84.66  22 P      P      08 55 12.6 +1.0
      baz=244
F26K  Sheenjek River   84.75  20 P      P      08 55 13.2 +1.1
      baz=241
N30M  Aishikik Lake    84.80  27 P      P      08 55 13.3 +0.9
      baz=248
DAWY  Dawson           84.85  24 P      P      08 55 13.8 +1.2
      baz=246,SNR=7.8
D25K  Kavik River      84.86  18 P      P      08 55 12.9 +0.3
      baz=239
SKAG  Skagway          84.89  29 P      P      08 55 13.7 +0.9
      baz=250
U33K  Whale Pass       84.90  32 P      P      08 55 14.0 +1.0
      baz=252
H27K  Steamboat Moun   84.97  21 P      P      08 55 14.2 +1.0
      baz=244
L29M  L29M             84.98  25 P      P      08 55 14.5 +1.1
      baz=247
O30N  Mendenhall       85.00  27 P      P      08 55 14.4 +1.0
      baz=249
KSH   Kashi            85.09 310 P      P      08 55 16.5 +2.0
KSH                              pP     sP     08 56 17.5  -14
KSH                              sP     pwP    08 56 45.0  +34
KSH                              pmax   pmax
      comp=Z,21nm,0.9s
KSH                              pmax   pmax
      comp=Z,150nm,6.5s
KSH                              LR     LR
      comp=Z,210nm,16.4s
KSH                              LR     LR
      comp=Z,170nm,13.0s
G27K  Doyon Strip      85.19  21 P      P      08 55 14.9 +0.6
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      baz=243
T33K  Petersburg       85.21  32 P      P      08 55 15.0 +0.6
      baz=252
M30M  Minto, Yukon     85.35  26 P      P      08 55 15.5 +0.4
M30M                             IAmb   IAmb   08 55 17.6
      comp=Z,13nm,1.4s
M30M  Minto, Yukon     85.35  26 P      P      08 55 16.3 +1.1
      baz=248
N31M  Braeburn, Yuko   85.39  27 P      P      08 55 15.7 +0.3
      baz=249,SNR=7.9
WRAK  Wrangell Islan   85.40  32 P      P      08 55 16.9 +1.5
      baz=253
ULHL  Ulahol           85.45 313 P      P      08 55 16.1 -0.2
      SNR=8.9
MAW   Mawson           85.45 203 P      P      08 55 15.0 -0.5
      comp=Z,22nm,0.8s,baz=59,slow=21,SNR=4.9
      comp=Z,22nm,0.8s
V35K  Ketchikan        85.48  33 P      P      08 55 16.8 +1.0
      baz=253
K29M  Barlow Dome      85.52  24 P      P      08 55 16.8 +0.7
      baz=248,SNR=12
C26K  Camden Bay       85.60  18 P      P      08 55 17.1 +1.0
      baz=240
P32M  Atlin            85.70  29 P      P      08 55 17.6 +0.6
      baz=251
KURK  Kurchatov        85.77 322 P      P      08 55 16.1 -1.3
KURK                             IAmb   IAmb   08 55 18.1
      comp=Z,14nm,1.4s
KURBB Kurchatov Arra   85.80 322 P      P      08 55 16.2 -1.3
      comp=Z,3.8nm,0.5s,baz=101,slow=4.5,SNR=66
      comp=Z,3.8nm,0.5s
I29M  Ogilvie Camp,    85.81  23 P      P      08 55 18.0 +0.7
      baz=247,SNR=12
C27K  Jago River       85.82  18 P      P      08 55 18.4 +1.1
      baz=241
E27K  Coleen River     85.83  20 P      P      08 55 18.5 +1.1
      baz=243
TKM2  Tokmak 2         86.05 314 P      P      08 55 19.2 -0.1
      SNR=8.2
MAYO  Mayo, Yukon      86.10  25 P      P      08 55 19.5 +0.7
      baz=249
Q32M  Nakina River     86.21  30 P      P      08 55 20.0 +0.4
      baz=252
M31M  Drury Creek, Y   86.26  26 P      P      08 55 20.2 +0.6
      baz=250,SNR=5.3
P33M  Teslin, Yukon    86.33  28 P      P      08 55 20.5 +0.4
      baz=252
S34M  Telegraph Cree   86.48  31 P      P      08 55 21.6 +0.9
      baz=254
N32M  Quiet Lake       86.50  28 P      P      08 55 21.9 +1.0
      baz=252
T35M  Bob Quinn        86.67  32 P      P      08 55 22.4 +0.6
      baz=254
FARO  Faro, Yukon      86.73  26 P      P      08 55 22.9 +1.0
      baz=251,SNR=6.3
AAK   Ala-Archa        86.79 313 P      P      08 55 22.4 -0.4
      SNR=5.7
AAK   Ala-Archa        86.79 313 P      P      08 55 22.0 -0.8
      comp=Z,6.7nm,0.7s,baz=126,slow=3.0,SNR=12
      comp=Z,6.7nm,0.7s
AAK   Ala-Archa        86.79 313 P      P      08 55 22.9 +0.1
AAK                              IAmb   IAmb   08 55 23.3
      comp=Z,6.7nm,0.7s
EPYK  Eagle Plains     86.80  22 P      P      08 55 22.9 +0.8
      baz=248
USP   Ospenovka        86.91 314 P      P      08 55 22.7 -0.5
      SNR=7.6
DLBC  Dease Lake       87.18  31 P      P      08 55 24.8 +0.6
      baz=254
G30M  tAoh Zraii Nji   87.21  22 P      P      08 55 24.4 +0.3
      baz=248
AML   Almayashu        87.28 313 P      P      08 55 25.8 +0.3
      SNR=13
EKS2  Erkin-Say        87.32 313 P      P      08 55 25.1 -0.1
      SNR=6.9
NRIK  Noril'sk         87.53 341 P      P      08 55 23.9 -1.6
      comp=Z,4.1nm,0.5s,baz=132,slow=4.6,SNR=10
      comp=Z,4.1nm,0.5s
WTLY  Watson Lake, Y   88.23  29 P      P      08 55 29.6 +0.5
      baz=255
F31M  Tsiigehtchic     88.28  21 P      P      08 55 29.2 +0.1
      baz=251
INK   Inuvik           88.64  21 P      P      08 55 31.1 +0.4
      baz=251
SMMC  Simmler          89.38  55 P      P      08 55 35.0 -0.1
      baz=263
LIRD  Liard River Hi   89.40  30 P      P      08 55 35.0 +0.5
      baz=258
KKAR  Karatay Array    89.76 313 P      P      08 55 35.7 -0.9
VES   Vestal, Richgr   90.18  54 P      P      08 55 38.9 +0.2
      baz=263
CIS   Catalina Islan   90.45  57 P      P      08 55 40.2 +0.1
      baz=264
DECC  Green Verdugo    90.61  56 P      P      08 55 41.5 +0.7
      baz=264
EDW2  Edwards Air Fo   90.96  55 P      P      08 55 43.5 +1.1
      baz=264,SNR=7.6
CWC   Cottonwood Cre   91.06  54 P      P      08 55 44.0 +1.0
      baz=264
NVAR  Mina Array Bea   91.10  52 P      P      08 55 44.7 +1.5
      comp=Z,10nm,0.9s,baz=255,slow=6.4,SNR=54
      comp=Z,10nm,0.9s
BFSC  Mount Baldy Ra   91.16  56 P      P      08 55 44.6 +1.1
      baz=264,SNR=7.5
BVAR  Borovoye Array   91.22 323 P      P      08 55 41.6 -1.5
      comp=Z,10nm,0.7s,baz=100,slow=6.2,SNR=31
      comp=Z,10nm,0.7s
KVN   Kaiserville      91.33  51 P      P      08 55 45.1 +0.9
KVN                              IAmb   IAmb   08 55 46.5
      comp=Z,16nm,1.3s
MURC  Murrieta         91.48  57 P      P      08 55 46.1 +1.2
      baz=264
109C  Camp Elliot, M   91.48  57 P      P      08 55 46.3 +1.5
      baz=264
MPMC  Manual Prospec   91.49  54 P      P      08 55 47.1 +2.0
      baz=264,SNR=9.0
GSC   Goldstone, Bar   91.97  55 P      P      08 55 48.6 +1.5
      baz=264
FURC  Furnace Creek,   92.04  54 P      P      08 55 48.7 +1.5
      baz=264
MONP2 Monument Peak    92.06  57 P      P      08 55 49.6 +1.9
      baz=265,SNR=5.8
PFO   Pinyon Flats O   92.09  57 P      P      08 55 49.1 +1.3
      baz=265,SNR=5.8
TPFO  Pinon Flats      92.10  57 P      P      08 55 49.2 +1.4
      baz=265,SNR=7.1
BMN   Battle Mountai   92.15  50 P      P      08 55 48.6 +0.7
BMN                              IAmb   IAmb   08 55 50.1
      comp=Z,7.4nm,0.8s
C36M  Paulatuk         92.23  21 P      P      08 55 47.0 -0.3
C36M                             IAmb   IAmb   08 55 47.7
      comp=Z,4.5nm,0.8s
C36M  Paulatuk         92.23  21 P      P      08 55 47.5 +0.1
      baz=260
IKP   In-Ko-Pah, Jac   92.29  58 P      P      08 55 49.7 +1.0
      baz=265
HEC   Hector,Ludlow    92.31  55 P      P      08 55 50.0 +1.3
      baz=265
A36M  Sachs Harbour    92.34  18 P      P      08 55 48.0 +0.1
      baz=259
ESJX  Sierra Juarez    92.37  58 P      P      08 55 51.1 +1.9
ESJX                             IAmb   IAmb   08 55 53.0
      comp=Z,8.8nm,1.0s
SHOC  Shoshone, Teco   92.46  54 P      P      08 55 50.1 +0.8
      baz=265
BELC  Belle Mtn. Jos   92.51  56 P      P      08 55 51.0 +1.3
      baz=265,SNR=5.9
TPNV  Topopah Spring   92.58  53 P      P      08 55 51.1 +1.1
      baz=265,SNR=7.0
SWSC  Sam W. Stewart   92.58  57 P      P      08 55 51.1 +1.3
      baz=265
TUQ   Turquoise Moun   92.70  55 P      P      08 55 52.1 +1.6
      baz=265
GMRC  Granite Mounta   92.86  55 P      P      08 55 52.6 +1.3
      baz=265,SNR=9.4
BC3   Big Chuckawall   92.93  57 P      P      08 55 53.2 +1.5
      baz=265,SNR=11
NEW   Newport          92.97  42 P      P      08 55 52.9 +1.6
      baz=265
R11B  Troy Canyon, C   93.22  52 P      P      08 55 54.7 +1.8
      baz=265,SNR=11
IRM   Iron Mountain    93.23  56 P      P      08 55 54.5 +1.6
      baz=265,SNR=13
GLA   Glamis           93.41  57 P      P      08 55 55.6 +1.8
      baz=265
NEE2  Needles Airpor   93.71  56 P      P      08 55 56.5 +1.5
      baz=266
PDMCI Parker Dam,Lak   94.07  56 P      P      08 55 57.9 +1.2
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	baz=266,SNR=7.6						
SPR3	**Spring Creek 3**	**94.25**	**51**	P	**P**	**08 55 58.8**	**+1.0**
HLID	**Hailey**	**94.49**	**47**	P	**P**	**08 55 59.3**	**+0.7**
	baz=266						
MSO	**Missoula**	**95.02**	**44**	P	**P**	**08 56 01.2**	**+0.3**
	baz=267						
YKA	**Yellowknife Ar**	**95.34**	**28**	P	**P**	**08 56 01.8**	**0.0**
	comp=Z,1.9nm,0.7s,baz=265,slow=4.5,SNR=37						
	comp=Z,1.9nm,0.7s						
DUG	**Dugway, Tooele**	**95.49**	**50**	P	**P**	**08 56 04.5**	**+1.3**
	baz=267						
HVU	**Hansel Valley**	**95.60**	**49**	P	**P**	**08 56 04.4**	**+0.7**
HVU				IAmb	IAmb	08 56 05.5	
	comp=Z,5.7nm,0.8s						
WUAZ	**Wupatki**	**96.41**	**55**	P	**P**	**08 56 08.6**	**+1.0**
	baz=268						
BOZ	**Bozeman (W)**	**96.57**	**45**	P	**P**	**08 56 08.9**	**+0.8**
	baz=269						
TUC	**Tucson**	**96.76**	**58**	P	**P**	**08 56 09.6**	**+0.5**
	baz=268						
H17A	**Grant Village**	**97.29**	**46**	P	**P**	**08 56 11.8**	**+0.4**
	baz=269						
BW06	**Boulder Array**	**98.01**	**48**	P	**P**	**08 56 14.7**	**0.0**
	baz=270						
PD31	**Pinedale Array**	**98.01**	**48**	P	**P**	**08 56 14.5**	**-0.2**
PD31				IAmb	IAmb	08 56 15.3	
	comp=Z,3.0nm,0.8s						
PDAR	**Pinedale Array**	**98.01**	**48**	P	**P**	**08 56 14.5**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=234,slow=2.3,SNR=30						
	comp=Z,2.2nm,0.6s						
PDAR	**Pinedale Array**	**98.01**	**48**	P	**P**	**08 56 14.4**	**-0.3**
RLMT	**Red Lodge**	**98.23**	**45**	P	**P**	**08 56 16.3**	**+0.8**
	baz=270						
MVCO	**Mesa Verde**	**98.78**	**53**	P	**P**	**08 56 18.6**	**+0.4**
	baz=270						
O20A	**White River Ci**	**98.99**	**50**	P	**P**	**08 56 19.4**	**+0.3**
	baz=270						
S22A	**4UR Ranch, Cre**	**100.11**	**53**	P	**Pdif**	**08 56 24.5**	**+0.3**
	baz=271						
LAO	**LASA Array**	**100.32**	**44**	P	**Pdif**	**08 56 25.4**	**+0.8**
	baz=273						
ANMO	**Albuquerque**	**100.42**	**56**	P	**Pdif**	**08 56 26.1**	**+0.6**
	baz=270						
N23A	**Red Feather La**	**100.73**	**50**	P	**Pdif**	**08 56 28.0**	**+1.1**
	baz=272						
ISCO	**Idaho Springs**	**101.02**	**51**	P	**Pdif**	**08 56 28.7**	**+0.5**
	baz=272						
DGMT	**Dagmar**	**101.58**	**42**	P	**Pdif**	**08 56 30.9**	**+0.7**
	baz=274						
RSSD	**Black Hills**	**102.00**	**46**	P	**Pdif**	**08 56 32.4**	**+0.1**
	baz=274						
TXAR	**Lajitas Array**	**102.83**	**61**	P	**Pdif**	**08 56 37.2**	**+0.9**
	comp=Z,0.1nm,0.6s,baz=256,slow=3.6,SNR=2.0						
MNK	**Minsk**	**115.46**	**329**	*i* P	**Pdif**	**08 57 28.9**	**-2.8**
	comp=E,4.0nm,1.2s						
MNK				*i* P	**Pdif**	**08 57 28.9**	**-2.8**
	comp=N,40nm,1.0s						
MNK				*i* P	**Pdif**	**08 57 28.9**	**-2.8**
	comp=Z,9.0nm,0.8s,baz=62						
MNK				*i* pP	**pPdif**	**08 58 30.0**	**+3.8**
MNK				*i* PP	**PP**	**09 02 21.9**	**-1.3**
MNK				*i* SKP		09 04 26.0	
MNK				*i* PPP	PPP	09 04 50.2	
MNK				*i* PKS	**PKSdf**	**09 04 52.5**	**-2.4**
MNK				*i* SS	SS	09 18 02.6	-1.2
MNK				*i* SSS	SSS	09 22 23.8	
MNK				*i* LRM	MLR	09 50 29.0	
	comp=E,31nm,17.2s						
MNK				*i* LRM	MLR	09 50 49.1	
	comp=Z,85nm,9.9s						
MNK				*i* LRM	MLR	09 51 13.7	
	comp=N,370nm,16.0s						
WCI	**Wyandotte Cave**	**116.11**	**50**	P	**PKPdf**	**09 01 19.8**	**-0.4**
	baz=284						
AKASG	**Malin Array Be**	**116.45**	**325**	PKP	**PKPdf**	**09 01 19.7**	**-0.8**
	comp=N,0.3nm,0.4s,baz=57,slow=2.1,SNR=4.4						
LRAL	**Lakeview Retre**	**116.68**	**56**	P	**PKPdf**	**09 01 21.2**	**-0.3**
	baz=281						
AAM	**Ann Arbor**	**116.93**	**45**	P	**PKPdf**	**09 01 21.9**	**+0.2**
	baz=288						
BRTR	**Keskin Array B**	**117.44**	**312**	PKP	**PKPdf**	**09 01 21.4**	**-1.6**
	comp=N,0.3nm,0.4s,baz=146,slow=2.7,SNR=2.4						
PLCA	**Paso Flores**	**117.79**	**142**	PKP	**PKPdf**	**09 01 23.1**	**-0.5**
	comp=N,0.7nm,0.6s,baz=255,slow=4.9,SNR=5.4						
O53A	**New Philadelph**	**119.33**	**47**	P	**PKPdf**	**09 01 25.8**	**-0.6**
	baz=289						
KMSC	**Kings Mountain**	**120.76**	**52**	P	**PKPdf**	**09 01 29.3**	**0.0**
	baz=286						
CNNC	**Cliffs of the**	**123.42**	**51**	P	**PKPdf**	**09 01 34.1**	**-0.3**
	baz=289						
CLL	**Collm**	**124.66**	**332**	*e*PKPdf	**PKPdf**	**09 01 36.0**	**-0.3**
HRV	**Adam Dziewonsk**	**125.09**	**41**	P	**PKPdf**	**09 01 37.4**	**+0.1**
	baz=298						
PKME	**Peaks-Kenny Pk**	**125.12**	**37**	P	**PKPdf**	**09 01 37.3**	**0.0**
	baz=302						
GERES	**GERESS Array B**	**125.92**	**329**	PKP	**PKPdf**	**09 01 38.8**	**-0.1**
	comp=N,1.1nm,0.6s,baz=95,slow=3.3,SNR=7.8						
M65A	**Busby, Falmout**	**126.14**	**41**	P	**PKPdf**	**09 01 39.5**	**+0.2**
	baz=299						
ROSC	**El Rosal**	**131.07**	**89**	PKP	**PKPdf**	**09 01 49.7**	**-0.4**
	comp=N,5.7nm,0.4s,baz=230,slow=7.9,SNR=2.1						
LPAZ	**La Paz**	**132.19**	**118**	PKP	**PKPdf**	**09 01 53.2**	**+0.9**
	comp=N,1.3nm,0.5s,baz=256,slow=9.1,SNR=3.7						
CPUP	**Villa Florida**	**135.39**	**137**	PKP	**PKPdf**	**09 01 57.0**	**-0.4**
	comp=N,1.0nm,0.7s,baz=45,slow=19,SNR=3.8						
ESDC	**Sonseca Array**	**141.21**	**334**	PKP	**PKPdf**	**09 02 07.1**	**-0.6**
	comp=N,0.7nm,0.7s,baz=57,slow=4.7,SNR=2.0						
BDFB	**Brasilia**	**148.95**	**134**	PKP	**PKPdf**	**09 02 21.4**	**-0.3**
	comp=N,6.5nm,0.6s,baz=157,slow=7.7,SNR=3.8						
BDFB				PKPbc	**PKPbc**	**09 02 25.7**	**-0.3**
	comp=N,6.5nm,0.6s,baz=303,slow=1.7,SNR=10						
TORD	**Torodi Ar. Bea**	**152.52**	**287**	PKP	**PKPdf**	**09 02 26.1**	**-1.0**
	comp=N,30nm,0.5s,baz=48,slow=2.2,SNR=4.7						

GEN ***25*** *08:46:59.1, 44°.16N×11°.14E, h14^{km}±1^{km}, Ml1.7*

ROM 25 08:46:59.8±0.1**, 44°.152N**±0°.004×**11°.125E**±0°.005**, h9^{km}, ML2.0**/40**, 9C-5D, Error ellipse: s-maj=0.5km s-min=0.3km az=24.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNVD	**Fontana Vidola**	**0.02**	**354**	⇓P	Pg	08 47 01.7	0.0
FNVD				S	Sg	08 47 03.3	+0.4
FNVD				AML	AML		
	comp=E,6730µm,0.1s						
FNVD				AML	AML		
	comp=N,7870µm,0.1s						
MTCR	**Monte La Croce**	**0.15**	**216**	⇑P	Pg	08 47 03.9	+0.6
MTCR				S	Sg	08 47 06.9	+1.2
MTCR				AML	AML		
	comp=N,2565µm,0.2s						
MTCR				AML	AML		
	comp=E,3600µm,0.2s						
MTCR	**Monte La Croce**	**0.15**	**216**	P	Pg	08 47 03.9	+0.6
MTCR				S	Sg	08 47 06.9	+1.3
SEI	**Scarperia**	**0.19**	**120**	⇑P	Pg	08 47 04.0	+0.1
SEI				S	Sg	08 47 07.5	+0.9
SEI				AML	AML		
	comp=E,1485µm,0.4s						
SEI				AML	AML		
	comp=N,2285µm,0.4s						
SEI	**Scarperia**	**0.19**	**120**	P	Pg	08 47 04.0	+0.1
SEI				S	Sg	08 47 07.6	+1.0
MPPT	**Montemurlo**	**0.20**	**187**	⇑P	Pg	08 47 04.5	+0.5
MPPT				S	Sg	08 47 08.1	+1.4
MPPT				AML	AML		
	comp=E,1575µm,0.2s						
MPPT				AML	AML		
	comp=N,1845µm,0.2s						
ZCCA	**Zocca**	**0.23**	**332**	⇑P	Pg	08 47 05.5	+1.0
ZCCA				S	Sg	08 47 08.9	+1.2
ZCCA				AML	AML		
	comp=E,535µm,0.3s						
ZCCA				AML	AML		
	comp=N,355µm,0.4s						
ZCCA				AML	AML		
	comp=E,603µm,0.3s						
ZCCA				AML	AML		
	comp=N,400µm,1.3s						
ZCCA				AML	AML		
	comp=E,535µm,0.3s						
ZCCA				AML	AML		
	comp=N,355µm,0.4s						
ZCCA				AML	AML		
	comp=N,400µm,0.7s						
ZCCA	**Zocca**	**0.23**	**332**	P	Pg	08 47 05.5	+1.0
BRIS	**BRISIGHELLA**	**0.28**	**90**	⇓P	Pn	08 47 09.5	-0.6
BRIS				S	Sb	08 47 16.8	+5.1
BRIS				AML	AML		
	comp=E,194µm,1.1s						
BRIS				AML	AML		
	comp=N,276µm,0.3s						
BRIS				AML	AML		
	comp=E,194µm,0.9s						
POPM	**Popiglio**	**0.29**	**248**	⇑P	Pg	08 47 05.9	+0.4
POPM				S	Sb	08 47 10.7	-1.3
POPM				AML	AML		
	comp=E,1390µm,0.7s						
POPM				AML	AML		
	comp=N,1630µm,0.2s						
POPM	**Popiglio**	**0.29**	**248**	P	Pg	08 47 05.9	+0.4
POPM				S	Sb	08 47 10.8	-1.2
MTRZ	**Monterenzio**	**0.33**	**47**	⇑P	Pg	08 47 06.0	-0.4
MTRZ				AML	AML		
	comp=N,702µm,0.3s						
MTRZ				AML	AML		
	comp=N,713µm,0.3s						
MTRZ				AML	AML		
	comp=E,556µm,0.4s						
MTRZ				AML	AML		
	comp=E,536µm,0.4s						
MTRZ				AML	AML		
	comp=N,702µm,1.7s						
MTRZ				AML	AML		
	comp=N,713µm,1.7s						
MTRZ	**Monterenzio**	**0.33**	**47**	P	Pg	08 47 06.0	-0.4
CRMI	**Carmignano**	**0.38**	**197**	⇑P	Pg	08 47 07.4	+0.2
CRMI				S	Sb	08 47 13.7	-1.0
CRMI				AML	AML		
	comp=N,138µm,0.5s						
CRMI				AML	AML		
	comp=E,160µm,0.8s						
CRMI	**Carmignano**	**0.38**	**197**	P	Pg	08 47 07.5	+0.2
CRMI				S	Sb	08 47 13.8	-0.9
BDI	**Bagni Di Lucca**	**0.39**	**257**	⇑P	Pg	08 47 07.7	+0.2
BDI				S	Sg	08 47 13.8	+1.1
BDI				AML	AML		
	comp=N,99µm,0.2s						
BDI				AML	AML		
	comp=E,97µm,0.3s						
BDI	**Bagni Di Lucca**	**0.39**	**257**	P	Pg	08 47 07.7	+0.2
BDI				S	Sb	08 47 13.9	-1.1
RUFI	**Rufina**	**0.42**	**138**	P	Pg	08 47 08.4	+0.4
RUFI				AML	AML		
	comp=E,123µm,0.4s						
RUFI				AML	AML		
	comp=N,82µm,0.5s						
RUFI				AML	AML		
	comp=E,122µm,0.4s						
RUFI				AML	AML		
	comp=N,82µm,0.5s						
RUFI				AML	AML		
	comp=E,122µm,1.6s						
RUFI	**Rufina**	**0.42**	**138**	P	Pg	08 47 08.4	+0.4
LMD	**Lutirano**	**0.43**	**100**	P	Pg	08 47 08.3	+0.2
LMD				S	Sb	08 47 15.0	-1.0
LMD				AML	AML		
	comp=N,132µm,0.3s						
LMD				AML	AML		
	comp=N,132µm,0.3s						
LMD				AML	AML		
	comp=E,118µm,0.4s						
LMD				AML	AML		
	comp=E,118µm,1.6s						
LMD	**Lutirano**	**0.43**	**100**	P	Pg	08 47 08.3	+0.2
LMD				S	Sg	08 47 14.7	+0.9
GSCL	**Gusciola**	**0.43**	**297**	P	Pg	08 47 08.8	+0.5
GSCL				S	Sb	08 47 15.8	-0.4
GSCL				AML	AML		
	comp=E,90µm,1.4s						
GSCL				AML	AML		
	comp=N,132µm,0.2s						
GSCL				AML	AML		
	comp=E,90µm,0.6s						
GSCL	**Gusciola**	**0.43**	**297**	P	Pg	08 47 08.8	+0.5
GSCL				S	Sb	08 47 16.3	0.0
CARD	**Cardoso**	**0.48**	**255**	AML	AML		
	comp=E,232µm,1.9s						
CARD				AML	AML		
	comp=N,302µm,0.1s						
CARD				AML	AML		
	comp=E,232µm,0.1s						
CARD	**Cardoso**	**0.48**	**255**	P	Pg	08 47 08.3	-0.9
CARD				S	Sg	08 47 16.4	+0.9
MAIM	**Mastiano**	**0.52**	**243**	P	Pg	08 47 10.0	+0.2
MAIM				S	Sb	08 47 18.1	-0.5
MAIM				AML	AML		
	comp=E,105µm,0.9s						
MAIM				AML	AML		
	comp=N,92µm,0.3s						
MAIM				AML	AML		
	comp=N,92µm,1.7s						
MAIM				AML	AML		
	comp=E,105µm,1.1s						
MAIM	**Mastiano**	**0.52**	**243**	P	Pg	08 47 10.1	+0.2
MAIM				S	Sg	08 47 16.9	+0.3
SARO	**Sassorosso**	**0.52**	**274**	P	Pg	08 47 10.2	+0.2
SARO	**Sassorosso**	**0.52**	**274**	P	Pg	08 47 10.1	+0.2
SARO				S	Sg	08 47 17.4	+0.5
VLC	**Villacollemand**	**0.53**	**271**	P	Pg	08 47 10.4	+0.2
VLC				S	Sb	08 47 18.6	-0.5
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC	**Villacollemand**	**0.53**	**271**	P	Pg	08 47 10.4	+0.2
VLC				S	Sb	08 47 18.6	-0.5
ASQU	**Asqua**	**0.60**	**126**	P	Pg	08 47 11.8	+0.4
ASQU				AML	AML		
	comp=N,148µm,0.6s						
ASQU				AML	AML		
	comp=E,138µm,0.5s						
ASQU	**Asqua**	**0.60**	**126**	P	Pg	08 47 11.8	+0.4
ASQU				S	Sb	08 47 21.1	+0.1
PII	**Pisa**	**0.61**	**225**	P	Pg	08 47 11.6	-0.1
PII				S	Sg	08 47 20.3	+0.7
PII				AML	AML		
	comp=E,306µm,0.2s						
PII				AML	AML		
	comp=N,312µm,0.3s						
PII	**Pisa**	**0.61**	**225**	P	Pg	08 47 12.1	+0.4
PII				S	Sb	08 47 22.5	+1.2
OSSC	**Osservatorio P**	**0.64**	**172**	P	Pg	08 47 12.5	+0.4
OSSC				AML	AML		
	comp=E,93µm,0.7s						
OSSC				AML	AML		
	comp=N,115µm,1.3s						
OSSC				AML	AML		
	comp=E,93µm,1.3s						
OSSC	**Osservatorio P**	**0.64**	**172**	P	Pb	08 47 13.3	+0.3
OSSC				S	Sb	08 47 22.4	+0.4
CSNT	**Castellina Chi**	**0.69**	**170**	P	Pb	08 47 14.4	+0.4
CSNT				S	Sb	08 47 23.9	+0.3
EQUI	**Equi**	**0.70**	**271**	P	Pb	08 47 13.8	-0.3
CRE	**Caprese Michel**	**0.80**	**131**	P	Pb	08 47 16.0	+0.1
CRE				AML	AML		
	comp=E,104µm,0.5s						
CRE				AML	AML		
	comp=N,216µm,0.4s						
CRE				AML	AML		
	comp=N,216µm,1.6s						
GRAM	**Graiana**	**0.83**	**294**	P	Pb	08 47 16.2	-0.3
SACS	**San Casciano d**	**1.42**	**156**	P	Pn	08 47 24.8	-1.0
MAGA	**Magasa**	**1.66**	**348**	⇓P	Pg	08 47 31.7	0.0
MAGA				AML	AML		
	comp=E,73µm,1.4s						
MAGA				AML	AML		
	comp=E,73µm,0.6s						
MAGA				AML	AML		
	comp=N,59µm,0.4s						
FDMO	**Fiordimonte**	**1.81**	**127**	P	Pn	08 47 29.9	-1.2
PP3	**Marolino**	**1.96**	**112**	⇑P	Pg	08 47 37.3	0.0
T1212	**Cascia, Frazio**	**1.98**	**134**	⇓P	Pn	08 47 33.2	-0.3
APPI	**Appiano**	**2.33**	**2**	⇓P	Pg	08 47 44.5	+0.1
CIRO	**Champorcher**	**2.92**	**301**	P	Pg	08 47 55.9	+0.2
LPEL	**Lama dei Pelig**	**3.07**	**132**	P	Pb	08 47 55.3	+0.7
CLL	**Collm**	**7.27**	**9**	*e*Sg	Sg	08 50 47.0	-6.0

ROM 25 08:47:59.2±0.1**, 44°.152N**±0°.004×**11°.133E**±0°.006**, h10^{km}, ML1.2**/2**, Error ellipse: s-maj=0.4km s-min=0.4km az=105.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNVD	**Fontana Vidola**	**0.02**	**334**	P	Pg	08 48 01.1	-0.1
FNVD				S	Sg	08 48 02.6	+0.1
MTCR	**Monte La Croce**	**0.16**	**218**	P	Pg	08 48 03.3	+0.5
MTCR				S	Sg	08 48 06.3	+1.0
SEI	**Scarperia**	**0.19**	**121**	P	Pg	08 48 03.8	+0.5
SEI				S	Sg	08 48 07.0	+1.0
MPPT	**Montemurlo**	**0.20**	**189**	P	Pg	08 48 04.2	+0.8
MPPT				S	Sg	08 48 07.6	+1.4
ZCCA	**Zocca**	**0.23**	**330**	P	Pg	08 48 04.9	+1.0
POPM	**Popiglio**	**0.29**	**249**	P	Pg	08 48 05.7	+0.6
POPM				S	Sg	08 48 10.1	+1.1
POPM				AML	AML		
	comp=E,62µm,0.9s						
POPM				AML	AML		
	comp=N,67µm,1.1s						
MTRZ	**Monterenzio**	**0.33**	**47**	P	Pg	08 48 05.7	-0.1

IGIL ***25*** *08:52:50.4, 39°.85N×13°.09W, h25^{km}, ML2.9*

LDG ***25*** *08:52:51.6±0.2, 39°.92N×13°.04W, h20^{km}, Ml3.6/5, Error ellipse: s-maj=4.0km s-min=2.4km az=81.0*

MDD ***25*** *08:52:51.6±0.6, 39°.84N×13°.00W, h27^{km}±18^{km}, Mb4.6/20, M_mb4.1/20, Error ellipse: s-maj=16.8km s-min=3.9km az=89.0*

INMG ***25*** *08:52:53.1±1.7, 39°.96N×13°.16W, h14^{km}, ML3.0, Error ellipse: s-maj=6.0km s-min=3.5km az=87.0*

CNRM ***25*** *08:52:56.1, 39°.39N×12°.81W, h43^{km}, ml3.5*

ISC 25 08:52:47.2±2.4**, 39°.90N**±0°.05×**12°.9W**±0°.1**, h10^{km}, n72, σ2^{s}60**/140**, 20C-1D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**2.92**	**108**	*e*P	**Pn**	**08 53 36.9**	**+3.2**
PMAFR				S	**Sn**	**08 54 09.9**	**+1.0**
PMAFR				A	A	08 54 12.1	
	54nm,0.2s						
PCAS	**Casmilo, Conde**	**3.35**	**86**	⇓*e*P	**Pn**	**08 53 42.9**	**+3.3**
PCAS				S	**Sn**	**08 54 20.1**	**+0.7**
PCAS				A	A	08 54 23.4	
	23nm,0.3s						
COI	**Coimbra**	**3.42**	**83**	*e*P	**Pn**	**08 53 43.9**	**+3.3**
COI				S	**Sn**	**08 54 21.7**	**+0.5**
COI				A	A	08 54 27.9	
	47nm,0.5s						
PTO	**Porto**	**3.47**	**68**	*e*P	**Pn**	**08 53 43.9**	**+2.7**
PTO				S	**Sn**	**08 54 21.6**	**-0.7**
PTO				A	A	08 54 25.9	
	95nm,0.1s						
PMTG	**Montargil**	**3.68**	**102**	*e*P	**Pn**	**08 53 46.8**	**+2.7**
PMTG				*e*S	**Sn**	**08 54 28.6**	**+1.1**
PMTG				A	A	08 54 32.2	
	12nm,0.1s						
PNCL	**Nicolau / Gran**	**3.81**	**117**	S	**Sn**	**08 54 30.5**	**-0.3**
PNCL				P	**Pn**	**08 53 48.6**	**+2.6**
PNCL	**Nicolau / Gran**	**3.81**	**117**	*e*P	**Pn**	**08 53 49.0**	**+3.0**
PNCL				*e*S	**Sn**	**08 54 30.9**	**0.0**
PNCL				A	A	08 54 37.4	
	12nm,0.2s						
PVIS	**Viseu**	**3.88**	**76**	*e*P	**Pn**	**08 53 49.7**	**+2.8**
PVIS				*e*S	**Sn**	**08 54 31.9**	**-0.6**
PVIS				A	A	08 54 37.6	
	37nm,0.1s						
EVO	**Evora**	**4.00**	**108**	*e*P	**Pn**	**08 53 51.7**	**+3.2**
EVO				S	**Sn**	**08 54 36.3**	**+0.8**
EVO				A	A	08 54 42.7	
	14nm,0.1s						
PGAV	**Gavieira, Arco**	**4.04**	**58**	*e*P	**Pn**	**08 53 52.2**	**+3.1**
PGAV				*e*S	**Sn**	**08 54 35.8**	**-0.7**
PGAV				A	A	08 54 44.4	
	20nm,0.2s						
MTE	**Manteigas**	**4.10**	**81**	*e*P	**Pn**	**08 53 53.3**	**+3.3**
MTE				S	**Sn**	**08 54 38.1**	**+0.1**
MTE				A	A	08 54 45.6	
	20nm,0.4s						
POLO	**Lamas de Olo**	**4.12**	**67**	*e*P	**Pn**	**08 53 52.8**	**+2.5**
POLO				S	**Sn**	**08 54 37.9**	**-0.7**
POLO				A	A	08 54 45.8	
	5.4nm,0.2s						
ELOB	**Lobios**	**4.13**	**60**	Pn	**Pn**	**08 53 53.1**	**+2.8**
ELOB				⇑*i*Vmb_V		08 53 54.9	
	1µm,SNR=6.1						
ELOB				Sn	**Sn**	**08 54 37.2**	**-1.6**
PCBR	**Castelo Branco**	**4.14**	**89**	*e*P	**Pn**	**08 53 53.6**	**+3.2**
PCBR				*e*S	**Sn**	**08 54 38.3**	**-0.5**
PCBR				A	A	08 54 44.4	
	21nm,0.2s						
PVRL	**Vila Real**	**4.14**	**69**	*e*P	**Pn**	**08 53 54.4**	**+3.8**
PVRL				S	**Sn**	**08 54 38.1**	**-1.0**
PVRL				A	A	08 54 46.6	
	28nm,0.1s						
MESJ	**Messejana**	**4.16**	**118**	*e*P	**Pn**	**08 53 53.5**	**+2.7**
MESJ				S	**Sn**	**08 54 39.2**	**-0.3**
MESJ				A	A	08 54 43.6	
	13nm,0.3s						
MESJ	**Messejana**	**4.16**	**118**	*e*P	**Pn**	**08 53 52.9**	**+2.2**
MESJ				*e*S	**Sn**	**08 54 38.3**	**-1.1**
MESJ				IAML		08 54 43.0	
	comp=E,18nm,0.2s						
MORF	**Marmelete**	**4.19**	**127**	*e*P	**Pn**	**08 53 52.6**	**+1.4**
MORF				*e*S	**Sn**	**08 54 40.3**	**+0.1**
MORF				A	A	08 54 44.4	
	comp=E,19nm,0.3s						
MORF	**Marmelete**	**4.19**	**127**	*e*P	**Pn**	**08 53 52.7**	**+1.5**
MORF				*e*S	**Sn**	**08 54 38.3**	**-1.9**
MORF				IAML		08 54 43.8	
	comp=N,29nm,0.2s						
PFVI	**Vila Bisbo**	**4.20**	**130**	P	**Pn**	**08 53 52.4**	**+1.2**
PFVI				S	**Sn**	**08 54 36.7**	**-3.6**
PESTR	**Estremoz**	**4.21**	**103**	P	**Pn**	**08 53 54.8**	**+3.4**
PESTR				S	**Sn**	**08 54 43.2**	**+2.6**
PESTR	**Estremoz**	**4.21**	**103**	P	**Pn**	**08 53 53.9**	**+2.5**
PESTR				S	**Sn**	**08 54 40.6**	**0.0**
PESTR	**Estremoz**	**4.21**	**103**	*e*P	**Pn**	**08 53 54.4**	**+3.0**
PESTR				S	**Sn**	**08 54 41.2**	**+0.6**
PESTR				A	A	08 54 45.6	
	comp=N,21nm,0.4s						
EMAZ	**Mazaricos**	**4.21**	**43**	Pn	**Pn**	**08 53 53.8**	**+2.3**
EMAZ				⇑*i*Vmb_V		08 53 56.5	
	comp=N,633nm,SNR=2.5						
EMAZ				Sn	**Sn**	**08 54 38.4**	**-2.4**
PMRV	**Marv??o**	**4.24**	**95**	*e*P	**Pn**	**08 53 54.5**	**+2.6**
PMRV				S	**Sn**	**08 54 40.8**	**-0.7**
PMRV				A	A	08 54 46.8	
	comp=N,20nm,0.4s						
PBEJ	**Beja**	**4.32**	**114**	*e*P	**Pn**	**08 53 57.3**	**+4.4**
PBEJ				S	**Sn**	**08 54 43.6**	**+0.4**
PBEJ				A	A	08 54 47.5	
	comp=N,8.9nm,0.2s						
PCVE	**Castro Verde**	**4.39**	**120**	P	**Pn**	**08 53 56.6**	**+2.6**
PCVE				S	**Sn**	**08 54 44.1**	**-1.1**
PCVE	**Castro Verde**	**4.39**	**120**	*e*P	**Pn**	**08 53 56.8**	**+2.9**
PCVE				S	**Sn**	**08 54 45.2**	**0.0**
PCVE				A	A	08 54 52.5	
	comp=N,8.6nm,0.4s						
EAGO	**Agolada(Pontev**	**4.61**	**50**	Pn	**Pn**	**08 53 59.4**	**+2.4**
EAGO				⇑*i*Vmb_V		08 54 01.1	
	comp=N,1µm,SNR=6.2						
EAGO				Sn	**Sn**	**08 54 47.7**	**-2.8**
MVO	**Moncorvo**	**4.61**	**72**	*e*P	**Pn**	**08 53 59.8**	**+2.8**
MVO				*e*S	**Sn**	**08 54 50.3**	**-0.4**
MVO				A	A	08 54 59.3	
	comp=N,25nm,0.2s						
EBAD	**Badajoz**	**4.67**	**102**	P	**Pn**	**08 54 00.1**	**+2.3**
EBAD				S	**Sn**	**08 54 50.7**	**-1.4**
EBAD	**Badajoz**	**4.67**	**102**	Pn	**Pn**	**08 54 00.0**	**+2.3**
EBAD				⇑*i*Vmb_V		08 54 01.5	
	comp=N,671nm,SNR=4.3						
EBAD				Sn	**Sn**	**08 54 50.5**	**-1.5**
PBDV	**Barranco-do-Ve**	**4.68**	**123**	*e*P	**Pn**	**08 54 00.6**	**+2.6**
PBDV				*e*S	**Sn**	**08 54 52.2**	**-0.2**
PBDV				A	A	08 54 55.6	
	comp=N,10nm,0.8s						
PVAQ	**Vaqueiros**	**4.73**	**120**	P	**Pn**	**08 54 02.0**	**+3.4**
PVAQ				S	**Sn**	**08 54 53.0**	**-0.5**
PVAQ	**Vaqueiros**	**4.73**	**120**	P	**Pn**	**08 54 01.2**	**+2.6**
PVAQ				S	**Sn**	**08 54 52.9**	**-0.6**
PVAQ	**Vaqueiros**	**4.73**	**120**	*e*P	**Pn**	**08 54 01.7**	**+3.1**
PVAQ				*e*S	**Sn**	**08 54 53.6**	**+0.1**

PVAQ				A	A	08 54 57.1	
	comp=N,11nm,0.2s						
EGRO	**El Granado**	**4.82**	**118**	P	**Pn**	**08 54 02.8**	**+3.0**
EGRO				S	**Sn**	**08 54 54.8**	**-0.8**
EGRO	**El Granado**	**4.82**	**118**	Pn	**Pn**	**08 54 02.8**	**+3.0**
EGRO				⇑*i*Vmb_V		08 54 09.8	
	comp=N,348nm,SNR=1.6						
EGRO				Sn	**Sn**	**08 54 55.4**	**-0.3**
PBAR	**Barrancos**	**4.84**	**109**	P	**Pn**	**08 54 03.2**	**+3.1**
PBAR				S	**Sn**	**08 54 54.7**	**-1.6**
PBAR	**Barrancos**	**4.84**	**109**	*e*P	**Pn**	**08 54 03.5**	**+3.4**
PBAR				*e*S	**Sn**	**08 54 56.2**	**-0.1**
PBAR				A	A	08 54 59.1	
	comp=N,10.0nm,0.4s						
ECAL	**Calabor**	**5.06**	**64**	Pn	**Pn**	**08 54 05.5**	**+2.3**
ECAL				⇑*i*Vmb_V		08 54 08.4	
	comp=N,629nm,SNR=3.4						
ECAL				Sn	**Sn**	**08 55 00.3**	**-1.4**
EMIN	**Mina Concepcio**	**5.28**	**112**	P	**Pn**	**08 54 09.0**	**+2.9**
EMIN				S	**Sn**	**08 55 05.0**	**-2.0**
EMIN	**Mina Concepcio**	**5.28**	**112**	Pn	**Pn**	**08 54 08.9**	**+2.9**
EMIN				⇑*i*Vmb_V		08 54 09.9	
	comp=N,289nm,SNR=1.9						
EMIN				Sn	**Sn**	**08 55 05.6**	**-1.3**
EJUZ	**Juzbado, Salam**	**5.44**	**75**	Pn	**Pn**	**08 54 11.2**	**+2.9**
EJUZ				Sn	**Sn**	**08 55 08.6**	**-2.5**
EPON	**Pontenova**	**5.47**	**49**	Pn	**Pn**	**08 54 11.3**	**+2.5**
EPON				⇑*i*Vmb_V		08 54 15.7	
	comp=N,336nm,SNR=1.3						
EPON				Sn	**Sn**	**08 55 07.8**	**-4.0**
ECAB	**El Cabril**	**6.07**	**105**	P	**Pn**	**08 54 20.1**	**+3.0**
ECAB				S	**Sn**	**08 55 24.8**	**-1.8**
ECAB	**El Cabril**	**6.07**	**105**	Pn	**Pn**	**08 54 20.1**	**+3.0**
ECAB				⇑*i*Vmb_V		08 54 25.4	
	comp=N,155nm,SNR=1.3						
ECAB				Sn	**Sn**	**08 55 24.2**	**-2.5**
PAB	**San Pablo**	**6.57**	**90**	Pn	**Pn**	**08 54 26.4**	**+2.5**
PAB				⇑*i*Vmb_V		08 54 27.9	
	comp=N,196nm,SNR=2.0						
PAB				Sn	**Sn**	**08 55 37.6**	**-1.2**
EARI	**Arriondas**	**6.66**	**57**	Pn	**Pn**	**08 54 29.1**	**+4.1**
EARI				⇑*i*Vmb_V		08 54 30.7	
	comp=N,510nm,SNR=1.8						
EARI				Sn	**Sn**	**08 55 38.9**	**-2.1**
EADA	**Adamuz**	**6.67**	**102**	P	**Pn**	**08 54 27.8**	**+2.6**
EADA				S	**Sn**	**08 55 38.1**	**-3.2**
EADA	**Adamuz**	**6.67**	**102**	Pn	**Pn**	**08 54 27.7**	**+2.4**
EADA				⇑*i*Vmb_V		08 54 32.0	
	comp=N,172nm,SNR=1.4						
EADA				Sn	**Sn**	**08 55 37.9**	**-3.4**
GUD	**Guadarrama**	**6.70**	**81**	Pn	**Pn**	**08 54 29.0**	**+3.3**
GUD				⇑*i*Vmb_V		08 54 29.9	
	comp=N,192nm,SNR=1.8						
GUD				Sn	**Sn**	**08 55 39.6**	**-2.5**
ESDC	**Sonseca Array**	**6.85**	**89**	Pn	**Pn**	**08 54 30.7**	**+2.9**
ESDC				⇑*i*Vmb_V		08 54 34.3	
	comp=N,200nm,SNR=1.9						
ESDC				Sn	**Sn**	**08 55 43.1**	**-2.7**
UCM	**Universidad Co**	**7.38**	**84**	P	**Pn**	**08 54 38.4**	**+3.4**
UCM				S	**Sn**	**08 55 57.2**	**-1.5**
ELAN	**Lanestosa**	**7.81**	**62**	Pn	**Pn**	**08 54 44.7**	**+3.9**
ELAN				⇑*i*Vmb_V		08 54 49.3	
	comp=N,184nm,SNR=0.7						
ELAN				Sn	**Sn**	**08 56 07.9**	**-1.3**
EQES	**Quesada**	**7.92**	**102**	Pn	**Pn**	**08 54 45.0**	**+2.6**
EQES				⇑*i*Vmb_V		08 54 49.6	
	comp=N,139nm,SNR=0.9						
EQES				Sn	**Sn**	**08 56 08.4**	**-3.7**
ZHG	**ZHG**	**8.15**	**140**	P	**Pn**	**08 54 48.4**	**+2.8**
ZHG				S	**Sn**	**08 56 15.4**	**-2.3**
ETOR	**Torete**	**8.30**	**80**	Pn	**Pn**	**08 54 51.5**	**+3.9**
ETOR				⇑*i*Vmb_V		08 54 52.3	
	comp=N,359nm,SNR=1.9						
ETOB	**Tobarra**	**8.86**	**95**	P	**Pn**	**08 54 58.8**	**+3.5**
ETOB				S	**Sn**	**08 56 33.4**	**-1.9**
ETOB	**Tobarra**	**8.86**	**95**	Pn	**Pn**	**08 54 58.9**	**+3.5**
ETOB				⇑*i*Vmb_V		08 55 00.7	
	comp=N,169nm,SNR=0.8						
ETOB				Sn	**Sn**	**08 56 34.3**	**-0.9**
EALK	**Alkurruntz**	**9.13**	**65**	Pn	Pn	08 55 04.0	+5.0
EALK				⇑*i*Vmb_V		08 55 08.7	
	comp=N,104nm,SNR=0.6						
EALK				Sn	**Sn**	**08 56 40.4**	**-1.4**
SJPF	**Ste Jean**	**9.29**	**66**	*e*Pn	**Pn**	**08 55 04.0**	**+2.8**
SJPF				*e*Sn	**Sn**	**08 56 41.8**	**-4.0**
	comp=N,2.8nm,0.3s						
EMOS	**Mosqueruela**	**9.50**	**83**	Pn	**Pn**	**08 55 07.0**	**+2.9**
EMOS				⇑*i*Vmb_V		08 55 11.4	
	comp=N,400nm,SNR=1.3						
EMOS				Sn	**Sn**	**08 56 46.7**	**-4.3**
OUK	**Oukaimeden**	**9.58**	**153**	P	**Pn**	**08 55 04.5**	**-0.9**
OUK				S	**Sn**	**08 56 46.9**	**-6.4**
MDT	**Midelt**	**9.71**	**134**	P	**Pn**	**08 55 08.4**	**+1.5**
MDT				S	**Sn**	**08 56 52.2**	**-3.8**
ETSF	**Etsaut**	**9.71**	**68**	*e*Pn	**Pn**	**08 55 09.4**	**+2.4**
ETSF				*e*Sn	**Sn**	**08 56 52.5**	**-3.6**
	comp=N,2.4nm,0.3s						
EPF	**Esparros**	**10.38**	**68**	*e*Pn	**Pn**	**08 55 18.7**	**+2.5**
EPF				*e*Sn	**Sn**	**08 57 09.3**	**-3.3**
	comp=N,1.6nm,0.3s						
QUIF	**Quistinic**	**10.62**	**38**	*e*Pn	**Pn**	**08 55 20.8**	**+1.5**
QUIF				*e*Sn	**Sn**	**08 57 14.0**	**-4.3**
	comp=N,1.4nm,0.2s						
LFF	**La Frestale**	**11.23**	**59**	*e*Pn	**Pn**	**08 55 28.3**	**+0.6**
LFF				*e*Sn	**Sn**	**08 57 28.6**	**-4.7**
	comp=N,2.3nm,0.3s						
MFF	**Saint Martin d**	**11.43**	**50**	*e*Pn	**Pn**	**08 55 32.5**	**+2.2**
MFF				*e*Sn	**Sn**	**08 57 32.6**	**-5.4**
MTLF	**Montolieu**	**11.79**	**68**	*e*Pn	**Pn**	**08 55 38.4**	**+3.0**
CAF	**Calviac**	**12.11**	**61**	*e*Pn	**Pn**	**08 55 42.4**	**+2.6**

IDC ***25*** *08:59:24.5±1.8, 7°.27S×155°.36E, h83^{km}±17^{km}, mb3.7/11, mbtmp4.2/16, Error ellipse: s-maj=16.5km s-min=12.2km az=8.0*

NEIC ***25*** *08:59:25.8±2.1, 7°.23S±0°.09×155°.52E±0°.09, h77^{km}±8^{km}, mb4.2/18, Error ellipse: s-maj=15.3km s-min=10.1km az=218.0*

ISC 25 08:59:26.6±0.5**, 7°.35S**±0°.07×**155°.38E**±0°.06**, h100**^{km}**, n42,** σ**1^{s}36**/46**, mb4.1**/16**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**4.48**	**314**		**Pn**	**09 00 32.3**	**0.0**
KRVT	**Keravat (AS076**	**4.50**	**312**	P	**Pn**	**09 00 31.0**	**-1.5**
	21nm,0.4s,baz=144,slow=10,SNR=2.2						
HNR	**Honiara**	**4.97**	**115**	P	**Pn**	**09 00 37.0**	**-2.0**
	773nm,0.5s,baz=210,slow=7.4,SNR=4.0						
HNR				S	**Sn**	**09 01 35.6**	**+0.2**
	1μm,0.8s,baz=324,slow=17,SNR=1.7						
HNR	**Honiara**	**4.97**	**115**		**Pn**	**09 00 36.7**	**-2.3**
PMG	**Port Moresby**	**8.38**	**255**	P	**Pn**	**09 01 23.6**	**-1.7**
	10nm,0.6s,baz=82,slow=9.7,SNR=3.7						
PMG				S	**Sn**	**09 02 54.4**	**-4.0**
	9.3nm,0.7s,baz=0.0,slow=14,SNR=1.8						
PMG	**Port Moresby**	**8.38**	**255**	Pn	**Pn**	**09 01 23.9**	**-1.5**
CTA	**Charters Tower**	**15.45**	**214**	P	**Pn**	**09 02 59.9**	**+0.8**
	6.6nm,0.8s,baz=109,slow=8.5,SNR=3.1						
CTAO	**Charters Tower**	**15.45**	**214**	Pn	**P**	**09 03 01.2**	**-0.2**
CTAO				IAmb	IAmb	09 03 12.2	
	comp=Z,15nm,1.1s						
KOUNC	**Koumac, New Ca**	**15.71**	**148**	Pn	**Pn**	**09 03 02.7**	**+0.4**
KOUNC				IAmb	IAmb	09 03 05.8	
	comp=Z,31nm,1.4s						
DZM	**Mont Dzumac**	**18.12**	**145**	P	**P**	**09 03 30.1**	**-0.8**
	comp=Z,5.5nm,0.9s,baz=270,slow=6.5,SNR=3.6						
DZM	**Mont Dzumac**	**18.12**	**145**	P	**P**	**09 03 30.2**	**-0.8**
DZM				IAmb	IAmb	09 03 43.9	
	comp=Z,19nm,1.4s						
WB0	**Warramunga Arr**	**23.81**	**237**	P	**P**	**09 04 30.4**	**-0.1**
WB0				IAmb	IAmb	09 04 34.5	
	comp=Z,8.2nm,0.9s						
WRA	**Warramunga Arr**	**23.93**	**236**	P	**P**	**09 04 30.6**	**-1.0**
	comp=Z,8.3nm,0.9s,baz=59,slow=9.1,SNR=22						
WRA				PcP	**PcP**	**09 08 11.5**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=63,slow=2.3,SNR=2.5						
	comp=Z,8.3nm,0.9s						
WRA	**Warramunga Arr**	**23.93**	**236**	P	**P**	**09 04 31.4**	**-0.2**
MSVF	**Nonsavu**	**24.39**	**117**	P	**P**	**09 04 35.0**	**-0.9**
	comp=Z,5.3nm,0.8s,baz=275,slow=10,SNR=4.5						
	comp=Z,5.3nm,0.8s						
MSVF	**Nonsavu**	**24.39**	**117**	P	**P**	**09 04 35.9**	**0.0**
MSVF				IAmb	IAmb	09 04 47.1	
	comp=Z,19nm,1.2s						
AS31	**Alice Springs**	**26.23**	**229**	P	**P**	**09 04 54.5**	**+2.1**
ASAR	**Alice Springs**	**26.23**	**229**	P	**P**	**09 04 52.3**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=62,slow=8.8,SNR=15						
ASAR				PcP	**PcP**	**09 08 18.4**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=69,slow=2.7,SNR=2.5						
	comp=Z,1.3nm,0.8s						
ASAR	**Alice Springs**	**26.23**	**229**	P	**P**	**09 04 54.8**	**+2.3**
STKA	**Stephens Creek**	**27.58**	**206**	P	**P**	**09 05 04.7**	**+0.2**
	comp=Z,4.5nm,0.8s,baz=27,slow=11,SNR=13						
	comp=Z,4.5nm,0.8s						
STKA	**Stephens Creek**	**27.58**	**206**	P	**P**	**09 05 05.3**	**+0.8**
BBOO	**Buckleboo**	**31.05**	**213**	P	**P**	**09 05 37.4**	**+2.2**
NWAO	**Narrogin (SRO)**	**43.55**	**229**	P	**P**	**09 07 23.7**	**+3.0**
PETK	**Petropavlovsk-**	**60.25**	**2**	P	**P**	**09 09 24.1**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=165,slow=6.0,SNR=1.7						
	comp=Z,1.5nm,0.7s						
PETK	**Petropavlovsk-**	**60.25**	**2**	P	**P**	**09 09 24.7**	**+0.4**
CMAR	**Chiang Mai Arr**	**61.28**	**296**	P	**P**	**09 09 32.1**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=134,slow=5.7,SNR=4.7						
	comp=Z,0.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**61.28**	**296**	P	**P**	**09 09 33.6**	**+1.7**
CHTO	**Chiang Mai**	**61.39**	**296**	P	**P**	**09 09 34.3**	**+1.6**
SONM	**Songino Array**	**69.83**	**327**	P	**P**	**09 10 25.4**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=142,slow=7.7,SNR=7.5						
	comp=Z,0.8nm,0.6s						
SONM	**Songino Array**	**69.83**	**327**	P	**P**	**09 10 26.6**	**0.0**
SONM				IAmb	IAmb	09 10 27.5	
	comp=Z,2.3nm,1.2s						
TNA	**Tin City**	**77.56**	**15**	P	**P**	**09 11 12.3**	**+1.1**
TNA				IAmb	IAmb	09 11 16.8	
	comp=Z,5.6nm,1.4s						
P19K	**Oil Pt**	**78.18**	**24**	P	**P**	**09 11 16.2**	**+1.4**
L19K	**White Mountain**	**79.14**	**21**	P	**P**	**09 11 20.5**	**+0.5**
L19K				IAmb	IAmb	09 11 21.4	
	comp=Z,5.6nm,1.3s						
PPLA	**Purkeypile**	**80.56**	**22**	P	**P**	**09 11 27.9**	**+0.1**
CAST	**Castle Rocks**	**80.91**	**21**	P	**P**	**09 11 29.3**	**-0.3**
CAST				IAmb	IAmb	09 11 33.6	
	comp=Z,1.8nm,0.8s						
IMAR	**Indian Mountai**	**81.94**	**19**	P	**P**	**09 11 34.6**	**-0.3**
QSPA	**South Pole Qui**	**82.63**	**180**	P	**P**	**09 11 39.4**	**+0.6**
QSPA				IAmb	IAmb	09 12 13.1	
	comp=Z,4.7nm,1.3s						
ILAR	**Eielson Array**	**83.56**	**21**	P	**P**	**09 11 41.6**	**-1.7**
	comp=Z,0.3nm,0.4s,baz=250,slow=5.5,SNR=14						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**83.92**	**319**	P	**P**	**09 11 45.2**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=101,slow=6.4,SNR=6.6						
	comp=Z,0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**84.68**	**326**	P	**P**	**09 11 48.5**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=126,slow=9.1,SNR=2.0						
	comp=Z,0.3nm,0.3s						
YKA	**Yellowknife Ar**	**96.47**	**28**	P	**P**	**09 12 43.7**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=263,slow=4.7,SNR=11						
	comp=Z,0.3nm,0.7s						
BDFB	**Brasilia**	**147.47**	**135**	PKPbc	**PKPbc**	**09 19 00.5**	**+0.3**
	comp=Z,4.1nm,0.7s,baz=298,slow=2.2,SNR=6.7						

BJI ***25*** *09:07:42.0±0.0, 5°.20S×145°.93E, h92^{km}, mb5.1/77, mB5.1/48*

MOS ***25*** *09:07:43.7±0.7, 5°.13S×145°.34E, h84^{km}, mb5.3/35, Error ellipse: s-maj=9.1km s-min=5.0km az=106.6*

NEIC ***25*** *09:07:44.9±1.6, 5°.13S±0°.07×145°.39E±0°.08, h73^{km}±4^{km}, mb5.5/131, Mww5.3/20, Error ellipse: s-maj=11.2km s-min=10.2km az=65.0*

NEIC ***25*** *09:07:45.4, 5°.13S×145°.39E, h80^{km}, Moment Tensor Solution. Duration: 2^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}0.24; $M_{\theta\theta}$-0.22; $M_{\phi\phi}$-0.02; $M_{r\theta}$-0.69; $M_{\theta\phi}$-0.71; $M_{\phi r}$0.03; Fault plane solution: $M_0$1.02000×10^{17} NP1: ϕ_s268.42000°, δ81.04000°, λ134.06000°. NP2: ϕ_s7.56000°, δ44.78000°, λ12.77000°. Principal axes: T 0.9777, Plg38.0000°, Azm217.0000°; N 0.0768, Plg43.0000°, Azm80.0000°; P -1.0545, Plg23.0000°, Azm326.0000°;*

IDC ***25*** *09:07:45.5±0.5, 5°.17S×145°.42E, h85^{km}±4^{km}, mb4.9/33, mbtmp5.3/39, MS4.1/50 Error ellipse: s-maj=12.6km s-min=7.3km az=74.0*

NEIC ***25*** *09:07:45.4, 5°.13S×145°.39E, h80^{km}*

DJA ***25*** *09:07:46.6±0.3, 5°S±2°×14°5E±°, h89^{km}±3^{km}, M5.4/85, mB5.8/56, mb5.6/85, MLv6.0/5, Mw(mB)5.3/56, MwMwp5.2/5, Mwp5.4/5*

GCMT ***25*** *09:07:47.9±0.1, 5°.16S±0°.01×145°.36E±0°.01, h94^{km}±1^{km}, MW5.3/136, Moment Tensor Solution. s102,c165; s136,c242; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.34±.02; $M_{\theta\theta}$-0.30±.02; $M_{\phi\phi}$-0.03±.02; $M_{r\theta}$-0.77±.01; $M_{\theta\phi}$-0.68±.01; $M_{\phi r}$-0.07±.01; Best double couple: $M_0$1.06300×10^{17} NP1: ϕ_s265.00000°, δ79.00000°, λ126.00000°. NP2: ϕ_s10.00000°, δ38.00000°, λ19.00000°. Principal axes: T 0.9730, Plg44.0000°, Azm211.0000°; N 0.1810, Plg35.0000°, Azm77.0000°; P -1.1530, Plg25.0000°, Azm327.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

KLM ***25*** *09:07:47, 5°.15S×145°.43E, h82^{km}, mb5.6*

ISC 25 09:07:46.0±0.2**, 5°.18S**±0°.03×**145°.44E**±0°.04**, h91**^{km}±1^{km}**, h92**^{km}**:pP-P, n807,** σ**1^{s}27**/867**, mb5.4**/169**, 21C-32D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.53**	**158**	P	**Pn**	**09 08 51.5**	**-0.9**
	2μm,0.4s,baz=4.7,slow=6.1,SNR=426						
PMG				S	**Sn**	**09 09 42.7**	**-1.1**
	4μm,0.6s,baz=137,slow=22,SNR=17						
PMG				LR	LR	09 11 08.4	
	comp=Z,7μm,21.9s,baz=12,slow=45						
PMG	**Port Moresby**	**4.53**	**158**	Pn	**Pn**	**09 08 51.2**	**-1.1**
PMG	**Port Moresby**	**4.53**	**158**	P	**Pn**	**09 08 51.9**	**-0.4**
PMG	**Port Moresby**	**4.53**	**158**	P	**Pn**	**09 08 51.6**	**-0.7**
PMG	**Port Moresby**	**4.53**	**158**	*d i*P	**Pn**	**09 08 51.4**	**-0.9**
PMG				pmax	pmax		
	comp=Z,2μm,0.7s						
GENI	**Genyem**	**5.86**	**296**	P	**Pn**	**09 09 12.5**	**+2.1**
GENI	**Genyem**	**5.86**	**296**	P	**Pn**	**09 09 11.4**	**+1.0**
	comp=Z,2μm,1.1s,comp=Z,23μmcomp=Z,9μmcomp=Z,15nm						
KRVT	**Keravat (AS076**	**6.62**	**83**	P	**Pn**	**09 09 22.0**	**+1.2**
	comp=Z,378nm,0.8s,baz=224,slow=2.8,SNR=22						
RABL	**Rabaul**	**6.77**	**82**	Pn	**Pn**	**09 09 23.3**	**+0.4**
RABL	**Rabaul**	**6.77**	**82**	P	**Pn**	**09 09 26.1**	**+3.2**
	comp=Z,3μm,0.8s						
SMPI	**Sarmi**	**7.43**	**295**	P	**Pn**	**09 09 33.2**	**+1.4**
	comp=Z,796nm,0.9s,comp=Z,10μmcomp=Z,4.8nm						
COEN	**Coen**	**9.00**	**194**	P	**Pn**	**09 09 54.3**	**+1.0**
	baz=9.0,SNR=318						
COEN	**Coen**	**9.00**	**194**	Pn	**Pn**	**09 09 54.0**	**+0.8**
COEN	**Coen**	**9.00**	**194**	P	**Pn**	**09 09 54.7**	**+1.4**
SRPI	**Serui, Papua**	**9.76**	**289**	P	**Pn**	**09 10 01.6**	**-2.0**
	comp=Z,312nm,0.5s,comp=Z,6μm						
RKPI	**Ransiki, Papua**	**11.82**	**288**	P	**Pn**	**09 10 32.0**	**+0.4**
	comp=Z,285nm,1.2s,comp=Z,20μm						
MTSU	**Mount Surprise**	**12.92**	**185**	P	**Pn**	**09 10 47.3**	**+1.0**
	baz=13,SNR=20						
MTSU	**Mount Surprise**	**12.92**	**185**	P	**Pn**	**09 10 48.4**	**+2.1**
FAKI	**Fak Fak**	**13.35**	**279**	Pn	**Pn**	**09 10 49.9**	**-2.1**
FAKI	**Fak Fak**	**13.35**	**279**	P	**Pn**	**09 10 50.3**	**-1.7**
FAKI	**Fak Fak**	**13.35**	**279**	P	**Pn**	**09 10 51.5**	**-0.5**
	comp=Z,226nm,1.0s,comp=Z,2μm						
TV1H	**Townsville Har**	**14.06**	**175**	P	**Pn**	**09 11 01.5**	**+0.4**
SIJI	**Sorong**	**14.79**	**286**	P	**Pn**	**09 11 09.3**	**-1.3**
	comp=Z,91nm,0.7s,baz=88,slow=9.8,SNR=22						
SIJI				LR	LR	09 18 19.0	
	comp=Z,887nm,21.6s,baz=115,slow=43						
KDU	**Kakadu**	**14.82**	**239**	P	**Pn**	**09 11 10.0**	**-1.0**
	baz=15,SNR=119						
KDU	**Kakadu**	**14.82**	**239**	P	**Pn**	**09 11 10.3**	**-0.7**
CTA	**Charters Tower**	**14.84**	**177**	P	**Pn**	**09 11 12.6**	**+1.3**
	comp=Z,36nm,0.6s,baz=356,slow=14,SNR=71						
CTA				LR	LR	09 17 15.5	
	comp=Z,1μm,18.7s,baz=358,slow=38						
CTA	**Charters Tower**	**14.84**	**177**	P	**P**	**09 11 14.6**	**-0.1**
CTAO	**Charters Tower**	**14.84**	**177**	Pn	**Pn**	**09 11 11.1**	**-0.1**
CTAO	**Charters Tower**	**14.84**	**177**	P	**P**	**09 11 14.6**	**-0.1**
CTAO	**Charters Tower**	**14.84**	**177**	P	**Pn**	**09 11 11.1**	**-0.1**
HNR	**Honiara**	**14.99**	**107**	P	**Pn**	**09 11 13.8**	**+0.6**
	comp=Z,3μm,0.7s,baz=195,slow=20,SNR=12						
HNR				LR	LR	09 16 46.4	
	comp=Z,8μm,19.8s,baz=272,slow=36						
HNR	**Honiara**	**14.99**	**107**	Pn	**Pn**	**09 11 13.9**	**+0.7**
HNR	**Honiara**	**14.99**	**107**	P	**P**	**09 11 17.2**	**+0.8**
HNR	**Honiara**	**14.99**	**107**	P	**Pn**	**09 11 13.9**	**+0.7**
BNDI	**Bandanaira**	**15.50**	**272**	P	**Pn**	**09 11 19.9**	**+0.3**
	comp=Z,462nm,0.8s,comp=Z,19μm						
MTN	**Manton Dam**	**16.05**	**241**	P	**Pn**	**09 11 25.2**	**-1.2**
	baz=16,SNR=124						
MTN	**Manton Dam**	**16.05**	**241**	Pn	**Pn**	**09 11 24.9**	**-1.5**
MTN	**Manton Dam**	**16.05**	**241**	P	**Pn**	**09 11 25.3**	**-1.2**
QIS	**Mount Isa**	**16.30**	**200**	P	**Pn**	**09 11 28.2**	**-1.4**
	baz=16,SNR=36						
QIS	**Mount Isa**	**16.30**	**200**	P	**Pn**	**09 11 29.7**	**0.0**
MSAI	**Masohi**	**16.57**	**276**	P	**Pn**	**09 11 32.9**	**-0.1**
	comp=Z,72nm,0.7s,comp=Z,861nm						
AAI	**Ambon**	**17.26**	**274**	P	**P**	**09 11 42.0**	**+0.4**
	comp=Z,455nm,0.7s,comp=Z,4μm						
PATS	**Pohnpei**	**17.54**	**47**	P	**P**	**09 11 44.3**	**-0.3**
	baz=18,SNR=4.3						
PATS	**Pohnpei**	**17.54**	**47**	P	**P**	**09 11 43.9**	**-0.7**
WB0	**Warramunga Arr**	**18.05**	**216**	P	**P**	**09 11 49.2**	**-1.1**
WRAB	**Tennant Creek**	**18.21**	**215**	P	**P**	**09 11 50.9**	**-1.1**
WRAB	**Tennant Creek**	**18.21**	**215**	P	**P**	**09 11 51.8**	**-0.2**
WRAB	**Tennant Creek**	**18.21**	**215**	*c i*P	**P**	**09 11 51.3**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,129nm,0.8s						
WB2	**Warramunga Arr**	**18.22**	**215**	P	**P**	**09 11 50.8**	**-1.3**
	baz=18						
WB2	**Warramunga Arr**	**18.22**	**215**	P	**P**	**09 11 51.0**	**-1.1**
WRA	**Warramunga Arr**	**18.22**	**215**	P	**P**	**09 11 51.7**	**-0.4**
	comp=Z,112nm,1.0s,baz=42,slow=12,SNR=292						
WRA				PcP	**PcP**	**09 16 22.2**	**+0.9**
	comp=Z,9.6nm,0.7s,baz=24,slow=1.9,SNR=4.8						
WRA				LR	LR	09 19 51.9	
	comp=Z,839nm,19.6s,baz=29,slow=40						
NLAI	**Namlea**	**18.39**	**275**	P	**Pn**	**09 11 55.3**	**+0.1**
	comp=Z,197nm,0.5s,comp=Z,4μm						
LBMI	**Labuha**	**18.48**	**284**	P	**Pn**	**09 11 55.9**	**-0.2**
	comp=Z,747nm,1.0s,comp=Z,7μm						
GUMO	**Guam**	**18.66**	**358**	P	**P**	**09 11 57.5**	**+0.7**
	comp=Z,383nm,0.9s,baz=185,slow=9.4,SNR=16						
GUMO	**Guam**	**18.66**	**358**	P	**P**	**09 11 56.7**	**-0.2**
GUMO	**Guam**	**18.66**	**358**	P	**Pn**	**09 11 58.5**	**+0.3**
TNTI	**Ternate**	**19.00**	**288**	P	**P**	**09 11 59.0**	**-1.6**
TNTI	**Ternate**	**19.00**	**288**	P	**P**	**09 12 01.3**	**+0.6**
	comp=Z,139nm,1.1s,comp=Z,2μm						
KNRA	**Kununurra**	**19.42**	**236**	P	**P**	**09 12 05.0**	**-0.3**
	baz=19,SNR=6.4						
KNRA	**Kununurra**	**19.42**	**236**	P	**P**	**09 12 03.9**	**-1.4**
SANI	**Sanana**	**19.66**	**278**	P	**P**	**09 12 08.1**	**+0.2**
SANI	**Sanana**	**19.66**	**278**	P	**P**	**09 12 07.0**	**-0.9**
	comp=Z,332nm,1.0s,comp=Z,3μm						
EIDS	**Eidsvold**	**20.79**	**165**	P	**P**	**09 12 20.8**	**+0.8**
	baz=21,SNR=21						
EIDS	**Eidsvold**	**20.79**	**165**	P	**P**	**09 12 19.7**	**-0.3**
EIDS				IAmb	IAmb	09 12 40.8	
	comp=Z,120nm,0.8s						
EIDS	**Eidsvold**	**20.79**	**165**	P	**P**	**09 12 21.0**	**+1.0**
QLP	**Quilpie**	**21.31**	**183**	P	**P**	**09 12 26.0**	**+0.4**
	baz=21,SNR=41						
QLP	**Quilpie**	**21.31**	**183**	P	**P**	**09 12 26.2**	**+0.6**
RMQ	**Roma**	**21.42**	**172**	P	**P**	**09 12 27.6**	**+0.8**
	baz=22,SNR=40						
RMQ	**Roma**	**21.42**	**172**	P	**P**	**09 12 27.6**	**+0.8**
AS01	**Alice Springs**	**21.46**	**210**	P	**P**	**09 12 27.0**	**-0.2**
SOEI	**Soe**	**21.48**	**257**	P	**P**	**09 12 27.3**	**-0.3**
SOEI				IAmb	IAmb	09 12 46.1	
	comp=Z,257nm,0.7s						
SOEI	**Soe**	**21.48**	**257**	P	**P**	**09 12 28.8**	**+1.2**
SOEI	**Soe**	**21.48**	**257**	P	**P**	**09 12 28.8**	**+1.2**
	comp=Z,584nm,1.2s,comp=Z,6μm						
AS31	**Alice Springs**	**21.48**	**210**	P	**P**	**09 12 26.4**	**-1.0**
ASAR	**Alice Springs**	**21.48**	**210**	P	**P**	**09 12 27.0**	**-0.5**
	comp=Z,51nm,0.6s,baz=43,slow=8.2,SNR=271						
ASAR				S	**S**	**09 16 18.9**	**-1.9**
	comp=Z,10nm,0.9s,baz=30,slow=19,SNR=1.8						
ASAR				LR	LR	09 21 24.4	
	comp=Z,580nm,19.8s,baz=40,slow=38						
	comp=Z,51nm,0.6s						
ASAR	**Alice Springs**	**21.48**	**210**	P	**P**	**09 12 26.9**	**-0.6**
INKA	**Innaminka**	**22.88**	**191**	P	**P**	**09 12 42.1**	**+0.1**
CDOP	**Cateel, Davao**	**22.92**	**304**	⇓*e*P	**P**	**09 12 40.3**	**-2.3**
LUWI	**Luwuk**	**23.00**	**280**	P	**P**	**09 12 43.3**	**-0.1**
LUWI	**Luwuk**	**23.00**	**280**	P	**P**	**09 12 43.9**	**+0.5**
	comp=Z,638nm,1.1s,comp=Z,8μm						
FITZ	**Fitzroy Crossi**	**23.22**	**235**	P	**P**	**09 12 44.6**	**-0.9**
	baz=23						
FITZ	**Fitzroy Crossi**	**23.22**	**235**	P	**P**	**09 12 44.4**	**-1.1**
DAV	**Davao City (W)**	**23.26**	**301**	LR	LR	09 22 41.9	
	comp=Z,273nm,18.4s,baz=172,slow=39						
MMRI	**Maumere**	**23.29**	**260**	P	**P**	**09 12 44.6**	**-1.5**
MMRI				IAmb	IAmb	09 12 53.6	
	comp=Z,103nm,0.6s						
MMRI	**Maumere**	**23.29**	**260**	P	**P**	**09 12 45.1**	**-1.0**
	comp=Z,173nm,0.6s,comp=Z,2μmcomp=Z,2μm						
TASP	**Talacogon, Agu**	**23.81**	**305**	*i* P	**P**	**09 12 48.1**	**-2.7**
KOUNC	**Koumac, New Ca**	**23.84**	**132**	P	**P**	**09 12 51.7**	**+0.6**
KOUNC	**Koumac, New Ca**	**23.84**	**132**	P	**P**	**09 12 51.6**	**+0.5**
SKMP	**Bagumbayan, Su**	**23.88**	**299**	⇓*e*P	**P**	**09 12 50.0**	**-1.5**
SKMP				*e*S	**S**	**09 16 59.5**	**-1.8**
MRSI	**Marisa**	**24.14**	**283**	P	**P**	**09 12 52.5**	**-1.3**
	comp=Z,289nm,0.6s,comp=Z,3μm						
BUTP	**Butuan**	**24.25**	**305**	⇑*e*P	P	09 13 12.5	+18
GLSP	**General Luna,**	**24.32**	**308**	⇑*e*P	**P**	**09 12 54.8**	**-0.6**
GLSP				*e*S	S	09 17 31.5	+23
OOD	**Oodnadatta**	**24.33**	**201**	P	**P**	**09 12 55.5**	**+0.2**
CGP	**Cagayan de Oro**	**24.73**	**303**	⇓*e*P	**P**	**09 13 02.3**	**+3.2**
BSSI	**Bau Bau, Buton**	**24.85**	**267**	P	**P**	**09 13 00.6**	**+0.3**
	comp=Z,109nm,1.1s,comp=Z,2μm						
BASI	**Baing, Sumba**	**25.14**	**257**	P	**P**	**09 13 04.1**	**+1.2**
	comp=Z,827nm,1.0s,comp=Z,7μm						
BKSI	**Bulukumba**	**25.21**	**269**	P	**P**	**09 13 04.1**	**+0.5**
	comp=Z,128nm,1.0s,comp=Z,980nm						
TOLI2	**Tolitoli**	**25.41**	**284**	P	**P**	**09 13 04.4**	**-1.0**
TOLI2				IAmb	IAmb	09 13 08.9	
	comp=Z,122nm,0.7s						
TOLI2	**Tolitoli**	**25.41**	**284**	P	**P**	**09 13 04.8**	**-0.6**
	comp=Z,174nm,1.0s						
MSLP	**Maasin**	**25.53**	**307**	⇑*e*P	**P**	**09 13 04.4**	**-2.0**
PAGZ	**Pagadian**	**25.53**	**300**	⇑*e*P	**P**	**09 13 06.8**	**+0.3**
PAGZ				*e*S	**S**	**09 17 26.9**	**-0.6**
KAPI	**Kappang**	**25.59**	**269**	P	**P**	**09 13 07.5**	**+0.5**
	comp=Z,40nm,0.6s,baz=107,slow=6.1,SNR=16						
	comp=Z,40nm,0.6s						
KAPI	**Kappang**	**25.59**	**269**	P	**P**	**09 13 07.0**	**+0.1**
KAPI				IAmb	IAmb	09 13 32.3	
	comp=Z,148nm,1.2s						
KAPI	**Kappang**	**25.59**	**269**	P	**P**	**09 13 08.4**	**+1.4**
KAPI	**Kappang**	**25.59**	**269**	*ce*P	**P**	**09 13 05.7**	**-1.3**
SPSI	**Sidrap Palu**	**25.62**	**272**	P	**P**	**09 13 09.3**	**+2.0**
	comp=Z,99nm,1.3s,comp=Z,1μm						
WRKA	**Warakurna**	**25.70**	**218**	P	**P**	**09 13 07.4**	**-0.5**
	baz=26,SNR=290						
WRKA	**Warakurna**	**25.70**	**218**	P	**P**	**09 13 07.3**	**-0.6**
RTV	**Rentapao**	**25.73**	**121**	P	**P**	**09 13 09.0**	**+0.8**
ARMA	**Armidale**	**25.77**	**168**	P	**P**	**09 13 09.8**	**+1.2**
	baz=26,SNR=110						
ARMA	**Armidale**	**25.77**	**168**	P	**P**	**09 13 08.5**	**-0.1**
ARMA				IAmb	IAmb	09 13 10.8	
	comp=Z,199nm,1.0s						
ARMA	**Armidale**	**25.77**	**168**	P	**P**	**09 13 09.7**	**+1.2**
LCRK	**Leigh Creek**	**26.04**	**194**	P	**P**	**09 13 11.1**	**+0.3**
TBP	**Tagbilaran**	**26.09**	**304**	*e*P	**P**	**09 13 14.7**	**+3.2**
MPSI	**Mapaga**	**26.09**	**281**	P	**P**	**09 13 09.6**	**-1.9**
	comp=Z,61nm,0.7s,comp=Z,1μm						
CMSA	**Cobar Meteorol**	**26.22**	**180**	P	**P**	**09 13 13.5**	**+1.1**
	baz=26,SNR=61						
CMSA	**Cobar Meteorol**	**26.22**	**180**	P	**P**	**09 13 13.4**	**+0.9**
LIFNC	**LIFOU**	**26.23**	**128**	P	**P**	**09 13 13.1**	**+0.4**
LIFNC	**LIFOU**	**26.23**	**128**	P	**P**	**09 13 13.4**	**+0.7**
OCLP	**Ormoc**	**26.27**	**308**	⇑*e*P	P	09 13 33.7	+21
NOUC	**Port Laguerre**	**26.28**	**132**	P	**P**	**09 13 13.1**	**0.0**
DZM	**Mont Dzumac**	**26.36**	**132**	*e*P	**P**	**09 13 16.4**	**+2.4**
	comp=Z,201nm,28.9s						
DZM				*e*LR	LR	09 20 00.7	
	comp=Z,3μm,30.8s						
DZM	**Mont Dzumac**	**26.36**	**132**	P	**P**	**09 13 14.1**	**+0.1**
	comp=Z,41nm,0.6s,baz=294,slow=7.6,SNR=88						
DZM				LR	LR	09 22 43.9	
	comp=Z,419nm,19.7s,baz=308,slow=34						
	comp=Z,41nm,0.6s						
DZM	**Mont Dzumac**	**26.36**	**132**	P	**P**	**09 13 13.7**	**-0.3**
DZM	**Mont Dzumac**	**26.36**	**132**	P	**P**	**09 13 13.7**	**-0.3**
ONTNC	**Ouen Toro**	**26.51**	**132**	P	**P**	**09 13 15.0**	**-0.2**
ONTNC	**Ouen Toro**	**26.51**	**132**	P	**P**	**09 13 15.2**	**0.0**
YATNC	**Mamie plateau,**	**26.69**	**131**	P	**P**	**09 13 17.3**	**+0.5**
STKA	**Stephens Creek**	**26.80**	**187**	P	**P**	**09 13 18.1**	**+0.4**
	comp=Z,94nm,0.7s,baz=354,slow=8.8,SNR=311						

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STKA                                 LR     LR     09 24 43.6
      comp=Z,664nm,21.5s,baz=8.2,slow=38
      comp=Z,94nm,0.7s
STKA  Stephens Creek     26.80 187   P      P      09 13 17.9 +0.2
      baz=27,SNR=106
STKA  Stephens Creek     26.80 187   P      P      09 13 17.8 +0.1
STKA  Stephens Creek     26.80 187   P      P      09 13 17.9 +0.2
STKA  Stephens Creek     26.80 187   P      P      09 13 17.8 +0.1
STKA                                 pmax   pmax
      comp=Z,25nm,0.8s
OUENC Ouen Island, N     26.86 132   P      P      09 13 18.7 +0.4
OUENC                                IAmb   IAmb   09 13 20.6
      comp=Z,173nm,1.9s
OUENC Ouen Island, N     26.86 132   P      P      09 13 18.5 +0.1
CNOP  Candoni, Negro     27.18 303⇑eP    P      09 13 23.4 +2.2
MULG  Mulgathing         27.18 202   P      P      09 13 20.9 -0.2
PINNC Pines Island,      27.43 131   P      P      09 13 23.4  0.0
GUIM  Jordan             27.65 305⇑eP    P      09 13 27.9 +2.5
PLAI  Plampang           27.69 261   P      P      09 13 24.2 -1.7
PLAI  Plampang           27.69 261   P      P      09 13 26.1 +0.2
      comp=Z,43nm,1.0s
MGCD  Mangrove Creek     28.38 170   P      P      09 13 33.2 +1.4
      baz=28,SNR=9.7
MGCD  Mangrove Creek     28.38 170   P      P      09 13 33.1 +1.3
TWSI  Taliwang, Sumb     28.56 261   P      P      09 13 33.9 +0.3
      comp=Z,22nm,0.7s
HTT   Hallett            28.76 191   P      P      09 13 35.4 +0.2
      baz=29,SNR=42
HTT   Hallett            28.76 191   P      P      09 13 35.6 +0.4
BKB   Balikpapan         28.76 277   P      P      09 13 36.5 +1.1
MYLDM Lahad Datu         28.81 291   P      P      09 13 34.3 -1.5
MYLDM                                IAmb   IAmb   09 14 39.4
      comp=Z,114nm,1.1s
BBOO  Buckleboo          28.85 197   P      P      09 13 35.8 -0.1
      baz=29,SNR=127
BBOO  Buckleboo          28.85 197   P      P      09 13 35.4 -0.6
BBOO  Buckleboo          28.85 197   P      P      09 13 35.8 -0.1
OTRP  Odiongan           29.09 307⇑eP    P      09 13 36.9 -1.4
YNG   Young              29.10 175   P      P      09 13 39.4 +1.2
MBWA  Marble Bar         29.57 235   P      P      09 13 42.5  0.0
MBWA                                 IAmb   IAmb   09 13 44.9
      comp=Z,328nm,1.8s
MBWA  Marble Bar         29.57 235   P      P      09 13 42.9 +0.4
PSA00 Pilbara Seismi     29.68 234   P      P      09 13 43.1 -0.3
PSA00                                IAmb   IAmb   09 13 44.9
      comp=Z,132nm,1.0s
PSA00 Pilbara Seismi     29.68 234   P      P      09 13 43.3 -0.1
PSA00                                IAmb   IAmb   09 13 44.9
      comp=Z,66nm,1.0s
PSA00 Pilbara Seismi     29.68 234   P      P      09 13 43.8 +0.4
CAN   Canberra           30.17 174   P      P      09 13 48.6 +0.9
CAN   Canberra           30.17 174   P      P      09 13 49.0 +1.3
CAN   Canberra           30.17 174   P      P      09 13 48.6 +0.9
CAN                                  pmax   pmax
      comp=Z,229nm,1.1s
CNB   Canberra Magne     30.20 174   P      P      09 13 49.3 +1.3
FORT  Forrest            30.27 211   P      P      09 13 48.8 +0.3
      baz=30,SNR=63
FORT  Forrest            30.27 211   P      P      09 13 48.4 -0.1
FORT  Forrest            30.27 211   P      P      09 13 48.6 +0.1
BBKI  Banjar Baru        30.56 272   P      P      09 13 58.3 +7.0
SPMM  Sapulut            30.56 288   P      P      09 13 51.0 -0.4
TGY   Tagaytay City      30.96 309   LR     LR     09 25 33.6
      comp=Z,226nm,20.9s,baz=148,slow=34
JAGI  Jajag, Banyuwa     31.23 262   P      P      09 13 55.9 -1.4
KKM   Kota Kinabalu      31.24 291   P      P      09 13 56.7 -0.7
ARPS  Mount Arapiles     31.61 186   P      P      09 14 01.5 +1.3
      baz=32,SNR=46
ARPS  Mount Arapiles     31.61 186   P      P      09 14 01.4 +1.1
MILA  Mila               31.91 174   P      P      09 14 04.2 +1.2
      baz=32,SNR=29
MILA  Mila               31.91 174   P      P      09 14 04.1 +1.2
TOO   Toolangi           32.24 180   P      P      09 14 06.0 +0.2
      baz=32,SNR=64
TOO   Toolangi           32.24 180   P      P      09 14 06.4 +0.6
TOO   Toolangi           32.24 180   P      P      09 14 07.4 +1.6
TOO   Toolangi           32.24 180   P      P      09 14 06.4 +0.6
TOO                                  pmax   pmax
      comp=Z,157nm,1.1s
JCJ   Chichijima         32.24 355   LR     LR     09 25 29.3
      comp=Z,222nm,21.8s,baz=148,slow=33
JCJ   Chichijima         32.24 355   P      P      09 14 04.5 -1.4
JCJ   Chichijima         32.24 355   P      P      09 14 04.6 -1.3
BRAT  Ballarat           32.25 182   P      P      09 14 07.4 +1.6
YSA   Yasawairara        33.50 113   P      P      09 14 18.7 +1.7
SBUM  Sibu               34.04 282   P      P      09 14 21.4 -0.4
SBUM                                 IAmb   IAmb   09 14 23.6
      comp=Z,43nm,0.9s
SBUM  Sibu               34.04 282   P      P      09 14 23.0 +1.2
KMBL  Kambalda           34.17 218   P      P      09 14 22.8 +0.1
      baz=34,SNR=44
KMBL  Kambalda           34.17 218   P      P      09 14 23.1 +0.4
MSVF  Nonsavu            34.23 114   P      P      09 14 24.9 +1.5
      comp=Z,102nm,0.9s,baz=270,slow=7.7,SNR=70
MSVF                                 LR     LR     09 28 09.4
      comp=Z,192nm,18.3s,baz=281,slow=36
      comp=Z,102nm,0.9s
MSVF  Nonsavu            34.23 114   P      P      09 14 24.4 +0.9
MSVF  Nonsavu            34.23 114   P      P      09 14 25.5 +2.0
MSVF  Nonsavu            34.23 114c iP    P      09 14 25.2 +1.7
MSVF                                 pmax   pmax
      comp=Z,180nm,1.0s
MSVF  Nonsavu            34.23 114   P      P      09 14 23.7 +0.2
MSVF                                 sP     sP     09 14 50.4 -4.7
GIRL  Giralia            34.79 237   P      P      09 14 29.4 +1.3
      baz=35,SNR=15
GIRL  Giralia            34.79 237   P      P      09 14 28.2 +0.1
GIRL  Giralia            34.79 237   P      P      09 14 30.2 +2.1
KSM   Kuching            35.71 280   P      P      09 14 36.1 -0.1
KSM                                  IAmb   IAmb   09 14 37.7
      comp=Z,100nm,1.0s
KSM   Kuching            35.71 280   P      P      09 14 37.0 +0.8
GLAD  Gladstone          35.72 177   P      P      09 14 37.5 +1.6
TAVE  Taveuni            35.83 111   P      P      09 14 38.6 +1.5
JOW   Kunigami           35.90 333   LR     LR     09 26 15.6
      comp=Z,363nm,21.1s,baz=268,slow=31
KPJI  Karang Pucung      36.35 265   P      P      09 14 42.9 +1.3
      comp=Z,57nm,0.8s
MORW  Morawa             36.59 226   P      P      09 14 43.9 +0.4
      baz=37,SNR=12
MORW  Morawa             36.59 226   P      P      09 14 43.6 +0.1
MORW  Morawa             36.59 226   P      P      09 14 44.4 +0.9
CMJI  Cimerak            36.84 264   P      P      09 14 46.0 +0.2
      comp=Z,134nm,1.0s
KLBR  Kellerberrin       36.93 221   P      P      09 14 46.7 +0.4
      baz=37,SNR=16
KLBR  Kellerberrin       36.93 221   P      P      09 14 46.6 +0.2
FUTU  Fugatoga           36.99 107   P      P      09 14 48.9 +1.9
FUTU                                 pP     pP     09 15 02.1 -5.9
FUTU                                 sP     sP     09 15 10.3 -8.2
BLDU  Ballidu            37.03 223   P      P      09 14 47.9 +0.8
      baz=37,SNR=53
BLDU  Ballidu            37.03 223   P      P      09 14 47.8 +0.6
MOO   Moorlands          37.14 178   P      P      09 14 49.8 +1.9
      baz=37,SNR=16
MOO   Moorlands          37.14 178   P      P      09 14 49.4 +1.5
NACB  Ninganchiao        37.30 322   P      P      09 14 49.6 +0.1
NACB  Ninganchiao        37.30 322   P      P      09 14 50.3 +0.8
TAU   Tasmania Unive     37.61 178   P      P      09 14 52.0 +0.1
TAU   Tasmania Unive     37.61 178   P      P      09 14 53.1 +1.2
TAU   Tasmania Unive     37.61 178   P      P      09 14 52.0 +0.1
TAU                                  pmax   pmax
      comp=Z,216nm,1.6s
BBJI  Bungbulang         37.62 265   P      P      09 14 51.1 -1.4
YHNB  Yeheng             37.80 323   P      P      09 14 52.9 -0.9
YHNB  Yeheng             37.80 323   P      P      09 14 54.5 +0.6
NWAO  Narrogin (SRO)     38.12 220   LR     LR     09 31 37.9
      comp=Z,429nm,19.1s,baz=50,slow=38
NWAO  Narrogin (SRO)     38.12 220   P      P      09 14 56.7 +0.3
      baz=38,SNR=24
NWAO                                 P      P      09 14 56.7 +0.3
      baz=38,SNR=24
NWAO  Narrogin (SRO)     38.12 220   P      P      09 14 55.8 -0.6
NWAO                                 IAmb   IAmb   09 14 58.3
      comp=Z,57nm,0.9s
NWAO  Narrogin (SRO)     38.12 220   P      P      09 14 55.8 -0.6
NWAO  Narrogin (SRO)     38.12 220   P      P      09 14 56.8 +0.3
NWAO  Narrogin (SRO)     38.12 220   P      P      09 14 56.7 +0.3
NWAO  Narrogin (SRO)     38.12 220   P      P      09 14 55.8 -0.6
NWAO                                 pmax   pmax
      comp=Z,187nm,0.9s
MUN   Mundaring          38.20 222   P      P      09 14 57.2 +0.2
      baz=38,SNR=17
MUN   Mundaring          38.20 222   P      P      09 14 58.0 +1.0
JHJ2  Mitsune            38.45 352   P      P      09 14 58.6 -0.5
PPBI  Pangkal Pinang     39.33 273   P      P      09 15 07.7 +0.9
      comp=Z,98nm,0.6s,comp=Z,39µm
RKGY  Rocky Gully        39.39 218   P      P      09 15 07.8 +0.9
      baz=39,SNR=11
RKGY  Rocky Gully        39.39 218   P      P      09 15 08.3 +1.4
CGJI  Cibinong           39.56 266   P      P      09 15 07.6 -1.0
      comp=Z,124nm,0.9s
OUZ   Omahuta            39.60 143   P      P      09 15 11.4 +2.7
XMI   Christmas Isla     39.71 260   P      P      09 15 11.2 +1.3
JMN   Monobe             40.22 345   P      P      09 15 13.7 -0.1
JMN   Monobe             40.22 345   P      P      09 15 14.1 +0.3
JNU   Nakatsue           40.52 341   LR     LR     09 30 32.6
      comp=Z,181nm,19.4s,baz=160,slow=34
JNU   Nakatsue           40.52 341   P      P      09 15 15.9 -0.4
KASI  Kota Agung         40.76 268   P      P      09 15 17.2 -1.4
      comp=Z,272nm,1.0s,comp=Z,2µm
DSRI  Dabo               41.07 275   P      P      09 15 22.0 +0.9
      comp=Z,85nm,1.0s
INU   Inuyama            41.09 349   P      P      09 15 20.5 -0.4
INU                                  IAmb   IAmb   09 15 22.6
      comp=Z,118nm,1.6s
INU   Inuyama            41.09 349   P      P      09 15 20.8 -0.1
INU   Inuyama            41.09 349   P      P      09 15 19.7 -1.1
INU                                  sP     pP     09 15 45.2 +2.7
LWLI  Liwa               41.22 268   P      P      09 15 23.7 +1.2
      comp=Z,389nm,0.8s
JGF   Kuroka             41.27 350   P      P      09 15 21.6 -0.9
JGF                                  IAmb   IAmb   09 15 22.8
      comp=Z,48nm,0.8s
JGF   Kuroka             41.27 350   P      P      09 15 21.5 -0.9
TPRI  Tanjung Pinang     41.31 277   P      P      09 15 24.3 +1.2
JHS   Saijyo             41.62 345   P      P      09 15 24.9 -0.3
JHS                                  IAmb   IAmb   09 15 26.9
      comp=Z,36nm,0.8s
JHS   Saijyo             41.62 345   P      P      09 15 25.2 -0.1
KUZ   Kuaotunu           41.90 143   P      P      09 15 29.7 +2.1
MJAR  Matsushiro Arr     42.05 351   P      P      09 15 27.6 -1.2
      comp=Z,10nm,0.6s,baz=168,slow=9.3,SNR=41
MJAR                                 pP     pP     09 15 49.4 -1.0
      comp=Z,37nm,1.1s,baz=174,slow=7.7,SNR=9.5
      comp=Z,10nm,0.6s
MAJO  Matsushiro         42.05 351   P      P      09 15 27.6 -1.2
MAJO                                 IAmb   IAmb   09 15 51.9
      comp=Z,86nm,1.4s
MAJO  Matsushiro         42.05 351   P      P      09 15 28.5 -0.3
MAJO  Matsushiro         42.05 351d iP    P      09 15 27.8 -1.0
MAJO                                 pmax   pmax
      comp=Z,39nm,0.9s
MAJO  Matsushiro         42.05 351   P      P      09 15 27.0 -1.8
MAJO                                 pP     pP     09 15 48.6 -1.8
MJB9  Matsu-Tunnel       42.06 351   P      P      09 15 28.6 -0.3
MJB9                                 IAmb   IAmb   09 15 52.8
      comp=Z,88nm,1.4s
RAO   Raoul Island       42.10 129   LR     LR     09 32 09.7
      comp=Z,164nm,18.1s,baz=298,slow=35
MYKOM Kota Tinggi        42.12 278   P      P      09 15 29.6 -0.1
MYKOM                                IAmb   IAmb   09 15 31.3
      comp=Z,45nm,0.8s
MYKOM Kota Tinggi        42.12 278   P      P      09 15 31.0 +1.3
MNAI  Manna              42.34 269   P      P      09 15 30.7 -0.8
TOZ   Tahuroa Road       42.43 144   P      P      09 15 33.7 +1.9
TOZ                                  IAmb   IAmb   09 15 35.5
      comp=Z,113nm,0.9s
QIZ   Qiongzhong         42.52 305   P      P      09 15 33.5 +0.6
QIZ                                  pP     pP     09 15 53.5 -1.0
QIZ                                  PP     PP     09 17 18.0 +4.8
QIZ                                  S      S      09 21 47.3 -1.4
QIZ                                  sS     sS     09 22 27.0 +1.1
QIZ                                  SS     SS     09 25 04.8 +3.0
QIZ                                  pmax   pmax
      comp=Z,27nm,2.0s
QIZ                                  LR     LR
      comp=Z,270nm,20.7s
QIZ                                  LR     LR
      comp=Z,350nm,22.3s
QIZ                                  LR     LR
      comp=Z,510nm,27.1s
HIZ   Hauiti             42.59 145   P      P      09 15 35.1 +2.0
HIZ                                  IAmb   IAmb   09 15 37.2
      comp=Z,94nm,0.8s
HIZ   Hauiti             42.59 145   P      P      09 15 36.2 +3.1
KHEZ  Kahui Hut          42.67 147   P      P      09 15 35.6 +1.7
KHEZ  Kahui Hut          42.67 147   P      P      09 15 37.4 +3.5
NEZ   North Egmont       42.69 147   P      P      09 15 37.8 +3.7
SSE   Sheshan            42.88 329   P      P      09 15 36.3 +0.8
SSE                                  S      S      09 21 53.5  0.0
SSE                                  pmax   pmax
      comp=Z,28nm,0.9s
SSE                                  pmax   pmax
      comp=Z,110nm,4.4s
SSE                                  LR     LR
      comp=Z,120nm,23.1s
SSE                                  LR     LR
      comp=Z,94nm,22.9s
VRZ   Vera Road          42.96 146   P      P      09 15 39.4 +3.3
QRZ   Quartz Range       43.00 150   P      P      09 15 38.5 +2.0
QRZ                                  IAmb   IAmb   09 16 41.7
      comp=Z,149nm,1.4s
QRZ   Quartz Range       43.00 150   P      P      09 15 39.0 +2.6
QRZ   Quartz Range       43.00 150   P      P      09 15 39.2 +2.8
AFI   Afiamalu           43.01 105   LR     LR     09 30 28.6
      comp=Z,237nm,19.8s,baz=268,slow=32
JMM   Marumori           43.04 355   P      P      09 15 36.8 +0.1
MASI  Maura Aman, Be     43.13 271   P      P      09 15 38.0  0.0
      comp=Z,329nm,0.7s,comp=Z,2µm
TKNZ  Takaka Hill        43.37 149   P      P      09 15 41.2 +1.7
TKNZ  Takaka Hill        43.37 149   P      P      09 15 41.9 +2.4
PKVZ  Pokaka             43.40 146   P      P      09 15 43.1 +3.3
WTVZ  West Tongariro     43.42 145   P      P      09 15 43.4 +3.4
NNVZ  North Ngauruho     43.44 145   P      P      09 15 43.1 +2.9
NTVZ  North Tongarir     43.45 145   P      P      09 15 43.2 +2.9
NGZ   Ngauruhoe          43.46 145   P      P      09 15 43.6 +3.2
TMVZ  Te Maari           43.48 145   P      P      09 15 43.9 +3.4
JSD   Sado               43.51 352   P      P      09 15 40.8 +0.3
MRNZ  Matariki Terra     43.54 150   P      P      09 15 42.4 +1.6
MRNZ  Matariki Terra     43.54 150   P      P      09 15 42.9 +2.1
WNVZ  Wahianoa           43.57 146   P      P      09 15 44.5 +3.3
URZ   Urewera            43.73 143   LR     LR     09 33 47.4
      comp=Z,307nm,18.3s,baz=36,slow=36
URZ   Urewera            43.73 143   P      P      09 15 43.6 +1.3
JCZ   Jackson Bay        43.84 156   P      P      09 15 45.5 +2.3
JRMM  Jerantut           43.85 281   P      P      09 15 44.0 +0.3
BKZ   Black Stump Fm     43.97 145   P      P      09 15 46.0 +1.7
MXZ   Matakaoa Point     44.01 142   P      P      09 15 46.3 +1.7
SDSI  Sungai Dareh       44.14 274   P      P      09 15 45.8 -0.2
      comp=Z,303nm,0.8s,comp=Z,3µm
TUWZ  Tuamarina          44.17 149   P      P      09 15 47.0 +1.2
SNZO  South Karori       44.48 148   P      P      09 15 49.0 +0.8
MRZ   Mangatainoka R     44.48 147   P      P      09 15 49.5 +1.2
RPZ   Rata Peaks         44.52 153   LR     LR     09 32 30.6
      comp=Z,528nm,21.8s,baz=316,slow=33
RPZ   Rata Peaks         44.52 153   P      P      09 15 49.8 +1.2
BKNI  Bangkinang         44.68 276   P      P      09 15 50.9 +0.6
BKNI  Bangkinang         44.68 276   P      P      09 15 51.6 +1.3
      comp=Z,421nm,0.9s,comp=Z,3µm
NJ2   Nanjing            44.85 327 ⇓P     P      09 15 52.0 +0.7
NJ2                                  pP     pP     09 16 14.3 +1.0
NJ2                                  sP     sP     09 16 26.5 +2.8
NJ2                                  PcP    PcP    09 17 31.8 +0.1
NJ2                                  S      S      09 22 24.5 +2.2
NJ2                                  sS     sS     09 23 00.8 +1.1
NJ2                                  pmax   pmax
      comp=Z,34nm,0.9s
NJ2                                  pmax   pmax
      comp=Z,220nm,4.7s
BFZ   Birch Farm         44.86 146   P      P      09 15 52.5 +1.2
PDSI  Padang             45.10 274   P      P      09 15 52.4 -1.3
      comp=Z,94nm,0.6s
IPM   Ipoh               45.39 281   P      P      09 15 55.3 -0.7
ODZ   Otahua Downs       45.40 155   P      P      09 15 56.2 +0.7
KSRS  Korea Array        45.45 340   P      P      09 15 56.0  0.0
      comp=Z,18nm,0.9s,baz=158,slow=9.1,SNR=44
KSRS                                 pP     pP     09 16 17.4 -0.6
      comp=Z,21nm,0.9s,baz=158,slow=9.7,SNR=6.4
KSRS                                 LR     LR     09 32 45.9
      comp=Z,267nm,20.1s,baz=155,slow=33
      comp=Z,18nm,0.9s
KSAR  Wonju Array Be     45.45 340   P      P      09 15 55.4 -0.6
KSAR  Wonju Array Be     45.45 340   P      P      09 15 55.4 -0.6
KS19  Wonju Array Si     45.51 340   P      P      09 15 55.9 -0.6
KS19                                 IAmb   IAmb   09 16 21.2
      comp=Z,45nm,1.1s
JTM   Tenmabayashi       45.92 355   P      P      09 16 00.0 +0.4
KULM  Kulim              45.92 282   P      P      09 15 59.3 -0.9
KULM                                 IAmb   IAmb   09 16 01.1
      comp=Z,47nm,0.8s
SYZ   Scrubby Hill       46.02 157   P      P      09 16 02.8 +2.5
WHN   Wuhan              46.34 322 ⇑P     P      09 16 04.5 +1.5
WHN                                  pP     pP     09 16 26.5 +1.5
WHN                                  S      S      09 22 46.0 +2.4
WHN                                  sS     sS     09 23 26.3 +5.1
WHN                                  pmax   pmax
      comp=Z,110nm,1.0s
WHN                                  pmax   pmax
      comp=Z,520nm,3.8s
ERM   Erimo              47.02 358   P      P      09 16 08.7 +0.6
ERM   Erimo              47.02 358deP     P      09 16 08.8 +0.6
ERM                                  pmax   pmax
      comp=Z,45nm,1.2s
ERM   Erimo              47.02 358   P      P      09 16 10.6 +2.5
RPSI  Rantau Prapat      47.12 278   P      P      09 16 09.0 -0.5
PSI   Prapat             47.14 279   P      P      09 16 09.8  0.0
PSI   Prapat             47.14 279   P      P      09 16 09.0 -0.8
PSI                                  pmax   pmax
      comp=Z,145nm,1.3s
SRIT  Nakonsritamara     47.71 286   P      P      09 16 14.1  0.0
SRIT                                 IAmb   IAmb   09 16 15.3
      comp=Z,34nm,0.8s
GSI   Gunungsitoli       48.25 276   P      P      09 16 17.1 -1.1
GSI   Gunungsitoli       48.25 276   P      P      09 16 17.7 -0.5
GSI   Gunungsitoli       48.25 276   P      P      09 16 17.3 -0.9
      comp=Z,176nm,0.7s
KCSI  Kotacane, Aceh     48.40 279   P      P      09 16 18.0 -1.4
      comp=Z,126nm,0.9s,comp=Z,1µm
TIA   Tai'an             48.98 329 ⇑P     P      09 16 23.3 -0.2
TIA                                  pmax   pmax
      comp=Z,25nm,0.8s
TIA                                  LR     LR
      comp=Z,280nm,21.6s
TIA                                  LR     LR
      comp=Z,280nm,13.7s
TIA                                  LR     LR
      comp=Z,490nm,29.4s
DL2   Dalian             49.09 335   P      P      09 16 24.5 +0.3
DL2                                  pP     pP     09 16 46.3 -0.3
DL2                                  pmax   pmax
      comp=Z,15nm,0.7s
JKA   Kamikawa-asahi     49.14 357   P      P      09 16 24.9 +0.4
JKA                                  IAmb   IAmb   09 16 27.8
      comp=Z,50nm,0.8s
ASAJ  Asahikawa          49.14 357   P      P      09 16 24.6 +0.1
      comp=Z,46nm,0.8s,baz=219,slow=11,SNR=37
ASAJ                                 LR     LR     09 35 32.2
      comp=Z,94nm,21.7s,baz=183,slow=34
      comp=Z,46nm,0.8s
ASAJ  Asahikawa          49.14 357   P      P      09 16 24.9 +0.4
ASAJ                                 pmax   pmax
      comp=Z,50nm,0.8s
ENH   Enshi              49.27 318   P      P      09 16 25.2 -0.6
ENH                                  IAmb   IAmb   09 16 49.8
      comp=Z,52nm,1.3s
LHMI  Lhok Sumawe        49.52 281   P      P      09 16 26.2 -1.7
SNSI  Sinabang, Aceh     49.64 278   P      P      09 16 28.8 -0.1
      comp=Z,254nm,0.8s
MLSI  Meulaboh, Aceh     49.87 280   P      P      09 16 29.6 -1.0
      comp=Z,269nm,0.7s,comp=Z,4µm
LYN   LuoYang            50.28 324⇑iP    P      09 16 33.5 +0.1
LYN                                  pP     pP     09 16 55.0 -0.6
LYN                                  S      S      09 23 39.5 +0.3
LYN                                  sS     sS     09 24 17.5 +0.3
LYN                                  pmax   pmax
      comp=Z,33nm,1.0s
PHRA  Phrae              50.39 299   P      P      09 16 35.3 +0.8
USA0B Ussuriysk Arra     50.63 347   P      P      09 16 35.9 +0.2
USA0B Ussuriysk Arra     50.63 347   P      P      09 16 35.9 +0.2
USA0B                                pmax   pmax
      comp=Z,69nm,0.8s
USRK  Ussuriysk Ar.      50.63 347   P      P      09 16 36.0 +0.3
      comp=Z,70nm,0.7s,baz=175,slow=7.0,SNR=130
USRK                                 LR     LR     09 35 16.8
      comp=Z,144nm,21.2s,baz=145,slow=33
      comp=Z,70nm,0.7s
USRK  Ussuriysk Ar.      50.63 347   P      P      09 16 35.5 -0.3
USRK  Ussuriysk Ar.      50.63 347   P      P      09 16 35.5 -0.3
SNY   Shenyang           50.86 339 ⇑P     P      09 16 37.5  0.0
SNY                                  S      S      09 23 47.5 +0.6
SNY                                  pmax   pmax
      comp=Z,21nm,1.0s
SNY                                  pmax   pmax
      comp=Z,360nm,4.5s
SNY                                  LR     LR
      comp=Z,340nm,30.9s
SNY                                  LR     LR
      comp=Z,320nm,23.5s
SNY                                  LR     LR
      comp=Z,880nm,31.9s
CRAI  Chiangrai          50.97 301   P      P      09 16 39.7 +0.8
HNS   HongShan           51.13 328 ⇓P     P      09 16 39.5 -0.2
HNS                                  pP     pP     09 17 02.3 +0.2
HNS                                  S      S      09 23 49.0 -1.8
HNS                                  sS     sS     09 24 29.0 -0.1
HNS                                  SS     SS     09 27 21.3 -6.1
HNS                                  pmax   pmax
      comp=Z,81nm,0.8s
HNS                                  LR     LR
      comp=Z,230nm,20.7s
HNS                                  LR     LR
      comp=Z,370nm,21.6s
KMI   Kunming            51.27 308 ⇓P     P      09 16 42.3 +1.0
KMI                                  pP     pP     09 17 05.0 +1.5
KMI                                  S      S      09 23 51.3 -2.4
KMI                                  sS     sS     09 24 35.5 +3.7
KMI                                  pmax   pmax
      comp=Z,21nm,1.0s
KMI                                  LR     LR
      comp=Z,210nm,25.1s
KMI                                  LR     LR
      comp=Z,250nm,18.5s
KMI                                  LR     LR
      comp=Z,480nm,27.2s
CM31  Chiang Mai Arr     51.50 298   P      P      09 16 43.0 +0.2
CM31                                 IAmb   IAmb   09 17 13.2
      comp=Z,30nm,0.9s
CMAR  Chiang Mai Arr     51.50 298   P      P      09 16 43.3 +0.5
      comp=Z,6.7nm,0.3s,baz=120,slow=6.0,SNR=23
CMAR                                 PcP    PcP    09 17 54.7 -1.2
      comp=Z,10nm,0.9s,baz=120,slow=5.3,SNR=1.9
      comp=Z,6.7nm,0.3s
MDJ   Mudanjiang         51.58 346   P      P      09 16 43.0 +0.1
MDJ                                  pP     pP     09 17 05.5  0.0
MDJ                                  S      S      09 23 57.8 +1.1
MDJ                                  sS     sS     09 24 35.8 +0.9
MDJ                                  pmax   pmax
      comp=Z,38nm,0.8s
MDJ                                  pmax   pmax
      comp=Z,200nm,6.9s
MDJ                                  LR     LR
      comp=Z,620nm,24.7s
MDJ   Mudanjiang         51.58 346   P      P      09 16 41.8 -1.1
MDJ                                  IAmb   IAmb   09 16 43.8
      comp=Z,26nm,0.8s
MDJ   Mudanjiang         51.58 346   P      P      09 16 42.1 -0.8
CHTO  Chiang Mai         51.64 299   P      P      09 16 44.5 +0.7
CHTO  Chiang Mai         51.64 299   P      P      09 16 44.5 +0.7
CHTO                                 pmax   pmax
      comp=Z,1.0nm,1.0s
YSS   Yuzh-Sakhalins     51.96 358   P      P      09 16 45.9 +0.2
YSS                                  IAmb   IAmb   09 16 47.0
      comp=Z,69nm,1.1s
YSS   Yuzh-Sakhalins     51.96 358⇓iP    P      09 16 45.9 +0.2
YSS                                e*SP     sP     09 17 17.3 -1.1
YSS                                  eS     S      09 24 00.2 -1.7
YSS                                  pmax   pmax
      comp=Z,50nm,1.1s
YSS                                  MLR    MLR
      comp=Z,300nm,17.0s
YSS   Yuzh-Sakhalins     51.96 358   P      P      09 16 45.3 -0.4
CN2   Changchun          51.99 342   P      P      09 16 45.5 -0.5
CN2                                  S      S      09 24 03.8 +1.4
CN2                                  pmax   pmax
      comp=Z,10.0nm,0.6s
CN2                                  pmax   pmax
      comp=Z,200nm,5.0s
CN2                                  LR     LR
      comp=Z,300nm,17.0s
CN2                                  LR     LR
      comp=Z,300nm,17.0s
CN2                                  LR     LR
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      comp=Z,300nm,16.0s
XAN   Xi'an              52.07 321⇑iP    P       09 16 46.8  0.0
XAN                                pP    pP      09 17 08.8 -0.4
XAN                                S     S       09 24 00.8 -3.2
XAN                                pmax  pmax
      comp=Z,55nm,0.9s
XAN                                pmax  pmax
      comp=Z,150nm,7.3s
XAN                                LR    LR
      comp=Z,230nm,18.9s
XAN                                LR    LR
      comp=Z,200nm,19.2s
XAN                                LR    LR
      comp=Z,520nm,22.3s
BJT   Baijiatuau         52.43 332  P    P       09 16 48.6 -0.7
BJT                                IAmb  IAmb    09 17 12.7
      comp=Z,76nm,1.5s
BJT   Baijiatuau         52.43 332  P    P       09 16 48.6 -0.7
BJT                                pmax  pmax
      comp=Z,76nm,1.5s
BJI   Beijing            52.45 332  P    P       09 16 49.0 -0.4
BJI                                pP    pP      09 17 10.8 -1.0
BJI                                sP    sP      09 17 20.0 -2.1
BJI                                S     S       09 24 08.0 -0.7
BJI                                pmax  pmax
      comp=Z,11nm,0.9s
BJI                                pmax  pmax
      comp=Z,54nm,3.5s
BJI                                LR    LR
      comp=Z,110nm,16.4s
BJI                                LR    LR
      comp=Z,110nm,17.2s
BJI                                LR    LR
      comp=Z,210nm,21.0s
PZH   PanZhiHua          52.74 309  P    P       09 16 52.3 +0.3
PZH                                sP    sP      09 17 28.0 +3.4
PZH                                S     S       09 24 13.5 -0.1
PZH                                sS    sS      09 24 52.0 +0.2
PZH                                ScS   ScS     09 26 32.5 -1.0
PZH                                SS    SS      09 27 51.0 -2.5
PZH                                pmax  pmax
      comp=Z,10.0nm,0.5s
PZH                                pmax  pmax
      comp=Z,90nm,5.1s
PZH                                LR    LR
      comp=Z,460nm,23.7s
PZH                                LR    LR
      comp=Z,440nm,23.7s
PZH                                LR    LR
      comp=Z,2μm,37.7s
BNX   BinXian            53.19 344 ⇓P    P       09 16 54.0 -0.8
BNX                                pmax  pmax
      comp=Z,48nm,0.9s
CD2   Chengdu            53.60 315  P    P       09 16 59.5 +1.4
CD2                                S     S       09 24 25.8 +0.9
CD2                                sS    sS      09 25 07.5 +5.4
CD2                                pmax  pmax
      comp=Z,30nm,0.7s
CD2                                pmax  pmax
      comp=Z,80nm,4.4s
TNCH  TengChong          54.60 306 eP    P       09 17 07.8 +2.1
TNCH                               pP    pP      09 17 30.0 +1.8
HHC   Hu-ho-hao-te       55.33 329 eP    P       09 17 11.0 +0.4
HHC                                S     S       09 24 47.3 -0.7
HHC                                SS    SS      09 28 30.5 -3.4
HHC                                pmax  pmax
      comp=Z,52nm,0.9s
HHC                                pmax  pmax
      comp=Z,190nm,4.3s
HHC                                LR    LR
      comp=Z,610nm,19.7s
HHC                                LR    LR
      comp=Z,950nm,20.3s
RAR   Rarotonga          55.38 112  LR   LR      09 39 36.5
      comp=Z,54nm,18.5s,baz=279,slow=34
KLR   Kul'dur            55.49 349  P    P       09 17 11.6 +0.2
      comp=Z,40nm,0.8s,baz=180,slow=4.4,SNR=152
KLR                                LR    LR      09 37 43.0
      comp=Z,147nm,21.4s,baz=158,slow=32
      comp=Z,40nm,0.8s
KLR   Kul'dur            55.49 349diP    P       09 17 11.2 -0.2
KLR                                pmax  pmax
      comp=Z,54nm,0.9s
XLT   XiLinHaoTe         55.56 335 eP    P       09 17 11.5 -0.7
XLT                                pP    pP      09 17 34.5 -0.3
XLT                                sP    sP      09 17 45.0  0.0
XLT                                S     S       09 24 49.5 -1.4
XLT                                sS    sS      09 25 30.8 +2.4
XLT                                SS    SS      09 28 34.0 -3.4
XLT                                pmax  pmax
      comp=Z,14nm,0.8s
XLT                                pmax  pmax
      comp=Z,150nm,6.1s
XLT                                LR    LR
      comp=Z,220nm,14.8s
XLT                                LR    LR
      comp=Z,290nm,23.0s
TYV   Tymovskoe          55.87 358 eP    P       09 17 14.9 +0.8
TYV                                eS    S       09 24 58.4 +3.9
TYV                                pmax  pmax
      comp=Z,200nm,2.4s
TYV                                pmax  pmax
      comp=Z,48nm,1.0s
TYV                                smax  smax
      comp=N,300nm,8.3s
TYV                                smax  smax
      comp=E,300nm,8.3s
BTO   Baotou             55.96 328 eP    P       09 17 16.8 +1.7
BTO                                pP    pP      09 17 38.3 +0.5
BTO                                sP    sP      09 17 49.8 +1.7
BTO                                PP    PP      09 19 24.5 +3.6
BTO                                S     S       09 24 59.3 +3.0
BTO                                sS    sS      09 25 38.0 +4.3
BTO                                pmax  pmax
      comp=E,59nm,1.0s
BTO                                pmax  pmax
      comp=E,490nm,6.5s
BTO                                LR    LR
      comp=E,1μm,21.1s
BTO                                LR    LR
      comp=E,810nm,18.6s
BTO                                LR    LR
      comp=E,2μm,23.2s
GRNR  Gornyy             56.27 353⇑iP    P       09 17 17.4 +0.5
GRNR                               eS    S       09 25 02.8 +3.0
GRNR                               pmax  pmax
      comp=E,3.0nm,1.2s
GRNR                               pmax  pmax
      comp=N,8.0nm,1.1s
GRNR                               pmax  pmax
      comp=Z,20nm,1.1s
GRNR                               smax  smax
      comp=E,3.0nm,0.9s
LZH   Lanzhou            56.59 320 eP    P       09 17 21.0 +1.3
LZH                                pP    pP      09 17 43.3 +1.0
LZH                                sP    sP      09 17 51.3 -1.2
LZH                                S     S       09 25 06.3 +1.4
LZH                                sS    sS      09 25 46.5 +4.3
LZH                                pmax  pmax
      comp=E,70nm,1.2s
LZH                                pmax  pmax
      comp=E,170nm,5.5s
HEH   HeiHe              57.37 346 eP    P       09 17 24.5 -0.2
HEH                                pP    pP      09 17 46.5 -1.0
HEH                                PcP   PcP     09 18 15.8 -1.9
HEH                                S     S       09 25 12.3 -2.1
HEH                                pmax  pmax
      comp=E,23nm,1.0s
HEH                                pmax  pmax
      comp=E,160nm,4.9s
HIA   Hailar             58.66 341  P    P       09 17 33.7 -0.1
HIA                                IAmb  IAmb    09 17 56.8
      comp=Z,55nm,1.2s
HIA   Hailar             58.66 341  P    P       09 17 33.7 -0.1
HIA                                pmax  pmax
      comp=Z,55nm,1.2s
PEA0B Petropavlovsk-     58.99   9  P    P       09 17 37.0 +1.1
PEA0B Petropavlovsk-     58.99   9diP    P       09 17 36.6 +0.6
PETK  Petropavlovsk-     58.99   9  P    P       09 17 36.0  0.0
      comp=Z,48nm,0.8s,baz=177,slow=9.0,SNR=98
PETK                               LR    LR      09 38 29.0
      comp=Z,148nm,21.9s,baz=185,slow=31
PETK                               PKP2bc        09 47 20.6
      comp=Z,4.7nm,1.0s,baz=58,slow=8.9,SNR=3.8
      comp=Z,48nm,0.8s
PETK  Petropavlovsk-     58.99   9  P    P       09 17 36.2 +0.2
PETK  Petropavlovsk-     58.99   9  P    P       09 17 36.2 +0.2
PET   Petropavlovsk      59.05   9  P    P       09 17 36.8 +0.4
PET                                IAmb  IAmb    09 17 37.8
      comp=Z,68nm,1.4s
PET   Petropavlovsk      59.05   9 eP    P       09 17 36.5 +0.1
PET                                eS    S       09 25 32.3 -3.8
PET                                pmax  pmax
      comp=Z,24nm,0.6s
PET   Petropavlovsk      59.05   9  P    P       09 17 36.3 -0.1
PET                                sP    sP      09 18 06.3 -3.2
BRDH  Bariadhala         59.41 300  LR   LR      09 48 41.5
      comp=Z,96nm,18.1s,baz=18,slow=41
SHL   Shillong           60.28 303  P    P       09 17 45.5 -0.1
SHL                                IAmb  IAmb    09 18 15.4
      comp=Z,22nm,0.9s
SHL   Shillong           60.28 303  P    P       09 17 45.5 -0.1
SHL                                pmax  pmax
      comp=Z,22nm,0.9s
ZEA   Zeya               60.66 348 eP    P       09 17 48.0 +0.6
ZEA                                e             09 18 10.1
ZEA                                eS    S       09 25 59.7 +2.9
ZEA                                pmax  pmax
      comp=E,10.0nm,0.8s
ZEA                                pmax  pmax
      comp=N,40nm,0.9s
ZEA                                pmax  pmax
      comp=Z,70nm,0.8s
ZEA                                smax  smax
      comp=N,100nm,6.1s
GTA   Gaotai             61.13 321 eP    P       09 17 51.8 +0.7
GTA                                pP    pP      09 18 15.3 +1.3
GTA                                S     S       09 26 05.3 +1.8
GTA                                pmax  pmax
      comp=N,17nm,1.4s
GTA                                LR    LR
      comp=N,120nm,14.5s
GTA                                LR    LR
      comp=N,140nm,16.7s
GTA                                LR    LR
      comp=N,140nm,16.7s
KIP   Kipapa             61.38  62⇓eP    P       09 17 54.7 +1.8
KIP                                pmax  pmax
      comp=Z,79nm,1.3s
KIP   Kipapa             61.38  62  P    P       09 17 53.8 +1.0
KIP                                pP    pP      09 18 15.7  0.0
KIP                                sP    sP      09 18 24.0 -1.8
LSA   Lhasa              62.51 307  P    P       09 17 58.3 -2.7
LSA                                pmax  pmax
      comp=Z,7.0nm,0.5s
SHEM  Shemya Is, Ala     62.59  19  P    P       09 18 01.2 +0.8
      comp=Z,161nm,0.9s,baz=310,slow=14,SNR=3.7
SHEM                               LR    LR      09 42 10.3
      comp=Z,116nm,19.2s,baz=322,slow=33
      comp=Z,161nm,0.9s
ULN   Ulaanbaatar        62.66 332  P    P       09 18 00.7 -0.4
ULN                                IAmb  IAmb    09 18 26.1
      comp=Z,28nm,1.1s
ULN   Ulaanbaatar        62.66 332diP    P       09 18 01.4 +0.2
ULN                                pmax  pmax
      comp=Z,29nm,1.7s
GOMU  GeErMu             62.72 315  P    P       09 18 04.8 +2.7
GOMU                               pmax  pmax
      comp=Z,11nm,0.8s
GOMU                               pmax  pmax
      comp=Z,53nm,4.8s
SONM  Songino Array      62.95 332  P    P       09 18 03.6 +0.6
      comp=Z,6.7nm,0.8s,baz=158,slow=7.3,SNR=35
SONM                               LR    LR      09 44 36.3
      comp=Z,210nm,20.8s,baz=128,slow=35
SONM                               PKP2bc        09 47 11.2
      comp=Z,4.2nm,1.1s,baz=267,slow=2.0,SNR=15
      comp=Z,6.7nm,0.8s
SONM  Songino Array      62.95 332  P    P       09 18 03.0  0.0
SONM                               IAmb  IAmb    09 18 27.8
      comp=Z,48nm,1.5s
ODAN  Odare              64.50 303 eP    P       09 18 13.9 +0.1
PPT   Papeete            64.61 107  LR   LR      09 42 53.6
      comp=Z,50nm,21.7s,baz=276,slow=33
TBI   Tubuai             65.11 113 eP    P       09 18 20.0 +2.4
      comp=Z,337nm,34.0s
TBI                                eS    S       09 26 53.3 -0.2
      comp=Z,443nm,30.2s
TBI   Tubuai             65.11 113 eLR   LR      09 37 58.5
      comp=Z,2μm,36.2s
TBI                                eLR   LR      09 37 58.7
      comp=Z,4μm,27.0s
RAMN  Ramite             65.19 303 eP    P       09 18 18.0 -0.4
      comp=Z,20nm,0.7s
CASY  Casey              65.64 195  P    P       09 18 20.6 +0.5
PALK  Pallekele          65.77 280  P    P       09 18 22.5 +0.4
PALK  Pallekele          65.77 280  P    P       09 18 22.5 +0.4
PALK                               pmax  pmax
      comp=Z,21nm,0.9s
JIRN  Jiri               65.78 303 eP    P       09 18 22.1 -0.2
      comp=Z,30nm,0.8s
GUN   Gumba              66.13 303 eP    P       09 18 24.6 +0.1
      comp=Z,53nm,0.7s
ZAK   Zakamensk          66.19 332 eP    P       09 18 24.2 +0.1
ZAK                                pmax  pmax
      comp=Z,39nm,1.1s
PKI   Pulchoki           66.40 303 eP    P       09 18 25.7 -0.5
      comp=Z,22nm,0.8s
PKIN  Phulchoki          66.42 303 eP    P       09 18 26.2  0.0
KKN   Kakani             66.58 303 eP    P       09 18 26.5 -0.7
DMN   Daman              66.67 303 eP    P       09 18 27.9 +0.1
GKN   Gorkha             67.19 303 eP    P       09 18 30.7 -0.3
BOD   Bodaibo            67.73 342 eP    P       09 18 32.8 -0.7
BOD                                pmax  pmax
      comp=Z,59nm,1.4s
KOLN  Koldanda           67.98 303 eP    P       09 18 34.6 -1.5
DANN  Dangsing           68.04 303 eP    P       09 18 35.8 -0.7
      comp=Z,35nm,0.8s
YAK   Yakutsk            68.11 352  P    P       09 18 36.1 +0.3
      comp=Z,24nm,0.5s,baz=151,slow=2.2,SNR=8.4
YAK                                LR    LR      09 49 15.3
      comp=Z,44nm,18.4s,baz=246,slow=37
      comp=Z,24nm,0.5s
YAK   Yakutsk            68.11 352  P    P       09 18 35.9  0.0
YAK   Yakutsk            68.11 352 eP    P       09 18 35.7 -0.1
YAK                                e*PP  pP      09 18 57.0 -2.4
YAK                                e             09 21 06.4
YAK                                eS    S       09 27 29.0 +0.8
YAK                                e*SS  sS      09 28 09.8 +2.8
YAK                                e             09 28 25.7
YAK                                eSS   SS      09 31 48.7 -4.0
YAK                                pmax  pmax
      comp=Z,27nm,0.7s
YAK                                pmax  pmax
      comp=N,8.0nm,0.8s
YAK                                pmax  pmax
      comp=E,2.0nm,0.6s
YAK                                pmax  pmax
      comp=Z,97nm,2.8s
YAK                                pmax  pmax
      comp=N,51nm,2.1s
YAK                                pmax  pmax
      comp=E,33nm,2.3s
YAK                                smax  smax
      comp=N,59nm,2.8s
YAK                                smax  smax
      comp=E,63nm,2.3s
MOY   Mondy              68.12 332 eP    P       09 18 36.4 +0.1
MOY                                pmax  pmax
      comp=Z,30nm,1.3s
SEY   Seymchan           68.13   3  P    P       09 18 36.6 +0.7
      comp=Z,41nm,0.7s,baz=178,slow=5.4,SNR=149
      comp=Z,41nm,0.7s
SEY   Seymchan           68.13   3⇓iP    P       09 18 36.3 +0.4
SEY                                pmax  pmax
      comp=Z,42nm,0.8s
PYUN  Piuthan            68.60 303 eP    P       09 18 39.3 -0.6
      comp=Z,22nm,0.6s
NIKH  Nikolski High      69.56  28  P    P       09 18 46.1 +1.0
      baz=230
WMQ   Urumqi             71.17 320⇑iP    P       09 18 55.8 +0.7
WMQ                                PcP   pP      09 19 17.5 -1.2
WMQ                                sP    sP      09 19 35.0 +6.3
WMQ                                LR    LR
      comp=Z,160nm,29.0s
UNV   Unalaska Valle     71.20  28  P    P       09 18 55.8 +0.8
      baz=232
VNDA  Vanda              72.82 176  P    P       09 19 05.5 +1.1
      comp=Z,40nm,1.0s,baz=328,slow=6.6,SNR=100
VNDA                               LR    LR      09 47 49.0
      comp=Z,174nm,21.7s,baz=344,slow=33
      comp=Z,40nm,1.0s
VNDA  Vanda              72.82 176  P    P       09 19 05.2 +0.9
VNDA                               IAmb  IAmb    09 19 06.5
      comp=Z,55nm,1.1s
VNDA  Vanda              72.82 176  P    P       09 19 05.2 +0.9
VNDA                               pmax  pmax
      comp=Z,55nm,1.1s
FALS  False Pass         73.25  28  P    P       09 19 08.1 +0.9
      baz=234
TAOE  Nuku Hiva Isla     73.84  98 eLR   LR      09 42 01.5
      comp=Z,103nm,23.3s
DGZ   Jazzator, Alta     74.08 325diP    P       09 19 12.3 -0.1
DGZ                                pmax  pmax
      comp=Z,19nm,1.1s
S12K  Black Hills        74.38  28  P    P       09 19 14.6 +0.8
      baz=235
BILL  Bilibino           74.51   8  P    P       09 19 14.2 -0.1
BILL  Bilibino           74.51   8ceP    P       09 19 14.8 +0.5
BILL                               e             09 19 29.3
BILL                               e*PP  pP      09 19 41.2 +3.0
BILL                               e             09 22 04.9
BILL                               pmax  pmax
      comp=Z,23nm,1.0s
ZSN   Zaisan             74.56 322 eP    P       09 19 15.1  0.0
      baz=322
ZSN   Zaisan             74.56 322 eP    P       09 19 15.1  0.0
SDPT  Sand Point         74.92  29  P    P       09 19 17.4 +0.4
SDPT  Sand Point         74.92  29  P    P       09 19 17.3 +0.4
      baz=237,SNR=5.4
MK31  Makanchi Array     75.89 321  P    P       09 19 22.6 -0.2
MK31  Makanchi Array     75.89 321diP    P       09 19 22.5 -0.2
MKAR  Makanchi Array     75.89 321  P    P       09 19 22.6 -0.1
      comp=Z,8.7nm,0.8s,baz=103,slow=6.9,SNR=71
MKAR                               pP    pP      09 19 44.8 -1.7
      comp=Z,30nm,1.1s,baz=122,slow=6.3,SNR=10
MKAR                               LR    LR      09 52 45.5
      comp=Z,67nm,21.7s,baz=140,slow=36
      comp=Z,8.7nm,0.8s
MKAR  Makanchi Array     75.89 321  P    P       09 19 22.3 -0.4
SHLS  Shalkode           76.38 317 eP    P       09 19 23.6 -2.1
      baz=317
SHLS  Shalkode           76.38 317 eP    P       09 19 23.6 -2.1
CHGN  Chignik            76.42  28  P    P       09 19 25.8 +0.4
CHGN                               IAmb  IAmb    09 19 49.3
      comp=Z,94nm,1.0s
CHGN  Chignik            76.42  28  P    P       09 19 25.8 +0.4
      baz=238,SNR=13
UZB   Uzynbulak          76.68 316 eP    P       09 19 27.2 -0.2
      baz=316
UZB   Uzynbulak          76.68 316 eP    P       09 19 27.2 -0.2
KPKS  Kokpek             77.02 317 eP    P       09 19 28.6 -0.7
      baz=317
KPKS  Kokpek             77.02 317 eP    P       09 19 28.5 -0.7
SATY  Saty               77.07 316 eP    P       09 19 29.0 -0.6
      baz=316
SATY  Saty               77.07 316 eP    P       09 19 29.0 -0.6
ZHN   Zhinishke          77.09 316 eP    P       09 19 29.3 -0.4
      baz=316
ZHN   Zhinishke          77.09 316 eP    P       09 19 29.3 -0.4
TIXI  Tiksi              77.45 355  P    P       09 19 29.9 -1.0
      comp=Z,16nm,0.8s,baz=90,slow=19,SNR=58
TIXI                               LR    LR      09 52 21.2
      comp=Z,50nm,21.9s,baz=8.0,slow=35
      comp=Z,16nm,0.8s
TIXI  Tiksi              77.45 355deP    P       09 19 29.6 -1.3
TIXI                               pmax  pmax
      comp=Z,12nm,0.6s
R16K  Pilot Point        77.47  28  P    P       09 19 31.9 +0.6
      baz=239,SNR=22
ZAA0  Zalesovo Array     77.50 328  P    P       09 19 30.9 -0.7
ZALV  Zalesovo Beam      77.50 328  P    P       09 19 30.9 -0.6
      comp=Z,15nm,0.7s,baz=109,slow=5.2,SNR=67
ZALV                               LR    LR      09 53 41.3
      comp=Z,74nm,21.4s,baz=120,slow=36
      comp=Z,15nm,0.7s
ZALV  Zalesovo Beam      77.50 328 i P   P       09 19 30.8 -0.8
ZALV                               pmax  pmax
      comp=Z,15nm,0.7s
KDJ   Kajisay            77.62 315  P    P       09 19 32.6 -0.2
KDJ   Kajisay            77.62 315  P    P       09 19 32.6 -0.2
KDJ                                pmax  pmax
      comp=Z,26nm,1.1s
KSH   Kashi              77.68 312  P    P       09 19 34.5 +1.4
KSH                                PcP   PcP     09 19 45.0 +2.1
KSH                                pP    pP      09 19 59.8 +2.9
KSH                                S     S       09 29 22.5 +4.4
KSH                                SKS   SKSac   09 29 35.8 -3.0
KSH                                ScS   SKKSac  09 29 41.5 +1.9
KSH                                sS    sS      09 30 01.8 +3.0
KSH                                pmax  pmax
      comp=Z,8.0nm,0.7s
KSH                                pmax  pmax
      comp=Z,180nm,5.6s
KSH                                LR    LR
      comp=Z,380nm,26.0s
KSH                                LR    LR
      comp=Z,270nm,21.9s
TDK   Taldyqorghan       77.73 318 eP    P       09 19 32.6 -0.6
      baz=318
TDK   Taldyqorghan       77.73 318 eP    P       09 19 32.5 -0.6
MDOK  Medeo              78.04 316 eP    P       09 19 34.5 -0.6
      baz=316
MDOK  Medeo              78.04 316 eP    P       09 19 34.4 -0.6
P16K  Nushagak River     78.05  26  P    P       09 19 34.9 +0.4
      baz=238,SNR=8.9
R17K  Ugashik Creek      78.06  28  P    P       09 19 34.9 +0.3
      baz=240
TNSS  Tian-Shan          78.07 316 eP    P       09 19 34.5 -1.0
      baz=316
TNSS  Tian-Shan          78.07 316 eP    P       09 19 34.5 -1.0
NIL   Nilore             78.19 306  P    P       09 19 35.8 -0.1
NIL                                IAmb  IAmb    09 20 03.3
      comp=Z,47nm,0.8s
NIL   Nilore             78.19 306  P    P       09 19 35.8 -0.1
NIL                                pmax  pmax
      comp=Z,47nm,0.9s
NRN   Naryn              78.24 314  P    P       09 19 35.9 -0.5
NRN   Naryn              78.24 314  P    P       09 19 35.9 -0.5
NRN                                pmax  pmax
      comp=Z,9.0nm,0.9s
TNA   Tin City           78.29  18  P    P       09 19 36.4 +0.8
      baz=228,SNR=22
CHKK  Chushkaly          78.31 317 eP    P       09 19 35.8 -0.6
      baz=317
CHKK  Chushkaly          78.31 317 eP    P       09 19 35.7 -0.6
O16K  Kokwok River B     78.31  26  P    P       09 19 36.7 +0.8
      baz=238
ULHL  Ulahol             78.32 315  P    P       09 19 38.0 +1.4
      SNR=7.1
ANM   Nome               78.45  19  P    P       09 19 37.9 +1.3
      baz=230,SNR=22
Q16K  King Salmon        78.46  27  P    P       09 19 37.9 +1.1
      baz=240
N16K  Nishlik Lake       78.50  25  P    P       09 19 38.1 +1.1
      baz=237
Q17K  Contact Creek      78.60  27  P    P       09 19 37.7 -0.1
      baz=240,SNR=23
BOOM  Boomskoye usch     78.61 315  P    P       09 19 37.9 -0.3
BOOM  Boomskoye usch     78.61 315  P    P       09 19 37.9 -0.3
BOOM                               pmax  pmax
      comp=Z,25nm,1.1s
O17K  Koliganek Bris     78.83  26  P    P       09 19 39.8 +1.1
      baz=239,SNR=6.5
TKM2  Tokmak 2           78.98 315  P    P       09 19 40.4 +0.1
      SNR=13
Q18K  Katmai Hardscr     79.20  27  P    P       09 19 40.6 -0.3
      baz=241,SNR=23
OHAK  Old Harbor         79.33  29  P    P       09 19 42.2 +0.6
      baz=243
P18K  Big Mountain,      79.46  27  P    P       09 19 42.2 -0.1
      baz=241
UCH   Uchtor             79.54 314  P    P       09 19 44.3 +0.7
      SNR=21
KURK  Kurchatov          79.63 324diP    P       09 19 42.3 -1.1
KURK                               pmax  pmax
      comp=Z,24nm,1.3s
KURBB Kurchatov Arra     79.65 323  P    P       09 19 43.3 -0.2
      comp=Z,7.9nm,0.9s,baz=110,slow=4.6,SNR=50
      comp=Z,7.9nm,0.9s
AAK   Ala-Archa          79.67 315  P    P       09 19 45.3 +1.3
      SNR=5.8
AAK   Ala-Archa          79.67 315  P    P       09 19 44.3 +0.3
      comp=Z,4.5nm,0.8s,baz=127,slow=8.2,SNR=9.2
      comp=Z,4.5nm,0.8s
AAK   Ala-Archa          79.67 315deP    P       09 19 43.5 -0.5
AAK                                pmax  pmax
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          comp=Z,10.0nm,1.3s
O18K  Koktuh Hills      79.70  26  P       P       09 19 44.0 +0.5
          baz=241
USP   Ospenovka         79.85 315  P       P       09 19 44.8  0.0
          SNR=15
KDAK  Kodiak Island     79.92  29  P       P       09 19 45.4 +0.7
          comp=Z,26nm,1.0s,baz=186,slow=2.3,SNR=9.8
KDAK                               LR      LR      09 54 45.3
          comp=Z,72nm,19.0s,baz=260,slow=35
          comp=Z,26nm,1.0s
KDAK  Kodiak Island     79.92  29⇓eP      P       09 19 45.1 +0.3
KDAK                               pmax    pmax
          comp=Z,41nm,1.0s
KDAK  Kodiak Island     79.92  29  P       P       09 19 45.5 +0.7
          baz=243
Q19K  Cape Douglas,     79.95  27  P       P       09 19 45.2 +0.2
          baz=242
AML   Almayashu         80.09 314  P       P       09 19 46.9 +0.3
          SNR=21
SVW2  Sparrevohn        80.16  25  P       P       09 19 46.9 +0.9
SVW2                               IAmb    IAmb    09 19 48.7
          comp=Z,40nm,0.9s
EKS2  Erkin-Say         80.18 315  P       P       09 19 47.5 +0.8
          SNR=8.4
O19K  Port Alsworth     80.25  26  P       P       09 19 46.8 +0.3
          baz=241,SNR=5.1
Q20K  Shuyak Island     80.39  28  P       P       09 19 47.6 +0.3
          baz=243
P19K  Oil Pt            80.48  27  IAmb    IAmb    09 19 49.5
          comp=Z,78nm,1.1s
P19K  Oil Pt            80.48  27  P       P       09 19 47.5 -0.3
          baz=242
N19K  Bonanza Creek     80.48  26  IAmb    IAmb    09 20 13.4
          comp=Z,100nm,1.5s
N19K  Bonanza Creek     80.48  26  P       P       09 19 48.1 +0.2
          baz=241
BTLS  Baital            80.68 317 eP       P       09 19 49.0 -0.2
          baz=317
BTLS  Baital            80.68 317 eP       P       09 19 48.9 -0.2
TTA   Tatalina          80.91  23  P       P       09 19 50.5 +0.4
TTA                                IAmb    IAmb    09 20 14.8
          comp=Z,61nm,1.6s
TTA   Tatalina          80.91  23  P       P       09 19 50.5 +0.4
TTA                                pmax    pmax
          comp=Z,61nm,1.6s
TTA   Tatalina          80.91  23  P       P       09 19 50.7 +0.6
          baz=239
O20K  Slope Mountain    80.95  27  P       P       09 19 50.1 -0.2
          baz=243
L19K  White Mountain    81.00  24  IAmb    IAmb    09 19 52.9
          comp=Z,40nm,0.8s
L19K  White Mountain    81.00  24  P       P       09 19 51.1 +0.7
          baz=241
M19K  Big River Lodg    81.05  25  P       P       09 19 51.6 +0.9
          baz=241
HOM   Homer             81.20  27  P       P       09 19 51.5  0.0
          baz=244
RDOG  Red Dog Mine      81.42  17  P       P       09 19 53.3 +0.8
RDOG                               IAmb    IAmb    09 20 18.1
          comp=Z,108nm,1.2s
RDOG  Red Dog Mine      81.42  17  P       P       09 19 53.6 +1.0
          baz=232
GCSA  Galena City Sc    81.52  22  P       P       09 19 53.8 +0.7
          baz=238,SNR=40
L20K  Farewell, AK      81.54  24  P       P       09 19 54.3 +1.0
          baz=241
M20K  Styx River        81.56  25  IAmb    IAmb    09 19 55.7
          comp=Z,37nm,0.9s
M20K  Styx River        81.56  25  P       P       09 19 54.2 +0.7
          baz=242
SPCR  Spurr Chakacha    81.64  26  P       P       09 19 54.2 +0.2
          baz=243
BRSE  Bradley Lake S    81.65  27  P       P       09 19 54.9 +0.9
          baz=245
KBL   Kabul             81.80 306  P       P       09 19 54.9 -0.7
KBL   Kabul             81.80 306  P       P       09 19 54.9 -0.7
KBL                                pmax    pmax
          comp=Z,16nm,1.2s
K20K  Telida            81.89  23  P       P       09 19 56.1 +0.9
K20K                               IAmb    IAmb    09 19 57.6
          comp=Z,34nm,0.8s
K20K  Telida            81.89  23  P       P       09 19 56.3 +1.1
          baz=241,SNR=32
DZA   Taraz             81.98 314 eP       P       09 19 55.8 -0.3
          baz=314
DZA   Taraz             81.98 314 eP       P       09 19 55.8 -0.3
SKT   Skwentna          82.28  25  P       P       09 19 56.3 -0.9
          baz=244,SNR=7.3
SUA   Susitna One       82.39  26  P       P       09 19 57.4 -0.6
          baz=244,SNR=8.7
MAW   Mawson            82.40 203  P       P       09 19 58.4 +0.7
          comp=Z,33nm,0.7s,baz=108,slow=8.1,SNR=13
          comp=Z,33nm,0.7s
MAW   Mawson            82.40 203  P       P       09 19 58.1 +0.3
          baz=82,SNR=9.1
PPLA  Purkeypile        82.42  24  P       P       09 19 57.9 -0.3
          baz=243,SNR=6.4
O22K  Cooper Landing    82.42  27  P       P       09 19 58.1 +0.1
          baz=245,SNR=8.8
KK31  Karatay Array     82.61 315  P       P       09 19 59.4  0.0
KK31  Karatay Array     82.61 315  P       P       09 19 59.4  0.0
KK31                               pmax    pmax
          comp=Z,23nm,1.3s
KKAR  Karatay Array     82.61 315  P       P       09 19 59.3 -0.1
KKAR  Karatay Array     82.61 315  P       P       09 19 59.3 -0.1
RC01  Rabbit Creek A    82.67  26  P       P       09 19 58.9 -0.4
          baz=245,SNR=16
CAST  Castle Rocks      82.70  24  P       P       09 19 59.4 -0.1
          baz=243,SNR=34
IUG   Iuzhnay           82.73 313 eP       P       09 19 59.6 -0.5
          baz=314
IUG   Iuzhnay           82.73 313 eP       P       09 19 59.6 -0.5
CHUM  Lake Minchumin    82.83  23  P       P       09 20 00.8 +0.8
          baz=243,SNR=121
BRZS  Berezniki         82.99 322 eP       P       09 20 00.6 -0.7
          baz=322
BRZS  Berezniki         82.99 322 eP       P       09 20 00.5 -0.7
CUT   Chulitna          83.00  25  P       P       09 20 00.1 -0.8
          baz=245,SNR=8.9
CHM   Chimkent          83.08 314 eP       P       09 20 01.4 -0.5
          baz=314
CHM   Chimkent          83.08 314 eP       P       09 20 01.3 -0.5
PMR   Palmer            83.15  26  P       P       09 20 01.4 -0.3
          baz=246,SNR=11
PWL   Port Wells        83.20  27  P       P       09 20 01.6 -0.5
          baz=247,SNR=6.2
P23K  Montague Islan    83.29  28  P       P       09 20 02.0 -0.5
          baz=248
KNK   Knik Glacier      83.37  26  P       P       09 20 02.7 -0.2
          baz=246,SNR=12
TRF   Thorofare Moun    83.44  24  P       P       09 20 02.4 -1.0
          baz=245,SNR=12
BPAW  Bear Paw Mtn.     83.45  23  P       P       09 20 02.8 -0.5
BPAW  Bear Paw Mtn.     83.45  23  P       P       09 20 02.8 -0.5
          baz=244,SNR=18
H21K  Melozitna Rive    83.47  22  P       P       09 20 03.8 +0.5
          baz=242
I21K  Tanana            83.55  22  IAmb    IAmb    09 20 29.2
          comp=Z,72nm,1.1s
I21K  Tanana            83.55  22  P       P       09 20 04.6 +0.9
          baz=243,SNR=42
SML   Sawmill           83.58  26  P       P       09 20 04.0 +0.1
SML                                IAmb    IAmb    09 20 05.5
          comp=Z,52nm,0.9s
SML   Sawmill           83.58  26  P       P       09 20 04.1 +0.1
          baz=247,SNR=19
G21K  Allakaket         83.63  21  P       P       09 20 04.5 +0.5
          baz=241
M23K  Glacier View      83.84  26  P       P       09 20 05.0 -0.3
          baz=247,SNR=10
MLY   Manley            83.95  23  P       P       09 20 05.9 +0.1
          baz=244,SNR=74
F21K  Alatna River      83.98  20  P       P       09 20 06.1 +0.2
          baz=241
RND   Reindeer          84.01  24  P       P       09 20 05.6 -0.6
RND                                IAmb    IAmb    09 20 06.9
          comp=Z,41nm,0.8s
RND   Reindeer          84.01  24  P       P       09 20 05.6 -0.6
RND                                pmax    pmax
          comp=Z,41nm,0.8s
NRIK  Noril'sk          84.03 342  P       P       09 20 05.8 -0.3
          comp=Z,44nm,0.8s,baz=122,slow=4.4,SNR=73
NRIK                               LR      LR      09 56 50.2
          comp=Z,105nm,21.0s,baz=129,slow=35
          comp=Z,44nm,0.8s
NRIK  Noril'sk          84.03 342d iP      P       09 20 05.6 -0.4
NRIK                               pmax    pmax
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          comp=Z,53nm,0.8s
SCM   Sheep Creek Mo    84.03  26  P       P       09 20 06.1 -0.2
          baz=248,SNR=15
MCK   McKinley          84.11  24  P       P       09 20 06.0 -0.7
          baz=246,SNR=49
EYAK  Cordova Ski Ar    84.26  28  P       P       09 20 07.3  0.0
          baz=249
NEA2  Nenana            84.41  23  P       P       09 20 07.4 -0.7
          baz=246,SNR=28
KLU   Klutina           84.53  27  P       P       09 20 09.1 +0.2
          baz=249,SNR=23
I23K  Minto, Yukon-K    84.53  23  P       P       09 20 08.6  0.0
          baz=245,SNR=9.0
F22K  John River        84.56  20  P       P       09 20 09.7 +0.9
          baz=242
M24K  Tolsona, Glenn    84.64  26  P       P       09 20 10.1 +0.7
          baz=248,SNR=8.6
H23K  Yukon River       84.75  22  P       P       09 20 09.9 +0.1
H23K                               IAmb    IAmb    09 20 34.5
          comp=Z,31nm,0.9s
H23K  Yukon River       84.75  22  P       P       09 20 09.8 +0.1
          baz=245,SNR=27
WRH   Wood River Hil    84.75  24  P       P       09 20 09.1 -0.7
WRH                                IAmb    IAmb    09 20 33.8
          comp=Z,66nm,1.1s
QSPA  South Pole Qui    84.78 180  LR      LR      09 57 06.3
          comp=Z,168nm,20.3s,baz=10.0,slow=35
QSPA  South Pole Qui    84.78 180  P       P       09 20 10.7 +0.5
MDM   Murphy Dome       84.89  23  P       P       09 20 10.3 -0.2
CCB   Clear Creek Bu    84.93  23  P       P       09 20 10.0 -0.7
CCB                                IAmb    IAmb    09 20 11.1
          comp=Z,51nm,0.9s
G23K  Bananza Creek     84.95  21  P       P       09 20 11.4 +0.6
          baz=245
TCOL  CIGO, UAF Yank    85.00  23  P       P       09 20 11.0  0.0
TCOL                               IAmb    IAmb    09 20 34.8
          comp=Z,54nm,0.8s
TCOL  CIGO, UAF Yank    85.00  23  P       P       09 20 10.0 -1.1
          baz=247,SNR=23
COLA  College           85.01  23  P       P       09 20 11.1 +0.1
COLA                               IAmb    IAmb    09 20 11.9
          comp=Z,56nm,0.9s
COLA  College           85.01  23d iP      P       09 20 09.9 -1.1
COLA                               pmax    pmax
          comp=Z,51nm,0.9s
COLA  College           85.01  23  P       P       09 20 09.9 -1.1
          baz=247
A21K  Barrow            85.10  16  P       P       09 20 11.3 -0.1
          baz=238
COLD  Coldfoot          85.11  21  IAmb    IAmb    09 20 37.2
          comp=Z,45nm,1.0s
COLD  Coldfoot          85.11  21  P       P       09 20 12.0 +0.4
          baz=244
N25K  Chitina, Valde    85.16  27  P       P       09 20 12.6 +0.5
N25K                               IAmb    IAmb    09 20 36.6
          comp=Z,65nm,1.7s
N25K  Chitina, Valde    85.16  27  P       P       09 20 12.2 +0.2
          baz=250,SNR=6.3
HDA   Harding Lake      85.18  24  P       P       09 20 10.9 -1.1
          baz=248,SNR=20
HARP  HAARP             85.19  26  P       P       09 20 12.2 +0.1
          baz=249,SNR=5.3
BVAR  Borovoye Array    85.20 324  P       P       09 20 11.9 -0.4
          comp=Z,12nm,0.6s,baz=109,slow=6.6,SNR=72
          comp=Z,12nm,0.6s
PAX   Paxson            85.26  25  P       P       09 20 12.2 -0.3
          baz=249,SNR=8.2
POKR  Poker Plat Res    85.27  23  P       P       09 20 12.1 -0.3
          baz=247,SNR=8.4
BRVK  Borovoye          85.27 324d iP      P       09 20 11.8 -0.8
BRVK                               pmax    pmax
          comp=Z,9.0nm,0.8s
IL31                    85.35  23  P       P       09 20 11.7 -1.1
IL31                               IAmb    IAmb    09 20 36.1
          comp=Z,59nm,0.9s
ILAR  Eielson Array     85.35  23  P       P       09 20 11.3 -1.4
          comp=Z,42nm,0.8s,baz=255,slow=4.9,SNR=230
ILAR                               pP      pP      09 20 34.6 -2.6
          comp=Z,40nm,0.8s,baz=257,slow=5.0,SNR=12
ILAR                               PKKPbc  PKKPdf  09 38 16.1 +3.6
          comp=Z,1.3nm,0.7s,baz=359,slow=1.1,SNR=15
ILAR                               PKPPKP  P'P'df  09 46 24.3 +1.4
          comp=Z,0.5nm,1.0s,baz=256,slow=2.3,SNR=4.4
ILAR                               LR      LR      09 52 55.2
          comp=Z,113nm,21.5s,baz=250,slow=32
          comp=Z,42nm,0.8s
H24K  Noodor Dome       85.38  22  IAmb    IAmb    09 20 38.0
          comp=Z,27nm,1.0s
H24K  Noodor Dome       85.38  22  P       P       09 20 13.4 +0.4
          baz=247
K24K  Donnelly Dome     85.43  25  P       P       09 20 12.9 -0.4
          baz=249,SNR=14
E23K  Chandalar         85.67  20  P       P       09 20 15.3 +0.8
          baz=245
D23K  Nanushuk River    85.72  19  P       P       09 20 15.7 +1.2
          baz=244
RIDG  Independent Ri    85.80  25  P       P       09 20 15.1  0.0
          baz=250,SNR=28
MCARA McCarthy VSAT     85.80  27  P       P       09 20 15.1  0.0
          baz=251,SNR=7.9
G24K  Hadweenzic Riv    85.87  22  P       P       09 20 15.9 +0.5
          baz=247
F24K  Squaw Lake        86.05  21  P       P       09 20 17.2 +0.9
          baz=246
E24K  Your Creek        86.07  20  P       P       09 20 17.0 +0.7
          baz=246
M26K  Nabesna, AK       86.14  26  P       P       09 20 17.5 +0.6
          baz=251,SNR=7.7
PRP   Porcupine Dome    86.16  23  P       P       09 20 16.0 -1.0
          baz=249,SNR=6.6
L26K  Log Cabin Wild    86.19  26  P       P       09 20 17.2 +0.2
          baz=251,SNR=20
SCRK  Sand Creek        86.24  25  P       P       09 20 17.3 -0.1
          baz=250,SNR=19
BARN  Barnard Glacie    86.33  28  P       P       09 20 18.6 +0.7
BARN                               IAmb    IAmb    09 20 42.8
          comp=Z,30nm,0.8s
G25K  Bearman Lake      86.40  22  P       P       09 20 18.6 +0.7
          baz=248,SNR=8.5
M27K  Edge Creek, AK    86.62  26  P       P       09 20 19.9 +0.7
M27K                               IAmb    IAmb    09 20 44.2
          comp=Z,51nm,0.9s
M27K  Edge Creek, AK    86.62  26  P       P       09 20 20.0 +0.7
          baz=252,SNR=36
C24K  Franklin Bluff    86.68  19  P       P       09 20 20.0 +0.8
          baz=246
PINM  Pinnacle          86.71  29  P       P       09 20 20.1 +0.4
          baz=254,SNR=7.4
L27K  Beaver Creek,     86.86  26  IAmb    IAmb    09 20 45.2
          comp=Z,29nm,1.1s
L27K  Beaver Creek,     86.86  26  P       P       09 20 20.9 +0.6
          baz=252
F25K  Christian Rive    86.87  21  P       P       09 20 21.4 +1.1
          baz=249
BCAR  Beaver Creek A    86.88  26  P       P       09 20 21.1 +0.7
O28M  Mount Upton       86.93  28  P       P       09 20 21.2 +0.2
          baz=254
PNL   Peninsula         87.01  29  P       P       09 20 21.1  0.0
          baz=255,SNR=7.6
I26K  Coal Creek Min    87.02  23  P       P       09 20 21.4 +0.5
          baz=251
K27K  Chicken           87.05  25  IAmb    IAmb    09 20 47.1
          comp=Z,63nm,1.1s
K27K  Chicken           87.05  25  P       P       09 20 22.1 +0.9
          baz=252
YUK3  Moose Creek       87.09  27  P       P       09 20 22.2 +0.5
          baz=254,SNR=34
BVCY  Beaver Creek      87.09  27  P       P       09 20 22.3 +0.9
          baz=253,SNR=30
E25K  Arctic Village    87.09  21  P       P       09 20 22.2 +0.9
          baz=249,SNR=19
D25K  Kavik River       87.27  19  P       P       09 20 22.8 +0.6
          baz=248
YUK8  Steele Glacier    87.27  28  P       P       09 20 23.4 +0.8
          baz=254,SNR=15
G26K  Porcupine Rive    87.32  22  P       P       09 20 23.3 +0.9
          baz=250
F26K  Sheenjek River    87.45  21  P       P       09 20 23.9 +0.8
          baz=250
O29M  Mount Kennedy     87.57  29  P       P       09 20 24.7 +0.8
          baz=255,SNR=21
EGAK  Eagle             87.66  24  P       P       09 20 24.2 +0.2
          baz=253,SNR=23
I27K  Kandik River      87.72  23  P       P       09 20 24.9 +0.5
          baz=252
YUK4  Talbot Arm        87.81  28  P       P       09 20 25.9 +0.8
          baz=255,SNR=40
YUK6  Outpost Mounta    87.84  28  P       P       09 20 25.9 +0.6
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          baz=256,SNR=6.8
H27K  Steamboat Moun    87.95  23  P       P       09 20 26.1 +0.6
          baz=252
C26K  Camden Bay        87.97  19  P       P       09 20 26.8 +1.4
          baz=249,SNR=50
G27K  Doyon Strip       88.07  22  P       P       09 20 26.9 +0.8
          baz=252
M29M  Somme Creek       88.17  27  P       P       09 20 27.2 +0.5
          baz=255,SNR=38
DAWY  Dawson            88.19  25  P       P       09 20 27.4 +0.8
DAWY  Dawson            88.19  25  P       P       09 20 27.3 +0.6
          baz=254,SNR=38
S31K  Pelican           88.19  31  P       P       09 20 27.1 +0.4
          baz=257
HYT   Haines Junctio    88.22  29  P       P       09 20 27.7 +0.7
HYT                                IAmb    IAmb    09 20 52.1
          comp=Z,40nm,0.9s
HYT   Haines Junctio    88.22  29  P       P       09 20 27.6 +0.7
          baz=256,SNR=33
C27K  Jago River        88.26  19  P       P       09 20 27.8 +1.0
          baz=250,SNR=41
P30M  Million Dollar    88.31  29  P       P       09 20 28.1 +0.8
          baz=257
PLBC  Pleasant Camp     88.45  30  P       P       09 20 28.3 +0.4
          baz=257,SNR=13
L29M  L29M              88.49  26  P       P       09 20 28.9 +0.8
          baz=256
E27K  Coleen River      88.52  21  P       P       09 20 28.9 +0.8
          baz=252
R31K  City Hall, Gus    88.54  31  P       P       09 20 29.0 +0.7
          baz=258
N30M  Aishikik Lake     88.56  28  P       P       09 20 28.9 +0.4
          baz=257
J29M  Klondike Camp     88.79  25  P       P       09 20 30.1 +0.6
          baz=256
O30N  Mendenhall        88.88  29  P       P       09 20 30.4 +0.4
          baz=258,SNR=9.9
K29M  Barlow Dome       88.93  26  P       P       09 20 31.0 +0.7
          baz=256
M30M  Minto, Yukon      88.95  27  P       P       09 20 30.6 +0.3
          baz=257,SNR=9.6
S32K  Killisnoo         88.96  32  P       P       09 20 31.0 +0.7
          baz=259
SKAG  Skagway           88.97  30  P       P       09 20 30.8 +0.4
          baz=258
I29M  Ogilvie Camp,     88.98  24  P       P       09 20 31.0 +0.7
          baz=255
R32K  Eaglecrest        89.15  31  P       P       09 20 32.0 +0.8
          baz=259
N31M  Braeburn, Yuko    89.18  28  P       P       09 20 31.9 +0.5
          baz=258,SNR=6.9
MAYO  Mayo, Yukon       89.58  26  P       P       09 20 33.9 +0.8
          baz=258
T33K  Petersburg        89.71  33  P       P       09 20 35.1 +1.2
          baz=260
P32M  Atlin             89.80  30  P       P       09 20 33.9 -0.4
          baz=260
EPYK  Eagle Plains      89.86  23  P       P       09 20 35.1 +0.7
EPYK                               IAmb    IAmb    09 20 59.0
          comp=Z,47nm,1.0s
EPYK  Eagle Plains      89.86  23  P       P       09 20 34.7 +0.3
          baz=257,SNR=5.4
M31M  Drury Creek, Y    89.97  28  P       P       09 20 35.1  0.0
          baz=259
WRAK  Wrangell Islan    89.97  33  P       P       09 20 35.4 +0.3
          baz=261
G30M  tAoh Zraii Nji    90.19  23  P       P       09 20 36.2 +0.2
          baz=257
V35K  Ketchikan         90.21  35  P       P       09 20 36.7 +0.5
          baz=261
P33M  Teslin, Yukon     90.36  30  P       P       09 20 37.5 +0.6
          baz=260
N32M  Quiet Lake        90.39  29  P       P       09 20 37.5 +0.4
          baz=260
Q32M  Nakina River      90.43  31  P       P       09 20 38.0 +0.5
          baz=261
FARO  Faro, Yukon       90.46  28  P       P       09 20 36.8 -0.5
FARO  Faro, Yukon       90.46  28  P       P       09 20 38.0 +0.7
          baz=260
S34M  Telegraph Cree    90.86  32  P       P       09 20 40.4 +1.2
          baz=262
GEYT  Alibeck           91.04 308  P       P       09 20 40.0 -0.6
          comp=Z,2.0nm,0.7s,baz=163,slow=1.5,SNR=4.2
GEYT                               LR      LR      10 03 57.2
          comp=Z,40nm,21.0s,baz=98,slow=37
          comp=Z,2.0nm,0.7s
T35M  Bob Quinn         91.20  33  P       P       09 20 42.1 +1.2
          baz=262
F31M  Tsiigehtchic      91.23  22  P       P       09 20 40.4 -0.3
          baz=260
INK   Inuvik            91.46  22  P       P       09 20 40.9 -0.9
          comp=Z,12nm,1.0s,baz=256,slow=5.9,SNR=23
INK                                pP      pP      09 21 04.9 -1.4
          comp=Z,16nm,1.0s,baz=252,slow=6.6,SNR=8.4
INK                                LR      LR      09 57 08.9
          comp=Z,112nm,19.7s,baz=270,slow=32
          comp=Z,12nm,1.0s
INK   Inuvik            91.46  22  P       P       09 20 41.5 -0.3
          baz=260
DLBC  Dease Lake        91.51  32  LR      LR      09 56 59.3
          comp=Z,78nm,18.9s,baz=278,slow=32
DLBC  Dease Lake        91.51  32  P       P       09 20 43.0 +0.7
          baz=263
BBB   Bella Bella       91.87  38  LR      LR      09 57 01.9
          comp=Z,115nm,19.1s,baz=269,slow=32
AKTO  Aktyubinsk        92.31 320  P       P       09 20 45.1 -1.0
          comp=Z,1.0nm,0.5s,baz=90,slow=2.4,SNR=6.4
AKTO                               LR      LR      10 06 05.7
          comp=Z,52nm,18.3s,baz=78,slow=38
          comp=Z,1.0nm,0.5s
WTLY  Watson Lake, Y    92.34  30  P       P       09 20 46.7 +0.7
          baz=264,SNR=7.2
ARU   Arti              92.55 326  P       P       09 20 45.3 -1.7
          comp=Z,4.3nm,0.2s,baz=254,slow=3.1,SNR=5.5
ARU                                LR      LR      10 03 59.9
          comp=Z,66nm,19.6s,baz=83,slow=36
          comp=Z,4.3nm,0.2s
ARU   Arti              92.55 326c iP      P       09 20 45.5 -1.6
ARU                                                09 24 28.0
ARU                                S       SKSac   09 31 09.2 -3.1
ARU                                SS      SS      09 37 54.1 -3.3
ARU                                pmax    pmax
          comp=Z,11nm,1.3s
LIRD  Liard River Hi    93.63  31  P       P       09 20 52.9 +0.8
          baz=266
ELIB  Princess Elisa    94.58 195 dP       P       09 20 56.8 +0.4
          comp=Z,44nm,1.0s
KOTAN Kotaneelee Air    94.71  30  P       P       09 20 57.6 +0.7
          baz=268
YBH   Yreka Blue Hor    94.79  49  LR      LR      09 55 23.7
          comp=Z,84nm,20.6s,baz=284,slow=30
C36M  Paulatuk          94.98  21  P       P       09 20 58.7 +0.8
          baz=269,SNR=5.3
VOI   Vohitsoka         96.08 247  P       P       09 21 05.0 +0.8
SMMC  Simmler           96.68  55  P       P       09 21 06.6 +0.1
          baz=268
BELA  Belgrano 2        97.06 180  P       P       09 21 06.8 -0.6
KIRV  Kirov             97.54 328  LR      LR      10 05 09.2
          comp=Z,118nm,21.7s,baz=77,slow=35
NVAR  Mina Array Bea    98.09  52  P       P       09 21 12.8 -0.3
          comp=Z,0.2nm,0.4s,baz=260,slow=11,SNR=3.1
NVAR                               pP      pP      09 21 35.8 -1.9
          comp=Z,1.8nm,0.7s,baz=269,slow=6.5,SNR=7.2
NVAR                               LR      LR      09 58 46.3
          comp=Z,93nm,21.4s,baz=266,slow=31
          comp=Z,0.2nm,0.4s
NEW   Newport           98.79  42  LR      LR      10 04 12.8
          comp=Z,37nm,18.3s,baz=262,slow=34
BELG  Belogornoye       98.85 322  LR      LR      10 08 14.6
          comp=Z,113nm,19.3s,baz=56,slow=37
BELG  Belogornoye       98.85 322⇓eP      P       09 21 13.5 -2.3
BELG                               pmax    pmax
          comp=Z,3.0nm,1.4s
YKA   Yellowknife Ar    99.17  28  P       Pdif    09 21 17.1 +0.1
          comp=Z,2.7nm,0.9s,baz=274,slow=4.6,SNR=33
YKA                                pP      pP      09 21 40.3 -1.4
          comp=Z,4.6nm,0.9s,baz=276,slow=4.5,SNR=11
YKA                                PP      PP      09 25 18.8 -1.7
          comp=Z,0.6nm,0.8s,baz=273,slow=7.5,SNR=4.1
YKA                                PKKPbc  PKKPbc  09 37 41.7 -2.7
          comp=Z,2.6nm,0.8s,baz=98,slow=2.9,SNR=34
YKA                                PKPPKP          09 45 55.7
          comp=Z,0.2nm,0.8s,baz=80,slow=2.3,SNR=3.5
YKA                                LR      LR      10 05 33.4
          comp=Z,86nm,19.4s,baz=267,slow=35
          comp=Z,2.7nm,0.9s
GSC   Goldstone, Bar    99.29  55  P       Pdif    09 21 19.0 +0.6
          baz=270
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TROLL	**Troll, Antarti**	**99.30**	**191**	Pdiff	**Pdif**	**09 21 17.2**	**-0.5**
PFO	**Pinyon Flats O**	**99.58**	**57**	LR	LR	09 58 34.8	
	comp=Z,126nm,20.8s,baz=231,slow=31						
PFO	**Pinyon Flats O**	**99.58**	**57**	P	**Pdif**	**09 21 20.2**	**+0.5**
	baz=270						
SNAA	**Sanae**	**100.54**	**190**	⇓*e*P	**Pdif**	**09 21 23.3**	**+0.2**
SNAA				pmax	pmax		
	comp=Z,14nm,1.3s						
KLMR	**Klimovskoe**	**102.24**	**331**	*e*Pdif	**Pdif**	**09 21 27.7**	**-3.0**
KLMR				AMP		09 21 35.4	
	comp=Z,23nm,1.7s						
KLMR				*e*pPdif	**pPdif**	**09 21 52.3**	**-2.9**
KLMR				*e*PP	**PP**	**09 25 44.6**	**+0.9**
KLMR				*e*PKKP	**PKKPbc**	**09 37 31.1**	**-4.5**
KLMR	**Klimovskoe**	**102.24**	**331**	*e*P	**Pdif**	**09 21 27.7**	**-3.0**
KLMR				*e*		09 25 44.5	
KLMR				pmax	pmax		
	comp=Z,23nm,1.7s						
LVZ	**Lovozero**	**102.52**	**339**	⇑*e*P	**Pdif**	**09 21 30.8**	**-1.1**
LVZ				pmax	pmax		
	comp=Z,64nm,1.7s						
RES	**Resolute Bay**	**102.56**	**14**	PKKPbc	PKKPbc	09 37 32.0	-3.0
	comp=Z,1.8nm,0.8s,baz=48,slow=1.3,SNR=8.1						
APA	**Apatity**	**103.08**	**339**	⇓*i*P	**Pdif**	**09 21 31.3**	**-3.0**
APA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,900nm,25.0s						
OBN	**Obninsk**	**104.98**	**326**	*i* P	**Pdif**	**09 21 42.3**	**-0.7**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	**ARCESS Array B**	**105.00**	**342**	PKKPbc	PKKPbc	09 37 24.0	-3.6
	comp=Z,2.1nm,0.5s,baz=259,slow=1.9,SNR=28						
FINES	**FINESS Array B**	**108.26**	**334**	PKKPbc	PKKPbc	09 37 13.1	-4.1
	comp=Z,3.5nm,0.9s,baz=40,slow=2.4,SNR=4.3						
MNK	**Minsk**	**109.98**	**327**	*i* P	**Pdif**	**09 22 01.3**	**-3.9**
	comp=E,2.0nm,0.9s						
MNK				*i* P	**Pdif**	**09 22 01.3**	**-3.9**
	comp=N,42nm,1.1s						
MNK				*i* P	**Pdif**	**09 22 01.3**	**-3.9**
	comp=Z,6.0nm,0.7s,baz=70						
MNK				*i* pP	**pPdif**	**09 22 27.9**	**-1.8**
MNK				*i* PP	**PP**	**09 26 37.3**	**-3.4**
MNK				*i* PPP	PPP	09 28 55.2	
MNK				*i* SS	SS	09 41 56.0	-2.6
MNK				*i* SSS	SSS	09 46 04.1	
MNK				*i* LRM	MLR	10 12 32.3	
	comp=N,479nm,15.3s						
MNK				*i* LRM	MLR	10 12 36.8	
	comp=E,24nm,14.1s						
MNK				*i* LRM	MLR	10 13 22.1	
	comp=Z,147nm,16.0s						
MNK	**Minsk**	**109.98**	**327**	*i* P	**Pdif**	**09 22 01.3**	**-3.9**
MNK				*i*		09 26 37.3	
MNK				*i* SS	SS	09 41 56.0	-2.7
MNK				*i* SSS	SSS	09 46 04.0	
MNK				pmax	pmax		
	comp=N,42nm,1.1s						
MNK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				MLR	MLR		
	comp=N,479nm,15.0s						
MNK				MLR	MLR		
	comp=E,24nm,14.0s						
MNK				MLR	MLR		
	comp=Z,147nm,16.0s						
TXAR	**Lajitas Array**	**110.72**	**61**	PP	**PP**	**09 26 46.1**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=323,slow=7.9,SNR=3.7						
TXAR				PKKPbc	**PKKPbc**	**09 37 06.3**	**-2.0**
	comp=Z,0.3nm,0.5s,baz=104,slow=5.4,SNR=7.4						
NB2	**NORSAR Subarra**	**114.61**	**337**	PKKP		09 36 54.5	
	comp=Z,8.7nm,1.4s,baz=232,slow=4.4						
NOA	**NORSAR Array B**	**114.61**	**337**	PKKPbc	PKKPbc	09 36 54.7	-1.7
	comp=Z,1.3nm,0.7s,baz=54,slow=3.3,SNR=5.7						
CLL	**Collm**	**119.45**	**328**	*e*PKPdf	**PKPdf**	**09 26 24.0**	**-1.0**
CLL				*e*x	x	09 26 50.0	
CLL				*e*PP	**PP**	**09 27 46.0**	**-1.4**
CLL				*e*SS	SS	09 44 06.0	+3.0
CLL				AMS	AMS	10 15 00.0	
	comp=Z,200nm,21.8s						
CLL	**Collm**	**119.45**	**328**	*e*PKIKP	**PKPdf**	**09 26 24.0**	**-1.0**
CLL				*e*		09 26 50.0	
GERES	**GERESS Array B**	**120.36**	**325**	PKP	**PKPdf**	**09 26 26.9**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=72,slow=3.2,SNR=2.8						
LL02	**Futaleuf**	**121.22**	**149**	PKPdf	**PKiKP**	**09 26 29.4**	**+0.6**
DAVOX	**Davos/Dischmat**	**123.64**	**325**	PKKPbc	PKKPbc	09 36 22.6	-0.5
	comp=Z,1.6nm,0.6s,baz=174,slow=8.3,SNR=4.0						
PLCA	**Paso Flores**	**123.64**	**148**	PKP	**PKiKP**	**09 26 33.7**	**-0.1**
	comp=Z,7.4nm,0.7s,baz=229,slow=2.1,SNR=46						
SCHQ	**Schefferville**	**124.08**	**22**	PKKPbc	PKKPbc	09 36 20.3	-1.1
	comp=Z,2.3nm,0.6s,baz=96,slow=2.3,SNR=7.0						
HDC	**Heredia**	**130.68**	**81**	*e*P	**PKPdf**	**09 26 47.9**	**+0.1**
OTAV	**Otavalo**	**135.90**	**95**	*e*P	**PKPdf**	**09 26 57.5**	**-0.5**
VACA	**Villa Angela C**	**138.74**	**144**	*e*P	**PKPdf**	**09 27 02.6**	**+0.3**
MECA	**Mercedes**	**138.89**	**148**	*e*P	**PKPdf**	**09 27 02.6**	**+0.1**
PLTB	**Pedras Altas**	**139.02**	**155**	*e*P	**PKPdf**	**09 27 02.8**	**+0.1**
ITQB	**Itaqui**	**139.39**	**150**	*e*P	**PKPdf**	**09 27 02.8**	**-0.6**
CZSB	**Cruzeiro do Su**	**139.84**	**108**	*e*P	**PKPdf**	**09 27 04.6**	**0.0**
TICA	**Tres Isletas**	**139.86**	**143**	*e*P	**PKPdf**	**09 27 04.6**	**+0.3**
CPSB	**Cacapava Do Su**	**140.26**	**154**	*e*P	**PKPdf**	**09 27 04.4**	**-0.6**
LPAZ	**La Paz**	**140.53**	**123**	PKP	**PKPdf**	**09 27 06.0**	**-0.6**
	comp=Z,3.8nm,0.8s,baz=266,slow=3.1,SNR=5.9						
LPAZ	**La Paz**	**140.53**	**123**	PKIKP	**PKPdf**	**09 27 06.0**	**-0.6**
LPAZ	**La Paz**	**140.53**	**123**	*e*P	**PKPdf**	**09 27 05.7**	**-1.0**
AZCA	**Azaras, Argent**	**141.01**	**149**	*e*P	**PKPdf**	**09 27 06.0**	**-0.4**
CPUP	**Villa Florida**	**141.68**	**146**	PKhKP	PKPpre	09 27 01.9	
	comp=Z,5.2nm,0.8s,baz=237,slow=3.4,SNR=15						
CPUP	**Villa Florida**	**141.68**	**146**	*e*P	**PKPdf**	**09 27 08.1**	**+0.4**
ALGR	**Alto Alegre (B**	**141.82**	**153**	*e*P	**PKPdf**	**09 27 07.5**	**-0.5**
ESFA	**Espinillo Form**	**142.06**	**143**	*e*P	**PKPdf**	**09 27 08.3**	**-0.1**
CNLB	**Canela**	**142.30**	**156**	*e*P	**PKPdf**	**09 27 08.3**	**-0.5**
TOA0	**Torodi Ar. Sit**	**143.39**	**285**	PKPdf	PKPbc	09 27 08.9	+0.6
SDV	**Santo Domingo**	**144.02**	**82**	PKPdf	**PKPab**	**09 27 10.0**	**0.0**
SDV	**Santo Domingo**	**144.02**	**82**	*e*P	**PKPdf**	**09 27 11.5**	**-0.9**
FRBT	**Francisco Belt**	**144.20**	**151**	*e*P	PKPbc	09 27 11.3	+0.8
MCR1	**Marechal Candi**	**144.96**	**148**	*e*P	**PKPab**	**09 27 12.8**	**-0.1**
ETMB	**Extrema**	**145.12**	**115**	*e*P	**PKPab**	**09 27 13.7**	**-0.1**
AMBA	**Amambai (Brazi**	**145.66**	**145**	*e*P	**PKPdf**	**09 27 14.9**	**+0.2**
PTGB	**Pitanga**	**145.74**	**151**	*e*P	**PKPdf**	**09 27 14.3**	**-0.7**
BBSD	**Serra de San D**	**145.99**	**131**	*e*P	**PKPdf**	**09 27 15.3**	**-0.1**
BDQN	**Bodoquena, MS**	**146.47**	**140**	*e*P	**PKPbc**	**09 27 17.4**	**-0.2**
BAUV	**El Baul**	**146.57**	**82**		**PKPdf**	**09 27 16.1**	**-0.4**
TIJ01	**Guaruva-PR**	**146.59**	**156**	*e*P	**PKPdf**	**09 27 16.6**	**+0.2**
HUMP	**Col San Antoni**	**146.83**	**65**		**PKPdf**	**09 27 16.7**	**-0.1**
HUMP				PKPbc	**PKPbc**	**09 27 18.1**	**-0.7**
AQDB	**Aquidauana**	**147.11**	**141**		**PKPbc**	**09 27 20.0**	**+0.6**
AQDB	**Aquidauana**	**147.11**	**141**	*e*P	**PKPdf**	**09 27 17.4**	**+0.2**
SGCB	**S£o Gabriel d**	**147.14**	**98**	*e*P	**PKPdf**	**09 27 17.8**	**+0.3**
FRTB	**Fartura**	**148.09**	**153**	*e*P	**PKPdf**	**09 27 18.9**	**+0.1**
PTLB	**Pontes e Lacer**	**148.17**	**130**	PKPdf	**PKPdf**	**09 27 18.9**	**-0.2**
PTLB					**PKPbc**	**09 27 22.9**	**+0.5**
PTLB					**pPKPbc**	**09 27 47.6**	**-0.1**
PTLB	**Pontes e Lacer**	**148.17**	**130**	*e*P	**PKPdf**	**09 27 18.5**	**-0.5**
PET01	**Itanhaem-SP**	**148.19**	**158**	*e*P	**PKPdf**	**09 27 18.5**	**-0.4**
SAML	**Samuel**	**148.20**	**116**		**PKPbc**	**09 27 22.9**	**+0.3**
SAML	**Samuel**	**148.20**	**116**	PKP2	**PKPbc**	**09 27 22.9**	**+0.3**
RVDE	**Rio Verde (Bra**	**148.67**	**141**	*e*P	**PKPdf**	**09 27 19.4**	**-0.5**
TEFE	**Tefe**	**148.74**	**105**	*e*P	**PKPdf**	**09 27 20.8**	**+0.7**
PCMB	**Pacaembu**	**148.75**	**149**	*e*P	**PKPdf**	**09 27 19.6**	**-0.4**
SPB	**Sao Paulo**	**148.76**	**157**		**PKiKP**	**09 27 25.0**	**-0.1**
VILB	**Vilhena**	**148.80**	**125**		**PKiKP**	**09 27 25.3**	**-0.2**
VILB	**Vilhena**	**148.80**	**125**	*e*P	**PKPdf**	**09 27 20.1**	**0.0**
VAO	**Valinhos**	**149.48**	**157**	*e*P	**PKPdf**	**09 27 21.0**	**-0.2**
PARB	**Paraibuna**	**149.66**	**160**	*e*P	**PKPdf**	**09 27 21.6**	**+0.1**
PP1B	**Ponte de Pedra**	**149.75**	**139**	*e*P	**PKPdf**	**09 27 21.6**	**-0.1**
C2SB	**Chapadao do Su**	**150.15**	**143**	*e*P	**PKPdf**	**09 27 22.2**	**0.0**
KIC	**Kosan Boka**	**150.31**	**274**	⇓*i*PKP1	**PKiKP**	**09 27 29.1**	**+0.4**
	comp=Z,122nm,1.0s						
SALV	**Santo Antonio**	**150.39**	**135**	*e*P	**PKPdf**	**09 27 22.4**	**-0.3**
DBIC	**Dimbokro**	**150.42**	**274**	PKPbc	**PKPbc**	**09 27 27.9**	**-0.2**
	comp=Z,41nm,0.8s,baz=101,slow=2.7,SNR=46						
TIC	**Toumodi**	**150.59**	**274**	⇓*i*PKP1	**PKiKP**	**09 27 29.6**	**+0.4**
	comp=Z,17nm,0.3s						
LIC	**Lamto**	**150.60**	**273**	⇓*i*PKP1	**PKiKP**	**09 27 29.7**	**+0.5**
	comp=Z,167nm,0.8s						
IPMB	**Ipameri, GO**	**153.33**	**150**	*e*P	**PKPdf**	**09 27 26.4**	**-0.7**
CLDB	**Colider**	**153.51**	**127**	*e*P	**PKPdf**	**09 27 27.4**	**0.0**
BOAV	**Boa Vista**	**153.95**	**95**	*e*P	**PKPdf**	**09 27 28.4**	**+0.4**
BDFB	**Brasilia**	**155.39**	**147**	PKP	**PKPdf**	**09 27 30.9**	**+0.8**
	comp=Z,1.5nm,0.5s,baz=150,slow=2.7,SNR=4.6						
BDFB				PKPbc	PKPbc	09 27 40.4	
	comp=Z,14nm,0.9s,baz=198,slow=4.1,SNR=16						
BDFB				PKPab	**pPKPdf**	**09 27 54.6**	**-0.9**
	comp=Z,14nm,0.8s,baz=185,slow=3.3,SNR=8.2						
MCPB	**Macapa, AP**	**161.68**	**107**	*e*P	**PKPdf**	**09 27 37.3**	**-0.3**
ROSB	**Rosrio**	**167.52**	**130**	*e*P	**PKPdf**	**09 27 42.3**	**-0.3**

JMA 25 09:14:39.1±0.1, 34°.0N±0°.1×135°.3E±0°.2, h7^{km}, MV-0.2/7, NW WAKAYAMA PREF, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWM	**Minabe**	**0.19**	**162**	P	Pg	09 14 43.0	+0.1
JWM				*e*S	Sg	09 14 45.8	+0.3

IDC 25 09:24:13.7±2.1, 7°.61S×126°.60E, h0^{km}, mb3.3/1, mbtmp3.5/3, ML3.5/2, Error ellipse: s-maj=222.0km s-min=32.9km az=62.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.38**	**149**	Pn	Pn	09 27 37.4	-1.2
	0.2nm,0.3s,baz=321,slow=13,SNR=14						
WRA				Sn	Sn	09 30 04.2	-15
	0.6nm,0.3s,baz=336,slow=23,SNR=12						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**17.44**	**157**	P	P	09 28 19.4	-0.5
	0.3nm,0.3s,baz=341,slow=12,SNR=20						
ASAR				S	Sn	09 31 20.5	-13
	0.2nm,0.4s,baz=345,slow=25,SNR=4.9						
	1.6nm,0.6s						
MKAR	**Makanchi Array**	**66.93**	**329**	P	P	09 35 08.0	0.0
	0.2nm,0.6s,baz=146,slow=8.0,SNR=2.1						
	0.2nm,0.6s						

ROM 25 09:41:53.1±0.1, 44°.125N±0°.006×11°.119E±0°.009, h7^{km}±1^{km}, ML1.6/6, 1C-2D, Error ellipse: s-maj=0.7km s-min=0.4km az=258.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNVD	**Fontana Vidola**	**0.04**	**3**	⇓P	Pg	09 41 54.7	0.0
FNVD				S	Sg	09 41 56.2	+0.4
MTCR	**Monte La Croce**	**0.13**	**222**	P	Pg	09 41 56.9	+0.9
MTCR				S	Sg	09 41 60.0	+2.1
MPPT	**Montemurlo**	**0.17**	**187**	P	Pg	09 41 57.5	+1.0
MPPT				S	Sg	09 42 01.2	+2.3
SEI	**Scarperia**	**0.18**	**112**	P	Pg	09 41 57.5	+0.7
SEI				S	Sg	09 42 00.6	+1.3
SEI				AML	AML		
	comp=E,236µm,0.3s						
SEI				AML	AML		
	comp=N,468µm,0.6s						
SEI				AML	AML		
	comp=E,236µm,1.7s						
ZCCA	**Zocca**	**0.25**	**336**	⇓P	Pg	09 41 58.4	+0.4
ZCCA				S	Sg	09 42 03.5	+2.1
POPM	**Popiglio**	**0.27**	**253**	⇑P	Pg	09 41 59.0	+0.5
POPM				S	Sb	09 42 03.8	-1.4
POPM				AML	AML		
	comp=N,291µm,0.2s						
POPM				AML	AML		
	comp=E,324µm,0.7s						
CRMI	**Carmignano**	**0.35**	**198**	P	Pg	09 42 00.6	+0.6
CRMI				S	Sb	09 42 06.9	-0.6
CRMI				AML	AML		
	comp=N,51µm,0.6s						
CRMI				AML	AML		
	comp=E,96µm,0.4s						
CRMI				AML	AML		
	comp=N,51µm,0.6s						
MTRZ	**Monterenzio**	**0.35**	**45**	P	Pg	09 41 59.1	-0.9
MTRZ				AML	AML		
	comp=E,111µm,0.7s						
MTRZ				AML	AML		
	comp=N,133µm,1.6s						
MTRZ				AML	AML		
	comp=N,133µm,1.6s						
RUFI	**Rufina**	**0.40**	**135**	P	Pb	09 42 02.3	-0.2

ROM 25 09:42:14.7±0.1, 42°.821N±0°.004×13°.12E±0°.01, h13^{km}±1^{km}, ML0.8/4, 1C-1D, Error ellipse: s-maj=0.8km s-min=0.7km az=109.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**55**	P	Pg	09 42 17.6	+0.1
T1245				S	Sg	09 42 19.3	-0.2
T1245				AML	AML		
	comp=N,91µm,0.7s						
T1245				AML	AML		
	comp=E,63µm,0.3s						
T1245				AML	AML		
	comp=N,91µm,0.7s						
T1245				AML	AML		
	comp=E,167µm,2.9s						
T1245				AML	AML		
	comp=N,186µm,2.8s						
T1212	**Cascia, Frazio**	**0.09**	**218**	P	Pg	09 42 18.0	+0.3
T1212				S	Sg	09 42 20.0	+0.3
T1212				AML	AML		
	comp=E,34µm,4.6s						
T1214	**Arquata del Tr**	**0.09**	**133**	P	Pg	09 42 17.9	+0.2
T1214				S	Sg	09 42 19.9	0.0
T1214				AML	AML		
	comp=N,39µm,2.7s						
MC2	**Monte Cornacci**	**0.10**	**30**	P	Pg	09 42 18.2	+0.2
MC2				S	Sb	09 42 21.1	-0.4
T1218	**Civita (PG)**	**0.15**	**181**	P	Pg	09 42 18.9	+0.4
T1218				S	Sg	09 42 21.8	+0.7
FDMO	**Fiordimonte**	**0.22**	**354**	P	Pg	09 42 19.9	+0.4
FDMO				S	Sg	09 42 23.2	+0.5
MPPT	**Montemurlo**	**1.86**	**308**	P	Pn	09 42 47.0	+0.5
MPPT				S	Sn	09 43 09.0	-0.9
MPPT				AML	AML		
	comp=N,85µm,0.2s						
MPPT				AML	AML		
	comp=E,64µm,0.2s						
MTCR	**Monte La Croce**	**1.96**	**309**	⇑P	Pn	09 42 45.9	-1.9
MTCR				AML	AML		
	comp=E,95µm,0.8s						
MTCR				AML	AML		
	comp=N,95µm,1.2s						
POPM	**Popiglio**	**2.11**	**306**	P	Pn	09 42 48.4	-1.4
MNTV	**Mantova**	**2.87**	**325**	S	Sg	09 43 46.9	-0.1
PZUN	**Potenza**	**2.96**	**136**	⇓P	Pn	09 42 50.2	-11
PZUN				S	Sn	09 43 35.1	-1.6
PZUN				AML	AML		
	comp=E,81µm,1.1s						
PZUN				AML	AML		
	comp=N,190µm,0.1s						
TREG	**Tregnago**	**3.05**	**333**	S	Sb	09 43 44.1	-1.8
STAL	**STALIGIAL**	**3.45**	**355**	S	Sb	09 43 59.9	+2.3
ZONE	**Zone**	**3.65**	**325**	P	Pn	09 43 02.0	-8.9
ZONE				S	Sn	09 43 44.4	-9.4
EUCT	**Pavia**	**3.73**	**311**	P	Pb	09 43 17.4	-3.1
TDS	**Terranova Siba**	**3.98**	**141**	S	Sn	09 43 59.7	-2.3
ERC	**Erice**	**4.80**	**185**	P	Pb	09 43 35.0	-3.7
VLO	**Vlora**	**5.32**	**114**	P	Pn	09 43 37.4	+3.5

ROM 25 09:42:41.8±0.1, 44°.165N±0°.003×11°.139E±0°.004, h11^{km}, ML1.0/6, 1C-1D, Error ellipse: s-maj=0.3km s-min=0.3km az=20.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNVD	**Fontana Vidola**	**0.01**	**285**	P	Pg	09 42 44.0	+0.2
FNVD				S	Sg	09 42 45.5	+0.3
MTCR	**Monte La Croce**	**0.17**	**217**	S	Sg	09 42 49.3	+0.9
MTCR				AML	AML		
	comp=E,95µm,0.8s						
MTCR				AML	AML		
	comp=N,95µm,1.2s						
MTCR				AML	AML		
	comp=E,95µm,0.8s						
MTCR				AML	AML		
	comp=N,95µm,1.2s						
MTCR				AML	AML		
	comp=N,95µm,1.2s						
MTCR				AML	AML		
	comp=E,95µm,0.8s						
SEI	**Scarperia**	**0.19**	**125**	P	Pg	09 42 46.5	+0.5
SEI				S	Sg	09 42 50.1	+1.3
MPPT	**Montemurlo**	**0.21**	**190**	S	Sg	09 42 50.5	+1.1
MPPT				AML	AML		
	comp=E,64µm,0.2s						
MPPT				AML	AML		
	comp=N,85µm,0.2s						
MPPT				AML	AML		
	comp=E,64µm,0.2s						
BRSN	**Barisano**	**0.69**	**80**	⇑P	Pg	09 42 53.1	-1.9
BRSN				AML	AML		
	comp=E,1420µm,0.2s						
BRSN				AML	AML		
	comp=N,1165µm,0.2s						
BRSN				AML	AML		
	comp=E,1415µm,0.2s						
BRSN				AML	AML		
	comp=N,1180µm,0.2s						
APEC	**Apecchio**	**1.11**	**123**	P	Pb	09 43 02.9	-0.1
ATFO	**Monte Foce - G**	**1.31**	**127**	⇓P	Pg	09 43 07.7	+0.7
LEOD	**Capriano del C**	**1.48**	**331**	S	Sn	09 43 21.8	-5.9
FDMO	**Fiordimonte**	**1.81**	**128**	P	Pn	09 43 12.3	-0.6

ISK ***25*** *09:44:24.9, 39°.57N×26°.07E, h6^{km}, ML2.6/23*
DDA ***25*** *09:44:25.5±0.0, 39°.56N×26°.13E, h6^{km}±1^{km}, ML2.6*
ATH ***25*** *09:44:25.8, 39°.56N×26°.09E, h11^{km}±1^{km}, ML2.5/7, Error ellipse: s-maj=2.3km s-min=0.9km az=238.0*
THE ***25*** *09:44:25.4, 39°.56N×26°.08E, h7^{km}±3^{km}, ML2.5/8, Error ellipse: s-maj=3.4km s-min=0.5km az=105.0*

ISC 25 09:44:25.4±0.8, 39°.56N±0°.01×26°.08E±0°.02, h10^{km}±5^{km}, n65, σ0^{s}.56/107, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.07**	**142**	P	**Pg**	**09 44 27.6**	**-0.1**
KOCA				S	**Sg**	**09 44 28.9**	**-0.4**
GPNR	**Gulpinar-Canak**	**0.11**	**158**	Pg	**Pg**	**09 44 27.9**	**-0.2**
BOZC	**Bozcaada**	**0.28**	**356**	Pg	**Pg**	**09 44 31.5**	**+0.3**
BOZC				Sg	**Sg**	**09 44 35.1**	**+0.1**
BOZC	**Bozcaada**	**0.28**	**356**	P	**Pg**	**09 44 31.3**	**+0.1**
BOZC				P	**Pg**	**09 44 31.4**	**+0.3**
BOZC				S	**Sg**	**09 44 35.5**	**+0.4**
BOZC				S	**Sb**	**09 44 35.6**	**-1.9**
EZN	**Ezine**	**0.33**	**35**	P	**Pg**	**09 44 32.0**	**0.0**
EZN				S	**Sg**	**09 44 36.6**	**+0.3**
	928nm,0.2s						
EZN	**Ezine**	**0.33**	**35**	Pg	**Pg**	**09 44 31.9**	**0.0**
EZN				Sg	**Sg**	**09 44 36.6**	**+0.3**
PRK	**Paraskevi**	**0.34**	**155**	P	**Pg**	**09 44 32.5**	**+0.2**
PRK				S	**Sg**	**09 44 37.0**	**+0.2**
	2µm,0.2s						
PRK	**Paraskevi**	**0.34**	**155**	P	**Pg**	**09 44 32.5**	**+0.2**
PRK				S	**Sg**	**09 44 37.0**	**+0.2**
PRK				AML	AML	09 44 38.2	
	comp=N,2379µm,0.2s						
PRK				AML	AML	09 44 39.1	
	comp=E,4256µm,0.3s						
SIGR	**SIGRI**	**0.39**	**207**	P	**Pg**	**09 44 33.3**	**+0.2**
SIGR				S	**Sg**	**09 44 38.2**	**0.0**
	comp=E,1µm,0.3s						
SIGR	**SIGRI**	**0.39**	**207**	Pg	**Pg**	**09 44 33.3**	**+0.2**
SIGR				Sg	**Sg**	**09 44 39.3**	**+1.1**
SIGR	**SIGRI**	**0.39**	**207**	P	**Pg**	**09 44 33.3**	**+0.2**
SIGR				S	**Sg**	**09 44 38.2**	**0.0**
SIGR				AML	AML	09 44 39.8	
	comp=E,2296µm,0.2s						
SIGR				AML	AML	09 44 42.4	
	comp=N,2112µm,0.5s						
BAYC	**CANAKKALE_Bayr**	**0.40**	**63**	P	**Pg**	**09 44 33.1**	**-0.2**
BAYC				S	**Sg**	**09 44 38.5**	**-0.3**
BAYC				*i* AML	AML	09 44 39.0	
	comp=N,715nm,0.2s						
ECEA	**Canakkale, Ece**	**0.49**	**8**	P	**Pg**	**09 44 35.3**	**+0.3**
ECEA				S	**Sg**	**09 44 42.3**	**+0.8**
AYVA	**Ayvalik**	**0.53**	**118**	P	**Pg**	**09 44 35.5**	**-0.2**
COMU	**Canakkale**	**0.62**	**29**	Pg	**Pg**	**09 44 37.2**	**-0.2**
GOKA	**anakkale-Gk**	**0.65**	**348**	P	**Pg**	**09 44 38.2**	**+0.3**
GOKA				S	**Sg**	**09 44 46.5**	**0.0**
GOKA				*i* AML	AML	09 44 47.0	
	comp=N,274nm,0.4s						
GOKA				*i* AML	AML	09 44 48.0	
	comp=N,347nm,0.5s						
GADA	**Gvkgeada**	**0.65**	**348**	Pg	**Pg**	**09 44 37.6**	**-0.4**
GADA				Sg	**Sg**	**09 44 46.6**	**+0.1**
LIA	**Limnos Island**	**0.77**	**296**	P	**Pg**	**09 44 40.6**	**+0.3**
LIA				S	**Sg**	**09 44 51.0**	**+0.6**
	comp=N,972nm,0.3s						
LIA	**Limnos Island**	**0.77**	**296**	P	**Pg**	**09 44 40.7**	**+0.3**
LIA				S	**Sg**	**09 44 51.0**	**+0.6**
LIA				AML	AML	09 44 54.6	
	comp=E,2613µm,0.4s						
LIA				AML	AML	09 44 56.3	
	comp=N,1253µm,0.2s						
BUHA	**Balikesir, Bur**	**0.77**	**94**	P	**Pg**	**09 44 40.4**	**0.0**
BUHA				S	**Sg**	**09 44 50.6**	**+0.2**
DKL	**Dikili**	**0.80**	**127**	Pg	**Pg**	**09 44 41.2**	**+0.3**
CANM	**Can-anakkale**	**0.88**	**59**	Pg	**Pg**	**09 44 42.2**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.89**	**20**	Pg	**Pg**	**09 44 42.2**	**-0.4**
KARB	**zmir-Karabur**	**0.93**	**164**	P	**Pg**	**09 44 43.5**	**+0.2**
KARB				S	**Sg**	**09 44 55.2**	**-0.2**
KARB				*i* AML	AML	09 44 58.0	
	comp=N,213nm,0.2s						
KARB				*i* AML	AML	09 44 58.0	
	comp=N,217nm,0.4s						
LPK	**Lapseki**	**0.97**	**32**	Pg	**Pg**	**09 44 43.5**	**-0.5**
ZEDA	**zmir-Bergama**	**0.97**	**127**	P	**Pb**	**09 44 44.6**	**+0.3**
ZEDA				S	**Sb**	**09 44 57.4**	**+0.2**
SMTH	**Samothraki Isl**	**1.00**	**335**	P	**Pg**	**09 44 44.6**	**-0.2**
SMTH				S	**Sg**	**09 44 58.0**	**+0.2**
	comp=N,190nm,0.2s						
SMTH	**Samothraki Isl**	**1.00**	**335**	P	**Pg**	**09 44 44.6**	**-0.2**
SMTH				S	**Sg**	**09 44 58.0**	**+0.2**
SMTH				AML	AML	09 45 00.8	
	comp=N,427µm,0.2s						
SMTH				AML	AML	09 45 00.9	
	comp=E,326µm,0.2s						
PSRA	**Psara**	**1.09**	**202**	P	**Pg**	**09 44 46.7**	**+0.3**
PSRA				S	**Sb**	**09 45 01.8**	**+1.2**
CAVK	**Edirne/Enez-Ca**	**1.13**	**3**	P	**Pg**	**09 44 46.7**	**-0.5**
CAVK				S	**Sb**	**09 45 02.6**	**+0.8**
CAVK				*i* AML	AML	09 45 05.0	
	comp=E,98nm,0.6s						
ERIK	**Erikli-Kesan**	**1.16**	**16**	Pn	**Pg**	**09 44 47.2**	**-0.5**
CHOS	**Chios island**	**1.17**	**181**	P	**Pg**	**09 44 47.0**	**-0.9**
CHOS				S	**Sg**	**09 45 03.1**	**0.0**
	comp=E,348nm,0.3s						
CHOS	**Chios island**	**1.17**	**181**	Pn	**Pg**	**09 44 47.8**	**-0.1**
CHOS	**Chios island**	**1.17**	**181**	P	**Pg**	**09 44 47.0**	**-0.9**
CHOS				S	**Sg**	**09 45 01.7**	**-1.4**
CHOS				AML	AML	09 45 05.8	
	comp=N,483µm,0.2s						
CHOS				AML	AML	09 45 06.8	
	comp=E,916µm,0.3s						
ENEZ	**Enez**	**1.18**	**3**	Pn	**Pg**	**09 44 47.8**	**-0.3**
BALY	**Balya**	**1.20**	**81**	P	**Pn**	**09 44 49.0**	**+0.7**
BALY				S	**Sg**	**09 45 02.4**	**-1.7**
KRBG	**Karabiga-Canak**	**1.25**	**48**	Pn	**Pn**	**09 44 49.3**	**+0.4**
URLA	**Izmir**	**1.26**	**161**	Pn	**Pn**	**09 44 48.9**	**-0.2**
URLA	**Izmir**	**1.26**	**161**	P	**Pn**	**09 44 48.3**	**-0.8**
URLA				S	**Sb**	**09 45 05.6**	**+0.1**
STEP	**BALIKESIR_Sava**	**1.28**	**98**	P	**Pg**	**09 44 50.5**	**+0.5**
STEP				S	**Sg**	**09 45 06.7**	**+0.1**
KNL	**Balıkesir**	**1.32**	**57**	P	**Pn**	**09 44 49.5**	**-0.4**
KNL				S	**Sn**	**09 45 08.0**	**+0.5**
KNL				*i* AML	AML	09 45 08.0	
	comp=E,200nm,0.6s						
KNL				*i* AML	AML	09 45 10.0	
	comp=E,90nm,0.4s						
KNL				*i* AML	AML	09 45 10.0	
	comp=E,171nm,0.5s						
GONE	**Gonen-Balikesi**	**1.33**	**68**	Pn	**Pb**	**09 44 50.7**	**+0.3**
ALN	**Alexandroupoli**	**1.34**	**359**	P	**Pn**	**09 44 49.8**	**-0.4**
ALN				S	**Sn**	**09 45 08.6**	**+0.6**
	comp=E,188nm,0.5s						
ALN	**Alexandroupoli**	**1.34**	**359**	Pn	**Pn**	**09 44 50.4**	**+0.3**
ALN	**Alexandroupoli**	**1.34**	**359**	P	**Pn**	**09 44 49.7**	**-0.4**
ALN				S	**Sb**	**09 45 07.1**	**-0.7**
ALN				AML	AML	09 45 09.2	
	comp=E,582µm,0.5s						
ALN				AML	AML	09 45 09.2	
	comp=N,170µm,0.5s						
KESN	**Edirne-Kesan**	**1.35**	**20**	P	**Pn**	**09 44 50.1**	**-0.5**
KESN				S	**Sn**	**09 45 09.2**	**+0.5**

KESN				*i* AML	AML	09 45 10.0	
	comp=N,151nm,0.3s						
KESN				*i* AML	AML	09 45 11.0	
	comp=N,153nm,0.5s						
ZEYE	Izmir, Urla-Ze	1.36	166	P	Pn	09 44 49.7	-0.7
ZEYE				S	Sb	09 45 06.8	-1.4
BLCB	Balcova	1.39	147	P	Pn	09 44 50.9	+0.1
BLCB				S	Sn	09 45 09.9	+0.7
BLCB	Balcova	1.39	147	Pn	Pb	09 44 51.7	+0.2
BALB	Balikesir	1.39	86	Pn	Pn	09 44 51.1	+0.2
RKY	Sarkoy-Tekirda	1.41	36	Pn	Pn	09 44 51.4	+0.3
BKES	Balkesir-Mer	1.44	82	P	Pb	09 44 52.3	+0.1
BKES				S	Sb	09 45 11.0	+0.3
THAS	Thassos island	1.48	315	P	Pn	09 44 51.6	-0.5
THAS	Thassos island	1.48	315	P	Pn	09 44 51.6	-0.5
THAS				S	Sn	09 45 09.9	-1.5
THAS				AML	AML	09 45 10.7	
	comp=E,108µm,0.2s						
THAS				AML	AML	09 45 10.9	
	comp=N,196µm,0.3s						
AKHS	Akhisar	1.51	116	P	Pn	09 44 52.5	0.0
EDC	Edincik	1.58	60	Pn	Pn	09 44 53.8	+0.3
RDO	Rodhopi	1.64	345	P	Pn	09 44 54.0	-0.3
RDO				S	Sn	09 45 14.7	-0.7
	comp=N,30nm,0.4s						
RDO	Rodhopi	1.64	345	Pn	Pn	09 44 54.8	+0.5
BAND	Balkesir-Ban	1.74	62	P	Pn	09 44 55.8	+0.1
BAND				S	Sn	09 45 17.3	-0.7
DURS	Dursunbey	1.85	88	P	Pn	09 44 57.4	+0.2
DURS				S	Sn	09 45 21.2	+0.5
KCTX	Karacabey (Bur	1.89	67	Pn	Pn	09 44 57.7	0.0
SMG	Samos	1.94	162	P	Pn	09 44 58.0	-0.4
SMG	Samos	1.94	162	P	Pn	09 44 58.0	-0.4
CRLT	Corlu	2.02	38	Pn	Pn	09 45 00.3	+0.9
DEMI	Demirci	2.11	103	P	Pg	09 45 05.7	-0.2
DEMI				S	Sn	09 45 28.3	+1.2

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*DDA **25** 09:50:29.5±0.0, 38.°70N×25.°94E, h3^{km}±3^{km}, ML2.6*
*ISK **25** 09:50:29.4, 38.°71N×25.°91E, h8^{km}, ML2.6/18*
*ATH **25** 09:50:30.0, 38.°70N×25.°92E, h23^{km}±2^{km}, ML2.8/6, Error ellipse: s-maj=2.4km s-min=1.3km az=149.0*
*THE **25** 09:50:30.0, 38.°70N×25.°92E, h9^{km}±2^{km}, ML2.5/8, Error ellipse: s-maj=3.0km s-min=0.5km az=254.0*
ISC 25 09:50:29.9±0.9**, 38.°70N**±0.°02×**25.°91E**±0.°03**, h16**^{km}±7^{km}**, n53, σ0.^{s}84**/87**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSRA	Psara	0.31	241	P	Pb	09 50 37.8	+0.7
PSRA				S	Sg	09 50 41.7	+0.7
PSRA				AML	AML	09 50 42.8	
	comp=N,9903µm,0.1s						
PSRA				AML	AML	09 50 42.8	
	comp=E,9847µm,0.1s						
CHOS	Chios island	0.33	160	P	Pg	09 50 37.0	+0.1
CHOS				S	Sg	09 50 41.6	0.0
	comp=E,5µm,0.2s						
CHOS	Chios island	0.33	160	Pg	Pg	09 50 36.9	+0.1
CHOS				Sg	Sg	09 50 41.6	0.0
CHOS	Chios island	0.33	160	P	Pg	09 50 37.0	+0.1
CHOS				S	Sg	09 50 41.6	0.0
CHOS				AML	AML	09 50 42.8	
	comp=E,14847µm,0.2s						
CHOS				AML	AML	09 50 42.8	
	comp=N,8260µm,0.2s						
KARB	zmir-Karabur	0.39	95	P	Pg	09 50 37.7	-0.2
KARB				S	Sg	09 50 43.0	-0.5
SIGR	SIGRI	0.52	355	P	Pg	09 50 40.2	0.0
SIGR				S	Sg	09 50 46.6	-0.6
	comp=N,775nm,0.4s						
SIGR	SIGRI	0.52	355	Pg	Pg	09 50 40.2	0.0
SIGR				Sg	Sg	09 50 47.1	-0.1
SIGR	SIGRI	0.52	355	P	Pg	09 50 40.2	0.0
SIGR				S	Sg	09 50 46.6	-0.6
SIGR				AML	AML	09 50 47.8	
	comp=N,1690µm,0.4s						
SIGR				AML	AML	09 50 52.2	
	comp=E,1390µm,0.4s						
PRK	Paraskevi	0.62	27	P	Pg	09 50 41.7	-0.4
PRK				S	Sb	09 50 51.2	+0.4
	comp=E,428nm,0.4s						
PRK	Paraskevi	0.62	27	P	Pg	09 50 41.7	-0.4
PRK				S	Sb	09 50 51.2	+0.4
PRK				AML	AML	09 50 53.7	
	comp=E,1047µm,0.4s						
PRK				AML	AML	09 50 55.6	
	comp=N,658µm,0.3s						
URLA	Izmir	0.63	122	Pg	Pg	09 50 42.4	0.0
URLA	Izmir	0.63	122	P	Pg	09 50 42.4	0.0
URLA				S	Sg	09 50 51.0	+0.1
ZEYE	Izmir, Urla-Ze	0.65	134	P	Pg	09 50 42.4	-0.3
ZEYE				S	Sg	09 50 51.1	-0.3
ZEYE				*i* AML	AML	09 50 53.0	
	comp=N,319nm,0.3s						
ZEYE				*i* AML	AML	09 50 54.0	
	comp=N,290nm,0.4s						
ZEYE				*i* AML	AML	09 50 55.0	
	comp=N,247nm,0.3s						
GPNR	Gulpinar-Canak	0.78	13	Pg	Pg	09 50 44.6	-0.5
KOCA	Canakkale, Ayv	0.82	12	P	Pg	09 50 45.5	-0.5
KOCA				S	Sb	09 50 58.0	+1.2
AYVA	Ayvalik	0.86	45	P	Pg	09 50 45.1	-1.6
AYVA				S	Sb	09 50 58.8	+1.0
DKL	Dikili	0.86	64	Pg	Pg	09 50 46.3	-0.4
DKL				Sg	Sb	09 50 58.6	+0.8
BLCB	Balcova	0.94	109	P	Pg	09 50 47.4	-0.8
BLCB				S	Sb	09 51 00.6	+0.5
BLCB	Balcova	0.94	109	Pg	Pg	09 50 47.9	-0.3
ZEDA	zmir-Bergama	0.95	73	P	Pg	09 50 48.1	-0.3
ZEDA				S	Sg	09 50 59.7	-1.2
DGB	zmir	1.00	130	P	Pg	09 50 48.5	-0.8
DGB				S	Sg	09 51 01.5	-0.8
BOZC	Bozcaada	1.15	5	Pn	Pb	09 50 51.3	-0.1
BOZC				Sn	Sn	09 51 07.8	+1.0
BOZC	Bozcaada	1.15	5	P	Pb	09 50 51.1	-0.3
BOZC				P	Pb	09 50 51.1	-0.3
BOZC				S	Sb	09 51 07.2	+1.1
BOZC				S	Sb	09 51 07.3	+1.1
BOZC				*i* AML	AML	09 51 09.0	
	comp=N,106nm,0.2s						
BOZC				*i* AML	AML	09 51 09.0	
	comp=N,110nm,0.2s						
BOZC				*i* AML	AML	09 51 09.0	
	comp=N,138nm,0.2s						
BOZC				*i* AML	AML	09 51 12.0	
	comp=N,111nm,0.8s						
BAYC	CANAKKALE_Bayr	1.16	25	P	Pb	09 50 50.8	-0.7
BAYC				S	Sb	09 51 07.0	+0.7
EZN	Ezine	1.17	16	P	Pb	09 50 51.6	-0.2
EZN				S	Sg	09 51 07.8	-0.1
	comp=N,182nm,0.3s						
EZN	Ezine	1.17	16	Pn	Pb	09 50 51.9	+0.1
BUHA	Balikesir, Bur	1.21	48	P	Pb	09 50 51.6	-0.9
BUHA				S	Sb	09 51 07.3	-0.6
SMG	Samos	1.23	143	P	Pn	09 50 53.0	+0.6
SMG				S	Sn	09 51 09.8	+1.1
	comp=N,382nm,0.2s						
SMG	Samos	1.23	143	P	Pn	09 50 51.6	-0.9
SMG				S	Sb	09 51 06.1	-2.2
SMG				AML	AML	09 51 11.6	
	comp=E,1004µm,0.3s						
SMG				AML	AML	09 51 12.7	
	comp=N,520µm,0.3s						
LIA	Limnos Island	1.33	335	P	Pn	09 50 53.8	0.0
LIA				S	Sn	09 51 12.3	+1.2
	comp=N,230nm,0.3s						
LIA	Limnos Island	1.33	335	P	Pn	09 50 52.3	-1.5
LIA				S	Sb	09 51 08.9	-2.3
LIA				AML	AML	09 51 11.4	
	comp=E,480µm,0.3s						
LIA				AML	AML	09 51 15.0	
	comp=N,461µm,0.5s						
ECEA	Canakkale, Ece	1.36	9	P	Pn	09 50 54.7	+0.4
ECEA				S	Sb	09 51 10.9	-1.3
ECEA				*i* AML	AML	09 51 16.0	
	comp=N,84nm,0.8s						
ECEA				*i* AML	AML	09 51 17.0	
	comp=N,124nm,0.5s						
ECEA				*i* AML	AML	09 51 18.0	
	comp=N,120nm,0.4s						
KYMI	Kymi, Euboea I	1.42	268	P	Pn	09 50 54.5	-0.5
KYMI	Kymi, Euboea I	1.42	268	P	Pn	09 50 53.5	-1.5
GCAM	G?zelcaml?	1.44	133	Pn	Pn	09 50 56.3	+1.0
COMU	Canakkale	1.47	17	Pn	Pn	09 50 56.5	+0.7
GADA	Gvkgeada	1.49	360	Pn	Pn	09 50 57.1	+1.0
GOKA	anakkale-Gk	1.49	360	P	Pb	09 50 57.9	+0.6
GOKA				S	Sg	09 51 17.7	-0.4
GOKA				*i* AML	AML	09 51 19.0	
	comp=N,83nm,0.3s						
GOKA				*i* AML	AML	09 51 19.0	
	comp=N,92nm,0.8s						
GOKA				*i* AML	AML	09 51 20.0	
	comp=N,181nm,0.4s						
STEP	BALIKESIR_Sava	1.56	64	P	Pn	09 50 57.2	+0.1
STEP				S	Sn	09 51 18.4	+1.4
CANM	Can-anakkale	1.58	34	Pn	Pn	09 50 58.3	+1.0
BALY	Balya	1.69	51	P	Pn	09 50 52.3	-6.5
BALY				S	Sn	09 51 18.7	-1.4
GELI	Tayfur-Gelibol	1.75	14	Pn	Pn	09 51 00.7	+1.0
SMTH	Samothraki Isl	1.80	351	P	Pn	09 51 00.7	+0.4
SMTH				S	Sn	09 51 22.6	-0.2
	comp=N,22nm,0.4s						
LPK	Lapseki	1.80	21	Pn	Pn	09 51 01.1	+0.8
GONE	Gonen-Balikesi	1.93	45	Pn	Pn	09 51 03.2	+1.2
KRBG	Karabiga-Canak	2.01	32	Pn	Pn	09 51 04.2	+1.1
ERIK	Erikli-Kesan	2.03	13	Pn	Pn	09 51 04.5	+1.1
ENEZ	Enez	2.05	5	P	Pn	09 51 03.7	0.0
ENEZ	Enez	2.05	5	Pn	Pn	09 51 05.2	+1.5
ALN	Alexandroupoli	2.20	3	P	Pn	09 51 05.6	-0.2
ALN				S	Sn	09 51 32.4	-0.3
	comp=N,28nm,0.6s						
ALN	Alexandroupoli	2.20	3	Pn	Pn	09 51 06.9	+1.1
OUR	Ouranopolis	2.21	318	Pn	Pn	09 51 06.6	+0.6
RKY	Sarkoy-Tekirda	2.22	26	Pn	Pn	09 51 07.4	+1.3

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*IDC **25** 10:10:59.6±3.3, 5.°16S×145.°58E, h74^{km}±32^{km}, mb3.6/9, mbtmp4.0/11, MS2.9/2, Error ellipse: s-maj=29.4km s-min=17.7km az=89.0*
*NEIC **25** 10:11:01.7±1.1, 5.°21S±0.°06×145.°5E±0.°1, h91^{km}±7^{km}, mb4.2/19, Error ellipse: s-maj=19.2km s-min=8.6km az=86.0*
ISC 25 10:10:58.4±0.6**, 5.°09S**±0.°07×**145.°56E**±0.°09**, h64**^{km}**, n48, σ1.^{s}16**/46**, mb4.2**/18**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.58	160	P	Pn	10 12 06.9	+1.8
	76nm,0.2s,baz=298,slow=4.8,SNR=71						
PMG				S	Sn	10 12 56.3	-0.7
	94nm,0.4s,baz=320,slow=23,SNR=20						
PMG				LR	LR	10 14 24.9	
	comp=Z,137nm,20.9s,baz=282,slow=46						
PMG	Port Moresby	4.58	160	Pn	Pn	10 12 06.9	+1.8
PMG				Sn	Sn	10 12 57.0	0.0
PMG	Port Moresby	4.58	160	P	Pn	10 12 06.7	+1.6
COEN	Coen	9.12	195	Pn	Pn	10 13 08.5	+1.1
COEN	Coen	9.12	195	P	Pn	10 13 10.7	+3.3
MTSU	Mount Surprise	13.02	185	P	Pn	10 14 03.6	+2.9
HNR	Honiara	14.91	108	Pn	Pn	10 14 25.1	-0.5
CTA	Charters Tower	14.93	177	P	P	10 14 31.1	+1.1
	4.8nm,0.8s,baz=3.3,slow=15,SNR=6.9						
CTAO	Charters Tower	14.93	177		Pn	10 14 25.6	-0.3
KDU	Kakadu	14.96	239	P	Pn	10 14 27.5	+1.2
MTN	Manton Dam	16.19	241		Pn	10 14 41.4	-0.5
MTN				IAmb	IAmb	10 15 06.0	
	comp=Z,16nm,1.2s						
MTN	Manton Dam	16.19	241	P	Pn	10 14 41.5	-0.5
WB0	Warramunga Arr	18.20	216	P	P	10 15 05.7	-0.5
WRAB	Tennant Creek	18.35	216	P	P	10 15 07.1	-0.8
WRAB				IAmb	IAmb	10 15 12.1	
	comp=Z,4.7nm,0.5s						
WB2	Warramunga Arr	18.36	215	P	P	10 15 07.5	-0.5
WRA	Warramunga Arr	18.36	216	P	P	10 15 07.1	-1.0
	comp=Z,2.5nm,0.6s,baz=28,slow=10.0,SNR=64						
WRA				LR	LR	10 22 38.4	
	comp=Z,38nm,21.6s,baz=72,slow=38						
WRA	Warramunga Arr	18.36	216	P	P	10 15 06.7	-1.3
KNRA	Kununurra	19.57	236		P	10 15 19.9	-1.3
KNRA				IAmb	IAmb	10 15 25.1	
	comp=Z,11nm,0.6s						
KNRA	Kununurra	19.57	236	P	Pn	10 15 21.9	-1.2
EIDS	Eidsvold	20.85	166	P	P	10 15 34.2	-0.9
EIDS				IAmb	IAmb	10 15 44.2	
	comp=Z,22nm,1.5s						
AS31	Alice Springs	21.62	210	P	P	10 15 42.3	-1.1
AS31				IAmb	IAmb	10 15 46.1	
	comp=Z,2.6nm,0.5s						
ASAR	Alice Springs	21.62	210	P	P	10 15 43.0	-0.4
	comp=Z,2.7nm,0.5s,baz=41,slow=7.3,SNR=53						
	comp=Z,2.7nm,0.5s						
ASAR	Alice Springs	21.62	210	P	P	10 15 42.7	-0.7
INKA	Innaminka	22.99	191	P	P	10 15 59.2	+1.4
FITZ	Fitzroy Crossi	23.37	235	P	P	10 15 60.0	-1.6
ARMA	Armidale	25.84	168	P	P	10 16 23.1	-1.0
ARMA				IAmb	IAmb	10 16 26.4	
	comp=Z,29nm,1.5s						
DZM	Mont Dzumac	26.34	132	P	P	10 16 28.7	+0.1
	comp=Z,1.6nm,0.6s,baz=100,slow=22,SNR=1.8						
	comp=Z,1.6nm,0.6s						
STKA	Stephens Creek	26.91	187	P	P	10 16 33.3	-0.3
	comp=Z,2.3nm,0.7s,baz=344,slow=9.6,SNR=9.3						
	comp=Z,2.3nm,0.7s						
STKA	Stephens Creek	26.91	187	P	P	10 16 33.0	-0.5
BBOO	Buckleboo	28.97	197	P	P	10 16 51.1	-0.8
BBOO				IAmb	IAmb	10 17 17.1	
	comp=Z,9.6nm,1.3s						
MBWA	Marble Bar	29.71	235	P	P	10 16 57.7	-1.0
MBWA				IAmb	IAmb	10 17 17.9	
	comp=Z,11nm,1.4s						
CAN	Canberra	30.25	174	P	P	10 17 03.0	-0.3
FORT	Forrest	30.40	211	P	P	10 17 03.2	-1.4
MORW	Morawa	36.73	226	P	P	10 17 59.1	-0.6
KSRS	Korea Array	45.40	340	P	P	10 19 11.7	+1.0
	comp=Z,0.9nm,0.9s,baz=177,slow=8.2,SNR=2.9						
	comp=Z,0.9nm,0.9s						
USRK	Ussuriysk Ar.	50.56	347	P	P	10 19 51.5	+1.0
	comp=Z,1.3nm,0.6s,baz=152,slow=6.5,SNR=6.0						
	comp=Z,1.3nm,0.6s						
PZH	PanZhiHua	52.77	309	P	P	10 19 57.0	-10
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,5.0s						
HHC	Hu-ho-hao-te	55.31	329	*e*P	P	10 20 14.0	-12
HHC				pmax	pmax		
	comp=Z,22nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,4.9s						
PETK	Petropavlovsk-	58.88	9	P	P	10 20 51.0	+0.5
	comp=Z,2.5nm,0.8s,baz=177,slow=7.2,SNR=3.5						
	comp=Z,2.5nm,0.8s						
CASY	Casey	65.76	195	P	P	10 21 36.1	-0.2
WMQ	Urumqi	71.17	320	*e*P	P	10 21 59.0	-12
VNDA	Vanda	72.91	176	P	P	10 22 20.6	+0.4
	comp=Z,0.7nm,0.6s,baz=342,slow=7.1,SNR=5.9						
	comp=Z,0.7nm,0.6s						
VNDA	Vanda	72.91	176	P	P	10 22 19.1	-1.1
VNDA				IAmb	IAmb	10 22 27.0	
	comp=Z,2.9nm,1.4s						
MKAR	Makanchi Array	75.89	321	P	P	10 22 38.5	+0.3
	comp=Z,0.1nm,0.3s,baz=101,slow=7.5,SNR=2.9						
	comp=Z,0.1nm,0.3s						
KSH	Kashi	77.70	312	P	P	10 22 40.8	-7.9
KSH				pP	PcP	10 22 48.5	-10
KSH				PcP	pP	10 22 50.3	-16
KSH				pmax	pmax		
	comp=Z,3.0nm,1.2s						
CCB	Clear Creek Bu	84.81	23	P	P	10 23 25.3	-0.2
CCB				IAmb	IAmb	10 23 26.2	
	comp=Z,2.4nm,0.9s						
QSPA	South Pole Qui	84.87	180	P	P	10 23 26.1	0.0
QSPA				IAmb	IAmb	10 23 54.7	
	comp=Z,7.5nm,1.5s						
ILAR	Eielson Array	85.22	23	P	P	10 23 27.1	-0.5
	comp=Z,2.0nm,0.8s,baz=257,slow=5.3,SNR=19						
	comp=Z,2.0nm,0.8s						

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*FUNV **25** 10:31:13.8, 10.°44N×62.°30W, h4^{km}, MW2.9*
*TRN **25** 10:31:14.0, 10.°44N×62.°27W, h3^{km}, MD3.4*
ISC 25 10:31:17.2±1.5**, 10.°49N**±0.°09×**62.°48W**±0.°07**, h75**^{km}**, n13, σ1.^{s}52**/17**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUV	Carupano	0.77	284	*e*P	Pn	10 31 30.5	-2.8
CRUV				*e*S	Sn	10 31 42.5	-2.6
TRN	Trinidad (W)	1.07	82	*e*P	Pn	10 31 30.4	-6.4
GRGR	Grenville	1.82	26	*e*P	Pn	10 31 46.1	-0.5
GRGR				*e*S	Sn	10 32 09.9	+1.1
GRHS	Sauteurs	1.90	25	*e*S	Sn	10 32 10.7	-0.2
TOSP	Speyside	2.07	67	*e*P	Pn	10 31 49.1	-0.8
PCRV	Puerto La Cruz	2.15	262	*e*P	Pn	10 31 51.4	+0.4
GCMP	Grenada, Carri	2.23	27	*e*P	Pn	10 31 51.4	-0.7
GCMP				*e*S	Sn	10 32 20.8	+2.1
PRGV	PARIAGUAN	2.75	231	*e*P	Pn	10 31 58.6	-0.5
PRGV				*e*S	Sn	10 32 32.0	+0.7
BIRV	Birongo	3.73	270	*e*P	Pn	10 32 14.2	+1.7
TACV	Tcata	4.49	266	*e*P	Pn	10 32 23.0	+0.1
TACV				*e*S	Sn	10 33 16.4	+2.4
CACV	CAICARA DEL OR	4.96	234	*e*P	Pn	10 32 23.6	-5.7
CACV				*e*S	Sn	10 33 15.5	-10
BENV	Beln	5.07	264	*e*P	Pn	10 32 31.6	+0.8
BAUV	El Baul	5.70	255	*e*P	Pn	10 32 38.9	-0.4
BAUV				*e*S	Sn	10 33 42.6	-0.8

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*REN **25** 10:36:47.3±1.3, 38.°47N±0.°02×116.°59W±0.°03, h6^{km}±1^{km}, ML2.5/8, ML2.4/50(NEIC), Error ellipse: s-maj=3.6km s-min=2.9km az=58.0*
NEIC 25 10:36:46.3±1.6**, 38.°51N**±0.°03×**116.°55W**±0.°03**, h5**^{km}±2^{km}**, Error ellipse: s-maj=5.7km s-min=3.7km az=26.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
Q09A	Carvers	0.59	303		Pb	10 36 58.7	-0.5
Q09A					Sb	10 37 07.0	-0.9
Q09A				IAML		10 37 08.2	
	comp=E,243nm,0.4s						
TPH	Tonopah	0.69	231		Pg	10 36 59.6	+0.1
TPH					Sg	10 37 08.6	+0.2
MZP	Montezuma Peak	1.04	219		Pg	10 37 06.1	-0.2
MZP				IAML		10 37 23.6	
	comp=E,107nm,0.3s						
S11A	Rachel	1.07	144		Pb	10 37 07.6	+0.2
S11A				IAML		10 37 23.1	
	comp=N,105nm,0.3s						
S11A				IAML		10 37 25.0	
	comp=E,110nm,0.9s						
NV11	Mina Array Sit	1.26	267	Pg	Pg	10 37 10.2	-0.3
KVN	Kaiserville	1.32	294		Pn	10 37 11.5	-0.1
KVN				IAML		10 37 29.8	
	comp=N,37nm,0.3s						
NVAR	Mina Array Bea	1.38	267		Pn	10 37 11.6	-0.8
NV08	Mina Array Sit	1.39	266		Pn	10 37 11.7	-0.9
NV09	Mina Array Sit	1.40	267		Pn	10 37 11.9	-0.8
Q12A	Willow Creek R	1.45	68		Pb	10 37 13.8	0.0
LCH	Last Change Ra	1.54	214		Pb	10 37 15.5	+0.1
LCH				IAML		10 37 37.6	
	comp=N,36nm,0.3s						
SGV	South Grapevin	1.58	194		Pb	10 37 15.8	-0.2
TPNV	Topopah Spring	1.58	171		Pn	10 37 14.8	-0.3
TPNV				IAML		10 37 41.2	
	comp=N,35nm,0.3s						
TPNV				IAML		10 37 45.0	
	comp=N,42nm,0.6s						
PRN	Pahroc Range	1.62	132		Pn	10 37 15.4	-0.2
PRN				IAML		10 37 41.2	
	comp=E,59nm,0.3s						
PRN				IAML		10 37 48.8	
	comp=N,59nm,0.5s						
CPY	CP-1	1.63	166		Pb	10 37 16.6	-0.2
GRAC	Grapevine Rang	1.65	203		Pb	10 37 17.2	+0.1
GRAC	Grapevine Rang	1.65	203	IAML		10 37 41.2	
	comp=E,62nm,0.4s						
MLNR	Milner Canyon	1.69	238		Pb	10 37 17.6	-0.3
WCT	Wildcat Mounta	1.72	182		Pn	10 37 16.3	-0.6
WCT				IAML		10 37 42.2	
	comp=E,37nm,0.4s						
BENR	Benton	1.78	244		Pb	10 37 19.1	-0.4
SPR3	Spring Creek 3	1.80	74	Pn	Pn	10 37 17.5	-0.8
BMN	Battle Mountai	1.99	345		Pn	10 37 21.1	+0.4
AMDNV	Amargosa	2.07	174		Pn	10 37 21.6	0.0
YERR	Yerington	2.16	283		Pn	10 37 22.4	-0.7
YERR				IAML		10 37 55.1	
	comp=N,23nm,0.5s						
YERR				IAML		10 37 56.8	
	comp=E,33nm,0.5s						
SHPR	Sheep Range	2.29	151		Pn	10 37 24.6	-0.2
ELK	Elko	2.45	24		Pn	10 37 28.4	+1.3
ELK				IAML		10 38 06.2	
	comp=E,12nm,0.5s						
SZCU	Shurtz Canyon	2.88	107		Sg	10 38 18.3	-0.6
LCMT	Little Creek M	3.02	119	Pn	Pn	10 37 34.8	-0.1
LCMT					LR	10 38 21.2	
LCMT				IAML		10 38 22.6	
	comp=N,7.0nm,0.4s						
LCMT				IAML		10 38 26.7	
	comp=E,6.3nm,2.0s						
V12A	Nelson	3.09	153	Pn	Pn	10 37 35.9	0.0
V12A					LR	10 38 24.8	
V12A				IAML		10 38 25.6	
	comp=N,6.8nm,0.6s						
V12A				IAML		10 38 28.1	
	comp=E,7.8nm,0.6s						
PLTX	Planet X, Gerl	3.14	315	Pn	Pn	10 37 37.1	+0.6
TCRU	Three Creeks R	3.22	87		Lg	10 38 33.1	
KNB	Kanab	3.31	116	Pn	Pn	10 37 39.1	+0.2
KNB					LR	10 38 30.6	
KNB				IAML		10 38 51.1	
	comp=E,5.9nm,3.9s						
KNB				IAML		10 39 02.6	
	comp=N,8.8nm,4.4s						
BGU	Big Grassy Mou	3.63	47		Sg	10 38 42.3	-0.6

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*IDC **25** 10:52:10.5±0.7, 60.°40S×26.°85W, h0^{km}, mb4.5/9, mbtmp4.5/9, MS3.8/33, Error ellipse: s-maj=30.5km s-min=18.7km az=56.0*
*NEIC **25** 10:52:10.5±1.3, 60.°6S±0.°1×26.°4W±0.°3, h10^{km}±1^{km}, mb4.7/46, Error ellipse: s-maj=34.4km s-min=5.8km az=48.0*
ISC 25 10:52:12.2±0.5**, 60.°5S**±0.°1×**26.°5W**±0.°1**, h20**^{km}**, n95, σ1.^{s}08**/71**, mb4.7**/31**, MS3.7**/31**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	8.24	315	Pn	Pn	10 54 10.5	+0.1
VNA1	Neumayer--Stat	12.59	151	P	Pn	10 55 07.9	-1.9
VNA3	Neumayer Olymp	12.71	155	P	Pn	10 55 08.9	-2.6
VNA3				S	Sn	10 57 18.6	-14
SNAA	Sanae	14.59	150	P	Pn	10 55 35.0	-2.3
SNAA	Sanae	14.59	150	Pn	Pn	10 55 34.4	-2.8
	1.2nm,0.3s,baz=318,slow=16,SNR=27						
SNAA				LR	LR	10 59 57.8	
	comp=Z,321nm,21.0s,baz=290,slow=32						
SNAA	Sanae	14.59	150		Pn	10 55 34.9	-2.3
TROLL	Troll, Antarti	16.18	147	P	Pn	10 55 56.8	-1.3
PMSA	Palmer Station	17.58	240	LR	LR	11 02 13.6	
	comp=Z,177nm,18.3s,baz=133,slow=34						
BELA	Belgrano 2	17.65	186	P	Pn	10 56 16.7	+0.2
QSPA	South Pole Qui	29.73	180	P	P	10 58 19.3	+2.5
	6.2nm,0.9s,baz=313,slow=0.3,SNR=29						
QSPA				LR	LR	11 10 05.5	
	comp=Z,186nm,19.0s,baz=186,slow=36						
	6.2nm,0.9s						
QSPA	South Pole Qui	29.73	180	P	P	10 58 17.1	+0.4
TRQA	Tornquist	31.62	299	P	P	10 58 34.0	+0.6
PLCA	Paso Flores	33.37	286	P	P	10 58 48.1	-0.8
	1.0nm,0.7s,baz=121,slow=9.0,SNR=5.3						
	1.0nm,0.7s						
PLCA	Paso Flores	33.37	286	P	P	10 58 48.5	-0.3
PLTB	Pedras Altas	33.85	316	P	P	10 58 53.3	+0.3
PLTB				IAmb	IAmb	10 59 04.8	
	comp=Z,9.8nm,0.9s						
ITQB	Itaqui	36.82	313	P	P	10 59 18.8	+0.3
ITQB				IAmb	IAmb	10 59 20.4	
	comp=Z,25nm,1.0s						
BO02	Sierra Bellavi	38.26	292	P	P	10 59 30.8	0.0
BO01	Tunca	38.73	292	P	P	10 59 33.7	-1.0
LMEL	Las Melosas	38.78	293	P	P	10 59 34.3	-1.1
MT08	Bocatoma Ro	39.04	294	P	P	10 59 37.5	0.0
MT08				IAmb	IAmb	10 59 40.5	
	comp=Z,11nm,0.9s						
MT09	Talagante	39.20	293	P	P	10 59 38.2	-0.6
MT09				IAmb	IAmb	10 59 39.6	

	comp=Z,13nm,0.8s						
MT03	**Universidad Ad**	**39.22**	**293**	P	**P**	**10 59 38.2**	**-0.7**
MT03				IAmb	IAmb	10 59 41.0	
	comp=Z,34nm,1.2s						
MT01	**Popeta**	**39.25**	**292**	P	**P**	**10 59 38.0**	**-1.0**
MT05	**Renca**	**39.41**	**293**	P	**P**	**10 59 40.8**	**+0.4**
PEL	**Peldehue**	**39.59**	**293**	P	**P**	**10 59 42.2**	**+0.3**
PEL				IAmb	IAmb	10 59 43.4	
	comp=Z,37nm,1.2s						
MT02	**Curacav**	**39.70**	**293**	P	**P**	**10 59 43.0**	**+0.2**
MT02				IAmb	IAmb	10 59 43.9	
	comp=Z,11nm,0.8s						
CFA	**Coronel Fontan**	**39.80**	**297**	P	**P**	**10 59 43.1**	**-0.6**
	comp=Z,10nm,0.7s,baz=161,slow=8.0,SNR=42						
CFA				LR	LR	11 16 33.8	
	comp=Z,64nm,19.2s,baz=151,slow=37						
	comp=Z,10nm,0.7s						
VA03	**San Esteban**	**39.85**	**294**	P	**P**	**10 59 43.6**	**-0.6**
VA03				IAmb	IAmb	10 59 45.9	
	comp=Z,22nm,0.9s						
ZON	**Zonda**	**40.05**	**297**	P	**P**	**10 59 45.6**	**-0.1**
CPUP	**Villa Florida**	**40.12**	**314**	P	**P**	**10 59 45.9**	**-0.4**
	comp=Z,3.4nm,0.4s,baz=162,slow=8.4,SNR=10						
CPUP				LR	LR	11 14 26.9	
	comp=Z,82nm,21.7s,baz=163,slow=34						
	comp=Z,3.4nm,0.4s						
CPUP	**Villa Florida**	**40.12**	**314**	P	**P**	**10 59 45.9**	**-0.4**
CO02	**Combarbal**	**41.37**	**295**	P	**P**	**10 59 56.6**	**-0.1**
CO02				IAmb	IAmb	10 59 58.1	
	comp=Z,11nm,0.9s						
CO03	**El Pedregal**	**41.54**	**295**	P	**P**	**10 59 57.9**	**-0.2**
CO03				IAmb	IAmb	10 59 59.5	
	comp=Z,10.0nm,0.9s						
SUR	**Sutherland**	**41.67**	**69**	LR	LR	11 12 46.2	
	comp=Z,48nm,21.0s,baz=196,slow=30						
CO01	**Juntas del Tor**	**42.01**	**297**	P	**P**	**11 00 02.6**	**+0.4**
CO01				IAmb	IAmb	11 00 04.6	
	comp=Z,15nm,0.8s						
CO06	**Fray Jorge**	**42.11**	**294**	P	**P**	**11 00 03.0**	**+0.3**
VNDA	**Vanda**	**42.12**	**183**	P	**P**	**11 00 04.5**	**+2.2**
	comp=Z,0.9nm,0.9s,baz=124,slow=4.8,SNR=3.5						
VNDA				LR	LR	11 16 28.8	
	comp=Z,100nm,18.6s,baz=163,slow=34						
	comp=Z,0.9nm,0.9s						
GO04	**Tololo Observa**	**42.16**	**296**	P	**P**	**11 00 03.1**	**-0.3**
GO04				IAmb	IAmb	11 00 04.4	
	comp=Z,13nm,0.9s						
CO05	**La Serena**	**42.57**	**295**	P	**P**	**11 00 06.2**	**-0.2**
CO05				IAmb	IAmb	11 00 07.2	
	comp=Z,22nm,0.8s						
AC05	**El Transito**	**43.07**	**297**	P	**P**	**11 00 11.3**	**+0.7**
AC04	**Llanos de Chal**	**43.97**	**297**	P	**P**	**11 00 18.0**	**+0.3**
GO03	**Copiap**	**44.13**	**298**	P	**P**	**11 00 18.9**	**-0.2**
GO03				IAmb	IAmb	11 00 20.0	
	comp=Z,17nm,0.9s						
AC06	**Mina Casimiro**	**44.39**	**298**	P	**P**	**11 00 21.0**	**-0.1**
AC06				IAmb	IAmb	11 00 22.1	
	comp=Z,16nm,0.9s						
GO02	**Mina Guanaco**	**45.98**	**301**	P	**P**	**11 00 34.4**	**+0.3**
BOSA	**Boshof**	**46.90**	**71**	LR	LR	11 16 24.1	
	comp=Z,67nm,19.7s,baz=192,slow=31						
BDFB	**Brasilia**	**47.44**	**331**	P	**P**	**11 00 45.2**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=134,slow=13,SNR=2.2						
BDFB				LR	LR	11 18 41.7	
	comp=Z,62nm,21.3s,baz=117,slow=34						
	comp=Z,1.2nm,0.3s						
LVC	**Limon Verde**	**47.95**	**303**	P	**P**	**11 00 49.9**	**+0.4**
	comp=Z,8.4nm,0.8s,baz=168,slow=5.5,SNR=10						
LVC				LR	LR	11 21 41.7	
	comp=Z,45nm,20.5s,baz=165,slow=37						
	comp=Z,8.4nm,0.8s						
LVC	**Limon Verde**	**47.95**	**303**	P	**P**	**11 00 50.2**	**+0.6**
PB07	**IPOC Station P**	**49.14**	**302**	P	**P**	**11 00 58.9**	**+0.3**
PB01	**IPOC Station P**	**49.58**	**303**	P	**P**	**11 01 02.4**	**+0.6**
LBTB	**Lobatse**	**50.12**	**69**	LR	LR	11 18 45.7	
	comp=Z,73nm,18.4s,baz=206,slow=32						
GO01	**Chusmiza**	**50.69**	**304**	P	**P**	**11 01 10.7**	**0.0**
GO01				IAmb	IAmb	11 01 12.1	
	comp=Z,11nm,0.8s						
PTLB	**Pontes e Lacer**	**50.81**	**318**	P	**P**	**11 01 11.6**	**+0.6**
PTLB				IAmb	IAmb	11 01 12.3	
	comp=Z,6.2nm,0.7s						
SIV	**San Ignacio**	**50.96**	**315**	LR	LR	11 21 04.5	
	comp=Z,61nm,21.7s,baz=122,slow=34						
MNMC	**Minye Minye**	**51.34**	**304**	P	**P**	**11 01 16.0**	**+0.7**
TSUM	**Tsumeb**	**51.69**	**57**	LR	LR	11 18 28.1	
	comp=Z,114nm,20.1s,baz=156,slow=30						
H10S2	**ASCENSION HYDR**	**52.20**	**15**	T	T	11 57 59.8	
	baz=187,slow=74,SNR=5.9						
H10S3	**ASCENSION HYDR**	**52.21**	**15**	T	T	11 58 00.2	
	baz=33,slow=74,SNR=8.3						
LPAZ	**La Paz**	**53.31**	**307**	P	**P**	**11 01 30.9**	**+0.5**
	comp=Z,3.9nm,0.6s,baz=135,slow=3.2,SNR=12						
LPAZ				LR	LR	11 25 48.6	
	comp=Z,49nm,19.9s,baz=124,slow=38						
	comp=Z,3.9nm,0.6s						
LPAZ	**La Paz**	**53.31**	**307**	P	**P**	**11 01 29.8**	**-0.6**
LPAZ				IAmb	IAmb	11 01 31.3	
	comp=Z,5.6nm,0.8s						
SAML	**Samuel**	**58.24**	**316**	P	**P**	**11 02 05.0**	**0.0**
SAML				IAmb	IAmb	11 02 05.5	
	comp=Z,6.3nm,0.8s						
ETMB	**Extrema**	**58.51**	**312**	P	**P**	**11 02 06.7**	**-0.2**
LSZ	**Lusaka**	**59.77**	**66**	LR	LR	11 24 14.5	
	comp=Z,122nm,20.3s,baz=196,slow=32						
ATAH	**Atahualpa**	**65.78**	**301**	LR	LR	11 30 44.0	
	comp=Z,34nm,21.6s,baz=141,slow=35						
OPO	**Ambohidratompo**	**65.99**	**85**	LR	LR	11 27 56.8	
	comp=Z,35nm,18.2s,baz=287,slow=32						
BOAV	**Boa Vista**	**68.06**	**323**	P	**P**	**11 03 09.4**	**-0.6**
BOAV				IAmb	IAmb	11 03 09.9	
	comp=Z,4.5nm,0.9s						
MDP	**Montagnes des**	**68.55**	**332**	LR	LR	11 30 19.6	
	comp=Z,72nm,21.2s,baz=146,slow=34						
DBIC	**Dimbokro**	**69.11**	**23**	LR	LR	11 25 49.6	
	comp=Z,76nm,21.6s,baz=171,slow=29						
OTAV	**Otavalo**	**72.46**	**304**	P	**P**	**11 03 36.8**	**-0.8**
OTAV				IAmb	IAmb	11 03 39.4	
	comp=Z,9.4nm,1.4s						
MBAR	**Mbarara**	**73.93**	**61**	LR	LR	11 32 58.5	
	comp=Z,102nm,19.7s,baz=189,slow=33						
ROSC	**El Rosal**	**75.03**	**310**	LR	LR	11 41 50.9	
	comp=Z,32nm,18.0s,baz=114,slow=40						
BBTS	**Babate**	**75.34**	**10**	LR	LR	11 30 12.6	
	comp=Z,118nm,19.4s,baz=234,slow=30						
TOA0	**Torodi Ar. Sit**	**76.80**	**28**	P	**P**	**11 04 02.0**	**-0.1**
TOA0				IAmb	IAmb	11 04 05.2	
	comp=Z,8.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**76.80**	**28**	P	**P**	**11 04 04.0**	**+1.9**
	comp=Z,15nm,0.5s,baz=199,slow=6.4,SNR=4.7						
TORD				LR	LR	11 31 15.6	
	comp=Z,42nm,18.4s,baz=221,slow=30						
	comp=Z,15nm,0.5s						
SDV	**Santo Domingo**	**77.43**	**315**	LR	LR	11 40 14.4	
	comp=Z,41nm,18.2s,baz=172,slow=37						
SDV	**Santo Domingo**	**77.43**	**315**	P	**P**	**11 04 06.0**	**+0.1**
SDV				IAmb	IAmb	11 04 06.2	
	comp=Z,5.3nm,0.8s						
JTS	**Las Juntas de**	**84.23**	**303**	LR	LR	11 42 49.8	
	comp=Z,14nm,20.6s,baz=120,slow=36						
SJG	**San Juan**	**84.61**	**322**	LR	LR	11 41 08.0	
	comp=Z,30nm,21.7s,baz=145,slow=35						
STKA	**Stephens Creek**	**87.43**	**170**	LR	LR	11 41 42.1	
	comp=Z,88nm,19.2s,baz=206,slow=34						
ASAR	**Alice Springs**	**94.62**	**162**	LR	LR	11 46 40.9	
	comp=Z,124nm,18.2s,baz=200,slow=34						
MDT	**Midelt**	**94.71**	**18**	LR	LR	11 42 07.4	
	comp=Z,62nm,18.3s,baz=358,slow=32						
DZM	**Mont Dzumac**	**97.05**	**192**	LR	LR	11 46 28.4	
	comp=Z,83nm,18.5s,baz=216,slow=34						
WRA	**Warramunga Arr**	**98.34**	**162**	LR	LR	11 48 20.2	
	comp=Z,105nm,18.6s,baz=181,slow=34						
CTA	**Charters Tower**	**99.48**	**173**	LR	LR	11 49 51.0	
	comp=Z,77nm,19.5s,baz=224,slow=35						
MSVF	**Nonsavu**	**99.55**	**204**	LR	LR	11 48 10.4	
	comp=Z,51nm,19.9s,baz=66,slow=34						
FRB	**Frobisher Bay**	**127.94**	**338**	PKP	**PKiKP**	**11 11 15.6**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=169,slow=3.0,SNR=3.9						
FINES	**FINESS Array B**	**128.14**	**29**	PKP	**PKiKP**	**11 11 16.1**	**+0.4**
	comp=Z,2.2nm,0.8s,baz=182,slow=5.5,SNR=4.3						
PZH	**PanZhiHua**	**131.31**	**110**	PKP	**PKPdf**	**11 11 22.0**	**-0.5**
ARCES	**ARCESS Array B**	**134.94**	**23**	PKP	**PKiKP**	**11 11 29.7**	**+0.4**
	comp=Z,2.2nm,0.8s,baz=224,slow=2.5,SNR=1.5						
KURBB	**Kurchatov Arra**	**138.74**	**69**	PKP	**PKiKP**	**11 11 37.5**	**0.0**
	comp=Z,0.2nm,0.3s,baz=228,slow=3.8,SNR=1.9						
YKA	**Yellowknife Ar**	**139.64**	**314**	PKP	**PKiKP**	**11 11 37.9**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=131,slow=2.3,SNR=18						
YKA				PP	**PP**	**11 14 29.5**	**-3.7**
	comp=Z,0.8nm,1.0s,baz=131,slow=5.7,SNR=7.9						
YKA				SKPbc	**SKPbc**	**11 15 11.6**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=130,slow=2.3,SNR=8.0						
LZH	**Lanzhou**	**140.27**	**105**	*e*PKP	**PKiKP**	**11 11 43.3**	**+1.8**
LZH				sPKP		11 11 57.3	
INK	**Inuvik**	**149.38**	**316**	PKPbc	**PKiKP**	**11 11 58.5**	**-0.4**
	comp=Z,4.3nm,0.8s,baz=72,slow=4.3,SNR=20						
SONM	**Songino Array**	**150.35**	**94**	PKPbc	**PKiKP**	**11 12 03.0**	**+1.2**
	comp=Z,1.6nm,1.0s,baz=219,slow=3.0,SNR=7.7						
ILAR	**Eielson Array**	**153.18**	**305**	PKPbc	**PKiKP**	**11 12 08.0**	**+1.1**
	comp=Z,1.3nm,0.8s,baz=153,slow=2.8,SNR=14						

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*IDC **25** 11:05:33.7±1.1, 36°.30N×97°.63W, h0^{km}, mbtmp3.4/4, ML3.7/3, Error ellipse: s-maj=13.8km s-min=11.4km az=133.0*

*TUL **25** 11:05:34.4±0.7, 36°.28N±0°.01×97°.56W±0°.01, h7^{km}±7^{km}, ML3.6, mb_Lg3.4/114(NEIC), ML3.6/64(NEIC), Error ellipse: s-maj=1.6km s-min=1.4km az=147.0*

*NEIC **25** 11:05:34.5±0.8, 36°.27N±0°.01×97°.57W±0°.01, h5^{km}±7^{km}, Error ellipse: s-maj=1.7km s-min=1.5km az=150.0*

*ANF **25** 11:05:35.8±1.8, 36°.31N×97°.55W, h16^{km}±13^{km}, ML4.0/7, Error ellipse: s-maj=4.7km s-min=3.7km az=160.0*

ISC 25 11:05:34.2±1.1**, 36°.26N**±0°.02×**97°.58W**±0°.02**, h9**^{km}±9^{km}**, n138,** σ1^{s}.13/90**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.41**	**307**	Pg	**Pg**	**11 05 42.6**	**+0.3**
CROK				Sg	**Sg**	**11 05 48.4**	**+0.7**
CROK				IAML		11 05 50.9	
	comp=E,7μm,0.3s						
OK029	**Liberty Lake**	**0.47**	**168**	Pg	**Pg**	**11 05 44.0**	**+0.6**
OK029				Sg	**Sg**	**11 05 50.6**	**+1.0**
OK029				IAML		11 05 51.0	
	comp=E,6μm,0.5s						
OK048	**Pawnee Station**	**0.53**	**73**	Pg	**Pg**	**11 05 44.6**	**+0.1**
OK033	**Mehan**	**0.56**	**112**	Pg	**Pg**	**11 05 45.4**	**+0.4**
GC02	**Grant County #**	**0.63**	**339**	Pg	**Pg**	**11 05 46.5**	**0.0**
OK052	**Battle Ridge R**	**0.68**	**113**		**Pg**	**11 05 47.6**	**+0.3**
QUOK	**Quay**	**0.71**	**97**		**Pg**	**11 05 47.8**	**-0.1**
QUOK				IAML		11 06 04.2	
	comp=E,2μm,0.2s						
OK030	**Cody Creek RV**	**0.72**	**117**		**Pg**	**11 05 48.2**	**+0.1**
OK030				IAML		11 06 00.6	
	comp=E,2μm,0.5s						
OK032	**Salt Plains WL**	**0.75**	**317**		**Pg**	**11 05 48.5**	**-0.1**
OK032				IAML		11 05 58.9	
	comp=E,3μm,0.2s						
OK032				IAML		11 06 01.2	
	comp=E,3μm,0.3s						
KAN13	**South Haven SW**	**0.76**	**6**		**Pg**	**11 05 48.6**	**-0.2**
KAN13				IAML		11 06 05.4	
	comp=E,2μm,0.3s						
KAN13				IAML		11 06 10.8	
	comp=N,2μm,0.2s						
KAN14	**Manchester OK**	**0.76**	**336**		**Pg**	**11 05 48.9**	**0.0**
KAN14				IAML		11 06 00.0	
	comp=E,3μm,0.4s						
KAN14				IAML		11 06 04.4	
	comp=N,2μm,0.3s						
KAN17	**Caldwell West**	**0.80**	**349**		**Pg**	**11 05 49.5**	**-0.1**
KAN17				IAML		11 06 04.3	
	comp=E,3μm,0.3s						
KAN17				IAML		11 06 06.1	
	comp=N,3μm,0.3s						
OKCSW	**OKLAHOMA CITY**	**0.86**	**173**		**Pg**	**11 05 51.1**	**+0.3**
KAN09	**Caldwell North**	**0.88**	**358**		**Pg**	**11 05 50.9**	**-0.2**
KAN05	**Bluff City Nor**	**0.88**	**344**		**Pg**	**11 05 51.2**	**+0.1**
KAN05				IAML		11 06 05.9	
	comp=N,3μm,0.2s						
KAN01	**Argonia South**	**0.90**	**351**		**Pg**	**11 05 51.6**	**-0.1**
KAN01				IAML		11 06 03.7	
	comp=E,2μm,0.4s						
DEOK	**Depew**	**0.97**	**115**	Pg	**Pg**	**11 05 52.6**	**-0.2**
DEOK				IAML		11 06 08.2	
	comp=N,1μm,0.4s						
OK038	**West end E0370**	**0.97**	**283**	Pg	**Pg**	**11 05 52.7**	**-0.2**
KS20	**Mayfield South**	**0.97**	**1**		**Pg**	**11 05 52.6**	**-0.2**
KS20				IAML		11 06 06.5	
	comp=N,2μm,0.2s						
KS20				IAML		11 06 10.7	
	comp=N,2μm,0.3s						
FNO	**Franklin**	**1.01**	**172**	Pg	**Pg**	**11 05 53.5**	**-0.1**
FNO				IAML		11 06 08.0	
	comp=E,2μm,0.2s						
KAN06	**Argonia West S**	**1.01**	**347**		**Pg**	**11 05 53.3**	**-0.4**
KAN06				IAML		11 06 07.5	
	comp=E,2μm,0.5s						
KAN06				IAML		11 06 08.4	
	comp=N,1μm,0.2s						
KAN08	**Anthony NE Sta**	**1.02**	**342**		**Pg**	**11 05 53.7**	**0.0**
KAN08				IAML		11 06 07.4	
	comp=E,2μm,0.4s						
KAN08				IAML		11 06 09.5	
	comp=N,1μm,0.5s						
OK035	**E0210 Rd and N**	**1.02**	**296**		**Pg**	**11 05 53.5**	**-0.3**
OK035				IAML		11 06 11.6	
	comp=N,2μm,0.2s						
KS21	**Milan North St**	**1.03**	**356**	IAML		11 06 08.3	
	comp=N,2μm,0.2s						
KS21				IAML		11 06 09.4	
	comp=N,2μm,0.2s						
KS21	**Milan North St**	**1.03**	**356**		**Pg**	**11 05 53.8**	**-0.2**
T35A	**Sooner Cattle**	**1.08**	**52**	Pg	**Pg**	**11 05 54.4**	**-0.6**
T35A				IAML		11 06 13.7	
	comp=N,1μm,0.5s						
T35A				IAML		11 06 13.7	
	comp=E,2μm,0.5s						
T35B	**Sooner Cattle**	**1.08**	**52**	P	**Pg**	**11 05 54.4**	**-0.5**
	baz=233,SNR=128						
T35B				S	**Sg**	**11 06 08.5**	**-0.5**
	baz=233						
KAN12	**Harper NE Stat**	**1.09**	**342**		**Pg**	**11 05 55.0**	**-0.1**
CSTR	**Hydro, Custer**	**1.09**	**236**		**Pg**	**11 05 55.2**	**0.0**
NOKA	**Waynoka**	**1.16**	**289**	Pg	**Pg**	**11 05 56.0**	**-0.4**
NOKA				IAML		11 06 15.7	
	comp=E,2μm,0.3s						
U32A	**Winter Ranch,**	**1.16**	**276**		**Pg**	**11 05 56.0**	**-0.5**
U32A				IAML		11 06 12.8	
	comp=E,918nm,0.2s						
U32A	**Winter Ranch,**	**1.16**	**276**	P	**Pg**	**11 05 56.0**	**-0.5**
	baz=95						
W35A	**Tecumseh**	**1.24**	**153**	Pn	**Pg**	**11 05 57.3**	**-0.8**
W35A				IAML		11 06 22.1	
	comp=N,2μm,0.4s						
TUL1	**Leonard**	**1.49**	**103**	Pn	**Pn**	**11 06 01.2**	**0.0**
TUL1				IAmb_Lg		11 06 23.7	
	comp=Z,203nm,0.8s						
TUL1	**Leonard**	**1.49**	**103**	P	**Pn**	**11 06 01.1**	**0.0**
	baz=285						
TUL1				S	**Sn**	**11 06 21.5**	**+0.8**
	baz=285						
TUL1	**Leonard**	**1.49**	**103**	P	**Pn**	**11 06 01.0**	**-0.1**
	baz=285,SNR=383						
TUL1				S	**Sn**	**11 06 21.5**	**+0.8**
	baz=285						
X34A	**Smith Ranch, M**	**1.67**	**187**		**Pb**	**11 06 05.5**	**+0.3**
X34A				IAmb_Lg		11 06 28.5	
	comp=Z,169nm,0.8s						
WMOK	**Wichita Mounta**	**1.81**	**213**		**Pn**	**11 06 06.4**	**+0.8**
WMOK				IAmb_Lg		11 06 35.0	
	comp=Z,157nm,0.8s						
WMOK	**Wichita Mounta**	**1.81**	**213**	P	**Pn**	**11 06 06.5**	**+0.9**
	baz=32						
WMOK				S	**Sb**	**11 06 31.3**	**+0.9**
	baz=32						
WMOK	**Wichita Mounta**	**1.81**	**213**	P	**Pn**	**11 06 06.5**	**+0.9**
	baz=32,SNR=284						
WMOK				S	**Sb**	**11 06 31.3**	**+0.9**
	baz=32						
RLO	**Rose Lookout**	**2.07**	**92**		**Pn**	**11 06 10.1**	**+0.9**
RLO				IAmb_Lg		11 06 41.9	
	comp=Z,231nm,0.8s						
LOOK	**Love County**	**2.29**	**172**	Pn	**Pn**	**11 06 13.6**	**+1.5**
LOOK				IAmb_Lg		11 06 47.5	
	comp=Z,118nm,0.8s						
R32A	**Long Quarter,**	**2.34**	**338**		**Pn**	**11 06 14.9**	**+1.9**
X37A	**Clayton**	**2.45**	**132**	Pn	**Pn**	**11 06 15.8**	**+1.3**
X37A				IAmb_Lg		11 06 55.2	
	comp=Z,202nm,0.8s						
X37A	**Clayton**	**2.45**	**132**	P	**Pn**	**11 06 15.8**	**+1.3**
	baz=314,SNR=91						
U38A	**Gravette**	**2.58**	**85**	Pn	**Pn**	**11 06 17.3**	**+1.1**
U38A				IAmb_Lg		11 06 59.2	
	comp=Z,122nm,0.9s						
WTFS	**Witchita Falls**	**2.59**	**197**		**Pn**	**11 06 17.9**	**+1.5**
WTFS				IAmb_Lg		11 07 04.5	
	comp=Z,41nm,0.7s						
Z35A	**Perchaven, San**	**2.93**	**175**		**Pn**	**11 06 22.5**	**+1.5**
Z35A	**Perchaven, San**	**2.93**	**175**	P	**Pn**	**11 06 22.6**	**+1.6**
	baz=355,SNR=26						
HHAR	**Hobbs**	**2.94**	**89**		**Pn**	**11 06 22.4**	**+1.3**
KSU1	**Kansas State U**	**2.94**	**15**		**Pn**	**11 06 21.9**	**+0.8**
KSU1	**Kansas State U**	**2.94**	**15**	P	**Pn**	**11 06 22.3**	**+1.2**
	baz=195						
KSU1	**Kansas State U**	**2.94**	**15**	P	**Pn**	**11 06 22.1**	**+1.0**
	baz=195,SNR=34						
CBKS	**Cedar Bluff**	**3.08**	**327**	IAmb_Lg		11 07 14.4	
	comp=Z,94nm,0.7s						
FW06	**Azle**	**3.28**	**180**	IAmb_Lg		11 07 25.9	
	comp=Z,37nm,0.8s						
FW07	**Weatherford**	**3.55**	**183**	IAmb_Lg		11 07 31.3	
	comp=Z,42nm,0.8s						
AMTX	**Amarillo**	**3.62**	**249**	IAmb_Lg		11 07 30.1	
	comp=Z,128nm,0.8s						
AMTX	**Amarillo**	**3.62**	**249**	Sb	**Sg**	**11 07 27.2**	**-3.3**
	baz=66						
Z38A	**Mt. Pleasant**	**3.67**	**144**	P	**Pn**	**11 06 32.5**	**+1.3**
	baz=326						
MIAR	**Mount Ida**	**3.69**	**116**	IAmb_Lg		11 07 36.7	
	comp=Z,84nm,0.8s						
MIAR	**Mount Ida**	**3.69**	**116**	P	**Pn**	**11 06 32.8**	**+1.4**
	baz=299						
MIAR	**Mount Ida**	**3.69**	**116**	P	**Pn**	**11 06 32.6**	**+1.2**
	baz=299,SNR=130						
S39A	**Bolivar**	**3.69**	**66**	IAmb_Lg		11 07 36.3	
	comp=Z,168nm,0.9s						
S39A	**Bolivar**	**3.69**	**66**	P	**Pn**	**11 06 32.3**	**+0.8**
	baz=249,SNR=28						
FW16	**Waxahatchie**	**3.81**	**171**	IAmb_Lg		11 07 38.0	
	comp=Z,72nm,0.7s						
U40A	**Yellville**	**3.81**	**87**	P	**Pn**	**11 06 34.7**	**+1.5**
	baz=270,SNR=19						
U40A				P	**Pn**	**11 06 34.7**	**+1.5**
	baz=270,SNR=19						
FW14	**Alvarado**	**3.86**	**175**	IAmb_Lg		11 07 44.6	
	comp=Z,64nm,0.9s						
FW13	**Cleburne**	**3.90**	**178**	IAmb_Lg		11 07 38.3	
	comp=Z,27nm,0.7s						
X40A	**Basin Creek Fa**	**4.26**	**113**	P	**Pn**	**11 06 41.1**	**+1.9**
	baz=296,SNR=9.1						
X40A				P	**Pn**	**11 06 41.1**	**+1.9**
	baz=296,SNR=9.1						
WHTX	**Lake Whitney,**	**4.26**	**179**	Sb	**Sg**	**11 07 47.2**	**-3.8**
	baz=359						
WHTX	**Lake Whitney,**	**4.26**	**179**	P	**Pn**	**11 06 40.1**	**+0.8**
	baz=359						
WHAR	**Wooly Hollow**	**4.41**	**101**	IAmb_Lg		11 08 03.0	
	comp=Z,65nm,0.9s						
WLAR	**White Oak Lake**	**4.47**	**124**	IAmb_Lg		11 07 59.5	
	comp=Z,89nm,1.0s						
237A	**Washetta, Mont**	**4.49**	**160**	IAmb_Lg		11 07 54.4	
	comp=Z,53nm,0.8s						
237A	**Washetta, Mont**	**4.49**	**160**	P	**Pn**	**11 06 42.9**	**+0.4**
	baz=342,SNR=7.0						
237A				S	**Sn**	**11 07 34.7**	**-0.2**
	baz=342						
UALR	**University of**	**4.52**	**108**	IAmb_Lg		11 08 00.3	
	comp=Z,57nm,0.8s						
POST	**Post**	**4.54**	**227**	IAmb_Lg		11 08 01.1	
	comp=Z,71nm,0.8s						
P38A	**Dawn**	**4.64**	**42**	IAmb_Lg		11 08 09.1	
	comp=Z,88nm,0.8s						
R40A	**Maddies Statio**	**4.69**	**63**	P	**Pn**	**11 06 45.8**	**+0.6**
	baz=246,SNR=27						
MSTX	**Muleshoe**	**4.83**	**243**	IAmb_Lg		11 08 16.1	
	comp=Z,48nm,0.9s						
KSCO	**Kaye Shedlock’**	**4.86**	**306**	IAmb_Lg		11 08 11.0	
	comp=Z,49nm,0.7s						
KSCO	**Kaye Shedlock’**	**4.86**	**306**	P	**Pn**	**11 06 48.4**	**+0.8**
	baz=123						
NATX	**Nacogdoches**	**5.10**	**151**	IAmb_Lg		11 08 26.9	
	comp=Z,52nm,0.8s						
BGNE	**Belgrade**	**5.16**	**355**	IAmb_Lg		11 08 25.3	
	comp=Z,111nm,0.7s						
BGNE	**Belgrade**	**5.16**	**355**	P	**Pn**	**11 06 51.7**	**+0.1**
	baz=175						
BGNE	**Belgrade**	**5.16**	**355**	P	**Pn**	**11 06 51.5**	**-0.2**
	baz=175,SNR=9.2						
LCAR	**Lake Charles**	**5.20**	**90**	IAmb_Lg		11 08 20.8	
	comp=Z,57nm,0.8s						
T42A	**Van Buren**	**5.27**	**80**	IAmb_Lg		11 08 28.8	
	comp=Z,77nm,0.8s						
T42A	**Van Buren**	**5.27**	**80**	P	**Pn**	**11 06 53.4**	**+0.3**
	baz=264,SNR=5.9						
CCAR	**Cane Creek**	**5.30**	**114**	IAmb_Lg		11 08 32.6	
	comp=Z,69nm,0.9s						
CCM	**Cathedral Cave**	**5.36**	**69**	IAmb_Lg		11 08 26.2	
	comp=Z,108nm,0.8s						
CCM	**Cathedral Cave**	**5.36**	**69**	P	**Pn**	**11 06 55.2**	**+0.7**
	baz=252						
435B	**Jarrell**	**5.46**	**180**	IAmb_Lg		11 08 38.9	
	comp=Z,56nm,0.8s						
435B	**Jarrell**	**5.46**	**180**	P	**Pn**	**11 06 56.9**	**+1.1**
	baz=0.2						
T25A	**Trinidad**	**5.56**	**281**	IAmb_Lg		11 08 44.7	
	comp=Z,47nm,0.7s						
T25A	**Trinidad**	**5.56**	**281**	P	**Pn**	**11 06 58.1**	**+0.7**
	baz=97						
HBAR	**Harrisburg**	**5.66**	**95**	IAmb_Lg		11 08 47.5	
	comp=Z,121nm,0.7s						
N38A	**Joes South For**	**5.66**	**36**	P	**Pn**	**11 06 59.2**	**+0.7**
	baz=218,SNR=6.5						
L34A	**Svendsen Farm,**	**5.77**	**9**	IAmb_Lg		11 08 45.3	
	comp=Z,92nm,0.7s						
ODSA	**Odessa**	**5.83**	**226**	IAmb_Lg		11 08 52.5	
	comp=Z,27nm,0.9s						
FVM	**French Village**	**5.96**	**71**	S	**Sn**	**11 08 08.9**	**-2.3**
	baz=256						
JCT	**Junction City**	**6.06**	**199**	IAmb_Lg		11 08 55.6	
	comp=Z,68nm,0.8s						
JCT	**Junction City**	**6.06**	**199**	P	**Pn**	**11 07 04.2**	**+0.1**
	baz=17,SNR=10						
GNAR	**Gosnell**	**6.12**	**91**	IAmb_Lg		11 08 54.3	
	comp=Z,82nm,0.9s						
143A	**Socs Landing,**	**6.21**	**123**	IAmb_Lg		11 08 59.5	
	comp=Z,51nm,0.8s						
PARMO	**Parma**	**6.32**	**84**	IAmb_Lg		11 09 05.4	
	comp=Z,102nm,0.9s						
PVMO	**Portageville**	**6.36**	**86**	IAmb_Lg		11 09 10.1	
	comp=Z,90nm,0.8s						
K31A	**O'Neill**	**6.42**	**352**	P	**Pn**	**11 07 09.4**	**+0.4**
	baz=171						
CGM3	**Cape Girardeau**	**6.44**	**78**	IAmb_Lg		11 09 00.9	
	comp=Z,78nm,0.7s						
SDCO	**Great Sand Dun**	**6.51**	**286**	P	**Pn**	**11 07 12.4**	**+1.8**
	baz=101						
SCIA	**State Center**	**6.58**	**30**	IAmb_Lg		11 09 05.4	
	comp=Z,83nm,0.7s						
Q24A	**Divide**	**6.59**	**296**	IAmb_Lg		11 09 11.5	
	comp=Z,50nm,0.9s						
GLAT	**Glass**	**6.70**	**87**	IAmb_Lg		11 09 17.4	
	comp=Z,105nm,0.9s						
BRIGG	**Briggsdale**	**6.83**	**311**	IAmb_Lg		11 09 14.3	
	comp=Z,81nm,0.9s						
OXF	**Oxford**	**6.89**	**102**	IAmb_Lg		11 09 28.9	
	comp=Z,27nm,0.8s						
W45A	**Hickory Valley**	**6.91**	**97**	IAmb_Lg		11 09 26.8	
	comp=Z,54nm,0.8s						
Y45A	**Yeager Farm, C**	**7.00**	**108**	IAmb_Lg		11 09 22.2	
	comp=Z,33nm,0.8s						
UTMT	**University of**	**7.03**	**87**	IAmb_Lg		11 09 22.0	
	comp=Z,92nm,0.9s						
ANMO	**Albuquerque**	**7.35**	**262**	Pn	**Pn**	**11 07 26.3**	**+4.3**
	comp=Z,0.1nm,0.3s,baz=51,slow=21,SNR=1.4						
ANMO				Pg	Pb	11 07 47.6	+5.5
	comp=Z,0.6nm,0.3s,baz=164,slow=16,SNR=12						
ANMO				Lg	Lg	11 09 23.5	
	comp=Z,2.8nm,0.3s,baz=105,slow=8.4,SNR=12						
ECSD	**EROS Data Cent**	**7.50**	**5**	P	**Pn**	**11 07 22.9**	**-0.9**
	baz=186						
L40A	**Anamosa**	**7.61**	**38**	IAmb_Lg		11 09 40.3	
	comp=Z,41nm,0.8s						
146A	**Union**	**7.91**	**115**	IAmb_Lg		11 10 02.7	
	comp=Z,27nm,0.9s						
PHWY	**Pilot Hill**	**7.95**	**312**	IAmb_Lg		11 09 51.8	
	comp=Z,36nm,0.9s						
Y22D	**IRIS PASSCAL I**	**7.96**	**257**	IAmb_Lg		11 10 00.5	
	comp=Z,74nm,0.9s						
N23A	**Red Feather La**	**8.02**	**308**	IAmb_Lg		11 10 01.7	

	comp=Z,58nm,0.8s						
SUSD	Miller	8.24	353	IAmb_Lg		11 09 58.7	
	comp=Z,42nm,0.8s						
I37A	Lemond, Waseca	8.38	21	IAmb_Lg		11 10 08.6	
	comp=Z,43nm,1.0s						
TXAR	Lajitas Array	8.60	218	Pn	Pn	11 07 38.5	-0.5
	comp=Z,0.2nm,0.3s,baz=46,slow=11,SNR=15						
TXAR				Pg	Pg	11 08 10.3	-8.6
	comp=Z,0.8nm,0.3s,baz=48,slow=13,SNR=8.3						
TXAR				Lg	Lg	11 09 58.0	
	comp=Z,0.8nm,0.3s,baz=43,slow=40,SNR=1.9						
	comp=Z,0.3nm,0.4s						
JFWS	Jewell Farm	8.72	38	IAmb_Lg		11 10 08.9	
	comp=Z,52nm,0.7s						
RWWY	Rawlins	9.25	309	IAmb_Lg		11 10 52.8	
	comp=Z,26nm,0.8s						
RSSD	Black Hills	9.28	330	IAmb_Lg		11 10 37.7	
	comp=Z,20nm,0.8s						
I40A	Norwalk	9.30	33	IAmb_Lg		11 10 40.3	
	comp=Z,43nm,1.1s						
K43A	Burlington	9.61	45	IAmb_Lg		11 10 44.2	
	comp=Z,53nm,0.8s						
F33A	5 Mile Ranch,	9.62	5	IAmb_Lg		11 10 55.0	
	comp=Z,17nm,1.1s						
TKL	Tuckaleechee C	11.20	89	Pn	Pn	11 08 15.5	+0.9
	comp=Z,0.1nm,0.3s,baz=272,slow=16,SNR=1.4						
TKL				Lg	Lg	11 11 19.2	
	comp=Z,0.9nm,0.3s,baz=295,slow=17,SNR=2.7						
	comp=Z,1.8nm,0.7s						
PDAR	Pinedale Array	11.30	309	Pn	Pn	11 08 15.4	-0.7
	comp=Z,0.1nm,0.3s,baz=125,slow=17,SNR=2.8						
PDAR				Pg		11 08 58.9	
	comp=Z,0.2nm,0.3s,baz=116,slow=16,SNR=2.6						
PDAR				Lg	Lg	11 11 26.8	
	comp=Z,0.3nm,0.3s,baz=111,slow=30,SNR=3.5						
	comp=Z,0.2nm,0.3s						
ULM	Lac du Bonnet	14.04	5	Pn	Pn	11 08 48.0	-5.1
	comp=Z,0.9nm,0.4s,baz=186,slow=12,SNR=1.5						
ULM				Sn	Sn	11 11 17.8	-11
	comp=Z,0.3nm,0.3s,baz=154,slow=9.0,SNR=1.8						
ULM				Lg	Lg	11 12 47.5	
	comp=Z,0.1nm,0.3s,baz=253,slow=18,SNR=1.6						
SADO	Sadowa	16.37	53	Lg	Lg	11 13 58.6	
	comp=Z,0.2nm,0.3s,baz=162,slow=22,SNR=2.6						

*MOS **25** 11:11:48.3±1.0, 36°.71N×71°.42E, h192^{km}, mb4.2/22, Error ellipse: s-maj=7.4km s-min=3.9km az=84.8*

*BJI **25** 11:11:49.5±0.0, 36°.86N×71°.40E, h186^{km}, mb4.6/10, mB4.6/7*

*NEIC **25** 11:11:49.6±1.7, 36°.75N±0°.02×71°.33E±0°.10, h186^{km}±7^{km}, mb4.4/11, Error ellipse: s-maj=11.4km s-min=2.4km az=81.0*

*IDC **25** 11:11:49.6±0.7, 36°.63N×71°.41E, h195^{km}±5^{km}, mb3.6/23, mbtmp4.3/27, MS3.7/2, Error ellipse: s-maj=12.6km s-min=9.0km az=35.0*

*NNC **25** 11:11:51.2±14.0, 36°.97N×71°.05E, h179^{km}±159^{km}, mb4.0, mpv5.1, Error ellipse: s-maj=140.1km s-min=65.9km az=18.0*

*SOME **25** 11:11:57.3, 37°.53N×71°.70E, h5^{km}*

ISC 25 11:11:48.8±0.4, **36°.66N**±0°.04×**71°.37E**±0°.04, **h186**^{km}±4^{km}, **h186**^{km}**:pP-P, n192,** σ1^{s}93/228, **mb4.0**/42, **12C-16D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	Garm	2.48	341	Pn	Pn	11 12 32.1	+0.4
CHGR	Chuyangaron	2.66	319	Pn	Pn	11 12 33.7	0.0
CHGR	Chuyangaron	2.66	319	PN	Pn	11 12 33.7	0.0
KBL	Kabul	2.84	223	Pn	Pn	11 12 36.7	+0.7
KBL	Kabul	2.84	223	PN	Pn	11 12 36.7	+0.7
DRK	Karamyk	2.84	7		Pn	11 12 32.1	-3.9
CEP	Cherat	2.86	171	⇓P	Pn	11 12 38.6	+2.4
CEP				S	Sn	11 13 14.0	+0.8
CHCP	Chirah Chowk	3.37	152	P	Pn	11 12 44.1	+1.8
NIL	Nilore	3.37	152	Pn	Pn	11 12 44.2	+1.9
NIL	Nilore	3.37	152	PN	Pn	11 12 44.2	+1.9
BTK	Batken	3.42	353		Pn	11 12 44.2	+1.3
BTK	Batken	3.42	353	PN	Pn	11 12 44.2	+1.3
THW	Thamme Wali	3.87	175	⇓P	Pn	11 12 49.4	+1.0
KSH	Kashi	4.62	50	P	Pn	11 12 54.3	-3.7
KSH				S	Sn	11 13 42.8	-10
KSH				smax	smax		
	comp=N,800nm,0.5s						
KSH				smax	smax		
	comp=E,440nm,0.4s						
KSH				LR	LR		
	comp=N,210nm,5.9s						
KSH				LR	LR		
	comp=E,310nm,5.7s						
KSH				LR	LR		
	comp=Z,210nm,6.6s						
SARP	Sargodha	4.84	167	P	Pn	11 13 01.1	+0.2
SARP	Sargodha	4.84	167	P	Pn	11 13 01.2	+0.3
TAS	Tashkent	4.94	342	Pn	Pn	11 13 02.2	+0.3
TAS	Tashkent	4.94	342	PN	Pn	11 13 02.2	+0.3
THN	Thein Dam	5.53	138	eP	Pn	11 13 10.9	+1.1
THN				eS	Sn	11 14 12.7	-0.8
THN				IAML		11 14 13.1	
	comp=N,557nm,0.6s						
THN				IAML		11 14 13.1	
	comp=E,530nm,0.5s						
IUG	Iuzhnay	5.58	350	eP	Pn	11 13 10.6	+0.2
	baz=349						
IUG	Iuzhnay	5.58	350	ePg	Pn	11 13 10.6	+0.2
	comp=E,1µm,0.2s						
IUG				eLg	Lg	11 14 10.7	
	comp=E,1µm,0.4s						
IUG	Iuzhnay	5.58	350	ePN	Pn	11 13 10.5	+0.2
AML	Almayashu	5.76	17	P	Pn	11 13 12.2	-0.7
	SNR=1098						
CHM	Chimkent	5.82	347	eP	Pn	11 13 13.8	+0.4
	baz=346						
CHM	Chimkent	5.82	347	ePg	Pn	11 13 13.8	+0.4
	comp=E,2µm,0.2s						
CHM				eLg	Lg	11 14 15.9	
	comp=E,4µm,0.4s						
CHM	Chimkent	5.82	347	ePN	Pn	11 13 13.8	+0.4
NRN	Naryn	5.98	36	Pn	Pn	11 13 14.6	-1.2
NRN	Naryn	5.98	36	PN	Pn	11 13 14.6	-1.2
DHRM	DHARAMSHALA	5.99	136	eP	Pn	11 13 16.8	+0.9
DHRM				eS	Sn	11 14 22.4	-2.2
DHRM				IAML		11 14 25.2	
	comp=N,744nm,0.4s						
DHRM				IAML		11 14 25.4	
	comp=E,1µm,0.4s						
UCH	Uchtor	6.07	23	P	Pn	11 13 17.1	0.0
	SNR=427						
DZA	Taraz	6.23	360	ePg	Pn	11 13 18.9	+0.2
	comp=E,466nm,0.1s						
DZA				eLg	Lg	11 14 25.6	
	comp=E,1µm,0.7s						
MRKS	Merke	6.25	13	ePg	Pn	11 13 19.0	0.0
	comp=E,144nm,0.3s						
MRKS				eLg	Lg	11 14 25.6	
	comp=E,472nm,0.5s						
EKS2	Erkin-Say	6.28	16	P	Pn	11 13 19.8	+0.3
	SNR=94						
AAK	Ala-Archa	6.44	21	P	Pn	11 13 21.9	+0.3
	SNR=271						
AAK	Ala-Archa	6.44	21	P	Pn	11 13 21.9	+0.3
	comp=E,180nm,0.3s,baz=168,slow=4.7,SNR=510						
AAK				S	Sn	11 14 31.6	-3.5
	comp=E,84nm,0.6s,baz=141,slow=22,SNR=20						
AAK	Ala-Archa	6.44	21	Pn	Pn	11 13 22.0	+0.3
AAK	Ala-Archa	6.44	21	d iPN	Pn	11 13 21.8	+0.1
AAK				pmax	pmax		
	comp=Z,113nm,0.6s						
KK31	Karatay Array	6.47	354	Pn	Pn	11 13 21.7	-0.3
KK31	Karatay Array	6.47	354	⇓P	Pn	11 13 21.6	-0.3
	comp=Z,60nm,0.2s,baz=175,slow=13,SNR=1512						
KK31				⇑S	Sn	11 14 30.2	-5.4
	comp=Z,114nm,0.4s,baz=183,slow=23,SNR=4.7						
KK31	Karatay Array	6.47	354	PN	Pn	11 13 21.7	-0.3
KKAR	Karatay Array	6.47	354	Pn	Pn	11 13 21.5	-0.4
KKAR	Karatay Array	6.47	354	PN	Pn	11 13 21.5	-0.4
KBK	Karagaybulak	6.60	24	P	Pn	11 13 24.8	+1.1
	SNR=39						
FRU1	Bishkek	6.64	21		Pn	11 13 24.9	+0.8
FRU1	Bishkek	6.64	21	PN	Pn	11 13 25.0	+0.8
BHK	Bhakra	6.70	140	eP	Pn	11 13 24.9	-0.1
BHK				eS	Sn	11 14 39.0	-2.0
BHK				IAML		11 14 40.5	
	comp=E,206nm,0.3s						
ULHL	Ulahol	6.73	33	P	Pn	11 13 25.1	-0.4
	SNR=40						
BOOM	Boomskoye usch	6.81	30	Pn	Pn	11 13 26.3	-0.2
BOOM	Boomskoye usch	6.81	30	PN	Pn	11 13 26.3	-0.2
CHMS	Chumysh	6.85	21	P	Pn	11 13 26.9	0.0
	SNR=34						
USP	Ospenovka	7.03	19	P	Pn	11 13 28.6	-0.6
	SNR=83						
TKM2	Tokmak 2	7.05	26	P	Pn	11 13 29.7	0.0
	SNR=187						
KDJ	Kajisay	7.08	38	Pn	Pn	11 13 29.9	-0.1
KDJ	Kajisay	7.08	38	PN	Pn	11 13 29.9	-0.1
TARG	Taragay, Kyrgy	7.11	43	Pn	Pn	11 13 30.3	-0.4
TARG	Taragay, Kyrgy	7.11	43	PN	Pn	11 13 30.3	-0.4
SGDS	Sogindy	7.23	19	eP	Pn	11 13 31.2	-0.7
	baz=19						
SGDS	Sogindy	7.23	19	ePN	Pn	11 13 31.2	-0.7
SMLA	Simla	7.32	137	eP	Pn	11 13 32.7	-0.5
SMLA				eS	Sn	11 14 50.9	-4.8
SMLA				IAML		11 14 55.6	
	comp=E,355nm,0.5s						
SMLA				IAML		11 14 55.7	
	comp=N,258nm,0.3s						
DGS	Degeres	7.39	26	ePg	Pn	11 13 34.0	-0.1
	comp=N,44nm,0.7s						
DGS				eLg	Lg	11 14 53.2	
	comp=N,36nm,0.5s						
TNSS	Tian-Shan	7.68	32	eP	Pn	11 13 37.6	-0.6
	baz=32						
TNSS	Tian-Shan	7.68	32	ePN	Pn	11 13 37.5	-0.6
MDOK	Medeo	7.83	32	⇑P	Pn	11 13 39.8	0.0
	comp=N,52nm,0.6s						
MDOK	Medeo	7.83	32	eP	Pn	11 13 40.1	+0.2
	baz=32						
MDOK	Medeo	7.83	32	ePN	Pn	11 13 40.0	+0.2
KUU	Kurty	8.16	26	eP	Pn	11 13 43.3	-0.8
	baz=26						
KUU	Kurty	8.16	26	ePN	Pn	11 13 43.2	-0.8
DDI	Dehra Dun	8.43	137	eP	Pn	11 13 48.3	+0.6
DDI				eS	Sn	11 15 16.7	-5.5
BTLS	Baital	8.62	13	i P	Pn	11 13 49.2	-0.8
	baz=12						
BTLS	Baital	8.62	13	i PN	Pn	11 13 49.2	-0.8
UZB	Uzynbulak	8.75	40	eP	Pn	11 13 51.6	-0.4
	baz=40						
UZB	Uzynbulak	8.75	40	ePN	Pn	11 13 51.5	-0.4
KPKS	Kokpek	8.81	37	eP	Pn	11 13 51.8	-0.9
	baz=37						
KPKS	Kokpek	8.81	37	ePN	Pn	11 13 51.7	-0.9
KHET	Khetri	9.34	155	eP	Pn	11 13 57.4	-2.2
KHET				eS	Sn	11 15 35.6	-8.4
NDI	New Delhi	9.35	147	eP	Pn	11 13 59.0	-0.8
NDI				eS	Sn	11 15 37.8	-6.4
KUDL	Kundal	9.52	152	eP	Pn	11 14 00.9	-1.1
KUDL				eS	Sn	11 15 40.0	-8.3
SONA	Sohna	9.67	148	eP	Pn	11 14 03.2	-0.7
SONA				eS	Sn	11 15 42.8	-8.9
PTH	Pithoragarh	10.25	131	eP	Pn	11 14 10.3	-1.4
AJM	Ajmer	10.52	164	eP	Pn	11 14 14.6	-0.5
AJM				eS	Sn	11 16 06.8	-5.4
GEYT	Alibeck	10.64	281	P	Pn	11 14 13.0	-3.5
	comp=N,3.1nm,0.3s,baz=93,slow=7.7,SNR=13						
GEYT				S	Sn	11 16 08.0	-6.9
	comp=N,5.8nm,0.4s,baz=96,slow=14,SNR=2.3						
GEYT	Alibeck	10.64	281	Pn	Pn	11 14 14.2	-2.3
GEYT	Alibeck	10.64	281	P	Pn	11 14 14.2	-2.3
GYA0B	ALIBECK ARRAY	10.64	281	Pn	Pn	11 14 15.0	-1.5
OTUK	Ortayu	11.60	3	⇑P	Pn	11 14 26.6	-2.2
	comp=N,9.5nm,0.7s						
MK31	Makanchi Array	12.99	35		Pn	11 14 45.8	-0.7
MK31	Makanchi Array	12.99	35	⇓P	Pn	11 14 45.8	-0.7
	comp=N,2.9nm,0.5s						
MK31	Makanchi Array	12.99	35	c iP	Pn	11 14 46.1	-0.4
MKAR	Makanchi Array	12.99	35	P	Pn	11 14 45.1	-1.4
	comp=N,2.9nm,0.5s,baz=218,slow=9.1,SNR=42						
MKAR	Makanchi Array	12.99	35		Pn	11 14 46.1	-0.4
MKAR	Makanchi Array	12.99	35	P	Pn	11 14 46.1	-0.4
PYUN	Piuthan	13.00	128	eP	Pn	11 14 44.7	-2.2
PYUN				eS	Sn	11 17 00.7	-11
DANN	Dangsing	13.33	125	eP	Pn	11 14 50.6	-0.6
	comp=N,17nm,0.2s						
BRZS	Berezniki	13.35	4	eP	Pn	11 14 49.8	-1.3
	baz=3.5						
BRZS	Berezniki	13.35	4	eP	Pn	11 14 49.7	-1.3
KOLN	Koldanda	13.62	127	eP	Pn	11 14 53.0	-1.7
GKN	Gorkha	14.14	124	eP	Pn	11 15 00.8	-0.3
	comp=N,32nm,0.3s						
BHPL	Bhopal	14.36	157	eP	P	11 15 06.1	+0.6
BHPL				eS	Sn	11 17 33.5	-10
WMQ	Urumqi	14.36	55	eP	P	11 15 06.3	+0.9
WMQ				S	Sn	11 17 41.0	-2.9
WMQ				pmax	pmax		
	comp=N,21nm,0.7s						
KKN	Kakani	14.71	123	eP	Pn	11 15 08.5	+0.3
	comp=N,42nm,0.5s						
DMN	Daman	14.71	124	eP	Pn	11 15 08.8	+0.5
	comp=N,39nm,0.4s						
KURBB	Kurchatov Arra	14.88	18	P	Pn	11 15 07.8	-2.1
	comp=N,12nm,0.7s,baz=208,slow=10,SNR=22						
KURBB				S	S	11 17 56.5	-0.1
	comp=N,1.6nm,0.5s,baz=205,slow=20,SNR=6.1						
PKIN	Phulchoki	14.93	123	eP	Pn	11 15 11.2	+0.3
	comp=N,60nm,0.5s						
PKI	Pulchoki	14.94	123	eP	Pn	11 15 10.5	-0.7
	comp=N,38nm,0.5s						
KURK	Kurchatov	14.99	18		Pn	11 15 09.2	-2.0
KURK	Kurchatov	14.99	18	ceP	Pn	11 15 09.7	-1.5
KURK				pmax	pmax		
	comp=Z,21nm,1.3s						
GUN	Gumba	15.04	121	eP	Pn	11 15 12.9	+0.5
	comp=Z,29nm,0.4s						
AB31	Akbulak array	15.10	330	P	Pn	11 15 10.9	-1.6
	comp=Z,15nm,0.5s,baz=142,slow=11,SNR=398						
ABKAR	Akbulak array	15.10	330		Pn	11 15 10.7	-1.8
JIRN	Jiri	15.41	121	eP	Pn	11 15 17.0	0.0
	comp=Z,90nm,0.5s						
RAMN	Ramite	16.14	123	eP	Pn	11 15 26.6	+0.8
	comp=Z,34nm,0.5s						
BVAR	Borovoye Array	16.38	358	P	P	11 15 27.1	-0.5
	comp=Z,33nm,0.7s,baz=170,slow=12,SNR=94						
BVAR				S	S	11 18 24.6	-4.3
	comp=Z,5.8nm,0.7s,baz=169,slow=23,SNR=5.9						
BRVK	Borovoye	16.42	358	P	P	11 15 27.6	-0.4
BRVK				IAmb	IAmb	11 15 29.6	
	comp=Z,36nm,1.0s						
BRVK	Borovoye	16.42	358	ceP	P	11 15 28.0	0.0
BRVK				pmax	pmax		
	comp=Z,39nm,1.0s						
ODAN	Odare	16.74	121	eP	Pn	11 15 34.1	+1.2
	comp=Z,55nm,0.9s						
AKTO	Aktyubinsk	16.80	329	P	Pn	11 15 33.1	0.0
	comp=Z,46nm,0.3s,baz=140,slow=7.5,SNR=136						
AKTO				pP	pP	11 16 05.0	+1.9
	comp=Z,19nm,0.7s,baz=135,slow=8.9,SNR=3.8						
AKTO				S	S	11 18 29.8	-7.9
	comp=Z,5.8nm,0.7s,baz=152,slow=16,SNR=3.5						
AKTO				LR	LR	11 22 49.9	
	comp=Z,122nm,19.2s,baz=161,slow=39						
AKTO	Aktyubinsk	16.80	329	⇓P	Pn	11 15 32.8	-0.3
	comp=Z,19nm,0.4s						
WSAR	Wadi Sarin	17.32	223	P	Pn	11 15 39.4	-0.1
	comp=Z,7.1nm,0.9s,baz=35,slow=13,SNR=2.1						
DGZ	Jazzator, Alta	17.48	37	⇓eP	Pn	11 15 41.1	-0.2
DGZ				pmax	pmax		
	comp=Z,12nm,0.6s						
GOMU	GeErMu	18.87	84	P	Pn	11 16 00.0	+2.0
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,60nm,4.3s						
ZAA0	Zalesovo Array	19.65	24	P	P	11 16 02.9	-0.2
ZAA0				IAmb	IAmb	11 16 07.9	
	comp=Z,24nm,0.7s						
ZALV	Zalesovo Beam	19.65	24	P	P	11 16 03.4	+0.3
	comp=Z,22nm,0.5s,baz=220,slow=12,SNR=59						
ZALV				S	S	11 19 31.8	-2.6
	comp=Z,1.7nm,0.8s,baz=199,slow=14,SNR=3.6						
ZALV	Zalesovo Beam	19.65	24	P	P	11 16 02.9	-0.1
SHL	Shillong	20.71	116	P	P	11 16 16.9	+2.0
SHL	Shillong	20.71	116	P	P	11 16 16.9	+2.0
SHL				pmax	pmax		
	comp=Z,23nm,0.6s						
GNI	Garni	21.13	288	P	P	11 16 18.6	-0.6
	comp=Z,2.6nm,0.3s,baz=96,slow=5.6,SNR=3.9						
	comp=Z,2.6nm,0.3s						
GNI	Garni	21.13	288	⇓iP	P	11 16 23.1	+3.9
GNI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SVE	Sverdlovsk	21.43	344	eP	P	11 16 22.4	+0.4
SVE				pmax	pmax		
	comp=Z,13nm,0.9s						
ARU	Arti	21.58	340	P	P	11 16 23.9	+0.3
	comp=Z,6.5nm,0.5s,baz=145,slow=7.7,SNR=9.5						
ARU				S	S	11 20 18.7	+8.5
	comp=Z,1.5nm,0.4s,baz=250,slow=19,SNR=1.7						
	comp=Z,6.5nm,0.5s						
ARU	Arti	21.58	340	P	P	11 16 23.5	-0.1
ARU				IAmb	IAmb	11 16 26.0	
	comp=Z,8.5nm,0.8s						
ARU	Arti	21.58	340	d iP	P	11 16 23.8	+0.2
ARU				*PP	pP	11 16 56.1	-0.1
ARU				S	S	11 20 10.4	+0.2
ARU				pmax	pmax		
	comp=Z,12nm,0.9s						
ZEI	Tsey	21.94	295	eP	P	11 16 29.3	+1.6
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBZ	Khabaz	22.80	297	P	P	11 16 34.7	-0.6
	comp=Z,2.0nm,0.6s,baz=105,slow=7.3,SNR=6.6						
	comp=Z,2.0nm,0.6s						
KBZ	Khabaz	22.80	297	deP	P	11 16 36.1	+0.8
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BELG	Belogornoye	22.96	321	P	P	11 16 36.5	-0.1
	comp=Z,13nm,0.7s,baz=78,slow=2.4,SNR=5.7						
BELG				pP	pP	11 17 11.5	+0.7
	comp=Z,30nm,0.9s,baz=153,slow=2.7,SNR=6.8						
	comp=Z,13nm,0.7s						
BELG	Belogornoye	22.96	321	deP	P	11 16 38.0	+1.4
BELG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIV	Kislovodsk	22.98	297	eP	P	11 16 37.9	+0.8
KIV				eS	S	11 20 33.2	-0.1
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
RAYN	Ar Rayn	25.83	247	P	P	11 17 03.2	+0.1
RAYN				IAmb	IAmb	11 17 05.0	
	comp=Z,6.9nm,1.1s						
RAYN	Ar Rayn	25.83	247	P	P	11 17 03.2	+0.1
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIRV	Kirov	26.23	334	⇑eP	P	11 17 06.8	+0.6
ANN	Anapa	26.82	298	eP	P	11 17 11.6	0.0
ANN				e*PP	pP	11 17 50.9	+1.1
ANN				eS	S	11 21 34.3	+0.4
ANN				pmax	pmax		
	comp=Z,38nm,0.9s						
PZH	PanZhiHua	27.68	103	P	P	11 17 20.0	+0.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,4.3s						
SONM	Songino Array	28.00	55	P	P	11 17 21.8	-0.4
	comp=Z,0.4nm,0.6s,baz=259,slow=12,SNR=3.5						
	comp=Z,0.4nm,0.6s						
ULN	Ulaanbaatar	28.44	56	⇓eP	P	11 17 26.5	+0.3
ULN				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BR131	Keskin Array S	29.67	288	⇑eP	P	11 17 36.6	-0.6
BRTR	Keskin Array B	29.67	288	P	P	11 17 38.6	+1.4
	comp=Z,1.2nm,0.6s,baz=88,slow=8.8,SNR=6.8						
BRTR				pP	pP	11 18 17.6	+1.9
	comp=Z,0.9nm,0.6s,baz=113,slow=9.3,SNR=3.5						
	comp=Z,1.2nm,0.6s						
BRTR	Keskin Array B	29.67	288	i P	P	11 17 39.5	+2.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
OBN	Obninsk	30.02	319	eP	P	11 17 40.7	+0.9
OBN				e*PP	pP	11 18 22.4	+3.8
OBN				e*SP	PP	11 18 46.6	-4.6
OBN				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CMAR	Chiang Mai Arr	30.27	119	P	P	11 17 42.8	+0.3
	comp=Z,1.5nm,0.9s,baz=302,slow=8.2,SNR=12						
	comp=Z,1.5nm,0.9s						
CMAR	Chiang Mai Arr	30.27	119	P	P	11 17 44.9	+2.5
CMAR	Chiang Mai Arr	30.27	119	i P	P	11 17 44.0	+1.6
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
PALK	Pallekele	30.46	162	P	P	11 17 44.8	+0.6
	comp=Z,3.8nm,0.6s,baz=70,slow=6.7,SNR=5.1						
	comp=Z,3.8nm,0.6s						
PHRA	Phrae	31.15	118	P	P	11 17 51.3	+1.1
HHC	Hu-ho-hao-te	31.43	70	eP	P	11 17 54.0	+1.4
HHC				pmax	pmax		
	comp=Z,20nm,0.7s						
HHC				pmax	pmax		
	comp=Z,180nm,5.1s						
AKASG	Malin Array Be	33.08	309	P	P	11 18 07.1	+0.4
	comp=Z,2.4nm,0.6s,baz=80,slow=6.8,SNR=16						
	comp=Z,2.4nm,0.6s						
AKBB	Malin Array Si	33.08	309	⇑iP	P	11 18 07.3	+0.6
AKBB				pmax	pmax		
	comp=Z,48nm,5.2s						
NRIK	Noril'sk	33.92	10	⇑eP	P	11 18 15.1	+1.4
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PUL	Pulkovo	34.96	325	⇓eP	P	11 18 21.3	-1.4
PUL				pmax	pmax		
	comp=Z,96nm,0.4s						
MLR	Muntele Rosu	34.97	299	P	P	11 18 25.7	+2.5
MLR				IAmb	IAmb	11 18 27.6	
	comp=Z,7.3nm,0.8s						
MLR	Muntele Rosu	34.97	299	P	P	11 18 25.7	+2.5
MLR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
FINES	FINESS Array B	37.52	326	P	P	11 18 44.8	+0.5
	comp=Z,0.8nm,0.3s,baz=119,slow=8.7,SNR=20						
	comp=Z,0.8nm,0.3s						
FINES	FINESS Array B	37.52	326	i P	P	11 18 45.0	+0.6
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARCES	ARCESS Array B	41.12	337	P	P	11 19 14.9	+0.9
	comp=Z,1.6nm,0.6s,baz=126,slow=7.6,SNR=6.4						
	comp=Z,1.6nm,0.6s						
GERES	GERESS Array B	43.08	305	P	P	11 19 30.8	+0.5
	comp=Z,0.3nm,0.4s,baz=61,slow=8.0,SNR=2.2						
	comp=Z,0.3nm,0.4s						
HFS	Hagfors	43.13	322	P	P	11 19 30.8	+0.4
	comp=Z,2.4nm,0.3s,baz=93,slow=11,SNR=35						
HFS				pP	pP	11 20 12.3	+0.9
	comp=Z,2.4nm,0.6s,baz=90,slow=12,SNR=2.6						
	comp=Z,2.4nm,0.3s						
CLL	Collm	43.33	309	eP	P	11 19 34.0	+1.9
CLL	Collm	43.33	309	eP	P	11 19 34.0	+1.9
NB2	NORSAR Subarra	44.44	323	P	P	11 19 40.7	-0.1
	comp=Z,1.3nm,0.4s,baz=98,slow=7.9						
NB2				pP	pP	11 20 23.1	+1.1
	comp=Z,1.2nm,0.7s,baz=96,slow=8.6						
NOA	NORSAR Array B	44.44	323	P	P	11 19 40.8	-0.1
	comp=Z,1.4nm,0.6s,baz=106,slow=7.1,SNR=17						
NOA				pP	pP	11 20 22.5	+0.5
	comp=Z,1.7nm,0.7s,baz=96,slow=8.1,SNR=4.0						
	comp=Z,1.4nm,0.6s						
KLR	Kul'dur	44.81	54	⇓eP	P	11 19 44.0	+0.1
KLR				pmax	pmax		
	comp=Z,8.0nm,2.5s						
TIXI	Tiksi	45.52	22	P	P	11 19 48.7	-0.5
	comp=Z,2.5nm,0.3s,baz=270,slow=13,SNR=9.8						
	comp=Z,2.5nm,0.3s						
TIXI	Tiksi	45.52	22	⇓eP	P	11 19 49.0	-0.1
TIXI				pmax	pmax		
	comp=Z,8.0nm,2.4s						
SPITS	Spitsbergen Ar	47.41	347	P	P	11 20 05.2	+1.4
	comp=Z,9.0nm,1.0s,baz=116,slow=12,SNR=5.4						
	comp=Z,9.0nm,1.0s						
EKA	Eskdalemuir Ar	52.38	316	P	P	11 20 41.4	-0.1
	comp=Z,1.1nm,0.6s,baz=83,slow=7.1,SNR=9.2						
	comp=Z,1.1nm,0.6s						
MAJO	Matsushiro	52.62	69	⇑eP	P	11 20 43.4	-0.2
MAJO				pmax	pmax		
	comp=Z,12nm,1.6s						
SEY	Seymchan	54.12	34	ceP	P	11 20 53.0	-1.1
SEY				pmax	pmax		
	comp=Z,4.0nm,1.7s						
ESDC	Sonseca Array	57.65	298	P	P	11 21 20.1	+0.5
	comp=Z,3.5nm,1.1s,baz=62,slow=6.9,SNR=9.7						
ESDC				pP	pP	11 22 04.2	+1.6
	comp=Z,1.1nm,1.0s,baz=72,slow=8.2,SNR=3.0						
	comp=Z,3.5nm,1.1s						
BILL	Bilibino	58.34	26	eP	P	11 21 23.2	-0.6
BILL				e*PP	pP	11 22 09.8	+2.1

BILL				*e*		11 22 14.4	
BILL				*e*		11 23 34.7	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TOA0	**Torodi Ar. Sit**	**66.02**	**269**	P	**P**	**11 22 14.0**	**-1.7**
TOA0				IAmb	IAmb	11 22 14.4	
	comp=Z,4.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**66.02**	**269**	P	**P**	**11 22 13.9**	**-1.8**
	comp=Z,2.4nm,0.3s,baz=50,slow=5.9,SNR=3.0						
A36M	**Sachs Harbour**	**71.02**	**5**	P	**P**	**11 22 47.1**	**+1.4**
IMAR	**Indian Mountai**	**71.93**	**18**	P	**P**	**11 22 51.1**	**-0.2**
BMAR	**Burnt Mountain**	**72.72**	**14**	P	**P**	**11 22 57.0**	**+1.0**
INK	**Inuvik**	**73.70**	**9**	P	**P**	**11 23 02.2**	**+0.6**
	comp=Z,1.0nm,0.4s,baz=341,slow=5.7,SNR=15						
INK				pP	**pP**	**11 23 48.2**	**+1.2**
	comp=Z,1.6nm,0.9s,baz=10,slow=8.6,SNR=3.1						
	comp=Z,1.0nm,0.4s						
INK	**Inuvik**	**73.70**	**9**	P	**P**	**11 23 02.1**	**+0.5**
CAST	**Castle Rocks**	**74.44**	**19**	P	**P**	**11 23 06.0**	**0.0**
CAST				IAmb	IAmb	11 23 07.4	
	comp=Z,3.9nm,1.1s						
ILAR	**Eielson Array**	**74.55**	**16**	P	**P**	**11 23 06.0**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=316,slow=4.9,SNR=1.3						
ILAR				pP	**pP**	**11 23 53.0**	**+0.5**
	comp=Z,0.7nm,1.1s,baz=311,slow=6.4,SNR=4.0						
	comp=Z,0.2nm,0.6s						
FRB	**Frobisher Bay**	**75.00**	**343**	LR	LR	11 59 44.8	
	comp=Z,85nm,18.1s,baz=58,slow=38						
YKA	**Yellowknife Ar**	**81.08**	**3**	P	**P**	**11 23 42.9**	**+0.3**
	comp=Z,2.3nm,0.7s,baz=350,slow=5.2,SNR=55						
YKA				pP	**pP**	**11 24 30.8**	**+1.7**
	comp=Z,0.8nm,0.8s,baz=349,slow=5.1,SNR=4.8						
	comp=Z,2.3nm,0.7s						
WRA	**Warramunga Arr**	**81.82**	**122**	P	**P**	**11 23 46.3**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=322,slow=4.9,SNR=49						
	comp=Z,1.9nm,0.6s						
WRAB	**Tennant Creek**	**81.82**	**122**	⇓*e*P	**P**	**11 23 45.6**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,29nm,3.6s						
ASAR	**Alice Springs**	**84.10**	**125**	P	**P**	**11 23 58.0**	**-0.8**
	comp=Z,2.4nm,0.6s,baz=310,slow=5.0,SNR=45						
	comp=Z,2.4nm,0.6s						

IDC 25 11:16:52.4±3.0**,32°.76S×178°.69W,h0^{km},mb3.6**/2**, mbtmp3.6**/3**,ML3.6**/1**,Error ellipse: s-maj=69.9km s-min=36.2km az=113.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.47**	**211**	Pn	Pn	11 18 29.2	+0.4
	1.4nm,0.3s,baz=358,slow=4.4,SNR=19						
URZ				Sn	Sn	11 19 44.0	+0.7
	0.8nm,0.3s,baz=334,slow=22,SNR=1.5						
	3.5nm,0.4s						
ASAR	**Alice Springs**	**42.45**	**270**	P	P	11 24 49.0	-0.3
	0.6nm,0.8s,baz=108,slow=7.5,SNR=5.3						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**43.65**	**275**	P	P	11 24 59.0	0.0
	0.4nm,0.3s,baz=117,slow=7.8,SNR=12						
	0.4nm,0.3s						
FINES	**FINESS Array B**	**147.13**	**338**	PKPbc	PKPbc	11 36 35.7	-0.9
	1.8nm,0.8s,baz=66,slow=4.7,SNR=5.7						

KRSC 25 11:20:31.6±1.1**,49°.26N×156°.55E,h53^{km}**±21^{km}**,Ml4.2, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.45**	**349**	*e*P	Pn	11 20 56.9	+1.5
SKR				*e*S	Sn	11 21 14.6	+1.2
PAU	**Pauzhetka**	**2.21**	**4**	*e*P	Pn	11 21 09.4	+3.5
PAU				*e*S	Sn	11 21 36.2	+4.1
KDTR	**Khodutka, Kamc**	**2.73**	**20**	*e*P	Pn	11 21 15.9	+2.9
KDTR				*e*S	Sn	11 21 48.1	+3.4
MTVR	**Mutnovka**	**3.39**	**17**	*e*P	Pn	11 21 25.4	+3.3
MTVR				*e*S	Sn	11 22 04.8	+3.8
GRL	**Gorelyy**	**3.43**	**16**	*e*P	Pn	11 21 26.4	+3.7
GRL				*e*S	Sn	11 22 06.6	+4.5
APC	**Apacha**	**3.69**	**6**	*e*P	Pn	11 21 29.2	+3.1
PET	**Petropavlovsk**	**3.99**	**19**	S	Sn	11 22 19.8	+4.1
PET	**Petropavlovsk**	**3.99**	**19**	*e*P	Pn	11 21 33.6	+3.4
PET				*e*S	Sn	11 22 19.8	+4.1
PET	**Petropavlovsk**	**3.99**	**19**	P	Pn	11 21 33.6	+3.4
DALK	**Dalny**	**4.02**	**19**	S	Sn	11 22 19.7	+3.3
DALK	**Dalny**	**4.02**	**19**	*e*P	Pn	11 21 33.9	+3.3
DALK				*e*S	Sn	11 22 19.7	+3.3
DALK	**Dalny**	**4.02**	**19**	P	Pn	11 21 33.9	+3.3
UGLR	**Uglovaya**	**4.20**	**19**	P	Pn	11 21 36.7	+3.5
UGLR	**Uglovaya**	**4.20**	**19**	*e*P	Pn	11 21 36.7	+3.5
AVH	**Avacha**	**4.24**	**18**	S	Sn	11 22 26.7	+4.8
AVH	**Avacha**	**4.24**	**18**	*e*P	Pn	11 21 38.0	+4.3
AVH				*e*S	Sn	11 22 26.7	+4.8
AVH	**Avacha**	**4.24**	**18**	P	Pn	11 21 38.0	+4.3
KOK	**Koryaka**	**4.24**	**17**	S	Sn	11 22 26.1	+4.1
KOK	**Koryaka**	**4.24**	**17**	*e*P	Pn	11 21 37.9	+4.2
KOK				*e*S	Sn	11 22 26.1	+4.1
KOK	**Koryaka**	**4.24**	**17**	P	Pn	11 21 37.9	+4.1
SMAR	**Somma**	**4.25**	**19**	P	Pn	11 21 37.4	+3.4
SMAR	**Somma**	**4.25**	**19**	*e*P	Pn	11 21 37.4	+3.4
KRER	**Koryakskii**	**4.28**	**18**	S	Sn	11 22 27.2	+4.2
KRER	**Koryakskii**	**4.28**	**18**	*e*P	Pn	11 21 38.4	+4.0
KRER				*e*S	Sn	11 22 27.2	+4.2
KRER	**Koryakskii**	**4.28**	**18**	P	Pn	11 21 38.4	+4.1
KRX	**Arik**	**4.31**	**17**	P	Pn	11 21 38.5	+3.8
KRX	**Arik**	**4.31**	**17**	*e*P	Pn	11 21 38.5	+3.7
SPN	**Mys Shipunski**	**4.42**	**28**	*e*S	Sn	11 22 29.2	+3.0
GNL	**Ganaly**	**4.52**	**11**	*e*P	Pn	11 21 40.7	+3.1

*NEIC **25** 11:24:23.0±2.1, 19°.08S±0°.05×69°.48W±0°.06, h122^{km}±6^{km}, mb4.3/10, ML4.5(GUC), Error ellipse: s-maj=10.5km s-min=5.0km az=52.0*

*VAO **25** 11:24:22.5±0.8, 18°.90S×69°.30W, h125^{km}±7^{km}, mb4.6*

*SJA **25** 11:24:23.4±2.4, 19°.14S×69°.32W, h100^{km}, ML4.3, MW4.1, Hypocentre not reviewed by the ISC*

*IDC **25** 11:24:23.5±0.6, 19°.09S×69°.14W, h128^{km}±5^{km}, mb3.8/11, mbtmp4.2/16, Error ellipse: s-maj=14.8km s-min=7.8km az=97.0*

*GUC **25** 11:24:23.6±0.7, 19°.06S×69°.43W, h124^{km}±3^{km}, ML4.5*

ISC 25 11:24:22.4±0.5**,19°.08S**±0°.03×**69°.35W**±0°.05**,h123^{km}**±4^{km}**, n101,**σ**1.^{s}37**/115**,mb4.2**/13**,8C-3D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNMC	**Minye Minye**	**0.23**	**258**		**Pn**	**11 24 39.9**	**+0.1**
MNMC	**Minye Minye**	**0.23**	**258**	⇑*i*P	**Pn**	**11 24 40.5**	**+0.6**
MNMC				*i* S	**Sn**	**11 24 53.8**	**+0.8**
MNMC				IAML		11 24 57.9	
	comp=E,21µm,0.5s						
MNMCX	**Minye Minye**	**0.23**	**258**	*e*P		11 24 40.2	
MNMCX				*e*S		11 24 54.3	
MNMCX				IAML		11 24 57.2	
	comp=Z,11µm,0.2s						
GO01	**Chusmiza**	**0.60**	**166**		**Pn**	**11 24 43.4**	**+1.4**
GO01	**Chusmiza**	**0.60**	**166**	⇓*i*P	**Pn**	**11 24 43.4**	**+1.4**
GO01				*i* S	**Sn**	**11 24 58.6**	**+2.0**
GO01				IAML		11 25 00.3	
	comp=E,423µm,0.0s						
GO01	**Chusmiza**	**0.60**	**166**	*e*P		11 24 37.7	
GO01				*e*P		11 24 43.2	
GO01				IAML		11 25 00.8	
	comp=Z,6µm,0.8s						
PB11	**IPOC Station P**	**0.73**	**203**		**Pn**	**11 24 42.9**	**+0.3**
PB11	**IPOC Station P**	**0.73**	**203**	⇑*i*P	**Pn**	**11 24 43.4**	**+0.8**
PB11				*i* S	**Sn**	**11 24 58.7**	**+0.9**
PB11				IAML		11 24 59.5	
	comp=N,19µm,0.4s						
PB16	**IPOC Station P**	**0.76**	**349**	⇓*i*P	**Pn**	**11 24 44.1**	**+0.8**
PB16				*i* S	**Sn**	**11 24 59.7**	**+0.8**
PB16	**IPOC Station P**	**0.76**	**349**	*e*P		11 24 44.1	
PB16				*e*S		11 25 00.6	
PB16				IAML		11 25 01.2	
	comp=Z,8µm,0.5s						
PB12	**IPOC Station P**	**1.04**	**297**	⇑*i*P	**Pn**	**11 24 44.9**	**-0.2**
PB12				*i* S	**Sn**	**11 25 01.7**	**-0.6**
PB12				IAML		11 25 03.3	
	comp=E,12µm,0.4s						
PB12	**IPOC Station P**	**1.04**	**297**	*e*P		11 24 39.2	
PB12				*e*P		11 24 44.9	
PB12				*e*S		11 25 02.2	
PB12				IAML		11 25 03.3	
	comp=Z,5µm,0.2s						
PB08	**IPOC Station P**	**1.07**	**170**	⇑*i*P	**Pn**	**11 24 47.5**	**+1.7**
PB08				*i* S	**Sn**	**11 25 05.6**	**+2.1**
PB08				IAML		11 25 07.3	
	comp=N,5µm,0.6s						
PB08	**IPOC Station P**	**1.07**	**170**	*e*P		11 24 47.5	
PB08				*e*S		11 25 05.7	
PB08				IAML		11 25 06.3	
	comp=Z,3µm,0.6s						
AP01	**Chacalluta**	**1.18**	**307**		**Pn**	**11 24 46.5**	**0.0**
AP01	**Chacalluta**	**1.18**	**307**	*e*P	**Pn**	**11 24 46.5**	**0.0**
AP01				*i* S	**Sn**	**11 25 04.3**	**-0.4**
AP01				IAML		11 25 05.8	
	comp=E,25µm,0.4s						
AP01	**Chacalluta**	**1.18**	**307**	*e*P		11 24 46.6	
AP01				*e*S		11 25 05.0	
AP01				IAML		11 25 11.3	
	comp=Z,8µm,0.3s						
TA02	**Huaiquique**	**1.39**	**212**		**Pn**	**11 24 48.9**	**+0.1**
TA02	**Huaiquique**	**1.39**	**212**	*e*P	**Pn**	**11 24 49.0**	**+0.2**
TA02				*i* S	**Sn**	**11 25 08.5**	**-0.4**
TA02				IAML		11 25 10.4	
	comp=N,10µm,0.1s						
TA02	**Huaiquique**	**1.39**	**212**	*e*P		11 24 48.9	
TA02				*e*S		11 25 09.8	
TA02				IAML		11 25 10.4	
	comp=Z,2µm,0.1s						
PB18	**Visviri**	**1.49**	**355**	⇓*i*P	**Pn**	**11 24 52.6**	**+2.0**
PB18				*i* S	**Sn**	**11 25 15.3**	**+3.5**
TA01	**Diego Aracena**	**1.67**	**208**		**Pn**	**11 24 52.1**	**0.0**
TA01	**Diego Aracena**	**1.67**	**208**	⇑*i*P	**Pn**	**11 24 52.0**	**0.0**
TA01				*i* S	**Sn**	**11 25 13.5**	**-1.1**
TA01				IAML		11 25 15.3	
	comp=N,1µm,0.4s						
TA01	**Diego Aracena**	**1.67**	**208**	*e*P		11 24 52.1	
TA01				*e*S		11 25 14.5	
PB01	**IPOC Station P**	**1.95**	**184**	⇑*i*P	**Pn**	**11 24 56.6**	**+1.0**
PB01				*i* S	**Sn**	**11 25 21.6**	**+0.7**
PB01				IAML		11 25 23.9	
	comp=N,1µm,0.3s						
PB01	**IPOC Station P**	**1.95**	**184**	*e*P		11 24 56.6	
PB01				*e*S		11 25 21.8	
PB02	**IPOC Station P**	**2.28**	**193**	⇑*i*P	**Pn**	**11 25 00.4**	**+0.7**
PB02				*i* S	**Sn**	**11 25 28.2**	**-0.1**
PB02				IAML		11 25 37.8	
	comp=E,2µm,0.4s						
PB02	**IPOC Station P**	**2.28**	**193**	*e*P		11 25 00.4	
PB02				*e*P		11 25 00.6	
PB02				*e*S		11 25 29.0	
PB02				IAML		11 25 35.8	
	comp=Z,2µm,0.3s						
PB07	**IPOC Station P**	**2.68**	**191**	⇑*i*P	**Pn**	**11 25 05.3**	**+0.5**
PB07				*i* S	**Sn**	**11 25 34.0**	**-3.4**
PB07				IAML		11 25 47.8	
	comp=E,1µm,0.5s						
PB07	**IPOC Station P**	**2.68**	**191**	*e*P		11 25 05.0	
PB07				*e*S		11 25 28.7	
PB07				IAML		11 25 35.3	
	comp=Z,1000nm,0.6s						
PB07				*e*S		11 25 39.2	
PB09	**IPOC Station P**	**2.70**	**178**	*e*P	**Pn**	**11 25 06.7**	**+1.6**
PB09				*i* S	**Sn**	**11 25 36.4**	**-1.6**
PB09				IAML		11 25 44.1	
	comp=E,878nm,0.7s						
PB09	**IPOC Station P**	**2.70**	**178**	*e*P		11 25 06.0	
PB09				*e*S		11 25 37.7	
LPAZ	**La Paz**	**3.01**	**23**	P	**Pn**	**11 25 11.5**	**+1.9**
	comp=E,57nm,0.3s,baz=173,slow=3.6,SNR=217						
LPAZ				S	**Sn**	**11 25 45.5**	**-0.4**
	comp=E,67nm,0.8s,baz=222,slow=21,SNR=6.1						
LPAZ	**La Paz**	**3.01**	**23**		**Pn**	**11 25 11.7**	**+2.1**
LPAZ	**La Paz**	**3.01**	**23**	*e*P		11 25 11.0	
PB04	**IPOC Station P**	**3.32**	**193**	*e*P	**Pn**	**11 25 13.6**	**+0.4**
PB04				IAML		11 25 55.2	
	comp=N,637nm,0.5s						
PB04	**IPOC Station P**	**3.32**	**193**	*e*P		11 25 13.7	
PB04				*e*S		11 25 51.2	
PB04				IAML		11 25 56.7	
	comp=Z,532nm,0.1s						
LVC	**Limon Verde**	**3.53**	**173**	P	**Pn**	**11 25 18.4**	**+2.2**
	comp=Z,27nm,0.3s,baz=36,slow=8.9,SNR=113						
LVC				S	**Sn**	**11 25 58.2**	**+0.5**
	comp=Z,211nm,0.5s,baz=286,slow=6.2,SNR=17						
LVC	**Limon Verde**	**3.53**	**173**		**Pn**	**11 25 18.2**	**+2.0**
LVC	**Limon Verde**	**3.53**	**173**	*e*P	**Pn**	**11 25 18.8**	**+2.6**
LVC	**Limon Verde**	**3.53**	**173**	*e*P		11 25 17.0	
LVC				*e*S		11 25 44.2	
LVC				IAML		11 25 50.3	
	comp=Z,366nm,0.7s						
PB06	**IPOC Station P**	**3.61**	**183**	*e*P		11 25 17.0	
PB06				*e*P		11 25 17.6	
PB06				*e*S		11 25 58.2	
PB06				IAML		11 26 31.4	
	comp=Z,329nm,0.4s						
PB15	**IPOC Station P**	**4.11**	**182**	*e*P	**Pn**	**11 25 24.3**	**+0.7**
PB15				*i* S	**Sn**	**11 26 12.3**	**+1.2**
PB15	**IPOC Station P**	**4.11**	**182**	*e*P		11 25 24.0	
PB15				*e*S		11 26 11.6	
PB15				IAML		11 26 19.1	
	comp=Z,778nm,0.2s						
PB10	**IPOC Station P**	**4.55**	**194**	*e*P	**Pn**	**11 25 28.5**	**-0.9**
PB10				*i* S	**Sn**	**11 26 15.8**	**-5.6**
PB10	**IPOC Station P**	**4.55**	**194**	*e*P		11 25 28.7	
PB10				*e*S		11 26 19.3	
PB10				IAML		11 26 21.9	
	comp=Z,164nm,0.5s						
GO02	**Mina Guanaco**	**6.05**	**182**	Pn	**Pn**	**11 25 49.3**	**-0.6**
AC02	**Maricunga**	**7.72**	**179**		**Pn**	**11 26 12.2**	**-0.3**
SIV	**San Ignacio**	**8.47**	**70**	P	**Pn**	**11 26 20.6**	**-1.8**
	comp=Z,26nm,0.5s,baz=256,slow=11,SNR=158						
SIV				S	**Sn**	**11 27 53.4**	**-3.0**
	comp=Z,8.3nm,0.7s,baz=141,slow=21,SNR=2.0						
BBSD	**Serra de San D**	**8.52**	**79**	*e*P	**Pn**	**11 26 21.0**	**-2.0**
ETMB	**Extrema**	**9.70**	**19**	*e*P	**Pn**	**11 26 36.7**	**-2.2**
AC05	**El Transito**	**9.74**	**185**		**Pn**	**11 26 36.6**	**-2.9**
PTLB	**Pontes e Lacer**	**10.40**	**71**	Pn	**Pn**	**11 26 46.9**	**-1.5**
VILB	**Vilhena**	**10.70**	**57**	Pn	**Pn**	**11 26 51.0**	**-1.4**
VILB	**Vilhena**	**10.70**	**57**	*e*P	**Pn**	**11 26 50.5**	**-2.0**
SAML	**Samuel**	**11.71**	**32**	*e*P	**Pn**	**11 27 02.2**	**-3.7**
CFA	**Coronel Fontan**	**12.51**	**176**	P	**Pn**	**11 27 17.1**	**+0.9**
	comp=Z,1.1nm,0.4s,baz=348,slow=11,SNR=4.1						
AQDB	**Aquidauana**	**12.93**	**98**	*e*P	**Pn**	**11 27 22.2**	**+0.6**
CPUP	**Villa Florida**	**13.23**	**125**	P	**Pn**	**11 27 24.1**	**-1.5**
	comp=Z,2.4nm,0.8s,baz=294,slow=13,SNR=6.0						
SALV	**Santo Antonio**	**13.41**	**78**	*e*P	**Pn**	**11 27 27.0**	**-1.0**
RVDE	**Rio Verde (Bra**	**13.63**	**92**	*e*P	**Pn**	**11 27 29.0**	**-1.8**
PP1B	**Ponte de Pedra**	**13.82**	**86**	*e*P	**Pn**	**11 27 32.8**	**-0.4**
AMBA	**Amambai (Brazi**	**13.95**	**108**	*e*P	**Pn**	**11 27 34.5**	**-0.3**
MT02	**Curacav**	**14.21**	**186**	P	**Pn**	**11 27 38.6**	**+0.5**
CLDB	**Colider**	**15.42**	**60**	*e*P	**Pn**	**11 27 53.4**	**-0.1**
CRSM	**Crissiumal (Br**	**16.36**	**124**	*e*P	**P**	**11 28 06.6**	**+1.1**
FRBT	**Francisco Belt**	**16.53**	**117**	*e*P	**P**	**11 28 08.8**	**+1.2**
H03N1	**Juan Fernandez**	**16.66**	**209**	T	T	11 45 51.6	
	baz=29,slow=73						
H03N2	**Juan Fernandez**	**16.67**	**209**	T	T	11 45 38.2	
	baz=29,slow=73						
H03N3	**Juan Fernandez**	**16.68**	**209**	T	T	11 46 02.4	
	baz=29,slow=73						
PTGB	**Pitanga**	**16.99**	**112**	*e*P	**Pn**	**11 28 12.5**	**-0.3**
PCMB	**Pacaembu**	**17.15**	**101**	*e*P	**Pn**	**11 28 14.8**	**+0.1**
ALGR	**Alto Alegre (B**	**17.76**	**126**	*e*P	**Pn**	**11 28 21.8**	**-0.3**
ITAB	**Concordia**	**17.78**	**120**	P	**Pn**	**11 28 22.7**	**+0.5**
ITRB	**Iturama**	**17.93**	**95**	*e*P	**Pn**	**11 28 24.0**	**-0.1**
CPSB	**Cacapava Do Su**	**18.30**	**131**	*e*P	**P**	**11 28 26.4**	**-0.6**
SNDB	**Serra Nova Dou**	**18.77**	**71**	*e*P	**P**	**11 28 31.1**	**-1.1**
FRTB	**Fartura**	**18.93**	**106**	*e*P	**P**	**11 28 32.8**	**-1.1**
PLTB	**Pedras Altas**	**18.99**	**135**	P	**Pn**	**11 28 35.3**	**-1.2**
PLTB				IAmb	IAmb	11 28 35.9	
	comp=Z,13nm,0.7s						
BB19B	**Bebedouro**	**19.66**	**99**	*e*P	**P**	**11 28 40.5**	**-1.3**
ITTB	**Itaituba**	**19.77**	**44**	*e*P	**P**	**11 28 41.4**	**-1.6**
TRQA	**Tornquist**	**19.97**	**163**	P	**P**	**11 28 45.4**	**+0.4**
BDFB	**Brasilia**	**20.65**	**84**	P	**P**	**11 28 51.4**	**-1.3**
	comp=Z,7.2nm,0.5s,baz=255,slow=12,SNR=14						
	comp=Z,7.2nm,0.5s						
BDFB	**Brasilia**	**20.65**	**84**	P	**P**	**11 28 52.3**	**-0.3**
BDFB				IAmb	IAmb	11 28 55.9	
	comp=Z,8.4nm,0.5s						
BDFB	**Brasilia**	**20.65**	**84**	*e*P	**P**	**11 28 51.5**	**-1.1**
TER01	**Tubaro-SC**	**20.73**	**121**	*e*P	**P**	**11 28 52.9**	**-0.4**
PLCA	**Paso Flores**	**21.60**	**182**	P	**P**	**11 29 02.9**	**+0.3**
	comp=Z,9.9nm,0.9s,baz=355,slow=11,SNR=21						
	comp=Z,9.9nm,0.9s						
PLCA	**Paso Flores**	**21.60**	**182**	P	**P**	**11 29 03.4**	**+0.9**
PLCA				IAmb	IAmb	11 29 06.3	
	comp=Z,14nm,0.9s						
PARB	**Paraibuna**	**22.52**	**105**	*e*P	**P**	**11 29 11.3**	**-0.8**
BOAV	**Boa Vista**	**23.04**	**23**	P	**P**	**11 29 17.0**	**-0.2**
BOAV				IAmb	IAmb	11 29 19.9	
	comp=Z,8.0nm,0.8s						
NAN01	**Guarapari, ES**	**27.74**	**92**	*e*P	**P**	**11 29 58.9**	**-0.7**
BAUV	**El Baul**	**27.88**	**3**	P	**P**	**11 30 00.6**	**-0.3**
GDU01	**Guandu, BA**	**29.04**	**84**	*e*P	**P**	**11 30 11.3**	**+0.1**
MDP	**Montagnes des**	**29.13**	**36**	P	**P**	**11 30 11.0**	**-1.0**
	comp=Z,7.1nm,0.6s,baz=218,slow=7.7,SNR=5.1						
	comp=Z,7.1nm,0.6s						
CMIG	**Matias Romero**	**43.84**	**323**	P	**P**	**11 32 17.7**	**+1.1**
	comp=Z,2.0nm,0.7s,baz=150,slow=3.1,SNR=2.3						
	comp=Z,2.0nm,0.7s						
TXAR	**Lajitas Array**	**58.42**	**325**	P	**P**	**11 34 05.7**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=144,slow=7.7,SNR=5.0						
	comp=Z,0.5nm,0.7s						
SNAA	**Sanae**	**64.69**	**161**	P	**P**	**11 34 47.9**	**+0.9**
DBIC	**Dimbokro**	**68.47**	**75**	P	**P**	**11 35 10.8**	**-1.1**
	comp=Z,2.2nm,0.6s,baz=291,slow=4.9,SNR=3.5						
	comp=Z,2.2nm,0.6s						
QSPA	**South Pole Qui**	**71.09**	**180**	P	**P**	**11 35 28.8**	**+1.6**
QSPA				IAmb	IAmb	11 35 55.0	
	comp=Z,10nm,1.4s						
PDAR	**Pinedale Array**	**71.82**	**330**	P	**P**	**11 35 32.4**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=116,slow=8.3,SNR=4.3						
	comp=Z,0.3nm,0.5s						
NVAR	**Mina Array Bea**	**73.34**	**322**	P	**P**	**11 35 42.5**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=140,slow=7.8,SNR=4.1						
	comp=Z,0.5nm,0.7s						
TOA0	**Torodi Ar. Sit**	**76.95**	**71**	P	**P**	**11 36 02.3**	**+0.4**
TOA0				IAmb	IAmb	11 36 08.2	
	comp=Z,6.9nm,1.1s						
TORD	**Torodi Ar. Bea**	**76.95**	**71**	P	**P**	**11 36 00.4**	**-1.5**
	comp=Z,14nm,0.6s,baz=255,slow=5.9,SNR=2.1						
	comp=Z,14nm,0.6s						
VNDA	**Vanda**	**79.15**	**190**	P	**P**	**11 36 13.6**	**+0.6**
ESDC	**Sonseca Array**	**84.42**	**45**	P	**P**	**11 36 42.6**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=255,slow=5.5,SNR=5.7						
	comp=Z,0.6nm,0.6s						
YKA	**Yellowknife Ar**	**88.78**	**341**	P	**P**	**11 37 02.3**	**+0.5**
	comp=Z,3.6nm,0.8s,baz=136,slow=4.9,SNR=80						
YKA				pP	**pP**	**11 37 34.4**	**-0.5**
	comp=Z,1.3nm,0.9s,baz=134,slow=4.9,SNR=4.5						
	comp=Z,3.6nm,0.8s						
H11S2	**WAKE ISLAND Hy**	**127.13**	**279**	T	T	14 02 44.0	
	baz=100,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy**	**127.14**	**279**	T	T	14 02 47.3	
	baz=100,slow=75,SNR=13						
H11N3	**WAKE ISLAND Hy**	**127.14**	**281**	T	T	14 02 49.8	
	baz=100,slow=74,SNR=15						
H11S3	**WAKE ISLAND Hy**	**127.14**	**279**	T	T	14 02 48.0	
	baz=100,slow=75,SNR=12						
H11N2	**WAKE ISLAND Hy**	**127.16**	**281**	T	T	14 02 53.9	
	baz=100,slow=74,SNR=16						
H11N1	**WAKE ISLAND Hy**	**127.16**	**281**	T	T	14 02 44.8	
	baz=100,slow=74,SNR=8.1						
ASAR	**Alice Springs**	**131.83**	**209**	PKP	**PKPdf**	**11 43 22.1**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=140,slow=1.6,SNR=9.8						
WRA	**Warramunga Arr**	**134.79**	**212**	PKP	**PKiKP**	**11 43 28.4**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=148,slow=1.8,SNR=20						
WRA				pPKP	**pPKPdf**	**11 44 01.7**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=152,slow=1.7,SNR=2.3						
ZALV	**Zalesovo Beam**	**139.93**	**24**	PKP	**PKPdf**	**11 43 35.7**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=298,slow=3.2,SNR=4.7						
ZALV				pPKP	**pPKPdf**	**11 44 11.4**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=309,slow=2.4,SNR=2.9						
MKAR	**Makanchi Array**	**143.90**	**34**	PKP	**PKPdf**	**11 43 43.2**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=336,slow=3.2,SNR=2.0						
USRK	**Ussuriysk Ar.**	**149.24**	**329**	PKPbc	**PKiKP**	**11 43 57.4**	**-0.5**
	comp=Z,4.1nm,1.0s,baz=277,slow=1.0,SNR=5.1						
MJAR	**Matsushiro Arr**	**150.21**	**311**	PKPbc	**PKiKP**	**11 44 00.3**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=71,slow=0.8,SNR=7.1						
SONM	**Songino Array**	**151.11**	**6**	PKPbc	**PKiKP**	**11 44 02.2**	**+0.4**
	comp=Z,2.5nm,0.5s,baz=299,slow=1.3,SNR=19						
SONM				pPKPbc	**pPKPbc**	**11 44 36.4**	**+0.8**
	comp=Z,1.2nm,0.5s,baz=296,slow=1.0,SNR=5.8						

*NIED **25** 11:32:57.2, 31°.48N×128°.84E, h14^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.17; $M_{\theta\theta}$1.99; $M_{\phi\phi}$-1.82; $M_{r\theta}$-0.79; $M_{\theta\phi}$2.55; $M_{\phi r}$0.01; Fault plane solution: $M_0$3.28000×10^{14} NP1: ϕ_s289.00000°, δ87.00000°, λ13.00000°. NP2: ϕ_s198.00000°, δ77.00000°, λ177.00000°.*

JMA 25 11:32:57.2±0.2**,31°.5N**±0°.5×**128°.8E**±0°.7**,h14^{km}**±1^{km}**, MV3.5**/32**,SW OFF KYUSHU,Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.78**	**75**	P	Pg	11 33 11.5	-0.7
JSJ				*e*S	Sg	11 33 22.1	-0.4
JFU	**Fukue jima 2**	**1.17**	**356**	P	Pn	11 33 18.8	-0.3
JFU				*e*S	Sb	11 33 34.3	+0.1
JSU	**Suzuyama**	**1.38**	**89**	*e*P	Pn	11 33 22.4	+0.3
NGSJ	**Nagasakinomoza**	**1.41**	**35**	*e*P	Pn	11 33 22.4	0.0
JNN	**Nakanoshima**	**1.87**	**151**	*e*P	Pn	11 33 28.5	-0.2
JYAK	**Yakushimahirau**	**1.90**	**130**	*e*P	Pn	11 33 28.6	-0.6
JTZ	**Takazaki**	**1.96**	**77**	*e*P	Pn	11 33 30.6	+0.5
JIU3	**Izumi3**	**1.99**	**57**	*e*P	Pn	11 33 30.9	+0.5
JTN	**Tanegashima 3**	**2.02**	**114**	*e*P	Pn	11 33 30.8	0.0
JMTN	**Minamitane**	**2.08**	**121**	*e*P	Pn	11 33 31.8	+0.2

*ANF **25** 11:33:11.8±0.6, 36°.28N×97°.57W, h3^{km}±6^{km}, ML3.5/11, Error ellipse: s-maj=6.1km s-min=3.0km az=164.0*

*NEIC **25** 11:33:12.5±0.4, 36°.27N±0°.01×97°.57W±0°.01, h5^{km}±7^{km}, Error ellipse: s-maj=2.0km s-min=1.1km az=131.0*

*TUL **25** 11:33:12.4±0.5, 36°.28N±0°.01×97°.566W±0°.007, h7^{km}±6^{km}, ML3.1, mb_Lg3.1/88(NEIC), ML3.1/50(NEIC), Error ellipse: s-maj=1.8km s-min=0.8km az=190.0*

ISC 25 11:33:12.4±1.2**,36°.27N**±0°.02×**97°.58W**±0°.02**,h4^{km}**±11^{km}**, n88,**σ**0.^{s}52**/52**,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.40**	**306**	Pg	**Pg**	**11 33 20.5**	**+0.3**
CROK				Sg	**Sg**	**11 33 26.4**	**+0.9**
CROK				IAML		11 33 26.9	
	comp=E,3µm,0.3s						
OK029	**Liberty Lake**	**0.48**	**168**	Pg	**Pg**	**11 33 22.0**	**+0.3**
OK029				IAML		11 33 28.9	
	comp=E,2µm,0.5s						
OK048	**Pawnee Station**	**0.53**	**74**	Pg	**Pg**	**11 33 22.8**	**+0.1**
OK033	**Mehan**	**0.56**	**113**	Pg	**Pg**	**11 33 23.4**	**+0.2**
BLOK	**Blackwell**	**0.57**	**31**		**Pg**	**11 33 23.6**	**+0.2**
BLOK				IAML		11 33 37.8	
	comp=E,2µm,0.2s						
BLOK				IAML		11 33 38.8	
	comp=N,2µm,0.2s						
GC02	**Grant County #**	**0.63**	**339**	Pg	**Pg**	**11 33 24.4**	**0.0**
OK051	**E0350 and S346**	**0.64**	**68**		**Pg**	**11 33 24.6**	**-0.1**
OK051				IAML		11 33 34.4	
	comp=N,1µm,0.2s						
OK051				IAML		11 33 42.9	
	comp=N,1µm,0.2s						
OK052	**Battle Ridge R**	**0.68**	**113**		**Pg**	**11 33 25.6**	**+0.1**
QUOK	**Quay**	**0.71**	**98**		**Pg**	**11 33 26.0**	**0.0**
QUOK				IAML		11 33 42.0	
	comp=N,712nm,0.2s						
OK030	**Cody Creek RV**	**0.73**	**118**		**Pg**	**11 33 26.4**	**0.0**
OK030				IAML		11 33 38.7	
	comp=N,666nm,0.4s						
OK032	**Salt Plains WL**	**0.74**	**317**		**Pg**	**11 33 26.6**	**0.0**
OK032				IAML		11 33 37.0	
	comp=N,1µm,0.2s						
OK032				IAML		11 33 39.4	
	comp=N,1µm,0.2s						
KAN13	**South Haven SW**	**0.75**	**6**		**Pg**	**11 33 26.8**	**0.0**
KAN13				IAML		11 33 44.8	
	comp=N,840nm,0.3s						
KAN13				IAML		11 33 45.4	
	comp=E,731nm,0.2s						
KAN14	**Manchester OK**	**0.76**	**336**		**Pg**	**11 33 27.0**	**+0.1**
KAN14				IAML		11 33 38.3	
	comp=E,1µm,0.2s						
KAN14				IAML		11 33 39.5	
	comp=N,1µm,0.1s						
KAN17	**Caldwell West**	**0.79**	**349**		**Pg**	**11 33 27.7**	**+0.1**
KAN17				IAML		11 33 42.4	
	comp=E,817nm,0.3s						
KAN17				IAML		11 33 45.3	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=N,607nm,0.3s						
KAN09	Caldwell North	0.87	358		Pg	11 33 29.0	0.0
KAN09				IAML		11 33 42.5	
	comp=N,1µm,0.2s						
OKCSW	OKLAHOMA CITY	0.87	172		Pg	11 33 29.0	0.0
OK038	West end E0370	0.96	283		Pg	11 33 30.7	-0.2
DEOK	Depew	0.97	116		Pg	11 33 30.6	-0.4
OK035	E0210 Rd and N	1.01	296	Pg	Pg	11 33 30.9	-0.9
OK035				IAML		11 33 54.0	
	comp=N,558nm,0.2s						
FNO	Franklin	1.02	172		Pg	11 33 31.6	-0.3
FNO				IAML		11 33 55.6	
	comp=E,676nm,0.8s						
T35A	Sooner Cattle	1.07	53	Pg	Pg	11 33 32.5	-0.5
T35A				IAML		11 33 48.3	
	comp=N,413nm,0.3s						
T35A				IAML		11 33 52.1	
	comp=E,393nm,0.3s						
T35B	Sooner Cattle	1.07	53	P	Pg	11 33 32.5	-0.5
	baz=233						
T35B				S	Sg	11 33 46.7	-0.2
	baz=233						
U32A	Winter Ranch,	1.16	276		Pg	11 33 34.0	-0.6
U32A				IAML		11 33 52.8	
	comp=E,346nm,0.1s						
U32A				IAML		11 33 55.9	
	comp=N,359nm,0.1s						
U32A	Winter Ranch,	1.16	276	P	Pg	11 33 34.0	-0.6
	baz=95						
U32A				S	Sg	11 33 49.9	+0.4
	baz=95						
W35A	Tecumseh	1.25	153		Pg	11 33 35.5	-0.8
TUL1	Leonard	1.49	103	Pn	Pn	11 33 39.1	-0.8
TUL1				IAmb_Lg		11 34 01.8	
	comp=Z,65nm,0.8s						
TUL1	Leonard	1.49	103	P	Pn	11 33 39.2	-0.8
	baz=285						
TUL1				S	Sn	11 33 59.5	-0.4
	baz=285						
ELIS	Ellis County	1.50	263		Pn	11 33 40.0	-0.2
X34A	Smith Ranch, M	1.68	187		Pb	11 33 43.4	-0.4
X34A				IAmb_Lg		11 34 08.1	
	comp=Z,111nm,0.7s						
WMOK	Wichita Mounta	1.81	213		Pn	11 33 44.5	0.0
WMOK	Wichita Mounta	1.81	213	P	Pn	11 33 44.5	0.0
	baz=32						
WMOK				S	Sb	11 34 08.9	-0.5
	baz=32						
RLO	Rose Lookout	2.07	92		Pn	11 33 48.9	+0.9
RLO				IAmb_Lg		11 34 20.4	
	comp=Z,82nm,0.8s						
LOOK	Love County	2.29	172		Pn	11 33 52.5	+1.4
LOOK				IAmb_Lg		11 34 31.5	
	comp=Z,60nm,0.7s						
R32A	Long Quarter,	2.33	338	P	Pn	11 33 51.3	-0.3
	baz=157						
R32A				S	Sn	11 34 20.7	0.0
	baz=157						
X37A	Clayton	2.46	132		Pn	11 33 53.1	-0.3
X37A				IAmb_Lg		11 34 33.2	
	comp=Z,71nm,0.7s						
X37A	Clayton	2.46	132	P	Pn	11 33 52.9	-0.4
	baz=314						
X37A				S	Sn	11 34 24.2	+0.4
	baz=314						
U38A	Gravette	2.58	85	P	Pn	11 33 55.4	+0.4
	baz=267						
U38A				S	Sn	11 34 27.7	+0.8
	baz=267						
WTFS	Witchita Falls	2.60	197	IAmb_Lg		11 34 42.4	
	comp=Z,18nm,0.7s						
KSU1	Kansas State U	2.93	15	IAmb_Lg		11 34 51.5	
	comp=Z,28nm,0.8s						
KSU1	Kansas State U	2.93	15	P	Pn	11 33 60.0	+0.2
	baz=195						
HHAR	Hobbs	2.94	89	P	Pn	11 33 59.3	-0.6
	baz=271						
HHAR				S	Sn	11 34 36.9	+1.2
	baz=271						
Z35A	Perchaven, San	2.94	175	P	Pn	11 34 00.3	+0.3
	baz=355						
Z35A				S	Sn	11 34 36.4	+0.6
	baz=355						
CBKS	Cedar Bluff	3.07	327	P	Pn	11 34 01.7	-0.1
	baz=145						
FW03	Perrin-Whitt E	3.25	187	IAmb_Lg		11 34 59.2	
	comp=Z,17nm,0.7s						
FW06	Azle	3.29	180	IAmb_Lg		11 35 05.9	
	comp=Z,16nm,0.9s						
FW07	Weatherford	3.56	183	IAmb_Lg		11 35 10.3	
	comp=Z,15nm,0.8s						
AMTX	Amarillo	3.62	249	IAmb_Lg		11 35 13.6	
	comp=Z,55nm,0.7s						
AMTX	Amarillo	3.62	249	P	Pn	11 34 09.8	+0.5
	baz=66						
S39A	Bolivar	3.69	66	IAmb_Lg		11 35 14.3	
	comp=Z,63nm,0.9s						
MIAR	Mount Ida	3.69	117	IAmb_Lg		11 35 12.9	
	comp=Z,28nm,0.8s						
FW16	Waxahatchie	3.82	171	IAmb_Lg		11 35 16.3	
	comp=Z,29nm,0.7s						
FW14	Alvarado	3.87	175	IAmb_Lg		11 35 21.5	
	comp=Z,18nm,0.7s						
FW13	Cleburne	3.91	178	IAmb_Lg		11 35 21.3	
	comp=Z,14nm,0.8s						
WHAR	Wooly Hollow	4.41	101	IAmb_Lg		11 35 40.7	
	comp=Z,20nm,0.8s						
WLAR	White Oak Lake	4.48	124	IAmb_Lg		11 35 46.6	
	comp=Z,23nm,0.7s						
UALR	University of	4.52	108	IAmb_Lg		11 35 41.4	
	comp=Z,19nm,0.8s						
POST	Post	4.54	226	IAmb_Lg		11 35 43.4	
	comp=Z,32nm,0.9s						
P38A	Dawn	4.63	42	IAmb_Lg		11 35 41.7	
	comp=Z,29nm,0.8s						
MSTX	Muleshoe	4.84	243	IAmb_Lg		11 35 53.5	
	comp=Z,18nm,0.8s						
NATX	Nacogdoches	5.11	151	IAmb_Lg		11 36 05.3	
	comp=Z,22nm,0.9s						
BGNE	Belgrade	5.15	355	IAmb_Lg		11 36 03.4	
	comp=Z,36nm,0.8s						
LCAR	Lake Charles	5.20	90	IAmb_Lg		11 36 05.2	
	comp=Z,22nm,0.9s						
T42A	Van Buren	5.27	80	IAmb_Lg		11 36 06.9	
	comp=Z,57nm,1.3s						
CCM	Cathedral Cave	5.36	69	IAmb_Lg		11 36 04.3	
	comp=Z,34nm,0.8s						
P40A	Paris	5.45	52	IAmb_Lg		11 36 09.1	
	comp=Z,55nm,1.0s						
435B	Jarrell	5.47	180	IAmb_Lg		11 36 14.5	
	comp=Z,18nm,0.7s						
T25A	Trinidad	5.56	281	IAmb_Lg		11 36 24.7	
	comp=Z,19nm,0.8s						
N38A	Joes South For	5.66	36	IAmb_Lg		11 36 20.2	
	comp=Z,44nm,0.7s						
L34A	Svendsen Farm,	5.77	9	IAmb_Lg		11 36 31.0	
	comp=Z,28nm,0.8s						
OGNE	Ogallala	5.83	325	IAmb_Lg		11 36 27.6	
	comp=Z,47nm,0.8s						
ODSA	Odessa	5.84	226	IAmb_Lg		11 36 32.5	
	comp=Z,12nm,0.9s						
JCT	Junction City	6.07	198	IAmb_Lg		11 36 37.7	
	comp=Z,23nm,0.8s						
CGM3	Cape Girardeau	6.44	78	IAmb_Lg		11 36 37.6	
	comp=Z,31nm,0.9s						
Q24A	Divide	6.58	296	IAmb_Lg		11 36 47.1	
	comp=Z,16nm,0.8s						
BRIGG	Briggsdale	6.82	311	IAmb_Lg		11 36 53.6	
	comp=Z,29nm,0.9s						
SIUC	Southern Illin	6.84	75	IAmb_Lg		11 37 01.2	
	comp=Z,41nm,0.9s						
P43A	Skaggs, Pawnee	7.20	60	IAmb_Lg		11 37 06.4	
	comp=Z,36nm,0.8s						
ISCO	Idaho Springs	7.25	301	IAmb_Lg		11 37 08.0	
	comp=Z,10nm,0.9s						
K38A	Parkersburg	7.38	29	IAmb_Lg		11 37 16.6	
	comp=Z,35nm,1.1s						
L40A	Anamosa	7.61	39	IAmb_Lg		11 37 12.7	
	comp=Z,15nm,0.9s						
PHWY	Pilot Hill	7.94	312	IAmb_Lg		11 37 29.7	
	comp=Z,11nm,0.7s						
Y22D	IRIS PASSCAL I	7.96	257	IAmb_Lg		11 37 46.5	
	comp=Z,28nm,0.8s						
N23A	Red Feather La	8.02	308	IAmb_Lg		11 37 40.4	
	comp=Z,20nm,0.7s						
O44A	Mansfield	8.15	59	IAmb_Lg		11 37 36.0	
	comp=Z,19nm,0.8s						
SUSD	Miller	8.23	353	IAmb_Lg		11 37 37.1	
	comp=Z,16nm,0.8s						
I37A	Lemond, Waseca	8.37	21	IAmb_Lg		11 37 43.4	
	comp=Z,14nm,0.9s						
L42A	Oliver, Polo	8.40	45	IAmb_Lg		11 37 45.8	
	comp=Z,21nm,0.8s						
JFWS	Jewell Farm	8.72	38	IAmb_Lg		11 37 49.2	
	comp=Z,18nm,0.8s						

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*NOU **25** 11:50:33.6, 37.°70S×178.°01E, h22^{km}, MLv3.5/6, Off E. Coast of N. Island, N.Z.*

*WEL **25** 11:50:38.5±0.3, 38°S±3°×17°8E±°, h28^{km}±2^{km}, M2.9/38, ML3.2/50, MLv2.9/38, Error ellipse: s-maj=0.0km s-min=0.0km az=33.2, confirmed*

ISC 25 11:50:38.9±1.0**, 37.°79S**±0.°03×**177.°54E**±0.°03**, h32**^{km}±8^{km}**, n91,** σ1^{s}**11**/102**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	0.19	80	P	Pn	11 50 45.7	+0.2
HAZ				S	Sb	11 50 51.4	+1.8
RUGZ	Raukumara Rang	0.21	149	P	Pn	11 50 45.8	-0.1
RUGZ				S	Sb	11 50 51.5	+1.4
WIZ	White Island	0.38	313	P	Pn	11 50 48.0	-0.1
WIZ				S	Sn	11 50 55.6	+1.1
WSRZ	White Island S	0.40	313	P	Pn	11 50 49.9	+1.5
WSRZ				S	Sn	11 50 56.3	+1.5
PKGZ	Pakihiroa	0.43	103	P	Pb	11 50 47.9	-0.5
WHRZ	Whale Island	0.45	261	P	Pn	11 50 49.6	+0.4
WHRZ				S	Sn	11 50 58.0	+1.7
TWGZ	Tauwhareparae	0.52	138	P	Pn	11 50 50.2	+0.1
MWZ	Matawai	0.55	181	P	Pb	11 50 50.0	-0.1
MWZ				S	Sn	11 50 58.8	+0.2
URZ	Urewera	0.58	216	P	Pb	11 50 50.7	0.0
URZ	Urewera	0.58	216	P	Pb	11 50 50.8	0.0
PUZ	Puketiti	0.63	117	P	Pn	11 50 51.4	-0.2
PUZ				S	Sn	11 51 01.8	+1.1
MXZ	Matakaoa Point	0.65	70	P	Pb	11 50 50.8	-1.0
WMGZ	Waiomatatini S	0.69	93	P	Pn	11 50 52.3	-0.2
WMGZ				S	Sn	11 51 04.2	+2.1
TKGZ	Te Karaka	0.69	160	P	Pn	11 50 52.9	+0.5
TKGZ				S	Sn	11 51 05.8	+3.7
EDRZ	Edgecumbe	0.71	243	P	Pn	11 50 52.9	+0.1
EDRZ				S	Sn	11 51 03.7	+1.1
RAGZ	Rawiri	0.71	188	P	Pn	11 50 53.0	+0.2
MARZ	Manawahe	0.71	254	P	Pb	11 50 52.5	-0.4
MARZ				S	Sn	11 51 03.1	+0.5
CNGZ	Carnagh Statio	0.87	143	P	Pn	11 50 54.9	0.0
MUGZ	Murupara	0.92	221	P	Pn	11 50 55.4	-0.2
RIGZ	Rimuhau	0.93	169	P	Pn	11 50 55.7	-0.1
TARZ	Mount Tarawera	0.93	241	P	Pn	11 50 56.0	+0.2
RTZ	Ruatahuna	0.94	208	P	Pn	11 50 55.4	-0.5
LIRZ	Lichensteins R	0.94	256	P	Pn	11 50 56.1	+0.3
RRRZ	Republican Roa	0.98	236	P	Pn	11 50 56.4	-0.1
SNGZ	Shannon Statio	1.00	189	P	Pb	11 50 57.5	-0.3
TGRZ	Tauranga	1.02	273	P	Pn	11 50 56.4	-0.5
KARZ	Kaharoa	1.05	257	P	Pn	11 50 57.3	-0.1
PRRZ	Plateau Road	1.15	232	P	Pn	11 50 58.6	-0.2
MYRZ	Mayor Island	1.15	296	P	Pn	11 50 58.2	-0.5
HRRZ	Handcock Road	1.16	238	P	Pn	11 50 59.2	+0.3
RAHZ	Arahi	1.18	198	P	Pn	11 50 59.5	+0.3
MTHZ	Maungataniwha	1.20	207	P	Pn	11 50 59.0	-0.4
ALRZ	Allen Road	1.22	230	P	Pn	11 50 59.6	-0.2
WHHZ	Waihua	1.31	191	P	Pb	11 51 02.8	-0.1
MRHZ	Matea Rd	1.37	220	P	Pn	11 51 01.4	-0.4
MHGZ	Mahia Peninsul	1.39	168	P	Pn	11 51 01.5	-0.6
NMHZ	Naumai	1.43	204	P	Pn	11 51 03.0	+0.4
ARHZ	Aropaoanui	1.53	196	P	Pn	11 51 04.4	+0.4
BKZ	Black Stump Fm	1.60	211	P	Pn	11 51 05.5	+0.5
BKZ	Black Stump Fm	1.60	211	P	Pn	11 51 04.5	-0.5
TOZ	Tahuroa Road	1.62	271	P	Pn	11 51 04.6	-0.5
TLZ	Tolley Road	1.67	251	P	Pn	11 51 05.7	-0.2
RITZ	Rihia Road	1.78	228	P	Pn	11 51 07.7	+0.3
MCHZ	McNeill Hill	1.78	202	P	Pn	11 51 08.3	+0.9
KUZ	Kuaotunu	1.79	305	P	Pn	11 51 06.3	-1.2
KUZ	Kuaotunu	1.79	305	P	Pn	11 51 06.3	-1.2
KWHZ	Kaweka Forest	1.85	208	P	Pn	11 51 08.8	+0.3
TMVZ	Te Maari	1.96	227	P	Pn	11 51 10.1	+0.1
NTVZ	North Tongarir	1.96	228	P	Pn	11 51 10.5	+0.4
ETVZ	East Tongariro	1.97	226	P	Pn	11 51 10.2	0.0
OTVZ	Oturere	2.01	226	P	Pn	11 51 10.9	+0.1
BHHZ	Black Hill Sta	2.06	214	P	Pn	11 51 11.1	-0.2
NGZ	Ngauruhoe	2.06	227	P	Pn	11 51 12.7	+1.3
KAHZ	Kahuranaki	2.07	194	P	Pn	11 51 10.7	-0.8
FWVZ	Far West T-bar	2.14	226	P	Pn	11 51 14.0	+1.4
MOVZ	Moawhango	2.14	220	P	Pn	11 51 11.9	-0.5
WIAZ	Waiheke Island	2.16	297	P	Pn	11 51 12.2	-0.5
WNVZ	Wahianoa	2.16	224	P	Pn	11 51 13.6	+0.8
TRVZ	Turoa	2.17	225	P	Pn	11 51 14.2	+1.2
HIZ	Hauiti	2.24	250	P	Pn	11 51 14.3	+0.6
HIZ	Hauiti	2.24	250	P	Pn	11 51 14.3	+0.6
ETAZ	East Tamaki Re	2.24	291	P	Pn	11 51 13.7	-0.1
GRZ	Great Barrier	2.27	312	P	Pn	11 51 13.2	-0.9
MTVZ	Mangateitei	2.27	225	P	Pn	11 51 15.5	+1.2
PXZ	Pawanui	2.30	193	P	Pn	11 51 12.9	-1.6
MBAZ	Motutapu North	2.34	295	P	Pn	11 51 15.0	-0.1
PNHZ	Pukenui	2.37	206	P	Pn	11 51 14.8	-0.8
WPHZ	Waipukurau	2.43	200	P	Pn	11 51 15.4	-1.0
VRZ	Vera Road	2.56	238	P	Pn	11 51 19.2	+1.1
PRHZ	Porangahau	2.57	196	P	Pn	11 51 16.6	-1.7
RVAZ	Riverhead Bore	2.57	292	P	Pn	11 51 18.6	+0.3
TSZ	Takapari Road	2.58	208	P	Pn	11 51 17.6	-0.9
DVHZ	Dannevirke	2.73	203	P	Pn	11 51 18.4	-2.1
WAZ	Wanganui	2.80	225	P	Pn	11 51 22.6	+1.1
POWZ	Post Office Ro	2.94	207	P	Pn	11 51 22.8	-0.6
LREZ	Lake Rotokare	2.97	235	P	Pn	11 51 25.0	+1.2
PRWZ	Pori Road	3.02	203	P	Pn	11 51 23.3	-1.2
BFZ	Birch Farm	3.06	199	P	Pn	11 51 23.1	-1.9
BFZ	Birch Farm	3.06	199	P	Pn	11 51 22.9	-2.1
NEZ	North Egmont	3.08	240	P	Pn	11 51 28.1	+2.7
WCZ	Waipu Caves	3.16	305	P	Pn	11 51 26.2	-0.2
TIWZ	Tintock	3.25	203	P	Pn	11 51 25.7	-1.9
HOWZ	Holdsworth Sta	3.48	206	P	Pn	11 51 29.2	-1.6
OGWZ	Otaki Gorge	3.54	211	P	Pn	11 51 29.5	-2.1
TMWZ	Te Maipa	3.55	201	P	Pn	11 51 29.1	-2.7
KIW	Kapiti Island	3.69	213	P	Pn	11 51 31.5	-2.1
MTW	Mount Morrison	3.72	205	P	Pn	11 51 33.0	-1.1
CAW	Cannon Point	3.83	209	P	Pn	11 51 32.7	-2.8
PAWZ	Paruwai Farm	3.94	204	P	Pn	11 51 35.4	-1.8
OUZ	Omahuta	4.08	308	P	Pn	11 51 38.8	-0.3
OUZ	Omahuta	4.08	308	P	Pn	11 51 39.3	+0.3

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*IDC **25** 12:18:49.1±1.3, 16.°51N×98.°22W, h0^{km}, mb3.7/7, mbtmp3.5/10, ML3.2/3, MS3.3/5, Error ellipse: s-maj=27.8km s-min=15.2km az=22.0*

*MEX **25** 12:18:52.6±0.3, 16.°45N×98.°26W, h31^{km}±3^{km}, MD4.5*

ISC 25 12:18:51.4±0.8**, 16.°49N**±0.°03×**98.°24W**±0.°02**, h26**^{km}±6^{km}**, n93,** σ1^{s}**77**/155**, mb3.5**/7**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.15	133	*i* P	Pb	12 18 56.9	+0.3
PNIG				*i* S	Sb	12 19 00.5	+0.4
YOIG	Yosondua	0.76	61	*i* P	Pb	12 19 05.7	-0.4
YOIG				*e*S	Sb	12 19 15.6	-0.6
MGIG	Malinaltepec	0.83	333	*e*P	Pn	12 19 06.6	-1.0
MGIG				*e*S	Sb	12 19 17.6	-0.4
TXIG	Tlaxiaco	0.88	31	*e*P	Pn	12 19 07.7	-0.7
TXIG				*i* S	Sb	12 19 19.1	-0.6
TLIG	Tlapa	1.11	344	*e*P	Pn	12 19 11.2	-0.2
TLIG				*e*S	Sn	12 19 25.6	-0.3
PEIG	Puerto Escondi	1.16	115	*e*P	Pn	12 19 10.9	-1.1
PEIG				*e*S	Sn	12 19 24.5	-2.5
HMTT	Tlapaneco	1.33	347	*e*P	Pn	12 19 13.9	-0.5
HMTT				*e*S	Sn	12 19 29.9	-1.5
HLIG	Huajuapan de L	1.39	17	*e*P	Pn	12 19 15.5	+0.1
HLIG				*e*S	Sn	12 19 32.6	-0.4
FTIG	Fresnillo de T	1.41	4	*e*P	Pn	12 19 15.8	+0.3
FTIG				*e*S	Sn	12 19 32.8	-0.5
DAIG	Los Arroyos	1.45	291	*e*P	Pn	12 19 15.1	-0.8
DAIG				*e*S	Sn	12 19 32.1	-2.0
VHO	Vista Hermosa	1.55	68	*e*P	Pn	12 19 18.1	+0.6
VHO				*e*S	Sn	12 19 33.9	-3.1
OXBJ	Oaxaca	1.56	68	*e*P	Pn	12 19 17.9	+0.3
OXBJ				*e*S	Sn	12 19 35.6	-1.5
VNTA	La Mica	1.57	286	*i* P	Pn	12 19 16.5	-1.1
VNTA				*e*S	Sn	12 19 34.4	-2.6
ACP2	Acapulco	1.62	284	*e*P	Pn	12 19 18.2	-0.1
ACP2				*e*S	Sn	12 19 35.8	-2.6
PANG	Puerto Angel	1.89	116	*e*P	Pn	12 19 20.9	-1.0
PANG				*e*S	Sn	12 19 41.6	-3.3
MEIG	Mezcala	1.94	317	*e*P	Pn	12 19 24.2	+1.4
MEIG				*e*S	Sn	12 19 45.2	-1.2
TOIG	Toxpalan	1.95	35	*e*P	Pn	12 19 22.9	-0.1
TOIG				*e*S	Sn	12 19 46.3	-0.3
CAIG	El Cayaco	2.02	286	*e*P	Pn	12 19 23.5	-0.3
CAIG				*e*S	Sn	12 19 46.0	-2.1
TPIG	Tehuac#an	2.09	24	*e*P	Pn	12 19 25.0	+0.1
TPIG				*e*S	Sn	12 19 49.4	-0.9
HUIG	Huatulco	2.17	109	*e*P	Pn	12 19 25.3	-0.5
HUIG				*e*S	Sn	12 19 50.0	-1.9
ATYC	Atoyac	2.22	289	*e*P	Pn	12 19 26.1	-0.4
ATYC				*e*S	Sn	12 19 51.2	-1.9
PLIG	Platanillo	2.24	328	*e*P	Pn	12 19 26.3	-0.6
PLIG				*e*S	Sb	12 20 00.6	+2.0
YAIG	Yautepec	2.48	342	*e*P	Pn	12 19 32.0	+1.7
YAIG				*e*S	Sn	12 19 59.5	-0.4
OZST	Orizaba	2.60	25	*e*P	Pn	12 19 34.4	+2.5
OZST				*e*S	Sn	12 20 01.3	-1.4
NEUV	Arroyo Zacate	2.63	62	*e*P	Pn	12 19 32.4	+0.2
NEUV				*e*S	Sn	12 20 03.3	+0.1
AMVM	AMECAMECA	2.67	349	*e*P	Pn	12 19 32.3	-0.8
AMVM				*e*S	Sn	12 20 04.0	-0.8
ARIG	Puente Sto Nin	2.69	312	*e*P	Pn	12 19 32.1	-0.9
ARIG				*e*S	Sn	12 20 05.0	+0.3
MAVM	Malinalco, Edo	2.73	334	*e*P	Pn	12 19 34.6	+0.9
MAVM				*e*S	Sn	12 20 08.8	+2.8
MPVM	San Francisco	2.79	345	*e*P	Pn	12 19 36.5	+1.9
MPVM				*e*S	Sn	12 20 08.8	+1.2
TLVM	San Miguel Top	2.84	342	*e*P	Pb	12 19 39.7	-1.9
TLVM				*e*S	Sn	12 20 07.9	-1.0
XCVM	Xochimilco	2.87	343	*e*P	Pb	12 19 41.0	-1.1
XCVM				*e*S	Sn	12 20 11.6	+2.0
THVM	De Xico	2.89	346	*e*P	Pn	12 19 36.3	+0.3
THVM				*e*S	Sn	12 20 08.4	-1.6
AOVM	Tlapan	2.94	340	*e*P	Pn	12 19 38.8	+1.8
AOVM				*e*S	Sn	12 20 11.0	-0.7
UNM	Universidad Na	2.96	343	*e*P	Pn	12 19 36.9	0.0
UNM				*e*P	Pb	12 19 37.5	-6.1
UNM				*e*S	Sn	12 20 10.1	-1.7
UNM				*e*S	Sb	12 20 11.2	-8.2
INVM	La Marquesa	2.99	339	*e*P	Pn	12 19 36.5	-0.9
INVM				*e*S	Sn	12 20 11.4	-1.2
TXVM	Universitario	2.99	348	*e*P	Pn	12 19 37.0	-0.5
TXVM				*e*S	Sn	12 20 11.0	-1.7
BJVM	Benito Juarez	3.00	343	*e*S	Sn	12 20 11.6	-1.2
CJVM	Cuajimalpa	3.02	341	*e*P	Pn	12 19 38.3	+0.5
CJVM				*e*S	Sn	12 20 12.7	-0.6
PBVM	Pinon	3.04	345	*e*P	Pn	12 19 39.7	+1.9
PBVM				*e*S	Sb	12 20 22.5	+1.0
MHVM	Bosque de Chap	3.04	342	*e*P	Pn	12 19 38.5	+0.4
MHVM				*e*S	Sn	12 20 11.7	-2.1
JAUV	Jalcomulco	3.17	25	*e*P	Pn	12 19 39.5	-0.1
JAUV				*e*S	Sn	12 20 15.7	-1.0
PTVM	Pico Tres Padr	3.19	345	*e*P	Pn	12 19 39.3	-0.9
PTVM				*e*S	Sn	12 20 17.8	+0.3
AZVM	Cuida Lopez Ma	3.23	342	*e*P	Pn	12 19 34.3	-6.4
AZVM				*e*S	Sn	12 20 16.0	-2.6
CMIG	Matias Romero	3.27	79	Pn	Pn	12 19 40.8	-0.2
	6.3nm,0.3s,baz=263,slow=12,SNR=75						
CMIG				Pg	Pb	12 19 48.9	+0.2
	15nm,0.3s,baz=263,slow=14,SNR=21						
CMIG				Sn	Sn	12 20 18.0	-1.1
	32nm,0.3s,baz=29,slow=12,SNR=4.0						
CMIG				Lg	Lg	12 20 32.1	
	113nm,0.3s,baz=352,slow=14,SNR=15						
CMIG				LR	LR	12 21 18.6	
	comp=Z,206nm,19.0s,baz=200,slow=46 13nm,0.3s						
CMIG	Matias Romero	3.27	79	*i* P	Pn	12 19 40.8	-0.2
CMIG				*e*S	Sn	12 20 19.3	+0.2
ZIIG	Zihuatanejo	3.28	290	*e*P	Pn	12 19 41.6	+0.5
ZIIG				*e*S	Sn	12 20 23.6	+4.3
VTVM	Tizayuca	3.30	351	*e*P	Pb	12 19 49.8	+0.4
VTVM				*e*S	Sn	12 20 22.8	+2.6
ZUVM	ZUMPANGO	3.41	347	*e*P	Pn	12 19 43.2	0.0
ZUVM				*e*S	Sn	12 20 19.6	-3.3
ATVM	ATLACOMULCO	3.59	335	*e*P	Pn	12 19 45.6	-0.1
ATVM				*e*S	Sn	12 20 26.8	-0.6
PMUV	Sontecomapan	3.61	55	*e*P	Pn	12 19 44.5	-1.2
PMUV				*e*S	Sn	12 20 21.3	-6.2
CXUV	Coxquihui	3.71	9	*e*P	Pn	12 19 48.0	+0.9
CXUV				*e*S	Sn	12 20 29.2	-0.8
DEIG	Demacu	3.86	349	*e*P	Pn	12 19 50.0	+0.7
DEIG				*e*S	Sn	12 20 33.7	-0.3
TUIG	Tuzandepetl	3.96	67	*e*P	Pn	12 19 50.2	-0.2
MOIG	Morelia	4.23	319	*e*P	Pn	12 19 58.7	+4.3
MOIG				*e*S	Sn	12 20 42.3	-0.8
JRQG	Juriquilla Cam	4.68	334	*e*P	Pn	12 20 00.9	+0.3
JRQG				*e*S	Sn	12 20 55.3	+1.1
PCIG		4.89	99	*e*P	Pn	12 20 04.0	+0.7
PCIG				*e*S	Sn	12 20 54.8	-4.2
TGIG		4.91	86	*e*P	Pn	12 20 01.3	-2.4
TGIG				*e*S	Sn	12 20 58.5	-1.3
CTUV	Llano Grande	4.95	359	*e*P	Pn	12 20 04.7	+0.6
CTUV				*e*S	Sn	12 21 00.2	-0.4
MMIG	Aquila	5.19	291	*e*P	Pn	12 20 05.2	-2.2
MMIG				*e*S	Sn	12 21 04.6	-1.9
RPIG	Rio Verde	5.61	343	*e*S	Sn	12 21 14.8	-2.2
COIG	Colima	5.84	298	*e*P	Pn	12 20 16.8	+0.4
COIG				*e*S	Sn	12 21 22.9	+0.3
CCIG	Comitan	5.86	91	*e*P	Pn	12 20 15.5	-1.3
JUBC	Volcan de Coli	5.89	301	*e*P	Pn	12 20 16.4	-0.9
JUBC				*e*S	Sn	12 21 23.7	-0.5
EZ5V		5.90	301	*e*P	Pn	12 20 16.9	-0.5
EZ5V				*e*S	Sn	12 21 20.2	-4.2
MNGA	Volcan de Coli	5.91	301	*e*P	Pn	12 20 16.4	-1.1
MNGA				*e*S	Sn	12 21 24.0	-0.6
INCO	Volcan de Coli	5.93	301	*e*P	Pn	12 20 18.3	+0.4
INCO				*e*S	Sn	12 21 23.8	-1.4
PATR	El Naranjo	5.94	102	*e*P	Pn	12 20 19.0	+1.1
PATR				*e*S	Sn	12 21 23.4	-1.9
SOMAC	Volcano de Col	5.95	301	*e*P	Pn	12 20 19.8	+1.7
SOMAC				*e*S	Sn	12 21 23.2	-2.5
PAVE	Pavencul	5.98	102	*e*P	Pn	12 20 18.2	-0.2
PAVE				*e*S	Sn	12 21 24.2	-2.0
CDAR	Ciudad de Arme	6.01	295	*e*P	Pn	12 20 21.5	+2.8
CDAR				*e*S	Sn	12 21 24.3	-2.5
CHUJ	Union Juarez	6.07	102	*e*P	Pn	12 20 20.9	+1.2
CHUJ				*e*S	Sn	12 21 26.7	-1.7
R15V		6.08	297	*e*P	Pn	12 20 19.0	-0.8
R15V				*e*S	Sn	12 21 28.8	+0.2
GTIG	Gomez Farias	6.60	353	*e*P	Pn	12 20 32.6	+5.8
GTIG				*e*S	Sn	12 21 38.3	-2.9
CIHU	Emiliano Zapat	6.77	295	*e*P	Pn	12 20 30.1	+1.0
CIHU				*e*S	Sn	12 21 44.0	-1.4
CJM	Chamela	7.13	296	*e*P	Pn	12 20 36.1	+2.1
CJM				*e*S	Sn	12 21 53.3	-1.0
ZAIG	Zacatecas	7.46	328	*e*	Pb	12 20 49.8	-10
LNIG	Linares	8.44	352	*e*	Pb	12 21 22.1	+5.3
H06E1	SOCORRO T-PHAS	12.30	283	T	T	12 34 10.3	
LPIG	La Paz	13.61	306	LR	LR	12 27 33.4	
	comp=Z,77nm,20.2s,baz=80,slow=38						
TXAR	Lajitas Array	13.72	340	Pn	P	12 22 08.5	-4.2
	baz=162,slow=16,SNR=2.9						
TXAR				LR	LR	12 28 03.2	
	comp=Z,122nm,19.7s,baz=146,slow=40 0.1nm,0.6s						
ANMO	Albuquerque	19.79	340	P	Pn	12 23 22.4	+0.7
	0.1nm,0.3s,baz=257,slow=7.8,SNR=4.4 0.8nm,0.7s						
PDAR	Pinedale Array	27.92	342	P	P	12 24 41.3	+1.6
	0.4nm,0.8s,baz=160,slow=11,SNR=2.9 0.4nm,0.8s						
SDV	Santo Domingo	27.95	102	P	P	12 24 42.1	+1.9
	2.6nm,0.8s,baz=274,slow=3.9,SNR=4.3 2.6nm,0.8s						
NVAR	Mina Array Bea	28.07	325	P	P	12 24 43.1	+2.1
	0.7nm,0.8s,baz=140,slow=7.1,SNR=4.8 0.7nm,0.8s						
YKA	Yellowknife Ar	47.37	350	P	P	12 27 23.4	+0.4
	0.4nm,0.7s,baz=157,slow=7.6,SNR=5.5 0.4nm,0.7s						
H03N2	Juan Fernandez	52.96	160	T	T	13 24 59.3	
	baz=337,slow=77,SNR=361						
H03N1	Juan Fernandez	52.97	160	T	T	13 25 00.5	
	baz=337,slow=77,SNR=664						
H03N3	Juan Fernandez	52.98	160	T	T	13 24 59.4	
	baz=337,slow=77,SNR=642						
INK	Inuvik	56.42	345	P	P	12 28 31.6	+1.3
	1.1nm,0.8s,baz=100,slow=6.7,SNR=5.0						

	1.1nm,0.8s						
ILAR	Eielson Array	58.23	338	P	P	12 28 44.8	+1.6
	0.3nm,0.8s,baz=147,slow=5.4,SNR=5.0						
	0.3nm,0.8s						
PLCA	Paso Flores	62.47	157	P	P	12 29 14.4	+1.8
	1.2nm,0.8s,baz=18,slow=3.2,SNR=3.8						
	1.2nm,0.8s						
BBTS	Babate	78.18	78	LR	LR	12 59 23.5	
	comp=Z,54nm,21.7s,baz=344,slow=31						
TORD	Torodi Ar. Bea	95.59	75	LR	LR	13 09 33.7	
	comp=Z,34nm,21.8s,baz=24,slow=32						

*SOME **25** 12:24:28.1, 39°.22N×73°.75E, h10^{km}*
*KRNET **25** 12:24:32.3±0.1, 39°.12N×74°.09E, mb3.5*
*NNC **25** 12:24:35.4±3.6, 39°.39N×74°.21E, h0^{km}, mb3.7, mpv3.4,*
Error ellipse: s-maj=26.4km s-min=13.4km az=175.0
ISC 25 12:24:35.1±1.7, **39°.37N**±0°.06×**73°.99E**±0°.05, **h6**^{km}±10^{km},
n28, σ**1^s.07**/37, **18C-9D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	1.48	322	⇑eP	Pg	12 25 04.2	+0.8
	baz=25						
OHH				⇑eS	Sg	12 25 27.5	+4.9
	baz=25						
DRK	Karamyk	1.70	274	⇑eP	Pb	12 25 05.7	-1.2
	baz=82						
DRK				⇑eS	Sg	12 25 30.6	+0.9
	baz=82						
ARLS	Aral	2.50	6	⇓eP	Pb	12 25 19.1	-1.4
	baz=4.0						
ARLS				⇓eS	Sb	12 25 53.2	+1.6
	baz=4.0						
BTK	Batken	2.54	287	⇑eP	Pb	12 25 18.5	-2.6
	baz=91						
BTK				⇑eS	Sb	12 25 52.3	-0.4
	baz=91						
NRN	Naryn	2.57	36	⇓iP	Pb	12 25 18.8	-2.9
	baz=31						
NRN				⇓iS	Sb	12 25 52.8	-0.9
	baz=31						
AML	Almayashu	2.77	355	⇓iP	Pb	12 25 23.4	-1.8
	baz=54						
AML				⇓iS	Sb	12 26 00.7	+1.2
	baz=54						
ARK	Arkit	2.88	328	⇑iP	Pb	12 25 24.6	-2.2
	baz=29						
ARK				⇑iS	Sb	12 26 02.8	+0.5
	baz=29						
GAR	Garm	2.88	264	⇑iP	Pn	12 25 22.0	+0.4
	baz=69						
GAR				⇑iS	Sn	12 25 58.4	+1.8
	baz=69						
UCH	Uchtor	2.88	8	⇑eP	Pb	12 25 24.6	-2.5
	baz=6.0						
UCH				⇑eS	Sb	12 26 02.7	-0.1
	baz=6.0						
TRKS	Terek-Say	3.06	316	⇑eP	Pn	12 25 26.0	+1.8
	baz=17						
TRKS				⇑iS	Sn	12 26 05.4	+4.2
	baz=17						
AAK	Ala-Archa	3.29	6	⇓eP	Pb	12 25 30.2	-3.7
	baz=5.0						
AAK				⇓eS	Sb	12 26 12.4	-1.8
	baz=5.0						
MNAS	Manas	3.31	341	⇑iP	Pb	12 25 30.9	-3.4
	baz=41						
MNAS				⇑iS	Sb	12 26 13.4	-1.5
	baz=41						
MRKS	Merke	3.42	351	Pg	Pb	12 25 35.0	-1.1
	1.2nm,0.2s						
MRKS				Lg	Lg	12 26 22.7	
	4.8nm,0.3s						
MRKS	Merke	3.42	351	ePg	Pb	12 25 35.0	-1.1
	1.2nm,0.2s						
MRKS				eLg	Lg	12 26 22.7	
	4.8nm,0.3s						
IUG	Iuzhnay	4.09	314	Pg	Pb	12 25 42.9	-4.6
	7.6nm,0.2s						
IUG				Lg	Lg	12 26 36.0	
	32nm,0.4s						
IUG	Iuzhnay	4.09	314	ePg	Pb	12 25 42.9	-4.6
	7.6nm,0.2s						
IUG				eLg	Lg	12 26 36.0	
	32nm,0.4s						
DGS	Degeres	4.09	19	Pg	Pb	12 25 47.9	+0.3
	3.6nm,0.5s						
DGS				Lg	Lg	12 26 44.4	
	7.0nm,0.7s						
DGS	Degeres	4.09	19	ePg	Pb	12 25 47.9	+0.3
	3.6nm,0.5s						
DGS				eLg	Lg	12 26 44.4	
	7.0nm,0.7s						
IZV	Izvestkoviy	4.16	28	Pg	Pb	12 25 49.8	+1.0
	1.4nm,0.3s						
IZV				Lg	Lg	12 26 47.3	
	13nm,0.5s						
IZV	Izvestkoviy	4.16	28	ePg	Pb	12 25 49.8	+1.0
	1.4nm,0.3s						
IZV				eLg	Lg	12 26 47.3	
	13nm,0.5s						
TNSS	Tian-Shan	4.29	30	Pg	Pb	12 25 51.6	+0.5
	3.8nm,0.5s						
TNSS				Lg	Lg	12 26 51.3	
	6.5nm,1.0s						
TNSS	Tian-Shan	4.29	30	ePg	Pb	12 25 51.6	+0.5
	3.8nm,0.5s						
TNSS				eLg	Lg	12 26 50.3	
	6.5nm,1.0s						
KOTS	Kotyrbulak	4.52	30	Pg	Pb	12 25 56.7	+1.8
	2.7nm,0.2s						
KOTS				Lg	Lg	12 26 59.1	
	18nm,0.6s						
KOTS	Kotyrbulak	4.52	30	ePg	Pb	12 25 56.7	+1.8
	2.7nm,0.2s						
KOTS				eLg	Lg	12 26 59.0	
	18nm,0.6s						
KK31	Karatay Array	4.56	326	⇓Pn	Pb	12 25 50.3	-5.1
	0.5nm,0.3s,baz=0.0,slow=0.1,SNR=12						
KK31				Pg	Pg	12 26 03.4	+1.0
	0.9nm,0.3s,baz=140,slow=15,SNR=5.3						
KK31				⇑Sn	Sn	12 26 42.7	+4.8
	1.6nm,0.4s						
KK31				⇑Lg	Lg	12 27 05.6	
	3.0nm,0.5s,baz=141,slow=28,SNR=4.9						
ARXS	Arharly	5.62	29	Pg	Pb	12 26 15.7	+2.1
	3.8nm,0.4s						
ARXS				Lg	Lg	12 27 32.1	
	4.1nm,0.7s						
ARXS	Arharly	5.62	29	ePg	Pb	12 26 15.7	+2.1
	3.8nm,0.4s						
ARXS				eLg	Lg	12 27 32.1	
	4.1nm,0.7s						
BLB	Baldybastay	5.79	34	Pg	Pb	12 26 17.4	+0.9
	4.6nm,0.4s						
BLB				Lg	Lg	12 27 35.0	
	2.9nm,0.6s						

*IDC **25** 12:35:25.8±1.5, 38°.95N×74°.10E, h0^{km}, mb3.6/4,*
mbtmp3.4/6, ML2.7/2, MS3.7/2, Error ellipse: s-maj=33.9km
s-min=27.1km az=149.0
*KRNET **25** 12:35:27.4±0.1, 39°.05N×73°.89E, mb3.6*
*SOME **25** 12:35:29.6, 39°.25N×74°.20E, h15^{km}*
*NNC **25** 12:35:34.5±2.1, 39°.46N×74°.27E, h0^{km}, mb3.8, mpv3.4,*
Error ellipse: s-maj=15.5km s-min=8.1km az=171.0
ISC 25 12:35:27.7±0.9, **39°.26N**±0°.05×**74°.15E**±0°.04, **h10**^{km}, **n48**,
σ**1^s.56**/59, **mb3.7**/5, **17C-14D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	1.64	321	⇑eP	Pg	12 35 59.1	-0.1
	baz=30						
OHH				⇑iS	Sg	12 36 22.5	+1.9
	baz=30						
DRK	Karamyk	1.83	278	⇓eP	Pn	12 35 59.1	-0.5
	baz=86						
DRK				⇓eS	Sn	12 36 21.8	-1.2
	baz=86						
NRN	Naryn	2.59	33	⇑iP	Pg	12 36 16.2	-1.2
	baz=33						
NRN				⇑iS	Sg	12 36 52.2	+1.1
	baz=33						
ARLS	Aral	2.60	3	⇓eP	Pg	12 36 15.7	-1.9
	baz=7.0						
ARLS				⇓iS	Sg	12 36 51.3	-0.1
	baz=7.0						
BTK	Batken	2.69	288	⇓eP	Pn	12 36 12.6	+1.4
	baz=94						
BTK				⇓iS	Sn	12 36 45.6	+1.7
	baz=94						
AML	Almayashu	2.89	353	P	Pb	12 36 19.2	-0.5
	SNR=36						
AML	Almayashu	2.89	353	⇓eP	Pb	12 36 19.5	-0.1
	baz=57						
AML				⇓iS	Sg	12 36 57.9	-2.7
	baz=57						
UCH	Uchtor	2.98	5	P	Pb	12 36 20.6	-0.6
	SNR=71						
UCH	Uchtor	2.98	5	⇑eP	Pb	12 36 21.4	+0.2
	baz=8.0						
UCH				⇑eS	Sg	12 37 01.0	-2.5
	baz=8.0						
GAR	Garm	2.99	266	⇑eP	Pn	12 36 15.2	-0.1
	baz=70						
GAR				⇑iS	Sn	12 36 50.3	-1.0
	baz=70						
ARK	Arkit	3.03	327	⇑iP	Pb	12 36 20.0	-1.9
	baz=32						
ARK				⇑iS	Sb	12 36 58.4	-0.7
	baz=32						
TRKS	Terek-Say	3.23	316	⇓iP	Pn	12 36 21.1	+2.5
	baz=20						
TRKS				⇓eS	Sn	12 37 00.1	+2.9
	baz=20						
ULHL	Ulahol	3.38	27	P	Pg	12 36 31.1	-1.4
	SNR=8.6						
AAK	Ala-Archa	3.38	4	P	Pb	12 36 28.9	+1.0
	SNR=14						
AAK	Ala-Archa	3.38	4	⇓eP	Pb	12 36 27.0	-0.9
	baz=7.0						
AAK				⇓iS	Sb	12 37 10.4	+1.2
	baz=7.0						
EKS2	Erkin-Say	3.41	355	P	Pb	12 36 27.8	-0.5
	SNR=10						
KBK	Karagaybulak	3.45	10	P	Pb	12 36 29.6	+0.5
	SNR=9.0						
MNAS	Manas	3.46	339	⇑iP	Pb	12 36 26.8	-2.3
	baz=43						
MNAS				⇑iS	Sb	12 37 09.7	-1.6
	baz=43						
MRKS	Merke	3.55	349	Pg	Pg	12 36 34.1	-1.7
	7.3nm,0.3s						
MRKS				Lg	Lg	12 37 19.4	
	15nm,0.6s						
MRKS	Merke	3.55	349	ePg	Pg	12 36 34.1	-1.7
	7.3nm,0.3s						
MRKS				eLg	Lg	12 37 19.4	
	15nm,0.6s						
KDJ	Kajisay	3.68	38	⇑iP	Pb	12 36 32.1	-0.9
	baz=38						
KDJ				⇑iS	Sb	12 37 18.9	+1.2
	baz=38						
TKM2	Tokmak 2	3.82	16	P	Pb	12 36 33.8	-1.5
	SNR=9.2						
USP	Ospenovka	4.01	4	P	Pg	12 36 42.5	-2.1
	SNR=5.0						
DGS	Degeres	4.16	17	Pg	Pg	12 36 46.9	-0.6
	11nm,0.5s						
DGS				Lg	Lg	12 37 40.6	
	14nm,0.5s						
DGS	Degeres	4.16	17	ePg	Pg	12 36 46.9	-0.6
	11nm,0.5s						
DGS				eLg	Lg	12 37 40.6	
	14nm,0.5s						
IZV	Izvestkoviy	4.21	25	Pg	Pg	12 36 47.4	-1.0
	2.6nm,0.6s						
IZV				Lg	Lg	12 37 41.5	
	18nm,0.6s						
IZV	Izvestkoviy	4.21	25	ePg	Pg	12 36 47.4	-1.0
	2.6nm,0.6s						
IZV				eLg	Lg	12 37 41.5	
	18nm,0.6s						
TNSS	Tian-Shan	4.33	28	Pg	Pg	12 36 49.6	-1.0
	6.7nm,0.3s						
TNSS				Lg	Lg	12 37 45.6	
	4.0nm,0.5s						
TNSS	Tian-Shan	4.33	28	ePg	Pg	12 36 49.6	-1.0
	6.7nm,0.3s						
TNSS				eLg	Lg	12 37 45.6	
	4.0nm,0.5s						
MDOK	Medeo	4.47	28	Pg	Pg	12 36 52.0	-1.4
	4.0nm,0.4s						
MDOK				Lg	Lg	12 37 49.8	
	10nm,0.7s						
MDOK	Medeo	4.47	28	ePg	Pg	12 36 52.0	-1.4
	4.0nm,0.4s						
MDOK				eLg	Lg	12 37 49.8	
	10nm,0.7s						
KOTS	Kotyrbulak	4.56	28	Pg	Pg	12 36 54.4	-0.6
	6.4nm,0.7s						
KOTS				Lg	Lg	12 37 53.6	
	30nm,0.6s						
KOTS	Kotyrbulak	4.56	28	ePg	Pg	12 36 54.4	-0.6
	6.4nm,0.7s						
KOTS				eLg	Lg	12 37 53.6	
	30nm,0.6s						
KK31	Karatay Array	4.72	326	Pn	Pb	12 36 45.4	-5.1
	0.9nm,0.3s,baz=129,slow=14,SNR=22						
KK31				Pg	Pg	12 36 58.5	+0.4
	1.7nm,0.4s,baz=138,slow=15,SNR=5.2						
KK31				⇓Sn	Sb	12 37 42.6	-4.8
	2.8nm,0.4s						
KK31				⇑Lg	Lg	12 38 01.1	
	5.8nm,0.5s,baz=140,slow=28,SNR=5.5						
KUU	Kurty	4.91	19	Pg	Pg	12 37 00.3	-1.5
	3.2nm,0.4s						
KUU				Lg	Lg	12 38 04.0	
	6.9nm,0.5s						
KUU	Kurty	4.91	19	ePg	Pg	12 37 00.3	-1.5
	3.2nm,0.4s						
KUU				eLg	Lg	12 38 04.0	
	6.9nm,0.5s						
CHKK	Chushkaly	5.06	24	ePg	Pg	12 37 03.5	-1.2
	2.0nm,0.5s						
CHKK				eLg	Lg	12 38 09.2	
	7.4nm,0.6s						
PDGK	Podgornoye	5.72	43	⇓Pg	Pg	12 37 16.3	-1.0
	3.0nm,0.6s						
PDGK				⇑Lg	Lg	12 38 26.6	
	13nm,0.8s						
MKAR	Makanchi Array	9.60	36	Pn	Pn	12 37 51.2	+5.2
	0.1nm,0.3s,baz=222,slow=13,SNR=2.8						
MKAR				Lg	Lg	12 40 35.1	
	baz=224,slow=33,SNR=2.4						
	0.2nm,0.5s						
AB31	Akbulak array	14.24	319	⇑P	Pn	12 38 52.4	+3.1
	0.7nm,0.6s,baz=123,slow=14,SNR=8.6						
ZALV	Zalesovo Beam	16.39	23	Pn	P	12 39 19.1	-1.5
	0.1nm,0.3s,baz=207,slow=16,SNR=1.8						
	0.4nm,0.5s						
FINES	FINESS Array B	36.68	323	P	P	12 42 35.3	+1.0
	1.0nm,0.8s,baz=116,slow=11,SNR=4.6						
	1.0nm,0.8s						
ARCES	ARCESS Array B	39.61	336	P	P	12 43 00.5	+1.5
	1.7nm,0.8s,baz=115,slow=10,SNR=1.4						
	1.7nm,0.8s						
JNU	Nakatsue	45.56	79	LR	LR	13 04 36.6	
	comp=Z,111nm,18.2s,baz=156,slow=38						
MJAR	Matsushiro Arr	49.67	72	LR	LR	13 06 44.3	
	comp=Z,50nm,18.7s,baz=189,slow=38						
ESDC	Sonseca Array	58.38	298	P	P	12 45 23.9	+0.5
	0.2nm,0.5s,baz=49,slow=8.2,SNR=1.5						
	0.2nm,0.5s						
TORD	Torodi Ar. Bea	68.26	269	P	P	12 46 29.1	+0.1
	1.1nm,0.3s,baz=48,slow=5.5,SNR=2.0						
WRA	Warramunga Arr	81.41	124	P	P	12 47 43.5	-1.4
	0.3nm,0.9s,baz=321,slow=4.2,SNR=1.6						
	0.3nm,0.9s						

*IDC **25** 12:44:48.4±1.7, 9°.57S×121°.89E, h0^{km}, mb4.2/6,*
mbtmp4.0/8, ML3.5/2, Error ellipse: s-maj=58.9km
s-min=27.5km az=56.0
*DJA **25** 12:44:55.9±0.4, 10°S±4°×12°2E±°, h10^{km}, M4.2/10,*
mb4.2/3, MLv4.1/10
ISC 25 12:44:51.5±0.8, **9°.97S**±0°.06×**122°.24E**±0°.06, **h35**^{km}, **n16**,
σ**1^s.65**/19, **mb4.2**/6, **Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	1.32	360	P	Pn	12 45 16.2	+2.7
MMRI				S	Sn	12 45 30.2	+0.3
BASI	Baing, Sumba	1.66	261	P	Pn	12 45 20.5	+2.4
BASI				S	Sn	12 45 39.2	+1.0
SOEI	Soe	2.01	84	P	Pn	12 45 37.0	+14
BSSI	Bau Bau, Buton	4.18	335	P	Pn	12 45 53.7	+0.9
PLAI	Plampang	4.55	284	P	Pn	12 45 58.6	+0.7
BKSI	Bulukumba	5.07	335	P	Pn	12 46 05.8	+0.7
TWSI	Taliwang, Sumb	5.43	283	P	Pn	12 46 11.6	+1.6
TWSI				S	Sn	12 47 08.9	-2.4
SPSI	Sidrap Palu	6.45	337	P	Pn	12 46 24.6	+0.6
WRA	Warramunga Arr	15.32	132	Pn	P	12 48 31.9	+2.3
	0.2nm,0.3s,baz=310,slow=15,SNR=14						
WRA				Sn	Sn	12 51 13.0	-0.9
	0.1nm,0.3s,baz=302,slow=25,SNR=4.8						
	0.4nm,0.7s						
ASAR	Alice Springs	17.59	142	P	P	12 49 02.2	+7.4
	0.1nm,0.3s,baz=319,slow=13,SNR=10.0						
ASAR				S	Sn	12 52 06.1	-3.1
	0.1nm,0.4s,baz=275,slow=38,SNR=2.3						
	0.6nm,0.5s						
MJAR	Matsushiro Arr	48.64	17	P	P	12 53 31.7	-0.3
	0.8nm,0.7s,baz=194,slow=9.3,SNR=4.3						
	0.8nm,0.7s						
USRK	Ussuriysk Ar.	54.63	9	P	P	12 54 16.8	+0.1
	0.8nm,0.5s,baz=189,slow=5.4,SNR=2.5						
	0.8nm,0.5s						
ASAJ	Asahikawa	56.91	17	P	P	12 54 33.5	+0.5
	4.0nm,1.0s,baz=194,slow=8.3,SNR=5.2						
	4.0nm,1.0s						
SONM	Songino Array	59.24	348	P	P	12 54 48.4	-1.1
	0.7nm,0.5s,baz=163,slow=8.6,SNR=8.1						
	0.7nm,0.5s						
MKAR	Makanchi Array	66.80	331	P	P	12 55 39.2	-0.3
	4.0nm,0.6s,baz=139,slow=7.4,SNR=63						
	4.0nm,0.6s						
ZALV	Zalesovo Beam	71.11	338	P	P	12 56 04.8	-1.4
	3.7nm,0.4s,baz=135,slow=5.0,SNR=28						
	3.7nm,0.4s						

*ISU **25** 12:51:20.6, 41°.05N×68°.63E, h9^{km}*
*SOME **25** 12:51:23.4, 40°.68N×69°.63E, h15^{km}*
ISC 25 12:51:20.6±2.4, **40°.84N**±0°.06×**68°.84E**±0°.05, **h9**^{km}±20^{km},
n10, σ**1^s.41**/15, **2D, Southeastern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YBZ	Yangibazar	0.73	51	P	Pb	12 51 34.7	-0.8
YBZ				S	Sb	12 51 45.2	-0.4
KRSA	Karasay	1.11	229	P	Pn	12 51 42.0	-0.3
KRSA				S	Sn	12 51 58.0	+0.4
CHMG	Chimgan	1.13	51	P	Pn	12 51 42.7	0.0
CHMG				S	Sn	12 51 58.3	-0.2
CHRV	Charvak	1.16	46	P	Pg	12 51 57.9	+15
IUG	Iuzhnay	1.58	34	eP	Pb	12 51 51.5	+1.4
	18nm,0.1s						
IUG				eS	Sb	12 52 11.4	+1.2
	30nm,0.4s						
CHMI	Chimion	2.12	105	P	Pb	12 52 00.4	+1.1
CHMI				S	Sg	12 52 29.3	+0.4
NUT	Nurota	2.42	264	P	Pb	12 52 04.6	+0.4
NUT				S	Sb	12 52 33.0	-1.2
KK31	Karatay Array	2.58	28	⇓Pn	Pb	12 52 06.9	-0.1
	0.5nm,0.2s,baz=209,slow=18,SNR=35						
KK31				Sn	Sb	12 52 40.5	+1.7
	8.6nm,0.3s,baz=209,slow=30,SNR=20						
MRKS	Merke	3.79	58	ePg	Pb	12 52 24.3	-3.4
	1.2nm,0.3s						
MRKS				eLg	Lg	12 53 06.0	
	5.0nm,0.5s						
AB31	Akbulak array	10.50	326	⇓P	Pn	12 53 44.1	-7.0
	1.3nm,0.8s,baz=164,slow=11,SNR=9.2						

*IDC **25** 12:53:17.6±1.4, 22°.98N×125°.11E, h0^{km}, mb3.4/4,*
mbtmp3.5/5, ML3.0/1, MS2.7/1, Error ellipse: s-maj=51.1km
s-min=25.7km az=72.0
*JMA **25** 12:53:22.0±0.3, 23°N±1°×125°.1E±0°.8, h56^{km}, MV3.4/17,*
FAR S OFF ISHIGAKIJIMA
ISC 25 12:53:23.4±1.2, **23°.13N**±0°.09×**125°.15E**±0°.05, **h50**^{km}, **n19**,
σ**1^s.48**/29, **mb3.2**/4, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKRS	Kuro-shima	1.52	317	P	Pn	12 53 47.5	-0.7
JKRS				eS	Sn	12 54 06.0	-0.8
JIJ	Ishigaki jima	1.54	323	P	Pn	12 53 47.4	-1.0
JIJ				eS	Sn	12 54 05.3	-2.0
HATJ	Hateruma jima	1.54	307	P	Pn	12 53 46.9	-1.6
HATJ				eS	Sn	12 54 05.2	-2.1
JTJ	Tarama	1.56	345	P	Pn	12 53 48.3	-0.5
JTJ				eS	Sn	12 54 07.8	+0.1
JMJ2	Miyako jima3	1.61	6	P	Pn	12 53 48.8	-0.6
JOGS	Gusukube	1.64	8	P	Pn	12 53 49.3	-0.5
JOGS				eS	Sn	12 54 09.6	-0.1
JISG	Ishigakijimahi	1.64	332	P	Pn	12 53 49.0	-0.9
JISG				eS	Sn	12 54 08.4	-1.4
JIRB	Irabujima	1.69	1	P	Pn	12 53 49.8	-0.8
JIRB				eS	Sn	12 54 11.0	0.0
IRIF	Iriomote-Funau	1.77	313	P	Pn	12 53 50.3	-1.3
IRIF				eS	Sn	12 54 11.5	-1.4
JIKM	Ikemajima	1.79	3	P	Pn	12 53 51.5	-0.4
JIKM				eS	Sn	12 54 13.7	+0.3
YOJ	Yonaguni jima	2.37	304	eP	Pn	12 53 59.1	-0.7
YOJ				S	Sn	12 54 26.1	-1.5
JKE	Kume jima 2	3.51	25	P	Pn	12 54 14.5	-1.0
JJT3	Tamagusuku3	3.84	38	eP	Pn	12 54 18.9	-1.1
JOW	Kunigami	4.65	37	Pn	Pn	12 54 30.9	-0.3
	1.5nm,0.3s,baz=11,slow=16,SNR=2.6						
JOW				Sn	Sn	12 55 19.1	-4.7
	2.0nm,0.3s,baz=111,slow=21,SNR=6.5						
	28nm,0.8s						
TGY	Tagaytay City	9.83	205	LR	LR	12 58 55.7	
	comp=Z,44nm,18.6s,baz=294,slow=35						
SONM	Songino Array	28.84	333	P	P	12 59 19.4	+2.2
	0.5nm,0.9s,baz=126,slow=7.3,SNR=2.8						
	0.5nm,0.9s						
MKAR	Makanchi Array	41.63	315	P	P	13 01 08.6	+1.8
	0.1nm,0.6s,baz=111,slow=7.9,SNR=2.3						
	0.1nm,0.6s						
ZALV	Zalesovo Beam	43.12	326	P	P	13 01 19.4	+0.7
	0.3nm,0.4s,baz=126,slow=7.3,SNR=2.2						
	0.3nm,0.4s						
WRA	Warramunga Arr	43.74	167	P	P	13 01 23.7	-0.3
	0.5nm,0.8s,baz=347,slow=8.9,SNR=6.5						
	0.5nm,0.8s						

*IDC **25** 13:04:42.1±1.9, 6°.37S×152°.93E, h0^{km}, mb3.3/4,*
mbtmp3.5/6, ML1.6/1, Error ellipse: s-maj=53.1km
s-min=23.3km az=113.0
ISC 25 13:04:48.2±1.5, **6°.33S**±0°.10×**152°.6E**±0°.2, **h35**^{km}, **n7**,
σ**1^s.02**/9, **mb3.2**/4, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.09	344	Pn	Pn	13 05 21.6	+0.8
	110nm,0.3s,baz=266,slow=2.1,SNR=142						
KRVT				Sn	Sn	13 05 45.3	-0.4
	206nm,0.3s,baz=251,slow=24,SNR=60						
PMG	Port Moresby	6.20	240	Pn	Pn	13 06 18.0	+0.7
	0.9nm,0.3s,baz=69,slow=9.3,SNR=1.5						
PMG				Sn	Sn	13 07 26.0	-1.0
	1.6nm,0.3s,baz=318,slow=20,SNR=2.1						
	5.4nm,0.4s						
WRA	Warramunga Arr	22.31	231	P	P	13 09 43.5	+0.5
	0.4nm,0.5s,baz=58,slow=10,SNR=11						
	0.4nm,0.5s						
ASAR	Alice Springs	24.91	224	P	P	13 10 09.7	+1.5
	1.0nm,0.5s,baz=58,slow=9.2,SNR=22						
	1.0nm,0.5s						
MKAR	Makanchi Array	81.35	319	P	P	13 17 00.9	-0.4
	0.2nm,0.5s,baz=128,slow=6.4,SNR=2.5						
	0.2nm,0.5s						
ILAR	Eielson Array	83.64	22	P	P	13 17 12.4	-0.4
	0.1nm,0.7s,baz=247,slow=5.8,SNR=1.2						
	0.1nm,0.7s						
TORD	Torodi Ar. Bea	150.56	286	PKPbc	PKiKP	13 24 37.2	-1.0
	0.8nm,0.3s,baz=64,slow=3.4,SNR=2.0						

SKO 25 13:31:18.5, 40°.65N×20°.91E, h4^{km}, ML1.8,
Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNA	Florina	0.38	69	i Pg	Pg	13 31 25.6	-0.2
FNA				i Sg	Sb	13 31 32.9	-1.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
OHR	Ohrid	0.47	350	*i* Pg	Pg	13 31 27.6	+0.1
OHR				*i* Sg	Sb	13 31 35.7	-1.0
OHR				*e*Lg	Lg	13 31 36.4	
	comp=E,66nm,0.4s						
GRG	Griva	1.17	74	*i* Pg	Pb	13 31 41.2	-0.2
IGT	Igoumenitsa	1.20	202	*i* Pg	Pb	13 31 41.8	0.0
IGT				*i* Sg	Sg	13 31 54.7	-2.4

ATH 25 13:31:24.7,38°.75N×20°.55E,h17^{km}±6^{km},ML1.3/2,Error ellipse: s-maj=13.1km s-min=0.9km az=96.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKD2	Lefkada island	0.10	65	P	Pg	13 31 27.9	-0.3
LKD2				S	Sg	13 31 30.8	+0.2
LKD2				AML	AML	13 31 31.2	
	comp=E,278µm,0.1s						
LKD2				AML	AML	13 31 31.5	
	comp=N,276µm,0.2s						
TSLK	Tsoukalades, L	0.12	48	P	Pg	13 31 28.2	-0.2
TSLK				S	Sb	13 31 31.0	+0.1
TSLK				AML	AML	13 31 31.4	
	comp=E,396µm,0.1s						
TSLK				AML	AML	13 31 32.2	
	comp=N,250µm,0.2s						
EVGI	Lefkada island	0.15	146	P	Pg	13 31 28.6	-0.3
EVGI				S	Sg	13 31 31.8	+0.2
FSK	Fiskardo	0.29	177	P	Pg	13 31 30.8	-0.1
FSK				S	Sg	13 31 35.3	+0.2
VLS	Valsamata	0.57	176	P	Pg	13 31 35.9	-0.1
IGT	Igoumenitsa	0.80	348	P	Pb	13 31 39.5	-0.6
IGT				S	Sb	13 31 50.6	-0.1

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*IDC **25** 13:42:19.9±3.4,29°.36N×80°.64E,h0^{km},mb3.5/4, mbtmp3.5/6,ML3.8/2,MS3.9/2,Error ellipse: s-maj=126.5km s-min=22.1km az=70.0*

ISC 25 13:42:22.4±1.1,29°.3N±0°.2×80°.65E±0°.09,h19^{km},n9, σ0^{s}.82/7,mb3.7/4,Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NDI	New Delhi	3.07	259	*e*P	Pg	13 43 33.0	+12
NDI				*e*S	Sg	13 44 01.0	-0.2
MKAR	Makanchi Array	17.47	4	P	P	13 46 25.9	-0.1
	0.1nm,0.3s,baz=179,slow=11,SNR=6.3						
	0.3nm,0.4s						
CMAR	Chiang Mai Arr	19.90	119	P	Pn	13 46 53.4	-1.2
	0.2nm,0.3s,baz=299,slow=12,SNR=2.1						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	21.32	356	P	P	13 47 07.6	-0.3
	0.5nm,0.7s,baz=180,slow=10,SNR=8.9						
	0.5nm,0.7s						
ZALV	Zalesovo Beam	24.77	6	P	P	13 47 42.9	+0.1
	0.5nm,0.3s,baz=202,slow=7.7,SNR=4.0						
	0.5nm,0.3s						
GERES	GERESS Array B	53.71	311	LR	LR	14 18 35.5	
	comp=Z,92nm,18.3s,baz=334,slow=40						
BORG	Borgarnes	68.73	333	LR	LR	14 26 44.3	
	comp=Z,106nm,18.7s,baz=341,slow=39						
WRA	Warramunga Arr	71.27	127	P	P	13 53 41.6	+0.8
	0.7nm,0.9s,baz=323,slow=6.2,SNR=7.6						
	0.7nm,0.9s						
ASAR	Alice Springs	73.48	130	P	P	13 53 54.7	+0.7
	0.3nm,0.3s,baz=315,slow=6.1,SNR=12						
	0.3nm,0.3s						

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*IDC **25** 13:49:42.7±1.0,39°.45S×174°.30E,h198^{km}±13^{km},mb3.2/4, mbtmp3.8/6,Error ellipse: s-maj=21.5km s-min=14.4km az=121.0*

*WEL **25** 13:49:45.0±0.6,39°S±3°×17°4E±°,h204^{km}±4^{km},M4.0/78, ML3.5/10,MLv4.0/78,Error ellipse: s-maj=0.0km s-min=0.0km az=119.9,confirmed*

ISC 25 13:49:40.6±1.0,39°.54S±0°.05×174°.24E±0°.05,h236^{km}±6^{km}, n168,σ1^{s}.72/177,mb3.4/4,North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LREZ	Lake Rotokare	0.15	59	P	Pn	13 50 12.8	+1.6
LREZ				S	S	13 50 34.0	-1.0
PREZ	Palmer Road	0.21	343	P	Pn	13 50 12.7	+1.3
NEZ	North Egmont	0.29	338	P	Pn	13 50 12.8	+1.2
KHEZ	Kahui Hut	0.30	325	P	Pn	13 50 12.9	+1.4
NMEZ	Namu Road	0.30	294	P	Pn	13 50 12.9	+1.5
DREZ	Durham Road	0.35	356	P	Pn	13 50 12.7	+1.2
DREZ				S	S	13 50 34.2	-1.5
NBEZ	Newall Road No	0.39	313	P	Pn	13 50 13.0	+1.4
NBEZ				S	S	13 50 35.2	-0.6
PKE	Pukeiti	0.40	331	P	Pn	13 50 12.9	+1.3
MHEZ	Mangahewa	0.47	8	P	Pn	13 50 13.4	+1.6
MHEZ				S	S	13 50 35.3	-0.9
VRZ	Vera Road	0.58	45	P	Pn	13 50 12.9	+0.7
VRZ				S	S	13 50 34.5	-2.3
WAZ	Wanganui	0.62	111	P	Pn	13 50 14.4	+2.1
WAZ				S	S	13 50 36.9	-0.1
PKVZ	Pokaka	0.90	74	P	Pn	13 50 14.8	+1.2
PKVZ				S	S	13 50 37.3	-2.1
MTVZ	Mangateitei	0.97	81	P	Pn	13 50 15.3	+1.3
MTVZ				S	S	13 50 38.0	-2.1
TWVZ	Taurewa	1.04	64	P	Pn	13 50 15.5	+1.0
TRVZ	Turoa	1.04	77	P	Pn	13 50 15.9	+1.3
TRVZ				S	S	13 50 38.8	-2.5
FWVZ	Far West T-bar	1.06	75	P	Pn	13 50 16.0	+1.3
FWVZ				S	S	13 50 38.9	-2.5
DRZ	Dome Shelter	1.06	76	P	Pn	13 50 16.6	+1.7
WNVZ	Wahianoa	1.08	79	P	Pn	13 50 16.2	+1.4
WHVZ	Whangaehu Hut	1.08	77	P	Pn	13 50 16.5	+1.6
NGZ	Ngauruhoe	1.12	71	P	Pn	13 50 16.3	+1.3
TUVZ	Tukino	1.13	77	P	Pn	13 50 16.8	+1.7
HIZ	Hauiti	1.13	25	P	Pn	13 50 15.7	+0.7
HIZ				S	S	13 50 39.7	-2.1
WTVZ	West Tongariro	1.13	68	P	Pn	13 50 16.4	+1.3
NNVZ	North Ngauruho	1.15	70	P	Pn	13 50 16.6	+1.3
SNVZ	South Ngauruho	1.15	73	P	Pn	13 50 16.7	+1.4
OTVZ	Oturere	1.17	72	P	Pn	13 50 16.8	+1.4
KRVZ	Karewarewa	1.18	68	P	Pn	13 50 16.7	+1.3
MOVZ	Moawhango	1.18	84	P	Pn	13 50 16.6	+1.3
NTVZ	North Tongarir	1.20	69	P	Pn	13 50 17.0	+1.4
ETVZ	East Tongariro	1.21	71	P	Pn	13 50 17.0	+1.3
TMVZ	Te Maari	1.22	70	P	Pn	13 50 17.1	+1.4
KATZ	Kakaramea	1.27	64	P	Pn	13 50 17.5	+1.5
DUWZ	D’Urville Isla	1.28	191	P	Pn	13 50 17.8	+1.9
RATZ	Rangitukua	1.37	61	P	Pn	13 50 17.9	+1.3
RITZ	Rihia Road	1.38	66	P	Pn	13 50 18.2	+1.5
BHHZ	Black Hill Sta	1.42	89	P	Pn	13 50 18.2	+1.2
KIW	Kapiti Island	1.42	159	P	Pn	13 50 18.7	+1.9
TSZ	Takapari Road	1.43	112	P	Pn	13 50 19.2	+2.2
WATZ	Wairara	1.43	55	P	Pn	13 50 18.5	+1.4
POWZ	Post Office Ro	1.45	126	P	Pn	13 50 19.1	+1.9
OGWZ	Otaki Gorge	1.46	151	P	Pn	13 50 19.3	+2.1
MRZ	Mangatainoka R	1.52	138	P	Pn	13 50 19.5	+1.9
PNHZ	Pukenui	1.56	104	P	Pn	13 50 20.0	+2.0
TLZ	Tolley Road	1.58	40	P	Pn	13 50 19.1	+0.8
WHTZ	Whakaora	1.60	57	P	Pn	13 50 20.2	+1.7
KUTZ	Kaahu Road	1.62	50	P	Pn	13 50 20.1	+1.5
DVHZ	Dannevirke	1.67	118	P	Pn	13 50 20.9	+2.0
TCW	Tory Channel	1.67	179	P	Pn	13 50 21.1	+2.3
HOWZ	Holdsworth Sta	1.67	145	P	Pn	13 50 20.8	+1.8
PRWZ	Pori Road	1.67	128	P	Pn	13 50 21.2	+2.2
CAW	Cannon Point	1.69	158	P	Pn	13 50 21.0	+2.0
KWHZ	Kaweka Forest	1.70	87	P	Pn	13 50 21.3	+2.1
TIWZ	Tintock	1.77	135	P	Pn	13 50 21.8	+2.0
WPHZ	Waipukurau	1.78	108	P	Pn	13 50 22.1	+2.2
TKNZ	Takaka Hill	1.78	213	P	Pn	13 50 21.4	+1.5
BKZ	Black Stump Fm	1.79	79	P	Pn	13 50 21.5	+1.4
WEL	Wellington	1.79	167	P	Pn	13 50 21.9	+2.0
NNZ	Nelson	1.80	201	P	Pn	13 50 21.9	+2.0
WPRZ	Whakapapatarin	1.81	56	P	Pn	13 50 21.3	+1.1
QRZ	Quartz Range	1.83	225	P	Pn	13 50 21.6	+1.3
MRHZ	Matea Rd	1.84	68	P	Pn	13 50 21.4	+0.9
GRRZ	Galatos Road	1.88	51	P	Pn	13 50 22.3	+1.4
MTW	Mount Morrison	1.88	149	P	Pn	13 50 22.6	+1.8
TUWZ	Tuamarina	1.90	187	P	Pn	13 50 23.0	+2.1
MCHZ	McNeill Hill	1.91	88	P	Pn	13 50 23.6	+2.6
ALRZ	Allen Road	1.91	60	P	Pn	13 50 22.1	+1.0
BFZ	Birch Farm	1.92	127	P	Pn	13 50 23.1	+2.0
HRRZ	Handcock Road	1.97	55	P	Pn	13 50 23.0	+1.4
PRRZ	Plateau Road	1.98	59	P	Pn	13 50 22.6	+0.9
PRHZ	Porangahau	1.98	112	P	Pn	13 50 24.1	+2.4
HSRZ	Hossack Road	1.99	53	P	Pn	13 50 23.2	+1.4
TMWZ	Te Maipa	2.01	142	P	Pn	13 50 24.0	+2.1
CPWZ	Castlepoint	2.04	133	P	Pn	13 50 24.8	+2.7
NMHZ	Naumai	2.04	78	P	Pn	13 50 24.8	+2.4
UTU	Utuhina	2.05	49	P	Pn	13 50 24.0	+1.6
PAWZ	Paruwai Farm	2.05	154	P	Pn	13 50 24.2	+1.9
KAHZ	Kahuranaki	2.06	98	P	Pn	13 50 24.9	+2.5
TOZ	Tahuroa Road	2.06	29	P	Pn	13 50 23.7	+1.2
PXZ	Pawanui	2.08	104	P	Pn	13 50 25.0	+2.4
HLRZ	Highlands Stat	2.09	53	P	Pn	13 50 25.0	+2.1
NGRZ	Ngongotaha	2.09	47	P	Pn	13 50 24.8	+1.9
MTHZ	Maungataniwha	2.14	72	P	Pn	13 50 24.4	+1.2
RRRZ	Republican Roa	2.14	57	P	Pn	13 50 24.5	+1.2
KMRZ	Kaimai	2.15	39	P	Pn	13 50 25.1	+1.7
ARHZ	Aropaoanui	2.16	84	P	Pn	13 50 25.6	+2.2
TRWZ	Traveller	2.16	150	P	Pn	13 50 25.4	+2.0
PLWZ	Palliser	2.17	159	P	Pn	13 50 25.2	+1.7
MRNZ	Matariki Terra	2.17	211	P	Pn	13 50 25.0	+1.6
KARZ	Kaharoa	2.18	47	P	Pn	13 50 25.2	+1.5
BSWZ	Blackbirch Sta	2.19	187	P	Pn	13 50 25.8	+2.1
OMRZ	Omania	2.20	50	P	Pn	13 50 25.2	+1.4
CKHZ	Cape Kidnapper	2.20	94	P	Pn	13 50 26.4	+2.6
TARZ	Mount Tarawera	2.20	54	P	Pn	13 50 25.2	+1.2
CMWZ	Cape Campbell	2.21	180	P	Pn	13 50 26.3	+2.5
MUGZ	Murupara	2.24	63	P	Pn	13 50 25.0	+0.8
LIRZ	Lichensteins R	2.27	48	P	Pn	13 50 26.0	+1.4
RAHZ	Arahi	2.30	75	P	Pn	13 50 26.7	+1.9
RTZ	Ruatahuna	2.33	68	P	Pn	13 50 26.2	+1.0
WHHZ	Waihua	2.37	80	P	Pn	13 50 27.6	+2.1
TGRZ	Tauranga	2.41	42	P	Pn	13 50 27.4	+1.5
EDRZ	Edgecumbe	2.42	55	P	Pn	13 50 27.3	+1.2
THZ	Tophouse	2.44	204	P	Pn	13 50 28.0	+1.8
MARZ	Manawahe	2.46	52	P	Pn	13 50 27.7	+1.2
AWAZ	Awhitu Peninsu	2.49	8	P	Pn	13 50 28.7	+1.9
SNGZ	Shannon Statio	2.53	74	P	Pn	13 50 28.8	+1.7
URZ	Urewera	2.58	61	P	Pn	13 50 28.2	+0.5
	374nm,0.3s,baz=332,slow=7.4,SNR=1061						
URZ				S	S	13 51 00.1	-4.5
	80nm,0.3s,baz=225,slow=14,SNR=12						
URZ	Urewera	2.58	61	P	Pn	13 50 28.2	+0.5
WTAZ	Waiatarua	2.62	6	P	Pn	13 50 30.3	+2.2
ETAZ	East Tamaki Re	2.64	12	P	Pn	13 50 30.2	+1.9
RAGZ	Rawiri	2.69	68	P	Pn	13 50 30.2	+1.2
EPAZ	Eden Park BICE	2.69	9	P	Pn	13 50 30.9	+2.0
HBAZ	Herne Bay Bore	2.71	8	P	Pn	13 50 31.1	+1.9
KNZ	Kokohu	2.72	80	P	Pn	13 50 30.9	+1.8
MYRZ	Mayor Island	2.75	36	P	Pn	13 50 31.6	+2.0
RVAZ	Riverhead Bore	2.78	6	P	Pn	13 50 31.8	+1.9
MBAZ	Motutapu North	2.81	11	P	Pn	13 50 32.2	+2.0
WIAZ	Waiheke Island	2.83	15	P	Pn	13 50 32.4	+2.0
MWZ	Matawai	2.84	66	P	Pn	13 50 31.4	+0.9
RIGZ	Rimuhau	2.87	74	P	Pn	13 50 32.5	+1.7
MHGZ	Mahia Peninsul	2.87	83	P	Pn	13 50 33.0	+2.2
DSZ	Denniston Nort	2.88	219	P	Pn	13 50 32.5	+1.7
KHZ	Kahutara	2.92	190	P	Pn	13 50 33.2	+1.9
TKGZ	Te Karaka	3.02	70	P	Pn	13 50 34.0	+1.6
KUZ	Kuaotunu	3.03	23	P	Pn	13 50 34.3	+1.8
RUGZ	Raukumara Rang	3.12	61	P	Pn	13 50 33.7	0.0
TWGZ	Tauwhareparae	3.23	66	P	Pn	13 50 36.3	+1.4
CNGZ	Carnagh Statio	3.27	72	P	Pn	13 50 37.2	+1.9
HAZ	Te Kaha	3.30	58	P	Pn	13 50 35.6	+0.1
GRZ	Great Barrier	3.42	17	P	Pn	13 50 39.1	+2.0
PKGZ	Pakihiroa	3.43	62	P	Pn	13 50 38.1	+0.9
PUZ	Puketiti	3.47	66	P	Pn	13 50 38.4	+0.9
GVZ	Greta Valley S	3.54	194	P	Pn	13 50 39.9	+1.6
LTZ	Lake Taylor	3.56	204	P	Pn	13 50 40.2	+1.6
WCZ	Waipu Caves	3.60	1	P	Pn	13 50 41.2	+2.1
WMGZ	Waiomatatini S	3.69	64	P	Pn	13 50 40.9	+0.8
MXZ	Matakaoa Point	3.75	60	P	Pn	13 50 41.8	+0.9
INZ	Inchbonnie	3.82	213	P	Pn	13 50 42.8	+1.3
AMCZ	Amberley	3.82	198	P	Pn	13 50 43.2	+1.6
OXZ	Oxford	4.13	203	P	Pn	13 50 46.3	+1.1
MQZ	McQueen’s Vall	4.33	195	P	Pn	13 50 48.3	+0.7
OUZ	Omahuta	4.34	353	P	Pn	13 50 50.4	+2.4
WVZ	Waitaha Valley	4.41	216	P	Pn	13 50 49.7	+1.2
AKCZ	Akaroa Harbour	4.44	192	P	Pn	13 50 50.7	+1.6
RACZ	Rakaia	4.47	200	P	Pn	13 50 50.7	+1.4
WACZ	Wakanui South	4.75	201	P	Pn	13 50 54.3	+1.5
GCSZ	Gaunt Creek Bo	4.78	217	P	Pn	13 50 54.2	+1.0
RPZ	Rata Peaks	4.80	209	P	Pn	13 50 54.7	+1.3
	14nm,0.4s,baz=17,slow=17,SNR=26						
RPZ				S	S	13 51 47.2	-4.1
	87nm,0.3s,baz=304,slow=24,SNR=25						
RPZ	Rata Peaks	4.80	209	P	Pn	13 50 54.8	+1.3
ARCZ	Arundel	4.96	206	P	Pn	13 50 56.7	+1.3
FOZ	Fox Glacier	5.19	218	P	Pn	13 50 59.1	+0.9
TMZ	Timaru	5.41	205	P	Pn	13 51 02.5	+1.6
LBZ	Lake Benmore	5.71	211	P	Pn	13 51 05.9	+1.2
JCZ	Jackson Bay	6.09	220	P	Pn	13 51 10.2	+0.6
ODZ	Otahua Downs	6.11	205	P	Pn	13 51 11.6	+1.8
WKZ	Wanaka	6.55	215	P	Pn	13 51 15.7	+0.3
EAZ	Earnscleugh	6.75	211	P	Pn	13 51 18.0	+0.1
MSZ	Milford Sound	6.95	220	P	Pn	13 51 20.9	+0.6
MLZ	Mavora Lakes	7.37	216	P	Pn	13 51 26.5	+0.7
WHZ	Wether Hill Ro	7.86	214	P	Pn	13 51 31.9	0.0
SYZ	Scrubby Hill	7.92	206	P	Pn	13 51 34.6	+1.8
APZ	The Paps	8.60	210	P	Pn	13 51 42.2	+0.9
DZM	Mont Dzumac	18.64	337	P	Pn	13 53 46.8	+2.2
	2.4nm,0.6s,baz=171,slow=13,SNR=2.4						
MSVF	Nonsavu	21.98	10	P	P	13 54 20.7	+5.0
	3.8nm,0.4s,baz=262,slow=23,SNR=15						
	3.8nm,0.4s						
ASAR	Alice Springs	37.48	283	P	P	13 56 37.6	+5.7
	0.5nm,0.5s,baz=128,slow=7.2,SNR=26						
	0.5nm,0.5s						
VNDA	Vanda	38.45	184	P	P	13 56 46.6	+7.4
	0.8nm,0.5s,baz=9.4,slow=8.2,SNR=6.9						
	0.8nm,0.5s						
WRA	Warramunga Arr	39.37	288	P	P	13 56 52.9	+5.3
	0.2nm,0.5s,baz=126,slow=8.2,SNR=9.8						
	0.2nm,0.5s						
ARCES	ARCESS Array B	145.69	341	PKPbc	PKiKP	14 08 55.4	+1.5
	1.3nm,0.4s,baz=63,slow=2.9,SNR=12						
FINES	FINESS Array B	150.66	329	PKPbc	PKPab	14 09 08.1	-3.4
	1.9nm,0.9s,baz=85,slow=3.3,SNR=4.8						

IDC 25 13:51:28.4±3.1,28°.56S×62°.44E,h0^{km},mb3.6/3, mbtmp3.6/3,Error ellipse: s-maj=99.0km s-min=47.9km az=49.0,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	58.56	41	P	P	14 01 27.4	+0.3
	0.3nm,0.4s,baz=227,slow=6.1,SNR=1.9						
	0.3nm,0.4s						
ASAR	Alice Springs	63.49	104	P	P	14 02 00.8	0.0
	0.4nm,0.6s,baz=245,slow=6.1,SNR=13						
	0.4nm,0.6s						
SONM	Songino Array	85.69	28	P	P	14 04 08.2	-0.9
	0.3nm,0.4s,baz=224,slow=6.0,SNR=3.0						
	0.3nm,0.4s						
YKA	Yellowknife Ar	146.01	358	PKPbc	PKPdf	14 11 08.9	+0.2
	0.4nm,0.6s,baz=349,slow=3.4,SNR=11						

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*IDC **25** 13:57:33.7±1.2,3°.82S×127°.46E,h0^{km},mb3.8/3, mbtmp4.0/6,ML3.9/3,MS3.1/4,Error ellipse: s-maj=27.8km s-min=14.0km az=72.0*

*DJA **25** 13:57:36.7±0.3,4°S±3°×12°7E±°,h10^{km},M4.3/17,mb4.6/7, mB4.9/2,MLv4.2/17,Mw(mB)4.2/2*

*NEIC **25** 13:57:37.1±2.8,3°.86S±0°.07×127°.3E±0°.1,h38^{km}±15^{km}, mb4.1/7,Error ellipse: s-maj=16.0km s-min=8.8km az=115.0*

ISC 25 13:57:37.8±0.7,3°.73S±0°.06×127°.46E±0°.04,h35^{km},n33, σ1^{s}.96/37,mb3.7/3,Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLAI	Namlea	0.61	324	P	Pn	13 57 47.6	-2.4
NLAI				S	Sn	13 57 55.8	-2.8
AAI	Ambon	0.73	86	P	Pn	13 57 50.1	-1.6
AAI				S	Sn	13 58 00.3	-1.4
MSAI	Masohi	1.52	75	P	Pn	13 58 02.5	+0.1
MSAI				S	Sn	13 58 23.2	+2.2
SANI	Sanana	2.23	319	P	Pn	13 58 12.0	-0.2
BNDI	Bandanaira	2.56	108	P	Pn	13 58 18.3	+1.5
LBMI	Labuha	3.08	1	P	Pn	13 58 25.3	+1.4
TNTI	Ternate	4.48	359	P	Pn	13 58 43.6	+0.4
SIJI	Sorong	4.75	53	Pn	Pn	13 58 47.8	+0.8
	9.7nm,0.3s,baz=249,slow=23,SNR=32						
SIJI				Sn	Sn	13 59 40.0	-0.8
	6.7nm,0.3s,baz=353,slow=21,SNR=15						
SIJI				LR	LR	14 01 26.4	
	comp=Z,273nm,19.6s,baz=94,slow=48						
	20nm,0.3s						
FAKI	Fak Fak	4.85	81	Pn	Pn	13 58 49.7	+1.5
FAKI	Fak Fak	4.85	81	P	Pn	13 58 49.8	+1.5
LUWI	Luwuk	5.39	300	Pn	Pn	13 58 54.5	-1.3
LUWI	Luwuk	5.39	300	P	Pn	13 58 57.3	+1.5
	106nm,0.7s,2µm0.3nm						
SOEI	Soe	6.77	208	Pn	Pn	13 59 09.9	-4.9
SOEI	Soe	6.77	208	P	Pn	13 59 17.2	+2.4
	41nm,1.2s,0.1nm						
MRSI	Marisa	6.92	307	P	Pn	13 59 18.7	+1.9
	40nm,0.6s,0.2nm						
BKSI	Bulukumba	7.48	258	P	Pn	13 59 27.4	+2.9
KAPI	Kappang	7.79	260	Pn	Pn	13 59 30.2	+1.4
	2.4nm,0.3s,baz=113,slow=14,SNR=2.0						
KAPI				Sn	Sn	14 00 56.7	+0.9
	0.6nm,0.3s,baz=244,slow=16,SNR=1.7						
KAPI				LR	LR	14 03 10.5	
	comp=Z,76nm,19.5s,baz=54,slow=43						
	9.8nm,0.4s						
TOLI2	Tolitoli	8.23	306	Pn	Pn	13 59 37.1	+2.3
KNRA	Kununurra	11.94	174	Pn	Pn	14 00 23.4	-2.2
WB0	Warramunga Arr	17.31	158	P	Pn	14 01 34.1	-2.8
WB0				IAmb	IAmb	14 01 42.2	
	comp=Z,18nm,1.2s						
WRA	Warramunga Arr	17.45	158	P	Pn	14 01 36.0	-2.7
	comp=Z,0.3nm,0.3s,baz=343,slow=13,SNR=28						
WRA				S	Sn	14 04 52.3	+0.4
	comp=Z,0.3nm,0.8s,baz=332,slow=27,SNR=1.4						
	comp=Z,4.0nm,0.9s						
WRA	Warramunga Arr	17.45	158		Pn	14 01 35.0	-3.6
WB2	Warramunga Arr	17.46	158	P	Pn	14 01 36.2	-2.4
WB2				IAmb	IAmb	14 01 43.8	
	comp=Z,11nm,1.1s						
COEN	Coen	18.54	124	P	P	14 01 51.2	-0.4
COEN				IAmb	IAmb	14 02 09.1	
	comp=Z,16nm,1.2s						
AS31	Alice Springs	20.77	163		P	14 02 17.3	+1.4
AS31				IAmb	IAmb	14 02 19.0	
	comp=Z,5.6nm,0.8s						
ASAR	Alice Springs	20.77	163	P	P	14 02 16.9	+0.9
	comp=Z,14nm,0.8s,baz=343,slow=11,SNR=207						
ASAR				S	S	14 06 09.0	+3.0
	comp=Z,0.5nm,0.9s,baz=342,slow=18,SNR=3.2						
	comp=Z,14nm,0.8s						
ASAR	Alice Springs	20.77	163	P	P	14 02 16.2	+0.3
GUMO	Guam	24.39	45	LR	LR	14 11 48.7	
	comp=Z,32nm,21.5s,baz=182,slow=35						
FORT	Forrest	26.91	179	P	P	14 03 12.8	-2.9
NWAO	Narrogin (SRO)	30.58	197	LR	LR	14 16 26.7	
	comp=Z,95nm,19.6s,baz=306,slow=37						
KSRS	Korea Array	40.98	1	P	P	14 05 19.4	+2.1
	comp=Z,0.8nm,0.8s,baz=169,slow=7.4,SNR=3.2						
	comp=Z,0.8nm,0.8s						
MKAR	Makanchi Array	64.13	327	P	P	14 08 09.5	+0.8
	comp=Z,0.3nm,0.4s,baz=118,slow=7.3,SNR=6.0						
	comp=Z,0.3nm,0.4s						
QSPA	South Pole Qui	86.22	180	P	P	14 10 13.6	-2.0
QSPA				IAmb	IAmb	14 10 45.9	
	comp=Z,7.0nm,1.4s						

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*IDC **25** 14:00:58.2±1.9,22°.42N×92°.79E,h50^{km}±27^{km},mb3.4/6, mbtmp3.6/7,ML2.8/1,Error ellipse: s-maj=30.0km s-min=16.1km az=45.0*

ISC 25 14:00:57.4±0.9,22°.5N±0°.2×92°.79E±0°.08,h35^{km},n8, σ1^{s}.15/9,mb3.6/6,India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRDH	Bariadhala	1.07	280	P	Pn	14 01 15.5	-0.4
	148nm,0.3s,baz=90,slow=20,SNR=6.7						
BRDH				S	Sn	14 01 31.5	+1.9
	685nm,0.3s,baz=270,slow=19,SNR=23						
CMAR	Chiang Mai Arr	7.03	124	P	Pn	14 02 38.9	+1.0
	baz=299,slow=13,SNR=7.6						
	0.7nm,0.6s						
MKAR	Makanchi Array	25.68	343	P	P	14 06 24.0	-0.1
	2.1nm,0.7s,baz=157,slow=9.5,SNR=27						
	2.1nm,0.7s						
SONM	Songino Array	27.54	20	P	P	14 06 41.2	+0.3
	0.5nm,0.7s,baz=202,slow=7.4,SNR=2.8						
	0.5nm,0.7s						
ZALV	Zalesovo Beam	31.98	351	P	P	14 07 20.1	+0.1
	0.6nm,0.4s,baz=161,slow=9.4,SNR=5.9						
	0.6nm,0.4s						
MJAR	Matsushiro Arr	41.56	60	P	P	14 08 41.8	0.0
	0.5nm,0.4s,baz=262,slow=7.3,SNR=4.2						
	0.5nm,0.4s						
WRA	Warramunga Arr	58.53	133	P	P	14 10 49.2	-1.4
	0.3nm,0.7s,baz=320,slow=7.5,SNR=7.6						
	0.3nm,0.7s						
ASAR	Alice Springs	60.86	136	P	P	14 11 05.5	-1.1
	0.4nm,0.7s,baz=318,slow=6.7,SNR=6.0						
	0.4nm,0.7s						

ROM 25 14:46:22.0±0.1,42°.965N±0°.004×13°.231E±0°.007, h8^{km},ML1.7/15,14C-3D,Error ellipse: s-maj=0.6km s-min=0.2km az=114.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1256	Bolognola (MC)	0.04	355	⇑P	Pg	14 46 23.6	-0.3
T1256				S	Sg	14 46 24.5	-0.7
T1256				AML	AML		
	comp=E,1660µm,0.4s						
T1256				AML	AML		
	comp=N,2025µm,1.5s						
T1256				AML	AML		
	comp=E,1655µm,0.4s						
T1256				AML	AML		
	comp=N,2035µm,1.4s						
T1256				AML	AML		
	comp=E,1660µm,0.9s						
T1256	Bolognola (MC)	0.04	355	S	Sg	14 46 24.9	-0.3
MC2	Monte Cornacci	0.06	210	⇑P	Pg	14 46 24.2	+0.1
MC2				S	Sg	14 46 25.6	0.0
MC2	Monte Cornacci	0.06	210	S	Sg	14 46 25.6	0.0
MMO1	Montemonaco	0.10	133	⇑P	Pg	14 46 24.6	+0.2
MMO1				S	Sg	14 46 26.4	+0.3
MMO1	Montemonaco	0.10	133	S	Sg	14 46 26.5	+0.3
T1245	Castelsantange	0.11	196	⇓P	Pg	14 46 25.1	+0.4
T1245				S	Sg	14 46 27.3	+0.7
T1245				AML	AML		
	comp=E,1755µm,1.0s						
T1245				AML	AML		
	comp=N,1550µm,0.3s						
T1245				AML	AML		
	comp=E,1820µm,1.0s						
T1245				AML	AML		
	comp=N,1740µm,0.3s						
T1245				AML	AML		
	comp=E,1840µm,1.0s						
T1245				AML	AML		
	comp=N,1645µm,0.3s						
T1245	Castelsantange	0.11	196	AML	AML		
	comp=N,1645µm,0.3s						
T1245				AML	AML		
	comp=E,1840µm,1.0s						
T1245				AML	AML		
	comp=N,1765µm,0.3s						
T1245				AML	AML		
	comp=E,1820µm,1.0s						
T1245				AML	AML		
	comp=N,1645µm,0.3s						
T1245				AML	AML		
	comp=E,1820µm,1.0s						
T1245				AML	AML		
	comp=N,1765µm,0.3s						
T1245				AML	AML		
	comp=E,1840µm,1.0s						
GUMA	Gualdo di Mace	0.12	38	P	Pg	14 46 25.6	+0.8
GUMA				S	Sg	14 46 28.2	+1.4
GUMA				AML	AML		
	comp=E,1660µm,0.4s						
GUMA				AML	AML		
	comp=E,1660µm,1.6s						
GUMA				AML	AML		
	comp=N,1152µm,0.4s						
GUMA	Gualdo di Mace	0.12	38	⇑P	Pg	14 46 25.6	+0.8
GUMA				S	Sg	14 46 28.3	+1.5
GUMA				AML	AML		
	comp=E,1660µm,0.4s						
GUMA				AML	AML		
	comp=N,1152µm,0.4s						

GUMA				AML	AML		
	comp=E,1660µm,1.6s						
GUMA				AML	AML		
	comp=N,1152µm,0.4s						
FDMO	**Fiordimonte**	0.13	304	P	Pg	14 46 24.5	-0.4
FDMO	**Fiordimonte**	0.13	304	P	Pg	14 46 25.0	+0.2
FDMO				S	Sg	14 46 27.6	+0.8
FDMO				AML	AML		
	comp=N,340µm,0.9s						
FDMO				AML	AML		
	comp=E,444µm,1.5s						
FDMO				AML	AML		
	comp=N,339µm,0.9s						
FDMO				AML	AML		
	comp=E,444µm,0.5s						
FDMO	**Fiordimonte**	0.13	304	P	Pg	14 46 24.5	-0.4
FDMO	**Fiordimonte**	0.13	304	P	Pg	14 46 24.5	-0.4
FDMO				S	Sg	14 46 27.7	+0.8
FDMO				AML	AML		
	comp=E,444µm,1.5s						
FDMO				AML	AML		
	comp=N,339µm,0.9s						
FDMO				AML	AML		
	comp=E,444µm,0.5s						
FDMO				AML	AML		
	comp=N,339µm,0.9s						
NRCA	**Norcia**	0.16	213	⇑P	Pg	14 46 26.0	+0.6
NRCA				S	Sg	14 46 29.0	+1.3
NRCA				AML	AML		
	comp=E,976µm,0.2s						
NRCA				AML	AML		
	comp=N,674µm,0.4s						
NRCA	**Norcia**	0.16	213	S	Sg	14 46 29.1	+1.4
NRCA				AML	AML		
	comp=E,976µm,0.2s						
NRCA				AML	AML		
	comp=N,674µm,0.4s						
NRCA				AML	AML		
	comp=N,674µm,0.4s						
NRCA				AML	AML		
	comp=E,976µm,0.2s						
T1216	**Preci, Frazion**	0.17	245	P	Pg	14 46 26.3	+0.7
T1216				S	Sg	14 46 29.5	+1.4
T1216				AML	AML		
	comp=E,432µm,0.4s						
T1216				AML	AML		
	comp=N,407µm,1.1s						
T1216				AML	AML		
	comp=N,408µm,1.1s						
T1216				AML	AML		
	comp=E,433µm,0.4s						
T1216	**Preci, Frazion**	0.17	245	P	Pg	14 46 26.2	+0.6
T1216				S	Sg	14 46 29.5	+1.4
T1216				AML	AML		
	comp=E,433µm,0.4s						
T1216				AML	AML		
	comp=N,407µm,1.1s						
T1216				AML	AML		
	comp=E,433µm,0.4s						
T1216				AML	AML		
	comp=N,408µm,1.1s						
T1216				AML	AML		
	comp=E,433µm,0.4s						
T1216				AML	AML		
	comp=N,408µm,1.1s						
T1220	**Camerino, Fraz**	0.18	324	P	Pg	14 46 26.3	+0.5
T1220				S	Sg	14 46 29.8	+1.5
T1220				AML	AML		
	comp=N,1181µm,0.4s						
T1220				AML	AML		
	comp=E,1165µm,1.2s						
T1220				AML	AML		
	comp=N,1183µm,0.4s						
T1220				AML	AML		
	comp=E,1165µm,0.8s						
T1220	**Camerino, Fraz**	0.18	324	⇑P	Pg	14 46 26.3	+0.6
T1220				AML	AML		
	comp=E,1165µm,1.2s						
T1220				AML	AML		
	comp=N,1183µm,0.4s						
T1220				AML	AML		
	comp=N,1183µm,0.4s						
T1220				AML	AML		
	comp=E,1165µm,0.8s						
T1219	**Muccia, Frazio**	0.19	299	P	Pg	14 46 25.7	-0.2
T1219				AML	AML		
	comp=N,292µm,1.2s						
T1219				AML	AML		
	comp=E,288µm,0.6s						
T1214	**Arquata del Tr**	0.21	185	P	Pg	14 46 26.9	+0.6
T1214				S	Sg	14 46 30.7	+1.5
T1214				AML	AML		
	comp=N,244µm,1.4s						
T1214				AML	AML		
	comp=N,203µm,0.8s						
T1214				AML	AML		
	comp=E,230µm,0.1s						
T1214				AML	AML		
	comp=E,236µm,0.9s						
T1214				AML	AML		
	comp=E,236µm,1.1s						
T1214				AML	AML		
	comp=N,244µm,0.6s						
T1212	**Cascia, Frazio**	0.25	213	⇑P	Pg	14 46 27.9	+0.8
T1212				S	Sb	14 46 32.3	-1.1
T1212				AML	AML		
	comp=E,222µm,0.6s						
T1212				AML	AML		
	comp=N,404µm,0.1s						
T1212				AML	AML		
	comp=E,241µm,0.1s						
T1212				AML	AML		
	comp=N,414µm,0.1s						
T1212				AML	AML		
	comp=E,222µm,0.6s						
T1212				AML	AML		
	comp=N,404µm,0.1s						
T1212				AML	AML		
	comp=E,241µm,0.1s						
T1212				AML	AML		
	comp=N,414µm,0.1s						
T1212				AML	AML		
	comp=E,241µm,0.1s						
T1212				AML	AML		
	comp=E,222µm,1.4s						
T1212				AML	AML		
	comp=N,414µm,0.1s						
T1212				AML	AML		
	comp=N,404µm,0.1s						
T1212	**Cascia, Frazio**	0.25	213	⇑P	Pg	14 46 27.9	+0.8
T1212	**Cascia, Frazio**	0.25	213	AML	AML		
	comp=N,414µm,0.1s						
T1212				AML	AML		
	comp=E,222µm,0.6s						
T1212				AML	AML		
	comp=N,404µm,0.1s						
T1212				AML	AML		
	comp=E,241µm,0.1s						
T1212				AML	AML		
	comp=E,222µm,1.4s						
T1218	**Civita (PG)**	0.31	196	P	Pg	14 46 28.9	+0.8
T1218				AML	AML		
	comp=E,204µm,0.2s						
T1218				AML	AML		
	comp=N,331µm,0.2s						
T1218				AML	AML		
	comp=E,196µm,0.2s						
T1218				AML	AML		
	comp=N,326µm,0.2s						
T1218				AML	AML		
	comp=E,204µm,0.2s						
T1218				AML	AML		
	comp=E,196µm,0.2s						
T1218				AML	AML		
	comp=N,326µm,0.2s						
T1218				AML	AML		
	comp=N,331µm,0.2s						
T1218	**Civita (PG)**	0.31	196	P	Pg	14 46 28.9	+0.8
T1218	**Civita (PG)**	0.31	196	AML	AML		
	comp=N,326µm,0.2s						
T1218				AML	AML		
	comp=E,196µm,0.2s						
SNTG	**Esanatoglia**	0.36	324	P	Pg	14 46 29.6	+0.6
SNTG				S	Sb	14 46 35.9	-0.6
SNTG				AML	AML		
	comp=E,68µm,0.7s						
SNTG				AML	AML		
	comp=N,77µm,0.5s						
SNTG				AML	AML		
	comp=N,76µm,0.5s						
SNTG				AML	AML		
	comp=E,68µm,1.3s						
SNTG	**Esanatoglia**	0.36	324	⇑P	Pg	14 46 29.7	+0.6
SNTG				AML	AML		
	comp=E,68µm,0.7s						
SNTG				AML	AML		
	comp=N,76µm,0.5s						
SNTG				AML	AML		
	comp=E,68µm,0.7s						
SNTG				AML	AML		
	comp=N,76µm,0.5s						
SNTG				AML	AML		
	comp=E,68µm,1.3s						
SNTG				AML	AML		
	comp=N,76µm,0.5s						
EL6	**Elcito**	0.38	345	S	Sb	14 46 37.4	+0.4
EL6				AML	AML		
	comp=E,109µm,0.2s						
EL6				AML	AML		
	comp=N,122µm,0.2s						
EL6				AML	AML		
	comp=E,109µm,0.2s						
EL6				AML	AML		
	comp=N,122µm,0.2s						
EL6	**Elcito**	0.38	345	S	Sb	14 46 37.4	+0.4
CING	**Cingoli**	0.41	356	P	Pg	14 46 30.8	+0.7
CING				S	Sb	14 46 37.8	-0.2
CING				AML	AML		
	comp=E,72µm,1.3s						
CING				AML	AML		
	comp=N,62µm,1.1s						
CING				AML	AML		
	comp=E,72µm,0.7s						
CING	**Cingoli**	0.41	356	⇓P	Pb	14 46 30.8	-0.7
CING				AML	AML		
	comp=E,72µm,1.3s						
CING				AML	AML		
	comp=N,62µm,1.1s						
CING				AML	AML		
	comp=N,62µm,1.1s						
CING				AML	AML		
	comp=E,72µm,0.7s						
TERO	**Teramo**	0.44	141	P	Pg	14 46 30.9	+0.3
TERO	**Teramo**	0.44	141	P	Pg	14 46 31.0	+0.5
TERO				S	Sb	14 46 37.7	-1.0
TERO				AML	AML		
	comp=E,59µm,0.5s						
TERO				AML	AML		
	comp=N,54µm,0.7s						
TERO				AML	AML		
	comp=N,54µm,1.3s						
TERO	**Teramo**	0.44	141	P	Pg	14 46 30.9	+0.3
TERO				AML	AML		
	comp=E,59µm,0.5s						
TERO				AML	AML		
	comp=N,54µm,0.7s						
TERO				AML	AML		
	comp=E,59µm,0.5s						
TERO				AML	AML		
	comp=N,54µm,1.3s						
TERO	**Teramo**	0.44	141	P	Pg	14 46 30.9	+0.3
PP3	**Marolino**	0.50	34	S	Sb	14 46 50.4	+10
PP3				AML	AML		
	comp=E,178µm,1.0s						
PP3				AML	AML		
	comp=E,178µm,1.0s						
PP3				AML	AML		
	comp=N,210µm,0.9s						
MOMA	**Monte Martano**	0.51	252	⇑P	Pb	14 46 33.1	-0.2
MOMA				S	Sb	14 46 41.3	+0.4
MOMA				AML	AML		
	comp=E,104µm,0.3s						
MOMA				AML	AML		
	comp=N,75µm,0.2s						
MOMA				AML	AML		
	comp=E,104µm,0.3s						
MOMA				AML	AML		
	comp=N,75µm,0.2s						
MOMA				AML	AML		
	comp=E,104µm,0.3s						
MOMA				AML	AML		
	comp=N,75µm,0.2s						
MOMA	**Monte Martano**	0.51	252	⇑P	Pb	14 46 33.1	-0.2
MOMA	**Monte Martano**	0.51	252	AML	AML		
	comp=E,104µm,0.3s						
MOMA				AML	AML		
	comp=N,74µm,0.2s						
MOMA				AML	AML		
	comp=E,104µm,0.3s						
MOMA				AML	AML		
	comp=N,75µm,0.2s						
MURB	**Monte Urbino**	0.60	300	P	Pb	14 46 34.2	-0.5
MURB				AML	AML		
	comp=E,158µm,0.3s						
MURB				AML	AML		
	comp=N,133µm,0.3s						
MURB	**Monte Urbino**	0.60	300	⇓P	Pb	14 46 34.3	-0.4
MURB				AML	AML		
	comp=E,158µm,0.3s						
MURB				AML	AML		
	comp=N,133µm,0.3s						
MURB				AML	AML		
	comp=E,158µm,0.3s						
MURB				AML	AML		
	comp=N,133µm,0.3s						
MPAG	**Monte Paganucc**	0.75	333	⇑P	Pb	14 46 37.5	+0.2
MPAG	**Monte Paganucc**	0.75	333	⇑P	Pb	14 46 37.5	+0.2
MPAG	**Monte Paganucc**	0.75	333	⇑P	Pb	14 46 37.5	+0.2
PIEI	**Pieia**	0.77	319	S	Sb	14 46 49.4	+1.2
PIEI	**Pieia**	0.77	319	S	Sb	14 46 49.4	+1.2
PIEI				AML	AML		
	comp=E,24µm,0.8s						
PIEI				AML	AML		
	comp=N,21µm,0.2s						
PIEI				AML	AML		
	comp=N,21µm,0.2s						
PIEI				AML	AML		
	comp=E,24µm,1.2s						
PIEI	**Pieia**	0.77	319	S	Sb	14 46 49.4	+1.2

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*NEIC **25** 14:46:30.6±2.2, 11°.10N±0°.06×60°.80W±0°.09, h53^{km}±9^{km}, mb4.4/20, Error ellipse: s-maj=12.5km s-min=8.6km az=82.0*

*IDC **25** 14:46:31.1±0.8, 11°.22N×61°.09W, h42^{km}±7^{km}, mb3.8/17, mbtmp4.0/18, ML2.5/1, MS3.2/9, Error ellipse: s-maj=16.8km s-min=10.3km az=87.0*

*TRN **25** 14:46:31.2, 11°.22N×60°.83W, h38^{km}, MD4.4*

TRN Felt int Tobago, MMI II.

*FUNV **25** 14:46:32.8, 11°.26N×60°.97W, h19^{km}, MW4.3*

*VAO **25** 14:46:36.7±0.4, 10°.39N×60°.36W, h10^{km}, mb4.5*

ISC 25 14:46:31.1±0.6, **11°.19N**±0°.03×**60°.94W**±0°.04, **h46**^{km}±5^{km}, **n155**, σ1^{s}.75/171, **mb4.2**/28, **MS3.2**/6, **Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPR	**Prospect**	0.16	92	*e*P	Pn	14 46 39.2	+0.5
TOSP	**Speyside**	0.41	75		Pn	14 46 40.6	-0.4
TOSP	**Speyside**	0.41	75	*e*P	Pn	14 46 41.5	+0.5
TOSP				*e*S	Sn	14 46 47.3	-0.7
TRN	**Trinidad (W)**	0.71	220	*e*P	Pn	14 46 47.7	+2.9
TRN				*e*S	Sn	14 46 58.7	+4.0
TBH	**Brigand Hill**	0.71	190	*e*P	Pn	14 46 47.6	+2.7
TBH				*e*S	Sn	14 46 57.3	+2.4
TPP	**Pointe-a-Pierr**	1.01	210	*e*P	Pn	14 46 51.7	+2.9
GRGR	**Grenville**	1.17	323	Pn	Pn	14 46 52.7	+1.6
GRGR				Sn	Sn	14 47 08.3	+2.4
GRGR	**Grenville**	1.17	323	*e*P	Pn	14 46 52.2	+1.2
GRGR				*e*S	Sn	14 47 08.3	+2.4
GRHS	**Sauteurs**	1.24	326	*e*P	Pn	14 46 53.3	+1.4
GRHS				*e*S	Sn	14 47 09.2	+1.8
GRSS	**Sisters**	1.28	329	*e*P	Pn	14 46 55.1	+2.5
GRSS				*e*S	Sn	14 47 11.0	+2.4
GCMP	**Grenada, Carri**	1.37	340	*e*P	Pn	14 46 55.0	+1.1
GCMP				*e*S	Sn	14 47 12.8	+2.0
SVOC	**Richmond Hill,**	1.97	352	*e*P	Pn	14 47 03.4	+1.4
SVOC				*e*S	Sn	14 47 27.6	+2.1
SVB	**Belmont**	2.09	352		Pn	14 47 04.1	+0.4
SVB	**Belmont**	2.09	352	*e*P	Pn	14 47 05.5	+1.8
SVB				*e*S	Sn	14 47 30.8	+2.3
SVV	**Soufriere Volc**	2.13	353	*e*P	Pn	14 47 06.0	+1.7
SVV				*e*S	Sn	14 47 30.7	+1.2
SSV	**Crater Summit**	2.14	353	*e*P	Pn	14 47 06.1	+1.7
SSV				*e*S	Sn	14 47 31.3	+1.6
BCHC	**Barbados, Cave**	2.31	33	*e*P	Pn	14 47 06.8	+0.1
BCHC				*e*S	Sn	14 47 32.7	-1.3
CRUV	**Carupano**	2.32	257	*e*P	Pn	14 47 08.9	+2.2
CRUV				*e*S	Sn	14 47 35.5	+1.5
BBGH	**Gun Hill**	2.36	35	*e*P	Pn	14 47 07.0	-0.3
BBGH				*e*S	Sn	14 47 34.0	-1.2
MCLT	**Moule a Chique**	2.50	360	Pn	Pn	14 47 10.2	+0.8
MCLT	**Moule a Chique**	2.50	360	*e*P	Pn	14 47 10.5	+1.1
MCLT				*e*S	Sn	14 47 39.2	+0.6
SLCP	**Castries, St.**	2.80	359	*e*S	Sn	14 47 45.3	-0.7
SLBI	**Saint Lucia, B**	2.81	359	*e*P	Pn	14 47 14.8	+1.2
SLBI				*e*S	Sn	14 47 46.9	+0.6
H05S1	**Guadeloupe/Mar**	3.21	2	P	Pn	14 47 20.5	+1.4
H05S1				S	Sn	14 47 55.4	-0.8
	SNR=118						
MPOM	**Morne Pois Mar**	3.23	1	Pn	Pn	14 47 20.2	+0.9
MPOM	**Morne Pois Mar**	3.23	1	*e*P	Pn	14 47 20.8	+1.4
MPOM				*e*S	Sn	14 47 57.3	+0.6
BIM	**Bigot**	3.31	358	Pn	Pn	14 47 21.9	+1.5
BIM	**Bigot**	3.31	358	*e*P	Pn	14 47 21.7	+1.3
BIM				*e*S	Sn	14 47 59.4	+0.8
TRMF	**Trois Ilets**	3.33	358	*e*P	Pn	14 47 22.6	+1.9
MVM	**Montagne Vaucl**	3.34	1	*e*P	Pn	14 47 21.6	+0.7
ZAM	**Aeronautique**	3.36	358	*e*P	Pn	14 47 23.7	+2.6
LPMF	**Morne Lapointe**	3.36	360	*e*P	Pn	14 47 22.2	+1.1
FDF	**Fort de France**	3.53	357		Pn	14 47 24.1	+0.7
FDF	**Fort de France**	3.53	357	*e*P	Pn	14 47 24.9	+1.4
FDF				*e*S	Sn	14 48 04.7	+0.7
ILAM	**Ilet Lapin Mar**	3.56	1	Pn	Pn	14 47 23.7	-0.1
ILAM	**Ilet Lapin Mar**	3.56	1	*e*P	Pn	14 47 25.0	+1.1
ILAM				*e*S	Sn	14 48 04.9	+0.2
GBMF	**Grand Be**	3.59	356	*e*P	Pn	14 47 25.7	+1.3
CXM	**Morne La Croix**	3.60	356	*e*P	Pn	14 47 28.0	+3.4
BAMF	**Morne Balai**	3.61	357	*e*P	Pn	14 47 25.9	+1.3
SVN	**Savane Anatole**	3.63	356		Pn	14 47 26.0	+1.0
SVN	**Savane Anatole**	3.63	356	*e*P	Pn	14 47 26.4	+1.4
PCRV	**Puerto La Cruz**	3.77	255	P	Pn	14 47 27.7	+0.9
	24nm,0.5s,baz=101,slow=5.2,SNR=23						
PCRV				S	Sn	14 48 06.9	-3.1
	59nm,0.7s,baz=82,slow=23,SNR=4.7						
PCRV	**Puerto La Cruz**	3.77	255	*e*P	Pn	14 47 28.7	+1.9
PCRV				*e*S	Sn	14 48 08.3	-1.7
PRGV	**PARIAGUAN**	4.38	237	*e*P	Pn	14 47 37.5	+2.4
PRGV				*e*S	Sn	14 48 25.1	+0.2
TBG	**Guadaloupe-3**	4.68	352	*e*P	Pn	14 47 40.9	+1.6
MAGL	**Barre de l’ile**	4.74	356	Pn	Pn	14 47 42.8	+2.7
MAGL	**Barre de l’ile**	4.74	356	*e*P	Pn	14 47 42.1	+2.0
MAGL	**Barre de l’ile**	4.74	356	*e*S	Sn	14 48 34.7	+0.9
CBE	**Ff, Capester**	4.89	352		Pn	14 47 43.0	+0.8
CBE	**Ff, Capester**	4.89	352	*e*P	Pn	14 47 43.4	+1.2
CBE	**Ff, Capester**	4.89	352	*e*S	Sn	14 48 38.6	+1.1
H05N1	**Guadeloupe/Mar**	5.09	359	P	Pn	14 47 47.1	+2.1
H05N1				S	Sn	14 48 41.3	-1.3
GDHS	**Morne Mazeau,**	5.11	351		Pn	14 47 46.1	+0.8
ABD	**La Joyeuse, An**	5.28	354	*e*P	Pn	14 47 50.7	+3.3
ABD	**La Joyeuse, An**	5.28	354	*e*S	Sn	14 48 47.5	+0.5
BIRV	**Birongo**	5.29	263	Pn	Pn	14 47 50.2	+2.7
BIRV	**Birongo**	5.29	263	*e*P	Pn	14 47 49.7	+2.1
BIRV				*e*S	Sn	14 48 45.2	-2.1
MERV	**Las Mercedes**	5.62	250	*e*S	Sn	14 48 54.3	-1.1
MLYT	**Lee's Yard**	5.63	348	*e*P	Pn	14 47 53.4	+1.1
MLYT	**Lee's Yard**	5.63	348	*e*S	Sn	14 48 55.8	+0.1
MBFL	**Flemmings, Mon**	5.66	348	*e*P	Pn	14 47 54.0	+1.2
MBFL	**Flemmings, Mon**	5.66	348	*e*S	Sn	14 48 58.0	+1.5
ANBD	**Bethesda, Anti**	5.88	352	*e*P	Pn	14 47 58.6	+3.0
ANBD	**Bethesda, Anti**	5.88	352	*e*S	Sn	14 49 02.5	+0.8
TACV	**Tcata**	6.08	261	*e*P	Pn	14 47 58.6	+0.2
ANWB	**Willy Bob**	6.49	353	Pn	Pn	14 48 05.1	+1.0
ANWB	**Willy Bob**	6.49	353	*e*P	Pn	14 48 07.9	+3.9
ANWB	**Willy Bob**	6.49	353	*e*S	Sn	14 49 15.2	-1.6
CACV	**CAICARA DEL OR**	6.60	237	*e*P	Pn	14 48 00.5	-5.1
CACV				*e*S	Sn	14 49 07.2	-12
BENV	**Beln**	6.66	260	*e*P	Pn	14 48 07.7	+1.2
BENV				*e*S	Sn	14 49 16.7	-4.5
BAUV	**El Baul**	7.34	253	Pn	Pn	14 48 14.7	-1.1
BAUV	**El Baul**	7.34	253	*e*P	Pn	14 48 15.8	0.0
BAUV				*e*S	Sn	14 49 32.8	-5.1
BAUV	**El Baul**	7.34	253	*e*P	Pn	14 48 16.0	+0.2
CDVI	**St. Croix**	7.50	331	Pn	Pn	14 48 20.3	+2.3
MAPV	**Macapo**	7.52	260	*e*P	Pn	14 48 18.4	+0.1
MAPV				*e*S	Sn	14 49 38.0	-4.3
JACV	**Jacura**	7.75	270	*e*P	Pn	14 48 23.8	+2.4
MTP	**Monte Pirata**	8.19	327	Pn	Pn	14 48 27.2	-0.2
CUPR	**Culebra, Puert**	8.23	330	Pn	Pn	14 48 28.3	+0.4
HUMP	**Col San Antoni**	8.38	326	Pn	Pn	14 48 30.4	+0.4
SJG	**San Juan**	8.53	324	LR	LR	14 52 22.3	
	comp=Z,78nm,21.8s,baz=238,slow=42						
SIQV	**Siquisique**	8.73	267	*e*P	Pn	14 48 34.9	0.0
BOAV	**Boa Vista**	8.75	177	Pn	Pn	14 48 32.8	-2.3
BOAV	**Boa Vista**	8.75	177	*e*P	Pn	14 48 32.6	-2.5
CURV	**Curarigua**	8.95	263	*e*P	Pn	14 48 38.9	+1.0
SDV	**Santo Domingo**	9.82	257	P	Pn	14 48 48.6	-1.4
	0.5nm,0.3s,baz=240,slow=19,SNR=2.0						
SDV				S	Sn	14 50 33.6	-5.4
	3.3nm,0.5s,baz=58,slow=23,SNR=1.5						
SDV				LR	LR	14 53 24.2	
	comp=Z,86nm,21.6s,baz=60,slow=43						
	1.9nm,0.5s						
SDV	**Santo Domingo**	9.82	257	*e*P	Pn	14 49 03.8	+14
SOCV	**Socops**	10.19	254	*e*P	Pn	14 48 53.8	-1.2
MDP	**Montagnes des**	10.20	126	P	Pn	14 48 50.5	-4.4
	9.5nm,0.3s,baz=317,slow=16,SNR=43						
MDP				S	Sn	14 50 36.3	-12
	59nm,0.5s,baz=38,slow=19,SNR=15						
MACA	**Manacapuru-AM**	14.26	179	Pn	Pn	14 49 48.0	-2.4
MCPB	**Macapa, AP**	14.48	142	*e*P	Pn	14 49 46.7	-6.7
MALB	**Monte Alegre**	14.56	152	*e*P	Pn	14 49 49.1	-5.3
ROSC	**El Rosal**	14.67	246	LR	LR	14 56 49.0	
	comp=Z,189nm,20.6s,baz=98,slow=42						
TEFE	**Tefe**	15.06	194	*e*P	Pn	14 50 01.8	+0.8
ITTB	**Itaituba**	16.30	161	*e*P	Pn	14 50 13.0	-4.0
TBTG	**Tabatinga, AM**	17.70	211	*e*P	Pn	14 50 38.7	+4.3
TMAB	**Tom-Au,PA,Br**	18.57	136	*e*P	P	14 50 43.2	-1.2
NPGB	**Novo Progresso**	18.95	163	*e*P	P	14 50 47.9	-0.6
SAML	**Samuel**	20.13	186		P	14 51 01.4	-0.1
SAML	**Samuel**	20.13	186	*e*P	Pn	14 51 03.1	-0.5
PRPB	**Parauapebas**	20.50	147	*e*P	P	14 51 05.3	-0.2
OTAV	**Otavalo**	20.52	239	P	P	14 51 03.0	-3.2
ROSB	**Rosrio**	21.81	129	*e*P	P	14 51 20.4	+0.9
PDRB	**Porto dos Gac**	23.04	169	*e*P	P	14 51 33.5	+0.9
SMTB	**Santa Maria do**	23.94	146	*e*P	P	14 51 42.3	+1.1
MCRA	**Macar, Loja**	24.44	232	P	P	14 51 47.5	+1.7
MCRA				IAmb	IAmb	14 51 48.5	
	comp=Z,8.2nm,0.5s						
ATAH	**Atahualpa**	25.16	224	LR	LR	15 02 19.5	
	comp=Z,82nm,20.6s,baz=50,slow=38						
SIV	**San Ignacio**	27.01	180	P	P	14 52 10.5	+1.5
	comp=Z,0.7nm,0.5s,baz=18,slow=9.6,SNR=4.1						
SIV				LR	LR	15 02 43.4	
	comp=Z,41nm,20.2s,baz=342,slow=36						
	comp=Z,0.7nm,0.5s						
NNA	**Nana**	27.93	215	LR	LR	15 04 24.9	
	comp=Z,59nm,20.0s,baz=12,slow=38						
LPAZ	**La Paz**	28.22	195	LR	LR	15 04 21.2	
	comp=Z,69nm,20.2s,baz=52,slow=38						
CMIG	**Matias Romero**	33.40	284	LR	LR	15 08 50.0	
	comp=Z,34nm,18.3s,baz=42,slow=40						
N49A	**Columbus Grove**	36.00	329	P	P	14 53 27.2	-0.6
MCR1	**Marechal Candi**	36.07	169	*e*P	P	14 53 30.7	+2.2
SADO	**Sadowa**	36.94	338	LR	LR	15 11 01.1	
	comp=Z,35nm,18.1s,baz=120,slow=40						
SADO	**Sadowa**	36.94	338	P	P	14 53 34.2	-1.4
CPUP	**Villa Florida**	37.46	175	P	P	14 53 39.9	-0.4
	comp=Z,1.4nm,0.5s,baz=16,slow=9.8,SNR=4.2						
	comp=Z,1.4nm,0.5s						
CNLB	**Canela**	41.43	167	*e*P	P	14 54 14.1	+0.7
TXAR	**Lajitas Array**	43.67	301	P	P	14 54 30.1	-1.7
	comp=Z,0.5nm,0.5s,baz=117,slow=11,SNR=8.9						
TXAR				PcP	PcP	14 56 19.8	+1.3
	comp=Z,2.1nm,0.6s,baz=114,slow=5.4,SNR=15						
	comp=Z,0.5nm,0.5s						
SCHQ	**Schefferville**	43.78	355	P	P	14 54 33.1	+1.0
	comp=Z,3.2nm,0.8s,baz=186,slow=12,SNR=2.9						
	comp=Z,3.2nm,0.8s						
ULM	**Lac du Bonnet**	48.37	331	P	P	14 55 07.1	-1.2
	comp=Z,2.7nm,0.4s,baz=139,slow=8.9,SNR=5.8						
	comp=Z,2.7nm,0.4s						
H10N3	**ASCENSION HYDR**	49.92	110	T	T	15 48 46.1	
	baz=292,slow=75,SNR=172						

H10N2	ASCENSION HYDR	49.93	110	T	T	15 48 49.1	
	baz=292,slow=75,SNR=189						
H10N1	ASCENSION HYDR	49.94	110	T	T	15 48 50.2	
	baz=292,slow=75,SNR=207						
H10S3	ASCENSION HYDR	50.19	112	T	T	15 49 05.0	
	baz=292,slow=74,SNR=72						
H10S2	ASCENSION HYDR	50.21	112	T	T	15 49 06.4	
	baz=288,slow=74,SNR=15						
PLCA	Paso Flores	52.42	189	P	P	14 55 38.0	-1.1
	comp=Z,1.3nm,0.8s,baz=358,slow=8.8,SNR=4.4						
	comp=Z,1.3nm,0.8s						
PDAR	Pinedale Array	52.55	316	P	P	14 55 39.9	-0.4
	comp=Z,0.6nm,0.5s,baz=110,slow=8.0,SNR=1.7						
	comp=Z,0.6nm,0.5s						
FCC	Fort Churchill	53.65	339	P	P	14 55 46.0	-1.8
FCC				IAmb	IAmb	14 55 48.8	
	comp=Z,2.3nm,0.6s						
TPAW	Teton Pass	53.76	316	P	P	14 55 46.6	-2.7
TPAW				IAmb	IAmb	14 56 11.0	
	comp=Z,4.0nm,1.0s						
FFC	Flin Flon	54.10	332	P	P	14 55 49.4	-1.7
DBIC	Dimbokro	55.52	90	P	P	14 56 02.6	+0.5
	comp=Z,0.9nm,0.3s,baz=272,slow=5.7,SNR=1.7						
	comp=Z,0.9nm,0.3s						
ESDC	Sonseca Array	57.63	50	P	P	14 56 18.8	+2.0
	comp=Z,1.6nm,0.7s,baz=259,slow=8.2,SNR=8.7						
	comp=Z,1.6nm,0.7s						
NVAR	Mina Array Bea	57.66	308	P	P	14 56 16.8	-0.4
	comp=Z,0.4nm,0.7s,baz=96,slow=9.2,SNR=2.2						
	comp=Z,0.4nm,0.7s						
TORD	Torodi Ar. Bea	61.12	81	P	P	14 56 41.0	-0.2
	comp=Z,0.9nm,0.5s,baz=284,slow=5.8,SNR=2.7						
TORD				pP	pP	14 56 54.8	+0.5
	comp=Z,0.4nm,0.4s,baz=291,slow=5.0,SNR=1.8						
YKA	Yellowknife Ar	63.85	335	P	P	14 56 57.9	-0.8
	comp=Z,1.6nm,0.7s,baz=110,slow=7.6,SNR=28						
	comp=Z,1.6nm,0.7s						
GERES	GERESS Array B	71.55	42	P	P	14 57 48.6	+1.1
	comp=Z,0.9nm,0.6s,baz=254,slow=3.6,SNR=5.9						
GERES				pP	pP	14 58 01.1	+0.2
	comp=Z,0.5nm,0.5s,baz=268,slow=7.7,SNR=3.1						
	comp=Z,0.9nm,0.6s						
A36M	Sachs Harbour	71.60	343	P	P	14 57 46.0	-1.2
A36M				IAmb	IAmb	14 57 48.0	
	comp=Z,4.7nm,0.7s						
NOA	NORSAR Array B	71.65	29	P	P	14 57 49.1	+1.2
	comp=Z,1.3nm,0.9s,baz=261,slow=6.0,SNR=3.4						
	comp=Z,1.3nm,0.9s						
PMSA	Palmer Station	75.78	181	*e*P	P	14 58 18.2	+6.5
IL31		78.23	334	P	P	14 58 24.9	-0.8
IL31				IAmb	IAmb	14 58 26.6	
	comp=Z,1.8nm,0.6s						
ILAR	Eielson Array	78.23	334	P	P	14 58 25.9	+0.2
	comp=Z,1.2nm,0.5s,baz=88,slow=4.4,SNR=36						
	comp=Z,1.2nm,0.5s						
ILAR	Eielson Array	78.23	334	P	P	14 58 24.8	-1.0
ARCES	ARCESS Array B	78.35	21	P	P	14 58 26.3	0.0
	comp=Z,6.3nm,1.0s,baz=258,slow=4.5,SNR=3.8						
	comp=Z,6.3nm,1.0s						
POKR	Poker Plat Res	78.46	334	P	P	14 58 26.9	-0.1
POKR				IAmb	IAmb	14 58 48.3	
	comp=Z,5.6nm,1.4s						
SCM	Sheep Creek Mo	78.52	331	P	P	14 58 26.9	-0.6
WRH	Wood River Hil	78.76	334	P	P	14 58 28.3	-0.3
WRH				IAmb	IAmb	14 59 12.4	
	comp=Z,7.5nm,1.5s						
MDM	Murphy Dome	78.80	334	P	P	14 58 29.1	+0.2
MDM				IAmb	IAmb	14 58 29.8	
	comp=Z,3.1nm,0.7s						
FINES	FINESS Array B	78.83	29	P	P	14 58 30.4	+1.3
	comp=Z,1.3nm,0.7s,baz=253,slow=3.8,SNR=8.1						
	comp=Z,1.3nm,0.7s						
I23K	Minto, Yukon-K	79.27	335	P	P	14 58 31.8	+0.4
I23K				IAmb	IAmb	14 59 02.4	
	comp=Z,5.7nm,1.4s						
TRF	Thorofare Moun	79.79	333	P	P	14 58 34.7	+0.2
KTH	Kantishna Hill	80.06	333	P	P	14 58 34.5	-1.3
I21K	Tanana	80.37	335	P	P	14 58 36.4	-0.9
I21K				IAmb	IAmb	14 58 45.6	
	comp=Z,8.9nm,1.5s						
CAST	Castle Rocks	80.60	333	P	P	14 58 37.7	-0.9
IMAR	Indian Mountai	81.01	336	P	P	14 58 41.0	+0.3
SVW2	Sparrevohn	82.53	331	P	P	14 58 49.2	+0.3
BRTR	Keskin Array B	86.42	50	P	P	14 59 10.8	+1.6
	comp=Z,1.0nm,0.7s,baz=241,slow=4.7,SNR=5.2						
BRTR				pP	pP	14 59 23.2	+0.4
	comp=Z,0.9nm,0.7s,baz=288,slow=4.6,SNR=5.1						
	comp=Z,1.0nm,0.7s						

JMA ***25*** *14:47:27.8±0.1, 36°.6N±0°.4×139°.9E±0°.6, h119^{km}±1^{km}, MV2.9/40, SOUTHERN TOCHIGI PREF*

IDC ***25*** *14:47:28.5±1.5, 36°.60N×139°.81E, h132^{km}±12^{km}, mb3.1/8, mbtmp3.5/10, Error ellipse: s-maj=23.3km s-min=18.6km az=84.0*

ISC 25 14:47:26.9±0.8, **36°.61N**±0°.05×**139°.98E**±0°.07, **h123**^{km}±7^{km}, **n37**, σ**1.^{s}53**/44, **mb3.4**/8, **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAG	Ashikaga	0.46	246	P	Pn	14 47 45.0	+0.1
JKT	Katashina	0.61	285	P	Pn	14 47 46.3	+0.4
JKT				*e*S	Sn	14 48 00.5	+0.2
JFY	Yanaizu	0.82	345	P	Pn	14 47 48.2	+0.6
JFY				*e*S	Sn	14 48 03.1	-0.1
JUON	Uonuma	0.95	309	*e*P	Pn	14 47 49.1	+0.4
JUON				*e*S	Sn	14 48 05.0	-0.2
JOTO	OTAMA OYAMA	0.99	17	P	Pn	14 47 50.1	+1.1
JOTO				*e*S	Sn	14 48 06.8	+0.9
JRY	Ryogami san	1.05	236	P	Pn	14 47 50.1	+0.4
JNS	Sasagawa	1.32	337	*e*P	Pn	14 47 52.6	+0.2
JMM	Marumori	1.41	27	P	Pn	14 47 54.5	+1.0
MJAR	Matsushiro Arr	1.43	268	P	Pn	14 47 53.5	-0.1
	75nm,0.6s,baz=84,slow=10,SNR=463						
MJAR				S	Sn	14 48 13.9	-0.1
	24nm,0.5s,baz=92,slow=21,SNR=3.4						
MAJO	Matsushiro	1.43	268	P	Pn	14 47 53.9	+0.2
MAT	Matsushiro	1.43	268	P	Pn	14 47 53.8	+0.1
MAT				*e*S	Sn	14 48 13.4	-0.6
JOD2	Odawara 2	1.53	209	P	Pn	14 47 54.6	-0.3
JOD2				*e*S	Sn	14 48 15.3	-0.7
JYN	Shimob	1.61	227	P	Pn	14 47 56.1	+0.3
JYN				*e*S	Sn	14 48 17.9	+0.1
JFNN	Fujinakano	1.76	217	*e*P	Pn	14 47 58.1	+0.5
JAW	Awa shima	1.93	343	P	Pn	14 48 00.1	+0.5
JSD	Sado	1.98	317	P	Pn	14 48 00.0	-0.2
JSD	Sado	1.98	317	P	Pn	14 47 59.9	-0.2
JSD				*e*S	Sn	14 48 24.3	-1.3
JGF	Kuroka	2.35	245	P	Pn	14 48 05.3	+0.4
JSG	Sagara	2.42	218	P	Pn	14 48 06.8	+1.0
INU	Inuyama	2.71	243	P	Pn	14 48 09.6	+0.1
JHJ2	Mitsune	3.49	182	P	Pn	14 48 20.9	+1.1
JTM	Tenmabayashi	4.26	11	P	Pn	14 48 32.4	+2.6
ASAJ	Asahikawa	7.76	14	P	Pn	14 49 15.7	-1.3
	1.6nm,0.3s,baz=234,slow=13,SNR=22						
ASAJ				S	Sn	14 50 35.8	-7.4
	2.4nm,0.5s,baz=147,slow=21,SNR=2.3						
JCJ	Chichijima	9.67	168	P	Pn	14 49 39.9	-3.0
	48nm,0.7s,baz=297,slow=17,SNR=1.5						
JCJ				S	Sn	14 51 20.9	-8.9
	53nm,0.6s,baz=280,slow=22,SNR=2.4						
KSRS	Korea Array	9.68	279	P	Pn	14 49 44.8	+1.9
	1.1nm,0.8s,baz=104,slow=15,SNR=4.3						
USRK	Ussuriysk Ar.	9.72	324	P	Pn	14 49 44.2	+0.7
	2.5nm,0.9s,baz=136,slow=14,SNR=4.6						
SONM	Songino Array	27.07	305	P	P	14 52 57.3	-0.7
	0.7nm,0.5s,baz=103,slow=8.3,SNR=4.9						
	0.7nm,0.5s						
H11N2	WAKE ISLAND Hy	28.94	118	T	T	15 23 19.5	
	baz=308						
H11N1	WAKE ISLAND Hy	28.95	118	T	T	15 23 16.2	
	baz=308						
H11N3	WAKE ISLAND Hy	28.96	118	T	T	15 23 10.1	
	baz=308						
ZALV	Zalesovo Beam	41.35	313	P	P	14 54 59.9	-0.6
	0.6nm,0.5s,baz=87,slow=8.8,SNR=4.4						
	0.6nm,0.5s						
MKAR	Makanchi Array	43.37	302	P	P	14 55 16.7	-0.2
	0.6nm,0.8s,baz=88,slow=8.8,SNR=5.4						
	0.6nm,0.8s						
ILAR	Eielson Array	50.47	32	P	P	14 56 12.8	+1.1
	0.7nm,0.8s,baz=278,slow=6.7,SNR=9.4						
	0.7nm,0.8s						
WRA	Warramunga Arr	56.50	186	P	P	14 56 56.2	0.0
	0.2nm,0.3s,baz=0.3,slow=7.5,SNR=7.6						
	0.2nm,0.3s						
ASAR	Alice Springs	60.23	186	P	P	14 57 23.0	+0.9
	0.2nm,0.8s,baz=9.1,slow=7.0,SNR=1.9						
	0.2nm,0.8s						
NVAR	Mina Array Bea	76.16	52	P	P	14 59 04.0	+2.2
	0.4nm,0.7s,baz=300,slow=4.0,SNR=2.4						
	0.4nm,0.7s						
PDAR	Pinedale Array	78.78	45	P	P	14 59 17.0	+0.7
	0.3nm,0.8s,baz=278,slow=2.6,SNR=2.4						
	0.3nm,0.8s						

IDC ***25*** *14:51:02.9±4.4, 14°.73N×93°.13W, h0^{km}, mb3.6/4, mbtmp3.5/6, ML3.3/2, MS2.3/1, Error ellipse: s-maj=150.9km s-min=24.4km az=37.0*

MEX ***25*** *14:51:05.4±0.4, 14°.30N×93°.44W, h15^{km}, MD4.0*

ISC 25 14:51:02.5±2.4, **14°.47N**±0°.09×**93°.38W**±0°.05, **h5**^{km}±13^{km}, **n17**, σ**0.^{s}89**/25, **mb3.7**/4, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.16	68	*e*P	Pn	14 51 25.5	0.0
THIG				*e*S	Sb	14 51 39.7	-0.8
PCIG		1.24	7	*e*P	Pn	14 51 27.1	+0.6
PCIG				*i* S	Sn	14 51 44.0	+0.5
PATR	El Naranjo	1.28	60	*e*P	Pn	14 51 27.2	-0.1
PATR				*e*S	Sn	14 51 44.5	-0.4
PAVE	Pavencul	1.37	58	*e*P	Pg	14 51 28.6	-0.2
PAVE				*e*S	Sn	14 51 46.6	-0.5
CHUJ	Union Juarez	1.38	63	*e*P	Pn	14 51 28.5	-0.1
CHUJ				*e*S	Sn	14 51 47.1	-0.2
CCIG	Comitan	2.17	33	*e*P	Pb	14 51 42.9	+0.6
CCIG				*e*S	Sb	14 52 08.1	-1.5
TGIG		2.31	6	*e*P	Pn	14 51 42.6	+1.4
TGIG				*e*S	Sg	14 52 16.5	-0.3
HUIG	Huatulco	2.93	296	*e*P	Pn	14 51 45.7	-4.1
HUIG				*i* S	Sn	14 52 16.6	-8.8
CMIG	Matias Romero	2.98	331	Pn	Pn	14 51 50.2	-0.3
	3.3nm,0.3s,baz=157,slow=13,SNR=21						
CMIG				Sn	Sn	14 52 26.1	-0.5
	3.4nm,0.3s,baz=160,slow=23,SNR=6.4						
CMIG				LR	LR	14 52 42.1	
	comp=Z,50nm,20.4s,baz=188,slow=34						
	6.6nm,0.3s						
CMIG	Matias Romero	2.98	331	*e*P	Pn	14 51 50.3	-0.1
CMIG				*e*S	Sn	14 52 25.8	-0.8
PEIG	Puerto Escondi	3.94	293	*e*P	Pn	14 52 00.1	-3.6
PEIG				*e*S	Sn	14 52 40.0	-10
NEUV	Arroyo Zacate	3.98	325	*e*P	Pn	14 52 03.1	-1.0
NEUV				*e*S	Sn	14 52 49.5	-1.6
TXAR	Lajitas Array	17.59	329	Pn	P	14 55 11.7	+2.0
	baz=148,slow=13,SNR=4.4						
	0.5nm,0.7s						
SDV	Santo Domingo	22.95	101	P	P	14 56 07.5	-0.6
	4.0nm,0.8s,baz=284,slow=8.3,SNR=4.4						
	4.0nm,0.8s						
NVAR	Mina Array Bea	32.47	322	P	P	14 57 35.3	+1.0
	0.4nm,0.7s,baz=147,slow=8.5,SNR=2.7						
	0.4nm,0.7s						
YKA	Yellowknife Ar	50.27	347	P	P	14 59 59.2	-0.3
	0.8nm,0.8s,baz=153,slow=7.6,SNR=9.6						
	0.8nm,0.8s						
ILAR	Eielson Array	61.88	337	P	P	15 01 22.4	-0.3
	0.4nm,0.9s,baz=133,slow=6.4,SNR=4.2						
	0.4nm,0.9s						

IDC ***25*** *14:53:10.3±2.6, 17°.50N×145°.67E, h282^{km}±27^{km}, mb2.8/5, mbtmp3.5/6, Error ellipse: s-maj=43.6km s-min=18.9km az=104.0*

ISC 25 14:53:11.8±1.0, **17°.4N**±0°.1×**145°.6E**±0°.3, **h300**^{km}, **n6**, σ**1.^{s}46**/6, **mb2.9**/5, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	3.85	191	P	Pn	14 54 15.3	-1.1
	52nm,0.9s,baz=40,slow=18,SNR=1.7						
GUMO				S	S	14 54 58.9	-9.3
	20nm,0.5s,baz=170,slow=23,SNR=1.5						
WRA	Warramunga Arr	38.72	197	P	P	15 00 08.7	+0.9
	0.5nm,0.8s,baz=18,slow=8.5,SNR=7.3						
	0.5nm,0.8s						
ASAR	Alice Springs	42.38	196	P	P	15 00 38.1	+0.6
	0.2nm,0.6s,baz=15,slow=6.3,SNR=7.2						
	0.2nm,0.6s						
SONM	Songino Array	44.12	322	P	P	15 00 51.4	+0.2
	0.2nm,0.5s,baz=126,slow=7.6,SNR=1.7						
	0.2nm,0.5s						
ILAR	Eielson Array	64.85	26	P	P	15 03 17.4	-1.5
	0.1nm,0.4s,baz=254,slow=5.6,SNR=6.1						
	0.1nm,0.4s						
NVAR	Mina Array Bea	84.00	52	P	P	15 05 10.7	+1.3
	0.7nm,0.7s,baz=270,slow=5.4,SNR=5.3						
	0.7nm,0.7s						

BJI ***25*** *14:57:19.3±0.0, 3°.38S×137°.37E, h20^{km}, mb5.5/90, mB5.3/63, Ms5.1/92, Ms7 5.0/89*

KLM ***25*** *14:57:22, 3°.15S×137°.28E, h10^{km}, mb5.6*

MOS ***25*** *14:57:23.8±1.0, 3°.06S×136°.84E, h24^{km}, mb5.7/67, MS5.2/11, Error ellipse: s-maj=8.1km s-min=4.3km az=110.1*

DJA ***25*** *14:57:26.8±0.2, 3°S±2°×13°7E±°, h35^{km}±2^{km}, M5.4/101, mb5.6/101, mB5.9/73, MLv6.0/10, Mw5.5/34, Mw(mB)5.4/73, MwMwp5.2/34, Mwp5.5/34*

NEIC ***25*** *14:57:27.8±1.7, 3°.05S±0°.08×136°.87E±0°.07, h34^{km}±3^{km}, mb5.6/165, Ms_20 5.2/186, Mwb5.4/47, Mww5.5/26, Error ellipse: s-maj=11.3km s-min=9.6km az=206.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.52; $M_{\theta\theta}$-1.26; $M_{\phi\phi}$0.73; $M_{r\theta}$-0.84; $M_{\theta\phi}$0.27; $M_{\phi r}$-0.32; Fault plane solution: $M_0$1.44000×10^{17} NP1: ϕ_s138.91000°, δ41.95000°, λ159.46000°. NP2: ϕ_s244.48000°, δ76.44000°, λ49.91000°. Principal axes: T 1.2013, Plg44.0000°, Azm115.0000°; N 0.3997, Plg39.0000°, Azm256.0000°; P -1.6009, Plg21.0000°, Azm4.0000°;*

NEIC ***25*** *14:57:27.8, 3°.05S×136°.87E, h34^{km}*

NEIC ***25*** *14:57:27.2, 3°.05S×136°.86E, h36^{km}*

NEIC ***25*** *14:57:27.2, 2°.95S×136°.86E, h36^{km}, Moment Tensor Solution. Duration: 3.^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.92; $M_{\theta\theta}$-2.28; $M_{\phi\phi}$1.35; $M_{r\theta}$-1.08; $M_{\theta\phi}$1.12; $M_{\phi r}$-0.56; Fault plane solution: $M_0$2.54000×10^{17} NP1: ϕ_s247.36000°, δ76.30000°, λ36.39000°. NP2: ϕ_s147.46000°, δ54.81000°, λ163.16000°. Principal axes: T 2.2607, Plg35.0000°, Azm113.0000°; N 0.5554, Plg51.0000°, Azm265.0000°; P -2.8161, Plg14.0000°, Azm13.0000°;*

IDC ***25*** *14:57:28.6±1.8, 3°.05S×136°.87E, h48^{km}±17^{km}, mb5.1/26, mbtmp5.4/31, ML4.3/4, MS4.8/55 Error ellipse: s-maj=14.7km s-min=8.3km az=65.0*

GCMT ***25*** *14:57:30.8±0.1, 2°.86S±0°.01×136°.93E±0°.01, h47^{km}, MW5.6/149, Moment Tensor Solution. s135,c252; s149,c289; Duration: 1.^{s}6 Moment tensor: Scale 10^{17} Nm; M_{rr}1.49±.04; $M_{\theta\theta}$-3.58±.04; $M_{\phi\phi}$2.10±.04; $M_{r\theta}$-1.80±.05; $M_{\theta\phi}$1.14±.03; $M_{\phi r}$0.02±.05; Best double couple: $M_0$3.42600×10^{17} NP1: ϕ_s243.00000°, δ81.00000°, λ35.00000°. NP2: ϕ_s147.00000°, δ55.00000°, λ169.00000°. Principal axes: T 2.5130, Plg31.0000°, Azm111.0000°; N 1.8380, Plg54.0000°, Azm255.0000°; P -4.3400, Plg17.0000°, Azm10.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 14:57:26.1±0.3, **3°.06S**±0°.03×**136°.86E**±0°.03, **h28**^{km}±1^{km}, **h28**^{km}**:pP-P**, **n1141**, σ**1.^{s}41**/1190, **mb5.6**/232, **MS5.1**/185, **15C-42D**, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRPI	Serui, Papua	1.33	332	P	Pb	14 57 50.1	-0.4
SRPI				S	Sb	14 58 07.0	-0.1
SMPI	Sarmi	2.13	60	P	Pn	14 58 00.1	+0.2
SMPI				S	Sn	14 58 25.6	+0.1
RKPI	Ransiki, Papua	3.09	300	P	Pn	14 58 14.5	+1.4
RKPI				S	Sn	14 58 51.6	+2.5
GENI	Genyem	3.34	82	P	Pn	14 58 19.2	+2.7
GENI	Genyem	3.34	82	P	Pn	14 58 17.7	+1.2
GENI				S	Sn	14 58 54.9	-0.4
FAKI	Fak Fak	4.60	272	Pn	Pn	14 58 36.1	+2.2
FAKI				Sn	Sn	14 59 27.2	+0.6
FAKI	Fak Fak	4.60	272	P	Pn	14 58 36.7	+2.8
FAKI	Fak Fak	4.60	272	P	Pn	14 58 36.4	+2.5
FAKI				S	Sn	14 59 27.4	+0.9
SIJI	Sorong	6.00	291	P	Pn	14 58 54.7	+1.7
	43nm,0.3s,baz=96,slow=13,SNR=166						
SIJI				S	Sn	14 59 59.9	-1.0
	402nm,0.5s,baz=287,slow=21,SNR=7.5						
	133nm,0.4s						
BNDI	Bandanaira	7.09	258	P	Pn	14 59 11.4	+3.3
BNDI	Bandanaira	7.09	258	P	Pn	14 59 08.8	+0.7
	2μm,1.3s,16μm6μm39nm						
BNDI				S	Sn	15 00 30.5	+2.7
	2μm,1.3s,16μm6μm39nm						
SAUI	Saumlaki	7.38	228	Pn	Pn	14 59 14.7	+2.6
SAUI	Saumlaki	7.38	228	P	Pn	14 59 16.9	+4.8
SAUI	Saumlaki	7.38	228	P	Pn	14 59 12.2	+0.1
	1μm,0.7s,21μm28μm14nm						
MSAI	Masohi	7.92	268	P	Pn	14 59 21.8	+2.3
	99nm,0.6s,908nm0.6nm						
AAI	Ambon	8.67	266	P	Pn	14 59 30.2	+0.4
	562nm,0.7s,6μm8μm						
LBMI	Labuha	9.65	284	P	Pn	14 59 44.7	+1.4
	693nm,0.9s,7μm						
NLAI	Namlea	9.74	269	P	Pn	14 59 46.5	+2.0
	250nm,0.7s,96μm						
TNTI	Ternate	10.22	292	P	Pn	14 59 51.8	+0.7
	106nm,0.9s,2μm5μm						
KDU	Kakadu	10.50	204	P	Pn	14 59 55.6	+0.7
	baz=10,SNR=739						
KDU	Kakadu	10.50	204	P	Pn	14 59 55.8	+0.9
SANI	Sanana	10.90	275	P	Pn	15 00 02.3	+1.9
SANI	Sanana	10.90	275	P	Pn	15 00 00.9	+0.5
	434nm,0.7s,3μm5μm						
MTN	Manton Dam	11.25	210	P	Pn	15 00 06.0	+0.8
	baz=11,SNR=513						
MTN	Manton Dam	11.25	210	Pn	Pn	15 00 06.2	+1.0
MTN	Manton Dam	11.25	210	P	Pn	15 00 08.2	+3.0
PMG	Port Moresby	12.02	122	P	Pn	15 00 18.1	+2.3
	17nm,0.3s,baz=312,slow=9.1,SNR=140						
PMG				S	Sn	15 02 27.3	-1.7
	77nm,0.6s,baz=18,slow=23,SNR=1.5						
PMG				LR	LR	15 05 40.1	
	comp=Z,6μm,21.6s,baz=275,slow=41						
	775nm,1.0s						
PMG	Port Moresby	12.02	122	Pn	Pn	15 00 18.2	+2.5
PMG	Port Moresby	12.02	122	P	Pn	15 00 18.4	+2.7
PMG	Port Moresby	12.02	122	P	Pn	15 00 17.7	+2.0
PMG	Port Moresby	12.02	122	*c i*P	Pn	15 00 16.0	+0.3
PMG				pmax	pmax		
	comp=Z,1μm,1.0s						
COEN	Coen	12.50	150	P	Pn	15 00 22.5	+0.3
	baz=12,SNR=52						
COEN	Coen	12.50	150	Pn	Pn	15 00 22.5	+0.3
COEN	Coen	12.50	150	P	Pn	15 00 23.2	+0.9
SOEI	Soe	14.16	241	Pn	Pn	15 00 46.7	+1.5
SOEI	Soe	14.16	241	P	Pn	15 00 47.2	+2.1
SOEI	Soe	14.16	241	P	Pn	15 00 46.4	+1.3
	comp=Z,576nm,1.2s,comp=Z,11μmcomp=Z,5μm						
LUWI	Luwuk	14.22	278	Pn	Pn	15 00 46.7	+1.0
LUWI	Luwuk	14.22	278	P	Pn	15 00 48.8	+3.0
LUWI	Luwuk	14.22	278	P	Pn	15 00 46.2	+0.4
	comp=Z,331nm,1.0s,comp=Z,6μmcomp=Z,4μm						
GTOI	Gorontalo	14.32	285	P	Pn	15 00 50.1	+2.9
	comp=Z,134nm,0.7s,comp=Z,1μm						
KNRA	Kununurra	14.86	212	P	Pn	15 00 53.9	-0.5
	baz=15,SNR=312						
KNRA	Kununurra	14.86	212		Pn	15 00 54.6	+0.1
KNRA	Kununurra	14.86	212	P	Pn	15 00 54.7	+0.3
DAV	Davao City (W)	15.10	312	LR	LR	15 07 41.5	
	comp=Z,3μm,18.4s,baz=108,slow=41						
KRVT	Keravat (AS076	15.19	95	P	Pn	15 00 58.5	-0.4
	comp=Z,1.0nm,0.3s,baz=202,slow=3.6,SNR=5.4						
	comp=Z,101nm,1.1s						
RABL	Rabaul	15.32	95		Pn	15 00 59.7	-0.9
RABL				IAmb	IAmb	15 01 08.5	
	comp=Z,235nm,0.8s						
RABL	Rabaul	15.32	95	P	P	15 01 04.2	-0.9
MRSI	Marisa	15.32	283	P	Pn	15 01 01.2	+0.6
	comp=Z,248nm,0.8s,comp=Z,2μmcomp=Z,3μm						
MMRI	Maumere	15.56	249	P	Pn	15 01 02.7	-1.0
MMRI	Maumere	15.56	249	P	Pn	15 01 03.5	-0.2
	comp=Z,118nm,0.8s,comp=Z,5μmcomp=Z,4μm						
AUCSH	Cairns State H	16.32	148	P	Pn	15 01 14.4	+0.9
TOLI2	Tolitoli	16.59	284		Pn	15 01 14.5	-2.5
TOLI2	Tolitoli	16.59	284	P	P	15 01 20.9	+1.6
BSSI	Bau Bau, Buton	16.60	259	P	Pn	15 01 16.6	-0.4
	comp=Z,250nm,0.8s,comp=Z,3μmcomp=Z,3μm						
MTSU	Mount Surprise	16.67	155	P	Pn	15 01 17.6	-0.3
	baz=17,SNR=222						
MTSU	Mount Surprise	16.67	155	P	Pn	15 01 18.7	+0.8
WB0	Warramunga Arr	16.78	188		Pn	15 01 16.4	-2.9
WB0				IAmb	IAmb	15 01 24.7	
	comp=Z,850nm,1.4s						
BKSI	Bulukumba	16.84	262	P	Pn	15 01 20.9	+0.8
	comp=Z,89nm,1.3s,comp=Z,2μmcomp=Z,3μm						
WRAB	Tennant Creek	16.95	188		Pn	15 01 18.8	-2.6
WRAB				IAmb	IAmb	15 01 27.5	
	comp=Z,741nm,1.4s						
WRAB	Tennant Creek	16.95	188	P	P	15 01 22.6	-0.6
WRAB	Tennant Creek	16.95	188	P	Pn	15 01 18.8	-2.6
WRAB				pmax	pmax		
	comp=Z,741nm,1.4s						
WB2	Warramunga Arr	16.96	188	P	Pn	15 01 19.1	-2.4
	baz=17						
WB2	Warramunga Arr	16.96	188		Pn	15 01 19.1	-2.4
WB2				IAmb	IAmb	15 01 27.6	
	comp=Z,308nm,0.8s						
WRA	Warramunga Arr	16.96	188	P	Pn	15 01 18.4	-3.2
	comp=Z,18nm,0.4s,baz=5.8,slow=13,SNR=172						
WRA				S	Sn	15 04 16.1	-13
	comp=Z,306nm,0.9s,baz=8.5,slow=23,SNR=4.6						
WRA				LR	LR	15 09 18.9	
	comp=Z,3μm,18.8s,baz=354,slow=42						
WRA	Warramunga Arr	16.96	188		Pn	15 01 19.7	-1.9
WRA	Warramunga Arr	16.96	188	P	Pn	15 01 19.7	-1.9
WRA				pmax	pmax		
	comp=Z,82nm,1.4s						
SPSI	Sidrap Palu	17.08	266	P	Pn	15 01 23.7	+0.6
	comp=Z,148nm,1.1s,comp=Z,3μmcomp=Z,5μm						
KAPI	Kappang	17.17	263	P	P	15 01 28.5	+2.8
	comp=Z,22nm,0.7s,baz=69,slow=3.4,SNR=4.3						
KAPI				LR	LR	15 10 13.3	
	comp=Z,1μm,20.3s,baz=90,slow=44						
KAPI	Kappang	17.17	263	P	P	15 01 26.4	+0.7
KAPI	Kappang	17.17	263	*c i*P	P	15 01 26.1	+0.4
MPSI	Mapaga	17.29	281	P	P	15 01 26.7	-0.2
	comp=Z,117nm,1.2s,comp=Z,3μmcomp=Z,4μm						
QIS	Mount Isa	17.60	171	P	Pn	15 01 27.6	-1.9
	baz=18,SNR=235						
QIS	Mount Isa	17.60	171	P	Pn	15 01 27.9	-1.6
BASI	Baing, Sumba	17.66	245	P	Pn	15 01 29.9	-0.4
	comp=Z,341nm,0.8s,comp=Z,4μmcomp=Z,3μm						
GUMO	Guam	18.35	25	P	Pn	15 01 38.9	+0.1
	comp=Z,1.6nm,0.3s,baz=187,slow=3.3,SNR=10.0						
GUMO				LR	LR	15 08 28.5	
	comp=Z,2μm,21.6s,baz=194,slow=36						
	comp=Z,209nm,1.0s						
GUMO	Guam	18.35	25	P	Pn	15 01 41.1	+2.4
FITZ	Fitzroy Crossi	18.55	216	P	Pn	15 01 41.3	+0.1
TV1H	Townsville Har	18.81	150	P	Pn	15 01 45.9	+1.6
CTA	Charters Tower	19.25	152	P	Pn	15 01 49.9	+0.3
	comp=Z,217nm,0.8s,baz=329,slow=11,SNR=163						
CTA				S	S	15 05 28.1	+3.1
	comp=Z,28nm,0.6s,baz=60,slow=20,SNR=2.1						
CTA				LR	LR	15 09 34.1	
	comp=Z,7μm,21.0s,baz=335,slow=38						
CTA	Charters Tower	19.25	152	P	Pn	15 01 49.7	+0.1
CTAO	Charters Tower	19.25	152	P	P	15 01 48.3	-0.2
CTAO				IAmb	IAmb	15 01 53.4	
	comp=Z,340nm,1.1s						
CTAO	Charters Tower	19.25	152	P	Pn	15 01 49.7	+0.1
CTAO	Charters Tower	19.25	152	P	P	15 01 48.3	-0.2
CTAO				pmax	pmax		
	comp=Z,340nm,1.1s						
PLAI	Plampang	19.82	252	P	P	15 01 54.6	-0.2
PLAI	Plampang	19.82	252	P	P	15 01 54.1	-0.7
	comp=Z,382nm,0.8s,comp=Z,3μmcomp=Z,3μm						
BKB	Balikpapan	20.03	275	P	Pn	15 02 00.9	+2.0
BKB	Balikpapan	20.03	275	P	Pn	15 01 58.4	-0.5
	comp=Z,704nm,1.0s,comp=Z,9μmcomp=Z,12μm						
TWSI	Taliwang, Sumb	20.65	253	P	P	15 02 03.5	-0.3
	comp=Z,103nm,0.8s,comp=Z,1μm						
KBKI	Kotabaru	20.66	269	P	P	15 02 03.9	0.0
	comp=Z,1μm,0.6s,comp=Z,49μm						
AS01	Alice Springs	20.68	188	P	Pn	15 02 06.2	-0.3
AS31	Alice Springs	20.68	188	P	P	15 02 04.5	+0.4

AS31				IAmb	IAmb	15 02 10.1	
	comp=Z,245nm,0.9s						
ASAR	Alice Springs	20.68	188	P	Pn	15 02 05.8	-0.8
	comp=Z,350nm,0.7s,baz=8.0,slow=12,SNR=1510						
ASAR				S	S	15 05 45.9	-8.1
	comp=Z,255nm,1.1s,baz=9.6,slow=28,SNR=7.9						
ASAR				LR	LR	15 10 40.2	
	comp=Z,17µm,18.6s,baz=12,slow=38						
ASAR				P3KPbc		15 36 06.2	
	comp=Z,0.4nm,0.7s,baz=190,slow=3.9,SNR=3.2						
	comp=Z,350nm,0.7s						
ASAR	Alice Springs	20.68	188	P	P	15 02 05.0	+0.9
SPMM	Sapulut	21.79	291	P	P	15 02 20.0	+3.9
BBKI	Banjar Baru	21.98	268	P	P	15 02 18.2	0.0
	comp=Z,472nm,0.9s,comp=Z,8µm						
SRBI	Singaraja	22.11	256	P	P	15 02 18.8	-0.7
	comp=Z,116nm,0.9s,comp=Z,3µm						
DNP	Denpasar	22.24	255	P	P	15 02 19.1	-1.8
IGBI	Denpasar	22.33	254	P	P	15 02 22.0	+0.1
	comp=Z,208nm,0.9s,comp=Z,2µmcomp=Z,3µm						
KKM	Kota Kinabalu	22.51	294	P	P	15 02 25.9	+1.9
KKM				IAmb	IAmb	15 02 40.3	
	comp=Z,199nm,1.1s						
KKM	Kota Kinabalu	22.51	294	P	P	15 02 26.5	+2.5
ABJI	Asem Bagus	23.00	257	P	P	15 02 29.0	0.0
	comp=Z,176nm,1.1s						
JAGI	Jajag, Banyuwa	23.21	256	P	P	15 02 28.9	-2.2
JAGI	Jajag, Banyuwa	23.21	256	P	P	15 02 30.2	-1.0
JAGI	Jajag, Banyuwa	23.21	256	P	P	15 02 30.4	-0.8
	comp=Z,131nm,0.8s						
TGY	Tagaytay City	23.24	318	P	P	15 02 31.3	-0.1
	comp=Z,868nm,1.0s,baz=281,slow=1.4,SNR=26						
TGY				LR	LR	15 12 09.1	
	comp=Z,2µm,20.8s,baz=142,slow=38						
	comp=Z,868nm,1.0s						
WRKA	Warakurna	23.36	200	P	P	15 02 32.5	0.0
	baz=23,SNR=544						
WRKA	Warakurna	23.36	200	P	P	15 02 32.8	+0.3
BLJI	Banyuglugur	23.62	258	P	P	15 02 34.2	-0.9
	comp=Z,146nm,1.1s,comp=Z,2µmcomp=Z,4µm						
HNR	Honiara	23.80	106	P	P	15 02 37.1	+0.3
	comp=Z,18µm,0.9s,baz=230,slow=3.0,SNR=108						
HNR	Honiara	23.80	106	P	P	15 02 36.6	-0.2
HNR	Honiara	23.80	106	P	P	15 02 37.3	+0.5
GMJI	Gumukmas	23.86	256	P	P	15 02 37.0	-0.4
	comp=Z,126nm,0.9s						
RK1H	Rockhampton Ha	24.14	148	P	P	15 02 40.9	+1.0
BWJI	Bawean	24.28	263	P	P	15 02 41.7	+0.3
	comp=Z,561nm,1.5s,comp=Z,9µm						
QLP	Quilpie	24.44	164	P	P	15 02 42.6	0.0
	baz=24,SNR=43						
QLP	Quilpie	24.44	164	P	P	15 02 42.8	+0.2
MBWA	Marble Bar	24.53	221	P	P	15 02 44.1	+0.6
MBWA				IAmb	IAmb	15 03 04.8	
	comp=Z,290nm,1.1s						
MBWA	Marble Bar	24.53	221	IAMs_20	IAMs_20	15 13 32.5	
	comp=Z,7µm,20.0s						
MBWA	Marble Bar	24.53	221	P	P	15 02 44.8	+1.3
GRJI	Gresik	24.58	260	P	P	15 02 45.1	+1.0
	comp=Z,532nm,0.9s,comp=Z,7µmcomp=Z,4µm						
OOD	Oodnadatta	24.62	182	P	P	15 02 43.9	-0.4
PSA00	Pilbara Seismi	24.74	221	P	P	15 02 46.5	+1.0
PSA00	Pilbara Seismi	24.74	221	P	P	15 02 46.1	+0.6
PSA00				IAmb	IAmb	15 03 11.2	
	comp=Z,137nm,0.8s						
PSA00	Pilbara Seismi	24.74	221	P	P	15 02 46.5	+1.0
INKA	Innaminka	24.82	172	P	P	15 02 45.8	-0.3
PBKI	Pangkalan Bun	25.16	270	P	P	15 02 50.0	+0.7
	comp=Z,355nm,1.3s,comp=Z,5µm						
TBJI	Tambak Boyo	25.19	261	P	P	15 02 49.6	0.0
	comp=Z,415nm,1.5s,comp=Z,7µm						
SBUM	Sibu	25.23	282	P	P	15 02 50.1	+0.2
SBUM				IAmb	IAmb	15 03 14.8	
	comp=Z,377nm,1.8s						
SBUM	Sibu	25.23	282	P	P	15 02 53.0	+3.0
PWJI	Pagerwojo	25.41	258	P	P	15 02 51.0	-0.6
	comp=Z,111nm,0.8s						
NGJI	Ngawi	25.64	259	P	P	15 02 54.4	+0.7
	comp=Z,110nm,1.1s						
RMQ	Roma	25.94	155	P	P	15 02 56.3	0.0
	baz=26,SNR=24						
RMQ	Roma	25.94	155	P	P	15 02 57.1	+0.8
UWJI	Ujung Watu	26.03	262	P	P	15 02 57.5	+0.2
	comp=Z,408nm,1.5s,comp=Z,5µm						
EIDS	Eidsvold	26.07	150	P	P	15 02 57.4	-0.1
	baz=26,SNR=22						
EIDS	Eidsvold	26.07	150	P	P	15 02 58.1	+0.7
EIDS				IAmb	IAmb	15 03 10.9	
	comp=Z,136nm,1.0s						
EIDS	Eidsvold	26.07	150	P	P	15 02 59.0	+1.6
SMRI	Semarang	26.61	260	P	P	15 03 03.9	+1.4
SMRI	Semarang	26.61	260	P	P	15 03 01.6	-0.9
	comp=Z,336nm,0.9s						
UGM	Wanagama	26.64	258	P	P	15 03 02.8	0.0
UGM				IAmb	IAmb	15 03 15.6	
	comp=Z,310nm,1.3s						
UGM	Wanagama	26.64	258	P	P	15 03 01.9	-0.9
	comp=Z,193nm,1.7s						
KSM	Kuching	26.92	279	P	P	15 03 07.0	+1.8
KSM	Kuching	26.92	279	P	P	15 03 07.1	+1.8
KSM	Kuching	26.92	279	P	P	15 03 07.0	+1.8
MULG	Mulgathing	27.20	185	P	P	15 03 07.7	+0.1
LCRK	Leigh Creek	27.27	177	P	P	15 03 08.2	0.0
KPJI	Karang Pucung	28.13	260	P	P	15 03 16.3	+0.2
	comp=Z,90nm,1.4s						
AULRC	Lightning Ridg	28.27	159	P	P	15 03 17.5	+0.3
CMJI	Cimerak	28.66	259	P	P	15 03 20.0	-0.8
	comp=Z,208nm,0.6s,comp=Z,8µm						
AUWSH	Wavell State H	28.73	149	P	P	15 03 22.5	+1.2
FORT	Forrest	28.80	196	P	P	15 03 21.8	-0.1
	baz=29,SNR=56						
FORT	Forrest	28.80	196	P	P	15 03 18.7	-3.1
FORT	Forrest	28.80	196	P	P	15 03 21.7	-0.1
STKA	Stephens Creek	29.01	172	P	P	15 03 23.0	-0.7
	comp=Z,22nm,0.6s,baz=345,slow=8.4,SNR=73						
	comp=Z,22nm,0.6s						
STKA	Stephens Creek	29.01	172	P	P	15 03 23.3	-0.4
	baz=29,SNR=20						
STKA	Stephens Creek	29.01	172	P	P	15 03 22.3	-1.4
STKA	Stephens Creek	29.01	172	P	P	15 03 22.6	-1.1
STKA	Stephens Creek	29.01	172	*ce*P	P	15 03 23.2	-0.5
BBJI	Bungbulang	29.40	260	P	P	15 03 27.3	-0.2
CMSA	Cobar Meteorol	29.53	165	P	P	15 03 28.1	-0.2
	baz=30,SNR=46						
CMSA	Cobar Meteorol	29.53	165	P	P	15 03 27.7	-0.6
BBOO	Buckleboo	29.61	181	P	P	15 03 28.4	-0.6
	baz=30,SNR=16						
BBOO	Buckleboo	29.61	181	P	P	15 03 28.1	-0.9
BBOO				IAmb	IAmb	15 04 18.1	
	comp=Z,100nm,0.9s						
BBOO				PcP	PcP	15 06 33.3	-0.2
BBOO	Buckleboo	29.61	181	P	P	15 03 28.6	-0.4
WHYH	Whyalla	29.83	179	P	P	15 03 31.8	+0.9
CNJI	Cibinong	29.90	261	P	P	15 03 31.6	-0.2
	comp=Z,54nm,1.1s,comp=Z,1µm						
CBJI	Citeko	30.09	263	P	P	15 03 46.6	+13
HTT	Hallett	30.28	177	P	P	15 03 34.6	-0.4
	baz=30,SNR=22						
HTT	Hallett	30.28	177	P	P	15 03 35.0	0.0
JCJ	Chichijima	30.42	9	LR	LR	15 13 23.2	
	comp=Z,2µm,20.0s,baz=178,slow=31						
ARMA	Armidale	30.59	154	P	P	15 03 38.7	+0.8
	baz=31,SNR=25						
ARMA	Armidale	30.59	154	P	P	15 03 37.8	-0.1
ARMA	Armidale	30.59	154	P	P	15 03 38.9	+1.0
PPBI	Pangkal Pinang	30.70	271	P	P	15 03 40.6	+1.6
	comp=Z,27nm,0.9s,comp=Z,5µm						
JOW	Kunigami	30.85	345	P	P	15 03 40.8	+0.7
	comp=Z,92nm,1.0s,baz=177,slow=11,SNR=5.6						
JOW				LR	LR	15 13 51.6	
	comp=Z,2µm,20.9s,baz=131,slow=32						
	comp=Z,92nm,1.0s						
JOW	Kunigami	30.85	345	P	P	15 03 42.3	+2.2
	comp=Z,155nm,1.2s						
NACB	Ninganchiao	30.88	332	P	P	15 03 38.9	-1.4
NACB	Ninganchiao	30.88	332	*e*S	P	15 03 39.3	-1.0
	baz=44						
AUPHS	Peel High Scho	30.88	156	P	P	15 03 41.4	+1.1
AUDCS	Dubbo College	31.06	160	P	P	15 03 42.3	+0.5
YHNB	Yeheng	31.40	332	IAMs_20	IAMs_20	15 14 31.4	
	comp=Z,4µm,21.0s						
KMBL	Kambalda	31.50	205	P	P	15 03 46.1	+0.3
	baz=32,SNR=18						
KMBL	Kambalda	31.50	205	P	P	15 03 46.3	+0.5
TATO	Taipei	31.61	333	P	P	15 03 33.2	-14
TATO				pP	pP	15 03 47.0	-8.0
KOUNC	Koumac, New Ca	31.89	125	P	P	15 03 49.3	0.0
KOUNC	Koumac, New Ca	31.89	125	P	P	15 03 49.5	+0.2
KASI	Kota Agung	32.36	265	P	P	15 03 52.6	-0.9
	comp=Z,50nm,1.0s						
DSRI	Dabo	32.36	274	P	P	15 03 53.6	0.0
	comp=Z,29nm,1.5s						
TPRI	Tanjung Pinang	32.56	276	P	P	15 03 55.0	-0.3
MORW	Morawa	32.57	215	P	P	15 03 55.7	+0.5
	baz=33,SNR=19						
MORW	Morawa	32.57	215	P	P	15 03 54.8	-0.4
MORW				IAmb	IAmb	15 05 07.3	
	comp=Z,92nm,1.2s						
MORW	Morawa	32.57	215	P	P	15 03 55.9	+0.7
NTLH	Newcastle Hard	32.78	157	P	P	15 03 58.7	+1.7
MGCD	Mangrove Creek	32.83	158	P	P	15 03 58.1	+0.7
	baz=33,SNR=9.1						
MGCD	Mangrove Creek	32.83	158	P	P	15 03 59.4	+2.0
YNG	Young	32.89	162	P	P	15 03 59.0	+1.1
SYDH	Sydney Hard Ro	33.18	159	P	P	15 04 02.5	+2.0
MYKOM	Kota Tinggi	33.34	278	P	P	15 04 01.9	-0.3
MYKOM				IAmb	IAmb	15 04 04.9	
	comp=Z,62nm,1.0s						
MYKOM	Kota Tinggi	33.34	278	P	P	15 04 04.0	+1.8
BTDF	Bukit Timah Da	33.36	277	P	P	15 04 04.8	+2.5
	comp=Z,23nm,0.9s						
BLDU	Ballidu	33.38	213	P	P	15 04 02.8	+0.6
	baz=34,SNR=15						
BLDU	Ballidu	33.38	213	P	P	15 04 02.9	+0.6
RIV	Riverview	33.40	158	P	P	15 04 03.6	+1.3
	baz=34,SNR=3.2						
RIV	Riverview	33.40	158	P	P	15 04 03.6	+1.3
KLBR	Kellerberrin	33.60	210	P	P	15 04 05.0	+0.7
	baz=34,SNR=21						
KLBR	Kellerberrin	33.60	210	P	P	15 04 04.6	+0.4
WOLH	Wollongong Har	33.81	159	P	P	15 04 08.9	+3.0
ARPS	Mount Arapiles	33.86	173	P	P	15 04 06.0	-0.3
	baz=34,SNR=22						
ARPS	Mount Arapiles	33.86	173	P	P	15 04 06.3	0.0
CAN	Canberra	34.02	162	P	P	15 04 07.9	+0.1
CAN				IAmb	IAmb	15 04 10.2	
	comp=Z,161nm,1.4s						
CAN	Canberra	34.02	162	P	P	15 04 08.6	+0.8
CAN	Canberra	34.02	162	P	P	15 04 07.9	+0.1
CAN				pmax	pmax		
	comp=Z,161nm,1.4s						
CAN				MLR	MLR		
	comp=Z,12µm,22.0s						
CNB	Canberra Magne	34.13	162	P	P	15 04 10.0	+1.2
NOUC	Port Laguerre	34.28	126	P	P	15 04 10.3	+0.1
NOUC	Port Laguerre	34.28	126	P	P	15 04 09.3	-0.9
NOUC				sP	sP	15 04 23.8	+1.9
DZM	Mont Dzumac	34.38	126	*e*P	P	15 04 10.3	-0.9
	comp=Z,96nm,1.3s						
DZM				*e*S	S	15 09 37.9	+0.3
	comp=Z,924nm,34.3s						
DZM				*e*LR	LR	15 13 19.0	
	comp=Z,5µm,28.9s						
DZM	Mont Dzumac	34.38	126	P	P	15 04 11.0	-0.2
	comp=Z,22nm,1.0s,baz=324,slow=8.2,SNR=16						
DZM				LR	LR	15 18 03.6	
	comp=Z,3µm,21.7s,baz=302,slow=36						
	comp=Z,22nm,1.0s						
DZM	Mont Dzumac	34.38	126	P	P	15 04 10.6	-0.6
DZM	Mont Dzumac	34.38	126	P	P	15 04 11.4	+0.2
DZM	Mont Dzumac	34.38	126	P	P	15 04 10.3	-0.9
DZM				pP	sP	15 04 24.5	+1.7
LIFNC	LIFOU	34.43	123	P	P	15 04 10.5	-1.0
LIFNC				IAmb	IAmb	15 04 12.6	
	comp=Z,110nm,0.9s						
LIFNC				IAMs_20	IAMs_20	15 17 33.7	
	comp=Z,3µm,20.0s						
LIFNC	LIFOU	34.43	123	P	P	15 04 11.8	+0.3
QIZ	Qiongzhong	34.47	311	P	P	15 04 11.5	-0.4
QIZ				sP	pP	15 04 21.5	+1.3
QIZ				PP	PP	15 05 32.8	+2.5
QIZ				S	S	15 09 36.5	-2.3
QIZ				sS	sS	15 09 52.5	0.0
QIZ				pmax	pmax		
	comp=Z,29nm,1.2s						
QIZ				LR	LR		
	comp=Z,2µm,25.5s						
QIZ				LR	LR		
	comp=Z,1µm,29.5s						
QIZ				LR	LR		
	comp=Z,2µm,30.7s						
ONTNC	Ouen Toro	34.50	126	P	P	15 04 13.3	+1.2
AUUHS	Ulladulla High	34.53	160	P	P	15 04 14.2	+2.0
MASI	Maura Aman, Be	34.57	269	P	P	15 04 14.6	+1.7
	comp=Z,217nm,1.2s,comp=Z,2µm						
GZH	Guangzhou	34.66	320	P	P	15 04 16.0	+2.6
GZH				S	S	15 09 49.5	+7.9
GZH				pmax	pmax		
	comp=Z,75nm,0.9s						
MUN	Mundaring	34.71	212	P	P	15 04 14.7	+0.9
	baz=35,SNR=8.5						
MUN	Mundaring	34.71	212	P	P	15 04 14.9	+1.1
YATNC	Mamie plateau,	34.74	125	P	P	15 04 14.6	+0.4
JSU	Suzuyama	34.91	350	P	P	15 04 15.1	-0.4
JSU	Suzuyama	34.91	350	P	P	15 04 17.0	+1.5
BRAT	Ballarat	34.94	170	P	P	15 04 17.9	+2.3
NWAO	Narrogin (SRO)	34.94	210	P	P	15 04 16.2	+0.5
	comp=Z,17nm,0.8s,baz=32,slow=7.5,SNR=9.3						
NWAO				LR	LR	15 19 38.0	
	comp=Z,12µm,18.6s,baz=26,slow=38						
	comp=Z,17nm,0.8s						
NWAO	Narrogin (SRO)	34.94	210	P	P	15 04 16.8	+1.0
	baz=35,SNR=8.0						
NWAO				P	P	15 04 16.8	+1.0
	baz=35,SNR=8.0						
NWAO	Narrogin (SRO)	34.94	210	P	P	15 04 16.6	+0.8
NWAO	Narrogin (SRO)	34.94	210	P	P	15 04 16.9	+1.1
NWAO	Narrogin (SRO)	34.94	210	P	P	15 04 16.6	+0.8
NWAO				pmax	pmax		
	comp=Z,160nm,0.8s						
JRMM	Jerantut	35.05	281	P	P	15 04 19.0	+2.1
TOO	Toolangi	35.25	168	P	P	15 04 19.6	+1.2
	baz=35,SNR=12						
TOO	Toolangi	35.25	168	P	P	15 04 17.4	-1.0
TOO				IAmb	IAmb	15 04 44.8	
	comp=Z,78nm,1.3s						
TOO	Toolangi	35.25	168	P	P	15 04 19.0	+0.6
TOO	Toolangi	35.25	168	P	P	15 04 17.4	-1.0
TOO				pmax	pmax		
	comp=Z,79nm,1.3s						
SDSI	Sungai Dareh	35.47	273	P	P	15 04 21.2	+0.6
	comp=Z,59nm,1.4s,comp=Z,936nm						
MILA	Mila	35.67	163	P	P	15 04 22.7	+0.6
	baz=36,SNR=52						
MILA	Mila	35.67	163	P	P	15 04 23.0	+0.9
BKNI	Bangkinang	35.96	275	P	P	15 04 27.5	+2.6
	comp=Z,293nm,1.1s						
BKNI	Bangkinang	35.96	275	P	P	15 04 27.4	+2.6
	comp=Z,293nm,1.0s,comp=Z,2µm						
JNU	Nakatsue	36.43	352	P	P	15 04 28.5	-0.1
	comp=Z,111nm,0.8s,baz=164,slow=5.0,SNR=56						
JNU				LR	LR	15 17 26.3	
	comp=Z,2µm,21.1s,baz=161,slow=33						
	comp=Z,111nm,0.8s						
JNU	Nakatsue	36.43	352	P	P	15 04 28.6	+0.1
JNU	Nakatsue	36.43	352	P	P	15 04 29.0	+0.5
PDSI	Padang	36.43	273	P	P	15 04 28.9	0.0
	comp=Z,79nm,1.1s,comp=Z,1µm						
RKGY	Rocky Gully	36.43	208	P	P	15 04 30.1	+1.5
	baz=36,SNR=5.2						
IPM	Ipoh	36.58	282	P	P	15 04 29.6	-0.5
IPM				IAmb	IAmb	15 04 32.4	
	comp=Z,81nm,1.2s						
IPM				PcP	PcP	15 06 54.0	+0.7
IPM	Ipoh	36.58	282	P	P	15 04 29.6	-0.5
IPM	Ipoh	36.58	282	P	P	15 04 32.0	+1.9
JMN	Monobe	36.70	356	P	P	15 04 29.2	-1.7
JMN				PcP	PcP	15 06 54.2	+0.9
JMN	Monobe	36.70	356	P	P	15 04 31.5	+0.7
SSE	Sheshan	37.10	337	P	P	15 04 35.3	+1.0
SSE				PP	PP	15 06 00.3	+1.1
SSE				S	S	15 10 15.5	-3.4
SSE				pmax	pmax		
	comp=Z,60nm,1.1s						
SSE				pmax	pmax		
	comp=Z,110nm,5.1s						
SSE				LR	LR		
	comp=Z,680nm,23.7s						
KULM	Kulim	37.11	283	P	P	15 04 33.7	-0.9
KULM				IAmb	IAmb	15 04 36.7	
	comp=Z,67nm,1.0s						
KULM	Kulim	37.11	283	P	P	15 04 36.0	+1.4
SKLT	Songkhla	37.57	286	P	P	15 04 40.1	+1.6
JHS	Saijyo	38.02	355	P	P	15 04 42.1	0.0
JHS				IAmb	IAmb	15 04 43.6	
	comp=Z,202nm,1.5s						
JHS				PcP	PcP	15 06 58.4	+1.1
JHS	Saijyo	38.02	355	P	P	15 04 42.3	+0.3
GULI	GuiLin	38.14	319	⇓P	P	15 04 51.5	+8.4
GULI				PP	PnPn	15 06 29.8	+18
GULI				S	S	15 10 39.5	+4.7
GULI				SS	SnSn	15 13 19.8	+0.2
GULI				pmax	pmax		
	comp=Z,90nm,1.2s						
GULI				LR	LR		
	comp=N,1µm,24.9s						
GULI				LR	LR		
	comp=E,650nm,23.9s						
GULI				LR	LR		
	comp=Z,1µm,30.4s						
INU	Inuyama	38.21	0	P	P	15 04 43.2	-0.3
INU	Inuyama	38.21	0	P	P	15 04 44.1	+0.6
INU	Inuyama	38.21	0	P	P	15 04 43.8	+0.3
INU				pP	sP	15 04 54.2	-1.1
RPSI	Rantau Prapat	38.35	278	P	P	15 04 44.7	-0.4
RPSI				IAmb	IAmb	15 04 46.7	
	comp=Z,98nm,1.1s						
PSI	Prapat	38.36	278	P	P	15 04 45.4	0.0
PSI	Prapat	38.36	278	P	P	15 04 44.7	-0.7
PSI				pmax	pmax		
	comp=Z,98nm,1.1s						
JGF	Kuroka	38.46	1	P	P	15 04 43.7	-2.1
JGF	Kuroka	38.46	1	P	P	15 04 46.2	+0.5
CNSH	ChangSha	38.66	325	⇓*i*P	P	15 04 48.8	+1.3
CNSH				S	S	15 10 42.0	-0.6
CNSH				pmax	pmax		
	comp=Z,66nm,1.1s						
CNSH				LR	LR		
	comp=Z,1µm,21.8s						
CNSH				LR	LR		
	comp=Z,470nm,24.1s						
CNSH				LR	LR		
	comp=Z,1µm,26.9s						
TSI	Tuntungan	38.82	279	P	P	15 04 48.8	-0.3
	comp=Z,155nm,0.9s						
NJ2	Nanjing	38.88	335	⇓*i*P	P	15 04 50.3	+1.0
NJ2				pP	pP	15 04 56.3	-1.3
NJ2				sP	sP	15 04 59.5	-1.5
NJ2				PcP	PcP	15 06 57.5	-2.4
NJ2				S	S	15 10 44.5	-1.3
NJ2				sS	sS	15 10 58.0	-1.6
NJ2				pmax	pmax		
	comp=Z,110nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,390nm,4.0s						
NJ2				LR	LR		
	comp=Z,2µm,16.6s						
NJ2				LR	LR		
	comp=Z,2µm,17.5s						
NJ2				LR	LR		
	comp=Z,3µm,19.9s						
SRIT	Nakonsritamara	38.91	288	P	P	15 04 51.6	+1.8
SURA	Surathani	39.04	288	P	P	15 04 52.2	+1.3
GLAD	Gladstone	39.07	167	P	P	15 04 51.5	+0.7
NAYO	Nakonayok	39.23	297	P	P	15 04 54.4	+2.0
MJAR	Matsushiro Arr	39.42	2	P	P	15 04 52.4	-1.3
	comp=Z,9.8nm,0.7s,baz=184,slow=8.5,SNR=36						
MJAR				PcP	PcP	15 07 02.1	+0.5
	comp=Z,6.2nm,1.0s,baz=151,slow=3.1,SNR=4.0						
MJAR				LR	LR	15 19 00.7	
	comp=Z,2µm,19.5s,baz=170,slow=33						
	comp=Z,9.8nm,0.7s						
MAJO	Matsushiro	39.42	2	P	P	15 04 52.7	-1.0
MAJO	Matsushiro	39.42	2	P	P	15 04 54.6	+0.9
MAJO	Matsushiro	39.42	2	*d i*P	P	15 04 52.4	-1.3
MAJO				pmax	pmax		
	comp=Z,31nm,1.1s						
MAJO	Matsushiro	39.42	2	P	P	15 04 51.9	-1.8
MJB9	Matsu-Tunnel	39.42	2	P	P	15 04 53.8	+0.1
GSI	Gunungsitoli	39.51	276	P	P	15 04 54.7	-0.2
GSI				IAmb	IAmb	15 04 55.4	
	comp=Z,96nm,1.1s						
GSI	Gunungsitoli	39.51	276	P	P	15 04 54.5	-0.3
GSI	Gunungsitoli	39.51	276	P	P	15 04 54.1	-0.7
	comp=Z,95nm,1.3s,comp=Z,3µm						
KCSI	Kotacane, Aceh	39.61	279	P	P	15 04 55.6	-0.1
	comp=Z,68nm,1.2s,comp=Z,916nm						
WHN	Wuhan	39.73	329	⇓*i*P	P	15 04 58.3	+1.9
WHN				pP	sP	15 05 08.8	+0.7
WHN				S	S	15 10 59.5	+0.9
WHN				SS	SS	15 13 54.3	-0.7
WHN				pmax	pmax		
	comp=Z,410nm,1.2s						
WHN				pmax	pmax		
	comp=Z,1µm,5.7s						
WHN				LR	LR		
	comp=Z,6µm,24.7s						
WHN				LR	LR		
	comp=Z,2µm,14.8s						
WHN				LR	LR		
	comp=Z,8µm,24.4s						
TJN	Taejon	40.22	348	P	P	15 05 00.2	-0.2
TJN	Taejon	40.22	348	P	P	15 05 00.7	+0.3
TJN	Taejon	40.22	348	*d i*P	P	15 05 00.1	-0.3
MOO	Moorlands	40.29	168	P	P	15 05 02.0	+1.2
	baz=40,SNR=8.7						
MOO	Moorlands	40.29	168	P	P	15 05 02.0	+1.2
LHMI	Lhok Sumawe	40.71	282	P	P	15 05 07.2	+2.4
LHMI	Lhok Sumawe	40.71	282	P	P	15 05 06.5	+1.7
	comp=Z,313nm,1.0s,comp=Z,3µm						
TAU	Tasmania Unive	40.76	168	P	P	15 05 05.7	+1.0
TAU	Tasmania Unive	40.76	168	P	P	15 05 05.8	+1.0
TAU	Tasmania Unive	40.76	168	P	P	15 05 05.7	+1.0
TAU				pmax	pmax		
	comp=Z,62nm,1.3s						
TAU				MLR	MLR		
	comp=Z,6µm,20.0s						
SNSI	Sinabang, Aceh	40.88	277	P	P	15 05 07.1	+0.9
	comp=Z,274nm,1.3s,comp=Z,3µm						
JMM	Marumori	40.88	5	P	P	15 05 06.2	+0.4
JMM	Marumori	40.88	5	P	P	15 05 06.4	+0.6
JSD	Sado	40.91	2	P	P	15 05 06.1	+0.1
JSD				IAmb	IAmb	15 05 07.5	
	comp=Z,283nm,1.6s						
JSD	Sado	40.91	2	P	P	15 05 05.8	-0.2
MLSI	Meulaboh, Aceh	41.07	280	P	P	15 05 07.9	+0.1
	comp=Z,238nm,1.1s						
KSAR	Wonju Array Be	41.15	349	P	P	15 05 08.3	+0.3
KSAR				PcP	PcP	15 07 08.1	+1.0
KSAR	Wonju Array Be	41.15	349	P	P	15 05 08.3	+0.3
KSAR						15 07 08.1	
KSRS	Korea Array	41.15	349	P	P	15 05 08.2	+0.2
	comp=Z,39nm,1.0s,baz=167,slow=9.7,SNR=88						
KSRS				PcP	PcP	15 07 08.0	+0.9
	comp=Z,5.1nm,0.8s,baz=178,slow=3.0,SNR=4.7						
KSRS				LR	LR	15 19 42.7	
	comp=Z,1µm,21.9s,baz=170,slow=32						
	comp=Z,39nm,1.0s						
KS19	Wonju Array Si	41.21	349	P	P	15 05 08.5	0.0
GYA	Guiyang	41.39	317	⇑*i*P	P	15 05 12.0	+1.7
GYA				S	S	15 11 22.5	-1.3
GYA				pmax	pmax		
	comp=Z,100nm,1.1s						
GYA				pmax	pmax		
	comp=Z,480nm,9.5s						
GYA				LR	LR		
	comp=Z,1µm,17.4s						
GYA				LR	LR		
	comp=Z,1µm,23.9s						
GYA				LR	LR		
	comp=Z,1µm,22.2s						
INCN	Inchon	41.44	348	P	P	15 05 11.2	+0.8
	comp=Z,83nm,1.3s						
INCN	Inchon	41.44	348	P	P	15 05 10.3	-0.2
PHRA	Phrae	41.95	302	P	P	15 05 15.3	+0.5
ENH	Enshi	42.22	324	P	P	15 05 17.1	+0.2
ENH				IAmb	IAmb	15 05 18.9	
	comp=Z,93nm,0.9s						
ENH	Enshi	42.22	324	P	P	15 05 18.1	+1.1
FUNA	Funafuti	42.45	99	P	P	15 05 20.0	+1.0
CRAI	Chiangrai	42.63	304	P	P	15 05 21.3	+0.8
MSVF	Nonsavu	42.93	113	P	P	15 05 24.5	+1.6
	comp=Z,14nm,0.8s,baz=298,slow=6.1,SNR=9.8						
MSVF				LR	LR	15 22 32.4	
	comp=Z,1µm,21.5s,baz=297,slow=35						
	comp=Z,14nm,0.8s						

MSVF	**Nonsavu**	**42.93**	**113**	P	**P**	**15 05 23.1**	**+0.1**
MSVF	**Nonsavu**	**42.93**	**113**	P	**P**	**15 05 25.2**	**+2.2**
MSVF	**Nonsavu**	**42.93**	**113**	P	**P**	**15 05 24.2**	**+1.3**
CM31	**Chiang Mai Arr**	**43.02**	**301**	P	**P**	**15 05 23.4**	**-0.2**
CM31				IAmb	IAmb	15 05 26.5	
	comp=Z,129nm,1.1s						
CMAR	**Chiang Mai Arr**	**43.02**	**301**	P	**P**	**15 05 24.8**	**+1.1**
	comp=Z,53nm,1.0s,baz=126,slow=6.7,SNR=266						
CMAR				LR	LR	15 22 07.5	
	comp=Z,310nm,21.3s,baz=110,slow=34						
	comp=Z,53nm,1.0s						
CMAR	**Chiang Mai Arr**	**43.02**	**301**	P	**P**	**15 05 24.0**	**+0.4**
CMAR	**Chiang Mai Arr**	**43.02**	**301**	*i* P	**P**	**15 05 24.7**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,54nm,1.0s						
CHTO	**Chiang Mai**	**43.17**	**302**	P	**P**	**15 05 24.9**	**0.0**
CHTO	**Chiang Mai**	**43.17**	**302**	P	**P**	**15 05 24.9**	**0.0**
CHTO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TIA	**Tai'an**	**43.20**	**336**	P	**P**	**15 05 24.5**	**-0.3**
TIA				S	**S**	**15 11 48.5**	**-1.5**
TIA				SS	**SS**	**15 15 02.8**	**-0.9**
TIA				pmax	pmax		
	comp=Z,33nm,0.9s						
TIA				pmax	pmax		
	comp=Z,130nm,3.5s						
TIA				LR	LR		
	comp=Z,2µm,19.4s						
TIA				LR	LR		
	comp=Z,880nm,20.2s						
TIA				LR	LR		
	comp=Z,2µm,20.8s						
KMI	**Kunming**	**43.36**	**312**	⇓P	**P**	**15 05 28.3**	**+1.7**
KMI				PP	**PP**	**15 07 06.0**	**-1.7**
KMI				S	**S**	**15 11 52.5**	**-0.6**
KMI				pmax	pmax		
	comp=Z,160nm,1.1s						
KMI				LR	LR		
	comp=Z,800nm,19.0s						
KMI				LR	LR		
	comp=Z,800nm,19.5s						
KMI				LR	LR		
	comp=Z,2µm,28.4s						
JTM	**Tenmabayashi**	**43.80**	**5**	P	**P**	**15 05 30.1**	**+0.5**
JTM				IAmb	IAmb	15 05 31.5	
	comp=Z,137nm,1.0s						
JTM	**Tenmabayashi**	**43.80**	**5**	P	**P**	**15 05 30.3**	**+0.7**
LYN	**LuoYang**	**43.88**	**331**	⇑P	**P**	**15 05 31.0**	**+0.7**
LYN				sP	pP	15 05 40.0	+1.2
LYN				PcP	**PcP**	**15 07 17.3**	**+1.0**
LYN				S	**S**	**15 11 57.5**	**-2.5**
LYN				SS	**SS**	**15 15 11.5**	**-5.6**
LYN				ScS	**ScS**	**15 15 26.0**	**-1.8**
LYN				pmax	pmax		
	comp=Z,150nm,0.9s						
LYN				LR	LR		
	comp=Z,620nm,16.5s						
LYN				LR	LR		
	comp=Z,580nm,15.7s						
LYN				LR	LR		
	comp=Z,1µm,30.4s						
DL2	**Dalian**	**44.06**	**343**	P	**P**	**15 05 32.3**	**+0.7**
DL2				S	**S**	**15 11 59.5**	**-2.9**
DL2				pmax	pmax		
	comp=Z,34nm,1.0s						
DL2				pmax	pmax		
	comp=Z,280nm,9.0s						
DL2				LR	LR		
	comp=Z,730nm,17.8s						
DL2				LR	LR		
	comp=Z,960nm,19.1s						
DL2				LR	LR		
	comp=Z,1µm,27.8s						
TAVE	**Taveuni**	**44.58**	**111**	P	**P**	**15 05 37.0**	**+0.8**
PZH	**PanZhiHua**	**44.89**	**313**	P	**P**	**15 05 39.3**	**+0.6**
PZH				pP	**pP**	**15 05 48.8**	**+1.6**
PZH				PP	**PP**	**15 07 29.3**	**+5.4**
PZH				S	**S**	**15 12 12.8**	**-2.4**
PZH				sS	**sS**	**15 12 32.0**	**+2.9**
PZH				pmax	pmax		
	comp=Z,110nm,1.0s						
PZH				pmax	pmax		
	comp=Z,390nm,7.6s						
PZH				LR	LR		
	comp=Z,3µm,29.4s						
PZH				LR	LR		
	comp=Z,4µm,21.4s						
PZH				LR	LR		
	comp=Z,2µm,21.4s						
HNS	**HongShan**	**45.21**	**335**	⇓P	**P**	**15 05 41.0**	**+0.2**
HNS				PP	**PP**	**15 07 28.0**	**+1.1**
HNS				S	**S**	**15 12 15.3**	**-3.8**
HNS				SS	**ScS**	**15 15 38.5**	**+2.5**
HNS				pmax	pmax		
	comp=Z,100nm,1.0s						
HNS				pmax	pmax		
	comp=Z,430nm,9.0s						
HNS				LR	LR		
	comp=Z,2µm,20.1s						
HNS				LR	LR		
	comp=Z,1µm,21.1s						
HNS				LR	LR		
	comp=Z,2µm,19.6s						
ERM	**Erimo**	**45.23**	**7**	P	**P**	**15 05 41.9**	**+1.1**
ERM	**Erimo**	**45.23**	**7**	⇓*e*P	**P**	**15 05 41.6**	**+0.7**
ERM				pmax	pmax		
	comp=Z,114nm,2.4s						
XAN	**Xi'an**	**45.33**	**327**	⇓*i*P	**P**	**15 05 42.3**	**+0.4**
XAN				pP	pP	15 05 47.3	-3.1
XAN				S	**S**	**15 12 17.8**	**-3.3**
XAN				sS	pS	15 12 33.0	+2.0
XAN				pmax	pmax		
	comp=Z,120nm,1.2s						
XAN				pmax	pmax		
	comp=Z,340nm,3.6s						
XAN				LR	LR		
	comp=Z,840nm,22.7s						
XAN				LR	LR		
	comp=Z,1µm,20.6s						
XAN				LR	LR		
	comp=Z,2µm,23.4s						
FUTU	**Fugatoga**	**45.79**	**107**	P	**P**	**15 05 46.9**	**+1.0**
FUTU	**Fugatoga**	**45.79**	**107**	P	**P**	**15 05 47.3**	**+1.4**
LKBA	**Tubou, Lakemba**	**45.94**	**112**	P	**P**	**15 05 49.3**	**+2.3**
	comp=Z,1.9nm,1.2s						
CD2	**Chengdu**	**46.22**	**319**	⇓P	**P**	**15 05 49.8**	**+0.8**
CD2				pP	pP	15 05 58.5	+1.0
CD2				PP	**PP**	**15 07 41.5**	**+3.6**
CD2				S	**S**	**15 12 32.0**	**-2.1**
CD2				SS	**SS**	**15 16 00.3**	**+0.5**
CD2				pmax	pmax		
	comp=Z,140nm,1.2s						
CD2				pmax	pmax		
	comp=Z,210nm,4.4s						
CD2				LR	LR		
	comp=Z,500nm,12.8s						
CD2				LR	LR		
	comp=Z,380nm,12.8s						
CD2				LR	LR		
	comp=Z,1µm,19.6s						
SNY	**Shenyang**	**46.28**	**346**	⇓P	**P**	**15 05 49.5**	**+0.3**
SNY				S	**S**	**15 12 33.0**	**-1.4**
SNY				pmax	pmax		
	comp=Z,100nm,1.4s						
SNY				pmax	pmax		
	comp=Z,390nm,6.5s						
SNY				LR	LR		
	comp=Z,1µm,20.1s						
SNY				LR	LR		
	comp=Z,1µm,17.2s						
SNY				LR	LR		
	comp=Z,2µm,21.6s						
TIY	**Taiyuan**	**46.47**	**333**	P	**P**	**15 05 51.5**	**+0.6**
TIY				PP	**PP**	**15 07 40.3**	**-0.1**
TIY				S	**S**	**15 12 32.3**	**-5.1**
TIY				pmax	pmax		
	comp=Z,370nm,11.0s						
TIY				LR	LR		
	comp=Z,940nm,17.9s						
TIY				LR	LR		
	comp=Z,960nm,21.3s						
TIY				LR	LR		
	comp=Z,2µm,18.6s						
DGPR	**DIGLIPUR**	**46.49**	**291**	*e*P	**P**	**15 05 50.3**	**-1.0**
DGPR				IAmb	IAmb	15 05 55.5	
	comp=Z,77nm,1.4s						
TNCH	**TengChong**	**46.51**	**309**	⇓P	**P**	**15 05 52.8**	**+1.2**
TNCH				pP	pP	15 05 58.8	-1.3
TNCH				PP	**PP**	**15 07 42.0**	**+0.8**
TNCH				S	**S**	**15 12 39.5**	**+0.9**
TNCH				SS	**SS**	**15 15 58.8**	**-6.2**
TNCH				pmax	pmax		
	comp=Z,130nm,1.1s						
TNCH				pmax	pmax		
	comp=Z,470nm,4.7s						
TNCH				LR	LR		
	comp=Z,280nm,19.9s						
TNCH				LR	LR		
	comp=Z,260nm,15.0s						
TNCH				LR	LR		
	comp=Z,560nm,22.0s						
OUZ	**Omahuta**	**46.71**	**138**	IAMs_20	IAMs_20	15 23 49.4	
	comp=Z,3µm,21.0s						
BJT	**Baijiatuau**	**46.88**	**338**	IAMs_20	IAMs_20	15 24 02.5	
	comp=Z,2µm,21.0s						
BJT	**Baijiatuau**	**46.88**	**338**	P	**P**	**15 05 55.1**	**+1.1**
BJI	**Beijing**	**46.90**	**338**	P	**P**	**15 05 54.5**	**+0.4**
BJI				pP	**pP**	**15 05 57.5**	**-5.1**
BJI				sP	**sP**	**15 06 00.8**	**-5.2**
BJI				S	**S**	**15 12 38.8**	**-4.6**
BJI				pmax	pmax		
	comp=Z,42nm,1.1s						
BJI				LR	LR		
	comp=Z,860nm,20.8s						
BJI				LR	LR		
	comp=Z,410nm,19.6s						
BJI				LR	LR		
	comp=Z,1µm,21.1s						
MND	**Mandalay**	**46.98**	**304**	P	**P**	**15 05 56.2**	**+1.2**
JKA	**Kamikawa-asahi**	**47.24**	**6**	P	**P**	**15 05 57.4**	**+0.6**
JKA				IAmb	IAmb	15 05 58.1	
	comp=Z,48nm,0.9s						
ASAJ	**Asahikawa**	**47.24**	**6**	P	**P**	**15 05 57.2**	**+0.4**
	comp=Z,30nm,0.7s,baz=227,slow=12,SNR=74						
ASAJ				LR	LR	15 23 29.3	
	comp=Z,1µm,21.6s,baz=222,slow=33						
	comp=Z,30nm,0.7s						
USRK	**Ussuriysk Ar.**	**47.25**	**355**	P	**P**	**15 05 57.6**	**+0.8**
	comp=Z,59nm,0.7s,baz=184,slow=7.1,SNR=109						
USRK				LR	LR	15 22 30.0	
	comp=Z,2µm,21.4s,baz=163,slow=32						
	comp=Z,59nm,0.7s						
USA0B	**Ussuriysk Arra**	**47.25**	**355**	P	**P**	**15 05 57.8**	**+1.1**
USA0B				IAmb	IAmb	15 05 58.9	
	comp=Z,79nm,0.9s						
USA0B	**Ussuriysk Arra**	**47.25**	**355**	*d i*P	**P**	**15 05 57.4**	**+0.6**
CN2	**Changchun**	**47.76**	**349**	P	**P**	**15 06 00.8**	**0.0**
CN2				S	**S**	**15 12 55.8**	**+0.2**
CN2				pmax	pmax		
	comp=Z,50nm,0.9s						
CN2				pmax	pmax		
	comp=Z,400nm,5.0s						
CN2				LR	LR		
	comp=Z,1µm,19.0s						
CN2				LR	LR		
	comp=Z,1µm,19.0s						
CN2				LR	LR		
	comp=Z,1µm,19.0s						
TEY	**Ternei**	**47.88**	**360**	⇓*e*P	**P**	**15 06 01.7**	**0.0**
TEY				pmax	pmax		
	comp=E,10.0nm,1.2s						
TEY				pmax	pmax		
	comp=N,70nm,1.0s						
TEY				pmax	pmax		
	comp=Z,90nm,1.0s						
MDJ	**Mudanjiang**	**47.91**	**353**	P	**P**	**15 06 02.5**	**+0.6**
MDJ				sP	pP	15 06 11.0	+0.6
MDJ				S	**S**	**15 12 56.8**	**-0.8**
MDJ				ScS	**ScS**	**15 15 54.5**	**+1.1**
MDJ				pmax	pmax		
	comp=Z,150nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,330nm,7.4s						
MDJ				LR	LR		
	comp=Z,950nm,21.7s						
MDJ				LR	LR		
	comp=Z,690nm,23.9s						
MDJ				LR	LR		
	comp=Z,2µm,20.6s						
MDJ	**Mudanjiang**	**47.91**	**353**	P	**P**	**15 06 02.2**	**+0.3**
MDJ	**Mudanjiang**	**47.91**	**353**	P	**P**	**15 06 02.9**	**+1.0**
MDJ	**Mudanjiang**	**47.91**	**353**	P	**P**	**15 06 01.4**	**-0.4**
MDJ				sP	**sP**	**15 06 21.1**	**+7.3**
KUZ	**Kuaotunu**	**48.99**	**138**	P	**P**	**15 06 11.7**	**+1.2**
KUZ	**Kuaotunu**	**48.99**	**138**	P	**P**	**15 06 11.7**	**+1.2**
BNX	**BinXian**	**49.31**	**351**	⇓P	**P**	**15 06 13.0**	**+0.4**
BNX				pP	**pP**	**15 06 19.3**	**-1.9**
BNX				sP	**sP**	**15 06 21.5**	**-3.1**
BNX				PP	**PP**	**15 08 05.8**	**-1.1**
BNX				S	**S**	**15 13 15.0**	**-2.3**
BNX				pmax	pmax		
	comp=Z,140nm,1.1s						
BNX				pmax	pmax		
	comp=Z,370nm,4.3s						
BNX				LR	LR		
	comp=Z,650nm,19.0s						
BNX				LR	LR		
	comp=Z,470nm,19.0s						
BNX				LR	LR		
	comp=Z,1µm,20.6s						
TOZ	**Tahuroa Road**	**49.41**	**139**	P	**P**	**15 06 13.7**	**+0.2**
TOZ				IAmb	IAmb	15 06 16.2	
	comp=Z,49nm,0.9s						
HHC	**Hu-ho-hao-te**	**49.43**	**335**	*e*P	**P**	**15 06 14.5**	**+0.7**
HIZ	**Hauiti**	**49.44**	**141**	IAMs_20	IAMs_20	15 25 33.6	
	comp=Z,3µm,22.0s						
HIZ	**Hauiti**	**49.44**	**141**	P	**P**	**15 06 15.7**	**+1.9**
JCZ	**Jackson Bay**	**49.64**	**150**	P	**P**	**15 06 17.4**	**+2.0**
JCZ	**Jackson Bay**	**49.64**	**150**	P	**P**	**15 06 17.2**	**+1.9**
MSZ	**Milford Sound**	**49.65**	**151**	P	**P**	**15 06 17.3**	**+2.0**
LZH	**Lanzhou**	**49.67**	**325**	*e*P	**P**	**15 06 17.3**	**+1.5**
LZH				pP	pP	15 06 23.8	-0.6
LZH				sP	sP	15 06 28.3	+0.5
LZH				PcP	**PcP**	**15 07 35.5**	**-1.4**
LZH				PP	**PP**	**15 08 13.3**	**+2.7**
LZH				S	**S**	**15 13 21.3**	**-1.8**
LZH				sS	sS	15 13 35.5	-1.7
LZH				pmax	pmax		
	comp=Z,160nm,1.1s						
LZH				pmax	pmax		
	comp=Z,550nm,6.0s						
LZH				LR	LR		
	comp=Z,1µm,19.8s						
LZH				LR	LR		
	comp=Z,1µm,19.9s						
LZH				LR	LR		
	comp=Z,2µm,20.8s						
SAIH	**SAIHA**	**49.79**	**303**	*e*P	**P**	**15 06 17.7**	**+0.8**
SAIH				IAmb	IAmb	15 06 20.2	
	comp=Z,221nm,0.9s						
DCZ	**Deep Cove**	**49.88**	**152**	P	**P**	**15 06 17.8**	**+0.8**
DCZ				IAmb	IAmb	15 06 29.5	
	comp=Z,74nm,0.9s						
DCZ				IAMs_20	IAMs_20	15 24 54.0	
	comp=Z,3µm,22.0s						
DCZ	**Deep Cove**	**49.88**	**152**	P	**P**	**15 06 18.4**	**+1.4**
BTO	**Baotou**	**49.91**	**333**	*e*P	**P**	**15 06 19.0**	**+1.5**
BTO				pP	**pP**	**15 06 25.8**	**-0.2**
BTO				sP	**sP**	**15 06 27.5**	**-1.9**
BTO				PP	**PP**	**15 08 13.0**	**+0.4**
BTO				S	**S**	**15 13 27.0**	**+0.9**
BTO				pmax	pmax		
	comp=Z,110nm,1.1s						
BTO				pmax	pmax		
	comp=Z,2µm,7.6s						
BTO				LR	LR		
	comp=Z,4µm,19.0s						
BTO				LR	LR		
	comp=Z,4µm,19.0s						
BTO				LR	LR		
	comp=Z,5µm,21.6s						
IMP	**Imphal**	**50.03**	**306**	*e*P	**P**	**15 06 18.4**	**-0.3**
IMP				IAmb	IAmb	15 06 19.7	
	comp=Z,63nm,0.8s						
YSS	**Yuzh-Sakhalins**	**50.07**	**5**	P	**P**	**15 06 19.3**	**+0.9**
YSS				IAmb	IAmb	15 06 19.9	
	comp=Z,81nm,0.9s						
YSS	**Yuzh-Sakhalins**	**50.07**	**5**	P	**P**	**15 06 19.2**	**+0.8**
YSS	**Yuzh-Sakhalins**	**50.07**	**5**	⇓*e*P	**P**	**15 06 18.7**	**+0.3**
YSS				*e*		15 07 38.6	
YSS				*e*S	**S**	**15 13 26.7**	**-1.2**
YSS				*e*SS	**SS**	**15 17 02.3**	**+0.8**
YSS				pmax	pmax		
	comp=Z,80nm,0.9s						
YSS				pmax	pmax		
	comp=Z,300nm,2.6s						
YSS				smax	smax		
	comp=N,500nm,13.4s						
YSS				MLR	MLR		
	comp=Z,600nm,18.0s						
YSS	**Yuzh-Sakhalins**	**50.07**	**5**	P	**P**	**15 06 18.0**	**-0.5**
INZ	**Inchbonnie**	**50.09**	**147**	P	**P**	**15 06 17.7**	**-1.0**
RAO	**Raoul Island**	**50.18**	**126**	LR	LR	15 24 53.7	
	comp=Z,856nm,21.9s,baz=298,slow=33						
MLZ	**Mavora Lakes**	**50.26**	**152**	IAMs_20	IAMs_20	15 24 52.1	
	comp=Z,3µm,22.0s						
MLZ	**Mavora Lakes**	**50.26**	**152**	P	**P**	**15 06 21.0**	**+1.1**
MOKO	**MOKOCHONG**	**50.28**	**308**	*e*P	**P**	**15 06 20.9**	**+0.3**
MOKO				IAmb	IAmb	15 06 25.0	
	comp=Z,81nm,1.1s						
NNVZ	**North Ngauruho**	**50.28**	**141**	P	**P**	**15 06 22.4**	**+1.9**
WKZ	**Wanaka**	**50.30**	**151**	P	**P**	**15 06 21.4**	**+1.2**
NGZ	**Ngauruhoe**	**50.30**	**141**	P	**P**	**15 06 22.9**	**+2.4**
NTVZ	**North Tongarir**	**50.30**	**141**	P	**P**	**15 06 22.4**	**+1.8**
KOHI	**KOHIMA**	**50.31**	**307**	*e*P	**P**	**15 06 21.0**	**+0.2**
KOHI				IAmb	IAmb	15 06 22.3	
	comp=Z,226nm,1.1s						
TMVZ	**Te Maari**	**50.33**	**141**	P	**P**	**15 06 22.7**	**+1.9**
OTVZ	**Oturere**	**50.34**	**141**	P	**P**	**15 06 23.0**	**+2.2**
XLT	**XiLinHaoTe**	**50.34**	**341**	⇓*i*P	**P**	**15 06 20.5**	**-0.1**
XLT				S	**S**	**15 13 35.5**	**+3.6**
XLT				pmax	pmax		
	comp=Z,34nm,1.1s						
XLT				LR	LR		
	comp=Z,1µm,19.6s						
XLT				LR	LR		
	comp=Z,1µm,21.3s						
TRVZ	**Turoa**	**50.34**	**141**	P	**P**	**15 06 22.8**	**+1.8**
ETVZ	**East Tongariro**	**50.35**	**141**	P	**P**	**15 06 23.4**	**+2.5**
WNVZ	**Wahianoa**	**50.39**	**141**	P	**P**	**15 06 22.8**	**+1.6**
MOVZ	**Moawhango**	**50.53**	**141**	P	**P**	**15 06 23.1**	**+0.9**
RPZ	**Rata Peaks**	**50.55**	**148**	LR	LR	15 26 52.8	
	comp=Z,2µm,21.7s,baz=308,slow=35						
RPZ	**Rata Peaks**	**50.55**	**148**	P	**P**	**15 06 21.9**	**-0.3**
RPZ				IAmb	IAmb	15 06 36.1	
	comp=Z,106nm,1.0s						
RPZ				IAMs_20	IAMs_20	15 26 51.9	
	comp=Z,3µm,21.0s						
RPZ	**Rata Peaks**	**50.55**	**148**	P	**P**	**15 06 22.4**	**+0.2**
LBZ	**Lake Benmore**	**50.57**	**149**	IAMs_20	IAMs_20	15 26 28.3	
	comp=Z,2µm,20.0s						
LBZ	**Lake Benmore**	**50.57**	**149**	P	**P**	**15 06 22.9**	**+0.5**
WHZ	**Wether Hill Ro**	**50.57**	**152**	P	**P**	**15 06 22.8**	**+0.5**
WHZ				IAmb	IAmb	15 06 59.8	
	comp=Z,113nm,1.5s						
WHZ				IAMs_20	IAMs_20	15 25 15.2	
	comp=Z,3µm,22.0s						
WHZ	**Wether Hill Ro**	**50.57**	**152**	P	**P**	**15 06 22.8**	**+0.5**
TUWZ	**Tuamarina**	**50.66**	**144**	P	**P**	**15 06 22.8**	**-0.2**
EAZ	**Earnscleugh**	**50.73**	**151**	P	**P**	**15 06 24.5**	**+0.9**
URZ	**Urewera**	**50.75**	**139**	LR	LR	15 27 00.1	
	comp=Z,4µm,20.8s,baz=32,slow=35						
URZ	**Urewera**	**50.75**	**139**	P	**P**	**15 06 23.8**	**0.0**
BHHZ	**Black Hill Sta**	**50.77**	**141**	P	**P**	**15 06 24.4**	**+0.4**
BKZ	**Black Stump Fm**	**50.86**	**140**	P	**P**	**15 06 24.8**	**+0.1**
BKZ				IAmb	IAmb	15 06 25.9	
	comp=Z,44nm,0.8s						
BKZ				IAMs_20	IAMs_20	15 26 31.2	
	comp=Z,3µm,21.0s						
BKZ	**Black Stump Fm**	**50.86**	**140**	P	**P**	**15 06 24.8**	**+0.1**
BKZ	**Black Stump Fm**	**50.86**	**140**	P	**P**	**15 06 24.9**	**+0.2**
RTZ	**Ruatahuna**	**50.87**	**139**	P	**P**	**15 06 24.8**	**0.0**
RTZ				IAmb	IAmb	15 06 26.5	
	comp=Z,139nm,1.3s						
RTZ				IAMs_20	IAMs_20	15 26 34.3	
	comp=Z,2µm,21.0s						
MTHZ	**Maungataniwha**	**50.91**	**140**	P	**P**	**15 06 25.4**	**+0.4**
KWHZ	**Kaweka Forest**	**50.97**	**141**	P	**P**	**15 06 26.2**	**+0.7**
RUGZ	**Raukumara Rang**	**50.97**	**138**	P	**P**	**15 06 25.9**	**+0.3**
TMZ	**Timaru**	**50.99**	**149**	P	**P**	**15 06 25.6**	**+0.1**
NMHZ	**Naumai**	**51.02**	**140**	P	**P**	**15 06 27.2**	**+1.2**
SNZO	**South Karori**	**51.03**	**144**	IAMs_20	IAMs_20	15 27 41.6	
	comp=Z,2µm,22.0s						
KHZ	**Kahutara**	**51.05**	**145**	P	**P**	**15 06 25.6**	**-0.4**
KHZ				IAmb	IAmb	15 07 05.2	
	comp=Z,97nm,1.3s						
MWZ	**Matawai**	**51.07**	**139**	P	**P**	**15 06 26.7**	**+0.5**
RAGZ	**Rawiri**	**51.08**	**139**	P	**P**	**15 06 26.9**	**+0.5**
GVZ	**Greta Valley S**	**51.12**	**146**	P	**P**	**15 06 25.8**	**-0.8**
MRZ	**Mangatainoka R**	**51.16**	**142**	P	**P**	**15 06 26.0**	**-0.9**
MRZ				IAmb	IAmb	15 06 37.7	
	comp=Z,61nm,0.9s						
MRZ				IAMs_20	IAMs_20	15 27 15.2	
	comp=Z,3µm,20.0s						
MXZ	**Matakaoa Point**	**51.17**	**138**	IAMs_20	IAMs_20	15 26 19.5	
	comp=Z,3µm,19.0s						
SNGZ	**Shannon Statio**	**51.19**	**139**	P	**P**	**15 06 27.5**	**+0.3**
APZ	**The Paps**	**51.29**	**153**	P	**P**	**15 06 28.5**	**+0.8**
ITAN	**ITANAGAR**	**51.30**	**309**	*e*P	**P**	**15 06 30.1**	**+2.0**
ITAN				IAmb	IAmb	15 06 32.0	
	comp=Z,408nm,1.2s						
ZIRO	**ZIRO**	**51.38**	**309**	*e*P	**P**	**15 06 30.0**	**+1.1**
ZIRO				IAmb	IAmb	15 06 31.6	
	comp=Z,185nm,1.0s						
MQZ	**McQueen's Vall**	**51.40**	**147**	P	**P**	**15 06 28.3**	**-0.2**
MQZ				IAmb	IAmb	15 06 34.4	
	comp=Z,47nm,0.9s						
MQZ	**McQueen's Vall**	**51.40**	**147**	P	**P**	**15 06 29.0**	**+0.5**
RIGZ	**Rimuhau**	**51.43**	**139**	P	**P**	**15 06 29.3**	**+0.4**
TEZP	**TEZPUR**	**51.77**	**308**	*e*P	**P**	**15 06 31.9**	**+0.3**
AFI	**Afiamalu**	**51.82**	**105**	LR	LR	15 28 24.0	
	comp=Z,588nm,19.0s,baz=283,slow=36						
HHSZ	**Highcliff Hill**	**51.83**	**150**	P	P	15 06 22.5	-9.2
SHL	**Shillong**	**52.03**	**306**	*e*P	**P**	**15 06 34.3**	**+0.5**
SHL				IAmb	IAmb	15 06 35.7	
	comp=Z,90nm,1.1s						
KLR	**Kul'dur**	**52.27**	**356**	P	**P**	**15 06 35.8**	**+0.9**
	comp=Z,124nm,0.7s,baz=187,slow=4.7,SNR=518						
KLR				LR	LR	15 25 25.8	
	comp=Z,3µm,21.9s,baz=169,slow=32						
	comp=Z,124nm,0.7s						
KLR	**Kul'dur**	**52.27**	**356**	*d i*P	**P**	**15 06 35.5**	**+0.6**
KLR				pmax	pmax		
	comp=Z,133nm,0.7s						
GUWA	**GUWAHATI**	**52.46**	**307**	*e*P	**P**	**15 06 37.4**	**+0.7**
GRNR	**Gornyy**	**53.62**	**360**	⇑*i*P	**P**	**15 06 46.0**	**+1.1**
GRNR				*e*S	**S**	**15 14 23.3**	**+6.6**
GRNR				pmax	pmax		
	comp=N,30nm,1.0s						
GRNR				pmax	pmax		
	comp=E,7.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,50nm,0.9s						
GRNR				smax	smax		
	comp=N,2.0nm,0.9s						
HEH	**HeiHe**	**53.72**	**352**	*e*P	**P**	**15 06 45.5**	**-0.1**
HEH				sP	**sP**	**15 06 58.0**	**+0.4**
HEH				PcP	**PcP**	**15 07 50.8**	**-0.7**
HEH				S	**S**	**15 14 15.0**	**-3.0**
HEH				pmax	pmax		
	comp=N,71nm,1.1s						
HEH				LR	LR		
	comp=N,910nm,20.4s						
HEH				LR	LR		
	comp=N,800nm,20.6s						
HEH				LR	LR		
	comp=N,1µm,19.2s						
TYV	**Tymovskoe**	**53.94**	**5**	*e*P	**P**	**15 06 48.1**	**+0.9**
TYV				*e*S	**S**	**15 14 26.3**	**+5.4**
TYV				pmax	pmax		
	comp=Z,39nm,0.9s						
TYV				pmax	pmax		
	comp=Z,400nm,3.1s						
TYV				smax	smax		
	comp=N,400nm,8.2s						
TYV				smax	smax		
	comp=E,400nm,8.2s						
HIA	**Hailar**	**54.19**	**346**	P	**P**	**15 06 49.7**	**+0.7**
HIA	**Hailar**	**54.19**	**346**	P	**P**	**15 06 49.8**	**+0.7**
HIA	**Hailar**	**54.19**	**346**	P	**P**	**15 06 49.7**	**+0.7**
HIA				pmax	pmax		
	comp=Z,44nm,1.0s						
GTA	**Gaotai**	**54.27**	**325**	*e*P	**P**	**15 06 51.0**	**+1.0**
GTA				pP	pP	15 06 56.8	-1.8
GTA				sP	sP	15 07 02.0	0.0

GTA				PP	**PP**	**15 08 53.8**	**+1.7**
GTA				S	**S**	**15 14 25.0**	**-1.1**
GTA				sS	pS	15 14 37.5	+1.1
GTA				pmax	pmax		
	comp=Z,64nm,1.0s						
GTA				pmax	pmax		
	comp=Z,190nm,4.9s						
GTA				LR	LR		
	comp=Z,590nm,18.5s						
GTA				LR	LR		
	comp=Z,570nm,19.6s						
GTA				LR	LR		
	comp=Z,890nm,20.4s						
LSA	**Lhasa**	**54.51**	**310**	P	**P**	**15 06 54.0**	**+1.7**
LSA				pmax	pmax		
	comp=Z,94nm,1.1s						
GOMU	**GeErMu**	**55.34**	**319**	P	**P**	**15 06 59.5**	**+1.4**
GOMU				pP	pP	15 07 03.3	-3.5
GOMU				sP	sP	15 07 05.3	-4.9
GOMU				S	**S**	**15 14 39.8**	**-1.3**
GOMU				pmax	pmax		
	comp=Z,21nm,1.1s						
GOMU				pmax	pmax		
	comp=Z,370nm,5.2s						
GOMU				LR	LR		
	comp=Z,550nm,19.8s						
GOMU				LR	LR		
	comp=Z,640nm,18.6s						
GOMU				LR	LR		
	comp=Z,880nm,19.7s						
GTK	**Tadong**	**55.43**	**306**	*e*P	**P**	**15 07 00.1**	**+1.4**
GTK				IAmb	IAmb	15 07 01.4	
	comp=Z,112nm,1.0s						
SKR	**Severo-Kuril's**	**56.03**	**15**	*e*P	**P**	**15 07 03.5**	**+1.3**
SKR				*e*S	S	15 14 58.3	+9.4
SKR				pmax	pmax		
	comp=Z,69nm,1.1s						
SKR				MLR	MLR		
	comp=Z,300nm,22.0s						
NKL	**Nikolayevsk**	**56.10**	**3**	*e*P	**P**	**15 07 00.3**	**-2.4**
NKL				*e*		15 07 57.9	
NKL				*e*S	**S**	**15 14 50.2**	**+0.5**
NKL				pmax	pmax		
	comp=N,148nm,1.0s						
NKL				pmax	pmax		
	comp=E,40nm,1.0s						
NKL				pmax	pmax		
	comp=Z,407nm,1.0s						
NKL				pmax	pmax		
	comp=Z,694nm,1.8s						
NKL				smax	smax		
	comp=E,227nm,4.7s						
NKL				smax	smax		
	comp=N,281nm,3.3s						
TAPN	**Taplejung**	**56.17**	**306**	*e*P	**P**	**15 07 05.4**	**+1.3**
BOK	**Bokaro**	**56.31**	**301**	IAmb	IAmb	15 07 25.5	
	comp=Z,515µm,38.8s						
RAMN	**Ramite**	**56.91**	**305**	*e*P	**P**	**15 07 10.4**	**+1.1**
PALK	**Pallekele**	**56.97**	**281**	LR	LR	15 35 01.3	
	comp=Z,204nm,18.9s,baz=209,slow=40						
ULN	**Ulaanbaatar**	**57.02**	**336**	P	**P**	**15 07 09.2**	**-0.4**
ULN				IAmb	IAmb	15 07 11.7	
	comp=Z,53nm,1.1s						
ULN	**Ulaanbaatar**	**57.02**	**336**	IAMs_20	IAMs_20	15 30 43.8	
	comp=Z,2µm,20.0s						
ULN	**Ulaanbaatar**	**57.02**	**336**	*d i*P	**P**	**15 07 10.4**	**+0.7**
ULN				pmax	pmax		
	comp=Z,61nm,1.3s						
ZEA	**Zeya**	**57.16**	**353**	*de*P	**P**	**15 07 10.9**	**+0.6**
ZEA				*e*		15 07 23.3	
ZEA				*e*		15 09 22.4	
ZEA				*e*		15 10 42.4	
ZEA				*e*S	**S**	**15 15 04.8**	**+0.9**
ZEA				pmax	pmax		
	comp=N,50nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,110nm,0.9s						
ZEA				pmax	pmax		
	comp=N,100nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,100nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,100nm,7.2s						
ZEA				smax	smax		
	comp=N,300nm,8.8s						
SONM	**Songino Array**	**57.27**	**336**	P	**P**	**15 07 11.9**	**+0.5**
	comp=N,14nm,0.8s,baz=154,slow=8.6,SNR=78						
SONM				LR	LR	15 30 53.0	
	comp=N,2µm,21.7s,baz=140,slow=35						
	comp=N,14nm,0.8s						
SONM	**Songino Array**	**57.27**	**336**	P	**P**	**15 07 11.7**	**+0.4**
JIRN	**Jiri**	**57.52**	**306**	*e*P	**P**	**15 07 14.8**	**+1.0**
GUN	**Gumba**	**57.88**	**306**	*e*P	**P**	**15 07 17.2**	**+0.9**
PKI	**Pulchoki**	**58.13**	**305**	*e*P	**P**	**15 07 18.5**	**+0.5**
PKIN	**Phulchoki**	**58.14**	**305**	*e*P	**P**	**15 07 18.4**	**+0.4**
CIT	**Chita**	**58.33**	**343**	*e*P	**P**	**15 07 20.0**	**+1.4**
CIT				*e*		15 07 31.7	
CIT				*e*		15 08 10.2	
CIT				pmax	pmax		
	comp=Z,268nm,1.4s						
DMN	**Daman**	**58.39**	**305**	*e*P	**P**	**15 07 20.7**	**+0.9**
	comp=Z,215nm,1.0s						
PEA0B	**Petropavlovsk-**	**58.64**	**15**	P	**P**	**15 07 20.9**	**+0.1**
PEA0B	**Petropavlovsk-**	**58.64**	**15**	*d i*P	**P**	**15 07 21.7**	**+1.0**
PETK	**Petropavlovsk-**	**58.64**	**15**	P	**P**	**15 07 21.0**	**+0.3**
	comp=Z,20nm,0.6s,baz=134,slow=4.9,SNR=48						
PETK				LR	LR	15 29 57.5	
	comp=Z,470nm,22.0s,baz=182,slow=33						
	comp=Z,20nm,0.6s						
PETK	**Petropavlovsk-**	**58.64**	**15**	P	**P**	**15 07 21.4**	**+0.7**
PETK	**Petropavlovsk-**	**58.64**	**15**	P	**P**	**15 07 21.4**	**+0.7**
PET	**Petropavlovsk**	**58.81**	**15**	P	**P**	**15 07 21.8**	**-0.1**
PET	**Petropavlovsk**	**58.81**	**15**	P	**P**	**15 07 22.8**	**+1.0**
PET	**Petropavlovsk**	**58.81**	**15**	*e*P	**P**	**15 07 22.6**	**+0.8**
PET				*e*S	**S**	**15 15 29.1**	**+3.7**
PET				pmax	pmax		
	comp=Z,65nm,0.8s						
PET				pmax	pmax		
	comp=Z,300nm,9.9s						
PET	**Petropavlovsk**	**58.81**	**15**	P	**P**	**15 07 21.9**	**0.0**
GKN	**Gorkha**	**58.92**	**305**	*e*P	**P**	**15 07 24.1**	**+0.7**
	comp=Z,327nm,1.1s						
DANN	**Dangsing**	**59.77**	**305**	*e*P	**P**	**15 07 30.1**	**+0.7**
	comp=Z,142nm,0.9s						
PYUN	**Piuthan**	**60.31**	**305**	*e*P	**P**	**15 07 34.0**	**+1.0**
	comp=Z,509nm,0.9s						
ZAK	**Zakamensk**	**60.53**	**336**	*e*P	**P**	**15 07 33.8**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,65nm,1.4s						
HYB	**Hyderabad**	**60.98**	**292**	*e*P	**P**	**15 07 37.6**	**+0.1**
HYB				IAmb	IAmb	15 07 41.5	
	comp=Z,29nm,0.7s						
HYB	**Hyderabad**	**60.98**	**292**	*e*P	**P**	**15 07 37.8**	**+0.3**
HYB				IVmB_BB		15 07 38.3	
	comp=Z,251nm,1.4s						
IRK	**Irkutsk**	**61.60**	**338**	*e*P	**P**	**15 07 41.3**	**+0.2**
IRK				*e*S	**S**	**15 15 57.8**	**-3.6**
IRK				pmax	pmax		
	comp=Z,111nm,2.2s						
MOY	**Mondy**	**62.45**	**336**	*e*P	**P**	**15 07 47.6**	**+0.7**
MOY				pmax	pmax		
	comp=Z,95nm,1.5s						
BOD	**Bodaibo**	**63.41**	**347**	⇑*i*P	**P**	**15 07 53.3**	**+0.4**
BOD				pmax	pmax		
	comp=Z,108nm,1.1s						
BHPL	**Bhopal**	**63.49**	**298**	*e*P	**P**	**15 07 54.6**	**+0.3**
SHEM	**Shemya Is, Ala**	**63.81**	**24**	LR	LR	15 32 45.7	
	comp=Z,427nm,20.3s,baz=146,slow=33						
RAR	**Rarotonga**	**64.11**	**112**	LR	LR	15 32 04.6	
	comp=Z,179nm,21.5s,baz=280,slow=32						
WMQ	**Urumqi**	**64.15**	**323**	⇑*i*P	**P**	**15 07 59.3**	**+1.1**
WMQ				sP	sP	15 08 10.5	+0.1
WMQ				PcP	**PcP**	**15 08 29.5**	**-3.6**
WMQ				S	**S**	**15 16 33.5**	**-0.2**
WMQ				pmax	pmax		
	comp=Z,82nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,110nm,3.7s						
WMQ				LR	LR		
	comp=Z,920nm,27.1s						
WMQ				LR	LR		
	comp=Z,810nm,22.9s						
WMQ				LR	LR		
	comp=Z,640nm,25.9s						
DDI	**Dehra Dun**	**65.12**	**305**	*e*P	**P**	**15 08 05.9**	**+1.0**
DDI				IAmb	IAmb	15 08 07.0	
	comp=Z,213nm,1.0s						
YAK	**Yakutsk**	**65.14**	**356**	LR	LR	15 33 11.7	
	comp=Z,2µm,21.9s,baz=166,slow=33						
YAK	**Yakutsk**	**65.14**	**356**	P	**P**	**15 08 04.8**	**+0.6**
YAK				IAMs_20	IAMs_20	15 32 49.4	
	comp=Z,2µm,22.0s						
YAK	**Yakutsk**	**65.14**	**356**	*d i*P	**P**	**15 08 04.6**	**+0.4**
YAK				*e**PP	**sP**	**15 08 17.5**	**+1.2**
YAK				*e*		15 08 36.4	
YAK				*e*S	**S**	**15 16 45.4**	**+0.3**
YAK				*e**SS	sS	15 17 14.7	+15
YAK				*e*		15 17 48.9	
YAK				*e*SS	**SS**	**15 20 56.6**	**-1.4**
YAK				pmax	pmax		
	comp=Z,236nm,0.8s						
YAK				pmax	pmax		
	comp=N,26nm,0.8s						
YAK				pmax	pmax		
	comp=E,10.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,49nm,1.9s						
YAK				pmax	pmax		
	comp=N,58nm,1.6s						
YAK				pmax	pmax		
	comp=E,25nm,1.9s						
YAK				smax	smax		
	comp=N,617nm,4.1s						
YAK				smax	smax		
	comp=E,59nm,3.2s						
POO	**Poona**	**65.59**	**292**	*e*P	**P**	**15 08 07.6**	**-0.5**
POO				IAmb	IAmb	15 08 16.5	
	comp=Z,44nm,0.8s						
CASY	**Casey**	**65.76**	**191**	P	**P**	**15 08 07.9**	**-0.3**
SMLA	**Simla**	**66.11**	**306**	*e*P	**P**	**15 08 11.8**	**+0.6**
SEY	**Seymchan**	**66.86**	**8**	LR	LR	15 36 31.4	
	comp=Z,168nm,21.8s,baz=194,slow=35						
SEY	**Seymchan**	**66.86**	**8**	⇓*i*P	**P**	**15 08 16.2**	**+0.9**
SEY				pmax	pmax		
	comp=Z,66nm,1.3s						
DGZ	**Jazzator, Alta**	**67.58**	**328**	*d i*P	**P**	**15 08 20.4**	**+0.1**
DGZ				pmax	pmax		
	comp=Z,59nm,1.2s						
ZSN	**Zaisan**	**67.77**	**325**	*e*P	**P**	**15 08 21.5**	**+0.1**
	comp=Z,23nm,1.2s,baz=325						
ZSN				*e*S	**S**	**15 17 17.9**	**+0.3**
	baz=325						
ZSN	**Zaisan**	**67.77**	**325**	*e*P	**P**	**15 08 21.4**	**+0.1**
ZSN				*e*S	**S**	**15 17 17.9**	**+0.3**
ZSN				pmax	pmax		
	comp=Z,23nm,1.2s						
MK31	**Makanchi Array**	**68.95**	**323**	P	**P**	**15 08 28.8**	**0.0**
MK31					pP	15 08 28.9	-8.7
MK31	**Makanchi Array**	**68.95**	**323**	*d i*P	**P**	**15 08 29.1**	**+0.3**
MKAR	**Makanchi Array**	**68.95**	**323**	P	**P**	**15 08 29.2**	**+0.4**
	comp=Z,260nm,1.4s,baz=116,slow=8.2,SNR=156						
MKAR				PKP2bc		15 36 40.3	
	comp=Z,1.3nm,1.1s,baz=294,slow=3.9,SNR=6.0						
MKAR				LR	LR	15 37 52.2	
	comp=Z,468nm,21.9s,baz=110,slow=35						
	comp=Z,260nm,1.4s						
MKAR	**Makanchi Array**	**68.95**	**323**	P	**P**	**15 08 29.1**	**+0.3**
MKAR	**Makanchi Array**	**68.95**	**323**	P	**P**	**15 08 29.1**	**+0.3**
SHLS	**Shalkode**	**69.05**	**319**	*e*P	**P**	**15 08 28.5**	**-1.1**
	comp=Z,42nm,1.2s,baz=319						
SHLS	**Shalkode**	**69.05**	**319**	*e*P	**P**	**15 08 28.5**	**-1.1**
SHLS				pmax	pmax		
	comp=Z,42nm,1.2s						
UZB	**Uzynbulak**	**69.33**	**319**	*e*P	**P**	**15 08 32.0**	**+0.5**
	comp=Z,46nm,1.1s,baz=318						
UZB	**Uzynbulak**	**69.33**	**319**	*e*P	**P**	**15 08 31.9**	**+0.5**
UZB				pmax	pmax		
	comp=Z,46nm,1.1s						
TARG	**Taragay, Kyrgy**	**69.56**	**317**	P	**P**	**15 08 34.1**	**+0.9**
TARG	**Taragay, Kyrgy**	**69.56**	**317**	P	**P**	**15 08 34.1**	**+0.9**
TARG				pmax	pmax		
	comp=Z,39nm,1.0s						
KPKS	**Kokpek**	**69.69**	**319**	*e*P	**P**	**15 08 34.1**	**+0.5**
	comp=Z,41nm,1.2s,baz=319						
KPKS				*e*S	**S**	**15 17 40.5**	**-0.3**
	baz=319						
KPKS	**Kokpek**	**69.69**	**319**	*e*P	**P**	**15 08 34.0**	**+0.5**
KPKS				*e*S	**S**	**15 17 40.5**	**-0.3**
KPKS				pmax	pmax		
	comp=Z,41nm,1.2s						
SATY	**Saty**	**69.70**	**318**	*e*P	**P**	**15 08 34.2**	**+0.4**
	comp=Z,62nm,1.2s,baz=318						
SATY				*e*S	**S**	**15 17 41.1**	**+0.1**
	baz=318						
SATY	**Saty**	**69.70**	**318**	*e*P	**P**	**15 08 34.1**	**+0.4**
SATY				*e*S	**S**	**15 17 41.1**	**+0.1**
SATY				pmax	pmax		
	comp=Z,62nm,1.2s						
ZHN	**Zhinishke**	**69.73**	**318**	*e*P	**P**	**15 08 34.3**	**+0.4**
	comp=Z,26nm,1.1s,baz=318						
ZHN	**Zhinishke**	**69.73**	**318**	*e*P	**P**	**15 08 34.2**	**+0.4**
ZHN				pmax	pmax		
	comp=Z,26nm,1.1s						
KSH	**Kashi**	**69.98**	**314**	P	**P**	**15 08 38.0**	**+2.5**
KSH				pP	pP	15 08 45.5	+1.1
KSH				sP	sP	15 08 49.3	+1.6
KSH				PcP	**PcP**	**15 08 58.0**	**+0.3**
KSH				PP	**PP**	**15 11 13.0**	**+2.4**
KSH				S	**S**	**15 17 46.5**	**+2.1**
KSH				SKS	**SKSac**	**15 18 32.0**	**-3.1**
KSH				pmax	pmax		
	comp=Z,83nm,1.0s						
KSH				LR	LR		
	comp=Z,510nm,18.7s						
KSH				LR	LR		
	comp=Z,450nm,22.1s						
KSH				LR	LR		
	comp=Z,1µm,27.2s						
NIL	**Nilore**	**70.06**	**307**	P	**P**	**15 08 35.5**	**-0.5**
NIL				IAmb	IAmb	15 08 38.0	
	comp=Z,82nm,1.0s						
NIL	**Nilore**	**70.06**	**307**	P	**P**	**15 08 35.5**	**-0.5**
NIL				pmax	pmax		
	comp=Z,82nm,1.0s						
KDJ	**Kajisay**	**70.15**	**317**	P	**P**	**15 08 37.3**	**+0.8**
KDJ				IAmb	IAmb	15 08 38.5	
	comp=Z,47nm,0.9s						
KDJ	**Kajisay**	**70.15**	**317**	P	**P**	**15 08 37.3**	**+0.8**
KDJ				pmax	pmax		
	comp=Z,47nm,0.9s						
TDK	**Taldyqorghan**	**70.53**	**320**	*e*P	**P**	**15 08 39.1**	**+0.5**
	comp=Z,63nm,1.0s,baz=320						
TDK	**Taldyqorghan**	**70.53**	**320**	*e*P	**P**	**15 08 39.1**	**+0.5**
TDK				pmax	pmax		
	comp=Z,63nm,1.0s						
MDOK	**Medeo**	**70.65**	**318**	*e*P	**P**	**15 08 40.3**	**+0.8**
	baz=318						
MDOK				*e*S	**S**	**15 17 52.2**	**+0.1**
	baz=318						
MDOK	**Medeo**	**70.65**	**318**	*e*P	**P**	**15 08 40.3**	**+0.8**
MDOK				*e*S	**S**	**15 17 52.2**	**+0.1**
NRN	**Naryn**	**70.69**	**316**	P	**P**	**15 08 40.6**	**+0.6**
NRN	**Naryn**	**70.69**	**316**	P	**P**	**15 08 40.6**	**+0.6**
NRN				pmax	pmax		
	comp=Z,31nm,0.8s						
AAA	**Alma-Ata**	**70.76**	**318**	*e*P	**P**	**15 08 40.6**	**+0.5**
	comp=Z,57nm,1.0s,baz=318						
AAA	**Alma-Ata**	**70.76**	**318**	*e*P	**P**	**15 08 40.6**	**+0.5**
AAA				pmax	pmax		
	comp=Z,57nm,1.0s						
ULHL	**Ulahol**	**70.83**	**317**	P	**P**	**15 08 41.5**	**+0.8**
	SNR=23						
CHKK	**Chushkaly**	**70.97**	**319**	*e*P	**P**	**15 08 41.3**	**-0.1**
	baz=319						
CHKK	**Chushkaly**	**70.97**	**319**	*e*P	**P**	**15 08 41.2**	**-0.1**
BOOM	**Boomskoye usch**	**71.14**	**317**	P	**P**	**15 08 43.5**	**+1.0**
BOOM				IAmb	IAmb	15 08 44.4	
	comp=Z,45nm,1.0s						
BOOM	**Boomskoye usch**	**71.14**	**317**	P	**P**	**15 08 43.5**	**+1.0**
BOOM				pmax	pmax		
	comp=Z,45nm,1.0s						
ZAA0	**Zalesovo Array**	**71.32**	**331**	P	**P**	**15 08 41.8**	**-1.4**
ZALV	**Zalesovo Beam**	**71.32**	**331**	P	**P**	**15 08 42.3**	**-0.8**
	comp=Z,20nm,0.6s,baz=116,slow=5.8,SNR=120						
ZALV				PKPPKP	**P'P'df**	**15 36 36.5**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=289,slow=9.2,SNR=3.9						
ZALV				LR	LR	15 41 56.3	
	comp=Z,479nm,18.6s,baz=124,slow=37						
	comp=Z,20nm,0.6s						
ZALV	**Zalesovo Beam**	**71.32**	**331**	P	**P**	**15 08 42.5**	**-0.6**
ZALV	**Zalesovo Beam**	**71.32**	**331**	*i* P	**P**	**15 08 42.2**	**-0.9**
ZALV				pmax	pmax		
	comp=Z,20nm,0.6s						
KUU	**Kurty**	**71.42**	**318**	*e*P	**P**	**15 08 44.1**	**+0.1**
	baz=318						
KUU				*e*S	**S**	**15 17 60.0**	**-0.8**
	baz=318						
KUU	**Kurty**	**71.42**	**318**	*e*P	**P**	**15 08 44.1**	**+0.1**
KUU				*e*S	**S**	**15 17 59.9**	**-0.8**
TKM2	**Tokmak 2**	**71.53**	**317**	P	**P**	**15 08 45.5**	**+0.5**
	SNR=49						
KBK	**Karagaybulak**	**71.88**	**317**	P	**P**	**15 08 47.9**	**+0.9**
	SNR=20						
NIKH	**Nikolski High**	**71.92**	**31**	P	**P**	**15 08 46.3**	**-0.5**
	baz=238						
UCH	**Uchtor**	**72.02**	**316**	P	**P**	**15 08 49.3**	**+1.1**
	SNR=128						
CHMS	**Chumysh**	**72.14**	**317**	P	**P**	**15 08 49.2**	**+0.8**
	SNR=19						
AAK	**Ala-Archa**	**72.18**	**317**	P	**P**	**15 08 49.6**	**+0.8**
	SNR=36						
AAK	**Ala-Archa**	**72.18**	**317**	LR	LR	15 42 19.4	
	comp=Z,850nm,21.1s,baz=112,slow=37						
AAK	**Ala-Archa**	**72.18**	**317**	P	**P**	**15 08 48.1**	**-0.7**
AAK	**Ala-Archa**	**72.18**	**317**	*d i*P	**P**	**15 08 49.4**	**+0.6**
AAK				pmax	pmax		
	comp=Z,54nm,1.1s						
SGDS	**Sogindy**	**72.39**	**317**	*e*P	**P**	**15 08 49.9**	**0.0**
	baz=318						
SGDS	**Sogindy**	**72.39**	**317**	*e*P	**P**	**15 08 49.9**	**0.0**
USP	**Ospenovka**	**72.41**	**317**	P	**P**	**15 08 50.6**	**+0.6**
	SNR=70						
AML	**Almayashu**	**72.55**	**316**	P	**P**	**15 08 52.4**	**+1.1**
	SNR=114						
EKS2	**Erkin-Say**	**72.68**	**316**	P	**P**	**15 08 52.6**	**+0.9**
	SNR=58						
KURK	**Kurchatov**	**72.95**	**326**	P	**P**	**15 08 52.8**	**-0.2**
KURK				IAmb	IAmb	15 08 54.0	
	comp=Z,60nm,1.1s						
KURK	**Kurchatov**	**72.95**	**326**	*d i*P	**P**	**15 08 52.5**	**-0.4**
KURK				pmax	pmax		
	comp=Z,67nm,1.3s						
BTLS	**Baital**	**73.38**	**319**	⇓*i*P	**P**	**15 08 55.8**	**+0.2**
	baz=319						
BTLS	**Baital**	**73.38**	**319**	*d i*P	**P**	**15 08 55.8**	**+0.2**
PPT	**Papeete**	**73.42**	**107**	P	**P**	**15 08 55.7**	**-0.7**
	comp=Z,54nm,0.8s,baz=323,slow=6.3,SNR=6.8						
PPT				LR	LR	15 37 50.3	
	comp=Z,242nm,21.8s,baz=268,slow=33						
	comp=Z,54nm,0.8s						
PPT2	**Papeete2**	**73.42**	**107**	*e*P	**P**	**15 08 56.9**	**+0.4**
	comp=Z,69nm,1.2s						
PPT2	**Papeete2**	**73.42**	**107**	*e*LR	LR	15 31 24.9	
	comp=Z,2µm,32.8s						
SPIA	**Saint Paul Isl**	**73.52**	**27**	P	**P**	**15 08 55.3**	**-0.9**
	baz=236						
UNV	**Unalaska Valle**	**73.58**	**31**	P	**P**	**15 08 55.9**	**-0.7**
	baz=240						
TIAR	**Tiarei**	**73.64**	**107**	*e*P	**P**	**15 08 58.8**	**+1.1**
	comp=Z,6.8nm,0.9s						
KBL	**Kabul**	**73.66**	**307**	P	**P**	**15 08 56.5**	**-1.3**
KBL	**Kabul**	**73.66**	**307**	P	**P**	**15 08 56.5**	**-1.3**
KBL				pmax	pmax		
	comp=Z,44nm,1.0s						
TBI	**Tubuai**	**73.81**	**113**	*e*P	**P**	**15 08 58.8**	**+0.2**
	comp=Z,197nm,1.3s						
TBI				*e*S	**S**	**15 18 28.3**	**-0.5**
	comp=Z,716nm,34.5s						
TBI				*e*SS	**SS**	**15 23 13.4**	**+0.3**
	comp=Z,2µm,31.8s						
TBI				*e*LR	LR	15 31 35.6	
	comp=Z,18µm,27.8s						
TBI				*e*LR	LR	15 31 35.8	
	comp=Z,7µm,29.8s						
BILL	**Bilibino**	**73.85**	**11**	P	**P**	**15 08 57.6**	**-0.4**
BILL	**Bilibino**	**73.85**	**11**	*c i*P	**P**	**15 08 58.0**	**0.0**
BILL				*e*		15 09 11.2	
BILL				*e*		15 11 38.3	
BILL				*e*PPP	PPP	15 13 22.5	
BILL				*e*S	**S**	**15 18 30.3**	**+2.7**
BILL				*e*SS	**SS**	**15 23 14.2**	**+2.2**
BILL				pmax	pmax		
	comp=Z,25nm,1.3s						
BILL				MLR	MLR		
	comp=Z,225nm,19.0s						
BTK	**Batken**	**73.90**	**313**	P	**P**	**15 08 58.2**	**-0.8**
BTK				IAmb	IAmb	15 09 24.2	
	comp=Z,54nm,1.1s						
BTK	**Batken**	**73.90**	**313**	P	**P**	**15 08 58.2**	**-0.8**
BTK				pmax	pmax		
	comp=Z,54nm,1.1s						
GAR	**Garm**	**73.95**	**312**	P	**P**	**15 08 59.6**	**+0.3**
DZA	**Taraz**	**74.45**	**316**	*e*P	**P**	**15 09 02.2**	**+0.2**
	baz=316						
DZA	**Taraz**	**74.45**	**316**	*e*P	**P**	**15 09 02.2**	**+0.2**
CHGR	**Chuyangaron**	**74.71**	**311**	P	**P**	**15 09 03.1**	**-0.5**
CHGR	**Chuyangaron**	**74.71**	**311**	P	**P**	**15 09 03.2**	**-0.5**
CHGR				pmax	pmax		
	comp=Z,141nm,1.0s						
TIXI	**Tiksi**	**74.75**	**357**	LR	LR	15 39 33.8	
	comp=Z,2µm,21.4s,baz=5.5,slow=34						
TIXI	**Tiksi**	**74.75**	**357**	P	**P**	**15 09 02.5**	**-0.6**
TIXI				IAmb	IAmb	15 09 18.7	
	comp=Z,56nm,1.1s						
TIXI	**Tiksi**	**74.75**	**357**	*d i*P	**P**	**15 09 02.3**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,50nm,1.3s						
TIXI				MLR	MLR		
	comp=Z,605nm,18.0s						
PMOR	**Pomariorio Ree**	**74.97**	**105**	*e*P	**P**	**15 09 06.1**	**+0.6**
	comp=Z,154nm,1.1s						
KK31	**Karatay Array**	**75.09**	**316**	P	**P**	**15 09 06.0**	**+0.3**
KK31	**Karatay Array**	**75.09**	**316**	P	**P**	**15 09 06.0**	**+0.3**
KK31				pmax	pmax		
	comp=Z,35nm,0.9s						
KKAR	**Karatay Array**	**75.09**	**316**	P	**P**	**15 09 06.1**	**+0.4**
KKAR	**Karatay Array**	**75.09**	**316**	P	**P**	**15 09 06.1**	**+0.4**
IUG	**Iuzhnay**	**75.12**	**315**	*e*P	**P**	**15 09 06.4**	**+0.3**
	comp=Z,51nm,1.2s,baz=315						
IUG				*e*S	**S**	**15 18 42.3**	**-0.7**
	baz=315						
IUG	**Iuzhnay**	**75.12**	**315**	*e*P	**P**	**15 09 06.3**	**+0.3**
IUG				*e*S	**S**	**15 18 42.2**	**-0.7**
IUG				pmax	pmax		
	comp=Z,51nm,1.2s						
CHM	**Chimkent**	**75.47**	**315**	*e*P	**P**	**15 09 08.5**	**+0.5**
	baz=315						
CHM	**Chimkent**	**75.47**	**315**	*e*P	**P**	**15 09 08.4**	**+0.5**
VNDA	**Vanda**	**75.60**	**175**	P	**P**	**15 09 08.0**	**0.0**
	comp=Z,24nm,0.7s,baz=325,slow=6.1,SNR=47						
VNDA				LR	LR	15 41 53.7	
	comp=Z,2µm,18.7s,baz=352,slow=35						
	comp=Z,24nm,0.7s						
VNDA	**Vanda**	**75.60**	**175**	P	**P**	**15 09 08.0**	**0.0**
VNDA	**Vanda**	**75.60**	**175**	P	**P**	**15 09 08.0**	**0.0**
FALS	**False Pass**	**75.65**	**31**	P	**P**	**15 09 08.0**	**-0.6**
	baz=243						
BRZS	**Berezniki**	**76.10**	**323**	⇓*i*P	**P**	**15 09 11.2**	**-0.2**
	baz=323						
BRZS	**Berezniki**	**76.10**	**323**	*d i*P	**P**	**15 09 11.1**	**-0.2**
SBA	**Scott Base**	**76.40**	**174**	P	**P**	**15 09 13.6**	**+1.1**
SBA				IAmb	IAmb	15 09 58.0	
	comp=Z,67nm,1.2s						
SBA	**Scott Base**	**76.40**	**174**	P	**P**	**15 09 13.6**	**+1.1**
SBA				pmax	pmax		
	comp=Z,67nm,1.3s						
S12K	**Black Hills**	**76.72**	**31**	P	**P**	**15 09 14.4**	**-0.3**
	baz=244						
SDPT	**Sand Point**	**77.39**	**31**	P	**P**	**15 09 18.3**	**-0.1**
	baz=245						
BRVK	**Borovoye**	**78.62**	**326**	P	**P**	**15 09 25.3**	**0.0**
BRVK				IAmb	IAmb	15 09 26.5	
	comp=Z,81nm,0.8s						
BRVK	**Borovoye**	**78.62**	**326**	P	**P**	**15 09 25.3**	**0.0**
BRVK				pmax	pmax		
	comp=Z,81nm,0.9s						
CHGN	**Chignik**	**78.84**	**31**	P	**P**	**15 09 25.4**	**-1.0**
CHGN	**Chignik**	**78.84**	**31**	P	**P**	**15 09 26.1**	**-0.3**
	baz=247						
TNA	**Tin City**	**79.12**	**20**	P	**P**	**15 09 28.1**	**+0.3**
	baz=237						
ANM	**Nome**	**79.50**	**22**	P	**P**	**15 09 29.2**	**-0.7**
ANM				IAMs_20	IAMs_20	15 39 11.2	
	comp=Z,1µm,22.0s						
ANM	**Nome**	**79.50**	**22**	P	**P**	**15 09 29.2**	**-0.7**
ANM	**Nome**	**79.50**	**22**	P	**P**	**15 09 31.1**	**+1.1**
	baz=239						

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NRIK  Noril'sk          79.54 344  P        P        15 09 30.3 +0.3
      comp=Z,42nm,1.0s,baz=129,slow=5.7,SNR=47
NRIK                               LR       LR       15 48 23.9
      comp=Z,314nm,19.0s,baz=132,slow=38
      comp=Z,42nm,1.0s
NRIK  Noril'sk          79.54 344  P        P        15 09 29.5 -0.6
NRIK                               IAmb     IAmb     15 09 44.7
      comp=Z,90nm,1.2s
NRIK  Noril'sk          79.54 344d iP       P        15 09 30.1 +0.1
NRIK                               pmax     pmax
      comp=Z,105nm,1.3s
R16K  Pilot Point       79.75  30  P        P        15 09 32.1 +0.8
      baz=248,SNR=5.5
P16K  Nushagak River    80.12  28  P        P        15 09 33.8 +0.5
      baz=247,SNR=9.4
O16K  Kokwok River B    80.29  28  P        P        15 09 35.1 +0.8
      baz=247
N16K  Nishlik Lake      80.33  27  P        P        15 09 36.0 +1.5
      baz=246,SNR=7.6
R17K  Ugashik Creek     80.37  30  P        P        15 09 35.2 +0.4
      baz=248
WSAR  Wadi Sarin        80.41 294  LR       LR       15 45 24.4
      comp=Z,96nm,21.8s,baz=114,slow=36
O17K  Koliganek Bris    80.83  28  P        P        15 09 38.4 +1.3
      baz=248
Q17K  Contact Creek     80.85  30  P        P        15 09 37.5  0.0
      baz=249
MAW   Mawson            81.11 202  P        P        15 09 38.9 +0.3
      comp=Z,17nm,1.1s,baz=94,slow=6.9,SNR=2.8
MAW                                LR       LR       15 42 38.2
      comp=Z,2µm,21.1s,baz=80,slow=33
      comp=Z,17nm,1.1s
MAW   Mawson            81.11 202  P        P        15 09 39.4 +0.9
MAW   Mawson            81.11 202  P        P        15 09 39.4 +0.9
MAW                                pmax     pmax
      comp=Z,7.0nm,1.0s
Q18K  Katmai Hardscr    81.42  29  P        P        15 09 40.5  0.0
      baz=250
P18K  Big Mountain,     81.57  29  IAMs_20  IAMs_20  15 40 22.1
      comp=Z,948nm,21.0s
P18K  Big Mountain,     81.57  29  P        P        15 09 41.5 +0.3
      baz=249
O18K  Koktuh Hills      81.75  28  P        P        15 09 42.3 +0.2
      baz=249
OHAK  Old Harbor        81.80  31  P        P        15 09 43.5 +1.1
OHAK  Old Harbor        81.80  31  P        P        15 09 42.7 +0.3
      baz=251
SVW2  Sparrevohn        82.02  27  P        P        15 09 43.7 +0.2
SVW2  Sparrevohn        82.02  27  P        P        15 09 45.0 +1.5
RDOG  Red Dog Mine      82.11  19  P        P        15 09 44.6 +0.7
      baz=241,SNR=15
Q19K  Cape Douglas,     82.18  29  IAMs_20  IAMs_20  15 40 25.3
      comp=Z,2µm,22.0s
O19K  Port Alsworth     82.28  28  P        P        15 09 45.0 +0.2
      baz=250
KDAK  Kodiak Island     82.34  31  LR       LR       15 42 06.1
      comp=Z,846nm,21.6s,baz=262,slow=32
KDAK  Kodiak Island     82.34  31  P        P        15 09 46.0 +0.8
KDAK                               IAmb     IAmb     15 10 00.5
      comp=Z,121nm,1.6s
KDAK  Kodiak Island     82.34  31d iP       P        15 09 45.8 +0.6
KDAK                               pmax     pmax
      comp=Z,115nm,1.6s
KDAK  Kodiak Island     82.34  31  P        P        15 09 45.8 +0.6
      baz=252
N19K  Bonanza Creek     82.42  27  P        P        15 09 46.6 +0.9
N19K                               IAmb     IAmb     15 10 01.3
      comp=Z,73nm,1.4s
N19K  Bonanza Creek     82.42  27  P        P        15 09 46.0 +0.3
      baz=250
TTA   Tatalina          82.51  25  P        P        15 09 47.5 +1.4
TTA   Tatalina          82.51  25  P        P        15 09 46.8 +0.7
      baz=248,SNR=12
P19K  Oil Pt            82.62  29  IAMs_20  IAMs_20  15 41 01.8
      comp=Z,1µm,20.0s
P19K  Oil Pt            82.62  29  P        P        15 09 47.4 +0.8
      baz=251
TAOE  Nuku Hiva Isla    82.62  98 eP        P        15 09 48.3 +0.6
      comp=Z,89nm,22.4s
TAOE  Nuku Hiva Isla    82.62  98 eSS       SS       15 25 26.2 -0.1
      comp=Z,157nm,31.6s
TAOE  Nuku Hiva Isla    82.62  98 eLR       LR       15 35 40.8
      comp=Z,606nm,26.0s
Q20K  Shuyak Island     82.69  30  P        P        15 09 47.6 +0.6
      baz=252
L19K  White Mountain    82.73  26  IAMs_20  IAMs_20  15 41 01.8
      comp=Z,996nm,21.0s
L19K  White Mountain    82.73  26  P        P        15 09 47.8 +0.6
      baz=249,SNR=20
M19K  Big River Lodg    82.84  26  P        P        15 09 48.6 +0.8
M19K  Big River Lodg    82.84  26  P        P        15 09 48.0 +0.3
      baz=250
GCSA  Galena City Sc    82.84  23  P        P        15 09 47.8 +0.1
      baz=247,SNR=13
GEYT  Alibeck           83.01 309  P        P        15 09 49.8 +0.5
      comp=Z,33nm,1.0s,baz=132,slow=2.2,SNR=52
GEYT                               LR       LR       15 49 34.0
      comp=Z,528nm,21.5s,baz=90,slow=38
      comp=Z,33nm,1.0s
GEYT  Alibeck           83.01 309  P        P        15 09 49.0 -0.2
GEYT                               IAmb     IAmb     15 09 54.1
      comp=Z,93nm,1.4s
GEYT  Alibeck           83.01 309  P        P        15 09 49.0 -0.2
GEYT                               pmax     pmax
      comp=Z,93nm,1.4s
GYA0B ALIBECK ARRAY     83.01 309  P        P        15 09 50.0 +0.8
GYA0B                              IAmb     IAmb     15 09 54.0
      comp=Z,90nm,1.4s
O20K  Slope Mountain    83.05  28  P        P        15 09 48.3 -0.7
      baz=252
L20K  Farewell, AK      83.26  26  P        P        15 09 50.6 +0.6
      baz=250,SNR=17
HOM   Homer             83.39  29  P        P        15 09 50.9 +0.3
      baz=252
M20K  Styx River        83.39  27  P        P        15 09 51.8 +1.0
M20K                               IAmb     IAmb     15 09 57.1
      comp=Z,40nm,1.1s
M20K  Styx River        83.39  27  P        P        15 09 50.8  0.0
      baz=251
K20K  Telida            83.48  25  P        P        15 09 52.3 +1.3
K20K                               IAmb     IAmb     15 10 08.4
      comp=Z,75nm,1.3s
K20K                               IAMs_20  IAMs_20  15 42 27.6
      comp=Z,1µm,21.0s
K20K  Telida            83.48  25  P        P        15 09 52.6 +1.6
      baz=250,SNR=16
CNPM  China Poot        83.54  29  P        P        15 09 51.8 +0.3
CNPM                               IAmb     IAmb     15 10 07.0
      comp=Z,143nm,1.7s
CNPM                               IAMs_20  IAMs_20  15 42 14.3
      comp=Z,1µm,19.0s
SPCR  Spurr Chakacha    83.59  27  P        P        15 09 53.3 +1.5
      baz=252
BRLK  Bradley Lake      83.78  29  IAMs_20  IAMs_20  15 42 01.3
      comp=Z,838nm,20.0s
ABKAR Akbulak array     83.80 320  P        P        15 09 52.4 -0.5
BRSE  Bradley Lake S    83.85  29  P        P        15 09 54.2 +1.2
      baz=253
CAPN  Captain Cook N    83.95  28  P        P        15 09 53.4 -0.1
      baz=253
PPLA  Purkeypile        84.14  26  P        P        15 09 55.0 +0.4
PPLA                               IAmb     IAmb     15 10 10.8
      comp=Z,101nm,1.6s
PPLA  Purkeypile        84.14  26  P        P        15 09 54.5  0.0
      baz=252
SKT   Skwentna          84.14  27  P        P        15 09 54.0 -0.5
SKT   Skwentna          84.14  27  P        P        15 09 54.5  0.0
      baz=252,SNR=7.6
SUA   Susitna One       84.34  27  P        P        15 09 55.1 -0.5
SUA   Susitna One       84.34  27  P        P        15 09 54.9 -0.7
      baz=253,SNR=9.4
CAST  Castle Rocks      84.35  25  P        P        15 09 56.0 +0.5
CAST                               IAMs_20  IAMs_20  15 42 34.4
      comp=Z,1µm,22.0s
CAST  Castle Rocks      84.35  25  P        P        15 09 55.7 +0.2
      baz=252,SNR=23
CHUM  Lake Minchumin    84.40  25  P        P        15 09 56.0 +0.3
      baz=251,SNR=41
IMAR  Indian Mountai    84.52  23  P        P        15 09 56.7 +0.4
O22K  Cooper Landing    84.54  28  IAMs_20  IAMs_20  15 43 37.8
      comp=Z,852nm,20.0s
O22K  Cooper Landing    84.54  28  P        P        15 09 56.7 +0.2
      baz=254
RC01  Rabbit Creek A    84.71  28  P        P        15 09 57.2 -0.1
RC01                               IAmb     IAmb     15 10 11.6
      comp=Z,86nm,1.4s
RC01  Rabbit Creek A    84.71  28  P        P        15 09 56.8 -0.5
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      baz=254,SNR=12
H21K  Melozitna Rive    84.78  23  P        P        15 09 58.7 +1.1
H21K                               IAmb     IAmb     15 10 13.4
      comp=Z,46nm,1.4s
H21K  Melozitna Rive    84.78  23  P        P        15 09 58.0 +0.4
      baz=251
G21K  Allakaket         84.80  22  P        P        15 09 58.0 +0.3
      baz=250
CUT   Chulitna          84.83  27  IAMs_20  IAMs_20  15 41 58.4
      comp=Z,1µm,22.0s
CUT   Chulitna          84.83  27  P        P        15 09 58.5 +0.6
      baz=253
KTH   Kantishna Hill    84.89  25  P        P        15 09 58.4 +0.1
KTH                                IAmb     IAmb     15 10 18.4
      comp=Z,47nm,1.2s
KTH                                IAMs_20  IAMs_20  15 42 26.6
      comp=Z,1µm,22.0s
I21K  Tanana            84.95  24  P        P        15 09 59.2 +0.8
I21K                               IAmb     IAmb     15 10 14.6
      comp=Z,105nm,1.7s
I21K                               IAMs_20  IAMs_20  15 46 42.2
      comp=Z,826nm,19.0s
I21K  Tanana            84.95  24  P        P        15 09 58.6 +0.2
      baz=252,SNR=11
BPAW  Bear Paw Mtn.     85.02  25  P        P        15 09 59.3 +0.4
      baz=253
SVE   Sverdlovsk        85.04 328 eP        P        15 09 58.8 -0.3
SVE                               eS        S        15 20 20.8 -5.7
SVE                                pmax     pmax
      comp=Z,58nm,1.1s
SVE                                MLR      MLR
      comp=Z,1µm,22.0s
F21K  Alatna River      85.05  21  P        P        15 09 59.1 +0.2
      baz=250
PMR   Palmer            85.12  27  P        P        15 09 58.5 -0.9
PMR                                IAmb     IAmb     15 10 16.9
      comp=Z,37nm,1.2s
PMR   Palmer            85.12  27  P        P        15 09 59.6 +0.2
PMR   Palmer            85.12  27  P        P        15 09 58.5 -0.9
PMR                                pmax     pmax
      comp=Z,37nm,1.2s
PMR   Palmer            85.12  27  P        P        15 09 59.0 -0.3
      baz=254,SNR=11
TRF   Thorofare Moun    85.13  26  P        P        15 09 59.7 +0.1
TRF                                IAMs_20  IAMs_20  15 44 15.0
      comp=Z,1µm,21.0s
TRF   Thorofare Moun    85.13  26  P        P        15 09 58.8 -0.8
      baz=253
AKTO  Aktyubinsk        85.25 321  LR       LR       15 52 07.7
      comp=Z,301nm,18.4s,baz=88,slow=38
GHO   Glory Hole Cre    85.27  27  IAMs_20  IAMs_20  15 43 31.8
      comp=Z,1µm,21.0s
PWL   Port Wells        85.30  28  P        P        15 10 00.0 -0.3
      baz=255,SNR=6.3
KNK   Knik Glacier      85.39  28  P        P        15 10 00.6 -0.1
KNK                                IAmb     IAmb     15 10 05.4
      comp=Z,48nm,1.0s
KNK   Knik Glacier      85.39  28  P        P        15 10 00.9 +0.1
      baz=255,SNR=21
MLY   Manley            85.40  24  P        P        15 10 01.1 +0.3
MLY   Manley            85.40  24  P        P        15 10 00.9 +0.1
      baz=253,SNR=27
A21K  Barrow            85.53  17  P        P        15 10 01.5 +0.4
      baz=247
P23K  Montague Islan    85.54  29  P        P        15 10 02.1 +0.6
      baz=256
SML   Sawmill           85.55  27  P        P        15 10 02.1 +0.5
SML                                IAmb     IAmb     15 10 06.1
      comp=Z,64nm,1.0s
SML                                IAMs_20  IAMs_20  15 42 57.3
      comp=Z,979nm,22.0s
SML   Sawmill           85.55  27  P        P        15 10 01.3 -0.3
      baz=255,SNR=27
F22K  John River        85.62  21  P        P        15 10 02.3 +0.5
      baz=251
RND   Reindeer          85.73  26  P        P        15 10 02.6 +0.2
RND                                IAmb     IAmb     15 10 07.1
      comp=Z,33nm,0.8s
RND                                IAMs_20  IAMs_20  15 44 26.0
      comp=Z,906nm,20.0s
RND   Reindeer          85.73  26  P        P        15 10 02.7 +0.2
RND                                pmax     pmax
      comp=Z,33nm,0.8s
MCK   McKinley          85.79  25  P        P        15 10 02.5 -0.2
MCK                                IAmb     IAmb     15 10 07.4
      comp=Z,39nm,0.9s
MCK   McKinley          85.79  25  P        P        15 10 02.5 -0.2
MCK                                pmax     pmax
      comp=Z,39nm,0.9s
MCK   McKinley          85.79  25  P        P        15 10 02.2 -0.5
      baz=254,SNR=30
M23K  Glacier View      85.82  27  P        P        15 10 02.7 -0.2
      baz=256,SNR=14
NEA2  Nenana            85.96  25  P        P        15 10 03.7 +0.2
      baz=254,SNR=16
I23K  Minto, Yukon-K    86.00  24  P        P        15 10 03.4 -0.3
I23K  Minto, Yukon-K    86.00  24  P        P        15 10 03.7  0.0
      baz=254,SNR=25
SCM   Sheep Creek Mo    86.02  27  P        P        15 10 03.3 -0.6
SCM   Sheep Creek Mo    86.02  27  P        P        15 10 03.3 -0.6
SCM                                pmax     pmax
      comp=Z,93nm,1.2s
SCM   Sheep Creek Mo    86.02  27  P        P        15 10 04.2 +0.3
      baz=256,SNR=22
ARU   Arti              86.07 327  PP       PP       15 13 25.8 +1.1
      comp=Z,10nm,1.0s,baz=134,slow=8.5,SNR=3.6
ARU                                LR       LR       15 51 02.4
      comp=Z,437nm,19.5s,baz=92,slow=37
ARU   Arti              86.07 327  P        P        15 10 03.5 -0.7
ARU                                IAmb     IAmb     15 10 04.9
      comp=Z,44nm,0.9s
ARU   Arti              86.07 327c iP       P        15 10 03.2 -1.0
ARU                                S        S        15 20 27.0  -10
ARU                                pmax     pmax
      comp=Z,56nm,1.0s
ARU                                MLR      MLR
      comp=Z,770nm,22.0s
H23K  Yukon River       86.11  23  P        P        15 10 05.0 +0.7
H23K                               IAmb     IAmb     15 10 19.9
      comp=Z,79nm,1.3s
H23K                               IAMs_20  IAMs_20  15 42 21.0
      comp=Z,1µm,22.0s
H23K  Yukon River       86.11  23  P        P        15 10 04.5 +0.2
      baz=254
G23K  Bananza Creek     86.18  22  P        P        15 10 05.7 +1.1
      baz=253
COLD  Coldfoot          86.26  22  P        P        15 10 05.4 +0.4
COLD  Coldfoot          86.26  22  P        P        15 10 05.8 +0.8
      baz=253
WRH   Wood River Hil    86.34  25  P        P        15 10 05.0 -0.4
WRH                                IAMs_20  IAMs_20  15 43 41.0
      comp=Z,793nm,21.0s
MDM   Murphy Dome       86.41  24  P        P        15 10 05.3 -0.5
MDM                                IAmb     IAmb     15 10 20.1
      comp=Z,107nm,1.7s
EYAK  Cordova Ski Ar    86.47  29  P        P        15 10 05.6 -0.4
      baz=258
CCB   Clear Creek Bu    86.50  25  P        P        15 10 06.0 -0.2
CCB                                IAMs_20  IAMs_20  15 44 19.4
      comp=Z,777nm,22.0s
TCOL  CIGO, UAF Yank    86.54  24  IAMs_20  IAMs_20  15 43 59.3
      comp=Z,767nm,21.0s
TCOL  CIGO, UAF Yank    86.54  24  P        P        15 10 06.3  0.0
      baz=255,SNR=6.9
COLA  College           86.54  24  P        P        15 10 07.1 +0.8
COLA  College           86.54  24d iP       P        15 10 05.5 -0.8
COLA                               pmax     pmax
      comp=Z,85nm,1.8s
COLA  College           86.54  24  P        P        15 10 06.0 -0.3
      baz=255
DIV   Divide            86.58  28  P        P        15 10 07.0 +0.2
DIV                                IAmb     IAmb     15 10 21.3
      comp=Z,48nm,0.9s
KLU   Klutina           86.59  28  P        P        15 10 07.4 +0.6
KLU                                IAmb     IAmb     15 10 20.6
      comp=Z,31nm,1.1s
KLU                                IAMs_20  IAMs_20  15 42 04.8
      comp=Z,888nm,22.0s
KLU   Klutina           86.59  28  P        P        15 10 06.8  0.0
      baz=257,SNR=10
D23K  Nanushuk River    86.61  20  P        P        15 10 06.9 +0.3
      baz=252
M24K  Tolsona, Glenn    86.61  27  P        P        15 10 08.0 +1.1
M24K  Tolsona, Glenn    86.61  27  P        P        15 10 07.6 +0.7
      baz=257,SNR=12
E23K  Chandalar         86.72  21  P        P        15 10 08.1 +0.8
      baz=254
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POKR  Poker Plat Res    86.78  24  IAMs_20  IAMs_20  15 47 36.5
      comp=Z,739nm,20.0s
POKR  Poker Plat Res    86.78  24  P        P        15 10 07.8 +0.3
      baz=256
H24K  Noodor Dome       86.78  23  P        P        15 10 08.2 +0.6
H24K  Noodor Dome       86.78  23  P        P        15 10 08.2 +0.6
      baz=255
HDA   Harding Lake      86.80  25  P        P        15 10 07.0 -0.6
      baz=256,SNR=18
QSPA  South Pole Qui    86.89 180  LR       LR       15 48 48.2
      comp=Z,2µm,20.5s,baz=2.0,slow=35
QSPA  South Pole Qui    86.89 180  P        P        15 10 08.0 -0.2
QSPA                               IAmb     IAmb     15 10 30.1
      comp=Z,75nm,1.2s
ILAR  Eielson Array     86.92  25  P        P        15 10 07.0 -1.2
      comp=Z,16nm,1.0s,baz=265,slow=4.3,SNR=60
ILAR                               LR       LR       15 45 03.7
      comp=Z,530nm,21.1s,baz=255,slow=33
      comp=Z,16nm,1.0s
PAX   Paxson            87.12  27  P        P        15 10 10.0 +0.6
PAX   Paxson            87.12  27  P        P        15 10 10.0 +0.6
PAX                                pmax     pmax
      comp=Z,85nm,1.3s
PAX   Paxson            87.12  27  P        P        15 10 09.7 +0.3
      baz=258,SNR=18
E24K  Your Creek        87.13  21  P        P        15 10 10.0 +0.7
      baz=255
HARP  HAARP             87.14  27  P        P        15 10 09.0 -0.4
      baz=258
G24K  Hadweenzic Riv    87.15  23  P        P        15 10 10.1 +0.8
      baz=256
K24K  Donnelly Dome     87.17  26  P        P        15 10 09.4 -0.1
      baz=257,SNR=14
F24K  Squaw Lake        87.20  22  P        P        15 10 10.3 +0.7
      baz=255
N25K  Chitina, Valde    87.23  28  P        P        15 10 10.6 +0.7
N25K                               IAMs_20  IAMs_20  15 45 08.9
      comp=Z,866nm,19.0s
N25K  Chitina, Valde    87.23  28  P        P        15 10 10.7 +0.7
      baz=258,SNR=12
C24K  Franklin Bluff    87.50  20  P        P        15 10 11.4 +0.5
      baz=254,SNR=7.6
RIDG  Independent Ri    87.56  26  P        P        15 10 11.3 -0.1
RIDG  Independent Ri    87.56  26  P        P        15 10 11.9 +0.5
      baz=258,SNR=28
GLB   Gilahina Butte    87.57  28  P        P        15 10 12.4 +0.9
GLB                                IAMs_20  IAMs_20  15 44 53.8
      comp=Z,1µm,22.0s
PRP   Porcupine Dome    87.65  24  P        P        15 10 12.6 +0.7
      baz=258
G25K  Bearman Lake      87.70  23  P        P        15 10 12.7 +0.8
      baz=257
VRDI  Verde Repeater    87.70  28  P        P        15 10 12.5 +0.2
VRDI                               IAmb     IAmb     15 10 28.2
      comp=Z,57nm,1.5s
VRDI                               IAMs_20  IAMs_20  15 45 43.2
      comp=Z,831nm,21.0s
DOT   Dot Lake          87.88  26  P        P        15 10 13.2 +0.3
MCARA McCarthy VSAT     87.94  28  P        P        15 10 12.9 -0.3
MCARA                              IAmb     IAmb     15 10 32.1
      comp=Z,74nm,1.4s
MCARA                              IAMs_20  IAMs_20  15 45 48.4
      comp=Z,852nm,20.0s
MCARA McCarthy VSAT     87.94  28  P        P        15 10 13.7 +0.5
      baz=260,SNR=7.3
SCRK  Sand Creek        87.98  26  P        P        15 10 13.2 -0.3
SCRK                               IAmb     IAmb     15 10 28.5
      comp=Z,78nm,1.6s
SCRK                               IAMs_20  IAMs_20  15 47 07.3
      comp=Z,1µm,20.0s
SCRK  Sand Creek        87.98  26  P        P        15 10 13.5  0.0
      baz=259,SNR=16
FYU   Fort Yukon        87.99  23  P        P        15 10 13.8 +0.5
FYU                                IAMs_20  IAMs_20  15 43 49.6
      comp=Z,1µm,22.0s
F25K  Christian Rive    88.06  22  P        P        15 10 14.1 +0.3
      baz=257
L26K  Log Cabin Wild    88.08  27  IAMs_20  IAMs_20  15 45 10.1
      comp=Z,1µm,21.0s
L26K  Log Cabin Wild    88.08  27  P        P        15 10 14.5 +0.6
      baz=260,SNR=13
M26K  Nabesna, AK       88.13  27  IAMs_20  IAMs_20  15 44 53.4
      comp=Z,1µm,22.0s
M26K  Nabesna, AK       88.13  27  P        P        15 10 14.4 +0.2
      baz=260,SNR=13
D25K  Kavik River       88.19  20  P        P        15 10 14.9 +0.6
      baz=256
E25K  Arctic Village    88.20  21  P        P        15 10 14.6 +0.3
      baz=257
BMAR  Burnt Mountain    88.42  22  P        P        15 10 16.4 +0.9
BARN  Barnard Glacie    88.53  29  P        P        15 10 17.6 +1.3
BARN                               IAMs_20  IAMs_20  15 45 03.2
      comp=Z,992nm,21.0s
I26K  Coal Creek Min    88.58  24  P        P        15 10 16.9 +0.7
I26K                               IAmb     IAmb     15 10 31.0
      comp=Z,82nm,1.5s
I26K                               IAMs_20  IAMs_20  15 45 22.9
      comp=Z,780nm,22.0s
I26K  Coal Creek Min    88.58  24  P        P        15 10 16.1  0.0
      baz=260
G26K  Porcupine Rive    88.63  23  P        P        15 10 17.4 +1.1
      baz=259
M27K  Edge Creek, AK    88.63  27  P        P        15 10 17.9 +1.2
M27K                               IAMs_20  IAMs_20  15 44 55.8
      comp=Z,937nm,22.0s
M27K  Edge Creek, AK    88.63  27  P        P        15 10 17.0 +0.3
      baz=261,SNR=17
F26K  Sheenjek River    88.64  22  P        P        15 10 17.4 +0.9
      baz=259
L27K  Beaver Creek,     88.77  27  P        P        15 10 18.1 +0.9
L27K                               IAMs_20  IAMs_20  15 44 56.4
      comp=Z,836nm,21.0s
L27K  Beaver Creek,     88.77  27  P        P        15 10 17.7 +0.6
      baz=261
BCAR  Beaver Creek A    88.79  27  P        P        15 10 18.4 +1.2
K27K  Chicken           88.81  26  P        P        15 10 18.8 +1.5
K27K                               IAMs_20  IAMs_20  15 46 16.2
      comp=Z,979nm,20.0s
K27K  Chicken           88.81  26  P        P        15 10 18.9 +1.7
      baz=261
C26K  Camden Bay        88.82  20  P        P        15 10 17.9 +0.7
      baz=258
PINM  Pinnacle          89.08  30  P        P        15 10 19.3 +0.5
      baz=262
BVCY  Beaver Creek      89.11  27  P        P        15 10 19.0 +0.2
      baz=262,SNR=19
C27K  Jago River        89.17  20  P        P        15 10 18.6 -0.3
      baz=259,SNR=12
O28M  Mount Upton       89.20  29  P        P        15 10 19.5 -0.1
      baz=262,SNR=12
YUK3  Moose Creek       89.21  28  P        P        15 10 20.1 +0.6
      baz=262,SNR=33
I27K  Kandik River      89.26  24  P        P        15 10 20.2 +0.8
      baz=261
EGAK  Eagle             89.33  25  P        P        15 10 20.9 +1.2
EGAK                               IAmb     IAmb     15 10 35.0
      comp=Z,60nm,1.4s
EGAK  Eagle             89.33  25  P        P        15 10 20.0 +0.3
      baz=261,SNR=8.0
H27K  Steamboat Moun    89.39  24  P        P        15 10 20.3 +0.3
      baz=261
G27K  Doyon Strip       89.44  23  P        P        15 10 20.9 +0.8
      baz=261
PNL   Peninsula         89.45  30  P        P        15 10 21.2 +0.8
PNL   Peninsula         89.45  30  P        P        15 10 20.1 -0.3
      baz=263
YUK8  Steele Glacier    89.47  29  P        P        15 10 21.7 +0.9
      baz=263,SNR=7.5
E27K  Coleen River      89.67  22  P        P        15 10 21.7 +0.4
      baz=261,SNR=12
O29M  Mount Kennedy     89.94  30  P        P        15 10 23.2 +0.4
      baz=264,SNR=16
DAWY  Dawson            89.99  26  P        P        15 10 23.5 +0.6
DAWY                               IAmb     IAmb     15 10 38.5
      comp=Z,89nm,1.4s
DAWY  Dawson            89.99  26  P        P        15 10 23.2 +0.3
      baz=263,SNR=23
YUK4  Talbot Arm        90.02  29  P        P        15 10 23.8 +0.5
      baz=264,SNR=13
YUK6  Outpost Mounta    90.11  29  P        P        15 10 23.8 +0.1
      baz=264
M29M  Somme Creek       90.22  28  P        P        15 10 24.7 +0.6
      baz=264,SNR=18
L29M  L29M              90.44  27  P        P        15 10 25.3 +0.3
      baz=264,SNR=14
HYT   Haines Junctio    90.52  29  P        P        15 10 26.3 +0.8
HYT                                IAmb     IAmb     15 10 41.1
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	comp=Z,51nm,1.4s						
HYT	Haines Junctio	90.52	29	P	P	15 10 25.6	+0.1
	baz=265,SNR=13						
I29M	Ogilvie Camp,	90.60	25	P	P	15 10 25.9	+0.2
	baz=264						
P30M	Million Dollar	90.72	30	P	P	15 10 26.3	-0.1
	baz=265						
N30M	Aishikik Lake	90.77	29	P	P	15 10 26.9	+0.3
	baz=265,SNR=12						
K29M	Barlow Dome	90.79	26	P	P	15 10 27.1	+0.4
	baz=265,SNR=8.9						
S31K	Pelican	90.93	32	P	P	15 10 28.1	+0.9
	baz=266						
PLBC	Pleasant Camp	90.97	31	P	P	15 10 27.7	+0.2
	baz=266,SNR=7.3						
M30M	Minto, Yukon	91.00	28	P	P	15 10 29.1	+1.5
M30M				IAmb	IAmb	15 10 42.5	
	comp=Z,59nm,2.0s						
M30M				IAMs_20	IAMs_20	15 45 55.5	
	comp=Z,1µm,22.0s						
M30M	Minto, Yukon	91.00	28	P	P	15 10 28.4	+0.8
	baz=265,SNR=7.5						
O30N	Mendenhall	91.20	29	P	P	15 10 29.3	+0.7
	baz=266,SNR=7.6						
KIRV	Kirov	91.25	328	LR	LR	15 54 26.7	
	comp=Z,451nm,19.6s,baz=93,slow=37						
KIRV	Kirov	91.25	328	c iP	P	15 10 27.4	-1.3
AKT	Akhty	91.35	311	eP	P	15 10 28.2	-1.6
AKT				e		15 14 04.7	
AKT				pmax	pmax		
	comp=Z,16nm,1.3s						
N31M	Braeburn, Yuko	91.40	29	P	P	15 10 30.1	+0.6
N31M				IAmb	IAmb	15 10 45.1	
	comp=Z,81nm,1.9s						
N31M				IAMs_20	IAMs_20	15 47 18.1	
	comp=Z,1µm,20.0s						
N31M	Braeburn, Yuko	91.40	29	P	P	15 10 30.6	+1.1
	baz=266,SNR=9.0						
SKAG	Skagway	91.50	31	P	P	15 10 31.8	+1.9
SKAG	Skagway	91.50	31	P	P	15 10 30.7	+0.8
	baz=267,SNR=5.9						
G30M	tAoh Zraii Nji	91.58	23	P	P	15 10 30.9	+0.7
	baz=266						
S32K	Killisnoo	91.78	33	P	P	15 10 32.8	+1.6
	baz=267						
BELG	Belogornoye	91.93	322	P	P	15 10 30.4	-1.7
	comp=Z,93nm,1.0s,baz=48,slow=2.4,SNR=9.8						
BELG				LR	LR	15 55 29.9	
	comp=Z,405nm,19.7s,baz=91,slow=38						
	comp=Z,93nm,1.0s						
BELG	Belogornoye	91.93	322	c iP	P	15 10 30.2	-1.8
BELG				pmax	pmax		
	comp=Z,21nm,1.0s						
M31M	Drury Creek, Y	92.10	28	IAMs_20	IAMs_20	15 47 17.4	
	comp=Z,921nm,21.0s						
M31M	Drury Creek, Y	92.10	28	P	P	15 10 33.0	+0.3
	baz=268						
P32M	Atlin	92.33	31	P	P	15 10 34.0	+0.2
	baz=268						
F31M	Tsiigehtchic	92.57	23	P	P	15 10 34.4	-0.2
	baz=268,SNR=7.5						
FARO	Faro, Yukon	92.59	28	P	P	15 10 35.2	+0.3
	baz=268,SNR=8.8						
INK	Inuvik	92.68	22	LR	LR	15 49 41.5	
	comp=Z,227nm,21.3s,baz=251,slow=34						
INK	Inuvik	92.68	22	P	P	15 10 34.3	-0.8
INK	Inuvik	92.68	22	P	P	15 10 34.3	-0.8
INK				pmax	pmax		
	comp=Z,24nm,1.4s						
INK	Inuvik	92.68	22	P	P	15 10 34.8	-0.4
	baz=268,SNR=12						
GNI	Garni	93.57	310	PP	PP	15 14 29.3	+4.2
	comp=Z,3.0nm,0.3s,baz=150,slow=8.5,SNR=3.5						
GNI				LR	LR	15 56 51.7	
	comp=Z,213nm,20.7s,baz=106,slow=38						
GNI	Garni	93.57	310⇓	eP	P	15 10 40.3	+0.1
GNI				pmax	pmax		
	comp=Z,11nm,1.4s						
DLBC	Dease Lake	94.22	32	LR	LR	15 49 04.2	
	comp=Z,511nm,21.1s,baz=295,slow=33						
ZEI	Tsey	94.23	313	eP	P	15 10 40.8	-2.4
ZEI				pmax	pmax		
	comp=Z,11nm,1.3s						
ELIB	Princess Elisa	94.23	197	dP	P	15 10 43.1	+0.6
	comp=Z,25nm,1.2s						
NCK	Nalchik	94.46	313⇑	eP	P	15 10 43.1	-0.9
NCK				pmax	pmax		
	comp=Z,9.0nm,0.4s						
KBZ	Khabaz	94.96	313	P	P	15 10 44.3	-1.9
	comp=Z,1.3nm,0.4s,baz=66,slow=4.1,SNR=2.2						
KBZ				LR	LR	15 56 49.9	
	comp=Z,284nm,21.6s,baz=80,slow=38						
	comp=Z,1.3nm,0.4s						
KBZ	Khabaz	94.96	313	c eP	P	15 10 44.4	-1.8
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.4s						
KIV	Kislovodsk	95.11	314	IAMs_20	IAMs_20	15 43 18.1	
	comp=Z,777nm,21.0s						
KIV	Kislovodsk	95.11	314	eP	P	15 10 45.8	-1.2
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,204nm,20.0s						
A36M	Sachs Harbour	95.34	18	P	P	15 10 46.6	-0.7
A36M	Sachs Harbour	95.34	18	P	P	15 10 47.5	+0.2
	baz=277						
VRH	Novokhopyorsk	95.59	321	eP	P	15 10 46.3	-2.6
VRH				pmax	pmax		
	comp=Z,31nm,0.9s						
C36M	Paulatuk	96.05	21	P	P	15 10 49.7	-0.9
C36M				IAmb	IAmb	15 10 50.6	
	comp=Z,14nm,0.7s						
C36M				IAMs_20	IAMs_20	15 51 19.5	
	comp=Z,636nm,20.0s						
C36M	Paulatuk	96.05	21	P	P	15 10 50.2	-0.4
	baz=277						
KLMR	Klimovskoe	96.24	331	eP	P	15 10 47.9	-3.7
KLMR				AMP		15 10 50.6	
	comp=Z,27nm,0.9s						
KLMR				ePP	PP	15 14 38.2	-6.7
KLMR				LQ	LQ	15 44 00.1	
KLMR				LQ	LQ	15 44 00.1	
KLMR				LR	LR	15 45 47.5	
KLMR				AMP		15 57 51.9	
	comp=Z,1µm,17.7s						
KLMR	Klimovskoe	96.24	331	eP	P	15 10 47.8	-3.8
KLMR				pmax	pmax		
	comp=Z,27nm,0.9s						
KLMR				MLR	MLR		
	comp=Z,1µm,18.0s						
VORR	Voronezh	97.14	322	eP	P	15 10 54.8	-1.1
VORR				pmax	pmax		
	comp=Z,30nm,1.3s						
VSR	Storozhevoye	97.20	321	eP	P	15 10 53.6	-2.6
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LPSR	Galich'ya Gora	97.24	322	eP	P	15 10 54.4	-1.9
LPSR				pmax	pmax		
	comp=Z,40nm,1.0s						
SOC	Sochi	97.27	313	eP	P	15 10 52.0	-4.7
SOC				eS	SKSac	15 21 27.8	-4.5
SOC				eSS	SS	15 28 57.2	+0.1
SOC				eSSS	SSS	15 32 44.5	
SOC				MLR	MLR		
	comp=Z,362nm,19.0s						
MOS	Moscow	97.72	326	eP	P	15 10 55.9	-2.5
MOS				e		15 11 05.9	
MOS				e		15 14 55.7	
MOS				MLR	MLR		
	comp=Z,700nm,22.0s						
OBN	Obninsk	98.39	325	LR	LR	15 58 06.0	
	comp=Z,214nm,21.1s,baz=63,slow=37						
OBN	Obninsk	98.39	325	deP	P	15 11 00.0	-1.4
OBN				i *PP	pP	15 11 06.1	-4.5
OBN				i *SP	sP	15 11 11.6	-2.1
OBN				i		15 14 59.2	
OBN				i PPP	PPP	15 17 09.9	
OBN				eS	SKSac	15 21 37.8	+0.4
OBN				eSS	SS	15 29 14.5	+2.5
OBN				eSSS	SSS	15 32 54.1	
OBN				pmax	pmax		
	comp=Z,43nm,1.3s						
OBN				MLR	MLR		
	comp=Z,863nm,21.0s						
ANN	Anapa	98.84	315	eP	P	15 11 01.2	-2.5
ANN				e*PP	Pdif	15 11 07.5	+3.8
ANN				e		15 15 04.4	
ANN				eS	SKSac	15 21 38.2	-2.0
ANN				eSS	SS	15 29 21.1	+2.2
ANN				pmax	pmax		
	comp=Z,29nm,0.9s						
SPITS	Spitsbergen Ar	98.99	350	LR	LR	15 58 01.3	
	comp=Z,359nm,20.2s,baz=15,slow=37						
BELA	Belgrano 2	99.03	182	P	Pdif	15 11 03.7	-0.3
TROLL	Troll, Antarti	99.58	193	Pdiff	Pdif	15 11 09.7	+3.0
YBH	Yreka Blue Hor	99.82	48	LR	LR	15 48 54.5	
	comp=Z,557nm,20.7s,baz=274,slow=31						
ARCES	ARCESS Array B	100.22	341	P	Pdif	15 11 08.8	-0.6
	comp=Z,17nm,1.0s,baz=85,slow=5.2,SNR=30						
ARCES				PKKPbc	PKKPbc	15 27 26.5	-3.0
	comp=Z,3.0nm,0.9s,baz=276,slow=2.6,SNR=4.6						
PUL	Pulkovo	100.92	330⇓	eP	Pdif	15 11 13.1	+0.5
PUL				pmax	pmax		
	comp=Z,42nm,0.7s						
SNAA	Sanae	100.99	192⇓	iP	Pdif	15 11 12.5	-0.4
SNAA				pmax	pmax		
	comp=Z,20nm,1.6s						
YKA	Yellowknife Ar	101.21	27	P	Pdif	15 11 13.9	0.0
	comp=Z,3.7nm,0.9s,baz=288,slow=4.4,SNR=30						
YKA				PP	PP	15 15 25.4	+2.7
	comp=Z,0.9nm,1.1s,baz=273,slow=7.8,SNR=2.3						
YKA				PKKPbc	PKKPbc	15 27 23.9	-2.6
	comp=Z,0.2nm,0.6s,baz=107,slow=2.8,SNR=2.8						
BR131	Keskin Array S	102.11	310⇓	eP	Pdif	15 11 14.8	-3.8
BRTR	Keskin Array B	102.11	310	P	Pdif	15 11 16.7	-1.9
	comp=Z,1.0nm,0.8s,baz=105,slow=2.9,SNR=5.5						
BRTR				PP	PP	15 15 30.3	-0.2
	comp=Z,0.9nm,0.8s,baz=101,slow=7.5,SNR=3.6						
BRTR	Keskin Array B	102.11	310	i P	Pdif	15 11 15.3	-3.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	FINESS Array B	102.52	333	P	Pdif	15 11 17.9	-1.8
	comp=Z,2.6nm,0.8s,baz=59,slow=6.7,SNR=3.6						
FINES				PP	PP	15 15 33.9	+1.3
	comp=Z,2.1nm,0.7s,baz=90,slow=8.9,SNR=3.8						
FINES	FINESS Array B	102.52	333	i P	Pdif	15 11 22.6	+2.9
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BMO	Blue Mountains	103.36	45	IAMs_20	IAMs_20	15 49 26.4	
	comp=Z,696nm,21.0s						
MNK	Minsk	103.44	325	i P	Pdif	15 11 20.2	-3.8
	comp=E,2.0nm,1.1s						
MNK				i P	Pdif	15 11 20.2	-3.8
	comp=N,38nm,0.9s						
MNK				i P	Pdif	15 11 20.2	-3.8
	comp=Z,9.0nm,1.1s,baz=76						
MNK				i PP	PP	15 15 36.4	-3.4
MNK				i PPP	PPP	15 17 46.1	
MNK				i SS	SS	15 30 22.0	-0.2
MNK				i SSS	SSS	15 34 15.2	
MNK				i LQ	LQ	15 52 04.0	
MNK				i LR	LR	15 57 04.9	
MNK				i LRM	MLR	16 00 24.6	
	comp=E,71nm,20.4s						
MNK				i LRM	MLR	16 00 53.9	
	comp=N,477nm,22.3s						
MNK				i LRM	MLR	16 01 26.3	
	comp=Z,434nm,20.4s						
MNK	Minsk	103.44	325	i P	Pdif	15 11 20.1	-3.8
MNK				i		15 15 36.3	
MNK				i SS	SS	15 30 22.0	-0.2
MNK				i SSS	SSS	15 34 15.1	
MNK				pmax	pmax		
	comp=N,38nm,0.9s						
MNK				pmax	pmax		
	comp=E,2.0nm,1.1s						
MNK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MNK				MLR	MLR		
	comp=E,71nm,20.0s						
MNK				MLR	MLR		
	comp=N,477nm,22.0s						
MNK				MLR	MLR		
	comp=Z,434nm,20.0s						
AKASG	Malin Array Be	103.49	321	Pdiff	Pdif	15 11 22.1	-2.2
	comp=Z,7.8nm,1.1s,baz=61,slow=3.9,SNR=11						
AKASG				PP	PP	15 15 39.2	-1.1
	comp=Z,2.9nm,0.9s,baz=67,slow=7.2,SNR=4.9						
NVAR	Mina Array Bea	103.51	51	Pdiff	Pdif	15 11 27.4	+2.4
	comp=Z,0.6nm,0.8s,baz=260,slow=5.4,SNR=3.3						
NVAR				PKKP	PKKPdf	15 27 27.6	-0.1
	comp=Z,0.1nm,0.3s,baz=57,slow=3.7,SNR=2.1						
NACGM	Naroch	103.96	326	ePP	PKiKP	15 15 45.8	+2.1
	baz=75						
MFID	Camas Ranch	104.65	46	IAMs_20	IAMs_20	15 51 35.6	
	comp=Z,759nm,20.0s						
TPNV	Topopah Spring	105.32	53	IAMs_20	IAMs_20	15 53 33.9	
	comp=Z,760nm,21.0s						
HLID	Hailey	105.63	46	IAMs_20	IAMs_20	15 50 36.6	
	comp=Z,791nm,19.0s						
DLMT	Dillon	106.54	44	IAMs_20	IAMs_20	15 49 08.4	
	comp=Z,521nm,18.0s						
MLR	Muntele Rosu	106.76	317	PP	PP	15 16 06.5	+1.7
	comp=Z,6.5nm,1.1s,baz=106,slow=11,SNR=4.5						
BOZ	Bozeman (W)	107.15	43	IAMs_20	IAMs_20	15 52 50.5	
	comp=Z,999nm,21.0s						
FXWY	Fox Creek	108.02	45	IAMs_20	IAMs_20	15 55 05.8	
	comp=Z,609nm,20.0s						
HWUT	Hardware Ranch	108.09	47	IAMs_20	IAMs_20	15 51 56.7	
	comp=Z,661nm,19.0s						
FLWY	Flagg Ranch	108.15	45	IAMs_20	IAMs_20	15 52 35.1	
	comp=Z,726nm,22.0s						
SNOW	Snow King Moun	108.26	45	IAMs_20	IAMs_20	15 55 21.0	
	comp=Z,698nm,21.0s						
NOA	NORSAR Array B	109.24	335	PP	PP	15 16 21.4	-0.7
	comp=Z,1.7nm,1.0s,baz=46,slow=7.0,SNR=3.5						
PDAR	Pinedale Array	109.27	46	PKiKP	PKiKP	15 15 55.0	+0.7
	comp=Z,0.6nm,0.7s,baz=248,slow=1.6,SNR=4.2						
PDAR				PKKPab	PKKPab	15 27 12.4	-0.3
	comp=Z,0.7nm,0.9s,baz=97,slow=5.6,SNR=3.9						
LAO	LASA Array	110.47	41	IAMs_20	IAMs_20	15 55 22.1	
	comp=Z,885nm,21.0s						
MORC	Moravsky Berou	110.94	323	ePKIKP	PKiKP	15 15 55.2	-1.7
JAVC	Velka Javorina	111.19	322	ePKIKP	PKiKP	15 15 58.9	+1.4
RWWY	Rawlins	111.23	46	IAMs_20	IAMs_20	15 54 56.9	
	comp=Z,937nm,21.0s						
OSTC	Ostas	111.44	324	ePKP	PKiKP	15 15 58.5	+0.7
OSTC	Ostas	111.44	324	ePKIKP	PKiKP	15 15 58.5	+0.7
VRAC	Vranov	111.68	323	ePKIKP	PKiKP	15 15 57.8	-0.5
KRUC	Moravsky	111.90	322	ePKIKP	PKiKP	15 15 58.4	-0.3
TIR	Tirane	112.09	314	IAMs_20	IAMs_20	16 12 33.5	
	comp=Z,480nm,19.0s						
BRG	Berggiesshubel	112.63	325	ePKP	PKiKP	15 16 00.4	+0.3
BRG				Amp		15 16 01.0	
	comp=Z,4.7nm,1.0s						
BRG	Berggiesshubel	112.63	325	Amp		15 16 50.1	
	comp=Z,7.2nm,1.3s						
BRG	Berggiesshubel	112.63	325	ePKIKP	PKiKP	15 16 00.3	+0.3
BRG						15 16 48.1	
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRG	Berggiesshubel	112.63	325	P	PP	15 16 48.1	+1.3
CONA	Conrad Observa	112.65	321	i PKiKP	PKiKP	15 16 00.8	+0.4
	comp=Z,2.4nm,0.8s						
RSSD	Black Hills	112.74	43	IAMs_20	IAMs_20	15 55 56.6	
	comp=Z,835nm,22.0s						
ISCO	Idaho Springs	112.92	48	IAMs_20	IAMs_20	15 57 20.5	
	comp=Z,560nm,21.0s						
ISCO	Idaho Springs	112.92	48	P	PKiKP	15 15 59.5	-1.9
	baz=286						
121A	Cookes Peak, D	112.93	56	P	PKiKP	15 15 59.9	-1.6
	baz=282						
CLL	Collm	112.98	326	e(PKiKP)		15 15 59.0	
	comp=Z,5.0nm,1.2s						
CLL				ePP	PP	15 16 50.0	+0.7
CLL				ePS	PS	15 26 30.0	+5.0
CLL				eSS	SS	15 32 12.0	-19
CLL				eSSS	SSS	15 36 42.0	
CLL				AMS	AMS	16 07 00.0	
	comp=N,700nm,21.4s						
CLL				AMS	AMS	16 07 00.0	
	comp=E,500nm,20.5s						
CLL				AMS	AMS	16 08 00.0	
	comp=Z,1µm,20.0s						
CLL	Collm	112.98	326	ePKIKP	PKiKP	15 15 59.0	-1.7
CLL				e		15 16 50.0	
CLL				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CLL				MLR	MLR		
	comp=Z,1µm,20.0s						
ARSA	Arzberg	113.11	321	i PKiKP	PKiKP	15 16 01.5	+0.4
	comp=Z,4.2nm,1.0s						
CKRC	Cesky Krumlov	113.26	323	ePKP	PKiKP	15 16 02.1	+0.7
CKRC	Cesky Krumlov	113.26	323	ePKIKP	PKiKP	15 16 02.1	+0.7
ANMO	Albuquerque	113.49	53⇑	iPKIKP	PKiKP	15 16 03.2	+0.7
ANMO	Albuquerque	113.49	53	P	PKiKP	15 16 02.8	+0.3
	baz=283						
SDCO	Great Sand Dun	113.55	50	P	PKiKP	15 16 02.9	+0.2
	baz=285						
KHC	Kasperske Hory	113.57	323	ePKP	PKiKP	15 16 02.0	0.0
KHC	Kasperske Hory	113.57	323	ePKIKP	PKiKP	15 16 02.0	0.0
GERES	GERESS Array B	113.61	323	Pdiff	Pdif	15 12 08.2	-1.3
	comp=Z,0.3nm,0.5s,baz=88,slow=4.4,SNR=4.2						
GERES				PKiKP	PKiKP	15 16 02.0	-0.1
	comp=Z,0.6nm,0.6s,baz=87,slow=3.4,SNR=4.7						
SOKA	Soboth	113.64	320	i PKiKP	PKiKP	15 16 01.7	-0.6
	comp=Z,3.3nm,0.7s						
BOJS	Bojanci	113.94	319	i PKPdf	PKiKP	15 16 02.7	0.0
LJU	Ljubljana	114.20	320	i PKPdf	PKPdf	15 16 03.2	0.0
T25A	Trinidad	114.55	50	P	PKPdf	15 16 03.3	-1.2
	baz=286						
KBA	Koelnbreinsper	114.55	321	i PKP	PKiKP	15 16 03.0	-1.1
	comp=Z,7.3nm,1.2s						
MNTX	Cornudas Mount	115.10	56	P	PKiKP	15 16 04.7	-0.7
	baz=283						
OGNE	Ogallala	115.18	46	IAMs_20	IAMs_20	15 57 04.3	
	comp=Z,913nm,22.0s						
ABTA	Abfaltersbach	115.21	321	i PKP	PKiKP	15 16 04.2	-1.1
	comp=Z,7.6nm,0.9s						
ULM	Lac du Bonnet	115.39	34	PKP	PKiKP	15 16 04.3	-1.0
	comp=Z,3.0nm,0.9s,baz=0.0,slow=2.0,SNR=2.0						
WTTA	Wattenberg	115.53	322	i PKP	PKiKP	15 16 05.5	-0.5
	comp=Z,5.8nm,0.5s						
WATA	Walderalm	115.54	322	i PKP	PKiKP	15 16 05.5	-0.5
	comp=Z,2.3nm,0.5s						
SQTA	Sankt Quirin	115.82	322	i PKP	PKiKP	15 16 05.4	-1.1
	comp=Z,2.6nm,0.7s						
MOTA	Moosalm	115.83	322	i PKP	PKiKP	15 16 05.8	-0.7
	comp=Z,8.8nm,1.0s						
FETA	Feichten	116.20	322	i PKP	PKPdf	15 16 06.6	-0.6
	comp=Z,7.4nm,1.2s						
AQU	L'Aquila	116.34	316	IAMs_20	IAMs_20	16 15 41.5	
	comp=Z,661nm,19.0s						
DAVA	Damuels	116.60	323	i PKP	PKPdf	15 16 07.6	-0.5
	comp=Z,3.9nm,0.6s						
FUORN	Ofenpass-Fuorn	116.66	322	IAMs_20	IAMs_20	16 09 40.6	
	comp=Z,805nm,22.0s						
MSTX	Muleshoe	116.68	53	P	PKPdf	15 16 07.0	-1.5
	baz=285						
DAVOX	Davos/Dischmat	116.83	322	PKP	PKPdf	15 16 07.6	-0.9
	comp=Z,2.2nm,0.5s,baz=14,slow=3.7,SNR=7.7						
TXAR	Lajitas Array	117.06	59	PKP	PKPdf	15 16 09.2	-0.1
	comp=Z,0.8nm,0.8s,baz=241,slow=1.9,SNR=5.8						
TXAR				PKKPab	PKKPab	15 26 38.6	+0.4
	comp=Z,0.9nm,0.9s,baz=141,slow=5.8,SNR=6.8						
AMTX	Amarillo	117.30	52	P	PKiKP	15 16 09.8	+0.1
	baz=287						
CBKS	Cedar Bluff	117.56	47	IAMs_20	IAMs_20	15 59 57.3	
	comp=Z,594nm,20.0s						
ECSD	EROS Data Cent	117.86	41	IAMs_20	IAMs_20	16 03 15.9	
	comp=Z,712nm,20.0s						
ECSD	EROS Data Cent	117.86	41	P	PKPdf	15 16 09.6	-0.8
	baz=295						
EKA	Eskdalemuir Ar	118.73	335	PKP	PKPdf	15 16 11.4	-0.3
	comp=Z,0.6nm,0.4s,baz=72,slow=3.2,SNR=14						
EKA				PP	PP	15 17 29.8	+0.5
	comp=Z,1.4nm,0.8s,baz=40,slow=6.6,SNR=3.8						
OK035	E0210 Rd and N	119.03	49	IAMs_20	IAMs_20	16 02 09.6	
	comp=Z,523nm,19.0s						
EYMN	Ely	119.04	35	P	PKiKP	15 16 12.6	+0.1
	baz=302						
ABTX	Abilene, Hawle	119.57	54	P	PKPdf	15 16 12.9	-1.1
	baz=287						
WMOK	Wichita Mounta	119.62	51	P	PKiKP	15 16 14.7	+0.6
	baz=289						
SPMN	Marine on St.	119.62	38	P	PKPdf	15 16 11.9	-1.8
	baz=299						
JCT	Junction City	120.04	56	P	PKiKP	15 16 15.3	+0.2
	baz=286						
OK029	Liberty Lake	120.30	50	IAMs_20	IAMs_20	16 03 42.1	
	comp=Z,574nm,19.0s						
OK033	Mehan	120.60	49	IAMs_20	IAMs_20	16 05 05.2	
	comp=Z,446nm,20.0s						
OK052	Battle Ridge R	120.72	49	IAMs_20	IAMs_20	16 05 17.4	
	comp=Z,487nm,22.0s						
833A	Chaparral WMA,	120.94	59	P	PKiKP	15 16 17.5	+0.6
	baz=285						
TUL1	Leonard	121.52	49	P	PKiKP	15 16 18.1	+0.3
	baz=292						
WHTX	Lake Whitney,	121.53	54	P	PKPdf	15 16 17.0	-0.7
	baz=288						
KEST	Kesra	121.70	311	PKP	PKPdf	15 16 18.0	-0.1
	comp=Z,8.9nm,1.1s,baz=161,slow=4.8,SNR=5.1						
JFWS	Jewell Farm	122.36	40	IAMs_20	IAMs_20	16 01 47.8	
	comp=Z,757nm,21.0s						
JFWS	Jewell Farm	122.36	40	P	PKiKP	15 16 19.2	0.0
	baz=300						
S39A	Bolivar	122.65	46	PKPdf	PKPdf	15 16 18.8	-0.9
MIAR	Mount Ida	123.71	50	P	PKPdf	15 16 20.1	-1.8
	baz=292						
CCM	Cathedral Cave	123.98	45	IAMs_20	IAMs_20	16 03 29.3	
	comp=Z,695nm,22.0s						
CCM	Cathedral Cave	123.98	45	P	PKiKP	15 16 22.4	-0.1
	baz=296						
HDIL	Hopedale	124.15	42	P	PKPdf	15 16 21.6	-0.9
	baz=300						
GLMI	Grayling	124.73	35	P	PKPdf	15 16 21.6	-1.9
	baz=306						
SCHQ	Schefferville	124.91	16	PKP	PKPdf	15 16 23.4	-0.1
	comp=Z,6.9nm,1.0s,baz=16,slow=5.9,SNR=3.6						
SFIN	Lafayette	125.69	41	P	PKPdf	15 16 22.8	-2.7
	baz=302						
OXF	Oxford	126.87	48	P	PKPdf	15 16 25.4	-2.5
	baz=296						
O48B	Farmland	127.01	40	P	PKiKP	15 16 28.9	+0.4
	baz=303						
WVT	Waverly	127.29	46	IAMs_20	IAMs_20	16 03 47.3	
	comp=Z,632nm,21.0s						
WCI	Wyandotte Cave	127.33	43	P	PKiKP	15 16 29.5	+0.2
	baz=301						
PLAL	Pickwick Lake	127.64	47	IAMs_20	IAMs_20	16 08 45.3	
	comp=Z,483nm,20.0s						
P49A	Miami Univ. Ec	127.69	40	IAMs_20	IAMs_20	16 10 15.7	
	comp=Z,726nm,21.0s						
P49A	Miami Univ. Ec	127.69	40	P	PKPdf	15 16 29.0	-0.3
	baz=303						
CART	Cartagena	128.35	317	IAMs_20	IAMs_20	16 15 39.3	
	comp=Z,503nm,22.0s						
ACSO	Alum Creek Sta	128.40	39	P	PKiKP	15 16 31.5	+0.2
	baz=305						
M53A	WI Miller and	129.07	36	P	PKPdf	15 16 32.2	+0.2
	baz=308						
ESDC	Sonseca Array	129.13	321	PKP	PKPdf	15 16 31.9	-0.2
	comp=Z,2.5nm,1.1s,baz=20,slow=4.1,SNR=6.4						
ESDC				PP	PP	15 18 39.3	-0.6
	comp=Z,1.4nm,1.1s,baz=10,slow=7.8,SNR=4.2						
P52A	Corning	129.28	39	IAMs_20	IAMs_20	16 04 40.7	
	comp=Z,733nm,21.0s						
P52A	Corning	129.28	39	P	PKPdf	15 16 30.6	-1.8
	baz=306						
LRAL	Lakeview Retre	129.32	49	P	PKPdf	15 16 31.4	-1.2
	baz=297						
PLCA	Paso Flores	129.73	153	PKP	PKiKP	15 16 34.0	0.0
	comp=Z,6.7nm,0.9s,baz=198,slow=3.5,SNR=10						
PLCA	Paso Flores	129.73	153		PKiKP	15 16 35.2	+1.1
PLCA	Paso Flores	129.73	153	PKIKP	PKiKP	15 16 35.2	+1.1
PLCA	Paso Flores	129.73	153	eP	PKiKP	15 16 35.2	+1.1
TZTN	Tazewell	130.07	43	P	PKPdf	15 16 33.9	-0.1
	baz=302						
MVO	Moncorvo	130.08	324	eLQ	LQ	15 51 54.5	
MVO				eLR	LR	16 00 37.1	
MVO				A	A	16 18 01.4	
	comp=Z,534nm,20.0s						
BRAL	Brewton	130.09	51	P	PKiKP	15 16 34.9	0.0
	baz=295						
LONY	Lake Ozonia	130.21	29	P	PKiKP	15 16 35.1	+0.2
	baz=317						
PGAV	Gavieira, Arco	130.26	326	eLQ	LQ	15 51 00.3	
PGAV				eLR	LR	15 58 42.6	
PGAV				A	A	16 18 53.6	
	comp=Z,480nm,20.0s						
MCWV	Mont Chateau	130.67	37	P	PKPdf	15 16 32.9	-2.1
	baz=308						
MTE	Manteigas	130.87	324	eLQ	LQ	15 51 53.5	
MTE				eLR	LR	15 59 41.0	

MTE				A	A	16 22 09.4	
	comp=Z,498nm,18.0s						
SSPA	**Standing Stone**	**131.21**	**35**	P	**PKPdf**	**15 16 35.6**	**-0.4**
	baz=311						
VT1	**Waterbury**	**131.30**	**28**	IAMs_20	IAMs_20	16 07 00.3	
	comp=Z,610nm,20.0s						
PMRV	**Marv??o**	**131.39**	**323**	*e*LQ	LQ	15 50 42.3	
PMRV				*e*LR	LR	15 59 06.7	
PMRV				A	A	16 22 23.6	
	comp=Z,447nm,20.0s						
BLA	**Blacksburg**	**131.78**	**40**	IAMs_20	IAMs_20	16 11 28.1	
	comp=Z,531nm,20.0s						
PKME	**Peaks-Kenny Pk**	**132.11**	**25**	P	**PKiKP**	**15 16 38.7**	**+0.2**
	baz=324						
L61B	**Northampton**	**132.74**	**30**	P	**PKiKP**	**15 16 40.2**	**+0.3**
	baz=318						
PVAQ	**Vaqueiros**	**132.85**	**321**	*e*LQ	LQ	15 55 15.0	
PVAQ				*e*LR	LR	16 00 04.4	
PVAQ				A	A	16 20 28.0	
	comp=Z,334nm,22.0s						
PAL	**Palisades**	**133.16**	**32**	P	**PKPdf**	**15 16 39.6**	**0.0**
	baz=316						
HRV	**Adam Dziewonsk**	**133.25**	**29**	P	**PKPdf**	**15 16 38.7**	**-1.1**
	baz=319						
TOA0	**Torodi Ar. Sit**	**134.57**	**285**	PKPdf	**PKPdf**	**15 16 43.2**	**+0.2**
TORD	**Torodi Ar. Bea**	**134.57**	**285**	PKhKP	PKPpre	15 16 31.6	
	comp=Z,0.4nm,0.3s,baz=58,slow=4.1,SNR=2.2						
TORD				PKP	**PKPdf**	**15 16 43.1**	**+0.1**
	comp=Z,3.8nm,0.4s,baz=73,slow=2.2,SNR=22						
DWPF	**Disney Wildern**	**135.82**	**52**	P	**PKPdf**	**15 16 41.5**	**-3.5**
	baz=298						
PMOZ	**Porto Moniz, M**	**141.69**	**324**	A	A	16 21 40.4	
	comp=Z,359nm,22.0s						
DBIC	**Dimbokro**	**141.69**	**277**	PKhKP	PKPpre	15 16 50.0	
	comp=Z,6.9nm,0.8s,baz=140,slow=3.3,SNR=6.2						
MCRA	**Macar, Loja**	**142.48**	**101**	*e*P	**PKPdf**	**15 16 52.6**	**-5.0**
BCIP	**Isla Barro Col**	**143.03**	**79**	IAMs_20	IAMs_20	16 12 03.7	
	comp=Z,421nm,19.0s						
NNA	**Nana**	**143.32**	**115**	PKP	PKPbc	15 16 56.4	+0.3
	comp=Z,6.2nm,0.3s,baz=216,slow=9.8,SNR=1.6						
ATAH	**Atahualpa**	**143.39**	**106**	PKP	**PKPdf**	**15 16 59.1**	**-0.6**
	comp=Z,13nm,0.7s,baz=261,slow=4.0,SNR=11						
PB03	**IPOC Station P**	**143.95**	**135**		**PKPdf**	**15 16 59.2**	**-0.9**
PLTB	**Pedras Altas**	**143.97**	**165**	*e*P	**PKPdf**	**15 16 58.7**	**-1.0**
PB07	**IPOC Station P**	**144.06**	**135**		**PKPdf**	**15 16 59.5**	**-0.9**
LVC	**Limon Verde**	**144.17**	**137**	PKP	**PKPdf**	**15 17 00.6**	**-0.2**
	comp=Z,4.5nm,0.4s,baz=212,slow=2.6,SNR=11						
LVC	**Limon Verde**	**144.17**	**137**	*e*P	**PKPdf**	**15 17 01.1**	**+0.4**
PAC1	**Pacto, Paraso**	**144.26**	**94**	*e*P	PKPbc	15 16 59.6	+0.4
TUMC	**Tumaco**	**144.43**	**91**	*e*P	**PKPdf**	**15 17 00.8**	**-0.2**
TA01	**Diego Aracena**	**144.58**	**133**	PKPdf	**PKPdf**	**15 17 00.9**	**-0.1**
OTAV	**Otavalo**	**144.60**	**94**		**PKPdf**	**15 17 01.6**	**-0.3**
OTAV	**Otavalo**	**144.60**	**94**	PKIKP	**PKPdf**	**15 17 01.6**	**-0.3**
OTAV	**Otavalo**	**144.60**	**94**	*e*P	**PKPdf**	**15 17 01.3**	**-0.6**
OTAV	**Otavalo**	**144.60**	**94**	*e*P	PKPbc	15 17 00.8	+0.2
CUSE	**Cuicocha Este**	**144.66**	**94**	*e*P	PKPbc	15 17 00.7	0.0
PIAT	**Ana Tenorio**	**144.66**	**96**	*e*P	**PKPdf**	**15 17 02.1**	**+0.2**
MECA	**Mercedes**	**144.75**	**157**	*e*P	**PKPdf**	**15 17 01.1**	**0.0**
RODS	**Rosario do Sul**	**144.84**	**162**	*e*P	**PKPdf**	**15 17 01.2**	**-0.1**
ITQB	**Itaqui**	**144.99**	**159**	*e*P	**PKPdf**	**15 17 02.0**	**+0.4**
GR1C	**Gorgona, Isla**	**145.03**	**89**	*e*P	**PKPab**	**15 17 01.7**	**+0.3**
PTAC	**Punta Ardita,**	**145.24**	**82**	*e*P	**PKPdf**	**15 17 02.5**	**+0.1**
CPSB	**Cacapava Do Su**	**145.30**	**164**	*e*P	**PKPdf**	**15 17 03.6**	**+1.6**
BONI	**La Bonita**	**145.54**	**94**	*e*P	**PKPab**	**15 17 04.4**	**+0.8**
GCUF	**Volcan Galeras**	**145.78**	**92**	*e*P	**PKPab**	**15 17 05.7**	**+0.8**
BBAC	**Balboa, Cauca**	**145.91**	**91**	*e*P	**PKPdf**	**15 17 04.1**	**+0.3**
APAC	**Apartado, Choc**	**146.38**	**80**	*e*P	**PKPab**	**15 17 07.1**	**+0.6**
POPC	**Popayan, Colom**	**146.50**	**90**	*e*P	**PKPbc**	**15 17 05.9**	**-0.4**
JAMC	**Jamundi, Valle**	**146.52**	**89**	*e*P	**PKPbc**	**15 17 06.3**	**-0.1**
AZCA	**Azaras, Argent**	**146.66**	**159**	*e*P	**PKPab**	**15 17 06.8**	**-0.2**
YOTC	**Yotoco, Valle**	**146.85**	**87**	*e*P	**PKPbc**	**15 17 06.8**	**-0.4**
PLMC	**San Jos del P**	**146.89**	**86**	*e*P	**PKPbc**	**15 17 06.9**	**-0.3**
ALGR	**Alto Alegre (B**	**146.93**	**164**	*e*P	**PKPab**	**15 17 07.7**	**-0.5**
ALGR	**Alto Alegre (B**	**146.93**	**164**	*e*P	**PKPbc**	**15 17 07.4**	**+0.5**
CNLB	**Canela**	**146.97**	**168**	*e*P	**PKPab**	**15 17 08.5**	**+0.1**
CNLB	**Canela**	**146.97**	**168**	*e*P	**PKPbc**	**15 17 07.0**	**0.0**
SJCC	**San Jacinto, C**	**147.47**	**76**	*e*P	**PKPbc**	**15 17 09.1**	**+0.4**
HELC	**Santa Helena**	**147.57**	**83**	*e*P	**PKPdf**	**15 17 08.0**	**+1.2**
CPUP	**Villa Florida**	**147.72**	**156**	PKPbc	**PKPdf**	**15 17 07.5**	**+1.2**
	comp=Z,35nm,1.1s,baz=213,slow=2.0,SNR=36						
CPUP	**Villa Florida**	**147.72**	**156**		**PKiKP**	**15 17 10.2**	**-0.9**
CPUP	**Villa Florida**	**147.72**	**156**	PKP2	**PKiKP**	**15 17 10.2**	**-0.9**
CPUP	**Villa Florida**	**147.72**	**156**	*e*P	**PKPdf**	**15 17 07.4**	**+1.2**
BETC	**Betania**	**147.74**	**90**	*e*P	**PKPbc**	**15 17 09.2**	**-0.3**
ANIL	**Santa Ana**	**147.78**	**86**	*e*P	**PKPbc**	**15 17 09.0**	**-0.9**
CRSM	**Crissiumal (Br**	**147.86**	**162**	*e*P	**PKPbc**	**15 17 08.1**	**-1.3**
CRSM	**Crissiumal (Br**	**147.86**	**162**	*e*P	**PKiKP**	**15 17 10.5**	**-0.8**
ZARC	**Zaragoza, Cauc**	**148.12**	**81**	*e*P	**PKPbc**	**15 17 10.1**	**-0.4**
SDDR	**Presa de Saban**	**148.25**	**58**		**PKPbc**	**15 17 10.8**	**+0.1**
NORC	**Norcasia**	**148.27**	**84**	*e*P	**PKPbc**	**15 17 10.5**	**-0.4**
PRAC	**Prado**	**148.31**	**88**	*e*P	**PKPbc**	**15 17 11.0**	**0.0**
ESFA	**Espinillo Form**	**148.41**	**153**	*e*P	**PKPbc**	**15 17 11.6**	**+0.7**
PTBC	**PUERTO BERRIO,**	**148.61**	**82**	*e*P	**PKPbc**	**15 17 10.5**	**-1.3**
ITAB	**Concordia**	**148.66**	**164**	*e*P	**PKPbc**	**15 17 10.4**	**-1.0**
ITAB	**Concordia**	**148.66**	**164**	*e*P	**PKiKP**	**15 17 13.1**	**+0.1**
LPAZ	**La Paz**	**148.70**	**129**	PKPbc	**PKPbc**	**15 17 10.9**	**-1.7**
	comp=Z,20nm,1.0s,baz=247,slow=0.7,SNR=27						
LPAZ	**La Paz**	**148.70**	**129**	*e*P	**PKPdf**	**15 17 09.8**	**+0.9**
LPAZ	**La Paz**	**148.70**	**129**	*e*P	**PKPdf**	**15 17 08.7**	**-0.2**
ROSC	**El Rosal**	**148.85**	**86**	PKPbc	**PKPbc**	**15 17 11.8**	**-1.1**
	comp=Z,22nm,0.7s,baz=355,slow=0.4,SNR=11						
SPBC	**San Pablo de B**	**149.06**	**84**	*e*P	**PKPbc**	**15 17 12.6**	**-0.4**
MACC	**Macarena, Meta**	**149.31**	**91**	*e*P	**PKPdf**	**15 17 10.8**	**+1.6**
CHIC	**Chingaza**	**149.44**	**86**	*e*P	**PKPdf**	**15 17 02.4**	**-7.5**
FRBT	**Francisco Belt**	**149.58**	**162**	*e*P	**PKiKP**	**15 17 16.1**	**+1.0**
FRBT	**Francisco Belt**	**149.58**	**162**	*e*P	**PKiKP**	**15 17 14.8**	**-0.2**
BARC	**Barichara**	**149.87**	**82**	*e*P	**PKPbc**	**15 17 15.2**	**0.0**
RUSC	**La Rusia**	**150.02**	**84**	*e*P	**PKPbc**	**15 17 15.3**	**-0.6**
URIC	**Uribia, Colomb**	**150.16**	**72**	*e*P	**PKPbc**	**15 17 15.5**	**-0.1**
PAMC	**Pamplona, Colo**	**150.27**	**81**	*e*P	**PKPbc**	**15 17 14.0**	**-2.5**
MCR1	**Marechal Candi**	**150.67**	**159**	*e*P	**PKPdf**	**15 17 09.3**	**-1.8**
MCR1	**Marechal Candi**	**150.67**	**159**	*e*P	**PKPdf**	**15 17 11.7**	**+0.7**
PTGB	**Pitanga**	**151.06**	**163**	*e*P	**PKiKP**	**15 17 18.7**	**+0.5**
PTGB	**Pitanga**	**151.06**	**163**	*e*P	**PKiKP**	**15 17 18.3**	**+0.2**
TIJ01	**Guaruva-PR**	**151.22**	**169**	*e*P	**PKPbc**	**15 17 17.8**	**-0.2**
AMBA	**Amambai (Brazi**	**151.70**	**156**	*e*P	**PKPdf**	**15 17 15.0**	**+2.3**
AMBA	**Amambai (Brazi**	**151.70**	**156**	*e*P	**PKPdf**	**15 17 13.0**	**+0.3**
SDV	**Santo Domingo**	**152.06**	**77**	PKP	**PKPdf**	**15 17 13.8**	**+0.2**
	comp=Z,8.2nm,0.7s,baz=302,slow=2.0,SNR=12						
SDV				PKPbc	**PKPbc**	**15 17 20.2**	**-0.1**
	comp=Z,27nm,0.8s,baz=296,slow=4.4,SNR=12						
SDV	**Santo Domingo**	**152.06**	**77**	IAMs_20	IAMs_20	16 41 27.1	
	comp=Z,396nm,22.0s						
SDV	**Santo Domingo**	**152.06**	**77**	*e*P	**PKPdf**	**15 17 14.6**	**+1.0**
SDV	**Santo Domingo**	**152.06**	**77**	*e*P	**PKPdf**	**15 17 14.5**	**+0.9**
CRPR	**Cabo Rojo, PR**	**152.21**	**56**		**PKPbc**	**15 17 19.9**	**-0.3**
MLPR	**Magueyes Islan**	**152.28**	**56**		**PKPbc**	**15 17 20.1**	**-0.2**
SJG	**San Juan**	**152.94**	**55**	PKPbc	**PKPbc**	**15 17 21.2**	**-0.6**
	comp=Z,16nm,0.2s,baz=45,slow=4.3,SNR=6.9						
FRTB	**Fartura**	**153.02**	**167**	*e*P	**PKiKP**	**15 17 23.7**	**+1.5**
BDQN	**Bodoquena, MS**	**153.09**	**151**	*e*P	**PKPdf**	**15 17 14.0**	**-0.8**
BBSD	**Serra de San D**	**153.50**	**140**	*e*P	**PKPdf**	**15 17 15.2**	**-0.3**
BBSD	**Serra de San D**	**153.50**	**140**	*e*P	**PKPdf**	**15 17 16.2**	**+0.8**
AQDB	**Aquidauana**	**153.56**	**153**	*e*P	**PKiKP**	**15 17 23.5**	**+0.3**
AQDB	**Aquidauana**	**153.56**	**153**	*e*P	**PKPbc**	**15 17 21.5**	**-1.6**
SIV	**San Ignacio**	**154.06**	**137**	PKP	**PKPdf**	**15 17 15.8**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=225,slow=1.8,SNR=5.6						
SIV				PKPbc	**PKiKP**	**15 17 24.6**	**+0.1**
	comp=Z,9.3nm,1.0s,baz=246,slow=3.0,SNR=18						
SIV				PKPab	**PKPab**	**15 17 37.6**	**-0.2**
	comp=Z,7.4nm,0.7s,baz=213,slow=3.0,SNR=10.0						
PCMB	**Pacaembu**	**154.23**	**162**	*e*P	**PKPbc**	**15 17 24.3**	**-0.3**
RVDE	**Rio Verde (Bra**	**155.17**	**153**	*e*P	**PKPdf**	**15 17 12.2**	**-5.6**
PTLB	**Pontes e Lacer**	**155.74**	**140**	*e*P	**PKPdf**	**15 17 19.2**	**+0.7**
SGCB	**S£o Gabriel d**	**155.91**	**97**	*e*P	**PKPab**	**15 17 45.8**	**-0.1**
ITRB	**Iturama**	**156.29**	**163**	*e*P	**PKPdf**	**15 17 21.0**	**+1.8**
ALF01	**Guarapari-ES**	**156.35**	**186**	*e*P	**PKPab**	**15 17 48.2**	**+1.0**
PP1B	**Ponte de Pedra**	**156.43**	**151**	*e*P	**PKPdf**	**15 17 18.7**	**-0.8**
SAML	**Samuel**	**156.73**	**121**	*e*P	**PKPdf**	**15 17 21.2**	**+1.2**
VILB	**Vilhena**	**156.76**	**134**	*e*P	**PKPdf**	**15 17 22.5**	**+2.5**
SALV	**Santo Antonio**	**157.44**	**147**	*e*P	**PKPdf**	**15 17 21.5**	**+0.7**
TEFE	**Tefe**	**157.55**	**107**	*e*P	**PKPdf**	**15 17 19.0**	**-2.0**
SJMB	**Sao Joao De Ma**	**158.29**	**185**	*e*P	**PKPdf**	**15 17 22.8**	**+1.0**
IPMB	**Ipameri, GO**	**158.50**	**167**	*e*P	**PKPdf**	**15 17 22.8**	**+0.7**
ARAG	**Araguaiana, MT**	**159.48**	**156**	*e*P	**PKPdf**	**15 17 24.7**	**+1.5**
PDRB	**Porto dos Gac**	**160.12**	**137**	*e*P	**PKPdf**	**15 17 24.3**	**+0.2**
BDFB	**Brasilia**	**160.81**	**166**	PKP	**PKPdf**	**15 17 25.4**	**+0.5**
	comp=Z,1.4nm,0.3s,baz=207,slow=6.7,SNR=4.7						
BDFB				PKPab	**PKPab**	**15 18 06.1**	**-0.6**
	comp=Z,5.7nm,0.8s,baz=117,slow=4.5,SNR=6.0						
CLDB	**Colider**	**161.29**	**138**	*e*P	**PKPdf**	**15 17 25.8**	**+0.5**
JANB	**Januaria**	**161.96**	**176**	*e*P	**PKPdf**	**15 17 26.6**	**+0.6**
BOAV	**Boa Vista**	**162.63**	**92**	*e*P	**PKPdf**	**15 17 29.6**	**+2.9**
NPGB	**Novo Progresso**	**164.21**	**129**	*e*P	**PKPdf**	**15 17 30.6**	**+2.4**
NPGB	**Novo Progresso**	**164.21**	**129**	*e*P	**PKPdf**	**15 17 28.7**	**+0.5**
SDBA	**SAO DESIDERIO**	**164.53**	**174**	*e*P	**PKPdf**	**15 17 28.8**	**+0.3**

JMA ***25*** *15:02:58.4±0.2,23°.2N±0°.6×120°.6E±0°.8,h12^{km}±2^{km}, MV3.7/10,TAIWAN REGION*

TAP ***25*** *15:02:58.4,23°.27N×120°.63E,h10^{km},ML4.1,B*

ASIES ***25*** *15:02:58.9,23°.27N×120°.65E,h20^{km},MW3.7*

ISC 25 15:02:58.9±0.7,**23°.284N**±0°.010×**120°.61E**±0°.01, **h11**^{km}±3^{km}**,n175,**σ0^{s}**.81**/332**,50C-29D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPUB	**Ta-pu**	**0.02**	**41**	P	**Pg**	**15 03 00.5**	**-0.5**
TPUB	**Ta-pu**	**0.02**	**41**	⇑*i*P	**Pg**	**15 03 00.7**	**-0.3**
	baz=354						
TPUB				*i* S	**Sg**	**15 03 02.3**	**-0.2**
	baz=354						
WTP	**Ta-pu**	**0.04**	**180**	⇑*i*P	**Pg**	**15 03 00.7**	**-0.4**
	baz=206						
WTP				*i* S	**Sg**	**15 03 02.4**	**-0.3**
	baz=206						
CHN4	**Tsaushan**	**0.07**	**344**	⇑*i*P	**Pg**	**15 03 01.6**	**+0.2**
	baz=337						
CHN4				*i* S	**Sg**	**15 03 03.9**	**+0.7**
	baz=337						
TWK	**Hsinying**	**0.12**	**262**	⇓*i*P	**Pg**	**15 03 02.1**	**+0.1**
	baz=270						
TWK				*i* S	**Sg**	**15 03 04.8**	**+0.5**
	baz=270						
SNST	**Tainan City**	**0.12**	**239**	⇓*e*P	**Pb**	**15 03 03.6**	**+0.2**
	baz=250						
CHN1	**Nanshi**	**0.13**	**219**	⇑*i*P	**Pg**	**15 03 02.0**	**-0.1**
	baz=230						
CHN1				*i* S	**Sg**	**15 03 04.6**	**+0.3**
	baz=230						
WCKO	**Fanlu**	**0.15**	**357**	⇑*i*P	**Pg**	**15 03 02.9**	**+0.3**
	baz=351						
WCKO				*i* S	**Sg**	**15 03 06.4**	**+1.3**
	baz=351						
STYT	**Tauyuan**	**0.18**	**132**	⇓*i*P	**Pg**	**15 03 02.7**	**-0.3**
	baz=131						
STYT				S	**Sg**	**15 03 05.6**	**-0.1**
	baz=131						
STYH	**Taoyuan**	**0.19**	**127**	⇓*i*P	**Pg**	**15 03 02.6**	**-0.4**
	baz=122						
STYH				S	**Sg**	**15 03 05.5**	**-0.3**
	baz=122						
SGST	**Jiashian**	**0.20**	**188**	⇑*e*P	**Pg**	**15 03 02.3**	**-1.1**
	baz=192						
CHY	**Chiayi**	**0.28**	**321**	⇑*i*P	**Pb**	**15 03 05.5**	**-0.4**
	baz=321						
CHY				*i* S	**Sb**	**15 03 10.9**	**+0.4**
	baz=321						
CHN2	**Minshiung**	**0.28**	**333**	⇑*i*P	**Pb**	**15 03 05.8**	**-0.1**
	baz=331						
CHN2				S	**Sb**	**15 03 11.7**	**+1.0**
	baz=331						
ALS	**Alishan**	**0.29**	**38**	⇑*i*P	**Pg**	**15 03 05.1**	**+0.2**
	baz=34						
ALS				S	**Sb**	**15 03 10.1**	**-1.0**
	baz=34						
SLGT	**Liugui**	**0.29**	**174**	⇑P	**Pb**	**15 03 05.5**	**-0.6**
	baz=178						
SLGT				*e*S	**Sb**	**15 03 10.3**	**-0.7**
	baz=178						
CHN3	**Shinhua**	**0.31**	**228**	⇑*i*P	**Pb**	**15 03 06.2**	**-0.2**
	baz=233						
CHN3				*e*S	**Sb**	**15 03 12.6**	**+1.1**
	baz=233						
CHN5	**Tsauling**	**0.32**	**11**	⇑*i*P	**Pg**	**15 03 05.7**	**+0.3**
	baz=7.0						
CHN5				*e*S	**Sb**	**15 03 12.1**	**+0.2**
	baz=7.0						
ICHU	**Yijhu**	**0.32**	**284**	⇓*i*P	**Pg**	**15 03 06.1**	**+0.7**
	baz=286						
ICHU				S	**Sb**	**15 03 12.2**	**+0.5**
	baz=286						
SSHA	**Shanhua**	**0.33**	**244**	P	**Pb**	**15 03 06.9**	**0.0**
	baz=248						
SSHA				*e*S	**Sb**	**15 03 14.1**	**+1.9**
	baz=248						
SHHT	**Tainan City**	**0.36**	**223**	⇑*e*P	**Pg**	**15 03 02.9**	**-3.3**
	baz=227						
YUS	**Yu-Shan**	**0.37**	**57**	⇑*i*P	**Pg**	**15 03 06.9**	**+0.3**
	baz=54						
YUS				*i* S	**Sg**	**15 03 12.4**	**+0.8**
	baz=54						
CHN8	**Yiju**	**0.38**	**280**	⇓*i*P	**Pb**	**15 03 07.1**	**-0.5**
	baz=282						
CHN8				*e*S	**Sb**	**15 03 14.6**	**+1.2**
	baz=282						
ELDTW	**Lidau**	**0.38**	**104**	⇓*i*P	**Pg**	**15 03 06.4**	**-0.2**
	baz=102						
ELDTW				*e*S	**Sg**	**15 03 12.3**	**+0.6**
	baz=102						
SCLT	**Jiali**	**0.40**	**254**	⇓P	**Pb**	**15 03 07.8**	**-0.2**
	baz=257						
SCLT				*e*S	**Sb**	**15 03 15.7**	**+1.5**
	baz=257						
WGK	**Gukeng**	**0.40**	**353**	⇑*i*P	**Pb**	**15 03 08.0**	**-0.1**
	baz=352						
WGK				*e*S	**Sb**	**15 03 15.6**	**+1.3**
	baz=352						
WDLH	**Douliu**	**0.41**	**350**	⇑*i*P	**Pb**	**15 03 08.1**	**-0.1**
	baz=348						
WDLH				S	**Sb**	**15 03 15.4**	**+1.0**
	baz=348						
SCST	**Cishan**	**0.41**	**196**	⇑*i*P	**Pb**	**15 03 07.7**	**-0.5**
	baz=199						
SCST				*e*S	**Sb**	**15 03 14.7**	**+0.2**
	baz=199						
WSL	**Shuilin Townsh**	**0.43**	**304**	⇓*i*P	**Pb**	**15 03 08.2**	**-0.3**
	baz=304						
WSL				S	**Sb**	**15 03 15.5**	**+0.6**
	baz=304						
TAI1	**Yung-k'ang**	**0.43**	**236**	⇑P	**Pb**	**15 03 08.8**	**+0.2**
	baz=238						
TAI1				*e*S	**Sb**	**15 03 16.3**	**+1.4**
	baz=238						
WTK	**Tuku**	**0.45**	**333**	⇑*i*P	**Pb**	**15 03 08.7**	**-0.2**
	baz=332						
WTK				S	**Sb**	**15 03 16.4**	**+0.8**
	baz=332						
WHYT	**Xinyi Township**	**0.47**	**28**	⇑*i*P	**Pg**	**15 03 08.2**	**+0.1**
	baz=25						
WHYT				*e*S	**Sb**	**15 03 15.3**	**-0.8**
	baz=25						
TAI	**Tainan**	**0.48**	**233**	*e*P	**Pb**	**15 03 09.6**	**+0.2**
	baz=236						
TWM1	**Shoushan**	**0.49**	**201**	⇑*i*P	**Pb**	**15 03 10.1**	**+0.5**
	baz=203						
TWM1				*e*S	**Sb**	**15 03 22.1**	**+5.4**
	baz=203						
TSCK	**Chigu Township**	**0.50**	**254**	⇓*i*P	**Pb**	**15 03 09.4**	**-0.4**
	baz=257						
TSCK				S	**Sb**	**15 03 18.0**	**+0.9**
	baz=257						
WSF	**Szhu**	**0.50**	**314**	⇓*i*P	**Pb**	**15 03 09.6**	**-0.2**
	baz=315						
WSF				*e*S	**Sb**	**15 03 18.3**	**+1.2**
	baz=315						
SSD	**Sandimen**	**0.54**	**178**	⇑*i*P	**Pg**	**15 03 09.5**	**+0.1**
	baz=179						
SSD				S	**Sb**	**15 03 17.3**	**-0.7**
	baz=179						
WJS	**Zhushan**	**0.55**	**11**	⇑*i*P	**Pb**	**15 03 10.3**	**-0.2**
	baz=9.0						
WJS				*e*S	**Sb**	**15 03 19.1**	**+0.7**
	baz=9.0						
EHD	**Haiduan**	**0.56**	**104**	⇓*i*P	**Pg**	**15 03 09.6**	**-0.3**
	baz=102						
EHD				*e*S	**Sg**	**15 03 17.7**	**+0.4**
	baz=102						
SGLT	**Jiouru**	**0.57**	**192**	⇑*e*P	**Pb**	**15 03 11.4**	**+0.6**
	baz=193						
SGLT				*e*S	**Sn**	**15 03 22.1**	**-0.2**
	baz=193						
TSMG	**Majia**	**0.58**	**177**	*e*P	**Pg**	**15 03 10.1**	**-0.1**
	baz=179						
TSMG				*e*S	**Sb**	**15 03 18.5**	**-0.7**
	baz=179						
SNJT	**Kaohsiung City**	**0.59**	**206**	*e*P	**Pg**	**15 03 10.4**	**0.0**
	baz=208						
SNJT				*e*S	**Sb**	**15 03 20.7**	**+1.2**
	baz=208						
ECS	**Chishang**	**0.59**	**108**	⇓P	**Pg**	**15 03 10.4**	**0.0**
	baz=108						
ECS				*e*S	**Sb**	**15 03 19.3**	**-0.3**
	baz=108						
SSLB	**Suanglung**	**0.59**	**32**	P	**Pg**	**15 03 10.4**	**-0.1**
SSLB	**Suanglung**	**0.59**	**32**	⇑*i*P	**Pg**	**15 03 10.3**	**-0.2**
	baz=30						
SSLB				*e*S	**Sb**	**15 03 19.0**	**-0.7**
	baz=30						
WNT	**Mingjian**	**0.59**	**6**	⇑*i*P	**Pb**	**15 03 11.4**	**+0.1**
	baz=5.0						
WNT				*e*S	**Sb**	**15 03 21.2**	**+1.4**
	baz=5.0						
LONT	**Longtian**	**0.61**	**128**	⇓*i*P	**Pg**	**15 03 10.5**	**-0.3**
	baz=128						
LONT				*e*S	**Sg**	**15 03 19.0**	**+0.3**
	baz=128						
TSPT	**Pingtung City**	**0.61**	**190**	*e*P	**Pb**	**15 03 12.1**	**+0.4**
	baz=192						
TSPT				*e*S	**Sn**	**15 03 23.9**	**+0.6**
	baz=192						
WNT1	**Nantou City**	**0.62**	**6**	*e*P	**Pb**	**15 03 12.1**	**+0.3**
	baz=4.0						
WNT1				*e*S	**Sn**	**15 03 22.4**	**-1.2**
	baz=4.0						
TWG	**Pinlang**	**0.62**	**137**	⇓*i*P	**Pg**	**15 03 10.9**	**-0.2**
	baz=137						
TWG				*e*S	**Sb**	**15 03 19.8**	**-0.9**
	baz=137						
WMLT	**Mailiao**	**0.63**	**325**	*e*P	**Pb**	**15 03 11.7**	**-0.2**
	baz=325						
WMLT				*e*S	**Sb**	**15 03 21.9**	**+1.2**
	baz=325						
FULB	**Fuli**	**0.63**	**98**	⇓*i*P	**Pb**	**15 03 11.6**	**-0.4**
	baz=96						
FULB				*e*S	**Sb**	**15 03 21.3**	**+0.5**
	baz=96						
TWF1	**Yuli**	**0.63**	**84**	⇓*i*P	**Pg**	**15 03 11.0**	**-0.3**
	baz=82						
TWF1				*e*S	**Sg**	**15 03 19.5**	**-0.1**
	baz=82						
TWGBT	**Beinan**	**0.63**	**137**	P	**Pg**	**15 03 11.2**	**0.0**
TWGBT	**Beinan**	**0.63**	**137**	⇓P	**Pg**	**15 03 10.9**	**-0.3**
	baz=137						
TWGBT				*e*S	**Sg**	**15 03 19.8**	**+0.2**
	baz=137						
YULB	**Yu-li**	**0.64**	**80**	P	**Pg**	**15 03 10.7**	**-0.6**
YULB	**Yu-li**	**0.64**	**80**	⇓*i*P	**Pg**	**15 03 10.9**	**-0.4**
	baz=78						
YULB				*e*S	**Sg**	**15 03 18.9**	**-0.8**
	baz=78						
EYUL	**Yuli**	**0.65**	**84**	⇓*i*P	**Pg**	**15 03 11.2**	**-0.4**
	baz=83						
EYUL				*e*S	**Sg**	**15 03 19.9**	**-0.3**
	baz=83						
SMLT	**Sun Moon Lake**	**0.65**	**24**	⇑*i*P	**Pb**	**15 03 12.3**	**-0.1**
	baz=22						
SMLT				*e*S	**Sb**	**15 03 22.5**	**+1.0**
	baz=22						
WRL	**Guolierlin Hig**	**0.65**	**341**	⇑*i*P	**Pg**	**15 03 12.0**	**+0.3**
	baz=340						
WRL				*e*S	**Sb**	**15 03 22.0**	**+0.6**
	baz=340						
WTCT	**Ta-ch'eng**	**0.65**	**332**	P	**Pg**	**15 03 12.1**	**+0.4**
	baz=332						
WTCT				*e*S	**Sb**	**15 03 22.6**	**+1.1**
	baz=332						
TYC	**Yuchr**	**0.66**	**20**	⇑*i*P	**Pb**	**15 03 12.3**	**-0.1**
	baz=19						
TYC				*e*S	**Sb**	**15 03 22.7**	**+1.2**
	baz=19						
MASBT	**Mashibuluo**	**0.67**	**179**	⇑*i*P	**Pg**	**15 03 11.8**	**-0.1**
	baz=180						
MASBT				*e*S	**Sg**	**15 03 21.0**	**+0.2**
	baz=180						
VWDT	**VWDT**	**0.67**	**46**	⇑*i*P	**Pg**	**15 03 12.1**	**+0.1**
	baz=44						
VWDT				*e*S	**Sg**	**15 03 21.3**	**+0.4**
	baz=44						
WYL	**Yuanlin Townsh**	**0.68**	**357**	*e*P	**Pb**	**15 03 12.9**	**+0.2**
	baz=356						
WYL				*e*S	**Sn**	**15 03 23.8**	**-1.1**
	baz=356						
EHY	**Hungye**	**0.69**	**71**	⇓*i*P	**Pg**	**15 03 12.1**	**-0.2**
	baz=70						
EHY				*e*S	**Sg**	**15 03 21.5**	**+0.2**
	baz=70						
EDH	**Donghe**	**0.71**	**116**	⇓*i*P	**Pg**	**15 03 12.6**	**-0.1**
	baz=115						
EDH				*e*S	**Sb**	**15 03 23.3**	**+0.4**
	baz=115						
CHKT	**Chengkung**	**0.71**	**105**	⇓P	**Pb**	**15 03 13.2**	**-0.2**
	baz=104						
CHKT				*e*S	**Sn**	**15 03 25.1**	**-0.8**
	baz=104						
TTN	**Taitung**	**0.72**	**137**	⇓*e*P	**Pb**	**15 03 13.3**	**-0.1**
	baz=137						
ECL	**Taimali**	**0.75**	**155**	⇑*i*P	**Pg**	**15 03 13.1**	**-0.4**
	baz=156						
ECL				*e*S	**Sg**	**15 03 23.4**	**+0.1**
	baz=156						
KAU	**Kaohsiung**	**0.77**	**202**	*e*P	**Pn**	**15 03 15.2**	**-0.5**
	baz=203						
KAU				*e*S	**Sn**	**15 03 27.9**	**+0.7**
	baz=203						
ECBN	**Changbin**	**0.77**	**87**	*e*P	**Pb**	**15 03 14.6**	**+0.3**
	baz=86						
ECBN				*e*S	**Sn**	**15 03 26.6**	**-0.7**
	baz=86						
HGSD	**Ruisui**	**0.77**	**74**	⇓P	**Pb**	**15 03 14.1**	**-0.3**
	baz=73						
HGSD				*e*S	**Sb**	**15 03 25.0**	**+0.1**
	baz=73						
WPL	**Puli Township**	**0.79**	**23**	*e*P	**Pg**	**15 03 14.2**	**0.0**
	baz=22						
WPL				*e*S	**Sb**	**15 03 25.7**	**+0.3**
	baz=22						
WCHH	**Zhanghua**	**0.79**	**356**	⇑P	**Pb**	**15 03 14.6**	**-0.2**
	baz=355						
WCHH				*e*S	**Sb**	**15 03 26.7**	**+1.2**
	baz=355						
DPDB	**Guoxing**	**0.80**	**21**	⇑*i*P	**Pg**	**15 03 14.4**	**0.0**
	baz=19						
DPDB				*e*S	**Sb**	**15 03 26.2**	**+0.4**
	baz=19						
WCS	**Beigang Elemen**	**0.82**	**19**	⇑P	**Pg**	**15 03 14.7**	**-0.1**
	baz=18						
WCS				*e*S	**Sb**	**15 03 26.6**	**+0.4**
	baz=18						
EGFH	**Guangfu**	**0.84**	**63**	*e*P	**Pg**	**15 03 14.8**	**-0.3**
	baz=61						
EGFH				*e*S	**Sb**	**15 03 26.3**	**-0.5**
	baz=61						
WUSB	**Renai**	**0.84**	**33**	⇑P	**Pg**	**15 03 14.8**	**-0.5**
	baz=32						
WUSB				*e*S	**Sb**	**15 03 26.9**	**-0.1**
	baz=32						
OWD	**Renai**	**0.84**	**38**	⇑*e*P	**Pg**	**15 03 14.9**	**-0.4**
	baz=36						
OWD				*e*S	**Sb**	**15 03 27.4**	**+0.3**
	baz=36						
TCU	**Taichung**	**0.86**	**4**	⇑*e*P	**Pb**	**15 03 15.9**	**0.0**
	baz=3.0						
TCU				*e*S	**Sn**	**15 03 28.8**	**-0.8**
	baz=3.0						
WDGT	**Dungji**	**0.88**	**269**	⇓*e*P	**Pg**	**15 03 15.4**	**-0.5**
	baz=269						
WDGT				*e*S	**Sg**	**15 03 27.8**	**+0.4**
	baz=269						
SCZT	**Fangliau**	**0.91**	**180**	⇑*e*P	**Pg**	**15 03 16.0**	**-0.4**
	baz=180						
SCZT				*e*S	**Sn**	**15 03 30.8**	**+0.1**
	baz=180						
ESL	**Shilin**	**0.92**	**55**	*e*P	**Pg**	**15 03 16.6**	**-0.1**
	baz=54						
ESL				*e*S	**Sb**	**15 03 28.8**	**-0.3**
	baz=54						
EAST	**Anshuo**	**0.92**	**166**	⇑*e*P	**Pg**	**15 03 16.4**	**-0.4**
	baz=167						
EAST				*e*S	**Sb**	**15 03 29.9**	**+0.7**
	baz=167						
CHGB	**Renai**	**0.93**	**33**	⇑*e*P	**Pg**	**15 03 16.5**	**-0.4**
	baz=32						
CHGB				*e*S	**Sb**	**15 03 29.6**	**0.0**
	baz=32						
TEGC	**Jichi Village**	**0.95**	**63**	*e*P	**Pg**	**15 03 16.8**	**-0.5**
	baz=62						
TEGC				*e*S	**Sn**	**15 03 31.2**	**-0.5**
	baz=62						

TAW	**Tawu**	0.96	164	*e*P	Pg	15 03 17.0	-0.5
	baz=165						
TAW				*e*S	Sb	15 03 30.5	+0.3
	baz=165						
TWP	**Hsiaoliuchiu**	0.96	194	*e*P	Pn	15 03 18.5	+0.1
	baz=195						
TWP				*e*S	Sn	15 03 35.6	+3.6
	baz=195						
TAWH	**Dawu Township**	0.97	165	⇑*e*P	Pg	15 03 17.1	-0.6
	baz=166						
TAWH				*e*S	Sb	15 03 30.7	+0.1
	baz=166						
PHUB	**P'eng-hu**	0.98	284	⇓*e*P	Pg	15 03 16.9	-1.1
	baz=284						
PHUB				*e*S	Sg	15 03 30.4	-0.4
	baz=284						
LDUT	**Ludao**	0.99	127	*e*P	Pg	15 03 17.1	-1.0
	baz=127						
LDUT				*e*S	Sb	15 03 31.8	+0.5
	baz=127						
PNG	**Penghu**	1.01	286	⇓P	Pg	15 03 17.5	-0.9
	baz=287						
PNG				*e*S	Sg	15 03 31.3	-0.4
	baz=287						
WHP	**Taichung City**	1.03	17	*e*P	Pg	15 03 18.8	-0.1
	baz=16						
WHP				*e*S	Sn	15 03 34.5	+0.6
	baz=16						
WHF	**Hehuan Shan**	1.04	35	⇑P	Pg	15 03 18.8	-0.3
	baz=34						
WHF				*e*S	Sb	15 03 33.9	+0.7
	baz=34						
ETM	**Tongmen**	1.05	50	*e*P	Pb	15 03 18.9	-0.3
	baz=49						
ETM				*e*S	Sb	15 03 33.2	+0.2
	baz=49						
WDJ	**Dajia District**	1.06	1	⇑*e*P	Pg	15 03 19.4	0.0
WDJ				*e*S	Sn	15 03 34.9	+0.5
TWQ1	**Liyutan**	1.07	8	⇑*e*P	Pg	15 03 19.6	0.0
	baz=7.0						
TWQ1				*e*S	Sn	15 03 35.1	+0.4
	baz=7.0						
TEYL	**Yanliau Villag**	1.07	57	*e*P	Pn	15 03 20.4	+0.5
	baz=54						
TEYL				*e*S	Sn	15 03 35.1	+0.3
	baz=54						
TDCB	**Techi**	1.09	27	*e*P	Pb	15 03 19.5	-0.4
	baz=26						
TDCB				*e*S	Sb	15 03 34.1	+0.1
	baz=26						
VCHM	**Qimei**	1.09	266	⇓*e*P	Pb	15 03 18.6	-1.2
	baz=267						
VCHM				*e*S	Sb	15 03 33.3	-0.8
	baz=267						
TWT	**Tachien**	1.09	28	*e*P	Pb	15 03 19.4	-0.6
	baz=26						
TWT				*e*S	Sb	15 03 34.5	+0.2
	baz=26						
NSY	**Sanyi**	1.14	7	⇑*e*P	Pn	15 03 21.0	+0.2
	baz=6.0						
NSY				*e*S	Sn	15 03 37.9	+1.5
	baz=6.0						
HWA	**Hwalien**	1.14	53	*e*P	Pg	15 03 21.4	+0.5
	baz=52						
HWA				*e*S	Sn	15 03 36.9	+0.4
	baz=52						
TWD	**Chiawan**	1.20	48	*e*P	Pn	15 03 21.4	-0.2
	baz=48						
TWD				*e*S	Sb	15 03 36.7	-0.4
	baz=48						
ETLH	**Xiulin Townshi**	1.22	41	⇑*e*P	Pn	15 03 21.4	-0.6
	baz=40						
ETLH				*e*S	Sg	15 03 37.9	-0.2
	baz=40						
NMLH	**Miaoli**	1.26	7	⇑*e*P	Pn	15 03 22.4	-0.1
	baz=6.0						
NMLH				*e*S	Sg	15 03 40.7	+1.2
	baz=6.0						
NACB	**Ninganchiao**	1.26	45	P	Pn	15 03 22.4	-0.1
NACB	**Ninganchiao**	1.26	45	⇑*e*P	Pn	15 03 22.0	-0.5
	baz=44						
ETL	**Fush Village**	1.27	47	*e*P	Pb	15 03 22.9	0.0
	baz=46						
ETL				*e*S	Sg	15 03 39.8	-0.2
	baz=46						
SMST	**Manzhou Townsh**	1.27	171	*e*P	Pn	15 03 22.3	-0.3
	baz=171						
SMST				*e*S	Sg	15 03 40.9	+0.9
	baz=171						
HEN	**Hengchun**	1.28	175	*e*P	Pn	15 03 22.6	0.0
	baz=175						
HEN				*e*S	Sg	15 03 42.2	+2.1
	baz=175						
NNSB	**Datong**	1.34	32	*e*P	Pn	15 03 23.3	-0.4
	baz=31						
NNSB				*e*S	Sg	15 03 42.0	-0.2
	baz=31						
NNSH	**Datong**	1.34	32	*e*P	Pn	15 03 23.4	-0.3
	baz=31						
NNSH				*e*S	Sg	15 03 42.9	+0.7
	baz=31						
NNS	**Nan Shan**	1.34	31	*e*P	Pn	15 03 23.8	+0.1
	baz=30						
NNS				*e*S	Sg	15 03 42.0	-0.3
	baz=30						
TWK1	**Hengchun**	1.35	172	*e*P	Pn	15 03 23.5	-0.1
	baz=173						
TWK1				*e*S	Sn	15 03 41.5	0.0
	baz=173						
TWKBT	**Hengchun**	1.35	172	*e*P	Pn	15 03 23.5	-0.1
	baz=173						
TWKBT				*e*S	Sg	15 03 42.8	+0.4
	baz=173						
NSTT	**Nanjuang**	1.39	15	*e*P	Pn	15 03 24.3	+0.1
	baz=14						
NSTT				*e*S	Sg	15 03 43.6	0.0
	baz=14						
TSEB	**Hengchuen, Pin**	1.40	169	*e*P	Pg	15 03 26.0	+0.1
	baz=171						
TSEB				*e*S	Sg	15 03 45.4	+1.2
	baz=171						
LIOB	**Emei**	1.41	15	*e*P	Pn	15 03 24.6	+0.1
	baz=14						
LIOB				*e*S	Sg	15 03 44.5	+0.2
	baz=14						
NJN	**Zhunan**	1.41	9	*e*P	Pn	15 03 24.6	0.0
	baz=9.0						
NJN				*e*S	Sg	15 03 44.8	+0.3
	baz=9.0						
NFF	**Wufeng Townshi**	1.42	19	*e*P	Pn	15 03 24.7	0.0
	baz=18						
NFF				*e*S	Sb	15 03 43.9	+0.4
	baz=18						
LATG	**Datong**	1.50	34	*e*P	Pn	15 03 26.3	+0.5
	baz=33						
LATG				*e*S	Sb	15 03 46.4	+0.5
	baz=33						
NJD	**Zhudong**	1.51	17	*e*P	Pn	15 03 26.4	+0.5
	baz=16						
NJD				*e*S	Sg	15 03 47.2	-0.4
	baz=16						
LAY	**Lan-yu**	1.51	145	*e*P	Pn	15 03 24.6	-1.3
	baz=145						
LAY				*e*S	Sb	15 03 46.0	-0.1
	baz=145						
HSN1	**Hsinchu**	1.53	14	*e*P	Pn	15 03 26.7	+0.5
	baz=13						
HSN1				*e*S	Sg	15 03 48.1	-0.2
	baz=13						
ENA	**Nanau**	1.54	42	*e*P	Pb	15 03 27.3	-0.1
	baz=41						
ENA				*e*S	Sg	15 03 48.1	-0.3
	baz=41						
SBCB	**Hsinchu**	1.54	13	*e*P	Pn	15 03 26.4	0.0
	baz=12						
SBCB				*e*S	Sb	15 03 47.6	+0.6
	baz=12						
NSK	**Sanguang**	1.54	26	*e*P	Pn	15 03 26.9	+0.4
	baz=26						
NSK				*e*S	Sg	15 03 48.8	+0.1
	baz=26						
HSN	**Hsinchu**	1.55	12	*e*P	Pb	15 03 27.1	-0.5
	baz=13						
HSN				*e*S	Sg	15 03 49.0	+0.3
	baz=13						
YHNB	**Yeheng**	1.55	27	P	Pb	15 03 27.1	-0.5
YHNB	**Yeheng**	1.55	27	⇑*e*P	Pn	15 03 26.9	+0.4
	baz=26						
YHNB				*e*S	Sg	15 03 48.2	-0.5
	baz=26						
NDT	**Datong Townshi**	1.55	32	*e*P	Pb	15 03 27.5	-0.2
	baz=31						
NDT				*e*S	Sb	15 03 47.3	0.0
	baz=31						
LYUB	**Lan-yu**	1.56	145	*e*P	Pn	15 03 24.2	-2.4
	baz=145						
LYUB				*e*S	Sn	15 03 45.2	-1.6
	baz=145						
EWUT	**Wuta**	1.57	42	*e*P	Pb	15 03 28.0	0.0
	baz=42						
EWUT				*e*S	Sb	15 03 48.4	+0.5
	baz=42						
ENTT	**Nioudou**	1.61	33	*e*P	Pb	15 03 28.4	-0.2
	baz=32						
ENTT				*e*S	Sg	15 03 51.8	+1.1
	baz=32						
NWLT	**Wulai**	1.69	28	*e*P	Pn	15 03 29.3	+0.8
	baz=28						
NWLT				*e*S	Sg	15 03 52.7	-0.8
	baz=28						
FUSB	**Fushanzhiwuyua**	1.72	31	*e*P	Pb	15 03 30.0	-0.6
	baz=30						
FUSB				*e*S	Sg	15 03 54.8	+0.5
	baz=30						
TWE	**Neicheng**	1.73	34	*e*P	Pb	15 03 30.7	0.0
	baz=34						
TWE				*e*S	Sg	15 03 53.8	-0.7
	baz=34						
TWC	**Suao**	1.74	40	*e*P	Pb	15 03 30.8	0.0
	baz=40						
TWC				*e*S	Sg	15 03 54.2	-0.7
	baz=40						
NCUH	**Zhongli**	1.76	17	*e*P	Pn	15 03 29.4	+0.1
	baz=17						
NCU	**National Centr**	1.76	17	*e*P	Pn	15 03 29.3	0.0
	baz=17						
NCU				*e*S	Sb	15 03 53.5	+0.3
	baz=17						
NHW	**Xinwu Township**	1.76	13	*e*P	Pn	15 03 29.7	+0.3
	baz=12						
NHW				*e*S	Sb	15 03 53.7	+0.3
	baz=12						
EOS4	**EOS4**	1.77	62	*e*P	Pn	15 03 29.6	+0.4
	baz=61						
EOS4				*e*S	Sn	15 03 52.2	+0.8
	baz=61						
ILA	**Ilan**	1.80	35	*e*P	Pb	15 03 32.0	+0.1
	baz=35						
ILA				*e*S	Sg	15 03 57.4	+0.4
	baz=35						
EOS3	**EOS3**	1.85	57	*e*P	Pb	15 03 32.0	-0.7
	baz=57						
EOS3				*e*S	Sb	15 03 56.8	+1.0
	baz=57						
EOS2	**EOS2**	1.86	52	*e*P	Pg	15 03 34.8	+0.1
	baz=52						
EOS2				*e*S	Sg	15 04 00.1	+1.2
	baz=52						
TATO	**Taipei**	1.86	25	P	Pn	15 03 31.8	+1.0
NHDH	**Xindian Distri**	1.87	26	*e*P	Pn	15 03 31.6	+0.8
	baz=26						
NHDH				*e*S	Sg	15 03 59.0	-0.1
	baz=26						
TWA	**Mucha**	1.91	27	*e*P	Pn	15 03 32.1	+0.7
	baz=27						
TWA				*e*S	Sb	15 03 57.8	+0.2
	baz=27						
TWS1	**Kuangyinshan**	1.95	22	*e*P	Pn	15 03 32.2	+0.2
	baz=22						
TWS1				*e*S	Sn	15 03 57.6	+1.2
	baz=22						
VWUC	**VWUC**	2.00	328	*e*P	Pn	15 03 31.5	-1.2
	baz=328						
VWUC				*e*S	Sn	15 03 56.2	-1.6
	baz=328						
TIPB	**Shuangxi**	2.01	33	*e*P	Pn	15 03 34.0	+1.1
	baz=33						
TIPB				*e*S	Sg	15 04 02.7	-1.0
	baz=33						
YM01	**YM01**	2.05	25	*e*P	Pn	15 03 33.9	+0.5
	baz=25						
YM01				*e*S	Sb	15 04 01.4	-0.3
	baz=25						
ANP	**Anpu**	2.07	23	*e*P	Pn	15 03 33.9	+0.2
	baz=23						
ANP				*e*S	Sb	15 04 01.3	-0.9
	baz=23						
WFSB	**Wu-fen Shan**	2.07	31	*e*P	Pb	15 03 36.9	+0.3
	baz=30						
WFSB				*e*S	Sg	15 04 06.2	+0.5
	baz=30						
YM08	**YM08**	2.10	25	*e*P	Pb	15 03 36.2	-0.7
	baz=25						
TWB1	**Santiao Chiao**	2.13	36	*e*P	Pb	15 03 36.0	-1.4
	baz=36						
TWB1				*e*S	Sb	15 04 05.3	+1.5
	baz=36						
SXI1	**Grass Mountain**	2.14	32	*e*P	Pn	15 03 35.6	+1.0
	baz=32						
SXI1				*e*S	Sb	15 04 06.0	+1.6
	baz=32						
PTMZ	**Houxiangcun**	2.22	322	*e*P	Pn	15 03 34.6	-1.1
	baz=322						
PTMZ				*e*S	Sn	15 04 01.1	-1.9
	baz=322						
KNM	**Kinmen**	2.29	300	*e*P	Pn	15 03 37.2	+0.5
	baz=298						
KNM				*e*S	Sn	15 04 07.0	+2.1
	baz=298						
KNMB	**Chin-men Tao**	2.35	300	*e*P	Pn	15 03 36.5	-1.0
	baz=300						
KNMB				*e*S	Sn	15 04 06.9	+0.6
	baz=300						
YOJ	**Yonaguni jima**	2.49	61	*e*P	Pn	15 03 41.2	+1.9
	baz=61						
YOJ				*e*S	Sn	15 04 11.5	+1.8
	baz=61						
ZPLA	**Ao Xicun**	2.71	284	*e*P	Pn	15 03 41.2	-1.2
	baz=284						
ZPLA				*e*S	Sn	15 04 14.2	-0.9
	baz=284						
AXDP	**Jialang**	2.90	304	*e*P	Pn	15 03 44.1	-0.9
	baz=304						
MATB	**Ma-tsu**	2.92	348	*e*P	Pn	15 03 44.1	-1.1
	baz=347						
MATB				*e*S	Sn	15 04 18.6	-1.7
	baz=347						
MSUT	**Lienchiang**	2.94	348	*e*P	Pn	15 03 44.7	-0.9
	baz=347						
MSUT				*e*S	Sn	15 04 19.8	-1.1
	baz=347						
HATJ	**Hateruma jima**	3.02	75	P	Pn	15 03 47.2	+0.5
HATJ				S	Sn	15 04 23.6	+0.6
IRIF	**Iriomote-Funau**	3.04	69	*e*P	Pn	15 03 48.2	+1.2
IRIF				*e*S	Sn	15 04 25.0	+1.7
MHZQ	**Yeshan**	3.15	333	*e*P	Pn	15 03 47.9	-0.6
	baz=333						
MHZQ				*e*S	Sn	15 04 24.8	-1.3
	baz=333						
JKRS	**Kuro-shima**	3.25	72	*e*P	Pn	15 03 50.8	+0.9
LYJJ	**Jianjiangzhen**	3.34	347	*e*P	Pn	15 03 50.1	-1.0
	baz=346						
LYJJ				*e*S	Sn	15 04 30.1	-0.7
	baz=346						
JIJ	**Ishigaki jima**	3.41	71	P	Pn	15 03 52.8	+0.8
JIJ				S	Sn	15 04 33.2	+0.8
JISG	**Ishigakijimahi**	3.62	68	P	Pn	15 03 55.7	+0.8
JISG				*e*S	Sn	15 04 38.2	+0.5
XPSS	**Dashiqiu**	3.65	354	*e*P	Pn	15 03 54.2	-1.2
	baz=354						
XPSS				*e*S	Sn	15 04 36.8	-1.5
	baz=354						
JTJ	**Tarama**	3.98	69	*e*S	Sn	15 04 48.2	+1.7

ROM 25 15:14:55.3±0.0**, 42°.746N**±0°.002×**13°.233E**±0°.002**,**
h12^{km}**, ML1.6**/19**, 3C-3D, Error ellipse: s-maj=0.2km**
s-min=0.1km az=84.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1214	**Arquata del Tr**	0.02	306	P	Pg	15 14 57.9	+0.1
T1214				S	Sg	15 14 59.5	+0.1
T1214				AML	AML		
	comp=E,1680µm,0.2s						
T1214				AML	AML		
	comp=N,696µm,0.7s						
T1214				AML	AML		
	comp=N,696µm,0.7s						
T1214				AML	AML		
	comp=N,733µm,0.5s						
T1214				AML	AML		
	comp=N,696µm,1.3s						
T1214				AML	AML		
	comp=E,1780µm,0.2s						
T1214				AML	AML		
	comp=E,1675µm,0.2s						
T1245	**Castelsantange**	0.12	343	P	Pg	15 14 58.8	+0.3
T1245				S	Sg	15 15 01.2	+0.3
T1245				AML	AML		
	comp=E,621µm,1.2s						
T1245				AML	AML		
	comp=N,563µm,0.4s						
T1245				AML	AML		
	comp=E,620µm,1.2s						
T1245				AML	AML		
	comp=N,648µm,1.5s						
T1245				AML	AML		
	comp=E,652µm,0.2s						
T1245				AML	AML		
	comp=E,620µm,0.8s						
T1245				AML	AML		
	comp=N,648µm,0.5s						
T1245				AML	AML		
	comp=N,562µm,0.4s						
T1218	**Civita (PG)**	0.12	229	⇑P	Pg	15 14 58.9	+0.4
T1218				S	Sg	15 15 01.3	+0.5
T1218				AML	AML		
	comp=N,738µm,0.8s						
T1218				AML	AML		
	comp=N,768µm,0.8s						
T1218				AML	AML		
	comp=E,526µm,0.6s						
T1218				AML	AML		
	comp=N,738µm,1.2s						
T1218				AML	AML		
	comp=N,768µm,1.2s						
T1218				AML	AML		
	comp=E,554µm,0.7s						
NRCA	**Norcia**	0.12	315	P	Pg	15 14 58.9	+0.3
NRCA				S	Sg	15 15 01.2	+0.2
NRCA				AML	AML		
	comp=E,1305µm,0.2s						
NRCA				AML	AML		
	comp=E,1445µm,0.2s						
NRCA				AML	AML		
	comp=N,823µm,0.8s						
NRCA				AML	AML		
	comp=N,722µm,0.1s						
SMA1	**SAN MARTINO**	0.14	147	⇓P	Pg	15 14 59.2	+0.4
SMA1				S	Sg	15 15 01.7	+0.5
SMA1				AML	AML		
	comp=N,267µm,0.3s						
SMA1				AML	AML		
	comp=N,267µm,1.7s						
SMA1				AML	AML		
	comp=E,170µm,0.7s						
T1212	**Cascia, Frazio**	0.14	272	⇑P	Pg	15 14 59.1	+0.4
T1212				S	Sg	15 15 01.8	+0.5
T1212				AML	AML		
	comp=N,232µm,0.3s						
T1212				AML	AML		
	comp=N,261µm,0.3s						
T1212				AML	AML		
	comp=E,222µm,0.4s						
T1212				AML	AML		
	comp=E,204µm,0.4s						
MMO1	**Montemonaco**	0.17	24	⇓P	Pg	15 14 59.6	+0.4
MMO1				S	Sg	15 15 02.6	+0.6
MC2	**Monte Cornacci**	0.17	349	P	Pg	15 14 59.8	+0.4
MC2				S	Sg	15 15 02.9	+0.7
T1241	**Roccafluvione,**	0.18	53	P	Pg	15 14 59.8	+0.4
T1241				S	Sg	15 15 03.0	+0.6
T1241				AML	AML		
	comp=E,376µm,0.3s						
T1241				AML	AML		
	comp=N,132µm,1.3s						
T1241				AML	AML		
	comp=N,132µm,1.3s						
T1216	**Preci, Frazion**	0.21	313	P	Pg	15 15 00.3	+0.3
T1216				S	Sg	15 15 03.8	+0.7
T1216				AML	AML		
	comp=N,210µm,0.3s						
T1216				AML	AML		
	comp=N,210µm,1.7s						
T1216				AML	AML		
	comp=E,123µm,0.1s						
T1217	**Poggiodomo (PG**	0.23	261	P	Pg	15 15 00.5	+0.3
T1217				S	Sg	15 15 04.4	+0.9
T1217				AML	AML		
	comp=E,98µm,1.5s						
T1217				AML	AML		
	comp=N,106µm,1.4s						
T1217				AML	AML		
	comp=E,98µm,1.5s						
T1217				AML	AML		
	comp=N,106µm,1.4s						
T1217				AML	AML		
	comp=E,98µm,0.5s						
RM33	**Pellescritta (**	0.24	183	P	Pg	15 15 00.7	+0.4
RM33				S	Sg	15 15 04.8	+1.0
RM33				AML	AML		
	comp=N,101µm,1.5s						
RM33				AML	AML		
	comp=N,101µm,0.5s						
RM33				AML	AML		
	comp=E,148µm,0.6s						
CAMP	**Campotosto**	0.25	148	⇓P	Pg	15 15 00.9	+0.4
CAMP				S	Sg	15 15 04.8	+0.7
CAMP				AML	AML		
	comp=N,70µm,0.2s						
CAMP				AML	AML		
	comp=E,54µm,0.5s						
T1256	**Bolognola (MC)**	0.26	359	P	Pg	15 15 01.2	+0.4
T1256				S	Sg	15 15 05.2	+0.7
T1256				AML	AML		
	comp=E,46µm,0.7s						
T1256				AML	AML		
	comp=N,56µm,0.7s						
T1256				AML	AML		
	comp=E,46µm,0.7s						
T1256				AML	AML		
	comp=N,57µm,0.7s						
T1256				AML	AML		
	comp=N,57µm,1.3s						
TERO	**Teramo**	0.30	114	P	Pg	15 15 01.7	+0.3
TERO				S	Sg	15 15 06.4	+0.9
TERO				AML	AML		
	comp=E,134µm,1.1s						
TERO				AML	AML		
	comp=N,154µm,1.0s						
TERO				AML	AML		
	comp=E,134µm,0.9s						
FDMO	**Fiordimonte**	0.31	340	P	Pg	15 15 01.9	+0.3
FDMO				S	Sb	15 15 06.9	-0.9
FDMO				AML	AML		
	comp=E,36µm,0.2s						
FDMO				AML	AML		
	comp=N,48µm,0.3s						
GUMA	**Gualdo di Mace**	0.33	13	P	Pb	15 15 02.7	-0.3
GUMA				S	Sb	15 15 08.3	+0.1
GUMA				AML	AML		
	comp=N,222µm,0.3s						
GUMA				AML	AML		
	comp=E,197µm,0.3s						
T1211	**Morro Reatino**	0.35	233	P	Pg	15 15 02.7	+0.3
T1211				S	Sb	15 15 08.3	-0.7
T1211				AML	AML		
	comp=E,86µm,0.9s						
T1211				AML	AML		
	comp=N,100µm,0.4s						
T1211				AML	AML		
	comp=E,86µm,1.1s						
T1211				AML	AML		
	comp=N,100µm,1.6s						
T1219	**Muccia, Frazio**	0.35	332	P	Pg	15 15 02.6	+0.2
T1219				S	Sg	15 15 08.0	+0.9
T1222	**Castel Sant'An**	0.37	203	P	Pg	15 15 03.0	+0.2
T1222				S	Sb	15 15 08.7	-0.8
T1220	**Camerino, Fraz**	0.38	344	P	Pg	15 15 03.2	+0.3
T1220				AML	AML		
	comp=N,146µm,1.4s						

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T1220                                AML    AML
      comp=E,115µm,0.2s
MOMA  Monte Martano       0.49 277⇑ P      Pb     15 15 05.5 -0.4
MOMA                                 AML    AML
      comp=N,70µm,1.2s
MOMA                                 AML    AML
      comp=N,70µm,0.8s
MOMA                                 AML    AML
      comp=E,130µm,0.2s
EL6   Elcito              0.59 351  S      Sb     15 15 16.9 +1.0
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IDC ***25*** *15:38:20.9±0.6, 53°.07N×142°.91E, h0km, mb4.0/22, mbtmp3.9/27, ML3.1/4, Error ellipse: s-maj=16.2km s-min=11.9km az=138.0*

MOS ***25*** *15:38:20.5±1.1, 53°.00N×143°.07E, h12km, mb4.3/16, MS3.1/4, Error ellipse: s-maj=10.7km s-min=6.5km az=86.9*

MOS Felt (II-III) at Okha, Sabo, Tungor.

SKHL ***25*** *15:38:21.8±0.2, 52°.98N×142°.90E, h11km±3km, mb4.9/5*

SKHL Felt (II-III) at Okha, Tungor, Sabo.

NEIC ***25*** *15:38:22.8±2.2, 53°.03N±0°.09×143°.1E±0°.1, h15km±5km, mb4.2/10, Error ellipse: s-maj=13.9km s-min=10.5km az=135.0*

ISC 25 15:38:24.0±1.2**, 53°.03N**±0°.03×**143°.08E**±0°.04**, h24**km±9km**, n107, σ1ˢ.33**/121**, mb4.1**/34**, 5C-6D, Sakhalin Island**

```
Code  Station Name         Δ°   AZ°  Phase ID       Time       Res
                                     Op     ISC     h  m  s    ISC
OKH   Okha                0.53 351⇑iPN     Pb     15 38 34.4 -0.2
OKH                                 i S      Sn     15 38 43.6 -0.7
OKH                                  pmax   pmax
      comp=Z,4µm,0.3s
OKH                                  smax   smax
      comp=N,76µm,0.6s
OKH                                  smax   smax
      comp=E,68µm,0.4s
OKH   Okha                0.53 351 ePg    Pb     15 38 34.5 -0.2
OKH                                  AMB    AMB    15 38 34.8
      comp=E,4µm,0.3s
OKH                                 eSg    Sn     15 38 43.5 -0.7
OKH                                  A      A      15 38 44.2
      comp=E,76µm,0.6s
OKH                                  A      A      15 38 44.2
      comp=E,68µm,0.6s
NKL   Nikolayevsk         1.45 276 ePN    Pn     15 38 46.8 -1.9
NKL                                 eS     Sn     15 39 06.7 -0.3
NKL                                  pmax   pmax
      comp=N,55nm,0.6s
NKL                                  pmax   pmax
      comp=E,474nm,0.4s
NKL                                  pmax   pmax
      comp=Z,726nm,0.4s
NKL                                  smax   smax
      comp=E,433nm,0.2s
NKL                                  smax   smax
      comp=N,2µm,0.5s
NKL   Nikolayevsk         1.45 276 eP     Pn     15 38 46.9 -1.8
NKL                                 ePg    Pb     15 38 48.2 -2.1
NKL                                  AMB    AMB    15 38 48.4
      comp=N,774nm,0.4s
NKL                                 eSg    Sn     15 39 06.7 -0.3
NKL                                  A      A      15 39 08.3
      comp=N,4µm,0.5s
NKL                                  A      A      15 39 08.3
      comp=N,10µm,0.5s
TYV   Tymovskoe           2.19 187 ePN    Pn     15 38 58.1 -0.8
TYV                                 eS     Sn     15 39 23.4 -1.7
TYV                                  pmax   pmax
      comp=Z,100nm,0.7s
TYV                                  pmax   pmax
      comp=Z,23nm,0.7s
TYV                                  smax   smax
      comp=N,100nm,0.8s
TYV                                  smax   smax
      comp=N,129nm,0.8s
TYV                                  smax   smax
      comp=E,77nm,0.8s
TYV   Tymovskoe           2.19 187 eP     Pn     15 38 58.0 -0.8
TYV                                 eP     Pb     15 39 00.9 -1.9
TYV                                 ePg           15 39 02.8
TYV                                  AMB    AMB    15 39 02.9
      comp=E,60nm,0.5s
TYV                                 eS     Sn     15 39 24.1 -1.0
TYV                                 eSg    Sb     15 39 33.0 +3.6
TYV                                  A      A      15 39 35.6
      comp=E,2µm,0.4s
TYV                                  A      A      15 39 35.6
      comp=E,2µm,0.4s
GRNR  Gornyy              4.70 244 ePN    Pn     15 39 32.6 -0.8
GRNR                                e             15 40 31.7
GRNR                                 pmax   pmax
      comp=E,30nm,0.5s
GRNR                                 pmax   pmax
      comp=N,20nm,0.6s
GRNR                                 pmax   pmax
      comp=Z,20nm,0.5s
GRNR                                 smax   smax
      comp=N,60nm,0.5s
GRNR                                 MLR    MLR
      comp=E,240nm,15.0s
GRNR                                 MLR    MLR
      comp=N,170nm,11.0s
GRNR                                 MLR    MLR
      comp=Z,310nm,12.0s
GRNR  Gornyy              4.70 244 eP     Pn     15 39 32.6 -0.8
GRNR                                ePg    Pb     15 39 52.6 +6.9
GRNR                                 AMB    AMB    15 39 53.2
      comp=Z,20nm,0.5s
YSS   Yuzh-Sakhalins      6.09 182        Pn     15 39 51.9 -0.5
YSS   Yuzh-Sakhalins      6.09 182 ePN    Pn     15 39 52.6 +0.2
YSS                                  pmax   pmax
      comp=Z,10.0nm,0.8s
YSS                                  MLR    MLR
      comp=Z,400nm,17.0s
YSS   Yuzh-Sakhalins      6.09 182 eP     Pn     15 39 53.6 +1.2
YSS                                  AMB    AMB    15 39 54.7
      comp=Z,10.0nm,0.8s
YSS                                 eS     Sn     15 41 00.8 -0.4
YSS                                 eSg    Sb     15 41 43.7  +22
YSS                                  A      A      15 41 47.7
      comp=Z,10.0nm,0.3s
YSS                                  A      A      15 41 47.7
      comp=Z,20nm,0.3s
KLR   Kul'dur             8.08 246  Pn     Pn     15 40 21.1 +1.4
      comp=Z,0.3nm,0.3s,baz=52,slow=14,SNR=8.4
KLR                                  Lg     Lg     15 42 37.2
      comp=Z,1.0nm,0.3s,baz=139,slow=9.5,SNR=5.1
KLR   Kul'dur             8.08 246dePN    Pn     15 40 21.3 +1.6
KLR   Kul'dur             8.08 246 eP     Pn     15 40 19.0 -0.7
PEA0B Petropavlovsk-      8.81  84  Pn     Pn     15 40 30.1 +0.4
PEA0B Petropavlovsk-      8.81  84  PN     Pn     15 40 30.2 +0.4
PETK  Petropavlovsk-      8.81  84  Pn     Pn     15 40 29.2 -0.5
      comp=Z,0.5nm,0.3s,baz=272,slow=11,SNR=15
PETK                                 Sn     Sn     15 42 02.4 -5.8
      baz=264,slow=26
      comp=Z,1.6nm,0.6s
PETK  Petropavlovsk-      8.81  84  Pn     Pn     15 40 29.5 -0.2
PETK  Petropavlovsk-      8.81  84  PN     Pn     15 40 29.5 -0.2
ASAJ  Asahikawa           8.93 182  Pn     Pn     15 40 31.8 +0.4
      comp=Z,0.3nm,0.3s,baz=342,slow=5.2,SNR=11
ASAJ                                 Sn     Sn     15 42 11.2 +0.1
      baz=241,slow=19,SNR=1.2
      comp=Z,1.6nm,0.5s
ASAJ  Asahikawa           8.93 182  PN     Pn     15 40 32.8 +1.4
JKA   Kamikawa-asahi      8.93 182  Pn     Pn     15 40 32.8 +1.4
ZEA   Zeya                9.49 281 ePN    Pn     15 40 34.5 -4.5
ZEA                                  pmax   pmax
      comp=Z,10.0nm,0.7s
ZEA                                  MLR    MLR
      comp=E,300nm,11.0s
ZEA                                  MLR    MLR
      comp=Z,300nm,11.0s
ZEA   Zeya                9.49 281 eP     Pn     15 40 40.3 +1.3
HEH   HeiHe              10.13 260 eP     Pn     15 40 48.3 +0.5
HEH                                  S      Sn     15 42 39.8 -0.7
HEH                                  smax   smax
      comp=N,130nm,1.1s
HEH                                  smax   smax
      comp=E,57nm,1.1s
SEY   Seymchan           11.07  23  Pn     Pn     15 41 02.5 +1.8
      comp=E,0.2nm,0.3s,baz=218,slow=7.3,SNR=15
SEY                                  Sn     Sn     15 42 58.5 -5.1
      comp=E,0.1nm,0.3s,baz=162,slow=20,SNR=2.4
      comp=E,4.1nm,0.8s
SEY   Seymchan           11.07  23⇑ePN    Pn     15 41 02.7 +2.0
SEY                                  pmax   pmax
      comp=Z,5.0nm,1.0s
SEY   Seymchan           11.07  23 eP     Pn     15 41 02.7 +2.0
USRK  Ussuriysk Ar.      11.47 224  Lg     Lg     15 44 26.6
      comp=Z,0.1nm,0.3s,baz=43,slow=26,SNR=5.4
YAK   Yakutsk            11.52 327  Pn     Pn     15 41 04.5 -2.2
      baz=45,slow=1.3,SNR=1.2
YAK                                  Lg     Lg     15 44 13.2
      baz=270,slow=20,SNR=1.8
YAK   Yakutsk            11.52 327 ePN    Pn     15 41 04.1 -2.6
YAK                                  pmax   pmax
      comp=Z,5.0nm,0.9s
YAK                                  pmax   pmax
      comp=N,3.0nm,1.1s
YAK                                  pmax   pmax
      comp=E,2.0nm,0.9s
YAK   Yakutsk            11.52 327 eP     Pn     15 41 06.5 -0.2
MJAR  Matsushiro Arr     16.84 194  Pn     P      15 42 20.9 +0.9
      baz=11,slow=14,SNR=3.0
INU   Inuyama            18.19 196  Pn     Pn     15 42 32.2 -2.6
INU                                  IAmb   IAmb   15 42 46.7
      comp=Z,13nm,1.2s
BILL  Bilibino           18.69  28  P      P      15 42 39.4 -0.7
BILL  Bilibino           18.69  28 eP     Pn     15 42 41.0 +0.4
BILL                                 pmax   pmax
      comp=Z,3.0nm,0.9s
BILL                                 MLR    MLR
      comp=Z,69nm,9.0s
BILL  Bilibino           18.69  28 eP     Pn     15 42 42.0 +1.4
KSRS  Korea Array        18.82 220  P      Pn     15 42 43.2 +0.9
      comp=Z,0.1nm,0.3s,baz=28,slow=11,SNR=5.4
      comp=Z,1.4nm,0.8s
KSRS  Korea Array        18.82 220 eP     Pn     15 42 45.0 +2.7
KSAR  Wonju Array Be     18.84 220  P      P      15 42 40.4 -1.6
KSAR  Wonju Array Be     18.84 220  P      P      15 42 40.4 -1.6
TIXI  Tiksi              19.71 347  P      P      15 42 51.3  0.0
      comp=Z,4.8nm,0.9s,baz=89,slow=23,SNR=15
TIXI  Tiksi              19.71 347  P      P      15 42 49.8 -1.5
TIXI  Tiksi              19.71 347⇑eP     P      15 42 50.2 -1.1
TIXI                                 pmax   pmax
      comp=Z,5.0nm,0.8s
ULN   Ulaanbaatar        23.34 272ceP     P      15 43 30.2 -0.3
ULN                                  pmax   pmax
      comp=Z,3.0nm,1.2s
ULN   Ulaanbaatar        23.34 272 eP     P      15 43 30.2 -0.3
SONM  Songino Array      23.75 272  P      P      15 43 34.5  0.0
      comp=Z,0.3nm,0.6s,baz=80,slow=9.8,SNR=2.8
SONM                                 Lg     Lg     15 50 51.8
      baz=59,slow=28
      comp=Z,0.3nm,0.6s
ZAK   Zakamensk          24.59 280 eP     P      15 43 42.3 +0.2
ZAK                                  pmax   pmax
      comp=Z,4.0nm,1.2s
CLES  Cleveland East     27.96  71  P      P      15 44 10.9 -1.3
CLES                                 IAmb   IAmb   15 44 14.8
      comp=Z,2µm,1.4s
NRIK  Noril'sk           29.95 324⇓eP     P      15 44 31.4 +1.6
NRIK                                 pmax   pmax
      comp=Z,5.0nm,1.7s
ZALV  Zalesovo Beam      33.83 295  P      P      15 45 03.3 -0.7
      comp=Z,0.6nm,0.5s,baz=79,slow=3.8,SNR=2.4
      comp=Z,0.6nm,0.5s
DGZ   Jazzator, Alta     34.16 287diP     P      15 45 08.8 +1.6
DGZ                                  pmax   pmax
      comp=Z,4.0nm,0.9s
COLD  Coldfoot           34.20  40  P      P      15 45 07.9 +0.7
COLD                                 IAmb   IAmb   15 45 09.1
      comp=Z,2.7nm,0.9s
ILAR  Eielson Array      36.05  43  P      P      15 45 24.8 +1.6
      comp=Z,1.6nm,0.9s,baz=277,slow=7.9,SNR=13
      comp=Z,1.6nm,0.9s
ILAR  Eielson Array      36.05  43 eP     P      15 45 24.7 +1.6
ILAR                                 pmax   pmax
      comp=Z,1.0nm,0.7s
EGAK  Eagle              38.39  42  P      P      15 45 42.9  0.0
EGAK                                 IAmb   IAmb   15 45 47.7
      comp=Z,6.2nm,0.9s
MK31  Makanchi Array     38.59 286  P      P      15 45 44.1 -0.7
MK31                                 IAmb   IAmb   15 45 45.6
      comp=Z,2.5nm,0.7s
MK31  Makanchi Array     38.59 286  P      P      15 45 44.1 -0.7
MK31                                 pmax   pmax
      comp=Z,3.0nm,0.7s
MKAR  Makanchi Array     38.59 286  P      P      15 45 44.9  0.0
      comp=Z,2.4nm,0.6s,baz=62,slow=8.1,SNR=36
MKAR                                 PcP    PcP    15 47 56.7 -0.1
      comp=Z,0.3nm,0.8s,baz=65,slow=4.1,SNR=1.8
      comp=Z,2.4nm,0.6s
MKAR  Makanchi Array     38.59 286  P      P      15 45 44.3 -0.5
KURK  Kurchatov          38.67 293  P      P      15 45 44.2 -1.1
KURK                                 IAmb   IAmb   15 45 46.3
      comp=Z,5.3nm,0.9s
KURK  Kurchatov          38.67 293diP     P      15 45 45.6 +0.2
KURK                                 pmax   pmax
      comp=Z,6.0nm,1.3s
KURK  Kurchatov          38.67 293 eP     P      15 45 45.6 +0.2
L27K  Beaver Creek,      38.71  45  P      P      15 45 45.6 -0.1
L27K                                 IAmb   IAmb   15 45 48.8
      comp=Z,4.2nm,1.0s
INK   Inuvik             40.03  35  P      P      15 45 57.5 +1.0
      comp=Z,1.4nm,0.8s,baz=292,slow=8.8,SNR=6.5
INK                                  PcP    PcP    15 48 01.8 +0.9
      comp=Z,0.5nm,0.5s,baz=293,slow=3.4,SNR=4.0
      comp=Z,1.4nm,0.8s
BRVK  Borovoye           41.99 300⇓eP     P      15 46 13.1 +0.3
BRVK                                 pmax   pmax
      comp=Z,10.0nm,3.1s
BRVK  Borovoye           41.99 300 eP     P      15 46 13.1 +0.3
AAK   Ala-Archa          45.52 286⇑iP     P      15 46 41.8 +0.2
AAK                                  pmax   pmax
      comp=Z,2.0nm,1.3s
AAK   Ala-Archa          45.52 286 eP     P      15 46 41.8 +0.2
ARU   Arti               45.99 310⇓eP     P      15 46 43.9 -1.0
ARU                                  pmax   pmax
      comp=Z,14nm,3.5s
RES   Resolute Bay       46.90  18  P      P      15 46 52.4 +0.6
      comp=Z,4.2nm,0.8s,baz=296,slow=8.1,SNR=24
      comp=Z,4.2nm,0.8s
RES   Resolute Bay       46.90  18  P      P      15 46 52.0 +0.2
RES   Resolute Bay       46.90  18  P      P      15 46 52.0 +0.2
RES                                  pmax   pmax
      comp=Z,5.0nm,0.9s
CMAR  Chiang Mai Arr     48.53 242  P      P      15 47 04.3 -0.8
      comp=Z,0.3nm,0.3s,baz=21,slow=8.7,SNR=2.4
      comp=Z,0.3nm,0.3s
JIRN  Jiri               48.65 262 eP     P      15 47 05.7 -0.7
GUN   Gumba              48.65 262 eP     P      15 47 06.6 +0.3
PKI   Pulchoki           49.18 262 eP     P      15 47 10.2 -0.2
GKN   Gorkha             49.33 263 eP     P      15 47 11.6 +0.3
DANN  Dangsing           49.60 264 eP     P      15 47 14.2 +0.7
      comp=Z,12nm,0.8s
YKA   Yellowknife Ar     49.76  36  P      P      15 47 14.8 +0.8
      comp=Z,0.4nm,0.8s,baz=310,slow=7.7,SNR=7.3
      comp=Z,0.4nm,0.8s
YKA   Yellowknife Ar     49.76  36 eP     P      15 47 15.0 +1.1
PYUN  Piuthan            50.24 265 eP     P      15 47 18.9 +0.6
      comp=Z,29nm,0.9s
FINES FINESS Array B     55.45 329  P      P      15 47 56.0  0.0
      comp=Z,3.9nm,0.9s,baz=37,slow=7.3,SNR=6.4
      comp=Z,3.9nm,0.9s
FINES FINESS Array B     55.45 329  P      P      15 47 56.0  0.0
OBN   Obninsk            56.38 319 eP     P      15 48 05.4 +2.7
OBN                                 e             15 49 01.6
OBN                                 e             15 50 07.9
OBN                                  pmax   pmax
      comp=Z,3.0nm,0.9s
GEYT  Alibeck            58.01 292  P      P      15 48 15.0 +0.4
      comp=Z,1.9nm,0.7s,baz=52,slow=2.4,SNR=3.3
      comp=Z,1.9nm,0.7s
NB2   NORSAR Subarra     60.00 335  P      P      15 48 27.8 -0.3
      comp=Z,2.8nm,0.8s,baz=32,slow=6.9
NOA   NORSAR Array B     60.00 335  P      P      15 48 27.9 -0.1
      comp=Z,1.6nm,0.8s,baz=31,slow=6.8,SNR=4.0
      comp=Z,1.6nm,0.8s
NOA   NORSAR Array B     60.00 335 eP     P      15 48 28.2 +0.1
NOA                                  pmax   pmax
      comp=Z,2.0nm,0.8s
HFS   Hagfors            60.12 334  P      P      15 48 28.6 -0.3
      comp=Z,1.7nm,0.4s,baz=30,slow=6.8,SNR=12
      comp=Z,1.7nm,0.4s
FRB   Frobisher Bay      60.98  15  P      P      15 48 34.1 -0.5
      comp=Z,5.9nm,0.7s,baz=340,slow=6.7,SNR=13
      comp=Z,5.9nm,0.7s
KIV   Kislovodsk         61.80 306 eP     P      15 48 41.8 +1.2
KIV                                  pmax   pmax
      comp=Z,5.0nm,1.0s
KIV   Kislovodsk         61.80 306 eP     P      15 48 41.8 +1.2
AKASG Malin Array Be     62.63 319  P      P      15 48 45.3 -0.7
      comp=Z,0.4nm,0.5s,baz=33,slow=7.5,SNR=4.8
      comp=Z,0.4nm,0.5s
AKASG Malin Array Be     62.63 319 eP     P      15 48 45.6 -0.3
AKASG                                pmax   pmax
      comp=Z,1.0nm,0.6s
NVAR  Mina Array Bea     65.02  59  P      P      15 49 04.0 +1.8
      comp=Z,0.7nm,0.6s,baz=308,slow=5.7,SNR=5.7
      comp=Z,0.7nm,0.6s
ULM   Lac du Bonnet      65.73  37  P      P      15 49 06.5 +0.2
      comp=Z,2.7nm,0.6s,baz=328,slow=6.6,SNR=5.0
      comp=Z,2.7nm,0.6s
ULM   Lac du Bonnet      65.73  37 eP     P      15 49 07.6 +1.3
ULM                                  pmax   pmax
      comp=Z,1.0nm,0.3s
PDAR  Pinedale Array     66.02  50  P      P      15 49 09.8 +1.1
      comp=Z,1.0nm,0.7s,baz=343,slow=1.9,SNR=10
      comp=Z,1.0nm,0.7s
BRTR  Keskin Array B     69.37 309  P      P      15 49 29.9 +0.3
      comp=Z,0.7nm,0.8s,baz=55,slow=6.5,SNR=5.5
      comp=Z,0.7nm,0.8s
BRTR  Keskin Array B     69.37 309 eP     P      15 49 30.2 +0.5
BRTR                                 pmax   pmax
      comp=Z,1.0nm,0.8s
WRA   Warramunga Arr     73.06 189  P      P      15 49 51.9  0.0
      comp=Z,0.8nm,0.9s,baz=4.4,slow=6.6,SNR=6.1
      comp=Z,0.8nm,0.9s
WRA   Warramunga Arr     73.06 189 eP     P      15 49 50.7 -1.1
WRA                                  pmax   pmax
      comp=Z,1.0nm,0.9s
ASAR  Alice Springs      76.79 189  P      P      15 50 14.1 +0.8
      comp=Z,0.7nm,0.6s,baz=1.2,slow=5.0,SNR=15
      comp=Z,0.7nm,0.6s
TXAR  Lajitas Array      79.62  55  P      P      15 50 31.6 +2.2
      comp=Z,1.1nm,0.9s,baz=291,slow=4.2,SNR=9.1
      comp=Z,1.1nm,0.9s
ESDC  Sonseca Array      83.36 335  P      P      15 50 49.1 +0.2
      comp=Z,0.7nm,0.7s,baz=2.0,slow=5.7,SNR=5.7
      comp=Z,0.7nm,0.7s
STKA  Stephens Creek     84.56 181 eP     P      15 50 53.4 -1.3
STKA                                 pmax   pmax
      comp=Z,1.0nm,0.3s
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IDC ***25*** *15:49:45.7±5.5, 7°.49S×129°.05E, h104km±69km, mb2.9/1, mbtmp3.7/4, ML3.6/3, Error ellipse: s-maj=107.4km s-min=25.7km az=83.0*

ISC 25 15:49:44.9±1.2**, 7°.40S**±0°.07×**129°.1E**±0°.2**, h100**km**, n10, σ4ˢ.80**/10**, Banda Sea**

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Code  Station Name         Δ°   AZ°  Phase ID       Time       Res
                                     Op     ISC     h  m  s    ISC
SAUI  Saumlaki            2.31 105  P      Pn     15 50 26.1 +4.6
SOEI  Soe                 5.27 243  P      Pn     15 51 12.0  +10
MTN   Manton Dam          5.78 159  P      Pn     15 51 12.5 +4.2
KDU   Kakadu              6.24 148  P      Pn     15 51 17.3 +2.8
SIJI  Sorong              6.86  19  P      Pn     15 51 25.3 +2.3
      0.6nm,0.3s,baz=263,slow=19,SNR=6.4
SIJI                                 S      Sn     15 52 35.5 -4.1
      3.2nm,0.3s,baz=237,slow=23,SNR=2.3
      1.6nm,0.3s
KNRA  Kununurra           8.23 182  P      Pn     15 51 45.4 +3.8
PLAI  Plampang           11.25 262  P      Pn     15 52 30.1 +7.4
WRA   Warramunga Arr     13.48 158  P      Pn     15 52 50.6 -1.6
      0.3nm,0.3s,baz=338,slow=13,SNR=51
WRA                                  S      Sn     15 55 10.2  -10
      2.7nm,0.6s,baz=337,slow=21,SNR=5.6
      2.0nm,0.6s
ASAR  Alice Springs      16.83 164  P      P      15 53 35.5 +0.5
      0.5nm,0.3s,baz=339,slow=9.8,SNR=68
ASAR                                 S      Sn     15 56 32.9 -8.7
      0.3nm,0.6s,baz=350,slow=27,SNR=2.8
      1.9nm,0.6s
MKAR  Makanchi Array     68.05 327  P      P      16 00 34.2 +0.5
      0.1nm,0.4s,baz=119,slow=7.7,SNR=1.7
      0.1nm,0.4s
```

IDC ***25*** *15:59:26.6±1.6, 59°.28N×153°.32W, h86km±24km, mb3.4/6, mbtmp3.8/10, MS3.9/1, Error ellipse: s-maj=25.4km s-min=15.4km az=121.0*

NEIC ***25*** *15:59:27.4±1.1, 59°.29N±0°.04×153°.25W±0°.07, h95km±7km, Error ellipse: s-maj=6.6km s-min=3.7km az=46.0*

AEIC ***25*** *15:59:28.6±1.1, 59°.29N±0°.04×153°.22W±0°.07, h91km±6km, ML3.5, mb3.7/3(NEIC), ML3.8/90(NEIC), Error ellipse: s-maj=6.7km s-min=3.6km az=139.0*

ISC 25 15:59:27.2±0.7**, 59°.28N**±0°.04×**153°.17W**±0°.04**, h97**km±6km**, n211, σ0ˢ.77**/218**, mb3.8**/6**, Southern Alaska**

```
Code  Station Name         Δ°   AZ°  Phase ID       Time       Res
                                     Op     ISC     h  m  s    ISC
OPT   Oil Point           0.37 355  P      Pn     15 59 42.1 +0.2
      baz=180
P19K  Oil Pt              0.37 355         Pn     15 59 41.9  0.0
P19K                                 Sn     Sn     15 59 52.5 -0.4
P19K  Oil Pt              0.37 355  P      Pn     15 59 42.1 +0.1
      baz=180
P19K                                 S      Sn     15 59 52.1 -0.8
      baz=180
Q19K  Cape Douglas,       0.43 215  Pn     Pn     15 59 42.2 -0.1
Q19K                                 Sn     Sn     15 59 53.5  0.0
Q19K  Cape Douglas,       0.43 215  P      Pn     15 59 42.2 -0.1
      baz=31
ILSW  Iliamna Southw      0.70   1         Pn     15 59 44.4 -0.2
ILSW                                 Sn     Sn     15 59 56.4 -1.1
ILSW                                 IAML          15 59 57.5
      comp=E,3µm,0.8s
ILSW                                 IAML          15 59 57.6
      comp=N,2µm,0.3s
Q20K  Shuyak Island       0.79 149  P      Pn     15 59 45.6 +0.4
      baz=328
Q20K                                 S      Sn     15 59 58.9 +0.2
      baz=328
O20K  Slope Mountain      0.85  19  P      Pn     15 59 46.0 +0.1
      baz=201
HOM   Homer               0.87  64  Pn     Pn     15 59 46.8 +0.9
HOM   Homer               0.87  64         Sn     16 00 00.5 +0.4
HOM   Homer               0.87  64  P      Pn     15 59 46.9 +0.9
      baz=246
HOM                                  S      Sn     16 00 00.5 +0.4
      baz=246
CNPM  China Poot          1.02  75  Pn     Pn     15 59 48.1 +0.4
CNPM                                 IAML          16 00 04.1
      comp=E,2µm,0.3s
CNPM                                 IAML          16 00 06.2
      comp=N,2µm,0.4s
P18K  Big Mountain,       1.06 277  Pn     Pn     15 59 47.5 -0.6
P18K  Big Mountain,       1.06 277  P      Pn     15 59 47.5 -0.6
      baz=95
O19K  Port Alsworth       1.08 328  Pn     Pn     15 59 48.0 -0.3
O19K  Port Alsworth       1.08 328  P      Pn     15 59 48.3  0.0
      baz=148
O19K                                 S      Sn     16 00 04.1 -0.1
      baz=148
KAHC  Katmai Hardscr      1.14 237  P      Pn     15 59 49.1 -0.1
      baz=54
Q18K  Katmai Hardscr      1.14 237  P      Pn     15 59 48.9 -0.3
      baz=54
O18K  Koktuh Hills        1.18 300         Pn     15 59 49.1 -0.5
O18K                                 IAML          16 00 06.4
      comp=N,919nm,0.8s
O18K  Koktuh Hills        1.18 300  P      Pn     15 59 49.2 -0.3
      baz=119
RSO   Redoubt South       1.20  10         Pn     15 59 50.1 +0.2
BRLK  Bradley Lake        1.26  67         Pn     15 59 50.6 +0.1
BRSE  Bradley Lake S      1.32  69         Pn     15 59 51.5 +0.3
BRSE                                        Sn     16 00 10.0 +0.7
BRSE  Bradley Lake S      1.32  69  P      Pn     15 59 51.5 +0.3
      baz=251
BRSE                                 S      Sn     16 00 10.0 +0.7
      baz=251
RDJH  Redoubt Jeurge      1.32   8         Pn     15 59 51.5 +0.2
KDAK  Kodiak Island       1.54 168  P      Pn     15 59 53.5 -0.2
      comp=N,195nm,0.3s,baz=60,slow=4.5,SNR=3319
KDAK                                 S      Sn     16 00 12.4 -1.4
      comp=N,222nm,0.3s,baz=71,slow=23,SNR=29
KDAK  Kodiak Island       1.54 168  Pn     Pn     15 59 53.7  0.0
KDAK                                 IAML          16 00 13.8
      comp=N,539nm,0.4s
KDAK                                 IAML          16 00 14.0
      comp=N,758nm,0.5s
N19K  Bonanza Creek       1.67 337         Pn     15 59 55.5  0.0
N19K                                 IAML          16 00 17.4
      comp=E,475nm,0.8s
```

N19K	Bonanza Creek	1.67	337	P	Pn	15 59 55.8	+0.3
	baz=157						
N19K				S	Sn	16 00 16.7	-0.3
	baz=157						
Q17K	Contact Creek	1.74	235	P	Pn	15 59 56.5	+0.1
	baz=52						
CAPN	Captain Cook N	1.80	33		Pn	15 59 59.2	+2.2
Q16K	King Salmon	1.90	253	P	Pn	15 59 58.8	+0.5
	baz=70						
SPCR	Spurr Chakacha	1.98	14	P	Pn	15 59 59.9	+0.4
	baz=195						
SPU	Mount Spurr	1.98	16		Pn	15 59 59.9	+0.4
O17K	Koliganek Bris	2.06	286	P	Pn	16 00 00.3	-0.1
	baz=102						
OHAK	Old Harbor	2.07	182	Pn	Pn	16 00 00.1	-0.4
OHAK	Old Harbor	2.07	182	P	Pn	15 59 59.7	-0.8
OHAK	Old Harbor	2.07	182	P	Pn	15 59 59.9	-0.6
	baz=0.9						
O22K	Cooper Landing	2.11	54	Pn	Pn	16 00 01.8	+0.7
O22K	Cooper Landing	2.11	54	P	Pn	16 00 01.3	+0.2
	baz=237						
O22K				S	Sn	16 00 26.7	-0.3
	baz=237						
SVW2	Sparrevohn	2.18	328	Pn	Pn	16 00 01.9	-0.1
SVW2	Sparrevohn	2.18	328	P	Pn	16 00 02.0	0.0
R17K	Ugashik Creek	2.36	227	P	Pn	16 00 04.9	+0.6
	baz=44						
FIS	Fire Island	2.38	37		Pn	16 00 06.2	+1.6
FIS				IAML		16 00 55.7	
	comp=E,477nm,0.7s						
FIS				IAML		16 01 09.6	
	comp=N,466nm,0.8s						
P16K	Nushagak River	2.49	266	P	Pn	16 00 06.6	+0.5
	baz=82						
RC01	Rabbit Creek A	2.50	42	Pn	Pn	16 00 06.3	+0.2
RC01				IAML		16 00 37.1	
	comp=N,393nm,0.4s						
RC01				IAML		16 00 38.7	
	comp=E,606nm,0.2s						
RC01	Rabbit Creek A	2.50	42	P	Pn	16 00 06.5	+0.4
	baz=225						
SUA	Susitna One	2.50	28		Pn	16 00 07.0	+0.7
SUA				IAML		16 00 40.7	
	comp=N,307nm,0.6s						
SUA				IAML		16 00 41.7	
	comp=E,372nm,0.7s						
SUA	Susitna One	2.50	28	P	Pn	16 00 07.0	+0.7
	baz=210						
M20K	Styx River	2.61	0		Pn	16 00 08.4	+0.7
M19K	Big River Lodg	2.70	348		Pn	16 00 09.1	+0.2
M19K	Big River Lodg	2.70	348	P	Pn	16 00 09.0	+0.2
	baz=167						
SKT	Skwentna	2.82	16	Pn	Pn	16 00 10.8	+0.3
SKT				IAML		16 00 47.7	
	comp=E,170nm,0.3s						
SKT	Skwentna	2.82	16	P	Pn	16 00 10.8	+0.3
	baz=198						
PWL	Port Wells	2.90	55	Pn	Pn	16 00 11.3	-0.1
PWL	Port Wells	2.90	55	P	Pn	16 00 11.3	-0.1
	baz=239						
P23K	Montague Islan	3.02	74	P	Pn	16 00 13.5	+0.5
	baz=259						
L19K	White Mountain	3.02	345		Pn	16 00 13.2	+0.1
N16K	Nishlik Lake	3.06	295	P	Pn	16 00 14.1	+0.4
	baz=111						
PMR	Palmer	3.06	39	Pn	Pn	16 00 13.4	-0.2
PMR				IAML		16 00 50.4	
	comp=E,127nm,0.2s						
PMR				IAML		16 00 50.8	
	comp=N,172nm,0.3s						
PMR	Palmer	3.06	39	P	Pn	16 00 14.8	+1.2
PMR	Palmer	3.06	39	P	Pn	16 00 13.3	-0.2
	baz=223						
KNK	Knik Glacier	3.17	46		Pn	16 00 15.3	+0.1
KNK				IAML		16 00 52.6	
	comp=N,350nm,0.2s						
KNK	Knik Glacier	3.17	46	P	Pn	16 00 14.9	-0.2
	baz=230						
GHO	Glory Hole Cre	3.26	38		Pn	16 00 17.1	+0.6
GHO				IAML		16 00 53.6	
	comp=E,253nm,0.5s						
GHO				IAML		16 01 01.7	
	comp=N,217nm,0.9s						
CUT	Chulitna	3.44	23		Pn	16 00 19.4	+0.8
CUT				IAML		16 01 05.5	
	comp=N,253nm,0.4s						
CUT				IAML		16 01 16.1	
	comp=E,225nm,0.6s						
CUT	Chulitna	3.44	23	P	Pn	16 00 19.3	+0.6
	baz=206						
SML	Sawmill	3.48	41		Pn	16 00 19.3	0.0
SML				IAML		16 01 10.8	
	comp=N,152nm,0.8s						
SML				IAML		16 01 24.6	
	comp=E,111nm,1.1s						
SML	Sawmill	3.48	41	P	Pn	16 00 19.7	+0.4
	baz=226						
Q23K	Middleton Isla	3.50	85	Pn	Pn	16 00 19.7	+0.3
Q23K				IAML		16 01 03.3	
	comp=E,259nm,0.9s						
MID	Middleton Isla	3.50	85	Pn	Pn	16 00 19.7	+0.2
MID				IAML		16 01 01.2	
	comp=E,251nm,1.5s						
PPLA	Purkeypile	3.66	7		Pn	16 00 23.7	+1.9
PPLA	Purkeypile	3.66	7	P	Pn	16 00 23.2	+1.4
	baz=188						
M23K	Glacier View	3.69	45	P	Pn	16 00 22.4	+0.3
	baz=230						
SCM	Sheep Creek Mo	3.86	46		Pn	16 00 24.5	+0.1
SCM				IAML		16 01 09.0	
	comp=E,179nm,0.7s						
SCM				IAML		16 01 09.9	
	comp=N,159nm,0.4s						
SCM	Sheep Creek Mo	3.86	46	P	Pn	16 00 24.5	+0.1
	baz=231						
TTA	Tatalina	3.91	341	Pn	Pn	16 00 25.0	-0.1
TTA	Tatalina	3.91	341	P	Pn	16 00 25.1	-0.1
TTA	Tatalina	3.91	341	P	Pn	16 00 25.0	-0.1
	baz=158						
EYAK	Cordova Ski Ar	3.95	68		Pn	16 00 25.1	-0.5
EYAK	Cordova Ski Ar	3.95	68	P	Pn	16 00 25.0	-0.5
	baz=255						
CHGN	Chignik	4.10	225		Pn	16 00 27.7	+0.1
CHGN				IAML		16 01 14.1	
	comp=N,60nm,0.3s						
CHGN	Chignik	4.10	225	P	Pn	16 00 27.8	+0.3
	baz=41						
K20K	Telida	4.11	354		Pn	16 00 28.3	+0.5
K20K	Telida	4.11	354	P	Pn	16 00 28.0	+0.2
	baz=174						
DIV	Divide	4.13	60		Pn	16 00 28.4	+0.3
CAST	Castle Rocks	4.18	7		Pn	16 00 29.6	+0.8
CAST	Castle Rocks	4.18	7	P	Pn	16 00 29.2	+0.4
	baz=188						
KLU	Klutina	4.22	55		Pn	16 00 29.1	-0.2
KLU	Klutina	4.22	55	P	Pn	16 00 29.2	-0.2
	baz=242						
TRF	Thorofare Moun	4.41	17		Pn	16 00 32.3	+0.4
TRF				IAML		16 01 25.7	
	comp=N,83nm,0.6s						
TRF				IAML		16 01 25.8	
	comp=E,97nm,0.6s						
TRF	Thorofare Moun	4.41	17	P	Pn	16 00 32.2	+0.4
	baz=200						
KTH	Kantishna Hill	4.42	13		Pn	16 00 32.0	0.0
KTH	Kantishna Hill	4.42	13	IAML		16 01 27.0	
	comp=N,49nm,0.5s						
KTH				IAML		16 01 29.2	
	comp=E,44nm,0.5s						
M24K	Tolsona, Glenn	4.46	48		Pn	16 00 32.6	+0.2
M24K				IAML		16 01 26.5	
	comp=N,114nm,0.4s						
M24K	Tolsona, Glenn	4.46	48	P	Pn	16 00 32.7	+0.2
	baz=234						
RND	Reindeer	4.63	25		Pn	16 00 35.3	+0.5
RND	Reindeer	4.63	25	IAML		16 01 27.7	
	comp=E,70nm,0.6s						
RND				IAML		16 01 28.1	
	comp=N,63nm,0.7s						
CHUM	Lake Minchumin	4.63	5		Pn	16 00 35.3	+0.5
N25K	Chitina, Valde	4.84	58	Pn	Pn	16 00 37.8	0.0
N25K				IAML		16 01 31.4	
	comp=N,77nm,0.6s						
N25K				IAML		16 01 31.9	
	comp=E,67nm,0.6s						
N25K	Chitina, Valde	4.84	58	P	Pn	16 00 37.7	0.0
	baz=245						
MCK	McKinley	4.90	23	Pn	Pn	16 00 39.2	+0.6
MCK	McKinley	4.90	23	P	Pn	16 00 39.1	+0.6
	baz=207						
BPAW	Bear Paw Mtn.	4.95	11		Pn	16 00 39.1	+0.1
BPAW	Bear Paw Mtn.	4.95	11	IAML		16 01 33.9	
	comp=N,28nm,0.6s						
BPAW				IAML		16 01 38.6	
	comp=E,36nm,0.5s						
BPAW	Bear Paw Mtn.	4.95	11	P	Pn	16 00 39.5	+0.5
	baz=193						
HARP	HAARP	5.01	48	P	Pn	16 00 40.6	+0.6
	baz=235						
GLB	Gilahina Butte	5.13	61		Pn	16 00 41.3	-0.2
GLB	Gilahina Butte	5.13	61	IAML		16 01 40.5	
	comp=E,61nm,0.3s						
GLB				IAML		16 01 40.5	
	comp=N,76nm,0.4s						
BWN	Browne	5.21	18		Pn	16 00 43.2	+0.6
BWN	Browne	5.21	18	IAML		16 02 11.8	
	comp=E,41nm,1.0s						
BWN				IAML		16 02 14.8	
	comp=N,54nm,0.9s						
VRDI	Verde Repeater	5.22	64		Pn	16 00 42.7	-0.2
VRDI	Verde Repeater	5.22	64	IAML		16 01 41.8	
	comp=N,77nm,0.2s						
VRDI				IAML		16 01 42.9	
	comp=E,39nm,0.5s						
PAX	Paxson	5.25	42		Pn	16 00 43.7	+0.4
PAX	Paxson	5.25	42	P	Pn	16 00 43.6	+0.4
	baz=229						
MCARA	McCarthy VSAT	5.46	63		Pn	16 00 46.8	+0.7
MCARA	McCarthy VSAT	5.46	63	P	Pn	16 00 46.8	+0.7
	baz=252						
KIAG	Kiagna River	5.66	68		Pn	16 00 48.9	+0.1
NEA2	Nenana	5.67	18		Pn	16 00 48.3	-0.5
NEA2	Nenana	5.67	18	P	Pn	16 00 48.5	-0.4
	baz=202						
BALM	Baldy	5.69	67		Pn	16 00 49.2	0.0
WRH	Wood River Hil	5.73	23		Pn	16 00 49.2	-0.5
GCSA	Galena City Sc	5.75	344	P	Pn	16 00 50.0	+0.1
	baz=161						
MENT	Mentasta	5.87	47	P	Pn	16 00 53.3	+1.7
M26K	Nabesna, AK	5.88	54		Pn	16 00 52.4	+0.6
MLY	Manley	5.88	10		Pn	16 00 52.0	+0.2
MLY	Manley	5.88	10	P	Pn	16 00 52.0	+0.2
	baz=192						
HDA	Harding Lake	5.93	27		Pn	16 00 52.0	-0.3
HDA	Harding Lake	5.93	27	P	Pn	16 00 52.2	-0.1
	baz=213						
I21K	Tanana	5.95	5		Pn	16 00 52.6	+0.1
CCB	Clear Creek Bu	5.95	23	Pn	Pn	16 00 52.2	-0.4
RIDG	Independent Ri	5.99	38		Pn	16 00 53.6	+0.4
RIDG	Independent Ri	5.99	38	P	Pn	16 00 53.6	+0.4
	baz=226						
BARN	Barnard Glacie	6.02	68		Pn	16 00 54.4	+0.6
L26K	Log Cabin Wild	6.06	48		Pn	16 00 55.7	+1.6
TCOL	CIGO, UAF Yank	6.14	22		Pn	16 00 55.1	-0.1
TCOL	CIGO, UAF Yank	6.14	22	P	Pn	16 00 55.2	+0.1
	baz=207						
COLA	College	6.14	22		Pn	16 00 55.0	-0.2
COLA	College	6.14	22	P	Pn	16 00 55.2	0.0
MDM	Murphy Dome	6.15	20		Pn	16 00 55.1	-0.2
I23K	Minto, Yukon-K	6.15	15		Pn	16 00 55.5	+0.2
I23K	Minto, Yukon-K	6.15	15	P	Pn	16 00 55.1	-0.2
	baz=199						
DOT	Dot Lake	6.18	41		Pn	16 00 56.3	+0.5
IL31		6.25	26		Pn	16 00 56.2	-0.4
ILAR	Eielson Array	6.25	26	P	Pn	16 00 56.1	-0.6
	comp=E,12nm,0.5s,baz=209,slow=13,SNR=154						
ILAR				S	Sn	16 02 03.9	-2.7
	comp=E,11nm,0.5s,baz=205,slow=24,SNR=14						
M27K	Edge Creek, AK	6.33	56		Pn	16 00 58.6	+0.7
M27K	Edge Creek, AK	6.33	56	P	Pn	16 00 58.5	+0.7
	baz=246						
SAMH	Samovar Hills	6.33	77		Pn	16 00 59.3	+1.3
H21K	Melozitna Rive	6.40	1		Pn	16 00 59.1	+0.4
SCRK	Sand Creek	6.43	39	Pn	Pn	16 00 58.7	-0.5
SCRK	Sand Creek	6.43	39	P	Pn	16 00 58.7	-0.5
	baz=227						
POKR	Poker Plat Res	6.44	22		Pn	16 00 59.0	-0.3
POKR	Poker Plat Res	6.44	22	P	Pn	16 00 59.4	+0.1
	baz=208						
PCA	Pinnacle	6.59	77		Pn	16 01 02.3	+0.8
PINM	Pinnacle	6.59	77	P	Pn	16 01 02.5	+1.1
	baz=269						
L27K	Beaver Creek,	6.67	51		Pn	16 01 03.5	+1.1
L27K	Beaver Creek,	6.67	51	P	Pn	16 01 02.6	+0.2
	baz=241						
BCAR	Beaver Creek A	6.68	51		Pn	16 01 03.0	+0.3
IMAR	Indian Mountai	6.73	358		Pn	16 01 03.6	+0.4
YUK3	Moose Creek	6.75	63	P	Pn	16 01 04.5	+0.8
	baz=254						
H23K	Yukon River	6.78	13		Pn	16 01 03.9	0.0
H23K	Yukon River	6.78	13	P	Pn	16 01 03.8	-0.1
	baz=196						
BCPM	Bancas Point	6.90	79	Pn	Pn	16 01 06.5	+0.9
H24K	Noodor Dome	7.02	18	Pn	Pn	16 01 06.8	-0.4
H24K	Noodor Dome	7.02	18	P	Pn	16 01 06.8	-0.4
	baz=203						
PNL	Peninsula	7.03	81	P	Pn	16 01 07.9	+0.5
PNL	Peninsula	7.03	81	P	Pn	16 01 07.8	+0.4
	baz=273						
K27K	Chicken	7.11	43		Pn	16 01 09.1	+0.7
PRP	Porcupine Dome	7.19	26	Pn	Pn	16 01 09.6	0.0
PRP	Porcupine Dome	7.19	26	P	Pn	16 01 09.7	0.0
	baz=213						
G23K	Bananza Creek	7.59	10	P	Pn	16 01 14.7	-0.2
	baz=192						
I26K	Coal Creek Min	7.63	33		Pn	16 01 14.9	-0.5
ANM	Nome	7.81	318		Pn	16 01 19.4	+1.4
EGAK	Eagle	7.88	41		Pn	16 01 18.5	-0.3
EGAK	Eagle	7.88	41	P	Pn	16 01 18.6	-0.3
	baz=231						
HYT	Haines Junctio	7.99	72	Pn	Pn	16 01 21.5	+1.0
COLD	Coldfoot	8.09	8		Pn	16 01 20.7	-1.0
DAWY	Dawson	8.11	48	Pn	Pn	16 01 22.4	+0.3
DAWY	Dawson	8.11	48	P	Pn	16 01 22.4	+0.3
	baz=240						
FYU	Fort Yukon	8.15	23		Pn	16 01 21.4	-1.1
I27K	Kandik River	8.29	35	P	Pn	16 01 24.1	-0.4
	baz=226						
M30M	Minto, Yukon	8.63	61	Pn	Pn	16 01 29.1	+0.1
N31M	Braeburn, Yuko	8.89	68	Pn	Pn	16 01 32.6	0.0
S31K	Pelican	8.94	91	P	Pn	16 01 33.0	-0.2
	baz=286						
BMAR	Burnt Mountain	9.03	22	Pn	Pn	16 01 32.9	-1.7
SKAG	Skagway	9.11	81	Pn	Pn	16 01 37.0	+1.4
SKAG	Skagway	9.11	81	P	Pn	16 01 37.5	+1.9
UNV	Unalaska Valle	9.15	239	Pn	Pn	16 01 34.9	-1.2
BESE	Bessie Mountai	9.50	86	Pn	Pn	16 01 43.3	+2.3
M31M	Drury Creek, Y	9.64	64	Pn	Pn	16 01 43.4	+0.5
SIT	Sitka	9.69	96	Pn	Pn	16 01 43.1	-0.4
JIS	Juneau Island	9.81	88	Pn	Pn	16 01 47.2	+2.1
FARO	Faro, Yukon	10.13	65	Pn	Pn	16 01 50.3	+0.8
P33M	Teslin, Yukon	10.31	76	Pn	Pn	16 01 52.7	+0.7
DLBC	Dease Lake	12.00	84	P	Pn	16 02 17.2	+2.5
	comp=E,3.6nm,0.3s,baz=243,slow=12,SNR=31						
DLBC				S	Sn	16 04 23.6	-2.9
	comp=E,0.8nm,0.3s,baz=166,slow=19,SNR=2.2						
DLBC	Dease Lake	12.00	84	Pn	Pn	16 02 17.9	+3.1
INK	Inuvik	12.47	35	P	Pn	16 02 20.3	-0.5
	comp=E,2.2nm,0.7s,baz=229,slow=14,SNR=14						
INK	Inuvik	12.47	35	Pn	Pn	16 02 19.6	-1.2
MOBC	Moresby Island	13.27	108	Pn	Pn	16 02 32.8	+1.3
C36M	Paulatuk	15.95	39	Pn	Pn	16 03 03.6	-2.0
C36M				IAmb	IAmb	16 03 08.7	
	comp=Z,2.4nm,0.6s						
A36M	Sachs Harbour	16.92	30	Pn	Pn	16 03 18.1	+0.6
A36M				IAmb	IAmb	16 03 52.7	
	comp=Z,5.4nm,0.9s						
YKA	Yellowknife Ar	18.84	64	P	P	16 03 40.3	+1.3
	comp=Z,0.3nm,0.6s,baz=276,slow=10,SNR=11						
BILL	Bilibino	19.63	313	P	P	16 03 46.8	-0.9
BILL				IAmb	IAmb	16 04 16.1	
	comp=Z,5.5nm,1.4s						
SEY	Seymchan	25.88	302	P	P	16 04 49.6	+0.2
	comp=Z,0.3nm,0.3s,baz=51,slow=14,SNR=2.4						
	comp=Z,0.3nm,0.3s						
PETK	Petropavlovsk-	27.48	279	P	P	16 05 03.8	-0.1
	comp=Z,1.3nm,0.7s,baz=69,slow=11,SNR=13						
	comp=Z,1.3nm,0.7s						
PDAR	Pinedale Array	31.32	102	LR	LR	16 18 41.8	
	comp=Z,189nm,18.1s,baz=3.0,slow=37						
KSRS	Korea Array	53.25	283	P	P	16 08 36.4	+1.0
	comp=Z,0.9nm,0.6s,baz=37,slow=6.8,SNR=7.6						
	comp=Z,0.9nm,0.6s						
SONM	Songino Array	55.14	306	P	P	16 08 49.6	+0.4
	comp=Z,1.4nm,0.7s,baz=39,slow=7.3,SNR=11						
	comp=Z,1.4nm,0.7s						
ZALV	Zalesovo Beam	57.90	324	P	P	16 09 07.4	-1.1
	comp=Z,0.7nm,0.5s,baz=29,slow=7.3,SNR=3.7						
	comp=Z,0.7nm,0.5s						
MKAR	Makanchi Array	64.94	321	P	P	16 09 55.3	-0.7
	comp=Z,0.1nm,0.5s,baz=29,slow=5.7,SNR=1.5						
	comp=Z,0.1nm,0.5s						
BOSA	Boshof	149.32	3	PKPbc	PKPbc	16 19 04.3	+0.1
	comp=Z,1.7nm,0.7s,baz=359,slow=4.7,SNR=6.0						

DJA 25 16:03:23.8±0.5,3°S±5°×13°7E±°,h53^{km}±15^{km},M3.7/7, mb3.9/1,MLv3.6/7,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRPI	Serui, Papua	0.93	334	P	Pn	16 03 40.8	+0.1
SRPI				S	Sn	16 03 54.2	+1.1
SMPI	Sarmi	2.18	71	P	Pn	16 03 56.9	-0.7
RKPI	Ransiki, Papua	2.74	296	P	Pn	16 04 04.5	-0.9
RKPI				S	Sn	16 04 38.2	+0.9
GENI	Genyem	3.52	88	P	Pn	16 04 16.6	+0.6
FAKI	Fak Fak	4.40	267	P	Pn	16 04 28.1	0.0

BGR ***25*** *16:07:41.6, 16°.96S×179°.86E, h33^{km}*

NEIC ***25*** *16:08:35.2±2.4, 17°.8S±0°.1×178°.5W±0°.1, h558^{km}±8^{km}, mb4.4/40, Error ellipse: s-maj=22.0km s-min=16.1km az=135.0*

NOU ***25*** *16:08:36.1, 17°.63S×178°.55W, h578^{km}, mb4.4/22, Fiji Islands Region*

IDC ***25*** *16:08:38.5±1.2, 17°.69S×178°.79W, h580^{km}±9^{km}, mb3.4/12, mbtmp4.3/14, Error ellipse: s-maj=29.7km s-min=13.7km az=144.0*

ISC 25 16:08:36.9±0.5,17°.89S±0°.10×178°.58W±0°.08,h580^{km}, n135,σ1§21/131,mb4.2/32,1C,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	Tubou, Lakemba	0.41	214	P	P	16 09 44.7	-0.5
TAVE	Taveuni	1.73	313	P	P	16 09 47.7	-0.7
MSVF	Nonsavu	3.22	272	P	P	16 09 55.7	-0.2
	15nm,0.5s,baz=69,slow=3.1,SNR=31						
MSVF				S	S	16 11 00.5	+0.4
	9.3nm,0.8s,baz=90,slow=20,SNR=9.5						
MSVF	Nonsavu	3.22	272	P	P	16 09 53.9	-1.9
MSVF	Nonsavu	3.22	272	P	P	16 09 56.0	+0.2
AFI	Afiamalu	7.65	60	P	P	16 10 29.1	-3.2
	56nm,0.6s,baz=47,slow=2.8,SNR=18						
AFI				S	S	16 12 03.2	-3.6
	19nm,0.7s,baz=31,slow=22,SNR=2.2						
AFI	Afiamalu	7.65	60	P	P	16 10 29.4	-2.9
NIUE	Niue	8.29	100	P	P	16 10 37.6	-0.8
LIFNC	LIFOU	13.69	256	P	P	16 11 29.4	-3.5
LIFNC	LIFOU	13.69	256	P	P	16 11 32.7	-0.2
PINNC	Pines Island,	13.93	248	P	P	16 11 34.0	-1.3
PINNC	Pines Island,	13.93	248	P	P	16 11 34.3	-1.0
YATNC	Mamie plateau,	14.28	251	P	P	16 11 38.4	-0.4
OUENC	Ouen Island, N	14.41	249	P	P	16 11 38.3	-1.7
OUENC	Ouen Island, N	14.41	249	P	P	16 11 39.0	-1.1
DZM	Mont Dzumac	14.68	251	P	P	16 11 41.7	-1.1
	9.7nm,0.4s,baz=86,slow=19,SNR=29						
DZM	Mont Dzumac	14.68	251	P	P	16 11 41.2	-1.6
DZM	Mont Dzumac	14.68	251	P	P	16 11 41.6	-1.2
ONTNC	Ouen Toro	14.73	250	P	P	16 11 42.1	-1.1
ONTNC	Ouen Toro	14.73	250	P	P	16 11 42.9	-0.2
NOUC	Port Laguerre	14.82	251	P	P	16 11 42.8	-1.1
KOUNC	Koumac, New Ca	16.40	258	P	P	16 11 59.5	+0.6
KOUNC	Koumac, New Ca	16.40	258	P	P	16 11 59.5	+0.6
OUZ	Omahuta	18.61	200	P	P	16 12 20.6	+1.8
URZ	Urewera	20.64	190	P	P	16 12 36.4	-0.7
	5.3nm,0.9s,baz=45,slow=2.9,SNR=2.1						
TKNZ	Takaka Hill	24.18	196	P	P	16 13 09.3	+0.6
NNZ	Nelson	24.25	195	P	P	16 13 10.0	+0.7
LTZ	Lake Taylor	26.00	195	P	P	16 13 23.8	-1.0
INZ	Inchbonnie	26.17	197	P	P	16 13 25.1	-1.1
OXZ	Oxford	26.57	195	P	P	16 13 29.8	0.0
OXZ				IAmb	IAmb	16 14 08.1	
	comp=Z,17nm,1.1s						
WKZ	Wanaka	28.80	199	P	P	16 13 48.9	-0.2
MLZ	Mavora Lakes	29.56	199	P	P	16 13 56.8	+1.0
ARMA	Armidale	29.81	240	P	P	16 13 59.0	+0.8
ARMA				IAmb	IAmb	16 14 00.3	
	comp=Z,9.3nm,0.7s						
ARMA	Armidale	29.81	240	P	P	16 13 59.6	+1.4
MGCD	Mangrove Creek	31.17	235	P	P	16 14 11.4	+1.7
RMQ	Roma	31.36	248	P	P	16 14 11.6	+0.1
CTAO	Charters Tower	33.29	261	P	P	16 14 27.4	-0.5
CTAO				IAmb	IAmb	16 14 44.1	
	comp=Z,18nm,1.2s						
CAN	Canberra	33.59	232	P	P	16 14 29.6	-0.5
CAN				IAmb	IAmb	16 14 38.4	
	comp=Z,13nm,1.3s						
CAN	Canberra	33.59	232	P	P	16 14 31.5	+1.3
COEN	Coen	36.95	270	P	P	16 14 57.8	-0.4
COEN				IAmb	IAmb	16 14 59.1	
	comp=Z,8.4nm,0.7s						
TOO	Toolangi	37.06	231	P	P	16 15 00.3	+1.5
STKA	Stephens Creek	38.50	241	P	P	16 15 11.7	+1.1
	comp=Z,6.9nm,0.4s,baz=91,slow=10,SNR=26						
	comp=Z,6.9nm,0.4s						
STKA	Stephens Creek	38.50	241	P	P	16 15 11.8	+1.2
BBOO	Buckleboo	43.27	241	P	P	16 15 49.3	+0.9
WB0	Warramunga Arr	44.45	260	P	P	16 15 56.6	-1.0
WB0				IAmb	IAmb	16 16 18.9	
	comp=Z,13nm,1.4s						
WB2	Warramunga Arr	44.47	260	P	P	16 15 56.8	-1.0
WRAB	Tennant Creek	44.47	260	P	P	16 15 57.0	-0.8
WRA	Warramunga Arr	44.48	260	P	P	16 15 57.4	-0.6
	comp=Z,2.8nm,0.6s,baz=92,slow=7.0,SNR=30						
	comp=Z,2.8nm,0.6s						
WRA	Warramunga Arr	44.48	260	P	P	16 15 56.8	-1.2
AS31	Alice Springs	44.64	254	P	P	16 15 59.4	+0.2
AS31				IAmb	IAmb	16 16 00.0	
	comp=Z,8.7nm,0.7s						
ASAR	Alice Springs	44.64	254	P	P	16 15 59.5	+0.3
	comp=Z,31nm,0.6s,baz=88,slow=8.2,SNR=294						
ASAR				ScP	ScP	16 20 29.5	+2.9
	comp=Z,0.4nm,0.6s,baz=84,slow=4.7,SNR=2.9						
	comp=Z,31nm,0.6s						
ASAR	Alice Springs	44.64	254	P	P	16 15 59.0	-0.2
FORT	Forrest	49.87	245	P	P	16 16 36.0	-2.1
FORT				IAmb	IAmb	16 16 38.9	
	comp=Z,12nm,0.7s						
FITZ	Fitzroy Crossi	52.87	261	P	P	16 16 59.3	-0.7
SOEI	Soe	55.91	270	P	P	16 17 21.7	+0.3
SOEI				IAmb	IAmb	16 17 57.4	
	comp=Z,31nm,1.2s						
PSA00	Pilbara Seismi	57.76	255	P	P	16 17 32.6	-1.2
PSA00	Pilbara Seismi	57.76	255	P	P	16 17 33.6	-0.2
PSA00				IAmb	IAmb	16 18 05.8	
	comp=Z,17nm,1.5s						
MBWA	Marble Bar	57.92	256	P	P	16 17 34.2	-0.7
MBWA				IAmb	IAmb	16 18 03.3	
	comp=Z,15nm,1.4s						
MORW	Morawa	60.34	246	P	P	16 17 49.8	-1.2
MORW				IAmb	IAmb	16 18 29.2	
	comp=Z,23nm,1.4s						
MJAR	Matsushiro Arr	67.80	323	P	P	16 18 37.4	-0.6
	comp=Z,2.1nm,0.6s,baz=160,slow=5.9,SNR=15						
	comp=Z,2.1nm,0.6s						
MAJO	Matsushiro	67.80	323	P	P	16 18 36.3	-1.7
MAJO				IAmb	IAmb	16 18 38.2	
	comp=Z,4.3nm,0.6s						
MJB9	Matsu-Tunnel	67.81	323	P	P	16 18 37.1	-0.9
MJB9				IAmb	IAmb	16 18 39.2	
	comp=Z,4.2nm,0.6s						
JSU	Suzuyama	69.31	315	P	P	16 18 46.1	-1.0
JHS	Saijyo	69.78	319	P	P	16 18 49.3	-0.6
JHS				IAmb	IAmb	16 18 54.5	
	comp=Z,24nm,1.3s						
JKA	Kamikawa-asahi	71.19	332	P	P	16 18 58.0	+0.1
QSPA	South Pole Qui	72.16	180	P	P	16 19 01.5	-1.9
PEA0B	Petropavlovsk-	73.63	345	P	P	16 19 11.6	-0.2
PETK	Petropavlovsk-	73.63	345	P	P	16 19 12.1	+0.3
	comp=Z,4.0nm,0.7s,baz=126,slow=7.9,SNR=8.5						
	comp=Z,4.0nm,0.7s						
PETK	Petropavlovsk-	73.63	345	P	P	16 19 10.1	-1.7
KSRS	Korea Array	74.59	318	P	P	16 19 18.8	+1.3
	comp=Z,0.8nm,0.7s,baz=128,slow=7.7,SNR=2.6						

	comp=Z,0.8nm,0.7s						
USRK	**Ussuriysk Ar.**	76.51	326	P	P	16 19 29.0	+1.0
	comp=Z,0.5nm,0.5s,baz=122,slow=5.4,SNR=4.3						
	comp=Z,0.5nm,0.5s						
NVAR	**Mina Array Bea**	79.52	44	P	P	16 19 46.2	+1.6
	comp=Z,1.0nm,0.6s,baz=229,slow=7.9,SNR=9.0						
	comp=Z,1.0nm,0.6s						
K05A	**Summer Lake**	80.29	39	P	P	16 19 48.0	-0.5
ILSW	**Iliamna Southw**	80.31	13	P	P	16 19 47.6	-0.4
ILSW				IAmb	IAmb	16 19 48.5	
	comp=Z,8.3nm,0.8s						
J05D	**Fort Rock, OR**	80.41	39	P	P	16 19 49.9	+0.9
BRLK	**Bradley Lake**	80.60	14	P	P	16 19 45.8	-3.7
BRLK				IAmb	IAmb	16 19 50.3	
	comp=Z,12nm,1.0s						
SUA	**Susitna One**	82.16	13	P	P	16 19 56.9	-0.6
CAST	**Castle Rocks**	83.65	12	P	P	16 20 01.6	-3.2
CAST				IAmb	IAmb	16 20 05.0	
	comp=Z,5.0nm,0.7s						
N25K	**Chitina, Valde**	83.73	16	P	P	16 20 05.1	-0.2
N25K				IAmb	IAmb	16 20 06.4	
	comp=Z,5.7nm,0.7s						
TRF	**Thorofare Moun**	84.03	12	P	P	16 20 05.7	-1.1
TRF				IAmb	IAmb	16 20 07.2	
	comp=Z,7.7nm,0.8s						
ILAR	**Eielson Array**	85.91	13	P	P	16 20 15.1	-0.6
	comp=Z,0.9nm,0.4s,baz=224,slow=5.2,SNR=15						
	comp=Z,0.9nm,0.4s						
TXAR	**Lajitas Array**	86.12	58	P	P	16 20 20.3	+2.7
	comp=Z,0.9nm,0.7s,baz=216,slow=6.4,SNR=13						
	comp=Z,0.9nm,0.7s						
PDAR	**Pinedale Array**	87.45	43	P	P	16 20 25.1	+1.4
	comp=Z,0.9nm,0.5s,baz=207,slow=2.9,SNR=11						
	comp=Z,0.9nm,0.5s						
YKA	**Yellowknife Ar**	94.39	25	P	P	16 20 55.4	+0.4
	comp=Z,0.3nm,0.6s,baz=242,slow=4.4,SNR=9.5						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	109.01	314	PKiKP	PKiKP	16 26 00.9	-0.4
	comp=Z,0.3nm,0.5s,baz=162,slow=1.2,SNR=5.9						
BVAR	**Borovoye Array**	116.73	321	PKP	PKPdf	16 26 16.2	+0.4
	comp=Z,0.7nm,0.4s,baz=108,slow=2.7,SNR=4.7						
ARCES	**ARCESS Array B**	126.27	350	PKP	PKPdf	16 26 34.8	+1.2
	comp=Z,1.8nm,0.9s,baz=50,slow=1.4,SNR=0.8						
FINES	**FINESS Array B**	133.13	344	PKhKP	PKPpre	16 26 41.3	
	comp=Z,2.3nm,0.9s,baz=117,slow=4.8,SNR=2.7						
EKA	**Eskdalemuir Ar**	142.47	4	PKhKP	PKPpre	16 27 00.6	
	comp=Z,0.1nm,0.3s,baz=335,slow=3.1,SNR=3.6						
BUR08	**Bucovina Ar. S**	144.51	332		PKPab	16 27 10.0	+1.1
BRTR	**Keskin Array B**	144.66	315	PKP	PKPbc	16 27 09.8	+0.8
	comp=Z,1.5nm,0.7s,baz=89,slow=1.7,SNR=9.9						
BRTR	**Keskin Array B**	144.66	315		PKPbc	16 27 10.0	+1.0
FLTG	**Flechtingen**	144.78	350	*e*PKPbc	PKPbc	16 27 09.5	+0.8
	baz=20,slow=3.2						
OSTC	**Ostas**	145.33	343	*e*PKP	PKPab	16 27 12.0	+0.2
CHVC	**Chvalec**	145.35	344	*e*PKP	PKPab	16 27 12.1	+0.2
CLZ	**Clausthal**	145.40	350	*e*PKPbc	PKPbc	16 27 11.6	+0.9
	baz=20,slow=3.2						
CLL	**Collm**	145.41	347		PKPbc	16 27 11.8	+1.1
CLL	**Collm**	145.41	347	⇑*i*PKPbc	PKPbc	16 27 11.5	+0.9
	comp=Z,7.0nm,0.6s						
CLL	**Collm**	145.41	347	*e*PKPbc	PKPbc	16 27 11.7	+1.1
	baz=20,slow=3.2						
UPC	**Upice**	145.43	344	*e*PKP	PKPbc	16 27 12.1	+1.4
DPC	**Dobruska-Polom**	145.49	343	*e*PKP	PKPbc	16 27 12.2	+1.2
KRLC	**Kraliky**	145.61	342	*e*PKP	PKPbc	16 27 11.9	+0.6
BRG	**Berggiesshubel**	145.61	346	*e*PKPbc	PKPbc	16 27 12.2	+1.0
	baz=20,slow=3.2						
FBE	**Freiberg**	145.70	347	*e*PKPbc	PKPbc	16 27 12.4	+0.9
	baz=20,slow=3.2						
MLR	**Muntele Rosu**	145.74	329	PKPbc	PKPbc	16 27 13.5	+1.6
	comp=Z,1.1nm,0.3s,baz=333,slow=2.3,SNR=3.5						
MOX	**Moxa**	146.32	348	*e*PKPbc	PKPbc	16 27 14.4	+1.2
	baz=20,slow=3.2						
VRAC	**Vranov**	146.35	342	*e*PKP	PKPbc	16 27 14.7	+1.3
TANN	**Tannenbergstha**	146.37	347	*e*PKPbc	PKPbc	16 27 14.6	+1.1
	baz=20,slow=3.2						
WERD	**Werda**	146.37	347	*e*PKPbc	PKPbc	16 27 14.5	+1.1
	baz=20,slow=3.2						
GUNZ	**Gunzen**	146.45	347	*e*PKPbc	PKPbc	16 27 14.9	+1.3
	baz=20,slow=3.2						
WERN	**Wernitzgruen**	146.51	347	*e*PKPbc	PKPbc	16 27 14.9	+1.1
	baz=20,slow=3.2						
KRUC	**Moravsky**	146.63	342	*e*PKP	PKPbc	16 27 14.8	+0.7
MANZ	**Manzenberg**	146.85	347	*e*PKPbc	PKPbc	16 27 16.1	+1.4
	baz=20,slow=3.2						
ROTZ	**Rotzenmuhle**	147.04	347	*e*PKPbc	PKPbc	16 27 16.6	+1.4
	baz=20,slow=3.2						
TNS	**Taunus Mts**	147.26	352	*e*PKPbc	PKPbc	16 27 16.8	+1.0
	baz=20,slow=3.2						
KHC	**Kasperske Hory**	147.32	345	*e*PKP	PKPbc	16 27 17.0	+1.0
CKRC	**Cesky Krumlov**	147.43	344	*e*PKP	PKPbc	16 27 17.5	+1.2
GEC2	**GERESS Array S**	147.56	345	*e*PKPbc	PKPbc	16 27 17.8	+1.1
	baz=20,slow=3.2						
GERES	**GERESS Array B**	147.56	345	PKPbc	PKPbc	16 27 17.6	+0.9
	comp=Z,1.7nm,0.5s,baz=22,slow=3.0,SNR=17						
CONA	**Conrad Observa**	147.80	342	*i* PKP	PKPbc	16 27 18.6	+1.2
	comp=Z,2.1nm,0.6s						
RONA	**Rosalia, Austr**	147.87	341	*i* PKP	PKPbc	16 27 18.7	+1.2
	comp=Z,2.3nm,0.6s						
FUR	**Furstenfeldbru**	148.75	347	*e*PKPbc	PKiKP	16 27 22.5	+1.9
	baz=20,slow=3.2						
KBA	**Koelnbreinsper**	149.28	344	*i* PKP	PKPbc	16 27 21.2	+0.1
	comp=Z,2.1nm,0.4s						
WATA	**Walderalm**	149.47	346	*i* PKP	PKPbc	16 27 21.2	-0.3
	comp=Z,2.6nm,0.6s						
RETA	**Reutte**	149.51	347	*i* PKP	PKPbc	16 27 22.2	+0.7
	comp=Z,1.6nm,0.5s						
WTTA	**Wattenberg**	149.53	346	*i* PKP	PKPbc	16 27 22.5	+0.8
	comp=Z,3.6nm,0.4s						
MOTA	**Moosalm**	149.57	347	*i* PKP	PKPbc	16 27 22.3	+0.6
	comp=Z,4.9nm,1.0s						
MYKA	**Terra Mystica**	149.62	343	*i* PKP	PKPbc	16 27 21.8	0.0
	comp=Z,2.1nm,0.4s						
SQTA	**Sankt Quirin**	149.66	347	*i* PKP	PKPbc	16 27 22.7	+0.8
	comp=Z,3.0nm,0.5s						
ABTA	**Abfaltersbach**	149.80	345	*i* PKP	PKPbc	16 27 22.5	+0.2
	comp=Z,2.6nm,0.5s						
FETA	**Feichten**	149.96	347	*i* PKP	PKPbc	16 27 23.2	+0.6
	comp=Z,6.2nm,1.5s						
CIMO	**Cimolais**	150.23	345		PKPbc	16 27 23.5	+0.4
DAVOX	**Davos/Dischmat**	150.36	348	PKPbc	PKPbc	16 27 24.7	+1.0
	comp=Z,4.4nm,0.5s,baz=299,slow=6.7,SNR=12						
FUORN	**Ofenpass-Fuorn**	150.44	348		PKiKP	16 27 25.5	+1.1
FNA	**Florina**	151.45	327		PKPbc	16 27 26.7	+0.5

DJA 25 16:10:31.2±1.3,**3°S**±4°×**13°7E**±°,**h31**^{km}±16^{km},**M3.8**/7,
mb3.6/1,**MLv3.8**/7,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	0.99	323	P	Pb	16 10 49.5	-0.3
SRPI				S	Sn	16 11 02.1	+0.2
SMPI	**Sarmi**	2.00	70	P	Pn	16 11 02.7	-0.1
SMPI				S	Sn	16 11 27.8	+1.0
RKPI	**Ransiki, Papua**	2.89	293	P	Pn	16 11 14.8	-0.3
RKPI				S	Sn	16 11 49.6	+0.7
GENI	**Genyem**	3.33	89	P	Pn	16 11 21.5	+0.2
GENI				S	Sn	16 12 00.4	+0.5
FAKI	**Fak Fak**	4.58	267	P	Pn	16 11 37.4	-1.0

*IDC **25** 16:22:59.2±1.5,19°.51S×177°.41W,h561^{km}±15^{km},mb3.3/8,*
mbtmp4.2/11,Error ellipse: s-maj=28.1km s-min=16.1km
az=140.0
ISC 25 16:22:58.0±0.9,**19°.6S**±0°.2×**177°.3W**±0°.1,**h550**^{km},**n17**,
σ**1^{s}.16**/19,**mb3.8**/8,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	4.79	291	P	P	16 24 28.1	+2.0
	18nm,0.3s,baz=152,slow=15,SNR=83						
AFI	**Afiamalu**	7.70	44	P	P	16 24 54.9	+2.0
	15nm,0.4s,baz=256,slow=8.3,SNR=7.6						
AFI				S	S	16 26 25.6	-1.4
	26nm,0.8s,baz=204,slow=20,SNR=2.5						
DZM	**Mont Dzumac**	15.43	258	P	P	16 26 13.5	+1.5
	1.2nm,0.6s,baz=122,slow=19,SNR=1.4						
URZ	**Urewera**	19.27	193	P	P	16 26 46.8	-0.5
	4.0nm,0.8s,baz=338,slow=8.7,SNR=1.4						
CTA	**Charters Tower**	34.27	263	P	P	16 28 58.2	-0.7
	4.7nm,0.5s,baz=86,slow=9.4,SNR=19						
	4.7nm,0.5s						
STKA	**Stephens Creek**	38.81	243	P	P	16 29 36.9	+0.8
	0.8nm,0.3s,baz=71,slow=8.9,SNR=4.7						
	0.8nm,0.3s						
ASAR	**Alice Springs**	45.40	256	P	P	16 30 27.4	-0.7
	2.6nm,0.7s,baz=88,slow=8.9,SNR=28						
ASAR				PcP	PcP	16 31 55.8	+0.1
	0.8nm,0.5s,baz=104,slow=3.9,SNR=3.4						
	2.6nm,0.7s						
WRA	**Warramunga Arr**	45.41	261	P	P	16 30 26.9	-1.2
	1.5nm,0.3s,baz=94,slow=7.8,SNR=7.0						
WRA				PcP	PcP	16 31 56.1	+0.3
	0.3nm,0.4s,baz=100,slow=3.8,SNR=1.9						
	1.5nm,0.3s						
SIJI	**Sorong**	53.66	284	P	P	16 31 27.6	-1.2
	16nm,0.9s,baz=127,slow=15,SNR=5.0						
	16nm,0.9s						
MJAR	**Matsushiro Arr**	69.86	323	P	P	16 33 12.3	-1.5
	0.8nm,0.8s,baz=216,slow=1.3,SNR=5.3						
	0.8nm,0.8s						
ILAR	**Eielson Array**	87.25	13	P	P	16 34 45.5	-0.3
	0.4nm,0.6s,baz=222,slow=5.1,SNR=11						
	0.4nm,0.6s						
CMAR	**Chiang Mai Arr**	90.44	289	P	P	16 35 02.5	+0.9
	0.6nm,0.6s,baz=133,slow=2.8,SNR=4.4						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	111.04	314	PKiKP	PKiKP	16 40 28.2	-0.9
	0.1nm,0.3s,baz=103,slow=1.2,SNR=4.3						
ARCES	**ARCESS Array B**	128.11	350	PKP	PKPdf	16 41 01.0	-0.1
	1.3nm,0.8s,baz=357,slow=1.8,SNR=5.7						
AKASG	**Malin Array Be**	142.51	332	PKhKP	PKPpre	16 41 24.1	
	0.3nm,0.3s,baz=36,slow=3.9,SNR=4.9						
BRTR	**Keskin Array B**	146.69	314	PKPbc	PKPbc	16 41 38.3	-0.5
	0.8nm,0.6s,baz=137,slow=5.6,SNR=6.3						
GERES	**GERESS Array B**	149.47	346	PKPbc	PKPbc	16 41 45.7	+0.3
	0.6nm,0.7s,baz=352,slow=1.4,SNR=5.2						

*IDC **25** 16:23:60.0±6.2,6°.75S×129°.00E,h90^{km}±77^{km},mb3.2/1,*
mbtmp3.7/4,ML3.8/3,Error ellipse: s-maj=120.4km
s-min=25.6km az=83.0
ISC 25 16:24:04.6±1.0,**6°.60S**±0°.07×**129°.9E**±0°.1,**h150**^{km},**n14**,
σ**2^{s}.09**/16,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	1.99	134	P	Pn	16 24 43.8	+4.2
FAKI	**Fak Fak**	4.37	33	P	Pn	16 25 10.7	+1.0
SIJI	**Sorong**	5.87	14	P	Pn	16 25 30.0	+0.4
	2.3nm,0.3s,baz=186,slow=18,SNR=38						
SIJI				S	Sn	16 26 33.4	-2.6
	8.5nm,0.2s,baz=104,slow=23,SNR=5.6						
	5.0nm,0.3s						
MTN	**Manton Dam**	6.33	169	P	Pn	16 25 36.5	+0.8
SOEI	**Soe**	6.35	240	P	Pn	16 25 36.9	+0.8
	20nm,1.7s						
KDU	**Kakadu**	6.58	157	P	Pn	16 25 40.0	+1.0
KNRA	**Kununurra**	9.08	187	P	Pn	16 26 11.3	-1.1
WRAB	**Tennant Creek**	13.96	162	P	Pn	16 27 15.2	-0.8
WRA	**Warramunga Arr**	13.96	162	P	Pn	16 27 14.3	-1.8
	0.4nm,0.3s,baz=337,slow=13,SNR=23						
WRA				S	Sn	16 29 42.0	-8.9
	1.2nm,0.5s,baz=340,slow=22,SNR=8.5						
	0.6nm,0.3s						
ASAR	**Alice Springs**	17.41	167	P	Pn	16 27 59.0	+0.5
	0.3nm,0.3s,baz=350,slow=10,SNR=45						
ASAR				S	S	16 31 06.6	-4.6
	0.5nm,0.5s,baz=354,slow=28,SNR=5.2						
	1.3nm,0.5s						
AS01	**Alice Springs**	17.42	167	P	Pn	16 27 59.6	+1.0
WRKA	**Warakurna**	18.39	184	P	Pn	16 28 09.9	-0.2
OOD	**Oodnadatta**	21.79	166	P	P	16 28 45.5	+0.8
MKAR	**Makanchi Array**	67.81	327	P	P	16 34 46.3	-0.2
	0.2nm,0.3s,baz=119,slow=7.7,SNR=6.8						
	0.2nm,0.3s						

*DJA **25** 16:31:13.7±1.0,3°S±5°×13°7E±°,h14^{km}±7^{km},M4.3/7,*
mb4.2/1,mB5.0/1,MLv4.3/7,Mw(mB)4.2/1
*IDC **25** 16:31:17.2±3.8,3°.09S×136°.68E,h65^{km}±34^{km},mb3.7/13,*
mbtmp4.0/15,ML4.1/2,Error ellipse: s-maj=31.1km
s-min=13.6km az=67.0
ISC 25 16:31:13.0±0.5,**3°.02S**±0°.05×**137°.00E**±0°.05,**h32**^{km},**n38**,
σ**1^{s}.75**/44,**mb4.0**/12,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	1.37	327	P	Pn	16 31 35.4	-0.5
SRPI				S	Sn	16 31 50.3	-2.7
SMPI	**Sarmi**	2.00	59	P	Pb	16 31 47.7	-1.0
SMPI				S	Sb	16 32 13.0	-0.2
RKPI	**Ransiki, Papua**	3.19	298	P	Pn	16 32 02.7	+1.7
RKPI				S	Sn	16 32 37.9	-0.1
GENI	**Genyem**	3.20	82	P	Pn	16 32 03.9	+2.8
GENI				S	Sb	16 32 44.5	-3.2
FAKI	**Fak Fak**	4.74	271	P	Pn	16 32 22.7	+0.3
FAKI	**Fak Fak**	4.74	271	P	Pn	16 32 22.1	-0.3
SIJI	**Sorong**	6.11	290	P	Pn	16 32 42.2	+1.0
	4.8nm,0.3s,baz=60,slow=14,SNR=31						
SIJI				S	Sn	16 33 46.7	-3.4
	11nm,0.4s,baz=180,slow=20,SNR=10						
	12nm,0.3s						
KDU	**Kakadu**	10.60	205	P	Pn	16 33 43.5	+0.7
MTN	**Manton Dam**	11.35	210	P	Pn	16 33 55.1	+2.0
COEN	**Coen**	12.46	151	P	Pn	16 34 09.6	+1.3
KNRA	**Kununurra**	14.96	212	P	Pn	16 34 42.6	+0.2
MTSU	**Mount Surprise**	16.65	155	P	Pn	16 35 05.7	+1.6
TOLI2	**Tolitoli**	16.72	284	P	Pn	16 35 06.1	+1.0
WRAB	**Tennant Creek**	17.01	189	P	Pn	16 35 10.0	+1.4
WRA	**Warramunga Arr**	17.02	189	P	Pn	16 35 06.2	-2.6
	0.4nm,0.4s,baz=10,slow=12,SNR=3.7						
WRA				S	Sn	16 38 04.6	-13
	2.8nm,0.7s,baz=14,slow=22,SNR=5.8						
CTA	**Charters Tower**	19.22	153	P	Pn	16 35 37.0	+1.3
	0.4nm,0.3s,baz=332,slow=12,SNR=5.6						
	7.4nm,1.0s						
CTA	**Charters Tower**	19.22	153	P	Pn	16 35 37.1	+1.3
CTAO	**Charters Tower**	19.22	153	P	Pn	16 35 37.1	+1.3
AS01	**Alice Springs**	20.73	188	P	P	16 35 52.8	+1.7
ASAR	**Alice Springs**	20.74	188	P	P	16 35 52.1	+0.9
	3.1nm,0.5s,baz=16,slow=9.8,SNR=39						
ASAR				S	S	16 39 34.7	-6.5
	0.6nm,0.6s,baz=8.8,slow=25,SNR=3.5						
	3.1nm,0.5s						
WRKA	**Warakurna**	23.44	200	P	P	16 36 18.9	-0.8
OOD	**Oodnadatta**	24.67	183	P	P	16 36 31.0	-0.1
FORT	**Forrest**	28.87	196	P	P	16 37 08.2	-0.7
STKA	**Stephens Creek**	29.03	172	P	P	16 37 10.4	+0.1
	0.5nm,0.4s,baz=351,slow=13,SNR=1.7						
	0.5nm,0.4s						
CMAR	**Chiang Mai Arr**	43.12	301	P	P	16 39 10.3	-0.5
	1.2nm,0.8s,baz=126,slow=5.9,SNR=7.1						
	1.2nm,0.8s						
USRK	**Ussuriysk Ar.**	47.22	355	P	P	16 39 44.1	+1.2
	1.6nm,0.6s,baz=178,slow=6.1,SNR=7.4						
	1.6nm,0.6s						
KLR	**Kul'dur**	52.24	356	P	P	16 40 22.2	+1.2
	4.8nm,0.6s,baz=166,slow=7.3,SNR=16						
	4.8nm,0.6s						
SONM	**Songino Array**	57.28	336	P	P	16 40 57.6	-0.2
	0.4nm,0.7s,baz=168,slow=7.7,SNR=3.8						
	0.4nm,0.7s						
PETK	**Petropavlovsk-**	58.57	14	P	P	16 41 08.8	+2.3
	1.4nm,0.6s,baz=246,slow=6.1,SNR=1.8						
	1.4nm,0.6s						
MKAR	**Makanchi Array**	69.00	323	P	P	16 42 15.5	+0.1
	0.5nm,0.5s,baz=109,slow=8.1,SNR=12						
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	71.35	330	P	P	16 42 28.7	-1.0
	0.9nm,0.5s,baz=108,slow=7.5,SNR=5.4						
	0.9nm,0.5s						
KURBB	**Kurchatov Arra**	73.00	325	P	P	16 42 39.0	-0.6
	1.0nm,0.2s,baz=117,slow=5.6,SNR=1.9						
	1.0nm,0.2s						
VNDA	**Vanda**	75.63	175	P	P	16 42 54.0	-0.4
	0.5nm,0.6s,baz=328,slow=4.0,SNR=1.7						
	0.5nm,0.6s						
NRIK	**Noril'sk**	79.54	344	P	P	16 43 16.9	+0.5
	0.8nm,0.3s,baz=76,slow=4.2,SNR=1.9						
	0.8nm,0.3s						
ILAR	**Eielson Array**	86.82	25	P	P	16 43 53.6	-0.4
	0.6nm,0.8s,baz=254,slow=3.6,SNR=5.7						
	0.6nm,0.8s						
ARCES	**ARCESS Array B**	100.23	341	P	Pdif	16 44 55.1	-0.6
	3.6nm,1.0s,baz=96,slow=5.5,SNR=1.5						
TORD	**Torodi Ar. Bea**	134.69	285	PKP	PKPdf	16 50 28.7	-0.8
	0.6nm,0.6s,baz=86,slow=1.6,SNR=3.4						
CPUP	**Villa Florida**	147.70	155	PKPbc	PKPbc	16 50 56.0	+0.8
	0.6nm,0.3s,baz=202,slow=6.5,SNR=3.2						

*IDC **25** 16:36:20.6±2.5,22°.36N×94°.45E,h95^{km}±27^{km},mb3.2/3,*
mbtmp3.5/5,MS3.2/1,Error ellipse: s-maj=39.6km
s-min=17.3km az=35.0
ISC 25 16:36:21.2±1.1,**22°.3N**±0°.2×**94°.4E**±0°.1,**h100**^{km},**n6**,
σ**0^{s}.43**/7,**mb3.7**/3,**Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRDH	**Bariadhala**	2.60	278	P	Pn	16 37 01.8	+0.2
	72nm,0.3s,baz=0.0,slow=20,SNR=6.2						
BRDH				S	Sn	16 37 32.5	-0.1
	236nm,0.3s,baz=270,slow=18,SNR=14						
CMAR	**Chiang Mai Arr**	5.72	131	P	Pn	16 37 44.0	+0.2
	0.9nm,0.5s,baz=312,slow=13,SNR=10						
CMAR				S	Sn	16 38 39.8	-8.3
	0.4nm,0.6s,baz=320,slow=26,SNR=2.0						
MKAR	**Makanchi Array**	26.32	341	P	P	16 41 48.0	+0.4
	0.1nm,0.4s,baz=149,slow=10,SNR=4.1						
MKAR				pP	pP	16 42 09.5	-0.4
	0.4nm,0.5s,baz=155,slow=10,SNR=4.3						
	0.1nm,0.4s						
KSRS	**Korea Array**	32.53	55	LR	LR	16 57 00.9	
	comp=Z,40nm,19.3s,baz=35,slow=38						
WRA	**Warramunga Arr**	57.31	134	P	P	16 45 58.4	-0.5
	0.5nm,0.5s,baz=320,slow=7.6,SNR=11						
	0.5nm,0.5s						
ASAR	**Alice Springs**	59.69	138	P	P	16 46 15.6	+0.1
	0.3nm,0.5s,baz=320,slow=7.0,SNR=19						
	0.3nm,0.5s						

*JMA **25** 16:41:48.2±0.4,23°N±2°×12°1E±°,h19^{km},MV3.5/9,*
TAIWAN REGION
*TAP **25** 16:41:48.6,23°.26N×120°.63E,h10^{km},ML3.7,B*
ISC 25 16:41:49.0±0.7,**23°.27N**±0°.01×**120°.59E**±0°.01,**h13**^{km}±3^{km},
n170,σ**0^{s}.85**/311,**35C-24D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WTP	**Ta-pu**	0.03	143	⇑*i*P	Pg	16 41 50.9	-0.5
	baz=199						
WTP				*i* S	Sg	16 41 52.5	-0.6
	baz=199						
TPUB	**Ta-pu**	0.04	49	P	Pg	16 41 51.2	-0.3
TPUB	**Ta-pu**	0.04	49	⇑*i*P	Pg	16 41 51.0	-0.5
	baz=360						
TPUB				*i* S	Sg	16 41 52.5	-0.7
	baz=360						
CHN4	**Tsaushan**	0.08	360	⇑*i*P	Pg	16 41 51.8	0.0
	baz=340						
CHN4				*i* S	Sg	16 41 54.1	+0.4
	baz=340						
TWK	**Hsinying**	0.10	267	⇓*i*P	Pg	16 41 52.2	+0.2
	baz=271						
TWK				S	Sg	16 41 54.9	+0.7
	baz=271						
SNST	**Tainan City**	0.10	240	⇓*e*P	Pg	16 41 53.7	+1.7
	baz=251						
CHN1	**Nanshi**	0.10	215	⇑*i*P	Pg	16 41 52.2	+0.1
	baz=230						
CHN1				*i* S	Sg	16 41 54.7	+0.5
	baz=230						
WCKO	**Fanlu**	0.17	4	⇑*i*P	Pg	16 41 53.1	+0.2
	baz=353						
WCKO				S	Sb	16 41 56.7	-0.7
	baz=353						
STYT	**Tauyuan**	0.18	126	⇓*i*P	Pg	16 41 52.9	-0.3
	baz=129						
STYT				*i* S	Sg	16 41 55.9	-0.3
	baz=129						
SGST	**Jiashian**	0.19	183	⇑*e*P	Pg	16 41 52.4	-0.8
	baz=191						
STYH	**Taoyuan**	0.20	121	⇓*i*P	Pg	16 41 52.9	-0.5
	baz=121						
STYH				S	Sg	16 41 55.8	-0.5
	baz=121						
CHY	**Chiayi**	0.27	325	⇓*i*P	Pb	16 41 55.8	-0.1
	baz=322						
CHY				*i* S	Sb	16 42 01.0	+0.6
	baz=322						
SLGT	**Liugui**	0.28	170	⇑*e*P	Pb	16 41 55.7	-0.2
	baz=177						
SLGT				*e*S	Sb	16 42 00.5	-0.1
	baz=177						
CHN2	**Minshiung**	0.28	337	⇑*i*P	Pb	16 41 56.1	+0.1
	baz=332						
CHN2				S	Sb	16 42 02.0	+1.4
	baz=332						
CHN3	**Shinhua**	0.29	227	⇓*i*P	Pb	16 41 56.4	+0.4
	baz=233						
CHN3				*e*S	Sn	16 42 02.4	-2.7
	baz=233						
ICHU	**Yijhu**	0.30	287	⇓*i*P	Pb	16 41 56.2	-0.1
	baz=287						
ICHU				S	Sb	16 42 02.4	+1.2
	baz=287						
ALS	**Alishan**	0.31	39	⇑*i*P	Pg	16 41 55.5	0.0
	baz=35						
ALS				S	Sg	16 42 00.5	+0.6
	baz=35						
SSHA	**Shanhua**	0.31	244	⇓P	Pb	16 41 57.0	+0.6
	baz=248						
SSHA				*e*S	Sn	16 42 04.4	-1.3
	baz=248						
CHN5	**Tsauling**	0.33	13	⇑*i*P	Pg	16 41 56.0	+0.2
	baz=7.0						
CHN5				S	Sb	16 42 02.1	-0.1
	baz=7.0						
SHHT	**Tainan City**	0.34	222	⇓*e*P	Pg	16 41 53.0	-2.8
	baz=227						
CHN8	**Yiju**	0.36	282	P	Pb	16 41 57.4	+0.1
	baz=283						
CHN8				*e*S	Sb	16 42 04.3	+1.5
	baz=283						
SCLT	**Jiali**	0.38	255	*i* P	Pb	16 41 58.0	+0.4
	baz=257						
SCLT				S	Sn	16 42 05.8	-1.5
	baz=257						
SCST	**Cishan**	0.40	193	⇑*i*P	Pb	16 41 57.8	0.0
	baz=198						
SCST				S	Sb	16 42 05.0	+1.1
	baz=198						
YUS	**Yu-Shan**	0.40	57	P	Pg	16 41 57.1	0.0
	baz=54						
YUS				*e*S	Sg	16 42 02.9	+0.4
	baz=54						
ELDTW	**Lidau**	0.40	102	⇑*i*P	Pg	16 41 56.7	-0.3
	baz=102						
ELDTW				S	Sg	16 42 02.8	+0.4
	baz=102						
TAI1	**Yung-k'ang**	0.41	236	*e*P	Pn	16 41 59.1	-1.5
	baz=238						
TAI1				*e*S	Sn	16 42 06.8	-1.3
	baz=238						
WGK	**Gukeng**	0.41	356	⇑*i*P	Pb	16 41 58.3	+0.1
	baz=353						
WGK				*e*S	Sb	16 42 05.8	+1.4
	baz=353						
WDLH	**Douliu**	0.42	353	⇑*i*P	Pb	16 41 58.4	+0.1
	baz=349						
WDLH				*e*S	Sb	16 42 05.8	+1.2
	baz=349						
WSL	**Shuilin Townsh**	0.42	307	*i* P	Pb	16 41 58.3	0.0
	baz=305						
WSL				S	Sb	16 42 05.7	+1.1
	baz=305						
WTK	**Tuku**	0.46	336	⇑*i*P	Pb	16 41 59.0	+0.1
	baz=332						
WTK				*e*S	Sb	16 42 06.7	+1.0
	baz=332						
TAI	**Tainan**	0.46	233	*e*P	Pb	16 41 59.6	+0.7
	baz=236						
TAI				*e*S	Sn	16 42 09.4	+0.1
	baz=236						
TWM1	**Shoushan**	0.47	199	⇑*e*P	Pn	16 42 00.3	-1.2
	baz=203						
TWM1				*e*S	Sn	16 42 12.0	+2.3
	baz=203						
TSCK	**Chigu Township**	0.48	255	⇓*i*P	Pb	16 41 59.6	+0.2
	baz=257						
TSCK				*e*S	Sn	16 42 08.2	-1.7
	baz=257						
WHYT	**Xinyi Township**	0.49	29	⇑*i*P	Pg	16 41 58.6	0.0
	baz=25						
WHYT				S	Sg	16 42 05.7	+0.6
	baz=25						
WSF	**Szhu**	0.50	317	P	Pb	16 41 59.8	+0.1
	baz=315						
WSF				*e*S	Sn	16 42 08.4	-1.9

	baz=315						
SSD	**Sandimen**	0.52	176	⇑iP	Pb	16 41 59.7	-0.4
	baz=179						
SSD				eS	Sb	16 42 07.4	-0.2
	baz=179						
SGLT	**Jiouru**	0.55	190	eP	Pn	16 42 01.5	-1.1
	baz=193						
SGLT				eS	Sn	16 42 12.1	+0.5
	baz=193						
WJS	**Zhushan**	0.56	13	⇑P	Pb	16 42 00.6	-0.2
	baz=9.0						
WJS				eS	Sb	16 42 09.7	+1.0
	baz=9.0						
TSMG	**Majia**	0.56	175	eP	Pb	16 42 00.4	-0.4
	baz=179						
TSMG				eS	Sb	16 42 08.5	-0.3
	baz=179						
EHD	**Haiduan**	0.58	102	⇓iP	Pg	16 41 59.9	-0.5
	baz=102						
EHD				eS	Sg	16 42 07.5	-0.4
	baz=102						
TSPT	**Pingtung City**	0.60	189	eP	Pn	16 42 02.8	-0.5
	baz=192						
TSPT				eS	Sn	16 42 13.4	+0.6
	baz=192						
ECS	**Chishang**	0.60	107	eP	Pg	16 42 00.6	-0.2
	baz=107						
ECS				eS	Sb	16 42 09.7	-0.2
	baz=107						
WNT	**Mingjian**	0.61	8	⇑P	Pb	16 42 01.7	+0.1
	baz=5.0						
WNT				eS	Sb	16 42 11.2	+1.2
	baz=5.0						
SSLB	**Suanglung**	0.61	33	P	Pg	16 42 00.9	-0.1
SSLB	**Suanglung**	0.61	33	⇑iP	Pg	16 42 00.6	-0.4
	baz=30						
SSLB				eS	Sb	16 42 09.9	-0.2
	baz=30						
LONT	**Longtian**	0.61	126	⇓iP	Pg	16 42 00.7	-0.3
	baz=128						
LONT				eS	Sg	16 42 09.2	+0.1
	baz=128						
TWG	**Pinlang**	0.63	135	⇓P	Pg	16 42 01.1	-0.1
	baz=137						
TWG				eS	Sb	16 42 10.0	-0.6
	baz=137						
WMLT	**Mailiao**	0.63	327	eP	Pb	16 42 02.0	+0.1
	baz=325						
WMLT				eS	Sn	16 42 12.2	-1.4
	baz=325						
TWGBT	**Beinan**	0.64	135	P	Pg	16 42 01.5	+0.1
TWGBT	**Beinan**	0.64	135	⇓iP	Pg	16 42 01.1	-0.3
	baz=137						
TWGBT				eS	Sg	16 42 10.0	+0.1
	baz=137						
WNT1	**Nantou City**	0.64	7	eP	Pb	16 42 02.4	+0.4
	baz=4.0						
WNT1				eS	Sb	16 42 11.5	+0.6
	baz=4.0						
FULB	**Fuli**	0.65	96	⇓P	Pg	16 42 01.9	+0.2
	baz=96						
FULB				eS	Sb	16 42 11.7	+0.5
	baz=96						
TWF1	**Yuli**	0.65	83	⇓P	Pg	16 42 01.2	-0.5
	baz=82						
TWF1				eS	Sg	16 42 09.9	-0.5
	baz=82						
WTCT	**Ta-ch'eng**	0.66	334	eP	Pb	16 42 02.4	+0.1
	baz=332						
WTCT				eS	Sn	16 42 12.8	-1.5
	baz=332						
MASBT	**Mashibuluo**	0.66	177	⇑P	Pb	16 42 02.0	-0.4
	baz=180						
MASBT				eS	Sb	16 42 11.3	-0.1
	baz=180						
WRL	**Guolierlin Hig**	0.66	342	⇑P	Pb	16 42 02.2	-0.2
	baz=340						
WRL				eS	Sb	16 42 12.3	+0.8
	baz=340						
YULB	**Yu-li**	0.66	79	P	Pg	16 42 01.3	-0.5
YULB	**Yu-li**	0.66	79	⇓P	Pg	16 42 01.2	-0.7
	baz=78						
YULB				eS	Sg	16 42 09.5	-1.1
	baz=78						
EYUL	**Yuli**	0.67	83	⇓P	Pg	16 42 01.5	-0.6
	baz=82						
EYUL				eS	Sg	16 42 10.3	-0.6
	baz=82						
SMLT	**Sun Moon Lake**	0.67	25	⇑P	Pb	16 42 02.5	-0.1
	baz=23						
SMLT				eS	Sb	16 42 13.0	+1.1
	baz=23						
TYC	**Yuchr**	0.68	21	⇑P	Pb	16 42 02.6	0.0
	baz=19						
TYC				eS	Sn	16 42 13.2	-1.5
	baz=19						
WYL	**Yuanlin Townsh**	0.69	359	eP	Pb	16 42 03.1	+0.3
	baz=356						
WYL				eS	Sn	16 42 14.1	-0.9
	baz=356						
VWDT	**VWDT**	0.69	46	⇑P	Pg	16 42 02.4	-0.1
	baz=44						
VWDT				eS	Sg	16 42 11.6	-0.1
	baz=44						
EHY	**Hungye**	0.71	71	⇓P	Pg	16 42 02.4	-0.4
	baz=70						
EHY				eS	Sg	16 42 11.8	-0.3
	baz=70						
EDH	**Donghe**	0.72	114	⇓P	Pg	16 42 02.9	-0.1
	baz=115						
EDH				eS	Sb	16 42 13.7	+0.5
	baz=115						
TTN	**Taitung**	0.72	135	⇑eP	Pb	16 42 03.8	+0.3
	baz=136						
TTN				eS	Sn	16 42 14.5	-1.4
	baz=136						
CHKT	**Chengkung**	0.73	103	⇓eP	Pb	16 42 03.4	-0.2
	baz=104						
CHKT				eS	Sb	16 42 14.1	+0.6
	baz=104						
KAU	**Kaohsiung**	0.75	201	eP	Pn	16 42 05.9	+0.6
	baz=203						
KAU				eS	Sn	16 42 18.0	+1.5
	baz=203						
ECL	**Taimali**	0.75	154	⇓P	Pg	16 42 03.4	-0.2
	baz=155						
ECL				eS	Sg	16 42 13.2	-0.1
	baz=155						
ECBN	**Changbin**	0.79	87	eP	Pb	16 42 04.9	+0.3
	baz=86						
ECBN				eS	Sn	16 42 16.9	-0.6
	baz=86						
HGSD	**Ruisui**	0.79	74	⇓P	Pg	16 42 04.4	0.0
	baz=73						
HGSD				eS	Sb	16 42 15.3	-0.1
	baz=73						
WCHH	**Zhanghua**	0.81	358	⇑eP	Pb	16 42 04.8	-0.1
	baz=355						
WCHH				eS	Sn	16 42 16.9	-1.0
	baz=355						
WPL	**Puli Township**	0.81	24	eP	Pg	16 42 04.5	-0.2
	baz=22						
WPL				eS	Sb	16 42 16.2	+0.4
	baz=22						
DPDB	**Guoxing**	0.82	22	⇑P	Pg	16 42 04.7	-0.2
	baz=20						
DPDB				eS	Sb	16 42 16.7	+0.5
	baz=20						
WCS	**Beigang Elemen**	0.83	20	⇑P	Pg	16 42 05.0	-0.2
	baz=18						
WCS				eS	Sb	16 42 17.2	+0.6
	baz=18						
WDGT	**Dungji**	0.86	269	eP	Pb	16 42 05.5	-0.3
	baz=270						
WDGT				eS	Sn	16 42 18.1	-1.1
	baz=270						
EGFH	**Guangfu**	0.86	62	eP	Pg	16 42 05.3	-0.4
	baz=61						
EGFH				eS	Sg	16 42 16.5	-0.5
	baz=61						
WUSB	**Renai**	0.86	34	eP	Pg	16 42 05.1	-0.7
	baz=32						
WUSB				eS	Sg	16 42 17.3	+0.2
	baz=32						
OWD	**Renai**	0.86	38	eP	Pg	16 42 05.2	-0.6
	baz=36						
OWD				eS	Sg	16 42 17.5	+0.3
	baz=36						
TCU	**Taichung**	0.88	5	⇑eP	Pg	16 42 06.2	+0.2
	baz=3.0						
TCU				eS	Sn	16 42 19.2	-0.5
	baz=3.0						
SCZT	**Fangliau**	0.90	178	eP	Pn	16 42 06.6	-0.8
	baz=180						
SCZT				eS	Sn	16 42 20.2	+0.1
	baz=180						
EAST	**Anshuo**	0.92	165	eP	Pg	16 42 06.7	0.0
	baz=167						
EAST				eS	Sn	16 42 19.5	-1.2
	baz=167						
ESL	**Shilin**	0.94	55	eP	Pb	16 42 06.7	-0.5
	baz=54						
ESL				eS	Sg	16 42 19.9	+0.4
	baz=54						
TWP	**Hsiaoliuchiu**	0.94	193	eP	Pn	16 42 10.0	+2.0
	baz=195						
TWP				eS	Sn	16 42 26.4	+5.0
	baz=195						
CHGB	**Renai**	0.95	34	eP	Pb	16 42 06.8	-0.7
	baz=32						
CHGB				eS	Sn	16 42 21.4	-0.4
	baz=32						
TAW	**Tawu**	0.95	163	eP	Pg	16 42 07.5	+0.1
	baz=164						
TAW				eS	Sn	16 42 20.5	-1.0
	baz=164						
TAWH	**Dawu Township**	0.97	164	eP	Pg	16 42 07.4	-0.3
	baz=165						
TAWH				eS	Sn	16 42 20.9	-1.0
	baz=165						
PHUB	**P'eng-hu**	0.97	285	eP	Pb	16 42 07.0	-0.6
	baz=284						
PHUB				eS	Sg	16 42 20.4	0.0
	baz=284						
TEGC	**Jichi Village**	0.97	63	eP	Pn	16 42 08.4	+0.1
	baz=62						
TEGC				eS	Sn	16 42 22.1	+0.1
	baz=62						
PNG	**Penghu**	1.00	287	eP	Pb	16 42 07.8	-0.4
	baz=287						
PNG				eS	Sg	16 42 21.6	+0.2
	baz=287						
LDUT	**Ludao**	1.00	126	eP	Pb	16 42 07.5	-0.7
	baz=127						
LDUT				eS	Sg	16 42 21.9	+0.4
	baz=127						
WHP	**Taichung City**	1.05	18	eP	Pb	16 42 09.0	-0.2
	baz=16						
WHP				eS	Sn	16 42 24.4	+0.3
	baz=16						
WHF	**Hehuan Shan**	1.07	35	⇑eP	Pb	16 42 09.1	-0.5
	baz=34						
WHF				eS	Sg	16 42 24.2	+0.6
	baz=34						
VCHM	**Qimei**	1.07	267	⇓eP	Pb	16 42 08.7	-0.7
	baz=267						
VCHM				eS	Sn	16 42 23.7	-0.8
	baz=267						
WDJ	**Dajia District**	1.07	2	eP	Pg	16 42 09.7	0.0
	baz=1.0						
WDJ				eS	Sn	16 42 25.5	+1.0
	baz=1.0						
ETM	**Tongmen**	1.08	50	eP	Pb	16 42 09.2	-0.3
	baz=49						
ETM				eS	Sg	16 42 23.9	+0.1
	baz=49						
TWQ1	**Liyutan**	1.08	9	⇑eP	Pg	16 42 09.9	0.0
	baz=7.0						
TWQ1				eS	Sn	16 42 25.7	+0.8
	baz=7.0						
TEYL	**Yanliau Villag**	1.10	57	eP	Pg	16 42 10.7	+0.5
	baz=54						
TEYL				eS	Sn	16 42 25.7	+0.6
	baz=54						
TDCB	**Techi**	1.11	28	eP	Pb	16 42 09.8	-0.4
	baz=26						
TDCB				eS	Sb	16 42 24.7	+0.1
	baz=26						
TWT	**Tachien**	1.11	29	eP	Pb	16 42 09.8	-0.4
	baz=26						
TWT				eS	Sg	16 42 25.0	0.0
	baz=26						
NSY	**Sanyi**	1.15	8	⇑eP	Pg	16 42 11.2	+0.1
	baz=6.0						
NSY				eS	Sg	16 42 27.3	+1.1
	baz=6.0						
HWA	**Hwalien**	1.16	53	eP	Pg	16 42 11.4	0.0
	baz=52						
HWA				eS	Sg	16 42 27.1	+0.5
	baz=52						
TWD	**Chiawan**	1.22	49	eP	Pn	16 42 11.7	-0.1
	baz=48						
TWD				eS	Sb	16 42 27.6	-0.1
	baz=48						
ETLH	**Xiulin Townshi**	1.24	41	eP	Pn	16 42 11.8	-0.3
	baz=40						
ETLH				eS	Sg	16 42 29.2	+0.2
	baz=40						
SMST	**Manzhou Townsh**	1.27	170	eP	Pg	16 42 13.6	+0.2
	baz=171						
HEN	**Hengchun**	1.27	174	eP	Pb	16 42 12.6	-0.2
	baz=175						
HEN				eS	Sg	16 42 31.4	+1.5
	baz=175						
NMLH	**Miaoli**	1.27	8	⇑eP	Pb	16 42 12.7	-0.2
	baz=7.0						
NMLH				eS	Sg	16 42 31.1	+0.9
	baz=7.0						
NACB	**Ninganchiao**	1.28	45	P	Pn	16 42 12.6	-0.1
NACB	**Ninganchiao**	1.28	45	eP	Pn	16 42 12.5	-0.2
	baz=44						
NACB				eS	Sn	16 42 29.8	0.0
	baz=44						
ETL	**Fush Village**	1.29	47	eP	Pg	16 42 13.6	-0.3
	baz=46						
ETL				eS	Sg	16 42 31.0	+0.2
	baz=46						
TWK1	**Hengchun**	1.34	172	eP	Pg	16 42 18.0	+3.3
	baz=173						
TWKBT	**Hengchun**	1.34	171	eP	Pb	16 42 13.8	-0.2
	baz=173						
TWKBT				eS	Sg	16 42 34.8	+2.5
	baz=173						
NNSB	**Datong**	1.36	32	eP	Pn	16 42 13.7	-0.1
	baz=31						
NNSB				eS	Sg	16 42 33.4	+0.5
	baz=31						
NNSH	**Datong**	1.36	32	eP	Pn	16 42 13.9	0.0
	baz=31						
NNSH				eS	Sg	16 42 33.5	+0.6
	baz=31						
NNS	**Nan Shan**	1.36	31	eP	Pb	16 42 14.2	-0.3
	baz=30						
NNS				eS	Sg	16 42 32.6	-0.4
	baz=30						
TSEB	**Hengchuen, Pin**	1.39	168	eP	Pb	16 42 14.4	-0.5
	baz=171						
NSTT	**Nanjuang**	1.40	15	eP	Pb	16 42 14.7	-0.5
	baz=14						
NSTT				eS	Sg	16 42 34.0	-0.3
	baz=14						
LIOB	**Emei**	1.42	16	eP	Pn	16 42 14.8	+0.2
	baz=14						
LIOB				eS	Sg	16 42 35.6	+0.7
	baz=14						
NJN	**Zhunan**	1.43	10	eP	Pb	16 42 15.0	-0.6
	baz=9.0						
NJN				eS	Sg	16 42 35.8	+0.7
	baz=9.0						
NFF	**Wufeng Townshi**	1.44	19	eP	Pn	16 42 14.9	0.0
	baz=18						
NFF				eS	Sb	16 42 34.4	+0.5
	baz=18						
LAY	**Lan-yu**	1.51	144	eP	Pn	16 42 14.7	-1.1
	baz=145						
LAY				eS	Sb	16 42 35.5	-0.5
	baz=145						
LATG	**Datong**	1.52	34	eP	Pb	16 42 16.7	-0.5
	baz=33						
LATG				eS	Sb	16 42 37.1	+0.7
	baz=33						
NJD	**Zhudong**	1.53	17	eP	Pb	16 42 16.9	-0.3
	baz=16						
NJD				eS	Sg	16 42 37.7	-0.5
	baz=16						
HSN1	**Hsinchu**	1.55	14	eP	Pb	16 42 17.0	-0.6
	baz=13						
HSN1				eS	Sb	16 42 37.4	+0.2
	baz=13						
SBCB	**Hsinchu**	1.56	13	eP	Pb	16 42 17.1	-0.6
	baz=12						
SBCB				eS	Sg	16 42 38.5	-0.7
	baz=12						
ENA	**Nanau**	1.56	42	eP	Pb	16 42 17.1	-0.7
	baz=42						
ENA				eS	Sb	16 42 37.6	+0.2
	baz=42						
LYUB	**Lan-yu**	1.56	144	eP	Pn	16 42 14.4	-2.1
	baz=145						
LYUB				eS	Sn	16 42 35.5	-1.1
	baz=145						
NSK	**Sanguang**	1.56	26	eP	Pb	16 42 17.1	-0.7
	baz=26						
NSK				eS	Sg	16 42 38.9	-0.5
	baz=26						
YHNB	**Yeheng**	1.56	27	P	Pb	16 42 17.5	-0.4
YHNB	**Yeheng**	1.56	27	eP	Pn	16 42 17.1	+0.5
	baz=26						
YHNB				eS	Sb	16 42 38.2	+0.5
	baz=26						
NDT	**Datong Townshi**	1.57	32	eP	Pb	16 42 17.8	-0.1
	baz=31						
NDT				eS	Sg	16 42 39.6	0.0
	baz=31						
EWUT	**Wuta**	1.59	43	eP	Pb	16 42 17.9	-0.5
	baz=42						
EWUT				eS	Sn	16 42 37.8	+0.3
	baz=42						
ENTT	**Nioudou**	1.63	33	eP	Pb	16 42 18.7	-0.2
	baz=32						
ENTT				eS	Sb	16 42 40.4	+1.0
	baz=32						
NDS	**Dongshan**	1.70	37	eP	Pb	16 42 20.5	+0.4
	baz=36						
NWLT	**Wulai**	1.71	29	eP	Pb	16 42 19.5	-0.9
	baz=28						
NWLT				eS	Sg	16 42 43.4	-0.8
	baz=28						
FUSB	**Fushanzhiwuyua**	1.74	31	eP	Pb	16 42 20.2	-0.6
	baz=30						
FUSB				eS	Sb	16 42 43.7	+1.0
	baz=30						
TWE	**Neicheng**	1.75	34	eP	Pb	16 42 20.5	-0.4
	baz=34						
TWE				eS	Sb	16 42 43.5	+0.7
	baz=34						
TWC	**Suao**	1.76	41	eP	Pb	16 42 21.1	-0.1
	baz=40						
TWC				eS	Sg	16 42 44.7	-1.0
	baz=40						
NHW	**Xinwu Township**	1.78	13	eP	Pn	16 42 19.9	+0.4
	baz=12						
EOS4	**EOS4**	1.79	62	eP	Pn	16 42 18.7	-0.6
	baz=61						
EOS4				eS	Sb	16 42 43.7	-0.1
	baz=61						
ILA	**Ilan**	1.82	35	eP	Pb	16 42 21.9	-0.4
	baz=35						
EOS3	**EOS3**	1.88	57	eP	Pn	16 42 21.4	+0.7
	baz=57						
EOS3				eS	Sb	16 42 47.3	+1.0
	baz=57						
TATO	**Taipei**	1.88	26	P	Pn	16 42 21.7	+0.8
EOS2	**EOS2**	1.89	52	eP	Pb	16 42 23.6	+0.4
	baz=52						
NHDH	**Xindian Distri**	1.89	27	eP	Pn	16 42 21.9	+0.9
	baz=26						
NHDH				eS	Sg	16 42 48.5	-1.2
	baz=26						
TWA	**Mucha**	1.93	28	eP	Pn	16 42 22.5	+0.9
	baz=27						
TWA				eS	Sg	16 42 50.6	-0.4
	baz=27						
TWS1	**Kuangyinshan**	1.97	22	eP	Pn	16 42 22.9	+0.7
	baz=22						
TWS1				eS	Sb	16 42 48.6	-0.7
	baz=22						
VWUC	**VWUC**	2.01	329	eP	Pn	16 42 21.6	-1.0
	baz=328						
VWUC				eS	Sn	16 42 46.7	-0.9
	baz=328						
TIPB	**Shuangxi**	2.03	33	eP	Pn	16 42 24.2	+1.2
	baz=33						
TIPB				eS	Sg	16 42 53.1	-1.3
	baz=33						
NTST	**Danshui**	2.04	22	eP	Pn	16 42 23.9	+0.9
	baz=22						
YM01	**YM01**	2.07	25	eP	Pn	16 42 23.4	-0.1
	baz=25						
ANP	**Anpu**	2.09	24	eP	Pn	16 42 24.2	+0.4
	baz=23						
WFSB	**Wu-fen Shan**	2.09	31	eP	Pb	16 42 27.4	+0.5
	baz=30						
TWB1	**Santiao Chiao**	2.15	36	eP	Pb	16 42 26.1	-1.7
	baz=36						
SXI1	**Grass Mountain**	2.16	33	eP	Pb	16 42 27.9	-0.1
	baz=32						
PTMZ	**Houxiangcun**	2.22	323	eP	Pn	16 42 24.8	-0.7
	baz=322						
PTMZ				eS	Sn	16 42 51.3	-1.5
	baz=322						
KNM	**Kinmen**	2.28	300	eP	Pg	16 42 32.5	-0.3
	baz=298						
KNMB	**Chin-men Tao**	2.34	301	eP	Pn	16 42 26.8	-0.4
	baz=300						
KNMB				eS	Sb	16 43 01.1	+1.2
	baz=300						
ZPLA	**Ao Xicun**	2.69	285	eP	Pn	16 42 31.1	-0.9
	baz=284						
ZPLA				eS	Sn	16 43 04.6	+0.2
	baz=284						
AXDP	**Jialang**	2.89	305	eP	Pn	16 42 34.5	-0.4
	baz=304						
MATB	**Ma-tsu**	2.93	349	eP	Pn	16 42 34.3	-1.0
	baz=347						
MATB				eS	Sn	16 43 09.3	-1.1
	baz=347						
DSXP	**Dongshan**	2.94	279	eP	Pn	16 42 35.0	-0.4
	baz=279						
HATJ	**Hateruma jima**	3.05	74	S	Sn	16 43 14.0	+0.7
IRIF	**Iriomote-Funau**	3.06	69	P	Pn	16 42 38.7	+1.5
IRIF				eS	Sn	16 43 16.4	+2.7
MHZQ	**Yeshan**	3.15	334	eP	Pn	16 42 38.0	-0.4
	baz=333						
MHZQ				eS	Sn	16 43 15.9	0.0
	baz=333						
JKRS	**Kuro-shima**	3.27	72	eP	Pn	16 42 41.9	+1.9
JKRS				eS	Sn	16 43 21.7	+2.8
LYJJ	**Jianjiangzhen**	3.35	347	eP	Pn	16 42 40.4	-0.7
	baz=347						
JIJ	**Ishigaki jima**	3.43	71	eP	Pn	16 42 42.7	+0.5
JIJ				eS	Sn	16 43 23.0	+0.3
JISG	**Ishigakijimahi**	3.65	68	eP	Pn	16 42 45.4	+0.3
JISG				eS	Sn	16 43 27.9	-0.1
XPSS	**Dashiqiu**	3.66	354	eP	Pn	16 42 44.4	-0.9
	baz=354						

IDC ***25*** *17:00:37.6±0.7, 50°.22S×139°.06E, h0^{km}, mb4.3/8, mbtmp4.3/9, ML4.0/1, MS4.1/29, Error ellipse: s-maj=29.2km s-min=17.1km az=83.0*

NEIC ***25*** *17:00:38.2±1.9, 50°.31S±0°.07×139°.4E±0°.1, h10^{km}±1^{km}, mb4.7/48, Error ellipse: s-maj=15.9km s-min=7.0km az=136.0*

GCMT ***25*** *17:00:41.2±0.3, 50°.26S±0°.01×139°.53E±0°.03, h16^{km}±1^{km}, MW4.9/87, Moment Tensor Solution. s15,c16; s87,c121; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.45±.15; M$_{\theta\theta}$0.63±.13; M$_{\phi\phi}$-0.18±.14; M$_{r\theta}$1.33±.39; M$_{\theta\phi}$-2.82±.10; M$_{\phi r}$0.68±.34; Best double couple: M$_0$3.23700×10^{16} NP1:ϕ_s268.00000°, δ79.00000°, λ-154.00000°. NP2: ϕ_s173.00000°, δ64.00000°, λ-12.00000°. Principal axes: T 3.1690, Plg10.0000°, Azm39.0000°; N 0.1360, Plg62.0000°, Azm290.0000°; P -3.3050, Plg26.0000°, Azm133.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 17:00:38.6±0.4, **50°.29S**±0°.06×**139°.42E**±0°.08, **h12**^{km}, **n129**, σ**1^{s}.28**/93, **mb4.7**/30, **MS4.1**/29, **Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAU	Tasmania Unive	9.16	39	Pn	Pn	17 02 50.6	+0.2
TAU	Tasmania Unive	9.16	39	P	Pn	17 02 51.3	+0.9
MOO	Moorlands	9.50	37	P	Pn	17 02 56.5	+1.4
GLAD	Gladstone	11.07	36	P	Pn	17 03 17.4	+0.8
MCQ	Macquarie Isla	12.64	117	Pn	Pn	17 03 37.1	-0.9
TOO	Toolangi	13.44	21	Pn	Pn	17 03 49.2	+0.3
TOO	Toolangi	13.44	21	P	Pn	17 03 51.7	+2.7
CAN	Canberra	16.50	29		P	17 04 31.2	-1.2
BBOO	Buckleboo	17.64	351	P	Pn	17 04 43.3	-0.7
STKA	Stephens Creek	18.46	6	P	P	17 04 53.5	-0.5
	0.3nm,0.3s,baz=165,slow=14,SNR=6.7						
STKA				LR	LR	17 11 06.0	
	comp=Z,587nm,18.7s,baz=184,slow=34						
	3.3nm,0.9s						
STKA	Stephens Creek	18.46	6	P	P	17 04 54.0	-0.1
PYZ	Puysegur Point	18.58	88	P	P	17 04 53.8	-1.4
PYZ				IAmb	IAmb	17 04 58.1	
	comp=Z,104nm,1.3s						
DCZ	Deep Cove	19.16	86	P	Pn	17 05 02.1	-0.4
CMSA	Cobar Meteorol	19.31	16	P	Pn	17 05 04.5	+0.1
WHZ	Wether Hill Ro	19.50	88	P	Pn	17 05 06.1	-0.4
MLZ	Mavora Lakes	19.82	87	P	Pn	17 05 09.8	-0.7
LCRK	Leigh Creek	19.84	357	P	Pn	17 05 10.4	-0.3
MULG	Mulgathing	20.38	347	P	Pn	17 05 16.4	-0.8
WKZ	Wanaka	20.63	86	P	P	17 05 17.5	-0.2
FORT	Forrest	21.27	332	P	P	17 05 23.9	-0.7
FORT				IAmb	IAmb	17 05 36.6	
	comp=Z,28nm,0.9s						
FORT	Forrest	21.27	332	P	P	17 05 25.2	+0.6
LBZ	Lake Benmore	21.57	86	P	P	17 05 28.4	+0.6
LBZ				IAmb	IAmb	17 05 35.1	
	comp=Z,69nm,1.5s						
ODZ	Otahua Downs	21.58	88	P	P	17 05 31.1	+3.3
ODZ				IAmb	IAmb	17 05 40.4	
	comp=Z,56nm,1.3s						
CASY	Casey	21.75	212	P	P	17 05 29.0	-0.5
CASY				IAmb	IAmb	17 05 35.3	
	comp=Z,43nm,1.1s						
ARMA	Armidale	21.86	29	P	P	17 05 30.7	-0.5
ARMA				IAmb	IAmb	17 05 44.9	
	comp=Z,26nm,1.2s						
RPZ	Rata Peaks	22.44	85	P	P	17 05 39.9	+2.8
	comp=Z,15nm,0.9s,baz=235,slow=9.3,SNR=3.4						
RPZ				LR	LR	17 12 23.8	
	comp=Z,399nm,19.4s,baz=248,slow=31						
	comp=Z,15nm,0.9s						
RPZ	Rata Peaks	22.44	85	P	P	17 05 36.5	-0.6
LTZ	Lake Taylor	23.67	84	P	P	17 05 50.5	+0.7
NWAO	Narrogin (SRO)	23.85	308	LR	LR	17 12 56.4	
	comp=Z,712nm,21.1s,baz=132,slow=31						
H01W1	Cape Leeuwin H	23.97	300	T	T	17 30 44.1	
	baz=135,slow=74,SNR=36						
H01W2	Cape Leeuwin H	23.98	300	T	T	17 30 44.6	
	baz=135,slow=74,SNR=41						
H01W3	Cape Leeuwin H	23.99	300	T	T	17 30 45.1	
	baz=135,slow=74,SNR=37						
THZ	Tophouse	24.59	83	P	P	17 05 57.5	-0.9
KHZ	Kahutara	24.66	85	P	P	17 05 59.4	+0.5
QRZ	Quartz Range	24.86	80	P	P	17 06 01.1	+0.4
QRZ				IAmb	IAmb	17 06 25.2	
	comp=Z,28nm,1.1s						
NNZ	Nelson	25.18	82	P	P	17 06 04.0	+0.3
MRZ	Mangatainoka R	26.88	83	P	P	17 06 17.8	-1.3
ASAR	Alice Springs	26.92	349	P	P	17 06 18.9	-0.7
	comp=Z,2.9nm,0.8s,baz=163,slow=10,SNR=29						
ASAR				PcP	PcP	17 09 41.2	-0.2
	comp=Z,0.7nm,0.7s,baz=178,slow=3.2,SNR=5.6						
ASAR				LR	LR	17 15 49.5	
	comp=Z,257nm,19.6s,baz=178,slow=34						
	comp=Z,2.9nm,0.8s						
ASAR	Alice Springs	26.92	349	P	P	17 06 19.4	-0.1
AS31	Alice Springs	26.92	349	P	P	17 06 18.8	-0.8
BKZ	Black Stump Fm	28.31	81	P	P	17 06 32.3	+0.4
BKZ				IAmb	IAmb	17 06 58.6	
	comp=Z,23nm,1.3s						
VNDA	Vanda	28.63	170	P	P	17 06 36.1	+1.8
	comp=Z,1.9nm,0.8s,baz=327,slow=8.1,SNR=8.4						
VNDA				LR	LR	17 15 43.1	
	comp=Z,222nm,19.4s,baz=336,slow=32						
	comp=Z,1.9nm,0.8s						
VNDA	Vanda	28.63	170	P	P	17 06 34.3	0.0
RTZ	Ruatahuna	28.94	81	P	P	17 06 37.1	-0.5
RTZ				IAmb	IAmb	17 06 49.1	
	comp=Z,25nm,1.4s						
URZ	Urewera	29.23	80	LR	LR	17 17 36.2	
	comp=Z,157nm,18.4s,baz=329,slow=35						
WB2	Warramunga Arr	30.54	351	P	P	17 06 51.4	-0.4
WB2				IAmb	IAmb	17 06 53.9	
	comp=Z,12nm,0.9s						
WRA	Warramunga Arr	30.55	351	P	P	17 06 51.3	-0.5
	comp=Z,5.8nm,0.9s,baz=170,slow=8.1,SNR=33						
WRA				PcP	PcP	17 09 51.8	+1.3
	comp=Z,1.3nm,0.8s,baz=186,slow=2.3,SNR=5.6						
WRA				LR	LR	17 18 03.5	
	comp=Z,234nm,19.3s,baz=166,slow=34						
	comp=Z,5.8nm,0.9s						
WRA	Warramunga Arr	30.55	351	P	P	17 06 51.1	-0.7
WRAB	Tennant Creek	30.55	351	P	P	17 06 50.6	-1.3
WRAB				IAmb	IAmb	17 06 54.0	
	comp=Z,11nm,0.9s						
CTA	Charters Tower	30.62	13	LR	LR	17 18 48.9	
	comp=Z,425nm,18.3s,baz=170,slow=36						
WB0	Warramunga Arr	30.71	351	P	P	17 06 52.9	-0.4
WB0				IAmb	IAmb	17 07 34.1	
	comp=Z,20nm,1.4s						
PSA00	Pilbara Seismi	32.54	325	P	P	17 07 09.0	-0.4
PSA00				IAmb	IAmb	17 07 23.4	
	comp=Z,9.1nm,1.0s						
PSA00	Pilbara Seismi	32.54	325	P	P	17 07 09.3	0.0
PSA00				IAmb	IAmb	17 07 09.7	
	comp=Z,3.2nm,1.1s						
MBWA	Marble Bar	32.96	325	P	P	17 07 12.0	-1.0
MBWA				IAmb	IAmb	17 07 13.8	
	comp=Z,17nm,1.3s						
FITZ	Fitzroy Crossi	33.96	336	P	P	17 07 22.1	+0.4
OUENC	Ouen Island, N	35.14	48	P	P	17 07 31.8	-0.1
OUENC				IAmb	IAmb	17 07 58.7	
	comp=Z,19nm,1.3s						
DZM	Mont Dzumac	35.25	47	*e*LR	LR	17 16 49.2	
	comp=Z,822nm,26.1s						
DZM	Mont Dzumac	35.25	47	P	P	17 07 33.1	+0.1
	comp=Z,6.2nm,1.0s,baz=152,slow=3.3,SNR=3.6						
DZM				LR	LR	17 19 11.7	
	comp=Z,366nm,18.9s,baz=204,slow=32						
	comp=Z,6.2nm,1.0s						
DZM	Mont Dzumac	35.25	47	P	P	17 07 33.3	+0.3
DZM				IAmb	IAmb	17 07 36.6	
	comp=Z,11nm,1.1s						
MTN	Manton Dam	37.95	347	P	P	17 07 54.9	-1.1
MTN				IAmb	IAmb	17 08 22.5	
	comp=Z,29nm,1.5s						
RAO	Raoul Island	38.26	73	LR	LR	17 19 52.0	
	comp=Z,246nm,20.1s,baz=320,slow=30						
QSPA	South Pole Qui	39.83	180	P	P	17 08 12.1	+0.6
	comp=Z,9.2nm,1.1s,baz=205,slow=0.5,SNR=13						
	comp=Z,9.2nm,1.1s						
QSPA	South Pole Qui	39.83	180	P	P	17 08 10.5	-1.0
QSPA				IAmb	IAmb	17 08 29.2	
	comp=Z,16nm,1.1s						
MAW	Mawson	40.03	215	LR	LR	17 22 15.4	
	comp=Z,681nm,21.7s,baz=66,slow=32						
PMG	Port Moresby	41.26	12	LR	LR	17 25 38.1	
	comp=Z,260nm,18.2s,baz=180,slow=36						
PMG	Port Moresby	41.26	12	P	P	17 08 23.4	-0.1
PMG				IAmb	IAmb	17 09 01.7	
	comp=Z,15nm,1.1s						
SOEI	Soe	42.31	337	P	P	17 08 33.9	+1.6
	comp=Z,18nm,1.3s						
SAUI	Saumlaki	42.71	348	P	P	17 08 37.0	+1.7
	comp=Z,180nm,0.8s						
HNR	Honiara	44.14	30	LR	LR	17 26 49.0	
	comp=Z,1µm,20.1s,baz=226,slow=36						
MSVF	Nonsavu	44.78	58	LR	LR	17 23 56.1	
	comp=Z,308nm,20.0s,baz=196,slow=31						
KRVT	Keravat (AS076	47.04	17	LR	LR	17 27 25.5	
	comp=Z,344nm,20.9s,baz=299,slow=34						
KAPI	Kappang	48.06	333	LR	LR	17 28 26.4	
	comp=Z,132nm,21.9s,baz=170,slow=35						
BELA	Belgrano 2	52.05	182	P	P	17 09 47.3	-0.1
BELA				IAmb	IAmb	17 09 50.3	
	comp=Z,12nm,1.0s						
AFI	Afiamalu	53.59	65	LR	LR	17 28 10.3	
	comp=Z,134nm,20.4s,baz=196,slow=31						
AFI	Afiamalu	53.59	65	P	P	17 09 57.2	-2.4
TOLI2	Tolitoli	53.63	337	P	P	17 09 57.7	-2.0
TOLI2				IAmb	IAmb	17 10 23.1	
	comp=Z,13nm,1.2s						
TROLL	Troll, Antarti	54.30	195	P	P	17 10 10.2	+6.0
SNAA	Sanae	55.44	194	LR	LR	17 32 58.2	
	comp=Z,211nm,20.3s,baz=148,slow=35						
TBI	Tubuai	60.45	92	*e*LR	LR	17 28 21.4	
	comp=Z,2µm,24.5s						
TBI				*e*LR	LR	17 28 21.6	
	comp=Z,393nm,24.0s						
GSI	Gunungsitoli	62.59	311	P	P	17 11 00.6	-1.9
PMSA	Palmer Station	63.84	169	LR	LR	17 36 16.5	
	comp=Z,91nm,18.1s,baz=150,slow=33						
KULM	Kulim	64.67	316	P	P	17 11 14.8	-1.4
H08S2	Diego Garcia H	69.48	283	T	T	18 27 29.5	
	baz=141,slow=76,SNR=14						
H08S1	Diego Carcia H	69.49	283	T	T	18 27 34.1	
	baz=141,slow=76,SNR=14						
H08S3	Diego Garcia H	69.50	283	T	T	18 27 33.4	
	baz=141,slow=76,SNR=17						
GO09	Cerro Castillo	75.27	160	P	P	17 12 19.4	-1.6
PALK	Pallekele	76.47	299	LR	LR	17 40 42.7	
	comp=Z,189nm,19.7s,baz=230,slow=32						
CM31	Chiang Mai Arr	77.19	321	P	P	17 12 32.3	+0.2
CM31				IAmb	IAmb	17 12 35.0	
	comp=Z,5.6nm,1.1s						
CMAR	Chiang Mai Arr	77.19	321	P	P	17 12 32.3	+0.2
	comp=Z,1.2nm,0.9s,baz=168,slow=4.6,SNR=11						
CMAR				LR	LR	17 45 36.1	
	comp=Z,96nm,20.7s,baz=160,slow=35						
	comp=Z,1.2nm,0.9s						
CMAR	Chiang Mai Arr	77.19	321	P	P	17 12 31.7	-0.4
CHTO	Chiang Mai	77.51	321	P	P	17 12 33.7	-0.2
CRAI	Chiangrai	78.22	323	P	P	17 12 39.4	+1.5
CRAI				IAmb	IAmb	17 12 41.3	
	comp=Z,6.3nm,1.2s						
SUR	Sutherland	81.43	229	LR	LR	17 42 08.8	
	comp=Z,141nm,20.3s,baz=166,slow=31						
RPN	Rapa Nui	81.91	123	LR	LR	17 41 55.1	
	comp=Z,47nm,21.7s,baz=174,slow=30						
BOSA	Boshof	82.27	234	LR	LR	17 42 36.6	
	comp=Z,106nm,19.6s,baz=176,slow=31						
BRDH	Bariadhala	84.02	317	LR	LR	17 54 14.5	
	comp=Z,80nm,18.0s,baz=243,slow=38						
LBTB	Lobatse	84.98	236	LR	LR	17 44 24.0	
	comp=Z,97nm,19.1s,baz=181,slow=31						
PLCA	Paso Flores	85.62	158	LR	LR	17 43 39.2	
	comp=Z,42nm,20.5s,baz=198,slow=30						
KSRS	Korea Array	87.95	351	P	P	17 13 30.0	+2.3
	comp=Z,1.8nm,1.0s,baz=186,slow=5.9,SNR=4.6						
	comp=Z,1.8nm,1.0s						
H03S2	Juan Fernandez	89.63	149	T	T	18 53 49.8	
	baz=201,slow=74						
H03S1	Juan Fernandez	89.63	149	T	T	18 53 52.6	
	baz=201,slow=74						
H03S3	Juan Fernandez	89.65	149	T	T	18 53 50.9	
	baz=201,slow=74						
LSZ	Lusaka	91.34	244	LR	LR	17 50 20.5	
	comp=Z,187nm,18.3s,baz=153,slow=33						
TSUM	Tsumeb	93.96	234	LR	LR	17 48 47.3	
	comp=Z,151nm,21.4s,baz=156,slow=31						
NVAR	Mina Array Bea	125.59	71	PKP	PKiKP	17 19 45.5	+5.6
	comp=Z,0.6nm,0.7s,baz=188,slow=2.7,SNR=4.9						
TXAR	Lajitas Array	128.86	89	PKP	PKiKP	17 19 48.7	+2.2
	comp=Z,1.2nm,1.1s,baz=167,slow=4.3,SNR=3.7						
YKA	Yellowknife Ar	139.59	44	PKP	PKiKP	17 20 06.0	-1.0
	comp=Z,0.2nm,0.7s,baz=228,slow=1.6,SNR=1.7						
FINES	FINESS Array B	142.65	313	PKhKP	PKPpre	17 20 05.2	
	comp=Z,1.8nm,0.9s,baz=200,slow=34,SNR=1.7						
ARCES	ARCESS Array B	144.05	327	PKhKP	PKPpre	17 20 08.0	
	comp=Z,4.8nm,0.9s,baz=78,slow=4.2,SNR=2.0						
ARCES				PKP	PKPdf	17 20 12.2	-0.3
	comp=Z,7.0nm,1.0s,baz=71,slow=3.3,SNR=5.4						
KRLC	Kraliky	144.06	292	*e*P	PKiKP	17 20 20.5	+3.8
DPC	Dobruska-Polom	144.43	293	*e*P	PKPbc	17 20 12.5	+0.1
MYKA	Terra Mystica	144.52	286	*e*PKP	PKPdf	17 20 14.2	+0.1
	comp=Z,5.2nm,1.1s						
OSTC	Ostas	144.57	293	*e*P	PKiKP	17 20 19.0	+1.3
MOA	Molln	144.67	288	*e*PKP	PKPdf	17 20 13.8	-0.4
	comp=Z,7.9nm,1.6s						
KBA	Koelnbreinsper	144.90	286	*e*PKP	PKPab	17 20 13.9	-0.2
	comp=Z,3.7nm,1.1s						
BIOA	Bad Ischl, Aus	144.98	287	*e*PKP	PKPbc	17 20 13.8	-0.4
	comp=Z,8.3nm,1.3s						
CKRC	Cesky Krumlov	145.04	289	*e*P	PKPdf	17 20 15.9	+1.0
ABTA	Abfaltersbach	145.27	285	*e*PKP	PKPdf	17 20 16.6	+1.2
	comp=Z,10nm,1.1s						
ULM	Lac du Bonnet	145.35	68	PKPbc	PKiKP	17 20 18.2	-1.0
	comp=Z,1.9nm,0.5s,baz=210,slow=1.6,SNR=3.5						
GERES	GERESS Array B	145.42	289	PKPbc	PKPbc	17 20 14.4	-1.3
	comp=Z,1.8nm,0.9s,baz=129,slow=1.9,SNR=13						
KHC	Kasperske Hory	145.60	290	*e*P	PKPdf	17 20 15.0	-0.8
KHC				*e*x	x	17 20 25.0	
WTTA	Wattenberg	146.03	286	*e*PKP	PKPab	17 20 19.4	+1.0
	comp=Z,14nm,1.3s						
WATA	Walderalm	146.10	286	*e*PKP	PKPab	17 20 19.2	+0.7
	comp=Z,8.0nm,1.1s						
SQTA	Sankt Quirin	146.28	285	*e*PKP	PKPbc	17 20 18.5	+0.1
	comp=Z,8.4nm,1.3s						
MOTA	Moosalm	146.40	285	*e*PKP	PKPdf	17 20 16.9	-0.5
	comp=Z,7.3nm,1.0s						
FETA	Feichten	146.50	285	*i* PKP	PKPbc	17 20 19.4	+0.4
	comp=Z,4.2nm,0.8s						
RETA	Reutte	146.67	285	*e*PKP	PKPab	17 20 20.8	+0.2
	comp=Z,5.5nm,1.0s						
DAVA	Damuels	147.13	285	*e*PKP	PKiKP	17 20 22.9	-0.3
	comp=Z,8.1nm,1.4s						
ESDC	Sonseca Array	152.27	262	PKPbc	PKPbc	17 20 33.2	-0.5
	comp=Z,0.9nm,0.7s,baz=86,slow=1.6,SNR=4.4						

NOU 25 17:15:00.6, 16°.96S×167°.82E, h12^{km}, MLv3.9/10, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	0.84	155	P	Pb	17 15 17.4	+0.3
KOUNC	Koumac, New Ca	4.89	223	P	Pn	17 16 14.1	0.0
YATNC	Mamie plateau,	5.15	190	P	Pn	17 16 17.1	-0.4
DZM	Mont Dzumac	5.25	194	P	Pn	17 16 19.1	+0.1
NOUC	Port Laguerre	5.31	195	P	Pn	17 16 19.9	+0.1

IDC 25 17:15:07.7±1.6**, 2°.56N×123°.22E, h0^{km}, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=203.6km s-min=24.1km az=63.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.89	154	P	P	17 20 31.7	-0.7
	0.4nm,0.5s,baz=331,slow=11,SNR=10						
	0.4nm,0.5s						
ASAR	Alice Springs	28.07	159	P	P	17 21 01.9	+0.7
	0.2nm,0.5s,baz=347,slow=7.4,SNR=13						
	0.2nm,0.5s						
MKAR	Makanchi Array	56.57	327	P	P	17 24 52.2	0.0
	0.2nm,0.3s,baz=123,slow=7.5,SNR=11						
	0.2nm,0.3s						

IDC ***25*** *17:52:41.7±8.4, 30°.83S×179°.74W, h427^{km}±98^{km}, mb2.7/2, mbtmp3.7/3, Error ellipse: s-maj=93.1km s-min=36.2km az=10.0*

WEL ***25*** *17:54:17.7, 38˚S±20˚×17˚8E±1˚9, h75^{km}±25^{km}, M2.5/16, ML2.7/28, MLv2.5/16, Error ellipse: s-maj=0.0km s-min=0.0km az=137.1*

ISC 25 17:52:40.9±1.7**, 30°.9S**±0°.1×**179°.1W**±0°.3**, h450^{km}, n41,** $\sigma 1^{s}.$**58**/40**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	7.17	196	P	P	17 54 28.2	+0.9
HAZ	Te Kaha	7.27	200	P	P	17 54 28.7	+0.3
PKGZ	Pakihiroa	7.32	198	P	P	17 54 28.9	0.0
PUZ	Puketiti	7.45	196	P	P	17 54 32.3	+2.1
RUGZ	Raukumara Rang	7.50	200	P	P	17 54 30.4	-0.5
TWGZ	Tauwhareparae	7.61	197	P	P	17 54 34.6	+2.5
MARZ	Manawahe	7.84	205	P	P	17 54 37.1	+2.5
MWZ	Matawai	7.88	200	P	P	17 54 34.9	-0.1
TKGZ	Te Karaka	7.89	198	P	P	17 54 36.4	+1.4
URZ	Urewera	7.94	202	P	P	17 54 35.3	-0.2
	7.6nm,0.3s,baz=349,slow=3.2,SNR=73						
URZ				S	S	17 56 08.2	-1.4
	15nm,0.5s,baz=167,slow=23,SNR=25						
URZ	Urewera	7.94	202	P	P	17 54 35.4	-0.2
RIGZ	Rimuhau	8.17	197	P	P	17 54 37.5	-0.5
RRRZ	Republican Roa	8.22	205	P	P	17 54 32.2	-6.3
MUGZ	Murupara	8.25	203	P	P	17 54 33.8	-5.1
RTZ	Ruatahuna	8.31	202	P	P	17 54 39.3	-0.3
SNGZ	Shannon Statio	8.35	199	P	P	17 54 40.2	+0.2
RAHZ	Arahi	8.55	200	P	P	17 54 43.4	+1.2
MTHZ	Maungataniwha	8.57	202	P	P	17 54 44.7	+2.4
TLZ	Tolley Road	8.59	209	P	P	17 54 46.0	+3.5
MRHZ	Matea Rd	8.69	204	P	P	17 54 44.8	+1.1
NMHZ	Naumai	8.80	201	P	P	17 54 45.4	+0.4
BKZ	Black Stump Fm	8.97	202	P	P	17 54 46.9	+0.2
HIZ	Hauiti	9.04	212	P	P	17 54 51.2	+3.8
MCHZ	McNeill Hill	9.16	201	P	P	17 54 50.3	+1.6
TMVZ	Te Maari	9.20	206	P	P	17 54 50.8	+1.5
ETVZ	East Tongariro	9.21	206	P	P	17 54 50.6	+1.1
KWHZ	Kaweka Forest	9.22	202	P	P	17 54 50.3	+0.8
BHHZ	Black Hill Sta	9.40	203	P	P	17 54 51.1	-0.3
WNVZ	Wahianoa	9.42	206	P	P	17 54 51.6	-0.1
KAHZ	Kahuranaki	9.43	199	P	P	17 54 53.1	+1.4
PKVZ	Pokaka	9.49	207	P	P	17 54 53.3	+0.9
MTVZ	Mangateitei	9.52	206	P	P	17 54 54.1	+1.4
VRZ	Vera Road	9.59	210	P	P	17 54 56.1	+2.7
PXZ	Pawanui	9.65	199	P	P	17 54 55.4	+1.4
PNHZ	Pukenui	9.74	202	P	P	17 54 55.7	+0.6
WPHZ	Waipukurau	9.80	200	P	P	17 54 57.2	+1.5
PRHZ	Porangahau	9.93	199	P	P	17 54 59.0	+1.9
ASAR	Alice Springs	42.11	268	P	P	17 59 50.4	-2.0
	0.2nm,0.4s,baz=104,slow=7.3,SNR=6.4						
	0.2nm,0.4s						
WRA	Warramunga Arr	43.15	273	P	P	17 59 58.7	-1.8
	0.6nm,0.5s,baz=113,slow=7.4,SNR=8.2						
	0.6nm,0.5s						
FINES	FINESS Array B	145.29	339	PKPbc	PKPab	18 11 28.1	+0.6
	1.3nm,0.4s,baz=50,slow=5.0,SNR=20						
NOA	NORSAR Array B	149.11	350	PKPbc	PKiKP	18 11 38.7	+0.9
	0.5nm,0.7s,baz=19,slow=4.2,SNR=1.5						

IDC ***25*** *17:54:13.0±0.5, 11°.88S×165°.53E, h0^{km}, mb4.6/22, mbtmp4.5/25, ML4.5/2, MS3.7/26, Error ellipse: s-maj=16.3km s-min=13.2km az=99.0*

BJI ***25*** *17:54:16.4±0.0, 11°.33S×165°.76E, h21^{km}, mb4.7/51, mB5.0/26, Ms4.9/6, Ms7 4.5/4*

NOU ***25*** *17:54:17.0, 11°.89S×165°.44E, h16^{km}, mb4.7/32, Santa Cruz Islands*

NEIC ***25*** *17:54:17.6±1.4, 11°.90S±0°.06×165°.46E±0°.09, h29^{km}±5^{km}, mb4.9/158, Error ellipse: s-maj=12.5km s-min=8.9km az=70.0*

GCMT ***25*** *17:54:18.6±0.3, 11°.92S±0°.04×165°.30E±0°.03, h19^{km}±1^{km}, MW4.8/67, Moment Tensor Solution. s22,c25; s67,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm;* M_{rr}*-2.35±.17;* $M_{\theta\theta}$*0.78±.10;* $M_{\phi\phi}$*1.56±.10;* $M_{r\theta}$*-0.10±.24;* $M_{\theta\phi}$*-0.82±.05;* $M_{\phi r}$*0.55±.20; Best double couple:* M_0*2.28500×10^{16} NP1:*ϕ_s*152.00000°, δ52.00000°, λ-84.00000°. NP2:* ϕ_s*323.00000°, δ39.00000°, λ-97.00000°. Principal axes: T 2.1430, Plg7.0000°, Azm238.0000°; N 0.2780, Plg4.0000°, Azm329.0000°; P -2.4270, Plg82.0000°, Azm92.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 17:54:18.1±0.5**, 11°.93S**±0°.05×**165°.43E**±0°.05**, h34^{km}**±1^{km}**, h34^{km}:pP-P, n439,** $\sigma 1^{s}.$**23**/398**, mb4.9**/115**, MS3.7**/26**, 3C-3D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.93	294	Pn	Pn	17 55 44.4	+0.8
	2µm,0.3s,baz=136,slow=7.4,SNR=55						
HNR				Sn	Sn	17 56 48.6	-1.8
	1µm,0.3s,baz=212,slow=23,SNR=7.2						
HNR				LR	LR	17 57 46.8	
	comp=Z,11µm,21.3s,baz=133,slow=36						
HNR	Honiara	5.93	294	Pn	Pn	17 55 44.2	+0.6
HNR				Sn	Sn	17 56 48.0	-2.4
HNR	Honiara	5.93	294	P	Pn	17 55 44.8	+1.2
KOUNC	Koumac, New Ca	8.64	187	Pn	Pn	17 56 21.3	+0.5
KOUNC				Sn	Sn	17 57 54.4	-2.6
KOUNC	Koumac, New Ca	8.64	187	P	Pn	17 56 21.8	+1.1
LIFNC	LIFOU	8.96	169	Pn	Pn	17 56 24.2	-0.9
LIFNC	LIFOU	8.96	169	P	Pn	17 56 26.3	+1.1
DZM	Mont Dzumac	10.13	175	*e*Pn	Pn	17 56 39.9	-1.4
	49nm,1.5s						
DZM				*e*LR	LR	17 58 59.7	
	comp=Z,494nm,25.3s						
DZM	Mont Dzumac	10.13	175	Pn	Pn	17 56 41.9	+0.6
	3.0nm,0.3s,baz=302,slow=21,SNR=72						
DZM				Sn	Sn	17 58 31.2	-2.5
	0.6nm,0.3s,baz=126,slow=19,SNR=1.3						
DZM				LR	LR	18 00 22.9	
	comp=Z,480nm,18.1s,baz=22,slow=36						
	7.7nm,0.4s						
DZM	Mont Dzumac	10.13	175	Pn	Pn	17 56 40.9	-0.4
DZM	Mont Dzumac	10.13	175	P	Pn	17 56 41.8	+0.6
NOUC	Port Laguerre	10.15	175	P	Pn	17 56 42.4	+1.0
YATNC	Mamie plateau,	10.17	172	P	Pn	17 56 41.7	0.0
ONTNC	Ouen Toro	10.36	175	Pn	Pn	17 56 43.8	-0.6
ONTNC	Ouen Toro	10.36	175	P	Pn	17 56 46.1	+1.7
OUENC	Ouen Island, N	10.52	173	Pn	Pn	17 56 46.6	+0.2
OUENC	Ouen Island, N	10.52	173	P	Pn	17 56 48.7	+2.3
PINNC	Pines Island,	10.79	170		Pn	17 56 50.1	-0.2
PINNC	Pines Island,	10.79	170	P	Pn	17 56 50.9	+0.6
MSVF	Nonsavu	13.49	117	Pn	Pn	17 57 26.7	-0.6
	0.1nm,0.3s,baz=270,slow=20,SNR=1.4						
MSVF				LR	LR	18 00 58.7	
	comp=Z,98nm,18.8s,baz=300,slow=30						
	1.8nm,0.8s						
PMG	Port Moresby	18.13	276	P	Pn	17 58 27.3	0.0
	7.9nm,0.8s,baz=129,slow=14,SNR=2.1						
PMG				LR	LR	18 04 23.9	
	comp=Z,288nm,21.7s,baz=114,slow=34						
PMG	Port Moresby	18.13	276	Pn	Pn	17 58 24.3	-3.0
EIDS	Eidsvold	19.04	223		P	17 58 37.1	-0.3
CTA	Charters Tower	20.12	244	P	Pn	17 58 50.6	-0.7
	25nm,1.0s,baz=74,slow=11,SNR=15						
CTA				LR	LR	18 05 19.9	
	comp=Z,214nm,21.2s,baz=85,slow=33						
	25nm,1.0s						
CTA	Charters Tower	20.12	244	P	Pn	17 58 51.2	-0.1
CTAO	Charters Tower	20.12	244	P	Pn	17 58 51.3	0.0
CTAO	Charters Tower	20.12	244	P	Pn	17 58 50.8	-0.5
MTSU	Mount Surprise	21.29	251	P	P	17 59 04.1	+2.1
RMQ	Roma	21.35	225	P	P	17 59 04.6	+2.1
COEN	Coen	21.78	262	P	P	17 59 06.1	-1.1
AFI	Afiamalu	22.30	98	LR	LR	18 06 09.0	
	comp=Z,168nm,19.3s,baz=252,slow=32						
ARMA	Armidale	22.41	213	P	P	17 59 14.3	+0.4
ARMA	Armidale	22.41	213	P	P	17 59 15.2	+1.3
OUZ	Omahuta	24.34	164	P	P	17 59 36.2	+3.4
NIUE	Niue	24.77	110	P	P	17 59 35.2	-1.7
QIS	Mount Isa	26.20	248	P	P	17 59 52.3	+2.4
CMSA	Cobar Meteorol	26.69	220	P	P	17 59 55.9	+1.8
GENI	Genyem	26.69	288	P	P	17 59 54.8	+0.5
GENI	Genyem	26.69	288	P	P	17 59 57.8	+3.5
	15nm,1.2s						
CAN	Canberra	27.64	210	P	P	18 00 01.9	-0.8
CAN				IAmb	IAmb	18 00 32.5	
	comp=Z,41nm,1.9s						
INKA	Innaminka	27.96	232	P	P	18 00 07.3	+1.8
URZ	Urewera	28.22	160	P	P	18 00 07.6	-0.1
	comp=Z,12nm,0.9s,baz=360,slow=1.6,SNR=3.9						
	comp=Z,12nm,0.9s						
URZ	Urewera	28.22	160	P	P	18 00 10.3	+2.6
SMPI	Sarmi	28.27	288	P	P	18 00 11.9	+3.4
	comp=Z,32nm,1.1s						
RTZ	Ruatahuna	28.50	161	P	P	18 00 11.3	+1.0
RTZ				IAmb	IAmb	18 00 14.6	
	comp=Z,22nm,1.0s						
BKZ	Black Stump Fm	28.85	162	P	P	18 00 13.3	-0.1
BKZ	Black Stump Fm	28.85	162	P	P	18 00 15.4	+2.0
STKA	Stephens Creek	29.59	224	P	P	18 00 20.9	+0.9
	comp=Z,7.1nm,0.9s,baz=31,slow=10,SNR=10						
STKA				PcP	PcP	18 03 25.1	+0.6
	comp=Z,2.5nm,0.8s,baz=38,slow=4.0,SNR=4.1						
STKA				LR	LR	18 10 57.7	
	comp=Z,210nm,21.3s,baz=29,slow=34						
	comp=Z,7.1nm,0.9s						
STKA	Stephens Creek	29.59	224	P	P	18 00 19.8	-0.3
BFZ	Birch Farm	30.18	164	P	P	18 00 26.2	+1.1
WB0	Warramunga Arr	30.82	251	P	P	18 00 31.1	0.0
WB2	Warramunga Arr	30.88	251	P	P	18 00 31.0	-0.6
WRAB	Tennant Creek	30.88	251	P	P	18 00 31.1	-0.6
WRAB	Tennant Creek	30.88	251	P	P	18 00 32.3	+0.7

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WRAB  Tennant Creek     30.88 251  P      P      18 00 31.5 -0.1
WRAB                               sP     sP     18 00 42.3 -0.3
WRA   Warramunga Arr    30.90 251  P      P      18 00 31.4 -0.4
      comp=Z,3.0nm,0.5s,baz=81,slow=8.9,SNR=31
WRA                                PcP    PcP    18 03 28.2 +0.2
      comp=Z,1.5nm,0.9s,baz=81,slow=2.8,SNR=7.7
WRA                                LR     LR     18 10 56.8
      comp=Z,221nm,21.6s,baz=60,slow=32
      comp=Z,3.0nm,0.5s
WRA   Warramunga Arr    30.90 251  P      P      18 00 31.2 -0.6
INZ   Inchbonnie        31.12 171  P      P      18 00 34.5 +1.1
TOO   Toolangi          31.16 212  P      P      18 00 34.4 +0.5
TOO                                IAmb   IAmb   18 00 39.1
      comp=Z,17nm,1.1s
OXZ   Oxford            31.80 171  P      P      18 00 38.4 -1.0
OOD   Oodnadatta        31.99 236  P      P      18 00 42.1 +0.8
RPZ   Rata Peaks        32.04 172  P      P      18 00 42.1 +0.6
      comp=Z,29nm,0.8s,baz=289,slow=3.4,SNR=7.9
RPZ                                LR     LR     18 13 55.4
      comp=Z,136nm,18.2s,baz=351,slow=37
      comp=Z,29nm,0.8s
RPZ   Rata Peaks        32.04 172  P      P      18 00 40.9 -0.6
RPZ   Rata Peaks        32.04 172  P      P      18 00 43.1 +1.6
AS31  Alice Springs     32.12 244  P      P      18 00 42.1 -0.4
ASAR  Alice Springs     32.12 244  P      P      18 00 42.3 -0.3
      comp=Z,3.3nm,0.9s,baz=70,slow=9.3,SNR=33
ASAR                               PcP    PcP    18 03 31.5 +0.1
      comp=Z,2.4nm,0.9s,baz=72,slow=3.1,SNR=10
ASAR                               LR     LR     18 12 14.2
      comp=Z,134nm,20.2s,baz=66,slow=34
      comp=Z,3.3nm,0.9s
ASAR  Alice Springs     32.12 244  P      P      18 00 43.0 +0.4
HTT   Hallett           32.33 224  P      P      18 00 45.8 +1.6
GUMO  Guam              32.54 321  LR     LR     18 13 59.2
      comp=Z,84nm,18.5s,baz=152,slow=36
BBOO  Buckleboo         34.00 228  P      P      18 00 59.0 +0.2
MULG  Mulgathing        34.32 233  P      P      18 01 01.4 -0.2
RAR   Rarotonga         34.54 110  LR     LR     18 12 18.0
      comp=Z,74nm,20.6s,baz=322,slow=32
TAU   Tasmania Unive    34.64 204  P      P      18 01 04.7 +0.6
SIJI  Sorong            35.63 285  LR     LR     18 16 57.2
      comp=Z,118nm,19.2s,baz=102,slow=38
KNRA  Kununurra         35.77 260  P      P      18 01 14.7 +0.4
WRKA  Warakurna         37.42 244  P      P      18 01 28.3  0.0
FITZ  Fitzroy Crossi    38.86 256  P      P      18 01 40.0 -0.4
FORT  Forrest           39.28 236  P      P      18 01 42.5 -1.4
FORT                               IAmb   IAmb   18 03 13.7
      comp=Z,20nm,0.9s
MMRI  Maumere           42.59 270  P      P      18 02 09.2 -2.1
MMRI                               IAmb   IAmb   18 02 29.4
      comp=Z,29nm,1.0s
PPT   Papeete           43.79 103  LR     LR     18 16 11.9
      comp=Z,43nm,21.6s,baz=256,slow=30
PPT2  Papeete2          43.79 103 eS      S      18 08 51.6 +1.8
      comp=Z,78nm,24.8s
PPT2                              eLR     LR     18 14 32.9
      comp=Z,392nm,33.0s
PPT2                              eLR     LR     18 14 33.0
      comp=Z,217nm,34.5s
DAV   Davao City (W)    43.90 293  LR     LR     18 18 51.0
      comp=Z,79nm,18.5s,baz=344,slow=34
TBI   Tubuai            44.30 111 eS      S      18 08 58.6 +1.7
      comp=Z,377nm,30.2s
TBI                               eLR     LR     18 14 46.4
      comp=Z,890nm,32.5s
TBI                               eLR     LR     18 14 46.8
      comp=Z,2µm,31.0s
PSA00 Pilbara Seismi    44.55 251  P      P      18 02 26.3 -0.7
PSA00                              IAmb   IAmb   18 02 46.6
      comp=Z,21nm,1.2s
PSA00 Pilbara Seismi    44.55 251  P      P      18 02 26.3 -0.7
MBWA  Marble Bar        44.62 252  P      P      18 02 28.1 +0.6
MBWA                               IAmb   IAmb   18 02 40.5
      comp=Z,15nm,0.9s
MBWA  Marble Bar        44.62 252  P      P      18 02 28.9 +1.3
MBWA                               pP     sP     18 02 38.0 -0.6
KAPI  Kappang           45.65 275  LR     LR     18 24 12.7
      comp=Z,75nm,18.4s,baz=85,slow=39
TOLI2 Tolitoli          46.20 283  P      P      18 02 39.3 -0.8
NWAO  Narrogin (SRO)    48.72 237  LR     LR     18 22 53.3
      comp=Z,180nm,21.6s,baz=32,slow=35
MORW  Morawa            48.93 242  P      P      18 03 01.6 +0.4
TAOE  Nuku Hiva Isla    53.55  92 eSS     SKiKP  18 14 49.9 +0.3
      comp=Z,46nm,24.7s
TAOE                              eLR     LR     18 19 03.8
      comp=Z,86nm,24.4s
UGM   Wanagama          54.16 269  P      P      18 03 39.3 -1.3
JGF   Kuroka            54.22 332  P      P      18 03 39.2 -1.3
JGF                                IAmb   IAmb   18 04 25.6
      comp=Z,21nm,1.3s
JMN   Monobe            54.44 328  P      P      18 03 40.8 -1.4
JMN                                IAmb   IAmb   18 04 00.7
      comp=Z,16nm,0.9s
MJAR  Matsushiro Arr    54.61 333  P      P      18 03 42.6 -0.8
      comp=Z,4.3nm,0.9s,baz=168,slow=8.6,SNR=13
MJAR                               LR     LR     18 23 31.3
      comp=Z,33nm,21.2s,baz=182,slow=32
      comp=Z,4.3nm,0.9s
MAJO  Matsushiro        54.62 333  P      P      18 03 43.0 -0.4
MAJO  Matsushiro        54.62 333  P      P      18 03 43.1 -0.3
MJB9  Matsu-Tunnel      54.62 333  P      P      18 03 43.8 +0.3
JNU   Nakatsue          55.62 325  LR     LR     18 23 55.2
      comp=Z,44nm,21.3s,baz=156,slow=32
YULB  Yu-li             55.65 309  P      P      18 03 50.3 -0.8
JHS   Saijyo            55.82 328  P      P      18 03 51.4 -0.7
TPUB  Ta-pu             56.10 309  P      P      18 03 54.2 -0.2
SSLB  Suanglung         56.13 309  P      P      18 03 53.7 -0.9
YHNB  Yeheng            56.31 311  P      P      18 03 56.6 +0.7
JTM   Tenmabayashi      57.09 338  P      P      18 04 00.8 -0.3
JKA   Kamikawa-asahi    59.52 341  P      P      18 04 18.2 +0.2
JKA                                IAmb   IAmb   18 04 20.3
      comp=Z,19nm,1.0s
ASAJ  Asahikawa         59.52 341  P      P      18 04 18.5 +0.5
      comp=Z,14nm,0.8s,baz=210,slow=6.1,SNR=23
      comp=Z,14nm,0.8s
KSRS  Korea Array       60.43 326  P      P      18 04 23.9 -0.4
      comp=Z,1.0nm,0.8s,baz=148,slow=6.4,SNR=3.4
      comp=Z,1.0nm,0.8s
NJ2   Nanjing           62.43 316 eP      P      18 04 40.3 +2.3
NJ2                                pP     pP     18 04 46.0 -0.7
NJ2                                sP     sP     18 04 49.5 -0.4
NJ2                                pmax   pmax
      comp=Z,6.0nm,0.5s
NJ2                                pmax   pmax
      comp=Z,130nm,5.3s
USA0B Ussuriysk Arra    63.60 334  P      P      18 04 43.6 -1.8
USA0B                              IAmb   IAmb   18 04 48.0
      comp=Z,18nm,1.4s
USRK  Ussuriysk Ar.     63.60 334  P      P      18 04 46.2 +0.8
      comp=Z,3.0nm,0.8s,baz=147,slow=8.6,SNR=9.4
      comp=Z,3.0nm,0.8s
USRK  Ussuriysk Ar.     63.60 334  P      P      18 04 43.6 -1.8
MDJ   Mudanjiang        64.99 333  P      P      18 04 55.8 +1.2
MDJ                                sP     sP     18 05 06.0 -0.9
MDJ                                pmax   pmax
      comp=Z,5.0nm,1.1s
MDJ                                pmax   pmax
      comp=Z,100nm,5.2s
MDJ   Mudanjiang        64.99 333  P      P      18 04 53.8 -0.8
MDJ                                IAmb   IAmb   18 06 09.5
      comp=Z,12nm,1.5s
PETK  Petropavlovsk-    65.12 355  P      P      18 04 54.3 -1.0
      comp=Z,6.1nm,0.9s,baz=156,slow=11,SNR=5.4
      comp=Z,6.1nm,0.9s
CASY  Casey             65.44 201  P      P      18 04 57.1 -0.2
CASY                               IAmb   IAmb   18 06 07.7
      comp=Z,15nm,1.2s
VNDA  Vanda             65.61 181  P      P      18 04 58.5 +0.3
      comp=Z,1.1nm,0.8s,baz=10,slow=5.3,SNR=1.8
      comp=Z,1.1nm,0.8s
VNDA  Vanda             65.61 181  P      P      18 04 59.0 +0.8
VNDA                               IAmb   IAmb   18 05 55.3
      comp=Z,31nm,1.9s
IPM   Ipoh              66.07 280  P      P      18 05 02.5 +0.2
IPM                                IAmb   IAmb   18 05 04.5
      comp=Z,11nm,1.0s
CN2   Changchun         66.34 329  P      P      18 05 04.5 +1.2
CN2                                pmax   pmax
      comp=Z,10.0nm,0.8s
BNX   BinXian           66.84 332 ⇓P      P      18 05 06.5  0.0
BNX                                pmax   pmax
      comp=Z,8.0nm,1.0s
BNX                                pmax   pmax
      comp=Z,100nm,6.0s
CCD   Concordia, Ant    67.28 191  P      P      18 05 09.3 -0.1
CCD                                sP     pwP    18 05 26.9 +2.0
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ENH   Enshi             68.22 309  P      P      18 05 15.2 -0.4
ENH   Enshi             68.22 309  P      P      18 05 15.3 -0.3
NIKH  Nikolski High     68.31  16  P      P      18 05 15.8 +0.2
      baz=207
HNS   HongShan          68.33 318 ⇑P      P      18 05 17.8 +1.7
HNS                                pmax   pmax
      comp=Z,10.0nm,1.2s
SRIT  Nakonsritamara    68.54 284  P      P      18 05 16.6 -1.2
SRIT                               IAmb   IAmb   18 05 20.7
      comp=Z,22nm,1.2s
GSI   Gunungsitoli      68.64 276  P      P      18 05 18.4 -0.1
GSI                                IAmb   IAmb   18 05 38.5
      comp=Z,14nm,0.9s
GYA   Guiyang           68.66 305 ⇑P      P      18 05 20.0 +1.5
GYA                                pmax   pmax
      comp=Z,11nm,1.1s
UNV   Unalaska Valle    69.74  17  P      P      18 05 23.8 -0.6
      baz=209
HEH   HeiHe             70.28 335 eP      P      18 05 26.5 -1.3
HEH                                pmax   pmax
      comp=Z,6.0nm,0.7s
XAN   Xi'an             70.49 313⇑iP      P      18 05 30.8 +1.2
XAN                                pP     sP     18 05 39.8 -1.8
XAN                                pmax   pmax
      comp=Z,9.0nm,0.8s
PHRA  Phrae             71.05 294  P      P      18 05 32.6 -0.6
KMI   Kunming           71.32 302 ⇓P      P      18 05 37.0 +2.0
KMI                                pmax   pmax
      comp=Z,11nm,1.7s
CRAI  Chiangrai         71.52 296  P      P      18 05 35.2 -0.9
CRAI                               IAmb   IAmb   18 05 38.9
      comp=Z,11nm,1.0s
CM31  Chiang Mai Arr    72.18 294  P      P      18 05 41.2 +1.1
CM31                               IAmb   IAmb   18 05 43.1
      comp=Z,12nm,1.0s
CMAR  Chiang Mai Arr    72.18 294  P      P      18 05 41.5 +1.4
      comp=Z,5.3nm,0.8s,baz=120,slow=4.5,SNR=34
      comp=Z,5.3nm,0.8s
CMAR  Chiang Mai Arr    72.18 294  P      P      18 05 40.8 +0.8
MA2   Magadan           72.24 352  P      P      18 05 39.1 -0.4
CHTO  Chiang Mai        72.30 294  P      P      18 05 41.7 +1.0
HHC   Hu-ho-hao-te      72.31 320 eP      P      18 05 43.3 +2.8
HHC                                pmax   pmax
      comp=Z,48nm,0.7s
HHC                                pmax   pmax
      comp=Z,210nm,6.1s
PZH   PanZhiHua         72.69 303  P      P      18 05 46.8 +3.7
PZH                                pmax   pmax
      comp=Z,10.0nm,0.8s
PZH                                pmax   pmax
      comp=Z,90nm,4.7s
SDPT  Sand Point        72.89  20  P      P      18 05 41.7 -1.7
      baz=215
CD2   Chengdu           72.89 308  P      P      18 05 45.5 +1.4
CD2                                pmax   pmax
      comp=Z,10.0nm,0.9s
HIA   Hailar            72.98 331  P      P      18 05 44.9 +0.6
BTO   Baotou            73.15 319 eP      P      18 05 48.5 +3.0
BTO                                pP     pP     18 05 53.5 -0.9
BTO                                sP     sP     18 05 56.3 -1.2
BTO                                PP     PP     18 08 30.3 +1.4
BTO                                S      SKiKP  18 15 14.8 -0.5
BTO                                sS     sS     18 15 26.8 +1.0
BTO                                pmax   pmax
      comp=Z,20nm,0.5s
BTO                                pmax   pmax
      comp=Z,440nm,8.1s
BTO                                LR     LR
      comp=Z,350nm,6.2s
BTO                                LR     LR
      comp=Z,510nm,5.5s
CHGN  Chignik           74.34  20  P      P      18 05 50.8 -1.1
CHGN                               IAmb   IAmb   18 05 54.2
      comp=Z,9.8nm,0.8s
TNCH  TengChong         74.83 300 eP      P      18 05 57.8 +2.1
TNCH                               pP     pP     18 06 04.0 -0.8
TNCH                               pmax   pmax
      comp=Z,9.0nm,0.8s
LZH   Lanzhou           75.12 313 eP      P      18 05 59.0 +1.8
LZH                                pP     pP     18 06 05.0 -1.1
LZH                                sP     sP     18 06 08.0 -1.3
LZH                                pmax   pmax
      comp=Z,15nm,1.1s
R16K  Pilot Point       75.63  20  P      P      18 05 57.9 -1.5
      baz=217
R17K  Ugashik Creek     76.08  20  P      P      18 06 01.6 -0.3
      baz=218
P16K  Nushagak River    76.67  18  P      P      18 06 04.9 -0.4
      baz=217
Q17K  Contact Creek     76.74  20  P      P      18 06 05.2 -0.6
      baz=219,SNR=6.8
Q16K  King Salmon       76.81  19  P      P      18 06 05.1 -0.9
      baz=218
OHAK  Old Harbor        76.84  22  P      P      18 06 05.4 -0.8
      baz=222
O16K  Kokwok River B    77.09  18  P      P      18 06 06.7 -0.9
      baz=217
P17K  Kvichak River     77.29  19  P      P      18 06 07.0 -1.7
      baz=218
Q18K  Katmai Hardscr    77.33  20  P      P      18 06 06.9 -2.2
      baz=220,SNR=6.7
KDAK  Kodiak Island     77.51  22  P      P      18 06 10.2 +0.2
      comp=Z,9.0nm,0.9s,baz=279,slow=6.9,SNR=4.5
KDAK                               LR     LR     18 32 15.6
      comp=Z,75nm,21.0s,baz=240,slow=30
      comp=Z,9.0nm,0.9s
KDAK  Kodiak Island     77.51  22  P      P      18 06 10.3 +0.3
KDAK  Kodiak Island     77.51  22  P      P      18 06 09.4 -0.6
      baz=222
O17K  Koliganek Bris    77.54  18  P      P      18 06 08.1 -2.0
      baz=218
N16K  Nishlik Lake      77.60  17  P      P      18 06 08.7 -1.8
      baz=216
P18K  Big Mountain,     77.83  19  P      P      18 06 11.1 -0.8
P18K  Big Mountain,     77.83  19  P      P      18 06 11.6 -0.2
      baz=219,SNR=14
Q19K  Cape Douglas,     78.00  20  P      P      18 06 12.6 -0.2
Q19K  Cape Douglas,     78.00  20  P      P      18 06 10.9 -1.9
      baz=221
QSPA  South Pole Qui    78.08 180  LR     LR     18 39 29.1
      comp=Z,54nm,18.2s,baz=12,slow=35
QSPA  South Pole Qui    78.08 180  P      P      18 06 13.2 -0.1
QSPA                               IAmb   IAmb   18 06 15.1
      comp=Z,22nm,1.4s
Q20K  Shuyak Island     78.19  21  P      P      18 06 12.2 -1.6
      baz=222
O18K  Koktuh Hills      78.20  19  P      P      18 06 13.1 -0.7
O18K                               IAmb   IAmb   18 06 37.0
      comp=Z,15nm,1.2s
O18K  Koktuh Hills      78.20  19  P      P      18 06 13.8  0.0
      baz=219
P19K  Oil Pt            78.69  20  P      P      18 06 16.2 -0.4
P19K  Oil Pt            78.69  20  P      P      18 06 16.4 -0.2
      baz=221
O19K  Port Alsworth     78.74  19  P      P      18 06 15.9 -0.9
O19K                               IAmb   IAmb   18 06 18.2
      comp=Z,11nm,1.0s
O19K  Port Alsworth     78.74  19  P      P      18 06 15.5 -1.3
      baz=220
ULN   Ulaanbaatar       78.83 324  P      P      18 06 18.6 +0.8
ULN                                IAmb   IAmb   18 06 20.2
      comp=Z,11nm,0.8s
YAK   Yakutsk           78.85 344  P      P      18 06 16.9 -0.4
ILSW  Iliamna Southw    78.97  20  P      P      18 06 17.6 -0.6
ILSW                               IAmb   IAmb   18 06 19.0
      comp=Z,15nm,1.1s
SVW2  Sparrevohn        79.05  18  P      P      18 06 18.1 -0.4
SVW2                               IAmb   IAmb   18 06 20.3
      comp=Z,20nm,1.6s
N19K  Bonanza Creek     79.17  19  P      P      18 06 17.3 -1.9
      baz=220
SONM  Songino Array     79.19 324  P      P      18 06 20.7 +0.9
      comp=Z,4.5nm,0.8s,baz=140,slow=5.8,SNR=26
      comp=Z,4.5nm,0.8s
SONM  Songino Array     79.19 324  P      P      18 06 20.1 +0.4
O20K  Slope Mountain    79.21  20  P      P      18 06 18.3 -1.2
      baz=222
ANM   Nome              79.42  12  P      P      18 06 18.8 -1.6
      baz=209
GTA   Gaotai            79.45 314 eP      P      18 06 23.0 +1.7
GTA                                pmax   pmax
      comp=Z,9.0nm,1.1s
RSO   Redoubt South     79.46  20  P      P      18 06 20.5 -0.5
BRLK  Bradley Lake      79.57  21  P      P      18 06 20.8 -0.6
BRSE  Bradley Lake S    79.61  21  P      P      18 06 19.9 -1.7
      baz=224
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BILL  Bilibino          79.76   0  P      P      18 06 22.6 +0.3
BILL                               IAmb   IAmb   18 06 24.1
      comp=Z,24nm,1.1s
TNA   Tin City          79.80  11  P      P      18 06 22.9 +0.4
      baz=206
M19K  Big River Lodg    80.03  18  P      P      18 06 24.2 +0.4
M19K                               IAmb   IAmb   18 06 25.9
      comp=Z,8.6nm,0.8s
M19K  Big River Lodg    80.03  18  P      P      18 06 23.2 -0.6
      baz=220
L19K  White Mountain    80.11  18  IAmb   IAmb   18 06 26.3
      comp=Z,10nm,0.8s
L19K  White Mountain    80.11  18  P      P      18 06 23.6 -0.6
      baz=219
SPCR  Spurr Chakacha    80.19  19  P      P      18 06 23.0 -1.7
      baz=222
CAPN  Captain Cook N    80.22  20  P      P      18 06 23.7 -1.1
      baz=223
TTA   Tatalina          80.36  17  P      P      18 06 25.5 -0.1
TTA   Tatalina          80.36  17  P      P      18 06 24.7 -0.9
      baz=218
M20K  Styx River        80.41  19  P      P      18 06 25.0 -1.0
      baz=221
L20K  Farewell, AK      80.63  18  P      P      18 06 25.9 -1.1
      baz=220
SUA   Susitna One       80.86  20  IAmb   IAmb   18 06 31.5
      comp=Z,11nm,1.2s
SUA   Susitna One       80.86  20  P      P      18 06 27.1 -1.3
      baz=223
RC01  Rabbit Creek A    80.93  20  P      P      18 06 28.2 -0.4
      baz=224
SKT   Skwentna          80.98  19  P      P      18 06 28.0 -0.9
      baz=222
PWL   Port Wells        81.25  21  IAmb   IAmb   18 06 32.4
      comp=Z,17nm,0.8s
PWL   Port Wells        81.25  21  P      P      18 06 29.6 -0.7
      baz=226
K20K  Telida            81.25  17  IAmb   IAmb   18 06 47.2
      comp=Z,24nm,1.9s
K20K  Telida            81.25  17  P      P      18 06 29.7 -0.6
      baz=220
PPLA  Purkeypile        81.46  18  P      P      18 06 30.1 -1.5
      baz=222
PMR   Palmer            81.49  20  P      P      18 06 31.4 -0.1
      baz=225
GCSA  Galena City Sc    81.57  15  P      P      18 06 32.2 +0.4
      baz=217
KNK   Knik Glacier      81.59  21  P      P      18 06 32.0 -0.2
KNK                                IAmb   IAmb   18 06 33.5
      comp=Z,7.0nm,0.7s
KNK   Knik Glacier      81.59  21  P      P      18 06 31.1 -1.0
      baz=225
CUT   Chulitna          81.70  19  P      P      18 06 32.0 -0.6
      baz=224
GOMU  GeErMu            81.84 310  P      P      18 06 38.5 +4.0
GOMU                               pP     pP     18 06 42.8 -0.7
GOMU                               pmax   pmax
      comp=Z,75nm,5.6s
CAST  Castle Rocks      81.88  18  IAmb   IAmb   18 06 36.0
      comp=Z,9.7nm,0.7s
CAST  Castle Rocks      81.88  18  P      P      18 06 32.7 -1.0
      baz=222
SML   Sawmill           81.91  20  P      P      18 06 31.1 -2.8
      baz=226
EYAK  Cordova Ski Ar    81.96  22  P      P      18 06 31.9 -2.2
      baz=228
M23K  Glacier View      82.11  20  P      P      18 06 32.7 -2.2
      baz=226
CHUM  Lake Minchumin    82.16  17  P      P      18 06 33.6 -1.5
      baz=222
SCM   Sheep Creek Mo    82.27  21  IAmb   IAmb   18 06 37.3
      comp=Z,17nm,0.7s
SCM   Sheep Creek Mo    82.27  21  P      P      18 06 33.5 -2.3
      baz=226,SNR=5.6
KTH   Kantishna Hill    82.33  18  IAmb   IAmb   18 06 37.9
      comp=Z,6.7nm,0.8s
DIV   Divide            82.34  22  IAmb   IAmb   18 06 37.4
      comp=Z,17nm,0.8s
TRF   Thorofare Moun    82.45  18  P      P      18 06 34.2 -2.7
      baz=224
KLU   Klutina           82.53  21  IAmb   IAmb   18 06 38.6
      comp=Z,8.2nm,0.8s
KLU   Klutina           82.53  21  P      P      18 06 34.9 -2.3
      baz=228
BPAW  Bear Paw Mtn.     82.72  18  P      P      18 06 36.4 -1.6
      baz=223
M24K  Tolsona, Glenn    82.86  21  P      P      18 06 39.0 +0.1
M24K  Tolsona, Glenn    82.86  21  P      P      18 06 36.3 -2.5
      baz=228,SNR=5.7
RDOG  Red Dog Mine      82.95  11  IAmb   IAmb   18 06 41.5
      comp=Z,17nm,1.0s
RDOG  Red Dog Mine      82.95  11  P      P      18 06 36.9 -2.2
      baz=211
MCK   McKinley          83.08  19  IAmb   IAmb   18 06 54.1
      comp=Z,16nm,1.2s
MCK   McKinley          83.08  19  P      P      18 06 38.6 -1.3
      baz=225
N25K  Chitina, Valde    83.08  22  P      P      18 06 37.9 -2.1
      baz=229,SNR=12
I21K  Tanana            83.23  17  P      P      18 06 39.7 -0.9
      baz=222
VRDI  Verde Repeater    83.26  22  IAmb   IAmb   18 06 42.3
      comp=Z,7.1nm,0.7s
GLB   Gilahina Butte    83.26  22  IAmb   IAmb   18 06 42.2
      comp=Z,9.1nm,0.7s
IMAR  Indian Mountai    83.36  16  P      P      18 06 41.1 -0.1
H21K  Melozitna Rive    83.36  16  P      P      18 06 41.2 -0.1
      baz=221
HARP  HAARP             83.41  21  P      P      18 06 40.8 -0.8
      baz=228
MLY   Manley            83.47  17  P      P      18 06 40.0 -2.0
      baz=223
MCARA McCarthy VSAT     83.52  22  IAmb   IAmb   18 06 55.3
      comp=Z,26nm,1.6s
MCARA McCarthy VSAT     83.52  22  P      P      18 06 42.2 +0.1
      baz=230
NEA2  Nenana            83.65  18  IAmb   IAmb   18 06 45.0
      comp=Z,9.5nm,1.4s
NEA2  Nenana            83.65  18  P      P      18 06 42.7 -0.1
      baz=225
PAX   Paxson            83.68  20  P      P      18 06 43.4 +0.3
      baz=228
PINM  Pinnacle          83.79  24  P      P      18 06 41.5 -2.2
      baz=233
BARN  Barnard Glacie    83.83  23  IAmb   IAmb   18 06 45.6
      comp=Z,12nm,0.8s
G21K  Allakaket         83.83  15  P      P      18 06 43.6 -0.1
      baz=220
WRH   Wood River Hil    83.86  18  P      P      18 06 43.6 -0.3
WRH                                IAmb   IAmb   18 06 45.5
      comp=Z,10nm,0.8s
PNL   Peninsula         83.88  25  P      P      18 06 44.3 +0.2
      baz=234
I23K  Minto, Yukon-K    83.96  18  P      P      18 06 44.3 -0.1
      baz=224
CCB   Clear Creek Bu    84.08  18  IAmb   IAmb   18 06 46.2
      comp=Z,6.7nm,0.7s
K24K  Donnelly Dome     84.14  20  P      P      18 06 43.7 -1.7
      baz=228
M26K  Nabesna, AK       84.18  22  IAmb   IAmb   18 06 47.2
      comp=Z,14nm,0.9s
M26K  Nabesna, AK       84.18  22  P      P      18 06 44.5 -1.1
      baz=230
HDA   Harding Lake      84.18  19  P      P      18 06 42.3 -3.2
      baz=227,SNR=21
SIT   Sitka             84.18  28  P      P      18 06 44.2 -1.4
      baz=238
O28M  Mount Upton       84.22  24  P      P      18 06 42.5 -3.7
      baz=233
TCOL  CIGO, UAF Yank    84.22  18  P      P      18 06 43.8 -1.9
      baz=226
COLA  College           84.22  18  P      P      18 06 45.8 +0.1
COLA  College           84.22  18  P      P      18 06 44.0 -1.6
      baz=226
S31K  Pelican           84.26  27  P      P      18 06 45.1 -0.9
      baz=237
SNCC  San Nicolas Is    84.29  54  P      P      18 06 43.1 -3.7
      baz=252
F21K  Alatna River      84.38  15  P      P      18 06 45.5 -1.0
      baz=220
H23K  Yukon River       84.40  17  P      P      18 06 45.6 -1.0
      baz=224
RIDG  Independent Ri    84.41  20  IAmb   IAmb   18 06 48.4
      comp=Z,13nm,0.9s
RIDG  Independent Ri    84.41  20  P      P      18 06 45.0 -1.7
      baz=229,SNR=5.8
IL31                    84.45  19  P      P      18 06 47.0 +0.2
IL31                               IAmb   IAmb   18 06 48.9
```

	comp=Z,7.9nm,0.7s						
ILAR	Eielson Array	84.45	19	P	P	18 06 46.4	-0.5
	comp=Z,6.3nm,0.6s,baz=249,slow=4.9,SNR=111						
	comp=Z,6.3nm,0.6s						
L26K	Log Cabin Wild	84.45	21	IAmb	IAmb	18 06 48.8	
	comp=Z,12nm,1.1s						
L26K	Log Cabin Wild	84.45	21	P	P	18 06 45.8	-1.1
	baz=230						
SBC	Santa Barbara	84.51	53	P	P	18 06 45.0	-2.8
	baz=252						
POKR	Poker Plat Res	84.52	18	P	P	18 06 46.3	-1.0
	baz=226						
M27K	Edge Creek, AK	84.55	22	IAmb	IAmb	18 06 49.6	
	comp=Z,9.0nm,0.9s						
M27K	Edge Creek, AK	84.55	22	P	P	18 06 45.4	-2.2
	baz=231						
O29M	Mount Kennedy	84.58	24	P	P	18 06 47.0	-0.8
	baz=234						
DOT	Dot Lake	84.61	20	P	P	18 06 48.3	+0.6
YUK8	Steele Glacier	84.69	23	P	P	18 06 46.8	-1.7
	baz=233,SNR=9.4						
YUK3	Moose Creek	84.72	23	P	P	18 06 47.4	-1.1
	baz=233						
U33K	Whale Pass	84.73	30	P	P	18 06 47.7	-0.7
	baz=240						
S32K	Killisnoo	84.75	28	P	P	18 06 48.1	-0.4
	baz=238						
TAPN	Taplejung	84.76	299	*e*P	P	18 06 50.4	+0.7
SCRK	Sand Creek	84.85	20	P	P	18 06 47.4	-1.7
	baz=229,SNR=17						
H24K	Noodor Dome	84.89	18	P	P	18 06 49.5	+0.4
	baz=226						
G23K	Bananza Creek	84.90	16	P	P	18 06 48.7	-0.5
	baz=224						
F22K	John River	84.92	15	P	P	18 06 49.1	-0.1
	baz=221						
BVCY	Beaver Creek	84.96	22	P	P	18 06 48.4	-1.1
	baz=232						
L27K	Beaver Creek,	85.01	21	IAmb	IAmb	18 06 51.5	
	comp=Z,5.1nm,0.7s						
L27K	Beaver Creek,	85.01	21	P	P	18 06 47.2	-2.6
	baz=231,SNR=7.6						
PLBC	Pleasant Camp	85.03	26	P	P	18 06 48.9	-0.9
	baz=237,SNR=5.3						
YUK6	Outpost Mounta	85.04	24	P	P	18 06 48.5	-1.7
	baz=235						
V35K	Ketchikan	85.08	31	P	P	18 06 50.0	-0.2
	baz=241						
P30M	Million Dollar	85.14	25	P	P	18 06 48.3	-2.2
	baz=236						
CMB	Columbia Colle	85.15	50	P	P	18 06 51.1	0.0
YUK4	Talbot Arm	85.16	24	P	P	18 06 50.4	-0.4
	baz=234,SNR=5.9						
R32K	Eaglecrest	85.20	27	P	P	18 06 48.5	-2.2
	baz=238						
CIS	Catalina Islan	85.22	55	P	P	18 06 50.0	-1.5
	baz=252						
COLD	Coldfoot	85.23	16	IAmb	IAmb	18 06 54.0	
	comp=Z,7.8nm,1.0s						
COLD	Coldfoot	85.23	16	P	P	18 06 50.6	-0.1
	baz=223						
HYT	Haines Junctio	85.32	24	IAmb	IAmb	18 06 52.8	
	comp=Z,5.7nm,0.8s						
HYT	Haines Junctio	85.32	24	P	P	18 06 51.2	-0.3
	baz=235,SNR=6.2						
PRP	Porcupine Dome	85.38	18	P	P	18 06 50.5	-1.2
	baz=228						
SKAG	Skagway	85.47	26	P	P	18 06 51.7	-0.4
	baz=238						
BBB	Bella Bella	85.48	34	LR	LR	18 36 18.9	
	comp=Z,49nm,20.9s,baz=227,slow=30						
K27K	Chicken	85.53	21	IAmb	IAmb	18 06 54.9	
	comp=Z,14nm,1.3s						
K27K	Chicken	85.53	21	P	P	18 06 52.4	+0.1
	baz=231						
DECC	Green Verdugo	85.54	54	P	P	18 06 51.7	-1.4
	baz=252						
RAMN	Ramite	85.60	299	*e*P	P	18 06 54.8	+1.0
G24K	Hadweenzic Riv	85.61	17	P	P	18 06 53.2	+0.5
	baz=226						
N30M	Aishikik Lake	85.84	24	P	P	18 06 53.3	-0.7
	baz=236						
O30N	Mendenhall	85.86	25	P	P	18 06 54.2	+0.2
	baz=237						
M29M	Somme Creek	85.88	23	P	P	18 06 54.3	+0.1
	baz=234						
I26K	Coal Creek Min	85.99	19	P	P	18 06 55.1	+0.5
I26K	Coal Creek Min	85.99	19	P	P	18 06 54.0	-0.5
	baz=230						
E23K	Chandalar	85.99	15	P	P	18 06 54.1	-0.5
	baz=224,SNR=6.5						
EDW2	Edwards Air Fo	86.00	53	P	P	18 06 54.5	-0.9
	baz=252						
MDPB	Devils Postpil	86.00	50	P	P	18 06 54.7	-0.9
G25K	Bearman Lake	86.05	17	P	P	18 06 54.8	+0.1
	baz=227						
F24K	Squaw Lake	86.07	16	P	P	18 06 55.7	+0.7
	baz=226						
JIRN	Jiri	86.14	299	*e*P	P	18 06 57.5	+0.8
P32M	Atlin	86.24	26	P	P	18 06 55.2	-0.8
	baz=239						
E24K	Your Creek	86.30	16	P	P	18 06 55.8	-0.3
	baz=225						
EGAK	Eagle	86.31	20	P	P	18 06 56.6	+0.5
EGAK	Eagle	86.31	20	P	P	18 06 57.1	+1.0
	baz=232,SNR=24						
PALK	Pallekele	86.36	278	LR	LR	18 49 34.1	
	comp=Z,51nm,18.2s,baz=244,slow=38						
PALK	Pallekele	86.36	278	P	P	18 06 56.9	-0.7
PALK				IAmb	IAmb	18 07 00.6	
	comp=Z,11nm,0.9s						
N31M	Braeburn, Yuko	86.38	24	P	P	18 06 57.5	+0.9
	baz=237						
D23K	Nanushuk River	86.38	15	P	P	18 06 56.6	+0.2
	baz=223						
L29M	L29M	86.39	22	P	P	18 06 57.4	+0.8
	baz=235						
CWC	Cottonwood Cre	86.40	52	P	P	18 06 57.6	+0.2
	baz=252						
TIN	Tinemaha, Big	86.47	51	P	P	18 06 57.4	-0.3
	baz=252						
GUN	Gumba	86.48	299	*e*P	P	18 06 59.1	+0.8
DAWY	Dawson	86.49	21	P	P	18 06 57.3	+0.2
DAWY				IAmb	IAmb	18 06 58.9	
	comp=Z,4.6nm,0.8s						
DAWY	Dawson	86.49	21	P	P	18 06 57.8	+0.7
	baz=234,SNR=6.3						
Q32M	Nakina River	86.56	27	P	P	18 06 58.4	+0.7
	baz=240						
S34M	Telegraph Cree	86.57	29	P	P	18 06 58.6	+1.0
	baz=241						
M30M	Minto, Yukon	86.59	23	P	P	18 06 57.6	0.0
	baz=236						
MONP2	Monument Peak	86.67	56	P	P	18 06 57.8	-1.2
	baz=254						
I27K	Kandik River	86.67	19	P	P	18 06 59.1	+1.1
	baz=231,SNR=8.5						
MPMC	Manual Prospec	86.74	52	P	P	18 06 58.4	-0.7
	baz=253						
F25K	Christian Rive	86.75	17	P	P	18 07 00.5	+2.2
	baz=228,SNR=8.1						
DSP	Deep Springs	86.76	51	P	P	18 06 58.9	-0.1
PKI	Pulchoki	86.79	299	*e*P	P	18 07 00.3	+0.5
NVAR	Mina Array Bea	86.83	50	P	P	18 06 59.3	-0.3
	comp=Z,1.9nm,0.8s,baz=234,slow=8.0,SNR=12						
NVAR				LR	LR	18 38 00.8	
	comp=Z,52nm,21.4s,baz=264,slow=30						
	comp=Z,1.9nm,0.8s						
NVAR	Mina Array Bea	86.83	50	P	P	18 06 59.0	-0.6
TPFO	Pinon Flats	86.85	55	P	P	18 06 58.3	-1.3
	baz=254						
IKP	In-Ko-Pah, Jac	86.86	56	P	P	18 07 00.3	+0.6
	baz=254						
G26K	Porcupine Rive	86.86	18	P	P	18 06 59.5	+0.8
	baz=229						
TIXI	Tiksi	86.90	349	P	P	18 06 58.9	+0.1
BMAR	Burnt Mountain	86.94	17	P	P	18 07 00.1	+0.9
K29M	Barlow Dome	87.03	22	P	P	18 07 00.5	+0.7
	baz=235						
GSC	Goldstone, Bar	87.05	53	P	P	18 07 00.5	-0.1
	baz=253						
DMN	Daman	87.06	299	*e*P	P	18 07 02.1	+1.1
H27K	Steamboat Moun	87.09	19	P	P	18 06 59.7	-0.3
	baz=232						
E25K	Arctic Village	87.12	16	P	P	18 06 59.6	-0.5
	baz=228,SNR=8.8						
F26K	Sheenjek River	87.24	17	P	P	18 07 01.4	+0.7
	baz=229						
BELC	Belle Mtn. Jos	87.32	55	P	P	18 07 00.6	-1.3
	baz=254						
M31M	Drury Creek, Y	87.32	24	P	P	18 07 00.5	-0.7
	baz=238						
FURC	Furnace Creek,	87.34	52	P	P	18 07 02.6	+0.8
	baz=253						
G27K	Doyon Strip	87.42	18	P	P	18 07 01.0	-0.6
	baz=231						
C24K	Franklin Bluff	87.42	15	P	P	18 07 01.3	-0.1
	baz=225						
MAYO	Mayo, Yukon	87.50	22	P	P	18 07 02.3	+0.3
	baz=237						
GKN	Gorkha	87.56	299	*e*P	P	18 07 03.5	+0.2
I29M	Ogilvie Camp,	87.63	20	IAmb	IAmb	18 07 07.2	
	comp=Z,7.9nm,0.7s						
I29M	Ogilvie Camp,	87.63	20	P	P	18 07 03.9	+1.3
	baz=234						
BC3	Big Chuckawall	87.66	55	P	P	18 07 02.3	-1.3
	baz=254						
D25K	Kavik River	87.73	15	P	P	18 07 01.9	-1.1
	baz=227						
FARO	Faro, Yukon	87.75	24	P	P	18 07 02.2	-1.1
	baz=239						
TUQ	Turquoise Moun	87.78	53	P	P	18 07 02.3	-1.9
	baz=254						
GMRC	Granite Mounta	87.81	54	P	P	18 07 02.4	-1.9
	baz=254						
WVOR	Wild Horse Val	87.82	46	IAmb	IAmb	18 07 33.4	
	comp=Z,4.8nm,0.5s						
TPNV	Topopah Spring	87.95	52	P	P	18 07 03.7	-1.3
	baz=254						
IRM	Iron Mountain	88.05	55	P	P	18 07 02.6	-2.7
	baz=254						
J08A	Circle Bar Ran	88.22	45	IAmb	IAmb	18 07 08.8	
	comp=Z,6.0nm,1.1s						
E27K	Coleen River	88.30	17	P	P	18 07 04.4	-1.3
	baz=231						
DANN	Dangsing	88.40	299	*e*P	P	18 07 07.1	-0.3
C26K	Camden Bay	88.51	15	P	P	18 07 08.2	+1.6
	baz=228						
C27K	Jago River	88.63	16	P	P	18 07 09.2	+2.0
	baz=229						
EPYK	Eagle Plains	88.74	20	IAmb	IAmb	18 07 11.1	
	comp=Z,10nm,1.1s						
EPYK	Eagle Plains	88.74	20	P	P	18 07 09.4	+1.6
	baz=236						
R11B	Troy Canyon, C	88.85	51	P	P	18 07 09.9	+0.7
	baz=254						
PDMCI	Parker Dam,Lak	88.89	55	P	P	18 07 08.4	-0.8
	baz=255						
PYUN	Piuthan	89.00	299	*e*P	P	18 07 09.6	-0.6
	comp=Z,23nm,0.9s						
PRN	Pahroc Range	89.00	52	IAmb	IAmb	18 07 12.2	
	comp=Z,11nm,1.1s						
G30M	tAoh Zraii Nji	89.25	20	P	P	18 07 10.9	+0.7
	baz=236						
W13A	Hualapai Mount	89.30	54	IAmb	IAmb	18 07 13.0	
	comp=Z,5.2nm,1.0s						
214A	Organ Pipe Nat	89.37	57	IAmb	IAmb	18 07 13.6	
	comp=Z,5.6nm,1.0s						
214A	Organ Pipe Nat	89.37	57	P	P	18 07 11.6	0.0
	baz=256						
WMQ	Urumqi	89.50	315	*e*P	P	18 07 13.3	+1.3
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
Q12A	Willow Creek R	89.61	50	IAmb	IAmb	18 07 14.4	
	comp=Z,7.3nm,0.9s						
BELA	Belgrano 2	89.63	176	P	P	18 07 11.4	-0.5
BELA				IAmb	IAmb	18 07 12.7	
	comp=Z,5.8nm,0.9s						
LPIG	La Paz	89.66	65	LR	LR	18 43 44.7	
	comp=Z,28nm,18.3s,baz=307,slow=33						
SPR3	Spring Creek 3	89.97	50	P	P	18 07 14.4	-0.2
SPR3				IAmb	IAmb	18 07 16.0	
	comp=Z,5.6nm,0.8s						
LCMT	Little Creek M	90.29	52	IAmb	IAmb	18 07 17.6	
	comp=Z,4.1nm,0.8s						
KNB	Kanab	90.61	52	IAmb	IAmb	18 07 19.4	
	comp=Z,5.6nm,1.1s						
INK	Inuvik	90.83	19	P	P	18 07 18.2	+0.7
	baz=239						
HLID	Hailey	91.11	46	P	P	18 07 20.1	+0.5
	baz=255						
MTPU	Mount Pierson	91.36	52	IAmb	IAmb	18 07 24.0	
	comp=Z,3.6nm,0.8s						
WUAZ	Wupatki	91.39	54	P	P	18 07 20.6	-0.5
	baz=256						
DUG	Dugway, Tooele	91.41	49	P	P	18 07 21.0	-0.1
	baz=256						
HVU	Hansel Valley	91.83	48	IAmb	IAmb	18 07 24.6	
	comp=Z,5.3nm,0.8s						
W18A	Petrified Fore	92.60	55	P	P	18 07 25.9	-0.9
	baz=257						
ELIB	Princess Elisa	92.61	191	*d*P	P	18 07 25.9	-0.2
DLMT	Dillon	92.83	44	IAmb	IAmb	18 07 29.1	
	comp=Z,4.6nm,0.8s						
BOZ	Bozeman (W)	93.55	44	IAmb	IAmb	18 08 34.0	
	comp=Z,8.7nm,1.8s						
BOZ	Bozeman (W)	93.55	44	P	P	18 07 31.1	+0.2
	baz=257						
121A	Cookes Peak, D	93.65	58	P	P	18 07 30.3	-1.3
	baz=258						
MK31	Makanchi Array	93.95	317	P	P	18 07 32.4	-0.1
MK31				IAmb	IAmb	18 07 34.3	
	comp=Z,5.3nm,0.9s						
MKAR	Makanchi Array	93.95	317	P	P	18 07 33.2	+0.7
	comp=Z,4.9nm,0.8s,baz=98,slow=6.3,SNR=53						
	comp=Z,4.9nm,0.8s						
MKAR	Makanchi Array	93.95	317	P	P	18 07 32.7	+0.2
ZAA0	Zalesovo Array	94.09	324	P	P	18 07 31.8	-1.1
ZAA0				IAmb	IAmb	18 07 33.5	
	comp=Z,3.6nm,0.9s						
ZALV	Zalesovo Beam	94.09	324	P	P	18 07 32.5	-0.4
	comp=Z,2.2nm,0.7s,baz=108,slow=4.8,SNR=12						
	comp=Z,2.2nm,0.7s						
C36M	Paulatuk	94.37	20	P	P	18 07 34.1	+0.3
	baz=248						
BW06	Boulder Array	94.38	47	P	P	18 07 34.0	-0.8
	baz=258						
PDAR	Pinedale Array	94.38	47	P	P	18 07 34.7	-0.1
	comp=Z,1.1nm,0.9s,baz=212,slow=2.7,SNR=7.1						
	comp=Z,1.1nm,0.9s						
Y22D	IRIS PASSCAL I	94.66	56	P	P	18 07 36.1	-0.1
	baz=259						
Y22F	Passcal Instru	94.66	56	P	P	18 07 34.4	-1.8
	baz=259						
A36M	Sachs Harbour	95.03	17	P	P	18 07 37.5	+0.7
	baz=247						
ANMO	Albuquerque	95.20	56	LR	LR	18 43 23.6	
	comp=Z,28nm,19.7s,baz=40,slow=31						
S22A	4UR Ranch, Cre	95.43	53	P	P	18 07 39.1	-0.8
	baz=259						
MNTX	Cornudas Mount	95.49	59	P	P	18 07 38.5	-1.3
	baz=259						
YKA	Yellowknife Ar	95.90	27	P	P	18 07 39.6	-1.3
	comp=Z,1.1nm,0.6s,baz=254,slow=4.6,SNR=18						
	comp=Z,1.1nm,0.6s						
SDCO	Great Sand Dun	96.47	53	P	P	18 07 44.5	0.0
	baz=260						
TXAR	Lajitas Array	96.52	61	P	P	18 07 44.1	-0.6
	comp=Z,0.6nm,0.7s,baz=227,slow=6.5,SNR=7.8						
TXAR				LR	LR	18 45 40.8	
	comp=Z,37nm,18.2s,baz=308,slow=32						
	comp=Z,0.6nm,0.7s						
KDJ	Kajisay	96.61	312	IAmb	IAmb	18 09 27.2	
	comp=Z,11nm,2.0s						
KSH	Kashi	97.06	309	P	Pdif	18 07 51.8	+4.7
P52A	Corning	114.77	52	P	PKiKP	18 12 55.6	+0.2
	baz=275						
ARCES	ARCESS Array B	117.11	345	PKP	PKPdf	18 12 58.2	-0.8
	comp=Z,8.8nm,1.2s,baz=20,slow=3.9,SNR=5.1						
FINES	FINESS Array B	122.48	338	PKP	PKPdf	18 13 09.2	-0.3
	comp=Z,1.2nm,0.8s,baz=46,slow=6.0,SNR=1.7						
BOSA	Boshof	124.26	223	PKP	PKiKP	18 13 14.6	+0.1
	comp=Z,2.7nm,0.7s,baz=182,slow=2.7,SNR=7.8						
NOA	NORSAR Array B	127.47	345	PKP	PKPdf	18 13 18.8	-0.4
	comp=Z,0.6nm,0.9s,baz=45,slow=9.9,SNR=3.3						
BRTR	Keskin Array B	129.33	312	PKP	PKiKP	18 13 24.8	+0.6
	comp=Z,0.3nm,0.7s,baz=56,slow=4.7,SNR=2.4						
KEST	Kesra	147.92	322	PKPbc	PKiKP	18 14 01.6	-0.7
	comp=Z,8.7nm,0.9s,baz=45,slow=1.4,SNR=6.0						
ESDC	Sonseca Array	150.81	343	PKPbc	PKPbc	18 14 07.7	+0.3
	comp=Z,2.1nm,0.8s,baz=38,slow=1.9,SNR=13						
ESDC				PKPab	pPKPbc	18 14 15.8	-1.0
	comp=Z,2.0nm,0.9s,baz=7.6,slow=4.5,SNR=7.4						

TAP 25 17:54:55.9, 23°.53N×120°.88E, h7km, ML0.9, 2C, B,

Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALS	Alishan	0.07	255	*i* P	Pg	17 54 58.3	+0.3
	baz=251						
ALS				*i* S	Sg	17 55 00.3	+0.7
	baz=251						
YUS	Yu-Shan	0.08	120	*e*P	Pg	17 54 58.9	+0.5
	baz=119						
YUS				*e*S	Sg	17 55 01.1	+1.0
	baz=119						
WHYT	Xinyi Township	0.17	352⇑	*i*P	Pg	17 54 59.9	+0.5
	baz=352						
WHYT				S	Sg	17 55 02.6	+0.8
	baz=352						
CHN5	Tsauling	0.20	290	*i* P	Pg	17 55 00.6	+0.7
	baz=290						
CHN5				S	Sg	17 55 03.9	+1.2
	baz=290						
SSLB	Suanglung	0.27	15⇑	*i*P	Pg	17 55 01.5	+0.3
	baz=15						
SSLB				*e*S	Sg	17 55 05.6	+0.8
	baz=15						
WCKO	Fanlu	0.27	250	*e*S	Sb	17 55 06.4	-1.4
	baz=250						
YULB	Yu-li	0.41	109	*e*P	Pg	17 55 04.3	+0.5
	baz=109						

IDC 25 17:58:43.8±1.8**, 6°.88S×128°.37E, h0km, mb3.8**/1**,**
mbtmp3.6/4**, ML3.2**/3**, Error ellipse: s-maj=56.5km**
s-min=29.6km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.63	26	Pn	Pn	18 00 23.9	+1.3
	1.0nm,0.3s,baz=106,slow=7.8,SNR=24						
SIJI				Sn	Sn	18 01 26.4	-13
	2.2nm,0.3s,baz=244,slow=23,SNR=19						
	3.8nm,0.2s						
WRA	Warramunga Arr	14.22	157	Pn	Pn	18 02 06.4	-0.1
	0.1nm,0.3s,baz=337,slow=14,SNR=1.6						
WRA				Sn	Sn	18 04 32.5	-13
	0.2nm,0.3s,baz=334,slow=24,SNR=1.8						
	0.4nm,0.5s						
ASAR	Alice Springs	17.52	163	P	Pn	18 02 49.9	+0.3
	0.1nm,0.3s,baz=345,slow=9.9,SNR=7.8						
ASAR				S	Sn	18 05 54.2	-11
	0.1nm,0.5s,baz=146,slow=47,SNR=1.4						
	0.5nm,0.5s						
MKAR	Makanchi Array	67.25	328	P	P	18 09 39.8	-0.3
	0.4nm,0.4s,baz=114,slow=7.9,SNR=7.1						
	0.4nm,0.4s						

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*NEIC **25** 18:06:44.8±2.0, 4°.46S±0°.05×76°.93W±0°.06, h11km±4km,*
mb4.8/323, Error ellipse: s-maj=8.3km s-min=6.7km
az=78.0
*IDC **25** 18:06:47.5±3.1, 4°.44S×76°.86W, h33km±24km, mb4.3/26,*
mbtmp4.5/35, ML4.2/6, MS4.0/16, Error ellipse:
s-maj=15.9km s-min=9.8km az=66.0
*VAO **25** 18:06:47.6±0.2, 4°.53S×76°.85W, h24km, mb4.9*
*BJI **25** 18:06:49.0±0.0, 4°.50S×76°.90W, h30km, mB5.0/1, Ms5.3/3,*
Ms7 5.0/3
ISC 25 18:06:47.6±0.3**, 4°.47S**±0°.04**×76°.89W**±0°.05**, h35km, n682,**
σ1ˢ09/642**, mb4.8**/171**, MS3.9**/10**, 5C-2D, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	3.04	209	Pn	Pn	18 07 35.8	+2.1
	13nm,0.3s,baz=30,slow=11,SNR=86						
ATAH				Sn	Sn	18 08 13.9	+4.7
	68nm,0.3s,baz=156,slow=20,SNR=7.2						
	472nm,0.7s						
MCRA	Macar, Loja	3.06	272		Pn	18 07 32.7	-0.9
MCRA				Sn	Sn	18 08 07.5	-1.5
MCRA	Macar, Loja	3.06	272	*e*P	Pn	18 07 32.8	-0.8
MCRA				*e*S	Sn	18 08 07.8	-1.3
MCRA				*i*		18 08 19.3	
	comp=Z,2µm,0.5s						
ARNL	Arenillas	3.30	286		Pn	18 07 36.2	-0.7
ARNL				Sn	Sn	18 08 12.6	-2.3
PORT	Chimborazo Vol	3.53	328		Pn	18 07 41.8	+1.3
PORT				Sn	Sn	18 08 18.7	-2.6
CHSH	Refugio Sur-Vo	3.56	326		Pn	18 07 41.9	+1.0
PIAT	Ana Tenorio	3.71	338	*e*P	Pn	18 07 45.4	+2.6
PIAT				*e*S	Sn	18 08 27.3	+1.7
SLOR	San Lorenzo -	4.05	337		Pn	18 07 47.8	+0.3
SALI	Salinas	4.68	299	Pn	Pn	18 07 57.7	+1.8
PULU	Pululahua	4.74	340	Pn	Pn	18 07 57.4	+0.4
IMBA	Imbabura, San	4.89	344	Pn	Pn	18 07 59.6	+0.4
OTAV	Otavalo	4.93	341		Pn	18 08 01.0	+1.3
OTAV	Otavalo	4.93	341	*e*P	Pn	18 08 02.1	+2.4
OTAV	Otavalo	4.93	341	*e*P	Pn	18 08 02.0	+2.4
BONI	La Bonita	4.93	353	*e*P	Pn	18 08 23.2	+24
FLF1	Flavio Alfaro-	5.04	324	*e*P	Pn	18 08 01.4	+0.7
TULM	Tulcn-Chalpat	5.23	350		Pn	18 08 04.2	+0.4
TULM	Tulcn-Chalpat	5.23	350	*e*P	Pn	18 08 09.2	+5.4
CZSB	Cruzeiro do Su	5.27	128	Pn	Pn	18 08 04.6	+0.6
CZSB	Cruzeiro do Su	5.27	128	*e*P	Pn	18 08 04.7	+0.7
GCUF	Volcan Galeras	5.67	355	*e*P	Pn	18 08 11.1	+1.2
CRUC	La Cruz	6.00	359	*e*P	Pn	18 08 15.2	+0.9
FLOC	Florencia	6.13	12	*e*P	Pn	18 08 16.2	+0.4
BBAC	Balboa, Cauca	6.46	357	*e*P	Pn	18 08 22.2	+1.7
GARC	Garzon, Huila	6.75	12⇑	*e*P	Pn	18 08 24.9	+0.3
POPC	Popayan, Colom	6.96	2	*e*P	Pn	18 08 29.8	+2.3
TBTG	Tabatinga, AM	6.96	88	Pn	Pn	18 08 27.9	+0.6
TBTG	Tabatinga, AM	6.96	88	*e*P	Pn	18 08 28.8	+1.5
TBTG	Tabatinga, AM	6.96	88	*e*P	Pn	18 08 28.4	+1.1
MACC	Macarena, Meta	7.24	25	*e*P	Pn	18 08 31.8	+0.8
BETC	Betania	7.25	12	*e*P	Pn	18 08 33.5	+2.3
NNA	Nana	7.47	180	Pn	Pn	18 08 35.0	+0.7
	comp=Z,8.2nm,0.3s,baz=348,slow=11,SNR=18						
NNA				Sn	Sn	18 09 56.0	-1.9
	comp=Z,16nm,0.3s,baz=306,slow=17,SNR=2.2						
	comp=Z,45nm,0.6s						
NNA	Nana	7.47	180	Pn	Pn	18 08 33.0	-1.2
GR1C	Gorgona, Isla	7.53	350	*e*P	Pn	18 08 37.5	+2.5
JAMC	Jamundi, Valle	7.63	2	*e*P	Pn	18 08 40.5	+3.9
PRAC	Prado	8.37	14	*e*P	Pn	18 08 46.7	+0.1
YOTC	Yotoco, Valle	8.41	4	*e*P	Pn	18 08 50.4	+3.1
MALC	Bahia Malaga	8.44	357	*e*P	Pn	18 08 58.7	+11
ANIL	Santa Ana	9.02	9	*e*P	Pn	18 09 05.5	+10
VILC	Villavicencio,	9.10	21	*e*P	Pn	18 08 59.7	+3.0
CHIC	Chingaza	9.57	19	*e*P	Pn	18 09 03.0	-0.3
ROSC	El Rosal	9.60	16	Pn	Pn	18 09 02.7	-1.0
	comp=Z,4.5nm,0.3s,baz=163,slow=19,SNR=1.4						
ROSC				Lg	Lg	18 11 50.4	
	comp=Z,9.5nm,0.3s,baz=78,slow=20,SNR=3.3						
ROSC				LR	LR	18 13 41.6	
	comp=Z,1µm,19.1s,baz=194,slow=43						
ROSC	El Rosal	9.60	16		Pn	18 09 05.8	+2.1
SGCB	S£o Gabriel d	10.75	67	*e*P	Pn	18 09 19.4	+0.2
RUSC	La Rusia	10.97	20	*e*P	Pn	18 09 24.0	+1.4
PTBC	PUERTO BERRIO,	11.20	13	*e*P	Pn	18 09 25.9	+0.5
ETMB	Extrema	11.85	117	Pn	Pn	18 09 31.9	-2.3
ETMB	Extrema	11.85	117	*e*P	Pn	18 09 33.7	-0.5
UREC	San Jos de Ur	12.21	6	*e*P	Pn	18 09 42.4	+3.2
TEFE	Tefe	12.26	86	*e*P	Pn	18 09 39.7	-0.2
SAML	Samuel	14.32	109	Pn	Pn	18 10 04.8	-3.2
BRU2	Volcan	14.39	336	Pn	Pn	18 10 07.8	-1.3
LPAZ	La Paz	14.56	144	Pn	Pn	18 10 10.1	-1.7
	comp=Z,0.7nm,0.3s,baz=327,slow=16,SNR=6.5						
LPAZ				Lg	Lg	18 14 27.1	
	comp=Z,0.4nm,0.3s,baz=319,slow=17,SNR=3.8						
	comp=Z,1.8nm,0.5s						
LPAZ	La Paz	14.56	144		Pn	18 10 09.4	-2.3
LPAZ	La Paz	14.56	144	*e*P	Pn	18 10 10.7	-1.1
SDV	Santo Domingo	14.66	25	Pn	Pn	18 10 12.0	-0.7
	comp=Z,4.3nm,0.5s,baz=237,slow=9.1,SNR=7.7						
SDV				Lg	Lg	18 14 29.3	
	comp=Z,1.9nm,0.3s,baz=55,slow=23,SNR=3.0						
SDV				LR	LR	18 17 04.6	
	comp=Z,644nm,19.8s,baz=206,slow=42						
SDV	Santo Domingo	14.66	25	Pn	Pn	18 10 11.6	-1.2
SDV	Santo Domingo	14.66	25	*e*P	Pn	18 10 12.4	-0.4
PB18	Visviri	14.92	151	Pn	Pn	18 10 15.8	-0.9
SRBA	San Rafael, Bu	15.06	335		Pn	18 10 15.6	-2.5
AP01	Chacalluta	15.23	156	Pn	Pn	18 10 18.2	-2.0
PEZE	Perez Zeledon,	15.33	334	P	Pn	18 10 20.1	-1.6
PB12	IPOC Station P	15.45	156	P	Pn	18 10 20.6	-2.6
PB12				IAmb	IAmb	18 10 28.8	
	comp=Z,33nm,0.7s						

PB16	IPOC Station P	15.56	153		Pn	18 10 24.4	-0.6
RIMA	Rio Macho	15.76	334	P	Pn	18 10 27.3	0.0
BATAN	Batan	15.85	336		Pn	18 10 28.9	+0.7
BATAN				IAmb	IAmb	18 10 35.8	
	comp=Z,66nm,1.2s						
BAUV	El Baul	15.98	34	P	P	18 10 30.9	-2.2
BAUV				IAmb	IAmb	18 10 38.8	
	comp=Z,141nm,1.3s						
HDC	Heredia	16.07	333	P	Pn	18 10 31.3	+0.1
HDC				IAmb	IAmb	18 10 38.3	
	comp=Z,48nm,0.7s						
MACA	Manacapuru-AM	16.22	86	Pn	Pn	18 10 31.8	-1.2
MACA				IAmb	IAmb	18 10 35.4	
	comp=Z,50nm,0.6s						
MACA	Manacapuru-AM	16.22	86	*e*P	Pn	18 10 32.2	-0.8
MNMC	Minye Minye	16.22	155	P	Pn	18 10 32.0	-1.2
MNMC				IAmb	IAmb	18 10 38.2	
	comp=Z,54nm,0.6s						
JTS	Las Juntas de	16.72	331	Pn	Pn	18 10 39.9	+0.6
	comp=Z,9.4nm,0.8s,baz=108,slow=0.9,SNR=5.9						
JTS				LR	LR	18 16 40.6	
	comp=Z,346nm,19.6s,baz=133,slow=36						
JTS	Las Juntas de	16.72	331		Pn	18 10 39.9	+0.6
PB11	IPOC Station P	16.76	156	P	Pn	18 10 38.3	-1.6
DUNO	Dulce Nombre,	16.80	329	P	Pn	18 10 40.5	+0.2
COVE	Coope Vega, Sa	16.84	334	P	Pn	18 10 40.0	-0.8
GO01	Chusmiza	16.87	154	P	Pn	18 10 40.2	-1.4
GO01				IAmb	IAmb	18 10 46.4	
	comp=Z,87nm,1.5s						
ORTG	Ortega, Santa	17.03	330	P	Pn	18 10 42.5	-0.7
TA02	Huaiquique	17.03	158	P	Pn	18 10 40.2	-2.9
TA01	Diego Aracena	17.28	158	P	Pn	18 10 44.4	-1.9
PB08	IPOC Station P	17.30	155	P	Pn	18 10 44.3	-2.7
HZTE	Horizontes, Gu	17.39	330	P	Pn	18 10 45.8	-2.0
BOAV	Boa Vista	17.72	68	P	P	18 10 51.5	-0.9
BOAV	Boa Vista	17.72	68	*e*P	P	18 10 52.5	+0.2
PB01	IPOC Station P	17.98	157	P	Pn	18 10 53.0	-2.1
PB02	IPOC Station P	18.08	159	P	Pn	18 10 54.5	-1.8
ESPN	Las Esperanzas	18.12	336	P	Pn	18 10 55.5	-1.1
AUA1	Aruba	18.20	22	P	Pn	18 10 56.0	-1.6
AUA1				IAmb	IAmb	18 11 01.2	
	comp=Z,147nm,1.2s						
ACON	Acoyapa	18.29	333	P	P	18 10 57.1	-1.5
HATO	Hato, Curacao	18.32	25	P	P	18 10 56.7	-2.3
HATO				IAmb	IAmb	18 11 00.2	
	comp=Z,49nm,0.8s						
PB07	IPOC Station P	18.45	159	P	P	18 10 57.1	-3.5
VILB	Vilhena	18.51	118	P	P	18 10 57.9	-3.2
VILB	Vilhena	18.51	118	*e*P	Pn	18 11 00.5	-1.0
PB09	IPOC Station P	18.75	157	P	Pn	18 11 05.0	+0.5
PB03	IPOC Station P	18.80	159	P	P	18 11 03.5	-0.9
PB04	IPOC Station P	18.92	160	P	P	18 11 06.0	+0.3
BOAB	BOACO BROADBAN	18.94	333		P	18 11 05.3	-0.5
PCRV	Puerto La Cruz	18.99	40	P	Pn	18 11 07.5	+0.2
	comp=Z,1.8nm,0.3s,baz=181,slow=6.6,SNR=11						
PCRV				Lg	Lg	18 16 51.4	
	comp=Z,0.6nm,0.3s,baz=37,slow=23,SNR=2.2						
PCRV				LR	LR	18 19 39.5	
	comp=Z,841nm,19.4s,slow=41						
	comp=Z,16nm,0.6s						
SIV	San Ignacio	19.30	128	P	P	18 11 09.3	-0.5
	comp=Z,0.1nm,0.3s,baz=296,slow=11,SNR=11						
SIV				Lg	Lg	18 16 59.5	
	comp=Z,0.2nm,0.3s,baz=257,slow=18,SNR=6.0						
SIV				LR	LR	18 19 13.4	
	comp=Z,355nm,20.1s,baz=305,slow=39						
	comp=Z,5.9nm,0.8s						
CNGN	Cerro Negro	19.47	330	P	P	18 11 11.6	-0.1
CNGN				IAmb	IAmb	18 11 23.0	
	comp=Z,80nm,1.6s						
MATN	Matagalpa	19.48	333	P	P	18 11 11.4	-0.4
LVC	Limon Verde	19.62	158	P	P	18 11 13.8	+0.2
	comp=Z,0.7nm,0.3s,baz=318,slow=5.5,SNR=8.7						
LVC				LR	LR	18 20 15.9	
	comp=Z,331nm,19.3s,baz=322,slow=41						
	comp=Z,11nm,0.8s						
LVC	Limon Verde	19.62	158	P	P	18 11 12.5	-1.1
LVC				IAmb	IAmb	18 11 23.5	
	comp=Z,47nm,1.3s						
LVC	Limon Verde	19.62	158	*e*P	Pn	18 11 14.5	-0.6
PB10	IPOC Station P	19.90	163	P	P	18 11 16.2	0.0
PB10				IAmb	IAmb	18 11 28.5	
	comp=Z,51nm,1.3s						
PB15	IPOC Station P	19.96	160	P	P	18 11 15.8	-1.4
PB15				IAmb	IAmb	18 11 31.9	
	comp=Z,23nm,0.6s						
BBSD	Serra de San D	20.36	130	*e*P	P	18 11 21.1	-0.2
PTLB	Pontes e Lacer	20.59	123	P	P	18 11 23.6	-0.2
PTLB	Pontes e Lacer	20.59	123	*e*P	P	18 11 23.5	-0.3
PB14	IPOC Station P	20.99	163	P	P	18 11 28.3	-0.1
ITTB	Itaituba	21.09	91	*e*P	P	18 11 28.5	-0.8
TGUH	Tegucigalpa,Un	21.09	331	P	P	18 11 28.5	-0.9
PDRB	Porto dos Gac	21.17	111	*e*P	P	18 11 29.5	-0.7
NPGB	Novo Progresso	21.57	98	*e*P	P	18 11 35.4	+0.9
GO02	Mina Guanaco	21.74	162	P	P	18 11 34.8	-1.6
CLDB	Colider	21.84	108	*e*P	P	18 11 38.1	+0.8
AC01	Pan de Azucar	22.38	165	P	P	18 11 41.0	-2.1
AC01				IAmb	IAmb	18 11 44.8	
	comp=Z,22nm,0.8s						
MTDJ	Mount Denham	22.56	358	P	P	18 11 45.9	+0.8
ESQI	Esquipulas	22.58	327	P	P	18 11 46.0	+0.7
ESQI				IAmb	IAmb	18 11 58.1	
	comp=Z,40nm,0.8s						
MALB	Monte Alegre	22.73	84	*e*P	P	18 11 46.2	-0.7
AC02	Maricunga	23.45	162	P	P	18 11 55.4	+0.9
AC06	Mina Casimiro	23.60	165	P	P	18 11 54.0	-1.5
SALV	Santo Antonio	23.72	120	*e*P	P	18 11 57.5	+0.8
GO03	Copiap	23.86	165	P	P	18 11 57.7	-0.2
SJG	San Juan	24.81	25	P	P	18 12 05.7	-0.9
	comp=Z,7.7nm,0.4s,baz=224,slow=5.7,SNR=6.3						
SJG				LR	LR	18 23 40.3	
	comp=Z,195nm,19.1s,baz=249,slow=41						
	comp=Z,7.7nm,0.4s						
EMPR	Esperanza - Ma	24.98	24	P	P	18 12 08.2	0.0
AC05	El Transito	25.04	166	P	P	18 12 08.4	-0.4
AC05				IAmb	IAmb	18 12 12.2	
	comp=Z,16nm,0.9s						
LCO	Las Campanas	25.11	167	P	P	18 12 08.1	-1.5
MCPB	Macapa, AP	25.14	81	*e*P	P	18 12 10.9	+1.2
PP1B	Ponte de Pedra	25.19	123	*e*P	P	18 12 11.1	+0.9
BDQN	Bodoquena, MS	25.22	131	*e*P	P	18 12 10.1	-0.3
CCIG	Comitan	25.55	324	P	P	18 12 13.6	+0.1
RVDE	Rio Verde (Bra	25.86	126	*e*P	P	18 12 16.9	+0.7
MDP	Montagnes des	26.02	69	P	P	18 12 17.7	0.0
	comp=Z,22nm,1.0s,baz=243,slow=6.3,SNR=2.6						
MDP				LR	LR	18 23 07.1	
	comp=Z,319nm,18.5s,baz=270,slow=38						
	comp=Z,22nm,1.0s						
AQDB	Aquidauana	26.04	129	P	P	18 12 17.5	-0.3
AQDB				IAmb	IAmb	18 12 20.4	
	comp=Z,16nm,0.9s						
AQDB	Aquidauana	26.04	129	*e*P	P	18 12 18.5	+0.7
CO01	Juntas del Tor	26.17	167	P	P	18 12 18.6	-0.7
CO01				IAmb	IAmb	18 12 31.4	
	comp=Z,23nm,1.6s						
GO04	Tololo Observa	26.21	168	P	P	18 12 19.3	-0.2
GO04				IAmb	IAmb	18 12 31.2	
	comp=Z,41nm,1.4s						
SNDB	Serra Nova Dou	26.39	108	*e*P	P	18 12 21.7	+0.6
CO06	Fray Jorge	26.53	170	P	P	18 12 22.5	+0.3
CO03	El Pedregal	26.88	168	P	P	18 12 24.7	-0.7
ESFA	Espinillo Form	26.98	141	*e*P	P	18 12 27.1	+0.9
PRPB	Parauapebas	27.01	95	*e*P	P	18 12 26.7	+0.1
ARAG	Araguaiana, MT	27.06	116	*e*P	P	18 12 27.3	+0.2
CO02	Combarbal	27.17	169	P	P	18 12 27.9	-0.2
CO02				IAmb	IAmb	18 12 30.0	
	comp=Z,13nm,0.9s						
SOR	Soroa	27.75	348	P	P	18 12 33.1	0.0
CMIG	Matias Romero	27.84	321	P	P	18 12 32.7	-1.3
	comp=Z,1.6nm,0.5s,baz=118,slow=12,SNR=1.7						
	comp=Z,1.6nm,0.5s						
AMBA	Amambai (Brazi	28.01	133	*e*P	P	18 12 35.9	+0.3
ZON	Zonda	28.02	165	P	P	18 12 35.2	-0.3
CFA	Coronel Fontan	28.19	164	P	P	18 12 37.0	-0.2
	comp=Z,3.6nm,0.7s,baz=334,slow=8.9,SNR=12						
CFA				LR	LR	18 23 48.7	
	comp=Z,103nm,19.0s,baz=58,slow=36						
	comp=Z,3.6nm,0.7s						
CPUP	Villa Florida	28.69	141	P	P	18 12 41.0	-0.6
	comp=Z,6.4nm,1.0s,baz=318,slow=9.0,SNR=9.4						
	comp=Z,6.4nm,1.0s						
CPUP	Villa Florida	28.69	141	P	P	18 12 40.3	-1.2
CPUP	Villa Florida	28.69	141	*e*P	P	18 12 41.7	+0.2
VA03	San Esteban	28.77	169	P	P	18 12 41.1	-1.2
ROC1	El Roble	28.89	170	P	P	18 12 42.0	-1.5
ROC1				IAmb	IAmb	18 12 57.5	
	comp=Z,11nm,0.9s						
PEL	Peldehue	29.11	169	P	P	18 12 44.6	-0.6
MT02	Curacav	29.14	170	P	P	18 12 44.5	-1.0
SMTB	Santa Maria do	29.42	100	*e*P	P	18 12 48.5	+0.3
MT08	Bocatoma Ro	29.53	168	P	P	18 12 49.2	0.0
MT08				IAmb	IAmb	18 12 52.5	
	comp=Z,13nm,1.1s						
MCR1	Marechal Candi	29.64	134	*e*P	P	18 12 52.9	+2.8
MT09	Talagante	29.67	170	P	P	18 12 50.4	+0.1
MT09				IAmb	IAmb	18 12 59.6	
	comp=Z,8.6nm,0.7s						
MT13	San Alfonso	29.77	169	P	P	18 12 50.3	-0.9
MT13				IAmb	IAmb	18 12 54.0	
	comp=Z,21nm,1.3s						
ITRB	Iturama	29.96	123	*e*P	P	18 12 53.5	+0.6
PCMB	Pacaembu	30.14	127	*e*P	P	18 12 54.0	-0.4
MECA	Mercedes	30.40	146	*e*P	P	18 12 57.8	+1.2
BDFB	Brasilia	30.47	113	P	P	18 12 57.7	+0.1
	comp=Z,5.6nm,0.9s,baz=279,slow=13,SNR=6.9						
	comp=Z,5.6nm,0.9s						
BDFB	Brasilia	30.47	113	*e*P	P	18 12 58.3	+0.7
AZCA	Azaras, Argent	30.77	142	*e*P	P	18 13 00.1	+0.1
IPMB	Ipameri, GO	31.10	118	*e*P	P	18 13 02.8	-0.2
PTGB	Pitanga	31.23	133	*e*P	P	18 13 03.8	-0.3
FRBT	Francisco Belt	31.28	136	*e*P	P	18 13 04.2	-0.3
ML02	Panimavida	31.55	171	P	P	18 13 05.3	-1.4
ITQB	Itaqui	31.56	145	P	P	18 13 06.7	-0.2
ITQB	Itaqui	31.56	145	*e*P	P	18 13 07.8	+0.9
CRSM	Crissiumal (Br	31.60	139	*e*P	P	18 13 06.7	-0.6
BB19B	Bebedouro	32.11	123	*e*P	P	18 13 11.6	-0.3
FRTB	Fartura	32.37	128	*e*P	P	18 13 13.8	-0.3
SDBA	SAO DESIDERIO	32.58	106	*e*P	P	18 13 16.5	+0.4
DWPF	Disney Wildern	32.68	353	P	P	18 13 17.9	+1.2
	baz=172						
ITAB	Concordia	32.72	136	*e*P	P	18 13 16.9	-0.2
PMNB	Patos De Minas	32.87	118	*e*P	P	18 13 18.9	+0.2
RODS	Rosario do Sul	32.89	144	*e*P	P	18 13 18.9	+0.3
ALGR	Alto Alegre (B	33.14	140	*e*P	P	18 13 19.7	-1.2
JANB	Januaria	33.73	110	*e*P	P	18 13 26.1	-0.1
CPSB	Cacapava Do Su	33.98	142	*e*P	P	18 13 27.8	-0.3
PLTB	Pedras Altas	34.85	144	P	P	18 13 34.5	-1.1
PLTB	Pedras Altas	34.85	144	*e*P	P	18 13 35.6	-0.1
CNLB	Canela	34.91	138	*e*P	P	18 13 36.0	-0.2
GO06	Curarrehue	35.30	173	P	P	18 13 39.1	-0.4
PARB	Paraibuna	35.53	125	*e*P	P	18 13 43.1	+1.5
TRQA	Tornquist	36.09	160	P	P	18 13 45.5	-0.8
TRQA				IAmb	IAmb	18 13 55.4	
	comp=Z,24nm,1.4s						
LL04	Puerto Octay	36.51	174	P	P	18 13 48.8	-0.8
PLCA	Paso Flores	36.55	172	P	P	18 13 50.2	+0.1
	comp=Z,5.3nm,0.9s,baz=352,slow=9.6,SNR=16						
	comp=Z,5.3nm,0.9s						
PLCA	Paso Flores	36.55	172	P	P	18 13 49.8	-0.4
PLCA	Paso Flores	36.55	172	*e*P	P	18 13 51.2	+1.0
ZAIG	Zacatecas	36.91	318	P	P	18 13 54.4	+0.7
NHSC	New Hope	37.50	355	P	P	18 13 60.0	+1.8
	baz=175						
SJMB	Sao Joao De Ma	37.62	115	*e*P	P	18 13 59.6	+0.1
DUB01	Friburgo-RJ	37.73	121	*e*P	P	18 14 01.3	+0.9
RPN	Rapa Nui	38.28	231	LR	LR	18 26 47.6	
	comp=Z,182nm,18.6s,baz=118,slow=31						
GUA01	Guaratinga, BA	38.31	111	*e*P	P	18 14 04.6	-0.7
LRAL	Lakeview Retre	38.51	346	P	P	18 14 06.6	-0.1
LRAL				IAmb	IAmb	18 14 09.0	
	comp=Z,22nm,1.5s						
LRAL	Lakeview Retre	38.51	346	P	P	18 14 07.0	+0.4
	baz=164,SNR=5.5						
ALF01	Guarapari-ES	38.64	118	*e*P	P	18 14 09.1	+1.1
VBMS	Vicksburg	38.72	341	P	P	18 14 07.9	-0.5
Y52A	Lilburn	38.72	350	P	P	18 14 09.1	+0.6
Y52A				IAmb	IAmb	18 15 25.0	
	comp=Z,34nm,1.6s						
LL02	Futaleuf	38.82	174	P	P	18 14 09.1	-0.1
HODGE	Hodges	38.82	353	P	P	18 14 09.4	+0.1
HODGE				IAmb	IAmb	18 14 13.9	
	comp=Z,28nm,1.2s						
Z47A	Carrollton	38.93	345	P	P	18 14 09.5	-0.7
Z47A				IAmb	IAmb	18 14 11.6	
	comp=Z,22nm,1.1s						
BIRD	Birdtown, Kers	39.05	355	P	P	18 14 10.9	-0.3
BIRD				IAmb	IAmb	18 14 20.4	
	comp=Z,33nm,1.4s						
833A	Chaparral WMA,	39.15	328	P	P	18 14 12.3	+0.1
833A	Chaparral WMA,	39.15	328	P	P	18 14 12.4	+0.3
	baz=143						
Y49A	Blount Mountai	39.17	347	P	P	18 14 11.6	-0.6
Y49A				IAmb	IAmb	18 14 19.7	
	comp=Z,45nm,1.9s						
PAULI	Pauline	39.35	354	P	P	18 14 14.0	+0.3
PAULI				IAmb	IAmb	18 14 23.6	
	comp=Z,16nm,1.0s						
143A	Socs Landing,	39.45	341	P	P	18 14 14.6	+0.1
143A				IAmb	IAmb	18 14 16.8	
	comp=Z,13nm,0.8s						
X51A	Calhoun	39.54	350	P	P	18 14 15.6	+0.2
KMSC	Kings Mountain	39.62	354	P	P	18 14 15.4	-0.6
KMSC	Kings Mountain	39.62	354	P	P	18 14 16.1	+0.2
	baz=173						
BG3	Lake Jocassee	39.66	352	P	P	18 14 15.9	-0.4
FPAL	Fort Paine	39.66	349	P	P	18 14 15.7	-0.6
X48A	Hartselle	39.88	347	P	P	18 14 17.3	-0.8
W52A	Murphy	39.90	351	P	P	18 14 18.4	+0.1
W52A				IAmb	IAmb	18 15 23.2	
	comp=Z,54nm,1.9s						
Y45A	Yeager Farm, C	39.96	344	P	P	18 14 19.1	+0.3
W50A	Signal Mountai	40.24	349	P	P	18 14 20.7	-0.5
435B	Jarrell	40.25	332	P	P	18 14 21.8	+0.5
435B				IAmb	IAmb	18 14 23.3	
	comp=Z,9.5nm,0.7s						
V53A	Saluda	40.31	353	P	P	18 14 21.4	-0.4
V53A				IAmb	IAmb	18 15 31.1	
	comp=Z,44nm,2.0s						
V55A	Taylorsville	40.31	355	P	P	18 14 21.1	-0.6
V55A				IAmb	IAmb	18 15 13.9	
	comp=Z,23nm,1.6s						
CPCT	Cooper Cave	40.35	350	P	P	18 14 22.1	+0.1
CPCT				IAmb	IAmb	18 14 31.3	
	comp=Z,12nm,0.8s						
SWET	Sewanee	40.38	349	P	P	18 14 21.5	-0.8
Z41A	Richland Creek	40.44	339	P	P	18 14 21.5	-1.2
V52A	Sevierville	40.59	352	P	P	18 14 23.3	-0.7
V52A				IAmb	IAmb	18 14 33.3	
	comp=Z,14nm,1.0s						
U59A	Littleton	40.62	359	P	P	18 14 24.0	-0.2
PLAL	Pickwick Lake	40.63	346	P	P	18 14 23.2	-1.1
PLAL				IAmb	IAmb	18 14 31.9	
	comp=Z,41nm,1.7s						
V51A	Loudon	40.67	351	P	P	18 14 24.2	-0.5
V51A				IAmb	IAmb	18 14 33.9	
	comp=Z,13nm,0.9s						
U56A	King	40.73	356	P	P	18 14 25.1	-0.1
U56A				IAmb	IAmb	18 14 27.6	
	comp=Z,20nm,1.1s						
RCBR	Riachuelo	40.84	94	*e*P	P	18 14 27.1	+0.6
WLAR	White Oak Lake	40.93	339	P	P	18 14 26.1	-0.8
WLAR				IAmb	IAmb	18 14 43.5	
	comp=Z,17nm,0.6s						
U54A	Nelsons Funny	41.03	354	P	P	18 14 27.8	+0.1
U54A				IAmb	IAmb	18 14 36.9	
	comp=Z,19nm,1.1s						
V48A	Smith Brothers	41.07	348	P	P	18 14 27.3	-0.6
V48A				IAmb	IAmb	18 14 36.6	
	comp=Z,21nm,0.8s						
W45A	Hickory Valley	41.08	345	P	P	18 14 27.0	-1.0
JCT	Junction City	41.09	329	P	P	18 14 28.3	+0.1
JCT	Junction City	41.09	329	P	P	18 14 29.1	+0.9
	baz=144						
COYC	Coyhaique	41.16	175	P	P	18 14 28.4	-0.2
WHTX	Lake Whitney,	41.20	333	P	P	18 14 29.3	+0.2
WHTX	Lake Whitney,	41.20	333	P	P	18 14 30.6	+1.5
	baz=148						
T59A	Double "B" Far	41.23	359	P	P	18 14 28.4	-0.8
T59A				IAmb	IAmb	18 14 31.4	
	comp=Z,22nm,1.1s						
TZTN	Tazewell	41.27	352	P	P	18 14 29.6	0.0
TZTN				IAmb	IAmb	18 14 31.4	
	comp=Z,20nm,1.1s						
TZTN	Tazewell	41.27	352	P	P	18 14 30.5	+0.9
	baz=170						
T57A	Hurt	41.31	357	P	P	18 14 30.3	+0.4
T57A				IAmb	IAmb	18 14 31.7	
	comp=Z,17nm,0.8s						
FW13	Cleburne	41.50	333	P	P	18 14 32.1	+0.6
FW13				IAmb	IAmb	18 14 33.4	
	comp=Z,15nm,0.9s						
U49A	Red Boiling Sp	41.61	349	P	P	18 14 30.9	-1.4
U49A				IAmb	IAmb	18 15 25.4	
	comp=Z,35nm,2.0s						
UALR	University of	41.66	341	P	P	18 14 32.0	-0.8
UALR				IAmb	IAmb	18 14 41.2	
	comp=Z,12nm,0.9s						
WVT	Waverly	41.66	347	P	P	18 14 31.1	-1.8
MIAR	Mount Ida	41.87	339	P	P	18 14 33.7	-0.8
	baz=155						
S57A	Dark Hollow, R	42.06	358	P	P	18 14 36.6	+0.7
S57A				IAmb	IAmb	18 14 38.0	
	comp=Z,20nm,1.1s						
FW06	Azle	42.08	334	P	P	18 14 36.7	+0.4
FW06				IAmb	IAmb	18 14 46.4	
	comp=Z,16nm,0.7s						
WHAR	Wooly Hollow	42.11	341	P	P	18 14 36.0	-0.5
S54A	Dingess, Beckl	42.25	355	P	P	18 14 37.4	-0.2
S54A				IAmb	IAmb	18 14 46.7	
	comp=Z,23nm,1.2s						
TX31	Lajitas Ar. Si	42.31	324	P	P	18 14 38.5	+0.1
TX32	Lajitas Array	42.31	324	P	P	18 14 38.2	-0.2
TXAR	Lajitas Array	42.31	324	P	P	18 14 39.0	+0.7
	comp=Z,2.4nm,0.8s,baz=150,slow=9.5,SNR=24						
TXAR				PcP	PcP	18 16 30.1	-1.6
	comp=Z,1.0nm,0.8s,baz=145,slow=3.3,SNR=4.6						
	comp=Z,2.4nm,0.8s						
TXAR	Lajitas Array	42.31	324	P	P	18 14 38.7	+0.3
S51A	Beattyville	42.35	352	P	P	18 14 38.1	-0.3
S51A				IAmb	IAmb	18 14 40.0	
	comp=Z,28nm,1.3s						
FW03	Perrin-Whitt E	42.36	333	P	P	18 14 39.0	+0.4
FW03				IAmb	IAmb	18 14 40.8	
	comp=Z,22nm,1.0s						
LCAR	Lake Charles	42.48	343	P	P	18 14 39.0	-0.5
LCAR				IAmb	IAmb	18 14 47.7	
	comp=Z,15nm,1.0s						
X37A	Clayton	42.58	337	P	P	18 14 40.0	-0.3
X37A				IAmb	IAmb	18 14 49.4	
	comp=Z,18nm,1.3s						
FCAR	Ozark Folk Cen	42.61	342	P	P	18 14 39.3	-1.2
R55A	Marlinton	42.64	356	P	P	18 14 41.3	+0.4
ABTX	Abilene, Hawle	42.75	331	P	P	18 14 42.5	+0.7
ABTX				IAmb	IAmb	18 14 43.9	
	comp=Z,16nm,1.1s						
ABTX	Abilene, Hawle	42.75	331	P	P	18 14 43.3	+1.6
	baz=146						
LOOK	Love County	42.79	335	P	P	18 14 42.7	+0.7
LOOK				IAmb	IAmb	18 14 44.2	
	comp=Z,13nm,0.8s						
R50A	Paris	43.09	351	P	P	18 14 44.1	-0.3
R50A				IAmb	IAmb	18 14 45.3	
	comp=Z,15nm,1.2s						
WTFS	Witchita Falls	43.15	333		P	18 14 45.2	+0.2
WTFS				IAmb	IAmb	18 14 47.1	
	comp=Z,22nm,0.9s						
Q56A	Snyder Ridge,	43.34	357	P	P	18 14 46.1	-0.3
Q56A				IAmb	IAmb	18 14 49.1	
	comp=Z,22nm,1.1s						
T42A	Van Buren	43.36	343	P	P	18 14 45.0	-1.5
WCI	Wyandotte Cave	43.37	349	P	P	18 14 46.0	-0.7
WCI	Wyandotte Cave	43.37	349	P	P	18 14 46.1	-0.5
	baz=166						
USIN	University of	43.39	348	P	P	18 14 43.7	-3.1
S44A	Carbondale	43.49	346	P	P	18 14 46.0	-1.6
S44A				IAmb	IAmb	18 14 47.6	
	comp=Z,12nm,0.8s						
Q52A	Bidwell	43.50	354	P	P	18 14 47.5	-0.2
Q52A				IAmb	IAmb	18 14 48.9	
	comp=Z,23nm,1.2s						
SIUC	Southern Illin	43.51	346	P	P	18 14 45.9	-1.9
SIUC				IAmb	IAmb	18 14 47.7	
	comp=Z,12nm,0.7s						
HHAR	Hobbs	43.57	340	P	P	18 14 46.9	-1.4
HHAR				IAmb	IAmb	18 14 56.8	
	comp=Z,12nm,1.0s						
X34A	Smith Ranch, M	43.59	335	P	P	18 14 49.0	+0.6
X34A				IAmb	IAmb	18 14 50.8	
	comp=Z,21nm,0.9s						
W35A	Tecumseh	43.66	336		P	18 14 48.9	-0.2
P57A	Homestead Farm	43.74	359	P	P	18 14 48.7	-1.0
P57A				IAmb	IAmb	18 15 01.6	
	comp=Z,30nm,1.8s						
ODSA	Odessa	43.81	328	P	P	18 14 49.4	-1.0
ODSA				IAmb	IAmb	18 14 59.8	
	comp=Z,9.6nm,0.9s						
RLO	Rose Lookout	43.84	339	P	P	18 14 50.4	-0.2
RLO				IAmb	IAmb	18 14 59.5	
	comp=Z,14nm,1.0s						
U38A	Gravette	43.86	340	P	P	18 14 49.9	-0.8
TUL1	Leonard	43.90	338	P	P	18 14 50.2	-0.8
TUL1				IAmb	IAmb	18 15 00.1	
	comp=Z,15nm,1.2s						
TUL1	Leonard	43.90	338	P	P	18 14 51.7	+0.7
	baz=152						
P53A	Whipple	43.93	355	P	P	18 14 50.4	-0.8
P53A				IAmb	IAmb	18 14 52.7	
	comp=Z,11nm,0.9s						
FNO	Franklin	43.97	336	P	P	18 14 51.2	-0.3
MCWV	Mont Chateau	43.99	357	P	P	18 14 52.7	+1.0
	baz=176						
POST	Post	44.02	330	P	P	18 14 51.6	-0.5
POST				IAmb	IAmb	18 14 53.8	
	comp=Z,14nm,0.9s						
FVM	French Village	44.07	345		P	18 14 51.2	-1.1
FVM				IAmb	IAmb	18 15 01.0	
	comp=Z,29nm,1.4s						
P51A	Williamsport	44.10	353	P	P	18 14 52.3	-0.2
P51A				IAmb	IAmb	18 14 52.7	
	comp=Z,38nm,1.6s						
WMOK	Wichita Mounta	44.11	334		P	18 14 52.1	-0.6
WMOK				IAmb	IAmb	18 15 02.8	
	comp=Z,8.0nm,0.8s						
WMOK	Wichita Mounta	44.11	334	P	P	18 14 53.4	+0.7
	baz=148,SNR=9.6						
DEOK	Depew	44.11	337	P	P	18 14 52.3	-0.4
P52A	Corning	44.15	354	P	P	18 14 52.4	-0.5
P52A				IAmb	IAmb	18 15 09.2	
	comp=Z,22nm,1.2s						
P52A	Corning	44.15	354	P	P	18 14 53.2	+0.3
	baz=173						
MVL	Millersville	44.25	1	P	P	18 14 55.2	+1.5
MVL				IAmb	IAmb	18 14 56.5	
	comp=Z,18nm,1.0s						
OK031	S. Brethren Rd	44.34	337	P	P	18 14 54.2	-0.3
OK031				IAmb	IAmb	18 14 55.7	
	comp=Z,18nm,0.9s						
CCM	Cathedral Cave	44.36	344	P	P	18 14 53.3	-1.3
CCM				IAmb	IAmb	18 15 02.3	
	comp=Z,21nm,1.5s						
CCM	Cathedral Cave	44.36	344	P	P	18 14 54.4	-0.2
	baz=160						
OK052	Battle Ridge R	44.37	337	P	P	18 14 54.1	-0.6
P49A	Miami Univ. Ec	44.38	351	P	P	18 14 54.7	0.0
	baz=169						
OK029	Liberty Lake	44.45	336		P	18 14 55.0	-0.5
OK033	Mehan	44.46	337	P	P	18 14 55.0	-0.4
OK033				IAmb	IAmb	18 15 04.7	
	comp=Z,19nm,1.0s						
PAGS	Pennsylvania G	44.48	0	P	P	18 14 55.7	+0.3
QUOK	Quay	44.48	337	P	P	18 14 55.1	-0.6
QUOK				IAmb	IAmb	18 14 56.9	
	comp=Z,20nm,1.0s						
Q44A	Meyer Farm, Va	44.59	346	P	P	18 14 55.3	-1.1
Q44A				IAmb	IAmb	18 14 56.1	
	comp=Z,11nm,0.8s						
CLNB	Carlsbad	44.64	327	P	P	18 14 57.0	-0.1
S39A	Bolivar	44.64	341	P	P	18 14 55.8	-1.1
O53A	New Philadelph	44.67	355	P	P	18 14 57.1	0.0
	baz=174						
OK048	Pawnee Station	44.79	337	P	P	18 14 57.9	-0.2
ACSO	Alum Creek Sta	44.83	353	P	P	18 14 58.3	0.0
	baz=172						
CSTR	Hydro, Custer	44.84	335	P	P	18 14 58.6	+0.1
GDL2	Guadalupe Moun	44.86	326	P	P	18 14 59.2	+0.3
LUPA	Lehigh Univers	44.87	2	P	P	18 14 59.5	+0.9
SSPA	Standing Stone	44.89	359	P	P	18 15 00.0	+1.2
	baz=179						
MNTX	Cornudas Mount	45.05	325	P	P	18 15 00.9	+0.6
	baz=138,SNR=9.6						
O48B	Farmland	45.15	351	P	P	18 14 59.5	-1.4
	baz=168						
PAL	Palisades	45.34	3	P	P	18 15 04.0	+1.7

	baz=184						
MSTX	Muleshoe	45.38	329	P	P	18 15 02.9	0.0
MSTX				IAmb	IAmb	18 15 04.7	
	comp=Z,8.7nm,0.8s						
MSTX	Muleshoe	45.38	329	P	P	18 15 03.0	0.0
	baz=142,SNR=5.1						
AMTX	Amarillo	45.57	331	P	P	18 15 04.0	-0.4
AMTX				IAmb	IAmb	18 15 06.1	
	comp=Z,6.9nm,0.8s						
AMTX	Amarillo	45.57	331	P	P	18 15 04.8	+0.4
	baz=144						
M57A	Sunshine Farm,	45.59	360	P	P	18 15 05.8	+1.5
U32A	Winter Ranch,	45.60	335		P	18 15 04.0	-0.5
OK032	Salt Plains WL	45.63	336	P	P	18 15 04.2	-0.6
OK032				IAmb	IAmb	18 15 06.0	
	comp=Z,13nm,0.8s						
KAN17	Caldwell West	45.66	337	P	P	18 15 05.2	+0.3
KAN09	Caldwell North	45.68	337	P	P	18 15 05.5	+0.4
NOKA	Waynoka	45.78	335		P	18 15 05.8	-0.2
HDIL	Hopedale	46.23	347	P	P	18 15 08.2	-1.2
	baz=163						
BINY	Binghamton	46.45	1	P	P	18 15 11.1	0.0
BINY	Binghamton	46.45	1	P	P	18 15 12.5	+1.3
	baz=181						
K57A	Scipio Center	46.98	0	P	P	18 15 16.2	+1.0
KSU1	Kansas State U	47.03	339	P	P	18 15 15.9	+0.2
	baz=153						
121A	Cookes Peak, D	47.06	324	P	P	18 15 17.2	+0.9
121A				IAmb	IAmb	18 15 19.0	
	comp=Z,11nm,1.0s						
121A	Cookes Peak, D	47.06	324	P	P	18 15 18.1	+1.9
	baz=136,SNR=6.6						
319A	Douglas	47.16	321	P	P	18 15 17.5	+0.5
BNM	Barren Site	47.57	326	P	P	18 15 19.8	-0.5
LENM	Lemitar	47.77	326	P	P	18 15 22.0	+0.2
DUN6	Lazy B Ranch	47.85	323	P	P	18 15 23.2	+0.8
CBKS	Cedar Bluff	47.97	336	P	P	18 15 24.9	+1.8
	baz=149						
J47A	Sunmer	48.02	352	P	P	18 15 22.9	-0.5
ANMO	Albuquerque	48.07	327	P	P	18 15 24.8	+0.7
	comp=Z,14nm,0.7s,baz=231,slow=9.1,SNR=47						
	comp=Z,14nm,0.7s						
ANMO	Albuquerque	48.07	327	P	P	18 15 25.2	+1.1
ANMO	Albuquerque	48.07	327	P	P	18 15 25.8	+1.7
	baz=139						
JFWS	Jewell Farm	48.69	347	P	P	18 15 29.7	+1.2
	baz=162						
T25A	Trinidad	48.70	331	P	P	18 15 29.5	+0.5
T25A				IAmb	IAmb	18 15 39.6	
	comp=Z,10nm,0.9s						
T25A	Trinidad	48.70	331	P	P	18 15 30.7	+1.8
	baz=142,SNR=7.5						
TUC	Tucson	48.73	321	P	P	18 15 29.6	+0.5
TUC				IAmb	IAmb	18 15 39.0	
	comp=Z,6.8nm,1.0s						
TUC	Tucson	48.73	321	P	P	18 15 30.0	+0.9
	baz=132						
SADO	Sadowa	49.06	358	P	P	18 15 30.4	-0.8
	comp=Z,6.0nm,0.9s,baz=191,slow=5.0,SNR=3.4						
	comp=Z,6.0nm,0.9s						
FRNY	Flat Rock	49.17	3	P	P	18 15 33.2	+1.1
FRNY				IAmb	IAmb	18 15 34.0	
	comp=Z,13nm,1.0s						
KSCO	Kaye Shedlock'	49.37	334	P	P	18 15 35.2	+1.2
	baz=145						
BGNE	Belgrade	49.62	339	P	P	18 15 36.3	+0.6
	baz=152						
SDCO	Great Sand Dun	49.71	330	P	P	18 15 37.5	+0.7
SDCO				IAmb	IAmb	18 15 39.1	
	comp=Z,12nm,1.0s						
SDCO	Great Sand Dun	49.71	330	P	P	18 15 38.2	+1.4
	baz=141,SNR=19						
214A	Organ Pipe Nat	49.79	319	P	P	18 15 37.6	+0.4
214A				IAmb	IAmb	18 15 39.4	
	comp=Z,19nm,1.5s						
214A	Organ Pipe Nat	49.79	319	P	P	18 15 38.3	+1.1
	baz=130						
W18A	Petrified Fore	50.03	325	P	P	18 15 40.6	+1.4
	baz=135						
S22A	4UR Ranch, Cre	50.38	329	P	P	18 15 43.0	+1.1
S22A				IAmb	IAmb	18 15 52.4	
	comp=Z,11nm,1.4s						
S22A	4UR Ranch, Cre	50.38	329	P	P	18 15 43.5	+1.6
	baz=140,SNR=7.4						
Q24A	Divide	50.49	331	P	P	18 15 43.4	+0.7
	baz=142						
OGNE	Ogallala	50.72	335	IAmb	IAmb	18 15 46.1	
	comp=Z,16nm,0.9s						
OGNE	Ogallala	50.72	335	P	P	18 15 45.0	+0.9
	baz=147						
MVCO	Mesa Verde	50.85	327	P	P	18 15 45.2	-0.2
MVCO	Mesa Verde	50.85	327	P	P	18 15 45.9	+0.6
	baz=138						
ECSD	EROS Data Cent	51.17	342	IAmb	IAmb	18 15 55.5	
	comp=Z,13nm,1.3s						
ECSD	EROS Data Cent	51.17	342	P	P	18 15 47.0	-0.4
	baz=155,SNR=6.6						
WUAZ	Wupatki	51.27	324	IAmb	IAmb	18 15 51.0	
	comp=Z,17nm,0.9s						
WUAZ	Wupatki	51.27	324	P	P	18 15 50.2	+1.8
	baz=134,SNR=11						
ISCO	Idaho Springs	51.37	332	P	P	18 15 49.9	+0.6
ISCO	Idaho Springs	51.37	332	P	P	18 15 50.5	+1.1
	baz=142						
LATQ	La Tuque	51.76	4	IAmb	IAmb	18 15 53.7	
	comp=Z,12nm,0.7s						
GLA	Glamis	51.80	319	P	P	18 15 53.2	+0.8
	baz=129						
PV07	Paradox Valley	51.84	328	P	P	18 15 53.2	+0.4
PV07				IAmb	IAmb	18 16 03.0	
	comp=Z,18nm,1.3s						
PV11	David Mesa, Pa	51.86	328	IAmb	IAmb	18 16 04.5	
	comp=Z,18nm,1.0s						
PDMCI	Parker Dam,Lak	52.16	321	P	P	18 15 56.2	+1.4
	baz=130						
SWSC	Sam W. Stewart	52.38	318	P	P	18 15 56.8	+0.3
	baz=128						
N23A	Red Feather La	52.39	332	P	P	18 15 57.5	+0.6
	baz=142						
IKP	In-Ko-Pah, Jac	52.41	318	P	P	18 15 56.9	0.0
	baz=128						
W13A	Hualapai Mount	52.51	322	P	P	18 15 58.5	+0.8
W13A				IAmb	IAmb	18 16 08.4	
	comp=Z,8.5nm,0.9s						
SUSD	Miller	52.57	340	P	P	18 15 57.4	-0.3
SUSD	Miller	52.57	340	P	P	18 15 58.1	+0.3
	baz=152						
BC3	Big Chuckawall	52.59	319	P	P	18 15 58.8	+0.5
	baz=129						
IRM	Iron Mountain	52.70	320	P	P	18 16 00.2	+1.2
	baz=129						
MONP2	Monument Peak	52.76	318	P	P	18 16 00.4	+0.8
	baz=127						
O20A	White River Ci	52.91	330	P	P	18 16 02.4	+1.7
	baz=140						
PKCU	Pink Cliffs	53.15	325	IAmb	IAmb	18 16 13.2	
	comp=Z,14nm,1.1s						
BELC	Belle Mtn. Jos	53.16	319	P	P	18 16 03.5	+1.1
	baz=128						
SRU	San Rafael Swe	53.33	328	IAmb	IAmb	18 16 13.7	
	comp=Z,8.5nm,1.1s						
LCMT	Little Creek M	53.39	324	P	P	18 16 04.6	+0.4
LCMT				IAmb	IAmb	18 16 15.3	
	comp=Z,8.0nm,0.9s						
GMRC	Granite Mounta	53.43	320	P	P	18 16 05.7	+1.2
	baz=129						
MTPU	Mount Pierson	53.49	325	P	P	18 16 06.5	+1.4
MURC	Murrieta	53.70	318	P	P	18 16 07.6	+1.2
	baz=127						
P17A	Butcher Ranch,	53.71	328	IAmb	IAmb	18 16 08.4	
	comp=Z,11nm,1.0s						
EYMN	Ely	53.75	348	P	P	18 16 09.8	+3.5
	baz=162						
MSU	Marysvale	53.81	326	P	P	18 16 07.6	+0.3
MVU	Marysvale	53.83	326	P	P	18 16 08.1	+0.7
CCUT	Cedar City	53.83	324	IAmb	IAmb	18 16 10.2	
	comp=Z,7.0nm,1.0s						
HEC	Hector,Ludlow	53.89	320	P	P	18 16 09.6	+1.9
	baz=128						
TUQ	Turquoise Moun	54.00	321	P	P	18 16 10.3	+1.6
	baz=129						
K22A	Casper	54.05	333	IAmb	IAmb	18 16 19.0	
	comp=Z,21nm,1.4s						
K22A	Casper	54.05	333	P	P	18 16 10.6	+1.7
	baz=143						
RSSD	Black Hills	54.18	336	P	P	18 16 10.7	+0.8
RSSD				IAmb	IAmb	18 16 12.1	
	comp=Z,7.8nm,0.8s						
RSSD	Black Hills	54.18	336	P	P	18 16 11.4	+1.6
	baz=146						
BFSC	Mount Baldy Ra	54.40	318	P	P	18 16 13.1	+1.6
	baz=127						
GSC	Goldstone, Bar	54.48	320	P	P	18 16 13.1	+1.0
GSC				IAmb	IAmb	18 16 22.7	
	comp=Z,9.9nm,1.1s						
GSC	Goldstone, Bar	54.48	320	P	P	18 16 13.7	+1.6
	baz=128						
BSUT	Blindstream Ca	54.49	329	P	P	18 16 12.9	+0.5
BSUT				IAmb	IAmb	18 16 23.3	
	comp=Z,16nm,1.1s						
JLU	Jordanelle	54.90	328	P	P	18 16 15.8	+0.5
JLU				IAmb	IAmb	18 16 25.4	
	comp=Z,14nm,1.3s						
QSM	Queen of Sheba	54.93	320	IAmb	IAmb	18 16 26.1	
	comp=Z,12nm,1.4s						
EDW2	Edwards Air Fo	55.00	319	P	P	18 16 16.9	+1.1
	baz=127						
SNCC	San Nicolas Is	55.08	316	P	P	18 16 16.5	+0.1
	baz=125						
AGMN	Agassiz Nation	55.11	345	P	P	18 16 16.1	-0.1
	baz=157,SNR=7.3						
TPNV	Topopah Spring	55.16	322	IAmb	IAmb	18 16 31.3	
	comp=Z,5.9nm,0.9s						
TPNV	Topopah Spring	55.16	322	P	P	18 16 18.7	+1.6
	baz=130,SNR=5.7						
WCT	Wildcat Mounta	55.30	321	P	P	18 16 18.8	+0.8
DUG	Dugway, Tooele	55.34	327	P	P	18 16 19.1	+0.9
DUG				IAmb	IAmb	18 16 28.7	
	comp=Z,6.5nm,0.8s						
DUG	Dugway, Tooele	55.34	327	P	P	18 16 19.7	+1.4
	baz=135,SNR=7.0						
SPR3	Spring Creek 3	55.37	325	IAmb	IAmb	18 16 28.6	
	comp=Z,7.1nm,0.8s						
MPMC	Manual Prospec	55.39	320	P	P	18 16 19.7	+0.9
	baz=128						
BW06	Boulder Array	55.55	331	P	P	18 16 19.5	-0.3
BW06				IAmb	IAmb	18 16 28.8	
	comp=Z,6.7nm,0.8s						
BW06	Boulder Array	55.55	331	P	P	18 16 20.0	+0.1
	baz=139,SNR=7.4						
PD31	Pinedale Array	55.55	331	IAmb	IAmb	18 16 28.8	
	comp=Z,5.8nm,0.8s						
PDAR	Pinedale Array	55.55	331	P	P	18 16 19.8	-0.1
	comp=Z,3.3nm,0.7s,baz=126,slow=8.4,SNR=38						
PDAR				PcP	PcP	18 17 19.6	+0.2
	comp=Z,1.7nm,0.9s,baz=113,slow=6.9,SNR=1.8						
	comp=Z,3.3nm,0.7s						
R11B	Troy Canyon, C	55.67	323	P	P	18 16 22.0	+1.3
	baz=131						
Q12A	Willow Creek R	55.68	325	P	P	18 16 21.4	+0.6
Q12A				IAmb	IAmb	18 16 31.2	
	comp=Z,11nm,1.0s						
HWUT	Hardware Ranch	55.69	329	IAmb	IAmb	18 16 22.4	
	comp=Z,11nm,0.9s						
ISA	Isabella, Lake	55.78	319	P	P	18 16 22.1	+0.7
	baz=127						
MDND	Maddock	55.79	342	P	P	18 16 22.3	+1.2
	baz=152						
CWC	Cottonwood Cre	56.00	320	P	P	18 16 24.0	+0.9
	baz=128						
PKM	Mcpherson Peak	56.22	318	P	P	18 16 25.6	+0.9
	baz=125						
AHID	Auburn Hatcher	56.30	330	IAmb	IAmb	18 16 26.5	
	comp=Z,6.7nm,0.8s						
HVU	Hansel Valley	56.44	328	P	P	18 16 26.2	+0.1
HVU				IAmb	IAmb	18 16 36.4	
	comp=Z,9.9nm,1.4s						
DSP	Deep Springs	56.50	321	IAmb	IAmb	18 16 28.8	
	comp=Z,7.1nm,1.1s						
MOOW	Moose Ponds	56.86	331	P	P	18 16 29.0	-0.2
ULM	Lac du Bonnet	56.91	346	P	P	18 16 28.1	-1.0
	comp=Z,8.7nm,0.8s,baz=154,slow=8.4,SNR=12						
ULM				LR	LR	18 43 14.2	
	comp=Z,68nm,18.5s,baz=346,slow=38						
	comp=Z,8.7nm,0.8s						
ULM	Lac du Bonnet	56.91	346	P	P	18 16 28.1	-1.0
ULM				IAmb	IAmb	18 16 29.4	
	comp=Z,9.7nm,0.8s						
ELK	Elko	57.06	326	P	P	18 16 30.3	-0.4
	comp=Z,1.5nm,0.8s,baz=130,slow=6.9,SNR=4.6						
	comp=Z,1.5nm,0.8s						
IMW	Indian Meadow	57.06	331	P	P	18 16 30.4	-0.3
IMW				IAmb	IAmb	18 16 41.5	
	comp=Z,4.5nm,0.7s						
FLWY	Flagg Ranch	57.09	331	P	P	18 16 31.1	+0.3
FLWY				IAmb	IAmb	18 16 41.0	
	comp=Z,15nm,1.1s						
RLMT	Red Lodge	57.22	333	P	P	18 16 32.6	+0.9
	baz=141,SNR=5.3						
H17A	Grant Village	57.27	332	P	P	18 16 32.4	+0.4
H17A	Grant Village	57.27	332	P	P	18 16 34.0	+2.0
	baz=139						
NV11	Mina Array Sit	57.27	322	IAmb	IAmb	18 16 42.4	
	comp=Z,8.9nm,1.1s						
MDPB	Devils Postpil	57.36	321	IAmb	IAmb	18 16 34.9	
	comp=Z,8.8nm,1.2s						
NVAR	Mina Array Bea	57.36	322	P	P	18 16 33.7	+0.9
	comp=Z,3.5nm,0.8s,baz=141,slow=7.3,SNR=21						
	comp=Z,3.5nm,0.8s						
NVAR	Mina Array Bea	57.36	322	P	P	18 16 33.3	+0.5
LHV	Little Huntoon	57.38	322	P	P	18 16 33.1	+0.6
LHV				IAmb	IAmb	18 16 43.4	
	comp=Z,9.4nm,1.0s						
KVN	Kaiserville	57.62	323	IAmb	IAmb	18 16 44.5	
	comp=Z,9.5nm,1.3s						
DGMT	Dagmar	57.87	339	P	P	18 16 39.0	+3.0
	baz=147						
GCMT	Greycliff	57.91	333	P	P	18 16 36.6	+0.2
BMN	Battle Mountai	57.98	324	P	P	18 16 37.0	-0.1
BMN				IAmb	IAmb	18 16 39.0	
	comp=Z,8.8nm,0.9s						
WAKR	Walker	58.11	321	IAmb	IAmb	18 16 48.5	
	comp=Z,5.8nm,0.8s						
HLID	Hailey	58.56	329	IAmb	IAmb	18 16 43.2	
	comp=Z,6.0nm,1.0s						
HLID	Hailey	58.56	329	P	P	18 16 42.3	+1.3
	baz=135,SNR=7.2						
BOZ	Bozeman (W)	58.66	332	IAmb	IAmb	18 16 51.8	
	comp=Z,11nm,0.8s						
BOZ	Bozeman (W)	58.66	332	P	P	18 16 42.8	+1.1
	baz=138,SNR=13						
MCMT	McKenzie Canyo	58.67	331	P	P	18 16 41.8	-0.1
SCHQ	Schefferville	59.68	7	P	P	18 16 48.4	0.0
	comp=Z,12nm,0.7s,baz=203,slow=6.3,SNR=11						
	comp=Z,12nm,0.7s						
SCHQ	Schefferville	59.68	7	P	P	18 16 48.7	+0.3
EGMT	Eagleton	59.68	335	P	P	18 16 49.9	+1.3
	baz=141						
WVOR	Wild Horse Val	60.09	325	IAmb	IAmb	18 16 53.3	
	comp=Z,5.9nm,0.9s						
MSO	Missoula	60.65	332	P	P	18 16 56.5	+1.2
MSO	Missoula	60.65	332	P	P	18 16 56.6	+1.2
	baz=137,SNR=8.1						
I07A	Izee	61.63	326	IAmb	IAmb	18 17 04.2	
	comp=Z,8.7nm,1.0s						
J05D	Fort Rock, OR	62.11	325	P	P	18 17 05.7	+0.4
FFC	Flin Flon	62.56	344	P	P	18 17 07.9	0.0
FFC				IAmb	IAmb	18 17 09.2	
	comp=Z,9.8nm,1.1s						
NEW	Newport	63.19	331	P	P	18 17 13.7	+1.4
	baz=134						
FCC	Fort Churchill	64.51	350	IAmb	IAmb	18 17 21.1	
	comp=Z,7.3nm,0.8s						
EDM	Edmonton	65.14	337	P	P	18 17 25.0	0.0
FRB	Frobisher Bay	68.32	4	P	P	18 17 44.5	-0.5
	comp=Z,6.6nm,0.7s,baz=175,slow=7.3,SNR=11						
	comp=Z,6.6nm,0.7s						
LIC	Lamto	72.53	82	⇑*i*P	P	18 18 12.5	+0.8
	comp=Z,9.7nm,0.4s						
TIC	Toumodi	72.58	82	⇑*i*P	P	18 18 10.5	-1.6
	comp=Z,3.1nm,0.2s						
YKA	Yellowknife Ar	72.68	343	P	P	18 18 11.3	-0.3
	comp=Z,2.0nm,0.7s,baz=140,slow=5.8,SNR=31						
	comp=Z,2.0nm,0.7s						
DBIC	Dimbokro	72.75	82	P	P	18 18 13.5	+0.5
	comp=Z,9.6nm,0.8s,baz=268,slow=5.0,SNR=18						
DBIC				LR	LR	18 48 47.8	
	comp=Z,91nm,19.5s,baz=244,slow=35						
	comp=Z,9.6nm,0.8s						
DBIC	Dimbokro	72.75	82	P	P	18 18 13.7	+0.7
KIC	Kosan Boka	72.83	82	⇑*i*P	P	18 18 14.5	+1.0
	comp=Z,20nm,0.7s						
KOTAN	Kotaneelee Air	74.20	338	P	P	18 18 22.5	+1.9
	baz=131						
V35K	Ketchikan	74.60	331	P	P	18 18 22.8	-0.2
	baz=122						
T35M	Bob Quinn	74.87	333	P	P	18 18 26.4	+1.8
	baz=124						
CRAG	Craig	75.41	331	P	P	18 18 29.2	+1.6
	baz=121						
WRAK	Wrangell Islan	75.53	332	P	P	18 18 29.5	+1.2
	baz=122						
DLBC	Dease Lake	75.59	334	P	P	18 18 29.8	+1.0
DLBC				IAmb	IAmb	18 18 39.6	
	comp=Z,11nm,1.2s						
DLBC	Dease Lake	75.59	334	P	P	18 18 30.5	+1.7
	baz=125						
S34M	Telegraph Cree	75.79	333	P	P	18 18 30.6	+0.8
	baz=124						
WRGLY	Wrigley	76.03	340	P	P	18 18 33.5	+2.5
	baz=132,SNR=6.5						
Q32M	Nakina River	76.86	334	P	P	18 18 36.7	+0.6
	baz=123						
S32K	Killisnoo	77.12	332	P	P	18 18 39.2	+1.8
	baz=120						
R32K	Eaglecrest	77.50	333	P	P	18 18 40.8	+1.2
	baz=120						
P33M	Teslin, Yukon	77.77	335	P	P	18 18 41.3	+0.3
P33M				IAmb	IAmb	18 18 52.2	
	comp=Z,8.0nm,1.1s						
P33M	Teslin, Yukon	77.77	335	P	P	18 18 41.9	+0.9
	baz=122						
P32M	Atlin	77.82	334	P	P	18 18 41.8	+0.5
	baz=122						
S31K	Pelican	78.14	332	P	P	18 18 43.0	0.0
	baz=119						
PLBC	Pleasant Camp	78.92	333	P	P	18 18 49.0	+1.7
	baz=119						
FARO	Faro, Yukon	79.07	337	IAmb	IAmb	18 19 00.4	
	comp=Z,19nm,1.7s						
FARO	Faro, Yukon	79.07	337	P	P	18 18 49.8	+1.6
	baz=122						
O30N	Mendenhall	79.45	335	P	P	18 18 51.5	+1.3
	baz=120						
M31M	Drury Creek, Y	79.47	336	P	P	18 18 51.5	+1.2
	baz=121						
P30M	Million Dollar	79.51	334	P	P	18 18 52.3	+1.7
	baz=119						
RES	Resolute Bay	79.78	355	P	P	18 18 51.8	0.0
	comp=Z,2.4nm,0.8s,baz=188,slow=9.6,SNR=11						
	comp=Z,2.4nm,0.8s						
ESDC	Sonseca Array	79.82	49	P	P	18 18 53.2	+0.4
	comp=Z,1.8nm,1.0s,baz=266,slow=5.6,SNR=7.0						
	comp=Z,1.8nm,1.0s						
TOA0	Torodi Ar. Sit	79.94	76	P	P	18 18 54.0	+0.2
TOA0				IAmb	IAmb	18 18 55.4	
	comp=Z,15nm,1.4s						
TORD	Torodi Ar. Bea	79.94	76	P	P	18 18 54.1	+0.3
	comp=Z,7.8nm,0.2s,baz=279,slow=4.6,SNR=20						
	comp=Z,7.8nm,0.2s						
N30M	Aishikik Lake	80.21	335	P	P	18 18 56.3	+1.9
	baz=119						
YUK6	Outpost Mounta	80.51	334	P	P	18 18 57.6	+1.4
	baz=118						
M30M	Minto, Yukon	80.62	336	P	P	18 18 58.1	+1.5
	baz=119						
SNAA	Sanae	80.79	162	P	P	18 18 58.1	+0.8
YUK4	Talbot Arm	80.82	335	P	P	18 18 59.5	+1.7
	baz=117						
TULEG	Thule	81.02	2	P	P	18 18 58.7	+0.4
TULEG				IAmb	IAmb	18 19 00.5	
	comp=Z,14nm,1.1s						
O28M	Mount Upton	81.23	334	P	P	18 19 01.7	+1.5
	baz=116						
M29M	Somme Creek	81.24	336	P	P	18 19 01.6	+1.7
	baz=118,SNR=5.2						
YUK8	Steele Glacier	81.27	334	P	P	18 19 01.8	+1.5
	baz=116						
L29M	L29M	81.42	336	P	P	18 19 02.3	+1.5
	baz=118,SNR=8.3						
K29M	Barlow Dome	81.53	337	P	P	18 19 02.3	+0.9
	baz=119						
YUK3	Moose Creek	81.78	335	P	P	18 19 04.1	+1.1
	baz=116						
F31M	Tsiigehtchic	82.01	341	P	P	18 19 04.8	+1.1
	baz=123,SNR=5.8						
BVCY	Beaver Creek	82.23	335	P	P	18 19 06.5	+1.4
	baz=115						
DAWY	Dawson	82.36	337	IAmb	IAmb	18 19 07.3	
	comp=Z,8.8nm,1.3s						
DAWY	Dawson	82.36	337	P	P	18 19 06.4	+0.7
	baz=117						
A36M	Sachs Harbour	82.38	346	P	P	18 19 06.0	+0.4
	baz=131,SNR=19						
INK	Inuvik	82.41	342	P	P	18 19 05.9	+0.1
	comp=Z,8.5nm,0.9s,baz=112,slow=5.1,SNR=29						
	comp=Z,8.5nm,0.9s						
INK	Inuvik	82.41	342	P	P	18 19 06.8	+1.0
	baz=123,SNR=11						
EPYK	Eagle Plains	82.46	339	P	P	18 19 06.8	+0.6
EPYK				IAmb	IAmb	18 19 16.4	
	comp=Z,7.4nm,0.9s						
EPYK	Eagle Plains	82.46	339	P	P	18 19 07.2	+1.0
	baz=120						
TROLL	Troll, Antarti	82.50	162	P	P	18 19 07.4	+0.9
I29M	Ogilvie Camp,	82.55	338	P	P	18 19 07.8	+1.1
	baz=118						
G30M	tAoh Zraii Nji	82.60	340	P	P	18 19 08.4	+1.5
	baz=120						
M27K	Edge Creek, AK	82.64	335	IAmb	IAmb	18 19 09.7	
	comp=Z,11nm,1.2s						
M27K	Edge Creek, AK	82.64	335	P	P	18 19 08.9	+1.6
	baz=114,SNR=5.1						
MCARA	McCarthy VSAT	82.74	334	P	P	18 19 09.6	+1.9
	baz=113,SNR=6.6						
VRDI	Verde Repeater	82.87	333	P	P	18 19 07.0	-1.6
L27K	Beaver Creek,	82.91	335	P	P	18 19 09.3	+0.7
L27K				IAmb	IAmb	18 19 19.3	
	comp=Z,11nm,1.2s						
L27K	Beaver Creek,	82.91	335	P	P	18 19 09.8	+1.2
	baz=115						
GLB	Gilahina Butte	83.11	334	IAmb	IAmb	18 19 11.6	
	comp=Z,8.1nm,0.9s						
M26K	Nabesna, AK	83.13	335	IAmb	IAmb	18 20 46.6	
	comp=Z,18nm,1.7s						
M26K	Nabesna, AK	83.13	335	P	P	18 19 10.6	+0.8
	baz=113						
EGAK	Eagle	83.36	337	P	P	18 19 12.0	+1.2
	baz=115,SNR=11						
K27K	Chicken	83.41	336	P	P	18 19 12.2	+1.0
K27K	Chicken	83.41	336	P	P	18 19 12.5	+1.4
	baz=114						
L26K	Log Cabin Wild	83.53	335	IAmb	IAmb	18 19 13.6	
	comp=Z,6.3nm,0.9s						
L26K	Log Cabin Wild	83.53	335	P	P	18 19 13.2	+1.4
	baz=113						
Q23K	Middleton Isla	83.55	331	P	P	18 19 12.8	+0.9
	baz=110						
EYAK	Cordova Ski Ar	83.66	332	P	P	18 19 13.6	+1.2
	baz=111						
I27K	Kandik River	83.89	338	P	P	18 19 14.2	+0.5
	baz=115						
DOT	Dot Lake	84.07	336	IAmb	IAmb	18 19 24.6	
	comp=Z,9.6nm,1.1s						
KLU	Klutina	84.07	333	P	P	18 19 15.3	+0.7
	baz=111						
H27K	Steamboat Moun	84.12	338	P	P	18 19 15.5	+0.7
	baz=115						
SCRK	Sand Creek	84.16	336	P	P	18 19 15.8	+0.6
SCRK				IAmb	IAmb	18 19 16.9	
	comp=Z,12nm,1.4s						
SCRK	Sand Creek	84.16	336	P	P	18 19 16.2	+1.1
	baz=113						
I26K	Coal Creek Min	84.36	337	P	P	18 19 16.7	+0.8
	baz=114						
M24K	Tolsona, Glenn	84.40	334	P	P	18 19 17.1	+0.8
	baz=110						
PAX	Paxson	84.40	335	P	P	18 19 17.3	+0.9
	baz=111						
G27K	Doyon Strip	84.42	339	P	P	18 19 16.7	+0.5
	baz=115						
RIDG	Independent Ri	84.42	336	P	P	18 19 17.3	+0.9
	baz=112						
EKA	Eskdalemuir Ar	84.48	33	P	P	18 19 16.2	-0.5
	comp=Z,1.7nm,0.8s,baz=231,slow=5.3,SNR=6.2						
	comp=Z,1.7nm,0.8s						
TAM	Tamanrasset	84.74	67	P	P	18 19 20.7	+1.8
SCM	Sheep Creek Mo	84.82	333	P	P	18 19 19.5	+1.1
	baz=110						
K24K	Donnelly Dome	84.83	335	P	P	18 19 19.1	+0.7
	baz=111						
E27K	Coleen River	84.98	340	P	P	18 19 19.9	+0.8
	baz=115						

M23K	Glacier View	84.99	333	P	P	18 19 19.9	+0.7
	baz=109						
KNK	Knik Glacier	85.19	333	P	P	18 19 21.1	+0.8
	baz=108						
G26K	Porcupine Rive	85.24	339	P	P	18 19 20.8	+0.5
	baz=113						
SML	Sawmill	85.26	333	P	P	18 19 21.2	+0.5
	baz=109						
PRP	Porcupine Dome	85.35	337	P	P	18 19 21.8	+0.7
	baz=111						
O22K	Cooper Landing	85.50	332	P	P	18 19 22.4	+0.7
	baz=107						
HDA	Harding Lake	85.53	336	IAmb	IAmb	18 19 31.3	
	comp=Z,5.4nm,0.7s						
HDA	Harding Lake	85.53	336	P	P	18 19 22.4	+0.6
	baz=110						
QSPA	South Pole Qui	85.62	180	P	P	18 19 23.1	+0.7
ILAR	Eielson Array	85.63	336	P	P	18 19 21.9	-0.4
	comp=Z,1.7nm,0.9s,baz=119,slow=3.6,SNR=14						
	comp=Z,1.7nm,0.9s						
F26K	Sheenjek River	85.66	339	P	P	18 19 23.6	+1.1
	baz=113						
RC01	Rabbit Creek A	85.69	332	P	P	18 19 23.1	+0.5
	baz=107						
BRSE	Bradley Lake S	85.77	331	P	P	18 19 23.9	+0.7
	baz=106						
POKR	Poker Plat Res	85.96	336	P	P	18 19 25.0	+1.0
	baz=110						
G25K	Bearman Lake	86.02	338	P	P	18 19 25.6	+1.4
	baz=111						
F25K	Christian Rive	86.16	339	P	P	18 19 26.1	+1.2
	baz=111						
HOM	Homer	86.19	331	P	P	18 19 26.0	+0.9
	baz=106						
MDM	Murphy Dome	86.23	336	P	P	18 19 25.4	+0.1
SUA	Susitna One	86.26	332	P	P	18 19 26.3	+0.6
	baz=106						
C27K	Jago River	86.28	341	P	P	18 19 26.9	+1.4
	baz=113						
E25K	Arctic Village	86.32	340	P	P	18 19 27.1	+1.3
	baz=112,SNR=7.5						
H24K	Noodor Dome	86.38	337	P	P	18 19 25.3	-0.8
H24K				IAmb	IAmb	18 19 36.4	
	comp=Z,9.5nm,1.2s						
H24K	Noodor Dome	86.38	337	P	P	18 19 27.3	+1.2
	baz=109						
OHAK	Old Harbor	86.41	328	P	P	18 19 27.3	+1.0
	baz=104						
NEA2	Nenana	86.46	336	P	P	18 19 26.9	+0.5
	baz=108,SNR=5.1						
G24K	Hadweenzic Riv	86.51	338	P	P	18 19 27.8	+1.2
	baz=110						
TRF	Thorofare Moun	86.62	334	P	P	18 19 28.3	+0.9
	baz=107						
I23K	Minto, Yukon-K	86.75	336	P	P	18 19 27.4	-0.3
I23K	Minto, Yukon-K	86.75	336	P	P	18 19 28.8	+1.1
	baz=108,SNR=6.1						
SKT	Skwentna	86.76	333	P	P	18 19 28.6	+0.6
	baz=106,SNR=9.8						
C26K	Camden Bay	86.78	341	P	P	18 19 29.4	+1.6
	baz=112						
SPCR	Spurr Chakacha	86.87	332	P	P	18 19 29.3	+0.8
	baz=105						
KTH	Kantishna Hill	86.93	334	IAmb	IAmb	18 22 27.8	
	comp=Z,7.5nm,1.0s						
F24K	Squaw Lake	86.94	339	P	P	18 19 29.7	+0.9
	baz=109						
H23K	Yukon River	87.03	337	P	P	18 19 30.0	+0.8
	baz=108						
D25K	Kavik River	87.03	341	P	P	18 19 30.3	+1.1
	baz=111						
BPAW	Bear Paw Mtn.	87.11	335	P	P	18 19 29.4	-0.3
BPAW	Bear Paw Mtn.	87.11	335	P	P	18 19 30.2	+0.6
	baz=106,SNR=7.2						
MLY	Manley	87.27	336	P	P	18 19 31.1	+0.7
	baz=107,SNR=7.3						
PPLA	Purkeypile	87.30	334	P	P	18 19 31.4	+0.6
	baz=105,SNR=9.3						
E24K	Your Creek	87.34	339	P	P	18 19 31.7	+1.0
	baz=109						
CAST	Castle Rocks	87.39	334	P	P	18 19 30.7	-0.3
CAST	Castle Rocks	87.39	334	P	P	18 19 31.1	+0.1
	baz=105,SNR=12						
M20K	Styx River	87.47	333	IAmb	IAmb	18 19 32.2	
	comp=Z,4.6nm,0.8s						
M20K	Styx River	87.47	333	P	P	18 19 31.9	+0.4
	baz=104						
G23K	Bananza Creek	87.48	338	P	P	18 19 32.6	+1.2
	baz=107						
CHUM	Lake Minchumin	87.61	335	P	P	18 19 32.4	+0.4
	baz=105						
O19K	Port Alsworth	87.63	331	P	P	18 19 32.1	-0.1
	baz=103						
Q18K	Katmai Hardscr	87.63	329	P	P	18 19 32.4	+0.1
	baz=102						
COLD	Coldfoot	87.70	338	P	P	18 19 34.1	+1.7
	baz=107						
E23K	Chandalar	87.73	339	P	P	18 19 33.7	+1.1
	baz=108						
I21K	Tanana	87.82	336	IAmb	IAmb	18 19 42.5	
	comp=Z,9.8nm,1.3s						
I21K	Tanana	87.82	336	P	P	18 19 33.4	+0.5
	baz=106						
N19K	Bonanza Creek	87.85	331	P	P	18 19 33.4	+0.1
	baz=103						
P18K	Big Mountain,	87.90	330	P	P	18 19 33.7	+0.1
	baz=102						
C24K	Franklin Bluff	87.94	341	P	P	18 19 34.6	+1.1
	baz=109						
L20K	Farewell, AK	87.95	333	P	P	18 19 34.1	+0.3
	baz=104						
O18K	Koktuh Hills	87.99	330	P	P	18 19 33.9	0.0
	baz=102						
Q17K	Contact Creek	88.00	329	P	P	18 19 34.9	+0.8
	baz=102						
M19K	Big River Lodg	88.05	332	P	P	18 19 34.6	+0.5
	baz=103						
R17K	Ugashik Creek	88.14	328	P	P	18 19 35.5	+0.9
	baz=101						
K20K	Telida	88.24	334	P	P	18 19 35.0	-0.1
K20K	Telida	88.24	334	P	P	18 19 36.0	+0.9
	baz=104						
H21K	Melozitna Rive	88.27	336	P	P	18 19 35.5	+0.4
	baz=105						
L19K	White Mountain	88.33	333	IAmb	IAmb	18 19 36.7	
	comp=Z,7.8nm,1.1s						
L19K	White Mountain	88.33	333	P	P	18 19 35.9	+0.4
	baz=103						
D23K	Nanushuk River	88.38	340	P	P	18 19 36.7	+1.2
	baz=107						
P17K	Kvichak River	88.47	330	P	P	18 19 37.0	+0.9
	baz=101						
Q16K	King Salmon	88.48	329	P	P	18 19 36.4	+0.2
	baz=101						
F22K	John River	88.51	338	P	P	18 19 37.5	+1.2
	baz=105						
IMAR	Indian Mountai	88.73	337	P	P	18 19 37.0	-0.3
R16K	Pilot Point	88.75	328	P	P	18 19 39.1	+1.6
	baz=100						
G21K	Allakaket	88.76	337	P	P	18 19 38.7	+1.3
	baz=104						
O17K	Koliganek Bris	88.91	330	P	P	18 19 38.8	+0.6
	baz=101						
F21K	Alatna River	88.93	338	P	P	18 19 39.3	+1.0
	baz=104						
ELIB	Princess Elisa	88.95	162	*d*P	P	18 19 39.5	+1.0
CHGN	Chignik	88.99	327	P	P	18 19 39.4	+0.7
	baz=100						
TTA	Tatalina	89.01	333	P	P	18 19 38.7	0.0
	baz=102						
P16K	Nushagak River	89.23	329	P	P	18 19 40.5	+0.8
	baz=100						
O16K	Kokwok River B	89.37	330	P	P	18 19 41.2	+0.8
	baz=100						
GCSA	Galena City Sc	89.75	335	P	P	18 19 42.4	+0.4
	baz=101						
N16K	Nishlik Lake	89.86	331	P	P	18 19 43.1	+0.4
	baz=99						
CLL	Collm	93.38	39	*e*P	P	18 19 59.0	-0.2
GERES	GERESS Array B	93.72	41	P	P	18 20 01.4	+0.4
	comp=Z,0.2nm,0.3s,baz=276,slow=2.9,SNR=3.9						
	comp=Z,0.2nm,0.3s						
SUR	Sutherland	94.12	123	LR	LR	18 58 58.9	
	comp=Z,41nm,19.6s,baz=240,slow=33						
BOSA	Boshof	98.48	120	LR	LR	19 02 10.7	
	comp=Z,50nm,20.2s,baz=196,slow=34						
ARCES	ARCESS Array B	98.49	20	P	P	18 20 21.5	-0.6
	comp=Z,4.4nm,1.0s,baz=294,slow=7.5,SNR=3.6						
	comp=Z,4.4nm,1.0s						
LBTB	Lobatse	99.38	116	LR	LR	19 02 39.7	
	comp=Z,137nm,20.2s,baz=214,slow=34						
URZ	Urewera	99.71	230	LR	LR	18 57 41.6	
	comp=Z,71nm,18.4s,baz=129,slow=31						
ZALV	Zalesovo Beam	128.46	14	PKP	PKPdf	18 25 50.8	+0.1
	comp=Z,4.4nm,0.8s,baz=294,slow=1.5,SNR=22						
MKAR	Makanchi Array	134.15	20	PKP	PKPdf	18 26 02.1	+0.3
	comp=Z,0.9nm,0.7s,baz=28,slow=2.2,SNR=12						
MJAR	Matsushiro Arr	134.65	319	PKP	PKPdf	18 26 02.9	-0.1
	comp=Z,1.0nm,0.7s,baz=94,slow=1.7,SNR=6.8						
SONM	Songino Array	136.70	357	PKP	PKPdf	18 26 07.0	+0.3
	comp=Z,1.2nm,0.7s,baz=313,slow=2.5,SNR=9.2						
KSH	Kashi	137.34	31	PKP	PKPdf	18 26 06.5	-1.6
WMQ	Urumqi	138.51	17	*e*PKP	PKiKP	18 26 11.3	-0.9
ASAR	Alice Springs	138.97	226	PKhKP	PKPpre	18 26 04.2	
	comp=Z,0.8nm,0.8s,baz=125,slow=2.8,SNR=10						
KSRS	Korea Array	140.09	329	PKhKP	PKPpre	18 26 09.2	
	comp=Z,3.2nm,0.9s,baz=124,slow=32,SNR=5.2						
WRA	Warramunga Arr	140.88	231	PKhKP	PKPpre	18 26 07.5	
	comp=Z,1.1nm,1.0s,baz=107,slow=2.8,SNR=8.2						
WRA				PKP	PKPdf	18 26 12.8	-2.1
	comp=Z,1.3nm,0.8s,baz=117,slow=2.1,SNR=7.4						
HHC	Hu-ho-hao-te	142.99	349	*e*PKP	PKPdf	18 26 15.8	-2.5
BTO	Baotou	143.49	351	*e*PKP	PKPbc	18 26 17.8	+1.4
GTA	Gaotai	145.09	4	*e*PKPbc	PKPbc	18 26 21.3	-0.1
GTA				pPKP	pPKPab	18 26 30.8	-1.9
HNS	HongShan	145.55	344	⇑PKPbc	PKPbc	18 26 23.0	+0.3
GOMU	GeErMu	147.51	13	PKPbc	PKPab	18 26 30.3	-0.8
GOMU				pPKP	pPKPdf	18 26 37.5	-0.6
GOMU				sPKP		18 26 41.0	
GOMU				AMB	AMB		
	comp=Z,61nm,5.7s						
LZH	Lanzhou	148.53	359	*e*PKPbc	PKiKP	18 26 33.0	-0.1
LZH				pPKP	sPKPdf	18 26 44.0	+0.6
NJ2	Nanjing	148.84	334	*e*PKPbc	PKPdf	18 26 26.8	-1.5
PYUN	Piuthan	149.69	37	*e*P	PKiKP	18 26 35.7	-0.1
DANN	Dangsing	149.96	36	*e*P	PKiKP	18 26 36.7	+0.3
	comp=Z,64nm,0.8s						
XAN	Xi'an	150.08	350	⇓*i*PKPbc	PKiKP	18 26 36.0	-0.2
XAN				pPKP	sPKPdf	18 26 44.3	-1.5
GKN	Gorkha	150.72	35	*e*P	PKiKP	18 26 38.2	+0.4
	comp=Z,87nm,0.9s						
DMN	Daman	151.29	35	*e*P	PKiKP	18 26 39.5	+0.3
	comp=Z,18nm,0.6s						
PKIN	Phulchoki	151.48	34	*e*P	PKiKP	18 26 39.6	0.0
GUN	Gumba	151.49	33	*e*P	PKiKP	18 26 40.2	+0.5
PKI	Pulchoki	151.49	34	*e*P	PKiKP	18 26 39.7	0.0
JIRN	Jiri	151.86	33	*e*P	PKiKP	18 26 40.7	+0.2
	comp=Z,12nm,0.7s						
RAMN	Ramite	152.64	34	*e*P	PKiKP	18 26 42.1	+0.2
	comp=Z,22nm,0.6s						
TAPN	Taplejung	152.91	31	*e*P	PKiKP	18 26 42.8	+0.2
CMAR	Chiang Mai Arr	165.51	16	PKP	PKPdf	18 26 49.6	0.0
	comp=Z,1.0nm,0.9s,baz=292,slow=1.8,SNR=7.8						
CMAR				PKPab	PKPab	18 27 47.4	-0.3
	comp=Z,1.6nm,0.8s,baz=326,slow=5.5,SNR=9.5						

ROM ***25*** *18:20:57.9±0.1, 45.°106N±0.°006×12.°420E±0.°009,*
h16^{km}±1^{km}, ML2.2/60, Error ellipse: s-maj=0.7km
s-min=0.2km az=222.0
ISC 25 18:20:57.6±1.0**, 45.°09N**±0.°02×**12.°43E**±0.°02**, h17**^{km}±7^{km}**,**
n60, σ1.^{s}**22**/88**, 2C-3D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VENL	Venezia Lido	0.33	353	P	Pb	18 21 04.9	-0.1
VENL				S	Sb	18 21 10.9	+1.0
IESO	Jesolo	0.44	11	⇓*e*Pg	Pg	18 21 06.6	+0.1
IESO				*e*Sg	Sb	18 21 13.4	+0.4
TEOL	Teolo	0.60	297	*e*Pg	Pg	18 21 09.3	-0.3
TEOL				*e*Sg	Sg	18 21 17.2	-0.3
TEOL	Teolo	0.60	297	P	Pg	18 21 09.2	-0.3
TEOL				S	Sg	18 21 17.2	-0.3
TEOL				AML	AML		
	comp=E,575µm,0.4s						
TEOL				AML	AML		
	comp=N,364µm,0.2s						
TEOL				AML	AML		
	comp=E,576µm,0.4s						
TEOL				AML	AML		
	comp=N,346µm,0.7s						
TEOL				AML	AML		
	comp=E,371µm,0.2s						
ZOVE	Zovencedo	0.76	299	⇓P	Pg	18 21 12.0	-0.5
ZOVE				S	Sg	18 21 21.8	-0.7
MTLO	Montello	0.76	342	*e*Pg	Pg	18 21 12.2	-0.2
MTLO				*e*Sg	Sb	18 21 23.2	+0.8
ED06	Collalto TV	0.78	348	*e*Pg	Pg	18 21 13.3	+0.5
ED06				*e*Sg	Sg	18 21 23.3	+0.1
ASOL	Asolo	0.80	332	P	Pb	18 21 13.1	+0.1
ASOL				S	Sn	18 21 24.8	-0.8
IMOL	Imola, Italy	0.88	214	P	Pb	18 21 14.7	+0.3
CGRP	Cima Grappa	0.91	331	*e*Pg	Pb	18 21 14.7	-0.2
CGRP				*e*Sg	Sb	18 21 26.8	+0.1
CGRP	Cima Grappa	0.91	331	P	Pb	18 21 14.5	-0.4
CGRP				S	Sb	18 21 26.9	+0.1
CGRP				AML	AML		
	comp=N,76µm,0.6s						
CGRP				AML	AML		
	comp=E,101µm,0.2s						
CGRP				AML	AML		
	comp=N,76µm,1.4s						
CGRP				AML	AML		
	comp=N,77µm,3.6s						
CGRP				AML	AML		
	comp=N,83µm,2.5s						
CGRP				AML	AML		
	comp=E,101µm,0.2s						
CGRP				AML	AML		
	comp=E,154µm,1.1s						
CAE	Caneva	0.92	0	*e*Pg	Pb	18 21 14.8	-0.3
CAE				*e*Sg	Sg	18 21 27.7	+0.2
CAE	Caneva	0.92	0	P	Pb	18 21 14.7	-0.3
CAE				S	Sb	18 21 26.9	0.0
FRE8	Fregona	0.93	357	P	Pb	18 21 14.5	-0.7
VARN	Col Varnada, M	0.93	346	*e*Pg	Pb	18 21 15.1	-0.2
VARN	Col Varnada, M	0.93	346	P	Pb	18 21 14.9	-0.4
VARN				S	Sg	18 21 27.6	-0.3
VARN				AML	AML		
	comp=E,160µm,0.4s						
VARN				AML	AML		
	comp=N,130µm,1.5s						
VARN				AML	AML		
	comp=N,120µm,0.6s						
VARN				AML	AML		
	comp=N,130µm,0.5s						
VARN				AML	AML		
	comp=E,150µm,0.4s						
VARN				AML	AML		
	comp=E,156µm,3.3s						
VARN				AML	AML		
	comp=N,74µm,0.3s						
VARN				AML	AML		
	comp=N,116µm,0.1s						
VARN				AML	AML		
	comp=E,160µm,0.4s						
POLC	Polcenigo	0.94	3	P	Pb	18 21 15.2	-0.1
POLC				S	Sg	18 21 28.1	0.0
POLC				AML	AML		
	comp=E,326µm,0.4s						
POLC				AML	AML		
	comp=N,270µm,0.4s						
POLC				AML	AML		
	comp=N,251µm,0.6s						
POLC				AML	AML		
	comp=E,299µm,0.3s						
BRJN	Brijuni	0.95	101	⇑P	Pb	18 21 16.2	+0.6
BRJN				S	Sb	18 21 28.9	+1.0
CTI	Castel Tesino	1.10	330	P	Pb	18 21 17.9	-0.4
CTI				S	Sg	18 21 32.9	-0.6
CTI				AML	AML		
	comp=N,176µm,0.1s						
CTI				AML	AML		
	comp=E,284µm,1.3s						
CTI				AML	AML		
	comp=E,265µm,0.2s						
CTI				AML	AML		
	comp=N,176µm,0.1s						
ROVR	Rover Verones	1.11	301	P	Pb	18 21 18.2	-0.2
ROVR				S	Sb	18 21 32.5	0.0
ROVR				AML	AML		
	comp=N,155µm,0.2s						
ROVR				AML	AML		
	comp=E,72µm,1.1s						
ROVR				AML	AML		
	comp=E,225µm,1.1s						
ROVR				AML	AML		
	comp=E,69µm,0.3s						
ROVR				AML	AML		
	comp=N,368µm,0.2s						
ROVR				AML	AML		
	comp=N,155µm,0.2s						
TRI	Trieste	1.12	56	P	Pb	18 21 18.6	+0.1
TRI				S	Sn	18 21 34.0	+0.5
TRI				AML	AML		
	comp=E,81µm,0.1s						
TRI				AML	AML		
	comp=N,30µm,0.8s						
TRI				AML	AML		
	comp=N,26µm,0.2s						
TRI				AML	AML		
	comp=E,81µm,0.1s						
LMD	Lutirano	1.14	207	P	Pn	18 21 18.9	+0.2
LMD				AML	AML		
	comp=E,40µm,1.4s						
LMD				AML	AML		
	comp=N,36µm,1.5s						
LMD				AML	AML		
	comp=E,40µm,0.6s						
LMD				AML	AML		
	comp=E,36µm,0.2s						
LMD				AML	AML		
	comp=N,30µm,0.2s						
DOSS	Dosso del Somm	1.18	312	P	Pn	18 21 19.1	-0.3
DOSS				S	Sb	18 21 34.6	0.0
DOSS				AML	AML		
	comp=N,220µm,0.5s						
DOSS				AML	AML		
	comp=E,240µm,0.4s						
DOSS				AML	AML		
	comp=N,162µm,1.1s						
DOSS				AML	AML		
	comp=N,162µm,0.9s						
DOSS				AML	AML		
	comp=E,161µm,0.6s						
DOSS				AML	AML		
	comp=N,167µm,0.2s						
DOSS				AML	AML		
	comp=E,158µm,0.2s						
DOSS				AML	AML		
	comp=N,151µm,0.2s						
DOSS				AML	AML		
	comp=E,127µm,0.2s						
STAL	STALIGIAL	1.19	9	P	Pn	18 21 18.6	-0.8
STAL				S	Sb	18 21 34.2	-0.4
STAL				AML	AML		
	comp=E,189µm,1.3s						
STAL				AML	AML		
	comp=N,172µm,0.7s						
STAL				AML	AML		
	comp=N,172µm,1.3s						
STAL				AML	AML		
	comp=E,189µm,0.7s						
STAL				AML	AML		
	comp=N,165µm,0.2s						
STAL				AML	AML		
	comp=E,188µm,0.1s						
STAL				AML	AML		
	comp=N,176µm,0.2s						
STAL				AML	AML		
	comp=E,147µm,0.2s						
SABO	M.te Sabotino	1.21	42	P	Pn	18 21 19.3	-0.4
SABO				AML	AML		
	comp=N,280µm,0.3s						
SABO				AML	AML		
	comp=E,114µm,0.2s						
SABO				AML	AML		
	comp=E,442µm,0.2s						
SABO				AML	AML		
	comp=N,80µm,0.7s						
MPRI	Monte Prat	1.22	19	P	Pn	18 21 19.5	-0.3
CIMO	Cimolais	1.22	0	P	Pn	18 21 19.4	-0.4
CIMO				AML	AML		
	comp=E,28µm,0.3s						
CIMO				AML	AML		
	comp=N,24µm,1.5s						
CIMO				AML	AML		
	comp=N,24µm,0.5s						
CIMO				AML	AML		
	comp=E,24µm,0.1s						
CIMO				AML	AML		
	comp=N,22µm,0.1s						
CIMO				AML	AML		
	comp=N,33µm,1.5s						
CIMO				AML	AML		
	comp=E,20µm,0.1s						
AGOR	Agordo	1.22	347	P	Pn	18 21 19.8	-0.1
AGOR				AML	AML		
	comp=N,28µm,1.1s						
AGOR				AML	AML		
	comp=N,28µm,0.9s						
AGOR				AML	AML		
	comp=E,31µm,0.3s						
AGOR				AML	AML		
	comp=N,122µm,1.7s						
AGOR				AML	AML		
	comp=N,26µm,0.3s						
AGOR				AML	AML		
	comp=E,98µm,0.5s						
AGOR				AML	AML		
	comp=E,31µm,0.3s						
LUSI	Trento, Gardas	1.36	310	P	Pn	18 21 22.1	+0.3
LUSI				S	Sb	18 21 39.9	+0.2
LUSI				AML	AML		
	comp=N,201µm,1.1s						
LUSI				AML	AML		
	comp=E,90µm,1.6s						
LUSI				AML	AML		
	comp=E,90µm,0.4s						
LUSI				AML	AML		
	comp=E,88µm,0.1s						
LUSI				AML	AML		
	comp=N,189µm,0.2s						
ASQU	Asqua	1.37	200	P	Pg	18 21 24.2	+0.1
DRE	Drenchia	1.38	38	P	Pn	18 21 21.4	-0.6
GAGG	Gaggia	1.43	314	P	Pn	18 21 22.7	-0.2
GAGG				S	Sb	18 21 42.1	+0.2
GAGG				AML	AML		
	comp=E,133µm,1.3s						
GAGG				AML	AML		
	comp=N,150µm,1.4s						
GAGG				AML	AML		
	comp=E,148µm,0.9s						
GAGG				AML	AML		
	comp=N,78µm,1.1s						
GAGG				AML	AML		
	comp=N,78µm,0.9s						
GAGG				AML	AML		
	comp=E,148µm,1.1s						
GAGG				AML	AML		
	comp=E,115µm,0.9s						
GAGG				AML	AML		
	comp=N,132µm,0.3s						
GAGG				AML	AML		
	comp=N,54µm,0.2s						
MAGA	Magasa	1.44	299	P	Pn	18 21 23.3	+0.3
MAGA				AML	AML		
	comp=N,160µm,0.4s						
MAGA				AML	AML		
	comp=E,205µm,0.3s						
MAGA				AML	AML		
	comp=N,151µm,0.2s						
MAGA				AML	AML		
	comp=E,205µm,0.3s						
SALO	Salr	1.45	292	P	Pb	18 21 24.4	+0.4
SALO				AML	AML		
	comp=E,142µm,1.0s						
SALO				AML	AML		
	comp=E,140µm,0.4s						
SALO				AML	AML		
	comp=N,194µm,0.9s						
SALO				AML	AML		
	comp=N,170µm,0.4s						
SALO				AML	AML		
	comp=N,154µm,0.3s						
SALO				AML	AML		
	comp=E,140µm,0.5s						
SALO				AML	AML		
	comp=E,140µm,0.5s						
SALO				AML	AML		

	comp=N,168µm,0.5s						
PTCC	Patocco-Chiusa	1.46	26	P	Pb	18 21 25.0	+0.7
PTCC				AML	AML		
	comp=N,25µm,1.3s						
PTCC				AML	AML		
	comp=E,25µm,1.2s						
PTCC				AML	AML		
	comp=E,21µm,0.3s						
PTCC				AML	AML		
	comp=N,23µm,0.2s						
APPI	Appiano	1.62	329	AML	AML		
	comp=N,74µm,0.3s						
APPI				AML	AML		
	comp=E,61µm,0.3s						
ABTA	Abfaltersbach	1.66	2	*i* Pn	Pn	18 21 26.1	+0.2
	comp=E,1.0nm,0.2s						
ABTA				*e*Pg	Pb	18 21 28.3	+0.7
	comp=E,1.0nm,0.2s						
ABTA				*e*Sn	Sb	18 21 47.9	-0.4
	comp=E,1.8nm,0.2s						
BRES	Bressanone	1.68	343	⇑P	Pb	18 21 28.8	+0.6
BRES				AML	AML		
	comp=E,42µm,1.0s						
BRES				AML	AML		
	comp=N,39µm,1.6s						
BRES				AML	AML		
	comp=E,42µm,1.0s						
BRES				AML	AML		
	comp=E,42µm,1.0s						
BRES				AML	AML		
	comp=N,39µm,0.4s						
BRES				AML	AML		
	comp=E,35µm,0.3s						
BRES				AML	AML		
	comp=N,30µm,0.2s						
RISI	Rein	1.87	353	AML	AML		
	comp=E,46µm,1.6s						
RISI				AML	AML		
	comp=N,58µm,0.3s						
RISI				AML	AML		
	comp=E,46µm,0.4s						
ROSI	Rosskopf	1.97	339	P	Pb	18 21 32.2	-0.9
ROSI				AML	AML		
	comp=E,29µm,0.3s						
ROSI				AML	AML		
	comp=N,45µm,0.3s						
T1220	Camerino, Fraz	2.04	166	S	Sb	18 22 01.4	+2.3
OBKA	Obir	2.05	45	*e*Pn	Pn	18 21 32.4	+1.1
	comp=N,0.5nm,0.1s						
OBKA				*e*Sn	Sb	18 21 59.7	+0.1
	comp=N,3.3nm,0.2s						
T1219	Muccia, Frazio	2.08	168	S	Sb	18 22 01.5	+1.2
FDMO	Fiordimonte	2.11	167	S	Sn	18 22 00.1	+2.2
FDMO				AML	AML		
	comp=N,38µm,0.5s						
FDMO				AML	AML		
	comp=E,48µm,0.5s						
T1256	Bolognola (MC)	2.16	164	S	Sn	18 22 00.5	+1.2
WTTA	Wattenberg	2.24	346	*i* Pg	Pb	18 21 39.2	+1.5
	comp=E,2.2nm,0.2s						
WTTA				*e*Sg	Sb	18 22 06.9	+1.7
	comp=E,6.6nm,0.4s						
FETA	Feichten	2.27	329	*e*Pg	Pb	18 21 39.0	+0.9
	comp=E,0.4nm,0.1s						
FETA				*e*Sg	Sb	18 22 07.4	+1.5
	comp=E,1.9nm,0.3s						
MILN	Milano	2.29	281	P	Pg	18 21 42.7	+1.1
SQTA	Sankt Quirin	2.29	339	*e*Pg	Pb	18 21 39.6	+1.1
	comp=E,8.8nm,0.3s						
SQTA				*e*Sg	Sb	18 22 08.7	+2.1
	comp=E,2.8nm,0.2s						
WATA	Walderalm	2.32	345	*e*Pg	Pb	18 21 40.6	+1.6
	comp=E,1.7nm,0.1s						
WATA				*e*Sg	Sg	18 22 10.9	-1.3
	comp=E,1.7nm,0.2s						
MOTA	Moosalm	2.44	338	*e*Pg	Pb	18 21 42.3	+1.3
	comp=E,1.2nm,0.3s						
MOTA				*e*Sg	Sg	18 22 14.6	-1.3
	comp=E,0.6nm,0.1s						
SARZ	Sarezzano	2.51	266	S	Sg	18 22 17.2	-1.1
LPEL	Lama dei Pelig	3.30	157	P	Pn	18 21 45.3	-3.2
LPEL				AML	AML		
	comp=N,30µm,0.2s						
LPEL				AML	AML		
	comp=E,24µm,0.2s						
LRP	Arpino	3.54	166	S	Sb	18 22 42.0	-0.5
BURY	Giardini Botan	3.73	251	P	Pg	18 22 12.1	+3.1
CIGN	Sant'Elia a Pi	3.88	151	S	Sn	18 22 38.5	-3.0
GATE	Gambatesa	4.01	152	S	Sb	18 22 57.5	+1.7
MODR	Mondragone	4.08	164	S	Sn	18 22 40.2	-6.3
STON	Ston	4.40	118	⇓P	Pn	18 22 04.9	+1.4
VULT	Monte Vulture	4.75	149	P	Pn	18 22 06.8	-1.6

*JMA **25** 18:41:42.5±0.8, 47°N±6°×15°3E±1°0, h330km, MV3.2/10, KURILE ISLANDS REGION*

*IDC **25** 18:41:43.7±2.8, 48°.97N×151°.02E, h307km±33km, mb2.8/4, mbtmp3.5/6, Error ellipse: s-maj=50.3km s-min=24.1km az=147.0*

ISC 25 18:41:39.4±1.7**, 48°.0N**±0°.2×**152°.0E**±0°.2**, h350km, n14, σ3s.12**/17**, mb2.9**/4**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	6.28	33	P	Pn	18 43 11.9	-1.2
	4.1nm,0.9s,baz=221,slow=7.5,SNR=4.0						
NEM2	Nemuro 2	6.38	226	*e*P	Pn	18 43 16.1	+1.5
NEM2				*e*S	S	18 44 29.7	-2.1
JTKR	Abashiri--Toko	6.94	238	*e*P	Pn	18 43 24.7	+3.7
JAK	Akkeshi	7.17	229	*e*P	Pn	18 43 25.5	+1.8
JAK				*e*S	S	18 44 45.5	-3.0
JAR	Ashorobuto	7.45	234	*e*P	Pn	18 43 30.1	+3.1
JKK2	Kamakawa 2	7.67	241	*e*P	Pn	18 43 33.5	+3.9
JOB	Onbets	7.68	232	*e*P	Pn	18 43 32.2	+2.5
JOB				*e*S	S	18 44 57.2	-2.4
JCH	Churui	8.13	232	*e*P	Pn	18 43 37.3	+2.2
JCH				*e*S	S	18 45 05.2	-4.2
JNBK	Urakawa-nobuka	8.69	232	*e*P	Pn	18 43 43.1	+1.4
MJAR	Matsushiro Arr	15.31	227	P	Pn	18 45 06.1	+6.2
	0.7nm,0.6s,baz=22,slow=11,SNR=6.6						
ZALV	Zalesovo Beam	41.30	304	P	P	18 48 50.3	-1.3
	0.4nm,0.4s,baz=79,slow=7.5,SNR=2.2						
	0.4nm,0.4s						
MKAR	Makanchi Array	45.73	296	P	P	18 49 27.2	+0.6
	0.3nm,0.6s,baz=65,slow=9.2,SNR=4.1						
	0.3nm,0.6s						
YKA	Yellowknife Ar	50.38	37	P	P	18 50 07.1	+5.5
	0.2nm,0.4s,baz=297,slow=6.6,SNR=3.7						
	0.2nm,0.4s						
FINES	FINESS Array B	62.61	334	P	P	18 51 26.8	-0.1
	0.9nm,0.7s,baz=35,slow=7.6,SNR=4.6						
	0.9nm,0.7s						

*NEIC **25** 18:50:05.5±1.8, 43°.60N±0°.04×105°.17W±0°.06, h0km±2km, ML3.2/89, Error ellipse: s-maj=9.3km s-min=4.2km az=312.0*

*IDC **25** 18:50:06.5±1.2, 43°.77N×105°.58W, h0km, mbtmp3.0/4, ML3.2/4, Error ellipse: s-maj=20.0km s-min=9.4km az=151.0*

ISC 25 18:50:05.0±0.8**, 43°.55N**±0°.05×**105°.22W**±0°.05**, h0km, n70, σ1s.13**/69**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.03	56		Pg	18 50 23.8	-0.9
RSSD				IAML		18 50 42.2	
	641nm,0.5s						
K22A	Casper	1.31	227		Pg	18 50 30.0	-0.2
PHWY	Pilot Hill	2.26	185		Pn	18 50 45.2	+1.4
PHWY				IAML		18 51 18.2	
	129nm,0.6s						
PHWY				IAML		18 51 19.0	
	105nm,0.4s						
RWWY	Rawlins	2.37	219		Pn	18 50 46.3	+0.9
RWWY				IAML		18 51 24.7	
	128nm,1.1s						
N23A	Red Feather La	2.71	192		Pn	18 50 51.2	+1.1
N23A				IAML		18 51 46.4	
	comp=N,117nm,0.8s						
BRIGG	Briggsdale	3.04	167		Pn	18 50 57.3	+2.7
LAO	LASA Array	3.21	348		Pn	18 50 57.7	+0.9
BW06	Boulder Array	3.27	258		Pn	18 50 58.4	+0.6
BW06				IAML		18 51 54.1	
	comp=N,46nm,0.7s						
PD31	Pinedale Array	3.27	258		Pn	18 50 57.6	-0.1
PDAR	Pinedale Array	3.27	258	Pn	Pn	18 50 58.7	+0.9
	comp=N,3.0nm,0.3s,baz=71,slow=15,SNR=56						
PDAR				Pg	Pb	18 51 04.8	+0.7
	comp=N,9.6nm,0.3s,baz=63,slow=18,SNR=32						
PDAR				Lg	Lg	18 51 44.2	
	comp=N,15nm,0.3s,baz=75,slow=35,SNR=8.6						
	comp=N,3.2nm,0.4s						
PDAR	Pinedale Array	3.27	258		Pn	18 50 58.5	+0.7
RLMT	Red Lodge	3.30	300		Pn	18 50 58.5	+0.4
RLMT				IAML		18 51 58.9	
	comp=N,75nm,0.4s						
RLMT				IAML		18 51 59.8	
	comp=N,44nm,0.7s						
OGNE	Ogallala	3.52	137	Pn	Pn	18 51 03.5	+2.4
YMP	Mirror Lake Pl	3.75	290	Pn	Pn	18 51 06.5	+2.1
ISCO	Idaho Springs	3.76	185		Pn	18 51 06.9	+2.3
LKWY	Lake	3.87	287	Pn	Pn	18 51 08.2	+2.1
LKWY				IAML		18 52 12.9	
	comp=N,52nm,0.9s						
LKWY				IAML		18 52 18.3	
	comp=N,38nm,1.4s						
GCMT	Greycliff	3.88	307		Pn	18 51 06.8	+0.8
H17A	Grant Village	3.96	284	Pn	Pn	18 51 08.8	+1.6
H17A				IAML		18 52 12.7	
	comp=N,36nm,1.2s						
H17A				IAML		18 52 13.0	
	comp=E,27nm,1.0s						
FLWY	Flagg Ranch	4.00	279		Pn	18 51 09.9	+2.1
FLWY				IAML		18 52 38.8	
	comp=E,33nm,1.6s						
MOOW	Moose Ponds	4.01	275		Pn	18 51 09.4	+1.4
SNOW	Snow King Moun	4.03	271	Pn	Pn	18 51 09.6	+1.4
SNOW				IAML		18 52 21.6	
	comp=E,43nm,1.1s						
SNOW				IAML		18 52 25.9	
	comp=E,46nm,1.1s						
O20A	White River Ci	4.09	214		Pn	18 51 09.6	+0.6
O20A				IAML		18 53 09.1	
	comp=E,40nm,2.4s						
YNR	Norris Junctio	4.10	288	Pn	Pn	18 51 09.8	+0.7
IMW	Indian Meadow	4.16	277		Pn	18 51 10.9	+0.9
IMW				IAML		18 52 26.5	
	comp=E,34nm,0.5s						
IMW				IAML		18 52 31.3	
	comp=E,23nm,0.7s						
TPAW	Teton Pass	4.17	271	Pn	Pn	18 51 11.1	+0.9
TPAW				IAML		18 52 40.2	
	comp=E,30nm,1.1s						
TPAW				IAML		18 52 48.7	
	comp=E,24nm,1.1s						
FXWY	Fox Creek	4.22	273		Pn	18 51 11.4	+0.6
YMR	Madison River	4.29	287	Pn	Pn	18 51 13.0	+1.3
YMR				IAML		18 52 30.8	
	comp=E,36nm,1.1s						
AHID	Auburn Hatcher	4.37	262	Pn	Pn	18 51 13.1	+0.2
AHID				IAML		18 52 28.2	
	comp=E,34nm,0.9s						
AHID				IAML		18 52 32.9	
	comp=E,23nm,0.9s						
RDMU	Red Mountain	4.40	229	Pn	Pn	18 51 14.2	+1.0
RDMU				IAML		18 52 46.1	
	comp=N,27nm,1.1s						
E28A	Huff	4.41	45	Pn	Pn	18 51 15.1	+1.9
SMCO	Snowmass	4.57	197	Pn	Pn	18 51 16.5	+0.8
SMCO				IAML		18 52 45.7	
	comp=N,28nm,0.9s						
SMCO				IAML		18 52 55.3	
	comp=N,30nm,1.1s						
Q24A	Divide	4.58	179	Pn	Pn	18 51 16.9	+1.0
Q24A				IAML		18 52 36.3	
	comp=E,24nm,0.4s						
SUSD	Miller	4.61	77	Pn	Pn	18 51 16.6	+0.7
QLMT	Earthquake Lak	4.64	288	Pn	Pn	18 51 17.5	+0.9
K31A	O'Neill	4.83	99	Pn	Pn	18 51 19.4	+0.5
KSCO	Kaye Shedlock'	4.94	156	Pn	Pn	18 51 21.2	+0.6
DGMT	Dagmar	4.97	8	Pn	Pn	18 51 21.8	+0.8
BOZ	Bozeman (W)	5.01	296		Pn	18 51 22.1	+0.5
BOZ				IAML		18 52 56.4	
	comp=E,13nm,0.7s						
HWUT	Hardware Ranch	5.07	250		Pn	18 51 22.0	-0.5
BSUT	Blindstream Ca	5.11	236		Pn	18 51 22.9	-0.2
BSUT				IAML		18 53 04.7	
	comp=N,14nm,1.4s						
BSUT				IAML		18 53 07.0	
	comp=E,11nm,2.2s						
TCUT	Toone Canyon	5.19	244		Pn	18 51 25.3	+1.1
EGMT	Eagleton	5.48	326	Pn	Pn	18 51 28.2	+0.2
JLU	Jordanelle	5.49	240	Pn	Pn	18 51 29.3	+1.0
DLMT	Dillon	5.58	291	Pn	Pn	18 51 29.3	-0.1
MCMT	McKenzie Canyo	5.63	286	Pn	Pn	18 51 30.9	+0.7
LRM	Limekiln Ridge	5.63	296	Pn	Pn	18 51 30.7	+0.5
CTU	Camp Tracy	5.63	242	Pn	Pn	18 51 30.0	-0.2
HRY	Holter Researc	5.64	306	Pn	Pn	18 51 30.9	+0.7
BGNE	Belgrade	5.65	110	Pn	Pn	18 51 30.3	+0.1
PV07	Paradox Valley	5.73	208	Pn	Pn	18 51 31.8	+0.3
PV15	Paradox Valley	5.76	206	Pn	Pn	18 51 32.7	+0.7
SPUT	South Promonto	5.80	250	Pn	Pn	18 51 31.8	-0.7
SDCO	Great Sand Dun	5.80	182	Pn	Pn	18 51 33.8	+1.1
P17A	Butcher Ranch,	5.81	227		Pn	18 51 33.3	+0.6
MDND	Maddock	5.82	41	Pn	Pn	18 51 26.1	-6.5
HVU	Hansel Valley	5.84	255	Pn	Pn	18 51 32.3	-0.8
PV23	Carpenter Ridg	5.85	211	Pn	Pn	18 51 33.4	+0.1
S22A	4UR Ranch, Cre	5.93	192		Pn	18 51 33.4	-0.9
MPU	Maple Canyon	5.96	236	Pn	Pn	18 51 33.5	-1.1
SRU	San Rafael Swe	5.97	224		Pn	18 51 34.2	-0.5
PV17	East Wray Mesa	5.98	210	Pn	Pn	18 51 35.3	+0.3
TMUT	Trail Mountain	6.19	229		Pn	18 51 37.5	-0.5
ECSD	EROS Data Cent	6.25	85	Pn	Pn	18 51 37.8	-0.7
NLU	North Lily Min	6.26	237	Pn	Pn	18 51 36.7	-2.1
CBKS	Cedar Bluff	6.29	137	Pn	Pn	18 51 36.8	-2.2
L34A	Svendsen Farm,	6.70	101	Pn	Pn	18 51 46.4	+1.8
I10CA	LAC DU BONNET	9.15	40	I	I	19 42 50.0	
	baz=224,slow=326,SNR=8.8						
ULM	Lac du Bonnet	9.26	40	Pn	Pn	18 52 19.6	-0.1
	comp=E,0.8nm,0.3s,baz=229,slow=9.3,SNR=2.7						
ULM				Lg	Lg	18 54 51.3	
	comp=E,0.5nm,0.3s,baz=131,slow=20,SNR=1.8						
	comp=E,1.5nm,0.3s						
TXAR	Lajitas Array	14.24	174	Pn	P	18 53 35.0	-0.7
	baz=11,slow=11,SNR=3.2						
TXAR				Pg		18 54 31.0	
	baz=360,slow=16,SNR=2.2						
TXAR				Lg	Lg	18 57 37.2	
	baz=9.6,slow=22,SNR=2.7						
	comp=E,0.1nm,0.3s						
YKA	Yellowknife Ar	19.76	347	P	P	18 54 36.2	0.0
	comp=E,0.1nm,0.3s,baz=167,slow=11,SNR=4.5						
	comp=E,0.1nm,0.3s						

*IDC **25** 19:05:00.9±3.7, 17°.35S×178°.97W, h600km±19km, mb2.7/4, mbtmp3.7/6, Error ellipse: s-maj=143.1km s-min=29.7km az=140.0*

ISC 25 19:05:00.9±4.1**, 17°.3S**±0°.9×**179°.0W**±0°.8**, h600km, n6, σ0s.55**/6**, mb3.3**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.81	262	P	P	19 06 19.6	+0.4
	29nm,0.6s,baz=90,slow=4.0,SNR=42						
DZM	Mont Dzumac	14.46	249	P	P	19 08 03.7	-0.6
	1.4nm,0.6s,baz=53,slow=20,SNR=5.6						
STKA	Stephens Creek	38.39	240	P	P	19 11 32.5	0.0
	1.4nm,0.8s,baz=77,slow=14,SNR=3.0						
	1.4nm,0.8s						
WRA	Warramunga Arr	44.15	259	P	P	19 12 18.4	+0.2
	0.2nm,0.4s,baz=92,slow=7.1,SNR=12						
	0.2nm,0.4s						
ASAR	Alice Springs	44.38	254	P	P	19 12 20.3	+0.5
	1.7nm,0.5s,baz=88,slow=8.5,SNR=34						
	1.7nm,0.5s						
ILAR	Eielson Array	85.47	13	P	P	19 16 35.7	-0.2
	0.1nm,0.4s,baz=214,slow=5.4,SNR=4.5						
	0.1nm,0.4s						

*IDC **25** 19:34:36.1±12.0, 52°.28N×175°.83W, h0km, mb3.5/3, mbtmp3.5/4, ML4.4/1, Error ellipse: s-maj=244.4km s-min=59.9km az=78.0*

*AEIC **25** 19:35:10.9±2.0, 52°.6N±0°.3×173°.0W±0°.2, h219km±9km, Error ellipse: s-maj=38.2km s-min=11.2km az=161.0*

*NEIC **25** 19:35:11.3±2.7, 52°.8N±0°.4×173°.1W±0°.2, h184km±23km, mb3.9/12, ML3.5(AEIC), Error ellipse: s-maj=53.2km s-min=7.9km az=164.0*

ISC 25 19:35:10.7±0.9**, 52°.7N**±0°.2×**173°.05W**±0°.08**, h200km, n33, σ1s.01**/35**, mb3.1**/3**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSTR	Great Sitkin T	1.95	252	Pn	Pn	19 35 47.1	-1.6
ADK	Adak	2.39	251	Pn	Pn	19 35 53.1	-0.1
ADK				Sn	Sn	19 36 25.8	-0.6
NIKH	Nikolski High	2.55	83		Pn	19 35 55.3	+0.2
NIKH	Nikolski High	2.55	83		Sn	19 36 30.3	+0.6
KIWB	Kanaga Island	2.67	252	Pn	Pn	19 35 56.3	-0.1
KIWB				Sn	Sn	19 36 32.4	+0.3
UNV	Unalaska Valle	4.08	72		Pn	19 36 14.2	+0.9
UNV	Unalaska Valle	4.08	72		Sn	19 37 02.6	0.0
FALS	False Pass	6.09	66		Pn	19 36 39.5	+0.6
SDPT	Sand Point	7.85	65	Pn	Pn	19 37 00.4	-1.4
CHGN	Chignik	9.23	61	Pn	Pn	19 37 17.9	-1.8
P18K	Big Mountain,	11.96	49	Pn	Pn	19 37 55.9	+1.1
O18K	Koktuh Hills	12.18	47	Pn	Pn	19 37 58.1	+0.5
OHAK	Old Harbor	12.20	61	Pn	P	19 38 00.5	-1.7
N19K	Bonanza Creek	12.97	44	Pn	Pn	19 38 08.5	+0.9
CNPM	China Poot	13.89	52	Pn	Pn	19 38 18.9	-0.1
PPLA	Purkeypile	14.99	39		P	19 38 33.2	-0.1
KTH	Kantishna Hill	15.83	38		P	19 38 42.8	+0.3
KTH				IAmb	IAmb	19 38 46.7	
	comp=Z,5.9nm,0.9s						
BPAW	Bear Paw Mtn.	16.11	36		Pn	19 38 47.1	+1.1
BPAW				IAmb	IAmb	19 38 48.5	
	comp=Z,7.5nm,1.1s						
IMAR	Indian Mountai	16.42	29	P	Pn	19 38 49.8	+0.2
NEA2	Nenana	17.08	37	P	P	19 38 55.2	-0.9
CCB	Clear Creek Bu	17.58	37	P	P	19 39 00.1	-1.4
CCB				IAmb	IAmb	19 39 04.7	
	comp=Z,5.3nm,1.2s						
ILAR	Eielson Array	17.98	38	P	P	19 39 03.6	-2.3
	comp=Z,1.1nm,0.3s,baz=239,slow=9.4,SNR=86						
	comp=Z,1.0nm,0.4s						
H24K	Noodor Dome	18.19	34	P	P	19 39 08.7	+0.5
H24K				IAmb	IAmb	19 39 12.5	
	comp=Z,7.7nm,1.4s						
RIDG	Independent Ri	18.31	42	P	P	19 39 08.9	-0.6
DOT	Dot Lake	18.59	43	P	P	19 39 12.5	-0.1
M26K	Nabesna, AK	18.62	47		Pn	19 39 16.1	+0.4
SCRK	Sand Creek	18.75	42	P	P	19 39 13.7	-0.8
K27K	Chicken	19.55	43	P	P	19 39 22.9	0.0
K27K				IAmb	IAmb	19 39 27.8	
	comp=Z,3.1nm,0.8s						
EGAK	Eagle	20.20	41	P	P	19 39 29.4	-0.3
DAWY	Dawson	20.68	44	P	P	19 39 36.0	+1.0
DAWY				IAmb	IAmb	19 39 38.0	
	comp=Z,5.2nm,1.4s						
INK	Inuvik	24.31	35	P	P	19 40 07.0	-2.4
	comp=Z,0.9nm,0.6s,baz=254,slow=9.9,SNR=4.7						
	comp=Z,0.9nm,0.6s						
PDAR	Pinedale Array	42.53	77	P	P	19 42 47.2	+0.7
	comp=Z,0.4nm,0.6s,baz=327,slow=6.5,SNR=5.2						
	comp=Z,0.4nm,0.6s						
TXAR	Lajitas Array	54.98	86	P	P	19 44 21.6	+0.4
	comp=Z,0.2nm,0.6s,baz=310,slow=7.0,SNR=2.1						
	comp=Z,0.2nm,0.6s						

ROM 25 19:52:46.2±0.1**, 42°.799N**±0°.004×**13°.156E**±0°.007**, h10km, ML0.8**/1**, 5C-1D, Error ellipse: s-maj=0.4km s-min=0.4km az=111.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T1214	Arquata del Tr	0.06	135	⇑P	Pg	19 52 48.6	+0.3
T1214				S	Sg	19 52 50.0	+0.1
T1245	Castelsantange	0.06	22	P	Pg	19 52 48.7	+0.2
T1245				S	Sg	19 52 50.2	0.0
T1245				AML	AML		
	comp=E,83µm,0.3s						
T1245				AML	AML		
	comp=N,90µm,0.3s						
T1212	Cascia, Frazio	0.10	240	⇑P	Pg	19 52 49.2	+0.5
T1212				S	Sg	19 52 51.0	+0.5
MC2	Monte Cornacci	0.12	12	P	Pg	19 52 49.9	+0.7
T1218	Civita (PG)	0.13	193	⇑P	Pg	19 52 49.8	+0.5
T1216	Preci, Frazion	0.14	312	⇑P	Pg	19 52 49.5	+0.2
MMO1	Montemonaco	0.16	51	⇑P	Pg	19 52 50.2	+0.4
FDMO	Fiordimonte	0.24	348	P	Pg	19 52 52.0	+0.9
TERO	Teramo	0.37	118	⇓P	Pg	19 52 53.9	+0.4

*IDC **25** 19:52:57.6±0.9, 39°.38N×20°.48E, h0km, mb3.7/13, mbtmp3.6/22, ML3.6/8, MS3.4/2, Error ellipse: s-maj=15.8km s-min=13.4km az=15.0*

*TIR **25** 19:52:60.0, 39°.38N×20°.53E, h17km±2km, Md4.0, Ml3.7*

*THE **25** 19:53:00.8, 39°.37N×20°.55E, h12km±1km, ML3.5/8, Error ellipse: s-maj=1.3km s-min=0.3km az=289.0*

*NEIC **25** 19:53:00.6±2.4, 39°.38N±0°.05×20°.48E±0°.05, h10km±1km, mb4.0/10, Error ellipse: s-maj=9.5km s-min=4.6km az=210.0*

*ATH **25** 19:53:01.6, 39°.36N×20°.51E, h7km±1km, ML3.5/8, Error ellipse: s-maj=2.0km s-min=0.8km az=283.0*

*PDG **25** 19:53:01.3±0.6, 39°.42N×20°.45E, h17km±1km, ML3.6/13, Error ellipse: s-maj=0.6km s-min=1.4km az=0.0*

*BEO **25** 19:53:05.0±0.8, 39°.72N×20°.44E, h0km, ML3.3/10*

ISC 25 19:53:00.5±0.8**, 39°.38N**±0°.01×**20°.52E**±0°.02**, h18km**±3km**, n299, σ1s.48**/374**, mb3.8**/18**, 21C-11D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGT	Igoumenitsa	0.21	316	P	Pg	19 53 05.6	0.0
IGT				S	Sg	19 53 09.6	+0.5
	11µm,0.2s						
IGT	Igoumenitsa	0.21	316	P	Pb	19 53 05.7	+0.1
	baz=315						
IGT				S	Sg	19 53 09.3	+0.2
	baz=315						
IGT	Igoumenitsa	0.21	316	P	Pb	19 53 05.6	+0.1
IGT				S	Sg	19 53 09.6	+0.5
IGT				AML	AML	19 53 11.3	
	comp=N,23558µm,0.2s						
IGT				AML	AML	19 53 11.9	
	comp=E,22165µm,0.2s						
IGT	Igoumenitsa	0.21	316	P	Pb	19 53 05.7	+0.1
IGT				S	Sg	19 53 09.4	+0.3
IGT				AML	AML	19 53 11.3	
	comp=N,23558µm,0.2s						
IGT				AML	AML	19 53 11.9	
	comp=E,22165µm,0.2s						
JAN	Janina	0.37	42	P	Pg	19 53 08.0	-0.3
JAN				S	Sg	19 53 13.8	+0.2
	comp=E,15µm,0.2s						
JAN	Janina	0.37	42	P	Pg	19 53 08.0	-0.3
JAN				S	Sg	19 53 13.8	+0.2
JAN				AML	AML	19 53 15.0	
	comp=E,29431µm,0.2s						
JAN				AML	AML	19 53 16.4	
	comp=N,31217µm,0.3s						
JAN	Janina	0.37	42	P	Pg	19 53 08.2	-0.2
JAN				S	Sg	19 53 13.9	+0.3
TSLK	Tsoukalades, L	0.56	170	P	Pg	19 53 11.6	-0.1
TSLK				S	Sg	19 53 19.1	-0.2
	comp=N,6µm,0.4s						
TSLK	Tsoukalades, L	0.56	170	P	Pg	19 53 11.6	-0.1
TSLK				S	Sg	19 53 19.1	-0.2
TSLK				AML	AML	19 53 21.8	
	comp=N,16879µm,0.4s						
TSLK				AML	AML	19 53 22.4	
	comp=E,9637µm,0.4s						
TSLK	Tsoukalades, L	0.56	170	P	Pg	19 53 11.7	-0.1
TSLK				S	Sb	19 53 19.8	+0.4
TSLK				AML	AML	19 53 21.8	
	comp=N,16879µm,0.4s						
TSLK				AML	AML	19 53 22.4	
	comp=E,9637µm,0.4s						
KASA	Kassiopi	0.58	309	P	Pb	19 53 12.2	+0.1
KASA				S	Sn	19 53 21.6	-1.4
KASA				AML	AML	19 53 23.5	
	comp=E,13779µm,0.5s						
KASA				AML	AML	19 53 23.7	
	comp=N,9114µm,0.4s						
KASA	Kassiopi	0.58	309	P	Pb	19 53 12.4	+0.3
KASA				S	Sb	19 53 20.7	+0.7
KASA				AML	AML	19 53 23.5	
	comp=E,13779µm,0.5s						
KASA				AML	AML	19 53 23.7	

	comp=N,9115µm,0.4s						
LKD2	Lefkada island	0.60	170	P	Pg	19 53 12.2	-0.2
LKD2				S	Sb	19 53 20.7	+0.2
	comp=N,4µm,0.7s						
LKD2	Lefkada island	0.60	170	P	Pg	19 53 12.1	-0.3
	baz=170						
LKD2				S	Sb	19 53 21.4	+0.9
	baz=170						
LKD2	Lefkada island	0.60	170	P	Pg	19 53 12.2	-0.2
LKD2				S	Sb	19 53 20.7	+0.2
LKD2				AML	AML	19 53 23.7	
	comp=N,8341µm,0.6s						
LKD2				AML	AML	19 53 27.2	
	comp=E,10263µm,0.3s						
LKD2	Lefkada island	0.60	170	P	Pg	19 53 12.2	-0.2
LKD2				S	Sb	19 53 21.6	+1.1
LKD2				AML	AML	19 53 27.2	
	comp=E,10263µm,0.3s						
LKD2				AML	AML	19 53 30.7	
	comp=N,11919µm,0.7s						
SRN	Sarande	0.64	321	P	Pb	19 53 12.0	-1.1
	baz=321						
SRN				S	Sg	19 53 22.3	+0.6
	baz=321						
SRN				AMP			
	comp=N,6.9nm,0.4s,baz=321						
KEK	Kerkira	0.65	301	P	Pn	19 53 14.3	-0.5
KEK				S	Sg	19 53 23.3	+1.3
	comp=N,4µm,0.5s						
KEK	Kerkira	0.65	301	Pg	Pg	19 53 14.0	+0.7
KEK				Sg	Sn	19 53 23.7	-1.0
KEK	Kerkira	0.65	301	P	Pn	19 53 14.3	-0.5
KEK				S	Sg	19 53 23.3	+1.3
KEK				AML	AML	19 53 32.8	
	comp=N,7621µm,0.4s						
KEK				AML	AML	19 53 33.6	
	comp=E,8147µm,0.6s						
KEK	Kerkira	0.65	301	P	Pn	19 53 14.3	-0.5
KEK				S	Sn	19 53 23.4	-1.3
KEK				AML	AML	19 53 32.8	
	comp=N,7621µm,0.4s						
KEK				AML	AML	19 53 33.6	
	comp=E,8147µm,0.6s						
EVGI	Lefkada island	0.77	172	P	Pb	19 53 14.6	-0.6
EVGI				S	Sg	19 53 26.1	+0.5
	comp=E,4µm,0.4s						
EVGI	Lefkada island	0.77	172	P	Pb	19 53 14.6	-0.6
EVGI				S	Sg	19 53 26.1	+0.5
EVGI	Lefkada island	0.77	172	P	Pb	19 53 14.7	-0.6
LSK	Leskovik	0.77	4	P	Pb	19 53 15.1	-0.4
	baz=3.0						
LSK				S	Sn	19 53 27.9	+0.1
	baz=3.0						
LSK				AMP			
	comp=N,20nm,0.6s,baz=3.0						
KPRO	Kipourio	0.86	48	P	Pb	19 53 16.9	-0.1
KPRO				S	Sg	19 53 29.3	+0.5
	comp=N,3µm,0.3s						
KPRO	Kipourio	0.86	48	P	Pb	19 53 16.8	-0.1
KPRO				S	Sg	19 53 29.3	+0.5
KPRO				AML	AML	19 53 33.1	
	comp=E,3507µm,0.4s						
KPRO				AML	AML	19 53 33.2	
	comp=N,4831µm,0.3s						
KPRO	Kipourio	0.86	48	P	Pb	19 53 16.9	-0.1
KPRO				AML	AML	19 53 33.1	
	comp=E,3507µm,0.4s						
KPRO				AML	AML	19 53 33.2	
	comp=N,4831µm,0.3s						
FSK	Fiskardo	0.92	178	P	Pb	19 53 17.4	-0.5
FSK				S	Sg	19 53 30.4	-0.1
	comp=N,8µm,0.3s						
FSK	Fiskardo	0.92	178	P	Pb	19 53 17.4	-0.5
FSK				S	Sg	19 53 30.4	-0.1
FSK				AML	AML	19 53 36.0	
	comp=N,12631µm,0.4s						
FSK				AML	AML	19 53 36.5	
	comp=E,16670µm,0.3s						
FSK	Fiskardo	0.92	178	P	Pb	19 53 16.8	-1.1
FSK				AML	AML	19 53 36.0	
	comp=N,12631µm,0.4s						
FSK				AML	AML	19 53 36.5	
	comp=E,16670µm,0.3s						
PVO	Paravola	1.09	134	P	Pb	19 53 20.3	-0.5
PVO	Paravola	1.09	134	P	Pb	19 53 20.3	-0.5
PVO				S	Sg	19 53 36.2	+0.3
EVR	Evrytania	1.10	114	P	Pg	19 53 21.7	-0.1
EVR				S	Sn	19 53 36.0	+0.1
EVR	Evrytania	1.10	114	P	Pg	19 53 21.7	-0.1
EVR				S	Sn	19 53 36.0	+0.1
EVR				AML	AML	19 53 42.8	
	comp=N,5210µm,0.6s						
EVR				AML	AML	19 53 43.7	
	comp=E,3796µm,0.5s						
EVR	Evrytania	1.10	114	P	Pg	19 53 22.1	+0.3
KEF4	Livadi, Kephal	1.12	184	P	Pb	19 53 21.7	+0.4
KEF4	Livadi, Kephal	1.12	184	P	Pb	19 53 21.7	+0.4
KEF4				S	Sg	19 53 38.0	+1.1
KEF4	Livadi, Kephal	1.12	184	P	Pb	19 53 21.5	+0.2
THL	Klokotos Trika	1.17	80	P	Pn	19 53 21.7	-0.2
THL				S	Sg	19 53 38.3	-0.1
THL	Klokotos Trika	1.17	80	P	Pn	19 53 21.7	-0.2
THL				S	Sg	19 53 38.3	-0.1
THL				AML	AML	19 53 43.2	
	comp=N,2119µm,0.7s						
THL				AML	AML	19 53 44.3	
	comp=E,1716µm,0.5s						
THL	Klokotos Trika	1.17	80	P	Pn	19 53 22.1	+0.2
VLS	Valsamata	1.20	178	P	Pn	19 53 22.5	+0.1
VLS				S	Sn	19 53 38.6	+0.4
VLS	Valsamata	1.20	178	P	Pn	19 53 22.5	+0.1
VLS				S	Sn	19 53 38.6	+0.4
VLS				AML	AML	19 53 42.4	
	comp=E,10364µm,0.4s						
VLS				AML	AML	19 53 43.4	
	comp=N,10802µm,0.4s						
VLS	Valsamata	1.20	178	P	Pb	19 53 23.1	+0.4
VLS				S	Sg	19 53 40.6	+1.2
VLS				AML	AML	19 53 42.4	
	comp=E,10364µm,0.4s						
VLS				AML	AML	19 53 43.4	
	comp=N,10802µm,0.4s						
KBN	Korca	1.26	9	P	Pb	19 53 24.4	+0.7
	baz=8.0						
KBN				S	Sg	19 53 41.1	-0.2
	baz=8.0						
KBN				AMP			
	comp=N,5.0nm,0.5s,baz=8.0						
PSDA	Pessada-Kefalo	1.27	178	P	Pb	19 53 23.7	0.0
PSDA	Pessada-Kefalo	1.27	178	P	Pb	19 53 23.7	0.0
PSDA	Pessada-Kefalo	1.27	178	P	Pb	19 53 23.7	0.0
MAKR	Makrakomi, Fth	1.30	106	P	Pb	19 53 24.5	+0.1
MAKR				S	Sb	19 53 41.2	+0.4
MAKR	Makrakomi, Fth	1.30	106	P	Pb	19 53 24.9	+0.5
MAKR				S	Sg	19 53 43.0	+0.3
MAKR				AML	AML	19 53 47.7	
	comp=N,10302µm,0.9s						
MAKR				AML	AML	19 53 48.1	
	comp=E,13010µm,0.5s						
MAKR	Makrakomi, Fth	1.30	106	P	Pb	19 53 24.8	+0.5
KZN	Kozani	1.33	46	P	Pb	19 53 25.0	0.0
KZN	Kozani	1.33	46	P	Pg	19 53 26.1	-0.1
KZN				S	Sg	19 53 44.8	+1.2
KZN				AML	AML	19 53 49.8	
	comp=E,3515µm,0.4s						
KZN				AML	AML	19 53 51.0	
	comp=N,2156µm,0.8s						
KZN	Kozani	1.33	46	P	Pg	19 53 26.2	0.0
ANX	Ano Chora	1.34	125	P	Pb	19 53 25.0	-0.1
ANX				S	Sg	19 53 43.5	-0.4
ANX	Ano Chora	1.34	125	P	Pb	19 53 25.0	-0.1
ANX				S	Sg	19 53 43.5	-0.4
ANX				AML	AML	19 53 50.8	
	comp=E,4309µm,1.1s						
ANX				AML	AML	19 53 50.9	
	comp=N,3183µm,0.7s						
ANX	Ano Chora	1.34	125	P	Pg	19 53 26.1	-0.3
EFP	Efpalio	1.44	131	P	Pg	19 53 27.6	-0.6
EFP				AML	AML	19 53 56.5	
	comp=E,2576µm,0.7s						
EFP				AML	AML	19 53 57.9	
	comp=N,2900µm,0.8s						
EFP	Efpalio	1.44	131	P	Pg	19 53 28.3	+0.1
AGG	Agios Georgios	1.45	104	Pn	Pb	19 53 27.1	+0.2
AGG				Sn	Sg	19 53 46.8	-0.5
AGG	Agios Georgios	1.45	104	P	Pb	19 53 27.0	+0.1
AGG	Agios Georgios	1.45	104	P	Pb	19 53 27.0	+0.1
LRSO	Larissa Observ	1.47	78	P	Pb	19 53 26.9	-0.4
LRSO	Larissa Observ	1.47	78	P	Pb	19 53 27.5	+0.2
LRSO	Larissa Observ	1.47	78	P	Pb	19 53 27.9	+0.6
RLS	Riolos of Patr	1.51	151	P	Pb	19 53 28.1	+0.1
RLS				AML	AML	19 53 56.6	
	comp=N,1197µm,0.5s						
RLS				AML	AML	19 53 58.9	
	comp=E,1379µm,0.5s						
RLS	Riolos of Patr	1.51	151	P	Pb	19 53 28.3	+0.4
SERG	Sergoula	1.54	128	P	Pg	19 53 29.5	-0.5
SERG				AML	AML	19 53 55.5	
	comp=E,1737µm,0.5s						
SERG				AML	AML	19 53 57.5	
	comp=N,2506µm,0.8s						
SERG	Sergoula	1.54	128	P	Pg	19 53 29.9	-0.2
FNA	Florina	1.55	25	P	Pb	19 53 28.4	-0.2
FNA	Florina	1.55	25	Pn	Pb	19 53 28.8	+0.2
FNA	Florina	1.55	25	P	Pb	19 53 29.5	+0.8
	baz=24						
FNA				S	Sn	19 53 47.2	+0.3
	baz=24						
FNA	Florina	1.55	25	P	Pb	19 53 28.7	+0.1
FNA	Florina	1.55	25	P	Pb	19 53 28.9	+0.2
LAKA	Lakka	1.61	135	P	Pb	19 53 29.7	0.0
LAKA				AML	AML	19 54 01.8	
	comp=E,882µm,0.6s						
LAKA				AML	AML	19 54 01.9	
	comp=N,716µm,0.7s						
LAKA	Lakka	1.61	135	P	Pb	19 53 30.4	+0.7
LIT	Litokhoron	1.68	64	P	Pn	19 53 29.9	+1.0
LIT	Litokhoron	1.68	64		Pb	19 53 31.1	+0.2
LIT	Litokhoron	1.68	64	P	Pb	19 53 30.9	+0.1
LIT	Litokhoron	1.68	64	P	Pb	19 53 31.5	+0.6
LTHK	Lithakia	1.69	172	P	Pn	19 53 28.5	-0.5
LTHK	Lithakia	1.69	172	P	Pb	19 53 30.2	-0.8
LTHK	Lithakia	1.69	172	P	Pb	19 53 30.0	-0.9
DRO	Drossia	1.70	147	P	Pb	19 53 31.5	+0.2
DRO				AML	AML	19 54 04.6	
	comp=N,2294µm,0.7s						
DRO				AML	AML	19 54 04.7	
	comp=E,2852µm,0.9s						
DRO	Drossia	1.70	147	P	Pb	19 53 31.4	+0.2
SCTE	Santa Cesarea	1.73	294	Pn	Pb	19 53 30.9	-0.7
SCTE	Santa Cesarea	1.73	294	P	Pb	19 53 31.1	-0.6
SCTE	Santa Cesarea	1.73	294	P	Pb	19 53 31.1	-0.6
OHR	Ohrid	1.74	7	i Pn	Pg	19 53 34.3	+0.3
AXAR	Agios Charalam	1.77	110	P	Pb	19 53 33.0	+0.6
AXAR				S	Sb	19 53 55.0	+0.7
AXAR				AML	AML	19 54 04.2	
	comp=N,4022µm,0.7s						
AXAR				AML	AML	19 54 05.2	
	comp=E,3014µm,0.6s						
AXAR	Agios Charalam	1.77	110	P	Pb	19 53 32.7	+0.3
KLV	Kalavryta, Ach	1.84	136	P	Pb	19 53 34.1	+0.4
KLV				AML	AML	19 54 09.8	
	comp=N,598µm,1.0s						
KLV				AML	AML	19 54 10.3	
	comp=E,704µm,1.0s						
KLV	Kalavryta, Ach	1.84	136	P	Pb	19 53 33.8	+0.1
GUR	Goura	2.03	135	P	Pb	19 53 36.6	-0.2
GUR	Goura	2.03	135	P	Pb	19 53 36.3	-0.5
TIR	Tirane	2.03	346	⇑P	Pb	19 53 36.4	-0.4
TIR	Tirane	2.03	346	Pn	Pn	19 53 35.1	+1.4
TIR	Tirane	2.03	346	P	Pb	19 53 36.8	0.0
	baz=346						
TIR				S	Sg	19 54 04.5	-1.2
	baz=346						
TIR	Tirane	2.03	346	ePn	Pb	19 53 36.4	-0.4
TIR				eSn	Sn	19 53 56.8	-1.8
LKR	Lokris	2.06	110	P	Pb	19 53 36.2	-1.1
LKR	Lokris	2.06	110	P	Pb	19 53 36.0	-1.3
ATAL	Atalanti	2.06	109	P	Pb	19 53 36.9	-0.5
ATAL				AML	AML	19 54 05.9	
	comp=N,996µm,0.8s						
ATAL				AML	AML	19 54 08.5	
	comp=E,326µm,0.5s						
ATAL	Atalanti	2.06	109	P	Pb	19 53 37.5	+0.1
XOR	Xorichti	2.07	90	P	Pb	19 53 36.2	-1.2
XOR	Xorichti	2.07	90	P	Pb	19 53 36.9	-0.5
GRG	Griva	2.13	42	P	Pb	19 53 37.1	-1.5
GRG	Griva	2.13	42	P	Pb	19 53 37.5	-1.1
THAL	Thalero	2.14	128	P	Pb	19 53 37.3	-1.4
THE	Thessaloniki	2.25	56	P	Pb	19 53 39.4	-1.3
PHP	Peshkopia	2.30	358	P	Pb	19 53 40.5	-1.0
	baz=359						
PHP				S	Sb	19 54 08.4	-1.3
	baz=359						
LOUT	Loutraki	2.37	125	P	Pb	19 53 41.6	-1.0
VIL2	Platees	2.44	118	P	Pb	19 53 42.4	-1.4
VIL2	Platees	2.44	118	P	Pb	19 53 42.6	-1.2
ITM	Ithomi	2.46	153		Pn	19 53 41.6	+2.0
ITM	Ithomi	2.46	153	P	Pb	19 53 42.2	-1.9
VAY	Valandovo	2.49	38	i Pn	Pb	19 53 42.7	-1.9
KNT	Kendrikon	2.54	45	P	Pn	19 53 42.1	+1.3
KNT	Kendrikon	2.54	45	P	Pn	19 53 42.1	+1.3
KNT	Kendrikon	2.54	45	P	Pn	19 53 42.2	+1.4
SOH	Sokhos	2.60	56	P	Pb	19 53 44.5	-2.1
STIP	Stip	2.64	28	i Pn	Pb	19 53 46.7	-0.4
PYL	PYLOS	2.66	158	P	Pn	19 53 43.9	+1.5
SKO	Skopje	2.68	15	i Pn	Pb	19 53 45.7	-2.2
EPID	Epidavros	2.69	130	P	Pn	19 53 45.1	+2.2
EPID	Epidavros	2.69	130	P	Pb	19 53 45.8	-2.3
ULC	Ulcinj	2.76	340	⇑iPn	Pn	19 53 45.2	+1.4
ULC				i Sn	Sn	19 54 18.6	+1.9
EREA	Eretria	2.83	109	P	Pn	19 53 46.5	+1.8
EREA	Eretria	2.83	109	P	Pn	19 53 46.6	+1.8
OUR	Ouranopolis	2.83	69	P	Pn	19 53 47.1	+2.4
KRND	KRANIDI	2.87	133	P	Pn	19 53 47.4	+2.1
KYMI	Kymi, Euboea I	2.88	104	P	Pn	19 53 48.2	+2.7
ATHU	Athens Univers	2.92	118	P	Pn	19 53 48.1	+2.2
SRS	Serrai	2.92	53	P	Pn	19 53 48.2	+2.2
TIP	Timpagrande	2.93	267	⇑P	Pn	19 53 47.8	+1.6
TIP	Timpagrande	2.93	267	Pn	Pn	19 53 47.5	+1.3
PTL	Penteli	2.93	116	P	Pn	19 53 49.1	+2.9
PTL	Penteli	2.93	116	P	Pn	19 53 48.9	+2.7
DION	Dionisos Attik	2.97	115	P	Pn	19 53 49.5	+2.9
VLY	Voula,Athens	2.98	120	P	Pn	19 53 48.8	+2.0
DRME	Dracevica, Mon	2.98	340	ePn	Pn	19 53 48.8	+1.9
DRME	Dracevica, Mon	2.98	340	⇓iPn	Pn	19 53 48.8	+1.9
DRME				i Sn	Sn	19 54 24.2	+2.0
BCI	Bajram Curri	3.00	354	P	Pb	19 53 50.6	-2.8
	baz=354						
KOKK	Kokkinochori,	3.03	61	P	Pn	19 53 49.8	+2.3
KKB	Krupnik	3.16	37	P	Pn	19 53 52.3	+3.0
BUM	Brajici-Budva	3.17	338	⇓iPn	Pn	19 53 50.6	+1.1
BUM				i Sn	Sn	19 54 28.2	+1.3
MATE	Matera	3.19	295	⇓P	Pg	19 54 12.9	+11
PDG	Podgorica	3.19	343	⇑P	Pn	19 53 51.6	+1.9
PDG	Podgorica	3.19	343	Pn	Pn	19 53 50.5	+0.8
PDG	Podgorica	3.19	343	⇑iPn	Pn	19 53 51.5	+1.7
PDG				i Sn	Sn	19 54 29.1	+1.7
NVR	Nevrokopi	3.22	51	P	Pn	19 53 53.0	+2.8
NVR	Nevrokopi	3.22	51	P	Pn	19 53 52.7	+2.5
PVY	Plav	3.24	353	⇑iPn	Pn	19 53 52.5	+2.0
PVY				i Sn	Sn	19 54 31.0	+2.3
MMB	Musomiste	3.29	47	P	Pn	19 53 53.7	+2.6
PRVS	Prvonek	3.34	20	ePn	Pn	19 53 54.5	+2.7
CEME	Cevo	3.39	339	⇓iPn	Pn	19 53 53.6	+1.1
CEME				i Sn	Sn	19 54 33.6	+1.3
HCY	Herceg Novi	3.43	334	ePn	Pn	19 53 53.5	+0.6
HCY	Herceg Novi	3.43	334	⇑iPn	Pn	19 53 53.6	+0.6
HCY				i Sn	Sn	19 54 32.8	-0.4
BOSS	Bosilegrad	3.45	25	ePn	Pn	19 53 56.3	+3.0
THAS	Thassos island	3.45	68	P	Pn	19 53 54.9	+1.6
KAVA	Kavala	3.46	61	P	Pn	19 53 55.1	+1.7
IVA	Berane	3.52	352	⇑iPn	Pn	19 53 57.4	+3.1
IVA				i Sn	Sn	19 54 37.3	+1.7
KOME	Kolasin	3.55	348	⇑iPn	Pn	19 53 57.0	+2.3
KOME				i Sn	Sn	19 54 37.8	+1.5
BARS	Barje	3.57	15	ePn	Pn	19 53 57.2	+2.3
BARS				eSn	Sn	19 54 35.1	-1.5
NKME	Niksic	3.59	341	⇑iPn	Pn	19 53 56.5	+1.3
NKME				i Sn	Sn	19 54 38.7	+1.6
LIA	Limnos Island	3.63	80	P	Pn	19 53 58.1	+2.4
CUC	Castrocucco	3.68	281	Pn	Pn	19 53 57.8	+1.3
TREB	Trebinje	3.72	334	ePn	Pn	19 53 57.0	+0.1
BRY	Bratogost	3.82	338	ePn	Pn	19 53 59.3	+0.7
BRY	Bratogost	3.82	338	⇑iPn	Pn	19 53 59.6	+1.0
BRY				i Sn	Sn	19 54 44.2	+1.1
VTS	Vitosha	3.83	32	⇓P	Pg	19 54 15.7	+1.9
VTS	Vitosha	3.83	32	ePn	Pn	19 54 01.3	+2.7
VTS				eSn	Sn	19 54 43.6	+0.3
VTS	Vitosha	3.83	32	P	Pn	19 54 00.8	+2.2
SELS	Selova	3.86	6	ePn	Pn	19 54 00.8	+1.8
SJES	Sjenica	3.90	354	ePn	Pn	19 54 02.1	+2.5
SJES	Sjenica	3.90	354	ePn	Pn	19 54 01.9	+2.3
RZN	Rozhen	3.94	53	P	Pn	19 54 02.6	+2.4
UPM	Unac-Piva	4.01	343	ePn	Pn	19 54 02.8	+1.7
UPM	Unac-Piva	4.01	343	⇓iPn	Pn	19 54 02.8	+1.7
UPM				i Sn	Sn	19 54 48.8	+1.1
PLE	Pljevlja	4.04	348	⇑iPn	Pn	19 54 04.1	+2.6
PLE				i Sn	Sn	19 54 49.7	+1.4
STON	Ston	4.09	329	ePn	Pn	19 54 02.3	+0.3
PLD	Plovdiv	4.18	48	ePn	Pn	19 54 07.2	+3.9
IVAS	Ivanjica	4.20	356	ePn	Pn	19 54 05.4	+1.7
RDO	Rodhopi	4.22	64	Pn	Pn	19 54 05.7	+1.8
RUDO	Rudo	4.32	349	ePn	Pn	19 54 06.3	+1.0
BOVS	Bovan	4.34	11	⇓P	Pn	19 54 06.2	+0.6
BOVS	Bovan	4.34	11	ePn	Pn	19 54 06.7	+1.2
BOVS				eSn	Sn	19 54 56.2	+0.5
SGRT	San Giovanni R	4.34	305	Pn	Pn	19 54 06.8	+1.1
ALN	Alexandroupoli	4.50	69		Pn	19 54 09.3	+1.6
GRUS	Gruza	4.51	2	ePn	Pn	19 54 09.2	+1.4
BBLS	Lazići	4.56	350	ePn	Pn	19 54 10.5	+1.9
BBLS	Lazići	4.56	350	ePn	Pn	19 54 10.3	+1.7
ZAGS	Zajecar	4.61	16	ePn	Pn	19 54 10.5	+1.3
DIVS	Divibare	4.73	355	Pn	Pn	19 54 11.9	+0.9
DIVS	Divibare	4.73	355	ePn	Pn	19 54 12.2	+1.3
DIVS				eSn	Sn	19 55 02.7	-2.7
DIVS	Divibare	4.73	355	ePn	Pn	19 54 12.3	+1.3
TRUS	Trudelj	4.84	359	ePn	Pn	19 54 13.5	+1.1
HAPS	Han Pijesak,BI	4.85	346	ePn	Pn	19 54 13.7	+1.1
PAOL	Paolisi	4.85	292		Pn	19 54 14.9	+2.3
SANT	Santorini	4.93	126	Pn	Pn	19 54 14.9	+1.3
VAE	Valguarnera	5.16	250	Pn	Pn	19 54 16.0	-0.9
	comp=E,1.1nm,0.3s,baz=152,slow=12,SNR=2.2						
VAE				Sn	Sn	19 55 16.6	+0.6
	comp=E,1.5nm,0.3s,baz=146,slow=7.3,SNR=1.9						
	comp=E,6.6nm,0.5s						
RAFF	Raffo Rosso	5.30	248	Pn	Pn	19 54 18.2	-0.6
SRKY	Kupres RS	5.32	333	ePn	Pn	19 54 20.7	+1.7
IDI	Anoyia	5.37	138	Pn	Pn	19 54 19.6	-0.1
	comp=E,0.9nm,0.3s,baz=238,slow=9.1,SNR=10						
IDI				Sn	Sn	19 55 17.0	-4.0
	comp=E,1.4nm,0.3s,baz=277,slow=16,SNR=2.4						
	comp=E,4.9nm,0.6s						
IDI	Anoyia	5.37	138	Pn	Pn	19 54 19.9	+0.2
MDVR	Moldovita	5.47	9	⇓P	Pn	19 54 21.4	+0.3
MGRS	Mrkonjic Grad	5.65	334	ePn	Pn	19 54 25.3	+1.8
HERR	Herculane	5.67	14	⇑P	Pn	19 54 23.6	-0.3
INTR	Introdacqua	5.68	300	Pn	Pn	19 54 25.8	+1.8
BALB	Balikesir	5.70	85	Pn	Pn	19 54 25.9	+1.8
FRGS	Fruska Gora	5.80	355	⇑P	Pn	19 54 26.2	+0.7
FRGS	Fruska Gora	5.80	355	ePn	Pn	19 54 26.7	+1.1
FRGS				eSn	Sn	19 55 29.3	-2.3
FRGS	Fruska Gora	5.80	355	ePn	Pn	19 54 26.0	+0.4
A050A	Klekovaca	5.90	331	ePn	Pn	19 54 28.2	+1.2
BLY	Banja Luka	5.91	336	ePn	Pn	19 54 27.4	+0.3
AQU	L'Aquila	6.16	301	Pn	Pn	19 54 32.1	+1.6
CAMP	Campotosto	6.24	303		Pn	19 54 33.9	+2.2
BZS	Buzias	6.29	7	⇓P	Pn	19 54 31.6	-0.6
KARP	Karpathos	6.52	124	Pn	Pn	19 54 36.0	+0.5
GUMA	Gualdo di Mace	6.55	306		Pn	19 54 37.5	+1.6
NRCA	Norcia	6.57	304		Pn	19 54 38.2	+1.9
FDMO	Fiordimonte	6.69	305		Pn	19 54 39.6	+1.8
VOIR		6.92	27	⇑P	Pn	19 54 44.2	+3.3
MORH	Mrgy, Hungar	6.97	349	⇑P	Pn	19 54 42.1	+0.5
MURB	Monte Urbino	7.16	305		Pn	19 54 46.7	+2.4
BOJS	Bojanci	7.25	329	ePn	Pn	19 54 46.4	+0.9
MLR	Muntele Rosu	7.30	32	⇑P	Pn	19 54 50.2	+3.8
MLR	Muntele Rosu	7.30	32	Pn	Pn	19 54 49.4	+3.1
	comp=E,1.0nm,0.3s,baz=256,slow=22,SNR=17						
MLR				LR	LR	19 58 34.5	
	comp=E,198nm,18.2s,baz=5.0,slow=46						
	comp=E,8.6nm,0.7s						
MLR	Muntele Rosu	7.30	32	Pn	Pn	19 54 48.9	+2.6
CRES	Cresnjev	7.45	332	ePn	Pn	19 54 48.5	+0.3
BISRR	Bisoca	7.67	35	⇓P	Pn	19 54 56.1	+4.8
CEY	Cerknica	7.78	327	ePn	Pn	19 54 52.9	+0.1
SKDS	Skadanscina	7.82	324	ePn	Pn	19 54 51.3	-2.0
AKAS	Kas	7.84	111	Pn	Pn	19 54 56.2	+2.5
PLOR	Plostina	7.89	33	⇑P	Pn	19 54 58.7	+4.5
VRI	Vrincioaia	7.93	33	⇓P	Pn	19 54 59.5	+4.7
TRI	Trieste	8.05	324	Pn	Pn	19 54 56.4	-0.1
CFR	Carcaliu	8.09	42	⇑P	Pn	19 55 03.6	+6.7
SOKA	Soboth	8.33	333	i Pn	Pn	19 55 00.5	+0.2
	comp=E,2.2nm,0.3s,SNR=7.5						
SOKA				i Sn	Sn	19 56 28.4	-5.4
	comp=E,3.4nm,0.4s						
SABO	M.te Sabotino	8.33	325	Pn	Pn	19 55 00.6	+0.2
OBKA	Obir	8.36	330	i Pn	Pn	19 55 01.4	+0.6
	comp=E,3.9nm,0.3s,SNR=12						
OBKA				eSn	Sn	19 56 31.6	-3.2
	comp=E,8.3nm,0.6s						
OBKA	Obir	8.36	330	ePn	Pn	19 55 00.7	-0.1
VLDR	Vladesti	8.53	38	⇑P	Pn	19 55 08.4	+5.5
ARSA	Arzberg	8.67	337	i Pn	Pn	19 55 05.8	+0.9
	comp=E,1.6nm,0.3s						
PRED	Cave del Predi	8.71	326	Pn	Pn	19 55 05.6	0.0
TEOL	Teolo	8.87	315	Pn	Pn	19 55 07.3	-0.3
BURAR	Bucovina Array	8.91	21	⇑P	Pn	19 55 10.5	+2.2
BURAR	Bucovina Array	8.91	21	Pn	Pn	19 55 09.6	+1.3
BUR08	Bucovina Ar. S	8.93	21	Pn	Pn	19 55 09.9	+1.3
STAL	STALIGIAL	8.95	323	Pn	Pn	19 55 09.1	+0.3
CLUD	Cludinico	9.02	324	Pn	Pn	19 55 09.4	-0.4
CIMO	Cimolais	9.12	322	Pn	Pn	19 55 10.5	-0.6
CTI	Castel Tesino	9.33	318	Pn	Pn	19 55 13.9	-0.1
ABTA	Abfaltersbach	9.41	324	i Pn	Pn	19 55 15.7	+0.6
	comp=E,0.6nm,0.2s						
ABTA				eSn	Sn	19 56 55.7	-4.8
	comp=E,2.6nm,0.4s						
MOA	Molln	9.60	334	i Pn	Pn	19 55 19.7	+2.0
	comp=E,2.3nm,0.3s,SNR=11						
MOA				i Sn	Sn	19 57 02.0	-3.1
	comp=E,1.4nm,0.4s						
SALO	Salr	9.66	313	Pn	Pn	19 55 19.4	+0.9
BRTR	Keskin Array B	10.14	84	Pn	Pn	19 55 28.6	+3.4
	comp=E,0.1nm,0.3s,baz=273,slow=13,SNR=2.0						
	comp=E,0.3nm,0.4s						
WTTA	Wattenberg	10.19	324	i Pn	Pn	19 55 27.4	+1.4
	comp=E,1.4nm,0.3s,SNR=4.1						
WTTA				eSn	Sn	19 57 15.3	-4.6
	comp=E,6.6nm,0.5s						
WATA	Walderalm	10.27	324	i Pn	Pn	19 55 28.0	+0.9
	comp=E,0.8nm,0.2s						
WATA				eSn	Sn	19 57 18.9	-2.9
	comp=E,2.9nm,0.4s						
SQTA	Sankt Quirin	10.36	322	i Pn	Pn	19 55 29.9	+1.7
	comp=E,1.6nm,0.3s,SNR=4.1						
SQTA				i Sn	Sn	19 57 19.7	-4.2
	comp=E,3.4nm,0.4s						
FUORN	Ofenpass-Fuorn	10.43	317	Pn	Pn	19 55 30.1	+0.9
MOTA	Moosalm	10.50	322	i Pn	Pn	19 55 31.8	+1.6
	comp=E,1.6nm,0.4s,SNR=4.1						
MOTA				eSn	Sn	19 57 24.5	-2.9
	comp=E,5.3nm,0.7s						
GERES	GERESS Array B	10.65	335	Pn	Pn	19 55 31.4	-0.8
	comp=E,0.3nm,0.3s,baz=156,slow=13,SNR=7.9						
GERES				Sn	Sn	19 57 26.5	-4.5
	comp=E,0.3nm,0.3s,baz=151,slow=24,SNR=5.4						
	comp=E,0.5nm,0.4s						
DAVOX	Davos/Dischmat	10.73	317	Pn	Pn	19 55 33.2	-0.1
	comp=E,0.9nm,0.4s,baz=72,slow=13						
DAVOX				Sn	Sn	19 57 30.8	-2.2
	comp=E,0.2nm,0.3s,baz=184,slow=16,SNR=2.8						
KHC	Kasperske Hory	10.94	335	ePN	Pn	19 55 37.0	+0.9
SENIN	Lac Senin/Sane	11.94	310	Pn	Pn	19 55 50.6	+0.6
MMAI	Mount Meron Ar	13.58	113	Pn	Pn	19 56 11.7	-0.6
	comp=E,0.3nm,0.3s,baz=310,slow=14,SNR=2.3						
	comp=E,0.5nm,0.5s						
EIL	Elat	15.32	125	Pn	Pn	19 56 35.8	0.0
	comp=E,0.3nm,0.3s,baz=235,slow=23,SNR=1.8						
	comp=E,2.7nm,0.6s						
PABE	Paberze	16.30	7	Pn	Pn	19 56 48.3	+0.1
PABE				IAmb	IAmb	19 57 09.1	
	comp=Z,7.9nm,0.9s						
ESDC	Sonseca Array	18.88	279	P	Pn	19 57 20.3	-0.2
	comp=Z,0.1nm,0.3s,baz=2.4,slow=9.4,SNR=1.5						
	comp=Z,0.2nm,0.5s						
HFS	Hagfors	21.22	351	P	P	19 57 44.1	-0.8
	comp=Z,2.4nm,0.6s,baz=152,slow=13,SNR=15						
	comp=Z,2.4nm,0.6s						
KONO	Kongsberg	21.44	345	P	P	19 57 47.2	-0.1

NC602	NORSAR Array S	22.10	348	P	P	19 57 54.0	-0.5
FINES	FINESS Array B	22.36	7	P	P	19 57 55.6	-1.5
	comp=Z,1.3nm,0.4s,baz=177,slow=11,SNR=22						
	comp=Z,1.3nm,0.4s						
FINES	FINESS Array B	22.36	7	P	P	19 57 56.5	-0.7
NB2	NORSAR Subarra	22.44	348	P	P	19 57 57.9	-0.3
	comp=Z,1.2nm,0.6s,baz=154,slow=11						
NOA	NORSAR Array B	22.44	348	P	P	19 57 58.0	-0.1
	comp=Z,0.5nm,0.5s,baz=152,slow=10,SNR=10						
	comp=Z,0.5nm,0.5s						
EKA	Eskdalemuir Ar	22.46	323	P	P	19 57 58.5	+0.1
	comp=Z,0.9nm,0.6s,baz=120,slow=9.8,SNR=10						
	comp=Z,0.9nm,0.6s						
ESK	Eskdalemuir	22.47	323	P	P	19 57 58.6	+0.1
ESK				IAmb	IAmb	19 58 22.9	
	comp=Z,13nm,1.4s						
KIRV	Kirov	26.66	34	LR	LR	20 10 25.1	
	comp=Z,104nm,20.1s,baz=259,slow=39						
AKTO	Aktyubinsk	28.47	55	P	P	19 58 53.9	-0.4
	comp=Z,1.0nm,0.4s,baz=295,slow=4.1,SNR=3.0						
	comp=Z,1.0nm,0.4s						
GEYT	Alibeck	29.26	81	P	P	19 58 59.7	-1.8
	comp=Z,0.9nm,0.5s,baz=260,slow=16,SNR=1.8						
	comp=Z,0.9nm,0.5s						
ABKAR	Akbulak array	29.58	57	P	P	19 59 03.9	-0.3
ARU	Arti	30.17	43	P	P	19 59 08.8	-0.5
	comp=Z,1.4nm,0.4s,baz=270,slow=19,SNR=2.0						
	comp=Z,1.4nm,0.4s						
ARCES	ARCESS Array B	30.33	3	P	P	19 59 09.3	-1.3
	comp=Z,0.5nm,0.4s,baz=188,slow=11,SNR=9.1						
	comp=Z,0.5nm,0.4s						
TOA0	Torodi Ar. Sit	30.97	218	P	P	19 59 17.2	+0.4
TOA0				IAmb	IAmb	19 59 19.4	
	comp=Z,1.7nm,0.6s						
TORD	Torodi Ar. Bea	30.97	218	P	P	19 59 17.4	+0.6
	comp=Z,47nm,0.3s,baz=336,slow=3.3,SNR=3.5						
KK31	Karatay Array	37.32	68	P	P	20 00 12.1	+0.5
KKAR	Karatay Array	37.32	68	P	P	20 00 11.9	+0.3
KURK	Kurchatov	41.57	54	P	P	20 00 46.4	-0.4
KURK				IAmb	IAmb	20 01 09.1	
	comp=Z,2.9nm,1.4s						
MK31	Makanchi Array	44.68	59	P	P	20 01 11.6	-0.5
MKAR	Makanchi Array	44.68	59	P	P	20 01 11.7	-0.4
	comp=Z,0.9nm,0.5s,baz=282,slow=7.8,SNR=20						
	comp=Z,0.9nm,0.5s						
MKAR	Makanchi Array	44.68	59	P	P	20 01 11.5	-0.6
ZAA0	Zalesovo Array	44.89	49	P	P	20 01 13.3	-0.3
ZAA0				IAmb	IAmb	20 01 19.9	
	comp=Z,1.6nm,0.7s						
ZALV	Zalesovo Beam	44.89	49	P	P	20 01 13.3	-0.4
	comp=Z,1.5nm,0.3s,baz=276,slow=8.0,SNR=9.3						
	comp=Z,1.5nm,0.3s						
ZALV	Zalesovo Beam	44.89	49	P	P	20 01 13.6	-0.1
SONM	Songino Array	59.70	51	P	P	20 03 04.3	+0.4
	comp=Z,0.2nm,0.9s,baz=29,slow=3.3,SNR=1.8						
	comp=Z,0.2nm,0.9s						
YKA	Yellowknife Ar	72.26	340	P	P	20 04 24.3	+0.1
	comp=Z,0.1nm,0.4s,baz=39,slow=4.9,SNR=2.0						
	comp=Z,0.1nm,0.4s						
ILAR	Eielson Array	75.71	354	P	P	20 04 46.3	+1.9
	comp=Z,0.2nm,0.8s,baz=45,slow=4.6,SNR=1.8						
	comp=Z,0.2nm,0.8s						

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*BJI **25** 20:03:50.3±0.0, 3°.76S×137°.34E, h60^{km}, mb4.9/71, mB5.1/50, Ms4.6/57, Ms7 4.4/57*

*NEIC **25** 20:03:52.5±1.4, 3°.02S±0°.08×136°.86E±0°.07, h10^{km}±1^{km}, mb5.2/107, Error ellipse: s-maj=14.0km s-min=11.6km az=33.0*

*MOS **25** 20:03:55.0±0.9, 3°.12S×136°.81E, h49^{km}, mb5.3/59, Error ellipse: s-maj=9.3km s-min=4.5km az=114.5*

*IDC **25** 20:03:56.4±2.3, 3°.04S×136°.86E, h41^{km}±20^{km}, mb4.5/15, mbtmp4.8/19, ML4.6/3, MS4.2/38, Error ellipse: s-maj=18.3km s-min=10.5km az=57.0*

*DJA **25** 20:03:56.9±0.2, 3°S±2°×13°7E±°, h48^{km}±2^{km}, M4.8/74, mb5.1/74, mB5.3/30, MLv5.2/10, Mw5.0/28, Mw(mB)4.7/30, MwMwp5.1/6, Mwp5.3/6*

*GCMT **25** 20:03:58.5±0.2, 2°.80S±0°.01×136°.88E±0°.01, h47^{km}, MW5.1/104, Moment Tensor Solution. s98,c153; s104,c161; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.71±.16; $M_{\theta\theta}$-6.50±.10; $M_{\phi\phi}$1.79±.14; $M_{r\theta}$-1.79±.11; $M_{\theta\phi}$0.54±.09; $M_{\phi r}$1.42±.13; Best double couple: $M_0$6.15700×10^{16} NP1:ϕ_s291.00000°, δ57.00000°, λ113.00000°. NP2:ϕ_s74.00000°, δ39.00000°, λ59.00000°. Principal axes: T 5.4690, Plg69.0000°, Azm250.0000°; N 1.3760, Plg19.0000°, Azm98.0000°; P -6.8450, Plg9.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 20:03:56.3±0.4**, 3°.08S**±0°.03×**136°.88E**±0°.03**, h44**^{km}±3^{km}**, h44**^{km}**:pP-P, n624,** σ1^s**28**/646**, mb5.1**/153**, MS4.3**/58**, 27C-15D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	Serui, Papua	1.36	332	P	Pn	20 04 18.3	-0.6
SRPI				S	Sn	20 04 36.3	+0.5
SMPI	Sarmi	2.13	59	P	Pn	20 04 28.9	-0.5
SMPI				S	Sn	20 04 53.5	-1.2
RKPI	Ransiki, Papua	3.12	300	P	Pn	20 04 44.4	+1.4
RKPI				S	Sn	20 05 19.4	+0.4
GENI	Genyem	3.33	82	P	Pn	20 04 47.4	+1.6
GENI	Genyem	3.33	82	P	Pn	20 04 46.7	+0.9
GENI				S	Sn	20 05 25.1	+1.0
FAKI	Fak Fak	4.62	272	Pn	Pn	20 05 03.8	+0.2
FAKI				Sn	Sn	20 05 56.1	0.0
FAKI	Fak Fak	4.62	272	P	Pn	20 05 04.6	+0.9
FAKI	Fak Fak	4.62	272	P	Pn	20 05 04.1	+0.4
FAKI				S	Sn	20 05 57.2	+1.1
SIJI	Sorong	6.02	291	P	Pn	20 05 23.5	+0.6
	18nm,0.3s,baz=120,slow=20,SNR=66						
SIJI				S	Sn	20 06 29.4	-1.2
	71nm,0.8s,baz=169,slow=18,SNR=8.0						
SIJI				LR	LR	20 08 34.9	
	comp=Z,3µm,19.6s,baz=96,slow=46						
	32nm,0.3s						
MMPI	Merauke	6.39	147	P	Pn	20 05 29.0	+1.1
	15nm,0.8s,0.1nm						
BNDI	Bandanaira	7.10	258	P	Pn	20 05 38.3	+0.6
	301nm,1.2s,3.9nm						
SAUI	Saumlaki	7.38	229	Pn	Pn	20 05 41.5	0.0
SAUI	Saumlaki	7.38	229	P	Pn	20 05 42.6	+1.1
	351nm,1.1s,5µm6µm2.4nm						
MSAI	Masohi	7.94	268	P	Pn	20 05 50.7	+1.5
	18nm,0.7s,215nm0.1nm						
AAI	Ambon	8.69	266	P	Pn	20 05 59.6	+0.1
	83nm,0.6s						
LBMI	Labuha	9.68	284	P	Pn	20 06 14.0	+0.9
	107nm,0.8s						
NLAI	Namlea	9.76	269	P	Pn	20 06 15.5	+1.3
	36nm,0.9s,6µm						
TNTI	Ternate	10.25	292	P	Pn	20 06 20.8	-0.1
	35nm,1.8s,904nm						
KDU	Kakadu	10.49	204	P	Pn	20 06 23.8	-0.3
	baz=11,SNR=368						
KDU	Kakadu	10.49	204	P	Pn	20 06 24.0	-0.2
SANI	Sanana	10.92	275	P	Pn	20 06 30.7	+0.6
SANI	Sanana	10.92	275	P	Pn	20 06 31.0	+0.9
	64nm,0.8s,602nm						
MTN	Manton Dam	11.24	210	P	Pn	20 06 35.6	+1.2
	baz=11,SNR=249						
MTN	Manton Dam	11.24	210	Pn	Pn	20 06 34.7	+0.3
MTN	Manton Dam	11.24	210	P	Pn	20 06 36.8	+2.4
PMG	Port Moresby	11.99	122	P	Pn	20 06 46.5	+1.7
	66nm,0.8s,baz=354,slow=6.1,SNR=21						
PMG				S	Sn	20 08 55.5	-1.8
	31nm,0.7s,baz=275,slow=18,SNR=1.6						
PMG				LR	LR	20 13 15.8	
	comp=Z,719nm,19.2s,baz=304,slow=46						
PMG	Port Moresby	11.99	122	Pn	Pn	20 06 45.3	+0.5
PMG	Port Moresby	11.99	122	P	Pn	20 06 47.2	+2.4
PMG	Port Moresby	11.99	122	P	Pn	20 06 47.4	+2.6
PMG	Port Moresby	11.99	122	*d i*P	Pn	20 06 46.3	+1.5
PMG				pmax	pmax		
	comp=Z,154nm,1.3s						
COEN	Coen	12.47	150	P	Pn	20 06 51.0	-0.2
	baz=12,SNR=44						
COEN	Coen	12.47	150	Pn	Pn	20 06 50.7	-0.6
COEN	Coen	12.47	150	P	Pn	20 06 51.2	-0.1
SOEI	Soe	14.17	242	Pn	Pn	20 07 11.9	-2.6
SOEI	Soe	14.17	242	P	Pn	20 07 16.7	+2.1
SOEI	Soe	14.17	242	P	Pn	20 07 14.8	+0.2
	comp=Z,128nm,0.9s,comp=Z,2µm						
LUWI	Luwuk	14.24	278	Pn	Pn	20 07 14.6	-0.8
LUWI	Luwuk	14.24	278	P	Pn	20 07 17.0	+1.6
LUWI	Luwuk	14.24	278	P	Pn	20 07 16.9	+1.6
	comp=Z,92nm,0.8s,comp=Z,1µm						
GTOI	Gorontalo	14.34	285	P	Pn	20 07 19.1	+2.3
	comp=Z,38nm,0.9s,comp=Z,543nm						
KNRA	Kununurra	14.85	212	P	Pn	20 07 22.9	-0.6
	baz=15,SNR=205						
KNRA	Kununurra	14.85	212	Pn	Pn	20 07 23.0	-0.5
KNRA	Kununurra	14.85	212	P	Pn	20 07 23.9	+0.4
DAV	Davao City (W)	15.13	312	LR	LR	20 13 52.6	
	comp=Z,543nm,19.7s,baz=108,slow=40						
KRVT	Keravat (AS076	15.17	95	P	P	20 07 31.8	-0.4
	comp=Z,47nm,0.9s,baz=342,slow=16,SNR=3.6						
KRVT				LR	LR	20 13 41.4	
	comp=Z,536nm,20.7s,baz=65,slow=38						
RABL	Rabaul	15.30	95	P	P	20 07 32.1	-1.5
RABL	Rabaul	15.30	95	P	P	20 07 32.5	-1.1
MRSI	Marisa	15.34	283	P	P	20 07 33.2	-0.9
	comp=Z,104nm,1.1s,comp=Z,785nm						
SKMP	Bagumbayan, Su	15.57	308	⇑*e*P	P	20 07 37.0	+0.3
SKMP				*e*S	Sn	20 10 25.7	+1.1
CTBH	Cotabato--PC H	16.24	309	⇑*e*P	P	20 07 43.6	-0.4
TOLI2	Tolitoli	16.62	284		Pn	20 07 46.0	-0.3
TOLI2	Tolitoli	16.62	284	P	P	20 07 50.3	+2.1
MTSU	Mount Surprise	16.64	155	P	Pn	20 07 46.9	+0.3
	baz=17,SNR=16						
MTSU	Mount Surprise	16.64	155	P	Pn	20 07 47.1	+0.5
GLSP	General Luna,	16.68	320	⇑*e*P	P	20 07 48.9	+0.1
CGP	Cagayan de Oro	16.70	313	⇓*e*P	P	20 07 54.2	+5.1
WB0	Warramunga Arr	16.76	188	Pn	Pn	20 07 45.8	-2.2
BKSI	Bulukumba	16.85	262	P	P	20 07 51.8	+1.0
	comp=Z,39nm,1.6s,comp=Z,578nm						
WRAB	Tennant Creek	16.93	188	P	P	20 07 51.2	-0.4
WRAB	Tennant Creek	16.93	188	⇑*e*P	Pn	20 07 47.1	-3.0
WRAB				pmax	pmax		
	comp=Z,149nm,0.9s						
WRA	Warramunga Arr	16.94	188	P	Pn	20 07 47.2	-3.1
	comp=Z,19nm,0.9s,baz=4.5,slow=13,SNR=24						
WRA				S	Sn	20 10 46.9	-11
	comp=Z,44nm,0.9s,baz=13,slow=22,SNR=2.6						
WRA				LR	LR	20 15 31.9	
	comp=Z,598nm,19.9s,baz=354,slow=41						
SPSI	Sidrap Palu	17.10	267	P	P	20 07 53.2	-0.3
	comp=Z,26nm,1.4s						
KAPI	Kappang	17.19	263	P	P	20 07 54.0	-0.6
	comp=Z,0.6nm,0.3s,baz=126,slow=8.7,SNR=2.1						
KAPI				LR	LR	20 17 01.5	
	comp=Z,176nm,18.5s,baz=82,slow=46						
	comp=Z,15nm,1.1s						
KAPI	Kappang	17.19	263	P	P	20 07 54.0	-0.6
PAGZ	Pagadian	17.30	309	⇑*e*P	P	20 07 57.6	+1.9
MPSI	Mapaga	17.31	281	P	P	20 07 55.8	-0.1
	comp=Z,28nm,1.1s,comp=Z,672nm						
QIS	Mount Isa	17.57	171	P	Pn	20 07 55.8	-2.4
	baz=18,SNR=53						
QIS	Mount Isa	17.57	171	P	Pn	20 07 57.2	-0.9
TBP	Tagbilaran	18.14	315	*e*P	P	20 07 57.8	-7.3
GUMO	Guam	18.37	25	LR	LR	20 14 43.2	
	comp=Z,502nm,20.7s,baz=198,slow=35						
FITZ	Fitzroy Crossi	18.54	216	P	P	20 08 09.0	-0.4
	baz=19						
FITZ	Fitzroy Crossi	18.54	216	P	P	20 08 09.1	-0.4
TV1H	Townsville Har	18.78	150	P	Pn	20 08 14.6	+1.8
CNOP	Candoni, Negro	19.12	312	⇓*e*P	Pn	20 08 16.9	-0.1
CNOP				*e*S	S	20 11 51.8	+1.2
CTA	Charters Tower	19.22	152	P	Pn	20 08 18.2	+0.1
	comp=Z,2.2nm,0.3s,baz=329,slow=11,SNR=28						
CTA				S	S	20 11 49.9	-2.6
	comp=Z,11nm,0.9s,baz=341,slow=14,SNR=2.3						
CTA				LR	LR	20 16 27.9	
	comp=Z,481nm,19.4s,baz=336,slow=39						
	comp=Z,90nm,0.9s						
CTA	Charters Tower	19.22	152	P	Pn	20 08 18.3	+0.1
CTAO	Charters Tower	19.22	152	P	Pn	20 08 17.9	-0.3
CTAO				IAmb	IAmb	20 08 22.0	
	comp=Z,78nm,0.8s						
CTAO	Charters Tower	19.22	152	P	Pn	20 08 18.3	+0.1
CTAO	Charters Tower	19.22	152	P	Pn	20 08 17.9	-0.3
CTAO				pmax	pmax		
	comp=Z,78nm,0.9s						
GUIM	Jordan	19.69	314	⇑*e*P	Pn	20 08 23.6	-0.2
GUIM				*e*S	Sn	20 12 03.8	-0.4
PLAI	Plampang	19.83	252	P	P	20 08 21.8	-1.8
PLAI	Plampang	19.83	252	P	Pn	20 08 24.8	-0.6
BKB	Balikpapan	20.05	275	P	P	20 08 26.1	+0.2
	comp=Z,524nm,1.5s						
MYLDM	Lahad Datu	20.11	294	P	P	20 08 25.0	-1.6
RCP	Roxas	20.23	316	⇑*e*P	Pn	20 08 29.2	-0.9
AS01	Alice Springs	20.66	188	P	Pn	20 08 34.1	-1.0
TWSI	Taliwang, Sumb	20.66	253	P	P	20 08 33.6	+1.0
	comp=Z,34nm,1.1s						
AS31	Alice Springs	20.66	188	P	P	20 08 33.2	+0.6
ASAR	Alice Springs	20.66	188	P	Pn	20 08 34.0	-1.3
	comp=Z,99nm,0.7s,baz=12,slow=12,SNR=336						
ASAR				S	S	20 12 17.1	-4.2
	comp=Z,6.8nm,0.9s,baz=5.5,slow=28,SNR=1.7						
ASAR				LR	LR	20 17 07.8	
	comp=Z,3µm,19.2s,baz=5.5,slow=38						
	comp=Z,99nm,0.7s						
ASAR	Alice Springs	20.66	188	P	P	20 08 33.1	+0.5
ASAR	Alice Springs	20.66	188	P	Pn	20 08 34.0	-1.2
PVCP	Virac	20.83	323	⇑*e*P	P	20 08 34.0	-0.4
PVCP				*e*S	S	20 12 20.3	-4.2
OTRP	Odiongan	21.29	316	⇓*e*P	P	20 08 41.0	+1.6
OTRP				*e*S	S	20 12 35.4	+1.6
BBKI	Banjar Baru	22.00	268	P	P	20 08 49.1	+2.1
	comp=Z,149nm,1.1s,comp=Z,2µm						
SRBI	Singaraja	22.12	256	P	P	20 08 49.2	+0.9
	comp=Z,54nm,1.3s,comp=Z,1µm						
JCNP	Jose Panganiba	22.26	321	⇑*e*P	P	20 08 50.5	+0.7
JCNP				*e*S	Sn	20 13 17.4	+12
KKM	Kota Kinabalu	22.54	294	P	P	20 08 52.7	-0.2
KKM				IAmb	IAmb	20 08 56.7	
	comp=Z,154nm,1.6s						
KKM	Kota Kinabalu	22.54	294	P	P	20 08 54.5	+1.6
LQP	Lukban	22.87	319	⇓*e*P	P	20 08 46.6	-10
ABJI	Asem Bagus	23.01	257	P	P	20 08 59.9	+2.1
	comp=Z,76nm,1.2s						
JAGI	Jajag, Banyuwa	23.22	256	P	P	20 08 58.1	-1.8
JAGI	Jajag, Banyuwa	23.22	256	P	P	20 08 58.8	-1.1
	comp=Z,45nm,1.3s						
TGY	Tagaytay City	23.27	318	P	P	20 08 59.6	-0.7
	comp=Z,67nm,0.3s,baz=209,slow=10,SNR=5.0						
TGY				LR	LR	20 18 28.7	
	comp=Z,431nm,21.6s,baz=132,slow=38						
	comp=Z,67nm,0.3s						
WRKA	Warakurna	23.34	200	P	P	20 09 00.1	-0.8
	baz=24,SNR=105						
WRKA	Warakurna	23.34	200	P	P	20 09 00.8	-0.1
LUBP	Lubang	23.48	316	⇑*e*P	P	20 09 02.0	-0.3
LUBP				*e*S	S	20 13 15.3	+2.3
MACP	Maragondon, Ca	23.53	317	⇑*e*P	P	20 09 04.5	+1.7
MACP				*e*S	S	20 13 18.0	+4.3
BLJI	Banyuglugur	23.63	258	P	P	20 09 04.0	+0.3
	comp=Z,64nm,1.2s						
HNR	Honiara	23.77	106	P	P	20 09 04.3	-0.8
	comp=Z,3µm,0.9s,baz=246,slow=2.2,SNR=14						
HNR				LR	LR	20 19 27.2	
	comp=Z,4µm,19.9s,baz=268,slow=39						
HNR	Honiara	23.77	106	P	P	20 09 04.9	-0.2
HNR	Honiara	23.77	106	P	P	20 09 05.7	+0.6
GMJI	Gumukmas	23.87	257	P	P	20 09 05.8	-0.2
	comp=Z,40nm,1.2s						
BALP	Baler	24.06	321	⇑*e*P	P	20 09 08.1	+0.4
BWJI	Bawean	24.30	263	P	P	20 09 10.8	+0.9
	comp=Z,173nm,1.4s						
QLP	Quilpie	24.41	164	P	P	20 09 10.8	0.0
	baz=24,SNR=14						
QLP	Quilpie	24.41	164	P	P	20 09 11.4	+0.6
MBWA	Marble Bar	24.52	222	P	P	20 09 11.9	0.0
MBWA				IAmb	IAmb	20 09 14.8	
	comp=Z,112nm,1.2s						
MBWA	Marble Bar	24.52	222	P	P	20 09 13.0	+1.1
GRJI	Gresik	24.59	260	P	P	20 09 14.0	+1.4
	comp=Z,279nm,1.3s,comp=Z,4µm						
OOD	Oodnadatta	24.60	183	P	P	20 09 12.4	-0.1
PSA00	Pilbara Seismi	24.74	221	P	P	20 09 14.3	+0.5
PSA00	Pilbara Seismi	24.74	221	P	P	20 09 14.4	+0.6
PSA00				IAmb	IAmb	20 09 16.1	
	comp=Z,51nm,0.8s						
PSA00	Pilbara Seismi	24.74	221	P	P	20 09 14.4	+0.6
INKA	Innaminka	24.80	172	P	P	20 09 13.9	-0.4
CAUP	Cauayan	24.84	324	⇑*e*P	P	20 09 22.4	+7.7
PBKI	Pangkalan Bun	25.18	270	P	P	20 09 18.8	+0.9
	comp=Z,126nm,1.0s						
SBUM	Sibu	25.25	282	P	P	20 09 18.6	0.0
SBUM				IAmb	IAmb	20 09 53.0	
	comp=Z,57nm,1.7s						
PWJI	Pagerwojo	25.42	258	P	P	20 09 18.5	-1.7
	comp=Z,29nm,1.0s						
RMQ	Roma	25.91	155	P	P	20 09 25.0	+0.5
	baz=26,SNR=7.5						
RMQ	Roma	25.91	155	P	P	20 09 26.0	+1.5
EIDS	Eidsvold	26.04	150	P	P	20 09 26.5	+0.9
	baz=26,SNR=8.9						
EIDS	Eidsvold	26.04	150	P	P	20 09 26.5	+0.9
EIDS				IAmb	IAmb	20 09 30.3	
	comp=Z,56nm,1.1s						
EIDS	Eidsvold	26.04	150	P	P	20 09 27.5	+1.9
SMRI	Semarang	26.62	260	P	P	20 09 31.3	+0.3
SMRI	Semarang	26.62	260	P	P	20 09 31.8	+0.8
	comp=Z,180nm,1.2s						
KSM	Kuching	26.94	279	P	P	20 09 33.9	0.0
MULG	Mulgathing	27.18	185	P	P	20 09 35.9	0.0
LCRK	Leigh Creek	27.25	177	P	P	20 09 36.1	-0.3
AULRC	Lightning Ridg	28.25	159	P	P	20 09 46.1	+0.7
CMJI	Cimerak	28.67	259	P	P	20 09 50.1	+0.7
	comp=Z,105nm,0.6s						
AUWSH	Wavell State H	28.70	149	P	P	20 09 50.2	+0.8
FORT	Forrest	28.78	196	P	P	20 09 50.5	+0.4
	baz=29,SNR=8.0						
FORT	Forrest	28.78	196	P	P	20 09 49.9	-0.3
FORT	Forrest	28.78	196	P	P	20 09 50.3	+0.2
STKA	Stephens Creek	28.98	172	P	P	20 09 51.6	-0.3
	comp=Z,8.3nm,0.7s,baz=346,slow=8.4,SNR=21						
STKA				LR	LR	20 23 01.2	
	comp=Z,452nm,19.0s,baz=338,slow=39						
	comp=Z,8.3nm,0.7s						
STKA	Stephens Creek	28.98	172	P	P	20 09 51.9	-0.1
	baz=29,SNR=20						
STKA	Stephens Creek	28.98	172	P	P	20 09 51.2	-0.7
STKA	Stephens Creek	28.98	172	P	P	20 09 50.9	-1.0
CMSA	Cobar Meteorol	29.50	165	P	P	20 09 57.5	+1.0
	baz=30,SNR=28						
CMSA	Cobar Meteorol	29.50	165	P	P	20 09 57.2	+0.7
BBOO	Buckleboo	29.58	181	P	P	20 09 57.1	-0.1
	baz=30,SNR=5.3						
BBOO	Buckleboo	29.58	181	P	P	20 09 56.5	-0.7
BBOO				IAmb	IAmb	20 10 58.6	
	comp=Z,24nm,0.8s						
HTT	Hallett	30.25	177	P	P	20 10 03.1	-0.1
	baz=30,SNR=5.5						
HTT	Hallett	30.25	177	P	P	20 10 02.9	-0.3
JCJ	Chichijima	30.44	9	LR	LR	20 19 51.4	
	comp=Z,343nm,20.4s,baz=159,slow=31						
ARMA	Armidale	30.56	154	P	P	20 10 07.1	+1.0
	baz=31,SNR=9.8						
ARMA	Armidale	30.56	154	P	P	20 10 06.9	+0.8
ARMA	Armidale	30.56	154	P	P	20 10 07.1	+1.0
AUPHS	Peel High Scho	30.85	156	P	P	20 10 09.8	+1.3
JOW	Kunigami	30.88	345	LR	LR	20 20 20.5	
	comp=Z,529nm,21.2s,baz=252,slow=32						
AUDCS	Dubbo College	31.03	160	P	P	20 10 10.8	+0.8
YHNB	Yeheng	31.43	332	P	P	20 10 14.0	+0.3
KMBL	Kambalda	31.48	205	P	P	20 10 13.4	-0.7
PMBI	Palembang	32.06	269	P	P	20 10 20.4	+1.1
MORW	Morawa	32.56	215	P	P	20 10 24.1	+0.5
	baz=33,SNR=4.0						
MORW	Morawa	32.56	215	P	P	20 10 23.7	+0.2
MORW				IAmb	IAmb	20 11 31.0	
	comp=Z,70nm,1.7s						
YNG	Young	32.86	162	P	P	20 10 27.0	+0.9
SYDH	Sydney Hard Ro	33.16	159	P	P	20 10 30.6	+2.0
MYKOM	Kota Tinggi	33.37	278	P	P	20 10 30.2	-0.6
MYKOM				IAmb	IAmb	20 10 32.5	
	comp=Z,25nm,1.0s						
RIV	Riverview	33.37	158	P	P	20 10 32.0	+1.5
	baz=34,SNR=3.5						
KLBR	Kellerberrin	33.59	210	P	P	20 10 33.1	+0.6
	baz=34,SNR=9.7						
WOLH	Wollongong Har	33.78	159	P	P	20 10 36.5	+2.4
ARPS	Mount Arapiles	33.83	173	P	P	20 10 34.7	+0.1
	baz=34,SNR=5.5						
ARPS	Mount Arapiles	33.83	173	P	P	20 10 35.3	+0.8
CAN	Canberra	33.99	162	P	P	20 10 36.4	+0.4
CAN				IAmb	IAmb	20 10 38.3	
	comp=Z,42nm,0.9s						
CAN	Canberra	33.99	162	P	P	20 10 37.1	+1.1
CAN	Canberra	33.99	162	P	P	20 10 36.4	+0.4
CAN				pmax	pmax		
	comp=Z,42nm,0.9s						
CNB	Canberra Magne	34.10	162	P	P	20 10 38.0	+1.1
DZM	Mont Dzumac	34.35	126	*e*S	S	20 16 04.4	+0.1
	comp=Z,99nm,22.4s						
DZM				*e*SS	SS	20 18 35.2	+0.8
	comp=Z,120nm,21.9s						
DZM				*e*LR	LR	20 19 53.0	
	comp=Z,650nm,28.4s						
DZM	Mont Dzumac	34.35	126	LR	LR	20 24 31.6	
	comp=Z,216nm,19.7s,baz=290,slow=36						
QIZ	Qiongzhong	34.50	311	P	P	20 10 41.3	+0.8
QIZ				S	S	20 16 08.3	+1.9
QIZ				LR	LR		
	comp=Z,350nm,19.1s						
QIZ				LR	LR		
	comp=Z,290nm,19.9s						
QIZ				LR	LR		
	comp=Z,450nm,22.3s						
AUUHS	Ulladulla High	34.50	160	P	P	20 10 41.9	+1.6
MASI	Maura Aman, Be	34.58	269	P	P	20 10 40.6	-0.8
	comp=Z,57nm,1.0s						
BRAT	Ballarat	34.91	170	P	P	20 10 45.7	+1.9
NWAO	Narrogin (SRO)	34.93	210	LR	LR	20 26 06.0	
	comp=Z,2µm,19.1s,baz=31,slow=38						
NWAO	Narrogin (SRO)	34.93	210	P	P	20 10 45.1	+1.0
NWAO	Narrogin (SRO)	34.93	210	P	P	20 10 45.1	+1.0
NWAO				pmax	pmax		
	comp=Z,129nm,1.0s						
TOO	Toolangi	35.22	168	P	P	20 10 47.9	+1.3
	baz=35,SNR=13						
TOO	Toolangi	35.22	168	P	P	20 10 47.3	+0.7
TOO				IAmb	IAmb	20 10 49.1	
	comp=Z,22nm,0.9s						
TOO	Toolangi	35.22	168	P	P	20 10 48.3	+1.7
TOO	Toolangi	35.22	168	P	P	20 10 47.3	+0.7
TOO				pmax	pmax		
	comp=Z,22nm,0.9s						
SDSI	Sungai Dareh	35.49	273	P	P	20 10 49.4	+0.3
	comp=Z,9.8nm,0.8s,comp=Z,832nm						
MILA	Mila	35.65	163	P	P	20 10 51.6	+1.3
	baz=36,SNR=13						
MILA	Mila	35.65	163	P	P	20 10 51.7	+1.4
PDSI	Padang	36.45	273	P	P	20 10 56.7	-0.8
	comp=Z,22nm,1.0s						
JNU	Nakatsue	36.45	352	LR	LR	20 24 04.8	
	comp=Z,499nm,20.7s,baz=162,slow=33						
JNU	Nakatsue	36.45	352	P	P	20 10 56.9	-0.2
JNU				IAmb	IAmb	20 10 58.2	
	comp=Z,19nm,0.8s						
JNU	Nakatsue	36.45	352	P	P	20 10 57.3	+0.1
IPM	Ipoh	36.60	282	P	P	20 10 57.9	-0.8
IPM				IAmb	IAmb	20 11 00.7	
	comp=Z,51nm,1.4s						
IPM	Ipoh	36.60	282	P	P	20 10 59.1	+0.4
KULM	Kulim	37.13	283	P	P	20 11 02.5	-0.7
SSE	Sheshan	37.13	337	P	P	20 11 03.3	+0.4
SSE				S	S	20 16 46.8	+0.4
SSE				pmax	pmax		
	comp=Z,15nm,0.7s						
SSE				pmax	pmax		
	comp=Z,76nm,3.9s						
SSE				LR	LR		
	comp=Z,140nm,23.5s						
SSE				LR	LR		
	comp=Z,130nm,23.9s						
SISI	Saibi	37.80	272	P	P	20 11 08.7	-0.1
	comp=Z,49nm,1.2s						
JHS	Saijyo	38.05	355	P	P	20 11 10.2	-0.4
JHS				IAmb	IAmb	20 11 23.7	
	comp=Z,60nm,1.6s						
RPSI	Rantau Prapat	38.37	278	P	P	20 11 12.6	-1.0
RPSI				IAmb	IAmb	20 11 14.3	
	comp=Z,42nm,1.1s						
PSI	Prapat	38.38	278	P	P	20 11 13.2	-0.7
PSI	Prapat	38.38	278	P	P	20 11 12.6	-1.3
PSI				pmax	pmax		
	comp=Z,42nm,1.1s						
TSI	Tuntungan	38.84	279	P	P	20 11 17.6	0.0
	comp=Z,49nm,1.0s						

NJ2	**Nanjing**	**38.91**	**335**	*e*P	**P**	**20 11 22.5**	**+4.6**
NJ2				pP	**sP**	**20 11 37.5**	**+2.4**
NJ2				sP	pP	20 11 45.3	+15
NJ2				PP	**PP**	**20 12 51.5**	**+3.8**
NJ2				S	**S**	**20 17 14.8**	**+1.5**
NJ2				SS	**SnSn**	**20 20 08.0**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,79nm,3.9s						
NJ2				LR	LR		
	comp=Z,490nm,21.8s						
NJ2				LR	LR		
	comp=Z,400nm,19.4s						
NJ2				LR	LR		
	comp=Z,500nm,19.9s						
SRIT	**Nakonsritamara**	**38.93**	**288**	P	**P**	**20 11 18.6**	**+0.2**
SRIT				IAmb	IAmb	20 11 20.0	
	comp=Z,56nm,0.8s						
SRIT	**Nakonsritamara**	**38.93**	**288**	P	**P**	**20 11 19.7**	**+1.3**
GLAD	**Gladstone**	**39.04**	**167**	P	**P**	**20 11 20.5**	**+1.6**
SURA	**Surathani**	**39.06**	**289**	P	**P**	**20 11 20.2**	**+0.7**
MJAR	**Matsushiro Arr**	**39.44**	**2**	P	**P**	**20 11 21.5**	**-0.8**
	comp=Z,2.8nm,0.8s,baz=179,slow=8.6,SNR=11						
MJAR				PcP	**PcP**	**20 13 30.3**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=185,slow=4.1,SNR=5.0						
	comp=Z,2.8nm,0.8s						
MAJO	**Matsushiro**	**39.44**	**2**	P	**P**	**20 11 21.9**	**-0.4**
MAJO	**Matsushiro**	**39.44**	**2**	⇑*e*P	**P**	**20 11 22.2**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,26nm,1.8s						
GSI	**Gunungsitoli**	**39.53**	**276**	P	**P**	**20 11 22.2**	**-1.2**
GSI				IAmb	IAmb	20 11 23.0	
	comp=Z,50nm,1.1s						
GSI	**Gunungsitoli**	**39.53**	**276**	P	**P**	**20 11 22.2**	**-1.2**
GSI	**Gunungsitoli**	**39.53**	**276**	P	**P**	**20 11 21.9**	**-1.5**
	comp=Z,45nm,1.2s						
KCSI	**Kotacane, Aceh**	**39.63**	**279**	P	**P**	**20 11 23.5**	**-0.7**
	comp=Z,24nm,1.5s						
WHN	**Wuhan**	**39.76**	**329**	P	**P**	**20 11 27.5**	**+2.5**
WHN				S	**S**	**20 17 30.8**	**+4.7**
WHN				pmax	pmax		
	comp=Z,64nm,1.2s						
WHN				pmax	pmax		
	comp=Z,610nm,4.9s						
WHN				LR	LR		
	comp=Z,1µm,29.5s						
TJN	**Taejon**	**40.25**	**348**	⇓*e*P	**P**	**20 11 30.9**	**+1.9**
MOO	**Moorlands**	**40.26**	**168**	P	**P**	**20 11 30.8**	**+1.8**
	baz=40,SNR=3.6						
LHMI	**Lhok Sumawe**	**40.73**	**282**	P	**P**	**20 11 32.9**	**-0.5**
LHMI	**Lhok Sumawe**	**40.73**	**282**	P	**P**	**20 11 34.1**	**+0.7**
LHMI	**Lhok Sumawe**	**40.73**	**282**	P	**P**	**20 11 34.0**	**+0.7**
	comp=Z,155nm,1.1s,comp=Z,2µm						
TAU	**Tasmania Unive**	**40.73**	**168**	P	**P**	**20 11 34.0**	**+1.1**
TAU	**Tasmania Unive**	**40.73**	**168**	P	**P**	**20 11 34.1**	**+1.1**
TAU	**Tasmania Unive**	**40.73**	**168**	P	**P**	**20 11 34.0**	**+1.1**
TAU				pmax	pmax		
	comp=Z,21nm,0.9s						
SNSI	**Sinabang, Aceh**	**40.90**	**277**	P	**P**	**20 11 36.1**	**+1.4**
	comp=Z,165nm,1.3s						
JMM	**Marumori**	**40.91**	**5**	P	**P**	**20 11 33.7**	**-0.6**
JMM				IAmb	IAmb	20 11 54.4	
	comp=Z,35nm,1.0s						
JMM	**Marumori**	**40.91**	**5**	P	**P**	**20 11 34.9**	**+0.5**
JSD	**Sado**	**40.93**	**2**	P	**P**	**20 11 34.5**	**-0.1**
MLSI	**Meulaboh, Aceh**	**41.09**	**280**	P	**P**	**20 11 36.0**	**-0.3**
	comp=Z,95nm,1.1s						
KSAR	**Wonju Array Be**	**41.18**	**349**	P	**P**	**20 11 36.0**	**-0.6**
KSAR	**Wonju Array Be**	**41.18**	**349**	P	**P**	**20 11 36.0**	**-0.6**
KSRS	**Korea Array**	**41.18**	**349**	P	**P**	**20 11 36.3**	**-0.4**
	comp=Z,2.7nm,0.9s,baz=167,slow=9.2,SNR=7.2						
KSRS				PcP	**PcP**	**20 13 35.6**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=172,slow=2.5,SNR=5.0						
KSRS				LR	LR	20 27 02.3	
	comp=Z,254nm,20.5s,baz=175,slow=34						
	comp=Z,2.7nm,0.9s						
GYA	**Guiyang**	**41.42**	**317**	⇓P	**P**	**20 11 40.0**	**+1.1**
GYA				pP	sP	20 11 53.3	-3.0
GYA				PcP	**PcP**	**20 13 37.0**	**+0.5**
GYA				S	**S**	**20 17 51.0**	**-0.3**
GYA				pmax	pmax		
	comp=Z,16nm,1.4s						
GYA				pmax	pmax		
	comp=Z,130nm,3.9s						
GYA				LR	LR		
	comp=Z,320nm,17.2s						
GYA				LR	LR		
	comp=Z,250nm,21.1s						
GYA				LR	LR		
	comp=Z,230nm,17.6s						
PHRA	**Phrae**	**41.97**	**302**	P	**P**	**20 11 43.4**	**0.0**
ENH	**Enshi**	**42.25**	**324**	P	**P**	**20 11 44.9**	**-0.7**
ENH				IAmb	IAmb	20 12 16.4	
	comp=Z,58nm,1.7s						
ENH	**Enshi**	**42.25**	**324**	P	**P**	**20 11 46.3**	**+0.7**
CRAI	**Chiangrai**	**42.66**	**304**	P	**P**	**20 11 48.4**	**-0.7**
MSVF	**Nonsavu**	**42.90**	**113**	LR	LR	20 28 54.9	
	comp=Z,293nm,19.7s,baz=286,slow=35						
CM31	**Chiang Mai Arr**	**43.05**	**301**	P	**P**	**20 11 52.4**	**+0.2**
CM31				IAmb	IAmb	20 11 54.1	
	comp=Z,39nm,1.1s						
CMAR	**Chiang Mai Arr**	**43.05**	**301**	P	**P**	**20 11 52.6**	**+0.4**
	comp=Z,19nm,1.0s,baz=124,slow=6.6,SNR=117						
CMAR				PcP	**PcP**	**20 13 43.0**	**+1.1**
	comp=Z,4.1nm,1.0s,baz=162,slow=1.3,SNR=4.3						
CMAR				LR	LR	20 31 04.9	
	comp=Z,67nm,19.1s,baz=110,slow=38						
	comp=Z,19nm,1.0s						
CMAR	**Chiang Mai Arr**	**43.05**	**301**	P	**P**	**20 11 52.4**	**+0.2**
CHTO	**Chiang Mai**	**43.20**	**302**	P	**P**	**20 11 53.4**	**-0.1**
CHTO	**Chiang Mai**	**43.20**	**302**	P	**P**	**20 11 53.4**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KMI	**Kunming**	**43.39**	**312**	⇑P	**P**	**20 11 56.0**	**+0.9**
KMI				pP	pP	20 12 08.0	+0.7
KMI				sP	sP	20 12 14.8	+2.3
KMI				S	**S**	**20 18 20.8**	**+0.2**
KMI				pmax	pmax		
	comp=Z,21nm,1.2s						
KMI				pmax	pmax		
	comp=Z,130nm,4.3s						
KMI				LR	LR		
	comp=Z,200nm,20.8s						
KMI				LR	LR		
	comp=Z,270nm,23.6s						
KMI				LR	LR		
	comp=Z,450nm,23.4s						
LYN	**LuoYang**	**43.91**	**331**	*e*P	**P**	**20 11 59.8**	**+0.9**
LYN				S	**S**	**20 18 28.3**	**+0.8**
LYN				LR	LR		
	comp=Z,170nm,15.1s						
LYN				LR	LR		
	comp=Z,150nm,10.6s						
LYN				LR	LR		
	comp=Z,270nm,26.7s						
PZH	**PanZhiHua**	**44.92**	**313**	P	**P**	**20 12 07.8**	**+0.5**
PZH				S	**S**	**20 18 39.5**	**-3.1**
PZH				pmax	pmax		
	comp=Z,20nm,1.1s						
PZH				pmax	pmax		
	comp=Z,90nm,5.1s						
PZH				LR	LR		
	comp=Z,510nm,19.1s						
PZH				LR	LR		
	comp=Z,520nm,21.5s						
PZH				LR	LR		
	comp=Z,1µm,20.6s						
HNS	**HongShan**	**45.24**	**335**	⇓P	**P**	**20 12 09.8**	**+0.4**
HNS				S	**S**	**20 18 44.8**	**-1.8**
HNS				SS	**SS**	**20 22 08.3**	**-2.2**
HNS				pmax	pmax		
	comp=Z,12nm,0.9s						
HNS				LR	LR		
	comp=Z,390nm,21.5s						
HNS				LR	LR		
	comp=Z,420nm,19.9s						
XAN	**Xi'an**	**45.36**	**327**	⇓*i*P	**P**	**20 12 10.8**	**+0.3**
XAN				S	**S**	**20 18 44.5**	**-4.1**
XAN				pmax	pmax		
	comp=Z,15nm,1.0s						
XAN				pmax	pmax		
	comp=Z,130nm,4.5s						
XAN				LR	LR		
	comp=Z,190nm,11.7s						
XAN				LR	LR		
	comp=Z,250nm,16.5s						
XAN				LR	LR		
	comp=Z,530nm,23.4s						
CD2	**Chengdu**	**46.25**	**319**	P	**P**	**20 12 18.5**	**+0.9**
CD2				S	**S**	**20 19 02.0**	**+0.5**
CD2				pmax	pmax		
	comp=Z,30nm,1.1s						
CD2				pmax	pmax		
	comp=Z,140nm,6.3s						
CD2				LR	LR		
	comp=Z,170nm,9.6s						
CD2				LR	LR		
	comp=Z,110nm,8.6s						
CD2				LR	LR		
	comp=Z,190nm,12.8s						
TNCH	**TengChong**	**46.54**	**309**	⇑P	**P**	**20 12 20.5**	**+0.4**
TNCH				pP	sP	20 12 35.0	-2.5
TNCH				sP	pP	20 12 41.8	+9.4
TNCH				S	**S**	**20 19 04.5**	**-1.6**
TNCH				pmax	pmax		
	comp=Z,34nm,1.1s						
TNCH				pmax	pmax		
	comp=Z,150nm,4.4s						
TNCH				LR	LR		
	comp=Z,160nm,16.8s						
TNCH				LR	LR		
	comp=Z,150nm,17.5s						
TNCH				LR	LR		
	comp=Z,160nm,17.7s						
BJT	**Baijiatuau**	**46.91**	**338**	P	**P**	**20 12 22.0**	**-0.6**
BJT	**Baijiatuau**	**46.91**	**338**	P	**P**	**20 12 22.0**	**-0.6**
BJT				pmax	pmax		
	comp=Z,15nm,1.3s						
BJI	**Beijing**	**46.93**	**338**	P	**P**	**20 12 22.8**	**+0.1**
BJI				pP	**sP**	**20 12 37.3**	**-2.8**
BJI				S	**S**	**20 19 04.8**	**-6.0**
BJI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BJI				pmax	pmax		
	comp=Z,33nm,3.6s						
BJI				LR	LR		
	comp=Z,170nm,17.9s						
BJI				LR	LR		
	comp=Z,110nm,18.5s						
BJI				LR	LR		
	comp=Z,210nm,17.9s						
MND	**Mandalay**	**47.00**	**304**	P	**P**	**20 12 23.9**	**+0.3**
USA0B	**Ussuriysk Arra**	**47.27**	**355**	P	**P**	**20 12 25.7**	**+0.4**
USA0B	**Ussuriysk Arra**	**47.27**	**355**	*ce*P	**P**	**20 12 27.2**	**+1.9**
USRK	**Ussuriysk Ar.**	**47.27**	**355**	P	**P**	**20 12 26.0**	**+0.7**
	comp=Z,7.0nm,0.7s,baz=175,slow=7.4,SNR=12						
	comp=Z,7.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**47.27**	**355**	P	**P**	**20 12 25.5**	**+0.2**
USRK	**Ussuriysk Ar.**	**47.27**	**355**	P	**P**	**20 12 26.0**	**+0.7**
CN2	**Changchun**	**47.79**	**349**	P	**P**	**20 12 29.0**	**-0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=Z,300nm,20.0s						
CN2				LR	LR		
	comp=Z,200nm,20.0s						
CN2				LR	LR		
	comp=Z,300nm,20.0s						
MDJ	**Mudanjiang**	**47.93**	**353**	P	**P**	**20 12 32.5**	**+2.1**
MDJ				sP	sP	20 12 52.5	+4.6
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,86nm,3.9s						
MDJ	**Mudanjiang**	**47.93**	**353**	P	**P**	**20 12 30.1**	**-0.3**
MDJ				IAmb	IAmb	20 12 34.9	
	comp=Z,11nm,0.8s						
MDJ	**Mudanjiang**	**47.93**	**353**	P	**P**	**20 12 31.5**	**+1.1**
BNX	**BinXian**	**49.33**	**351**	⇓P	**P**	**20 12 41.5**	**+0.3**
BNX				pmax	pmax		
	comp=Z,12nm,1.2s						
BNX				pmax	pmax		
	comp=Z,110nm,5.7s						
HHC	**Hu-ho-hao-te**	**49.46**	**335**	*e*P	**P**	**20 12 42.8**	**+0.4**
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,5.0s						
HHC				LR	LR		
	comp=Z,550nm,17.8s						
HHC				LR	LR		
	comp=Z,260nm,17.8s						
HHC				LR	LR		
	comp=Z,640nm,17.8s						
JCZ	**Jackson Bay**	**49.61**	**150**	P	**P**	**20 12 45.4**	**+1.9**
LZH	**Lanzhou**	**49.70**	**325**	*e*P	**P**	**20 12 45.5**	**+1.1**
LZH				pP	pP	20 12 57.0	+0.3
LZH				sP	sP	20 13 04.0	+2.1
LZH				PcP	**PcP**	**20 14 06.3**	**+1.2**
LZH				S	**S**	**20 19 51.0**	**+0.5**
LZH				sS	sS	20 20 18.5	+7.5
LZH				pmax	pmax		
	comp=Z,27nm,1.1s						
LZH				pmax	pmax		
	comp=Z,78nm,4.6s						
LZH				LR	LR		
	comp=Z,270nm,16.5s						
LZH				LR	LR		
	comp=Z,290nm,15.1s						
LZH				LR	LR		
	comp=Z,410nm,19.4s						
TKNZ	**Takaka Hill**	**49.80**	**144**	P	**P**	**20 12 45.7**	**+0.8**
BTO	**Baotou**	**49.94**	**333**	*e*P	**P**	**20 12 47.8**	**+1.8**
BTO				pP	**sP**	**20 13 01.0**	**-2.5**
BTO				sP	pP	20 13 10.3	+12
BTO				S	**S**	**20 19 54.8**	**+1.3**
BTO				SS	**SS**	**20 23 22.8**	**-4.2**
BTO				pmax	pmax		
	comp=Z,33nm,0.6s						
BTO				pmax	pmax		
	comp=Z,310nm,3.8s						
BTO				LR	LR		
	comp=Z,900nm,20.9s						
BTO				LR	LR		
	comp=Z,760nm,16.5s						
BTO				LR	LR		
	comp=Z,1µm,19.8s						
YSS	**Yuzh-Sakhalins**	**50.09**	**5**	*ce*P	**P**	**20 12 49.8**	**+2.9**
YSS				pmax	pmax		
	comp=Z,15nm,1.7s						
RAO	**Raoul Island**	**50.15**	**126**	LR	LR	20 33 28.6	
	comp=Z,111nm,18.6s,baz=36,slow=35						
RPZ	**Rata Peaks**	**50.52**	**148**	LR	LR	20 33 08.6	
	comp=Z,305nm,21.9s,baz=304,slow=35						
RPZ	**Rata Peaks**	**50.52**	**148**	P	**P**	**20 12 50.7**	**+0.4**
RPZ				IAmb	IAmb	20 13 09.7	
	comp=Z,49nm,1.1s						
TUWZ	**Tuamarina**	**50.63**	**144**	P	**P**	**20 12 50.9**	**-0.2**
URZ	**Urewera**	**50.72**	**139**	LR	LR	20 33 36.5	
	comp=Z,576nm,21.5s,baz=38,slow=35						
AFI	**Afiamalu**	**51.80**	**105**	LR	LR	20 33 34.8	
	comp=Z,107nm,21.8s,baz=308,slow=34						
SHL	**Shillong**	**52.05**	**306**	P	**P**	**20 13 01.8**	**-0.5**
SHL				IAmb	IAmb	20 13 03.5	
	comp=Z,40nm,0.9s						
SHL	**Shillong**	**52.05**	**306**	P	**P**	**20 13 01.8**	**-0.5**
SHL				pmax	pmax		
	comp=Z,40nm,0.9s						
KLR	**Kul'dur**	**52.29**	**356**	*c* *i*P	**P**	**20 13 03.9**	**+0.5**
KLR				pmax	pmax		
	comp=Z,18nm,0.8s						
GRNR	**Gornyy**	**53.65**	**360**	⇓*i*P	**P**	**20 13 14.3**	**+1.0**
GRNR				pmax	pmax		
	comp=N,2.0nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GRNR				MLR	MLR		
	comp=N,100nm,15.0s						
GRNR				MLR	MLR		
	comp=E,180nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,290nm,15.0s						
HEH	**HeiHe**	**53.75**	**352**	*e*P	**P**	**20 13 12.8**	**-1.3**
HEH				PcP	**PcP**	**20 14 19.5**	**-0.2**
HEH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HIA	**Hailar**	**54.22**	**346**	P	**P**	**20 13 17.8**	**+0.2**
HIA	**Hailar**	**54.22**	**346**	P	**P**	**20 13 20.6**	**+3.0**
HIA	**Hailar**	**54.22**	**346**	P	**P**	**20 13 17.8**	**+0.2**
HIA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
GTA	**Gaotai**	**54.30**	**325**	*e*P	**P**	**20 13 19.5**	**+1.0**
GTA				pP	sP	20 13 36.0	-0.1
GTA				sP	pP	20 13 44.3	+13
GTA				S	**S**	**20 20 48.3**	**-5.1**
GTA				pmax	pmax		
	comp=Z,11nm,0.9s						
GTA				LR	LR		
	comp=Z,110nm,15.6s						
GTA				LR	LR		
	comp=Z,190nm,17.1s						
GTA				LR	LR		
	comp=Z,120nm,17.8s						
LSA	**Lhasa**	**54.54**	**310**	P	**P**	**20 13 22.0**	**+1.2**
LSA				pmax	pmax		
	comp=Z,36nm,0.9s						
LSA	**Lhasa**	**54.54**	**310**	P	**P**	**20 13 20.9**	**+0.1**
LSA				IAmb	IAmb	20 13 23.5	
	comp=Z,23nm,0.8s						
LSA	**Lhasa**	**54.54**	**310**	P	**P**	**20 13 20.9**	**+0.1**
LSA				pmax	pmax		
	comp=Z,23nm,0.8s						
GOMU	**GeErMu**	**55.37**	**319**	P	**P**	**20 13 28.0**	**+1.4**
GOMU				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GOMU				pmax	pmax		
	comp=Z,89nm,4.8s						
GOMU				LR	LR		
	comp=Z,98nm,19.6s						
GOMU				LR	LR		
	comp=Z,190nm,20.4s						
GOMU				LR	LR		
	comp=Z,240nm,20.1s						
TAPN	**Taplejung**	**56.20**	**306**	*e*P	**P**	**20 13 32.8**	**+0.2**
	comp=Z,111nm,1.1s						
RAMN	**Ramite**	**56.94**	**305**	*e*P	**P**	**20 13 38.5**	**+0.7**
	comp=Z,86nm,0.9s						
PALK	**Pallekele**	**56.99**	**281**	LR	LR	20 41 02.6	
	comp=Z,92nm,18.1s,baz=213,slow=39						
ULN	**Ulaanbaatar**	**57.05**	**336**	P	**P**	**20 13 37.9**	**-0.3**
ULN	**Ulaanbaatar**	**57.05**	**336**	*c* *i*P	**P**	**20 13 38.2**	**+0.1**
ULN				pmax	pmax		
	comp=Z,12nm,1.7s						
ZEA	**Zeya**	**57.19**	**353**	*e*P	**P**	**20 13 39.4**	**+0.7**
ZEA				*e*		20 13 51.1	
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
ZEA				MLR	MLR		
	comp=E,200nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,16.0s						
SONM	**Songino Array**	**57.29**	**336**	P	**P**	**20 13 39.8**	**0.0**
	comp=Z,2.3nm,0.8s,baz=153,slow=8.3,SNR=21						
SONM				PcP	**PcP**	**20 14 33.8**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=147,slow=4.5,SNR=4.0						
SONM				LR	LR	20 37 21.6	
	comp=Z,495nm,21.6s,baz=132,slow=35						
	comp=Z,2.3nm,0.8s						
SONM	**Songino Array**	**57.29**	**336**	P	**P**	**20 13 39.7**	**0.0**
SONM	**Songino Array**	**57.29**	**336**	P	**P**	**20 13 39.7**	**-0.1**
SONM				pmax	pmax		
	comp=Z,5.0nm,1.1s						
JIRN	**Jiri**	**57.55**	**306**	*e*P	**P**	**20 13 42.7**	**+0.4**
GUN	**Gumba**	**57.91**	**306**	*e*P	**P**	**20 13 45.1**	**+0.3**
PKI	**Pulchoki**	**58.15**	**305**	*e*P	**P**	**20 13 46.6**	**+0.1**
PKIN	**Phulchoki**	**58.17**	**305**	*e*P	**P**	**20 13 46.5**	**0.0**
DMN	**Daman**	**58.42**	**305**	*e*P	**P**	**20 13 48.8**	**+0.6**
PEA0B	**Petropavlovsk-**	**58.66**	**15**	P	**P**	**20 13 50.1**	**+1.0**
PEA0B	**Petropavlovsk-**	**58.66**	**15**	P	**P**	**20 13 50.1**	**+1.0**
PEA0B				pmax	pmax		
	comp=Z,121nm,1.6s						
PETK	**Petropavlovsk-**	**58.66**	**15**	P	**P**	**20 13 50.4**	**+1.3**
	comp=Z,4.7nm,0.7s,baz=143,slow=3.4,SNR=6.4						
	comp=Z,4.7nm,0.7s						
PETK	**Petropavlovsk-**	**58.66**	**15**	P	**P**	**20 13 49.4**	**+0.3**
PETK	**Petropavlovsk-**	**58.66**	**15**	P	**P**	**20 13 49.4**	**+0.3**
GKN	**Gorkha**	**58.95**	**305**	*e*P	**P**	**20 13 52.3**	**+0.5**
DANN	**Dangsing**	**59.80**	**305**	*e*P	**P**	**20 13 58.2**	**+0.4**
	comp=Z,63nm,0.8s						
PYUN	**Piuthan**	**60.34**	**305**	*e*P	**P**	**20 14 02.0**	**+0.6**
	comp=Z,206nm,0.9s						
ZAK	**Zakamensk**	**60.56**	**336**	*e*P	**P**	**20 14 02.4**	**0.0**
ZAK				pmax	pmax		
	comp=Z,14nm,1.4s						
HYB	**Hyderabad**	**61.00**	**292**	*e*P	**P**	**20 14 05.7**	**-0.3**
MOY	**Mondy**	**62.48**	**336**	*e*P	**P**	**20 14 15.9**	**+0.6**
MOY				pmax	pmax		
	comp=Z,22nm,1.6s						
MA2	**Magadan**	**63.43**	**8**	P	**P**	**20 14 21.7**	**+0.4**
MA2	**Magadan**	**63.43**	**8**	P	**P**	**20 14 21.7**	**+0.4**
MA2				pmax	pmax		
	comp=Z,63nm,1.7s						
BOD	**Bodaibo**	**63.43**	**347**	*e*P	**P**	**20 14 20.9**	**-0.5**
BOD				pmax	pmax		
	comp=Z,30nm,1.6s						
SHEM	**Shemya Is, Ala**	**63.82**	**24**	LR	LR	20 39 13.8	
	comp=Z,182nm,20.9s,baz=338,slow=33						
WMQ	**Urumqi**	**64.18**	**323**	⇑*i*P	**P**	**20 14 27.0**	**+0.3**
WMQ				pP	pP	20 14 37.8	-1.6
WMQ				sP	sP	20 14 45.0	+0.6
WMQ				LR	LR		
	comp=Z,210nm,9.5s						
WMQ				LR	LR		
	comp=Z,150nm,26.5s						
YAK	**Yakutsk**	**65.17**	**356**	LR	LR	20 40 11.1	
	comp=Z,542nm,22.0s,baz=138,slow=33						
YAK	**Yakutsk**	**65.17**	**356**	P	**P**	**20 14 32.8**	**+0.2**
YAK	**Yakutsk**	**65.17**	**356**	*e*P	**P**	**20 14 33.0**	**+0.4**
YAK				*e**PP	**pP**	**20 14 43.9**	**-1.5**
YAK				*e*		20 15 04.8	
YAK				*e*S	**S**	**20 23 13.4**	**+1.2**
YAK				*e**SS	**sS**	**20 23 34.3**	**+0.7**
YAK				*e*		20 24 21.5	
YAK				pmax	pmax		
	comp=Z,28nm,0.7s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.8s						
YAK				smax	smax		
	comp=N,136nm,4.0s						
YAK				smax	smax		
	comp=E,82nm,4.4s						
SEY	**Seymchan**	**66.88**	**8**	⇓*i*P	**P**	**20 14 44.4**	**+0.8**
SEY				pmax	pmax		
	comp=Z,14nm,1.7s						
DGZ	**Jazzator, Alta**	**67.61**	**328**	*c* *i*P	**P**	**20 14 48.5**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,12nm,1.1s						
ZSN	**Zaisan**	**67.80**	**325**	*e*P	**P**	**20 14 49.8**	**0.0**
	baz=325						
ZSN	**Zaisan**	**67.80**	**325**	*e*P	**P**	**20 14 49.8**	**0.0**
MK31	**Makanchi Array**	**68.98**	**323**	P	**P**	**20 14 56.8**	**-0.4**
MK31				IAmb	IAmb	20 14 58.6	
	comp=Z,17nm,1.2s						
MK31	**Makanchi Array**	**68.98**	**323**	P	**P**	**20 14 56.8**	**-0.4**
MK31				pmax	pmax		
	comp=Z,17nm,1.3s						
MKAR	**Makanchi Array**	**68.98**	**323**	P	**P**	**20 14 57.2**	**0.0**
	comp=Z,6.1nm,0.8s,baz=114,slow=8.1,SNR=46						
	comp=Z,6.1nm,0.8s						
MKAR	**Makanchi Array**	**68.98**	**323**	P	**P**	**20 14 56.9**	**-0.3**
MKAR	**Makanchi Array**	**68.98**	**323**	P	**P**	**20 14 56.9**	**-0.3**
SHLS	**Shalkode**	**69.08**	**319**	*e*P	**P**	**20 14 56.6**	**-1.4**
	comp=Z,16nm,1.2s,baz=319						
SHLS	**Shalkode**	**69.08**	**319**	*e*P	**P**	**20 14 56.6**	**-1.4**
SHLS				pmax	pmax		
	comp=Z,16nm,1.2s						
UZB	**Uzynbulak**	**69.36**	**319**	*e*P	**P**	**20 15 00.2**	**+0.3**
	comp=Z,17nm,1.1s,baz=319						
UZB	**Uzynbulak**	**69.36**	**319**	*e*P	**P**	**20 15 00.1**	**+0.3**
UZB				pmax	pmax		
	comp=Z,17nm,1.1s						
TARG	**Taragay, Kyrgy**	**69.59**	**317**	P	**P**	**20 15 01.5**	**-0.1**
TARG				IAmb	IAmb	20 15 13.0	
	comp=Z,16nm,1.1s						
TARG	**Taragay, Kyrgy**	**69.59**	**317**	P	**P**	**20 15 01.5**	**-0.1**
TARG				pmax	pmax		
	comp=Z,16nm,1.1s						
KPKS	**Kokpek**	**69.72**	**319**	*e*P	**P**	**20 15 02.1**	**+0.2**
	comp=Z,16nm,1.3s,baz=319						
KPKS	**Kokpek**	**69.72**	**319**	*e*P	**P**	**20 15 02.1**	**+0.2**
KPKS				pmax	pmax		
	comp=Z,16nm,1.3s						
SATY	**Saty**	**69.73**	**318**	*e*P	**P**	**20 15 02.5**	**+0.4**
	comp=Z,18nm,1.0s,baz=318						
SATY	**Saty**	**69.73**	**318**	*e*P	**P**	**20 15 02.4**	**+0.4**
SATY				pmax	pmax		
	comp=Z,18nm,1.0s						

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ZHN   Zhinishke        69.76 318  eP    P      20 15 02.4 +0.1
      baz=318
ZHN   Zhinishke        69.76 318  eP    P      20 15 02.3 +0.1
KSH   Kashi            70.02 314  P     P      20 15 05.5 +1.6
KSH                               pP    sP     20 15 21.0 -0.8
KSH                               PcP   PcP    20 15 27.0 +1.1
KSH                               PP    PP     20 17 45.8 +6.5
KSH                               S     S      20 24 13.3 +1.7
KSH                               ScS   SKSac  20 25 01.5 -0.4
KSH                               pmax  pmax
      comp=Z,33nm,1.4s
KSH                               pmax  pmax
      comp=Z,200nm,9.2s
KSH                               LR    LR
      comp=Z,180nm,16.5s
KSH                               LR    LR
      comp=Z,190nm,16.5s
KSH                               LR    LR
      comp=Z,260nm,23.4s
NIL   Nilore           70.09 307  P     P      20 15 04.0 -0.3
NIL   Nilore           70.09 307  P     P      20 15 04.0 -0.3
NIL                               pmax  pmax
      comp=Z,26nm,0.8s
KDJ   Kajisay          70.18 317  P     P      20 15 05.0 +0.1
KDJ                               IAmb  IAmb   20 15 06.7
      comp=Z,17nm,0.9s
KDJ   Kajisay          70.18 317  P     P      20 15 05.0 +0.1
KDJ                               pmax  pmax
      comp=Z,17nm,0.9s
TDK   Taldyqorghan     70.56 320  eP    P      20 15 07.5 +0.5
      comp=Z,19nm,0.8s,baz=320
TDK   Taldyqorghan     70.56 320  eP    P      20 15 07.4 +0.5
TDK                               pmax  pmax
      comp=Z,19nm,0.8s
MDOK  Medeo            70.68 318  eP    P      20 15 07.8 -0.2
      baz=318
MDOK  Medeo            70.68 318  eP    P      20 15 07.7 -0.2
TNSS  Tian-Shan        70.70 318  eP    P      20 15 09.1 +0.7
      baz=318
TNSS  Tian-Shan        70.70 318  eP    P      20 15 09.0 +0.7
AAA   Alma-Ata         70.79 318  eP    P      20 15 09.0 +0.5
      comp=Z,20nm,0.9s,baz=318
AAA   Alma-Ata         70.79 318  eP    P      20 15 08.9 +0.5
AAA                               pmax  pmax
      comp=Z,20nm,0.9s
ULHL  Ulahol           70.86 317  P     P      20 15 10.1 +0.9
      SNR=5.5
CHKK  Chushkaly        71.00 319  eP    P      20 15 09.7  0.0
      baz=319
CHKK  Chushkaly        71.00 319  eP    P      20 15 09.6  0.0
ZAA0  Zalesovo Array   71.35 331  P     P      20 15 10.0 -1.5
ZALV  Zalesovo Beam    71.35 331  P     P      20 15 10.8 -0.7
      comp=Z,5.7nm,0.6s,baz=118,slow=5.9,SNR=31
      comp=Z,5.7nm,0.6s
ZALV  Zalesovo Beam    71.35 331  P     P      20 15 10.1 -1.4
ZALV  Zalesovo Beam    71.35 331  P     P      20 15 10.1 -1.4
KUU   Kurty            71.45 318  eP    P      20 15 12.5 +0.1
      comp=Z,21nm,1.0s,baz=318
KUU   Kurty            71.45 318  eP    P      20 15 12.4 +0.1
KUU                               pmax  pmax
      comp=Z,21nm,1.0s
TKM2  Tokmak 2         71.56 317  P     P      20 15 13.6 +0.3
      SNR=21
KBK   Karagaybulak     71.91 317  P     P      20 15 15.8 +0.4
      SNR=10
SEM   Semipalatinsk    71.92 326  eP    P      20 15 13.7 -1.7
      baz=326
SEM   Semipalatinsk    71.92 326  eP    P      20 15 13.6 -1.7
UCH   Uchtor           72.05 316  P     P      20 15 17.3 +0.8
      SNR=39
CHMS  Chumysh          72.17 317  P     P      20 15 17.3 +0.6
      SNR=9.2
FRU1  Bishkek          72.18 317  P     P      20 15 17.2 +0.3
FRU1  Bishkek          72.18 317  P     P      20 15 17.2 +0.3
FRU1                              pmax  pmax
      comp=Z,13nm,1.0s
AAK   Ala-Archa        72.21 317  P     P      20 15 18.2 +1.0
      SNR=15
AAK   Ala-Archa        72.21 317  P     P      20 15 16.9 -0.2
AAK                               IAmb  IAmb   20 15 18.9
      comp=Z,29nm,1.4s
AAK   Ala-Archa        72.21 317c iP    P      20 15 17.3 +0.1
AAK                               pmax  pmax
      comp=Z,16nm,1.0s
SGDS  Sogindy          72.42 317  eP    P      20 15 18.1 -0.3
      baz=318
SGDS  Sogindy          72.42 317  eP    P      20 15 18.0 -0.3
USP   Ospenovka        72.44 317  P     P      20 15 18.5 +0.1
      SNR=31
AML   Almayashu        72.58 316  P     P      20 15 20.4 +0.8
      SNR=50
EKS2  Erkin-Say        72.71 316  P     P      20 15 20.7 +0.6
      SNR=23
KURK  Kurchatov        72.98 326  P     P      20 15 20.9 -0.4
KURK                              IAmb  IAmb   20 15 34.9
      comp=Z,60nm,1.9s
KURK  Kurchatov        72.98 326c iP    P      20 15 20.8 -0.5
KURK                              pmax  pmax
      comp=Z,19nm,1.3s
PPT2  Papeete2         73.39 107  eP    P      20 15 26.0 +1.4
      comp=Z,26nm,22.2s
PPT2  Papeete2         73.39 107  eLR   LR     20 37 59.2
      comp=Z,418nm,32.2s
BTLS  Baital           73.41 319  eP    P      20 15 23.8 -0.2
      baz=319
BTLS  Baital           73.41 319  eP    P      20 15 23.8 -0.2
KBL   Kabul            73.69 307  P     P      20 15 25.2 -1.0
KBL                               IAmb  IAmb   20 15 26.7
      comp=Z,18nm,0.8s
KBL   Kabul            73.69 307  P     P      20 15 25.2 -1.0
KBL                               pmax  pmax
      comp=Z,18nm,0.8s
TBI   Tubuai           73.79 113  eLR   LR     20 38 09.9
      comp=Z,3µm,28.2s
TBI                               eLR   LR     20 38 10.0
      comp=Z,1µm,31.2s
BILL  Bilibino         73.88  11  eP    P      20 15 26.2 -0.1
BILL                              e            20 15 40.9
BILL                              e*PP  sP     20 15 43.0 -1.2
BILL                              ePPP  PPP    20 19 59.2
BILL                              pmax  pmax
      comp=Z,8.0nm,1.3s
BTK   Batken           73.93 313  P     P      20 15 26.9 -0.4
BTK                               IAmb  IAmb   20 15 28.7
      comp=Z,36nm,1.4s
BTK   Batken           73.93 313  P     P      20 15 26.9 -0.4
BTK                               pmax  pmax
      comp=Z,36nm,1.4s
GAR   Garm             73.97 312  P     P      20 15 27.4 -0.3
DZA   Taraz            74.48 316  eP    P      20 15 30.2 -0.2
      baz=316
DZA   Taraz            74.48 316  eP    P      20 15 30.1 -0.2
CHGR  Chuyangaron      74.74 311  P     P      20 15 31.6 -0.4
CHGR  Chuyangaron      74.74 311  P     P      20 15 31.6 -0.4
CHGR                              pmax  pmax
      comp=Z,49nm,0.8s
TIXI  Tiksi            74.78 357  P     P      20 15 30.6 -0.8
TIXI  Tiksi            74.78 357  P     P      20 15 30.6 -0.8
TIXI                              pmax  pmax
      comp=Z,12nm,1.2s
KK31  Karatay Array    75.12 316  P     P      20 15 33.4 -0.6
KK31                              IAmb  IAmb   20 15 35.1
      comp=Z,14nm,0.8s
KK31  Karatay Array    75.12 316  P     P      20 15 33.4 -0.6
KK31                              pmax  pmax
      comp=Z,14nm,0.8s
KKAR  Karatay Array    75.12 316  P     P      20 15 33.3 -0.7
KKAR  Karatay Array    75.12 316  P     P      20 15 33.3 -0.7
IUG   Iuzhnay          75.15 315  eP    P      20 15 34.6 +0.2
      comp=Z,15nm,1.0s,baz=315
IUG   Iuzhnay          75.15 315  eP    P      20 15 34.5 +0.2
IUG                               pmax  pmax
      comp=Z,15nm,1.0s
TAS   Tashkent         75.42 314  P     P      20 15 35.9  0.0
TAS   Tashkent         75.42 314  P     P      20 15 35.9  0.0
TAS                               pmax  pmax
      comp=Z,75nm,1.3s
CHM   Chimkent         75.50 315  eP    P      20 15 36.6 +0.3
      comp=Z,13nm,0.7s,baz=315
CHM   Chimkent         75.50 315  eP    P      20 15 36.6 +0.3
CHM                               pmax  pmax
      comp=Z,13nm,0.7s
VNDA  Vanda            75.58 175  P     P      20 15 35.9 -0.1
      comp=Z,5.3nm,0.8s,baz=324,slow=7.3,SNR=17
VNDA                              LR    LR     20 47 37.7
      comp=Z,345nm,20.0s,baz=344,slow=35
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      comp=Z,5.3nm,0.8s
VNDA  Vanda            75.58 175  P     P      20 15 36.2 +0.2
VNDA  Vanda            75.58 175  P     P      20 15 36.2 +0.2
VNDA                              pmax  pmax
      comp=Z,7.0nm,0.9s
BRZS  Berezniki        76.13 323  eP    P      20 15 39.4 -0.3
      baz=323
BRZS  Berezniki        76.13 323  eP    P      20 15 39.3 -0.3
BRVK  Borovoye         78.65 326  P     P      20 15 53.2 -0.5
BRVK                              IAmb  IAmb   20 15 54.6
      comp=Z,27nm,0.8s
BRVK  Borovoye         78.65 326  P     P      20 15 53.2 -0.5
BRVK                              pmax  pmax
      comp=Z,27nm,0.8s
NRIK  Noril'sk         79.57 344  P     P      20 15 58.1 -0.3
      comp=Z,12nm,0.9s,baz=126,slow=5.5,SNR=16
NRIK                              LR    LR     20 53 51.7
      comp=Z,94nm,20.5s,baz=134,slow=38
      comp=Z,12nm,0.9s
NRIK  Noril'sk         79.57 344  P     P      20 15 58.5 +0.1
NRIK                              IAmb  IAmb   20 15 59.6
      comp=Z,29nm,1.2s
NRIK  Noril'sk         79.57 344c iP    P      20 15 58.3 -0.1
NRIK                              pmax  pmax
      comp=Z,28nm,1.3s
P16K  Nushagak River   80.13  28  P     P      20 16 03.0 +1.4
      baz=247
O17K  Koliganek Bris   80.84  28  P     P      20 16 06.9 +1.5
      baz=248
MAW   Mawson           81.09 202  LR    LR     20 49 56.7
      comp=Z,266nm,19.0s,baz=70,slow=34
RDOG  Red Dog Mine     82.13  19  P     P      20 16 12.7 +0.6
RDOG                              IAmb  IAmb   20 16 26.4
      comp=Z,20nm,1.4s
KDAK  Kodiak Island    82.35  31  LR    LR     20 48 22.8
      comp=Z,289nm,21.9s,baz=257,slow=32
KDAK  Kodiak Island    82.35  31  P     P      20 16 13.2 -0.2
KDAK  Kodiak Island    82.35  31  P     P      20 16 13.2 -0.2
KDAK                              pmax  pmax
      comp=Z,92nm,1.8s
TAOE  Nuku Hiva Isla   82.60  98  eLR   LR     20 42 14.9
      comp=Z,252nm,26.2s
L19K  White Mountain   82.75  26  P     P      20 16 16.9 +1.4
L19K                              IAmb  IAmb   20 16 29.6
      comp=Z,13nm,1.1s
L19K  White Mountain   82.75  26  P     P      20 16 17.5 +2.0
      baz=249
M19K  Big River Lodg   82.85  26  P     P      20 16 17.5 +1.5
      baz=250
GEYT  Alibeck          83.04 309  P     P      20 16 17.7 +0.2
      comp=Z,11nm,0.8s,baz=150,slow=3.3,SNR=22
GEYT                              LR    LR     20 56 02.9
      comp=Z,166nm,20.8s,baz=90,slow=38
      comp=Z,11nm,0.8s
GEYT  Alibeck          83.04 309  P     P      20 16 17.6 +0.2
GEYT                              IAmb  IAmb   20 16 19.0
      comp=Z,14nm,0.8s
GYA0B ALIBECK ARRAY    83.04 309  P     P      20 16 17.7 +0.2
GYA0B                             IAmb  IAmb   20 16 19.0
      comp=Z,13nm,0.8s
M20K  Styx River       83.41  27  P     P      20 16 19.0 +0.1
M20K                              IAmb  IAmb   20 16 37.8
      comp=Z,15nm,1.4s
M20K  Styx River       83.41  27  P     P      20 16 20.1 +1.1
      baz=251
K20K  Telida           83.50  25  P     P      20 16 19.6 +0.4
K20K                              IAmb  IAmb   20 16 36.1
      comp=Z,32nm,1.6s
K20K  Telida           83.50  25  P     P      20 16 21.3 +2.0
      baz=250
ABKAR Akbulak array    83.83 320  P     P      20 16 20.4 -0.9
SUA   Susitna One      84.36  27  P     P      20 16 24.0 +0.2
SUA                               IAmb  IAmb   20 16 28.5
      comp=Z,24nm,1.5s
CAST  Castle Rocks     84.36  25  P     P      20 16 25.1 +1.4
      baz=252
CHUM  Lake Minchumin   84.41  25  P     P      20 16 25.3 +1.4
      baz=251
IMAR  Indian Mountai   84.54  23  P     P      20 16 24.6 +0.1
G21K  Allakaket        84.81  22  P     P      20 16 27.4 +1.5
      baz=250
F21K  Alatna River     85.06  21  P     P      20 16 29.0 +1.8
      baz=250
SVE   Sverdlovsk       85.07 328  eP    P      20 16 27.2 -0.2
SVE                               pmax  pmax
      comp=Z,24nm,1.1s
KNK   Knik Glacier     85.40  28  P     P      20 16 29.1 +0.1
KNK                               IAmb  IAmb   20 16 33.9
      comp=Z,23nm,1.2s
KNK   Knik Glacier     85.40  28  P     P      20 16 29.8 +0.8
      baz=255
SML   Sawmill          85.56  27  P     P      20 16 30.5 +0.7
      baz=255
F22K  John River       85.64  21  P     P      20 16 31.8 +1.8
      baz=251
BWN   Browne           85.70  25  P     P      20 16 31.4 +1.1
RND   Reindeer         85.75  26  P     P      20 16 30.4 -0.3
RND   Reindeer         85.75  26  P     P      20 16 30.4 -0.3
RND                               pmax  pmax
      comp=Z,9.0nm,1.0s
NEA2  Nenana           85.98  25  P     P      20 16 33.2 +1.4
      baz=254
I23K  Minto, Yukon-K   86.01  24  P     P      20 16 33.4 +1.5
      baz=254
SCM   Sheep Creek Mo   86.03  27  P     P      20 16 32.3 +0.2
SCM   Sheep Creek Mo   86.03  27  P     P      20 16 32.3 +0.2
SCM                               pmax  pmax
      comp=Z,65nm,1.9s
SCM   Sheep Creek Mo   86.03  27  P     P      20 16 33.1 +1.0
      baz=256
ARU   Arti             86.10 327  P     P      20 16 31.1 -1.4
ARU                               IAmb  IAmb   20 16 33.0
      comp=Z,15nm,1.0s
ARU   Arti             86.10 327c iP    P      20 16 31.3 -1.2
ARU                               S     S      20 26 51.3  -12
ARU                               pmax  pmax
      comp=Z,16nm,1.0s
H23K  Yukon River      86.13  23  P     P      20 16 34.0 +1.5
      baz=254
G23K  Bananza Creek    86.19  22  P     P      20 16 34.1 +1.3
      baz=253
COLD  Coldfoot         86.28  22  P     P      20 16 33.5 +0.3
COLD                              IAmb  IAmb   20 16 48.4
      comp=Z,25nm,1.4s
COLD  Coldfoot         86.28  22  P     P      20 16 34.9 +1.7
      baz=253
WRH   Wood River Hil   86.36  25  P     P      20 16 33.4 -0.1
MDM   Murphy Dome      86.42  24  P     P      20 16 33.4 -0.6
MDM                               IAmb  IAmb   20 16 49.5
      comp=Z,16nm,1.4s
CCB   Clear Creek Bu   86.52  25  P     P      20 16 33.9 -0.4
CCB                               IAmb  IAmb   20 16 35.6
      comp=Z,24nm,1.2s
COLA  College          86.56  24ceP     P      20 16 33.3 -1.2
COLA                              pmax  pmax
      comp=Z,20nm,1.8s
DIV   Divide           86.60  28  P     P      20 16 35.3 +0.3
DIV                               IAmb  IAmb   20 16 37.6
      comp=Z,12nm,0.8s
KLU   Klutina          86.60  28  P     P      20 16 37.4 +2.4
      baz=257
D23K  Nanushuk River   86.62  20  P     P      20 16 37.1 +2.3
      baz=252
E23K  Chandalar        86.73  21  P     P      20 16 37.0 +1.6
      baz=254
H24K  Noodor Dome      86.79  23  P     P      20 16 36.6 +0.8
      baz=255
QSPA  South Pole Qui   86.86 180  LR    LR     20 56 42.7
      comp=Z,228nm,18.3s,baz=4.0,slow=36
QSPA  South Pole Qui   86.86 180  P     P      20 16 36.2  0.0
IL31                   86.93  25  P     P      20 16 35.4 -0.9
IL31                              IAmb  IAmb   20 16 36.5
      comp=Z,14nm,1.2s
ILAR  Eielson Array    86.93  25  P     P      20 16 35.0 -1.4
      comp=Z,6.5nm,1.0s,baz=257,slow=4.1,SNR=27
      comp=Z,6.5nm,1.0s
ILAR  Eielson Array    86.93  25  P     P      20 16 35.2 -1.2
ILAR  Eielson Array    86.93  25  P     P      20 16 35.2 -1.2
PAX   Paxson           87.13  27  P     P      20 16 38.0 +0.5
PAX   Paxson           87.13  27  P     P      20 16 38.0 +0.5
PAX   Paxson           87.13  27  P     P      20 16 38.6 +1.1
      baz=258
G24K  Hadweenzic Riv   87.17  23  P     P      20 16 39.1 +1.5
      baz=256
K24K  Donnelly Dome    87.18  26  P     P      20 16 38.4 +0.7
      baz=257
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F24K  Squaw Lake       87.22  22  P     P      20 16 39.4 +1.6
      baz=255
N25K  Chitina, Valde   87.25  28  P     P      20 16 39.8 +1.7
      baz=258
RIDG  Independent Ri   87.57  26  P     P      20 16 39.3 -0.3
RIDG  Independent Ri   87.57  26  P     P      20 16 40.4 +0.8
      baz=258
G25K  Bearman Lake     87.71  23  P     P      20 16 42.1 +2.0
      baz=257
DOT   Dot Lake         87.89  26  P     P      20 16 41.1  0.0
DOT                               IAmb  IAmb   20 16 42.5
      comp=Z,16nm,1.1s
SCRK  Sand Creek       87.99  26  P     P      20 16 41.9 +0.2
SCRK                              IAmb  IAmb   20 17 04.7
      comp=Z,20nm,1.6s
SCRK  Sand Creek       87.99  26  P     P      20 16 42.5 +0.9
      baz=259
F25K  Christian Rive   88.07  22  P     P      20 16 43.2 +1.3
      baz=257
L26K  Log Cabin Wild   88.09  27  P     P      20 16 43.4 +1.3
      baz=260
E25K  Arctic Village   88.22  21  P     P      20 16 44.0 +1.4
      baz=257
BMAR  Burnt Mountain   88.44  22  P     P      20 16 43.9 +0.2
I26K  Coal Creek Min   88.59  24  P     P      20 16 45.1 +0.8
      baz=260
G26K  Porcupine Rive   88.65  23  P     P      20 16 45.8 +1.2
      baz=259
M27K  Edge Creek, AK   88.65  27  P     P      20 16 46.6 +1.7
      baz=261
F26K  Sheenjek River   88.66  22  P     P      20 16 46.2 +1.6
      baz=259
L27K  Beaver Creek,    88.78  27  P     P      20 16 46.6 +1.3
      baz=261
BCAR  Beaver Creek A   88.80  27  P     P      20 16 46.0 +0.5
K27K  Chicken          88.83  26  P     P      20 16 47.3 +1.9
      baz=261
BVCY  Beaver Creek     89.12  27  P     P      20 16 48.1 +1.2
      baz=262
YUK3  Moose Creek      89.22  28  P     P      20 16 49.0 +1.4
      baz=262
I27K  Kandik River     89.28  24  P     P      20 16 49.1 +1.5
      baz=261
EGAK  Eagle            89.34  25  P     P      20 16 49.1 +1.2
      baz=261
E27K  Coleen River     89.69  22  P     P      20 16 50.6 +1.1
      baz=261
DAWY  Dawson           90.00  26  P     P      20 16 51.7 +0.7
DAWY                              IAmb  IAmb   20 17 06.1
      comp=Z,24nm,1.4s
DAWY  Dawson           90.00  26  P     P      20 16 52.7 +1.6
      baz=263
M29M  Somme Creek      90.24  28  P     P      20 16 53.5 +1.2
      baz=264
HYT   Haines Junctio   90.53  29  P     P      20 16 53.7 +0.1
HYT                               IAmb  IAmb   20 17 08.8
      comp=Z,18nm,1.5s
HYT   Haines Junctio   90.53  29  P     P      20 16 54.9 +1.2
      baz=265
N30M  Aishikik Lake    90.79  29  P     P      20 16 56.4 +1.7
      baz=265
M30M  Minto, Yukon     91.02  28  P     P      20 16 57.0 +1.2
      baz=265
KIRV  Kirov            91.28 328  LR    LR     21 01 03.5
      comp=Z,124nm,18.8s,baz=76,slow=38
KIRV  Kirov            91.28 328d iP    P      20 16 55.1 -1.9
G30M  tAoh Zraii Nji   91.60  23  P     P      20 16 58.5 +0.1
      baz=266
BELG  Belogornoye      91.96 322d iP    P      20 16 58.5 -1.8
BELG                              pmax  pmax
      comp=Z,8.0nm,1.0s
FARO  Faro, Yukon      92.60  28  P     P      20 17 04.0 +0.9
      baz=268
INK   Inuvik           92.69  22  LR    LR     20 53 17.0
      comp=Z,128nm,21.1s,baz=273,slow=32
INK   Inuvik           92.69  22  P     P      20 17 03.1 -0.2
      baz=268
ELIB  Princess Elisa   94.22 197  dP    P      20 17 11.3 +0.7
      comp=Z,13nm,1.1s
DLBC  Dease Lake       94.23  32  LR    LR     20 56 13.5
      comp=Z,101nm,19.9s,baz=280,slow=33
ZEI   Tsey             94.26 313  eP    P      20 17 07.5 -3.9
ZEI                               pmax  pmax
      comp=Z,5.0nm,1.4s
A36M  Sachs Harbour    95.36  18  P     P      20 17 15.3 -0.2
      baz=277
BBB   Bella Bella      95.50  38  LR    LR     20 53 06.5
      comp=Z,106nm,20.6s,baz=272,slow=31
VRH   Novokhopyorsk    95.62 321  eP    P      20 17 15.2 -1.9
VRH                               pmax  pmax
      comp=Z,20nm,1.8s
GURO  Guroymak-BITLI   95.70 308  P     P      20 17 16.7 -1.3
C36M  Paulatuk         96.07  21  P     P      20 17 17.6 -1.2
C36M                              IAmb  IAmb   20 17 18.7
      comp=Z,9.5nm,1.3s
C36M  Paulatuk         96.07  21  P     P      20 17 18.1 -0.7
      baz=277
KLMR  Klimovskoe       96.27 331  eP    P      20 17 15.3 -4.6
KLMR                              AMP          20 17 16.8
      comp=Z,25nm,2.0s
KLMR                              ePP   PP     20 21 04.3 -9.1
KLMR                              ePPP  PPP    20 23 14.2
KLMR  Klimovskoe       96.27 331  eP    P      20 17 15.3 -4.6
KLMR                              ePPP  PPP    20 23 14.2
KLMR                              pmax  pmax
      comp=Z,25nm,2.0s
VORD  Divnogorie       97.16 321  eP    P      20 17 21.4 -2.7
VORD                              pmax  pmax
      comp=Z,10.0nm,1.0s
VORR  Voronezh         97.17 322  eP    P      20 17 22.4 -1.8
VORR                              pmax  pmax
      comp=Z,10.0nm,1.1s
VSR   Storozhevoye     97.23 321  eP    P      20 17 20.8 -3.6
VSR                               pmax  pmax
      comp=Z,8.0nm,0.7s
LPSR  Galich'ya Gora   97.27 322  eP    P      20 17 22.4 -2.2
LPSR                              pmax  pmax
      comp=Z,10.0nm,1.0s
MOS   Moscow           97.75 326  eP    Pdif   20 17 29.7 +3.0
MOS                               e            20 21 34.4
OBN   Obninsk          98.42 325  eP    P      20 17 27.2 -2.5
OBN                               e*PP  sP     20 17 46.0 -1.9
OBN                               e            20 21 29.9
OBN                               pmax  pmax
      comp=Z,5.0nm,0.5s
ARCES ARCESS Array B  100.25 341  P     Pdif   20 17 37.1 -0.5
      comp=Z,4.8nm,0.9s,baz=66,slow=4.1,SNR=5.1
YKA   Yellowknife Ar  101.22  27  P     Pdif   20 17 41.5 -0.5
      comp=Z,1.0nm,0.9s,baz=284,slow=4.4,SNR=11
YKA   Yellowknife Ar  101.22  27 i P    Pdif   20 17 42.2 +0.2
YKA                               pmax  pmax
      comp=Z,1.0nm,0.9s
FINES FINESS Array B  102.55 333  P     Pdif   20 17 47.2 -0.8
      comp=Z,1.2nm,0.7s,baz=103,slow=8.6,SNR=2.3
MNK   Minsk           103.47 325 i P    Pdif   20 17 49.5 -2.8
      comp=E,2.0nm,1.0s
MNK                              i P    Pdif   20 17 49.5 -2.8
      comp=N,34nm,1.0s
MNK                              i P    Pdif   20 17 49.5 -2.8
      comp=Z,4.0nm,0.7s,baz=76
MNK                              i pP   pPdif  20 18 07.2 +1.7
MNK                              i PP   PP     20 22 06.3 -2.0
MNK                              i PPP  PPP    20 24 16.1
MNK                              i SS   SS     20 36 48.6 -0.9
MNK                              i SSS  SSS    20 40 44.5
MNK                              i LQ   LQ     20 58 45.6
MNK                              i LR   LR     21 01 36.0
MNK                              i LRM  MLR    21 04 59.8
MNK                              i LRM  MLR    21 05 01.7
      comp=N,1µm,23.6s
MNK                              i LRM  MLR    21 05 22.1
      comp=E,12nm,8.9s
MNK   Minsk           103.47 325 i P    Pdif   20 17 49.4 -2.8
MNK                              i             20 22 06.3
MNK                              i PPP  PPP    20 24 16.1
MNK                              i SS   SS     20 36 48.6 -1.0
MNK                              i SSS  SSS    20 40 44.5
MNK                               pmax  pmax
      comp=N,34nm,1.0s
MNK                               pmax  pmax
      comp=Z,4.0nm,0.7s
MNK                               pmax  pmax
      comp=E,2.0nm,1.0s
MNK                               MLR   MLR
      comp=N,1µm,24.0s
MNK                               MLR   MLR
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	comp=E,12nm,9.0s						
NVAR	Mina Array Bea	103.52	51	Pdiff	Pdif	20 17 54.3	+1.2
	comp=E,0.6nm,0.7s,baz=264,slow=5.9,SNR=5.0						
AKASG	Malin Array Be	103.52	321	Pdiff	Pdif	20 17 50.0	-2.5
	comp=E,0.4nm,0.3s,baz=90,slow=1.0,SNR=3.7						
PDAR	Pinedale Array	109.28	46	PKiKP	PKiKP	20 22 21.8	-0.5
	comp=E,0.3nm,0.6s,baz=299,slow=1.5,SNR=4.3						
CLL	Collm	113.01	326	ePKiKP	PKiKP	20 22 28.0	-0.8
CLL				AMS	AMS	21 14 00.0	
	comp=N,200nm,20.4s						
CLL				AMS	AMS	21 14 00.0	
	comp=E,200nm,20.2s						
CLL				AMS	AMS	21 14 00.0	
	comp=Z,300nm,18.9s						
CLL	Collm	113.01	326	ePKIKP	PKiKP	20 22 28.0	-0.8
GERES	GERESS Array B	113.64	323	PKiKP	PKiKP	20 22 29.6	-0.7
	comp=Z,0.5nm,0.6s,baz=128,slow=1.6,SNR=4.1						
T25A	Trinidad	114.55	50	P	PKiKP	20 22 33.4	+0.9
	baz=286						
KBA	Koelnbreinsper	114.58	321	i PKP	PKiKP	20 22 31.3	-0.9
	comp=Z,4.3nm,1.1s						
MNTX	Cornudas Mount	115.10	56	P	PKPdf	20 22 34.3	+0.9
	baz=283						
ABTA	Abfaltersbach	115.24	321	ePKP	PKiKP	20 22 32.7	-0.6
	comp=Z,6.6nm,1.0s						
STAL	STALIGIAL	115.31	321		PKiKP	20 22 32.9	-0.5
CIMO	Cimolais	115.46	321		PKiKP	20 22 32.8	-0.9
WTTA	Wattenberg	115.56	322	ePKP	PKiKP	20 22 33.7	-0.4
	comp=Z,7.3nm,1.2s						
WATA	Walderalm	115.57	322	ePKP	PKiKP	20 22 33.4	-0.6
	comp=Z,5.4nm,1.3s						
SQTA	Sankt Quirin	115.85	322	ePKP	PKiKP	20 22 34.2	-0.3
	comp=Z,6.1nm,1.1s						
MOTA	Moosalm	115.86	322	i PKP	PKiKP	20 22 34.1	-0.5
	comp=Z,4.7nm,1.1s						
FETA	Feichten	116.23	322	i PKP	PKPdf	20 22 35.1	-0.2
	comp=Z,6.2nm,1.3s						
TXAR	Lajitas Array	117.06	59	PKP	PKiKP	20 22 37.5	+0.1
	comp=Z,0.7nm,0.7s,baz=206,slow=2.0,SNR=9.7						
WMOK	Wichita Mounta	119.62	51	P	PKiKP	20 22 42.3	+0.1
	baz=289						
JCT	Junction City	120.04	56	PKPdf	PKPdf	20 22 42.5	-0.5
JCT	Junction City	120.04	56	PKIKP	PKPdf	20 22 42.5	-0.5
JCT	Junction City	120.04	56	P	PKiKP	20 22 43.4	+0.4
	baz=286						
TUL1	Leonard	121.52	49	P	PKiKP	20 22 46.3	+0.5
	baz=292						
P38A	Dawn	121.70	44	PKPdf	PKPdf	20 22 45.4	-0.4
KEST	Kesra	121.73	311	PKP	PKiKP	20 22 46.3	0.0
	comp=Z,3.3nm,0.8s,baz=338,slow=5.4,SNR=3.9						
U38A	Gravette	122.38	48	PKPdf	PKPdf	20 22 46.4	-0.9
S39A	Bolivar	122.66	46	PKPdf	PKPdf	20 22 46.9	-0.9
R40A	Maddies Statio	123.16	45		PKPdf	20 22 48.0	-0.8
MIAR	Mount Ida	123.71	50	P	PKiKP	20 22 51.4	+1.3
	baz=292						
CCM	Cathedral Cave	123.99	45	PKPdf	PKPdf	20 22 49.5	-0.8
CCM	Cathedral Cave	123.99	45	PKIKP	PKPdf	20 22 49.5	-0.8
CCM	Cathedral Cave	123.99	45	P	PKPdf	20 22 50.0	-0.3
	baz=296						
ESDC	Sonseca Array	129.16	321	PKP	PKPdf	20 22 60.0	-0.3
	comp=Z,0.2nm,0.3s,baz=336,slow=5.9,SNR=3.4						
PLCA	Paso Flores	129.70	153	PKP	PKiKP	20 23 02.5	+0.4
	comp=Z,5.4nm,0.9s,baz=226,slow=3.7,SNR=7.7						
KMSC	Kings Mountain	132.35	43	P	PKiKP	20 23 07.3	-0.2
	baz=304						
TOA0	Torodi Ar. Sit	134.59	285	PKPdf	PKPdf	20 23 09.9	-1.1
TORD	Torodi Ar. Bea	134.59	285	PKP	PKPdf	20 23 10.5	-0.5
	comp=Z,8.6nm,0.8s,baz=60,slow=1.4,SNR=30						
DBIC	Dimbokro	141.71	277	PKhKP	PKPpre	20 23 19.6	
	comp=Z,4.7nm,0.9s,baz=82,slow=8.0,SNR=3.9						
PB15	IPOC Station P	143.36	137		PKPbc	20 23 25.7	+1.4
PB03	IPOC Station P	143.92	135		PKPbc	20 23 27.0	+1.0
PLTB	Pedras Altas	143.94	165	PKPdf	PKPbc	20 23 26.6	+1.1
PB07	IPOC Station P	144.03	135		PKPbc	20 23 26.9	+0.6
TA01	Diego Aracena	144.55	133	PKPdf	PKPbc	20 23 28.1	+0.4
OTAV	Otavalo	144.58	94	eP	PKPab	20 23 28.2	-0.2
PIAT	Ana Tenorio	144.64	96	eP	PKPdf	20 23 30.3	+0.4
GR1C	Gorgona, Isla	145.01	89	eP	PKPbc	20 23 28.2	-1.2
PTAC	Punta Ardita,	145.23	82	eP	PKPbc	20 23 28.2	-1.9
BONI	La Bonita	145.52	94	eP	PKPdf	20 23 29.2	-2.0
GCUF	Volcan Galeras	145.76	92	eP	PKPab	20 23 34.0	+1.2
APAC	Apartado, Choc	146.37	80	eP	PKPab	20 23 35.0	+0.5
POPC	Popayan, Colom	146.49	90	eP	PKPdf	20 23 33.5	+0.6
YOTC	Yotoco, Valle	146.83	87	eP	PKPdf	20 23 31.4	-1.9
UREC	San Jos de Ur	147.42	80	eP	PKPdf	20 23 34.5	+0.4
SJCC	San Jacinto, C	147.46	76	eP	PKPdf	20 23 35.5	+1.3
FLOC	Florencia	147.47	92	eP	PKPdf	20 23 34.5	+0.2
HELC	Santa Helena	147.56	83	eP	PKPdf	20 23 35.7	+0.9
GARC	Garzon, Huila	147.66	91	eP	PKPbc	20 23 36.6	-1.0
CPUP	Villa Florida	147.69	156	PKPbc	PKPbc	20 23 37.6	+0.6
	comp=Z,34nm,0.9s,baz=215,slow=2.2,SNR=51						
CPUP	Villa Florida	147.69	156		PKPdf	20 23 35.5	+1.3
CPUP	Villa Florida	147.69	156	PKP2	PKPdf	20 23 35.5	+1.3
ZARC	Zaragoza, Cauc	148.11	81	eP	PKPdf	20 23 35.5	+0.3
SDDR	Presa de Saban	148.25	58		PKPbc	20 23 38.8	0.0
NORC	Norcasia	148.25	84	eP	PKPbc	20 23 37.9	-1.0
CZSB	Cruzeiro do Su	148.59	110		PKPdf	20 23 34.9	-1.1
PTBC	PUERTO BERRIO,	148.60	83	eP	PKPdf	20 23 37.6	+1.6
ROSC	El Rosal	148.83	86	PKPbc	PKPbc	20 23 41.1	+0.3
	comp=Z,20nm,0.7s,baz=235,slow=16,SNR=8.7						
ROSC	El Rosal	148.83	86		PKPdf	20 23 35.9	-1.0
ROSC	El Rosal	148.83	86	PKIKP	PKPdf	20 23 35.9	-1.0
MACC	Macarena, Meta	149.30	91	eP	PKPbc	20 23 40.1	-1.4
CHIC	Chingaza	149.43	86	eP	PKPdf	20 23 38.7	+0.8
RUSC	La Rusia	150.01	84	eP	PKPbc	20 23 43.6	-0.3
URIC	Uribia, Colomb	150.15	72	eP	PKPbc	20 23 42.9	-0.7
PAMC	Pamplona, Colo	150.25	81	eP	PKPbc	20 23 42.9	-1.6
CRPR	Cabo Rojo, PR	152.21	56		PKPbc	20 23 46.1	-2.1

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*LDG **25** 20:06:00.8±0.1, 42.°87N×1.°62W, h2^{km}, Md2.6/2, Ml2.6/25, Error ellipse: s-maj=1.8km s-min=1.5km az=102.0*

*MDD **25** 20:06:01.9±0.2, 42.°87N×1.°54W, h0^{km}, mb_Lg2.7/14, Error ellipse: s-maj=1.7km s-min=1.2km az=164.0*

*STR **25** 20:06:01.2±0.7, 43°N±3°×°±°, h2^{km}, MLv2.5/6, Error ellipse: s-maj=0.0km s-min=0.0km az=83.3, preliminary*

ISC 25 20:06:01.3±0.9**, 42.°93N**±0.°02×**1.°54W**±0.°02**, h8**^{km}±7^{km}**, n59,** σ**1.^{s}66**/119**, 3C-1D, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EARA	Aranguren	0.16	191	⇑Pg	Pg	20 06 03.4	-1.1
EARA				Sg	Sg	20 06 05.6	-1.3
EARA	Aranguren	0.16	191	⇑Pg	Pg	20 06 03.5	-1.1
EARA				Sg	Sg	20 06 05.5	-1.3
EORO	Oroz-Betelu	0.17	101	Pg	Pg	20 06 04.7	-0.2
EORO				Sg	Sg	20 06 07.4	+0.1
EORO				i Vmb_Lg		20 06 09.5	
EALK	Alkurruntz	0.29	4	Pg	Pg	20 06 07.5	+0.3
EALK				Sg	Sg	20 06 13.1	+2.0
EALK				i Vmb_Lg		20 06 15.1	
EALK	Alkurruntz	0.29	4	Pg	Pg	20 06 07.6	+0.4
EALK				Sg	Sg	20 06 12.6	+1.4
SJPF	Ste Jean	0.30	51	ePg	Pg	20 06 07.4	+0.2
SJPF				eSg	Sg	20 06 12.3	+1.2
	126nm,0.2s						
OSSF	Osses	0.39	31	⇓Pg	Pg	20 06 09.1	+0.3
OSSF				Sg	Sg	20 06 15.7	+1.7
ATE	Arette	0.64	75	⇑Pg	Pg	20 06 13.5	0.0
ATE				Sg	Sg	20 06 23.9	+2.1
ETSF	Etsaut	0.72	92	ePg	Pg	20 06 14.8	-0.4
ETSF				eSg	Sg	20 06 24.5	0.0
	52nm,0.3s						
CANF	Canfranc	0.77	102	Pg	Pg	20 06 16.3	+0.2
CANF				Sg	Sg	20 06 27.7	+1.6
TERF	Tercis-les-Bai	0.81	22	Pg	Pg	20 06 17.9	+0.9
TERF				Sg	Sg	20 06 29.6	+2.0
PYLO	Lourdes	1.11	81	Pg	Pb	20 06 23.4	+0.6
PYLO				Sg	Sg	20 06 39.1	+2.2
VIEF	Viey	1.15	92	Pg	Pb	20 06 23.1	-0.4
VIEF				Sg	Sb	20 06 40.0	+1.5
ECHI	Chisagues Biel	1.30	101	Pg	Pn	20 06 25.9	0.0
ECHI				Sg	Sb	20 06 43.3	+0.2
ECHI				i Vmb_Lg		20 06 47.1	
ECHI	Chisagues Biel	1.30	101	Pn	Pn	20 06 26.4	+0.5
ECHI				Sg	Sg	20 06 45.5	+2.3
EPF	Esparros	1.38	85	ePn	Pn	20 06 26.8	-0.2
EPF	Esparros	1.38	85	ePg	Pn	20 06 27.9	+0.9
EPF				eSg	Sb	20 06 45.5	+0.2
	23nm,0.2s						
ELAN	Lanestosa	1.42	283	Pg	Pn	20 06 27.7	+0.2
ELAN				Sg	Sn	20 06 47.7	+1.2
ELAN				i Vmb_Lg		20 06 50.7	
ESAC	San Caprasio	1.44	146	Pg	Pn	20 06 28.4	+0.6
ESAC				Sg	Sn	20 06 47.6	+0.7
MLS	Moulis	1.93	88	Pn	Pn	20 06 35.6	+1.1
MLS				Sn	Sb	20 07 01.9	+0.9
SALF	Salau	2.01	94	Pn	Pn	20 06 36.5	+0.9
SALF				Sn	Sb	20 07 03.8	+0.3
ETOR	Torete	2.14	191	Pg	Pn	20 06 39.3	+1.8
ETOR				Sg	Sb	20 07 08.1	+0.9
ETOR				i Vmb_Lg		20 07 12.9	
LRVF	chteau la Riv	2.21	23	Pn	Pn	20 06 39.6	+1.4
LRVF				Sn	Sn	20 07 07.7	+2.0
ERTA	Horta de San J	2.41	144	Pn	Pn	20 06 41.8	+0.7
ERTA				Pg	Pb	20 06 45.5	+0.5
ERTA				Sn	Sn	20 07 09.6	-1.2
ERTA				Sg	Sb	20 07 16.2	+1.3
ERTA				i Vmb_Lg		20 07 25.1	
MONQ	Montcuq	2.45	53	Pn	Pn	20 06 42.8	+1.2
MONQ				Sn	Sn	20 07 13.8	+2.0
EPOB	Poblet	2.50	128	Pn	Pn	20 06 41.9	-0.5
EPOB				Pg	Pb	20 06 46.8	+0.3
EPOB				Sn	Sn	20 07 11.7	-1.5
EPOB				Sg	Sb	20 07 18.7	+1.2
EPOB				i Vmb_Lg		20 07 22.3	
LFF	La Frestale	2.60	38	ePn	Pn	20 06 43.5	-0.1
LFF	La Frestale	2.60	38	eP	Pn	20 06 45.2	+1.6
LFF				eSn	Sn	20 07 14.4	-1.0
	11nm,0.4s						
LFF				eSg	Sg	20 07 24.9	+0.1
	6.7nm,0.3s						
EMOS	Mosqueruela	2.68	162	Pn	Pn	20 06 46.2	+1.2
EMOS				Pg	Pb	20 06 49.8	+0.2
EMOS				Sn	Sn	20 07 16.7	-1.0
EMOS				Sg	Sb	20 07 25.3	+2.5
EMOS				i Vmb_Lg		20 07 33.8	
EARI	Arriondas	2.71	279	Pn	Pn	20 06 45.0	-0.3
EARI				Sn	Sn	20 07 18.4	+0.1
EARI				i Vmb_Lg		20 07 55.1	
MTLF	Montolieu	2.78	80	ePn	Pn	20 06 46.0	-0.1
MTLF				eSn	Sn	20 07 17.6	-2.3
	5.5nm,0.4s						
MTLF	Montolieu	2.78	80	Pn	Pn	20 06 47.2	+1.0
MTLF				Sn	Sn	20 07 21.4	+1.6
GUD	Guadarrama	3.00	221	Pn	Pn	20 06 48.9	-0.5
GUD				Sn	Sn	20 07 23.7	-1.9
RJF	Les Rejaudoux	3.24	42	ePn	Pn	20 06 52.2	-0.2
RJF				eSn	Sn	20 07 29.8	-1.4
	6.5nm,0.4s						
CAF	Calviac	3.28	51	ePn	Pn	20 06 52.7	-0.4
CAF				eSn	Sn	20 07 30.4	-1.9
	3.3nm,0.2s						
MFF	Saint Martin d	3.81	15	ePn	Pn	20 07 00.7	+0.5
MFF				eSn	Sn	20 07 43.4	-1.8
	1.0nm,0.3s						
MFF				eSg	Sg	20 08 02.8	-0.7
	4.1nm,0.4s						
ECAL	Calabor	3.97	257	Pn	Pn	20 07 01.8	-0.8
ECAL				Sn	Sn	20 07 49.1	-0.3
ECAL				Sg	Sb	20 08 02.8	+3.0
ECAL				i Vmb_Lg		20 08 12.4	
PAB	San Pablo	3.99	213	Pn	Pn	20 07 01.3	-1.5
PAB				Sn	Sn	20 07 47.6	-2.2
PAB				Sg	Sb	20 08 02.8	+2.5
PAB				i Vmb_Lg		20 08 17.2	
LASF	Ste Croix	4.09	72	ePn	Pn	20 07 03.3	-0.9
LASF	Ste Croix	4.09	72	eP	Pn	20 07 06.2	+2.0
LASF				eSn	Sn	20 07 49.1	-3.1
	1.5nm,0.4s						
EPON	Pontenova	4.13	277	Pn	Pn	20 07 04.5	-0.1
EPON				Sn	Sn	20 07 53.1	-0.1
TCF	Toulx Ste Croi	4.30	37	ePn	Pn	20 07 06.9	-0.1
TCF				eSn	Sn	20 07 54.6	-2.7
	2.7nm,0.3s						
MVO	Moncorvo	4.45	249	ePn	Pn	20 07 08.5	-0.7
MVO				eSn	Sn	20 07 59.1	-2.1
MVO				A	A	20 08 21.1	
	4.8nm,0.5s						
BGF	Bois d'Agland	4.79	39	ePn	Pn	20 07 13.3	-0.4
BGF				eSn	Sn	20 08 06.4	-3.0
BGF				eSg	Sg	20 08 31.7	-3.3
	8.2nm,0.4s						
VIVF	Saint-Julien-l	4.88	65	ePn	Pn	20 07 14.2	-0.9
VIVF				eSn	Sn	20 08 08.7	-3.1
	1.3nm,0.3s						
POLO	Lamas de Olo	4.90	254	ePn	Pn	20 07 14.8	-0.6
QUIF	Quistinic	5.12	348	ePn	Pn	20 07 18.0	-0.3
QUIF	Quistinic	5.12	348	eP	Pn	20 07 23.1	+4.8
QUIF				eSn	Sn	20 08 15.2	-2.3
	0.5nm,0.2s						
AVF	Avril sur Loir	5.20	40	ePn	Pn	20 07 18.9	-0.4
AVF				eSn	Sn	20 08 16.4	-3.0
	2.1nm,0.5s						
SMRF	Simiane la Rot	5.28	76	ePn	Pn	20 07 20.5	-0.1
SMRF	Simiane la Rot	5.28	76	eP	Pn	20 07 23.8	+3.2
SMF	Signal de Mont	5.34	44	ePn	Pn	20 07 20.9	-0.4
SMF				eSn	Sn	20 08 20.1	-2.8
	0.6nm,0.2s						
SSF	Saint Saulge	5.47	39	ePn	Pn	20 07 22.4	-0.6
SSF				eSn	Sn	20 08 22.3	-3.8
	3.6nm,0.6s						
ORIF	Oris-en-Rattie	5.71	67	ePn	Pn	20 07 26.1	-0.5
ORIF	Oris-en-Rattie	5.71	67	eP	Pn	20 07 29.7	+3.1
ORIF				eSn	Sn	20 08 28.3	-4.1
	0.2nm,0.3s						
LDF	La Druitiere	5.75	9	ePg	Pg	20 07 49.3	-2.2
LDF				eSn	Sn	20 08 30.2	-3.0
	7.0nm,0.9s						
LOR	Lormes	5.78	39	ePn	Pn	20 07 26.8	-0.6
	baz=220						
LOR				eSn	Sn	20 08 30.7	-3.2
	2.5nm,0.6s						
MBDF	Montbardon	6.27	70	eP	Pn	20 07 37.9	+3.6
CABF	La Chapelle	6.56	53	ePn	Pn	20 07 38.1	0.0
CABF				eSn	Sn	20 08 48.9	-4.2
	0.7nm,0.4s						

IDC 25 20:21:55.8±1.5**, 0.°22N**×**121.°50E, h0**^{km}**, mb3.5**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=217.9km s-min=25.1km az=60.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.66	149	P	P	20 27 08.6	-0.6
	1.9nm,0.8s,baz=325,slow=11,SNR=33						
	1.9nm,0.8s						
ASAR	Alice Springs	26.63	154	P	P	20 27 36.9	+0.6
	0.2nm,0.5s,baz=327,slow=8.3,SNR=8.4						
	0.2nm,0.5s						
MKAR	Makanchi Array	57.65	329	P	P	20 31 47.9	-0.1
	0.2nm,0.3s,baz=130,slow=8.9,SNR=5.8						
	0.2nm,0.3s						

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*BJI **25** 20:28:21.6±0.0, 45.°72N×151.°69E, h48^{km}, mb4.6/55, mB4.9/22, Ms4.4/27, Ms7 4.2/28*

*SKHL **25** 20:28:22.1±0.6, 45.°50N×151.°70E, h54^{km}±5^{km}, mb5.2/9*

*MOS **25** 20:28:22.2±0.9, 45.°62N×151.°57E, h45^{km}, mb4.8/44, MS3.7/7, Error ellipse: s-maj=6.1km s-min=4.6km az=108.0*

*NEIC **25** 20:28:23.8±1.3, 45.°68N±0.°08×151.°5E±0.°1, h39^{km}±7^{km}, mb4.7/91, Error ellipse: s-maj=13.9km s-min=9.5km az=135.0*

*JMA **25** 20:28:23.1±1.1, 46°N±4°×15°2E±°, h30^{km}, MV4.7/19, KURILE ISLANDS REGION*

*IDC **25** 20:28:27.5±2.2, 45.°91N×151.°32E, h69^{km}±19^{km}, mb3.8/28, mbtmp4.1/34, MS4.0/32, Error ellipse: s-maj=16.2km s-min=10.1km az=149.0*

*BGR **25** 20:28:38.1, 48.°65N×149.°39E, h33^{km}, mb4.6*

ISC 25 20:28:22.5±0.4**, 45.°50N**±0.°05×**151.°69E**±0.°05**, h36**^{km}±1^{km}**, h36**^{km}**:pP-P, n482,** σ**1.^{s}21**/479**, mb4.6**/143**, MS4.1**/42**, 20C-46D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.71	266	d iPN	Pn	20 29 03.6	+0.2
KUR				eS	Sn	20 29 33.4	-1.5
KUR				pmax	pmax		
	comp=Z,815nm,0.4s						
KUR				pmax	pmax		
	comp=E,97nm,0.2s						
KUR				pmax	pmax		
	comp=N,271nm,0.1s						
KUR				smax	smax		
	comp=N,1µm,0.3s						
KUR				smax	smax		
	comp=E,370nm,0.3s						
KUR	Kuril'sk	2.71	266	i P	Pn	20 29 03.3	-0.1
KUR				AMB	AMB	20 29 06.0	
	comp=E,270nm,0.4s						
KUR				AMB	AMB	20 29 06.0	
	comp=E,100nm,0.4s						
KUR				AMB	AMB	20 29 06.0	
	comp=E,820nm,0.4s						
KUR				eS	Sn	20 29 34.6	-0.3
KUR				A	A	20 29 43.6	
	comp=E,1µm,0.3s						
KUR				A	A	20 29 43.6	
	comp=E,370nm,0.3s						
SHO	Shikotan	3.83	247	d iPN	Pn	20 29 18.6	-0.2
SHO				eS	Sn	20 30 01.8	-0.7
SHO				pmax	pmax		
	comp=E,78nm,0.3s						
SHO				pmax	pmax		
	comp=Z,126nm,0.3s						
SHO				smax	smax		
	comp=N,140nm,0.3s						
SHO				smax	smax		
	comp=E,243nm,0.4s						
SHO	Shikotan	3.83	247	i P	Pn	20 29 18.7	-0.1
SHO				AMB	AMB	20 29 22.4	
	comp=E,130nm,0.3s						
SHO				eS	Sn	20 30 01.6	-0.9
SHO				A	A	20 30 07.0	
	comp=E,140nm,0.4s						
SHO				A	A	20 30 07.0	
	comp=E,240nm,0.4s						
YUK	Yuzh-Kuril'sk	4.40	253	i PN	Pn	20 29 28.2	+1.5
YUK				eS	Sn	20 30 18.6	+2.0
YUK				pmax	pmax		
	comp=N,86nm,0.2s						
YUK				pmax	pmax		
	comp=Z,396nm,0.2s						
YUK				smax	smax		
	comp=E,772nm,0.9s						
YUK				smax	smax		
	comp=N,362nm,0.4s						
YUK	Yuzh-Kuril'sk	4.40	253	i P	Pn	20 29 27.5	+0.8
YUK				AMB	AMB	20 29 32.0	
	comp=N,90nm,0.3s						
YUK				AMB	AMB	20 29 32.0	
	comp=N,400nm,0.3s						
YUK				eS	Sn	20 30 16.4	-0.2
YUK				A	A	20 30 25.0	
	comp=N,360nm,0.9s						
YUK				A	A	20 30 25.0	
	comp=N,770nm,0.9s						
NEM2	Nemuro 2	4.76	245	eP	Pn	20 29 31.3	-0.4
NEM2				eS	Sn	20 30 22.4	-3.1
NMR	Nemuro--Hokkai	4.77	246	⇓iPN	Pn	20 29 31.3	-0.5
NMR	Nemuro--Hokkai	4.77	246	eP	Pn	20 29 31.5	-0.3
NMR				eS	Sn	20 30 24.5	-1.2
RUSJ	Misakicho	4.79	255	⇓iPN	Pn	20 29 34.3	+2.2
RUSJ				eS	Sn	20 30 29.5	+3.2
JRA	Rausu	4.93	254	eP	Pn	20 29 35.6	+1.6
JRA				eS	Sn	20 30 32.8	+3.0
JNK	Nakash	5.33	251	eP	Pn	20 29 41.0	+1.4
JNK				eS	Sn	20 30 40.1	+0.4
AKK	Akkeshi	5.50	246	eP	Pn	20 29 41.7	-0.2
JAK	Akkeshi	5.61	246	eP	Pn	20 29 42.9	-0.4
JAK				eS	Sn	20 30 41.4	-5.1
JTKR	Abashiri--Toko	5.75	257	eP	Pn	20 29 47.0	+1.7
SKR	Severo-Kuril’s	5.98	28	ePN	Pn	20 29 49.3	+1.0
SKR				pmax	pmax		
	comp=Z,167nm,0.6s						
SKR				MLR	MLR		
	comp=Z,500nm,18.0s						
SKR	Severo-Kuril’s	5.98	28	eP	Pn	20 29 49.3	+1.0
SKR				AMB	AMB	20 29 51.1	
	comp=Z,170nm,0.6s						
SKR				eS	Sn	20 30 54.2	-1.2
SKR				A	A	20 31 01.2	
	comp=Z,220nm,0.4s						
SKR				A	A	20 31 01.2	
	comp=Z,260nm,0.4s						
JAR	Ashorobuto	6.08	252	eP	Pn	20 29 51.3	+1.4
JOB	Onbets	6.21	248	eP	Pn	20 29 52.3	+0.7
YSS	Yuzh-Sakhalins	6.37	286		Pn	20 29 53.6	-0.1
YSS	Yuzh-Sakhalins	6.37	286	⇑ePN	Pn	20 29 54.5	+0.8
YSS				eS	Sn	20 31 05.9	+0.8
YSS				pmax	pmax		
	comp=Z,40nm,0.4s						
YSS				pmax	pmax		
	comp=Z,200nm,5.9s						
YSS				smax	smax		
	comp=N,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,2µm,17.0s						
YSS				MLR	MLR		
	comp=E,800nm,16.0s						
YSS	Yuzh-Sakhalins	6.37	286	eP	Pn	20 29 55.4	+1.7
YSS				AMB	AMB	20 29 57.0	
	comp=E,80nm,0.3s						
YSS				AMB	AMB	20 30 01.1	
	comp=E,200nm,5.9s						
YSS				eS	Sn	20 31 05.0	-0.1
YSS				A	A	20 31 10.0	
	comp=E,10.0nm,0.4s						
YSS				A	A	20 31 10.0	
	comp=E,10.0nm,0.4s						
JKK2	Kamakawa 2	6.58	259	eP	Pn	20 29 59.4	+2.8
JKA	Kamikawa-asahi	6.61	261	Pn	Pn	20 29 59.2	+2.1
JKA	Kamikawa-asahi	6.61	261	eP	Pn	20 29 59.8	+2.7
ASAJ	Asahikawa	6.61	261	P	Pn	20 29 59.8	+2.7
	comp=E,9.2nm,0.3s,baz=82,slow=17,SNR=57						
ASAJ				S	Sn	20 31 14.3	+3.2
	comp=E,16nm,0.8s,baz=93,slow=18,SNR=0.8						
ASAJ				LR	LR	20 32 32.9	
	comp=E,935nm,20.2s,baz=142,slow=38						
JCH	Churui	6.65	247	eP	Pn	20 29 58.1	+0.5
PAU	Pauzhetka	6.87	28	eP	Pn	20 30 01.7	+1.0
PAU				AMB	AMB	20 30 02.2	
	comp=E,70nm,0.4s						
PAU				eS	Sn	20 31 16.7	-0.9
PAU				A	A	20 31 21.3	
	comp=E,290nm,0.2s						
PAU				A	A	20 31 21.3	
	comp=E,210nm,0.2s						
JWK2	Keihoku	6.89	272	eP	Pn	20 30 05.2	+4.2
JAB	Ashibetsu	7.05	257	eP	Pn	20 30 06.6	+3.4
ERM	Erimo	7.09	244	Pn	Pn	20 30 05.4	+1.7
ERM	Erimo	7.09	244	d ePN	Pn	20 30 06.2	+2.6
JNBK	Urakawa-nobuka	7.21	247	eP	Pn	20 30 04.7	-0.6
JRBN	Rebuntou	7.47	273	eP	Pn	20 30 12.1	+3.2
TYV	Tymovskoe	8.07	315	ePN	Pn	20 30 18.1	+1.0
TYV				pmax	pmax		
	comp=Z,15nm,0.9s						
TYV				pmax	pmax		
	comp=Z,200nm,3.2s						
TYV	Tymovskoe	8.07	315	eP	Pn	20 30 18.4	+1.3
TYV				AMB	AMB	20 30 18.7	
	comp=Z,20nm,0.9s						
TYV				AMB	AMB	20 30 22.4	
	comp=Z,200nm,3.2s						
TYV				eS	Sn	20 31 46.4	-0.6
TYV				A	A	20 31 49.0	
	comp=Z,200nm,4.2s						
TYV				A	A	20 31 55.0	
	comp=Z,40nm,0.7s						
TYV				A	A	20 31 55.0	
	comp=Z,50nm,0.7s						
PEA0B	Petropavlovsk-	8.57	25	Pn	Pn	20 30 24.9	+1.0
PEA0B	Petropavlovsk-	8.57	25	⇑ePN	Pn	20 30 25.2	+1.3
PETK	Petropavlovsk-	8.57	25	P	Pn	20 30 23.9	+0.1
	comp=Z,4.3nm,0.5s,baz=192,slow=11,SNR=6.8						
PETK				S	Sn	20 32 02.6	+3.4
	comp=Z,4.8nm,0.6s,baz=228,slow=26,SNR=1.6						
PETK	Petropavlovsk-	8.57	25	Pn	Pn	20 30 24.1	+0.2
PETK	Petropavlovsk-	8.57	25	PN	Pn	20 30 24.1	+0.2
PET	Petropavlovsk	8.80	29	Pn	Pn	20 30 27.9	+0.9
PET	Petropavlovsk	8.80	29	ePN	Pn	20 30 26.8	-0.2
PET				pmax	pmax		
	comp=Z,38nm,0.6s						
PET				MLR	MLR		
	comp=Z,800nm,20.0s						
PET				MLR	MLR		
	comp=Z,2µm,19.0s						
PET	Petropavlovsk	8.80	29	eP	Pn	20 30 29.0	+2.0

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PET                                AMB    AMB    20 30 33.7
      comp=Z,10.0nm,0.8s
PET                                AMS    AMS    20 34 57.6
      comp=Z,2µm,19.0s
JANG  Nango               9.05 239 eP     Pn     20 30 28.4  -2.1
JTM   Tenmabayashi        9.08 242  Pn    Pn     20 30 30.2  -0.7
JTH   Tanohata            9.11 236 eS     Sn     20 32 03.9  -8.8
TEY   Ternei             10.65 273 eP     Pn     20 30 53.8  +1.4
TEY                                AMB    AMB    20 30 59.4
      comp=Z,10.0nm,0.7s
JMM   Marumori           11.15 231  Pn    Pn     20 30 57.5  -1.8
GRNR  Gornyy             11.47 303⇑iPN    Pn     20 31 05.4  +1.7
GRNR                               eS     Sn     20 33 15.3  +4.8
GRNR                               pmax   pmax
      comp=N,1.0nm,0.5s
GRNR                               pmax   pmax
      comp=E,2.0nm,0.5s
GRNR                               pmax   pmax
      comp=Z,3.0nm,0.7s
GRNR                               smax   smax
      comp=N,1.0nm,0.5s
GRNR                               MLR    MLR
      comp=E,450nm,17.0s
GRNR                               MLR    MLR
      comp=N,260nm,20.0s
GRNR                               MLR    MLR
      comp=Z,590nm,15.0s
GRNR  Gornyy             11.47 303 i P    Pn     20 31 05.4  +1.7
GRNR                               AMB    AMB    20 31 06.1
GRNR                               AMS    AMS    20 35 40.0
      comp=Z,300nm,18.0s
GRNR                               AMS    AMS    20 35 40.0
      comp=Z,500nm,18.0s
GRNR                               AMS    AMS    20 35 40.0
      comp=Z,600nm,18.0s
KHBR  Khabarovsk         11.74 291 eP     Pn     20 31 07.5  +0.2
JSD   Sado               12.48 238        Pn     20 31 15.9  -1.6
MJAR  Matsushiro Arr     13.53 233  P     Pn     20 31 31.3  -0.6
      comp=Z,2.3nm,1.0s,baz=26,slow=12,SNR=7.8
MJAR                               LR     LR     20 37 02.6
      comp=Z,243nm,22.0s,baz=32,slow=38
MJB9  Matsu-Tunnel       13.53 233        Pn     20 31 30.0  -1.9
MAJO  Matsushiro         13.53 233        Pn     20 31 30.0  -1.9
MAJO  Matsushiro         13.53 233⇓eP     Pn     20 31 30.9  -1.0
KLR   Kul'dur            14.01 293  P     Pn     20 31 39.0  +0.6
      comp=Z,6.9nm,1.1s,baz=96,slow=14,SNR=10
KLR   Kul'dur            14.01 293⇓iP     Pn     20 31 40.2  +1.9
KLR                                pmax   pmax
      comp=Z,13nm,1.3s
KLR                                MLR    MLR
      comp=Z,624nm,15.0s
KLR   Kul'dur            14.01 293 eP     Pn     20 31 37.2  -1.1
KLR                                AMB    AMB    20 31 44.0
      comp=Z,10.0nm,0.8s
KLR                                AMS    AMS    20 37 38.4
      comp=Z,600nm,15.0s
USA0B Ussuriysk Arra     14.04 272  Pn    Pn     20 31 38.2  -0.5
USA0B Ussuriysk Arra     14.04 272c iP    Pn     20 31 39.5  +0.8
USRK  Ussuriysk Ar.      14.04 272  P     Pn     20 31 38.7   0.0
      comp=Z,5.1nm,0.8s,baz=71,slow=11,SNR=9.4
USRK  Ussuriysk Ar.      14.04 272        Pn     20 31 38.3  -0.4
USRK  Ussuriysk Ar.      14.04 272  P     Pn     20 31 38.3  -0.4
MA2   Magadan            14.11 358        Pn     20 31 38.4  -1.2
MA2   Magadan            14.11 358  P     Pn     20 31 38.4  -1.2
MA2   Magadan            14.11 358 eP     Pn     20 31 38.4  -1.2
JGF   Kuroka             14.69 233  Pn    Pn     20 31 46.5  -1.1
MDJ   Mudanjiang         15.63 275  P     Pn     20 32 00.0   0.0
MDJ                                pP     pP     20 32 08.8  -3.8
MDJ                                sP     pwP    20 32 15.5  +0.9
MDJ                                S      Sn     20 34 51.5  -0.5
MDJ                                sS     S      20 35 04.3  -2.0
MDJ                                pmax   pmax
      comp=Z,9.0nm,1.0s
MDJ                                pmax   pmax
      comp=Z,230nm,11.6s
MDJ                                LR     LR
      comp=Z,410nm,14.7s
MDJ                                LR     LR
      comp=Z,660nm,18.6s
MDJ                                LR     LR
      comp=Z,940nm,16.9s
MDJ   Mudanjiang         15.63 275  Pn    Pn     20 31 59.2  -0.8
HEH   HeiHe              16.93 295 eP     Pn     20 32 16.0  -0.5
HEH                                pmax   pmax
      comp=Z,7.0nm,0.7s
HEH                                LR     LR
      comp=Z,140nm,19.8s
HEH                                LR     LR
      comp=Z,570nm,17.1s
HEH                                LR     LR
      comp=Z,720nm,16.3s
SEY   Seymchan           17.48   1  P     Pn     20 32 20.4  -2.7
      comp=Z,1.8nm,0.7s,baz=125,slow=16,SNR=3.5
SEY   Seymchan           17.48   1⇓iP     P      20 32 24.2  +0.2
SEY                                pmax   pmax
      comp=Z,9.0nm,2.6s
ZEA   Zeya               17.78 306 eP     Pn     20 32 26.3  -0.7
ZEA                                pmax   pmax
      comp=Z,10.0nm,1.3s
ZEA   Zeya               17.78 306 eP     Pn     20 32 24.8  -2.2
ZEA                                AMB    AMB    20 32 29.0
      comp=Z,10.0nm,0.9s
CN2   Changchun          18.72 274  P     P      20 32 37.5  -0.4
CN2                                pmax   pmax
      comp=Z,10.0nm,0.6s
CN2                                LR     LR
      comp=Z,400nm,16.0s
CN2                                LR     LR
      comp=Z,400nm,16.0s
CN2                                LR     LR
      comp=Z,600nm,17.0s
KSRS  Korea Array        19.48 254  P     P      20 32 45.7  -0.6
      comp=Z,4.8nm,0.9s,baz=57,slow=12,SNR=12
KSRS                               LR     LR     20 39 32.0
      comp=Z,243nm,20.2s,baz=65,slow=34
KS19  Wonju Array Si     19.50 254  P     P      20 32 45.9  -0.5
KSAR  Wonju Array Be     19.52 254  P     P      20 32 46.7  +0.1
KSAR  Wonju Array Be     19.52 254  P     P      20 32 46.7  +0.1
JNU   Nakatsue           20.23 240  P     Pn     20 32 58.4  +1.9
      comp=Z,11nm,1.1s,baz=25,slow=5.1,SNR=3.3
JNU                                LR     LR     20 41 04.4
      comp=Z,182nm,19.9s,baz=36,slow=37
      comp=Z,11nm,1.1s
TJN   Taejon             20.45 252⇑eP     P      20 32 56.5  -0.2
YAK   Yakutsk            20.88 330  P     P      20 32 59.2  -2.0
      comp=Z,11nm,0.6s,baz=113,slow=4.8,SNR=12
      comp=Z,11nm,0.6s
YAK   Yakutsk            20.88 330        P      20 32 59.5  -1.6
YAK   Yakutsk            20.88 330 eP     P      20 33 01.5  +0.3
YAK                                eS     S      20 36 51.7   0.0
YAK                                e*SS   sS     20 37 08.9  +4.5
YAK                                eSS    SnSn   20 37 14.9  +1.7
YAK                                eSSS   SSS    20 37 28.3
YAK                                pmax   pmax
      comp=Z,58nm,0.9s
YAK                                pmax   pmax
      comp=N,15nm,0.9s
YAK                                pmax   pmax
      comp=E,13nm,1.0s
YAK                                smax   smax
      comp=N,62nm,2.2s
YAK                                smax   smax
      comp=E,43nm,3.0s
YAK   Yakutsk            20.88 330 eP     P      20 33 01.5  +0.3
HIA   Hailar             21.86 291  P     P      20 33 10.7  -1.2
HIA   Hailar             21.86 291  P     P      20 33 10.7  -1.2
HIA                                pmax   pmax
      comp=Z,5.0nm,0.7s
BILL  Bilibino           23.84  14  P     P      20 33 30.9  -1.1
BILL  Bilibino           23.84  14 eP     P      20 33 31.6  -0.3
BILL                               e*PP   sP     20 33 46.0  +1.2
BILL                               e             20 34 03.2
BILL                               e             20 37 13.7
BILL                               pmax   pmax
      comp=Z,14nm,3.2s
BILL                               MLR    MLR
      comp=Z,218nm,15.0s
BILL  Bilibino           23.84  14 eP     P      20 33 31.6  -0.3
BJI   Beijing            26.49 271  P     P      20 33 58.5  +2.3
BJI                                pP     pP     20 34 06.5  +0.5
BJI                                sP     sP     20 34 13.5  +3.0
BJI                                pmax   pmax
      comp=Z,7.0nm,0.9s
BJT   Baijiatuau         26.50 271  P     P      20 33 55.9  -0.5
BJT                                IAmb   IAmb   20 33 59.2
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      comp=Z,11nm,0.8s
BJT   Baijiatuau         26.50 271  P     P      20 33 55.9  -0.5
BJT                                pmax   pmax
      comp=Z,11nm,0.8s
TIA   Tai'an             27.56 263  P     P      20 34 06.3  +0.3
TIA                                pmax   pmax
      comp=Z,7.0nm,1.4s
TIXI  Tiksi              28.41 345  P     P      20 34 09.2  -3.9
      comp=Z,3.9nm,0.5s,baz=163,slow=20,SNR=22
      comp=Z,3.9nm,0.5s
TIXI  Tiksi              28.41 345  P     P      20 34 10.5  -2.6
TIXI  Tiksi              28.41 345ceP     P      20 34 13.1   0.0
TIXI                               pmax   pmax
      comp=Z,4.0nm,0.7s
TIXI                               MLR    MLR
      comp=Z,263nm,18.0s
TIXI  Tiksi              28.41 345 eP     P      20 34 13.1   0.0
H11N2 WAKE ISLAND Hy     28.61 149  T     T      21 04 41.4
      baz=334,slow=75
H11N1 WAKE ISLAND Hy     28.62 149  T     T      21 04 54.8
      baz=334,slow=75
H11N3 WAKE ISLAND Hy     28.63 149  T     T      21 04 50.4
      baz=334,slow=75
NJ2   Nanjing            28.68 254 eP     P      20 34 16.5  +0.5
NJ2                                pP     pwP    20 34 27.5  -1.6
NJ2                                sP     sP     20 34 30.0  +0.6
NJ2                                pmax   pmax
      comp=Z,7.0nm,0.5s
NJ2                                pmax   pmax
      comp=Z,99nm,3.8s
NJ2                                LR     LR
      comp=Z,330nm,17.2s
NJ2                                LR     LR
      comp=Z,320nm,17.7s
NJ2                                LR     LR
      comp=Z,280nm,16.2s
WAKE  Wake Island        28.94 150  P     P      20 34 19.2  +0.9
HHC   Hu-ho-hao-te       29.41 275 eP     P      20 34 23.3  +0.8
HHC                                pmax   pmax
      comp=Z,23nm,0.9s
HHC                                pmax   pmax
      comp=Z,280nm,5.6s
HHC                                LR     LR
      comp=Z,290nm,15.9s
HHC                                LR     LR
      comp=Z,830nm,15.2s
HHC                                LR     LR
      comp=Z,1µm,14.6s
H11S1 WAKE ISLAND Hy     29.67 150  T     T      21 06 05.2
      baz=339,slow=76
H11S3 WAKE ISLAND Hy     29.68 150  T     T      21 06 14.3
      baz=339,slow=76
H11S2 WAKE ISLAND Hy     29.69 150  T     T      21 06 15.5
      baz=339,slow=76
ULN   Ulaanbaatar        30.39 291  P     P      20 34 30.4  -0.9
ULN   Ulaanbaatar        30.39 291⇓eP     P      20 34 31.7  +0.5
ULN                                pmax   pmax
      comp=Z,9.0nm,2.9s
ULN   Ulaanbaatar        30.39 291 eP     P      20 34 31.7  +0.5
SONM  Songino Array      30.83 291  P     P      20 34 32.2  -2.8
      comp=Z,0.7nm,0.6s,baz=81,slow=8.6,SNR=8.3
SONM                               LR     LR     20 47 49.6
      comp=Z,283nm,19.1s,baz=112,slow=38
      comp=Z,0.7nm,0.6s
SONM  Songino Array      30.83 291  P     P      20 34 34.2  -0.9
SONM  Songino Array      30.83 291  P     P      20 34 34.2  -0.9
SONM                               pmax   pmax
      comp=Z,2.0nm,1.1s
GUMO  Guam               32.33 192  LR    LR     20 47 32.3
      comp=Z,117nm,19.0s,baz=5.0,slow=35
XAN   Xi'an              34.43 266  P     P      20 35 07.0  +0.5
XAN                                pmax   pmax
      comp=Z,9.0nm,1.1s
M20K  Styx River         35.29  42  P     P      20 35 14.6  +0.9
IMAR  Indian Mountai     35.36  35  P     P      20 35 14.3  +0.1
PPLA  Purkeypile         35.76  41  P     P      20 35 18.6  +0.8
PPLA                               IAmb   IAmb   20 35 43.5
      comp=Z,14nm,1.5s
CAST  Castle Rocks       35.83  40  P     P      20 35 19.1  +0.8
ENH   Enshi              36.17 260  P     P      20 35 20.7  -0.8
ENH                                IAmb   IAmb   20 35 22.3
      comp=Z,12nm,1.1s
TRF   Thorofare Moun     36.64  40  P     P      20 35 26.1  +0.8
TRF                                IAmb   IAmb   20 36 08.7
      comp=Z,9.5nm,1.4s
LZH   Lanzhou            36.94 272 eP     P      20 35 29.0  +0.8
LZH                                pP     sP     20 35 42.5   0.0
LZH                                sP     pwP    20 35 48.8  +8.6
LZH                                pmax   pmax
      comp=Z,17nm,1.1s
H23K  Yukon River        37.06  36  P     P      20 35 29.9  +1.1
SML   Sawmill            37.56  42  P     P      20 35 33.6  +0.6
SML                                IAmb   IAmb   20 35 55.0
      comp=Z,6.6nm,0.7s
MDM   Murphy Dome        37.57  37  P     P      20 35 33.8  +0.7
COLA  College            37.73  37⇓eP     P      20 35 34.4  +0.1
COLA                               pmax   pmax
      comp=Z,4.0nm,0.6s
HDA   Harding Lake       38.12  38  P     P      20 35 38.0  +0.4
ILAR  Eielson Array      38.15  38  P     P      20 35 37.4  -0.4
      comp=Z,0.9nm,0.8s,baz=263,slow=7.1,SNR=14
      comp=Z,0.9nm,0.8s
ILAR  Eielson Array      38.15  38  P     P      20 35 37.9   0.0
ILAR  Eielson Array      38.15  38  P     P      20 35 37.9   0.0
GTA   Gaotai             38.19 280 eP     P      20 35 40.0  +1.3
GTA                                pP     pP     20 35 47.5  -1.0
GTA                                PcP    PcP    20 37 55.0  +2.3
GTA                                pmax   pmax
      comp=Z,5.0nm,0.9s
GTA                                LR     LR
      comp=Z,120nm,14.5s
GTA                                LR     LR
      comp=Z,170nm,13.1s
GTA                                LR     LR
      comp=Z,270nm,14.5s
FYU   Fort Yukon         38.84  35  P     P      20 35 44.6  +1.0
FYU                                IAmb   IAmb   20 35 54.4
      comp=Z,11nm,1.3s
BMAR  Burnt Mountain     39.11  33  P     P      20 35 46.9  +1.0
CD2   Chengdu            39.79 266  P     P      20 35 52.5  +0.4
CD2                                pmax   pmax
      comp=Z,30nm,1.1s
GYA   Guiyang            40.48 258 ⇓P     P      20 36 00.0  +2.1
GYA                                pmax   pmax
      comp=Z,11nm,1.0s
BCAR  Beaver Creek A     40.50  40  P     P      20 35 59.0  +1.4
EGAK  Eagle              40.60  37  P     P      20 35 58.2  -0.1
DGZ   Jazzator, Alta     42.35 300⇑eP     P      20 36 13.2  +0.1
DGZ                                pmax   pmax
      comp=Z,3.0nm,0.8s
ZALV  Zalesovo Beam      42.55 306  P     P      20 36 11.7  -2.6
      comp=Z,0.2nm,0.3s,baz=81,slow=8.9,SNR=1.4
ZALV                               PcP    PcP    20 38 06.1  -0.2
      comp=Z,3.7nm,0.7s,baz=68,slow=3.0,SNR=18
ZALV                               LR     LR     20 54 50.9
      comp=Z,254nm,20.6s,baz=88,slow=38
      comp=Z,0.2nm,0.3s
GOMU  GeErMu             43.20 278  P     P      20 36 21.0  +0.6
GOMU                               S      S      20 42 48.5  +3.5
GOMU                               pmax   pmax
      comp=Z,13nm,0.9s
GOMU                               LR     LR
      comp=Z,230nm,17.4s
GOMU                               LR     LR
      comp=Z,220nm,17.1s
GOMU                               LR     LR
      comp=Z,280nm,18.2s
INK   Inuvik             43.24  32  P     P      20 36 19.6  -0.1
      comp=Z,2.4nm,0.6s,baz=292,slow=7.4,SNR=13
      comp=Z,2.4nm,0.6s
INK   Inuvik             43.24  32  P     P      20 36 20.4  +0.6
INK   Inuvik             43.24  32  P     P      20 36 20.4  +0.6
INK                                pmax   pmax
      comp=Z,4.0nm,0.7s
PZH   PanZhiHua          43.85 262  P     P      20 36 28.0  +2.6
PZH                                pmax   pmax
      comp=Z,20nm,1.1s
PZH                                pmax   pmax
      comp=Z,100nm,5.6s
KMI   Kunming            44.04 260 ⇑P     P      20 36 27.3  +0.3
KMI                                pP     pwP    20 36 38.8  -2.4
KMI                                pmax   pmax
      comp=Z,11nm,1.2s
WMQ   Urumqi             44.46 292 eP     P      20 36 31.0  +1.0
WMQ                                LR     LR
      comp=Z,290nm,12.7s
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WMQ                                LR     LR
      comp=Z,130nm,25.1s
A36M  Sachs Harbour      45.41  26  P     P      20 36 37.3  +0.2
A36M                               IAmb   IAmb   20 36 40.0
      comp=Z,11nm,0.8s
C36M  Paulatuk           46.40  29  P     P      20 36 45.2  +0.4
C36M                               IAmb   IAmb   20 36 57.0
      comp=Z,5.4nm,0.6s
MK31  Makanchi Array     46.64 298  P     P      20 36 46.5  -0.7
MK31  Makanchi Array     46.64 298⇓eP     P      20 36 45.9  -1.3
MKAR  Makanchi Array     46.64 298  P     P      20 36 46.6  -0.6
      comp=Z,1.2nm,0.6s,baz=70,slow=7.1,SNR=15
MKAR                               PcP    PcP    20 38 19.9  -0.7
      comp=Z,1.4nm,0.6s,baz=66,slow=4.0,SNR=6.6
MKAR                               LR     LR     20 57 19.3
      comp=Z,375nm,18.9s,baz=144,slow=38
      comp=Z,1.2nm,0.6s
MKAR  Makanchi Array     46.64 298  P     P      20 36 46.9  -0.3
MKAR  Makanchi Array     46.64 298 i P    P      20 36 47.2   0.0
MKAR                               pmax   pmax
      comp=Z,1.0nm,0.6s
MKAR  Makanchi Array     46.64 298 i P    P      20 36 47.2   0.0
DLBC  Dease Lake         47.18  45  P     P      20 36 53.2  +1.9
      comp=Z,1.1nm,0.4s,baz=312,slow=11,SNR=3.7
      comp=Z,1.1nm,0.4s
KURK  Kurchatov          47.24 304  P     P      20 36 51.0  -0.7
KURK  Kurchatov          47.24 304  P     P      20 36 51.0  -0.7
KURK                               pmax   pmax
      comp=Z,3.0nm,0.9s
KURK  Kurchatov          47.24 304 eP     P      20 36 51.0  -0.7
CRAI  Chiangrai          48.91 257  P     P      20 37 05.3  +0.3
CRAI                               IAmb   IAmb   20 37 08.1
      comp=Z,9.4nm,1.2s
LSA   Lhasa              49.35 273  P     P      20 37 10.5  +1.6
LSA                                pmax   pmax
      comp=Z,11nm,0.7s
LSA   Lhasa              49.35 273  P     P      20 37 08.8  -0.1
LSA                                IAmb   IAmb   20 37 11.8
      comp=Z,7.5nm,0.8s
LSA   Lhasa              49.35 273  P     P      20 37 08.8  -0.1
LSA                                pmax   pmax
      comp=Z,8.0nm,0.8s
LSA   Lhasa              49.35 273 eP     P      20 37 08.8  -0.1
PHRA  Phrae              50.20 255  P     P      20 37 14.8   0.0
CHTO  Chiang Mai         50.86 256  P     P      20 37 20.1  +0.2
CHTO  Chiang Mai         50.86 256  P     P      20 37 20.1  +0.2
BVAR  Borovoye Array     50.89 310  LR    LR     21 00 30.3
      comp=Z,326nm,18.5s,baz=86,slow=38
BRVK  Borovoye           50.93 310  P     P      20 37 18.9  -1.1
BRVK  Borovoye           50.93 310  P     P      20 37 18.9  -1.1
BRVK                               pmax   pmax
      comp=Z,2.0nm,0.8s
CM31  Chiang Mai Arr     51.11 256  P     P      20 37 22.1  +0.4
CM31                               IAmb   IAmb   20 37 24.2
      comp=Z,7.2nm,1.1s
CMAR  Chiang Mai Arr     51.11 256  P     P      20 37 22.4  +0.7
      comp=Z,2.6nm,0.9s,baz=33,slow=7.8,SNR=21
CMAR                               LR     LR     21 01 47.4
      comp=Z,54nm,19.3s,baz=80,slow=39
      comp=Z,2.6nm,0.9s
CMAR  Chiang Mai Arr     51.11 256 i P    P      20 37 23.5  +1.8
CMAR                               pmax   pmax
      comp=Z,3.0nm,0.9s
SHL   Shillong           51.34 268  P     P      20 37 23.0  -0.6
SHL                                IAmb   IAmb   20 37 24.4
      comp=Z,11nm,0.8s
SHL   Shillong           51.34 268  P     P      20 37 23.0  -0.6
SHL                                pmax   pmax
      comp=Z,11nm,0.8s
KDJ   Kajisay            52.06 295  P     P      20 37 28.1  -0.7
KDJ   Kajisay            52.06 295  P     P      20 37 28.1  -0.7
KDJ                                pmax   pmax
      comp=Z,3.0nm,1.0s
RES   Resolute Bay       52.34  18  P     P      20 37 29.1  -1.1
      comp=Z,1.4nm,0.5s,baz=328,slow=7.9,SNR=9.5
      comp=Z,1.4nm,0.5s
RES   Resolute Bay       52.34  18  P     P      20 37 30.2  +0.1
RES                                IAmb   IAmb   20 37 35.5
      comp=Z,4.8nm,0.8s
RES   Resolute Bay       52.34  18  P     P      20 37 30.2  +0.1
RES                                pmax   pmax
      comp=Z,5.0nm,0.8s
YKA   Yellowknife Ar     52.52  36  P     P      20 37 31.9  +0.2
      comp=Z,1.2nm,0.8s,baz=299,slow=7.2,SNR=14
YKA                                LR     LR     21 01 30.8
      comp=Z,114nm,21.2s,baz=306,slow=38
      comp=Z,1.2nm,0.8s
YKA   Yellowknife Ar     52.52  36 i P    P      20 37 32.4  +0.8
YKA                                pmax   pmax
      comp=Z,1.0nm,0.9s
BOOM  Boomskoye usch     52.66 296  P     P      20 37 33.3   0.0
BOOM  Boomskoye usch     52.66 296  P     P      20 37 33.3   0.0
TAPN  Taplejung          53.18 273 eP     P      20 37 38.0  +0.6
AAK   Ala-Archa          53.50 296  LR    LR     21 01 39.8
      comp=Z,229nm,18.3s,baz=93,slow=38
AAK   Ala-Archa          53.50 296  P     P      20 37 38.8  -0.6
AAK   Ala-Archa          53.50 296⇑eP     P      20 37 40.1  +0.7
AAK   Ala-Archa          53.50 296 eP     P      20 37 40.1  +0.7
JIRN  Jiri               54.05 274 eP     P      20 37 44.4  +0.5
GUN   Gumba              54.12 275 eP     P      20 37 45.4  +1.1
      comp=Z,20nm,0.5s
RAMN  Ramite             54.20 274 eP     P      20 37 44.9  +0.1
      comp=Z,15nm,0.3s
KSH   Kashi              54.21 292  P     P      20 37 48.5  +3.9
KSH                                sP     sP     20 38 06.3  +7.1
KSH                                ScS    ScS    20 47 30.5  -0.6
KSH                                pmax   pmax
      comp=Z,2.0nm,1.0s
KSH                                LR     LR
      comp=Z,260nm,18.4s
KSH                                LR     LR
      comp=Z,310nm,22.1s
KSH                                LR     LR
      comp=Z,380nm,16.5s
PKI   Pulchoki           54.66 275 eP     P      20 37 48.0  -0.2
PKIN  Phulchoki          54.66 275 eP     P      20 37 48.3  +0.1
DMN   Daman              54.84 275 eP     P      20 37 50.2  +0.7
      comp=Z,24nm,0.7s
GKN   Gorkha             54.93 276 eP     P      20 37 50.3  +0.3
ARU   Arti               55.27 318d iP    P      20 37 51.4  -0.4
ARU                                              20 38 50.5
ARU                                S      S      20 45 34.5  +1.8
ARU                                SS     SS     20 49 18.7  +2.1
ARU                                pmax   pmax
      comp=Z,8.0nm,1.2s
ARU   Arti               55.27 318 i P    P      20 37 51.4  -0.4
DANN  Dangsing           55.34 277 eP     P      20 37 53.5  +0.4
      comp=Z,21nm,0.6s
TULEG Thule              55.54  11  P     P      20 37 52.9  -0.6
TULEG                              IAmb   IAmb   20 37 53.2
      comp=Z,8.7nm,0.9s
KK31  Karatay Array      55.73 299  P     P      20 37 54.4  -1.0
KK31                               IAmb   IAmb   20 37 58.5
      comp=Z,2.6nm,0.7s
KK31  Karatay Array      55.73 299  P     P      20 37 54.4  -1.0
KK31                               pmax   pmax
      comp=Z,3.0nm,0.7s
KKAR  Karatay Array      55.73 299  P     P      20 37 54.3  -1.1
KKAR  Karatay Array      55.73 299  P     P      20 37 54.3  -1.1
PYUN  Piuthan            56.02 277 eP     P      20 37 58.7  +0.8
NEEM  North Greenlan     56.51   6 i P    P      20 37 57.5  -3.3
NEEM                               IAmb   IAmb   20 38 00.6
      comp=Z,29nm,1.3s
BTK   Batken             57.22 296  P     P      20 38 05.2  -1.0
BTK                                IAmb   IAmb   20 38 11.0
      comp=Z,3.7nm,0.7s
BTK   Batken             57.22 296  P     P      20 38 05.2  -1.0
BTK                                pmax   pmax
      comp=Z,4.0nm,0.7s
DAG   Danmarks Havn      57.85 357 i P    P      20 38 06.5  -3.4
GAR   Garm               58.14 295  P     P      20 38 12.4  -0.3
KIRV  Kirov              58.18 323⇑eP     P      20 38 12.3  -0.1
ABKAR Akbulak array      58.47 310  P     P      20 38 12.8  -1.8
KULLO Kullorsuaq         58.65   9 i P    P      20 38 11.5  -4.0
ARCES ARCESS Array B     58.71 341  P     P      20 38 13.7  -2.3
      comp=Z,3.0nm,0.9s,baz=26,slow=11,SNR=1.2
ARCES                              LR     LR     21 06 10.0
      comp=Z,288nm,20.1s,baz=52,slow=39
      comp=Z,3.0nm,0.9s
AKTO  Aktyubinsk         58.82 312  LR    LR     21 06 01.2
      comp=Z,452nm,18.2s,baz=52,slow=39
CHGR  Chuyangaron        59.08 295  P     P      20 38 17.9  -1.2
CHGR  Chuyangaron        59.08 295  P     P      20 38 17.9  -1.2
CHGR                               pmax   pmax
      comp=Z,19nm,0.6s
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NIL    Nilore            59.36 288   P      P       20 38 20.9 -0.1
NIL    Nilore            59.36 288   P      P       20 38 20.9 -0.1
NIL                                  pmax   pmax
       comp=Z,22nm,1.1s
KULM   Kulim             59.63 244   P      P       20 38 24.6 +1.5
COEN   Coen              59.67 190   P      P       20 38 25.1 +1.9
COEN                                 IAmb   IAmb    20 38 58.3
       comp=Z,9.7nm,1.1s
DBG    Daneborg          60.36 357 i P      P       20 38 25.4 -1.8
KBL    Kabul             61.60 291   P      P       20 38 35.3 -1.3
KBL                                  IAmb   IAmb    20 38 38.8
       comp=Z,6.3nm,0.8s
KBL    Kabul             61.60 291   P      P       20 38 35.3 -1.3
KBL                                  pmax   pmax
       comp=Z,6.0nm,0.8s
SUMG   Summit            62.01   3 i P      P       20 38 37.5 -1.4
SUMG                                 IAmb   IAmb    20 38 41.2
       comp=Z,25nm,1.0s
FFC    Flin Flon         62.34  39   P      P       20 38 41.6 +0.7
FFC                                  IAmb   IAmb    20 38 43.0
       comp=Z,8.6nm,1.4s
FFC    Flin Flon         62.34  39   P      P       20 38 41.6 +0.7
FFC                                  pmax   pmax
       comp=Z,9.0nm,1.5s
BELG   Belogornoye       62.80 318⇑eP     P       20 38 44.4 +0.4
BELG                                 pmax   pmax
       comp=Z,2.0nm,1.0s
FCC    Fort Churchill    62.85  32   P      P       20 38 43.8 -0.4
FCC                                  IAmb   IAmb    20 39 06.6
       comp=Z,2.8nm,0.7s
FCC    Fort Churchill    62.85  32   P      P       20 38 43.8 -0.4
FCC                                  pmax   pmax
       comp=Z,3.0nm,0.7s
BOZ    Bozeman (W)       63.34  51   P      P       20 38 49.2 +1.2
BOZ    Bozeman (W)       63.34  51   P      P       20 38 49.2 +1.2
BOZ                                  pmax   pmax
       comp=Z,2.0nm,0.8s
NVAR   Mina Array Bea    63.90  61   P      P       20 38 54.0 +2.1
       comp=Z,0.8nm,0.6s,baz=283,slow=7.0,SNR=6.2
       comp=Z,0.8nm,0.6s
NVAR   Mina Array Bea    63.90  61   P      P       20 38 52.3 +0.5
SCO    Scoresbysund      64.24 358   P      P       20 38 52.9 -0.3
SCO    Scoresbysund      64.24 358   P      P       20 38 52.9 -0.3
SCO                                  pmax   pmax
       comp=Z,29nm,1.4s
ELK    Elko              64.31  57   P      P       20 38 56.6 +2.1
       comp=Z,0.3nm,0.3s,baz=258,slow=16,SNR=1.7
       comp=Z,0.3nm,0.3s
PUL    Pulkovo           64.66 331⇓eP     P       20 38 55.9 -0.3
PUL                                  pmax   pmax
       comp=Z,21nm,0.7s
PUL    Pulkovo           64.66 331 eP     P       20 38 55.9 -0.3
FIA1   FINESS Array S    64.74 334   P      P       20 38 54.6 -2.1
FINES  FINESS Array B    64.74 334   P      P       20 38 53.9 -2.8
       comp=Z,1.7nm,0.5s,baz=36,slow=6.7,SNR=18
       comp=Z,1.7nm,0.5s
FINES  FINESS Array B    64.74 334   P      P       20 38 54.5 -2.2
FINES  FINESS Array B    64.74 334 i P      P       20 38 54.7 -2.0
FINES                                pmax   pmax
       comp=Z,2.0nm,0.6s
ICESG  Greenland Ices    65.42   4 i P      P       20 39 01.3 -0.1
OBN    Obninsk           65.78 325 eP     P       20 39 04.5 +1.1
OBN                                e*PP   pwP     20 39 16.3 -0.4
OBN                                e*SP   sP      20 39 20.8 +2.8
OBN                                e              20 39 33.7
OBN                                e              20 41 27.3
OBN                                  pmax   pmax
       comp=Z,8.0nm,0.6s
OBN                                  MLR    MLR
       comp=Z,106nm,17.0s
OBN    Obninsk           65.78 325 eP     P       20 39 04.5 +1.1
PDAR   Pinedale Array    66.29  53   P      P       20 39 09.7 +2.4
       comp=Z,0.3nm,0.6s,baz=300,slow=2.7,SNR=2.7
       comp=Z,0.3nm,0.6s
GEYT   Alibeck           66.39 301   P      P       20 39 06.3 -1.5
       comp=Z,4.7nm,0.7s,baz=356,slow=2.2,SNR=11
       comp=Z,4.7nm,0.7s
GEYT   Alibeck           66.39 301   P      P       20 39 06.8 -1.0
GEYT                                 IAmb   IAmb    20 39 08.5
       comp=Z,6.4nm,0.8s
GEYT   Alibeck           66.39 301   P      P       20 39 06.8 -1.0
GEYT                                 pmax   pmax
       comp=Z,6.0nm,0.8s
GYA0B  ALIBECK ARRAY     66.39 301   P      P       20 39 07.0 -0.8
GYA0B                                IAmb   IAmb    20 39 12.7
       comp=Z,6.8nm,0.8s
SFJD   Kangerlussuaq     66.55   9   LR     LR      21 11 05.8
       comp=Z,86nm,18.6s,baz=342,slow=39
SFJD   Kangerlussuaq     66.55   9 i P      P       20 39 05.3 -2.9
FRB    Frobisher Bay     66.55  18   LR     LR      21 12 12.9
       comp=Z,88nm,18.2s,baz=350,slow=40
WB0    Warramunga Arr    66.83 198   P      P       20 39 12.6 +2.0
WB0                                  IAmb   IAmb    20 39 32.3
       comp=Z,6.3nm,0.9s
WRA    Warramunga Arr    67.01 198   P      P       20 39 13.2 +1.5
       comp=Z,0.7nm,0.8s,baz=12,slow=6.5,SNR=3.8
       comp=Z,0.7nm,0.8s
MSVF   Nonsavu           67.33 153   LR     LR      21 06 32.9
       comp=Z,107nm,19.4s,baz=354,slow=34
DY2G   Dye2              67.51   8 i P      P       20 39 15.3 +0.6
AFI    Afiamalu          67.73 141   LR     LR      21 10 29.0
       comp=Z,29nm,19.1s,baz=344,slow=37
DZM    Mont Dzumac       68.57 165 eLR    LR      21 00 13.6
       comp=Z,134nm,23.1s
DZM    Mont Dzumac       68.57 165   LR     LR      21 03 01.0
       comp=Z,91nm,21.9s,baz=28,slow=30
NC405  NORSAR Array S    68.90 340   P      P       20 39 22.2 -1.0
NB2    NORSAR Subarra    69.08 341   P      P       20 39 23.2 -1.2
       comp=Z,7.0nm,0.8s,baz=30,slow=6.5
NOA    NORSAR Array B    69.08 341   P      P       20 39 22.3 -2.0
       comp=Z,4.6nm,0.7s,baz=30,slow=6.7,SNR=24
       comp=Z,4.6nm,0.7s
BORG   Borgarnes         69.96 357 i P      P       20 39 26.8 -2.8
SEKA   Sheki             70.50 309   P      P       20 39 31.0 -2.5
ASAR   Alice Springs     70.71 197   P      P       20 39 37.3 +2.6
       comp=Z,0.6nm,0.8s,baz=9.8,slow=6.0,SNR=6.1
       comp=Z,0.6nm,0.8s
ASAR   Alice Springs     70.71 197   P      P       20 39 36.7 +2.0
NCK    Nalchik           70.81 313⇑eP     P       20 39 36.1 +0.8
NCK                                  pmax   pmax
       comp=Z,8.0nm,0.6s
MNGR   Mingechevir, A    70.86 309   P      P       20 39 33.5 -2.1
KVAR   Kislovodsk Arr    70.95 314   LR     LR      21 14 52.1
       comp=Z,72nm,18.2s,baz=264,slow=40
KIV    Kislovodsk        70.95 314   P      P       20 39 35.2 -1.0
KIV                                  IAmb   IAmb    20 39 38.7
       comp=Z,6.6nm,1.0s
KIV    Kislovodsk        70.95 314 eP     P       20 39 37.8 +1.6
KIV                                  pmax   pmax
       comp=Z,6.0nm,1.0s
KIV                                  MLR    MLR
       comp=Z,185nm,18.0s
KBZ    Khabaz            71.01 313   P      P       20 39 35.5 -0.8
       comp=Z,5.8nm,0.8s,baz=116,slow=1.6,SNR=14
KBZ                                  LR     LR      21 14 39.9
       comp=Z,337nm,18.3s,baz=60,slow=39
       comp=Z,5.8nm,0.8s
KBZ    Khabaz            71.01 313deP     P       20 39 36.6 +0.2
KBZ                                  pmax   pmax
       comp=Z,9.0nm,0.9s
KBZ    Khabaz            71.01 313 eP     P       20 39 36.6 +0.2
ZEI    Tsey              71.16 312 eP     P       20 39 36.6 -1.0
ZEI                                  pmax   pmax
       comp=Z,4.0nm,1.0s
LKRN   Lenkeran, Azer    71.35 306   P      P       20 39 36.5 -2.0
GANJ   Ganja             71.37 309   P      P       20 39 36.6 -2.1
ONI    Oni               71.53 312   P      P       20 39 39.8 +0.1
ONI                                  IAmb   IAmb    20 39 41.7
       comp=Z,4.8nm,0.9s
ONI    Oni               71.53 312   P      P       20 39 39.8 +0.1
ONI                                  pmax   pmax
       comp=Z,5.0nm,0.9s
AKASG  Malin Array Be    72.03 326   P      P       20 39 40.4 -2.0
       comp=Z,1.4nm,0.4s,baz=37,slow=6.1,SNR=13
       comp=Z,1.4nm,0.4s
AKBB   Malin Array Si    72.03 326⇓eP     P       20 39 41.0 -1.4
AKBB                                 pmax   pmax
       comp=Z,22nm,2.8s
AK05   Malin Array Si    72.10 326   P      P       20 39 41.0 -1.9
AK05                                 IAmb   IAmb    20 40 20.8
       comp=Z,3.7nm,0.9s
GNI    Garni             72.58 310   LR     LR      21 15 06.1
       comp=Z,138nm,18.2s,baz=69,slow=39
GNI    Garni             72.58 310   P      P       20 39 46.1  0.0
GNI    Garni             72.58 310⇓iP     P       20 39 47.5 +1.4
GNI                                  pmax   pmax
       comp=Z,21nm,1.9s
NAX    Nakhchivan        72.86 309   P      P       20 39 45.5 -2.2
SCHQ   Schefferville     74.84  22   P      P       20 39 58.9  0.0
       comp=Z,4.0nm,0.9s,baz=68,slow=19,SNR=2.7
SCHQ                                 LR     LR      21 18 52.1
       comp=Z,94nm,18.8s,baz=276,slow=41
       comp=Z,4.0nm,0.9s
GURO   Guroymak-BITLI    75.18 310   P      P       20 40 01.7 +0.4
GURO                                 IAmb   IAmb    20 40 03.6
       comp=Z,8.9nm,1.1s
VASR   Vaslui            75.82 324 ⇑P     P       20 40 04.1 -0.5
WSAR   Wadi Sarin        75.85 289   LR     LR      21 17 21.9
       comp=Z,88nm,20.8s,baz=84,slow=39
OJC    Ojcow             75.93 330 eP     P       20 40 05.1 -0.1
OJC    Ojcow             75.93 330   P      P       20 40 04.9 -0.3
OJC                                  IAmb   IAmb    20 40 05.7
       comp=Z,9.1nm,0.7s
OJC    Ojcow             75.93 330   P      P       20 40 04.9 -0.3
OJC                                  pmax   pmax
       comp=Z,9.0nm,0.7s
BUR08  Bucovina Ar. S    76.06 326   P      P       20 40 05.5 -0.6
BUR08                                IAmb   IAmb    20 40 06.5
       comp=Z,10nm,0.7s
BURAR  Bucovina Array    76.08 326 ⇓P     P       20 40 05.4 -0.9
BURAR  Bucovina Array    76.08 326   P      P       20 40 05.4 -0.9
BURAR  Bucovina Array    76.08 326   P      P       20 40 05.4 -0.9
STHS   Stebnicka Huta    76.09 329 eP     P       20 40 05.6 -0.6
STHS                                 pmax   pmax
       comp=Z,10.0nm,0.8s
STHS   Stebnicka Huta    76.09 329 eP     P       20 40 05.6 -0.6
DIKM   Dikmen            76.35 316 ⇑P     P       20 40 07.7 -0.1
TESR   Tescani           76.39 324 ⇓P     P       20 40 07.0 -1.0
TLCR                     76.55 322 ⇑P     P       20 40 08.7 -0.1
TLCR                     76.55 322   P      P       20 40 08.7 -0.1
KSP    Ksiaz             76.57 333 eP     P       20 40 08.7 -0.2
TRPA   Tarpa             76.68 328 ⇑P     P       20 40 09.0 -0.5
FLTG   Flechtingen       76.79 336 eP     P       20 40 09.4 -0.6
       comp=Z,6.7nm,0.8s,baz=27,slow=5.8
OSTC   Ostas             76.84 333 eP     P       20 40 09.3 -1.1
OSTC   Ostas             76.84 333 eP     P       20 40 09.3 -1.1
CFR    Carcaliu          76.84 323 ⇓P     P       20 40 09.3 -1.2
CFR    Carcaliu          76.84 323   P      P       20 40 09.2 -1.2
CHVC   Chvalec           76.86 333 eP     P       20 40 09.9 -0.7
CHVC   Chvalec           76.86 333 eP     P       20 40 09.9 -0.7
LANS   Liptovska Anna    76.95 330 eP     P       20 40 11.4 +0.3
LANS                                 pmax   pmax
       comp=Z,8.0nm,0.7s
LANS   Liptovska Anna    76.95 330 eP     P       20 40 11.4 +0.3
UPC    Upice             76.95 333 eP     P       20 40 10.5 -0.5
UPC    Upice             76.95 333 eP     P       20 40 10.5 -0.5
TPGR   Topolog           76.98 322 ⇑P     P       20 40 11.0 -0.3
DPC    Dobruska-Polom    76.98 332 eP     P       20 40 10.6 -0.7
DPC    Dobruska-Polom    76.98 332 eP     P       20 40 10.6 -0.7
KRLC   Kraliky           77.07 332 eP     P       20 40 10.6 -1.2
KRLC   Kraliky           77.07 332 eP     P       20 40 10.6 -1.2
MORC   Moravsky Berou    77.07 331 ⇓P     P       20 40 11.5 -0.3
MORC   Moravsky Berou    77.07 331   P      P       20 40 10.8 -1.0
MORC                                 IAmb   IAmb    20 40 12.5
       comp=Z,9.9nm,0.8s
MORC   Moravsky Berou    77.07 331 eP     P       20 40 11.0 -0.8
MORC   Moravsky Berou    77.07 331   P      P       20 40 11.5 -0.3
COVR   Voineasa-Covas    77.11 324 ⇓P     P       20 40 12.3 +0.2
CLL    Collm             77.19 335   P      P       20 40 11.3 -1.0
CLL                                  IAmb   IAmb    20 40 12.3
       comp=Z,9.3nm,0.7s
CLL    Collm             77.19 335 i P      P       20 40 11.5 -0.8
       comp=Z,13nm,1.1s
CLL                                epP    PcP     20 40 24.0 +1.1
CLL                                ex     x       20 40 32.0
CLL                                ePP    PP      20 43 06.0 +0.4
CLL    Collm             77.19 335 i P      P       20 40 11.5 -0.8
CLL                                e*PP   PcP     20 40 24.0 +1.1
CLL                                  pmax   pmax
       comp=Z,13nm,1.1s
CLL    Collm             77.19 335 eP     P       20 40 11.7 -0.6
       comp=Z,7.0nm,0.8s,baz=27,slow=5.8
BRG    Berggiesshubel    77.28 334 eP     P       20 40 12.4 -0.4
BRG                                  pmax   pmax
       comp=Z,3.0nm,0.7s
BRG    Berggiesshubel    77.28 334 eP     P       20 40 12.3 -0.6
       comp=Z,2.3nm,0.8s,baz=27,slow=5.8
BRG    Berggiesshubel    77.28 334   Amp            20 40 13.8
       comp=Z,2.5nm,0.7s
BRG    Berggiesshubel    77.28 334 eP     Pg      20 40 12.4 +0.2
EKA    Eskdalemuir Ar    77.31 346   LR     LR      21 15 55.6
       comp=Z,135nm,21.7s,baz=44,slow=37
HARR   Harsova           77.32 323 ⇓P     P       20 40 13.2 +0.1
HARR   Harsova           77.32 323   P      P       20 40 13.2 +0.1
MAUC   Maruska           77.33 331 eP     P       20 40 12.8 -0.4
ESK    Eskdalemuir       77.34 346   P      P       20 40 12.0 -1.1
ESK    Eskdalemuir       77.34 346   P      P       20 40 12.0 -1.1
ESK                                  pmax   pmax
       comp=Z,22nm,1.5s
PVCC   Panska Ves        77.39 334 eP     P       20 40 13.1 -0.4
PVCC   Panska Ves        77.39 334 eP     P       20 40 13.1 -0.4
FBE    Freiberg          77.42 334 eP     P       20 40 13.2 -0.4
       comp=Z,22nm,1.4s,baz=27,slow=5.8
CJR    Cluj-Napoca       77.45 326 ⇑P     P       20 40 14.3 +0.3
CJR    Cluj-Napoca       77.45 326   P      P       20 40 14.2 +0.3
CLZ    Clausthal         77.47 337 eP     P       20 40 13.3 -0.6
       comp=Z,4.1nm,0.7s,baz=27,slow=5.8
MLR    Muntele Rosu      77.51 324 ⇓P     P       20 40 13.9 -0.5
MLR    Muntele Rosu      77.51 324   P      P       20 40 13.8 -0.6
MLR                                  IAmb   IAmb    20 40 15.8
       comp=Z,6.8nm,0.7s
MLR    Muntele Rosu      77.51 324   P      P       20 40 13.9 -0.5
ISR    Istrita           77.56 324 ⇓P     P       20 40 14.3 -0.3
ISR    Istrita           77.56 324   P      P       20 40 14.3 -0.3
MARR   Marisel-Cluj      77.67 327 ⇓P     Pg      20 40 14.2 +2.0
VYHS   Vyhne             77.72 330 eP     P       20 40 15.2 -0.2
VYHS                                 pmax   pmax
       comp=Z,11nm,1.2s
VYHS   Vyhne             77.72 330 eP     P       20 40 15.2 -0.2
DRGR                     77.73 327 ⇓P     P       20 40 14.9 -0.6
DRGR                     77.73 327   P      P       20 40 14.9 -0.6
IBBN   Ibbenburen        77.76 338 eP     P       20 40 15.2 -0.3
       comp=Z,9.9nm,0.7s,baz=27,slow=5.8
VRAC   Vranov            77.79 332 ⇓P     P       20 40 15.5 -0.2
VRAC   Vranov            77.79 332 eP     P       20 40 15.6 -0.2
VRAC   Vranov            77.79 332   P      P       20 40 15.5 -0.2
JAVC   Velka Javorina    77.82 331 eP     P       20 40 16.7 +0.7
PRU    Pruhonice         77.87 333 eP     P       20 40 15.5 -0.6
PRU    Pruhonice         77.87 333 eP     P       20 40 15.5 -0.6
VOIR                     77.92 325 ⇓P     P       20 40 16.3 -0.3
VOIR                     77.92 325   P      P       20 40 16.3 -0.3
KRUC   Moravsky          78.07 332 eP     P       20 40 17.0 -0.3
WERD   Werda             78.15 335 eP     P       20 40 17.3 -0.5
       comp=Z,3.4nm,0.8s,baz=27,slow=5.8
TREC   Trest             78.17 332 eP     P       20 40 17.5 -0.4
TREC   Trest             78.17 332 eP     P       20 40 17.5 -0.4
MOX    Moxa              78.18 335 eP     P       20 40 17.3 -0.6
       comp=Z,2.3nm,0.7s,baz=27,slow=5.8
BNN    Bunyan            78.18 314   P      P       20 40 17.5 -0.8
SMOL   Smolenice         78.19 331 eP     P       20 40 18.9 +0.9
SMOL                                 pmax   pmax
       comp=Z,11nm,1.3s
GUNZ   Gunzen            78.22 335 eP     P       20 40 17.9 -0.3
       comp=Z,4.2nm,0.8s,baz=27,slow=5.8
WERN   Wernitzgruen      78.27 335 eP     P       20 40 18.1 -0.3
       comp=Z,6.0nm,0.8s,baz=27,slow=5.8
NKC    Novy Kostel       78.30 335 eP     P       20 40 18.2 -0.4
NKC    Novy Kostel       78.30 335 eP     P       20 40 18.2 -0.4
MODS   Modra-Piesok      78.37 331 eP     P       20 40 19.4 +0.4
MODS                                 pmax   pmax
       comp=Z,27nm,1.0s
MODS   Modra-Piesok      78.37 331 eP     P       20 40 19.4 +0.4
SRO    Srobarova         78.49 330 eP     P       20 40 20.1 +0.5
SRO                                  pmax   pmax
       comp=Z,25nm,1.5s
SRO    Srobarova         78.49 330 eP     P       20 40 20.1 +0.5
SIRR   Siria             78.57 327 ⇑P     P       20 40 19.9 -0.2
KASTN  Kahler Asten      78.58 337 eP     P       20 40 19.7 -0.4
       comp=Z,4.3nm,0.8s,baz=27,slow=5.8
BR131  Keskin Array S    78.61 316   P      P       20 40 20.1 -0.5
BR131                                IAmb   IAmb    20 40 21.5
       comp=Z,7.3nm,0.9s
BR131  Keskin Array S    78.61 316⇓eP     P       20 40 19.7 -0.9
BRTR   Keskin Array B    78.61 316   P      P       20 40 20.0 -0.7
       comp=Z,3.3nm,0.8s,baz=89,slow=4.8,SNR=23
BRTR                                 LR     LR      21 19 34.9
       comp=Z,132nm,18.1s,baz=71,slow=39
       comp=Z,3.3nm,0.8s
BRTR   Keskin Array B    78.61 316   P      P       20 40 20.0 -0.7
BRTR   Keskin Array B    78.61 316 i P      P       20 40 20.7 +0.1
BRTR                                 pmax   pmax
       comp=Z,3.0nm,0.8s
MANZ   Manzenberg        78.62 335 eP     P       20 40 20.1 -0.2
       comp=Z,1.0nm,0.9s,baz=27,slow=5.8
BUG    Bochum--Univer    78.67 338 eP     P       20 40 20.1 -0.5
       comp=Z,5.4nm,0.7s,baz=27,slow=5.8
ROTZ   Rotzenmuhle       78.78 335 eP     P       20 40 21.0 -0.2
       comp=Z,1.1nm,0.8s,baz=27,slow=5.8
SURR   Surduc            78.82 327 ⇑P     P       20 40 20.8 -0.6
ANTO   Ankara            78.91 317   P      P       20 40 21.9 -0.3
ANTO   Ankara            78.91 317   P      P       20 40 21.9 -0.3
ANTO                                 pmax   pmax
       comp=Z,13nm,0.7s
KHC    Kasperske Hory    78.92 333 eP     P       20 40 21.0 -1.0
KHC                                ex     x       20 40 30.5
KHC    Kasperske Hory    78.92 333 eP     P       20 40 21.0 -1.0
KHC                                e              20 40 30.5
BR231  Keskin MP Arra    78.94 317   P      P       20 40 22.1 -0.4
BR231                                IAmb   IAmb    20 40 23.5
       comp=Z,12nm,0.8s
CKRC   Cesky Krumlov     78.96 333 eP     P       20 40 20.8 -1.5
CKRC   Cesky Krumlov     78.96 333 eP     P       20 40 20.8 -1.5
TXAR   Lajitas Array     78.98  59   P      P       20 40 23.9 +1.2
       comp=Z,0.3nm,0.6s,baz=304,slow=4.2,SNR=4.8
       comp=Z,0.3nm,0.6s
BZS    Buzias            79.13 327 ⇓P     P       20 40 22.9 -0.3
BZS    Buzias            79.13 327   P      P       20 40 22.8 -0.3
GEC2   GERESS Array S    79.14 333   P      P       20 40 22.5 -0.8
GEC2                                 IAmb   IAmb    20 40 23.6
       comp=Z,5.1nm,0.8s
GEC2   GERESS Array S    79.14 333 eP     P       20 40 22.8 -0.5
       comp=Z,3.3nm,0.8s,baz=27,slow=5.8
GERES  GERESS Array B    79.14 333   P      P       20 40 21.8 -1.5
       comp=Z,2.7nm,0.6s,baz=27,slow=4.5,SNR=18
GERES                                LR     LR      21 19 15.1
       comp=Z,150nm,19.3s,baz=70,slow=39
       comp=Z,2.7nm,0.6s
GERES  GERESS Array B    79.14 333   P      P       20 40 22.3 -1.0
GRA1   Grafenberg Arr    79.15 335   P      P       20 40 23.1 -0.1
GRF    Grafenberg Arr    79.15 335   P      P       20 40 23.1 -0.1
GRF                                  pmax   pmax
       comp=Z,15nm,0.7s
GRF    Grafenberg Arr    79.15 335 eP     P       20 40 23.0 -0.3
       comp=Z,11nm,0.8s,baz=27,slow=5.8
GRFO   Grafenberg        79.15 335   P      P       20 40 23.0 -0.2
GRFO   Grafenberg        79.15 335   P      P       20 40 23.0 -0.2
GRFO                                 pmax   pmax
       comp=Z,14nm,0.7s
CONA   Conrad Observa    79.23 332 i P      P       20 40 24.0 +0.2
       comp=Z,5.6nm,0.6s,SNR=5.3
RONA   Rosalia, Austr    79.28 331 i P      P       20 40 24.3 +0.2
       comp=Z,7.4nm,0.7s
RAO    Raoul Island      79.37 153   LR     LR      21 10 51.9
       comp=Z,41nm,21.0s,baz=360,slow=32
HERR   Herculane         79.43 326 ⇓P     P       20 40 23.7 -1.2
TNS    Taunus Mts        79.46 337 eP     P       20 40 24.9 -0.1
       comp=Z,4.9nm,0.7s,baz=27,slow=5.8
AHRW   Bad Neuenahr-A    79.54 338 eP     P       20 40 25.6 +0.3
       comp=Z,8.0nm,0.9s,baz=27,slow=5.8
BEBN   Eben Emael        79.67 339 dP     P       20 40 25.6 -0.4
BEBN                               dPcP   PcP     20 40 33.6 -0.1
MORH   Mrgy, Hungar      79.73 329 ⇓P     P       20 40 24.7 -1.7
BTNL   Ternell           79.75 339 dP     P       20 40 26.0 -0.5
MEM    Membach           79.76 339 dP     P       20 40 26.7 +0.2
MOA    Molln             79.83 332 i P      P       20 40 26.8 -0.2
       comp=Z,5.4nm,0.9s
BSTI   Sart Tilman       79.89 339 dP     P       20 40 27.7 +0.5
ARSA   Arzberg           79.93 331 i P      P       20 40 27.4 -0.1
       comp=Z,4.1nm,0.9s
BCLA   Clavier           80.11 339 dP     P       20 40 28.3 -0.1
BCLA                               dPcP   sP      20 40 45.0 +1.9
BIOA   Bad Ischl, Aus    80.17 333 i P      P       20 40 28.8  0.0
       comp=Z,12nm,1.3s
BGES   Gesves            80.20 339 dP     P       20 40 28.7 -0.2
FRGS   Fruska Gora       80.20 328 ⇓P     P       20 40 28.8 -0.2
BMRD   Maredsous         80.35 339 dP     P       20 40 29.4 -0.3
RCHB   Rochefort         80.37 339 dP     P       20 40 29.6 -0.2
RJOB   Jochberg          80.40 333 eP     P       20 40 30.2 +0.1
       comp=Z,4.6nm,0.9s,baz=27,slow=5.8
FUR    Furstenfeldbru    80.49 334 eP     P       20 40 30.6  0.0
       comp=Z,8.9nm,0.7s,baz=27,slow=5.8
SOKA   Soboth            80.60 331 i P      P       20 40 30.9 -0.3
       comp=Z,10nm,1.1s,SNR=7.3
PERS   Pernice           80.61 331 i P      P       20 40 30.8 -0.4
BOVS   Bovan             80.75 326 ⇓P     P       20 40 30.4 -1.6
KBA    Koelnbreinsper    80.80 333 i P      P       20 40 32.6 +0.2
       comp=Z,11nm,0.8s,SNR=8.3
OBKA   Obir              80.91 332 i P      P       20 40 32.6 -0.3
       comp=Z,4.1nm,0.8s
GOLS   Golise            80.98 331 i P      P       20 40 32.6 -0.6
DIVS   Divibare          81.03 327   P      P       20 40 32.8 -0.8
DIVS                                 IAmb   IAmb    20 40 34.1
       comp=Z,4.7nm,0.9s
WATA   Walderalm         81.14 334 i P      P       20 40 34.2 +0.1
       comp=Z,9.1nm,0.5s
WTTA   Wattenberg        81.18 334 i P      P       20 40 34.6 +0.2
       comp=Z,9.7nm,0.6s,SNR=5.4
BFO    Black Forest      81.21 336 eP     P       20 40 34.7 +0.3
       comp=Z,5.9nm,0.9s,baz=27,slow=5.8
PMOR   Pomariorio Ree    81.22 122 eT     T       22 10 14.6
       comp=Z,8.5nm,0.2s
RDO    Rodhopi           81.22 322   P      P       20 40 34.1 -0.4
RDO                                  IAmb   IAmb    20 40 35.4
       comp=Z,11nm,0.8s
RETA   Reutte            81.25 334 i P      P       20 40 34.5 -0.2
       comp=Z,5.7nm,0.9s
MOTA   Moosalm           81.28 334 i P      P       20 40 34.8 -0.1
       comp=Z,15nm,1.1s
PRED   Cave del Predi    81.29 332   P      P       20 40 33.5 -1.4
PRED                                 IAmb   IAmb    20 40 34.6
       comp=Z,4.9nm,0.7s
SQTA   Sankt Quirin      81.35 334 i P      P       20 40 35.4 +0.1
       comp=Z,11nm,0.9s
ABTA   Abfaltersbach     81.36 333 i P      P       20 40 35.0 -0.4
       comp=Z,5.5nm,1.2s
TAOE   Nuku Hiva Isla    81.39 112 eLR    LR      21 06 09.6
       comp=Z,160nm,25.6s
ECH    Echery            81.64 337   P      P       20 40 36.2 -0.4
ECH                                  IAmb   IAmb    20 40 37.1
       comp=Z,7.8nm,0.8s
ECH    Echery            81.64 337   P      P       20 40 36.2 -0.4
ECH                                  pmax   pmax
       comp=Z,8.0nm,0.8s
FETA   Feichten          81.68 334 i P      P       20 40 37.1  0.0
       comp=Z,7.9nm,1.1s
DAVA   Damuels           81.70 335 i P      P       20 40 37.0 -0.2
       comp=Z,6.0nm,0.8s
STAL   STALIGIAL         81.73 333   P      P       20 40 35.7 -1.5
STAL                                 IAmb   IAmb    20 40 36.4
       comp=Z,7.2nm,0.9s
BATG   Bathurst New B    81.84  25   P      P       20 40 37.9 +0.2
MANT   Manisa            82.01 318   P      P       20 40 38.2 -0.9
MANT                                 IAmb   IAmb    20 40 39.4
       comp=Z,7.2nm,0.9s
FUORN  Ofenpass-Fuorn    82.18 334   P      P       20 40 39.4 -0.4
FUORN                                IAmb   IAmb    20 40 40.9
       comp=Z,7.9nm,1.1s
PPT    Papeete           82.25 125   LR     LR      21 10 27.6
       comp=Z,80nm,21.0s,baz=336,slow=30
PPT2   Papeete2          82.26 125 eLR    LR      21 06 34.2
       comp=Z,128nm,28.2s
PPT2                               eLR    LR      21 06 34.2
       comp=Z,174nm,24.5s
PDG    Podgorica         82.73 327   P      P       20 40 41.5 -0.9
PDG                                  IAmb   IAmb    20 40 42.9
       comp=Z,16nm,1.2s
MMAI   Mount Meron Ar    82.89 311   LR     LR      21 22 04.4
       comp=Z,199nm,19.4s,baz=110,slow=39
FNA    Florina           83.28 324   P      P       20 40 44.5 -0.9
FNA    Florina           83.28 324   P      P       20 40 44.5 -0.9
FNA                                  pmax   pmax
       comp=Z,3.0nm,0.9s
SENIN  Lac Senin/Sane    83.29 336   P      P       20 40 45.2 -0.4
RAYN   Ar Rayn           84.13 298   P      P       20 40 49.4 -0.6
RAYN                                 IAmb   IAmb    20 41 08.9
       comp=Z,5.4nm,1.2s
RAYN   Ar Rayn           84.13 298   P      P       20 40 49.4 -0.6
RAYN                                 pmax   pmax
       comp=Z,5.0nm,1.2s
SGRT   San Giovanni R    84.64 328   P      P       20 40 51.7 -0.7
EIL    Elat              85.71 309   LR     LR      21 25 27.1
       comp=Z,76nm,18.3s,baz=60,slow=40
TBI    Tubuai            86.89 128 eLR    LR      21 08 42.4
       comp=Z,664nm,27.0s
TBI                                eLR    LR      21 08 42.5
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	comp=Z,2µm,26.5s						
TBI	**Tubuai**	**86.89**	**128**	*e*T	T	22 17 27.1	
	comp=Z,7.5nm,0.3s						
ESDC	**Sonseca Array**	**92.44**	**341**	P	**P**	**20 41 27.9**	**-1.6**
	comp=Z,0.4nm,0.8s,baz=22,slow=3.5,SNR=1.8						
ESDC				LR	LR	21 27 01.6	
	comp=Z,77nm,20.4s,baz=12,slow=38						
	comp=Z,0.4nm,0.8s						
H03N2	**Juan Fernandez**	**139.73**	**91**	T	T	23 23 36.5	
	baz=297,slow=77						
H03N3	**Juan Fernandez**	**139.75**	**91**	T	T	23 23 33.6	
	baz=297,slow=77						
H03N1	**Juan Fernandez**	**139.75**	**91**	T	T	23 23 35.9	
	baz=297,slow=77						
ELIB	**Princess Elisa**	**144.24**	**205**	*d*PKP	PKiKP	20 48 05.6	+8.7
PLCA	**Paso Flores**	**149.07**	**96**	PKPbc	**PKiKP**	**20 48 08.0**	**+0.3**
	comp=Z,1.9nm,0.8s,baz=244,slow=4.0,SNR=4.3						
PLCA	**Paso Flores**	**149.07**	**96**	PKP2	**PKiKP**	**20 48 08.0**	**+0.3**
CPUP	**Villa Florida**	**149.95**	**60**	PKPbc	**PKPbc**	**20 48 08.6**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=270,slow=3.0,SNR=2.0						

IDC ***25*** *20:29:08.0±2.3, 3°.15S×134°.19E, h0^{km}, mb3.5/3, mbtmp3.4/5, ML3.4/2, Error ellipse: s-maj=101.4km s-min=24.1km az=68.0*

ISC 25 20:29:14.0±1.8**, 3°.5S**±0°.2×**133°.6E**±0°.5**, h35^{km}, n6,** σ**0^{s}.93**/6**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.52**	**318**	Pn	**Pn**	**20 30 06.8**	**+0.5**
	0.3nm,0.3s,baz=127,slow=20,SNR=1.3						
SIJI				Sn	Sn	20 30 32.8	-14
	0.3nm,0.3s,baz=151,slow=19,SNR=1.8						
	5.9nm,0.7s						
WRA	**Warramunga Arr**	**16.36**	**178**	Pn	**Pn**	**20 33 01.5**	**+0.3**
	0.4nm,0.3s,baz=353,slow=14,SNR=16						
WRA				Sn	**Sn**	**20 36 01.1**	**-0.7**
	0.1nm,0.3s,baz=8.7,slow=23,SNR=2.3						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**20.05**	**179**	P	Pn	20 33 47.4	+1.1
	1.2nm,0.5s,baz=12,slow=12,SNR=46						
	1.2nm,0.5s						
STKA	**Stephens Creek**	**29.21**	**166**	P	**P**	**20 35 12.9**	**+0.5**
	0.5nm,0.4s,baz=342,slow=19,SNR=3.0						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**67.40**	**324**	P	**P**	**20 40 04.8**	**-1.1**
	0.2nm,0.5s,baz=111,slow=5.8,SNR=1.4						
	0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**131.57**	**284**	PKP	**PKiKP**	**20 48 25.7**	**+0.5**
	56nm,0.3s,baz=94,slow=2.0,SNR=4.3						

MOS ***25*** *20:30:33.8±1.5, 45°.67N×151°.70E, h40^{km}, mb4.3/1, Error ellipse: s-maj=20.8km s-min=10.5km az=152.9*

SKHL ***25*** *20:30:34.2±0.3, 45°.40N×151°.80E, h56^{km}±4^{km}, mb4.8/4*

IDC ***25*** *20:30:38.1±4.9, 45°.68N×151°.60E, h58^{km}±40^{km}, mb3.3/9, mbtmp3.6/13, ML3.5/4, Error ellipse: s-maj=35.6km s-min=24.7km az=100.0*

ISC 25 20:30:36.7±0.9**, 45°.6N**±0°.1×**151°.65E**±0°.09**, h50^{km}, n35,** σ**1^{s}.81**/33**, mb3.5**/9**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.68**	**265**	*e*PN	**Pn**	**20 31 16.1**	**-1.2**
KUR				*e*S	**Sn**	**20 31 46.4**	**-2.2**
KUR				pmax	pmax		
	comp=Z,221nm,0.4s						
KUR				pmax	pmax		
	comp=E,42nm,0.1s						
KUR				pmax	pmax		
	comp=N,47nm,0.1s						
KUR				smax	smax		
	comp=E,858nm,0.6s						
KUR				smax	smax		
	comp=N,204nm,0.3s						
KUR	**Kuril'sk**	**2.68**	**265**	*e*P	**Pn**	**20 31 16.1**	**-1.2**
KUR				AMB	AMB	20 31 18.0	
	comp=N,180nm,0.4s						
KUR				*e*S	**Sn**	**20 31 47.4**	**-1.2**
KUR				A	A	20 31 54.8	
	comp=N,200nm,0.4s						
KUR				A	A	20 31 54.8	
	comp=N,530nm,0.4s						
SHO	**Shikotan**	**3.82**	**246**	*e*PN	**Pn**	**20 31 31.5**	**-1.4**
SHO				pmax	pmax		
	comp=Z,86nm,0.4s						
SHO				pmax	pmax		
	comp=E,50nm,0.5s						
SHO				pmax	pmax		
	comp=N,33nm,0.4s						
SHO	**Shikotan**	**3.82**	**246**	*e*P	**Pn**	**20 31 31.6**	**-1.4**
SHO				AMB	AMB	20 31 34.0	
	comp=N,90nm,0.4s						
SHO				*e*S	**Sn**	**20 32 14.9**	**-1.7**
SHO				A	A	20 32 26.6	
	comp=N,150nm,0.5s						
SHO				A	A	20 32 26.6	
	comp=N,170nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.39**	**252**	*e*PN	**Pn**	**20 31 38.5**	**-2.2**
YUK				pmax	pmax		
	comp=Z,290nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**4.39**	**252**	*e*P	**Pn**	**20 31 40.2**	**-0.5**
YUK				AMB	AMB	20 31 42.6	
	comp=Z,200nm,0.5s						
YUK				*e*S	**Sn**	**20 32 29.6**	**-0.9**
YUK				A	A	20 32 40.3	
	comp=Z,310nm,0.5s						
YUK				A	A	20 32 40.3	
	comp=Z,180nm,0.5s						
NMR	**Nemuro--Hokkai**	**4.76**	**245**	*e*PN	**Pn**	**20 31 44.7**	**-1.2**
NMR	**Nemuro--Hokkai**	**4.76**	**245**	*e*P	**Pn**	**20 31 45.3**	**-0.6**
NMR				*e*S	**Sn**	**20 32 37.6**	**-2.2**
RUSJ	**Misakicho**	**4.78**	**255**	PN	**Pn**	**20 31 49.7**	**+3.6**
AKK	**Akkeshi**	**5.50**	**245**	*e*P	**Pn**	**20 31 55.5**	**-0.5**
YSS	**Yuzh-Sakhalins**	**6.33**	**286**	*e*P	**Pn**	**20 32 07.9**	**+0.6**
YSS				AMB	AMB	20 32 09.3	
	comp=Z,20nm,0.4s						
JKA	**Kamikawa-asahi**	**6.59**	**261**	*e*P	**Pn**	**20 32 13.7**	**+2.7**
ASAJ	**Asahikawa**	**6.59**	**261**	P	**Pn**	**20 32 13.7**	**+2.7**
	comp=Z,2.0nm,0.3s,baz=75,slow=16,SNR=1.7						
ASAJ				S	**Sn**	**20 33 30.5**	**+5.7**
	comp=Z,5.2nm,0.6s,baz=155,slow=23,SNR=0.8						
	comp=Z,23nm,0.7s						
MJAR	**Matsushiro Arr**	**13.54**	**233**	P	**Pn**	**20 33 47.1**	**+1.1**
	baz=46,slow=5.5,SNR=1.9						
	comp=Z,1.4nm,0.8s						
USRK	**Ussuriysk Ar.**	**14.01**	**272**	P	**Pn**	**20 33 51.4**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=70,slow=12,SNR=2.1						
	comp=Z,2.3nm,0.6s						
KSRS	**Korea Array**	**19.47**	**254**	P	**Pn**	**20 35 00.2**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=62,slow=11,SNR=3.0						
	comp=Z,1.4nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.66**	**149**	T	T	21 05 55.7	
	baz=338,slow=76,SNR=9.1						
H11N1	**WAKE ISLAND Hy**	**28.68**	**149**	T	T	21 05 57.0	
	baz=338,slow=76,SNR=7.8						
H11N3	**WAKE ISLAND Hy**	**28.68**	**149**	T	T	21 06 00.1	
	baz=338,slow=76,SNR=9.1						
H11S1	**WAKE ISLAND Hy**	**29.72**	**150**	T	T	21 07 13.6	
	baz=338,slow=76,SNR=7.6						
H11S3	**WAKE ISLAND Hy**	**29.73**	**150**	T	T	21 07 14.8	
	baz=338,slow=76,SNR=8.5						
H11S2	**WAKE ISLAND Hy**	**29.74**	**150**	T	T	21 07 14.2	
	baz=338,slow=76,SNR=7.5						
SONM	**Songino Array**	**30.79**	**291**	P	**P**	**20 36 48.0**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=85,slow=6.2,SNR=1.8						
	comp=Z,0.3nm,0.6s						
SONM	**Songino Array**	**30.79**	**291**	P	**P**	**20 36 48.0**	**+0.5**
MKAR	**Makanchi Array**	**46.59**	**298**	P	**P**	**20 38 59.4**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=67,slow=8.4,SNR=1.0						
MKAR				PcP	**PcP**	**20 40 32.9**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=72,slow=3.5,SNR=3.1						
	comp=Z,0.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**51.09**	**256**	P	**P**	**20 39 34.1**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=34,slow=6.6,SNR=3.1						
	comp=Z,0.9nm,0.8s						
YKA	**Yellowknife Ar**	**52.50**	**36**	P	**P**	**20 39 43.7**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=297,slow=6.9,SNR=1.7						
	comp=Z,0.3nm,0.7s						
WRA	**Warramunga Arr**	**67.05**	**198**	P	**P**	**20 41 25.4**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=16,slow=6.4,SNR=1.8						
	comp=Z,0.2nm,0.5s						
NOA	**NORSAR Array B**	**69.03**	**341**	P	**P**	**20 41 36.2**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=27,slow=6.4,SNR=1.4						
	comp=Z,0.6nm,0.7s						
ASAR	**Alice Springs**	**70.75**	**197**	P	**P**	**20 41 49.6**	**+2.0**
	comp=Z,0.2nm,0.5s,baz=12,slow=5.5,SNR=1.6						
	comp=Z,0.2nm,0.5s						
BRTR	**Keskin Array B**	**78.56**	**316**	P	**P**	**20 42 32.7**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=35,slow=5.3,SNR=3.0						
	comp=Z,0.7nm,0.8s						
GERES	**GERESS Array B**	**79.08**	**333**	P	**P**	**20 42 35.4**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=38,slow=5.0,SNR=2.5						
	comp=Z,0.4nm,0.5s						
H03N2	**Juan Fernandez**	**139.76**	**91**	T	T	23 24 49.0	
	baz=304						
H03N3	**Juan Fernandez**	**139.77**	**91**	T	T	23 24 53.3	
	baz=304						
H03N1	**Juan Fernandez**	**139.78**	**91**	T	T	23 24 44.7	
	baz=304						

ROM 25 20:37:37.8±0.1**, 42°.803N**±0°.003×**13°.177E**±0°.004**, h12^{km}, ML0.9**/1**, Error ellipse: s-maj=0.4km s-min=0.1km az=311.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1214	**Arquata del Tr**	**0.05**	**152**	P	Pg	20 37 40.6	+0.2
T1214				S	Sg	20 37 42.4	+0.2
T1245	**Castelsantange**	**0.05**	**9**	P	Pg	20 37 40.6	+0.2
T1245				S	Sg	20 37 42.4	+0.1
T1245				AML	AML		
	comp=E,463µm,0.1s						
T1245				AML	AML		
	comp=N,328µm,0.5s						
MC2	**Monte Cornacci**	**0.11**	**5**	P	Pg	20 37 41.3	+0.3
T1212	**Cascia, Frazio**	**0.11**	**242**	P	Pg	20 37 41.3	+0.3
T1212				S	Sg	20 37 43.6	+0.4
T1218	**Civita (PG)**	**0.14**	**199**	P	Pg	20 37 41.7	+0.3
T1218				S	Sg	20 37 44.5	+0.6
T1216	**Preci, Frazion**	**0.14**	**307**	P	Pg	20 37 41.7	+0.3
MMO1	**Montemonaco**	**0.15**	**49**	P	Pg	20 37 41.7	+0.3
T1241	**Roccafluvione,**	**0.20**	**74**	P	Pg	20 37 42.5	+0.3
T1217	**Poggiodomo (PG**	**0.20**	**243**	P	Pg	20 37 42.7	+0.4
T1217				S	Sg	20 37 46.3	+0.9
T1217				AML	AML		
	comp=E,27µm,1.5s						
T1217				AML	AML		
	comp=N,44µm,1.3s						
T1217				AML	AML		
	comp=N,44µm,0.7s						
T1217				AML	AML		
	comp=E,27µm,0.5s						
SMA1	**SAN MARTINO**	**0.21**	**146**	AML	AML		
	comp=E,53µm,0.2s						
SMA1				AML	AML		
	comp=N,44µm,0.6s						
TERO	**Teramo**	**0.36**	**120**	AML	AML		
	comp=E,20µm,1.3s						
TERO				AML	AML		
	comp=N,17µm,1.2s						
TERO				AML	AML		
	comp=N,17µm,0.8s						
TERO				AML	AML		
	comp=E,20µm,0.7s						

IDC ***25*** *20:38:44.0±0.8, 36°.80N×97°.81W, h0^{km}, mb3.6/2, mbtmp3.7/7, ML3.2/6, MS3.5/4, Error ellipse: s-maj=11.2km s-min=8.7km az=152.0*

ANF ***25*** *20:38:44.6±0.8, 36°.75N×97°.72W, h15^{km}±5^{km}, ML4.8/14, Error ellipse: s-maj=1.9km s-min=1.8km az=34.0*

NEIC ***25*** *20:38:44.9±0.4, 36°.67N±0°.02×97°.76W±0°.01, h2^{km}±7^{km}, Error ellipse: s-maj=3.0km s-min=1.0km az=197.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.69; $M_{\theta\theta}$5.32; $M_{\phi\phi}$-4.63; $M_{r\theta}$1.84; $M_{\theta\phi}$2.58; $M_{\phi r}$-1.53; Fault plane solution: $M_0$6.12000×10^{14} NP1: ϕ_s299.90000°, δ84.25000°, λ-23.53000°. NP2:ϕ_s32.40000°, δ66.60000°, λ-173.73000°. Principal axes: T 6.2581, Plg12.0000°, Azm348.0000°; N -0.2767, Plg66.0000°, Azm107.0000°; P -5.9814, Plg21.0000°, Azm254.0000°;*

NEIC ***25*** *20:38:44.9, 36°.68N×97°.76W, h0^{km}*

TUL ***25*** *20:38:44.3±0.9, 36°.68N±0°.01×97°.76W±0°.01, h8^{km}±7^{km}, ML3.9, mb4.1/6(NEIC), mb_Lg4.0/128(NEIC), ML3.9/64(NEIC), Mwr3.8/30(NEIC), Error ellipse: s-maj=2.1km s-min=0.9km az=146.0*

ISC 25 20:38:44.1±0.8**, 36°.67N**±0°.02×**97°.73W**±0°.02**, h15^{km}**±6^{km}**, n234,** σ**1^{s}.53**/228**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	**Grant County #**	**0.21**	**329**	Pg	**Pg**	**20 38 48.5**	**-0.5**
GC02				Sg	**Sg**	**20 38 51.4**	**-0.8**
CROK	**Carrier**	**0.27**	**231**		**Pg**	**20 38 49.6**	**-0.3**
KAN14	**Manchester OK**	**0.34**	**326**		**Pg**	**20 38 50.9**	**-0.3**
KAN14				Sg	**Sg**	**20 38 55.5**	**-0.5**
KAN14				IAML		20 38 55.8	
	comp=E,17µm,0.5s						
KAN17	**Caldwell West**	**0.37**	**355**		**Pg**	**20 38 51.7**	**0.0**
KAN17				IAML		20 38 58.8	
	comp=E,15µm,0.4s						
KAN17				IAML		20 39 02.0	
	comp=N,15µm,0.3s						
KAN13	**South Haven SW**	**0.39**	**30**		**Pg**	**20 38 52.4**	**+0.3**
KAN13				Sg	**Sg**	**20 38 58.0**	**+0.4**
OK032	**Salt Plains WL**	**0.41**	**289**		**Pg**	**20 38 52.0**	**-0.4**
OK032				IAML		20 38 59.1	
	comp=N,12µm,0.2s						
BLOK	**Blackwell**	**0.42**	**78**		**Pg**	**20 38 53.1**	**+0.5**
BLOK				IAML		20 39 05.3	
	comp=E,9µm,0.2s						
BLOK				IAML		20 39 09.3	
	comp=N,8µm,0.2s						
KAN05	**Bluff City Nor**	**0.45**	**345**		**Pg**	**20 38 53.0**	**-0.1**
KAN05				IAML		20 39 05.0	
	comp=N,10µm,0.3s						
KAN05				IAML		20 39 06.7	
	comp=E,8µm,0.2s						
KAN09	**Caldwell North**	**0.47**	**11**		**Pg**	**20 38 53.6**	**+0.1**
KAN01	**Argonia South**	**0.48**	**357**		**Pg**	**20 38 53.7**	**0.0**
KS20	**Mayfield South**	**0.57**	**14**		**Pg**	**20 38 55.5**	**+0.1**
KS20				IAML		20 39 08.7	
	comp=E,6µm,0.3s						
KAN06	**Argonia West S**	**0.58**	**350**		**Pg**	**20 38 55.5**	**-0.1**
KAN08	**Anthony NE Sta**	**0.59**	**341**		**Pg**	**20 38 55.5**	**-0.2**
KS21	**Milan North St**	**0.61**	**5**	IAML		20 39 04.9	
	comp=E,9µm,0.5s						
KS21				IAML		20 39 06.5	
	comp=E,6µm,0.2s						
KS21	**Milan North St**	**0.61**	**5**		**Pg**	**20 38 56.2**	**0.0**
KAN12	**Harper NE Stat**	**0.66**	**341**		**Pg**	**20 38 56.8**	**-0.3**
KAN12				Sg	**Sg**	**20 39 05.9**	**0.0**
KAN12				IAML		20 39 10.4	
	comp=E,9µm,0.4s						
OK048	**Pawnee Station**	**0.68**	**112**		**Pb**	**20 38 57.8**	**+0.1**
OK048				IAML		20 39 09.8	
	comp=E,5µm,0.8s						
OK051	**E0350 and S346**	**0.74**	**103**		**Pb**	**20 38 58.8**	**+0.2**
OK051				IAML		20 39 13.1	
	comp=E,6µm,0.2s						
OK051				IAML		20 39 16.3	
	comp=E,7µm,0.2s						
OK035	**E0210 Rd and N**	**0.79**	**273**	Pg	**Pg**	**20 38 58.9**	**-0.7**
OK035				IAML		20 39 21.8	
	comp=E,5µm,0.4s						
OK035				IAML		20 39 22.1	
	comp=E,4µm,0.4s						
OK038	**West end E0370**	**0.84**	**257**		**Pg**	**20 38 59.8**	**-0.7**
OK038				IAML		20 39 16.1	
	comp=E,6µm,0.3s						
OK038				IAML		20 39 25.6	
	comp=E,6µm,0.3s						
OK033	**Mehan**	**0.89**	**134**		**Pb**	**20 39 01.7**	**+0.3**
OK033				IAML		20 39 16.2	
	comp=E,6µm,0.6s						
OK033				IAML		20 39 16.2	
	comp=E,4µm,0.7s						
OK029	**Liberty Lake**	**0.90**	**166**		**Pg**	**20 39 01.6**	**0.0**
QUOK	**Quay**	**0.96**	**121**		**Pb**	**20 39 03.0**	**+0.5**
NOKA	**Waynoka**	**0.97**	**268**	Pg	**Pg**	**20 39 02.0**	**-0.9**
NOKA				IAML		20 39 24.0	
	comp=E,3µm,0.2s						
NOKA				IAML		20 39 24.2	
	comp=N,3µm,0.3s						
T35A	**Sooner Cattle**	**1.00**	**76**		**Pg**	**20 39 03.6**	**+0.1**
T35A				IAML		20 39 24.2	
	comp=E,3µm,0.5s						
T35A				IAML		20 39 24.4	
	comp=N,3µm,0.4s						
T35B	**Sooner Cattle**	**1.00**	**76**	P	**Pb**	**20 39 03.8**	**+0.5**
	baz=257,SNR=1000						
OK052	**Battle Ridge R**	**1.01**	**132**		**Pb**	**20 39 03.8**	**+0.5**
OK052				IAML		20 39 18.8	
	comp=N,5µm,0.2s						
OK052				IAML		20 39 22.1	
	comp=N,4µm,0.8s						
OK030	**Cody Creek RV**	**1.06**	**134**		**Pb**	**20 39 04.7**	**+0.5**
U32A	**Winter Ranch,**	**1.07**	**254**		**Pb**	**20 39 03.9**	**-0.5**
U32A	**Winter Ranch,**	**1.07**	**254**	P	**Pb**	**20 39 03.9**	**-0.5**
	baz=73,SNR=117						
U32A				S	**Sg**	**20 39 18.2**	**-0.5**
	baz=73						
OK005	**Luther M Schoo**	**1.10**	**157**	Pg	**Pb**	**20 39 05.4**	**+0.5**
OK009	**Oakdale Elemen**	**1.12**	**167**		**Pb**	**20 39 05.5**	**+0.4**
OKCSW	**OKLAHOMA CITY**	**1.29**	**169**		**Pb**	**20 39 08.3**	**+0.3**
OKCSW				IAML		20 39 30.3	
	comp=N,3µm,0.2s						
CSTR	**Hydro, Custer**	**1.29**	**217**		**Pn**	**20 39 08.1**	**+0.5**
DEOK	**Depew**	**1.29**	**129**		**Pb**	**20 39 08.6**	**+0.4**
FNO	**Franklin**	**1.44**	**169**	Pg	**Pb**	**20 39 10.9**	**+0.2**
ELIS	**Ellis County**	**1.49**	**247**		**Pn**	**20 39 11.4**	**+0.9**
W35A	**Tecumseh**	**1.67**	**155**		**Pb**	**20 39 14.5**	**0.0**
TUL1	**Leonard**	**1.74**	**115**	Pn	**Pb**	**20 39 15.7**	**-0.1**
TUL1				IAmb_Lg		20 39 41.0	
	comp=Z,783nm,0.9s						
TUL1	**Leonard**	**1.74**	**115**	P	**Pb**	**20 39 15.5**	**-0.2**
	baz=297,SNR=217						
TUL1				Sb	**Sg**	**20 39 39.5**	**-0.6**
	baz=297						
TUL1	**Leonard**	**1.74**	**115**	P	**Pb**	**20 39 16.4**	**+0.7**
	baz=297,SNR=260						
TUL1				S	**Sg**	**20 39 39.8**	**-0.3**
	baz=297						
R32A	**Long Quarter,**	**1.91**	**336**		**Pn**	**20 39 17.8**	**+1.5**
R32A				IAmb_Lg		20 39 45.0	
	comp=Z,1µm,1.1s						
X34A	**Smith Ranch, M**	**2.07**	**182**		**Pb**	**20 39 20.6**	**-0.8**
X34A				IAmb_Lg		20 39 54.1	
	comp=Z,677nm,1.2s						
WMOK	**Wichita Mounta**	**2.11**	**204**	Pn	**Pn**	**20 39 20.5**	**+1.6**
WMOK	**Wichita Mounta**	**2.11**	**204**	P	**Pn**	**20 39 20.8**	**+1.8**
	baz=23						
WMOK				S	**Sb**	**20 39 48.7**	**+0.6**
	baz=23						
WMOK	**Wichita Mounta**	**2.11**	**204**	P	**Pn**	**20 39 20.4**	**+1.4**
	baz=23,SNR=318						
WMOK				S	**Sb**	**20 39 48.8**	**+0.6**
	baz=23						
RLO	**Rose Lookout**	**2.24**	**102**		**Pb**	**20 39 23.2**	**-1.1**
RLO				IAmb_Lg		20 39 54.2	
	comp=Z,163nm,0.7s						
KSU1	**Kansas State U**	**2.58**	**20**		**Pn**	**20 39 27.2**	**+1.8**
KSU1				IAmb_Lg		20 40 07.7	
	comp=Z,420nm,0.7s						
KSU1	**Kansas State U**	**2.58**	**20**	P	**Pn**	**20 39 26.0**	**+0.6**
	baz=201,SNR=215						
KSU1				Sb	**Sb**	**20 40 01.7**	**+0.1**
	baz=201						
KSU1	**Kansas State U**	**2.58**	**20**	P	**Pn**	**20 39 27.3**	**+1.9**
	baz=201,SNR=54						
KSU1				S	**Sn**	**20 39 58.8**	**+2.3**
	baz=201						
CBKS	**Cedar Bluff**	**2.67**	**324**	Pn	**Pn**	**20 39 28.0**	**+1.4**
CBKS				IAmb_Lg		20 40 10.9	
	comp=Z,314nm,0.7s						
CBKS	**Cedar Bluff**	**2.67**	**324**	P	**Pn**	**20 39 28.0**	**+1.4**
	baz=143,SNR=82						
CBKS				Sb	**Sb**	**20 40 05.1**	**+1.0**
	baz=143						
U38A	**Gravette**	**2.70**	**94**		**Pn**	**20 39 29.2**	**+2.2**
U38A				IAmb_Lg		20 40 08.8	
	comp=Z,268nm,0.9s						
U38A	**Gravette**	**2.70**	**94**	P	**Pn**	**20 39 29.6**	**+2.6**
	baz=276,SNR=192						
LOOK	**Love County**	**2.71**	**170**	Pn	**Pn**	**20 39 29.0**	**+1.8**
X37A	**Clayton**	**2.83**	**137**	Pn	**Pn**	**20 39 30.9**	**+2.1**
X37A				IAmb_Lg		20 40 20.5	
	comp=Z,457nm,0.8s						
X37A	**Clayton**	**2.83**	**137**	P	**Pn**	**20 39 30.8**	**+2.1**
	baz=318,SNR=72						
WTFS	**Witchita Falls**	**2.96**	**192**		**Pn**	**20 39 32.3**	**+1.7**
WTFS				IAmb_Lg		20 40 20.4	
	comp=Z,84nm,0.8s						
HHAR	**Hobbs**	**3.08**	**96**		**Pn**	**20 39 34.4**	**+2.2**
HHAR				IAmb_Lg		20 40 30.5	
	comp=Z,352nm,0.7s						
Z35A	**Perchaven, San**	**3.36**	**173**		**Pn**	**20 39 37.9**	**+1.8**
Z35A	**Perchaven, San**	**3.36**	**173**	P	**Pn**	**20 39 38.1**	**+2.1**
	baz=353,SNR=22						
FW03	**Perrin-Whitt E**	**3.63**	**184**	Pn	**Pn**	**20 39 42.0**	**+2.1**
FW03				IAmb_Lg		20 40 48.5	
	comp=Z,112nm,0.8s						
S39A	**Bolivar**	**3.66**	**73**	Pn	**Pn**	**20 39 42.1**	**+1.9**
S39A				IAmb_Lg		20 40 45.1	
	comp=Z,308nm,0.8s						
S39A	**Bolivar**	**3.66**	**73**	P	**Pn**	**20 39 42.7**	**+2.5**
	baz=255,SNR=39						
AMTX	**Amarillo**	**3.68**	**242**		**Pn**	**20 39 42.2**	**+1.7**
AMTX				IAmb_Lg		20 40 42.0	
	comp=Z,314nm,1.0s						
AMTX	**Amarillo**	**3.68**	**242**	P	**Pn**	**20 39 41.7**	**+1.2**
	baz=59						
AMTX				Sb	**Sb**	**20 40 37.9**	**+4.6**
	baz=59						
AMTX	**Amarillo**	**3.68**	**242**	P	**Pn**	**20 39 42.4**	**+1.9**
	baz=59,SNR=18						
FW06	**Azle**	**3.69**	**178**	Pn	**Pn**	**20 39 41.6**	**+0.9**
FW06				IAmb_Lg		20 40 51.2	
	comp=Z,107nm,0.8s						
U40A	**Yellville**	**3.94**	**93**	P	**Pn**	**20 39 46.4**	**+2.4**
	baz=276,SNR=32						
U40A				P	**Pn**	**20 39 46.4**	**+2.4**
	baz=276,SNR=32						
FW07	**Weatherford**	**3.96**	**181**	IAmb_Lg		20 40 57.8	
	comp=Z,137nm,0.9s						
MIAR	**Mount Ida**	**3.99**	**121**		**Pn**	**20 39 46.7**	**+1.9**
MIAR				IAmb_Lg		20 40 54.3	
	comp=Z,406nm,0.8s						
MIAR	**Mount Ida**	**3.99**	**121**	P	**Pn**	**20 39 46.2**	**+1.4**
	baz=303,SNR=8.4						
MIAR				S	**Sn**	**20 40 33.7**	**+2.4**
	baz=303						
MIAR	**Mount Ida**	**3.99**	**121**	P	**Pn**	**20 39 47.5**	**+2.8**
	baz=303,SNR=30						
N33B	**J Bar K, Exete**	**4.06**	**3**	P	**Pn**	**20 39 46.5**	**+0.8**
	baz=184,SNR=15						
N33A	**J Bar K, Exete**	**4.07**	**3**	IAmb_Lg		20 40 56.5	
	comp=Z,378nm,0.9s						
Z38A	**Mt. Pleasant**	**4.08**	**146**		**Pn**	**20 39 47.6**	**+1.6**
FW16	**Waxahatchie**	**4.24**	**170**	IAmb_Lg		20 41 02.4	
	comp=Z,215nm,1.1s						
FW13	**Cleburne**	**4.32**	**177**	IAmb_Lg		20 41 04.7	
	comp=Z,102nm,1.1s						
ABTX	**Abilene, Hawle**	**4.34**	**202**		**Pn**	**20 39 50.2**	**+0.6**
ABTX	**Abilene, Hawle**	**4.34**	**202**	P	**Pn**	**20 39 50.6**	**+1.1**
	baz=20,SNR=13						
ABTX				S	**Sn**	**20 40 42.0**	**+2.1**
	baz=20						
P38A	**Dawn**	**4.43**	**47**		**Pn**	**20 39 52.9**	**+2.1**
P38A				IAmb_Lg		20 41 11.2	
	comp=Z,425nm,0.7s						
KSCO	**Kaye Shedlock'**	**4.53**	**303**		**Pn**	**20 39 53.3**	**+1.1**
KSCO				IAmb_Lg		20 41 13.2	
	comp=Z,383nm,0.7s						
KSCO	**Kaye Shedlock'**	**4.53**	**303**	P	**Pn**	**20 39 52.2**	**0.0**
	baz=120,SNR=6.7						
KSCO				S	**Sn**	**20 40 45.0**	**+0.3**
	baz=120						
KSCO	**Kaye Shedlock'**	**4.53**	**303**	P	**Pn**	**20 39 53.8**	**+1.6**
	baz=120,SNR=14						
X40A	**Basin Creek Fa**	**4.54**	**117**		**Pn**	**20 39 54.2**	**+1.9**
FCAR	**Ozark Folk Cen**	**4.59**	**98**		**Pn**	**20 39 54.7**	**+1.7**
FCAR				IAmb_Lg		20 41 18.8	
	comp=Z,222nm,0.8s						
WHAR	**Wooly Hollow**	**4.62**	**106**	IAmb_Lg		20 41 17.4	
	comp=Z,310nm,0.9s						
R40A	**Maddies Statio**	**4.63**	**68**		**Pn**	**20 39 55.1**	**+1.6**
R40A				IAmb_Lg		20 41 17.9	
	comp=Z,232nm,0.7s						
R40A	**Maddies Statio**	**4.63**	**68**	P	**Pn**	**20 39 55.2**	**+1.7**
	baz=251,SNR=110						
WHTX	**Lake Whitney,**	**4.67**	**177**		**Pn**	**20 39 55.6**	**+1.4**
WHTX	**Lake Whitney,**	**4.67**	**177**	P	**Pn**	**20 39 55.6**	**+1.4**
	baz=357						

WHTX				Sb	Sg	20 41 08.7	-5.5
	baz=357						
WHTX	Lake Whitney,	4.67	177	P	Pn	20 39 55.7	+1.6
	baz=357,SNR=13						
BGNE	Belgrade	4.74	356	Pn	Pn	20 39 55.7	+0.6
BGNE				IAmb_Lg		20 41 21.4	
	comp=Z,523nm,0.8s						
BGNE	Belgrade	4.74	356	P	Pn	20 39 55.6	+0.6
	baz=176,SNR=27						
BGNE				S	Sn	20 40 49.8	0.0
	baz=176						
BGNE	Belgrade	4.74	356	P	Pn	20 39 56.2	+1.2
	baz=176,SNR=45						
POST	Post	4.75	222	IAmb_Lg		20 41 19.1	
	comp=Z,104nm,0.9s						
UALR	University of	4.77	112	IAmb_Lg		20 41 28.6	
	comp=Z,419nm,0.9s						
WLAR	White Oak Lake	4.81	127	IAmb_Lg		20 41 23.6	
	comp=Z,225nm,0.7s						
237A	Washetta, Mont	4.92	161	IAmb_Lg		20 41 31.8	
	comp=Z,164nm,1.0s						
237A	Washetta, Mont	4.92	161	P	Pn	20 39 58.5	+0.9
	baz=342,SNR=12						
MSTX	Muleshoe	4.93	238		Pn	20 39 58.7	+1.0
MSTX	Muleshoe	4.93	238	P	Pn	20 39 58.8	+1.0
	baz=55						
MSTX				Sb	Sb	20 41 15.2	+5.9
	baz=55						
Z41A	Richland Creek	5.29	129	Pn	Pn	20 40 02.1	-0.4
P40A	Paris	5.31	56		Pn	20 40 03.3	+0.5
P40A				IAmb_Lg		20 41 37.0	
	comp=Z,347nm,0.8s						
T42A	Van Buren	5.33	84	Pn	Pn	20 40 04.8	+1.7
T42A				IAmb_Lg		20 41 46.2	
	comp=Z,168nm,0.7s						
LCAR	Lake Charles	5.34	95	IAmb_Lg		20 41 37.7	
	comp=Z,194nm,0.7s						
CCM	Cathedral Cave	5.34	73	Pn	Pn	20 40 05.3	+2.0
CCM				IAmb_Lg		20 41 40.5	
	comp=Z,349nm,0.9s						
CCM	Cathedral Cave	5.34	73	P	Pn	20 40 03.7	+0.3
	baz=257						
CCM	Cathedral Cave	5.34	73	P	Pn	20 40 05.7	+2.3
	baz=257,SNR=21						
T25A	Trinidad	5.38	277	Pn	Pn	20 40 05.6	+1.6
T25A				IAmb_Lg		20 41 46.2	
	comp=Z,207nm,0.9s						
T25A	Trinidad	5.38	277	P	Pn	20 40 05.2	+1.2
	baz=93,SNR=16						
L34A	Svendsen Farm,	5.39	11	Pn	Pn	20 40 03.9	-0.1
N38A	Joes South For	5.41	39	P	Pn	20 40 06.0	+1.8
	baz=222,SNR=14						
OGNE	Ogallala	5.43	323	Pn	Pn	20 40 06.8	+2.2
OGNE				IAmb_Lg		20 41 45.9	
	comp=Z,267nm,0.8s						
OGNE	Ogallala	5.43	323	P	Pn	20 40 05.4	+0.8
	baz=141						
NATX	Nacogdoches	5.52	152	IAmb_Lg		20 41 51.6	
	comp=Z,138nm,0.8s						
CCAR	Cane Creek	5.59	118	IAmb_Lg		20 41 50.6	
	comp=Z,316nm,0.9s						
PBMO	Poplar Bluff	5.86	87	IAmb_Lg		20 41 58.1	
	comp=Z,213nm,0.8s						
435B	Jarrell	5.88	179	Pn	Pn	20 40 10.3	-0.4
435B				IAmb_Lg		20 42 04.8	
	comp=Z,132nm,1.1s						
435B	Jarrell	5.88	179	P	Pn	20 40 10.9	+0.2
	baz=359						
435B				S	Sn	20 41 18.4	+0.6
	baz=359						
435B	Jarrell	5.88	179	P	Pn	20 40 11.6	+0.9
	baz=359						
FVM	French Village	5.96	75	Pn	Pn	20 40 13.0	+1.2
FVM				IAmb_Lg		20 41 51.7	
	comp=Z,193nm,0.8s						
FVM	French Village	5.96	75	P	Pn	20 40 13.9	+2.1
	baz=260,SNR=14						
K31A	O'Neill	6.00	353	P	Pn	20 40 14.2	+1.9
	baz=172,SNR=25						
ODSA	Odessa	6.04	223	IAmb_Lg		20 42 09.5	
	comp=Z,41nm,1.0s						
SLM	Saint Louis	6.26	70	IAmb_Lg		20 42 11.1	
	comp=Z,190nm,0.7s						
SCIA	State Center	6.29	32	Pn	Pn	20 40 18.0	+1.7
SCIA	State Center	6.29	32	P	Pn	20 40 16.7	+0.4
	baz=215						
SCIA				S	Sn	20 41 28.0	+0.1
	baz=215						
SDCO	Great Sand Dun	6.30	282	Pn	Pn	20 40 18.5	+1.8
SDCO	Great Sand Dun	6.30	282	P	Pn	20 40 17.6	+0.9
	baz=97,SNR=20						
Q24A	Divide	6.30	294	IAmb_Lg		20 42 12.6	
	comp=Z,160nm,0.8s						
Q24A	Divide	6.30	294	P	Pn	20 40 16.9	+0.1
	baz=109						
Q24A				S	Sn	20 41 29.0	+0.2
	baz=109						
JCT	Junction City	6.42	196		Pn	20 40 18.3	+0.1
JCT				IAmb_Lg		20 42 11.2	
	comp=Z,182nm,1.1s						
JCT	Junction City	6.42	196	P	Pn	20 40 19.0	+0.9
	baz=15						
PVMO	Portageville	6.47	90	IAmb_Lg		20 42 25.8	
	comp=Z,276nm,0.8s						
CGM3	Cape Girardeau	6.49	82	IAmb_Lg		20 42 09.3	
	comp=Z,285nm,1.1s						
MET	Memphis--Engin	6.51	101	IAmb_Lg		20 42 19.8	
	comp=Z,347nm,0.8s						
143A	Socs Landing,	6.54	125	IAmb_Lg		20 42 24.1	
	comp=Z,311nm,1.0s						
HALT	Halls	6.82	94	IAmb_Lg		20 42 40.6	
	comp=Z,235nm,0.7s						
S44A	Carbondale	6.84	79	IAmb_Lg		20 42 30.3	
	comp=Z,146nm,0.8s						
SIUC	Southern Illin	6.87	79	IAmb_Lg		20 42 28.3	
	comp=Z,128nm,0.7s						
ISCO	Idaho Springs	6.95	299	Pn	Pn	20 40 26.6	+1.0
ISCO				IAmb_Lg		20 42 31.9	
	comp=Z,125nm,0.8s						
ISCO	Idaho Springs	6.95	299	P	Pn	20 40 26.0	+0.4
	baz=114						
ISCO				S	Sn	20 41 44.2	-0.4
	baz=114						
K38A	Parkersburg	7.08	31	Pn	Pn	20 40 28.2	+1.0
W45A	Hickory Valley	7.09	100	IAmb_Lg		20 42 28.9	
	comp=Z,294nm,0.8s						
ECSD	EROS Data Cent	7.10	7	Pn	Pn	20 40 27.4	-0.1
ECSD				IAmb_Lg		20 42 32.7	
	comp=Z,138nm,0.9s						
ECSD	EROS Data Cent	7.10	7	P	Pn	20 40 27.4	-0.1
	baz=187,SNR=10						
ECSD				S	Sn	20 41 47.1	-0.9
	baz=187						
ECSD	EROS Data Cent	7.10	7	P	Pn	20 40 27.6	0.0
	baz=187,SNR=53						
OXF	Oxford	7.11	105		Pn	20 40 28.5	+0.9
OXF	Oxford	7.11	105	P	Pn	20 40 28.4	+0.8
	baz=290,SNR=6.2						
OXF				S	Sn	20 41 50.8	+2.7
	baz=290						
Q44A	Meyer Farm, Va	7.25	69	P	Pn	20 40 31.4	+2.0
	baz=255,SNR=8.5						
Y45A	Yeager Farm, C	7.26	110	IAmb_Lg		20 42 39.9	
	comp=Z,209nm,0.9s						
ANMO	Albuquerque	7.30	259	Pn	Pn	20 40 31.1	+0.7
	comp=Z,0.1nm,0.3s,baz=48,slow=17,SNR=2.2						
ANMO				Pg	Pb	20 40 56.1	+5.5
	comp=Z,0.5nm,0.3s,baz=172,slow=17,SNR=7.1						
ANMO				Lg	Lg	20 42 33.0	
	comp=Z,2.0nm,0.3s,baz=80,slow=17,SNR=5.3						
ANMO				LR	LR	20 43 40.3	
	comp=Z,108nm,20.4s,baz=114,slow=41						
L40A	Anamosa	7.37	41		Pn	20 40 31.6	+0.4
L40A				IAmb_Lg		20 42 47.3	
	comp=Z,210nm,0.7s						
PHWY	Pilot Hill	7.59	310		Pn	20 40 35.0	+0.6
PHWY				IAmb_Lg		20 42 59.8	
	comp=Z,150nm,0.9s						
HDIL	Hopedale	7.66	57		Pn	20 40 35.8	+0.8
HDIL	Hopedale	7.66	57	P	Pn	20 40 34.9	-0.2
	baz=242						
HDIL				S	Sn	20 42 00.6	-0.9
	baz=242						
N23A	Red Feather La	7.68	306		Pn	20 40 36.3	+0.7
N23A				IAmb_Lg		20 43 06.0	
	comp=Z,265nm,0.8s						
N23A	Red Feather La	7.68	306	P	Pn	20 40 36.1	+0.5
	baz=121,SNR=6.0						
SMCO	Snowmass	7.72	292	IAmb_Lg		20 42 55.2	
	comp=Z,90nm,1.1s						
SUSD	Miller	7.82	354		Pn	20 40 38.0	+0.7
SUSD				IAmb_Lg		20 42 52.0	
	comp=Z,141nm,0.9s						
SUSD	Miller	7.82	354	P	Pn	20 40 37.0	-0.3
	baz=173						
Y22D	IRIS PASSCAL I	7.94	254	IAmb_Lg		20 43 01.3	
	comp=Z,124nm,1.0s						
Y22D	IRIS PASSCAL I	7.94	254	P	Pn	20 40 40.5	+1.3
	baz=68						
Y22F	Passcal Instru	7.94	254	P	Pn	20 40 40.7	+1.5
	baz=68						
PLAL	Pickwick Lake	8.02	99	IAmb_Lg		20 43 04.2	
	comp=Z,71nm,0.8s						
MNTX	Cornudas Mount	8.05	234	P	Pn	20 40 42.3	+1.8
	baz=50						
146A	Union	8.20	117	IAmb_Lg		20 43 25.3	
	comp=Z,106nm,0.8s						
833A	Chaparral WMA,	8.44	190	Pn	Pn	20 40 46.3	+0.4
833A				IAmb_Lg		20 43 24.6	
	comp=Z,77nm,1.1s						
833A	Chaparral WMA,	8.44	190	P	Pn	20 40 47.4	+1.5
	baz=8.9						
JFWS	Jewell Farm	8.48	40		Pn	20 40 47.2	+0.8
JFWS	Jewell Farm	8.48	40	P	Pn	20 40 46.0	-0.5
	baz=225						
JFWS	Jewell Farm	8.48	40	P	Pn	20 40 47.5	+1.1
	baz=225,SNR=11						
TX32	Lajitas Array	8.85	216	Pn	Pn	20 40 52.2	+0.6
TXAR	Lajitas Array	8.85	216	Pn	Pn	20 40 52.8	+1.2
	comp=Z,0.2nm,0.3s,baz=42,slow=11,SNR=4.3						
TXAR				Sn	Sn	20 42 29.2	-2.0
	comp=Z,0.6nm,0.3s,baz=44,slow=13,SNR=1.1						
TXAR				Lg	Lg	20 43 20.8	
	comp=Z,1.7nm,0.3s,baz=43,slow=22,SNR=8.5						
	comp=Z,0.3nm,0.4s						
TXAR	Lajitas Array	8.85	216	Pn	Pn	20 40 52.4	+0.7
RSSD	Black Hills	8.86	329	IAmb_Lg		20 43 38.8	
	comp=Z,71nm,0.8s						
RSSD	Black Hills	8.86	329	P	Pn	20 40 51.8	0.0
	baz=145						
RSSD	Black Hills	8.86	329	S	Sn	20 42 35.2	+3.8
	baz=145						
RWWY	Rawlins	8.90	307	IAmb_Lg		20 43 28.6	
	comp=Z,221nm,1.1s						
I40A	Norwalk	9.02	35		Pn	20 40 54.9	+1.0
I40A				IAmb_Lg		20 43 47.4	
	comp=Z,126nm,0.8s						
K22A	Casper	9.03	314	IAmb_Lg		20 43 51.2	
	comp=Z,142nm,0.8s						
K22A	Casper	9.03	314	P	Pn	20 40 53.7	-0.5
	baz=129						
SFIN	Lafayette	9.11	63	P	Pn	20 40 55.1	0.0
	baz=250						
F33A	5 Mile Ranch,	9.22	6	Pn	Pn	20 40 56.0	-0.6
F33A				IAmb_Lg		20 43 48.0	
	comp=Z,77nm,0.7s						
WCI	Wyandotte Cave	9.22	77	P	Pn	20 40 56.9	+0.3
	baz=264						
WCI	Wyandotte Cave	9.22	77	P	Pn	20 40 59.1	+2.5
	baz=264						
SPMN	Marine on St.	9.32	22	IAmb_Lg		20 43 58.1	
	comp=Z,82nm,0.8s						
SPMN	Marine on St.	9.32	22	P	Pn	20 40 56.5	-1.4
	baz=205						
F36A	Milaca	9.71	18	Pn	Pn	20 41 04.1	+0.9
F36A				IAmb_Lg		20 43 57.4	
	comp=Z,77nm,1.1s						
I42A	Draeger Farm,	9.86	40	Pn	Pn	20 41 05.8	+0.5
I42A				IAmb_Lg		20 44 05.4	
	comp=Z,120nm,0.7s						
O48B	Farmland	10.49	66	P	Pn	20 41 13.0	-0.9
	baz=254						
P49A	Miami Univ. Ec	10.64	71		Pn	20 41 16.0	-0.1
P49A	Miami Univ. Ec	10.64	71	P	Pn	20 41 15.7	-0.3
	baz=259						
CPCT	Cooper Cave	10.76	93		Pn	20 41 18.6	+0.9
R50A	Paris	10.77	77		Pn	20 41 18.0	+0.2
V51A	Loudon	10.84	91	P	Pn	20 41 20.5	+1.7
	baz=279						
PDAR	Pinedale Array	10.95	307	Pn	Pn	20 41 20.4	0.0
	baz=119,slow=17,SNR=1.3						
PDAR				Lg	Lg	20 44 21.1	
	comp=Z,1.4nm,0.3s,baz=121,slow=19,SNR=5.7						
	comp=Z,0.5nm,0.7s						
S51A	Beattyville	11.32	81	P	Pn	20 41 27.4	+2.1
	baz=270						
S51A				P	Pn	20 41 27.4	+2.1
	baz=270						
TKL	Tuckaleechee C	11.33	91	Pn	Pn	20 41 27.5	+2.1
	comp=Z,0.8nm,0.3s,baz=275,slow=11,SNR=14						
TKL				Sn	Sn	20 43 31.4	-0.3
	comp=Z,0.7nm,0.3s,baz=210,slow=20,SNR=1.6						
TKL				Lg	Lg	20 44 35.4	
	comp=Z,1.5nm,0.3s,baz=183,slow=23,SNR=7.4						
	comp=Z,4.9nm,0.6s						
N49A	Columbus Grove	11.39	64		Pn	20 41 25.9	-0.3
TZTN	Tazewell	11.40	86	P	Pn	20 41 28.9	+2.5
	baz=275						
COWI	Conover	11.41	32	Pn	Pn	20 41 25.1	-1.4
AGMN	Agassiz Nation	11.70	6	Pn	Pn	20 41 29.8	-0.7
AGMN	Agassiz Nation	11.70	6	P	Pn	20 41 28.9	-1.5
	baz=188						
LAO	LASA Array	11.84	330	P	Pn	20 41 31.8	-0.7
	baz=145						
ACSO	Alum Creek Sta	12.09	68	P	Pn	20 41 35.4	-0.5
	baz=258						
EYMN	Ely	12.17	20	Pn	Pn	20 41 35.4	-1.5
EYMN	Ely	12.17	20	P	Pn	20 41 35.8	-1.0
	baz=204						
Q52A	Bidwell	12.44	75	P	Pn	20 41 42.3	+1.7
	baz=264						
Q52A				P	Pn	20 41 42.3	+1.7
	baz=264						
H17A	Grant Village	12.44	312	P	Pn	20 41 39.6	-1.3
	baz=124						
P52A	Corning	12.63	72		Pn	20 41 42.4	-0.7
P52A	Corning	12.63	72	P	Pn	20 41 43.1	0.0
	baz=261						
DGMT	Dagmar	12.71	340	Pn	Pn	20 41 43.4	-0.9
DGMT	Dagmar	12.71	340	P	Pn	20 41 42.5	-1.8
	baz=156						
214A	Organ Pipe Nat	13.32	254	P	Pn	20 41 52.8	+0.1
	baz=65						
KMSC	Kings Mountain	13.38	92	P	Pn	20 41 53.6	+0.1
	baz=281						
O53A	New Philadelph	13.43	70	P	Pn	20 41 53.4	-0.6
	baz=260						
ULM	Lac du Bonnet	13.64	5	Pn	Pn	20 41 51.6	-5.2
	comp=Z,0.6nm,0.3s,baz=188,slow=12,SNR=6.0						
ULM				Sn	Sn	20 44 15.3	-13
	comp=Z,0.6nm,0.3s,baz=194,slow=13,SNR=1.8						
ULM				Lg	Lg	20 45 39.3	
	baz=225,slow=16						
	comp=Z,3.2nm,0.5s						
M53A	WI Miller and	14.07	65	P	Pn	20 42 02.3	-0.6
	baz=256						
EGMT	Eagleton	14.39	326	P	Pn	20 42 07.0	-0.3
	baz=138						
HLID	Hailey	14.49	303	P	Pn	20 42 08.2	-0.6
	baz=113						
S57A	Dark Hollow, R	15.00	80	Pn	Pn	20 42 15.0	-0.6
S57A				IAmb	IAmb	20 42 21.2	
	comp=Z,8.9nm,1.1s						
V58A	Windy Hill, Pi	15.05	88	Pn	Pn	20 42 14.0	-2.2
M55A	Ridgway	15.48	66	Pn	Pn	20 42 19.7	-2.2
M55A				IAmb	IAmb	20 42 51.2	
	comp=Z,15nm,1.2s						
WVNY	West Valley, N	15.81	63	Pn	Pn	20 42 25.9	-0.3
WVNY				IAmb	IAmb	20 42 51.3	
	comp=Z,15nm,1.1s						
SSPA	Standing Stone	15.99	70	Pn	Pn	20 42 26.6	-1.9
SSPA				IAmb	IAmb	20 42 48.0	
	comp=Z,21nm,1.3s						
SADO	Sadowa	16.22	54	Pn	Pn	20 42 29.8	-1.6
	comp=Z,0.3nm,0.3s,baz=224,slow=7.5,SNR=1.9						
SADO				Sn	Sn	20 45 21.4	-10
	comp=Z,0.3nm,0.3s,baz=271,slow=9.3,SNR=1.4						
SADO				Lg	Lg	20 47 09.1	
	comp=Z,1.0nm,0.3s,baz=234,slow=19,SNR=7.4						
	comp=Z,2.8nm,0.7s						
CMIG	Matias Romero	19.67	172	LR	LR	20 52 14.6	
	comp=Z,37nm,20.6s,baz=46,slow=41						
FCC	Fort Churchill	22.23	5	P	P	20 43 40.8	+0.8
YKA	Yellowknife Ar	27.89	343	P	P	20 44 34.1	+1.1
	comp=Z,0.4nm,0.8s,baz=142,slow=9.0,SNR=6.8						
	comp=Z,0.4nm,0.8s						
ILAR	Eielson Array	40.30	330	P	P	20 46 22.2	+1.7
	comp=Z,1.2nm,0.7s,baz=106,slow=7.2,SNR=19						
	comp=Z,1.2nm,0.7s						
SHEM	Shemya Is, Ala	60.81	316	LR	LR	21 13 21.4	
	comp=Z,108nm,21.7s,baz=348,slow=34						
KEST	Kesra	81.16	52	LR	LR	21 25 21.0	
	comp=Z,97nm,21.2s,baz=318,slow=34						

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*NEIC **25** 20:45:45±2.0, 6°.70S±0°.07×129°.88E±0°.09, h169^{km}±5^{km}, mb4.1/7, Error ellipse: s-maj=13.3km s-min=9.4km az=80.0*

*IDC **25** 20:45:47.5±2.5, 6°.53S×130°.60E, h180^{km}±25^{km}, mb3.5/3, mbtmp4.1/5, Error ellipse: s-maj=49.9km s-min=17.5km az=74.0*

ISC 25 20:45:44.5±0.6, **6°.70S**±0°.05×**129°.88E**±0°.07, **h169**^{km}, **n39**, σ**2^{s}.30**/43, **mb3.8**/5, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.90	132	Pn	Pn	20 46 20.7	+0.9
SAUI				Sn	Sn	20 46 46.2	-0.9
FAKI	Fak Fak	4.44	32	Pn	Pn	20 46 51.1	+0.1
FAKI				Sn	Sn	20 47 41.3	-1.7
SIJI	Sorong	5.96	14	P	Pn	20 47 11.7	+0.8
	7.5nm,0.2s,baz=221,slow=20,SNR=40						
SIJI				S	Sn	20 48 15.0	-3.7
	48nm,0.2s,baz=253,slow=19,SNR=16						
MTN	Manton Dam	6.23	169	Pn	Pn	20 47 13.4	-1.1
MTN	Manton Dam	6.23	169	P	Pn	20 47 13.5	-1.0
SOEI	Soe	6.33	241	Pn	Pn	20 47 15.9	+0.1
KDU	Kakadu	6.48	157	P	Pn	20 47 17.1	-0.6
MMRI	Maumere	7.81	255	Pn	Pn	20 47 35.4	0.0
KNRA	Kununurra	8.99	187	Pn	Pn	20 47 48.7	-2.2
FITZ	Fitzroy Crossi	12.06	200	Pn	Pn	20 48 28.8	-2.3
WB0	Warramunga Arr	13.71	162		Pn	20 48 48.1	-4.0
WRAB	Tennant Creek	13.86	162	P	Pn	20 48 51.3	-2.6
WRA	Warramunga Arr	13.86	162	P	Pn	20 48 50.2	-3.8
	2.1nm,0.7s,baz=344,slow=13,SNR=24						
WRA				S	Sn	20 51 17.6	-10
	2.0nm,0.4s,baz=344,slow=22,SNR=7.6						
WRA	Warramunga Arr	13.86	162	Pn	Pn	20 48 50.5	-3.5
WB1	Warramunga Ar.	13.88	162	P	Pn	20 48 51.2	-3.0
COEN	Coen	14.93	120		Pn	20 49 05.8	-1.6
COEN	Coen	14.93	120	P	P	20 49 12.6	+3.8
JAGI	Jajag, Banyuwa	15.69	263	P	Pn	20 49 15.2	-1.5
JAGI				IAmb	IAmb	20 49 29.1	
	comp=Z,22nm,1.1s						
QIS	Mount Isa	16.70	147	P	Pn	20 49 30.0	+1.2
AS31	Alice Springs	17.31	167	P	P	20 49 35.5	+0.6
AS31				IAmb	IAmb	20 49 37.4	
	comp=Z,2.2nm,0.6s						
ASAR	Alice Springs	17.31	167	P	Pn	20 49 36.4	+0.2
	comp=Z,3.4nm,0.4s,baz=349,slow=10,SNR=83						
ASAR				S	S	20 52 40.5	-6.2
	comp=Z,1.3nm,0.9s,baz=353,slow=19,SNR=3.6						
ASAR				ScP	ScP	20 57 29.2	+1.2
	comp=Z,0.4nm,0.6s,baz=355,slow=1.6,SNR=3.4						
ASAR	Alice Springs	17.31	167	P	P	20 49 35.7	+0.7
AS01	Alice Springs	17.32	167	P	Pn	20 49 37.1	+0.8
PSA00	Pilbara Seismi	17.68	212	P	P	20 49 38.9	-0.1
PSA00				IAmb	IAmb	20 49 41.3	
	comp=Z,6.2nm,0.8s						
MTSU	Mount Surprise	18.09	130	P	Pn	20 49 46.4	+0.9
WRKA	Warakurna	18.30	185	P	P	20 49 47.3	+1.5
OOD	Oodnadatta	21.69	166	P	P	20 50 23.0	+0.9
MULG	Mulgathing	23.79	171	P	P	20 50 44.1	+2.3
FORT	Forrest	24.02	184	P	P	20 50 46.9	+3.1
LCRK	Leigh Creek	24.89	163	P	P	20 50 55.4	+3.6
BBOO	Buckleboo	26.61	168	P	P	20 51 07.3	+0.1
BBOO				IAmb	IAmb	20 51 27.8	
	comp=Z,23nm,1.5s						
STKA	Stephens Creek	27.34	158	P	P	20 51 15.3	+1.5
	comp=Z,0.6nm,0.3s,baz=330,slow=11,SNR=2.9						
	comp=Z,0.6nm,0.3s						
STKA	Stephens Creek	27.34	158	P	P	20 51 14.1	+0.4
NACB	Ninganchiao	31.73	346	P	P	20 51 50.8	-1.8
CMAR	Chiang Mai Arr	39.44	310	P	P	20 53 05.0	+6.6
	comp=Z,0.4nm,0.3s,baz=143,slow=7.4,SNR=4.5						
	comp=Z,0.4nm,0.3s						
MK31	Makanchi Array	67.91	327	P	P	20 56 27.5	+2.6
MK31				IAmb	IAmb	20 56 33.4	
	comp=Z,2.1nm,1.4s						
MKAR	Makanchi Array	67.91	327	P	P	20 56 27.8	+2.9
	comp=Z,0.8nm,0.4s,baz=120,slow=7.6,SNR=31						
	comp=Z,0.8nm,0.4s						
MKAR	Makanchi Array	67.91	327	P	P	20 56 27.1	+2.2
QSPA	South Pole Qui	83.28	180	P	P	20 57 53.1	+1.1

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*IDC **25** 20:58:11.3±3.7, 4°.63S×125°.16E, h485^{km}±53^{km}, mb2.8/3, mbtmp3.8/5, Error ellipse: s-maj=57.3km s-min=16.3km az=71.0*

ISC 25 20:58:12.4±1.4, **4°.6S**±0°.1×**125°.3E**±0°.2, **h500**^{km}, **n5**, σ**0^{s}.78**/7, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	7.04	59	P	P	20 59 58.9	-0.2
	7.1nm,0.6s,baz=240,slow=23,SNR=16						
SIJI				S	S	21 01 26.6	+0.3
	8.0nm,0.6s,baz=210,slow=20,SNR=1.9						
WRA	Warramunga Arr	17.64	151	P	P	21 01 48.2	-1.4
	1.6nm,0.5s,baz=328,slow=10,SNR=67						
WRA				S	S	21 04 47.0	+0.1
	0.3nm,0.7s,baz=325,slow=16,SNR=2.2						
ASAR	Alice Springs	20.72	157	P	P	21 02 17.9	+0.2
	0.8nm,0.5s,baz=341,slow=15,SNR=33						
	0.8nm,0.5s						
STKA	Stephens Creek	31.17	152	P	P	21 03 50.5	+0.6
	0.9nm,0.3s,baz=322,slow=9.8,SNR=4.2						
	0.9nm,0.3s						
MKAR	Makanchi Array	63.68	328	P	P	21 07 54.2	0.0
	0.2nm,0.5s,baz=116,slow=8.3,SNR=5.2						
	0.2nm,0.5s						

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*IPEC **25** 21:05:27.1±0.3, 51°.51N×16°.21E, h1^{km}, ML2.4/5, Error ellipse: s-maj=2.2km s-min=1.1km az=36.0*

*PRU **25** 21:05:28.8±0.0, 51°.42N×16°.06E, h0^{km}*

*VIE **25** 21:05:28.5, 51°.42N×16°.27E, h0^{km}, mb2.4/3, ml2.7/3 63 km NW of Wroclaw Suspected Mining induced.*

ISC 25 21:05:28.0±1.1, **51°.42N**±0°.05×**16°.11E**±0°.03, **h0**^{km}, **n28**, σ**0^{s}.80**/62, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.59	169	*e*Pg	Pb	21 05 40.4	-0.8
KSP				*e*Sg	Sb	21 05 49.4	-0.8
CHVC	Chvalec	0.84	182	*e*PG	Pb	21 05 44.7	-0.7
CHVC				*e*SG	Sb	21 05 56.3	-0.9
	comp=Z,42nm,0.5s						
OSTC	Ostas	0.87	176	*e*PG	Pb	21 05 45.5	-0.5
OSTC				*e*SG	Sb	21 05 58.1	-0.1
	comp=Z,37nm,0.4s						
UPC	Upice	0.92	184	*e*PG	Pb	21 05 46.4	-0.4
UPC				*e*SG	Sb	21 05 59.6	0.0
	comp=Z,58nm,0.4s						
DPC	Dobruska-Polom	1.08	173	*e*PG	Pg	21 05 48.6	-0.1
DPC				*e*SG	Sb	21 06 04.0	-0.3
	comp=Z,34nm,0.7s						
PVCC	Panska Ves	1.32	228	*e*PG	Pg	21 05 53.2	-0.2
PVCC				*e*SG	Sn	21 06 11.8	-0.3
	comp=Z,157nm,1.3s						
KRLC	Kraliky	1.42	162	*e*PG	Pg	21 05 54.5	-0.6
KRLC				*e*SG	Sn	21 06 13.8	-0.6
	comp=Z,34nm,0.7s						
BRG	Berggiesshubel	1.47	249	Pg	Pb	21 05 56.4	+0.2
BRG				Sg	Sn	21 06 16.6	+0.8
BRG				Amp		21 06 18.1	
	comp=Z,29nm,0.5s						
BRG				Amp		21 14 35.0	
	comp=E,0.2nm,22.4s						
BRG				Amp		21 14 37.0	
	comp=N,0.3nm,23.8s						
BRG				Amp		21 14 39.0	
	comp=Z,0.4nm,24.0s						
GOPC	GO Pecny, Ondr	1.73	210	*e*PG	Pb	21 06 00.3	-0.4
GOPC				*e*SG	Sg	21 06 24.1	+0.5
	comp=Z,22nm,0.6s						
PRU	Pruhonice	1.75	215	*e*PG	Pb	21 06 00.8	-0.2
PRU				*e*SG	Sg	21 06 25.1	+0.9

	comp=Z,24nm,0.5s						
MORC	**Moravsky Berou**	1.89	151	*e*Pn	Pn	21 06 01.0	-0.5
	baz=334						
MORC				*e*Sg	Sg	21 06 27.8	-0.7
	comp=Z,19nm,0.6s,baz=334						
CLL	**Collm**	1.95	268	*e*Pn	Pn	21 06 01.0	-1.4
CLL				*e*Pg	Pb	21 06 04.0	-0.4
CLL				*i* x	x	21 06 07.0	
CLL				*i* x	x	21 06 18.9	
CLL				*i* Sg	Sb	21 06 30.0	+0.7
	comp=Z,29nm,0.7s						
OKC	**Ostrava-Krasne**	2.05	140	*e*PG	Pg	21 06 06.3	-1.0
OKC				*e*SG	Sg	21 06 34.3	+0.5
	comp=Z,32nm,0.9s						
VRAC	**Vranov**	2.14	172	*e*Pn	Pn	21 06 05.1	+0.1
	baz=354						
VRAC				*e*Sg	Sg	21 06 36.6	-0.1
	comp=Z,18nm,0.7s,baz=354						
MAUC	**Maruska**	2.34	151	*e*PN	Pn	21 06 06.9	-0.8
MAUC				*e*SG	Sg	21 06 44.1	+1.1
	comp=Z,37nm,0.7s						
KRUC	**Moravsky**	2.37	175	*e*PG	Pb	21 06 11.9	+0.3
KRUC				*e*SG	Sg	21 06 43.9	-0.2
KRUC	**Moravsky**	2.37	175	*e*Pg	Pb	21 06 11.8	+0.2
	baz=357						
KRUC				*e*Sg	Sg	21 06 43.8	-0.3
	comp=Z,21nm,0.7s,baz=357						
NKC	**Novy Kostel**	2.61	244	*e*PN	Pn	21 06 11.5	0.0
NKC				*e*PG	Pb	21 06 16.0	+0.3
NKC				*e*SG	Sg	21 06 51.8	0.0
	comp=Z,37nm,0.9s						
OJC	**Ojcow**	2.63	116	*e*Pg	Pg	21 06 17.6	-0.8
OJC				*e*Sg	Sg	21 06 52.3	-0.1
KHC	**Kasperske Hory**	2.81	216	*e*PN	Pn	21 06 14.0	-0.2
KHC				*e*PG	Pb	21 06 20.0	+0.9
KHC				*e*SN	Sn	21 06 48.0	-0.9
KHC				*e*SG	Sg	21 06 57.0	-1.3
CKRC	**Cesky Krumlov**	2.85	205	*e*PN	Pn	21 06 15.3	+0.5
CKRC				*e*PG	Pb	21 06 19.8	0.0
CKRC				*e*SG	Sg	21 07 00.3	+0.7
LANS	**Liptovska Anna**	3.13	135	*e*PN	Pn	21 06 18.5	-0.1
LANS				*e*PG	Pg	21 06 28.3	+0.3
LANS				*e*SG	Sg	21 07 09.6	+1.0
MODS	**Modra-Piesok**	3.15	166	*e*PG	Pg	21 06 28.3	+0.1
MODS				*e*SG	Sg	21 07 09.6	+0.6
VYHS	**Vyhne**	3.42	148	*e*PN	Pn	21 06 22.4	-0.2
VYHS				*e*PG	Pg	21 06 35.4	+1.9
VYHS				*e*SG	Sg	21 07 17.6	-0.2
CONA	**Conrad Observa**	3.50	183	*i* Pn	Pn	21 06 24.9	+1.1
	comp=Z,0.3nm,0.2s						
CONA				Sg	Sg	21 07 20.8	+0.4
	comp=Z,5.1nm,0.4s						
MOA	**Molln**	3.77	199	*i* Pn	Pn	21 06 27.9	+0.5
	comp=Z,0.5nm,0.2s						
MOA				Sg	Sg	21 07 30.1	+1.0
	comp=Z,11nm,0.5s						
STHS	**Stebnicka Huta**	3.85	119	*e*PG	Pg	21 06 41.9	+0.2
STHS				*e*SG	Sg	21 07 34.8	+3.3
ARSA	**Arzberg**	4.20	185	Sg	Sg	21 07 44.2	+1.5
	comp=Z,7.3nm,0.7s						

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*IDC **25** 21:05:29.0±5.6, 36°.63N×71°.17E, h59^{km}±34^{km}, mb3.3/2, mbtmp3.5/7, ML3.3/5, Error ellipse: s-maj=65.2km s-min=20.3km az=152.0*

ISC 25 21:05:32.6±2.2**, 36°.8N**±0°.2×**71°.1E**±0°.1**, h100**^{km}**, n9,** σ**1^{s}.62**/12**, 1C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KK31	**Karatay Array**	6.30	356	P	Pn	21 07 04.2	+1.3
	3.4nm,0.4s,baz=182,slow=13,SNR=132						
KK31				⇑S	Sn	21 08 13.1	-0.3
	1.6nm,0.3s,baz=184,slow=26,SNR=8.0						
AAK	**Ala-Archa**	6.39	23	P	Pn	21 07 04.4	+0.2
	0.8nm,0.3s,baz=193,slow=7.9,SNR=13						
AAK				S	Sn	21 08 14.8	-1.0
	1.7nm,0.4s,baz=148,slow=22,SNR=7.4						
	1.5nm,0.3s						
GEYT	**Alibeck**	10.37	280	P	Pn	21 07 57.6	-0.7
	0.8nm,0.3s,baz=103,slow=12,SNR=11						
GEYT				S	Sn	21 09 50.5	-2.0
	1.4nm,0.3s,baz=125,slow=26,SNR=7.5						
	1.6nm,0.4s						
MKAR	**Makanchi Array**	13.01	36	P	Pn	21 08 30.8	-2.7
	0.1nm,0.3s,baz=204,slow=13,SNR=2.2						
	0.1nm,0.5s						
AB31	**Akbulak array**	14.84	330	⇓P	Pn	21 08 57.0	-0.1
	0.5nm,0.4s,baz=141,slow=14,SNR=35						
AKTO	**Aktyubinsk**	16.54	330	P	P	21 09 19.8	+0.6
	0.3nm,0.3s,baz=134,slow=9.6,SNR=3.0						
	1.2nm,0.4s						
ZALV	**Zalesovo Beam**	19.61	25	P	P	21 09 53.7	+0.9
	0.1nm,0.3s,baz=223,slow=10,SNR=3.5						
	0.3nm,0.3s						
FINES	**FINESS Array B**	37.26	326	P	P	21 12 36.6	+2.4
	0.5nm,0.4s,baz=119,slow=11,SNR=4.5						
	0.5nm,0.4s						
NOA	**NORSAR Array B**	44.17	323	P	P	21 13 32.6	+1.5
	0.6nm,0.8s,baz=96,slow=7.7,SNR=2.0						
	0.6nm,0.8s						

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*NIED **25** 21:13:01.9, 30°.29N×137°.49E, h543^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.97; $M_{\theta\theta}$2.40; $M_{\phi\phi}$-1.43; $M_{r\theta}$1.12; $M_{\theta\phi}$2.39; $M_{\phi r}$-2.72; Fault plane solution: $M_0$4.19000×10^{15} NP1:ϕ_s25.00000°, δ67.00000°, λ-149.00000°. NP2:ϕ_s282.00000°, δ62.00000°, λ-26.00000°.*

*JMA **25** 21:13:01.9±0.3, 30°N±2°×13°7E±°, h543^{km}±4^{km}, MV4.2/28, SHIKOKU BASIN*

*IDC **25** 21:13:05.9±0.8, 30°.38N×137°.18E, h502^{km}±8^{km}, mb3.6/30, mbtmp4.6/38, Error ellipse: s-maj=10.5km s-min=6.7km az=86.0*

*NEIC **25** 21:13:05.8±1.2, 30°.37N±0°.09×137°.2E±0°.1, h497^{km}±8^{km}, mb4.4/107, Error ellipse: s-maj=14.8km s-min=12.3km az=106.0*

ISC 25 21:13:05.0±0.5**, 30°.33N**±0°.04×**137°.29E**±0°.05**, h494**^{km}±6^{km}**, n225,** σ**1^{s}.10**/246**, mb4.3**/82**, 3C-2D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TTO1	**TONANKAI O.B.S**	3.31	353	P	P	21 14 19.9	+2.7
TTO1				S	S	21 15 20.9	+4.6
JHJ2	**Mitsune**	3.51	37	P	P	21 14 19.2	+0.2
JHJ2	**Mitsune**	3.51	37	P	P	21 14 19.9	+0.8
JTNC	**Tanabenakahech**	3.76	338	P	P	21 14 22.4	+1.4
JTNC				S	S	21 15 24.1	+1.0
JIE	**Ise**	4.08	353	P	P	21 14 25.5	+1.9
JMN	**Monobe**	4.46	320	P	P	21 14 28.5	+1.7
JTO	**Tosashimizu**	4.59	305	P	P	21 14 29.2	+1.3
INU	**Inuyama**	5.01	357		P	21 14 32.6	+1.0
JOD2	**Odawara 2**	5.15	17	P	P	21 14 32.8	-0.1
JOD2				S	S	21 15 43.9	-0.9
JGF	**Kuroka**	5.26	1		P	21 14 34.4	+0.5
BSO1	**Boso 1**	5.32	35	P	P	21 14 33.3	-0.6
CBIJ	**Chichi jima**	5.37	126	P	P	21 14 33.6	-1.5
CBIJ				S	S	21 15 45.0	-3.7
JCJ	**Chichijima**	5.37	126	P	P	21 14 33.8	-1.4
	20nm,0.3s,baz=294,slow=20,SNR=7.9						
JCJ				S	S	21 15 42.5	-6.2
	203nm,0.4s,baz=295,slow=23,SNR=21						
JHH2	**Haha-jima-NKT2**	5.66	129	A	A	21 14 36.4	
	comp=E,6.0nm,0.5s,comp=E,4.0nm,0.3s						
JRY	**Ryogami san**	5.83	13	P	P	21 14 39.4	0.0
JHS	**Saijyo**	5.84	324		P	21 14 40.5	+1.1
JHS	**Saijyo**	5.84	324	P	P	21 14 40.7	+1.3
JNU	**Nakatsue**	6.13	299	P	P	21 14 43.7	+1.4
	79nm,0.5s,baz=105,slow=3.8,SNR=16						
JNU				S	S	21 16 02.3	+0.3
	16nm,0.8s,baz=221,slow=16,SNR=2.1						
JNU	**Nakatsue**	6.13	299		P	21 14 43.9	+1.5
MJAR	**Matsushiro Arr**	6.24	7	P	P	21 14 43.0	-0.4
	19nm,0.7s,baz=179,slow=10,SNR=85						
MJAR				S	S	21 16 02.3	-1.6
	12nm,0.8s,baz=204,slow=9.0,SNR=9.1						
MAJO	**Matsushiro**	6.25	7		P	21 14 43.2	-0.1
MJB9	**Matsu-Tunnel**	6.25	7		P	21 14 44.2	+0.9
JOI	**OKI**	6.84	331	P	P	21 14 49.7	+0.5
JMZ	**Minamidaito 2**	7.00	232	P	P	21 14 52.2	+1.2
JAMN	**Amaminishikomi**	7.39	256	*e*P	P	21 14 55.6	+0.6
JSD	**Sado**	7.73	6	P	P	21 14 57.3	-1.0
JTU	**Tsushima**	7.87	304	P	P	21 14 59.8	0.0
JMM	**Marumori**	8.06	20	P	P	21 15 01.0	-0.7
JOW	**Kunigami**	8.66	248	P	P	21 15 09.2	+1.0
	53nm,0.7s,baz=70,slow=11,SNR=6.4						
JOW	**Kunigami**	8.66	248	P	P	21 15 08.2	+0.1
JMK	**Ichinoseki**	9.19	20	P	P	21 15 13.6	+0.1
JKE	**Kume jima 2**	10.08	249	P	P	21 15 23.2	+0.1
TJN	**Taejon**	10.26	309		P	21 15 24.4	-0.5
KSRS	**Korea Array**	10.54	315	P	P	21 15 27.9	+0.1
	20nm,0.7s,baz=128,slow=10,SNR=82						
KSAR	**Wonju Array Be**	10.55	315	P	P	21 15 27.5	-0.5
KS19	**Wonju Array Si**	10.60	315	P	P	21 15 27.9	-0.7
JTM	**Tenmabayashi**	10.88	15	P	P	21 15 31.8	+0.4
JOT	**Ohata**	11.44	14	P	P	21 15 38.1	+0.7
JOT				S	S	21 17 39.1	-3.9
JOSM	**Okushiri--Mats**	11.86	8	P	P	21 15 42.2	+0.4
JMJ	**Miyako jima 2**	11.97	246	P	P	21 15 45.1	+1.8
ERM	**Erimo**	12.58	20	P	P	21 15 49.5	0.0
YOJ	**Yonaguni jima**	13.96	249	P	P	21 16 03.5	-1.0
ASAJ	**Asahikawa**	14.39	16	P	P	21 16 08.8	+0.2
	8.8nm,0.8s,baz=231,slow=16,SNR=18						
ASAJ				S	S	21 18 40.1	0.0
	5.1nm,0.7s,baz=161,slow=33,SNR=3.2						
JKA	**Kamikawa-asahi**	14.39	16	P	P	21 16 09.2	+0.5
USA0B	**Ussuriysk Arra**	14.47	345	P	P	21 16 09.7	+0.2
USRK	**Ussuriysk Ar.**	14.47	345	P	P	21 16 09.6	+0.1
	84nm,0.5s,baz=161,slow=10,SNR=206						
TATO	**Taipei**	14.98	253	P	P	21 16 13.9	-1.3
YHNB	**Yeheng**	15.20	252	P	P	21 16 15.3	-2.3
YHNB	**Yeheng**	15.20	252	P	P	21 16 15.4	-2.1
NACB	**Ninganchiao**	15.24	250	P	P	21 16 14.7	-3.1
NACB	**Ninganchiao**	15.24	250	P	P	21 16 14.9	-3.0
MDJ	**Mudanjiang**	15.51	339	P	P	21 16 19.8	-0.5
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,83nm,5.4s						
MDJ	**Mudanjiang**	15.51	339	P	P	21 16 20.1	-0.2
MDJ				IAmb	IAmb	21 16 27.4	
	comp=Z,11nm,0.5s						
YULB	**Yu-li**	15.85	248	P	P	21 16 22.3	-1.9
YULB	**Yu-li**	15.85	248	P	P	21 16 22.6	-1.6
NJ2	**Nanjing**	15.87	281	*e*P	P	21 16 24.0	-0.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SNY	**Shenyang**	15.93	320	⇑P	P	21 16 24.3	-0.5
SNY				pmax	pmax		
	comp=Z,54nm,0.9s						
SSLB	**Suanglung**	15.94	250	P	P	21 16 23.4	-1.8
SSLB	**Suanglung**	15.94	250	P	P	21 16 23.6	-1.6
TWGBT	**Beinan**	16.31	247	P	P	21 16 27.8	-1.3
TWG	**Pinlang**	16.31	247	P	P	21 16 27.1	-2.0
CN2	**Changchun**	16.41	328	P	P	21 16 29.5	-0.4
CN2				pmax	pmax		
	comp=Z,30nm,0.9s						
TPUB	**Ta-pu**	16.43	249	P	P	21 16 29.6	-0.8
TPUB	**Ta-pu**	16.43	249	P	P	21 16 29.7	-0.7
YSS	**Yuzh-Sakhalins**	17.13	13	P	P	21 16 36.8	-0.4
BNX	**BinXian**	17.22	336	⇑P	P	21 16 37.5	-0.6
BNX				pmax	pmax		
	comp=Z,93nm,0.9s						
BNX				pmax	pmax		
	comp=Z,59nm,4.6s						
TIA	**Tai'an**	17.84	295	P	P	21 16 43.0	-1.1
TIA				pmax	pmax		
	comp=Z,12nm,0.9s						
GUMO	**Guam**	18.07	156	P	P	21 16 47.4	+0.9
	comp=Z,69nm,0.5s,baz=7.6,slow=15,SNR=5.9						
GUMO	**Guam**	18.07	156	P	P	21 16 47.3	+0.9
KLR	**Kul'dur**	19.34	349	P	P	21 16 58.0	+0.4
	comp=Z,14nm,0.5s,baz=174,slow=8.8,SNR=63						
BJT	**Baijiatuau**	19.75	305	P	P	21 17 00.4	-1.1
BJT				IAmb	IAmb	21 17 01.5	
	comp=Z,8.2nm,0.7s						
BJI	**Beijing**	19.75	305	P	P	21 17 01.0	-0.5
BJI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BJI				pmax	pmax		
	comp=Z,26nm,4.0s						
WHN	**Wuhan**	19.78	276	P	P	21 17 02.0	+0.1
WHN				pmax	pmax		
	comp=Z,28nm,0.6s						
HNS	**HongShan**	20.01	297	⇑P	P	21 17 03.5	-0.4
HNS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HEH	**HeiHe**	21.25	342	*e*P	P	21 17 14.3	-0.6
HEH				pmax	pmax		
	comp=Z,43nm,0.7s						
HIA	**Hailar**	23.13	330	P	P	21 17 31.1	-0.9
HIA				IAmb	IAmb	21 17 32.5	
	comp=Z,6.8nm,0.6s						
HHC	**Hu-ho-hao-te**	23.33	304	*e*P	P	21 17 33.5	-0.5
HHC				pmax	pmax		
	comp=Z,28nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,6.0s						
ENH	**Enshi**	23.99	277	P	P	21 17 39.0	-0.9
XAN	**Xi'an**	24.26	286	P	P	21 17 42.0	-0.3
XAN				pmax	pmax		
	comp=Z,13nm,0.8s						
PETK	**Petropavlovsk-**	27.20	27	P	P	21 18 09.9	+2.0
	comp=Z,1.7nm,0.8s,baz=190,slow=4.2,SNR=9.5						
	comp=Z,1.7nm,0.8s						
PETK	**Petropavlovsk-**	27.20	27	P	P	21 18 09.4	+1.5
ULN	**Ulaanbaatar**	29.02	316	P	P	21 18 23.8	-0.4
ULN				IAmb	IAmb	21 18 24.6	
	comp=Z,3.5nm,0.7s						
SONM	**Songino Array**	29.41	315	P	P	21 18 27.2	-0.2
	comp=Z,1.7nm,0.6s,baz=131,slow=9.1,SNR=15						
SONM				PcP	PcP	21 21 18.2	+0.2
	comp=Z,0.2nm,0.4s,baz=126,slow=4.2,SNR=1.7						
SONM				ScP	ScP	21 24 10.6	-2.1
	comp=Z,0.5nm,0.7s,baz=114,slow=2.7,SNR=4.2						
	comp=Z,1.7nm,0.6s						
SONM	**Songino Array**	29.41	315	P	P	21 18 27.0	-0.4
MA2	**Magadan**	30.64	13	P	P	21 18 38.4	+0.6
MA2				IAmb	IAmb	21 18 39.3	
	comp=Z,17nm,0.7s						
MYLDM	**Lahad Datu**	30.65	219	P	P	21 18 39.0	+0.5
KKM	**Kota Kinabalu**	31.25	224	P	P	21 18 44.1	+0.3
KKM				IAmb	IAmb	21 18 53.3	
	comp=Z,15nm,0.8s						
PZH	**PanZhiHua**	31.42	272	P	P	21 18 44.5	-0.6
PZH				pmax	pmax		
	comp=Z,20nm,0.8s						
PZH				pmax	pmax		
	comp=Z,60nm,5.4s						
GTA	**Gaotai**	31.87	297	*e*P	P	21 18 48.5	-0.3
GTA				PcP	PcP	21 21 26.0	+1.1
GTA				ScP	ScP	21 24 21.0	-0.1
GTA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
YAK	**Yakutsk**	32.10	353	P	P	21 18 49.3	-1.0
	comp=Z,7.7nm,0.4s,baz=28,slow=2.4,SNR=6.5						
	comp=Z,7.7nm,0.4s						
YAK	**Yakutsk**	32.10	353		P	21 18 49.1	-1.1
YAK				IAmb	IAmb	21 18 50.5	
	comp=Z,31nm,1.1s						
TOLI2	**Tolitoli**	33.02	211	P	P	21 18 57.9	-0.8
TOLI2				IAmb	IAmb	21 18 59.3	
	comp=Z,9.5nm,0.7s						
FAKI	**Fak Fak**	33.41	189	P	P	21 19 02.1	+0.1
SEY	**Seymchan**	34.04	12	P	P	21 19 07.2	+0.5
	comp=Z,5.1nm,0.8s,baz=206,slow=6.6,SNR=18						
	comp=Z,5.1nm,0.8s						
TNCH	**TengChong**	34.62	271	⇓P	P	21 19 12.5	+0.1
TNCH				pP	pwP	21 20 41.5	-0.1
TNCH				S	S	21 24 06.5	+0.1
TNCH				pmax	pmax		
	comp=Z,19nm,0.9s						
TNCH				pmax	pmax		
	comp=Z,85nm,4.1s						
CRAI	**Chiangrai**	34.73	262	P	P	21 19 13.4	+0.2
CRAI				IAmb	IAmb	21 19 14.8	
	comp=Z,19nm,0.8s						
PHRA	**Phrae**	35.59	259	P	P	21 19 20.2	-0.1
GOMU	**GeErMu**	35.78	291	P	P	21 19 22.8	+0.6
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,72nm,5.5s						
SBUM	**Sibu**	36.51	225	P	P	21 19 27.3	-0.6
SBUM				IAmb	IAmb	21 19 29.4	
	comp=Z,11nm,1.0s						
CHTO	**Chiang Mai**	36.55	261	P	P	21 19 28.1	-0.3
CM31	**Chiang Mai Arr**	36.70	260	P	P	21 19 29.2	-0.4
CM31				IAmb	IAmb	21 19 30.6	
	comp=Z,14nm,0.7s						
CMAR	**Chiang Mai Arr**	36.70	260	P	P	21 19 29.8	+0.2
	comp=Z,8.5nm,0.6s,baz=58,slow=6.4,SNR=101						
CMAR				ScP	S	21 24 36.5	-0.9
	comp=Z,0.7nm,0.8s,baz=21,slow=5.7,SNR=4.3						
	comp=Z,8.5nm,0.6s						
CMAR	**Chiang Mai Arr**	36.70	260	P	P	21 19 29.5	-0.1
KSM	**Kuching**	38.46	227	P	P	21 19 44.5	+0.5
KAPI	**Kappang**	38.95	209	P	P	21 19 48.0	0.0
	comp=Z,9.0nm,0.7s,baz=48,slow=14,SNR=4.1						
	comp=Z,9.0nm,0.7s						
SHL	**Shillong**	40.19	275	P	P	21 19 56.9	-1.2
SHL				IAmb	IAmb	21 19 58.8	
	comp=Z,8.2nm,1.0s						
WMQ	**Urumqi**	41.21	303	⇓*i*P	P	21 20 06.8	+0.9
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
SRIT	**Nakonsritamara**	41.30	246	P	P	21 20 06.6	-0.3
SRIT				IAmb	IAmb	21 20 08.6	
	comp=Z,19nm,0.7s						
MMRI	**Maumere**	41.35	203	P	P	21 20 06.8	-0.4
BILL	**Bilibino**	41.41	16	P	P	21 20 08.0	+1.1
TIXI	**Tiksi**	41.63	356	P	P	21 20 08.3	-0.4
TIXI				IAmb	IAmb	21 20 09.1	
	comp=Z,9.4nm,0.6s						
SOEI	**Soe**	41.77	199	P	P	21 20 10.4	-0.3
KULM	**Kulim**	42.54	242	P	P	21 20 16.9	+0.2
KULM				IAmb	IAmb	21 20 18.0	
	comp=Z,17nm,0.8s						
IPM	**Ipoh**	42.78	240	P	P	21 20 18.0	-0.6
IPM				IAmb	IAmb	21 20 19.3	
	comp=Z,22nm,1.1s						
TAPN	**Taplejung**	43.26	279	*e*P	P	21 20 22.2	-0.4
	comp=Z,11nm,0.3s						
MTN	**Manton Dam**	43.33	189	P	P	21 20 22.5	-0.3
MTN				IAmb	IAmb	21 20 27.5	
	comp=Z,36nm,1.4s						
ZAA0	**Zalesovo Array**	44.23	318	P	P	21 20 28.5	-0.8
ZAA0				IAmb	IAmb	21 20 29.7	
	comp=Z,5.1nm,0.6s						
ZALV	**Zalesovo Beam**	44.23	318	P	P	21 20 28.4	-1.0
	comp=Z,4.5nm,0.5s,baz=91,slow=8.5,SNR=24						
ZALV				PcP	PcP	21 22 02.3	-0.9
	comp=Z,0.7nm,0.3s,baz=120,slow=2.6,SNR=2.9						
ZALV				ScP	ScP	21 25 06.7	-1.1
	comp=Z,0.8nm,0.6s,baz=87,slow=6.1,SNR=4.2						
	comp=Z,4.5nm,0.5s						
ZALV	**Zalesovo Beam**	44.23	318	P	P	21 20 28.6	-0.7
RAMN	**Ramite**	44.32	279	*e*P	P	21 20 30.6	-0.2
	comp=Z,14nm,0.3s						
JIRN	**Jiri**	44.47	280	*e*P	P	21 20 32.5	+0.4
	comp=Z,59nm,0.3s						
JAGI	**Jajag, Banyuwa**	44.52	214	P	P	21 20 30.9	-1.2
GUN	**Gumba**	44.67	280	*e*P	P	21 20 33.8	+0.2
	comp=Z,22nm,0.3s						
MK31	**Makanchi Array**	45.11	307	P	P	21 20 35.9	-0.4
MKAR	**Makanchi Array**	45.11	307	P	P	21 20 36.0	-0.3
	comp=Z,1.6nm,0.4s,baz=86,slow=9.5,SNR=36						
MKAR				PcP	PcP	21 22 06.1	-0.5
	comp=Z,0.2nm,0.3s,baz=73,slow=3.7,SNR=5.4						
MKAR				ScP	ScP	21 25 09.7	-2.0
	comp=Z,0.5nm,0.5s,baz=87,slow=5.0,SNR=5.9						
	comp=Z,1.6nm,0.4s						
MKAR	**Makanchi Array**	45.11	307	P	P	21 20 35.9	-0.4
PKI	**Pulchoki**	45.16	280	*e*P	P	21 20 36.9	-0.5
	comp=Z,3.1nm,0.2s						
PKIN	**Phulchoki**	45.17	280	*e*P	P	21 20 36.8	-0.6
	comp=Z,5.0nm,0.4s						
DMN	**Daman**	45.41	280	*e*P	P	21 20 38.8	-0.4
	comp=Z,11nm,0.4s						
RPSI	**Rantau Prapat**	45.52	240	P	P	21 20 39.3	-0.6
RPSI				IAmb	IAmb	21 20 40.2	
	comp=Z,9.2nm,0.8s						
GKN	**Gorkha**	45.70	281	*e*P	P	21 20 41.0	-0.3
	comp=Z,10nm,0.3s						
UGM	**Wanagama**	45.89	218	P	P	21 20 42.0	-0.6
DANN	**Dangsing**	46.35	282	*e*P	P	21 20 46.6	+0.2
	comp=Z,14nm,0.4s						
KNRA	**Kununurra**	46.47	191	P	P	21 20 47.2	+0.3
PYUN	**Piuthan**	47.07	282	*e*P	P	21 20 51.9	+0.2
	comp=Z,44nm,0.4s						
GSI	**Gunungsitoli**	47.45	240	P	P	21 20 53.8	-0.7
MNAI	**Manna**	47.63	230	P	P	21 20 54.6	-1.2
KURK	**Kurchatov**	47.65	313	P	P	21 20 54.6	-0.9
KURK				IAmb	IAmb	21 20 56.3	
	comp=Z,14nm,1.2s						
NRIK	**Noril'sk**	48.08	339	P	P	21 20 58.1	-0.4
	comp=Z,8.5nm,0.4s,baz=110,slow=9.6,SNR=20						
	comp=Z,8.5nm,0.4s						
NRIK	**Noril'sk**	48.08	339	P	P	21 20 58.1	-0.4
NRIK				IAmb	IAmb	21 20 58.9	
	comp=Z,9.2nm,0.7s						
TARG	**Taragay, Kyrgy**	48.56	301	P	P	21 21 02.7	-0.3
KDJ	**Kajisay**	48.98	301	P	P	21 21 05.3	-0.5
FITZ	**Fitzroy Crossi**	49.44	195	P	P	21 21 09.4	+0.2
WB0	**Warramunga Arr**	49.88	184	P	P	21 21 12.7	+0.2
WB0				IAmb	IAmb	21 21 13.1	
	comp=Z,6.0nm,0.5s						
WRA	**Warramunga Arr**	50.06	184	P	P	21 21 13.9	+0.1
	comp=Z,4.6nm,0.3s,baz=359,slow=7.7,SNR=294						
WRA				PcP	PcP	21 22 25.7	+0.9
	comp=Z,1.0nm,0.6s,baz=356,slow=4.1,SNR=3.0						
	comp=Z,4.6nm,0.3s						
WRA	**Warramunga Arr**	50.06	184	P	P	21 21 12.9	-0.9
KSH	**Kashi**	50.25	298	P	P	21 21 18.0	+2.8
KSH				PcP	PcP	21 22 27.0	+1.5
KSH				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CTA	**Charters Tower**	50.86	169	P	P	21 21 21.0	+1.3
	comp=Z,2.4nm,0.5s,baz=0.1,slow=8.6,SNR=1.6						
	comp=Z,2.4nm,0.5s						
CTAO	**Charters Tower**	50.86	169	P	P	21 21 21.0	+1.3
CTAO				IAmb	IAmb	21 21 28.9	
	comp=Z,23nm,1.4s						
AAK	**Ala-Archa**	50.90	302	P	P	21 21 19.6	-0.3
BVAR	**Borovoye Array**	52.75	316	P	P	21 21 32.7	-0.2
	comp=Z,10nm,0.4s,baz=92,slow=7.6,SNR=64						
	comp=Z,10nm,0.4s						
BRVK	**Borovoye**	52.81	316	P	P	21 21 33.1	-0.3
BRVK				IAmb	IAmb	21 21 33.8	
	comp=Z,4.2nm,0.5s						
P18K	**Big Mountain,**	53.05	36	P	P	21 21 36.3	+1.3
P18K				IAmb	IAmb	21 21 37.2	
	comp=Z,7.6nm,0.8s						
NIL	**Nilore**	53.64	291	P	P	21 21 39.5	-0.2
NIL				IAmb	IAmb	21 21 41.7	
	comp=Z,7.2nm,0.6s						
KK31	**Karatay Array**	53.72	303	P	P	21 21 39.8	-0.2
KK31				IAmb	IAmb	21 21 40.5	
	comp=Z,4.4nm,0.5s						
KKAR	**Karatay Array**	53.72	303	P	P	21 21 39.9	-0.1
AS31	**Alice Springs**	53.78	184	P	P	21 21 40.7	+0.1
ASAR	**Alice Springs**	53.78	184	P	P	21 21 40.7	+0.1
	comp=Z,1.3nm,0.4s,baz=14,slow=11,SNR=40						
ASAR				ScP	ScP	21 25 49.6	+0.6
	comp=Z,0.5nm,0.7s,baz=10,slow=4.0,SNR=4.4						
	comp=Z,1.3nm,0.4s						
ASAR	**Alice Springs**	53.78	184	P	P	21 21 40.9	+0.2
K20K	**Telida**	53.81	31	P	P	21 21 42.1	+1.8
K20K				IAmb	IAmb	21 21 43.2	
	comp=Z,5.8nm,0.8s						
MBWA	**Marble Bar**	53.91	200	P	P	21 21 41.6	+0.2
MBWA				IAmb	IAmb	21 21 42.1	
	comp=Z,9.0nm,0.5s						
IMAR	**Indian Mountai**	54.16	28	P	P	21 21 43.4	+0.7
PSA00	**Pilbara Seismi**	54.26	200	P	P	21 21 44.0	0.0
PSA00				IAmb	IAmb	21 22 02.5	
	comp=Z,22nm,1.4s						
PSA00	**Pilbara Seismi**	54.26	200	P	P	21 21 43.5	-0.5
PSA00				IAmb	IAmb	21 21 44.8	
	comp=Z,3.8nm,0.8s						
KDAK	**Kodiak Island**	54.43	38	P	P	21 21 45.5	+0.8
KDAK				IAmb	IAmb	21 21 46.4	
	comp=Z,20nm,1.2s						
PPLA	**Purkeypile**	54.64	32	P	P	21 21 47.9	+1.5
PPLA				IAmb	IAmb	21 22 06.2	
	comp=Z,15nm,1.5s						
GAR	**Garm**	54.66	298	P	P	21 21 46.5	-0.4
GAR				IAmb	IAmb	21 21 47.3	
	comp=Z,9.3nm,0.3s						
SKT	**Skwentna**	54.93	33	P	P	21 21 49.0	+0.8
SUA	**Susitna One**	55.30	34	P	P	21 21 51.7	+0.8
CHGR	**Chuyangaron**	55.62	298	P	P	21 21 53.1	-0.4
CHGR				IAmb	IAmb	21 21 54.1	
	comp=Z,13nm,0.6s						

NEA2	Nenana	56.06	30	P	P	21 21 56.9	+0.9
MDM	Murphy Dome	56.42	29	P	P	21 21 59.8	+1.2
WRH	Wood River Hil	56.48	30	P	P	21 21 59.9	+0.9
H24K	Noodor Dome	56.56	28	P	P	21 22 00.6	+1.0
SCM	Sheep Creek Mo	56.92	33	P	P	21 22 03.2	+1.1
SCM				IAmb	IAmb	21 22 04.1	
	comp=Z,18nm,1.2s						
HDA	Harding Lake	56.98	30	P	P	21 22 02.4	0.0
IL31		56.99	30	P	P	21 22 02.6	+0.2
ILAR	Eielson Array	56.99	30	P	P	21 22 02.1	-0.4
	comp=Z,0.9nm,0.6s,baz=254,slow=5.7,SNR=16						
	comp=Z,0.9nm,0.6s						
ILAR	Eielson Array	56.99	30	P	P	21 22 02.6	+0.1
PALK	Pallekele	57.62	259	P	P	21 22 07.3	-0.3
PALK				IAmb	IAmb	21 22 08.6	
	comp=Z,6.9nm,0.8s						
BMAR	Burnt Mountain	57.85	26	P	P	21 22 10.5	+2.2
DOT	Dot Lake	58.29	31	P	P	21 22 11.7	+0.3
SCRK	Sand Creek	58.30	31	P	P	21 22 11.9	+0.3
DZM	Mont Dzumac	59.16	148	P	P	21 22 19.6	+1.8
	comp=Z,3.3nm,0.7s,baz=315,slow=4.9,SNR=6.7						
	comp=Z,3.3nm,0.7s						
ARU	Arti	59.23	321	P	P	21 22 17.1	-0.6
	comp=Z,5.5nm,0.4s,baz=100,slow=5.3,SNR=15						
	comp=Z,5.5nm,0.4s						
ARU	Arti	59.23	321	P	P	21 22 17.0	-0.8
ARU				IAmb	IAmb	21 22 17.5	
	comp=Z,6.6nm,0.5s						
ABKAR	Akbulak array	59.76	312	P	P	21 22 21.0	-0.4
AKTO	Aktyubinsk	60.72	314	P	P	21 22 27.2	-0.6
	comp=Z,5.7nm,0.6s,baz=64,slow=8.9,SNR=14						
	comp=Z,5.7nm,0.6s						
EPYK	Eagle Plains	61.04	27	P	P	21 22 31.0	+1.3
EPYK				IAmb	IAmb	21 22 32.1	
	comp=Z,12nm,0.8s						
FORT	Forrest	61.40	189	P	P	21 22 31.8	-0.6
FORT				IAmb	IAmb	21 22 33.7	
	comp=Z,14nm,0.7s						
HYT	Haines Junctio	61.74	34	P	P	21 22 35.9	+1.3
HYT				IAmb	IAmb	21 23 08.7	
	comp=Z,9.7nm,1.5s						
INK	Inuvik	61.90	25	P	P	21 22 35.7	+0.5
STKA	Stephens Creek	62.00	176	P	P	21 22 37.3	+0.9
	comp=Z,0.8nm,0.3s,baz=328,slow=8.3,SNR=3.9						
	comp=Z,0.8nm,0.3s						
MORW	Morawa	62.45	201	P	P	21 22 39.3	0.0
MORW				IAmb	IAmb	21 22 41.4	
	comp=Z,33nm,1.4s						
BBOO	Buckleboo	62.81	181	P	P	21 22 41.8	+0.2
BBOO				IAmb	IAmb	21 22 44.7	
	comp=Z,13nm,1.4s						
A36M	Sachs Harbour	63.73	20	P	P	21 22 47.9	+0.9
A36M				IAmb	IAmb	21 22 49.5	
	comp=Z,6.3nm,0.8s						
NWAO	Narrogin (SRO)	65.72	198	P	P	21 23 00.2	+0.1
	comp=Z,16nm,0.8s,baz=7.8,slow=4.9,SNR=12						
	comp=Z,16nm,0.8s						
NWAO	Narrogin (SRO)	65.72	198	P	P	21 23 00.1	0.0
SPB2	Spitsbergen Ar	66.42	349	P	P	21 23 04.2	+0.3
SPITS	Spitsbergen Ar	66.42	349	P	P	21 23 04.3	+0.3
	comp=Z,8.2nm,0.9s,baz=78,slow=7.8,SNR=8.2						
	comp=Z,8.2nm,0.9s						
KEV	Kevo	68.49	339	P	P	21 23 16.2	-0.5
ARCES	ARCESS Array B	69.06	340	P	P	21 23 20.0	-0.2
	comp=Z,3.7nm,0.4s,baz=61,slow=8.5,SNR=49						
	comp=Z,3.7nm,0.4s						
ARCES	ARCESS Array B	69.06	340	P	P	21 23 20.2	0.0
ARCES				IAmb	IAmb	21 23 44.3	
	comp=Z,35nm,1.5s						
RES	Resolute Bay	69.91	13	P	P	21 23 25.7	+0.5
RES				IAmb	IAmb	21 23 26.8	
	comp=Z,4.0nm,0.8s						
YKA	Yellowknife Ar	71.32	28	P	P	21 23 34.1	+0.4
	comp=Z,1.6nm,0.7s,baz=296,slow=5.8,SNR=23						
	comp=Z,1.6nm,0.7s						
KBZ	Khabaz	72.66	311	P	P	21 23 41.8	-0.1
	comp=Z,4.5nm,0.7s,baz=98,slow=4.9,SNR=15						
	comp=Z,4.5nm,0.7s						
KVAR	Kislovodsk Arr	72.69	311	P	P	21 23 43.8	+1.5
	comp=Z,2.2nm,0.8s,baz=261,slow=20,SNR=2.6						
	comp=Z,2.2nm,0.8s						
FIA1	FINESS Array S	73.12	332	P	P	21 23 43.5	-0.6
FIA1				IAmb	IAmb	21 23 44.6	
	comp=Z,19nm,1.4s						
FINES	FINESS Array B	73.12	332	P	P	21 23 43.6	-0.6
	comp=Z,2.8nm,0.4s,baz=61,slow=5.2,SNR=45						
	comp=Z,2.8nm,0.4s						
FINES	FINESS Array B	73.12	332	P	P	21 23 43.5	-0.7
DBO	Dodson Butte	76.23	48	P	P	21 24 02.9	+0.7
DBO				IAmb	IAmb	21 24 41.0	
	comp=Z,16nm,1.3s						
PABE	Paberze	77.38	328	P	P	21 24 07.8	-0.4
PABE				IAmb	IAmb	21 24 08.7	
	comp=Z,10nm,0.7s						
AKASG	Malin Array Be	77.45	322	P	P	21 24 07.2	-1.4
	comp=Z,1.1nm,0.3s,baz=52,slow=5.7,SNR=4.1						
	comp=Z,1.1nm,0.3s						
SCO	Scoresbysund	78.38	353	P	P	21 24 14.1	+0.9
SCO				IAmb	IAmb	21 24 57.0	
	comp=Z,8.1nm,1.2s						
NC405	NORSAR Array S	78.76	336	P	P	21 24 14.7	-0.8
NC405				IAmb	IAmb	21 24 43.9	
	comp=Z,33nm,1.4s						
NB2	NORSAR Subarra	78.98	336	P	P	21 24 16.1	-0.6
	comp=Z,2.0nm,0.5s,baz=47,slow=5.1						
NOA	NORSAR Array B	78.98	336	P	P	21 24 15.9	-0.8
	comp=Z,3.2nm,0.6s,baz=46,slow=5.2,SNR=19						
	comp=Z,3.2nm,0.6s						
RAYN	Ar Rayn	79.94	291	P	P	21 24 22.3	-0.2
BRTR	Keskin Array B	80.65	311	P	P	21 24 25.9	-0.2
	comp=Z,0.6nm,0.6s,baz=105,slow=3.6,SNR=4.7						
	comp=Z,0.6nm,0.6s						
BRTR	Keskin Array B	80.65	311	P	P	21 24 25.6	-0.5
BUR08	Bucovina Ar. S	81.36	321	P	P	21 24 29.6	+0.1
BURAR	Bucovina Array	81.37	321	P	P	21 24 29.4	-0.2
KVN	Kaiserville	81.64	50	P	P	21 24 31.8	+0.6
NVAR	Mina Array Bea	81.83	50	P	P	21 24 33.4	+1.1
	comp=Z,0.4nm,0.5s,baz=300,slow=5.8,SNR=4.6						
	comp=Z,0.4nm,0.5s						
PDAR	Pinedale Array	84.86	43	P	P	21 24 48.0	+0.6
	comp=Z,0.5nm,0.7s,baz=78,slow=1.3,SNR=4.6						
	comp=Z,0.5nm,0.7s						

WEL 25 21:16:10.5±0.3,**42˚S**±2˚×**17˚3E**±˚,**h10**^{km}±4^{km},**M3.0**/9, **ML3.1**/12,**MLv3.0**/9,**Error ellipse: s-maj=0.0km s-min=0.0km az=113.0,confirmed,South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHZ	Kahutara	0.08	159	P	Pg	21 16 13.4	+0.5
KHZ	Kahutara	0.08	159	P	Pg	21 16 13.4	+0.6
KHZ				S	Sg	21 16 15.4	+0.9
BSWZ	Blackbirch Sta	0.69	24	P	Pb	21 16 24.5	-0.1
BSWZ	Blackbirch Sta	0.69	24	P	Pb	21 16 24.5	0.0
GVZ	Greta Valley S	0.71	209	P	Pb	21 16 25.3	+0.2
GVZ	Greta Valley S	0.71	209	P	Pb	21 16 25.1	0.0
GVZ				S	Sn	21 16 36.8	-1.0
THZ	Tophouse	0.73	322	P	Pg	21 16 24.7	+0.1
THZ	Tophouse	0.73	322	P	Pg	21 16 24.6	0.0
THZ				S	Sg	21 16 34.2	+0.1
CMWZ	Cape Campbell	0.80	42	P	Pn	21 16 28.0	+0.2
CMWZ	Cape Campbell	0.80	42	P	Pn	21 16 27.4	-0.4
TUWZ	Tuamarina	0.97	20	P	Pb	21 16 29.6	+0.2
TUWZ	Tuamarina	0.97	20	P	Pb	21 16 29.5	+0.1
TUWZ				S	Sn	21 16 43.3	-0.7
LTZ	Lake Taylor	1.01	244	P	Pg	21 16 29.0	-0.9
LTZ	Lake Taylor	1.01	244	P	Pg	21 16 28.8	-1.1
LTZ				S	Sb	21 16 43.9	+0.4
AMCZ	Amberley	1.04	217	P	Pb	21 16 30.9	+0.2
AMCZ	Amberley	1.04	217	P	Pg	21 16 29.6	-1.0
MRNZ	Matariki Terra	1.09	329	P	Pg	21 16 31.4	-0.2
MRNZ	Matariki Terra	1.09	329	P	Pg	21 16 30.8	-0.7
MRNZ				S	Sb	21 16 45.9	+0.1
NNZ	Nelson	1.13	355	P	Pb	21 16 31.8	-0.3
NNZ	Nelson	1.13	355	P	Pb	21 16 31.9	-0.2
TCW	Tory Channel	1.27	27	P	Pn	21 16 34.3	0.0
TCW	Tory Channel	1.27	27	P	Pn	21 16 33.8	-0.5
TCW				S	Sn	21 16 53.1	+1.6
TKNZ	Takaka Hill	1.37	343	P	Pb	21 16 36.0	-0.2
DSZ	Denniston Nort	1.40	295	P	Pb	21 16 36.6	-0.1
WEL	Wellington	1.42	42	P	Pn	21 16 36.1	-0.2
OXZ	Oxford	1.46	227	P	Pn	21 16 35.3	-1.6
MQZ	McQueen’s Vall	1.50	204	P	Pn	21 16 35.6	-1.9
PLWZ	Palliser	1.52	60	P	Pn	21 16 37.1	-0.7
PLWZ	Palliser	1.52	60	P	Pn	21 16 36.0	-1.8
INZ	Inchbonnie	1.57	255	P	Pn	21 16 38.7	+0.2
DUWZ	D’Urville Isla	1.57	12	P	Pn	21 16 38.8	+0.3
AKCZ	Akaroa Harbour	1.59	196	P	Pn	21 16 37.7	-1.1
MSWZ	Moikau Station	1.60	55	P	Pn	21 16 38.2	-0.7
MSWZ				S	Sn	21 16 59.0	-0.7
QRZ	Quartz Range	1.68	334	P	Pb	21 16 41.3	-0.3
CAW	Cannon Point	1.70	44	P	Pn	21 16 39.7	-0.6
PAWZ	Paruwai Farm	1.73	57	P	Pn	21 16 39.6	-1.1
PAWZ	Paruwai Farm	1.73	57	P	Pn	21 16 39.5	-1.2
KIW	Kapiti Island	1.82	36	P	Pn	21 16 41.8	-0.1
TRWZ	Traveller	1.89	61	P	Pn	21 16 42.8	0.0
TRWZ	Traveller	1.89	61	P	Pn	21 16 41.9	-0.9
TRWZ				S	Sn	21 17 05.4	-1.3
MTW	Mount Morrison	1.91	52	P	Pg	21 16 48.9	+1.8
MTW				S	Sn	21 17 05.8	-1.4
OGWZ	Otaki Gorge	1.97	40	P	Pn	21 16 43.5	-0.5
WACZ	Wakanui South	2.01	217	P	Pn	21 16 42.8	-1.7
HOWZ	Holdsworth Sta	2.09	47	P	Pb	21 16 49.4	+0.8
HOWZ	Holdsworth Sta	2.09	47	P	Pn	21 16 45.8	+0.2
HOWZ				S	Sn	21 17 10.8	-0.9
WVZ	Waitaha Valley	2.16	249	P	Pn	21 16 46.7	+0.1
TMWZ	Te Maipa	2.17	56	P	Pg	21 16 53.9	+1.7
TMWZ				S	Sn	21 17 13.2	-0.6
RPZ	Rata Peaks	2.26	232	P	Pn	21 16 46.5	-1.5
MRZ	Mangatainoka R	2.29	44	P	Pn	21 16 47.3	-1.1
ARCZ	Arundel	2.34	226	P	Pn	21 16 47.3	-1.8
TIWZ	Tintock	2.38	50	P	Pb	21 16 52.0	-1.5
TIWZ				S	Sn	21 17 18.5	-0.3
BFZ	Birch Farm	2.65	52	P	Pn	21 16 50.0	-3.3
BFZ				S	Sn	21 17 24.4	-1.0
TMZ	Timaru	2.73	221	P	Pn	21 16 53.4	-1.1
WAZ	Wanganui	2.82	24	P	Pb	21 17 00.1	-0.8
MTVZ	Mangateitei	3.31	27	P	Pb	21 17 11.2	+1.8
VRZ	Vera Road	3.35	17	P	Pb	21 17 07.1	-2.9
MOVZ	Moawhango	3.39	31	P	Pb	21 17 11.7	+0.9
ODZ	Otahua Downs	3.40	216	P	Pn	21 17 01.5	-2.2
WNVZ	Wahianoa	3.41	29	P	Pn	21 17 05.8	+1.9
BHHZ	Black Hill Sta	3.45	35	P	Pb	21 17 11.1	-0.6
FWVZ	Far West T-bar	3.45	27	P	Pb	21 17 12.8	+0.9
NGZ	Ngauruhoe	3.54	27	P	Pb	21 17 13.9	+0.6
OTVZ	Oturere	3.58	28	P	Pb	21 17 13.4	-0.5
OTVZ				S	Sg	21 18 07.7	+2.4
ETVZ	East Tongariro	3.62	28	P	Pb	21 17 14.2	-0.4
ETVZ				S	Sg	21 18 08.3	+1.6
TMVZ	Te Maari	3.63	28	P	Pb	21 17 14.5	-0.4
TMVZ				S	Sg	21 18 07.2	+0.1
KWHZ	Kaweka Forest	3.66	38	P	Pb	21 17 12.0	-3.4
KWHZ				S	Sn	21 17 48.7	-1.9
BKZ	Black Stump Fm	3.90	37	P	Pb	21 17 20.0	+0.5
HIZ	Hauiti	3.96	16	P	Pn	21 17 13.2	+1.9

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*IDC **25** 21:18:36.0±1.1,5˚.31S×151˚.34E,h61^{km}±11^{km},mb3.4/7, mbtmp3.7/8,Error ellipse: s-maj=48.7km s-min=9.6km az=127.0*

ISC 25 21:18:35.3±1.1,**5˚.3S**±0˚.2×**151˚.4E**±0˚.3,**h57**^{km},**n10**, σ**1^{s}09**/13,**mb3.6**/7,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.19	30	P	Pn	21 18 55.6	-0.2
	438nm,0.3s,baz=238,slow=1.5,SNR=205						
KRVT				S	Sn	21 19 12.5	+1.5
	790nm,0.3s,baz=187,slow=17,SNR=20						
PMG	Port Moresby	5.85	226	P	Pn	21 20 00.1	+0.6
	4.5nm,0.4s,baz=270,slow=18,SNR=2.0						
PMG				S	Sn	21 21 04.7	-0.6
	18nm,0.4s,baz=150,slow=17,SNR=8.8						
WRA	Warramunga Arr	22.07	227	P	P	21 23 26.3	+0.6
	4.5nm,0.5s,baz=52,slow=9.9,SNR=25						
WRA				PcP	PcP	21 27 23.9	+2.0
	0.3nm,0.9s,baz=31,slow=2.2,SNR=1.6						
	4.5nm,0.5s						
ASAR	Alice Springs	24.84	221	P	P	21 23 53.0	+0.4
	2.0nm,0.7s,baz=54,slow=8.8,SNR=23						
	2.0nm,0.7s						
SONM	Songino Array	66.06	329	P	P	21 29 16.8	+0.4
	0.4nm,0.6s,baz=153,slow=5.4,SNR=4.0						
	0.4nm,0.6s						
MKAR	Makanchi Array	79.83	319	P	P	21 30 37.1	-0.7
	0.1nm,0.4s,baz=102,slow=5.8,SNR=4.8						
	0.1nm,0.4s						
ZALV	Zalesovo Beam	80.84	327	P	P	21 30 43.3	+0.3
	0.2nm,0.4s,baz=103,slow=4.6,SNR=2.1						
	0.2nm,0.4s						
ILAR	Eielson Array	83.17	22	P	P	21 30 53.5	-1.5
	0.3nm,0.7s,baz=253,slow=6.1,SNR=2.0						
	0.3nm,0.7s						
NVAR	Mina Array Bea	93.50	52	P	P	21 31 45.1	-0.3
	0.3nm,0.6s,baz=270,slow=7.2,SNR=2.0						
	0.3nm,0.6s						
TORD	Torodi Ar. Bea	149.16	287	PKPbc	PKPbc	21 38 17.3	-1.2
	0.8nm,0.6s,baz=80,slow=3.1,SNR=5.2						

IDC 25 21:19:20.1±1.2,**28˚.17N**×**104˚.93E**,**h0**^{km},**mb3.6**/4, **mbtmp3.5**/5,**ML3.4**/1,**Error ellipse: s-maj=89.4km s-min=20.9km az=63.0,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	19.66	3	P	Pn	21 23 51.8	-0.2
	0.1nm,0.3s,baz=188,slow=11,SNR=4.6						
	0.3nm,0.4s						
MKAR	Makanchi Array	25.70	322	P	P	21 24 52.0	+0.1
	0.4nm,0.5s,baz=120,slow=11,SNR=5.1						
	0.4nm,0.5s						
ZALV	Zalesovo Beam	29.67	336	P	P	21 25 26.5	-0.9
	0.3nm,0.4s,baz=138,slow=9.6,SNR=1.7						
	0.3nm,0.4s						
WRA	Warramunga Arr	55.65	146	P	P	21 28 57.9	-0.3
	0.8nm,0.8s,baz=334,slow=8.5,SNR=6.7						
	0.8nm,0.8s						
ASAR	Alice Springs	58.62	149	P	P	21 29 19.4	+0.2
	0.6nm,0.6s,baz=334,slow=6.7,SNR=8.3						
	0.6nm,0.6s						

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*LDG **25** 21:31:33.6±0.1,42˚.88N×1˚.62W,h2^{km},Md2.8/2,Ml2.7/26, Error ellipse: s-maj=2.1km s-min=1.8km az=91.0*

*STR **25** 21:31:33.8±0.6,43˚N±3˚×˚±˚,h6^{km},MLv2.7/7,Error ellipse: s-maj=0.0km s-min=0.0km az=86.2,preliminary*

*MDD **25** 21:31:34.5±0.2,42˚.90N×1˚.57W,h0^{km},mb_Lg2.6/16, Error ellipse: s-maj=1.6km s-min=1.1km az=160.0*

ISC 25 21:31:33.1±1.0,**42˚.98N**±0˚.02×**1˚.58W**±0˚.02,**h5**^{km}±8^{km},**n68**, σ**1^{s}76**/135,**2C-1D**,**Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EARA	Aranguren	0.20	179	⇑Pg	Pg	21 31 36.0	-1.0
EARA				Sg	Sg	21 31 38.0	-1.8
EARA	Aranguren	0.20	179	⇑Pg	Pg	21 31 36.1	-1.0
EARA				Sg	Sg	21 31 37.9	-1.8
EORO	Oroz-Betelu	0.22	112	Pg	Pg	21 31 37.3	-0.1
EORO				Sg	Sg	21 31 40.4	+0.1
EORO				*i* Vmb_Lg		21 31 41.6	
EALK	Alkurruntz	0.25	13	Pg	Pb	21 31 40.2	+2.2
EALK				Sg	Sb	21 31 45.8	+4.5
EALK				*i* Vmb_Lg		21 31 47.4	
EALK	Alkurruntz	0.25	13	Pg	Pb	21 31 40.2	+2.2
EALK				Sg	Sb	21 31 45.8	+4.5
SJPF	Ste Jean	0.30	62	*e*Pg	Pg	21 31 39.5	+0.7
SJPF				*e*Sg	Sg	21 31 44.5	+1.7
	199nm,0.3s						
OSSF	Osses	0.36	40	⇓Pg	Pb	21 31 41.7	-0.3
OSSF				Sg	Sb	21 31 48.4	+0.3
ATE	Arette	0.66	80	Pg	Pg	21 31 46.3	+0.6
ATE				Sg	Sg	21 31 55.1	+0.9
ETSF	Etsaut	0.76	96	*e*Pg	Pg	21 31 47.4	-0.2
ETSF				*e*Sg	Sb	21 31 58.8	-0.6
	40nm,0.2s						
TERF	Tercis-les-Bai	0.78	26	Pg	Pb	21 31 50.2	+1.1
TERF				Sg	Sb	21 32 01.2	+1.2
CANF	Canfranc	0.81	105	Pg	Pg	21 31 48.7	+0.1
CANF				Sg	Sg	21 31 59.5	+0.3
VIEF	Viey	1.18	94	Pn	Pg	21 31 55.2	-0.5
VIEF				Sn	Sb	21 32 12.6	+0.9
ECHI	Chisagues Biel	1.34	103	Pg	Pg	21 31 58.9	0.0
ECHI				Sg	Sn	21 32 17.2	+0.3
ECHI				*i* Vmb_Lg		21 32 19.5	
ECHI	Chisagues Biel	1.34	103	Pn	Pg	21 31 57.9	-0.9
ECHI				Sn	Sg	21 32 16.3	0.0
ELAN	Lanestosa	1.38	281	Pg	Pn	21 31 59.2	+0.2
ELAN				Sg	Sg	21 32 17.1	-0.3
ELAN				*i* Vmb_Lg		21 32 27.5	
EPF	Esparros	1.41	87	*e*Pn	Pn	21 31 59.7	+0.2
EPF				*e*Sn	Sg	21 32 18.1	-0.3
	51nm,0.4s						
ESAC	San Caprasio	1.50	146	Pn	Pn	21 32 01.0	+0.3
ESAC				Sn	Sb	21 32 20.4	-0.4
MLS	Moulis	1.96	90	Pn	Pn	21 32 06.7	-0.4
MLS				Sn	Sn	21 32 32.1	0.0
SALF	Salau	2.05	95	Pn	Pn	21 32 08.2	-0.1
SALF				Sn	Sn	21 32 34.4	+0.2
LRVF	chteau la Riv	2.17	25	Pn	Pn	21 32 11.1	+1.2
LRVF				Sn	Sn	21 32 39.6	+2.5
ETOR	Torete	2.18	189	Pn	Pn	21 32 10.5	+0.4
ETOR				Pg	Pb	21 32 14.4	+1.3
ETOR				Sg	Sb	21 32 40.3	-0.2
ETOR				*i* Vmb_Lg		21 32 44.9	
PAND	Andorre	2.35	100	Pn	Pn	21 32 12.5	0.0
MONQ	Montcuq	2.45	54	Pn	Pn	21 32 14.3	+0.6
MONQ				Sn	Sn	21 32 44.7	+0.7
ERTA	Horta de San J	2.47	144	Pn	Pn	21 32 14.5	+0.5
ERTA				Sn	Sn	21 32 44.9	+0.3
ERTA				Sg	Sb	21 32 50.1	+1.4
ERTA				*i* Vmb_Lg		21 32 56.8	
EPOB	Poblet	2.56	128	Pn	Pn	21 32 14.7	-0.5
EPOB				Pg	Pb	21 32 20.0	+0.5
EPOB				Sn	Sn	21 32 44.6	-2.1
EPOB				Sg	Sb	21 32 51.0	-0.2
EPOB				*i* Vmb_Lg		21 32 55.2	
LFF	La Frestale	2.58	40	*e*Pn	Pn	21 32 16.7	+1.2
LFF	La Frestale	2.58	40	*e*P	Pn	21 32 17.8	+2.3
LFF				*e*Sn	Sn	21 32 46.4	-0.8
	11nm,0.3s						
EARI	Arriondas	2.67	278	Pn	Pn	21 32 18.2	+1.4
EARI				Sn	Sn	21 32 50.2	+0.6
CARF	Carcanieres	2.73	94	Pn	Pn	21 32 17.3	-0.2
CARF				Sn	Sn	21 32 50.5	-0.5
EMOS	Mosqueruela	2.74	162	Pn	Pn	21 32 17.7	-0.1
EMOS				Sn	Sn	21 32 48.9	-2.5
EMOS				Sg	Sb	21 32 57.1	+0.6
EMOS				*i* Vmb_Lg		21 33 10.2	
MTLF	Montolieu	2.80	81	*e*Pn	Pn	21 32 19.1	+0.5
MTLF				*e*Sn	Sn	21 32 51.4	-1.3
	4.6nm,0.3s						
MTLF	Montolieu	2.80	81	Sn	Sn	21 32 52.1	-0.6
MTLF	Montolieu	2.80	81	Pn	Pn	21 32 18.2	-0.3
GUD	Guadarrama	3.02	220	Pn	Pn	21 32 22.1	+0.4
GUD				Sn	Sn	21 32 58.2	-0.1
RJF	Les Rejaudoux	3.22	43	*e*Pn	Pn	21 32 25.1	+0.8
RJF				*e*Sn	Sn	21 33 01.0	-2.1
	4.7nm,0.1s						
CHIF	Chize	3.27	14	Pn	Pn	21 32 26.3	+1.4
CAF	Calviac	3.28	52	*e*Pn	Pn	21 32 25.3	+0.2
CAF	Calviac	3.28	52	*e*P	Pn	21 32 27.5	+2.4
CAF				*e*Sn	Sn	21 33 03.2	-1.2
	5.2nm,0.1s						
EJON	La Jonquera	3.34	98	Pg	Pb	21 32 34.0	+1.3
EJON				Sn	Sn	21 33 06.8	+0.9
EJON				Sg	Sb	21 33 16.0	+2.4
EJON				*i* Vmb_Lg		21 33 32.5	
ECHE	Chera	3.41	172	Pg	Pb	21 32 36.3	+2.3
ECHE				Sn	Sn	21 33 08.2	+0.4
ECHE				Sg	Sg	21 33 19.6	-3.1
ECHE				*i* Vmb_Lg		21 33 31.0	
EJUZ	Juzbado, Salam	3.72	241	Pn	Pn	21 32 30.9	-0.4
EJUZ				Sn	Sn	21 33 13.7	-1.8
EJUZ				Sg	Sb	21 33 27.1	+2.4
ESDC	Sonseca Array	3.75	209	Sn	Sn	21 33 15.5	-0.7
ESDC				Sg	Sg	21 33 30.4	-3.2
MFF	Saint Martin d	3.77	15	*e*Pn	Pn	21 32 32.0	+0.2
MFF	Saint Martin d	3.77	15	*e*Pg	Pg	21 32 44.5	-0.7
MFF				*e*Sn	Sn	21 33 14.6	-1.9
MFF				*e*Sg	Sg	21 33 32.9	-1.1
	3.1nm,0.3s						
ECAL	Calabor	3.95	257	Pn	Pn	21 32 34.5	+0.1
ECAL				Sn	Sn	21 33 19.7	-1.4
ECAL				Sg	Sb	21 33 35.5	+4.2
ECAL				*i* Vmb_Lg		21 33 43.5	
PAB	San Pablo	4.01	212	Pn	Pn	21 32 34.7	-0.5
PAB				Sn	Sn	21 33 19.7	-3.0
PAB				Sg	Sb	21 33 37.9	+4.8
PAB				*i* Vmb_Lg		21 33 40.7	
EPON	Pontenova	4.09	277	Sn	Sn	21 33 23.4	-1.0
LASF	Ste Croix	4.11	73	*e*Pn	Pn	21 32 36.9	+0.4
LASF	Ste Croix	4.11	73	*e*P	Pn	21 32 39.2	+2.7
LASF				*e*Sn	Sn	21 33 23.1	-1.8
	7.1nm,0.6s						
LBL	Lubilhac	4.15	55	Pn	Pn	21 32 38.2	+1.1
LBL	Lubilhac	4.15	55	Sn	Sn	21 33 25.8	-0.1
TCF	Toulx Ste Croi	4.28	38	*e*Pn	Pn	21 32 39.3	+0.5
TCF				*e*Sn	Sn	21 33 26.4	-2.7
	4.3nm,0.3s						
ETOB	Tobarra	4.33	180	Pn	Pn	21 32 40.3	+0.8
ETOB				Sn	Sn	21 33 28.5	-1.9
BGF	Bois d'Agland	4.77	40	*e*Pn	Pn	21 32 46.1	+0.5
BGF				*e*Sn	Sn	21 33 37.9	-3.3
	8.1nm,0.3s						
VIVF	Saint-Julien-l	4.89	65	*e*Pn	Pn	21 32 47.2	-0.1
VIVF				*e*Sn	Sn	21 33 43.8	-0.5
	3.6nm,0.4s						
QUIF	Quistinic	5.07	348	*e*Pn	Pn	21 32 50.5	+0.9
QUIF				*e*Sn	Sn	21 33 45.7	-2.7
	2.0nm,0.3s						
AVF	Avril sur Loir	5.18	41	*e*Pn	Pn	21 32 51.4	+0.2
AVF				*e*Sn	Sn	21 33 47.9	-3.4
	0.9nm,0.2s						
HYF	Humbligny	5.23	33	*e*P	Pn	21 32 55.5	+3.6
HYF				*e*Sn	Sn	21 33 49.9	-2.6
SGMF	Saint Gilles	5.32	353	*e*Pn	Pn	21 32 54.5	+1.4
SGMF				*e*Sn	Sn	21 33 52.5	-2.3
	1.4nm,0.3s						
SMF	Signal de Mont	5.32	45	*e*Pn	Pn	21 32 53.3	+0.1
SMF				*e*Sn	Sn	21 33 50.8	-4.1
	1.7nm,0.3s						
GRR	Gorron	5.44	5	*e*Pn	Pn	21 32 55.4	+0.7
GRR				*e*Sn	Sn	21 33 54.4	-3.2
GRR				*e*Sg	Sg	21 34 25.1	-2.5
	1.8nm,0.3s						
SSF	Saint Saulge	5.45	40	*e*Pn	Pn	21 32 55.3	+0.4
SSF				*e*Sn	Sn	21 33 55.2	-2.7
	1.5nm,0.3s						
ROSF	Rostrenen	5.49	348	*e*Pn	Pn	21 32 56.5	+1.1
ROSF				*e*Sn	Sn	21 33 56.6	-2.3
	2.1nm,0.3s						
LDF	La Druitiere	5.71	10	*e*Pn	Pn	21 32 59.4	+0.9
LDF				*e*Sn	Sn	21 34 01.1	-3.2
	1.1nm,0.3s						
ORIF	Oris-en-Rattie	5.73	68	*e*P	Pn	21 33 02.4	+3.6
LOR	Lormes	5.76	40	*e*Pn	Pn	21 32 59.8	+0.6
	baz=222						
LOR				*e*Sn	Sn	21 34 02.1	-3.6
	0.6nm,0.2s						
LOR				*e*Sg	Sg	21 34 35.4	-2.7
	2.2nm,0.5s						
FLN	La Foliniere	5.84	7	*e*Pn	Pn	21 33 00.8	+0.6
FLN				*e*Sn	Sn	21 34 04.5	-3.0
	1.3nm,0.3s						
CABF	La Chapelle	6.56	54	*e*P	Pn	21 33 15.7	+5.5

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*IDC **25** 21:50:18.9±1.1,27˚.83S×66˚.92W,h142^{km}±13^{km},mb3.3/1, mbtmp3.8/6,Error ellipse: s-maj=23.7km s-min=10.6km az=96.0*

*SJA **25** 21:50:19.6±0.7,27˚.92S×67˚.06W,h173^{km}±3^{km},ML3.6, MW3.5,Hypocentre not reviewed by the ISC*

*NEIC **25** 21:50:21.0±2.3,27˚.91S±0˚.07×67˚.10W±0˚.07, h174^{km}±13^{km},mb4.0/4,Error ellipse: s-maj=10.9km s-min=9.7km az=166.0*

ISC 25 21:50:19.9±0.6,**27˚.85S**±0˚.05×**67˚.00W**±0˚.07,**h164**^{km},**n57**, σ**1^{s}22**/61,**mb4.1**/3,**Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TINO	Tinogasta	0.55	247	*i* P		21 50 44.2	
TINO				*i* S		21 51 02.0	
CYA	Choya	1.21	119	*i* P		21 50 48.5	
CYA				*i* S		21 51 11.1	
CYA				IAML		21 51 11.8	
	comp=Z,77nm,0.4s						
ACLC	CERRO LA CRUZ	1.57	179	*i* P		21 50 51.7	

ACLC				*i* S		21 51 15.4	
ACLC				IAML		21 51 17.4	
	comp=Z,370nm,0.8s						
AC02	**Maricunga**	**2.15**	**298**	Pn	**Pn**	**21 51 00.6**	**+2.5**
GO03	**Copiap**	**2.88**	**274**		**Pn**	**21 51 07.9**	**+1.5**
GO03				Sn	**Sn**	**21 51 42.6**	**+0.1**
GO03	**Copiap**	**2.88**	**274**	*i* P		21 51 06.7	
AC06	**Mina Casimiro**	**3.02**	**279**		**Pn**	**21 51 09.2**	**+1.1**
AC06				Sn	**Sn**	**21 51 44.8**	**-0.7**
AC05	**El Transito**	**3.05**	**250**		**Pn**	**21 51 10.4**	**+1.8**
AC05	**El Transito**	**3.05**	**250**	*i* P		21 51 08.9	
AC05				IAML		21 51 48.9	
	comp=Z,224nm,0.2s						
CO01	**Juntas del Tor**	**3.44**	**231**		**Pn**	**21 51 15.9**	**+2.3**
CO01	**Juntas del Tor**	**3.44**	**231**	*i* P		21 51 13.5	
CO01				IAML		21 52 03.7	
	comp=Z,27nm,0.7s						
LCO	**Las Campanas**	**3.46**	**250**		**Pn**	**21 51 14.8**	**+1.0**
LCO	**Las Campanas**	**3.46**	**250**	*i* P		21 51 13.9	
LCO				IAML		21 51 56.6	
	comp=Z,1µm,0.4s						
GO02	**Mina Guanaco**	**3.54**	**318**		**Pn**	**21 51 17.4**	**+2.4**
GO02	**Mina Guanaco**	**3.54**	**318**	*i* P		21 51 16.2	
AC04	**Llanos de Chal**	**3.62**	**263**		**Pn**	**21 51 16.0**	**+0.4**
AC04	**Llanos de Chal**	**3.62**	**263**	*i* P		21 51 15.0	
AC04				IAML		21 51 59.6	
	comp=Z,54nm,0.3s						
AC01	**Pan de Azucar**	**3.63**	**297**		**Pn**	**21 51 17.2**	**+1.4**
AC01	**Pan de Azucar**	**3.63**	**297**	*i* P		21 51 16.9	
AC01				IAML		21 52 06.2	
	comp=Z,35nm,0.3s						
CFA	**Coronel Fontan**	**3.90**	**196**	P	**Pn**	**21 51 19.8**	**+0.6**
	comp=Z,46nm,0.2s,baz=21,slow=14,SNR=707						
CFA				S	**Sn**	**21 52 03.7**	**-1.8**
	comp=Z,97nm,0.3s,baz=41,slow=18,SNR=11						
CFA	**Coronel Fontan**	**3.90**	**196**	*i* P		21 51 19.0	
CFA				IAML		21 52 06.6	
	comp=Z,107nm,0.2s						
ZON	**Zonda**	**3.96**	**201**	Pn	**Pn**	**21 51 20.6**	**+0.5**
ZON	**Zonda**	**3.96**	**201**	*i* P		21 51 20.0	
ZON				IAML		21 52 07.7	
	comp=Z,57nm,0.3s						
GO04	**Tololo Observa**	**4.06**	**234**		**Pn**	**21 51 22.1**	**+0.7**
GO04	**Tololo Observa**	**4.06**	**234**	*i* P		21 51 21.0	
CO05	**La Serena**	**4.25**	**240**		**Pn**	**21 51 23.5**	**-0.3**
CO03	**El Pedregal**	**4.39**	**226**		**Pn**	**21 51 26.1**	**+0.5**
CO03	**El Pedregal**	**4.39**	**226**	*i* P		21 51 25.7	
CO03				IAML		21 52 21.1	
	comp=Z,40nm,0.2s						
RTLS	**Leoncito**	**4.41**	**206**	*i* P		21 51 26.4	
RTLS				IAML		21 52 22.6	
	comp=Z,94nm,0.3s						
CO02	**Combarbal**	**4.83**	**225**		**Pn**	**21 51 31.1**	**-0.3**
CO02	**Combarbal**	**4.83**	**225**	*i* P		21 51 31.0	
CO02				IAML		21 52 33.1	
	comp=Z,42nm,0.5s						
CO06	**Fray Jorge**	**4.93**	**234**	Pn	**Pn**	**21 51 31.6**	**-1.1**
ASAL	**Salagasta**	**4.99**	**198**	*i* P		21 51 33.0	
ASAL				IAML		21 52 32.8	
	comp=Z,25nm,0.7s						
PB15	**IPOC Station P**	**5.13**	**334**	Pn	**Pn**	**21 51 37.4**	**+1.8**
PB15	**IPOC Station P**	**5.13**	**334**	*i* P		21 51 36.5	
PB15				IAML		21 52 45.2	
	comp=Z,30nm,0.3s						
PB10	**IPOC Station P**	**5.38**	**323**	Pn	**Pn**	**21 51 39.3**	**+0.7**
AAGR	**Agrelo**	**5.45**	**196**	*i* P		21 51 39.0	
AAGR				IAML		21 52 44.4	
	comp=Z,33nm,0.7s						
LVC	**Limon Verde**	**5.50**	**341**	P	**Pn**	**21 51 40.3**	**-0.1**
	comp=Z,2.0nm,0.3s,baz=168,slow=9.3,SNR=2.5						
LVC				S	**Sn**	**21 52 40.7**	**-2.9**
	comp=Z,5.3nm,0.5s,baz=309,slow=22,SNR=12						
LVC	**Limon Verde**	**5.50**	**341**	Pn	**Pn**	**21 51 42.1**	**+1.6**
VA03	**San Esteban**	**5.78**	**211**		**Pn**	**21 51 44.6**	**+0.7**
VA06	**Catapilco**	**5.99**	**217**		**Pn**	**21 51 45.4**	**-1.2**
MT08	**Bocatoma Ro**	**6.15**	**204**		**Pn**	**21 51 50.2**	**+1.2**
PEL	**Peldehue**	**6.16**	**210**	Pn	**Pn**	**21 51 49.0**	**+0.1**
ROC1	**El Roble**	**6.18**	**213**		**Pn**	**21 51 48.5**	**-0.8**
PB03	**IPOC Station P**	**6.29**	**336**		**Pn**	**21 51 51.3**	**+0.4**
MT03	**Universidad Ad**	**6.39**	**207**		**Pn**	**21 51 52.4**	**+0.5**
MT05	**Renca**	**6.39**	**209**	Pn	**Pn**	**21 51 51.7**	**-0.2**
MT02	**Curacav**	**6.47**	**212**		**Pn**	**21 51 52.4**	**-0.5**
MT13	**San Alfonso**	**6.52**	**205**		**Pn**	**21 51 54.7**	**+1.0**
LMEL	**Las Melosas**	**6.58**	**204**		**Pn**	**21 51 55.0**	**+0.5**
PB07	**IPOC Station P**	**6.64**	**336**	Pn	**Pn**	**21 51 54.7**	**-0.7**
MT09	**Talagante**	**6.83**	**209**		**Pn**	**21 51 57.1**	**-0.7**
PB02	**IPOC Station P**	**7.02**	**337**	Pn	**Pn**	**21 52 00.7**	**+0.3**
VA05	**Santo Domingo**	**7.02**	**213**	Pn	**Pn**	**21 51 59.1**	**-1.1**
MT01	**Popeta**	**7.02**	**210**		**Pn**	**21 51 58.3**	**-1.9**
PB01	**IPOC Station P**	**7.15**	**341**	Pn	**Pn**	**21 52 01.9**	**-0.1**
BO02	**Sierra Bellavi**	**7.64**	**204**		**Pn**	**21 52 07.5**	**-1.0**
PB08	**IPOC Station P**	**7.92**	**345**	Pn	**Pn**	**21 52 13.8**	**+1.1**
GO05	**Huala**	**8.29**	**209**	Pn	**Pn**	**21 52 15.2**	**-1.8**
ML02	**Panimavida**	**8.74**	**204**	Pn	**Pn**	**21 52 21.0**	**-2.0**
CPUP	**Villa Florida**	**8.75**	**82**	P	**Pn**	**21 52 21.6**	**-1.6**
	comp=Z,0.7nm,0.4s,baz=248,slow=9.8,SNR=2.9						
LPAZ	**La Paz**	**11.55**	**355**	P	**Pn**	**21 53 01.7**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=217,slow=5.1,SNR=3.5						
GO06	**Curarrehue**	**12.28**	**196**	Pn	**Pn**	**21 53 07.8**	**-1.6**
AQDB	**Aquidauana**	**12.65**	**57**		**P**	**21 53 19.0**	**-0.1**
SIV	**San Ignacio**	**13.01**	**26**	P	**Pn**	**21 53 18.5**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=216,slow=14,SNR=7.4						
ITAB	**Concordia**	**13.21**	**91**		**P**	**21 53 25.4**	**+0.2**
LL04	**Puerto Octay**	**13.77**	**197**	Pn	**Pn**	**21 53 26.1**	**-2.1**
SAML	**Samuel**	**19.14**	**12**	P	**P**	**21 54 31.3**	**+0.6**
BDFB	**Brasilia**	**21.38**	**59**	P	**P**	**21 54 54.2**	**-0.5**
	comp=Z,1.3nm,0.4s,baz=225,slow=1.4,SNR=3.9						
	comp=Z,1.3nm,0.4s						
BDFB	**Brasilia**	**21.38**	**59**	P	**P**	**21 54 54.4**	**-0.4**
BDFB				IAmb	IAmb	21 55 10.3	
	comp=Z,4.4nm,1.1s						
BOAV	**Boa Vista**	**30.71**	**13**	P	**P**	**21 56 20.0**	**+0.5**
QSPA	**South Pole Qui**	**62.37**	**180**	P	**P**	**22 00 26.7**	**+1.8**
QSPA				IAmb	IAmb	22 00 27.9	
	comp=Z,2.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**77.97**	**68**	P	**P**	**22 02 00.7**	**+0.4**
	comp=Z,40nm,0.3s,baz=262,slow=5.4,SNR=4.2						
ASAR	**Alice Springs**	**124.96**	**204**	PKP	**PKiKP**	**22 09 02.5**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=135,slow=1.7,SNR=6.8						
WRA	**Warramunga Arr**	**128.20**	**206**	PKP	**PKiKP**	**22 09 08.9**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=154,slow=2.1,SNR=17						
MKAR	**Makanchi Array**	**149.40**	**44**	PKPbc	**PKiKP**	**22 09 51.4**	**+1.0**
	comp=Z,1.3nm,1.2s,baz=320,slow=2.3,SNR=3.9						

ROM 25 21:57:06.3±0.1**, 37°.768N**±0°.004×**15°.100E**±0°.008**, h10^{km}, ML1.8**/20**, 3C-2D, Error ellipse: s-maj=0.6km s-min=0.3km az=282.0, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESLN	**Serra La Nave**	**0.12**	**233**	⇑P	Pg	21 57 09.3	-0.1
ESLN				S	Sg	21 57 11.5	0.0
ESLN				AML	AML		
	comp=E,1496µm,0.6s						
ESLN				AML	AML		
	comp=N,1024µm,0.9s						
EMSG	**Monte Spagnolo**	**0.13**	**294**	⇓P	Pg	21 57 09.7	+0.2
EMSG				S	Sg	21 57 12.4	+0.8
EMSG				AML	AML		
	comp=E,1910µm,0.2s						
EMSG				AML	AML		
	comp=N,2190µm,0.3s						
EMSG				AML	AML		
	comp=E,1910µm,1.8s						
EPZF	**Pizzo Felice**	**0.20**	**286**	⇑P	Pg	21 57 10.8	+0.3
EPZF				S	Sg	21 57 15.1	+1.6
EPZF				AML	AML		
	comp=N,1455µm,0.3s						
EPZF				AML	AML		
	comp=E,1096µm,0.6s						
AIO	**Antillo**	**0.23**	**27**	P	Pg	21 57 11.8	+0.7
AIO				S	Sg	21 57 16.1	+1.8
AIO				AML	AML		
	comp=N,263µm,1.3s						
AIO				AML	AML		
	comp=N,263µm,0.7s						
AIO				AML	AML		
	comp=E,314µm,1.1s						
ESML	**S. M. di Licod**	**0.23**	**230**	P	Pg	21 57 11.7	+0.6
ESML				S	Sg	21 57 16.8	+2.5
ESML				AML	AML		
	comp=N,257µm,0.7s						
ESML				AML	AML		
	comp=E,320µm,2.1s						
EPOZ	**Pozzillo**	**0.25**	**183**	⇓P	Pg	21 57 10.6	-0.9
EPOZ				AML	AML		
	comp=N,1615µm,1.1s						
EPOZ				AML	AML		
	comp=N,1615µm,0.9s						
EPOZ				AML	AML		
	comp=E,1555µm,0.6s						
NOV	**Novara**	**0.26**	**6**	P	Pg	21 57 12.4	+0.7
NOV				S	Sb	21 57 17.0	-0.9
NOV				AML	AML		
	comp=E,575µm,0.7s						
NOV				AML	AML		
	comp=N,342µm,0.7s						
NOV				AML	AML		
	comp=N,342µm,1.3s						
MUCR	**Ucria**	**0.33**	**327**	P	Pg	21 57 13.2	+0.3
MUCR				S	Sb	21 57 18.8	-1.0
MUCR				AML	AML		
	comp=E,91µm,0.5s						
MUCR				AML	AML		
	comp=E,87µm,0.4s						
MUCR				AML	AML		
	comp=N,100µm,0.7s						
MUCR				AML	AML		
	comp=N,172µm,0.5s						
MNO	**Monte Soro**	**0.36**	**297**	P	Pg	21 57 14.0	+0.4
MNO				S	Sb	21 57 20.3	-0.5
MNO				AML	AML		
	comp=E,310µm,0.4s						
MNO				AML	AML		
	comp=N,296µm,1.5s						
GALF	**Gagliano Caste**	**0.43**	**262**	⇑P	Pb	21 57 15.7	-0.3
GALF				S	Sb	21 57 22.3	-0.3
GALF				AML	AML		
	comp=E,228µm,0.8s						
GALF				AML	AML		
	comp=N,227µm,0.6s						
HLNI	**Lentini**	**0.46**	**203**	P	Pg	21 57 15.2	0.0
HLNI				S	Sb	21 57 22.3	-1.0
HLNI				AML	AML		
	comp=E,43µm,2.2s						
HLNI				AML	AML		
	comp=N,38µm,1.7s						
MSFR	**San Fratello**	**0.48**	**303**	P	Pg	21 57 16.3	+0.5
HAGA	**Augusta**	**0.48**	**175**	P	Pg	21 57 16.1	+0.3
HAGA				S	Sb	21 57 23.7	-0.4
HAGA				AML	AML		
	comp=N,56µm,1.7s						
HAGA				AML	AML		
	comp=E,79µm,0.7s						
CAGR	**Agira**	**0.50**	**253**	AML	AML		
	comp=E,184µm,0.7s						
CAGR				AML	AML		
	comp=N,173µm,1.6s						
AGST	**Augusta-Monte**	**0.52**	**169**	P	Pb	21 57 17.2	-0.3
AGST				S	Sb	21 57 24.8	-0.4
AGST				AML	AML		
	comp=E,157µm,1.3s						
AGST				AML	AML		
	comp=N,189µm,1.0s						
MTTG	**Motta San Giov**	**0.53**	**63**	P	Pg	21 57 16.7	+0.1
MSRU	**Castanea**	**0.59**	**33**	P	Pg	21 57 17.2	-0.6
RAFF	**Raffo Rosso**	**0.80**	**227**	P	Pg	21 57 21.6	-0.1

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*ROM **25** 21:57:47.0±0.1, 41°.509N±0°.004×14°.993E±0°.005, h20^{km}, ML3.4/263, Mw3.5, Error ellipse: s-maj=0.4km s-min=0.1km az=208.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.66; $M_{\theta\theta}$0.05; $M_{\phi\phi}$1.61; $M_{r\theta}$-0.74; $M_{\theta\phi}$-1.61; $M_{\phi r}$-0.77; Fault plane solution: $M_0$2.52408×10^{14} NP1:ϕ_s118.00000°, δ52.00000°, λ-137.00000°. NP2:ϕ_s358.00000°, δ58.00000°, λ-47.00000°.*

*PDG **25** 21:57:47.1±0.6, 41°.51N×14°.99E, h18^{km}, ML3.6/12 Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*

*IDC **25** 21:57:48.5±4.9, 41°.94N×15°.31E, h0^{km}, mb3.4/2, mbtmp3.4/3, ML3.8/1, MS3.1/3, Error ellipse: s-maj=92.9km s-min=23.3km az=58.0*

*LDG **25** 21:57:48.1, 41°.42N×14°.95E, h29^{km}*

*PRU **25** 21:57:48.9±0.0, 41°.63N×15°.44E, h10^{km}*

*BEO **25** 21:57:51.5±0.6, 41°.53N×15°.24E, h29^{km}±5^{km}, ML3.5/15*

ISC 25 21:57:47.0±0.8**, 41°.52N**±0°.02×**14°.96E**±0°.02**, h26**^{km}±4^{km}**, n221,** σ2^{s}**10**/285**, 29C-8D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GATE	**Gambatesa**	**0.04**	**259**	⇓P	**Pb**	**21 57 51.1**	**-0.3**
GATE				S	**Sb**	**21 57 54.5**	**0.0**
GATE				AML	AML		
	comp=E,91300µm,0.3s						
GATE				AML	AML		
	comp=N,51400µm,0.7s						
GATE				AML	AML		
	comp=N,54150µm,0.7s						
GATE				AML	AML		
	comp=E,91300µm,0.3s						
GATE				AML	AML		
	comp=N,47350µm,0.3s						
GATE				AML	AML		
	comp=E,91400µm,0.3s						
GATE				AML	AML		
	comp=N,50950µm,0.3s						
CIGN	**Sant'Elia a Pi**	**0.14**	**342**	⇑P	**Pb**	**21 57 51.9**	**-0.2**
CIGN				S	**Sb**	**21 57 56.0**	**+0.4**
CIGN				AML	AML		
	comp=E,9585µm,0.6s						
CIGN				AML	AML		
	comp=E,5985µm,0.3s						
CIGN				AML	AML		
	comp=E,5985µm,1.7s						
CIGN				AML	AML		
	comp=N,10450µm,0.4s						
MOCO	**Biccari - m.te**	**0.21**	**136**	⇓P	**Pb**	**21 57 52.4**	**-0.6**
MOCO				S	**Sb**	**21 57 56.5**	**-0.5**
MOCO				AML	AML		
	comp=N,5065µm,0.9s						
MOCO				AML	AML		
	comp=E,14650µm,0.7s						
MOCO				AML	AML		
	comp=E,14300µm,0.7s						
MOCO				AML	AML		
	comp=N,5070µm,0.9s						
MOCO				AML	AML		
	comp=N,5185µm,0.9s						
MELA	**Melanico ??? S**	**0.22**	**33**	⇑P	**Pb**	**21 57 52.5**	**-0.5**
MELA				S	**Sb**	**21 57 57.1**	**0.0**
MELA				AML	AML		
	comp=E,58900µm,0.4s						
MELA				AML	AML		
	comp=N,41500µm,0.4s						
MELA				AML	AML		
	comp=E,56600µm,0.4s						
MELA				AML	AML		
	comp=N,43000µm,0.4s						
SACR	**S. Croce Del S**	**0.23**	**238**	⇑P	**Pb**	**21 57 52.8**	**-0.4**
SACR				S	**Sb**	**21 57 57.3**	**-0.1**
SACR				AML	AML		
	comp=E,14150µm,0.6s						
SACR				AML	AML		
	comp=N,11700µm,0.7s						
SACR				AML	AML		
	comp=E,15300µm,0.6s						
SACR				AML	AML		
	comp=N,11100µm,0.7s						
SACR				AML	AML		
	comp=E,14150µm,1.4s						
SACR				AML	AML		
	comp=N,11100µm,1.3s						
SACR				AML	AML		
	comp=N,11700µm,1.3s						
SACR				AML	AML		
	comp=E,15300µm,1.4s						
BSSO	**Busso**	**0.28**	**275**	⇑P	**Pb**	**21 57 53.8**	**-0.1**
BSSO				S	**Sb**	**21 57 59.6**	**+1.1**
BSSO				AML	AML		
	comp=E,4610µm,0.3s						
BSSO				AML	AML		
	comp=N,9645µm,0.8s						
BSSO				AML	AML		
	comp=N,3740µm,0.8s						
BSSO				AML	AML		
	comp=E,11250µm,0.4s						
BSSO				AML	AML		
	comp=E,4610µm,1.7s						
BSSO				AML	AML		
	comp=N,3740µm,1.2s						
BSSO				AML	AML		
	comp=N,9645µm,1.2s						
PSB1	**Pescosannita**	**0.32**	**201**	⇑P	**Pb**	**21 57 53.8**	**-0.6**
PSB1				S	**Sb**	**21 57 59.3**	**-0.1**
PSB1				AML	AML		
	comp=E,17250µm,0.3s						
PSB1				AML	AML		
	comp=N,9425µm,0.3s						
PSB1				AML	AML		
	comp=E,17550µm,0.3s						
PSB1				AML	AML		
	comp=N,9420µm,0.3s						
PSB1				AML	AML		
	comp=N,9790µm,0.3s						
BIOG	**Biogem**	**0.34**	**158**	P	**Pb**	**21 57 55.0**	**+0.2**
BIOG				AML	AML		
	comp=E,6870µm,0.5s						
BIOG				AML	AML		
	comp=N,7550µm,1.6s						
BIOG				AML	AML		
	comp=N,8055µm,0.5s						
BIOG				AML	AML		
	comp=E,6865µm,0.4s						
BIOG				AML	AML		
	comp=N,7550µm,1.6s						
BIOG				AML	AML		
	comp=E,7060µm,0.6s						
BIOG				AML	AML		
	comp=N,7395µm,1.2s						
BIOG				AML	AML		
	comp=N,6685µm,1.5s						
BIOG				AML	AML		
	comp=N,6685µm,0.5s						
BIOG				AML	AML		
	comp=E,7060µm,1.4s						
BIOG				AML	AML		
	comp=N,5330µm,0.5s						
BIOG				AML	AML		
	comp=E,6870µm,0.4s						
PTRJ	**Pietraroja**	**0.36**	**245**	⇑P	**Pb**	**21 57 54.4**	**-0.7**
PTRJ				S	**Sb**	**21 58 00.9**	**+0.3**
PTRJ				AML	AML		
	comp=N,6315µm,1.1s						
PTRJ				AML	AML		
	comp=E,9220µm,1.0s						
PTRJ				AML	AML		
	comp=E,9550µm,1.0s						
PTRJ				AML	AML		
	comp=N,6535µm,1.1s						
PTRJ				AML	AML		
	comp=N,6315µm,0.9s						
PTRJ				AML	AML		
	comp=E,9550µm,1.0s						
PTRJ				AML	AML		
	comp=E,9220µm,1.0s						
PTRJ				AML	AML		
	comp=N,6535µm,0.9s						
MRB1	**Monte Rocchett**	**0.39**	**179**	⇑P	**Pb**	**21 57 55.1**	**-0.4**
MRB1				S	**Sb**	**21 58 00.7**	**-0.6**
MRB1				AML	AML		
	comp=E,10655µm,1.2s						
MRB1				AML	AML		
	comp=N,8295µm,0.5s						
MRB1				AML	AML		
	comp=E,10770µm,1.2s						
MRB1				AML	AML		
	comp=E,10650µm,1.2s						
MRB1				AML	AML		
	comp=N,8615µm,0.5s						
MRB1				AML	AML		
	comp=N,8295µm,1.5s						
MRB1				AML	AML		
	comp=E,10650µm,0.8s						
MRB1				AML	AML		
	comp=E,10770µm,0.8s						
MRB1				AML	AML		
	comp=N,8615µm,1.5s						
TRIV	**Trivento**	**0.40**	**309**	⇑P	**Pb**	**21 57 55.8**	**+0.3**
TRIV				AML	AML		
	comp=N,2380µm,1.1s						
TRIV				AML	AML		
	comp=E,2930µm,0.4s						
TRIV				AML	AML		
	comp=E,2730µm,0.3s						
TRIV				AML	AML		
	comp=N,2570µm,1.1s						
TRIV				AML	AML		
	comp=N,2380µm,0.9s						
TRIV				AML	AML		
	comp=N,2570µm,0.9s						
VITU	**Vitulano (BN)**	**0.42**	**217**	P	**Pb**	**21 57 55.2**	**-0.7**
VITU				S	**Sb**	**21 58 02.4**	**+0.3**
VITU				AML	AML		
	comp=E,9900µm,0.3s						
VITU				AML	AML		
	comp=N,12950µm,0.5s						
VITU				AML	AML		
	comp=N,12600µm,0.5s						
VITU				AML	AML		
	comp=E,3680µm,0.4s						
SGG	**Gregorio Mates**	**0.46**	**253**	⇑P	**Pb**	**21 57 56.1**	**-0.5**
SGG				S	**Sb**	**21 58 03.9**	**+0.8**
SGG				AML	AML		
	comp=E,20nm,0.5s						
SGG				AML	AML		
	comp=E,6540µm,0.5s						
SGG				AML	AML		
	comp=N,23nm,0.4s						
SGG				AML	AML		
	comp=N,7450µm,0.4s						
SGG				AML	AML		
	comp=N,23nm,1.6s						
SGG				AML	AML		
	comp=N,7450µm,1.6s						
SGTA	**Sant Agata di**	**0.49**	**142**	⇓P	**Pb**	**21 57 56.4**	**-0.8**
SGTA				S	**Sb**	**21 58 03.6**	**-0.4**
SGTA				AML	AML		
	comp=E,2730µm,1.0s						
SGTA				AML	AML		
	comp=E,2730µm,1.0s						
SGTA				AML	AML		
	comp=N,4015µm,0.3s						
SGTA				AML	AML		
	comp=E,2740µm,1.0s						
SGTA				AML	AML		
	comp=E,2730µm,1.0s						
SGTA				AML	AML		
	comp=N,4100µm,0.3s						
SGTA				AML	AML		
	comp=E,2740µm,1.0s						
APRC	**Apricena**	**0.49**	**61**	P	**Pb**	**21 57 56.0**	**-1.1**
APRC				S	**Sb**	**21 58 03.5**	**-0.6**
FRES	**Fresagrandinar**	**0.50**	**334**	P	**Pb**	**21 57 57.3**	**0.0**
FRES				S	**Sb**	**21 58 04.8**	**+0.5**
FRES				AML	AML		
	comp=E,1780µm,1.1s						
FRES				AML	AML		
	comp=N,1050µm,0.9s						
FRES				AML	AML		
	comp=E,1780µm,0.9s						
FRES				AML	AML		
	comp=N,1050µm,1.1s						
CAFE	**Carife**	**0.53**	**157**	P	**Pb**	**21 57 57.1**	**-0.8**
CAFE				S	**Sb**	**21 58 04.2**	**-1.0**
CAFE				AML	AML		
	comp=E,3600µm,0.2s						
CAFE				AML	AML		
	comp=N,2505µm,0.8s						
CAFE				AML	AML		
	comp=E,3755µm,0.2s						
CAFE				AML	AML		
	comp=N,2650µm,0.8s						
CAFE				AML	AML		
	comp=N,2505µm,0.8s						
CAFE				AML	AML		
	comp=E,3595µm,0.2s						
CAFE				AML	AML		
	comp=N,2505µm,1.2s						
CAFE				AML	AML		
	comp=N,2650µm,1.2s						
MIDA	**Miranda**	**0.55**	**283**	⇑P	**Pb**	**21 57 57.6**	**-0.5**
MIDA				S	**Sb**	**21 58 06.4**	**+0.8**
MIDA				AML	AML		
	comp=N,3150µm,0.5s						

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MIDA                             AML   AML
      comp=E,3570µm,0.7s
MIDA                             AML   AML
      comp=E,3590µm,0.5s
MIDA                             AML   AML
      comp=N,3155µm,0.5s
MIDA                             AML   AML
      comp=E,3570µm,1.3s
MIDA                             AML   AML
      comp=N,3220µm,0.4s
VAGA  Valle Agricola  0.56 259 ⇑P      Pb    21 57 57.7 -0.5
VAGA                             S     Sb    21 58 07.0 +1.1
VAGA                             AML   AML
      comp=E,5715µm,0.5s
VAGA                             AML   AML
      comp=N,10385µm,0.3s
VAGA                             AML   AML
      comp=E,5710µm,0.5s
VAGA                             AML   AML
      comp=E,5890µm,0.5s
VAGA                             AML   AML
      comp=N,10700µm,0.4s
PAOL  Paolisi         0.57 212 ⇑P      Pb    21 57 57.6 -0.9
PAOL                             AML   AML
      comp=E,5720µm,0.5s
PAOL                             AML   AML
      comp=E,5945µm,0.5s
PAOL                             AML   AML
      comp=N,8365µm,0.5s
PAOL                             AML   AML
      comp=N,8055µm,0.5s
SNAL  S. Angelo Dei   0.62 163   P     Pb    21 57 58.1 -1.2
SNAL                             S     Sb    21 58 07.0 -0.7
SNAL                             AML   AML
      comp=N,2330µm,1.3s
SNAL                             AML   AML
      comp=E,2185µm,1.1s
SNAL                             AML   AML
      comp=N,2470µm,1.3s
SNAL                             AML   AML
      comp=E,2100µm,1.1s
SNAL                             AML   AML
      comp=N,2330µm,0.7s
SNAL                             AML   AML
      comp=N,2470µm,0.7s
SGRT  San Giovanni R  0.63  68   P     Pb    21 57 58.6 -0.8
SGRT                             S     Sb    21 58 07.9  0.0
SGRT                             AML   AML
      comp=N,13300µm,0.3s
SGRT                             AML   AML
      comp=E,22400µm,0.7s
SGRT                             AML   AML
      comp=N,13300µm,1.7s
RNI2  Rionero Sannit  0.64 287 ⇑P      Pb    21 57 59.2 -0.4
RNI2                             AML   AML
      comp=E,4730µm,0.5s
RNI2                             AML   AML
      comp=E,4575µm,0.5s
RNI2                             AML   AML
      comp=N,3990µm,0.4s
RNI2                             AML   AML
      comp=E,4730µm,1.5s
RNI2                             AML   AML
      comp=N,4120µm,0.4s
RNI2                             AML   AML
      comp=E,4575µm,1.5s
PIGN  Pignataro Magg  0.67 242 ⇑P      Pb    21 57 59.5 -0.5
PIGN                             AML   AML
      comp=E,3260µm,0.5s
PIGN                             AML   AML
      comp=E,3285µm,0.5s
PIGN                             AML   AML
      comp=N,3275µm,0.5s
PIGN                             AML   AML
      comp=N,3155µm,0.5s
CERA  Filignano       0.71 276   P     Pb    21 58 00.2 -0.6
CERA                             AML   AML
      comp=N,7050µm,0.9s
CERA                             AML   AML
      comp=E,5405µm,1.1s
CERA                             AML   AML
      comp=E,5265µm,1.1s
CERA                             AML   AML
      comp=N,7255µm,0.9s
CERA                             AML   AML
      comp=E,5405µm,0.9s
CERA                             AML   AML
      comp=E,5265µm,0.9s
CERA                             AML   AML
      comp=N,7255µm,1.1s
CERA                             AML   AML
      comp=N,7050µm,1.1s
TREM  Isole Tremiti   0.73  34   P     Pb    21 58 00.8 -0.3
TREM                             AML   AML
      comp=E,13800µm,1.3s
TREM                             AML   AML
      comp=E,13800µm,0.7s
TREM                             AML   AML
      comp=N,53500µm,0.4s
MSAG  Monte S. Angel  0.73  75   P     Pb    21 58 00.5 -0.7
MSAG                             AML   AML
      comp=N,32550µm,0.8s
MSAG                             AML   AML
      comp=N,33300µm,0.8s
MSAG                             AML   AML
      comp=E,19700µm,0.5s
MSAG                             AML   AML
      comp=E,21000µm,0.6s
CAPA  Cerignola FG    0.74 119   P     Pb    21 57 59.6 -1.6
CAPA                             S     Sb    21 58 10.0 -0.9
CAPA                             AML   AML
      comp=E,4825µm,1.0s
CAPA                             AML   AML
      comp=N,6955µm,0.8s
CAPA                             AML   AML
      comp=E,4825µm,1.0s
VULT  Monte Vulture   0.75 139   P     Pb    21 58 00.6 -0.9
VULT                             AML   AML
      comp=E,5470µm,0.7s
VULT                             AML   AML
      comp=N,6485µm,0.4s
VULT                             AML   AML
      comp=E,5650µm,0.7s
VULT                             AML   AML
      comp=N,6485µm,0.4s
VULT                             AML   AML
      comp=N,6790µm,0.4s
VULT                             AML   AML
      comp=N,6485µm,1.6s
VULT                             AML   AML
      comp=N,6790µm,1.6s
MCRV  Calabritti - M  0.75 168   P     Pb    21 58 00.5 -1.1
MCRV                             AML   AML
      comp=E,2875µm,0.5s
MCRV                             AML   AML
      comp=N,3145µm,1.1s
MCRV                             AML   AML
      comp=E,2875µm,1.5s
MCRV                             AML   AML
      comp=N,3145µm,0.9s
LPEL  Lama dei Pelig  0.79 312   P     Pb    21 58 01.8 -0.2
LPEL                             AML   AML
      comp=E,2900µm,0.3s
LPEL                             AML   AML
      comp=N,3210µm,0.2s
VVDG  Vesuvio Valle   0.80 211   P     Pn    21 58 02.1 -0.5
VVDG                             AML   AML
VVDG                             AML   AML
VVDG                             AML   AML
VBKN  Vesuvio Bunker  0.80 210   P     Pn    21 58 02.6 -0.1
VBKN                             AML   AML
      comp=N,10405µm,0.4s
VBKN                             AML   AML
      comp=E,9570µm,0.7s
VCRE  Vesuvio Crater  0.81 210   P     Pn    21 58 02.4 -0.4
CRTO  Cratere Ovest,  0.81 210   P     Pn    21 58 02.8  0.0
CRTO                             AML   AML
CRTO                             AML   AML
OVO   Vesuviano       0.81 212   P     Pn    21 58 02.7 -0.1
VARP  Vesuvio Array   0.82 211   P     Pn    21 58 02.5 -0.4
VARP                             AML   AML
      comp=E,4680µm,1.5s
VARP                             AML   AML
      comp=N,13800µm,0.4s
VTIR  Vesuvio Tirone  0.82 210   P     Pn    21 58 02.6 -0.4
VTIR                             AML   AML
      comp=E,2495µm,0.6s
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VTIR                             AML   AML
      comp=N,2250µm,0.5s
VTIR                             AML   AML
      comp=N,2250µm,1.5s
MRLC  Muro Lucano     0.86 152   P     Pn    21 58 02.8 -0.7
MRLC                             AML   AML
      comp=N,1200µm,0.5s
MRLC                             AML   AML
      comp=E,1130µm,0.5s
MRLC                             AML   AML
      comp=E,1135µm,0.5s
MRLC                             AML   AML
      comp=N,1145µm,0.3s
MODR  Mondragone      0.90 246 ⇑P      Pn    21 58 04.6 +0.6
MODR                             AML   AML
      comp=N,3155µm,0.8s
MODR                             AML   AML
      comp=N,3155µm,1.2s
MODR                             AML   AML
      comp=E,2565µm,0.4s
CSOB  Campi Flegrei   0.93 222   P     Pb    21 58 05.5 +1.1
INTR  Introdacqua     0.93 302 ⇓P      Pn    21 58 03.8 -0.7
INTR                             S     Sb    21 58 18.3 +1.7
INTR                             AML   AML
      comp=E,2µm,0.9s
INTR                             AML   AML
      comp=N,5µm,0.7s
INTR                             AML   AML
      comp=E,2230µm,1.0s
INTR                             AML   AML
      comp=N,7505µm,0.7s
INTR                             AML   AML
      comp=N,5µm,0.7s
INTR                             AML   AML
      comp=E,2230µm,1.0s
INTR                             AML   AML
      comp=E,2µm,1.1s
INTR                             AML   AML
      comp=N,7505µm,1.3s
INTR                             AML   AML
      comp=N,5µm,1.3s
COLB  Campi Flegrei   0.94 222   P     Pb    21 58 05.9 +1.4
PALZ  Palazzo San Ge  0.95 127   P     Pn    21 58 04.6 -0.1
PALZ                             S     Sn    21 58 17.7 +0.3
PALZ                             AML   AML
      comp=E,6750µm,0.7s
PALZ                             AML   AML
      comp=N,6995µm,0.6s
PALZ                             AML   AML
      comp=N,6995µm,1.4s
PALZ                             AML   AML
      comp=E,6750µm,1.3s
CFMN  Campi Flegrei   0.95 224   P     Pb    21 58 05.5 +0.7
MRVN  Minervino Murg  1.04 116 ⇑P      Pn    21 58 06.2 +0.3
MRVN                             AML   AML
      comp=N,2140µm,0.8s
MRVN                             AML   AML
      comp=E,1420µm,1.3s
MRVN                             AML   AML
      comp=N,2140µm,1.2s
ACER  Acerenza        1.04 134   P     Pn    21 58 06.4 +0.4
ACER                             AML   AML
      comp=E,2610µm,1.0s
ACER                             AML   AML
      comp=N,1600µm,0.9s
ACER                             AML   AML
      comp=N,1725µm,0.9s
ACER                             AML   AML
      comp=N,1600µm,1.1s
ACER                             AML   AML
      comp=N,1725µm,1.1s
ACER                             AML   AML
      comp=E,2695µm,1.0s
LRP   Arpino          1.04 277   P     Pn    21 58 06.2 +0.3
LRP                              AML   AML
      comp=E,1520µm,0.5s
LRP                              AML   AML
      comp=E,1520µm,1.5s
LRP                              AML   AML
      comp=N,1310µm,0.5s
CDRU  Civita di Ruta  1.06 166   P     Pn    21 58 06.8 +0.5
CDRU                             AML   AML
      comp=E,810µm,1.2s
CDRU                             AML   AML
      comp=N,641µm,0.6s
CDRU                             AML   AML
      comp=E,810µm,0.8s
VVLD  Villa Vallelon  1.06 290   AML   AML
      comp=N,2160µm,0.6s
VVLD                             AML   AML
      comp=E,2570µm,0.7s
PZUN  Potenza         1.08 144   P     Pb    21 58 08.7 +1.7
T0110 Collepietro     1.13 309   P     Pn    21 58 07.2 -0.1
T0110                            AML   AML
      comp=E,2490µm,0.5s
T0110                            AML   AML
      comp=N,2075µm,0.6s
T0110                            AML   AML
      comp=E,2490µm,1.5s
T0110                            AML   AML
      comp=N,2075µm,1.4s
IFOR  Ischia Forio P  1.16 226   P     Pn    21 58 07.9 +0.2
IFOR                             AML   AML
      comp=E,9765µm,0.6s
IFOR                             AML   AML
      comp=N,8550µm,1.1s
IFOR                             AML   AML
      comp=E,9765µm,1.4s
VCEL  Villa Celiera   1.21 317   P     Pb    21 58 10.4 +1.1
VCEL                             AML   AML
      comp=N,1770µm,1.3s
VCEL                             AML   AML
      comp=E,2265µm,0.6s
CMPR  Campora         1.23 168 ⇑P      Pn    21 58 09.7 +1.1
CMPR                             AML   AML
      comp=E,1050µm,0.9s
CMPR                             AML   AML
      comp=N,529µm,0.5s
SLCN  Sala Consilina  1.24 156   P     Pb    21 58 10.4 +0.7
GUAR  Guarcino        1.27 283   P     Pb    21 58 11.5 +1.2
GUAR                             AML   AML
      comp=E,1044µm,0.4s
GUAR                             AML   AML
      comp=N,1845µm,0.6s
GUAR                             AML   AML
      comp=N,1845µm,1.4s
FAGN  Fagnano         1.27 306   AML   AML
      comp=N,1490µm,0.5s
FAGN                             AML   AML
      comp=E,3610µm,0.6s
FAGN                             AML   AML
      comp=E,3610µm,1.4s
PTQR  Pietraquaria    1.27 294   P     Pb    21 58 11.2 +0.8
PTQR                             AML   AML
      comp=E,728µm,0.6s
PTQR                             AML   AML
      comp=N,736µm,0.6s
GIUL  Giuliano Di Ro  1.28 272 ⇑P      Pn    21 58 10.4 +1.1
GIUL                             AML   AML
      comp=E,636µm,0.6s
GIUL                             AML   AML
      comp=N,694µm,1.1s
PTRP  Pietrapertosa   1.30 140   P     Pn    21 58 10.6 +1.0
PTRP                             AML   AML
      comp=E,934µm,0.7s
PTRP                             AML   AML
      comp=N,1175µm,0.8s
MCEL  Monticello      1.35 152   P     Pn    21 58 11.3 +1.0
MCEL                             AML   AML
      comp=E,452µm,0.9s
MCEL                             AML   AML
      comp=E,468µm,0.9s
MCEL                             AML   AML
      comp=E,468µm,1.1s
MCEL                             AML   AML
      comp=E,452µm,1.1s
MCEL                             AML   AML
      comp=N,522µm,0.7s
MCEL                             AML   AML
      comp=N,548µm,0.8s
AMUR  Altamura        1.38 116   P     Pn    21 58 11.2 +0.6
AMUR                             AML   AML
      comp=N,1550µm,0.7s
AMUR                             AML   AML
      comp=N,1550µm,1.3s
AMUR                             AML   AML
      comp=E,1270µm,0.5s
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MTSN  Montesano sull  1.39 154   P     Pn    21 58 11.9 +1.1
MTSN                             AML   AML
      comp=E,491µm,1.0s
MTSN                             AML   AML
      comp=N,402µm,0.9s
MTSN                             AML   AML
      comp=E,491µm,1.0s
MTSN                             AML   AML
      comp=N,402µm,1.1s
AG11  Viggiano (PZ)   1.40 147   P     Pn    21 58 11.6 +0.6
MIGL  Miglionico      1.44 129   P     Pn    21 58 12.4 +0.9
MIGL                             AML   AML
      comp=N,3095µm,0.7s
MIGL                             AML   AML
      comp=E,2360µm,0.8s
MGR   Morigerati      1.45 162   P     Pb    21 58 13.2 -0.2
MGR                              AML   AML
      comp=E,424µm,0.5s
MGR                              AML   AML
      comp=N,378µm,1.2s
MGR                              AML   AML
      comp=N,378µm,0.8s
LATB  Latina          1.50 270   P     Pn    21 58 12.9 +0.6
LATB                             AML   AML
      comp=E,322µm,1.5s
LATB                             AML   AML
      comp=N,188µm,0.8s
LATB                             AML   AML
      comp=E,322µm,0.5s
SIRI  Monte Sirino -  1.50 153   P     Pn    21 58 13.5 +1.1
SIRI                             AML   AML
      comp=E,415µm,1.3s
SIRI                             AML   AML
      comp=E,418µm,1.3s
SIRI                             AML   AML
      comp=N,484µm,0.5s
SIRI                             AML   AML
      comp=E,415µm,0.7s
SIRI                             AML   AML
      comp=N,495µm,0.6s
SIRI                             AML   AML
      comp=E,418µm,0.7s
CAMP  Campotosto      1.54 312   P     Pb    21 58 15.3 +0.4
CAMP                             AML   AML
      comp=N,398µm,0.7s
CAMP                             AML   AML
      comp=E,442µm,0.9s
CERT  Cerreto         1.54 287 ⇑P      Pb    21 58 14.8 -0.2
CERT                             AML   AML
      comp=E,1090µm,0.6s
CERT                             AML   AML
      comp=N,456µm,0.7s
FIAM  Fiamignano      1.57 299   P     Pb    21 58 16.5 +1.1
FIAM                             AML   AML
      comp=E,945µm,0.6s
FIAM                             AML   AML
      comp=N,1150µm,0.8s
MATE  Matera          1.58 123   P     Pn    21 58 14.7 +1.4
MATE                             AML   AML
      comp=E,956µm,1.3s
MATE                             AML   AML
      comp=N,988µm,0.4s
MATE                             AML   AML
      comp=N,988µm,1.6s
CRAC  Craco           1.60 136   P     Pb    21 58 15.7 -0.3
SMA1  SAN MARTINO     1.64 313   P     Pb    21 58 17.0 +0.4
SMA1                             AML   AML
      comp=N,750µm,0.6s
SMA1                             AML   AML
      comp=E,801µm,0.8s
SMA1                             AML   AML
      comp=N,750µm,1.4s
CUC   Castrocucco     1.66 157   P     Pb    21 58 16.5 -0.3
CUC                              AML   AML
      comp=E,319µm,0.8s
CUC                              AML   AML
      comp=N,268µm,1.0s
CUC                              AML   AML
      comp=N,334µm,0.9s
CUC                              AML   AML
      comp=E,394µm,0.8s
CUC                              AML   AML
      comp=N,334µm,1.1s
CUC                              AML   AML
      comp=N,268µm,1.0s
VIVA  Pratoni del Vi  1.66 279   P     Pn    21 58 15.9 +1.5
VIVA                             AML   AML
      comp=E,1635µm,1.4s
VIVA                             AML   AML
      comp=N,2325µm,0.4s
VIVA                             AML   AML
      comp=N,2325µm,1.6s
LTRZ  Laterza         1.68 123   P     Pn    21 58 15.7 +1.0
LTRZ                             AML   AML
      comp=N,1140µm,1.1s
LTRZ                             AML   AML
      comp=N,1240µm,1.3s
LTRZ                             AML   AML
      comp=E,904µm,1.3s
LTRZ                             AML   AML
      comp=E,762µm,0.2s
T1222 Castel Sant'An  1.69 302   P     Pb    21 58 18.0 +0.7
T1222                            AML   AML
      comp=N,474µm,0.7s
T1222                            AML   AML
      comp=N,474µm,1.3s
T1222                            AML   AML
      comp=E,640µm,0.6s
OFFI  Offida          1.70 327   P     Pb    21 58 18.1 +0.4
OFFI                             AML   AML
      comp=N,2245µm,0.6s
OFFI                             AML   AML
      comp=E,1935µm,0.5s
OFFI                             AML   AML
      comp=N,2245µm,1.4s
MTCE  Montecelio      1.74 288   P     Pn    21 58 17.4 +1.9
MTCE                             AML   AML
      comp=E,494µm,0.5s
MTCE                             AML   AML
      comp=N,326µm,0.5s
NOCI  Noci            1.75 114   P     Pn    21 58 16.5 +0.8
NOCI                             AML   AML
      comp=E,1325µm,0.3s
NOCI                             AML   AML
      comp=N,1280µm,0.8s
NOCI                             AML   AML
      comp=N,1280µm,1.2s
T1218 Civita (PG)     1.79 310   P     Pb    21 58 19.3 +0.1
T1218                            AML   AML
      comp=N,554µm,1.4s
T1218                            AML   AML
      comp=N,560µm,0.3s
T1218                            AML   AML
      comp=E,415µm,1.0s
T1218                            AML   AML
      comp=E,384µm,1.0s
MMN   Mormanno        1.81 154   P     Pb    21 58 19.6 +0.3
MMO1  Montemonaco     1.84 319 ⇓P      Pb    21 58 19.5 -0.4
T1211 Morro Reatino   1.87 303   P     Pb    21 58 20.6 +0.1
T1211                            AML   AML
      comp=N,740µm,0.6s
T1211                            AML   AML
      comp=E,466µm,0.6s
T1211                            AML   AML
      comp=N,768µm,0.6s
T1211                            AML   AML
      comp=E,489µm,0.6s
T1245 Castelsantange  1.88 316   P     Pb    21 58 20.2 -0.4
T1245                            AML   AML
      comp=E,954µm,0.6s
T1245                            AML   AML
      comp=E,906µm,0.5s
T1245                            AML   AML
      comp=E,954µm,1.4s
T1245                            AML   AML
      comp=E,906µm,1.5s
T1245                            AML   AML
      comp=N,1355µm,0.5s
T1245                            AML   AML
      comp=N,1255µm,0.4s
T1212 Cascia, Frazio  1.88 311   P     Pb    21 58 20.6 -0.1
T1212                            AML   AML
      comp=N,519µm,0.6s
T1212                            AML   AML
      comp=E,420µm,0.8s
T1212                            AML   AML
      comp=N,518µm,0.7s
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T1212				AML	AML		
	comp=N,518µm,1.3s						
T1212				AML	AML		
	comp=E,432µm,1.3s						
T1212				AML	AML		
	comp=E,420µm,1.2s						
MC2	**Monte Cornacci**	**1.92**	**317**	P	**Pb**	**21 58 20.8**	**-0.6**
GUMA	**Gualdo di Mace**	**1.96**	**322**	P	**Pb**	**21 58 21.1**	**-0.9**
GUMA				AML	AML		
	comp=E,1340µm,0.5s						
GUMA				AML	AML		
	comp=E,1645µm,0.5s						
GUMA				AML	AML		
	comp=E,1645µm,1.5s						
GUMA				AML	AML		
	comp=N,1530µm,0.5s						
GUMA				AML	AML		
	comp=N,1335µm,0.5s						
GUMA				AML	AML		
	comp=E,1340µm,1.5s						
T1256	**Bolognola (MC)**	**1.97**	**320**	P	**Pb**	**21 58 21.8**	**-0.4**
T1256				AML	AML		
	comp=E,536µm,0.5s						
T1256				AML	AML		
	comp=N,529µm,0.5s						
SRES	**S.Oreste - Sor**	**1.97**	**292**	P	**Pb**	**21 58 21.2**	**-0.9**
SRES				AML	AML		
	comp=E,199µm,0.9s						
SRES				AML	AML		
	comp=N,218µm,1.3s						
SRES				AML	AML		
	comp=E,199µm,1.1s						
HVAR	**Hvar**	**1.99**	**33**	P	**Pn**	**21 58 20.1**	**+1.1**
T1216	**Preci, Frazion**	**1.99**	**314**	AML	AML		
	comp=N,621µm,1.2s						
T1216				AML	AML		
	comp=E,613µm,0.5s						
T1216				AML	AML		
	comp=N,621µm,0.8s						
T1216				AML	AML		
	comp=E,613µm,1.5s						
T1220	**Camerino, Fraz**	**2.11**	**319**	AML	AML		
	comp=N,2005µm,0.6s						
T1220				AML	AML		
	comp=N,2005µm,1.4s						
T1220				AML	AML		
	comp=E,2040µm,0.4s						
TDS	**Terranova Siba**	**2.13**	**150**	P	**Pn**	**21 58 22.3**	**+1.4**
CING	**Cingoli**	**2.27**	**325**	P	**Pn**	**21 58 25.2**	**+2.3**
CING				AML	AML		
	comp=N,304µm,0.8s						
CING				AML	AML		
	comp=E,350µm,1.0s						
CING				AML	AML		
	comp=N,304µm,1.2s						
EL6	**Elcito**	**2.27**	**323**	P	**Pn**	**21 58 25.5**	**+2.5**
EL6				AML	AML		
	comp=E,440µm,1.3s						
EL6				AML	AML		
	comp=N,518µm,0.6s						
EL6				AML	AML		
	comp=N,518µm,1.4s						
EL6				AML	AML		
	comp=E,440µm,0.7s						
TOLF	**Tolfa**	**2.28**	**285**	P	**Pn**	**21 58 24.8**	**+1.7**
TOLF				AML	AML		
	comp=N,167µm,0.7s						
TOLF				AML	AML		
	comp=N,167µm,1.3s						
TOLF				AML	AML		
	comp=E,144µm,1.6s						
ATCC	**AVT- Casa Cast**	**2.39**	**315**	P	**Pb**	**21 58 28.5**	**-0.9**
ATCC				AML	AML		
	comp=E,460µm,0.8s						
ATCC				AML	AML		
	comp=N,484µm,0.7s						
ATCC				AML	AML		
	comp=E,460µm,1.2s						
ATCC				AML	AML		
	comp=N,484µm,1.3s						
CELI	**Celico**	**2.42**	**150**	P	**Pn**	**21 58 27.8**	**+2.7**
CELI				AML	AML		
	comp=E,299µm,0.9s						
CELI				AML	AML		
	comp=N,212µm,1.5s						
CELI				AML	AML		
	comp=N,212µm,0.5s						
CELI				AML	AML		
	comp=E,299µm,1.1s						
STON	**Ston**	**2.44**	**56**	AML	AML		
	comp=E,240µm,0.6s						
STON				AML	AML		
	comp=N,334µm,0.6s						
STON				AML	AML		
	comp=E,240µm,1.4s						
STON	**Ston**	**2.44**	**56**	*e*Pn	**Pn**	**21 58 26.4**	**+1.2**
STON				*e*Sn	**Sn**	**21 58 54.9**	**+0.8**
STON	**Ston**	**2.44**	**56**	*e*Pn	**Pn**	**21 58 26.4**	**+1.2**
ARVD	**Arcevia**	**2.48**	**324**	P	**Pn**	**21 58 28.2**	**+2.4**
ARVD				AML	AML		
	comp=E,172µm,0.9s						
ARVD				AML	AML		
	comp=N,170µm,0.6s						
MURB	**Monte Urbino**	**2.51**	**315**	P	**Pb**	**21 58 30.3**	**-1.1**
MURB				AML	AML		
	comp=N,444µm,0.4s						
MURB				AML	AML		
	comp=E,512µm,0.4s						
MGAB	**Montegabbione**	**2.53**	**304**	P	**Pn**	**21 58 29.6**	**+3.1**
MGAB				AML	AML		
	comp=N,170µm,1.3s						
MGAB				AML	AML		
	comp=N,166µm,0.6s						
MGAB				AML	AML		
	comp=E,260µm,0.5s						
MGAB				AML	AML		
	comp=E,233µm,0.5s						
ATFO	**Monte Foce - G**	**2.56**	**317**	P	**Pb**	**21 58 30.4**	**-1.8**
ATFO				AML	AML		
	comp=E,262µm,0.8s						
ATFO				AML	AML		
	comp=N,206µm,0.9s						
ATFO				AML	AML		
	comp=E,262µm,1.2s						
SACS	**San Casciano d**	**2.63**	**301**	P	**Pb**	**21 58 31.4**	**-2.0**
SACS				AML	AML		
	comp=E,110µm,1.3s						
SACS				AML	AML		
	comp=N,134µm,0.8s						
SACS				AML	AML		
	comp=N,136µm,0.8s						
SACS				AML	AML		
	comp=E,121µm,1.3s						
ATVO	**AVT- Monte Val**	**2.65**	**315**	P	**Pn**	**21 58 31.2**	**+3.1**
ATVO				AML	AML		
	comp=E,177µm,1.2s						
ATVO				AML	AML		
	comp=N,160µm,0.7s						
ATVO				AML	AML		
	comp=E,177µm,0.8s						
ATVO				AML	AML		
	comp=N,160µm,1.3s						
ATMI	**Monte Miggiano**	**2.70**	**313**	P	**Pb**	**21 58 33.0**	**-1.5**
PIEI	**Pieia**	**2.70**	**319**	P	**Pn**	**21 58 31.2**	**+2.4**
PIEI				AML	AML		
	comp=E,146µm,0.8s						
PIEI				AML	AML		
	comp=E,146µm,1.2s						
PIEI				AML	AML		
	comp=N,100µm,0.4s						
ATPI	**Pietralunga -**	**2.70**	**316**	P	**Pb**	**21 58 32.6**	**-2.0**
TREB	**Trebinje**	**2.79**	**63**	*e*Pn	**Pn**	**21 58 31.0**	**+1.0**
TREB				*e*Sn	**Sn**	**21 59 03.1**	**+0.3**
TREB	**Trebinje**	**2.79**	**63**	*e*Pn	**Pn**	**21 58 31.3**	**+1.3**
HCY	**Herceg Novi**	**2.79**	**69**	*e*Pn	**Pn**	**21 58 30.9**	**+0.9**
HCY	**Herceg Novi**	**2.79**	**69**⇑	*i*Pn	**Pn**	**21 58 30.8**	**+0.8**
HCY				*i* Sn	**Sn**	**21 59 04.5**	**+1.7**
BADI	**Badiali**	**2.83**	**316**	P	**Pb**	**21 58 34.9**	**-1.9**
PARC	**Parchiule**	**2.93**	**317**	P	**Pn**	**21 58 35.6**	**+3.7**
PARC				AML	AML		
	comp=E,166µm,0.6s						
PARC				AML	AML		
	comp=N,142µm,0.5s						
BRY	**Bratogost**	**2.99**	**61**	*e*Pn	**Pn**	**21 58 34.4**	**+1.5**
BRY	**Bratogost**	**2.99**	**61**⇑	*i*Pn	**Pn**	**21 58 34.4**	**+1.5**
BRY				*i* Sn	**Sn**	**21 59 11.1**	**+3.1**
SRKY	**Kupres RS**	**3.02**	**32**	*e*Pn	**Pn**	**21 58 35.5**	**+2.3**
BUM	**Brajici-Budva**	**3.04**	**74**⇑	*i*Pn	**Pn**	**21 58 34.7**	**+1.3**
CEME	**Cevo**	**3.12**	**70**⇑	*i*Pn	**Pn**	**21 58 35.8**	**+1.2**
CEME				*i* Sn	**Sn**	**21 59 14.1**	**+3.1**
A050A	**Klekovaca**	**3.17**	**21**	*e*Pn	**Pn**	**21 58 37.8**	**+2.4**
NKME	**Niksic**	**3.22**	**66**⇑	*i*Pn	**Pn**	**21 58 37.5**	**+1.6**
NKME				*i* Sn	**Sn**	**21 59 16.6**	**+3.2**
DRME	**Dracevica, Mon**	**3.22**	**77**	*e*Pn	**Pn**	**21 58 36.8**	**+0.9**
DRME	**Dracevica, Mon**	**3.22**	**77**⇑	*i*Pn	**Pn**	**21 58 37.3**	**+1.4**
DRME				*i* Sn	**Sn**	**21 59 16.6**	**+3.1**
ULC	**Ulcinj**	**3.23**	**81**⇑	*i*Pn	**Pn**	**21 58 37.8**	**+1.7**
ULC				*i* Sn	**Sn**	**21 59 16.9**	**+3.1**
MGRS	**Mrkonjic Grad**	**3.29**	**28**	*e*Pn	**Pn**	**21 58 38.5**	**+1.7**
PDG	**Podgorica**	**3.33**	**73**⇓	*i*Pn	**Pn**	**21 58 38.7**	**+1.4**
PDG				*i* Sn	**Sn**	**21 59 18.9**	**+2.9**
UPM	**Unac-Piva**	**3.37**	**59**	*e*Pn	**Pn**	**21 58 40.5**	**+2.4**
UPM	**Unac-Piva**	**3.37**	**59**⇑	*i*Pn	**Pn**	**21 58 40.6**	**+2.4**
UPM				*i* Sn	**Sn**	**21 59 20.6**	**+3.2**
LMD	**Lutirano**	**3.50**	**318**	P	**Pn**	**21 58 43.2**	**+3.4**
LMD				AML	AML		
	comp=E,71µm,1.2s						
LMD				AML	AML		
	comp=N,79µm,1.2s						
LMD				AML	AML		
	comp=N,79µm,0.8s						
VLO	**Vlora**	**3.59**	**106**	AML	AML		
	comp=E,646µm,0.1s						
VLO				AML	AML		
	comp=N,1165µm,0.1s						
BLY	**Banja Luka**	**3.61**	**26**	*e*Pn	**Pn**	**21 58 43.8**	**+2.5**
BLY				*e*Sn	**Sn**	**21 59 26.0**	**+2.9**
BLY	**Banja Luka**	**3.61**	**26**	*e*Pn	**Pn**	**21 58 43.7**	**+2.5**
KOME	**Kolasin**	**3.63**	**67**⇑	*i*Pn	**Pn**	**21 58 43.9**	**+2.2**
KOME				*i* Sn	**Sn**	**21 59 26.7**	**+2.9**
PLE	**Pljevlja**	**3.74**	**60**⇓	*i*Pn	**Pn**	**21 58 45.6**	**+2.4**
PLE				*i* Sn	**Sn**	**21 59 29.5**	**+3.0**
A051A	**Mrakovica**	**3.77**	**21**	*e*Pn	**Pn**	**21 58 45.5**	**+2.0**
MTCR	**Monte La Croce**	**3.85**	**312**	P	**Pn**	**21 58 47.2**	**+2.6**
PVY	**Plav**	**3.87**	**72**⇑	*i*Pn	**Pn**	**21 58 47.9**	**+2.9**
PVY				*i* Sn	**Sn**	**21 59 32.7**	**+3.0**
RUDO	**Rudo**	**3.87**	**56**	*e*Pn	**Pn**	**21 58 46.4**	**+1.5**
HAPS	**Han Pijesak,BI**	**3.90**	**48**	*e*Pn	**Pn**	**21 58 48.0**	**+2.7**
HAPS				*e*Sn	**Sn**	**21 59 29.5**	**-0.8**
HAPS	**Han Pijesak,BI**	**3.90**	**48**	*e*Pn	Pn	21 58 47.8	+0.6
IVA	**Berane**	**3.90**	**68**⇓	*i*Pn	**Pn**	**21 58 48.6**	**+3.2**
IVA				*i* Sn	**Sn**	**21 59 33.0**	**+2.6**
BOJS	**Bojanci**	**3.99**	**3**	*e*Pn	**Pn**	**21 58 47.7**	**+1.3**
BBLS	**Lazići**	**4.03**	**53**	*e*Pn	**Pn**	**21 58 49.5**	**+2.5**
BBLS				*e*Sn	**Sn**	**21 59 31.3**	**-2.1**
BBLS	**Lazići**	**4.03**	**53**	*e*Pn	Pn	21 58 49.3	+1.5
A052A	**Srbac**	**4.04**	**27**	*e*Pn	**Pn**	**21 58 49.0**	**+1.9**
SKDS	**Skadanscina**	**4.08**	**351**	*e*Pn	**Pn**	**21 58 47.3**	**-0.5**
SJES	**Sjenica**	**4.10**	**63**	*e*Pn	**Pn**	**21 58 50.8**	**+2.7**
SJES				*e*Sn	**Sn**	**21 59 33.3**	**-1.9**
SJES	**Sjenica**	**4.10**	**63**	*e*Pn	**Pn**	**21 58 51.6**	**+3.5**
CEY	**Cerknica**	**4.23**	**355**	*e*Pn	**Pn**	**21 58 51.6**	**+1.7**
CRES	**Cresnjev**	**4.32**	**5**	*e*Pn	**Pn**	**21 58 52.0**	**+1.0**
IVAS	**Ivanjica**	**4.35**	**60**	*e*Pn	**Pn**	**21 58 53.2**	**+1.7**
IVAS				*e*Sn	**Sn**	**21 59 39.7**	**-1.7**
OHR	**Ohrid**	**4.41**	**93**	*i* Pn	**Pn**	**21 58 55.7**	**+3.3**
DIVS	**Divibare**	**4.51**	**53**	AML	AML		
	comp=N,38µm,1.1s						
DIVS				AML	AML		
	comp=E,33µm,0.5s						
DIVS	**Divibare**	**4.51**	**53**	*e*Pn	**Pn**	**21 58 55.4**	**+1.8**
DIVS				*e*Sn	**Sn**	**21 59 43.4**	**-1.9**
DIVS	**Divibare**	**4.51**	**53**	*e*Pn	**Pn**	**21 58 55.5**	**+1.8**
TEKS	**Tekeris**	**4.51**	**46**	*e*Pn	**Pn**	**21 58 57.1**	**+3.4**
TEKS				*e*Sn	**Sn**	**21 59 43.7**	**-1.6**
TEKS	**Tekeris**	**4.51**	**46**	*e*Pn	**Pn**	**21 58 51.8**	**-1.9**
PGF	**Pioggiola**	**4.56**	**285**	*e*Pn	**Pn**	**21 58 53.5**	**-0.9**
PGF	**Pioggiola**	**4.56**	**285**	*e*P	**Pn**	**21 58 56.9**	**+2.5**
PGF				*e*Sn	**Sn**	**21 59 43.0**	**-3.6**
	comp=E,4.6nm,0.4s						
TRUS	**Trudelj**	**4.83**	**54**	*e*Pn	**Pn**	**21 58 59.7**	**+1.7**
TRUS				*e*Sn	**Sn**	**21 59 52.2**	**-0.8**
GRUS	**Gruza**	**4.85**	**59**	*e*Pn	**Pn**	**21 59 00.1**	**+1.8**
GRUS				*e*Sn	**Sn**	**21 59 51.5**	**-2.2**
SELS	**Selova**	**4.87**	**68**	*e*Pn	**Pn**	**21 58 59.8**	**+1.3**
SELS				*e*Sn	**Sn**	**21 59 52.9**	**-1.1**
OBKA	**Obir**	**5.00**	**357**	*e*Pn	**Pn**	**21 59 01.4**	**+1.0**
	comp=E,0.9nm,0.1s,SNR=18						
OBKA	**Obir**	**5.00**	**357**	*e*Pn	**Pn**	**21 59 00.7**	**+0.3**
FRGS	**Fruska Gora**	**5.07**	**43**	*e*Pn	**Pn**	**21 59 02.3**	**+1.0**
FRGS				*e*Sn	**Sn**	**21 59 57.2**	**-1.9**
FRGS	**Fruska Gora**	**5.07**	**43**	*e*Pn	Pn	21 58 56.9	-4.4
SOKA	**Soboth**	**5.16**	**1**	*e*Pn	**Pn**	**21 59 03.1**	**+0.5**
	comp=E,3.3nm,0.5s						
MYKA	**Terra Mystica**	**5.20**	**350**	*e*Pn	**Pn**	**21 59 06.1**	**+3.0**
	comp=E,2.4nm,0.3s						
MYKA				*e*Sn	**Sn**	**22 00 03.2**	**+1.0**
	comp=E,7.5nm,0.6s						
BARS	**Barje**	**5.25**	**73**	*e*Pn	**Pn**	**21 59 05.4**	**+1.5**
BARS				*e*Sn	**Sn**	**22 00 00.1**	**-3.5**
PRVS	**Prvonek**	**5.39**	**77**	*e*Pn	**Pn**	**21 59 07.0**	**+1.2**
PRVS				*e*Sn	**Sn**	**22 00 04.2**	**-2.8**
BOVS	**Bovan**	**5.41**	**65**	*e*Pn	**Pn**	**21 59 06.5**	**+0.6**
BOVS				*e*Sn	**Sn**	**22 00 04.3**	**-3.0**
STIP	**Stip**	**5.42**	**86**	*i* Pn	**Pn**	**21 59 10.1**	**+4.0**
ABTA	**Abfaltersbach**	**5.51**	**342**	*e*Pn	**Pn**	**21 59 08.4**	**+0.9**
	comp=E,2.1nm,0.3s,SNR=7.0						
ABTA				*e*Sn	**Sn**	**22 00 10.9**	**+0.8**
	comp=E,5.8nm,0.3s						
KBA	**Koelnbreinsper**	**5.68**	**349**	*e*Pn	**Pn**	**21 59 11.1**	**+1.3**
	comp=E,0.8nm,0.3s						
BOSS	**Bosilegrad**	**5.68**	**78**	*e*Pn	**Pn**	**21 59 10.9**	**+1.1**
ARSA	**Arzberg**	**5.74**	**4**	*e*Pn	**Pn**	**21 59 11.2**	**+0.6**
	comp=E,2.2nm,0.3s,SNR=6.4						
ZAGS	**Zajecar**	**5.83**	**64**	*e*Pn	**Pn**	**21 59 12.6**	**+0.9**
ZAPS	**Zavoj**	**5.94**	**70**	*e*Pn	**Pn**	**21 59 15.3**	**+2.0**
ZAPS				*e*Sn	**Sn**	**22 00 15.6**	**-5.0**
SBF	**Sospel**	**6.02**	**295**	*e*P	**Pn**	**21 59 17.6**	**+3.2**
WTTA	**Wattenberg**	**6.22**	**339**	*e*Pn	**Pn**	**21 59 21.1**	**+3.8**
	comp=E,1.4nm,0.3s						
WTTA				*e*Sn	**Sn**	**22 00 27.7**	**+0.2**
	comp=E,6.1nm,0.4s						
BIOA	**Bad Ischl, Aus**	**6.24**	**352**	*e*Pn	**Pn**	**21 59 20.0**	**+2.6**
	comp=E,4.2nm,0.3s						
BIOA				*e*Sn	**Sn**	**22 00 29.5**	**+1.6**
	comp=E,5.5nm,0.3s						
RONA	**Rosalia, Austr**	**6.25**	**8**	*e*Pn	**Pn**	**21 59 20.1**	**+2.5**
	comp=E,2.0nm,0.4s						
FETA	**Feichten**	**6.28**	**333**	*e*Pn	**Pn**	**21 59 19.8**	**+1.7**
	comp=E,1.8nm,0.4s						
FETA				*e*Sn	**Sn**	**22 00 29.1**	**0.0**
	comp=E,3.1nm,0.7s						
SQTA	**Sankt Quirin**	**6.30**	**336**	*i* Pn	**Pn**	**21 59 20.3**	**+2.0**
	comp=E,2.9nm,0.4s,SNR=7.6						
SQTA				*e*Sn	**Sn**	**22 00 31.2**	**+1.7**
	comp=E,4.8nm,0.2s						
MOA	**Molln**	**6.35**	**356**	*i* Pn	**Pn**	**21 59 21.1**	**+2.3**
	comp=E,2.1nm,0.2s,SNR=14						
MOA				*e*Sn	**Sn**	**22 00 30.8**	**+0.3**
	comp=E,8.0nm,0.6s						
CONA	**Conrad Observa**	**6.44**	**5**	*e*Pn	**Pn**	**21 59 21.1**	**+0.9**
	comp=E,1.5nm,0.4s						
CONA				*e*Sn	**Sn**	**22 00 31.7**	**-1.2**
	comp=E,4.4nm,0.4s						
MOTA	**Moosalm**	**6.44**	**336**	*e*Pn	**Pn**	**21 59 23.4**	**+3.1**
	comp=E,1.1nm,0.3s						
LMR	**La Mourre**	**6.51**	**289**	*e*P	**Pn**	**21 59 23.5**	**+2.4**
LMR				*e*Sn	**Sn**	**22 00 29.6**	**-5.0**
	comp=E,0.7nm,0.3s						
DAVA	**Damuels**	**6.82**	**329**	*e*Pn	**Pn**	**21 59 28.5**	**+3.1**
	comp=E,5.5nm,0.6s						
MODS	**Modra-Piesok**	**7.05**	**13**	*e*SN	**Sn**	**22 00 44.0**	**-3.7**
LPL	**La Plagne**	**7.19**	**306**	*e*Pn	**Pn**	**21 59 29.2**	**-1.5**
LPL				*e*Sn	**Sn**	**22 00 47.3**	**-4.3**
	comp=E,1.6nm,0.3s						
KEST	**Kesra**	**7.26**	**219**	LR	LR	22 02 35.9	
	comp=E,126nm,18.8s,baz=221,slow=37						
CKRC	**Cesky Krumlov**	**7.31**	**357**	*e*PN	**Pn**	**21 59 34.7**	**+2.6**
CKRC				*e*SN	**Sn**	**22 00 51.9**	**-2.4**
SMRF	**Simiane la Rot**	**7.33**	**293**	*e*P	**Pn**	**21 59 36.1**	**+3.7**
SMRF				*e*Sn	**Sn**	**22 00 49.4**	**-5.4**
	comp=E,0.6nm,0.2s						
GERES	**GERESS Array B**	**7.38**	**353**	Pn	**Pn**	**21 59 33.3**	**+0.2**
	comp=E,0.8nm,0.3s,baz=182,slow=13,SNR=11						
GERES				Sn	**Sn**	**22 00 53.0**	**-3.0**
	comp=E,1.1nm,0.3s,baz=167,slow=23,SNR=7.8						
	comp=E,0.8nm,0.3s						
ORIF	**Oris-en-Rattie**	**7.45**	**300**	*e*P	**Pn**	**21 59 37.1**	**+3.0**
ORIF				*e*Sn	**Sn**	**22 00 52.1**	**-5.7**
	comp=E,0.7nm,0.3s						
VYHS	**Vyhne**	**7.49**	**20**	*e*PN	**Pn**	**21 59 36.0**	**+1.4**
VYHS				*e*SN	**Sn**	**22 00 56.2**	**-2.5**
KHC	**Kasperske Hory**	**7.67**	**353**	*e*SN	**Sn**	**22 01 00.0**	**-3.1**
CABF	**La Chapelle**	**8.17**	**312**	*e*P	**Pn**	**21 59 46.1**	**+2.2**
CABF				*e*Sn	**Sn**	**22 01 10.7**	**-4.7**
	comp=E,1.2nm,0.4s						
PRU	**Pruhonice**	**8.47**	**358**	*e*SN	**Sn**	**22 01 20.8**	**-1.9**
HINF	**Hinteralfeld**	**8.54**	**320**	*e*Pn	**Pn**	**21 59 47.9**	**-1.1**
HINF				*e*Sn	**Sn**	**22 01 19.8**	**-4.7**
	comp=E,2.3nm,0.3s						
CDF	**Champ du Feu**	**8.78**	**324**	*e*Pn	**Pn**	**21 59 51.1**	**-1.2**
CDF				*e*Sn	**Sn**	**22 01 24.8**	**-5.6**
	comp=E,3.6nm,0.3s						
HAU	**Haudompre**	**8.92**	**320**	*e*Pn	**Pn**	**21 59 53.0**	**-1.1**
HAU				*e*Sn	**Sn**	**22 01 28.5**	**-5.2**
	comp=E,6.4nm,0.3s						
SMF	**Signal de Mont**	**9.50**	**306**	*e*Pn	**Pn**	**22 00 01.4**	**-0.7**
SMF				*e*Sn	**Sn**	**22 01 42.9**	**-5.1**
	comp=E,0.9nm,0.3s						
PAGF	**Fort de Pagny**	**9.60**	**320**	*e*Pn	**Pn**	**22 00 02.0**	**-1.4**
PAGF				*e*Sn	**Sn**	**22 01 44.6**	**-5.8**
	comp=E,1.6nm,0.2s						
SFTF	**Sexfontaines**	**9.71**	**317**	*e*P	**Pn**	**22 00 09.4**	**+4.5**
	baz=137						
SFTF				*e*Sn	**Sn**	**22 01 47.7**	**-5.3**
	comp=E,2.0nm,0.3s						
LOR	**Lormes**	**9.80**	**310**	*e*Pn	**Pn**	**22 00 04.7**	**-1.6**
	baz=131						
LOR				*e*Sn	Sn	22 01 48.7	-6.7
	comp=E,1.4nm,0.3s						
AVF	**Avril sur Loir**	**9.86**	**306**	*e*Pn	**Pn**	**22 00 06.5**	**-0.6**
AVF				*e*Sn	**Sn**	**22 01 51.8**	**-5.1**
	comp=E,0.4nm,0.3s						
MEZF	**Maizieres J’vi**	**9.89**	**318**	*e*P	**Pn**	**22 00 09.6**	**+2.2**
	baz=139						
MEZF				*e*Sn	**Sn**	**22 01 51.7**	**-5.9**
	comp=E,1.9nm,0.4s						
SSF	**Saint Saulge**	**9.90**	**308**	*e*Pn	**Pn**	**22 00 06.5**	**-1.1**
SSF				*e*Sn	**Sn**	**22 01 51.5**	**-6.4**
	comp=E,0.4nm,0.4s						
SAVF	**Savonnieres en**	**9.93**	**319**	*e*Pn	**Pn**	**22 00 06.5**	**-1.5**
SAVF	**Savonnieres en**	**9.93**	**319**	*e*P	**Pn**	**22 00 12.4**	**+4.4**
	baz=141						
KVAR	**Kislovodsk Arr**	**20.48**	**74**	LR	LR	22 13 22.6	
	comp=E,47nm,18.0s,baz=273,slow=46						
KBZ	**Khabaz**	**20.64**	**74**	LR	LR	22 13 36.5	
	comp=E,47nm,18.2s,baz=155,slow=47						
FINES	**FINESS Array B**	**21.06**	**15**	P	**P**	**22 02 28.2**	**-0.6**
	comp=E,0.9nm,0.7s,baz=215,slow=12,SNR=1.6						
	comp=E,0.9nm,0.7s						
MKAR	**Makanchi Array**	**47.26**	**60**	P	**P**	**22 06 20.1**	**+2.2**
	comp=E,0.5nm,0.6s,baz=282,slow=6.5,SNR=7.5						
	comp=E,0.5nm,0.6s						

MAN ***25*** *22:16:53.0, 16°.04N×119°.03E, h14^{km}, mb5.1, ML4.1, MS4.2*

NEIC ***25*** *22:16:59.3±1.3, 15°.97N±0°.07×119°.4E±0°.1, h38^{km}±7^{km}, mb4.6/76, Error ellipse: s-maj=15.2km s-min=9.8km az=95.0*

IDC ***25*** *22:17:02.2±1.6, 15°.98N×119°.45E, h72^{km}±16^{km}, mb4.0/27, mbtmp4.3/30, MS3.3/11, Error ellipse: s-maj=16.3km s-min=9.4km az=74.0*

ISC 25 22:17:00.7±0.5**, 15°.92N**±0°.03×**119°.29E**±0°.04**, h56**^{km}±4^{km}**, n171,** σ**1^{s}77**/200**, mb4.5**/70**, MS3.6**/13**, 11C-10D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPP	**San Manuel, Pa**	**1.36**	**80**⇑	*e*P	**Pn**	**22 17 20.0**	**-3.5**
SMPP				*e*S	**Sn**	**22 17 35.9**	**-4.5**
SAMP	**Sagada Mountai**	**1.93**	**53**⇓	*e*P	**Pn**	**22 17 27.9**	**-3.4**
SAMP				*e*S	**Sn**	**22 17 51.3**	**-3.1**
QVP	**Quezon City--P**	**2.10**	**128**⇓	*e*P	**Pn**	**22 17 33.3**	**-0.1**
QVP				*e*S	**Sn**	**22 18 01.3**	**+2.9**
MACP	**Maragondon, Ca**	**2.15**	**140**⇑	*e*P	**Pn**	**22 17 32.4**	**-1.7**
MACP				*e*S	**Sn**	**22 17 58.6**	**-1.0**
BALP	**Baler**	**2.21**	**94**⇓	*e*P	**Pn**	**22 17 33.5**	**-1.5**
BALP				*e*S	**Sn**	**22 18 03.4**	**+2.2**
LUBP	**Lubang**	**2.36**	**157**⇓	*e*P	**Pn**	**22 17 35.5**	**-1.5**
LUBP				*e*S	**Sn**	**22 18 02.7**	**-2.1**
TGY	**Tagaytay City**	**2.41**	**138**	P	**Pn**	**22 17 38.1**	**+0.4**
	214nm,0.4s,baz=304,slow=3.2,SNR=6.7						
TGY				S	**Sn**	**22 18 07.8**	**+1.7**
	555nm,0.4s,baz=214,slow=16,SNR=7.7						
TGY	**Tagaytay City**	**2.41**	**138**⇓	*e*P	**Pn**	**22 17 41.8**	**+4.0**
TGY				*e*S	**Sn**	**22 18 09.1**	**+3.0**
CAUP	**Cauayan**	**2.64**	**67**⇓	*e*P	**Pn**	**22 17 40.3**	**-0.5**
CAUP				*e*S	Sn	22 18 29.3	+18
LQP	**Lukban**	**2.82**	**129**⇑	*e*P	**Pn**	**22 17 42.5**	**-1.1**
CVP	**Callao Caves**	**3.01**	**53**⇓	*e*P	**Pn**	**22 17 45.6**	**-0.3**
PACPP	**Pamplona Cagay**	**3.21**	**38**⇑	*i*P	**Pn**	**22 17 45.5**	**-3.2**
PACPP				*i* S	**Sn**	**22 18 23.6**	**-2.1**
PALP	**Palanan**	**3.22**	**69**⇑	*e*P	**Pn**	**22 17 48.4**	**-0.4**
PALP				*e*S	**Sn**	**22 18 30.2**	**+4.3**
JCNP	**Jose Panganiba**	**3.67**	**116**⇓	*e*P	**Pn**	**22 17 54.0**	**-0.9**
JCNP				*e*S	**Sn**	**22 18 39.0**	**+2.0**
CICP	**Calayan Island**	**3.93**	**32**⇓	*e*P	**Pn**	**22 17 56.1**	**-2.5**
BUSP	**Coron**	**3.99**	**167**⇑	*e*P	**Pn**	**22 17 57.5**	**-1.9**
BUSP				*e*S	**Sn**	**22 18 43.8**	**-1.1**
OTRP	**Odiongan**	**4.42**	**143**⇑	*e*P	**Pn**	**22 18 04.0**	**-1.3**
SCSP	**San Jose Seism**	**4.67**	**118**⇑	*e*P	**Pn**	**22 18 09.3**	**+0.6**
ENPP	**El Nido**	**4.68**	**178**⇑	*e*P	**Pn**	**22 18 06.4**	**-2.5**
ENPP				*e*S	**Sn**	**22 18 57.7**	**-4.2**
BBP	**Basco**	**5.17**	**29**⇑	*e*P	**Pn**	**22 18 12.2**	**-3.4**
PVCP	**Virac**	**5.24**	**115**⇑	*e*P	**Pn**	**22 18 16.8**	**+0.2**
PVCP				*e*S	Sn	22 19 40.0	+24
TWG	**Pinlang**	**7.07**	**13**	Pn	**Pn**	**22 18 38.8**	**-2.9**
TPUB	**Ta-pu**	**7.46**	**10**	Pn	**Pn**	**22 18 43.2**	**-3.7**
YULB	**Yu-li**	**7.67**	**14**	Pn	**Pn**	**22 18 46.8**	**-3.1**
SSLB	**Suanglung**	**7.99**	**11**	Pn	**Pn**	**22 18 51.2**	**-3.0**
NACB	**Ninganchiao**	**8.50**	**14**	Pn	**Pn**	**22 18 58.5**	**-2.7**
YHNB	**Yeheng**	**8.93**	**12**	Pn	**Pn**	**22 19 05.1**	**-2.0**
QIZ	**Qiongzhong**	**9.53**	**290**	P	**Pn**	**22 19 13.8**	**-1.5**
QIZ				S	**Sn**	**22 21 02.3**	**+1.3**
QIZ				pmax	pmax		
	comp=Z,44nm,2.0s						
QIZ				LR	LR		
	comp=N,400nm,8.0s						
QIZ				LR	LR		
	comp=E,280nm,8.0s						
QIZ				LR	LR		
	comp=Z,340nm,13.5s						
KKM	**Kota Kinabalu**	**10.26**	**197**	Pn	**Pn**	**22 19 23.0**	**-2.4**
MYLDM	**Lahad Datu**	**10.70**	**184**	Pn	**Pn**	**22 19 32.2**	**+0.9**
JOW	**Kunigami**	**13.71**	**36**	LR	LR	22 25 13.1	
	comp=Z,67nm,21.6s,baz=44,slow=36						
TOLI2	**Tolitoli**	**14.78**	**174**	Pn	**Pn**	**22 20 27.3**	**+0.7**
SBUM	**Sibu**	**15.08**	**208**	Pn	**Pn**	**22 20 31.2**	**+0.7**
NJ2	**Nanjing**	**16.07**	**359**	*e*P	**Pn**	**22 20 43.0**	**0.0**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KSM	**Kuching**	**16.86**	**213**		**P**	**22 20 54.0**	**-0.4**
PZH	**PanZhiHua**	**19.43**	**306**	P	**Pn**	**22 21 28.0**	**+3.6**
PZH				S	**S**	**22 24 57.0**	**-2.7**
PZH				LR	LR		
	comp=N,270nm,14.7s						
PZH				LR	LR		
	comp=E,290nm,15.1s						
PZH				LR	LR		
	comp=Z,450nm,15.7s						
CMAR	**Chiang Mai Arr**	**19.60**	**280**	P	**Pn**	**22 21 26.4**	**+0.1**
	comp=Z,1.3nm,0.3s,baz=90,slow=9.9,SNR=11						
CMAR				PcP	**PcP**	**22 25 44.3**	**+1.6**
	comp=Z,0.9nm,0.3s,baz=96,slow=0.9,SNR=4.3						
CMAR				LR	LR	22 29 09.4	
	comp=Z,95nm,19.7s,baz=95,slow=37						
CMAR	**Chiang Mai Arr**	**19.60**	**280**	P	**P**	**22 21 24.4**	**-0.2**
JNU	**Nakatsue**	**20.09**	**29**	P	**P**	**22 21 27.8**	**-2.0**
	comp=Z,12nm,0.9s,baz=208,slow=17,SNR=5.2						
JNU				LR	LR	22 28 34.2	
	comp=Z,79nm,21.1s,baz=208,slow=35						
XAN	**Xi'an**	**20.32**	**335**	P	**P**	**22 21 32.0**	**-0.3**
XAN				pP	Pn	22 21 37.8	+3.1
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CD2	**Chengdu**	**20.60**	**319**	P	Pn	22 21 37.8	-0.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				LR	LR		
	comp=N,200nm,12.4s						
CD2				LR	LR		
	comp=E,190nm,12.6s						

CD2				LR	LR		
	comp=Z,310nm,12.9s						
KAPI	**Kappang**	**20.80**	**179**	P	Pn	22 21 39.2	-1.2
	comp=Z,14nm,0.9s,baz=323,slow=12,SNR=4.4						
	comp=Z,14nm,0.9s						
KAPI	**Kappang**	**20.80**	**179**	P	**P**	**22 21 37.9**	**+0.4**
KAPI				IAmb	IAmb	22 22 00.3	
	comp=Z,31nm,1.3s						
IPM	**Ipoh**	**21.24**	**240**	P	**P**	**22 21 41.7**	**-0.5**
HNS	**HongShan**	**21.78**	**350**	⇓P	**P**	**22 21 53.5**	**+5.7**
HNS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
JMN	**Monobe**	**22.09**	**34**	P	**P**	**22 21 49.4**	**-1.9**
JMN				IAmb	IAmb	22 22 06.5	
	comp=Z,52nm,1.5s						
JHS	**Saijyo**	**22.69**	**31**	P	**P**	**22 21 56.0**	**-1.7**
KSAR	**Wonju Array Be**	**22.75**	**18**	P	**P**	**22 21 56.8**	**-1.4**
KSRS	**Korea Array**	**22.77**	**18**	P	**P**	**22 21 56.5**	**-2.0**
	comp=Z,3.0nm,0.9s,baz=199,slow=9.3,SNR=10						
KSRS				LR	LR	22 31 43.3	
	comp=Z,31nm,20.1s,baz=180,slow=39						
	comp=Z,3.0nm,0.9s						
RPSI	**Rantau Prapat**	**23.97**	**239**	P	**P**	**22 22 10.0**	**-0.1**
BJT	**Baijiatuau**	**24.17**	**354**	P	**P**	**22 22 10.2**	**-1.5**
LZH	**Lanzhou**	**24.35**	**328**	*e*P	P	22 22 22.5	+8.9
LZH				pP	pwP	22 22 31.8	-0.3
LZH				sP	sP	22 22 35.3	+2.9
LZH				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GUMO	**Guam**	**24.84**	**92**	LR	LR	22 30 07.2	
	comp=Z,34nm,21.1s,baz=110,slow=32						
HHC	**Hu-ho-hao-te**	**25.73**	**346**	*e*P	**P**	**22 22 27.3**	**+1.3**
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC				pmax	pmax		
	comp=Z,95nm,4.8s						
BTO	**Baotou**	**25.89**	**344**	*e*P	**P**	**22 22 29.5**	**+2.1**
BTO				pP	**pP**	**22 22 41.5**	**+1.4**
BTO				sP	**sP**	**22 22 47.5**	**+1.2**
BTO				PP	**PnPn**	**22 23 14.0**	**+6.8**
BTO				S	**S**	**22 26 59.8**	**+6.3**
BTO				sS	**sS**	**22 27 17.0**	**+1.4**
BTO				SS	**SnSn**	**22 27 56.0**	**+1.4**
BTO				pmax	pmax		
	comp=Z,31nm,0.7s						
BTO				pmax	pmax		
	comp=Z,320nm,6.1s						
BTO				LR	LR		
	comp=N,430nm,6.6s						
BTO				LR	LR		
	comp=E,450nm,13.6s						
BTO				LR	LR		
	comp=Z,610nm,8.8s						
MJAR	**Matsushiro Arr**	**26.55**	**36**	LR	LR	22 34 24.4	
	comp=Z,46nm,18.5s,baz=216,slow=40						
GTA	**Gaotai**	**28.95**	**328**	*e*P	**P**	**22 22 56.5**	**+1.6**
GTA				pP	pP	22 23 06.3	-1.3
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GOMU	**GeErMu**	**29.71**	**317**	P	**P**	**22 23 04.3**	**+2.3**
GOMU				pP	pP	22 23 07.5	-7.4
GOMU				sP	pwP	22 23 08.0	-12
GOMU				S	**S**	**22 27 48.5**	**-5.9**
GOMU				sS	sS	22 27 55.8	-21
GOMU				SS	SnSn	22 28 53.8	-34
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,51nm,5.5s						
GOMU				LR	LR		
	comp=N,100nm,12.6s						
GOMU				LR	LR		
	comp=E,100nm,12.2s						
GOMU				LR	LR		
	comp=Z,180nm,12.8s						
USRK	**Ussuriysk Ar.**	**30.18**	**18**	P	**P**	**22 23 05.2**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=217,slow=7.4,SNR=5.2						
	comp=Z,1.5nm,0.8s						
ULN	**Ulaanbaatar**	**33.42**	**345**	P	**P**	**22 23 33.7**	**-0.5**
ULN				IAmb	IAmb	22 23 35.3	
	comp=Z,3.1nm,0.7s						
SONM	**Songino Array**	**33.56**	**344**	P	**P**	**22 23 35.6**	**+0.2**
	comp=Z,5.1nm,0.6s,baz=166,slow=10,SNR=52						
	comp=Z,5.1nm,0.6s						
SONM	**Songino Array**	**33.56**	**344**	P	**P**	**22 23 35.2**	**-0.2**
SONM				IAmb	IAmb	22 23 36.4	
	comp=Z,5.7nm,0.6s						
ASAJ	**Asahikawa**	**34.36**	**30**	P	**P**	**22 23 41.3**	**-0.9**
	comp=Z,2.4nm,0.8s,baz=270,slow=8.1,SNR=2.1						
	comp=Z,2.4nm,0.8s						
FITZ	**Fitzroy Crossi**	**34.37**	**169**	P	**P**	**22 23 41.8**	**-0.7**
KLR	**Kul'dur**	**34.75**	**14**	P	**P**	**22 23 44.6**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=228,slow=9.1,SNR=15						
KLR				LR	LR	22 38 37.6	
	comp=Z,52nm,18.8s,baz=223,slow=37						
	comp=Z,1.9nm,0.6s						
MBWA	**Marble Bar**	**36.85**	**179**	P	**P**	**22 24 04.3**	**+0.6**
PSA00	**Pilbara Seismi**	**37.26**	**179**	P	**P**	**22 24 07.5**	**+0.3**
PSA00				IAmb	IAmb	22 24 08.9	
	comp=Z,5.4nm,0.7s						
PSA00	**Pilbara Seismi**	**37.26**	**179**	P	**P**	**22 24 08.0**	**+0.8**
PSA00				IAmb	IAmb	22 24 08.9	
	comp=Z,13nm,0.7s						
COEN	**Coen**	**37.93**	**140**	P	**P**	**22 24 10.6**	**-2.3**
COEN				IAmb	IAmb	22 24 35.2	
	comp=Z,14nm,1.4s						
WB0	**Warramunga Arr**	**38.44**	**157**	P	**P**	**22 24 15.6**	**-1.7**
WB0				IAmb	IAmb	22 24 16.2	
	comp=Z,7.8nm,0.6s						
WRA	**Warramunga Arr**	**38.58**	**157**	P	**P**	**22 24 16.8**	**-1.6**
	comp=Z,6.6nm,0.7s,baz=332,slow=9.7,SNR=81						
WRA				PcP	**PcP**	**22 26 30.5**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=342,slow=3.1,SNR=5.8						
	comp=Z,6.6nm,0.7s						
WRA	**Warramunga Arr**	**38.58**	**157**	P	**P**	**22 24 16.1**	**-2.3**
WMQ	**Urumqi**	**38.62**	**323**	*e*P	**P**	**22 24 21.0**	**+2.3**
AS31	**Alice Springs**	**41.85**	**160**	P	**P**	**22 24 44.5**	**-1.0**
ASAR	**Alice Springs**	**41.85**	**160**	P	**P**	**22 24 44.6**	**-0.9**
	comp=Z,7.9nm,0.6s,baz=339,slow=6.9,SNR=119						
ASAR				PcP	**PcP**	**22 26 40.7**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=342,slow=3.5,SNR=1.9						
	comp=Z,7.9nm,0.6s						
MK31	**Makanchi Array**	**43.45**	**323**	P	**P**	**22 24 58.5**	**+0.3**
MKAR	**Makanchi Array**	**43.45**	**323**	P	**P**	**22 24 59.1**	**+0.9**
	comp=Z,2.5nm,0.7s,baz=127,slow=9.0,SNR=34						
MKAR				PcP	**PcP**	**22 26 45.6**	**0.0**
	comp=Z,1.1nm,0.6s,baz=97,slow=4.2,SNR=6.7						
	comp=Z,2.5nm,0.7s						
MKAR	**Makanchi Array**	**43.45**	**323**	P	**P**	**22 24 58.7**	**+0.5**
KSH	**Kashi**	**44.42**	**311**	P	**P**	**22 25 09.5**	**+3.3**
KSH				sP	sP	22 25 24.8	-1.0
KSH				PcP	pwP	22 25 51.5	+27
KSH				ScP	**ScP**	**22 30 41.5**	**+4.8**
KSH				PcS	**PcS**	**22 30 46.0**	**+3.3**
KSH				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KDJ	**Kajisay**	**44.51**	**315**	P	**P**	**22 25 07.8**	**+0.7**
CTAO	**Charters Tower**	**44.52**	**143**	P	**P**	**22 25 06.2**	**-0.8**
NIL	**Nilore**	**44.97**	**302**	P	**P**	**22 25 10.4**	**-0.2**
NIL				IAmb	IAmb	22 25 11.6	
	comp=Z,5.6nm,0.7s						
ZAA0	**Zalesovo Array**	**46.47**	**333**	P	**P**	**22 25 21.4**	**-0.6**
ZAA0				IAmb	IAmb	22 25 22.5	
	comp=Z,5.9nm,1.2s						
ZALV	**Zalesovo Beam**	**46.47**	**333**	P	**P**	**22 25 21.8**	**-0.3**
	comp=Z,1.8nm,0.4s,baz=127,slow=7.1,SNR=12						
ZALV				PcP	**PcP**	**22 26 54.7**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=117,slow=5.1,SNR=2.6						
	comp=Z,1.8nm,0.4s						
ZALV	**Zalesovo Beam**	**46.47**	**333**	P	**P**	**22 25 21.4**	**-0.7**
AAK	**Ala-Archa**	**46.55**	**314**	LR	LR	22 46 25.2	
	comp=Z,88nm,19.9s,baz=58,slow=38						
YAK	**Yakutsk**	**46.65**	**7**	P	**P**	**22 25 22.2**	**-1.1**
YAK				IAmb	IAmb	22 25 23.6	
	comp=Z,6.9nm,0.6s						
KURBB	**Kurchatov Arra**	**47.60**	**326**	P	**P**	**22 25 31.6**	**+0.7**
	comp=Z,5.7nm,0.8s,baz=122,slow=8.6,SNR=25						
KURBB				PcP	**PcP**	**22 26 59.8**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=118,slow=3.4,SNR=3.2						
	comp=Z,5.7nm,0.8s						
KURK	**Kurchatov**	**47.60**	**326**	P	**P**	**22 25 31.2**	**+0.3**
PEA0B	**Petropavlovsk-**	**47.78**	**30**	P	**P**	**22 25 31.5**	**-0.8**
PETK	**Petropavlovsk-**	**47.78**	**30**	P	**P**	**22 25 31.7**	**-0.6**
	comp=Z,12nm,0.7s,baz=211,slow=8.3,SNR=15						
	comp=Z,12nm,0.7s						
PETK	**Petropavlovsk-**	**47.78**	**30**	P	**P**	**22 25 31.8**	**-0.5**
PET	**Petropavlovsk**	**48.20**	**31**	P	**P**	**22 25 34.9**	**-0.6**
GAR	**Garm**	**48.48**	**308**	P	**P**	**22 25 38.4**	**+0.4**
GAR				IAmb	IAmb	22 25 42.6	
	comp=Z,6.4nm,0.8s						
CHGR	**Chuyangaron**	**49.27**	**308**	P	**P**	**22 25 44.1**	**0.0**
KK31	**Karatay Array**	**49.46**	**314**	P	**P**	**22 25 45.8**	**+0.4**
KK31				IAmb	IAmb	22 25 47.3	
	comp=Z,3.1nm,1.1s						
KKAR	**Karatay Array**	**49.46**	**314**	P	**P**	**22 25 46.1**	**+0.7**
BBOO	**Buckleboo**	**51.04**	**162**	P	**P**	**22 25 56.5**	**-0.8**
EIDS	**Eidsvold**	**51.41**	**142**	P	**P**	**22 25 59.3**	**-0.9**
STKA	**Stephens Creek**	**52.12**	**156**	P	**P**	**22 26 04.5**	**-0.8**
	comp=Z,2.8nm,0.5s,baz=332,slow=5.2,SNR=7.8						
	comp=Z,2.8nm,0.5s						
STKA	**Stephens Creek**	**52.12**	**156**	P	**P**	**22 26 04.7**	**-0.7**
SEY	**Seymchan**	**52.33**	**18**	P	**P**	**22 26 06.6**	**0.0**
	comp=Z,1.4nm,0.2s,baz=226,slow=3.4,SNR=8.6						
	comp=Z,1.4nm,0.2s						
BVAR	**Borovoye Array**	**53.18**	**325**	P	**P**	**22 26 13.3**	**+0.2**
	comp=Z,2.5nm,0.6s,baz=124,slow=9.1,SNR=13						
BVAR				PcP	**PcP**	**22 27 20.6**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=108,slow=3.9,SNR=4.6						
	comp=Z,2.5nm,0.6s						
BRVK	**Borovoye**	**53.26**	**325**	P	**P**	**22 26 13.3**	**-0.3**
BRVK				IAmb	IAmb	22 26 16.1	
	comp=Z,5.5nm,1.0s						
ARMA	**Armidale**	**55.60**	**146**	P	**P**	**22 26 31.0**	**0.0**
ARMA				IAmb	IAmb	22 26 32.1	
	comp=Z,8.2nm,0.8s						
TIXI	**Tiksi**	**56.01**	**4**	P	**P**	**22 26 31.7**	**-1.5**
	comp=Z,4.1nm,0.9s,baz=90,slow=23,SNR=15						
TIXI				LR	LR	22 50 30.8	
	comp=Z,46nm,18.4s,baz=268,slow=36						
	comp=Z,4.1nm,0.9s						
TIXI	**Tiksi**	**56.01**	**4**	P	**P**	**22 26 31.9**	**-1.4**
TIXI				IAmb	IAmb	22 26 33.4	
	comp=Z,4.1nm,0.9s						
NRIK	**Noril'sk**	**56.96**	**347**	P	**P**	**22 26 39.9**	**-0.2**
	comp=Z,5.3nm,0.7s,baz=131,slow=6.8,SNR=11						
	comp=Z,5.3nm,0.7s						
NRIK	**Noril'sk**	**56.96**	**347**	P	**P**	**22 26 39.5**	**-0.5**
NRIK				IAmb	IAmb	22 26 40.7	
	comp=Z,7.4nm,0.8s						
GEYT	**Alibeck**	**57.74**	**305**	P	**P**	**22 26 47.2**	**+1.1**
	comp=Z,2.0nm,0.9s,baz=84,slow=6.1,SNR=5.3						
GEYT				LR	LR	22 54 45.1	
	comp=Z,59nm,18.7s,baz=148,slow=39						
	comp=Z,2.0nm,0.9s						
ABKAR	**Akbulak array**	**58.18**	**318**	P	**P**	**22 26 49.0**	**+0.1**
CAN	**Canberra**	**58.23**	**152**	P	**P**	**22 26 49.3**	**-0.2**
TOO	**Toolangi**	**58.64**	**156**	P	**P**	**22 26 52.1**	**-0.1**
TOO				IAmb	IAmb	22 26 54.7	
	comp=Z,8.8nm,1.2s						
BILL	**Bilibino**	**60.04**	**19**	P	**P**	**22 27 00.8**	**-0.6**
BILL				IAmb	IAmb	22 27 01.7	
	comp=Z,3.4nm,0.7s						
ARU	**Arti**	**60.79**	**326**	P	**P**	**22 27 06.5**	**-0.3**
BELG	**Belogornoye**	**66.37**	**321**	P	**P**	**22 27 43.5**	**-0.1**
	comp=Z,10nm,0.8s,baz=147,slow=3.9,SNR=8.6						
	comp=Z,10nm,0.8s						
ONI	**Oni**	**69.05**	**310**	P	**P**	**22 28 01.2**	**+0.4**
ONI				IAmb	IAmb	22 28 04.0	
	comp=Z,3.5nm,0.8s						
AKH	**Akhalkalaki**	**69.07**	**309**	P	**P**	**22 28 01.7**	**+0.6**
RAYN	**Ar Rayn**	**69.22**	**289**	P	**P**	**22 28 02.5**	**+0.3**
RAYN				IAmb	IAmb	22 28 05.0	
	comp=Z,4.4nm,0.9s						
KBZ	**Khabaz**	**69.40**	**311**	P	**P**	**22 28 03.0**	**+0.1**
	comp=Z,4.2nm,0.9s,baz=165,slow=5.2,SNR=11						
	comp=Z,4.2nm,0.9s						
KIV	**Kislovodsk**	**69.54**	**311**	P	**P**	**22 28 04.1**	**+0.2**
GURO	**Guroymak-BITLI**	**70.39**	**306**	P	**P**	**22 28 09.7**	**+0.5**
GURO				IAmb	IAmb	22 28 12.3	
	comp=Z,5.6nm,1.0s						
TTA	**Tatalina**	**73.56**	**28**	P	**P**	**22 28 28.2**	**+0.5**
TTA				IAmb	IAmb	22 28 29.3	
	comp=Z,4.5nm,0.6s						
O18K	**Koktuh Hills**	**74.14**	**32**	P	**P**	**22 28 31.4**	**+0.4**
IMAR	**Indian Mountai**	**74.36**	**25**	P	**P**	**22 28 32.5**	**+0.3**
CAST	**Castle Rocks**	**75.30**	**28**	P	**P**	**22 28 38.1**	**+0.5**
PPLA	**Purkeypile**	**75.31**	**28**	P	**P**	**22 28 38.4**	**+0.5**
PPLA				IAmb	IAmb	22 29 03.0	
	comp=Z,12nm,1.4s						
KDAK	**Kodiak Island**	**75.70**	**34**	P	**P**	**22 28 39.8**	**-0.2**
KDAK				IAmb	IAmb	22 28 40.6	
	comp=Z,9.1nm,0.8s						
SUA	**Susitna One**	**76.15**	**30**	P	**P**	**22 28 42.5**	**-0.2**
NEA2	**Nenana**	**76.47**	**26**	P	**P**	**22 28 44.8**	**+0.5**
NEA2				IAmb	IAmb	22 28 45.6	
	comp=Z,4.6nm,0.8s						
ARCES	**ARCESS Array B**	**76.54**	**339**	P	**P**	**22 28 44.2**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=57,slow=5.1,SNR=11						
	comp=Z,1.3nm,0.5s						
ARCES	**ARCESS Array B**	**76.54**	**339**	P	**P**	**22 28 44.5**	**-0.1**
MCK	**McKinley**	**76.66**	**27**	P	**P**	**22 28 45.5**	**+0.1**
MCK				IAmb	IAmb	22 28 46.8	
	comp=Z,9.1nm,1.0s						
BRTR	**Keskin Array B**	**76.72**	**308**	P	**P**	**22 28 46.3**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=116,slow=3.4,SNR=3.2						
	comp=Z,0.4nm,0.7s						
BRTR	**Keskin Array B**	**76.72**	**308**	P	**P**	**22 28 46.4**	**+0.1**
MDM	**Murphy Dome**	**76.77**	**26**	P	**P**	**22 28 46.3**	**+0.3**
MDM				IAmb	IAmb	22 28 47.6	
	comp=Z,4.5nm,0.7s						
SPB2	**Spitsbergen Ar**	**77.15**	**348**	P	**P**	**22 28 48.2**	**+0.3**
ILAR	**Eielson Array**	**77.37**	**26**	P	**P**	**22 28 47.7**	**-1.7**
	comp=Z,0.8nm,0.8s,baz=274,slow=4.8,SNR=9.4						
	comp=Z,0.8nm,0.8s						
ILAR	**Eielson Array**	**77.37**	**26**	P	**P**	**22 28 48.9**	**-0.5**
FIA1	**FINESS Array S**	**77.69**	**331**	P	**P**	**22 28 50.9**	**-0.3**
FIA1				IAmb	IAmb	22 28 58.5	
	comp=Z,10.0nm,1.1s						
FINES	**FINESS Array B**	**77.69**	**331**	P	**P**	**22 28 50.7**	**-0.5**
	comp=Z,1.6nm,0.5s,baz=54,slow=5.4,SNR=18						
	comp=Z,1.6nm,0.5s						
BMAR	**Burnt Mountain**	**77.78**	**23**	P	**P**	**22 28 51.7**	**+0.1**
AKASG	**Malin Array Be**	**77.90**	**319**	P	**P**	**22 28 51.7**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=66,slow=4.6,SNR=5.8						
	comp=Z,0.6nm,0.6s						
MNK	**Minsk**	**78.02**	**323**	*i* P	**P**	**22 28 51.6**	**-1.6**
	comp=E,2.0nm,1.1s						
MNK				*i* P	**P**	**22 28 51.6**	**-1.6**
	comp=N,35nm,0.9s						
MNK				*i* P	**P**	**22 28 51.6**	**-1.6**
	comp=Z,8.0nm,1.3s,baz=79						
MNK				*i* PP	**PP**	**22 31 51.8**	**+2.2**
MNK				*i* PPP	PPP	22 33 43.0	
MNK				*i* S	**S**	**22 38 45.6**	**+3.0**
MNK				*i* SS	**SS**	**22 43 46.0**	**+1.8**
MNK				*i* SSS	SSS	22 47 14.7	
MNK				*i* LQ	LQ	22 58 18.1	
MNK				*i* LR	LR	23 03 45.5	
MNK				*i* LRM	MLR	23 06 13.7	
	comp=N,539nm,21.3s						
MNK				*i* LRM	MLR	23 06 50.5	
	comp=Z,128nm,12.9s						
MNK				*i* LRM	MLR	23 06 56.9	
	comp=E,18nm,15.5s						
NACGM	**Naroch**	**78.57**	**324**	*e*P	**P**	**22 28 56.2**	**0.0**
	comp=Z,10.0nm,0.9s,baz=78						
I26K	**Coal Creek Min**	**78.81**	**25**	P	**P**	**22 28 57.0**	**-0.3**
I26K				IAmb	IAmb	22 28 58.8	
	comp=Z,5.8nm,0.8s						
M26K	**Nabesna, AK**	**79.57**	**28**	P	**P**	**22 29 02.3**	**+0.7**
M26K				IAmb	IAmb	22 29 03.2	
	comp=Z,5.9nm,0.8s						
EGAK	**Eagle**	**79.76**	**25**	P	**P**	**22 29 02.7**	**+0.2**
EGAK				IAmb	IAmb	22 29 05.5	
	comp=Z,5.7nm,1.1s						
BCAR	**Beaver Creek A**	**79.94**	**27**	P	**P**	**22 29 04.5**	**+0.9**
NOR	**Nord**	**80.34**	**354**	*i* P	**P**	**22 29 04.4**	**-1.0**
NOR				IAmb	IAmb	22 29 15.8	
	comp=Z,25nm,1.9s						
DAWY	**Dawson**	**80.69**	**26**	P	**P**	**22 29 08.5**	**+0.9**
DAWY				IAmb	IAmb	22 29 19.3	
	comp=Z,3.6nm,1.1s						
BURAR	**Bucovina Array**	**81.11**	**317**	P	**P**	**22 29 10.7**	**+0.4**
BURAR				IAmb	IAmb	22 29 11.5	
	comp=Z,2.6nm,0.6s						
BUR08	**Bucovina Ar. S**	**81.12**	**317**	P	**P**	**22 29 10.8**	**+0.5**
BUR08				IAmb	IAmb	22 29 11.7	
	comp=Z,3.2nm,0.7s						
MLR	**Muntele Rosu**	**81.13**	**315**	P	**P**	**22 29 10.6**	**+0.2**
INK	**Inuvik**	**81.53**	**21**	P	**P**	**22 29 11.6**	**-0.3**
EUNU	**Eureka**	**83.24**	**4**	P	**P**	**22 29 20.2**	**-0.5**
FARO	**Faro, Yukon**	**83.90**	**27**	P	**P**	**22 29 25.0**	**+0.6**
FARO				IAmb	IAmb	22 29 26.2	
	comp=Z,5.3nm,1.0s						
DAG	**Danmarks Havn**	**84.22**	**351**	*i* P	**P**	**22 29 24.0**	**-1.7**
NC405	**NORSAR Array S**	**84.42**	**332**	P	**P**	**22 29 26.4**	**-0.6**
NB2	**NORSAR Subarra**	**84.67**	**332**	P	**P**	**22 29 27.6**	**-0.7**
	comp=Z,2.7nm,0.8s,baz=68,slow=4.6						
NOA	**NORSAR Array B**	**84.67**	**332**	P	**P**	**22 29 27.0**	**-1.3**
	comp=Z,0.9nm,0.6s,baz=68,slow=4.7,SNR=6.5						
NOA				LR	LR	23 07 45.0	
	comp=Z,19nm,18.5s,baz=20,slow=36						
	comp=Z,0.9nm,0.6s						
BSD	**Bornholm Skovb**	**85.08**	**326**	*e*P	**P**	**22 29 27.7**	**-2.7**
FNA	**Florina**	**85.60**	**311**	P	**P**	**22 29 32.1**	**-1.3**
DBG	**Daneborg**	**86.38**	**350**	*i* P	**P**	**22 29 36.0**	**-0.5**
NEEM	**North Greenlan**	**86.65**	**358**	*i* P	**P**	**22 29 38.4**	**+0.2**
RES	**Resolute Bay**	**87.06**	**9**	P	**P**	**22 29 39.0**	**-0.8**
RES				IAmb	IAmb	22 29 40.8	
	comp=Z,3.8nm,1.0s						
WTTA	**Wattenberg**	**89.95**	**320**	*i* P	**P**	**22 29 53.9**	**-0.4**
	comp=Z,4.3nm,1.0s						
SQTA	**Sankt Quirin**	**90.24**	**320**	*i* P	**P**	**22 29 55.4**	**-0.2**
	comp=Z,2.5nm,0.7s						
DAVA	**Damuels**	**91.03**	**320**	*i* PcP	**PcP**	**22 29 60.0**	**-0.3**
	comp=Z,7.2nm,1.2s						
YKA	**Yellowknife Ar**	**91.25**	**22**	P	**P**	**22 29 59.5**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=313,slow=4.4,SNR=16						
	comp=Z,0.8nm,0.8s						
PLCA	**Paso Flores**	**153.84**	**163**	PKPbc	**PKiKP**	**22 36 55.1**	**+1.0**
	comp=Z,2.0nm,0.8s,baz=189,slow=4.8,SNR=4.2						

HLW ***25*** *22:51:03.7, 30°.27N×31°.95E, h5^{km}±1^{km}, Md2.7*
GII ***25*** *22:51:05.4±0.0, 30°.44N×31°.73E, h31^{km}, MD3.1/4, Mm3.2/4*
ISC 25 22:51:02.5±1.4, **30°.35N**±0°.05×**31°.92E**±0°.03, **h8**^{km}±11^{km}, **n39**, σ**0^s.78**/55, **Egypt**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HHAG	**Hagoal**	**0.43**	**158**	P	**Pg**	**22 51 10.8**	**0.0**
	baz=158						
HHAG				S	**Sg**	**22 51 15.7**	**-0.8**
	baz=158						
KOT	**Kottamia**	**0.43**	**190**	P	**Pg**	**22 51 11.0**	**+0.1**
	baz=198						
KOT				S	**Sg**	**22 51 16.3**	**-0.3**
	baz=198						
HLW	**Helwan**	**0.70**	**225**	P	**Pg**	**22 51 16.3**	**+0.3**
	baz=233						
GLL	**Jalalah**	**0.80**	**193**	P	**Pg**	**22 51 17.4**	**-0.3**
	baz=198						
HSAF	**As Saff**	**0.80**	**203**	P	**Pg**	**22 51 17.5**	**-0.3**
	baz=209						
SUZ	**Suez**	**0.94**	**123**	P	**Pg**	**22 51 20.5**	**-0.1**
	baz=119						
SUZ				S	**Sg**	**22 51 33.1**	**+0.2**
	baz=119						
HMYD	**Mayadein**	**1.11**	**240**	P	**Pn**	**22 51 24.6**	**+0.2**
	baz=245						
ZAF	**Zafarana**	**1.20**	**153**	P	**Pn**	**22 51 24.5**	**-1.0**
	baz=152						
ZNM	**Zenema**	**1.28**	**139**	P	**Pn**	**22 51 26.3**	**-0.4**
	baz=137						
HNAT	**Natroun**	**1.34**	**238**	P	**Pg**	**22 51 28.0**	**-0.1**
	baz=242						
HNAT				S	**Sg**	**22 51 46.3**	**+0.9**
	baz=242						
NBNS	**Bani Suef**	**1.81**	**198**	P	**Pn**	**22 51 34.2**	**+0.2**
	baz=200						
RYAN	**Fayoum**	**1.91**	**229**	P	**Pn**	**22 51 35.7**	**+0.4**
	baz=232						
KZIT	**Kziot**	**2.21**	**75**	Pn	**Pn**	**22 51 40.4**	**+1.0**
KZIT				Sn	**Sn**	**22 52 07.7**	**+0.8**
GRB	**Gharib**	**2.21**	**160**	P	**Pn**	**22 51 38.8**	**-0.7**
	baz=159						
KRMI	**Paran Flat**	**2.44**	**95**	Pn	**Pn**	**22 51 43.6**	**+0.9**
KRMI				Sn	**Sn**	**22 52 13.3**	**+0.5**
TR2	**Tor 2**	**2.52**	**141**	P	**Pn**	**22 51 43.2**	**-0.5**
	baz=140						
HKAT	**Jabal Katrina**	**2.57**	**135**	P	**Pn**	**22 51 44.1**	**-0.5**
	baz=133						
MBRI	**Mt Berech**	**2.66**	**101**	Pn	**Pn**	**22 51 47.0**	**+1.3**
PRNI	**Paran**	**2.67**	**89**	Pn	**Pn**	**22 51 46.4**	**+0.6**
PRNI				Sn	**Sn**	**22 52 19.0**	**+0.6**
HBST	**Basata**	**2.70**	**114**	P	**Pn**	**22 51 46.4**	**+0.3**
	baz=112						
EIL	**Elat**	**2.72**	**104**	Pn	**Pn**	**22 51 46.5**	**0.0**
EIL				Sn	**Sn**	**22 52 20.2**	**+0.6**
HRFI	**Mount Harif**	**2.72**	**96**	Pn	**Pn**	**22 51 47.0**	**+0.5**
HRFI				Sn	**Sn**	**22 52 20.9**	**+1.3**
TAMRE	**El Minia**	**2.80**	**198**	P	**Pn**	**22 51 48.0**	**+0.4**
	baz=200						
ZFRI	**Zfri**	**2.82**	**85**	Pn	**Pn**	**22 51 48.2**	**+0.3**
ZFRI				Sn	**Sn**	**22 52 22.8**	**+0.7**
AMAZ	**Amatzia**	**2.83**	**65**	Pn	**Pn**	**22 51 48.0**	**0.0**
AMAZ				Sn	**Sn**	**22 52 21.8**	**-0.6**
HDHB	**Dhahab**	**2.86**	**124**	P	**Pn**	**22 51 48.6**	**+0.2**
	baz=122						
YTIR	**Yattir**	**2.93**	**69**	Pn	**Pn**	**22 51 49.9**	**+0.5**
YTIR				Sn	**Sn**	**22 52 24.8**	**-0.1**
TR1	**Tor 1**	**2.94**	**142**	P	**Pn**	**22 51 49.0**	**-0.5**
	baz=141						
ASUT		**2.96**	**186**	P	**Pn**	**22 51 49.9**	**+0.1**
	baz=187						
DSI	**Dead Sea**	**3.21**	**67**	Pn	**Pn**	**22 51 54.2**	**+0.9**
SLTI	**Sal'it**	**3.27**	**54**	Pn	**Pn**	**22 51 54.5**	**+0.5**
GHAJ	**Ghor Haditha**	**3.28**	**72**	Pn	**Pn**	**22 51 54.9**	**+0.8**
HHRG	**Al Ghardaqah**	**3.44**	**155**	P	**Pn**	**22 51 58.3**	**+1.8**
	baz=155						
HMDT	**Nahal Hemdat**	**3.62**	**58**	Pn	**Pn**	**22 51 58.9**	**0.0**
HMDT				Sn	**Sn**	**22 52 40.5**	**-1.4**
MMLI	**Mount Malkishu**	**3.65**	**54**	Pn	**Pn**	**22 51 59.7**	**+0.4**
MMLI				Sn	**Sn**	**22 52 40.8**	**-1.7**
MMC7	**Mount Meron ar**	**3.98**	**47**	Pn	**Pn**	**22 52 04.1**	**+0.2**
GEM	**Giv'at Ha'Em**	**4.28**	**47**	Pn	**Pn**	**22 52 08.0**	**+0.1**
GEM				Sn	**Sn**	**22 52 56.0**	**-2.0**
NATI	**Neve Ativ**	**4.36**	**47**	Pn	**Pn**	**22 52 09.8**	**+0.8**
NATI				Sn	**Sn**	**22 52 58.2**	**-1.7**
HFRF	**Wahat Farafira**	**4.50**	**226**	P	**Pn**	**22 52 10.8**	**-0.1**
	baz=227						

BUC 25 23:17:09.4±0.2, **45°.51N**×**27°.63E**, **h11**^{km}±1^{km}, **ml1.1**/10, **19C-13D, Error ellipse: s-maj=2.1km s-min=1.0km az=31.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUDR		**0.08**	**19**	⇑P	Pg	23 17 11.9	0.0
TUDR				⇑S	Sg	23 17 13.6	-0.1
TUDR		**0.08**	**19**	⇑P	Pg	23 17 12.8	+0.9
TUDR				⇓S	Sg	23 17 15.1	+1.4
IZVR	**Izvoarele**	**0.10**	**73**	⇓P	Pg	23 17 11.8	-0.3
IZVR				⇑S	Sg	23 17 14.4	+0.4
IZVR	**Izvoarele**	**0.10**	**73**	⇑P	Pg	23 17 12.6	+0.6
IZVR				⇑S	Sg	23 17 15.4	+1.3
SLCR	**Slobozia Conac**	**0.12**	**52**	⇓P	Pg	23 17 12.4	0.0
SLCR				⇓S	Sg	23 17 14.4	-0.2
SLCR	**Slobozia Conac**	**0.12**	**52**	⇓P	Pg	23 17 13.0	+0.6
SLCR				⇑S	Sg	23 17 15.4	+0.8
SCHL	**Schela**	**0.14**	**95**	⇓S	Sg	23 17 15.7	+0.7
SCHL	**Schela**	**0.14**	**95**	⇑S	Sg	23 17 16.9	+1.9
SCTR	**Scanteiesti**	**0.30**	**58**	⇑P	Pg	23 17 15.4	-0.1
SCTR				⇑S	Sg	23 17 20.3	+0.7
ODBI	**Odobesti**	**0.47**	**302**	⇓P	Pg	23 17 18.8	+0.1
ODBI				⇓S	Sg	23 17 25.2	+0.3
ODBI	**Odobesti**	**0.47**	**302**	⇓P	Pn	23 17 21.3	-0.8
ODBI				⇑S	Sb	23 17 26.9	+0.1
CFR	**Carcaliu**	**0.49**	**133**	⇓P	Pg	23 17 18.8	-0.2
CFR				⇑S	Sg	23 17 26.2	+0.8
CFR	**Carcaliu**	**0.49**	**133**	⇓P	Pn	23 17 22.1	-0.2
CFR				⇑S	Sb	23 17 28.3	+1.1
VRI	**Vrincioaia**	**0.72**	**299**	⇑P	Pb	23 17 23.9	-0.2
HARR	**Harsova**	**0.85**	**165**	⇑P	Pg	23 17 25.9	+0.2
TPGR	**Topolog**	**0.86**	**139**	⇑P	Pb	23 17 26.5	+0.1
TPGR				⇓S	Sb	23 17 37.9	0.0
TLCR		**0.90**	**111**	⇑P	Pb	23 17 27.1	+0.2
TLCR				⇑S	Sb	23 17 39.0	+0.1
TIRR	**Tirgusor**	**1.19**	**152**	⇑P	Pb	23 17 31.7	-0.3
TIRR				⇓S	Sn	23 17 48.1	0.0

IDC 25 23:34:44.3±3.3, **23°.38N**×**143°.36E**, **h0**^{km}, **mb3.5**/3, **mbtmp3.6**/4, **ML3.6**/1, **Error ellipse: s-maj=146.7km**

s-min=27.6km az=82.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	3.85	344	Pn	Pn	23 35 44.5	-0.3
	4.6nm,0.3s,baz=300,slow=20,SNR=2.3						
JCJ				Sn	Sn	23 36 27.2	-3.5
	9.1nm,0.3s,baz=312,slow=22,SNR=1.7						
	83nm,0.9s						
WRA	Warramunga Arr	43.95	192	P	P	23 42 53.1	-0.2
	0.4nm,0.8s,baz=20,slow=7.6,SNR=9.6						
	0.4nm,0.8s						
MKAR	Makanchi Array	53.69	312	P	P	23 44 07.1	-0.9
	0.1nm,0.4s,baz=99,slow=8.9,SNR=4.3						
	0.1nm,0.4s						
FINES	FINESS Array B	81.74	334	P	P	23 47 05.7	+1.1
	1.1nm,0.8s,baz=35,slow=5.1,SNR=1.5						
	1.1nm,0.8s						

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*NOU **25** 23:44:33.9, 12°.81S×167°.44E, h187^{km}, mb4.2/19, Santa Cruz Islands*

*IDC **25** 23:44:36.5±0.7, 13°.27S×167°.12E, h184^{km}±5^{km}, mb3.8/18, mbtmp4.3/22, MS3.5/5, Error ellipse: s-maj=17.0km s-min=10.9km az=122.0*

*GCMT **25** 23:44:37.8±0.4, 13°.27S±0°.04×167°.03E±0°.03, h197^{km}±4^{km}, MW4.9/77, Moment Tensor Solution. s20,c22; s77,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.77±.14; $M_{\theta\theta}$-0.44±.20; $M_{\phi\phi}$-1.33±.19; $M_{r\theta}$-0.44±.13; $M_{\theta\phi}$-1.05±.17; $M_{\phi r}$-2.13±.12; Best double couple: $M_0$2.89400×10^{16} NP1:ϕ_s197.00000°,δ70.00000°,λ77.00000°. NP2: ϕ_s51.00000°,δ24.00000°,λ122.00000°. Principal axes: T 2.8570, Plg63.0000°, Azm87.0000°; N 0.0780, Plg12.0000°, Azm201.0000°; P -2.9310, Plg24.0000°, Azm297.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **25** 23:44:38.9±1.4, 13°.3S±0°.1×167°.2E±0°.1, h203^{km}±8^{km}, mb4.5/27 Error ellipse: s-maj=17.5km s-min=15.5km az=89.0*

ISC 25 23:44:38.0±0.4, **13°.24S**±0°.06×**167°.15E**±0°.07, **h200**^{km}, **n80**, σ**1^s.32**/87, **mb4.3**/30, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	4.57	167	P	Pn	23 45 46.1	-0.8
KOUNC	Koumac, New Ca	7.77	200	Pn	Pn	23 46 29.2	+1.0
KOUNC	Koumac, New Ca	7.77	200	P	Pn	23 46 31.7	+3.5
HNR	Honiara	8.01	297	LR	LR	23 48 37.8	
	comp=Z,2µm,21.4s,baz=132,slow=30						
YATNC	Mamie plateau,	8.78	182	P	Pn	23 46 43.2	+1.9
DZM	Mont Dzumac	8.81	184	P	Pn	23 46 39.9	-2.0
	3.2nm,0.7s,baz=172,slow=20,SNR=11						
DZM				S	Sn	23 48 21.9	+1.1
	1.7nm,0.3s,baz=150,slow=22,SNR=1.3						
DZM				LR	LR	23 49 46.0	
	comp=Z,73nm,19.8s,baz=358,slow=35						
DZM	Mont Dzumac	8.81	184	Pn	Pn	23 46 41.7	-0.2
DZM	Mont Dzumac	8.81	184	P	Pn	23 46 43.7	+1.9
NOUC	Port Laguerre	8.85	185	P	Pn	23 46 44.7	+2.4
ONTNC	Ouen Toro	9.04	184	Pn	Pn	23 46 44.5	-0.3
OUENC	Ouen Island, N	9.13	182	Pn	Pn	23 46 46.0	0.0
OUENC	Ouen Island, N	9.13	182	P	Pn	23 46 48.1	+2.1
MSVF	Nonsavu	11.42	114	P	Pn	23 47 15.9	+0.4
	3.4nm,0.7s,baz=146,slow=19,SNR=2.8						
MSVF	Nonsavu	11.42	114		Pn	23 47 15.8	+0.2
MSVF	Nonsavu	11.42	114	P	Pn	23 47 11.1	-4.5
RABL	Rabaul	17.31	300	P	P	23 48 25.9	-0.6
KRVT	Keravat (AS076	17.37	299	P	P	23 48 27.0	-0.1
	17nm,0.4s,baz=337,slow=17,SNR=3.7						
KRVT				LR	LR	23 55 23.1	
	comp=Z,100nm,20.5s,baz=265,slow=37						
EIDS	Eidsvold	19.35	229	P	P	23 48 48.3	-0.2
EIDS				IAmb	IAmb	23 49 00.2	
	comp=Z,25nm,1.4s						
PMG	Port Moresby	19.96	279	P	P	23 48 55.2	+0.1
	comp=Z,42nm,0.9s,baz=112,slow=4.9,SNR=9.4						
PMG	Port Moresby	19.96	279	P	P	23 48 55.3	+0.1
TV1H	Townsville Har	20.43	250	P	P	23 49 02.1	+2.1
CTA	Charters Tower	21.13	248	P	P	23 49 07.2	-0.3
	comp=Z,13nm,0.8s,baz=74,slow=10.0,SNR=11						
	comp=Z,13nm,0.8s						
CTAO	Charters Tower	21.13	248	P	P	23 49 07.6	+0.1
CTAO				IAmb	IAmb	23 49 10.0	
	comp=Z,21nm,0.8s						
CTAO	Charters Tower	21.13	248	P	P	23 49 07.9	+0.4
RMQ	Roma	21.70	230	P	P	23 49 14.0	+0.6
ARMA	Armidale	22.31	218	P	P	23 49 19.6	+0.4
ARMA				IAmb	IAmb	23 49 26.3	
	comp=Z,16nm,1.5s						
COEN	Coen	23.31	265	P	P	23 49 29.3	+0.9
COEN	Coen	23.31	265	P	P	23 49 30.2	+1.9
RTZ	Ruatahuna	26.74	163	P	P	23 49 58.9	-0.2
RTZ				IAmb	IAmb	23 50 16.8	
	comp=Z,12nm,1.1s						
BKZ	Black Stump Fm	27.11	164	P	P	23 50 02.3	-0.1
MRZ	Mangatainoka R	28.30	166	P	P	23 50 12.7	-0.1
STKA	Stephens Creek	29.89	227	P	P	23 50 27.0	-0.1
	comp=Z,4.9nm,0.6s,baz=42,slow=8.0,SNR=14						
STKA				LR	LR	00 01 13.4	
	comp=Z,125nm,18.4s,baz=243,slow=33						
	comp=Z,4.9nm,0.6s						
STKA	Stephens Creek	29.89	227	P	P	23 50 27.5	+0.5
TOO	Toolangi	30.99	215	P	P	23 50 35.8	-0.9
TOO				IAmb	IAmb	23 51 01.6	
	comp=Z,12nm,1.5s						
WB0	Warramunga Arr	32.03	254	P	P	23 50 45.3	-0.7
WB0				IAmb	IAmb	23 50 46.1	
	comp=Z,12nm,1.0s						
WRAB	Tennant Creek	32.09	254	P	P	23 50 45.5	-1.0
WB1	Warramunga Ar.	32.10	254	P	P	23 50 46.0	-0.6
WRA	Warramunga Arr	32.10	254	P	P	23 50 45.5	-1.1
	comp=Z,7.0nm,0.9s,baz=84,slow=9.0,SNR=39						
WRA				pP	pP	23 51 23.2	-3.7
	comp=Z,2.9nm,0.8s,baz=85,slow=8.7,SNR=4.5						
WRA				ScP	ScP	23 56 56.7	+0.9
	comp=Z,3.3nm,1.0s,baz=84,slow=3.2,SNR=13						
	comp=Z,7.0nm,0.9s						
WRA	Warramunga Arr	32.10	254	P	P	23 50 45.3	-1.4
AS31	Alice Springs	33.12	247	P	P	23 50 54.4	-1.1
ASAR	Alice Springs	33.12	247	P	P	23 50 54.4	-1.1
	comp=Z,4.2nm,0.6s,baz=75,slow=9.2,SNR=83						
ASAR				pP	pP	23 51 34.6	-1.5
	comp=Z,2.3nm,0.8s,baz=74,slow=9.7,SNR=2.6						
ASAR				S	S	23 55 57.9	-2.1
	comp=Z,1.0nm,1.0s,baz=73,slow=17,SNR=5.0						
ASAR				ScP	ScP	23 57 01.3	+2.0
	comp=Z,3.8nm,0.9s,baz=82,slow=3.3,SNR=20						
	comp=Z,4.2nm,0.6s						
BBOO	Buckleboo	34.41	230	P	P	23 51 05.6	-0.9
BBOO				IAmb	IAmb	23 51 34.8	
	comp=Z,16nm,1.2s						
KNRA	Kununurra	37.22	261	P	P	23 51 30.4	0.0
FORT	Forrest	39.97	238	P	P	23 51 52.5	-0.7
FORT				IAmb	IAmb	23 51 53.9	
	comp=Z,22nm,0.8s						
FITZ	Fitzroy Crossi	40.20	258	P	P	23 51 54.9	-0.3
PSA00	Pilbara Seismi	45.75	253	P	P	23 52 39.5	-0.3
PSA00				IAmb	IAmb	23 52 41.3	
	comp=Z,15nm,1.4s						
PSA00	Pilbara Seismi	45.75	253	P	P	23 52 40.1	+0.4
PSA00				IAmb	IAmb	23 52 41.2	
	comp=Z,16nm,1.0s						
DAV	Davao City (W)	45.95	294	LR	LR	00 10 00.1	
	comp=Z,62nm,19.8s,baz=333,slow=33						
TOLI2	Tolitoli	48.13	284	P	P	23 52 58.3	0.0
TOLI2				IAmb	IAmb	23 52 58.7	
	comp=Z,14nm,1.0s						
PLAI	Plampang	48.60	270	P	P	23 53 02.0	+0.2
MJAR	Matsushiro Arr	56.54	332	P	P	23 53 59.1	-0.5
	comp=Z,2.2nm,0.8s,baz=163,slow=8.6,SNR=6.5						
	comp=Z,2.2nm,0.8s						
JNU	Nakatsue	57.65	324	P	P	23 54 08.0	+0.5
	comp=Z,8.6nm,0.9s,baz=143,slow=5.1,SNR=3.0						
	comp=Z,8.6nm,0.9s						
JKA	Kamikawa-asahi	61.31	340	P	P	23 54 32.9	+0.6
JKA				IAmb	IAmb	23 54 40.6	
	comp=Z,15nm,1.3s						
ASAJ	Asahikawa	61.31	340	P	P	23 54 33.7	+1.5
	comp=Z,3.3nm,0.7s,baz=211,slow=5.9,SNR=5.5						
	comp=Z,3.3nm,0.7s						
KSRS	Korea Array	62.45	325	P	P	23 54 39.8	-0.2
	comp=Z,1.1nm,0.8s,baz=151,slow=8.2,SNR=2.9						
	comp=Z,1.1nm,0.8s						
USRK	Ussuriysk Ar.	65.51	333	P	P	23 55 01.7	+1.9
	comp=Z,2.1nm,0.7s,baz=132,slow=4.3,SNR=4.7						
	comp=Z,2.1nm,0.7s						
USRK	Ussuriysk Ar.	65.51	333	P	P	23 55 01.3	+1.5
PEA0B	Petropavlovsk-	66.58	354	P	P	23 55 07.9	+1.5
PETK	Petropavlovsk-	66.58	354	P	P	23 55 07.5	+1.1
	comp=Z,4.2nm,0.8s,baz=168,slow=7.4,SNR=4.7						
	comp=Z,4.2nm,0.8s						
PETK	Petropavlovsk-	66.58	354	P	P	23 55 07.7	+1.3
KLR	Kul'dur	69.61	336	P	P	23 55 26.6	+1.3
	comp=Z,0.7nm,0.6s,baz=146,slow=6.2,SNR=4.3						
	comp=Z,0.7nm,0.6s						
CMAR	Chiang Mai Arr	74.24	294	P	P	23 55 53.3	-0.3
	comp=Z,1.2nm,0.4s,baz=126,slow=4.6,SNR=10						
	comp=Z,1.2nm,0.4s						
CMAR	Chiang Mai Arr	74.24	294	P	P	23 55 54.6	+1.1
QSPA	South Pole Qui	76.78	180	P	P	23 56 07.5	+0.2
QSPA				IAmb	IAmb	23 56 09.1	
	comp=Z,11nm,1.1s						
SEY	Seymchan	76.80	353	P	P	23 56 07.7	+0.6
	comp=Z,4.8nm,0.8s,baz=154,slow=5.6,SNR=14						
	comp=Z,4.8nm,0.8s						
BILL	Bilibino	81.06	360		P	23 56 31.2	+1.0
BILL				IAmb	IAmb	23 56 32.1	
	comp=Z,10nm,1.2s						
SONM	Songino Array	81.24	324	P	P	23 56 32.6	+0.8
	comp=Z,0.6nm,0.8s,baz=122,slow=4.0,SNR=5.0						
SONM				pP	pP	23 57 17.8	-1.9
	comp=Z,0.7nm,0.9s,baz=124,slow=8.0,SNR=3.4						
	comp=Z,0.6nm,0.8s						
SONM	Songino Array	81.24	324	P	P	23 56 33.4	+1.6
H21K	Melozitna Rive	84.15	16	P	P	23 56 47.3	+1.1
H21K				IAmb	IAmb	23 56 48.7	
	comp=Z,6.5nm,1.2s						
IMAR	Indian Mountai	84.17	15	P	P	23 56 46.9	+0.7
WRH	Wood River Hil	84.58	18	P	P	23 56 48.2	-0.2
ILAR	Eielson Array	85.15	18	P	P	23 56 50.8	-0.4
	comp=Z,1.1nm,0.4s,baz=242,slow=5.0,SNR=26						
ILAR				pP	pP	23 57 37.3	-2.2
	comp=Z,6.5nm,1.0s,baz=233,slow=6.0,SNR=13						
	comp=Z,1.1nm,0.4s						
MKAR	Makanchi Array	96.05	317	P	P	23 57 42.7	0.0
	comp=Z,0.8nm,0.7s,baz=95,slow=6.6,SNR=11						
MKAR				pP	pP	23 58 28.3	-3.5
	comp=Z,1.1nm,0.8s,baz=98,slow=5.2,SNR=6.0						
	comp=Z,0.8nm,0.7s						
ZALV	Zalesovo Beam	96.13	324	P	P	23 57 42.3	-0.4
	comp=Z,0.6nm,0.6s,baz=119,slow=1.9,SNR=4.3						
	comp=Z,0.6nm,0.6s						
YKA	Yellowknife Ar	96.28	27	P	P	23 57 42.4	-0.8
	comp=Z,0.5nm,1.0s,baz=263,slow=5.2,SNR=5.5						
YKA				pP	pP	23 58 28.5	-3.6
	comp=Z,1.1nm,0.9s,baz=253,slow=4.7,SNR=9.3						
	comp=Z,0.5nm,1.0s						
FINES	FINESS Array B	124.30	339	PKP	PKPdf	00 03 12.7	+0.1
	comp=Z,1.4nm,0.7s,baz=80,slow=3.6,SNR=7.4						
BRTR	Keskin Array B	131.44	312	SKPbc	SKPab	00 06 36.0	+1.8
	comp=Z,1.0nm,1.0s,baz=22,slow=4.0,SNR=5.3						
GERES	GERESS Array B	138.27	334	PKhKP	PKPpre	00 03 36.0	
	comp=Z,0.3nm,0.5s,baz=56,slow=2.5,SNR=1.8						
GERES				SKPbc	SKPbc	00 06 57.0	+1.9
	comp=Z,0.6nm,0.8s,baz=35,slow=4.9,SNR=5.2						
KEST	Kesra	149.98	322	PKPbc	PKPbc	00 04 05.4	+0.2
	comp=Z,6.3nm,1.0s,baz=187,slow=1.6,SNR=8.3						
ESDC	Sonseca Array	152.53	345	PKPbc	PKiKP	00 04 11.3	+0.1
	comp=Z,1.7nm,0.8s,baz=3.3,slow=3.3,SNR=11						

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*IDC **26** 00:06:23.9±0.8, 36°.17N×69°.13E, h0^{km}, mb3.8/15, mbtmp3.8/21, ML3.7/6, MS3.0/7, Error ellipse: s-maj=18.6km s-min=14.3km az=173.0*

*NNC **26** 00:06:30.3±4.0, 36°.88N×68°.62E, h0^{km}, mb4.3, mpv4.2, Error ellipse: s-maj=42.7km s-min=18.9km az=151.0*

*MOS **26** 00:06:30.7±1.3, 36°.47N×69°.17E, h55^{km}, mb4.2/12, Error ellipse: s-maj=9.8km s-min=5.2km az=78.1*

*NEIC **26** 00:06:32.5±1.8, 36°.47N±0°.05×69°.09E±0°.06, h58^{km}±7^{km}, mb4.2/21, Error ellipse: s-maj=7.6km s-min=6.3km az=213.0*

ISC 26 00:06:30.7±0.4, **36°.38N**±0°.04×**69°.06E**±0°.04, **h50**^{km}, **n142**, σ**2^s.48**/163, **mb4.0**/31, **MS3.3**/5, **10C-9D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	1.83	180		Pn	00 07 03.2	+3.2
KBL	Kabul	1.83	180	PN	Pn	00 07 03.2	+3.2
CHGR	Chuyangaron	2.28	2		Pn	00 07 06.2	+0.2
CHGR	Chuyangaron	2.28	2	PN	Pn	00 07 06.2	+0.2
GAR	Garm	2.80	20		Pn	00 07 13.7	+0.5
CEP	Cherat	3.46	137	P	Pn	00 07 27.4	+5.2
CEP				S	Sn	00 08 11.0	+9.1
BTK	Batken	3.93	20		Pn	00 07 30.5	+1.9
BTK	Batken	3.93	20	PN	Pn	00 07 30.5	+1.9
THW	Thamme Wali	4.20	147	P	Pn	00 07 35.8	+3.5
NIL	Nilore	4.39	127	Pn	Pn	00 07 37.9	+3.1
NIL	Nilore	4.39	127	PN	Pn	00 07 37.9	+3.1
CHCP	Chirah Chowk	4.39	127	P	Pn	00 07 38.5	+3.6
IUG	Iuzhnay	5.81	7	Pg	Pn	00 07 55.1	+0.7
	24nm,0.2s						
IUG				Lg	Lg	00 08 57.5	
	94nm,0.3s						
KSH	Kashi	6.30	58	P	Pn	00 07 58.0	-3.1
KSH				pP		00 08 01.5	
KSH				S	Sn	00 09 01.5	-10
KSH				pmax	pmax		
	comp=Z,67nm,0.8s						
THN	Thein Dam	6.76	124	*e*P	Pn	00 08 10.4	+3.0
THN				*e*S	Sn	00 09 27.3	+4.2
THN				IAML		00 09 30.4	
	comp=N,71nm,0.3s						
THN				IAML		00 09 31.2	
	comp=E,72nm,0.3s						
AML	Almayashu	6.78	31	P	Pn	00 08 08.3	+0.4
	SNR=90						
KK31	Karatay Array	6.81	9	Pn	Pn	00 08 08.2	+0.2
KK31	Karatay Array	6.81	9	P	Pn	00 08 07.3	-0.7
	comp=E,1.6nm,0.2s,baz=202,slow=16,SNR=126						
KK31				⇑S	Sn	00 09 19.0	-5.2
	comp=E,10nm,0.5s,baz=199,slow=26,SNR=8.0						
KK31	Karatay Array	6.81	9	PN	Pn	00 08 08.2	+0.2
KKAR	Karatay Array	6.81	9	Pn	Pn	00 08 07.8	-0.1
KKAR	Karatay Array	6.81	9	PN	Pn	00 08 07.9	-0.1
MRKS	Merke	7.13	26	Lg	Lg	00 09 30.4	
	comp=E,26nm,0.4s						
UCH	Uchtor	7.21	34	P	Pn	00 08 14.6	+0.7
	SNR=87						
EKS2	Erkin-Say	7.26	29	P	Pn	00 08 15.2	+0.9
	SNR=9.1						
AAK	Ala-Archa	7.53	32	P	Pn	00 08 18.8	+0.8
	SNR=24						
AAK	Ala-Archa	7.53	32	Pn	Pn	00 08 18.6	+0.6
	comp=E,5.4nm,0.3s,baz=196,slow=5.5,SNR=79						
AAK				Sn	Sn	00 09 40.9	-1.2
	comp=E,2.9nm,0.3s,baz=155,slow=22,SNR=7.4						
AAK				LR	LR	00 12 02.5	
	comp=E,92nm,21.1s,baz=184,slow=44						
	comp=E,11nm,0.3s						
AAK	Ala-Archa	7.53	32	Pn	Pn	00 08 18.3	+0.3
FRU1	Bishkek	7.73	32	Pn	Pn	00 08 21.1	+0.4
FRU1	Bishkek	7.73	32	P	Pn	00 08 21.1	+0.4
KBK	Karagaybulak	7.75	34	P	Pn	00 08 22.3	+1.3
	SNR=36						
BHK	Bhakra	7.87	127	*e*S	Sn	00 09 52.2	+2.0
BHK				IAML		00 09 55.9	
	comp=E,72nm,0.4s						
CHMS	Chumysh	7.94	32	P	Pn	00 08 23.6	+0.2
	SNR=22						
USP	Ospenovka	8.05	30	P	Pn	00 08 24.9	-0.1
	SNR=42						
ULHL	Ulahol	8.08	41	P	Pn	00 08 25.9	+0.3
	SNR=16						
BOOM	Boomskoye usch	8.10	39		Pn	00 08 26.1	+0.3
BOOM	Boomskoye usch	8.10	39	P	Pn	00 08 26.1	+0.3
SGDS	Sogindy	8.26	29	Pg	Pn	00 08 27.5	-0.4
	comp=E,10nm,0.5s						
SGDS				Lg	Lg	00 09 58.6	
	comp=E,31nm,0.6s						
KST	Kastek	8.52	37	Pg	Pn	00 08 31.8	+0.3
	comp=E,5.2nm,0.5s						
KST				Lg	Lg	00 10 05.7	
	comp=E,9.3nm,1.4s						
KDJ	Kajisay	8.52	45	Pn	Pn	00 08 30.8	-0.8
KDJ	Kajisay	8.52	45	P	Pn	00 08 30.8	-0.8
SMLA	Simla	8.54	125	*e*P	Pn	00 08 34.6	+2.9
SMLA				*e*S	Sn	00 10 07.8	+1.2
SMLA				*e*S	Sn	00 10 08.0	+1.3
SMLA				IAML		00 10 09.5	
	comp=N,62nm,0.3s						
DGS	Degeres	8.58	35	Pg	Pn	00 08 32.0	-0.4
	comp=N,2.7nm,1.0s						
DGS				Lg	Lg	00 10 05.7	
	comp=N,6.5nm,0.8s						
TARG	Taragay, Kyrgy	8.65	49		Pn	00 08 33.0	-0.6
TARG	Taragay, Kyrgy	8.65	49	P	Pn	00 08 33.0	-0.6
GEYT	Alibeck	8.87	283	Pn	Pn	00 08 34.2	-2.1
	comp=N,1.7nm,0.3s,baz=121,slow=10,SNR=15						
GEYT				Sn	Sn	00 10 10.5	-4.4
	comp=N,4.3nm,0.3s,baz=138,slow=20,SNR=5.0						
GEYT				LR	LR	00 12 23.8	
	comp=N,24nm,19.6s,baz=132,slow=40						
	comp=N,2.2nm,0.3s						
GEYT	Alibeck	8.87	283	Pn	Pn	00 08 33.7	-2.6
GYA0B	ALIBECK ARRAY	8.87	283	Pn	Pn	00 08 33.2	-3.0
GYA0B	ALIBECK ARRAY	8.87	283	⇓P	Pn	00 08 32.5	-3.8
GYA0B				⇓S	Sn	00 10 10.9	-4.0
MDOK	Medeo	9.15	40	⇑P	Pn	00 08 40.0	-0.2
	comp=N,11nm,0.6s						
KUDL	Kundal	10.34	140	*e*P	Pn	00 08 57.9	+1.6
KUDL				*e*S	Sn	00 10 45.9	-4.9
KUDL				*e*S	Sn	00 10 46.1	-4.6
JHNI	Jhansi	13.57	141	*e*S	Sn	00 12 02.1	-7.8
MK31	Makanchi Array	14.35	39	Pn	Pn	00 09 48.2	-2.7
MK31	Makanchi Array	14.35	39	*c i*P	Pn	00 09 49.4	-1.5
MKAR	Makanchi Array	14.35	39	Pn	Pn	00 09 48.9	-2.0
	comp=N,0.2nm,0.3s,baz=224,slow=15,SNR=29						
	comp=N,2.4nm,0.8s						
MKAR	Makanchi Array	14.35	39		Pn	00 09 48.6	-2.3
MKAR	Makanchi Array	14.35	39	*e*P	Pn	00 09 49.5	-1.4
PYUN	Piuthan	14.38	121	*e*P	Pn	00 09 49.4	-2.2
	comp=N,20nm,0.5s						
AB31	Akbulak array	14.49	335	P	Pn	00 09 49.1	-3.6
	comp=N,0.7nm,0.3s,baz=152,slow=12,SNR=87						
AB31				⇑S	Sn	00 12 25.6	-6.3
	comp=N,2.9nm,0.5s,baz=150,slow=24,SNR=5.2						
ABKAR	Akbulak array	14.49	335		Pn	00 09 48.9	-3.8
DANN	Dangsing	14.77	119	*e*P	Pn	00 09 53.9	-2.9
	comp=N,7.6nm,0.3s						
BHPL	Bhopal	14.96	149	*e*P	P	00 10 03.9	+0.3
BHPL				*e*S	Sn	00 12 35.2	-8.4
BHPL				*e*S	S	00 12 38.6	-21
GKN	Gorkha	15.60	118	*e*P	Pn	00 10 05.4	-2.0
	comp=N,10nm,0.3s						
KURBB	Kurchatov Arra	15.79	23	Pn	Pn	00 10 06.0	-3.6
	comp=N,0.1nm,0.3s,baz=214,slow=12,SNR=5.0						
KURBB				LR	LR	00 17 14.5	
	comp=N,38nm,20.9s,baz=198,slow=41						
	comp=N,0.6nm,0.3s						
KURK	Kurchatov	15.90	23		Pn	00 10 07.9	-3.1
KURK	Kurchatov	15.90	23	⇑*i*P	P	00 10 13.3	-0.6
KURK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AKTO	Aktyubinsk	16.15	334	Pn	Pn	00 10 12.9	-1.3
	comp=Z,0.3nm,0.3s,baz=139,slow=11,SNR=6.8						
AKTO				Sn	Sn	00 13 03.0	-9.2
	comp=Z,0.2nm,0.3s,baz=211,slow=21,SNR=2.2						
	comp=Z,2.7nm,0.8s						
DMN	Daman	16.16	118	*e*P	Pn	00 10 13.2	-1.5
	comp=Z,8.0nm,0.3s						
PKIN	Phulchoki	16.39	118	*e*P	Pn	00 10 16.1	-1.5
	comp=Z,11nm,0.3s						
PKI	Pulchoki	16.40	118	*e*P	Pn	00 10 15.9	-1.9
	comp=Z,6.9nm,0.3s						
GUN	Gumba	16.54	116	*e*P	Pn	00 10 17.3	-2.3
	comp=Z,12nm,0.4s						
BVA0	Borovoye Array	16.67	3	P	P	00 10 21.4	-1.0
	comp=Z,2.3nm,0.9s,baz=169,slow=11,SNR=17						
BVAR	Borovoye Array	16.67	3	Pn	Pn	00 10 19.6	-1.1
	comp=Z,0.1nm,0.3s,baz=172,slow=11,SNR=12						
BVAR				Sn	Sn	00 13 16.2	-8.6
	baz=188,slow=18,SNR=4.9						
BRVK	Borovoye	16.70	3	Pn	Pn	00 10 19.0	-2.1
BRVK	Borovoye	16.70	3	⇓*e*P	Pn	00 10 19.2	-1.9
JIRN	Jiri	16.91	116	*e*P	Pn	00 10 22.3	-1.9
	comp=Z,18nm,0.3s						
RAMN	Ramite	17.62	117	*e*P	Pn	00 10 31.7	-1.2
	comp=Z,7.4nm,0.4s						
TAPN	Taplejung	18.20	114	*e*P	P	00 10 38.9	-0.9
	comp=Z,7.6nm,0.4s						
DGZ	Jazzator, Alta	18.84	39	⇓*e*P	P	00 10 45.2	-1.4
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GNI	Garni	19.45	289	P	Pn	00 10 53.8	-0.9
	comp=Z,0.1nm,0.3s,baz=90,slow=14,SNR=1.4						
	comp=Z,1.0nm,0.6s						
ZAA0	Zalesovo Array	20.71	27	P	P	00 11 04.5	-2.1
ZAA0				IAmb	IAmb	00 11 12.0	
	comp=Z,3.6nm,0.7s						
ZALV	Zalesovo Beam	20.71	27	P	P	00 11 06.5	-0.1
	comp=Z,1.8nm,0.4s,baz=216,slow=10,SNR=14						
	comp=Z,1.8nm,0.4s						
ZALV	Zalesovo Beam	20.71	27	P	P	00 11 05.0	-1.6
ZALV	Zalesovo Beam	20.71	27	*e*P	P	00 11 06.3	-0.3
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KBZ	Khabaz	21.27	298	⇓*e*P	P	00 11 15.2	+2.5
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.4s						
ARU	Arti	21.28	344	P	P	00 11 13.9	+1.2
	comp=Z,1.2nm,0.4s,baz=154,slow=6.7,SNR=2.5						
	comp=Z,1.2nm,0.4s						
ARU	Arti	21.28	344	P	P	00 11 11.8	-0.9
ARU				IAmb	IAmb	00 11 33.3	
	comp=Z,6.3nm,1.1s						
ARU	Arti	21.28	344	*c i*P	P	00 11 16.0	+3.3
ARU						00 11 36.5	
ARU				S	Sn	00 15 13.6	-2.0
ARU				SS	SnSn	00 15 39.0	+7.7
ARU				pmax	pmax		
	comp=Z,14nm,2.1s						
KVAR	Kislovodsk Arr	21.46	299	P	P	00 11 15.2	+0.3
	comp=Z,1.6nm,0.7s,baz=131,slow=11,SNR=2.3						
	comp=Z,1.6nm,0.7s						
KIV	Kislovodsk	21.47	299	P	P	00 11 15.1	+0.2
KIV	Kislovodsk	21.47	299	*e*P	P	00 11 16.0	+1.0
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BELG	Belogornoye	22.03	323	*i* P	P	00 11 24.3	+3.6
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBN	Obninsk	29.02	321	LR	LR	00 25 19.3	
	comp=Z,18nm,18.4s,baz=194,slow=39						
EIL	Elat	29.26	267	LR	LR	00 25 40.4	
	comp=Z,30nm,18.8s,baz=45,slow=40						
SONM	Songino Array	29.70	56	P	P	00 12 33.2	+1.3
	comp=Z,1.7nm,0.8s,baz=265,slow=9.7,SNR=14						
SONM				LR	LR	00 26 10.6	
	comp=Z,81nm,18.5s,baz=247,slow=40						
	comp=Z,1.7nm,0.8s						
SONM	Songino Array	29.70	56	P	P	00 12 31.7	-0.2
SONM	Songino Array	29.70	56	*e*P	P	00 12 33.7	+1.8
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ULN	Ulaanbaatar	30.14	56	⇓*i*P	P	00 12 36.7	+0.8
ULN				pmax	pmax		
	comp=Z,5.0nm,2.5s						
CMAR	Chiang Mai Arr	31.79	116	*ce*P	P	00 12 49.5	-1.0
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	31.81	309	P	P	00 12 51.8	+1.5
	comp=Z,0.3nm,0.4s,baz=83,slow=6.9,SNR=5.2						
	comp=Z,0.3nm,0.4s						
MNK	Minsk	33.49	316	*i* P	P	00 13 05.9	+0.9
	comp=E,2.0nm,1.1s						
MNK				*i* P	P	00 13 05.9	+0.9
	comp=N,34nm,0.9s						
MNK				*i* P	P	00 13 05.9	+0.9
	comp=Z,4.0nm,1.0s,baz=285						
MNK				*i* pP	pP	00 13 19.0	+0.6
MNK				*i* PP	PnPn	00 14 19.0	+1.6
MNK				*i* S	S	00 18 25.8	+2.7
MNK				*i* sS	sS	00 18 48.4	+2.8
MNK				*i* SS	SnSn	00 20 34.1	+5.3
MNK				*i* LR	LR	00 25 40.3	
MNK				*i* LRM	MLR	00 27 52.5	
	comp=E,5.0nm,17.2s						
MNK				*i* LRM	MLR	00 27 57.6	
	comp=N,361nm,18.5s						
MNK				*i* LRM	MLR	00 28 20.6	
	comp=Z,43nm,15.9s						
MNK	Minsk	33.49	316	*i* P	P	00 13 05.9	+0.9
MNK				*i* *PP	pP	00 13 18.9	+0.6

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MNK                                   i               00 14 19.0
MNK                                   i               00 15 44.8
MNK                                   i S     S       00 18 25.8 +2.7
MNK                                   i *SS   sS      00 18 48.4 +2.8
MNK                                   i SS    SnSn    00 20 34.1 +5.3
MNK                                   i               00 23 26.5
MNK                                    pmax   pmax
       comp=Z,4.0nm,1.0s
MNK                                    pmax   pmax
       comp=N,34nm,0.9s
MNK                                    pmax   pmax
       comp=E,2.0nm,1.1s
MNK                                    MLR    MLR
       comp=E,5.0nm,17.0s
MNK                                    MLR    MLR
       comp=N,361nm,19.0s
MNK                                    MLR    MLR
       comp=Z,43nm,16.0s
NRIK   Noril'sk          34.54  11⇑eP  P      00 13 14.7 +0.7
NRIK                                   pmax   pmax
       comp=Z,8.0nm,3.0s
FINES  FINESS Array B    36.72 327  P  P      00 13 34.0 +1.3
       comp=Z,0.8nm,0.6s,baz=120,slow=8.5,SNR=4.5
       comp=Z,0.8nm,0.6s
FINES  FINESS Array B    36.72 327  P  P      00 13 32.9 +0.2
FINES  FINESS Array B    36.72 327  P  P      00 13 34.0 +1.3
IPM    Ipoh              43.25 130  P  P      00 14 27.8 +0.5
NC303  NORSAR Array S    43.49 324  P  P      00 14 29.6 +0.8
NC303                               IAmb IAmb 00 14 48.7
       comp=Z,6.2nm,1.1s
NB2    NORSAR Subarra    43.54 323  P  P      00 14 30.2 +1.0
       comp=Z,1.3nm,0.7s,baz=99,slow=8.6
NOA    NORSAR Array B    43.54 323  P  P      00 14 30.5 +1.3
       comp=Z,0.6nm,0.7s,baz=100,slow=8.0,SNR=1.7
       comp=Z,0.6nm,0.7s
YAK    Yakutsk           44.98  36⇓eP  P      00 14 41.8 +1.2
YAK                                 pmax pmax
       comp=Z,3.0nm,0.5s
KSRS   Korea Array       46.40  70  P  P      00 14 51.5 -0.7
       comp=Z,0.4nm,0.5s,baz=285,slow=7.3,SNR=2.1
KSRS                                LR   LR   00 37 13.6
       comp=Z,31nm,18.3s,baz=330,slow=40
       comp=Z,0.4nm,0.5s
TIXI   Tiksi             46.48  22  P  P      00 14 53.6 +1.3
       comp=Z,1.9nm,0.4s,baz=270,slow=20,SNR=14
       comp=Z,1.9nm,0.4s
TIXI   Tiksi             46.48  22  P  P      00 14 53.2 +1.0
TIXI                                IAmb IAmb 00 14 54.9
       comp=Z,4.9nm,0.9s
TIXI   Tiksi             46.48  22⇑iP  P      00 14 53.3 +1.0
TIXI                                pmax pmax
       comp=Z,5.0nm,0.8s
KLR    Kul'dur           46.48  53  P  P      00 14 54.5 +1.8
       comp=Z,0.4nm,0.4s,baz=277,slow=3.8,SNR=3.6
       comp=Z,0.4nm,0.4s
KLR    Kul'dur           46.48  53⇑eP  P      00 14 54.3 +1.6
KLR                                 pmax pmax
       comp=Z,6.0nm,2.2s
TOA0   Torodi Ar. Sit    64.15 268  P  P      00 17 00.7 +0.5
TOA0                                IAmb IAmb 00 17 01.8
       comp=Z,2.5nm,0.9s
TORD   Torodi Ar. Bea    64.15 268  P  P      00 17 00.9 +0.6
       comp=Z,1.5nm,0.7s,baz=47,slow=5.9,SNR=11
A36M   Sachs Harbour     71.46   5  P  P      00 17 46.8 +1.4
A36M                                IAmb IAmb 00 17 48.1
       comp=Z,3.1nm,0.8s
IMAR   Indian Mountai    72.76  17  P  P      00 17 53.5 +0.3
BMAR   Burnt Mountain    73.42  13  P  P      00 17 58.7 +1.5
C36M   Paulatuk          74.14   5  P  P      00 18 02.2 +0.9
C36M                                IAmb IAmb 00 18 13.5
       comp=Z,2.1nm,0.7s
INK    Inuvik            74.27   9  P  P      00 18 04.0 +1.9
       comp=Z,0.9nm,0.6s,baz=342,slow=7.5,SNR=7.4
       comp=Z,0.9nm,0.6s
INK    Inuvik            74.27   9  P  P      00 18 03.6 +1.6
INK                                 IAmb IAmb 00 18 04.7
       comp=Z,4.9nm,1.4s
INK    Inuvik            74.27   9  P  P      00 18 04.0 +1.9
COLA   College           75.02  15⇓eP  P      00 18 07.4 +1.0
COLA                                pmax pmax
       comp=Z,3.0nm,0.8s
ILAR   Eielson Array     75.31  15  P  P      00 18 09.4 +1.3
       comp=Z,0.7nm,0.9s,baz=324,slow=3.7,SNR=6.5
       comp=Z,0.7nm,0.9s
ILAR   Eielson Array     75.31  15 eP  P      00 18 09.2 +1.0
ILAR                                pmax pmax
       comp=Z,1.0nm,1.0s
SKT    Skwentna          76.64  18  P  P      00 18 16.1 +0.3
SKT                                 IAmb IAmb 00 18 17.9
       comp=Z,2.9nm,1.1s
RIDG   Independent Ri    76.65  15  P  P      00 18 16.6 +0.8
RIDG                                IAmb IAmb 00 18 36.6
       comp=Z,6.5nm,1.4s
SCM    Sheep Creek Mo    77.79  17  P  P      00 18 23.1 +0.8
SCM    Sheep Creek Mo    77.79  17  P  P      00 18 23.1 +0.8
SCM                                 pmax pmax
       comp=Z,9.0nm,1.2s
BCAR   Beaver Creek A    77.87  14  P  P      00 18 23.9 +1.1
MORW   Morawa            78.66 139  P  P      00 18 28.0 +0.6
YKA    Yellowknife Ar    81.43   2  P  P      00 18 43.3 +1.4
       comp=Z,0.4nm,0.8s,baz=351,slow=4.7,SNR=7.8
       comp=Z,0.4nm,0.8s
WRA    Warramunga Arr    83.27 121  P  P      00 18 51.4 -0.7
       comp=Z,1.1nm,0.9s,baz=322,slow=5.0,SNR=12
       comp=Z,1.1nm,0.9s
WRA    Warramunga Arr    83.27 121  P  P      00 18 50.9 -1.3
WRA    Warramunga Arr    83.27 121 eP  P      00 18 51.9 -0.2
WRA                                 pmax pmax
       comp=Z,1.0nm,0.7s
WRAB   Tennant Creek     83.27 121⇓eP  P      00 18 51.3 -0.8
WRAB                                pmax pmax
       comp=Z,14nm,1.9s
WB2    Warramunga Arr    83.27 121  P  P      00 18 51.3 -0.9
ASAR   Alice Springs     85.48 124  P  P      00 19 02.9 -0.4
       comp=Z,0.5nm,0.5s,baz=306,slow=4.8,SNR=14
       comp=Z,0.5nm,0.5s
ASAR   Alice Springs     85.48 124  P  P      00 19 02.6 -0.7
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*SNET **26** 00:19:57.6±2.1, 12°.49N×88°.26W, h23^{km}, ML4.4*
*INET **26** 00:19:59.6±0.8, 12°.56N×88°.23W, h21^{km}±10^{km}, ML4.5*
*IDC **26** 00:20:01.4±1.6, 12°.87N×87°.92W, h63^{km}±14^{km}, mb3.6/8, mbtmp3.9/11, MS2.9/5, Error ellipse: s-maj=33.3km s-min=10.6km az=45.0*
*NEIC **26** 00:20:01.5±1.4, 12°.66N±0°.06×88°.18W±0°.06, h61^{km}±6^{km}, mb4.3/38, Error ellipse: s-maj=9.6km s-min=6.3km az=221.0*
ISC 26 00:20:00.6±0.8**, 12°.64N**±0°.05×**88°.21W**±0°.04**, h60**^{km}±7^{km}**, n213, σ1^{s}.24**/235**, mb4.3**/26**, 2C-1D, Off coast of central America**

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Code   Station Name        Δ°   AZ°   Phase ID       Time      Res
                                     Op    ISC     h  m  s     ISC
CNCH   Conchagua          0.73  30⇓eP    Pn      00 20 14.5  -0.9
CNCH                                eS    Sn      00 20 26.3  +0.2
LCND   La Caada           0.73  25  eP    Pn      00 20 14.4  -0.9
LCND                                eS    Sn      00 20 25.5  -0.6
ALJI   Alcalda de J       0.77 333  eP    Pn      00 20 14.7  -1.0
ALJI                                eS    Sn      00 20 26.0  -0.8
LCY    Lacayo             0.79 354  eP    Pn      00 20 15.2  -0.8
LCY                                 eS    Sn      00 20 26.4  -1.0
VSM    San Miguel         0.79 355  eP    Pn      00 20 15.5  -0.7
PACA   Pacayal            0.83 352  eP    Pn      00 20 16.1  -0.6
PACA                                eS    Sn      00 20 27.9  -0.6
PACA   Pacayal            0.83 352  eP    Pn      00 20 16.1  -0.6
TECA   Tecapa             0.90 341  eP    Pn      00 20 16.7  -0.8
COEB   Comit de Eme       0.91 340  eP    Pn      00 20 16.7  -1.0
PQSS   Presa 15 de Se     1.04 341  eP    Pn      00 20 18.6  -0.6
PQSS                                eS    Sn      00 20 32.7  -0.2
TECO   Alcaldia de Te     1.05 328  eP    Pn      00 20 18.2  -1.2
FAGO   Alcalda de S       1.05   5  eP    Pn      00 20 19.0  -0.4
CRIN   San Cristobal      1.13  87   Pn   Pn      00 20 20.0  -0.4
CRIN                                 Sn   Sn      00 20 35.8  +0.6
CRIN   San Cristobal      1.13  87  eP    Pn      00 20 20.0  -0.4
CRIN                                eS    Sn      00 20 36.1  +0.8
CRIN                                 IAML         00 20 41.9
       comp=E,26µm,0.2s
SCLA   Alcaldia de Sa     1.17 334  eP    Pn      00 20 20.7  -0.3
SJTE   Alcalda de S       1.24 321⇑eP    Pn      00 20 21.1  -0.9
PAVA   Las Pavas          1.28 326  eP    Pn      00 20 22.0  -0.5
LFRS   El Faro            1.28 320  eP    Pn      00 20 21.5  -1.0
LBRS   Las Brisas         1.36 323  eP    Pn      00 20 23.0  -0.6
LFU    La Fuente          1.41 321  eP    Pn      00 20 23.8  -0.4
LFU                                 eS    Sn      00 20 41.3  -0.7
P5NO   Presa 5 de nov     1.44 338  eP    Pn      00 20 23.9  -0.6
P5NO                                eS    Sn      00 20 41.7  -0.9
SNET   Serv Nac Est T     1.44 316        Pn      00 20 23.4  -1.2
SNET   Serv Nac Est T     1.44 316  eP    Pn      00 20 23.7  -0.9
UEES   Universidad Ev     1.47 317  eP    Pn      00 20 24.2  -0.8
CNGN   Cerro Negro        1.48  95   Pn   Pn      00 20 23.8  -1.3
CNGN                                 Sn   Sn      00 20 42.9  -0.6
CNGN   Cerro Negro        1.48  95  eP    Pn      00 20 23.8  -1.3
CNGN                                eS    Sn      00 20 43.2  -0.2
BOQS   Boqueron           1.51 316  eP    Pn      00 20 25.1  -0.6
JAYA   Jayaque - finc     1.57 310  eP    Pn      00 20 25.3  -1.2
CEDA   San Andres         1.64 315  eP    Pn      00 20 26.7  -0.5
MOMN   Momotombo          1.64  98  eP    Pn      00 20 26.1  -1.2
TGUH   Tegucigalpa,Un     1.68  33   Pn   Pn      00 20 28.1  +0.3
TGUH                                 Sn   Sn      00 20 48.8  +0.3
TGUH   Tegucigalpa,Un     1.68  33  eP    Pn      00 20 28.2  +0.4
TGUH                                eS    Sn      00 20 49.4  +1.0
BRAN   Las Pilas          1.81  87  eP    Pn      00 20 29.6  +0.1
BRAN                                eS    Sn      00 20 52.4  +0.9
CEVE   Cerro Verde        1.82 311  eP    Pn      00 20 29.1  -0.7
SBLS   San Blas           1.82 311  eP    Pn      00 20 29.6  -0.3
RTR    El Retiro          1.88 312  eP    Pn      00 20 30.5  -0.1
TISN   Laguna Tiscapa     1.96 104  eP    Pn      00 20 30.5  -1.0
MGAN   Managua            1.98 104  eP    Pn      00 20 30.7  -1.1
NUBE   Las Nubes          1.98 310  eP    Pn      00 20 31.2  -0.8
HUEN                      2.01  98  eP    Pn      00 20 31.3  -0.9
WILN   Americas 2         2.03 103  eP    Pn      00 20 31.4  -1.1
SLOZ   Alcaldia de Sa     2.06 312  eP    Pn      00 20 33.2  +0.2
MASN   Masaya             2.11 108  eP    Pn      00 20 32.1  -1.5
RCON   San Juan de Ri     2.17  67  eP    Pn      00 20 34.8  +0.2
ESQI   Esquipulas         2.21 330   Pn   Pn      00 20 35.2  +0.3
ESQI   Esquipulas         2.21 330  eP    Pn      00 20 35.4  +0.4
MATN   Matagalpa          2.25  82   Pn   Pn      00 20 34.7  -0.8
MATN                                 Sn   Sn      00 21 01.6  -0.6
MATN   Matagalpa          2.25  82  eP    Pn      00 20 34.7  -0.8
BOAB   BOACO BROADBAN2.49   94   Pn   Pn      00 20 37.6  -1.2
BOAB                                 Sn   Sn      00 21 08.8  +0.9
BOAB   BOACO BROADBAN2.49   94  eP    Pn      00 20 37.5  -1.2
CONN   Concepcion         2.74 113  eP    Pn      00 20 40.5  -1.7
LCRUZ  La Cruz            2.96 121  eP    Pn      00 20 45.6  +0.4
ACON   Acoyapa            3.04 102   Pn   Pn      00 20 44.7  -1.5
ACON                                 Sn   Sn      00 21 23.3  +1.8
ACON   Acoyapa            3.04 102  eP    Pn      00 20 44.8  -1.5
ACON                                 IAML         00 21 36.6
       comp=E,211nm,0.7s
ACON   Acoyapa            3.04 102  eP    Pn      00 20 44.4  -1.9
HZTE   Horizontes, Gu     3.19 127   Pn   Pn      00 20 48.8  +0.4
HZTE                                 Sn   Sn      00 21 24.1  -1.2
HZTE   Horizontes, Gu     3.19 127  eP    Pn      00 20 49.2  +0.8
GBS3   Finca Las Img      3.27 124  eP    Pn      00 20 49.2  -0.2
ELI1   Hacienda Flor      3.27 127⇑eP    Pn      00 20 50.0  +0.6
GB1A   Borinquen Arri     3.29 123  eP    Pn      00 20 48.9  -1.0
LAPC   Finca la Perla     3.29 124  eP    Pn      00 20 50.2  +0.4
BUEV   Buena Vista        3.30 123  eP    Pn      00 20 50.8  +1.0
BUAI   Buenos Aires       3.32 122  eP    Pn      00 20 49.8  -0.3
VORI   VORI               3.33 123  eP    Pn      00 20 50.9  +0.4
VRLE   La Escondida,      3.34 123  eP    Pn      00 20 51.0  +0.6
GPS3   Bodega del ICE     3.35 124  eP    Pn      00 20 51.6  +1.0
GPS1   Guardaparques      3.36 123  eP    Pn      00 20 50.4  -0.3
GPS2   Hotel Rincn d      3.37 124  eP    Pn      00 20 52.0  +1.1
GP14   Hacienda Santa     3.37 123  eP    Pn      00 20 51.1  +0.2
GP77   Hacienda Santa     3.38 123  eP    Pn      00 20 50.7  -0.4
HATIL  Hatillo            3.38 133  eP    Pn      00 20 51.0   0.0
DELF   Filadelfia         3.39 130  eP    Pn      00 20 51.7  +0.6
HORNC  Hornillas          3.53 123  eP    Pn      00 20 51.9  -1.2
VMAR   Armenia, Volca     3.53 121  eP    Pn      00 20 53.0  -0.1
COLC   Colonia            3.54 123  eP    Pn      00 20 54.2  +1.1
SAJU   San Juanillo,      3.54 136  eP    Pn      00 20 52.7  -0.4
CANAL  Canalete           3.57 120  eP    Pn      00 20 52.0  -1.5
CUI    Cuipilapa          3.57 123  eP    Pn      00 20 54.2  +0.6
JUD3   Juan Diaz 3        3.59 133  eP    Pn      00 20 53.9   0.0
MOTZ   Rio Naranjo        3.63 122  eP    Pn      00 20 53.5  -0.9
NICO   Nicoya             3.68 132  eP    Pn      00 20 55.2  +0.2
DUNO   Dulce Nombre,      3.68 133   Pn   Pn      00 20 55.2  +0.2
DUNO   Dulce Nombre,      3.68 133  eP    Pn      00 20 55.3  +0.2
ACAL   Aguas Claras       3.69 122  eP    Pn      00 20 55.8  +0.5
NARJA  Naranjal           3.72 135  eP    Pn      00 20 55.5  -0.1
CMARA  Lajas Hojancha     3.77 133  eP    Pn      00 20 56.5  +0.1
INDI   Punta indio, G     3.83 136  eP    Pn      00 20 56.9  -0.1
ESPN   Las Esperanzas     3.84  96   Pn   Pn      00 20 56.6  -0.7
ESPN   Las Esperanzas     3.84  96  eP    Pn      00 20 56.9  -0.3
ESPN   Las Esperanzas     3.84  96  eP    Pn      00 20 56.7  -0.5
POPE   POPE, Guanacas     3.86 131  eP    Pn      00 20 57.8  +0.3
RTAL   Retalhuleu         3.88 299   Pn   Pn      00 20 58.6  +0.9
NYURE  Nandayure          3.91 132  eP    Pn      00 20 58.0  -0.2
JTS    Las Juntas de      3.95 126   P    Pn      00 20 59.2  +0.4
       comp=E,24nm,0.3s,baz=310,slow=20,SNR=26
JTS                                  S    Sn      00 21 43.5  -0.5
       comp=E,55nm,0.4s,baz=306,slow=20,SNR=0.9
JTS                                  LR   LR      00 22 57.8
       comp=E,126nm,20.9s,baz=278,slow=46
JTS    Las Juntas de      3.95 126   Pn   Pn      00 20 59.7  +0.8
JTS    Las Juntas de      3.95 126  eP    Pn      00 20 59.6  +0.8
JUNT   Juntas             3.95 126  eP    Pn      00 21 00.4  +1.6
TABAC  Tabacon            3.99 122  eP    Pn      00 21 01.2  +1.9
MTEVE  Monteverde         4.04 124  eP    Pn      00 21 03.1  +3.0
CEDE   Laguna Cedeo       4.04 122  eP    Pn      00 21 01.4  +1.2
ARE1   Arenal 1           4.05 122  eP    Pn      00 21 01.3  +1.2
FORC   Fortuna            4.08 122  eP    Pn      00 21 02.6  +2.0
COVE   Coope Vega, Sa     4.19 117   Pn   Pn      00 21 03.4  +1.4
LAFE   Finca La Fe, P     4.29 131  eP    Pn      00 21 03.3   0.0
CBL1   Cabuya             4.30 134  eP    Pn      00 21 04.2  +0.6
CPMI   Catarata Coope     4.42 122  eP    Pn      00 21 06.1  +0.7
SRA1   San Ramn           4.45 124  eP    Pn      00 21 08.3  +2.6
PETF   Flores             4.55 340   Pn   Pn      00 21 07.7  +0.8
JACO   JACO, Garabito     4.57 130        Pn      00 21 07.5  +0.2
JACO   JACO, Garabito     4.57 130  eP    Pn      00 21 08.3  +1.1
BITO   Garabito Jaco      4.62 130  eP    Pn      00 21 11.3  +3.3
VPTE   Poasito            4.63 122  eP    Pn      00 21 11.3  +2.9
HDC    Heredia            4.79 123   Pn   Pn      00 21 10.7  +0.3
HDC3   Heredia 3          4.80 123  eP    Pn      00 21 14.5  +4.0
ACOS   Acosta             4.87 125  eP    Pn      00 21 14.4  +3.0
CVIMO  Finca Echandi      4.92 121  eP    Pn      00 21 15.8  +3.5
OCM    Ochomogo           4.98 123  eP    Pn      00 21 13.8  +0.8
VIRE   VIRE               4.99 122  eP    Pn      00 21 16.3  +2.9
ABE2   San Pablo          5.01 125  eP    Pn      00 21 15.5  +2.0
VICA   Volcano Irazu      5.03 121  eP    Pn      00 21 16.2  +2.3
LCR2   La Lucha 2         5.03 125  eP    Pn      00 21 15.9  +2.2
HAYA   Volcan Irazu       5.03 121  eP    Pn      00 21 16.3  +2.4
ICR3   Volcano Irazu      5.04 121  eP    Pn      00 21 17.0  +2.9
SVQ2   Quepos             5.09 128  eP    Pn      00 21 16.2  +1.9
REPA   Paraso             5.09 123  eP    Pn      00 21 18.3  +3.8
LLNJ   Naranjito          5.11 128  eP    Pn      00 21 17.0  +2.3
RIMA   Rio Macho          5.13 123        Pn      00 21 15.4  +0.4
RIMA   Rio Macho          5.13 123  eP    Pn      00 21 17.0  +1.9
RVLA   Villa Bonita       5.18 119  eP    Pn      00 21 17.0  +1.4
LCOCO  El Coco            5.22 119  eP    Pn      00 21 17.5  +1.4
CCIG   Comitan            5.25 314   Pn   Pn      00 21 18.1  +1.4
CDM    Cerro de Muert     5.33 125  eP    Pn      00 21 20.4  +2.3
BUS1   Rivas              5.34 125  eP    Pn      00 21 20.3  +2.0
BATAN  Batan              5.37 118   Pn   Pn      00 21 19.4  +1.2
EDDO   Dominical          5.43 128  eP    Pn      00 21 20.5  +1.5
MRVA   Moravia de Chi     5.45 120  eP    Pn      00 21 22.7  +3.3
PEZE   Perez Zeledon,     5.50 126   Pn   Pn      00 21 21.4  +1.4
PEZE   Perez Zeledon,     5.50 126  eP    Pn      00 21 22.1  +2.1
SRBA   San Rafael, Bu     5.84 125   Pn   Pn      00 21 26.1  +1.3
SRBA   San Rafael, Bu     5.84 125  eP    Pn      00 21 26.6  +1.8
EDPN   Palmar Norte       5.93 128  eP    Pn      00 21 28.2  +2.4
PLAN   Los Planes de      5.95 131  eP    Pn      00 21 27.8  +1.7
EDBA   Buenos Aires       5.95 125  eP    Pn      00 21 27.9  +1.7
EDP2   Potrero Grande     6.11 126  eP    Pn      00 21 30.8  +2.4
POTG   Potrero Grande     6.14 125  eP    Pn      00 21 31.1  +2.3
EDAD   Golfito            6.34 128  eP    Pn      00 21 33.9  +2.3
CDITO  Canoas             6.62 127   Pn   Pn      00 21 35.9  +0.6
BRU2   Volcan             6.63 125   Pn   Pn      00 21 36.3  +0.6
BRU2   Volcan             6.63 125  eP    Pn      00 21 36.6  +1.0
TEIG   Tepich             7.55 360   Pn   Pn      00 21 48.9  +0.9
CMIG   Matias Romero      7.83 305   P    Pn      00 21 52.9  +1.0
       comp=E,4.3nm,0.3s,baz=123,slow=9.1,SNR=17
CMIG                                 S    Sn      00 23 23.3  +4.2
       comp=E,5.9nm,0.5s,baz=303,slow=23,SNR=1.5
BCIP   Isla Barro Col     8.91 112   Pn   Pn      00 22 06.6  -0.1
TLIG   Tlapa             11.13 297        Pn      00 22 38.2  +1.0
SOR    Soroa             11.24  25   Pn   Pn      00 22 38.1  -0.5
TULM   Tulcn-Chalpat     15.72 138        Pn      00 23 40.7  +1.9
ROSC   El Rosal          15.75 118   LR   LR      00 31 29.3
       comp=E,33nm,20.0s,baz=200,slow=44
PULU   Pululahua         15.80 142        Pn      00 23 40.1  +0.2
SDV    Santo Domingo     17.66 100   P    Pn      00 24 01.4  -1.4
       comp=E,1.0nm,0.4s,baz=298,slow=15,SNR=1.3
SDV                                  LR   LR      00 32 28.0
       comp=E,29nm,18.8s,baz=275,slow=43
833A   Chaparral WMA,    18.78 328   P    P       00 24 15.6  +0.6
833A                                 IAmb IAmb    00 24 18.3
       comp=Z,12nm,0.7s
BAUV   El Baul           20.14  98   P    P       00 24 28.0  -2.0
BAUV                                 IAmb IAmb    00 24 51.5
       comp=Z,22nm,1.4s
LRAL   Lakeview Retre    20.33   3   P    P       00 24 32.6  +0.7
JCT    Junction City     20.74 331   P    P       00 24 37.0  +0.5
Y49A   Blount Mountai    21.19   4   P    P       00 24 41.8  +0.6
Y49A                                 IAmb IAmb    00 25 02.7
       comp=Z,20nm,1.4s
SJG    San Juan          21.94  73   LR   LR      00 33 36.6
       comp=Z,47nm,20.9s,baz=270,slow=38
TX32   Lajitas Array     21.96 322   P    P       00 24 50.1  +0.5
TX32                                 IAmb IAmb    00 24 52.1
       comp=Z,15nm,1.4s
TXAR   Lajitas Array     21.96 322   P    P       00 24 50.7  +1.1
       comp=Z,4.7nm,0.6s,baz=144,slow=9.6,SNR=73
TXAR                                 ScP  ScP     00 32 19.9  +1.0
       comp=Z,0.3nm,0.6s,baz=161,slow=5.7,SNR=5.5
       comp=Z,4.7nm,0.6s
TXAR   Lajitas Array     21.96 322   P    P       00 24 50.2  +0.7
HODGE  Hodges            22.17  13   P    P       00 24 52.2  +0.6
HODGE                                IAmb IAmb    00 24 55.1
       comp=Z,8.9nm,0.8s
CBYP   Canovanas         22.25  73   P    P       00 24 52.1  -0.6
MIAR   Mount Ida         22.35 348   P    P       00 24 53.6   0.0
UALR   University of     22.36 351   P    P       00 24 54.2  +0.6
UALR                                 IAmb IAmb    00 24 56.8
       comp=Z,9.1nm,0.6s
JSC    Jenkinsville      22.45  15   P    P       00 24 54.4  -0.3
JSC                                  IAmb IAmb    00 24 57.6
       comp=Z,11nm,1.0s
ABTX   Abilene, Hawle    22.48 334   P    P       00 24 55.9  +0.8
ABTX                                 IAmb IAmb    00 24 57.2
       comp=Z,4.2nm,0.6s
W50A   Signal Mountai    22.61   6   P    P       00 24 56.5   0.0
BG3    Lake Jocassee     22.76  11   P    P       00 24 58.5  +0.5
BG3                                  IAmb IAmb    00 25 26.5
       comp=Z,13nm,1.4s
CPCT   Cooper Cave       22.95   8   P    P       00 24 59.2  -0.7
KMSC   Kings Mountain    23.25  14   P    P       00 25 03.4  +0.5
KMSC                                 IAmb IAmb    00 25 03.8
       comp=Z,18nm,1.4s
TKL    Tuckaleechee C    23.27   9   P    P       00 25 01.7  -1.3
       comp=Z,4.3nm,0.9s,baz=171,slow=6.4,SNR=8.6
TKL                                  LR   LR      00 33 18.9
       comp=Z,54nm,18.5s,baz=110,slow=35
       comp=Z,4.3nm,0.9s
LCAR   Lake Charles      23.48 354   P    P       00 25 04.6  -0.4
POST   Post              23.69 331   P    P       00 25 06.5  -0.5
POST                                 IAmb IAmb    00 25 09.1
       comp=Z,11nm,0.7s
FNO    Franklin          24.01 341   P    P       00 25 09.8  -0.1
HHAR   Hobbs             24.10 349   P    P       00 25 11.3  +0.6
HHAR                                 IAmb IAmb    00 25 14.1
       comp=Z,5.4nm,0.5s
V58A   Windy Hill, Pi    24.47  18   P    P       00 25 13.8  -0.2
MSTX   Muleshoe          25.04 330   P    P       00 25 19.1  -0.3
MSTX                                 IAmb IAmb    00 25 20.2
       comp=Z,7.3nm,0.7s
S39A   Bolivar           25.36 350   P    P       00 25 22.3  +0.2
SDCO   Great Sand Dun    29.39 331   P    P       00 25 59.3  +0.7
ETMB   Extrema           31.22 135   P    P       00 26 14.5  -0.1
ETMB                                 IAmb IAmb    00 26 24.2
       comp=Z,3.6nm,0.7s
PD31   Pinedale Array    35.26 332   P    P       00 26 49.5  -0.2
PDAR   Pinedale Array    35.26 332   P    P       00 26 49.9  +0.1
       comp=Z,0.8nm,0.5s,baz=127,slow=10,SNR=11
       comp=Z,0.8nm,0.5s
PDAR   Pinedale Array    35.26 332   P    P       00 26 49.5  -0.2
HWUT   Hardware Ranch    35.33 329   P    P       00 26 51.0  +0.6
HWUT                                 IAmb IAmb    00 26 51.8
       comp=Z,3.2nm,0.7s
AGMN   Agassiz Nation    36.12 351   P    P       00 26 56.7  -0.1
SNOW   Snow King Moun    36.35 332   P    P       00 26 59.8  +0.7
MOOW   Moose Ponds       36.57 332   P    P       00 27 01.4  +0.4
MOOW                                 IAmb IAmb    00 27 02.4
       comp=Z,2.6nm,0.6s
RLMT   Red Lodge         37.02 335   P    P       00 27 05.0  +0.2
RLMT                                 IAmb IAmb    00 27 05.9
       comp=Z,2.7nm,0.7s
NVAR   Mina Array Bea    37.08 319   P    P       00 27 06.1  +0.7
       comp=Z,0.3nm,0.5s,baz=125,slow=7.8,SNR=2.4
NVAR                                 PcP  PcP     00 29 26.3  +1.3
       comp=Z,0.8nm,0.6s,baz=136,slow=3.7,SNR=6.2
NVAR                                 ScP  ScP     00 33 05.7  -1.3
       comp=Z,0.5nm,0.7s,baz=119,slow=3.9,SNR=4.8
       comp=Z,0.3nm,0.5s
PB08   IPOC Station P    37.59 150   P    P       00 27 10.1  +0.1
PB08                                 IAmb IAmb    00 27 34.9
       comp=Z,3.9nm,1.0s
MCMT   McKenzie Canyo    38.37 331   P    P       00 27 17.0  +0.8
BOZ    Bozeman (W)       38.41 333   P    P       00 27 16.9  +0.5
BOZ                                  IAmb IAmb    00 27 17.7
       comp=Z,2.4nm,0.6s
LRM    Limekiln Ridge    38.94 333   P    P       00 27 21.3  +0.3
SIV    San Ignacio       39.11 136   P    P       00 27 22.3  -0.2
       comp=Z,2.3nm,0.6s,baz=300,slow=7.0,SNR=17
       comp=Z,2.3nm,0.6s
BATG   Bathurst New B    39.21  24   P    P       00 27 23.4  +0.5
EDM    Edmonton          45.17 339   P    P       00 28 11.3  -0.1
FRB    Frobisher Bay     52.88  11   P    P       00 29 07.7  -2.3
       comp=Z,0.9nm,0.3s,baz=204,slow=8.5,SNR=7.7
       comp=Z,0.9nm,0.3s
YKA    Yellowknife Ar    53.24 345   P    P       00 29 11.7  -1.1
       comp=Z,1.1nm,0.8s,baz=140,slow=7.7,SNR=19
       comp=Z,1.1nm,0.8s
BCAR   Beaver Creek A    62.78 336   P    P       00 30 19.2  -0.4
ILAR   Eielson Array     65.55 336   P    P       00 30 36.8  -0.9
       comp=Z,0.5nm,0.7s,baz=136,slow=4.9,SNR=11
       comp=Z,0.5nm,0.7s
ILAR   Eielson Array     65.55 336   P    P       00 30 37.1  -0.5
BMAR   Burnt Mountain    65.84 339   P    P       00 30 39.0  -0.6
SUA    Susitna One       65.99 332   P    P       00 30 40.0  -0.6
SUA                                  IAmb IAmb    00 30 45.5
       comp=Z,2.1nm,0.8s
WRA    Warramunga Arr   138.61 254   PKP  PKPdf   00 39 20.8  +0.2
       comp=Z,0.3nm,0.5s,baz=91,slow=2.3,SNR=10
ASAR   Alice Springs    138.65 249   PKP  PKPdf   00 39 21.4  +0.8
       comp=Z,0.3nm,0.7s,baz=108,slow=2.5,SNR=2.4
PZH    PanZhiHua        139.91 346   PKP  PKPdf   00 39 22.5  -0.5
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*REY **26** 00:24:13.4, 67°.81N×18°.38W, h10^{km}*
*IDC **26** 00:24:15.5±0.8, 67°.66N×18°.68W, h0^{km}, mb3.5/10, mbtmp3.7/13, ML3.4/3, MS3.8/3, Error ellipse: s-maj=21.5km s-min=16.0km az=36.0*
*NEIC **26** 00:24:16.1±0.9, 67°.74N±0°.07×19°.0W±0°.2, h10^{km}±1^{km}, mb4.0/10, Error ellipse: s-maj=16.9km s-min=3.7km az=46.0*
ISC 26 00:24:15.9±3.9**, 67°.64N**±0°.04×**18°.70W**±0°.06**, h7**^{km}±26^{km}**, n70, σ1^{s}.72**/72**, mb3.4**/12**, Iceland region**

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Code   Station Name        Δ°   AZ°   Phase ID       Time      Res
                                     Op    ISC     h  m  s     ISC
IGRI   Grimsey            1.14 166   P    Pn      00 24 35.1  -3.1
       baz=173
IGRI                                 S    Sb      00 24 51.7  -1.1
       baz=173
ILEI   Leirhofn           1.52 144   P    Pn      00 24 39.7  -3.6
       baz=152
ISIG   Siglufjorour       1.52 183   P    Pn      00 24 40.9  -2.5
       baz=187
ISIG                                 S    Sn      00 25 02.8  -0.6
       baz=187
IBRE   Brettingsstaoi     1.56 168   P    Pn      00 24 42.0  -1.9
       baz=174
IBRE                                 S    Sn      00 25 02.6  -1.8
       baz=174
IHRN   Hraun              1.64 201   P    Pn      00 24 43.1  -2.0
       baz=203
IHRN                                 S    Sn      00 25 02.8  -3.6
       baz=203
IHED   Heoinshofoi        1.66 160   P    Pn      00 24 42.2  -3.1
       baz=166
IHED                                 S    Sn      00 25 05.9  -1.0
       baz=166
IHLA   Hella              1.71 176   P    Pn      00 24 44.4  -1.7
       baz=180
IHLA                                 S    Sn      00 25 07.4  -0.7
       baz=180
IGRA   Granastaoir        1.79 165   P    Pn      00 24 44.8  -2.3
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	baz=170						
IGIL	Gilhagi	1.83	148	P	Pn	00 24 44.2	-3.4
	baz=154						
IGIL				S	Sn	00 25 07.3	-3.7
	baz=154						
IDIM	Dimmadalss	1.83	157	P	Pn	00 24 44.6	-3.1
	baz=162						
ISKI	Skildingahlsh	1.90	159	P	Pn	00 24 45.8	-2.9
	baz=164						
IGHA	Grjothals	1.98	155	P	Pn	00 24 46.7	-3.1
	baz=160						
IKVO	Krokottuvotn	2.07	159	P	Pn	00 24 48.5	-2.5
	baz=164						
IREN	Reynihlio	2.13	160	P	Pn	00 24 49.3	-2.5
	baz=164						
IMEL	Melhnausar	2.24	158	P	Pn	00 24 50.9	-2.4
	baz=162						
IGRS	Grimsstaoir	2.26	152	P	Pn	00 24 50.9	-2.8
	baz=157						
ISVA	Svartarkot	2.39	165	P	Pn	00 24 53.7	-1.7
	baz=169						
ISTE	Stelbrattur	2.83	188	P	Pn	00 25 01.5	+0.1
	baz=190						
IMKO	Mokollar	2.84	159	P	Pn	00 25 00.4	-1.3
	baz=163						
THOR	Thorvaldshraun	2.84	162	P	Pn	00 25 00.1	-1.5
	baz=166						
IURH	Urdarhals	2.91	167	P	Pn	00 25 01.4	-1.1
	baz=170						
IDYN	Dyngjuhals	2.92	169	P	Pn	00 25 02.2	-0.5
	baz=172						
IADA	Aoalbol	2.92	153	P	Pn	00 25 00.7	-2.0
	baz=157						
IVON	Vonarskard	3.01	172	P	Pn	00 25 03.4	-0.6
	baz=175						
SCO	Scoresbysund	3.08	339		Pn	00 25 01.0	-3.8
IVSH	V-Sauoahnukur	3.09	156	P	Pn	00 25 03.8	-1.3
	baz=159						
IASB	`sbjarnarst	3.10	201	P	Pn	00 25 04.4	-0.7
	baz=202						
BORG	Borgarnes	3.10	201	Pn	Pn	00 25 04.7	-0.4
	6.8nm,0.3s,baz=15,slow=6.8,SNR=19						
	75nm,0.5s						
BORG	Borgarnes	3.10	201	Pn	Pn	00 25 02.9	-2.2
ISKR	Skrokkalda	3.10	177	P	Pn	00 25 04.3	-1.0
	baz=180						
IDJK	Dyngjujokull	3.21	169	P	Pn	00 25 06.3	-0.6
	baz=172						
ICESG	Greenland Ices	7.86	290	eP	Pn	00 26 13.8	+3.0
SUMG	Summit	8.32	315	eP	Pn	00 26 14.5	-2.5
DY2G	Dye2	10.78	277	eP	Pn	00 26 51.2	+0.6
SFJD	Kangerlussuaq	12.26	282	LR	LR	00 31 43.2	
	comp=Z,1µm,21.9s,baz=56,slow=36						
EKA	Eskdalemuir Ar	14.34	142	Pn	P	00 27 47.4	+1.2
	baz=338,slow=11						
EKA	Eskdalemuir Ar	14.34	142	P	P	00 27 47.4	+1.2
SPITS	Spitsbergen Ar	14.39	28	Pn	Pn	00 27 41.5	+2.0
	baz=216,slow=12						
	25nm,1.1s						
HFS	Hagfors	15.94	102	Pn	P	00 28 04.9	+1.0
	0.1nm,0.3s,baz=317,slow=8.5,SNR=5.2						
HFS				LR	LR	00 34 06.6	
	comp=Z,359nm,18.2s,baz=304,slow=37						
ARCES	ARCESS Array B	15.98	63		P	00 28 04.9	+0.5
ARCES				IAmb	IAmb	00 28 27.8	
	comp=Z,13nm,1.2s						
KEV	Kevo	16.43	62		P	00 28 09.1	-0.3
LVZ	Lovozero	19.67	64	P	P	00 28 44.5	-0.5
FINES	FINESS Array B	19.82	87	P	P	00 28 47.2	+0.6
	comp=Z,0.1nm,0.3s,baz=306,slow=11,SNR=8.0						
	comp=Z,5.1nm,1.0s						
FINES	FINESS Array B	19.82	87	P	P	00 28 47.0	+0.4
FRB	Frobisher Bay	20.41	283	P	Pn	00 28 53.9	-1.2
	comp=Z,2.2nm,0.6s,baz=54,slow=10,SNR=7.7						
	comp=Z,2.2nm,0.6s						
EUNU	Eureka	20.76	333	P	P	00 28 55.2	-1.5
EUNU				IAmb	IAmb	00 28 59.5	
	comp=Z,4.7nm,0.8s						
RES	Resolute Bay	23.80	320	P	P	00 29 29.6	+1.0
	comp=Z,0.6nm,0.7s,baz=66,slow=11,SNR=2.4						
	comp=Z,0.6nm,0.7s						
RES	Resolute Bay	23.80	320	P	P	00 29 26.8	-1.9
GEC2	GERESS Array S	24.91	123	P	P	00 29 40.0	+0.8
GEC2				IAmb	IAmb	00 29 41.6	
	comp=Z,3.0nm,0.8s						
GERES	GERESS Array B	24.91	123	P	P	00 29 40.0	+0.8
	comp=Z,1.3nm,0.8s,baz=319,slow=7.8,SNR=8.3						
	comp=Z,1.3nm,0.8s						
GERES	GERESS Array B	24.91	123	P	P	00 29 39.8	+0.6
ESDC	Sonseca Array	29.19	156	P	P	00 30 19.5	+1.8
	comp=Z,0.5nm,0.9s,baz=348,slow=9.0,SNR=1.6						
	comp=Z,0.5nm,0.9s						
YKA	Yellowknife Ar	36.87	310	P	P	00 31 24.6	+0.4
	comp=Z,0.4nm,0.6s,baz=40,slow=8.5,SNR=5.2						
YKA				PcP	PcP	00 33 46.1	+0.6
	comp=Z,0.3nm,0.7s,baz=40,slow=3.0,SNR=5.0						
	comp=Z,0.4nm,0.6s						
BRTR	Keskin Array B	39.79	107	PcP	PcP	00 33 56.1	+0.9
	comp=Z,0.5nm,0.8s,baz=321,slow=3.7,SNR=1.8						
ABKAR	Akbulak array	41.64	75	P	P	00 32 04.2	-0.1
K27K	Chicken	42.53	327	P	P	00 32 10.2	-1.1
ILAR	Eielson Array	42.83	330	P	P	00 32 14.6	+0.8
	comp=Z,0.3nm,0.7s,baz=34,slow=5.4,SNR=4.5						
	comp=Z,0.3nm,0.7s						
IMAR	Indian Mountai	42.93	335	P	P	00 32 13.7	-0.9
BCAR	Beaver Creek A	43.32	326	P	P	00 32 18.2	+0.3
ZALV	Zalesovo Beam	46.18	53	PcP	PcP	00 34 15.8	-0.4
	comp=Z,0.9nm,0.6s,baz=342,slow=4.8,SNR=4.5						
MK31	Makanchi Array	51.59	59		P	00 33 23.0	+0.7
MK31				IAmb	IAmb	00 33 30.9	
	comp=Z,2.8nm,1.5s						
MKAR	Makanchi Array	51.59	59	P	P	00 33 22.4	+0.1
	comp=Z,0.3nm,0.7s,baz=342,slow=7.6,SNR=4.6						
	comp=Z,0.3nm,0.7s						
PDAR	Pinedale Array	51.62	290	P	P	00 33 23.3	+0.4
	comp=Z,0.4nm,0.8s,baz=28,slow=6.7,SNR=3.5						
	comp=Z,0.4nm,0.8s						
PDAR	Pinedale Array	51.62	290	P	P	00 33 21.6	-1.3
TOA0	Torodi Ar. Sit	56.08	156	P	P	00 33 55.2	-0.1
TOA0				IAmb	IAmb	00 33 59.5	
	comp=Z,1.3nm,0.8s						
TORD	Torodi Ar. Bea	56.08	156	P	P	00 33 56.4	+1.0
	comp=Z,0.5nm,0.7s,baz=332,slow=9.1,SNR=3.5						
SONM	Songino Array	57.69	41	P	P	00 34 07.1	+0.5
	comp=Z,0.2nm,0.5s,baz=316,slow=6.0,SNR=2.4						
	comp=Z,0.2nm,0.5s						
CMAR	Chiang Mai Arr	82.98	58	P	P	00 36 41.3	-0.2
	comp=Z,0.5nm,0.3s,baz=324,slow=5.9,SNR=5.0						
	comp=Z,0.5nm,0.3s						
CMAR	Chiang Mai Arr	82.98	58	P	P	00 36 41.1	-0.3
LPAZ	La Paz	91.06	227	LR	LR	01 18 01.4	
	comp=Z,18nm,18.7s,baz=16,slow=35						

REY ***26*** *00:24:47.6, 67°.78N×18°.37W, h10km*

NEIC ***26*** *00:24:49.3±2.1, 67°.72N±0°.06×18°.9W±0°.2, h10km±1km, mb4.6/43, Error ellipse: s-maj=12.3km s-min=10.3km az=87.0*

IDC ***26*** *00:24:50.1±0.5, 67°.74N×18°.65W, h0km, mb4.0/23, mbtmp4.0/27, ML3.7/4, MS4.6/4, Error ellipse: s-maj=16.7km s-min=9.9km az=18.0*

GCMT ***26*** *00:24:50.3±0.2, 67°.84N±0°.03×18°.70W±0°.04, h12km, MW4.8/107, Moment Tensor Solution. s13,c14; s107,c146; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.75±.05; $M_{\theta\theta}$0.18±.05; $M_{\phi\phi}$1.57±.04; $M_{r\theta}$0.23±.29; $M_{\theta\phi}$0.45±.04; $M_{\phi r}$0.06±.19; Best double couple: $M_0$1.74000×10^{16} NP1:ϕ_s203.00000°, δ47.00000°, λ-82.00000°. NP2:ϕ_s10.00000°, δ43.00000°, λ-99.00000°. Principal axes: T 1.7050, Plg2.0000°, Azm287.0000°; N 0.0720, Plg6.0000°, Azm17.0000°; P -1.7760, Plg83.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 00:24:49.3±2.1**, 67°.67N**±0°.04×**18°.66W**±0°.04**, h5**km±13km**, n184,** σ1s**.74**/191**, mb4.4**/61**, MS4.3**/20**, 4D, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGRI	Grimsey	1.16	167	P	Pn	00 25 08.3	-3.8
	baz=173						
IGRI				S	Sb	00 25 25.3	-1.8
	baz=173						
ILEI	Leirhofn	1.52	145	S	Sn	00 25 33.1	-4.3
	baz=151						
ISIG	Siglufjorour	1.54	184	P	Pn	00 25 14.9	-2.5
	baz=188						
ISIG				S	Sn	00 25 36.1	-1.7
	baz=188						
IBRE	Brettingsstaoi	1.58	169	P	Pn	00 25 15.4	-2.5
	baz=174						
IBRE				S	Sn	00 25 36.2	-2.5
	baz=174						
IHRN	Hraun	1.67	201	P	Pn	00 25 16.8	-2.4
	baz=203						
IHRN				S	Sn	00 25 38.0	-2.9
	baz=203						
IHED	Heoinshofoi	1.68	161	P	Pn	00 25 15.9	-3.5
	baz=166						
IHED				S	Sn	00 25 39.1	-2.0
	baz=166						
IHLA	Hella	1.73	176	P	Pn	00 25 18.2	-1.9
	baz=180						
IHLA				S	Sn	00 25 41.1	-1.4
	baz=180						
IGRA	Granastaoir	1.81	166	P	Pn	00 25 18.8	-2.3
	baz=170						
IGIL	Gilhagi	1.84	149	P	Pn	00 25 17.9	-3.6
	baz=154						
IGIL				S	Sn	00 25 41.1	-4.0
	baz=154						
IDIM	Dimmadalss	1.84	157	P	Pn	00 25 18.5	-3.1
	baz=162						
ISKI	Skildingahlsh	1.92	160	P	Pn	00 25 19.4	-3.3
	baz=164						
IGHA	Grjothals	1.99	156	P	Pn	00 25 20.4	-3.3
	baz=160						
IKVO	Krokottuvotn	2.08	159	P	Pn	00 25 22.1	-2.9
	baz=163						
IREN	Reynihlio	2.14	160	P	Pn	00 25 22.8	-2.9
	baz=164						
IREN				S	Sn	00 25 50.7	-2.0
	baz=164						
IMEL	Melhnausar	2.25	158	P	Pn	00 25 24.8	-2.4
	baz=162						
IGRS	Grimsstaoir	2.27	152	P	Pn	00 25 24.7	-2.9
	baz=156						
ISVA	Svartarkot	2.41	166	P	Pn	00 25 27.4	-2.0
	baz=169						
ISTE	Stelbrattur	2.85	188	P	Pn	00 25 35.5	0.0
	baz=190						
IMKO	Mokollar	2.86	160	P	Pn	00 25 34.6	-1.0
	baz=163						
THOR	Thorvaldshraun	2.86	163	P	Pn	00 25 34.3	-1.3
	baz=166						
IURH	Urdarhals	2.92	167	P	Pn	00 25 35.4	-1.2
	baz=170						
IADA	Aoalbol	2.93	154	P	Pn	00 25 35.7	-1.0
	baz=157						
IDYN	Dyngjuhals	2.93	169	P	Pn	00 25 35.9	-0.8
	baz=172						
IVON	Vonarskard	3.03	173	P	Pn	00 25 37.4	-0.6
	baz=175						
IKRE	Kreppuhraun	3.04	161	P	Pn	00 25 37.0	-1.1
	baz=164						
SCO	Scoresbysund	3.07	339	Pn	Pn	00 25 34.3	-4.1
IVSH	V-Sauoahnukur	3.10	156	P	Pn	00 25 37.8	-1.3
	baz=159						
ISKR	Skrokkalda	3.12	178	P	Pn	00 25 38.4	-0.8
	baz=180						
IASB	`sbjarnarst	3.12	201	P	Pn	00 25 38.1	-1.1
	baz=203						
BORG	Borgarnes	3.12	202	Pn	Pn	00 25 39.5	+0.4
	30nm,0.3s,baz=1.1,slow=15,SNR=14						
BORG				Sn	Sn	00 26 15.8	-1.0
	22nm,0.3s,baz=187,slow=23,SNR=2.1						
BORG				LR	LR	00 26 50.1	
	comp=Z,2µm,18.7s,baz=20,slow=38						
	228nm,0.5s						
BORG	Borgarnes	3.12	202	Pn	Pn	00 25 36.3	-2.9
IDJK	Dyngjujokull	3.23	169	P	Pn	00 25 40.4	-0.5
	baz=172						
ANGG	Ammassalik, Gr	7.81	264	Pn	Pn	00 26 40.5	-3.0
SFJD	Kangerlussuaq	12.27	282	Pn	Pn	00 27 44.8	+0.4
	0.2nm,0.3s,baz=41,slow=9.7,SNR=3.5						
	7.4nm,0.9s						
EKA	Eskdalemuir Ar	14.35	142	Pn	P	00 28 19.9	-0.2
	baz=337,slow=9.7						
ESK	Eskdalemuir	14.35	142	Pn	Pn	00 28 12.9	0.0
SPITS	Spitsbergen Ar	14.36	29	Pn	Pn	00 28 13.5	+0.5
	baz=228,slow=11						
	63nm,1.2s						
SPB2	Spitsbergen Ar	14.36	29	Pn	Pn	00 28 13.0	+0.1
NOA	NORSAR Array B	14.41	103	Pn	Pn	00 28 16.3	+2.5
	baz=105,slow=17,SNR=1.4						
NAO01	NORSAR Array S	14.41	104	Pn	Pn	00 28 13.5	-0.3
HFS	Hagfors	15.93	103	Pn	P	00 28 38.5	+0.9
	0.1nm,0.3s,baz=318,slow=8.6,SNR=9.2						
ARCES	ARCESS Array B	15.96	63	Pn	P	00 28 37.6	-0.3
	0.2nm,0.3s,baz=337,slow=2.8,SNR=5.6						
ARCES	ARCESS Array B	15.96	63		P	00 28 36.5	-1.4
ARCES				IAmb	IAmb	00 28 44.8	
	comp=Z,46nm,1.5s						
KEV	Kevo	16.41	62	Pn	Pn	00 28 40.3	+0.3
KEV				IAmb	IAmb	00 29 19.9	
	comp=Z,93nm,1.5s						
LVZ	Lovozero	19.65	64		P	00 29 18.4	-0.2
LVZ				IAmb	IAmb	00 29 50.1	
	comp=Z,51nm,1.4s						
FINES	FINESS Array B	19.80	87	P	Pn	00 29 21.8	+0.1
	comp=Z,0.3nm,0.3s,baz=312,slow=11,SNR=11						
	comp=Z,8.3nm,0.8s						
FINES	FINESS Array B	19.80	87		P	00 29 20.2	0.0
MEF	Metsahovi	19.93	91	eP	Pn	00 29 23.4	+0.2
FRB	Frobisher Bay	20.42	283	P	Pn	00 29 28.9	-0.1
	comp=Z,22nm,1.1s,baz=55,slow=10,SNR=13						
	comp=Z,22nm,1.1s						
MTSE	Matsula	20.71	95	eP	P	00 29 30.0	-0.1
BGES	Gesves	20.95	134	dP	P	00 29 34.9	+2.1
BGES				dPP	PnPn	00 29 48.6	-2.4
MEM	Membach	21.01	132	dP	P	00 29 36.8	+3.4
WLF	Walferdange	21.90	133	dP	P	00 29 41.1	-1.9
VSU	Vasula	22.00	92	eP	P	00 29 44.0	+0.1
GKP	Gorka Klasztor	22.36	112	eP	P	00 29 48.9	+1.0
CLL	Collm	22.55	121	P	P	00 29 48.5	-1.4
CLL				IAmb	IAmb	00 29 58.4	
	comp=Z,21nm,1.3s						
CLL	Collm	22.55	121	eP	P	00 29 51.0	+1.1
CLL				i x	x	00 29 54.1	
	comp=Z,17nm,1.3s						
CLL				i x	x	00 29 57.5	
	comp=Z,35nm,1.6s						
CLL				eS	S	00 33 54.0	-3.3
VSVD	Vaisvydziai	22.71	100	eP	P	00 29 53.1	+1.6
PABE	Paberze	23.08	101	eP	P	00 29 57.0	+1.5
BRG	Berggiesshubel	23.23	120	eP	P	00 29 57.4	+0.4
BRG				Amp		00 30 03.3	
	comp=Z,8.0nm,1.4s						
BRG				Amp		00 40 38.0	
	comp=N,0.4nm,17.1s						
BRG				Amp		00 40 41.0	
	comp=Z,0.6nm,14.8s						
BRG				Amp		00 40 45.0	
	comp=E,0.4nm,18.0s						
NKC	Novy Kostel	23.29	123	eP	P	00 30 00.2	+2.5
NKC				AMS	AMS	00 40 50.0	
	comp=E,700nm,14.9s						
PVCC	Panska Ves	23.73	120	AMS	AMS	00 42 10.0	
	comp=E,700nm,18.5s						
RES	Resolute Bay	23.79	320	P	P	00 30 04.3	+1.9
	comp=E,3.8nm,1.1s,baz=47,slow=8.9,SNR=6.1						
	comp=E,3.8nm,1.1s						
RES	Resolute Bay	23.79	320	P	P	00 30 01.4	-1.0
CHVC	Chvalec	24.18	118	eP	P	00 30 09.3	+3.0
CHVC				AMS	AMS	00 41 00.0	
	comp=E,900nm,20.7s						
PRU	Pruhonice	24.18	120	eP	P	00 30 07.8	+1.5
PRU				AMS	AMS	00 41 00.0	
	comp=E,600nm,14.5s						
UPC	Upice	24.23	118	eP	P	00 30 09.8	+3.0
UPC				AMS	AMS	00 41 00.0	
	comp=E,700nm,13.2s						
OSTC	Ostas	24.26	117	eP	P	00 30 09.9	+2.9
OSTC				AMS	AMS	00 41 00.0	
	comp=E,700nm,14.2s						
GOPC	GO Pecny, Ondr	24.33	120	AMS	AMS	00 43 20.0	
	comp=E,700nm,12.4s						
DPC	Dobruska-Polom	24.47	118	eP	P	00 30 11.5	+2.5
DPC				AMS	AMS	00 41 10.0	
	comp=E,700nm,17.0s						
NACGM	Naroch	24.60	99	eP	P	00 30 10.0	0.0
	comp=Z,9.0nm,0.8s,baz=319						
KRLC	Kraliky	24.86	117	eP	P	00 30 15.5	+3.0
KRLC				AMS	AMS	00 41 20.0	
	comp=Z,500nm,13.0s						
GEC2	GERESS Array S	24.90	123		P	00 30 12.3	-0.7
GEC2				IAmb	IAmb	00 30 18.3	
	comp=Z,13nm,1.0s						
GERES	GERESS Array B	24.90	123	P	P	00 30 14.4	+1.4
	comp=Z,6.0nm,0.9s,baz=330,slow=7.7,SNR=18						
	comp=Z,6.0nm,0.9s						
GERES	GERESS Array B	24.90	123		P	00 30 12.2	-0.7
LSH	Leshukonskoye	25.02	66	eP	P	00 30 12.5	-1.3
	comp=Z,40nm,1.9s						
TREC	Trest	25.09	120	eP	P	00 30 15.4	+0.8
TREC				AMS	AMS	00 41 30.0	
	comp=Z,800nm,14.6s						
DAVA	Damuels	25.11	130	epP	P	00 30 16.5	+1.5
	comp=Z,6.5nm,1.1s						
CKRC	Cesky Krumlov	25.12	122	eP	P	00 30 15.4	+0.6
RETA	Reutte	25.20	129	epP	pP	00 30 18.1	+1.2
	comp=Z,5.5nm,1.0s						
KLMR	Klimovskoe	25.25	77	eP	P	00 30 15.8	-0.1
	comp=Z,22nm,1.2s						
KLMR	Klimovskoe	25.25	77	eP	P	00 30 14.8	-1.1
KLMR				AMP		00 30 20.4	
	comp=Z,22nm,1.2s						
KLMR				LQ	LQ	00 35 58.4	
KLMR				LQ	LQ	00 35 58.4	
KLMR				LR	LR	00 37 40.0	
KLMR				AMP		00 39 44.4	
	comp=Z,806nm,16.4s						
MNK	Minsk	25.32	98	i P	P	00 30 16.5	0.0
	comp=E,3.0nm,1.1s						
MNK				i P	P	00 30 16.5	0.0
	comp=N,51nm,0.8s						
MNK				i P	P	00 30 16.5	0.0
	comp=Z,15nm,1.1s,baz=140						
MNK				i PP	PnPn	00 30 50.6	-0.1
MNK				i PPP	PPP	00 30 58.6	
MNK				i S	S	00 34 42.9	+0.1
MNK				i SS	SnSn	00 35 34.4	+1.2
MNK				i SSS	SSS	00 35 48.2	
MNK				i LR	LR	00 38 49.9	
MNK				i LRM	MLR	00 40 13.6	
	comp=E,35nm,17.2s						
MNK				i LRM	MLR	00 40 14.9	
	comp=Z,533nm,16.0s						
MNK				i LRM	MLR	00 40 37.2	
	comp=N,468nm,19.2s						
MORC	Moravsky Berou	25.37	117	P	P	00 30 16.8	-0.4
MORC				IAmb	IAmb	00 30 23.0	
	comp=Z,12nm,1.1s						
MORC	Moravsky Berou	25.37	117	eP	P	00 30 17.3	+0.2
MOTA	Moosalm	25.43	128	epP	pP	00 30 20.1	+1.1
	comp=Z,7.6nm,1.2s						
VRAC	Vranov	25.45	118	P	P	00 30 19.2	+1.4
	comp=Z,5.7nm,0.9s,baz=322,slow=11,SNR=8.2						
	comp=Z,5.7nm,0.9s						
VRAC	Vranov	25.45	118	eP	P	00 30 18.1	+0.3
SQTA	Sankt Quirin	25.57	128	epP	pP	00 30 21.1	+0.9
	comp=Z,7.0nm,1.3s						
DAVOX	Davos/Dischmat	25.57	130	P	P	00 30 21.5	+2.3
	comp=Z,4.7nm,1.1s,baz=9.3,slow=19,SNR=4.6						
	comp=Z,4.7nm,1.1s						
WATA	Walderalm	25.58	128	epP	pP	00 30 21.4	+1.0
	comp=Z,7.7nm,1.2s						
KRUC	Moravsky	25.60	119	eP	P	00 30 20.2	+1.1
WTTA	Wattenberg	25.66	127	epP	pP	00 30 22.6	+1.5
	comp=Z,10nm,1.3s						
SCHQ	Schefferville	25.69	264	P	P	00 30 21.0	+1.1
	comp=Z,6.0nm,0.8s,baz=25,slow=2.5,SNR=4.3						
	comp=Z,6.0nm,0.8s						
MAUC	Maruska	25.82	117	eP	P	00 30 24.1	+2.9
MAUC				AMS	AMS	00 43 50.0	
	comp=Z,900nm,14.3s						
KBA	Koelnbreinsper	26.35	125	eP	P	00 30 27.8	+1.6
	comp=Z,4.8nm,1.5s						
ABTA	Abfaltersbach	26.39	127	epP	P	00 30 27.1	+0.7
	comp=Z,5.6nm,1.4s						
CONA	Conrad Observa	26.41	121	epP	P	00 30 26.9	+0.4
	comp=Z,5.3nm,1.2s						
MODS	Modra-Piesok	26.49	119	eP	P	00 30 30.1	+2.9
LANS	Liptovska Anna	26.57	115	eP	P	00 30 31.7	+3.7
RONA	Rosalia, Austr	26.75	121	eP	P	00 30 27.5	-2.1
	comp=Z,3.4nm,0.6s						
CTI	Castel Tesino	26.76	129	P	P	00 30 29.5	-0.3
CLUD	Cludinico	26.76	127	P	P	00 30 29.2	-0.5
CLUD				IAmb	IAmb	00 30 38.1	
	comp=Z,16nm,1.0s						
STAL	STALIGIAL	26.89	127	P	P	00 30 29.8	-1.1
STAL				IAmb	IAmb	00 30 45.1	
	comp=Z,20nm,1.5s						
VYHS	Vyhne	26.91	117	eP	P	00 30 34.5	+3.5
PRED	Cave del Predi	26.99	126	P	P	00 30 31.0	-0.8
AKASG	Malin Array Be	28.82	102	P	P	00 30 48.5	+0.5
	comp=Z,0.3nm,0.3s,baz=328,slow=8.9,SNR=6.5						
	comp=Z,0.3nm,0.3s						
ESDC	Sonseca Array	29.20	156	P	P	00 30 54.5	+2.9
	comp=Z,1.6nm,1.0s,baz=349,slow=9.0,SNR=5.0						
	comp=Z,1.6nm,1.0s						
MILM	Milestii Mici	31.80	107	eP	P	00 31 14.0	-0.4
MILM	Milestii Mici	31.80	107	ePP	PP	00 32 19.0	-6.9
MILM				eL	L	00 43 42.0	
MILM				LRM	MLR	00 43 42.0	
FNA	Florina	34.56	121	P	P	00 31 38.6	0.0
RDO	Rodhopi	35.64	115	P	P	00 31 46.8	-1.1
RDO				IAmb	IAmb	00 31 51.5	
	comp=Z,6.6nm,1.0s						
AGG	Agios Georgios	36.47	121	P	P	00 31 54.5	-0.5
YKA	Yellowknife Ar	36.87	310	P	P	00 31 58.8	+0.7
	comp=Z,1.6nm,1.0s,baz=40,slow=8.4,SNR=13						
YKA				PcP	PcP	00 34 20.4	+0.9
	comp=Z,1.5nm,1.0s,baz=44,slow=3.0,SNR=7.5						
	comp=Z,1.6nm,1.0s						
MDUB	Mudurnu	38.24	110	P	P	00 32 10.7	+0.6
FFC	Flin Flon	38.88	293	P	P	00 32 12.0	-3.2
FFC				IAmb	IAmb	00 32 19.6	
	comp=Z,15nm,1.3s						
TIXI	Tiksi	39.25	16	P	P	00 32 18.0	-0.1
BRTR	Keskin Array B	39.78	108	P	P	00 32 24.7	+1.6
	comp=Z,1.4nm,1.1s,baz=323,slow=5.4,SNR=6.5						
	comp=Z,1.4nm,1.1s						
BRTR	Keskin Array B	39.78	108	P	P	00 32 22.2	-0.8
KBZ	Khabaz	39.78	95	P	P	00 32 26.1	+3.3
	comp=Z,2.9nm,1.0s,baz=258,slow=7.0,SNR=5.3						
	comp=Z,2.9nm,1.0s						
BMAR	Burnt Mountain	40.01	331	P	P	00 32 22.6	-2.0
ULM	Lac du Bonnet	40.29	284	P	P	00 32 28.1	+1.2
	comp=Z,0.8nm,0.3s,baz=45,slow=5.9,SNR=3.9						
	comp=Z,0.8nm,0.3s						
HILA	High Level	40.73	307	P	P	00 32 27.9	-2.7
BNN	Bunyan	41.36	106	P	P	00 32 35.6	-0.5
BNN				IAmb	IAmb	00 33 00.8	
	comp=Z,12nm,1.2s						
ABKAR	Akbulak array	41.62	75	P	P	00 32 37.2	-0.7
ILAR	Eielson Array	42.82	330	P	P	00 32 48.9	+1.3
	comp=Z,0.6nm,0.8s,baz=16,slow=6.7,SNR=5.9						
ILAR				PcP	PcP	00 34 39.8	+1.4
	comp=Z,0.6nm,0.9s,baz=343,slow=3.2,SNR=4.4						
	comp=Z,0.6nm,0.8s						
IMAR	Indian Mountai	42.92	335	P	P	00 32 46.7	-1.6
H21K	Melozitna Rive	43.06	334	P	P	00 32 48.8	-0.7
BCAR	Beaver Creek A	43.32	326	P	P	00 32 50.9	-0.8
ZALV	Zalesovo Beam	46.16	53	P	P	00 33 14.9	+0.6
	comp=Z,0.6nm,0.7s,baz=341,slow=12,SNR=2.8						
ZALV				PcP	PcP	00 34 50.7	+0.7
	comp=Z,1.2nm,0.7s,baz=311,slow=3.9,SNR=6.5						
	comp=Z,0.6nm,0.7s						
ZALV	Zalesovo Beam	46.16	53	P	P	00 33 14.1	-0.2
KURK	Kurchatov	46.96	60	P	P	00 33 20.4	-0.2
TKL	Tuckaleechee C	48.14	263	P	P	00 33 32.1	+2.1
	comp=Z,2.9nm,0.8s,baz=69,slow=8.6,SNR=2.3						
TKL				LR	LR	00 53 14.6	
	comp=Z,997nm,18.1s,baz=28,slow=35						
	comp=Z,2.9nm,0.8s						
T47A	Sharon Grove	48.24	267	P	P	00 33 29.8	-1.0
S39A	Bolivar	50.00	273	P	P	00 33 40.9	-3.3
S39A				IAmb	IAmb	00 33 47.9	
	comp=Z,9.5nm,1.0s						
GEYT	Alibeck	50.59	85	P	P	00 33 50.3	+1.6
	comp=Z,1.5nm,0.7s,baz=334,slow=12,SNR=4.0						
	comp=Z,1.5nm,0.7s						
KK31	Karatay Array	50.71	71	P	P	00 33 49.9	+0.3
KK31				IAmb	IAmb	00 33 53.8	
	comp=Z,6.8nm,1.5s						
KKAR	Karatay Array	50.71	71	P	P	00 33 50.0	+0.4
MK31	Makanchi Array	51.57	59	P	P	00 33 56.0	0.0
MKAR	Makanchi Array	51.57	59	P	P	00 33 56.5	+0.5

	comp=Z,1.3nm,0.9s,baz=331,slow=6.5,SNR=9.6						
	comp=Z,1.3nm,0.9s						
MKAR	**Makanchi Array**	**51.57**	**59**	P	**P**	**00 33 55.5**	**-0.5**
PD31	**Pinedale Array**	**51.63**	**290**	P	**P**	**00 33 55.6**	**-1.2**
PDAR	**Pinedale Array**	**51.63**	**290**	P	**P**	**00 33 58.0**	**+1.3**
	comp=Z,1.0nm,0.8s,baz=53,slow=7.6,SNR=9.6						
	comp=Z,1.0nm,0.8s						
PDAR	**Pinedale Array**	**51.63**	**290**	P	**P**	**00 33 55.5**	**-1.2**
OK030	**Cody Creek RV**	**52.87**	**275**	P	**P**	**00 34 04.6**	**-1.1**
RDMU	**Red Mountain**	**53.56**	**289**	P	**P**	**00 34 10.2**	**-0.8**
RDMU				IAmb	IAmb	00 34 15.4	
	comp=Z,11nm,1.2s						
W35A	**Tecumseh**	**53.59**	**275**	P	**P**	**00 34 09.0**	**-2.0**
GAR	**Garm**	**54.23**	**74**	P	**P**	**00 34 16.1**	**+0.2**
GAR				IAmb	IAmb	00 34 21.2	
	comp=Z,6.3nm,0.9s						
WMOK	**Wichita Mounta**	**54.68**	**276**	P	**P**	**00 34 18.6**	**-0.5**
WMOK				IAmb	IAmb	00 34 23.2	
	comp=Z,6.7nm,1.1s						
WTFS	**Witchita Falls**	**55.42**	**275**	P	**P**	**00 34 22.7**	**-1.6**
WTFS				IAmb	IAmb	00 34 28.9	
	comp=Z,14nm,1.0s						
ELK	**Elko**	**55.42**	**294**	LR	LR	00 58 15.3	
	comp=Z,736nm,18.6s,baz=32,slow=36						
KSH	**Kashi**	**55.82**	**69**	P	**P**	**00 34 27.3**	**0.0**
KSH				pP	sP	00 34 32.3	+3.2
KSH				sP	pP	00 34 35.3	+6.7
KSH				ScP	**ScP**	**00 39 25.8**	**+0.3**
KSH				sS	pS	00 42 18.3	+2.0
KSH	**Kashi**	**55.82**	**69**	SS	SKiKP	00 45 54.5	+25
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KSH				LR	LR		
	comp=N,340nm,14.4s						
KSH				LR	LR		
	comp=E,250nm,12.4s						
KSH				LR	LR		
	comp=Z,460nm,17.9s						
WMQ	**Urumqi**	**55.96**	**57**	*e*P	**P**	**00 34 27.8**	**-0.4**
WMQ				pP	sP	00 34 36.5	+6.5
WMQ				PcP	**PcP**	**00 35 29.0**	**+2.4**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMQ				LR	LR		
	comp=N,370nm,12.1s						
WMQ				LR	LR		
	comp=E,160nm,12.1s						
WMQ				LR	LR		
	comp=Z,170nm,19.5s						
TOA0	**Torodi Ar. Sit**	**56.09**	**156**	P	**P**	**00 34 29.1**	**-0.2**
TOA0				IAmb	IAmb	00 34 33.9	
	comp=Z,3.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**56.09**	**156**	P	**P**	**00 34 30.9**	**+1.6**
	comp=Z,60nm,0.5s,baz=325,slow=7.6,SNR=3.7						
ABTX	**Abilene, Hawle**	**56.88**	**276**	P	**P**	**00 34 33.1**	**-1.8**
SONM	**Songino Array**	**57.66**	**41**	P	**P**	**00 34 40.9**	**+0.6**
	comp=Z,1.2nm,1.1s,baz=314,slow=6.3,SNR=4.6						
	comp=Z,1.2nm,1.1s						
PAHR	**Pah Rah Range**	**57.78**	**296**	P	**P**	**00 34 40.6**	**-0.7**
PAHR				IAmb	IAmb	00 34 46.7	
	comp=Z,9.3nm,1.3s						
KVN	**Kaiserville**	**57.93**	**295**	P	**P**	**00 34 41.1**	**-1.2**
KVN				IAmb	IAmb	00 34 47.1	
	comp=Z,6.8nm,1.1s						
YERR	**Yerington**	**58.38**	**296**	P	**P**	**00 34 44.1**	**-1.5**
YERR				IAmb	IAmb	00 34 49.4	
	comp=Z,7.7nm,0.9s						
NVAR	**Mina Array Bea**	**58.55**	**295**	P	**P**	**00 34 47.6**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=64,slow=3.4,SNR=4.7						
NVAR				LR	LR	01 00 23.8	
	comp=Z,853nm,18.1s,baz=28,slow=36						
	comp=Z,0.1nm,0.3s						
NVAR	**Mina Array Bea**	**58.55**	**295**	P	**P**	**00 34 45.5**	**-1.3**
JCT	**Junction City**	**58.86**	**275**	P	**P**	**00 34 48.4**	**-0.4**
HEH	**HeiHe**	**59.67**	**25**	*e*P	**P**	**00 34 55.0**	**+1.0**
GWY	**Greenwater Val**	**59.99**	**292**	P	**P**	**00 34 54.8**	**-1.9**
GWY				IAmb	IAmb	00 35 01.5	
	comp=Z,5.6nm,1.0s						
TXAR	**Lajitas Array**	**61.35**	**278**	P	**P**	**00 35 07.2**	**+1.2**
	comp=Z,1.0nm,1.0s,baz=64,slow=2.9,SNR=6.7						
	comp=Z,1.0nm,1.0s						
TXAR	**Lajitas Array**	**61.35**	**278**	P	**P**	**00 35 05.3**	**-0.6**
GTA	**Gaotai**	**63.69**	**49**	*e*P	**P**	**00 35 24.0**	**+2.5**
GTA				pP	sP	00 35 28.0	+4.7
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
HHC	**Hu-ho-hao-te**	**65.49**	**40**	*e*P	**P**	**00 35 33.0**	**-0.2**
HHC				pmax	pmax		
	comp=Z,24nm,0.6s						
HHC				pmax	pmax		
	comp=Z,280nm,4.7s						
MDJ	**Mudanjiang**	**65.50**	**24**	P	**P**	**00 35 33.5**	**+0.4**
MDJ				PcP	**PcP**	**00 36 07.0**	**+2.2**
MDJ				PP	**PP**	**00 37 53.8**	**-2.7**
MDJ				sS	S	00 44 17.5	-0.5
MDJ	**Mudanjiang**	**65.50**	**24**	SS	SS	00 48 21.5	-8.9
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,130nm,6.5s						
BAUV	**El Baul**	**67.14**	**234**	P	**P**	**00 35 42.9**	**-1.0**
MJAR	**Matsushiro Arr**	**74.65**	**19**	P	**P**	**00 36 30.6**	**+1.2**
	comp=Z,2.3nm,0.9s,baz=342,slow=6.1,SNR=4.6						
	comp=Z,2.3nm,0.9s						
NJ2	**Nanjing**	**75.60**	**36**	*e*P	**P**	**00 36 33.5**	**-1.3**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,190nm,3.8s						
PZH	**PanZhiHua**	**76.30**	**53**	P	**P**	**00 36 39.8**	**+0.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,5.5s						
TULM	**Tulcn-Chalpat**	**78.02**	**241**	P	**P**	**00 36 48.9**	**-0.4**
CMAR	**Chiang Mai Arr**	**82.95**	**58**	P	**P**	**00 37 15.8**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=315,slow=5.6,SNR=8.2						
	comp=Z,0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**82.95**	**58**	P	**P**	**00 37 13.6**	**-1.5**
TAOE	**Nuku Hiva Isla**	**109.79**	**296**	*e*LR	LR	01 15 46.9	
	comp=Z,145nm,22.5s						
TBI	**Tubuai**	**126.42**	**300**	*e*LR	LR	01 23 29.0	
	comp=Z,2µm,26.8s						
TBI				*e*LR	LR	01 23 29.0	
	comp=Z,631nm,35.5s						
ASAR	**Alice Springs**	**132.83**	**35**	PKP	**PKiKP**	**00 44 06.7**	**+0.5**
	comp=Z,0.4nm,0.9s,baz=340,slow=1.8,SNR=2.5						
DZM	**Mont Dzumac**	**134.29**	**353**	*e*LR	LR	01 27 07.0	
	comp=Z,86nm,26.4s						
MAW	**Mawson**	**146.30**	**137**	PKPbc	**PKiKP**	**00 44 31.6**	**-0.6**
	comp=Z,6.4nm,0.9s,baz=315,slow=4.3,SNR=3.5						

WEL 26 00:25:03.8±0.5**, 42°S**±2°×**17°4E**±°**, h5**^{km}**, M2.5**/6**, ML2.7**/10**,**
MLv2.5/6**, Error ellipse: s-maj=0.0km s-min=0.0km**
az=87.0, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHZ	**Kahutara**	**0.20**	**200**	P	Pg	00 25 08.1	+0.4
KHZ				S	Sg	00 25 11.6	+1.3
BSWZ	**Blackbirch Sta**	**0.55**	**20**	P	Pg	00 25 14.7	+0.3
CMWZ	**Cape Campbell**	**0.65**	**42**	P	Pb	00 25 17.4	-0.2
THZ	**Tophouse**	**0.71**	**311**	P	Pg	00 25 17.8	+0.2
THZ				S	Sb	00 25 27.9	-1.0
TUWZ	**Tuamarina**	**0.83**	**16**	P	Pg	00 25 19.9	0.0
GVZ	**Greta Valley S**	**0.86**	**211**	P	Pg	00 25 20.6	+0.4
GVZ				S	Sb	00 25 33.6	+0.6
NNZ	**Nelson**	**1.03**	**350**	P	Pg	00 25 23.2	-0.4
MRNZ	**Matariki Terra**	**1.05**	**322**	P	Pb	00 25 24.5	-0.1
MRNZ				S	Sb	00 25 39.3	+0.6
TCW	**Tory Channel**	**1.13**	**26**	P	Pg	00 25 24.5	-1.0
LTZ	**Lake Taylor**	**1.15**	**241**	P	Pg	00 25 25.0	-0.8
LTZ				S	Sg	00 25 40.2	-0.4
TKNZ	**Takaka Hill**	**1.30**	**337**	P	Pn	00 25 28.1	-0.5
DSZ	**Denniston Nort**	**1.44**	**289**	P	Pn	00 25 30.5	-0.2
DSZ				S	Sg	00 25 51.0	+0.7
DUWZ	**D'Urville Isla**	**1.45**	**9**	P	Pn	00 25 29.5	-1.2
CAW	**Cannon Point**	**1.56**	**44**	P	Pn	00 25 29.9	-2.3
QRZ	**Quartz Range**	**1.63**	**329**	P	Pn	00 25 33.5	+0.3
MQZ	**McQueen's Vall**	**1.64**	**206**	P	Pn	00 25 29.9	-3.4
MQZ				S	Sn	00 25 50.0	-4.8
KIW	**Kapiti Island**	**1.67**	**36**	P	Pn	00 25 32.2	-1.6
INZ	**Inchbonnie**	**1.69**	**252**	P	Pn	00 25 33.0	-1.0
OGWZ	**Otaki Gorge**	**1.83**	**40**	P	Pn	00 25 33.7	-2.2
HOWZ	**Holdsworth Sta**	**1.94**	**47**	P	Pb	00 25 40.1	+0.4
MRZ	**Mangatainoka R**	**2.15**	**44**	P	Pn	00 25 37.6	-2.8
TSZ	**Takapari Road**	**2.79**	**40**	P	Pn	00 25 45.5	-3.8

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*REY **26** 00:25:22.8, 67°.74N×18°.40W, h10^{km}*
*IDC **26** 00:25:24.9±1.4, 67°.78N×18°.43W, h0^{km}, mb3.8/5,*
mbtmp3.8/6, ML3.3/1, Error ellipse: s-maj=52.3km
s-min=22.3km az=14.0
ISC 26 00:25:24.7±0.9**, 67°.46N**±0°.06×**18°.85W**±0°.09**, h10**^{km}**, n26,**
σ**1**^{s}**.29**/29**, mb3.7**/4**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGRI	**Grimsey**	**0.98**	**160**	P	**Pg**	**00 25 42.8**	**-0.7**
	baz=172						
IGRI				S	**Sn**	**00 25 59.9**	**+1.6**
	baz=172						
ISIG	**Siglufjorour**	**1.33**	**181**	S	**Sg**	**00 26 10.0**	**+2.5**
	baz=187						
IHRN	**Hraun**	**1.45**	**201**	P	**Pg**	**00 25 51.8**	**-0.6**
	baz=203						
IHRN				S	**Sg**	**00 26 11.4**	**+0.2**
	baz=203						
IHED	**Heoinshofoi**	**1.51**	**155**	P	**Pn**	**00 25 50.9**	**-0.9**
	baz=165						
IHLA	**Hella**	**1.53**	**173**	P	**Pn**	**00 25 51.6**	**-0.5**
	baz=180						
IDIM	**Dimmadalss**	**1.69**	**152**	P	**Pn**	**00 25 53.4**	**-0.8**
	baz=161						
IGIL	**Gilhagi**	**1.71**	**143**	P	**Pn**	**00 25 52.9**	**-1.5**
	baz=153						
ISKI	**Skildingahlsh**	**1.75**	**155**	P	**Pn**	**00 25 54.4**	**-0.7**
	baz=163						
IGHA	**Grjothals**	**1.84**	**151**	P	**Pn**	**00 25 55.4**	**-1.0**
	baz=159						
IKVO	**Krokottuvotn**	**1.92**	**155**	P	**Pn**	**00 25 57.0**	**-0.4**
	baz=163						
IREN	**Reynihlio**	**1.98**	**156**	P	**Pn**	**00 25 58.2**	**-0.1**
	baz=164						
IMEL	**Melhnausar**	**2.09**	**154**	P	**Pn**	**00 25 59.7**	**-0.1**
	baz=162						
IGRS	**Grimsstaoir**	**2.13**	**148**	P	**Pn**	**00 25 59.6**	**-0.7**
	baz=156						
ISVA	**Svartarkot**	**2.23**	**163**	P	**Pn**	**00 26 02.2**	**+0.6**
	baz=169						
ISTE	**Stelbrattur**	**2.63**	**187**	P	**Pb**	**00 26 10.1**	**-1.8**
	baz=190						
IURH	**Urdarhals**	**2.74**	**165**	P	**Pn**	**00 26 09.9**	**+1.1**
	baz=170						
IDYN	**Dyngjuhals**	**2.75**	**167**	P	**Pn**	**00 26 10.7**	**+1.8**
	baz=172						
IADA	**Aoalbol**	**2.79**	**150**	P	**Pn**	**00 26 09.6**	**+0.3**
	baz=156						
IASB	**`sbjarnarst**	**2.90**	**201**	P	**Pb**	**00 26 13.2**	**-3.3**
	baz=203						
HFS	**Hagfors**	**15.96**	**102**	Pn	**P**	**00 29 12.6**	**0.0**
	0.2nm,0.3s,baz=318,slow=8.5,SNR=5.5						
FINES	**FINESS Array B**	**19.89**	**86**	P	**P**	**00 29 55.6**	**-0.1**
	0.3nm,0.3s,baz=314,slow=12,SNR=4.8						
	3.4nm,0.7s						
FRB	**Frobisher Bay**	**20.39**	**283**	P	Pn	00 30 03.6	+0.4
	11nm,1.1s,baz=53,slow=10,SNR=3.3						
	11nm,1.1s						
GERES	**GERESS Array B**	**24.86**	**122**	P	**P**	**00 30 49.2**	**+2.1**
	3.8nm,1.0s,baz=327,slow=9.5,SNR=3.9						
	3.8nm,1.0s						
YKA	**Yellowknife Ar**	**36.94**	**310**	P	**P**	**00 32 34.4**	**+1.2**
	1.3nm,1.0s,baz=39,slow=8.6,SNR=3.9						
YKA				PcP	**PcP**	**00 34 55.2**	**+1.1**
	0.5nm,0.8s,baz=40,slow=3.1,SNR=3.0						
	1.3nm,1.0s						
ZALV	**Zalesovo Beam**	**46.34**	**53**	P	**P**	**00 33 49.4**	**-0.8**
	0.4nm,0.5s,baz=322,slow=4.2,SNR=2.3						
ZALV				PcP	**PcP**	**00 35 25.2**	**+0.1**
	0.3nm,0.4s,baz=328,slow=5.1,SNR=2.0						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**51.74**	**59**	P	**P**	**00 34 31.0**	**-0.7**
	0.5nm,0.8s,baz=327,slow=7.1,SNR=2.2						
	0.5nm,0.8s						

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*IDC **26** 00:45:39.5±2.2, 5°.69S×133°.59E, h0^{km}, mb4.0/4,*
mbtmp3.9/7, ML3.9/3, Error ellipse: s-maj=100.0km
s-min=26.3km az=76.0
*DJA **26** 00:45:48.8±2.0, 5°S±5°×13°4E±°, h28^{km}±23^{km}, M4.7/13,*
mb4.8/6, mB5.3/5, MLv4.6/13, Mw(mB)4.7/5
ISC 26 00:45:45.3±0.8**, 5°.49S**±0°.06×**133°.52E**±0°.08**, h35**^{km}**, n29,**
σ**1**^{s}**.92**/30**, mb3.9**/5**, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**2.86**	**334**	P	**Pn**	**00 46 28.2**	**-0.3**
FAKI	**Fak Fak**	**2.86**	**334**	P	**Pn**	**00 46 28.0**	**-0.5**
FAKI				S	**Sn**	**00 46 59.7**	**-2.0**
SAUI	**Saumlaki**	**3.31**	**222**	P	Pn	00 46 42.6	+7.8
BNDI	**Bandanaira**	**3.73**	**285**	P	**Pn**	**00 46 43.3**	**+2.8**
BNDI	**Bandanaira**	**3.73**	**285**	P	**Pn**	**00 46 42.8**	**+2.3**
RKPI	**Ransiki, Papua**	**4.01**	**9**	P	**Pn**	**00 46 45.2**	**+0.9**
RKPI				S	**Sn**	**00 47 28.1**	**-2.0**
SRPI	**Serui, Papua**	**4.51**	**37**	P	**Pn**	**00 46 52.3**	**+1.1**
MSAI	**Masohi**	**5.05**	**295**	P	**Pn**	**00 47 00.9**	**+2.2**
SIJI	**Sorong**	**5.12**	**334**	Pn	**Pn**	**00 46 59.0**	**-0.5**
	8.1nm,0.3s,baz=159,slow=23,SNR=32						
SIJI				Sn	**Sn**	**00 47 54.0**	**-3.4**
	28nm,0.3s,baz=94,slow=23,SNR=20						
	22nm,0.2s						
SWI	**Sorong**	**5.12**	**334**	P	**Pn**	**00 47 00.6**	**+0.9**
SWI				S	**Sn**	**00 47 55.1**	**-2.5**
AAI	**Ambon**	**5.61**	**288**	P	**Pn**	**00 47 08.5**	**+2.2**
	92nm,0.4s,2µm0.6nm						
SMPI	**Sarmi**	**6.24**	**56**	P	**Pn**	**00 47 17.0**	**+2.1**
	15nm,1.4s,0.2nm						
NLAI	**Namlea**	**6.79**	**289**	P	**Pn**	**00 47 25.5**	**+3.0**
	24nm,0.5s,3µm0.2nm						
KDU	**Kakadu**	**7.22**	**188**	P	**Pn**	**00 47 27.8**	**-0.7**
GENI	**Genyem**	**7.23**	**67**	P	**Pn**	**00 47 30.5**	**+1.9**
MTN	**Manton Dam**	**7.67**	**198**	P	**Pn**	**00 47 34.9**	**+0.2**
SANI	**Sanana**	**8.26**	**294**	P	**Pn**	**00 47 42.7**	**-0.1**
KNRA	**Kununurra**	**11.15**	**204**	P	**Pn**	**00 48 21.3**	**-1.0**
WRA	**Warramunga Arr**	**14.38**	**177**	Pn	Pn	00 49 01.1	-5.5
	0.4nm,0.3s,baz=353,slow=14,SNR=28						
WRA				Sn	Sn	00 51 31.2	-14
	0.5nm,0.3s,baz=3.6,slow=23,SNR=4.6						
	0.5nm,0.3s						
PLAI	**Plampang**	**15.97**	**257**	P	**Pn**	**00 49 29.4**	**+1.9**
QIS	**Mount Isa**	**16.10**	**159**	P	**Pn**	**00 49 28.2**	**-0.9**
AS01	**Alice Springs**	**18.07**	**179**	P	**Pn**	**00 49 51.2**	**-2.6**
ASAR	**Alice Springs**	**18.07**	**179**	P	**Pn**	**00 49 50.0**	**-3.8**
	0.3nm,0.3s,baz=7.3,slow=14,SNR=13						
ASAR				S	Sn	00 53 00.4	-14
	0.7nm,0.8s,baz=346,slow=14,SNR=2.9						
	0.5nm,0.4s						
WRKA	**Warakurna**	**20.07**	**194**	P	**P**	**00 50 16.3**	**+0.4**
CMAR	**Chiang Mai Arr**	**41.58**	**306**	P	**P**	**00 53 30.9**	**+0.8**
	0.9nm,0.3s,baz=136,slow=8.5,SNR=5.0						
	0.9nm,0.3s						
MKAR	**Makanchi Array**	**68.95**	**325**	P	**P**	**00 56 48.0**	**+1.0**
	0.7nm,0.5s,baz=121,slow=8.0,SNR=15						
	0.7nm,0.5s						
KSH	**Kashi**	**69.34**	**316**	P	P	00 56 55.5	+5.8
KSH				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KSH				LR	LR		
	comp=N,160nm,9.6s						
KSH				LR	LR		
	comp=E,250nm,13.7s						
KSH				LR	LR		
	comp=Z,93nm,11.3s						
ZALV	**Zalesovo Beam**	**71.84**	**332**	P	**P**	**00 57 04.9**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=120,slow=6.6,SNR=5.7						
	comp=Z,0.9nm,0.6s						
BVAR	**Borovoye Array**	**78.70**	**327**	P	**P**	**00 57 44.7**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=104,slow=6.3,SNR=5.2						
	comp=Z,0.8nm,0.8s						

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*DNK **26** 00:49:39.2±3.9, 64°.57N×17°.90W, h0^{km}±342^{km}, ML1.4*
*IDC **26** 00:50:21.1±1.1, 67°.41N×18°.24W, h0^{km}, mb3.3/6,*
mbtmp3.5/10, ML2.5/3, MS3.3/8, Error ellipse:
s-maj=23.7km s-min=20.0km az=10.0
ISC 26 00:50:22.4±0.7**, 67°.49N**±0°.07×**18°.30W**±0°.09**, h10**^{km}**, n21,**
σ**1**^{s}**.17**/13**, mb3.3**/5**, MS3.3**/5**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**3.02**	**206**	Pn	**Pn**	**00 51 08.8**	**-1.4**
	1.5nm,0.3s,baz=352,slow=12,SNR=1.3						
BORG				Sn	**Sn**	**00 51 46.6**	**+0.2**
	1.3nm,0.3s,baz=36,slow=16,SNR=2.2						
	19nm,0.8s						
SCO	**Scoresbysund**	**3.28**	**338**	*e*P	Pn	00 51 08.9	-4.8
DBG	**Daneborg**	**6.88**	**356**	*e*P	Pn	00 51 56.0	-7.1
DBG				*i* S	**Sb**	**00 53 41.2**	**-2.7**
DBG				IAML		00 53 44.5	
	comp=Z,0.9nm,0.6s						
SUMG	**Summit**	**8.54**	**316**	*e*P	Pn	00 52 13.6	-13
DAG	**Danmarks Havn**	**9.33**	**359**	*e*P	Pn	00 52 32.7	-4.0
SFJD	**Kangerlussuaq**	**12.44**	**283**	LR	LR	00 57 37.9	
	comp=Z,136nm,18.1s,baz=66,slow=35						
EKA	**Eskdalemuir Ar**	**14.12**	**142**	LR	LR	00 58 47.6	
	comp=Z,112nm,18.7s,baz=352,slow=36						
NOA	**NORSAR Array B**	**14.23**	**103**	Pn	**Pn**	**00 53 43.3**	**-0.5**
	baz=272,slow=13,SNR=1.3						
NOA				LR	LR	00 58 21.0	
	comp=Z,97nm,19.8s,baz=300,slow=34						
	comp=Z,0.6nm,0.9s						
SPITS	**Spitsbergen Ar**	**14.45**	**28**	Pn	**Pn**	**00 53 47.5**	**+0.9**
	comp=Z,19nm,1.0s,baz=239,slow=13,SNR=2.3						
HFS	**Hagfors**	**15.75**	**102**	Pn	**Pn**	**00 54 04.9**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=332,slow=15,SNR=2.7						
FINES	**FINESS Array B**	**19.67**	**86**	P	**P**	**00 54 51.3**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=316,slow=11,SNR=3.6						
	comp=Z,2.0nm,0.7s						
FRB	**Frobisher Bay**	**20.59**	**284**	P	**P**	**00 55 01.3**	**+0.2**
	comp=Z,3.6nm,1.0s,baz=66,slow=11,SNR=4.0						
FRB				LR	LR	01 02 52.5	
	comp=Z,51nm,20.3s,baz=45,slow=36						
	comp=Z,3.6nm,1.0s						
GERES	**GERESS Array B**	**24.69**	**123**	P	**P**	**00 55 43.0**	**-0.4**
	comp=Z,1.0nm,0.9s,baz=340,slow=12,SNR=5.2						
	comp=Z,1.0nm,0.9s						
DAVOX	**Davos/Dischmat**	**25.35**	**131**	LR	LR	01 07 13.8	
	comp=Z,85nm,19.9s,baz=278,slow=40						
SCHQ	**Schefferville**	**25.81**	**265**	LR	LR	01 05 18.6	
	comp=Z,127nm,18.8s,baz=126,slow=35						
OBN	**Obninsk**	**28.03**	**89**	LR	LR	01 06 39.5	
	comp=Z,26nm,19.4s,baz=7.0,slow=35						
AKASG	**Malin Array Be**	**28.64**	**102**	LR	LR	01 07 34.0	
	comp=Z,82nm,18.8s,baz=269,slow=36						
YKA	**Yellowknife Ar**	**37.08**	**310**	P	**P**	**00 57 33.0**	**+0.8**
	comp=Z,0.3nm,0.9s,baz=42,slow=7.5,SNR=3.0						
	comp=Z,0.3nm,0.9s						
ILAR	**Eielson Array**	**43.04**	**331**	P	**P**	**00 58 22.9**	**+1.4**
	comp=Z,0.2nm,0.7s,baz=24,slow=6.3,SNR=4.5						
	comp=Z,0.2nm,0.7s						
MKAR	**Makanchi Array**	**51.54**	**60**	P	**P**	**00 59 27.6**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=316,slow=6.0,SNR=2.8						
	comp=Z,0.3nm,0.7s						
SONM	**Songino Array**	**57.70**	**41**	P	**P**	**01 00 12.8**	**0.0**
	comp=Z,0.2nm,0.4s,baz=349,slow=4.4,SNR=2.1						
	comp=Z,0.2nm,0.4s						

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*ISK **26** 00:50:28.5, 35°.30N×31°.26E, h5^{km}, ML2.5/6*
*NIC **26** 00:50:29.3±0.0, 35°.36N×30°.96E, h35^{km}±32^{km}, Ml2.5/7*
ISC 26 00:50:28.8±2.5**, 35°.36N**±0°.06×**31°.1E**±0°.1**, h14**^{km}±11^{km}**,**
n16, σ**0**^{s}**.76**/30**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKMS	**Akamas**	**1.08**	**108**	P	**Pg**	**00 50 49.5**	**-0.1**
AKMS				S	**Sg**	**00 51 04.6**	**+0.9**
AKMS				AML	AML	00 51 10.9	
	0.4nm,0.3s						
AKMS				AML	AML	00 51 10.9	
	0.4nm,0.3s						
AKMS				AML	AML	00 51 17.7	
	0.4nm,1.0s						
AKMS				AML	AML	00 51 17.7	
	0.4nm,1.0s						
ALFC	**Alefka**	**1.25**	**99**	P	**Pb**	**00 50 52.5**	**+0.2**
ALFC				S	**Sg**	**00 51 09.6**	**+0.3**
ALFC				AML	AML	00 51 15.4	
	0.3nm,0.4s						
ALFC				AML	AML	00 51 15.4	
	0.3nm,0.4s						
GAZI	**Gazipasa**	**1.32**	**49**	Pn	**Pb**	**00 50 53.4**	**-0.1**
GAZI				Sn	**Sg**	**00 51 12.4**	**+0.8**
NATA	**Nata**	**1.35**	**115**	P	**Pn**	**00 50 52.9**	**-0.4**
NATA				S	**Sg**	**00 51 11.9**	**-0.4**
NATA				AML	AML	00 51 31.9	
	0.5nm,0.4s						
NATA				AML	AML	00 51 31.9	
	0.5nm,0.4s						
NATA				AML	AML	00 51 36.8	
	0.5nm,0.7s						
NATA				AML	AML	00 51 36.8	
	0.5nm,0.7s						
TROD	**Troodos**	**1.51**	**105**	P	**Pn**	**00 50 55.1**	**-0.6**
TROD				S	**Sb**	**00 51 16.4**	**+0.4**
TROD				AML	AML	00 51 25.6	
	0.1nm,0.6s						
TROD				AML	AML	00 51 25.6	
	0.1nm,0.6s						
TROD				AML	AML	00 51 34.5	
	0.1nm,0.8s						
TROD				AML	AML	00 51 34.5	
	0.1nm,0.8s						
SZAC	**Souni**	**1.59**	**112**	P	**Pn**	**00 50 56.4**	**-0.2**
SZAC				S	**Sb**	**00 51 18.7**	**+0.6**
SZAC				AML	AML	00 51 35.2	
	0.1nm,0.8s						
SZAC				AML	AML	00 51 35.2	
	0.1nm,0.8s						
SZAC				AML	AML	00 51 41.4	
	0.2nm,0.6s						
SZAC				AML	AML	00 51 41.4	
	0.2nm,0.6s						
TEKE	**Tekeli-Mersin**	**1.82**	**64**	Pn	**Pb**	**00 51 00.8**	**-1.2**
TEKE				Sn	**Sb**	**00 51 24.3**	**-0.4**
ASGA	**Asgata**	**1.86**	**107**	P	**Pn**	**00 51 00.5**	**+0.1**
ASGA				S	**Sn**	**00 51 24.1**	**+0.4**
ASGA				AML	AML	00 51 47.1	
	0.1nm,0.7s						
ASGA				AML	AML	00 51 47.1	
	0.1nm,0.7s						
ASGA				AML	AML	00 51 50.3	
	0.1nm,0.8s						
ASGA				AML	AML	00 51 50.3	
	0.1nm,0.8s						
CSS	**Mathiatis**	**1.88**	**102**	Pn	**Pn**	**00 51 00.7**	**+0.1**
CSS				Sn	**Sn**	**00 51 24.6**	**+0.5**
CSS	**Mathiatis**	**1.88**	**102**	P	**Pn**	**00 51 00.8**	**+0.1**
CSS				S	**Sb**	**00 51 26.7**	**+0.4**
HDMB	**Hadim**	**1.96**	**35**	Pn	**Pb**	**00 51 03.7**	**-0.8**
HDMB				Sn	**Sb**	**00 51 29.4**	**+0.6**
BERE	**Bereket-Mersin**	**1.99**	**60**	Pn	**Pb**	**00 51 03.4**	**-1.6**
BERE				Sn	**Sb**	**00 51 29.1**	**-0.7**
MVOU	**Mavrovouni**	**2.11**	**99**	P	**Pn**	**00 51 04.1**	**+0.4**
MVOU				S	**Sn**	**00 51 29.9**	**+0.1**
MVOU				AML	AML	00 51 52.0	
	0.1nm,0.8s						
MVOU				AML	AML	00 51 52.0	
	0.1nm,0.8s						
MVOU				AML	AML	00 52 03.2	
	0.1nm,1.9s						
MVOU				AML	AML	00 52 03.2	
	0.1nm,1.9s						
SEYD	**Seydisehir-KON**	**2.13**	**16**	Pn	**Pb**	**00 51 06.9**	**-0.4**
AKKU	**Akkuyu-Mersin**	**2.15**	**68**	Pn	**Pn**	**00 51 05.4**	**+1.0**
AKKU				Sn	**Sb**	**00 51 32.4**	**-1.8**
IKL	**Isikli**	**2.29**	**67**	Pn	**Pn**	**00 51 07.4**	**+1.3**

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*HEL **26** 00:50:35.0±0.2, 67°.84N×20°.23E, h0^{km}, ML1.8, Explosion*
*IDC **26** 00:50:37.3±1.3, 67°.81N×20°.96E, h0^{km}, mbtmp2.7/3,*
ML2.0/3, Error ellipse: s-maj=20.2km s-min=9.3km
az=110.0
ISC 26 00:50:35.3±1.0**, 67°.86N**±0°.03×**20°.37E**±0°.05**, h0**^{km}**, n24,**
σ**1**^{s}**.13**/39**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LANU	**Lannavaara**	**0.64**	**72**	PG	**Pg**	**00 50 47.3**	**-0.2**
	baz=252						
LANU				SG	**Sb**	**00 50 57.1**	**-1.7**
KIF	**Kilpisjarvi**	**1.16**	**8**	*e*P	**Pg**	**00 50 57.5**	**0.0**
KIF	**Kilpisjarvi**	**1.16**	**8**	PG	**Pg**	**00 50 57.5**	**0.0**
	baz=189						
KIF				MSG		00 51 12.3	
	comp=Z,14nm,0.2s						

KIF				SG	Sb	00 51 13.1	-0.7
HEF	Hetta	1.35	64	eP	Pg	00 51 00.6	-0.5
HEF	Hetta	1.35	64	PN	Pg	00 51 00.5	-0.6
	baz=243						
HEF				MSG		00 51 17.5	
	comp=Z,7.8nm,0.2s						
HEF				SN	Sn	00 51 19.5	-0.5
PAJU	Pajala	1.35	127	PG	Pg	00 50 59.9	-1.2
	baz=305						
PAJU				SN	Sb	00 51 19.1	-0.1
ERTU	Ertsjaerv	1.49	151	PG	Pn	00 51 02.1	-1.2
ERTU				SN	Sg	00 51 23.1	+0.1
KLF	Kolari	1.52	113	PG	Pn	00 51 03.1	-0.5
	baz=298						
KLF				MSG		00 51 21.7	
	comp=Z,6.6nm,0.2s						
KTK1	Kautokeino	1.57	41	PG	Pn	00 51 04.2	-0.2
KTK1				SN	Sg	00 51 27.7	+2.1
TRO	Tromso	1.86	344	PG	Pn	00 51 08.5	+0.2
TRO				SG	Sn	00 51 32.6	+0.1
KALU	Kalix	2.33	148	PG	Pn	00 51 15.2	+0.5
	baz=325						
KALU				SG	Sb	00 51 46.0	-1.3
TOF	Tornio	2.37	137	PG	Pn	00 51 16.5	+1.2
	baz=321						
TOF				MSG		00 51 45.7	
	comp=Z,2.7nm,0.2s						
TOF				SG	Sb	00 51 49.2	+0.8
SGF	Sodankyl	2.39	97	PG	Pn	00 51 16.8	+1.2
SGF				SG	Sb	00 51 47.9	-1.2
ARA0	ARCESS Array S	2.52	46	PB	Pn	00 51 18.6	+1.2
ARA0				SN	Sn	00 51 46.7	-2.1
ARCES	ARCESS Array B	2.52	46	Pn	Pn	00 51 18.1	+0.6
	comp=Z,0.6nm,0.3s,baz=225,slow=16,SNR=20						
ARCES				Sn	Sn	00 51 49.6	+0.8
	comp=Z,1.4nm,0.3s,baz=229,slow=25,SNR=14						
	comp=Z,1.3nm,0.3s						
RNF	Rovaniemi	2.53	117	PB	Pn	00 51 19.1	+1.6
RNF				SG	Sb	00 51 53.3	+0.2
KEV	Kevo	3.07	49	PG	Pb	00 51 29.5	-1.2
KEV				MSG		00 52 06.7	
	comp=Z,2.3nm,0.2s						
KEV				SB	Sb	00 52 08.5	-0.2
VRF	Varrio	3.51	88	PG	Pb	00 51 38.6	+0.4
OUL	Oulu	3.56	139	SG	Sb	00 52 24.1	+1.4
OLKF	Oulanka, Finla	3.85	109	PN	Pn	00 51 36.7	+0.9
MSF	Maaselka	3.94	116	PN	Pn	00 51 38.5	+1.6
	baz=303						
KU6	Riekki	4.17	112	PG	Pb	00 51 50.2	+0.8
	baz=296						
FINES	FINESS Array B	6.89	157	Pn	Pn	00 52 17.5	+0.2
	comp=Z,0.1nm,0.3s,baz=344,slow=15,SNR=4.4						
FINES				Sn	Sn	00 53 34.0	-2.3
	comp=Z,0.1nm,0.3s,baz=346,slow=22,SNR=1.1						
FINES				Lg	Lg	00 54 09.7	
	comp=Z,0.2nm,0.3s,baz=349,slow=28,SNR=2.8						
	comp=Z,0.9nm,0.8s						
NOA	NORSAR Array B	7.90	214	Pn	Pn	00 52 33.5	+2.3
	baz=8.1,slow=13,SNR=1.0						
NOA				Lg	Lg	00 54 46.3	
	baz=339,slow=19,SNR=4.3						
	comp=Z,0.3nm,0.7s						

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*IDC **26** 00:52:55.6±1.2, 67°.53N×18°.82W, h0km, mb3.4/4, mbtmp3.6/7, ML2.9/3, Error ellipse: s-maj=26.2km s-min=22.4km az=29.0*

ISC 26 00:52:56.9±0.9**, 67°.55N**±0°.10×**18°.7W**±0°.1**, h10km, n7, σ**0^{s}**.44**/8**, mb3.3**/4**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	Borgarnes	3.00	202	Pn	Pn	00 53 44.3	-0.2
	3.0nm,0.3s,baz=211,slow=2.3,SNR=2.2						
BORG				Sn	Sn	00 54 20.3	-0.2
	5.1nm,0.3s,baz=50,slow=22,SNR=8.6						
	43nm,0.8s						
ARCES	ARCESS Array B	16.04	63	Pn	Pn	00 56 41.5	-0.6
	0.1nm,0.3s,baz=300,slow=14,SNR=2.5						
	8.8nm,1.0s						
FINES	FINESS Array B	19.84	86	P	P	00 57 27.4	0.0
	0.1nm,0.3s,baz=308,slow=9.5,SNR=4.3						
	2.7nm,0.9s						
GERES	GERESS Array B	24.86	123	P	P	00 58 20.1	+0.7
	0.4nm,0.6s,baz=292,slow=10,SNR=2.5						
	0.4nm,0.6s						
YKA	Yellowknife Ar	36.92	310	P	P	01 00 05.3	+0.1
	0.5nm,0.9s,baz=39,slow=8.8,SNR=6.5						
	0.5nm,0.9s						
ILAR	Eielson Array	42.90	330	P	P	01 00 54.9	0.0
	0.4nm,0.9s,baz=18,slow=6.2,SNR=4.1						
	0.4nm,0.9s						
TXAR	Lajitas Array	61.34	278	P	P	01 03 12.6	+0.1
	0.7nm,1.1s,baz=33,slow=6.9,SNR=3.8						
	0.7nm,1.1s						

IDC 26 00:59:13.3±7.0**, 5°.74S**×**147°.41E, h157km**±78km**, mb3.1**/1**, mbtmp3.9**/3**, Error ellipse: s-maj=132.2km s-min=49.6km az=121.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.65	184	P	Pn	01 00 10.0	+0.6
	23nm,0.3s,baz=356,slow=6.1,SNR=16						
PMG				S	Sn	01 00 53.2	+0.3
	38nm,0.3s,baz=315,slow=23,SNR=9.1						
WRA	Warramunga Arr	19.00	221	P	P	01 03 22.9	-0.2
	4.3nm,0.6s,baz=41,slow=11,SNR=68						
ASAR	Alice Springs	22.06	215	P	P	01 03 55.9	+0.1
	1.0nm,0.6s,baz=48,slow=8.3,SNR=22						
	1.0nm,0.6s						
TORD	Torodi Ar. Bea	145.42	285	PKPbc	PKPdf	01 18 33.1	-0.6
	0.4nm,0.7s,baz=92,slow=2.5,SNR=1.3						

IDC 26 01:00:51.3±5.5**, 39°.35N**×**110°.01E, h0km, mb3.3**/4**, mbtmp3.3**/5**, ML2.8**/1**, Error ellipse: s-maj=117.8km s-min=26.5km az=86.0, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	8.87	344	Pn	Pn	01 03 00.5	-0.3
	0.1nm,0.3s,baz=165,slow=14,SNR=5.9						
SONM				Sn	Sn	01 04 42.9	+1.3
	0.1nm,0.3s,baz=172,slow=23,SNR=5.6						
	0.7nm,0.6s						
MKAR	Makanchi Array	21.50	299	P	P	01 05 41.7	+0.1
	1.4nm,1.0s,baz=96,slow=11,SNR=8.1						
	1.4nm,1.0s						
ZALV	Zalesovo Beam	22.46	319	P	P	01 05 52.1	+0.3
	0.2nm,0.4s,baz=125,slow=12,SNR=1.6						
	0.2nm,0.4s						
CMAR	Chiang Mai Arr	22.93	208	P	P	01 05 57.0	-0.1
	1.1nm,0.3s,baz=11,slow=10,SNR=5.0						
	1.1nm,0.3s						
KURBB	Kurchatov Arra	24.77	307	P	P	01 06 14.4	-0.1
	0.5nm,0.8s,baz=109,slow=10,SNR=3.1						
	0.5nm,0.8s						

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*NOU **26** 01:04:41.2, 15°.79S×166°.24E, h0km, MLv4.7/12, Vanuatu Islands*

*IDC **26** 01:04:46.1±1.7, 16°.21S×165°.42E, h0km, mb3.7/3, mbtmp3.8/4, ML4.1/1, MS3.5/2, Error ellipse: s-maj=38.1km s-min=31.0km az=100.0*

ISC 26 01:04:43.5±2.1**, 15°.7S**±0°.2×**166°.3E**±0°.1**, h35km, n13, σ**0^{s}**.57**/11**, mb3.6**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	2.73	137	P	Pn	01 05 25.1	+0.3
KOUNC	Koumac, New Ca	5.15	201	P	Pn	01 05 58.8	+0.6
DZM	Mont Dzumac	6.32	178	Pn	Pn	01 06 14.6	+0.3
	4.7nm,0.3s,baz=344,slow=12,SNR=100						
DZM				Sn	Sn	01 07 24.6	-0.7
	1.6nm,0.3s,baz=14,slow=22,SNR=1.4						
	24nm,0.5s						
DZM	Mont Dzumac	6.32	178	P	Pn	01 06 14.6	+0.3
NOUC	Port Laguerre	6.35	180	P	Pn	01 06 15.2	+0.6
ONTNC	Ouen Toro	6.55	178	P	Pn	01 06 18.0	+0.5
OUENC	Ouen Island, N	6.69	175	P	Pn	01 06 19.9	+0.6
PINNC	Pines Island,	6.95	171	P	Pn	01 06 23.3	+0.4
HNR	Honiara	8.77	315	LR	LR	01 09 54.8	
	comp=Z,706nm,18.0s,baz=252,slow=36						
WRA	Warramunga Arr	30.64	257	P	P	01 10 54.6	-0.2
	0.3nm,0.8s,baz=87,slow=9.5,SNR=1.6						
	0.3nm,0.8s						
ASAR	Alice Springs	31.41	250	P	P	01 11 01.2	-0.4
	0.7nm,0.6s,baz=76,slow=10,SNR=13						
	0.7nm,0.6s						
GUMO	Guam	35.99	323	LR	LR	01 27 05.9	
	comp=Z,24nm,18.7s,baz=104,slow=37						
ILAR	Eielson Array	87.77	18	P	P	01 17 40.0	+11
	0.6nm,0.7s,baz=230,slow=6.0,SNR=7.5						
	0.6nm,0.7s						

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*BER **26** 01:06:43.5±5.9, 66°.21N×25°.27W, h10km, mb4.9, MW5.0(CSEM)*

*DNK **26** 01:07:09.9±4.0, 67°.58N×19°.25W, h0km±62km*

*BJI **26** 01:07:10.2±0.0, 67°.68N×19°.15W, h14km, mb4.8/65, mB5.4/47, Ms5.1/53, Ms7 4.9/53*

*REY **26** 01:07:11.0, 67°.79N×18°.41W, h10km*

*MOS **26** 01:07:11.4±1.3, 67°.68N×18°.66W, h10km, mb5.1/77, MS4.8/28, Error ellipse: s-maj=9.2km s-min=5.2km az=102.6*

*NEIC **26** 01:07:12.2, 67°.82N×18°.64W, h18km*

*NEIC **26** 01:07:12.2±1.9, 67°.82N±0°.05×18°.7W±0°.2, h10km±1km, mb5.0/300, Mww5.2/17, Error ellipse: s-maj=11.2km s-min=9.2km az=263.0*

*IDC **26** 01:07:12.4±0.4, 67°.68N×18°.59W, h0km, mb4.4/37, mbtmp4.4/44, ML3.5/6, MS4.7/85, Error ellipse: s-maj=11.3km s-min=8.4km az=21.0*

*NEIC **26** 01:07:12.2, 67°.92N×18°.64W, h18km, Moment Tensor Solution. Duration: $2^{s}.2$ Moment tensor: Scale 10^{16}Nm; M_{rr}-9.39; $M_{\theta\theta}$1.84; $M_{\phi\phi}$7.55; $M_{r\theta}$-2.27; $M_{\theta\phi}$2.41; $M_{\phi r}$1.00; Fault plane solution: $M_0$9.19000×10^{16} NP1: ϕ_s187.52000°, δ46.93000°, λ-107.62000°. NP2: ϕ_s32.46000°, δ45.88000°, λ-72.06000°. Principal axes: T 8.4353, Plg1.0000°, Azm290.0000°; N 1.5177, Plg13.0000°, Azm200.0000°; P -9.9531, Plg77.0000°, Azm22.0000°;*

*GCMT **26** 01:07:13.2±0.1, 67°.83N±0°.01×18°.70W±0°.02, h12km, MW5.2/147, Moment Tensor Solution. s40,c53; s147,c267; Duration: $1^{s}.0$ Moment tensor: Scale 10^{17} Nm; M_{rr}-0.88±.01; $M_{\theta\theta}$0.05±.01; $M_{\phi\phi}$0.82±.01; $M_{r\theta}$-0.01±.06; $M_{\theta\phi}$0.18±.01; $M_{\phi r}$0.09±.04; Best double couple: $M_0$0.87700×10^{17} NP1: ϕ_s191.00000°, δ48.00000°, λ-93.00000°. NP2: ϕ_s15.00000°, δ42.00000°, λ-87.00000°. Principal axes: T 0.8730, Plg3.0000°, Azm283.0000°; N 0.0070, Plg2.0000°, Azm193.0000°; P -0.8800, Plg87.0000°, Azm68.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **26** 01:07:15.1, 67°.59N×18°.99W, h5km, mb4.4*

ISC 26 01:07:12.9±0.5**, 67°.67N**±0°.03×**18°.72W**±0°.03**, h11**km±3km**, n1073, σ**1^{s}**.77**/1045**, mb4.9**/285**, MS4.8**/133**, 18C-37D, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGRI	Grimsey	1.16	166	P	Pb	01 07 32.3	-2.8
	baz=173						
IGRI				S	Sb	01 07 48.2	-1.9
	baz=173						
ILEI	Leirhofn	1.54	144	P	Pn	01 07 37.3	-3.0
	baz=151						
ILEI				S	Sn	01 07 56.4	-3.8
	baz=151						
ISIG	Siglufjorour	1.54	183	P	Pn	01 07 38.5	-1.8
	baz=187						
ISIG				S	Sn	01 07 59.1	-1.3
	baz=187						
IBRE	Brettingsstaoi	1.58	168	P	Pn	01 07 38.9	-2.0
	baz=173						
IBRE				S	Sn	01 08 00.1	-1.2
	baz=173						
IHRN	Hraun	1.66	200	P	Pn	01 07 40.2	-1.8
	baz=203						
IHRN				S	Sn	01 07 59.9	-3.3
	baz=203						
IHED	Heoinshofoi	1.69	160	S	Sn	01 08 02.5	-1.4
	baz=165						
IHLA	Hella	1.74	175	P	Pn	01 07 41.5	-1.5
	baz=180						
IGRA	Granastaoir	1.81	165	P	Pn	01 07 41.9	-2.2
	baz=170						
IGRA				S	Sn	01 08 06.5	-0.5
	baz=170						
IGIL	Gilhagi	1.85	149	P	Pn	01 07 41.8	-2.8
	baz=154						
IDIM	Dimmadalss	1.85	157	P	Pn	01 07 42.0	-2.7
	baz=162						
ISKI	Skildingahlsh	1.93	159	P	Pn	01 07 43.2	-2.5
	baz=164						
ISKI				S	Sn	01 08 09.5	-0.4
	baz=164						
IGHA	Grjothals	2.01	155	P	Pn	01 07 44.3	-2.4
	baz=160						
IGHA				S	Sn	01 08 09.2	-2.6
	baz=160						
IKVO	Krokottuvotn	2.09	159	P	Pn	01 07 45.7	-2.2
	baz=163						
IREN	Reynihlio	2.15	160	P	Pn	01 07 46.8	-1.9
	baz=164						
IREN				S	Sn	01 08 14.3	-1.1
	baz=164						
IMEL	Melhnausar	2.26	158	P	Pn	01 07 48.4	-1.8
	baz=162						
IGRS	Grimsstaoir	2.29	152	P	Pn	01 07 48.4	-2.2
	baz=156						
IGRS				S	Sn	01 08 16.7	-2.0
	baz=156						
ISVA	Svartarkot	2.41	165	P	Pn	01 07 51.1	-1.2
	baz=169						
ISVA				S	Sn	01 08 21.8	-0.1
	baz=169						
ISTE	Stelbrattur	2.85	188	P	Pn	01 07 59.0	+0.6
	baz=190						
IMKO	Mokollar	2.87	159	P	Pn	01 07 57.2	-1.4
	baz=163						
THOR	Thorvaldshraun	2.87	162	P	Pn	01 07 57.9	-0.7
	baz=166						
IURH	Urdarhals	2.93	167	P	Pn	01 07 58.9	-0.6
	baz=170						
IDYN	Dyngjuhals	2.94	169	P	Pn	01 07 59.1	-0.6
	baz=172						
IADA	Aoalbol	2.95	153	P	Pn	01 07 57.9	-1.8
	baz=156						
IVON	Vonarskard	3.03	172	P	Pn	01 08 00.5	-0.4
	baz=175						
SCO	Scoresbysund	3.06	339	Pn	Pn	01 07 56.0	-5.1
SCO	Scoresbysund	3.06	339	P	Pn	01 07 56.0	-5.2
SCO	Scoresbysund	3.06	339	iP	Pn	01 07 56.8	-4.3
IASB	`sbjarnarst	3.12	201	P	Pn	01 08 01.4	-0.5
	baz=202						
IASB				S	Sn	01 08 39.9	+0.8
	baz=202						
BORG	Borgarnes	3.12	201	Pn	Pn	01 08 01.7	-0.2
	42nm,0.3s,baz=19,slow=6.7,SNR=124						
BORG				Sn	Sn	01 08 40.0	+0.9
	56nm,0.3s,baz=240,slow=21,SNR=9.8						
	496nm,0.7s						
BORG	Borgarnes	3.12	201	Pn	Pn	01 08 00.9	-1.0
BORG	Borgarnes	3.12	201	P	Pn	01 08 00.9	-1.0
IVSH	V-Sauoahnukur	3.12	156	P	Pn	01 08 00.8	-1.2
	baz=159						
ISKR	Skrokkalda	3.12	177	P	Pn	01 08 02.3	+0.2
	baz=180						
IDJK	Dyngjujokull	3.23	169	P	Pn	01 08 03.7	-0.1
	baz=171						
IVOT	Vottur	3.47	169	P	Pn	01 08 07.1	+0.2
	baz=171						
JMIC	Jan Mayen	4.92	43	eP	Pb	01 08 35.6	-3.4
JMIC				IAmb	IAmb	01 08 37.4	
	comp=Z,322nm,1.1s						
JMIC				e		01 09 23.4	
DBG	Daneborg	6.69	357	eP	Pn	01 08 49.6	-1.4
DBG	Daneborg	6.69	357	eP	Pn	01 08 46.8	-4.3
DBG				eS	Sn	01 10 16.4	+9.3
ANGG	Ammassalik, Gr	7.78	264	Pn	Pn	01 09 05.6	-0.4
ICESG	Greenland Ices	7.85	290	eP	Pn	01 09 05.3	-1.8
SUMG	Summit	8.30	315	eP	Pn	01 09 11.4	-2.0
DAG	Danmarks Havn	9.15	0	iP	Pn	01 09 24.0	-0.7
DAG				eS	Sn	01 11 13.1	+5.5
DAG	Danmarks Havn	9.15	0	eP	Pn	01 09 21.2	-3.5
DAG				eS	Sn	01 11 20.5	+13
DY2G	Dye2	10.77	276	eP	Pn	01 09 46.3	-0.7
FOO	Floro	11.80	110	e		01 12 53.0	
ILULI	Ilulissat	11.93	292		Pn	01 10 00.5	-2.1
ILULI	Ilulissat	11.93	292	P	Pn	01 10 00.5	-2.1
ILULI	Ilulissat	11.93	292	eP	Pn	01 09 58.3	-4.3
SUE	Sulen	12.07	112	eS	Sn	01 12 41.5	+23
MOL	Molde	12.11	102	e		01 13 16.6	
AKN	Aaknes	12.15	105	eP	Pn	01 10 08.1	+2.3
AKN				IAmb	IAmb	01 10 09.6	
	comp=Z,42nm,1.1s						
AKN				e		01 13 15.0	
SFJD	Kangerlussuaq	12.25	282	Pn	Pn	01 10 06.6	-0.4
	comp=Z,0.3nm,0.3s,baz=49,slow=11,SNR=6.1						
	comp=Z,9.8nm,0.8s						
SFJD	Kangerlussuaq	12.25	282		Pn	01 10 04.5	-2.5
SFJD	Kangerlussuaq	12.25	282	P	Pn	01 10 04.5	-2.5
NUUG	Nuugaatsiaq	12.50	304	eP	Pn	01 10 04.8	-5.6
HYA	Hoyanger	12.50	109	eP	Pn	01 10 12.0	+1.5
ASK	Askoy	12.62	113	eP	Pn	01 10 13.8	+1.7
BER	Bergen	12.74	113	eP	Pn	01 10 14.6	+0.8
BER				IAmb	IAmb	01 10 17.8	
	comp=Z,35nm,1.1s						
NSS	Namsos	12.75	90	eP	P	01 10 21.6	-3.4
NSS				IAmb	IAmb	01 10 27.1	
	comp=Z,415nm,2.0s						
NSS				eS	Sn	01 13 20.3	+45
DOMB	Dombas	13.00	102	eP	Pn	01 10 18.5	+1.2
UPNV	Upernavik	13.45	309	eP	Pn	01 10 19.5	-3.9
NEEM	North Greenlan	13.51	330	iP	Pn	01 10 21.0	-3.4
ODD1	Odda	13.53	113	eP	Pn	01 10 24.4	-0.2
ODD1				IAmb	IAmb	01 10 28.7	
	comp=Z,480nm,2.8s						
SKAR	Skarslia	13.60	108	eP	Pn	01 10 27.2	+1.7
BLS5	Blasjo	13.83	114	eP	Pn	01 10 28.4	-0.2
BRBB	Barentsburg B	13.94	28	eP	Pn	01 10 33.7	+3.7
KBS	Kingsbay	14.02	24	eP	Pn	01 10 32.7	+1.6
NOR	Nord	14.02	1	iP	Pn	01 10 30.0	-1.2
NOR	Nord	14.02	1	eP	Pn	01 10 29.5	-1.6
NOR				e		01 14 54.3	
NC204	NORSAR Array S	14.11	103		Pn	01 10 30.0	-2.5
IVI	Ivigtut	14.14	257	iP	Pn	01 10 28.2	-4.7
EKA	Eskdalemuir Ar	14.36	142	Pn	Pn	01 10 35.6	-0.4
	baz=20,slow=7.5						
EKA				LR	LR	01 15 37.4	
	comp=Z,4μm,20.1s,baz=332,slow=35						
	comp=Z,1.8nm,0.8s						
ESK	Eskdalemuir	14.37	142		Pn	01 10 34.9	-1.1
ESK	Eskdalemuir	14.37	142	P	Pn	01 10 34.9	-1.1
SPA0	Spitsbergen Ar	14.37	29	eP	Pn	01 10 38.2	+2.2
SPITS	Spitsbergen Ar	14.37	29	Pn	Pn	01 10 37.5	+1.5
	comp=Z,68nm,1.1s,baz=216,slow=11,SNR=28						
SPITS				LR	LR	01 14 38.2	
	comp=Z,4μm,19.8s,baz=204,slow=31						
SPITS	Spitsbergen Ar	14.37	29	P	Pn	01 10 32.7	-3.3
SPB2	Spitsbergen Ar	14.37	29	Pn	Pn	01 10 33.1	-2.9
NOD	Norderasen	14.40	91	eP	P	01 10 40.5	-2.9
NB2	NORSAR Subarra	14.43	103	P	Pn	01 10 38.6	+1.7
	comp=Z,611nm,5.0s,baz=311,slow=11						
NB2	NORSAR Subarra	14.43	103	P	Pn	01 10 38.6	+1.7
	baz=311,slow=11						
NOA	NORSAR Array B	14.43	103	Pn	Pn	01 10 37.3	+0.4
	baz=288,slow=8.9,SNR=3.7						
NOA				LR	LR	01 15 21.1	
	comp=Z,3μm,21.7s,baz=310,slow=34						
	comp=Z,1.0nm,0.9s						
KIF	Kilpisjarvi	14.48	67	eP	P	01 10 45.1	+0.9
NC602	NORSAR Array S	14.75	103	eP	Pn	01 10 42.5	+1.2
KONO	Kongsberg	14.78	109	Pn	Pn	01 10 39.5	-2.1
KONO	Kongsberg	14.78	109	P	Pn	01 10 39.5	-2.1
KTK1	Kautokeino	15.33	66	eP	P	01 10 54.6	+0.9
DSB	Dublin	15.64	152	Pn	Pn	01 10 51.7	-1.4
HEF	Hetta	15.65	68	eP	P	01 10 57.0	-0.2
HFS	Hagfors	15.95	103	Pn	P	01 11 02.6	+1.9
	comp=Z,0.6nm,0.3s,baz=322,slow=9.4,SNR=34						
HFS				LR	LR	01 16 30.4	
	comp=Z,1μm,21.2s,baz=294,slow=35						
ARA0	ARCESS Array S	15.98	63	IAmb	IAmb	01 11 01.6	
	comp=Z,560nm,2.3s						
ARA0				eP	P	01 11 01.7	+0.8
ARCES	ARCESS Array B	15.98	63	Pn	Pn	01 10 56.7	-0.6
	comp=Z,0.2nm,0.3s,baz=299,slow=1.2,SNR=7.5						
ARCES				LR	LR	01 15 42.6	
	comp=Z,3μm,20.1s,baz=268,slow=32						
	comp=Z,12nm,1.0s						
ARCES	ARCESS Array B	15.98	63	Pn	Pn	01 10 53.8	-3.5
ARCES	ARCESS Array B	15.98	63	P	Pn	01 10 53.8	-3.5
ARCES				pmax	pmax		
	comp=Z,55nm,1.4s						
KEV	Kevo	16.43	62	Pn	Pn	01 11 00.4	-2.7
KEV	Kevo	16.43	62	P	Pn	01 11 00.4	-2.7
KEV				pmax	pmax		
	comp=Z,82nm,1.3s						
MUD	Monsted U'grnd	17.04	118	iP	P	01 11 13.0	+0.4
TULEG	Thule	17.10	322	Pn	Pn	01 11 07.5	-4.0
VADS	Vadso	17.12	60	eP	P	01 11 14.2	+0.7
VADS				IAmb	IAmb	01 11 17.3	
	comp=Z,63nm,1.0s						
BORU	Boraas	17.39	110	iP	P	01 11 16.3	-0.2
FABU	Falkenberg	17.84	111	iP	Pn	01 11 20.8	-0.1
RAF	Rauma	18.44	92	eP	Pn	01 11 28.6	+0.5
DEL	Delary	18.66	111	iP	Pn	01 11 30.5	-0.4
BJUU	Bjuv	18.67	113	iP	P	01 11 30.1	-0.5
COP	Copenhagen	18.77	114	iP	P	01 11 30.9	-0.8
LLD	Lille Linde	18.97	115	iP	Pn	01 11 34.6	0.0
LUNU	Lund	19.16	113	iP	P	01 11 35.8	-0.2
APA	Apatity	19.38	66	⇓iP	Pn	01 11 38.6	-0.8
APA				i		01 15 07.4	
APA				pmax	pmax		
	comp=Z,33nm,0.9s						
APA				MLR	MLR		
	comp=Z,4μm,16.0s						
BSEG	Bad Segeberg	19.47	121	eP	Pn	01 11 40.7	+0.1
	baz=332,slow=10						
BLEU	Blekinge	19.49	109	iP	P	01 11 39.8	+0.2
LVZ	Lovozero	19.67	64	P	P	01 11 38.0	-3.6
LVZ				IAmb	IAmb	01 11 46.2	
	comp=Z,63nm,1.0s						
LVZ	Lovozero	19.67	64	⇓eP	Pn	01 11 42.2	-0.8
LVZ				pmax	pmax		
	comp=Z,140nm,2.5s						
FINES	FINESS Array B	19.83	87	P	Pn	01 11 44.0	-0.7
	comp=Z,0.6nm,0.3s,baz=326,slow=9.2,SNR=28						
FINES				LR	LR	01 18 48.1	
	comp=Z,6μm,18.7s,baz=310,slow=35						
	comp=Z,27nm,0.9s						
FINES	FINESS Array B	19.83	87	P	P	01 11 41.9	-1.3
MEF	Metsahovi	19.95	91	eP	Pn	01 11 45.5	-0.8
IBBN	Ibbenburen	20.04	127	eP	Pn	01 11 47.5	+0.1
	baz=332,slow=10						
FRB	Frobisher Bay	20.39	283	P	Pn	01 11 50.8	-0.6
	comp=Z,44nm,1.0s,baz=54,slow=10,SNR=34						
FRB				LR	LR	01 19 13.4	
	comp=Z,2μm,18.4s,baz=59,slow=35						
	comp=Z,44nm,1.0s						
NRDL	Niedersach Rie	20.62	123	eP	Pn	01 11 53.1	-1.0
	comp=Z,26nm,0.9s,baz=332,slow=10						
BUG	Bochum--Univer	20.66	129	eP	Pn	01 11 54.0	-0.6
	comp=Z,22nm,0.9s,baz=332,slow=10						
EUNU	Eureka	20.73	333	P	P	01 11 52.0	-1.1
EUNU				IAmb	IAmb	01 11 57.9	
	comp=Z,47nm,0.9s						
MTSE	Matsula	20.73	95	eP	P	01 11 53.5	+0.4
BEBN	Eben Emael	20.77	132	dP	P	01 11 53.7	+0.2
BEBN				dPP	PnPn	01 12 12.1	+0.7
SLIT	Slitere, Latvi	20.91	99	eP	P	01 11 55.9	+0.8
BSTI	Sart Tilman	20.93	133	dP	P	01 11 55.6	+0.4
BMRD	Maredsous	20.96	134	dP	P	01 11 56.2	+0.6
BGES	Gesves	20.97	134	dP	Pn	01 11 56.9	-1.5
BCLA	Clavier	21.00	133	dP	P	01 11 56.1	+0.1
MEM	Membach	21.03	132	dP	P	01 11 56.5	+0.1
	comp=Z,18nm,0.9s						
BTNL	Ternell	21.08	132	dP	P	01 11 57.3	+0.3
DOU	Dourbes	21.10	135	dP	P	01 11 57.5	+0.3
ASSE	Asse, Remlinge	21.11	123	eP	P	01 11 58.0	+0.9
	comp=Z,6.4nm,1.0s,baz=332,slow=10						
FLTG	Flechtingen	21.12	122	eP	P	01 11 58.0	+0.7
	comp=Z,13nm,0.9s,baz=332,slow=10						
KASTN	Kahler Asten	21.21	128	eP	P	01 11 59.5	+1.2
	comp=Z,10nm,0.8s,baz=332,slow=10						
RCHB	Rochefort	21.22	134	dP	P	01 11 59.2	+0.8
BHOU	Houvegnez	21.26	132	dP	P	01 11 59.0	+0.2
CLZ	Clausthal	21.26	124	eP	P	01 11 59.9	+1.0
	comp=Z,19nm,1.0s,baz=332,slow=10						
GTTG	Gottingen	21.39	125	eP	P	01 12 01.9	+1.6

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       comp=Z,34nm,1.0s,baz=332,slow=10
AHRW   Bad Neuenahr-A    21.40 130 eP       P        01 12 01.2 +0.9
       comp=Z,9.3nm,0.9s,baz=332,slow=10
RUE    Ruedersdorf       21.84 118 eP       P        01 12 06.5 +1.5
RUE    Ruedersdorf       21.84 118 eP       P        01 12 04.7 -0.3
       comp=Z,21nm,0.7s,baz=332,slow=10
WLF    Walferdange       21.92 133 P        P        01 12 04.5 -1.4
WLF                                IAmb     IAmb     01 12 09.5
       comp=Z,81nm,1.7s
WLF    Walferdange       21.92 133 P        P        01 12 04.5 -1.4
WLF                                pmax     pmax
       comp=Z,81nm,1.7s
WLF    Walferdange       21.92 133 dP       P        01 12 07.8 +1.9
WLF    Walferdange       21.92 133 eP       P        01 12 06.5 +0.6
       baz=332,slow=10
PBUR   Paburge           21.95 102 eP       P        01 12 07.3 +1.1
VSU    Vasula            22.02  92 d iP     P        01 12 06.2 -0.7
VSU    Vasula            22.02  92 eP       P        01 12 07.2 +0.3
TNS    Taunus Mts        22.08 129 eP       P        01 12 08.8 +1.0
       baz=332,slow=10
NEUB   Neuenburg         22.25 123 eP       P        01 12 10.3 +0.8
       comp=Z,15nm,1.0s,baz=332,slow=10
GKP    Gorka Klasztor    22.39 112 eP       P        01 12 11.7 +0.8
GKP    Gorka Klasztor    22.39 112 eP       P        01 12 12.4 +1.6
CLF    Chambon-Foret     22.41 141 P        P        01 12 10.7 -0.5
CLL    Collm             22.57 121 P        P        01 12 12.0 -0.9
CLL                                IAmb     IAmb     01 12 20.8
       comp=Z,124nm,1.7s
CLL    Collm             22.57 121 i P      P        01 12 12.4 -0.5
       comp=Z,149nm,2.1s
CLL                                ePmax             01 12 16.0
CLL                                i x      x        01 12 19.1
       comp=Z,307nm,2.3s
CLL                                eS       S        01 16 21.0 +1.1
CLL                                ex       x        01 16 42.0
CLL                                eSSS     SSS      01 17 06.0
CLL                                AMS      AMS      01 24 00.0
CLL    Collm             22.57 121 i P      P        01 12 12.4 -0.5
CLL                                i                 01 12 19.1
CLL                                eS       S        01 16 21.0 +1.1
CLL                                pmax     pmax
       comp=Z,149nm,2.1s
CLL    Collm             22.57 121 eP       P        01 12 13.3 +0.5
       baz=332,slow=10
MOX    Moxa              22.69 124 eP       P        01 12 15.3 +1.1
       comp=Z,9.6nm,0.9s,baz=332,slow=10
VSVD   Vaisvydziai       22.73 100 eP       P        01 12 14.6 +0.1
FBE    Freiberg          23.02 121 eP       P        01 12 18.8 +1.3
       comp=Z,11nm,0.9s,baz=332,slow=10
WERD   Werda             23.08 123 eP       P        01 12 19.5 +1.2
       comp=Z,9.9nm,1.0s,baz=332,slow=10
PABE   Paberze           23.11 101 P        P        01 12 15.8 -2.6
PABE   Paberze           23.11 101 eP       P        01 12 19.7 +1.3
TANN   Tannenbergstha    23.16 123 eP       P        01 12 20.1 +1.0
       comp=Z,15nm,1.1s,baz=332,slow=10
GUNZ   Gunzen            23.16 123 eP       P        01 12 20.1 +0.9
       comp=Z,13nm,1.1s,baz=332,slow=10
WERN   Wernitzgruen      23.24 123 eP       P        01 12 20.9 +0.9
       comp=Z,15nm,1.1s,baz=332,slow=10
BRG    Berggiesshubel    23.25 120 eP       P        01 12 21.5 +1.6
BRG                                Amp               01 12 24.0
       comp=Z,197nm,2.2s
BRG    Berggiesshubel    23.25 120 P        P        01 12 34.5  +15
BRG                                Amp               01 12 35.4
       comp=Z,179nm,2.4s
BRG    Berggiesshubel    23.25 120 S        Sn       01 16 43.0 -6.5
BRG                                Amp               01 22 56.0
       comp=Z,2.0nm,17.4s
BRG                                Amp               01 23 01.0
       comp=N,1.3nm,15.9s
BRG                                Amp               01 23 07.0
       comp=E,1.2nm,15.8s
BRG    Berggiesshubel    23.25 120 eP       P        01 12 21.5 +1.6
BRG                                pmax     pmax
       comp=Z,197nm,2.2s
BRG                                pmax     pmax
       comp=Z,179nm,2.4s
BRG                                MLR      MLR
       comp=N,1µm,15.9s
BRG                                MLR      MLR
       comp=E,1µm,15.8s
BRG    Berggiesshubel    23.25 120 eP       P        01 12 20.5 +0.6
       comp=E,12nm,1.2s,baz=332,slow=10
NKC    Novy Kostel       23.31 123 eP       P        01 12 22.0 +1.4
NKC                                eS       S        01 16 37.7 +4.8
NKC                                AMS      AMS      01 23 20.0
       comp=E,2µm,15.5s
NKC    Novy Kostel       23.31 123 eP       P        01 12 22.0 +1.4
NKC                                eS       S        01 16 37.7 +4.8
NKC                                MLR      MLR
       comp=Z,2µm,15.5s
GRA1   Grafenberg Arr    23.40 125 P        P        01 12 21.7 +0.2
GRF    Grafenberg Arr    23.40 125 P        P        01 12 21.7 +0.2
GRF                                pmax     pmax
       comp=Z,195nm,1.8s
GRF    Grafenberg Arr    23.40 125 eP       P        01 12 22.7 +1.2
       comp=Z,11nm,0.9s,baz=332,slow=10
GRFO   Grafenberg        23.40 125 P        P        01 12 22.2 +0.7
GRFO   Grafenberg        23.40 125 P        P        01 12 22.2 +0.7
GRFO                               pmax     pmax
       comp=Z,189nm,1.8s
MANZ   Manzenberg        23.42 124 eP       P        01 12 22.8 +1.1
       comp=Z,1.6nm,1.0s,baz=332,slow=10
ECH    Echery            23.51 133 P        P        01 12 22.5 -0.2
ECH                                IAmb     IAmb     01 12 38.0
       comp=Z,81nm,1.9s
ECH    Echery            23.51 133 P        P        01 12 22.5 -0.2
ECH                                pmax     pmax
       comp=Z,81nm,1.9s
STU    Stuttgart         23.60 129 P        P        01 12 22.9 -0.6
STU    Stuttgart         23.60 129 P        P        01 12 22.9 -0.6
STU                                pmax     pmax
       comp=Z,123nm,1.7s
STU    Stuttgart         23.60 129 eP       P        01 12 24.6 +1.2
       baz=332,slow=10
ROTZ   Rotzenmuhle       23.64 124 eP       P        01 12 25.4 +1.5
       baz=332,slow=10
BFO    Black Forest      23.74 131 P        P        01 12 24.3 -0.6
BFO                                IAmb     IAmb     01 12 44.0
       comp=Z,107nm,2.0s
BFO    Black Forest      23.74 131 P        P        01 12 24.3 -0.6
BFO                                pmax     pmax
       comp=Z,107nm,2.0s
BFO    Black Forest      23.74 131 eP       P        01 12 25.6 +0.7
       baz=332,slow=10
PVCC   Panska Ves        23.75 120 eP       P        01 12 26.5 +1.6
PVCC                               eS       S        01 16 45.0 +5.1
PVCC                               AMS      AMS      01 24 30.0
       comp=Z,3µm,14.7s
PVCC   Panska Ves        23.75 120 eP       P        01 12 26.5 +1.6
PVCC                               eS       S        01 16 45.0 +5.1
PVCC                               MLR      MLR
       comp=Z,3µm,14.7s
RES    Resolute Bay      23.78 320 P        P        01 12 26.2 +1.3
       comp=Z,7.9nm,0.8s,baz=76,slow=14,SNR=23
RES                                LR       LR       01 21 40.5
       comp=Z,3µm,18.7s,baz=74,slow=36
       comp=Z,7.9nm,0.8s
RES    Resolute Bay      23.78 320          P        01 12 24.5 -0.5
RES                                IAmb     IAmb     01 12 31.2
       comp=Z,37nm,1.4s
KSP    Ksiaz             24.07 117 eP       P        01 12 28.4 +0.5
KSP                                eS       S        01 16 50.6 +5.8
CHVC   Chvalec           24.20 118 eP       P        01 12 29.2  0.0
CHVC                               AMS      AMS      01 23 20.0
       comp=Z,2µm,16.0s
CHVC   Chvalec           24.20 118 eP       P        01 12 29.2  0.0
CHVC                               MLR      MLR
       comp=Z,2µm,16.0s
PRU    Pruhonice         24.21 120 eP       P        01 12 29.5 +0.3
PRU                                eS       S        01 16 49.2 +2.1
PRU                                AMS      AMS      01 24 20.0
       comp=Z,2µm,13.0s
PRU    Pruhonice         24.21 120 eP       P        01 12 29.5 +0.3
PRU                                eS       S        01 16 49.2 +2.1
PRU                                MLR      MLR
       comp=Z,2µm,13.0s
UPC    Upice             24.25 118 eP       P        01 12 31.7 +2.0
UPC                                eS       S        01 16 50.2 +2.3
UPC                                AMS      AMS      01 23 20.0
       comp=Z,2µm,14.7s
UPC    Upice             24.25 118 eP       P        01 12 31.7 +2.0
UPC                                eS       S        01 16 50.2 +2.3
UPC                                MLR      MLR
       comp=Z,2µm,14.7s
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OSTC   Ostas             24.28 117 eP       P        01 12 29.8 -0.1
OSTC                               eS       S        01 16 48.1 -0.3
OSTC                               AMS      AMS      01 23 20.0
       comp=Z,2µm,16.0s
OSTC   Ostas             24.28 117 eP       P        01 12 29.8 -0.1
OSTC                               eS       S        01 16 48.1 -0.3
OSTC                               MLR      MLR
       comp=Z,2µm,16.0s
GOPC   GO Pecny, Ondr    24.35 120 eS       S        01 16 51.3 +1.8
GOPC                               AMS      AMS      01 25 40.0
       comp=Z,2µm,11.4s
DPC    Dobruska-Polom    24.49 117 eP       P        01 12 32.3 +0.4
DPC                                eS       S        01 16 56.5 +4.7
DPC                                AMS      AMS      01 23 40.0
       comp=Z,2µm,15.7s
DPC    Dobruska-Polom    24.49 117 eP       P        01 12 32.3 +0.4
DPC                                eS       S        01 16 56.5 +4.7
DPC                                MLR      MLR
       comp=Z,2µm,15.7s
NACGM  Naroch            24.62  99⇑iP       P        01 12 33.5 +0.6
       comp=Z,32nm,0.9s,baz=320
KHC    Kasperske Hory    24.64 123 eP       P        01 12 34.0 +0.8
KHC                                ex       x        01 13 00.0
KHC    Kasperske Hory    24.64 123 eP       P        01 12 34.0 +0.8
BEL    Belsk             24.82 110 eP       P        01 12 37.9 +3.2
UBR    Ueberruh          24.85 129 eP       P        01 12 37.2 +2.1
       comp=Z,12nm,0.9s,baz=332,slow=10
KRLC   Kraliky           24.88 117 eP       P        01 12 36.1 +0.7
KRLC                               eS       S        01 17 05.9 +7.8
KRLC                               AMS      AMS      01 23 40.0
       comp=Z,2µm,15.6s
KRLC   Kraliky           24.88 117 eP       P        01 12 36.1 +0.7
KRLC                               MLR      MLR
       comp=Z,2µm,15.6s
GEC2   GERESS Array S    24.93 123 P        P        01 12 35.3 -0.5
GEC2                               IAmb     IAmb     01 12 39.1
       comp=Z,64nm,1.6s
GEC2   GERESS Array S    24.93 123 eP       P        01 12 37.7 +1.9
       comp=Z,15nm,0.9s,baz=332,slow=10
GERES  GERESS Array B    24.93 123 P        P        01 12 36.6 +0.7
       comp=Z,9.6nm,0.9s,baz=6.7,slow=13,SNR=28
GERES                              LR       LR       01 22 35.7
       comp=Z,1µm,19.8s,baz=329,slow=37
       comp=Z,9.6nm,0.9s
GERES  GERESS Array B    24.93 123 P        P        01 12 35.4 -0.5
LSH    Leshukonskoye     25.04  66 eP       P        01 12 33.7 -2.9
       comp=Z,82nm,1.6s
TREC   Trest             25.12 120 eP       P        01 12 38.4 +0.9
TREC                               eS       S        01 17 08.0 +6.2
TREC                               AMS      AMS      01 25 20.0
       comp=Z,2µm,12.9s
TREC   Trest             25.12 120 eP       P        01 12 38.4 +0.9
TREC                               eS       S        01 17 08.0 +6.2
TREC                               MLR      MLR
       comp=Z,2µm,12.9s
DAVA   Damuels           25.14 130 eP       P        01 12 38.8 +1.0
       comp=Z,26nm,1.8s,SNR=5.4
CKRC   Cesky Krumlov     25.14 122 eP       P        01 12 38.3 +0.6
CKRC                               eS       S        01 16 59.9 -2.3
CKRC   Cesky Krumlov     25.14 122 eP       P        01 12 38.3 +0.6
CKRC                               eS       S        01 16 59.9 -2.3
RETA   Reutte            25.22 128 eP       P        01 12 39.4 +0.9
       comp=Z,16nm,1.8s,SNR=6.3
KLMR   Klimovskoe        25.28  77 eP       P        01 12 37.7 -1.1
       comp=Z,47nm,1.0s
KLMR   Klimovskoe        25.28  77 eP       P        01 12 37.8 -1.0
KLMR                               AMP               01 12 42.0
       comp=Z,47nm,1.0s
KLMR                               LQ       LQ       01 19 20.4
KLMR                               LQ       LQ       01 19 20.4
KLMR                               LR       LR       01 20 01.0
KLMR                               AMP               01 22 08.3
       comp=Z,2µm,13.1s
KLMR   Klimovskoe        25.28  77 eP       P        01 12 37.8 -1.0
KLMR                               pmax     pmax
       comp=Z,47nm,1.0s
KLMR                               MLR      MLR
       comp=Z,2µm,13.0s
MNK    Minsk             25.34  98 i P      P        01 12 38.4 -1.0
       comp=E,2.0nm,0.8s
MNK                                i P      P        01 12 38.4 -1.0
       comp=N,36nm,0.8s
MNK                                i P      P        01 12 38.4 -1.0
       comp=Z,41nm,1.0s,baz=140
MNK                                i PP     PnPn     01 13 12.8 -1.1
MNK                                i PPP    PPP      01 13 20.8
MNK                                i S      S        01 17 05.2 -0.1
MNK                                i SS     SnSn     01 17 57.4 +1.1
MNK                                i SSS    SSS      01 18 11.1
MNK                                i LQ     LQ       01 20 21.8
MNK                                i LR     LR       01 20 56.2
MNK                                i LRM    MLR      01 22 38.4
       comp=E,121nm,16.3s
MNK                                i LRM    MLR      01 22 46.5
       comp=Z,2µm,16.3s
MNK                                i LRM    MLR      01 22 48.4
       comp=N,2µm,16.3s
MNK    Minsk             25.34  98 i P      P        01 12 38.4 -1.0
MNK                                i PPP    PPP      01 13 20.8
MNK                                i                 01 16 11.1
MNK                                i S      S        01 17 05.1 -0.1
MNK                                i SSS    SSS      01 18 11.1
MNK                                i                 01 23 39.1
MNK                                pmax     pmax
       comp=N,36nm,0.9s
MNK                                pmax     pmax
       comp=E,2.0nm,0.9s
MNK                                pmax     pmax
       comp=Z,41nm,1.0s
MNK                                MLR      MLR
       comp=E,121nm,16.0s
MNK                                MLR      MLR
       comp=Z,2µm,16.0s
MNK                                MLR      MLR
       comp=N,2µm,16.0s
MORC   Moravsky Berou    25.40 117 P        P        01 12 39.1 -0.9
MORC   Moravsky Berou    25.40 117 eP       P        01 12 40.7 +0.7
MORC   Moravsky Berou    25.40 117 P        P        01 12 39.1 -0.9
MORC                               pmax     pmax
       comp=Z,88nm,1.6s
MOTA   Moosalm           25.45 128 eP       P        01 12 41.6 +0.9
       comp=Z,32nm,1.6s,SNR=11
VRAC   Vranov            25.48 118 P        P        01 12 41.4 +0.7
       comp=Z,8.5nm,0.9s,baz=323,slow=7.8,SNR=10.0
VRAC                               LR       LR       01 22 11.2
       comp=Z,1µm,21.9s,baz=324,slow=35
       comp=Z,8.5nm,0.9s
VRAC   Vranov            25.48 118 eP       P        01 12 41.4 +0.7
OKC    Ostrava-Krasne    25.55 116 eP       P        01 12 42.5 +1.1
OKC                                eS       S        01 17 11.1 +2.5
OKC                                AMS      AMS      01 26 30.0
       comp=Z,1µm,13.0s
OKC    Ostrava-Krasne    25.55 116 eP       P        01 12 42.5 +1.1
OKC                                eS       S        01 17 11.1 +2.5
OKC                                MLR      MLR
       comp=Z,1µm,13.0s
SQTA   Sankt Quirin      25.59 128 eP       P        01 12 42.9 +1.0
       comp=Z,36nm,1.5s,SNR=16
DAVOX  Davos/Dischmat    25.59 130 P        P        01 12 42.9 +0.8
       comp=Z,11nm,1.0s,baz=313,slow=8.7,SNR=13
DAVOX                              LR       LR       01 23 52.5
       comp=Z,4µm,18.4s,baz=317,slow=39
       comp=Z,11nm,1.0s
WATA   Walderalm         25.60 127 eP       P        01 12 43.3 +1.3
       comp=Z,27nm,1.8s,SNR=11
RJOB   Jochberg          25.61 125 eP       P        01 12 44.9 +2.9
       comp=Z,10nm,0.9s,baz=332,slow=10
KRUC   Moravsky          25.62 119 eP       P        01 12 42.7 +0.7
SCHQ   Schefferville     25.66 264 P        P        01 12 43.2 +0.9
       comp=Z,7.3nm,0.8s,baz=35,slow=8.5,SNR=6.4
SCHQ                               LR       LR       01 22 16.9
       comp=Z,3µm,18.2s,baz=63,slow=35
       comp=Z,7.3nm,0.8s
SCHQ   Schefferville     25.66 264          P        01 12 41.2 -1.2
SCHQ                               IAmb     IAmb     01 12 45.5
       comp=Z,44nm,1.4s
WTTA   Wattenberg        25.68 127 eP       P        01 12 43.8 +1.0
       comp=Z,41nm,1.5s,SNR=11
OJC    Ojcow             25.80 113 eP       P        01 12 43.9 +0.2
MAUC   Maruska           25.84 117 eP       P        01 12 44.9 +0.8
MAUC                               eS       S        01 17 25.8  +12
MAUC                               AMS      AMS      01 26 10.0
       comp=Z,5µm,14.2s
FUORN  Ofenpass-Fuorn    25.85 130 P        P        01 12 43.4 -1.0
BIOA   Bad Ischl, Aus    25.92 124 eP       P        01 12 45.4 +0.6
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       comp=Z,22nm,2.2s,SNR=6.7
MOA    Molln             25.98 123 eP       P        01 12 46.2 +0.8
       comp=Z,16nm,1.6s
JAVC   Velka Javorina    26.23 118 eP       P        01 12 50.0 +2.4
BNI    Bardonecchia      26.29 137 P        P        01 12 47.9 -0.4
BNI                                IAmb     IAmb     01 12 58.1
       comp=Z,64nm,1.8s
BNI    Bardonecchia      26.29 137 P        P        01 12 47.9 -0.4
BNI                                pmax     pmax
       comp=Z,64nm,1.8s
KBA    Koelnbreinsper    26.37 125 eP       P        01 12 50.6 +1.6
       comp=Z,24nm,2.1s,SNR=10
ABTA   Abfaltersbach     26.41 127 eP       P        01 12 49.9 +0.6
       comp=Z,19nm,1.3s
CONA   Conrad Observa    26.43 121 eP       P        01 12 50.5 +1.1
       comp=Z,18nm,1.4s,SNR=5.2
SMOL   Smolenice         26.44 118 eP       P        01 12 51.2 +1.7
SMOL                               pmax     pmax
       comp=Z,22nm,1.4s
MODS   Modra-Piesok      26.51 119 eP       P        01 12 51.5 +1.4
MODS   Modra-Piesok      26.51 119 eP       P        01 12 51.5 +1.4
LANS   Liptovska Anna    26.59 115 eP       P        01 12 53.4 +2.5
LANS                               pmax     pmax
       comp=Z,11nm,1.3s
LANS   Liptovska Anna    26.59 115 eP       P        01 12 53.4 +2.5
NIE    Niedzica          26.66 114 eP       P        01 12 53.9 +2.5
RONA   Rosalia, Austr    26.77 121 eP       P        01 12 52.7 +0.2
       comp=Z,27nm,1.6s
CTI    Castel Tesino     26.78 129 P        P        01 12 50.9 -1.7
CTI    Castel Tesino     26.78 129 P        P        01 12 50.9 -1.7
CTI                                pmax     pmax
       comp=Z,18nm,1.1s
CIMO   Cimolais          26.78 127 P        P        01 12 53.0 +0.5
CIMO                               IAmb     IAmb     01 12 59.9
       comp=Z,19nm,1.4s
CLUD   Cludinico         26.78 126 P        P        01 12 50.1 -2.5
CLUD                               IAmb     IAmb     01 13 00.3
       comp=Z,35nm,1.0s
MYKA   Terra Mystica     26.86 125 eP       P        01 12 54.6 +1.2
       comp=Z,28nm,1.8s,SNR=10.0
STAL   STALIGIAL         26.91 127 P        P        01 12 53.4 -0.3
STAL                               IAmb     IAmb     01 12 56.1
       comp=Z,73nm,2.0s
ARSA   Arzberg           26.91 122 eP       P        01 12 54.8 +1.0
       comp=Z,5.1nm,1.4s
VYHS   Vyhne             26.93 116 eP       P        01 12 54.6 +0.7
VYHS                               pmax     pmax
       comp=Z,79nm,2.0s
VYHS   Vyhne             26.93 116 eP       P        01 12 54.6 +0.7
VYHS                               e                 01 26 28.5
VYHS                               e                 01 35 28.1
PRED   Cave del Predi    27.01 126 P        P        01 12 54.1 -0.5
PRED                               IAmb     IAmb     01 13 08.2
       comp=Z,34nm,1.4s
OBKA   Obir              27.26 124 eP       P        01 12 57.7 +0.8
       comp=Z,9.7nm,2.4s
SOKA   Soboth            27.26 123 eP       P        01 12 56.7 -0.3
       comp=Z,8.5nm,1.4s
SRO    Srobarova         27.34 118 eP       P        01 13 00.0 +2.4
SRO    Srobarova         27.34 118 eP       P        01 13 00.0 +2.4
TEOL   Teolo             27.41 129 P        P        01 12 56.6 -1.6
TEOL                               IAmb     IAmb     01 13 00.7
       comp=Z,40nm,1.6s
SABO   M.te Sabotino     27.43 126 P        P        01 12 57.4 -1.0
SABO                               IAmb     IAmb     01 13 01.8
       comp=Z,91nm,1.7s
LVV    L'vov             27.65 109 eP       P        01 12 59.3 -1.0
LVV                                e                 01 13 50.2
LVV                                eS       S        01 17 36.3 -5.4
LVV                                MLR      MLR
       comp=N,1µm,13.0s
LVV                                MLR      MLR
       comp=E,500nm,13.0s
LVV                                MLR      MLR
       comp=Z,1µm,13.0s
TRI    Trieste           27.73 126 P        P        01 13 01.0  0.0
TRI                                IAmb     IAmb     01 13 04.2
       comp=Z,31nm,1.5s
TRI    Trieste           27.73 126 P        P        01 13 01.0  0.0
TRI                                pmax     pmax
       comp=Z,31nm,1.5s
PSZ    Piszkesteto       27.79 116 IAmb     IAmb     01 13 05.3
       comp=Z,24nm,1.3s
MOS    Moscow            28.13  87 eP       P        01 13 01.6 -2.9
MOS                                eS       S        01 17 45.3 -3.9
MOS                                MLR      MLR
       comp=Z,4µm,20.0s
MOS                                MLR      MLR
       comp=N,3µm,19.0s
MOS                                MLR      MLR
       comp=E,2µm,20.0s
OBN    Obninsk           28.19  89 P        P        01 13 04.9 -0.1
       comp=E,1.3nm,0.4s,baz=340,slow=6.4,SNR=5.1
OBN                                LR       LR       01 23 58.4
       comp=E,1µm,18.3s,baz=328,slow=36
       comp=E,1.3nm,0.4s
OBN    Obninsk           28.19  89 P        P        01 13 04.3 -0.7
OBN                                IAmb     IAmb     01 13 47.7
       comp=Z,30nm,1.2s
OBN    Obninsk           28.19  89⇑eP       P        01 13 05.0 -0.1
OBN                                e                 01 13 50.6
OBN                                eS       S        01 17 56.9 +6.8
OBN                                pmax     pmax
       comp=Z,31nm,1.3s
OBN                                MLR      MLR
       comp=Z,5µm,17.0s
AKASG  Malin Array Be    28.84 102 P        P        01 13 11.1 +0.2
       comp=Z,3.6nm,0.8s,baz=326,slow=9.3,SNR=14
AKASG                              LR       LR       01 24 23.0
       comp=Z,3µm,20.2s,baz=320,slow=36
       comp=Z,3.6nm,0.8s
AKBB   Malin Array Si    28.84 102 IAmb     IAmb     01 13 52.6
       comp=Z,49nm,1.9s
AKBB   Malin Array Si    28.84 102⇓iP       P        01 13 12.1 +1.2
AKBB                               pmax     pmax
       comp=Z,65nm,3.3s
HORU   Horodok           29.02 107 P        P        01 13 12.2 -0.4
ESDC   Sonseca Array     29.21 156 P        P        01 13 15.7 +1.3
       comp=Z,2.2nm,0.9s,baz=2.1,slow=12,SNR=9.0
ESDC                               LR       LR       01 24 41.5
       comp=Z,2µm,18.3s,baz=348,slow=36
       comp=Z,2.2nm,0.9s
ESDC   Sonseca Array     29.21 156 P        P        01 13 13.1 -1.2
MURB   Monte Urbino      29.57 130 IAmb     IAmb     01 13 22.5
       comp=Z,48nm,1.5s
BURAR  Bucovina Array    29.93 110 P        P        01 13 18.9 -1.8
FDMO   Fiordimonte       29.94 129 IAmb     IAmb     01 13 27.6
       comp=Z,44nm,1.7s
NRCA   Norcia            30.14 129 IAmb     IAmb     01 13 26.4
       comp=Z,62nm,1.9s
CESX   Cesi              30.18 130 IAmb     IAmb     01 13 25.1
       comp=Z,49nm,1.8s
KIRV   Kirov             30.49  73 P        P        01 13 25.1 -0.3
       comp=Z,10nm,0.8s,baz=141,slow=6.5,SNR=6.5
KIRV                               LR       LR       01 24 33.9
       comp=Z,2µm,19.3s,baz=312,slow=34
       comp=Z,10nm,0.8s
CAMP   Campotosto        30.50 129 P        P        01 13 24.6 -1.2
LPSR   Galich'ya Gora    31.02  90 eP       P        01 13 28.9 -1.2
LPSR                               pmax     pmax
       comp=Z,20nm,1.4s
LPSR                               MLR      MLR
       comp=Z,2µm,14.0s
KIS    Kishinev          31.76 106 eP       P        01 13 34.7 -2.0
       comp=Z,200nm,4.5s
KIS                                eL       L        01 24 14.0
KIS                                LRM      MLR      01 26 46.0
       comp=Z,500nm,14.0s
KIS    Kishinev          31.76 106 eP       P        01 13 34.0 -2.7
KIS                                MLR      MLR
       comp=Z,600nm,15.0s
KIS                                MLR      MLR
       comp=E,500nm,14.0s
MILM   Milestii Mici     31.82 106⇓iP       P        01 13 34.0 -3.2
       comp=E,330nm,3.8s
MILM                               eL       L        01 23 11.0
MILM                               LRM      MLR      01 26 42.0
       comp=E,2µm,17.0s
MILM   Milestii Mici     31.82 106d iP      P        01 13 34.0 -3.2
MILM                               pmax     pmax
       comp=Z,330nm,3.8s
MILM                               MLR      MLR
       comp=Z,2µm,17.0s
MILM                               MLR      MLR
       comp=E,1µm,14.0s
VORR   Voronezh          31.85  91 eP       P        01 13 37.4 -0.1
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VORR				pmax	pmax		
	comp=Z,15nm,0.4s						
MLR	**Muntele Rosu**	**32.00**	**111**	LR	LR	01 27 26.4	
	comp=Z,2µm,19.2s,baz=322,slow=38						
MLR	**Muntele Rosu**	**32.00**	**111**	P	**P**	**01 13 36.9**	**-2.1**
MLR				IAmb	IAmb	01 14 10.4	
	comp=Z,19nm,1.5s						
MLR	**Muntele Rosu**	**32.00**	**111**	P	**P**	**01 13 36.9**	**-2.1**
MLR				pmax	pmax		
	comp=Z,19nm,1.5s						
VSR	**Storozhevoye**	**32.20**	**91**	*e*P	**P**	**01 13 40.3**	**-0.2**
VSR				pmax	pmax		
	comp=Z,20nm,1.4s						
VSR				MLR	MLR		
	comp=Z,3µm,12.0s						
A36M	**Sachs Harbour**	**32.39**	**326**		**P**	**01 13 40.0**	**-2.0**
A36M				IAmb	IAmb	01 13 46.3	
	comp=Z,18nm,1.1s						
A36M				PcP	**PcP**	**01 16 28.2**	**-0.8**
A36M	**Sachs Harbour**	**32.39**	**326**	P	**P**	**01 13 42.1**	**+0.1**
	baz=43,SNR=12						
PDG	**Podgorica**	**32.41**	**122**	P	**P**	**01 13 40.0**	**-2.5**
PDG				IAmb	IAmb	01 13 44.3	
	comp=Z,30nm,2.0s						
D62A	**Allapoint, All**	**32.72**	**257**	P	**P**	**01 13 46.9**	**+1.8**
	baz=33						
D62A				P	**P**	**01 13 46.9**	**+1.8**
	baz=33						
FCC	**Fort Churchill**	**32.97**	**292**		**P**	**01 13 44.1**	**-3.0**
FCC				IAmb	IAmb	01 13 50.9	
	comp=Z,26nm,1.6s						
FCC	**Fort Churchill**	**32.97**	**292**	P	**P**	**01 13 44.1**	**-3.0**
FCC				pmax	pmax		
	comp=Z,26nm,1.6s						
VRH	**Novokhopyorsk**	**33.19**	**89**	*e*P	**P**	**01 13 46.5**	**-2.6**
VRH				pmax	pmax		
	comp=Z,20nm,1.4s						
VRH				MLR	MLR		
	comp=Z,3µm,15.0s						
E62A	**Clayton Lake**	**33.28**	**257**	P	**P**	**01 13 51.1**	**+1.1**
	baz=32						
E62A				P	**P**	**01 13 51.1**	**+1.1**
	baz=32						
SKO	**Skopje**	**33.54**	**119**	*i* P	**P**	**01 13 53.5**	**+1.2**
G65A	**Princeton**	**33.76**	**253**	P	**P**	**01 13 56.0**	**+1.8**
	baz=31						
G65A				P	**P**	**01 13 56.0**	**+1.8**
	baz=31						
TIRR	**Tirgusor**	**33.78**	**109**	P	**P**	**01 13 52.2**	**-2.2**
TIRR				IAmb	IAmb	01 13 56.5	
	comp=Z,20nm,1.1s						
TIRR	**Tirgusor**	**33.78**	**109**	P	**P**	**01 13 52.2**	**-2.2**
TIRR				pmax	pmax		
	comp=Z,20nm,1.1s						
F62A	**Pittston Farm,**	**34.06**	**257**	P	**P**	**01 13 58.3**	**+1.5**
	baz=32						
F62A				P	**P**	**01 13 58.3**	**+1.5**
	baz=32						
C36M	**Paulatuk**	**34.10**	**322**	P	**P**	**01 13 55.5**	**-1.3**
C36M				IAmb	IAmb	01 14 01.0	
	comp=Z,23nm,1.1s						
C36M	**Paulatuk**	**34.10**	**322**	P	**P**	**01 13 57.1**	**+0.2**
	baz=41,SNR=13						
OHR	**Ohrid**	**34.10**	**121**	*i* P	**P**	**01 13 58.1**	**+0.8**
VLO	**Vlora**	**34.26**	**123**	P	**P**	**01 13 58.0**	**-0.6**
VLO	**Vlora**	**34.26**	**123**	P	**P**	**01 13 58.0**	**-0.6**
VLO				pmax	pmax		
	comp=Z,103nm,1.7s						
NRIK	**Noril'sk**	**34.32**	**37**	P	**P**	**01 13 59.7**	**+0.9**
	comp=Z,1.7nm,0.3s,baz=311,slow=4.1,SNR=5.8						
NRIK				LR	LR	01 29 34.5	
	comp=Z,831nm,18.7s,baz=323,slow=39						
	comp=Z,1.7nm,0.3s						
NRIK	**Noril'sk**	**34.32**	**37**	P	**P**	**01 13 56.2**	**-2.6**
NRIK	**Noril'sk**	**34.32**	**37***d*	*i*P	**P**	**01 13 59.1**	**+0.3**
NRIK				pmax	pmax		
	comp=Z,32nm,3.0s						
PKME	**Peaks-Kenny Pk**	**34.34**	**255**	P	**P**	**01 14 01.2**	**+1.9**
	baz=31						
PKME	**Peaks-Kenny Pk**	**34.34**	**255**	P	**P**	**01 14 00.8**	**+1.6**
	baz=31						
BELG	**Belogornoye**	**34.49**	**82**	P	**P**	**01 14 00.4**	**-0.1**
	comp=Z,25nm,1.0s,baz=135,slow=5.6,SNR=9.9						
BELG				LR	LR	01 27 10.4	
	comp=Z,2µm,19.1s,baz=323,slow=35						
	comp=Z,25nm,1.0s						
BELG	**Belogornoye**	**34.49**	**82***d*	*i*P	**P**	**01 13 59.6**	**-0.9**
BELG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
VAY	**Valandovo**	**34.50**	**119**	*i* P	**P**	**01 14 01.7**	**+1.0**
ARU	**Arti**	**35.40**	**69**	P	**P**	**01 14 08.5**	**+0.2**
	comp=Z,6.5nm,0.9s,baz=298,slow=4.7,SNR=10.0						
ARU				LR	LR	01 27 37.6	
	comp=Z,3µm,18.4s,baz=305,slow=35						
	comp=Z,6.5nm,0.9s						
ARU	**Arti**	**35.40**	**69**	P	**P**	**01 14 05.4**	**-2.9**
ARU				IAmb	IAmb	01 14 11.1	
	comp=Z,43nm,1.7s						
ARU	**Arti**	**35.40**	**69***d*	*i*P	**P**	**01 14 08.1**	**-0.2**
ARU						01 15 24.0	
ARU						01 16 37.9	
ARU				S	**S**	**01 19 43.9**	**+1.4**
ARU				SS	**SnSn**	**01 22 01.6**	**+0.7**
ARU				pmax	pmax		
	comp=Z,47nm,2.6s						
ARU				MLR	MLR		
	comp=Z,3µm,18.0s						
SIM	**Simferopol'**	**35.45**	**103**	*e*P	P	01 14 03.4	-5.5
SIM				*e*S	**S**	**01 19 37.7**	**-5.8**
SIM				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SIM				smax	smax		
	comp=N,98nm,14.4s						
SIM				MLR	MLR		
	comp=Z,2µm,17.6s						
VAE	**Valguarnera**	**35.46**	**131**	LR	LR	01 28 27.0	
	comp=Z,1µm,18.1s,baz=341,slow=36						
LIT	**Litokhoron**	**35.57**	**120**	P	**P**	**01 14 07.6**	**-2.3**
LIT	**Litokhoron**	**35.57**	**120**	P	**P**	**01 14 07.6**	**-2.3**
LIT				pmax	pmax		
	comp=Z,19nm,1.5s						
H62A	**Milan**	**35.62**	**257**	P	**P**	**01 14 11.1**	**+0.7**
	baz=31						
H62A				P	**P**	**01 14 11.1**	**+0.7**
	baz=31						
RDO	**Rodhopi**	**35.67**	**115**	IAmb	IAmb	01 14 13.7	
	comp=Z,34nm,1.5s						
KEST	**Kesra**	**35.74**	**139**	P	**P**	**01 14 12.6**	**+1.1**
	comp=Z,3.7nm,1.0s,baz=296,slow=6.8,SNR=5.0						
KEST				LR	LR	01 28 54.8	
	comp=Z,1µm,18.2s,baz=278,slow=36						
	comp=Z,3.7nm,1.0s						
SVE	**Sverdlovsk**	**35.83**	**67**	*e*P	**P**	**01 14 11.1**	**-0.9**
SVE				*e*S	**S**	**01 19 52.7**	**+3.6**
SVE				pmax	pmax		
	comp=Z,20nm,1.6s						
SVE				MLR	MLR		
	comp=Z,2µm,17.0s						
MDT	**Midelt**	**35.85**	**159**	LR	LR	01 28 37.7	
	comp=Z,631nm,20.2s,baz=5.5,slow=36						
ALN	**Alexandroupoli**	**36.06**	**115**	P	**P**	**01 14 11.2**	**-2.9**
ALN				IAmb	IAmb	01 14 17.2	
	comp=Z,28nm,1.4s						
ALN	**Alexandroupoli**	**36.06**	**115**	P	**P**	**01 14 11.2**	**-2.9**
ALN				pmax	pmax		
	comp=Z,28nm,1.4s						
LBNH	**Lisbon**	**36.19**	**257**	P	**P**	**01 14 16.6**	**+1.4**
	baz=31						
FRNY	**Flat Rock**	**36.31**	**259**		**P**	**01 14 15.1**	**-1.1**
FRNY	**Flat Rock**	**36.31**	**259**	P	**P**	**01 14 17.6**	**+1.4**
	baz=32						
BMNY	**Brushton-Moira**	**36.65**	**260**	P	**P**	**01 14 19.1**	**0.0**
	baz=32						
ANN	**Anapa**	**36.83**	**99**	*e*P	**P**	**01 14 18.4**	**-2.2**
ANN				*e*		01 15 43.0	
ANN				*e*PPP	PPP	01 15 58.0	
ANN				*e*S	**S**	**01 20 02.1**	**-2.3**
ANN				pmax	pmax		
	comp=Z,19nm,0.9s						
ANN				MLR	MLR		
	comp=Z,2µm,14.0s						
MCVT	**Middlebury Col**	**36.84**	**258**	P	**P**	**01 14 21.4**	**+0.7**
	baz=31						
YKA	**Yellowknife Ar**	**36.84**	**310**	P	**P**	**01 14 21.6**	**+1.1**
	comp=Z,7.0nm,1.0s,baz=42,slow=8.1,SNR=36						
YKA				PcP	**PcP**	**01 16 43.6**	**+1.7**
	comp=Z,4.6nm,0.9s,baz=39,slow=2.9,SNR=19						
YKA				LR	LR	01 29 40.9	
	comp=Z,2µm,18.3s,baz=40,slow=37						
	comp=Z,7.0nm,1.0s						
LONY	**Lake Ozonia**	**36.87**	**260**	IAmb	IAmb	01 14 25.5	
	comp=Z,25nm,1.4s						
LONY	**Lake Ozonia**	**36.87**	**260**	P	**P**	**01 14 22.0**	**+1.0**
	baz=32						
INK	**Inuvik**	**37.04**	**326**	LR	LR	01 31 31.0	
	comp=Z,721nm,18.7s,baz=14,slow=39						
INK	**Inuvik**	**37.04**	**326**		**P**	**01 14 20.6**	**-1.4**
INK				PcP	**PcP**	**01 16 42.9**	**+0.5**
INK	**Inuvik**	**37.04**	**326**	P	**P**	**01 14 20.7**	**-1.4**
INK						01 16 42.9	
INK				pmax	pmax		
	comp=Z,11nm,1.1s						
INK	**Inuvik**	**37.04**	**326**	P	**P**	**01 14 22.1**	**-0.1**
	baz=35,SNR=9.3						
NCB	**Newcomb**	**37.28**	**259**	P	**P**	**01 14 25.8**	**+1.3**
	baz=31						
HRV	**Adam Dziewonsk**	**37.55**	**255**	P	**P**	**01 14 27.5**	**+0.7**
	baz=30						
HRV	**Adam Dziewonsk**	**37.55**	**255**	P	**P**	**01 14 26.3**	**-0.4**
	baz=30						
F31M	**Tsiigehtchic**	**37.80**	**325**	P	**P**	**01 14 28.4**	**-0.2**
	baz=34						
WCNY	**West Carthage**	**37.81**	**261**	P	**P**	**01 14 30.9**	**+1.9**
	baz=31						
BALB	**Balikesir**	**37.82**	**114**	P	**P**	**01 14 29.0**	**-0.1**
BALB				PcP	**PcP**	**01 16 45.4**	**+0.1**
J59A	**Piesco**	**37.82**	**259**	P	**P**	**01 14 30.9**	**+1.8**
	baz=31						
J59A				P	**P**	**01 14 30.9**	**+1.8**
	baz=31						
C26K	**Camden Bay**	**37.88**	**333**	P	**P**	**01 14 29.2**	**-0.1**
	baz=30						
C27K	**Jago River**	**37.92**	**332**	P	**P**	**01 14 29.8**	**+0.1**
	baz=30						
L61B	**Northampton**	**38.01**	**256**	P	**P**	**01 14 32.5**	**+1.8**
	baz=30						
L61B	**Northampton**	**38.01**	**256**	P	**P**	**01 14 31.7**	**+1.0**
	baz=30						
J58A	**Remsen**	**38.20**	**260**	P	**P**	**01 14 33.2**	**+0.9**
	baz=31						
J58A				P	**P**	**01 14 33.2**	**+0.9**
	baz=31						
A21K	**Barrow**	**38.42**	**340**	P	**P**	**01 14 32.9**	**-0.9**
	baz=24						
SADO	**Sadowa**	**38.47**	**265**	LR	LR	01 29 56.0	
	comp=Z,2µm,18.3s,baz=50,slow=35						
BORA	**Eskisehir**	**38.52**	**111**	P	**P**	**01 14 33.0**	**-2.0**
D25K	**Kavik River**	**38.66**	**333**	P	**P**	**01 14 35.5**	**-0.3**
	baz=29						
C24K	**Franklin Bluff**	**38.70**	**335**	P	**P**	**01 14 35.4**	**-0.7**
	baz=28						
G30M	**tAoh Zraii Nji**	**38.72**	**326**	P	**P**	**01 14 36.4**	**0.0**
	baz=33,SNR=15						
SOC	**Sochi**	**38.72**	**98**	*e*P	**P**	**01 14 35.7**	**-0.9**
SOC				*e*PPP	PPP	01 16 25.7	
SOC				*e*S	**S**	**01 20 33.1**	**-0.1**
SOC				*e*SS	**SS**	**01 23 22.6**	**-0.7**
SOC				MLR	MLR		
	comp=Z,1µm,19.0s						
GOF	**Gofitskoye**	**38.74**	**94**⇑	*e*P	**P**	**01 14 37.6**	**+0.9**
GOF				pmax	pmax		
	comp=Z,20nm,1.0s						
E27K	**Coleen River**	**38.78**	**330**	P	**P**	**01 14 36.8**	**0.0**
	baz=31						
FFC	**Flin Flon**	**38.85**	**293**		**P**	**01 14 34.6**	**-3.0**
FFC				IAmb	IAmb	01 14 42.0	
	comp=Z,50nm,1.4s						
FFC	**Flin Flon**	**38.85**	**293**	P	**P**	**01 14 34.6**	**-3.0**
FFC				pmax	pmax		
	comp=Z,49nm,1.5s						
MANT	**Manisa**	**39.08**	**114**	P	**P**	**01 14 38.9**	**-1.1**
E46A	**Sault Ste Mari**	**39.10**	**271**		**P**	**01 14 39.8**	**+0.1**
E46A				IAmb	IAmb	01 14 44.8	
	comp=Z,25nm,1.0s						
E46A	**Sault Ste Mari**	**39.10**	**271**	P	**P**	**01 14 40.8**	**+1.1**
	baz=33						
D24K	**Happy Valley**	**39.22**	**334**	P	**P**	**01 14 40.4**	**-0.1**
	baz=27						
TIXI	**Tiksi**	**39.26**	**16**	P	**P**	**01 14 42.3**	**+1.5**
	comp=Z,2.8nm,0.7s,baz=270,slow=24,SNR=16						
	comp=Z,2.8nm,0.7s						
TIXI	**Tiksi**	**39.26**	**16**		**P**	**01 14 39.1**	**-1.6**
TIXI				IAmb	IAmb	01 14 45.5	
	comp=Z,56nm,1.7s						
TIXI	**Tiksi**	**39.26**	**16***d*	*i*P	**P**	**01 14 42.2**	**+1.4**
TIXI				pmax	pmax		
	comp=Z,48nm,2.5s						
EPYK	**Eagle Plains**	**39.34**	**326**	P	**P**	**01 14 40.2**	**-1.5**
	baz=32,SNR=6.2						
BINY	**Binghamton**	**39.47**	**260**	P	**P**	**01 14 44.8**	**+1.9**
	baz=30						
BINY	**Binghamton**	**39.47**	**260**	P	**P**	**01 14 45.5**	**+2.6**
	baz=30						
KIV	**Kislovodsk**	**39.53**	**95**	P	**P**	**01 14 43.7**	**+0.2**
KIV	**Kislovodsk**	**39.53**	**95**	*e*P	**P**	**01 14 44.1**	**+0.6**
KIV				*e*S	**S**	**01 20 46.9**	**+1.3**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,1µm,16.0s						
KVAR	**Kislovodsk Arr**	**39.54**	**95**	LR	LR	01 31 19.9	
	comp=Z,1µm,18.5s,baz=273,slow=37						
E25K	**Arctic Village**	**39.57**	**332**	P	**P**	**01 14 43.0**	**-0.5**
	baz=28,SNR=8.4						
F26K	**Sheenjek River**	**39.69**	**331**	P	**P**	**01 14 43.5**	**-1.0**
	baz=29						
D23K	**Nanushuk River**	**39.69**	**335**	P	**P**	**01 14 43.7**	**-0.8**
	baz=26						
PAL	**Palisades**	**39.72**	**256**	P	**P**	**01 14 47.0**	**+2.0**
	baz=29						
TOLK	**Toolik Lake Re**	**39.80**	**334**	P	**P**	**01 14 45.3**	**-0.2**
	baz=27						
BR131	**Keskin Array S**	**39.80**	**107***c*	*i*P	**P**	**01 14 47.9**	**+2.0**
BRTR	**Keskin Array B**	**39.80**	**107**	P	**P**	**01 14 47.2**	**+1.4**
	comp=Z,3.6nm,1.1s,baz=339,slow=6.6,SNR=13						
BRTR				LR	LR	01 32 35.6	
	comp=Z,1µm,21.4s,baz=306,slow=38						
	comp=Z,3.6nm,1.1s						
BRTR	**Keskin Array B**	**39.80**	**107**	P	**P**	**01 14 44.2**	**-1.7**
KBZ	**Khabaz**	**39.81**	**95**	P	**P**	**01 14 46.8**	**+1.1**
	comp=Z,4.3nm,1.0s,baz=318,slow=12,SNR=8.7						
KBZ				LR	LR	01 31 41.5	
	comp=Z,2µm,18.2s,baz=314,slow=37						
	comp=Z,4.3nm,1.0s						
KBZ	**Khabaz**	**39.81**	**95***d*	*i*P	**P**	**01 14 47.0**	**+1.4**
KBZ				pmax	pmax		
	comp=Z,12nm,1.1s						
AKTO	**Aktyubinsk**	**39.96**	**76**	P	**P**	**01 14 48.0**	**+1.1**
	comp=Z,6.7nm,1.0s,baz=302,slow=10,SNR=11						
AKTO				LR	LR	01 30 25.9	
	comp=Z,2µm,19.5s,baz=310,slow=35						
	comp=Z,6.7nm,1.0s						
AKTO	**Aktyubinsk**	**39.96**	**76**	P	**P**	**01 14 48.0**	**+1.1**
G27K	**Doyon Strip**	**39.98**	**329**	P	**P**	**01 14 46.6**	**-0.4**
	baz=30						
BMAR	**Burnt Mountain**	**40.00**	**331**		**P**	**01 14 46.1**	**-1.0**
F25K	**Christian Rive**	**40.05**	**332**	P	**P**	**01 14 48.0**	**+0.4**
	baz=28						
L56A	**Greenwood**	**40.11**	**261**	P	**P**	**01 14 48.3**	**0.0**
	baz=30						
L56A				P	**P**	**01 14 48.3**	**0.0**
	baz=30						
E24K	**Your Creek**	**40.12**	**333**	P	**P**	**01 14 48.4**	**+0.3**
	baz=27						
ULM	**Lac du Bonnet**	**40.26**	**284**	P	**P**	**01 14 50.9**	**+1.5**
	comp=Z,6.9nm,1.0s,baz=31,slow=7.8,SNR=7.5						
ULM				LR	LR	01 31 06.2	
	comp=Z,2µm,18.8s,baz=40,slow=36						
	comp=Z,6.9nm,1.0s						
ULM	**Lac du Bonnet**	**40.26**	**284**		**P**	**01 14 48.1**	**-1.3**
ULM				IAmb	IAmb	01 14 53.2	
	comp=Z,46nm,1.6s						
NCK	**Nalchik**	**40.27**	**94**⇑	*e*P	**P**	**01 14 51.7**	**+2.1**
NCK				pmax	pmax		
	comp=Z,31nm,1.4s						
G26K	**Porcupine Rive**	**40.27**	**330**	P	**P**	**01 14 49.4**	**+0.1**
	baz=29						
WVNY	**West Valley, N**	**40.28**	**262**	P	**P**	**01 14 48.4**	**-1.2**
WVNY				IAmb	IAmb	01 14 54.5	
	comp=Z,34nm,1.1s						
WVNY	**West Valley, N**	**40.28**	**262**	P	**P**	**01 14 50.4**	**+0.8**
	baz=30						
E23K	**Chandalar**	**40.33**	**334**	P	**P**	**01 14 49.6**	**-0.3**
	baz=26						
H27K	**Steamboat Moun**	**40.46**	**328**	P	**P**	**01 14 50.7**	**-0.2**
	baz=30						
GLMI	**Grayling**	**40.51**	**270**	IAmb	IAmb	01 14 56.2	
	comp=Z,51nm,1.1s						
GLMI	**Grayling**	**40.51**	**270**	P	**P**	**01 14 52.2**	**+0.7**
	baz=32						
F24K	**Squaw Lake**	**40.52**	**333**	P	**P**	**01 14 51.3**	**-0.1**
	baz=27						
EYMN	**Ely**	**40.52**	**279**	P	**P**	**01 14 52.6**	**+1.0**
	baz=34						
M57A	**Sunshine Farm,**	**40.64**	**260**	P	**P**	**01 14 54.5**	**+1.9**
	baz=30						
M57A				P	**P**	**01 14 54.5**	**+1.9**
	baz=30						
IDI	**Anoyia**	**40.73**	**120**	LR	LR	01 34 19.9	
	comp=Z,504nm,19.2s,baz=330,slow=40						
G25K	**Bearman Lake**	**40.87**	**331**	P	**P**	**01 14 53.8**	**-0.4**
	baz=28						
FYU	**Fort Yukon**	**40.88**	**331**	IAmb	IAmb	01 14 59.5	
	comp=Z,42nm,1.2s						
N58A	**Sunbury**	**40.92**	**259**	P	**P**	**01 14 54.8**	**-0.1**
N58A				IAmb	IAmb	01 14 59.9	
	comp=Z,24nm,1.1s						
N58A	**Sunbury**	**40.92**	**259**	P	**P**	**01 14 56.7**	**+1.8**
	baz=29						
N58A				P	**P**	**01 14 56.7**	**+1.8**
	baz=29						
ZEI	**Tsey**	**40.99**	**95**	*e*P	**P**	**01 14 56.2**	**+0.4**
ZEI				pmax	pmax		
	comp=Z,13nm,1.8s						
B35A	**Bob, Littlefor**	**41.02**	**281**	P	**P**	**01 14 57.0**	**+1.3**
	baz=34						
I27K	**Kandik River**	**41.03**	**328**	P	**P**	**01 14 54.3**	**-1.3**
	baz=29						
ERPA	**Erie**	**41.05**	**263**	P	**P**	**01 14 56.3**	**+0.3**
	baz=30						
M55A	**Ridgway**	**41.14**	**262**	P	**P**	**01 14 57.8**	**+1.0**
M55A				IAmb	IAmb	01 15 01.8	
	comp=Z,43nm,1.3s						
M55A	**Ridgway**	**41.14**	**262**	P	**P**	**01 14 57.0**	**+0.2**
	baz=30						
M55A				P	**P**	**01 14 57.0**	**+0.2**
	baz=30						
COWI	**Conover**	**41.16**	**275**	P	**P**	**01 14 59.4**	**+2.5**
	baz=33						
G24K	**Hadweenzic Riv**	**41.18**	**332**	P	**P**	**01 14 56.7**	**-0.1**
	baz=27						
COLD	**Coldfoot**	**41.18**	**334**	P	**P**	**01 14 56.2**	**-0.6**
	baz=26						
F22K	**John River**	**41.25**	**335**	P	**P**	**01 14 55.6**	**-1.8**
	baz=25						
GROC	**Groznyy**	**41.36**	**93**	*e*P	**P**	**01 14 57.1**	**-1.4**
GROC				*e*S	**S**	**01 21 16.0**	**+3.4**
BNN	**Bunyan**	**41.38**	**106**	P	**P**	**01 14 58.6**	**-0.3**
PAGS	**Pennsylvania G**	**41.45**	**259**	P	**P**	**01 14 58.4**	**-0.9**
KOTAN	**Kotaneelee Air**	**41.46**	**313**	P	**P**	**01 14 57.8**	**-1.4**
	baz=34						
SSPA	**Standing Stone**	**41.53**	**260**	P	**P**	**01 15 01.5**	**+1.6**
SSPA				IAmb	IAmb	01 15 04.9	
	comp=Z,52nm,1.6s						
SSPA	**Standing Stone**	**41.53**	**260**	P	**P**	**01 14 59.0**	**-1.0**
	baz=29						
SSPA	**Standing Stone**	**41.53**	**260**	P	**P**	**01 15 01.6**	**+1.6**
	baz=29						
I26K	**Coal Creek Min**	**41.60**	**329**	IAmb	IAmb	01 15 04.8	
	comp=Z,23nm,1.0s						
I26K	**Coal Creek Min**	**41.60**	**329**	P	**P**	**01 14 59.7**	**-0.5**
	baz=28						
G23K	**Bananza Creek**	**41.62**	**333**	P	**P**	**01 14 58.1**	**-2.3**
	baz=26						
ABKAR	**Akbulak array**	**41.64**	**75**	P	**P**	**01 14 59.9**	**-0.9**
EGAK	**Eagle**	**41.66**	**327**	P	**P**	**01 14 59.6**	**-1.1**
EGAK	**Eagle**	**41.66**	**327**	P	**P**	**01 14 58.6**	**-2.1**
	baz=29,SNR=9.7						
G22K	**Bettles**	**41.68**	**334**	P	**P**	**01 14 58.4**	**-2.5**
	baz=25						
K29M	**Barlow Dome**	**41.69**	**324**	P	**P**	**01 14 59.4**	**-1.8**
	baz=30						
F21K	**Alatna River**	**41.72**	**335**	P	**P**	**01 14 58.3**	**-3.0**
	baz=24						
AGMN	**Agassiz Nation**	**41.87**	**283**	IAmb	IAmb	01 15 06.9	
	comp=Z,28nm,1.3s						
AGMN	**Agassiz Nation**	**41.87**	**283**	P	**P**	**01 15 01.6**	**-1.1**
	baz=34						
AGMN	**Agassiz Nation**	**41.87**	**283**	P	**P**	**01 15 01.8**	**-0.8**
	baz=34						
PRP	**Porcupine Dome**	**41.87**	**330**	P	**P**	**01 15 00.8**	**-1.9**
	baz=27,SNR=8.9						
M53A	**WI Miller and**	**41.89**	**264**	P	**P**	**01 15 02.9**	**0.0**
	baz=30						
DAWY	**Dawson**	**41.91**	**326**	P	**P**	**01 14 59.7**	**-3.1**
	baz=29,SNR=9.2						
AKH	**Akhalkalaki**	**42.02**	**96**	P	**P**	**01 15 02.8**	**-1.4**
AKH	**Akhalkalaki**	**42.02**	**96**	P	**P**	**01 15 02.8**	**-1.4**
AKH				pmax	pmax		
	comp=Z,155nm,1.8s						
H24K	**Noodor Dome**	**42.03**	**332**	P	**P**	**01 15 01.3**	**-2.5**
	baz=26						
M52A	**Chesterland**	**42.06**	**264**	P	**P**	**01 15 05.5**	**+1.1**
	baz=30						
M52A				P	**P**	**01 15 05.5**	**+1.1**
	baz=30						
FARO	**Faro, Yukon**	**42.11**	**321**	P	**P**	**01 15 02.6**	**-1.8**
	baz=31						
BRVK	**Borovoye**	**42.20**	**64**	P	**P**	**01 15 04.0**	**-1.3**
BRVK	**Borovoye**	**42.20**	**64***d*	*i*P	**P**	**01 15 05.7**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,23nm,2.7s						
SDMD	**Soldier's Deli**	**42.21**	**258**	P	**P**	**01 15 04.4**	**-1.1**
	baz=29						
MAK	**Makhachkala**	**42.22**	**91**	*e*P	**P**	**01 15 02.1**	**-3.4**
MAK				*e*S	**S**	**01 21 19.8**	**-5.5**
MAK				pmax	pmax		
	comp=Z,65nm,1.0s						
MAK				MLR	MLR		
	comp=Z,979nm,13.0s						
G40A	**Rib Lake**	**42.27**	**275**	IAmb	IAmb	01 15 10.2	
	comp=Z,31nm,1.2s						
G40A	**Rib Lake**	**42.27**	**275**	P	**P**	**01 15 05.2**	**-0.7**
	baz=32						
RDOG	**Red Dog Mine**	**42.28**	**341**	P	**P**	**01 15 03.2**	**-2.6**
	baz=19						
AAM	**Ann Arbor**	**42.29**	**267**	P	**P**	**01 15 05.6**	**-0.5**
	baz=31						
H23K	**Yukon River**	**42.34**	**332**	P	**P**	**01 15 04.2**	**-2.0**
	baz=25						
G21K	**Allakaket**	**42.38**	**335**	P	**P**	**01 15 04.5**	**-2.1**
	baz=24						
M31M	**Drury Creek, Y**	**42.38**	**321**	P	**P**	**01 15 05.3**	**-1.4**
	baz=30						
L29M	**L29M**	**42.46**	**324**	P	**P**	**01 15 05.7**	**-1.7**
	baz=29						
N53A	**Lisbon**	**42.50**	**263**	P	**P**	**01 15 08.0**	**+0.2**
	baz=30						
N53A				P	**P**	**01 15 08.0**	**+0.2**
	baz=30						
K27K	**Chicken**	**42.51**	**327**	P	**P**	**01 15 05.0**	**-2.6**
	baz=28,SNR=11						
KARS	**Kars**	**42.54**	**97**	P	**P**	**01 15 07.7**	**-0.7**
KARS	**Kars**	**42.54**	**97**	P	**P**	**01 15 07.7**	**-0.7**
KARS				pmax	pmax		
	comp=Z,123nm,1.7s						
POKR	**Poker Plat Res**	**42.59**	**331**	P	**P**	**01 15 07.7**	**-0.7**
POKR	**Poker Plat Res**	**42.59**	**331**	P	**P**	**01 15 06.4**	**-2.0**
	baz=26						
M30M	**Minto, Yukon**	**42.62**	**323**	P	**P**	**01 15 07.5**	**-1.2**
	baz=30,SNR=16						
WTLY	**Watson Lake, Y**	**42.76**	**316**	P	**P**	**01 15 07.5**	**-2.4**
WTLY				IAmb	IAmb	01 15 15.0	
	comp=Z,38nm,1.9s						
WTLY	**Watson Lake, Y**	**42.76**	**316**	P	**P**	**01 15 09.2**	**-0.6**
	baz=32						
IL31		**42.80**	**330**	P	**P**	**01 15 07.6**	**-2.4**
IL31				PcP	**PcP**	**01 17 01.2**	**+0.3**
ILAR	**Eielson Array**	**42.80**	**330**	P	**P**	**01 15 11.7**	**+1.6**
	comp=Z,4.8nm,1.0s,baz=24,slow=6.8,SNR=29						
ILAR				PcP	**PcP**	**01 17 02.6**	**+1.6**
	comp=Z,2.9nm,1.0s,baz=355,slow=3.2,SNR=8.1						
	comp=Z,4.8nm,1.0s						
O54A	**Avella**	**42.87**	**262**	P	**P**	**01 15 12.7**	**+1.8**
	baz=29						
O54A				P	**P**	**01 15 12.7**	**+1.8**
	baz=29						
COLA	**College**	**42.89**	**331**	P	**P**	**01 15 11.0**	**+0.2**
COLA				IAmb	IAmb	01 15 15.3	
	comp=Z,13nm,0.7s						

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COLA  College           42.89 331   P       P       01 15 14.4 +3.7
      comp=Z,18nm,1.0s
COLA  College           42.89 331c iP       P       01 15 13.2 +2.5
COLA                                pmax    pmax
      comp=Z,17nm,1.0s
COLA  College           42.89 331   P       P       01 15 09.7 -1.0
      baz=26
L48A  N Adams           42.89 268   P       P       01 15 12.8 +1.8
      baz=30
L48A                                P       P       01 15 12.8 +1.8
      baz=30
TCOL  CIGO, UAF Yank    42.89 331   P       P       01 15 08.8 -2.0
      baz=26
I23K  Minto, Yukon-K    42.92 332   P       P       01 15 09.4 -1.5
      baz=25
SCRK  Sand Creek        42.95 328   P       P       01 15 08.6 -2.8
      baz=27,SNR=9.7
N51A  Ashland           42.99 265   P       P       01 15 11.7 -0.2
      baz=30
N51A                                P       P       01 15 11.7 -0.2
      baz=30
ZKTA  Zakatala          43.02  93   P       P       01 15 13.1 +1.0
F36A  Milaca            43.03 279   IAmb    IAmb    01 15 16.5
      comp=Z,33nm,1.7s
F36A  Milaca            43.03 279   P       P       01 15 12.4 +0.4
      baz=32
H21K  Melozitna Rive    43.05 334   P       P       01 15 11.2 -0.9
      baz=24
M29M  Somme Creek       43.12 324   P       P       01 15 11.0 -1.8
      baz=29
MCWV  Mont Chateau      43.12 261   P       P       01 15 12.3 -0.6
      baz=29
MCWV  Mont Chateau      43.12 261   P       P       01 15 14.6 +1.7
      baz=29
O53A  New Philadelph    43.13 263   IAmb    IAmb    01 15 18.1
      comp=Z,43nm,1.4s
O53A  New Philadelph    43.13 263   P       P       01 15 11.8 -1.1
      baz=29
HDA   Harding Lake      43.14 330   P       P       01 15 12.9 +0.1
HDA   Harding Lake      43.14 330   P       P       01 15 10.6 -2.2
      baz=26,SNR=11
MLY   Manley            43.27 333   P       P       01 15 11.8 -2.1
      baz=24,SNR=11
SPMN  Marine on St.     43.29 278   P       P       01 15 14.3 +0.1
SPMN                                IAmb    IAmb    01 15 18.8
      comp=Z,25nm,1.2s
SPMN  Marine on St.     43.29 278   P       P       01 15 12.4 -1.8
      baz=32
SPMN  Marine on St.     43.29 278   P       P       01 15 16.0 +1.7
      baz=32
S61A  Accomac           43.29 256   P       P       01 15 15.2 +0.9
      baz=28
S61A                                P       P       01 15 15.2 +0.9
      baz=28
L27K  Beaver Creek,     43.31 326   IAmb    IAmb    01 15 19.3
      comp=Z,23nm,1.1s
L27K  Beaver Creek,     43.31 326   P       P       01 15 13.5 -0.8
      baz=28,SNR=18
RIDG  Independent Ri    43.33 328   P       P       01 15 13.8 -0.6
      baz=27,SNR=9.0
N31M  Braeburn, Yuko    43.34 321   P       P       01 15 12.3 -2.1
      baz=30,SNR=8.1
I21K  Tanana            43.35 333   P       P       01 15 12.0 -2.5
      baz=24
NEA2  Nenana            43.37 331   P       P       01 15 11.5 -3.2
      baz=25,SNR=15
K24K  Donnelly Dome     43.46 329   P       P       01 15 12.2 -3.2
      baz=26
CBN   Corbin Frederi    43.47 258   P       P       01 15 15.7  0.0
      baz=28
O52A  Adamsville        43.48 264   IAmb    IAmb    01 15 20.7
      comp=Z,50nm,1.4s
O52A  Adamsville        43.48 264   P       P       01 15 17.6 +1.8
      baz=29
O52A                                P       P       01 15 17.6 +1.8
      baz=29
AKT   Akhty             43.57  92  eP       P       01 15 18.3 +1.6
AKT                                e                01 17 01.8
AKT                                e                01 17 05.7
AKT                                 pmax    pmax
      comp=Z,19nm,1.4s
GNI   Garni             43.58  96   LR      LR      01 34 08.3
      comp=Z,1µm,19.4s,baz=326,slow=37
GNI   Garni             43.58  96   P       P       01 15 16.7 -0.1
GNI   Garni             43.58  96 deP       P       01 15 18.1 +1.3
GNI                                 pmax    pmax
      comp=Z,35nm,1.7s
SEKA  Sheki             43.60  93   P       P       01 15 18.1 +1.2
MDND  Maddock           43.63 285   P       P       01 15 16.0 -0.9
      baz=33
L26K  Log Cabin Wild    43.67 327   P       P       01 15 15.1 -2.0
      baz=27
N30M  Aishikik Lake     43.67 322   P       P       01 15 14.3 -2.9
      baz=29
N49A  Columbus Grove    43.67 267   IAmb    IAmb    01 15 22.7
      comp=Z,37nm,1.1s
N49A  Columbus Grove    43.67 267   P       P       01 15 18.9 +1.5
      baz=30
N49A                                P       P       01 15 18.9 +1.5
      baz=30
BVCY  Beaver Creek      43.68 325   P       P       01 15 14.1 -3.1
      baz=28,SNR=6.0
P33M  Teslin, Yukon     43.72 319   P       P       01 15 16.2 -1.4
      baz=30
GANJ  Ganja             43.76  94   P       P       01 15 19.1 +1.0
ACSO  Alum Creek Sta    43.81 265   P       P       01 15 16.4 -2.1
      baz=30
ACSO  Alum Creek Sta    43.81 265   P       P       01 15 19.5 +1.0
      baz=30
MENT  Mentasta          43.82 327   P       P       01 15 22.7 +4.4
      comp=Z,8.7nm,0.8s
P53A  Whipple           43.86 263   P       P       01 15 19.9 +1.1
      baz=29
P53A                                P       P       01 15 19.9 +1.1
      baz=29
MNGR  Mingechevir, A    43.94  93   P       P       01 15 20.5 +1.1
M27K  Edge Creek, AK    43.95 326   P       P       01 15 16.5 -3.0
      baz=27
GURO  Guroymak-BITLI    43.95 100   P       P       01 15 19.2 -0.6
EDM   Edmonton          43.96 300   IAmb    IAmb    01 15 23.7
      comp=Z,26nm,1.3s
P52A  Corning           44.01 264   IAmb    IAmb    01 15 24.7
      comp=Z,34nm,1.2s
P52A  Corning           44.01 264   P       P       01 15 19.2 -0.9
      baz=29
L44A  Lake County Fo    44.02 271   P       P       01 15 18.7 -1.4
      baz=31
O30N  Mendenhall        44.04 321   P       P       01 15 17.7 -2.4
      baz=29
Q54A  Coxs Mills        44.09 262   P       P       01 15 23.1 +2.4
      baz=29
Q54A                                P       P       01 15 23.1 +2.4
      baz=29
F33A  5 Mile Ranch,     44.09 281   IAmb    IAmb    01 15 25.1
      comp=Z,39nm,1.4s
F33A  5 Mile Ranch,     44.09 281   P       P       01 15 22.5 +1.9
      baz=32
MCK   McKinley          44.13 331   P       P       01 15 17.1 -3.7
      baz=25,SNR=5.7
YUK4  Talbot Arm        44.13 323   P       P       01 15 16.7 -4.3
      baz=28
PAX   Paxson            44.15 328   P       P       01 15 16.6 -4.4
      baz=26,SNR=5.4
M26K  Nabesna, AK       44.15 326   P       P       01 15 17.4 -3.6
      baz=27
YUK3  Moose Creek       44.16 325   P       P       01 15 17.7 -3.6
      baz=28
T60A  Surry             44.16 257   P       P       01 15 22.8 +1.5
      baz=27
T60A                                P       P       01 15 22.8 +1.5
      baz=27
BPAW  Bear Paw Mtn.     44.17 332   P       P       01 15 17.6 -3.5
      baz=24,SNR=9.0
BBSR  BB Station        44.18 241   P       P       01 15 24.2 +2.8
      baz=23
JFWS  Jewell Farm       44.28 274   P       P       01 15 18.9 -3.3
      baz=31
HYT   Haines Junctio    44.32 322   P       P       01 15 19.3 -3.2
      baz=28
O49A  Covington         44.37 266   P       P       01 15 23.9 +1.0
      baz=30
O49A                                P       P       01 15 23.9 +1.0
      baz=30
YUK6  Outpost Mounta    44.42 323   P       P       01 15 19.6 -3.8
      baz=28
YUK8  Steele Glacier    44.44 324   P       P       01 15 18.6 -5.0
      baz=28
S57A  Dark Hollow, R    44.45 259   P       P       01 15 25.5 +1.9
      baz=28
S57A                                P       P       01 15 25.5 +1.9
      baz=28
P32M  Atlin             44.48 319   P       P       01 15 20.0 -3.7
      baz=29
P51A  Williamsport      44.49 264   P       P       01 15 25.6 +1.6
      baz=29
P51A                                P       P       01 15 25.6 +1.6
      baz=29
BILL  Bilibino          44.52 357           P       01 15 22.7 -1.1
BILL  Bilibino          44.52 357 ⇓eP       P       01 15 25.0 +1.2
BILL                               e                01 17 08.1
BILL                               eS       S       01 22 09.5 +11
BILL                                pmax    pmax
      comp=Z,26nm,2.5s
BILL                                MLR     MLR
      comp=Z,268nm,16.0s
DLBC  Dease Lake        44.53 316   LR      LR      01 34 15.3
      comp=Z,2µm,19.9s,baz=60,slow=36
DLBC  Dease Lake        44.53 316   P       P       01 15 19.0 -5.1
      baz=30
BRLDA Berland Lookou    44.54 304   P       P       01 15 23.9 -0.4
BRLDA                               IAmb    IAmb    01 15 28.7
      comp=Z,46nm,1.4s
I37B  Waseca            44.54 277   P       P       01 15 24.9 +0.6
      baz=31
GCSA  Galena City Sc    44.55 336   P       P       01 15 19.9 -4.1
      baz=21
CHUM  Lake Minchumin    44.60 333   P       P       01 15 20.6 -3.9
      baz=23,SNR=6.9
HARP  HAARP             44.60 328   P       P       01 15 21.0 -3.6
      baz=26,SNR=5.6
T59A  Double "B" Far    44.62 257   P       P       01 15 26.8 +1.9
      baz=27
T59A                                P       P       01 15 26.8 +1.9
      baz=27
O48B  Farmland          44.62 267   P       P       01 15 25.3 +0.4
      baz=30
TRF   Thorofare Moun    44.64 331   P       P       01 15 22.3 -2.7
      baz=24
Q32M  Nakina River      44.66 317   P       P       01 15 24.5 -0.8
      baz=30
NAX   Nakhchivan        44.72  96   P       P       01 15 28.0 +2.2
DGMT  Dagmar            44.78 290   P       P       01 15 24.9 -1.3
      baz=32
P30M  Million Dollar    44.81 321   P       P       01 15 24.7 -1.6
      baz=28
L42A  Oliver, Polo      44.84 272   P       P       01 15 27.3 +0.6
      baz=30
CAST  Castle Rocks      44.99 332   P       P       01 15 25.8 -1.8
      baz=23
O28M  Mount Upton       44.99 324   P       P       01 15 26.7 -1.3
      baz=27
O29M  Mount Kennedy     45.04 322   P       P       01 15 26.4 -1.8
      baz=28
MCARA McCarthy VSAT     45.07 326   P       P       01 15 26.1 -2.2
      baz=26
M24K  Tolsona, Glenn    45.07 328   P       P       01 15 24.7 -3.6
      baz=25
R53A  Hurricane         45.08 263   P       P       01 15 29.7 +1.1
      baz=28
R53A                                P       P       01 15 29.7 +1.1
      baz=28
P49A  Miami Univ. Ec    45.08 266   P       P       01 15 28.7 +0.1
      baz=29
N25K  Chitina, Valde    45.20 327   IAmb    IAmb    01 15 34.5
      comp=Z,12nm,0.8s
N25K  Chitina, Valde    45.20 327   P       P       01 15 26.5 -2.9
      baz=26,SNR=6.6
T57A  Hurt              45.23 259   IAmb    IAmb    01 15 33.6
      comp=Z,17nm,1.2s
T57A  Hurt              45.23 259   P       P       01 15 29.7 -0.1
      baz=28
T57A                                P       P       01 15 29.7 -0.1
      baz=28
U59A  Littleton         45.26 257   IAmb    IAmb    01 15 34.7
      comp=Z,35nm,1.6s
U59A  Littleton         45.26 257   P       P       01 15 31.0 +1.0
      baz=27
U59A                                P       P       01 15 31.0 +1.0
      baz=27
PLBC  Pleasant Camp     45.26 320   P       P       01 15 27.5 -2.3
      baz=28
SFIN  Lafayette         45.26 269   P       P       01 15 29.2 -0.8
      baz=30
SFIN  Lafayette         45.26 269   P       P       01 15 29.4 -0.6
      baz=30
TNA   Tin City          45.27 343   IAmb    IAmb    01 15 34.2
      comp=Z,15nm,1.0s
TNA   Tin City          45.27 343   P       P       01 15 24.9 -4.8
      baz=16,SNR=14
S34M  Telegraph Cree    45.28 316   P       P       01 15 28.5 -1.4
      baz=30
S54A  Dingess, Beckl    45.30 262   P       P       01 15 33.0 +2.5
      baz=28
S54A                                P       P       01 15 33.0 +2.5
      baz=28
L40A  Anamosa           45.38 274   P       P       01 15 31.4 +0.4
      baz=30
K20K  Telida            45.39 334   IAmb    IAmb    01 15 36.2
      comp=Z,12nm,1.1s
K20K  Telida            45.39 334   P       P       01 15 28.5 -2.3
      baz=22,SNR=6.5
P48A  Milroy            45.41 267   P       P       01 15 31.2 -0.1
      baz=29
P48A                                P       P       01 15 31.2 -0.1
      baz=29
PPLA  Purkeypile        45.49 332   P       P       01 15 29.8 -2.0
      baz=23
SCM   Sheep Creek Mo    45.55 329   P       P       01 15 27.8 -4.4
      baz=25
KLU   Klutina           45.58 328   P       P       01 15 28.0 -4.4
      baz=25
CUT   Chulitna          45.59 331   P       P       01 15 30.6 -1.8
      baz=23
PINM  Pinnacle          45.61 323   P       P       01 15 28.7 -3.9
      baz=27
M23K  Glacier View      45.67 329   P       P       01 15 27.9 -5.1
      baz=24,SNR=5.3
SML   Sawmill           45.77 329   P       P       01 15 32.1 -1.8
      baz=24
PNL   Peninsula         45.79 322   P       P       01 15 31.7 -2.3
      baz=27
R32K  Eaglecrest        45.84 318   P       P       01 15 30.3 -4.1
      baz=28
T35M  Bob Quinn         45.85 315   P       P       01 15 31.7 -2.9
      baz=30
GHO   Glory Hole Cre    45.92 330   IAmb    IAmb    01 15 40.6
      comp=Z,11nm,1.0s
ANM   Nome              45.92 341   P       P       01 15 32.6 -2.4
      baz=17,SNR=8.7
HDIL  Hopedale          45.94 271   P       P       01 15 34.8 -0.7
      baz=30
HDIL  Hopedale          45.94 271   P       P       01 15 37.0 +1.5
      baz=30
P46A  Rosedale          45.96 268   P       P       01 15 36.5 +0.9
      baz=29
O44A  Mansfield         45.98 270   P       P       01 15 36.2 +0.5
      baz=30
ECSD  EROS Data Cent    46.00 280   IAmb    IAmb    01 15 40.3
      comp=Z,17nm,1.2s
ECSD  EROS Data Cent    46.00 280   P       P       01 15 34.2 -1.7
      baz=31
ECSD  EROS Data Cent    46.00 280   P       P       01 15 36.9 +1.0
      baz=31
R50A  Paris             46.02 265   IAmb    IAmb    01 15 40.5
      comp=Z,19nm,1.2s
R50A  Paris             46.02 265   P       P       01 15 36.5 +0.4
      baz=29
R50A                                P       P       01 15 36.5 +0.4
      baz=29
TTA   Tatalina          46.11 334   P       P       01 15 33.6 -3.0
      baz=21
PMR   Palmer            46.12 330   P       P       01 15 33.9 -2.7
      baz=24
KNK   Knik Glacier      46.16 329   P       P       01 15 32.5 -4.4
      baz=24
ZAA0  Zalesovo Array    46.17  53   P       P       01 15 35.7 -1.4
ZAA0                                PcP     PcP     01 17 12.3 -0.3
ZALV  Zalesovo Beam     46.17  53   P       P       01 15 37.7 +0.6
      comp=Z,2.6nm,0.8s,baz=331,slow=8.8,SNR=12
ZALV                                PcP     PcP     01 17 13.6 +0.9
      comp=Z,3.2nm,0.7s,baz=338,slow=4.4,SNR=12
ZALV                                LR      LR      01 38 11.8
      comp=Z,361nm,19.1s,baz=324,slow=40
      comp=Z,2.6nm,0.8s
L20K  Farewell, AK      46.17 333   P       P       01 15 35.2 -1.9
      baz=22
SKT   Skwentna          46.22 331   P       P       01 15 35.3 -2.1
      baz=23
U56A  King              46.23 260   P       P       01 15 39.4 +1.6
      baz=28
U56A                                P       P       01 15 39.4 +1.6
      baz=28
V58A  Windy Hill, Pi    46.24 258   IAmb    IAmb    01 15 42.9
      comp=Z,19nm,1.1s
V58A  Windy Hill, Pi    46.24 258   P       P       01 15 39.3 +1.4
      baz=27
V58A                                P       P       01 15 39.3 +1.4
      baz=27
SUSD  Miller            46.27 282   P       P       01 15 37.1 -0.9
      baz=31
SCIA  State Center      46.27 276   P       P       01 15 38.1 +0.1
      baz=30
SCIA  State Center      46.27 276   P       P       01 15 39.4 +1.4
      baz=30
CNNC  Cliffs of the     46.28 257   P       P       01 15 40.0 +1.9
      baz=27
S51A  Beattyville       46.31 264   P       P       01 15 38.2 -0.1
      baz=28
S51A                                P       P       01 15 38.2 -0.1
      baz=28
R49A  Shelbyville       46.34 266   P       P       01 15 39.8 +1.3
      baz=29
R49A                                P       P       01 15 39.8 +1.3
      baz=29
LKRN  Lenkeran, Azer    46.37  93   P       P       01 15 40.0 +1.2
N41A  Harden Midland    46.41 273   P       P       01 15 40.6 +1.5
      baz=30
MMAI  Mount Meron Ar    46.43 110   LR      LR      01 37 30.4
      comp=Z,562nm,19.7s,baz=82,slow=39
S31K  Pelican           46.55 319   P       P       01 15 38.8 -1.1
      baz=28
SUA   Susitna One       46.55 331   IAmb    IAmb    01 15 44.2
      comp=Z,30nm,1.4s
SUA   Susitna One       46.55 331   P       P       01 15 39.3 -0.8
      baz=23
S32K  Killisnoo         46.56 318   P       P       01 15 37.9 -2.2
      baz=28
M20K  Styx River        46.60 332   IAmb    IAmb    01 15 43.2
      comp=Z,12nm,1.1s
U54A  Nelsons Funny     46.62 261   P       P       01 15 42.4 +1.5
      baz=28
U54A                                P       P       01 15 42.4 +1.5
      baz=28
L19K  White Mountain    46.62 333   P       P       01 15 35.7 -4.8
      baz=21
PWL   Port Wells        46.64 329   P       P       01 15 37.1 -3.6
      baz=24,SNR=5.8
RC01  Rabbit Creek A    46.70 330   P       P       01 15 39.8 -1.4
      baz=23
M19K  Big River Lodg    46.80 333   P       P       01 15 40.5 -1.4
      baz=21
WCI   Wyandotte Cave    46.82 267           P       01 15 41.8 -0.5
WCI                                 IAmb    IAmb    01 15 46.8
      comp=Z,21nm,1.1s
WCI   Wyandotte Cave    46.82 267   P       P       01 15 41.8 -0.5
WCI                                 pmax    pmax
      comp=Z,21nm,1.1s
WCI   Wyandotte Cave    46.82 267   P       P       01 15 42.3  0.0
      baz=29
WCI   Wyandotte Cave    46.82 267   P       P       01 15 43.5 +1.1
      baz=29
P43A  Skaggs, Pawnee    46.82 271   P       P       01 15 43.5 +1.1
      baz=29
WRAK  Wrangell Islan    46.91 316   P       P       01 15 41.4 -1.4
      baz=28
KURK  Kurchatov         46.98  60   P       P       01 15 41.9 -1.6
KURK  Kurchatov         46.98  60d iP       P       01 15 43.5 +0.1
KURK                                pmax    pmax
      comp=Z,8.0nm,1.0s
V55A  Taylorsville      46.98 260   P       P       01 15 45.4 +1.8
      baz=27
V55A                                P       P       01 15 45.4 +1.8
      baz=27
LAO   LASA Array        47.02 290   P       P       01 15 43.0 -0.9
      baz=31
LAO   LASA Array        47.02 290   P       P       01 15 45.0 +1.1
      baz=31
KURBB Kurchatov Arra    47.03  60   LR      LR      01 36 01.6
      comp=Z,867nm,18.3s,baz=161,slow=37
SPU   Mount Spurr       47.05 331   P       P       01 15 42.5 -1.5
OLIL  Olney             47.07 269   P       P       01 15 45.9 +1.6
      baz=29
EGMT  Eagleton          47.13 294   P       P       01 15 41.9 -2.9
      baz=31,SNR=14
TZTN  Tazewell          47.25 263   P       P       01 15 45.5 -0.3
      baz=28
Q44A  Meyer Farm, Va    47.27 270   P       P       01 15 47.0 +1.2
      baz=29
T50A  Nancy             47.32 265   P       P       01 15 46.6 +0.3
      baz=28
T50A                                P       P       01 15 46.6 +0.3
      baz=28
TAM   Tamanrasset       47.35 149   P       P       01 15 46.8  0.0
TAM                                 IAmb    IAmb    01 15 49.8
      comp=Z,18nm,1.8s
TAM   Tamanrasset       47.35 149   P       P       01 15 46.8  0.0
TAM                                 pmax    pmax
      comp=Z,18nm,1.8s
U33K  Whale Pass        47.38 316   P       P       01 15 45.1 -1.4
      baz=28
K31A  O'Neill           47.75 281   P       P       01 15 50.3 +0.7
      baz=30
SVW2  Sparrevohn        47.76 333   P       P       01 15 54.2 +4.8
      comp=Z,9.4nm,1.2s
P40A  Paris             47.88 273   P       P       01 15 50.0 -0.6
      baz=29
N35A  Tabor             48.10 277   P       P       01 15 51.6 -0.7
N35A                                IAmb    IAmb    01 15 56.3
      comp=Z,14nm,0.8s
TKL   Tuckaleechee C    48.12 263   LR      LR      01 35 37.9
      comp=Z,3µm,18.8s,baz=35,slow=35
U49A  Red Boiling Sp    48.13 265   P       P       01 15 53.9 +1.3
      baz=28
V51A  Loudon            48.21 263   P       P       01 15 52.8 -0.4
      baz=28
T47A  Sharon Grove      48.22 267   P       P       01 15 53.2  0.0
      baz=28,SNR=8.5
CASEE Lake Jocassee     48.39 261   P       P       01 15 54.7 +0.1
      baz=27
S44A  Carbondale        48.42 269   P       P       01 15 56.1 +1.4
      baz=28
RSSD  Black Hills       48.43 286           P       01 15 53.9 -1.1
RSSD                                IAmb    IAmb    01 16 00.8
      comp=Z,11nm,1.1s
RSSD  Black Hills       48.43 286   P       P       01 15 53.9 -1.1
RSSD                                pmax    pmax
      comp=Z,11nm,1.1s
RSSD  Black Hills       48.43 286   P       P       01 15 54.8 -0.2
      baz=30
RSSD  Black Hills       48.43 286   P       P       01 15 56.4 +1.3
      baz=30
BGNE  Belgrade          48.57 280   P       P       01 15 54.4 -1.6
      baz=30
YAK   Yakutsk           48.59  19   P       P       01 15 56.3 +0.6
      comp=Z,6.3nm,0.4s,baz=173,slow=3.7,SNR=6.9
      comp=Z,6.3nm,0.4s
YAK   Yakutsk           48.59  19   P       P       01 15 54.3 -1.4
YAK   Yakutsk           48.59  19c iP       P       01 15 55.9 +0.2
YAK                                 pmax    pmax
      comp=Z,40nm,1.0s
FVM   French Village    48.61 270   IAmb    IAmb    01 16 00.2
      comp=Z,12nm,0.9s
FVM   French Village    48.61 270   P       P       01 15 55.9 -0.3
      baz=29
HODGE Hodges            48.81 260   P       P       01 15 57.6 -0.2
      baz=27
CCM   Cathedral Cave    48.86 271           P       01 15 57.5 -0.6
CCM                                 IAmb    IAmb    01 16 02.1
      comp=Z,14nm,1.1s
CCM   Cathedral Cave    48.86 271   P       P       01 15 57.6 -0.6
CCM                                 pmax    pmax
      comp=Z,14nm,1.1s
CCM   Cathedral Cave    48.86 271   P       P       01 15 57.3 -0.9
      baz=29
CCM   Cathedral Cave    48.86 271   P       P       01 15 57.5 -0.6
      baz=29
O18K  Koktuh Hills      48.86 333   P       P       01 15 55.0 -2.9
      baz=20
N16K  Nishlik Lake      48.88 335   P       P       01 15 55.1 -3.0
      baz=19
CGM3  Cape Girardeau    48.92 269   IAmb    IAmb    01 16 03.2
      comp=Z,29nm,1.3s
NHSC  New Hope          49.03 258   P       P       01 16 00.6 +1.1
      baz=26
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NHSC	New Hope	49.03	258	P	**P**	**01 16 00.6**	**+1.1**
	baz=26						
R40A	Maddies Statio	49.05	272	IAmb	IAmb	01 16 02.8	
	comp=Z,31nm,1.5s						
R40A	Maddies Statio	49.05	272	P	**P**	**01 15 59.3**	**-0.2**
	baz=29						
W50A	Signal Mountai	49.11	264	P	**P**	**01 16 01.0**	**+0.9**
	baz=27						
V48A	Smith Brothers	49.20	266	P	**P**	**01 16 01.0**	**+0.1**
	baz=28						
EIL	Elat	49.30	112	LR	LR	01 39 36.5	
	comp=Z,178nm,19.1s,baz=320,slow=40						
P18K	Big Mountain,	49.30	332	P	**P**	**01 15 59.5**	**-1.8**
	baz=20						
NEW	Newport	49.44	300	LR	LR	01 37 13.1	
	comp=Z,3µm,19.0s,baz=32,slow=36						
Q19K	Cape Douglas,	49.45	331	P	**P**	**01 16 00.6**	**-1.8**
	baz=21						
RLMT	Red Lodge	49.45	291	P	**P**	**01 16 02.6**	**-0.3**
	baz=30,SNR=8.5						
Q20K	Shuyak Island	49.51	330	P	**P**	**01 16 01.9**	**-1.0**
	baz=21						
SEY	Seymchan	49.53	5	P	**P**	**01 16 04.4**	**+1.4**
	comp=Z,2.4nm,0.3s,baz=346,slow=7.4,SNR=7.0						
SEY				LR	LR	01 38 17.2	
	comp=Z,164nm,18.3s,baz=346,slow=38						
	comp=Z,2.4nm,0.3s						
SEY	Seymchan	49.53	5	⇓*i*P	**P**	**01 16 04.9**	**+1.9**
SEY				pmax	pmax		
	comp=Z,10.0nm,1.0s						
O16K	Kokwok River B	49.60	334	P	**P**	**01 16 02.1**	**-1.4**
	baz=19						
MSO	Missoula	49.61	296		**P**	**01 16 02.3**	**-1.7**
MSO	Missoula	49.61	296	P	**P**	**01 16 02.5**	**-1.5**
	baz=30,SNR=8.9						
T42A	Van Buren	49.70	270	IAmb	IAmb	01 16 08.1	
	comp=Z,24nm,1.2s						
T42A	Van Buren	49.70	270	P	**P**	**01 16 04.1**	**-0.5**
	baz=28						
BOZ	Bozeman (W)	49.88	294	IAmb	IAmb	01 16 10.4	
	comp=Z,26nm,1.4s						
BOZ	Bozeman (W)	49.88	294	P	**P**	**01 16 04.6**	**-1.4**
	baz=30,SNR=15						
S39A	Bolivar	49.98	273	P	**P**	**01 16 07.1**	**+0.4**
	baz=28,SNR=9.2						
KSU1	Kansas State U	49.99	277	P	**P**	**01 16 05.7**	**-1.1**
	baz=29						
KSU1	Kansas State U	49.99	277	P	**P**	**01 16 07.4**	**+0.6**
	baz=29						
BOD	Bodaibo	50.07	31	*e*P	**P**	**01 16 06.0**	**-1.1**
BOD				pmax	pmax		
	comp=Z,13nm,2.0s						
YMP	Mirror Lake Pl	50.10	292	IAmb	IAmb	01 16 12.6	
	comp=Z,26nm,1.3s						
P16K	Nushagak River	50.12	334	P	**P**	**01 16 06.4**	**-1.0**
	baz=19						
KDAK	Kodiak Island	50.32	330	LR	LR	01 39 29.5	
	comp=Z,880nm,21.0s,baz=53,slow=38						
KDAK	Kodiak Island	50.32	330	P	**P**	**01 16 06.2**	**-2.8**
	baz=21						
X48A	Hartselle	50.43	265	IAmb	IAmb	01 16 13.6	
	comp=Z,26nm,1.2s						
X48A	Hartselle	50.43	265	P	**P**	**01 16 11.1**	**+0.9**
	baz=27						
OGNE	Ogallala	50.43	283	P	**P**	**01 16 11.8**	**+1.6**
	baz=29						
H17A	Grant Village	50.55	292	P	**P**	**01 16 12.0**	**+0.7**
	baz=29						
LCAR	Lake Charles	50.57	270	IAmb	IAmb	01 16 14.8	
	comp=Z,20nm,1.4s						
LCAR	Lake Charles	50.57	270	P	**P**	**01 16 11.3**	**+0.2**
	baz=28						
154A	Montrose	50.57	260	P	**P**	**01 16 13.7**	**+2.5**
	baz=26						
K22A	Casper	50.61	287	IAmb	IAmb	01 16 15.7	
	comp=Z,23nm,1.2s						
K22A	Casper	50.61	287	P	**P**	**01 16 10.0**	**-1.6**
	baz=29						
K22A	Casper	50.61	287	P	**P**	**01 16 11.8**	**+0.2**
	baz=29						
GEYT	Alibeck	50.62	85	P	**P**	**01 16 12.3**	**+0.7**
	comp=Z,3.4nm,0.9s,baz=339,slow=7.1,SNR=7.1						
GEYT				LR	LR	01 38 56.9	
	comp=Z,2µm,20.3s,baz=351,slow=38						
	comp=Z,3.4nm,0.9s						
GYA0B	ALIBECK ARRAY	50.62	85	P	**P**	**01 16 11.6**	**0.0**
W45A	Hickory Valley	50.62	267	P	**P**	**01 16 12.1**	**+0.6**
	baz=28						
DGZ	Jazzator, Alta	50.67	54	*de*P	**P**	**01 16 13.4**	**+1.4**
DGZ				pmax	pmax		
	comp=Z,32nm,2.9s						
Y49A	Blount Mountai	50.71	264	IAmb	IAmb	01 16 16.2	
	comp=Z,21nm,1.1s						
Y49A	Blount Mountai	50.71	264	P	**P**	**01 16 11.1**	**-1.3**
	baz=27						
Z51A	Franklin	50.73	263	P	**P**	**01 16 12.2**	**-0.2**
	baz=27						
KKAR	Karatay Array	50.73	71	P	**P**	**01 16 11.1**	**-1.3**
KKAR	Karatay Array	50.73	71	P	**P**	**01 16 11.1**	**-1.3**
HBAR	Harrisburg	50.83	269	P	**P**	**01 16 12.3**	**-0.8**
	baz=28						
255A	Hazlehurst	50.95	259	P	**P**	**01 16 14.9**	**+0.9**
	baz=26						
U40A	Yellville	50.97	272	P	**P**	**01 16 14.0**	**-0.2**
	baz=28,SNR=16						
U40A				P	**P**	**01 16 14.0**	**-0.2**
	baz=28,SNR=16						
OHAK	Old Harbor	50.98	330	P	P	01 16 20.5	+6.5
	comp=Z,16nm,1.1s						
FCAR	Ozark Folk Cen	51.10	271	IAmb	IAmb	01 16 18.8	
	comp=Z,31nm,1.5s						
152A	Waverly Hall	51.13	262	IAmb	IAmb	01 16 19.8	
	comp=Z,26nm,1.4s						
152A	Waverly Hall	51.13	262	P	**P**	**01 16 16.7**	**+1.2**
	baz=26						
R17K	Ugashik Creek	51.16	332	P	**P**	**01 16 13.2**	**-2.1**
	baz=19						
OXF	Oxford	51.28	267	P	**P**	**01 16 16.9**	**+0.4**
	baz=27						
R32A	Long Quarter,	51.38	278	IAmb	IAmb	01 16 21.1	
	comp=Z,17nm,0.9s						
R32A	Long Quarter,	51.38	278	P	**P**	**01 16 18.2**	**+0.9**
	baz=28						
CBKS	Cedar Bluff	51.43	279	P	**P**	**01 16 18.0**	**+0.3**
	baz=29						
CBKS	Cedar Bluff	51.43	279	P	**P**	**01 16 17.9**	**+0.3**
	baz=29						
HHAR	Hobbs	51.45	273	IAmb	IAmb	01 16 20.9	
	comp=Z,30nm,1.7s						
U38A	Gravette	51.48	273	IAmb	IAmb	01 16 20.8	
	comp=Z,20nm,1.3s						
U38A	Gravette	51.48	273	P	**P**	**01 16 17.5**	**-0.6**
	baz=28,SNR=6.2						
MK31	Makanchi Array	51.59	59	*d i*P	**P**	**01 16 18.7**	**-0.1**
MKAR	Makanchi Array	51.59	59	P	**P**	**01 16 19.2**	**+0.5**
	comp=Z,4.9nm,1.0s,baz=326,slow=6.1,SNR=31						
MKAR				PcP	**PcP**	**01 17 33.0**	**+0.5**
	comp=Z,0.8nm,0.9s,baz=347,slow=4.4,SNR=1.7						
MKAR				PP	**PP**	**01 18 19.3**	**+3.5**
	comp=Z,1.0nm,0.9s,baz=346,slow=8.8,SNR=3.5						
MKAR				LR	LR	01 38 08.1	
	comp=Z,710nm,18.9s,baz=321,slow=36						
	comp=Z,4.9nm,1.0s						
MKAR	Makanchi Array	51.59	59	P	**P**	**01 16 17.9**	**-0.8**
BW06	Boulder Array	51.60	290	IAmb	IAmb	01 16 22.6	
	comp=Z,24nm,1.5s						
BW06	Boulder Array	51.60	290	P	**P**	**01 16 20.4**	**+1.3**
	baz=29,SNR=10.0						
PD31	Pinedale Array	51.60	290		**P**	**01 16 18.5**	**-0.7**
PD31				IAmb	IAmb	01 16 22.6	
	comp=Z,21nm,1.5s						
PDAR	Pinedale Array	51.60	290	P	**P**	**01 16 20.2**	**+1.0**
	comp=Z,3.2nm,1.0s,baz=48,slow=6.2,SNR=18						
PDAR				PP	**PP**	**01 18 22.1**	**+5.8**
	comp=Z,1.7nm,1.1s,baz=54,slow=11,SNR=4.0						
PDAR				LR	LR	01 38 02.3	
	comp=Z,2µm,19.1s,baz=29,slow=36						
	comp=Z,3.2nm,1.0s						
LRAL	Lakeview Retre	51.67	264	P	**P**	**01 16 20.0**	**+0.5**
	baz=27						
LRAL	Lakeview Retre	51.67	264	P	**P**	**01 16 19.8**	**+0.4**
	baz=27						
WHAR	Wooly Hollow	51.69	270	IAmb	IAmb	01 16 23.4	
	comp=Z,41nm,1.5s						
RWWY	Rawlins	51.70	287	IAmb	IAmb	01 16 22.7	
	comp=Z,23nm,1.4s						
TIGA	Tifton	51.80	260	P	**P**	**01 16 21.5**	**+1.1**
	baz=26						
PLID	Pearl Lake	51.83	297	IAmb	IAmb	01 16 24.3	
	comp=Z,29nm,1.6s						
T35B	Sooner Cattle	51.87	275	P	**P**	**01 16 21.1**	**+0.1**
	baz=28,SNR=9.7						
Y45A	Yeager Farm, C	51.90	267	P	**P**	**01 16 21.6**	**+0.5**
	baz=27						
N23A	Red Feather La	51.92	286	P	**P**	**01 16 21.5**	**-0.2**
	baz=29,SNR=11						
KAN01	Argonia South	52.13	277	IAmb	IAmb	01 16 26.2	
	comp=Z,38nm,1.3s						
UALR	University of	52.16	270	P	**P**	**01 16 23.3**	**+0.2**
UALR				IAmb	IAmb	01 16 28.4	
	comp=Z,18nm,1.2s						
250A	Grady	52.33	263	P	**P**	**01 16 24.7**	**+0.3**
	baz=26						
KSCO	Kaye Shedlock'	52.34	282	P	**P**	**01 16 24.2**	**-0.4**
KSCO	Kaye Shedlock'	52.34	282	P	**P**	**01 16 25.5**	**+0.9**
	baz=28						
KSCO	Kaye Shedlock'	52.34	282	P	**P**	**01 16 24.5**	**-0.1**
	baz=28						
KAN14	Manchester OK	52.39	277	IAmb	IAmb	01 16 28.8	
	comp=Z,29nm,1.1s						
TUL1	Leonard	52.48	274	P	**P**	**01 16 25.3**	**-0.2**
	baz=28						
AAK	Ala-Archa	52.57	68	LR	LR	01 38 10.5	
	comp=Z,2µm,18.0s,baz=330,slow=35						
AAK	Ala-Archa	52.57	68	P	**P**	**01 16 25.3**	**-0.9**
AAK	Ala-Archa	52.57	68	*d i*P	**P**	**01 16 27.3**	**+1.0**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
HLID	Hailey	52.62	294	P	**P**	**01 16 26.7**	**0.0**
	baz=28						
ISCO	Idaho Springs	52.76	285	P	**P**	**01 16 28.8**	**+0.9**
	baz=28,SNR=6.0						
ISCO	Idaho Springs	52.76	285	P	**P**	**01 16 29.1**	**+1.2**
	baz=28,SNR=6.0						
MOY	Mondy	52.77	43	*e*P	**P**	**01 16 28.8**	**+1.2**
MOY				pmax	pmax		
	comp=Z,93nm,3.0s						
MA2	Magadan	52.83	7	P	**P**	**01 16 26.7**	**-1.1**
MA2	Magadan	52.83	7	P	**P**	**01 16 26.7**	**-1.1**
MIAR	Mount Ida	52.84	271	P	**P**	**01 16 28.3**	**+0.1**
MIAR	Mount Ida	52.84	271	P	**P**	**01 16 28.3**	**+0.1**
MIAR				pmax	pmax		
	comp=Z,13nm,1.2s						
MIAR	Mount Ida	52.84	271	P	**P**	**01 16 28.1**	**-0.1**
	baz=27						
MIAR	Mount Ida	52.84	271	P	**P**	**01 16 28.8**	**+0.6**
	baz=27						
OK030	Cody Creek RV	52.84	275	IAmb	IAmb	01 16 32.1	
	comp=Z,26nm,1.1s						
BBTS	Babate	52.98	177	LR	LR	01 35 17.1	
	comp=Z,411nm,20.0s,baz=26,slow=32						
Q24A	Divide	53.32	284	P	**P**	**01 16 31.9**	**-0.2**
	baz=28						
O20A	White River Ci	53.43	287	IAmb	IAmb	01 16 37.9	
	comp=Z,38nm,1.4s						
O20A	White River Ci	53.43	287	P	**P**	**01 16 33.0**	**+0.2**
	baz=28,SNR=7.3						
X37A	Clayton	53.49	273	IAmb	IAmb	01 16 36.5	
	comp=Z,24nm,1.2s						
X37A	Clayton	53.49	273	P	**P**	**01 16 33.3**	**+0.4**
	baz=27,SNR=8.3						
W35A	Tecumseh	53.56	275	IAmb	IAmb	01 16 37.7	
	comp=Z,24nm,1.0s						
143A	Socs Landing,	53.64	268	P	**P**	**01 16 35.6**	**+1.5**
	baz=27						
FNO	Franklin	53.67	275	IAmb	IAmb	01 16 36.7	
	comp=Z,19nm,1.2s						
SDPT	Sand Point	54.05	334	P	**P**	**01 16 36.1**	**-0.6**
	baz=17						
GAR	Garm	54.26	74	P	**P**	**01 16 37.8**	**-0.8**
BGU	Big Grassy Mou	54.46	292	IAmb	IAmb	01 16 44.6	
	comp=Z,20nm,1.5s						
Z38A	Mt. Pleasant	54.52	272	P	**P**	**01 16 42.2**	**+1.8**
	baz=27						
SDCO	Great Sand Dun	54.53	284	P	**P**	**01 16 41.5**	**+0.6**
	baz=28,SNR=6.3						
SDCO	Great Sand Dun	54.53	284	P	**P**	**01 16 41.9**	**+1.1**
	baz=28,SNR=6.3						
ZAK	Zakamensk	54.53	42	*e*P	**P**	**01 16 41.1**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
WMOK	Wichita Mounta	54.65	276	IAmb	IAmb	01 16 45.5	
	comp=Z,27nm,1.3s						
WMOK	Wichita Mounta	54.65	276	P	**P**	**01 16 41.6**	**+0.1**
	baz=27,SNR=13						
WMOK	Wichita Mounta	54.65	276	P	**P**	**01 16 42.1**	**+0.6**
	baz=27,SNR=13						
T25A	Trinidad	54.66	282	P	**P**	**01 16 44.0**	**+2.3**
	baz=28,SNR=6.3						
P17A	Butcher Ranch,	54.92	289	P	**P**	**01 16 43.2**	**-0.3**
P17A				IAmb	IAmb	01 16 47.7	
	comp=Z,13nm,1.3s						
S22A	4UR Ranch, Cre	55.02	285	IAmb	IAmb	01 16 49.0	
	comp=Z,16nm,1.5s						
S22A	4UR Ranch, Cre	55.02	285	P	**P**	**01 16 46.7**	**+2.3**
	baz=28,SNR=7.0						
DUG	Dugway, Tooele	55.03	291	IAmb	IAmb	01 16 49.0	
	comp=Z,14nm,1.4s						
DUG	Dugway, Tooele	55.03	291	P	**P**	**01 16 45.2**	**+1.0**
	baz=27						
PV07	Paradox Valley	55.08	287	P	**P**	**01 16 45.9**	**+1.2**
PV07				IAmb	IAmb	01 16 49.9	
	comp=Z,41nm,1.9s						
SRU	San Rafael Swe	55.16	289	IAmb	IAmb	01 16 49.3	
	comp=Z,21nm,1.4s						
J05D	Fort Rock, OR	55.19	300	P	**P**	**01 16 45.0**	**-0.4**
WTFS	Witchita Falls	55.39	275	IAmb	IAmb	01 16 51.2	
	comp=Z,78nm,1.5s						
ELK	Elko	55.40	293	LR	LR	01 40 38.5	
	comp=Z,3µm,18.8s,baz=30,slow=36						
AMTX	Amarillo	55.62	279	P	**P**	**01 16 50.0**	**+1.5**
	baz=27						
NATX	Nacogdoches	55.73	271	P	**P**	**01 16 50.3**	**+1.1**
	baz=26						
FW06	Azle	55.75	274	IAmb	IAmb	01 16 53.4	
	comp=Z,32nm,1.2s						
KSH	Kashi	55.84	69	P	**P**	**01 16 53.0**	**+2.9**
KSH				S	**S**	**01 24 41.8**	**+4.7**
KSH				pmax	pmax		
	comp=Z,10.0nm,1.8s						
KSH				LR	LR		
	comp=Z,790nm,14.4s						
KSH				LR	LR		
	comp=Z,920nm,17.2s						
KSH				LR	LR		
	comp=Z,2µm,21.3s						
FW03	Perrin-Whitt E	55.89	274	IAmb	IAmb	01 16 54.4	
	comp=Z,60nm,1.4s						
237A	Washetta, Mont	55.95	272	P	**P**	**01 16 53.4**	**+2.6**
	baz=26						
WMQ	Urumqi	55.98	57	*e*P	**P**	**01 16 54.3**	**+3.3**
WMQ				sP	sP	01 17 01.0	+5.6
WMQ				pmax	pmax		
	comp=Z,21nm,1.1s						
WMQ				LR	LR		
	comp=Z,1µm,14.5s						
WMQ				LR	LR		
	comp=Z,1µm,17.9s						
WMQ				LR	LR		
	comp=Z,700nm,21.1s						
TOA0	Torodi Ar. Sit	56.10	156	P	**P**	**01 16 51.7**	**-0.3**
TOA0				IAmb	IAmb	01 16 57.5	
	comp=Z,37nm,2.0s						
TORD	Torodi Ar. Bea	56.10	156	P	**P**	**01 16 52.8**	**+0.8**
	comp=Z,2.6nm,0.8s,baz=335,slow=10.0,SNR=15						
TORD				LR	LR	01 40 48.8	
	comp=Z,385nm,18.9s,baz=351,slow=36						
MVCO	Mesa Verde	56.11	286		**P**	**01 16 51.6**	**-0.6**
MVCO				IAmb	IAmb	01 16 56.8	
	comp=Z,32nm,1.6s						
MVCO	Mesa Verde	56.11	286	P	**P**	**01 16 52.5**	**+0.3**
	baz=27						
MOD	Modoc Plateau	56.11	298	IAmb	IAmb	01 16 57.1	
	comp=Z,14nm,1.3s						
FW13	Cleburne	56.26	273	IAmb	IAmb	01 16 56.8	
	comp=Z,21nm,0.9s						
ZEA	Zeya	56.28	24	*e*P	**P**	**01 16 54.9**	**+2.1**
ZEA				*e*		01 19 02.2	
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA				MLR	MLR		
	comp=N,100nm,18.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,17.0s						
UNV	Unalaska Valle	56.44	338	P	**P**	**01 16 51.8**	**-2.1**
	baz=14						
WHTX	Lake Whitney,	56.59	273	IAmb	IAmb	01 16 59.2	
	comp=Z,20nm,1.1s						
WHTX	Lake Whitney,	56.59	273	P	**P**	**01 16 56.0**	**+0.7**
	baz=26						
WHTX	Lake Whitney,	56.59	273	P	**P**	**01 16 56.8**	**+1.5**
	baz=26						
MTPU	Mount Pierson	56.71	289	IAmb	IAmb	01 17 01.8	
	comp=Z,15nm,1.3s						
MSTX	Muleshoe	56.85	279	P	**P**	**01 16 57.3**	**-0.1**
	baz=27						
ABTX	Abilene, Hawle	56.86	276	P	**P**	**01 16 59.3**	**+2.0**
	baz=26,SNR=5.2						
ABTX	Abilene, Hawle	56.86	276	P	**P**	**01 16 58.6**	**+1.3**
	baz=26,SNR=5.2						
YBH	Yreka Blue Hor	57.07	300	LR	LR	01 42 23.0	
	comp=Z,1µm,20.1s,baz=8.5,slow=37						
POST	Post	57.17	278	IAmb	IAmb	01 17 03.2	
	comp=Z,17nm,1.2s						
ANMO	Albuquerque	57.36	283	LR	LR	01 41 05.3	
	comp=Z,2µm,20.8s,baz=133,slow=35						
ANMO	Albuquerque	57.36	283		**P**	**01 17 00.5**	**-0.6**
ANMO	Albuquerque	57.36	283	⇓*e*P	**P**	**01 17 03.2**	**+2.1**
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.7s						
ANMO	Albuquerque	57.36	283	P	**P**	**01 17 02.4**	**+1.3**
	baz=27						
CCUT	Cedar City	57.57	290	IAmb	IAmb	01 17 07.6	
	comp=Z,25nm,1.6s						
R11B	Troy Canyon, C	57.65	292	P	**P**	**01 17 03.2**	**+0.2**
	baz=26,SNR=20						
SONM	Songino Array	57.67	41	P	**P**	**01 17 03.7**	**+0.6**
	comp=Z,2.3nm,0.9s,baz=323,slow=7.9,SNR=14						
SONM				PcP	**PcP**	**01 17 56.9**	**+0.9**
	comp=Z,2.2nm,1.0s,baz=314,slow=4.0,SNR=5.7						
SONM				LR	LR	01 45 06.6	
	comp=Z,711nm,18.2s,baz=344,slow=40						
	comp=Z,2.3nm,0.9s						
435B	Jarrell	57.72	273	P	**P**	**01 17 02.2**	**-1.2**
	baz=26						
KBL	Kabul	57.73	77	P	**P**	**01 17 03.6**	**-0.1**
KBL	Kabul	57.73	77	P	**P**	**01 17 03.6**	**-0.1**
KBL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PAHR	Pah Rah Range	57.76	296	IAmb	IAmb	01 17 08.3	
	comp=Z,21nm,1.4s						
HKT	Hockley	57.79	271		**P**	**01 17 04.7**	**+0.9**
HKT	Hockley	57.79	271	P	**P**	**01 17 04.7**	**+0.9**
HKT				pmax	pmax		
	comp=Z,41nm,1.6s						
HKT	Hockley	57.79	271	P	**P**	**01 17 05.3**	**+1.5**
	baz=26						
ULN	Ulaanbaatar	57.81	40	P	**P**	**01 17 04.0**	**0.0**
ULN				IAmb	IAmb	01 17 09.5	
	comp=Z,33nm,1.8s						
ULN	Ulaanbaatar	57.81	40	*d i*P	**P**	**01 17 04.8**	**+0.8**
ULN				pmax	pmax		
	comp=Z,40nm,2.9s						
KNB	Kanab	57.85	289	IAmb	IAmb	01 17 08.7	
	comp=Z,20nm,1.5s						
SJG	San Juan	57.90	236	LR	LR	01 37 46.7	
	comp=Z,351nm,22.0s,baz=61,slow=32						
KVN	Kaiserville	57.90	295	IAmb	IAmb	01 17 08.9	
	comp=Z,21nm,1.2s						
Y22D	IRIS PASSCAL I	58.31	283	P	**P**	**01 17 04.5**	**-3.2**
	baz=26						
Y22F	Passcal Instru	58.31	283	P	**P**	**01 17 06.7**	**-0.9**
	baz=26						
YERR	Yerington	58.36	296	IAmb	IAmb	01 17 13.3	
	comp=Z,23nm,1.2s						
W18A	Petrified Fore	58.42	286	P	**P**	**01 17 08.1**	**-0.3**
	baz=26						
Y22A	Socorro	58.45	283	P	**P**	**01 17 09.3**	**+0.7**
	baz=26,SNR=7.9						
NVAR	Mina Array Bea	58.53	295	P	**P**	**01 17 11.0**	**+1.8**
	comp=Z,2.3nm,0.9s,baz=18,slow=3.9,SNR=13						
NVAR				LR	LR	01 42 47.7	
	comp=Z,3µm,18.7s,baz=24,slow=36						
	comp=Z,2.3nm,0.9s						
NVAR	Mina Array Bea	58.53	295	P	**P**	**01 17 08.8**	**-0.5**
WUAZ	Wupatki	58.67	287	P	**P**	**01 17 08.7**	**-1.5**
	baz=26						
RAYN	Ar Rayn	58.72	105	P	**P**	**01 17 09.2**	**-1.3**
RAYN				IAmb	IAmb	01 17 13.8	
	comp=Z,21nm,1.4s						
RAYN	Ar Rayn	58.72	105	P	**P**	**01 17 09.2**	**-1.3**
RAYN				pmax	pmax		
	comp=Z,21nm,1.5s						
JCT	Junction City	58.83	275	P	**P**	**01 17 11.5**	**+0.2**
	baz=26,SNR=9.0						
JCT	Junction City	58.83	275	P	**P**	**01 17 12.1**	**+0.9**
	baz=26,SNR=9.0						
TPNV	Topopah Spring	59.14	292	IAmb	IAmb	01 17 17.6	
	comp=Z,12nm,1.2s						
TPNV	Topopah Spring	59.14	292	P	**P**	**01 17 14.0**	**+0.6**
	baz=26,SNR=6.5						
SHPR	Sheep Range	59.15	291	IAmb	IAmb	01 17 18.6	
	comp=Z,18nm,1.6s						
HIA	Hailar	59.28	30	P	**P**	**01 17 12.7**	**-1.4**
HIA	Hailar	59.28	30	P	**P**	**01 17 12.7**	**-1.4**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
LCH	Last Change Ra	59.37	294	IAmb	IAmb	01 17 19.0	
	comp=Z,15nm,1.6s						
WCT	Wildcat Mounta	59.41	293	IAmb	IAmb	01 17 19.2	
	comp=Z,13nm,1.4s						
GRAC	Grapevine Rang	59.49	293	P	**P**	**01 17 15.3**	**-0.4**
	baz=26						
X16A	Lo Mia Camp, P	59.67	287	IAmb	IAmb	01 17 21.7	
	comp=Z,14nm,1.4s						
HEH	HeiHe	59.68	24	*e*P	**P**	**01 17 18.0**	**+1.3**
HEH				pP	**sP**	**01 17 23.0**	**+1.8**
HEH				PcP	**PcP**	**01 18 04.3**	**+0.7**
HEH				S	**S**	**01 25 34.3**	**+7.6**
HEH				pmax	pmax		
	comp=Z,20nm,1.2s						
HEH				pmax	pmax		
	comp=Z,330nm,5.3s						
HEH				LR	LR		
	comp=Z,350nm,20.9s						
HEH				LR	LR		
	comp=Z,190nm,20.4s						
HEH				LR	LR		
	comp=Z,550nm,17.7s						
MNTX	Cornudas Mount	59.85	280	P	**P**	**01 17 19.9**	**+1.7**
	baz=26,SNR=8.6						
MNTX	Cornudas Mount	59.85	280	P	**P**	**01 17 18.5**	**+0.2**
	baz=26,SNR=8.6						
GWY	Greenwater Val	59.97	292	IAmb	IAmb	01 17 23.8	
	comp=Z,24nm,1.3s						
121A	Cookes Peak, D	60.01	283	P	**P**	**01 17 20.1**	**+0.6**
	baz=26						
121A	Cookes Peak, D	60.01	283	P	**P**	**01 17 20.9**	**+1.4**
	baz=26						
NIL	Nilore	60.09	74	P	**P**	**01 17 18.6**	**-1.2**
NIL				IAmb	IAmb	01 17 22.1	
	comp=Z,11nm,0.9s						
NIL	Nilore	60.09	74	P	**P**	**01 17 18.6**	**-1.2**
NIL				pmax	pmax		
	comp=Z,11nm,1.0s						
SHOC	Shoshone, Teco	60.09	292	P	**P**	**01 17 21.7**	**+2.0**
	baz=26						
CWC	Cottonwood Cre	60.24	294	P	**P**	**01 17 22.7**	**+1.7**
	baz=26						
QSM	Queen of Sheba	60.24	292	P	**P**	**01 17 21.2**	**+0.3**
QSM				IAmb	IAmb	01 17 25.7	
	comp=Z,25nm,1.6s						
MPMC	Manual Prospec	60.37	293	P	**P**	**01 17 23.7**	**+1.7**
	baz=26						
TUQ	Turquoise Moun	60.38	291	P	**P**	**01 17 23.8**	**+1.8**
	baz=26						
833A	Chaparral WMA,	60.61	273	P	**P**	**01 17 24.6**	**+1.2**
	baz=25						
833A	Chaparral WMA,	60.61	273	P	**P**	**01 17 25.0**	**+1.6**
	baz=25						
PDMCI	Parker Dam,Lak	60.76	289	P	**P**	**01 17 24.6**	**+0.2**
	baz=26						
GSC	Goldstone, Bar	60.81	292	P	**P**	**01 17 26.3**	**+1.5**
	baz=25						
GMRC	Granite Mounta	60.87	291	P	**P**	**01 17 27.5**	**+2.2**
	baz=26,SNR=5.3						
HEC	Hector,Ludlow	61.07	291	P	**P**	**01 17 25.1**	**-1.4**
	baz=25						
ISA	Isabella, Lake	61.08	294	P	**P**	**01 17 25.8**	**-0.8**
ISA				IAmb	IAmb	01 17 31.5	
	comp=Z,25nm,1.4s						
ISA	Isabella, Lake	61.08	294	P	**P**	**01 17 25.8**	**-0.8**

ISA				pmax	pmax		
	comp=Z,25nm,1.5s						
ISA	**Isabella, Lake**	**61.08**	**294**	P	**P**	**01 17 26.2**	**-0.4**
	baz=25						
IRM	**Iron Mountain**	**61.25**	**290**	P	**P**	**01 17 29.4**	**+1.6**
	baz=25						
TUC	**Tucson**	**61.32**	**285**	P	**P**	**01 17 27.6**	**-0.7**
TUC	**Tucson**	**61.32**	**285**	P	**P**	**01 17 27.6**	**-0.7**
TUC				pmax	pmax		
	comp=Z,46nm,1.9s						
TUC	**Tucson**	**61.32**	**285**	P	**P**	**01 17 29.3**	**+1.0**
	baz=26						
KLR	**Kul'dur**	**61.33**	**22**	P	**P**	**01 17 28.8**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=345,slow=9.1,SNR=5.5						
	comp=Z,1.2nm,0.7s						
TX31	**Lajitas Ar. Si**	**61.33**	**278**	P	**P**	**01 17 28.4**	**0.0**
TX31	**Lajitas Ar. Si**	**61.33**	**278**	P	**P**	**01 17 28.7**	**+0.3**
	baz=25						
TX32	**Lajitas Array**	**61.33**	**278**	P	**P**	**01 17 27.3**	**-1.1**
TX32				IAmb	IAmb	01 17 32.4	
	comp=Z,13nm,1.4s						
TXAR	**Lajitas Array**	**61.33**	**278**	P	**P**	**01 17 30.0**	**+1.6**
	comp=Z,2.4nm,0.9s,baz=53,slow=4.8,SNR=15						
TXAR				LR	LR	01 43 57.8	
	comp=Z,2µm,18.6s,baz=30,slow=36						
	comp=Z,2.4nm,0.9s						
TXAR	**Lajitas Array**	**61.33**	**278**	P	**P**	**01 17 27.3**	**-1.1**
TXAR	**Lajitas Array**	**61.33**	**278**	P	**P**	**01 17 27.3**	**-1.1**
BLYC	**Blythe**	**61.39**	**289**	P	**P**	**01 17 28.0**	**-0.6**
BLYC				IAmb	IAmb	01 17 33.3	
	comp=Z,16nm,1.2s						
EDW2	**Edwards Air Fo**	**61.61**	**293**	P	**P**	**01 17 32.9**	**+2.7**
	baz=25						
DBIC	**Dimbokro**	**61.63**	**164**	P	**P**	**01 17 32.2**	**+1.9**
	comp=Z,2.3nm,0.7s,baz=357,slow=8.1,SNR=5.5						
DBIC				LR	LR	01 44 42.9	
	comp=Z,489nm,18.4s,baz=8.0,slow=36						
	comp=Z,2.3nm,0.7s						
DBIC	**Dimbokro**	**61.63**	**164**	P	**P**	**01 17 31.3**	**+0.9**
DBIC	**Dimbokro**	**61.63**	**164**	P	**P**	**01 17 31.3**	**+0.9**
DBIC				pmax	pmax		
	comp=Z,80nm,1.9s						
TIC	**Toumodi**	**61.64**	**164**	⇑*i*PKIKP	**P**	**01 17 34.7**	**+4.2**
	comp=Z,9.5nm,0.3s						
ARVC	**Arvin**	**61.68**	**294**	P	**P**	**01 17 31.5**	**+0.8**
	baz=25						
BELC	**Belle Mtn. Jos**	**61.70**	**291**	P	**P**	**01 17 30.9**	**0.0**
	baz=25						
BC3	**Big Chuckawall**	**61.81**	**290**	P	**P**	**01 17 32.8**	**+1.2**
	baz=25						
SKR	**Severo-Kuril's**	**61.91**	**4**	*e*P	**P**	**01 17 33.3**	**+1.4**
SKR				pmax	pmax		
	comp=Z,23nm,0.8s						
SKR				pmax	pmax		
	comp=Z,100nm,4.2s						
KIC	**Kosan Boka**	**61.95**	**164**	⇑*i*PKIKP	**P**	**01 17 35.3**	**+2.8**
	comp=Z,16nm,0.9s						
113A	**Mohawk Valley,**	**62.00**	**288**	P	**P**	**01 17 31.6**	**-1.2**
113A				IAmb	IAmb	01 17 37.0	
	comp=Z,14nm,1.4s						
LIC	**Lamto**	**62.05**	**165**	⇑*i*PKIKP	**P**	**01 17 35.4**	**+2.2**
	comp=Z,3.0nm,0.2s						
OSI	**Osito Audit: C**	**62.11**	**293**	P	**P**	**01 17 31.7**	**-1.8**
	baz=25						
GLA	**Glamis**	**62.13**	**289**	P	**P**	**01 17 35.0**	**+1.3**
	baz=25						
PFO	**Pinyon Flats O**	**62.21**	**291**	LR	LR	01 44 36.5	
	comp=Z,952nm,18.4s,baz=28,slow=36						
PFO	**Pinyon Flats O**	**62.21**	**291**	P	**P**	**01 17 35.1**	**+0.8**
	baz=25						
TPFO	**Pinon Flats**	**62.21**	**291**	P	**P**	**01 17 34.8**	**+0.4**
	baz=25						
PKM	**Mcpherson Peak**	**62.24**	**294**	P	**P**	**01 17 33.0**	**-1.6**
	baz=25						
214A	**Organ Pipe Nat**	**62.38**	**287**	P	**P**	**01 17 35.7**	**+0.3**
	baz=25						
MURC	**Murrieta**	**62.48**	**291**	P	**P**	**01 17 34.7**	**-1.3**
	baz=25						
SWSC	**Sam W. Stewart**	**62.58**	**290**	P	**P**	**01 17 33.9**	**-2.7**
	baz=25						
SBC	**Santa Barbara**	**62.61**	**294**	P	**P**	**01 17 34.4**	**-2.5**
	baz=25						
IKP	**In-Ko-Pah, Jac**	**62.95**	**290**	P	**P**	**01 17 39.0**	**-0.2**
	baz=25						
CIS	**Catalina Islan**	**63.09**	**292**	P	**P**	**01 17 39.9**	**-0.2**
	baz=25						
SNCC	**San Nicolas Is**	**63.62**	**293**	P	**P**	**01 17 44.1**	**+0.5**
	baz=24						
XLT	**XiLinHaoTe**	**63.65**	**35**	⇓*i*P	**P**	**01 17 45.3**	**+1.6**
XLT				pP	sP	01 17 50.5	+2.3
XLT				sP	pP	01 17 52.3	+5.3
XLT				SS	SS	01 30 25.8	+1.9
XLT				pmax	pmax		
	comp=Z,12nm,1.3s						
XLT				pmax	pmax		
	comp=Z,230nm,3.7s						
XLT				LR	LR		
	comp=Z,79nm,16.5s						
XLT				LR	LR		
	comp=Z,300nm,17.2s						
XLT				LR	LR		
	comp=Z,1µm,16.6s						
GTA	**Gaotai**	**63.71**	**49**	⇑P	**P**	**01 17 45.5**	**+1.2**
GTA				pP	sP	01 17 51.3	+2.6
GTA				pmax	pmax		
	comp=Z,14nm,1.2s						
GTA				pmax	pmax		
	comp=Z,200nm,4.4s						
GTA				LR	LR		
	comp=Z,500nm,15.6s						
GTA				LR	LR		
	comp=Z,320nm,16.4s						
GTA				LR	LR		
	comp=Z,680nm,17.8s						
WSAR	**Wadi Sarin**	**63.93**	**92**	LR	LR	01 50 15.0	
	comp=Z,300nm,18.1s,baz=349,slow=40						
BNX	**BinXian**	**64.06**	**26**	⇓P	**P**	**01 17 46.5**	**+0.2**
BNX				pmax	pmax		
	comp=Z,17nm,1.1s						
BNX				pmax	pmax		
	comp=Z,280nm,3.8s						
HSIG		**64.34**	**284**	P	**P**	**01 17 48.6**	**+0.2**
HSIG				IAmb	IAmb	01 17 52.4	
	comp=Z,22nm,1.4s						
YSS	**Yuzh-Sakhalins**	**64.85**	**14**	P	**P**	**01 17 49.9**	**-1.6**
YSS				IAmb	IAmb	01 17 56.4	
	comp=Z,14nm,1.0s						
YSS	**Yuzh-Sakhalins**	**64.85**	**14**	P	**P**	**01 17 55.6**	**+4.2**
	comp=Z,15nm,1.1s						
YSS	**Yuzh-Sakhalins**	**64.85**	**14**	⇑*i*P	**P**	**01 17 52.4**	**+1.0**
YSS				pmax	pmax		
	comp=Z,15nm,1.2s						
GOMU	**GeErMu**	**65.17**	**55**	P	**P**	**01 17 56.0**	**+1.9**
GOMU				pP	sP	01 18 00.0	+1.4
GOMU				sP	pP	01 18 01.0	+3.6
GOMU				SS	SS	01 30 45.3	-3.2
GOMU				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GOMU				pmax	pmax		
	comp=Z,61nm,4.8s						
GOMU				LR	LR		
	comp=Z,330nm,19.2s						
GOMU				LR	LR		
	comp=Z,400nm,17.5s						
GOMU				LR	LR		
	comp=Z,580nm,16.5s						
BTO	**Baotou**	**65.35**	**41**	*e*P	**P**	**01 17 55.5**	**+0.6**
BTO				pP	**sP**	**01 18 00.5**	**+1.1**
BTO				sP	**pP**	**01 18 02.5**	**+4.3**
BTO				S	**S**	**01 26 42.8**	**+4.2**
BTO				pmax	pmax		
	comp=Z,41nm,1.6s						
BTO				pmax	pmax		
	comp=Z,640nm,5.0s						
BTO				LR	LR		
	comp=Z,1µm,17.7s						
BTO				LR	LR		
	comp=Z,1µm,17.2s						
BTO				LR	LR		
	comp=Z,2µm,19.6s						
HHC	**Hu-ho-hao-te**	**65.50**	**39**	*e*P	**P**	**01 17 57.5**	**+1.6**
HHC				pmax	pmax		
	comp=Z,20nm,0.6s						
HHC				pmax	pmax		
	comp=Z,170nm,4.9s						
HHC				LR	LR		
	comp=Z,840nm,17.2s						
HHC				LR	LR		
	comp=Z,490nm,13.1s						
HHC				LR	LR		
	comp=Z,890nm,15.2s						
MDJ	**Mudanjiang**	**65.51**	**24**	P	**P**	**01 17 55.8**	**+0.1**
MDJ				pP	pP	01 17 59.0	0.0
MDJ				PcP	**PcP**	**01 18 28.8**	**+1.4**
MDJ				S	**S**	**01 26 36.0**	**-4.1**
MDJ				ScS	**SKSac**	**01 27 47.5**	**-3.1**
MDJ				SS	**SS**	**01 30 50.3**	**-2.3**
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,190nm,3.7s						
MDJ				LR	LR		
	comp=Z,220nm,12.9s						
MDJ				LR	LR		
	comp=Z,210nm,16.3s						
MDJ				LR	LR		
	comp=Z,380nm,22.1s						
MDJ	**Mudanjiang**	**65.51**	**24**	P	**P**	**01 17 54.7**	**-1.0**
MDJ	**Mudanjiang**	**65.51**	**24**	P	**P**	**01 17 59.3**	**+3.6**
	comp=Z,17nm,1.0s						
CN2	**Changchun**	**65.61**	**28**	*e*P	**P**	**01 17 55.8**	**-0.6**
CN2				*e*pP	sP	01 18 02.0	+1.2
CN2				*e*S	**S**	**01 26 43.0**	**+1.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,360nm,4.0s						
CN2				LR	LR		
	comp=Z,350nm,17.0s						
CN2				LR	LR		
	comp=Z,190nm,17.0s						
CN2				LR	LR		
	comp=Z,360nm,15.0s						
USA0B	**Ussuriysk Arra**	**66.28**	**23**	P	**P**	**01 17 58.9**	**-1.8**
USA0B				IAmb	IAmb	01 18 03.8	
	comp=Z,8.5nm,1.1s						
USA0B	**Ussuriysk Arra**	**66.28**	**23**	P	**P**	**01 17 58.9**	**-1.8**
USA0B				pmax	pmax		
	comp=Z,9.0nm,1.1s						
USRK	**Ussuriysk Ar.**	**66.28**	**23**	P	**P**	**01 18 01.7**	**+1.0**
	comp=Z,6.1nm,1.0s,baz=23,slow=10,SNR=7.3						
USRK				LR	LR	01 49 08.8	
	comp=Z,112nm,18.8s,baz=333,slow=38						
	comp=Z,6.1nm,1.0s						
MDP	**Montagnes des**	**66.58**	**217**	LR	LR	01 42 26.6	
	comp=Z,148nm,18.4s,baz=344,slow=32						
ZAIG	**Zacatecas**	**66.83**	**273**	P	**P**	**01 18 04.3**	**-0.6**
ZAIG				IAmb	IAmb	01 18 10.3	
	comp=Z,18nm,1.2s						
BJI	**Beijing**	**67.35**	**36**	P	**P**	**01 18 08.5**	**+0.9**
BJI				pmax	pmax		
	comp=Z,13nm,2.1s						
BJI				LR	LR		
	comp=Z,560nm,14.8s						
BJI				LR	LR		
	comp=Z,130nm,15.9s						
BJI				LR	LR		
	comp=Z,580nm,15.4s						
BJT	**Baijiatuau**	**67.37**	**36**	P	**P**	**01 18 07.3**	**-0.4**
BJT	**Baijiatuau**	**67.37**	**36**	P	**P**	**01 18 07.3**	**-0.4**
BJT				pmax	pmax		
	comp=Z,36nm,1.5s						
ASAJ	**Asahikawa**	**67.65**	**14**	LR	LR	01 46 49.7	
	comp=Z,174nm,20.2s,baz=32,slow=35						
LZH	**Lanzhou**	**67.96**	**47**	*e*P	**P**	**01 18 13.3**	**+1.6**
LZH				pP	sP	01 18 18.0	+1.9
LZH				sP	pP	01 18 21.0	+6.0
LZH				pmax	pmax		
	comp=Z,24nm,1.0s						
LZH				LR	LR		
	comp=Z,1µm,17.3s						
LZH				LR	LR		
	comp=Z,820nm,16.3s						
LZH				LR	LR		
	comp=Z,1µm,18.0s						
SDV	**Santo Domingo**	**67.99**	**237**	LR	LR	01 43 47.5	
	comp=Z,393nm,21.9s,baz=20,slow=32						
SDV	**Santo Domingo**	**67.99**	**237**	P	**P**	**01 18 11.4**	**-0.7**
SDV				IAmb	IAmb	01 18 29.4	
	comp=Z,15nm,1.4s						
SDV	**Santo Domingo**	**67.99**	**237**	*e*P	**P**	**01 18 14.8**	**+2.7**
LPIG	**La Paz**	**68.56**	**281**	LR	LR	01 48 30.3	
	comp=Z,944nm,18.5s,baz=12,slow=36						
ATD	**Arta Tunnel**	**68.79**	**112**	LR	LR	01 50 46.2	
	comp=Z,9.3nm,19.6s,baz=347,slow=38						
CMIG	**Matias Romero**	**69.06**	**264**	LR	LR	01 51 26.8	
	comp=Z,370nm,18.6s,baz=40,slow=38						
HNS	**HongShan**	**69.53**	**38**	⇑P	**P**	**01 18 23.3**	**+2.0**
HNS				pmax	pmax		
	comp=Z,20nm,2.2s						
HNS				LR	LR		
	comp=Z,710nm,17.5s						
HNS				LR	LR		
	comp=Z,720nm,18.3s						
ERM	**Erimo**	**69.78**	**14**	P	**P**	**01 18 21.8**	**-0.9**
ERM				IAmb	IAmb	01 18 26.4	
	comp=Z,16nm,0.9s						
ERM	**Erimo**	**69.78**	**14**	P	**P**	**01 18 21.8**	**-0.9**
ERM				pmax	pmax		
	comp=Z,16nm,1.0s						
FURI	**Furi**	**69.79**	**117**	P	**P**	**01 18 24.6**	**+1.1**
LSA	**Lhasa**	**69.97**	**61**	P	**P**	**01 18 24.5**	**-0.2**
LSA	**Lhasa**	**69.97**	**61**	P	**P**	**01 18 24.5**	**-0.2**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
BOAV	**Boa Vista**	**71.15**	**225**	P	**P**	**01 18 30.4**	**-0.9**
BOAV				IAmb	IAmb	01 18 34.5	
	comp=Z,19nm,1.4s						
TIA	**Tai'an**	**71.23**	**37**	P	**P**	**01 18 33.0**	**+1.3**
TIA				pmax	pmax		
	comp=Z,15nm,2.0s						
TIA				pmax	pmax		
	comp=Z,250nm,3.9s						
TIA				LR	LR		
	comp=Z,560nm,16.2s						
TIA				LR	LR		
	comp=Z,270nm,13.6s						
TIA				LR	LR		
	comp=Z,790nm,15.9s						
XAN	**Xi'an**	**71.27**	**44**	⇑P	**P**	**01 18 32.5**	**+0.5**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
XAN				LR	LR		
	comp=Z,820nm,18.4s						
XAN				LR	LR		
	comp=Z,380nm,19.4s						
XAN				LR	LR		
	comp=Z,1µm,17.8s						
JTS	**Las Juntas de**	**71.60**	**252**	LR	LR	01 48 08.2	
	comp=Z,318nm,20.7s,baz=344,slow=34						
LYN	**LuoYang**	**71.70**	**41**	⇑P	**P**	**01 18 36.3**	**+1.8**
LYN				S	**S**	**01 27 54.8**	**+0.8**
LYN				pmax	pmax		
	comp=Z,280nm,3.4s						
LYN				LR	LR		
	comp=Z,210nm,14.4s						
LYN				LR	LR		
	comp=Z,430nm,14.6s						
LYN				LR	LR		
	comp=Z,390nm,20.3s						
KSRS	**Korea Array**	**72.21**	**27**	P	**P**	**01 18 38.0**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=347,slow=5.1,SNR=4.2						
KSRS				LR	LR	01 51 13.3	
	comp=Z,260nm,20.0s,baz=340,slow=37						
	comp=Z,1.0nm,0.5s						
KSAR	**Wonju Array Be**	**72.22**	**27**	P	**P**	**01 18 36.0**	**-1.5**
KSAR	**Wonju Array Be**	**72.22**	**27**	P	**P**	**01 18 36.0**	**-1.5**
CD2	**Chengdu**	**72.79**	**49**	P	**P**	**01 18 41.5**	**+0.4**
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
CD2				LR	LR		
	comp=Z,230nm,13.6s						
CD2				LR	LR		
	comp=Z,240nm,14.5s						
CD2				LR	LR		
	comp=Z,490nm,17.9s						
ROSC	**El Rosal**	**72.98**	**239**	LR	LR	01 47 18.6	
	comp=Z,328nm,21.4s,baz=22,slow=33						
TJN	**Taejon**	**73.16**	**28**	P	**P**	**01 18 46.1**	**+2.9**
	comp=Z,100nm,1.2s						
LODK	**Lodwar**	**73.83**	**123**	P	**P**	**01 18 46.8**	**-0.6**
SHL	**Shillong**	**74.03**	**62**	P	**P**	**01 18 47.3**	**-1.4**
SHL				IAmb	IAmb	01 21 30.6	
	comp=Z,6.4nm,0.5s						
SHL	**Shillong**	**74.03**	**62**	P	**P**	**01 18 47.3**	**-1.4**
SHL				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MAJO	**Matsushiro**	**74.65**	**19**	⇓*e*P	**P**	**01 18 54.2**	**+2.2**
MAJO				pmax	pmax		
	comp=Z,17nm,1.2s						
MJAR	**Matsushiro Arr**	**74.65**	**19**	P	**P**	**01 18 52.8**	**+0.8**
	comp=Z,8.1nm,1.0s,baz=346,slow=5.8,SNR=14						
MJAR				LR	LR	01 51 36.2	
	comp=Z,82nm,21.4s,baz=354,slow=36						
	comp=Z,8.1nm,1.0s						
ENH	**Enshi**	**74.99**	**45**	P	**P**	**01 18 52.7**	**-1.3**
ENH	**Enshi**	**74.99**	**45**	P	**P**	**01 18 56.9**	**+2.9**
	comp=Z,16nm,0.9s						
NJ2	**Nanjing**	**75.61**	**36**	*e*P	**P**	**01 18 55.0**	**-2.5**
NJ2				pP	**pP**	**01 18 59.8**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,17nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,130nm,5.2s						
WHN	**Wuhan**	**75.99**	**41**	P	**P**	**01 18 59.8**	**+0.1**
MBAR	**Mbarara**	**76.19**	**129**	LR	LR	01 53 40.8	
	comp=Z,259nm,21.6s,baz=328,slow=37						
PZH	**PanZhiHua**	**76.32**	**53**	P	**P**	**01 19 02.0**	**+0.2**
PZH				pmax	pmax		
	comp=Z,20nm,1.1s						
PZH				pmax	pmax		
	comp=Z,170nm,3.5s						
TNCH	**TengChong**	**76.70**	**56**	⇑P	**P**	**01 19 06.3**	**+2.3**
TNCH				pmax	pmax		
	comp=Z,340nm,3.0s						
JNU	**Nakatsue**	**76.94**	**26**	LR	LR	01 55 05.7	
	comp=Z,164nm,19.9s,baz=336,slow=37						
GYA	**Guiyang**	**77.81**	**48**	⇑P	**P**	**01 19 11.0**	**+0.8**
GYA				PP	**PP**	**01 22 06.8**	**+1.6**
GYA				S	**S**	**01 28 59.0**	**-3.6**
GYA				pmax	pmax		
	comp=Z,30nm,2.2s						
GYA				pmax	pmax		
	comp=Z,140nm,5.2s						
GYA				LR	LR		
	comp=Z,210nm,24.0s						
GYA				LR	LR		
	comp=Z,220nm,19.0s						
GYA				LR	LR		
	comp=Z,360nm,37.2s						
KMI	**Kunming**	**77.92**	**52**	⇓P	**P**	**01 19 10.5**	**-0.4**
KMI				pmax	pmax		
	comp=Z,10.0nm,2.1s						
KMI				pmax	pmax		
	comp=Z,120nm,5.4s						
KMI				LR	LR		
	comp=Z,520nm,16.5s						
KMI				LR	LR		
	comp=Z,180nm,15.3s						
KMI				LR	LR		
	comp=Z,460nm,18.7s						
OTAV	**Otavalo**	**78.67**	**242**	P	**P**	**01 19 15.3**	**-0.1**
OTAV				IAmb	IAmb	01 19 20.4	
	comp=Z,34nm,1.6s						
OTAV	**Otavalo**	**78.67**	**242**	P	**P**	**01 19 15.3**	**-0.1**
OTAV				pmax	pmax		
	comp=Z,34nm,1.7s						
OTAV	**Otavalo**	**78.67**	**242**	*e*P	**P**	**01 19 18.2**	**+2.8**
KMBO	**Kilima Mbogo**	**78.71**	**122**	P	**P**	**01 19 14.3**	**-1.1**
KMBO	**Kilima Mbogo**	**78.71**	**122**	P	**P**	**01 19 14.3**	**-1.1**
KMBO				pmax	pmax		
	comp=Z,14nm,1.9s						
MND	**Mandalay**	**78.73**	**59**	P	**P**	**01 19 15.7**	**+0.6**
	comp=Z,20nm,1.2s						
KIBK	**Kibwezi**	**80.11**	**122**	P	**P**	**01 19 21.2**	**-1.6**
PCHI	**Peechi**	**82.27**	**81**	⇑*e*P	**P**	**01 19 35.9**	**+1.7**
PCHI				*e*S	S	01 29 12.1	-37
JOW	**Kunigami**	**82.62**	**29**	LR	LR	01 58 01.1	
	comp=Z,147nm,18.1s,baz=22,slow=37						
CHTO	**Chiang Mai**	**82.64**	**58**	P	**P**	**01 19 35.2**	**-0.9**
CHTO	**Chiang Mai**	**82.64**	**58**	P	**P**	**01 19 35.2**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,1.0nm,1.3s						
SAML	**Samuel**	**82.72**	**224**	P	**P**	**01 19 37.3**	**+0.9**
SAML	**Samuel**	**82.72**	**224**	P	**P**	**01 19 37.3**	**+0.9**
SAML				pmax	pmax		
	comp=Z,34nm,2.0s						
CM31	**Chiang Mai Arr**	**82.97**	**58**	P	**P**	**01 19 37.0**	**-0.9**
CM31				IAmb	IAmb	01 19 40.8	
	comp=Z,15nm,1.2s						
CMAR	**Chiang Mai Arr**	**82.97**	**58**	P	**P**	**01 19 38.3**	**+0.5**
	comp=Z,5.1nm,0.9s,baz=323,slow=6.2,SNR=21						
CMAR				LR	LR	01 58 21.0	
	comp=Z,102nm,22.0s,baz=290,slow=37						
	comp=Z,5.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**82.97**	**58**	P	**P**	**01 19 36.2**	**-1.7**
CMAR	**Chiang Mai Arr**	**82.97**	**58**	*i* P	**P**	**01 19 38.5**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ETMB	**Extrema**	**84.38**	**227**	IAmb	IAmb	01 19 48.8	
	comp=Z,15nm,1.4s						
ATAH	**Atahualpa**	**85.56**	**239**	LR	LR	01 57 47.1	
	comp=Z,77nm,19.4s,baz=7.1,slow=36						
QIZ	**Qiongzhong**	**85.75**	**48**	P	**P**	**01 19 50.5**	**-1.5**
QIZ				S	**S**	**01 30 20.3**	**-4.1**
QIZ				LR	LR		
	comp=Z,770nm,17.7s						
QIZ				LR	LR		
	comp=Z,280nm,12.7s						
QIZ				LR	LR		
	comp=Z,730nm,18.2s						
BDFB	**Brasilia**	**85.78**	**208**	P	**P**	**01 19 53.6**	**+1.6**
	comp=Z,0.8nm,0.4s,baz=133,slow=1.7,SNR=3.5						
BDFB				LR	LR	01 52 18.3	
	comp=Z,306nm,21.2s,baz=333,slow=32						
	comp=Z,0.8nm,0.4s						
PALK	**Pallekele**	**86.90**	**79**	LR	LR	02 01 26.3	
	comp=Z,450nm,21.2s,baz=83,slow=38						
PALK	**Pallekele**	**86.90**	**79**	P	**P**	**01 19 55.7**	**-2.0**
PALK	**Pallekele**	**86.90**	**79**	P	**P**	**01 19 55.7**	**-2.0**
PALK				pmax	pmax		
	comp=Z,35nm,1.8s						
SIV	**San Ignacio**	**88.93**	**220**	LR	LR	01 56 04.2	
	comp=Z,235nm,18.9s,baz=39,slow=33						
LSZ	**Lusaka**	**89.43**	**135**	LR	LR	02 04 09.2	
	comp=Z,338nm,19.2s,baz=340,slow=38						
NNA	**Nana**	**89.61**	**236**	LR	LR	01 58 44.2	
	comp=Z,112nm,20.9s,baz=340,slow=34						
TSUM	**Tsumeb**	**90.63**	**146**	LR	LR	02 03 09.5	
	comp=Z,619nm,18.1s,baz=333,slow=37						
LPAZ	**La Paz**	**91.08**	**227**	LR	LR	02 00 07.1	
	comp=Z,83nm,19.3s,baz=351,slow=35						
TGY	**Tagaytay City**	**93.38**	**39**	LR	LR	02 07 26.3	
	comp=Z,125nm,18.5s,baz=158,slow=39						
LVC	**Limon Verde**	**97.30**	**226**	LR	LR	02 03 30.8	
	comp=Z,87nm,19.7s,baz=350,slow=35						
CPUP	**Villa Florida**	**98.03**	**214**	LR	LR	02 01 44.4	
	comp=Z,128nm,18.1s,baz=16,slow=33						
LBTB	**Lobatse**	**98.08**	**140**	LR	LR	02 08 26.8	
	comp=Z,353nm,18.0s,baz=336,slow=38						
OPO	**Ambohidratompo**	**98.31**	**119**	LR	LR	02 10 52.6	
	comp=Z,72nm,18.1s,baz=182,slow=39						
TAOE	**Nuku Hiva Isla**	**109.77**	**296**	*e*LR	LR	01 58 07.1	
	comp=Z,670nm,21.6s						
TBI	**Tubuai**	**126.40**	**300**	*e*LR	LR	02 05 48.6	
	comp=Z,5µm,26.8s						
TBI				*e*LR	LR	02 05 48.7	
	comp=Z,1µm,27.0s						
WRA	**Warramunga Arr**	**129.34**	**33**	PKP	**PKiKP**	**01 26 21.4**	**-0.3**
	comp=Z,1.4nm,0.9s,baz=347,slow=2.6,SNR=7.7						
ASAR	**Alice Springs**	**132.85**	**35**	PKP	**PKiKP**	**01 26 28.4**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=8.1,slow=1.7,SNR=6.8						
DZM	**Mont Dzumac**	**134.29**	**353**	*e*LR	LR	02 09 23.1	
	comp=Z,213nm,24.0s						
BELA	**Belgrano 2**	**145.64**	**186**		**PKPab**	**01 26 49.5**	**-0.4**
MAW	**Mawson**	**146.32**	**137**	PKPbc	**PKPbc**	**01 26 51.9**	**+0.1**
MAW	**Mawson**	**146.32**	**137**	PKP2	**PKPbc**	**01 26 51.9**	**+0.1**
TOO	**Toolangi**	**148.57**	**24**	PKPbc	**PKPdf**	**01 26 56.3**	**+1.0**
TOO	**Toolangi**	**148.57**	**24**	PKIKP	**PKPdf**	**01 26 56.3**	**+1.0**

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*IDC **26** 01:15:54.7±8.8, 22°.33S×170°.69E, h54^{km}±62^{km}, mb3.3/3, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=85.5km s-min=50.3km az=160.0*

ISC 26 01:15:49.6±1.7**, 22°.3S**±0°.6×**171°.0E**±0°.1**, h35^{km}, n16, σ1^{s}46**/18**, mb3.6**/3**, Southeast of Loyalty Islands**

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

DZM	**Mont Dzumac**	4.23	272	P	Pn	01 16 52.4	+0.7
	3.2nm,0.3s,baz=93,slow=17,SNR=76						
DZM				S	Sn	01 17 38.9	-1.1
	26nm,0.4s,baz=314,slow=23,SNR=11						
	10nm,0.3s						
ASAR	**Alice Springs**	34.12	260	P	P	01 22 31.9	+0.6
	0.6nm,0.7s,baz=88,slow=8.9,SNR=10.0						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	34.23	267	P	P	01 22 32.1	-0.1
	0.2nm,0.6s,baz=98,slow=8.5,SNR=5.0						
	0.2nm,0.6s						
SONM	**Songino Array**	90.65	323	P	P	01 28 51.0	+2.4
	0.7nm,0.9s,baz=140,slow=5.6,SNR=3.8						
	0.7nm,0.9s						
KRLC	**Kraliky**	145.68	330	*e*PKP	PKiKP	01 35 28.5	+0.2
RONA	**Rosalia, Austr**	147.55	327	*e*PKP	PKPbc	01 35 30.2	+0.1
	0.3nm,0.3s						
CONA	**Conrad Observa**	147.61	328	*i* PKP	PKPbc	01 35 29.8	-0.4
	0.2nm,0.2s						
CKRC	**Cesky Krumlov**	147.71	331	*e*PKP	PKPab	01 35 31.8	-1.0
KHC	**Kasperske Hory**	147.81	332	*e*PKP	PKPdf	01 35 25.0	-2.8
KHC				*e*x	PKiKP	01 35 33.0	+0.3
GERES	**GERESS Array B**	147.97	331	PKPbc	PKiKP	01 35 33.4	+0.3
	0.8nm,0.7s,baz=62,slow=2.3,SNR=5.6						
MOA	**Molln**	148.43	329	*i* PKP	PKPbc	01 35 31.6	-0.8
	0.5nm,0.2s						
OBKA	**Obir**	149.24	327	*e*PKP	PKPab	01 35 37.5	-1.6
	0.4nm,0.4s						
KBA	**Koelnbreinsper**	149.42	329	*e*PKP	PKPab	01 35 37.6	-2.3
	0.6nm,0.5s						
MOTA	**Moosalm**	150.24	332	*e*PKP	PKiKP	01 35 39.1	+1.2
	0.5nm,0.4s						
SQTA	**Sankt Quirin**	150.29	332	*i* PKP	PKiKP	01 35 39.4	+1.4
	1.3nm,0.5s						
FETA	**Feichten**	150.65	332	*i* PKP	PKiKP	01 35 40.5	+1.7
	0.6nm,0.5s						

TRN 26 01:25:17.6, 18°.36N×61°.81W, h46^{km}, MD3.6, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANWB	**Willy Bob**	0.69	178	*e*P	Pn	01 25 32.3	+1.2
ANWB				*e*S	Sn	01 25 43.4	+2.6
ANBD	**Bethesda, Anti**	1.31	178	*e*P	Pn	01 25 40.8	+1.4
ANBD				*e*S	Sn	01 25 57.2	+1.5
CBE	**Ff, Capester**	2.29	175	*e*P	Pn	01 25 55.6	+2.7
CBE				*e*S	Sn	01 26 22.3	+2.4
MAGL	**Barre de l'ile**	2.45	168	*e*P	Pn	01 25 57.1	+2.0
MAGL				*e*S	Sn	01 26 26.6	+2.6
MPOM	**Morne Pois Mar**	4.00	167	*e*P	Pn	01 26 17.6	+1.1
MPOM				*e*S	Sn	01 27 02.2	+0.1

IDC 26 01:27:51.7±1.6, 30°.24N×140°.77E, h0^{km}, mb3.7/3, mbtmp3.5/4, ML2.4/1, Error ellipse: s-maj=74.9km s-min=30.3km az=98.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	6.64	342	Pn	Pn	01 29 30.8	+0.2
	0.1nm,0.3s,baz=156,slow=13,SNR=2.6						
	1.0nm,0.6s						
H11N2	**WAKE ISLAND Hy**	25.83	108	T	T	02 00 51.0	
	baz=300,slow=75,SNR=108						
H11N1	**WAKE ISLAND Hy**	25.84	108	T	T	02 00 51.6	
	baz=300,slow=75,SNR=74						
H11N3	**WAKE ISLAND Hy**	25.85	108	T	T	02 00 53.6	
	baz=300,slow=75,SNR=120						
H11S3	**WAKE ISLAND Hy**	26.28	110	T	T	02 01 22.5	
	baz=302,slow=75,SNR=66						
H11S1	**WAKE ISLAND Hy**	26.28	110	T	T	02 01 25.4	
	baz=302,slow=75,SNR=64						
H11S2	**WAKE ISLAND Hy**	26.30	110	T	T	02 01 26.6	
	baz=302,slow=75,SNR=33						
WRA	**Warramunga Arr**	50.27	188	P	P	01 36 49.7	-0.2
	0.5nm,0.8s,baz=4.5,slow=7.9,SNR=4.9						
	0.5nm,0.8s						
ILAR	**Eielson Array**	55.59	30	P	P	01 37 27.9	-0.8
	0.7nm,1.0s,baz=273,slow=8.7,SNR=2.9						
	0.7nm,1.0s						
TXAR	**Lajitas Array**	94.70	52	P	P	01 41 15.9	+0.5
	0.6nm,0.9s,baz=300,slow=2.7,SNR=6.7						
	0.6nm,0.9s						
H03N2	**Juan Fernandez**	146.26	106	T	T	04 31 24.9	
	baz=281,slow=75,SNR=48						
H03N3	**Juan Fernandez**	146.27	106	T	T	04 31 26.2	
	baz=281,slow=75,SNR=40						
H03N1	**Juan Fernandez**	146.28	106	T	T	04 31 24.8	
	baz=281,slow=75,SNR=7.4						

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*IDC **26** 01:38:55.4±1.1, 3°.10S×128°.76E, h0^{km}, mb3.8/4, mbtmp3.9/6, ML4.0/2, MS3.3/1, Error ellipse: s-maj=42.0km s-min=22.7km az=74.0*
*DJA **26** 01:38:58.7±0.4, 3°S±4°×12°9E±°, h14^{km}±4^{km}, M4.1/12, mb4.5/1, MLv3.8/12*
ISC 26 01:38:59.6±0.7, 3°.13S±0°.06×129°.05E±0°.05, h33^{km}, n20, σ1^{s}43/24, mb3.8/3, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	0.24	210	P	Pb	01 39 07.6	+0.9
MSAI				S	Sb	01 39 12.6	+1.1
AAI	**Ambon**	1.02	237	P	Pb	01 39 19.2	+0.5
AAI				S	Sb	01 39 32.7	+0.9
BNDI	**Bandanaira**	1.62	148	P	Pb	01 39 28.5	-0.5
NLAI	**Namlea**	1.95	267	P	Pn	01 39 30.6	+0.2
LBMI	**Labuha**	2.92	328	P	Pn	01 39 42.0	-1.8
SIJI	**Sorong**	3.16	45	Pn	Pn	01 39 48.6	+1.6
	26nm,0.3s,baz=217,slow=10,SNR=56						
SIJI				Sn	Sn	01 40 24.4	+0.9
	14nm,0.3s,baz=262,slow=14,SNR=14						
	59nm,0.3s						
SWI	**Sorong**	3.16	44	P	Pn	01 39 47.7	+0.7
FAKI	**Fak Fak**	3.20	86	P	Pn	01 39 50.1	+2.4
SANI	**Sanana**	3.24	289	P	Pn	01 39 46.2	-2.0
RKPI	**Ransiki, Papua**	5.37	73	P	Pn	01 40 18.7	+1.2
GTOI	**Gorontalo**	7.10	302	P	Pn	01 40 43.1	+1.8
MRSI	**Marisa**	7.96	297	P	Pn	01 40 49.9	-3.1
MPSI	**Mapaga**	9.78	290	P	Pn	01 41 18.1	+0.1
WRA	**Warramunga Arr**	17.49	163	P	P	01 43 01.8	-0.2
	0.4nm,0.3s,baz=342,slow=12,SNR=22						
WRA				S	Sn	01 46 13.1	-1.9
	0.3nm,0.7s,baz=346,slow=20,SNR=2.1						
	0.8nm,0.5s						
PMG	**Port Moresby**	19.04	110	LR	LR	01 53 11.1	
	comp=Z,33nm,21.8s,baz=340,slow=44						
ASAR	**Alice Springs**	20.95	167	P	P	01 43 41.2	+1.3
	3.2nm,0.6s,baz=352,slow=12,SNR=33						
ASAR				S	S	01 47 30.0	-1.7
	0.7nm,0.8s,baz=348,slow=19,SNR=4.6						
ASAR				LR	LR	01 51 22.5	
	comp=Z,77nm,18.1s,baz=316,slow=36						
	3.2nm,0.6s						
SONM	**Songino Array**	54.50	341	P	P	01 48 24.0	-0.3
	0.6nm,0.8s,baz=150,slow=6.7,SNR=4.7						
	0.6nm,0.8s						
MKAR	**Makanchi Array**	64.50	326	P	P	01 49 33.0	-0.2
	0.9nm,0.5s,baz=120,slow=8.4,SNR=14						
	0.9nm,0.5s						
BVAR	**Borovoye Array**	74.31	328	P	P	01 50 33.5	-0.1
	0.7nm,0.7s,baz=134,slow=8.5,SNR=5.0						
	0.7nm,0.7s						
TORD	**Torodi Ar. Bea**	127.05	284	PKP	PKiKP	01 58 02.0	+0.1
	79nm,0.3s,baz=358,slow=1.9,SNR=6.2						

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*REY **26** 01:48:36.8, 67°.87N×18°.35W, h10^{km}*
*BER **26** 01:48:38.9±5.8, 67°.67N×19°.34W, h10^{km}, mb4.8(CSEM)*
*NEIC **26** 01:48:39.8±1.8, 67°.854N±0°.010×18°.3W±0°.2, h10^{km}±1^{km}, mb4.9/240, Error ellipse: s-maj=11.4km s-min=2.7km az=86.0*
*IDC **26** 01:48:39.1±0.4, 67°.76N×18°.46W, h0^{km}, mb4.4/32, mbtmp4.4/37, ML3.4/6, MS4.3/77, Error ellipse: s-maj=12.1km s-min=8.9km az=15.0*
*GCMT **26** 01:48:40.8±0.2, 67°.99N±0°.02×18°.49W±0°.03, h12^{km}, MW5.0/127, Moment Tensor Solution. s28,c29; s127,c194; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.16±.08; $M_{\theta\theta}$0.23±.09; $M_{\phi\phi}$3.93±.07; $M_{r\theta}$1.55±.40; $M_{\theta\phi}$0.71±.08; $M_{\phi r}$-1.32±.33; Best double couple: $M_0$4.54900×10^{16} NP1:ϕ_s351.00000°, δ55.00000°, λ-113.00000°. NP2:ϕ_s208.00000°, δ41.00000°, λ-61.00000°. Principal axes: T 4.1980, Plg8.0000°, Azm97.0000°; N 0.6970, Plg19.0000°, Azm5.0000°; P -4.8990, Plg70.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **26** 01:48:42.5, 67°.69N×18°.59W, h5^{km}, mb4.3*
*DNK **26** 01:48:57.9±4.3, 69°.04N×21°.27W, h0^{km}±60^{km}*
ISC 26 01:48:38.2±0.6, 67°.77N±0°.02×18°.76W±0°.02, h6^{km}±4^{km}, n660, σ1^{s}99/528, mb4.8/191, MS4.3/91, 3C-18D, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGRI	**Grimsey**	1.27	166	P	Pn	01 48 59.5	-2.9
	baz=174						
IGRI				S	Sb	01 49 16.9	-2.1
	baz=174						
ILEI	**Leirhofn**	1.64	146	P	Pn	01 49 04.2	-3.2
	baz=153						
ISIG	**Siglufjorour**	1.65	182	P	Pn	01 49 05.5	-2.1
	baz=187						
ISIG				S	Sn	01 49 28.4	-0.6
	baz=187						
IBRE	**Brettingsstaoi**	1.69	168	P	Pn	01 49 05.7	-2.4
	baz=174						
IBRE				S	Sn	01 49 28.0	-2.1
	baz=174						
IHRN	**Hraun**	1.76	198	P	Pn	01 49 07.5	-1.6
	baz=202						
IHRN				S	Sn	01 49 27.9	-3.7
	baz=202						
IHED	**Heoinshofoi**	1.79	161	P	Pn	01 49 06.6	-3.0
	baz=167						
IHLA	**Hella**	1.84	175	P	Pn	01 49 08.4	-1.8
	baz=180						
IHLA				S	Sn	01 49 33.1	-0.7
	baz=180						
IGRA	**Granastaoir**	1.92	165	P	Pn	01 49 08.9	-2.4
	baz=171						
IGRA				S	Sn	01 49 34.5	-1.2
	baz=171						
IGIL	**Gilhagi**	1.95	150	P	Pn	01 49 08.6	-3.2
	baz=156						
IGIL				S	Sn	01 49 31.6	-4.8
	baz=156						
IDIM	**Dimmadalss**	1.96	158	P	Pn	01 49 08.8	-3.0
	baz=163						
IDIM				S	Sn	01 49 34.1	-2.5
	baz=163						
ISKI	**Skildingahlsh**	2.03	159	P	Pn	01 49 10.1	-2.8
	baz=165						
IGHA	**Grjothals**	2.11	156	P	Pn	01 49 11.1	-2.8
	baz=161						
IKVO	**Krokottuvotn**	2.20	159	P	Pn	01 49 12.8	-2.4
	baz=164						
IKVO				S	Sn	01 49 40.2	-2.5
	baz=164						
IREN	**Reynihlio**	2.26	160	P	Pn	01 49 13.6	-2.4
	baz=165						
IMEL	**Melhnausar**	2.37	158	P	Pn	01 49 15.2	-2.2
	baz=163						
IMEL				S	Sn	01 49 45.3	-1.4
	baz=163						
IGRS	**Grimsstaoir**	2.39	153	P	Pn	01 49 15.4	-2.4
	baz=158						
IGRS				S	Sn	01 49 44.6	-2.7
	baz=158						
ISVA	**Svartarkot**	2.52	166	P	Pn	01 49 17.9	-1.6
	baz=170						
ISVA				S	Sn	01 49 47.2	-3.4
	baz=170						
ISTE	**Stelbrattur**	2.95	187	P	Pn	01 49 26.1	+0.6
	baz=190						
SCO	**Scoresbysund**	2.95	339		Pn	01 49 22.8	-2.6
SCO	**Scoresbysund**	2.95	339	*i* P	Pn	01 49 22.0	-3.5
IMKO	**Mokollar**	2.97	160	P	Pn	01 49 24.2	-1.6
	baz=164						
THOR	**Thorvaldshraun**	2.97	163	P	Pn	01 49 24.5	-1.3
	baz=166						
IURH	**Urdarhals**	3.04	167	P	Pn	01 49 26.0	-0.8
	baz=170						
IADA	**Aoalbol**	3.05	154	P	Pn	01 49 24.9	-2.0
	baz=157						
IDYN	**Dyngjuhals**	3.05	169	P	Pn	01 49 26.3	-0.6
	baz=172						
IVON	**Vonarskard**	3.14	172	P	Pn	01 49 27.6	-0.5
	baz=175						
IASB	**`sbjarnarst**	3.21	200	P	Pn	01 49 28.6	-0.4
	baz=202						
IASB				S	Sn	01 50 08.2	+0.7
	baz=202						
BORG	**Borgarnes**	3.21	200	Pn	Pn	01 49 28.9	-0.1
	18nm,0.3s,baz=17,slow=6.6,SNR=51						
BORG				Sn	Sn	01 50 06.4	-1.1
	23nm,0.3s,baz=250,slow=21,SNR=10						
BORG				LR	LR	01 50 33.2	
	comp=Z,1μm,18.1s,baz=28,slow=35						
	171nm,0.6s						
BORG	**Borgarnes**	3.21	200	Pn	Pn	01 49 28.1	-1.0
IVSH	**V-Sauoahnukur**	3.22	156	P	Pn	01 49 27.4	-1.8
	baz=160						
ISKR	**Skrokkalda**	3.23	177	P	Pn	01 49 29.4	0.0
	baz=180						
IDJK	**Dyngjujokull**	3.34	169	P	Pn	01 49 30.6	-0.5
	baz=172						
IGRF	**Grimsfjall**	3.44	169	P	Pn	01 49 32.1	-0.2
	baz=172						
IJOK	**Jokulheimar**	3.48	176	P	Pn	01 49 33.0	+0.2
	baz=179						
IHUS	**Husbondi**	3.52	172	P	Pn	01 49 33.3	-0.1
	baz=175						
IGYG	**Gygjarholskot**	3.56	190	P	Pn	01 49 34.3	+0.5
	baz=193						
IVOT	**Vottur**	3.58	169	P	Pn	01 49 34.1	-0.1
	baz=172						
IIEY	**Innrieyrar**	3.70	176	P	Pn	01 49 36.0	+0.1
	baz=178						
IHEI	**Heioarbar**	3.73	197	P	Pn	01 49 36.8	+0.6
	baz=199						
IKSK	**Karasker**	3.75	164	P	Pn	01 49 35.9	-0.6
	baz=168						
IHES	**Hestalda**	3.76	185	P	Pn	01 49 37.6	+1.0
	baz=188						
IFED	**Fedgar**	3.79	186	P	Pn	01 49 38.1	+1.2
	baz=189						
IKRO	**Krokur**	3.82	196	P	Pn	01 49 38.1	+0.8
	baz=198						
IHAU	**Haukadalur**	3.85	188	P	Pn	01 49 38.8	+1.0
	baz=190						
IEDA	**Engidalur**	3.86	197	P	Pn	01 49 38.6	+0.6
	baz=200						
ISAU	**Saurbar**	3.86	191	P	Pn	01 49 38.7	+0.7
	baz=193						
IKAL	**Kalfafell**	3.87	173	P	Pn	01 49 38.4	+0.4
	baz=176						
ISOL	**Solvholt**	3.96	194	P	Pn	01 49 39.7	+0.3
	baz=196						
IKAS	**Kald??rsel**	3.98	200	P	Pn	01 49 40.1	+0.6
	baz=202						
IFAG	**Fagurholsmyri**	4.01	167	P	Pn	01 49 40.5	+0.6
	baz=169						
JMIC	**Jan Mayen**	4.85	44	*e*S	Sb	01 50 51.6	-10
DBG	**Daneborg**	6.58	357	*i* P	Pn	01 50 16.1	+0.8
DBG	**Daneborg**	6.58	357	*e*P	Pn	01 50 16.6	+1.3
DBG				*e*		01 51 27.0	
ANGG	**Ammassalik, Gr**	7.78	263	Pn	Pn	01 50 32.1	+0.4
ICESG	**Greenland Ices**	7.80	289	*i* P	Pn	01 50 34.0	+1.8
SUMG	**Summit**	8.21	315	*i* P	Pn	01 50 37.0	-1.0
DAG	**Danmarks Havn**	9.05	0	*i* P	Pn	01 50 50.0	+1.0
DAG	**Danmarks Havn**	9.05	0	*e*P	Pn	01 50 51.0	+2.0
DAG				*e*		01 53 11.8	
DY2G	**Dye2**	10.74	276	*i* P	Pn	01 51 16.1	+3.6
FOO	**Floro**	11.85	110	*e*		01 54 21.8	
ILULI	**Ilulissat**	11.87	292		Pn	01 51 28.3	+0.6
LOF	**Lofoten**	12.06	73	*e*		01 54 23.0	
AKN	**Aaknes**	12.19	105	*e*P	Pn	01 51 31.5	-0.5
AKN				IAmb	IAmb	01 51 32.1	
	comp=Z,31nm,1.1s						
STEI	**Steigen**	12.73	74	*e*		01 54 45.3	
DOMB	**Dombas**	13.04	103	*e*P	P	01 51 49.5	-4.7
NEEM	**North Greenlan**	13.41	330	*i* P	Pn	01 51 46.4	-2.5
SKAR	**Skarslia**	13.64	108	*e*P	Pn	01 51 51.5	-0.4
BLS5	**Blasjo**	13.88	115	*e*P	Pn	01 51 54.5	-0.7
NOR	**Nord**	13.91	1	*i* P	P	01 51 56.5	-7.3
NOR	**Nord**	13.91	1	*e*P	P	01 51 56.6	-7.2
NOR				*e*		01 56 06.1	
NC204	**NORSAR Array S**	14.15	103	Pn	Pn	01 51 57.1	-1.8
SPA0	**Spitsbergen Ar**	14.28	29	*e*P	P	01 52 04.5	-3.4
SPITS	**Spitsbergen Ar**	14.28	29	Pn	P	01 52 02.4	-5.5
	baz=227,slow=14						
SPITS				LR	LR	01 56 03.5	
	comp=Z,1μm,19.9s,baz=192,slow=31						
	comp=Z,71nm,1.1s						
SPB2	**Spitsbergen Ar**	14.28	29	Pn	Pn	01 51 58.2	-2.3
NBO00	**NORSAR Array S**	14.31	104	Pn	Pn	01 51 59.5	-1.6
NC303	**NORSAR Array S**	14.41	103	Pn	Pn	01 52 01.0	-1.3
KIF	**Kilpisjarvi**	14.45	67	*e*P	P	01 52 10.9	+1.1
EKA	**Eskdalemuir Ar**	14.46	142	Pn	Pn	01 52 02.5	-0.5
	baz=334,slow=13						
EKA				LR	LR	01 56 55.1	
	comp=Z,1μm,21.2s,baz=335,slow=34						
	comp=Z,1.7nm,0.9s						
ESK	**Eskdalemuir**	14.46	142	Pn	Pn	01 52 01.8	-1.2
NB2	**NORSAR Subarra**	14.47	103	P	P	01 52 05.2	-4.9
	comp=Z,220nm,3.3s,baz=311,slow=11						
NOA	**NORSAR Array B**	14.47	103	Pn	Pn	01 52 02.5	-0.7
	baz=310,slow=12,SNR=4.9						
NOA				LR	LR	01 56 48.4	
	comp=Z,828nm,21.3s,baz=310,slow=34						
NB201	**NORSAR Array S**	14.49	103	Pn	Pn	01 52 00.6	-2.9
NC405	**NORSAR Array S**	14.61	102	Pn	Pn	01 52 03.2	-1.9
NC602	**NORSAR Array S**	14.79	104	*e*P	P	01 52 14.3	+0.7
KTK1	**Kautokeino**	15.30	66	*e*P	P	01 52 20.5	+1.3
HEF	**Hetta**	15.62	68	*e*P	P	01 52 24.0	+1.3
ARA0	**ARCESS Array S**	15.94	63	*e*P	P	01 52 28.0	+1.7
ARCES	**ARCESS Array B**	15.94	63	Pn	P	01 52 23.9	-2.4
	comp=Z,0.1nm,0.3s,baz=290,slow=7.6,SNR=6.0						
ARCES				LR	LR	01 56 58.4	
	comp=Z,1μm,21.9s,baz=274,slow=32						
	comp=Z,7.6nm,0.8s						
HFS	**Hagfors**	15.99	103	Pn	P	01 52 27.4	+0.5
	comp=Z,0.4nm,0.3s,baz=316,slow=10,SNR=35						
HFS				LR	LR	01 57 57.9	
	comp=Z,475nm,20.8s,baz=298,slow=35						
KEV	**Kevo**	16.39	62	Pn	Pn	01 52 24.1	-4.2
KEV				IAmb	IAmb	01 52 38.3	
	comp=Z,131nm,1.4s						
KEV	**Kevo**	16.39	62	*e*P	P	01 52 33.5	+2.2
TULEG	**Thule**	17.00	322	Pn	Pn	01 52 31.1	-5.0
VADS	**Vadso**	17.08	60	*e*P	P	01 52 39.5	+0.6
VADS				IAmb	IAmb	01 52 43.0	
	comp=Z,100nm,1.1s						
RAF	**Rauma**	18.45	92	*e*P	P	01 52 54.1	+0.1
FINES	**FINESS Array B**	19.83	87	P	Pn	01 53 09.9	-0.9
	comp=Z,0.4nm,0.3s,baz=324,slow=9.4,SNR=26						
FINES				LR	LR	02 00 14.5	
	comp=Z,2μm,18.5s,baz=306,slow=35						
	comp=Z,34nm,1.0s						
FINES	**FINESS Array B**	19.83	87	P	Pn	01 53 07.0	-3.8
MEF	**Metsahovi**	19.97	91	*e*P	Pn	01 53 11.3	-1.0
IBBN	**Ibbenburen**	20.12	127	*e*P	Pn	01 53 14.3	+0.1
	comp=Z,9.5nm,1.0s,baz=333,slow=10						
FRB	**Frobisher Bay**	20.36	282	P	Pn	01 53 17.6	+0.8
	comp=Z,14nm,0.8s,baz=54,slow=9.5,SNR=26						
FRB				LR	LR	02 00 31.6	
	comp=Z,932nm,20.9s,baz=49,slow=35						
	comp=Z,14nm,0.8s						
EUNU	**Eureka**	20.63	333	P	Pn	01 53 18.0	-2.1
EUNU				IAmb	IAmb	01 53 27.3	
	comp=Z,80nm,1.4s						
NRDL	**Niedersach Rie**	20.69	123	*e*P	Pn	01 53 19.3	-1.4
	comp=Z,30nm,1.0s,baz=333,slow=10						
SNF	**Seneffe**	20.73	135	*d*P	Pn	01 53 19.6	-1.7
BUG	**Bochum--Univer**	20.73	129	*e*P	Pn	01 53 20.5	-0.9
	comp=Z,28nm,0.9s,baz=333,slow=10						
MTSE	**Matsula**	20.76	95	*e*P	Pn	01 53 19.6	-2.0
BEBN	**Eben Emael**	20.85	132	*d*P	Pn	01 53 20.9	-1.8
BEBN				*d*PP	PnPn	01 53 39.0	+0.8
SLIT	**Slitere, Latvi**	20.95	99	*e*P	Pn	01 53 21.3	-2.5
BSTI	**Sart Tilman**	21.01	133	*d*P	P	01 53 23.0	+1.0
BMRD	**Maredsous**	21.04	135	*d*P	P	01 53 23.8	+1.5
BGES	**Gesves**	21.06	134	*d*P	P	01 53 22.9	+0.3
BCLA	**Clavier**	21.09	134	*d*P	P	01 53 23.2	+0.4
MEM	**Membach**	21.11	132	*d*P	P	01 53 23.8	+0.7
BTNL	**Ternell**	21.17	132	*d*P	P	01 53 24.7	+1.0
ASSE	**Asse, Remlinge**	21.18	123	*e*P	P	01 53 24.3	+0.6
	comp=Z,12nm,1.2s,baz=333,slow=10						
DOU	**Dourbes**	21.18	135	*d*P	P	01 53 23.4	-0.5
DOU				*d*PP	PnPn	01 53 42.0	-0.9
FLTG	**Flechtingen**	21.19	122	*e*P	P	01 53 24.3	+0.4
	comp=Z,17nm,0.9s,baz=333,slow=10						
KASTN	**Kahler Asten**	21.29	128	*e*P	P	01 53 26.0	+1.0
	comp=Z,9.2nm,0.9s,baz=333,slow=10						
RCHB	**Rochefort**	21.30	134	*d*P	P	01 53 25.2	0.0
CLZ	**Clausthal**	21.33	124	*e*P	P	01 53 26.0	+0.5
	comp=Z,16nm,1.0s,baz=333,slow=10						
BHOU	**Houvegnez**	21.34	132	*d*P	P	01 53 25.7	+0.1
BHOU				*d*PP	PnPn	01 53 44.7	-0.4
GTTG	**Gottingen**	21.46	125	*e*P	P	01 53 27.9	+1.1
	baz=333,slow=10						
AHRW	**Bad Neuenahr-A**	21.48	131	*e*P	P	01 53 28.1	+1.1
	comp=Z,17nm,1.1s,baz=333,slow=10						
RUE	**Ruedersdorf**	21.90	118	*e*P	P	01 53 32.7	+1.2
RUE	**Ruedersdorf**	21.90	118	*e*P	P	01 53 30.0	-1.5
	baz=333,slow=10						
WLF	**Walferdange**	22.00	133	*e*P	P	01 53 33.5	+0.8
	comp=Z,4.0nm,0.9s,baz=333,slow=10						
VSU	**Vasula**	22.04	93	*e*P	P	01 53 33.2	+0.3
TNS	**Taunus Mts**	22.16	129	*e*P	P	01 53 35.2	+0.8
	comp=Z,18nm,1.1s,baz=333,slow=10						
GKP	**Gorka Klasztor**	22.44	112	*e*P	P	01 53 38.9	+1.5
CLF	**Chambon-Foret**	22.50	141	P	P	01 53 38.0	0.0
CLL	**Collm**	22.64	121	P	P	01 53 38.4	-1.1
CLL				IAmb	IAmb	01 53 41.0	
	comp=Z,45nm,1.4s						
CLL	**Collm**	22.64	121	*i* P	P	01 53 39.7	+0.3
	comp=Z,47nm,1.4s						
CLL				*i* x	x	01 53 43.1	
CLL				*i* x	x	01 53 51.7	
CLL				*e*(PP)		01 53 59.0	
CLL				*e*S	S	01 57 48.0	+0.6
CLL	**Collm**	22.64	121	*e*P	P	01 53 39.1	-0.3
	comp=Z,20nm,1.2s,baz=333,slow=10						
MOX	**Moxa**	22.76	124	*e*P	P	01 53 41.2	+0.4
	comp=Z,14nm,1.0s,baz=333,slow=10						
VSVD	**Vaisvydziai**	22.77	100	*e*P	P	01 53 40.7	0.0
FBE	**Freiberg**	23.08	121	*e*P	P	01 53 43.7	-0.4
	comp=Z,17nm,1.0s,baz=333,slow=10						
PABE	**Paberze**	23.14	101	P	P	01 53 43.1	-1.5
PABE				IAmb	IAmb	01 53 50.9	
	comp=Z,56nm,1.2s						
PABE	**Paberze**	23.14	101	*e*P	P	01 53 44.5	-0.1
WERD	**Werda**	23.15	123	*e*P	P	01 53 44.9	0.0
	comp=Z,13nm,1.1s,baz=333,slow=10						
TANN	**Tannenbergstha**	23.23	123	*e*P	P	01 53 45.8	+0.1
	comp=Z,15nm,1.1s,baz=333,slow=10						
GUNZ	**Gunzen**	23.23	123	*e*P	P	01 53 45.9	+0.2
	comp=Z,11nm,1.1s,baz=333,slow=10						
WERN	**Wernitzgruen**	23.31	123	*e*P	P	01 53 46.6	0.0
	comp=Z,14nm,1.1s,baz=333,slow=10						
BRG	**Berggiesshubel**	23.32	120	*e*P	P	01 53 47.4	+0.9
BRG				Amp		01 53 49.4	
	comp=Z,41nm,1.7s						
BRG	**Berggiesshubel**	23.32	120	P	P	01 53 57.7	+11
BRG				Amp		01 53 58.8	
	comp=Z,13nm,1.3s						
BRG	**Berggiesshubel**	23.32	120	*e*P	P	01 53 46.1	-0.4
	comp=Z,22nm,1.4s,baz=333,slow=10						
NKC	**Novy Kostel**	23.38	123	*e*P	P	01 53 46.0	-1.2
NKC				AMS	AMS	02 06 50.0	
	comp=Z,900nm,8.7s						
GRA1	**Grafenberg Arr**	23.47	125	IAmb	IAmb	01 53 50.8	
	comp=Z,42nm,1.2s						
GRF	**Grafenberg Arr**	23.47	125	*e*P	P	01 53 48.8	+0.7
	comp=Z,15nm,1.0s,baz=333,slow=10						
GRFO	**Grafenberg**	23.47	125	P	P	01 53 47.6	-0.5
GRFO				IAmb	IAmb	01 53 50.8	
	comp=Z,41nm,1.2s						
MANZ	**Manzenberg**	23.49	124	*e*P	P	01 53 48.7	+0.4
	comp=Z,1.8nm,1.1s,baz=333,slow=10						
ECH	**Echery**	23.60	133	P	P	01 53 48.3	-1.0
ECH				IAmb	IAmb	01 53 52.2	
	comp=Z,73nm,1.9s						
STU	**Stuttgart**	23.68	129	IAmb	IAmb	01 53 52.9	
	comp=Z,46nm,1.5s						
RES	**Resolute Bay**	23.68	320	P	P	01 53 52.6	+2.7
	comp=Z,10nm,1.1s,baz=80,slow=15,SNR=19						
RES				LR	LR	02 02 23.0	
	comp=Z,772nm,21.2s,baz=53,slow=35						
	comp=Z,10nm,1.1s						
RES	**Resolute Bay**	23.68	320	P	P	01 53 49.4	-0.5
RES				IAmb	IAmb	01 53 56.1	

	comp=Z,57nm,1.6s						
ROTZ	Rotzenmuhle	23.71	124	*e*P	P	01 53 51.6	+1.1
	comp=Z,2.4nm,1.1s,baz=333,slow=10						
PVCC	Panska Ves	23.82	120	*e*P	P	01 53 52.2	+0.8
PVCC				AMS	AMS	02 06 00.0	
	comp=Z,900nm,13.8s						
BFO	Black Forest	23.82	131	P	P	01 53 50.6	-1.0
BFO				IAmb	IAmb	01 53 55.1	
	comp=Z,36nm,1.4s						
BFO	Black Forest	23.82	131	*e*P	P	01 53 52.5	+0.9
	comp=Z,10.0nm,1.0s,baz=333,slow=10						
KSP	Ksiaz	24.13	117	*e*P	P	01 53 55.2	+0.9
CHVC	Chvalec	24.26	118	*e*P	P	01 53 56.1	+0.4
PRU	Pruhonice	24.27	120	*e*P	P	01 53 56.2	+0.5
PRU				AMS	AMS	02 04 50.0	
	comp=Z,600nm,14.9s						
UPC	Upice	24.32	118	*e*P	P	01 53 56.3	+0.2
UPC				AMS	AMS	02 04 30.0	
	comp=Z,900nm,14.4s						
OSTC	Ostas	24.34	118	*e*P	P	01 53 57.2	+0.8
GOPC	GO Pecny, Ondr	24.42	120	AMS	AMS	02 04 40.0	
	comp=Z,700nm,20.1s						
DPC	Dobruska-Polom	24.56	118	*e*P	P	01 53 58.8	+0.5
DPC				AMS	AMS	02 04 50.0	
	comp=Z,700nm,14.3s						
NACGM	Naroch	24.65	99	*e*P	P	01 53 59.1	+0.1
	comp=N,1µm,1.0s						
KHC	Kasperske Hory	24.71	123	*e*P	P	01 54 00.0	+0.3
KHC				*e*x	x	01 54 36.0	
UBR	Ueberruh	24.93	129	*e*P	P	01 54 03.4	+1.7
	comp=N,24nm,1.1s,baz=333,slow=10						
KRLC	Kraliky	24.95	117	*e*P	P	01 54 02.4	+0.6
KRLC				AMS	AMS	02 05 20.0	
	comp=N,600nm,16.4s						
GEC2	GERESS Array S	25.00	123	IAmb	IAmb	01 54 05.8	
	comp=Z,29nm,1.1s						
GEC2	GERESS Array S	25.00	123	*e*P	P	01 54 03.8	+1.5
	comp=Z,14nm,0.9s,baz=333,slow=10						
GERES	GERESS Array B	25.00	123	P	P	01 54 03.3	+1.0
	comp=Z,10nm,0.8s,baz=325,slow=8.3,SNR=33						
GERES				LR	LR	02 03 53.4	
	comp=Z,364nm,19.6s,baz=311,slow=37						
	comp=Z,10nm,0.8s						
GERES	GERESS Array B	25.00	123	P	P	01 54 02.4	0.0
LSH	Leshukonskoye	25.01	66	*e*P	P	01 53 58.6	-3.6
	comp=Z,74nm,1.3s						
TREC	Trest	25.18	120	*e*P	P	01 54 04.8	+0.8
TREC				AMS	AMS	02 05 10.0	
	comp=Z,800nm,14.4s						
CKRC	Cesky Krumlov	25.21	122	*e*P	P	01 54 05.3	+1.1
DAVA	Damuels	25.21	130	*e*P	P	01 54 05.9	+1.5
	comp=Z,26nm,1.2s,SNR=5.9						
KLMR	Klimovskoe	25.27	77	*e*P	P	01 54 03.6	-1.0
	comp=Z,52nm,1.0s						
KLMR	Klimovskoe	25.27	77	*e*P	P	01 54 03.6	-1.0
KLMR				LQ	LQ	02 00 45.4	
KLMR				LQ	LQ	02 00 45.4	
KLMR				LR	LR	02 01 34.3	
KLMR				AMP		02 02 47.2	
	comp=Z,994nm,18.7s						
RETA	Reutte	25.29	129	*e*P	P	01 54 06.6	+1.5
	comp=Z,15nm,1.2s						
MNK	Minsk	25.37	98	*i* P	P	01 54 04.5	-1.1
	comp=E,6.0nm,1.1s						
MNK				*i* P	P	01 54 04.5	-1.1
	comp=N,77nm,1.1s						
MNK				*i* P	P	01 54 04.5	-1.1
	comp=Z,54nm,0.9s,baz=140						
MNK				*i* PP	PnPn	01 54 38.5	-1.5
MNK				*i* PPP	PPP	01 54 46.6	
MNK				*i* S	S	01 58 30.8	-1.2
MNK				*i* SS	SnSn	01 59 22.4	-0.6
MNK				*i* SSS	SSS	01 59 36.1	
MNK				*i* LQ	LQ	02 01 59.3	
MNK				*i* LR	LR	02 02 53.1	
MNK				*i* LRM	MLR	02 04 02.1	
	comp=E,32nm,16.1s						
MNK				*i* LRM	MLR	02 04 15.6	
	comp=Z,590nm,16.8s						
MNK				*i* LRM	MLR	02 04 24.0	
	comp=N,728nm,17.4s						
MORC	Moravsky Berou	25.46	117	P	P	01 54 05.9	-0.6
MORC				IAmb	IAmb	01 54 09.9	
	comp=Z,24nm,1.1s						
MORC	Moravsky Berou	25.46	117	*e*P	P	01 54 07.6	+1.1
MOTA	Moosalm	25.52	128	*e*P	P	01 54 08.5	+1.3
	comp=Z,28nm,1.4s,SNR=10						
VRAC	Vranov	25.54	119	P	P	01 54 08.2	+1.0
	comp=Z,11nm,0.9s,baz=338,slow=11,SNR=11						
VRAC				LR	LR	02 03 38.9	
	comp=Z,470nm,21.4s,baz=325,slow=35						
	comp=Z,11nm,0.9s						
VRAC	Vranov	25.54	119	*e*P	P	01 54 08.4	+1.2
OKC	Ostrava-Krasne	25.61	116	*e*P	P	01 54 08.5	+0.7
SCHQ	Schefferville	25.66	264	P	P	01 54 11.4	+3.2
	comp=Z,7.1nm,0.9s,baz=238,slow=10,SNR=4.7						
SCHQ				LR	LR	02 03 35.9	
	comp=Z,1µm,19.4s,baz=64,slow=35						
	comp=Z,7.1nm,0.9s						
SCHQ	Schefferville	25.66	264	P	P	01 54 09.6	+1.3
SQTA	Sankt Quirin	25.67	128	*e*P	P	01 54 10.1	+1.6
	comp=Z,26nm,1.5s,SNR=11						
DAVOX	Davos/Dischmat	25.67	131	P	P	01 54 09.6	+1.0
	comp=Z,18nm,1.2s,baz=347,slow=12,SNR=11						
DAVOX				LR	LR	02 05 29.5	
	comp=Z,1µm,18.4s,baz=310,slow=40						
	comp=Z,18nm,1.2s						
WATA	Walderalm	25.67	128	*e*P	P	01 54 09.6	+1.0
	comp=Z,25nm,1.4s,SNR=9.2						
KRUC	Moravsky	25.68	119	*e*P	P	01 54 09.4	+0.9
RJOB	Jochberg	25.69	125	*e*P	P	01 54 10.4	+1.8
	comp=Z,11nm,0.8s,baz=333,slow=10						
WTTA	Wattenberg	25.76	128	*e*P	P	01 54 10.8	+1.4
	comp=Z,41nm,1.3s,SNR=16						
MAUC	Maruska	25.91	117	*e*P	P	01 54 11.1	+0.6
MAUC				AMS	AMS	02 07 30.0	
	comp=Z,2µm,10.6s						
BIOA	Bad Ischl, Aus	25.99	124	*e*P	P	01 54 12.4	+1.0
	comp=Z,12nm,1.2s,SNR=5.8						
MOA	Molln	26.05	123	*e*P	P	01 54 13.1	+1.3
	comp=Z,5.7nm,1.2s						
JAVC	Velka Javorina	26.29	118	*e*P	P	01 54 14.3	+0.3
BNI	Bardonecchia	26.38	137	IAmb	IAmb	01 54 19.5	
	comp=Z,26nm,1.4s						
KBA	Koelnbreinsper	26.45	125	*e*pP	pP	01 54 17.4	0.0
	comp=Z,10nm,1.1s,SNR=6.7						
ABTA	Abfaltersbach	26.48	127	*e*pP	pP	01 54 17.8	+0.3
	comp=Z,8.9nm,1.2s						
CONA	Conrad Observa	26.50	121	*e*P	P	01 54 17.0	+1.1
	comp=Z,17nm,1.1s,SNR=5.6						
MODS	Modra-Piesok	26.57	119	*e*P	P	01 54 19.0	+2.4
LANS	Liptovska Anna	26.65	115	*e*P	P	01 54 19.6	+2.3
RONA	Rosalia, Austr	26.84	121	*e*pP	pP	01 54 20.5	-0.2
	comp=Z,7.5nm,1.1s						
CIMO	Cimolais	26.86	127	IAmb	IAmb	01 54 25.3	
	comp=Z,25nm,1.5s						
MYKA	Terra Mystica	26.94	125	*e*pP	pP	01 54 21.7	0.0
	comp=Z,9.5nm,1.1s,SNR=5.3						
ARSA	Arzberg	26.98	122	*e*P	P	01 54 21.6	+1.4
	comp=Z,3.8nm,1.1s						
VYHS	Vyhne	27.00	117	*e*P	P	01 54 21.4	+1.0
OBKA	Obir	27.33	124	*e*P	P	01 54 24.4	+1.0
	comp=Z,5.3nm,1.4s						
SABO	M.te Sabotino	27.51	126	IAmb	IAmb	01 54 27.2	
	comp=Z,28nm,1.5s						
TRI	Trieste	27.80	126	P	P	01 54 28.1	+0.5
OBN	Obninsk	28.20	89	P	P	01 54 31.6	+0.5
	comp=Z,2.3nm,0.4s,baz=90,slow=6.1,SNR=4.5						
OBN				LR	LR	02 05 24.8	
	comp=Z,425nm,18.0s,baz=334,slow=36						
	comp=Z,2.3nm,0.4s						
OBN	Obninsk	28.20	89	P	P	01 54 31.6	+0.5
AKASG	Malin Array Be	28.88	102	P	P	01 54 37.2	+0.1
	comp=Z,3.8nm,0.8s,baz=325,slow=9.3,SNR=13						
AKASG				LR	LR	02 05 59.9	
	comp=Z,703nm,18.5s,baz=338,slow=36						
	comp=Z,3.8nm,0.8s						
AKBB	Malin Array Si	28.88	102	IAmb	IAmb	01 54 38.2	
	comp=Z,24nm,1.4s						
ESDC	Sonseca Array	29.31	156	P	P	01 54 42.6	+1.5
	comp=Z,3.1nm,1.1s,baz=359,slow=11,SNR=7.2						
ESDC				LR	LR	02 06 00.9	
	comp=Z,501nm,19.1s,baz=346,slow=36						
	comp=Z,3.1nm,1.1s						
MURB	Monte Urbino	29.65	130	IAmb	IAmb	01 54 53.1	
	comp=Z,27nm,1.3s						
NRCA	Norcia	30.22	129	IAmb	IAmb	01 54 52.7	
	comp=Z,12nm,0.7s						
DIVS	Divibare	31.23	120	P	P	01 54 57.5	-0.6
MILM	Milestii Mici	31.87	107	*e*P	P	01 55 02.0	-1.5
MILM				*e*L	L	02 05 39.0	
MILM				LRM	MLR	02 07 50.0	
	comp=Z,600nm,17.0s						
MLR	Muntele Rosu	32.05	111	LR	LR	02 08 53.3	
	comp=Z,626nm,18.7s,baz=320,slow=38						
A36M	Sachs Harbour	32.29	326	P	P	01 55 08.4	+1.4
A36M	Sachs Harbour	32.29	326	P	P	01 55 05.3	-1.8
	baz=43,SNR=13						
FCC	Fort Churchill	32.91	292	P	P	01 55 14.8	+2.2
C36M	Paulatuk	34.00	322	P	P	01 55 20.0	-2.0
	baz=41,SNR=19						
NRIK	Noril'sk	34.24	37	P	P	01 55 26.2	+2.1
	comp=Z,3.7nm,0.8s,baz=314,slow=5.1,SNR=9.6						
NRIK				LR	LR	02 10 59.7	
	comp=Z,301nm,18.5s,baz=318,slow=39						
	comp=Z,3.7nm,0.8s						
NRIK	Noril'sk	34.24	37	P	P	01 55 24.8	+0.7
NRIK				IAmb	IAmb	01 55 27.2	
	comp=Z,24nm,1.5s						
PKME	Peaks-Kenny Pk	34.36	255	P	P	01 55 24.7	-0.6
	baz=31						
BELG	Belogornoye	34.49	83	P	P	01 55 26.8	+0.4
	comp=Z,16nm,0.9s,baz=268,slow=7.7,SNR=5.2						
BELG				LR	LR	02 08 36.6	
	comp=Z,724nm,18.9s,baz=324,slow=35						
	comp=Z,16nm,0.9s						
KBN	Korca	34.60	121	IAmb	IAmb	01 55 29.8	
	comp=Z,15nm,1.3s						
ARU	Arti	35.38	69	LR	LR	02 09 03.4	
	comp=Z,1µm,18.2s,baz=307,slow=35						
ARU	Arti	35.38	69	P	P	01 55 33.3	-0.7
ARU				IAmb	IAmb	01 55 36.0	
	comp=Z,23nm,1.2s						
VAE	Valguarnera	35.54	132	LR	LR	02 09 55.0	
	comp=Z,370nm,19.1s,baz=341,slow=36						
RDO	Rodhopi	35.73	115	IAmb	IAmb	01 55 39.0	
	comp=Z,26nm,1.3s						
KEST	Kesra	35.83	139	LR	LR	02 10 22.8	
	comp=Z,414nm,18.2s,baz=296,slow=36						
MDT	Midelt	35.96	159	LR	LR	02 10 25.8	
	comp=Z,175nm,18.9s,baz=3.0,slow=36						
ALN	Alexandroupoli	36.12	115	IAmb	IAmb	01 55 42.5	
	comp=Z,24nm,1.3s						
LBNH	Lisbon	36.21	257	P	P	01 55 40.8	-0.4
	baz=31						
YKA	Yellowknife Ar	36.77	309	P	P	01 55 48.4	+2.6
	comp=Z,3.6nm,0.9s,baz=42,slow=8.2,SNR=42						
YKA				PcP	PcP	01 58 09.8	+2.1
	comp=Z,3.0nm,0.9s,baz=38,slow=2.9,SNR=16						
YKA				LR	LR	02 10 48.6	
	comp=Z,574nm,18.4s,baz=46,slow=36						
	comp=Z,3.6nm,0.9s						
LONY	Lake Ozonia	36.87	260	P	P	01 55 46.1	-0.8
	baz=32						
INK	Inuvik	36.94	326	LR	LR	02 12 57.9	
	comp=Z,309nm,18.7s,baz=358,slow=39						
INK	Inuvik	36.94	326	P	P	01 55 48.1	+0.9
INK				IAmb	IAmb	01 55 52.8	
	comp=Z,22nm,1.3s						
INK				PcP	PcP	01 58 10.8	+2.7
INK	Inuvik	36.94	326	P	P	01 55 44.8	-2.4
	baz=35,SNR=10						
HRV	Adam Dziewonsk	37.56	255	P	P	01 55 52.6	-0.1
	baz=30						
F31M	Tsiigehtchic	37.70	325	P	P	01 55 51.7	-2.0
	baz=34,SNR=15						
C26K	Camden Bay	37.78	333	P	P	01 55 52.0	-2.3
	baz=30						
C27K	Jago River	37.82	332	P	P	01 55 52.4	-2.3
	baz=30						
L61B	Northampton	38.03	256	P	P	01 55 56.4	-0.3
	baz=30						
M65A	Busby, Falmout	38.05	253	P	P	01 55 56.3	-0.6
	baz=29						
A21K	Barrow	38.32	340	P	P	01 55 55.9	-2.9
	baz=24						
SADO	Sadowa	38.46	265	LR	LR	02 11 24.0	
	comp=Z,796nm,18.3s,baz=61,slow=35						
D25K	Kavik River	38.55	333	P	P	01 55 58.5	-2.4
	baz=29						
C24K	Franklin Bluff	38.59	335	P	P	01 55 58.3	-2.8
	baz=28						
G30M	tAoh Zraii Nji	38.62	326	P	P	01 55 59.3	-2.2
	baz=32						
WRGLY	Wrigley	38.66	315	P	P	01 55 59.9	-1.9
	baz=36						
E27K	Coleen River	38.68	330	P	P	01 55 59.2	-2.7
	baz=30,SNR=20						
ILGA	Ilgaz	38.71	106	P	P	01 56 03.9	+1.1
ILGA				IAmb	IAmb	01 56 08.3	
	comp=Z,26nm,0.9s						
FFC	Flin Flon	38.80	293	P	P	01 56 04.6	+1.6
FFC				IAmb	IAmb	01 56 09.4	
	comp=Z,37nm,1.4s						
E46A	Sault Ste Mari	39.08	271	P	P	01 56 08.5	+3.0
D24K	Happy Valley	39.12	334	P	P	01 56 03.6	-2.0
	baz=27						
L59A	Walton	39.13	258	P	P	01 56 08.6	+2.5
TIXI	Tiksi	39.16	16	P	P	01 56 06.3	+0.5
TIXI				IAmb	IAmb	01 56 13.4	
	comp=Z,75nm,1.9s						
EPYK	Eagle Plains	39.24	326	IAmb	IAmb	01 56 12.3	
	comp=Z,27nm,1.2s						
EPYK	Eagle Plains	39.24	326	P	P	01 56 02.9	-3.8
	baz=32,SNR=7.1						
E25K	Arctic Village	39.47	332	P	P	01 56 05.2	-3.4
	baz=28,SNR=17						
BINY	Binghamton	39.47	259	P	P	01 56 07.8	-1.1
	baz=30						
KIV	Kislovodsk	39.56	95	P	P	01 56 09.1	-0.5
F26K	Sheenjek River	39.59	331	P	P	01 56 06.7	-2.8
	baz=29						
D23K	Nanushuk River	39.59	335	P	P	01 56 06.2	-3.3
	baz=26						
PAL	Palisades	39.74	256	P	P	01 56 11.9	+0.9
	baz=29						
KBZ	Khabaz	39.83	95	P	P	01 56 13.4	+1.6
	comp=Z,4.8nm,1.0s,baz=324,slow=7.4,SNR=8.2						
KBZ				LR	LR	02 12 58.9	
	comp=Z,507nm,19.9s,baz=318,slow=37						
	comp=Z,4.8nm,1.0s						
BRTR	Keskin Array B	39.85	108	P	P	01 56 13.6	+1.4
	comp=Z,3.6nm,1.1s,baz=318,slow=5.3,SNR=17						
BRTR				LR	LR	02 14 03.0	
	comp=Z,464nm,21.1s,baz=308,slow=38						
	comp=Z,3.6nm,1.1s						
BRTR	Keskin Array B	39.85	108	P	P	01 56 11.9	-0.3
G27K	Doyon Strip	39.88	329	P	P	01 56 09.2	-2.8
	baz=30						
AKTO	Aktyubinsk	39.95	76	LR	LR	02 11 52.1	
	comp=Z,668nm,19.6s,baz=2.0,slow=35						
F25K	Christian Rive	39.95	331	P	P	01 56 09.9	-2.7
	baz=28						
E24K	Your Creek	40.02	333	P	P	01 56 10.8	-2.4
	baz=27						
G26K	Porcupine Rive	40.17	330	P	P	01 56 11.8	-2.6
	baz=29						
ULM	Lac du Bonnet	40.22	284	P	P	01 56 17.7	+2.7
	comp=Z,3.4nm,0.6s,baz=48,slow=7.3,SNR=5.2						
ULM				LR	LR	02 12 33.9	
	comp=Z,701nm,18.6s,baz=6.5,slow=36						
	comp=Z,3.4nm,0.6s						
ULM	Lac du Bonnet	40.22	284	P	P	01 56 17.0	+2.1
E23K	Chandalar	40.23	334	P	P	01 56 10.7	-4.3
	baz=26,SNR=20						
WVNY	West Valley, N	40.28	262	P	P	01 56 17.6	+2.1
WVNY				IAmb	IAmb	01 56 23.5	
	comp=Z,35nm,1.3s						
H27K	Steamboat Moun	40.36	328	P	P	01 56 12.8	-3.2
	baz=29,SNR=13						
F24K	Squaw Lake	40.42	333	P	P	01 56 12.3	-4.2
	baz=27						
EYMN	Ely	40.49	279	P	P	01 56 15.3	-1.9
	baz=34						
G25K	Bearman Lake	40.77	331	P	P	01 56 14.9	-4.4
	baz=27						
FYU	Fort Yukon	40.78	331	P	P	01 56 21.0	+1.6
IDI	Anoyia	40.79	120	LR	LR	02 15 47.3	
	comp=Z,165nm,19.2s,baz=328,slow=40						
I27K	Kandik River	40.93	328	P	P	01 56 16.8	-3.9
	baz=29						
ONI	Oni	41.01	95	P	P	01 56 22.1	+0.4
ERPA	Erie	41.05	263	P	P	01 56 22.0	+0.1
	baz=30						
G24K	Hadweenzic Riv	41.08	332	P	P	01 56 18.3	-3.6
	baz=27						
COLD	Coldfoot	41.08	334	P	P	01 56 17.7	-4.2
	baz=25						
F22K	John River	41.15	335	P	P	01 56 19.2	-3.3
	baz=24,SNR=15						
J29M	Klondike Camp	41.22	325	P	P	01 56 19.6	-3.5
	baz=30						
KOTAN	Kotaneelee Air	41.38	313	P	P	01 56 24.1	-0.3
	baz=33						
BNN	Bunyan	41.42	106	IAmb	IAmb	01 56 28.7	
	comp=Z,37nm,1.4s						
I26K	Coal Creek Min	41.50	328	IAmb	IAmb	01 56 32.0	
	comp=Z,40nm,1.4s						
I26K	Coal Creek Min	41.50	328	P	P	01 56 23.1	-2.2
	baz=28						
G23K	Bananza Creek	41.51	333	P	P	01 56 22.7	-2.8
	baz=25,SNR=5.9						
AKAS	Kas	41.53	114	P	P	01 56 26.7	+0.6
SSPA	Standing Stone	41.54	260	P	P	01 56 24.9	-1.1
	baz=29						
EGAK	Eagle	41.56	327	P	P	01 56 26.5	+0.7
EGAK				IAmb	IAmb	01 56 31.4	
	comp=Z,28nm,1.4s						
EGAK	Eagle	41.56	327	P	P	01 56 24.0	-1.8
	baz=29,SNR=11						
G22K	Bettles	41.57	334	P	P	01 56 24.1	-1.8
	baz=25						
K29M	Barlow Dome	41.59	324	P	P	01 56 25.1	-1.2
	baz=30						
F21K	Alatna River	41.62	335	P	P	01 56 25.4	-0.9
	baz=24						
ABKAR	Akbulak array	41.63	75	P	P	01 56 25.6	-1.0
PRP	Porcupine Dome	41.77	330	P	P	01 56 29.4	+1.7
PRP				IAmb	IAmb	01 56 34.8	
	comp=Z,46nm,1.6s						
PRP	Porcupine Dome	41.77	330	P	P	01 56 25.1	-2.6
	baz=27,SNR=12						
DAWY	Dawson	41.81	325	P	P	01 56 29.9	+1.9
DAWY				IAmb	IAmb	01 56 34.2	
	comp=Z,21nm,1.3s						
DAWY	Dawson	41.81	325	P	P	01 56 25.5	-2.4
	baz=29,SNR=9.5						
AGMN	Agassiz Nation	41.83	283	P	P	01 56 29.5	+1.2
AGMN	Agassiz Nation	41.83	283	P	P	01 56 26.9	-1.3
	baz=34						
M53A	WI Miller and	41.89	263	P	P	01 56 28.0	-0.8
	baz=30						
H24K	Noodor Dome	41.92	331	IAmb	IAmb	01 56 35.9	
	comp=Z,43nm,1.8s						
FARO	Faro, Yukon	42.02	320	P	P	01 56 27.4	-2.3
	baz=31,SNR=7.5						
BRVK	Borovoye	42.17	64	P	P	01 56 31.5	+0.6
RDOG	Red Dog Mine	42.18	341	IAmb	IAmb	01 56 37.0	
	comp=Z,37nm,1.7s						
RDOG	Red Dog Mine	42.18	341	P	P	01 56 29.0	-1.8
	baz=19						
BVAR	Borovoye Array	42.23	64	P	P	01 56 32.7	+1.2
	comp=Z,3.3nm,0.9s,baz=324,slow=7.3,SNR=15						
BVAR				PP	PP	01 58 07.0	-1.9
	comp=Z,2.6nm,1.0s,baz=342,slow=7.8,SNR=3.8						
BVAR				LR	LR	02 12 35.1	
	comp=Z,152nm,20.9s,baz=307,slow=34						
	comp=Z,3.3nm,0.9s						
H23K	Yukon River	42.23	332	IAmb	IAmb	01 56 38.7	
	comp=Z,36nm,1.6s						
H23K	Yukon River	42.23	332	P	P	01 56 28.6	-2.8
	baz=25,SNR=9.9						
G21K	Allakaket	42.27	335	P	P	01 56 30.7	-0.9
	baz=23,SNR=8.5						
AAM	Ann Arbor	42.28	267	P	P	01 56 31.8	-0.2
	baz=31						
M31M	Drury Creek, Y	42.29	321	P	P	01 56 28.9	-3.0
	baz=30						
L29M	L29M	42.37	324	P	P	01 56 29.0	-3.5
	baz=29						
POKR	Poker Plat Res	42.49	331	P	P	01 56 29.8	-3.6
	baz=26						
M30M	Minto, Yukon	42.53	323	IAmb	IAmb	01 56 40.8	
	comp=Z,67nm,1.9s						
M30M	Minto, Yukon	42.53	323	P	P	01 56 31.5	-2.4
	baz=30,SNR=9.4						
KARS	Kars	42.56	97	P	P	01 56 34.0	-0.4
KARS				IAmb	IAmb	01 56 58.6	
	comp=Z,27nm,1.2s						
WTLY	Watson Lake, Y	42.68	316	P	P	01 56 33.2	-1.8
	baz=32,SNR=9.0						
IL31		42.70	330	P	P	01 56 36.0	+0.9
IL31				IAmb	IAmb	01 56 41.7	
	comp=Z,24nm,1.4s						
ILAR	Eielson Array	42.70	330	P	P	01 56 37.9	+2.7
	comp=Z,9.5nm,1.1s,baz=21,slow=6.2,SNR=37						
ILAR				PcP	PcP	01 58 28.3	+1.7
	comp=Z,3.4nm,1.1s,baz=346,slow=2.0,SNR=6.4						
ILAR				LR	LR	02 18 13.3	
	comp=Z,245nm,18.9s,baz=35,slow=42						
	comp=Z,9.5nm,1.1s						
ILAR	Eielson Array	42.70	330	P	P	01 56 35.7	+0.6
MDM	Murphy Dome	42.78	331	IAmb	IAmb	01 56 42.6	
	comp=Z,28nm,1.2s						
I23K	Minto, Yukon-K	42.82	332	IAmb	IAmb	01 56 43.1	
	comp=Z,36nm,1.4s						
I23K	Minto, Yukon-K	42.82	332	P	P	01 56 34.1	-2.0
	baz=25,SNR=10						
SCRK	Sand Creek	42.85	328	P	P	01 56 34.1	-2.4
	baz=27						
H21K	Melozitna Rive	42.95	334	IAmb	IAmb	01 56 44.3	
	comp=Z,25nm,1.1s						
H21K	Melozitna Rive	42.95	334	P	P	01 56 34.0	-3.2
	baz=23,SNR=24						
CCB	Clear Creek Bu	42.99	331	IAmb	IAmb	01 56 43.7	
	comp=Z,22nm,1.4s						
M29M	Somme Creek	43.03	324	P	P	01 56 36.4	-1.6
	baz=29						
HDA	Harding Lake	43.04	330	IAmb	IAmb	01 56 44.2	
	comp=Z,20nm,1.2s						
HDA	Harding Lake	43.04	330	P	P	01 56 35.4	-2.5
	baz=26,SNR=11						
DOT	Dot Lake	43.16	328	IAmb	IAmb	01 56 45.6	
	comp=Z,23nm,1.3s						
MLY	Manley	43.17	333	P	P	01 56 36.2	-2.8
	baz=24,SNR=15						
L27K	Beaver Creek,	43.22	326	IAmb	IAmb	01 56 46.5	
	comp=Z,46nm,1.4s						
L27K	Beaver Creek,	43.22	326	P	P	01 56 37.1	-2.3
	baz=28						
RIDG	Independent Ri	43.23	328	P	P	01 56 38.7	-0.8
	baz=26,SNR=12						
N31M	Braeburn, Yuko	43.24	321	IAmb	IAmb	01 56 46.3	
	comp=Z,26nm,1.2s						
N31M	Braeburn, Yuko	43.24	321	P	P	01 56 37.5	-2.1
	baz=29,SNR=7.4						
I21K	Tanana	43.25	333	P	P	01 56 38.4	-1.1
	baz=24						
NEA2	Nenana	43.27	331	IAmb	IAmb	01 56 46.1	
	comp=Z,28nm,1.2s						
NEA2	Nenana	43.27	331	P	P	01 56 37.0	-2.7
	baz=25,SNR=17						
K24K	Donnelly Dome	43.36	329	P	P	01 56 38.4	-2.2
	baz=26						
GAZ	Gaziantep	43.41	106	P	P	01 56 41.2	-0.1
CBN	Corbin Frederi	43.47	258	P	P	01 56 40.9	-0.8
	baz=28						
L26K	Log Cabin Wild	43.57	327	P	P	01 56 38.3	-3.9
	baz=27						
N30M	Aishikik Lake	43.58	322	P	P	01 56 39.8	-2.6
	baz=29						
BVCY	Beaver Creek	43.58	325	P	P	01 56 39.9	-2.4
	baz=28						
MDND	Maddock	43.59	285	P	P	01 56 41.6	-0.9
	baz=33						
GNI	Garni	43.61	96	LR	LR	02 15 35.0	
	comp=Z,562nm,18.9s,baz=334,slow=37						
GNI	Garni	43.61	96	P	P	01 56 42.4	-0.6
GNI				IAmb	IAmb	01 56 46.4	
	comp=Z,39nm,1.6s						
P33M	Teslin, Yukon	43.63	319	P	P	01 56 40.8	-1.9
	baz=30						
MENT	Mentasta	43.72	327	P	P	01 56 44.0	+0.6
ACSO	Alum Creek Sta	43.81	265	P	P	01 56 44.7	+0.3
	baz=30						
M27K	Edge Creek, AK	43.85	326	P	P	01 56 38.6	-6.1
	baz=27						
EDM	Edmonton	43.89	300	P	P	01 56 49.9	+4.9
EDM				IAmb	IAmb	01 56 51.1	
	comp=Z,37nm,1.5s						
O30N	Mendenhall	43.94	321	P	P	01 56 42.7	-2.6
	baz=29						
GURO	Guroymak-BITLI	43.98	100	P	P	01 56 45.2	-0.7

L44A	Lake County Fo	44.00	271	P	**P**	**01 56 44.9**	**-1.0**
	baz=31						
MCK	McKinley	44.03	331	IAmb	IAmb	01 56 52.2	
	comp=Z,36nm,1.3s						
MCK	McKinley	44.03	331	P	**P**	**01 56 42.6**	**-3.3**
	baz=24,SNR=11						
YUK4	Talbot Arm	44.04	323	P	**P**	**01 56 42.6**	**-3.6**
	baz=28						
PAX	Paxson	44.05	328	IAmb	IAmb	01 56 52.9	
	comp=Z,41nm,1.7s						
PAX	Paxson	44.05	328	P	**P**	**01 56 43.3**	**-2.8**
	baz=26,SNR=6.4						
M26K	Nabesna, AK	44.05	326	P	**P**	**01 56 44.0**	**-2.2**
	baz=27,SNR=6.8						
YUK3	Moose Creek	44.06	324	P	P	01 56 41.9	-4.5
	baz=27						
BPAW	Bear Paw Mtn.	44.06	332	P	**P**	**01 56 42.3**	**-3.9**
	baz=24,SNR=16						
WAPA	Wapiti River	44.12	306	P	**P**	**01 56 47.4**	**+0.6**
HYT	Haines Junctio	44.23	322	P	**P**	**01 56 45.0**	**-2.7**
	baz=28,SNR=5.9						
YUK6	Outpost Mounta	44.33	323	P	**P**	**01 56 46.8**	**-1.7**
	baz=28						
YUK8	Steele Glacier	44.34	324	P	P	01 56 44.2	-4.5
	baz=28						
P32M	Atlin	44.40	319	P	**P**	**01 56 44.7**	**-4.2**
	baz=29						
BILL	Bilibino	44.41	357	P	**P**	**01 56 49.9**	**+1.1**
DLBC	Dease Lake	44.44	316	LR	LR	02 15 10.1	
	comp=Z,593nm,20.5s,baz=82,slow=36						
DLBC	Dease Lake	44.44	316	P	P	01 56 44.7	-4.6
	baz=30						
GCSA	Galena City Sc	44.45	336	P	**P**	**01 56 46.3**	**-2.8**
	baz=21						
CHUM	Lake Minchumin	44.50	333	P	**P**	**01 56 45.7**	**-3.9**
	baz=23,SNR=9.6						
HARP	HAARP	44.50	328	P	P	01 56 44.8	-4.9
	baz=26						
TRF	Thorofare Moun	44.54	331	P	P	01 56 44.9	-5.2
	baz=24						
Q32M	Nakina River	44.58	317	P	**P**	**01 56 46.8**	**-3.8**
	baz=30						
P30M	Million Dollar	44.72	321	P	P	01 56 46.5	-5.0
	baz=28						
DGMT	Dagmar	44.73	290	P	**P**	**01 56 48.5**	**-3.2**
	baz=32						
CAST	Castle Rocks	44.89	332	P	P	01 56 47.7	-5.0
	baz=23,SNR=5.5						
SKAG	Skagway	44.91	320	P	P	01 56 47.7	-5.2
	baz=28						
O29M	Mount Kennedy	44.94	322	P	P	01 56 48.5	-4.9
	baz=28						
M24K	Tolsona, Glenn	44.97	328	P	P	01 56 48.3	-5.2
	baz=25						
N25K	Chitina, Valde	45.10	327	P	P	01 56 49.3	-5.2
	baz=26						
TNA	Tin City	45.16	342	IAmb	IAmb	01 57 00.5	
	comp=Z,14nm,1.0s						
TNA	Tin City	45.16	342	P	P	01 56 49.1	-5.7
	baz=16,SNR=14						
PLBC	Pleasant Camp	45.17	320	P	P	01 56 49.2	-5.8
	baz=28						
S34M	Telegraph Cree	45.19	316	P	**P**	**01 56 51.2**	**-4.0**
	baz=29						
K20K	Telida	45.29	334	IAmb	IAmb	01 57 02.6	
	comp=Z,30nm,1.4s						
K20K	Telida	45.29	334	P	**P**	**01 56 51.4**	**-4.5**
	baz=22						
PPLA	Purkeypile	45.39	332	P	**P**	**01 56 53.9**	**-3.0**
	baz=23						
P48A	Milroy	45.41	267	P	**P**	**01 57 00.1**	**+2.9**
SCM	Sheep Creek Mo	45.45	329	P	P	01 56 52.0	-5.3
	baz=24						
KLU	Klutina	45.48	328	P	P	01 56 52.3	-5.2
	baz=25						
M23K	Glacier View	45.57	329	P	**P**	**01 56 55.4**	**-2.8**
	baz=24,SNR=5.2						
SML	Sawmill	45.67	329	P	**P**	**01 57 00.1**	**+1.1**
	baz=24						
ANM	Nome	45.82	341	P	**P**	**01 57 00.3**	**+0.3**
	baz=17,SNR=12						
HDIL	Hopedale	45.93	271	P	**P**	**01 56 58.6**	**-2.6**
	baz=30						
ECSD	EROS Data Cent	45.97	280	IAmb	IAmb	01 57 08.0	
	comp=Z,27nm,1.6s						
ECSD	EROS Data Cent	45.97	280	P	**P**	**01 57 01.3**	**-0.3**
	baz=31,SNR=5.5						
TTA	Tatalina	46.01	334	P	**P**	**01 56 58.2**	**-3.5**
	baz=21						
R50A	Paris	46.02	265	IAmb	IAmb	01 57 08.2	
	comp=Z,19nm,1.2s						
PMR	Palmer	46.02	330	P	**P**	**01 56 58.4**	**-3.3**
	baz=24,SNR=5.2						
L20K	Farewell, AK	46.07	333	P	**P**	**01 57 00.9**	**-1.2**
	baz=22						
SKT	Skwentna	46.12	331	IAmb	IAmb	01 57 07.7	
	comp=Z,21nm,1.3s						
SKT	Skwentna	46.12	331	P	P	01 57 05.7	+3.2
	baz=22,SNR=6.3						
ZAA0	Zalesovo Array	46.12	53	P	**P**	**01 57 03.7**	**+1.2**
ZAA0				PcP	**PcP**	**01 58 39.0**	**+0.6**
ZALV	Zalesovo Beam	46.12	53	P	**P**	**01 57 03.5**	**+0.9**
	comp=Z,2.0nm,0.8s,baz=330,slow=8.6,SNR=11						
ZALV				PcP	**PcP**	**01 58 39.8**	**+1.4**
	comp=Z,4.7nm,0.8s,baz=339,slow=4.8,SNR=15						
ZALV				LR	LR	02 19 37.9	
	comp=Z,153nm,18.6s,baz=338,slow=40						
	comp=Z,2.0nm,0.8s						
SCIA	State Center	46.25	275	P	**P**	**01 57 03.7**	**0.0**
	baz=30						
EYAK	Cordova Ski Ar	46.30	327	P	**P**	**01 57 01.5**	**-2.4**
	baz=25						
SUA	Susitna One	46.45	330	P	**P**	**01 57 04.5**	**-0.7**
	baz=23,SNR=6.4						
S32K	Killisnoo	46.48	318	P	**P**	**01 57 01.8**	**-3.5**
	baz=28						
M20K	Styx River	46.50	332	IAmb	IAmb	01 57 09.8	
	comp=Z,13nm,1.1s						
M20K	Styx River	46.50	332	P	**P**	**01 57 04.3**	**-1.3**
	baz=22						
L19K	White Mountain	46.52	333	P	**P**	**01 57 04.9**	**-0.7**
	baz=21						
RC01	Rabbit Creek A	46.60	330	P	**P**	**01 57 03.5**	**-2.8**
	baz=23,SNR=12						
M19K	Big River Lodg	46.70	333	P	**P**	**01 57 04.2**	**-2.9**
	baz=21						
WCI	Wyandotte Cave	46.81	267	P	**P**	**01 57 09.3**	**+1.2**
	baz=29						
KURK	Kurchatov	46.94	60	P	**P**	**01 57 08.5**	**-0.5**
KURK				IAmb	IAmb	01 57 11.2	
	comp=Z,9.7nm,1.1s						
LAO	LASA Array	46.97	290	P	**P**	**01 57 07.2**	**-2.3**
	baz=31						
KURBB	Kurchatov Arra	46.99	60	P	**P**	**01 57 10.6**	**+1.2**
	comp=Z,5.9nm,1.1s,baz=326,slow=7.4,SNR=20						
KURBB				PcP	**PcP**	**01 58 43.1**	**+1.6**
	comp=Z,1.0nm,0.8s,baz=314,slow=4.6,SNR=5.2						
KURBB				PP	**PP**	**01 58 58.6**	**-0.9**
	comp=Z,1.6nm,0.9s,baz=322,slow=10,SNR=4.9						
	comp=Z,5.9nm,1.1s						
EGMT	Eagleton	47.08	294	P	**P**	**01 57 08.4**	**-1.9**
	baz=31,SNR=10.0						
TAM	Tamanrasset	47.45	149	P	**P**	**01 57 14.4**	**+0.9**
V35K	Ketchikan	47.59	314	P	**P**	**01 57 12.2**	**-1.8**
	baz=28						
N19K	Bonanza Creek	47.73	332	P	P	01 57 10.6	-4.6
	baz=21						
BRSE	Bradley Lake S	48.04	330	P	**P**	**01 57 15.8**	**-1.7**
	baz=22						
TKL	Tuckaleechee C	48.12	262	LR	LR	02 16 56.6	
	comp=Z,1µm,19.3s,baz=35,slow=35						
HOM	Homer	48.29	330	P	**P**	**01 57 16.9**	**-2.5**
	baz=22						
FVM	French Village	48.60	270	IAmb	IAmb	01 57 27.1	
	comp=Z,14nm,1.1s						
CLTN	Cedars of Leba	48.70	265	IAmb	IAmb	01 57 32.6	
	comp=Z,22nm,1.4s						
O18K	Koktuh Hills	48.76	332	P	**P**	**01 57 20.2**	**-2.9**
	baz=20						
CCM	Cathedral Cave	48.85	271	P	**P**	**01 57 25.8**	**+1.8**
CCM				IAmb	IAmb	01 57 29.2	
	comp=Z,9.5nm,1.1s						
CCM	Cathedral Cave	48.85	271	P	**P**	**01 57 23.5**	**-0.5**
	baz=29						
LLLB	Lillooet	48.87	305	P	**P**	**01 57 27.0**	**+3.0**
CGM3	Cape Girardeau	48.91	269	IAmb	IAmb	01 57 30.9	
	comp=Z,21nm,1.3s						
R40A	Maddies Statio	49.03	272	IAmb	IAmb	01 57 30.4	
	comp=Z,12nm,1.2s						
O17K	Koliganek Bris	49.16	334	P	**P**	**01 57 23.8**	**-2.3**
	baz=19,SNR=5.8						
P18K	Big Mountain,	49.20	332	P	**P**	**01 57 28.2**	**+1.7**
P18K				IAmb	IAmb	01 57 31.4	
	comp=Z,17nm,1.3s						
P18K	Big Mountain,	49.20	332	P	**P**	**01 57 22.5**	**-4.0**
	baz=20						
V48A	Smith Brothers	49.20	265	IAmb	IAmb	01 57 32.7	
	comp=Z,16nm,1.2s						
BBB	Bella Bella	49.38	310	LR	LR	02 18 21.5	
	comp=Z,299nm,18.9s,baz=38,slow=36						
NEW	Newport	49.38	299	LR	LR	02 18 39.7	
	comp=Z,881nm,18.7s,baz=30,slow=36						
RLMT	Red Lodge	49.40	291	P	**P**	**01 57 25.9**	**-2.5**
	baz=30,SNR=6.5						
O16K	Kokwok River B	49.50	334	P	**P**	**01 57 24.7**	**-4.0**
	baz=19						
MSO	Missoula	49.55	296	P	**P**	**01 57 31.6**	**+2.2**
MSO				IAmb	IAmb	01 57 35.7	
	comp=Z,12nm,1.0s						
MSO	Missoula	49.55	296	P	**P**	**01 57 29.1**	**-0.3**
	baz=30,SNR=8.0						
T42A	Van Buren	49.69	270	IAmb	IAmb	01 57 35.8	
	comp=Z,12nm,1.2s						
BOZ	Bozeman (W)	49.82	293	IAmb	IAmb	01 57 37.9	
	comp=Z,16nm,1.2s						
BOZ	Bozeman (W)	49.82	293	P	**P**	**01 57 34.6**	**+3.1**
	baz=30,SNR=8.8						
KSU1	Kansas State U	49.97	277	P	**P**	**01 57 29.7**	**-2.9**
	baz=29						
YMP	Mirror Lake Pl	50.05	292	IAmb	IAmb	01 57 39.3	
	comp=Z,9.6nm,1.0s						
KDAK	Kodiak Island	50.22	330	LR	LR	02 21 16.9	
	comp=Z,322nm,19.4s,baz=73,slow=39						
X48A	Hartselle	50.42	265	IAmb	IAmb	01 57 41.2	
	comp=Z,15nm,1.2s						
H17A	Grant Village	50.50	292	P	**P**	**01 57 36.4**	**-0.4**
	baz=29						
K22A	Casper	50.56	287	IAmb	IAmb	01 57 42.5	
	comp=Z,15nm,1.1s						
K22A	Casper	50.56	287	P	**P**	**01 57 38.7**	**+1.5**
	baz=29						
GEYT	Alibeck	50.62	85	P	**P**	**01 57 39.0**	**+1.5**
	comp=Z,10nm,1.2s,baz=296,slow=8.1,SNR=12						
GEYT				LR	LR	02 20 23.1	
	comp=Z,702nm,19.9s,baz=353,slow=38						
	comp=Z,10nm,1.2s						
GEYT	Alibeck	50.62	85	IAmb	IAmb	01 57 40.7	
	comp=Z,25nm,1.6s						
GYA0B	ALIBECK ARRAY	50.62	85	P	**P**	**01 57 38.0**	**+0.4**
GYA0B				IAmb	IAmb	01 57 40.6	
	comp=Z,27nm,1.7s						
KK31	Karatay Array	50.71	71	P	**P**	**01 57 38.1**	**0.0**
PHWY	Pilot Hill	51.35	286	IAmb	IAmb	01 57 49.2	
	comp=Z,17nm,1.5s						
R32A	Long Quarter,	51.35	278	IAmb	IAmb	01 57 47.9	
	comp=Z,17nm,1.0s						
U38A	Gravette	51.46	273	IAmb	IAmb	01 57 47.8	
	comp=Z,22nm,1.6s						
MKAR	Makanchi Array	51.55	59	P	**P**	**01 57 45.3**	**+1.0**
	comp=Z,3.9nm,1.0s,baz=336,slow=5.6,SNR=26						
MKAR				PcP	**PcP**	**01 58 58.3**	**0.0**
	comp=Z,1.1nm,0.8s,baz=306,slow=4.1,SNR=4.7						
	comp=Z,3.9nm,1.0s						
MKAR	Makanchi Array	51.55	59	P	**P**	**01 57 44.8**	**+0.4**
BW06	Boulder Array	51.55	290	IAmb	IAmb	01 57 50.3	
	comp=Z,23nm,1.6s						
BW06	Boulder Array	51.55	290	P	**P**	**01 57 44.4**	**-0.3**
	baz=29,SNR=6.6						
PD31	Pinedale Array	51.55	290	P	**P**	**01 57 46.2**	**+1.5**
PD31				IAmb	IAmb	01 57 50.3	
	comp=Z,23nm,1.7s						
PDAR	Pinedale Array	51.55	290	P	**P**	**01 57 47.0**	**+2.2**
	comp=Z,3.6nm,1.0s,baz=50,slow=5.6,SNR=16						
PDAR				PP	**PP**	**01 59 45.9**	**+4.2**
	comp=Z,0.5nm,0.9s,baz=30,slow=9.3,SNR=2.8						
PDAR				LR	LR	02 19 29.8	
	comp=Z,552nm,19.0s,baz=28,slow=36						
	comp=Z,3.6nm,1.0s						
BRIGG	Briggsdale	51.56	284	P	**P**	**01 57 46.9**	**+2.2**
RWWY	Rawlins	51.65	287	IAmb	IAmb	01 57 50.2	
	comp=Z,13nm,1.2s						
PLID	Pearl Lake	51.77	297	IAmb	IAmb	01 57 51.8	
	comp=Z,21nm,1.4s						
N23A	Red Feather La	51.88	286	P	**P**	**01 57 47.6**	**+0.3**
	baz=29,SNR=11						
OK051	E0350 and S346	52.33	275	IAmb	IAmb	01 57 55.5	
	comp=Z,27nm,1.3s						
BMO	Blue Mountains	52.42	297	P	**P**	**01 57 53.4**	**+2.4**
OK048	Pawnee Station	52.45	275	IAmb	IAmb	01 57 56.5	
	comp=Z,27nm,1.3s						
AAK	Ala-Archa	52.54	68	P	**P**	**01 57 52.2**	**+0.3**
ISCO	Idaho Springs	52.72	285	P	P	01 57 47.3	-6.2
	baz=28,SNR=5.4						
MA2	Magadan	52.72	7	P	**P**	**01 57 53.8**	**+0.9**
MA2				IAmb	IAmb	01 57 58.4	
	comp=Z,28nm,1.3s						
OK052	Battle Ridge R	52.77	275	IAmb	IAmb	01 57 58.7	
	comp=Z,25nm,1.3s						
OK030	Cody Creek RV	52.82	275	IAmb	IAmb	01 57 59.1	
	comp=Z,31nm,1.4s						
MIAR	Mount Ida	52.82	271	P	**P**	**01 57 55.9**	**+2.0**
	baz=27						
BBTS	Babate	53.09	177	LR	LR	02 15 45.4	
	comp=Z,218nm,21.6s,baz=354,slow=31						
O20A	White River Ci	53.39	287	IAmb	IAmb	01 58 04.6	
	comp=Z,22nm,1.3s						
O20A	White River Ci	53.39	287	P	**P**	**01 57 56.5**	**-1.8**
	baz=28,SNR=5.6						
X37A	Clayton	53.47	273		**P**	**01 58 00.4**	**+1.7**
X37A				IAmb	IAmb	01 58 04.1	
	comp=Z,13nm,1.1s						
RDMU	Red Mountain	53.48	289	IAmb	IAmb	01 58 05.3	
	comp=Z,29nm,1.6s						
SMCO	Snowmass	53.77	286	P	**P**	**01 58 04.0**	**+2.7**
SMCO				IAmb	IAmb	01 58 20.9	
	comp=Z,17nm,1.7s						
S12K	Black Hills	53.86	335	P	P	01 57 56.2	-5.1
	baz=16						
KDJ	Kajisay	53.93	66	P	**P**	**01 58 02.5**	**+0.3**
GAR	Garm	54.24	74	P	**P**	**01 58 04.2**	**-0.2**
TARG	Taragay, Kyrgy	54.50	66	IAmb	IAmb	01 58 12.2	
	comp=Z,26nm,2.0s						
WMOK	Wichita Mounta	54.63	276	IAmb	IAmb	01 58 13.2	
	comp=Z,23nm,1.6s						
WMOK	Wichita Mounta	54.63	276	P	**P**	**01 58 03.8**	**-3.4**
	baz=27						
LOOK	Love County	54.68	274		**P**	**01 58 09.9**	**+2.3**
DUG	Dugway, Tooele	54.98	291	IAmb	IAmb	01 58 22.0	
	comp=Z,13nm,1.6s						
DUG	Dugway, Tooele	54.98	291	P	**P**	**01 58 07.4**	**-2.4**
	baz=27						
S22A	4UR Ranch, Cre	54.98	285	P	**P**	**01 58 09.3**	**-0.7**
	baz=27,SNR=5.6						
PV13	Radium Mtn., P	55.34	287	IAmb	IAmb	01 58 18.6	
	comp=Z,20nm,1.2s						
ELK	Elko	55.34	293	LR	LR	02 22 05.8	
	comp=Z,847nm,19.2s,baz=31,slow=36						
ELK	Elko	55.34	293	P	**P**	**01 58 14.8**	**+2.2**
KSH	Kashi	55.82	69	P	**P**	**01 58 14.8**	**-1.1**
KSH				pP	sP	01 58 21.0	+2.6
KSH				S	**S**	**02 06 02.5**	**-0.6**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KSH				LR	LR		
	comp=N,330nm,17.2s						
KSH				LR	LR		
	comp=E,340nm,15.8s						
KSH				LR	LR		
	comp=Z,550nm,17.9s						
FW03	Perrin-Whitt E	55.87	274	IAmb	IAmb	01 58 22.0	
	comp=Z,34nm,1.4s						
WMQ	Urumqi	55.94	57	*e*P	P	01 58 19.8	+3.2
WMQ				LR	LR		
	comp=N,350nm,10.5s						
WMQ				LR	LR		
	comp=E,600nm,17.9s						
WMQ				LR	LR		
	comp=Z,230nm,19.9s						
MVCO	Mesa Verde	56.06	286	P	P	01 58 12.3	-5.5
	baz=27						
TOA0	Torodi Ar. Sit	56.20	156	P	**P**	**01 58 18.6**	**0.0**
TORD	Torodi Ar. Bea	56.20	156	P	**P**	**01 58 19.8**	**+1.1**
	comp=Z,5.0nm,1.0s,baz=340,slow=7.1,SNR=16						
TORD				PcP	**PcP**	**01 59 18.4**	**+2.1**
	comp=Z,0.8nm,0.9s,baz=2.7,slow=3.3,SNR=1.7						
TORD				LR	LR	02 22 36.5	
	comp=Z,130nm,18.2s,baz=353,slow=36						
ABTX	Abilene, Hawle	56.83	276	P	**P**	**01 58 19.7**	**-3.3**
	baz=26,SNR=5.2						
YBH	Yreka Blue Hor	57.00	300	LR	LR	02 23 58.9	
	comp=Z,499nm,18.4s,baz=14,slow=37						
ANMO	Albuquerque	57.32	283	LR	LR	02 22 53.3	
	comp=Z,552nm,18.4s,baz=132,slow=36						
ANMO	Albuquerque	57.32	283	P	**P**	**01 58 23.5**	**-3.2**
	baz=27						
R11B	Troy Canyon, C	57.60	292	P	P	01 58 24.5	-4.1
	baz=26,SNR=18						
SONM	Songino Array	57.60	41	P	**P**	**01 58 29.7**	**+1.2**
	comp=Z,2.9nm,1.2s,baz=326,slow=7.2,SNR=14						
SONM				PcP	**PcP**	**01 59 23.3**	**+1.7**
	comp=Z,2.4nm,1.1s,baz=331,slow=3.5,SNR=5.7						
SONM				LR	LR	02 26 22.9	
	comp=Z,270nm,18.6s,baz=342,slow=39						
	comp=Z,2.9nm,1.2s						
SONM	Songino Array	57.60	41	IAmb	IAmb	01 58 33.5	
	comp=Z,15nm,1.6s						
PAHR	Pah Rah Range	57.70	296	IAmb	IAmb	01 58 35.8	
	comp=Z,11nm,1.2s						
ULN	Ulaanbaatar	57.73	40	P	**P**	**01 58 29.9**	**+0.5**
KNB	Kanab	57.80	289	IAmb	IAmb	01 58 42.5	
	comp=Z,13nm,1.4s						
KVN	Kaiserville	57.85	295	P	**P**	**01 58 32.3**	**+2.0**
KVN				IAmb	IAmb	01 58 36.3	
	comp=Z,14nm,1.0s						
SJG	San Juan	57.95	236	LR	LR	02 19 15.6	
	comp=Z,104nm,21.7s,baz=81,slow=32						
NV11	Mina Array Sit	58.42	295	IAmb	IAmb	01 59 04.7	
	comp=Z,12nm,1.7s						
NVAR	Mina Array Bea	58.47	295	P	**P**	**01 58 37.8**	**+3.1**
	comp=Z,2.8nm,1.0s,baz=39,slow=5.3,SNR=13						
NVAR				LR	LR	02 24 14.9	
	comp=Z,897nm,19.1s,baz=24,slow=36						
	comp=Z,2.8nm,1.0s						
WUAZ	Wupatki	58.62	287	P	**P**	**01 58 37.6**	**+1.8**
WUAZ				IAmb	IAmb	01 58 41.2	
	comp=Z,12nm,1.4s						
RAYN	Ar Rayn	58.76	105	P	**P**	**01 58 36.5**	**-0.2**
RAYN				IAmb	IAmb	01 58 39.0	
	comp=Z,16nm,1.4s						
JCT	Junction City	58.81	275	P	**P**	**01 58 34.2**	**-2.7**
	baz=26,SNR=5.4						
TPNV	Topopah Spring	59.08	292	IAmb	IAmb	01 58 46.1	
	comp=Z,13nm,1.4s						
TPNV	Topopah Spring	59.08	292	P	**P**	**01 58 36.6**	**-2.4**
	baz=26,SNR=5.4						
PETK	Petropavlovsk-	59.41	2	LR	LR	02 23 39.8	
	comp=Z,82nm,21.1s,baz=359,slow=35						
SHEM	Shemya Is, Ala	59.43	351	LR	LR	02 25 00.4	
	comp=Z,79nm,19.6s,baz=94,slow=37						
HEH	HeiHe	59.59	24	*e*P	P	01 58 44.0	+2.0
HEH				pmax	pmax		
	comp=Z,24nm,0.9s						
MNTX	Cornudas Mount	59.82	280	P	**P**	**01 58 41.1**	**-2.9**
	baz=26,SNR=5.8						
GWY	Greenwater Val	59.92	292	P	**P**	**01 58 47.0**	**+2.3**
GWY				IAmb	IAmb	01 58 52.1	
	comp=Z,18nm,1.3s						
121A	Cookes Peak, D	59.97	283	P	**P**	**01 58 48.2**	**+3.0**
121A	Cookes Peak, D	59.97	283	P	**P**	**01 58 41.5**	**-3.7**
	baz=26,SNR=5.8						
NIL	Nilore	60.07	74	P	**P**	**01 58 45.6**	**-0.1**
NIL				IAmb	IAmb	01 58 47.7	
	comp=Z,11nm,0.9s						
CWC	Cottonwood Cre	60.18	293	P	**P**	**01 58 42.5**	**-4.1**
	baz=25						
QSM	Queen of Sheba	60.19	292	P	**P**	**01 58 49.6**	**+3.3**
QSM				IAmb	IAmb	01 58 52.5	
	comp=Z,8.7nm,1.2s						
MPMC	Manual Prospec	60.32	293	P	**P**	**01 58 44.0**	**-3.5**
	baz=25						
TUQ	Turquoise Moun	60.33	291	P	**P**	**01 58 45.8**	**-1.7**
	baz=26						
NEE2	Needles Airpor	60.46	290	P	**P**	**01 58 46.1**	**-2.2**
	baz=26						
PDMCI	Parker Dam,Lak	60.71	289	P	**P**	**01 58 49.6**	**-0.3**
	baz=26						
ISA	Isabella, Lake	61.02	293	P	**P**	**01 58 55.0**	**+2.9**
TUC	Tucson	61.28	285	P	**P**	**01 58 57.1**	**+3.2**
TUC	Tucson	61.28	285	P	**P**	**01 58 54.1**	**+0.2**
	baz=25						
TX31	Lajitas Ar. Si	61.30	277	P	**P**	**01 58 56.7**	**+2.5**
TX32	Lajitas Array	61.30	277	P	**P**	**01 58 56.1**	**+2.0**
TXAR	Lajitas Array	61.30	277	P	**P**	**01 58 57.0**	**+2.8**
	comp=Z,2.7nm,1.0s,baz=51,slow=5.4,SNR=14						
TXAR				LR	LR	02 25 15.7	
	comp=Z,555nm,18.1s,baz=30,slow=36						
	comp=Z,2.7nm,1.0s						
BELC	Belle Mtn. Jos	61.65	291	P	**P**	**01 58 55.3**	**-1.2**
	baz=25						
DBIC	Dimbokro	61.74	164	P	**P**	**01 58 58.8**	**+1.7**
	comp=Z,2.5nm,0.9s,baz=20,slow=10,SNR=3.3						
DBIC				LR	LR	02 26 11.8	
	comp=Z,151nm,18.5s,baz=7.0,slow=36						
	comp=Z,2.5nm,0.9s						
PFO	Pinyon Flats O	62.16	291	LR	LR	02 26 03.1	
	comp=Z,320nm,19.0s,baz=56,slow=36						
IKP	In-Ko-Pah, Jac	62.90	290	P	**P**	**01 59 06.6**	**+1.7**
	baz=25						
XLT	XiLinHaoTe	63.57	35	⇓*i*P	P	01 59 12.0	+2.9
XLT				pmax	pmax		
	comp=Z,11nm,0.8s						
XLT				pmax	pmax		
	comp=Z,84nm,3.8s						
GTA	Gaotai	63.65	49	*e*P	**P**	**01 59 11.3**	**+1.5**
GTA				sP	sP	01 59 23.5	+11
GTA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
GTA				LR	LR		
	comp=N,150nm,18.2s						
GTA				LR	LR		
	comp=E,150nm,17.8s						
GTA				LR	LR		
	comp=Z,220nm,17.8s						
WSAR	Wadi Sarin	63.95	92	LR	LR	02 30 05.6	
	comp=Z,150nm,20.6s,baz=346,slow=39						
BNX	BinXian	63.97	26	⇓P	**P**	**01 59 13.0**	**+1.4**
BNX				pmax	pmax		
	comp=Z,18nm,1.0s						
BNX				pmax	pmax		
	comp=Z,85nm,4.3s						
HPIG		64.21	278	P	**P**	**01 59 17.1**	**+3.3**
HPIG				IAmb	IAmb	01 59 19.3	
	comp=Z,9.4nm,1.4s						
YSS	Yuzh-Sakhalins	64.75	14	P	**P**	**01 59 17.1**	**+0.5**
GOMU	GeErMu	65.12	55	P	P	01 59 22.0	+2.3
GOMU				pP	sP	01 59 25.8	+3.5
GOMU				sP	pP	01 59 26.5	+4.9
GOMU				PcP	PP	02 01 01.0	-41
GOMU				PP	**PP**	**02 01 41.8**	**-0.6**
GOMU				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GOMU				pmax	pmax		
	comp=Z,72nm,4.7s						
GOMU				LR	LR		
	comp=N,160nm,15.1s						
GOMU				LR	LR		
	comp=E,140nm,17.5s						
GOMU				LR	LR		
	comp=Z,190nm,18.6s						
BTO	Baotou	65.28	41	*e*P	**P**	**01 59 18.8**	**-1.6**
BTO				pP	**sP**	**01 59 23.5**	**+0.5**
BTO				sP	**pP**	**01 59 26.0**	**+3.7**
BTO				pmax	pmax		
	comp=Z,20nm,0.5s						
BTO				pmax	pmax		
	comp=Z,460nm,3.7s						
MDJ	Mudanjiang	65.42	24	P	**P**	**01 59 22.8**	**+1.7**
MDJ				sP	sP	01 59 27.5	+3.9
MDJ				PcP	PcP	01 59 58.3	+5.3
MDJ				PP	**PP**	**02 01 44.5**	**+0.2**
MDJ				S	**S**	**02 08 01.0**	**-4.3**
MDJ				ScS	**ScS**	**02 09 14.5**	**-2.0**
MDJ	Mudanjiang	65.42	24	SS	SS	02 12 12.0	-5.4
MDJ				pmax	pmax		
	comp=Z,23nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,110nm,3.7s						
MDJ	Mudanjiang	65.42	24	P	**P**	**01 59 21.4**	**+0.3**
HHC	Hu-ho-hao-te	65.43	39	*e*P	P	01 59 24.0	+2.6
HHC				pmax	pmax		
	comp=Z,34nm,0.9s						
HHC				pmax	pmax		

	comp=Z,200nm,5.8s						
CN2	**Changchun**	**65.52**	**28**	*e*P	**P**	**01 59 22.3**	**+0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
USA0B	**Ussuriysk Arra**	**66.19**	**23**	P	**P**	**01 59 25.6**	**-0.4**
USA0B				IAmb	IAmb	01 59 28.5	
	comp=Z,14nm,1.3s						
USRK	**Ussuriysk Ar.**	**66.19**	**23**	P	**P**	**01 59 26.9**	**+0.9**
	comp=Z,6.8nm,1.0s,baz=343,slow=6.0,SNR=10						
	comp=Z,6.8nm,1.0s						
ZAIG	**Zacatecas**	**66.81**	**273**	P	**P**	**01 59 32.0**	**+1.4**
BJI	**Beijing**	**67.27**	**36**	P	P	01 59 35.5	+2.5
BJI				sP	sP	01 59 37.5	+1.9
BJI				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BJI				LR	LR		
	comp=N,190nm,14.9s						
BJI				LR	LR		
	comp=E,96nm,14.4s						
BJI				LR	LR		
	comp=Z,210nm,15.1s						
BJT	**Baijiatuau**	**67.29**	**36**	P	**P**	**01 59 33.9**	**+0.7**
ASAJ	**Asahikawa**	**67.55**	**14**	LR	LR	02 28 15.5	
	comp=Z,87nm,20.2s,baz=348,slow=35						
LZH	**Lanzhou**	**67.90**	**47**	*e*P	P	01 59 39.0	+1.8
LZH				sP	sP	01 59 45.5	+5.7
LZH				S	**S**	**02 08 30.3**	**-5.7**
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,240nm,4.3s						
LZH				LR	LR		
	comp=N,410nm,15.6s						
LZH				LR	LR		
	comp=E,260nm,13.4s						
LZH				LR	LR		
	comp=Z,530nm,17.0s						
SDV	**Santo Domingo**	**68.04**	**237**	LR	LR	02 25 16.9	
	comp=Z,129nm,21.9s,baz=28,slow=32						
SDV	**Santo Domingo**	**68.04**	**237**	*e*P	**P**	**01 59 41.7**	**+3.3**
LPIG	**La Paz**	**68.52**	**281**	LR	LR	02 30 06.1	
	comp=Z,411nm,18.3s,baz=9.5,slow=36						
CMIG	**Matias Romero**	**69.06**	**264**	LR	LR	02 32 54.8	
	comp=Z,113nm,18.4s,baz=40,slow=38						
HNS	**HongShan**	**69.46**	**38**	⇑P	**P**	**01 59 48.0**	**+1.3**
HNS				PP	PP	02 02 28.0	+8.4
HNS				S	**S**	**02 08 57.8**	**+3.7**
LSA	**Lhasa**	**69.93**	**61**	P	**P**	**01 59 51.5**	**+1.2**
LSA				IAmb	IAmb	01 59 56.0	
	comp=Z,14nm,1.3s						
TIA	**Tai'an**	**71.15**	**37**	P	**P**	**01 59 56.8**	**-0.3**
TIA				pmax	pmax		
	comp=Z,13nm,1.3s						
TIA				pmax	pmax		
	comp=Z,100nm,5.9s						
TIA				LR	LR		
	comp=N,210nm,18.0s						
TIA				LR	LR		
	comp=E,200nm,19.1s						
TIA				LR	LR		
	comp=Z,300nm,15.6s						
XAN	**Xi'an**	**71.20**	**44**	⇑P	**P**	**01 59 59.0**	**+1.4**
XAN				pmax	pmax		
	comp=Z,12nm,1.3s						
BOAV	**Boa Vista**	**71.22**	**225**	*e*P	**P**	**02 00 00.1**	**+2.4**
JTS	**Las Juntas de**	**71.62**	**252**	LR	LR	02 29 26.5	
	comp=Z,102nm,21.3s,baz=345,slow=34						
LYN	**LuoYang**	**71.63**	**41**	⇑P	P	02 00 02.0	+2.0
KSRS	**Korea Array**	**72.12**	**27**	P	**P**	**02 00 04.1**	**+1.2**
	comp=Z,2.6nm,1.0s,baz=346,slow=4.4,SNR=8.2						
KSRS				LR	LR	02 32 38.7	
	comp=Z,106nm,20.1s,baz=335,slow=37						
	comp=Z,2.6nm,1.0s						
KSAR	**Wonju Array Be**	**72.12**	**27**	P	**P**	**02 00 02.2**	**-0.8**
CD2	**Chengdu**	**72.73**	**49**	P	**P**	**02 00 07.3**	**+0.6**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
ROSC	**El Rosal**	**73.03**	**239**	LR	LR	02 28 58.4	
	comp=Z,111nm,20.9s,baz=58,slow=33						
LODK	**Lodwar**	**73.89**	**123**	P	**P**	**02 00 13.9**	**+0.1**
MAJO	**Matsushiro**	**74.56**	**19**	P	**P**	**02 00 17.4**	**0.0**
MJAR	**Matsushiro Arr**	**74.56**	**19**	P	**P**	**02 00 19.3**	**+1.9**
	comp=Z,7.4nm,0.9s,baz=12,slow=14,SNR=6.9						
	comp=Z,7.4nm,0.9s						
ENH	**Enshi**	**74.92**	**45**	P	**P**	**02 00 20.1**	**+0.6**
NJ2	**Nanjing**	**75.53**	**36**	*e*P	**P**	**02 00 21.3**	**-1.7**
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,210nm,5.7s						
WHN	**Wuhan**	**75.92**	**40**	P	**P**	**02 00 26.5**	**+1.3**
PZH	**PanZhiHua**	**76.26**	**53**	P	**P**	**02 00 28.3**	**+0.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.4s						
PZH				pmax	pmax		
	comp=Z,150nm,4.9s						
ITTB	**Itaituba**	**76.52**	**218**	*e*P	P	02 00 33.0	+4.3
BRDH	**Bariadhala**	**76.58**	**63**	LR	LR	02 38 12.1	
	comp=Z,248nm,18.2s,baz=233,slow=39						
JNU	**Nakatsue**	**76.85**	**26**	LR	LR	02 36 30.5	
	comp=Z,101nm,18.5s,baz=336,slow=37						
GYA	**Guiyang**	**77.75**	**48**	⇓P	P	02 00 38.0	+2.2
GYA				pmax	pmax		
	comp=Z,19nm,1.1s						
KMI	**Kunming**	**77.86**	**52**	⇓P	**P**	**02 00 36.8**	**+0.3**
KMI				pP	sP	02 00 39.8	+0.7
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KMI				LR	LR		
	comp=N,190nm,14.9s						
KMI				LR	LR		
	comp=E,160nm,16.1s						
KMI				LR	LR		
	comp=Z,240nm,17.0s						
OTAV	**Otavalo**	**78.71**	**242**	P	**P**	**02 00 43.5**	**+2.0**
OTAV				IAmb	IAmb	02 00 48.2	
	comp=Z,11nm,1.4s						
OTAV	**Otavalo**	**78.71**	**242**	*e*P	**P**	**02 00 44.7**	**+3.2**
NPGB	**Novo Progresso**	**79.02**	**217**	*e*P	**P**	**02 00 45.2**	**+2.5**
SMTB	**Santa Maria do**	**79.17**	**209**	*e*P	**P**	**02 00 46.2**	**+2.7**
CRAI	**Chiangrai**	**81.72**	**56**	P	**P**	**02 00 56.2**	**-1.1**
CRAI				IAmb	IAmb	02 01 01.4	
	comp=Z,12nm,1.4s						
SDBA	**SAO DESIDERIO**	**82.17**	**206**	*e*P	**P**	**02 01 01.5**	**+2.0**
CHTO	**Chiang Mai**	**82.59**	**58**	P	**P**	**02 01 01.9**	**0.0**
SAML	**Samuel**	**82.79**	**224**	P	**P**	**02 01 04.2**	**+1.5**
SAML	**Samuel**	**82.79**	**224**	*e*P	**P**	**02 01 04.9**	**+2.2**
SNDB	**Serra Nova Dou**	**82.92**	**212**	*e*P	**P**	**02 01 06.9**	**+3.5**
CMAR	**Chiang Mai Arr**	**82.92**	**58**	P	**P**	**02 01 05.0**	**+1.4**
	comp=Z,2.8nm,0.3s,baz=323,slow=6.0,SNR=29						
CMAR				PP	**PP**	**02 04 16.2**	**+2.6**
	comp=Z,1.4nm,0.3s,baz=329,slow=10,SNR=4.9						
CMAR				LR	LR	02 43 31.3	
	comp=Z,53nm,18.5s,baz=280,slow=40						
	comp=Z,2.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**82.92**	**58**	P	**P**	**02 01 04.1**	**+0.5**
PDRB	**Porto dos Gac**	**83.75**	**217**	*e*P	**P**	**02 01 10.3**	**+2.6**
ETMB	**Extrema**	**84.44**	**227**	P	**P**	**02 01 12.4**	**+1.2**
ETMB	**Extrema**	**84.44**	**227**	*e*P	**P**	**02 01 14.3**	**+3.1**
JANB	**Januaria**	**84.67**	**205**	*e*P	**P**	**02 01 14.3**	**+1.9**
ATAH	**Atahualpa**	**85.60**	**239**	LR	LR	02 39 25.9	
	comp=Z,33nm,18.9s,baz=3.1,slow=36						
QIZ	**Qiongzhong**	**85.69**	**48**	P	**P**	**02 01 17.3**	**-0.3**
QIZ	**Qiongzhong**	**85.69**	**48**	S	**S**	**02 11 54.8**	**+4.6**
QIZ				LR	LR		
	comp=Z,350nm,23.3s						
BDFB	**Brasilia**	**85.87**	**208**	P	**P**	**02 01 21.1**	**+2.6**
	comp=Z,5.7nm,1.1s,baz=30,slow=9.7,SNR=6.1						
BDFB				LR	LR	02 33 26.0	
	comp=Z,99nm,21.9s,baz=296,slow=31						
	comp=Z,5.7nm,1.1s						
BDFB	**Brasilia**	**85.87**	**208**	IAmb	IAmb	02 01 23.6	
	comp=Z,11nm,1.2s						
BDFB	**Brasilia**	**85.87**	**208**	*e*P	**P**	**02 01 21.7**	**+3.3**
ARAG	**Araguaiana, MT**	**86.66**	**212**	*e*P	**P**	**02 01 24.4**	**+2.3**
PALK	**Pallekele**	**86.89**	**79**	LR	LR	02 42 40.6	
	comp=Z,208nm,20.4s,baz=75,slow=37						
PTLB	**Pontes e Lacer**	**88.01**	**219**	P	**P**	**02 01 31.0**	**+2.3**
PTLB				IAmb	IAmb	02 01 34.8	
	comp=Z,8.0nm,1.4s						
PTLB	**Pontes e Lacer**	**88.01**	**219**	*e*P	**P**	**02 01 31.4**	**+2.7**
IPMB	**Ipameri, GO**	**88.19**	**208**	*e*P	**P**	**02 01 32.0**	**+2.4**
PMNB	**Patos De Minas**	**88.43**	**206**	*e*P	**P**	**02 01 33.0**	**+2.3**
SIV	**San Ignacio**	**89.00**	**220**	P	**P**	**02 01 36.4**	**+3.0**
	comp=Z,5.3nm,1.0s,baz=17,slow=4.7,SNR=14						
SIV				LR	LR	02 37 14.4	
	comp=Z,92nm,18.9s,baz=30,slow=33						
	comp=Z,5.3nm,1.0s						
LSZ	**Lusaka**	**89.51**	**135**	LR	LR	02 45 36.4	
	comp=Z,90nm,18.1s,baz=338,slow=38						
NNA	**Nana**	**89.66**	**236**	LR	LR	02 40 13.2	
	comp=Z,35nm,21.0s,baz=340,slow=34						
BBSD	**Serra de San D**	**90.04**	**220**	*e*P	**P**	**02 01 40.4**	**+2.2**
TSUM	**Tsumeb**	**90.73**	**146**	LR	LR	02 44 28.6	
	comp=Z,164nm,18.8s,baz=332,slow=37						
LPAZ	**La Paz**	**91.14**	**227**	LR	LR	02 41 15.9	
	comp=Z,34nm,19.5s,baz=20,slow=35						
AQDB	**Aquidauana**	**92.09**	**214**	IAmb	IAmb	02 01 53.5	
	comp=Z,7.6nm,1.2s						
AQDB	**Aquidauana**	**92.09**	**214**	*e*P	**P**	**02 01 50.8**	**+3.1**
BDQN	**Bodoquena, MS**	**92.29**	**215**	*e*P	**P**	**02 01 51.1**	**+2.5**
LVC	**Limon Verde**	**97.37**	**226**	LR	LR	02 46 29.2	
	comp=Z,26nm,18.8s,baz=0.0,slow=36						
CPUP	**Villa Florida**	**98.11**	**214**	LR	LR	02 42 45.2	
	comp=Z,60nm,18.5s,baz=22,slow=33						
LBTB	**Lobatse**	**98.17**	**140**	LR	LR	02 49 16.9	
	comp=Z,96nm,19.0s,baz=350,slow=37						
TAOE	**Nuku Hiva Isla**	**109.71**	**296**	*e*LR	LR	02 39 30.4	
	comp=Z,239nm,21.8s						
TBI	**Tubuai**	**126.33**	**300**	*e*LR	LR	02 47 12.0	
	comp=Z,798nm,28.8s						
TBI				*e*LR	LR	02 47 12.5	
	comp=Z,2μm,26.8s						
WRA	**Warramunga Arr**	**129.25**	**33**	PKP	**PKiKP**	**02 07 48.1**	**+0.6**
	comp=Z,0.5nm,0.9s,baz=322,slow=2.6,SNR=4.6						
ASAR	**Alice Springs**	**132.77**	**35**	PKP	**PKiKP**	**02 07 54.3**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=333,slow=3.3,SNR=5.5						
DZM	**Mont Dzumac**	**134.18**	**353**	*e*LR	LR	02 50 46.6	
	comp=Z,145nm,23.6s						
BELA	**Belgrano 2**	**145.75**	**186**		**PKiKP**	**02 08 17.5**	**-1.9**
MAW	**Mawson**	**146.41**	**137**	PKPbc	**PKiKP**	**02 08 20.3**	**-0.6**

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*IDC **26** 02:00:08.1±0.7, 7°.75S×107°.88E, h0^{km}, mb4.0/12, mbtmp4.0/12, Error ellipse: s-maj=33.8km s-min=16.8km az=51.0*

*NEIC **26** 02:00:12.6±1.2, 7°.9S±0°.2×107°.8E±0°.1, h26^{km}±6^{km}, mb4.5/9, Error ellipse: s-maj=29.0km s-min=8.0km az=208.0*

*DJA **26** 02:00:15.9±0.6, 8°S±3°×10°8E±°, h18^{km}±3^{km}, M4.4/17, MLv4.4/17*

ISC 26 02:00:12.7±0.6**, 8°.1S**±0°.1×**107°.68E**±0°.07**, h35**^{km}**, n57, σ1**^{s}**25**/52**, mb4.3**/16**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	**Cimerak**	**0.81**	**70**	P	**Pn**	**02 00 29.1**	**+1.5**
CMJI				S	**Sn**	**02 00 37.7**	**-0.7**
CNJI	**Cibinong**	**0.93**	**324**	P	Pn	02 00 35.5	+6.3
KPJI	**Karang Pucung**	**1.44**	**60**	P	**Pn**	**02 00 38.1**	**+1.9**
KPJI				S	**Sn**	**02 00 55.6**	**+1.8**
SKJI	**Sukabumi**	**1.53**	**313**	P	Pn	02 00 45.3	+7.7
SKJI				S	Sn	02 01 06.8	+11
CGJI	**Cibinong**	**2.44**	**306**	P	Pn	02 00 57.9	+7.8
SBJI	**Serang**	**2.47**	**321**	P	Pn	02 00 58.7	+8.3
YOGI	**Yogyakarta**	**2.60**	**85**	P	**Pn**	**02 00 54.1**	**+1.9**
YOGI				S	**Sn**	**02 01 23.2**	**+0.5**
UGM	**Wanagama**	**2.82**	**87**		**Pn**	**02 00 53.8**	**-1.5**
UGM	**Wanagama**	**2.82**	**87**	P	**Pn**	**02 00 56.6**	**+1.3**
SMRI	**Semarang**	**2.92**	**70**	Pn	**Pn**	**02 00 56.4**	**-0.2**
SMRI	**Semarang**	**2.92**	**70**	P	**Pn**	**02 00 58.6**	**+2.0**
UWJI	**Ujung Watu**	**3.63**	**63**	P	**Pn**	**02 01 07.9**	**+1.5**
NGJI	**Ngawi**	**3.81**	**80**	P	**Pn**	**02 01 11.2**	**+2.3**
KASI	**Kota Agung**	**4.05**	**308**	P	Pn	02 01 20.4	+8.3
PWJI	**Pagerwojo**	**4.08**	**90**	P	**Pn**	**02 01 14.2**	**+1.6**
TBJI	**Tambak Boyo**	**4.31**	**74**	P	**Pn**	**02 01 17.2**	**+1.4**
GRJI	**Gresik**	**4.89**	**77**	P	**Pn**	**02 01 24.9**	**+1.1**
JAGI	**Jajag, Banyuwa**	**6.42**	**94**	Pn	**Pn**	**02 01 44.1**	**-0.7**
SOEI	**Soe**	**16.47**	**97**	Pn	**Pn**	**02 04 00.0**	**-1.3**
SOEI				IAmb	IAmb	02 04 16.6	
	comp=Z,22nm,0.6s						
KNRA	**Kununurra**	**21.96**	**112**	P	**P**	**02 05 03.5**	**0.0**
KNRA				IAmb	IAmb	02 05 05.8	
	comp=Z,21nm,1.0s						
MTN	**Manton Dam**	**23.54**	**104**	P	**P**	**02 05 17.4**	**-2.6**
WRA	**Warramunga Arr**	**28.38**	**117**	P	**P**	**02 06 04.0**	**0.0**
	comp=Z,0.2nm,0.4s,baz=290,slow=12,SNR=7.7						
	comp=Z,0.2nm,0.4s						
WRA	**Warramunga Arr**	**28.38**	**117**	P	**P**	**02 06 03.2**	**-0.7**
ASAR	**Alice Springs**	**29.53**	**125**	P	**P**	**02 06 14.9**	**+0.7**
	comp=Z,0.3nm,0.8s,baz=303,slow=8.9,SNR=2.8						
	comp=Z,0.3nm,0.8s						
H08S2	**Diego Garcia H**	**34.85**	**268**	T	T	02 44 06.5	
	baz=92,slow=76,SNR=24						
H08S3	**Diego Garcia H**	**34.86**	**268**	T	T	02 44 10.4	
	baz=92,slow=76,SNR=26						
H08S1	**Diego Carcia H**	**34.87**	**268**	T	T	02 44 08.0	
	baz=92,slow=76,SNR=81						
STKA	**Stephens Creek**	**39.43**	**132**	P	**P**	**02 07 40.9**	**+1.4**
	comp=Z,2.4nm,0.5s,baz=315,slow=8.9,SNR=6.1						
	comp=Z,2.4nm,0.5s						
SONM	**Songino Array**	**55.66**	**359**	P	**P**	**02 09 44.9**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=179,slow=8.5,SNR=7.3						
SONM				PcP	**PcP**	**02 10 44.1**	**-0.5**
	comp=Z,1.5nm,0.6s,baz=181,slow=4.2,SNR=9.5						
	comp=Z,0.7nm,0.5s						
KDJ	**Kajisay**	**57.21**	**333**	P	**P**	**02 09 55.9**	**-0.7**
MK31	**Makanchi Array**	**59.11**	**340**	P	**P**	**02 10 08.1**	**-1.5**
MK31				IAmb	IAmb	02 10 10.2	
	comp=Z,1.4nm,0.5s						
MKAR	**Makanchi Array**	**59.11**	**340**	P	**P**	**02 10 08.6**	**-1.1**
	comp=Z,1.9nm,0.4s,baz=152,slow=7.3,SNR=35						
	comp=Z,1.9nm,0.4s						
MKAR	**Makanchi Array**	**59.11**	**340**	P	**P**	**02 10 08.9**	**-0.7**
ZALV	**Zalesovo Beam**	**64.73**	**345**	P	**P**	**02 10 45.8**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=122,slow=4.6,SNR=3.1						
	comp=Z,0.5nm,0.4s						
GEYT	**Alibeck**	**65.00**	**318**	P	**P**	**02 10 49.8**	**+0.4**
	comp=Z,1.2nm,0.4s,baz=193,slow=6.1,SNR=5.1						
	comp=Z,1.2nm,0.4s						
GEYT	**Alibeck**	**65.00**	**318**	P	**P**	**02 10 49.4**	**0.0**
BVAR	**Borovoye Array**	**68.61**	**337**	P	**P**	**02 11 11.8**	**-0.2**
	comp=Z,1.9nm,0.5s,baz=141,slow=9.2,SNR=19						
	comp=Z,1.9nm,0.5s						
BRVK	**Borovoye**	**68.67**	**337**	P	**P**	**02 11 12.7**	**+0.3**
BRVK				IAmb	IAmb	02 11 13.0	
	comp=Z,1.5nm,0.4s						
ABKAR	**Akbulak array**	**70.67**	**329**	P	**P**	**02 11 24.5**	**-0.2**
ARU	**Arti**	**75.87**	**334**	P	**P**	**02 11 55.1**	**-0.2**
	comp=Z,1.4nm,0.5s,baz=56,slow=5.4,SNR=4.3						
	comp=Z,1.4nm,0.5s						
BOSA	**Boshof**	**79.56**	**242**	P	**P**	**02 12 19.4**	**+2.7**
	comp=Z,1.2nm,0.5s,baz=130,slow=5.6,SNR=10						
	comp=Z,1.2nm,0.5s						
TOKA	**Tokat**	**81.13**	**313**	P	**P**	**02 12 25.3**	**+0.5**
TOKA				IAmb	IAmb	02 12 26.3	
	comp=Z,7.5nm,1.5s						
BR131	**Keskin Array S**	**83.04**	**312**	P	**P**	**02 12 35.2**	**+0.3**
BRTR	**Keskin Array B**	**83.04**	**312**	P	**P**	**02 12 35.4**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=128,slow=6.9,SNR=8.3						
	comp=Z,0.7nm,0.7s						
BRTR	**Keskin Array B**	**83.04**	**312**	P	**P**	**02 12 35.5**	**+0.6**
FINES	**FINESS Array B**	**93.02**	**332**	P	**P**	**02 13 22.2**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=97,slow=7.9,SNR=5.5						
	comp=Z,1.1nm,0.7s						
YKA	**Yellowknife Ar**	**117.62**	**21**	PKP	**PKPdf**	**02 18 53.9**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=344,slow=2.0,SNR=6.4						
TXAR	**Lajitas Array**	**143.74**	**50**	PKP	PKPbc	02 19 43.1	+0.6
	comp=Z,0.2nm,0.5s,baz=244,slow=0.9,SNR=6.7						
R40A	**Maddies Statio**	**144.93**	**28**	PKPdf	**PKPab**	**02 19 44.8**	**-1.0**
U38A	**Gravette**	**145.33**	**32**		**PKPbc**	**02 19 45.7**	**-1.4**
FW03	**Perrin-Whitt E**	**145.57**	**40**	PKPbc	**PKPbc**	**02 19 46.3**	**-1.7**
CCM	**Cathedral Cave**	**145.59**	**27**	PKPbc	**PKPbc**	**02 19 46.9**	**-1.0**
Z35A	**Perchaven, San**	**145.89**	**39**		**PKPdf**	**02 19 46.6**	**-1.8**
JCT	**Junction City**	**145.97**	**45**		**PKPdf**	**02 19 48.1**	**-0.6**
BDFB	**Brasilia**	**146.32**	**226**	PKPbc	**PKPab**	**02 19 52.8**	**+1.2**
	comp=Z,1.2nm,0.4s,baz=108,slow=3.2,SNR=3.7						
T42A	**Van Buren**	**146.50**	**28**	PKPbc	**PKPbc**	**02 19 49.6**	**-1.1**
MIAR	**Mount Ida**	**147.19**	**34**	PKPbc	**PKPbc**	**02 19 51.5**	**-1.2**

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*IDC **26** 02:12:00.7±0.6, 67°.68N×18°.59W, h0^{km}, mb3.8/16, mbtmp3.8/20, ML3.2/4, MS4.1/78, Error ellipse: s-maj=18.5km s-min=12.4km az=29.0*

*REY **26** 02:12:00.5, 67°.75N×18°.24W, h10^{km}*

*NEIC **26** 02:12:01.1±0.9, 67°.90N±0°.07×18°.7W±0°.2, h10^{km}±1^{km}, mb4.3/33, Error ellipse: s-maj=13.6km s-min=10.7km az=243.0*

*GCMT **26** 02:12:01.1±0.2, 68°.11N±0°.03×18°.68W±0°.04, h12^{km}, MW4.9/112, Moment Tensor Solution. s24,c25; s112,c155; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.10±.06; $M_{\theta\theta}$-0.02±.07; $M_{\phi\phi}$2.12±.05; $M_{r\theta}$2.22±.28; $M_{\theta\phi}$0.36±.05; $M_{\phi r}$0.56±.24; Best double couple: $M_0$2.99900×10^{16} NP1:ϕ_s225.00000°,δ67.00000°, λ-61.00000°. NP2:ϕ_s350.00000°,δ36.00000°, λ-139.00000°. Principal axes: T 2.4720, Plg17.0000°, Azm294.0000°; N 1.0510, Plg26.0000°, Azm33.0000°; P -3.5260, Plg58.0000°, Azm175.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DNK **26** 02:12:40.4±0.3, 70°.62N×22°.37W, h18^{km}*

ISC 26 02:12:00.9±0.4**, 67°.68N**±0°.04×**18°.50W**±0°.04**, h10**^{km}**, n192, σ1**^{s}**56**/147**, mb4.2**/42**, MS4.1**/70**, 2D, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGRI	**Grimsey**	**1.16**	**170**	P	**Pb**	**02 12 21.1**	**-1.9**
	baz=176						
IGRI				S	**Sb**	**02 12 36.1**	**-2.1**
	baz=176						
ILEI	**Leirhofn**	**1.51**	**147**	P	**Pn**	**02 12 26.0**	**-1.9**
	baz=152						
ISIG	**Siglufjorour**	**1.57**	**186**	P	**Pn**	**02 12 27.3**	**-1.4**
	baz=190						
ISIG				S	**Sb**	**02 12 49.0**	**-0.8**
	baz=190						
IBRE	**Brettingsstaoi**	**1.58**	**171**	P	**Pn**	**02 12 27.6**	**-1.4**
	baz=175						
IBRE				S	**Sb**	**02 12 49.0**	**-1.3**
	baz=175						
IHED	**Heoinshofoi**	**1.68**	**163**	P	**Pn**	**02 12 28.3**	**-2.0**
	baz=167						
IHRN	**Hraun**	**1.70**	**203**	P	**Pn**	**02 12 29.4**	**-1.3**
	baz=205						
IHRN				S	**Sn**	**02 12 49.7**	**-2.7**
	baz=205						
IHLA	**Hella**	**1.75**	**178**	P	**Pn**	**02 12 30.1**	**-1.1**
	baz=182						
IHLA				S	**Sn**	**02 12 52.8**	**-0.7**
	baz=182						
IGRA	**Granastaoir**	**1.81**	**168**	P	**Pn**	**02 12 30.6**	**-1.5**
	baz=172						
IGRA				S	**Sn**	**02 12 54.0**	**-1.1**
	baz=172						
IGIL	**Gilhagi**	**1.82**	**151**	P	**Pn**	**02 12 30.1**	**-2.1**
	baz=155						
IGIL				S	**Sn**	**02 12 53.6**	**-1.8**
	baz=155						
IDIM	**Dimmadalss**	**1.84**	**159**	P	**Pn**	**02 12 30.5**	**-2.0**
	baz=163						
IDIM				S	**Sn**	**02 12 53.4**	**-2.3**
	baz=163						
ISKI	**Skildingahlsh**	**1.91**	**161**	P	**Pn**	**02 12 31.7**	**-1.8**
	baz=165						
ISKI				S	**Sn**	**02 12 56.9**	**-0.8**
	baz=165						
IGHA	**Grjothals**	**1.99**	**158**	P	**Pn**	**02 12 32.7**	**-1.8**
	baz=161						
IGHA				S	**Sn**	**02 12 58.1**	**-1.4**
	baz=161						
IKVO	**Krokottuvotn**	**2.08**	**161**	P	**Pn**	**02 12 34.9**	**-1.0**
	baz=165						
IREN	**Reynihlio**	**2.14**	**162**	P	**Pn**	**02 12 35.2**	**-1.5**
	baz=165						
IREN				S	**Sn**	**02 13 02.4**	**-0.8**
	baz=165						
IMEL	**Melhnausar**	**2.25**	**160**	P	**Pn**	**02 12 36.9**	**-1.2**
	baz=163						
IMEL				S	**Sn**	**02 13 05.5**	**-0.4**
	baz=163						
IGRS	**Grimsstaoir**	**2.26**	**154**	P	**Pn**	**02 12 36.9**	**-1.4**
	baz=157						
IGRS				S	**Sn**	**02 13 06.1**	**-0.2**
	baz=157						
ISVA	**Svartarkot**	**2.41**	**167**	P	**Pn**	**02 12 39.6**	**-0.8**
	baz=170						
ISVA				S	**Sn**	**02 13 08.5**	**-1.4**
	baz=170						
IMKO	**Mokollar**	**2.85**	**161**	P	**Pn**	**02 12 45.7**	**-0.8**
	baz=164						
THOR	**Thorvaldshraun**	**2.86**	**164**	P	**Pn**	**02 12 46.2**	**-0.4**
	baz=167						
ISTE	**Stelbrattur**	**2.88**	**190**	P	**Pn**	**02 12 47.9**	**+1.0**
	baz=192						
IADA	**Aoalbol**	**2.92**	**155**	P	**Pn**	**02 12 46.5**	**-1.0**
	baz=157						
IURH	**Urdarhals**	**2.93**	**169**	P	**Pn**	**02 12 47.6**	**+0.1**
	baz=171						
IDYN	**Dyngjuhals**	**2.94**	**170**	P	**Pn**	**02 12 47.9**	**+0.1**
	baz=173						
IKRE	**Kreppuhraun**	**3.04**	**163**	P	**Pn**	**02 12 49.0**	**0.0**
	baz=165						
IVON	**Vonarskard**	**3.04**	**174**	P	**Pn**	**02 12 49.5**	**+0.4**
	baz=176						
SCO	**Scoresbysund**	**3.07**	**338**		Pn	02 12 44.1	-5.3
SCO	**Scoresbysund**	**3.07**	**338**	*i* P	**Pn**	**02 12 45.0**	**-4.4**
IVSH	**V-Sauoahnukur**	**3.10**	**157**	P	**Pn**	**02 12 49.2**	**-0.7**
	baz=160						
ISKR	**Skrokkalda**	**3.14**	**179**	P	**Pn**	**02 12 51.3**	**+0.9**
	baz=181						
BORG	**Borgarnes**	**3.16**	**203**	Pn	**Pn**	**02 12 50.8**	**+0.1**
	8.0nm,0.3s,baz=16,slow=6.0,SNR=22						
BORG				LR	LR	02 13 15.2	
	comp=Z,367nm,20.4s,baz=32,slow=24						
BORG				Sn	**Sn**	**02 13 29.8**	**+1.4**
	11nm,0.3s,baz=32,slow=21,SNR=12						
	57nm,0.5s						
IASB	**`sbjarnarst**	**3.16**	**203**	P	**Pn**	**02 12 50.5**	**-0.1**
	baz=204						
IASB				S	**Sn**	**02 13 28.1**	**-0.3**
	baz=204						
IDJK	**Dyngjujokull**	**3.23**	**170**	P	**Pn**	**02 12 52.4**	**+0.5**
	baz=172						
IGRF	**Grimsfjall**	**3.33**	**171**	P	**Pn**	**02 12 54.2**	**+1.1**
	baz=173						
IJOK	**Jokulheimar**	**3.38**	**178**	P	**Pn**	**02 12 55.2**	**+1.5**
	baz=180						
IHUS	**Husbondi**	**3.42**	**174**	P	**Pn**	**02 12 55.5**	**+1.1**
	baz=176						
IVOT	**Vottur**	**3.47**	**170**	P	**Pn**	**02 12 56.1**	**+1.1**
	baz=172						
IKSK	**Karasker**	**3.63**	**166**	P	**Pn**	**02 12 58.0**	**+0.7**
	baz=168						
IHEI	**Heioarbar**	**3.67**	**199**	P	**Pn**	**02 12 58.9**	**+1.2**
	baz=200						
JMIC	**Jan Mayen**	**4.85**	**42**	LR	LR	02 14 31.9	
	comp=Z,1μm,18.9s,baz=268,slow=31						
DBG	**Daneborg**	**6.68**	**356**	*e*P	**Pn**	**02 13 37.0**	**-1.9**
SUMG	**Summit**	**8.35**	**315**	*i* P	**Pn**	**02 14 00.2**	**-1.9**
ILULI	**Ilulissat**	**12.00**	**292**	Pn	**Pn**	**02 14 49.8**	**-1.9**
SFJD	**Kangerlussuaq**	**12.32**	**282**	LR	LR	02 19 06.5	
	comp=Z,1μm,21.6s,baz=51,slow=35						
NBO00	**NORSAR Array S**	**14.20**	**104**	Pn	**Pn**	**02 15 21.2**	**-0.5**
SPITS	**Spitsbergen Ar**	**14.32**	**28**	Pn	**Pn**	**02 15 25.3**	**+2.0**
	baz=227,slow=14						
	19nm,1.0s						
EKA	**Eskdalemuir Ar**	**14.32**	**142**	Pn	**P**	**02 15 28.5**	**-2.2**
	baz=341,slow=11						
EKA				LR	LR	02 20 27.2	
	comp=Z,838nm,20.4s,baz=332,slow=35						
NOA	**NORSAR Array B**	**14.35**	**103**	LR	LR	02 20 08.9	
	comp=Z,560nm,21.4s,baz=310,slow=34						
HFS	**Hagfors**	**15.88**	**103**	Pn	**P**	**02 15 45.4**	**-2.5**
	baz=322,slow=9.1,SNR=1.6						
HFS				LR	LR	02 21 17.9	
	comp=Z,276nm,20.5s,baz=295,slow=35						
	2.9nm,1.1s						
ARCES	**ARCESS Array B**	**15.90**	**63**	LR	LR	02 20 29.5	
	comp=Z,699nm,20.7s,baz=286,slow=32						
FINES	**FINESS Array B**	**19.74**	**87**	P	**Pn**	**02 16 31.3**	**-0.6**
	0.2nm,0.3s,baz=317,slow=10,SNR=8.5						
FINES				LR	LR	02 23 35.2	
	comp=Z,1μm,18.7s,baz=302,slow=35						
	1.9nm,0.6s						
FINES	**FINESS Array B**	**19.74**	**87**	P	**Pn**	**02 16 30.4**	**-1.5**
FRB	**Frobisher Bay**	**20.47**	**283**	P	Pn	02 16 38.9	-1.6
	7.8nm,0.9s,baz=55,slow=9.2,SNR=12						
FRB				LR	LR	02 23 51.9	
	comp=Z,609nm,20.4s,baz=40,slow=35						
	7.8nm,0.9s						
EUNU	**Eureka**	**20.76**	**333**	P	**P**	**02 16 40.3**	**-1.1**
BMRD	**Maredsous**	**20.91**	**135**	*d*P	Pn	02 16 48.1	+2.4
DOU	**Dourbes**	**21.05**	**135**	*d*P	**P**	**02 16 48.8**	**+4.1**
WLF	**Walferdange**	**21.87**	**133**	P	**P**	**02 16 56.9**	**+3.4**
CLL	**Collm**	**22.51**	**121**	P	**P**	**02 17 01.4**	**+1.1**

CLL				IAmb	IAmb	02 17 15.4	
	comp=Z,18nm,1.5s						
CLL	**Collm**	**22.51**	**121**	*i* P	**P**	**02 17 01.1**	**+0.8**
	comp=Z,26nm,1.7s						
CLL				*i* x	x	02 17 07.1	
CLL				*i* x	x	02 17 11.0	
CLL				*e*PPP	PPP	02 17 36.0	
CLL				*e*S	**S**	**02 21 12.0**	**+5.1**
CLL				*e*SSS	SSS	02 21 54.0	
BRG	**Berggiesshubel**	**23.19**	**120**	*e*P	**P**	**02 17 10.5**	**+3.1**
BRG				Amp		02 17 11.9	
	comp=Z,62nm,2.3s						
BRG				Amp		02 27 50.0	
	comp=N,0.2nm,14.1s						
BRG				Amp		02 27 52.0	
	comp=Z,0.7nm,17.3s						
BRG				Amp		02 27 56.0	
	comp=E,0.4nm,15.1s						
STU	**Stuttgart**	**23.54**	**130**	P	**P**	**02 17 13.0**	**+2.0**
STU				IAmb	IAmb	02 17 15.1	
	comp=Z,6.1nm,0.7s						
BFO	**Black Forest**	**23.69**	**131**	P	**P**	**02 17 14.4**	**+1.9**
RES	**Resolute Bay**	**23.82**	**320**	P	**P**	**02 17 14.6**	**+1.1**
	comp=Z,1.2nm,0.8s,baz=62,slow=10,SNR=5.3						
RES				LR	LR	02 26 27.5	
	comp=Z,712nm,18.8s,baz=96,slow=36						
	comp=Z,1.2nm,0.8s						
RES	**Resolute Bay**	**23.82**	**320**	P	**P**	**02 17 12.8**	**-0.6**
RES				IAmb	IAmb	02 17 17.0	
	comp=Z,6.1nm,1.2s						
PRU	**Pruhonice**	**24.14**	**121**	*e*P	**P**	**02 17 18.0**	**+1.3**
DPC	**Dobruska-Polom**	**24.43**	**118**	*e*P	**P**	**02 17 20.3**	**+0.9**
KHC	**Kasperske Hory**	**24.57**	**123**	*e*P	**P**	**02 17 21.0**	**+0.3**
KRLC	**Kraliky**	**24.82**	**118**	*e*P	**P**	**02 17 23.1**	**+0.2**
GEC2	**GERESS Array S**	**24.86**	**123**	P	**P**	**02 17 24.6**	**+1.2**
GEC2				IAmb	IAmb	02 17 28.1	
	comp=Z,10nm,1.2s						
GERES	**GERESS Array B**	**24.86**	**123**	P	**P**	**02 17 24.9**	**+1.5**
	comp=Z,2.1nm,0.8s,baz=323,slow=8.4,SNR=9.4						
GERES				LR	LR	02 27 24.0	
	comp=Z,332nm,19.5s,baz=310,slow=37						
	comp=Z,2.1nm,0.8s						
GERES	**GERESS Array B**	**24.86**	**123**	P	**P**	**02 17 24.6**	**+1.2**
LSH	**Leshukonskoye**	**24.96**	**66**	*e*P	**P**	**02 17 21.7**	**-2.3**
	comp=Z,57nm,2.0s						
DAVA	**Damuels**	**25.08**	**130**	*e*P	**P**	**02 17 27.0**	**+1.6**
	comp=Z,7.6nm,1.3s						
KLMR	**Klimovskoe**	**25.19**	**77**	*e*P	**P**	**02 17 24.5**	**-1.6**
	comp=Z,34nm,1.6s						
KLMR	**Klimovskoe**	**25.19**	**77**	*e*	**P**	**02 17 24.4**	**-1.6**
KLMR				AMP		02 17 31.4	
	comp=Z,31nm,1.5s						
KLMR				LQ	LQ	02 24 22.2	
KLMR				LQ	LQ	02 24 22.2	
KLMR				LR	LR	02 24 58.2	
KLMR				AMP		02 26 13.8	
	comp=Z,1µm,17.7s						
MORC	**Moravsky Berou**	**25.33**	**117**	P	**P**	**02 17 28.9**	**+1.4**
MORC	**Moravsky Berou**	**25.33**	**117**	*e*P	**P**	**02 17 28.6**	**+1.1**
MOTA	**Moosalm**	**25.39**	**128**	*e*P	**P**	**02 17 30.1**	**+1.8**
	comp=Z,7.2nm,1.4s						
VRAC	**Vranov**	**25.41**	**119**	P	**P**	**02 17 30.7**	**+2.5**
	comp=Z,3.5nm,1.0s,baz=310,slow=14,SNR=4.9						
VRAC				LR	LR	02 27 08.9	
	comp=Z,320nm,19.5s,baz=323,slow=36						
	comp=Z,3.5nm,1.0s						
VRAC	**Vranov**	**25.41**	**119**	*e*P	**P**	**02 17 29.5**	**+1.3**
SQTA	**Sankt Quirin**	**25.53**	**128**	*e*P	**P**	**02 17 31.8**	**+2.3**
	comp=Z,7.2nm,1.2s						
DAVOX	**Davos/Dischmat**	**25.54**	**131**	P	**P**	**02 17 31.0**	**+1.4**
	comp=Z,4.5nm,1.2s,baz=330,slow=6.6,SNR=4.8						
DAVOX				LR	LR	02 28 41.0	
	comp=Z,908nm,18.1s,baz=317,slow=39						
	comp=Z,4.5nm,1.2s						
WATA	**Walderalm**	**25.54**	**128**	P	**P**	**02 17 32.2**	**+2.6**
	comp=Z,12nm,1.5s						
KRUC	**Moravsky**	**25.56**	**119**	*e*P	**P**	**02 17 30.5**	**+1.0**
WTTA	**Wattenberg**	**25.62**	**128**	*e*P	**P**	**02 17 32.3**	**+1.9**
	comp=Z,9.3nm,1.3s						
SCHQ	**Schefferville**	**25.75**	**264**	LR	LR	02 27 05.7	
	comp=Z,783nm,18.4s,baz=69,slow=35						
BIOA	**Bad Ischl, Aus**	**25.86**	**125**	*e*P	**P**	**02 17 35.4**	**+3.1**
	comp=Z,8.1nm,1.6s						
MOA	**Molln**	**25.92**	**123**	*e*P	**P**	**02 17 34.3**	**+1.4**
	comp=Z,5.2nm,1.5s						
KBA	**Koelnbreinsper**	**26.31**	**126**	*e*P	**P**	**02 17 37.8**	**+1.2**
	comp=Z,7.3nm,1.5s						
CONA	**Conrad Observa**	**26.36**	**121**	*e*P	**P**	**02 17 39.9**	**+3.0**
	comp=Z,2.8nm,1.1s						
CTI	**Castel Tesino**	**26.72**	**129**	P	**P**	**02 17 42.1**	**+1.8**
CTI				IAmb	IAmb	02 18 05.1	
	comp=Z,12nm,1.3s						
CIMO	**Cimolais**	**26.72**	**128**	P	**P**	**02 17 41.8**	**+1.6**
CIMO				IAmb	IAmb	02 18 05.6	
	comp=Z,12nm,1.4s						
CLUD	**Cludinico**	**26.73**	**127**	P	**P**	**02 17 41.6**	**+1.4**
MYKA	**Terra Mystica**	**26.80**	**126**	*e*P	**P**	**02 17 43.7**	**+2.7**
	comp=Z,7.4nm,1.6s						
SABO	**M.te Sabotino**	**27.37**	**126**	P	**P**	**02 17 47.1**	**+1.1**
SABO				IAmb	IAmb	02 17 59.6	
	comp=Z,5.9nm,1.2s						
OBN	**Obninsk**	**28.11**	**89**	LR	LR	02 28 45.7	
	comp=Z,281nm,18.4s,baz=342,slow=36						
AKASG	**Malin Array Be**	**28.76**	**102**	P	**P**	**02 17 58.5**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=326,slow=8.8,SNR=4.6						
AKASG				LR	LR	02 29 11.0	
	comp=Z,532nm,20.6s,baz=333,slow=36						
	comp=Z,0.6nm,0.5s						
ESDC	**Sonseca Array**	**29.19**	**157**	P	**P**	**02 18 04.5**	**+2.2**
	comp=Z,0.7nm,1.0s,baz=344,slow=8.6,SNR=2.5						
ESDC				LR	LR	02 29 31.1	
	comp=Z,390nm,18.0s,baz=348,slow=36						
	comp=Z,0.7nm,1.0s						
MLR	**Muntele Rosu**	**31.93**	**111**	LR	LR	02 32 23.3	
	comp=Z,448nm,18.1s,baz=324,slow=38						
A36M	**Sachs Harbour**	**32.42**	**326**	P	**P**	**02 18 30.4**	**0.0**
A36M				IAmb	IAmb	02 18 34.3	
	comp=Z,2.6nm,0.9s						
NRIK	**Noril'sk**	**34.26**	**37**	LR	LR	02 33 40.4	
	comp=Z,196nm,19.4s,baz=324,slow=38						
ARU	**Arti**	**35.32**	**69**	LR	LR	02 32 24.2	
	comp=Z,737nm,18.6s,baz=314,slow=35						
VAE	**Valguarnera**	**35.41**	**132**	LR	LR	02 33 15.4	
	comp=Z,222nm,18.7s,baz=332,slow=36						
KEST	**Kesra**	**35.70**	**139**	LR	LR	02 33 44.1	
	comp=Z,278nm,18.5s,baz=252,slow=36						
MDT	**Midelt**	**35.84**	**160**	LR	LR	02 33 07.1	
	comp=Z,176nm,21.0s,baz=6.0,slow=35						
YKA	**Yellowknife Ar**	**36.90**	**310**	P	**P**	**02 19 10.2**	**+1.1**
	comp=Z,0.5nm,0.9s,baz=41,slow=8.5,SNR=9.5						
YKA				PcP	**PcP**	**02 21 31.6**	**+1.4**
	comp=Z,0.3nm,0.7s,baz=41,slow=2.8,SNR=5.2						
YKA				LR	LR	02 33 26.6	
	comp=Z,357nm,20.6s,baz=358,slow=35						
	comp=Z,0.5nm,0.9s						
INK	**Inuvik**	**37.07**	**326**	LR	LR	02 34 09.2	
	comp=Z,198nm,20.9s,baz=8.5,slow=36						
SADO	**Sadowa**	**38.55**	**265**	LR	LR	02 34 45.1	
	comp=Z,584nm,18.4s,baz=76,slow=35						
FFC	**Flin Flon**	**38.92**	**293**	P	**P**	**02 19 25.5**	**-0.8**
FFC				IAmb	IAmb	02 19 29.4	
	comp=Z,6.3nm,1.2s						
TIXI	**Tiksi**	**39.22**	**16**	P	**P**	**02 19 26.8**	**-1.8**
KVAR	**Kislovodsk Arr**	**39.45**	**95**	LR	LR	02 36 40.8	
	comp=Z,175nm,19.1s,baz=272,slow=38						
KBZ	**Khabaz**	**39.72**	**95**	LR	LR	02 36 28.7	
	comp=Z,429nm,18.1s,baz=318,slow=37						
BR131	**Keskin Array S**	**39.73**	**108**	P	**P**	**02 19 34.3**	**+0.9**
BRTR	**Keskin Array B**	**39.73**	**108**	P	**P**	**02 19 35.1**	**+1.7**
	comp=Z,0.2nm,0.6s,baz=321,slow=11,SNR=2.3						
BRTR				LR	LR	02 37 33.8	
	comp=Z,338nm,19.9s,baz=302,slow=39						
	comp=Z,0.2nm,0.6s						
BRTR	**Keskin Array B**	**39.73**	**108**	P	**P**	**02 19 34.3**	**+0.9**
AKTO	**Aktyubinsk**	**39.88**	**76**	LR	LR	02 35 12.9	
	comp=Z,469nm,18.6s,baz=245,slow=35						
ULM	**Lac du Bonnet**	**40.34**	**285**	LR	LR	02 35 44.8	
	comp=Z,522nm,20.1s,baz=42,slow=35						
IDI	**Anoyia**	**40.66**	**120**	LR	LR	02 39 08.3	
	comp=Z,100nm,19.5s,baz=337,slow=40						
ABKAR	**Akbulak array**	**41.56**	**75**	P	**P**	**02 19 48.1**	**-0.1**
AKH	**Akhalkalaki**	**41.94**	**96**	P	**P**	**02 19 52.4**	**+0.8**
BVAR	**Borovoye Array**	**42.18**	**64**	LR	LR	02 36 20.0	
	comp=Z,96nm,19.5s,baz=275,slow=35						
ILAR	**Eielson Array**	**42.83**	**330**	P	**P**	**02 19 59.5**	**+1.2**
	comp=Z,1.0nm,1.1s,baz=23,slow=6.7,SNR=5.5						
ILAR				LR	LR	02 40 40.2	
	comp=Z,180nm,18.6s,baz=28,slow=40						
	comp=Z,1.0nm,1.1s						
IMAR	**Indian Mountai**	**42.93**	**335**	P	**P**	**02 19 58.0**	**-1.1**
H21K	**Melozitna Rive**	**43.07**	**334**	P	**P**	**02 19 60.0**	**-0.4**
H21K				IAmb	IAmb	02 20 03.1	
	comp=Z,7.0nm,1.4s						
GNI	**Garni**	**43.50**	**96**	LR	LR	02 39 04.8	
	comp=Z,432nm,18.2s,baz=328,slow=37						
GNI	**Garni**	**43.50**	**96**	P	**P**	**02 20 04.9**	**+0.6**
GNI				IAmb	IAmb	02 20 07.9	
	comp=Z,9.4nm,1.4s						
DLBC	**Dease Lake**	**44.58**	**316**	LR	LR	02 39 01.8	
	comp=Z,431nm,18.6s,baz=84,slow=36						
ZAA0	**Zalesovo Array**	**46.10**	**53**	P	**P**	**02 20 23.9**	**-0.6**
ZALV	**Zalesovo Beam**	**46.10**	**53**	PcP	**PcP**	**02 22 02.0**	**+1.5**
	comp=Z,1.0nm,0.6s,baz=331,slow=5.8,SNR=5.4						
ZALV	**Zalesovo Beam**	**46.10**	**53**	P	**P**	**02 20 23.1**	**-1.4**
MMAI	**Mount Meron Ar**	**46.35**	**110**	LR	LR	02 41 48.4	
	comp=Z,128nm,19.5s,baz=72,slow=38						
TKL	**Tuckaleechee C**	**48.20**	**263**	LR	LR	02 40 26.9	
	comp=Z,842nm,18.9s,baz=29,slow=35						
SIUC	**Southern Illin**	**48.47**	**269**	P	**P**	**02 20 41.8**	**-1.5**
YAK	**Yakutsk**	**48.55**	**19**	LR	LR	02 40 31.0	
	comp=Z,67nm,19.5s,baz=271,slow=35						
EIL	**Elat**	**49.23**	**113**	LR	LR	02 43 26.0	
	comp=Z,58nm,18.3s,baz=314,slow=38						
NEW	**Newport**	**49.51**	**300**	LR	LR	02 42 00.7	
	comp=Z,554nm,19.4s,baz=31,slow=36						
BBB	**Bella Bella**	**49.51**	**310**	LR	LR	02 42 11.9	
	comp=Z,208nm,18.4s,baz=40,slow=37						
MSO	**Missoula**	**49.68**	**296**	P	**P**	**02 20 52.3**	**-0.2**
MSO				IAmb	IAmb	02 20 59.8	
	comp=Z,3.7nm,0.9s						
BOZ	**Bozeman (W)**	**49.95**	**294**	P	**P**	**02 20 55.0**	**+0.3**
BOZ				IAmb	IAmb	02 20 57.7	
	comp=Z,4.8nm,1.2s						
KDAK	**Kodiak Island**	**50.35**	**330**	LR	LR	02 45 59.6	
	comp=Z,190nm,19.6s,baz=75,slow=40						
GEYT	**Alibeck**	**50.53**	**85**	LR	LR	02 43 22.7	
	comp=Z,506nm,21.0s,baz=348,slow=37						
GEYT	**Alibeck**	**50.53**	**85**	P	**P**	**02 20 59.4**	**+0.4**
MK31	**Makanchi Array**	**51.51**	**60**	P	**P**	**02 21 06.0**	**-0.3**
MKAR	**Makanchi Array**	**51.51**	**60**	P	**P**	**02 21 07.8**	**+1.5**
	comp=Z,0.6nm,0.9s,baz=332,slow=7.5,SNR=5.0						
MKAR				LR	LR	02 42 54.4	
	comp=Z,178nm,19.0s,baz=294,slow=36						
	comp=Z,0.6nm,0.9s						
MKAR	**Makanchi Array**	**51.51**	**60**	P	**P**	**02 21 06.3**	**0.0**
BW06	**Boulder Array**	**51.68**	**290**	P	**P**	**02 21 07.8**	**0.0**
BW06				IAmb	IAmb	02 21 30.2	
	comp=Z,3.2nm,1.2s						
PD31	**Pinedale Array**	**51.68**	**290**	P	**P**	**02 21 08.1**	**+0.3**
PDAR	**Pinedale Array**	**51.68**	**290**	P	**P**	**02 21 09.2**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=55,slow=7.8,SNR=5.9						
PDAR				LR	LR	02 42 50.3	
	comp=Z,398nm,18.8s,baz=32,slow=36						
	comp=Z,0.6nm,0.8s						
AAK	**Ala-Archa**	**52.48**	**68**	LR	LR	02 42 57.8	
	comp=Z,308nm,18.2s,baz=330,slow=35						
AAK	**Ala-Archa**	**52.48**	**68**	P	**P**	**02 21 14.3**	**+0.6**
BBTS	**Babate**	**53.00**	**178**	LR	LR	02 39 04.2	
	comp=Z,148nm,21.2s,baz=335,slow=31						
SRU	**San Rafael Swe**	**55.24**	**289**	P	**P**	**02 21 33.0**	**-1.0**
SRU				IAmb	IAmb	02 21 39.2	
	comp=Z,4.2nm,1.3s						
PV01	**Paradox Valley**	**55.39**	**287**	P	**P**	**02 21 35.0**	**-0.2**
PV01				IAmb	IAmb	02 22 00.6	
	comp=Z,5.6nm,1.4s						
ELK	**Elko**	**55.47**	**294**	LR	LR	02 45 26.6	
	comp=Z,600nm,19.2s,baz=31,slow=36						
FW06	**Azle**	**55.84**	**274**	P	**P**	**02 21 38.5**	**+0.4**
FW06				IAmb	IAmb	02 21 43.4	
	comp=Z,5.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**56.08**	**156**	LR	LR	02 45 37.8	
	comp=Z,82nm,18.9s,baz=3.5,slow=36						
SPR3	**Spring Creek 3**	**56.70**	**292**	P	**P**	**02 21 43.6**	**-1.0**
SPR3				IAmb	IAmb	02 21 49.5	
	comp=Z,5.5nm,1.2s						
YBH	**Yreka Blue Hor**	**57.13**	**300**	LR	LR	02 47 19.5	
	comp=Z,304nm,20.2s,baz=14,slow=37						
ANMO	**Albuquerque**	**57.44**	**283**	LR	LR	02 45 53.6	
	comp=Z,404nm,20.5s,baz=132,slow=35						
SONM	**Songino Array**	**57.61**	**41**	P	**P**	**02 21 53.1**	**+2.4**
	comp=Z,0.5nm,1.0s,baz=42,slow=2.4,SNR=3.6						
SONM				LR	LR	02 48 06.3	
	comp=Z,159nm,20.9s,baz=348,slow=38						
	comp=Z,0.5nm,1.0s						
SJG	**San Juan**	**57.98**	**236**	LR	LR	02 42 36.8	
	comp=Z,78nm,22.0s,baz=90,slow=32						
NVAR	**Mina Array Bea**	**58.60**	**295**	LR	LR	02 47 36.0	
	comp=Z,631nm,19.8s,baz=15,slow=36						
NVAR	**Mina Array Bea**	**58.60**	**295**	P	**P**	**02 21 57.2**	**-0.6**
PETK	**Petropavlovsk-**	**59.50**	**3**	LR	LR	02 46 50.3	
	comp=Z,64nm,20.9s,baz=27,slow=35						
KLR	**Kul'dur**	**61.28**	**22**	LR	LR	02 49 02.4	
	comp=Z,81nm,18.9s,baz=344,slow=36						
TXAR	**Lajitas Array**	**61.41**	**278**	P	**P**	**02 22 18.4**	**+1.3**
	comp=Z,0.7nm,1.1s,baz=58,slow=4.7,SNR=4.0						
TXAR				LR	LR	02 48 55.4	
	comp=Z,430nm,18.1s,baz=27,slow=36						
	comp=Z,0.7nm,1.1s						
TXAR	**Lajitas Array**	**61.41**	**278**	P	**P**	**02 22 16.7**	**-0.4**
DBIC	**Dimbokro**	**61.62**	**165**	LR	LR	02 49 33.3	
	comp=Z,115nm,18.6s,baz=7.0,slow=37						
PFO	**Pinyon Flats O**	**62.28**	**291**	LR	LR	02 49 25.2	
	comp=Z,243nm,21.4s,baz=42,slow=36						
WSAR	**Wadi Sarin**	**63.84**	**93**	LR	LR	02 53 27.4	
	comp=Z,79nm,19.8s,baz=2.0,slow=39						
PCRV	**Puerto La Cruz**	**64.99**	**232**	LR	LR	02 47 43.7	
	comp=Z,79nm,20.3s,slow=33						
BJT	**Baijiatuau**	**67.31**	**36**	P	**P**	**02 22 55.1**	**-0.3**
SDV	**Santo Domingo**	**68.07**	**237**	LR	LR	02 48 14.9	
	comp=Z,86nm,22.0s,baz=26,slow=32						
LPIG	**La Paz**	**68.64**	**281**	LR	LR	02 53 27.5	
	comp=Z,279nm,19.8s,baz=7.0,slow=36						
CMIG	**Matias Romero**	**69.15**	**264**	LR	LR	02 54 33.3	
	comp=Z,90nm,21.1s,baz=26,slow=37						
JTS	**Las Juntas de**	**71.69**	**252**	LR	LR	02 52 47.2	
	comp=Z,70nm,21.6s,baz=23,slow=34						
KSRS	**Korea Array**	**72.16**	**28**	LR	LR	02 56 21.2	
	comp=Z,51nm,19.3s,baz=325,slow=37						
ROSC	**El Rosal**	**73.06**	**240**	LR	LR	02 52 29.2	
	comp=Z,76nm,19.9s,baz=44,slow=33						
MJAR	**Matsushiro Arr**	**74.61**	**19**	P	**P**	**02 23 41.2**	**+1.3**
	comp=Z,2.8nm,1.0s,baz=351,slow=5.8,SNR=5.0						
	comp=Z,2.8nm,1.0s						
MBAR	**Mbarara**	**76.13**	**129**	LR	LR	02 58 29.4	
	comp=Z,57nm,21.7s,baz=344,slow=37						
BRDH	**Bariadhala**	**76.54**	**63**	LR	LR	02 59 44.0	
	comp=Z,162nm,18.6s,baz=234,slow=37						
JNU	**Nakatsue**	**76.89**	**26**	LR	LR	02 58 24.1	
	comp=Z,97nm,18.8s,baz=328,slow=36						
CMAR	**Chiang Mai Arr**	**82.89**	**58**	P	**P**	**02 24 26.2**	**+0.6**
	comp=Z,1.3nm,0.3s,baz=327,slow=5.1,SNR=5.2						
	comp=Z,1.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**82.89**	**58**	P	**P**	**02 24 24.7**	**-0.9**
PALK	**Pallekele**	**86.81**	**79**	LR	LR	03 05 50.7	
	comp=Z,142nm,20.7s,baz=70,slow=37						
SIV	**San Ignacio**	**89.00**	**221**	LR	LR	03 01 03.2	
	comp=Z,71nm,18.5s,baz=88,slow=33						
LSZ	**Lusaka**	**89.38**	**135**	LR	LR	03 08 49.2	
	comp=Z,81nm,18.2s,baz=10.0,slow=38						
TSUM	**Tsumeb**	**90.60**	**146**	LR	LR	03 06 31.4	
	comp=Z,112nm,18.7s,baz=146,slow=36						
LPAZ	**La Paz**	**91.15**	**227**	LR	LR	03 04 16.4	
	comp=Z,22nm,20.6s,baz=37,slow=34						
LVC	**Limon Verde**	**97.37**	**226**	LR	LR	03 08 10.2	
	comp=Z,24nm,20.0s,baz=351,slow=35						
CPUP	**Villa Florida**	**98.09**	**215**	LR	LR	03 06 33.2	
	comp=Z,40nm,18.2s,baz=38,slow=33						
WRA	**Warramunga Arr**	**129.28**	**34**	PKP	**PKiKP**	**02 31 09.9**	**+0.2**
	comp=Z,0.4nm,0.9s,baz=318,slow=2.3,SNR=2.2						
ASAR	**Alice Springs**	**132.78**	**35**	PKP	**PKiKP**	**02 31 16.8**	**0.0**
	comp=Z,0.5nm,1.1s,baz=354,slow=2.4,SNR=4.1						

IDC ***26*** *02:27:20.4±7.5, 6.°65N×76.°41W, h89^{km}±79^{km}, mb3.3/1, mbtmp3.9/2, ML3.1/1, Error ellipse: s-maj=111.4km s-min=38.3km az=73.0*

RSNC ***26*** *02:27:22.4±1.2, 6.°81N×73.°16W, h152^{km}±6^{km}, ML3.4, Mw3.7*

ISC 26 02:27:21.7±1.0**, 6.°83N**±0.°03×**73.°16W**±0.°04**, h150**^{km}**, n33,** σ**2.^{s}13**/61**, 1C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23**	**186**	⇓*i*P	**Pn**	**02 27 42.9**	**+0.5**
BARC				*e*S	**Sn**	**02 27 58.4**	**+0.3**
BARC				*i*		02 28 00.7	
	comp=Z,589nm,0.3s						
BRRC	**Barranca, Sant**	**0.62**	**297**	⇓*i*P	**Pn**	**02 27 44.7**	**+1.1**
BRRC				*e*S	**Sn**	**02 28 02.0**	**+1.6**
BRRC				*i*		02 28 04.5	
	comp=Z,210nm,0.4s						
PAMC	**Pamplona, Colo**	**0.68**	**42**	⇑*i*P	**Pn**	**02 27 45.6**	**+1.0**
PAMC				*e*S	**Sn**	**02 28 02.8**	**+0.6**
PAMC				*i*		02 28 04.1	
	comp=Z,187nm,0.2s						
RUSC	**La Rusia**	**0.93**	**175**	*e*P	**Pn**	**02 27 46.7**	**+0.2**
RUSC				*e*S	**Sn**	**02 28 05.7**	**+0.3**
RUSC				*i*		02 28 08.4	
	comp=Z,229nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.32**	**258**	*e*P	**Pn**	**02 27 49.3**	**-0.1**
PTBC				*e*S	**Sn**	**02 28 10.6**	**0.0**
PTBC				*i*		02 28 18.3	
	comp=Z,483nm,0.5s						
SPBC	**San Pablo de B**	**1.48**	**218**	*e*P	**Pn**	**02 27 51.7**	**+0.6**
SPBC				*e*S	**Sn**	**02 28 13.8**	**+0.1**
SPBC				*i*		02 28 20.4	
	comp=Z,492nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.81**	**292**	*e*P	**Pn**	**02 27 55.5**	**+0.8**
ZARC				*e*S	**Sn**	**02 28 20.8**	**+0.8**
ZARC				*i*		02 28 27.5	
	comp=Z,315nm,0.5s						
NORC	**Norcasia**	**2.11**	**234**	*e*P	**Pn**	**02 27 58.4**	**+0.2**
NORC				*e*S	**Sn**	**02 28 26.9**	**+0.7**
NORC				*i*		02 28 30.6	
	comp=Z,251nm,0.3s						
CHIC	**Chingaza**	**2.26**	**195**	*e*P	**Pn**	**02 28 00.9**	**+0.6**
CHIC				*e*S	**Sn**	**02 28 31.3**	**+1.4**
CHIC				*i*		02 28 40.1	
	comp=Z,108nm,0.8s						
ROSC	**El Rosal**	**2.29**	**210**	P	**Pn**	**02 28 02.7**	**+2.0**
	comp=Z,70nm,0.3s,baz=308,slow=19,SNR=95						
ROSC				S	**Sn**	**02 28 36.1**	**+5.6**
	comp=Z,258nm,0.5s,baz=13,slow=18,SNR=7.0						
	comp=Z,168nm,0.3s						
HELC	**Santa Helena**	**2.44**	**255**	*e*P	**Pn**	**02 28 04.3**	**+1.9**
HELC				*e*S	**Sn**	**02 28 33.2**	**-0.5**
HELC				*i*		02 28 41.9	
	comp=Z,203nm,0.4s						
VILC	**Villavicencio,**	**2.75**	**191**	*e*P	**Pn**	**02 28 06.2**	**+0.2**
VILC				*e*S	**Sn**	**02 28 41.8**	**+1.5**
VILC				*i*		02 28 56.5	
	comp=Z,137nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.80**	**159**	⇓*i*P	**Pn**	**02 28 05.8**	**-0.8**
PTGC				*e*S	**Sn**	**02 28 38.9**	**-2.4**
PTGC				*i*		02 28 39.9	
	comp=Z,72nm,0.3s						
CBOC	**Ciudad Bolivar**	**2.99**	**252**	*e*P	**Pn**	**02 28 10.6**	**+1.5**
CBOC				*e*S	**Sn**	**02 28 43.5**	**-2.2**
CBOC				*i*		02 28 52.3	
	comp=Z,55nm,0.5s						
DBBC	**Dabeiba**	**3.04**	**274**	*e*P	**Pn**	**02 28 10.4**	**+0.9**
DBBC				*e*S	**Sn**	**02 28 45.6**	**-0.9**
DBBC				*i*		02 28 54.3	
	comp=Z,52nm,0.3s						
ARGC	**Ariguani, Magd**	**3.20**	**340**	*e*P	**Pn**	**02 28 12.7**	**+1.1**
ARGC				*e*S	**Sn**	**02 28 51.2**	**+0.9**
ARGC				*i*		02 28 55.3	
	comp=Z,38nm,0.3s						
ANIL	**Santa Ana**	**3.22**	**224**	*e*P	**Pn**	**02 28 14.2**	**+2.0**
ANIL				*e*S	**Sn**	**02 28 51.8**	**+0.6**
ANIL				*i*		02 29 02.6	
	comp=Z,263nm,0.3s						
PRAC	**Prado**	**3.54**	**209**	*e*P	**Pn**	**02 28 15.9**	**-0.1**
PRAC				*e*S	**Sn**	**02 28 56.9**	**-1.3**
PRAC				*i*		02 29 07.6	
	comp=Z,101nm,0.8s						
APAC	**Apartado, Choc**	**3.56**	**288**	*e*P	**Pn**	**02 28 16.8**	**+0.6**
APAC				*e*S	**Sn**	**02 28 59.0**	**+0.6**
APAC				*i*		02 29 01.6	
	comp=Z,38nm,0.4s						
ORTC	**Ortega, Tolima**	**3.57**	**216**	*e*P	**Pn**	**02 28 17.3**	**+0.9**
ORTC				*e*S	**Sn**	**02 28 58.6**	**-0.2**
ORTC				*i*		02 29 06.8	
	comp=Z,74nm,0.4s						
PLMC	**San Jos del P**	**3.65**	**239**	*e*P	**Pn**	**02 28 18.4**	**+1.0**
PLMC				*e*S	**Sn**	**02 28 56.2**	**-4.5**
SJCC	**San Jacinto, C**	**3.65**	**327**	*e*P	**Pn**	**02 28 16.7**	**-0.7**
SJCC				*e*S	**Sn**	**02 28 57.7**	**-3.0**
CRJC	**Cerrejon, Guaj**	**4.18**	**4**	*e*P	**Pn**	**02 28 23.1**	**-1.3**
CRJC				*e*S	**Sn**	**02 29 11.5**	**-1.6**
CRJC				*i*		02 29 18.1	
	comp=Z,51nm,0.1s						
YOTC	**Yotoco, Valle**	**4.25**	**228**	*e*P	**Pn**	**02 28 25.7**	**+0.4**
YOTC				*e*S	**Sn**	**02 29 06.4**	**-8.4**
GUVC	**San Jose del G**	**4.29**	**173**	*e*S	**Sn**	**02 29 14.3**	**-1.3**
SMRC	**Santa Marta, M**	**4.44**	**346**	*e*P	**Pn**	**02 28 27.9**	**+0.3**
SMRC				*e*S	**Sn**	**02 29 16.3**	**-2.8**
MACC	**Macarena, Meta**	**4.70**	**188**	*e*P	**Pn**	**02 28 29.4**	**-1.8**
MACC				*e*S	**Sn**	**02 29 20.7**	**-4.7**
BETC	**Betania**	**4.70**	**209**	*e*P	**Pn**	**02 28 30.6**	**-0.7**
BETC				*i*		02 29 35.9	
	comp=Z,15nm,0.5s						
URIC	**Uribia, Colomb**	**4.98**	**13**	*e*P	**Pn**	**02 28 33.1**	**-1.8**
URIC				*e*S	**Sn**	**02 29 27.9**	**-4.0**
GARC	**Garzon, Huila**	**5.16**	**207**	*e*P	**Pn**	**02 28 36.7**	**-0.9**
GARC				*e*S	**Sn**	**02 29 33.3**	**-3.4**
BBAC	**Balboa, Cauca**	**6.28**	**221**	*e*P	**Pn**	**02 28 53.7**	**+1.4**
YKA	**Yellowknife Ar**	**63.25**	**340**	P	**P**	**02 37 33.2**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=133,slow=6.8,SNR=14						
	comp=Z,0.4nm,0.6s						
WRA	**Warramunga Arr**	**150.31**	**241**	PKPbc	**PKPdf**	**02 46 54.1**	**+3.3**
	comp=Z,0.1nm,0.4s,baz=110,slow=2.6,SNR=7.9						

RSPR 26 02:29:38.7, 18.°00N×67.°00W, h17^{km}±3^{km}**, 2C-2D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLPR	**Magueyes Islan**	**0.05**	**230**	⇑*e*P	Pg	02 29 41.9	+0.1
MLPR	**Magueyes Islan**	**0.05**	**230**	*e*S	Sg	02 29 44.3	+0.5
CRPR	**Cabo Rojo, PR**	**0.10**	**273**	⇓*e*P	Pg	02 29 42.0	-0.3
CRPR	**Cabo Rojo, PR**	**0.10**	**273**	*e*S	Sg	02 29 44.5	-0.1
LSP	**Las Mesas**	**0.19**	**336**	⇑*e*P	Pg	02 29 43.2	-0.2
LSP	**Las Mesas**	**0.19**	**336**	*e*S	Sb	02 29 47.0	-0.3
CELP	**Cerrillos**	**0.41**	**80**	⇓*e*P	Pg	02 29 47.1	0.0
CELP	**Cerrillos**	**0.41**	**80**	*e*S	Sg	02 29 52.3	-0.5

WEL 26 02:32:50.1±0.4**, 42°S**±2°×**17°4E**±°**, h12**^{km}**, M2.5**/7**, ML2.8**/11**, MLv2.5**/7**, Error ellipse: s-maj=0.0km s-min=0.0km az=95.4, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.13**	**199**	P	Pb	02 32 54.1	-0.3
KHZ				S	Sg	02 32 57.0	+1.5
BSWZ	**Blackbirch Sta**	**0.62**	**20**	P	Pg	02 33 02.4	+0.3
BSWZ				S	Sb	02 33 11.0	-0.4
THZ	**Tophouse**	**0.74**	**316**	P	Pg	02 33 04.4	0.0
THZ				S	Sg	02 33 14.3	+0.2
GVZ	**Greta Valley S**	**0.79**	**211**	P	Pn	02 33 07.2	+0.1
GVZ				S	Sn	02 33 19.8	+1.1
TUWZ	**Tuamarina**	**0.91**	**17**	P	Pb	02 33 07.7	0.0
TUWZ				S	Sb	02 33 20.3	+0.6
LTZ	**Lake Taylor**	**1.09**	**243**	P	Pb	02 33 11.0	0.0
NNZ	**Nelson**	**1.09**	**351**	P	Pb	02 33 10.6	-0.3
MRNZ	**Matariki Terra**	**1.09**	**325**	P	Pg	02 33 11.0	-0.1
MRNZ				S	Sn	02 33 26.7	+0.4
TCW	**Tory Channel**	**1.20**	**25**	P	Pn	02 33 12.6	-0.1
TKNZ	**Takaka Hill**	**1.35**	**339**	P	Pb	02 33 15.2	-0.1
DSZ	**Denniston Nort**	**1.44**	**292**	P	Pg	02 33 17.5	-0.2
DUWZ	**D'Urville Isla**	**1.51**	**9**	P	Pn	02 33 17.6	+0.5
OXZ	**Oxford**	**1.54**	**228**	P	Pn	02 33 16.9	-0.5
MQZ	**McQueen's Vall**	**1.57**	**206**	P	Pn	02 33 17.1	-0.6
MQZ				S	Sn	02 33 37.9	0.0
INZ	**Inchbonnie**	**1.65**	**254**	P	Pb	02 33 20.1	-0.2
PAWZ	**Paruwai Farm**	**1.65**	**57**	P	Pn	02 33 17.9	-1.0
AKCZ	**Akaroa Harbour**	**1.65**	**197**	P	Pn	02 33 18.9	-0.1
QRZ	**Quartz Range**	**1.67**	**331**	P	Pb	02 33 20.8	-0.1
KIW	**Kapiti Island**	**1.74**	**35**	P	Pn	02 33 20.7	+0.6
TRWZ	**Traveller**	**1.80**	**61**	P	Pn	02 33 19.1	-1.9

IDC 26 02:37:02.7±2.5**, 2.°22S**×**134.°20E, h0**^{km}**, mb3.1**/2**, mbtmp3.2**/4**, ML3.0**/2**, Error ellipse: s-maj=61.8km s-min=25.6km az=59.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.23**	**295**	Pn	Pn	02 37 56.3	+1.6
	3.8nm,0.3s,baz=234,slow=23,SNR=14						
SIJI				Sn	Sn	02 38 35.5	+1.7
	2.8nm,0.3s,baz=328,slow=23,SNR=5.7						
	11nm,0.2s						
WRA	**Warramunga Arr**	**17.61**	**180**	P	Pn	02 41 09.9	+0.2
	baz=355,slow=12,SNR=2.0						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**21.32**	**181**	P	P	02 41 51.4	0.0
	0.5nm,0.7s,baz=4.9,slow=13,SNR=4.3						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**66.70**	**324**	P	P	02 47 54.9	-0.7
	0.2nm,0.6s,baz=134,slow=5.5,SNR=2.2						
	0.2nm,0.6s						

NIC 26 02:56:49.8±0.0**, 34°.68N**×**32°.18E, h30**^{km}**, Ml1.7**/5**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NATA	**Nata**	**0.34**	**72**	P	Pb	02 56 57.9	+0.1
NATA				S	Sn	02 57 04.3	-0.3
NATA				AML	AML	02 57 04.9	
	1.1nm,0.2s						
NATA				AML	AML	02 57 04.9	
	1.1nm,0.2s						
NATA				AML	AML	02 57 05.7	
	0.7nm,0.2s						
NATA				AML	AML	02 57 05.7	
	0.7nm,0.2s						
AKMS	**Akamas**	**0.36**	**20**	P	Pb	02 56 58.1	-0.1
AKMS				AML	AML	02 57 05.2	
	0.2nm,0.2s						
AKMS				AML	AML	02 57 05.2	
	0.2nm,0.2s						
AKMS				S	Sn	02 57 05.2	0.0
AKMS				AML	AML	02 57 07.2	
	0.3nm,0.2s						
AKMS				AML	AML	02 57 07.2	
	0.3nm,0.2s						
SZAC	**Souni**	**0.58**	**82**	P	Pn	02 57 01.9	-0.2
SZAC				S	Sn	02 57 10.8	+0.2
SZAC				AML	AML	02 57 15.3	
	0.1nm,0.4s						
SZAC				AML	AML	02 57 15.3	
	0.1nm,0.4s						
SZAC				AML	AML	02 57 18.8	
	0.2nm,0.5s						
SZAC				AML	AML	02 57 18.8	
	0.2nm,0.5s						
ALFC	**Alefka**	**0.59**	**36**	P	Pb	02 57 01.9	+0.2
ALFC				S	Sn	02 57 10.9	+0.1
ALFC				AML	AML	02 57 12.6	
	0.2nm,0.6s						
ALFC				AML	AML	02 57 12.6	
	0.2nm,0.6s						
ALFC				AML	AML	02 57 13.5	
	0.2nm,0.5s						
ALFC				AML	AML	02 57 13.5	
	0.2nm,0.5s						
TROD	**Troodos**	**0.63**	**64**	P	Pb	02 57 01.7	-0.7
TROD				AML	AML	02 57 11.9	
TROD				AML	AML	02 57 11.9	
TROD				S	Sn	02 57 12.2	+0.3
TROD				AML	AML	02 57 13.1	
	0.1nm,0.3s						
TROD				AML	AML	02 57 13.1	
	0.1nm,0.3s						
CSS	**Mathiatis**	**0.99**	**73**	S	Sb	02 57 21.1	0.0

NIC 26 02:57:40.2±0.0**, 34°.62N**×**32°.19E, h21**^{km}±2^{km}**, Ml2.3**/8**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NATA	**Nata**	**0.35**	**64**	P	Pb	02 57 48.0	+0.3
NATA				S	Sb	02 57 54.0	+1.2
NATA				AML	AML	02 58 00.0	
	3.3nm,0.5s						
NATA				AML	AML	02 58 00.0	
	3.3nm,0.5s						
NATA				AML	AML	02 58 01.8	
	4.3nm,0.8s						
NATA				AML	AML	02 58 01.8	
	4.3nm,0.8s						
AKMS	**Akamas**	**0.41**	**17**	P	Pb	02 57 49.0	+0.3
AKMS				S	Sb	02 57 55.5	+0.9
AKMS				AML	AML	02 57 57.6	
	1.3nm,0.3s						
AKMS				AML	AML	02 57 57.6	
	1.3nm,0.3s						
AKMS				AML	AML	02 57 58.0	
	1.2nm,0.2s						
AKMS				AML	AML	02 57 58.0	
	1.2nm,0.2s						
SZAC	**Souni**	**0.59**	**77**	P	Pb	02 57 52.2	+0.3
SZAC				S	Sb	02 58 00.9	+1.0
SZAC				AML	AML	02 58 08.9	
	1.0nm,0.6s						
SZAC				AML	AML	02 58 08.9	
	1.0nm,0.6s						
SZAC				AML	AML	02 58 10.3	
	0.9nm,0.6s						
SZAC				AML	AML	02 58 10.3	
	0.9nm,0.6s						
ALFC	**Alefka**	**0.63**	**32**	P	Pb	02 57 52.7	0.0
ALFC				S	Sn	02 58 02.8	-0.6
ALFC				AML	AML	02 58 04.0	
	0.6nm,0.4s						
ALFC				AML	AML	02 58 04.0	
	0.6nm,0.4s						
ALFC				AML	AML	02 58 07.9	
	0.6nm,0.4s						
ALFC				AML	AML	02 58 07.9	
	0.6nm,0.4s						
TROD	**Troodos**	**0.65**	**60**	P	Pb	02 57 52.3	-0.7
TROD				S	Sb	02 58 01.5	-0.2
TROD				AML	AML	02 58 10.6	
	0.3nm,0.6s						
TROD				AML	AML	02 58 10.6	
	0.3nm,0.6s						
TROD				AML	AML	02 58 11.2	
	0.3nm,0.4s						
TROD				AML	AML	02 58 11.2	
	0.3nm,0.4s						
ASGA	**Asgata**	**0.89**	**79**	P	Pn	02 57 57.9	+0.4
ASGA				S	Sn	02 58 10.6	+0.9
ASGA				AML	AML	02 58 13.0	
	0.2nm,0.4s						
ASGA				AML	AML	02 58 13.0	
	0.2nm,0.4s						
ASGA				AML	AML	02 58 15.0	
	0.3nm,0.6s						
ASGA				AML	AML	02 58 15.0	
	0.3nm,0.6s						
CSS	**Mathiatis**	**1.00**	**70**	P	Pn	02 58 00.1	+1.1
CSS				AML	AML	02 58 18.6	
	0.1nm,0.7s						
CSS				AML	AML	02 58 26.1	
	0.1nm,0.7s						
MVOU	**Mavrovouni**	**1.25**	**71**	P	Pn	02 58 01.9	-0.6
MVOU				AML	AML	02 58 30.7	
	0.1nm,0.7s						

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*IDC **26** 03:05:10.4±2.5, 18°.70N×145°.88E, h138^{km}±25^{km}, mb3.3/12, mbtmp3.7/14, Error ellipse: s-maj=27.3km s-min=13.2km az=87.0*

ISC 26 03:05:11.0±0.7**, 18°.68N**±0°.07×**145°.9E**±0°.2**, h145**^{km}**, n20,** σ**0^s.62**/15**, mb3.5**/12**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.16**	**191**	P	**Pn**	**03 06 26.0**	**-0.4**
	14nm,0.3s,baz=43,slow=6.1,SNR=5.4						
GUMO				S	**Sn**	**03 07 25.3**	**+0.1**
	20nm,0.3s,baz=28,slow=20,SNR=1.4						
MJAR	**Matsushiro Arr**	**19.03**	**341**	P	**P**	**03 09 21.1**	**-0.7**
	1.0nm,0.4s,baz=162,slow=8.9,SNR=8.0						
H11S3	**WAKE ISLAND Hy**	**19.74**	**87**	T	T	03 30 40.4	
	baz=275,slow=74,SNR=10						
H11S1	**WAKE ISLAND Hy**	**19.75**	**87**	T	T	03 30 41.4	
	baz=275,slow=74,SNR=11						
H11S2	**WAKE ISLAND Hy**	**19.76**	**87**	T	T	03 30 42.0	
	baz=275,slow=74,SNR=9.7						
H11N1	**WAKE ISLAND Hy**	**19.88**	**84**	T	T	03 30 58.6	
	baz=268						
H11N2	**WAKE ISLAND Hy**	**19.89**	**84**	T	T	03 30 53.8	
	baz=268						
H11N3	**WAKE ISLAND Hy**	**19.90**	**84**	T	T	03 30 52.0	
	baz=268						
KSRS	**Korea Array**	**24.42**	**324**	P	**P**	**03 10 17.0**	**+0.9**
	0.3nm,0.5s,baz=123,slow=14,SNR=1.8						
	0.3nm,0.5s						
ASAJ	**Asahikawa**	**25.51**	**355**	P	**P**	**03 10 25.6**	**-0.2**
	1.1nm,0.5s,baz=259,slow=29,SNR=2.2						
	1.1nm,0.5s						
WRA	**Warramunga Arr**	**40.02**	**197**	P	**P**	**03 12 32.0**	**+0.1**
	0.4nm,0.5s,baz=12,slow=8.4,SNR=17						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**43.68**	**196**	P	**P**	**03 13 02.0**	**+0.4**
	0.1nm,0.3s,baz=17,slow=9.1,SNR=5.9						
	0.1nm,0.3s						
SEY	**Seymchan**	**44.44**	**4**	P	**P**	**03 13 07.4**	**+0.2**
	0.5nm,0.5s,baz=280,slow=19,SNR=1.5						
	0.5nm,0.5s						
DZM	**Mont Dzumac**	**45.23**	**153**	P	**P**	**03 13 14.0**	**0.0**
	0.9nm,0.5s,baz=151,slow=24,SNR=1.7						
	0.9nm,0.5s						
MKAR	**Makanchi Array**	**58.59**	**314**	P	**P**	**03 14 53.1**	**+0.5**
	0.5nm,0.6s,baz=91,slow=8.1,SNR=7.5						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**63.59**	**26**	P	**P**	**03 15 25.5**	**-0.5**
	0.6nm,0.7s,baz=257,slow=5.5,SNR=4.9						
	0.6nm,0.7s						
YKA	**Yellowknife Ar**	**77.93**	**28**	P	**P**	**03 16 52.9**	**+0.3**
	0.4nm,0.6s,baz=289,slow=5.6,SNR=7.6						
	0.4nm,0.6s						
NVAR	**Mina Array Bea**	**83.02**	**52**	P	**P**	**03 17 21.6**	**+0.9**
	0.5nm,0.5s,baz=266,slow=5.9,SNR=5.5						
	0.5nm,0.5s						
FINES	**FINESS Array B**	**86.97**	**335**	P	**P**	**03 17 38.3**	**-1.2**
	1.3nm,0.7s,baz=69,slow=4.6,SNR=6.4						
	1.3nm,0.7s						
PDAR	**Pinedale Array**	**87.72**	**46**	P	**P**	**03 17 43.6**	**-0.2**
	0.1nm,0.3s,baz=270,slow=2.7,SNR=3.7						
	0.1nm,0.3s						

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*IDC **26** 03:09:50.0±1.6, 4°.12S×129°.45E, h0^{km}, mb3.6/1, mbtmp3.4/4, ML3.2/3, Error ellipse: s-maj=56.6km s-min=26.8km az=83.0*

*DJA **26** 03:09:52.9±0.7, 4°S±9°×13°0E±°, h25^{km}±12^{km}, M3.4/7, MLv3.4/7*

ISC 26 03:09:54.0±1.0**, 4°.11S**±0°.07×**129°.56E**±0°.07**, h36**^{km}**, n7,** σ**1^s.39**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**0.54**	**140**	P	**Pn**	**03 10 04.0**	**-1.3**
MSAI	**Masohi**	**0.98**	**320**	P	**Pn**	**03 10 10.4**	**-0.9**
MSAI				S	**Sn**	**03 10 22.5**	**-1.5**
FAKI	**Fak Fak**	**2.93**	**66**	P	**Pn**	**03 10 38.5**	**+0.4**
FAKI				S	**Sn**	**03 11 10.2**	**-1.9**
SIJI	**Sorong**	**3.64**	**28**	Pn	**Pn**	**03 10 48.3**	**+0.4**
	3.4nm,0.3s,baz=196,slow=22,SNR=13						
SIJI				Sn	**Sn**	**03 11 28.2**	**-1.4**
	1.2nm,0.3s,baz=224,slow=8.2,SNR=5.0						
	5.6nm,0.3s						
WRA	**Warramunga Arr**	**16.41**	**164**	Pn	**Pn**	**03 13 42.4**	**+0.6**
	0.1nm,0.3s,baz=343,slow=11,SNR=2.3						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**19.89**	**168**	P	**P**	**03 14 23.3**	**+0.7**
	0.1nm,0.3s,baz=349,slow=10,SNR=13						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**65.59**	**326**	P	**P**	**03 20 35.6**	**+1.3**
	0.3nm,0.4s,baz=128,slow=8.3,SNR=5.2						
	0.3nm,0.4s						

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*IDC **26** 03:20:14.4±2.4, 35°.83N×69°.74E, h0^{km}, mb3.3/3, mbtmp3.3/4, ML3.0/1, Error ellipse: s-maj=74.8km s-min=37.7km az=92.0*

*NNC **26** 03:20:46.0±2.5, 37°.16N×69°.70E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=42.6km s-min=16.5km az=110.0*

ISC 26 03:20:15.6±2.1**, 35°.8N**±0°.1×**69°.7E**±0°.3**, h10**^{km}**, n8,** σ**1^s.00**/6**, 1C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	**Iuzhnay**	**6.30**	**3**	Pg	**Pb**	**03 22 04.7**	**-0.8**
	15nm,0.3s						
IUG				Lg	Lg	03 23 06.3	
	25nm,0.7s						
KK31	**Karatay Array**	**7.28**	**5**	⇑P	Pb	03 22 15.6	-6.6
	0.7nm,0.3s,baz=189,slow=13,SNR=17						
KK31				⇓S	**Sn**	**03 23 25.9**	**+1.0**
	3.4nm,0.3s						
MRKS	**Merke**	**7.43**	**21**	Pg	Pb	03 22 14.6	-10
	3.6nm,1.1s						
MRKS				Lg	Lg	03 23 24.6	
	13nm,0.9s						
MKAR	**Makanchi Array**	**14.47**	**37**	Pn	**Pn**	**03 23 40.7**	**+0.3**
	0.1nm,0.3s,baz=226,slow=14,SNR=2.1						
	0.5nm,1.0s						
AB31	**Akbulak array**	**15.18**	**335**	P	P	03 24 05.8	+11
	1.0nm,0.7s,baz=144,slow=11,SNR=8.9						
ZALV	**Zalesovo Beam**	**20.97**	**26**	P	**P**	**03 24 57.9**	**-0.9**
	0.5nm,0.4s,baz=228,slow=9.8,SNR=2.7						
	0.5nm,0.4s						
YKA	**Yellowknife Ar**	**81.95**	**2**	P	**P**	**03 32 35.8**	**+0.6**
	0.1nm,0.4s,baz=351,slow=5.7,SNR=5.3						
	0.1nm,0.4s						
WRA	**Warramunga Arr**	**82.58**	**121**	P	**P**	**03 32 39.1**	**0.0**
	0.2nm,0.6s,baz=321,slow=4.9,SNR=6.2						
	0.2nm,0.6s						

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*KRNET **26** 03:25:56.8±0.1, 40°.79N×74°.10E, h25^{km}, mb3.9*

*SOME **26** 03:25:57.8, 40°.77N×74°.10E, h20^{km}*

*KNET **26** 03:25:58.9±0.6, 40°.96N×74°.18E, h3^{km}±2^{km}, ml3.5, Error ellipse: s-maj=4.4km s-min=2.9km az=54.0*

*NNC **26** 03:25:58.3±0.9, 40°.88N×74°.07E, h0^{km}, mb4.4, mpv4.2, Error ellipse: s-maj=7.3km s-min=3.4km az=173.0*

ISC 26 03:25:57.1±1.3**, 40°.86N**±0°.03×**74°.01E**±0°.02**, h1**^{km}±10^{km}**, n89,** σ**1^s.54**/117**, 39C-29D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**0.99**	**251**	⇓*i*P	**Pg**	**03 26 16.0**	**-0.1**
	baz=56						
OHH				⇓*i*S	**Sb**	**03 26 30.0**	**-0.7**
	baz=56						
ARLS	**Aral**	**1.03**	**13**	⇑*i*P	**Pg**	**03 26 16.7**	**-0.2**
	baz=9.0						
ARLS				⇑*i*S	**Sb**	**03 26 31.2**	**-0.8**
	baz=9.0						
AML	**Almayashu**	**1.30**	**350**	P	**Pg**	**03 26 22.4**	**+0.4**
	242nm,0.2s,SNR=88						
AML				⇑S	**Sn**	**03 26 41.0**	**0.0**
	1µm,0.7s						
AML	**Almayashu**	**1.30**	**350**	⇓*i*P	**Pg**	**03 26 22.1**	**+0.1**
	baz=47						
AML				⇓*i*S	**Sn**	**03 26 40.8**	**-0.2**
	baz=47						
UCH	**Uchtor**	**1.42**	**15**	⇑P	**Pn**	**03 26 24.2**	**-0.3**
	54nm,0.2s,SNR=145						
UCH				⇓S	**Sn**	**03 26 44.1**	**-0.1**
	260nm,0.3s						
UCH	**Uchtor**	**1.42**	**15**	⇓*i*P	**Pn**	**03 26 23.9**	**-0.7**
	baz=12						
UCH				⇓*i*S	**Sb**	**03 26 43.4**	**-0.2**
	baz=12						
ARK	**Arkit**	**1.81**	**302**	⇑*i*P	**Pb**	**03 26 30.7**	**-0.4**
	baz=3.0						
ARK				⇑*i*S	**Sg**	**03 26 55.5**	**+0.3**
	baz=3.0						
EKS2	**Erkin-Say**	**1.81**	**355**	⇓P	**Pb**	**03 26 31.7**	**+0.5**
	50nm,0.2s,SNR=51						
EKS2				⇑S	**Sg**	**03 26 57.8**	**+2.4**
	134nm,0.6s						
EKS2	**Erkin-Say**	**1.81**	**355**	⇓*i*P	**Pb**	**03 26 30.5**	**-0.7**
	baz=53						
EKS2				⇓*i*S	**Sg**	**03 26 55.1**	**-0.3**
	baz=53						
AAK	**Ala-Archa**	**1.82**	**11**	⇓P	**Pb**	**03 26 31.6**	**+0.3**
	136nm,0.3s,SNR=215						
AAK				⇑S	**Sg**	**03 26 55.8**	**+0.3**
	131nm,0.4s						
AAK	**Ala-Archa**	**1.82**	**11**	⇓*i*P	**Pn**	**03 26 30.2**	**+0.5**
	baz=9.0						
AAK				⇓*i*S	**Sb**	**03 26 54.6**	**0.0**
	baz=9.0						
KBK	**Karagaybulak**	**1.93**	**21**	⇓P	**Pb**	**03 26 33.5**	**+0.3**
	51nm,0.2s,SNR=122						
KBK				⇑S	**Sg**	**03 26 59.7**	**+0.5**
	468nm,0.4s						
KBK	**Karagaybulak**	**1.93**	**21**	⇑*i*P	**Pn**	**03 26 31.6**	**+0.3**
	baz=18						
KBK				⇑*i*S	**Sb**	**03 26 57.1**	**-0.8**
	baz=18						
MRKS	**Merke**	**1.98**	**343**	Pg	**Pg**	**03 26 35.1**	**+0.1**
	84nm,0.2s						
MRKS				Lg	Lg	03 27 01.7	
	209nm,0.4s						
MRKS	**Merke**	**1.98**	**343**	*e*Pg	**Pg**	**03 26 35.1**	**+0.1**
	84nm,0.2s						
MRKS				*e*Lg	Lg	03 27 01.7	
	209nm,0.4s						
MNAS	**Manas**	**1.98**	**326**	⇓*i*P	**Pb**	**03 26 33.1**	**-1.0**
	baz=25						
MNAS				⇓*i*S	**Sg**	**03 26 59.8**	**-1.0**
	baz=25						
FRU1	**Bishkek**	**2.01**	**13**	⇑*i*P	**Pn**	**03 26 33.1**	**+0.9**
	baz=11						
FRU1				⇑*i*S	**Sb**	**03 26 59.4**	**-0.6**
	baz=11						
ULHL	**Ulahol**	**2.18**	**50**	⇑P	**Pn**	**03 26 36.1**	**+1.4**
	71nm,0.3s,SNR=212						
ULHL				⇑S	**Sb**	**03 27 05.1**	**+0.1**
	8.4nm,0.1s						
ULHL	**Ulahol**	**2.18**	**50**	⇑*i*P	**Pn**	**03 26 34.5**	**-0.2**
	baz=47						
ULHL				⇑*i*S	**Sn**	**03 27 01.9**	**-0.5**
	baz=47						
DRK	**Karamyk**	**2.18**	**232**	⇓*i*P	**Pn**	**03 26 34.7**	**-0.1**
	baz=34						
DRK				⇓*i*S	**Sn**	**03 27 02.5**	**-0.1**
	baz=34						
CHMS	**Chumysh**	**2.21**	**14**	⇑P	**Pb**	**03 26 37.6**	**-0.4**
	87nm,0.3s,SNR=65						
CHMS				⇑S	**Sg**	**03 27 08.0**	**-0.2**
	144nm,0.5s						
CHMS	**Chumysh**	**2.21**	**14**	Pg	**Sb**	**03 27 06.6**	**+0.7**
	80nm,0.2s						
CHMS				Lg	Lg	03 27 55.9	
	276nm,0.5s						
CHMS	**Chumysh**	**2.21**	**14**	⇑*i*P	**Pn**	**03 26 35.7**	**+0.7**
	baz=12						
CHMS				⇑*i*S	**Sn**	**03 27 03.9**	**+0.8**
	baz=12						
TRKS	**Terek-Say**	**2.27**	**288**	⇑*i*P	**Pn**	**03 26 36.5**	**+0.6**
	baz=88						
TRKS				⇑*i*S	**Sb**	**03 27 05.4**	**-2.2**
	baz=88						
TKM2	**Tokmak 2**	**2.38**	**29**	⇓P	**Pb**	**03 26 40.1**	**-0.8**
	596nm,0.0s,SNR=76						
TKM2				⇓S	**Sb**	**03 27 11.1**	**+0.3**
	195nm,0.3s						
TKM2	**Tokmak 2**	**2.38**	**29**	⇑*i*P	**Pn**	**03 26 37.8**	**+0.3**
	baz=27						
TKM2				⇑*i*S	**Sn**	**03 27 07.6**	**+0.2**
	baz=27						
USP	**Ospenovka**	**2.44**	**8**	⇓P	**Pb**	**03 26 41.3**	**-0.5**
	97nm,0.5s,SNR=40						
USP				⇓S	**Sb**	**03 27 13.2**	**+0.8**
	262nm,0.6s						
USP	**Ospenovka**	**2.44**	**8**	⇑*i*P	**Pn**	**03 26 38.8**	**+0.7**
	baz=7.0						
USP				⇑*i*S	**Sn**	**03 27 09.5**	**+0.9**
	baz=7.0						
BTK	**Batken**	**2.56**	**253**	⇓*i*P	**Pn**	**03 26 40.6**	**+0.7**
	baz=55						
BTK				⇓*i*S	**Sn**	**03 27 12.4**	**+0.6**
	baz=55						
KST	**Kastek**	**2.63**	**33**	Pg	**Pb**	**03 26 46.5**	**+1.5**
	34nm,0.4s						
KST				Lg	Lg	03 27 21.1	
	338nm,0.5s						
KST	**Kastek**	**2.63**	**33**	*e*Pg	**Pb**	**03 26 45.5**	**+0.4**
	34nm,0.4s						
KST				*e*Lg	Lg	03 27 19.3	
	338nm,0.5s						
SGDS	**Sogindy**	**2.64**	**10**	Pg	**Pb**	**03 26 46.6**	**+1.4**
	81nm,0.4s						
SGDS				Lg	Lg	03 27 22.1	
	147nm,0.7s						
KDJ	**Kajisay**	**2.70**	**61**	⇑*i*P	**Pn**	**03 26 41.6**	**-0.3**
	baz=59						
KDJ				⇑*i*S	**Sn**	**03 27 14.1**	**-1.2**
	baz=59						
DGS	**Degeres**	**2.72**	**28**	Pg	**Pg**	**03 26 48.9**	**-0.4**
	65nm,0.5s						
DGS				Lg	Lg	03 27 25.3	
	653nm,0.6s						
DGS	**Degeres**	**2.72**	**28**	*e*Pg	**Pb**	**03 26 47.8**	**+1.1**
	46nm,0.3s						
DGS				*e*Lg	Lg	03 27 23.6	
	653nm,0.6s						
DZA	**Taraz**	**2.85**	**316**	Pg	**Pg**	**03 26 52.3**	**+0.5**
	55nm,0.2s						
DZA				Lg	Lg	03 27 30.9	
	380nm,0.5s						
DZA	**Taraz**	**2.85**	**316**	*e*Pg	**Pg**	**03 26 52.3**	**+0.5**
	55nm,0.2s						
DZA				*e*Lg	Lg	03 27 30.9	
	380nm,0.5s						
MTBS	**Maitube**	**2.90**	**38**	Pg	**Pb**	**03 26 51.1**	**+1.4**
	48nm,0.3s						
MTBS				Lg	Lg	03 27 29.2	
	248nm,0.4s						
MTBS	**Maitube**	**2.90**	**38**	*e*Pg	**Pb**	**03 26 51.1**	**+1.4**
	48nm,0.3s						
MTBS				*e*Lg	Lg	03 27 29.2	
	248nm,0.4s						
IZV	**Izvestkoviy**	**2.92**	**41**	Pg	**Pb**	**03 26 51.7**	**+1.6**
	37nm,0.5s						
IZV				Lg	Lg	03 27 29.9	
	201nm,0.5s						
IZV	**Izvestkoviy**	**2.92**	**41**	*e*Pg	**Pb**	**03 26 51.7**	**+1.6**
	37nm,0.5s						
IZV				*e*Lg	Lg	03 27 29.9	
	201nm,0.5s						
TNSS	**Tian-Shan**	**3.09**	**44**	Pg	**Pb**	**03 26 53.8**	**+0.6**
	35nm,0.5s						
TNSS				Lg	Lg	03 27 34.2	
	85nm,0.4s						
TNSS	**Tian-Shan**	**3.09**	**44**	*e*Pg	**Pb**	**03 26 53.8**	**+0.6**
	35nm,0.5s						
TNSS				*e*Lg	Lg	03 27 34.2	
	85nm,0.4s						
AAA	**Alma-Ata**	**3.20**	**42**	Pg	**Pg**	**03 26 57.3**	**-1.1**
	50nm,0.3s						
AAA				Lg	Lg	03 27 39.4	
	435nm,0.5s						
AAA	**Alma-Ata**	**3.20**	**42**	*e*Pg	**Pg**	**03 26 57.2**	**-1.1**
	50nm,0.3s						
AAA				*e*Lg	Lg	03 27 39.4	
	435nm,0.5s						
KNDC	**Almaty**	**3.23**	**42**	⇑Pg	**Pb**	**03 26 57.1**	**+1.8**
	34nm,0.3s						
KNDC				⇓Lg	Lg	03 27 39.7	
	322nm,0.6s						
MDOK	**Medeo**	**3.23**	**43**	⇑Pg	**Pb**	**03 26 56.2**	**+0.8**
	13nm,0.3s						
MDOK				Pg	**Pb**	**03 26 56.4**	**+1.1**
	34nm,0.4s						
MDOK				⇓Lg	Lg	03 27 38.1	
	89nm,0.6s						
MDOK				Lg	Lg	03 27 38.5	
	96nm,0.8s						
MDOK	**Medeo**	**3.23**	**43**	*e*Pg	**Pb**	**03 26 56.4**	**+1.1**
	34nm,0.4s						
MDOK				*e*Lg	Lg	03 27 38.5	
	96nm,0.8s						
IUG	**Iuzhnay**	**3.26**	**295**	Pg	**Pg**	**03 26 59.3**	**-0.2**
	40nm,0.4s						
IUG				Lg	Lg	03 27 43.0	
	432nm,0.6s						
IUG	**Iuzhnay**	**3.26**	**295**	*e*Pg	**Pg**	**03 26 59.3**	**-0.2**
	40nm,0.1s						
IUG				*e*Lg	Lg	03 27 43.0	
	432nm,0.6s						
KOTS	**Kotyrbulak**	**3.31**	**43**	Pg	**Pb**	**03 26 58.6**	**+1.8**
	26nm,0.4s						
KOTS				Lg	Lg	03 27 41.7	
	277nm,0.6s						

KOTS	Kotyrbulak	3.31	43	*e*Pg	Pb	03 26 58.6	+1.8
	26nm,0.4s						
KOTS				*e*Lg	Lg	03 27 41.7	
	277nm,0.6s						
ANVS	Anan'yevo	3.34	54	⇑*i*P	Pn	03 26 50.5	-0.2
	baz=52						
ANVS				⇑*i*S	Sn	03 27 29.9	-1.3
	baz=52						
KK31	Karatay Array	3.44	312	⇓Pg	Pb	03 27 00.5	+1.6
	4.1nm,0.3s,baz=131,slow=16,SNR=15						
KK31				⇓Lg	Lg	03 27 47.5	
	38nm,0.5s,baz=128,slow=28,SNR=15						
KTBS	Karatobe	3.48	34	Pg	Pb	03 27 01.5	+2.0
	20nm,0.3s						
KTBS				Lg	Lg	03 27 46.7	
	314nm,0.4s						
KTBS	Karatobe	3.48	34	*e*Pg	Pb	03 27 01.4	+2.0
	20nm,0.3s						
KTBS				*e*Lg	Lg	03 27 46.7	
	314nm,0.4s						
KUU	Kurty	3.49	29	Pg	Pb	03 27 01.6	+1.9
	15nm,0.3s						
KUU				Lg	Lg	03 27 47.1	
	303nm,0.6s						
KUU	Kurty	3.49	29	*e*Pg	Pb	03 27 01.6	+1.9
	15nm,0.3s						
KUU				*e*Lg	Lg	03 27 47.1	
	303nm,0.6s						
CHM	Chimkent	3.62	295	*e*Pg	Pg	03 27 06.5	+0.2
	80nm,0.2s						
CHM				*e*Lg	Lg	03 27 55.9	
	276nm,0.5s						
PRZ	Przheval'sk	3.67	62	⇑*i*P	Pn	03 26 55.1	-0.1
	baz=61						
PRZ				⇑*i*S	Sn	03 27 37.4	-1.8
	baz=61						
CHKK	Chushkaly	3.72	35	Pg	Pb	03 27 05.9	+2.2
	12nm,0.5s						
CHKK				Lg	Lg	03 27 54.0	
	139nm,0.4s						
CHKK	Chushkaly	3.72	35	*e*Pg	Pb	03 27 05.9	+2.2
	12nm,0.5s						
CHKK				*e*Lg	Lg	03 27 54.0	
	139nm,0.4s						
SATY	Saty	3.95	55	Pg	Pb	03 27 10.0	+2.5
	30nm,0.8s						
SATY				Lg	Lg	03 28 01.7	
	88nm,0.3s						
SATY	Saty	3.95	55	*e*Pg	Pb	03 27 10.0	+2.5
	30nm,0.8s						
SATY				*e*Lg	Lg	03 28 01.7	
	88nm,0.3s						
ZHN	Zhinishke	4.03	54	Pg	Pb	03 27 10.0	+1.1
	27nm,0.5s						
ZHN				Lg	Lg	03 28 02.0	
	103nm,0.3s						
ZHN	Zhinishke	4.03	54	*e*Pg	Pb	03 27 10.0	+1.1
	27nm,0.5s						
ZHN				*e*Lg	Lg	03 28 02.0	
	103nm,0.3s						
KURS	Kuram	4.06	48	Pg	Pb	03 27 11.6	+2.2
	18nm,0.6s						
KURS				Lg	Lg	03 28 04.2	
	45nm,1.5s						
KURS	Kuram	4.06	48	*e*Pg	Pb	03 27 11.6	+2.2
	18nm,0.6s						
KURS				*e*Lg	Lg	03 28 04.2	
	45nm,1.5s						
BTLS	Baital	4.18	0	Pg	Pg	03 27 14.9	-2.4
	14nm,0.4s						
BTLS				Lg	Lg	03 28 09.6	
	3.3nm,0.8s						
BTLS	Baital	4.18	0	*e*Pg	Pg	03 27 14.9	-2.4
	14nm,0.4s						
BTLS				*e*Lg	Lg	03 28 09.6	
	3.3nm,0.8s						
KPKS	Kokpek	4.34	52	Pg	Pb	03 27 16.8	+2.5
	27nm,0.7s						
KPKS				Lg	Lg	03 28 13.0	
	95nm,0.5s						
KPKS	Kokpek	4.34	52	*e*Pg	Pb	03 27 16.8	+2.5
	27nm,0.7s						
KPKS				*e*Lg	Lg	03 28 13.0	
	95nm,0.5s						
UZB	Uzynbulak	4.38	57	Pg	Pb	03 27 16.5	+1.5
	33nm,0.4s						
UZB				Lg	Lg	03 28 13.4	
	72nm,0.5s						
UZB	Uzynbulak	4.38	57	*e*Pg	Pb	03 27 16.5	+1.5
	33nm,0.4s						
UZB				*e*Lg	Lg	03 28 13.4	
	72nm,0.5s						
ARXS	Arharly	4.38	39	Pg	Pb	03 27 17.6	+2.6
	20nm,0.7s						
ARXS				Lg	Lg	03 28 14.1	
	114nm,0.5s						
ARXS	Arharly	4.38	39	*e*Pg	Pb	03 27 17.6	+2.6
	20nm,0.7s						
ARXS				*e*Lg	Lg	03 28 14.1	
	114nm,0.5s						
BLB	Baldybastay	4.63	44	Pg	Pb	03 27 21.8	+2.7
	50nm,0.6s						
BLB				Lg	Lg	03 28 21.4	
	71nm,0.5s						
SHLS	Shalkode	4.67	59	Pg	Pg	03 27 26.4	-0.2
	36nm,0.5s						
SHLS				Lg	Lg	03 28 29.7	
	82nm,0.7s						
SHLS	Shalkode	4.67	59	*e*Pg	Pg	03 27 26.4	-0.2
	36nm,0.5s						
SHLS				*e*Lg	Lg	03 28 29.7	
	82nm,0.7s						
PDGK	Podgornoye	4.77	57	Pg	Pb	03 27 24.1	+2.6
	9.5nm,0.7s						
PDGK				Lg	Lg	03 28 25.8	
	25nm,0.8s						
PDGK	Podgornoye	4.77	57	⇑Pg	Pb	03 27 23.1	+1.6
	19nm,0.8s						
PDGK				⇓Lg	Lg	03 28 24.6	
	50nm,0.8s						
TDK	Taldyqorghan	5.25	36	Pg	Pb	03 27 34.1	+4.4
	22nm,0.5s						
TDK				Lg	Lg	03 28 42.5	
	210nm,0.9s						
TDK	Taldyqorghan	5.25	36	*e*Pg	Pb	03 27 34.1	+4.4
	22nm,0.5s						
TDK				*e*Lg	Lg	03 28 42.5	
	210nm,0.9s						
DJR	Jarkent	5.50	49	Pg	Pb	03 27 37.4	+3.4
DJR				Lg	Lg	03 28 48.1	
DJR	Jarkent	5.50	49	*e*P	Pb	03 27 37.4	+3.4
DJR				*e*S	Sg	03 28 48.1	-5.6
OTUK	Ortayu	7.48	351	⇑Lg	Lg	03 29 52.9	
	12nm,0.6s						
MK31	Makanchi Array	8.43	42	⇑Lg	Lg	03 30 21.8	
	1.9nm,0.5s,baz=229,slow=29,SNR=3.5						
KURBB	Kurchatov Arra	10.26	16	⇑Lg	Lg	03 31 18.6	
	10.0nm,0.7s						
AB31	Akbulak array	13.00	315	P	Pn	03 29 02.3	-0.6
	0.6nm,0.6s,baz=116,slow=14,SNR=13						

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*MOS **26** 03:43:57.7±0.0, 41°.16N×49°.26E, h20^{km}, MPVA4.0*
*DRS **26** 03:44:00.8±0.0, 41°.19N×49°.68E, h24^{km}*
ISC 26 03:43:57.6±1.9**, 41°.23N**±0°.08×**49°.36E**±0°.07**, h17**^{km}±9^{km}**,**
n24, σ**1^s.66**/45**, 1C-1D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSMR	Kasumkent	1.00	292	*e*Pg	Pg	03 44 18.4	+1.4
	10.0nm,0.1s						
KSMR				*e*Sg	Sn	03 44 33.1	+2.5
	97nm,0.1s						
DRN	Derbent	1.11	316	*e*Pg	Pg	03 44 19.8	+0.6
	97nm,0.1s						
DRN				*e*Sg	Sg	03 44 35.5	+1.8
	238nm,0.2s						
AKT	Akhty	1.25	282	*e*Pg	Pg	03 44 21.5	-0.4
	238nm,0.2s						
AKT				*e*Sg	Sg	03 44 38.0	-0.2
	2.0nm,0.4s						
SGKR	Sergokala	1.77	315	*e*Pg	Pb	03 44 29.6	0.0
	2.0nm,0.4s						
SGKR				*e*Sg	Sg	03 44 53.5	-1.1
	13nm,0.1s						
KMKR	Kumukh	1.92	299	*e*Pg	Pb	03 44 32.2	-0.1
	13nm,0.1s						
KMKR				*e*Sg	Sg	03 44 57.8	-1.6
	37nm,0.3s						
GNBR	Gunib	2.13	304	*e*Pn	Pb	03 44 34.6	-1.3
	37nm,0.3s						
GNBR				*e*Sn	Sb	03 45 02.2	+0.1
	1.0nm,0.4s						
MAK	Makhachkala	2.21	322	*e*Pg	Pb	03 44 38.0	+0.8
MAK				*e*Sg	Sg	03 45 07.5	-1.3
ARKR	Arakani	2.24	309	*e*Pn	Pb	03 44 36.7	-0.9
	1.0nm,0.4s						
ARKR				*e*Sn	Sb	03 45 06.3	+1.3
	39nm,0.3s						
BUJR	Buynaksk	2.31	314	*e*Pn	Pb	03 44 39.3	+0.3
BUJR				*e*Sn	Sb	03 45 08.5	+1.2
XNZR	Khunzakh	2.38	304	*e*Pn	Pb	03 44 38.7	-1.4
	39nm,0.3s						
XNZR				*e*Sn	Sb	03 45 09.7	+0.5
	26nm,0.4s						
KANR	Karaman	2.41	325	*e*Pn	Pb	03 44 39.4	-1.1
KANR				*e*Sn	Sb	03 45 12.7	+2.8
UNCR	Uncukul	2.42	309	*e*Pn	Pb	03 44 38.9	-1.9
	26nm,0.4s						
UNCR				*e*Sn	Sb	03 45 10.1	-0.2
	37nm,0.3s						
KRNR	Karanay	2.43	312	*e*Pn	Pb	03 44 39.2	-1.7
	37nm,0.3s						
KRNR				*e*Sn	Sb	03 45 10.8	+0.3
	26nm,0.4s						
DBC	Dubki	2.60	314	*e*Pn	Pn	03 44 41.0	+2.1
DBC				*e*Sn	Sb	03 45 13.1	-2.4
BTLR	Botlikh	2.74	303	*e*Pn	Pn	03 44 42.5	+1.5
BTLR				*e*Sn	Sb	03 45 18.1	-1.5
GROC	Groznyy	3.30	308	*e*Pn	Pn	03 44 51.1	+2.6
GROC				*e*Sn	Sn	03 45 29.9	+2.5
GNI	Garni	3.67	254	*e*Pn	Pn	03 44 55.7	+1.9
LACR	Lac	4.09	295	*e*Pn	Pn	03 45 00.2	+0.6
LACR				*e*Sn	Sn	03 45 49.5	+2.3
KBTC	Kuba-Taba	5.10	302	*e*Pn	Pn	03 45 13.3	0.0
KBTC				*e*Sn	Sn	03 46 10.3	-1.6
KBZ	Khabaz	5.39	300	*e*Pn	Pn	03 45 16.0	-1.3
KBZ				*e*Sn	Sn	03 46 16.5	-2.3
BEYR	Belyy Ugol+	5.57	302	*e*Pn	Pn	03 45 18.5	-1.3
BEYR				*e*Sn	Sn	03 46 19.7	-3.6
KIV	Kislovodsk	5.63	301	*e*Pn	Pn	03 45 22.9	+2.3
KIV				*e*Sn	Sn	03 46 25.5	+0.6
AB31	Akbulak array	10.95	39	⇓P	Pn	03 46 33.1	-0.3
	1.1nm,0.7s,baz=229,slow=8.9,SNR=12						
AB31				⇑S	Sn	03 48 28.4	-7.1
	0.2nm,0.3s,baz=225,slow=24,SNR=4.2						
AKTO	Aktyubinsk	11.00	30	P	Pn	03 46 32.2	-2.0
	0.9nm,0.5s						
AKTO				S	Sn	03 48 27.8	-9.0
	11nm,2.4s						

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*IDC **26** 03:45:06.8±1.1, 27°.89N×85°.79E, h0^{km}, mb3.8/6, mbtmp3.7/7, ML3.4/1, Error ellipse: s-maj=35.4km s-min=23.0km az=67.0*
*DMN **26** 03:45:07.8±0.2, 28°.05N×85°.95E, h10^{km}, Ml4.5/8, Error ellipse: s-maj=3.4km s-min=1.3km az=15.0*
ISC 26 03:45:09.1±0.9**, 27°.95N**±0°.06×**85°.84E**±0°.03**, h11**^{km}±5^{km}**,**
n23, σ**1^s.69**/41**, mb3.8**/7**, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUN	Gumba	0.05	140	*e*Pg	Pg	03 45 11.3	-0.4
GUN				*e*Sg	Sg	03 45 14.0	+0.5
JIRN	Jiri	0.42	133	*e*Pg	Pg	03 45 16.6	-1.0
JIRN				*e*Sg	Sg	03 45 22.7	-0.5
	6µm,0.4s						
KKN	Kakani	0.52	252	*e*Pg	Pb	03 45 20.0	-0.4
KKN				*e*Sg	Sb	03 45 28.0	-0.1
	3µm,0.2s						
KKN				*e*Sg	Sb	03 45 28.0	-0.1
KKN				*e*Sg	Sb	03 45 28.0	-0.1
PKI	Pulchoki	0.54	225	*e*Pg	Pb	03 45 21.1	+0.3
PKI				*e*Sg	Sb	03 45 30.5	+1.8
	826nm,0.2s						
PKIN	Phulchoki	0.54	227	*e*Pg	Pb	03 45 21.2	+0.4
PKIN				*e*Sg	Sb	03 45 30.0	+1.3
	2µm,0.4s						
DMN	Daman	0.73	243	*e*Pg	Pb	03 45 24.6	+0.5
DMN				*e*Sg	Sb	03 45 35.4	+1.1
	787nm,0.4s						
GKN	Gorkha	1.07	273	*e*Pg	Pb	03 45 29.5	-0.2
GKN				*e*Sg	Sb	03 45 44.7	+1.0
	830nm,0.3s						
RAMN	Ramite	1.20	146	*e*Pg	Pg	03 45 31.3	-1.0
RAMN				*e*Sg	Sb	03 45 47.8	+0.1
	714nm,0.3s						
ODAN	Odare	1.75	128	*e*Pg	Pb	03 45 41.2	-0.2
ODAN				*e*Sg	Sb	03 46 03.5	-0.1
	2µm,0.5s						
TAPN	Taplejung	1.76	109	*e*Pg	Pn	03 45 39.5	-0.4
TAPN				*e*Sg	Sn	03 46 02.9	+0.5
	1µm,0.4s						
DANN	Dangsing	1.88	283	*e*Pg	Pg	03 45 44.4	-0.8
DANN				*e*Sg	Sg	03 46 09.3	-0.3
	770nm,0.3s						
KOLN	Koldanda	1.99	265	*e*Pg	Pb	03 45 45.4	-0.1
KOLN				*e*Sg	Sg	03 46 14.5	+1.3
	3µm,0.5s						
KOLN				*e*Sg	Sb	03 46 14.7	+4.3
KOLN				*e*Sg	Sb	03 46 14.8	+4.3
PYUN	Piuthan	2.52	274	*e*Pg	Pg	03 45 56.7	-0.8
PYUN				*e*Sg	Sg	03 46 29.9	-0.4
	624nm,0.4s						
SHL	Shillong	5.90	112	*e*P	Pn	03 46 36.0	-0.7
SHL				*e*S	Sb	03 48 09.5	+6.6
MKAR	Makanchi Array	19.02	352	P	P	03 49 30.6	-0.4
	0.1nm,0.3s,baz=162,slow=13,SNR=6.8						
	0.6nm,0.5s						
KURBB	Kurchatov Arra	23.31	348	P	P	03 50 18.5	+1.5
	0.5nm,0.6s,baz=167,slow=9.8,SNR=6.4						
	0.5nm,0.6s						
SONM	Songino Array	25.49	33	P	P	03 50 36.5	-1.0
	0.9nm,0.5s,baz=218,slow=11,SNR=10						
	0.9nm,0.5s						
ZALV	Zalesovo Beam	25.98	359	P	P	03 50 43.3	+1.6
	0.5nm,0.4s,baz=198,slow=9.2,SNR=3.6						
	0.5nm,0.4s						
FINES	FINESS Array B	51.47	328	P	P	03 54 13.3	-0.8
	0.8nm,0.6s,baz=104,slow=9.3,SNR=1.7						
	0.8nm,0.6s						
ARCES	ARCESS Array B	53.81	338	P	P	03 54 29.8	-1.6
	7.0nm,1.1s,baz=91,slow=8.1,SNR=1.9						
	7.0nm,1.1s						
WRA	Warramunga Arr	66.83	130	P	P	03 56 01.2	-0.1
	0.5nm,0.6s,baz=322,slow=6.8,SNR=10						
	0.5nm,0.6s						
TORD	Torodi Ar. Bea	78.86	279	P	P	03 57 12.5	-0.3
	0.2nm,0.6s,baz=66,slow=3.1,SNR=1.3						
SIV	San Ignacio	147.20	284	PKPbc	PKPdf	04 04 51.2	+0.3
	0.7nm,0.7s,baz=74,slow=4.2,SNR=4.5						

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*IDC **26** 04:17:13.1±4.4, 36°.62N×71°.87E, h0^{km}, mb3.8/1, mbtmp3.7/3, ML3.1/2, MS3.4/1, Error ellipse: s-maj=105.6km s-min=30.8km az=142.0*
*NEIC **26** 04:17:27.6±1.4, 37°.24N±0°.06×72°.14E±0°.09, h98^{km}±7^{km}, mb4.2/4, Error ellipse: s-maj=11.3km s-min=7.9km az=126.0*
*NNC **26** 04:17:31.6±9.4, 38°.62N×72°.49E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=72.9km s-min=35.7km az=0.0*
ISC 26 04:17:26.6±0.9**, 37°.23N**±0°.08×**72°.02E**±0°.08**, h100**^{km}**, n38,**
σ**1^s.95**/36**, mb4.0**/4**, 1C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.22	323		Pn	04 18 03.1	+1.0
DRK	Karamyk	2.25	356		Pn	04 18 04.0	+1.2
CHGR	Chuyangaron	2.67	303	Pn	Pn	04 18 08.9	+0.8
BTK	Batken	2.97	342		Pn	04 18 13.8	+1.7
KBL	Kabul	3.61	223	Pn	Pn	04 18 22.2	+1.5
NIL	Nilore	3.71	164		Pn	04 18 22.6	+0.6
AML	Almayashu	5.06	14	P	Pn	04 18 43.1	+2.6
	SNR=20						
IUG	Iuzhnay	5.14	343	Pg	Pn	04 18 43.5	+2.2
	2.7nm,0.2s						
IUG				Lg	Lg	04 19 38.2	
	20nm,0.7s						
UCH	Uchtor	5.35	20	P	Pn	04 18 47.0	+2.6
	SNR=9.7						
MRKS	Merke	5.58	9	Pg	Pn	04 18 50.0	+2.7
	2.9nm,0.2s						
EKS2	Erkin-Say	5.59	13	P	Pn	04 18 50.3	+2.9
	SNR=8.9						
AAK	Ala-Archa	5.72	19	P	Pn	04 18 52.2	+3.0
	SNR=7.3						
AAK	Ala-Archa	5.72	19	Pn	Pn	04 18 50.8	+1.6
ULHL	Ulahol	5.97	32	P	Pn	04 18 56.1	+3.4
	SNR=6.1						
KK31	Karatay Array	5.98	349	Pn	Pn	04 18 54.1	+1.6
KK31	Karatay Array	5.98	349	Pn	Pn	04 18 53.3	+0.7
	2.4nm,0.4s,baz=170,slow=13,SNR=94						
KK31				⇑Pg		04 19 07.1	
	0.9nm,0.3s,baz=180,slow=24,SNR=6.4						
KK31				⇓Sn	Sn	04 19 56.0	-3.5
	2.2nm,0.3s,baz=180,slow=24,SNR=9.8						
KKAR	Karatay Array	5.98	349	Pn	Pn	04 18 52.9	+0.3
KDJ	Kajisay	6.31	38	Pn	Pn	04 18 57.3	+0.1
TARG	Taragay, Kyrgy	6.34	43		Pn	04 18 58.6	+0.8
KST	Kastek	6.54	26	Pg	Pn	04 19 05.3	+5.0
	2.7nm,0.4s						
KST				Lg	Lg	04 20 15.5	
	3.7nm,0.5s						
DGS	Degeres	6.65	24	Pg	Pn	04 19 05.6	+3.8
	2.7nm,1.1s						
DGS				Lg	Lg	04 20 16.3	
	4.1nm,1.1s						
MDOK	Medeo	7.06	31	Pn	Pn	04 18 56.6	-11
	0.5nm,0.2s						
MDOK				Sn	Sn	04 20 04.5	-22
	4.6nm,0.8s						
MK31	Makanchi Array	12.22	35		Pn	04 20 17.5	+0.3
MKAR	Makanchi Array	12.22	35	Pn	Pn	04 20 18.4	+1.2
	0.1nm,0.3s,baz=222,slow=16,SNR=7.4						
	0.5nm,0.6s						
MKAR	Makanchi Array	12.22	35	Pn	Pn	04 20 15.9	-1.2
KURK	Kurchatov	14.28	17	Pn	Pn	04 20 43.9	0.0
AB31	Akbulak array	14.87	328	P	Pn	04 20 48.8	-2.7
	0.9nm,0.8s,baz=226,slow=10.0,SNR=3.6						
ZAA0	Zalesovo Array	18.91	24	P	P	04 21 38.0	-1.2
ZALV	Zalesovo Beam	18.91	24	P	P	04 21 41.0	+1.7
	0.5nm,0.3s,baz=209,slow=10,SNR=6.4						
	1.3nm,0.3s						
ZALV	Zalesovo Beam	18.91	24	P	P	04 21 39.6	+0.3
BJT	Baijiatuau	34.34	71	P	P	04 24 02.6	-1.0
BJT				IAmb	IAmb	04 24 46.8	
	comp=Z,5.8nm,1.1s						
FINES	FINESS Array B	37.34	325	P	P	04 24 30.6	+1.6
	comp=Z,1.4nm,0.9s,baz=117,slow=11,SNR=4.1						
	comp=Z,1.4nm,0.9s						
YAK	Yakutsk	42.90	36	LR	LR	04 42 51.7	
	comp=Z,44nm,18.9s,baz=242,slow=35						
GERES	GERESS Array B	43.18	305	P	P	04 25 19.2	+1.8
CLL	Collm	43.37	308	P	P	04 25 20.5	+1.7
CLL				IAmb	IAmb	04 25 22.7	
	comp=Z,3.1nm,1.0s						
KS19	Wonju Array Si	43.82	72	P	P	04 25 22.4	-0.2
KSAR	Wonju Array Be	43.85	72	P	P	04 25 22.3	-0.5
TORD	Torodi Ar. Bea	66.55	269	P	P	04 28 04.5	-1.7
	comp=Z,0.2nm,0.7s,baz=55,slow=7.2,SNR=1.8						

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*IDC **26** 05:09:47.1±3.1, 36°.32N×70°.13E, h204^{km}±27^{km}, mb3.3/6, mbtmp3.8/11, Error ellipse: s-maj=25.1km s-min=19.8km az=169.0*
*NEIC **26** 05:09:49.8±1.5, 36°.50N±0°.07×70°.13E±0°.09, h221^{km}±6^{km}, mb4.0/8, Error ellipse: s-maj=10.9km s-min=10.1km az=161.0*
*NNC **26** 05:09:52.4±7.6, 37°.29N×73°.04E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=62.4km s-min=57.7km az=37.0*
ISC 26 05:09:49.0±0.6**, 36°.50N**±0°.06×**70°.23E**±0°.07**, h213**^{km}**, n64,**
σ**1^s.28**/66**, mb3.6**/9**, 2C, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.18	207	Pn	Pn	05 10 31.3	+0.7
CHGR	Chuyangaron	2.32	339	Pn	Pn	05 10 32.6	+0.8
GAR	Garm	2.50	2	Pn	Pn	05 10 35.0	+1.2
CEP	Cherat	3.00	152	P	Pn	05 10 41.9	+2.3
CEP				S	S	05 11 20.0	+1.3
BTK	Batken	3.58	7		Pn	05 10 48.4	+2.2
CHCP	Chirah Chowk	3.77	138	P	Pn	05 10 49.8	+1.2
NIL	Nilore	3.77	138	Pn	Pn	05 10 50.2	+1.6
THW	Thamme Wali	3.90	161	P	Pn	05 10 50.4	+0.3
KSH	Kashi	5.45	55	Pn	Pn	05 11 06.0	-3.4
KSH				Sn	S	05 12 02.3	-11
KSH				pmax	pmax		
	comp=Z,7.0nm,0.4s						
KSH				smax	smax		
	comp=N,34nm,0.6s						
KSH				smax	smax		
	comp=E,17nm,0.5s						
IUG	Iuzhnay	5.64	359	Pg	Pn	05 11 13.3	+1.4
	comp=E,193nm,0.6s						
IUG				Lg	Lg	05 12 15.7	
	comp=E,68nm,0.5s						
AML	Almayashu	6.23	24	P	Pn	05 11 20.3	+0.6
	SNR=68						
KK31	Karatay Array	6.60	2	Pn	Pn	05 11 24.5	+0.5
KK31	Karatay Array	6.60	2	P	Pn	05 11 24.4	+0.3
	comp=E,3.4nm,0.4s,baz=192,slow=13,SNR=57						
KK31				⇑S	S	05 12 36.1	-3.5
	comp=E,13nm,0.7s						
KKAR	Karatay Array	6.60	2	Pn	Pn	05 11 24.1	0.0
UCH	Uchtor	6.61	29	P	Pn	05 11 25.6	+0.9
	SNR=14						
MRKS	Merke	6.65	19	Pg	Pn	05 11 25.7	+0.8
	comp=E,3.9nm,0.6s						
MRKS				Lg	Lg	05 12 37.8	
	comp=E,14nm,0.6s						
EKS2	Erkin-Say	6.74	23	P	Pn	05 11 27.1	+1.1
	SNR=9.3						
AAK	Ala-Archa	6.96	27	P	Pn	05 11 29.9	+1.0
	SNR=7.6						
AAK	Ala-Archa	6.96	27	P	Pn	05 11 29.8	+1.0
	comp=E,4.1nm,0.3s,baz=169,slow=4.3,SNR=14						
AAK				S	S	05 12 45.8	-2.5
	comp=E,6.5nm,0.4s,baz=159,slow=23,SNR=9.2						
AAK	Ala-Archa	6.96	27	Pn	Pn	05 11 29.7	+0.8
ULHL	Ulahol	7.39	37	P	Pn	05 11 35.2	+0.7
	SNR=8.9						
TKM2	Tokmak 2	7.63	31	P	Pn	05 11 38.2	+0.7
	SNR=6.3						
KDJ	Kajisay	7.79	42	Pn	Pn	05 11 40.5	+1.0
KST	Kastek	7.89	32	Pg	Pn	05 11 44.2	+3.4
	comp=E,1.1nm,0.4s						
KST				Lg	Lg	05 13 09.3	
	comp=E,11nm,1.1s						
GEYT	Alibeck	9.77	282	P	Pn	05 12 02.6	-2.4
	comp=E,1.2nm,0.5s,baz=134,slow=11,SNR=3.5						
PYUN	Piuthan	13.65	124	*e*P	Pn	05 12 53.1	-1.3
	comp=E,16nm,0.4s						
MK31	Makanchi Array	13.66	37		P	05 12 55.4	-0.7
MKAR	Makanchi Array	13.66	37	P	P	05 12 55.5	-0.7
	comp=E,1.0nm,0.4s,baz=211,slow=10,SNR=18						
DANN	Dangsing	14.01	122	*e*P	Pn	05 12 58.1	-0.8
AB31	Akbulak array	14.79	333	⇑P	P	05 13 15.6	+7.1
	comp=E,1.2nm,0.3s,baz=157,slow=12,SNR=9.5						
ABKAR	Akbulak array	14.79	333		P	05 13 09.2	+0.6
GKN	Gorkha	14.83	121	*e*P	Pn	05 13 08.2	-0.6
	comp=E,15nm,0.3s						
WMQ	Urumqi	15.21	56	*e*P	P	05 13 16.0	+2.7
KURBB	Kurchatov Arra	15.33	20	P	Pn	05 13 14.1	-0.3
	comp=E,1.0nm,0.6s,baz=210,slow=11,SNR=7.9						
DMN	Daman	15.40	121	*e*P	P	05 13 15.3	-0.5
PKI	Pulchoki	15.64	120	*e*P	P	05 13 18.7	+0.2
	comp=E,16nm,0.4s						
GUN	Gumba	15.76	118	*e*P	P	05 13 19.9	+0.1
	comp=E,24nm,0.5s						
JIRN	Jiri	16.13	119	*e*P	P	05 13 24.2	+0.3
	comp=E,34nm,0.6s						
BVA0	Borovoye Array	16.52	0	P	Pn	05 13 37.2	+8.4
	comp=E,1.1nm,0.7s,baz=168,slow=9.4,SNR=14						
BVAR	Borovoye Array	16.52	0	P	Pn	05 13 29.1	+0.4
	comp=E,0.7nm,0.3s,baz=160,slow=10,SNR=12						
BRVK	Borovoye	16.56	0	P	Pn	05 13 28.7	-0.4
BRVK				IAmb	IAmb	05 13 31.3	
	comp=Z,2.9nm,0.5s						
RAMN	Ramite	16.85	120	*e*P	P	05 13 32.1	+0.4
	comp=Z,22nm,0.6s						
TAPN	Taplejung	17.40	117	*e*P	Pn	05 13 39.2	-0.4
	comp=Z,15nm,0.5s						
ZAA0	Zalesovo Array	20.18	26	P	P	05 14 07.4	+0.3
ZAA0				IAmb	IAmb	05 14 09.0	
	comp=Z,2.6nm,0.6s						
ZALV	Zalesovo Beam	20.18	26	P	P	05 14 07.6	+0.5
	comp=Z,3.2nm,0.4s,baz=219,slow=11,SNR=20						

	comp=Z,3.2nm,0.4s						
ZALV	Zalesovo Beam	20.18	26	P	P	05 14 07.4	+0.3
ARU	Arti	21.44	342	P	P	05 14 20.5	+0.2
	comp=Z,3.7nm,0.5s,baz=149,slow=11,SNR=5.7						
	comp=Z,3.7nm,0.5s						
ARU	Arti	21.44	342	P	P	05 14 20.7	+0.5
ARU				IAmb	IAmb	05 14 23.1	
	comp=Z,3.7nm,0.6s						
PZH	PanZhiHua	28.55	101	P	P	05 15 27.0	+1.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,110nm,4.7s						
HHC	Hu-ho-hao-te	32.35	69	*e*P	P	05 15 59.0	+0.6
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,5.2s						
FINES	FINESS Array B	37.14	326	P	P	05 16 39.2	+0.3
	comp=Z,1.6nm,0.9s,baz=142,slow=7.2,SNR=3.9						
	comp=Z,1.6nm,0.9s						
CLL	Collm	42.71	309	*e*P	P	05 17 25.0	+0.2
CLL				*e*PP	PP	05 19 09.0	+0.7
CLL				*e*pPP		05 19 45.0	
CLL				*e*PPP	PPP	05 19 50.0	
CLL				*e*x	x	05 20 45.0	
TORD	Torodi Ar. Bea	65.09	268	P	P	05 20 05.3	-1.8
	comp=Z,0.5nm,0.8s,baz=44,slow=5.4,SNR=2.9						
A36M	Sachs Harbour	71.26	5	P	P	05 20 44.9	+0.4
IMAR	Indian Mountai	72.36	17	P	P	05 20 50.7	-0.4
BMAR	Burnt Mountain	73.09	13	P	P	05 20 56.1	+0.6
FYU	Fort Yukon	73.72	14	P	P	05 21 00.1	+1.0
C36M	Paulatuk	73.94	5	P	P	05 21 00.0	-0.2
INK	Inuvik	74.00	9	P	P	05 21 01.6	+0.9
INK				IAmb	IAmb	05 21 01.6	
	comp=Z,3.4nm,1.2s						
SKT	Skwentna	76.22	19	P	P	05 21 13.0	-0.5
BCAR	Beaver Creek A	77.52	14	P	P	05 21 21.7	+1.0
YKA	Yellowknife Ar	81.27	2	P	P	05 21 41.0	+0.1
	comp=Z,0.4nm,0.7s,baz=347,slow=4.8,SNR=9.8						
	comp=Z,0.4nm,0.7s						
WRA	Warramunga Arr	82.52	121	P	P	05 21 47.2	-0.8
	comp=Z,0.4nm,0.8s,baz=319,slow=4.6,SNR=2.2						
	comp=Z,0.4nm,0.8s						
ASAR	Alice Springs	84.77	124	P	P	05 21 58.5	-1.0
	comp=Z,0.2nm,0.5s,baz=313,slow=5.0,SNR=4.3						
	comp=Z,0.2nm,0.5s						

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*NEIC **26** 05:11:58.0±1.0, 12°.8S±0°.1×166°.9E±0°.2, h108^{km}±8^{km}, mb4.5/24, Error ellipse: s-maj=21.2km s-min=14.5km az=87.0*

*IDC **26** 05:11:58.6±4.8, 12°.87S×166°.85E, h119^{km}±46^{km}, mb3.9/16, mbtmp4.3/17, MS3.4/8, Error ellipse: s-maj=30.6km s-min=19.5km az=152.0*

*NOU **26** 05:13:43.5, 20°.85S×166°.95E, h0^{km}, MLv2.8/4, Loyalty Islands*

ISC 26 05:11:56.7±0.6**, 12°.84S**±0°.07×**166°.84E**±0°.09**, h100**^{km}**, n58,** σ1^{s}**09**/57**, mb4.3**/26**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	7.56	296	S	Sn	05 15 05.5	-3.0
	2µm,0.4s,baz=116,slow=16,SNR=7.1						
HNR				LR	LR	05 16 34.4	
	comp=Z,1µm,20.2s,baz=136,slow=36						
HNR	Honiara	7.56	296	Pn	Pn	05 13 45.4	+1.1
LIFNC	LIFOU	7.91	177		Pn	05 13 49.0	+0.1
KOUNC	Koumac, New Ca	8.05	197		Pn	05 13 51.7	+0.8
YATNC	Mamie plateau,	9.17	180	P	Pn	05 14 05.9	-0.3
DZM	Mont Dzumac	9.19	182	P	Pn	05 14 07.9	+1.4
	26nm,0.3s,baz=177,slow=21,SNR=255						
DZM				S	Sn	05 15 44.4	-3.8
	4.8nm,0.4s,baz=321,slow=23,SNR=0.9						
DZM				LR	LR	05 17 08.2	
	comp=Z,136nm,18.8s,baz=300,slow=34						
DZM	Mont Dzumac	9.19	182		Pn	05 14 07.7	+1.2
DZM	Mont Dzumac	9.19	182	P	Pn	05 14 07.7	+1.2
NOUC	Port Laguerre	9.23	183	P	Pn	05 14 08.6	+1.7
ONTNC	Ouen Toro	9.43	182		Pn	05 14 10.8	+1.2
ONTNC	Ouen Toro	9.43	182	P	Pn	05 14 11.3	+1.7
OUENC	Ouen Island, N	9.53	180		Pn	05 14 12.2	+1.2
PINNC	Pines Island,	9.74	177		Pn	05 14 15.3	+1.4
MSVF	Nonsavu	11.86	116	P	Pn	05 14 54.8	+12
	29nm,1.0s,baz=270,slow=10,SNR=8.7						
MSVF				LR	LR	05 17 49.5	
	comp=Z,56nm,19.3s,baz=305,slow=30						
EIDS	Eidsvold	19.39	228	P	P	05 16 15.8	+0.9
EIDS				IAmb	IAmb	05 16 19.6	
	comp=Z,17nm,1.0s						
AFI	Afiamalu	20.83	95	LR	LR	05 22 21.1	
	comp=Z,68nm,18.7s,baz=154,slow=30						
CTA	Charters Tower	21.00	247	P	P	05 16 33.0	+0.7
	comp=Z,20nm,0.8s,baz=75,slow=11,SNR=21						
CTA				LR	LR	05 23 25.7	
	comp=Z,44nm,20.5s,baz=80,slow=33						
	comp=Z,20nm,0.8s						
CTAO	Charters Tower	21.00	247	P	P	05 16 32.7	+0.4
CTAO				IAmb	IAmb	05 16 36.5	
	comp=Z,20nm,0.8s						
ARMA	Armidale	22.45	216	P	P	05 16 48.3	+0.6
STKA	Stephens Creek	29.94	227	P	P	05 17 56.6	+1.2
	comp=Z,2.0nm,0.6s,baz=26,slow=9.0,SNR=4.6						
STKA				LR	LR	05 29 26.1	
	comp=Z,94nm,18.6s,baz=34,slow=35						
	comp=Z,2.0nm,0.6s						
STKA	Stephens Creek	29.94	227	P	P	05 17 57.5	+2.0
WB0	Warramunga Arr	31.86	253	P	P	05 18 12.2	-0.3
WB0				IAmb	IAmb	05 18 12.6	
	comp=Z,6.6nm,0.6s						
WB2	Warramunga Arr	31.92	253	P	P	05 18 12.8	-0.3
WB2				IAmb	IAmb	05 18 16.4	
	comp=Z,7.7nm,1.1s						
WRAB	Tennant Creek	31.92	253	P	P	05 18 12.3	-0.8
WRAB				IAmb	IAmb	05 18 13.1	
	comp=Z,10nm,1.2s						
WRA	Warramunga Arr	31.93	253	P	P	05 18 12.5	-0.7
	comp=Z,3.7nm,0.6s,baz=86,slow=9.0,SNR=32						
WRA				LR	LR	05 31 44.7	
	comp=Z,75nm,18.2s,baz=103,slow=37						
	comp=Z,3.7nm,0.6s						
WRA	Warramunga Arr	31.93	253	P	P	05 18 11.8	-1.4
AS31	Alice Springs	33.00	246	P	P	05 18 22.4	-0.1
AS31				IAmb	IAmb	05 18 23.1	
	comp=Z,3.1nm,0.6s						
ASAR	Alice Springs	33.00	246	P	P	05 18 21.7	-0.8
	comp=Z,8.1nm,0.7s,baz=71,slow=9.7,SNR=108						
ASAR				LR	LR	05 30 06.1	
	comp=Z,76nm,19.6s,baz=44,slow=33						
	comp=Z,8.1nm,0.7s						
BBOO	Buckleboo	34.44	230	P	P	05 18 35.5	+0.6
BBOO				IAmb	IAmb	05 18 36.4	
	comp=Z,5.9nm,0.8s						
MTN	Manton Dam	34.80	266	P	P	05 18 38.6	+0.5
KNRA	Kununurra	36.98	261	P	P	05 18 56.9	+0.2
FORT	Forrest	39.94	237	P	P	05 19 21.4	+0.1
FITZ	Fitzroy Crossi	39.99	257	P	P	05 19 22.7	+0.8
MBWA	Marble Bar	45.67	253	P	P	05 20 07.5	-0.3
MBWA				IAmb	IAmb	05 20 09.6	
	comp=Z,16nm,1.1s						
NWAO	Narrogin (SRO)	49.38	238	P	P	05 20 36.1	-0.3
	comp=Z,24nm,1.1s,baz=139,slow=9.3,SNR=2.8						
	comp=Z,24nm,1.1s						
JMN	Monobe	55.95	327	P	P	05 21 25.2	+0.6
JSU	Suzuyama	56.23	322	P	P	05 21 26.9	+0.2
JNU	Nakatsue	57.15	324	P	P	05 21 33.0	-0.2
	comp=Z,3.7nm,0.6s,baz=46,slow=1.6,SNR=4.7						
	comp=Z,3.7nm,0.6s						
JHS	Saijyo	57.32	327	P	P	05 21 34.7	+0.3
KSRS	Korea Array	61.95	325	P	P	05 22 06.2	+0.1
	comp=Z,1.2nm,0.7s,baz=139,slow=7.7,SNR=5.5						
	comp=Z,1.2nm,0.7s						
KLR	Kul'dur	69.12	336	P	P	05 22 53.0	+1.0
	comp=Z,2.1nm,0.7s,baz=148,slow=6.4,SNR=8.6						
	comp=Z,2.1nm,0.7s						
CMAR	Chiang Mai Arr	73.81	294	P	P	05 23 21.3	+0.4
	comp=Z,1.0nm,0.4s,baz=134,slow=5.2,SNR=8.8						
	comp=Z,1.0nm,0.4s						
QSPA	South Pole Qui	77.18	180	P	P	05 23 39.9	+0.5
QSPA				IAmb	IAmb	05 23 47.5	
	comp=Z,6.2nm,1.3s						
P18K	Big Mountain,	78.23	19	P	P	05 23 44.8	-0.3
P18K				IAmb	IAmb	05 24 10.3	
	comp=Z,12nm,1.4s						
BILL	Bilibino	80.66	360	P	P	05 23 58.1	+0.1
BILL				IAmb	IAmb	05 23 59.0	
	comp=Z,9.9nm,1.4s						
SONM	Songino Array	80.74	324	P	P	05 23 59.1	-0.1
	comp=Z,0.8nm,0.7s,baz=146,slow=6.4,SNR=6.4						
	comp=Z,0.8nm,0.7s						
SONM	Songino Array	80.74	324	P	P	05 23 59.2	0.0
HDA	Harding Lake	84.59	18	P	P	05 24 18.8	+0.3
HDA				IAmb	IAmb	05 24 19.5	
	comp=Z,7.1nm,0.9s						
IL31		84.87	18	P	P	05 24 19.9	+0.1
ILAR	Eielson Array	84.87	18	P	P	05 24 19.1	-0.8
	comp=Z,2.2nm,0.7s,baz=247,slow=5.0,SNR=41						
	comp=Z,2.2nm,0.7s						
NVAR	Mina Array Bea	86.36	49	P	P	05 24 29.6	+1.3
	comp=Z,0.2nm,0.5s,baz=260,slow=4.5,SNR=2.2						
	comp=Z,0.2nm,0.5s						
H06S1	SOCORRO T	86.85	70	T	T	07 01 47.2	
	SNR=14						
MKAR	Makanchi Array	95.55	317	P	P	05 25 10.1	-0.6
	comp=Z,0.8nm,0.6s,baz=90,slow=6.4,SNR=12						
	comp=Z,0.8nm,0.6s						
ZALV	Zalesovo Beam	95.63	324	P	P	05 25 09.8	-1.0
	comp=Z,0.6nm,0.5s,baz=138,slow=3.7,SNR=3.7						
	comp=Z,0.6nm,0.5s						
TXAR	Lajitas Array	95.74	61	P	P	05 25 10.3	-1.8
	comp=Z,0.1nm,0.7s,baz=230,slow=4.2,SNR=1.8						
	comp=Z,0.1nm,0.7s						
YKA	Yellowknife Ar	96.07	27	P	P	05 25 11.5	-1.1
	comp=Z,0.2nm,0.6s,baz=255,slow=4.5,SNR=6.8						
	comp=Z,0.2nm,0.6s						
ESDC	Sonseca Array	152.06	345	PKPbc	PKPbc	05 31 40.7	0.0
	comp=Z,0.6nm,0.9s,baz=7.9,slow=2.5,SNR=2.5						
ESDC				PKPab	PKPab	05 31 50.2	-0.2
	comp=Z,0.7nm,0.6s,baz=12,slow=4.2,SNR=12						
TORD	Torodi Ar. Bea	165.52	273	PKPab	PKPab	05 32 48.7	-0.8
	comp=Z,0.3nm,0.7s,baz=72,slow=4.7,SNR=2.1						

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*IDC **26** 05:49:14.5±1.2, 18°.93S×167°.63E, h0^{km}, mb4.0/6, mbtmp4.0/7, ML3.9/1, MS3.1/7, Error ellipse: s-maj=48.4km s-min=23.7km az=134.0*

*NOU **26** 05:49:15.2, 18°.87S×167°.66E, h10^{km}, MLv4.4/14, Vanuatu Islands*

*NEIC **26** 05:49:17.4±0.3, 19°.14S±0°.03×167°.5E±0°.1, h10^{km}±1^{km}, mb4.2/12, Error ellipse: s-maj=17.3km s-min=5.1km az=93.0*

ISC 26 05:49:15.5±0.6**, 18°.96S**±0°.05×**167°.69E**±0°.09**, h10**^{km}**, n50,** σ1^{s}**32**/48**, mb4.1**/11**, MS3.3**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	1.32	21	P	Pn	05 49 38.3	-1.6
RTV	Rentapao	1.36	31	P	Pn	05 49 39.0	-1.5
LIFNC	LIFOU	1.86	193		Pn	05 49 46.3	-1.0
LIFNC				Sn	Sn	05 50 07.6	-3.3
LIFNC	LIFOU	1.86	193	P	Pn	05 49 46.9	-0.5
YATNC	Mamie plateau,	3.17	193	P	Pn	05 50 05.6	+0.1
DZM	Mont Dzumac	3.31	200	Pn	Pn	05 50 07.9	+0.4
	12nm,0.3s,baz=77,slow=11,SNR=167						
DZM				Sn	Sn	05 50 45.6	-1.3
	34nm,0.3s,baz=334,slow=23,SNR=14						
DZM				LR	LR	05 50 49.1	
	comp=Z,145nm,19.6s,baz=355,slow=28						
	22nm,0.3s						
DZM	Mont Dzumac	3.31	200		Pn	05 50 06.1	-1.3
DZM	Mont Dzumac	3.31	200	P	Pn	05 50 08.1	+0.7
NOUC	Port Laguerre	3.38	202	P	Pn	05 50 09.6	+1.2
ONTNC	Ouen Toro	3.52	199		Pn	05 50 09.5	-0.9
ONTNC	Ouen Toro	3.52	199	P	Pn	05 50 11.5	+1.2
OUENC	Ouen Island, N	3.53	193		Pn	05 50 09.5	-0.9
OUENC	Ouen Island, N	3.53	193	P	Pn	05 50 11.7	+1.3
KOUNC	Koumac, New Ca	3.57	243		Pn	05 50 09.4	-1.6
KOUNC	Koumac, New Ca	3.57	243	P	Pn	05 50 12.0	+1.0
PINNC	Pines Island,	3.64	184		Pn	05 50 10.8	-1.1
MSVF	Nonsavu	9.92	85	LR	LR	05 54 14.1	
	comp=Z,43nm,18.2s,baz=273,slow=30						
EIDS	Eidsvold	16.64	245	Pn	Pn	05 53 06.3	-2.7
CTA	Charters Tower	20.23	263	LR	LR	06 01 07.4	
	comp=Z,103nm,18.6s,baz=82,slow=35						
AFI	Afiamalu	20.32	79	LR	LR	05 59 38.1	
	comp=Z,22nm,21.9s,baz=198,slow=31						
STKA	Stephens Creek	26.77	236	P	P	05 54 56.3	+0.7
	2.0nm,0.7s,baz=53,slow=8.0,SNR=3.7						
	2.0nm,0.7s						
RAR	Rarotonga	30.61	100	LR	LR	06 05 34.7	
	comp=Z,76nm,21.4s,baz=260,slow=32						
WB0	Warramunga Arr	31.39	263	P	P	05 55 36.2	-0.7
WB0				IAmb	IAmb	05 56 02.3	
	comp=Z,3.2nm,1.1s						
WB2	Warramunga Arr	31.42	263	P	P	05 55 36.3	-0.9
WB2				IAmb	IAmb	05 56 02.9	
	comp=Z,2.5nm,1.1s						
WRAB	Tennant Creek	31.42	263	P	P	05 55 35.8	-1.4
WRAB				IAmb	IAmb	05 55 40.9	
	comp=Z,3.0nm,1.1s						
WRA	Warramunga Arr	31.43	263	P	P	05 55 36.5	-0.7
	comp=Z,0.3nm,0.5s,baz=82,slow=6.2,SNR=5.8						
WRA				PcP	PcP	05 58 30.6	-0.2
	comp=Z,0.4nm,1.0s,baz=95,slow=3.1,SNR=1.8						
	comp=Z,0.3nm,0.5s						
WRA	Warramunga Arr	31.43	263	P	P	05 55 36.7	-0.6
AS31	Alice Springs	31.77	256	P	P	05 55 39.8	-0.5
AS31				IAmb	IAmb	05 55 53.0	
	comp=Z,1.8nm,0.7s						
ASAR	Alice Springs	31.77	256	P	P	05 55 40.9	+0.6
	comp=Z,4.0nm,0.7s,baz=81,slow=8.7,SNR=49						
ASAR				LR	LR	06 07 37.4	
	comp=Z,97nm,20.8s,baz=114,slow=35						
	comp=Z,4.0nm,0.7s						
ASAR	Alice Springs	31.77	256	P	P	05 55 39.4	-0.8
FORT	Forrest	37.65	244	P	P	05 56 30.0	-0.9
NWAO	Narrogin (SRO)	47.04	242	P	P	05 57 46.5	-0.9
LUWI	Luwuk	47.48	287	P	P	05 57 50.8	-0.2
USRK	Ussuriysk Ar.	70.83	334	P	P	06 00 34.1	+1.8
QSPA	South Pole Qui	71.09	180	P	P	06 00 34.3	+0.4
BELA	Belgrano 2	82.50	175	P	P	06 01 38.9	+0.9
BELA				IAmb	IAmb	06 01 39.5	
	comp=Z,2.3nm,0.7s						
SONM	Songino Array	86.12	324	P	P	06 01 57.5	+0.7
	comp=Z,1.4nm,0.7s,baz=150,slow=5.4,SNR=8.4						
	comp=Z,1.4nm,0.7s						
SONM	Songino Array	86.12	324	P	P	06 01 58.9	+2.1
SONM				IAmb	IAmb	06 02 09.5	
	comp=Z,1.9nm,1.0s						
NVAR	Mina Array Bea	89.72	49	P	P	06 02 15.6	+1.2
	comp=Z,0.5nm,0.7s,baz=237,slow=4.6,SNR=4.6						
	comp=Z,0.5nm,0.7s						
ILAR	Eielson Array	90.41	18	P	P	06 02 15.5	-1.2
	comp=Z,0.4nm,0.9s,baz=238,slow=5.1,SNR=1.8						
	comp=Z,0.4nm,0.9s						
ELK	Elko	92.82	48	LR	LR	06 34 36.6	
	comp=Z,20nm,21.2s,baz=314,slow=29						
KBA	Koelnbreinsper	144.97	329	*e*PKP	PKPab	06 08 53.1	+0.6
	comp=Z,4.5nm,1.1s						
ABTA	Abfaltersbach	145.60	329	*e*PKP	PKPdf	06 08 54.5	+0.3
	comp=Z,2.9nm,0.7s						
WTTA	Wattenberg	145.65	331	*e*PKP	PKPdf	06 08 54.6	+0.2
	comp=Z,2.5nm,0.8s						
MOTA	Moosalm	145.83	331	*e*PKP	PKPdf	06 08 56.2	+1.5
	comp=Z,6.0nm,0.9s						
SQTA	Sankt Quirin	145.88	331	*e*PKP	PKPdf	06 08 56.0	+1.3
	comp=Z,4.5nm,0.7s						
RETA	Reutte	145.88	332	*e*PKP	PKPdf	06 08 56.2	+1.6
	comp=Z,5.9nm,1.2s						
FETA	Feichten	146.24	331	*e*PKP	PKPdf	06 08 57.6	+2.2
	comp=Z,1.9nm,0.6s						
DAVOX	Davos/Dischmat	146.81	332	PKPbc	PKPdf	06 08 59.1	+2.7
	comp=Z,4.0nm,0.6s,baz=172,slow=2.5,SNR=16						
TORD	Torodi Ar. Bea	165.35	249	PKPab	PKPab	06 10 17.9	-1.1
	comp=Z,28nm,0.3s,baz=116,slow=2.8,SNR=5.1						

ROM 26 05:50:15.3±0.1**, 43°.705N**±0°.006×**12°.112E**±0°.006**, h10**^{km}**, ML1.0**/4**, Error ellipse: s-maj=0.7km s-min=0.4km az=196.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PARC	Parchiule	0.11	122	P	Pg	05 50 18.4	+0.4
PARC				S	Sg	05 50 20.5	+0.5
PARC				AML	AML		
	comp=N,178µm,0.3s						
PARC				AML	AML		
	comp=E,204µm,0.3s						
SSP9	Sansepolcro	0.13	174	P	Pg	05 50 18.9	+0.6
SSP9				S	Sg	05 50 21.7	+1.2
CRE	Caprese Michel	0.14	234	P	Pg	05 50 19.1	+0.5
CRE				S	Sg	05 50 21.8	+0.7
CRE				AML	AML		
	comp=N,61µm,1.4s						
CRE				AML	AML		
	comp=N,61µm,0.6s						
CRE				AML	AML		
	comp=E,41µm,1.5s						
CPGN	Carpegna, Ital	0.18	58	P	Pb	05 50 20.3	-0.5
BADI	Badiali	0.22	154	P	Pg	05 50 20.4	+0.5
ASQU	Asqua	0.25	291	P	Pg	05 50 20.9	+0.4
ASQU				S	Sg	05 50 25.1	+1.2
PIEI	Pieia	0.35	119	P	Pg	05 50 22.5	+0.2
PIEI				S	Sb	05 50 28.2	-1.1
PIEI				AML	AML		
	comp=E,66µm,1.5s						
PIEI				AML	AML		
	comp=N,31µm,1.0s						
PIEI				AML	AML		
	comp=E,66µm,0.5s						
ATMI	Monte Miggiano	0.39	163	P	Pg	05 50 23.4	+0.4
ATVO	AVT- Monte Val	0.39	146	P	Pg	05 50 23.4	+0.5
ATVO				AML	AML		
	comp=E,40µm,1.1s						
ATVO				AML	AML		
	comp=N,31µm,1.3s						
ATVO				AML	AML		
	comp=E,40µm,0.9s						
ATVO				AML	AML		
	comp=N,31µm,0.7s						
CAFI	Castiglion Fio	0.39	196	P	Pg	05 50 23.6	+0.6
CAFI				S	Sb	05 50 29.5	-0.9
RUFI	Rufina	0.46	287	P	Pb	05 50 25.0	-0.4

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*THE **26** 06:06:24.3, 35°.89N×22°.10E, h6^{km}±1^{km}, ML3.2/9, Error ellipse: s-maj=2.0km s-min=0.7km az=39.0*

*ISK **26** 06:06:25.2, 36°.01N×22°.31E, h74^{km}, ML3.4/19*

*ATH **26** 06:06:25.3, 35°.92N×22°.19E, h15^{km}±5^{km}, ML3.3/6, Error ellipse: s-maj=5.5km s-min=1.3km az=45.0*

*IDC **26** 06:06:27.4±2.2, 35°.96N×22°.25E, h77^{km}±22^{km}, mb3.5/10, mbtmp3.7/14, Error ellipse: s-maj=21.6km s-min=17.5km az=10.0*

ISC 26 06:06:25.4±1.0**, 35°.89N**±0°.05×**22°.13E**±0°.05**, h59**^{km}±10^{km}**, n67,** σ1^{s}**35**/86**, mb3.7**/10**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTHA	Kythira Island	0.84	64	P	Pn	06 06 40.3	-1.1
KTHA				S	Sn	06 06 53.2	+0.1
	3µm,0.5s						
KTHA	Kythira Island	0.84	64	Pg	Pn	06 06 40.4	-0.9
KTHA				Sg	Sn	06 06 51.9	-1.2
KTHA	Kythira Island	0.84	64	P	Pn	06 06 40.3	-1.1
KTHA				S	Sn	06 06 51.2	-1.8
KTHA				AML	AML	06 06 53.9	
	comp=N,3969µm,0.4s						
KTHA				AML	AML	06 06 56.7	
	comp=E,7658µm,0.6s						
ANKY	Antikythira Is	0.95	91	P	Pn	06 06 43.2	+0.4
ANKY				S	Sn	06 06 57.1	+1.5
	comp=E,2µm,0.5s						
ANKY	Antikythira Is	0.95	91	P	Pn	06 06 43.0	+0.3
ANKY				S	Sn	06 06 54.8	-0.8
ANKY				AML	AML	06 06 59.9	
	comp=E,5104µm,0.6s						
ANKY				AML	AML	06 07 00.9	
	comp=N,2987µm,0.5s						
PYL	PYLOS	1.05	343	P	Pn	06 06 43.7	-0.4
PYL				S	Sn	06 06 59.9	+2.0
	comp=N,982nm,0.5s						
PYL	PYLOS	1.05	343	P	Pn	06 06 43.7	-0.4
PYL				S	Sn	06 06 59.0	+1.1
PYL				AML	AML	06 07 04.8	
	comp=N,1431µm,0.8s						
PYL				AML	AML	06 07 05.6	
	comp=E,2147µm,0.5s						
VLI	Veliai	1.05	38	P	Pn	06 06 43.6	-0.5
VLI				S	Sn	06 06 59.9	+1.9
	comp=E,2µm,0.5s						
VLI	Veliai	1.05	38	P	Pn	06 06 43.7	-0.5
VLI				S	Sn	06 06 57.6	-0.3
VLI				AML	AML	06 07 00.9	
	comp=E,5597µm,0.6s						
VLI				AML	AML	06 07 01.8	
	comp=N,3900µm,0.4s						
MNVA	Monemvasia	1.08	42	P	Pn	06 06 43.5	-0.9
MNVA				S	Sn	06 06 58.4	-0.2
ITM	Ithomi	1.30	353	P	Pn	06 06 47.4	0.0
ITM				S	Sn	06 07 06.7	+2.9
	comp=N,762nm,0.6s						
ITM	Ithomi	1.30	353	Pn	Pn	06 06 47.4	0.0
ITM				Sn	Sn	06 07 03.5	-0.3
ITM	Ithomi	1.30	353	P	Pn	06 06 47.4	0.0
ITM				S	Sn	06 07 05.1	+1.3
ITM				AML	AML	06 07 11.1	
	comp=E,1403µm,0.3s						
ITM				AML	AML	06 07 15.4	
	comp=N,1584µm,0.7s						
RODP	Rodopos	1.36	104	P	Pn	06 06 49.3	+1.0
RODP				S	Sn	06 07 09.8	+4.4
	comp=N,292nm,0.5s						
RODP	Rodopos	1.36	104	Pn	Pn	06 06 48.1	-0.2
KNDR	Palaiochora Ch	1.43	117	P	Pn	06 06 49.3	+0.2
KNDR				S	Sn	06 07 08.8	+2.0
	comp=N,390nm,0.5s						
KNDR	Palaiochora Ch	1.43	117	Pn	Pn	06 06 48.3	-0.8
KNDR	Palaiochora Ch	1.43	117	P	Pn	06 06 49.3	+0.2
KNDR				S	Sn	06 07 04.6	-2.2
KNDR				AML	AML	06 07 16.8	
	comp=N,2126µm,0.4s						
KNDR				AML	AML	06 07 17.2	
	comp=E,1737µm,0.6s						
IMMV	Iera Moni Meta	1.57	105	P	Pn	06 06 51.6	+0.6
IMMV				S	Sn	06 07 13.5	+3.2
	comp=E,825nm,0.6s						
IMMV	Iera Moni Meta	1.57	105	Pn	Pn	06 06 50.8	-0.2
IMMV	Iera Moni Meta	1.57	105	P	Pn	06 06 51.6	+0.6
IMMV				S	Sn	06 07 09.8	-0.5
CHAN	Chania	1.60	103	P	Pn	06 06 51.1	-0.3
KRND	KRANIDI	1.70	29	P	Pn	06 06 52.8	0.0
KRND				S	Sn	06 07 16.3	+2.8
	comp=E,655nm,0.8s						
KRND	KRANIDI	1.70	29	P	Pn	06 06 52.5	-0.3
EPID	Epidavros	1.90	24	P	Pn	06 06 56.0	+0.6
EPID	Epidavros	1.90	24	P	Pn	06 06 56.0	+0.6
GVD	Gavdhos	1.91	123	Pn	Pn	06 06 56.7	+1.0
MHLO	Agia Marina, M	2.00	66	P	Pn	06 06 56.3	-0.6
GUR	Goura	2.05	5	P	Pn	06 06 59.6	+2.0
GUR	Goura	2.05	5	P	Pn	06 06 59.2	+1.6
DRO	Drossia	2.08	351	P	Pn	06 06 59.4	+1.3
DRO	Drossia	2.08	351	P	Pn	06 06 59.3	+1.3
IDI	Anoyia	2.33	104	P	Pn	06 07 01.8	+0.5
	comp=E,6.2nm,0.3s,baz=301,slow=16,SNR=28						
IDI	Anoyia	2.33	104	P	Pn	06 07 01.9	+0.5
IDI	Anoyia	2.33	104	Pn	Pn	06 07 01.5	+0.1
IDI	Anoyia	2.33	104	P	Pn	06 07 01.4	+0.1
HRKL	Herakleio	2.49	103	Pn	Pn	06 07 03.6	+0.1
EFP	Efpalio	2.54	356	P	Pn	06 07 06.0	+1.8
ANX	Ano Chora	2.70	357	P	Pn	06 07 07.8	+1.3
SANT	Santorini	2.74	79	Pn	Pn	06 07 05.9	-1.0
AGG	Agios Georgios	3.13	3	Pn	Pn	06 07 13.1	+0.8
ZKR	Zakros	3.42	102	Pn	Pn	06 07 17.0	+0.7
CHOS	Chios island	4.00	50	Pn	Pn	06 07 24.1	-0.2
KOSK	Kos Island	4.01	76	Pn	Pn	06 07 24.3	0.0
KARP	Karpathos	4.11	93	Pn	Pn	06 07 25.6	-0.1
BODT	Bodrum	4.33	73	Pn	Pn	06 07 28.8	0.0
URLA	Izmir	4.34	54	Pn	Pn	06 07 27.5	-1.3
SIGR	SIGRI	4.44	41	Pn	Pn	06 07 29.4	-0.8
ARG	Arkhangelos	4.87	84	Pn	Pn	06 07 35.7	-0.4
FETY	Fethiye	5.67	80	Pn	Pn	06 07 46.3	-0.7
VAE	Valguarnera	6.40	287	S	Sn	06 09 04.3	-4.5
	comp=E,6.9nm,0.8s,baz=106,slow=20,SNR=1.8						
BRTR	Keskin Array B	9.88	64	P	Pn	06 08 45.4	+0.6
	comp=E,0.2nm,0.3s,baz=253,slow=15,SNR=1.9						
MMAI	Mount Meron Ar	11.33	101	P	Pn	06 09 06.6	+2.0
	comp=E,0.6nm,0.3s,baz=296,slow=11,SNR=3.1						
KBZ	Khabaz	17.74	58	P	Pn	06 10 27.2	-0.9
	comp=E,1.1nm,0.8s,baz=270,slow=10,SNR=2.3						
ESDC	Sonseca Array	20.94	288	P	P	06 11 03.0	-0.3
	comp=E,0.7nm,0.8s,baz=90,slow=12,SNR=4.4						
	comp=E,0.7nm,0.8s						
HFS	Hagfors	24.86	350	P	P	06 11 41.6	-0.5

	comp=E,2.3nm,0.9s,baz=147,slow=9.8,SNR=13						
	comp=E,2.3nm,0.9s						
FINES	FINESS Array B	25.70	4	P	P	06 11 49.2	-0.4
	comp=E,2.9nm,1.0s,baz=174,slow=10,SNR=6.3						
	comp=E,2.9nm,1.0s						
EKA	Eskdalemuir Ar	26.04	326	P	P	06 11 53.8	+0.9
	comp=E,0.5nm,0.5s,baz=127,slow=8.6,SNR=7.5						
	comp=E,0.5nm,0.5s						
NOA	NORSAR Array B	26.11	348	P	P	06 11 54.1	+0.6
	comp=E,0.7nm,0.9s,baz=156,slow=8.6,SNR=2.8						
	comp=E,0.7nm,0.9s						
TORD	Torodi Ar. Bea	29.18	224	P	P	06 12 23.9	+2.7
	comp=E,0.5nm,0.8s,baz=34,slow=9.6,SNR=3.0						
ARCES	ARCESS Array B	33.75	2	P	P	06 13 00.9	-0.1
	comp=E,5.5nm,1.0s,baz=201,slow=9.7,SNR=1.9						
	comp=E,5.5nm,1.0s						
KURBB	Kurchatov Arra	42.59	52	P	P	06 14 14.3	-1.2
	comp=E,0.7nm,0.3s,baz=279,slow=8.5,SNR=3.8						
	comp=E,0.7nm,0.3s						
MKAR	Makanchi Array	45.44	57	P	P	06 14 38.2	-0.1
	comp=E,0.8nm,0.3s,baz=273,slow=7.8,SNR=31						
	comp=E,0.8nm,0.3s						
ZALV	Zalesovo Beam	46.29	47	P	P	06 14 43.4	-1.5
	comp=E,0.5nm,0.3s,baz=274,slow=8.5,SNR=2.9						
	comp=E,0.5nm,0.3s						
KSRS	Korea Array	79.77	51	P	P	06 18 26.2	-1.0
	comp=E,0.5nm,0.5s,baz=303,slow=3.5,SNR=2.1						
	comp=E,0.5nm,0.5s						
WRA	Warramunga Arr	119.12	94	PKP	PKPdf	06 25 06.0	-2.0
	comp=E,0.3nm,0.9s,baz=299,slow=3.5,SNR=1.5						
ASAR	Alice Springs	120.61	98	PKP	PKPdf	06 25 09.8	-1.0
	comp=E,0.2nm,0.8s,baz=335,slow=4.1,SNR=1.6						

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*IDC **26** 06:07:06.4±1.9, 15°.06S×166°.34E, h0km, mb3.3/3, mbtmp3.5/4, ML3.9/1, MS3.4/2, Error ellipse: s-maj=50.6km s-min=35.4km az=123.0*

*NOU **26** 06:07:11.6, 15°.37S×167°.58E, h119km, MLv4.2/9, Vanuatu Islands*

ISC 26 06:07:11.1±1.4, **15°.4S**±0°.1×**166°.9E**±0°.2, **h50km, n11, σ1s.99**/10, **mb3.3**/3, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	2.64	153	P	Pn	06 07 51.2	0.0
RTV	Rentapao	2.81	150	P	Pn	06 07 51.9	-1.6
LIFNC	LIFOU	5.40	177	P	Pn	06 08 29.0	0.0
YATNC	Mamie plateau,	6.67	180	P	Pn	06 08 46.9	+0.4
DZM	Mont Dzumac	6.69	184	Pn	Pn	06 08 49.4	+2.4
	2.2nm,0.3s,baz=11,slow=12,SNR=37						
DZM				Sn	Sn	06 10 02.0	0.0
	1.3nm,0.3s,baz=317,slow=22,SNR=9.0						
	4.8nm,0.3s						
OUENC	Ouen Island, N	7.02	181	P	Pn	06 08 53.2	+1.9
WRA	Warramunga Arr	31.37	257	P	P	06 13 24.8	-2.6
	0.2nm,0.6s,baz=84,slow=8.8,SNR=1.3						
	0.2nm,0.6s						
ASAR	Alice Springs	32.16	250	P	P	06 13 32.3	-1.9
	0.2nm,0.4s,baz=72,slow=9.4,SNR=4.9						
	0.2nm,0.4s						
GUMO	Guam	36.11	322	LR	LR	06 29 08.6	
	comp=Z,24nm,19.4s,baz=86,slow=37						
TGY	Tagaytay City	54.10	300	LR	LR	06 39 54.9	
	comp=Z,85nm,18.2s,baz=169,slow=37						
ILAR	Eielson Array	87.22	18	P	P	06 19 53.9	+2.3
	0.4nm,1.0s,baz=224,slow=6.3,SNR=4.3						
	0.4nm,1.0s						

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*ROM **26** 06:11:33.1±0.2, 38°.69N±0°.01×13°.00E±0°.02, h27km±1km, ML3.4/26, Error ellipse: s-maj=1.6km s-min=1.1km az=274.0*

*IDC **26** 06:11:41.9±1.6, 37°.69N×12°.88E, h0km, mb3.5/3, mbtmp3.5/3, ML2.2/1, Error ellipse: s-maj=35.4km s-min=20.9km az=10.0*

ISC 26 06:11:33.5±1.1, **38°.67N**±0°.04×**12°.98E**±0°.04, **h23km**±8km, **n48, σ0s.74**/51, **mb3.7**/3, **1D, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USI	Ustica	0.16	76	⇓P	Pb	06 11 38.5	-0.2
USI				S	Sb	06 11 42.3	+0.2
USI				AML	AML		
	comp=N,63900μm,0.3s						
USI				AML	AML		
	comp=E,26600μm,0.4s						
ERC	Erice	0.70	206	P	Pb	06 11 46.4	-0.8
ERC				S	Sb	06 11 56.8	+0.4
SOLUN	Solunto	0.72	143	P	Pb	06 11 47.5	+0.1
SOLUN				S	Sn	06 11 58.2	-0.4
SOLUN				AML	AML		
	comp=E,11650μm,0.8s						
SOLUN				AML	AML		
	comp=E,12315μm,0.5s						
SOLUN				AML	AML		
	comp=N,5945μm,1.2s						
SOLUN				AML	AML		
	comp=N,5945μm,0.8s						
SOLUN				AML	AML		
	comp=E,12315μm,1.5s						
CORL	Corleone	0.81	161	P	Pb	06 11 48.7	-0.3
CORL				S	Sn	06 12 01.7	+0.7
CORL				AML	AML		
	comp=E,4535μm,0.6s						
CORL				AML	AML		
	comp=N,3775μm,1.5s						
CORL				AML	AML		
	comp=E,6470μm,0.8s						
CORL				AML	AML		
	comp=E,6470μm,1.2s						
CORL				AML	AML		
	comp=N,5100μm,0.5s						
MFNL	Monte Finestre	0.88	183	P	Pn	06 11 50.7	+0.3
MMGO	Monte Magaggia	1.00	180	P	Pn	06 11 52.2	0.0
GIB	Gibilmanna	1.07	129	P	Pn	06 11 52.7	-0.5
GIB				S	Sb	06 12 07.1	+0.1
GIB				AML	AML		
	comp=E,3395μm,0.6s						
GIB				AML	AML		
	comp=N,2200μm,0.5s						
GIB				AML	AML		
	comp=E,3395μm,1.4s						
IACL	Alicudi	1.09	97	P	Pn	06 11 52.5	-0.8
IACL				AML	AML		
	comp=N,2235μm,0.5s						
IACL				AML	AML		
	comp=E,2850μm,0.6s						
ALJA	Alia	1.10	146	P	Pb	06 11 54.1	+0.1
ALJA				AML	AML		
	comp=E,3260μm,0.5s						
ALJA				AML	AML		
	comp=N,3430μm,0.5s						
ALJA				AML	AML		
	comp=N,3430μm,1.5s						
CLTB	Caltabellotta	1.10	170	P	Pb	06 11 54.8	+0.8
CSLB	Castelbuono	1.12	130	P	Pn	06 11 53.3	-0.5
CSLB				S	Sb	06 12 08.1	-0.4
CSLB				AML	AML		
	comp=E,1056μm,0.4s						
CSLB				AML	AML		
	comp=N,883μm,0.8s						
PLLN	Pollina	1.14	126	P	Pn	06 11 53.8	-0.3
PLLN				AML	AML		
	comp=E,2435μm,0.6s						
PLLN				AML	AML		
	comp=N,4010μm,0.6s						
PETRA	Petralia Sopra	1.23	133	P	Pn	06 11 55.3	0.0
PETRA				AML	AML		
	comp=N,2250μm,0.5s						
PETRA				AML	AML		
	comp=E,1710μm,0.6s						
IFIL	Filicudi I Eol	1.25	94	P	Pn	06 11 55.0	-0.6
IFIL				S	Sn	06 12 10.7	-1.0
IFIL				AML	AML		
	comp=N,2455μm,0.2s						
IFIL				AML	AML		
	comp=E,8045μm,0.4s						
RESU	Resuttano	1.33	140	P	Pb	06 11 58.2	+0.4
RESU				AML	AML		
	comp=E,914μm,0.5s						
RESU				AML	AML		
	comp=E,915μm,0.5s						
RESU				AML	AML		
	comp=N,1285μm,0.6s						
MSFR	San Fratello	1.42	116	P	Pn	06 11 57.6	-0.3
MSFR				S	Sn	06 12 15.1	-0.8
MSFR				AML	AML		
	comp=N,370μm,1.6s						
MSFR				AML	AML		
	comp=N,370μm,1.6s						
MSFR				AML	AML		
	comp=E,218μm,1.5s						
MSFR				AML	AML		
	comp=N,370μm,0.4s						
MNO	Monte Soro	1.54	118	P	Pn	06 11 59.0	-0.7
LLI	Lipari	1.56	98	P	Pn	06 11 59.6	-0.3
VPL	Vulcano Piano	1.60	100	P	Pn	06 11 59.5	-0.9
MUCR	Ucria	1.62	112	P	Pn	06 11 59.8	-0.9
MUCR				AML	AML		
	comp=E,552μm,0.5s						
MUCR				AML	AML		
	comp=N,595μm,0.5s						
VAE	Valguarnera	1.64	136	Pg	Pb	06 12 04.8	+1.6
	comp=N,2.4nm,0.3s,baz=256,slow=8.3,SNR=11						
CLTA	Licata	1.70	152	P	Pb	06 12 03.9	-0.1
CLTA				AML	AML		
	comp=E,626μm,1.1s						
CLTA				AML	AML		
	comp=N,954μm,1.4s						
EPZF	Pizzo Felice	1.70	119	P	Pn	06 12 02.0	+0.1
EPZF				AML	AML		
	comp=N,1540μm,0.5s						
EPZF				AML	AML		
	comp=E,1220μm,0.5s						
RAFF	Raffo Rosso	1.81	142	P	Pb	06 12 05.7	-0.4
RAFF				AML	AML		
	comp=E,1004μm,1.1s						
RAFF				AML	AML		
	comp=N,1058μm,0.6s						
RAFF				AML	AML		
	comp=E,1004μm,0.9s						
MILZ	Milazzo	1.81	102	P	Pn	06 12 02.6	-0.7
HLNI	Lentini	2.00	131	P	Pn	06 12 06.8	+1.0
HLNI				AML	AML		
	comp=E,516μm,1.4s						
HLNI				AML	AML		
	comp=N,653μm,0.4s						
HLNI				AML	AML		
	comp=E,516μm,0.6s						
HLNI				AML	AML		
	comp=N,653μm,1.6s						
MSRU	Castanea	2.03	101	P	Pn	06 12 05.5	-0.8
MSRU				AML	AML		
	comp=E,321μm,1.3s						
MSRU				AML	AML		
	comp=N,405μm,0.3s						
MSRU				AML	AML		
	comp=E,321μm,0.7s						
VENT	Ventotene	2.15	9	P	Pn	06 12 07.5	-0.4
MEU	Monte Lauro	2.20	135	P	Pn	06 12 09.3	+0.6
MEU				AML	AML		
	comp=N,746μm,1.4s						
MEU				AML	AML		
	comp=E,636μm,0.5s						
HMDC	Modica	2.23	140	P	Pn	06 12 10.6	+1.5
HMDC				AML	AML		
	comp=E,550μm,0.9s						
HMDC				AML	AML		
	comp=N,576μm,0.4s						
CET2	Cetraro	2.47	69	P	Pn	06 12 12.3	-0.1
MGR	Morigerati	2.48	53	P	Pn	06 12 12.5	+0.1
CDRU	Civita di Ruta	2.56	44	P	Pn	06 12 14.4	+0.8
CUC	Castrocucco	2.57	58	P	Pn	06 12 13.8	+0.1
MODR	Mondragone	2.57	15	P	Pn	06 12 14.5	+0.8
CAR1	CAROLEI	2.59	76	P	Pn	06 12 13.0	-1.1
CAR1				AML	AML		
	comp=N,512μm,1.3s						
CAR1				AML	AML		
	comp=E,570μm,0.5s						
CAR1				AML	AML		
	comp=N,428μm,0.5s						
CAR1				AML	AML		
	comp=E,570μm,1.5s						
CAR1				AML	AML		
	comp=E,430μm,0.4s						
MTSN	Montesano sull	2.68	53	P	Pn	06 12 16.0	+0.8
MTSN				AML	AML		
	comp=E,60μm,0.4s						
MTSN				AML	AML		
	comp=N,53μm,0.5s						
SIRI	Monte Sirino -	2.70	55	P	Pn	06 12 16.3	+0.7
SIRI				AML	AML		
	comp=E,110μm,1.2s						
SIRI				AML	AML		
	comp=N,86μm,1.1s						
SIRI				AML	AML		
	comp=E,110μm,0.8s						
VSL	Villasalto	2.92	288	P	Pn	06 12 17.3	-1.2
VSL				AML	AML		
	comp=E,126μm,0.2s						
VSL				AML	AML		
	comp=N,71μm,1.4s						
VSL				AML	AML		
	comp=N,71μm,0.6s						
CGL	Cagliari Serpe	2.95	285	P	Pn	06 12 17.7	-1.3
TOLF	Tolfa	3.47	348	P	Pn	06 12 27.9	+1.8
AMUR	Altamura	3.58	50	P	Pn	06 12 28.0	+0.4
AMUR				AML	AML		
	comp=N,54μm,0.5s						
AMUR				AML	AML		
	comp=E,51μm,0.3s						
AMUR				AML	AML		
	comp=N,54μm,1.5s						
KEST	Kesra	4.12	226	Pn	Pn	06 12 35.6	+0.5
	comp=N,0.2nm,0.3s,baz=145,slow=22,SNR=11						
T1256	Bolognola (MC)	4.34	2	AML	AML		
	comp=E,182μm,0.2s						
T1256				AML	AML		
	comp=N,125μm,1.6s						
T1256				AML	AML		
	comp=N,125μm,0.4s						
FDMO	Fiordimonte	4.36	1	AML	AML		
	comp=N,19μm,1.1s						
FDMO				AML	AML		
	comp=E,21μm,1.5s						
FDMO				AML	AML		
	comp=N,19μm,0.9s						
FINES	FINESS Array B	24.21	15	P	P	06 17 06.8	+19
	comp=N,2.1nm,0.8s,baz=200,slow=7.6,SNR=5.2						
	comp=N,2.1nm,0.8s						
MKAR	Makanchi Array	50.05	57	P	P	06 20 43.3	+17
	comp=N,0.7nm,0.9s,baz=284,slow=7.1,SNR=4.8						
	comp=N,0.7nm,0.9s						
YKA	Yellowknife Ar	70.76	337	P	P	06 23 06.3	+19
	comp=N,0.2nm,0.8s,baz=33,slow=8.0,SNR=2.1						
	comp=N,0.2nm,0.8s						

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*NEIC **26** 06:17:11.9±0.6, 18°.0N±0°.2×68°.74W±0°.07, h126km±12km, ML3.1/36, Md3.4/29(RSPR), Error ellipse: s-maj=30.5km s-min=7.9km az=188.0*

*RSPR **26** 06:17:12.6, 18°.03N×68°.73W, h121km±2km, MD3.4/15*

ISC 26 06:17:12.1±1.6, **17°.8N**±0°.1×**68°.79W**±0°.05, **h100km, n50, σ0s.58**/54, **16C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.83	28	⇑eP	Pn	06 17 30.8	0.0
PCDR	Punta Cana, DR	0.83	28	eS	Sn	06 17 45.3	+0.6
PCDR	Punta Cana, DR	0.83	28		Pn	06 17 31.0	+0.2
PCDR					Sn	06 17 45.4	+0.6
PCDR				IAML		06 17 46.3	
	comp=E,335nm,0.5s						
SDD	Santo Domingo	1.27	302	Pn	Pn	06 17 36.5	+1.0
IDE	Isla Desecheo	1.39	64	⇑eP	Pn	06 17 37.3	+0.3
IDE	Isla Desecheo	1.39	64	eS	Sn	06 17 56.1	+0.2
IDE	Isla Desecheo	1.39	64		Pn	06 17 37.3	+0.3
IDE					Sn	06 17 56.1	+0.2
CRPR	Cabo Rojo, PR	1.61	82	⇑eP	Pn	06 17 40.4	+0.6
CRPR	Cabo Rojo, PR	1.61	82		Pn	06 17 40.3	+0.5
CRPR				IAML		06 18 03.0	
	comp=E,160nm,0.6s						
PRSN	Puerto Rico Se	1.62	74		Pn	06 17 40.0	0.0
LSP	Las Mesas	1.67	76	⇑eP	Pn	06 17 40.8	+0.2
LSP	Las Mesas	1.67	76	eS	Sn	06 18 02.2	+0.1
LSP	Las Mesas	1.67	76		Pn	06 17 40.8	+0.2
LSP					Sn	06 18 02.2	+0.1
MLPR	Magueyes Islan	1.67	83	⇑eP	Pn	06 17 40.8	+0.3
MLPR	Magueyes Islan	1.67	83	eS	Sn	06 18 02.7	+0.6
MLPR	Magueyes Islan	1.67	83		Pn	06 17 40.9	+0.3
MLPR				IAML		06 18 04.3	
	comp=N,120nm,0.8s						
MLPR				IAML		06 18 04.4	
	comp=E,102nm,0.5s						
AGPR	Aguadilla, PR	1.74	66	⇑eP	Pn	06 17 41.8	+0.4
AGPR	Aguadilla, PR	1.74	66	eS	Sn	06 18 03.5	0.0
AGPR	Aguadilla, PR	1.74	66		Pn	06 17 41.4	0.0
AGPR				IAML		06 18 05.3	
	comp=E,220nm,0.5s						
GBPR	Guanica, Bosqu	1.83	84	⇑eP	Pn	06 17 43.5	+1.0
GBPR	Guanica, Bosqu	1.83	84	eS	Sn	06 18 06.4	+0.7
GBPR	Guanica, Bosqu	1.83	84		Pn	06 17 43.5	+1.0
GBPR					Sn	06 18 06.4	+0.7
UUPR	Utuado, UPR, P	2.02	76	⇑eP	Pn	06 17 45.2	+0.1
UUPR	Utuado, UPR, P	2.02	76	eS	Sn	06 18 09.8	-0.4
UUPR	Utuado, UPR, P	2.02	76		Pn	06 17 44.8	-0.3
OBIP	Obispado Ponce	2.09	82	⇑eP	Pn	06 17 45.4	-0.6
OBIP	Obispado Ponce	2.09	82		Pn	06 17 45.1	-0.9
OBIP				IAML		06 18 10.9	
	comp=E,77nm,0.8s						
OBIP				IAML		06 18 12.4	
	comp=N,104nm,0.8s						
CELP	Cerrillos	2.12	82	⇑eP	Pn	06 17 46.4	+0.1
CELP	Cerrillos	2.12	82	eS	Sn	06 18 13.2	+0.7
CELP	Cerrillos	2.12	82		Pn	06 17 46.1	-0.2
CELP				IAML		06 18 13.7	
	comp=N,88nm,0.7s						
CELP				IAML		06 18 18.9	
	comp=E,82nm,0.3s						
SC01	Santiago de lo	2.46	312	Pn	Pn	06 17 50.1	-0.7
SC01				IAML		06 18 15.6	
	comp=E,106nm,3.9s						
SC01				IAML		06 18 27.4	
	comp=N,108nm,0.6s						
SJG	San Juan	2.53	82		Pn	06 17 51.4	-0.3
SJG				IAML		06 18 24.2	
	comp=N,68nm,0.4s						
SJG				IAML		06 18 24.4	
	comp=N,50nm,0.2s						
IGPR	InterUniversit	2.56	85	⇑eP	Pn	06 17 52.5	+0.4
IGPR	InterUniversit	2.56	85		Pn	06 17 52.5	+0.4
GCPR	Guaynabo City	2.63	78	⇑eP	Pn	06 17 52.0	-0.9
GCPR	Guaynabo City	2.63	78		Pn	06 17 51.8	-1.1
SDDR	Presa de Saban	2.66	297	Pn	Pn	06 17 53.4	0.0
HUMP	Col San Antoni	2.82	82	⇑eP	Pn	06 17 55.6	+0.1
HUMP	Col San Antoni	2.82	82		Pn	06 17 55.1	-0.4
HUMP				IAML		06 18 29.9	
	comp=N,58nm,0.2s						
HUMP				IAML		06 18 30.6	
	comp=E,55nm,0.2s						
CBYP	Canovanas	2.83	80	⇑eP	Pn	06 17 55.2	-0.5
CBYP	Canovanas	2.83	80	eS	Sn	06 18 28.8	-0.5
CBYP	Canovanas	2.83	80		Pn	06 17 54.7	-1.1
MTP	Monte Pirata	3.10	84	⇑eP	Pn	06 17 59.3	+0.1
MTP	Monte Pirata	3.10	84	eS	Sn	06 18 36.2	+0.7
MTP	Monte Pirata	3.10	84		Pn	06 17 59.2	+0.1
MTP				IAML		06 18 40.0	
	comp=N,34nm,1.8s						
MTP				IAML		06 18 55.7	
	comp=E,35nm,3.9s						
CUPR	Culebra, Puert	3.38	81	⇑eP	Pn	06 18 02.3	-0.7
CUPR	Culebra, Puert	3.38	81	eS	Sn	06 18 41.1	-1.1
CUPR	Culebra, Puert	3.38	81		Pn	06 18 02.1	-0.9
PAPH	Port-au-Prince	3.42	283	Pn	Pn	06 18 02.8	-0.7
PAPH				IAML		06 19 18.6	
	comp=N,45nm,3.2s						
CDVI	St. Croix	3.83	90	Pn	Pn	06 18 08.4	-0.7

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*IDC **26** 06:53:45.9±0.7, 5°.13S×145°.48E, h87km±6km, mb3.9/19, mbtmp4.3/24, MS3.3/6, Error ellipse: s-maj=17.8km s-min=10.8km az=78.0*

*NEIC **26** 06:53:45.4±1.5, 5°.19S±0°.07×145°.30E±0°.06, h75km±6km, mb4.5/44, Error ellipse: s-maj=10.9km s-min=7.4km az=139.0*

*DJA **26** 06:53:47.6±0.5, 5°S±4°×14°5E±°, h94km±6km, M4.9/19, mB5.5/3, mb4.6/19, MLv5.0/3, Mw(mB)4.9/3*

ISC 26 06:53:45.5±0.5, **5°.19S**±0°.05×**145°.40E**±0°.06, **h78km**±5km, **h78km:pP-P, n120, σ1s.25**/123, **mb4.5**/43, **1C, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	3.69	32	Pn	Pn	06 54 40.8	+0.7
PMG	Port Moresby	4.54	158	P	Pn	06 54 52.1	+0.3
	85nm,0.3s,baz=292,slow=11,SNR=57						
PMG				S	Sn	06 55 41.2	-2.1
	397nm,0.5s,baz=124,slow=22,SNR=23						
PMG				LR	LR	06 56 29.3	
	comp=Z,271nm,18.5s,baz=340,slow=36						
PMG	Port Moresby	4.54	158	Pn	Pn	06 54 51.7	-0.1
PMG	Port Moresby	4.54	158	P	Pn	06 54 52.4	+0.6
PMG	Port Moresby	4.54	158	P	Pn	06 54 52.3	+0.5
GENI	Genyem	5.82	296	P	Pn	06 55 11.9	+2.6
	83nm,1.0s,0.8nm						
KRVT	Keravat (AS076	6.66	83	P	Pn	06 55 21.2	+0.5
	26nm,0.6s,baz=252,slow=6.4,SNR=2.3						
RABL	Rabaul	6.81	82	Pn	Pn	06 55 23.0	+0.2
SMPI	Sarmi	7.40	295	P	Pn	06 55 26.5	-4.3
COEN	Coen	8.99	194	Pn	Pn	06 55 50.5	-2.1
COEN	Coen	8.99	194	P	Pn	06 55 55.6	+3.0
MTSU	Mount Surprise	12.91	185	P	Pn	06 56 48.9	+2.9
SIJI	Sorong	14.75	286	P	Pn	06 57 09.4	-0.7
	6.7nm,0.5s,baz=233,slow=23,SNR=1.5						
KDU	Kakadu	14.78	239	P	P	06 57 12.5	-2.0
CTA	Charters Tower	14.84	177	P	Pn	06 57 11.1	-0.1
	4.9nm,0.9s,baz=86,slow=11,SNR=3.0						
CTAO	Charters Tower	14.84	177	Pn	Pn	06 57 10.7	-0.5
MTN	Manton Dam	16.01	241	Pn	Pn	06 57 24.4	-1.7
MTN				IAmb	IAmb	06 57 31.9	
	comp=Z,43nm,1.4s						
WB0	Warramunga Arr	18.03	216	P	P	06 57 50.5	+0.1
WRAB	Tennant Creek	18.18	215	P	P	06 57 52.1	-0.1
WRAB	Tennant Creek	18.18	215	P	Pn	06 57 53.0	+0.2
WB2	Warramunga Arr	18.19	215	P	P	06 57 52.1	-0.1
WB2				IAmb	IAmb	06 57 55.6	
	comp=Z,11nm,0.6s						
WRA	Warramunga Arr	18.20	215	P	P	06 57 52.4	+0.1
	comp=Z,7.0nm,0.7s,baz=40,slow=12,SNR=53						
WRA				LR	LR	07 06 22.5	
	comp=Z,125nm,19.9s,baz=356,slow=41						
WRA	Warramunga Arr	18.20	215	P	P	06 57 51.5	-0.8
NLAI	Namlea	18.36	275	P	Pn	06 57 54.6	-0.3
	comp=Z,31nm,0.8s,comp=Z,5μm						
LBMI	Labuha	18.44	284	P	Pn	06 57 55.9	0.0
	comp=Z,48nm,0.9s						
GUMO	Guam	18.66	358	LR	LR	07 03 20.0	
	comp=Z,66nm,21.1s,baz=113,slow=31						
TNTI	Ternate	18.96	288	P	P	06 57 58.7	-2.0
KNRA	Kununurra	19.39	236	P	P	06 58 04.6	-0.7
KNRA				IAmb	IAmb	06 58 24.6	
	comp=Z,22nm,1.0s						
KNRA	Kununurra	19.39	236	P	P	06 58 05.8	+0.5
SANI	Sanana	19.62	278	P	P	06 58 07.7	-0.2
	comp=Z,35nm,0.9s						
EIDS	Eidsvold	20.80	165	P	P	06 58 20.2	-0.3
QLP	Quilpie	21.31	183	P	P	06 58 27.9	+1.9
RMQ	Roma	21.42	172	P	P	06 58 28.5	+1.3
AS01	Alice Springs	21.43	210	P	P	06 58 29.5	+2.1
SOEI	Soe	21.44	257	P	P	06 58 26.2	-1.4
AS31	Alice Springs	21.46	210	P	P	06 58 26.4	-1.3
ASAR	Alice Springs	21.46	210	P	P	06 58 27.9	+0.3
	comp=Z,4.8nm,0.5s,baz=39,slow=7.3,SNR=35						
	comp=Z,4.8nm,0.5s						
ASAR	Alice Springs	21.46	210	P	P	06 58 26.9	-0.8
INKA	Innaminka	22.87	191	P	P	06 58 43.5	+1.0
GTOI	Gorontalo	23.10	284	P	P	06 58 47.1	+2.1
	comp=Z,31nm,0.7s,comp=Z,344nm						
FITZ	Fitzroy Crossi	23.19	235	P	P	06 58 43.0	-2.8
OOD	Oodnadatta	24.31	201	P	P	06 58 56.8	+1.0
TOLI2	Tolitoli	25.38	284	P	P	06 59 04.1	-1.6
TOLI2				IAmb	IAmb	06 59 34.8	
	comp=Z,13nm,1.1s						
WRKA	Warakurna	25.68	218	P	P	06 59 09.0	+0.6
ARMA	Armidale	25.78	168	P	P	06 59 10.3	+1.0
ARMA				IAmb	IAmb	06 59 11.1	
	comp=Z,16nm,0.8s						
ARMA	Armidale	25.78	168	P	P	06 59 10.7	+1.4
LCRK	Leigh Creek	26.03	194	P	P	06 59 12.2	+0.8
CMSA	Cobar Meteorol	26.22	179	P	P	06 59 14.1	+1.0
DZM	Mont Dzumac	26.39	131	P	P	06 59 14.5	-0.4
	comp=Z,3.4nm,0.6s,baz=248,slow=12,SNR=10.0						
DZM				LR	LR	07 08 14.6	
	comp=Z,93nm,18.8s,baz=5.0,slow=33						
	comp=Z,3.4nm,0.6s						

DZM	Mont Dzumac	26.39	131	P	P	06 59 14.5	-0.4
DZM	Mont Dzumac	26.39	131	P	P	06 59 15.1	+0.2
STKA	Stephens Creek	26.79	187	P	P	06 59 18.4	+0.1
	comp=Z,7.9nm,0.7s,baz=349,slow=9.3,SNR=21						
STKA				LR	LR	07 11 30.8	
	comp=Z,52nm,21.2s,baz=26,slow=40						
	comp=Z,7.9nm,0.7s						
STKA	Stephens Creek	26.79	187	P	P	06 59 18.5	+0.1
MULG	Mulgathing	27.16	202	P	P	06 59 22.7	+1.1
HTT	Hallett	28.74	191	P	P	06 59 36.7	+0.9
BBOO	Buckleboo	28.84	196	P	P	06 59 35.9	-0.6
BBOO				IAmb	IAmb	07 00 03.5	
	comp=Z,25nm,1.4s						
BBOO	Buckleboo	28.84	196	P	P	06 59 37.0	+0.5
CAN	Canberra	30.17	174	P	P	06 59 47.8	-0.6
CAN	Canberra	30.17	174	P	P	06 59 50.1	+1.7
FORT	Forrest	30.24	211	P	P	06 59 48.1	-0.9
FORT	Forrest	30.24	211	P	P	06 59 50.0	+1.0
ARPS	Mount Arapiles	31.61	185	P	P	07 00 02.4	+1.5
TOO	Toolangi	32.23	180	P	P	07 00 06.0	-0.5
TOO				IAmb	IAmb	07 00 09.0	
	comp=Z,9.3nm,0.9s						
MSVF	Nonsavu	34.27	114	P	P	07 00 23.3	-1.2
	comp=Z,2.2nm,0.8s,baz=306,slow=19,SNR=1.4						
	comp=Z,2.2nm,0.8s						
NWAO	Narrogin (SRO)	38.10	220	P	P	07 00 55.9	-1.0
JMN	Monobe	40.21	345	P	P	07 01 14.0	-0.5
MJAR	Matsushiro Arr	42.05	351	P	P	07 01 27.4	-2.1
	comp=Z,2.0nm,0.9s,baz=161,slow=8.0,SNR=4.7						
	comp=Z,2.0nm,0.9s						
TOZ	Tahuroa Road	42.45	144	P	P	07 01 34.8	+2.0
TKNZ	Takaka Hill	43.39	149	P	P	07 01 41.5	+1.2
MRZ	Mangatainoka R	44.50	147	P	P	07 01 49.5	+0.3
RPZ	Rata Peaks	44.53	153	LR	LR	07 20 23.4	
	comp=Z,47nm,19.0s,baz=271,slow=36						
NJ2	Nanjing	44.84	327	*e*P	P	07 01 53.0	+1.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,140nm,4.3s						
KSRS	Korea Array	45.44	340	P	P	07 01 55.0	-1.7
	comp=Z,1.0nm,0.6s,baz=163,slow=11,SNR=5.2						
	comp=Z,1.0nm,0.6s						
JTM	Tenmabayashi	45.92	355	P	P	07 02 00.6	+0.2
JKA	Kamikawa-asahi	49.14	357	P	P	07 02 26.1	+0.8
JKA				IAmb	IAmb	07 02 28.6	
	comp=Z,5.9nm,1.0s						
USA0B	Ussuriysk Arra	50.62	348	P	P	07 02 36.8	+0.2
USA0B				IAmb	IAmb	07 02 37.6	
	comp=Z,5.8nm,0.8s						
USRK	Ussuriysk Ar.	50.62	348	P	P	07 02 36.0	-0.5
	comp=Z,5.2nm,0.7s,baz=164,slow=5.4,SNR=12						
	comp=Z,5.2nm,0.7s						
USRK	Ussuriysk Ar.	50.62	348	P	P	07 02 36.7	+0.1
HNS	HongShan	51.12	329	⇑P	P	07 02 29.8	-11
HNS				pmax	pmax		
	comp=Z,11nm,0.6s						
CMAR	Chiang Mai Arr	51.47	298	P	P	07 02 44.1	+0.7
	comp=Z,0.8nm,0.3s,baz=125,slow=6.0,SNR=4.8						
	comp=Z,0.8nm,0.3s						
PZH	PanZhiHua	52.71	309	P	P	07 02 55.8	+3.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.4s						
PZH				pmax	pmax		
	comp=Z,90nm,5.7s						
HHC	Hu-ho-hao-te	55.32	329	*e*P	P	07 03 11.0	-0.3
HHC				pmax	pmax		
	comp=Z,31nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,5.4s						
BTO	Baotou	55.94	328	*e*P	P	07 03 18.3	+2.5
BTO				pP	sP	07 03 41.8	-2.6
BTO				pmax	pmax		
	comp=Z,26nm,0.8s						
BTO				pmax	pmax		
	comp=Z,390nm,3.9s						
PETK	Petropavlovsk-	59.00	9	P	P	07 03 35.8	-1.1
	comp=Z,3.5nm,0.8s,baz=166,slow=6.6,SNR=6.1						
	comp=Z,3.5nm,0.8s						
PETK	Petropavlovsk-	59.00	9	P	P	07 03 37.2	+0.3
SONM	Songino Array	62.93	332	P	P	07 04 03.4	-0.4
	comp=Z,0.3nm,0.5s,baz=162,slow=10.0,SNR=3.2						
	comp=Z,0.3nm,0.5s						
CASY	Casey	65.63	195	P	P	07 04 21.2	+0.2
SEY	Seymchan	68.14	3	P	P	07 04 36.7	-0.2
	comp=Z,2.7nm,0.6s,baz=183,slow=6.3,SNR=12						
	comp=Z,2.7nm,0.6s						
WMQ	Urumqi	71.14	320	*e*P	P	07 04 58.3	+2.4
VNDA	Vanda	72.82	176	P	P	07 05 05.8	+0.6
	comp=Z,1.6nm,0.7s,baz=339,slow=7.4,SNR=9.8						
	comp=Z,1.6nm,0.7s						
VNDA	Vanda	72.82	176	P	P	07 05 05.8	+0.6
MK31	Makanchi Array	75.86	321	P	P	07 05 22.8	-0.7
MKAR	Makanchi Array	75.86	321	P	P	07 05 23.6	0.0
	comp=Z,1.5nm,0.9s,baz=111,slow=6.6,SNR=6.5						
MKAR				pP	pP	07 05 46.3	+2.0
	comp=Z,0.8nm,0.7s,baz=109,slow=6.7,SNR=5.0						
	comp=Z,1.5nm,0.9s						
MKAR	Makanchi Array	75.86	321	P	P	07 05 22.8	-0.7
TIXI	Tiksi	77.45	355	P	P	07 05 30.7	-1.2
	comp=Z,1.5nm,0.7s,baz=90,slow=23,SNR=3.8						
	comp=Z,1.5nm,0.7s						
ZAA0	Zalesovo Array	77.48	328	P	P	07 05 31.6	-0.8
ZALV	Zalesovo Beam	77.48	328	P	P	07 05 31.6	-0.8
	comp=Z,1.4nm,0.7s,baz=102,slow=6.2,SNR=6.4						
ZALV				pP	pP	07 05 55.2	+1.9
	comp=Z,0.8nm,0.6s,baz=104,slow=6.3,SNR=2.9						
	comp=Z,1.4nm,0.7s						
ZALV	Zalesovo Beam	77.48	328	P	P	07 05 31.4	-1.1
TNA	Tin City	78.31	18	P	P	07 05 36.9	+0.2
TNA				IAmb	IAmb	07 05 38.2	
	comp=Z,5.2nm,1.1s						
CAST	Castle Rocks	82.72	24	P	P	07 05 60.0	-0.5
CAST				IAmb	IAmb	07 06 02.4	
	comp=Z,4.0nm,1.0s						
KTH	Kantishna Hill	83.25	24	P	P	07 06 02.3	-1.0
KTH				IAmb	IAmb	07 06 12.7	
	comp=Z,8.4nm,1.3s						
IMAR	Indian Mountai	83.30	21	P	P	07 06 03.5	+0.1
TRF	Thorofare Moun	83.46	24	P	P	07 06 03.8	-0.7
TRF				IAmb	IAmb	07 06 34.0	
	comp=Z,7.6nm,1.3s						
SML	Sawmill	83.61	26	P	P	07 06 04.5	-0.6
SML				IAmb	IAmb	07 06 18.9	
	comp=Z,9.4nm,1.2s						
MLY	Manley	83.97	23	P	P	07 06 06.6	-0.3
MLY				IAmb	IAmb	07 06 08.0	
	comp=Z,4.3nm,0.9s						
NRIK	Noril'sk	84.02	342	P	P	07 06 05.9	-1.1
	comp=Z,4.2nm,0.6s,baz=133,slow=3.3,SNR=8.3						
	comp=Z,4.2nm,0.6s						
NRIK	Noril'sk	84.02	342	P	P	07 06 06.3	-0.7
NRIK				IAmb	IAmb	07 06 07.3	
	comp=Z,5.0nm,0.8s						
BWN	Browne	84.10	24	P	P	07 06 06.8	-0.7
MCK	McKinley	84.13	24	P	P	07 06 06.7	-1.0
MCK				IAmb	IAmb	07 06 08.5	
	comp=Z,6.9nm,1.0s						
WRH	Wood River Hil	84.77	24	P	P	07 06 10.1	-0.8
WRH				IAmb	IAmb	07 06 10.9	
	comp=Z,4.8nm,0.9s						
QSPA	South Pole Qui	84.78	180	P	P	07 06 11.1	0.0
QSPA				IAmb	IAmb	07 06 11.9	
	comp=Z,3.6nm,0.8s						
CCB	Clear Creek Bu	84.95	23	P	P	07 06 10.6	-1.1
CCB				IAmb	IAmb	07 06 11.6	
	comp=Z,4.7nm,0.9s						
BVAR	Borovoye Array	85.18	324	P	P	07 06 12.5	-0.7
	comp=Z,1.4nm,0.6s,baz=106,slow=6.8,SNR=6.5						
	comp=Z,1.4nm,0.6s						
ILAR	Eielson Array	85.37	23	P	P	07 06 12.2	-1.6
	comp=Z,4.4nm,0.8s,baz=255,slow=5.1,SNR=42						
ILAR				pP	pP	07 06 35.0	-0.1
	comp=Z,1.6nm,0.7s,baz=249,slow=5.2,SNR=4.8						
	comp=Z,4.4nm,0.8s						
ILAR	Eielson Array	85.37	23	P	P	07 06 12.9	-1.0
H24K	Noodor Dome	85.40	22	P	P	07 06 14.4	+0.3
H24K				IAmb	IAmb	07 06 45.4	
	comp=Z,4.3nm,1.4s						
RIDG	Independent Ri	85.82	25	P	P	07 06 15.8	-0.4
RIDG				IAmb	IAmb	07 06 19.0	
	comp=Z,7.3nm,1.2s						
BCAR	Beaver Creek A	86.90	26	P	P	07 06 21.1	-0.4
BMAR	Burnt Mountain	87.22	21	P	P	07 06 24.0	+1.0
YKA	Yellowknife Ar	99.19	28	P	Pdif	07 07 17.7	-0.4
	comp=Z,0.4nm,1.1s,baz=275,slow=3.5,SNR=4.0						
YKA				pP	pP	07 07 40.1	+0.5
	comp=Z,0.5nm,1.0s,baz=285,slow=5.0,SNR=3.4						
	comp=Z,0.4nm,1.1s						

IDC 26 07:12:01.9±6.5, 46°.17N×109°.07E, h0km, mbtmp3.0/1, ML2.8/1, Error ellipse: s-maj=44.1km s-min=37.8km az=132.0, Mongolia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I34MN	SONGINO INFRAS	2.44	313	I	I	07 27 40.0	
	baz=128,slow=328,SNR=2.5						
SONM	Songino Array	2.47	313	Pn	Pn	07 12 43.7	+0.2
	2.0nm,0.3s,baz=139,slow=13,SNR=35						
SONM				Pg	Pb	07 12 46.9	-0.4
	5.2nm,0.3s,baz=134,slow=17,SNR=69						
SONM				Lg	Lg	07 13 20.5	
	0.6nm,0.3s,baz=134,slow=26,SNR=9.7						
SONM				Rg	Rg	07 13 30.9	
	16nm,0.9s,baz=127,slow=26,SNR=8.5						
	6.1nm,0.3s						
I45RU	USSURIYSK INFR	16.26	89	I	I	08 55 30.0	
	baz=282,slow=326,SNR=3.7						

IDC 26 07:21:05.3±10.0, 13°.15S×166°.97E, h154km±108km, mb3.4/4, mbtmp3.9/5, Error ellipse: s-maj=85.4km s-min=29.4km az=160.0

NOU 26 07:21:38.9, 15°.84S×167°.58E, h93km, MLv3.8/10, Vanuatu Islands

ISC 26 07:21:03.6±1.5, 13°.1S±0°.1×167°.3E±0°.2, h150km, n11, σ1ˢ78/11, mb3.8/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	4.64	169	P	Pn	07 22 10.0	-2.2
RTV	Rentapao	4.75	167	P	Pn	07 22 10.5	-3.2
KOUNC	Koumac, New Ca	7.91	201	P	Pn	07 22 57.5	+1.7
YATNC	Mamie plateau,	8.88	182	P	Pn	07 23 09.3	+0.6
DZM	Mont Dzumac	8.92	185	P	Pn	07 23 11.1	+1.8
	4.1nm,0.3s,baz=326,slow=14,SNR=16						
DZM				S	Sn	07 24 48.8	+0.3
	3.0nm,1.0s,baz=92,slow=16,SNR=1.4						
DZM	Mont Dzumac	8.92	185	P	Pn	07 23 11.2	+1.8
OUENC	Ouen Island, N	9.24	183	P	Pn	07 23 14.8	+1.3
CTA	Charters Tower	21.30	248	P	P	07 25 37.4	-1.2
	4.7nm,0.9s,baz=77,slow=13,SNR=1.8						
	4.7nm,0.9s						
WRA	Warramunga Arr	32.27	253	P	P	07 27 16.6	-1.7
	0.7nm,0.6s,baz=86,slow=9.3,SNR=11						
	0.7nm,0.6s						
ASAR	Alice Springs	33.29	247	P	P	07 27 25.9	-1.2
	1.8nm,0.7s,baz=70,slow=9.8,SNR=40						
	1.8nm,0.7s						
ILAR	Eielson Array	85.01	18	P	P	07 33 23.4	+1.7
	0.4nm,0.8s,baz=238,slow=6.3,SNR=5.7						
	0.4nm,0.8s						

IDC 26 07:22:40.2±1.1, 50°.03N×78°.71E, h0km, mbtmp2.9/2, ML2.4/2, Error ellipse: s-maj=11.3km s-min=7.0km az=63.0, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	0.60	349	Pg	Pg	07 22 52.0	+0.2
	2.1nm,0.3s,baz=167,slow=18,SNR=16						
KURBB				Lg	Lg	07 23 00.3	
	3.8nm,0.3s,baz=170,slow=32,SNR=10						
MKAR	Makanchi Array	4.02	142	Pn	Pn	07 23 44.3	+1.2
	0.2nm,0.3s,baz=327,slow=11,SNR=3.7						
MKAR				Pg	Pb	07 23 50.2	-1.8
	0.6nm,0.3s,baz=325,slow=15,SNR=7.7						
MKAR				Lg	Lg	07 24 44.4	
	1.7nm,0.3s,baz=325,slow=30,SNR=5.9						
	0.6nm,0.5s						
ZALV	Zalesovo Beam	5.44	42	Pn	Pn	07 24 04.4	+1.9
	0.7nm,0.3s,baz=233,slow=14,SNR=7.8						
ZALV				Lg	Lg	07 25 31.7	
	0.3nm,0.3s,baz=225,slow=20,SNR=1.3						
	1.5nm,0.4s						
I46RU	ZALESOVO INFRA	5.44	42	I	I	07 55 30.0	
	baz=224,slow=325,SNR=1.1						
BVAR	Borovoye Array	6.00	303	Lg	Lg	07 25 47.6	
	baz=124,slow=25,SNR=1.6						

IDC 26 07:29:02.4±1.5, 18°.94S×167°.80E, h0km, mb3.8/6, mbtmp3.8/7, ML3.8/1, MS3.2/3, Error ellipse: s-maj=49.1km s-min=25.7km az=141.0

NOU 26 07:29:04.3, 18°.87S×167°.64E, h10km, MLv4.2/15, Vanuatu Islands

NEIC 26 07:29:07.5±0.8, 19°.14S±0°.07×167°.50E±0°.09, h10km±2km, mb4.2/10, Error ellipse: s-maj=14.7km s-min=11.2km az=106.0

ISC 26 07:29:04.4±0.7, 18°.94S±0°.05×167°.70E±0°.09, h10km, n40, σ1ˢ21/42, mb4.0/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.30	21	P	Pn	07 29 27.6	-1.0
RTV	Rentapao	1.33	31	P	Pn	07 29 28.2	-0.9
LIFNC	LIFOU	1.88	193		Pn	07 29 35.7	-0.9
LIFNC				Sn	Sn	07 29 57.7	-2.6
LIFNC	LIFOU	1.88	193	P	Pn	07 29 35.5	-1.0
YATNC	Mamie plateau,	3.19	194	P	Pn	07 29 54.3	-0.4
DZM	Mont Dzumac	3.33	201	Pn	Pn	07 29 57.3	+0.6
	10nm,0.3s,baz=111,slow=15,SNR=176						
DZM				Sn	Sn	07 30 33.5	-2.8
	5.9nm,0.3s,baz=106,slow=20,SNR=4.0						
DZM				LR	LR	07 30 52.2	
	comp=Z,72nm,21.0s,baz=346,slow=33						
	19nm,0.3s						
DZM	Mont Dzumac	3.33	201		Pn	07 29 56.9	+0.2
DZM	Mont Dzumac	3.33	201	P	Pn	07 29 57.2	+0.6
NOUC	Port Laguerre	3.41	202	P	Pn	07 29 58.4	+0.8
ONTNC	Ouen Toro	3.55	199		Pn	07 29 59.1	-0.4
ONTNC	Ouen Toro	3.55	199	P	Pn	07 30 00.0	+0.5
OUENC	Ouen Island, N	3.55	193		Pn	07 29 59.5	-0.1
OUENC	Ouen Island, N	3.55	193	P	Pn	07 30 00.8	+1.2
KOUNC	Koumac, New Ca	3.59	243		Pn	07 29 59.4	-0.8
KOUNC	Koumac, New Ca	3.59	243	P	Pn	07 30 00.7	+0.5
PINNC	Pines Island,	3.66	184		Pn	07 30 01.6	+0.5
ARMA	Armidale	18.52	229	P	P	07 33 17.9	-3.2
CTA	Charters Tower	20.25	263	P	P	07 33 40.4	+0.3
	4.3nm,1.0s,baz=86,slow=12,SNR=1.2						
	4.3nm,1.0s						
CTAO	Charters Tower	20.25	263	P	P	07 33 40.4	+0.3
CTAO				IAmb	IAmb	07 34 07.6	
	comp=Z,11nm,1.0s						
HIZ	Hauiti	20.47	164	P	P	07 33 43.4	+1.1
HIZ				IAmb	IAmb	07 33 53.2	
	comp=Z,20nm,1.0s						
WB0	Warramunga Arr	31.41	263	P	P	07 35 26.3	+0.3
WB0				IAmb	IAmb	07 35 36.7	
	comp=Z,3.0nm,1.1s						
WB2	Warramunga Arr	31.44	263	P	P	07 35 27.1	+0.9
WB2				IAmb	IAmb	07 35 55.8	
	comp=Z,3.9nm,1.1s						
WRAB	Tennant Creek	31.44	263	P	P	07 35 25.9	-0.3
WRAB				IAmb	IAmb	07 35 30.3	
	comp=Z,2.1nm,1.1s						
WRA	Warramunga Arr	31.45	263	P	P	07 35 25.6	-0.7
	comp=Z,0.4nm,0.8s,baz=101,slow=8.8,SNR=7.3						
WRA				LR	LR	07 46 34.9	
	comp=Z,88nm,18.3s,baz=256,slow=33						
	comp=Z,0.4nm,0.8s						
WRA	Warramunga Arr	31.45	263	P	P	07 35 26.5	+0.2
BBOO	Buckleboo	31.50	238	P	P	07 35 26.2	-0.4
AS31	Alice Springs	31.79	255	P	P	07 35 29.9	+0.6
ASAR	Alice Springs	31.79	255	P	P	07 35 30.1	+0.7
	comp=Z,2.4nm,0.7s,baz=82,slow=9.1,SNR=31						
ASAR				LR	LR	07 47 36.2	
	comp=Z,106nm,19.1s,baz=8.0,slow=35						
	comp=Z,2.4nm,0.7s						
KNRA	Kununurra	37.27	269	P	P	07 36 16.8	0.0
KNRA				IAmb	IAmb	07 36 27.2	
	comp=Z,8.9nm,1.0s						
SOEI	Soe	42.96	276	P	P	07 37 04.5	+0.3
QSPA	South Pole Qui	71.11	180	P	P	07 40 24.9	+2.0
SONM	Songino Array	86.12	324	P	P	07 41 46.2	+0.5
	comp=Z,0.8nm,0.7s,baz=143,slow=5.5,SNR=6.2						
	comp=Z,0.8nm,0.7s						
NVAR	Mina Array Bea	89.70	49	P	P	07 42 02.5	-0.7
	comp=Z,0.4nm,0.7s,baz=214,slow=4.7,SNR=3.1						
	comp=Z,0.4nm,0.7s						
ILAR	Eielson Array	90.39	18	P	P	07 42 04.5	-1.0
	comp=Z,0.4nm,0.8s,baz=219,slow=7.0,SNR=2.2						
	comp=Z,0.4nm,0.8s						
KBA	Koelnbreinsper	144.96	329	*e*PKP	PKPab	07 48 42.3	+1.0
	comp=Z,0.6nm,0.3s						
ABTA	Abfaltersbach	145.60	329	*i* PKP	PKPdf	07 48 44.0	+0.8
	comp=Z,0.6nm,0.4s						
WATA	Walderalm	145.61	331	*e*PKP	PKPdf	07 48 44.1	+0.9
	comp=Z,0.3nm,0.2s						
MOTA	Moosalm	145.82	331	*i* PKP	PKPdf	07 48 45.1	+1.5
	comp=Z,0.7nm,0.3s						
SQTA	Sankt Quirin	145.87	331	*i* PKP	PKPdf	07 48 45.6	+2.0
	comp=Z,3.1nm,0.6s						
FETA	Feichten	146.23	331	*e*PKP	PKPdf	07 48 46.6	+2.3
	comp=Z,1.2nm,0.6s						

IDC 26 07:48:49.5±2.4, 2°.73N×127°.40E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=178.3km s-min=27.8km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.54	163	P	P	07 54 00.8	-0.8
	0.3nm,0.4s,baz=343,slow=11,SNR=13						
	0.3nm,0.4s						
ASAR	Alice Springs	26.99	167	P	P	07 54 33.8	+0.5
	0.2nm,0.3s,baz=346,slow=11,SNR=8.9						
	0.2nm,0.3s						
MKAR	Makanchi Array	58.75	325	P	P	07 58 49.5	+0.1
	0.2nm,0.5s,baz=118,slow=6.6,SNR=2.0						
	0.2nm,0.5s						

AUST 26 07:53:53.9±0.6, 27°.46S×135°.27E, h10km, Error ellipse: s-maj=9.2km s-min=6.0km az=53.0

IDC 26 07:53:54.3±2.8, 27°.29S×135°.45E, h0km, mbtmp2.7/3, ML2.7/3, Error ellipse: s-maj=41.6km s-min=16.8km az=57.0

ISC 26 07:53:53.3±0.8, 27°.47S±0°.05×135°.30E±0°.06, h10km, n18, σ1ˢ78/27, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OOD	Oodnadatta	0.47	134	P	Pg	07 54 03.7	+1.1
	baz=0.5						
OOD				S	Sg	07 54 10.0	+1.2
	baz=0.5						
MULG	Mulgathing	3.01	201	P	Pn	07 54 42.6	+1.5
	baz=3.0						
MULG				S	Sn	07 55 18.3	+1.0
	baz=3.0						
LCRK	Leigh Creek	3.92	140	P	Pn	07 54 55.5	+2.0
	baz=3.9						
ASAR	Alice Springs	3.99	341	Pn	Pn	07 54 55.8	+1.2
	0.2nm,0.3s,baz=155,slow=14,SNR=2.9						
ASAR				Sn	Sn	07 55 41.9	+0.5
	1.1nm,0.3s,baz=158,slow=20,SNR=18						
ASAR				Lg	Lg	07 55 55.5	
	0.5nm,0.3s,baz=161,slow=23,SNR=5.7						
	0.3nm,0.6s						
ASPA	Alice Springs	3.99	341	P	Pn	07 54 56.1	+1.5
	baz=4.0						
ASPA				S	Sn	07 55 42.4	+0.9
	baz=4.0						
INKA	Innaminka	4.84	95	P	Pn	07 55 06.1	-0.1
	baz=4.9						
BBOO	Buckleboo	5.37	173	P	Pn	07 55 14.1	+0.6
	baz=5.4						
HTT	Hallett	6.71	153	P	Pn	07 55 32.9	+0.8
	baz=6.7						
WRKA	Warakurna	6.74	289	P	Pn	07 55 33.4	+1.0
	baz=6.7						
WRKA				S	Sn	07 56 48.5	-0.8
	baz=6.7						
AUCAS	Cummins Area S	6.78	177	P	Pn	07 55 31.8	-1.1
	baz=6.8						
STKA	Stephens Creek	7.02	130	Pn	Pn	07 55 37.6	+1.4
	0.1nm,0.3s,baz=305,slow=14,SNR=1.3						
STKA				Sn	Sn	07 56 52.2	-3.9
	0.3nm,0.3s,baz=350,slow=12,SNR=3.5						
STKA				Lg	Lg	07 57 38.5	
	0.3nm,0.3s,baz=25,slow=22,SNR=1.4						
	0.4nm,0.3s						
STKA	Stephens Creek	7.02	130	P	Pn	07 55 37.9	+1.7
	baz=7.0						
STKA				S	Sn	07 56 52.8	-3.3
	baz=7.0						
FORT	Forrest	7.14	241	P	Pn	07 55 38.7	+0.8
	baz=7.1						
FORT				S	Sn	07 56 57.0	-2.2
	baz=7.1						
WC3	Warramunga Arr	7.52	353	P	Pn	07 55 44.5	+1.4
	baz=7.5						
WRA	Warramunga Arr	7.54	353	Pn	Pn	07 55 44.4	+1.0
	0.1nm,0.3s,baz=169,slow=13,SNR=6.6						
WRA				Sn	Sn	07 57 04.9	-4.1
	0.3nm,0.3s,baz=169,slow=23,SNR=7.2						
WRA				Lg	Lg	07 57 49.8	
	0.1nm,0.3s,baz=173,slow=31,SNR=2.2						
	0.5nm,0.6s						
QIS	Mount Isa	7.92	31	P	Pn	07 55 49.4	+0.8
	baz=8.0						
QLP	Quilpie	8.01	86	P	Pn	07 55 50.8	+1.0
	baz=8.0						
CMSA	Cobar Meteorol	9.92	117	P	Pn	07 56 16.3	+0.3
	baz=9.9						

HVO 26 07:53:59.9±0.7, 19°.30N±0°.02×155°.26W±0°.01, h2km±5km, ML2.4/9, ML2.1/45(NEIC), Error ellipse: s-maj=3.3km s-min=1.0km az=150.0

NEIC 26 07:54:00.7±0.8, 19°.31N±0°.02×155°.272W±0°.009, h5km±1km, Error ellipse: s-maj=3.1km s-min=2.0km az=156.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HLP	Hilina Pali	0.04	247		Pg	07 54 02.1	+0.2
HLP				Sg	Sg	07 54 03.9	+1.1
SDHHI	Sand Hill	0.08	345		Pg	07 54 02.7	+0.1
SDHHI				IAML		07 54 04.3	
	comp=N,1µm,0.3s						
SDHHI				IAML		07 54 04.9	
	comp=E,1µm,0.6s						
PUH	Pauahi	0.08	40		Pg	07 54 02.5	-0.2
PUH				Sg	Sg	07 54 04.3	+0.4
PUH				IAML		07 54 04.4	
	comp=E,758nm,0.2s						
RIM	Rim	0.09	359	Pg	Pg	07 54 02.7	0.0
RIM				IAML		07 54 04.4	
	comp=N,817nm,0.8s						
KKO	Keanakako`i	0.09	4	Pg	Pg	07 54 02.8	+0.1
KKO				Sg	Sg	07 54 05.0	+0.9
KKO				IAML		07 54 05.1	
	comp=N,1µm,0.2s						
KKO				IAML		07 54 05.0	
	comp=E,852nm,0.4s						
WRMHI	West Rim	0.10	345		Pg	07 54 02.9	0.0
BYL	Byron's Ledge	0.10	7	Pg	Pg	07 54 02.8	-0.1
BYL				IAML		07 54 05.4	
	comp=N,915nm,0.3s						
BYL				IAML		07 54 05.7	
	comp=E,683nm,0.4s						
NPH	North Pit	0.10	355	Pg	Pg	07 54 02.8	-0.1
OBL	Observatory Le	0.11	354		Pg	07 54 03.1	0.0
OBL				IAML		07 54 05.6	
	comp=E,1µm,0.5s						
OBL				IAML		07 54 05.6	
	comp=N,967nm,0.8s						
UWE	Uwekahuna	0.11	350	IAML		07 54 02.9	
	comp=N,741nm,1.1s						
UWE					Pg	07 54 03.1	0.0
UWE				IAML		07 54 05.7	
	comp=E,959nm,1.2s						
HATHI	Halema‘uma‘u T	0.11	5		Pg	07 54 03.1	0.0
HATHI				IAML		07 54 05.6	
	comp=E,588nm,0.3s						
HATHI				IAML		07 54 06.1	
	comp=N,718nm,0.2s						
UWB	Uwekahuna B	0.11	357		Pg	07 54 03.2	0.0
SBLHI	Steaming Bluff	0.12	2		Pg	07 54 03.1	-0.1
SBLHI				IAML		07 54 05.7	
	comp=E,498nm,1.1s						
SBLHI				IAML		07 54 06.3	

	comp=N,471nm,0.6s						
KNHH	**Kane Nui o Ham**	**0.12**	**55**		Pg	07 54 02.9	-0.3
HTC	**Hot Caves**	**0.14**	**239**		Pg	07 54 03.8	+0.2
RSD	**Rainshed**	**0.15**	**358**		Pg	07 54 03.6	-0.2
STCH	**Steam Cracks**	**0.16**	**62**		Pg	07 54 03.5	-0.4
STCH				IAML		07 54 07.5	
	comp=E,289nm,0.3s						
NPOC	**North of Pu‘u**	**0.17**	**62**		Pg	07 54 03.7	-0.5
NPOC				IAML		07 54 07.4	
	comp=E,394nm,0.6s						
NPOC				IAML		07 54 07.5	
	comp=N,522nm,0.7s						
JCUZ	**Jacuzzi**	**0.18**	**65**	Pg	Pg	07 54 03.8	-0.4
JCUZ				IAML		07 54 08.6	
	comp=N,396nm,1.0s						
AIN	**Ainahou**	**0.19**	**289**		Pg	07 54 04.7	+0.2
AIN				IAML		07 54 10.4	
	comp=E,582nm,0.2s						
MLH	**Mauna Loa**	**0.21**	**330**		Pg	07 54 05.1	+0.1
MLH				IAML		07 54 10.4	
	comp=E,476nm,0.1s						
JOKA	**Jonika Flow**	**0.28**	**64**		Pg	07 54 05.3	-0.9
JOKA					Sg	07 54 10.4	+0.4
KHU	**Kahuku**	**0.33**	**259**		Pg	07 54 06.8	-0.4
KHU				IAML		07 54 12.2	
	comp=E,350nm,1.8s						
HMH	**Humu‘ula Sheep**	**0.35**	**326**		Pg	07 54 07.5	-0.2
MWH	**Moku‘aweowe**	**0.35**	**300**		Pg	07 54 07.5	-0.2
MLOA	**Mauna Loa Obse**	**0.36**	**308**		Pg	07 54 08.1	+0.2
ALEP	**Alea Permanent**	**0.42**	**303**		Pg	07 54 08.2	-0.7
ALEP					Sg	07 54 15.3	+0.9
POHA	**Pohakuloa**	**0.51**	**331**		Pg	07 54 10.1	-0.5
KHLU	**Kahalu`u**	**0.65**	**296**		Pg	07 54 12.4	-0.8

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*IDC **26** 08:04:41.4±1.0, 14°.55N×144°.32E, h0km, mb3.9/8, mbtmp3.9/8, MS4.6/1, Error ellipse: s-maj=35.8km s-min=15.5km az=70.0*

*NEIC **26** 08:04:42.0±1.1, 14°.73N±0°.04×144°.6E±0°.2, h10km±1km, mb4.4/15, Error ellipse: s-maj=40.0km s-min=3.0km az=82.0*

ISC 26 08:04:42.2±0.8**, 14°.63N**±0°.08×**144°.5E**±0°.2**, h10**km**, n33, σ0ˢ.84**/26**, mb4.3**/17**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.11**	**159**	Pn	**Pb**	**08 05 04.0**	**+0.5**
	27nm,0.3s,baz=355,slow=18,SNR=9.1						
GUMO				Sn	**Sg**	**08 05 17.3**	**-0.8**
	69nm,0.3s,baz=191,slow=3.0,SNR=11						
H11S3	**WAKE ISLAND Hy**	**21.65**	**77**	T	T	08 32 29.5	
	baz=262,slow=75,SNR=36						
H11S1	**WAKE ISLAND Hy**	**21.66**	**77**	T	T	08 32 30.0	
	baz=262,slow=75,SNR=15						
H11S2	**WAKE ISLAND Hy**	**21.67**	**77**	T	T	08 32 28.5	
	baz=262,slow=75,SNR=16						
TNTI	**Ternate**	**21.79**	**232**	P	**P**	**08 09 35.2**	**+0.7**
H11N1	**WAKE ISLAND Hy**	**22.02**	**74**	T	T	08 32 58.1	
	baz=259,slow=75						
H11N2	**WAKE ISLAND Hy**	**22.02**	**74**	T	T	08 32 58.8	
	baz=259						
H11N3	**WAKE ISLAND Hy**	**22.03**	**74**	T	T	08 32 59.4	
	baz=259,slow=75						
MAJO	**Matsushiro**	**22.52**	**347**	P	**P**	**08 09 41.4**	**-0.8**
MAJO				IAmb	IAmb	08 09 52.4	
	comp=Z,7.7nm,1.1s						
MJB9	**Matsu-Tunnel**	**22.53**	**347**	P	**P**	**08 09 41.3**	**-1.0**
SSLB	**Suanglung**	**23.96**	**296**	P	**P**	**08 09 57.3**	**+0.3**
SSLB				IAmb	IAmb	08 10 11.3	
	comp=Z,17nm,1.1s						
PMG	**Port Moresby**	**24.03**	**173**	P	**P**	**08 09 56.9**	**-0.7**
TPUB	**Ta-pu**	**24.10**	**295**	P	**P**	**08 09 57.7**	**-0.6**
TPUB				IAmb	IAmb	08 10 01.1	
	comp=Z,15nm,0.8s						
ERM	**Erimo**	**27.31**	**358**	P	**P**	**08 10 25.0**	**-2.1**
ERM				IAmb	IAmb	08 10 42.6	
	comp=Z,8.0nm,1.0s						
HNR	**Honiara**	**28.42**	**146**	LR	LR	08 20 17.1	
	comp=Z,1µm,20.7s,baz=75,slow=33						
WB0	**Warramunga Arr**	**35.59**	**196**	P	**P**	**08 11 40.2**	**+0.1**
WB0				IAmb	IAmb	08 11 47.5	
	comp=Z,5.0nm,1.1s						
WRAB	**Tennant Creek**	**35.76**	**196**	P	**P**	**08 11 41.9**	**+0.4**
WRAB				IAmb	IAmb	08 11 44.2	
	comp=Z,5.5nm,1.1s						
WB2	**Warramunga Arr**	**35.77**	**196**	P	**P**	**08 11 41.9**	**+0.2**
WB2				IAmb	IAmb	08 11 43.0	
	comp=Z,7.7nm,1.0s						
WRA	**Warramunga Arr**	**35.77**	**196**	P	**P**	**08 11 41.4**	**-0.2**
	comp=Z,3.9nm,0.9s,baz=14,slow=9.3,SNR=25						
	comp=Z,3.9nm,0.9s						
WRA	**Warramunga Arr**	**35.77**	**196**	P	**P**	**08 11 41.6**	**0.0**
ASAR	**Alice Springs**	**39.44**	**195**	P	**P**	**08 12 12.4**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=18,slow=8.1,SNR=6.4						
	comp=Z,0.3nm,0.7s						
EIDS	**Eidsvold**	**40.28**	**171**	P	**P**	**08 12 19.2**	**-0.4**
EIDS				IAmb	IAmb	08 12 27.2	
	comp=Z,9.3nm,1.0s						
CMAR	**Chiang Mai Arr**	**43.71**	**281**	P	**P**	**08 12 47.7**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=79,slow=6.6,SNR=6.8						
	comp=Z,1.0nm,0.3s						
SONM	**Songino Array**	**45.65**	**324**	P	**P**	**08 13 04.0**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=140,slow=9.2,SNR=4.5						
	comp=Z,0.9nm,0.7s						
STKA	**Stephens Creek**	**46.32**	**183**	P	**P**	**08 13 08.3**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=345,slow=12,SNR=5.4						
	comp=Z,1.9nm,0.7s						
STKA	**Stephens Creek**	**46.32**	**183**	P	**P**	**08 13 09.0**	**+0.6**
BBOO	**Buckleboo**	**47.85**	**190**	P	**P**	**08 13 20.7**	**+0.4**
MKAR	**Makanchi Array**	**60.47**	**316**	P	**P**	**08 14 53.0**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=92,slow=7.5,SNR=9.3						
	comp=Z,0.9nm,0.8s						
MKAR	**Makanchi Array**	**60.47**	**316**	P	**P**	**08 14 50.6**	**-1.7**
ZALV	**Zalesovo Beam**	**60.55**	**324**	P	P	08 14 49.7	-3.0
KURK	**Kurchatov**	**63.53**	**320**	P	**P**	**08 15 12.5**	**-0.3**
KURK				IAmb	IAmb	08 15 20.1	
	comp=Z,3.1nm,1.1s						
KURBB	**Kurchatov Arra**	**63.58**	**320**	P	**P**	**08 15 13.4**	**+0.3**
	comp=Z,1.5nm,0.8s,baz=102,slow=6.8,SNR=19						
	comp=Z,1.5nm,0.8s						
YKA	**Yellowknife Ar**	**82.12**	**27**	P	**P**	**08 17 04.6**	**+1.6**
	comp=Z,0.3nm,0.7s,baz=290,slow=5.4,SNR=5.3						
	comp=Z,0.3nm,0.7s						

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*NEIC **26** 08:07:22.1±1.3, 36°.53N±0°.02×121°.21W±0°.03, h18km±2km, Error ellipse: s-maj=3.7km s-min=2.9km az=65.0*

*NCEDC **26** 08:07:22.1±2.4, 36°.56N±0°.01×121°.16W±0°.02, h8km±4km, ML3.1/28, ML3.0/68(NEIC), Error ellipse: s-maj=2.0km s-min=1.7km az=63.0*

ISC 26 08:07:21.8±0.8**, 36°.54N**±0°.02×**121°.19W**±0°.02**, h11**km±5km**, n176, σ0ˢ.78**/180**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BPIM	**Pinnacles**	**0.05**	**159**		**Pg**	**08 07 23.9**	**-0.1**
BBGB	**Big Mountain B**	**0.13**	**70**		**Pb**	**08 07 25.0**	**-1.4**
BBGB				Sg	**Sb**	**08 07 27.8**	**+0.5**
BSGM	**Shirttail Gulc**	**0.13**	**203**		**Pb**	**08 07 25.4**	**-0.9**
BSGM					**Sb**	**08 07 27.7**	**+0.4**
BJOM	**Mount Johnson**	**0.14**	**313**		**Pb**	**08 07 25.2**	**-1.2**
BJOM					**Sb**	**08 07 27.4**	**+0.1**
BAVM	**Antelope Valle**	**0.17**	**49**		**Pg**	**08 07 25.7**	**0.0**
SCZ	**Santa Cruz**	**0.18**	**290**		**Pg**	**08 07 26.2**	**+0.4**
SCZ					**Sg**	**08 07 29.2**	**+0.6**
BSLM	**Silva Ranch**	**0.27**	**332**		**Pb**	**08 07 28.6**	**-0.1**
BSRM	**Salinas Radio**	**0.30**	**296**		**Pg**	**08 07 28.3**	**+0.4**
SAO	**San Andreas Ge**	**0.31**	**318**	Pg	**Pg**	**08 07 28.2**	**+0.1**
FRP	**Fremont Peak**	**0.33**	**312**		**Pg**	**08 07 28.5**	**+0.1**
HAST	**Hastings Reser**	**0.33**	**243**		**Pb**	**08 07 29.1**	**-0.5**
HSFM	**Saint Francis**	**0.37**	**318**		**Pg**	**08 07 29.7**	**+0.5**
BCWM	**Chews Ridge**	**0.38**	**233**		**Pb**	**08 07 30.3**	**-0.4**
HJGM	**San Juan Grade**	**0.41**	**310**		**Pg**	**08 07 30.1**	**+0.2**
PCCM	**Crazy Canyon**	**0.45**	**177**		**Pb**	**08 07 31.4**	**-0.2**
PMPB	**Monarch Peak**	**0.45**	**135**		**Pg**	**08 07 30.7**	**0.0**
PMPB				IAML		08 07 46.0	
	comp=E,2µm,0.9s						
HTUM	**Tustin Road**	**0.47**	**309**		**Pg**	**08 07 31.1**	**+0.2**
HFEM	**San Felipe**	**0.48**	**339**		**Pb**	**08 07 32.0**	**-0.2**
PACP	**Pacheco Peak**	**0.48**	**351**		**Pg**	**08 07 32.0**	**+0.7**
HPCM	**Pacheco Lake**	**0.53**	**352**		**Pg**	**08 07 32.7**	**+0.6**
CDC	**Canada Road**	**0.54**	**334**		**Pb**	**08 07 33.5**	**+0.1**
BPOM	**Post Ranch**	**0.56**	**237**		**Pb**	**08 07 33.4**	**-0.2**
PSAM	**San Ardo**	**0.56**	**154**		**Pg**	**08 07 33.1**	**+0.3**
PPTM	**Peach Tree Val**	**0.57**	**138**		**Pg**	**08 07 33.0**	**+0.1**
PJUM	**Juniper Ridge**	**0.57**	**122**		**Pg**	**08 07 33.5**	**+0.6**
HMOM	**Monterey**	**0.59**	**277**		**Pb**	**08 07 33.9**	**-0.3**
JELB	**Ellicott, Sant**	**0.65**	**308**		**Pb**	**08 07 34.8**	**-0.2**
SCKWR	**San Luis Creek**	**0.65**	**8**		**Pg**	**08 07 35.6**	**+1.1**
PSMM	**Smith Mountain**	**0.67**	**134**		**Pg**	**08 07 35.1**	**+0.3**
PDRM	**Domengine Ranc**	**0.69**	**107**		**Pb**	**08 07 35.9**	**0.0**
CADM	**Anderson Res.**	**0.72**	**331**		**Pg**	**08 07 36.5**	**+0.8**
PHSB	**Hesperia Broad**	**0.72**	**171**		**Pb**	**08 07 36.1**	**-0.3**
PHPM	**Hope Ranch**	**0.73**	**139**		**Pb**	**08 07 35.7**	**-0.8**
JTGM	**Trout Gulch Ro**	**0.74**	**312**		**Pn**	**08 07 37.2**	**-1.0**
JLAB	**Laurel Hill**	**0.76**	**325**		**Pg**	**08 07 37.0**	**+0.5**
PANM	**San Antonio Re**	**0.79**	**163**		**Pb**	**08 07 37.4**	**-0.1**
PKD	**Bear Valley Ra**	**0.79**	**138**		**Pb**	**08 07 36.8**	**-0.8**
PWMM	**Westland Maint**	**0.80**	**97**		**Pb**	**08 07 37.7**	**0.0**
JRGM	**Rodeo Gulch Ro**	**0.80**	**309**		**Pb**	**08 07 37.0**	**-0.7**
PVCM	**Vineyard Canyo**	**0.81**	**139**		**Pb**	**08 07 37.3**	**-0.7**
PPO	**Portuguese Can**	**0.81**	**145**		**Pb**	**08 07 37.8**	**-0.2**
CCOB	**Coe Ranch Numb**	**0.82**	**332**		**Pn**	**08 07 38.6**	**-0.7**
PSTM	**Stockdale Moun**	**0.82**	**137**		**Pb**	**08 07 37.2**	**-0.8**
CMPM	**Mikes Peak**	**0.83**	**353**		**Pg**	**08 07 38.6**	**+0.7**
ARN	**Arnold Ranch**	**0.86**	**341**		**Pg**	**08 07 39.0**	**+0.6**
MHC	**Mount Hamilton**	**0.88**	**336**		**Pg**	**08 07 39.3**	**+0.4**
PWKM	**Work Ranch**	**0.91**	**142**		**Pb**	**08 07 39.3**	**-0.2**
PHFM	**Heflinger Ranc**	**0.91**	**135**		**Pb**	**08 07 39.6**	**-0.1**
CTM	**Castle Mountai**	**0.92**	**131**		**Pg**	**08 07 40.1**	**+0.6**
JJOM	**Saint Joseph’s**	**0.92**	**317**		**Pb**	**08 07 39.2**	**-0.6**
RAMR	**Ramage Ranch**	**0.93**	**164**		**Pb**	**08 07 39.9**	**-0.1**
JBNB	**Ben Lomond Mou**	**0.97**	**307**		**Pb**	**08 07 40.1**	**-0.6**
GHC	**Gold Hill**	**0.98**	**136**		**Pb**	**08 07 40.5**	**-0.3**
COSM	**Mount Oso**	**0.98**	**351**		**Pg**	**08 07 41.3**	**+0.5**
PSRM	**Scobie Ranch**	**1.00**	**132**		**Pb**	**08 07 41.0**	**-0.2**
PKLM	**Kerr Lake**	**1.03**	**138**		**Pb**	**08 07 41.3**	**-0.3**
CALM	**Calaveras Res.**	**1.04**	**332**		**Pb**	**08 07 41.5**	**-0.3**
PSNM	**Stone Corral**	**1.04**	**136**		**Pb**	**08 07 41.3**	**-0.6**
MYLM	**Yosemite Lake**	**1.05**	**36**		**Pb**	**08 07 41.1**	**-0.8**
TCAS	**Cass Winery, P**	**1.06**	**151**		**Pb**	**08 07 41.5**	**-0.6**
JSCM	**Stevens Creek**	**1.06**	**315**		**Pb**	**08 07 41.5**	**-0.7**
TCHL	**Shandon**	**1.06**	**143**		**Pb**	**08 07 41.8**	**-0.3**
JSJM	**St Joseph**	**1.07**	**318**		**Pn**	**08 07 42.4**	**-0.4**
PMRM	**Maxey Ranch**	**1.08**	**134**		**Pb**	**08 07 42.1**	**-0.4**
ARDC	**Alexander Ranc**	**1.08**	**171**		**Pb**	**08 07 42.1**	**-0.5**
JBMM	**Black Mountain**	**1.10**	**316**		**Pb**	**08 07 42.3**	**-0.6**
TRAM	**Private Proper**	**1.14**	**139**		**Pn**	**08 07 42.9**	**-0.8**
JPSM		**1.14**	**306**		**Pn**	**08 07 42.9**	**-0.8**
JFP	**Foothills Park**	**1.15**	**316**		**Pn**	**08 07 42.8**	**-1.0**
JSFB	**Stanford Teles**	**1.17**	**318**		**Pn**	**08 07 43.1**	**-1.0**
WENL	**Wente Vineyard**	**1.18**	**337**		**Pn**	**08 07 43.7**	**-0.5**
MHDM	**Hidden Dam**	**1.19**	**60**		**Pn**	**08 07 43.2**	**-1.2**
TSCN	**Private Proper**	**1.20**	**145**		**Pn**	**08 07 43.6**	**-0.9**
CVLM	**Vallecito**	**1.21**	**335**		**Pb**	**08 07 44.3**	**-0.4**
PTAM	**Tassajara Cree**	**1.21**	**161**		**Pn**	**08 07 43.9**	**-0.8**
JRSC	**Jasper Ridge**	**1.21**	**316**		**Pn**	**08 07 43.4**	**-1.2**
BGH	**Bear Gulch**	**1.22**	**311**		**Pn**	**08 07 44.1**	**-0.7**
CNIC	**Niles Canyon**	**1.24**	**330**		**Pn**	**08 07 44.3**	**-0.8**
LSDC	**Los Osos Digit**	**1.27**	**167**		**Pb**	**08 07 45.5**	**-0.2**
EFD	**Emergency Oper**	**1.27**	**163**		**Pn**	**08 07 44.5**	**-1.0**
TSCS	**Shell Creek So**	**1.29**	**148**		**Pn**	**08 07 44.6**	**-1.1**
TRAY	**Twisselman Ran**	**1.31**	**138**		**Pn**	**08 07 45.3**	**-0.7**
VPDC	**Valencia Peak**	**1.32**	**169**		**Pn**	**08 07 45.5**	**-0.7**
DPD	**Davis Peak**	**1.34**	**166**		**Pn**	**08 07 45.9**	**-0.6**
DCD	**Diablo Creek**	**1.35**	**168**		**Pn**	**08 07 45.9**	**-0.7**
CMOB	**Morgan Territo**	**1.36**	**339**		**Pn**	**08 07 46.7**	**-0.1**
JCHM	**Cahill Ridge**	**1.36**	**316**		**Pn**	**08 07 45.8**	**-1.0**
JCPM	**Coyote Point**	**1.39**	**320**		**Pn**	**08 07 46.0**	**-1.1**
SAC	**San Andreas**	**1.43**	**317**		**Pn**	**08 07 46.7**	**-1.0**
MMIM	**Miami Mountain**	**1.46**	**52**		**Pn**	**08 07 47.6**	**-0.6**
VOG	**Valley Oaks Go**	**1.47**	**98**	P	**Pn**	**08 07 47.3**	**-1.0**
	baz=280						
JSBM	**San Bruno Moun**	**1.50**	**320**		**Pn**	**08 07 47.0**	**-1.6**
JMGM	**Milagra Ridge**	**1.50**	**317**		**Pn**	**08 07 48.0**	**-0.7**
MCUB	**Copperopolis B**	**1.51**	**17**		**Pn**	**08 07 48.5**	**-0.3**
SMMC	**Simmler**	**1.56**	**141**		**Pn**	**08 07 48.7**	**-0.7**
SMMC	**Simmler**	**1.56**	**141**	P	**Pn**	**08 07 48.6**	**-0.8**
	baz=323,SNR=47						
BKS	**Berkeley--Byer**	**1.58**	**328**		**Pn**	**08 07 49.2**	**-0.5**
CVPM	**Vollmer Peak**	**1.58**	**329**		**Pn**	**08 07 49.4**	**-0.4**
VAK	**Adit at Lawren**	**1.58**	**328**		**Pn**	**08 07 49.3**	**-0.5**
BCH	**Branch Mountai**	**1.62**	**146**		**Pn**	**08 07 49.4**	**-1.0**
CMB	**Columbia Colle**	**1.63**	**23**		**Pn**	**08 07 50.2**	**-0.3**
CMB				IAML		08 08 13.4	
	comp=E,113nm,0.9s						
CMB				IAML		08 08 15.9	
	comp=N,112nm,0.6s						
CARC	**Carrizo Plain**	**1.64**	**138**		**Pn**	**08 07 50.2**	**-0.5**
CSPM	**San Pablo Ridg**	**1.68**	**328**		**Pn**	**08 07 50.5**	**-0.6**
MRHM	**Rocky Hill**	**1.71**	**98**		**Pn**	**08 07 49.8**	**-1.8**
CRGC	**Crocker Grade**	**1.75**	**137**		**Pn**	**08 07 52.2**	**-0.1**
VES	**Vestal, Richgr**	**1.84**	**112**	S	**Sn**	**08 08 16.7**	**+0.1**
	baz=294						
NOLM	**Olema**	**1.97**	**320**		**Pn**	**08 07 54.2**	**-0.9**
SPG2	**Springville 2**	**1.98**	**99**		**Pn**	**08 07 54.8**	**-0.6**
MRDM	**Red Cones**	**2.01**	**57**		**Pn**	**08 07 56.9**	**+1.0**
MDPB	**Devils Postpil**	**2.01**	**56**		**Pn**	**08 07 56.8**	**+0.8**
MINS	**Minaret Summit**	**2.04**	**56**		**Pn**	**08 07 57.4**	**+1.0**
NBRB	**Beebe Ranch Br**	**2.04**	**328**		**Pn**	**08 07 55.4**	**-0.6**
MMSM	**Mammoth Summit**	**2.04**	**57**		**Pb**	**08 07 57.8**	**-1.4**
FIGC	**Figueroa Mtn.**	**2.05**	**151**		**Pn**	**08 07 56.0**	**-0.4**
GATR	**Gnd/Air Tx Cnt**	**2.06**	**164**		**Pn**	**08 07 56.3**	**-0.1**
CVS	**Carmenet Viney**	**2.07**	**331**		**Pn**	**08 07 55.6**	**-0.9**
MDYM	**Dry Creek**	**2.07**	**57**		**Pb**	**08 07 58.6**	**-1.0**
MDCM	**Deadman Creek**	**2.08**	**55**		**Pn**	**08 07 57.8**	**+0.9**
MMLB	**Mammoth Lakes**	**2.09**	**57**		**Pb**	**08 07 59.0**	**-1.0**
MCCM	**Marconi Confer**	**2.10**	**321**	Pn	**Pn**	**08 07 56.0**	**-0.8**
MCCM				IAML		08 08 36.1	
	comp=E,85nm,0.8s						
MCCM				IAML		08 08 43.5	
	comp=N,94nm,2.6s						
MLCM	**Laurel Creek C**	**2.11**	**59**		**Pb**	**08 07 58.8**	**-1.5**
MEMM	**East Mammoth H**	**2.12**	**57**		**Pb**	**08 07 59.5**	**-1.0**
MGPM	**Gravel Pit**	**2.13**	**59**		**Pb**	**08 07 59.8**	**-0.8**
MCBM	**Casa Benchmark**	**2.14**	**58**		**Pb**	**08 07 59.6**	**-1.2**
MCSM	**Casa Diablo Ho**	**2.14**	**58**		**Pb**	**08 07 59.7**	**-1.1**
BCW	**Bitter Crk WRg**	**2.15**	**137**		**Pn**	**08 07 58.3**	**+0.6**
BCW				IAML		08 08 36.4	
	comp=N,132nm,0.8s						
LMCR	**Lookout Mounta**	**2.15**	**56**		**Pb**	**08 08 00.0**	**-1.0**
NJQ	**Nojoqui County**	**2.16**	**157**		**Pn**	**08 07 57.4**	**-0.4**
MCVM	**Convict Lake**	**2.16**	**60**		**Pb**	**08 07 59.7**	**-1.4**
MLAC	**Mammoth, Mammo**	**2.18**	**59**	Pb	**Pb**	**08 07 60.0**	**-1.4**
	baz=240						
MDRNC	**Doe Ridge**	**2.18**	**59**		**Pb**	**08 08 00.7**	**-0.7**
NTYM	**Taylor**	**2.19**	**328**		**Pn**	**08 07 57.4**	**-0.7**
MLHM	**Little Hot Cre**	**2.21**	**58**		**Pb**	**08 08 00.9**	**-1.1**
SYP	**Santa Ynez Pea**	**2.23**	**153**		**Pn**	**08 07 58.4**	**-0.5**
MTUM	**Tungsten Hills**	**2.26**	**68**		**Pn**	**08 08 00.5**	**+1.2**
NBPM	**Berryessa Peak**	**2.27**	**340**		**Pn**	**08 07 59.6**	**+0.3**
WASM	**Alta Sierra Ca**	**2.27**	**110**		**Pn**	**08 07 59.4**	**-0.1**
ISA	**Isabella, Lake**	**2.37**	**111**		**Pn**	**08 08 00.6**	**0.0**
ISA				IAML		08 08 34.1	
	comp=E,70nm,0.8s						
ISA				IAML		08 08 35.1	
	comp=N,86nm,0.9s						
ISA	**Isabella, Lake**	**2.37**	**111**	P	**Pn**	**08 08 01.1**	**+0.4**
	baz=293,SNR=15						
ARVC	**Arvin**	**2.38**	**126**		**Pn**	**08 08 00.8**	**+0.1**
ARVC	**Arvin**	**2.38**	**126**	S	**Sn**	**08 08 31.3**	**+1.4**
	baz=308						
MFBM	**Five Bridges**	**2.38**	**67**		**Pb**	**08 08 03.0**	**-1.8**
BENR	**Benton**	**2.40**	**60**		**Pb**	**08 08 03.5**	**-1.7**
WAKR	**Walker**	**2.41**	**35**		**Pn**	**08 08 01.7**	**+0.3**
WAKR				IAML		08 08 40.3	
	comp=N,141nm,0.8s						
MCDM	**Chidago Canyon**	**2.42**	**64**		**Pb**	**08 08 03.7**	**-1.7**
MRCM	**Red Rock Canyo**	**2.43**	**61**		**Pb**	**08 08 04.0**	**-1.6**
MLNR	**Milner Canyon**	**2.51**	**64**		**Pb**	**08 08 05.2**	**-1.8**
EMB	**Emerald Bay**	**2.58**	**19**		**Pn**	**08 08 04.3**	**+0.6**
EMB				IAML		08 08 44.7	
	comp=E,121nm,0.7s						
GDXM	**Geysers**	**2.60**	**331**	Pn	**Pn**	**08 08 02.3**	**-1.6**
DSP	**Deep Springs**	**2.71**	**71**		**Pn**	**08 08 04.6**	**-0.7**
DSP				IAML		08 08 51.1	
	comp=E,37nm,0.8s						
DSP				IAML		08 08 54.4	
	comp=N,48nm,1.1s						
CGO	**Cerro Gordo**	**2.73**	**89**		**Pb**	**08 08 08.4**	**-2.4**
LHV	**Little Huntoon**	**2.74**	**51**		**Pn**	**08 08 05.5**	**-0.2**
LHV				IAML		08 09 03.5	
	comp=E,99nm,0.8s						
HOPS	**Hopland Field**	**2.87**	**329**	Pn	**Pn**	**08 08 06.3**	**-1.2**
HOPS				IAML		08 08 38.4	
	comp=E,54nm,3.7s						
HOPS				IAML		08 08 48.8	
	comp=N,59nm,4.0s						
YERR	**Yerington**	**2.89**	**32**		**Pn**	**08 08 08.3**	**+0.3**
YERR				IAML		08 08 56.9	
	comp=N,52nm,0.7s						
MPK	**Martis Peak**	**2.90**	**18**		**Pn**	**08 08 08.7**	**+0.5**
CCAC	**Calif City Air**	**2.92**	**117**		**Pn**	**08 08 08.3**	**0.0**
LCH	**Last Change Ra**	**2.93**	**75**		**Pn**	**08 08 08.7**	**+0.3**
LCH				IAML		08 08 56.2	
	comp=N,37nm,0.7s						
LCH				IAML		08 09 00.3	
	comp=E,48nm,0.5s						
NVAR	**Mina Array Bea**	**2.97**	**50**		**Pn**	**08 08 09.2**	**+0.1**
NV11	**Mina Array Sit**	**3.07**	**51**		**Pn**	**08 08 10.2**	**-0.1**
NV11				IAML		08 09 03.8	
	comp=N,27nm,1.6s						
GRAC	**Grapevine Rang**	**3.10**	**80**		**Pn**	**08 08 11.0**	**+0.2**
GRAC				IAML		08 09 08.5	
	comp=N,67nm,0.6s						
MZP	**Montezuma Peak**	**3.26**	**68**		**Pn**	**08 08 13.2**	**+0.1**
PASC	**Pasadena Art C**	**3.41**	**133**		**Pn**	**08 08 15.2**	**+0.3**
PAHR	**Pah Rah Range**	**3.47**	**24**	Pn	**Pn**	**08 08 16.0**	**+0.1**
PAHR				IAML		08 09 12.6	
	comp=N,18nm,0.8s						
PAHR				IAML		08 09 25.9	
	comp=E,21nm,1.5s						
QSM	**Queen of Sheba**	**3.54**	**98**		**Pn**	**08 08 16.8**	**+0.1**
QSM				IAML		08 09 28.5	
	comp=E,20nm,0.8s						
GWY	**Greenwater Val**	**3.67**	**94**		**Pn**	**08 08 18.6**	**+0.1**
GWY				IAML		08 09 27.7	
	comp=E,19nm,1.0s						
GWY				IAML		08 09 28.2	
	comp=N,15nm,1.1s						
WCT	**Wildcat Mounta**	**3.68**	**85**		**Pn**	**08 08 18.1**	**-0.6**
GSC	**Goldstone, Bar**	**3.77**	**108**		**Pn**	**08 08 20.1**	**+0.2**
GSC				IAML		08 09 20.6	
	comp=E,27nm,0.8s						
GSC				IAML		08 09 25.8	
	comp=N,22nm,0.9s						
CIS	**Catalina Islan**	**3.87**	**143**	P	**Pn**	**08 08 21.3**	**+0.1**
	baz=325						
TPNV	**Topopah Spring**	**3.99**	**83**		**Pn**	**08 08 23.5**	**+0.4**
TPNV				IAML		08 09 47.0	
	comp=N,21nm,1.1s						
TPNV				IAML		08 10 56.0	
	comp=N,30nm,2.6s						
TPNV	**Topopah Spring**	**3.99**	**83**	P	**Pn**	**08 08 24.5**	**+1.5**
	baz=266						
ELS	**Elsinore Mount**	**4.22**	**132**		**Pn**	**08 08 26.3**	**+0.1**
PFO	**Pinyon Flats O**	**4.85**	**126**	Pn	**Pn**	**08 08 35.2**	**+0.3**
PFO				IAML		08 09 37.0	
	comp=N,6.9nm,3.0s						
PFO				IAML		08 09 39.3	
	comp=N,6.7nm,2.3s						
SHPR	**Sheep Range**	**4.86**	**89**		**Pn**	**08 08 34.4**	**-0.6**
PMD	**Palm Desert**	**4.88**	**125**	Pn	**Pn**	**08 08 35.6**	**+0.4**
PMD				IAML		08 09 46.4	
	comp=E,7.7nm,4.8s						
CBX	**Cerro Bola**	**5.63**	**137**	Pn	**Pn**	**08 08 44.9**	**-0.7**
ESJX	**Sierra Juarez**	**6.26**	**135**	Pn	**Pn**	**08 08 54.5**	**+0.2**

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*TEH **26** 08:22:38.1, 40°.55N×49°.32E, h10km, ML3.2*

*DRS **26** 08:22:42.5±0.0, 40°.48N×49°.05E, h26km*

ISC 26 08:22:40.3±1.8**, 40°.67N**±0°.06×**49°.13E**±0°.09**, h23**km±17km**, n16, σ0ˢ.96**/26**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSMR	**Kasumkent**	**1.20**	**321**	*e*Pg	**Pb**	**08 23 02.3**	**-0.1**
	3.0nm,0.0s						
KSMR				*e*Sg	**Sb**	**08 23 18.0**	**+0.5**
	43nm,0.2s						
AKT	**Akhty**	**1.33**	**308**	*e*Pg	**Pn**	**08 23 02.9**	**-0.7**
	43nm,0.2s						
AKT				*e*Sg	**Sn**	**08 23 19.8**	**-0.8**
	54nm,0.3s						
DRN	**Derbent**	**1.49**	**336**	*e*Pg	**Pn**	**08 23 05.1**	**-0.5**
	54nm,0.3s						
DRN				*e*Sg	**Sn**	**08 23 24.0**	**-0.3**
	16nm,0.5s						
SGKR	**Sergokala**	**2.10**	**329**	*e*Pg	**Pn**	**08 23 15.3**	**+1.2**
	2.0nm,0.4s						
SGKR				*e*Sg	**Sn**	**08 23 41.9**	**+2.3**
	10.0nm,0.6s						
KMKR	**Kumukh**	**2.11**	**314**	*e*Pg	**Pn**	**08 23 13.9**	**-0.5**
	16nm,0.5s						
KMKR				*e*Sg	**Sn**	**08 23 39.2**	**-0.9**
	2.0nm,0.4s						
GNBR	**Gunib**	**2.36**	**317**	*e*Pn	**Pn**	**08 23 17.1**	**-0.7**
	10.0nm,0.6s						
GNBR				*e*Sn	**Sn**	**08 23 45.6**	**-0.5**
	1.0nm,0.4s						
ARKR	**Arakani**	**2.51**	**321**	*e*Pn	**Pn**	**08 23 19.6**	**-0.1**
	1.0nm,0.4s						
ARKR				*e*Sn	**Sn**	**08 23 50.2**	**+0.6**
	10.0nm,0.4s						
XNZR	**Khunzakh**	**2.61**	**317**	*e*Pn	**Pn**	**08 23 20.8**	**-0.4**
	10.0nm,0.4s						
XNZR				*e*Sn	**Sn**	**08 23 51.8**	**-0.5**
	12nm,0.5s						
UNCR	**Uncukul**	**2.69**	**320**	*e*Pn	**Pn**	**08 23 22.8**	**+0.6**
	12nm,0.5s						
UNCR				*e*Sn	**Sn**	**08 23 55.5**	**+1.5**
	8.0nm,0.4s						
KRNR	**Karanay**	**2.72**	**323**	*e*Pn	**Pn**	**08 23 22.9**	**+0.2**
	8.0nm,0.4s						
KRNR				*e*Sn	**Sn**	**08 23 56.1**	**+1.2**
	8.0nm,0.4s						
IHRS	**Heris**	**2.85**	**215**	Pn	**Pn**	**08 23 25.9**	**+1.3**
QALM	**Alamut, Qazvin**	**4.39**	**164**	Pn	**Pn**	**08 23 44.6**	**-1.3**
KLST	**Kelardasht - M**	**4.41**	**159**	Pn	**Pn**	**08 23 45.5**	**-0.6**
MZPU	**Pul - Mazandar**	**4.64**	**155**	Pn	**Pn**	**08 23 48.6**	**-0.5**
IGLO	**Ghaloghah**	**5.56**	**137**	Pn	**Pn**	**08 24 02.4**	**+0.6**
IEMG	**Emamgholi**	**8.09**	**111**	Pn	**Pn**	**08 24 35.8**	**-0.8**

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*ANF **26** 08:25:43.7±0.2, 33°.21N×116°.07W, h19km±3km, ML3.7/32, Error ellipse: s-maj=1.7km s-min=1.4km az=177.0*

*NEIC **26** 08:25:44.4±1.2, 33°.24N±0°.01×116°.10W±0°.01, h20km±5km, Error ellipse: s-maj=2.2km s-min=1.5km az=213.0*

*PAS **26** 08:25:44.7±1.2, 33°.219N±0°.008×116°.083W±0°.004, h13km±3km, Mwr3.5/6, ML3.6/40(NEIC), Error ellipse: s-maj=1.3km s-min=0.5km az=198.0*

ISC 26 08:25:44.1±0.9**, 33°.22N**±0°.01×**116°.09W**±0°.01**, h18**km±2km**, n141, σ0ˢ.79**/213**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALN	**Salton City**	**0.10**	**54**		**Pg**	**08 25 47.6**	**-0.3**
SALN					**Sg**	**08 25 50.2**	**-0.2**
SLH	**Sleepy Hollow**	**0.14**	**260**		**Pg**	**08 25 48.2**	**-0.2**
SLH					**Sg**	**08 25 51.0**	**-0.2**
ERRC	**Elmore Ranch**	**0.24**	**115**		**Pg**	**08 25 50.4**	**+0.6**
ERRC					**Sg**	**08 25 55.0**	**+1.4**
BORC	**Borrego Spring**	**0.28**	**280**		**Pg**	**08 25 50.2**	**-0.2**
BORC					**Sb**	**08 25 54.3**	**-0.6**
BOMB	**Bombay Beach**	**0.33**	**64**		**Pg**	**08 25 51.5**	**+0.2**
BOMB					**Sb**	**08 25 56.9**	**+0.3**
SUP	**Superstition M**	**0.34**	**140**		**Pg**	**08 25 51.5**	**+0.1**
SUP					**Sg**	**08 25 56.5**	**+0.1**
CRR	**Carrizo Plain**	**0.34**	**163**		**Pg**	**08 25 51.6**	**+0.1**
CRR					**Sb**	**08 25 57.1**	**+0.2**
SWSC	**Sam W. Stewart**	**0.36**	**139**		**Pg**	**08 25 51.9**	**+0.1**
SWSC					**Sg**	**08 25 57.0**	**+0.1**
SWSC	**Sam W. Stewart**	**0.36**	**139**	P	**Pg**	**08 25 51.9**	**+0.1**
	baz=320,SNR=1000						
SWSC				S	**Sg**	**08 25 57.1**	**+0.1**
	baz=320						
MONP2	**Monument Peak**	**0.43**	**221**		**Pg**	**08 25 53.1**	**0.0**
MONP2					**Sg**	**08 25 59.1**	**-0.1**
MONP2	**Monument Peak**	**0.43**	**221**	P	**Pg**	**08 25 53.0**	**0.0**
	baz=43,SNR=182						
MONP2				S	**Sg**	**08 25 59.0**	**-0.1**
	baz=43						
CLI2	**Calipatria 2**	**0.43**	**103**		**Pb**	**08 25 53.6**	**+0.3**
CLI2					**Sb**	**08 26 01.0**	**+1.5**
CTCC	**Cactus City**	**0.44**	**10**		**Pg**	**08 25 53.2**	**0.0**
CTCC					**Sg**	**08 25 59.5**	**+0.1**
JUEM	**Julian Eagle M**	**0.45**	**252**		**Pg**	**08 25 53.5**	**+0.1**
JUEM					**Sb**	**08 26 01.5**	**+1.4**
WEMD	**Westmorland, C**	**0.46**	**113**		**Pb**	**08 25 54.0**	**+0.3**

WEMD					Sb	08 26 01.2	+1.1
MATG	Mataguay Scout	0.47	268		Pg	08 25 53.7	-0.1
MATG					Sg	08 26 00.2	0.0
COK2	Cook Ranch 2	0.47	141		Pg	08 25 54.0	+0.2
COK2					Sb	08 26 01.8	+1.2
CTW	Cottonwood Mou	0.49	21		Pg	08 25 53.9	-0.2
CTW					Sg	08 26 00.8	0.0
PMD	Palm Desert	0.49	330		Pg	08 25 53.5	-0.6
PMD	Palm Desert	0.49	330		Sg	08 25 60.0	-0.9
PMD	Palm Desert	0.49	330	IAML		08 26 01.0	
	comp=E,2µm,0.3s						
PMD				IAML		08 26 02.7	
	comp=N,1µm,0.3s						
XPFO	Pion Flat	0.50	322		Pg	08 25 53.9	-0.4
XPFO					Sg	08 26 00.3	-0.9
PFO	Pinyon Flats O	0.50	322		Pg	08 25 54.0	-0.4
PFO					Sg	08 26 00.7	-0.5
PFO	Pinyon Flats O	0.50	322	Pg	Pg	08 25 54.0	-0.4
PFO				IAML		08 26 01.5	
	comp=N,3µm,0.6s						
PFO				IAML		08 26 01.6	
	comp=N,2µm,0.8s						
PFO	Pinyon Flats O	0.50	322	P	Pg	08 25 53.9	-0.4
	baz=141,SNR=284						
PFO				S	Sg	08 26 00.8	-0.4
	baz=141						
FRD	Ford Ranch, An	0.51	303		Pg	08 25 54.5	0.0
FRD					Sg	08 26 01.4	-0.1
FRD	Ford Ranch, An	0.51	303		Pg	08 25 54.5	0.0
FRD					Sg	08 26 01.3	-0.2
IMPE	Imperial	0.54	125		Pg	08 25 55.3	+0.3
IMPE					Sn	08 26 04.3	-1.2
WESC	Westside Schoo	0.55	147		Pb	08 25 55.0	-0.1
WESC					Sg	08 26 04.0	+1.6
SNDA	J Saunders Pla	0.55	307		Pb	08 25 55.2	-0.1
SNDA					Sb	08 26 03.0	+0.1
BZNA	Buzz No.'s Pla	0.56	299		Pb	08 25 55.4	0.0
BZNA					Sb	08 26 02.8	-0.3
IKP	In-Ko-Pah, Jac	0.57	182		Pb	08 25 55.4	-0.1
IKP					Sb	08 26 03.2	0.0
IKP	In-Ko-Pah, Jac	0.57	182	P	Pb	08 25 55.2	-0.3
	baz=3.5,SNR=488						
IKP				S	Sb	08 26 03.2	0.0
	baz=3.5						
DNR	Dunn Ranch,Anz	0.57	307		Pb	08 25 55.6	0.0
DNR					Sg	08 26 03.9	+0.5
YUH	Yuha Desert	0.58	166		Sb	08 26 03.7	+0.1
YUH	Yuha Desert	0.58	166	Pg	Pb	08 25 55.4	-0.4
YUH	Yuha Desert	0.58	166	IAML		08 26 04.2	
	comp=E,2µm,0.1s						
YUH				IAML		08 26 04.2	
	comp=N,2µm,0.2s						
HAY	Hayfield	0.59	34		Pb	08 25 56.0	+0.1
HAY					Sg	08 26 04.3	+0.4
RMX	La Rumorosa	0.61	179		Pg	08 25 56.7	+0.3
RMX					Sg	08 26 06.0	+1.4
RMX				IAML		08 26 07.3	
	comp=E,5µm,0.5s						
RMX				IAML		08 26 07.4	
	comp=N,3µm,0.3s						
SGL	Mount Signal	0.64	152		Pb	08 25 56.2	-0.5
SGL					Sb	08 26 05.2	-0.1
CRY	Cary Ranch	0.65	303		Pb	08 25 56.9	0.0
CRY					Sb	08 26 05.4	-0.2
SNR	Schaffner Ranc	0.65	123		Pb	08 25 56.7	-0.2
SNR					Sn	08 26 08.1	-0.1
PLM	Palomar	0.66	282		Pb	08 25 57.2	0.0
PLM					Sb	08 26 06.4	+0.3
GVDA	Garner Valley	0.67	313		Pb	08 25 57.1	-0.1
GVDA					Sb	08 26 06.0	-0.2
DREC	Desert Rsrch C	0.68	127		Pb	08 25 57.3	0.0
DREC					Sn	08 26 09.3	+0.5
BC3	Big Chuckawall	0.69	50		Pb	08 25 57.3	-0.3
BC3					Sb	08 26 06.5	-0.2
BC3	Big Chuckawall	0.69	50	P	Pb	08 25 57.1	-0.4
	baz=229						
BC3				S	Sb	08 26 06.3	-0.4
	baz=229						
EML	El Monte Cty P	0.72	243		Pb	08 25 57.9	-0.1
EML					Sb	08 26 07.2	-0.4
BAR	Barrett	0.73	223		Pb	08 25 58.1	-0.2
BAR	Barrett	0.73	223		Sb	08 26 07.5	-0.5
DPP	Dos Picos Cty	0.75	253		Pb	08 25 58.5	-0.1
DPP					Sb	08 26 08.2	-0.3
EW2	E Wide Canyon	0.77	340		Pb	08 25 58.9	-0.1
EW2					Sg	08 26 09.6	+0.1
TKX	Tecate	0.78	214		Pb	08 25 59.1	-0.1
TKX					Sb	08 26 09.2	-0.3
BELC	Belle Mtn. Jos	0.78	5		Pb	08 25 59.0	-0.3
BELC					Sb	08 26 09.4	-0.2
BELC	Belle Mtn. Jos	0.78	5	P	Pb	08 25 58.8	-0.5
	baz=184,SNR=1000						
BELC				S	Sb	08 26 09.5	-0.2
	baz=184						
UABX	UABC, Campus M	0.80	137		Pb	08 25 59.0	-0.5
UABX					Sg	08 26 10.8	+0.4
DEVC	Devers	0.82	330		Pb	08 26 00.0	+0.1
DEVC					Sb	08 26 11.1	+0.4
DUZA	Dulzura	0.84	224		Pb	08 26 00.0	-0.2
DUZA					Sb	08 26 11.0	-0.2
POB	Polly Butte	0.84	304		Pb	08 26 00.1	-0.2
POB					Sb	08 26 10.9	-0.4
SDRC	San Diego Road	0.87	236		Pb	08 26 00.2	-0.4
SDRC					Sb	08 26 11.7	-0.2
COA	Coachella	0.88	113		Pb	08 25 59.9	-1.0
COA					Sb	08 26 12.2	-0.1
DGR	Domenigoni Val	0.88	299		Pb	08 26 00.5	-0.5
DGR					Sb	08 26 12.3	-0.2
BLAC	Blackrock camp	0.89	343		Pb	08 26 00.6	-0.4
BLAC					Sb	08 26 12.9	+0.3
TPC	Twentynine Pal	0.89	2		Pb	08 26 00.6	-0.4
BACC	Bachelor Mtn.	0.89	296		Pb	08 26 00.7	-0.4
BACC					Sb	08 26 12.3	-0.3
MTRP	Mission Trails	0.91	244		Pb	08 26 01.4	+0.1
HMTC	Hemet	0.91	303		Pn	08 26 02.2	+0.2
109C	Camp Elliot, M	0.92	249	Pg	Pb	08 26 01.2	-0.3
109C				IAML		08 26 14.5	
	comp=N,2µm,0.5s						
109C				IAML		08 26 16.0	
	comp=E,1µm,0.3s						
109C	Camp Elliot, M	0.92	249	P	Pb	08 26 01.0	-0.5
	baz=70,SNR=695						
109C				S	Sb	08 26 13.2	-0.1
	baz=70						
CPE	Camp Elliot	0.92	249		Pb	08 26 01.1	-0.4
OLP	Otay Lakes Par	0.94	230		Pb	08 26 01.6	-0.2
GORC	Green Oak Ranc	0.96	266		Pb	08 26 01.7	-0.5
RUN	Ruthven	0.96	104		Pb	08 26 01.0	-1.3
SDMC	San Diego Miss	0.98	244		Pb	08 26 02.6	0.0
MURC	Murrieta	1.00	293		Pb	08 26 02.5	-0.5
MURC	Murrieta	1.00	293	P	Pb	08 26 02.3	-0.6
	baz=112,SNR=290						
MURC				S	Sb	08 26 16.4	+0.6
	baz=112						
BBSC	Beaumont Base	1.02	313		Pn	08 26 03.8	+0.2
CBX	Cerro Bola	1.03	208		Pb	08 26 03.4	0.0
CBX				IAML		08 26 17.9	
	comp=N,2µm,0.5s						
CBX				IAML		08 26 19.1	
	comp=E,2µm,0.5s						
CPBX	Cerro Prieto	1.03	140		Pb	08 26 01.8	-1.6
EMSC	East Mesa	1.04	117		Pb	08 26 02.9	-0.7
GLA	Glamis	1.07	99		Pb	08 26 02.7	-1.4
GLA				IAML		08 26 28.6	
	comp=N,1µm,0.5s						
GLA	Glamis	1.07	99	P	Pb	08 26 02.6	-1.5
	baz=279,SNR=235						
GLA				S	Sb	08 26 16.6	-1.2
	baz=279						
GTM	Goat Mountain	1.10	348		Pb	08 26 04.7	+0.1
PEC	Perris	1.12	307		Pb	08 26 05.3	+0.3
ELS	Elsinore Mount	1.20	291		Pn	08 26 05.9	-0.1
ESJX	Sierra Juarez	1.22	174		Pn	08 26 05.6	-0.8
ESJX				IAML		08 26 23.8	
	comp=E,1µm,0.2s						
ESJX				IAML		08 26 25.5	
	comp=N,638nm,0.4s						
IRM	Iron Mountain	1.22	40	P	Pn	08 26 05.2	-1.1
	baz=219,SNR=217						
IRM				S	Sb	08 26 21.7	-0.5
	baz=219						
GUVIX	Guadalupe Vict	1.25	137		Pb	08 26 07.5	+0.3
GUVIX				IAML		08 26 33.8	
	comp=N,2µm,0.5s						
GUVIX				IAML		08 26 42.4	
	comp=E,2µm,0.7s						
BBRC	Big Bear Solar	1.25	326	P	Pn	08 26 06.1	-0.9
	baz=146,SNR=322						
BBRC				S	Sn	08 26 23.8	+0.4
	baz=146						
BLYC	Blythe	1.41	67	Pn	Pn	08 26 07.8	-1.1
BLYC				IAML		08 26 33.9	
	comp=N,461nm,0.8s						
CCX	Cicese	1.43	200		Pn	08 26 09.6	+0.4
CCX				IAML		08 26 30.3	
	comp=E,2µm,0.6s						
GMRC	Granite Mounta	1.60	13	P	Pn	08 26 10.7	-0.9
	baz=192,SNR=129						
GMRC				Sb	Sb	08 26 34.3	+1.1
	baz=192						
HEC	Hector,Ludlow	1.62	353	P	Pn	08 26 11.0	-0.9
	baz=172						
BFSC	Mount Baldy Ra	1.66	308	Pb	Pb	08 26 14.1	-0.1
	baz=128						
BFSC				Sb	Sb	08 26 35.5	+0.6
	baz=128						
RRX	Edison Barstow	1.82	336	Pb	Pb	08 26 16.9	0.0
	baz=155						
RRX				Sb	Sg	08 26 41.4	-1.4
	baz=155						
VTX	Valle De La Tr	1.84	172		Pn	08 26 14.8	-0.1
FMP	Fort Macarthur	1.91	286	Pb	Pb	08 26 17.8	-0.6
	baz=105						
FMP				Sb	Sb	08 26 43.3	+1.4
	baz=105						
PDMCI	Parker Dam,Lak	1.95	56	Sb	Sb	08 26 43.9	+0.9
	baz=236						
CIS	Catalina Islan	1.96	276	P	Pn	08 26 16.1	-0.4
	baz=95						
CIS				Sb	Sb	08 26 44.8	+1.4
	baz=95						
NEE2	Needles Airpor	1.97	38	Pb	Pb	08 26 19.4	-0.1
	baz=218						
NEE2				Sb	Sb	08 26 44.9	+1.3
	baz=218						
113A	Mohawk Valley,	2.00	102		Pn	08 26 15.7	-1.3
DECC	Green Verdugo	2.14	299	Pb	Pb	08 26 22.4	0.0
	baz=118						
DECC				Sb	Sb	08 26 50.0	+1.5
	baz=118						
GSC	Goldstone, Bar	2.16	344	Pb	Pb	08 26 23.3	+0.5
	baz=164						
GSC				S	Sn	08 26 45.2	-0.5
	baz=164						
TUQ	Turquoise Moun	2.22	3	P	Pn	08 26 19.5	-0.6
	baz=183,SNR=32						
TUQ				Sb	Sg	08 26 53.8	-1.7
	baz=183						
EDW2	Edwards Air Fo	2.29	317	Pb	Pb	08 26 25.7	+0.7
	baz=136						
EDW2				Sb	Sg	08 26 55.9	-2.1
	baz=136						
OSI	Osito Audit: C	2.60	303	P	Pn	08 26 25.0	-0.3
	baz=122,SNR=11						
OSI				Sb	Sb	08 27 04.2	+2.4
	baz=122						
LRMC	Laurel Mtn Rad	2.61	330	P	Pn	08 26 26.5	+0.9
	baz=149						
LRMC				Sb	Sg	08 27 05.9	-2.3
	baz=149						
W13A	Hualapai Mount	2.62	44		Pn	08 26 25.5	-0.2
Y14A	Wickenburg	2.67	74		Pn	08 26 26.4	+0.1
SHOC	Shoshone, Teco	2.68	357	P	Pn	08 26 26.4	+0.1
	baz=176						
SHOC				Sb	Sb	08 27 07.3	+3.2
	baz=176						
V12A	Nelson	2.70	22	Pn	Pn	08 26 27.7	+0.9
PIX	Pinacate	2.77	126		Pn	08 26 26.5	-1.1
QSM	Queen of Sheba	2.81	347		Pn	08 26 28.4	+0.1
ARVC	Arvin	2.97	311	Pb	Pb	08 26 35.9	-0.5
	baz=129						
ARVC				Sb	Sb	08 27 15.3	+3.0
	baz=129						
GWY	Greenwater Val	3.00	351		Pn	08 26 31.1	+0.2
214A	Organ Pipe Nat	3.04	114	Pn	Pn	08 26 29.7	-1.6
214A	Organ Pipe Nat	3.04	114	P	Pn	08 26 30.1	-1.2
	baz=295						
MPMC	Manual Prospec	3.06	338	N		08 26 31.1	
	baz=157,SNR=58						
ISA	Isabella, Lake	3.14	322	Pb	Pb	08 26 40.1	+0.7
	baz=140,SNR=27						
ISA				Sb	Sb	08 27 21.1	+3.7
	baz=140						
SHPR	Sheep Range	3.37	13	Pn	Pn	08 26 36.1	+0.2
WCT	Wildcat Mounta	3.59	353		Pn	08 26 39.2	+0.3
TPNV	Topopah Spring	3.72	358		Pn	08 26 41.6	+0.7
TPNV				IAML		08 27 45.4	
	comp=E,128nm,0.6s						
TPNV				IAML		08 27 46.1	
	comp=E,81nm,0.6s						
TPNV	Topopah Spring	3.72	358	P	Pn	08 26 41.2	+0.4
	baz=178						
GRAC	Grapevine Rang	3.91	345		Pn	08 26 44.2	+0.8
X16A	Lo Mia Camp, P	4.05	72		Pn	08 26 45.7	+0.4
LCH	Last Change Ra	4.20	343		Pn	08 26 48.0	+0.6
DSP	Deep Springs	4.42	340	Pn	Pn	08 26 51.3	+1.0
LCMT	Little Creek M	4.44	31	Pn	Pn	08 26 51.7	+1.0
WUAZ	Wupatki	4.52	58	Pn	Pn	08 26 52.6	+0.7
TUC	Tucson	4.56	100	Pn	Pn	08 26 51.4	-0.9
TUC	Tucson	4.56	100	P	Pn	08 26 51.5	-0.8
	baz=283						
KNB	Kanab	4.64	34	Pn	Pn	08 26 54.5	+1.0
CCUT	Cedar City	4.86	26	Pn	Pn	08 26 56.9	+0.4
PMPB	Monarch Peak	4.90	309	Pn	Pn	08 26 57.7	+0.8
TPH	Tonopah	4.93	350	Pn	Pn	08 26 58.6	+1.1
X18A	Snowflake	5.27	74	Pn	Pn	08 27 02.5	+0.4
W18A	Petrified Fore	5.59	68	Pn	Pn	08 27 07.6	+1.0
SPR3	Spring Creek 3	5.94	13	Pn	Pn	08 27 10.9	-0.5
KVN	Kaiserville	6.04	345	Pn	Pn	08 27 13.6	+0.8
121A	Cookes Peak, D	7.02	93	Pn	Pn	08 27 26.8	+0.7
121A	Cookes Peak, D	7.02	93	P	Pn	08 27 25.6	-0.5
	baz=278						

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*INET **26** 08:31:42.8±0.5, 12°.53N×88°.29W, h22km±13km, MW2.6*
*SNET **26** 08:31:44.8±0.8, 12°.68N×88°.28W, h36km±874km, ML2.4*
ISC 26 08:31:42.5±2.0**, 12°.55N**±0°.09×**88°.28W**±0°.06**, h27**km±15km**,**
n14, σ0s.58/21**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALJI	Alcalda de J	0.82	340	*e*P	Pb	08 31 58.5	+0.3
ALJI				*e*S	Sb	08 32 08.7	-0.2
LCND	La Caada	0.84	27	*e*P	Pn	08 31 58.1	-0.5
LCND				*e*S	Sb	08 32 09.2	-0.3
COEB	Comit de Eme	0.97	345	*e*P	Pn	08 32 00.5	-0.1
COEB				*e*S	Sb	08 32 12.7	-0.6
PQSS	Presa 15 de Se	1.10	346	*e*P	Pn	08 32 02.4	+0.3
PQSS				IAML		08 32 17.9	
	comp=Z,113nm,0.1s						
FAGO	Alcalda de S	1.15	8	*e*P	Pn	08 32 02.9	+0.1
FAGO				*e*S	Sn	08 32 17.2	-0.5
CRIN	San Cristobal	1.21	83	*e*P	Pn	08 32 03.8	+0.1
CRIN				*e*S	Sn	08 32 20.2	+0.9
SCLA	Alcaldia de Sa	1.22	339	*e*P	Pn	08 32 04.5	+0.6
SCLA				*e*S	Sn	08 32 19.3	-0.3
SCLA				IAML		08 32 25.1	
	comp=Z,52nm,0.3s						
SJTE	Alcalda de S	1.27	326	*e*P	Pn	08 32 04.7	0.0
SJTE				*e*S	Sn	08 32 20.2	-0.7
SJTE				IAML		08 32 25.2	
	comp=Z,97nm,0.2s						
CNGN	Cerro Negro	1.54	92	*e*P	Pn	08 32 08.6	+0.3
COPN	Copaltepe	1.69	102	*e*P	Pn	08 32 09.5	-0.8
MOMN	Momotombo	1.70	95	*e*P	Pn	08 32 09.9	-0.6
NUBE	Las Nubes	1.98	313	*e*P	Pn	08 32 15.0	+0.5
RCON	San Juan de Ri	2.27	66	*e*P	Pn	08 32 19.5	+1.2
MATN	Matagalpa	2.33	80	*e*P	Pn	08 32 18.7	-0.4

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*IDC **26** 08:33:57.3±2.2, 5°.93S×154°.77E, h171km±17km, mb3.2/6,*
mbtmp3.7/8, Error ellipse: s-maj=26.1km s-min=17.1km
az=73.0
ISC 26 08:33:59.4±1.0**, 6°.0S**±0°.2×**154°.6E**±0°.2**, h200**km**, n8,**
σ2s.46/10**, mb3.4**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.07	303	P	Pn	08 34 47.4	-2.4
	19nm,0.5s,baz=238,slow=14,SNR=1.9						
KRVT				S	Sn	08 35 27.2	-2.1
	75nm,0.4s,baz=175,slow=21,SNR=10						
DZM	Mont Dzumac	19.65	146	P	Pn	08 38 13.1	-4.0
	2.1nm,0.4s,baz=317,slow=19,SNR=13						
WRA	Warramunga Arr	24.08	233	P	P	08 38 58.9	+2.2
	0.6nm,0.5s,baz=58,slow=9.7,SNR=22						
WRA				PcP	PcP	08 42 34.0	+1.3
	0.1nm,0.3s,baz=56,slow=2.4,SNR=1.6 0.6nm,0.5s						
ASAR	Alice Springs	26.55	226	P	P	08 39 20.7	+1.7
	0.2nm,0.4s,baz=57,slow=9.2,SNR=4.6 0.2nm,0.4s						
SONM	Songino Array	68.30	327	P	P	08 44 40.8	+1.9
	0.3nm,0.5s,baz=128,slow=2.4,SNR=4.6 0.3nm,0.5s						
MKAR	Makanchi Array	82.41	319	P	P	08 46 00.9	+1.7
	0.8nm,0.6s,baz=96,slow=5.9,SNR=11 0.8nm,0.6s						
ILAR	Eielson Array	82.60	22	P	P	08 45 60.0	+0.2
	0.7nm,1.1s,baz=249,slow=5.2,SNR=4.3 0.7nm,1.1s						
ZALV	Zalesovo Beam	83.15	326	P	P	08 46 03.2	+0.4
	0.4nm,0.3s,baz=95,slow=12,SNR=2.3 0.4nm,0.3s						

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*IDC **26** 09:04:16.4±1.6, 17°.38S×175°.09W, h226km±16km, mb3.5/7,*
mbtmp4.0/9, Error ellipse: s-maj=29.5km s-min=12.8km
az=139.0
ISC 26 09:04:18.7±0.9**, 17°.3S**±0°.2×**175°.0W**±0°.2**, h256**km**, n11,**
σ1s.54/14**, mb3.6**/8**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.60	43	P	Pn	09 05 29.8	-0.2
	13nm,0.3s,baz=197,slow=3.2,SNR=21						
AFI				S	S	09 06 23.8	-3.0
	158nm,0.4s,baz=28,slow=24,SNR=18						
DZM	Mont Dzumac	18.10	252	P	P	09 08 09.9	-2.4
	1.6nm,1.0s,baz=72,slow=20,SNR=1.2						
URZ	Urewera	21.97	197	P	P	09 08 51.7	-0.1
	3.4nm,0.5s,baz=349,slow=3.3,SNR=6.8 3.4nm,0.5s						
KRVT	Keravat (AS076	34.81	288	P	P	09 10 47.0	+1.2
	30nm,0.6s,baz=130,slow=7.9,SNR=2.5						
STKA	Stephens Creek	41.77	241	P	P	09 11 43.0	-0.4
	0.6nm,0.3s,baz=83,slow=7.5,SNR=5.2 0.6nm,0.3s						
WRA	Warramunga Arr	47.94	259	P	P	09 12 31.2	-0.9
	1.5nm,0.4s,baz=97,slow=7.0,SNR=93						
WRA				PcP	PcP	09 13 56.5	+0.3
	0.4nm,0.7s,baz=115,slow=2.5,SNR=1.8 1.5nm,0.4s						
ASAR	Alice Springs	48.08	254	P	P	09 12 32.6	-0.5
	8.6nm,0.5s,baz=88,slow=8.8,SNR=227						
ASAR				PcP	PcP	09 13 57.1	+0.4
	0.5nm,0.5s,baz=103,slow=3.7,SNR=4.5 8.6nm,0.5s						
NVAR	Mina Array Bea	76.78	42	P	P	09 15 45.0	+2.5
	0.5nm,0.8s,baz=242,slow=7.4,SNR=4.3 0.5nm,0.8s						
ILAR	Eielson Array	84.63	12	P	P	09 16 24.4	+1.3
	0.3nm,0.5s,baz=218,slow=5.8,SNR=15 0.3nm,0.5s						
PDAR	Pinedale Array	84.71	42	P	P	09 16 24.7	+0.4
	0.2nm,0.6s,baz=241,slow=3.0,SNR=3.2 0.2nm,0.6s						
BRTR	Keskin Array B	146.62	318	PKPbc	PKPbc	09 23 30.8	+0.2
	0.4nm,0.6s,baz=56,slow=2.6,SNR=2.5						

IDC 26 09:21:26.8±43.0**, 25°.41N**×**140°.13E, h210**km±221km**,**
mb3.1/3**, mbtmp3.7**/4**, ML3.2**/1**, Error ellipse:**
s-maj=542.1km s-min=46.0km az=175.0, Volcano
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNU	Nakatsue	11.14	316	P	Pn	09 24 00.6	0.0
	0.1nm,0.3s,baz=144,slow=14,SNR=14 4.6nm,1.0s						
ILAR	Eielson Array	60.07	28	P	P	09 31 11.2	-0.3
	0.1nm,0.3s,baz=255,slow=5.5,SNR=4.1 0.1nm,0.3s						
YKA	Yellowknife Ar	74.49	28	P	P	09 32 42.2	+0.3
	0.3nm,0.5s,baz=297,slow=5.9,SNR=6.6 0.3nm,0.5s						
FINES	FINESS Array B	78.63	333	P	P	09 33 05.1	0.0
	0.8nm,0.3s,baz=71,slow=5.1,SNR=13 0.8nm,0.3s						

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*DJA **26** 09:30:45.4±0.6, 5°N±4°×11°9E±°, h22km±6km, M4.7/12,*
mB5.1/5, mb5.0/12, MLv4.7/9, Mw(mB)4.4/5
*NEIC **26** 09:30:48.3±1.3, 4°.93N±0°.08×118°.78E±0°.09, h34km±5km,*
mb4.6/33, Error ellipse: s-maj=15.7km s-min=8.0km
az=47.0
*IDC **26** 09:30:49.4±3.9, 4°.80N×118°.73E, h53km±37km, mb3.7/15,*
mbtmp4.0/16, ML4.1/1, MS3.4/9, Error ellipse:
s-maj=31.5km s-min=13.1km az=61.0
ISC 26 09:30:47.5±0.4**, 4°.84N**±0°.05×**118°.81E**±0°.07**, h35**km**, n93,**
σ1s.41/101**, mb4.5**/41**, MS3.5**/10**, Borneo**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MYLDM	Lahad Datu	0.46	317	Pg	Pn	09 30 54.0	-3.6
KKM	Kota Kinabalu	2.85	295	Pn	Pn	09 31 30.0	-0.6
TOLI2	Tolitoli	4.19	152	Pn	Pn	09 31 48.8	-0.2
MPSI	Mapaga	4.60	166	P	Pn	09 31 54.2	-0.3
MPSI				S	Sn	09 32 44.5	-2.3
MRSI	Marisa	5.34	144	P	Pn	09 32 05.5	+0.8
	247nm,0.5s,3µm1.0nm						
SGSI	Sangihe	6.79	99	P	Pn	09 32 23.1	-1.6
	108nm,0.6s,0.9nm						
SBUM	Sibu	7.00	250	Pn	Pn	09 32 27.8	+0.4
LUWI	Luwuk	7.05	146	Pn	Pn	09 32 31.1	+2.8
LUWI	Luwuk	7.05	146	P	Pn	09 32 30.1	+1.8
	393nm,0.5s,5µm1.6nm						
DAV	Davao City (W)	7.08	71	LR	LR	09 35 17.5	
	comp=Z,269nm,18.6s,baz=244,slow=37						
SPSI	Sidrap Palu	8.79	174	P	Pn	09 32 53.0	+0.8
	49nm,0.8s						
KAPI	Kappang	9.83	175	P	Pn	09 33 08.4	+2.0
	1.9nm,0.3s,baz=4.0,slow=8.2,SNR=5.1 20nm,0.9s						
KAPI	Kappang	9.83	175	Pn	Pn	09 33 09.5	+3.1
SANI	Sanana	9.91	134	P	Pn	09 33 03.4	-4.1
	19nm,0.9s						
BKSI	Bulukumba	10.18	173	P	Pn	09 33 11.5	+0.4
	26nm,0.7s						
LBMI	Labuha	10.24	122	P	Pn	09 33 09.2	-2.9
SIJI	Sorong	13.67	114	LR	LR	09 39 42.2	
	comp=Z,92nm,20.1s,baz=256,slow=39						
IPM	Ipoh	17.73	270		Pn	09 34 50.7	-1.1
KULM	Kulim	18.10	272	P	Pn	09 34 56.2	-0.1
RPSI	Rantau Prapat	19.96	265	P	P	09 35 16.8	0.0
RPSI				IAmb	IAmb	09 35 23.3	
	comp=Z,16nm,1.0s						
PHRA	Phrae	22.67	308	P	P	09 35 45.1	-0.9
CMAR	Chiang Mai Arr	23.67	307	P	P	09 35 56.1	+0.1
	comp=Z,1.1nm,0.3s,baz=132,slow=7.6,SNR=10						
CMAR				LR	LR	09 45 27.8	
	comp=Z,121nm,19.7s,baz=110,slow=37 comp=Z,1.1nm,0.3s						
CMAR	Chiang Mai Arr	23.67	307	P	P	09 35 55.6	-0.4
CHTO	Chiang Mai	23.86	307	P	P	09 35 57.4	-0.4
PZH	PanZhiHua	27.03	325	P	P	09 36 27.8	+1.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,3.8s						
NJ2	Nanjing	27.07	0	*e*P	P	09 36 28.3	+1.5
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,250nm,6.6s						
GUMO	Guam	27.12	70	LR	LR	09 47 13.1	
	comp=Z,28nm,21.3s,baz=220,slow=36						
WB0	Warramunga Arr	28.86	148	P	P	09 36 42.3	-0.6
WB0				IAmb	IAmb	09 36 45.0	
	comp=Z,10nm,1.1s						
WRA	Warramunga Arr	28.97	149	P	P	09 36 43.1	-0.8
	comp=Z,2.7nm,0.7s,baz=332,slow=9.6,SNR=26						
WRA				PcP	PcP	09 39 51.7	-0.6
	comp=Z,0.5nm,0.7s,baz=322,slow=2.3,SNR=6.0						

	comp=Z,2.7nm,0.7s						
WRA	Warramunga Arr	28.97	149	P	P	09 36 43.8	-0.2
WB2	Warramunga Arr	28.98	149	P	P	09 36 43.8	-0.2
BRDH	Bariadhala	31.69	307	LR	LR	09 51 58.0	
	comp=Z,205nm,19.4s,baz=102,slow=40						
AS31	Alice Springs	31.93	153	P	P	09 37 10.9	+0.9
ASAR	Alice Springs	31.93	153	P	P	09 37 10.3	+0.3
	comp=Z,1.2nm,0.8s,baz=341,slow=12,SNR=11						
ASAR				PcP	PcP	09 39 60.0	-0.1
	comp=Z,1.9nm,0.6s,baz=340,slow=2.6,SNR=24						
	comp=Z,1.2nm,0.8s						
ASAR	Alice Springs	31.93	153	P	P	09 37 11.1	+1.1
KSRS	Korea Array	33.52	13	LR	LR	09 52 55.0	
	comp=Z,28nm,18.4s,baz=170,slow=40						
BJI	Beijing	35.13	356	P	P	09 37 39.3	+1.7
BJI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MAJO	Matsushiro	36.23	27	P	P	09 37 45.4	-1.9
MAJO				IAmb	IAmb	09 38 15.2	
	comp=Z,14nm,1.1s						
MJB9	Matsu-Tunnel	36.23	27	P	P	09 37 45.1	-2.1
MJB9				IAmb	IAmb	09 38 11.4	
	comp=Z,9.1nm,0.8s						
HHC	Hu-ho-hao-te	36.44	351	eP	P	09 37 52.8	+3.7
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,5.9s						
BTO	Baotou	36.48	349	eP	P	09 37 51.0	+1.6
BTO				pP	pP	09 38 00.8	+1.2
BTO				sP	sP	09 38 04.5	+0.7
BTO				PP	PP	09 39 17.0	+4.2
BTO				S	S	09 43 30.0	+0.8
BTO				pmax	pmax		
	comp=Z,17nm,0.4s						
BTO				pmax	pmax		
	comp=Z,520nm,6.2s						
BTO				LR	LR		
	comp=N,500nm,18.8s						
BTO				LR	LR		
	comp=E,390nm,13.3s						
CTA	Charters Tower	36.62	133	LR	LR	09 52 54.8	
	comp=E,32nm,21.4s,baz=356,slow=36						
JSD	Sado	37.50	26	P	P	09 37 58.5	+0.5
NWAO	Narrogin (SRO)	37.59	182	P	P	09 37 59.3	+0.5
GTA	Gaotai	38.47	336	eP	P	09 38 07.0	+0.7
GTA				pP	pP	09 38 12.8	-3.8
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MDJ	Mudanjiang	40.73	12	P	P	09 38 25.8	+0.9
MDJ				pP	pP	09 38 35.8	+0.6
MDJ				PP	PP	09 39 56.8	-2.4
MDJ				ScP	ScP	09 44 08.5	-4.5
MDJ				PcS	PcS	09 44 15.3	-1.3
MDJ				S	S	09 44 35.5	+2.5
MDJ				sS	sS	09 44 52.3	+2.3
MDJ				SS	SnSn	09 47 40.8	-1.2
MDJ	Mudanjiang	40.73	12	ScS	ScS	09 48 28.5	+0.9
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,220nm,5.2s						
BBOO	Buckleboo	40.86	158	P	P	09 38 26.2	+0.1
BBOO				IAmb	IAmb	09 38 30.7	
	comp=Z,20nm,1.3s						
STKA	Stephens Creek	42.47	151	P	P	09 38 40.0	+0.7
	comp=Z,4.4nm,0.7s,baz=320,slow=6.5,SNR=13						
STKA				LR	LR	09 58 29.4	
	comp=Z,39nm,18.7s,baz=26,slow=39						
	comp=Z,4.4nm,0.7s						
STKA	Stephens Creek	42.47	151	P	P	09 38 40.4	+1.1
HNR	Honiara	43.37	109	LR	LR	09 57 39.6	
	comp=Z,698nm,18.9s,baz=244,slow=37						
SONM	Songino Array	44.15	348	P	P	09 38 52.7	-0.1
	comp=Z,0.8nm,0.6s,baz=164,slow=9.2,SNR=7.1						
SONM				LR	LR	09 58 39.0	
	comp=Z,92nm,18.5s,baz=160,slow=38						
	comp=Z,0.8nm,0.6s						
SONM	Songino Array	44.15	348	P	P	09 38 52.9	+0.1
ASAJ	Asahikawa	44.37	25	P	P	09 38 55.4	+0.9
	comp=Z,2.9nm,0.9s,baz=188,slow=23,SNR=3.7						
	comp=Z,2.9nm,0.9s						
HEH	HeiHe	45.84	8	eP	P	09 39 06.3	+0.3
HEH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ	Urumqi	47.52	330	eP	P	09 39 20.0	+0.6
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
CAN	Canberra	48.99	147	P	P	09 39 32.3	+1.5
CAN				IAmb	IAmb	09 40 06.3	
	comp=Z,11nm,1.3s						
NIL	Nilore	51.09	310	P	P	09 39 46.6	-0.2
KSH	Kashi	51.81	318	P	P	09 39 53.5	+1.3
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MK31	Makanchi Array	52.33	329	P	P	09 39 56.2	+0.3
MK31				IAmb	IAmb	09 39 56.6	
	comp=Z,3.0nm,0.8s						
MKAR	Makanchi Array	52.33	329	P	P	09 39 55.9	0.0
	comp=Z,2.8nm,0.6s,baz=128,slow=8.2,SNR=34						
MKAR				PcP	PcP	09 41 06.4	-0.3
	comp=Z,1.1nm,0.8s,baz=133,slow=3.2,SNR=2.5						
	comp=Z,2.8nm,0.6s						
ULHL	Ulahol	53.06	321	P	P	09 40 02.7	+1.1
	SNR=6.1						
TKM2	Tokmak 2	53.82	321	P	P	09 40 07.9	+0.7
	SNR=5.9						
UCH	Uchtor	54.14	320	P	P	09 40 10.4	+0.6
	SNR=6.7						
AAK	Ala-Archa	54.37	321	P	P	09 40 12.1	+1.0
	SNR=5.2						
AAK	Ala-Archa	54.37	321	P	P	09 40 11.5	+0.4
AAK				IAmb	IAmb	09 40 12.9	
	comp=Z,9.6nm,1.1s						
AML	Almayashu	54.62	320	P	P	09 40 14.3	+1.1
	SNR=5.7						
KBL	Kabul	54.65	309	P	P	09 40 13.0	-0.4
KBL				IAmb	IAmb	09 40 14.3	
	comp=Z,6.5nm,0.9s						
GAR	Garm	55.46	315	P	P	09 40 18.6	-0.4
GAR				IAmb	IAmb	09 40 19.9	
	comp=Z,20nm,1.4s						
CHGR	Chuyangaron	56.14	314	P	P	09 40 23.2	-0.6
ZAA0	Zalesovo Array	56.23	337	P	P	09 40 23.4	-0.6
ZAA0				IAmb	IAmb	09 40 24.6	
	comp=Z,7.6nm,1.2s						
ZALV	Zalesovo Beam	56.23	337	P	P	09 40 24.0	-0.1
	comp=Z,1.4nm,0.5s,baz=126,slow=7.5,SNR=9.7						
	comp=Z,1.4nm,0.5s						
ZALV	Zalesovo Beam	56.23	337	P	P	09 40 23.2	-0.9
KURK	Kurchatov	56.73	331	P	P	09 40 27.4	-0.3
KURK				IAmb	IAmb	09 40 28.8	
	comp=Z,7.2nm,0.9s						
KK31	Karatay Array	57.15	319	P	P	09 40 30.6	-0.2
KK31				IAmb	IAmb	09 40 31.7	
	comp=Z,3.3nm,0.9s						
KKAR	Karatay Array	57.15	319	P	P	09 40 30.6	-0.3
PETK	Petropavlovsk-	57.69	27	P	P	09 40 35.5	+1.0
	comp=Z,1.2nm,0.7s,baz=250,slow=4.3,SNR=1.7						
	comp=Z,1.2nm,0.7s						
BRVK	Borovoye	62.28	329	P	P	09 41 06.2	+0.2
BRVK				IAmb	IAmb	09 41 07.0	
	comp=Z,11nm,1.3s						
GEYT	Alibeck	64.09	310	P	P	09 41 18.7	+0.4
	comp=Z,1.4nm,0.6s,baz=117,slow=8.8,SNR=2.3						
	comp=Z,1.4nm,0.6s						
ABKAR	Akbulak array	66.37	322	P	P	09 41 32.6	-0.2
SNZO	South Karori	68.54	138	P	P	09 41 47.0	+0.4
BKZ	Black Stump Fm	68.81	135	P	P	09 41 49.8	+1.3
RTZ	Ruatahuna	68.92	134	P	P	09 41 49.8	+0.7
KBZ	Khabaz	76.50	314	P	P	09 42 33.6	-0.4
	comp=Z,0.7nm,0.4s,baz=162,slow=3.2,SNR=1.9						
	comp=Z,0.7nm,0.4s						
BRTR	Keskin Array B	83.22	309	P	P	09 43 10.0	-0.8
	comp=Z,0.7nm,0.7s,baz=86,slow=4.1,SNR=3.6						
	comp=Z,0.7nm,0.7s						
I21K	Tanana	85.31	25	P	P	09 43 21.9	+1.3
I21K				IAmb	IAmb	09 43 26.2	
	comp=Z,3.5nm,0.9s						
MLY	Manley	85.84	25	P	P	09 43 24.1	+0.8
MLY				IAmb	IAmb	09 43 28.0	
	comp=Z,2.9nm,1.0s						
AKASG	Malin Array Be	86.03	320	P	P	09 43 23.5	-1.0
	comp=Z,0.1nm,0.2s,baz=79,slow=4.3,SNR=1.8						
	comp=Z,0.1nm,0.2s						
MNK	Minsk	86.64	324	i P	P	09 43 25.8	-1.6
	comp=E,2.0nm,0.8s						
MNK				i P	P	09 43 25.8	-1.6
	comp=N,29nm,0.8s						
MNK				i P	P	09 43 25.8	-1.6
	comp=Z,5.0nm,0.8s,baz=267						
MNK				i PP	PP	09 46 46.9	-2.7
MNK				i PPP	PPP	09 48 41.1	
MNK				i S	S	09 53 48.7	-13
MNK				i SS	SS	09 59 40.4	-2.8
MNK				i SSS	SSS	10 03 12.8	
MNK				i LQ	LQ	10 17 44.6	
MNK				i LR	LR	10 21 53.1	
MNK				i LRM	MLR	10 23 19.3	
	comp=N,296nm,15.9s						
MNK				i LRM	MLR	10 23 35.3	
	comp=Z,83nm,12.1s						
MNK				i LRM	MLR	10 23 47.5	
	comp=E,30nm,13.4s						
FINES	FINESS Array B	87.10	331	P	P	09 43 29.5	0.0
	comp=E,1.3nm,0.6s,baz=72,slow=6.2,SNR=5.8						
	comp=E,1.3nm,0.6s						
ILAR	Eielson Array	87.50	25	P	P	09 43 30.6	-0.8
	comp=E,0.3nm,0.8s,baz=273,slow=5.1,SNR=4.5						
	comp=E,0.3nm,0.8s						
YKA	Yellowknife Ar	101.63	22	P	Pdif	09 44 36.1	0.0
	comp=E,0.1nm,0.7s,baz=300,slow=3.4,SNR=5.4						
TXAR	Lajitas Array	126.93	48	PKP	PKPdf	09 49 49.1	+0.6
	comp=E,0.3nm,0.6s,baz=202,slow=1.0,SNR=5.4						

IDC ***26*** *09:34:19.2±2.4, 62°.58N×151°.30W, h67*^{km}*±30*^{km}*, mb3.1/2, mbtmp3.4/5, ML3.3/4, Error ellipse: s-maj=25.6km s-min=18.3km az=105.0*

NEIC ***26*** *09:34:21.1±0.8, 62°.54N±0°.03×151°.14W±0°.08, h85*^{km}*±8*^{km}*, Error ellipse: s-maj=5.3km s-min=4.7km az=56.0*

AEIC ***26*** *09:34:22.3±1.1, 62°.55N±0°.02×151°.12W±0°.07, h74*^{km}*±6*^{km}*, ML3.2, ML3.4/130(NEIC), Error ellipse: s-maj=5.0km s-min=3.2km az=92.0*

ISC 26 09:34:20.7±0.9**, 62°.54N**±0°.03×**151°.13W**±0°.04**, h89**^{km}±6^{km}**, n238, σ0**^{s}**.66**/243**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUT	Chulitna	0.42	109		Pn	09 34 34.7	0.0
CUT					Sn	09 34 45.0	-0.1
CUT	Chulitna	0.42	109	IAML		09 34 45.5	
	comp=E,3μm,0.6s						
CUT	Chulitna	0.42	109	P	Pn	09 34 34.7	0.0
	baz=291						
CUT				S	Sn	09 34 45.2	+0.1
	baz=291						
SKT	Skwentna	0.59	199		Pn	09 34 36.1	-0.1
SKT				IAML		09 34 48.2	
	comp=N,3μm,0.5s						
SKT	Skwentna	0.59	199		Sn	09 34 47.3	-0.3
SKT	Skwentna	0.59	199	P	Pn	09 34 36.0	-0.1
	baz=18						
SKT				S	Sn	09 34 47.3	-0.3
	baz=18						
PPLA	Purkeypile	0.60	307		Pn	09 34 36.8	+0.5
PPLA	Purkeypile	0.60	307		Sn	09 34 47.7	-0.3
PPLA	Purkeypile	0.60	307	P	Pn	09 34 36.7	+0.3
	baz=124						
PPLA				S	Sn	09 34 47.7	-0.3
	baz=124						
CAST	Castle Rocks	0.98	334	Pn	Pn	09 34 40.3	+0.1
CAST				IAML		09 34 54.2	
	comp=E,680nm,0.5s						
CAST				IAML		09 34 54.2	
	comp=N,668nm,0.5s						
CAST	Castle Rocks	0.98	334		Sn	09 34 53.7	-0.9
CAST	Castle Rocks	0.98	334	P	Pn	09 34 40.2	+0.1
	baz=153						
CAST				S	Sn	09 34 54.0	-0.6
	baz=153						
TRF	Thorofare Moun	0.99	22		Pn	09 34 40.8	+0.4
TRF					Sn	09 34 55.8	+0.8
TRF	Thorofare Moun	0.99	22	IAML		09 34 56.4	
	comp=N,596nm,0.6s						
TRF	Thorofare Moun	0.99	22	P	Pn	09 34 40.7	+0.4
	baz=204						
TRF				S	Sn	09 34 55.8	+0.8
	baz=204						
KTH	Kantishna Hill	1.02	5	Pn	Pn	09 34 41.1	+0.5
KTH				IAML		09 34 55.9	
	comp=E,457nm,0.6s						
KTH				IAML		09 34 56.4	
	comp=N,677nm,0.6s						
KTH	Kantishna Hill	1.02	5		Sn	09 34 55.3	-0.2
WAT7	Susitna Watana	1.09	73		Pn	09 34 41.4	0.0
WAT7					Sn	09 34 56.9	-0.1
SUA	Susitna One	1.10	170		Pn	09 34 41.5	0.0
SUA	Susitna One	1.10	170	IAML		09 34 58.8	
	comp=E,410nm,0.8s						
SUA				IAML		09 35 04.0	
	comp=N,335nm,0.6s						
SUA	Susitna One	1.10	170	P	Pn	09 34 41.9	+0.3
	baz=351						
M20K	Styx River	1.15	236		Pn	09 34 42.0	-0.1
M20K				IAML		09 34 58.2	
	comp=N,448nm,0.5s						
M20K				IAML		09 34 58.2	
	comp=E,425nm,0.7s						
M20K	Styx River	1.15	236	P	Pn	09 34 42.0	-0.1
	baz=53						
M20K				S	Sn	09 34 57.7	-0.5
	baz=53						
L20K	Farewell, AK	1.28	268	P	Pn	09 34 43.6	0.0
	baz=85						
L20K				S	Sn	09 35 01.3	+0.5
	baz=85						
GHO	Glory Hole Cre	1.29	126		Pn	09 34 44.3	+0.5
GHO				IAML		09 35 07.9	
	comp=N,862nm,0.5s						
PMR	Palmer	1.34	134		Pn	09 34 44.2	0.0
PMR				IAML		09 35 05.2	
	comp=E,755nm,0.5s						
PMR				IAML		09 35 06.1	
	comp=N,515nm,0.4s						
PMR	Palmer	1.34	134	P	Pn	09 34 44.6	+0.3
PMR	Palmer	1.34	134	P	Pn	09 34 44.5	+0.2
	baz=317						
PMR				S	Sn	09 35 02.7	+0.6
	baz=317						
RND	Reindeer	1.35	49	Pn	Pn	09 34 44.9	+0.3
RND				IAML		09 35 05.0	
	comp=N,263nm,0.3s						
RND				IAML		09 35 05.2	
	comp=E,437nm,0.3s						
SPU	Mount Spurr	1.43	198		Pn	09 34 45.4	-0.1
SPCR	Spurr Chakacha	1.44	201	P	Pn	09 34 45.8	+0.2
	baz=20						
CHUM	Lake Minchumin	1.45	339		Pn	09 34 46.2	+0.5
CHUM					Sn	09 35 04.6	0.0
CHUM	Lake Minchumin	1.45	339	P	Pn	09 34 46.2	+0.5
	baz=158						
CHUM				S	Sn	09 35 04.6	0.0
	baz=158						
FIS	Fire Island	1.47	162		Pn	09 34 47.7	+1.8
SML	Sawmill	1.51	118		Pn	09 34 46.9	+0.4
SML	Sawmill	1.51	118	P	Pn	09 34 46.9	+0.4
	baz=301						
MCK	McKinley	1.56	39	Pn	Pn	09 34 47.5	+0.5
MCK	McKinley	1.56	39	P	Pn	09 34 47.6	+0.5
	baz=221						
BPAW	Bear Paw Mtn.	1.56	2	Pn	Pn	09 34 47.2	+0.1
BPAW				IAML		09 35 07.6	
	comp=E,378nm,0.4s						
BPAW				IAML		09 35 08.1	
	comp=N,494nm,0.6s						
BPAW	Bear Paw Mtn.	1.56	2		Sn	09 35 06.5	-0.8
BPAW	Bear Paw Mtn.	1.56	2	P	Pn	09 34 47.2	+0.1
	baz=182						
BPAW				S	Sn	09 35 06.4	-0.8
	baz=182						
K20K	Telida	1.57	303		Pn	09 34 47.2	0.0
K20K				IAML		09 35 07.2	
	comp=E,346nm,0.5s						
K20K	Telida	1.57	303	P	Pn	09 34 47.6	+0.3
	baz=120						
RC01	Rabbit Creek A	1.60	155		Pn	09 34 47.4	-0.3
RC01				IAML		09 35 09.4	
	comp=N,628nm,0.2s						
RC01				IAML		09 35 09.6	
	comp=E,467nm,0.3s						
RC01	Rabbit Creek A	1.60	155	P	Pn	09 34 47.3	-0.3
	baz=336						
M19K	Big River Lodg	1.66	249		Pn	09 34 48.3	0.0
M19K	Big River Lodg	1.66	249	P	Pn	09 34 48.4	0.0
	baz=65						
KNK	Knik Glacier	1.69	131		Pn	09 34 49.0	+0.1
KNK	Knik Glacier	1.69	131	IAML		09 35 15.1	
	comp=N,503nm,0.5s						
KNK				IAML		09 35 18.5	
	comp=E,566nm,0.4s						
KNK	Knik Glacier	1.69	131	P	Pn	09 34 49.2	+0.3
	baz=314						
M23K	Glacier View	1.77	114	P	Pn	09 34 49.6	-0.2
	baz=297						
L19K	White Mountain	1.77	260		Pn	09 34 49.6	-0.3
L19K	White Mountain	1.77	260	P	Pn	09 34 49.9	0.0
	baz=76						
CAPN	Captain Cook N	1.78	180		Pn	09 34 52.0	+2.1
BWN	Browne	1.80	24		Pn	09 34 51.0	+0.8
BWN				IAML		09 35 18.6	
	comp=E,188nm,0.9s						
BWN				IAML		09 35 22.8	
	comp=N,233nm,0.9s						
SCM	Sheep Creek Mo	1.92	110		Pn	09 34 51.8	-0.1
SCM	Sheep Creek Mo	1.92	110	P	Pn	09 34 51.7	-0.1
	baz=294						
SLKM	Skilak Lake	2.09	168		Pn	09 34 53.9	-0.1
PWL	Port Wells	2.15	141		Pn	09 34 54.4	-0.4
PWL	Port Wells	2.15	141	IAML		09 35 22.0	
	comp=E,409nm,0.4s						
PWL				IAML		09 35 22.1	
	comp=N,354nm,0.3s						
PWL	Port Wells	2.15	141	P	Pn	09 34 54.4	-0.4
	baz=323						
O22K	Cooper Landing	2.17	161		Pn	09 34 55.3	+0.3
O22K	Cooper Landing	2.17	161	P	Pn	09 34 55.0	0.0
	baz=343						
RSO	Redoubt South	2.23	201		Pn	09 34 56.1	+0.1
NEA2	Nenana	2.26	23		Pn	09 34 56.1	-0.1
NEA2				IAML		09 35 22.4	
	comp=E,84nm,0.6s						
NEA2	Nenana	2.26	23	P	Pn	09 34 56.1	-0.1
	baz=205						
TTA	Tatalina	2.28	282	Pn	Pn	09 34 56.7	+0.1
TTA	Tatalina	2.28	282	P	Pn	09 34 56.7	+0.1
TTA	Tatalina	2.28	282	P	Pn	09 34 56.7	+0.1
	baz=97						
M24K	Tolsona, Glenn	2.35	99		Pn	09 34 58.3	+0.7
M24K	Tolsona, Glenn	2.35	99	P	Pn	09 34 58.2	+0.7
	baz=283						
N19K	Bonanza Creek	2.36	224		Pn	09 34 58.1	+0.4
N19K	Bonanza Creek	2.36	224	P	Pn	09 34 58.0	+0.4
	baz=41						
WRH	Wood River Hil	2.37	34		Pn	09 34 57.8	+0.2
WRH				IAML		09 35 30.9	
	comp=E,83nm,0.6s						
MLY	Manley	2.50	4		Pn	09 34 59.7	+0.1
MLY	Manley	2.50	4	P	Pn	09 34 59.6	+0.1
	baz=184						
SVW2	Sparrevohn	2.56	238	Pn	Pn	09 35 00.5	+0.3
SVW2				IAML		09 35 47.5	
	comp=N,72nm,0.6s						
SVW2				IAML		09 36 00.4	
	comp=E,63nm,0.6s						
SVW2	Sparrevohn	2.56	238	P	Pn	09 35 00.4	+0.1
O20K	Slope Mountain	2.57	197	P	Pn	09 35 01.1	+0.6
	baz=16						
CCB	Clear Creek Bu	2.58	34	Pn	Pn	09 35 00.5	0.0
CCB				IAML		09 35 42.9	
	comp=E,73nm,0.5s						
PAX	Paxson	2.64	78		Pn	09 35 02.2	+0.8
PAX	Paxson	2.64	78	P	Pn	09 35 02.1	+0.8
	baz=264						
HDA	Harding Lake	2.65	43		Pn	09 35 01.8	+0.3
HDA				IAML		09 35 34.0	
	comp=N,313nm,0.5s						
HDA	Harding Lake	2.65	43	P	Pn	09 35 01.7	+0.3
	baz=227						
KLU	Klutina	2.67	111		Pn	09 35 01.2	-0.6
KLU	Klutina	2.67	111	IAML		09 35 48.1	
	comp=E,241nm,0.4s						
KLU	Klutina	2.67	111	P	Pn	09 35 01.2	-0.6
	baz=296						
I21K	Tanana	2.67	352		Pn	09 35 02.2	+0.5
I21K				IAML		09 35 47.0	
	comp=E,81nm,0.8s						
I21K	Tanana	2.67	352	P	Pn	09 35 02.2	+0.5
	baz=172						
I23K	Minto, Yukon-K	2.73	16		Pn	09 35 02.4	0.0
I23K	Minto, Yukon-K	2.73	16	P	Pn	09 35 03.0	+0.6
	baz=198						
K24K	Donnelly Dome	2.74	60	P	Pn	09 35 03.7	+1.1
	baz=245						
ILSW	Iliamna Southw	2.75	202		Pn	09 35 04.1	+1.3
MDM	Murphy Dome	2.75	27		Pn	09 35 03.0	+0.3
MDM				IAML		09 35 37.8	
	comp=N,59nm,0.8s						
TCOL	CIGO, UAF Yank	2.75	30		Pn	09 35 03.2	+0.5
TCOL				IAML		09 35 42.1	
	comp=N,266nm,0.6s						
TCOL				IAML		09 35 48.6	
	comp=E,283nm,0.6s						
TCOL	CIGO, UAF Yank	2.75	30	P	Pn	09 35 03.2	+0.5
	baz=214						
COLA	College	2.76	30		Pn	09 35 03.3	+0.4
COLA				IAML		09 35 37.0	
	comp=E,289nm,0.6s						
COLA				IAML		09 35 48.6	
	comp=E,304nm,0.6s						
COLA	College	2.76	30	P	Pn	09 35 03.2	+0.4
HARP	HAARP	2.78	90	P	Pn	09 35 03.9	+0.8
	baz=276						
BRLK	Bradley Lake	2.79	177		Pn	09 35 03.4	+0.1
BRLK	Bradley Lake	2.79	177	IAML		09 35 46.0	
	comp=E,113nm,0.6s						
BRLK				IAML		09 35 47.5	
	comp=N,110nm,0.6s						
O19K	Port Alsworth	2.81	215	Pn	Pn	09 35 04.0	+0.4
O19K				IAML		09 35 38.8	
	comp=E,192nm,0.5s						
O19K	Port Alsworth	2.81	215	P	Pn	09 35 03.9	+0.4
	baz=32						
BRSE	Bradley Lake S	2.82	176		Pn	09 35 03.1	-0.6
BRSE	Bradley Lake S	2.82	176	P	Pn	09 35 04.1	+0.4
	baz=356						
HOM	Homer	2.91	185		Pn	09 35 06.1	+1.3
HOM	Homer	2.91	185	IAML		09 35 46.4	
	comp=N,266nm,0.9s						
HOM	Homer	2.91	185	P	Pn	09 35 06.1	+1.3
	baz=4.7						
DIV	Divide	2.91	117		Pn	09 35 04.1	-0.9
IL31		2.93	38		Pn	09 35 05.4	+0.3
ILAR	Eielson Array	2.93	38	P	Pn	09 35 05.3	+0.1
	comp=N,12nm,0.3s,baz=224,slow=14,SNR=783						
ILAR				S	Sn	09 35 37.9	-1.5
	comp=N,10nm,0.4s,baz=219,slow=21,SNR=3.2						
ILAR	Eielson Array	2.93	38	Pn	Pn	09 35 04.8	-0.3
CNPM	China Poot	3.03	181	Pn	Pn	09 35 08.1	+1.6
CNPM				IAML		09 35 48.5	
	comp=E,160nm,0.8s						
CNPM				IAML		09 35 51.3	
	comp=N,126nm,0.4s						
POKR	Poker Plat Res	3.06	31		Pn	09 35 07.5	+0.6
POKR				IAML		09 35 47.0	
	comp=N,42nm,0.8s						
POKR	Poker Plat Res	3.06	31	P	Pn	09 35 07.5	+0.6
	baz=214						
OPT	Oil Point	3.07	200	P	Pn	09 35 08.8	+1.6
	baz=18						
P19K	Oil Pt	3.07	200	P	Pn	09 35 08.6	+1.4
	baz=18						
RIDG	Independent Ri	3.10	64		Pn	09 35 08.8	+1.4
RIDG	Independent Ri	3.10	64	P	Pn	09 35 08.5	+1.1
	baz=250						
P23K	Montague Islan	3.12	143	P	Pn	09 35 06.4	-1.4
	baz=327						
H21K	Melozitna Rive	3.21	348		Pn	09 35 09.3	+0.3
H21K	Melozitna Rive	3.21	348	P	Pn	09 35 09.7	+0.7
	baz=166						
N25K	Chitina, Valde	3.21	104	Pn	Pn	09 35 08.7	-0.4
N25K				IAML		09 35 59.2	
	comp=E,176nm,0.5s						
N25K	Chitina, Valde	3.21	104	P	Pn	09 35 08.7	-0.4
	baz=290						
EYAK	Cordova Ski Ar	3.26	125		Pn	09 35 09.2	-0.4
EYAK	Cordova Ski Ar	3.26	125	P	Pn	09 35 09.2	-0.4

EYAK	Cordova Ski Ar	3.26	125	P	Pn	09 35 08.9	-0.7
	baz=310						
O18K	Koktuh Hills	3.34	218		Pn	09 35 11.3	+0.6
O18K	Koktuh Hills	3.34	218	P	Pn	09 35 11.3	+0.6
	baz=34						
H23K	Yukon River	3.37	11		Pn	09 35 11.8	+0.6
H23K	Yukon River	3.37	11	P	Pn	09 35 11.7	+0.6
	baz=193						
GCSA	Galena City Sc	3.39	313		Pn	09 35 11.9	+0.6
GCSA	Galena City Sc	3.39	313	P	Pn	09 35 11.9	+0.6
	baz=128						
DOT	Dot Lake	3.40	68		Pn	09 35 12.0	+0.5
MENT	Mentasta	3.43	80		Pn	09 35 12.2	+0.3
MENT	Mentasta	3.43	80	P	Pn	09 35 12.3	+0.3
SCRK	Sand Creek	3.54	63	Pn	Pn	09 35 13.7	+0.2
SCRK				IAML		09 35 58.2	
	comp=N,105nm,1.1s						
SCRK				IAML		09 35 60.0	
	comp=E,72nm,1.1s						
SCRK	Sand Creek	3.54	63	P	Pn	09 35 14.0	+0.5
	baz=249						
H24K	Noodor Dome	3.60	22		Pn	09 35 14.8	+0.5
H24K	Noodor Dome	3.60	22	P	Pn	09 35 14.8	+0.5
	baz=205						
L26K	Log Cabin Wild	3.61	79		Pn	09 35 15.0	+0.7
L26K	Log Cabin Wild	3.61	79	P	Pn	09 35 15.1	+0.8
	baz=266						
GLB	Gilahina Butte	3.62	104		Pn	09 35 14.0	-0.6
GLB	Gilahina Butte	3.62	104	IAML		09 36 10.6	
	comp=E,92nm,0.6s						
GLB				IAML		09 36 12.3	
	comp=N,142nm,0.7s						
IMAR	Indian Mountai	3.64	343	Pn	Pn	09 35 15.4	+0.7
P18K	Big Mountain,	3.74	214	Pn	Pn	09 35 16.9	+0.8
P18K	Big Mountain,	3.74	214	P	Pn	09 35 16.9	+0.8
	baz=30						
M26K	Nabesna, AK	3.78	89		Pn	09 35 16.4	-0.2
M26K				IAML		09 36 11.2	
	comp=N,125nm,0.6s						
M26K				IAML		09 36 18.5	
	comp=E,116nm,0.8s						
M26K	Nabesna, AK	3.78	89	P	Pn	09 35 16.5	-0.2
	baz=276						
Q19K	Cape Douglas,	3.83	200	P	Pn	09 35 18.5	+1.1
	baz=18						
VRDI	Verde Repeater	3.87	107		Pn	09 35 17.0	-0.9
VRDI	Verde Repeater	3.87	107	IAML		09 36 16.3	
	comp=N,110nm,0.7s						
VRDI				IAML		09 36 17.3	
	comp=E,70nm,0.6s						
PRP	Porcupine Dome	3.87	37	Pn	Pn	09 35 18.4	+0.4
PRP				IAML		09 36 08.7	
	comp=N,51nm,0.5s						
PRP				IAML		09 36 10.7	
	comp=E,41nm,0.7s						
PRP	Porcupine Dome	3.87	37	P	Pn	09 35 18.4	+0.4
	baz=222						
Q20K	Shuyak Island	4.00	190	P	Pn	09 35 20.2	+0.6
	baz=8.4						
MCARA	McCarthy VSAT	4.00	103		Pn	09 35 19.3	-0.3
MCARA	McCarthy VSAT	4.00	103	P	Pn	09 35 19.4	-0.3
	baz=291						
O17K	Koliganek Bris	4.01	229	P	Pn	09 35 20.3	+0.6
	baz=43						
G21K	Allakaket	4.12	347	P	Pn	09 35 22.0	+0.8
	baz=164						
N16K	Nishlik Lake	4.21	244	P	Pn	09 35 22.8	+0.4
	baz=57						
G23K	Bananza Creek	4.21	6	P	Pn	09 35 23.4	+0.9
	baz=187						
L27K	Beaver Creek,	4.30	79		Pn	09 35 23.8	0.0
L27K				IAML		09 36 32.9	
	comp=N,43nm,0.9s						
L27K				IAML		09 36 40.4	
	comp=E,22nm,0.7s						
L27K	Beaver Creek,	4.30	79	P	Pn	09 35 23.7	0.0
	baz=267						
M27K	Edge Creek, AK	4.30	88		Pn	09 35 24.6	+0.8
M27K				IAML		09 36 41.1	
	comp=N,56nm,0.8s						
M27K				IAML		09 36 45.9	
	comp=E,36nm,1.1s						
M27K	Edge Creek, AK	4.30	88	P	Pn	09 35 24.3	+0.4
	baz=277						
BCAR	Beaver Creek A	4.32	79	Pn	Pn	09 35 23.7	-0.3
KAHC	Katmai Hardscr	4.35	208	P	Pn	09 35 25.6	+1.1
	baz=24						
Q18K	Katmai Hardscr	4.35	208	P	Pn	09 35 25.4	+0.9
	baz=24						
BALM	Baldy	4.43	106		Pn	09 35 24.7	-0.9
G24K	Hadweenzic Riv	4.46	19	P	Pn	09 35 26.5	+0.6
	baz=202						
KIAG	Kiagna River	4.48	107		Pn	09 35 25.1	-1.1
I26K	Coal Creek Min	4.48	48		Pn	09 35 27.2	+1.1
I26K	Coal Creek Min	4.48	48	P	Pn	09 35 27.0	+0.9
	baz=236						
O16K	Kokwok River B	4.49	232	P	Pn	09 35 26.6	+0.3
	baz=46						
COLD	Coldfoot	4.72	4		Pn	09 35 30.3	+0.9
COLD	Coldfoot	4.72	4	P	Pn	09 35 30.3	+0.9
	baz=185						
BARN	Barnard Glacie	4.73	104	Pn	Pn	09 35 29.5	-0.3
BARN				IAML		09 36 45.3	
	comp=E,65nm,0.5s						
BARN				IAML		09 36 47.2	
	comp=N,62nm,0.8s						
G25K	Bearman Lake	4.76	25	P	Pn	09 35 30.6	+0.7
	baz=209						
BVCY	Beaver Creek	4.77	87	P	Pn	09 35 30.3	+0.2
	baz=276						
FYU	Fort Yukon	4.77	30	Pn	Pn	09 35 31.3	+1.2
FYU				IAML		09 36 49.5	
	comp=E,42nm,3.8s						
FYU				IAML		09 36 49.7	
	comp=N,32nm,3.9s						
F21K	Alatna River	4.80	349	P	Pn	09 35 31.8	+1.3
	baz=167						
KDAK	Kodiak Island	4.83	189	P	Pn	09 35 29.8	-1.1
	comp=N,0.4nm,0.3s,baz=21,slow=14,SNR=43						
	comp=N,5.8nm,0.8s						
P16K	Nushagak River	4.87	227	P	Pn	09 35 32.4	+1.0
	baz=40						
Q17K	Contact Creek	4.90	211	P	Pn	09 35 32.9	+1.0
	baz=27						
EGAK	Eagle	4.97	59		Pn	09 35 33.5	+0.6
EGAK	Eagle	4.97	59	P	Pn	09 35 33.3	+0.5
	baz=248						
F22K	John River	5.01	355	P	Pn	09 35 34.2	+0.9
	baz=174						
YUK3	Moose Creek	5.06	94	P	Pn	09 35 34.2	0.0
	baz=284						
F24K	Squaw Lake	5.18	14	P	Pn	09 35 36.6	+0.9
	baz=197						
I27K	Kandik River	5.18	49	P	Pn	09 35 37.0	+1.3
	baz=238						
G26K	Porcupine Rive	5.43	32	P	Pn	09 35 39.4	+0.5
	baz=219						
O28M	Mount Upton	5.51	104	P	Pn	09 35 40.1	-0.3
	baz=294						
DAWY	Dawson	5.51	69	Pn	Pn	09 35 40.1	0.0
DAWY	Dawson	5.51	69	P	Pn	09 35 40.2	0.0
	baz=259						
YUK8	Steele Glacier	5.52	98	P	Pn	09 35 40.4	0.0
	baz=288						
SAMH	Samovar Hills	5.54	111		Pn	09 35 41.1	+0.5
H27K	Steamboat Moun	5.57	44	P	Pn	09 35 41.4	+0.5
	baz=233						
E23K	Chandalar	5.58	6	P	Pn	09 35 41.9	+0.9
	baz=187						
F25K	Christian Rive	5.58	22	P	Pn	09 35 41.8	+0.7
	baz=207						
E22K	Anaktuvuk Pass	5.62	357	P	Pn	09 35 42.5	+0.8
	baz=177						
BMAR	Burnt Mountain	5.64	27	Pn	Pn	09 35 41.5	-0.3
E24K	Your Creek	5.67	10	P	Pn	09 35 42.8	+0.5
	baz=192						
PCA	Pinnacle	5.78	110		Pn	09 35 43.1	-0.8
PINM	Pinnacle	5.78	110	P	Pn	09 35 43.1	-0.8
	baz=300						
M29M	Somme Creek	5.87	85	P	Pn	09 35 45.3	+0.1
	baz=277						
G27K	Doyon Strip	5.90	39	P	Pn	09 35 45.5	+0.1
	baz=228						
F26K	Sheenjek River	5.95	27	P	Pn	09 35 46.8	+0.7
	baz=213						
L29M	L29M	5.99	79	P	Pn	09 35 46.6	0.0
	baz=270						
YUK4	Talbot Arm	6.01	96	P	Pn	09 35 47.0	-0.2
	baz=286						
E25K	Arctic Village	6.06	20	P	Pn	09 35 48.3	+0.6
	baz=205						
BCPM	Bancas Point	6.12	110		Pn	09 35 47.0	-1.5
YUK6	Outpost Mounta	6.27	99	P	Pn	09 35 50.2	-0.5
	baz=290						
K29M	Barlow Dome	6.29	72	P	Pn	09 35 50.6	-0.3
	baz=264						
PNL	Peninsula	6.37	112		Pn	09 35 51.7	-0.2
PNL	Peninsula	6.37	112	P	Pn	09 35 51.6	-0.2
PNL	Peninsula	6.37	112	P	Pn	09 35 51.7	-0.2
	baz=302						
O29M	Mount Kennedy	6.43	105	P	Pn	09 35 52.1	-0.7
	baz=296						
M30M	Minto, Yukon	6.63	83	Pn	Pn	09 35 55.0	-0.3
ANM	Nome	6.68	294		Pn	09 35 57.1	+1.2
N30M	Aishikik Lake	6.70	93	P	Pn	09 35 55.7	-0.7
	baz=286						
HYT	Haines Junctio	6.71	99	Pn	Pn	09 35 55.9	-0.6
HYT	Haines Junctio	6.71	99	P	Pn	09 35 55.8	-0.7
	baz=291						
P30M	Million Dollar	7.23	103	P	Pn	09 36 02.9	-0.8
	baz=296						
EPYK	Eagle Plains	7.31	52		Pn	09 36 05.3	+0.7
O30N	Mendenhall	7.38	97	P	Pn	09 36 04.5	-1.0
	baz=291						
G30M	tAoh Zraii Nji	7.76	49	P	Pn	09 36 10.7	-0.1
	baz=242						
M31M	Drury Creek, Y	7.79	85	Pn	Pn	09 36 11.3	+0.2
SKAG	Skagway	8.27	105	P	Pn	09 36 17.1	-0.6
SKAG	Skagway	8.27	105	P	Pn	09 36 17.2	-0.4
	baz=299						
N32M	Quiet Lake	8.64	91	P	Pn	09 36 22.4	-0.4
	baz=287						
F31M	Tsiigehtchic	8.83	49	P	Pn	09 36 24.5	-0.8
	baz=244						
P32M	Atlin	8.94	102	P	Pn	09 36 25.6	-1.2
	baz=297						
A21K	Barrow	9.07	349	Pn	Pn	09 36 29.8	+1.3
INK	Inuvik	9.31	44	P	Pn	09 36 31.3	-0.4
	comp=N,0.3nm,0.3s,baz=231,slow=14,SNR=8.9						
	comp=N,1.6nm,0.5s						
JIS	Juneau Island	9.31	110	P	Pn	09 36 31.7	-0.1
YKA	Yellowknife Ar	16.72	74	P	Pn	09 38 08.0	-1.1
	comp=N,0.1nm,0.3s,baz=281,slow=12,SNR=4.7						
	comp=N,0.2nm,0.6s						
SONM	Songino Array	54.03	306	P	P	09 43 36.9	+1.4
	comp=N,0.4nm,0.6s,baz=23,slow=7.8,SNR=2.7						
	comp=N,0.4nm,0.6s						
MKAR	Makanchi Array	63.00	322	P	P	09 44 36.6	-1.0
	comp=N,0.2nm,0.4s,baz=38,slow=7.3,SNR=1.8						
	comp=N,0.2nm,0.4s						

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*INET **26** 09:35:25.3±0.6, 13°.07N×88°.41W, h20^{km}±5^{km}, MW2.8*
*SNET **26** 09:35:25.2±1.5, 12°.94N×88°.37W, h75^{km}±10^{km}, ML3.0*
ISC 26 09:35:26.6±1.5**, 13°.0N**±0°.1×**88°.37W**±0°.05**, h71**^{km}±13^{km}**,**
n28, σ0^{s}.87/37**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALJI	Alcalda de J	0.41	331	*e*P	Pn	09 35 37.8	-0.9
ALJI				*e*S	Sn	09 35 47.8	+0.2
ALJI				IAML		09 35 48.1	
	comp=Z,728nm,0.1s						
LCY	Lacayo	0.46	9	*e*P	Pn	09 35 38.4	-0.9
VSM	San Miguel	0.47	12	*e*P	Pn	09 35 38.9	-0.7
VSM				*e*S	Sn	09 35 50.5	+1.5
PACA	Pacayal	0.50	5	*e*P	Pn	09 35 38.9	-0.8
PACA				*e*S	Sn	09 35 50.0	+0.7
PACA				IAML		09 35 54.9	
	comp=Z,4μm,0.3s						
TECA	Tecapa	0.54	346	*e*P	Pn	09 35 39.4	-0.7
TECA				*e*S	Sn	09 35 50.6	+0.5
COEB	Comit de Eme	0.55	343	*e*P	Pn	09 35 39.3	-0.8
COEB				IAML		09 35 53.6	
	comp=Z,455nm,0.3s						
LCND	La Caada	0.58	54	*e*P	Pn	09 35 39.2	-1.1
LCND				*e*S	Sn	09 35 53.0	+2.6
LCND				IAML		09 35 53.5	
	comp=Z,283nm,0.3s						
CNCH	Conchagua	0.60	60	*e*P	Pn	09 35 39.5	-1.2
PQSS	Presa 15 de Se	0.68	344	*e*P	Pn	09 35 40.9	-0.4
TECO	Alcaldia de Te	0.69	325	*e*P	Pn	09 35 40.6	-0.9
FAGO	Alcalda de S	0.77	20	*e*P	Pn	09 35 41.2	-1.2
SCLA	Alcaldia de Sa	0.81	334	*e*P	Pn	09 35 42.2	-0.7
SCLA				IAML		09 35 59.8	
	comp=Z,63nm,0.2s						
SJTE	Alcalda de S	0.89	316	*e*P	Pn	09 35 43.4	-0.5
SJTE				IAML		09 35 57.8	
	comp=Z,114nm,0.2s						
PAVA	Las Pavas	0.92	323	*e*P	Pn	09 35 43.6	-0.7
LFRS	El Faro	0.94	314	*e*P	Pn	09 35 44.1	-0.4
LFRS				*e*S	Sn	09 35 58.3	+0.5
P5NO	Presa 5 de nov	1.08	340	*e*P	Pn	09 35 45.3	-0.9
UEES	Universidad Ev	1.13	311	*e*P	Pn	09 35 46.5	-0.4
BOQS	Boqueron	1.17	311	*e*P	Pn	09 35 47.4	-0.1
JAYA	Jayaque - finc	1.25	303	*e*P	Pn	09 35 47.7	-0.8
JAYA				*e*S	Sn	09 36 05.1	+0.2
JAYA				IAML		09 36 08.5	
	comp=Z,356nm,0.2s						
CRIN	San Cristobal	1.31	102	*e*P	Pn	09 35 48.7	-0.5
CRIN				*e*S	Sn	09 36 06.8	+0.5
CEVE	Cerro Verde	1.49	305	*e*P	Pn	09 35 51.9	+0.1
CEVE				IAML		09 36 16.3	
	comp=Z,363nm,0.3s						
SBLS	San Blas	1.50	305	*e*P	Pn	09 35 51.4	-0.4
TGUH	Tegucigalpa,Un	1.52	44	*e*P	Pn	09 35 51.2	-0.8
NUBE	Las Nubes	1.66	304	*e*P	Pn	09 35 53.6	-0.3
CNGN	Cerro Negro	1.70	106	*e*P	Pn	09 35 54.1	-0.2
CNGN				*e*S	Sn	09 36 15.7	+0.4
ESQI	Esquipulas	1.84	329	*e*P	Pn	09 35 55.8	-0.5
MOMN	Momotombo	1.87	107	*e*P	Pn	09 35 56.2	-0.4
COPN	Copaltepe	1.91	114	*e*P	Pn	09 35 56.2	-0.9

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*IDC **26** 09:47:28.7±0.7, 13°.10N×50°.88E, h0^{km}, mb4.2/15, mbtmp4.2/16, ML3.5/1, MS3.8/46, Error ellipse: s-maj=19.3km s-min=16.4km az=122.0*
*NEIC **26** 09:47:29.8±1.2, 13°.1N±0°.2×51°.0E±0°.1, h10^{km}±2^{km}, mb4.4/10, Error ellipse: s-maj=33.7km s-min=17.9km az=154.0*
ISC 26 09:47:31.0±0.7**, 13°.2N**±0°.1×**50°.85E**±0°.10**, h16**^{km}**, n67,**
σ1^{s}.09/34**, mb4.3**/20**, MS3.8**/45**, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATD	Arta Tunnel	7.99	259	Pn	Pn	09 49 27.3	+0.7
WSAR	Wadi Sarin	12.44	35	Pn	Pn	09 50 27.0	-0.6
	0.3nm,0.3s,baz=218,slow=17,SNR=2.5						
WSAR				LR	LR	09 55 02.9	
	comp=Z,1μm,18.5s,baz=237,slow=36						
	3.5nm,0.8s						
LODK	Lodwar	18.11	239	P	Pn	09 51 40.5	-1.8
EIL	Elat	22.06	321	LR	LR	10 00 24.5	
	comp=Z,207nm,18.6s,baz=60,slow=35						
MBAR	Mbarara	24.18	237	LR	LR	10 01 31.9	
	comp=Z,112nm,19.4s,baz=37,slow=35						
MMAI	Mount Meron Ar	24.28	327	LR	LR	10 01 58.3	
	comp=Z,87nm,20.3s,baz=222,slow=36						
GEYT	Alibeck	25.50	13	P	P	09 52 59.4	+0.7
	6.8nm,0.8s,baz=211,slow=13,SNR=10.0						
GEYT				LR	LR	10 04 59.8	
	comp=Z,736nm,18.2s,baz=193,slow=41						
	6.8nm,0.8s						
GEYT	Alibeck	25.50	13	P	P	09 52 56.7	-2.0
GEYT				IAmb	IAmb	09 53 00.8	
	comp=Z,7.1nm,0.8s						
GYA0B	ALIBECK ARRAY	25.50	13	P	P	09 52 57.4	-1.3
GYA0B				IAmb	IAmb	09 53 00.8	
	comp=Z,7.4nm,0.8s						
GEVA	Gevas	25.98	346	P	P	09 53 03.5	+0.2
GEVA				IAmb	IAmb	09 53 14.8	
	comp=Z,11nm,1.0s						
GNI	Garni	27.41	350	P	P	09 53 18.7	+2.6
	comp=Z,7.0nm,0.5s,baz=200,slow=15,SNR=5.0						
GNI				LR	LR	10 05 53.2	
	comp=Z,331nm,21.6s,baz=173,slow=40						
	comp=Z,7.0nm,0.5s						
GNI	Garni	27.41	350	P	P	09 53 15.3	-0.8
PALK	Pallekele	29.94	98	LR	LR	10 02 35.6	
	comp=Z,124nm,21.0s,baz=10,slow=30						
BRTR	Keskin Array B	30.50	333	P	P	09 53 45.3	+1.7
	comp=Z,0.3nm,0.4s,baz=130,slow=11,SNR=3.8						
BRTR				LR	LR	10 05 29.6	
	comp=Z,192nm,18.4s,baz=144,slow=35						
	comp=Z,0.3nm,0.4s						
KBZ	Khabaz	31.21	349	P	P	09 53 52.0	+2.4
	comp=Z,4.1nm,0.9s,baz=170,slow=7.2,SNR=10						
KBZ				LR	LR	10 08 40.3	
	comp=Z,247nm,20.7s,baz=161,slow=41						
	comp=Z,4.1nm,0.9s						
KIV	Kislovodsk	31.47	349	P	P	09 53 52.9	+0.9
OPO	Ambohidratompo	31.74	187	LR	LR	10 04 42.3	
	comp=Z,160nm,21.4s,baz=179,slow=33						
IDI	Anoyia	32.15	318	LR	LR	10 08 17.9	
	comp=Z,53nm,18.4s,baz=90,slow=39						
KKAR	Karatay Array	34.32	26	P	P	09 54 16.8	-0.1
AAK	Ala-Archa	35.79	30	LR	LR	10 11 06.8	
	comp=Z,170nm,19.5s,baz=232,slow=40						
LSZ	Lusaka	36.08	219	LR	LR	10 10 05.4	
	comp=Z,327nm,18.5s,baz=126,slow=38						
ABKAR	Akbulak array	36.76	10	P	P	09 54 37.2	-0.5
MLR	Muntele Rosu	38.53	332	LR	LR	10 10 48.1	
	comp=Z,103nm,18.3s,baz=140,slow=36						
BELG	Belogornoye	39.21	357	LR	LR	10 15 05.6	
	comp=Z,155nm,20.2s,baz=151,slow=42						
BRDH	Bariadhala	39.84	70	LR	LR	10 10 04.5	
	comp=Z,205nm,20.4s,baz=232,slow=34						
AKASG	Malin Array Be	41.37	339	P	P	09 55 15.4	-0.8
	comp=Z,2.0nm,0.9s,baz=147,slow=7.6,SNR=6.9						
AKASG				LR	LR	10 13 25.1	
	comp=Z,86nm,18.8s,baz=74,slow=38						
	comp=Z,2.0nm,0.9s						
MK31	Makanchi Array	42.65	32	P	P	09 55 26.3	-0.6
MKAR	Makanchi Array	42.65	32	P	P	09 55 26.7	-0.2
	comp=Z,1.3nm,0.5s,baz=220,slow=8.0,SNR=18						
MKAR				LR	LR	10 12 59.5	
	comp=Z,105nm,19.8s,baz=225,slow=36						
	comp=Z,1.3nm,0.5s						
MKAR	Makanchi Array	42.65	32	P	P	09 55 26.2	-0.7
BVAR	Borovoye Array	42.70	17	LR	LR	10 15 41.4	
	comp=Z,180nm,18.6s,baz=202,slow=40						
OBN	Obninsk	43.31	348	LR	LR	10 17 02.4	
	comp=Z,41nm,19.0s,baz=190,slow=41						
ARU	Arti	43.58	6	LR	LR	10 15 58.4	
	comp=Z,189nm,19.4s,baz=144,slow=39						
TAM	Tamanrasset	44.02	289	P	P	09 55 38.3	-0.1
TAM				IAmb	IAmb	09 55 41.5	
	comp=Z,5.2nm,0.9s						
LBTB	Lobatse	45.24	213	P	P	09 55 48.6	+0.6
	comp=Z,4.1nm,1.0s,baz=23,slow=7.7,SNR=2.9						
LBTB				LR	LR	10 13 41.9	
	comp=Z,197nm,21.9s,baz=9.0,slow=35						
	comp=Z,4.1nm,1.0s						
TSUM	Tsumeb	45.92	226	LR	LR	10 15 38.6	
	comp=Z,315nm,18.6s,baz=338,slow=37						
CMAR	Chiang Mai Arr	46.47	77	P	P	09 55 58.0	+0.3
	comp=Z,1.1nm,0.3s,baz=274,slow=8.9,SNR=7.7						
CMAR				LR	LR	10 16 13.1	
	comp=Z,27nm,18.2s,baz=275,slow=37						
	comp=Z,1.1nm,0.3s						
TOA0	Torodi Ar. Sit	47.80	276	P	P	09 56 07.7	-0.5
TOA0				IAmb	IAmb	09 56 10.7	
	comp=Z,3.2nm,0.9s						
TORD	Torodi Ar. Bea	47.80	276	P	P	09 56 08.4	+0.2
	comp=Z,2.6nm,0.8s,baz=81,slow=7.3,SNR=17						
BOSA	Boshof	48.36	211	P	P	09 56 12.9	+0.6
	comp=Z,4.7nm,1.0s,baz=42,slow=3.4,SNR=4.3						
BOSA				LR	LR	10 18 41.9	
	comp=Z,99nm,18.2s,baz=18,slow=39						
	comp=Z,4.7nm,1.0s						
ZALV	Zalesovo Beam	48.69	26	P	P	09 56 14.2	-0.3
	comp=Z,2.0nm,0.6s,baz=240,slow=8.0,SNR=9.2						
ZALV				LR	LR	10 19 34.7	
	comp=Z,66nm,18.2s,baz=216,slow=40						
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	51.43	345	LR	LR	10 22 42.3	
	comp=Z,101nm,18.1s,baz=110,slow=41						
SUR	Sutherland	53.64	212	LR	LR	10 21 43.1	
	comp=Z,157nm,18.4s,baz=16,slow=38						
MDT	Midelt	54.04	301	LR	LR	10 19 12.5	
	comp=Z,54nm,20.2s,baz=94,slow=35						
HFS	Hagfors	54.23	338	LR	LR	10 24 17.8	
	comp=Z,48nm,19.7s,baz=117,slow=41						
ESDC	Sonseca Array	54.75	309	P	P	09 56 59.9	-0.1
	comp=Z,2.5nm,0.9s,baz=89,slow=5.7,SNR=14						
ESDC				LR	LR	10 20 17.3	
	comp=Z,22nm,19.7s,baz=80,slow=36						
	comp=Z,2.5nm,0.9s						
DBIC	Dimbokro	55.16	269	LR	LR	10 18 39.4	
	comp=Z,59nm,20.4s,baz=109,slow=34						
NOA	NORSAR Array B	55.75	338	LR	LR	10 24 34.4	
	comp=Z,47nm,18.1s,baz=165,slow=40						
SONM	Songino Array	57.41	41	P	P	09 57 20.0	+0.9
	comp=Z,1.2nm,0.9s,baz=249,slow=8.2,SNR=6.9						
SONM				LR	LR	10 24 47.9	
	comp=Z,92nm,20.3s,baz=272,slow=39						
	comp=Z,1.2nm,0.9s						
NRIK	Noril'sk	60.74	14	LR	LR	10 28 56.6	
	comp=Z,139nm,18.8s,baz=246,slow=41						
BBTS	Babate	65.20	280	LR	LR	10 28 31.4	
	comp=Z,135nm,19.7s,baz=62,slow=38						
SPITS	Spitsbergen Ar	67.23	353	LR	LR	10 32 19.2	
	comp=Z,69nm,18.1s,baz=128,slow=40						
YAK	Yakutsk	73.23	29	LR	LR	10 32 52.4	
	comp=Z,60nm,21.1s,baz=270,slow=37						
TIXI	Tiksi	73.81	19	LR	LR	10 35 19.2	
	comp=Z,60nm,19.6s,baz=352,slow=39						
KLR	Kul'dur	74.22	42	LR	LR	10 35 16.3	
	comp=Z,71nm,19.1s,baz=260,slow=39						
JNU	Nakatsue	74.65	59	LR	LR	10 32 43.2	
	comp=Z,46nm,19.2s,baz=256,slow=36						
MJAR	Matsushiro Arr	80.19	55	LR	LR	10 37 20.0	
	comp=Z,42nm,20.2s,baz=286,slow=37						
MAW	Mawson	81.03	175	LR	LR	10 30 57.0	
	comp=Z,76nm,19.9s,baz=352,slow=32						
ASAJ	Asahikawa	82.20	47	LR	LR	10 39 10.1	
	comp=Z,49nm,18.5s,baz=330,slow=38						
SEY	Seymchan	83.56	27	P	P	09 59 59.6	+1.4
	comp=Z,2.3nm,0.9s,baz=270,slow=4.9,SNR=5.9						
	comp=Z,2.3nm,0.9s						
WRA	Warramunga Arr	88.44	111	P	P	10 00 23.1	0.0
	comp=Z,1.9nm,1.0s,baz=302,slow=3.7,SNR=7.0						
	comp=Z,1.9nm,1.0s						
ASAR	Alice Springs	88.99	114	P	P	10 00 25.4	-0.2
	comp=Z,1.4nm,0.8s,baz=290,slow=4.7,SNR=8.3						
	comp=Z,1.4nm,0.8s						
PETK	Petropavlovsk-	89.40	35	LR	LR	10 44 10.7	
	comp=Z,66nm,18.5s,baz=275,slow=38						
RES	Resolute Bay	89.76	351	LR	LR	10 43 41.9	
	comp=Z,52nm,18.2s,baz=351,slow=38						
LPAZ	La Paz	121.09	259	PKP	PKPdf	10 06 23.2	-1.5
	comp=Z,1.2nm,0.6s,baz=90,slow=5.1,SNR=3.5						
PDAR	Pinedale Array	121.51	343	PKP	PKPdf	10 06 23.6	-0.9
	comp=Z,0.2nm,0.5s,baz=45,slow=5.2,SNR=2.3						
NVAR	Mina Array Bea	127.68	349	PKP	PKiKP	10 06 37.9	+1.0
	comp=Z,1.0nm,0.9s,baz=45,slow=1.4,SNR=5.2						
TXAR	Lajitas Array	131.11	330	PKP	PKPdf	10 06 43.0	0.0
	comp=Z,0.3nm,0.8s,baz=34,slow=0.3,SNR=4.1						

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*NOU **26** 09:49:50.4, 18°.02S×170°.24E, h410^{km}, MLv4.3/10, Vanuatu Islands*
*IDC **26** 09:50:23.4±8.1, 19°.01S×167°.86E, h0^{km}, mb3.7/3, mbtmp3.6/4, ML3.1/1, Error ellipse: s-maj=134.3km s-min=41.6km az=81.0*
ISC 26 09:50:24.6±1.8**, 19°.09S**±0°.08×**168°.4E**±0°.2**, h35**^{km}**, n10,**
σ0^{s}.84/10**, mb3.6**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	1.29	3	P	Pn	09 50 46.0	-0.1
DVP	Devils Point	1.36	353	P	Pn	09 50 46.7	-0.5
YATNC	Mamie plateau,	3.27	205	P	Pn	09 51 12.7	-0.6
DZM	Mont Dzumac	3.47	211	Pn	Pn	09 51 15.7	-0.6
	1.9nm,0.3s,baz=22,slow=22,SNR=52						
DZM				Sn	Sn	09 51 56.1	-0.1
	3.2nm,0.3s,baz=178,slow=23,SNR=9.3						
	4.4nm,0.3s						
OUENC	Ouen Island, N	3.61	203	P	Pn	09 51 18.4	+0.3
ONTNC	Ouen Toro	3.67	209	P	Pn	09 51 19.0	+0.1
KOUNC	Koumac, New Ca	4.11	249	P	Pn	09 51 24.7	-0.2
STKA	Stephens Creek	27.23	237	P	P	09 56 07.1	+1.6
	1.0nm,0.6s,baz=69,slow=8.6,SNR=3.2						
	1.0nm,0.6s						
WRA	Warramunga Arr	32.05	263	P	P	09 56 47.3	-1.1
	0.5nm,1.0s,baz=89,slow=8.1,SNR=2.4						
	0.5nm,1.0s						
ASAR	Alice Springs	32.36	256	P	P	09 56 51.3	+0.2
	0.7nm,0.5s,baz=83,slow=8.4,SNR=23						
	0.7nm,0.5s						

*NIED **26** 09:50:36.4, 28.°86N×139.°08E, h529km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.18; $M_{\theta\theta}$2.76; $M_{\phi\phi}$-0.58; $M_{r\theta}$0.49; $M_{\theta\phi}$0.68; $M_{\phi r}$0.98; Fault plane solution: $M_0$2.82000×10^{15} NP1: ϕ_s237.00000°, δ57.00000°, λ-118.00000°. NP2: ϕ_s102.00000°, δ43.00000°, λ-54.00000°.*

*JMA **26** 09:50:36.4±0.2, 29°N±2°×13°9E±°, h529km, MV4.4/28, W OFF OGASAWARA*

*IDC **26** 09:50:37.4±0.6, 28.°85N×138.°75E, h499km±7km, mb3.4/28, mbtmp4.3/35, Error ellipse: s-maj=11.0km s-min=6.6km az=78.0*

*NEIC **26** 09:50:38.5±1.6, 28.°90N±0.°09×138.°8E±0.°1, h504km±7km, mb4.3/40, Error ellipse: s-maj=16.2km s-min=13.1km az=94.0*

ISC 26 09:50:37.5±0.3**, 28.°86N**±0.°04×**138.°79E**±0.°06**, h500**km**, n164, σ1.s07**/184**, mb4.0**/52**, 1D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.48	119	P	P	09 51 52.0	+0.1
CBIJ				S	S	09 52 50.6	-1.8
JCJ	Chichijima	3.48	119	P	P	09 51 51.3	-0.7
	243nm,0.3s,baz=266,slow=22,SNR=32						
JCJ				S	S	09 52 50.9	-1.5
	291nm,0.4s,baz=238,slow=23,SNR=15						
JCJ	Chichijima	3.48	119	P	P	09 51 51.8	-0.2
JCJ	Chichijima	3.48	119	P	P	09 51 51.9	0.0
JHH2	Haha-jima-NKT2	3.73	126	eP	P	09 51 54.0	+0.2
JHH2				eS	S	09 52 54.5	-1.4
JHCJ	Hachijojimakas	4.29	11	eP	P	09 51 59.3	+1.1
JHJ2	Mitsune	4.33	11	P	P	09 52 00.6	+2.0
JHJ2	Mitsune	4.33	11	P	P	09 52 00.7	+2.1
JHJ2	Mitsune	4.33	11	P	P	09 52 00.5	+1.9
TTO1	TONANKAI O.B.S	5.05	341	eP	P	09 52 08.4	+3.9
JTNC	Tanabenakahech	5.65	332	P	P	09 52 12.7	+2.3
JTNC				eS	S	09 53 28.2	+1.9
JIE	Ise	5.80	343	P	P	09 52 14.2	+2.4
BSO1	Boso 1	6.07	17	P	P	09 52 14.4	+0.7
BSO1				eS	S	09 53 32.5	-0.3
JOD2	Odawara 2	6.39	2	P	P	09 52 17.4	-0.1
JOD2				S	S	09 53 38.1	-1.5
JMN	Monobe	6.42	320		P	09 52 20.8	+2.9
JMN	Monobe	6.42	320	P	P	09 52 20.5	+2.6
JTO	Tosashimizu	6.51	309	P	P	09 52 21.1	+2.3
INU	Inuyama	6.65	347	P	P	09 52 21.9	+1.8
INU	Inuyama	6.65	347	P	P	09 52 21.6	+1.6
JGF	Kuroka	6.83	350	P	P	09 52 22.7	+0.7
JGF	Kuroka	6.83	350	P	P	09 52 23.4	+1.4
JWT	Wachi	7.02	337	P	P	09 52 27.0	+3.2
JRY	Ryogami san	7.14	1	P	P	09 52 25.0	0.0
JRY				eS	S	09 53 51.4	-1.8
MJAR	Matsushiro Arr	7.68	356	P	P	09 52 29.9	-0.6
	40nm,0.5s,baz=175,slow=11,SNR=217						
MJAR				S	S	09 54 01.7	-1.6
	9.6nm,0.8s,baz=82,slow=23,SNR=5.8						
MAJO	Matsushiro	7.68	356		P	09 52 30.2	-0.3
MAJO	Matsushiro	7.68	356	P	P	09 52 30.1	-0.4
MJB9	Matsu-Tunnel	7.69	356	P	P	09 52 30.2	-0.3
JHS	Saijyo	7.79	323		P	09 52 33.9	+2.2
JHS	Saijyo	7.79	323	P	P	09 52 33.9	+2.2
JHS	Saijyo	7.79	323	P	P	09 52 33.6	+1.9
JNU	Nakatsue	8.01	304	P	P	09 52 35.0	+0.9
	4.2nm,0.3s,baz=176,slow=14,SNR=16						
JNU	Nakatsue	8.01	304	P	P	09 52 36.1	+2.1
JNU	Nakatsue	8.01	304	P	P	09 52 36.8	+2.8
JOI	OKI	8.76	329	P	P	09 52 43.3	+1.6
JMM	Marumori	9.14	10	P	P	09 52 46.5	+0.9
JMM	Marumori	9.14	10	P	P	09 52 46.5	+0.9
JSD	Sado	9.17	357		P	09 52 45.3	-0.6
JSD	Sado	9.17	357	P	P	09 52 45.4	-0.5
JTU	Tsushima	9.79	308	P	P	09 52 53.6	+1.0
JTU	Tsushima	9.79	308	P	P	09 52 54.4	+1.8
JMK	Ichinoseki	10.27	11	P	P	09 52 58.5	+1.0
JMK				eS	S	09 54 50.9	-2.0
JTM	Tenmabayashi	12.05	8	P	P	09 53 17.6	+1.1
JTM	Tenmabayashi	12.05	8	P	P	09 53 17.5	+1.1
KSRS	Korea Array	12.50	316	P	P	09 53 21.1	-0.1
	5.3nm,0.5s,baz=126,slow=11,SNR=31						
JOT	Ohata	12.63	8	P	P	09 53 23.5	+0.9
JOSM	Okushiri--Mats	13.21	2	P	P	09 53 29.3	+0.6
ERM	Erimo	13.60	14	P	P	09 53 34.2	+1.4
ERM	Erimo	13.60	14	P	P	09 53 34.0	+1.2
JCH	Churui	14.22	14	eP	P	09 53 40.3	+1.0
JHR	Hokuryu	15.04	8	P	P	09 53 49.2	+1.2
NEM2	Nemuro 2	15.52	19	eP	P	09 53 53.2	+0.3
ASAJ	Asahikawa	15.53	10	P	P	09 53 53.1	+0.1
	5.8nm,0.3s,baz=186,slow=9.2,SNR=28						
JKA	Kamikawa-asahi	15.53	10	P	P	09 53 53.5	+0.5
JKA				IAmb	IAmb	09 53 54.4	
	comp=Z,12nm,0.8s						
JTKR	Abashiri--Toko	15.63	14	P	P	09 53 55.2	+1.2
YHNB	Yeheng	16.10	259	P	P	09 53 58.1	-1.3
GUMO	Guam	16.21	158	P	P	09 54 02.2	+1.8
	comp=Z,115nm,1.0s,baz=349,slow=6.9,SNR=9.6						
GUMO	Guam	16.21	158	P	P	09 54 01.9	+1.4
USA0B	Ussuriysk Arra	16.25	342	P	P	09 54 00.5	0.0
USRK	Ussuriysk Ar.	16.25	342	P	P	09 54 00.6	0.0
	comp=Z,25nm,0.7s,baz=168,slow=9.4,SNR=44						
JWK2	Keihoku	16.61	8	eP	P	09 54 05.5	+1.2
YULB	Yu-li	16.62	255	P	P	09 54 03.9	-0.9
YULB	Yu-li	16.62	255	P	P	09 54 03.4	-1.4
SSLB	Suanglung	16.77	257	P	P	09 54 06.0	-0.3
SSLB	Suanglung	16.77	257	P	P	09 54 06.0	-0.3
TPUB	Ta-pu	17.22	255	P	P	09 54 11.8	+1.0
YSS	Yuzh-Sakhalins	18.33	9	P	P	09 54 21.6	+0.9
CN2	Changchun	18.35	328	eP	P	09 54 21.5	+0.6
BNX	BinXian	19.10	335	⇓P	P	09 54 28.3	+0.6
BNX				pmax	pmax		
	comp=Z,18nm,0.6s						
BNX				pmax	pmax		
	comp=Z,110nm,5.7s						
TIA	Tai'an	19.66	297	P	P	09 54 34.5	+1.5
TIA				pmax	pmax		
	comp=Z,11nm,0.7s						
KLR	Kul'dur	21.05	347	P	P	09 54 46.0	+0.6
	comp=Z,8.7nm,0.5s,baz=156,slow=7.9,SNR=31						
	comp=Z,8.7nm,0.5s						
WHN	Wuhan	21.29	281	P	P	09 54 48.8	+0.9
WHN				pmax	pmax		
	comp=Z,64nm,0.6s						
HEH	HeiHe	23.05	341	P	P	09 55 03.3	-0.1
HEH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC	Hu-ho-hao-te	25.24	306	eP	P	09 55 23.0	-0.2
HHC				pmax	pmax		
	comp=Z,15nm,0.5s						
HHC				pmax	pmax		
	comp=Z,150nm,4.9s						
ENH	Enshi	25.50	280	P	P	09 55 25.3	-0.2
PEA0B	Petropavlovsk-	27.95	25	P	P	09 55 48.0	+1.3
PEA0B				IAmb	IAmb	09 56 06.6	
	comp=Z,20nm,1.1s						
PETK	Petropavlovsk-	27.95	25	P	P	09 55 48.5	+1.8
	comp=Z,1.9nm,0.6s,baz=188,slow=4.5,SNR=6.5						
	comp=Z,1.9nm,0.6s						
PETK	Petropavlovsk-	27.95	25	P	P	09 55 48.0	+1.3
LZH	Lanzhou	30.23	293	eP	P	09 56 20.5	+13
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
SIJI	Sorong	30.42	195	P	P	09 56 09.2	+0.5
	comp=Z,10nm,0.5s,baz=0.8,slow=18,SNR=4.7						
	comp=Z,10nm,0.5s						
SONM	Songino Array	31.37	316	P	P	09 56 17.0	+0.4
	comp=Z,0.5nm,0.4s,baz=128,slow=8.1,SNR=8.1						
SONM				PcP	PcP	09 58 55.3	0.0
	comp=Z,0.8nm,0.4s,baz=144,slow=3.1,SNR=7.5						
SONM				ScP	ScP	10 01 49.3	-1.5
	comp=Z,0.7nm,0.5s,baz=141,slow=3.8,SNR=6.0						
	comp=Z,0.5nm,0.4s						
MA2	Magadan	31.79	12	P	P	09 56 20.0	+0.1
MA2				IAmb	IAmb	09 56 21.4	
	comp=Z,11nm,0.8s						
FAKI	Fak Fak	32.21	192	P	P	09 56 25.3	+1.3
SEY	Seymchan	35.22	11	P	P	09 56 49.2	+0.4
	comp=Z,2.0nm,0.7s,baz=223,slow=7.7,SNR=6.5						
	comp=Z,2.0nm,0.7s						
GOMU	GeErMu	37.54	293	P	P	09 57 03.8	-5.1
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,97nm,5.0s						
CMAR	Chiang Mai Arr	37.78	263	P	P	09 57 11.0	+0.4
	comp=Z,2.4nm,0.5s,baz=72,slow=5.9,SNR=14						
CMAR				PcP	PcP	09 59 14.2	-0.4
	comp=Z,1.1nm,0.3s,baz=37,slow=2.7,SNR=4.1						
	comp=Z,2.4nm,0.5s						
KULM	Kulim	43.03	244	P	P	09 57 52.9	+0.2
KULM				IAmb	IAmb	09 57 54.2	
	comp=Z,10nm,0.6s						
WMQ	Urumqi	43.11	304	eP	P	09 57 53.0	-0.1
WMQ				pmax	pmax		
	comp=Z,16nm,1.3s						
TIXI	Tiksi	43.19	355	P	P	09 57 52.7	-0.4
	comp=Z,4.7nm,0.7s,baz=270,slow=23,SNR=21						
	comp=Z,4.7nm,0.7s						
TIXI	Tiksi	43.19	355	P	P	09 57 52.8	-0.4
TIXI				IAmb	IAmb	09 57 54.0	
	comp=Z,4.5nm,0.6s						
IPM	Ipoh	43.23	243	P	P	09 57 54.7	+0.4
IPM				IAmb	IAmb	09 57 55.2	
	comp=Z,7.6nm,0.6s						
TAPN	Taplejung	44.80	281	eP	P	09 58 06.7	0.0
	comp=Z,14nm,0.4s						
ODAN	Odare	45.20	280	eP	P	09 58 09.7	0.0
	comp=Z,31nm,0.6s						
RAMN	Ramite	45.86	281	eP	P	09 58 15.0	+0.2
JIRN	Jiri	46.03	282	eP	P	09 58 16.9	+0.7
	comp=Z,50nm,0.6s						
ZALV	Zalesovo Beam	46.19	319	P	P	09 58 15.4	-1.2
	comp=Z,0.6nm,0.4s,baz=105,slow=9.4,SNR=3.0						
ZALV				PcP	PcP	09 59 41.4	-0.8
	comp=Z,1.6nm,0.5s,baz=124,slow=3.9,SNR=6.8						
ZALV				ScP	ScP	10 02 45.2	-2.3
	comp=Z,0.5nm,0.4s,baz=100,slow=6.0,SNR=2.0						
	comp=Z,0.6nm,0.4s						
GUN	Gumba	46.23	282	eP	P	09 58 18.3	+0.6
	comp=Z,69nm,0.8s						
PKIN	Phulchoki	46.73	282	eP	P	09 58 21.0	-0.4
	comp=Z,10nm,0.5s						
DMN	Daman	46.97	282	eP	P	09 58 23.1	-0.1
	comp=Z,18nm,0.5s						
MK31	Makanchi Array	47.04	308	P	P	09 58 23.0	-0.1
MK31				IAmb	IAmb	09 58 23.3	
	comp=Z,1.7nm,0.5s						
MKAR	Makanchi Array	47.04	308	P	P	09 58 22.7	-0.4
	comp=Z,1.3nm,0.4s,baz=88,slow=10.0,SNR=30						
MKAR				PcP	PcP	09 59 45.0	-0.5
	comp=Z,1.1nm,0.4s,baz=73,slow=4.5,SNR=14						
MKAR				ScP	ScP	10 02 49.1	-2.2
	comp=Z,0.5nm,0.6s,baz=84,slow=5.2,SNR=5.5						
	comp=Z,1.3nm,0.4s						
MKAR	Makanchi Array	47.04	308	P	P	09 58 23.2	0.0
GKN	Gorkha	47.28	283	eP	P	09 58 25.8	+0.4
	comp=Z,20nm,0.6s						
DANN	Dangsing	47.94	283	eP	P	09 58 31.0	+0.5
	comp=Z,11nm,0.2s						
KOLN	Koldanda	48.22	283	eP	P	09 58 32.3	-0.3
WB0	Warramunga Arr	48.52	186	P	P	09 58 34.9	+0.4
WB0				IAmb	IAmb	09 58 37.3	
	comp=Z,11nm,1.3s						
PYUN	Piuthan	48.66	283	eP	P	09 58 36.2	+0.4
	comp=Z,42nm,0.4s						
WRAB	Tennant Creek	48.69	186	P	P	09 58 35.7	-0.1
WRAB				IAmb	IAmb	09 59 04.1	
	comp=Z,13nm,1.5s						
WB2	Warramunga Arr	48.70	186	P	P	09 58 36.0	+0.2
WRA	Warramunga Arr	48.70	186	P	P	09 58 35.8	-0.1
	comp=Z,1.9nm,0.5s,baz=0.0,slow=7.7,SNR=79						
WRA				PcP	PcP	09 59 51.8	+0.1
	comp=Z,1.5nm,0.5s,baz=357,slow=3.9,SNR=9.0						
WRA				ScP	ScP	10 02 58.4	-0.2
	comp=Z,0.4nm,0.9s,baz=2.8,slow=5.5,SNR=2.5						
WRA				S	S	10 04 57.6	-3.4
	comp=Z,0.4nm,0.7s,baz=357,slow=16,SNR=5.1						
	comp=Z,1.9nm,0.5s						
WRA	Warramunga Arr	48.70	186	P	P	09 58 35.8	-0.1
KURK	Kurchatov	49.61	314	P	P	09 58 41.7	-0.5
KSH	Kashi	52.10	299	P	P	09 59 04.8	+4.0
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AS31	Alice Springs	52.43	186	P	P	09 59 04.8	+1.7
ASAR	Alice Springs	52.43	186	P	P	09 59 03.2	+0.1
	comp=Z,0.6nm,0.5s,baz=8.6,slow=6.9,SNR=17						
ASAR				PcP	PcP	10 00 06.8	+1.1
	comp=Z,1.5nm,0.7s,baz=4.6,slow=3.9,SNR=9.4						
	comp=Z,0.6nm,0.5s						
ASAR	Alice Springs	52.43	186	P	P	09 59 04.8	+1.7
AAK	Ala-Archa	52.79	303	P	P	09 59 05.7	0.0
MBWA	Marble Bar	53.02	202	P	P	09 59 07.2	-0.1
MBWA				IAmb	IAmb	09 59 30.0	
	comp=Z,11nm,1.4s						
PSA00	Pilbara Seismi	53.36	202	P	P	09 59 09.9	+0.2
PSA00				IAmb	IAmb	09 59 49.0	
	comp=Z,18nm,1.2s						
BRVK	Borovoye	54.78	317	P	P	09 59 19.5	+0.1
IMAR	Indian Mountai	54.85	28	P	P	09 59 20.6	+0.9
CAST	Castle Rocks	55.29	31	P	P	09 59 24.1	+1.3
NIL	Nilore	55.41	293	P	P	09 59 25.0	+0.8
NIL				IAmb	IAmb	09 59 26.0	
	comp=Z,11nm,0.4s						
KK31	Karatay Array	55.62	304	P	P	09 59 25.7	+0.2
KK31				IAmb	IAmb	09 59 25.9	
	comp=Z,5.5nm,0.6s						
KKAR	Karatay Array	55.62	304	P	P	09 59 25.5	0.0
GAR	Garm	56.52	300	P	P	09 59 32.2	+0.3
GAR				IAmb	IAmb	09 59 32.3	
	comp=Z,9.1nm,0.5s						
DZM	Mont Dzumac	57.22	149	P	P	09 59 37.5	+0.7
	comp=Z,2.8nm,0.9s,baz=321,slow=8.4,SNR=2.1						
	comp=Z,2.8nm,0.9s						
CHGR	Chuyangaron	57.47	299	P	P	09 59 38.3	-0.1
ILAR	Eielson Array	57.63	29	P	P	09 59 38.7	-0.3
	comp=Z,0.2nm,0.5s,baz=256,slow=5.9,SNR=6.5						
	comp=Z,0.2nm,0.5s						
BMAR	Burnt Mountain	58.59	26	P	P	09 59 47.0	+1.5
BCAR	Beaver Creek A	59.95	31	P	P	09 59 55.7	+1.0
STKA	Stephens Creek	60.46	177	P	P	09 59 58.9	+0.6
	comp=Z,2.7nm,0.5s,baz=337,slow=8.7,SNR=7.2						
	comp=Z,2.7nm,0.5s						
ABKAR	Akbulak array	61.72	313	P	P	10 00 05.9	-0.5
INK	Inuvik	62.69	25	P	P	10 00 12.7	+0.2
	comp=Z,0.8nm,0.8s,baz=252,slow=4.3,SNR=2.3						
	comp=Z,0.8nm,0.8s						
INK	Inuvik	62.69	25	P	P	10 00 12.6	+0.2
M31M	Drury Creek, Y	63.45	32	P	P	10 00 18.0	+0.4
M31M				IAmb	IAmb	10 00 36.1	
	comp=Z,6.1nm,1.4s						
NWAO	Narrogin (SRO)	64.76	200	P	P	10 00 26.2	+0.1
NWAO	Narrogin (SRO)	64.76	200	P	P	10 00 26.2	+0.1
GEYT	Alibeck	66.03	301	P	P	10 00 33.9	-0.4
	comp=Z,2.5nm,0.6s,baz=87,slow=4.9,SNR=4.4						
	comp=Z,2.5nm,0.6s						
EUNU	Eureka	68.57	8	P	P	10 00 49.1	-0.2
ARCES	ARCESS Array B	70.88	340	P	P	10 01 03.0	-0.1
	comp=Z,12nm,1.1s,baz=66,slow=9.0,SNR=8.5						
	comp=Z,12nm,1.1s						
ARCES	ARCESS Array B	70.88	340	P	P	10 01 02.6	-0.6
ARCES				IAmb	IAmb	10 01 37.3	
	comp=Z,28nm,1.4s						
YKA	Yellowknife Ar	72.01	28	P	P	10 01 09.8	0.0
	comp=Z,0.4nm,0.5s,baz=299,slow=6.0,SNR=18						
	comp=Z,0.4nm,0.5s						
KBZ	Khabaz	74.61	312	P	P	10 01 25.2	+0.1
	comp=Z,8.2nm,0.7s,baz=102,slow=4.4,SNR=29						
	comp=Z,8.2nm,0.7s						
FIA1	FINESS Array S	75.03	333	P	P	10 01 26.5	-0.6
FIA1				IAmb	IAmb	10 01 42.5	
	comp=Z,14nm,1.1s						
FINES	FINESS Array B	75.03	333	P	P	10 01 26.6	-0.5
	comp=Z,5.2nm,0.5s,baz=71,slow=5.2,SNR=77						
	comp=Z,5.2nm,0.5s						
FINES	FINESS Array B	75.03	333	P	P	10 01 26.3	-0.8
URZ	Urewera	75.78	150	P	P	10 01 31.7	+0.2
	comp=Z,2.7nm,0.6s,baz=338,slow=5.4,SNR=0.7						
	comp=Z,2.7nm,0.6s						
BKZ	Black Stump Fm	76.26	151	P	P	10 01 34.1	-0.1
BKZ				IAmb	IAmb	10 01 56.3	
	comp=Z,29nm,1.4s						
MNK	Minsk	78.03	326	i P	P	10 01 41.4	-2.3
	comp=E,2.0nm,0.8s						
MNK				i P	P	10 01 41.4	-2.3
	comp=N,18nm,0.8s						
MNK				i P	P	10 01 41.4	-2.3
	comp=Z,4.0nm,0.6s,baz=237						
MNK				i pP	pP	10 03 29.1	-0.9
MNK				i PP	PP	10 04 46.3	-1.8
MNK				i PPP	PPP	10 06 38.4	
MNK				i S	S	10 10 54.8	-1.4
MNK				i sS	sS	10 14 07.5	+1.0
MNK				i SS	SS	10 16 11.0	+0.8
MNK				i SSS	SSS	10 19 41.2	
AKASG	Malin Array Be	79.41	322	P	P	10 01 50.1	-1.1
	comp=Z,0.7nm,0.3s,baz=51,slow=5.4,SNR=14						
	comp=Z,0.7nm,0.3s						
NB2	NORSAR Subarra	80.85	337	P	P	10 01 57.6	-1.0
	comp=Z,1.1nm,0.4s,baz=49,slow=4.6						
NOA	NORSAR Array B	80.85	337	P	P	10 01 57.6	-1.0
	comp=Z,1.4nm,0.5s,baz=54,slow=6.6,SNR=17						
	comp=Z,1.4nm,0.5s						
RAYN	Ar Rayn	81.70	292	P	P	10 02 03.9	+0.2
RAYN				IAmb	IAmb	10 02 04.6	
	comp=Z,20nm,1.2s						
NVAR	Mina Array Bea	81.76	51	P	P	10 02 04.7	+0.7
	comp=Z,0.7nm,0.5s,baz=299,slow=5.7,SNR=9.5						
	comp=Z,0.7nm,0.5s						
BR131	Keskin Array S	82.60	311	P	P	10 02 07.4	-0.8
BR131				IAmb	IAmb	10 02 09.0	
	comp=Z,5.5nm,0.7s						
BRTR	Keskin Array B	82.60	311	P	P	10 02 08.0	-0.1
	comp=Z,2.7nm,0.7s,baz=98,slow=4.5,SNR=19						
	comp=Z,2.7nm,0.7s						
MZP	Montezuma Peak	82.75	51	P	P	10 02 09.2	+0.1
PDAR	Pinedale Array	85.04	43	P	P	10 02 20.6	+0.3
	comp=Z,0.8nm,0.9s,baz=323,slow=5.8,SNR=4.0						
	comp=Z,0.8nm,0.9s						
VYHS	Vyhne	86.15	325	eP	P	10 02 24.8	-0.4
GERES	GERESS Array B	88.44	327	P	P	10 02 34.4	-1.6
	comp=Z,0.4nm,0.5s,baz=60,slow=12,SNR=4.4						
	comp=Z,0.4nm,0.5s						
TXAR	Lajitas Array	96.90	51	P	P	10 03 15.9	+0.7
	comp=Z,0.2nm,0.5s,baz=320,slow=3.7,SNR=4.4						
	comp=Z,0.2nm,0.5s						
ETMB	Extrema	149.86	56		PKPbc	10 09 30.2	-1.4
ETMB				PKPab	PKPab	10 09 37.5	-1.7
LPAZ	La Paz	152.25	69	PKPbc	PKiKP	10 09 38.2	+0.3
	comp=Z,0.9nm,0.4s,baz=292,slow=5.4,SNR=4.1						
PLCA	Paso Flores	153.27	124	PKPbc	PKiKP	10 09 38.2	-0.4
	comp=Z,1.1nm,0.6s,baz=247,slow=3.9,SNR=8.4						
PLCA				PKPab	PKPab	10 09 53.9	+0.8
	comp=Z,1.7nm,0.8s,baz=226,slow=8.3,SNR=4.3						

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*NOU **26** 10:00:21.7, 18.°88S×167.°63E, h5km, MLv4.2/16, Vanuatu Islands*

*IDC **26** 10:00:22.1±1.3, 18.°91S×167.°63E, h0km, mb4.0/7, mbtmp4.0/8, ML3.9/1, MS3.3/2, Error ellipse: s-maj=45.5km s-min=22.1km az=139.0*

*NEIC **26** 10:00:26.4±1.3, 19.°1S±0.°1×167.°7E±0.°1, h27km±7km, mb4.4/8, Error ellipse: s-maj=19.3km s-min=12.9km az=215.0*

ISC 26 10:00:22.9±0.8**, 18.°95S**±0.°06×**167.°8E**±0.°1**, h10**km**, n36, σ1.s10**/34**, mb4.1**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.28	19	P	Pn	10 00 45.3	-1.5
RTV	Rentapao	1.31	29	P	Pn	10 00 46.2	-1.1
LIFNC	LIFOU	1.89	195		Pn	10 00 53.5	-1.6
LIFNC	LIFOU	1.89	195	P	Pn	10 00 53.5	-1.6
YATNC	Mamie plateau,	3.20	194	P	Pn	10 01 12.5	-0.8
DZM	Mont Dzumac	3.34	201	Pn	Pn	10 01 14.8	-0.4
	12nm,0.3s,baz=68,slow=4.3,SNR=136						
DZM				Sn	Sn	10 01 52.4	-2.8
	19nm,0.3s,baz=144,slow=24,SNR=12						
	27nm,0.4s						
DZM	Mont Dzumac	3.34	201	Pn	Pn	10 01 14.5	-0.8
DZM	Mont Dzumac	3.34	201	P	Pn	10 01 14.9	-0.4
NOUC	Port Laguerre	3.42	203	P	Pn	10 01 16.4	+0.1
ONTNC	Ouen Toro	3.56	200	Pn	Pn	10 01 18.1	-0.1
ONTNC	Ouen Toro	3.56	200	P	Pn	10 01 18.4	+0.2
OUENC	Ouen Island, N	3.56	194	Pn	Pn	10 01 18.4	+0.2
OUENC	Ouen Island, N	3.56	194	P	Pn	10 01 18.7	+0.5
KOUNC	Koumac, New Ca	3.63	243		Pn	10 01 19.4	+0.2
KOUNC	Koumac, New Ca	3.63	243	P	Pn	10 01 18.7	-0.5
PINNC	Pines Island,	3.66	184	Pn	Pn	10 01 19.7	+0.2
PINNC	Pines Island,	3.66	184	P	Pn	10 01 20.0	+0.4
MSVF	Nonsavu	9.86	85	LR	LR	10 06 00.6	
	comp=Z,143nm,20.0s,baz=292,slow=34						
CTA	Charters Tower	20.29	263	P	Pn	10 04 59.5	-1.6
	9.0nm,0.9s,baz=96,slow=14,SNR=5.9						
	9.0nm,0.9s						
CTAO	Charters Tower	20.29	263	P	Pn	10 04 60.0	-1.0
CTAO				IAmb	IAmb	10 05 13.1	
	comp=Z,19nm,1.1s						
STKA	Stephens Creek	26.82	236	P	P	10 06 05.0	+1.5
	comp=Z,2.5nm,0.8s,baz=75,slow=12,SNR=4.4						
	comp=Z,2.5nm,0.8s						
WB0	Warramunga Arr	31.45	263	P	P	10 06 43.6	-1.3
WB0				IAmb	IAmb	10 07 09.4	
	comp=Z,6.2nm,1.3s						
WRA	Warramunga Arr	31.49	263	P	P	10 06 43.8	-1.4
	comp=Z,0.6nm,0.8s,baz=103,slow=8.8,SNR=13						
	comp=Z,0.6nm,0.8s						
WRA	Warramunga Arr	31.49	263	P	P	10 06 43.9	-1.3
AS31	Alice Springs	31.83	256	P	P	10 06 47.7	-0.5
ASAR	Alice Springs	31.84	256	P	P	10 06 47.8	-0.4
	comp=Z,5.3nm,0.8s,baz=82,slow=9.1,SNR=51						
ASAR				LR	LR	10 17 53.4	
	comp=Z,73nm,20.7s,baz=11,slow=33						
	comp=Z,5.3nm,0.8s						
ASAR	Alice Springs	31.84	256	P	P	10 06 47.3	-0.9
FORT	Forrest	37.71	244	P	P	10 07 38.5	-0.3
MORW	Morawa	47.98	248	P	P	10 09 02.1	-0.1
QSPA	South Pole Qui	71.11	180	P	P	10 11 41.1	-0.2
QSPA				IAmb	IAmb	10 12 01.6	
	comp=Z,4.9nm,1.3s						
SONM	Songino Array	86.14	324	P	P	10 13 05.2	+0.9
	comp=Z,1.2nm,0.8s,baz=145,slow=5.8,SNR=7.1						
	comp=Z,1.2nm,0.8s						
SONM	Songino Array	86.14	324	P	P	10 13 05.4	+1.0
SONM				IAmb	IAmb	10 13 16.5	
	comp=Z,2.9nm,1.0s						
NVAR	Mina Array Bea	89.67	49	P	P	10 13 23.5	+2.0
	comp=Z,0.2nm,0.6s,baz=213,slow=6.5,SNR=2.2						
	comp=Z,0.2nm,0.6s						
ILAR	Eielson Array	90.38	18	P	P	10 13 23.3	-0.6
	comp=Z,0.5nm,0.8s,baz=239,slow=5.8,SNR=5.5						
	comp=Z,0.5nm,0.8s						
MKAR	Makanchi Array	100.55	316	P	Pdif	10 14 12.3	+1.6
	comp=Z,0.1nm,0.4s,baz=102,slow=4.5,SNR=2.3						
YKA	Yellowknife Ar	101.06	28	P	Pdif	10 14 13.7	+1.1
	comp=Z,0.2nm,0.6s,baz=251,slow=4.7,SNR=3.6						

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*HVO **26** 10:05:05.2±1.6, 19.°473N±0.°010×155.°80W±0.°01, h12km±2km, ML2.7/10, ML2.8/42(NEIC), Error ellipse: s-maj=1.6km s-min=1.4km az=46.0*

NEIC 26 10:05:03.0±1.7**, 19.°53N**±0.°05×**155.°84W**±0.°03**, h25**km±3km**, Error ellipse: s-maj=7.1km s-min=4.0km az=169.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHLU	Kahalu`u	0.08	316		Pb	10 05 08.6	+0.9
KHLU					Sb	10 05 11.3	+0.5
KHLU	Kahalu`u	0.08	316	IAML		10 05 11.5	
	comp=N,4μm,0.4s						
KHLU				IAML		10 05 11.6	
	comp=E,2μm,0.3s						
CPH	Captain Cook	0.09	240		Pb	10 05 08.2	+0.5
CPH					Sb	10 05 10.4	-0.3
ALEP	Alea Permanent	0.18	88		Pb	10 05 09.4	+0.6
ALEP					Sb	10 05 12.7	-0.1
MWH	Moku‘aweowe	0.23	102		Pb	10 05 09.7	+0.1
MWH					Sb	10 05 13.4	-0.6
MWH	Moku‘aweowe	0.23	102	IAML		10 05 17.1	
	comp=E,2μm,0.5s						
MWH				IAML		10 05 17.2	
	comp=N,2μm,0.4s						
MLOA	Mauna Loa Obse	0.24	89		Pb	10 05 10.2	+0.6
MLOA					Sb	10 05 14.0	-0.2
MLOA	Mauna Loa Obse	0.24	89	IAML		10 05 14.2	
	comp=E,4μm,0.4s						
MLOA				IAML		10 05 14.2	
	comp=N,3μm,0.2s						
HMH	Humu‘ula Sheep	0.34	78		Pn	10 05 11.9	-0.7
HMH					Sb	10 05 17.1	+0.9
HMH	Humu‘ula Sheep	0.34	78	IAML		10 05 17.3	
	comp=N,1μm,0.4s						
HMH				IAML		10 05 17.4	
	comp=E,2μm,0.3s						
KHU	Kahuku	0.35	144		Pb	10 05 11.4	+0.4
KHU					Sb	10 05 16.4	-0.1

KHU	**Kahuku**	**0.35**	**144**	IAML		10 05 16.9	
	comp=E,1µm,0.2s						
KHU				IAML		10 05 17.2	
	comp=N,1µm,0.4s						
POHA	**Pohakuloa**	**0.36**	**52**		Sb	10 05 12.8	-4.0
POHA	**Pohakuloa**	**0.36**	**52**	Pg	Pn	10 05 12.6	-0.4
POHA	**Pohakuloa**	**0.36**	**52**	IAML		10 05 24.9	
	comp=N,1µm,0.5s						
POHA				IAML		10 05 26.3	
	comp=N,1µm,0.5s						
AIN	**Ainahou**	**0.39**	**114**		Pb	10 05 12.0	+0.4
AIN					Sb	10 05 17.4	0.0
AIN	**Ainahou**	**0.39**	**114**	IAML		10 05 17.9	
	comp=E,1µm,0.4s						
AIN				IAML		10 05 18.0	
	comp=N,2µm,0.3s						
MLH	**Mauna Loa**	**0.42**	**95**		Pb	10 05 12.7	+0.6
MLH					Sb	10 05 18.6	+0.2
MLH	**Mauna Loa**	**0.42**	**95**	IAML		10 05 19.4	
	comp=E,897nm,0.2s						
MLH				IAML		10 05 20.6	
	comp=N,1µm,0.1s						
HTC	**Hot Caves**	**0.51**	**125**		Pb	10 05 13.6	+0.3
HPAH	**Hawaii Prepara**	**0.51**	**15**	Pg	Pn	10 05 15.2	+0.3
WRMHI	**West Rim**	**0.52**	**104**		Pb	10 05 14.1	+0.4
UWE	**Uwekahuna**	**0.52**	**102**		Pb	10 05 14.2	+0.5
UWE					Sb	10 05 21.9	+0.9
RSD	**Rainshed**	**0.53**	**98**		Pn	10 05 14.6	-0.6
RSD				IAML		10 05 23.3	
	comp=E,677nm,0.3s						
RSD				IAML		10 05 23.7	
	comp=N,778nm,0.3s						
RSD	**Rainshed**	**0.53**	**98**		Sb	10 05 22.0	+0.8
SDHHI	**Sand Hill**	**0.53**	**106**		Pb	10 05 14.3	+0.4
OBL	**Observatory Le**	**0.53**	**102**		Pb	10 05 14.4	+0.5
OBL					Sn	10 05 22.5	-0.9
OBL	**Observatory Le**	**0.53**	**102**	IAML		10 05 23.2	
	comp=N,2µm,0.5s						
OBL				IAML		10 05 29.9	
	comp=E,2µm,0.7s						
UWB	**Uwekahuna B**	**0.54**	**102**		Sn	10 05 22.6	-0.9
UWB	**Uwekahuna B**	**0.54**	**102**		Pb	10 05 14.2	+0.3
UWB				IAML		10 05 25.4	
	comp=E,383nm,1.1s						
UWB	**Uwekahuna B**	**0.54**	**102**	IAML		10 05 21.9	
	comp=N,487nm,1.9s						
SBLHI	**Steaming Bluff**	**0.55**	**101**		Pb	10 05 14.3	+0.3
SBLHI	**Steaming Bluff**	**0.55**	**101**	IAML		10 05 26.2	
	comp=E,620nm,0.6s						
SBLHI				IAML		10 05 27.8	
	comp=N,863nm,0.8s						
RIM	**Rim**	**0.55**	**104**	Pg	Pb	10 05 14.1	0.0
RIM				IAML		10 05 27.9	
	comp=E,711nm,1.0s						
RIM				IAML		10 05 27.9	
	comp=N,1µm,0.7s						
HLP	**Hilina Pali**	**0.55**	**115**		Pb	10 05 14.3	+0.2
HLP	**Hilina Pali**	**0.55**	**115**	IAML		10 05 18.7	
	comp=E,610nm,1.6s						
HLP				IAML		10 05 22.6	
	comp=N,620nm,1.7s						
HATHI	**Halema‘uma‘u T**	**0.55**	**101**		Pb	10 05 14.4	+0.2
HATHI	**Halema‘uma‘u T**	**0.55**	**101**	IAML		10 05 22.2	
	comp=N,726nm,1.1s						
HATHI				IAML		10 05 27.8	
	comp=E,867nm,0.8s						
KKO	**Keanakako`i**	**0.55**	**104**	Pg	Pb	10 05 14.2	0.0
KKO				IAML		10 05 21.0	
	comp=E,750nm,1.5s						
PUH	**Pauahi**	**0.60**	**105**		Pb	10 05 15.2	+0.2
PUH					Sb	10 05 24.1	+0.8
PUH	**Pauahi**	**0.60**	**105**	IAML		10 05 24.9	
	comp=E,266nm,1.2s						
PUH				IAML		10 05 25.3	
	comp=N,414nm,1.2s						
KNHH	**Kane Nui o Ham**	**0.65**	**104**		Pb	10 05 15.9	+0.1
STCH	**Steam Cracks**	**0.69**	**102**		Pb	10 05 16.6	+0.2
JOKA	**Jonika Flow**	**0.79**	**97**		Pb	10 05 17.9	-0.3
JOKA					Sn	10 05 29.2	-0.4

IDC 26 10:15:31.9±1.9**, 5°.65N**×**120°.32E, h0**^{km}**, mb3.6**/3**,**
mbtmp3.6/3**, Error ellipse: s-maj=419.7km**
s-min=29.8km az=60.0, Sulu Archipelago

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**28.93**	**152**	P	P	10 21 32.6	-0.5
	0.4nm,0.6s,baz=331,slow=9.6,SNR=6.2 0.4nm,0.6s						
STKA	**Stephens Creek**	**42.47**	**153**	P	P	10 23 29.4	+0.4
	0.9nm,0.5s,baz=324,slow=8.7,SNR=3.9 0.9nm,0.5s						
MKAR	**Makanchi Array**	**52.44**	**328**	P	P	10 24 46.3	-0.1
	0.2nm,0.5s,baz=131,slow=9.0,SNR=2.9 0.2nm,0.5s						

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*IDC **26** 10:33:46.1±5.3, 7°.17S×74°.38W, h140^{km}±68^{km}, mb3.3/2,*
mbtmp3.9/5, Error ellipse: s-maj=91.7km s-min=19.7km
az=34.0
*VAO **26** 10:33:57.6±1.2, 7°.40S×73°.58W, h163^{km}, mbR4.2*
ISC 26 10:33:47.1±0.7**, 7°.33S**±0°.09×**74°.50W**±0°.06**, h150**^{km}**, n27,**
σ1^{s}.69/29**, mb3.5**/3**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CZSB	**Cruzeiro do Su**	**1.82**	**103**	*e*P	**Pn**	**10 34 23.0**	**+2.9**
ATAH	**Atahualpa**	**3.87**	**273**	P	**Pn**	**10 34 46.5**	**+0.5**
	41nm,0.6s,baz=20,slow=2.3,SNR=140						
ATAH				S	**Sn**	**10 35 32.9**	**+1.1**
	86nm,0.5s,baz=295,slow=20,SNR=10						
NNA	**Nana**	**5.17**	**206**	P	**Pn**	**10 35 05.2**	**+2.3**
	4.3nm,0.3s,baz=272,slow=3.6,SNR=1.7						
NNA				S	**Sn**	**10 35 58.8**	**-3.2**
	11nm,0.3s,baz=12,slow=9.3,SNR=3.6						
TBTG	**Tabatinga, AM**	**5.53**	**56**	*e*P	**Pn**	**10 35 09.8**	**+2.2**
ETMB	**Extrema**	**8.56**	**107**	*e*P	**Pn**	**10 35 46.5**	**-1.4**
TEFE	**Tefe**	**10.53**	**69**	*e*P	**Pn**	**10 36 14.1**	**-0.1**
SAML	**Samuel**	**11.32**	**99**	*e*P	**Pn**	**10 36 21.8**	**-2.7**
MACA	**Manacapuru-AM**	**14.36**	**74**	*e*P	**Pn**	**10 37 02.0**	**-1.7**
VILB	**Vilhena**	**15.14**	**113**	*e*P	**Pn**	**10 37 13.7**	**+0.3**
SIV	**San Ignacio**	**15.71**	**124**	P	**Pn**	**10 37 20.2**	**-0.2**
	3.4nm,0.7s,baz=304,slow=11,SNR=23						
BBSD	**Serra de San D**	**16.73**	**127**	*e*P	**Pn**	**10 37 34.0**	**+1.2**
PTLB	**Pontes e Lacer**	**17.07**	**120**	*e*P	**P**	**10 37 35.1**	**-1.1**
PDRB	**Porto dos Gac**	**18.03**	**105**	*e*P	**Pn**	**10 37 47.9**	**-0.5**
CLDB	**Colider**	**18.80**	**102**	*e*P	**P**	**10 37 54.3**	**-0.9**
ITTB	**Itaituba**	**18.89**	**82**	*e*P	**P**	**10 37 56.4**	**+0.1**
NPGB	**Novo Progresso**	**18.99**	**90**	*e*P	**P**	**10 37 55.7**	**-1.7**
PANT	**Pantanal (Braz**	**20.89**	**125**	*e*P	**P**	**10 38 18.1**	**+0.4**
BDQN	**Bodoquena, MS**	**21.57**	**129**	*e*P	**P**	**10 38 25.9**	**+0.9**
PP1B	**Ponte de Pedra**	**21.68**	**120**	*e*P	**P**	**10 38 29.0**	**+2.8**
RVDE	**Rio Verde (Bra**	**22.28**	**123**	*e*P	**P**	**10 38 33.7**	**+1.5**
AQDB	**Aquidauana**	**22.41**	**128**	*e*P	**P**	**10 38 35.1**	**+1.7**
SNDB	**Serra Nova Dou**	**23.33**	**103**	*e*P	**P**	**10 38 42.9**	**+0.9**
MCPB	**Macapa, AP**	**23.42**	**74**	*e*P	**P**	**10 38 44.2**	**+1.3**
AMBA	**Amambai (Brazi**	**24.34**	**132**	*e*P	**P**	**10 38 53.7**	**+2.5**
TXAR	**Lajitas Array**	**46.01**	**324**	P	**P**	**10 41 55.9**	**+0.1**
	0.5nm,0.5s,baz=148,slow=8.1,SNR=10.0 0.5nm,0.5s						
YKA	**Yellowknife Ar**	**76.11**	**342**	P	**P**	**10 45 17.2**	**-0.8**
	0.4nm,0.5s,baz=141,slow=6.3,SNR=14 0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**78.35**	**75**	P	**P**	**10 45 30.1**	**-1.4**
	0.6nm,0.5s,baz=265,slow=4.1,SNR=4.3						

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*GRAL **26** 10:35:16.4±0.3, 33°.71N×34°.97E, h26^{km}±2^{km}, MD3.2*
*NIC **26** 10:35:16.1±0.0, 33°.71N×35°.04E, h33^{km}±55^{km}, Ml3.2/10*
*GII **26** 10:35:16.4±0.0, 33°.59N×35°.00E, h14^{km}, MD2.8/9,*
Mm3.0/11
*JSO **26** 10:35:18.1, 33°.54N×35°.10E, h8^{km}±6^{km}, ML2.7/12,*
Mw3.1/12
*DDA **26** 10:35:20.6±0.0, 34°.27N×34°.81E, h7^{km}±3^{km}, ML2.6*
*ISK **26** 10:35:20.5, 34°.02N×34°.56E, h11^{km}, ML3.4/16*
ISC 26 10:35:13.1±1.1**, 33°.73N**±0°.02×**35°.00E**±0°.02**, h14**^{km}±9^{km}**,**
n72, σ1^{s}.58/114**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BEYL	**Beirut**	**0.44**	**71**	*e*P	**Pn**	**10 35 25.4**	**+0.5**
DQRL	**Deir Qamar**	**0.48**	**93**	*e*P	**Pn**	**10 35 26.1**	**+0.5**
DQRL				*e*S	**Sb**	**10 35 33.1**	**+2.8**
BHL	**Bhannes**	**0.57**	**73**	*e*P	**Pn**	**10 35 27.6**	**+0.7**
BHL				*e*S	**Sn**	**10 35 35.8**	**-0.4**
QRWL	**Qaraoun**	**0.60**	**108**	*e*P	**Pn**	**10 35 27.9**	**+0.6**
HNTI	**Hanita**	**0.67**	**167**	Pg	**Pn**	**10 35 27.7**	**-0.4**
HNTI	**Hanita**	**0.67**	**167**	P	**Pb**	**10 35 27.2**	**+0.7**
HNTI				IAML		10 35 37.5	
SHBL	**Chebaa**	**0.73**	**121**	*e*P	**Pn**	**10 35 29.7**	**+0.5**
RCY	**Rachaya**	**0.74**	**108**	*e*P	**Pn**	**10 35 30.1**	**+0.8**
RCY				*e*S	**Sn**	**10 35 40.1**	**-0.2**
ZAHL	**Zahle**	**0.75**	**80**	*e*P	**Pn**	**10 35 30.3**	**+0.9**
ZAHL				*e*S	**Sn**	**10 35 40.7**	**+0.1**
GEM	**Giv'at Ha'Em**	**0.76**	**133**	Pg	**Pn**	**10 35 29.8**	**+0.3**
GEM				Sg	**Sb**	**10 35 38.6**	**+0.2**
GEM	**Giv'at Ha'Em**	**0.76**	**133**	P	**Pn**	**10 35 29.7**	**+0.3**
GEM				S	**Sg**	**10 35 37.1**	**-0.8**
GEM				IAML		10 35 40.1	
NATI	**Neve Ativ**	**0.78**	**127**	Pg	**Pn**	**10 35 30.1**	**+0.5**
NATI				Sg	**Sb**	**10 35 40.2**	**+1.5**
NATI	**Neve Ativ**	**0.78**	**127**	P	**Pn**	**10 35 29.7**	**+0.1**
NATI				S	**Sg**	**10 35 38.5**	**+0.2**
NATI				IAML		10 35 41.7	
MMA0B	**Mount Meron ar**	**0.79**	**154**	Pg	**Pn**	**10 35 29.8**	**-0.1**
MMA0B				Sg	**Sb**	**10 35 39.2**	**-0.1**
HWQ	**Hawqa**	**0.96**	**55**	*e*P	**Pn**	**10 35 33.7**	**+1.4**
BLGI	**Bet Lehem HaGe**	**1.01**	**171**	Pg	**Pn**	**10 35 33.0**	**+0.2**
BLGI				Sg	**Sg**	**10 35 44.8**	**-1.0**
OFRI	**`Ofer**	**1.11**	**181**	Pg	**Pg**	**10 35 34.3**	**-0.2**
OFRI				Sg	**Sb**	**10 35 47.7**	**-0.7**
OFRI	**`Ofer**	**1.11**	**181**	P	**Pb**	**10 35 34.1**	**0.0**
OFRI				IAML		10 35 50.9	
SHMJ	**Saham**	**1.19**	**147**	P	**Pg**	**10 35 35.9**	**-0.1**
SHMJ				P	**Pb**	**10 35 36.3**	**+0.8**
SHMJ				S	**Sb**	**10 35 50.5**	**-0.3**
SHMJ				IAML		10 35 52.4	
BEIL	**Beino**	**1.27**	**50**	*e*P	**Pg**	**10 35 38.2**	**+0.6**
MMLI	**Mount Malkishu**	**1.34**	**164**	P	**Pn**	**10 35 37.9**	**+0.5**
MMLI				AML	AML	10 35 53.6	
	1.9nm,0.5s						
MMLI				AML	AML	10 35 53.6	
	1.9nm,0.5s						
MMLI				S	**Sb**	**10 35 54.2**	**-0.9**
MMLI	**Mount Malkishu**	**1.34**	**164**	Pg	**Pb**	**10 35 38.1**	**+0.1**
MMLI				Sg	**Sb**	**10 35 54.2**	**-0.9**
QRNJ	**Al-Qirein**	**1.48**	**161**	P	**Pb**	**10 35 40.2**	**-0.1**
QRNJ				S	**Sn**	**10 35 58.3**	**0.0**
QRNJ				IAML		10 35 59.0	
PARAL	**Paralimni**	**1.49**	**328**	P	**Pb**	**10 35 41.0**	**+0.5**
PARAL				S	**Sn**	**10 35 58.6**	**0.0**
PARAL				AML	AML	10 36 01.1	
	0.6nm,0.5s						
PARAL				AML	AML	10 36 01.1	
	0.6nm,0.5s						
PARAL				AML	AML	10 36 01.1	
	0.6nm,0.3s						
PARAL				AML	AML	10 36 01.1	
	0.6nm,0.3s						
SLTI	**Sal'it**	**1.49**	**179**	Pn	**Pb**	**10 35 40.5**	**0.0**
SLTI				Sn	**Sn**	**10 35 58.0**	**-0.7**
HMDT	**Nahal Hemdat**	**1.54**	**163**	Pn	**Pb**	**10 35 41.1**	**-0.3**
HMDT				Sn	**Sn**	**10 36 00.0**	**0.0**
HMDT	**Nahal Hemdat**	**1.54**	**163**	P	**Pg**	**10 35 42.7**	**0.0**
SALP	**Salfit**	**1.67**	**174**	Pn	**Pb**	**10 35 43.2**	**-0.4**
SALP				Sn	**Sn**	**10 36 03.2**	**+0.1**
MVOU	**Mavrovouni**	**1.71**	**319**	P	**Pn**	**10 35 43.6**	**+1.2**
MVOU				AML	AML	10 36 04.3	
	0.5nm,0.4s						
MVOU				AML	AML	10 36 06.4	
	0.5nm,0.4s						
ASGA	**Asgata**	**1.79**	**306**	P	**Pn**	**10 35 44.5**	**+1.0**
ASGA				S	**Sn**	**10 36 06.5**	**+0.4**
ASGA				AML	AML	10 36 09.3	
	0.2nm,0.2s						
ASGA				AML	AML	10 36 09.3	
	0.2nm,0.2s						
ASGA				AML	AML	10 36 11.9	
	0.3nm,0.3s						
ASGA				AML	AML	10 36 11.9	
	0.3nm,0.3s						
UJAP	**Al Uja**	**1.82**	**167**	Pn	**Pn**	**10 35 44.5**	**+0.6**
UJAP				Sn	**Sn**	**10 36 07.0**	**+0.2**
CSS	**Mathiatis**	**1.84**	**312**	Pn	**Pb**	**10 35 46.4**	**-0.2**
CSS				Sn	**Sn**	**10 36 05.3**	**-2.2**
CSS	**Mathiatis**	**1.84**	**312**	P	**Pb**	**10 35 46.0**	**-0.6**
EREN	**Erenkoy**	**1.92**	**339**	Pn	**Pb**	**10 35 48.6**	**+0.8**
LFK	**Lefkose**	**1.96**	**322**	Pn	**Pb**	**10 35 48.2**	**-0.4**
LFK				Sn	**Sn**	**10 36 08.7**	**-1.7**
SZAC	**Souni**	**2.03**	**301**	P	**Pb**	**10 35 48.8**	**-0.9**
SZAC				S	**Sn**	**10 36 12.2**	**+0.2**
SZAC				AML	AML	10 36 18.4	
	1.0nm,0.2s						
SZAC				AML	AML	10 36 18.4	
	1.0nm,0.2s						
SZAC				AML	AML	10 36 19.6	
	1.3nm,0.2s						
SZAC				AML	AML	10 36 19.6	
	1.3nm,0.2s						
TROD	**Troodos**	**2.14**	**305**	P	**Pn**	**10 35 50.3**	**+1.8**
TROD				S	**Sb**	**10 36 17.9**	**-0.3**
TROD				AML	AML	10 36 21.4	
	0.3nm,0.3s						
TROD				AML	AML	10 36 21.4	
	0.3nm,0.3s						
TROD				AML	AML	10 36 25.6	
	0.3nm,0.5s						
TROD				AML	AML	10 36 25.6	
	0.3nm,0.5s						
HSY	**Hisarkoy**	**2.15**	**312**	Pn	**Pb**	**10 35 51.7**	**-0.2**
DSI	**Dead Sea**	**2.18**	**171**	Pn	**Pn**	**10 35 50.0**	**+1.1**
DSI				Sn	**Sn**	**10 36 15.5**	**-0.3**
AMAZ	**Amatzia**	**2.20**	**182**	P	**Pn**	**10 35 50.9**	**+1.7**
AMAZ				S	**Sn**	**10 36 16.1**	**-0.1**
AMAZ	**Amatzia**	**2.20**	**182**	Pn	**Pn**	**10 35 50.3**	**+1.1**
AMAZ				Sn	**Sn**	**10 36 15.8**	**-0.4**
LEF	**Lefka**	**2.22**	**309**	Pn	**Pb**	**10 35 51.9**	**-1.1**
LEF				Sn	**Sn**	**10 36 15.3**	**-1.5**
LEF	**Lefka**	**2.22**	**309**	P	**Pb**	**10 35 52.0**	**-1.0**
LEF				S	**Sn**	**10 36 16.7**	**-0.1**
NATA	**Nata**	**2.26**	**298**	P	**Pb**	**10 35 52.7**	**-1.1**
NATA				S	**Sn**	**10 36 20.0**	**+2.2**
NATA				AML	AML	10 36 29.2	
	1.0nm,0.3s						
NATA				AML	AML	10 36 29.2	
	1.0nm,0.3s						
AKDN	**Akdeniz- Kıbrı**	**2.29**	**314**	Pn	**Pn**	**10 35 52.6**	**+2.2**
YTIR	**Yattir**	**2.37**	**178**	Pn	**Pn**	**10 35 52.6**	**+1.0**
YTIR				Sn	**Sn**	**10 36 20.3**	**-0.1**
ALFC	**Alefka**	**2.44**	**306**	P	**Pn**	**10 35 54.6**	**+2.1**
ALFC				S	**Sn**	**10 36 23.9**	**+1.7**
ALFC				AML	AML	10 36 26.0	
	1.0nm,0.3s						
ALFC				AML	AML	10 36 26.0	
	1.0nm,0.3s						
ALFC				AML	AML	10 36 27.8	
	0.8nm,0.4s						
ALFC				AML	AML	10 36 27.8	
	0.8nm,0.4s						
YAYL	**Yayladag**	**2.47**	**21**	Pn	**Pg**	**10 36 00.5**	**0.0**
YAYL	**Yayladag**	**2.47**	**21**	P	**Pn**	**10 35 54.8**	**+1.8**
YAYL				S	**Sn**	**10 36 22.0**	**-1.1**
YAYL				*i* AML	AML	10 36 27.0	
	comp=E,42nm,0.2s						
LISJ	**El Lisan**	**2.52**	**171**	P	**Pb**	**10 35 56.2**	**-1.9**
LISJ				IAML		10 36 35.9	
AKMS	**Akamas**	**2.55**	**301**	P	**Pn**	**10 35 56.5**	**+2.5**
AKMS				S	**Sn**	**10 36 26.6**	**+1.7**
AKMS				AML	AML	10 36 33.8	
	0.4nm,0.3s						
AKMS				AML	AML	10 36 33.8	
	0.4nm,0.3s						
TISA	**Tisan-Mersin**	**2.65**	**336**	Pn	**Pb**	**10 35 58.8**	**-1.6**
KARG	**Kargicak-Mersi**	**2.68**	**337**	Pn	**Pb**	**10 35 59.4**	**-1.5**
YESI	**Yesilovacik-Me**	**2.70**	**336**	Pn	**Pb**	**10 35 59.6**	**-1.5**
YESI				Sn	**Sn**	**10 36 27.8**	**-0.7**
GULN	**MERSIN_Gulnar**	**2.72**	**334**	P	**Pn**	**10 35 57.6**	**+1.2**
GULN				S	**Sn**	**10 36 25.6**	**-3.4**
GULN				*i* AML	AML	10 36 32.0	
	comp=N,30nm,0.5s						
SILI	**Silifke-Mersin**	**2.77**	**342**	Pn	**Pb**	**10 36 00.8**	**-1.6**
KIZK	**Mersin**	**2.83**	**346**	Pn	**Pb**	**10 36 02.3**	**-1.1**
TEKE	**Tekeli-Mersin**	**2.86**	**328**	Pn	**Pn**	**10 36 01.1**	**+2.8**
KZIT	**Kziot**	**2.86**	**190**	P	**Pn**	**10 35 59.9**	**+1.5**
KZIT				S	**Sn**	**10 36 30.2**	**-2.5**
KZIT				AML	AML	10 36 35.1	
	0.3nm,0.4s						
KZIT				AML	AML	10 36 35.1	
	0.3nm,0.4s						
KZIT	**Kziot**	**2.86**	**190**	Pn	**Pn**	**10 35 59.1**	**+0.8**
KZIT	**Kziot**	**2.86**	**190**	P	**Pn**	**10 36 00.4**	**+2.1**
TEVE	**Tevekalti-Mers**	**2.98**	**335**	Pn	**Pb**	**10 36 03.7**	**-2.3**
BERE	**Bereket-Mersin**	**2.99**	**331**	Pn	**Pn**	**10 36 02.0**	**+1.8**
YURE	**YUREGIR**	**3.13**	**9**	P	**Pn**	**10 36 04.2**	**+2.2**
YURE				S	**Sn**	**10 36 35.1**	**-4.1**
YURE				*i* AML	AML	10 37 24.0	
	comp=E,18nm,1.6s						
GAZI	**Gazipasa**	**3.33**	**319**	Pn	**Pn**	**10 36 07.6**	**+2.9**
GAZI	**Gazipasa**	**3.33**	**319**	P	**Pn**	**10 36 06.6**	**+1.8**
GAZI				S	**Sn**	**10 36 40.3**	**-3.8**
GAZI				*i* AML	AML	10 36 47.0	
	comp=N,27nm,0.8s						
GAZI				*i* AML	AML	10 36 49.0	
	comp=E,28nm,0.3s						
PRNI	**Paran**	**3.37**	**180**	Pn	**Pn**	**10 36 06.7**	**+1.4**
KRMN	**Karaman**	**3.71**	**338**	Pn	**Pn**	**10 36 13.7**	**+3.6**
KERG	**Konya-Eregli**	**3.74**	**349**	P	**Pn**	**10 36 13.2**	**+2.7**
KERG				S	**Sn**	**10 36 51.6**	**-2.9**
KERG				*i* AML	AML	10 36 59.0	
	comp=E,24nm,0.2s						
KERG				*i* AML	AML	10 38 11.0	
	comp=N,34nm,4.3s						
HDMB	**Hadim**	**3.82**	**328**	Pn	**Pn**	**10 36 15.5**	**+3.8**
KKBE	**Karaman, Kazim**	**3.86**	**335**	P	Pn	10 36 03.8	-8.4
KKBE				S	**Sn**	**10 36 51.1**	**-6.3**
MBRI	**Mt Berech**	**3.93**	**181**	Pn	**Pn**	**10 36 15.1**	**+2.0**

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*IDC **26** 10:58:57.1±9.4, 13°.76S×168°.73E, h170^{km}±85^{km}, mb3.7/4,*
mbtmp4.1/5, Error ellipse: s-maj=78.2km s-min=22.9km
az=177.0
*NOU **26** 10:59:14.4, 14°.69S×167°.72E, h142^{km}, MLv4.3/8,*
Vanuatu Islands
ISC 26 10:59:02.3±3.1**, 13°.9S**±0°.2×**167°.9E**±0°.3**, h150**^{km}**, n9,**
σ1^{s}.10/9**, mb3.8**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**3.85**	**176**	P	**Pn**	**11 00 01.8**	**+1.2**
KOUNC	**Koumac, New Ca**	**7.50**	**207**	P	**Pn**	**11 00 50.7**	**+1.7**
YATNC	**Mamie plateau,**	**8.21**	**187**	P	**Pn**	**11 00 58.6**	**+0.1**
DZM	**Mont Dzumac**	**8.29**	**189**	P	**Pn**	**11 00 59.3**	**-0.3**
	0.9nm,0.3s,baz=97,slow=17,SNR=12						
DZM				S	**Sn**	**11 02 30.9**	**-0.9**
	1.6nm,0.5s,baz=303,slow=23,SNR=2.1						
DZM	**Mont Dzumac**	**8.29**	**189**	P	**Pn**	**11 01 00.6**	**+1.0**
STKA	**Stephens Creek**	**30.02**	**229**	P	**P**	**11 04 57.1**	**0.0**
	1.2nm,0.4s,baz=51,slow=6.5,SNR=6.0 1.2nm,0.4s						
RAR	**Rarotonga**	**31.63**	**108**	P	P	11 04 57.5	-14
	12nm,0.5s,baz=267,slow=12,SNR=3.3 12nm,0.5s						
WRA	**Warramunga Arr**	**32.64**	**255**	P	**P**	**11 05 19.9**	**-0.4**
	0.5nm,0.6s,baz=85,slow=9.3,SNR=12 0.5nm,0.6s						
ASAR	**Alice Springs**	**33.56**	**248**	P	**P**	**11 05 27.4**	**-0.9**
	0.7nm,0.4s,baz=80,slow=8.9,SNR=30 0.7nm,0.4s						

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*KRNET **26** 11:03:13.4±0.1, 43°.31N×74°.69E, h12^{km}, mb2.8*
*KNET **26** 11:03:13.2±0.5, 43°.31N×74°.71E, h0^{km}, ml1.9, Error*
ellipse: s-maj=3.7km s-min=1.2km az=11.0
*NNC **26** 11:03:14.5±0.8, 43°.30N×74°.72E, h0^{km}, mb3.2, mpv3.4,*
Error ellipse: s-maj=9.2km s-min=5.3km az=1.0,
Suspected Mining explosion.
ISC 26 11:03:13.8±0.8**, 43°.31N**±0°.02×**74°.70E**±0°.02**, h0**^{km}**, n33,**
σ0^{s}.75/63**, 40C-7D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGDS	**Sogindy**	**0.15**	**341**	P	**Pg**	**11 03 17.0**	**+0.4**
	206nm,0.1s						
SGDS				S	**Sg**	**11 03 19.4**	**+0.8**
	3µm,0.3s						
USP	**Ospenovka**	**0.15**	**253**	⇑P	**Pg**	**11 03 16.0**	**-0.6**
	983nm,0.1s,SNR=1978						
USP				⇓S	**Sg**	**11 03 18.5**	**0.0**
	3µm,0.5s						
USP	**Ospenovka**	**0.15**	**253**	⇑*i*P	**Pg**	**11 03 16.4**	**-0.2**
	baz=52						
USP				⇑*i*S	**Sg**	**11 03 18.5**	**0.0**
	baz=52						
CHMS	**Chumysh**	**0.32**	**173**	⇑P	**Pg**	**11 03 19.9**	**+0.1**
	64nm,0.2s,SNR=29						
CHMS				⇑S	**Sg**	**11 03 24.1**	**+0.2**
	144nm,0.2s						
CHMS	**Chumysh**	**0.32**	**173**	⇑*i*P	**Pg**	**11 03 19.7**	**-0.1**
	baz=72						
CHMS				⇑*i*S	**Sg**	**11 03 24.2**	**+0.3**
	baz=72						
KBK	**Karagaybulak**	**0.68**	**164**	⇑P	**Pg**	**11 03 27.0**	**+0.2**
	38nm,0.1s,SNR=24						
KBK				⇓S	**Sg**	**11 03 36.7**	**+1.1**
	65nm,0.2s						
KBK	**Karagaybulak**	**0.68**	**164**	⇑*i*P	**Pg**	**11 03 26.6**	**-0.2**
	baz=64						
KBK				⇑*i*S	**Sg**	**11 03 36.1**	**+0.5**
	baz=64						
AAK	**Ala-Archa**	**0.69**	**192**	⇑P	**Pg**	**11 03 27.0**	**0.0**
	27nm,0.2s,SNR=88						
AAK				⇓S	**Sg**	**11 03 36.1**	**+0.2**
	25nm,0.2s						
AAK	**Ala-Archa**	**0.69**	**192**	⇑*i*P	**Pg**	**11 03 26.7**	**-0.3**
	baz=92						
AAK				⇑*i*S	**Sg**	**11 03 36.4**	**+0.5**
	baz=92						
TKM2	**Tokmak 2**	**0.77**	**120**	⇑P	**Pg**	**11 03 28.1**	**-0.3**
	12nm,0.1s,SNR=15						
TKM2				⇑S	**Sg**	**11 03 38.5**	**+0.1**
	53nm,0.1s						
TKM2	**Tokmak 2**	**0.77**	**120**	⇑*i*P	**Pg**	**11 03 28.1**	**-0.3**
	baz=20						
TKM2				⇑*i*S	**Sg**	**11 03 38.9**	**+0.5**
	baz=20						
EKS2	**Erkin-Say**	**0.94**	**226**	⇑P	**Pg**	**11 03 31.3**	**-0.4**
	15nm,0.1s,SNR=58						
EKS2	**Erkin-Say**	**0.94**	**226**	⇑*i*P	**Pg**	**11 03 31.2**	**-0.5**
	baz=26						
EKS2				⇑*i*S	**Sg**	**11 03 44.2**	**+0.4**
	baz=26						
KST	**Kastek**	**0.96**	**106**	P	**Pg**	**11 03 32.3**	**+0.1**
	14nm,0.2s						
KST				S	**Sb**	**11 03 46.1**	**-0.7**
	50nm,0.5s						
UCH	**Uchtor**	**1.09**	**187**	⇑P	**Pg**	**11 03 34.2**	**-0.4**
	11nm,0.1s,SNR=13						
UCH	**Uchtor**	**1.09**	**187**	⇑*i*P	**Pg**	**11 03 34.3**	**-0.4**
	baz=87						
UCH				⇑*i*S	**Sg**	**11 03 49.5**	**+0.7**
	baz=87						
MRKS	**Merke**	**1.22**	**243**	P	**Pg**	**11 03 36.0**	**-1.1**
	24nm,0.2s						
MRKS				S	**Sg**	**11 03 51.9**	**-1.0**
	30nm,0.3s						
MTBS	**Maitube**	**1.28**	**98**	P	**Pg**	**11 03 37.8**	**-0.5**
	13nm,0.2s						
MTBS				S	**Sb**	**11 03 55.2**	**-0.7**
	41nm,0.4s						
KUU	**Kurty**	**1.33**	**63**	P	**Pg**	**11 03 38.8**	**-0.4**
	16nm,0.2s						
KUU				S	**Sb**	**11 03 56.9**	**-0.3**
	22nm,0.2s						
AML	**Almayashu**	**1.39**	**212**	⇑P	**Pg**	**11 03 39.5**	**-1.0**
	8.0nm,0.1s,SNR=17						
AML	**Almayashu**	**1.39**	**212**	⇑*i*P	**Pg**	**11 03 39.8**	**-0.6**
	baz=12						
AML				⇑*i*S	**Sg**	**11 03 58.9**	**+0.4**
	baz=12						
ARLS	**Aral**	**1.48**	**191**	⇑*i*P	**Pn**	**11 03 41.2**	**-0.6**
	baz=91						
ARLS				⇑*i*S	**Sb**	**11 04 01.5**	**0.0**
	baz=91						
KTBS	**Karatobe**	**1.50**	**74**	P	**Pn**	**11 03 41.9**	**-0.1**
	12nm,0.2s						
KTBS				S	**Sn**	**11 04 02.2**	**-0.1**
	118nm,0.4s						
ULHL	**Ulahol**	**1.56**	**133**	⇓P	**Pn**	**11 03 42.8**	**-0.2**
	8.3nm,0.1s,SNR=8.4						
ULHL	**Ulahol**	**1.56**	**133**	⇑*i*P	**Pn**	**11 03 42.6**	**-0.3**
	baz=33						

ULHL				⇑iS	Sb	11 04 04.0	0.0
	baz=33						
CHKK	Chushkaly	1.75	71	P	Pg	11 03 47.1	-0.2
CHKK				S	Sg	11 04 11.0	+1.0
MNAS	Manas	1.81	244	⇑iP	Pn	11 03 46.8	+0.5
	baz=44						
MNAS				⇑iS	Sb	11 04 11.3	+0.2
	baz=44						
KDJ	Kajisay	2.18	122	⇓iP	Pb	11 03 52.9	-1.3
	baz=22						
KDJ				⇓iS	Sb	11 04 21.5	-0.3
	baz=22						
ANVS	Anan'yevo	2.24	103	⇑iP	Pn	11 03 53.4	+1.1
	baz=3.0						
ANVS				⇑iS	Sb	11 04 23.4	-0.2
	baz=3.0						
ARK	Arkit	2.52	234	⇑iP	Pn	11 03 57.7	+1.6
	baz=34						
ARK				⇑iS	Sn	11 04 29.0	+1.4
	baz=34						
KK31	Karatay Array	3.07	268	Pn	Pb	11 04 08.1	-1.1
	0.6nm,0.3s,baz=88,slow=15,SNR=52						
KK31				Pg	Pg	11 04 11.2	-1.3
	1.4nm,0.5s,baz=86,slow=16,SNR=16						
KK31				⇑Sn	Sb	11 04 47.5	+0.3
	1.0nm,0.3s,baz=86,slow=28,SNR=7.9						
KK31				⇓Lg	Lg	11 04 55.6	
	2.9nm,0.3s						
TRKS	Terek-Say	3.18	237	⇑iP	Pn	11 04 06.9	+1.7
	baz=36						
TRKS				⇑iS	Sn	11 04 46.2	+2.4
	baz=36						
MK31	Makanchi Array	6.41	54	P	Pn	11 04 50.9	+1.5
	0.8nm,0.5s,baz=231,slow=11,SNR=15						
MK31				⇑S	Sn	11 06 02.3	-0.9
	1.4nm,1.0s,baz=230,slow=26,SNR=4.2						

WEL **26** *11:17:00, 40°.09S×175°.01E, h30^{km}, ML4.3, Mw3.9, Moment Tensor Solution. s4 Moment tensor: Scale 10^{14} Nm; M_{rr}-0.21; $M_{\theta\theta}$3.09; $M_{\phi\phi}$-2.87; $M_{r\theta}$-3.93; $M_{\theta\phi}$7.32; $M_{\phi r}$1.20; Fault plane solution: $M_0$8.91000×10^{14} NP1: ϕ_s192.00000°, δ63.00000°, λ-177.00000°. NP2: ϕ_s101.00000°, δ88.00000°, λ-27.00000°. Principal axes: T 88.1200, Plg17.0000°, Azm150.0000°; N -90.0600, Plg63.0000°, Azm277.0000°; P 1.9500, Plg20.0000°, Azm53.0000°;*

WEL **26** *11:17:29.7, 40°S±4°×17°5E±°, h30^{km}±8^{km}, M4.2/134, ML4.7/30, MLv4.2/134 Error ellipse: s-maj=0.0km s-min=0.0km az=24.5, confirmed*

NOU **26** *11:17:29.7, 40°.13S×174°.98E, h72^{km}, MLv4.5/16, Cook Strait, New Zealand*

NEIC **26** *11:17:29.7±1.2, 40°.09S±0°.04×174°.99E±0°.07, h28^{km}±4^{km}, mb4.3/3, Error ellipse: s-maj=7.5km s-min=5.9km az=110.0*

ISC 26 11:17:29.4±1.0, **40°.09S**±0°.02×**174°.99E**±0°.02, **h30**^{km}±9^{km}, **n199**, σ**0^{s}.92**/209, **mb4.3**/3, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WAZ	Wanganui	0.33	0	P	Pb	11 17 37.7	+0.3
WAZ				S	Sn	11 17 44.2	+0.2
POWZ	Post Office Ro	0.67	117	P	Pb	11 17 42.9	+0.2
POWZ				S	Sn	11 17 52.4	-0.1
MRZ	Mangatainoka R	0.73	142		Pb	11 17 43.8	+0.1
MRZ	Mangatainoka R	0.73	142	P	Pb	11 17 43.8	+0.1
MRZ				S	Sb	11 17 53.6	+0.2
OGWZ	Otaki Gorge	0.74	169	P	Pb	11 17 43.4	-0.5
OGWZ				S	Sb	11 17 52.8	-0.9
TSZ	Takapari Road	0.75	88	P	Pb	11 17 44.1	0.0
TSZ				S	Sn	11 17 54.5	+0.1
LREZ	Lake Rotokare	0.77	324	P	Pb	11 17 44.7	+0.4
LREZ				S	Sn	11 17 56.8	+2.0
KIW	Kapiti Island	0.78	184	P	Pn	11 17 43.4	-1.0
KIW				S	Sb	11 17 53.0	-1.6
MTVZ	Mangateitei	0.80	28	P	Pn	11 17 44.4	-0.2
PKVZ	Pokaka	0.84	19	P	Pn	11 17 45.0	-0.4
PRWZ	Pori Road	0.89	122	P	Pb	11 17 46.7	+0.4
WNVZ	Wahianoa	0.89	32	P	Pn	11 17 46.0	-0.1
TRVZ	Turoa	0.90	29	P	Pn	11 17 46.0	-0.2
MOVZ	Moawhango	0.90	41	P	Pn	11 17 45.7	-0.4
HOWZ	Holdsworth Sta	0.91	154	P	Pn	11 17 46.2	+0.1
DRZ	Dome Shelter	0.93	29	P	Pn	11 17 46.5	-0.2
WHVZ	Whangaehu Hut	0.93	30	P	Pn	11 17 46.4	-0.3
DVHZ	Dannevirke	0.93	104	P	Pb	11 17 47.4	+0.4
FWVZ	Far West T-bar	0.94	28	P	Pn	11 17 46.5	-0.3
PNHZ	Pukenui	0.95	80	P	Pn	11 17 47.0	+0.2
TUVZ	Tukino	0.97	32	P	Pn	11 17 47.2	+0.1
TIWZ	Tintock	0.97	135	P	Pb	11 17 47.9	+0.1
VRZ	Vera Road	0.98	350	P	Pn	11 17 47.5	+0.4
PREZ	Palmer Road	0.98	319	P	Pb	11 17 48.0	+0.1
CAW	Cannon Point	1.02	177	P	Pn	11 17 47.5	-0.3
BHHZ	Black Hill Sta	1.02	55	P	Pn	11 17 47.4	-0.4
NGZ	Ngauruhoe	1.03	28	P	Pn	11 17 47.7	-0.3
SNVZ	South Ngauruho	1.03	30	P	Pn	11 17 48.2	+0.1
OTVZ	Oturere	1.06	30	P	Pn	11 17 48.4	0.0
NEZ	North Egmont	1.07	320	P	Pn	11 17 49.1	+0.7
NNVZ	North Ngauruho	1.07	27	P	Pn	11 17 48.4	-0.2
TWVZ	Taurewa	1.07	19	P	Pn	11 17 48.0	-0.5
WTVZ	West Tongariro	1.08	26	P	Pn	11 17 48.3	-0.3
DUWZ	D'Urville Isla	1.08	228	P	Pn	11 17 47.6	-1.0
DREZ	Durham Road	1.08	326	P	Pb	11 17 49.6	0.0
NMEZ	Namu Road	1.09	308	P	Pb	11 17 49.5	-0.2
KHEZ	Kahui Hut	1.09	316	P	Pb	11 17 49.7	0.0
KHEZ	Kahui Hut	1.09	316	P	Pb	11 17 49.8	0.0
ETVZ	East Tongariro	1.10	31	P	Pn	11 17 49.0	0.0
KRVZ	Karewarewa	1.11	27	P	Pn	11 17 48.9	-0.2
WPHZ	Waipukurau	1.12	89	P	Pb	11 17 50.6	+0.5
TMVZ	Te Maari	1.12	30	P	Pn	11 17 49.3	+0.1
NTVZ	North Tongarir	1.12	29	P	Pn	11 17 49.2	-0.1
BFZ	Birch Farm	1.13	122		Pb	11 17 50.3	-0.1
BFZ	Birch Farm	1.13	122	P	Pn	11 17 49.5	+0.2
BFZ	Birch Farm	1.13	122	P	Pn	11 17 49.7	+0.5
MHEZ	Mangahewa	1.13	333	P	Pb	11 17 50.6	+0.2
MTW	Mount Morrison	1.14	160	P	Pn	11 17 49.7	+0.4
PKE	Pukeiti	1.18	319	P	Pb	11 17 51.5	+0.2
NBEZ	Newall Road No	1.19	313	P	Pb	11 17 51.1	-0.2
WEL	Wellington	1.21	188	P	Pn	11 17 50.2	-0.1
TMWZ	Te Maipa	1.23	146	P	Pn	11 17 51.0	+0.4
KATZ	Kakaramea	1.24	27	P	Pn	11 17 51.1	+0.3
CPWZ	Castlepoint	1.24	132	P	Pb	11 17 52.3	+0.1
SNZO	South Karori	1.24	190		Pb	11 17 51.9	-0.4
SNZO	South Karori	1.24	190	P	Pn	11 17 50.6	-0.1
TCW	Tory Channel	1.25	205		Pn	11 17 50.9	0.0
TCW	Tory Channel	1.25	205	P	Pn	11 17 50.2	-0.6
PRHZ	Porangahau	1.28	99	P	Pb	11 17 52.7	-0.2
KWHZ	Kaweka Forest	1.29	60	P	Pn	11 17 52.2	+0.7
RITZ	Rihia Road	1.30	32	P	Pn	11 17 52.1	+0.6
BHW	Baring Head	1.32	184		Pn	11 17 52.2	+0.4
PAWZ	Paruwai Farm	1.34	166	P	Pn	11 17 52.3	+0.2
MSWZ	Moikau Station	1.34	171	Pn	Pn	11 17 52.9	+0.8
RATZ	Rangitukua	1.36	27	P	Pn	11 17 53.0	+0.5
TRWZ	Traveller	1.42	158	P	Pb	11 17 54.6	-0.6
PXZ	Pawanui	1.44	88	P	Pn	11 17 54.5	+1.0
MCHZ	McNeill Hill	1.47	65	P	Pb	11 17 56.1	0.0
BKZ	Black Stump Fm	1.48	52		Pb	11 17 55.6	-0.8
BKZ	Black Stump Fm	1.48	52	P	Pb	11 17 55.9	-0.5
BKZ	Black Stump Fm	1.48	52	P	Pn	11 17 55.2	+1.1
KAHZ	Kahuranaki	1.48	79	P	Pb	11 17 55.5	-0.9
WATZ	Wairara	1.49	23	P	Pn	11 17 54.8	+0.5
PLWZ	Palliser	1.50	172		Pn	11 17 54.4	+0.1
PLWZ	Palliser	1.50	172	P	Pn	11 17 54.6	+0.3
TUWZ	Tuamarina	1.56	210		Pn	11 17 55.3	+0.3
TUWZ	Tuamarina	1.56	210	P	Pn	11 17 54.8	-0.3
HIZ	Hauiti	1.57	356		Pn	11 17 55.7	+0.4
HIZ	Hauiti	1.57	356	P	Pn	11 17 56.0	+0.7
HIZ	Hauiti	1.57	356	P	Pn	11 17 55.7	+0.4
WHTZ	Whakaora	1.61	28	P	Pb	11 17 58.2	-0.3
NNZ	Nelson	1.66	227		Pn	11 17 57.3	+0.8
NNZ	Nelson	1.66	227	P	Pn	11 17 56.2	-0.3
CKHZ	Cape Kidnapper	1.67	76	P	Pb	11 17 58.5	-1.0
MRHZ	Matea Rd	1.67	42	P	Pn	11 17 57.3	+0.6
NMHZ	Naumai	1.72	56	P	Pb	11 17 59.7	-0.7
KUTZ	Kaahu Road	1.72	22	P	Pn	11 17 58.5	+1.1
ARHZ	Aropaoanui	1.76	63	P	Pn	11 17 59.5	+1.7
CMWZ	Cape Campbell	1.76	199		Pn	11 17 58.8	+0.9
CMWZ	Cape Campbell	1.76	199	P	Pn	11 17 59.2	+1.3
TLZ	Tolley Road	1.81	14	P	Pn	11 17 58.1	-0.5
TKNZ	Takaka Hill	1.81	238		Pn	11 17 58.7	+0.2
TKNZ	Takaka Hill	1.81	238	P	Pn	11 17 58.9	+0.3
WPRZ	Whakapapatarin	1.81	31	P	Pn	11 17 59.5	+0.8
BSWZ	Blackbirch Sta	1.83	207		Pn	11 17 59.6	+0.7
BSWZ	Blackbirch Sta	1.83	207	P	Pn	11 17 59.6	+0.7
ALRZ	Allen Road	1.85	35	P	Pn	11 17 60.0	+0.8
MTHZ	Maungataniwha	1.89	50	P	Pn	11 18 00.8	+1.1
PRRZ	Plateau Road	1.93	35	P	Pn	11 18 01.0	+0.8
GRRZ	Galatos Road	1.94	27	P	Pn	11 18 02.3	+1.9
HRRZ	Handcock Road	1.97	31	P	Pn	11 18 02.3	+1.5
RAHZ	Arahi	2.00	55	P	Pn	11 18 02.8	+1.5
WHHZ	Waihua	2.01	61	P	Pn	11 18 03.0	+1.7
QRZ	Quartz Range	2.01	248		Pn	11 18 01.3	0.0
QRZ	Quartz Range	2.01	248	P	Pn	11 18 01.5	+0.1
QRZ	Quartz Range	2.01	248	P	Pn	11 18 01.4	0.0
QRZ				S	Sn	11 18 23.6	-1.9
HSRZ	Hossack Road	2.03	29	P	Pn	11 18 02.8	+1.2
RRRZ	Republican Roa	2.11	35	P	Pn	11 18 03.7	+0.9
HLRZ	Highlands Stat	2.12	31	P	Pb	11 18 06.6	-0.6
MUGZ	Murupara	2.12	41	P	Pn	11 18 04.8	+1.9
UTU	Utuhina	2.13	27	P	Pb	11 18 06.8	-0.5
RTZ	Ruatahuna	2.13	47	Pn	Pn	11 18 03.9	+0.8
RTZ	Ruatahuna	2.13	47	P	Pn	11 18 04.4	+1.2
MRNZ	Matariki Terra	2.14	232		Pn	11 18 03.8	+0.7
MRNZ	Matariki Terra	2.14	232	P	Pn	11 18 03.7	+0.7
MRNZ				S	Sn	11 18 30.1	+1.4
NGRZ	Ngongotaha	2.19	26	P	Pb	11 18 07.6	-0.8
TARZ	Mount Tarawera	2.19	33	P	Pn	11 18 05.4	+1.5
SNGZ	Shannon Statio	2.24	55	P	Pn	11 18 05.7	+1.1
OMRZ	Omania	2.25	29	P	Pb	11 18 07.7	-1.8
KARZ	Kaharoa	2.29	26	P	Pb	11 18 08.9	-1.1
THZ	Tophouse	2.30	223		Pn	11 18 07.0	+1.7
THZ	Tophouse	2.30	223	P	Pn	11 18 05.9	+0.6
THZ				S	Sn	11 18 34.4	+1.7
KNZ	Kokohu	2.33	64	P	Pn	11 18 06.2	+0.5
TOZ	Tahuroa Road	2.39	10	Pn	Pn	11 18 06.6	+0.1
TOZ	Tahuroa Road	2.39	10	P	Pn	11 18 06.1	-0.4
EDRZ	Edgecumbe	2.40	35	P	Pn	11 18 09.5	+2.8
MHGZ	Mahia Peninsul	2.44	68	P	Pn	11 18 08.5	+1.3
URZ	Urewera	2.46	43	P	Pn	11 18 07.9	+0.3
URZ	Urewera	2.46	43	P	Pn	11 18 07.8	+0.3
RAGZ	Rawiri	2.47	51	P	Pb	11 18 11.0	-2.2
MARZ	Manawahe	2.48	33	P	Pn	11 18 09.2	+1.4
RIGZ	Rimuhau	2.56	58	P	Pn	11 18 09.5	+0.6
TGRZ	Tauranga	2.56	23	P	Pb	11 18 12.4	-2.2
KHZ	Kahutara	2.57	205		Pn	11 18 09.0	0.0
KHZ	Kahutara	2.57	205	P	Pn	11 18 08.9	-0.1
KHZ	Kahutara	2.57	205	P	Pn	11 18 09.0	0.0
MWZ	Matawai	2.64	49	P	Pn	11 18 10.7	+0.7
WHRZ	Whale Island	2.71	35	P	Pn	11 18 13.4	+2.4
TKGZ	Te Karaka	2.77	54	P	Pn	11 18 12.4	+0.8
DSZ	Denniston Nort	2.92	234		Pn	11 18 14.3	+0.4
DSZ	Denniston Nort	2.92	234	P	Pn	11 18 14.1	+0.2
MYRZ	Mayor Island	2.97	20	P	Pb	11 18 18.6	-3.1
RUGZ	Raukumara Rang	2.98	46	P	Pn	11 18 15.2	+0.4
TWGZ	Tauwhareparae	3.01	52	P	Pn	11 18 15.9	+0.8
AWAZ	Awhitu Peninsu	3.03	355	P	Pn	11 18 16.3	+1.0
ETAZ	East Tamaki Re	3.13	359	P	Pn	11 18 17.1	+0.4
WTAZ	Waiatarua	3.17	354	P	Pn	11 18 18.6	+1.3
HAZ	Te Kaha	3.19	44	P	Pn	11 18 17.4	-0.1
EPAZ	Eden Park BICE	3.21	357	P	Pn	11 18 18.5	+0.7
GVZ	Greta Valley S	3.23	206		Pn	11 18 17.1	-1.0
GVZ	Greta Valley S	3.23	206	P	Pn	11 18 17.4	-0.7
HBAZ	Herne Bay Bore	3.24	356	P	Pn	11 18 18.9	+0.7
PUZ	Puketiti	3.25	53	P	Pn	11 18 18.2	-0.1
PKGZ	Pakihiroa	3.26	49	P	Pn	11 18 19.1	+0.5
WIAZ	Waiheke Island	3.29	2	P	Pn	11 18 19.2	+0.2
MBAZ	Motutapu North	3.31	359	P	Pn	11 18 19.6	+0.3
RVAZ	Riverhead Bore	3.33	354	P	Pn	11 18 20.0	+0.5
LTZ	Lake Taylor	3.38	216	P	Pn	11 18 19.8	-0.4
KUZ	Kuaotunu	3.39	10	P	Pn	11 18 19.9	-0.3
KUZ	Kuaotunu	3.39	10	P	Pn	11 18 19.9	-0.3
ABAZ	Army Bay	3.48	358	P	Pn	11 18 22.5	+0.9
WMGZ	Waiomatatini S	3.50	51	P	Pn	11 18 21.7	-0.1
AMCZ	Amberley	3.55	209	P	Pn	11 18 21.5	-0.9
MXZ	Matakaoa Point	3.62	47	P	Pn	11 18 23.9	+0.5
MXZ	Matakaoa Point	3.62	47	P	Pn	11 18 23.9	+0.5
INZ	Inchbonnie	3.75	224	P	Pn	11 18 24.9	-0.3
GRZ	Great Barrier	3.85	6	P	Pn	11 18 26.6	0.0
OXZ	Oxford	3.92	213	P	Pn	11 18 25.7	-1.8
AKCZ	Akaroa Harbour	4.09	202	P	Pn	11 18 27.9	-1.9
WCZ	Waipu Caves	4.17	353	P	Pn	11 18 31.3	+0.2
WVZ	Waitaha Valley	4.37	225	P	Pn	11 18 34.6	+1.0
WACZ	Wakanui South	4.51	210	P	Pn	11 18 33.6	-2.1
RPZ	Rata Peaks	4.66	218	P	Pn	11 18 37.8	0.0
RPZ	Rata Peaks	4.66	218	P	Pn	11 18 38.3	+0.5
GCSZ	Gaunt Creek Bo	4.75	226	P	Pn	11 18 40.0	+1.0
ARCZ	Arundel	4.79	215	P	Pn	11 18 39.3	-0.2
OUZ	Omahuta	4.98	347	P	Pn	11 18 42.9	+0.7
OUZ	Omahuta	4.98	347	P	Pn	11 18 43.0	+0.9
FOZ	Fox Glacier	5.17	227	Pn	Pn	11 18 43.6	-1.1
FOZ	Fox Glacier	5.17	227	P	Pn	11 18 43.7	-1.1
TMZ	Timaru	5.21	213	P	Pn	11 18 43.4	-1.9
LBZ	Lake Benmore	5.58	218	Pn	Pn	11 18 49.5	-0.9
LBZ	Lake Benmore	5.58	218	P	Pn	11 18 49.0	-1.4
ODZ	Otahua Downs	5.90	211	Pn	Pn	11 18 53.0	-1.8
ODZ	Otahua Downs	5.90	211	P	Pn	11 18 53.4	-1.4
JCZ	Jackson Bay	6.09	227	P	Pn	11 18 56.4	-1.1
JCZ	Jackson Bay	6.09	227	P	Pn	11 18 57.6	+0.1
WKZ	Wanaka	6.47	221	P	Pn	11 19 03.3	+0.7
EAZ	Earnscleugh	6.63	217	P	Pn	11 19 03.3	-1.4
CTZ	Chatham Island	7.25	123	P	Pn	11 19 12.3	-0.9
CTZ	Chatham Island	7.25	123	P	Pn	11 19 12.6	-0.6
MLZ	Mavora Lakes	7.30	222	P	Pn	11 19 16.9	+2.8
SYZ	Scrubby Hill	7.73	212	P	Pn	11 19 19.2	-0.6
WHZ	Wether Hill Ro	7.76	219	Pn	Pn	11 19 20.7	+0.3
WHZ	Wether Hill Ro	7.76	219	P	Pn	11 19 22.0	+1.7
ASAR	Alice Springs	38.16	283	P	P	11 24 46.3	+0.1
WRAB	Tennant Creek	40.08	288	P	P	11 25 01.0	-1.2
WRAB				IAmb	IAmb	11 25 32.3	
	comp=Z,6.5nm,1.2s						
WB0	Warramunga Arr	40.15	288	P	P	11 25 03.6	+0.7
WB0				IAmb	IAmb	11 25 40.1	
	comp=Z,7.8nm,1.4s						
QSPA	South Pole Qui	50.04	180	P	P	11 26 22.4	+1.4
QSPA				IAmb	IAmb	11 26 45.8	
	comp=Z,6.2nm,1.2s						

TEH **26** *11:38:00.5, 38°.45N×44°.47E, h4^{km}±63^{km}, ML3.6*

ISN **26** *11:38:01.4±1.3, 38°.59N×44°.28E, h14^{km}, ML3.3*

AZER **26** *11:38:01.5±0.1, 38°.50N×44°.63E, h5^{km}, Error ellipse: s-maj=2.2km s-min=1.7km az=245.0*

ISK **26** *11:38:02.0, 38°.51N×44°.33E, h5^{km}, ML3.6/15*

DDA **26** *11:38:02.0±0.0, 38°.43N×44°.31E, h7^{km}±2^{km}, MW3.7*

NSSP **26** *11:38:03.0, 38°.47N×44°.37E, h10^{km}, Ms3.6*

IDC **26** *11:38:04.4±1.4, 38°.68N×44°.71E, h0^{km}, mb3.8/8, mbtmp3.7/10, ML3.2/2, MS3.1/9, Error ellipse: s-maj=24.1km s-min=15.6km az=1.0*

ISC 26 11:38:02.8±0.5, **38°.44N**±0°.02×**44°.45E**±0°.02, **h10**^{km}, **n111**, σ**2^{s}.19**/153, **mb3.7**/7, **MS3.1**/5, **10C-4D**, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	Van, Ozalp-Mer	0.42	302	SPECP		11 38 09.0	
OZAP				P	Pg	11 38 09.1	-2.1
OZAP				S	Sb	11 38 16.5	-2.6
OZAP				i AML	AML	11 38 19.0	
	comp=E,5µm,0.9s						
OZAP				i AML	AML	11 38 23.0	
	comp=N,5µm,0.7s						
TVAN	Van	0.82	277	P	Pg	11 38 16.4	-2.4
TVAN				S	Sg	11 38 26.3	-3.2
TVAN				i AML	AML	11 38 41.0	
	comp=N,2µm,0.5s						
TVAN				i AML	AML	11 38 45.0	
	comp=E,3µm,1.2s						
TVAN	Van	0.82	277	Pg	Pg	11 38 16.4	-2.4
VANB	Van	0.85	281	Pg	Pg	11 38 16.3	-2.9
VANB				Sg	Sg	11 38 28.1	-2.2
VANB	Van	0.85	281	Pg	Pg	11 38 16.0	-3.2
YOVA	Hakkari_Yksek	0.86	189	SPECP		11 38 18.0	
YOVA				P	Pg	11 38 18.0	-1.4
YOVA				S	Sb	11 38 30.5	-1.1
YOVA				i AML	AML	11 38 37.0	
	comp=N,572nm,0.8s						
YOVA				i AML	AML	11 38 47.0	
	comp=E,556nm,0.7s						
YOVA	Hakkari_Yksek	0.86	189	Pg	Pg	11 38 18.0	-1.4
VMUR	Van-Muradiye	0.88	309	SPECP		11 38 17.0	
VMUR				P	Pg	11 38 17.8	-2.0
VMUR				S	Sb	11 38 30.5	-1.7
VMUR				i AML	AML	11 38 34.0	
	comp=E,1µm,0.6s						
VMUR				i AML	AML	11 38 36.0	
	comp=N,1µm,0.4s						
VMUR	Van-Muradiye	0.88	309	Pg	Pg	11 38 17.8	-2.0
ISHB	Shabestar	0.93	99	Pg	Pg	11 38 17.4	-3.4
MAKU	Maku	0.93	11	Pg	Pg	11 38 17.6	-3.2
IMRD	Marand	1.02	74	Pg	Pg	11 38 19.6	-2.9
HAKT	HAKKARI	1.06	214	SPECP		11 38 21.0	
HAKT				P	Pg	11 38 21.3	-2.0
HAKT				i AML	AML	11 38 43.0	
	comp=E,695nm,0.5s						
HAKT				i AML	AML	11 38 54.0	
	comp=N,642nm,0.9s						
HAKT	HAKKARI	1.06	214	Pg	Pg	11 38 21.2	-2.0
NAX	Nakhchivan	1.10	48	P	Pg	11 38 21.3	-2.6
	SNR=76						
NAX				S	Sn	11 38 38.3	-1.4
GEVA	Gevas	1.10	264	SPECP		11 38 20.0	
GEVA				P	Pg	11 38 20.9	-3.1
GEVA				S	Sg	11 38 36.0	-2.4
GEVA				i AML	AML	11 38 43.0	
	comp=N,749nm,0.5s						
GEVA				i AML	AML	11 38 44.0	
	comp=E,646nm,0.4s						
GEVA	Gevas	1.10	264	Pg	Pg	11 38 20.9	-3.1
AKDM	Akdamar-Van	1.16	265	Pg	Pb	11 38 22.6	-2.5
AKDM				Sg	Sn	11 38 39.7	-1.6
AKDM	Akdamar-Van	1.16	265	Pg	Pb	11 38 21.6	-3.5
DYDN	Diyadin	1.25	332	SPECP		11 38 23.0	
DYDN				P	Pn	11 38 24.0	-2.7
DYDN				S	Sb	11 38 39.5	-3.5
DYDN				i AML	AML	11 38 49.0	
	comp=E,1µm,0.6s						
DYDN				i AML	AML	11 39 01.0	
	comp=N,1µm,0.8s						
DYDN	Diyadin	1.25	332	Pg	Pn	11 38 23.9	-2.7
SBZ	Shahbuz	1.29	42	P	Pn	11 38 24.5	-2.5
	SNR=198						
SBZ				S	Sb	11 38 42.8	-1.1
SBZ	Shahbuz	1.29	42	Pg	Pn	11 38 24.5	-2.5
ORD	Ordubad	1.30	68	P	Pn	11 38 24.8	-2.4
	SNR=286						
ORD				S	Sb	11 38 43.3	-1.0
ORD	Ordubad	1.30	68	Pg	Pn	11 38 24.7	-2.4
HYR	Heyderabad	1.32	14	P	Pn	11 38 25.1	-2.2
	SNR=125						
HYR				S	Sg	11 38 46.2	+1.0
HYR	Heyderabad	1.32	14	Pg	Pn	11 38 25.1	-2.2
ITBZ	Tabriz	1.35	98	Pg	Pn	11 38 25.0	-2.9
ADCV	BITLIS_Adilcev	1.40	286	P	Pn	11 38 27.0	-1.6
ADCV				S	Sg	11 38 46.5	-1.5
ADCV				i AML	AML	11 38 52.0	
	comp=E,721nm,0.6s						
ADCV				i AML	AML	11 38 54.0	
	comp=N,564nm,1.3s						
IAZR	Azarshahr	1.43	122	Pg	Pn	11 38 27.5	-1.6
TAB1	Tabriz	1.53	104	Pg	Pn	11 38 29.3	-1.1
TASB	TASBURUN-IGDIR	1.55	354	Pn	Pb	11 38 30.5	-1.2
TASB				Sn	Sg	11 38 51.5	-1.3
TASB	TASBURUN-IGDIR	1.55	354	Pg	Pb	11 38 30.5	-1.2
NRKZ	NAREK	1.57	6	⇑iP	Pb	11 38 30.7	-1.3
NRKZ				⇓iS	Sg	11 38 52.0	-1.3
PERV	Siirt/Pervari-	1.58	252	P	Pb	11 38 30.8	-1.5
PERV				i AML	AML	11 39 02.0	
	comp=E,959nm,0.6s						
PERV				i AML	AML	11 39 04.0	
	comp=N,851nm,0.8s						
AGRB	Hanur-Agry	1.61	315	Pn	Pb	11 38 30.9	-1.8
AGRB				Sn	Sg	11 38 52.4	-2.1
AGRB	Hanur-Agry	1.61	315	Pg	Pb	11 38 30.9	-1.8
MLAZ	Malazgirt-MUS	1.64	296	Pn	Pb	11 38 31.6	-1.7
MLAZ				Sn	Sb	11 38 52.8	-1.4
GNI	Garni	1.72	7	Pg	Pb	11 38 33.0	-1.7
	53nm,0.3s,baz=234,slow=2.7,SNR=104						
GNI				Lg	Lg	11 38 59.5	
	48nm,0.3s,baz=146,slow=23,SNR=17						
GNI	Garni	1.72	7	⇓iP	Pb	11 38 34.1	-0.6
GNI				⇑iS	Sg	11 38 58.5	+0.2
GNI	Garni	1.72	7	Pn	Pb	11 38 33.3	-1.4
VNNZ	Vanand	1.73	344	⇑iP	Pb	11 38 33.8	-1.0
VNNZ				⇑iS	Sg	11 38 57.1	-1.4
METS	Metsamor	1.73	351	⇑iP	Pb	11 38 33.0	-1.8
METS				⇑iS	Sb	11 38 55.8	-0.9
BLIS	Bitlis-Merkez	1.83	270	SPECP		11 38 34.0	
BLIS				P	Pb	11 38 34.8	-1.8
BLIS				S	Sg	11 38 59.3	-2.5
BLIS				i AML	AML	11 39 06.0	
	comp=N,231nm,1.3s						
BLIS				i AML	AML	11 39 08.0	
	comp=E,234nm,1.2s						
ARUZ	Aruch	1.86	351	⇑iP	Pb	11 38 36.5	-0.5
ARUZ				⇑iS	Sg	11 39 01.9	-0.8
KAPZ	Kaputan	1.89	6	⇑iP	Pn	11 38 35.0	-0.3
KAPZ				⇓iS	Sb	11 39 00.2	-1.1
GURO	Guroymak-BITLI	1.90	274	Pn	Pb	11 38 35.6	-2.1
MAHB	Mahabad	1.94	149	Pn	Pb	11 38 36.9	-1.5
AMBZ	Amberd	1.95	356	⇓iP	Pb	11 38 37.3	-1.3
AMBZ				⇑iS	Sg	11 39 03.2	-2.5
IHRS	Heris	2.04	93	Pn	Pn	11 38 37.4	-0.1
EATA	Eleskirt	2.08	314	P	Pn	11 38 37.9	-0.2
DIGO	Kars	2.14	337	P	Pg	11 38 42.6	-1.3
EAK	Akyaka	2.34	344	P	Pb	11 38 44.9	-0.3
KARS	Kars	2.43	335	Pn	Pn	11 38 42.7	0.0
VRTB	Varto-Mus	2.45	288	Pn	Pn	11 38 42.9	-0.1
VRTB	Varto-Mus	2.45	288	P	Pb	11 38 45.0	-2.1
QRD	Qoradiz	2.46	65	P	Pn	11 38 44.1	+1.1
	SNR=47						
QRD				S	Sb	11 39 16.9	-0.6
GDB	GEDABAY	2.49	23	P	Pn	11 38 44.4	+0.8
	SNR=46						
GDB				S	Sg	11 39 19.7	-3.2
KOPR	Koprukoy-ERZUR	2.54	308	Pn	Pn	11 38 44.4	+0.1
HOMI	Horasan	2.55	310	P	Pg	11 38 50.5	-1.2
BTMN	Batman	2.57	259	P	Pb	11 38 46.7	-2.3
SVAN	Silvan-Diyarba	2.58	265	Pn	Pb	11 38 46.1	-3.0
SVAN	Silvan-Diyarba	2.58	265	P	Pb	11 38 49.3	+0.2
ISRB	Sarab	2.61	103	Pn	Pn	11 38 45.8	+0.5
GANJ	Ganja	2.64	33	P	Pn	11 38 46.5	+1.0
	SNR=36						
GANJ				S	Sb	11 39 22.4	-0.2
AGDM	Agdam	2.65	50	P	Pn	11 38 47.0	+1.3
	SNR=67						
AGDM				S	Sn	11 39 19.3	+1.4
SENK	Senkaya-Erzuru	2.67	323	Pn	Pn	11 38 46.7	+0.6
QZX	Qazax, Azerbai	2.71	15	P	Pn	11 38 47.7	+1.2
	SNR=52						
QZX				S	Sb	11 39 23.8	-0.9
BLQ	Beylaqan	2.74	61	P	Pn	11 38 48.4	+1.6
BRDA	Brd	2.79	48	P	Pn	11 38 49.2	+1.6
	SNR=29						
BRDA				S	Sn	11 39 23.0	+1.8
BNGB	Bingl	3.00	282	Pn	Pn	11 38 51.7	+1.1
YRD	Yardimli	3.00	80	P	Pn	11 38 51.7	+1.0
	SNR=17						
YRD				S	Sb	11 39 31.3	-2.1
IKRK	Kirkuk	3.04	182	ePn	Pn	11 38 52.0	+1.1
IKRK				eSn	Sb	11 39 30.0	-4.0
IKRK				AML	AML	11 39 57.4	
	comp=E,104nm,0.7s						
IKRK				AML	AML	11 39 59.4	
	comp=N,111nm,0.6s						
LRK	Lerik	3.06	85	P	Pn	11 38 52.4	+1.0
	SNR=39						
LRK				S	Sn	11 39 30.0	+1.9
AKH	Akhalkalaki	3.06	346	Pn	Pn	11 38 52.3	+0.9
MNGR	Mingechevir, A	3.09	40	P	Pn	11 38 53.2	+1.5
MNGR				S	Sb	11 39 33.1	-2.6
GLBA	Clilabad	3.18	74	P	Pn	11 38 54.0	+1.1
	SNR=22						
GLBA				S	Sn	11 39 31.6	+0.7
LKRN	Lenkeran, Azer	3.40	84	S	Sb	11 39 40.3	-4.3
ASTR	Astara	3.41	87	P	Pn	11 38 57.3	+1.3
	SNR=16						
ASTR				S	Sb	11 39 41.3	-3.4
DYBB	Diyarbakir	3.43	263	Pn	Pn	11 38 57.7	+1.3
GAS1	Astara - Iran	3.45	90	Pn	Pn	11 38 57.1	+0.5
SEKA	Sheki	3.48	37	P	Pn	11 38 58.6	+1.5
	SNR=16						
SEKA				S	Sb	11 39 43.8	-3.1
ZKTA	Zakatala	3.60	27	P	Pn	11 39 00.7	+1.9

	SNR=13						
ZKTA				S	**Sb**	**11 39 45.2**	**-5.2**
QBL	**Gabala**	**3.62**	**45**	P	**Pn**	**11 39 00.1**	**+1.1**
	SNR=8.7						
QBL				S	**Sb**	**11 39 46.2**	**-4.6**
IML	**Ismayilli**	**3.72**	**50**	S	**Sb**	**11 39 49.5**	**-4.2**
XNQ	**Khinaliq**	**3.94**	**45**	P	**Pn**	**11 39 04.3**	**+0.8**
	SNR=6.5						
XNQ				S	**Sb**	**11 39 54.2**	**-6.0**
PQL	**Pirkuli**	**3.97**	**52**	P	**Pn**	**11 39 05.9**	**+2.1**
PQL				S	**Sb**	**11 39 55.4**	**-5.7**
ONI	**Oni**	**4.22**	**350**	Pn	**Pn**	**11 39 08.7**	**+1.5**
ATGJ	**Altiaghaj**	**4.22**	**54**	P	**Pn**	**11 39 08.5**	**+1.1**
ATGJ				S	**Sn**	**11 39 59.8**	**+3.0**
QUBA	**Quba, Azerbaij**	**4.26**	**46**	P	**Pn**	**11 39 10.6**	**+2.8**
BHD	**Baghdad**	**5.16**	**181**	*e*Pn	**Pn**	**11 39 23.0**	**+2.9**
BHD				*e*Sn	**Sn**	**11 40 22.0**	**+2.3**
IBDR	**Badra**	**5.45**	**167**	*e*Pn	**Pn**	**11 39 27.0**	**+2.9**
IBDR				*e*Sn	**Sn**	**11 40 29.0**	**+2.1**
IBDR				AML	AML	11 40 37.5	
	comp=N,43nm,0.5s						
IBDR				AML	AML	11 41 18.6	
	comp=E,26nm,0.5s						
BRTR	**Keskin Array B**	**8.51**	**282**	Pn	Pn	11 40 13.9	+7.7
	comp=E,0.1nm,0.3s,baz=103,slow=14,SNR=5.9						
	comp=E,0.5nm,0.5s						
MMAI	**Mount Meron Ar**	**9.13**	**236**	LR	LR	11 44 12.4	
	comp=E,161nm,18.9s,baz=132,slow=39						
GEYT	**Alibeck**	**10.77**	**88**	Pn	**Pn**	**11 40 39.0**	**+1.8**
	comp=E,0.5nm,0.3s,baz=262,slow=10.0,SNR=2.6						
GEYT				LR	LR	11 45 32.7	
	comp=E,59nm,19.6s,baz=194,slow=42						
	comp=E,1.4nm,0.4s						
EIL	**Elat**	**11.76**	**225**	LR	LR	11 45 55.6	
	comp=E,70nm,18.9s,baz=58,slow=39						
AKTO	**Aktyubinsk**	**15.39**	**34**	LR	LR	11 49 13.3	
	comp=E,29nm,18.4s,baz=6.5,slow=44						
MNK	**Minsk**	**19.62**	**330**	*i* P	**Pn**	**11 42 33.2**	**+0.6**
	comp=E,2.0nm,0.7s						
MNK				*i* P	**Pn**	**11 42 33.2**	**+0.6**
	comp=N,26nm,0.8s						
MNK				*i* P	**Pn**	**11 42 33.2**	**+0.6**
	comp=Z,7.0nm,0.8s,baz=138						
MNK				*i* PP	**PnPn**	**11 42 48.3**	**+2.2**
MNK				*i* PPP	PPP	11 42 56.0	
MNK				*i* S	**Sn**	**11 46 15.8**	**+3.0**
MNK				*i* SS	**SnSn**	**11 46 32.6**	**+5.6**
MNK				*i* SSS	SSS	11 46 45.5	
MNK				*i* LR	LR	11 49 57.5	
MNK				*i* LRM	MLR	11 51 20.6	
	comp=Z,93nm,12.2s						
MNK				*i* LRM	MLR	11 51 23.3	
	comp=E,15nm,12.2s						
MNK				*i* LRM	MLR	11 51 23.3	
	comp=N,204nm,14.8s						
ARU	**Arti**	**20.30**	**23**	P	**P**	**11 42 38.5**	**-0.1**
	comp=N,2.5nm,0.4s,baz=194,slow=9.6,SNR=6.8						
	comp=N,2.5nm,0.4s						
VYHS	**Vyhne**	**21.04**	**307**	*e*P	**P**	**11 42 46.9**	**+0.1**
VYHS	**Vyhne**	**21.04**	**307**	*e*PN	**P**	**11 42 50.4**	**+3.6**
BVAR	**Borovoye Array**	**23.08**	**42**	P	**P**	**11 43 08.7**	**+0.3**
	comp=N,1.7nm,0.8s,baz=235,slow=5.1,SNR=6.8						
BVAR				LR	LR	11 54 41.6	
	comp=N,65nm,19.0s,baz=281,slow=44						
	comp=N,1.7nm,0.8s						
AAK	**Ala-Archa**	**23.15**	**70**	LR	LR	11 55 03.1	
	comp=N,69nm,19.4s,baz=336,slow=44						
FINES	**FINESS Array B**	**25.70**	**340**	P	**P**	**11 43 34.0**	**+1.2**
	comp=N,3.1nm,1.0s,baz=157,slow=7.5,SNR=2.0						
	comp=N,3.1nm,1.0s						
KURBB	**Kurchatov Arra**	**26.93**	**52**	P	**P**	**11 43 44.8**	**+0.7**
	comp=N,1.6nm,0.8s,baz=263,slow=9.1,SNR=8.0						
	comp=N,1.6nm,0.8s						
MKAR	**Makanchi Array**	**28.84**	**61**	P	**P**	**11 44 02.5**	**+1.2**
	comp=N,0.8nm,0.7s,baz=263,slow=8.5,SNR=7.5						
	comp=N,0.8nm,0.7s						
ZALV	**Zalesovo Beam**	**31.45**	**47**	P	**P**	**11 44 23.2**	**-1.0**
	comp=N,0.5nm,0.4s,baz=252,slow=9.1,SNR=3.9						
ZALV				LR	LR	11 59 57.3	
	comp=N,34nm,18.2s,baz=84,slow=42						
	comp=N,0.5nm,0.4s						
EKA	**Eskdalemuir Ar**	**35.84**	**314**	LR	LR	12 01 10.2	
	comp=N,45nm,20.3s,baz=9.5,slow=39						
MDT	**Midelt**	**39.89**	**277**	LR	LR	12 04 12.6	
	comp=N,31nm,18.5s,baz=216,slow=39						
CMAR	**Chiang Mai Arr**	**51.11**	**97**	P	**P**	**11 47 05.9**	**0.0**
	comp=N,0.3nm,0.3s,baz=304,slow=6.4,SNR=1.5						
	comp=N,0.3nm,0.3s						
YKA	**Yellowknife Ar**	**78.01**	**350**	P	**P**	**11 50 04.3**	**+3.3**
	comp=N,0.4nm,1.0s,baz=23,slow=5.4,SNR=4.4						
	comp=N,0.4nm,1.0s						

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*NIED **26** 11:47:20.8, 41°.41N×142°.33E, h41^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.73; $M_{\theta\theta}$-1.98; $M_{\phi\phi}$2.70; $M_{r\theta}$-1.56; $M_{\theta\phi}$0.71; $M_{\phi r}$-0.35; Fault plane solution: $M_0$2.99000×10^{14} NP1:ϕ_s49.00000°, δ75.00000°, λ-32.00000°. NP2:ϕ_s148.00000°, δ59.00000°, λ-162.00000°.*

*JMA **26** 11:47:20.8±0.1, 41°.4N±0°.6×142°.3E±0°.7, h41^{km}±3^{km}, MV3.9/37, E OFF AOMORI PREF*

JMA Felt I J1 at E OFF AOMORI PREF .

*NEIC **26** 11:47:22.6±1.4, 41°.49N±0°.07×142°.3E±0°.1, h39^{km}±11^{km}, mb4.2/13, Error ellipse: s-maj=16.9km s-min=1.8km az=128.0*

*IDC **26** 11:47:23.4±2.2, 41°.40N×142°.34E, h56^{km}±19^{km}, mb3.3/9, mbtmp3.6/11, ML4.4/1, MS2.4/1, Error ellipse: s-maj=25.2km s-min=13.4km az=107.0*

ISC 26 11:47:21.9±0.7**, 41°.41N**±0°.03×**142°.31E**±0°.04**, h40**^{km}±6^{km}**, n66, σ1^{s}00**/71**, mb4.1**/16**, 9D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAHD	**Aomorihigashid**	**0.75**	**259**	*i* P	**Pn**	**11 47 35.3**	**-0.6**
JAHD				S	**Sn**	**11 47 45.9**	**-0.2**
JARK	**Aomorirokkasho**	**0.82**	**241**	*i* P	**Pn**	**11 47 36.2**	**-0.7**
JARK				S	**Sn**	**11 47 47.1**	**-0.8**
ERM	**Erimo**	**0.87**	**46**		**Pn**	**11 47 36.6**	**-1.1**
JEM	**Erimo**	**0.88**	**46**	⇓*i*P	**Pn**	**11 47 36.5**	**-1.2**
JEM				⇓S	**Sn**	**11 47 48.2**	**-1.1**
JNBK	**Urakawa-nobuka**	**0.93**	**21**	⇓*i*P	**Pn**	**11 47 37.4**	**-1.0**
JOT	**Ohata**	**0.95**	**269**	*i* P	**Pn**	**11 47 38.1**	**-0.6**
JOT				S	**Sn**	**11 47 50.7**	**-0.3**
JSHD	**Hidakashinhida**	**1.00**	**7**	*i* P	**Pn**	**11 47 39.2**	**-0.2**
JKB	**Kayabe**	**1.07**	**297**	*i* P	**Pn**	**11 47 39.4**	**-0.9**
JKB				*e*S	**Sn**	**11 47 53.6**	**-0.4**
JTM	**Tenmabayashi**	**1.13**	**237**		**Pn**	**11 47 40.8**	**-0.3**
JTM	**Tenmabayashi**	**1.13**	**237**	⇓*i*P	**Pn**	**11 47 41.1**	**0.0**
JTM				⇓S	**Sn**	**11 47 55.9**	**+0.5**
JANG	**Nango**	**1.20**	**210**	⇓*i*P	**Pn**	**11 47 40.9**	**-1.3**
JANG				⇓S	**Sn**	**11 47 55.8**	**-1.5**
JIAM	**Iburiatsuma**	**1.25**	**347**	*i* P	**Pn**	**11 47 43.0**	**+0.3**
JIAM				*e*S	**Sn**	**11 47 59.9**	**+1.5**
JBT2	**Biratori 2**	**1.37**	**2**	*i* P	**Pn**	**11 47 44.1**	**-0.4**
JBT2				*e*S	**Sn**	**11 48 02.7**	**+1.4**
JNB	**Noboribetsu**	**1.42**	**318**	*i* P	**Pn**	**11 47 44.1**	**-1.1**
JNB				S	**Sn**	**11 48 01.8**	**-0.8**
JSR	**Shiriuchi**	**1.43**	**275**	P	**Pn**	**11 47 45.1**	**-0.1**
JSR				*e*S	**Sn**	**11 48 04.0**	**+1.2**
JCH	**Churui**	**1.43**	**33**	⇓*i*P	**Pn**	**11 47 45.2**	**-0.2**
JCH				⇓*e*S	**Sn**	**11 48 04.3**	**+1.3**
JEW	**Eniwo**	**1.56**	**336**	*i* P	**Pn**	**11 47 47.2**	**0.0**
JEW				S	**Sn**	**11 48 07.3**	**+1.1**
JYM2	**Yakumo 2**	**1.61**	**297**	*i* P	**Pn**	**11 47 47.9**	**0.0**
JOMM	**Oshimamatsumae**	**1.74**	**275**	P	**Pn**	**11 47 49.1**	**-0.4**
JFR	**Furan**	**1.76**	**7**	P	**Pn**	**11 47 49.8**	**-0.1**
JAH	**Hinai**	**1.76**	**227**	*i* P	**Pn**	**11 47 50.3**	**+0.4**
JAH				S	**Sn**	**11 48 12.5**	**+1.4**
JKA	**Kamikawa-asahi**	**2.71**	**4**		**Pn**	**11 48 03.6**	**+0.6**
ASAJ	**Asahikawa**	**2.71**	**4**	P	**Pn**	**11 48 03.9**	**+0.9**
	47nm,0.3s,baz=218,slow=12,SNR=420						
ASAJ				S	**Sn**	**11 48 37.1**	**+2.6**
	138nm,0.7s,baz=60,slow=30,SNR=18						
	136nm,0.4s						
JMM	**Marumori**	**3.73**	**199**		**Pn**	**11 48 17.7**	**+0.8**
JSD	**Sado**	**4.59**	**224**	Pn	**Pn**	**11 48 28.8**	**0.0**
MJB9	**Matsu-Tunnel**	**5.82**	**215**	Pn	**Pn**	**11 48 48.6**	**+3.0**
MAJO	**Matsushiro**	**5.82**	**215**	Pn	**Pn**	**11 48 48.4**	**+2.7**
MJAR	**Matsushiro Arr**	**5.82**	**215**	P	**Pn**	**11 48 48.4**	**+2.7**
	1.1nm,0.4s,baz=26,slow=14,SNR=7.7						
KSRS	**Korea Array**	**11.81**	**255**	LR	LR	11 54 21.4	
	comp=Z,20nm,19.3s,baz=350,slow=35						
H11N2	**WAKE ISLAND Hy**	**30.06**	**129**	T	T	12 25 11.4	
	baz=322,slow=75,SNR=29						
H11N1	**WAKE ISLAND Hy**	**30.07**	**129**	T	T	12 25 06.8	
	baz=322,slow=75,SNR=26						
H11N3	**WAKE ISLAND Hy**	**30.08**	**129**	T	T	12 24 57.7	
	baz=322,slow=75,SNR=37						
H11S1	**WAKE ISLAND Hy**	**30.91**	**130**	T	T	12 26 43.6	
	baz=323,slow=76,SNR=26						
H11S3	**WAKE ISLAND Hy**	**30.91**	**130**	T	T	12 26 15.7	
	baz=323,slow=76,SNR=15						
H11S2	**WAKE ISLAND Hy**	**30.93**	**130**	T	T	12 26 15.5	
	baz=323,slow=76,SNR=16						
ZALV	**Zalesovo Beam**	**39.61**	**309**	P	**P**	**11 54 49.2**	**0.0**
	0.5nm,0.4s,baz=93,slow=10,SNR=2.8						
	0.5nm,0.4s						
K20K	**Telida**	**42.36**	**37**	P	**P**	**11 55 13.1**	**+1.3**
K20K				IAmb	IAmb	11 55 57.2	
	comp=Z,7.4nm,1.5s						
MKAR	**Makanchi Array**	**42.52**	**298**	P	**P**	**11 55 14.4**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=87,slow=7.0,SNR=4.5						
	comp=Z,0.4nm,0.8s						
MKAR	**Makanchi Array**	**42.52**	**298**	P	**P**	**11 55 13.3**	**-0.1**
IMAR	**Indian Mountai**	**42.57**	**33**	P	**P**	**11 55 13.0**	**-0.4**
CAST	**Castle Rocks**	**43.26**	**37**	P	**P**	**11 55 19.9**	**+0.8**
KURBB	**Kurchatov Arra**	**43.97**	**305**	P	**P**	**11 55 24.7**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=78,slow=8.9,SNR=4.8						
	comp=Z,0.4nm,0.4s						
I23K	**Minto, Yukon-K**	**44.39**	**34**	P	**P**	**11 55 28.3**	**+0.3**
NEA2	**Nenana**	**44.54**	**35**	P	**P**	**11 55 29.5**	**+0.2**
NEA2				IAmb	IAmb	11 55 30.9	
	comp=Z,3.4nm,0.7s						
MDM	**Murphy Dome**	**44.88**	**34**	P	**P**	**11 55 31.8**	**-0.2**
MDM				IAmb	IAmb	11 55 33.4	
	comp=Z,2.8nm,0.8s						
IL31		**45.46**	**35**	P	**P**	**11 55 36.7**	**+0.1**
ILAR	**Eielson Array**	**45.46**	**35**	P	**P**	**11 55 37.0**	**+0.4**
	comp=Z,2.0nm,1.0s,baz=272,slow=7.0,SNR=15						
	comp=Z,2.0nm,1.0s						
ILAR	**Eielson Array**	**45.46**	**35**	P	**P**	**11 55 36.2**	**-0.4**
PRP	**Porcupine Dome**	**45.97**	**33**	P	**P**	**11 55 41.1**	**+0.3**
PRP				IAmb	IAmb	11 55 42.3	
	comp=Z,3.1nm,0.8s						
BMAR	**Burnt Mountain**	**46.19**	**31**	P	**P**	**11 55 42.6**	**+0.2**
SCRK	**Sand Creek**	**46.80**	**36**	P	**P**	**11 55 47.2**	**-0.1**
SCRK				IAmb	IAmb	11 55 47.9	
	comp=Z,3.1nm,0.9s						
EGAK	**Eagle**	**47.90**	**34**	P	**P**	**11 55 55.9**	**+0.3**
EGAK				IAmb	IAmb	11 55 57.0	
	comp=Z,4.6nm,1.4s						
BCAR	**Beaver Creek A**	**47.93**	**37**	P	**P**	**11 55 56.6**	**+0.6**
INK	**Inuvik**	**50.20**	**29**	P	**P**	**11 56 12.8**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=301,slow=6.2,SNR=20						
	comp=Z,1.4nm,0.5s						
INK	**Inuvik**	**50.20**	**29**	P	**P**	**11 56 13.8**	**+0.6**
A36M	**Sachs Harbour**	**51.95**	**23**	P	**P**	**11 56 26.9**	**+0.6**
C36M	**Paulatuk**	**53.18**	**26**	P	**P**	**11 56 35.2**	**-0.2**
ABKAR	**Akbulak array**	**55.72**	**308**	P	**P**	**11 56 54.1**	**-0.1**
RES	**Resolute Bay**	**58.20**	**15**	P	**P**	**11 57 10.5**	**-0.8**
RES				IAmb	IAmb	11 57 11.8	
	comp=Z,3.3nm,1.4s						
YKA	**Yellowknife Ar**	**59.70**	**32**	P	**P**	**11 57 22.3**	**+0.4**
	comp=Z,0.1nm,0.6s,baz=307,slow=6.6,SNR=3.9						
	comp=Z,0.1nm,0.6s						
WRA	**Warramunga Arr**	**61.49**	**189**	P	**P**	**11 57 33.3**	**-1.2**
	comp=Z,0.2nm,0.4s,baz=5.4,slow=7.0,SNR=9.6						
	comp=Z,0.2nm,0.4s						
ASAR	**Alice Springs**	**65.21**	**188**	P	**P**	**11 57 59.1**	**-0.1**
	comp=Z,0.3nm,0.9s,baz=4.7,slow=6.8,SNR=1.8						
	comp=Z,0.3nm,0.9s						
FINES	**FINESS Array B**	**65.28**	**332**	P	**P**	**11 57 58.2**	**-1.0**
	comp=Z,1.0nm,0.6s,baz=25,slow=7.8,SNR=6.9						
	comp=Z,1.0nm,0.6s						
H03N2	**Juan Fernandez**	**146.55**	**90**	T	T	14 52 01.0	
	baz=300,slow=77,SNR=5.2						
H03N3	**Juan Fernandez**	**146.56**	**90**	T	T	14 51 53.3	
	baz=300,slow=77,SNR=5.3						
H03N1	**Juan Fernandez**	**146.56**	**90**	T	T	14 51 47.0	
	baz=300,slow=77,SNR=4.5						

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*SNET **26** 11:47:22.8±0.9, 12°.64N×87°.37W, h133^{km}±11^{km}, ML3.2*

INET 26 11:47:23.0±0.5**, 12°.62N×87°.24W, h121**^{km}±7^{km}**, MW3.3, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.20**	**66**	*e*P	Pn	11 47 40.2	+0.4
TELN	**Telica**	**0.40**	**92**	*e*P	Pn	11 47 41.3	+0.7
CNGN	**Cerro Negro**	**0.54**	**102**	*e*P	Pn	11 47 41.2	-0.1
MOMN	**Momotombo**	**0.71**	**107**	*e*P	Pn	11 47 42.5	-0.1
COPN	**Copaltepe**	**0.77**	**124**	*e*P	Pn	11 47 42.2	-0.8
CNCH	**Conchagua**	**0.87**	**319**	*e*P	Pn	11 47 44.2	+0.1
LCND	**La Caada**	**0.94**	**317**	*e*P	Pn	11 47 44.7	+0.2
LCND				*e*S	Sn	11 48 02.0	+1.2
LCND				IAML		11 48 06.5	
	comp=Z,110nm,0.4s						
MATN	**Matagalpa**	**1.32**	**76**	*e*P	Pn	11 47 48.6	+0.1
PACA	**Pacayal**	**1.35**	**309**	*e*P	Pn	11 47 49.6	+0.7
PACA				*e*S	Sn	11 48 09.0	+0.3
PACA				IAML		11 48 17.2	
	comp=Z,725nm,0.2s						
PACA	**Pacayal**	**1.35**	**309**	*e*P	Pn	11 47 49.2	+0.2
TGUH	**Tegucigalpa,Un**	**1.43**	**359**	*e*P	Pn	11 47 50.3	+0.5
BOAB	**BOACO BROADBAN**	**1.55**	**96**	*e*P	Pn	11 47 51.3	+0.3
ACON	**Acoyapa**	**2.12**	**108**	*e*P	Pn	11 47 57.9	-0.1

WEL 26 11:49:44.4±0.6**, 42°S**±3°×**17°4E**±°**, h5**^{km}**, M2.3**/7**, ML2.6**/10**, MLv2.3**/7**, Error ellipse: s-maj=0.0km s-min=0.0km az=129.3, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.33**	**220**	P	Pg	11 49 51.0	+0.3
KHZ				S	Sg	11 49 56.4	+1.3
BSWZ	**Blackbirch Sta**	**0.45**	**5**	P	Pg	11 49 53.1	0.0
BSWZ				S	Sb	11 50 00.5	-1.4
CMWZ	**Cape Campbell**	**0.51**	**35**	P	Pb	11 49 55.0	-0.8
TUWZ	**Tuamarina**	**0.74**	**7**	P	Pg	11 49 58.7	+0.1
THZ	**Tophouse**	**0.79**	**300**	P	Pg	11 49 59.7	0.0
THZ				S	Sb	11 50 10.9	-0.9
GVZ	**Greta Valley S**	**0.99**	**216**	P	Pg	11 50 03.5	0.0
GVZ				S	Sn	11 50 18.5	-0.9
NNZ	**Nelson**	**1.00**	**341**	P	Pg	11 50 03.0	-0.6
TCW	**Tory Channel**	**1.01**	**20**	P	Pg	11 50 03.2	-0.6
TCW				S	Sb	11 50 18.6	+0.5
MRNZ	**Matariki Terra**	**1.10**	**314**	P	Pg	11 50 05.6	0.0
WEL	**Wellington**	**1.13**	**39**	P	Pg	11 50 05.0	-1.0
LTZ	**Lake Taylor**	**1.30**	**241**	P	Pn	11 50 08.2	-1.1
LTZ				S	Sb	11 50 26.6	+0.1
TKNZ	**Takaka Hill**	**1.30**	**330**	P	Pn	11 50 08.6	-0.7
DUWZ	**D'Urville Isla**	**1.36**	**3**	P	Pn	11 50 09.4	-0.8
DUWZ				S	Sg	11 50 28.4	+0.2
CAW	**Cannon Point**	**1.41**	**42**	P	Pn	11 50 08.6	-2.1
PAWZ	**Paruwai Farm**	**1.43**	**57**	P	Pn	11 50 08.1	-3.0
DSZ	**Denniston Nort**	**1.56**	**285**	P	Pb	11 50 13.7	-0.2
DSZ				S	Sg	11 50 35.3	+0.7
QRZ	**Quartz Range**	**1.66**	**324**	P	Pn	11 50 14.7	+0.6
OGWZ	**Otaki Gorge**	**1.69**	**37**	P	Pn	11 50 12.4	-2.1
OXZ	**Oxford**	**1.75**	**228**	P	Pn	11 50 13.3	-2.2
MQZ	**McQueen's Vall**	**1.76**	**209**	P	Pn	11 50 12.6	-3.0
MRZ	**Mangatainoka R**	**2.00**	**42**	P	Pn	11 50 16.2	-2.7
WACZ	**Wakanui South**	**2.30**	**219**	P	Pn	11 50 20.7	-2.2

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*IDC **26** 12:03:59.8±1.4, 20°.88S×177°.61W, h494^{km}±14^{km}, mb3.4/9, mbtmp4.3/12, Error ellipse: s-maj=23.0km s-min=12.7km az=157.0*

*NEIC **26** 12:04:00.5±0.8, 20°.4S±0°.3×177°.4W±0°.2, h516^{km}±12^{km}, mb4.2/14, Error ellipse: s-maj=39.3km s-min=22.8km az=178.0*

ISC 26 12:04:00.3±0.7**, 20°.4S**±0°.1×**177°.54W**±0°.09**, h500**^{km}**, n30, σ1^{s}69**/35**, mb4.0**/16**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.94**	**302**	P	**P**	**12 05 28.8**	**+1.8**
	18nm,0.4s,baz=78,slow=23,SNR=91						
MSVF				S	**S**	**12 06 38.8**	**+1.3**
	4.1nm,0.8s,baz=151,slow=22,SNR=0.8						
MSVF	**Nonsavu**	**4.94**	**302**	P	**P**	**12 05 28.6**	**+1.7**
AFI	**Afiamalu**	**8.48**	**41**	P	**P**	**12 06 00.5**	**-1.4**
	17nm,0.4s,baz=218,slow=1.5,SNR=9.3						
AFI				S	**S**	**12 07 36.0**	**-5.6**
	46nm,0.7s,baz=238,slow=5.5,SNR=9.6						
AFI	**Afiamalu**	**8.48**	**41**	P	**P**	**12 06 00.8**	**-1.1**
PINNC	**Pines Island,**	**14.15**	**258**	P	**P**	**12 07 02.7**	**+1.1**
DZM	**Mont Dzumac**	**15.03**	**261**	P	**P**	**12 07 10.5**	**-0.5**
	4.6nm,0.7s,baz=94,slow=17,SNR=8.7						
DZM	**Mont Dzumac**	**15.03**	**261**	P	**P**	**12 07 10.2**	**-0.8**
DZM				IAmb	IAmb	12 07 15.3	
	comp=Z,7.7nm,1.0s						
KOUNC	**Koumac, New Ca**	**17.03**	**266**	P	**P**	**12 07 30.4**	**-1.3**
EIDS	**Eidsvold**	**29.29**	**254**	P	**P**	**12 09 21.2**	**-0.4**
ARMA	**Armidale**	**29.50**	**244**	P	**P**	**12 09 22.8**	**-0.7**
ARMA				IAmb	IAmb	12 09 54.8	
	comp=Z,2.6nm,1.0s						
CTAO	**Charters Tower**	**33.93**	**264**	P	**P**	**12 10 01.0**	**-0.4**
CTAO				IAmb	IAmb	12 10 02.2	
	comp=Z,9.7nm,0.9s						
COEN	**Coen**	**38.01**	**273**	P	**P**	**12 10 33.9**	**-1.5**
COEN				IAmb	IAmb	12 11 06.9	
	comp=Z,6.0nm,1.1s						
AS31	**Alice Springs**	**44.96**	**257**	P	**P**	**12 11 30.4**	**-0.1**
AS31				IAmb	IAmb	12 11 31.2	
	comp=Z,6.9nm,1.2s						
ASAR	**Alice Springs**	**44.96**	**257**	P	**P**	**12 11 30.1**	**-0.5**
	comp=Z,11nm,0.5s,baz=97,slow=7.6,SNR=219						
ASAR				PcP	**PcP**	**12 13 01.5**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=104,slow=4.4,SNR=2.5						
ASAR				S	**S**	**12 17 29.2**	**-2.9**
	comp=Z,1.2nm,0.8s,baz=94,slow=17,SNR=7.3						
	comp=Z,11nm,0.5s						
ASAR	**Alice Springs**	**44.96**	**257**	P	**P**	**12 11 29.6**	**-1.0**
WB0	**Warramunga Arr**	**45.02**	**262**	P	**P**	**12 11 30.3**	**-0.7**
WB0				IAmb	IAmb	12 11 30.8	
	comp=Z,9.9nm,0.7s						
WB2	**Warramunga Arr**	**45.03**	**262**	P	**P**	**12 11 30.4**	**-0.6**
WB2				IAmb	IAmb	12 11 30.9	
	comp=Z,7.9nm,0.7s						
WRAB	**Tennant Creek**	**45.03**	**262**	P	**P**	**12 11 30.0**	**-1.1**
WRAB				IAmb	IAmb	12 11 30.9	
	comp=Z,16nm,1.1s						
WRA	**Warramunga Arr**	**45.04**	**262**	P	**P**	**12 11 30.1**	**-1.0**
	comp=Z,4.9nm,0.6s,baz=96,slow=7.6,SNR=157						
WRA				S	**S**	**12 17 30.5**	**-2.8**
	comp=Z,0.3nm,0.8s,baz=100,slow=12,SNR=1.7						
	comp=Z,4.9nm,0.6s						
WRA	**Warramunga Arr**	**45.04**	**262**	P	**P**	**12 11 29.9**	**-1.3**
FITZ	**Fitzroy Crossi**	**53.47**	**262**	P	**P**	**12 12 33.2**	**-0.4**
SIJI	**Sorong**	**53.63**	**285**	P	**P**	**12 12 34.8**	**0.0**
	comp=Z,15nm,0.8s,baz=346,slow=10,SNR=4.7						
	comp=Z,15nm,0.8s						
SOEI	**Soe**	**56.93**	**272**	P	**P**	**12 12 57.0**	**-1.0**
QSPA	**South Pole Qui**	**69.67**	**180**	P	**P**	**12 14 18.6**	**-0.5**
PETK	**Petropavlovsk-**	**76.28**	**345**	P	**P**	**12 14 58.4**	**+1.5**
	comp=Z,2.3nm,1.0s,baz=120,slow=6.4,SNR=1.3						
	comp=Z,2.3nm,1.0s						
NVAR	**Mina Array Bea**	**80.65**	**43**	P	**P**	**12 15 22.9**	**+1.9**
	comp=Z,0.9nm,0.8s,baz=228,slow=9.5,SNR=6.9						
	comp=Z,0.9nm,0.8s						
TXAR	**Lajitas Array**	**86.64**	**57**	P	**P**	**12 15 53.4**	**+2.6**
	comp=Z,0.5nm,0.8s,baz=224,slow=5.9,SNR=6.7						
	comp=Z,0.5nm,0.8s						
ILAR	**Eielson Array**	**88.12**	**13**	P	**P**	**12 15 57.0**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=218,slow=5.4,SNR=4.6						
	comp=Z,0.2nm,0.5s						
PDAR	**Pinedale Array**	**88.59**	**43**	P	**P**	**12 16 01.3**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=207,slow=3.0,SNR=4.4						
	comp=Z,0.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**90.49**	**289**	P	**P**	**12 16 11.0**	**+2.1**
	comp=Z,0.9nm,0.7s,baz=136,slow=3.8,SNR=6.7						
	comp=Z,0.9nm,0.7s						

WEL 26 12:07:25.0±0.3**, 38°S**±3°×**17°8E**±°**, h26**^{km}±4^{km}**, M2.5**/21**, ML2.8**/28**, MLv2.5**/21**, Error ellipse: s-maj=0.0km s-min=0.0km az=145.1, confirmed, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**0.20**	**83**	P	Pn	12 07 32.4	+0.1
HAZ				S	Sb	12 07 38.0	+3.4
RUGZ	**Raukumara Rang**	**0.22**	**148**	P	Pn	12 07 32.2	-0.5
RUGZ				S	Sb	12 07 38.1	+2.9
PKGZ	**Pakihiroa**	**0.44**	**104**	P	Pb	12 07 34.5	+0.1
PKGZ				S	Sb	12 07 41.7	+1.0
WHRZ	**Whale Island**	**0.45**	**260**	P	Pn	12 07 36.1	+0.3
TWGZ	**Tauwhareparae**	**0.53**	**138**	P	Pn	12 07 36.8	-0.1
TWGZ				S	Sn	12 07 46.0	+0.9
MWZ	**Matawai**	**0.55**	**180**	P	Pb	12 07 36.6	+0.4
MWZ				S	Sn	12 07 45.1	-0.5
URZ	**Urewera**	**0.58**	**215**	P	Pn	12 07 37.4	-0.1
	40nm,0.3s,baz=354,slow=5.1,SNR=199						
URZ	**Urewera**	**0.58**	**215**	P	Pn	12 07 37.4	-0.1
URZ				S	Sn	12 07 46.7	+0.4
PUZ	**Puketiti**	**0.64**	**117**	P	Pb	12 07 37.8	+0.2
PUZ				S	Sn	12 07 48.0	+0.2
MXZ	**Matakaoa Point**	**0.65**	**71**	P	Pn	12 07 38.8	+0.2
WMGZ	**Waiomatatini S**	**0.70**	**93**	P	Pb	12 07 38.8	+0.2
WMGZ				S	Sn	12 07 50.1	+1.0
TKGZ	**Te Karaka**	**0.70**	**159**	P	Pn	12 07 39.4	+0.2
TKGZ				S	Sn	12 07 51.6	+2.4
MARZ	**Manawahe**	**0.71**	**253**	P	Pn	12 07 39.6	+0.2
RAGZ	**Rawiri**	**0.72**	**187**	P	Pn	12 07 39.3	-0.2
CNGZ	**Carnagh Statio**	**0.88**	**143**	P	Pb	12 07 41.4	-0.2
MUGZ	**Murupara**	**0.92**	**221**	P	Pn	12 07 42.1	-0.2
MUGZ				S	Sn	12 07 54.4	-0.2
RTZ	**Ruatahuna**	**0.94**	**207**	P	Pn	12 07 42.0	-0.6
RIGZ	**Rimuhau**	**0.94**	**169**	P	Pb	12 07 43.3	+0.6
RRRZ	**Republican Roa**	**0.98**	**235**	P	Pn	12 07 43.2	+0.1
SNGZ	**Shannon Statio**	**1.01**	**189**	P	Pb	12 07 44.3	+0.5
TGRZ	**Tauranga**	**1.01**	**273**	P	Pn	12 07 42.8	-0.6
PRRZ	**Plateau Road**	**1.15**	**231**	P	Pn	12 07 45.3	-0.1
RAHZ	**Arahi**	**1.19**	**197**	P	Pn	12 07 46.1	+0.2
MTHZ	**Maungataniwha**	**1.20**	**207**	P	Pn	12 07 45.7	-0.4
ALRZ	**Allen Road**	**1.22**	**230**	P	Pn	12 07 46.3	0.0
MRHZ	**Matea Rd**	**1.37**	**220**	P	Pn	12 07 48.2	-0.3
NMHZ	**Naumai**	**1.43**	**203**	P	Pn	12 07 48.9	-0.4
BKZ	**Black Stump Fm**	**1.60**	**210**	P	Pn	12 07 51.4	-0.3
TOZ	**Tahuroa Road**	**1.61**	**271**	P	Pn	12 07 51.6	-0.1
KUZ	**Kuaotunu**	**1.78**	**305**	P	Pn	12 07 53.5	-0.5
KUZ				S	Sn	12 08 15.1	-0.7
MCHZ	**McNeill Hill**	**1.78**	**201**	P	Pn	12 07 54.5	+0.4
KWHZ	**Kaweka Forest**	**1.85**	**208**	P	Pn	12 07 54.9	-0.3
KAHZ	**Kahuranaki**	**2.07**	**194**	P	Pn	12 07 58.2	0.0
ETAZ	**East Tamaki Re**	**2.23**	**291**	P	Pn	12 08 00.8	+0.5
MBAZ	**Motutapu North**	**2.33**	**295**	P	Pn	12 08 02.2	+0.5
RVAZ	**Riverhead Bore**	**2.56**	**292**	P	Pn	12 08 05.6	+0.8
WCZ	**Waipu Caves**	**3.15**	**305**	P	Pn	12 08 13.3	+0.4

IDC 26 12:11:43.4±3.4**, 49°.68S×113°.24E, h0**^{km}**, mb3.7**/2**, mbtmp3.7**/2**, MS3.5**/4**, Error ellipse: s-maj=185.7km s-min=66.9km az=125.0, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**14.78**	**3**	T	T	12 30 56.5	
	baz=180,slow=74,SNR=43						
H01W1	**Cape Leeuwin H**	**14.79**	**3**	T	T	12 30 57.5	
	baz=180,slow=74,SNR=54						
H01W3	**Cape Leeuwin H**	**14.80**	**3**	T	T	12 31 00.1	
	baz=180,slow=74,SNR=40						
STKA	**Stephens Creek**	**27.64**	**61**	LR	LR	12 28 29.4	
	comp=Z,75nm,18.1s,baz=204,slow=36						
ASAR	**Alice Springs**	**30.60**	**39**	P	P	12 17 59.0	0.0
	0.7nm,0.8s,baz=209,slow=7.4,SNR=10						
	0.7nm,0.8s						
VNDA	**Vanda**	**33.33**	**163**	LR	LR	12 30 26.0	
	comp=Z,72nm,18.4s,baz=327,slow=34						
WRA	**Warramunga Arr**	**34.11**	**37**	P	P	12 18 29.7	-0.1
	1.1nm,0.7s,baz=205,slow=8.6,SNR=7.8						
	1.1nm,0.7s						
CTA	**Charters Tower**	**39.50**	**54**	LR	LR	12 34 55.4	
	comp=Z,59nm,19.0s,baz=232,slow=35						
KAPI	**Kappang**	**44.85**	**9**	LR	LR	12 38 44.4	
	comp=Z,79nm,18.2s,baz=198,slow=36						
H08S2	**Diego Garcia H**	**53.96**	**307**	T	T	13 20 12.2	
	baz=149,slow=74						
H08S1	**Diego Carcia H**	**53.97**	**307**	T	T	13 20 16.5	
	baz=149,slow=74						
H08S3	**Diego Garcia H**	**53.98**	**307**	T	T	13 20 17.5	
	baz=149						
YKA	**Yellowknife Ar**	**151.14**	**45**	PKPbc	PKPbc	12 31 37.0	-0.2
	0.3nm,0.7s,baz=266,slow=1.7,SNR=5.4						

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*NEIC **26** 12:16:44.9±2.6, 22°.4S±0°.3×173°.3W±0°.1, h35^{km}±2^{km},* *mb4.6/17, Error ellipse: s-maj=43.7km s-min=20.7km az=10.0*

*IDC **26** 12:17:17.0±6.9, 19°.02S×174°.71W, h325^{km}±32^{km}, mb3.9/3, mbtmp4.3/5, Error ellipse: s-maj=129.4km s-min=51.0km az=142.0*

ISC 26 12:17:16.0±1.9, 19°.7S±0°.4×174°.9W±0°.2, h300^{km}, n25, σ2^{s}.18/22, mb4.1/11, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.02	285	P	Pn	12 18 57.3	-0.4
	2.3nm,0.4s,baz=67,slow=7.7,SNR=6.2						
MSVF	Nonsavu	7.02	285	Pn	Pn	12 18 56.7	-1.0
PINNC	Pines Island,	16.76	257	P	P	12 20 53.4	+1.1
PINNC				IAmb	IAmb	12 21 31.6	
	comp=Z,20nm,1.2s						
OUENC	Ouen Island, N	17.30	258	P	P	12 20 59.9	+1.8
DZM	Mont Dzumac	17.63	259	P	P	12 21 03.1	+1.2
	comp=Z,2.1nm,0.5s,baz=66,slow=23,SNR=6.0						
DZM				S	S	12 24 06.6	-2.9
	comp=Z,1.2nm,0.7s,baz=287,slow=23,SNR=1.8						
DZM	Mont Dzumac	17.63	259	P	P	12 21 03.4	+1.5
ARMA	Armidale	32.06	244	P	P	12 23 09.3	-6.4
ARMA				IAmb	IAmb	12 23 42.2	
	comp=Z,19nm,1.4s						
CAN	Canberra	35.40	236	P	P	12 23 36.2	-8.0
CAN				IAmb	IAmb	12 23 40.5	
	comp=Z,21nm,1.4s						
CTA	Charters Tower	36.52	263	P	P	12 23 55.8	+2.1
	comp=Z,9.7nm,0.5s,baz=93,slow=9.8,SNR=25						
	comp=Z,9.7nm,0.5s						
CTAO	Charters Tower	36.52	263	P	P	12 23 55.0	+1.3
TOO	Toolangi	38.74	234	P	P	12 24 03.7	-8.4
TOO				IAmb	IAmb	12 24 30.7	
	comp=Z,7.8nm,1.1s						
BBOO	Buckleboo	45.54	243	P	P	12 25 00.7	-5.9
BBOO				IAmb	IAmb	12 25 44.0	
	comp=Z,24nm,1.5s						
AS31	Alice Springs	47.58	256	P	P	12 25 21.7	-0.9
AS31				IAmb	IAmb	12 25 24.2	
	comp=Z,1.3nm,0.5s						
ASAR	Alice Springs	47.58	256	P	P	12 25 22.1	-0.4
	comp=Z,3.4nm,0.8s,baz=95,slow=7.6,SNR=22						
ASAR				ScP	ScP	12 30 07.1	-5.2
	comp=Z,1.2nm,0.9s,baz=102,slow=4.4,SNR=10						
	comp=Z,3.4nm,0.8s						
ASAR	Alice Springs	47.58	256	P	P	12 25 21.9	-0.6
WB0	Warramunga Arr	47.62	261	P	P	12 25 24.4	+1.5
WB0				IAmb	IAmb	12 25 25.0	
	comp=Z,8.0nm,0.8s						
WB2	Warramunga Arr	47.63	261	P	P	12 25 24.4	+1.4
WB2				IAmb	IAmb	12 25 25.1	
	comp=Z,6.6nm,1.0s						
WRAB	Tennant Creek	47.63	261	P	P	12 25 24.3	+1.4
WRAB				IAmb	IAmb	12 25 24.7	
	comp=Z,5.1nm,0.5s						
WRA	Warramunga Arr	47.64	261	P	P	12 25 24.5	+1.4
	comp=Z,2.6nm,0.3s,baz=97,slow=8.4,SNR=166						
WRA				ScP	ScP	12 30 08.6	-4.0
	comp=Z,0.4nm,1.1s,baz=100,slow=3.5,SNR=4.9						
	comp=Z,2.6nm,0.3s						
WRA	Warramunga Arr	47.64	261	P	P	12 25 24.3	+1.2
FORT	Forrest	52.31	246	P	P	12 25 54.4	-3.3
KNRA	Kununurra	53.67	265	P	P	12 26 12.7	+4.9
FITZ	Fitzroy Crossi	56.07	261	P	P	12 26 28.4	+3.5
MORW	Morawa	62.85	247	P	P	12 27 10.2	-0.7
BRTR	Keskin Array B	148.45	315	PKPbc	PKPdf	12 36 23.9	+0.1
	comp=Z,0.2nm,0.3s,baz=9.7,slow=1.7,SNR=2.6						

IDC 26 12:25:04.5±9.7, 19°.58S×178°.86W, h471^{km}±50^{km}, mb2.6/3, mbtmp3.5/5, Error ellipse: s-maj=235.4km s-min=30.2km az=141.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.46	302	P	P	12 26 16.5	-0.3
	8.7nm,0.7s,baz=129,slow=16,SNR=13						
DZM	Mont Dzumac	13.96	257	P	P	12 28 05.3	+1.0
	1.7nm,0.4s,baz=81,slow=22,SNR=8.0						
WRA	Warramunga Arr	43.93	261	P	P	12 32 28.7	-0.1
	0.5nm,1.0s,baz=95,slow=7.5,SNR=7.5						
	0.5nm,1.0s						
ASAR	Alice Springs	43.95	256	P	P	12 32 28.6	-0.4
	0.4nm,0.8s,baz=96,slow=8.1,SNR=6.0						
	0.4nm,0.8s						
ILAR	Eielson Array	87.61	13	P	P	12 37 01.2	0.0
	0.4nm,0.8s,baz=216,slow=5.7,SNR=5.8						
	0.4nm,0.8s						

WEL 26 12:30:59.2±0.3, 43°S±2°×17°3E±°, h5^{km}, M3.0/11, ML3.1/12, MLv3.0/11, Error ellipse: s-maj=0.0km s-min=0.0km az=111.3, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	Greta Valley S	0.36	166	P	Pg	12 31 06.7	+0.6
GVZ				S	Sb	12 31 12.6	-1.5
LTZ	Lake Taylor	0.50	251	P	Pg	12 31 09.5	+0.6
LTZ				S	Sg	12 31 16.8	+1.3
KHZ	Kahutara	0.50	66	P	Pg	12 31 09.0	+0.1
KHZ				S	Sg	12 31 16.3	+0.9
AMCZ	Amberley	0.59	199	P	Pb	12 31 11.4	-0.6
AMCZ				S	Sb	12 31 20.2	-0.5
THZ	Tophouse	0.86	359	P	Pg	12 31 15.5	-0.2
OXZ	Oxford	0.95	222	P	Pg	12 31 16.9	-0.7
OXZ				S	Sg	12 31 30.4	+0.5
INZ	Inchbonnie	1.09	264	P	Pg	12 31 19.8	-0.4
MQZ	McQueen's Vall	1.10	190	P	Pg	12 31 18.1	-2.3
MQZ				S	Sg	12 31 32.9	-1.7
BSWZ	Blackbirch Sta	1.15	38	P	Pg	12 31 21.0	-0.4
DSZ	Denniston Nort	1.21	316	P	Pg	12 31 22.2	-0.2
DSZ				S	Sn	12 31 39.3	-0.2
MRNZ	Matariki Terra	1.23	354	P	Pg	12 31 22.0	-0.8
RACZ	Rakaia	1.24	207	P	Pg	12 31 20.8	-2.3
AKCZ	Akaroa Harbour	1.25	180	P	Pg	12 31 20.5	-2.7
CMWZ	Cape Campbell	1.30	48	P	Pg	12 31 24.4	+0.2
TUWZ	Tuamarina	1.42	33	P	Pn	12 31 24.8	-0.8
NNZ	Nelson	1.45	14	P	Pn	12 31 25.4	-0.6
WACZ	Wakanui South	1.54	210	P	Pn	12 31 24.7	-2.6
TKNZ	Takaka Hill	1.59	1	P	Pn	12 31 27.3	-0.7
WVZ	Waitaha Valley	1.67	254	P	Pn	12 31 28.1	-1.0
TCW	Tory Channel	1.74	36	P	Pn	12 31 29.4	-0.7
RPZ	Rata Peaks	1.75	231	P	Pn	12 31 28.0	-2.2
QRZ	Quartz Range	1.82	351	P	Pn	12 31 31.6	+0.4
ARCZ	Arundel	1.83	223	P	Pn	12 31 29.0	-2.5
DUWZ	D'Urville Isla	1.97	23	P	Pn	12 31 33.4	+0.1
PLWZ	Palliser	2.03	60	P	Pn	12 31 31.7	-2.5
CAW	Cannon Point	2.21	47	P	Pn	12 31 34.2	-2.3
TMZ	Timaru	2.24	218	P	Pn	12 31 34.6	-2.4
KIW	Kapiti Island	2.31	41	P	Pn	12 31 37.3	-0.6
FOZ	Fox Glacier	2.45	247	P	Pn	12 31 39.3	-0.5
OGWZ	Otaki Gorge	2.47	44	P	Pn	12 31 38.1	-2.0
LBZ	Lake Benmore	2.66	228	P	Pn	12 31 40.6	-2.2
MRZ	Mangatainoka R	2.80	46	P	Pn	12 31 42.1	-2.6
ODZ	Otahua Downs	2.93	213	P	Pn	12 31 43.6	-2.8
NBEZ	Newall Road No	3.43	12	P	Pn	12 31 55.4	+2.1
TSZ	Takapari Road	3.44	43	P	Pn	12 31 53.3	-0.2
WKZ	Wanaka	3.58	231	P	Pn	12 31 52.6	-2.9
EAZ	Earnscleugh	3.69	224	P	Pn	12 31 53.9	-3.0
VRZ	Vera Road	3.76	22	P	Pn	12 31 58.1	+0.2
MLZ	Mavora Lakes	4.42	230	P	Pn	12 32 03.8	-3.2
TLZ	Tolley Road	4.73	26	P	Pn	12 32 11.2	0.0

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*JMA **26** 12:34:29.9±0.3, 44°N±1°×14°8E±°, h13^{km}, MV3.9/32, E OFF HOKKAIDO*

*SKHL **26** 12:34:32.0±0.1, 44°.20N×147°.60E, h44^{km}±5^{km}, mb4.7/4*

ISC 26 12:34:27.4±2.1, 44°.04N±0°.08×147°.7E±0°.1, h11^{km}±13^{km}, n19, σ1^{s}.49/31, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.64	255	*i* P	Pn	12 34 43.7	+1.4
SHO				AMB	AMB	12 34 44.9	
	170nm,0.2s						
SHO				*i* S	Sn	12 34 52.3	-0.1
SHO				A	A	12 34 52.9	
	1µm,0.3s						
SHO				A	A	12 34 52.9	
	2µm,0.3s						
KUR	Kuril'sk	1.20	6	*i* P	Pg	12 34 50.3	-0.1
KUR				AMB	AMB	12 34 51.9	
	160nm,0.2s						
KUR				*i* S	Sb	12 35 04.0	-1.6
KUR				A	A	12 35 06.1	
	1µm,0.3s						
KUR				A	A	12 35 06.1	
	2µm,0.3s						
YUK	Yuzh-Kuril'sk	1.31	270	*i* P	Pg	12 34 52.4	-0.1
YUK				AMB	AMB	12 34 54.1	
	680nm,0.3s						
YUK				*e*S	Sn	12 35 07.8	-1.3
YUK				A	A	12 35 10.8	
	1µm,0.3s						
YUK				A	A	12 35 10.8	
	640nm,0.3s						
NEM2	Nemuro 2	1.56	245	P	Pb	12 34 55.9	-0.3
NEM2				*e*S	Sn	12 35 14.3	-0.8
NMR	Nemuro--Hokkai	1.57	245	*i* P	Pb	12 34 56.0	-0.3
NMR				*e*S	Sn	12 35 14.0	-1.4
JRA	Rausu	1.85	268	*e*P	Pb	12 35 00.9	-0.2
JRA				*e*S	Sb	12 35 23.5	-0.7
JNSB	Nemuroshibetsu	1.95	263	P	Pb	12 35 02.3	-0.6
JNSB				*e*S	Sb	12 35 25.8	-1.4
JKHN	Kushirohamanak	2.07	243	P	Pn	12 35 03.3	+1.4
JNK	Nakash	2.19	259	*e*P	Pb	12 35 05.5	-1.5
JNK				*e*S	Sn	12 35 31.0	+0.2
AKK	Akkeshi	2.30	245	*i* P	Pn	12 35 06.5	+1.3
AKK				*i* S	Sn	12 35 32.2	-1.4
JAK	Akkeshi	2.41	245	P	Pn	12 35 08.0	+1.3
JAK				*e*S	Sn	12 35 36.0	-0.2
JTKR	Abashiri--Toko	2.72	270	P	Pn	12 35 13.0	+2.0
JAR	Ashorobuto	2.93	257	*e*P	Pn	12 35 16.3	+2.4
JAR				*e*S	Sn	12 35 50.5	+1.4
JOB	Onbets	3.02	249	P	Pn	12 35 17.1	+2.0
JMP	Maruseppu	3.12	271	*e*P	Pn	12 35 18.7	+2.3
JCH	Churui	3.46	247	*e*P	Pn	12 35 22.7	+1.6
JCH				*e*S	Sn	12 36 00.8	-1.2
ASAJ	Asahikawa	3.66	273	*e*P	Pn	12 35 27.0	+3.1
JNBK	Urakawa-nobuka	4.01	246	*e*P	Pn	12 35 30.1	+1.4
YSS	Yuzh-Sakhalins	4.52	312	*e*P	Pn	12 35 37.2	+1.4
YSS				AMB	AMB	12 35 37.4	
	100nm,0.4s						

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*IDC **26** 12:39:19.6±3.8, 23°.17S×179°.49W, h571^{km}±50^{km}, mb3.6/4, mbtmp4.4/7, Error ellipse: s-maj=97.6km s-min=37.8km az=69.0*

*NEIC **26** 12:39:20.1±1.4, 23°.3S±0°.1×179°.6W±0°.1, h561^{km}±11^{km}, mb4.4/20, Error ellipse: s-maj=24.5km s-min=7.9km az=149.0*

ISC 26 12:39:19.4±0.9, 23°.39S±0°.09×179°.6W±0°.1, h550^{km}, n35, σ1^{s}.14/36, mb4.3/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.03	339	P	P	12 40 58.9	+0.5
	11nm,0.5s,baz=203,slow=7.2,SNR=22						
MSVF	Nonsavu	6.03	339	P	P	12 40 58.4	-0.1
PINNC	Pines Island,	11.92	271	P	P	12 41 58.0	+0.9
AFI	Afiamalu	12.01	40	P	P	12 41 57.3	-0.9
LIFNC	LIFOU	12.44	280	P	P	12 42 02.1	-0.3
OUENC	Ouen Island, N	12.50	272	P	P	12 42 02.5	-0.6
DZM	Mont Dzumac	12.91	273	P	P	12 42 07.3	-0.2
	1.8nm,0.6s,baz=82,slow=21,SNR=3.0						
DZM	Mont Dzumac	12.91	273	P	P	12 42 10.6	+3.1
URZ	Urewera	15.09	190	P	P	12 42 30.2	+0.7
	6.2nm,0.6s,baz=344,slow=4.6,SNR=6.4						
URZ				S	S	12 45 02.9	-3.0
	11nm,1.0s,baz=265,slow=9.2,SNR=2.0						
BKZ	Black Stump Fm	16.07	191	P	P	12 42 38.3	-1.1
BKZ				IAmb	IAmb	12 42 47.4	
	comp=Z,35nm,1.4s						
TKNZ	Takaka Hill	18.66	198	P	P	12 43 03.6	+0.5
LTZ	Lake Taylor	20.48	197	P	P	12 43 20.8	+1.2
LTZ				IAmb	IAmb	12 43 25.1	
	comp=Z,21nm,1.3s						
LHI	Lord Howe Isla	20.54	242	P	P	12 43 18.4	-1.9
WHZ	Wether Hill Ro	24.61	201	P	P	12 43 58.0	+1.6
CAN	Canberra	29.69	239	P	P	12 44 42.0	+0.9
CAN				IAmb	IAmb	12 45 18.8	
	comp=Z,21nm,1.5s						
CTA	Charters Tower	31.81	269	P	P	12 45 00.0	+0.5
	comp=Z,9.3nm,0.4s,baz=94,slow=9.7,SNR=31						
	comp=Z,9.3nm,0.4s						
CTAO	Charters Tower	31.81	269	P	P	12 44 59.8	+0.3
TOO	Toolangi	33.01	237	P	P	12 45 10.2	+0.8
TOO				IAmb	IAmb	12 45 19.3	
	comp=Z,7.7nm,1.2s						
STKA	Stephens Creek	35.22	247	P	P	12 45 28.9	+0.9
	comp=Z,4.3nm,0.6s,baz=100,slow=10.0,SNR=8.4						
	comp=Z,4.3nm,0.6s						
STKA	Stephens Creek	35.22	247	P	P	12 45 27.9	-0.1
BBOO	Buckleboo	39.95	246	P	P	12 46 05.5	-1.2
AS31	Alice Springs	42.45	260	P	P	12 46 26.6	0.0
ASAR	Alice Springs	42.45	260	P	P	12 46 26.6	0.0
	comp=Z,4.9nm,0.8s,baz=95,slow=7.0,SNR=97						
	comp=Z,4.9nm,0.8s						
ASAR	Alice Springs	42.45	260	P	P	12 46 25.9	-0.6
WB2	Warramunga Arr	42.76	265	P	P	12 46 28.2	-0.8
WB2				IAmb	IAmb	12 46 28.9	
	comp=Z,6.5nm,0.6s						
WB0	Warramunga Arr	42.76	266	P	P	12 46 28.4	-0.6
WB0				IAmb	IAmb	12 46 29.2	
	comp=Z,8.0nm,0.7s						
WRAB	Tennant Creek	42.77	265	P	P	12 46 28.0	-1.1
WRAB				IAmb	IAmb	12 46 28.9	
	comp=Z,5.7nm,0.6s						
WRA	Warramunga Arr	42.77	265	P	P	12 46 28.8	-0.4
	comp=Z,5.6nm,0.6s,baz=92,slow=8.4,SNR=138						
	comp=Z,5.6nm,0.6s						
WRA	Warramunga Arr	42.77	265	P	P	12 46 28.3	-0.8
FORT	Forrest	46.80	249	P	P	12 46 58.6	-1.2
KNRA	Kununurra	49.02	269	P	P	12 47 16.2	-0.5
KNRA				IAmb	IAmb	12 47 17.6	
	comp=Z,16nm,1.2s						
FITZ	Fitzroy Crossi	51.20	265	P	P	12 47 33.0	+0.5
MORW	Morawa	57.36	250	P	P	12 48 15.4	-0.3
MORW				IAmb	IAmb	12 48 49.8	
	comp=Z,24nm,1.2s						
QSPA	South Pole Qui	66.69	180	P	P	12 49 17.4	+1.6
SNAA	Sanae	85.17	179	P	P	12 50 57.9	+0.4
SNAA				IAmb	IAmb	12 51 40.5	
	comp=Z,11nm,1.3s						

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*IDC **26** 12:47:11.8±0.6, 16°.37S×66°.63E, h0^{km}, mb4.2/17, mbtmp4.2/17, MS3.8/32, Error ellipse: s-maj=19.6km s-min=16.0km az=170.0*

ISC 26 12:47:13.4±0.7, 16°.4S±0°.2×66°.6E±0°.1, h10^{km}, n62, σ0^{s}.73/34, mb4.5/29, MS3.8/32, 2C-1D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	10.40	34	T	T	13 00 19.5	
	baz=212,slow=75,SNR=702						
H08S2	Diego Garcia H	10.41	34	T	T	13 00 18.5	
	baz=212,slow=75,SNR=432						
H08S3	Diego Garcia H	10.42	34	T	T	13 00 21.0	
	baz=212,slow=75,SNR=673						
PALK	Pallekele	27.33	32	LR	LR	13 01 51.2	
	comp=Z,94nm,18.0s,baz=318,slow=32						
LSZ	Lusaka	36.94	266	LR	LR	13 07 32.1	
	comp=Z,143nm,20.9s,baz=136,slow=33						
MBAR	Mbarara	38.66	290	LR	LR	13 08 10.7	
	comp=Z,175nm,19.6s,baz=71,slow=32						
LBTB	Lobatse	39.19	250	P	P	12 54 42.5	+0.5
	9.7nm,0.9s,baz=92,slow=9.6,SNR=11						
LBTB				LR	LR	13 08 47.9	
	comp=Z,120nm,18.1s,baz=88,slow=33						
	9.7nm,0.9s						
BOSA	Boshof	39.91	245	P	P	12 54 47.9	-0.1
	4.7nm,1.0s,baz=100,slow=7.5,SNR=5.2						
	4.7nm,1.0s						
WSAR	Wadi Sarin	40.13	349	LR	LR	13 07 16.9	
	comp=Z,66nm,20.8s,baz=182,slow=30						
BRDH	Bariadhala	45.90	33	LR	LR	13 14 59.1	
	comp=Z,180nm,18.9s,baz=274,slow=36						
H01W3	Cape Leeuwin H	46.19	123	T	T	13 44 58.7	
	baz=278,slow=75,SNR=15						
H01W2	Cape Leeuwin H	46.19	123	T	T	13 44 59.8	
	baz=278,slow=75,SNR=17						
H01W1	Cape Leeuwin H	46.20	123	T	T	13 44 53.0	
	baz=278,slow=75,SNR=13						
TSUM	Tsumeb	46.64	259	LR	LR	13 12 13.6	
	comp=Z,60nm,20.4s,baz=150,slow=32						
CMAR	Chiang Mai Arr	47.03	44	P	P	12 55 46.7	+1.4
	0.4nm,0.3s,baz=243,slow=11,SNR=9.2						
CMAR				LR	LR	13 14 15.7	
	comp=Z,104nm,18.3s,baz=230,slow=34						
	0.4nm,0.3s						
MAW	Mawson	51.26	182	LR	LR	13 14 30.7	
	comp=Z,58nm,18.5s,baz=356,slow=32						
KAPI	Kappang	53.28	84	LR	LR	13 19 43.4	
	comp=Z,72nm,18.0s,baz=272,slow=37						
GEYT	Alibeck	54.60	352	LR	LR	13 16 52.8	
	comp=Z,93nm,21.3s,baz=184,slow=33						
EIL	Elat	55.02	326	LR	LR	13 19 32.3	
	comp=Z,34nm,18.0s,baz=243,slow=35						
AAK	Ala-Archa	59.16	7	LR	LR	13 20 53.3	
	comp=Z,130nm,20.6s,baz=196,slow=34						
ASAR	Alice Springs	63.16	109	P	P	12 57 41.0	-1.2
	1.2nm,0.6s,baz=267,slow=6.1,SNR=20						
ASAR				LR	LR	13 21 28.5	
	comp=Z,212nm,19.9s,baz=284,slow=33						
	1.2nm,0.6s						
BRTR	Keskin Array B	63.71	332	P	P	12 57 43.9	-1.6
	1.6nm,0.8s,baz=141,slow=6.1,SNR=10.0						
	1.6nm,0.8s						
WRA	Warramunga Arr	64.08	105	P	P	12 57 47.8	-0.5
	3.9nm,0.9s,baz=267,slow=6.1,SNR=22						
	3.9nm,0.9s						
MKAR	Makanchi Array	64.44	12	P	P	12 57 49.6	-0.3
	1.7nm,1.1s,baz=197,slow=7.6,SNR=9.7						
	1.7nm,1.1s						
SIJI	Sorong	65.48	83	LR	LR	13 25 26.1	
	comp=Z,32nm,18.8s,baz=220,slow=35						
SNAA	Sanae	68.14	199	LR	LR	13 23 01.2	
	comp=Z,44nm,20.1s,baz=116,slow=32						
STKA	Stephens Creek	68.98	118	LR	LR	13 24 57.0	
	comp=Z,98nm,18.4s,baz=211,slow=33						
BVAR	Borovoye Array	69.19	2	LR	LR	13 26 29.3	
	comp=Z,60nm,21.4s,baz=170,slow=34						
BELG	Belogornoye	70.43	348	LR	LR	13 28 09.6	
	comp=Z,61nm,18.8s,baz=138,slow=35						
TORD	Torodi Ar. Bea	70.53	291	P	P	12 58 29.3	+0.2
	4.6nm,0.4s,baz=139,slow=6.8,SNR=6.9						
TORD				LR	LR	13 28 41.5	
	comp=Z,43nm,18.2s,baz=96,slow=35						
	4.6nm,0.4s						
ZALV	Zalesovo Beam	71.76	11	P	P	12 58 35.5	-0.2
	3.3nm,0.9s,baz=200,slow=6.9,SNR=13						
ZALV				LR	LR	13 29 04.8	
	comp=Z,65nm,18.8s,baz=228,slow=35						
	3.3nm,0.9s						
SONM	Songino Array	73.15	27	P	P	12 58 44.8	+0.5
	1.1nm,0.9s,baz=212,slow=5.3,SNR=6.3						
SONM				LR	LR	13 29 43.4	
	comp=Z,83nm,20.0s,baz=205,slow=35						
	1.1nm,0.9s						
QSPA	South Pole Qui	73.72	180	P	P	12 58 48.2	+0.7
	2.7nm,1.0s,baz=324,slow=1.0,SNR=5.4						
QSPA				LR	LR	13 28 28.8	
	comp=Z,56nm,18.0s,baz=262,slow=34						
	2.7nm,1.0s						
KIC	Kosan Boka	74.07	282	⇓*i*PKP1	P	12 58 51.0	+0.7
	26nm,1.0s						
DBIC	Dimbokro	74.28	282	P	P	12 58 52.3	+0.8
	5.2nm,0.8s,baz=100,slow=8.1,SNR=8.6						
DBIC				LR	LR	13 29 45.6	
	comp=Z,42nm,20.3s,baz=96,slow=34						
	5.2nm,0.8s						
LIC	Lamto	74.30	281	⇑*i*PKP1	P	12 58 51.9	+0.2
	32nm,0.9s						
AKASG	Malin Array Be	74.40	336	P	P	12 58 51.2	-0.2
	1.1nm,0.6s,baz=139,slow=4.9,SNR=7.8						
	1.1nm,0.6s						
TIC	Toumodi	74.42	282	⇑*i*PKP1	P	12 58 51.0	-1.4
	3.6nm,0.2s						
CTA	Charters Tower	75.07	107	LR	LR	13 29 24.4	
	comp=Z,93nm,19.1s,baz=260,slow=34						
VNDA	Vanda	75.27	167	LR	LR	13 29 47.2	
	comp=Z,31nm,18.7s,baz=283,slow=34						
KIRV	Kirov	76.01	351	LR	LR	13 30 50.8	
	comp=Z,45nm,21.3s,baz=195,slow=34						
RONA	Rosalia, Austr	78.02	328	*e*P	P	12 59 13.0	+0.8
	5.2nm,0.8s						
ARSA	Arzberg	78.12	327	*e*P	P	12 59 13.4	+0.6
	6.0nm,0.8s						
CONA	Conrad Observa	78.39	328	*e*P	P	12 59 14.7	+0.4
	5.5nm,0.9s						
KSRS	Korea Array	78.64	45	P	P	12 59 16.2	+0.4
	1.1nm,0.9s,baz=175,slow=20,SNR=3.3						
KSRS				LR	LR	13 33 27.6	
	comp=Z,26nm,19.0s,baz=105,slow=35						
	1.1nm,0.9s						
MOA	Molln	79.16	327	*e*P	P	12 59 18.9	+0.4
	6.2nm,0.9s						
ABTA	Abfaltersbach	79.41	325	*e*P	P	12 59 20.6	+0.7
	6.7nm,0.9s						
WTTA	Wattenberg	80.20	326	*e*P	P	12 59 24.2	0.0
	12nm,1.4s						
SQTA	Sankt Quirin	80.41	325	*e*P	P	12 59 25.3	0.0
	6.3nm,1.2s						
MOTA	Moosalm	80.54	325	*e*P	P	12 59 26.6	+0.5
	6.6nm,1.2s						
DAVA	Damuels	81.17	325	*e*P	P	12 59 29.8	+0.3
	4.6nm,0.8s						
MDT	Midelt	83.72	307	LR	LR	13 37 07.3	
	comp=Z,36nm,18.7s,baz=150,slow=36						
FINES	FINESS Array B	83.97	342	P	P	12 59 44.4	+0.9
	6.4nm,1.1s,baz=154,slow=7.7,SNR=4.3						
	6.4nm,1.1s						
MJAR	Matsushiro Arr	85.54	50	P	P	12 59 51.6	-0.5
	1.2nm,0.9s,baz=228,slow=4.8,SNR=2.4						
	1.2nm,0.9s						
ESDC	Sonseca Array	86.08	313	P	P	12 59 54.5	-0.2
	1.8nm,1.0s,baz=107,slow=4.3,SNR=6.6						
	1.8nm,1.0s						
KLR	Kul'dur	86.97	37	LR	LR	13 41 28.1	
	comp=Z,26nm,18.1s,baz=172,slow=38						
YAK	Yakutsk	92.42	25	LR	LR	13 40 58.4	
	comp=Z,60nm,19.4s,baz=260,slow=35						
TIXI	Tiksi	97.14	16	LR	LR	13 45 10.0	
	comp=Z,46nm,18.2s,baz=358,slow=36						
YKA	Yellowknife Ar	133.93	1	PKP	PKPdf	13 06 29.6	-0.9
	0.1nm,0.6s,baz=335,slow=2.1,SNR=4.2						
YKA				PP	PP	13 08 58.9	-0.9
	0.7nm,1.2s,baz=352,slow=7.1,SNR=5.9						
PDAR	Pinedale Array	153.49	354	PKPbc	PKiKP	13 07 12.2	-0.7
	0.6nm,0.8s,baz=92,slow=3.1,SNR=5.5						
NVAR	Mina Array Bea	157.61	10	PKPab	PKPab	13 07 43.1	+0.5
	0.7nm,0.7s,baz=358,slow=2.9,SNR=7.4						
TXAR	Lajitas Array	164.30	327	PKPab	PKPab	13 08 11.8	-0.2
	0.5nm,0.8s,baz=56,slow=5.1,SNR=5.2						

WEL 26 12:54:35.4±1.1, 45°S±6°×16°7E±°, h73^{km}±9^{km}, M2.5/2, ML2.9/8, MLv2.5/2, Error ellipse: s-maj=0.0km s-min=0.0km az=128.2, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.47	47	P	Pn	12 54 50.0	+1.8
MSZ				S	Sn	12 55 00.9	+3.3
DCZ	Deep Cove	0.51	203	P	Pn	12 54 49.9	+1.2
DCZ				S	Sn	12 55 00.9	+2.5
MLZ	Mavora Lakes	0.61	128	P	Pn	12 54 50.7	+1.1
MLZ				S	Sn	12 55 02.4	+2.3
WHZ	Wether Hill Ro	0.97	159	P	Pn	12 54 54.2	+0.5
WHZ				S	Sn	12 55 08.2	+0.9
WKZ	Wanaka	1.13	82	P	Pn	12 54 56.3	+0.6
WKZ				S	Sn	12 55 12.0	+1.0
JCZ	Jackson Bay	1.33	47	P	Pn	12 54 58.2	-0.2
JCZ				S	Sn	12 55 15.1	-0.5
EAZ	Earnscleugh	1.34	101	P	Pn	12 54 58.6	+0.2
EAZ				S	Sn	12 55 15.5	-0.2
TUZ	Tuapeka	1.81	123	P	Pn	12 55 04.5	-0.1
TUZ				S	Sn	12 55 24.8	-2.0
APZ	The Paps	1.88	169	P	Pn	12 55 05.2	-0.3
SYZ	Scrubby Hill	1.95	143	P	Pn	12 55 06.1	-0.3
LBZ	Lake Benmore	2.05	74	P	Pn	12 55 06.4	-1.4
FOZ	Fox Glacier	2.24	50	P	Pn	12 55 08.8	-1.6
ODZ	Otahua Downs	2.27	92	P	Pn	12 55 09.4	-1.3
TMZ	Timaru	2.61	78	P	Pn	12 55 13.2	-2.2

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*NEIC **26** 12:55:56.7±1.0, 3°.33N±0°.06×122°.5E±0°.1, h549^{km}±10^{km}, mb4.3/20, Error ellipse: s-maj=21.6km s-min=4.7km az=70.0*

*DJA **26** 12:55:56.5±0.6, 3°N±10°×12°3E±°, h538^{km}±10^{km}, M4.2/12, mb4.3/6, mB4.5/3, MLv4.3/12, Mw(mB)3.7/3*

*IDC **26** 12:55:57.5±1.6, 3°.34N×122°.74E, h566^{km}±18^{km}, mb3.1/8,* *mbtmp4.1/9, Error ellipse: s-maj=32.4km s-min=8.9km az=71.0*

ISC 26 12:55:56.2±0.6**, 3°.27N**±0°.09×**122°.6E**±0°.1**, h550km, n46,** σ**1s.14**/49**, mb4.2**/18**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	Gorontalo	2.65	170	P	P	12 57 08.2	-1.0
GTOI				S	S	12 58 06.5	-2.1
TOLI2	Tolitoli	2.78	220	P	P	12 57 10.2	+0.3
MRSI	Marisa	2.84	192	P	P	12 57 10.6	+0.3
MPSI	Mapaga	3.94	222	P	P	12 57 17.9	+0.3
LUWI	Luwuk	4.29	177	P	P	12 57 21.1	+0.8
LUWI	Luwuk	4.29	177	P	P	12 57 20.8	+0.5
MYLDM	Lahad Datu	4.46	295	P	P	12 57 23.1	+1.4
TNTI	Ternate	5.41	117	P	P	12 57 29.5	-0.2
TNTI	Ternate	5.41	117	P	P	12 57 28.9	-0.7
	73nm,0.9s,0.3nm						
LBMI	Labuha	6.29	128	P	P	12 57 37.1	-0.4
	72nm,0.8s,0.6nm						
SANI	Sanana	6.30	147	P	P	12 57 36.0	-1.6
	16nm,0.6s,782nm0.2nm						
KKM	Kota Kinabalu	6.89	294	P	P	12 57 42.7	-0.6
SIJI	Sorong	9.63	115	P	P	12 58 11.3	+0.9
	8.1nm,0.5s,baz=335,slow=18,SNR=5.8						
FAKI	Fak Fak	11.48	122	P	P	12 58 28.9	-0.6
SOEI	Soe	13.05	172	P	P	12 58 46.3	+0.5
MTN	Manton Dam	18.13	152	P	P	12 59 37.5	+2.1
KNRA	Kununurra	19.80	162	P	P	12 59 51.5	+0.9
FITZ	Fitzroy Crossi	21.45	172	P	P	13 00 06.0	+0.6
KULM	Kulim	21.93	276	P	P	13 00 09.8	-0.1
KULM				IAmb	IAmb	13 00 31.2	
	comp=Z,10.0nm,1.2s						
WB0	Warramunga Arr	25.68	154	P	P	13 00 43.0	-0.1
WB0				IAmb	IAmb	13 00 44.0	
	comp=Z,5.2nm,0.9s						
WRAB	Tennant Creek	25.80	154	P	P	13 00 44.0	-0.2
WRAB				IAmb	IAmb	13 00 45.1	
	comp=Z,8.5nm,0.8s						
WRA	Warramunga Arr	25.81	154	P	P	13 00 44.0	-0.2
	comp=Z,4.3nm,0.5s,baz=338,slow=9.4,SNR=89						
WRA				S	S	13 04 30.6	-4.7
	comp=Z,0.1nm,0.4s,baz=335,slow=15,SNR=1.5						
WRA				ScP	ScP	13 06 42.5	-0.5
	comp=Z,0.6nm,0.5s,baz=339,slow=2.9,SNR=7.2						
	comp=Z,4.3nm,0.5s						
WRA	Warramunga Arr	25.81	154	P	P	13 00 43.1	-1.1
WB2	Warramunga Arr	25.81	154	P	P	13 00 44.3	0.0
WB2				IAmb	IAmb	13 00 45.1	
	comp=Z,7.8nm,0.7s						
AS31	Alice Springs	28.96	158	P	P	13 01 12.8	+0.9
ASAR	Alice Springs	28.97	158	P	P	13 01 12.8	+0.9
	comp=Z,1.8nm,0.5s,baz=338,slow=7.5,SNR=99						
ASAR				PcP	PcP	13 04 03.0	0.0
	comp=Z,0.2nm,0.7s,baz=357,slow=1.9,SNR=1.2						
ASAR				S	S	13 05 24.1	-0.4
	comp=Z,0.2nm,0.6s,baz=317,slow=11,SNR=4.2						
ASAR				ScP	ScP	13 06 52.1	-0.6
	comp=Z,0.9nm,0.6s,baz=340,slow=2.9,SNR=14						
	comp=Z,1.8nm,0.5s						
ASAR	Alice Springs	28.97	158	P	P	13 01 12.3	+0.5
MJAR	Matsushiro Arr	36.12	22	P	P	13 02 10.2	-2.1
	comp=Z,0.7nm,0.5s,baz=191,slow=8.8,SNR=4.5						
	comp=Z,0.7nm,0.5s						
BBOO	Buckleboo	38.09	161	P	P	13 02 29.3	+0.9
STKA	Stephens Creek	39.36	154	P	P	13 02 40.3	+1.6
	comp=Z,2.3nm,0.4s,baz=337,slow=6.8,SNR=8.9						
	comp=Z,2.3nm,0.4s						
STKA	Stephens Creek	39.36	154	P	P	13 02 39.4	+0.7
USRK	Ussuriysk Ar.	41.61	10	P	P	13 02 56.0	-0.3
ARMA	Armidale	43.51	142	P	P	13 03 13.8	+2.1
ARMA				IAmb	IAmb	13 03 29.0	
	comp=Z,26nm,1.5s						
ASAJ	Asahikawa	44.37	21	P	P	13 03 17.5	-0.5
	comp=Z,1.7nm,0.5s,baz=256,slow=7.7,SNR=12						
	comp=Z,1.7nm,0.5s						
JKA	Kamikawa-asahi	44.37	21	P	P	13 03 17.7	-0.2
JKA				IAmb	IAmb	13 03 49.0	
	comp=Z,9.0nm,1.4s						
CAN	Canberra	45.70	149	P	P	13 03 30.5	+2.2
CAN				IAmb	IAmb	13 03 31.5	
	comp=Z,7.0nm,0.6s						
SONM	Songino Array	46.53	345	P	P	13 03 34.8	+0.3
	comp=Z,0.3nm,0.4s,baz=150,slow=7.6,SNR=3.5						
	comp=Z,0.3nm,0.4s						
MK31	Makanchi Array	55.62	327	P	P	13 04 40.4	+0.1
MKAR	Makanchi Array	55.62	327	P	P	13 04 40.3	0.0
	comp=Z,1.2nm,0.4s,baz=124,slow=8.1,SNR=31						
	comp=Z,1.2nm,0.4s						
MKAR	Makanchi Array	55.62	327	P	P	13 04 40.1	-0.2
ZALV	Zalesovo Beam	59.18	335	P	P	13 05 02.9	-1.4
	comp=Z,0.5nm,0.3s,baz=143,slow=5.4,SNR=3.9						
	comp=Z,0.5nm,0.3s						
KURK	Kurchatov	59.95	329	P	P	13 05 09.3	-0.2
KURK				IAmb	IAmb	13 05 09.5	
	comp=Z,5.5nm,0.3s						
NNZ	Nelson	63.99	139	P	P	13 05 36.6	+0.7
SNZO	South Karori	64.90	139	P	P	13 05 41.3	-0.4
BKZ	Black Stump Fm	65.09	136	P	P	13 05 43.9	+0.9
BKZ				IAmb	IAmb	13 05 47.9	
	comp=Z,17nm,1.3s						
VOI	Vohitsoka	78.05	247	P	P	13 06 58.1	-0.9
VOI				IAmb	IAmb	13 07 02.9	
	comp=Z,14nm,1.4s						

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*IDC **26** 13:32:21.6±5.8, 42°.96S×74°.56W, h0km, mb3.4/2, mbtmp3.4/3, ML3.5/1, MS2.5/1, Error ellipse: s-maj=154.5km s-min=26.4km az=159.0*

*GUC **26** 13:32:21.5±0.6, 43°.40S×74°.49W, h35km±3km, ML4.2*

*NEIC **26** 13:32:23.7±1.8, 43°.42S±0°.04×74°.21W±0°.07, h19km±6km, mb4.3/5, ML4.2(GUC), Error ellipse: s-maj=9.6km s-min=2.6km az=127.0*

ISC 26 13:32:24.9±1.8**, 43°.30S**±0°.04×**74°.21W**±0°.08**, h17**km±10km**, n45,** σ**1s.76**/50**, mb3.9**/4**, 4C-3D, Southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO07	Milladeo Hill,	0.44	65		Pg	13 32 34.0	+0.3
GO07	Milladeo Hill,	0.44	65	⇑*i*P	Pg	13 32 34.1	+0.3
GO07				*i*S	Sb	13 32 43.1	+2.7
GO07				IAML		13 32 44.7	
	comp=E,21μm,0.2s						
LL07	Hotel Espejo d	0.71	49		Pg	13 32 38.7	0.0
LL07	Hotel Espejo d	0.71	49	⇑*i*P	Pg	13 32 38.8	0.0
LL07				*i*S	Sb	13 32 51.5	+3.2
LL07				IAML		13 32 53.9	
	comp=N,19μm,0.6s						
LL06	Loncomilla	1.17	22		Pn	13 32 44.7	-1.7
LL06				Sn	Sb	13 33 02.5	+1.1
LL06	Loncomilla	1.17	22	⇓*i*P	Pn	13 32 44.8	-1.7
LL06				*i*S	Sb	13 33 02.6	+1.2
LL06				IAML		13 33 06.1	
	comp=N,6μm,0.5s						
AY01	Puyuhuapi	1.59	135		Pn	13 32 49.3	-2.9
AY01	Puyuhuapi	1.59	135	⇓*i*P	Pn	13 32 49.4	-2.9
AY01				*i*S	Sn	13 33 11.4	-0.9
AY01				IAML		13 33 13.0	
	comp=N,4μm,0.3s						
LL02	Futaleuf	1.73	87	Pn	Pn	13 32 53.2	-1.0
LL02	Futaleuf	1.73	87	⇑*i*P	Pn	13 32 53.9	-0.3
LL02				*i*S	Sn	13 33 17.8	+2.0
LL05	Los Muermos	1.97	16		Pn	13 32 58.2	+0.7
LL05	Los Muermos	1.97	16	*e*P	Pn	13 32 55.8	-1.7
LL05				*e*S	Sn	13 33 24.6	+2.8
LL05				IAML		13 33 33.4	
	comp=N,1μm,0.3s						
LL03	Petrohue	2.54	32		Pn	13 33 05.0	-0.3
LL03	Petrohue	2.54	32	*e*P	Pn	13 33 05.2	-0.1
COYC	Coyhaique	2.73	147	Pn	Pn	13 33 04.5	-3.5
COYC	Coyhaique	2.73	147	⇑*e*P	Pn	13 33 05.7	-2.3
COYC				*i*S	Sn	13 33 42.8	+2.2
LL04	Puerto Octay	2.74	30		Pn	13 33 06.5	-1.5
LL04	Puerto Octay	2.74	30	*e*P	Pn	13 33 07.0	-1.1
LL04				*e*S	Sn	13 33 42.0	+1.2
LL04				IAML		13 33 47.3	
	comp=E,727nm,0.2s						
AY02	Valle Explorad	3.26	168	Pn	Pn	13 33 11.4	-3.9
AY02	Valle Explorad	3.26	168	*e*P	Pn	13 33 16.8	+1.6
AY02				*e*S	Sn	13 33 58.4	+4.8
AY02				IAML		13 34 13.3	
	comp=E,757nm,0.7s						
LR04	Corral	3.47	10	Pn	Pn	13 33 18.6	+0.5
LR04	Corral	3.47	10	*e*P	Pn	13 33 18.8	+0.8
LR05	Currie	3.48	29	*e*P	Pn	13 33 17.4	-0.8
LR05				*e*S	Sn	13 34 01.0	+1.8
PLCA	Paso Flores	3.74	48	Pn	Pn	13 33 21.9	-0.1
	comp=E,0.8nm,0.3s,baz=231,slow=11,SNR=19						
PLCA				Lg	Lg	13 34 20.1	
	comp=E,4.4nm,0.3s,baz=271,slow=20,SNR=3.7						
PLCA				LR	LR	13 34 32.6	
	comp=E,57nm,19.3s,baz=268,slow=35						
	comp=E,2.6nm,0.4s						
PLCA	Paso Flores	3.74	48	Pn	Pn	13 33 21.8	-0.2
PLCA	Paso Flores	3.74	48	*e*P	Pn	13 33 21.9	-0.1
LR03	Panguipulli	3.92	21		Pn	13 33 25.4	+1.0
GO06	Curarrehue	4.24	30	Pn	Pn	13 33 28.6	-0.3
GO06	Curarrehue	4.24	30	⇓*e*P	Pn	13 33 28.6	-0.3
GO08	Villa O’Higgin	5.29	168	Pn	Pn	13 33 40.6	-2.6
GO05	Huala	8.47	13	Pn	Pn	13 34 24.5	-2.2
BO02	Sierra Bellavi	8.90	19		Pn	13 34 31.3	-1.5
BO01	Tunca	9.22	16	Pn	Pn	13 34 37.1	0.0
H03S1	Juan Fernandez	10.13	337	T	T	13 44 52.0	
	baz=160,slow=75,SNR=19						
H03S2	Juan Fernandez	10.14	337	T	T	13 44 51.2	
	baz=160,slow=75,SNR=39						
H03S3	Juan Fernandez	10.15	337	T	T	13 44 52.5	
	baz=160,slow=75,SNR=20						
TRQA	Tornquist	10.66	65	Pn	Pn	13 34 55.6	-1.1
PB14	IPOC Station P	18.89	11	P	P	13 36 45.2	+0.3
PB14				IAmb	IAmb	13 36 53.6	
	comp=Z,12nm,1.0s						
PB03	IPOC Station P	21.52	11	P	P	13 37 13.0	-0.2
PB03				IAmb	IAmb	13 37 20.3	
	comp=Z,18nm,1.5s						
CPUP	Villa Florida	21.81	45	P	P	13 37 13.5	-2.6
	comp=Z,1.3nm,0.8s,baz=198,slow=6.7,SNR=3.8						
	comp=Z,1.3nm,0.8s						
CPUP	Villa Florida	21.81	45	P	P	13 37 13.7	-2.5
PB07	IPOC Station P	21.81	11	P	P	13 37 16.9	+0.4
PB07				IAmb	IAmb	13 38 01.0	
	comp=Z,28nm,1.5s						
PB01	IPOC Station P	22.54	12	P	P	13 37 24.2	0.0
TXAR	Lajitas Array	77.18	334	P	P	13 44 14.9	-2.7
	comp=Z,0.3nm,0.7s,baz=154,slow=6.8,SNR=4.5						
	comp=Z,0.3nm,0.7s						
PZH	PanZhiHua	162.92	168	PKP	PKPdf	13 52 23.5	-2.9

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*NEIC **26** 13:45:08.8±1.8, 19°.71S±0°.09×177°.5W±0°.1, h389km±8km, mb4.3/26, Error ellipse: s-maj=15.7km s-min=11.9km az=67.0*

*IDC **26** 13:45:10.2±2.0, 19°.79S×177°.71W, h399km±17km, mb3.2/10, mbtmp3.9/12, Error ellipse: s-maj=23.8km s-min=13.2km az=115.0*

ISC 26 13:45:09.9±0.5**, 19°.68S**±0°.08×**177°.60W**±0°.08**, h400km, n47,** σ**1s.12**/49**, mb4.1**/22**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.56	294	P	Pn	13 46 27.0	-0.6
	3.5nm,0.4s,baz=156,slow=19,SNR=19						
MSVF				S	S	13 47 30.0	-0.6
	3.5nm,0.7s,baz=75,slow=18,SNR=1.4						
MSVF	Nonsavu	4.56	294	Pn	Pn	13 46 27.0	-0.6
AFI	Afiamalu	8.00	45	P	Pn	13 47 01.2	-3.9
	11nm,0.5s,baz=348,slow=22,SNR=2.1						
AFI				S	S	13 48 29.2	-10
	19nm,0.6s,baz=219,slow=19,SNR=2.4						
PINNC	Pines Island,	14.26	256	P	P	13 48 15.6	+1.3
KOUNC	Koumac, New Ca	17.04	264	P	P	13 48 43.4	-1.0
KOUNC				IAmb	IAmb	13 48 43.9	
	comp=Z,34nm,1.5s						
URZ	Urewera	19.07	193	P	P	13 49 04.6	-0.9
	comp=Z,9.9nm,0.7s,baz=214,slow=2.1,SNR=6.8						
URZ				S	S	13 52 17.1	-1.6
	comp=Z,6.8nm,0.9s,baz=34,slow=20,SNR=1.5						
RTZ	Ruatahuna	19.44	193	P	P	13 49 07.5	-1.6
RTZ				IAmb	IAmb	13 49 21.6	
	comp=Z,28nm,1.4s						
TCW	Tory Channel	22.55	196	P	P	13 49 36.5	-0.9
QRZ	Quartz Range	22.70	200	P	P	13 49 39.1	+0.4
LTZ	Lake Taylor	24.57	198	P	P	13 49 53.5	-2.1
LTZ				IAmb	IAmb	13 50 22.3	
	comp=Z,20nm,1.2s						
WHZ	Wether Hill Ro	28.73	201	P	P	13 50 33.0	+0.6
WHZ				IAmb	IAmb	13 51 04.7	
	comp=Z,41nm,1.5s						
ARMA	Armidale	29.77	243	P	P	13 50 42.1	+0.3
ARMA				IAmb	IAmb	13 51 25.6	
	comp=Z,20nm,1.5s						
CTAO	Charters Tower	33.96	263	P	P	13 51 17.7	-0.3
CTAO				IAmb	IAmb	13 51 53.9	
	comp=Z,32nm,1.5s						
TOO	Toolangi	36.69	233	P	P	13 51 40.3	-0.4
STKA	Stephens Creek	38.49	243	P	P	13 51 55.5	-0.1
	comp=Z,1.3nm,0.5s,baz=82,slow=12,SNR=6.4						
	comp=Z,1.3nm,0.5s						
STKA	Stephens Creek	38.49	243	P	P	13 51 55.4	-0.3
WAKE	Wake Island	41.69	337	P	P	13 52 22.7	+1.1
BBOO	Buckleboo	43.25	243	P	P	13 52 33.6	-0.4
BBOO				IAmb	IAmb	13 52 57.6	
	comp=Z,34nm,1.4s						
WB0	Warramunga Arr	45.07	261	P	P	13 52 47.1	-1.3
AS31	Alice Springs	45.08	256	P	P	13 52 47.8	-0.7
ASAR	Alice Springs	45.08	256	P	P	13 52 48.1	-0.4
	comp=Z,3.7nm,0.6s,baz=93,slow=8.3,SNR=90						
	comp=Z,3.7nm,0.6s						
ASAR	Alice Springs	45.08	256	P	P	13 52 47.4	-1.1
WRAB	Tennant Creek	45.09	261	P	P	13 52 47.4	-1.2
WRA	Warramunga Arr	45.09	261	P	P	13 52 47.5	-1.1
	comp=Z,0.9nm,0.5s,baz=98,slow=5.8,SNR=38						
	comp=Z,0.9nm,0.5s						
FORT	Forrest	49.97	246	P	P	13 53 25.0	-0.4
FORT				IAmb	IAmb	13 53 48.5	
	comp=Z,32nm,1.1s						
NWAO	Narrogin (SRO)	59.07	243	P	P	13 54 30.4	+0.4
MJAR	Matsushiro Arr	69.78	323	P	P	13 55 39.0	+0.7
	comp=Z,1.8nm,0.6s,baz=151,slow=5.2,SNR=5.0						
	comp=Z,1.8nm,0.6s						
QSPA	South Pole Qui	70.38	180	P	P	13 55 43.2	+1.5
QSPA				IAmb	IAmb	13 55 50.1	
	comp=Z,12nm,1.5s						
PETK	Petropavlovsk-	75.58	345	P	P	13 56 11.4	-0.3
	comp=Z,2.2nm,0.9s,baz=127,slow=6.0,SNR=2.1						
	comp=Z,2.2nm,0.9s						
NVAR	Mina Array Bea	80.17	43	P	P	13 56 38.1	+0.8
	comp=Z,0.3nm,0.6s,baz=220,slow=11,SNR=4.2						
	comp=Z,0.3nm,0.6s						
SPU	Mount Spurr	83.16	12	P	P	13 56 52.9	+0.9
CUT	Chulitna	84.63	12	P	P	13 56 58.9	-0.3
SCM	Sheep Creek Mo	84.75	14	P	P	13 57 00.7	+0.8
K20K	Telida	84.80	10	P	P	13 57 01.1	+1.1
K20K				IAmb	IAmb	13 57 13.3	
	comp=Z,4.9nm,1.4s						
N25K	Chitina, Valde	85.20	15	P	P	13 57 02.7	+0.6
N25K				IAmb	IAmb	13 57 37.3	
	comp=Z,7.3nm,1.2s						
CAST	Castle Rocks	85.21	11	P	P	13 57 01.3	-0.7
CAST				IAmb	IAmb	13 57 22.7	
	comp=Z,4.3nm,1.4s						
TRF	Thorofare Moun	85.58	12	P	P	13 57 04.5	+0.5
TRF				IAmb	IAmb	13 57 45.9	
	comp=Z,6.2nm,1.4s						
SEY	Seymchan	85.67	347	P	P	13 57 05.2	+0.9
	comp=Z,0.7nm,0.7s,baz=146,slow=5.7,SNR=7.6						
	comp=Z,0.7nm,0.7s						
TXAR	Lajitas Array	86.30	57	P	P	13 57 11.2	+3.0
	comp=Z,0.2nm,0.5s,baz=220,slow=6.4,SNR=4.1						
	comp=Z,0.2nm,0.5s						
AY01	Puyuhuapi	86.60	136	P	P	13 57 09.1	-0.3
HDA	Harding Lake	87.11	13	P	P	13 57 12.3	+1.2
HDA				IAmb	IAmb	13 57 13.4	
	comp=Z,4.1nm,1.2s						
CCB	Clear Creek Bu	87.14	12	P	P	13 57 11.2	0.0
IMAR	Indian Mountai	87.29	10	P	P	13 57 12.6	+0.6
ILAR	Eielson Array	87.44	13	P	P	13 57 13.3	+0.7
	comp=Z,0.3nm,0.5s,baz=228,slow=4.7,SNR=12						
	comp=Z,0.3nm,0.5s						
PDAR	Pinedale Array	88.11	43	P	P	13 57 16.7	0.0
	comp=Z,0.3nm,0.7s,baz=285,slow=3.5,SNR=2.3						
	comp=Z,0.3nm,0.7s						
CLL	Collm	147.35	348	*i* PKPbc	PKiKP	14 04 08.4	-0.5
GERES	GERESS Array B	149.52	345	PKPbc	PKiKP	14 04 13.3	-0.3
	comp=Z,0.6nm,0.6s,baz=46,slow=2.8,SNR=4.7						

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*INET **26** 13:46:40.9±0.2, 12°.13N×87°.56W, h15km±1km, MW2.9*

SNET 26 13:46:42.2±1.0**, 12°.50N**×**87°.83W, h26**km±259km**, ML2.5, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.77	359	*e*P	Pb	13 46 56.7	-0.4
CNCH				*e*S	Sn	13 47 09.0	+0.5
CRIN	San Cristobal	0.78	75	*e*P	Pb	13 46 55.3	-2.0
CRIN				*e*S	Sb	13 47 06.8	-0.8
LCND	La Caada	0.81	356	*e*P	Pb	13 46 56.7	-0.9
LCND				*e*S	Sb	13 47 08.7	+0.5
LCND				IAML		13 47 10.9	
	comp=Z,156nm,0.3s						
TELN	Telica	0.98	84	*e*P	Pn	13 46 56.9	-3.5
TELN				*e*S	Sb	13 47 09.2	-3.9
PACA	Pacayal	1.08	333	*e*P	Pb	13 47 02.6	+0.3
PACA				*e*S	Sb	13 47 17.1	+1.0

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*JMA **26** 13:53:23.7±0.2, 39°.1N±0°.6×144°.7E±0°.7, h40km, MV3.8/29, FAR E OFF NORTH HONSHU*

*IDC **26** 13:53:32.4±2.4, 39°.58N×143°.51E, h0km, mb3.3/2, mbtmp3.2/4, ML2.7/2, Error ellipse: s-maj=48.9km s-min=25.3km az=129.0*

ISC 26 13:53:26.4±2.3**, 39°.12N**±0°.09×**144°.7E**±0°.1**, h35km, n18,** σ**1s.84**/19**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	2.27	283	S	Sn	13 54 27.0	-1.2
JTH	Tanohata	2.33	291	*e*S	Sn	13 54 28.9	-0.8
OFUJ	Ofunato	2.35	270	*e*S	Sn	13 54 28.5	-1.5
JOM	Ohasama	2.66	279	S	Sn	13 54 37.1	-0.6
JMK	Ichinoseki	2.71	268	S	Sn	13 54 37.9	-1.0
JYK	Kaneyama	3.38	268	*e*P	Pn	13 54 18.4	+1.7
JNBK	Urakawa-nobuka	3.49	336	*e*S	Sn	13 54 59.3	+1.2
JOT	Ohata	3.59	310	*e*S	Sn	13 54 59.7	-0.9
JCH	Churui	3.64	344	*e*S	Sn	13 55 01.4	-0.4
NEM2	Nemuro 2	4.32	10	*e*P	Pn	13 54 29.5	0.0
NEM2				S	Sn	13 55 16.0	-2.6
JTKR	Abashiri--Toko	4.88	353	*e*P	Pn	13 54 37.8	+0.5
JTKR				*e*S	Sn	13 55 32.1	-0.4
JOSM	Okushiri--Mats	4.95	308	*e*P	Pn	13 54 41.3	+3.1
JHR	Hokuryu	5.13	335	*e*P	Pn	13 54 44.3	+3.7
JHR				*e*S	Sn	13 55 41.1	+2.5
ASAJ	Asahikawa	5.24	343	Pn	Pn	13 54 43.4	+1.3
	0.4nm,0.3s,baz=208,slow=14,SNR=9.6						
ASAJ				Sn	Sn	13 55 37.2	-4.0
	0.3nm,0.3s,baz=266,slow=26,SNR=2.2						
	0.8nm,0.3s						
JRY	Ryogami san	5.54	238	*e*S	Sn	13 55 45.5	-3.3
MJAR	Matsushiro Arr	5.74	245	Pn	Pn	13 54 50.0	+1.0
	0.1nm,0.3s,baz=58,slow=11,SNR=11						
MJAR				Sn	Sn	13 55 53.4	-0.3
	baz=49,slow=24,SNR=1.0						
	0.7nm,0.4s						
MKAR	Makanchi Array	45.24	301	P	P	14 01 43.2	+3.1
	0.3nm,0.7s,baz=92,slow=7.2,SNR=3.7						
	0.3nm,0.7s						
ILAR	Eielson Array	46.34	33	P	P	14 02 00.5	+12
	0.5nm,0.9s,baz=254,slow=8.4,SNR=4.4						
	0.5nm,0.9s						

WEL 26 13:54:31.5±0.4**, 42°S**±3°×**17°3E**±°**, h5km, M1.8**/1**, ML2.4**/7**, MLv1.8**/1**, Error ellipse: s-maj=0.0km s-min=0.0km az=130.2, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.07	56	P	Pg	13 54 33.1	0.0
KHZ				S	Sg	13 54 34.8	+0.6
GVZ	Greta Valley S	0.60	211	P	Pg	13 54 43.6	+0.5
BSWZ	Blackbirch Sta	0.80	23	P	Pg	13 54 46.6	-0.3
BSWZ				S	Sb	13 54 59.7	+0.6
THZ	Tophouse	0.81	329	P	Pg	13 54 46.4	-0.5
AMCZ	Amberley	0.93	219	P	Pg	13 54 49.4	0.0
LTZ	Lake Taylor	0.94	249	P	Pg	13 54 48.9	-0.5
LTZ				S	Sg	13 55 02.1	+0.5
MRNZ	Matariki Terra	1.18	333	P	Pg	13 54 53.4	-0.7
MRNZ				S	Sb	13 55 09.9	0.0
OXZ	Oxford	1.36	230	P	Pn	13 54 54.2	-2.9
MQZ	McQueen’s Vall	1.38	205	P	Pn	13 54 54.0	-3.4
MQZ				S	Sb	13 55 11.3	-4.4
DSZ	Denniston Nort	1.42	299	P	Pn	13 54 57.5	-0.5
TKNZ	Takaka Hill	1.47	345	P	Pn	13 54 57.8	-0.9
TKNZ				S	Sg	13 55 18.7	0.0
WACZ	Wakanui South	1.90	218	P	Pn	13 55 01.6	-2.9
RPZ	Rata Peaks	2.17	234	P	Pn	13 55 05.6	-2.6
RPZ				S	Sn	13 55 31.9	-3.5

WEL 26 14:06:01.7±0.5**, 41°S**±3°×**17°5E**±°**, h16**km±3km**, M2.1**/12**, ML2.4**/12**, MLv2.1**/12**, Error ellipse: s-maj=0.0km s-min=0.0km az=5.4, confirmed, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSWZ	Moikau Station	0.17	172	S	Sb	14 06 11.3	+1.5
CAW	Cannon Point	0.18	320	P	Pb	14 06 08.3	+1.6
PAWZ	Paruwai Farm	0.21	131	P	Pb	14 06 07.8	+0.6
PAWZ				S	Sb	14 06 12.2	+1.4
MTW	Mount Morrison	0.23	68	P	Pb	14 06 08.3	+0.8
MTW				S	Sb	14 06 12.9	+1.5
PLWZ	Palliser	0.32	175	P	Pb	14 06 09.3	+0.1
WEL	Wellington	0.34	263	P	Pb	14 06 10.3	+0.9
TRWZ	Traveller	0.39	113	P	Pb	14 06 10.5	+0.3
TRWZ				S	Sb	14 06 17.3	+1.4
HOWZ	Holdsworth Sta	0.41	33	P	Pb	14 06 11.4	+0.7
HOWZ				S	Sb	14 06 18.2	+1.5
OGWZ	Otaki Gorge	0.43	355	P	Pb	14 06 11.8	+0.9
OGWZ				S	Sb	14 06 18.5	+1.3
KIW	Kapiti Island	0.45	329	P	Pb	14 06 12.3	+1.1
TMWZ	Te Maipa	0.53	75	P	Pb	14 06 12.9	+0.3
TMWZ				S	Sb	14 06 21.1	+1.1
MRZ	Mangatainoka R	0.65	25	P	Pb	14 06 15.1	+0.5
MRZ				S	Sb	14 06 24.5	+1.2
TIWZ	Tintock	0.69	47	P	Pb	14 06 15.5	+0.1
TIWZ				S	Sb	14 06 25.6	+1.0
TCW	Tory Channel	0.71	273	P	Pb	14 06 16.3	+0.6
TCW				S	Sb	14 06 26.2	+0.9
PRWZ	Pori Road	0.90	40	P	Pb	14 06 18.5	-0.3
PRWZ				S	Sg	14 06 31.1	+0.3
BFZ	Birch Farm	0.96	54	P	Pb	14 06 18.6	-1.3
TUWZ	Tuamarina	0.98	259	P	Pb	14 06 19.4	-0.8
DUWZ	D’Urville Isla	1.08	294	P	Pn	14 06 22.2	0.0
DUWZ				S	Sn	14 06 36.8	-0.1
BSWZ	Blackbirch Sta	1.11	245	P	Pb	14 06 21.5	-1.0
TSZ	Takapari Road	1.31	26	P	Pn	14 06 24.5	-0.9
NNZ	Nelson	1.39	271	P	Pn	14 06 26.2	-0.2
WAZ	Wanganui	1.50	353	P	Pg	14 06 30.2	-0.3
TKNZ	Takaka Hill	1.72	276	P	Pn	14 06 31.5	+0.5

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*IDC **26** 14:11:15.7±3.0, 36°.38N×71°.49E, h98km±25km, mb3.5/15, mbtmp4.0/21, MS3.7/2, Error ellipse: s-maj=20.4km s-min=15.8km az=165.0*

*MOS **26** 14:11:17.1±1.1, 36°.59N×71°.36E, h118km, mb4.3/12, Error ellipse: s-maj=9.9km s-min=5.2km az=87.2*

*NEIC **26** 14:11:18.6±2.3, 36°.63N±0°.06×71°.27E±0°.08, h118km±5km, mb4.5/25, Error ellipse: s-maj=9.2km s-min=9.1km az=85.0*

*NNC **26** 14:11:19.6±2.7, 37°.12N×70°.88E, h0km, mb4.8, mpv4.9, Error ellipse: s-maj=25.2km s-min=20.8km az=133.0*

ISC 26 14:11:17.8±0.4**, 36°.63N**±0°.04×**71°.35E**±0°.04**, h114km, n142,** σ**2s.20**/165**, mb4.2**/33**, 9C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.50	341		Pn	14 11 59.2	+1.7
CHGR	Chuyangaron	2.67	320		Pn	14 12 00.4	+0.8
CHGR	Chuyangaron	2.67	320	PN	Pn	14 12 00.4	+0.8
KBL	Kabul	2.81	223		Pn	14 12 02.0	+0.4
KBL	Kabul	2.81	223	PN	Pn	14 12 02.0	+0.4
CEP	Cherat	2.84	171	P	Pn	14 12 03.6	+1.6
CEP				S	Sn	14 12 36.0	+0.1
DRK	Karamyk	2.87	7		Pn	14 12 00.2	-2.3
CHCP	Chirah Chowk	3.36	152	P	Pn	14 12 09.7	+1.0
NIL	Nilore	3.36	152		Pn	14 12 09.6	+0.9
NIL	Nilore	3.36	152	PN	Pn	14 12 09.6	+0.9
BTK	Batken	3.45	353		Pn	14 12 12.6	+2.7

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BTK   Batken            3.45 353    PN     Pn      14 12 12.6 +2.7
THW   Thamme Wali       3.84 175    P      Pn      14 12 14.8 -0.4
KSH   Kashi             4.65  50    Pn     Pn      14 12 23.8 -2.3
KSH                                 Sn     Sn      14 13 11.0 -8.1
KSH                                 pmax   pmax
      comp=Z,190nm,0.5s
KSH                                 smax   smax
      comp=N,740nm,0.5s
KSH                                 smax   smax
      comp=E,260nm,0.5s
TAS   Tashkent          4.95 342    Pn     Pn      14 12 31.3 +1.3
TAS   Tashkent          4.95 342    PN     Pn      14 12 31.3 +1.3
IUG   Iuzhnay           5.60 350    Pg     Pn      14 12 40.4 +1.5
      comp=E,82nm,0.2s
IUG                                 Lg     Lg      14 13 41.5
      comp=E,190nm,0.3s
AML   Almayashu         5.79  18    P      Pn      14 12 43.5 +1.9
      SNR=473
NRN   Naryn             6.01  36    Pn     Pn      14 12 45.1 +0.5
NRN   Naryn             6.01  36    PN     Pn      14 12 45.1 +0.5
UCH   Uchtor            6.10  23    P      Pn      14 12 47.8 +1.8
      SNR=125
MRKS  Merke             6.28  13    Pg     Pn      14 12 49.7 +1.7
      comp=E,74nm,0.4s
MRKS                                Lg     Lg      14 13 57.2
      comp=E,53nm,0.3s
EKS2  Erkin-Say         6.31  17    P      Pn      14 12 50.4 +2.0
      SNR=116
AAK   Ala-Archa         6.47  21    P      Pn      14 12 52.8 +2.1
      SNR=167
AAK   Ala-Archa         6.47  21    P      Pn      14 12 52.8 +2.1
      comp=E,86nm,0.3s,baz=178,slow=6.0,SNR=646
AAK                                 S      Sn      14 14 03.1  0.0
      comp=E,8.6nm,0.4s,baz=135,slow=22,SNR=5.9
AAK   Ala-Archa         6.47  21    Pn     Pn      14 12 52.4 +1.7
AAK   Ala-Archa         6.47  21    PN     Pn      14 12 52.4 +1.7
KK31  Karatay Array     6.50 355    Pn     Pn      14 12 52.0 +1.1
KK31  Karatay Array     6.50 355    P      Pn      14 12 51.3 +0.4
      comp=E,30nm,0.2s,baz=185,slow=15,SNR=612
KK31                               ⇑S      Sn      14 14 00.8 -2.7
      comp=E,22nm,0.5s
KK31  Karatay Array     6.50 355    PN     Pn      14 12 52.0 +1.1
KKAR  Karatay Array     6.50 355    Pn     Pn      14 12 52.0 +1.1
KKAR  Karatay Array     6.50 355    PN     Pn      14 12 52.0 +1.1
KBK   Karagaybulak      6.63  24    P      Pn      14 12 54.9 +2.1
      SNR=61
FRU1  Bishkek           6.67  21    Pn     Pn      14 12 54.3 +1.0
FRU1  Bishkek           6.67  21    PN     Pn      14 12 54.3 +1.0
ULHL  Ulahol            6.76  33    P      Pn      14 12 56.2 +1.5
      SNR=25
CHMS  Chumysh           6.88  21    P      Pn      14 12 57.7 +1.6
      SNR=53
USP   Ospenovka         7.06  19    P      Pn      14 12 59.8 +1.3
      SNR=146
TKM2  Tokmak 2          7.08  26    P      Pn      14 13 00.7 +1.7
      SNR=121
KDJ   Kajisay           7.11  38    Pn     Pn      14 13 00.3 +1.0
KDJ   Kajisay           7.11  38    PN     Pn      14 13 00.4 +1.0
MDOK  Medeo             7.86  32   ⇑P      Pn      14 13 11.7 +2.3
      comp=E,17nm,0.7s
GEYT  Alibeck          10.62 281    P      Pn      14 13 47.3 +0.5
      comp=E,3.2nm,0.4s,baz=129,slow=9.0,SNR=11
GEYT                                S      Sn      14 15 40.0 -3.8
      comp=E,2.9nm,0.5s,baz=95,slow=18,SNR=2.9
GEYT  Alibeck          10.62 281           Pn      14 13 45.1 -1.7
GEYT  Alibeck          10.62 281    P      Pn      14 13 45.1 -1.7
GYA0B ALIBECK ARRAY    10.62 281    Pn     Pn      14 13 44.9 -1.9
GYA0B ALIBECK ARRAY    10.62 281   ⇓P      Pn      14 13 48.0 +1.2
GYA0B                              ⇓S      Sn      14 15 40.3 -3.4
PYUN  Piuthan          13.00 128   eP      Pn      14 14 14.8 -3.6
      comp=E,18nm,0.3s
MK31  Makanchi Array   13.02  35    Pn     Pn      14 14 17.5 -0.9
MK31  Makanchi Array   13.02  35   ⇑P      Pn      14 14 18.0 -0.4
      comp=E,3.4nm,0.6s,baz=202,slow=12,SNR=34
MK31  Makanchi Array   13.02  35d iP      Pn      14 14 19.3 +0.9
MKAR  Makanchi Array   13.02  35    P      Pn      14 14 17.7 -0.7
      comp=E,3.5nm,0.7s,baz=219,slow=14,SNR=33
MKAR  Makanchi Array   13.02  35    Pn     Pn      14 14 17.4 -1.0
MKAR  Makanchi Array   13.02  35   i P     Pn      14 14 18.2 -0.2
MKAR                                pmax   pmax
      comp=Z,4.0nm,0.7s
DANN  Dangsing         13.33 125   eP      Pn      14 14 19.3 -3.5
      comp=Z,11nm,0.2s
KOLN  Koldanda         13.62 127   eP      Pn      14 14 23.7 -2.8
GKN   Gorkha           14.14 124   eP      Pn      14 14 30.3 -2.9
      comp=Z,14nm,0.2s
WMQ   Urumqi           14.39  55   eP      Pn      14 14 35.3 -0.9
WMQ                                 pmax   pmax
      comp=Z,12nm,0.7s
KURBB Kurchatov Arra   14.91  18    P      Pn      14 14 42.1 -0.4
      comp=Z,6.1nm,0.8s,baz=208,slow=10,SNR=8.4
KURBB Kurchatov Arra   14.91  18   ⇑P      P       14 14 46.1 +0.7
      comp=Z,9.4nm,0.6s
PKIN  Phulchoki        14.93 123   eP      Pn      14 14 40.8 -2.5
      comp=Z,6.9nm,0.2s
PKI   Pulchoki         14.94 123   eP      Pn      14 14 40.8 -2.7
      comp=Z,9.2nm,0.4s
KURK  Kurchatov        15.02  18    P      P       14 14 46.6 +0.1
KURK  Kurchatov        15.02  18   i P     P       14 14 46.7 +0.1
GUN   Gumba            15.04 121   eP      Pn      14 14 41.4 -3.4
      comp=Z,5.7nm,0.3s
AB31  Akbulak array    15.11 330    P      Pn      14 14 44.3 -0.8
      comp=Z,2.3nm,0.4s,baz=136,slow=13,SNR=149
AB31                               ⇓S      Sn      14 17 26.6 -5.3
      comp=Z,1.8nm,0.5s,baz=153,slow=24,SNR=10
ABKAR Akbulak array    15.11 330    Pn     Pn      14 14 43.9 -1.2
JIRN  Jiri             15.41 121   eP      Pn      14 14 46.6 -2.9
      comp=Z,11nm,0.4s
RAMN  Ramite           16.15 122   eP      Pn      14 14 56.4 -2.1
      comp=Z,16nm,0.4s
BVA0  Borovoye Array   16.41 358    P      P       14 15 02.5 +0.6
      comp=Z,6.6nm,0.8s,baz=173,slow=12,SNR=37
BVA0                                S      Sn      14 18 01.0 -2.2
      comp=Z,6.5nm,1.4s,baz=183,slow=35,SNR=4.3
BVAR  Borovoye Array   16.41 358    P      Pn      14 15 01.3 +0.2
      comp=Z,5.5nm,0.5s,baz=156,slow=9.3,SNR=32
BRVK  Borovoye         16.44 358    Pn     Pn      14 15 00.8 -0.8
BRVK  Borovoye         16.44 358    P      Pn      14 15 00.8 -0.8
BRVK                                pmax   pmax
      comp=Z,10.0nm,1.2s
TAPN  Taplejung        16.66 119   eP      Pn      14 15 04.5 -0.4
      comp=Z,16nm,0.4s
AKTO  Aktyubinsk       16.81 329    P      P       14 15 06.5 +0.2
      comp=Z,4.4nm,0.3s,baz=149,slow=10,SNR=11
AKTO  Aktyubinsk       16.81 329   ⇓P      P       14 15 07.9 +1.5
      comp=Z,9.1nm,1.6s
AKTO                               ⇑S      Sn      14 18 07.1 -5.8
      comp=Z,4.5nm,0.8s
DGZ   Jazzator, Alta   17.51  37   i P     Pn      14 15 14.8  0.0
DGZ                                 pmax   pmax
      comp=Z,5.0nm,0.3s
ZAA0  Zalesovo Array   19.68  24           P       14 15 37.7  0.0
ZAA0                                IAmb   IAmb    14 15 39.7
      comp=Z,14nm,1.1s
ZALV  Zalesovo Beam    19.68  24    P      P       14 15 38.7 +1.0
      comp=Z,9.0nm,0.3s,baz=210,slow=10,SNR=56
ZALV  Zalesovo Beam    19.68  24           P       14 15 38.1 +0.4
GNI   Garni            21.12 288    P      P       14 15 56.4 +2.8
      comp=Z,2.9nm,0.3s,baz=114,slow=10.0,SNR=3.9
      comp=Z,2.9nm,0.3s
GNI   Garni            21.12 288ceP      P       14 15 54.2 +0.7
GNI                                 pmax   pmax
      comp=Z,9.0nm,1.3s
ARU   Arti             21.60 340    P      P       14 16 00.2 +1.9
      comp=Z,2.0nm,0.4s,baz=134,slow=12,SNR=4.3
      comp=Z,2.0nm,0.4s
ARU   Arti             21.60 340    P      P       14 15 58.1 -0.2
ARU   Arti             21.60 340c iP      P       14 15 52.6 -5.7
ARU                                 S      S       14 19 43.3 -7.3
ARU                                 SS     SnSn    14 20 35.5  +10
ARU                                 pmax   pmax
      comp=Z,10.0nm,1.7s
ONI   Oni              22.24 294    P      P       14 16 03.3 -2.0
ONI   Oni              22.24 294    P      P       14 16 03.3 -2.0
ONI                                 pmax   pmax
      comp=Z,2.0nm,0.7s
KBZ   Khabaz           22.79 297    P      P       14 16 12.7 +2.1
      comp=Z,1.0nm,0.6s,baz=155,slow=8.2,SNR=3.7
      comp=Z,1.0nm,0.6s
KBZ   Khabaz           22.79 297   i P     P       14 16 11.2 +0.6
KBZ                                 pmax   pmax
      comp=Z,1.0nm,1.0s
SHA1  Shidzhatmaz      22.96 297   i P     P       14 16 12.4 -0.2
LZH   Lanzhou          26.11  81   eP      P       14 16 45.0 +3.8
LZH                                 pP     pP      14 17 08.3 +0.8
LZH                                 sP     sP      14 17 22.5 +1.5
LZH                                 pmax   pmax
      comp=Z,13nm,1.1s
PZH   PanZhiHua        27.70 103    P      P       14 16 58.0 +2.6
PZH                                 pmax   pmax
      comp=Z,10.0nm,0.7s
PZH                                 pmax   pmax
      comp=Z,100nm,5.1s
HHC   Hu-ho-hao-te     31.46  70   eP      P       14 17 26.8 -1.7
HHC                                 pmax   pmax
      comp=Z,23nm,0.7s
HHC                                 pmax   pmax
      comp=Z,220nm,5.0s
AKASG Malin Array Be   33.08 309    P      P       14 17 44.9 +2.4
      comp=Z,1.2nm,0.6s,baz=80,slow=6.8,SNR=9.8
      comp=Z,1.2nm,0.6s
AKASG Malin Array Be   33.08 309ceP      P       14 17 45.5 +3.0
AKASG                               pmax   pmax
      comp=Z,1.0nm,0.5s
MNK   Minsk            34.60 315   i P     P       14 17 53.5 -2.1
      comp=E,2.0nm,0.8s
MNK                                i P     P       14 17 53.5 -2.1
      comp=N,41nm,0.8s
MNK                                i P     P       14 17 53.5 -2.1
      comp=Z,6.0nm,0.6s,baz=283
MNK                                i pP    pP      14 18 20.0 -1.7
MNK                                i PP    PnPn    14 19 13.5 -1.4
MNK                                i S     S       14 23 14.9 -1.4
MNK                                i sS    sS      14 24 01.7 -0.2
MNK                                i SS    SnSn    14 25 41.9 +1.2
MNK                                i LRM   MLR     14 33 35.3
      comp=E,19nm,13.5s
MNK                                i LRM   MLR     14 33 51.4
      comp=N,271nm,13.5s
MNK                                i LRM   MLR     14 33 52.7
      comp=Z,147nm,13.6s
MNK   Minsk            34.60 315   i P     P       14 17 53.5 -2.1
MNK                                i *PP   pP      14 18 20.0 -1.7
MNK                                i               14 19 13.5
MNK                                i S     S       14 23 14.9 -1.4
MNK                                i *SS   sS      14 24 01.7 -0.2
MNK                                i SS    SnSn    14 25 41.9 +1.2
MNK                                 pmax   pmax
      comp=E,2.0nm,0.8s
MNK                                 pmax   pmax
      comp=N,41nm,0.8s
MNK                                 pmax   pmax
      comp=Z,6.0nm,0.6s
MNK                                 MLR    MLR
      comp=E,19nm,14.0s
MNK                                 MLR    MLR
      comp=N,271nm,14.0s
MNK                                 MLR    MLR
      comp=Z,147nm,14.0s
HIA   Hailar           36.99  54   i P     P       14 18 16.4 +0.3
HIA                                 pmax   pmax
      comp=Z,3.0nm,0.8s
FINES FINESS Array B   37.53 326    P      P       14 18 21.1 +0.7
      comp=Z,3.5nm,0.9s,baz=132,slow=9.0,SNR=9.2
      comp=Z,3.5nm,0.9s
FINES FINESS Array B   37.53 326    P      P       14 18 17.6 -2.8
FINES FINESS Array B   37.53 326   i P     P       14 18 23.0 +2.6
FINES                               pmax   pmax
      comp=Z,3.0nm,0.8s
NJ2   Nanjing          39.18  82   eP      P       14 18 36.5 +1.9
NJ2                                 pmax   pmax
      comp=Z,12nm,0.8s
NJ2                                 pmax   pmax
      comp=Z,380nm,6.6s
ARCES ARCESS Array B   41.13 337    P      P       14 18 50.5 +0.3
      comp=Z,4.7nm,0.9s,baz=115,slow=8.1,SNR=1.9
      comp=Z,4.7nm,0.9s
GERES GERESS Array B   43.08 305    P      P       14 19 08.7 +2.2
      comp=Z,0.2nm,0.3s,baz=76,slow=8.3,SNR=1.7
      comp=Z,0.2nm,0.3s
YAK   Yakutsk          43.70  36    P      P       14 19 10.4 -0.6
YAK                                 IAmb   IAmb    14 19 53.8
      comp=Z,11nm,0.5s
YAK   Yakutsk          43.70  36   i P     P       14 19 10.3 -0.8
YAK                                 pmax   pmax
      comp=Z,7.0nm,0.6s
NC303 NORSAR Array S   44.39 323    P      P       14 19 18.7 +2.1
NC303                               IAmb   IAmb    14 19 59.3
      comp=Z,21nm,1.4s
NB201 NORSAR Array S   44.41 323    P      P       14 19 17.8 +1.0
NB2   NORSAR Subarra   44.44 323    P      P       14 19 18.9 +1.8
      comp=Z,1.3nm,0.5s,baz=96,slow=7.9
NOA   NORSAR Array B   44.44 323    P      P       14 19 19.1 +2.0
      comp=Z,1.7nm,0.5s,baz=96,slow=7.7,SNR=12
      comp=Z,1.7nm,0.5s
NBO00 NORSAR Array S   44.66 323    P      P       14 19 19.9 +1.2
NBO00                               IAmb   IAmb    14 20 02.3
      comp=Z,29nm,1.5s
NC204 NORSAR Array S   44.68 323    P      P       14 19 20.8 +1.8
NC204                               IAmb   IAmb    14 19 46.9
      comp=Z,21nm,1.4s
JNU   Nakatsue         48.29  76    LR     LR      14 45 39.8
      comp=Z,36nm,18.4s,baz=164,slow=43
ESDC  Sonseca Array    57.64 298    P      P       14 20 57.4 +1.2
      comp=Z,0.2nm,0.5s,baz=48,slow=8.0,SNR=4.7
      comp=Z,0.2nm,0.5s
BILL  Bilibino         58.37  26ceP      P       14 21 01.0 +0.3
BILL                               e*PP    pP      14 21 33.1 +3.7
BILL                               e               14 23 15.2
BILL                               eS      S       14 29 00.6 +6.5
BILL                                pmax   pmax
      comp=Z,1.0nm,1.2s
TOA0  Torodi Ar. Sit   66.00 269    P      P       14 21 51.1 -1.3
TORD  Torodi Ar. Bea   66.00 269    P      P       14 21 51.2 -1.2
      comp=Z,1.5nm,0.5s,baz=52,slow=6.1,SNR=14
NRS   Narsarsuaq       69.88 333    P      P       14 22 15.3 -0.7
NRS   Narsarsuaq       69.88 333    P      P       14 22 15.3 -0.7
NRS                                 pmax   pmax
      comp=Z,36nm,1.2s
GIRL  Giralia          71.51 138    P      P       14 22 25.9 -0.4
IMAR  Indian Mountai   71.96  18    P      P       14 22 29.0 +0.5
MACI  Morro de la Ar   72.16 292    P      P       14 22 29.2 -1.3
BMAR  Burnt Mountain   72.75  14    P      P       14 22 35.7 +2.5
SPIA  Saint Paul Isl   73.15  30    P      P       14 22 36.5 +0.8
C36M  Paulatuk         73.72   6    P      P       14 22 40.1 +1.4
C36M                                IAmb   IAmb    14 22 40.9
      comp=Z,2.4nm,0.4s
INK   Inuvik           73.73   9    P      P       14 22 40.7 +1.8
      comp=Z,0.6nm,0.5s,baz=326,slow=5.1,SNR=4.2
      comp=Z,0.6nm,0.5s
INK   Inuvik           73.73   9    P      P       14 22 40.9 +2.1
K20K  Telida           74.00  20    P      P       14 22 40.7 +0.1
K20K                                IAmb   IAmb    14 23 06.3
      comp=Z,4.1nm,1.4s
ILAR  Eielson Array    74.58  16    P      P       14 22 44.6 +0.8
      comp=Z,0.5nm,1.0s,baz=282,slow=3.9,SNR=4.6
      comp=Z,0.5nm,1.0s
LBTB  Lobatse          74.96 222    P      P       14 22 47.5 +0.8
LBTB                                IAmb   IAmb    14 22 50.8
      comp=Z,12nm,1.4s
LBTB  Lobatse          74.96 222    P      P       14 22 47.5 +0.8
LBTB                                pmax   pmax
      comp=Z,12nm,1.4s
PMR   Palmer           76.75  19    P      P       14 22 57.8 +1.6
PMR                                 IAmb   IAmb    14 22 58.7
      comp=Z,9.5nm,1.4s
PMR   Palmer           76.75  19    P      P       14 22 57.8 +1.6
PMR                                 pmax   pmax
      comp=Z,9.0nm,1.4s
SML   Sawmill          76.77  18    P      P       14 22 57.6 +1.1
SML                                 IAmb   IAmb    14 23 37.2
      comp=Z,8.2nm,1.1s
BCAR  Beaver Creek A   77.17  15    P      P       14 23 00.4 +1.7
P19K  Oil Pt           77.24  21    P      P       14 22 59.9 +0.8
BOSA  Boshof           78.03 220    P      P       14 23 03.4 -0.5
      comp=Z,1.3nm,0.5s,baz=285,slow=0.2,SNR=5.8
      comp=Z,1.3nm,0.5s
BOSA  Boshof           78.03 220    P      P       14 23 03.7 -0.2
BOSA                                IAmb   IAmb    14 23 19.0
      comp=Z,12nm,1.4s
BOSA  Boshof           78.03 220    P      P       14 23 03.7 -0.2
BOSA                                pmax   pmax
      comp=Z,12nm,1.4s
YKA   Yellowknife Ar   81.10   3    P      P       14 23 21.8 +1.8
      comp=Z,0.5nm,0.6s,baz=350,slow=5.2,SNR=15
      comp=Z,0.5nm,0.6s
WRA   Warramunga Arr   81.82 122    P      P       14 23 23.3 -1.1
      comp=Z,0.2nm,0.6s,baz=325,slow=4.7,SNR=1.6
WRA                                 LR     LR      15 07 11.2
      comp=Z,87nm,19.1s,baz=336,slow=41
      comp=Z,0.2nm,0.6s
ASAR  Alice Springs    84.10 125    P      P       14 23 34.4 -1.7
      comp=Z,0.4nm,0.8s,baz=306,slow=4.9,SNR=4.7
      comp=Z,0.4nm,0.8s
```

JSN ***26*** *14:11:41.1±0.6, 18°.10N×76°.60W, h19^{km}±5^{km}, MD3.2*
SSNC ***26*** *14:11:42.4±1.0, 18°.33N×76°.71W, h2^{km}±5^{km}, MD3.1, ML2.4, MW2.8*
ISC 26 14:11:39.0±1.9, **18°.25N**±0°.07×**76°.57W**±0°.07, **h21**^{km}±3^{km}, **n11**, σ**0^{s}.90**/18, **5C, Jamaica region**

```
Code  Station Name       Δ°  AZ°   Phase ID             Time      Res
                                  Op     ISC        h  m  s     ISC
GWJ   Greenwich         0.23 221⇑iP      Pb        14 11 45.2   0.0
STH   Stony Hill        0.29 233⇑iP      Pb        14 11 45.6  +0.1
HOJ   Hope              0.30 215⇑iP      Pb        14 11 45.8  +0.1
PCJ   Portland Cotta    0.75 228⇑iP      Pb        14 11 52.5  -0.9
MTDJ  Mount Denham      0.92 269 eP      Pb        14 11 56.3   0.0
MTDJ                             eS      Sb        14 12 07.4  -0.7
MTDJ                              IAML             14 12 08.4
      comp=Z,170nm,0.2s
MTDJ                              IAML             14 12 08.7
      190nm,0.3s
MCJ   Malvern           1.11 253⇑iP      Pn        14 11 59.4   0.0
MCJ                              i S     Sb        14 12 13.2  -0.5
LMGC  Las Mercedes      1.85 347 eP      Pn        14 12 10.7  +1.2
LMGC                             eS      Sn        14 12 31.7  -0.6
LMGC                              IAML             14 12 33.8
      comp=E,63nm,0.1s
LMGC                              IAML             14 12 34.2
      comp=N,89nm,0.1s
RCC   Rio Carpintero    1.92  25 eP      Pb        14 12 13.3   0.0
RCC                              eS      Sb        14 12 36.1  -0.7
RCC                               IAML             14 12 39.3
      comp=E,12nm,0.1s
RCC                               IAML             14 12 39.3
      comp=N,8.3nm,0.1s
GTBY  Guantanamo Bay    2.17  39 eP      Pb        14 12 17.4  -0.1
GTBY                             eS      Sb        14 12 43.1  -0.7
GTBY                              IAML             14 12 46.0
      comp=N,15nm,0.1s
GTBY                              IAML             14 12 46.2
      comp=N,12nm,0.0s
HLGC  Holguin           2.67  10 eP      Pb        14 12 24.5  -1.6
HLGC                             eS      Sb        14 12 57.5  -1.0
HLGC                              IAML             14 12 59.7
      comp=E,13nm,0.5s
HLGC                              IAML             14 13 00.2
      comp=N,16nm,0.4s
CCCC  Cccc              3.15 339 eP      Pn        14 12 28.7  +1.4
CCCC                             eS      Sn        14 13 05.3  +1.0
CCCC                              IAML             14 13 06.3
      comp=N,4.1nm,0.8s
CCCC                              IAML             14 13 08.2
      comp=E,2.8nm,0.4s
```

NEIC ***26*** *14:14:10.8±2.6, 13°.7S±0°.1×167°.8E±0°.2, h35^{km}±2^{km}, mb4.1/7, Error ellipse: s-maj=30.2km s-min=20.4km az=110.0*
IDC ***26*** *14:14:27.2±13.0, 15°.07S×165°.47E, h0^{km}, mb3.8/3, mbtmp3.8/4, ML3.6/1, Error ellipse: s-maj=229.1km s-min=35.9km az=54.0*
ISC 26 14:14:11.6±2.1, **13°.8S**±0°.2×**167°.7E**±0°.3, **h35**^{km}, **n18**, σ**1^{s}.27**/18, **mb3.9**/6, **Vanuatu Islands**

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Code  Station Name       Δ°  AZ°   Phase ID             Time      Res
                                  Op     ISC        h  m  s     ISC
LIFNC LIFOU             6.96 183  Pn     Pn        14 15 51.0  -0.1
KOUNC Koumac, New Ca    7.45 205  Pn     Pn        14 16 00.4  +2.4
DZM   Mont Dzumac       8.32 188  Pn     Pn        14 16 11.6  +1.7
      1.2nm,0.3s,baz=139,slow=20,SNR=29
DZM                               Sn     Sn        14 17 32.7   -10
      0.1nm,0.3s,baz=90,slow=23,SNR=1.6
      4.1nm,0.3s
DZM   Mont Dzumac       8.32 188         Pn        14 16 11.2  +1.4
ONTNC Ouen Toro         8.55 188         Pn        14 16 14.0  +1.1
OUENC Ouen Island, N    8.62 185  Pn     Pn        14 16 14.2  +0.3
PINNC Pines Island,     8.78 181  Pn     Pn        14 16 17.1  +1.1
EIDS  Eidsvold         19.38 231  P      P         14 18 33.5  -1.0
EIDS                              IAmb   IAmb      14 18 50.7
      comp=Z,17nm,1.2s
STKA  Stephens Creek   29.89 229  P      P         14 20 15.2  -0.9
      comp=Z,0.9nm,0.4s,baz=56,slow=11,SNR=7.2
      comp=Z,0.9nm,0.4s
STKA  Stephens Creek   29.89 229  P      P         14 20 14.6  -1.6
STKA                              IAmb   IAmb      14 20 17.9
      comp=Z,2.7nm,1.4s
WB0   Warramunga Arr   32.36 255  P      P         14 20 37.4  -0.7
WB0                               IAmb   IAmb      14 20 38.6
      comp=Z,7.6nm,1.4s
WRA   Warramunga Arr   32.43 255  P      P         14 20 38.3  -0.3
      comp=Z,0.3nm,0.5s,baz=86,slow=8.7,SNR=6.1
      comp=Z,0.3nm,0.5s
AS31  Alice Springs    33.36 248  P      P         14 20 46.0  -0.8
AS31                              IAmb   IAmb      14 21 03.8
      comp=Z,1.4nm,1.3s
ASAR  Alice Springs    33.36 248  P      P         14 20 46.1  -0.7
      comp=Z,0.5nm,0.4s,baz=77,slow=9.4,SNR=30
      comp=Z,0.5nm,0.4s
ASAR  Alice Springs    33.36 248  P      P         14 20 45.8  -1.1
BBOO  Buckleboo        34.45 231  P      P         14 20 55.1  -1.1
FITZ  Fitzroy Crossi   40.56 258  P      P         14 21 49.4  +1.3
ULN   Ulaanbaatar      81.60 324  P      P         14 26 27.1  +1.0
ULN                               IAmb   IAmb      14 27 05.5
      comp=Z,3.6nm,1.4s
```

WEL 26 14:35:41.6±0.4, **42°S**±3°×**17°3E**±°, **h5**^{km}, **M2.0**/3, **ML2.4**/8, **MLv2.0**/3, **Error ellipse: s-maj=0.0km s-min=0.0km az=129.4, confirmed, South Island**

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Code  Station Name       Δ°  AZ°   Phase ID             Time      Res
                                  Op     ISC        h  m  s     ISC
KHZ   Kahutara          0.11  50  P      Pg        14 35 43.8  +0.1
KHZ                               S      Sg        14 35 46.1  +0.9
GVZ   Greta Valley S    0.56 211  P      Pg        14 35 52.7  +0.3
GVZ                               S      Sb        14 36 01.2  -1.1
THZ   Tophouse          0.82 332  P      Pg        14 35 57.2  -0.1
THZ                               S      Sb        14 36 09.3  -0.4
BSWZ  Blackbirch Sta    0.84  24  P      Pg        14 35 58.1  +0.4
LTZ   Lake Taylor       0.90 250  P      Pg        14 35 58.5  -0.4
LTZ                               S      Sg        14 36 11.2  +0.6
TUWZ  Tuamarina         1.12  20  P      Pg        14 36 02.5  -0.6
MRNZ  Matariki Terra    1.20 335  P      Pg        14 36 04.1  -0.4
MRNZ                              S      Sn        14 36 21.3  -0.2
NNZ   Nelson            1.27 358  P      Pg        14 36 04.8  -1.0
NNZ                               S      Sn        14 36 23.2  -0.1
MQZ   McQueen's Vall    1.35 205  P      Pn        14 36 03.5  -3.5
DSZ   Denniston Nort    1.42 301  P      Pn        14 36 07.7  -0.3
TKNZ  Takaka Hill       1.49 346  P      Pn        14 36 08.7  -0.3
TKNZ                              S      Sg        14 36 29.4   0.0
CAW   Cannon Point      1.84  42  P      Pn        14 36 11.2  -2.6
ARCZ  Arundel           2.20 228  P      Pn        14 36 18.7  -0.1
```

IDC ***26*** *15:06:31.3±1.0, 6°.28S×106°.48E, h0^{km}, mb3.9/6, mbtmp3.9/6, Error ellipse: s-maj=58.3km s-min=19.9km az=48.0*
DJA ***26*** *15:06:51.5±0.5, 7°S±6°×10°7E±°, h145^{km}±5^{km}, M4.0/13, mb4.2/1, MLv3.8/13*
NEIC ***26*** *15:06:53.6±0.7, 6°.1S±0°.1×106°.9E±0°.2, h195^{km}±4^{km}, mb4.0/8, Error ellipse: s-maj=31.1km s-min=17.7km az=67.0*
ISC 26 15:06:50.1±0.7, **6°.45S**±0°.08×**106°.73E**±0°.06, **h161**^{km}±6^{km}, **n34**, σ**1^{s}.54**/38, **mb3.9**/9, **Jawa**

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Code  Station Name       Δ°  AZ°   Phase ID             Time      Res
                                  Op     ISC        h  m  s     ISC
CBJI  Citeko            0.13  74  P      Pn        15 07 12.3  +0.8
SBJI  Serang            0.68 299  P      Pn        15 07 13.8  +0.2
SBJI                              S      Sn        15 07 32.2  +0.6
CNJI  Cibinong          0.94 155  P      Pn        15 07 15.3  -0.1
CGJI  Cibinong          1.04 261  P      Pn        15 07 16.9  +0.7
CGJI                              S      Sn        15 07 35.4  -0.8
JCJI  Jatiwangi         1.53  91  P      Pn        15 07 21.5  +0.7
JCJI                              S      Sn        15 07 44.9  +0.5
CMJI  Cimerak           2.16 128  P      Pn        15 07 27.8  +0.1
CMJI                              S      Sn        15 07 55.3  -1.5
KPJI  Karang Pucung     2.35 112  P      Pn        15 07 30.7  +0.7
KASI  Kota Agung        2.40 292  P      Pn        15 07 31.8  +1.2
KASI                              S      Sn        15 08 01.7  -0.2
PMBI  Palembang         4.01 331  P      Pn        15 07 53.1  +2.3
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UGM	Wanagama	4.04	111	Pn	Pn	15 07 52.0	+0.9
UGM	Wanagama	4.04	111	P	Pn	15 07 51.6	+0.5
MNAI	Manna	4.29	299	Pn	Pn	15 07 55.9	+1.4
MNAI	Manna	4.29	299	P	Pn	15 07 55.8	+1.4
PPBI	Pangkal Pinang	4.30	352	P	Pn	15 07 56.4	+1.8
MASI	Maura Aman, Be	5.55	306	P	Pn	15 08 12.6	+1.5
GSI	Gunungsitoli	11.95	310	Pn	Pn	15 09 32.3	-3.3
RPSI	Rantau Prapat	11.97	319	Pn	Pn	15 09 30.4	-5.4
FITZ	Fitzroy Crossi	21.78	124	P	P	15 11 28.9	-0.4
SAUI	Saumlaki	24.42	95	P	P	15 11 52.4	-1.7
MTN	Manton Dam	24.87	107	P	P	15 11 58.5	+0.5
MTN				IAmb	IAmb	15 12 38.9	
	comp=Z,21nm,1.4s						
WRA	Warramunga Arr	29.97	119	P	P	15 12 42.6	-1.0
	comp=Z,0.8nm,1.1s,baz=286,slow=13,SNR=14						
	comp=Z,0.8nm,1.1s						
ASAR	Alice Springs	31.23	126	P	P	15 12 56.3	+1.7
	comp=Z,0.3nm,0.5s,baz=296,slow=7.8,SNR=24						
	comp=Z,0.3nm,0.5s						
STKA	Stephens Creek	41.20	132	P	P	15 14 21.4	+2.3
	comp=Z,2.8nm,0.5s,baz=316,slow=8.7,SNR=13						
	comp=Z,2.8nm,0.5s						
STKA	Stephens Creek	41.20	132	P	P	15 14 21.3	+2.1
MK31	Makanchi Array	57.28	340	P	P	15 16 18.9	-2.0
MK31				IAmb	IAmb	15 17 00.1	
	comp=Z,2.9nm,1.5s						
MKAR	Makanchi Array	57.28	340	P	P	15 16 19.0	-1.9
	comp=Z,0.7nm,0.4s,baz=154,slow=8.5,SNR=14						
	comp=Z,0.7nm,0.4s						
MKAR	Makanchi Array	57.28	340	P	P	15 16 18.5	-2.4
BRVK	Borovoye	66.83	337	P	P	15 17 22.3	-2.1
BRVK				IAmb	IAmb	15 18 00.2	
	comp=Z,1.5nm,0.8s						
ABKAR	Akbulak array	68.81	329	P	P	15 17 34.7	-2.1
VNDA	Vanda	76.55	169	P	P	15 18 23.7	+1.7
BRTR	Keskin Array B	81.27	312	P	P	15 18 48.3	-0.4
	comp=Z,1.0nm,0.7s,baz=111,slow=6.8,SNR=6.1						
	comp=Z,1.0nm,0.7s						
QSPA	South Pole Qui	83.53	180	P	P	15 19 01.7	+1.8
	comp=Z,1.2nm,0.9s,baz=349,slow=5.2,SNR=8.5						
	comp=Z,1.2nm,0.9s						
QSPA	South Pole Qui	83.53	180	P	P	15 19 01.4	+1.6
QSPA				IAmb	IAmb	15 19 27.7	
	comp=Z,3.2nm,1.2s						
LIT	Litokhoron	89.72	310	P	P	15 19 29.9	-0.4

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*DDA **26** 15:12:14.6±0.0, 39°.57N×26°.12E, h8^{km}±1^{km}, ML2.6*
*ISK **26** 15:12:14.6, 39°.56N×26°.08E, h6^{km}, ML2.6/34*
*ATH **26** 15:12:15.3, 39°.56N×26°.08E, h9^{km}±1^{km}, ML2.6/8, Error ellipse: s-maj=1.9km s-min=0.8km az=251.0*
ISC 26 15:12:14.8±0.8**, 39°.56N**±0°.02×**26°.08E**±0°.02**, h11**^{km}±6^{km}**, n57, σ0^{s}.65**/77**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.07	140	P	Pg	15 12 16.7	-0.5
GPNR	Gulpinar-Canak	0.11	157	Pg	Pg	15 12 17.4	-0.2
GPNR				Sg	Sg	15 12 19.7	+0.1
BOZC	Bozcaada	0.28	356	Pg	Pg	15 12 20.9	+0.3
BOZC				Sg	Sg	15 12 25.1	+0.7
EZN	Ezine	0.33	36	Pg	Pg	15 12 21.4	0.0
EZN				Sg	Sg	15 12 26.3	+0.5
PRK	Paraskevi	0.35	154	P	Pg	15 12 21.9	+0.2
PRK				S	Sg	15 12 26.8	+0.5
PRK				AML	AML	15 12 28.7	
	comp=E,5858µm,0.3s						
PRK				AML	AML	15 12 29.0	
	comp=N,6042µm,0.3s						
SIGR	SIGRI	0.39	206	Pg	Pg	15 12 22.8	+0.3
SIGR				Sg	Sb	15 12 28.7	-0.9
SIGR	SIGRI	0.39	206	P	Pg	15 12 22.8	+0.3
SIGR				S	Sg	15 12 28.4	+0.8
SIGR				AML	AML	15 12 30.4	
	comp=E,1424µm,0.2s						
SIGR				AML	AML	15 12 30.6	
	comp=N,1621µm,0.3s						
BAYC	CANAKKALE_Bayr	0.41	63	P	Pg	15 12 22.2	-0.7
BAYC				S	Sg	15 12 27.3	-1.0
BAYC				*i* AML	AML	15 12 28.0	
	comp=N,457nm,0.2s						
BAYC				*i* AML	AML	15 12 28.0	
	comp=N,466nm,0.3s						
ECEA	Canakkale, Ece	0.49	9	P	Pg	15 12 24.1	-0.3
ECEA				S	Sb	15 12 31.8	-0.9
COMU	Canakkale	0.62	29	Pg	Pg	15 12 27.0	+0.1
COMU				Sg	Sb	15 12 36.1	-0.3
GOKA	anakkale-Gk	0.64	348	P	Pg	15 12 27.3	0.0
GOKA				S	Sg	15 12 36.2	+0.5
GADA	Gvkgeada	0.65	348	Pg	Pg	15 12 27.5	+0.2
LIA	Limnos Island	0.77	296	P	Pb	15 12 30.1	-0.1
LIA				S	Sb	15 12 40.3	-0.3
LIA				AML	AML	15 12 43.2	
	comp=E,1363µm,0.4s						
LIA				AML	AML	15 12 44.6	
	comp=N,2152µm,0.3s						
BUHA	Balikesir, Bur	0.78	94	P	Pg	15 12 29.0	-0.8
DKL	Dikili	0.81	127	Pg	Pb	15 12 30.6	-0.2
CANM	Can-anakkale	0.88	59	Pg	Pb	15 12 31.9	-0.2
GELI	Tayfur-Gelibol	0.89	20	Pg	Pg	15 12 31.8	-0.2
GELI				Sg	Sb	15 12 44.9	+0.7
KARB	zmir-Karabur	0.93	164	P	Pg	15 12 32.6	-0.1
KARB				S	Sb	15 12 45.7	+0.4
KARB				*i* AML	AML	15 12 48.0	
	comp=N,175nm,0.5s						
LPK	Lapseki	0.97	33	Pg	Pg	15 12 33.3	-0.1
ZEDA	zmir-Bergama	0.98	127	P	Pg	15 12 33.3	-0.3
ZEDA				S	Sb	15 12 46.9	+0.2
ZEDA				*i* AML	AML	15 12 48.0	
	comp=N,155nm,0.4s						
SMTH	Samothraki Isl	1.00	335	P	Pg	15 12 34.0	-0.1
PSRA	Psara	1.09	202	P	Pn	15 12 36.1	0.0
PSRA				S	Sn	15 12 51.2	+0.1
PSRA				AML	AML	15 12 54.0	
	comp=N,675µm,0.2s						
PSRA				AML	AML	15 12 56.2	
	comp=E,1166µm,0.2s						
ERIK	Erikli-Kesan	1.16	17	Pn	Pg	15 12 36.2	-0.9
CHOS	Chios island	1.17	181	Pn	Pn	15 12 37.5	+0.3
CHOS	Chios island	1.17	181	P	Pg	15 12 37.0	-0.3
CHOS				S	Sb	15 12 52.6	+0.3
CHOS				AML	AML	15 12 55.9	
	comp=N,418µm,0.3s						
CHOS				AML	AML	15 12 56.0	
	comp=E,862µm,0.2s						
ENEZ	Enez	1.18	3	Pn	Pn	15 12 37.3	+0.1
KRBG	Karabiga-Canak	1.25	48	Pn	Pn	15 12 38.3	0.0
URLA	Izmir	1.26	161	Pn	Pn	15 12 38.6	+0.1
STEP	BALIKESIR_Sava	1.28	98	P	Pn	15 12 37.9	-0.9
KNL	Balıkesir	1.32	57	P	Pn	15 12 38.1	-1.1
KNL				S	Sb	15 12 56.6	0.0
KNL				*i* AML	AML	15 12 58.0	
	comp=E,323nm,0.7s						
ALN	Alexandroupoli	1.34	359	Pn	Pb	15 12 39.9	0.0
ALN	Alexandroupoli	1.34	359	P	Pn	15 12 39.5	+0.1
ALN				S	Sb	15 12 56.7	-0.4
ALN				AML	AML	15 12 58.4	
	comp=E,180µm,0.4s						
ALN				AML	AML	15 12 59.4	
	comp=N,108µm,0.4s						
ZEYE	Izmir, Urla-Ze	1.36	166	P	Pn	15 12 38.9	-0.8
BLCB	Balcova	1.39	147	Pn	Pg	15 12 41.2	-0.3
BALB	Balikesir	1.40	86	Pn	Pb	15 12 40.9	0.0
RKY	Sarkoy-Tekirda	1.41	37	Pn	Pb	15 12 41.2	0.0
THAS	Thassos island	1.48	316	P	Pn	15 12 40.9	-0.4
THAS				S	Sn	15 12 59.9	-0.8
THAS				AML	AML	15 13 00.2	
	comp=N,128µm,0.3s						
THAS				AML	AML	15 13 04.4	
	comp=E,89µm,0.2s						
EDC	Edincik	1.58	60	Pn	Pb	15 12 43.7	-0.4
UKOP	Uzunkopru-Edir	1.62	15	Pn	Pb	15 12 44.3	-0.5
DGB	zmir	1.63	157	P	Pb	15 12 44.4	-0.5
RDO	Rodhopi	1.64	346	Pn	Pn	15 12 44.2	+0.6
RDO	Rodhopi	1.64	346	P	Pn	15 12 43.8	+0.3
OUR	Ouranopolis	1.79	296	Pn	Pb	15 12 46.7	-0.8
OUR	Ouranopolis	1.79	296	P	Pb	15 12 47.2	-0.3
KAVA	Kavala	1.87	321	P	Pn	15 12 46.5	-0.2
KCTX	Karacabey (Bur	1.89	67	Pn	Pn	15 12 47.8	+0.7
SMG	Samos	1.94	162	P	Pn	15 12 48.4	+0.6
SMG				S	Sn	15 13 11.6	-0.6
SMG				AML	AML	15 13 19.4	
	comp=E,281µm,0.6s						
SMG				AML	AML	15 13 19.9	
	comp=N,258µm,0.5s						
CRLT	Corlu	2.02	38	Pn	Pn	15 12 49.8	+1.0
GCAM	G?zelcaml?	2.07	154	Pn	Pn	15 12 50.6	+1.2
KDZ	Kurdzhali	2.15	347	Pn	Pn	15 12 51.6	+1.0
KULA	Kula-Manisa	2.27	117	Pn	Pn	15 12 53.6	+1.3
SLVT	Silivri	2.33	44	Pn	Pn	15 12 54.4	+1.3
EDRB	Edirne	2.34	12	Pn	Pn	15 12 54.5	+1.3
ARMT	Armutlu	2.36	64	Pn	Pn	15 12 54.9	+1.3
CTKS	Kestanelik-??a	2.50	47	Pn	Pn	15 12 56.7	+1.3
GEMT	Gemlik	2.55	69	Pn	Pn	15 12 57.6	+1.5
TVSB	Tavsanli	2.62	91	Pn	Pn	15 12 58.5	+1.3

PGC 26 15:13:10.7±17.0**, 51°.02N×130°.56W, h10**^{km}**, MLSn2.8**/13**, Mw3.5**/13**, 210km Wsw of Bella Bella, Bc Haida Gwaii Region, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HG4B	Hotspring	1.34	343	Pn	Pn	15 13 33.3	-2.1
HG4B				Sn	Sb	15 13 49.2	-3.9
HOLB	Holberg	1.58	103	Pn	Pn	15 13 36.7	-2.1
HOLB				Sn	Sn	15 13 54.7	-4.6
BNB	Barry Inlet	1.73	335	Pn	Pn	15 13 37.9	-3.0
BNB				Sn	Sn	15 13 58.5	-4.5
BBB	Bella Bella	1.92	52	Pn	Pn	15 13 41.6	-1.8
BBB				Sn	Sn	15 14 05.6	-2.0
PACB	Port Alice, BC	2.03	105	Pn	Pn	15 13 42.6	-2.3
MAYB	Maynard	2.24	105	Pn	Pn	15 13 46.3	-1.6
BNKB	Banks Island	2.35	10	Pn	Pn	15 13 48.7	-0.7
BNAB	Bonilla	2.48	359	Pn	Pn	15 13 50.3	-0.8
DIB	Dawson Inlet,	2.49	332	Pn	Pn	15 13 51.8	+0.6
WOSB	Woss	2.68	107	Pn	Pn	15 13 52.3	-1.6
HWKB	Hawksbury Isla	2.73	18	Pn	Pn	15 13 52.9	-1.6
GRNB	Grenville Isla	2.86	7	Pn	Pn	15 13 55.0	-1.3
KITB	Kitimat	3.28	20	Pn	Pn	15 14 00.9	-1.2
CBB	Campbell River	3.46	105	Pn	Pn	15 14 03.5	-1.0
FSJB	Fort St James	5.13	45	Pn	Pn	15 14 26.8	-0.8

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*IDC **26** 15:35:17.0±1.7, 35°.66N×141°.70E, h0^{km}, mb3.4/3, mbtmp3.4/5, ML3.5/1, Error ellipse: s-maj=43.3km s-min=23.7km az=62.0*
*JMA **26** 15:35:23.2±0.2, 35°.4N±0°.4×141°.3E±0°.9, h32^{km}±1^{km}, MV2.8/33, E OFF BOSO PENINSULA*
ISC 26 15:35:21.3±1.4**, 35°.52N**±0°.07×**141°.4E**±0°.1**, h25**^{km}**, n19, σ1^{s}.52**/15**, mb3.3**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.48	293	P	Pn	15 35 32.6	+0.1
CHOJ				*e*S	Sb	15 35 39.3	+1.5
JSMT	Sammumatsuo	0.79	279	P	Pn	15 35 37.0	+0.3
JIHU	Itakohorinouch	0.84	302	*e*P	Pn	15 35 38.7	+1.2
BSO1	Boso 1	0.93	202	P	Pb	15 35 37.7	-0.7
BSO1				X		15 35 48.2	
KTR	Katsuura	0.96	248	P	Pn	15 35 38.4	-0.8
BSO4	Boso 4	1.02	239	P	Pn	15 35 39.2	-0.6
BSO3	Boso 3	1.02	226	*i* P	Pn	15 35 39.2	-0.6
JYT	Yasato	1.21	306	*e*P	Pb	15 35 44.0	+0.5
MJAR	Matsushiro Arr	2.78	292	Pn	Pn	15 36 05.9	+1.6
	2.1nm,0.4s,baz=98,slow=14,SNR=16						
MJAR				Sn	Sb	15 36 41.4	-2.6
	0.2nm,0.3s,baz=152,slow=16,SNR=5.3						
ASAJ	Asahikawa	8.64	6	Pn	Pn	15 37 21.2	-3.4
	0.6nm,0.3s,baz=355,slow=8.4,SNR=17						
	2.5nm,0.4s						
H11N2	WAKE ISLAND Hy	27.41	118	T	T	16 10 06.3	
	baz=310,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	27.42	118	T	T	16 10 14.9	
	baz=310,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	27.43	118	T	T	16 10 06.0	
	baz=310,slow=75,SNR=10						
H11S1	WAKE ISLAND Hy	28.07	120	T	T	16 10 53.5	
	baz=312,slow=75,SNR=42						
H11S3	WAKE ISLAND Hy	28.07	121	T	T	16 10 52.8	
	baz=312,slow=75,SNR=41						
H11S2	WAKE ISLAND Hy	28.09	121	T	T	16 10 59.3	
	baz=312,slow=75,SNR=36						
MKAR	Makanchi Array	44.93	303	P	P	15 43 33.8	-0.2
	0.2nm,0.5s,baz=96,slow=8.9,SNR=2.2						
	0.2nm,0.5s						
WRA	Warramunga Arr	55.56	188	P	P	15 44 55.3	+0.7
	1.0nm,0.6s,baz=4.7,slow=8.1,SNR=19						
	1.0nm,0.6s						
ASAR	Alice Springs	59.29	188	P	P	15 45 21.8	+1.0
	0.1nm,0.7s,baz=1.1,slow=6.9,SNR=1.1						
	0.1nm,0.7s						

WEL 26 15:48:33.0±1.1**, 35°S**±10°×**17°9E**±1°4**, h274**^{km}±10^{km}**, M3.7**/32**, mB4.3**/11**, ML4.3**/43**, MLv4.0**/32**, Mw(mB)3.5**/11**, Error ellipse: s-maj=0.0km s-min=0.0km az=84.6, confirmed, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	2.90	206	P	Pn	15 49 25.6	-0.2
HAZ				S	S	15 50 07.5	-0.5
PKGZ	Pakihiroa	2.92	200	P	Pn	15 49 26.1	-0.1
PUZ	Puketiti	3.05	197	P	Pn	15 49 27.6	+0.1
PUZ				S	S	15 50 10.7	-0.2
RUGZ	Raukumara Rang	3.12	205	P	Pn	15 49 28.4	0.0
TWGZ	Tauwhareparae	3.22	200	P	Pn	15 49 30.0	+0.6
KUZ	Kuaotunu	3.35	241	P	Pn	15 49 28.3	-2.4
TKGZ	Te Karaka	3.50	200	P	Pn	15 49 31.8	-0.5
TKGZ				S	S	15 50 19.5	-0.1
MWZ	Matawai	3.50	204	P	Pn	15 49 32.6	+0.2
MWZ				S	S	15 50 20.6	+0.9
URZ	Urewera	3.59	210	P	Pn	15 49 32.8	-0.5
URZ				S	S	15 50 21.1	-0.2
RIGZ	Rimuhau	3.77	199	P	Pn	15 49 35.5	+0.1
WIAZ	Waiheke Island	3.80	243	P	Pn	15 49 33.8	-1.8
MUGZ	Murupara	3.92	211	P	Pn	15 49 36.9	-0.1
RTZ	Ruatahuna	3.95	208	P	Pn	15 49 37.0	-0.4
TOZ	Tahuroa Road	4.04	229	P	Pn	15 49 39.3	+1.0
KNZ	Kokohu	4.09	199	P	Pn	15 49 39.0	0.0
PRRZ	Plateau Road	4.10	215	P	Pn	15 49 39.7	+0.7
MHGZ	Mahia Peninsul	4.16	196	P	Pn	15 49 40.7	+1.0
RAHZ	Arahi	4.18	205	P	Pn	15 49 40.2	+0.3
RAHZ				S	S	15 50 34.5	+1.1
ALRZ	Allen Road	4.18	214	P	Pn	15 49 40.5	+0.6
MTHZ	Maungataniwha	4.21	208	P	Pn	15 49 40.3	0.0
WHHZ	Waihua	4.27	203	P	Pn	15 49 41.5	+0.5
WHHZ				S	S	15 50 36.1	+0.7
MRHZ	Matea Rd	4.37	212	P	Pn	15 49 42.3	+0.1
TLZ	Tolley Road	4.42	223	P	Pn	15 49 43.9	+1.2
NMHZ	Naumai	4.44	207	P	Pn	15 49 43.4	+0.4
ARHZ	Aropaoanui	4.52	204	P	Pn	15 49 44.2	+0.3
BKZ	Black Stump Fm	4.62	209	P	Pn	15 49 45.1	0.0
OUZ	Omahuta	4.72	267	P	Pn	15 49 41.3	-4.9
MCHZ	McNeill Hill	4.78	206	P	Pn	15 49 47.2	+0.2
KWHZ	Kaweka Forest	4.87	208	P	Pn	15 49 48.0	0.0
NTVZ	North Tongarir	4.92	216	P	Pn	15 49 48.8	+0.1
TMVZ	Te Maari	4.92	215	P	Pn	15 49 48.6	-0.1
HIZ	Hauiti	4.93	226	P	Pn	15 49 50.9	+2.2
ETVZ	East Tongariro	4.93	215	P	Pn	15 49 49.6	+0.7
SNVZ	South Ngauruho	5.01	215	P	Pn	15 49 49.8	0.0
NGZ	Ngauruhoe	5.02	216	P	Pn	15 49 50.8	+0.9
KAHZ	Kahuranaki	5.04	202	P	Pn	15 49 50.4	+0.3
BHHZ	Black Hill Sta	5.07	210	P	Pn	15 49 50.1	-0.3
FWVZ	Far West T-bar	5.10	215	P	Pn	15 49 51.5	+0.5
WNVZ	Wahianoa	5.14	215	P	Pn	15 49 51.7	+0.4
MTVZ	Mangateitei	5.24	215	P	Pn	15 49 52.5	0.0
PXZ	Pawanui	5.26	201	P	Pn	15 49 52.3	-0.3
PNHZ	Pukenui	5.38	207	P	Pn	15 49 53.5	-0.6
VRZ	Vera Road	5.41	221	P	Pn	15 49 56.2	+1.8
WPHZ	Waipukurau	5.43	204	P	Pn	15 49 54.9	+0.2
PRHZ	Porangahau	5.55	202	P	Pn	15 49 55.9	-0.2
TSZ	Takapari Road	5.59	208	P	Pn	15 49 56.0	-0.7
DVHZ	Dannevirke	5.73	205	P	Pn	15 49 57.8	-0.6
WAZ	Wanganui	5.76	216	P	Pn	15 49 59.1	+0.3
POWZ	Post Office Ro	5.96	207	P	Pn	15 50 01.0	0.0
PRWZ	Pori Road	6.03	205	P	Pn	15 50 02.5	+0.6
BFZ	Birch Farm	6.05	203	P	Pn	15 50 01.8	-0.3
TIWZ	Tintock	6.25	205	P	Pn	15 50 04.5	-0.2
MRZ	Mangatainoka R	6.26	207	P	Pn	15 50 03.8	-1.0
HOWZ	Holdsworth Sta	6.49	207	P	Pn	15 50 06.4	-1.2
TMWZ	Te Maipa	6.55	204	P	Pn	15 50 07.9	-0.5
OGWZ	Otaki Gorge	6.55	209	P	Pn	15 50 07.5	-0.9
KIW	Kapiti Island	6.70	210	P	Pn	15 50 08.9	-1.3
MTW	Mount Morrison	6.72	206	P	Pn	15 50 09.5	-1.0
PAWZ	Paruwai Farm	6.95	205	P	Pn	15 50 12.2	-1.1
DUWZ	D'Urville Isla	7.09	216	P	Pn	15 50 13.6	-1.4

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*MDD **26** 15:53:23.6±0.3, 28°.47N×14°.22W, h15^{km}±12^{km}, mb_Lg3.7/15, Error ellipse: s-maj=9.3km s-min=3.7km az=139.0*
*CNRM **26** 15:53:23.8, 28°.86N×13°.81W, h10^{km}, ml3.0*
ISC 26 15:53:20.5±1.0**, 28°.54N**±0°.04×**14°.24W**±0°.03**, h33**^{km}±4^{km}**, n31, σ1^{s}.94**/59**, 5C-4D, Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CFTV	Fuerteventura	0.18	133	⇓P	Pb	15 53 27.3	+0.3
CFTV				S	Sb	15 53 29.9	-1.6
CFTV				*i* Vmb_Lg		15 53 30.0	
CFUE	Fuerteventura	0.29	68	⇑P	Pb	15 53 29.3	+1.2
CFUE				S	Sb	15 53 33.6	+0.3
CFUE				*i* Vmb_Lg		15 53 33.8	
CGIN	Giniginamar, F	0.36	158	⇑P	Pb	15 53 29.2	+0.2
CGIN				S	Sb	15 53 33.2	-1.7
CLOB	Isla de Lobos,	0.43	59	⇑P	Pn	15 53 32.1	+1.6
CLOB				S	Sn	15 53 38.4	+1.1
CLOB				*i* Vmb_Lg		15 53 39.3	
EFAM	Famara	0.85	47	⇑P	Pb	15 53 38.0	+1.0
EFAM				S	Sb	15 53 49.1	+1.0
EFAM				*i* Vmb_Lg		15 53 55.0	
EOSO	Osorio	1.25	248	⇓P	Pb	15 53 43.5	-0.1
EOSO				S	Sn	15 53 57.6	+0.1
GGC	Guia, Gran Can	1.30	252	P	Pb	15 53 44.0	-0.5
GGC				S	Sn	15 53 59.0	+0.2
GGC				*i* Vmb_Lg		15 54 00.5	
EBAJ	Bajamar	1.85	271	⇓P	Pn	15 53 51.7	+1.7
EBAJ				S	Sn	15 54 12.4	+0.1
CGUI	Guimar, Teneri	1.95	264	⇓P	Pn	15 53 53.1	+1.6
CGUI				S	Sn	15 54 14.9	0.0
CGUI				*i* Vmb_Lg		15 54 15.1	
MACI	Morro de la Ar	2.02	262	P	Pn	15 53 54.0	+1.5
MACI				S	Sn	15 54 16.6	-0.1
MACI				*i* Vmb_Lg		15 54 20.8	
CRAJ	Montana Rajada	2.10	263	P	Pn	15 53 54.7	+1.1
CRAJ				S	Sn	15 54 18.4	-0.3
CRAJ				*i* Vmb_Lg		15 54 25.7	
CCAN	Las Canadas	2.11	262	P	Pn	15 53 54.8	+1.0
CCAN				S	Sn	15 54 18.2	-0.9
CCAN				*i* Vmb_Lg		15 54 19.5	
CNOR	Icod de los Vi	2.15	265	P	Pn	15 53 55.5	+1.3
CNOR				S	Sn	15 54 19.3	-0.4
CVIL	Vilaflor	2.15	260	P	Pn	15 53 56.3	+2.0
CVIL				S	Sn	15 54 20.0	0.0
CBOL	Buenavista del	2.29	265	⇑P	Pn	15 53 57.6	+1.4
CBOL				S	Sn	15 54 23.3	-0.1
CBOL				*i* Vmb_Lg		15 54 27.8	
EGOM	La Gomera	2.65	262	P	Pn	15 54 02.2	+1.3
EGOM				S	Sn	15 54 31.2	-0.7
EGOM				*i* Vmb_Lg		15 54 33.7	
TANT	Tantan	2.65	92	P	Pn	15 54 03.1	+2.2
TANT				S	Sn	15 54 30.0	-1.9
TBT	Taburiente	3.23	273	P	Pn	15 54 09.8	+0.7
TBT				S	Sn	15 54 42.9	-3.5
TBT				*i* Vmb_Lg		15 54 50.1	
CTIG	El Hierro	3.34	258	P	Pn	15 54 13.3	+2.9
CTIG				S	Sn	15 54 48.3	-0.6
CTIG				*i* Vmb_Lg		15 54 53.1	
CMCL	Mercadel, El H	3.44	257	P	Pn	15 54 14.2	+2.3
CMCL				S	Sn	15 54 50.1	-1.6
CCUM	Cumbre, El Hie	3.44	258	P	Pn	15 54 14.1	+2.3
CCUM				S	Sn	15 54 50.0	-1.5
CCUM				*i* Vmb_Lg		15 54 51.9	
CJUL	El Julan, El H	3.49	258	P	Pn	15 54 14.8	+2.1
CJUL				S	Sn	15 54 50.3	-2.6
CJUL				*i* Vmb_Lg		15 54 58.5	
CCAL	Punta Orchilla	3.55	258	P	Pn	15 54 15.8	+2.4
CCAL				S	Sn	15 54 52.2	-2.0
SFNM	Sidi Ifni	3.66	77	P	Pn	15 54 14.6	-0.2
PMAR	Madeira	4.76	332	P	Pn	15 54 34.2	+4.0
PMAR	Madeira	4.76	332	*e*P	Pn	15 54 33.6	+3.4
PMAR				*e*S	Sn	15 55 20.4	-4.0
PMAR				A	A	15 55 27.2	
	41nm,0.2s						
PMPS	Porto Santo	4.85	339	*e*P	Pn	15 54 32.5	+1.3
PMPS				*e*S	Sn	15 55 23.2	-3.0
PMPS				A	A	15 55 27.3	
	34nm,0.8s						
PMPST	Porto Santo, M	4.87	339	*e*P	Pn	15 54 33.4	+1.9
PMPST				*e*S	Sn	15 55 23.5	-3.2
TTIG	Tnine Tigouga,	5.43	67	P	Pn	15 54 38.5	-0.8
TTIG				S	Sn	15 55 38.0	-2.8
OUK	Oukaimeden	6.14	63	P	Pn	15 54 47.3	-2.0
OUK				S	Sn	15 55 53.7	-4.8
ZGR	Zagora	7.69	76	P	Pn	15 55 12.0	+1.7

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*IDC **26** 15:59:53.5±3.4, 56°.25N×157°.72W, h0^{km}, mb3.2/2, mbtmp3.3/4, ML3.2/2, Error ellipse: s-maj=64.3km s-min=29.7km az=165.0*
*AEIC **26** 15:59:58.9±1.1, 57°.16N±0°.05×157°.39W±0°.09, h3^{km}±7^{km}, ML3.3, ML3.4/32(NEIC), Error ellipse: s-maj=7.9km s-min=7.2km az=162.0*
*NEIC **26** 16:00:00.6±1.1, 57°.14N±0°.06×157°.5W±0°.1, h24^{km}±6^{km}, Error ellipse: s-maj=11.6km s-min=7.0km az=126.0*
ISC 26 15:59:58.7±1.4**, 57°.16N**±0°.04×**157°.51W**±0°.05**, h5**^{km}±10^{km}**, n72, σ0^{s}.66**/79**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
R16K	Pilot Point	0.41	355	P	Pg	16 00 06.8	+0.1
	baz=169						
R16K				S	Sg	16 00 13.1	+1.0
	baz=169						
R17K	Ugashik Creek	0.78	51	P	Pg	16 00 12.8	-0.8
	baz=230						
R17K				S	Sg	16 00 24.2	+0.6
	baz=230						
CHGN	Chignik	0.99	211		Pg	16 00 17.0	-0.8
CHGN	Chignik	0.99	211	P	Pg	16 00 17.5	-0.3
	baz=32						
Q17K	Contact Creek	1.41	37	P	Pn	16 00 24.3	-0.8
	baz=217						
VNFG	Fog Glacier, M	1.43	233	P	Pn	16 00 25.8	+0.4
	baz=52						
Q16K	King Salmon	1.59	16	P	Pn	16 00 26.6	-0.9
	baz=195						
Q16K				S	Sb	16 00 49.3	+0.4
	baz=195						
P16K	Nushagak River	1.90	352	P	Pn	16 00 31.9	+0.2
	baz=171						
P16K				S	Sb	16 00 58.4	+0.7
	baz=171						
KAHC	Katmai Hardscr	2.00	41	P	Pn	16 00 33.2	-0.1
	baz=222						
Q18K	Katmai Hardscr	2.00	41	P	Pn	16 00 33.0	-0.3
	baz=222						
OHAK	Old Harbor	2.30	87		Pn	16 00 36.4	-0.8
OHAK	Old Harbor	2.30	87	P	Pn	16 00 37.9	+0.7
	baz=270						
SDPT	Sand Point	2.46	224	Pn	Pn	16 00 39.5	+0.1
SDPT				IAML		16 01 17.8	
	comp=E,205nm,1.1s						
SDPT				IAML		16 01 23.7	
	comp=N,155nm,1.5s						
SDPT	Sand Point	2.46	224	P	Pn	16 00 39.9	+0.5
	baz=42						
O16K	Kokwok River B	2.46	353	P	Pn	16 00 39.7	+0.2
	baz=172						
P18K	Big Mountain,	2.54	27		Pn	16 00 39.9	-0.8
P18K				IAML		16 01 23.0	
	comp=E,167nm,0.8s						
P18K	Big Mountain,	2.54	27	P	Pn	16 00 39.9	-0.8
	baz=208						
P18K				S	Sb	16 01 15.2	-1.2
	baz=208						
O17K	Koliganek Bris	2.63	5	P	Pn	16 00 41.4	-0.5
	baz=184						
O17K				S	Sb	16 01 17.3	-1.6
	baz=184						
Q19K	Cape Douglas,	2.71	48	Pn	Pn	16 00 41.7	-1.3
Q19K	Cape Douglas,	2.71	48	P	Pn	16 00 42.7	-0.3
	baz=230						
KDAK	Kodiak Island	2.73	75	Pn	Pn	16 00 44.4	+1.2
	comp=E,5.0nm,0.3s,baz=278,slow=8.4,SNR=121						

KDAK				Sn	Sn	16 01 18.1	+1.5
	comp=E,3.9nm,0.3s,baz=267,slow=11,SNR=1.7						
	comp=E,57nm,0.9s						
KDAK	Kodiak Island	2.73	75		Pn	16 00 43.1	-0.1
S12K	Black Hills	2.92	242	P	Pn	16 00 46.3	+0.5
	baz=58						
O18K	Koktuh Hills	2.96	23		Pn	16 00 46.1	-0.2
O18K				IAML		16 01 36.0	
	comp=N,151nm,0.7s						
O18K				IAML		16 01 37.5	
	comp=E,122nm,0.9s						
O18K	Koktuh Hills	2.96	23	P	Pn	16 00 46.1	-0.2
	baz=204						
P19K	Oil Pt	3.36	40	Pn	Pn	16 00 51.6	-0.3
N16K	Nishlik Lake	3.39	349	P	Pn	16 00 52.6	+0.3
	baz=168						
O19K	Port Alsworth	3.47	27		Pn	16 00 52.8	-0.5
O19K	Port Alsworth	3.47	27	P	Pn	16 00 53.5	+0.2
	baz=209						
ILSW	Iliamna Southw	3.64	37		Pn	16 00 55.0	-0.7
ILSW				IAML		16 01 52.4	
	comp=N,64nm,0.9s						
ILSW				IAML		16 01 58.7	
	comp=E,64nm,1.0s						
O20K	Slope Mountain	3.89	39	P	Pn	16 00 58.8	-0.3
	baz=223						
N19K	Bonanza Creek	3.98	22		Pn	16 01 00.1	-0.4
N19K				IAML		16 02 05.9	
	comp=N,49nm,0.9s						
N19K				IAML		16 02 06.8	
	comp=E,75nm,0.7s						
N19K	Bonanza Creek	3.98	22	P	Pn	16 01 00.6	+0.1
	baz=204						
CNPM	China Poot	4.07	52		Pn	16 01 00.9	-0.7
CNPM				IAML		16 02 18.6	
	comp=N,38nm,2.2s						
SVW2	Sparrevohn	4.07	13		Pn	16 01 00.6	-1.0
SVW2				IAML		16 02 11.7	
	comp=N,48nm,0.6s						
SVW2				IAML		16 02 25.0	
	comp=E,49nm,0.7s						
SPU	Mount Spurr	4.91	33		Pn	16 01 13.4	+0.2
M19K	Big River Lodg	5.02	17		Pn	16 01 14.4	-0.2
M19K				IAML		16 02 37.7	
	comp=E,32nm,1.1s						
M19K				IAML		16 02 50.4	
	comp=N,24nm,0.8s						
M19K	Big River Lodg	5.02	17	P	Pn	16 01 14.6	0.0
	baz=199						
L19K	White Mountain	5.21	14		Pn	16 01 16.8	-0.5
L19K	White Mountain	5.21	14	P	Pn	16 01 17.0	-0.3
	baz=196						
M20K	Styx River	5.24	23		Pn	16 01 17.6	0.0
M20K				IAML		16 02 46.3	
	comp=E,23nm,0.7s						
M20K				IAML		16 02 52.0	
	comp=N,21nm,0.9s						
M20K	Styx River	5.24	23	P	Pn	16 01 18.5	+0.9
	baz=207						
SUA	Susitna One	5.53	36		Pn	16 01 22.1	+0.3
SUA	Susitna One	5.53	36	P	Pn	16 01 22.8	+1.0
	baz=221						
L20K	Farewell, AK	5.64	17	P	Pn	16 01 23.3	+0.1
	baz=200						
TTA	Tatalina	5.84	7	Pn	Pn	16 01 24.8	-1.2
PWL	Port Wells	6.02	48	Pn	Pn	16 01 28.9	+0.5
PPLA	Purkeypile	6.34	23	Pn	Pn	16 01 33.6	+0.8
CUT	Chulitna	6.40	32	Pn	Pn	16 01 33.2	-0.4
K20K	Telida	6.45	14		Pn	16 01 33.9	-0.4
CAST	Castle Rocks	6.83	21	Pn	Pn	16 01 39.3	-0.2
CHUM	Lake Minchumin	7.21	19		Pn	16 01 44.4	-0.3
CHUM	Lake Minchumin	7.21	19	P	Pn	16 01 44.4	-0.3
	baz=203						
BPAW	Bear Paw Mtn.	7.66	22	Pn	Pn	16 01 50.7	-0.2
ANM	Nome	8.36	336		Pn	16 02 00.1	-0.3
ANM	Nome	8.36	336	P	Pn	16 02 00.2	-0.1
	baz=149						
I21K	Tanana	8.48	16	Pn	Pn	16 02 01.9	-0.1
I21K	Tanana	8.48	16	P	Pn	16 02 01.7	-0.2
	baz=201						
H21K	Melozitna Rive	8.82	13	Pn	Pn	16 02 05.7	-1.0
I23K	Minto, Yukon-K	8.92	23	Pn	Pn	16 02 08.3	+0.2
MDM	Murphy Dome	9.02	26	Pn	Pn	16 02 09.7	+0.3
IMAR	Indian Mountai	9.03	10	Pn	Pn	16 02 09.1	-0.6
RIDG	Independent Ri	9.08	38	Pn	Pn	16 02 09.6	-0.7
ILAR	Eielson Array	9.21	30	Pn	Pn	16 02 13.5	+1.5
	comp=N,0.1nm,0.3s,baz=223,slow=13,SNR=11						
ILAR				Lg	Lg	16 05 04.7	
	baz=228,slow=28,SNR=4.4						
	comp=N,0.5nm,0.6s						
ILAR	Eielson Array	9.21	30	Pn	Pn	16 02 11.6	-0.4
H23K	Yukon River	9.48	20	Pn	Pn	16 02 15.8	0.0
TNA	Tin City	9.78	334	Pn	Pn	16 02 20.9	+1.0
BCAR	Beaver Creek A	9.81	46	Pn	Pn	16 02 20.4	+0.1
COLD	Coldfoot	10.65	16	Pn	Pn	16 02 31.3	-0.5
INK	Inuvik	15.53	34	Pn	Pn	16 03 38.0	0.0
YKA	Yellowknife Ar	21.88	58	P	P	16 04 52.3	+0.3
	comp=N,0.5nm,0.7s,baz=270,slow=10.0,SNR=9.4						
	comp=N,0.5nm,0.7s						
SONM	Songino Array	54.50	305	P	P	16 09 26.4	-0.8
	comp=N,0.3nm,0.5s,baz=49,slow=6.5,SNR=2.2						
	comp=N,0.3nm,0.5s						

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*IDC **26** 16:08:39.3±1.4, 14°.56N×52°.37E, h0^{km}, mb3.9/11, mbtmp3.9/12, ML3.0/1, MS3.2/5, Error ellipse: s-maj=34.9km s-min=21.7km az=25.0*

*NEIC **26** 16:08:41.4±1.0, 14°.7N±0°.1×52°.3E±0°.3, h10^{km}±1^{km}, mb4.2/6, Error ellipse: s-maj=50.1km s-min=13.8km az=115.0*

*OMAN **26** 16:08:46.9±2.1, 15°.35N×51°.82E, h33^{km}, mb5.3/6, ml3.6/4, ms2.5/1, Error ellipse: s-maj=22.3km s-min=15.4km az=133.0*

ISC 26 16:08:45.0±0.7**, 14°.94N**±0°.07×**52°.15E**±0°.08**, h35**^{km}**, n45, σ2^{s}25**/57**, mb3.9**/14**, MS3.0**/4**, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABTO	Aybut	2.64	24	P	Pn	16 09 25.2	+0.1
	SNR=5.9						
ABTO				S	Sn	16 09 57.0	+1.1
RBK	Rabkut	3.22	37	P	Pn	16 09 33.6	+0.4
RBK				S	Sn	16 10 12.7	+2.4
WHFO	Wadi Hawf	3.34	27	P	Pn	16 09 34.9	+0.1
	SNR=21						
WHFO				S	Sn	16 10 15.0	+1.7
DMTO	DMTO	3.85	44	P	Pn	16 09 42.0	+0.3
	SNR=14						
DMTO				S	Sn	16 10 30.4	+4.7
MZR	Muzera	8.11	9	P	Pn	16 10 40.6	+0.2
MZR				S	Sn	16 12 08.8	-2.2
MHTO	MHTO	8.17	42	P	Pn	16 10 40.3	-0.8
MHTO				S	Sn	16 12 12.5	+0.3
UMZA	Um Al Zommool	8.24	20	P	Pn	16 10 42.6	+0.5
UMZA				S	Sn	16 12 10.3	-3.6
JMDO	Jabal Madar	9.29	36	P	Pn	16 10 56.8	+0.2
JMDO				S	Sn	16 12 40.8	+0.9
ARQ	Araqi	9.31	26	P	Pn	16 10 56.4	-0.4
ARQ				S	Sn	16 12 39.3	-1.1
SMDO	Samad	9.81	34	P	Pn	16 11 02.7	-1.1
SMDO				S	Sn	16 12 49.4	-3.3
HOQ	Hoqain	9.88	29	P	Pn	16 11 03.0	-1.6
HOQ				S	Sn	16 12 52.0	-2.2
JLN	Jalan Bani Buh	9.94	43	P	Pn	16 11 05.1	-0.2
JLN				S	Sn	16 12 55.7	0.0
WBK	Wadi Bani Khal	9.99	39	P	Pn	16 11 04.6	-1.5
WBK				S	Sn	16 12 55.2	-1.8
ASUD	Al Ashush, Dub	10.09	17	P	Pn	16 11 08.2	+0.8
ASUD				S	Sn	16 12 54.8	-4.5
WSAR	Wadi Sarin	10.27	36	Pn	Pn	16 11 08.7	-1.3
	0.1nm,0.3s,baz=101,slow=2.0,SNR=2.5						
WSAR				Sn	Sn	16 13 00.5	-3.4
	0.4nm,0.3s,baz=184,slow=14,SNR=1.8						
WSAR				LR	LR	16 15 02.0	
	comp=Z,58nm,21.7s,baz=240,slow=37						
	7.2nm,1.0s						
ASHO	Ashiyiah	10.36	20	P	Pn	16 11 10.9	-0.3
ASHO				S	Sn	16 13 00.1	-6.1
RAYN	Ar Rayn	10.59	325	Pn	Pn	16 11 11.8	-2.6
UOSS	Minazif	10.65	20	Pn	Pn	16 11 15.5	+0.3
MASF	Masafi	11.03	19	P	Pn	16 11 22.0	+1.6
MASF				S	Sn	16 13 17.2	-5.4
BANOM	Banah	11.59	19	P	Pn	16 11 27.3	-0.8
BANOM				S	Sn	16 13 30.7	-5.6
SHME	Shamm	11.66	18	P	Pn	16 11 28.0	-1.0
SHME				S	Sn	16 13 33.7	-4.3
MSEY	Mahe Island	19.77	170	P	P	16 13 02.0	-10
MSEY				IAmb	IAmb	16 13 14.8	
	comp=Z,18nm,1.2s						
EIL	Elat	21.59	316	LR	LR	16 22 35.8	
	comp=Z,66nm,18.9s,baz=240,slow=38						
KMBO	Kilima Mbogo	21.73	224	P	P	16 13 31.2	-2.6
KMBO				IAmb	IAmb	16 13 53.5	
	comp=Z,6.3nm,1.5s						
MMAI	Mount Meron Ar	23.56	323	LR	LR	16 23 09.8	
	comp=Z,44nm,19.9s,baz=204,slow=36						
GNI	Garni	25.93	347	LR	LR	16 26 16.5	
	comp=Z,46nm,19.0s,baz=181,slow=40						
CHGR	Chuyangaron	27.98	29	P	P	16 14 32.2	-0.4
CHGR				IAmb	IAmb	16 14 36.7	
	comp=Z,12nm,1.1s						
KBZ	Khabaz	29.76	346	P	P	16 14 50.1	+2.0
	comp=Z,1.1nm,0.6s,baz=180,slow=6.3,SNR=4.9						
KBZ				LR	LR	16 28 47.5	
	comp=Z,96nm,18.7s,baz=142,slow=40						
	comp=Z,1.1nm,0.6s						
KKAR	Karatay Array	32.18	26	P	P	16 15 10.4	+0.8
ABKAR	Akbulak array	34.81	9	P	P	16 15 34.3	+1.9
AKASG	Malin Array Be	40.19	337	P	P	16 16 22.4	+4.6
	comp=Z,1.5nm,0.7s,baz=137,slow=7.4,SNR=8.6						
	comp=Z,1.5nm,0.7s						
MK31	Makanchi Array	40.49	32	P	P	16 16 21.3	+0.8
MKAR	Makanchi Array	40.49	32	P	P	16 16 22.2	+1.8
	comp=Z,0.8nm,0.6s,baz=221,slow=7.1,SNR=12						
	comp=Z,0.8nm,0.6s						
MKAR	Makanchi Array	40.49	32	P	P	16 16 21.5	+1.0
KEST	Kesra	43.45	306	P	P	16 16 47.6	+2.8
	comp=Z,1.6nm,0.6s,baz=46,slow=14,SNR=1.6						
	comp=Z,1.6nm,0.6s						
CMAR	Chiang Mai Arr	44.86	79	P	P	16 16 54.9	-1.4
	comp=Z,1.8nm,0.9s,baz=277,slow=8.7,SNR=12						
	comp=Z,1.8nm,0.9s						
ZAA0	Zalesovo Array	46.55	26	P	P	16 17 10.0	+0.9
ZAA0				IAmb	IAmb	16 17 11.0	
	comp=Z,2.5nm,0.8s						
ZALV	Zalesovo Beam	46.55	26	P	P	16 17 10.2	+1.1
	comp=Z,1.3nm,0.6s,baz=238,slow=8.3,SNR=8.2						
	comp=Z,1.3nm,0.6s						
ZALV	Zalesovo Beam	46.55	26	P	P	16 17 10.0	+0.8
LBTB	Lobatse	47.41	213	P	P	16 17 14.2	-2.1
FINES	FINESS Array B	50.06	344	P	P	16 17 36.8	+0.7
	comp=Z,4.8nm,0.9s,baz=133,slow=8.2,SNR=2.9						
	comp=Z,4.8nm,0.9s						
ESDC	Sonseca Array	54.63	308	P	P	16 18 12.9	+2.5
	comp=Z,0.4nm,0.7s,baz=108,slow=7.1,SNR=2.0						
	comp=Z,0.4nm,0.7s						
SONM	Songino Array	55.26	42	P	P	16 18 16.0	+1.1
	comp=Z,0.8nm,0.7s,baz=240,slow=8.1,SNR=7.3						
	comp=Z,0.8nm,0.7s						
WRA	Warramunga Arr	87.89	111	P	P	16 21 28.8	-2.8
	comp=Z,0.8nm,1.1s,baz=302,slow=4.2,SNR=2.3						
	comp=Z,0.8nm,1.1s						
ASAR	Alice Springs	88.58	115	P	P	16 21 33.1	-1.7
	comp=Z,0.3nm,0.7s,baz=297,slow=4.1,SNR=2.1						
	comp=Z,0.3nm,0.7s						

WEL 26 16:10:16.0±0.8**, 42°S**±4°×**17°3E**±°**, h78**^{km}±6^{km}**, M2.3**/6**, ML2.6**/12**, MLv2.3**/6**, Error ellipse: s-maj=0.0km s-min=0.0km az=92.8, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THZ	Tophouse	0.08	269	P	Pn	16 10 28.8	+1.5
THZ				S	Sn	16 10 38.2	+2.6
MRNZ	Matariki Terra	0.41	332	P	Pn	16 10 30.1	+1.3
MRNZ				S	Sn	16 10 40.8	+2.6
NNZ	Nelson	0.61	27	P	Pn	16 10 31.7	+1.1
NNZ				S	Sn	16 10 43.7	+2.4
BSWZ	Blackbirch Sta	0.65	86	P	Pn	16 10 32.4	+1.4
BSWZ				S	Sn	16 10 44.7	+2.7
TKNZ	Takaka Hill	0.73	357	P	Pn	16 10 32.7	+0.9
TKNZ				S	Sn	16 10 45.3	+1.7
KHZ	Kahutara	0.76	149	P	Pn	16 10 33.0	+0.8
KHZ				S	Sn	16 10 45.9	+1.7
TUWZ	Tuamarina	0.77	65	P	Pn	16 10 33.2	+0.9
DSZ	Denniston Nort	0.90	271	P	Pn	16 10 33.9	+0.1
DSZ				S	Sn	16 10 47.1	0.0
QRZ	Quartz Range	1.00	339	P	Pn	16 10 35.6	+0.6
TCW	Tory Channel	1.10	60	P	Pn	16 10 36.8	+0.7
LTZ	Lake Taylor	1.16	208	P	Pn	16 10 37.0	+0.1
DUWZ	D'Urville Isla	1.18	36	P	Pn	16 10 38.2	+1.0
GVZ	Greta Valley S	1.21	179	P	Pn	16 10 37.6	+0.1
GVZ				S	Sn	16 10 53.6	0.0
INZ	Inchbonnie	1.51	230	P	Pn	16 10 40.9	-0.4
CAW	Cannon Point	1.68	68	P	Pn	16 10 43.0	-0.6
KIW	Kapiti Island	1.69	58	P	Pn	16 10 43.5	-0.2
TMZ	Timaru	3.00	209	P	Pn	16 10 59.5	-1.9
SNVZ	South Ngauruho	3.26	39	P	Pn	16 11 05.7	+0.6

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*IDC **26** 16:19:02.8±2.0, 17°.37S×175°.05W, h216^{km}±19^{km}, mb3.8/14, mbtmp4.3/17, Error ellipse: s-maj=22.2km s-min=11.5km az=139.0*

*NEIC **26** 16:19:02.5±1.1, 17°.54S±0°.05×174°.79W±0°.09, h219^{km}±8^{km}, mb4.3/54, Error ellipse: s-maj=12.9km s-min=7.8km az=88.0*

ISC 26 16:19:06.1±0.5**, 17°.58S**±0°.10×**174°.94W**±0°.08**, h256**^{km}**, n90, σ0^{s}63**/89**, mb4.3**/41**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	4.75	40	P	Pn	16 20 13.7	-5.6
	26nm,0.3s,baz=153,slow=1.0,SNR=14						
AFI				S	S	16 21 05.0	-12
	155nm,0.5s,baz=77,slow=16,SNR=13						
AFI	Afiamalu	4.75	40		Pn	16 20 13.6	-5.7
NIUE	Niue	4.98	108	Pn	Pn	16 20 16.8	-5.1
MSVF	Nonsavu	6.69	268	P	Pn	16 20 44.8	+1.7
	13nm,0.6s,baz=107,slow=15,SNR=20						
MSVF	Nonsavu	6.69	268	Pn	Pn	16 20 43.9	+0.8
RAR	Rarotonga	14.75	107	P	P	16 22 22.9	0.0
	12nm,0.5s,baz=270,slow=6.1,SNR=2.3						
LIFNC	LIFOU	17.14	256		P	16 22 49.1	0.0
PINNC	Pines Island,	17.29	250		P	16 22 51.1	+0.4
PINNC				IAmb	IAmb	16 22 57.3	
	comp=Z,32nm,1.4s						
DZM	Mont Dzumac	18.08	253	P	P	16 22 59.4	0.0
	comp=Z,2.4nm,0.6s,baz=69,slow=20,SNR=5.7						
DZM	Mont Dzumac	18.08	253	P	P	16 22 59.6	+0.2
URZ	Urewera	21.75	197	P	P	16 23 38.8	+1.5
	comp=Z,8.6nm,0.6s,baz=358,slow=4.2,SNR=7.6						
	comp=Z,8.6nm,0.6s						
BKZ	Black Stump Fm	22.77	197	P	P	16 23 47.1	+0.4
ARMA	Armidale	32.98	241	P	P	16 25 18.1	+0.6
ARMA				IAmb	IAmb	16 25 18.5	
	comp=Z,8.0nm,0.7s						
CAN	Canberra	36.55	234	P	P	16 25 47.9	0.0
CAN				IAmb	IAmb	16 25 49.4	
	comp=Z,17nm,1.4s						
CTA	Charters Tower	36.76	260	P	P	16 25 49.0	-0.7
	comp=Z,5.7nm,0.7s,baz=109,slow=9.0,SNR=7.6						
	comp=Z,5.7nm,0.7s						
CTAO	Charters Tower	36.76	260	P	P	16 25 49.1	-0.7
TOO	Toolangi	39.96	232	P	P	16 26 15.8	-0.3
TOO				IAmb	IAmb	16 26 17.1	
	comp=Z,5.5nm,0.6s						
COEN	Coen	40.42	269	P	P	16 26 19.2	-0.9
COEN				IAmb	IAmb	16 26 28.3	
	comp=Z,20nm,1.5s						
WAKE	Wake Island	40.86	333	P	P	16 26 22.9	-0.5
PUH	Pauahi	41.52	29	P	P	16 26 29.4	+0.4
STKA	Stephens Creek	41.69	242	P	P	16 26 30.8	+0.6
	comp=Z,16nm,0.9s,baz=65,slow=8.5,SNR=15						
	comp=Z,16nm,0.9s						
STKA	Stephens Creek	41.69	242	P	P	16 26 30.4	+0.1
MCQ	Macquarie Isla	41.97	203	P	P	16 26 31.8	-0.3
BBOO	Buckleboo	46.46	241	P	P	16 27 08.0	0.0
BBOO				IAmb	IAmb	16 27 42.8	
	comp=Z,33nm,1.4s						
WB0	Warramunga Arr	47.91	259	P	P	16 27 18.2	-1.1
WB2	Warramunga Arr	47.93	259	P	P	16 27 18.4	-1.1
WRAB	Tennant Creek	47.94	259	P	P	16 27 18.3	-1.2
WRA	Warramunga Arr	47.95	259	P	P	16 27 18.9	-0.7
	comp=Z,3.6nm,0.6s,baz=96,slow=6.8,SNR=55						
WRA				PcP	PcP	16 28 44.5	+0.8
	comp=Z,0.7nm,0.5s,baz=102,slow=3.5,SNR=4.1						
	comp=Z,3.6nm,0.6s						
AS31	Alice Springs	48.06	254	P	P	16 27 19.8	-0.6
AS31				IAmb	IAmb	16 27 20.9	
	comp=Z,7.5nm,0.8s						
ASAR	Alice Springs	48.06	254	P	P	16 27 20.2	-0.3
	comp=Z,24nm,0.6s,baz=91,slow=7.8,SNR=658						
ASAR				PcP	PcP	16 28 45.1	+1.0
	comp=Z,1.0nm,0.5s,baz=103,slow=3.8,SNR=6.4						
	comp=Z,24nm,0.6s						
ASAR	Alice Springs	48.06	254	P	P	16 27 19.9	-0.5
MTN	Manton Dam	52.12	267	P	P	16 27 50.5	-0.3
MTN				IAmb	IAmb	16 28 20.1	
	comp=Z,27nm,1.4s						
KNRA	Kununurra	53.81	263	P	P	16 28 02.7	-0.5
SIJI	Sorong	55.40	281	P	P	16 28 14.0	-0.6
	comp=Z,5.5nm,0.5s,baz=124,slow=7.8,SNR=6.2						
	comp=Z,5.5nm,0.5s						
FITZ	Fitzroy Crossi	56.34	260	P	P	16 28 21.1	-0.1
PSA00	Pilbara Seismi	61.19	255	P	P	16 28 54.0	-0.4
PSA00				IAmb	IAmb	16 29 06.2	
	comp=Z,12nm,1.5s						
JMM	Marumori	69.08	324	P	P	16 29 44.4	-0.2
MJAR	Matsushiro Arr	69.67	321	P	P	16 29 47.0	-1.3
	comp=Z,2.0nm,0.9s,baz=144,slow=6.9,SNR=4.5						
	comp=Z,2.0nm,0.9s						
QSPA	South Pole Qui	72.47	180	P	P	16 30 03.3	-1.5
QSPA				IAmb	IAmb	16 30 23.7	
	comp=Z,7.1nm,1.4s						
UGM	Wanagama	72.97	267	P	P	16 30 08.9	+0.4
PETK	Petropavlovsk-	74.26	343	P	P	16 30 14.6	-0.5
	comp=Z,3.4nm,0.9s,baz=121,slow=9.0,SNR=10						
	comp=Z,3.4nm,0.9s						
PETK	Petropavlovsk-	74.26	343	P	P	16 30 15.0	-0.1
TPUB	Ta-pu	74.91	301	P	P	16 30 19.2	-0.2
KSRS	Korea Array	76.70	317	P	P	16 30 29.4	+0.3
	comp=Z,1.7nm,0.9s,baz=126,slow=6.4,SNR=6.9						
	comp=Z,1.7nm,0.9s						
NVAR	Mina Array Bea	76.92	42	P	P	16 30 31.9	+1.2
	comp=Z,0.4nm,0.6s,baz=228,slow=9.8,SNR=4.1						
	comp=Z,0.4nm,0.6s						
P18K	Big Mountain,	78.37	10	P	P	16 30 37.9	-0.1
ILSW	Iliamna Southw	79.29	11	P	P	16 30 43.1	0.0
ILSW				IAmb	IAmb	16 30 43.9	
	comp=Z,8.9nm,0.8s						
N19K	Bonanza Creek	79.84	10	P	P	16 30 45.7	-0.2
N19K				IAmb	IAmb	16 31 28.0	
	comp=Z,8.9nm,1.3s						
SUA	Susitna One	81.11	11	P	P	16 30 52.9	+0.1
GHO	Glory Hole Cre	81.75	12	P	P	16 30 56.4	+0.4
GHO				IAmb	IAmb	16 30 57.1	
	comp=Z,6.7nm,1.0s						
SCM	Sheep Creek Mo	82.14	13	P	P	16 30 58.5	+0.5
K20K	Telida	82.31	9	P	P	16 30 59.3	+0.5
VRDI	Verde Repeater	82.48	15	P	P	16 31 00.3	+0.3
VRDI				IAmb	IAmb	16 31 30.1	
	comp=Z,17nm,1.5s						
N25K	Chitina, Valde	82.54	14	P	P	16 31 00.6	+0.5
N25K				IAmb	IAmb	16 31 00.8	
	comp=Z,9.9nm,1.2s						
GLB	Gilahina Butte	82.58	15	P	P	16 31 00.8	+0.4
GLB				IAmb	IAmb	16 31 20.3	
	comp=Z,12nm,1.5s						
CAST	Castle Rocks	82.69	10	P	P	16 31 00.1	-0.6
CAST				IAmb	IAmb	16 31 24.3	
	comp=Z,6.4nm,1.4s						
TRF	Thorofare Moun	83.03	11	P	P	16 31 01.8	-0.8
TRF				IAmb	IAmb	16 31 03.7	
	comp=Z,3.6nm,0.9s						
MCK	McKinley	83.53	11	P	P	16 31 05.0	0.0
RIDG	Independent Ri	84.36	13	P	P	16 31 09.4	+0.2
RIDG				IAmb	IAmb	16 31 36.2	
	comp=Z,4.6nm,1.2s						
WRH	Wood River Hil	84.36	11	P	P	16 31 09.5	+0.3
WRH				IAmb	IAmb	16 31 10.4	
	comp=Z,4.9nm,1.0s						
DOT	Dot Lake	84.45	13	P	P	16 31 10.0	+0.3
BCAR	Beaver Creek A	84.47	14	P	P	16 31 10.4	+0.6
HDA	Harding Lake	84.53	12	P	P	16 31 10.2	+0.2
HDA				IAmb	IAmb	16 31 11.1	
	comp=Z,3.7nm,0.6s						
CCB	Clear Creek Bu	84.58	11	P	P	16 31 09.9	-0.3
CCB				IAmb	IAmb	16 31 11.1	
	comp=Z,4.7nm,0.7s						
H21K	Melozitna Rive	84.66	9	P	P	16 31 11.7	+1.0
H21K				IAmb	IAmb	16 31 35.8	
	comp=Z,5.1nm,1.4s						
SCRK	Sand Creek	84.75	13	P	P	16 31 11.8	+0.5
TCOL	CIGO, UAF Yank	84.77	11	P	P	16 31 11.1	-0.1
TCOL				IAmb	IAmb	16 31 12.2	
	comp=Z,6.5nm,0.8s						
COLA	College	84.77	11	P	P	16 31 11.1	-0.1
COLA				IAmb	IAmb	16 31 12.2	
	comp=Z,6.5nm,0.8s						
MDM	Murphy Dome	84.78	11	P	P	16 31 11.3	0.0
MDM				IAmb	IAmb	16 31 12.2	
	comp=Z,8.6nm,1.3s						
IMAR	Indian Mountai	84.83	9	P	P	16 31 12.3	+0.8
IL31		84.86	12	P	P	16 31 11.5	-0.1
IL31				IAmb	IAmb	16 31 20.7	
	comp=Z,7.7nm,1.5s						
ILAR	Eielson Array	84.86	12	P	P	16 31 11.8	+0.1
	comp=Z,1.1nm,0.6s,baz=224,slow=6.1,SNR=29						
	comp=Z,1.1nm,0.6s						
ILAR	Eielson Array	84.86	12	P	P	16 31 11.5	-0.2
PDAR	Pinedale Array	84.86	42	P	P	16 31 11.7	-0.8
	comp=Z,0.4nm,0.7s,baz=256,slow=4.4,SNR=3.7						
	comp=Z,0.4nm,0.7s						
DAWY	Dawson	85.89	15	P	P	16 31 17.3	+0.4
DAWY				IAmb	IAmb	16 31 18.9	
	comp=Z,2.6nm,0.8s						
EGAK	Eagle	86.07	14	P	P	16 31 18.4	+0.8
I26K	Coal Creek Min	86.09	13	P	P	16 31 18.6	+0.9
BMAR	Burnt Mountain	87.66	11	P	P	16 31 26.5	+1.2
FW14	Alvarado	89.36	56	P	P	16 31 33.5	-0.4
FW14				IAmb	IAmb	16 31 34.4	
	comp=Z,51nm,0.5s						
CMAR	Chiang Mai Arr	91.91	289	P	P	16 31 46.4	+0.3
	comp=Z,0.8nm,0.8s,baz=121,slow=2.5,SNR=6.3						
	comp=Z,0.8nm,0.8s						
YKA	Yellowknife Ar	92.67	24	P	P	16 31 48.8	+0.2
	comp=Z,0.1nm,0.5s,baz=243,slow=4.1,SNR=2.6						
	comp=Z,0.1nm,0.5s						
ARCES	ARCESS Array B	126.54	351	PKP	PKPdf	16 37 38.0	-0.2
	comp=Z,3.4nm,0.8s,baz=56,slow=3.1,SNR=3.9						
CLL	Collm	145.76	351	*i* PKPbc	PKPab	16 38 15.9	+0.1
	comp=Z,7.0nm,1.0s						
OSTC	Ostas	145.91	347	*e*PKP	PKPab	16 38 16.6	+0.2
DPC	Dobruska-Polom	146.08	347	*e*PKP	PKPab	16 38 17.3	+0.2
KRLC	Kraliky	146.24	346	*e*PKP	PKPbc	16 38 16.7	+0.2
PRU	Pruhonice	146.78	349	*e*PKP	PKPbc	16 38 18.8	+0.8
BRTR	Keskin Array B	146.84	318	PKPbc	PKPbc	16 38 19.4	+0.8
	comp=Z,1.5nm,0.8s,baz=130,slow=3.7,SNR=9.0						
KHC	Kasperske Hory	147.78	349	*e*PKP	PKPbc	16 38 21.5	+0.7
GERES	GERESS Array B	148.03	349	PKPbc	PKPbc	16 38 22.2	+0.7
	comp=Z,0.8nm,0.6s,baz=1.0,slow=2.5,SNR=6.5						

WEL 26 16:20:48.0±0.4**, 42°S**±3°×**17°3E**±°**, h5**^{km}**, M2.3**/7**, ML2.7**/11**, MLv2.3**/7**, Error ellipse: s-maj=0.0km s-min=0.0km az=150.9, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHZ	Kahutara	0.10	65	P	Pg	16 20 50.1	-0.1
KHZ				S	Sg	16 20 52.1	+0.5
GVZ	Greta Valley S	0.58	209	P	Pg	16 20 59.7	+0.5
THZ	Tophouse	0.79	331	P	Pg	16 21 03.4	+0.2
THZ				S	Sg	16 21 13.7	+0.2
BSWZ	Blackbirch Sta	0.82	25	P	Pg	16 21 04.0	+0.2
LTZ	Lake Taylor	0.90	249	P	Pg	16 21 05.1	-0.3
LTZ				S	Sb	16 21 18.2	-0.4
AMCZ	Amberley	0.91	218	P	Pg	16 21 05.6	+0.1
CMWZ	Cape Campbell	0.93	40	P	Pb	16 21 06.8	+0.2
TUWZ	Tuamarina	1.10	21	P	Pg	16 21 08.7	-0.5
TUWZ				S	Sb	16 21 24.7	+0.5
MRNZ	Matariki Terra	1.17	335	P	Pg	16 21 10.3	-0.1
NNZ	Nelson	1.24	359	P	Pg	16 21 11.3	-0.5
OXZ	Oxford	1.33	229	P	Pn	16 21 10.6	-2.7
OXZ				S	Sg	16 21 28.0	-2.8
MQZ	McQueen's Vall	1.36	204	P	Pn	16 21 10.2	-3.5
MQZ				S	Sb	16 21 27.4	-4.4
DSZ	Denniston Nort	1.39	300	P	Pn	16 21 13.8	-0.4
TCW	Tory Channel	1.41	28	P	Pn	16 21 14.0	-0.3
AKCZ	Akaroa Harbour	1.46	194	P	Pn	16 21 11.9	-3.2
TKNZ	Takaka Hill	1.47	346	P	Pn	16 21 14.9	-0.3
INZ	Inchbonnie	1.48	259	P	Pn	16 21 15.1	-0.2

DUWZ	D’Urville Isla	1.70	13	P	Pn	16 21 18.5	+0.2
RPZ	Rata Peaks	2.13	233	P	Pn	16 21 21.9	-2.5
ARCZ	Arundel	2.21	227	P	Pn	16 21 22.9	-2.5
TMZ	Timaru	2.60	222	P	Pn	16 21 28.7	-2.1

WEL 26 16:45:21.7±0.5**, 42°S**±3°×**17°3E**±°**, h5^{km}, M2.0**/2**, ML2.4**/10**, MLv2.0**/2**, Error ellipse: s-maj=0.0km s-min=0.0km az=121.7, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.24	71	P	Pg	16 45 26.6	+0.2
KHZ				S	Sg	16 45 30.2	+0.6
GVZ	Greta Valley S	0.49	197	P	Pb	16 45 32.2	-0.7
GVZ				S	Sb	16 45 40.3	-0.1
LTZ	Lake Taylor	0.76	247	P	Pg	16 45 36.4	+0.1
LTZ				S	Sg	16 45 46.4	+0.2
THZ	Tophouse	0.77	342	P	Pg	16 45 36.4	0.0
THZ				S	Sg	16 45 46.5	+0.1
BSWZ	Blackbirch Sta	0.92	32	P	Pg	16 45 39.3	+0.1
MRNZ	Matariki Terra	1.15	342	P	Pg	16 45 43.5	-0.2
MRNZ				S	Sn	16 46 00.3	-0.2
TUWZ	Tuamarina	1.19	27	P	Pg	16 45 44.0	-0.5
OXZ	Oxford	1.21	226	P	Pg	16 45 43.2	-1.6
NNZ	Nelson	1.28	5	P	Pn	16 45 45.7	-0.4
MQZ	McQueen’s Vall	1.28	199	P	Pn	16 45 43.7	-2.5
MQZ				S	Sg	16 45 59.9	-3.0
DSZ	Denniston Nort	1.30	305	P	Pn	16 45 46.1	-0.3
DSZ				S	Sb	16 46 03.7	+0.2
TKNZ	Takaka Hill	1.47	352	P	Pn	16 45 48.9	+0.1
TKNZ				S	Sg	16 46 08.9	-0.1
DUWZ	D’Urville Isla	1.77	17	P	Pn	16 45 53.2	+0.3
CAW	Cannon Point	1.95	45	P	Pn	16 45 53.6	-1.8
WAZ	Wanganui	3.04	26	P	Pn	16 46 07.9	-2.5
TSZ	Takapari Road	3.19	41	P	Pn	16 46 14.4	+1.9
MTVZ	Mangateitei	3.54	29	P	Pn	16 46 14.8	-2.6
VRZ	Vera Road	3.56	20	P	Pn	16 46 17.9	+0.3
WNVZ	Wahianoa	3.64	30	P	Pn	16 46 16.4	-2.4
BHHZ	Black Hill Sta	3.69	37	P	Pn	16 46 18.4	-1.0
TMVZ	Te Maari	3.86	30	P	Pn	16 46 19.7	-2.1
MKRZ	Makatiti	5.00	31	P	Pn	16 46 39.8	+2.3

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*IDC **26** 16:51:33.7±1.7, 40°.03N×145°.22E, h0^{km}, mb3.5/7, mbtmp3.6/10, ML3.1/3, Error ellipse: s-maj=38.9km s-min=25.2km az=95.0*

*JMA **26** 16:51:37.8±0.3, 40°.1N±0°.9×14°5E±°, h45^{km}, MV3.7/30, FAR E OFF NORTH HONSHU*

ISC 26 16:51:38.4±1.1**, 40°.08N**±0°.06×**145°.03E**±0°.08**, h32^{km}, n29, σ1^{s}54**/47**, mb3.6**/7**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	Erimo	2.40	324	P	Pn	16 52 14.9	-0.5
JEM				*e*S	Sn	16 52 42.5	-1.1
JTH	Tanohata	2.44	268	P	Pn	16 52 14.6	-1.4
MIYJ	Miyakonagasawa	2.52	259	P	Pn	16 52 16.4	-0.8
MIYJ				*e*S	Sn	16 52 44.7	-2.2
JKEN	Kujiedanarisaw	2.55	274	*e*P	Pn	16 52 15.8	-1.7
JKEN				*e*S	Sn	16 52 44.1	-3.4
JTHR	Tokachihiroo	2.56	330	P	Pn	16 52 16.9	-0.8
JTHR				S	Sn	16 52 45.9	-1.8
JANG	Nango	2.71	277	*i* P	Pn	16 52 18.8	-0.9
JANG				*e*S	Sn	16 52 48.7	-2.7
JNBK	Urakawa-nobuka	2.79	323	P	Pn	16 52 20.6	-0.2
JNBK				*e*S	Sn	16 52 53.0	-0.3
JCH	Churui	2.82	334	P	Pn	16 52 20.5	-0.8
JCH				S	Sn	16 52 52.2	-2.0
JAK	Akkeshi	2.92	355	P	Pn	16 52 21.2	-1.4
JAK				*e*S	Sn	16 52 54.9	-1.6
JOM	Ohasama	2.95	259	*i* P	Pn	16 52 22.9	-0.1
JOM				S	Sn	16 52 55.7	-1.5
JMK	Ichinoseki	3.16	250	P	Pn	16 52 25.4	-0.5
JMK				*e*S	Sn	16 53 00.4	-2.1
JOT	Ohata	3.29	294	P	Pn	16 52 27.5	-0.3
NEM2	Nemuro 2	3.32	9	P	Pn	16 52 25.9	-2.2
NEM2				S	Sn	16 53 03.5	-2.9
JAR	Ashorobuto	3.35	344	*i* P	Pn	16 52 27.4	-1.1
JAR				*e*S	Sn	16 53 04.8	-2.3
JYK	Kaneyama	3.80	254	P	Pn	16 52 34.7	0.0
JEW	Eniwo	3.85	317	P	Pn	16 52 36.0	+0.6
JEW				*e*S	Sn	16 53 19.2	-0.3
JRA	Rausu	3.85	1	P	Pn	16 52 33.7	-1.7
JRA				*e*S	Sn	16 53 17.5	-2.1
JTKR	Abashiri--Toko	3.97	348	P	Pn	16 52 36.7	-0.4
JTKR				*e*S	Sn	16 53 20.9	-1.7
JHR	Hokuryu	4.41	327	P	Pn	16 52 45.0	+1.9
JHR				*e*S	Sn	16 53 33.8	+0.5
ASAJ	Asahikawa	4.42	337	Pn	Pn	16 52 42.7	-0.5
	1.8nm,0.3s,baz=118,slow=14,SNR=48						
ASAJ				Sn	Sn	16 53 32.8	-0.7
	1.1nm,0.3s,baz=53,slow=26,SNR=3.8						
	3.3nm,0.3s						
MJAR	Matsushiro Arr	6.42	239	Pn	Pn	16 53 11.8	+1.0
	0.1nm,0.3s,baz=80,slow=15,SNR=9.3						
	2.7nm,0.8s						
USRK	Ussuriysk Ar.	10.52	297	Pn	Pn	16 54 06.9	0.0
	0.1nm,0.3s,baz=104,slow=15,SNR=7.1						
	4.7nm,1.0s						
SEY	Seymchan	23.30	9	P	P	16 56 43.9	+0.7
	1.5nm,0.8s,baz=190,slow=11,SNR=6.4						
	1.5nm,0.8s						
ZALV	Zalesovo Beam	42.05	310	P	P	16 59 29.7	+2.9
	0.3nm,0.4s,baz=72,slow=9.3,SNR=2.1						
ZALV				PcP	PcP	17 01 23.0	+1.9
	0.7nm,0.4s,baz=102,slow=3.4,SNR=3.7						
	0.3nm,0.4s						
MKAR	Makanchi Array	44.97	300	P	P	16 59 50.1	-0.3
	0.1nm,0.6s,baz=82,slow=10,SNR=1.9						
	0.1nm,0.6s						
KURBB	Kurchatov Arra	46.43	306	P	P	17 00 03.0	+1.2
	0.4nm,0.5s,baz=79,slow=8.9,SNR=4.1						
	0.4nm,0.5s						
BVAR	Borovoye Array	50.66	311	P	P	17 00 36.1	+1.6
	0.5nm,0.6s,baz=63,slow=8.5,SNR=2.2						
	0.5nm,0.6s						
WRA	Warramunga Arr	60.54	192	P	P	17 01 45.0	-0.6
	0.2nm,0.6s,baz=9.3,slow=6.8,SNR=1.5						
	0.2nm,0.6s						
FINES	FINESS Array B	67.42	333	P	P	17 02 30.3	-0.1
	2.1nm,0.8s,baz=35,slow=5.1,SNR=5.1						
	2.1nm,0.8s						

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*IDC **26** 17:04:07.7±4.2, 4°.99S×129°.75E, h177^{km}±55^{km}, mb3.3/1, mbtmp4.2/4, Error ellipse: s-maj=102.8km s-min=19.0km az=79.0*

*DJA **26** 17:04:08.4±0.4, 5°S±4°×13°0E±°, h184^{km}±5^{km}, M4.2/13, mb4.7/2, mB5.0/1, MLv3.9/13, Mw(mB)4.4/1*

ISC 26 17:04:07.3±0.8**, 4°.98S**±0°.06×**129°.87E**±0°.07**, h200^{km}, n24, σ2^{s}52**/29**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.46	4	P	Pn	17 04 35.4	+1.1
BNDI	Bandanaira	0.46	4	P	Pn	17 04 34.3	0.0
BNDI				S	Sn	17 04 54.5	-0.8
MSAI	Masohi	1.88	330	P	Pn	17 04 44.3	-0.3
MSAI				S	Sn	17 05 10.1	-3.6
AAI	Ambon	2.11	308	P	Pn	17 04 46.9	-0.1
FAKI	Fak Fak	3.13	49	P	Pn	17 04 59.2	+0.6
FAKI	Fak Fak	3.13	49	P	Pn	17 04 58.9	+0.3
SAUI	Saumlaki	3.30	155	P	Pn	17 05 02.1	+1.5
SAUI	Saumlaki	3.30	155	P	Pn	17 05 01.4	+0.8
SIJI	Sorong	4.32	19	P	Pn	17 05 13.5	+0.3
	59nm,0.3s,baz=207,slow=23,SNR=189						
SIJI				S	Sn	17 06 00.8	-4.1
	41nm,0.2s,baz=88,slow=23,SNR=14						
SANI	Sanana	4.85	307	P	Pn	17 05 21.6	+1.8
SANI	Sanana	4.85	307	P	Pn	17 05 19.1	-0.7
LBMI	Labuha	4.92	331	P	Pn	17 05 21.2	+0.4
RKPI	Ransiki, Papua	5.51	51	P	Pn	17 05 29.4	+1.1
	206nm,0.6s,3µm0.7nm						
MTN	Manton Dam	7.91	171	P	Pn	17 05 58.9	-0.6
KDU	Kakadu	8.08	162	P	Pn	17 06 00.8	-0.8
WRAB	Tennant Creek	15.49	164	P	Pn	17 07 35.5	-0.1
WRA	Warramunga Arr	15.49	164	P	Pn	17 07 35.5	-0.2
	1.3nm,0.5s,baz=344,slow=12,SNR=19						
WRA				S	S	17 10 19.1	-8.7
	1.4nm,0.4s,baz=342,slow=21,SNR=10						
QIS	Mount Isa	18.15	149	P	Pn	17 08 08.3	+1.1
ASAR	Alice Springs	18.98	169	P	P	17 08 16.3	+2.4
	9.7nm,0.5s,baz=347,slow=11,SNR=298						
ASAR				S	S	17 11 35.1	-3.7
	0.5nm,0.7s,baz=352,slow=20,SNR=2.8						
AS01	Alice Springs	18.99	168	P	P	17 08 16.5	+2.5
WRKA	Warakurna	20.00	184	P	P	17 08 26.4	+1.6
OOD	Oodnadatta	23.35	167	P	P	17 09 00.0	+2.1
MULG	Mulgathing	25.48	172	P	P	17 09 19.9	+2.8
MKAR	Makanchi Array	66.48	326	P	P	17 14 38.0	+2.6
	0.4nm,0.4s,baz=110,slow=8.3,SNR=14						
	0.4nm,0.4s						

WEL 26 17:13:41.0±0.6**, 41°S**±4°×**17°3E**±°**, h74^{km}**±5^{km}**, M3.6**/17**, ML3.9**/17**, MLv3.6**/17**, Error ellipse: s-maj=0.0km s-min=0.0km az=170.0, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNZ	Nelson	0.23	355	P	Pn	17 13 53.9	+1.7
NNZ				S	Sn	17 14 03.4	+2.9
TUWZ	Tuamarina	0.40	88	P	Pn	17 13 55.1	+1.8
TUWZ				S	Sn	17 14 05.2	+2.7
BSWZ	Blackbirch Sta	0.45	128	P	Pn	17 13 55.4	+1.7
BSWZ				S	Sn	17 14 06.3	+3.2
MRNZ	Matariki Terra	0.49	275	P	Pn	17 13 55.5	+1.4
MRNZ				S	Sn	17 14 06.0	+2.3
THZ	Tophouse	0.49	229	P	Pn	17 13 55.8	+1.6
THZ				S	Sn	17 14 06.5	+2.6
TKNZ	Takaka Hill	0.53	320	P	Pn	17 13 55.7	+1.3
TKNZ				S	Sn	17 14 06.3	+1.9
CMWZ	Cape Campbell	0.68	117	P	Pn	17 13 57.6	+1.7
TCW	Tory Channel	0.69	71	P	Pn	17 13 57.4	+1.3
TCW				S	Sn	17 14 09.4	+2.1
DUWZ	D’Urville Isla	0.75	31	P	Pn	17 13 58.1	+1.3
DUWZ				S	Sn	17 14 10.6	+2.2
QRZ	Quartz Range	0.91	313	P	Pn	17 13 58.9	+0.4
QRZ				S	Sn	17 14 12.0	+0.4
KHZ	Kahutara	0.98	174	P	Pn	17 14 00.4	+1.0
KHZ				S	Sn	17 14 14.0	+0.9
WEL	Wellington	1.04	82	P	Pn	17 14 00.5	+0.4
WEL				S	Sn	17 14 15.7	+1.2
HOWZ	Holdsworth Sta	1.68	72	P	Pn	17 14 07.6	-0.9
HOWZ				S	Sn	17 14 29.3	0.0
MRZ	Mangatainoka R	1.82	65	P	Pn	17 14 09.3	-1.0
TMWZ	Te Maipa	1.90	81	P	Pn	17 14 10.2	-1.1
INZ	Inchbonnie	1.94	228	P	Pn	17 14 11.6	-0.3
TIWZ	Tintock	1.99	71	P	Pn	17 14 11.3	-1.3
NMEZ	Namu Road	2.06	10	P	Pn	17 14 14.5	+1.1
WAZ	Wanganui	2.07	36	P	Pn	17 14 14.5	+0.8
POWZ	Post Office Ro	2.07	60	P	Pn	17 14 12.4	-1.3
LREZ	Lake Rotokare	2.12	21	P	Pn	17 14 15.8	+1.5
PRWZ	Pori Road	2.13	66	P	Pn	17 14 13.3	-1.2
CPWZ	Castlepoint	2.17	77	P	Pn	17 14 14.2	-0.9
PREZ	Palmer Road	2.17	16	P	Pn	17 14 16.0	+0.9
KHEZ	Kahui Hut	2.19	12	P	Pn	17 14 16.2	+0.8
NBEZ	Newall Road No	2.20	9	P	Pn	17 14 16.4	+1.0
NEZ	North Egmont	2.23	14	P	Pn	17 14 16.4	+0.5
BFZ	Birch Farm	2.28	71	P	Pn	17 14 14.6	-1.8
PKE	Pukeiti	2.29	11	P	Pn	17 14 17.5	+0.9
MQZ	McQueen’s Vall	2.33	194	P	Pn	17 14 15.2	-1.9
DREZ	Durham Road	2.33	15	P	Pn	17 14 17.9	+0.8
TSZ	Takapari Road	2.38	55	P	Pn	17 14 16.3	-1.5
DVHZ	Dannevirke	2.38	62	P	Pn	17 14 16.0	-1.9
AKCZ	Akaroa Harbour	2.46	188	P	Pn	17 14 17.4	-1.4
MHEZ	Mangahewa	2.46	17	P	Pn	17 14 20.1	+1.1
RACZ	Rakaia	2.47	202	P	Pn	17 14 17.4	-1.6
VRZ	Vera Road	2.54	25	P	Pn	17 14 20.5	+0.6
WVZ	Waitaha Valley	2.57	230	P	Pn	17 14 19.3	-1.0
MTVZ	Mangateitei	2.59	38	P	Pn	17 14 20.5	-0.2
PKVZ	Pokaka	2.61	35	P	Pn	17 14 20.8	-0.2
PNHZ	Pukenui	2.62	55	P	Pn	17 14 19.1	-1.9
WPHZ	Waipukurau	2.68	60	P	Pn	17 14 20.0	-1.9
TRVZ	Turoa	2.69	38	P	Pn	17 14 21.9	-0.4
WNVZ	Wahianoa	2.69	39	P	Pn	17 14 21.9	-0.4
MOVZ	Moawhango	2.71	42	P	Pn	17 14 21.2	-1.1
PRHZ	Porangahau	2.71	65	P	Pn	17 14 20.6	-1.8
WHVZ	Whangaehu Hut	2.73	38	P	Pn	17 14 22.4	-0.3
FWVZ	Far West T-bar	2.73	38	P	Pn	17 14 22.5	-0.3
WACZ	Wakanui South	2.75	204	P	Pn	17 14 21.6	-1.3
TUVZ	Tukino	2.77	39	P	Pn	17 14 22.9	-0.3
BHHZ	Black Hill Sta	2.81	47	P	Pn	17 14 22.4	-1.3
OTVZ	Oturere	2.86	38	P	Pn	17 14 24.1	-0.3
RPZ	Rata Peaks	2.86	217	P	Pn	17 14 22.4	-1.9
ETVZ	East Tongariro	2.90	38	P	Pn	17 14 24.4	-0.6
GCSZ	Gaunt Creek Bo	2.95	230	P	Pn	17 14 25.0	-0.5
PXZ	Pawanui	2.98	63	P	Pn	17 14 23.5	-2.4
ARCZ	Arundel	3.00	213	P	Pn	17 14 24.3	-1.8
KWHZ	Kaweka Forest	3.06	50	P	Pn	17 14 25.1	-2.0
KAHZ	Kahuranaki	3.11	59	P	Pn	17 14 25.4	-2.4
HIZ	Hauiti	3.13	21	P	Pn	17 14 27.7	-0.3
MCHZ	McNeill Hill	3.21	53	P	Pn	17 14 27.0	-2.0
BKZ	Black Stump Fm	3.28	47	P	Pn	17 14 27.9	-2.1
FOZ	Fox Glacier	3.38	231	P	Pn	17 14 29.6	-1.7
TMZ	Timaru	3.43	210	P	Pn	17 14 30.3	-1.7
MRHZ	Matea Rd	3.48	43	P	Pn	17 14 30.5	-2.3
NMHZ	Naumai	3.50	49	P	Pn	17 14 30.9	-2.2
ARHZ	Aropaoanui	3.50	53	P	Pn	17 14 30.8	-2.2
TLZ	Tolley Road	3.51	28	P	Pn	17 14 33.0	-0.3
MTHZ	Maungataniwha	3.69	47	P	Pn	17 14 33.1	-2.5
WHHZ	Waihua	3.76	52	P	Pn	17 14 33.9	-2.6
LBZ	Lake Benmore	3.78	218	P	Pn	17 14 34.2	-2.5
RAHZ	Arahi	3.78	49	P	Pn	17 14 34.0	-2.8
RTZ	Ruatahuna	3.94	45	P	Pn	17 14 35.8	-3.2
TOZ	Tahuroa Road	4.04	24	P	Pn	17 14 40.3	-0.1
KNZ	Kokohu	4.06	55	P	Pn	17 14 36.6	-4.1
ODZ	Otahua Downs	4.13	208	P	Pn	17 14 39.7	-1.8
MHGZ	Mahia Peninsul	4.13	58	P	Pn	17 14 38.4	-3.2
URZ	Urewera	4.27	43	P	Pn	17 14 39.8	-3.6
JCZ	Jackson Bay	4.30	231	P	Pn	17 14 42.4	-1.6
RIGZ	Rimuhau	4.32	52	P	Pn	17 14 40.4	-3.7
MWZ	Matawai	4.44	47	P	Pn	17 14 42.0	-3.8
AWAZ	Awhitu Peninsu	4.48	13	P	Pn	17 14 46.4	+0.1
TKGZ	Te Karaka	4.54	50	P	Pn	17 14 43.3	-3.9
WKZ	Wanaka	4.67	222	P	Pn	17 14 44.7	-4.1
CNGZ	Carnagh Statio	4.72	53	P	Pn	17 14 45.7	-4.0
RUGZ	Raukumara Rang	4.79	45	P	Pn	17 14 47.9	-2.7
TWGZ	Tauwhareparae	4.80	49	P	Pn	17 14 47.3	-3.4
EAZ	Earnscleugh	4.83	217	P	Pn	17 14 47.8	-3.2
WIAZ	Waiheke Island	4.83	17	P	Pn	17 14 50.9	-0.3
HAZ	Te Kaha	5.00	44	P	Pn	17 14 49.9	-3.5
PKGZ	Pakihiroa	5.06	47	P	Pn	17 14 50.4	-3.9
MLZ	Mavora Lakes	5.50	223	P	Pn	17 14 58.7	-1.5
WHZ	Wether Hill Ro	5.96	220	P	Pn	17 15 04.6	-1.8
OUZ	Omahuta	6.21	1	P	Pn	17 15 10.7	+0.7
CTZ	Chatham Island	7.71	111	P	Pn	17 15 29.2	-1.2

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*NEIC **26** 17:37:07.8±2.3, 24°.3S±0°.1×179°.2W±0°.2, h495^{km}±8^{km}, mb4.5/47, Error ellipse: s-maj=20.0km s-min=16.5km az=95.0*

*NOU **26** 17:37:10.9, 24°.20S×179°.40W, h512^{km}, mb4.3/16, South of Fiji Islands*

*IDC **26** 17:37:10.3±1.8, 24°.29S×179°.57W, h499^{km}±17^{km}, mb3.4/13, mbtmp4.3/16, Error ellipse: s-maj=21.5km s-min=13.8km az=120.0*

ISC 26 17:37:09.4±0.4**, 24°.21S**±0°.06×**179°.52W**±0°.07**, h500^{km}, n133, σ1^{s}77**/135**, mb4.5**/38**, 1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	5.23	165	P	P	17 38 41.4	+3.0
LKBA	Tubou, Lakemba	5.99	6	P	P	17 38 47.4	+1.6
MSVF	Nonsavu	6.84	340	P	P	17 38 55.4	+1.1
	22nm,0.4s,baz=196,slow=4.5,SNR=77						
MSVF				S	S	17 40 21.5	+1.6
	12nm,1.1s,baz=329,slow=19,SNR=1.1						
MSVF	Nonsavu	6.84	340		P	17 38 55.0	+0.7
MSVF	Nonsavu	6.84	340	P	P	17 38 55.4	+1.1
TAVE	Taveuni	7.48	357	P	P	17 39 03.2	+2.6
YSA	Yasawairara	7.96	339	P	P	17 39 07.4	+1.9
PINNC	Pines Island,	12.08	275		P	17 39 50.1	+1.2
AFI	Afiamalu	12.59	37	P	P	17 39 51.8	-2.7
	28nm,0.9s,baz=124,slow=3.6,SNR=2.3						
AFI				S	S	17 42 06.2	-4.3
	16nm,0.7s,baz=83,slow=21,SNR=2.1						
OUENC	Ouen Island, N	12.66	275		P	17 39 55.0	-0.1
OUENC	Ouen Island, N	12.66	275	P	P	17 39 57.9	+2.8
YATNC	Mamie plateau,	12.69	277	P	P	17 39 57.6	+2.2
ONTNC	Ouen Toro	13.04	276	P	P	17 40 00.9	+1.9
DZM	Mont Dzumac	13.09	277	P	P	17 40 01.4	+1.7
	4.0nm,0.6s,baz=74,slow=18,SNR=11						
DZM	Mont Dzumac	13.09	277		P	17 40 01.2	+1.5
DZM	Mont Dzumac	13.09	277	P	P	17 40 02.4	+2.6
URZ	Urewera	14.29	191	P	P	17 40 13.2	+1.1
	5.9nm,0.3s,baz=23,slow=1.2,SNR=14						
URZ				S	S	17 42 42.8	+0.1
	7.9nm,0.4s,baz=325,slow=23,SNR=10						
URZ	Urewera	14.29	191	P	P	17 40 14.0	+2.0
URZ	Urewera	14.29	191	P	P	17 40 13.7	+1.6
MWZ	Matawai	14.30	189	P	P	17 40 15.6	+3.4
TKGZ	Te Karaka	14.36	188	P	P	17 40 18.8	+6.0
RIGZ	Rimuhau	14.63	188	P	P	17 40 17.5	+1.8
MTHZ	Maungataniwha	14.92	191	P	P	17 40 22.5	+3.8
NMHZ	Naumai	15.16	191	P	P	17 40 23.8	+2.5
BKZ	Black Stump Fm	15.29	192	P	P	17 40 20.5	-2.0
OTVZ	Oturere	15.45	194	P	P	17 40 25.5	+1.1
KWHZ	Kaweka Forest	15.55	192	P	P	17 40 25.3	0.0
WNVZ	Wahianoa	15.62	194	P	P	17 40 26.4	+0.2
VRZ	Vera Road	15.64	197	P	P	17 40 29.3	+3.2
BHHZ	Black Hill Sta	15.68	193	P	P	17 40 26.1	-0.5
KAHZ	Kahuranaki	15.83	190	P	P	17 40 24.1	-4.1
PXZ	Pawanui	16.06	190	P	P	17 40 31.7	+1.2
TSZ	Takapari Road	16.25	192	P	P	17 40 33.1	+0.5
BFZ	Birch Farm	16.80	191	P	P	17 40 36.8	-1.4
BFZ	Birch Farm	16.80	191	P	P	17 40 38.8	+0.6
BFZ	Birch Farm	16.80	191	P	P	17 40 37.5	-0.7
MRZ	Mangatainoka R	16.91	193	P	P	17 40 36.3	-3.1
MRZ				IAmb	IAmb	17 41 10.7	
	comp=Z,33nm,1.5s						
MRZ	Mangatainoka R	16.91	193	P	P	17 40 36.3	-3.1
OGWZ	Otaki Gorge	17.14	194	P	P	17 40 40.4	-1.2
SNZO	South Karori	17.72	194	P	P	17 40 48.5	+1.5
TCW	Tory Channel	17.73	196	P	P	17 40 46.1	-1.0
TUWZ	Tuamarina	18.02	196	P	P	17 40 49.5	-0.2
THZ	Tophouse	18.60	198	P	P	17 40 55.6	+0.3
KHZ	Kahutara	19.05	196	P	P	17 40 58.9	-0.2
LTZ	Lake Taylor	19.73	198	P	P	17 41 03.4	-2.1
LTZ				IAmb	IAmb	17 41 27.8	
	comp=Z,37nm,1.5s						
LHI	Lord Howe Isla	20.27	244	P	P	17 41 11.7	+1.2
OXZ	Oxford	20.29	198	P	P	17 41 08.1	-2.4
RPZ	Rata Peaks	20.94	199	P	P	17 41 15.4	-1.0
	comp=Z,16nm,1.2s,baz=323,slow=14,SNR=2.1						
	comp=Z,16nm,1.2s						
RPZ	Rata Peaks	20.94	199	P	P	17 41 14.9	-1.5
RPZ				IAmb	IAmb	17 41 46.4	
	comp=Z,22nm,1.1s						
RPZ	Rata Peaks	20.94	199	P	P	17 41 17.6	+1.2
ARMA	Armidale	26.33	250	P	P	17 42 05.5	+0.7
EIDS	Eidsvold	26.70	261	P	P	17 42 07.8	-0.2
EIDS				IAmb	IAmb	17 42 47.4	
	comp=Z,18nm,1.4s						
MGCD	Mangrove Creek	27.20	244	P	P	17 42 14.7	+2.3
CNB	Canberra Magne	29.08	240	P	P	17 42 30.7	+1.8
CAN	Canberra	29.37	241	P	P	17 42 31.6	+0.3
CAN				IAmb	IAmb	17 43 05.2	
	comp=Z,22nm,1.5s						
CTAO	Charters Tower	31.92	271	P	P	17 42 54.4	+0.8
CTAO				IAmb	IAmb	17 42 55.1	
	comp=Z,17nm,0.6s						
CTAO	Charters Tower	31.92	271	P	P	17 42 54.5	+1.0
TOO	Toolangi	32.65	238	P	P	17 42 58.4	-1.2
TOO	Toolangi	32.65	238	P	P	17 43 00.8	+1.3
TAU	Tasmania Unive	33.05	227	P	P	17 43 04.1	+1.4
RABL	Rabaul	33.77	302	P	P	17 43 09.0	-0.3
RABL				IAmb	IAmb	17 43 28.2	
	comp=Z,30nm,1.1s						
STKA	Stephens Creek	35.02	249	P	P	17 43 20.2	+0.7
	comp=Z,3.9nm,0.6s,baz=86,slow=9.5,SNR=13						
	comp=Z,3.9nm,0.6s						
STKA	Stephens Creek	35.02	249	P	P	17 43 19.7	+0.2
COEN	Coen	36.60	279	P	P	17 43 33.5	+0.6
BBOO	Buckleboo	39.73	247	P	P	17 43 57.7	-0.5
BBOO				IAmb	IAmb	17 44 16.6	
	comp=Z,33nm,1.4s						
AS31	Alice Springs	42.42	261	P	P	17 44 19.6	-0.2
ASAR	Alice Springs	42.42	261	P	P	17 44 20.0	+0.2
	comp=Z,5.2nm,0.8s,baz=96,slow=7.1,SNR=137						
ASAR				S	S	17 49 59.0	-6.0
	comp=Z,0.4nm,0.8s,baz=90,slow=17,SNR=2.5						
	comp=Z,5.2nm,0.8s						
ASAR	Alice Springs	42.42	261	P	P	17 44 19.5	-0.3
WB2	Warramunga Arr	42.82	266	P	P	17 44 22.7	-0.2
WB2				IAmb	IAmb	17 44 23.4	
	comp=Z,14nm,0.7s						
WRAB	Tennant Creek	42.82	266	P	P	17 44 22.6	-0.3
WRAB				IAmb	IAmb	17 44 23.3	
	comp=Z,12nm,0.8s						
WB0	Warramunga Arr	42.82	267	P	P	17 44 22.7	-0.3
WB0				IAmb	IAmb	17 44 23.4	
	comp=Z,15nm,0.7s						
WRA	Warramunga Arr	42.83	266	P	P	17 44 22.7	-0.4
	comp=Z,12nm,0.6s,baz=103,slow=8.1,SNR=48						
WRA				S	S	17 50 05.6	-5.3
	comp=Z,0.6nm,0.9s,baz=99,slow=12,SNR=2.9						
	comp=Z,12nm,0.6s						
WRA	Warramunga Arr	42.83	266	P	P	17 44 21.7	-1.4
FORT	Forrest	46.62	250	P	P	17 44 51.8	-0.4
MTN	Manton Dam	47.92	274	P	P	17 45 01.5	-0.6
MTN				IAmb	IAmb	17 45 34.4	
	comp=Z,51nm,1.4s						
KNRA	Kununurra	49.13	270	P	P	17 45 11.1	0.0
KNRA				IAmb	IAmb	17 45 12.2	
	comp=Z,16nm,0.8s						
FITZ	Fitzroy Crossi	51.25	266	P	P	17 45 26.0	-0.6
VNDA	Vanda	54.10	185	P	P	17 45 42.2	-4.0
PSA00	Pilbara Seismi	55.54	260	P	P	17 45 54.4	-2.9
PSA00				IAmb	IAmb	17 46 36.3	
	comp=Z,24nm,1.4s						
MBWA	Marble Bar	55.75	260	P	P	17 45 56.6	-2.1
MBWA				IAmb	IAmb	17 45 58.3	
	comp=Z,31nm,1.4s						
MORW	Morawa	57.18	250	P	P	17 46 06.1	-2.4
MORW				IAmb	IAmb	17 46 23.6	
	comp=Z,33nm,1.4s						
TOLI2	Tolitoli	63.08	285	P	P	17 46 47.7	-0.2
TOLI2				IAmb	IAmb	17 46 49.8	
	comp=Z,9.5nm,0.7s						
QSPA	South Pole Qui	65.87	180	P	P	17 47 05.3	+0.4
KKM	Kota Kinabalu	69.42	287	P	P	17 47 26.1	-1.3
MJAR	Matsushiro Arr	72.41	325	P	P	17 47 45.1	+0.7
	comp=Z,2.2nm,0.7s,baz=161,slow=5.3,SNR=6.9						
	comp=Z,2.2nm,0.7s						
JSU	Suzuyama	73.21	317	P	P	17 47 47.7	-1.5
ADK	Adak	75.81	2	P	P	17 48 03.2	-0.1
JKA	Kamikawa-asahi	76.34	333	P	P	17 48 08.2	+1.7
YSS	Yuzh-Sakhalins	78.61	335	P	P	17 48 20.6	+1.9
YSS				IAmb	IAmb	17 48 22.4	
	comp=Z,10nm,1.0s						
KSRS	Korea Array	78.77	320	P	P	17 48 21.6	+1.8
	comp=Z,1.8nm,0.7s,baz=126,slow=5.6,SNR=9.8						
	comp=Z,1.8nm,0.7s						
PETK	Petropavlovsk-	79.51	346	P	P	17 48 23.9	+0.6
	comp=Z,1.9nm,0.5s,baz=104,slow=6.1,SNR=2.5						
	comp=Z,1.9nm,0.5s						
NJ2	Nanjing	81.20	311	*e*P	P	17 48 34.5	+1.8
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,160nm,5.7s						
USRK	Ussuriysk Ar.	81.27	327	P	P	17 48 33.6	+0.8
	comp=Z,1.9nm,0.5s,baz=160,slow=4.8,SNR=7.8						
	comp=Z,1.9nm,0.5s						
USRK	Ussuriysk Ar.	81.27	327	P	P	17 48 33.1	+0.3
MDJ	Mudanjiang	82.77	326	P	P	17 48 42.0	+1.6
MDJ				PcP	PcP	17 48 45.8	+1.9
MDJ				pP	pwP	17 50 33.3	+0.1
MDJ				sP	sP	17 51 26.3	+6.9
MDJ				ScS	S	17 58 30.8	+14
MDJ	Mudanjiang	82.77	326	sS	sS	18 01 38.5	+8.6
NVAR	Mina Array Bea	84.67	44	P	P	17 48 51.2	+0.9
	comp=Z,0.4nm,0.6s,baz=228,slow=5.4,SNR=2.8						
	comp=Z,0.4nm,0.6s						
TIA	Tai'an	84.77	313	P	P	17 48 52.5	+1.9
TIA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
P18K	Big Mountain,	85.67	12	P	P	17 48 53.9	-0.5
P18K				IAmb	IAmb	17 48 55.9	
	comp=Z,6.1nm,0.9s						
O18K	Koktuh Hills	86.11	12	P	P	17 48 56.5	0.0
O18K				IAmb	IAmb	17 48 58.2	
	comp=Z,10nm,0.8s						
RADR	Rader Ridge	86.49	35	P	P	17 48 54.9	-3.7
WVOR	Wild Horse Val	86.86	40		pP	17 50 45.2	-5.2

BRLK	**Bradley Lake**	**86.92**	**14**	P	**P**	**17 48 59.6**	**-0.7**
BRLK				IAmb	IAmb	17 49 43.0	
	comp=Z,13nm,1.2s						
N19K	**Bonanza Creek**	**87.14**	**12**	P	**P**	**17 49 00.3**	**-1.1**
N19K				IAmb	IAmb	17 49 06.0	
	comp=Z,10nm,1.4s						
HEH	**HeiHe**	**87.74**	**329**	*e*P	**P**	**17 49 05.0**	**+0.6**
SUA	**Susitna One**	**88.48**	**13**	P	**P**	**17 49 06.4**	**-1.3**
SUA				IAmb	IAmb	17 49 09.7	
	comp=Z,6.0nm,0.8s						
TCRU	**Three Creeks R**	**88.55**	**46**	P	**P**	**17 49 06.0**	**-2.8**
GHO	**Glory Hole Cre**	**89.15**	**14**	P	**P**	**17 49 11.2**	**+0.4**
GHO				IAmb	IAmb	17 49 13.1	
	comp=Z,11nm,1.1s						
CAST	**Castle Rocks**	**89.98**	**12**	P	**P**	**17 49 13.2**	**-1.4**
CMAR	**Chiang Mai Arr**	**90.05**	**290**	P	**P**	**17 49 18.6**	**+2.7**
	comp=Z,1.2nm,0.8s,baz=137,slow=3.0,SNR=12						
	comp=Z,1.2nm,0.8s						
TXAR	**Lajitas Array**	**90.22**	**58**	P	**P**	**17 49 19.4**	**+2.9**
	comp=Z,0.7nm,0.7s,baz=211,slow=7.7,SNR=7.3						
	comp=Z,0.7nm,0.7s						
TRF	**Thorofare Moun**	**90.36**	**13**	P	**P**	**17 49 15.7**	**-0.7**
TRF				IAmb	IAmb	17 49 52.6	
	comp=Z,8.6nm,1.4s						
HHC	**Hu-ho-hao-te**	**90.95**	**315**	*e*P	**P**	**17 49 19.0**	**-0.7**
HHC				pmax	pmax		
	comp=Z,36nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,4.8s						
PZH	**PanZhiHua**	**91.22**	**298**	P	**P**	**17 49 22.8**	**+1.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,60nm,6.7s						
ILAR	**Eielson Array**	**92.23**	**13**	P	**P**	**17 49 25.1**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=226,slow=5.2,SNR=6.3						
	comp=Z,0.5nm,0.8s						
PDAR	**Pinedale Array**	**92.61**	**44**	P	**P**	**17 49 28.6**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=245,slow=3.9,SNR=2.2						
	comp=Z,0.2nm,0.6s						
KAN13	**South Haven SW**	**98.24**	**53**		pP	17 51 35.3	-8.6
ZALV	**Zalesovo Beam**	**112.47**	**320**	PKiKP	**PKiKP**	**17 54 47.6**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=124,slow=2.9,SNR=2.7						
MKAR	**Makanchi Array**	**112.69**	**313**	PKiKP	**PKiKP**	**17 54 48.3**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=191,slow=0.9,SNR=8.4						
ARCES	**ARCESS Array B**	**132.28**	**348**	PKP	**PKPdf**	**17 55 25.1**	**-0.4**
	comp=Z,1.7nm,0.5s,baz=20,slow=4.0,SNR=4.8						
FINES	**FINESS Array B**	**138.88**	**342**	PKhKP	PKPpre	17 55 30.1	
	comp=Z,4.4nm,1.0s,baz=95,slow=2.1,SNR=4.5						
FINES				PKP	**PKiKP**	**17 55 39.7**	**-0.5**
	comp=Z,2.1nm,0.8s,baz=83,slow=4.1,SNR=6.9						
NB2	**NORSAR Subarra**	**142.46**	**351**	PKP	**PKPdf**	**17 55 42.0**	**-2.4**
	comp=Z,0.9nm,0.8s,baz=6.5,slow=2.9						
NOA	**NORSAR Array B**	**142.46**	**351**	PKhKP	PKPpre	17 55 41.5	
	comp=Z,0.7nm,0.6s,baz=276,slow=3.1,SNR=4.5						
NACGM	**Naroch**	**143.68**	**334**	*e*PKP	**PKPdf**	**17 55 46.4**	**-0.3**
	comp=Z,29nm,0.9s,baz=42						
AKASG	**Malin Array Be**	**145.47**	**327**	PKPbc	**PKPab**	**17 55 51.2**	**-1.1**
	comp=Z,3.0nm,0.5s,baz=44,slow=4.0,SNR=17						
BRTR	**Keskin Array B**	**148.12**	**307**	PKPbc	**PKiKP**	**17 55 59.3**	**-0.9**
	comp=Z,1.6nm,0.7s,baz=146,slow=5.2,SNR=13						
STHS	**Stebnicka Huta**	**150.05**	**332**	*e*PKP	**PKiKP**	**17 56 03.6**	**-0.1**
KSP	**Ksiaz**	**150.74**	**339**	*e*PKPbc	**PKiKP**	**17 56 06.1**	**+1.1**
LANS	**Liptovska Anna**	**150.99**	**334**	*e*PKP	**PKiKP**	**17 56 07.2**	**+1.6**
CLL	**Collm**	**151.28**	**344**	⇓*i*PKPbc	**PKiKP**	**17 56 06.7**	**+0.6**
	comp=Z,8.0nm,0.7s						
CLL				*i* PKPab	**PKPab**	**17 56 16.6**	**+0.5**
BRG	**Berggiesshubel**	**151.42**	**342**	*i* PKP	**PKiKP**	**17 56 07.3**	**+0.9**
BRG				Amp		17 56 07.8	
	comp=Z,5.2nm,0.6s						
VYHS	**Vyhne**	**151.76**	**334**	*e*PKP	**PKiKP**	**17 56 08.1**	**+0.9**
VYHS				*e*		17 56 19.6	
GERES	**GERESS Array B**	**153.30**	**340**	PKPbc	**PKiKP**	**17 56 10.9**	**+0.5**
	comp=Z,0.1nm,0.4s,baz=53,slow=5.2,SNR=3.6						

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*IDC **26** 17:46:34.9±0.6, 16°.51S×66°.62E, h0^{km}, mb4.1/14,*
mbtmp4.1/14, MS3.4/8, Error ellipse: s-maj=20.3km
s-min=18.8km az=178.0

ISC 26 17:46:36.5±0.7**, 16°.5S**±0°.2×**66°.6E**±0°.1**, h10^{km}, n39,**
σ**0^s.77**/27**, mb4.1**/22**, MS3.4**/8**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**10.52**	**34**	T	T	17 59 44.3	
	baz=212,slow=75						
H08S2	**Diego Garcia H**	**10.53**	**34**	T	T	17 59 44.5	
	baz=212,slow=75						
H08S3	**Diego Garcia H**	**10.54**	**34**	T	T	17 59 47.8	
	baz=212,slow=75						
PALK	**Pallekele**	**27.45**	**32**	LR	LR	18 00 12.3	
	comp=Z,87nm,20.3s,baz=236,slow=30						
LSZ	**Lusaka**	**36.94**	**266**	LR	LR	18 06 43.0	
	comp=Z,43nm,19.2s,baz=124,slow=33						
LBTB	**Lobatse**	**39.15**	**251**	P	**P**	**17 54 03.4**	**-1.4**
	2.9nm,0.8s,baz=182,slow=4.2,SNR=3.6						
LBTB				LR	LR	18 07 30.3	
	comp=Z,65nm,19.9s,baz=172,slow=32						
	2.9nm,0.8s						
BOSA	**Boshof**	**39.85**	**245**	LR	LR	18 07 05.4	
	comp=Z,56nm,19.4s,baz=169,slow=31						
SUR	**Sutherland**	**44.24**	**240**	P	**P**	**17 54 46.8**	**+0.3**
	6.0nm,1.0s,baz=122,slow=13,SNR=2.3						
SUR				LR	LR	18 11 15.1	
	comp=Z,34nm,20.3s,baz=138,slow=34						
	6.0nm,1.0s						
H01W3	**Cape Leeuwin H**	**46.09**	**123**	T	T	18 44 15.0	
	baz=278,slow=74,SNR=6.8						
H01W2	**Cape Leeuwin H**	**46.09**	**123**	T	T	18 44 16.0	
	baz=278,slow=74,SNR=6.8						
H01W1	**Cape Leeuwin H**	**46.11**	**123**	T	T	18 44 19.3	
	baz=278,slow=74,SNR=6.9						
TSUM	**Tsumeb**	**46.62**	**259**	LR	LR	18 12 55.9	
	comp=Z,26nm,18.9s,baz=148,slow=34						
CMAR	**Chiang Mai Arr**	**47.12**	**44**	P	**P**	**17 55 09.4**	**+0.3**
	0.5nm,0.5s,baz=230,slow=8.8,SNR=5.0						
	0.5nm,0.5s						
AAK	**Ala-Archa**	**59.31**	**7**	LR	LR	18 19 00.6	
	comp=Z,45nm,18.5s,baz=151,slow=33						
ASAR	**Alice Springs**	**63.10**	**108**	P	**P**	**17 57 04.5**	**-0.3**
	0.8nm,0.6s,baz=270,slow=5.6,SNR=27						
	0.8nm,0.6s						
BRTR	**Keskin Array B**	**63.85**	**332**	P	**P**	**17 57 10.6**	**+1.1**
	1.1nm,0.9s,baz=160,slow=7.7,SNR=6.1						
	1.1nm,0.9s						
WRA	**Warramunga Arr**	**64.03**	**104**	P	**P**	**17 57 11.0**	**+0.1**
	2.2nm,0.9s,baz=268,slow=5.9,SNR=16						
	2.2nm,0.9s						
MKAR	**Makanchi Array**	**64.59**	**12**	P	**P**	**17 57 13.4**	**-0.5**
	0.7nm,0.8s,baz=218,slow=9.2,SNR=7.0						
	0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**71.90**	**11**	P	**P**	**17 57 59.1**	**-0.5**
	2.1nm,0.8s,baz=202,slow=7.1,SNR=7.4						
	2.1nm,0.8s						
SONM	**Songino Array**	**73.28**	**27**	P	**P**	**17 58 08.0**	**-0.1**
	1.4nm,0.8s,baz=215,slow=5.8,SNR=10						
	1.4nm,0.8s						
QSPA	**South Pole Qui**	**73.57**	**180**	P	**P**	**17 58 10.5**	**+0.8**
	3.3nm,1.0s,baz=271,slow=0.7,SNR=6.5						
	3.3nm,1.0s						
DBIC	**Dimbokro**	**74.33**	**282**	P	**P**	**17 58 15.0**	**+0.1**
	2.4nm,0.8s,baz=150,slow=6.5,SNR=3.9						
	2.4nm,0.8s						
AKASG	**Malin Array Be**	**74.55**	**336**	P	**P**	**17 58 14.5**	**-0.8**
	0.6nm,0.6s,baz=142,slow=5.4,SNR=5.6						
	0.6nm,0.6s						
ARSA	**Arzberg**	**78.26**	**327**	*e*P	**P**	**17 58 37.3**	**+0.8**
	1.3nm,0.7s						
CONA	**Conrad Observa**	**78.53**	**328**	*e*P	**P**	**17 58 38.6**	**+0.5**
	0.3nm,0.2s						
MOA	**Molln**	**79.30**	**327**	*e*P	**P**	**17 58 43.1**	**+0.9**
	1.4nm,0.6s						
ABTA	**Abfaltersbach**	**79.54**	**325**	*e*P	**P**	**17 58 44.0**	**+0.3**
	1.6nm,0.5s						
WTTA	**Wattenberg**	**80.33**	**326**	*e*P	**P**	**17 58 48.4**	**+0.4**
	1.2nm,0.5s						
MOTA	**Moosalm**	**80.67**	**325**	*e*P	**P**	**17 58 49.8**	**0.0**
	4.2nm,1.0s						
FETA	**Feichten**	**80.68**	**325**	*e*P	**P**	**17 58 50.2**	**+0.3**
	1.6nm,0.7s						
DAVA	**Damuels**	**81.31**	**325**	*e*P	**P**	**17 58 54.5**	**+1.3**
	0.5nm,0.2s						
MJAR	**Matsushiro Arr**	**85.62**	**50**	P	**P**	**17 59 15.8**	**+0.3**
	1.1nm,0.7s,baz=195,slow=16,SNR=3.1						
	1.1nm,0.7s						
ESDC	**Sonseca Array**	**86.19**	**313**	P	**P**	**17 59 18.3**	**0.0**
	1.0nm,0.9s,baz=265,slow=33,SNR=4.8						
	1.0nm,0.9s						
ASAJ	**Asahikawa**	**91.65**	**44**	LR	LR	18 41 12.8	
	comp=Z,15nm,19.8s,baz=216,slow=36						
ILAR	**Eielson Array**	**126.74**	**17**	PKP	**PKPdf**	**18 05 38.2**	**-1.7**
	0.5nm,0.8s,baz=233,slow=4.5,SNR=4.9						
YKA	**Yellowknife Ar**	**134.08**	**1**	PKP	**PKiKP**	**18 05 53.9**	**-1.3**
	0.3nm,0.6s,baz=351,slow=2.4,SNR=7.9						
PDAR	**Pinedale Array**	**153.64**	**354**	PKPbc	**PKiKP**	**18 06 36.2**	**0.0**
	0.5nm,0.6s,baz=98,slow=1.1,SNR=6.1						
NVAR	**Mina Array Bea**	**157.75**	**10**	PKPab	**PKPab**	**18 07 06.8**	**+0.5**
	0.8nm,0.8s,baz=353,slow=3.3,SNR=6.2						
TXAR	**Lajitas Array**	**164.43**	**327**	PKPab	**PKPab**	**18 07 36.2**	**+0.6**
	0.2nm,0.7s,baz=92,slow=4.1,SNR=3.9						

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*IDC **26** 17:50:37.8±1.4, 9°.64N×93°.16E, h0^{km}, mb3.5/5,*
mbtmp3.5/6, Error ellipse: s-maj=51.8km s-min=24.0km
az=49.0

ISC 26 17:50:43.2±1.1**, 9°.8N**±0°.2×**93°.3E**±0°.1**, h35^{km}, n7,** σ**0^s.79**/7**,**
mb3.5/5**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.24**	**32**	Pn	**Pn**	**17 53 07.7**	**-0.1**
	0.4nm,0.3s,baz=217,slow=14,SNR=1.7						
PALK	**Pallekele**	**12.70**	**260**	Sn	**Sn**	**17 56 01.9**	**+0.2**
	0.3nm,0.3s,baz=198,slow=4.5,SNR=2.4						
MKAR	**Makanchi Array**	**38.09**	**348**	P	**P**	**17 57 59.2**	**+0.6**
	0.4nm,0.7s,baz=156,slow=9.1,SNR=4.1						
	0.4nm,0.7s						
GEYT	**Alibeck**	**42.26**	**317**	P	**P**	**17 58 33.9**	**+0.5**
	0.8nm,0.3s,baz=147,slow=8.6,SNR=2.2						
	0.8nm,0.3s						
WRA	**Warramunga Arr**	**50.03**	**126**	P	**P**	**17 59 34.9**	**+0.2**
	0.4nm,0.8s,baz=306,slow=8.5,SNR=1.7						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**51.76**	**131**	P	**P**	**17 59 47.7**	**0.0**
	0.3nm,0.7s,baz=304,slow=7.9,SNR=1.8						
	0.3nm,0.7s						
BRTR	**Keskin Array B**	**60.58**	**310**	P	**P**	**18 00 49.4**	**-1.3**
	0.4nm,0.7s,baz=127,slow=7.3,SNR=3.5						
	0.4nm,0.7s						

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*BJI **26** 18:12:10.9±0.0, 2°.06N×126°.03E, h112^{km}, mb4.6/52,*
mB5.0/27
*MAN **26** 18:12:12.7, 2°.60N×125°.78E, h22^{km}, mb5.4, ML4.4, MS4.7*
*IDC **26** 18:12:15.3±2.0, 2°.64N×125°.72E, h90^{km}±17^{km}, mb4.3/21,*
mbtmp4.6/23, MS3.4/14, Error ellipse: s-maj=22.1km
s-min=9.3km az=73.0
*NEIC **26** 18:12:15.1±2.7, 2°.68N±0°.05×125°.89E±0°.08, h86^{km}±6^{km},*
mb4.7/98, Error ellipse: s-maj=11.7km s-min=6.5km
az=77.0
*DJA **26** 18:12:16.3±0.7, 3°N±2°×12°6E±°, h40^{km}±19^{km}, M4.8/18,*
mb5.0/14, mB5.3/12, MLv4.8/18, Mw(mB)4.7/12,
MwMwp5.7/1, Mwp5.8/1

ISC 26 18:12:15.7±0.6**, 2°.65N**±0°.03×**125°.88E**±0°.05**, h96^{km}**±5^{km}**,**
n260, σ**1^s.43**/290**, mb4.7**/87**, 11C-5D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.09**	**341**	P	**Pn**	**18 12 35.7**	**-1.2**
SGSI				S	**Sn**	**18 12 51.4**	**-1.5**
TNTI	**Ternate**	**2.38**	**141**	Pn	**Pn**	**18 12 52.0**	**-1.1**
TNTI	**Ternate**	**2.38**	**141**	P	**Pn**	**18 12 52.3**	**-0.9**
TNTI	**Ternate**	**2.38**	**141**	P	**Pn**	**18 12 51.8**	**-1.4**
TNTI				S	**Sn**	**18 13 19.8**	**-2.1**
GTOI	**Gorontalo**	**3.49**	**235**	P	**Pn**	**18 13 08.1**	**+0.1**
GSPH	**General Santos**	**3.54**	**345**	⇓*i*P	**Pn**	**18 13 07.7**	**-1.2**
GSPH				*i* S	**Sn**	**18 13 48.4**	**-1.4**
LBMI	**Labuha**	**3.64**	**154**	P	**Pn**	**18 13 08.9**	**-1.2**
LBMI				S	**Sn**	**18 13 50.9**	**-1.2**
SKMP	**Bagumbayan, Su**	**4.07**	**341**	⇓*e*P	**Pn**	**18 13 15.5**	**-0.4**
SKMP				*e*S	**Sn**	**18 13 60.0**	**-2.5**
MATI	**Mati**	**4.29**	**5**	⇑*e*P	**Pn**	**18 13 19.1**	**+0.3**
MATI				*e*S	**Sn**	**18 14 03.0**	**-4.8**
DAV	**Davao City (W)**	**4.41**	**356**	P	**Pn**	**18 13 21.2**	**+0.8**
	130nm,0.4s,baz=246,slow=10.0,SNR=2.8						
DAV				S	**Sn**	**18 14 11.6**	**+1.0**
	185nm,0.4s,baz=285,slow=23,SNR=2.0						
DAV				LR	LR	18 15 17.9	
	comp=Z,352nm,20.1s,baz=224,slow=41						
DAV	**Davao City (W)**	**4.41**	**356**		**Pn**	**18 13 20.5**	**+0.1**
KCP	**Kidapawan**	**4.41**	**350**	⇑*i*P	**Pn**	**18 13 20.8**	**+0.4**
KCP				*i* S	**Sn**	**18 14 14.7**	**+4.0**
MRSI	**Marisa**	**4.49**	**241**	P	**Pn**	**18 13 22.5**	**+1.1**
MRSI				S	**Sn**	**18 14 12.7**	**+0.2**
SANI	**Sanana**	**4.66**	**179**	P	**Pn**	**18 13 21.7**	**-2.2**
SANI	**Sanana**	**4.66**	**179**	P	**Pn**	**18 13 21.3**	**-2.6**
LUWI	**Luwuk**	**4.80**	**220**	Pn	**Pn**	**18 13 26.9**	**+1.2**
LUWI	**Luwuk**	**4.80**	**220**	P	**Pn**	**18 13 29.2**	**+3.5**
LUWI	**Luwuk**	**4.80**	**220**	P	**Pn**	**18 13 27.9**	**+2.2**
CTBH	**Cotabato--PC H**	**4.83**	**340**	⇑*i*P	**Pn**	**18 13 26.9**	**+0.8**
CDOP	**Cateel, Davao**	**5.14**	**6**	⇑*e*P	**Pn**	**18 13 32.2**	**+1.9**
TOLI2	**Tolitoli**	**5.32**	**253**	Pn	**Pn**	**18 13 31.6**	**-1.1**
TOLI2	**Tolitoli**	**5.32**	**253**	P	**Pn**	**18 13 32.5**	**-0.2**
BIPH	**Bislig**	**5.52**	**5**	⇓*i*P	**Pn**	**18 13 36.0**	**+0.5**
BIPH				*i* S	**Sn**	**18 14 40.8**	**+3.0**
ZCP	**Zamboanga City**	**5.70**	**318**	⇑*i*P	**Pn**	**18 13 37.7**	**-0.3**
ZCP				*i* S	**Sn**	**18 14 38.4**	**-3.6**
PAGZ	**Pagadian**	**5.74**	**334**	⇑*e*P	**Pn**	**18 13 37.8**	**-0.7**
PAGZ				*e*S	**Sn**	**18 14 39.6**	**-3.4**
CGP	**Cagayan de Oro**	**5.89**	**349**	⇑*e*P	**Pn**	**18 13 41.1**	**+0.6**
CGP				*e*S	**Sn**	**18 14 49.8**	**+3.1**
NLAI	**Namlea**	**5.97**	**168**	P	**Pn**	**18 13 40.4**	**-1.2**
	36nm,0.6s,6µm0.4nm						
BUTP	**Butuan**	**6.29**	**358**	⇑*e*P	**Pn**	**18 13 48.4**	**+2.5**
BUTP				*e*S	**Sn**	**18 15 01.5**	**+5.1**
MPSI	**Mapaga**	**6.40**	**249**	P	**Pn**	**18 13 48.8**	**+1.3**
	131nm,0.8s,980nm0.4nm						
SIJI	**Sorong**	**6.42**	**123**	P	**Pn**	**18 13 47.9**	**+0.1**
	9.2nm,0.3s,baz=325,slow=16,SNR=12						
SIJI				LR	LR	18 16 38.4	
	comp=Z,243nm,20.0s,baz=314,slow=40						
MSAI	**Masohi**	**6.69**	**153**	P	**Pn**	**18 13 51.5**	**+0.1**
	18nm,0.5s,252nm0.1nm						
AAI	**Ambon**	**6.70**	**160**	P	**Pn**	**18 13 51.2**	**-0.4**
GLSP	**General Luna,**	**7.10**	**2**	⇑*e*P	**Pn**	**18 13 59.0**	**+2.0**
GLSP				*e*S	**Sn**	**18 15 13.1**	**-3.0**
GHBP	**Garcia Hernand**	**7.11**	**348**	⇓*i*P	**Pn**	**18 13 57.7**	**+0.5**
TBP	**Tagbilaran**	**7.28**	**344**	*e*P	**Pn**	**18 13 59.9**	**+0.4**
MSLP	**Maasin**	**7.51**	**352**	⇑*e*P	**Pn**	**18 14 04.6**	**+2.0**
MSLP				*e*S	Sn	18 15 35.8	+10
MYLDM	**Lahad Datu**	**7.78**	**289**	Pn	**Pn**	**18 14 09.1**	**+2.9**
LLP	**Lapu-Lapu**	**7.86**	**346**	*e*P	**Pn**	**18 14 07.8**	**+0.5**
LLP				*e*S	Sn	18 15 44.6	+10
FAKI	**Fak Fak**	**8.43**	**131**	Pn	**Pn**	**18 14 14.5**	**-0.7**
FAKI	**Fak Fak**	**8.43**	**131**	P	**Pn**	**18 14 15.6**	**+0.4**
SPSI	**Sidrap Palu**	**8.96**	**223**	P	**Pn**	**18 14 23.4**	**+1.0**
	23nm,0.7s,2µm						
RKPI	**Ransiki, Papua**	**9.27**	**116**	P	**Pn**	**18 14 27.4**	**+0.9**
	92nm,1.0s						
RCP	**Roxas**	**9.39**	**341**	⇑*i*P	**Pn**	**18 14 29.6**	**+1.5**
KAPI	**Kappang**	**9.76**	**219**	LR	LR	18 18 57.2	
	comp=Z,186nm,19.0s,baz=40,slow=42						
KKM	**Kota Kinabalu**	**10.21**	**290**	Pn	**Pn**	**18 14 41.5**	**+2.1**
KKM	**Kota Kinabalu**	**10.21**	**290**	P	**Pn**	**18 14 42.6**	**+3.1**
SRPI	**Serui, Papua**	**11.29**	**113**	P	**Pn**	**18 14 55.2**	**+1.2**
	34nm,0.9s						
SMPI	**Sarmi**	**13.63**	**110**	P	**Pn**	**18 15 27.2**	**+2.1**
	27nm,0.6s						
GENI	**Genyem**	**15.20**	**110**	P	**Pn**	**18 15 46.1**	**+0.8**
	134nm,1.1s						
MTN	**Manton Dam**	**16.25**	**161**	Pn	**Pn**	**18 15 55.9**	**-2.4**
MTN	**Manton Dam**	**16.25**	**161**	P	**Pn**	**18 15 56.5**	**-1.9**
KNRA	**Kununurra**	**18.43**	**171**		**P**	**18 16 23.8**	**+0.2**
KNRA				IAmb	IAmb	18 16 49.1	
	comp=Z,24nm,0.9s						
KNRA	**Kununurra**	**18.43**	**171**	P	**P**	**18 16 23.7**	**+0.1**
	comp=Z,21nm,0.9s						
FITZ	**Fitzroy Crossi**	**20.61**	**181**	P	**P**	**18 16 47.3**	**-0.1**
YULB	**Yu-li**	**21.10**	**348**	P	**P**	**18 16 55.1**	**+2.5**
	comp=Z,20nm,1.4s						
TPUB	**Ta-pu**	**21.15**	**347**	P	**P**	**18 16 49.9**	**-3.3**
TPUB				IAmb	IAmb	18 16 55.5	
	comp=Z,27nm,0.9s						
TPUB	**Ta-pu**	**21.15**	**347**	P	**P**	**18 16 52.3**	**-0.9**
CGJI	**Cibinong**	**22.15**	**245**	P	**P**	**18 17 05.9**	**+2.0**
WB0	**Warramunga Arr**	**23.79**	**160**	P	**P**	**18 17 19.7**	**-0.1**
WRAB	**Tennant Creek**	**23.93**	**160**	P	**P**	**18 17 21.0**	**0.0**
WRAB				IAmb	IAmb	18 17 29.8	
	comp=Z,21nm,0.9s						
WRAB	**Tennant Creek**	**23.93**	**160**	P	**P**	**18 17 21.0**	**0.0**
WRA	**Warramunga Arr**	**23.93**	**160**	P	**P**	**18 17 20.9**	**-0.2**
	comp=Z,7.2nm,0.4s,baz=337,slow=10,SNR=384						
WRA				PcP	**PcP**	**18 21 01.6**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=318,slow=2.3,SNR=3.4						
WRA				S	**S**	**18 21 27.7**	**-3.1**
	comp=Z,1.3nm,0.9s,baz=353,slow=12,SNR=7.8						
	comp=Z,7.2nm,0.4s						
WRA	**Warramunga Arr**	**23.93**	**160**	P	**P**	**18 17 19.8**	**-1.2**
WB2	**Warramunga Arr**	**23.94**	**160**	P	**P**	**18 17 21.0**	**-0.1**
WB2				IAmb	IAmb	18 17 24.3	
	comp=Z,36nm,1.1s						
JOW	**Kunigami**	**24.16**	**5**	P	**P**	**18 17 24.8**	**+1.7**
	comp=Z,28nm,0.6s,baz=169,slow=10,SNR=4.3						
	comp=Z,28nm,0.6s						
JOW	**Kunigami**	**24.16**	**5**	P	**P**	**18 17 21.5**	**-1.5**
JOW				IAmb	IAmb	18 17 25.4	
	comp=Z,44nm,0.8s						
PSA00	**Pilbara Seismi**	**24.78**	**193**	P	**P**	**18 17 28.4**	**-0.3**
QIS	**Mount Isa**	**26.70**	**150**	P	**P**	**18 17 47.9**	**+1.8**
AS31	**Alice Springs**	**27.29**	**164**	P	**P**	**18 17 51.4**	**0.0**
ASAR	**Alice Springs**	**27.30**	**164**	P	**P**	**18 17 51.5**	**0.0**
	comp=Z,2.6nm,0.5s,baz=340,slow=7.3,SNR=106						
ASAR				PcP	**PcP**	**18 21 09.9**	**+1.1**
	comp=Z,3.7nm,0.8s,baz=351,slow=2.5,SNR=11						
ASAR				S	**S**	**18 22 21.7**	**-2.4**
	comp=Z,1.4nm,1.0s,baz=344,slow=12,SNR=2.2						
	comp=Z,2.6nm,0.5s						
ASAR	**Alice Springs**	**27.30**	**164**	P	**P**	**18 17 51.9**	**+0.5**
ASAR				PcP	**PcP**	**18 21 10.0**	**+1.1**
AS01	**Alice Springs**	**27.31**	**164**	P	**P**	**18 17 51.2**	**-0.3**
	comp=Z,9.5nm,0.9s						
WRKA	**Warakurna**	**27.62**	**175**	P	**P**	**18 17 55.5**	**+1.2**
GSI	**Gunungsitoli**	**28.32**	**268**	P	**P**	**18 18 02.3**	**+1.6**
	comp=Z,32nm,1.2s						
NJ2	**Nanjing**	**29.99**	**348**	*e*P	**P**	**18 18 17.3**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,120nm,4.5s						
CTA	**Charters Tower**	**30.17**	**139**	LR	LR	18 32 45.4	
	comp=Z,88nm,18.0s,baz=264,slow=41						
CMAR	**Chiang Mai Arr**	**30.71**	**303**	P	**P**	**18 18 22.0**	**+0.2**
	comp=Z,3.1nm,1.0s,baz=123,slow=7.3,SNR=16						
CMAR				PcP	**PcP**	**18 21 17.9**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=160,slow=2.8,SNR=5.9						
	comp=Z,3.1nm,1.0s						
CHTO	**Chiang Mai**	**30.88**	**303**	P	**P**	**18 18 22.9**	**-0.4**
OOD	**Oodnadatta**	**31.70**	**163**	P	**P**	**18 18 31.8**	**+1.5**
JMN	**Monobe**	**31.82**	**13**	P	**P**	**18 18 30.9**	**-0.4**
JMN				IAmb	IAmb	18 18 32.9	
	comp=Z,18nm,0.9s						
JTU	**Tsushima**	**31.89**	**6**	P	**P**	**18 18 31.5**	**-0.4**
JHS	**Saijyo**	**32.89**	**11**	P	**P**	**18 18 42.4**	**+1.7**
MORW	**Morawa**	**32.91**	**196**	P	**P**	**18 18 39.8**	**-1.1**
PZH	**PanZhiHua**	**33.15**	**318**	P	**P**	**18 18 42.8**	**-0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=Z,80nm,4.5s						
FORT	**Forrest**	**33.30**	**177**	P	**P**	**18 18 44.3**	**0.0**
FORT	**Forrest**	**33.30**	**177**	P	**P**	**18 18 45.4**	**+1.1**
MULG	**Mulgathing**	**33.66**	**167**	P	**P**	**18 18 48.5**	**+1.1**
QLP	**Quilpie**	**34.04**	**150**	P	**P**	**18 18 51.7**	**+0.9**
INU	**Inuyama**	**34.14**	**16**	P	**P**	**18 18 50.7**	**-0.8**
INU				IAmb	IAmb	18 18 53.4	
	comp=Z,19nm,0.9s						
JGF	**Kuroka**	**34.48**	**17**	P	**P**	**18 18 53.9**	**-0.6**
JGF				IAmb	IAmb	18 18 55.4	
	comp=Z,14nm,0.9s						
JGF	**Kuroka**	**34.48**	**17**	P	**P**	**18 18 55.2**	**+0.7**
	comp=Z,23nm,0.8s						
TNCH	**TengChong**	**34.50**	**313**	*e*P	**P**	**18 18 56.0**	**+1.0**
TNCH				pP	pP	18 19 18.3	+2.2
TNCH				S	**S**	**18 24 16.8**	**-0.1**
TNCH				SS	**SnSn**	**18 26 34.0**	**-4.1**
TNCH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TNCH				pmax	pmax		
	comp=Z,190nm,4.6s						
TNCH				LR	LR		
	comp=Z,110nm,15.4s						
TNCH				LR	LR		
	comp=Z,94nm,11.6s						
TNCH				LR	LR		
	comp=Z,140nm,14.9s						
KSAR	**Wonju Array Be**	**34.68**	**3**	P	**P**	**18 18 56.0**	**-0.1**
KSAR					**PcP**	**18 21 29.6**	**+1.4**
KSRS	**Korea Array**	**34.69**	**3**	P	**P**	**18 18 57.1**	**+0.9**
	comp=Z,5.7nm,0.5s,baz=179,slow=9.9,SNR=62						
KSRS				PcP	**PcP**	**18 21 29.7**	**+1.5**
	comp=Z,3.2nm,0.8s,baz=183,slow=3.1,SNR=8.4						
	comp=Z,5.7nm,0.5s						
KS19	**Wonju Array Si**	**34.74**	**3**	P	**P**	**18 18 57.2**	**+0.5**
KS19				IAmb	IAmb	18 18 58.9	
	comp=Z,9.5nm,0.8s						
LCRK	**Leigh Creek**	**34.95**	**161**	P	**P**	**18 18 58.9**	**+0.3**
CD2	**Chengdu**	**35.03**	**326**	P	**P**	**18 18 59.3**	**-0.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MAJO	**Matsushiro**	**35.60**	**17**	P	**P**	**18 19 03.9**	**-0.2**
MAJO				IAmb	IAmb	18 19 04.8	
	comp=Z,14nm,0.8s						
MJAR	**Matsushiro Arr**	**35.60**	**17**	P	**P**	**18 19 03.4**	**-0.7**
	comp=Z,9.3nm,0.8s,baz=198,slow=9.1,SNR=26						
MJAR				PcP	**PcP**	**18 21 32.3**	**+1.3**
	comp=Z,1.9nm,0.9s,baz=189,slow=3.1,SNR=4.6						
	comp=Z,9.3nm,0.8s						
MJB9	**Matsu-Tunnel**	**35.60**	**17**	P	**P**	**18 19 04.9**	**+0.7**
MJB9				IAmb	IAmb	18 19 05.7	
	comp=Z,14nm,0.8s						
HNR	**Honiara**	**36.00**	**110**	LR	LR	18 34 17.7	
	comp=Z,1µm,18.3s,baz=213,slow=37						
BBOO	**Buckleboo**	**36.56**	**166**	P	**P**	**18 19 12.7**	**+0.4**
BBOO	**Buckleboo**	**36.56**	**166**	P	**P**	**18 19 12.5**	**+0.2**
	comp=Z,33nm,2.4s						
JSD	**Sado**	**37.01**	**16**	P	**P**	**18 19 14.4**	**-1.6**
STKA	**Stephens Creek**	**37.44**	**158**	P	**P**	**18 19 20.6**	**+0.8**
	comp=Z,4.2nm,0.3s,baz=344,slow=8.9,SNR=22						
STKA				LR	LR	18 35 03.0	
	comp=Z,61nm,18.3s,baz=353,slow=36						
	comp=Z,4.2nm,0.3s						
STKA	**Stephens Creek**	**37.44**	**158**	P	**P**	**18 19 20.2**	**+0.5**
STKA	**Stephens Creek**	**37.44**	**158**	P	**P**	**18 19 20.9**	**+1.1**
JMM	**Marumori**	**37.63**	**19**	P	**P**	**18 19 21.6**	**+0.3**
JMM	**Marumori**	**37.63**	**19**	P	**P**	**18 19 23.3**	**+2.0**
BJI	**Beijing**	**38.25**	**348**	P	**P**	**18 19 26.0**	**-0.5**
BJI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CMSA	**Cobar Meteorol**	**38.87**	**153**	P	**P**	**18 19 33.2**	**+1.4**
LZH	**Lanzhou**	**39.02**	**331**	*e*P	**P**	**18 19 32.3**	**-0.9**
LZH				pP	pP	18 19 55.0	-0.5
LZH				sP	sP	18 20 09.0	+2.5
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH				LR	LR		
	comp=Z,230nm,16.5s						
LZH				LR	LR		
	comp=Z,410nm,13.6s						
LZH				LR	LR		
	comp=Z,300nm,17.3s						
HHC	**Hu-ho-hao-te**	**40.17**	**343**	*e*P	**P**	**18 19 44.3**	**+1.7**
HHC				pmax	pmax		
	comp=Z,23nm,0.6s						
HHC				pmax	pmax		
	comp=Z,200nm,5.3s						
JTM	**Tenmabayashi**	**40.37**	**18**	P	**P**	**18 19 45.1**	**+1.0**
JTM	**Tenmabayashi**	**40.37**	**18**	P	**P**	**18 19 46.6**	**+2.5**
ARMA	**Armidale**	**41.05**	**145**	P	**P**	**18 19 50.1**	**+0.1**
ARMA				IAmb	IAmb	18 19 53.2	
	comp=Z,11nm,0.8s						
ARMA	**Armidale**	**41.05**	**145**	P	**P**	**18 19 52.1**	**+2.1**
USRK	**Ussuriysk Ar.**	**41.73**	**7**	P	**P**	**18 19 55.6**	**+0.4**
	comp=Z,13nm,0.9s,baz=190,slow=6.6,SNR=20						
	comp=Z,13nm,0.9s						
USRK	**Ussuriysk Ar.**	**41.73**	**7**	P	**P**	**18 19 54.4**	**-0.8**
MDJ	**Mudanjiang**	**41.93**	**4**	P	**P**	**18 19 58.0**	**+1.2**
MDJ				pP	pwP	18 20 21.0	-1.0
MDJ				sP	sP	18 20 31.8	+2.6
MDJ				PP	**PP**	**18 21 37.0**	**+1.3**
MDJ				PcP	**PcP**	**18 21 49.8**	**-0.8**
MDJ				ScP	**ScP**	**18 25 32.0**	**-0.4**
MDJ				S	**S**	**18 26 12.3**	**+4.3**
MDJ				sS	sS	18 26 51.0	+5.4
MDJ				ScS	**ScS**	**18 29 47.0**	**-2.7**
MDJ				pmax	pmax		
	comp=Z,23nm,0.7s						

MDJ				pmax	pmax		
	comp=Z,150nm,6.2s						
BNX	**BinXian**	**42.94**	**2**	⇓P	**P**	**18 20 05.0**	**0.0**
BNX				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BNX				pmax	pmax		
	comp=Z,200nm,5.2s						
H11S3	**WAKE ISLAND Hy**	**42.95**	**66**	T	T	19 06 18.2	
	baz=253,slow=75,SNR=15						
H11S2	**WAKE ISLAND Hy**	**42.96**	**66**	T	T	19 06 25.0	
	baz=253,slow=75,SNR=10						
H11S1	**WAKE ISLAND Hy**	**42.96**	**66**	T	T	19 06 25.7	
	baz=253,slow=75,SNR=8.0						
CAN	**Canberra**	**43.54**	**152**	P	**P**	**18 20 11.2**	**+1.2**
CAN				IAmb	IAmb	18 20 14.3	
	comp=Z,22nm,1.3s						
GTA	**Gaotai**	**43.60**	**330**	*e*P	**P**	**18 20 09.8**	**-0.8**
GTA				sP	sP	18 20 55.5	+11
GTA				PcP	**PcP**	**18 21 57.8**	**+1.2**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
JKA	**Kamikawa-asahi**	**43.87**	**17**	P	**P**	**18 20 13.8**	**+1.3**
TAPN	**Taplejung**	**43.99**	**308**	*e*P	**P**	**18 20 13.6**	**-0.5**
	comp=Z,22nm,1.0s						
ODAN	**Odare**	**44.02**	**307**	*e*P	**P**	**18 20 13.8**	**-0.5**
	comp=Z,31nm,0.9s						
GOMU	**GeErMu**	**44.02**	**323**	P	**P**	**18 20 14.5**	**+0.2**
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,46nm,4.5s						
RAMN	**Ramite**	**44.69**	**307**	*e*P	**P**	**18 20 19.5**	**-0.2**
	comp=Z,26nm,1.0s						
PALK	**Pallekele**	**45.22**	**278**	PcP	**PcP**	**18 22 02.9**	**+0.4**
	comp=Z,3.6nm,0.6s,baz=135,slow=1.4,SNR=4.0						
PALK				LR	LR	18 40 32.3	
	comp=Z,51nm,18.1s,baz=207,slow=38						
JIRN	**Jiri**	**45.33**	**307**	*e*P	**P**	**18 20 24.1**	**-0.8**
	comp=Z,27nm,0.9s						
GUN	**Gumba**	**45.69**	**307**	*e*P	**P**	**18 20 26.8**	**-0.9**
	comp=Z,28nm,0.8s						
PKI	**Pulchoki**	**45.91**	**307**	*e*P	**P**	**18 20 28.5**	**-0.9**
PKIN	**Phulchoki**	**45.93**	**307**	*e*P	**P**	**18 20 28.2**	**-1.3**
DMN	**Daman**	**46.17**	**307**	*e*P	**P**	**18 20 30.9**	**-0.5**
	comp=Z,36nm,1.0s						
YSS	**Yuzh-Sakhalins**	**46.51**	**16**	P	**P**	**18 20 34.1**	**+0.8**
YSS	**Yuzh-Sakhalins**	**46.51**	**16**	P	**P**	**18 20 34.1**	**+0.8**
DZM	**Mont Dzumac**	**46.62**	**124**	LR	LR	18 40 11.9	
	comp=Z,36nm,18.7s,baz=306,slow=36						
GKN	**Gorkha**	**46.72**	**307**	*e*P	**P**	**18 20 34.5**	**-1.0**
	comp=Z,24nm,1.0s						
KOLN	**Koldanda**	**47.45**	**306**	*e*P	**P**	**18 20 40.8**	**-0.5**
	comp=Z,44nm,1.0s						
HEH	**HeiHe**	**47.45**	**1**	*e*P	**P**	**18 20 40.8**	**+0.2**
HEH				PcP	**PcP**	**18 22 10.0**	**+0.5**
HEH				pmax	pmax		
	comp=Z,34nm,0.7s						
DANN	**Dangsing**	**47.56**	**307**	*e*P	**P**	**18 20 41.5**	**-0.8**
	comp=Z,34nm,0.7s						
ULN	**Ulaanbaatar**	**47.89**	**343**	P	**P**	**18 20 41.6**	**-2.7**
SONM	**Songino Array**	**48.06**	**342**	P	**P**	**18 20 44.5**	**-1.0**
	comp=Z,2.0nm,0.8s,baz=155,slow=8.7,SNR=15						
SONM				PcP	**PcP**	**18 22 12.5**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=167,slow=4.1,SNR=6.0						
SONM				LR	LR	18 44 57.2	
	comp=Z,42nm,18.0s,baz=176,slow=41						
	comp=Z,2.0nm,0.8s						
SONM	**Songino Array**	**48.06**	**342**	P	**P**	**18 20 43.2**	**-2.3**
SONM				PcP	**PcP**	**18 22 12.9**	**+0.9**
PYUN	**Piuthan**	**48.08**	**306**	*e*P	**P**	**18 20 45.7**	**-0.4**
	comp=Z,39nm,0.9s						
WMQ	**Urumqi**	**53.13**	**326**	*e*P	**P**	**18 21 23.5**	**-0.2**
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PEA0B	**Petropavlovsk-**	**56.75**	**22**	P	**P**	**18 21 50.2**	**+0.7**
PETK	**Petropavlovsk-**	**56.75**	**22**	P	**P**	**18 21 50.8**	**+1.3**
	comp=Z,8.6nm,0.7s,baz=207,slow=9.3,SNR=20						
	comp=Z,8.6nm,0.7s						
PETK	**Petropavlovsk-**	**56.75**	**22**	P	**P**	**18 21 49.1**	**-0.4**
MK31	**Makanchi Array**	**57.97**	**326**	P	**P**	**18 21 56.9**	**-1.4**
MK31				IAmb	IAmb	18 21 58.6	
	comp=Z,2.1nm,0.5s						
MKAR	**Makanchi Array**	**57.97**	**326**	P	**P**	**18 21 57.4**	**-0.8**
	comp=Z,3.0nm,0.5s,baz=121,slow=8.4,SNR=58						
MKAR				PcP	**PcP**	**18 22 49.5**	**+0.2**
	comp=Z,5.5nm,0.8s,baz=123,slow=5.3,SNR=17						
MKAR				LR	LR	18 48 55.0	
	comp=Z,9.8nm,18.5s,baz=81,slow=38						
	comp=Z,3.0nm,0.5s						
MKAR	**Makanchi Array**	**57.97**	**326**	P	**P**	**18 21 57.0**	**-1.2**
KSH	**Kashi**	**58.22**	**316**	P	**P**	**18 22 01.0**	**+0.8**
KSH				PcP	**PcP**	**18 22 52.5**	**+1.9**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KDJ	**Kajisay**	**58.59**	**319**	P	**P**	**18 22 02.1**	**-0.8**
YAK	**Yakutsk**	**59.31**	**2**	P	**P**	**18 22 06.4**	**-0.8**
MA2	**Magadan**	**59.96**	**14**	P	**P**	**18 22 12.6**	**+0.9**
ZAA0	**Zalesovo Array**	**61.17**	**334**	P	**P**	**18 22 19.5**	**-0.5**
ZALV	**Zalesovo Beam**	**61.17**	**334**	P	**P**	**18 22 18.1**	**-1.9**
	comp=Z,1.2nm,0.6s,baz=127,slow=6.4,SNR=6.1						
	comp=Z,1.2nm,0.6s						
GAR	**Garm**	**62.03**	**313**		**P**	**18 22 23.6**	**-2.8**
GAR				IAmb	IAmb	18 22 26.1	
	comp=Z,7.7nm,0.9s						
KURK	**Kurchatov**	**62.20**	**328**	P	**P**	**18 22 25.6**	**-1.4**
BRVK	**Borovoye**	**67.84**	**327**		**P**	**18 23 01.8**	**-1.7**
BRVK				IAmb	IAmb	18 23 29.6	
	comp=Z,5.2nm,0.8s						
WSAR	**Wadi Sarin**	**68.08**	**294**	LR	LR	18 55 32.0	
	comp=Z,17nm,19.6s,baz=220,slow=38						
TIXI	**Tiksi**	**68.93**	**1**	LR	LR	18 56 14.6	
	comp=Z,28nm,18.6s,baz=178,slow=38						
TIXI	**Tiksi**	**68.93**	**1**	P	**P**	**18 23 09.5**	**-0.5**
TIXI				IAmb	IAmb	18 23 11.0	
	comp=Z,20nm,1.3s						
GEYT	**Alibeck**	**70.91**	**309**	P	**P**	**18 23 22.8**	**0.0**
	comp=Z,1.6nm,0.7s,baz=151,slow=3.4,SNR=4.5						
	comp=Z,1.6nm,0.7s						
NRIK	**Noril'sk**	**71.28**	**347**	P	**P**	**18 23 24.7**	**+0.3**
	comp=Z,21nm,0.6s,baz=130,slow=6.5,SNR=36						
	comp=Z,21nm,0.6s						
NRIK	**Noril'sk**	**71.28**	**347**	P	**P**	**18 23 23.6**	**-0.7**
ABKAR	**Akbulak array**	**72.45**	**321**	P	**P**	**18 23 29.8**	**-2.0**
AKUT	**Akutan**	**75.29**	**34**	P	**P**	**18 23 46.3**	**-1.9**
ARU	**Arti**	**75.40**	**328**	P	**P**	**18 23 46.5**	**-2.2**
ARU				IAmb	IAmb	18 23 55.2	
	comp=Z,6.3nm,1.0s						
TNA	**Tin City**	**77.91**	**23**	P	**P**	**18 24 03.5**	**+0.7**
ANM	**Nome**	**78.60**	**24**	P	**P**	**18 24 07.4**	**+0.9**
P18K	**Big Mountain,**	**82.08**	**30**	P	**P**	**18 24 25.4**	**+0.1**
P18K				IAmb	IAmb	18 24 27.3	
	comp=Z,5.7nm,0.8s						
O18K	**Koktuh Hills**	**82.15**	**30**	P	**P**	**18 24 26.1**	**+0.4**
O18K				IAmb	IAmb	18 24 42.1	
	comp=Z,14nm,1.3s						
SVW2	**Sparrevohn**	**82.16**	**29**	P	**P**	**18 24 25.0**	**-0.7**
TTA	**Tatalina**	**82.25**	**27**	P	**P**	**18 24 26.5**	**+0.2**
TTA				IAmb	IAmb	18 24 28.6	
	comp=Z,5.6nm,0.8s						
VNDA	**Vanda**	**82.47**	**173**	P	**P**	**18 24 28.1**	**+1.2**
	comp=Z,3.9nm,0.8s,baz=326,slow=5.6,SNR=14						
	comp=Z,3.9nm,0.8s						
VNDA	**Vanda**	**82.47**	**173**	P	**P**	**18 24 26.9**	**-0.1**
N19K	**Bonanza Creek**	**82.64**	**29**	P	**P**	**18 24 30.1**	**+1.7**
N19K				IAmb	IAmb	18 24 32.2	
	comp=Z,9.6nm,0.8s						
L19K	**White Mountain**	**82.66**	**28**	P	**P**	**18 24 29.7**	**+1.3**
L19K				IAmb	IAmb	18 24 31.5	
	comp=Z,8.6nm,0.9s						
GEVA	**Gevas**	**82.73**	**308**	P	**P**	**18 24 29.0**	**-0.4**
GEVA				IAmb	IAmb	18 24 31.0	
	comp=Z,9.2nm,0.8s						
M19K	**Big River Lodg**	**82.84**	**28**	P	**P**	**18 24 29.5**	**+0.2**
M19K				IAmb	IAmb	18 24 32.5	
	comp=Z,6.0nm,0.8s						
K20K	**Telida**	**83.18**	**27**	P	**P**	**18 24 32.1**	**+1.0**
K20K				IAmb	IAmb	18 24 34.2	
	comp=Z,11nm,0.9s						
ILSW	**Iliamna Southw**	**83.20**	**30**	P	**P**	**18 24 30.6**	**-0.7**
ILSW				IAmb	IAmb	18 24 44.7	
	comp=Z,12nm,1.4s						
KDAK	**Kodiak Island**	**83.26**	**32**	LR	LR	19 05 08.9	
	comp=Z,45nm,18.0s,baz=225,slow=38						
M20K	**Styx River**	**83.43**	**28**	P	**P**	**18 24 33.3**	**+0.9**
M20K				IAmb	IAmb	18 24 35.4	
	comp=Z,14nm,0.9s						
RSO	**Redoubt South**	**83.45**	**30**	P	**P**	**18 24 32.5**	**-0.2**
A21K	**Barrow**	**83.51**	**18**	P	**P**	**18 24 34.0**	**+1.5**
A21K				IAmb	IAmb	18 24 36.0	
	comp=Z,12nm,0.8s						
IMAR	**Indian Mountai**	**83.67**	**24**	P	**P**	**18 24 35.0**	**+1.6**
PPLA	**Purkeypile**	**83.98**	**27**	P	**P**	**18 24 34.2**	**-1.0**
PPLA				IAmb	IAmb	18 24 39.7	
	comp=Z,14nm,1.4s						
H21K	**Melozitna Rive**	**84.02**	**24**	P	**P**	**18 24 37.0**	**+1.7**
H21K				IAmb	IAmb	18 24 38.2	
	comp=Z,11nm,0.9s						
CAST	**Castle Rocks**	**84.08**	**27**	P	**P**	**18 24 36.3**	**+0.7**
CNPM	**China Poot**	**84.12**	**31**	P	**P**	**18 24 35.3**	**-0.6**
SKT	**Skwentna**	**84.19**	**28**	P	**P**	**18 24 37.1**	**+0.9**
SKT				IAmb	IAmb	18 24 37.5	
	comp=Z,9.7nm,1.0s						
I21K	**Tanana**	**84.31**	**25**	P	**P**	**18 24 37.7**	**+1.1**
I21K				IAmb	IAmb	18 24 39.6	
	comp=Z,8.0nm,0.8s						
BRLK	**Bradley Lake**	**84.31**	**30**	P	**P**	**18 24 37.6**	**+0.7**
SUA	**Susitna One**	**84.52**	**29**	P	**P**	**18 24 38.1**	**+0.1**
KTH	**Kantishna Hill**	**84.61**	**27**	P	**P**	**18 24 37.5**	**-0.8**
KTH				IAmb	IAmb	18 24 58.8	
	comp=Z,9.1nm,1.4s						
BPAW	**Bear Paw Mtn.**	**84.63**	**26**	P	**P**	**18 24 38.2**	**-0.2**
BPAW				IAmb	IAmb	18 24 41.0	
	comp=Z,3.4nm,0.6s						
MLY	**Manley**	**84.82**	**25**	P	**P**	**18 24 39.7**	**+0.4**
MLY				IAmb	IAmb	18 24 42.2	
	comp=Z,6.0nm,0.8s						
RC01	**Rabbit Creek A**	**84.98**	**29**	P	**P**	**18 24 40.3**	**+0.2**
RC01				IAmb	IAmb	18 24 42.2	
	comp=Z,15nm,1.1s						
COLD	**Coldfoot**	**85.22**	**23**	P	**P**	**18 24 43.3**	**+2.0**
COLD				IAmb	IAmb	18 24 44.7	
	comp=Z,7.1nm,0.9s						
H23K	**Yukon River**	**85.38**	**24**	P	**P**	**18 24 42.4**	**+0.3**
I23K	**Minto, Yukon-K**	**85.41**	**25**	P	**P**	**18 24 43.2**	**+1.0**
I23K				IAmb	IAmb	18 24 45.3	
	comp=Z,7.1nm,1.0s						
MCK	**McKinley**	**85.51**	**26**	P	**P**	**18 24 42.0**	**-0.8**
MCK				IAmb	IAmb	18 24 44.9	
	comp=Z,4.2nm,0.8s						
KNK	**Knik Glacier**	**85.61**	**29**	P	**P**	**18 24 41.3**	**-2.0**
KNK				IAmb	IAmb	18 24 45.6	
	comp=Z,9.1nm,0.8s						
PWL	**Port Wells**	**85.65**	**29**	P	**P**	**18 24 42.6**	**-0.9**
PWL				IAmb	IAmb	18 24 46.9	
	comp=Z,10nm,0.8s						
SML	**Sawmill**	**85.69**	**28**	P	**P**	**18 24 43.9**	**+0.1**
SML				IAmb	IAmb	18 24 45.8	
	comp=Z,8.5nm,0.8s						
MDM	**Murphy Dome**	**85.88**	**25**	P	**P**	**18 24 44.7**	**+0.2**
WRH	**Wood River Hil**	**85.91**	**26**	P	**P**	**18 24 44.6**	**-0.1**
KLMR	**Klimovskoe**	**85.93**	**331**	*e*P	**P**	**18 24 42.0**	**-2.8**
KLMR				AMP		18 24 45.0	
	comp=Z,29nm,1.3s						
CCB	**Clear Creek Bu**	**86.04**	**26**	P	**P**	**18 24 45.6**	**+0.3**
H24K	**Noodor Dome**	**86.06**	**24**	P	**P**	**18 24 46.0**	**+0.5**
IL31		**86.44**	**25**	P	**P**	**18 24 45.6**	**-1.6**
ILAR	**Eielson Array**	**86.44**	**25**	P	**P**	**18 24 46.9**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=242,slow=5.3,SNR=14						
	comp=Z,0.7nm,0.7s						
ILAR	**Eielson Array**	**86.44**	**25**	P	**P**	**18 24 46.2**	**-1.2**
BMAR	**Burnt Mountain**	**87.40**	**23**	P	**P**	**18 24 53.6**	**+1.6**
EGAK	**Eagle**	**88.89**	**25**	P	**P**	**18 24 58.7**	**-0.4**
BARN	**Barnard Glacie**	**88.90**	**29**	P	**P**	**18 24 58.6**	**-0.8**
BARN				IAmb	IAmb	18 25 01.8	
	comp=Z,10nm,1.1s						
EIL	**Elat**	**89.51**	**300**	LR	LR	19 13 54.9	
	comp=Z,23nm,18.0s,baz=64,slow=41						
DAWY	**Dawson**	**89.72**	**26**	P	**P**	**18 25 02.2**	**-0.7**
BRTR	**Keskin Array B**	**90.05**	**310**	P	**P**	**18 25 04.6**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=144,slow=4.6,SNR=5.4						
	comp=Z,0.8nm,0.8s						
EPYK	**Eagle Plains**	**90.57**	**24**	P	**P**	**18 25 06.8**	**-0.1**
EPYK				IAmb	IAmb	18 25 09.3	
	comp=Z,4.7nm,0.9s						
HYT	**Haines Junctio**	**90.94**	**29**	P	**P**	**18 25 08.9**	**+0.1**
HYT				IAmb	IAmb	18 25 24.8	
	comp=Z,5.5nm,1.1s						
ARCES	**ARCESS Array B**	**91.17**	**340**	P	**P**	**18 25 09.1**	**-0.4**
	comp=Z,8.9nm,1.1s,baz=82,slow=7.5,SNR=5.0						
	comp=Z,8.9nm,1.1s						
INK	**Inuvik**	**91.48**	**21**	P	**P**	**18 25 10.3**	**-0.7**
INK				IAmb	IAmb	18 25 12.3	
	comp=Z,4.3nm,1.1s						
N31M	**Braeburn, Yuko**	**91.68**	**28**	P	**P**	**18 25 12.5**	**+0.3**
AKASG	**Malin Array Be**	**92.19**	**321**	P	**P**	**18 25 13.4**	**-1.3**
	comp=Z,1.5nm,0.6s,baz=67,slow=4.6,SNR=7.2						
	comp=Z,1.5nm,0.6s						
FIA1	**FINESS Array S**	**92.38**	**332**	P	**P**	**18 25 12.6**	**-2.6**
FINES	**FINESS Array B**	**92.38**	**332**	P	**P**	**18 25 14.3**	**-0.9**
	comp=Z,6.8nm,0.7s,baz=81,slow=1.8,SNR=12						
	comp=Z,6.8nm,0.7s						
FINES	**FINESS Array B**	**92.38**	**332**	P	**P**	**18 25 13.9**	**-1.4**
MNK	**Minsk**	**92.51**	**325**	*i* P	**P**	**18 25 14.5**	**-1.5**
	comp=E,4.0nm,0.9s						
MNK				*i* P	**P**	**18 25 14.5**	**-1.5**
	comp=N,34nm,0.8s						
MNK				*i* P	**P**	**18 25 14.5**	**-1.5**
	comp=Z,24nm,0.8s,baz=262						
MNK				*i* pP	**pP**	**18 25 40.9**	**-0.3**
MNK				*i* PP	**PP**	**18 28 56.0**	**-2.3**
MNK				*i* PPP	PPP	18 30 55.5	
MNK				*i* S	S	18 35 38.0	-34
MNK				*i* sS	ScS	18 36 25.8	+12
MNK				*i* PS	**PS**	**18 37 33.5**	**-2.2**
MNK				*i* SS	**SS**	**18 42 22.8**	**-2.6**
MNK				*i* SSS	SSS	18 46 02.4	
MNK				*i* LQ	LQ	19 01 07.3	
MNK				*i* LR	LR	19 06 14.1	
MNK				*i* LRM	MLR	19 07 50.4	
	comp=Z,68nm,18.6s						
MNK				*i* LRM	MLR	19 08 21.3	
	comp=N,387nm,17.8s						
MNK				*i* LRM	MLR	19 08 39.1	
	comp=E,26nm,17.8s						
QSPA	**South Pole Qui**	**92.56**	**180**	P	**P**	**18 25 16.8**	**+0.6**
QSPA				IAmb	IAmb	18 25 19.1	
	comp=Z,6.3nm,1.1s						
FARO	**Faro, Yukon**	**92.69**	**27**	P	**P**	**18 25 17.9**	**+1.1**
NACGM	**Naroch**	**93.08**	**325**	*e*P	**P**	**18 25 18.0**	**-0.7**
	comp=Z,22nm,1.0s,baz=81						
C36M	**Paulatuk**	**94.51**	**20**	P	**P**	**18 25 23.4**	**-1.5**
C36M				IAmb	IAmb	18 25 26.0	
	comp=Z,4.4nm,0.9s						
PABE	**Paberze**	**94.56**	**326**	P	**P**	**18 25 23.4**	**-2.1**
BURAR	**Bucovina Array**	**95.24**	**318**	P	**P**	**18 25 27.8**	**-1.1**
BUR08	**Bucovina Ar. S**	**95.24**	**318**	P	**P**	**18 25 28.2**	**-0.7**
NB2	**NORSAR Subarra**	**99.37**	**333**	P	**Pdif**	**18 25 45.2**	**-1.9**
	comp=Z,23nm,1.4s,baz=70,slow=4.4						
NB2	**NORSAR Subarra**	**99.37**	**333**	P	**Pdif**	**18 25 45.2**	**-1.9**
	baz=70,slow=4.4						
NOA	**NORSAR Array B**	**99.37**	**333**	P	**Pdif**	**18 25 45.3**	**-1.9**
	comp=Z,2.3nm,0.9s,baz=69,slow=4.6,SNR=6.4						
NOA				LR	LR	19 13 17.3	
	comp=Z,20nm,21.3s,baz=0.0,slow=37						
	comp=Z,2.3nm,0.9s						
YKA	**Yellowknife Ar**	**100.83**	**24**	P	**Pdif**	**18 25 54.2**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=298,slow=4.6,SNR=9.3						
BRG	**Berggiesshubel**	**101.59**	**323**	*e*P	**Pdif**	**18 25 57.4**	**+0.2**
BRG				Amp		18 25 58.6	
	comp=Z,3.9nm,0.9s						
GERES	**GERESS Array B**	**102.40**	**321**	P	**Pdif**	**18 26 01.1**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=60,slow=5.8,SNR=3.7						
PDAR	**Pinedale Array**	**112.73**	**41**	PKKPab	PKKPab	18 41 38.2	-1.1
	comp=Z,0.6nm,0.9s,baz=98,slow=5.6,SNR=3.8						
SCHQ	**Schefferville**	**121.76**	**9**	PKP	**PKPdf**	**18 30 59.2**	**+0.7**
	comp=Z,3.2nm,0.6s,baz=7.1,slow=8.1,SNR=2.9						
TORD	**Torodi Ar. Bea**	**122.44**	**287**	PKP	**PKPdf**	**18 31 00.6**	**-0.2**
	comp=Z,2.3nm,0.7s,baz=63,slow=1.9,SNR=15						
TXAR	**Lajitas Array**	**122.93**	**52**	PKP	**PKPdf**	**18 31 01.9**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=242,slow=1.9,SNR=4.8						
DBIC	**Dimbokro**	**129.96**	**281**	PKP	**PKPdf**	**18 31 16.0**	**+0.7**
	comp=Z,0.8nm,0.5s,baz=63,slow=2.3,SNR=1.7						
MT01	**Popeta**	**145.06**	**155**	PKPdf	**PKPdf**	**18 31 43.6**	**+1.1**
MT02	**Curacav**	**145.63**	**154**	PKPdf	**PKPab**	**18 31 45.6**	**+1.4**
ROC1	**El Roble**	**145.92**	**154**	PKPdf	**PKPab**	**18 31 46.3**	**+0.7**
VA03	**San Esteban**	**146.30**	**155**	PKPbc	**PKPab**	**18 31 48.2**	**+1.3**
CO02	**Combarbal**	**147.43**	**152**	PKPbc	**PKPab**	**18 31 51.0**	**-0.3**
CPUP	**Villa Florida**	**156.25**	**173**	PKPbc	PKPdf	18 32 10.6	+11
	comp=Z,0.6nm,0.3s,baz=194,slow=7.2,SNR=3.6						
LPAZ	**La Paz**	**160.67**	**135**	PKPab	**PKPab**	**18 32 50.1**	**+1.8**
	comp=Z,0.5nm,0.3s,baz=240,slow=17,SNR=4.1						

SJA ***26*** *18:42:06.2±0.6, 27°.62S×67°.46W, h164*^{km}*±6*^{km}*, ML4.2, MW4.2, Hypocentre not reviewed by the ISC*

NEIC ***26*** *18:42:07.5±2.5, 27°.59S±0°.06×67°.35W±0°.09, h132*^{km}*±8*^{km}*, mb4.7/23, ML4.4(GUC), Error ellipse: s-maj=12.1km s-min=9.0km az=93.0*

IDC ***26*** *18:42:08.6±0.7, 27°.53S×67°.23W, h137*^{km}*±5*^{km}*, mb3.8/11, mbtmp4.2/17, MS3.1/4, Error ellipse: s-maj=16.1km s-min=10.4km az=82.0*

VAO ***26*** *18:42:09.1±0.3, 27°.51S×67°.34W, h132*^{km}*, mb4.5*

GUC ***26*** *18:42:09.7±0.6, 27°.56S×67°.46W, h120*^{km}*±12*^{km}*, ML4.5*

ISC 26 18:42:07.3±0.6, **27°.55S**±0°.04×**67°.43W**±0°.04, **h135**^{km}±5^{km}, **n175**, σ**1§53**/195, **mb4.6**/22, **9C-2D, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AC02	**Maricunga**	**1.68**	**295**		**Pn**	**18 42 40.6**	**+2.3**
CYA	**Choya**	**1.69**	**122**	⇑*i*P	**Pn**	**18 42 39.9**	**+2.0**
CYA				*i* S	**Sn**	**18 43 02.1**	**+0.7**
CYA	**Choya**	**1.69**	**122**	*i* P		18 42 39.6	
CYA				*i* S		18 43 03.1	
CYA				IAML		18 43 03.3	
	comp=Z,419nm,1.7s						
ACLC	**CERRO LA CRUZ**	**1.91**	**167**	*i* P		18 42 41.6	
ACLC				*i* S		18 43 08.1	
ACLC				IAML		18 43 12.3	
	comp=Z,1µm,0.5s						
GO03	**Copiap**	**2.49**	**268**		**Pn**	**18 42 49.5**	**+1.8**
GO03				Sn	**Sn**	**18 43 20.1**	**+1.4**
GO03	**Copiap**	**2.49**	**268**	⇑*i*P	**Pn**	**18 42 49.5**	**+1.8**
GO03				*i* S	**Sn**	**18 43 19.7**	**+1.0**
GO03				IAML		18 43 22.7	
	comp=E,4µm,0.3s						
GO03	**Copiap**	**2.49**	**268**	*i* P		18 42 48.4	
AC06	**Mina Casimiro**	**2.61**	**274**		**Pn**	**18 42 50.6**	**+1.6**
AC06				Sn	**Sn**	**18 43 21.9**	**+0.6**
AC06	**Mina Casimiro**	**2.61**	**274**	⇑*i*P	**Pn**	**18 42 50.7**	**+1.6**
AC06				*i* S	**Sn**	**18 43 21.8**	**+0.6**
AC06				IAML		18 43 26.3	
	comp=N,976nm,0.4s						
AC05	**El Transito**	**2.82**	**242**		**Pn**	**18 42 53.8**	**+2.0**
AC05	**El Transito**	**2.82**	**242**	⇑*i*P	**Pn**	**18 42 53.9**	**+2.0**
AC05				*i* S	**Sn**	**18 43 27.8**	**+1.6**
AC05				IAML		18 43 29.9	
	comp=E,2µm,0.3s						
AC05	**El Transito**	**2.82**	**242**	*i* P		18 42 52.1	
AC05				IAML		18 43 29.9	
	comp=Z,1µm,0.3s						
GO02	**Mina Guanaco**	**3.07**	**320**		**Pn**	**18 42 58.3**	**+2.9**
GO02	**Mina Guanaco**	**3.07**	**320**	⇓*i*P	**Pn**	**18 42 58.2**	**+2.9**
GO02				*i* S	**Sn**	**18 43 34.7**	**+2.4**
GO02	**Mina Guanaco**	**3.07**	**320**	*i* P		18 42 56.5	
AC01	**Pan de Azucar**	**3.16**	**296**		**Pn**	**18 42 57.5**	**+1.4**
AC01	**Pan de Azucar**	**3.16**	**296**	*e*P	**Pn**	**18 42 57.9**	**+1.7**
AC01				*i* S	**Sn**	**18 43 33.5**	**-0.4**
AC01				IAML		18 43 38.2	
	comp=E,503nm,0.3s						
AC01	**Pan de Azucar**	**3.16**	**296**	*i* P		18 42 57.0	
AC01				IAML		18 43 41.0	
	comp=Z,211nm,0.1s						
LCO	**Las Campanas**	**3.23**	**243**		**Pn**	**18 42 58.4**	**+1.2**
LCO	**Las Campanas**	**3.23**	**243**	*e*P	**Pn**	**18 42 58.5**	**+1.2**
LCO				*e*S	**Sn**	**18 43 36.7**	**+0.7**
LCO	**Las Campanas**	**3.23**	**243**	*i* P		18 42 57.4	
AC04	**Llanos de Chal**	**3.29**	**258**		**Pn**	**18 42 58.6**	**+0.8**
AC04	**Llanos de Chal**	**3.29**	**258**	⇑*i*P	**Pn**	**18 42 58.6**	**+0.8**
AC04				*i* S	**Sn**	**18 43 36.6**	**-0.4**
AC04				IAML		18 43 39.2	
	comp=E,936nm,0.5s						
AC04	**Llanos de Chal**	**3.29**	**258**	*i* P		18 42 58.0	
AC04				IAML		18 43 43.0	
	comp=Z,454nm,0.5s						
CO01	**Juntas del Tor**	**3.36**	**223**		**Pn**	**18 43 01.4**	**+2.4**
CO01	**Juntas del Tor**	**3.36**	**223**	⇑*i*P	**Pn**	**18 43 01.4**	**+2.4**
CO01				*i* S	**Sn**	**18 43 40.2**	**+1.2**
CO01				IAML		18 43 43.9	
	comp=N,633nm,0.6s						
CO01	**Juntas del Tor**	**3.36**	**223**	*i* P		18 42 58.9	
CO01				IAML		18 43 43.3	
	comp=Z,292nm,0.8s						
DOCA	**Reserva Natura**	**3.68**	**203**	*i* P		18 43 03.0	
GO04	**Tololo Observa**	**3.94**	**228**		**Pn**	**18 43 07.0**	**+0.4**
GO04	**Tololo Observa**	**3.94**	**228**	⇑*i*P	**Pn**	**18 43 06.9**	**+0.3**
GO04				*e*S	**Sn**	**18 43 53.7**	**+1.1**
GO04	**Tololo Observa**	**3.94**	**228**	*i* P		18 43 06.0	
PB14	**IPOC Station P**	**3.96**	**317**		**Pn**	**18 43 09.2**	**+2.3**
PB14	**IPOC Station P**	**3.96**	**317**	*e*P	**Pn**	**18 43 09.2**	**+2.3**
PB14				*e*S	**Sn**	**18 43 50.6**	**-2.5**
PB14	**IPOC Station P**	**3.96**	**317**	*i* P		18 43 08.0	
PB14				IAML		18 43 55.6	
	comp=Z,206nm,0.5s						
SJA	**San Juan**	**4.08**	**194**	*i* P		18 43 08.1	
SJA				IAML		18 43 58.4	
	comp=Z,454nm,0.9s						
CO05	**La Serena**	**4.09**	**234**	Pn	**Pn**	**18 43 08.1**	**-0.3**
CO05	**La Serena**	**4.09**	**234**	⇑*i*P	**Pn**	**18 43 08.0**	**-0.3**
CO05				*i* S	**Sn**	**18 43 54.5**	**-1.3**
CFA	**Coronel Fontan**	**4.10**	**190**	P	**Pn**	**18 43 09.2**	**+0.7**
	comp=Z,69nm,0.3s,baz=0.6,slow=11,SNR=866						
CFA				S	**Sn**	**18 43 54.0**	**-2.1**
	comp=Z,480nm,0.3s,baz=255,slow=19,SNR=12						
CFA	**Coronel Fontan**	**4.10**	**190**	*i* P		18 43 08.4	
CFA				IAML		18 43 56.2	
	comp=Z,542nm,0.5s						
ZON	**Zonda**	**4.13**	**195**	Pn	**Pn**	**18 43 09.8**	**+0.9**
ZON	**Zonda**	**4.13**	**195**	*i* P		18 43 08.4	
ZON				IAML		18 43 58.3	
	comp=Z,461nm,0.6s						
CO03	**El Pedregal**	**4.34**	**220**		**Pn**	**18 43 12.3**	**+0.5**
CO03	**El Pedregal**	**4.34**	**220**	⇑*i*P	**Pn**	**18 43 12.3**	**+0.5**
CO03				*i* S	**Sn**	**18 44 03.0**	**+1.2**
CO03	**El Pedregal**	**4.34**	**220**	*i* P		18 43 11.4	
CO03				IAML		18 44 06.7	
	comp=Z,454nm,0.4s						
RTLS	**Leoncito**	**4.53**	**201**	*i* P		18 43 14.6	
RTLS				IAML		18 44 08.2	
	comp=Z,916nm,0.7s						
RTLS				IAML		18 44 10.9	
	comp=Z,907nm,0.3s						
PB15	**IPOC Station P**	**4.70**	**336**		**Pn**	**18 43 19.1**	**+2.4**
PB15	**IPOC Station P**	**4.70**	**336**	*e*P	**Pn**	**18 43 19.3**	**+2.6**
PB15				*e*S	**Sn**	**18 44 13.0**	**+2.3**
PB15	**IPOC Station P**	**4.70**	**336**	*i* P		18 43 17.7	
PB15				IAML		18 44 23.4	
	comp=Z,122nm,0.3s						
CO02	**Combarbal**	**4.79**	**220**		**Pn**	**18 43 17.7**	**0.0**
CO02	**Combarbal**	**4.79**	**220**	*i* P		18 43 17.0	
CO02				IAML		18 44 23.4	
	comp=Z,383nm,0.4s						
CO06	**Fray Jorge**	**4.82**	**229**		**Pn**	**18 43 16.5**	**-1.5**
PB10	**IPOC Station P**	**4.91**	**324**	Pn	**Pn**	**18 43 20.7**	**+1.4**
PB10	**IPOC Station P**	**4.91**	**324**	*e*P	**Pn**	**18 43 20.9**	**+1.5**
PB10	**IPOC Station P**	**4.91**	**324**	*i* P		18 43 20.0	
PB10				IAML		18 44 33.2	
	comp=Z,50nm,1.2s						
LVC	**Limon Verde**	**5.10**	**344**	P	**Pn**	**18 43 24.8**	**+2.6**
	comp=Z,37nm,0.4s,baz=158,slow=9.6,SNR=77						
LVC				S	**Sn**	**18 44 21.8**	**+1.4**
	comp=Z,83nm,0.8s,baz=275,slow=20,SNR=30						
LVC	**Limon Verde**	**5.10**	**344**	*e*P	**Pn**	**18 43 24.1**	**+1.9**
LVC	**Limon Verde**	**5.10**	**344**	*i* P		18 43 23.2	
LVC				IAML		18 44 26.0	
	comp=Z,33nm,1.0s						
ASAL	**Salagasta**	**5.17**	**193**	*i* P		18 43 22.0	
ASAL				IAML		18 44 23.7	
	comp=Z,140nm,0.7s						
PB06	**IPOC Station P**	**5.20**	**338**	⇓*i*P		18 43 24.1	
PB06				IAML		18 44 27.0	
	comp=Z,42nm,2.3s						
PB04	**IPOC Station P**	**5.75**	**334**		**Pn**	**18 43 31.6**	**+0.9**
VA03	**San Esteban**	**5.86**	**207**		**Pn**	**18 43 32.1**	**+0.1**
PB03	**IPOC Station P**	**5.87**	**338**		**Pn**	**18 43 33.6**	**+1.2**
PB09	**IPOC Station P**	**5.96**	**344**		**Pn**	**18 43 35.8**	**+2.2**
VACA	**Villa Angela C**	**5.97**	**92**	*e*P	**Pn**	**18 43 32.6**	**-0.8**
VA06	**Catapilco**	**6.01**	**213**	Pn	**Pn**	**18 43 32.3**	**-1.7**
PB07	**IPOC Station P**	**6.22**	**338**		**Pn**	**18 43 37.7**	**+0.8**
ROC1	**El Roble**	**6.23**	**209**		**Pn**	**18 43 35.6**	**-1.5**
PEL	**Peldehue**	**6.24**	**206**	Pn	**Pn**	**18 43 36.1**	**-1.0**
MT08	**Bocatoma Ro**	**6.28**	**200**		**Pn**	**18 43 39.3**	**+1.4**
TICA	**Tres Isletas**	**6.39**	**81**	*e*P	**Pn**	**18 43 39.4**	**+0.3**
MT05	**Renca**	**6.48**	**205**	Pn	**Pn**	**18 43 39.4**	**-0.9**
MT03	**Universidad Ad**	**6.49**	**203**	Pn	**Pn**	**18 43 40.4**	**-0.1**

MT02	Curacav	6.53	208		Pn	18 43 39.0	-1.9
VA01	Torpederas	6.56	213	Pn	Pn	18 43 38.2	-3.0
PB02	IPOC Station P	6.60	340		Pn	18 43 42.0	0.0
MT13	San Alfonso	6.64	201		Pn	18 43 42.7	+0.2
LMEL	Las Melosas	6.71	200		Pn	18 43 43.9	+0.3
PB01	IPOC Station P	6.75	343		Pn	18 43 44.6	+0.6
MT09	Talagante	6.92	205		Pn	18 43 43.7	-2.6
VA05	Santo Domingo	7.07	210		Pn	18 43 45.0	-3.2
MT01	Popeta	7.10	207		Pn	18 43 46.3	-2.3
BO01	Tunca	7.50	204	Pn	Pn	18 43 51.8	-2.2
PB08	IPOC Station P	7.54	348		Pn	18 43 55.6	+0.6
BO02	Sierra Bellavi	7.77	201		Pn	18 43 56.5	-1.1
GO01	Chusmiza	8.01	348		Pn	18 44 00.9	-0.4
PB11	IPOC Station P	8.02	345		Pn	18 44 00.9	-0.3
MECA	Mercedes	8.33	104	*e*P	Pn	18 44 04.7	-0.4
GO05	Huala	8.37	206		Pn	18 44 01.9	-3.8
ESFA	Espinillo Form	8.43	74	*e*P	Pn	18 44 05.8	-0.7
MNMC	Minye Minye	8.62	346		Pn	18 44 09.1	-0.1
CPUP	Villa Florida	9.09	85	P	Pn	18 44 14.1	-1.3
	comp=Z,4.5nm,0.8s,baz=269,slow=11,SNR=9.2						
CPUP				LR	LR	18 47 41.1	
	comp=Z,32nm,20.4s,baz=230,slow=37						
CPUP	Villa Florida	9.09	85	Pn	Pn	18 44 13.7	-1.7
PB12	IPOC Station P	9.29	343	Pn	Pn	18 44 16.6	-1.6
PB16	IPOC Station P	9.37	348		Pn	18 44 20.9	+1.2
ITQB	Itaqui	9.73	105	Pn	Pn	18 44 22.4	-1.4
ITQB	Itaqui	9.73	105	*e*P	Pn	18 44 23.2	-0.7
AZCA	Azaras, Argent	10.15	96	*e*P	Pn	18 44 29.1	-0.4
BI05	Punta Hualpn	10.38	207	Pn	Pn	18 44 28.7	-3.9
LPAZ	La Paz	11.23	357	P	Pn	18 44 45.6	+1.1
	comp=Z,1.3nm,0.3s,baz=163,slow=7.6,SNR=12						
LPAZ				S	Sn	18 46 40.8	-7.9
	comp=Z,0.4nm,0.4s,baz=204,slow=21,SNR=0.8						
LPAZ				LR	LR	18 49 59.1	
	comp=Z,132nm,19.2s,baz=139,slow=42						
LPAZ	La Paz	11.23	357	Pn	Pn	18 44 44.7	+0.2
LPAZ	La Paz	11.23	357	*e*P	Pn	18 44 44.1	-0.4
TRQA	Tornquist	11.43	158	Pn	Pn	18 44 47.0	+0.5
CRSM	Crissiumal (Br	11.88	93	*e*P	Pn	18 44 51.6	-0.9
BDQN	Bodoquena, MS	12.05	56	*e*P	Pn	18 44 55.8	+1.1
BBSD	Serra de San D	12.09	33	*e*P	Pn	18 44 54.9	-0.3
AMBA	Amambai (Brazi	12.16	70	*e*P	Pn	18 44 57.5	+1.4
MCR1	Marechal Candi	12.43	79	*e*P	Pn	18 45 00.2	+0.6
GO06	Curarrehue	12.46	195	Pn	Pn	18 44 58.3	-1.8
PLTB	Pedras Altas	12.73	113	*e*P	Pn	18 45 03.6	+0.1
ALGR	Alto Alegre (B	12.77	99	*e*P	Pn	18 45 03.5	-0.6
AQDB	Aquidauana	12.82	59	Pn	Pn	18 45 03.2	-1.5
AQDB	Aquidauana	12.82	59	*e*P	Pn	18 45 04.3	-0.4
SIV	San Ignacio	12.93	28	P	Pn	18 45 04.9	-1.2
	comp=Z,7.1nm,0.8s,baz=210,slow=10.0,SNR=30						
FRBT	Francisco Belt	12.93	86	*e*P	Pn	18 45 06.4	+0.2
LR04	Corral	13.27	201	Pn	Pn	18 45 05.6	-4.7
PLCA	Paso Flores	13.40	190	P	P	18 45 14.6	-2.1
	comp=Z,3.7nm,0.8s,baz=7.0,slow=10,SNR=8.4						
PLCA	Paso Flores	13.40	190	Pn	Pn	18 45 12.5	+0.4
PLCA	Paso Flores	13.40	190	*e*P	P	18 45 14.4	-2.3
ITAB	Concordia	13.60	92		P	18 45 19.3	+0.4
ITAB	Concordia	13.60	92	*e*P	Pn	18 45 15.7	+1.0
PTGB	Pitanga	14.09	82	*e*P	Pn	18 45 21.4	+0.4
RVDE	Rio Verde (Bra	14.26	56	*e*P	Pn	18 45 23.4	+0.2
PTLB	Pontes e Lacer	14.29	34	Pn	Pn	18 45 23.4	-0.2
PTLB	Pontes e Lacer	14.29	34	*e*P	Pn	18 45 23.1	-0.5
CNLB	Canela	14.69	101	*e*P	Pn	18 45 29.5	+1.0
PP1B	Ponte de Pedra	15.23	52	*e*P	Pn	18 45 35.2	-0.1
PCMB	Pacaembu	15.85	72	*e*P	Pn	18 45 42.9	-0.1
SALV	Santo Antonio	15.90	46	*e*P	Pn	18 45 43.4	-0.2
VILB	Vilhena	16.02	26	Pn	Pn	18 45 41.8	-3.4
VILB				IAmb	IAmb	18 45 48.2	
	comp=Z,26nm,0.8s						
VILB	Vilhena	16.02	26	*e*P	Pn	18 45 45.6	+0.4
FRTB	Fartura	16.67	79	*e*P	Pn	18 45 53.6	+0.6
ITRB	Iturama	17.47	67	*e*P	P	18 46 02.2	+0.3
BB19B	Bebedouro	18.39	74	*e*P	P	18 46 12.0	+0.1
PET01	Itanhaem-SP	18.41	84	*e*P	P	18 46 12.1	-0.1
SPB	Sao Paulo	18.46	82	*e*P	P	18 46 13.3	+0.6
ARAG	Araguaiana, MT	18.68	54	*e*P	P	18 46 15.0	-0.1
RCLB	Rio Claro- Sao	18.74	79	*e*P	P	18 46 16.2	+0.4
PDRB	Porto dos Gac	18.77	34	*e*P	P	18 46 15.4	-0.7
SAML	Samuel	18.93	13	P	P	18 46 18.2	+0.3
SAML	Samuel	18.93	13	*e*P	P	18 46 19.2	+1.3
VAO	Valinhos	19.05	81	*e*P	P	18 46 19.5	+0.3
CLDB	Colider	19.87	36	*e*P	P	18 46 28.5	+0.5
IPMB	Ipameri, GO	20.09	66	*e*P	P	18 46 29.7	-0.7
PARB	Paraibuna	20.13	83	*e*P	P	18 46 30.9	+0.1
CZSB	Cruzeiro do Su	20.34	345	*e*P	Pn	18 46 35.3	-1.2
GO08	Villa O'Higgin	21.26	189	P	P	18 46 43.9	+1.3
PMNB	Patos De Minas	21.27	70	*e*P	P	18 46 41.9	-1.3
BDFB	Brasilia	21.56	61	P	P	18 46 44.8	-1.5
	comp=Z,4.3nm,0.3s,baz=233,slow=9.5,SNR=16						
	comp=Z,4.3nm,0.3s						
BDFB	Brasilia	21.56	61	P	P	18 46 44.7	-1.5
BDFB	Brasilia	21.56	61	*e*P	P	18 46 45.1	-1.2
VAS01	Vassouras-RJ	22.36	82	*e*P	P	18 46 54.6	+0.2
TBTG	Tabatinga, AM	23.36	354	*e*P	P	18 47 06.2	+2.4
TEFE	Tefe	24.06	7	*e*P	P	18 47 11.8	+1.7
MACA	Manacapuru-AM	25.10	16	P	P	18 47 20.0	+0.5
MACA				IAmb	IAmb	18 47 21.6	
	comp=Z,36nm,0.7s						
MACA	Manacapuru-AM	25.10	16	*e*P	P	18 47 20.6	+1.0
EFI	East Falkland	25.11	166	P	P	18 47 19.0	-0.3
EFI				IAmb	IAmb	18 47 21.7	
	comp=Z,20nm,1.0s						
MG02	Cerro Sombrero	25.24	183	P	P	18 47 20.2	-0.2
MG02				IAmb	IAmb	18 47 25.9	
	comp=Z,51nm,1.1s						
ITTB	Itaituba	25.61	28	*e*P	P	18 47 24.6	+0.4
SMTB	Santa Maria do	26.40	49	*e*P	P	18 47 31.0	-0.3
SGCB	S£o Gabriel d	27.28	1	*e*P	P	18 47 39.4	+0.3
MG01	Puerto William	27.36	180	P	P	18 47 40.3	+0.9
BOAV	Boa Vista	30.51	14	P	P	18 48 08.9	+1.2
BOAV				IAmb	IAmb	18 48 11.3	
	comp=Z,15nm,0.9s						
BOAV	Boa Vista	30.51	14	*e*P	P	18 48 08.1	+0.4
MCPB	Macapa, AP	30.80	31	*e*P	P	18 48 10.9	+0.6
MDP	Montagnes des	35.47	26	P	P	18 48 50.3	-0.6
	comp=Z,9.4nm,0.7s,baz=190,slow=14,SNR=7.4						
MDP				LR	LR	19 06 07.0	
	comp=Z,35nm,19.3s,baz=108,slow=41						
	comp=Z,9.4nm,0.7s						
BAUV	El Baul	36.28	359	P	P	18 48 57.1	-0.7
BAUV				IAmb	IAmb	18 48 58.7	
	comp=Z,14nm,1.1s						
SDV	Santo Domingo	36.35	355	*e*P	P	18 48 59.5	+0.8
ESPZ	Base Esperanza	36.49	172	P	P	18 48 58.2	-0.8
JACO	JACO, Garabito	40.59	333	P	P	18 49 34.8	+1.0
JTS	Las Juntas de	41.27	333	P	P	18 49 40.8	+1.4
	comp=Z,2.5nm,0.8s,baz=146,slow=11,SNR=3.8						
	comp=Z,2.5nm,0.8s						
MLPR	Magueyes Islan	45.25	1	P	P	18 50 10.2	-1.1
MLPR				IAmb	IAmb	18 50 26.4	
	comp=Z,23nm,1.1s						
CELP	Cerrillos	45.36	1	P	P	18 50 10.9	-1.2
CELP				IAmb	IAmb	18 50 13.0	
	comp=Z,15nm,1.0s						
AOPR	Arecibo Observ	45.63	1	P	P	18 50 12.9	-1.4
AOPR				IAmb	IAmb	18 50 21.6	
	comp=Z,23nm,0.8s						
CUPR	Culebra, Puert	45.63	3	P	P	18 50 13.3	-0.9
CUPR				IAmb	IAmb	18 50 15.0	
	comp=Z,15nm,0.9s						
VNA2	Neumayer--Watz	54.53	160	P	P	18 51 21.6	+0.8
	baz=286,slow=7.0						
SNAA	Sanae	56.15	160	P	P	18 51 32.8	+0.4
SNAA	Sanae	56.15	160	P	P	18 51 32.9	+0.4
	comp=Z,2.9nm,0.8s,baz=301,slow=12,SNR=7.1						
	comp=Z,2.9nm,0.8s						
SNAA	Sanae	56.15	160	P	P	18 51 32.5	+0.1
TROLL	Troll, Antarti	57.87	160	P	P	18 51 45.3	+0.7
QSPA	South Pole Qui	62.67	180	P	P	18 52 18.6	+1.3
	comp=Z,6.1nm,0.9s,baz=161,slow=4.3,SNR=20						
	comp=Z,6.1nm,0.9s						
QSPA	South Pole Qui	62.67	180	P	P	18 52 18.6	+1.3
QSPA				IAmb	IAmb	18 52 19.1	
	comp=Z,5.4nm,0.8s						
DBIC	Dimbokro	69.32	70	P	P	18 53 00.4	0.0
	comp=Z,3.5nm,0.5s,baz=235,slow=6.3,SNR=19						
	comp=Z,3.5nm,0.5s						
DBIC	Dimbokro	69.32	70	P	P	18 53 00.0	-0.4
DBIC				IAmb	IAmb	18 53 00.8	
	comp=Z,8.9nm,0.9s						
TSUM	Tsumeb	77.09	105	LR	LR	19 26 17.7	
	comp=Z,29nm,18.3s,baz=158,slow=34						
TOA0	Torodi Ar. Sit	78.22	68	P	P	18 53 52.5	+0.2
TOA0				IAmb	IAmb	18 53 53.7	
	comp=Z,17nm,0.8s						
TORD	Torodi Ar. Bea	78.22	68	P	P	18 53 52.7	+0.4
	comp=Z,13nm,0.7s,baz=257,slow=5.3,SNR=72						
TORD				pP	pP	18 54 26.2	-0.5
	comp=Z,0.8nm,0.8s,baz=244,slow=5.9,SNR=1.0						
BOSA	Boshof	79.48	117	P	P	18 54 00.6	+1.3
	comp=Z,2.9nm,1.0s,baz=257,slow=6.2,SNR=3.2						
	comp=Z,2.9nm,1.0s						
BOSA	Boshof	79.48	117	P	P	18 54 00.1	+0.9
PDAR	Pinedale Array	80.00	330	P	P	18 54 02.9	+1.1
	comp=Z,0.9nm,0.8s,baz=130,slow=5.8,SNR=6.9						
	comp=Z,0.9nm,0.8s						
NVAR	Mina Array Bea	81.07	322	P	P	18 54 10.1	+2.6
	comp=Z,0.2nm,0.5s,baz=150,slow=7.3,SNR=2.4						
	comp=Z,0.2nm,0.5s						
ELK	Elko	81.15	325	P	P	18 54 09.9	+2.0
	comp=Z,0.6nm,0.3s,baz=152,slow=17,SNR=4.1						
	comp=Z,0.6nm,0.3s						
ESDC	Sonseca Array	89.22	44	P	P	18 54 49.5	+1.7
	comp=Z,0.4nm,0.9s,baz=236,slow=4.5,SNR=1.6						
	comp=Z,0.4nm,0.9s						
ASAR	Alice Springs	125.07	204	PKP	PKPdf	19 00 52.1	-0.1
	comp=Z,0.7nm,0.7s,baz=146,slow=1.9,SNR=9.6						
ASAR				pPKP	pPKPdf	19 01 29.2	+0.3
	comp=Z,0.4nm,0.9s,baz=160,slow=2.1,SNR=1.8						
WRA	Warramunga Arr	128.29	206	PKP	PKiKP	19 00 58.8	-0.3
	comp=Z,1.3nm,0.8s,baz=156,slow=1.9,SNR=11						
ZALV	Zalesovo Beam	146.68	30	PKPbc	PKPbc	19 01 32.6	-0.1
	comp=Z,2.2nm,0.6s,baz=298,slow=2.9,SNR=11						
ZALV				pPKPbc	pPKPbc	19 02 09.9	+0.2
	comp=Z,1.3nm,0.5s,baz=320,slow=3.6,SNR=3.2						
KSH	Kashi	147.46	59	PKPbc	PKPdf	19 01 28.5	-4.3
KSH				pPKP	pPKPab	19 02 14.5	+0.4
MKAR	Makanchi Array	149.44	43	PKPbc	PKiKP	19 01 41.6	+0.3
	comp=Z,0.9nm,0.6s,baz=295,slow=3.0,SNR=13						
MKAR				pPKPbc	pPKPbc	19 02 17.5	-0.1
	comp=Z,0.7nm,0.7s,baz=295,slow=3.5,SNR=2.3						
PZH	PanZhiHua	170.29	94	PKP	PKPdf	19 01 58.5	-1.1

*NOU **26** 18:46:44.9, 42°.65S×173°.67E, h0^{km}, MLv3.7/8, South Island, New Zealand*

*WEL **26** 18:46:47.6±0.5, 42°S±4°×17°4E±°, h12^{km}±3^{km}, M3.3/13, ML3.5/14, MLv3.3/13, Error ellipse: s-maj=0.0km s-min=0.0km az=126.1, confirmed*

ISC 26 18:46:46.2±1.2**, 42°.54S**±0°.04×**173°.63E**±0°.05**, h13**^{km}±7^{km}**, n61, **σ0^{s}**.88**/66**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHZ	Kahutara	0.14	334	P	Pg	18 46 49.8	+0.1
KHZ	Kahutara	0.14	334	P	Pg	18 46 50.0	+0.3
KHZ				S	Sg	18 46 51.8	-0.4
GVZ	Greta Valley S	0.61	226	P	Pn	18 47 01.0	+0.3
GVZ				S	Sn	18 47 11.0	+0.7
BSWZ	Blackbirch Sta	0.85	13	P	Pg	18 47 02.6	0.0
CMWZ	Cape Campbell	0.91	29	P	Pn	18 47 05.4	+0.7
THZ	Tophouse	0.95	325	P	Pg	18 47 02.8	-1.7
AMCZ	Amberley	0.95	228	P	Pn	18 47 06.0	+0.6
LTZ	Lake Taylor	1.03	256	P	Pg	18 47 05.6	-0.4
LTZ				S	Sb	18 47 19.3	0.0
TUWZ	Tuamarina	1.14	12	P	Pg	18 47 07.9	-0.3
MRNZ	Matariki Terra	1.31	330	P	Pn	18 47 09.5	-0.8
NNZ	Nelson	1.34	352	P	Pn	18 47 10.1	-0.5
NNZ				S	Sb	18 47 27.7	-0.6
MQZ	McQueen's Vall	1.36	211	P	Pn	18 47 11.3	+0.3
MQZ				S	Sb	18 47 28.8	-0.1
OXZ	Oxford	1.40	236	P	Pn	18 47 11.4	-0.2
TCW	Tory Channel	1.42	20	P	Pn	18 47 11.7	-0.1
AKCZ	Akaroa Harbour	1.43	201	P	Pn	18 47 12.8	+0.9
SNZO	South Karori	1.47	34	P	Pn	18 47 12.8	+0.3
WEL	Wellington	1.52	35	P	Pn	18 47 13.4	+0.3
PLWZ	Palliser	1.56	52	P	Pn	18 47 13.7	0.0
DSZ	Denniston Nort	1.57	300	P	Pn	18 47 13.7	-0.2
TKNZ	Takaka Hill	1.59	342	P	Pn	18 47 13.9	-0.3
RACZ	Rakaia	1.61	222	P	Pn	18 47 14.4	+0.1
INZ	Inchbonnie	1.62	263	P	Pn	18 47 15.1	+0.6
DUWZ	D'Urville Isla	1.75	7	P	Pn	18 47 16.6	+0.2
PAWZ	Paruwai Farm	1.78	50	P	Pn	18 47 16.5	-0.2
CAW	Cannon Point	1.79	37	P	Pn	18 47 16.9	0.0
QRZ	Quartz Range	1.90	334	P	Pn	18 47 19.1	+0.7
QRZ	Quartz Range	1.90	334	P	Pn	18 47 18.7	+0.3
WACZ	Wakanui South	1.91	222	P	Pn	18 47 18.8	+0.2
TRWZ	Traveller	1.92	54	P	Pn	18 47 18.3	-0.4
KIW	Kapiti Island	1.94	30	P	Pn	18 47 19.1	+0.2
MTW	Mount Morrison	1.97	46	P	Pn	18 47 19.0	-0.4
OGWZ	Otaki Gorge	2.08	34	P	Pn	18 47 20.7	-0.1
HOWZ	Holdsworth Sta	2.17	41	P	Pn	18 47 21.7	-0.4
WVZ	Waitaha Valley	2.19	255	P	Pn	18 47 22.9	+0.5
RPZ	Rata Peaks	2.22	237	P	Pn	18 47 22.5	-0.3
RPZ	Rata Peaks	2.22	237	P	Pn	18 47 22.6	-0.1
ARCZ	Arundel	2.27	231	P	Pn	18 47 23.2	-0.3
MRZ	Mangatainoka R	2.38	39	P	Pn	18 47 24.5	-0.5
TIWZ	Tintock	2.45	45	P	Pn	18 47 25.6	-0.4
TMZ	Timaru	2.65	225	P	Pn	18 47 28.7	0.0
BFZ	Birch Farm	2.71	47	P	Pn	18 47 29.5	0.0
BFZ	Birch Farm	2.71	47	P	Pn	18 47 28.5	-1.0
LBZ	Lake Benmore	3.11	233	P	Pn	18 47 36.3	+1.3
KHEZ	Kahui Hut	3.26	5	P	Pn	18 47 39.0	+1.8
KHEZ	Kahui Hut	3.26	5	P	Pn	18 47 39.3	+2.2
NBEZ	Newall Road No	3.28	3	P	Pn	18 47 40.7	+3.4
ODZ	Otahua Downs	3.30	220	P	Pn	18 47 37.1	-0.6
ODZ	Otahua Downs	3.30	220	P	Pn	18 47 37.5	-0.1
MTVZ	Mangateitei	3.45	24	P	Pn	18 47 41.1	+1.3
WNVZ	Wahianoa	3.54	26	P	Pn	18 47 41.7	+0.5
TUVZ	Tukino	3.62	26	P	Pn	18 47 42.9	+0.7
NGZ	Ngauruhoe	3.68	25	P	Pn	18 47 44.1	+1.1
SNVZ	South Ngauruho	3.69	25	P	Pn	18 47 44.1	+1.0
OTVZ	Oturere	3.71	25	P	Pn	18 47 44.0	+0.5
NNVZ	North Ngauruho	3.73	25	P	Pn	18 47 44.8	+1.1
ETVZ	East Tongariro	3.75	26	P	Pn	18 47 44.6	+0.6
TMVZ	Te Maari	3.77	25	P	Pn	18 47 44.4	+0.2
NTVZ	North Tongarir	3.78	25	P	Pn	18 47 45.1	+0.8
HIZ	Hauiti	4.13	14	P	Pn	18 47 51.6	+2.5
HIZ	Hauiti	4.13	14	P	Pn	18 47 50.7	+1.6
AWAZ	Awhitu Peninsu	5.53	8	P	Pn	18 48 07.7	-0.6

*IDC **26** 18:47:31.9±0.9, 59°.58N×139°.12W, h0^{km}, mb3.7/12, mbtmp3.6/15, ML3.3/3, MS3.5/1, Error ellipse: s-maj=24.6km s-min=9.0km az=27.0*

*ANF **26** 18:47:33.3±0.2, 59°.54N×138°.90W, h9^{km}±1^{km}, ML3.9/50, Error ellipse: s-maj=1.7km s-min=1.1km az=11.0*

*NEIC **26** 18:47:34.7±1.4, 59°.57N±0°.04×139°.00W±0°.06, h16^{km}±7^{km}, ML3.9/12, ML3.6(AEIC), Error ellipse: s-maj=5.7km s-min=4.2km az=197.0*

*AEIC **26** 18:47:34.4±1.7, 59°.56N±0°.04×138°.96W±0°.06, h20^{km}±7^{km}, Error ellipse: s-maj=6.0km s-min=4.0km az=190.0*

ISC 26 18:47:34.5±0.9**, 59°.58N**±0°.03×**138°.96W**±0°.02**, h17**^{km}±5^{km}**, n264, **σ1^{s}**.16**/295**, mb3.8**/13**, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNL	Peninsula	0.24	292		Pg	18 47 39.8	-0.2
PNL					Sg	18 47 44.0	+0.3
PNL	Peninsula	0.24	292	P	Pg	18 47 39.7	-0.2
	baz=121						
PNL				S	Sg	18 47 44.0	+0.3
	baz=121						
YKU2	Yakutat	0.37	260		Pb	18 47 42.5	0.0
YKU2				Sg	Sb	18 47 49.8	+1.9
BCPM	Bancas Point	0.51	318		Pg	18 47 43.9	-0.7
BCPM				IAML		18 47 55.2	
	comp=E,7μm,0.3s						
BCPM				IAML		18 47 55.2	
	comp=N,9μm,0.2s						
BCPM	Bancas Point	0.51	318		Sb	18 47 53.1	+1.1
O29M	Mount Kennedy	0.75	15	P	Pg	18 47 48.2	-1.0
	baz=194						
O29M				S	Sg	18 47 58.6	-0.6
	baz=194						
PINM	Pinnacle	0.83	309	P	Pb	18 47 49.3	-1.1
	baz=130,SNR=6.6						
PINM				S	Sb	18 48 01.7	+0.3
	baz=130						
PCA	Pinnacle	0.84	309		Pb	18 47 49.4	-1.2
PCA	Pinnacle	0.84	309		Sg	18 48 02.2	+0.3
SAMH	Samovar Hills	1.07	302		Pb	18 47 53.7	-0.9
SAMH					Sn	18 48 09.8	+0.5
P30M	Million Dollar	1.15	61	P	Pn	18 47 54.8	-1.0
	baz=240						
P30M				S	Sb	18 48 10.0	-0.4
	baz=240						
PLBC	Pleasant Camp	1.33	94	P	Pn	18 47 56.7	-1.5
	baz=274						
PLBC				S	Sn	18 48 13.5	-1.9
	baz=274						
O28M	Mount Upton	1.35	333	P	Pn	18 47 58.5	-0.2
	baz=153						
O28M				S	Sb	18 48 17.1	+0.7
	baz=153						
YUK6	Outpost Mounta	1.40	12	P	Pn	18 47 59.5	+0.1
	baz=192,SNR=1000						
YUK6				S	Sg	18 48 19.2	-0.6
	baz=192						
HYT	Haines Junctio	1.45	30		Pn	18 48 00.1	+0.2
HYT					Sb	18 48 19.8	+0.7
HYT				IAML		18 48 22.6	
	comp=N,2μm,1.0s						
HYT	Haines Junctio	1.45	30	P	Pn	18 48 00.2	+0.2
	baz=210,SNR=1000						
HYT				S	Sb	18 48 19.9	+0.7
	baz=210						
YUK8	Steele Glacier	1.76	347	P	Pn	18 48 04.9	+0.6
	baz=167,SNR=1000						
YUK8				Sb	Sg	18 48 30.8	-0.3
	baz=167						
YUK4	Talbot Arm	1.78	5	P	Pb	18 48 06.7	0.0
	baz=186,SNR=1000						
CYK	Cape Yakataga	1.85	287		Pn	18 48 04.7	-0.6
CYK					Sn	18 48 28.9	+0.7
SKAG	Skagway	1.85	92		Pn	18 48 05.2	-0.3
SKAG	Skagway	1.85	92	P	Pn	18 48 05.1	-0.3
	baz=274,SNR=26						
SKAG				S	Sn	18 48 29.3	+0.9
	baz=274						
O30N	Mendenhall	1.87	49	P	Pn	18 48 05.8	+0.2
	baz=230,SNR=985						
O30N				S	Sn	18 48 29.6	+0.8
	baz=230						
BARN	Barnard Glacie	2.00	319		Pn	18 48 08.0	+0.4
BARN				IAML		18 48 36.4	
	comp=N,1μm,0.6s						
R31K	City Hall, Gus	2.04	124	P	Pn	18 48 07.7	-0.2
	baz=305						
R31K				S	Sn	18 48 33.1	+0.3
	baz=305						
N30M	Aishikik Lake	2.10	25	P	Pn	18 48 09.2	+0.4
	baz=206						
N30M				S	Sb	18 48 37.6	-0.3
	baz=206						
S31K	Pelican	2.16	138	P	Pn	18 48 08.9	-0.6
	baz=319,SNR=155						
S31K				S	Sn	18 48 36.7	+0.9
	baz=319						
KIAG	Kiagna River	2.17	310		Pn	18 48 09.8	0.0
BALM	Baldy	2.23	312		Pn	18 48 10.7	0.0
YUK3	Moose Creek	2.33	342	P	Pn	18 48 12.2	+0.1
	baz=161,SNR=237						
YUK3				S	Sb	18 48 43.4	-1.1
	baz=161						
BESE	Bessie Mountai	2.34	114		Pn	18 48 13.1	+0.9
N31M	Braeburn, Yuko	2.48	38		Pn	18 48 14.8	+0.8
N31M				IAML		18 48 53.5	
	comp=E,638nm,0.5s						
N31M				IAML		18 48 54.3	
	comp=N,636nm,0.5s						
N31M	Braeburn, Yuko	2.48	38	P	Pn	18 48 14.7	+0.7
	baz=220,SNR=330						
N31M				S	Sn	18 48 45.3	+1.5
	baz=220						
R32K	Eaglecrest	2.65	118	P	Pn	18 48 15.2	-1.1
	baz=301,SNR=18						
P32M	Atlin	2.67	88	P	Pn	18 48 15.5	-1.1
	baz=271,SNR=54						
P32M				S	Sn	18 48 48.3	-0.3
	baz=271						
MCARA	McCarthy VSAT	2.71	314		Pn	18 48 17.7	+0.6
MCARA	McCarthy VSAT	2.71	314	P	Pn	18 48 17.6	+0.6
	baz=131,SNR=944						
MCARA				S	Sb	18 48 53.0	-2.2
	baz=131						
JIS	Juneau Island	2.71	117		Pn	18 48 16.1	-1.0
VRDI	Verde Repeater	2.78	309	Pn	Pn	18 48 18.1	-0.1
M29M	Somme Creek	2.88	5	P	Pn	18 48 20.2	+0.6
	baz=185						
M29M				S	Sn	18 48 57.0	+3.1
	baz=185						
BVCY	Beaver Creek	2.99	343	P	Pn	18 48 21.2	+0.2
	baz=161,SNR=8.5						
GLB	Gilahina Butte	3.04	310		Pn	18 48 21.6	-0.1
S32K	Killisnoo	3.12	131	P	Pn	18 48 21.7	-1.1
	baz=314						
S32K				Sb	Sb	18 49 07.4	+0.2
	baz=314						
M27K	Edge Creek, AK	3.13	334		Pn	18 48 23.6	+0.5
M27K	Edge Creek, AK	3.13	334	P	Pn	18 48 23.4	+0.3
	baz=152,SNR=32						
M27K				Sb	Sb	18 49 11.2	+3.7
	baz=152						
P33M	Teslin, Yukon	3.16	76	Pn	Pn	18 48 22.3	-1.1
P33M	Teslin, Yukon	3.16	76	P	Pn	18 48 22.2	-1.2
	baz=260,SNR=27						
P33M				Sb	Sb	18 49 10.0	+1.7
	baz=260						
SIT	Sitka	3.17	141		Pn	18 48 24.7	+1.2
SIT	Sitka	3.17	141	Pb	Pb	18 48 29.5	-0.8
	baz=324						
M30M	Minto, Yukon	3.19	18	Pn	Pn	18 48 24.5	+0.7
M30M	Minto, Yukon	3.19	18	P	Pn	18 48 24.2	+0.4
	baz=200,SNR=70						
M30M				Sb	Sg	18 49 13.8	-3.0
	baz=200						
N32M	Quiet Lake	3.32	59	P	Pn	18 48 25.5	-0.1
	baz=243						
N32M				Sb	Sb	18 49 16.5	+3.6
	baz=243						
N25K	Chitina, Valde	3.44	309	Pn	Pn	18 48 27.6	+0.2
N25K	Chitina, Valde	3.44	309	P	Pn	18 48 27.7	+0.4
	baz=124						
N25K				S	Sn	18 49 10.1	+2.4
	baz=124						
M26K	Nabesna, AK	3.45	327		Pn	18 48 27.4	+0.1
M26K	Nabesna, AK	3.45	327	P	Pn	18 48 27.5	+0.1
	baz=144						
M31M	Drury Creek, Y	3.45	38		Pn	18 48 28.1	+0.7
M31M	Drury Creek, Y	3.45	38	P	Pn	18 48 28.1	+0.7
	baz=222,SNR=55						
M31M				S	Sn	18 49 09.2	+1.4
	baz=222						
Q32M	Nakina River	3.49	97	P	Pn	18 48 27.1	-1.0
	baz=282						
Q32M				S	Sn	18 49 09.3	+0.3
	baz=282						
EYAK	Cordova Ski Ar	3.54	289		Pn	18 48 27.5	-1.0
EYAK	Cordova Ski Ar	3.54	289	P	Pn	18 48 27.5	-1.0
	baz=104						
L29M	L29M	3.57	6	P	Pn	18 48 29.7	+0.7
	baz=187						
DIV	Divide	3.72	298		Pn	18 48 31.3	+0.1
BCAR	Beaver Creek A	3.75	340	Pn	Pn	18 48 31.0	-0.6
L27K	Beaver Creek,	3.76	340	Pn	Pn	18 48 31.3	-0.3
L27K	Beaver Creek,	3.76	340	P	Pn	18 48 30.8	-0.8
	baz=157						
FARO	Faro, Yukon	3.82	43		Pn	18 48 33.2	+0.8
KLU	Klutina	3.94	302		Pn	18 48 34.9	+0.8
KLU	Klutina	3.94	302	P	Pn	18 48 34.1	0.0
	baz=117						
L26K	Log Cabin Wild	4.05	330		Pn	18 48 35.8	+0.2
L26K	Log Cabin Wild	4.05	330	P	Pn	18 48 35.7	+0.1
	baz=147,SNR=29						
MENT	Mentasta	4.08	328		Pn	18 48 36.9	+0.9
HARP	HAARP	4.14	316	P	Pn	18 48 37.1	+0.3
	baz=131						
P23K	Montague Islan	4.29	279	P	Pn	18 48 37.9	-0.9
	baz=93						
MAYO	Mayo, Yukon	4.29	19	Pn	Pn	18 48 39.7	+0.9
MAYO	Mayo, Yukon	4.29	19	P	Pn	18 48 39.8	+0.9
	baz=201						
K29M	Barlow Dome	4.33	8	P	Pn	18 48 40.5	+1.0
	baz=190,SNR=136						
M24K	Tolsona, Glenn	4.34	309		Pn	18 48 40.8	+1.1
M24K	Tolsona, Glenn	4.34	309	P	Pn	18 48 40.4	+0.8
	baz=123						
S34M	Telegraph Cree	4.41	109	P	Pn	18 48 39.5	-0.9
	baz=295,SNR=19						
DAWY	Dawson	4.51	358	Pn	Pn	18 48 42.6	+0.7
DAWY	Dawson	4.51	358	P	Pn	18 48 42.4	+0.5

	baz=177,SNR=16						
PAX	**Paxson**	4.63	320		Pn	18 48 42.0	-1.6
PAX	**Paxson**	4.63	320	P	Pn	18 48 44.0	+0.4
	baz=135						
U33K	**Whale Pass**	4.67	136	P	Pn	18 48 43.3	-0.7
	baz=320						
SCM	**Sheep Creek Mo**	4.69	302		Pn	18 48 44.6	+0.1
SCM	**Sheep Creek Mo**	4.69	302	P	Pn	18 48 45.0	+0.6
	baz=116						
WRAK	**Wrangell Islan**	4.73	129	Pn	Pn	18 48 46.1	+1.2
WRAK	**Wrangell Islan**	4.73	129	P	Pn	18 48 44.9	0.0
	baz=314						
DOT	**Dot Lake**	4.75	331		Pn	18 48 45.0	-0.2
DLBC	**Dease Lake**	4.76	100	Pn	Pn	18 48 44.7	-0.7
	comp=N,1.3nm,0.3s,baz=288,slow=6.4,SNR=18						
DLBC				Pg	Pb	18 48 55.6	-1.7
	comp=N,2.2nm,0.3s,baz=281,slow=14,SNR=11						
DLBC				Lg	Lg	18 49 56.1	
	comp=N,3.2nm,0.3s,baz=144,slow=13,SNR=3.0						
	comp=N,3.9nm,0.5s						
DLBC	**Dease Lake**	4.76	100		Pn	18 48 44.9	-0.4
DLBC	**Dease Lake**	4.76	100	P	Pn	18 48 44.9	-0.4
	baz=287,SNR=14						
MMPY	**Sheldon Lake,**	4.82	47	P	Pn	18 48 47.1	+0.9
	baz=234,SNR=198						
M23K	**Glacier View**	4.85	301	P	Pn	18 48 47.3	+0.8
	baz=114						
PWL	**Port Wells**	4.85	289		Pn	18 48 46.4	-0.1
PWL	**Port Wells**	4.85	289	P	Pn	18 48 46.1	-0.4
	baz=102						
J29M	**Klondike Camp**	4.91	4		Pn	18 48 48.3	+1.0
J29M	**Klondike Camp**	4.91	4	P	Pn	18 48 47.3	0.0
	baz=184,SNR=16						
SCRK	**Sand Creek**	5.02	334	Pn	Pn	18 48 48.6	-0.3
SCRK	**Sand Creek**	5.02	334	P	Pn	18 48 48.5	-0.5
	baz=150,SNR=25						
RIDG	**Independent Ri**	5.03	329		Pn	18 48 49.3	+0.3
RIDG	**Independent Ri**	5.03	329	P	Pn	18 48 49.0	-0.1
	baz=144						
KNK	**Knik Glacier**	5.04	295		Pn	18 48 50.3	+1.0
KNK	**Knik Glacier**	5.04	295	P	Pn	18 48 49.6	+0.4
	baz=108						
SML	**Sawmill**	5.12	300	Pn	Pn	18 48 50.9	+0.6
SML	**Sawmill**	5.12	300	P	Pn	18 48 50.6	+0.3
	baz=112						
WTLY	**Watson Lake, Y**	5.15	80	Pn	Pn	18 48 51.4	+0.6
EGAK	**Eagle**	5.32	350		Pn	18 48 53.6	+0.6
EGAK	**Eagle**	5.32	350	P	Pn	18 48 53.1	+0.2
	baz=168,SNR=6.0						
K24K	**Donnelly Dome**	5.34	325	P	Pn	18 48 54.5	+1.2
	baz=140						
GHO	**Glory Hole Cre**	5.37	298		Pn	18 48 54.7	+1.0
PMR	**Palmer**	5.40	296	Pn	Pn	18 48 55.3	+1.2
PMR	**Palmer**	5.40	296	P	Pn	18 48 55.1	+1.0
	baz=108						
O22K	**Cooper Landing**	5.47	284		Pn	18 48 54.2	-0.8
O22K	**Cooper Landing**	5.47	284	P	Pn	18 48 55.2	+0.2
	baz=95						
RC01	**Rabbit Creek A**	5.56	290	Pn	Pn	18 48 55.9	-0.4
RC01	**Rabbit Creek A**	5.56	290	P	Pn	18 48 56.1	-0.2
	baz=102						
WAT1	**Susitna Watana**	5.67	309		Pn	18 48 58.2	+0.4
WAT1	**Susitna Watana**	5.67	309	P	Pn	18 48 58.0	+0.2
	baz=121						
SLKM	**Skilak Lake**	5.72	284		Pn	18 48 56.4	-2.1
WAT7	**Susitna Watana**	5.79	309		Pn	18 48 59.6	+0.2
I29M	**Ogilvie Camp,**	5.81	3	Pn	Pn	18 49 01.0	+1.2
I29M	**Ogilvie Camp,**	5.81	3	P	Pn	18 49 00.7	+0.9
	baz=183						
BRSE	**Bradley Lake S**	5.97	277		Pn	18 49 01.6	-0.3
BRSE	**Bradley Lake S**	5.97	277	P	Pn	18 49 01.7	-0.3
	baz=87						
BRLK	**Bradley Lake**	6.05	277		Pn	18 49 02.9	-0.1
I26K	**Coal Creek Min**	6.07	343		Pn	18 49 04.0	+0.8
I26K	**Coal Creek Min**	6.07	343	P	Pn	18 49 03.5	+0.3
	baz=160,SNR=13						
RND	**Reindeer**	6.09	313	Pn	Pn	18 49 05.8	+2.1
SUA	**Susitna One**	6.12	293	Pn	Pn	18 49 04.3	+0.3
SUA	**Susitna One**	6.12	293	P	Pn	18 49 04.2	+0.1
	baz=103						
HDA	**Harding Lake**	6.13	326		Pn	18 49 05.4	+1.3
HDA	**Harding Lake**	6.13	326	P	Pn	18 49 04.5	+0.3
	baz=139						
I27K	**Kandik River**	6.17	350	P	Pn	18 49 06.5	+1.8
	baz=167						
CUT	**Chulitna**	6.19	302		Pn	18 49 05.5	+0.7
CUT	**Chulitna**	6.19	302	P	Pn	18 49 06.2	+1.3
	baz=113						
CAPN	**Captain Cook N**	6.20	286	P	Pn	18 49 05.8	+0.8
	baz=96						
CNPM	**China Poot**	6.24	275	Pn	Pn	18 49 05.6	-0.1
MCK	**McKinley**	6.32	316	Pn	Pn	18 49 09.1	+2.4
MCK	**McKinley**	6.32	316	P	Pn	18 49 08.9	+2.2
	baz=127						
IL31		6.39	328		Pn	18 49 08.4	+0.8
ILAR	**Eielson Array**	6.39	328	Pn	Pn	18 49 06.3	-1.4
	comp=N,1.1nm,0.3s,baz=155,slow=13,SNR=54						
ILAR				Lg	Lg	18 50 52.6	
	comp=N,0.2nm,0.3s,baz=148,slow=24,SNR=2.3						
	comp=N,1.2nm,0.4s						
ILAR	**Eielson Array**	6.39	328	Pn	Pn	18 49 07.1	-0.6
HOM	**Homer**	6.44	276	Pn	Pn	18 49 04.7	-3.6
WRH	**Wood River Hil**	6.52	323	Pn	Pn	18 49 09.7	+0.3
CCB	**Clear Creek Bu**	6.56	325		Pn	18 49 11.0	+1.1
SKT	**Skwentna**	6.61	297	Pn	Pn	18 49 10.6	-0.1
SKT	**Skwentna**	6.61	297	P	Pn	18 49 10.5	-0.2
	baz=106						
TRF	**Thorofare Moun**	6.66	310		Pn	18 49 12.6	+1.0
TRF	**Thorofare Moun**	6.66	310	P	Pn	18 49 12.4	+0.9
	baz=121						
PRP	**Porcupine Dome**	6.69	336	Pn	Pn	18 49 12.1	+0.3
PRP	**Porcupine Dome**	6.69	336	P	Pn	18 49 12.7	+0.8
	baz=150						
SPU	**Mount Spurr**	6.69	290		Pn	18 49 10.7	-1.1
SPCR	**Spurr Chakacha**	6.76	290	P	Pn	18 49 13.5	+0.6
	baz=98						
BWN	**Browne**	6.77	317		Pn	18 49 11.7	-1.2
H27K	**Steamboat Moun**	6.78	351	P	Pn	18 49 13.7	+0.6
	baz=169						
EPYK	**Eagle Plains**	6.89	8	Pn	Pn	18 49 15.3	+0.7
EPYK	**Eagle Plains**	6.89	8	P	Pn	18 49 13.8	-0.8
	baz=189						
O20K	**Slope Mountain**	6.91	280	P	Pn	18 49 15.0	+0.1
	baz=89						
NEA2	**Nenana**	6.91	321		Pn	18 49 15.2	+0.5
NEA2	**Nenana**	6.91	321	P	Pn	18 49 15.5	+0.7
	baz=132						
MDM	**Murphy Dome**	6.91	325		Pn	18 49 15.6	+0.7
KTH	**Kantishna Hill**	6.96	310	Pn	Pn	18 49 16.9	+1.3
RSO	**Redoubt South**	6.97	283		Pn	18 49 14.7	-1.1
Q20K	**Shuyak Island**	6.99	268	P	Pn	18 49 15.0	-0.9
	baz=77						
ILSW	**Iliamna Southw**	7.17	279	Pn	Pn	18 49 18.6	+0.1
PPLA	**Purkeypile**	7.19	303	Pn	Pn	18 49 19.4	+0.5
PPLA	**Purkeypile**	7.19	303	P	Pn	18 49 19.3	+0.5
	baz=112						
P19K	**Oil Pt**	7.24	277	Pn	Pn	18 49 19.7	+0.3
P19K	**Oil Pt**	7.24	277	P	Pn	18 49 19.5	+0.1
	baz=85						
BPAW	**Bear Paw Mtn.**	7.27	314	Pn	Pn	18 49 20.5	+0.8
BPAW	**Bear Paw Mtn.**	7.27	314	P	Pn	18 49 20.1	+0.4
	baz=123						
M20K	**Styx River**	7.32	294		Pn	18 49 20.7	+0.2
M20K	**Styx River**	7.32	294	P	Pn	18 49 20.9	+0.4
	baz=102						
KDAK	**Kodiak Island**	7.33	262	Pn	Pn	18 49 19.6	-0.9
	comp=N,3.7nm,0.3s,baz=70,slow=11,SNR=86						
KDAK				Sn	Sn	18 50 37.1	-6.0
	comp=N,1.0nm,0.3s,baz=249,slow=21,SNR=6.6						
KDAK	**Kodiak Island**	7.33	262	Pn	Pn	18 49 19.4	-1.0
KDAK	**Kodiak Island**	7.33	262	P	Pn	18 49 19.1	-1.3
	baz=70						
G27K	**Doyon Strip**	7.36	352	P	Pn	18 49 22.6	+1.6
	baz=169						
CAST	**Castle Rocks**	7.36	307	Pn	Pn	18 49 20.9	-0.1
CAST	**Castle Rocks**	7.36	307	P	Pn	18 49 21.7	+0.7
	baz=116						
I23K	**Minto, Yukon-K**	7.38	324		Pn	18 49 21.9	+0.7
I23K	**Minto, Yukon-K**	7.38	324	P	Pn	18 49 22.3	+1.1
	baz=135						
H24K	**Noodor Dome**	7.49	331	Pn	Pn	18 49 24.3	+1.5
H24K	**Noodor Dome**	7.49	331	P	Pn	18 49 24.0	+1.2
	baz=143						
KOTAN	**Kotaneelee Air**	7.53	79	P	Pn	18 49 23.0	-0.3
	baz=272						
G30M	**tAoh Zraii Nji**	7.53	8	P	Pn	18 49 23.6	+0.2
	baz=191						
Q19K	**Cape Douglas,**	7.56	271	Pn	Pn	18 49 24.2	+0.5
Q19K	**Cape Douglas,**	7.56	271	P	Pn	18 49 23.7	0.0
	baz=79						
CHUM	**Lake Minchumin**	7.66	310		Pn	18 49 25.3	+0.2
CHUM	**Lake Minchumin**	7.66	310	P	Pn	18 49 25.6	+0.6
	baz=118						
G26K	**Porcupine Rive**	7.71	346	P	Pn	18 49 25.2	-0.5
	baz=162						
MLY	**Manley**	7.74	320		Pn	18 49 26.3	+0.2
MLY	**Manley**	7.74	320	P	Pn	18 49 27.1	+0.9
	baz=130						
O19K	**Port Alsworth**	7.75	281	Pn	Pn	18 49 25.8	-0.5
O19K	**Port Alsworth**	7.75	281	P	Pn	18 49 27.6	+1.3
	baz=88						
L20K	**Farewell, AK**	7.80	298	P	Pn	18 49 27.0	-0.1
	baz=106						
N19K	**Bonanza Creek**	7.83	286		Pn	18 49 26.6	-1.0
N19K	**Bonanza Creek**	7.83	286	P	Pn	18 49 26.1	-1.5
	baz=93						
OHAK	**Old Harbor**	7.89	259	Pn	Pn	18 49 26.2	-1.9
G25K	**Bearman Lake**	7.90	339	P	Pn	18 49 28.9	+0.6
	baz=153						
M19K	**Big River Lodg**	7.91	294	Pn	Pn	18 49 27.2	-1.3
M19K	**Big River Lodg**	7.91	294	P	Pn	18 49 28.2	-0.3
	baz=101						
H23K	**Yukon River**	7.92	327	Pn	Pn	18 49 28.1	-0.6
H23K	**Yukon River**	7.92	327	P	Pn	18 49 28.5	-0.2
	baz=138						
G24K	**Hadweenzic Riv**	8.11	335	P	Pn	18 49 31.9	+0.6
	baz=148						
K20K	**Telida**	8.16	304		Pn	18 49 31.8	0.0
K20K	**Telida**	8.16	304	P	Pn	18 49 31.9	0.0
	baz=111						
L19K	**White Mountain**	8.18	295	Pn	Pn	18 49 32.2	+0.1
L19K	**White Mountain**	8.18	295	P	Pn	18 49 31.8	-0.4
	baz=102						
O18K	**Koktuh Hills**	8.22	279		Pn	18 49 31.8	-0.9
O18K	**Koktuh Hills**	8.22	279	P	Pn	18 49 31.9	-0.9
	baz=85						
I21K	**Tanana**	8.24	318		Pn	18 49 33.6	+0.6
I21K	**Tanana**	8.24	318	P	Pn	18 49 33.1	+0.1
	baz=127						
BMAR	**Burnt Mountain**	8.27	345	Pn	Pn	18 49 34.0	+0.6
P18K	**Big Mountain,**	8.28	276	Pn	Pn	18 49 33.3	-0.3
P18K	**Big Mountain,**	8.28	276	P	Pn	18 49 32.8	-0.8
	baz=82						
Q18K	**Katmai Hardscr**	8.31	270	P	Pn	18 49 34.0	-0.1
	baz=77						
SVW2	**Sparrevohn**	8.38	288	Pn	Pn	18 49 33.9	-1.1
F26K	**Sheenjek River**	8.46	346	P	Pn	18 49 36.5	+0.4
	baz=162						
F25K	**Christian Rive**	8.57	343	P	Pn	18 49 37.4	-0.2
	baz=157						
E27K	**Coleen River**	8.72	353	P	Pn	18 49 40.3	+0.7
	baz=171						
G23K	**Bananza Creek**	8.72	330	P	Pn	18 49 40.2	+0.6
	baz=140						
H21K	**Melozitna Rive**	8.81	320		Pn	18 49 41.9	+1.1
H21K	**Melozitna Rive**	8.81	320	P	Pn	18 49 41.9	+1.1
	baz=128						
Q17K	**Contact Creek**	8.85	269	P	Pn	18 49 41.5	0.0
	baz=75						
TTA	**Tatalina**	8.87	300	Pn	Pn	18 49 40.3	-1.4
TTA	**Tatalina**	8.87	300	P	Pn	18 49 41.2	-0.5
	baz=105						
F24K	**Squaw Lake**	8.90	337	P	Pn	18 49 43.2	+1.2
	baz=149						
E25K	**Arctic Village**	9.05	344	P	Pn	18 49 45.4	+1.2
	baz=158						
INK	**Inuvik**	9.08	13	Pn	Pn	18 49 48.1	+3.7
	comp=N,0.1nm,0.3s,baz=195,slow=14,SNR=2.4						
INK				Sn	Sn	18 51 19.6	-6.4
	comp=N,0.2nm,0.3s,baz=117,slow=18,SNR=1.5						
INK				Lg	Lg	18 52 16.1	
	comp=N,0.2nm,0.3s,baz=293,slow=30,SNR=6.2						
Q16K	**King Salmon**	9.14	272	P	Pn	18 49 46.4	+1.1
	baz=77						
O17K	**Koliganek Bris**	9.18	279	P	Pn	18 49 45.2	-0.6
	baz=84						
R17K	**Ugashik Creek**	9.30	265	P	Pn	18 49 47.3	-0.2
	baz=71						
IMAR	**Indian Mountai**	9.32	320	Pn	Pn	18 49 47.9	+0.2
E24K	**Your Creek**	9.49	338	P	Pn	18 49 51.0	+0.8
	baz=149						
G21K	**Allakaket**	9.57	323	P	Pn	18 49 53.1	+1.9
	baz=130						
O16K	**Kokwok River B**	9.70	278	P	Pn	18 49 52.9	-0.1
	baz=82						
N16K	**Nishlik Lake**	9.95	284	P	Pn	18 49 55.6	-0.9
	baz=87						
D25K	**Kavik River**	10.28	345	P	Pn	18 50 01.7	+0.7
	baz=158						
CHGN	**Chignik**	10.84	261	Pn	Pn	18 50 08.4	-0.2
HOLB	**Holberg**	10.88	141	Pn	Pn	18 50 11.7	+2.5
C36M	**Paulatuk**	11.67	27	Pn	Pn	18 50 20.0	+0.1
C36M	**Paulatuk**	11.67	27	P	Pn	18 50 19.6	-0.3
	baz=220						
YKA	**Yellowknife Ar**	12.13	66	Pn	Pn	18 50 25.1	-1.1
	comp=N,0.1nm,0.3s,baz=265,slow=12,SNR=5.0						
YKA				Lg	Lg	18 53 51.2	
	baz=269,slow=30						
	comp=N,0.3nm,0.7s						
A36M	**Sachs Harbour**	13.61	18	P	Pn	18 50 45.5	-0.9
	baz=211						
TNA	**Tin City**	14.53	307	Pn	Pn	18 50 57.3	-1.6
TNA	**Tin City**	14.53	307	P	Pn	18 50 58.6	-0.3
	baz=101						
RES	**Resolute Bay**	22.02	30	P	P	18 52 28.2	+0.8
	comp=N,0.8nm,0.8s,baz=249,slow=14,SNR=3.8						
	comp=N,0.8nm,0.8s						
PDAR	**Pinedale Array**	24.65	120	P	P	18 52 56.3	+2.1
	comp=N,0.4nm,0.8s,baz=346,slow=2.2,SNR=2.7						
	comp=N,0.4nm,0.8s						
NVAR	**Mina Array Bea**	24.93	139	P	P	18 53 02.3	+5.6
	comp=N,0.7nm,0.9s,baz=308,slow=6.4,SNR=2.6						
PETK	**Petropavlovsk-**	34.47	288	P	P	18 54 20.2	-0.7
	comp=N,0.7nm,0.5s,baz=68,slow=9.5,SNR=4.5						
	comp=N,0.7nm,0.5s						
TIXI	**Tiksi**	35.87	327	P	P	18 54 32.2	-0.4
	comp=N,1.2nm,0.3s,baz=270,slow=23,SNR=6.0						
	comp=N,1.2nm,0.3s						
TXAR	**Lajitas Array**	38.53	126	P	P	18 54 56.1	+0.2
	comp=N,0.2nm,0.7s,baz=324,slow=4.5,SNR=2.2						
	comp=N,0.2nm,0.7s						
TKL	**Tuckaleechee C**	42.59	99	LR	LR	19 14 10.8	
	comp=N,54nm,19.5s,baz=306,slow=38						
NRIK	**Noril'sk**	47.12	339	P	P	18 56 03.6	-1.2
	comp=N,2.4nm,0.4s,baz=51,slow=4.6,SNR=5.0						
	comp=N,2.4nm,0.4s						
H11N2	**WAKE ISLAND Hy**	55.27	248	T	T	19 56 07.5	
	baz=30,slow=76,SNR=5.0						
H11N3	**WAKE ISLAND Hy**	55.28	248	T	T	19 56 10.5	
	baz=30,slow=76,SNR=20						
H11N1	**WAKE ISLAND Hy**	55.29	248	T	T	19 56 09.0	
	baz=30,slow=76,SNR=9.8						
KSRS	**Korea Array**	60.05	293	P	P	18 57 41.3	+1.3
	comp=N,0.9nm,0.8s,baz=51,slow=9.6,SNR=2.2						
	comp=N,0.9nm,0.8s						
SONM	**Songino Array**	60.45	315	P	P	18 57 43.6	+0.8
	comp=N,0.4nm,0.8s,baz=42,slow=9.0,SNR=4.0						
	comp=N,0.4nm,0.8s						
ZALV	**Zalesovo Beam**	61.50	332	P	P	18 57 49.0	-0.7
	comp=N,0.5nm,0.5s,baz=69,slow=8.1,SNR=3.8						
	comp=N,0.5nm,0.5s						
MKAR	**Makanchi Array**	68.74	331	P	P	18 58 35.6	-1.2
	comp=N,0.2nm,0.6s,baz=43,slow=6.5,SNR=3.7						
	comp=N,0.2nm,0.6s						
AKASG	**Malin Array Be**	69.66	8	P	P	18 58 41.4	-0.9
	comp=N,0.5nm,0.5s,baz=354,slow=6.2,SNR=3.3						
	comp=N,0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	89.18	306	P	P	19 00 29.8	+0.7
	comp=N,0.7nm,0.6s,baz=20,slow=3.9,SNR=5.9						
	comp=N,0.7nm,0.6s						

TRN 26 18:53:30.2, 16°.80N×61°.45W, h30km, MD3.8, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABD	**La Joyeuse, An**	0.32	186	*e*P	Pn	18 53 39.3	+0.5
ABD				*e*S	Sn	18 53 45.5	+1.0
ANBD	**Bethesda, Anti**	0.39	310	*e*P	Pn	18 53 40.4	+0.6
ANBD				*e*S	Sn	18 53 47.6	+1.4
MLYT	**Lee's Yard**	0.71	264	*e*P	Pn	18 53 46.6	+2.3
MLYT				*e*S	Sn	18 53 58.1	+3.8
MBFL	**Flemmings, Mon**	0.73	266	*e*P	Pn	18 53 46.6	+2.1
MBFL				*e*S	Sn	18 53 57.9	+3.2
CBE	**Ff, Capester**	0.74	192	*e*P	Pb	18 53 46.4	+1.7
MAGL	**Barre de l'ile**	0.86	169	*e*P	Pb	18 53 47.5	+0.9
MAGL				*e*S	Sb	18 53 59.3	+1.5
ANWB	**Willy Bob**	0.92	340	*e*P	Pb	18 53 47.5	-0.2
ANWB				*e*S	Sb	18 54 00.4	+0.8
TBG	**Guadaloupe-3**	0.96	191	*e*P	Pb	18 53 49.5	+1.2
TBG				*e*S	Sb	18 54 02.7	+2.0
TDBA	**Terre de Bas,**	0.96	191	*e*P	Pb	18 53 49.5	+1.2
DLPL	**La Plaine**	1.47	172	*e*P	Pb	18 53 56.9	0.0
DLPL				*e*S	Sb	18 54 14.9	-0.3
PCM	**Pelee Case Pet**	1.98	173	*e*P	Pn	18 54 03.5	+1.8
BAMF	**Morne Balai**	1.99	172	*e*P	Pb	18 54 04.7	-1.1
CXM	**Morne La Croix**	1.99	172	*e*P	Pb	18 54 04.5	-1.4
GBMF	**Grand Be**	2.01	172	*e*P	Pb	18 54 04.8	-1.3
PML	**Morne Lenard**	2.02	173	*e*P	Pb	18 54 05.5	-0.8
FDF	**Fort de France**	2.07	172	*e*P	Pn	18 54 04.2	+1.2
FDF				*e*S	Sn	18 54 29.0	+1.2
ILAM	**Ilet Lapin Mar**	2.09	164	*e*P	Pn	18 54 04.3	+1.2
ILAM				*e*S	Sn	18 54 29.2	+1.2
ZAM	**Aeronautique**	2.25	170	*e*P	Pn	18 54 06.9	+1.5
LPMF	**Morne Lapointe**	2.26	168	*e*P	Pn	18 54 06.7	+1.1
MVM	**Montagne Vaucl**	2.29	166	*e*P	Pn	18 54 08.1	+2.0
BIM	**Bigot**	2.30	171	*e*P	Pn	18 54 07.8	+1.7
BIM				*e*S	Sn	18 54 34.5	+1.2
MPOM	**Morne Pois Mar**	2.41	166	*e*P	Pn	18 54 09.2	+1.6
MPOM				*e*S	Sn	18 54 37.4	+1.4
SLBI	**Saint Lucia, B**	2.80	170	*e*P	Pn	18 54 14.8	+1.9
SLBI				*e*S	Sn	18 54 47.9	+2.3
CDVI	**St. Croix**	3.31	287	*e*P	Pn	18 54 21.2	+1.3
CDVI				*e*S	Sn	18 54 59.0	+0.8
AOPR	**Arecibo Observ**	5.29	288	*e*P	Pn	18 54 49.0	+1.8

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*SKHL **26** 19:13:59.5±0.4, 45°.40N×153°.10E, h27km±4km, mb4.3/5*

*IDC **26** 19:14:02.4±8.5, 47°.64N×151°.97E, h144km±47km, mb3.3/8, mbtmp3.7/10, MS3.6/1, Error ellipse: s-maj=105.0km s-min=28.5km az=167.0*

ISC 26 19:14:01.3±1.5, **47°.5N**±0°.2×**152°.1E**±0°.2, **h150km, n27, σ2ˢ.71**/14, **mb3.5**/8, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	3.70	233	*e*P	**Pn**	**19 14 55.6**	**-2.0**
KUR				AMB	AMB	19 14 58.0	
	20nm,0.5s						
KUR				*e*S	**Sn**	**19 15 38.0**	**-3.2**
KUR				A	A	19 15 45.9	
	20nm,0.2s						
KUR				A	A	19 15 45.9	
	40nm,0.2s						
SKR	**Severo-Kuril's**	4.13	38	*e*P	Pn	19 15 23.2	+20
SKR				AMB	AMB	19 15 24.0	
	40nm,0.6s						
SHO	**Shikotan**	5.17	227	*e*P	Pn	19 15 09.7	-7.3
SHO				AMB	AMB	19 15 12.8	
	20nm,0.5s						
SHO				*e*S	Sn	19 16 02.2	-14
SHO				A	A	19 16 12.5	
	40nm,0.3s						
SHO				A	A	19 16 12.5	
	20nm,0.3s						
YUK	**Yuzh-Kuril'sk**	5.57	234	*e*P	Pn	19 15 18.6	-3.5
YUK				AMB	AMB	19 15 19.8	
	30nm,0.5s						
YUK				*e*S	Sn	19 16 17.8	-7.5
YUK				A	A	19 16 21.5	
	20nm,0.4s						
YUK				A	A	19 16 21.5	
	20nm,0.4s						
NMR	**Nemuro--Hokkai**	6.09	229	*e*P	Pn	19 15 23.7	-5.4
NMR				AMB	AMB	19 15 24.0	
	10.0nm,0.3s						
NMR				*e*S	Sn	19 16 25.9	-12
NMR				A	A	19 16 30.4	
	20nm,0.2s						
NMR				A	A	19 16 30.4	
	20nm,0.2s						
PETK	**Petropavlovsk-**	6.66	31	P	**Pn**	**19 15 36.7**	**+0.1**
	0.9nm,0.5s,baz=326,slow=42,SNR=7.0						
PETK				S	**Sn**	**19 16 43.8**	**-7.5**
	1.2nm,0.8s,baz=294,slow=29,SNR=1.4						
AKK	**Akkeshi**	6.80	231	*e*P	Pn	19 15 33.4	-5.2
AKK				*e*S	Sn	19 16 43.8	-11
SEY	**Seymchan**	15.45	1	P	**Pn**	**19 17 31.1**	**+0.2**
	1.1nm,0.8s,baz=174,slow=9.2,SNR=6.4						
H11N2	**WAKE ISLAND Hy**	30.23	151	T	T	19 51 36.7	
	baz=340,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	30.24	151	T	T	19 51 43.7	
	baz=340,slow=75,SNR=16						
H11N3	**WAKE ISLAND Hy**	30.25	151	T	T	19 51 46.7	
	baz=340,slow=75,SNR=15						
H11S1	**WAKE ISLAND Hy**	31.31	153	T	T	19 52 55.6	
	baz=341,slow=76,SNR=17						
H11S3	**WAKE ISLAND Hy**	31.32	153	T	T	19 53 03.7	
	baz=341,slow=76,SNR=19						
H11S2	**WAKE ISLAND Hy**	31.33	153	T	T	19 52 59.5	
	baz=341,slow=76,SNR=15						
NRIK	**Noril'sk**	37.73	328	LR	LR	19 37 11.8	
	comp=Z,75nm,18.4s,baz=70,slow=37						
INK	**Inuvik**	41.39	33	P	**P**	**19 21 33.5**	**+1.4**
	0.4nm,0.4s,baz=312,slow=9.7,SNR=3.9						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	45.96	296	P	**P**	**19 22 09.7**	**+0.7**
	0.2nm,0.4s,baz=67,slow=7.2,SNR=3.5						
	0.2nm,0.4s						
RES	**Resolute Bay**	50.33	19	P	**P**	**19 22 43.4**	**+1.3**
	0.5nm,0.5s,baz=318,slow=9.2,SNR=5.1						
	0.5nm,0.5s						
YKA	**Yellowknife Ar**	50.73	37	P	**P**	**19 22 45.7**	**+0.5**
	0.2nm,0.6s,baz=294,slow=6.9,SNR=3.4						
	0.2nm,0.6s						
FINES	**FINESS Array B**	63.04	334	P	**P**	**19 24 12.6**	**+0.7**
	1.2nm,0.7s,baz=32,slow=6.6,SNR=6.7						
	1.2nm,0.7s						
NB2	**NORSAR Subarra**	67.27	341	P	**P**	**19 24 40.3**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=26,slow=6.5						
NOA	**NORSAR Array B**	67.27	341	P	**P**	**19 24 39.9**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=27,slow=6.3,SNR=4.2						
	comp=Z,0.8nm,0.6s						
AKASG	**Malin Array Be**	70.51	325	P	**P**	**19 24 59.6**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=34,slow=6.1,SNR=5.4						
	comp=Z,0.7nm,0.3s						
MMAI	**Mount Meron Ar**	81.78	311	P	**P**	**19 26 05.2**	**+1.9**
	comp=Z,0.6nm,0.5s,baz=40,slow=4.7,SNR=1.9						
	comp=Z,0.6nm,0.5s						
H03N2	**Juan Fernandez**	139.46	89	T	T	22 08 53.5	
	baz=308						
H03N1	**Juan Fernandez**	139.47	89	T	T	22 08 58.9	
	baz=308						
H03N3	**Juan Fernandez**	139.47	89	T	T	22 08 51.8	
	baz=308						

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*BJI **26** 19:14:33.2±0.0, 7°.38S×130°.02E, h146km, mb4.9/66, mB5.0/28*

*KLM **26** 19:14:34, 6°.95S×130°.23E, h114km, mb5.5*

*MOS **26** 19:14:35.9±0.8, 6°.95S×129°.78E, h132km, mb4.9/36, Error ellipse: s-maj=10.4km s-min=5.4km az=118.4*

*NEIC **26** 19:14:36.3±2.3, 7°.02S±0°.06×129°.80E±0°.07, h122km±5km, mb5.1/89, Error ellipse: s-maj=10.3km s-min=8.9km az=62.0*

*DJA **26** 19:14:36.7±0.2, 7°S±2°×13°0E±°, h137km±2km, M5.0/89, mb5.2/89, mB5.5/49, MLv5.6/16, Mw4.9/13, Mw(mB)5.0/49, MwMwp4.7/1, Mwp5.0/1*

*IDC **26** 19:14:38.3±1.2, 6°.98S×129°.80E, h142km±9km, mb4.6/32, mbtmp5.0/35, MS3.6/18, Error ellipse: s-maj=14.6km s-min=8.6km az=78.0*

*GCMT **26** 19:14:38.3±0.3, 7°.04S±0°.02×129°.85E±0°.02, h143km±2km, MW4.9/99, Moment Tensor Solution. s25,c31; s99,c142; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.32±.09; $M_{\theta\theta}$-2.84±.10; $M_{\phi\phi}$1.52±.12; $M_{r\theta}$-0.67±.07; $M_{\theta\phi}$0.70±.11; $M_{\phi r}$1.62±.07; Best double couple: $M_0$3.10100×10^{16} NP1:ϕ_s315.00000°, δ71.00000°, λ137.00000°. NP2: ϕ_s62.00000°, δ50.00000°, λ25.00000°. Principal axes: T 3.0440, Plg43.0000°, Azm271.0000°; N 0.1150, Plg44.0000°, Azm116.0000°; P -3.1580, Plg13.0000°, Azm13.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 19:14:37.2±0.4, 7.°02S±0.°03×129.°85E±0.°04, h140km±3km, h143km:pP-P, n580, σ1.s54/630, mb5.0/135, 34C-10D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.73	124	Pn	Pn	19 15 09.3	+0.7
SAUI	Saumlaki	1.73	124	P	Pn	19 15 09.9	+1.3
SAUI	Saumlaki	1.73	124	P	Pn	19 15 07.7	-0.9
SAUI				S	Sn	19 15 32.8	+0.1
BNDI	Bandanaira	2.48	1	P	Pn	19 15 20.7	+3.1
BNDI	Bandanaira	2.48	1	P	Pn	19 15 19.5	+1.9
AAI	Ambon	3.69	333	P	Pn	19 15 35.2	+2.0
MSAI	Masohi	3.76	346	P	Pn	19 15 36.1	+2.0
NLAI	Namlea	4.64	324	P	Pn	19 15 47.6	+1.8
FAKI	Fak Fak	4.72	31	Pn	Pn	19 15 45.8	-1.1
FAKI	Fak Fak	4.72	31	P	Pn	19 15 46.4	-0.4
FAKI	Fak Fak	4.72	31	P	Pn	19 15 45.8	-1.1
FAKI				S	Sn	19 16 36.9	-4.1
MTN	Manton Dam	5.93	168	P	Pn	19 16 01.5	-1.4
	baz=5.9,SNR=1000						
MTN				S	Sn	19 17 04.3	-5.6
	baz=5.9						
MTN	Manton Dam	5.93	168	Pn	Pn	19 16 01.1	-1.8
MTN	Manton Dam	5.93	168	P	Pn	19 16 02.3	-0.6
SOEI	Soe	6.15	243	Pn	Pn	19 16 06.6	+0.6
SOEI	Soe	6.15	243	P	Pn	19 16 07.5	+1.5
SOEI	Soe	6.15	243	P	Pn	19 16 05.5	-0.5
	1µm,0.9s,11µm22nm						
KDU	Kakadu	6.20	156	P	Pn	19 16 05.4	-1.2
	baz=6.2,SNR=1000						
KDU	Kakadu	6.20	156	P	Pn	19 16 06.0	-0.5
SANI	Sanana	6.25	322	P	Pn	19 16 10.5	+3.2
	267nm,1.1s						
SANI	Sanana	6.25	322	P	Pn	19 16 09.2	+1.9
	266nm,1.1s,2µm0.7nm						
SIJI	Sorong	6.27	13	P	Pn	19 16 06.4	-1.1
	166nm,0.7s,baz=196,slow=8.1,SNR=96						
SIJI				S	Sn	19 17 12.8	-5.2
	63nm,0.4s,baz=186,slow=23,SNR=7.3						
LBMI	Labuha	6.75	340	P	Pn	19 16 16.1	+2.1
	3µm,0.9s,22µm7.0nm						
RKPI	Ransiki, Papua	6.97	38	P	Pn	19 16 16.5	-0.4
	550nm,0.6s,12µm7.1nm						
MMRI	Maumere	7.71	257	Pn	Pn	19 16 27.5	+0.7
MMRI	Maumere	7.71	257	P	Pn	19 16 28.4	+1.6
	346nm,0.7s						
MMRI	Maumere	7.71	257	P	Pn	19 16 26.9	+0.1
	357nm,0.6s,6µm1.9nm						
TNTI	Ternate	8.12	342	Pn	Pn	19 16 33.8	+1.4
TNTI	Ternate	8.12	342	P	Pn	19 16 34.6	+2.2
TNTI	Ternate	8.12	342	P	Pn	19 16 33.8	+1.4
	169nm,1.0s,2µm						
SRPI	Serui, Papua	8.17	52	P	Pn	19 16 33.2	+0.2
	231nm,1.2s,3µm						
KNRA	Kununurra	8.67	187	P	Pn	19 16 37.1	-2.6
	baz=8.7,SNR=1000						
KNRA	Kununurra	8.67	187	Pn	Pn	19 16 37.1	-2.6
KNRA	Kununurra	8.67	187	P	Pn	19 16 37.6	-2.1
LUWI	Luwuk	9.22	310	Pn	Pn	19 16 45.5	-1.5
LUWI	Luwuk	9.22	310	P	Pn	19 16 51.3	+4.3
LUWI	Luwuk	9.22	310	P	Pn	19 16 48.7	+1.7
	217nm,1.4s,2µm						
BASI	Baing, Sumba	9.70	250	P	Pn	19 16 52.0	-1.5
	943nm,0.7s,12µm						
BKSI	Bulukumba	9.81	279	P	Pn	19 16 55.8	+0.8
	144nm,0.8s,2µm						
SMPI	Sarmi	10.15	61	P	Pn	19 16 59.3	-0.1
	81nm,1.1s						
GTOI	Gorontalo	10.21	318	P	Pn	19 17 04.5	+4.2
	40nm,1.0s,398nm						
KAPI	Kappang	10.23	281	P	Pn	19 16 56.9	-3.7
	4.0nm,0.3s,baz=75,slow=19,SNR=1.9						
KAPI				LR	LR	19 20 48.5	
	comp=Z,177nm,19.2s,baz=108,slow=36						
KAPI	Kappang	10.23	281	Pn	Pn	19 17 02.7	+2.1
KAPI	Kappang	10.23	281	P	Pn	19 17 02.6	+2.0
KAPI	Kappang	10.23	281	c iP	Pn	19 17 02.2	+1.6
SPSI	Sidrap Palu	10.48	286	P	Pn	19 17 04.8	+1.0
	131nm,0.8s,1µm						
MRSI	Marisa	10.85	313	P	Pn	19 17 10.4	+1.7
	230nm,1.1s,2µm						
GENI	Genyem	11.18	67	P	Pn	19 17 15.2	+2.0
GENI	Genyem	11.18	67	P	Pn	19 17 13.9	+0.7
	124nm,0.9s,2µm						
SGSI	Sangihe	11.47	338	P	Pn	19 17 19.0	+2.0
FITZ	Fitzroy Crossi	11.75	200	P	Pn	19 17 17.2	-3.5
	baz=12						
FITZ	Fitzroy Crossi	11.75	200	Pn	Pn	19 17 16.2	-4.4
FITZ	Fitzroy Crossi	11.75	200	P	Pn	19 17 17.3	-3.3
PLAI	Plampang	12.09	261	P	Pn	19 17 22.8	-2.3
PLAI	Plampang	12.09	261	P	Pn	19 17 22.0	-3.1
	532nm,0.5s,10µm						
TOLI2	Tolitoli	12.12	311	Pn	Pn	19 17 27.8	+2.2
TOLI2	Tolitoli	12.12	311	P	P	19 17 29.3	-3.0
	60nm,1.2s						
MPSI	Mapaga	12.32	306	P	Pn	19 17 29.6	+1.5
	41nm,0.8s,854nm						
TWSI	Taliwang, Sumb	12.96	262	P	Pn	19 17 33.3	-3.0
	185nm,0.8s						
WB0	Warramunga Arr	13.42	161		Pn	19 17 37.9	-4.4
I07AU	WARRAMUNGA INF	13.56	162	P	Pn	19 17 43.1	-1.0
	baz=331,slow=20,SNR=1.4						
WRAB	Tennant Creek	13.56	162	Pn	Pn	19 17 39.9	-4.2
WRAB	Tennant Creek	13.56	162	P	Pn	19 17 40.5	-3.6
WRAB	Tennant Creek	13.56	162	ceP	Pn	19 17 39.8	-4.2
WRAB				pmax	pmax		
	comp=Z,526nm,1.3s						
WRA	Warramunga Arr	13.57	162	P	Pn	19 17 39.6	-4.6
	comp=Z,144nm,0.5s,baz=344,slow=13,SNR=574						
WRA				S	Sn	19 19 58.6	-16
	comp=Z,161nm,0.5s,baz=336,slow=22,SNR=5.9						
WRA				LR	LR	19 23 49.1	
	comp=Z,644nm,19.9s,baz=332,slow=40						
WRA				ScS	ScS	19 29 52.1	-5.3
	comp=Z,1.7nm,0.7s,baz=86,slow=28,SNR=2.4						
WRA	Warramunga Arr	13.57	162	Pn	Pn	19 17 38.1	-6.1
WRA	Warramunga Arr	13.57	162	P	Pn	19 17 38.1	-6.1
WB2	Warramunga Arr	13.57	162	P	Pn	19 17 39.8	-4.4
	baz=14						
WB2				P	Pn	19 17 39.8	-4.4
	baz=14						
WB2	Warramunga Arr	13.57	162		Pn	19 17 39.8	-4.4
WB1	Warramunga Ar.	13.59	162	P	Pn	19 17 40.5	-3.9
GSPH	General Santos	13.90	339	⇑eP	Pn	19 17 44.6	-3.9
BKB	Balikpapan	14.12	293	P	P	19 17 53.6	-0.9
BKB	Balikpapan	14.12	293	P	P	19 17 53.1	-1.4
	comp=Z,242nm,1.2s,comp=Z,3µm						
SKMP	Bagumbayan, Su	14.45	338	⇓eP	Pn	19 17 55.3	-0.1
SKMP				eS	S	19 20 42.2	-2.9
SRBI	Singaraja	14.55	265	P	Pn	19 17 56.9	+0.4
	comp=Z,91nm,0.9s						
DAV	Davao City (W)	14.63	343	P	Pn	19 17 57.0	-0.5
	comp=Z,130nm,0.4s,baz=152,slow=2.5,SNR=2.1						
DAV				S	S	19 20 45.6	-3.2
	comp=Z,57nm,0.4s,baz=54,slow=22,SNR=1.0						
DAV				LR	LR	19 24 18.6	
	comp=Z,132nm,19.4s,baz=269,slow=40						
KCP	Kidapawan	14.72	341	⇓iP	P	19 18 00.4	-0.8
COEN	Coen	14.80	119	P	Pn	19 17 58.0	-1.8
	baz=15,SNR=12						
COEN	Coen	14.80	119		Pn	19 17 58.8	-1.0
COEN	Coen	14.80	119	P	Pn	19 17 59.6	-0.2
CTBH	Cotabato--PC H	15.21	338	⇑eP	Pn	19 18 05.2	+0.4
BBKI	Banjar Baru	15.35	283	P	P	19 18 07.5	-0.7
	comp=Z,1µm,0.6s,comp=Z,11µm						
BIPH	Bislig	15.49	347	⇑eP	Pn	19 18 07.8	-0.6
ABJI	Asem Bagus	15.50	266	P	Pn	19 18 07.1	-1.4
	comp=Z,165nm,0.8s						
PAGZ	Pagadian	16.11	336	⇑eP	P	19 18 16.6	0.0
BLJI	Banyuglugur	16.13	266	P	P	19 18 16.6	-0.2
	comp=Z,403nm,0.6s,comp=Z,5µm						
CGP	Cagayan de Oro	16.20	341	⇑iP	P	19 18 17.9	+0.3
GMJI	Gumukmas	16.30	265	P	Pn	19 18 17.6	-0.7
	comp=Z,61nm,0.4s						
BUTP	Butuan	16.43	345	⇑eP	P	19 18 21.6	+1.5
BUTP				eS	S	19 21 27.7	+4.3
QIS	Mount Isa	16.45	146	P	Pn	19 18 18.9	-1.2
	baz=16,SNR=57						
QIS	Mount Isa	16.45	146	P	Pn	19 18 19.6	-0.5
AS31	Alice Springs	17.01	167	P	P	19 18 24.9	-1.5
ASAR	Alice Springs	17.01	167	P	P	19 18 24.9	-1.5
	comp=Z,58nm,0.4s,baz=331,slow=9.2,SNR=734						
ASAR				S	Sn	19 21 23.9	-13
	comp=Z,56nm,0.4s,baz=352,slow=28,SNR=7.0						
ASAR				LR	LR	19 25 43.2	
	comp=Z,604nm,21.1s,baz=339,slow=39						
ASAR				ScP	ScP	19 26 25.6	-0.9
	comp=Z,21nm,0.6s,baz=338,slow=2.2,SNR=5.5						
ASAR	Alice Springs	17.01	167	P	P	19 18 24.6	-1.8
ASAR	Alice Springs	17.01	167	P	P	19 18 24.7	-1.8
AS01	Alice Springs	17.02	167	P	P	19 18 25.8	-0.7
GLSP	General Luna,	17.10	347	⇑eP	Pn	19 18 27.6	-0.3
GLSP				eS	S	19 21 37.8	-0.8
MBWA	Marble Bar	17.13	214	P	P	19 18 27.0	-0.7
MBWA	Marble Bar	17.13	214	P	P	19 18 27.9	+0.2
GRJI	Gresik	17.24	269	P	Pn	19 18 29.3	-0.4
	comp=Z,345nm,1.0s						
PMG	Port Moresby	17.30	99	P	Pn	19 18 31.2	+0.9
	comp=Z,36nm,0.8s,baz=280,slow=5.0,SNR=9.6						
PMG				S	S	19 21 31.9	-11
	comp=Z,20nm,0.9s,baz=259,slow=11,SNR=1.8						
PMG	Port Moresby	17.30	99	P	Pn	19 18 32.0	+1.6
PMG	Port Moresby	17.30	99	P	Pn	19 18 33.3	+2.9
PMG	Port Moresby	17.30	99	P	Pn	19 18 33.2	+2.9
PMG	Port Moresby	17.30	99	ceP	Pn	19 18 30.8	+0.4
PMG				pmax	pmax		
	comp=Z,59nm,1.0s						
PSA00	Pilbara Seismi	17.40	213	P	P	19 18 29.6	-1.1
PSA00	Pilbara Seismi	17.40	213	P	Pn	19 18 31.3	-0.3
GHBP	Garcia Hernand	17.43	342	⇓iP	Pn	19 18 33.1	+1.1
TBP	Tagbilaran	17.64	340	eP	Pn	19 18 35.1	+0.7
MSLP	Maasin	17.75	344	⇑eP	Pn	19 18 35.6	-0.1
MSLP	Maasin	17.75	344	⇓iP	ScP	19 26 26.0	-2.0
TBJI	Tambak Boyo	17.87	270	P	Pn	19 18 36.4	-0.8
	comp=Z,532nm,1.4s						
MTSU	Mount Surprise	17.91	129	P	Pn	19 18 38.2	+0.5
	baz=18,SNR=148						
MTSU	Mount Surprise	17.91	129	P	Pn	19 18 38.4	+0.6
PWJI	Pagerwojo	17.91	266	P	P	19 18 35.7	-0.7
	comp=Z,163nm,0.5s,comp=Z,2µm						
WRKA	Warakurna	17.98	185	P	P	19 18 36.8	-0.3
	baz=18,SNR=738						
WRKA	Warakurna	17.98	185	P	P	19 18 37.3	+0.2
CNOP	Candoni, Negro	18.21	337	⇑eP	Pn	19 18 41.6	+0.4
CNOP				eS	Sn	19 22 08.8	+3.1
NGJI	Ngawi	18.24	268	P	P	19 18 40.4	+0.4
	comp=Z,166nm,0.9s						
PBKI	Pangkalan Bun	18.61	282	P	Pn	19 18 44.8	-1.1
	comp=Z,1µm,1.0s,comp=Z,8µm						
UWJI	Ujung Watu	18.78	271	P	P	19 18 46.4	+0.5
	comp=Z,191nm,0.7s,comp=Z,2µm						
KKM	Kota Kinabalu	18.80	313	P	P	19 18 44.9	-1.2
KKM	Kota Kinabalu	18.80	313	P	Pn	19 18 47.5	-0.7
UGM	Wanagama	19.18	266	P	P	19 18 48.2	-2.1
SMRI	Semarang	19.26	269	P	Pn	19 18 54.8	+1.2
	comp=Z,162nm,0.7s						
SMRI	Semarang	19.26	269	P	P	19 18 51.5	+0.4
	comp=Z,161nm,0.8s						
SBUM	Sibu	19.95	298	P	Pn	19 19 00.1	-1.5
SBUM	Sibu	19.95	298	P	Pn	19 19 01.0	-0.6
TV1H	Townsville Har	20.48	128	P	Pn	19 19 06.9	-1.0
CTA	Charters Tower	20.55	131	P	P	19 19 06.8	+1.9
	comp=Z,5.7nm,0.7s,baz=310,slow=9.3,SNR=7.6						
CTA				S	S	19 22 40.5	-6.8
	comp=Z,9.7nm,0.6s,baz=185,slow=22,SNR=2.5						
CTA				LR	LR	19 28 38.2	
	comp=Z,164nm,20.0s,baz=296,slow=41						
	comp=Z,5.7nm,0.7s						
CTAO	Charters Tower	20.55	131	P	P	19 19 06.6	+1.7
CTAO	Charters Tower	20.55	131	P	P	19 19 06.6	+1.7
KPJI	Karang Pucung	20.75	268	P	P	19 19 06.0	-1.2
	comp=Z,184nm,0.6s,comp=Z,2µm						
OTRP	Odiongan	20.76	338	⇑eP	Pn	19 19 09.9	-1.3
CMJI	Cimerak	21.23	267	P	P	19 19 12.7	+0.4
	comp=Z,123nm,0.7s						
KSM	Kuching	21.24	293	P	P	19 19 12.0	-0.4
KSM	Kuching	21.24	293	P	P	19 19 14.7	+2.3
	comp=Z,198nm,1.2s						
KSM	Kuching	21.24	293	P	P	19 19 14.0	+1.6
PVCP	Virac	21.24	345	⇓eP	P	19 19 14.8	+2.4
PVCP				eS	S	19 22 56.9	-3.6
OOD	Oodnadatta	21.39	166	P	P	19 19 14.2	+0.3
GIRL	Giralia	21.62	222	P	P	19 19 17.6	+1.2
	baz=22,SNR=23						
GIRL	Giralia	21.62	222	P	P	19 19 15.7	-0.7
GIRL	Giralia	21.62	222	P	P	19 19 17.6	+1.2
BBJI	Bungbulang	22.02	267	P	P	19 19 18.9	-1.9
KRVT	Keravat (AS076	22.23	84	P	P	19 19 19.4	-3.4
	comp=Z,34nm,0.8s,baz=3.6,slow=9.3,SNR=3.3						
JCNP	Jose Panganiba	22.32	341	⇓eP	P	19 19 25.3	+1.7
CNJI	Cibinong	22.54	268	P	P	19 19 24.5	-1.3
	comp=Z,189nm,1.0s,comp=Z,2µm						
LUBP	Lubang	22.71	335	⇑eP	P	19 19 28.1	+0.8
CBJI	Citeko	22.85	270	P	P	19 19 25.2	-3.5
	comp=Z,260nm,0.9s,comp=Z,4µm						
INKA	Innaminka	23.06	155	P	P	19 19 31.9	+1.4
MULG	Mulgathing	23.48	171	P	P	19 19 35.2	+0.9
FORT	Forrest	23.70	184	P	P	19 19 37.0	+0.8
	baz=24,SNR=16						
FORT	Forrest	23.70	184	P	P	19 19 37.1	+0.8
FORT	Forrest	23.70	184	P	P	19 19 37.1	+0.8
QLP	Quilpie	23.79	147	P	P	19 19 38.4	+1.1
	baz=24,SNR=31						
QLP	Quilpie	23.79	147	P	P	19 19 38.3	+1.1
CGJI	Cibinong	23.98	269	P	P	19 19 36.5	-2.6
	comp=Z,124nm,0.8s,comp=Z,1µm						
PPBI	Pangkal Pinang	24.11	280	P	P	19 19 40.9	+0.6
	comp=Z,117nm,1.1s,comp=Z,5µm						
LCRK	Leigh Creek	24.60	162	P	P	19 19 45.5	+1.0
KASI	Kota Agung	25.24	272	P	P	19 19 50.2	-0.3
	comp=Z,62nm,0.8s						
PMBI	Palembang	25.30	278	P	P	19 19 54.9	+3.8
PMBI	Palembang	25.30	278	P	P	19 19 52.1	+1.0
	comp=Z,306nm,1.0s						
GUMO	Guam	25.33	36	P	P	19 19 52.8	+1.5
	comp=Z,52nm,0.7s,baz=192,slow=19,SNR=2.4						
	comp=Z,52nm,0.7s						
KMBL	Kambalda	25.34	196	P	P	19 19 51.7	+0.5
	baz=25,SNR=21						
KMBL	Kambalda	25.34	196	P	P	19 19 51.7	+0.5
MORW	Morawa	25.51	209	P	P	19 19 52.7	-0.1
	baz=26,SNR=40						
MORW	Morawa	25.51	209	P	P	19 19 52.1	-0.7
MORW				IAmb	IAmb	19 20 33.5	
	comp=Z,50nm,0.6s						
MORW	Morawa	25.51	209	P	P	19 19 53.0	+0.2
DSRI	Dabo	26.02	283	P	P	19 19 58.0	+0.4
	comp=Z,39nm,1.0s						
BBOO	Buckleboo	26.31	168	P	P	19 20 00.3	+0.4
	baz=26,SNR=24						
BBOO	Buckleboo	26.31	168	P	P	19 20 00.2	+0.3
BBOO	Buckleboo	26.31	168	P	P	19 20 00.5	+0.6
TPRI	Tanjung Pinang	26.46	286	P	P	19 20 02.4	+0.9
	comp=Z,48nm,0.8s						
BLDU	Ballidu	26.51	206	P	P	19 20 02.2	+0.4
	baz=26,SNR=31						
KLBR	Kellerberrin	26.93	203	P	P	19 20 06.0	+0.5
	baz=27,SNR=54						
KLBR				P	P	19 20 06.0	+0.5
	baz=27,SNR=54						
KLBR	Kellerberrin	26.93	203	P	P	19 20 06.1	+0.5
STKA	Stephens Creek	27.06	158	P	P	19 20 07.6	+1.0
	comp=Z,11nm,0.6s,baz=329,slow=9.4,SNR=28						
STKA				LR	LR	19 32 33.1	
	comp=Z,265nm,19.5s,baz=344,slow=40						
	comp=Z,11nm,0.6s						
STKA	Stephens Creek	27.06	158	P	P	19 20 07.3	+0.7
	baz=27,SNR=29						
STKA	Stephens Creek	27.06	158	P	P	19 20 06.9	+0.3
STKA	Stephens Creek	27.06	158	P	P	19 20 07.7	+1.0
STKA	Stephens Creek	27.06	158	i P	P	19 20 04.3	-2.3
BTDF	Bukit Timah Da	27.32	287	P	P	19 20 11.8	+2.6
	comp=Z,22nm,0.8s						
MYKOM	Kota Tinggi	27.38	288	P	P	19 20 10.0	+0.3
HTT	Hallett	27.60	163	P	P	19 20 12.4	+0.9
	baz=28,SNR=13						
MUN	Mundaring	27.90	205	P	P	19 20 14.4	+0.2
	baz=28,SNR=12						
NWAO	Narrogin (SRO)	28.32	203	P	P	19 20 18.4	+0.6
	comp=Z,11nm,0.4s,baz=25,slow=14,SNR=25						
	comp=Z,11nm,0.4s						
NWAO	Narrogin (SRO)	28.32	203	P	P	19 20 18.4	+0.6
	baz=28,SNR=12						
NWAO				P	P	19 20 18.4	+0.6
	baz=28,SNR=12						
NWAO	Narrogin (SRO)	28.32	203	P	P	19 20 18.1	+0.2
NWAO	Narrogin (SRO)	28.32	203	P	P	19 20 18.1	+0.2
NWAO				pmax	pmax		
	comp=Z,62nm,0.6s						
CMSA	Cobar Meteorol	28.54	151	P	P	19 20 20.6	+0.8
	baz=29,SNR=40						
CMSA	Cobar Meteorol	28.54	151	P	P	19 20 21.0	+1.2
SDSI	Sungai Dareh	28.97	281	P	P	19 20 23.7	-0.2
	comp=Z,63nm,1.1s						
BKNI	Bangkinang	29.65	283	P	P	19 20 32.5	+2.6
	comp=Z,115nm,1.1s						
BKNI	Bangkinang	29.65	283	P	P	19 20 30.3	+0.4
	comp=Z,113nm,1.0s						
IPM	Ipoh	30.95	291	P	P	19 20 43.2	+1.8
	comp=Z,41nm,0.7s						
ARMA	Armidale	30.98	141	P	P	19 20 41.6	+0.1
	baz=31,SNR=5.3						
TPUB	Ta-pu	31.45	344	P	P	19 20 45.8	+0.2
ARPS	Mount Arapiles	31.57	161	P	P	19 20 48.2	+1.7
	baz=32,SNR=13						
ARPS	Mount Arapiles	31.57	161	P	P	19 20 48.2	+1.7
KULM	Kulim	31.60	292	P	P	19 20 46.0	-1.1
KULM				IAmb	IAmb	19 20 49.7	
	comp=Z,62nm,1.2s						
KULM				PcP	PcP	19 23 37.7	+1.4
KULM				ScP	ScP	19 27 07.3	+0.6
YNG	Young	32.10	150	P	P	19 20 52.8	+1.6
RPSI	Rantau Prapat	32.34	286	P	P	19 20 52.0	-1.5
PSI	Prapat	32.37	287	P	P	19 20 52.5	-1.4
PSI	Prapat	32.37	287	P	P	19 20 52.0	-1.9
PSI				pmax	pmax		
	comp=Z,80nm,0.9s						
CAN	Canberra	33.22	151	P	P	19 21 02.1	+1.2
CAN				IAmb	IAmb	19 22 18.9	
	comp=Z,41nm,1.3s						
CAN	Canberra	33.22	151	P	P	19 21 02.1	+1.2
CAN				pmax	pmax		
	comp=Z,41nm,1.3s						
TOO	Toolangi	33.58	157	P	P	19 21 06.5	+2.4
	baz=34,SNR=6.1						
SRIT	Nakonsritamara	33.90	297	P	P	19 21 06.9	-0.2
SRIT	Nakonsritamara	33.90	297	P	P	19 21 07.3	+0.2
LHMI	Lhok Sumawe	35.01	289	P	P	19 21 15.6	-1.1
LHMI	Lhok Sumawe	35.01	289	P	P	19 21 16.1	-0.6
LHMI	Lhok Sumawe	35.01	289	P	P	19 21 17.4	+0.7
	comp=Z,183nm,0.8s						
MLSI	Meulaboh, Aceh	35.21	288	P	P	19 21 18.9	+0.5
	comp=Z,78nm,0.7s						
NAYO	Nakonayok	35.36	307	P	P	19 21 20.1	+0.5
PHRA	Phrae	38.68	311	P	P	19 21 48.4	+0.7
CM31	Chiang Mai Arr	39.62	310	P	P	19 21 55.7	+0.2
CM31				IAmb	IAmb	19 21 57.0	
	comp=Z,34nm,0.7s						
CMAR	Chiang Mai Arr	39.62	310	P	P	19 21 55.9	+0.4
	comp=Z,22nm,0.6s,baz=137,slow=6.8,SNR=166						
CMAR				PcP	PcP	19 24 01.6	+1.6
	comp=Z,5.8nm,0.7s,baz=168,slow=2.8,SNR=11						
CMAR				ScP	ScP	19 27 35.6	-0.2
	comp=Z,3.2nm,0.9s,baz=154,slow=3.3,SNR=12						
	comp=Z,22nm,0.6s						
CMAR	Chiang Mai Arr	39.62	310	P	P	19 21 54.1	-1.4
CMAR				PcP	PcP	19 24 02.0	+2.1
CMAR				ScP	ScP	19 27 36.4	+0.6
CRAI	Chiangrai	39.66	314	P	P	19 21 55.6	-0.2
CRAI				PcP	PcP	19 24 02.3	+2.3
CHTO	Chiang Mai	39.84	311	P	P	19 21 57.6	+0.4
CHTO	Chiang Mai	39.84	311	P	P	19 21 57.7	+0.4
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
JNU	Nakatsue	39.93	1	P	P	19 21 57.9	+0.1
	comp=Z,14nm,1.0s,baz=192,slow=20,SNR=5.2						
	comp=Z,14nm,1.0s						
NJ2	Nanjing	40.24	345	eP	P	19 22 04.0	+3.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,170nm,4.7s						
JMN	Monobe	40.70	5	P	P	19 22 03.6	-0.6
JMN				IAmb	IAmb	19 23 38.5	
	comp=Z,64nm,1.4s						
KMI	Kunming	41.43	321	⇑P	P	19 22 11.0	+0.5
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,77nm,4.0s						
KMI				LR	LR		
	comp=Z,150nm,9.4s						
JHS	Saijyo	41.90	4	P	P	19 22 14.0	+0.1
JHS				IAmb	IAmb	19 23 42.9	
	comp=Z,39nm,1.3s						
ENH	Enshi	41.91	333	P	P	19 22 14.5	+0.4
	comp=Z,26nm,0.7s						
ENH	Enshi	41.91	333	P	P	19 22 14.0	-0.1
JGF	Kuroka	42.98	9	P	P	19 22 22.9	+0.3
JGF				IAmb	IAmb	19 22 44.1	
	comp=Z,58nm,1.5s						
PZH	PanZhiHua	43.05	322	P	P	19 22 23.0	-0.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,70nm,5.1s						
TJN	Taejon	43.23	357	ceP	P	19 22 26.2	+1.7
MND	Mandalay	43.88	312	P	P	19 22 30.3	+0.3
MJAR	Matsushiro Arr	44.03	10	P	P	19 22 30.7	-0.3
	comp=Z,18nm,0.8s,baz=186,slow=9.6,SNR=43						
MJAR				PcP	PP	19 24 15.4	-1.2
	comp=Z,2.4nm,0.9s,baz=189,slow=3.9,SNR=1.5						
MJAR				ScP	ScP	19 27 52.5	-0.6
	comp=Z,2.4nm,0.8s,baz=178,slow=4.8,SNR=4.9						
	comp=Z,18nm,0.8s						
MAJO	Matsushiro	44.03	10	P	P	19 22 29.5	-1.5
MAJO				IAmb	IAmb	19 22 31.9	
	comp=Z,28nm,0.8s						
MAJO	Matsushiro	44.03	10	P	P	19 22 31.0	-0.1
MAJO	Matsushiro	44.03	10	P	P	19 22 29.5	-1.5
MAJO				pmax	pmax		
	comp=Z,28nm,0.8s						
MAJO	Matsushiro	44.03	10	P	P	19 22 30.3	-0.8
MAJO				pP	pP	19 22 57.6	-3.8
MJB9	Matsu-Tunnel	44.04	10	P	P	19 22 30.4	-0.7
MJB9				IAmb	IAmb	19 22 32.9	
	comp=Z,28nm,0.8s						
TNCH	TengChong	44.10	317	⇑P	P	19 22 32.0	0.0
TNCH				S	S	19 28 55.5	+1.1
TNCH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TNCH				pmax	pmax		
	comp=Z,130nm,4.9s						
KSRS	Korea Array	44.27	358	P	P	19 22 33.6	+0.7
	comp=Z,2.8nm,0.7s,baz=174,slow=8.8,SNR=13						
KSRS				PcP	PcP	19 24 15.9	+1.1
	comp=Z,1.6nm,0.6s,baz=172,slow=3.4,SNR=5.0						
KSRS				ScP	ScP	19 27 52.8	-1.2
	comp=Z,1.6nm,0.7s,baz=195,slow=4.0,SNR=4.9						
	comp=Z,2.8nm,0.7s						
LYN	LuoYang	44.49	339	⇑P	P	19 22 35.5	+0.8
LYN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TIA	Tai'an	44.63	345	P	P	19 22 23.8	-12
TIA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CD2	Chengdu	45.24	328	P	P	19 22 41.0	+0.3
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
XAN	Xi'an	45.39	335	⇓P	P	19 22 41.5	-0.4
XAN				ScP	ScP	19 27 59.5	+0.8
XAN				S	S	19 29 16.8	+4.3
XAN				pmax	pmax		
	comp=Z,31nm,0.8s						
JMM	Marumori	45.80	12	P	P	19 22 44.2	-0.8
JMM				IAmb	IAmb	19 22 50.2	
	comp=Z,39nm,0.7s						
HNS	HongShan	46.40	343	⇓P	P	19 22 50.0	+0.4
HNS				pmax	pmax		
	comp=Z,12nm,1.0s						
BRDH	Bariadhala	47.63	309	LR	LR	19 47 42.5	
	comp=Z,109nm,18.3s,baz=126,slow=42						
BJI	Beijing	48.49	346	P	P	19 23 06.3	+0.5
BJI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LZH	Lanzhou	49.35	332	eP	P	19 23 13.0	+0.4
LZH				S	S	19 30 05.0	-3.8
LZH				SS	SS	19 33 38.8	-3.7
LZH				pmax	pmax		
	comp=Z,30nm,1.0s						
HHC	Hu-ho-hao-te	50.51	342	eP	P	19 23 22.0	+0.7
HHC				pmax	pmax		
	comp=Z,43nm,0.5s						
HHC				pmax	pmax		

	comp=Z,140nm,5.4s						
USA0B	**Ussuriysk Arra**	**51.01**	**2**	P	**P**	**19 23 25.2**	**+0.4**
USA0B	**Ussuriysk Arra**	**51.01**	**2**	P	**P**	**19 23 25.2**	**+0.4**
USA0B				pmax	pmax		
	comp=Z,8.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**51.01**	**2**	P	**P**	**19 23 25.6**	**+0.8**
	comp=Z,7.4nm,0.6s,baz=173,slow=8.1,SNR=16						
	comp=Z,7.4nm,0.6s						
USRK	**Ussuriysk Ar.**	**51.01**	**2**	P	**P**	**19 23 25.4**	**+0.6**
USRK	**Ussuriysk Ar.**	**51.01**	**2**	P	**P**	**19 23 25.4**	**+0.6**
PALK	**Pallekele**	**51.03**	**285**	LR	LR	19 47 37.4	
	comp=Z,38nm,18.2s,baz=198,slow=39						
PALK	**Pallekele**	**51.03**	**285**	P	**P**	**19 23 23.8**	**-1.8**
PALK				IAmb	IAmb	19 23 28.2	
	comp=Z,25nm,0.8s						
PALK				PcP	**PcP**	**19 24 41.5**	**+1.8**
PALK				ScP	**ScP**	**19 28 23.9**	**+0.8**
PALK	**Pallekele**	**51.03**	**285**	*i* P	**P**	**19 23 25.3**	**-0.2**
RPZ	**Rata Peaks**	**51.31**	**142**	LR	LR	19 44 11.3	
	comp=Z,97nm,19.1s,baz=302,slow=34						
MDJ	**Mudanjiang**	**51.40**	**360**	P	**P**	**19 23 28.5**	**+0.9**
MDJ				pP	pP	19 23 56.8	-2.2
MDJ				PcP	**PcP**	**19 24 39.8**	**-0.5**
MDJ				PP	**PP**	**19 25 26.8**	**+0.5**
MDJ				PcS	**PcS**	**19 28 35.5**	**-2.6**
MDJ				S	**S**	**19 30 44.8**	**+8.4**
MDJ				ScS	**ScS**	**19 33 04.3**	**+0.5**
MDJ				pmax	pmax		
	comp=Z,13nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,180nm,3.9s						
MDJ	**Mudanjiang**	**51.40**	**360**	P	**P**	**19 23 28.2**	**+0.6**
MDJ	**Mudanjiang**	**51.40**	**360**	P	**P**	**19 23 28.2**	**+0.6**
MDJ				pP	pP	19 23 47.0	-12
TUWZ	**Tuamarina**	**51.97**	**138**	P	**P**	**19 23 32.2**	**+0.2**
LSA	**Lhasa**	**52.10**	**316**	P	**P**	**19 23 34.5**	**+0.7**
LSA				pmax	pmax		
	comp=Z,14nm,0.8s						
LSA	**Lhasa**	**52.10**	**316**	P	**P**	**19 23 34.4**	**+0.6**
LSA	**Lhasa**	**52.10**	**316**	P	**P**	**19 23 33.8**	**+0.1**
LSA				pP	**pP**	**19 23 57.4**	**-7.7**
GVZ	**Greta Valley S**	**52.15**	**140**	P	**P**	**19 23 32.4**	**-1.0**
ASAJ	**Asahikawa**	**52.18**	**12**	LR	LR	19 45 05.7	
	comp=Z,44nm,20.5s,baz=199,slow=35						
ASAJ	**Asahikawa**	**52.18**	**12**	P	**P**	**19 23 34.4**	**+0.9**
ASAJ				pmax	pmax		
	comp=Z,14nm,0.7s						
JKA	**Kamikawa-asahi**	**52.19**	**12**	P	**P**	**19 23 34.4**	**+0.9**
JKA				IAmb	IAmb	19 23 35.4	
	comp=Z,14nm,0.7s						
BHW	**Baring Head**	**52.58**	**138**	P	**P**	**19 23 35.3**	**-1.2**
MRZ	**Mangatainoka R**	**52.71**	**137**	P	**P**	**19 23 38.1**	**+0.6**
PLWZ	**Palliser**	**52.91**	**138**	P	**P**	**19 23 39.4**	**+0.3**
ODAN	**Odare**	**53.15**	**311**	*e*Pg	**P**	**19 23 41.1**	**-0.2**
TAPN	**Taplejung**	**53.18**	**312**	*e*P	**P**	**19 23 41.5**	**0.0**
	comp=Z,70nm,0.4s						
RAMN	**Ramite**	**53.79**	**311**	*e*P	**P**	**19 23 46.1**	**+0.1**
	comp=Z,98nm,0.5s						
GTA	**Gaotai**	**53.91**	**331**	⇑P	**P**	**19 23 47.0**	**+0.6**
GTA				ScP	**ScP**	**19 28 36.0**	**+0.8**
GTA				S	**S**	**19 31 08.0**	**-3.2**
GTA				pmax	pmax		
	comp=Z,23nm,1.0s						
GOMU	**GeErMu**	**54.12**	**325**	P	**P**	**19 23 49.0**	**+0.7**
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,84nm,4.3s						
JIRN	**Jiri**	**54.48**	**311**	*e*P	**P**	**19 23 50.9**	**-0.2**
GUN	**Gumba**	**54.85**	**311**	*e*P	**P**	**19 23 53.5**	**-0.2**
	comp=Z,99nm,0.5s						
YSS	**Yuzh-Sakhalins**	**54.94**	**11**	P	**P**	**19 23 54.1**	**+0.6**
YSS				IAmb	IAmb	19 23 55.2	
	comp=Z,12nm,0.7s						
YSS	**Yuzh-Sakhalins**	**54.94**	**11**	P	**P**	**19 23 54.6**	**+1.1**
	comp=Z,20nm,0.7s						
YSS	**Yuzh-Sakhalins**	**54.94**	**11**	*ce*P	**P**	**19 23 54.6**	**+1.1**
YSS				pmax	pmax		
	comp=Z,6.0nm,0.6s						
PKI	**Pulchoki**	**55.02**	**311**	*e*P	**P**	**19 23 54.3**	**-0.6**
	comp=Z,35nm,0.5s						
PKIN	**Phulchoki**	**55.03**	**311**	*e*P	**P**	**19 23 54.4**	**-0.5**
	comp=Z,46nm,0.4s						
KKN	**Kakani**	**55.23**	**311**	*e*P	**P**	**19 23 56.0**	**-0.3**
DMN	**Daman**	**55.27**	**311**	*e*P	**P**	**19 23 56.4**	**-0.2**
	comp=Z,42nm,0.6s						
GKN	**Gorkha**	**55.83**	**311**	*e*P	**P**	**19 24 00.3**	**-0.2**
	comp=Z,72nm,0.3s						
KLR	**Kul'dur**	**56.03**	**2**	ScP	**ScP**	**19 28 43.5**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=189,slow=3.7,SNR=6.1						
KLR				S	**S**	**19 31 37.4**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=51,slow=21,SNR=1.5						
KLR	**Kul'dur**	**56.03**	**2**	*ce*P	**P**	**19 24 02.5**	**+1.2**
KLR				pmax	pmax		
	comp=Z,14nm,1.7s						
PCHI	**Peechi**	**56.04**	**288**	*e*P	**P**	**19 24 00.6**	**-1.4**
HYB	**Hyderabad**	**56.19**	**296**	*e*P	**P**	**19 24 01.7**	**-1.3**
KOLN	**Koldanda**	**56.49**	**310**	*e*P	**P**	**19 24 05.3**	**0.0**
DANN	**Dangsing**	**56.67**	**311**	*e*P	**P**	**19 24 06.3**	**-0.3**
	comp=Z,69nm,0.6s						
HEH	**HeiHe**	**57.07**	**358**	*e*P	**P**	**19 24 09.3**	**+0.7**
HEH				ScP	**ScP**	**19 28 46.8**	**-1.8**
HEH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PYUN	**Piuthan**	**57.12**	**310**	*e*P	**P**	**19 24 09.7**	**0.0**
	comp=Z,71nm,0.5s						
ULN	**Ulaanbaatar**	**58.23**	**342**	P	**P**	**19 24 18.5**	**+1.5**
ULN				IAmb	IAmb	19 24 19.2	
	comp=Z,19nm,0.8s						
ULN	**Ulaanbaatar**	**58.23**	**342**	*ce*P	**P**	**19 24 18.2**	**+1.2**
ULN				pmax	pmax		
	comp=Z,19nm,0.7s						
ULN	**Ulaanbaatar**	**58.23**	**342**	P	**P**	**19 24 17.8**	**+0.8**
SONM	**Songino Array**	**58.41**	**342**	P	**P**	**19 24 19.0**	**+0.8**
	comp=Z,6.5nm,0.7s,baz=157,slow=5.5,SNR=36						
SONM				ScP	**ScP**	**19 28 54.7**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=147,slow=4.0,SNR=3.9						
SONM				S	**S**	**19 32 08.3**	**-2.0**
	comp=Z,0.4nm,0.9s,baz=132,slow=8.7,SNR=2.0						
SONM				PKP2bc		19 54 06.9	
	comp=Z,1.0nm,0.9s,baz=255,slow=2.3,SNR=5.2						
	comp=Z,6.5nm,0.7s						
SONM	**Songino Array**	**58.41**	**342**	P	**P**	**19 24 19.1**	**+0.9**
DRV	**Dumont d'Urvil**	**59.97**	**175**	P	**P**	**19 24 29.0**	**+0.5**
DRV				pP	pP	19 24 50.2	-11
ZEA	**Zeya**	**60.56**	**358**	*e*P	**P**	**19 24 33.9**	**+1.2**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CASY	**Casey**	**60.66**	**189**	P	**P**	**19 24 32.7**	**-0.5**
ZAK	**Zakamensk**	**61.63**	**341**	*e*P	**P**	**19 24 40.1**	**0.0**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
WMQ	**Urumqi**	**63.33**	**327**	*e*P	**P**	**19 24 52.3**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,38nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,5.1s						
MOY	**Mondy**	**63.48**	**340**	*e*P	**P**	**19 24 53.9**	**+1.5**
MOY				pmax	pmax		
	comp=Z,19nm,1.5s						
PEA0B	**Petropavlovsk-**	**64.39**	**18**	P	**P**	**19 24 58.2**	**+0.1**
PEA0B				IAmb	IAmb	19 25 02.8	
	comp=Z,21nm,0.9s						
PEA0B	**Petropavlovsk-**	**64.39**	**18**	P	**P**	**19 24 58.2**	**+0.1**
PEA0B				pmax	pmax		
	comp=Z,21nm,0.9s						
PETK	**Petropavlovsk-**	**64.39**	**18**	P	**P**	**19 24 59.6**	**+1.5**
	comp=Z,10nm,0.6s,baz=179,slow=5.3,SNR=19						
PETK				LR	LR	19 54 49.0	
	comp=Z,23nm,18.7s,baz=207,slow=38						
	comp=Z,10nm,0.6s						
PETK	**Petropavlovsk-**	**64.39**	**18**	P	**P**	**19 24 58.7**	**+0.6**
PET	**Petropavlovsk**	**64.62**	**19**	P	**P**	**19 24 59.1**	**-0.4**
PET				IAmb	IAmb	19 25 01.4	
	comp=Z,38nm,1.2s						
NIL	**Nilore**	**67.11**	**311**	P	**P**	**19 25 16.6**	**+0.6**
NIL				IAmb	IAmb	19 25 17.1	
	comp=Z,17nm,0.8s						
NIL	**Nilore**	**67.11**	**311**	P	**P**	**19 25 16.7**	**+0.6**
NIL				pmax	pmax		
	comp=Z,17nm,0.8s						
NIL	**Nilore**	**67.11**	**311**	P	**P**	**19 25 15.1**	**-1.0**
ZSN	**Zaisan**	**67.21**	**329**	*e*P	**P**	**19 25 17.2**	**+0.9**
	comp=Z,15nm,0.8s,baz=329						
ZSN	**Zaisan**	**67.21**	**329**	*e*P	**P**	**19 25 17.2**	**+0.9**

ZSN				pmax	pmax		
	comp=Z,15nm,0.8s						
DGZ	**Jazzator, Alta**	**67.45**	**332**	*i* P	**P**	**19 25 18.7**	**+0.7**
DGZ				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TARG	**Taragay, Kyrgy**	**67.88**	**320**	P	**P**	**19 25 22.7**	**+1.5**
TARG	**Taragay, Kyrgy**	**67.88**	**320**	P	**P**	**19 25 22.7**	**+1.5**
TARG				pmax	pmax		
	comp=Z,9.0nm,0.6s						
UZB	**Uzynbulak**	**67.90**	**322**	*e*P	**P**	**19 25 21.6**	**+0.7**
	baz=322						
UZB	**Uzynbulak**	**67.90**	**322**	*e*P	**P**	**19 25 21.6**	**+0.7**
KSH	**Kashi**	**67.93**	**318**	P	**P**	**19 25 23.0**	**+1.8**
KSH				PcP	**PcP**	**19 25 49.3**	**+2.7**
KSH				sP	sP	19 26 16.8	+7.5
KSH				pmax	pmax		
	comp=Z,16nm,0.8s						
KSH				LR	LR		
	comp=Z,380nm,7.9s						
KSH				LR	LR		
	comp=Z,250nm,6.7s						
KSH				LR	LR		
	comp=Z,93nm,11.3s						
CCD	**Concordia, Ant**	**68.14**	**182**	P	**P**	**19 25 22.7**	**+0.5**
CCD				pP	**PcP**	**19 25 48.1**	**+0.9**
MK31	**Makanchi Array**	**68.16**	**327**	P	**P**	**19 25 23.4**	**+1.0**
MK31	**Makanchi Array**	**68.16**	**327**	*c i*P	**P**	**19 25 23.2**	**+0.9**
MKAR	**Makanchi Array**	**68.16**	**327**	P	**P**	**19 25 23.4**	**+1.0**
	comp=Z,66nm,0.7s,baz=125,slow=7.9,SNR=769						
MKAR				S	**S**	**19 34 10.3**	**-0.9**
	comp=Z,1.2nm,1.0s,baz=118,slow=12,SNR=4.4						
MKAR				PKP2bc		19 53 44.0	
	comp=Z,0.2nm,0.6s,baz=319,slow=4.8,SNR=3.5						
MKAR				LR	LR	19 57 29.4	
	comp=Z,33nm,18.6s,baz=72,slow=38						
	comp=Z,66nm,0.7s						
MKAR	**Makanchi Array**	**68.16**	**327**	P	**P**	**19 25 23.1**	**+0.8**
SATY	**Saty**	**68.23**	**322**	⇑*i*P	**P**	**19 25 24.0**	**+1.0**
	comp=Z,16nm,0.9s,baz=322						
SATY	**Saty**	**68.23**	**322**	*c i*P	**P**	**19 25 24.0**	**+1.0**
SATY				pmax	pmax		
	comp=Z,16nm,0.9s						
ZHN	**Zhinishke**	**68.27**	**322**	*e*P	**P**	**19 25 24.0**	**+0.7**
	baz=322						
ZHN	**Zhinishke**	**68.27**	**322**	*e*P	**P**	**19 25 23.9**	**+0.7**
KPKS	**Kokpek**	**68.28**	**322**	*e*P	**P**	**19 25 24.2**	**+0.9**
	comp=Z,23nm,1.2s,baz=322						
KPKS	**Kokpek**	**68.28**	**322**	*e*P	**P**	**19 25 24.1**	**+0.9**
KPKS				pmax	pmax		
	comp=Z,23nm,1.2s						
KDJ	**Kajisay**	**68.49**	**321**	P	**P**	**19 25 26.0**	**+1.3**
KDJ				IAmb	IAmb	19 25 27.0	
	comp=Z,19nm,1.0s						
KDJ	**Kajisay**	**68.49**	**321**	P	**P**	**19 25 26.0**	**+1.3**
KDJ				pmax	pmax		
	comp=Z,19nm,1.0s						
YAK	**Yakutsk**	**68.84**	**360**	S	**S**	**19 34 17.5**	**-1.1**
	comp=Z,1.9nm,0.3s,baz=138,slow=23,SNR=15						
YAK	**Yakutsk**	**68.84**	**360**	P	**P**	**19 25 26.2**	**+0.1**
YAK				IAmb	IAmb	19 25 28.0	
	comp=Z,26nm,0.9s						
YAK	**Yakutsk**	**68.84**	**360**	*e*P	**P**	**19 25 26.7**	**+0.5**
YAK				*e*		19 25 47.2	
YAK				*e*		19 27 59.2	
YAK				*e*PPP	PPP	19 29 40.0	
YAK				*e*S	**S**	**19 34 18.4**	**-0.2**
YAK				*e*		19 35 00.0	
YAK				pmax	pmax		
	comp=Z,26nm,0.9s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,120nm,5.3s						
YAK				pmax	pmax		
	comp=N,89nm,5.6s						
YAK				pmax	pmax		
	comp=E,69nm,5.3s						
YAK				smax	smax		
	comp=E,62nm,1.8s						
YAK				smax	smax		
	comp=N,29nm,1.7s						
YAK	**Yakutsk**	**68.84**	**360**	P	**P**	**19 25 25.9**	**-0.2**
NRN	**Naryn**	**68.88**	**319**	P	**P**	**19 25 27.3**	**0.0**
NRN	**Naryn**	**68.88**	**319**	P	**P**	**19 25 27.3**	**0.0**
NRN				pmax	pmax		
	comp=Z,14nm,1.1s						
TNSS	**Tian-Shan**	**69.11**	**321**	*e*P	**P**	**19 25 30.0**	**+1.1**
	baz=321						
TNSS	**Tian-Shan**	**69.11**	**321**	*e*P	**P**	**19 25 29.9**	**+1.1**
MDOK	**Medeo**	**69.12**	**321**	*i* P	**P**	**19 25 29.6**	**+1.1**
	baz=322						
MDOK	**Medeo**	**69.12**	**321**	*i* P	**P**	**19 25 29.6**	**+1.1**
TDK	**Taldyqorghan**	**69.30**	**324**	*e*P	**P**	**19 25 30.6**	**+1.2**
	comp=Z,19nm,0.8s,baz=324						
TDK	**Taldyqorghan**	**69.30**	**324**	*e*P	**P**	**19 25 30.6**	**+1.2**
TDK				pmax	pmax		
	comp=Z,19nm,0.8s						
TKM2	**Tokmak 2**	**69.90**	**321**	P	**P**	**19 25 34.0**	**+0.6**
	SNR=51						
KUU	**Kurty**	**69.94**	**322**	⇑*i*P	**P**	**19 25 34.3**	**+0.8**
	baz=322						
KUU	**Kurty**	**69.94**	**322**	*c i*P	**P**	**19 25 34.2**	**+0.8**
KBK	**Karagaybulak**	**70.18**	**320**	P	**P**	**19 25 36.5**	**+1.4**
	SNR=34						
UCH	**Uchtor**	**70.24**	**320**	P	**P**	**19 25 37.3**	**+1.5**
	SNR=47						
AAK	**Ala-Archa**	**70.46**	**320**	P	**P**	**19 25 38.2**	**+1.5**
	SNR=40						
AAK	**Ala-Archa**	**70.46**	**320**	P	**P**	**19 25 38.1**	**+1.5**
	comp=Z,24nm,0.6s,baz=121,slow=5.1,SNR=148						
	comp=Z,24nm,0.6s						
AAK	**Ala-Archa**	**70.46**	**320**	P	**P**	**19 25 37.9**	**+1.2**
AAK				IAmb	IAmb	19 25 39.2	
	comp=Z,32nm,0.8s						
AAK	**Ala-Archa**	**70.46**	**320**	*i* P	**P**	**19 25 38.3**	**+1.5**
	SNR=63						
AAK	**Ala-Archa**	**70.46**	**320**	P	**P**	**19 25 37.0**	**+0.3**
AAK				pP	**PcP**	**19 25 56.4**	**-0.9**
CHMS	**Chumysh**	**70.47**	**320**	P	**P**	**19 25 37.9**	**+1.2**
	SNR=12						
KBL	**Kabul**	**70.66**	**310**	P	**P**	**19 25 38.5**	**+0.3**
KBL				IAmb	IAmb	19 25 47.4	
	comp=Z,12nm,0.6s						
KBL	**Kabul**	**70.66**	**310**	P	**P**	**19 25 38.5**	**+0.3**
KBL				pmax	pmax		
	comp=Z,12nm,0.6s						
AML	**Almayashu**	**70.72**	**319**	P	**P**	**19 25 39.9**	**+1.3**
	SNR=84						
USP	**Ospenovka**	**70.77**	**320**	P	**P**	**19 25 39.5**	**+1.1**
	SNR=75						
SGDS	**Sogindy**	**70.78**	**321**	*e*P	**P**	**19 25 39.2**	**+0.7**
	comp=Z,7.0nm,0.5s,baz=321						
SGDS	**Sogindy**	**70.78**	**321**	*e*P	**P**	**19 25 39.2**	**+0.7**
SGDS				pmax	pmax		
	comp=Z,7.0nm,0.5s						
EKS2	**Erkin-Say**	**70.93**	**320**	P	**P**	**19 25 41.1**	**+1.6**
	SNR=69						
SEM	**Semipalatinsk**	**71.43**	**329**	*e*P	**P**	**19 25 42.7**	**+0.2**
	comp=Z,20nm,0.9s,baz=329						
SEM	**Semipalatinsk**	**71.43**	**329**	*e*P	**P**	**19 25 42.7**	**+0.2**
SEM				pmax	pmax		
	comp=Z,20nm,0.9s						
ZAA0	**Zalesovo Array**	**71.53**	**334**	P	**P**	**19 25 42.1**	**-0.6**
ZAA0				IAmb	IAmb	19 25 43.6	
	comp=Z,17nm,0.8s						
ZALV	**Zalesovo Beam**	**71.53**	**334**	P	**P**	**19 25 42.7**	**0.0**
	comp=Z,13nm,0.6s,baz=119,slow=4.8,SNR=76						
ZALV				S	**S**	**19 34 45.6**	**-4.6**
	comp=Z,5.3nm,1.1s,baz=153,slow=11,SNR=13						
	comp=Z,13nm,0.6s						
ZALV	**Zalesovo Beam**	**71.53**	**334**	P	**P**	**19 25 41.5**	**-1.2**
GAR	**Garm**	**71.57**	**315**	P	**P**	**19 25 43.8**	**+0.3**
BTK	**Batken**	**71.68**	**316**	P	**P**	**19 25 44.4**	**+0.3**
BTK				IAmb	IAmb	19 25 46.0	
	comp=Z,18nm,0.8s						
BTK	**Batken**	**71.68**	**316**	P	**P**	**19 25 44.4**	**+0.3**
BTK				pmax	pmax		
	comp=Z,18nm,0.8s						
SEY	**Seymchan**	**71.85**	**11**	*ce*P	**P**	**19 25 46.2**	**+1.7**
SEY				pmax	pmax		
	comp=Z,25nm,1.3s						
BTLS	**Baital**	**71.94**	**322**	*e*P	**P**	**19 25 46.2**	**+0.8**
	baz=322						
BTLS	**Baital**	**71.94**	**322**	*e*P	**P**	**19 25 46.2**	**+0.8**

CHGR	**Chuyangaron**	**72.24**	**314**	P	**P**	**19 25 48.4**	**+0.9**
CHGR	**Chuyangaron**	**72.24**	**314**	P	**P**	**19 25 48.4**	**+0.9**
CHGR				pmax	pmax		
	comp=Z,96nm,0.7s						
KURBB	**Kurchatov Arra**	**72.44**	**329**	P	**P**	**19 25 49.0**	**+0.7**
	comp=Z,28nm,0.6s,baz=130,slow=5.0,SNR=229						
	comp=Z,28nm,0.6s						
VNDA	**Vanda**	**72.45**	**173**	P	**P**	**19 25 48.7**	**+0.7**
	comp=Z,5.8nm,0.8s,baz=320,slow=6.6,SNR=29						
VNDA				LR	LR	19 56 13.4	
	comp=Z,54nm,19.7s,baz=340,slow=34						
	comp=Z,5.8nm,0.8s						
VNDA	**Vanda**	**72.45**	**173**	P	**P**	**19 25 48.6**	**+0.7**
VNDA	**Vanda**	**72.45**	**173**	P	**P**	**19 25 48.6**	**+0.7**
VNDA				pmax	pmax		
	comp=Z,11nm,1.1s						
KURK	**Kurchatov**	**72.45**	**329**	P	**P**	**19 25 49.1**	**+0.8**
KURK				IAmb	IAmb	19 25 50.0	
	comp=Z,40nm,0.9s						
KURK	**Kurchatov**	**72.45**	**329**	P	**P**	**19 25 49.1**	**+0.8**
KURK				pmax	pmax		
	comp=Z,40nm,0.9s						
DZA	**Taraz**	**72.62**	**319**	*e*P	**P**	**19 25 50.1**	**+0.6**
	comp=Z,12nm,0.7s,baz=319						
DZA	**Taraz**	**72.62**	**319**	*e*P	**P**	**19 25 50.1**	**+0.6**
DZA				pmax	pmax		
	comp=Z,12nm,0.7s						
IUG	**Iuzhnay**	**73.14**	**318**	⇑*i*P	**P**	**19 25 53.9**	**+1.1**
	comp=Z,20nm,0.5s,baz=318						
IUG	**Iuzhnay**	**73.14**	**318**	*c i*P	**P**	**19 25 53.8**	**+1.1**
IUG				pmax	pmax		
	comp=Z,20nm,0.5s						
KK31	**Karatay Array**	**73.25**	**319**	P	**P**	**19 25 54.3**	**+1.1**
KK31				IAmb	IAmb	19 25 55.0	
	comp=Z,37nm,1.1s						
KK31	**Karatay Array**	**73.25**	**319**	P	**P**	**19 25 54.3**	**+1.1**
KK31				pmax	pmax		
	comp=Z,37nm,1.2s						
KKAR	**Karatay Array**	**73.25**	**319**	P	**P**	**19 25 54.1**	**+0.9**
KKAR	**Karatay Array**	**73.25**	**319**	P	**P**	**19 25 54.1**	**+0.9**
CHM	**Chimkent**	**73.50**	**318**	*e*P	**P**	**19 25 55.9**	**+1.2**
	baz=318						
CHM	**Chimkent**	**73.50**	**318**	*e*P	**P**	**19 25 55.9**	**+1.2**
MAW	**Mawson**	**74.88**	**201**	P	**P**	**19 26 03.0**	**+0.8**
	comp=Z,19nm,0.6s,baz=84,slow=9.2,SNR=12						
	comp=Z,19nm,0.6s						
MAW	**Mawson**	**74.88**	**201**	P	**P**	**19 26 02.1**	**-0.1**
	baz=75,SNR=8.2						
MAW	**Mawson**	**74.88**	**201**	P	**P**	**19 26 03.8**	**+1.6**
MAW	**Mawson**	**74.88**	**201**	P	**P**	**19 26 03.8**	**+1.6**
MAW				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BRZS	**Berezniki**	**75.24**	**326**	⇑*i*P	**P**	**19 26 05.5**	**+0.8**
	comp=Z,9.9nm,0.6s,baz=326						
BRZS	**Berezniki**	**75.24**	**326**	*c i*P	**P**	**19 26 05.4**	**+0.8**
BRZS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WSAR	**Wadi Sarin**	**75.74**	**296**	P	**P**	**19 26 08.6**	**+0.6**
	comp=Z,14nm,0.6s,baz=163,slow=5.3,SNR=26						
	comp=Z,14nm,0.6s						
SOHO	**SOHO**	**77.81**	**296**	*i* P	**P**	**19 26 19.8**	**+0.2**
	SNR=6.6						
BVAR	**Borovoye Array**	**78.00**	**328**	P	**P**	**19 26 20.5**	**+0.5**
	comp=Z,19nm,0.7s,baz=133,slow=6.3,SNR=64						
BVAR				LR	LR	20 03 20.9	
	comp=Z,25nm,18.4s,baz=46,slow=38						
	comp=Z,19nm,0.7s						
BRVK	**Borovoye**	**78.07**	**328**	P	**P**	**19 26 20.9**	**+0.5**
BRVK				IAmb	IAmb	19 26 21.9	
	comp=Z,27nm,0.8s						
BRVK	**Borovoye**	**78.07**	**328**	*i* P	**P**	**19 26 21.2**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,21nm,0.8s						
MDH	**Madha**	**78.29**	**298**	P	**P**	**19 26 21.7**	**-0.6**
UOSS	**Minazif**	**78.29**	**297**	P	**P**	**19 26 23.2**	**+0.9**
UOSS				IAmb	IAmb	19 26 23.4	
	comp=Z,53nm,1.9s						
UOSS	**Minazif**	**78.29**	**297**	P	**P**	**19 26 22.0**	**-0.3**
HATD	**Hatta, Dubai**	**78.33**	**297**	P	**P**	**19 26 22.7**	**+0.2**
ASHO	**Ashiyiah**	**78.36**	**297**	*i* P	**P**	**19 26 23.3**	**+0.6**
	SNR=6.0						
MSFE	**Esma-Masafi**	**78.43**	**298**	*i* P	**P**	**19 26 23.7**	**+0.6**
	SNR=9.1						
BANOM	**Banah**	**78.44**	**298**	*i* P	**P**	**19 26 23.5**	**+0.4**
	SNR=16						
ALNE	**Al Ain**	**78.49**	**296**	P	**P**	**19 26 24.2**	**+0.8**
TIXI	**Tiksi**	**78.51**	**360**	S	**S**	**19 36 02.1**	**-4.7**
	comp=Z,0.9nm,0.9s,baz=90,slow=24,SNR=2.4						
TIXI	**Tiksi**	**78.51**	**360**	P	**P**	**19 26 22.9**	**+0.5**
TIXI	**Tiksi**	**78.51**	**360**	*i* P	**P**	**19 26 23.6**	**+1.2**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SHME	**Shamm**	**78.61**	**298**	*i* P	**P**	**19 26 24.7**	**+0.7**
	SNR=8.0						
FAQ	**Al Faqa, Dubai**	**78.79**	**297**	*i* P	**P**	**19 26 25.0**	**0.0**
	SNR=9.9						
ASUD	**Al Ashush, Dub**	**79.00**	**297**	P	**P**	**19 26 26.5**	**+0.4**
BILL	**Bilibino**	**79.17**	**13**	⇑*e*P	**P**	**19 26 26.9**	**+0.8**
BILL				*e*		19 29 26.6	
BILL				*e*S	S	19 36 30.1	+16
BILL				pmax	pmax		
	comp=Z,6.0nm,1.6s						
GEYT	**Alibeck**	**80.11**	**310**	P	**P**	**19 26 32.9**	**+1.0**
	comp=Z,16nm,0.6s,baz=148,slow=3.2,SNR=42						
	comp=Z,16nm,0.6s						
GEYT	**Alibeck**	**80.11**	**310**	P	**P**	**19 26 33.0**	**+1.0**
GEYT				IAmb	IAmb	19 26 33.8	
	comp=Z,17nm,0.7s						
GEYT	**Alibeck**	**80.11**	**310**	P	**P**	**19 26 33.0**	**+1.0**
GEYT				pmax	pmax		
	comp=Z,17nm,0.7s						
GYA0B	**ALIBECK ARRAY**	**80.11**	**310**	P	**P**	**19 26 32.3**	**+0.4**
GYA0B				IAmb	IAmb	19 26 33.8	
	comp=Z,17nm,0.7s						
ABPO	**Ambohimpanom**	**80.80**	**252**	P	**P**	**19 26 35.8**	**-0.3**
ABPO	**Ambohimpanom**	**80.80**	**252**	P	**P**	**19 26 35.8**	**-0.3**
ABPO				pmax	pmax		
	comp=Z,26nm,1.6s						
VOI	**Vohitsoka**	**81.00**	**249**	P	**P**	**19 26 36.3**	**-0.8**
VOI	**Vohitsoka**	**81.00**	**249**	P	**P**	**19 26 38.2**	**+1.1**
NRIK	**Noril'sk**	**81.54**	**346**	P	**P**	**19 26 39.9**	**+1.1**
	comp=Z,4.7nm,0.8s,baz=148,slow=2.3,SNR=6.6						
	comp=Z,4.7nm,0.8s						
ABKAR	**Akbulak array**	**82.43**	**322**	P	**P**	**19 26 44.2**	**+0.4**
QSPA	**South Pole Qui**	**82.96**	**180**	LR	LR	20 04 26.2	
	comp=Z,81nm,18.9s,baz=14,slow=36						
QSPA	**South Pole Qui**	**82.96**	**180**	P	**P**	**19 26 46.7**	**+0.2**
QSPA				IAmb	IAmb	19 26 47.7	
	comp=Z,22nm,0.7s						
AKTO	**Aktyubinsk**	**83.99**	**322**	P	**P**	**19 26 52.0**	**+0.1**
	comp=Z,9.9nm,0.6s,baz=111,slow=8.9,SNR=30						
AKTO				LR	LR	20 09 31.6	
	comp=Z,15nm,18.4s,baz=10.0,slow=39						
	comp=Z,9.9nm,0.6s						
AKTO	**Aktyubinsk**	**83.99**	**322**	P	**P**	**19 26 52.0**	**+0.1**
SVE	**Sverdlovsk**	**84.70**	**329**	*e*P	**P**	**19 26 56.3**	**+1.0**
SVE				pmax	pmax		
	comp=Z,40nm,1.3s						
TNA	**Tin City**	**85.29**	**22**	P	**P**	**19 26 59.0**	**+1.0**
TNA	**Tin City**	**85.29**	**22**	P	**P**	**19 26 59.6**	**+1.6**
	baz=242						
ARU	**Arti**	**85.64**	**328**	P	**P**	**19 27 00.0**	**+0.1**
	comp=Z,12nm,0.7s,baz=100,slow=4.2,SNR=24						
	comp=Z,12nm,0.7s						
ARU	**Arti**	**85.64**	**328**	P	**P**	**19 26 59.1**	**-0.8**
ARU				IAmb	IAmb	19 27 01.1	
	comp=Z,19nm,0.9s						
ARU	**Arti**	**85.64**	**328**	*d i*P	**P**	**19 27 00.1**	**+0.1**
ARU				*PP	**pwP**	**19 27 36.6**	**-0.6**
ARU						19 30 16.1	
ARU				S	S	19 37 10.3	-10
ARU				pmax	pmax		
	comp=Z,23nm,0.9s						
P16K	**Nushagak River**	**86.94**	**30**	P	**P**	**19 27 08.1**	**+1.9**
	baz=251						
N16K	**Nishlik Lake**	**87.05**	**28**	P	**P**	**19 27 08.9**	**+2.1**
	baz=250						
O16K	**Kokwok River B**	**87.08**	**29**	P	**P**	**19 27 08.5**	**+1.7**
	baz=251						
LKRN	**Lenkeran, Azer**	**87.42**	**309**	P	**P**	**19 27 10.0**	**+1.0**
RAYN	**Ar Rayn**	**87.61**	**294**	P	**P**	**19 27 10.7**	**+0.4**
RAYN	**Ar Rayn**	**87.61**	**294**	P	**P**	**19 27 10.7**	**+0.4**
RAYN				pmax	pmax		
	comp=Z,42nm,0.9s						
RAYN	**Ar Rayn**	**87.61**	**294**	*i* P	**P**	**19 27 10.7**	**+0.4**
	SNR=43						

ELIB	Princess Elisa	88.43	197	*d*P	P	19 27 15.1	+1.7
	comp=Z,30nm,0.7s						
AKT	Akhty	88.73	312	*e*P	P	19 27 16.3	+1.0
AKT				*e**PP	pP	19 27 53.3	+2.7
AKT				*e**SP	sP	19 28 09.5	+4.3
AKT				*e*		19 30 47.2	
AKT				pmax	pmax		
	comp=Z,32nm,0.9s						
SVW2	Sparrevohn	88.73	28	P	P	19 27 14.6	-0.1
TTA	Tatalina	89.07	26	P	P	19 27 18.1	+1.7
	baz=253						
MNGR	Mingechevir, A	89.08	311	P	P	19 27 17.8	+1.0
N19K	Bonanza Creek	89.16	28	P	P	19 27 18.0	+1.2
N19K				IAmb	IAmb	19 29 01.8	
	comp=Z,27nm,1.6s						
L19K	White Mountain	89.37	27	P	P	19 27 18.7	+1.0
ZKTA	Zakatala	89.57	312	P	P	19 27 20.1	+1.0
GANJ	Ganja	89.63	311	P	P	19 27 20.4	+1.0
NAX	Nakhchivan	90.02	309	P	P	19 27 22.2	+0.8
K20K	Telida	90.04	26	P	P	19 27 21.6	+0.8
K20K				IAmb	IAmb	19 30 51.6	
	comp=Z,27nm,1.9s						
M20K	Styx River	90.07	27	P	P	19 27 21.7	+0.6
GNI	Garni	90.75	310	P	P	19 27 25.1	+0.3
	comp=Z,2.7nm,0.4s,baz=103,slow=14,SNR=4.4						
	comp=Z,2.7nm,0.4s						
BELG	Belogornoye	90.78	323	P	P	19 27 24.6	+0.2
	comp=Z,13nm,0.7s,baz=76,slow=1.0,SNR=4.4						
	comp=Z,13nm,0.7s						
SKT	Skwentna	90.83	28	P	P	19 27 24.4	-0.1
IMAR	Indian Mountai	90.87	23	P	P	19 27 24.8	+0.2
CHUM	Lake Minchumin	90.93	26	P	P	19 27 26.0	+1.1
	baz=256						
H21K	Melozitna Rive	91.17	24	P	P	19 27 25.4	-0.5
A21K	Barrow	91.39	18	P	P	19 27 25.7	-1.1
A21K	Barrow	91.39	18	P	P	19 27 27.9	+1.0
	baz=252						
KTH	Kantishna Hill	91.46	26	P	P	19 27 26.4	-1.1
KTH				IAmb	IAmb	19 28 54.1	
	comp=Z,16nm,1.5s						
GEVA	Gevas	91.79	308	P	P	19 27 30.7	+1.0
MLY	Manley	91.86	25	P	P	19 27 29.6	+0.4
MLY	Manley	91.86	25	P	P	19 27 29.9	+0.6
	baz=258						
KMBO	Kilima Mbogo	92.44	269	P	P	19 27 33.0	-0.3
KMBO				IAmb	IAmb	19 27 35.4	
	comp=Z,9.2nm,1.1s						
KMBO	Kilima Mbogo	92.44	269	P	P	19 27 33.0	-0.3
KMBO				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KMBO	Kilima Mbogo	92.44	269	*i* P	P	19 27 34.0	+0.7
	SNR=7.2						
I23K	Minto, Yukon-K	92.46	25	P	P	19 27 33.0	+1.1
	baz=259						
G23K	Bananza Creek	92.50	23	P	P	19 27 33.4	+1.2
	baz=258						
H23K	Yukon River	92.52	24	P	P	19 27 31.2	-1.1
H23K				IAmb	IAmb	19 27 34.5	
	comp=Z,21nm,1.9s						
H23K	Yukon River	92.52	24	P	P	19 27 33.5	+1.3
	baz=259						
KBZ	Khabaz	92.59	314	P	P	19 27 33.8	+0.8
	comp=Z,3.5nm,0.8s,baz=81,slow=5.4,SNR=11						
	comp=Z,3.5nm,0.8s						
KBZ	Khabaz	92.59	314	*i* P	P	19 27 33.1	+0.1
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
D23K	Nanushuk River	92.73	21	P	P	19 27 35.0	+1.8
	baz=258						
SHA1	Shidzhatmaz	92.77	314	*i* P	P	19 27 33.0	-1.2
KIV	Kislovodsk	92.78	314	*e*P	P	19 27 34.0	0.0
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
WRH	Wood River Hil	92.86	25	P	P	19 27 33.1	-0.8
WRH				IAmb	IAmb	19 27 36.1	
	comp=Z,16nm,1.6s						
CCB	Clear Creek Bu	93.02	25	P	P	19 27 34.1	-0.4
H24K	Noodor Dome	93.19	24	P	P	19 27 35.6	+0.2
H24K				IAmb	IAmb	19 29 37.7	
	comp=Z,14nm,1.7s						
H24K	Noodor Dome	93.19	24	P	P	19 27 36.2	+0.8
	baz=260						
ILAR	Eielson Array	93.43	25	P	P	19 27 35.4	-1.1
	comp=Z,1.0nm,0.8s,baz=273,slow=4.4,SNR=12						
ILAR				PKKP	PKKPdf	19 44 43.4	-0.2
	comp=Z,0.9nm,0.7s,baz=307,slow=0.9,SNR=15						
	comp=Z,1.0nm,0.8s						
F24K	Squaw Lake	93.48	22	P	P	19 27 38.2	+1.5
	baz=260						
G24K	Hadweenzic Riv	93.50	23	P	P	19 27 37.9	+1.2
	baz=260						
C24K	Franklin Bluff	93.57	20	P	P	19 27 38.2	+1.3
	baz=260						
TROLL	Troll, Antarti	94.11	194	P	P	19 27 41.0	+1.3
RIDG	Independent Ri	94.16	26	P	P	19 27 39.7	-0.2
RIDG				IAmb	IAmb	19 28 36.0	
	comp=Z,33nm,2.0s						
RIDG	Independent Ri	94.16	26	P	P	19 27 40.4	+0.5
	baz=263						
D25K	Kavik River	94.31	21	P	P	19 27 41.1	+0.6
	baz=262						
F25K	Christian Rive	94.34	23	P	P	19 27 41.5	+0.8
	baz=262						
E25K	Arctic Village	94.44	22	P	P	19 27 42.8	+1.7
	baz=262						
DOT	Dot Lake	94.50	27	P	P	19 27 41.0	-0.4
DOT				IAmb	IAmb	19 27 43.1	
	comp=Z,25nm,1.9s						
BMAR	Burnt Mountain	94.72	23	P	P	19 27 43.2	+0.8
BELA	Belgrano 2	94.79	183	P	P	19 27 41.8	-0.7
LODK	Lodwar	94.86	273	P	P	19 27 42.5	-1.7
F26K	Sheenjek River	94.92	22	P	P	19 27 45.0	+1.7
	baz=264						
G26K	Porcupine Rive	94.98	23	P	P	19 27 45.1	+1.6
	baz=264						
C27K	Jago River	95.28	21	P	P	19 27 46.3	+1.5
	baz=264						
L27K	Beaver Creek,	95.44	27	P	P	19 27 46.4	+0.6
L27K				IAmb	IAmb	19 28 42.6	
	comp=Z,17nm,1.9s						
BCAR	Beaver Creek A	95.46	27	P	P	19 27 46.2	+0.3
SNAA	Sanae	95.61	194	P	P	19 27 47.5	+1.0
SNAA	Sanae	95.61	194	P	P	19 27 47.5	+1.0
SNAA				IAmb	IAmb	19 27 48.0	
	comp=Z,8.5nm,0.7s						
SNAA	Sanae	95.61	194	P	P	19 27 47.5	+1.0
SNAA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
I27K	Kandik River	95.73	25	P	P	19 27 48.4	+1.4
	baz=266						
H27K	Steamboat Moun	95.81	24	P	P	19 27 49.1	+1.7
	baz=266						
E27K	Coleen River	95.92	22	P	P	19 27 48.9	+1.1
	baz=266						
VNA2	Neumayer--Watz	97.18	193	P	Pdif	19 27 54.0	+0.5
	baz=118,slow=7.0						
GRHM	Grahamstown, E	97.32	235	P	Pdif	19 27 56.0	+1.0
VNA3	Neumayer Olymp	97.44	192	P	Pdif	19 27 55.5	+0.8
MMAI	Mount Meron Ar	97.49	302	P	P	19 27 55.9	+0.1
	comp=Z,3.8nm,0.7s,baz=98,slow=9.0,SNR=9.2						
	comp=Z,3.8nm,0.7s						
VNA1	Neumayer--Stat	97.58	193	P	P	19 27 55.3	0.0
OBN	Obninsk	97.58	325	⇑*e*P	P	19 27 54.8	-0.7
OBN				*e**PP	pwP	19 28 32.6	-1.6
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
EIL	Elat	97.67	299	P	P	19 27 56.2	-0.3
	comp=Z,1.8nm,0.7s,baz=108,slow=6.4,SNR=2.6						
EIL				LR	LR	20 19 09.7	
	comp=Z,12nm,18.4s,baz=57,slow=40						
	comp=Z,1.8nm,0.7s						
INK	Inuvik	98.93	22	P	P	19 28 01.2	0.0
	comp=Z,2.0nm,1.0s,baz=257,slow=3.1,SNR=3.8						
	comp=Z,2.0nm,1.0s						
INK	Inuvik	98.93	22	P	Pdif	19 28 01.4	+0.1
	baz=274						
BRTR	Keskin Array B	99.21	309	P	Pdif	19 28 03.1	-0.3
	comp=Z,1.1nm,0.7s,baz=116,slow=5.3,SNR=12						
	comp=Z,1.1nm,0.7s						
BRTR	Keskin Array B	99.21	309	P	Pdif	19 28 03.2	-0.2
BOSA	Boshof	99.32	240	P	Pdif	19 28 04.6	+0.4
	comp=Z,2.8nm,0.9s,baz=103,slow=6.8,SNR=3.8						
	comp=Z,2.8nm,0.9s						
LBTB	Lobatse	99.83	243	LR	LR	20 10 45.9	
	comp=Z,10nm,18.5s,baz=122,slow=34						
AKASG	Malin Array Be	102.12	320	P	Pdif	19 28 15.7	-0.2
	comp=Z,0.7nm,0.4s,baz=73,slow=4.8,SNR=2.8						
FINES	FINESS Array B	102.71	331	PKiKP	PKiKP	19 32 39.2	+1.0
	comp=Z,3.0nm,0.8s,baz=101,slow=3.9,SNR=5.4						
YKA	Yellowknife Ar	107.83	26	PKiKP	PKiKP	19 32 48.2	+0.5
	comp=Z,0.3nm,0.6s,baz=298,slow=1.4,SNR=7.1						
YKA				SKiKP	SKiKP	19 36 09.2	-1.0
	comp=Z,0.3nm,0.7s,baz=284,slow=1.1,SNR=3.9						
YKA				PKKPbc	PKKPbc	19 44 01.6	-2.3
	comp=Z,2.3nm,0.7s,baz=109,slow=3.1,SNR=38						
YKA				PKKPab	PKKPab	19 44 15.3	-0.5
	comp=Z,0.7nm,0.8s,baz=108,slow=5.2,SNR=6.2						
KRLC	Kraliky	110.08	321	*e*PKP	PKiKP	19 32 52.9	+0.5
DPC	Dobruska-Polom	110.30	321	*e*PKP	PKiKP	19 32 53.6	+0.8
DPC	Dobruska-Polom	110.30	321	*e*PKIKP	PKiKP	19 32 53.6	+0.8
OSTC	Ostas	110.32	321	*e*PKP	PKiKP	19 32 53.6	+0.8
OSTC	Ostas	110.32	321	*e*PKIKP	PKiKP	19 32 53.6	+0.8
NVAR	Mina Array Bea	111.42	52	PP	PP	19 33 39.1	+1.0
	comp=Z,0.9nm,0.9s,baz=248,slow=9.5,SNR=2.8						
NVAR				PKKPbc	PKKPbc	19 43 52.3	+0.5
	comp=Z,0.8nm,0.7s,baz=108,slow=4.1,SNR=7.7						
NVAR				PKKPab	PKKPab	19 44 02.1	+1.5
	comp=Z,1.2nm,0.7s,baz=114,slow=4.8,SNR=8.2						
PRU	Pruhonice	111.50	321	*e*PKP	PKiKP	19 32 54.9	-0.1
PRU	Pruhonice	111.50	321	*e*PKIKP	PKiKP	19 32 54.9	-0.1
ARSA	Arzberg	111.55	318	*e*PKiKP	PKiKP	19 32 55.8	+0.6
	comp=Z,0.5nm,0.4s						
CKRC	Cesky Krumlov	111.95	320	*e*PKP	PKiKP	19 32 56.3	+0.4
CKRC	Cesky Krumlov	111.95	320	*e*PKIKP	PKiKP	19 32 56.3	+0.4
MOA	Molln	112.23	319	*e*PKiKP	PKiKP	19 32 56.5	+0.1
	comp=Z,0.3nm,0.3s						
GERES	GERESS Array B	112.34	320	PKiKP	PKiKP	19 32 56.5	-0.2
	comp=Z,2.0nm,0.6s,baz=68,slow=2.7,SNR=22						
KHC	Kasperske Hory	112.34	320	*e*PKP	PKiKP	19 32 57.0	+0.3
KHC	Kasperske Hory	112.34	320	*e*PKIKP	PKiKP	19 32 57.0	+0.3
BIOA	Bad Ischl, Aus	112.68	319	*e*PKiKP	PKiKP	19 32 57.5	+0.2
	comp=Z,0.5nm,0.3s						
KBA	Koelnbreinsper	113.03	318	*e*PKiKP	PKiKP	19 32 58.0	-0.3
	comp=Z,1.1nm,0.5s						
ABTA	Abfaltersbach	113.67	318	*i* PKiKP	PKiKP	19 32 59.6	+0.3
	comp=Z,3.0nm,0.7s						
WTTA	Wattenberg	114.11	319	*i* PKP	PKiKP	19 33 00.7	+0.4
	comp=Z,7.0nm,0.5s						
WATA	Walderalm	114.12	319	*i* PKP	PKPdf	19 33 00.3	0.0
	comp=Z,1.8nm,0.5s						
SQTA	Sankt Quirin	114.40	319	*i* PKP	PKiKP	19 33 01.1	+0.3
	comp=Z,0.8nm,0.4s						
MOTA	Moosalm	114.43	319	*i* PKP	PKPdf	19 33 00.9	0.0
	comp=Z,2.8nm,0.5s						
RETA	Reutte	114.61	319	*i* PKP	PKiKP	19 33 01.2	+0.1
	comp=Z,0.8nm,0.3s						
FETA	Feichten	114.77	319	*e*PKP	PKPdf	19 33 01.9	+0.3
	comp=Z,1.3nm,0.5s						
DAVA	Damuels	115.24	319	*i* PKP	PKPdf	19 33 02.8	+0.4
	comp=Z,3.9nm,0.5s						
PDAR	Pinedale Array	117.01	45	PKP	PKiKP	19 33 06.8	+0.7
	comp=Z,0.4nm,0.7s,baz=270,slow=1.8,SNR=4.9						
PDAR				SKP		19 36 28.4	
	comp=Z,0.8nm,1.0s,baz=252,slow=1.8,SNR=3.7						
PDAR				PKKPbc	PKKPbc	19 43 31.3	-1.7
	comp=Z,0.8nm,0.7s,baz=108,slow=5.8,SNR=8.3						
KEST	Kesra	118.71	307	PKP	PKPdf	19 33 09.2	-0.2
	comp=Z,3.8nm,0.8s,baz=64,slow=4.5,SNR=5.8						
FRB	Frobisher Bay	121.84	10	PKP	PKiKP	19 33 14.9	+0.4
	comp=Z,3.1nm,0.7s,baz=17,slow=6.4,SNR=9.3						
ULM	Lac du Bonnet	122.54	33	PKKPbc	PKKPbc	19 43 10.6	-2.0
	comp=Z,1.0nm,0.3s,baz=130,slow=7.9,SNR=3.6						
TXAR	Lajitas Array	125.07	59	PKP	PKiKP	19 33 22.3	+0.2
	comp=Z,0.3nm,0.7s,baz=242,slow=1.9,SNR=2.9						
TXAR				PKKPbc	PKKPbc	19 43 02.9	+0.7
	comp=Z,0.3nm,0.6s,baz=104,slow=5.4,SNR=4.4						
ESDC	Sonseca Array	127.41	315	PKP	PKiKP	19 33 27.0	+0.5
	comp=Z,3.2nm,1.2s,baz=0.0,slow=3.0,SNR=5.8						
TOA0	Torodi Ar. Sit	128.66	281	PKPdf	PKiKP	19 33 30.1	+0.5
TORD	Torodi Ar. Bea	128.66	281	PKP	PKPdf	19 33 29.1	+0.2
	comp=Z,5.1nm,0.7s,baz=76,slow=1.8,SNR=29						
TORD				SKPbc	SKPbc	19 36 37.1	
	comp=Z,89nm,0.8s,baz=82,slow=3.5,SNR=11						
PLCA	Paso Flores	128.91	160	PKP	PKiKP	19 33 30.1	+0.5
	comp=Z,4.5nm,0.9s,baz=249,slow=1.5,SNR=6.8						
PLCA				SKPbc	SKPbc	19 36 36.8	
	comp=Z,2.3nm,0.9s,baz=232,slow=3.5,SNR=2.6						
SCHQ	Schefferville	130.47	13	SKPbc	SKPab	19 36 41.7	-0.3
	comp=Z,19nm,0.8s,baz=359,slow=3.5,SNR=17						
DBIC	Dimbokro	135.04	272	PKP	PKiKP	19 33 42.2	-0.3
	comp=Z,9.0nm,0.8s,baz=85,slow=2.9,SNR=12						
DBIC				SKPbc	SKPbc	19 36 58.1	-0.8
	comp=Z,4.4nm,0.6s,baz=81,slow=3.7,SNR=10						
GO02	Mina Guanaco	142.84	150	PKPdf	PKPdf	19 33 53.6	-1.7
PB14	IPOC Station P	142.87	149	PKPdf	PKPdf	19 33 53.7	-1.8
LVC	Limon Verde	145.30	149		PKiKP	19 34 02.4	-1.4
LVC	Limon Verde	145.30	149	PKP2	PKiKP	19 34 02.4	-1.4
ITAB	Concordia	145.90	177		PKPab	19 34 02.8	+1.1
CPUP	Villa Florida	146.13	168	PKPbc	PKPab	19 34 03.1	+0.6
	comp=Z,39nm,0.9s,baz=197,slow=1.7,SNR=78						
CPUP				SKPbc	SKPbc	19 37 28.1	+0.2
	comp=Z,15nm,0.8s,baz=199,slow=3.3,SNR=17						
CPUP	Villa Florida	146.13	168		PKPab	19 34 03.3	+0.8
TA01	Diego Aracena	146.25	145		PKPab	19 34 04.2	+1.0
PB11	IPOC Station P	147.19	145		PKPab	19 34 06.5	-0.6
PB12	IPOC Station P	147.68	142		PKiKP	19 34 08.1	-0.3
SPB	Sao Paulo	149.46	185	*e*P	PKPdf	19 34 06.5	+0.3
LPAZ	La Paz	150.80	143	PKP	PKPdf	19 34 11.4	+2.2
	comp=Z,2.6nm,0.7s,baz=54,slow=2.5,SNR=8.7						
LPAZ				PKPbc	PKiKP	19 34 16.4	+0.9
	comp=Z,10nm,0.4s,baz=248,slow=5.4,SNR=11						
OTAV	Otavalo	150.99	102	*e*P	PKPdf	19 34 09.2	-0.2
AQDB	Aquidauana	152.14	169	*e*P	PKPdf	19 34 11.1	+0.7
BDFB	Brasilia	157.39	185	PKP	PKPdf	19 34 18.2	+0.4
	comp=Z,4.8nm,0.9s,baz=174,slow=1.5,SNR=6.9						
BDFB				PKPab	PKPab	19 34 50.0	+0.4
	comp=Z,1.8nm,0.4s,baz=162,slow=3.2,SNR=3.8						

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*IDC **26** 19:24:46.9±3.7, 10°.45N×140°.15E, h70^{km}±34^{km}, mb3.5/7, mbtmp3.8/8, ML4.0/1, Error ellipse: s-maj=32.0km s-min=21.4km az=138.0*

ISC 26 19:24:43.5±1.0**, 10°.5N**±0°.2×**140°.0E**±0°.1**, h35^{km}, n14, σ1^{s}.13**/9**, mb3.8**/7**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.70	56	P	Pn	19 26 06.6	+0.9
	4.4nm,0.3s,baz=139,slow=5.8,SNR=1.8						
GUMO				S	Sn	19 27 10.7	+0.7
	29nm,0.7s,baz=76,slow=20,SNR=1.1						
	39nm,0.8s						
H11S3	WAKE ISLAND Hy	27.03	70	T	T	19 58 27.9	
	baz=256,slow=74						
H11S1	WAKE ISLAND Hy	27.05	70	T	T	19 58 28.8	
	baz=256,slow=74						
H11S2	WAKE ISLAND Hy	27.05	70	T	T	19 58 31.2	
	baz=256						
H11N1	WAKE ISLAND Hy	27.52	67	T	T	19 59 04.3	
	baz=254,slow=75,SNR=5.1						
H11N2	WAKE ISLAND Hy	27.54	67	T	T	19 59 04.4	
	baz=254,slow=75,SNR=20						
H11N3	WAKE ISLAND Hy	27.54	67	T	T	19 59 05.3	
	baz=254,slow=75,SNR=21						
ASAR	Alice Springs	34.42	190	P	P	19 31 28.1	+0.3
	0.6nm,0.7s,baz=13,slow=12,SNR=1.7						
	0.6nm,0.7s						
KLR	Kul'dur	39.27	351	P	P	19 32 08.8	+0.1
	1.1nm,0.5s,baz=151,slow=7.0,SNR=6.5						
	1.1nm,0.5s						
CMAR	Chiang Mai Arr	40.46	286	P	P	19 32 20.2	+1.2
	1.1nm,0.7s,baz=97,slow=7.7,SNR=8.9						
	1.1nm,0.7s						
MKAR	Makanchi Array	60.52	318	P	P	19 34 50.5	+0.2
	0.6nm,0.8s,baz=102,slow=6.5,SNR=2.2						
	0.6nm,0.8s						
ILAR	Eielson Array	73.43	25	P	P	19 36 11.2	-0.7
	0.8nm,0.8s,baz=245,slow=6.0,SNR=12						
	0.8nm,0.8s						
INK	Inuvik	79.07	22	P	P	19 36 42.9	-1.0
	0.8nm,0.4s,baz=268,slow=5.7,SNR=4.8						
	0.8nm,0.4s						
YKA	Yellowknife Ar	87.81	27	P	P	19 37 27.0	-1.9
	0.2nm,0.7s,baz=288,slow=4.4,SNR=3.1						
	0.2nm,0.7s						

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*NOU **26** 19:54:28.6, 36°.23S×179°.71E, h248^{km}, MLv4.9/11, Off E. Coast of N. Island, N.Z.*

*IDC **26** 19:54:54.8±3.7, 37°.19S×177°.80E, h112^{km}±29^{km}, mb3.5/2, mbtmp3.8/2, Error ellipse: s-maj=57.6km s-min=33.3km az=25.0*

*WEL **26** 19:54:57.4±1.0, 37°S±8°×17°8E±°, h87^{km}±8^{km}, M3.9/30, ML4.1/24, MLv3.9/30, Error ellipse: s-maj=0.0km s-min=0.0km az=21.5, confirmed*

ISC 26 19:54:55.6±0.8**, 37°.26S**±0°.06×**177°.67E**±0°.06**, h123^{km}**±6^{km}**, n89, σ1^{s}.18**/94**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WIZ	White Island	0.46	235	P	Pn	19 55 12.9	-0.7
WIZ				S	Sn	19 55 24.9	-2.4
WSRZ	White Island S	0.47	237	P	Pn	19 55 13.9	+0.2
HAZ	Te Kaha	0.50	170	P	Pn	19 55 13.6	-0.3
HAZ				S	Sn	19 55 26.6	-1.0
MXZ	Matakaoa Point	0.59	121	P	Pn	19 55 14.1	-0.3
MXZ				S	Sn	19 55 27.9	-0.8
RUGZ	Raukumara Rang	0.70	179	P	Pn	19 55 15.3	-0.1
RUGZ				S	Sn	19 55 29.5	-1.0
PKGZ	Pakihiroa	0.70	153	P	Pn	19 55 15.7	+0.4
PKGZ				S	Sn	19 55 30.2	-0.1
WHRZ	Whale Island	0.81	223	P	Pn	19 55 16.2	+0.1
PUZ	Puketiti	0.93	150	P	Pn	19 55 20.2	+3.0
TWGZ	Tauwhareparae	0.95	165	P	Pn	19 55 18.4	+1.0
MARZ	Manawahe	1.07	227	P	Pn	19 55 18.8	+0.2
MWZ	Matawai	1.08	186	P	Pn	19 55 18.9	+0.2
URZ	Urewera	1.09	204	P	Pn	19 55 18.8	+0.1
	691nm,0.3s,baz=6.1,slow=3.3,SNR=1355						
URZ				S	Sn	19 55 35.9	-0.4
	956nm,0.3s,baz=356,slow=19,SNR=12						
URZ	Urewera	1.09	204	P	Pn	19 55 19.0	+0.3
URZ	Urewera	1.09	204	P	Pn	19 55 18.8	+0.1
URZ				S	Sn	19 55 36.1	-0.2
EDRZ	Edgecumbe	1.12	221	P	Pn	19 55 19.6	+0.5
MYRZ	Mayor Island	1.14	269	P	Pn	19 55 18.8	-0.4
TKGZ	Te Karaka	1.18	173	P	Pn	19 55 20.2	+0.6
TGRZ	Tauranga	1.21	247	P	Pn	19 55 19.8	-0.2
LIRZ	Lichensteins R	1.26	234	P	Pn	19 55 21.2	+0.7
CNGZ	Carnagh Statio	1.29	161	P	Pn	19 55 22.0	+1.2
MKRZ	Makatiti	1.29	227	P	Pn	19 55 22.4	+1.4
OMRZ	Omania	1.33	230	P	Pn	19 55 21.8	+0.5
TARZ	Mount Tarawera	1.34	223	P	Pn	19 55 22.4	+1.0
KARZ	Kaharoa	1.36	236	P	Pn	19 55 22.0	+0.4
MUGZ	Murupara	1.41	210	P	Pn	19 55 22.8	+0.6
HLRZ	Highlands Stat	1.44	226	P	Pn	19 55 23.4	+0.9
NGRZ	Ngongotaha	1.44	234	P	Pn	19 55 23.3	+0.7
RIGZ	Rimuhau	1.44	177	P	Pn	19 55 23.0	+0.4
RTZ	Ruatahuna	1.46	202	P	Pn	19 55 23.0	+0.2
UTU	Utuhina	1.48	232	P	Pn	19 55 24.5	+1.5
KMRZ	Kaimai	1.49	246	P	Pn	19 55 23.3	+0.2
HSRZ	Hossack Road	1.54	227	P	Pn	19 55 25.0	+1.3
HRRZ	Handcock Road	1.57	224	P	Pn	19 55 25.2	+1.2
PRRZ	Plateau Road	1.59	219	P	Pn	19 55 25.1	+0.9
KUZ	Kuaotunu	1.64	288	P	Pn	19 55 23.9	-1.0
KUZ	Kuaotunu	1.64	288	P	Pn	19 55 23.8	-1.0
GRRZ	Galatos Road	1.64	228	P	Pn	19 55 26.2	+1.3
ALRZ	Allen Road	1.67	219	P	Pn	19 55 26.1	+0.9
RAHZ	Arahi	1.71	195	P	Pn	19 55 26.4	+0.7
MTHZ	Maungataniwha	1.72	202	P	Pn	19 55 26.1	+0.3
WPRZ	Whakapapatarin	1.73	223	P	Pn	19 55 27.3	+1.4
KNZ	Kokohu	1.76	180	P	Pn	19 55 26.2	+0.1
TOZ	Tahuroa Road	1.79	254	P	Pn	19 55 26.8	+0.3
WHHZ	Waihua	1.84	191	P	Pn	19 55 27.8	+0.6
MRHZ	Matea Rd	1.85	212	P	Pn	19 55 28.1	+0.7
MHGZ	Mahia Peninsul	1.90	174	P	Pn	19 55 28.4	+0.5
KUTZ	Kaahu Road	1.91	229	P	Pn	19 55 29.4	+1.3
WHTZ	Whakaora	1.95	223	P	Pn	19 55 30.6	+2.0
NMHZ	Naumai	1.95	200	P	Pn	19 55 29.7	+1.1
GRZ	Great Barrier	2.04	299	P	Pn	19 55 28.9	-0.8
ARHZ	Aropaoanui	2.07	195	P	Pn	19 55 30.4	+0.5
WIAZ	Waiheke Island	2.08	282	P	Pn	19 55 29.9	-0.3
WATZ	Wairara	2.10	226	P	Pn	19 55 32.0	+1.6
BKZ	Black Stump Fm	2.11	206	P	Pn	19 55 31.2	+0.5
BKZ	Black Stump Fm	2.11	206	P	Pn	19 55 31.1	+0.5
RATZ	Rangitukua	2.19	222	P	Pn	19 55 33.1	+1.6
ETAZ	East Tamaki Re	2.21	277	P	Pn	19 55 32.1	+0.3
RITZ	Rihia Road	2.23	219	P	Pn	19 55 33.5	+1.5
MBAZ	Motutapu North	2.27	282	P	Pn	19 55 32.6	0.0
MCHZ	McNeill Hill	2.31	199	P	Pn	19 55 33.7	+0.7
KWHZ	Kaweka Forest	2.37	204	P	Pn	19 55 34.0	+0.1
TMVZ	Te Maari	2.41	219	P	Pn	19 55 35.6	+1.1
NTVZ	North Tongarir	2.41	220	P	Pn	19 55 35.7	+1.2
ETVZ	East Tongariro	2.42	219	P	Pn	19 55 35.7	+1.1
KRVZ	Karewarewa	2.43	221	P	Pn	19 55 36.4	+1.7
CKHZ	Cape Kidnapper	2.44	191	P	Pn	19 55 34.4	-0.2
OTVZ	Oturere	2.47	219	P	Pn	19 55 36.2	+1.0
NNVZ	North Ngauruho	2.47	220	P	Pn	19 55 36.5	+1.3
NGZ	Ngauruhoe	2.51	220	P	Pn	19 55 37.0	+1.3
HIZ	Hauiti	2.55	240	P	Pn	19 55 37.9	+1.8
BHHZ	Black Hill Sta	2.56	209	P	Pn	19 55 36.3	+0.1
KAHZ	Kahuranaki	2.60	194	P	Pn	19 55 36.6	-0.2
WNVZ	Wahianoa	2.63	218	P	Pn	19 55 37.7	+0.4
KHEZ	Kahui Hut	3.52	234	P	Pn	19 55 50.6	+1.8
BFZ	Birch Farm	3.59	198	P	Pn	19 55 47.8	-1.9
SNZO	South Karori	4.65	209	P	Pn	19 56 00.9	-2.9
QRZ	Quartz Range	5.35	227	P	Pn	19 56 11.6	-1.6
KHZ	Kahutara	6.05	210	P	Pn	19 56 19.1	-3.5
RPZ	Rata Peaks	8.18	216	P	Pn	19 56 48.1	-3.3
	7.2nm,0.4s,baz=31,slow=5.9,SNR=17						
RPZ				S	Sn	19 58 13.4	-8.7
	15nm,0.4s,baz=23,slow=20,SNR=14						
RPZ	Rata Peaks	8.18	216	P	Pn	19 56 47.8	-3.6
ODZ	Otahua Downs	9.40	212	P	Pn	19 57 01.4	-6.4
MSVF	Nonsavu	19.46	1	P	Pn	19 59 16.8	+1.6
	4.4nm,1.0s,baz=180,slow=14,SNR=4.8						
ASAR	Alice Springs	39.74	277	P	P	20 02 17.4	+1.2
	1.4nm,0.7s,baz=120,slow=7.4,SNR=22						
	1.4nm,0.7s						
WRA	Warramunga Arr	41.38	282	P	P	20 02 30.7	+1.0
	0.6nm,0.4s,baz=121,slow=8.0,SNR=20						
	0.6nm,0.4s						
KURBB	Kurchatov Arra	123.06	311	PKP	PKPdf	20 13 36.4	-0.4
	0.1nm,0.3s,baz=112,slow=1.8,SNR=4.1						
ARCES	ARCESS Array B	144.34	344	PKP	PKPdf	20 14 15.5	-0.5
	2.8nm,0.7s,baz=57,slow=3.3,SNR=4.0						
FINES	FINESS Array B	149.99	333	PKPbc	PKiKP	20 14 30.9	-0.5
	6.6nm,1.1s,baz=66,slow=1.7,SNR=6.7						
BRTR	Keskin Array B	151.85	286	PKPbc	PKPbc	20 14 35.7	-0.2
	0.3nm,0.4s,baz=146,slow=3.3,SNR=2.7						
TORD	Torodi Ar. Bea	155.72	190	PKPbc	PKPdf	20 14 46.1	+11
	0.3nm,0.3s,baz=123,slow=2.0,SNR=4.0						
TORD				PKPab	PKPab	20 15 03.6	+1.5
	0.3nm,0.3s,baz=160,slow=3.7,SNR=4.1						

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*IDC **26** 20:00:00.5±2.0, 31°.79S×123°.11E, h0^{km}, mb3.6/1, mbtmp3.8/5, ML3.8/3, Error ellipse: s-maj=51.6km s-min=19.1km az=159.0*

*NOU **26** 20:00:02.6, 31°.55S×122°.91E, h0^{km}, mb4.2/20, Western Australia*

*AUST **26** 20:00:03.5±0.6, 31°.62S×122°.89E, h10^{km}, Error ellipse: s-maj=13.5km s-min=5.3km az=174.0*

*NEIC **26** 20:00:04.1±1.4, 31°.51S±0°.09×122°.88E±0°.06, h15^{km}±6^{km}, mb4.1/10, Error ellipse: s-maj=13.8km s-min=2.8km az=152.0*

ISC 26 20:00:02.9±0.6**, 31°.54S**±0°.06×**122°.91E**±0°.04**, h10^{km}, n71, σ2^{s}.19**/88**, 1C-1D, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBL	Kambalda	0.90	281	⇓P	Pn	20 00 22.6	+1.0
	baz=0.9,SNR=73						
KMBL				S	Sn	20 00 34.3	-0.4
	baz=0.9,SNR=17						
KMBL	Kambalda	0.90	281	P	Pn	20 00 21.8	+0.2
AUKAL	John Paul Coll	1.45	302	⇑P	Pg	20 00 32.8	+2.0
	baz=1.5						
KLBR	Kellerberrin	4.40	268	P	Pn	20 01 10.1	+0.3
	baz=4.4,SNR=24						
KLBR				S	Sn	20 01 58.0	-3.2
	baz=4.4,SNR=8.3						
KLBR	Kellerberrin	4.40	268	P	Pn	20 01 10.1	+0.3
FORT	Forrest	4.48	82	P	Pn	20 01 13.4	+2.6
	baz=4.5,SNR=11						
FORT				S	Sn	20 02 04.2	+1.2
	baz=4.5,SNR=7.0						
FORT	Forrest	4.48	82		Pn	20 01 13.5	+2.6
FORT	Forrest	4.48	82	P	Pn	20 01 13.4	+2.6
NWAO	Narrogin (SRO)	5.00	252	Pn	Pn	20 01 18.1	0.0
	10nm,1.0s,baz=84,slow=4.8,SNR=12						
NWAO				Pg	Pb	20 01 31.9	+1.2
	6.3nm,0.3s,baz=79,slow=15,SNR=13						
NWAO				Sn	Sn	20 02 11.5	-4.5
	13nm,0.3s,baz=62,slow=18,SNR=8.1						

NWAO				Lg	Lg	20 02 34.4	
	30nm,0.3s,baz=163,slow=20,SNR=13						
NWAO	Narrogin (SRO)	5.00	252	P	Pn	20 01 18.1	0.0
	baz=5.0,SNR=5.1						
NWAO				P	Pn	20 01 18.1	0.0
	baz=5.0,SNR=5.1						
NWAO				S	Sn	20 02 15.4	-0.6
	baz=5.0						
NWAO				S	Sn	20 02 15.4	-0.6
	baz=5.0						
NWAO	Narrogin (SRO)	5.00	252	Pn	Pn	20 01 18.4	+0.3
NWAO	Narrogin (SRO)	5.00	252	Pn	Pn	20 01 18.2	+0.1
NWAO	Narrogin (SRO)	5.00	252	P	Pn	20 01 18.1	0.0
	44nm,0.9s						
BLDU	Ballidu	5.40	278	P	Pn	20 01 23.2	-0.3
	baz=5.4,SNR=13						
BLDU				S	Sn	20 02 20.6	-5.1
	baz=5.4						
BLDU	Ballidu	5.40	278	P	Pn	20 01 23.6	+0.1
MUN	Mundaring	5.73	264	P	Pn	20 01 27.5	-0.5
	baz=5.7,SNR=14						
MUN				S	Sn	20 02 27.6	-6.1
	baz=5.7						
MUN	Mundaring	5.73	264	P	Pn	20 01 27.9	-0.1
RKGY	Rocky Gully	5.84	237	P	Pn	20 01 29.9	+0.3
	baz=5.8,SNR=7.4						
RKGY				S	Sn	20 02 32.9	-3.8
	baz=5.8,SNR=5.4						
RKGY	Rocky Gully	5.84	237	P	Pn	20 01 30.3	+0.7
AUMAZ	Mazenod Senior	5.87	264	P	Pn	20 01 29.6	-0.4
	baz=5.8						
MORW	Morawa	6.43	291	P	Pn	20 01 38.0	+0.2
	baz=6.4,SNR=29						
MORW				S	Sn	20 02 47.8	-3.4
	baz=6.4						
MORW	Morawa	6.43	291	Pn	Pn	20 01 37.0	-0.7
MORW	Morawa	6.43	291	P	Pn	20 01 38.5	+0.8
WRKA	Warakurna	8.03	38	P	Pn	20 02 04.1	+4.4
	baz=8.1,SNR=13						
WRKA				S	Sn	20 03 34.7	+4.0
	baz=8.1						
MULG	Mulgathing	9.66	85	P	Pn	20 02 23.3	+1.3
	baz=9.7,SNR=5.9						
MULG				P		20 02 23.4	
	baz=9.7						
MULG				S	Sn	20 04 06.6	-3.9
	baz=9.7						
MULG	Mulgathing	9.66	85	P	Pn	20 02 23.3	+1.3
PSA00	Pilbara Seismi	10.30	344	Pn	Pn	20 02 30.5	-0.3
PSA00	Pilbara Seismi	10.30	344	Pn	Pn	20 02 29.2	-1.6
PSA00	Pilbara Seismi	10.30	344	P	Pn	20 02 31.9	+1.1
MBWA	Marble Bar	10.72	344	Pn	Pn	20 02 36.2	-0.4
MBWA	Marble Bar	10.72	344	P	Pn	20 02 36.9	+0.3
BBOO	Buckleboo	11.21	100	P	Pn	20 02 43.3	0.0
	baz=11						
BBOO	Buckleboo	11.21	100	Pn	Pn	20 02 43.5	+0.3
BBOO	Buckleboo	11.21	100	P	Pn	20 02 43.3	0.0
	25nm,2.8s						
OOD	Oodnadatta	11.72	75	P	Pn	20 02 50.0	-0.2
	baz=12,SNR=6.5						
OOD				S	Sn	20 04 55.8	-5.3
	baz=12						
OOD	Oodnadatta	11.72	75	P	Pn	20 02 50.5	+0.3
GIRL	Giralia	11.76	317	P	Pn	20 02 51.6	+0.9
	baz=12,SNR=6.0						
GIRL				S	Sn	20 04 56.5	-5.5
	baz=12						
GIRL	Giralia	11.76	317	Pn	Pn	20 02 52.0	+1.3
GIRL	Giralia	11.76	317	P	Pn	20 02 52.2	+1.5
ASPA	Alice Springs	12.50	54	P	Pn	20 03 02.5	+1.6
	baz=13						
ASAR	Alice Springs	12.51	54	Pn	Pn	20 03 01.6	+0.6
	0.6nm,0.3s,baz=223,slow=11,SNR=31						
ASAR				Sn	Sn	20 05 15.4	-5.1
	1.1nm,0.3s,baz=236,slow=22,SNR=8.4						
ASAR				Lg	Lg	20 06 35.4	
	0.3nm,0.3s,baz=224,slow=25,SNR=2.5						
	2.5nm,0.6s						
ASAR	Alice Springs	12.51	54	Pn	Pn	20 03 02.9	+1.9
AS31	Alice Springs	12.51	54		Pn	20 03 02.2	+1.1
AS01	Alice Springs	12.54	54	P	Pn	20 03 02.2	+0.7
	6.2nm,0.7s						
LCRK	Leigh Creek	13.18	89	P	Pn	20 03 10.5	+0.4
	baz=13						
LCRK	Leigh Creek	13.18	89	P	Pn	20 03 11.5	+1.4
FITZ	Fitzroy Crossi	13.61	11	P	Pn	20 03 16.3	+0.2
	baz=14						
FITZ	Fitzroy Crossi	13.61	11	Pn	Pn	20 03 16.2	+0.1
HTT	Hallett	13.65	102	P	Pn	20 03 19.2	+2.7
	baz=14						
WB1	Warramunga Ar.	15.45	44	P	Pn	20 03 40.5	-0.5
	15nm,1.5s						
WRA	Warramunga Arr	15.46	44	Pn	Pn	20 03 40.2	-0.9
	0.9nm,0.3s,baz=219,slow=14,SNR=28						
WRA				Sn	Sn	20 06 25.1	-7.4
	0.7nm,0.3s,baz=215,slow=22,SNR=7.0						
WRA				Lg	Lg	20 08 11.5	
	baz=221,slow=28						
	2.1nm,0.4s						
WRA	Warramunga Arr	15.46	44	Pn	Pn	20 03 40.6	-0.6
WB2	Warramunga Arr	15.46	44		Pn	20 03 41.1	-0.2
WB2				IAmb	IAmb	20 03 52.2	
	comp=Z,7.7nm,1.0s						
WRAB	Tennant Creek	15.47	44		Pn	20 03 40.9	-0.3
WRAB				IAmb	IAmb	20 04 20.9	
	comp=Z,18nm,1.4s						
WRAB	Tennant Creek	15.47	44	P	Pn	20 03 41.0	-0.3
WB0	Warramunga Arr	15.63	44		Pn	20 03 42.7	-0.6
WB0				IAmb	IAmb	20 03 55.2	
	comp=Z,7.4nm,0.8s						
STKA	Stephens Creek	15.91	96	Pn	Pn	20 03 42.7	-4.2
	comp=Z,0.1nm,0.3s,baz=274,slow=13,SNR=0.9						
STKA				Sn	Sn	20 06 31.3	-12
	comp=Z,0.3nm,0.3s,baz=264,slow=10,SNR=1.7						
STKA				Lg	Lg	20 08 19.8	
	comp=Z,0.3nm,0.3s,baz=286,slow=15,SNR=1.6						
	comp=Z,0.9nm,0.5s						
STKA	Stephens Creek	15.91	96	P	Pn	20 03 46.1	-0.8
	baz=16						
STKA	Stephens Creek	15.91	96	Pn	Pn	20 03 45.0	-1.9
INKA	Innaminka	15.96	81	P	Pn	20 03 46.6	-0.9
	baz=16						
KNRA	Kununurra	16.67	20	P	Pn	20 03 56.1	-0.6
	baz=17						
KNRA	Kununurra	16.67	20	Pn	Pn	20 03 56.2	-0.6
KNRA				IAmb	IAmb	20 04 39.1	
	comp=Z,16nm,1.1s						
KNRA	Kununurra	16.67	20	P	Pn	20 03 57.5	+0.8
	comp=Z,20nm,1.9s						
QIS	Mount Isa	18.54	58	P	Pn	20 04 21.0	+1.1
	baz=19						
QIS	Mount Isa	18.54	58	P	Pn	20 04 20.9	+1.0
TOO	Toolangi	19.53	114	P	P	20 04 30.7	+0.2
TOO				IAmb	IAmb	20 04 52.6	
	comp=Z,20nm,1.5s						
MTN	Manton Dam	20.09	24	P	P	20 04 36.8	+0.1
MTN				IAmb	IAmb	20 05 06.5	
	comp=Z,13nm,1.0s						
KDU	Kakadu	20.73	27	P	Pn	20 04 46.5	+0.5
	baz=21						
COEN	Coen	25.52	51	P	P	20 05 34.3	+2.5
QSPA	South Pole Qui	58.56	180	P	P	20 10 00.3	+0.8
MKAR	Makanchi Array	86.16	333	P	P	20 12 45.3	+1.3
	comp=Z,0.3nm,0.7s,baz=158,slow=5.8,SNR=2.1						
	comp=Z,0.3nm,0.7s						

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*IDC **26** 20:07:52.6±6.4, 36°.21N×70°.24E, h99^{km}±56^{km}, mb4.0/1, mbtmp3.9/5, Error ellipse: s-maj=78.0km s-min=20.8km az=154.0*

ISC 26 20:07:49.2±1.1**, 35°.91N**±0°.09×**70°.41E**±0°.08**, h100**^{km}**, n28,** σ**2^s.20**/30**, 1C, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	Iuzhnay	6.23	357	Pg	Pn	20 09 20.1	+1.4
	14nm,0.3s						
IUG				Lg	Lg	20 10 25.9	
	77nm,0.6s						
AML	Almayashu	6.71	21	P	Pn	20 09 27.4	+1.9
	SNR=21						
DZA	Taraz	7.01	6	Pg	Pn	20 09 31.1	+1.9
	12nm,0.2s						
DZA				Lg	Lg	20 10 44.3	
	52nm,0.5s						
UCH	Uchtor	7.07	26	P	Pn	20 09 32.7	+2.4
	SNR=12						
MRKS	Merke	7.16	17	Pg	Pn	20 09 32.5	+1.2
	5.9nm,0.3s						
MRKS				Lg	Lg	20 10 47.8	
	21nm,0.6s						
KK31	Karatay Array	7.18	1	P	Pn	20 09 32.2	+0.7
	1.8nm,0.3s,baz=191,slow=14,SNR=51						
KK31				⇑S	Sn	20 10 47.0	-4.5
	1.3nm,0.3s,baz=194,slow=24,SNR=5.7						
EKS2	Erkin-Say	7.23	20	P	Pn	20 09 36.0	+3.8
	SNR=14						
AAK	Ala-Archa	7.42	24	P	Pn	20 09 38.2	+3.3
	SNR=12						
AAK	Ala-Archa	7.42	24	P	Pn	20 09 36.4	+1.4
	8.2nm,0.4s,baz=175,slow=5.2,SNR=30						
AAK				S	Sn	20 10 54.8	-2.8
	14nm,0.9s,baz=356,slow=21,SNR=11						
CHMS	Chumysh	7.83	24	Pg	Pn	20 09 24.0	-16
	180nm,0.1s						
CHMS				Lg	Lg	20 10 32.0	
	120nm,0.3s						
TKM2	Tokmak 2	8.06	28	P	Pn	20 09 47.3	+3.6
	SNR=5.7						
SGDS	Sogindy	8.20	22	Pg	Pn	20 09 47.5	+2.1
	4.0nm,0.5s						
SGDS				Lg	Lg	20 11 12.6	
	7.7nm,0.6s						
GEYT	Alibeck	10.05	285	P	Pn	20 10 12.5	+1.9
	1.1nm,0.4s,baz=108,slow=8.1,SNR=5.9						
GEYT				S	Sn	20 11 58.5	-2.9
	1.0nm,0.4s,baz=104,slow=12,SNR=3.1						
PYUN	Piuthan	13.20	123	*e*P	Pn	20 10 51.1	-1.9
DANN	Dangsing	13.58	120	*e*P	Pn	20 10 56.7	-1.3
KOLN	Koldanda	13.83	122	*e*P	Pn	20 10 59.8	-1.3
MKAR	Makanchi Array	14.04	36	P	Pn	20 11 05.1	+1.5
	0.9nm,0.6s,baz=223,slow=14,SNR=5.7						
GKN	Gorkha	14.41	119	*e*P	Pn	20 11 06.8	-1.8
DMN	Daman	14.98	119	*e*P	Pn	20 11 14.7	-1.2
PKIN	Phulchoki	15.20	119	*e*P	Pn	20 11 17.3	-1.5
	8.6nm,0.4s						
PKI	Pulchoki	15.22	119	*e*P	Pn	20 11 17.2	-1.8
GUN	Gumba	15.35	117	*e*P	Pn	20 11 19.3	-1.4
AB31	Akbulak array	15.38	333	P	Pn	20 11 21.4	+0.9
	1.6nm,0.3s,baz=156,slow=12,SNR=70						
JIRN	Jiri	15.72	117	*e*P	Pn	20 11 23.6	-1.8
	6.8nm,0.4s						
KURBB	Kurchatov Arra	15.83	19	P	Pn	20 11 26.3	+0.1
	1.1nm,0.8s,baz=212,slow=10,SNR=11						
RAMN	Ramite	16.43	118	*e*P	Pn	20 11 32.4	-1.7
TAPN	Taplejung	17.01	115	*e*P	Pn	20 11 40.8	-0.4
	4.6nm,0.4s						
ZALV	Zalesovo Beam	20.64	25	P	P	20 12 21.8	+1.2
	8.6nm,0.6s,baz=220,slow=11,SNR=34						
	8.6nm,0.6s						

IDC 26 20:22:14.2±2.5**, 6°.55S**×**129°.67E, h0**^{km}**, mb3.1**/1**, mbtmp3.1**/3**, ML3.3**/2**, Error ellipse: s-maj=152.5km s-min=33.3km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.07	162	Pn	Pn	20 25 35.2	+0.3
	0.1nm,0.3s,baz=344,slow=14,SNR=6.4						
WRA				Sn	Sn	20 27 59.0	-13
	0.2nm,0.3s,baz=89,slow=6.7,SNR=7.2						
	0.2nm,0.4s						
ASAR	Alice Springs	17.50	167	P	Pn	20 26 19.7	-0.2
	0.1nm,0.3s,baz=338,slow=9.5,SNR=9.6						
	0.4nm,0.6s						
MKAR	Makanchi Array	67.67	327	P	P	20 33 13.2	0.0
	0.1nm,0.5s,baz=134,slow=8.2,SNR=1.6						
	0.1nm,0.5s						

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*IDC **26** 20:23:42.4±3.3, 35°.54N×141°.70E, h0^{km}, mb3.4/2, mbtmp3.2/3, ML1.9/1, Error ellipse: s-maj=87.2km s-min=28.7km az=49.0*

*JMA **26** 20:23:48.1±0.2, 35°.4N±0°.4×141°.3E±1°.0, h27^{km}±1^{km}, MV2.6/27, E OFF BOSO PENINSULA*

ISC 26 20:23:47.3±1.5**, 35°.36N**±0°.08×**141°.4E**±0°.1**, h25**^{km}**, n15,** σ**1^s.35**/11**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	0.54	310	P	Pb	20 23 57.5	-0.7
BSO1	Boso 1	0.77	204	P	Pn	20 24 02.5	+0.4
JSMT	Sammumatsuo	0.80	291	P	Pb	20 24 02.1	-0.5
KTR	Katsuura	0.89	257	P	Pn	20 24 03.2	-0.9
KTR				S	Sb	20 24 14.1	-1.3
BSO3	Boso 3	0.90	232	P	Pn	20 24 04.0	-0.1
JHO	Hitachi	1.41	333	P	Pb	20 24 11.8	-1.1
MJAR	Matsushiro Arr	2.82	296	Pn	Pn	20 24 31.2	+0.4
	0.2nm,0.3s,baz=104,slow=12,SNR=9.0						
MJAR				Sn	Sn	20 25 07.1	+3.1
	0.2nm,0.3s,baz=120,slow=10.0,SNR=4.2						
	1.4nm,0.4s						
H11N2	WAKE ISLAND Hy	27.36	118	T	T	20 58 35.8	
	baz=310,slow=75,SNR=3.2						
H11N1	WAKE ISLAND Hy	27.37	118	T	T	20 58 36.1	
	baz=310,slow=75,SNR=3.8						
H11N3	WAKE ISLAND Hy	27.38	118	T	T	20 58 37.7	
	baz=310,slow=75,SNR=3.5						
H11S1	WAKE ISLAND Hy	28.02	120	T	T	20 59 17.6	
	baz=312,slow=75,SNR=15						
H11S3	WAKE ISLAND Hy	28.02	120	T	T	20 59 23.7	
	baz=312,slow=75,SNR=14						
H11S2	WAKE ISLAND Hy	28.03	120	T	T	20 59 15.9	
	baz=312,slow=75,SNR=13						
MKAR	Makanchi Array	44.99	304	P	P	20 32 00.3	-0.2
	0.3nm,0.8s,baz=92,slow=7.8,SNR=2.7						
	0.3nm,0.8s						
WRA	Warramunga Arr	55.40	188	P	P	20 33 19.8	+0.3
	0.4nm,0.6s,baz=4.6,slow=7.7,SNR=7.1						
	0.4nm,0.6s						

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*AEIC **26** 20:35:34.8±3.0, 53°.4N±0°.1×173°.9W±0°.1, h177^{km}±8^{km}, ML3.3, mb3.9/17(NEIC), Error ellipse: s-maj=17.6km s-min=8.3km az=152.0*

*NEIC **26** 20:35:34.3±3.0, 53°.3N±0°.1×173°.9W±0°.1, h170^{km}±9^{km}, Error ellipse: s-maj=17.5km s-min=7.5km az=150.0*

ISC 26 20:35:34.1±0.9**, 53°.0N**±0°.1×**173°.73W**±0°.07**, h200**^{km}**, n31,** σ**1^s.43**/31**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSTR	Great Sitkin T	1.70	238	Pn	Pn	20 36 08.2	-1.5
ADK	Adak	2.14	239	Pn	Pn	20 36 13.7	-0.4
ADK				Sn	Sn	20 36 42.3	-2.8
KIWB	Kanaga Island	2.40	242	Pn	Pn	20 36 16.4	-0.5
NIKH	Nikolski High	2.94	89		Sn	20 37 00.3	-0.9
NIKH	Nikolski High	2.94	89		Pn	20 36 22.9	-0.1
UNV	Unalaska Valle	4.40	76		Sn	20 37 32.9	-0.1
UNV	Unalaska Valle	4.40	76		Pn	20 36 41.3	+0.6
SPIA	Saint Paul Isl	4.61	24		Sn	20 37 36.4	-1.6
SPIA	Saint Paul Isl	4.61	24	Pn	Pn	20 36 36.5	-6.8
SDPT	Sand Point	8.11	68	Pn	Pn	20 37 26.7	-1.9
O19K	Port Alsworth	12.84	48	Pn	Pn	20 38 27.7	-1.5
KDAK	Kodiak Island	12.90	60	Pn	Pn	20 38 28.3	-1.7
SKT	Skwentna	14.85	44	Pn	Pn	20 38 53.3	-0.8
GHO	Glory Hole Cre	15.88	47		Pn	20 39 05.8	-0.9
BPAW	Bear Paw Mtn.	16.12	38	P	Pn	20 39 09.3	-0.3
BPAW				IAmb	IAmb	20 39 52.6	
	comp=Z,3.5nm,1.0s						
SCM	Sheep Creek Mo	16.61	48		Pn	20 39 17.6	+2.1
KLU	Klutina	17.14	49	P	P	20 39 18.8	-1.4
KLU				IAmb	IAmb	20 39 35.8	
	comp=Z,7.1nm,1.3s						
M24K	Tolsona, Glenn	17.22	47	P	P	20 39 20.3	-0.8
MDM	Murphy Dome	17.59	37	P	P	20 39 24.5	-0.6
HDA	Harding Lake	17.81	40	P	Pn	20 39 28.3	-1.1
HDA				IAmb	IAmb	20 39 35.1	
	comp=Z,8.7nm,1.5s						
H24K	Noodor Dome	18.18	35	P	P	20 39 30.2	-1.3
RIDG	Independent Ri	18.37	43	P	P	20 39 33.2	-0.3
RIDG				IAmb	IAmb	20 39 39.2	
	comp=Z,5.8nm,1.4s						
DOT	Dot Lake	18.66	44	P	P	20 39 35.9	-0.8
SCRK	Sand Creek	18.81	43	P	P	20 39 38.4	0.0
SCRK				IAmb	IAmb	20 39 41.4	
	comp=Z,4.6nm,0.7s						
L27K	Beaver Creek,	19.43	46	P	Pn	20 39 47.7	-0.8
K27K	Chicken	19.62	43	P	Pn	20 39 49.3	-1.5
K27K				IAmb	IAmb	20 39 53.8	
	comp=Z,6.9nm,1.5s						
BMAR	Burnt Mountain	20.14	33	P	P	20 39 52.7	+0.2
EGAK	Eagle	20.25	42	P	P	20 39 54.5	+0.9
EGAK				IAmb	IAmb	20 39 59.4	
	comp=Z,2.2nm,0.7s						
INK	Inuvik	24.30	36	P	P	20 40 33.9	+1.2
INK				IAmb	IAmb	20 41 06.1	
	comp=Z,5.6nm,1.4s						
A36M	Sachs Harbour	28.11	30	P	P	20 41 08.7	+1.9
A36M				IAmb	IAmb	20 41 10.3	
	comp=Z,2.5nm,0.7s						
ERM	Erimo	30.68	267	P	P	20 41 33.3	+3.6

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*NEIC **26** 20:38:31.2±1.2, 11°.13S±0°.02×166°.4E±0°.2, h150^{km}±7^{km}, mb4.2/43, Error ellipse: s-maj=22.5km s-min=3.3km az=90.0*

*IDC **26** 20:38:32.8±4.6, 11°.21S×166°.43E, h170^{km}±42^{km}, mb3.7/18, mbtmp4.1/19, MS3.1/2, Error ellipse: s-maj=19.0km s-min=16.6km az=79.0*

ISC 26 20:38:30.3±0.5**, 11°.17S**±0°.06×**166°.4E**±0°.1**, h146**^{km}**, n78,** σ**0^s.90**/79**, mb4.2**/40**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOUNC	Koumac, New Ca	9.53	192	Pn	Pn	20 40 42.2	-2.0
LIFNC	LIFOU	9.59	175	Pn	Pn	20 40 46.3	+1.4
DZM	Mont Dzumac	10.84	180	P	Pn	20 41 04.1	+2.5
	1.2nm,0.4s,baz=182,slow=6.0,SNR=1.7						
DZM				S	Sn	20 42 58.8	-2.7
	1.3nm,0.6s,baz=308,slow=19,SNR=1.1						
PINNC	Pines Island,	11.42	175	Pn	Pn	20 41 11.1	+1.9
MSVF	Nonsavu	13.07	121	LR	LR	20 45 37.5	
	comp=Z,49nm,21.4s,baz=25,slow=33						
URZ	Urewera	28.64	162	P	P	20 44 13.3	+0.2
	2.9nm,0.4s,baz=137,slow=12,SNR=1.3						
	2.9nm,0.4s						
RTZ	Ruatahuna	28.93	163	P	P	20 44 16.2	+0.4
RTZ				IAmb	IAmb	20 44 27.7	
	comp=Z,5.5nm,0.8s						
H11S2	WAKE ISLAND Hy	29.48	1	T	T	21 15 15.3	
	baz=181						
H11S3	WAKE ISLAND Hy	29.48	1	T	T	21 15 21.2	
	baz=181						
H11S1	WAKE ISLAND Hy	29.50	1	T	T	21 15 17.2	
	baz=181						
MRZ	Mangatainoka R	30.48	166	P	P	20 44 29.9	+0.6
MRZ				IAmb	IAmb	20 44 36.7	
	comp=Z,14nm,1.1s						
STKA	Stephens Creek	30.76	224	P	P	20 44 32.0	0.0
	comp=Z,2.1nm,0.8s,baz=90,slow=7.1,SNR=3.0						
	comp=Z,2.1nm,0.8s						
STKA	Stephens Creek	30.76	224	P	P	20 44 32.1	0.0
STKA				PcP	PcP	20 47 28.2	+2.1
THZ	Tophouse	31.01	170	P	P	20 44 35.5	+1.4
BHW	Baring Head	31.03	168	P	P	20 44 33.4	-0.8
LTZ	Lake Taylor	31.91	172	P	P	20 44 41.8	-0.2
WB0	Warramunga Arr	31.91	251	P	P	20 44 43.2	+1.0
WB0				IAmb	IAmb	20 44 58.0	
	comp=Z,5.0nm,1.1s						
WB0				PcP	PcP	20 47 28.1	-1.3
WRAB	Tennant Creek	31.98	250	P	P	20 44 42.5	-0.4
WRAB				IAmb	IAmb	20 44 46.7	
	comp=Z,2.9nm,0.9s						
WRA	Warramunga Arr	32.00	250	P	P	20 44 43.4	+0.3
	comp=Z,0.7nm,0.6s,baz=83,slow=8.8,SNR=9.2						
WRA				PcP	PcP	20 47 30.3	+0.7
	comp=Z,0.4nm,0.8s,baz=75,slow=3.6,SNR=2.1						
	comp=Z,0.7nm,0.6s						
WRA	Warramunga Arr	32.00	250	P	P	20 44 42.2	-0.8
FOZ	Fox Glacier	32.38	175	P	P	20 44 45.7	-0.2
RPZ	Rata Peaks	32.68	174	P	P	20 44 48.4	-0.2
	comp=Z,6.7nm,0.6s,baz=292,slow=2.1,SNR=5.4						
	comp=Z,6.7nm,0.6s						
RPZ	Rata Peaks	32.68	174	P	P	20 44 48.6	0.0
RPZ				IAmb	IAmb	20 44 56.1	
	comp=Z,10nm,1.0s						
ASAR	Alice Springs	33.27	244	P	P	20 44 54.1	0.0
	comp=Z,0.4nm,0.6s,baz=68,slow=10,SNR=5.7						
ASAR				PcP	PcP	20 47 32.8	-0.4
	comp=Z,0.9nm,0.8s,baz=77,slow=2.0,SNR=7.2						
	comp=Z,0.4nm,0.6s						
BBOO	Buckleboo	35.18	228	P	P	20 45 11.6	+1.3
BBOO				IAmb	IAmb	20 45 30.5	
	comp=Z,10nm,1.1s						
FITZ	Fitzroy Crossi	39.92	255	P	P	20 45 51.3	+0.8
NWAO	Narrogin (SRO)	49.88	236	P	P	20 47 09.7	+0.6
	comp=Z,6.9nm,0.8s,baz=321,slow=13,SNR=1.5						
	comp=Z,6.9nm,0.8s						
NWAO	Narrogin (SRO)	49.88	236	P	P	20 47 08.5	-0.5
MORW	Morawa	50.08	241	P	P	20 47 10.9	+0.2
INU	Inuyama	53.95	330	P	P	20 47 38.2	-0.8
JMN	Monobe	54.30	327	P	P	20 47 41.4	-0.3
JNU	Nakatsue	55.53	324	P	P	20 47 50.9	+0.4
	comp=Z,5.7nm,0.8s,baz=94,slow=15,SNR=1.8						
JNU				LR	LR	21 11 29.0	
	comp=Z,25nm,18.6s,baz=148,slow=36						
	comp=Z,5.7nm,0.8s						
JKA	Kamikawa-asahi	59.11	340	P	P	20 48 15.6	+0.3
JKA				IAmb	IAmb	20 48 17.6	
	comp=Z,3.6nm,0.9s						
ASAJ	Asahikawa	59.11	340	P	P	20 48 15.8	+0.4
	comp=Z,2.2nm,0.7s,baz=169,slow=11,SNR=4.7						
	comp=Z,2.2nm,0.7s						
VNDA	Vanda	66.38	181	P	P	20 49 02.5	-0.5
	comp=Z,0.8nm,0.7s,baz=342,slow=5.8,SNR=5.8						
	comp=Z,0.8nm,0.7s						
VNDA	Vanda	66.38	181	P	P	20 49 03.5	+0.5
CMAR	Chiang Mai Arr	72.71	293	P	P	20 49 43.8	+0.9
	comp=Z,1.2nm,0.7s,baz=126,slow=4.0,SNR=12						
	comp=Z,1.2nm,0.7s						
SEY	Seymchan	74.67	353	P	P	20 49 53.6	+0.3
	comp=Z,0.3nm,0.3s,baz=26,slow=22,SNR=1.4						
	comp=Z,0.3nm,0.3s						
P18K	Big Mountain,	76.82	19	P	P	20 50 04.8	-0.9
P18K				IAmb	IAmb	20 50 06.2	
	comp=Z,6.7nm,0.9s						
O18K	Koktuh Hills	77.19	19	P	P	20 50 07.6	-0.1
O18K				IAmb	IAmb	20 50 13.2	
	comp=Z,11nm,1.1s						
P19K	Oil Pt	77.67	20	P	P	20 50 09.7	-0.7
QSPA	South Pole Qui	78.83	180	P	P	20 50 16.8	-0.2
M19K	Big River Lodg	79.04	18	P	P	20 50 18.8	+0.9
L19K	White Mountain	79.12	17	P	P	20 50 18.6	+0.3
L19K				IAmb	IAmb	20 50 20.6	
	comp=Z,3.0nm,0.9s						
SONM	Songino Array	79.12	324	P	P	20 50 19.5	+0.7
	comp=Z,0.5nm,0.6s,baz=137,slow=5.2,SNR=5.0						
	comp=Z,0.5nm,0.6s						
SONM	Songino Array	79.12	324	P	P	20 50 18.1	-0.7
CAPN	Captain Cook N	79.20	20	P	P	20 50 17.0	-1.7
SUA	Susitna One	79.85	19	P	P	20 50 22.4	-0.1
SUA				IAmb	IAmb	20 50 37.5	
	comp=Z,3.3nm,1.2s						
RC01	Rabbit Creek A	79.91	20	P	P	20 50 23.0	+0.4
RC01				IAmb	IAmb	20 50 23.5	
	comp=Z,5.0nm,1.1s						
CAST	Castle Rocks	80.89	18	P	P	20 50 27.6	-0.3
CAST				IAmb	IAmb	20 50 30.4	
	comp=Z,2.2nm,0.8s						
RDOG	Red Dog Mine	82.03	11	P	P	20 50 33.8	0.0
RDOG				IAmb	IAmb	20 50 35.2	
	comp=Z,2.1nm,0.5s						
N25K	Chitina, Valde	82.05	21	P	P	20 50 34.2	+0.2
IMAR	Indian Mountai	82.39	15	P	P	20 50 36.4	+0.8
WRH	Wood River Hil	82.87	18	P	P	20 50 37.7	-0.4
WRH				IAmb	IAmb	20 50 39.2	
	comp=Z,4.2nm,1.1s						
CCB	Clear Creek Bu	83.08	18	P	P	20 50 38.2	-1.0
CCB				IAmb	IAmb	20 50 41.5	
	comp=Z,2.1nm,1.0s						
HDA	Harding Lake	83.17	19	P	P	20 50 40.1	+0.4
HDA				IAmb	IAmb	20 50 40.7	
	comp=Z,4.0nm,0.7s						
RIDG	Independent Ri	83.39	20	P	P	20 50 41.5	+0.6
RIDG				IAmb	IAmb	20 50 43.5	
	comp=Z,4.3nm,1.0s						
IL31		83.45	18	P	P	20 50 40.9	-0.1
ILAR	Eielson Array	83.45	18	P	P	20 50 40.7	-0.4
	comp=Z,0.6nm,0.4s,baz=263,slow=5.0,SNR=17						
	comp=Z,0.6nm,0.4s						
DOT	Dot Lake	83.59	20	P	P	20 50 42.2	+0.3
DOT				IAmb	IAmb	20 50 43.4	
	comp=Z,2.7nm,0.8s						
SCRK	Sand Creek	83.84	20	P	P	20 50 43.2	0.0

SCRK				IAmb	IAmb	20 50 44.9	
	comp=Z,6.5nm,1.1s						
L27K	Beaver Creek,	83.98	21	P	P	20 50 44.0	+0.1
BCAR	Beaver Creek A	84.00	21	P	P	20 50 44.6	+0.6
K27K	Chicken	84.51	20	P	P	20 50 46.5	0.0
I26K	Coal Creek Min	84.98	19	P	P	20 50 50.2	+1.4
EGAK	Eagle	85.29	20	P	P	20 50 50.8	+0.4
EGAK				IAmb	IAmb	20 50 51.8	
	comp=Z,2.8nm,0.6s						
DSP	Deep Springs	85.58	51	P	P	20 50 53.2	+0.8
DSP				IAmb	IAmb	20 50 55.9	
	comp=Z,2.8nm,1.2s						
NVAR	Mina Array Bea	85.65	50	P	P	20 50 52.6	-0.5
	comp=Z,0.4nm,0.6s,baz=237,slow=7.2,SNR=4.3						
	comp=Z,0.4nm,0.6s						
BMAR	Burnt Mountain	85.95	17	P	P	20 50 54.0	+0.3
ZALV	Zalesovo Beam	94.01	324	P	P	20 51 31.4	-0.2
	comp=Z,0.3nm,0.2s,baz=116,slow=3.4,SNR=2.1						
	comp=Z,0.3nm,0.2s						
MK31	Makanchi Array	94.02	317	P	P	20 51 31.5	-0.5
MK31				IAmb	IAmb	20 51 33.6	
	comp=Z,1.5nm,1.1s						
MKAR	Makanchi Array	94.02	317	P	P	20 51 32.0	+0.1
	comp=Z,1.1nm,0.5s,baz=83,slow=6.1,SNR=22						
	comp=Z,1.1nm,0.5s						
MKAR	Makanchi Array	94.02	317	P	P	20 51 31.7	-0.2
ANMO	Albuquerque	94.03	55	P	P	20 51 32.3	-0.1
	comp=Z,0.7nm,0.6s,baz=124,slow=6.0,SNR=2.0						
	comp=Z,0.7nm,0.6s						
YKA	Yellowknife Ar	94.81	27	P	P	20 51 33.4	-1.8
	comp=Z,0.3nm,0.7s,baz=254,slow=4.7,SNR=3.3						
	comp=Z,0.3nm,0.7s						
FRB	Frobisher Bay	115.05	24	PKP	PKiKP	20 56 52.4	-1.2
	comp=Z,0.7nm,0.4s,baz=143,slow=4.8,SNR=1.5						
ARCES	ARCESS Array B	116.61	346	PKP	PKPdf	20 56 54.6	-1.9
	comp=Z,12nm,1.1s,baz=66,slow=3.1,SNR=3.7						
ESDC	Sonseca Array	150.34	345	PKPbc	PKPbc	20 58 05.2	+0.4
	comp=Z,0.9nm,1.0s,baz=8.7,slow=3.0,SNR=2.5						

IDC ***26*** *20:38:35.7±0.8, 46°.06N×26°.85E, h0^{km}, mb3.5/4, mbtmp3.4/8, ML3.2/4, Error ellipse: s-maj=12.8km s-min=7.6km az=134.0*
SOF ***26*** *20:38:40.5, 45°.46N×26°.21E, h90^{km}, MD3.9*
SIGU ***26*** *20:38:40.6, 45°.51N×26°.28E, h91^{km}*
BUC ***26*** *20:38:40.6±0.2, 45°.48N×26°.25E, h89^{km}±2^{km}, ml4.0/74, Error ellipse: s-maj=1.2km s-min=1.1km az=0.0*
MCSM ***26*** *20:38:40.0±0.5, 45°N±5°×2°6E±°, h88^{km}±5^{km}, ML4.0*
CFUSG ***26*** *20:38:42.0, 45°.66N×26°.50E, h86^{km}, mb2.8/4, Romania Magtype MSH 3.4 from 4 stations*
BEO ***26*** *20:38:44.3±1.4, 45°.44N×25°.97E, h94^{km}, ML3.4/14*
ISC 26 20:38:41.2±0.8, **45°.48N**±0°.02×**26°.27E**±0°.02, **h94**^{km}±4^{km}, **n169**, σ**1^{s}42**/240, **mb3.5**/4, **74C-66D**, **Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEHR	Nehoiu	0.05	157	⇑P	Pn	20 38 53.9	-0.5
NEHR				⇓S	Sn	20 39 03.6	-0.6
MLR	Muntele Rosu	0.23	274	⇑P	Pn	20 38 54.3	-0.7
MLR				⇑S	Sn	20 39 04.0	-1.2
MLR	Muntele Rosu	0.23	274	Pg	Pn	20 38 53.7	-1.2
	237nm,0.3s,baz=155,slow=21,SNR=2123						
MLR				Lg	Lg	20 39 03.7	
	baz=209,slow=12						
MLR				LR	LR	20 39 13.7	
	comp=Z,108nm,21.4s,baz=115,slow=45						
MLR	Muntele Rosu	0.23	274	P	Pn	20 38 54.2	-0.7
BISRR	Bisoca	0.32	77	⇑P	Pn	20 38 54.9	-0.4
BISRR				⇑S	Sn	20 39 04.1	-1.7
COVR	Voineasa-Covas	0.37	353	⇑P	Pn	20 38 54.8	-0.8
COVR				⇑S	Sn	20 39 04.1	-2.1
ISR	Istrita	0.41	151	⇑P	Pn	20 38 55.4	-0.4
ISR				⇑S	Sn	20 39 06.0	-0.6
PLOR	Plostina	0.46	36	⇓P	Pn	20 38 55.3	-0.8
PLOR				⇓S	Sn	20 39 05.8	-1.5
PLOR	Plostina	0.46	36	P	Pn	20 38 55.3	-0.8
SECR		0.46	198	⇓P	Pn	20 38 56.0	-0.1
SECR				⇑S	Sn	20 39 06.9	-0.3
VRI	Vrincioaia	0.51	40	⇓P	Pn	20 38 55.9	-0.6
VRI				⇑S	Sn	20 39 07.3	-0.4
VRI	Vrincioaia	0.51	40	P	Pn	20 38 55.8	-0.6
PLAR	PLOIESTI	0.59	197	⇓P	Pn	20 38 57.0	0.0
PLAR				⇓S	Sn	20 39 08.8	0.0
ODBI	Odobesti	0.62	62	⇓S	Sn	20 39 09.5	+0.1
OZUR		0.70	332	⇓P	Pn	20 38 57.1	-1.1
OZUR				⇓S	Sn	20 39 08.7	-2.2
PANC	Panciu	0.73	57	⇓P	Pn	20 38 58.3	-0.1
PANC				⇑S	Sn	20 39 10.7	-0.6
PGOR	Pogoanele	0.76	138	⇑P	Pn	20 38 58.6	0.0
PGOR				⇓S	Sn	20 39 12.4	+0.8
DOPR	Dopca	0.79	309	⇑P	Pn	20 38 57.7	-1.2
DOPR				⇓S	Sn	20 39 11.1	-1.2
SULR		0.80	181	⇑P	Pn	20 38 59.0	0.0
SULR				⇓S	Sn	20 39 12.2	-0.1
VOIR		0.86	268	⇑P	Pn	20 38 58.8	-0.9
VOIR				⇑S	Sn	20 39 12.0	-1.6
VOIR		0.86	268	P	Pn	20 38 58.8	-0.9
MTUR	Matau	0.88	254	⇑P	Pn	20 38 59.8	-0.2
GHRR		0.99	53	⇑P	Pn	20 39 01.0	-0.1
GHRR				⇓S	Sn	20 39 15.3	-0.6
GHRR				⇓S		20 39 15.4	
TUDR		0.99	83	⇑P	Pn	20 39 00.2	-0.8
TUDR				⇓S	Sn	20 39 14.6	-1.4
INCR	INCERC-Sediu C	1.04	184	⇑P	Pn	20 39 01.1	-0.5
INCR				⇓S	Sn	20 39 16.7	-0.2
IZVR	Izvoarele	1.06	86	⇑P	Pn	20 39 00.6	-1.2
IZVR				⇑S	Sn	20 39 15.5	-1.8
SLCR	Slobozia Conac	1.06	83	⇓P	Pn	20 39 00.8	-1.1
SLCR				⇑S	Sn	20 39 15.6	-1.8
TESR	Tescani	1.07	14	⇓P	Pn	20 39 01.3	-0.7
TESR				⇑S	Sn	20 39 16.0	-1.6
TESR	Tescani	1.07	14	P	Pn	20 39 01.3	-0.7
LEHL	Lehliu	1.08	158	⇑P	Pn	20 39 01.8	-0.2
LEHL				⇑S	Sn	20 39 17.7	+0.1
SCHL	Schela	1.10	88	⇑P	Pn	20 39 01.3	-1.0
SCHL				⇑S	Sn	20 39 16.0	-2.2
STFAR	Stefanesti-Arg	1.11	237	⇑P	Pn	20 39 02.3	-0.1
STFAR				⇓S	Sn	20 39 17.6	-0.8
BUC1	Bucharest	1.14	189	⇓P	Pn	20 39 02.4	-0.4
BUC1				⇓S	Sn	20 39 19.0	0.0
AMRR	Amara	1.15	138	⇑P	Pn	20 39 02.8	-0.1
AMRR				⇑S	Sn	20 39 19.3	+0.1
SCTR	Scanteiesti	1.23	80	⇓P	Pn	20 39 03.5	-0.3
SCTR				⇓S	Sn	20 39 19.5	-1.4
BIR	Birlad	1.24	50	⇑P	Pn	20 39 03.7	-0.2
BIR				⇑S	Sn	20 39 19.9	-1.1
TATR	Tatarca	1.26	84	⇑P	Pn	20 39 03.8	-0.4
TATR				⇓S	Sn	20 39 20.2	-1.3
SGRR	Singureni	1.27	189	⇑P	Pn	20 39 03.8	-0.5
SGRR				⇓S	Sn	20 39 20.7	-1.0
HUMR	Humele	1.31	224	⇑P	Pn	20 39 04.2	-0.7
HUMR				⇓S	Sn	20 39 21.5	-1.2
HUMR	Humele	1.31	224	P	Pn	20 39 03.3	-1.6
VLDR	Vladesti	1.32	73	⇑P	Pn	20 39 04.9	0.0
VLDR				⇑S	Sn	20 39 21.9	-1.0
JOSR	Joseni	1.34	337	⇑P	Pn	20 39 04.0	-1.2
CFR	Carcaliu	1.35	102	⇑P	Pn	20 39 04.5	-0.8
CFR				⇓S	Sn	20 39 23.2	-0.3
GIUM	Giurgiulesti	1.37	89	⇑P	Pn	20 39 05.3	-0.1
GIUM				⇑S	Sn	20 39 23.3	-0.5
GIUM	Giurgiulesti	1.37	89	P	Pn	20 39 05.6	+0.2
GIUM				S	Sn	20 39 24.9	+1.1
RASA	Rasa	1.41	153	⇑P	Pn	20 39 05.7	-0.3
RASA				⇓S	Sn	20 39 24.0	-0.7
BIZ	Bicaz	1.47	356	⇑S	Sn	20 39 26.1	0.0
MDB	Medias	1.48	297	⇑P	Pn	20 39 06.6	-0.2
MDB				⇓S	Sn	20 39 26.3	+0.1
GIRR	Girov	1.49	6	⇓P	Pn	20 39 06.9	-0.1
COPA	Copaceanca	1.54	209	⇓P	Pn	20 39 06.9	-0.6
COPA				⇑S	Sn	20 39 25.8	-1.7
TLBR	Topalu	1.57	126	⇑P	Pn	20 39 07.9	-0.1
TLBR				⇓S	Sn	20 39 27.6	-0.7
VASR	Vaslui	1.58	42	⇑P	Pn	20 39 07.9	-0.2
VASR				⇑S	Sn	20 39 27.5	-1.0
TPGR	Topolog	1.65	111	⇑P	Pn	20 39 08.4	-0.6
TPGR				⇓S	Sn	20 39 28.6	-1.5
LEOM	Leova	1.70	53	⇓P	Pn	20 39 09.6	-0.1
LEOM				⇓S	Sn	20 39 31.3	-0.1
LEOM	Leova	1.70	53	P	Pn	20 39 09.5	-0.1
LEOM				S	Sn	20 39 31.2	-0.1
CVD1	Cernavoda-Powe	1.72	131	⇑S	Sn	20 39 31.2	-0.6
LOT	Lotru	1.76	270	⇑P	Pn	20 39 09.9	-0.6
LOT				⇑S	Sn	20 39 30.7	-2.1
LOT	Lotru	1.76	270	P	Pn	20 39 09.4	-1.1
TLCR		1.82	98	⇑P	Pn	20 39 11.3	+0.1
TLCR				⇑S	Sn	20 39 34.3	+0.3
TIRR	Tirgusor	1.83	123	⇓P	Pn	20 39 11.1	-0.3
TIRR				⇑S	Sn	20 39 33.1	-1.1
RAZG	Razgrad	1.92	175	⇓P	Pn	20 39 12.1	-0.3
RAZG				⇓S	Sn	20 39 35.0	-1.2
ZIMR		1.93	200	⇑S	Sn	20 39 35.0	-1.5
IAS	Iasi	1.94	27	⇑P	Pn	20 39 12.2	-0.4
IAS				⇑S	Sn	20 39 35.1	-1.6
VLAD	Vladila	1.98	223	⇑P	Pn	20 39 12.3	-1.0
MFTR	Murfatlar	2.01	129	⇓P	Pn	20 39 13.4	-0.3
MFTR				⇓S	Sn	20 39 38.0	-0.3
ARCR	ARCALIA	2.09	321	⇓P	Pn	20 39 13.8	-0.8
TSCT	Constanta Port	2.15	127	⇑P	Pn	20 39 15.2	-0.3
TSCT				⇑S	Sn	20 39 40.3	-1.4
SZH	Strazhica	2.22	186	*i* P	Pn	20 39 15.9	-0.6
CJR	Cluj-Napoca	2.23	305	⇑P	Pn	20 39 16.4	-0.2
CJR				⇓S	Sn	20 39 43.2	-0.5
CJR	Cluj-Napoca	2.23	305	P	Pn	20 39 16.1	-0.5
PSN	Preselentsi	2.26	142	*i* P	Pn	20 39 17.2	+0.3
BUR01	Bucovina Ar. S	2.26	342	⇓P	Pn	20 39 16.9	-0.1
BUR01				⇓S	Sn	20 39 44.1	-0.3
BURAR	Bucovina Array	2.26	342	⇓P	Pn	20 39 16.9	-0.1
BURAR				⇓S	Sn	20 39 44.1	-0.3
MILM	Milestii Mici	2.28	50	*e*P	Pn	20 39 15.2	-2.0
	16nm,0.3s						
MILM				*e*S	Sn	20 39 40.7	-4.1
	53nm,0.2s						
SRE	Strehaia	2.32	251	⇑P	Pn	20 39 16.8	-0.9
SRE				⇓S	Sn	20 39 43.4	-2.2
KIS	Kishinev	2.34	48	⇓P	Pn	20 39 17.8	-0.1
KIS				⇓S	Sn	20 39 44.5	-1.6
KIS	Kishinev	2.34	48	*e*P	Pn	20 39 17.5	-0.4
	35nm,0.4s						
KIS				*e*S	Sn	20 39 44.0	-2.0
	100nm,0.3s						
MANR	Mangalia	2.34	134	⇓P	Pn	20 39 18.0	0.0
MANR				⇓S	Sn	20 39 45.4	-0.9
PVL	Pavlikeni	2.36	197	*i* P	Pn	20 39 19.3	+1.1
DEV	Deva	2.39	281	⇓P	Pn	20 39 18.3	-0.3
DEV				⇓S	Sn	20 39 45.9	-1.4
DEV	Deva	2.39	281	P	Pn	20 39 18.2	-0.5
PRD	Provadia	2.42	160	*i* P	Pn	20 39 19.6	+0.6
TSSL	Sulina	2.46	96	⇑S	Sn	20 39 49.4	+0.4
MARR	Marisel-Cluj	2.50	300	⇓P	Pn	20 39 19.8	-0.4
MARR				⇑S	Sn	20 39 48.9	-1.1
ROIA	ROIAK	2.51	161	*i* P	Pn	20 39 20.8	+0.5
BAIL	Bailesti	2.54	236	⇑P	Pn	20 39 19.6	-1.0
BAIL				⇓S	Sn	20 39 48.9	-1.9
KALB	Balgarevo	2.58	143	⇓P	Pn	20 39 21.4	+0.3
KALB				⇑S	Sn	20 39 51.5	-0.4
PUNG	Punghina	2.66	244	⇓P	Pn	20 39 20.6	-1.5
RMGR	Halanga-Turnu	2.66	253	⇑P	Pn	20 39 21.1	-1.1
DRBR	Darabani	2.74	5	⇑P	Pn	20 39 22.7	-0.7
DRBR				⇑S	Sn	20 39 55.1	-0.6
HERR	Herculane	2.79	259	⇓P	Pn	20 39 22.4	-1.5
MPEP	Malo Peshtene	2.79	221	*i* P	Pn	20 39 23.2	-0.8
DRGR		2.80	299	⇓P	Pn	20 39 23.5	-0.7
DRGR		2.80	299	P	Pn	20 39 23.5	-0.7
DRGR		2.80	299	*e*Pn	Pn	20 39 23.4	-0.7
BMR	Baia Mare	2.91	320	⇓P	Pn	20 39 25.3	-0.3
RAKU	Rahkiv	2.93	331	*e*P	Pn	20 39 26.1	+0.2
KSV	Kosov	2.96	344	*e*P	Pn	20 39 26.4	+0.2
NSLU	Nyzhne Selyshc	2.99	336	*e*P	Pn	20 39 30.6	+3.9
SORM	Soroca	3.02	28	⇓P	Pn	20 39 26.0	-1.1
SORM	Soroca	3.02	28	P	Pn	20 39 25.9	-1.1
KMPD	K-Podol'skiy	3.09	2	P	Pn	20 39 26.9	-1.1
KMPD				sP		20 39 49.3	
KMPD	K-Podol'skiy	3.09	2	*e*P	Pn	20 39 27.1	-0.9
KMPD				*e*S	Sn	20 40 00.9	-3.1
NDNU	Novodnistrovsk	3.21	13	*e*P	Pn	20 39 28.7	-0.9
NDNU				*e*S	Sn	20 40 03.5	-3.4
BZS	Buzias	3.27	274	⇓P	Pn	20 39 29.0	-1.4
BZS				⇓S	Sn	20 40 08.1	-0.3
BZS	Buzias	3.27	274	*e*Pn	Pn	20 39 28.6	-1.8
MDVR	Moldovita	3.30	259	⇑P	Pn	20 39 30.3	-0.6
MDVR	Moldovita	3.30	259	P	Pn	20 39 29.4	-1.4
ZAGS	Zajecar	3.32	241	*e*Pn	Pn	20 39 28.6	-2.5
ZAGS				*e*Sn	Sn	20 39 59.2	-10
ZAPS	Zavoj	3.41	231	*e*Pn	Pn	20 39 30.3	-2.0
ZAPS				*e*Sn	Sn	20 39 59.8	-12
KUBS	Kucevo	3.43	254	*e*Sn	Sn	20 39 59.9	-12
KORU	Korolevo	3.44	322	*e*P	Pn	20 39 35.1	+2.5
KORU				*e*P		20 39 35.6	
NE56	Odesa	3.44	68	P	Pn	20 39 31.9	-0.8
DIM	Dimitrovgrad	3.47	189	*i* P	Pn	20 39 32.3	-0.8
TRSU	Trosnyk	3.47	320	*e*P	Pn	20 39 36.9	+3.9
MEZ	Mezhgor'ye	3.58	329	*e*P	Pn	20 39 34.7	+0.2
BRIU	Brid	3.63	323	*e*P	Pn	20 39 37.4	+2.2
TRPA	Tarpa	3.69	317	⇑P	Pn	20 39 35.4	-0.5
HORU	Horodok	3.74	2	*e*P	Pn	20 39 35.5	-1.2
BOVS	Bovan	3.74	242	⇓P	Pn	20 39 35.5	-1.3
BOVS	Bovan	3.74	242	*e*Pn	Pn	20 39 35.2	-1.6
BOVS				*e*Sn	Sn	20 40 09.1	-11
MUKU	Mukachevo	3.86	322	*e*P	Pn	20 39 40.1	+1.8
RZN	Rozhen	3.95	197	*i* P	Pn	20 39 39.6	-0.2
BOSS	Bosilegrad	4.04	224	*e*Pn	Pn	20 39 40.3	-0.6
BOSS				*e*Sn	Sn	20 40 15.5	-12
BARS	Barje	4.16	232	*e*Pn	Pn	20 39 42.2	-0.3
BARS				*e*Sn	Sn	20 40 18.3	-12
PRVS	Prvonek	4.24	227	*e*Pn	Pn	20 39 42.6	-0.9
PRVS				*e*Sn	Sn	20 40 20.7	-11
GRUS	Gruza	4.26	250	*e*Pn	Pn	20 39 43.1	-0.7
GRUS				*e*Sn	Sn	20 40 21.0	-11
SELS	Selova	4.33	240	*e*Pn	Pn	20 39 43.4	-1.3
SELS				*e*Sn	Sn	20 40 21.2	-13
TRUS	Trudelj	4.35	255	*e*Pn	Pn	20 39 43.2	-1.8
TRUS				*e*Sn	Sn	20 40 23.0	-12
LUBAR	Lubar, Ukraine	4.56	12	P	Pn	20 39 46.9	-0.9
DIVS	Divibare	4.67	255	*e*Pn	Pn	20 39 48.1	-1.4
IVAS	Ivanjica	4.77	249	*e*Pn	Pn	20 39 48.5	-2.2
IVAS				*e*Sn	Sn	20 40 32.3	-12
STIP	Stip	4.80	220	*i* Pn	Pn	20 39 48.2	-3.0
STIP				*i* Sn	Sn	20 40 38.2	-7.3
KECS	Kecovo	4.97	309	*e*P	Pn	20 39 54.1	+0.7
SJES	Sjenica	5.03	246	*e*Pn	Pn	20 39 52.3	-2.0
SJES				*e*Sn	Sn	20 40 37.3	-14
BBLS	Lazići	5.15	254	*e*Pn	Pn	20 39 54.9	-1.0
BBLS				*e*Sn	Sn	20 40 39.6	-15
SEV	Sevastopol'	5.33	97	*i* P	Pn	20 39 57.1	-1.2
SEV				Pm		20 39 57.3	
	comp=Z,6.0nm,0.4s						
SEV				*i* S	Sn	20 40 54.4	-3.9
SEV				Sm		20 40 59.1	
	comp=N,11nm,0.3s						
SEV	Sevastopol'	5.33	97	P	Pn	20 39 57.1	-1.2
SEV				Pm		20 39 57.3	
SEV				S	Sn	20 40 54.4	-3.9
SEV				Sm		20 40 59.1	
AK07	Malin Array Si	5.45	20	P	Pn	20 39 59.1	-0.7
AK06	Malin Array Si	5.48	20	P	Pn	20 39 58.8	-1.5
AK10	Malin Array Si	5.50	20	P	Pn	20 39 59.3	-1.3
AK17	Malin Array Si	5.54	19	P	Pn	20 39 59.9	-1.2
MI28	Mi28,Pidlybu	5.54	9	P	Pn	20 40 00.5	-0.6
AK15	Malin Array Si	5.56	19	P	Pn	20 40 00.4	-1.0
SIM	Simferopol'	5.57	93	*e*S	Sn	20 41 00.8	-3.4
SIM				Sm		20 41 04.2	
	comp=N,10.0nm,0.3s						
SIM				Sm		20 41 04.2	
	comp=E,9.0nm,0.3s						
AKASG	Malin Array Be	5.59	20	Pg	Pn	20 40 00.7	-1.1
	comp=E,0.8nm,0.3s,baz=208,slow=12,SNR=4.1						
AKASG				Lg	Lg	20 41 11.9	
	comp=E,3.7nm,0.3s,baz=202,slow=25,SNR=6.6						
AK21	Malin Array Si	5.62	18	P	Pn	20 40 01.2	-1.0
AK23	Malin Array Si	5.63	19	P	Pn	20 40 01.0	-1.3
YAL	Yalta	5.68	97	*e*P	Pn	20 40 03.4	+0.3
YAL				Pm		20 40 04.2	
	comp=Z,5.0nm,0.2s						
YAL				*i* S	Sn	20 41 05.6	-1.3
YAL				Sm		20 41 10.0	
	comp=N,18nm,0.4s						
YAL				Sm		20 41 10.0	
	comp=E,16nm,0.5s						
RNPP5	Staryi Chortor	5.76	358	P	Pn	20 40 03.5	-0.6
ALU	Alushta	5.82	95	*i* P	Pn	20 40 04.0	-0.9
ALU				Pm		20 40 04.2	
	comp=Z,4.0nm,0.3s						
ALU				*i* S	Sn	20 41 07.7	-2.5
ALU				Sm		20 41 10.1	
	comp=N,13nm,0.4s						
ALU				Sm		20 41 10.1	
	comp=E,4.0nm,0.3s						
ALU	Alushta	5.82	95	P	Pn	20 40 04.0	-0.9
ALU				Pm		20 40 04.2	
ALU				S	Sn	20 41 07.7	-2.5
ALU				Sm		20 41 10.1	
LANS	Liptovska Anna	5.91	311	*e*P	Pn	20 40 07.2	+1.1
VYHS	Vyhne	5.91	303	*e*P	Pn	20 40 06.1	-0.1
SRO	Srobarova	5.95	296	*e*P	Pn	20 40 07.4	+0.7
SUDU	Sudak	6.20	92	*e*P	Pn	20 40 08.7	-1.4
SUDU				Pm		20 40 10.9	
	comp=Z,3.0nm,0.2s						
SUDU				*e*S	Sn	20 41 15.2	-4.3
SUDU				Sm		20 41 20.7	
	comp=N,25nm,0.3s						
SUDU				Sm		20 41 20.7	
	comp=E,15nm,0.4s						
SUDU	Sudak	6.20	92	P	Pn	20 40 08.7	-1.4
SUDU				Pm		20 40 10.9	
SUDU				S	Sn	20 41 15.2	-4.3
SUDU				Sm		20 41 20.7	
FEO	Feodosiya	6.46	91	*e*S	Sn	20 41 23.3	-2.5
FEO				Sm		20 41 24.7	
	comp=N,25nm,0.5s						
FEO				Sm		20 41 24.7	
	comp=E,3.0nm,0.2s						
FEO	Feodosiya	6.46	91	S	Sn	20 41 23.3	-2.5
FEO				Sm		20 41 24.7	
VRAC	Vranov	7.60	304	Pn	Pn	20 40 29.3	+0.2
	comp=E,0.5nm,0.3s,baz=122,slow=14,SNR=6.0						
	comp=E,2.9nm,0.5s						
KRLC	Kraliky	7.87	309	*e*PN	Pn	20 40 41.6	+8.7
BRTR	Keskin Array B	7.91	134	Pn	Pn	20 40 34.5	+1.0
	comp=E,0.1nm,0.3s,baz=322,slow=13,SNR=5.4						
BRTR				Sn	Sn	20 41 58.2	-3.3
	comp=E,0.2nm,0.3s,baz=129,slow=31,SNR=5.4						
	comp=E,0.2nm,0.3s						
DPC	Dobruska-Polom	8.27	310	*e*PN	Pn	20 40 46.4	+8.1
GERES	GERESS Array B	9.20	296	Pn	Pn	20 40 51.4	+0.4
	comp=E,0.1nm,0.3s,baz=108,slow=15,SNR=1.8						
	comp=E,0.2nm,0.3s						
FINES	FINESS Array B	16.00	360	Pn	Pn	20 42 06.8	-14
	comp=E,0.1nm,0.3s,baz=179,slow=15,SNR=1.0						
	comp=E,3.0nm,1.1s						
ZALV	Zalesovo Beam	37.80	55	P	P	20 45 48.6	+0.6
	comp=E,0.5nm,0.4s,baz=281,slow=8.4,SNR=2.0						
	comp=E,0.5nm,0.4s						
MKAR	Makanchi Array	38.14	67	P	P	20 45 52.0	+0.9
	comp=E,0.2nm,0.4s,baz=278,slow=8.5,SNR=5.4						
	comp=E,0.2nm,0.4s						
SONM	Songino Array	52.67	57	P	P	20 47 47.3	+1.5
	comp=E,0.2nm,0.5s,baz=292,slow=8.3,SNR=2.5						
	comp=E,0.2nm,0.5s						
SEY	Seymchan	63.76	24	P	P	20 49 03.9	+1.4
	comp=E,0.4nm,0.5s,baz=185,slow=23,SNR=1.6						
	comp=E,0.4nm,0.5s						

IDC ***26*** *20:39:49.2±1.9, 43°.64N×105°.56W, h0^{km}, mb4.3/1, mbtmp3.6/4, ML3.3/3, MS2.8/1, Error ellipse: s-maj=48.1km s-min=9.3km az=152.0*
NEIC ***26*** *20:39:50.5±1.3, 43°.64N±0°.04×105°.29W±0°.08, h0^{km}±2^{km}, ML3.2/54, Error ellipse: s-maj=10.3km s-min=7.5km az=284.0*
ISC 26 20:39:49.2±0.8, **43°.63N**±0°.05×**105°.30W**±0°.06, **h0**^{km}, **n47**, σ**1^{s}24**/47, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.04	62		Pb	20 40 10.2	0.0
K22A	Casper	1.33	223		Pg	20 40 13.2	-1.4
K22A				IAML		20 40 36.6	
	comp=N,338nm,0.3s						
PHWY	Pilot Hill	2.33	183	Pn	Pn	20 40 29.4	+0.2
PHWY				IAML		20 41 04.2	
	comp=N,102nm,0.4s						
RWWY	Rawlins	2.40	217	Pn	Pn	20 40 29.4	-0.6
RWWY				IAML		20 41 05.2	
	comp=N,141nm,1.1s						
N23A	Red Feather La	2.78	190	Pn	Pn	20 40 34.9	-0.3
N23A				IAML		20 41 16.8	
	comp=N,132nm,0.4s						
N23A				IAML		20 41 17.6	
	comp=E,108nm,0.4s						
LAO	LASA Array	3.12	348	Pn	Pn	20 40 40.7	+0.9
RLMT	Red Lodge	3.21	299		Pn	20 40 42.1	+1.1
RLMT				IAML		20 41 40.2	
	comp=E,68nm,0.4s						
RLMT				IAML		20 41 53.5	
	comp=E,53nm,1.1s						
PD31	Pinedale Array	3.23	256	Pn	Pn	20 40 42.4	+1.0
PDAR	Pinedale Array	3.23	256	Pn	Pn	20 40 42.4	+1.0
	comp=E,3.0nm,0.3s,baz=79,slow=16,SNR=46						
PDAR				Lg	Lg	20 41 24.3	
	comp=E,11nm,0.3s,baz=77,slow=32,SNR=9.8						
PDAR				LR	LR	20 42 03.7	
	comp=E,138nm,18.6s,baz=69,slow=44						
	comp=E,3.6nm,0.3s						
PDAR	Pinedale Array	3.23	256	Pn	Pn	20 40 42.1	+0.7
BW06	Boulder Array	3.23	256	Pn	Pn	20 40 42.0	+0.6
BW06				IAML		20 41 30.5	
	comp=E,68nm,0.4s						
BW06				IAML		20 41 35.0	
	comp=E,47nm,0.5s						
OGNE	Ogallala	3.62	137		Pn	20 40 47.9	+1.2
GCMT	Greycliff	3.78	306		Pn	20 40 49.6	+0.7
ISCO	Idaho Springs	3.84	184	Pn	Pn	20 40 51.2	+1.4
H17A	Grant Village	3.88	283		Pn	20 40 51.0	+0.7
H17A				IAML		20 41 57.5	
	comp=N,34nm,1.4s						
H17A				IAML		20 42 01.5	
	comp=E,38nm,1.2s						
MOOW	Moose Ponds	3.95	274	Pn	Pn	20 40 53.1	+1.8
IMW	Indian Meadow	4.09	276		Pn	20 40 54.6	+1.3
IMW				IAML		20 41 22.0	
	comp=E,34nm,0.5s						
IMW				IAML		20 42 11.3	
	comp=E,29nm,0.8s						
TPAW	Teton Pass	4.11	270		Pn	20 40 55.3	+1.8
TPAW				IAML		20 42 12.0	
	comp=E,22nm,1.1s						
TPAW				IAML		20 42 15.1	
	comp=E,46nm,1.2s						
O20A	White River Ci	4.13	213	Pn	Pn	20 40 55.5	+1.8
FXWY	Fox Creek	4.15	272		Pn	20 40 56.4	+2.3
E28A	Huff	4.39	46	Pn	Pn	20 40 56.7	-0.5
RDMU	Red Mountain	4.41	227	Pn	Pn	20 40 59.9	+2.3
RDMU				IAML		20 42 12.7	
	comp=N,38nm,1.4s						
QLMT	Earthquake Lak	4.56	287	Pn	Pn	20 40 58.9	-0.8
Q24A	Divide	4.67	179	Pn	Pn	20 41 02.1	+0.9
Q24A				IAML		20 42 17.0	
	comp=E,32nm,1.2s						
Q24A				IAML		20 43 24.2	
	comp=N,15nm,3.6s						
BOZ	Bozeman (W)	4.92	296	Pn	Pn	20 41 06.8	+2.2
BOZ				IAML		20 42 30.9	
	comp=N,15nm,0.9s						
BOZ				IAML		20 43 34.6	
	comp=N,16nm,3.9s						
KSCO	Kaye Shedlock'	5.04	156	Pn	Pn	20 41 07.0	+0.8
HWUT	Hardware Ranch	5.04	248	Pn	Pn	20 41 07.8	+1.5
BSUT	Blindstream Ca	5.11	235		Pn	20 41 08.3	+1.0
BSUT				IAML		20 42 35.3	
	comp=N,15nm,1.4s						
BSUT				IAML		20 42 53.8	
	comp=E,19nm,1.7s						
EGMT	Eagleton	5.38	326	Pn	Pn	20 41 11.7	+0.9
HRY	Holter Researc	5.54	306		Pn	20 41 14.7	+1.6
PV07	Paradox Valley	5.77	207	Pn	Pn	20 41 18.3	+2.0
MDND	Maddock	5.80	41		Pn	20 41 17.0	+0.5
SDCO	Great Sand Dun	5.88	182	Pn	Pn	20 41 18.5	+0.6
PV23	Carpenter Ridg	5.89	210	Pn	Pn	20 41 18.7	+0.8
PV11	David Mesa, Pa	5.97	208	Pn	Pn	20 41 20.7	+1.6
SRU	San Rafael Swe	5.99	223	Pn	Pn	20 41 19.9	+0.6
S22A	4UR Ranch, Cre	6.00	192	Pn	Pn	20 41 20.6	+1.1
PV13	Radium Mtn., P	6.08	207	Pn	Pn	20 41 21.9	+1.3
TMUT	Trail Mountain	6.20	228	Pn	Pn	20 41 23.7	+1.4
ECSD	EROS Data Cent	6.30	86	Pn	Pn	20 41 24.4	+1.0
DUG	Dugway, Tooele	6.57	241	Pn	Pn	20 41 28.0	+0.7
MSU	Marysvale	7.29	228	Pn	Pn	20 41 38.2	+1.0
AGMN	Agassiz Nation	8.06	51	Pn	Pn	20 41 48.1	+0.6

PKCU	Pink Cliffs	8.16	223	Pn	Pn	20 41 51.1	+1.9
ULM	Lac du Bonnet	9.23	41	Pn	Pn	20 42 03.1	-0.5
	comp=E,1.4nm,0.3s,baz=231,slow=15,SNR=8.0						
ULM				Lg	Lg	20 44 33.1	
	comp=E,0.4nm,0.3s,baz=277,slow=7.8,SNR=1.7						
	comp=E,2.4nm,0.3s						
YKA	Yellowknife Ar	19.66	347	P	P	20 44 18.4	-1.0
	comp=E,0.1nm,0.3s,baz=166,slow=11,SNR=2.9						
	comp=E,0.2nm,0.6s						
ARCES	ARCESS Array B	61.52	18	P	P	20 50 07.2	-0.2
	comp=E,3.2nm,0.9s,baz=332,slow=7.2,SNR=1.0						
	comp=E,3.2nm,0.9s						

IDC 26 20:47:03.5±2.5**, 2°.49N×128°.79E, h0^{km}, mb3.4**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=184.8km s-min=25.0km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.95	166	P	P	20 52 08.7	-0.9
	0.5nm,0.4s,baz=346,slow=10,SNR=16						
	0.5nm,0.4s						
ASAR	Alice Springs	26.47	169	P	P	20 52 43.1	+0.5
	0.2nm,0.4s,baz=346,slow=11,SNR=4.6						
	0.2nm,0.4s						
MKAR	Makanchi Array	59.74	325	P	P	20 57 10.5	+0.2
	0.4nm,0.4s,baz=121,slow=7.0,SNR=8.3						
	0.4nm,0.4s						

IDC 26 20:58:16.7±10.0**, 3°.37N×123°.11E, h499^{km}**±131^{km}**, mb2.6**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=272.5km s-min=38.1km az=62.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	25.66	155	P	P	21 03 05.9	-0.2
	0.8nm,0.5s,baz=334,slow=9.6,SNR=26						
	0.8nm,0.5s						
ASAR	Alice Springs	28.85	159	P	P	21 03 34.5	+0.3
	0.5nm,0.6s,baz=332,slow=7.3,SNR=7.4						
	0.5nm,0.6s						
MKAR	Makanchi Array	55.84	327	P	P	21 07 06.3	0.0
	0.1nm,0.4s,baz=126,slow=7.3,SNR=2.8						
MKAR				PcP	PcP	21 07 57.7	-0.3
	0.3nm,0.6s,baz=134,slow=4.2,SNR=5.0						
	0.1nm,0.4s						

IDC 26 20:59:43.7±1.5**, 2°.31N×124°.96E, h0^{km}, mb3.6**/3**, mbtmp3.7**/3**, Error ellipse: s-maj=191.8km s-min=22.8km az=64.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.95	158	P	P	21 04 59.7	-0.2
	1.2nm,0.5s,baz=335,slow=10,SNR=35						
	1.2nm,0.5s						
ASAR	Alice Springs	27.24	162	P	P	21 05 30.7	+0.9
	0.3nm,0.3s,baz=346,slow=11,SNR=6.0						
ASAR				PcP	PcP	21 08 49.0	-1.0
	0.4nm,0.6s,baz=356,slow=2.0,SNR=4.2						
	0.3nm,0.3s						
MKAR	Makanchi Array	57.74	327	P	P	21 09 36.8	+0.2
	0.3nm,0.3s,baz=118,slow=7.5,SNR=10						
MKAR				PcP	PcP	21 10 28.4	-1.0
	0.2nm,0.4s,baz=127,slow=3.8,SNR=2.5						
	0.3nm,0.3s						

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*IDC **26** 21:26:27.4±3.3, 17°.50S×72°.40W, h0^{km}, mb3.5/2, mbtmp3.2/3, ML2.3/1, MS3.2/4, Error ellipse: s-maj=124.2km s-min=35.6km az=15.0*

ISC 26 21:26:36.1±1.4**, 15°.3S**±0°.1×**72°.3W**±0°.2**, h35^{km}, n18, σ1^{s}30**/14**, mb3.6**/3**, 1C-1D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB18	Visviri	3.49	130	i P	Pn	21 27 29.6	+1.2
PB18				i S	Sn	21 28 11.3	+2.4
AP01	Chacalluta	3.54	149	eP	Pn	21 27 28.8	+0.1
AP01				i S	Sn	21 28 08.2	-1.1
AP01				IAML		21 28 14.7	
	comp=N,634nm,0.4s						
PB12	IPOC Station P	3.76	151	⇑iP	Pn	21 27 31.6	-0.1
PB12				eS	Sn	21 28 12.5	-2.3
PB16	IPOC Station P	3.99	139	⇓iP	Pn	21 27 35.4	0.0
PB16				i S	Sn	21 28 21.7	+0.5
LPAZ	La Paz	4.09	104	Pn	Pn	21 27 34.9	-1.9
	comp=N,0.1nm,0.3s,baz=258,slow=8.4,SNR=2.2						
LPAZ				LR	LR	21 29 20.2	
	comp=N,96nm,19.5s,baz=301,slow=40						
	comp=N,0.8nm,0.7s						
MNMC	Minye Minye	4.56	146	eP	Pn	21 27 42.4	-0.6
ATAH	Atahualpa	10.12	323	LR	LR	21 34 17.6	
	comp=N,101nm,19.9s,baz=166,slow=40						
SIV	San Ignacio	10.80	95	LR	LR	21 33 22.7	
	comp=N,68nm,19.4s,baz=294,slow=38						
H03N1	Juan Fernandez	19.01	197	T	T	21 48 58.5	
	baz=21,slow=73,SNR=61						
H03N2	Juan Fernandez	19.02	197	T	T	21 48 58.3	
	baz=21,slow=73,SNR=47						
H03N3	Juan Fernandez	19.03	197	T	T	21 48 54.3	
	baz=21,slow=73,SNR=47						
TXAR	Lajitas Array	53.77	326	P	P	21 36 04.5	+9.2
	comp=N,0.3nm,0.8s,baz=141,slow=5.8,SNR=3.7						
	comp=N,0.3nm,0.8s						
TORD	Torodi Ar. Bea	78.44	73	P	P	21 38 34.6	+0.6
	comp=N,0.9nm,0.8s,baz=262,slow=4.4,SNR=4.8						
VNDA	Vanda	82.34	190	LR	LR	22 08 11.8	
	comp=N,65nm,21.8s,baz=358,slow=31						
YKA	Yellowknife Ar	84.35	342	P	P	21 39 10.6	+6.3
	comp=N,0.3nm,0.6s,baz=135,slow=5.3,SNR=7.6						
	comp=N,0.3nm,0.6s						
ZALV	Zalesovo Beam	137.49	20	PKP	PKiKP	21 45 57.7	-0.3
	comp=N,0.2nm,0.4s,baz=321,slow=3.7,SNR=1.6						
MKAR	Makanchi Array	142.14	29	PKP	PKPdf	21 46 04.9	+0.1
	comp=N,0.2nm,0.7s,baz=342,slow=1.8,SNR=2.4						
SONM	Songino Array	147.57	2	PKPbc	PKiKP	21 46 19.4	+0.3
	comp=N,0.6nm,0.8s,baz=334,slow=5.5,SNR=2.3						

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*BJI **26** 21:42:06.2±0.0, 26°.97N×88°.62E, h6^{km}, mb4.3/39, mB4.5/12, ML4.0/1, Ms3.9/12, Ms7 3.8/11*

*IDC **26** 21:42:08.0±0.6, 27°.18N×88°.58E, h0^{km}, mb4.2/30, mbtmp4.1/33, ML4.1/2, MS3.4/5, Error ellipse: s-maj=17.6km s-min=11.1km az=48.0*

*MOS **26** 21:42:08.9±1.1, 27°.09N×88°.52E, h21^{km}, mb4.6/23, Error ellipse: s-maj=8.8km s-min=5.0km az=118.8*

*NDI **26** 21:42:09.0±3.4, 27°.49N×88°.51E, h10^{km}, ML4.3, mb4.5(NEIC)*

*NEIC **26** 21:42:11.9±1.6, 27°.14N±0°.07×88°.55E±0°.06, h24^{km}±5^{km}, mb4.5/62, Error ellipse: s-maj=10.0km s-min=7.5km az=199.0*

*DMN **26** 21:42:12.4±0.0, 26°.67N×88°.63E, h60^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 26 21:42:11.0±0.6**, 27°.07N**±0°.04×**88°.56E**±0°.03**, h23^{km}**±3^{km}**, n224, σ1^{s}67**/269**, mb4.4**/67**, MS3.6**/9**, 22C-5D, Sikkim**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTK	Tadong	0.25	9	eP	Pb	21 42 12.5	-4.8
JIRN	Jiri	2.18	286	ePg	Pb	21 42 49.5	-0.6
JIRN				eSg	Sb	21 43 17.2	+0.3
	3μm,0.3s						
GUN	Gumba	2.52	290	ePg	Pb	21 42 54.2	-1.5
GUN				eSg	Sb	21 43 25.5	-1.0
	3μm,0.4s						
GUN	Gumba	2.52	290	ePg	Pb	21 42 54.3	-1.5
GUN				eSg	Sb	21 43 26.0	-0.5
	3μm,0.5s						
PKI	Pulchoki	2.84	281	ePg	Pn	21 42 57.9	+2.6
PKI				eSg	Sn	21 43 32.1	+3.1
	1μm,0.3s						
PKI	Pulchoki	2.84	281	ePg	Pn	21 42 57.8	+2.5
PKI				eSg	Sn	21 43 31.8	+2.8
	443nm,0.3s						
PKIN	Phulchoki	2.85	281	ePg	Pn	21 42 57.9	+2.5
PKIN				eSg	Sn	21 43 32.3	+3.1
	2μm,0.4s						
PKIN	Phulchoki	2.85	281	ePg	Pn	21 42 58.0	+2.5
PKIN				eSg	Sn	21 43 31.5	+2.3
	553nm,0.3s						
GUWA	GUWAHATI	2.94	107	eP	Pn	21 42 57.9	+1.6
GUWA				eS	Sn	21 43 34.3	+3.4
GUWA				IAML		21 43 39.3	
	comp=N,1μm,0.3s						
GUWA				IAML		21 43 41.1	
	comp=E,2μm,0.5s						
KKN	Kakani	3.00	285	ePg	Pn	21 43 00.0	+2.7
KKN				eSg	Sn	21 43 36.0	+3.3
	comp=E,938nm,0.2s						
KKN	Kakani	3.00	285	ePg	Pn	21 43 00.3	+3.0
KKN				eSg	Sn	21 43 35.5	+2.8
	comp=E,938nm,0.2s						
KKN				eSg	Sb	21 43 36.5	-3.7
DMN	Daman	3.12	281	ePg	Pn	21 43 00.9	+1.9
DMN				eSg	Sn	21 43 38.2	+2.6
	comp=E,2μm,0.5s						
DMN	Daman	3.12	281	ePg	Pn	21 43 01.7	+2.7
DMN				eSg	Sn	21 43 36.9	+1.3
	comp=E,362nm,0.3s						
SHL	Shillong	3.34	116	Pn	Pn	21 43 02.6	+0.6
SHL	Shillong	3.34	116	ePN	Pn	21 43 05.0	+3.0
SHL				eSN	Sb	21 43 47.0	-3.0
SHL	Shillong	3.34	116	P	Pn	21 43 02.7	+0.6
LSA	Lhasa	3.47	41	Pn	Pn	21 43 06.5	+2.4
LSA				Sn	Sb	21 43 55.3	+1.2
LSA				LR	LR		
	comp=E,730nm,8.2s						
LSA				LR	LR		
	comp=E,1μm,7.5s						
LSA				LR	LR		
	comp=E,2μm,8.2s						
LSA	Lhasa	3.47	41		Pn	21 43 06.0	+1.9
LSA	Lhasa	3.47	41	P	Pn	21 43 06.0	+1.9
GKN	Gorkha	3.60	286	ePg	Pn	21 43 08.3	+2.7
GKN				eSg	Sn	21 43 49.3	+1.8
	comp=E,898nm,0.3s						
GKN	Gorkha	3.60	286	ePg	Pn	21 43 08.4	+2.8
GKN				eSg	Sn	21 43 48.8	+1.3
	comp=E,898nm,0.3s						
TEZP	TEZPUR	3.82	96	eP	Pn	21 43 08.3	-0.1
DANN	Dangsing	4.44	288	ePg	Pn	21 43 18.7	+1.5
DANN				eSg	Sn	21 44 09.7	+1.4
	comp=E,316nm,0.2s						
DANN	Dangsing	4.44	288	ePg	Pn	21 43 18.8	+1.5
DANN				eSg	Sn	21 44 09.3	+1.0
	comp=E,230nm,0.3s						
SILR	SILCHAR	4.45	120	eP	Pn	21 43 22.1	+4.9
SILR				IAML		21 44 37.0	
	comp=E,2μm,0.8s						
KOLN	Koldanda	4.46	280	ePg	Pn	21 43 19.1	+1.7
KOLN				eSg	Sn	21 44 09.3	+0.6
	comp=E,453nm,0.2s						
KOLN	Koldanda	4.46	280	ePg	Pn	21 43 19.1	+1.7
KOLN				eSg	Sn	21 44 08.9	+0.2
	comp=E,453nm,0.2s						
KOLN				eSg	Sb	21 44 09.7	-13
ITAN	ITANAGAR	4.61	88	eP	Pn	21 43 19.4	+0.2
ITAN				IAML		21 44 43.1	
	comp=N,2μm,0.4s						
ITAN				IAML		21 44 45.8	
	comp=E,2μm,0.6s						
ZIRO	ZIRO	4.73	83	eP	Pn	21 43 20.6	-0.5
ZIRO				IAML		21 44 37.6	
	comp=N,9μm,0.5s						
PYUN	Piuthan	5.04	283	ePg	Pn	21 43 26.6	+1.1
PYUN				eSg	Sn	21 44 23.9	+0.7
	comp=N,250nm,0.3s						
PYUN	Piuthan	5.04	283	ePg	Pn	21 43 26.7	+1.2
PYUN				eSg	Sn	21 44 23.4	+0.2
	comp=N,251nm,0.3s						
KOHI	KOHIMA	5.16	104	eP	Pn	21 43 26.9	-0.1
KOHI				IAML		21 44 57.4	
	comp=N,761nm,1.2s						
KOHI				IAML		21 45 04.1	
	comp=E,815nm,0.7s						
BRDH	Bariadhala	5.20	147	Pn	Pn	21 43 29.1	+1.7
	comp=E,17nm,0.3s,baz=270,slow=18,SNR=1.2						
BRDH				Sn	Sn	21 44 31.6	+5.0
	comp=E,84nm,0.3s,baz=270,slow=22,SNR=6.0						
	comp=E,58nm,0.3s						
IMP	Imphal	5.34	114	eP	Pn	21 43 31.5	+2.0
IMP				eS	Sn	21 44 35.3	+5.0
IMP				IAML		21 44 37.9	
	comp=N,63nm,0.4s						
IMP				IAML		21 44 38.6	
	comp=E,82nm,0.7s						
MOKO	MOKOCHONG	5.38	97	eP	Pn	21 43 29.9	-0.2
MOKO				eS	Sn	21 44 28.5	-2.9
MOKO				IAML		21 44 57.4	
	comp=E,551nm,0.6s						
SAIH	SAIHA	6.09	138	eP	Pn	21 43 42.3	+2.5
SAIH				eS	Sn	21 44 49.7	+1.0
SAIH				IAML		21 44 53.5	
	comp=N,327nm,0.4s						
LKP	Lekhapani	6.50	86	eP	Pn	21 43 44.3	-0.9
LKP				eS	Sn	21 44 56.1	-2.5
LKP				IAML		21 45 04.5	
	comp=N,227nm,0.3s						
LKP				IAML		21 45 09.3	
	comp=E,271nm,0.6s						
MND	Mandalay	8.53	125	Pn	Pn	21 44 12.8	-0.3
JBP	Jabalpur	8.69	245	⇓eP	Pn	21 44 16.8	+1.5
JBP				eS	Sn	21 45 53.1	+0.6
TNCH	TengChong	9.19	101	eP	Pn	21 44 24.5	+2.1
TNCH				pP		21 44 26.5	
TNCH				S	Sn	21 46 09.0	+3.8
TNCH				sS		21 46 12.5	
TNCH				pmax	pmax		
	comp=E,5.0nm,0.6s						
TNCH				pmax	pmax		
	comp=E,47nm,3.7s						
TNCH				LR	LR		
	comp=E,160nm,4.6s						
TNCH				LR	LR		
	comp=E,130nm,4.8s						
TNCH				LR	LR		
	comp=E,140nm,11.1s						
GOMU	GeErMu	10.54	29	P	Pn	21 44 43.3	+2.3
GOMU				pP		21 44 47.8	
GOMU				pmax	pmax		
	comp=E,4.0nm,0.7s						
GOMU				pmax	pmax		
	comp=E,81nm,5.4s						
GOMU				LR	LR		
	comp=E,270nm,10.5s						
GOMU				LR	LR		
	comp=E,210nm,10.2s						
GOMU				LR	LR		
	comp=E,360nm,11.0s						
PZH	PanZhiHua	11.79	90	P	Pn	21 45 01.0	+3.0
PZH				pmax	pmax		
	comp=E,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=E,50nm,5.1s						
CHTO	Chiang Mai	12.61	129	Pn	Pn	21 45 09.1	0.0
CHTO	Chiang Mai	12.61	129	P	Pn	21 45 09.1	0.0
CRAI	Chiangrai	12.79	120	Pn	Pn	21 45 11.6	+0.1
CMAR	Chiang Mai Arr	12.85	130	Pn	Pn	21 45 11.3	-1.1
	comp=E,0.4nm,0.5s,baz=312,slow=14,SNR=4.4						
CMAR	Chiang Mai Arr	12.85	130	i P	Pn	21 45 12.8	+0.4
HYB	Hyderabad	13.34	226	eP	Pn	21 45 17.4	-1.7
CHCP	Chirah Chowk	14.73	300	P	Pn	21 45 35.9	-2.2
NIL	Nilore	14.74	300	Pn	Pn	21 45 35.3	-2.9
NIL	Nilore	14.74	300	P	Pn	21 45 35.3	-2.9
THW	Thamme Wali	15.64	295	P	Pn	21 45 46.9	-3.2
LZH	Lanzhou	15.81	52	eP	Pn	21 45 49.5	-2.8
LZH				pP	P	21 45 55.5	-0.5
LZH				pmax	pmax		
	comp=E,18nm,1.1s						
LZH				LR	LR		
	comp=E,290nm,9.1s						
LZH				LR	LR		
	comp=E,470nm,9.8s						
LZH				LR	LR		
	comp=E,520nm,10.7s						
PBA	Port Blair	15.84	165		P	21 45 55.8	-0.4
PBA				IAmb	IAmb	21 46 29.4	
	comp=Z,33nm,0.9s						
CEP	Cherat	15.85	299	P	Pn	21 45 50.3	-2.5
KSH	Kashi	16.25	323	P	Pn	21 45 53.5	-4.4
KSH				pP	P	21 46 02.5	+1.7
KSH				PP	sP	21 46 12.5	+2.0
KSH				S	Sn	21 48 57.0	-0.5
KSH				SS	S	21 49 16.5	+6.5
KSH				pmax	pmax		
	comp=Z,6.0nm,0.5s						
WMQ	Urumqi	16.73	358	eP	P	21 46 06.0	0.0
WMQ				PP	sP	21 46 20.0	+4.2
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TARG	Taragay, Kyrgy	17.08	332	Pn	Pn	21 46 08.2	-0.4
TARG	Taragay, Kyrgy	17.08	332	P	Pn	21 46 08.2	-0.4
TARG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NRN	Naryn	17.66	327		P	21 46 16.4	-0.2
NRN	Naryn	17.66	327	P	P	21 46 16.4	-0.2
NRN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KBL	Kabul	18.32	299	P	P	21 46 23.3	-0.6
KBL				IAmb	IAmb	21 46 29.0	
	comp=Z,14nm,0.7s						
KBL	Kabul	18.32	299	P	P	21 46 23.3	-0.6
KBL				pmax	pmax		
	comp=Z,14nm,0.7s						
ENH	Enshi	18.64	75		P	21 46 26.5	-0.7
XAN	Xi'an	18.85	63	P	Pn	21 46 30.3	+0.2
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AAK	Ala-Archa	19.30	327	P	P	21 46 34.2	-0.4
	comp=Z,0.2nm,0.3s,baz=152,slow=4.7,SNR=10						
	comp=Z,1.4nm,0.6s						
AAK	Ala-Archa	19.30	327	P	P	21 46 34.1	-0.4
AAK	Ala-Archa	19.30	327	ceP	P	21 46 35.0	+0.5
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GAR	Garm	19.33	313	P	P	21 46 33.5	-1.3
BTK	Batken	19.60	316	P	P	21 46 35.9	-1.9
BTK				IAmb	IAmb	21 46 44.2	
	comp=Z,15nm,0.5s						
BTK	Batken	19.60	316	P	P	21 46 35.9	-1.9
BTK				pmax	pmax		
	comp=Z,15nm,0.5s						
CHGR	Chuyangaron	19.93	310	P	P	21 46 41.8	+0.5
CHGR				IAmb	IAmb	21 46 47.2	
	comp=Z,12nm,0.6s						
CHGR	Chuyangaron	19.93	310	P	P	21 46 41.8	+0.5
CHGR				pmax	pmax		
	comp=Z,12nm,0.6s						
MK31	Makanchi Array	20.30	348	P	P	21 46 44.0	-1.1
MK31	Makanchi Array	20.30	348	i P	P	21 46 44.3	-0.9
MKAR	Makanchi Array	20.30	348	P	P	21 46 44.6	-0.6
	comp=Z,3.1nm,0.5s,baz=172,slow=10,SNR=48						
	comp=Z,3.1nm,0.5s						
MKAR	Makanchi Array	20.30	348	P	P	21 46 44.3	-0.9
KK31	Karatay Array	21.69	322	P	P	21 46 59.6	-0.7
KK31	Karatay Array	21.69	322	P	P	21 46 59.6	-0.7
KK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KKAR	Karatay Array	21.69	322	P	P	21 46 59.5	-0.8
KKAR	Karatay Array	21.69	322	P	P	21 46 59.5	-0.8
LYN	LuoYang	21.82	64	⇓P	P	21 47 04.8	+3.2
LYN				pmax	pmax		
	comp=Z,22nm,1.1s						
BTO	Baotou	22.29	47	eP	P	21 47 07.5	+0.7
BTO				pP	pP	21 47 11.5	-2.3
BTO				sP	sP	21 47 14.3	-2.5
BTO				PP	PnPn	21 47 34.0	+4.4
BTO				pmax	pmax		
	comp=Z,26nm,0.7s						
DGZ	Jazzator, Alta	22.61	358	i P	P	21 47 09.5	-0.7
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.4s						
HHC	Hu-ho-hao-te	23.43	48	eP	P	21 47 17.5	-1.1
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				LR	LR		
	comp=Z,460nm,13.3s						
HHC				LR	LR		
	comp=Z,420nm,10.4s						
HHC				LR	LR		
	comp=Z,460nm,11.0s						
HNS	HongShan	24.33	58	⇑P	P	21 47 29.0	+2.0
HNS				pmax	pmax		
	comp=Z,13nm,0.6s						
KURBB	Kurchatov Arra	24.73	345	P	P	21 47 30.5	0.0
	comp=Z,6.7nm,0.8s,baz=167,slow=8.8,SNR=50						
	comp=Z,6.7nm,0.8s						
KURK	Kurchatov	24.80	345	P	P	21 47 31.4	+0.3
KURK				IAmb	IAmb	21 47 33.2	
	comp=Z,8.1nm,0.8s						
KURK	Kurchatov	24.80	345	ceP	P	21 47 31.7	+0.6
KURK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SONM	Songino Array	24.99	29	P	P	21 47 33.4	+0.4
	comp=Z,4.8nm,0.6s,baz=215,slow=11,SNR=46						
SONM				LR	LR	21 58 49.6	
	comp=Z,112nm,19.7s,baz=154,slow=40						
	comp=Z,4.8nm,0.6s						
SONM	Songino Array	24.99	29	P	P	21 47 32.3	-0.7
SONM				IAmb	IAmb	21 47 35.5	
	comp=Z,11nm,1.3s						
ULN	Ulaanbaatar	25.30	30	P	P	21 47 34.9	-1.0
ULN				IAmb	IAmb	21 47 38.3	
	comp=Z,7.3nm,0.7s						
ULN	Ulaanbaatar	25.30	30	i P	P	21 47 35.0	-0.9
ULN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ZAK	Zakamensk	25.86	22	eP	P	21 47 38.5	-2.4
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MOY	Mondy	26.30	18	eP	P	21 47 45.2	+0.3
NJ2	Nanjing	26.77	72	eP	P	21 47 49.3	+0.1
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ZAA0	Zalesovo Array	26.99	355	P	P	21 47 50.8	-0.1
ZAA0				IAmb	IAmb	21 47 52.5	
	comp=Z,8.1nm,1.1s						
ZALV	Zalesovo Beam	26.99	355	P	P	21 47 50.6	-0.3
	comp=Z,2.0nm,0.4s,baz=170,slow=9.0,SNR=18						
ZALV				LR	LR	22 00 00.3	
	comp=Z,56nm,18.5s,baz=153,slow=40						
	comp=Z,2.0nm,0.4s						
ZALV	Zalesovo Beam	26.99	355	i P	P	21 47 51.2	+0.3
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BVAR	Borovoye Array	29.24	337	P	P	21 48 11.3	+0.2
	comp=Z,1.0nm,0.4s,baz=141,slow=9.7,SNR=8.9						
BVAR				PcP	PcP	21 51 18.8	+1.1
	comp=Z,0.8nm,0.6s,baz=154,slow=4.0,SNR=4.2						
	comp=Z,1.0nm,0.4s						
ABKAR	Akbulak array	31.25	323	P	P	21 48 29.3	+0.4
AKT	Akhty	36.32	304	eP	P	21 49 12.8	-0.4
AKT				e		21 50 35.0	
AKT				pmax	pmax		
	comp=Z,10.0nm,1.5s						
ARU	Arti	36.35	332	P	P	21 49 13.0	0.0
	comp=Z,2.7nm,0.3s,baz=110,slow=17,SNR=9.6						
	comp=Z,2.7nm,0.3s						
ARU	Arti	36.35	332	P	P	21 49 13.3	+0.3
ARU	Arti	36.35	332	c iP	P	21 49 12.1	-0.9
ARU						21 50 33.3	
ARU						21 51 31.1	
ARU				S	S	21 54 55.2	+2.6
ARU				SS	SnSn	21 57 14.2	-6.5
ARU				pmax	pmax		
	comp=Z,16nm,2.5s						
GNI	Garni	38.38	301	i P	P	21 49 30.5	-0.2
GNI				pmax	pmax		
	comp=Z,8.0nm,1.8s						
USA0B	Ussuriysk Arra	38.72	52	P	P	21 49 32.6	-0.6
USA0B				IAmb	IAmb	21 49 37.5	
	comp=Z,6.1nm,0.7s						
USA0B	Ussuriysk Arra	38.72	52	P	P	21 49 32.6	-0.6
USA0B				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KLR	Kul'dur	39.82	44	P	P	21 49 41.2	-1.2
	comp=Z,0.7nm,0.6s,baz=274,slow=13,SNR=2.5						
	comp=Z,0.7nm,0.6s						
KLR	Kul'dur	39.82	44	i P	P	21 49 41.8	-0.6
KLR				pmax	pmax		
	comp=Z,1.0nm,1.3s						
KBZ	Khabaz	40.22	307	P	P	21 49 46.4	+0.7
	comp=Z,0.8nm,0.7s,baz=40,slow=11,SNR=2.2						
	comp=Z,0.8nm,0.7s						
KBZ	Khabaz	40.22	307	i P	P	21 49 46.1	+0.4
KBZ				pmax	pmax		
	comp=Z,13nm,3.8s						
KIRV	Kirov	41.59	330	LR	LR	22 07 36.7	
	comp=Z,67nm,18.1s,baz=323,slow=37						
NRIK	Noril'sk	42.30	359	P	P	21 50 02.0	-0.4
	comp=Z,9.0nm,0.7s,baz=161,slow=6.6,SNR=16						
NRIK				LR	LR	22 07 28.0	
	comp=Z,62nm,19.1s,baz=183,slow=36						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,9.0nm,0.7s						
NRIK	Noril'sk	42.30	359	P	P	21 50 02.4	-0.1
NRIK				IAmb	IAmb	21 50 03.9	
	comp=Z,9.7nm,0.8s						
NRIK	Noril'sk	42.30	359	ceP	P	21 50 03.1	+0.6
NRIK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MJAR	Matsushiro Arr	42.84	65	P	P	21 50 06.7	-0.7
	comp=Z,1.0nm,0.7s,baz=270,slow=9.0,SNR=2.3						
	comp=Z,1.0nm,0.7s						
YAK	Yakutsk	44.28	26	LR	LR	22 08 45.6	
	comp=Z,27nm,19.8s,baz=234,slow=36						
ASAJ	Asahikawa	46.28	54	P	P	21 50 34.5	-0.2
	comp=Z,1.4nm,0.7s,baz=264,slow=27,SNR=1.2						
	comp=Z,1.4nm,0.7s						
OBN	Obninsk	46.68	322	⇑eP	P	21 50 36.6	-1.1
OBN				e		21 52 14.8	
OBN				e		21 52 30.6	
OBN				eS	S	21 57 35.9	+10
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,104nm,16.0s						
BRTR	Keskin Array B	46.89	300	P	P	21 50 40.4	+0.7
	comp=Z,0.5nm,0.5s,baz=100,slow=7.8,SNR=5.3						
	comp=Z,0.5nm,0.5s						
BRTR	Keskin Array B	46.89	300	P	P	21 50 40.0	+0.3
TIXI	Tiksi	49.85	16	P	P	21 51 01.2	-0.7
	comp=Z,5.1nm,0.5s,baz=90,slow=23,SNR=23						
	comp=Z,5.1nm,0.5s						
TIXI	Tiksi	49.85	16	P	P	21 51 00.7	-1.2
TIXI	Tiksi	49.85	16	ceP	P	21 51 01.5	-0.4
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ELL	Elmali	50.03	296	P	P	21 51 05.0	+1.0
ELL	Elmali	50.03	296	P	P	21 51 05.0	+1.0
ELL				pmax	pmax		
	comp=Z,25nm,0.8s						
AKASG	Malin Array Be	50.31	315	P	P	21 51 05.1	-0.7
	comp=Z,0.3nm,0.3s,baz=80,slow=6.5,SNR=9.4						
	comp=Z,0.3nm,0.3s						
AKASG	Malin Array Be	50.31	315	i P	P	21 51 04.4	-1.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKBB	Malin Array Si	50.31	315	P	P	21 51 05.6	-0.1
AKBB	Malin Array Si	50.31	315	P	P	21 51 05.6	-0.1
AKBB				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SORM	Soroca	50.73	311	⇑P	P	21 51 09.1	+0.2
SORM	Soroca	50.73	311	⇑P	P	21 51 09.1	+0.2
MNK	Minsk	51.50	319	i P	P	21 51 11.2	-3.4
	comp=E,2.0nm,0.9s						
MNK				i P	P	21 51 11.2	-3.4
	comp=N,49nm,1.0s						
MNK				i P	P	21 51 11.2	-3.4
	comp=Z,7.0nm,1.0s,baz=276						
MNK				i PcP	PcP	21 52 25.6	-3.0
MNK				i PP	PP	21 53 08.5	-3.4
MNK				i PPP	PPP	21 54 07.6	
MNK				i S	S	21 58 31.7	-1.8
MNK				i ScS	ScS	22 01 01.8	-1.6
MNK				i SS	SS	22 02 09.0	-0.3
MNK				i SSS	SSS	22 03 43.9	
MNK				i LQ	LQ	22 10 45.4	
MNK				i LR	LR	22 13 14.4	
MNK				i LRM	MLR	22 14 57.8	
	comp=E,56nm,19.1s						
MNK				i LRM	MLR	22 15 10.6	
	comp=N,269nm,16.6s						
MNK				i LRM	MLR	22 15 32.9	
	comp=Z,101nm,12.2s						
MNK	Minsk	51.50	319	i P	P	21 51 11.2	-3.4
MNK				i		21 52 25.6	
MNK				i		21 53 08.4	
MNK				i PPP	PPP	21 54 07.5	
MNK				i S	S	21 58 31.7	-1.8
MNK				i		22 01 01.7	
MNK				i SS	SS	22 02 08.9	-0.3
MNK				i SSS	SSS	22 03 43.8	
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,49nm,1.0s						
MNK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MNK				MLR	MLR		
	comp=E,56nm,19.0s						
MNK				MLR	MLR		
	comp=N,269nm,17.0s						
MNK				MLR	MLR		
	comp=Z,101nm,12.0s						
VRI	Vrincioaia	51.83	308	⇓P	P	21 51 16.9	-0.4
VRI	Vrincioaia	51.83	308	⇓P	P	21 51 16.9	-0.4
PLOR	Plostina	51.88	308	⇑P	P	21 51 19.8	+2.1
PLOR	Plostina	51.88	308	⇑P	P	21 51 19.8	+2.1
MLR	Muntele Rosu	52.39	308	⇑P	P	21 51 23.6	+2.0
MLR	Muntele Rosu	52.39	308	P	P	21 51 21.4	-0.2
	comp=Z,1.7nm,0.4s,baz=13,slow=17,SNR=2.9						
	comp=Z,1.7nm,0.4s						
MLR	Muntele Rosu	52.39	308	⇑P	P	21 51 23.6	+2.0
BURAR	Bucovina Array	52.84	311	⇑P	P	21 51 25.7	+0.8
BURAR	Bucovina Array	52.84	311	P	P	21 51 25.0	+0.2
BUR08	Bucovina Ar. S	52.85	311	P	P	21 51 25.4	+0.5
VOIR		53.02	308	⇑P	P	21 51 25.6	-0.6
VOIR		53.02	308	⇑P	P	21 51 25.6	-0.6
FINES	FINESS Array B	53.49	328	P	P	21 51 29.1	-0.1
	comp=Z,1.6nm,0.5s,baz=108,slow=7.7,SNR=14						
	comp=Z,1.6nm,0.5s						
MARR	Marisel-Cluj	54.30	310	⇑P	P	21 51 37.1	+1.5
SEY	Seymchan	54.37	30	P	P	21 51 35.7	0.0
	comp=Z,3.3nm,0.6s,baz=195,slow=23,SNR=6.5						
	comp=Z,3.3nm,0.6s						
SEY	Seymchan	54.37	30	ceP	P	21 51 35.0	-0.7
SEY				pmax	pmax		
	comp=Z,8.0nm,1.3s						
DRGR		54.58	310	⇑P	P	21 51 38.4	+0.9
DRGR		54.58	310	⇑P	P	21 51 38.4	+0.9
BZS	Buzias	55.42	308	⇑P	P	21 51 45.4	+1.9
BZS	Buzias	55.42	308	⇑P	P	21 51 45.4	+1.9
ARCES	ARCESS Array B	55.53	338	P	P	21 51 44.7	+0.7
	comp=Z,4.1nm,0.7s,baz=102,slow=7.1,SNR=7.5						
	comp=Z,4.1nm,0.7s						
AGG	Agios Georgios	55.67	300	P	P	21 51 46.9	+1.3
AGG				IAmb	IAmb	21 52 13.9	
	comp=Z,4.4nm,1.4s						
AGG	Agios Georgios	55.67	300	P	P	21 51 46.9	+1.3
AGG				pmax	pmax		
	comp=Z,4.0nm,1.4s						
KTK1	Kautokeino	56.19	337	eP	P	21 51 49.6	+0.9
PETK	Petropavlovsk-	56.45	43	P	P	21 51 51.1	+0.2
	comp=Z,1.9nm,0.7s,baz=275,slow=6.7,SNR=2.1						
	comp=Z,1.9nm,0.7s						
HFS	Hagfors	59.44	326	P	P	21 52 11.3	-0.3
	comp=Z,3.2nm,0.5s,baz=100,slow=7.7,SNR=14						
	comp=Z,3.2nm,0.5s						
LOF	Lofoten	59.59	335	eP	P	21 52 12.4	-0.2
KONS	Konsvik	59.69	333	eP	P	21 52 13.8	+0.6
SPA0	Spitsbergen Ar	60.05	347	eP	P	21 52 16.8	+1.2
SPITS	Spitsbergen Ar	60.05	347	P	P	21 52 16.1	+0.5
	comp=Z,11nm,0.9s,baz=107,slow=11,SNR=14						
	comp=Z,11nm,0.9s						
NC405	NORSAR Array S	60.37	327	P	P	21 52 17.0	-1.1
GERES	GERESS Array B	60.41	313	P	P	21 52 19.2	+0.5
	comp=Z,0.7nm,0.7s,baz=77,slow=5.9,SNR=6.0						
	comp=Z,0.7nm,0.7s						
NC602	NORSAR Array S	60.48	327	eP	P	21 52 18.7	-0.1
BILL	Bilibino	60.60	25	P	P	21 52 19.4	-0.1
BILL				IAmb	IAmb	21 52 20.8	
	comp=Z,3.6nm,0.7s						
BILL	Bilibino	60.60	25	⇓eP	P	21 52 20.1	+0.6
BILL				pmax	pmax		
	comp=Z,8.0nm,1.7s						
BILL				MLR	MLR		
	comp=Z,53nm,15.0s						
NB2	NORSAR Subarra	60.62	327	P	P	21 52 19.5	-0.3
	comp=Z,1.8nm,0.7s,baz=85,slow=6.5						
NB2	NORSAR Subarra	60.62	327	P	P	21 52 19.5	-0.3
	baz=85,slow=6.5						
NOA	NORSAR Array B	60.62	327	P	P	21 52 19.0	-0.8
	comp=Z,1.0nm,0.5s,baz=86,slow=6.7,SNR=7.6						
	comp=Z,1.0nm,0.5s						
NOA	NORSAR Array B	60.62	327	P	P	21 52 19.0	-0.8
NC204	NORSAR Array S	60.83	327	P	P	21 52 20.6	-0.6
KONO	Kongsberg	61.53	325	eP	P	21 52 26.7	+0.8
WB0	Warramunga Arr	64.35	131	P	P	21 52 46.3	+1.1
WRA	Warramunga Arr	64.44	132	P	P	21 52 47.1	+1.3
	comp=Z,1.5nm,0.5s,baz=323,slow=6.7,SNR=24						
	comp=Z,1.5nm,0.5s						
WRA	Warramunga Arr	64.44	132	P	P	21 52 46.2	+0.4
WRAB	Tennant Creek	64.44	132	P	P	21 52 46.6	+0.9
WRAB				IAmb	IAmb	21 52 47.9	
	comp=Z,11nm,1.4s						
WRAB	Tennant Creek	64.44	132	P	P	21 52 46.7	+0.9
WRAB				pmax	pmax		
	comp=Z,11nm,1.5s						
WB2	Warramunga Arr	64.45	132	P	P	21 52 45.6	-0.3
NWAO	Narrogin (SRO)	65.61	154	P	P	21 52 53.5	+0.3
	comp=Z,19nm,1.0s,baz=266,slow=9.1,SNR=2.2						
	comp=Z,19nm,1.0s						
NWAO	Narrogin (SRO)	65.61	154	P	P	21 52 53.4	+0.3
NWAO	Narrogin (SRO)	65.61	154	P	P	21 52 53.4	+0.3
NWAO				pmax	pmax		
	comp=Z,212nm,1.4s						
AS31	Alice Springs	66.81	135	P	P	21 53 02.4	+1.3
ASAR	Alice Springs	66.81	135	P	P	21 53 02.6	+1.5
	comp=Z,1.7nm,0.6s,baz=316,slow=6.2,SNR=14						
	comp=Z,1.7nm,0.6s						
EKA	Eskdalemuir Ar	69.13	322	P	P	21 53 14.4	-0.9
	comp=Z,0.6nm,0.4s,baz=73,slow=6.3,SNR=6.4						
	comp=Z,0.6nm,0.4s						
EUNU	Eureka	73.06	359	P	P	21 53 38.4	-0.3
EUNU				IAmb	IAmb	21 53 44.0	
	comp=Z,5.5nm,0.9s						
ESDC	Sonseca Array	75.07	307	P	P	21 53 51.3	+0.1
	comp=Z,0.5nm,0.7s,baz=56,slow=4.7,SNR=6.2						
	comp=Z,0.5nm,0.7s						
IMAR	Indian Mountai	75.91	22	P	P	21 53 55.5	+0.1
K20K	Telida	77.33	24	P	P	21 54 04.7	+1.1
K20K				IAmb	IAmb	21 54 07.7	
	comp=Z,2.6nm,0.7s						
MLY	Manley	77.49	22	P	P	21 54 04.8	+0.3
BMAR	Burnt Mountain	77.81	18	P	P	21 54 07.7	+1.5
I23K	Minto, Yukon-K	77.87	21	P	P	21 54 06.6	+0.2
CAST	Castle Rocks	78.02	24	P	P	21 54 08.0	+0.6
PPLA	Purkeypile	78.30	24	P	P	21 54 09.4	+0.3
MDM	Murphy Dome	78.36	21	P	P	21 54 08.9	-0.3
MDM				IAmb	IAmb	21 54 18.2	
	comp=Z,4.0nm,1.0s						
A36M	Sachs Harbour	78.48	10	P	P	21 54 10.5	+0.8
CCB	Clear Creek Bu	78.70	21	P	P	21 54 10.8	-0.2
CCB				IAmb	IAmb	21 54 37.3	
	comp=Z,6.6nm,1.4s						
PRP	Porcupine Dome	78.84	20	P	P	21 54 12.6	+0.5
PRP				IAmb	IAmb	21 54 14.2	
	comp=Z,5.9nm,1.2s						
ILAR	Eielson Array	78.91	21	P	P	21 54 12.1	-0.2
	comp=Z,1.1nm,0.9s,baz=307,slow=5.4,SNR=9.1						
	comp=Z,1.1nm,0.9s						
MCK	McKinley	78.92	22	P	P	21 54 12.6	+0.2
MCK				IAmb	IAmb	21 54 31.7	
	comp=Z,7.6nm,1.4s						
MCK	McKinley	78.92	22	P	P	21 54 12.6	+0.2
MCK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
SKT	Skwentna	79.10	25	P	P	21 54 13.6	+0.2
SKT				IAmb	IAmb	21 54 16.2	
	comp=Z,5.9nm,0.6s						
P18K	Big Mountain,	79.20	28	P	P	21 54 14.7	+0.7
P18K				IAmb	IAmb	21 54 22.7	
	comp=Z,10nm,1.2s						
SUA	Susitna One	79.72	25	P	P	21 54 17.5	+0.7
SUA				IAmb	IAmb	21 54 18.8	
	comp=Z,4.3nm,0.8s						
INK	Inuvik	79.97	15	P	P	21 54 18.1	+0.2
INK				IAmb	IAmb	21 54 20.1	
	comp=Z,4.8nm,1.1s						
INK	Inuvik	79.97	15	P	P	21 54 18.1	+0.2
INK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
RIDG	Independent Ri	80.27	21	P	P	21 54 19.3	-0.4
RIDG				IAmb	IAmb	21 54 43.0	
	comp=Z,8.7nm,1.4s						
SCRK	Sand Creek	80.38	21	P	P	21 54 19.6	-0.8
SCRK				IAmb	IAmb	21 54 21.5	
	comp=Z,3.1nm,0.8s						
SML	Sawmill	80.38	24	P	P	21 54 20.9	+0.5
EPYK	Eagle Plains	80.71	17	P	P	21 54 22.4	+0.3
EPYK				IAmb	IAmb	21 54 22.8	
	comp=Z,10nm,1.3s						
SCM	Sheep Creek Mo	80.72	23	P	P	21 54 22.8	+0.6
SCM				IAmb	IAmb	21 54 24.2	
	comp=Z,5.5nm,0.7s						
SCM	Sheep Creek Mo	80.72	23	P	P	21 54 22.8	+0.6
SCM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BRLK	Bradley Lake	80.73	26	P	P	21 54 22.2	-0.1
C36M	Paulatuk	80.97	11	P	P	21 54 22.8	-0.5
C36M				IAmb	IAmb	21 54 25.0	
	comp=Z,3.0nm,0.8s						
TORD	Torodi Ar. Bea	81.38	280	P	P	21 54 27.0	+0.6
	comp=Z,0.3nm,0.4s,baz=54,slow=4.7,SNR=3.5						
KLU	Klutina	81.45	23	P	P	21 54 27.4	+1.3
KLU				IAmb	IAmb	21 54 58.9	
	comp=Z,7.8nm,1.2s						
BCAR	Beaver Creek A	81.73	21	P	P	21 54 28.6	+1.1
N25K	Chitina, Valde	81.83	23	P	P	21 54 29.0	+0.9
N25K				IAmb	IAmb	21 54 30.6	
	comp=Z,5.1nm,0.9s						
YKA	Yellowknife Ar	88.83	11	P	P	21 55 03.2	+0.3
	comp=Z,0.3nm,0.6s,baz=332,slow=4.4,SNR=7.0						
	comp=Z,0.3nm,0.6s						
YKA	Yellowknife Ar	88.83	11	i P	P	21 55 04.8	+1.9
CPUP	Villa Florida	149.57	264	PKPbc	PKiKP	22 02 00.9	+0.8
	comp=Z,1.3nm,0.8s,baz=70,slow=4.9,SNR=3.7						

UCR 26 21:46:44.2±1.6, 9°.87N×85°.20W, h17km±9km, MW3.5, 14C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LAFE	Finca La Fe, P	0.29	102	eP	Pg	21 46 49.5	-0.9
LAFE				eS	Sg	21 46 54.0	-0.8
CBL1	Cabuya	0.30	159	eP	Pg	21 46 50.2	-0.3
CBL1				eS	Sb	21 46 56.1	+0.4
INDI	Punta indio, G	0.30	270	eP	Pg	21 46 50.0	-0.6
INDI				eS	Sg	21 46 55.1	+0.1
JTS	Las Juntas de	0.49	30	eP	Pg	21 46 53.6	-0.4
JTS				eS	Sg	21 47 00.9	+0.3
SAJU	San Juanillo,	0.54	292	eP	Pg	21 46 54.1	-0.9
SAJU				eS	Sn	21 47 04.4	-1.5
JACO	JACO, Garabito	0.57	111	eP	Pg	21 46 54.9	-0.6
JACO				eS	Sb	21 47 03.8	+0.2
HATIL	Hatillo	0.65	311	eP	Pg	21 46 56.0	-1.1
HATIL				eS	Sn	21 47 08.2	-0.6
TABAC	Tabacon	0.76	34	eP	Pg	21 46 59.5	+0.4
TABAC				eS	Sb	21 47 10.1	+0.9
SOCE	Pocosol	0.77	48	eP	Pb	21 46 58.5	-0.7
SOCE				eS	Sb	21 47 09.4	0.0
ACAL	Aguas Claras	0.78	12	eP	Pb	21 46 58.6	-0.8
ACAL				eS	Sg	21 47 09.8	0.0
CEDE	Laguna Cedeo	0.79	38	eP	Pn	21 47 00.2	-0.4
CEDE				eS	Sg	21 47 10.8	+0.8
CUI	Cuipilapa	0.79	3	⇑iP	Pb	21 46 58.6	-0.9
CUI				eS	Sb	21 47 09.6	-0.3
COLC	Colonia	0.79	360	⇑iP	Pb	21 46 58.5	-1.1
COLC				eS	Sb	21 47 10.0	-0.1
HORNC	Hornillas	0.84	1	⇑iP	Pb	21 46 59.3	-1.1
HORNC				eS	Sb	21 47 11.0	-0.5
MESS	Mesas	0.87	0	⇑iP	Pb	21 46 59.9	-1.0
MESS				eS	Sb	21 47 11.9	-0.4
PTEN	Parque Tenorio	0.87	14	⇑iP	Pb	21 47 00.1	-0.8
PTEN				eS	Sg	21 47 12.5	-0.1
GPS2	Hotel Rincn d	0.89	350	eP	Pb	21 47 00.4	-0.9
GPS2				eS	Sg	21 47 13.5	+0.1
GP14	Hacienda Santa	0.90	351	⇑eP	Pb	21 47 00.4	-1.0
GP14				eS	Sb	21 47 13.1	0.0
GPS3	Bodega del ICE	0.90	350	eP	Pb	21 47 00.6	-0.9
CLARA	Aguas Claras	0.91	1	⇑eP	Pb	21 47 00.6	-1.1
CLARA				eS	Sb	21 47 13.0	-0.6
GPS1	Guardaparques	0.91	351	eP	Pb	21 47 00.7	-1.0
GPS1				eS	Sb	21 47 13.7	0.0
LAPC	Finca la Perla	0.92	346	⇑iP	Pb	21 47 00.7	-1.1
LAPC				eS	Sb	21 47 13.4	-0.4
HZTE	Horizontes, Gu	0.93	335	eP	Pb	21 47 01.2	-0.7
GBS3	Finca Las Img	0.94	345	⇑iP	Pb	21 47 01.0	-1.2
VMAR	Armenia, Volca	0.94	5	⇑iP	Pb	21 47 01.3	-0.9
VMAR				eP	Pg	21 47 01.4	-1.2
VMAR				eS	Sg	21 47 15.4	+0.4
BUEV	Buena Vista	0.95	348	⇑eP	Pb	21 47 01.2	-1.1
BUEV				eS	Sg	21 47 15.4	+0.2
VORI	VORI	0.96	351	⇑iP	Pb	21 47 01.3	-1.2
GB1A	Borinquen Arri	0.97	348	⇑eP	Pb	21 47 01.4	-1.2
GB1A				eS	Sb	21 47 14.9	-0.3
CANAL	Canalete	0.97	8	⇑iP	Pb	21 47 01.6	-1.1
CANAL				eS	Sb	21 47 15.3	+0.1
BUAI	Buenos Aires	1.01	353	eP	Pb	21 47 00.8	-2.6
VERA	Finca Concepci	1.03	18	eP	Pb	21 47 03.0	-0.7
VERA				eS	Sg	21 47 17.8	0.0
ABE2	San Pablo	1.14	98	eP	Pb	21 47 04.4	-1.2
COVE	Coope Vega, Sa	1.16	43	eP	Pn	21 47 05.0	-0.7
LCR2	La Lucha 2	1.18	96	eP	Pn	21 47 05.1	-1.1
CDM	Cerro de Muert	1.45	102	eP	Pn	21 47 09.5	-0.6
BUS1	Rivas	1.47	102	eP	Pn	21 47 09.6	-0.7
PEZE	Perez Zeledon,	1.58	108	eP	Pn	21 47 12.2	+0.7

IDC 26 21:48:25.7±5.7, 6°.93S×129°.16E, h94km±72km, mb3.0/1, mbtmp3.3/4, ML3.2/3, Error ellipse: s-maj=111.3km s-min=27.0km az=82.0, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIJI	Sorong	6.38	19	P	Pn	21 49 56.9	-0.2
	0.4nm,0.3s,baz=203,slow=24,SNR=1.4						
SIJI				S	Sn	21 51 03.6	-4.9
	1.8nm,0.3s,baz=239,slow=22,SNR=1.0						
	4.1nm,0.8s						
WRA	Warramunga Arr	13.88	159	P	Pn	21 51 36.6	-1.8
	0.1nm,0.3s,baz=338,slow=12,SNR=6.3						
WRA				S	Sn	21 54 01.4	-10
	0.5nm,0.5s,baz=343,slow=22,SNR=5.8						
	0.4nm,0.8s						
ASAR	Alice Springs	17.25	165	P	P	21 52 21.8	+0.8
	0.1nm,0.3s,baz=344,slow=9.6,SNR=5.9						
ASAR				S	Sn	21 55 24.0	-8.7
	0.3nm,0.8s,baz=4.6,slow=28,SNR=0.8						
	0.6nm,0.5s						
MKAR	Makanchi Array	67.71	327	P	P	21 59 13.2	+0.2
	0.1nm,0.4s,baz=128,slow=7.9,SNR=3.6						
	0.1nm,0.4s						

TAP 26 21:49:20.6, 24°.47N×121°.90E, h16km, ML1.2, B, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EWUT	Wuta	0.11	256	i P	Pb	21 49 24.5	+0.2
	baz=256						
EWUT				i S	Sb	21 49 27.3	+0.4
	baz=256						
TWC	Suao	0.14	343	i P	Pb	21 49 25.1	+0.1
	baz=346						
TWC				i S	Sb	21 49 27.6	-0.3
	baz=346						
ENA	Nanau	0.15	253	P	Pb	21 49 25.2	+0.2
	baz=251						
ENA				S	Sb	21 49 28.2	+0.3
	baz=251						
EHP	Heping Village	0.21	221	eS	Sb	21 49 30.7	+0.8
	baz=219						
NDS	Dongshan	0.23	314	eP	Pb	21 49 26.5	0.0
	baz=314						
NDS				S	Sb	21 49 30.7	+0.3
	baz=314						
EOS2	EOS2	0.31	100	P	Pb	21 49 28.1	+0.4
	baz=99						
EOS2				S	Sb	21 49 32.5	0.0
	baz=99						
ILA	Ilan	0.32	335	eP	Pg	21 49 27.3	-0.1
	baz=336						
ILA				eS	Sb	21 49 33.5	+0.5
	baz=336						
TWE	Neicheng	0.32	320	eP	Pb	21 49 27.9	-0.1
	baz=321						
TWE				eS	Sb	21 49 33.3	+0.2
	baz=321						
LATG	Datong	0.34	281	P	Pb	21 49 28.9	+0.5
	baz=280						
LATG				S	Sb	21 49 34.0	+0.3
	baz=280						
ENTT	Nioudou	0.34	299	i P	Pb	21 49 29.1	+0.7
	baz=299						
ENTT				i S	Sb	21 49 34.1	+0.4
	baz=299						
NDT	Datong Townshi	0.37	290	eP	Pb	21 49 29.1	+0.2
	baz=290						
NDT				S	Sb	21 49 34.8	+0.4
	baz=290						
EGS		0.37	5	eP	Pb	21 49 29.6	+0.7
	baz=6.0						
NTC	Toucheng	0.39	351	eP	Pb	21 49 29.5	+0.4
	baz=350						
NTC				eS	Sn	21 49 36.8	-1.9
	baz=350						
FUSB	Fushanzhiwuyua	0.40	316	eP	Pg	21 49 28.5	-0.3
	baz=315						
FUSB				eS	Sb	21 49 35.5	+0.1
	baz=315						
NACB	Ninganchiao	0.41	223	eS	Sb	21 49 35.0	-0.4
	baz=222						
ETLH	Xiulin Townshi	0.46	235	eS	Sb	21 49 37.5	+0.4
	baz=235						
NNSB	Datong	0.47	265	P	Pb	21 49 30.5	-0.1
	baz=264						
NNSB				S	Sb	21 49 37.9	+0.5
	baz=264						
NNS	Nan Shan	0.48	266	eP	Pg	21 49 29.3	-0.9
	baz=265						
NNS				S	Sb	21 49 37.6	0.0
	baz=265						
TIPB	Shuangxi	0.50	353	eP	Pg	21 49 30.6	0.0
	baz=352						
TIPB				eS	Sg	21 49 37.0	-0.3
	baz=352						
YHNB	Yeheng	0.51	293	eP	Pb	21 49 31.6	+0.3
	baz=292						
NSK	Sanguang	0.53	293	eP	Pb	21 49 31.6	0.0
	baz=292						
TWA	Mucha	0.58	331	eP	Pb	21 49 33.0	+0.6
	baz=331						

JMA 26 21:50:06.4±0.1, 24°.2N±0°.4×123°.6E±0°.3, h15km±1km, MV1.6/10, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.17	35	i P	Pg	21 50 10.6	-0.1
IRIF				eS	Sg	21 50 13.8	+0.3
HATJ	Hateruma jima	0.21	129	P	Pg	21 50 11.2	-0.1
JKRS	Kuro-shima	0.36	83	i P	Pg	21 50 13.8	0.0
JKRS				eS	Sb	21 50 19.6	-0.3
JIJ	Ishigaki jima	0.51	70	P	Pg	21 50 16.1	-0.3
JIJ				eS	Sg	21 50 23.0	-0.3
YOJ	Yonaguni jima	0.62	296	eS	Sg	21 50 26.4	-0.4
JYNG	Yonagunijimaku	0.67	293	eP	Pg	21 50 19.4	-0.1
JISG	Ishigakijimahi	0.74	58	P	Pg	21 50 20.4	-0.5
JISG				eS	Sg	21 50 30.8	+0.1
JTJ	Tarama	1.08	65	eS	Sg	21 50 41.5	0.0

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*BER **26** 21:51:05.9±1.2, 67°.57N×34°.14E, h0km, ML1.7, Suspected explosion*

HEL 26 21:51:06.6±0.2, 67°.67N×33°.72E, h0km, ML1.7, 1C, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVZ	Lovozero	0.42	56	eP	Pg	21 51 13.9	-0.8
LVZ				eS	Sg	21 51 20.1	0.0
LVZ	Lovozero	0.42	56	ceP	Pn	21 51 19.7	-0.3
VRF	Varrio	1.57	275	eP	Pn	21 51 34.4	-1.3
VRF				eS	Sn	21 51 54.1	-2.6
VRF				MSG		21 51 58.4	
	comp=Z,7.2nm,0.2s						
KU6	Riekki	2.24	224	ePB	Pn	21 51 45.8	+0.9
KU6				eSG	Sb	21 52 15.5	-0.6
MSF	Maaselka	2.56	229	ePB	Pn	21 51 50.8	+1.5
MSF				eSG	Sb	21 52 25.5	+0.2
SGF	Sodankyl	2.77	269	ePB	Pb	21 51 55.0	-1.9
SGF				eSB	Sn	21 52 27.9	+1.6
SGF				MSG		21 52 35.0	
	comp=Z,1.9nm,0.2s						
VADS	Vadso	2.93	329	eS	Sn	21 52 30.1	+0.1
RNF	Rovaniemi	3.19	254	eP	Pn	21 51 57.4	-0.5

RNF				*e*S	Sn	21 52 36.0	-0.6
KEV	Kevo	3.22	314	*e*P	Pn	21 51 58.6	+0.2
KEV				*e*S	Sn	21 52 36.9	-0.5
KEV	Kevo	3.22	314	*e*P	Pn	21 51 59.0	+0.6
KEV				*e*S	Sn	21 52 36.5	-0.9
ARA0	ARCESS Array S	3.55	306	*e*P	Pn	21 52 02.4	-0.4
ARA0				*e*S	Sn	21 52 44.3	-1.1
ARA0				IAML		21 52 58.1	
	comp=Z,3.9nm,0.3s						
ARA0	ARCESS Array S	3.55	306	*e*P	Pn	21 52 02.3	-0.5
ARA0				*e*S	Sn	21 52 45.1	-0.3
ARA0				*e*SG	Sb	21 52 56.8	+3.1
RMF	Romuvaara	3.80	206	*e*SG	Sb	21 53 04.1	+3.2
HEF	Hetta	3.85	286	*e*S	Sn	21 52 52.8	-0.2
HEF	Hetta	3.85	286	*e*SG	Sb	21 53 06.1	+3.6
KTK1	Kautokeino	4.11	294	*e*S	Sn	21 52 57.8	-1.6
KTK1	Kautokeino	4.11	294	*e*S	Sn	21 52 56.7	-2.7
KTK1				*e*SG	Sb	21 53 12.5	+2.5
KIF	Kilpisjarvi	4.97	292	*e*S	Sn	21 53 19.1	-1.4

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*IDC **26** 22:02:52.3±3.8, 25°.12N×123°.98E, h0^{km}, mb3.4/3, mbtmp3.4/3, MS3.6/2, Error ellipse: s-maj=263.9km s-min=28.3km az=62.0*

*JMA **26** 22:03:06.7±0.2, 25°N±2°×124°.3E±1°.0, h114^{km}±3^{km}, MV2.8/13, NW OFF ISHIGAKIJIMA IS*

ISC 26 22:03:05.5±1.1**, 25°.2N**±0°.1×**124°.27E**±0°.06**, h119**^{km}±10^{km}**, n16, σ0^{s}.68**/25**, mb3.2**/3**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JISG	Ishigakijimahi	0.60	176	*i* P	Pn	22 03 24.1	+0.1
JISG				*e*S	Sn	22 03 37.2	-0.7
JTJ	Tarama	0.67	144	P	Pn	22 03 24.9	+0.3
JTJ				S	Sn	22 03 38.8	-0.1
JIJ	Ishigaki jima	0.83	188	P	Pn	22 03 25.7	-0.2
JIJ				S	Sn	22 03 40.0	-1.2
JIRB	Irabujima	0.90	113	P	Pn	22 03 26.6	+0.1
JIRB				S	Sn	22 03 41.5	-0.7
JIKM	Ikemajima	0.93	106	P	Pn	22 03 27.1	+0.4
JIKM				S	Sn	22 03 43.0	+0.3
JKRS	Kuro-shima	0.97	194	P	Pn	22 03 27.5	+0.3
JKRS				S	Sn	22 03 43.4	-0.2
IRIF	Iriomote-Funau	0.98	210	P	Pn	22 03 27.3	+0.1
IRIF				S	Sn	22 03 43.3	-0.4
JMJ2	Miyako jima3	1.06	115	P	Pn	22 03 28.6	+0.6
JMJ2				*e*S	Sn	22 03 45.7	+0.6
JOGS	Gusukube	1.12	112	*e*P	Pn	22 03 29.4	+0.7
JOGS				S	Sn	22 03 46.9	+0.7
HATJ	Hateruma jima	1.20	201	*e*P	Pn	22 03 29.8	+0.3
HATJ				*e*S	Sn	22 03 47.9	+0.2
YOJ	Yonaguni jima	1.35	238	*e*P	Pn	22 03 32.3	+1.1
YOJ				S	Sn	22 03 52.0	+1.4
MKAR	Makanchi Array	39.62	314	P	P	22 10 24.6	-0.8
	0.1nm,0.3s,baz=97,slow=10,SNR=6.8						
	0.1nm,0.3s						
ZALV	Zalesovo Beam	40.98	325	P	P	22 10 35.5	-0.9
	0.4nm,0.4s,baz=106,slow=11,SNR=2.8						
	0.4nm,0.4s						
AAK	Ala-Archa	44.16	306	LR	LR	22 32 38.5	
	comp=Z,40nm,18.6s,baz=135,slow=41						
WRA	Warramunga Arr	45.92	167	P	P	22 11 16.8	+0.4
	0.3nm,0.6s,baz=347,slow=8.7,SNR=5.4						
	0.3nm,0.6s						
ARU	Arti	56.01	322	LR	LR	22 38 23.6	
	comp=Z,95nm,19.3s,baz=164,slow=38						

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*SJA **26** 22:20:38.1±0.8, 23°.10S×66°.72W, h248^{km}±13^{km}, ML3.7, MW3.6, Hypocentre not reviewed by the ISC*

*VAO **26** 22:20:41.6±0.5, 22°.66S×66°.86W, h236^{km}, mb3.6*

*GUC **26** 22:20:41.2±0.6, 23°.08S×67°.01W, h248^{km}±10^{km}, ML4.0*

*IDC **26** 22:20:46.5±9.3, 22°.49S×66°.30W, h251^{km}±69^{km}, mb4.6/1, mbtmp4.4/3, Error ellipse: s-maj=109.3km s-min=37.0km az=21.0*

ISC 26 22:20:39.5±0.7**, 23°.05S**±0°.05×**66°.92W**±0°.09**, h243**^{km}±13^{km}**, n44, σ1^{s}.52**/61**, 9C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.89	283	*e*P	Pn	22 21 21.7	+0.9
LVC	Limon Verde	1.89	283	*e*P	Pn	22 21 21.6	+0.8
LVC	Limon Verde	1.89	283	*i* P		22 21 21.7	
LVC				*e*S		22 21 54.1	
PB15	IPOC Station P	2.35	266	*e*P	Pn	22 21 26.6	+1.6
PB15				*e*S	S	22 22 00.8	0.0
PB15				IAML		22 22 06.1	
	comp=E,731nm,0.4s						
PB09	IPOC Station P	2.48	300	⇑*i*P	Pn	22 21 28.3	+2.0
PB09				*i* S	S	22 22 03.5	+0.4
PB09				IAML		22 22 09.5	
	comp=E,84nm,0.5s						
PB09	IPOC Station P	2.48	300	*i* P		22 21 28.3	
PB09				*e*S		22 22 03.8	
PB09				IAML		22 22 05.7	
	comp=Z,75nm,0.5s						
PB03	IPOC Station P	2.80	290	⇑*i*P	Pn	22 21 31.1	+1.5
PB03				*i* S	S	22 22 09.1	0.0
PB03				IAML		22 22 11.0	
	comp=E,217nm,0.3s						
PB03	IPOC Station P	2.80	290	*i* P		22 21 31.0	
PB03				IAML		22 22 10.7	
	comp=Z,160nm,0.3s						
PB07	IPOC Station P	3.04	295	⇑*i*P	Pn	22 21 33.9	+1.7
PB07				*i* S	S	22 22 13.5	-0.3
PB07				IAML		22 22 14.9	
	comp=E,236nm,0.3s						
PB07	IPOC Station P	3.04	295	*i* P		22 21 33.9	
PB07				*e*S		22 22 14.7	
PB07				IAML		22 22 14.8	
	comp=Z,145nm,0.5s						
PB04	IPOC Station P	3.07	283	⇑*i*P	Pn	22 21 34.1	+1.6
PB04				*i* S	S	22 22 14.0	-0.2
PB04				IAML		22 22 19.0	
	comp=N,155nm,0.3s						
PB04	IPOC Station P	3.07	283	*i* P		22 21 34.1	
PB04				*e*S		22 22 15.5	
PB04				IAML		22 22 16.7	
	comp=Z,91nm,0.5s						
PB01	IPOC Station P	3.11	309	⇑*i*P	Pn	22 21 34.3	+1.5
PB01				*i* S	S	22 22 15.1	+0.1
GO02	Mina Guanaco	3.22	229	⇑*i*P	Pn	22 21 35.2	+0.9
GO02				*i* S	S	22 22 17.3	-0.3
GO02	Mina Guanaco	3.22	229	*i* P		22 21 35.0	
PB02	IPOC Station P	3.25	301	*i* P	Pn	22 21 36.0	+1.5
PB02				*i* S	S	22 22 17.3	-0.5
PB02	IPOC Station P	3.25	301	*i* P		22 21 35.9	
PB10	IPOC Station P	3.37	261	⇑*i*P	Pn	22 21 37.5	+1.8
PB10				*i* S	S	22 22 19.8	-0.4
PB14	IPOC Station P	3.56	243	*e*P	Pn	22 21 39.3	+1.2
PB14				*e*S	S	22 22 23.6	-0.8
PB08	IPOC Station P	3.56	324	⇑*i*P	Pn	22 21 40.8	+2.5
PB08				*e*S	S	22 22 26.3	+1.5
TA01	Diego Aracena	3.91	309	*e*P	Pn	22 21 43.4	+1.5
TA01				*e*S	S	22 22 30.2	-1.2
TA01	Diego Aracena	3.91	309	*i* P		22 21 43.0	
TA01				IAML		22 22 32.4	
	comp=Z,38nm,0.3s						
GO01	Chusmiza	3.98	327	⇑*e*P	Pn	22 21 45.4	+2.1
GO01				*e*S	S	22 22 34.8	+1.2
PB11	IPOC Station P	4.15	322	*i* P	Pn	22 21 46.7	+1.7
PB11				*i* S	S	22 22 36.0	-0.8
PB11	IPOC Station P	4.15	322	*i* P		22 21 45.7	
PB11				IAML		22 22 37.7	
	comp=Z,65nm,0.3s						
AC01	Pan de Azucar	4.55	227	*e*P	Pn	22 21 50.0	+0.4
AC01				*e*S	S	22 22 42.9	-2.5
MNMC	Minye Minye	4.63	327	*i* P	Pn	22 21 52.4	+1.5
MNMC				*e*S	S	22 22 46.5	-1.1
MNMCX	Minye Minye	4.63	327	*i* P		22 21 52.0	
GO03	Copiap	5.43	213	*i* P		22 21 59.9	
LPAZ	La Paz	6.82	350	P	Pn	22 22 20.0	+1.5
	comp=Z,2.1nm,0.4s,baz=153,slow=11,SNR=16						
LPAZ				S	S	22 23 36.4	-1.3
	comp=Z,0.6nm,0.4s,baz=136,slow=6.6,SNR=1.1						
BBSD	Serra de San D	8.31	47	*e*P	Pn	22 22 33.4	-3.5
PTLB	Pontes e Lacer	10.54	46	*e*P	Pn	22 23 02.2	-2.8
CRSM	Crissiumal (Br	12.46	113	*e*P	P	22 23 32.8	+1.2
SALV	Santo Antonio	12.75	58	*e*P	Pn	22 23 30.6	-2.0
FRBT	Francisco Belt	12.95	106	*e*P	Pn	22 23 37.2	+2.1
ETMB	Extrema	13.18	3	*e*P	Pn	22 23 34.9	-2.9
PTGB	Pitanga	13.69	100	*e*P	Pn	22 23 46.1	+1.9
C2SB	Chapadao do Su	13.83	75	*e*P	Pn	22 23 44.8	-1.0
SAML	Samuel	14.47	15	*e*P	Pn	22 23 49.5	-4.1
PDRB	Porto dos Gac	14.96	42	*e*P	P	22 23 57.8	-1.5
ARAG	Araguaiana, MT	16.01	66	*e*P	P	22 24 11.7	+0.8
BB19B	Bebedouro	17.16	87	*e*P	P	22 24 24.8	+1.2
IPMB	Ipameri, GO	18.23	77	*e*P	P	22 24 35.3	+0.2
SNDB	Serra Nova Dou	18.51	56	*e*P	P	22 24 37.9	-0.3
BDFB	Brasilia	19.29	71	P	P	22 24 45.9	-0.7
	comp=Z,4.5nm,0.7s,baz=238,slow=12,SNR=9.0						
BDFB	Brasilia	19.29	71	*e*P	P	22 24 47.1	+0.5
PMNB	Patos De Minas	19.66	81	*e*P	P	22 24 50.3	-0.3
ITTB	Itaituba	21.49	32	*e*P	P	22 25 08.9	-0.6
JANB	Januaria	22.78	74	*e*P	P	22 25 21.1	-0.3
SMTB	Santa Maria do	23.29	56	*e*P	P	22 25 26.3	+0.4
SDBA	SAO DESIDERIO	23.46	67	*e*P	P	22 25 27.7	+0.1
PRPB	Parauapebas	23.52	47	*e*P	P	22 25 28.3	+0.2
MALB	Monte Alegre	24.39	32	*e*P	P	22 25 34.6	-1.3
TORD	Torodi Ar. Bea	76.16	69	P	P	22 32 02.4	+1.2
	comp=Z,7.2nm,0.3s,baz=233,slow=6.2,SNR=2.8						
	comp=Z,7.2nm,0.3s						
MKAR	Makanchi Array	145.74	39	PKP	PKiKP	22 39 54.0	+1.0
	comp=Z,0.3nm,0.7s,baz=322,slow=1.3,SNR=3.2						

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*KRNET **26** 22:24:59.1±0.1, 39°.83N×69°.76E, h17^{km}, mb2.6*

*ISU **26** 22:25:01.4, 39°.93N×69°.70E, h2^{km}*

ISC 26 22:24:59.6±1.4**, 39°.76N**±0°.03×**69°.79E**±0°.04**, h8**^{km}±11^{km}**, n16, σ1^{s}.30**/28**, 14C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	0.84	69	⇑*i*P	Pg	22 25 15.3	-0.5
	baz=74						
BTK				⇑*i*S	Sg	22 25 27.1	+0.3
	baz=74						
BTK	Batken	0.84	69	P	Pg	22 25 15.3	-0.5
BTK				S	Sg	22 25 27.1	+0.3
GAR	Garm	0.86	152	⇑*i*P	Pb	22 25 16.8	0.0
	baz=52						
GAR				⇑*i*S	Sn	22 25 29.7	-1.2
	baz=52						
CHGR	Chuyangaron	1.21	204	⇓*i*P	Pg	22 25 22.8	0.0
	baz=2.0						
CHGR				⇓*i*S	Sn	22 25 39.9	+0.5
	baz=2.0						
CHMI	Chimion	1.42	69	P	Pg	22 25 28.1	+1.2
CHMI				S	Sg	22 25 47.3	+2.0
DRK	Karamyk	1.57	100	⇑*i*P	Pg	22 25 29.5	-0.3
	baz=2.0						
DRK				⇑*i*S	Sg	22 25 51.1	+0.9
	baz=2.0						
TAS	Tashkent	1.61	346	⇑*i*P	Pb	22 25 27.9	-1.6
	baz=47						
TAS				⇑*i*S	Sb	22 25 48.6	-1.4
	baz=47						
KRSA	Karasay	1.62	283	P	Pg	22 26 06.1	+35
FRG	Fergana	1.65	67	P	Pg	22 25 53.5	+22
CHMG	Chimgan	1.79	5	P	Pg	22 25 54.1	+20
CHRV	Charvak	1.88	4	P	Pb	22 25 32.7	-1.5
CHRV				S	Sn	22 25 55.6	-0.5
TRKS	Terek-Say	2.04	30	⇑*i*P	Pn	22 25 34.8	+0.4
	baz=33						
TRKS				⇑*i*S	Sb	22 26 01.2	-1.5
	baz=33						
OHH	Osh	2.42	71	⇑*i*P	Pb	22 25 41.2	-2.2
	baz=72						
OHH				⇑*i*S	Sb	22 26 12.3	-1.0
	baz=72						
ARK	Arkit	2.62	38	⇓*i*P	Pb	22 25 44.1	-2.7
	baz=40						
ARK				⇓*i*S	Sn	22 26 16.3	+2.0
	baz=40						
KK31	Karatay Array	3.38	9	Pn	Pb	22 25 59.8	0.0
	0.3nm,0.3s,baz=210,slow=8.7,SNR=7.4						
KK31				Pn	Pb	22 25 59.8	0.0
	0.3nm,0.3s,baz=210,slow=8.7,SNR=7.4						
KK31				⇓Sn	Sb	22 26 41.8	+0.7
	1.9nm,0.3s,baz=208,slow=23						
KK31				⇓Sn	Sb	22 26 41.8	+0.7
	1.9nm,0.3s,baz=208,slow=23						
MNAS	Manas	3.41	36	⇑*i*P	Pn	22 25 54.4	+1.2
	baz=37						
MNAS				⇑*i*S	Sn	22 26 35.4	+1.6
	baz=37						

IDC 26 22:43:20.2±6.0**, 5°.76S**×**147°.72E, h177**^{km}±57^{km}**, mb3.2**/1**, mbtmp3.7**/3**, Error ellipse: s-maj=108.4km s-min=52.0km az=121.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.67	189	P	Pn	22 44 18.3	+1.3
	6.1nm,0.3s,baz=356,slow=12,SNR=1.7						
PMG				S	Sn	22 45 01.1	-0.4
	11nm,0.3s,baz=331,slow=20,SNR=2.7						
WRA	Warramunga Arr	19.18	221	P	P	22 47 30.4	-0.2
	2.0nm,0.5s,baz=48,slow=11,SNR=36						
ASAR	Alice Springs	22.22	215	P	P	22 48 03.4	+0.8
	1.4nm,0.6s,baz=47,slow=8.6,SNR=18						
	1.4nm,0.6s						
TORD	Torodi Ar. Bea	145.72	285	PKPbc	PKPdf	23 02 37.5	-1.2
	0.3nm,0.6s,baz=91,slow=2.2,SNR=1.1						

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*IDC **26** 22:44:54.5±3.9, 4°.75S×153°.48E, h80^{km}±27^{km}, mb3.4/4, mbtmp3.7/4, MS4.0/1, Error ellipse: s-maj=36.8km s-min=26.7km az=108.0*

ISC 26 22:44:51.0±1.3**, 4°.9S**±0°.2×**153°.7E**±0°.1**, h56**^{km}**, n10, σ1^{s}.54**/8**, mb3.5**/4**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.76	289	P	Pn	22 45 20.4	+1.2
	480nm,0.4s,baz=258,slow=1.3,SNR=94						
KRVT				S	Sn	22 45 39.2	-1.2
	496nm,0.3s,baz=235,slow=19,SNR=9.1						
KRVT				LR	LR	22 45 59.5	
	comp=Z,103nm,20.9s,baz=288,slow=43						
HNR	Honiara	7.68	126	LR	LR	22 49 49.8	
	comp=Z,1μm,20.9s,baz=25,slow=37						
WRA	Warramunga Arr	24.07	230	P	P	22 50 02.0	+0.6
	2.5nm,0.5s,baz=53,slow=9.9,SNR=32						
WRA				ScP	ScP	22 57 13.1	-2.7
	0.4nm,1.1s,baz=62,slow=2.6,SNR=1.5						
	2.5nm,0.5s						
H11S3	WAKE ISLAND Hy	26.52	29	T	T	23 19 00.7	
	baz=208						
H11S2	WAKE ISLAND Hy	26.53	29	T	T	23 19 04.1	
	baz=208						
H11S1	WAKE ISLAND Hy	26.54	29	T	T	23 19 04.6	
	baz=208						
ASAR	Alice Springs	26.70	224	P	P	22 50 25.8	+0.6
	0.6nm,0.5s,baz=56,slow=9.2,SNR=7.4						
	0.6nm,0.5s						
MKAR	Makanchi Array	80.97	319	P	P	22 56 59.6	-0.1
	0.2nm,0.5s,baz=117,slow=5.0,SNR=4.1						
	0.2nm,0.5s						
ILAR	Eielson Array	81.90	22	P	P	22 57 04.7	+0.5
	0.4nm,0.8s,baz=236,slow=6.4,SNR=2.9						
	0.4nm,0.8s						
TORD	Torodi Ar. Bea	151.18	288	PKPbc	PKPbc	23 04 38.4	-0.8
	29nm,0.5s,baz=74,slow=3.2,SNR=3.9						

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*IDC **26** 22:54:45.8±0.6, 30°.46N×83°.76E, h0^{km}, mb3.9/20, mbtmp3.9/23, ML3.5/2, MS3.5/33, Error ellipse: s-maj=17.4km s-min=14.1km az=26.0*

*BJI **26** 22:54:46.9±0.0, 30°.57N×83°.88E, h6^{km}, mb4.3/25, mB4.4/9, Ms4.0/19, Ms7 3.8/17*

*MOS **26** 22:54:48.2±1.8, 30°.49N×83°.63E, h22^{km}, mb4.3/12, Error ellipse: s-maj=9.1km s-min=4.6km az=117.6*

*NEIC **26** 22:54:51.7±2.0, 30°.60N±0°.10×83°.69E±0°.09, h35^{km}±6^{km}, mb4.2/22, Error ellipse: s-maj=15.4km s-min=9.8km az=205.0*

*NDI **26** 22:54:54.8±2.4, 30°.31N×83°.94E, h70^{km}, ML3.7, mb4.2(NEIC)*

ISC 26 22:54:47.7±0.4**, 30°.47N**±0°.06×**83°.86E**±0°.04**, h10**^{km}**, n150, σ2^{s}.08**/125**, mb4.1**/36**, MS3.6**/33**, 12C, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDI	Dehra Dun	5.02	270	*e*P	Pb	22 56 09.5	-6.2
SMLA	Simla	5.80	278	*e*P	Pn	22 56 19.0	+5.3
LSA	Lhasa	6.36	95	P	Pn	22 56 27.3	+5.3
LSA				S	Sg	22 58 07.5	-4.6
LSA				pmax	pmax		
	comp=Z,77nm,0.9s						
LSA				LR	LR		
	comp=N,2μm,11.4s						
LSA				LR	LR		
	comp=E,1μm,9.3s						
LSA				LR	LR		
	comp=Z,2μm,8.9s						
LSA	Lhasa	6.36	95	Pn	Pn	22 56 27.4	+5.5
LSA	Lhasa	6.36	95	P	Pn	22 56 27.5	+5.5
BOK	Bokaro	6.89	164	*e*P	Pn	22 56 30.4	+1.6
SHL	Shillong	8.61	123	Pn	Pn	22 56 54.4	+1.9
SHL	Shillong	8.61	123	*e*P	Pn	22 56 53.6	+1.1
SHL				IAML		22 58 38.7	
	comp=E,46nm,0.4s						
SHL	Shillong	8.61	123	P	Pn	22 56 54.4	+1.9
TEZP	TEZPUR	8.75	114	*e*P	Pn	22 56 56.5	+2.3
BHPL	Bhopal	9.21	220	*e*P	Pn	22 57 02.0	+1.4
BHPL				*e*S	Sn	22 58 36.6	-7.7
ZIRO	ZIRO	9.22	106	*e*P	Pn	22 57 02.6	+1.6
NIL	Nilore	9.54	292	Pn	Pn	22 57 04.5	-0.7
NIL	Nilore	9.54	292	P	Pn	22 57 04.5	-0.7
KOHI	KOHIMA	10.21	115	*e*P	Pn	22 57 16.7	+2.3
MOKO	MOKOCHONG	10.25	111	*e*P	Pn	22 57 15.7	+0.7
BRDH	Bariadhala	10.42	136	LR	LR	23 02 05.6	
	comp=E,207nm,21.1s,baz=266,slow=42						
GOMU	GeErMu	10.80	55	P	Pn	22 57 26.0	+3.3
GOMU				pP		22 57 30.3	
GOMU				pmax	pmax		
	comp=E,2.0nm,0.4s						
GOMU				pmax	pmax		
	comp=E,100nm,5.6s						
GOMU				LR	LR		
	comp=E,260nm,11.5s						
GOMU				LR	LR		
	comp=E,330nm,12.9s						
GOMU				LR	LR		
	comp=E,450nm,12.8s						
LKP	Lekhapani	10.96	104	*e*P	Pn	22 57 24.7	+0.2
SAIH	SAIHA	11.39	132	*e*P	Pn	22 57 33.9	+3.3
SAIH				IAML		22 59 47.1	
	comp=N,15nm,1.0s						
TARG	Taragay, Kyrgy	12.26	338		Pn	22 57 41.8	-0.9
TARG	Taragay, Kyrgy	12.26	338	P	Pn	22 57 41.8	-0.9
NRN	Naryn	12.65	332	Pn	Pn	22 57 46.7	-1.3
NRN	Naryn	12.65	332	P	Pn	22 57 46.7	-1.3
KBL	Kabul	13.15	292	Pn	Pn	22 57 53.1	-1.6
KBL	Kabul	13.15	292	P	Pn	22 57 53.1	-1.6
WMQ	Urumqi	13.67	12	*e*P	Pn	22 58 00.5	-1.2
ARLS	Aral	13.72	329	P	Pn	22 58 00.7	-1.7
MND	Mandalay	13.84	125	Pn	P	22 58 08.2	-4.1
HYB	Hyderabad	13.86	202	*e*P	Pn	22 58 04.6	+0.3
HYB				*e*		23 00 31.0	
GAR	Garm	14.01	311	Pn	Pn	22 58 03.3	-3.0
TNCH	TengChong	14.06	109	⇑*e*P	Pn	22 58 05.5	-1.7
TNCH				S	Sn	23 00 42.0	-1.5
TNCH				pmax	pmax		
	comp=N,15nm,0.6s						
TNCH				pmax	pmax		
	comp=N,64nm,4.6s						
TNCH				LR	LR		
	comp=N,310nm,14.4s						
TNCH				LR	LR		
	comp=N,300nm,11.7s						
TNCH				LR	LR		
	comp=N,390nm,14.7s						
AAK	Ala-Archa	14.28	331	Pn	Pn	22 58 09.0	-1.0
	comp=N,0.1nm,0.3s,baz=206,slow=8.9,SNR=2.8						
	comp=N,0.5nm,0.3s						
AAK	Ala-Archa	14.28	331	Pn	Pn	22 58 09.3	-0.7
AAK	Ala-Archa	14.28	331	P	Pn	22 58 09.0	-1.0
BTK	Batken	14.31	315	Pn	Pn	22 58 06.8	-3.6
BTK	Batken	14.31	315	P	Pn	22 58 06.8	-3.6
FRU1	Bishkek	14.36	332	Pn	Pn	22 58 10.0	-1.1
FRU1	Bishkek	14.36	332	P	Pn	22 58 10.0	-1.1
CHGR	Chuyangaron	14.60	308	Pn	Pn	22 58 10.8	-3.6
CHGR	Chuyangaron	14.60	308	P	Pn	22 58 10.8	-3.6
GTA	Gaotai	15.82	51	⇑P	P	22 58 35.0	+0.5
GTA				pmax	pmax		
	comp=N,11nm,1.0s						
GTA				LR	LR		
	comp=N,260nm,14.5s						
GTA				LR	LR		
	comp=N,310nm,13.8s						
GTA				LR	LR		
	comp=N,230nm,13.1s						
TAS	Tashkent	16.00	317	Pn	Pn	22 58 29.0	-3.8
TAS				IAmb	IAmb	22 58 54.0	
	comp=Z,31nm,0.6s						
TAS	Tashkent	16.00	317	P	Pn	22 58 29.0	-3.8
TAS				pmax	pmax		
	comp=Z,31nm,0.6s						
PZH	PanZhiHua	16.21	100	P	Pn	22 58 35.0	-0.7
PZH				S	Sn	23 01 33.5	-2.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,60nm,4.7s						
PZH				LR	LR		
	comp=Z,250nm,19.4s						
PZH				LR	LR		
	comp=Z,150nm,18.0s						
PZH				LR	LR		
	comp=Z,190nm,14.7s						
MK31	Makanchi Array	16.35	356	Pn	P	22 58 36.9	-3.3
MK31	Makanchi Array	16.35	356	P	P	22 58 36.9	-3.3
MK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MKAR	Makanchi Array	16.35	356	Pn	Pn	22 58 36.4	-0.9
	comp=Z,0.3nm,0.3s,baz=174,slow=11,SNR=12						
MKAR				LR	LR	23 05 59.5	
	comp=Z,117nm,18.9s,baz=186,slow=41						
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	16.35	356	P	P	22 58 38.1	-2.1
MKAR	Makanchi Array	16.35	356	*ce*P	P	22 58 40.2	0.0
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KK31	Karatay Array	16.51	323	Pn	Pn	22 58 35.9	-3.4
KK31	Karatay Array	16.51	323	P	Pn	22 58 35.9	-3.4
KK31				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KKAR	Karatay Array	16.51	323		Pn	22 58 35.9	-3.4
KKAR	Karatay Array	16.51	323	P	Pn	22 58 35.9	-3.4
KMI	Kunming	17.53	103	⇑P	Pn	22 58 52.0	-0.4
KMI				pmax	pmax		
	comp=Z,12nm,0.7s						
KMI				LR	LR		
	comp=Z,610nm,17.6s						
KMI				LR	LR		
	comp=Z,310nm,16.5s						
KMI				LR	LR		
	comp=Z,340nm,11.8s						
LZH	Lanzhou	17.62	66	*e*P	Pn	22 58 43.0	-10
LZH				pP	P	22 58 48.8	-5.6
LZH				sP	pP	22 58 51.0	-7.8
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
LZH				LR	LR		
	comp=N,290nm,10.7s						
LZH				LR	LR		
	comp=E,420nm,13.8s						
LZH				LR	LR		
	comp=Z,300nm,13.8s						
CHTO	Chiang Mai	17.94	127	P	P	22 59 00.7	+2.8
CHTO	Chiang Mai	17.94	127	P	P	22 59 00.7	+2.8
CRAI	Chiangrai	18.05	121	P	P	22 59 01.9	+2.7
CRAI				IAmb	IAmb	22 59 08.3	
	comp=Z,8.7nm,1.0s						
CM31	Chiang Mai Arr	18.18	128	P	P	22 59 01.7	+1.1
CM31				IAmb	IAmb	22 59 08.2	
	comp=Z,29nm,1.4s						
CMAR	Chiang Mai Arr	18.18	128	P	P	22 59 00.6	0.0
	comp=Z,2.0nm,0.8s,baz=305,slow=11,SNR=15						
CMAR				LR	LR	23 07 54.4	
	comp=Z,105nm,19.6s,baz=310,slow=43						
CMAR	Chiang Mai Arr	18.18	128		P	22 59 03.2	+2.6
CMAR	Chiang Mai Arr	18.18	128	*e*P	P	22 59 04.0	+3.4
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PHRA	Phrae	19.05	125	P	Pn	22 59 12.6	+1.8
DGZ	Jazzator, Alta	19.40	7	*i* P	Pn	22 59 15.4	+0.3
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						

KURBB	Kurchatov Arra	20.53	350	P	P	22 59 25.2	-0.8
	comp=Z,9.3nm,1.0s,baz=173,slow=10.0,SNR=56						
	comp=Z,9.3nm,1.0s						
KURK	Kurchatov	20.61	351	P	Pn	22 59 26.2	-2.9
KURK				IAmb	IAmb	22 59 27.4	
	comp=Z,14nm,1.1s						
KURK	Kurchatov	20.61	351*ce*	P	Pn	22 59 26.3	-2.8
KURK				pmax	pmax		
	comp=Z,14nm,1.0s						
XAN	Xi'an	21.48	74	P	P	22 59 36.5	0.0
XAN				pmax	pmax		
	comp=Z,15nm,1.0s						
ENH	Enshi	22.10	84	P	P	22 59 42.8	-0.4
ENH				IAmb	IAmb	22 59 50.2	
	comp=Z,7.8nm,0.8s						
GEYT	Alibeck	22.51	296	P	P	22 59 45.9	-1.6
	comp=Z,5.8nm,0.9s,baz=104,slow=9.1,SNR=10						
GEYT				LR	LR	23 09 21.5	
	comp=Z,46nm,19.2s,baz=153,slow=39						
	comp=Z,5.8nm,0.9s						
GEYT	Alibeck	22.51	296	P	P	22 59 45.6	-2.0
GEYT				IAmb	IAmb	23 00 12.2	
	comp=Z,12nm,1.2s						
GYA0B	ALIBECK ARRAY	22.51	296	P	P	22 59 45.7	-1.9
GYA0B				IAmb	IAmb	23 00 12.2	
	comp=Z,11nm,1.1s						
ZAA0	Zalesovo Array	23.48	1	P	P	22 59 57.0	-0.3
ZAA0				IAmb	IAmb	23 00 01.3	
	comp=Z,4.3nm,0.9s						
ZALV	Zalesovo Beam	23.48	1	P	P	22 59 56.4	-0.9
	comp=Z,3.0nm,0.8s,baz=179,slow=10,SNR=5.2						
ZALV				LR	LR	23 10 04.8	
	comp=Z,57nm,19.4s,baz=224,slow=39						
	comp=Z,3.0nm,0.8s						
ZALV	Zalesovo Beam	23.48	1	P	P	22 59 56.5	-0.7
ZALV	Zalesovo Beam	23.48	1	P	P	22 59 56.6	-0.7
WSAR	Wadi Sarin	23.60	258	P	P	22 59 57.8	-1.0
	comp=Z,3.1nm,1.1s,baz=340,slow=15,SNR=1.4						
WSAR				LR	LR	23 10 09.8	
	comp=Z,65nm,19.5s,baz=92,slow=39						
	comp=Z,3.1nm,1.1s						
SONM	Songino Array	24.48	39	P	P	23 00 08.4	+1.3
	comp=Z,2.8nm,0.6s,baz=224,slow=10,SNR=24						
SONM				LR	LR	23 10 50.6	
	comp=Z,70nm,21.0s,baz=256,slow=39						
	comp=Z,2.8nm,0.6s						
SONM	Songino Array	24.48	39	P	P	23 00 08.2	+1.2
BVAR	Borovoye Array	24.60	340	P	P	23 00 07.2	-0.7
	comp=Z,0.5nm,0.4s,baz=147,slow=9.6,SNR=11						
	comp=Z,0.5nm,0.4s						
BRVK	Borovoye	24.66	340	P	P	23 00 06.3	-2.1
BRVK				IAmb	IAmb	23 00 22.7	
	comp=Z,6.7nm,1.2s						
BRVK	Borovoye	24.66	340*ce*	P	P	23 00 09.4	+1.0
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
ULN	Ulaanbaatar	24.85	39	P	P	23 00 10.3	-0.2
ULN				IAmb	IAmb	23 00 12.4	
	comp=Z,4.5nm,0.8s						
ULN	Ulaanbaatar	24.85	39*ce*	P	P	23 00 11.2	+0.8
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ABKAR	Akbulak array	26.07	323	P	P	23 00 20.2	-1.0
AKTO	Aktyubinsk	27.77	323	LR	LR	23 12 24.5	
	comp=Z,86nm,21.6s,baz=268,slow=38						
ARU	Arti	31.44	333*c*	*i*P	P	23 01 11.6	+2.6
ARU						23 02 11.7	
ARU				S	S	23 06 22.5	+5.9
ARU				SS	SnSn	23 08 06.4	+5.7
ARU				pmax	pmax		
	comp=Z,12nm,1.6s						
GNI	Garni	33.13	298	LR	LR	23 16 31.6	
	comp=Z,50nm,20.4s,baz=97,slow=40						
AKH	Akhalkalaki	34.18	300	P	P	23 01 35.3	+1.9
AKH	Akhalkalaki	34.18	300	P	P	23 01 35.3	+1.9
AKH				pmax	pmax		
	comp=Z,20nm,1.0s						
BELG	Belogornoye	34.37	320	LR	LR	23 17 21.6	
	comp=Z,104nm,18.7s,baz=337,slow=40						
KBZ	Khabaz	34.90	304	P	P	23 01 38.6	-0.7
	comp=Z,1.9nm,0.8s,baz=154,slow=7.9,SNR=6.4						
KBZ				LR	LR	23 18 13.7	
	comp=Z,77nm,20.0s,baz=100,slow=40						
	comp=Z,1.9nm,0.8s						
KIV	Kislovodsk	35.08	304	*e*P	P	23 01 43.6	+2.5
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,59nm,16.0s						
KIRV	Kirov	36.61	330	LR	LR	23 18 32.1	
	comp=Z,64nm,18.6s,baz=111,slow=39						
KSRS	Korea Array	36.94	67	P	P	23 01 56.9	0.0
	comp=Z,0.5nm,0.5s,baz=274,slow=8.4,SNR=1.7						
KSRS				LR	LR	23 17 11.3	
	comp=Z,32nm,20.7s,baz=320,slow=36						
	comp=Z,0.5nm,0.5s						
NRIK	Noril'sk	38.97	2	*i* P	P	23 02 16.5	+2.9
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
JNU	Nakatsue	39.79	74	LR	LR	23 19 28.1	
	comp=Z,77nm,18.1s,baz=201,slow=37						
USRK	Ussuriysk Ar.	40.09	56	P	P	23 02 23.2	-0.1
USRK	Ussuriysk Ar.	40.09	56	P	P	23 02 23.2	-0.1
KLR	Kul'dur	40.49	48	P	P	23 02 26.3	-0.2
	comp=Z,1.4nm,0.7s,baz=262,slow=6.7,SNR=5.2						
KLR				LR	LR	23 20 57.6	
	comp=Z,100nm,18.8s,baz=250,slow=39						
	comp=Z,1.4nm,0.7s						
KLR	Kul'dur	40.49	48*ce*	P	P	23 02 26.7	+0.1
KLR				pmax	pmax		
	comp=Z,5.0nm,2.5s						
MMAI	Mount Meron Ar	41.00	287	LR	LR	23 20 50.1	
	comp=Z,82nm,20.1s,baz=162,slow=38						
OBN	Obninsk	41.46	320⇑	*e*P	P	23 02 36.4	+2.0
OBN				*e*		23 04 08.8	
OBN				*e*S	S	23 08 42.8	-6.7
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,134nm,17.0s						
BRTR	Keskin Array B	41.65	297	P	P	23 02 36.1	-0.3
	comp=Z,0.9nm,1.0s,baz=64,slow=2.9,SNR=6.2						
BRTR				LR	LR	23 22 26.9	
	comp=Z,71nm,18.4s,baz=84,slow=40						
	comp=Z,0.9nm,1.0s						
EIL	Elat	42.07	282	LR	LR	23 22 50.2	
	comp=Z,102nm,19.2s,baz=59,slow=40						
ELL	Elmali	44.88	293	P	P	23 03 02.1	-0.4
ELL	Elmali	44.88	293	P	P	23 03 02.1	-0.4
ELL				pmax	pmax		
	comp=Z,60nm,0.7s						
AKASG	Malin Array Be	45.00	313	P	P	23 03 01.8	-1.3
	comp=Z,0.4nm,0.6s,baz=82,slow=6.6,SNR=4.4						
	comp=Z,0.4nm,0.6s						
AKASG	Malin Array Be	45.00	313	*e*P	P	23 03 03.7	+0.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MJAR	Matsushiro Arr	45.22	67	LR	LR	23 22 07.9	
	comp=Z,50nm,18.9s,baz=295,slow=36						
MLR	Muntele Rosu	47.06	306	LR	LR	23 27 28.5	
	comp=Z,65nm,19.4s,baz=86,slow=42						
ASAJ	Asahikawa	47.72	56	LR	LR	23 24 42.8	
	comp=Z,91nm,18.3s,baz=343,slow=38						
TIXI	Tiksi	47.79	18*ce*	P	P	23 03 25.6	+0.9
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
FINES	FINESS Array B	48.42	327	P	P	23 03 28.9	-0.8
	comp=Z,3.4nm,0.8s,baz=109,slow=7.1,SNR=7.6						
FINES				LR	LR	23 25 23.9	
	comp=Z,202nm,18.4s,baz=69,slow=38						
	comp=Z,3.4nm,0.8s						
FINES	FINESS Array B	48.42	327	*e*P	P	23 03 32.2	+2.4
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KAPI	Kappang	49.23	130	LR	LR	23 30 17.7	
	comp=Z,73nm,19.2s,baz=252,slow=43						
VYHS	Vyhne	51.74	310	*e*P	P	23 04 00.1	+4.9
VYHS	Vyhne	51.74	310	*e*P	P	23 04 00.0	+4.8
LODK	Lodwar	53.06	249	P	P	23 04 04.6	-0.9
LODK				IAmb	IAmb	23 04 11.7	
	comp=Z,2.5nm,1.1s						
VRAC	Vranov	53.14	311	LR	LR	23 32 35.5	
	comp=Z,86nm,18.0s,baz=93,slow=43						
HFS	Hagfors	54.31	325	LR	LR	23 28 43.9	
	comp=Z,158nm,19.6s,baz=62,slow=38						
CLL	Collm	55.22	314	*e*P	P	23 04 20.0	-0.7
CLL	Collm	55.22	314	*e*P	P	23 04 20.0	-0.7
NB2	NORSAR Subarra	55.52	326	P	P	23 04 21.6	-1.2
	comp=Z,1.8nm,0.8s,baz=88,slow=7.4						
NOA	NORSAR Array B	55.52	326	P	P	23 04 21.4	-1.3
	comp=Z,1.3nm,0.8s,baz=87,slow=7.5,SNR=4.2						
NOA				LR	LR	23 29 29.7	
	comp=Z,51nm,21.0s,baz=85,slow=38						
	comp=Z,1.3nm,0.8s						
NOA	NORSAR Array B	55.52	326	*e*P	P	23 04 24.6	+1.8
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
PETK	Petropavlovsk-	56.81	44	LR	LR	23 30 18.9	
	comp=Z,52nm,18.8s,baz=137,slow=38						
DAVOX	Davos/Dischmat	57.98	309	LR	LR	23 35 16.6	
	comp=Z,60nm,18.9s,baz=58,slow=42						
MBAR	Mbarara	59.15	249	LR	LR	23 31 17.7	
	comp=Z,31nm,19.6s,baz=73,slow=37						
BILL	Bilibino	59.31	26⇑	*e*P	P	23 04 52.5	+3.2
BILL				*e*		23 05 38.2	
BILL				*e*		23 07 00.1	
BILL				*e*S	S	23 13 23.7	+26
BILL				pmax	pmax		
	comp=Z,6.0nm,2.4s						
BILL				MLR	MLR		
	comp=Z,59nm,15.0s						
WB0	Warramunga Arr	69.68	129	P	P	23 05 58.1	+0.3
WRA	Warramunga Arr	69.77	129	P	P	23 05 58.5	+0.2
	comp=Z,1.4nm,0.8s,baz=322,slow=6.4,SNR=15						
	comp=Z,1.4nm,0.8s						
WRA	Warramunga Arr	69.77	129	P	P	23 05 58.8	+0.5
WRA	Warramunga Arr	69.77	129	P	P	23 05 58.8	+0.5
SUMG	Summit	70.00	344	*i* P	P	23 06 03.0	+3.5
A21K	Barrow	70.09	17	P	P	23 05 58.5	-1.1
LSZ	Lusaka	70.26	238	LR	LR	23 36 48.9	
	comp=Z,28nm,19.4s,baz=155,slow=36						
ASAR	Alice Springs	72.12	132	P	P	23 06 12.6	0.0
	comp=Z,0.5nm,0.6s,baz=319,slow=5.5,SNR=3.8						
	comp=Z,0.5nm,0.6s						
ICESG	Greenland Ices	72.56	342	*i* P	P	23 06 16.2	+1.2
A36M	Sachs Harbour	75.83	9	P	P	23 06 33.9	+0.3
A36M				IAmb	IAmb	23 06 40.9	
	comp=Z,4.2nm,1.1s						
TORD	Torodi Ar. Bea	76.78	278	P	P	23 06 39.5	-0.5
	comp=Z,1.8nm,0.8s,baz=48,slow=5.0,SNR=8.6						
TORD				LR	LR	23 44 33.4	
	comp=Z,45nm,18.9s,baz=74,slow=39						
ILAR	Eielson Array	77.19	20	P	P	23 06 41.6	+0.2
	comp=Z,0.4nm,0.7s,baz=309,slow=5.0,SNR=2.9						
	comp=Z,0.4nm,0.7s						
ILAR	Eielson Array	77.19	20	*e*P	P	23 06 45.4	+4.0
INK	Inuvik	77.69	13	P	P	23 06 43.7	-0.4
	comp=Z,0.4nm,0.5s,baz=239,slow=22,SNR=2.2						
	comp=Z,0.4nm,0.5s						
BOSA	Boshof	81.08	229	P	P	23 07 02.8	-0.6
	comp=Z,1.6nm,0.7s,baz=93,slow=4.5,SNR=3.6						
BOSA				LR	LR	23 41 28.4	
	comp=Z,22nm,18.4s,baz=44,slow=35						
	comp=Z,1.6nm,0.7s						
DBIC	Dimbokro	85.56	275	P	P	23 07 26.4	-0.3
	comp=Z,1.9nm,0.7s,baz=71,slow=11,SNR=1.7						
DBIC				LR	LR	23 48 01.5	
	comp=Z,44nm,18.8s,baz=57,slow=37						
	comp=Z,1.9nm,0.7s						
YKA	Yellowknife Ar	86.18	8	P	P	23 07 28.4	-0.5
	comp=Z,0.4nm,0.7s,baz=340,slow=4.8,SNR=9.2						
	comp=Z,0.4nm,0.7s						
YKA	Yellowknife Ar	86.18	8	*e*P	P	23 07 31.9	+3.0
CPUP	Villa Florida	145.72	267	PKPbc	PKPdf	23 14 25.7	-1.2
	comp=Z,2.4nm,0.9s,baz=243,slow=3.6,SNR=2.2						

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*IDC **26** 22:58:43.2±14.0, 52°.09N×177°.30W, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=278.9km s-min=62.5km az=78.0*

*AEIC **26** 22:59:19.9±2.4, 52°.4N±0°.3×174°.7W±0°.4, h219km±9km, Error ellipse: s-maj=46.8km s-min=17.9km az=143.0*

*NEIC **26** 22:59:19.6±2.1, 52°.4N±0°.2×174°.3W±0°.5, h222km±24km, mb3.9/27, ML3.0(AEIC), Error ellipse: s-maj=45.3km s-min=16.3km az=112.0*

ISC 26 22:59:19.7±0.9**, 52°.7N**±0°.2×**174°.2W**±0°.1**, h200**km**, n44,** σ**1s.46**/45**, mb3.3**/3**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSTR	Great Sitkin T	1.30	243	Pn	Pn	22 59 51.6	-0.1
GSTR				Sn	Sn	23 00 17.8	+1.3
ADK	Adak	1.74	243		Pn	22 59 55.4	-0.2
KIWB	Kanaga Island	2.01	246		Pn	22 59 57.1	-1.2
P18K	Big Mountain,	12.51	50	Pn	P	23 02 13.9	-0.7
O18K	Koktuh Hills	12.71	48		P	23 02 16.8	-0.2
OHAK	Old Harbor	12.81	61	Pn	P	23 02 16.4	-1.6
SVW2	Sparrevohn	13.15	43		P	23 02 23.5	+1.7
KDAK	Kodiak Island	13.30	59	Pn	P	23 02 20.9	-2.6
ILSW	Iliamna Southw	13.71	50	Pn	P	23 02 26.1	-2.1
L19K	White Mountain	14.03	40		P	23 02 31.7	+0.1
CNPM	China Poot	14.46	53		P	23 02 37.4	+1.1
BRLK	Bradley Lake	14.70	52		P	23 02 39.5	+0.5
K20K	Telida	15.00	37	P	P	23 02 42.5	+0.2
SKT	Skwentna	15.28	44	P	P	23 02 47.3	+2.0
SKT				IAmb	IAmb	23 02 51.2	
	comp=Z,3.2nm,0.7s						
SUA	Susitna One	15.39	46	Pn	P	23 02 49.8	+3.1
SUA				IAmb	IAmb	23 03 32.7	
	comp=Z,6.6nm,1.2s						
PWL	Port Wells	16.25	50	P	Pn	23 02 57.9	+1.1
KTH	Kantishna Hill	16.29	39		Pn	23 02 58.8	+1.5
KTH				IAmb	IAmb	23 02 59.6	
	comp=Z,3.8nm,0.8s						
GHO	Glory Hole Cre	16.31	46	Pn	Pn	23 03 00.3	+2.8
KNK	Knik Glacier	16.39	48		Pn	23 02 59.9	+1.5
KNK				IAmb	IAmb	23 03 34.6	
	comp=Z,10nm,1.4s						
TRF	Thorofare Moun	16.48	40	P	Pn	23 03 00.3	+0.7
TRF				IAmb	IAmb	23 03 05.5	
	comp=Z,4.2nm,1.2s						
BPAW	Bear Paw Mtn.	16.56	37	P	Pn	23 03 01.1	+0.8
IMAR	Indian Mountai	16.79	30	P	Pn	23 03 02.4	-0.7
I21K	Tanana	16.83	33	P	Pn	23 03 03.2	-0.4
H21K	Melozitna Rive	16.86	31	P	Pn	23 03 04.6	+0.6
H21K				IAmb	IAmb	23 03 18.6	
	comp=Z,5.0nm,1.4s						
SCM	Sheep Creek Mo	17.04	47	P	Pn	23 03 07.6	+1.4
MCK	McKinley	17.15	40	P	Pn	23 03 07.4	0.0
MCK				IAmb	IAmb	23 03 39.6	
	comp=Z,7.1nm,1.5s						
MLY	Manley	17.17	35	P	Pn	23 03 08.0	+0.4
MLY				IAmb	IAmb	23 03 08.8	
	comp=Z,3.4nm,0.6s						
NEA2	Nenana	17.53	37	P	Pn	23 03 10.9	-0.9
KLU	Klutina	17.56	49	P	Pn	23 03 12.7	+0.4
KLU				IAmb	IAmb	23 03 19.3	
	comp=Z,7.8nm,1.2s						
M24K	Tolsona, Glenn	17.64	47	P	Pn	23 03 15.3	+2.0
I23K	Minto, Yukon-K	17.72	36	P	Pn	23 03 13.3	-0.6
WRH	Wood River Hil	17.83	38	P	P	23 03 13.1	-0.2
MDM	Murphy Dome	18.02	37	P	Pn	23 03 16.8	-0.8
MDM				IAmb	IAmb	23 03 36.9	
	comp=Z,4.6nm,1.3s						
TCOL	CIGO, UAF Yank	18.12	37	P	Pn	23 03 18.6	0.0
N25K	Chitina, Valde	18.20	49	P	Pn	23 03 22.3	+2.5
N25K				IAmb	IAmb	23 03 35.3	
	comp=Z,6.5nm,1.2s						
IL31		18.43	38	P	Pn	23 03 20.0	-2.3
IL31				IAmb	IAmb	23 03 52.3	
	comp=Z,7.9nm,1.5s						
ILAR	Eielson Array	18.43	38	P	P	23 03 18.6	-1.2
	comp=Z,0.5nm,0.7s,baz=238,slow=10.0,SNR=10						
	comp=Z,0.5nm,0.7s						
H24K	Noodor Dome	18.61	35	P	Pn	23 03 23.5	-1.0
H24K				IAmb	IAmb	23 03 47.8	
	comp=Z,4.4nm,1.4s						
RIDG	Independent Ri	18.80	43	P	P	23 03 23.4	-0.4
RIDG				IAmb	IAmb	23 03 26.5	
	comp=Z,7.6nm,1.4s						
DOT	Dot Lake	19.09	43	P	Pn	23 03 27.8	-2.3
DOT				IAmb	IAmb	23 03 38.6	
	comp=Z,5.5nm,1.3s						
SCRK	Sand Creek	19.24	42	P	Pn	23 03 29.7	-2.3
INK	Inuvik	24.73	35	P	P	23 04 20.2	-2.0
	comp=Z,0.7nm,1.0s,baz=254,slow=9.5,SNR=1.9						
	comp=Z,0.7nm,1.0s						
PDAR	Pinedale Array	43.20	76	P	P	23 07 01.4	+0.4
	comp=Z,0.9nm,0.8s,baz=306,slow=3.2,SNR=8.4						
	comp=Z,0.9nm,0.8s						
TXAR	Lajitas Array	55.66	85	P	P	23 08 35.7	+0.7
	comp=Z,0.4nm,0.8s,baz=316,slow=3.8,SNR=2.8						
	comp=Z,0.4nm,0.8s						

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*LDG **26** 23:01:48.9±0.0, 45°.33N×6°.43E, h2km, Md1.7/2, Ml1.7/8, Error ellipse: s-maj=0.8km s-min=0.7km az=76.0*

STR 26 23:01:48.9±0.3**, 45°N**±2°×°±°**, h5**km**, MLv1.3**/7**, 1C, Error ellipse: s-maj=0.0km s-min=0.0km az=89.1, preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OGMO	Fort Saint-Gob	0.22	124	⇑Pg	Pg	23 01 53.5	+0.2
OGMO				Sg	Sg	23 01 56.6	+0.4
GDM	Grand'Maison	0.25	240	Pg	Pg	23 01 53.8	0.0
GDM				Sg	Sg	23 01 57.3	+0.1
LPL	La Plagne	0.29	50	*e*Pg	Pg	23 01 54.5	0.0
LPL				*e*Sg	Sg	23 01 58.5	+0.1
	6.3nm,0.2s						
RSL	Roselend	0.38	22	Pg	Pg	23 01 56.3	-0.1
RSL				Sg	Sg	23 02 01.3	-0.1
GRN	Grenoble	0.49	260	Pg	Pg	23 01 58.1	-0.1
GRN				Sg	Sg	23 02 04.9	+0.3
ORIF	Oris-en-Rattie	0.56	223	*e*Pg	Pg	23 01 59.7	-0.1
ORIF				*e*Sg	Sg	23 02 07.1	0.0
	9.1nm,0.2s						
ORIF	Oris-en-Rattie	0.56	223	Pg	Pg	23 01 59.7	0.0
ORIF				Sg	Sg	23 02 06.6	-0.5
OGSM	Saint Maurice	0.58	299	Pg	Pg	23 02 00.6	+0.5
OGSM				Sg	Sg	23 02 07.9	+0.2
MBDF	Montbardon	0.65	158	*e*Pg	Pg	23 02 01.3	-0.2
MBDF				*e*Sg	Sg	23 02 09.8	-0.1
	1.3nm,0.2s						
CREF	Crivoux	0.80	170	Pg	Pg	23 02 03.9	-0.2
CREF				Sg	Sg	23 02 15.0	+0.6
OGAG	Argentiere	0.88	174	Pg	Pg	23 01 59.3	-6.5
OGAG				Sg	Sg	23 02 07.0	-10
OG35	Corcelles	0.93	320	Pg	Pg	23 02 06.6	-0.2
OG35				Sg	Sg	23 02 19.4	+0.6
JAUF	Jausiers	0.93	165	Pg	Pg	23 02 06.6	-0.2
JAUF				Sg	Sg	23 02 19.4	+0.6
DIX	Grande Dixence	1.02	42	Pg	Pg	23 02 07.6	-0.8
DIX				Sg	Sg	23 02 22.0	+0.4
CABF	La Chapelle	1.30	350	*e*Pg	Pb	23 02 14.3	+0.4
CABF				*e*Sg	Sg	23 02 30.4	-0.3
	1.0nm,0.2s						
VIVF	Saint-Julien-l	1.33	250	*e*Pg	Pg	23 02 15.1	+0.8
VIVF				*e*Sg	Sg	23 02 31.1	-0.4
	2.6nm,0.3s						
LASF	Ste Croix	2.22	236	*e*Pg	Pb	23 02 30.2	+0.7
LASF				*e*Sg	Sg	23 02 58.8	-1.4
	0.7nm,0.3s						
SMF	Signal de Mont	2.23	307	*e*Pg	Pb	23 02 30.4	+0.8
SMF				*e*Sn	Sn	23 02 51.5	-2.9
SMF				*e*Sg	Sg	23 02 59.1	-1.4
	0.7nm,0.2s						
AVF	Avril sur Loir	2.59	305	*e*Pg	Pb	23 02 37.0	+1.2
AVF				*e*Sg	Sg	23 03 10.5	-1.5
	0.4nm,0.3s						
SSF	Saint Saulge	2.66	312	*e*Pg	Pg	23 02 38.5	-1.4
SSF				*e*Sg	Sg	23 03 12.8	-1.6
	0.4nm,0.3s						
BGF	Bois d'Agland	2.78	297	*e*Pg	Pg	23 02 40.6	-1.6
BGF				*e*Sg	Sg	23 03 16.2	-2.0
	1.1nm,0.3s						
TCF	Toulx Ste Croi	3.10	289	*e*Sn	Sn	23 03 12.6	-3.3
	0.4nm,0.2s						

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*NEIC **26** 23:15:18.7±2.6, 31°.86S±0°.09×179°.5W±0°.2, h160km±14km, mb4.2/1, Error ellipse: s-maj=28.0km s-min=10.6km az=105.0*

*IDC **26** 23:15:20.9±3.4, 31°.78S×179°.67W, h196km±29km, mb3.7/3, mbtmp4.2/5, Error ellipse: s-maj=34.5km s-min=20.2km az=68.0*

ISC 26 23:15:17.7±0.7**, 31°.88S**±0°.07×**179°.6W**±0°.2**, h150**km**, n19,** σ**1s.65**/21**, mb4.1**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.98	29	Pn	Pn	23 16 05.8	+0.9
RAO				Sn	Sn	23 16 40.9	-0.3
URZ	Urewera	6.92	202	P	Pn	23 16 59.4	+2.8
	3.8nm,0.3s,baz=355,slow=2.3,SNR=7.7						
URZ				S	Sn	23 18 13.8	-0.5
	19nm,0.4s,baz=83,slow=22,SNR=18						
RTZ	Ruatahuna	7.29	202	Pn	Pn	23 17 02.8	+1.2
RTZ				Sn	Sn	23 18 24.1	+0.9
BKZ	Black Stump Fm	7.95	203	Pn	Pn	23 17 10.8	+0.4
THZ	Tophouse	11.56	209	Pn	Pn	23 17 59.5	+1.3
KHZ	Kahutara	11.87	206	Pn	Pn	23 18 02.1	0.0
CTZ	Chatham Island	12.06	170		P	23 18 09.8	-1.3
MSVF	Nonsavu	14.25	351	P	Pn	23 18 34.6	+1.7
	7.2nm,0.6s,baz=193,slow=18,SNR=10						
MSVF	Nonsavu	14.25	351	P	P	23 18 35.5	-0.3
MSVF	Nonsavu	14.25	351		Pn	23 18 34.8	+1.9
FOZ	Fox Glacier	14.34	213	P	P	23 18 38.2	+1.8
ASAR	Alice Springs	41.72	269	P	P	23 22 50.0	-2.1
	1.1nm,0.5s,baz=106,slow=7.6,SNR=18						
	1.1nm,0.5s						
WB2	Warramunga Arr	42.84	275	P	P	23 22 59.4	-1.7
WRA	Warramunga Arr	42.85	275	P	P	23 22 59.4	-1.8
	2.8nm,0.5s,baz=114,slow=8.1,SNR=0.8						
	2.8nm,0.5s						
WB0	Warramunga Arr	42.88	275	P	P	23 22 59.9	-1.6
QSPA	South Pole Qui	58.23	180	P	P	23 24 55.5	-0.5
	2.1nm,0.6s,baz=87,slow=2.9,SNR=17						
	2.1nm,0.6s						
QSPA	South Pole Qui	58.23	180	P	P	23 24 56.2	+0.1
QSPA				IAmb	IAmb	23 24 57.3	
	comp=Z,1.9nm,0.6s						
VA03	San Esteban	87.16	127		pwP	23 28 28.1	+3.6
FINES	FINESS Array B	146.04	338	PKPbc	PKPdf	23 34 34.6	-3.4
	comp=Z,1.4nm,0.4s,baz=51,slow=3.4,SNR=21						

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*IDC **26** 23:26:58.1±4.6, 42°.81N×105°.05W, h0km, mbtmp2.6/2, ML3.3/2, Error ellipse: s-maj=62.7km s-min=16.5km az=26.0*

*NEIC **26** 23:27:01.7±2.1, 43°.60N±0°.05×105°.09W±0°.06, h0km±2km, ML2.4/18, Error ellipse: s-maj=9.5km s-min=6.6km az=328.0*

ISC 26 23:27:01.8±1.3**, 43°.64N**±0°.05×**105°.26W**±0°.06**, h0**km**, n14,** σ**0s.96**/12**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.00	61		Pg	23 27 20.5	-0.5
K22A	Casper	1.36	224		Pg	23 27 26.5	-1.3
PHWY	Pilot Hill	2.34	184		Pn	23 27 42.4	+0.6
PHWY				IAML		23 28 17.3	
	17nm,1.1s						
PHWY				IAML		23 28 25.0	
	12nm,0.6s						
RWWY	Rawlins	2.43	217		Pn	23 27 43.4	+0.4
N23A	Red Feather La	2.79	191		Pn	23 27 48.9	+0.9
N23A				IAML		23 28 38.0	
	comp=N,16nm,0.8s						
N23A				IAML		23 28 42.5	
	comp=E,18nm,1.4s						
LAO	LASA Array	3.12	348	Pn	Pn	23 27 52.0	-0.3
RLMT	Red Lodge	3.23	299	Pn	Pn	23 27 55.6	+1.5
RLMT				IAML		23 28 55.1	
	comp=E,11nm,2.8s						
RLMT				IAML		23 29 02.1	
	comp=E,10nm,2.3s						
BW06	Boulder Array	3.26	256		Pn	23 27 55.2	+0.7
BW06				IAML		23 28 26.6	
	comp=E,5.5nm,4.8s						
BW06				IAML		23 28 56.5	
	comp=E,7.0nm,2.8s						
PD31	Pinedale Array	3.26	256		Pn	23 27 55.1	+0.7
PDAR	Pinedale Array	3.26	256	Pn	Pn	23 27 55.1	+0.7
	comp=E,0.1nm,0.3s,baz=92,slow=14,SNR=2.2						
PDAR				Lg	Lg	23 28 41.1	
	comp=E,0.6nm,0.3s,baz=78,slow=34,SNR=2.6						
	comp=E,0.3nm,0.5s						
PDAR	Pinedale Array	3.26	256		Pn	23 27 55.5	+1.0
OGNE	Ogallala	3.60	137	Pg	Pg	23 28 10.4	-0.4
I10CA	LAC DU BONNET	9.10	41	*i*		00 23 20.0	
	baz=222,slow=321,SNR=4.0						
TXAR	Lajitas Array	14.34	174	Pn	Pn	23 30 12.1	-14
	comp=E,0.3nm,0.3s,baz=5.1,slow=15,SNR=4.1						
	comp=E,0.1nm,0.3s						

OMAN ***26*** *23:37:31.7±0.2, 23°.17N×60°.53E, h28km±5km, ml3.5/21, Error ellipse: s-maj=6.1km s-min=2.4km az=263.0*

DSN ***26*** *23:37:31.4±1.9, 23°.02N×60°.29E, h10km, ML3.1/9, Error ellipse: s-maj=26.5km s-min=16.7km az=16.0*

ISC 26 23:37:29.2±3.5**, 23°.17N**±0°.05×**60°.54E**±0°.08**, h13**km±27km**, n35,** σ**1§13**/51**, 1C, Gulf of Oman**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JLN	Jalan Bani Buh	1.45	226	P	Pb	23 37 56.1	+0.1
	SNR=65						
JLN				S	Sb	23 38 14.6	+0.1
WBK	Wadi Bani Khal	1.55	249	P	Pn	23 37 57.3	+0.8
	SNR=327						
WBK				S	Sn	23 38 16.8	+0.2
WSAR	Wadi Sarin	1.75	273	P	Pn	23 38 00.1	+0.7
WSAR				S	Sn	23 38 19.9	-1.7
BIDO	Bidbid	2.24	280	P	Pn	23 38 06.9	+0.8
BIDO				S	Sn	23 38 34.0	+0.3
NGCH	Negor - Chabah	2.25	14	P	Pn	23 38 06.6	+0.4
	SNR=37						
NGCH				S	Sb	23 38 37.8	+0.3
SMDO	Samad	2.29	268	P	Pn	23 38 07.6	+0.8
	SNR=28						
JMDO	Jabal Madar	2.38	251	P	Pn	23 38 08.9	+0.9
	SNR=571						
HOQ	Hoqain	2.99	279	P	Pn	23 38 17.2	+0.8
	SNR=16						
HOQ				S	Sn	23 38 52.4	+0.2
BSY	Bisya	3.10	263	P	Pn	23 38 18.8	+0.8
	SNR=15						
MHTO	MHTO	3.22	228	P	Pn	23 38 20.7	+1.2
MHTO				S	Sn	23 38 58.6	+0.8
	SNR=6.3						
JASK	Jask - Hormozg	3.62	318	P	Pn	23 38 25.8	+0.7
	SNR=46						
JASK				S	Sn	23 39 07.6	-0.2
ARQ	Araqi	3.70	273	P	Pn	23 38 26.8	+0.7
	SNR=13						
SOHO	SOHO	3.79	286	P	Pn	23 38 27.6	+0.1
SOHO	SOHO	3.79	286	P	Pn	23 38 28.1	+0.7
SOHO				S	Sn	23 39 12.5	+0.5
DQM	DQM	4.26	221	P	Pn	23 38 35.0	+1.1
DQM				S	Sn	23 39 22.4	-1.2
UOSS	Minazif	4.34	295	P	Pn	23 38 35.0	0.0
UOSS	Minazif	4.34	295	P	Pn	23 38 35.6	+0.7
HATD	Hatta, Dubai	4.35	293	*i* P	Pn	23 38 38.4	+3.2
	SNR=6.9						
HATD				S	Sn	23 39 24.9	-0.9
HATD	Hatta, Dubai	4.35	293	P	Pn	23 38 35.8	+0.7
	SNR=6.9						
ASHO	Ashiyiah	4.37	291	*i* P	Pn	23 38 37.0	+1.7
	SNR=18						
ASHO	Ashiyiah	4.37	291	P	Pn	23 38 36.1	+0.7
	SNR=18						
MDH	Madha	4.41	300	P	Pn	23 38 36.2	+0.3
MDH	Madha	4.41	300	P	Pn	23 38 36.7	+0.7
ALNE	Al Ain	4.48	282	P	Pn	23 38 37.2	+0.4
ALNE				S	Sn	23 39 28.7	-0.2
ALNE	Al Ain	4.48	282	P	Pn	23 38 37.4	+0.5
ALNE				⇑S	Sn	23 39 29.7	+0.8
MSFE	Esma-Masafi	4.55	300	P	Pn	23 38 38.0	+0.1
BANOM	Banah	4.73	306	*i* P	Pn	23 38 41.1	+0.7
	SNR=18						
BANOM	Banah	4.73	306	P	Pn	23 38 41.1	+0.7
	SNR=18						
FAQ	Al Faqa, Dubai	4.79	290	P	Pn	23 38 41.8	+0.7
	SNR=10.0						
FAQ				S	Sn	23 39 37.1	+0.6
SHME	Shamm	4.92	307	*i* P	Pn	23 38 46.5	+3.6
	SNR=11						
SHME	Shamm	4.92	307	P	Pn	23 38 44.1	+1.1
	SNR=11						
UMZA	Um Al Zommool	4.97	266	P	Pn	23 38 44.3	+0.6
UMZA				S	Sn	23 39 41.5	+0.4
ASUD	Al Ashush, Dub	4.98	288	P	Pn	23 38 44.5	+0.7
ASUD				S	Sn	23 39 42.4	+1.1
RAYN	Ar Rayn	13.81	274	P	Pn	23 40 42.2	-2.7
RAYN	Ar Rayn	13.81	274	P	Pn	23 40 43.2	-1.7

IDC ***26*** *23:40:29.4±0.5, 25°.93N×99°.84E, h0km, mb4.3/26, mbtmp4.3/28, ML4.9/2, MS4.3/19, Error ellipse: s-maj=15.2km s-min=11.7km az=51.0*

BJI ***26*** *23:40:29.8±0.0, 25°.87N×99°.81E, h10km, mb4.5/58, mB4.8/31, ML4.5/13, Ms4.9/73, Ms7 4.7/67*

NEIC ***26*** *23:40:31.6±1.6, 25°.88N±0°.06×99°.88E±0°.04, h10km±1km, mb4.6/64, Error ellipse: s-maj=11.2km s-min=3.4km az=145.0*

GCMT ***26*** *23:40:31.8±0.2, 25°.75N±0°.02×99°.82E±0°.01, h23km±1km, MW5.0/116, Moment Tensor Solution. s42,c48; s116,c165; Duration: 0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*0.08±.15;* $M_{\theta\theta}$*-4.24±.13;* $M_{\phi\phi}$*4.16±.13;* $M_{r\theta}$*0.25±.22;* $M_{\theta\phi}$*0.91±.11;* $M_{\phi r}$*0.25±.18; Best double couple:* M_0*4.31300×10*^{16} *NP1:*ϕ_s*51.00000°, δ89.00000°, λ5.00000°. NP2:*ϕ_s*321.00000°, δ85.00000°, λ179.00000°. Principal axes: T 4.2760, Plg4.0000°, Azm276.0000°; N 0.0770, Plg85.0000°, Azm59.0000°; P -4.3490, Plg3.0000°, Azm186.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***26*** *23:40:32.5±1.0, 25°.78N×99°.74E, h30km, mb4.7/42, MS4.5/4 Error ellipse: s-maj=9.5km s-min=4.7km az=124.3*

ISC 26 23:40:30.7±0.3**, 25°.79N**±0°.03×**99°.86E**±0°.03**, h10**km**, n313,** σ**1§79**/330**, mb4.6**/92**, MS4.4**/29**, 30C-20D, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNCH	TengChong	1.42	238	⇑Pn	Pb	23 40 56.5	-0.9
TNCH				Pg	Pg	23 40 57.8	-0.2
TNCH				Sg	Sn	23 41 14.5	-1.2
TNCH				smax	smax		
	comp=N,42µm,1.1s						
TNCH				smax	smax		
	comp=E,48µm,1.3s						
PZH	PanZhiHua	1.84	67	Pg	Pb	23 41 03.5	-1.0
PZH				Sg	Sb	23 41 28.0	+0.3
PZH				smax	smax		
	comp=N,8µm,0.8s						
PZH				smax	smax		
	comp=E,11µm,1.0s						
KMI	Kunming	2.69	104	⇑Pn	Pb	23 41 16.8	-2.2
KMI				Pg	Pg	23 41 21.0	-1.3
KMI				Sg	Sg	23 41 58.0	+0.9
KMI				smax	smax		
	comp=N,1µm,1.0s						
KMI				smax	smax		
	comp=E,1µm,1.1s						
LKP	Lekhapani	3.91	294	*e*P	Pb	23 41 33.3	-6.4
LKP				IAmb	IAmb	23 41 47.5	
	comp=Z,724nm,0.7s						
MOKO	MOKOCHONG	4.83	277	*e*P	Pn	23 41 46.9	+3.3
MOKO				IAmb	IAmb	23 41 50.0	
	comp=Z,261nm,0.7s						
MND	Mandalay	5.08	223		Pn	23 41 48.8	+2.0
MND					Pg	23 42 03.6	-4.4
KOHI	KOHIMA	5.18	271	*e*P	Pn	23 41 51.8	+3.4
KOHI				IAmb	IAmb	23 42 13.1	
	comp=Z,884nm,1.6s						
IMP	Imphal	5.43	261	*e*P	Pn	23 41 55.9	+4.1
CRAI	Chiangrai	5.55	175	Pn	Pn	23 41 56.0	+2.6
ZIRO	ZIRO	5.65	289	*e*P	Pn	23 41 55.5	+0.6
ITAN	ITANAGAR	5.66	285	*e*P	Pn	23 41 56.3	+1.4
ITAN				IAmb	IAmb	23 41 58.0	
	comp=Z,360nm,1.0s						
CD2	Chengdu	6.15	33	Pn	Pn	23 42 03.0	+1.3
CD2				Pg	Pb	23 42 21.0	+3.0
CD2				Sg	Sg	23 43 45.5	-2.8
CD2				smax	smax		
	comp=Z,240nm,1.2s						
CD2				smax	smax		
	comp=Z,510nm,1.4s						
CD2				LR	LR		
	comp=Z,26µm,7.6s						
CD2				LR	LR		
	comp=Z,34µm,7.4s						
CD2				LR	LR		
	comp=Z,15µm,9.4s						
GYA	Guiyang	6.16	82	Pn	Pn	23 42 05.5	+3.7
GYA				Sn	Sn	23 43 21.8	+9.4
GYA				smax	smax		
	comp=Z,140nm,1.3s						
GYA				smax	smax		
	comp=Z,130nm,1.2s						
GYA				LR	LR		
	comp=Z,3µm,5.6s						
GYA				LR	LR		
	comp=Z,2µm,4.9s						
GYA				LR	LR		
	comp=Z,2µm,6.0s						
TEZP	TEZPUR	6.39	279	*e*P	Pn	23 42 05.2	+0.3
TEZP				IAmb	IAmb	23 42 07.4	
	comp=Z,158nm,0.9s						
CHTO	Chiang Mai	6.99	187	Pn	Pn	23 42 15.8	+2.6
CHTO	Chiang Mai	6.99	187	P	Pn	23 42 15.8	+2.6
SAIH	SAIHA	7.08	244	*e*P	Pn	23 42 18.0	+3.5
SAIH				IAmb	IAmb	23 42 21.1	
	comp=Z,52nm,0.8s						
SHL	Shillong	7.20	270	Pn	Pn	23 42 17.0	+0.9
SHL	Shillong	7.20	270	*e*P	Pn	23 42 15.6	-0.5
SHL				IAmb	IAmb	23 42 18.6	
	comp=Z,50nm,0.9s						
SHL	Shillong	7.20	270	P	Pn	23 42 17.0	+0.9
PHRA	Phrae	7.26	177	Pn	Pn	23 42 19.4	+2.5
CM31	Chiang Mai Arr	7.34	187	Pn	Pn	23 42 21.6	+3.6
CMAR	Chiang Mai Arr	7.34	187	Pn	Pn	23 42 20.5	+2.5
	comp=Z,3.5nm,0.3s,baz=3.6,slow=14,SNR=48						
CMAR				Pg	Pg	23 42 47.8	-3.5
	comp=Z,1.0nm,0.3s,baz=0.3,slow=18,SNR=6.9						
CMAR				Lg	Lg	23 44 27.2	
	comp=Z,0.9nm,0.3s,baz=358,slow=29,SNR=2.6						
CMAR				LR	LR	23 45 33.4	
	comp=Z,4µm,18.8s,baz=15,slow=41						
	comp=Z,11nm,0.5s						
CMAR	Chiang Mai Arr	7.34	187	Pn	Pn	23 42 21.9	+3.9
GUWA	GUWAHATI	7.36	275	*e*P	Pn	23 42 18.5	+0.3
GUWA				IAmb	IAmb	23 42 20.4	
	comp=Z,82nm,0.9s						
BRDH	Bariadhala	8.11	249	Pn	Pn	23 42 29.8	+1.3
	comp=Z,27nm,0.3s,baz=90,slow=16,SNR=4.5						
BRDH				LR	LR	23 46 07.5	
	comp=Z,2µm,19.0s,baz=91,slow=42						
	comp=Z,69nm,0.4s						
LSA	Lhasa	8.64	299	P	Pn	23 42 36.8	+0.6
LSA				S	Sn	23 44 24.3	+10
LSA				pmax	pmax		
	comp=Z,37nm,0.9s						
LSA				LR	LR		
	comp=Z,3µm,11.0s						
LSA				LR	LR		
	comp=Z,3µm,15.3s						
LSA				LR	LR		
	comp=Z,6µm,14.2s						
LSA	Lhasa	8.64	299	Pn	Pn	23 42 37.1	+0.9
LSA	Lhasa	8.64	299	P	Pn	23 42 37.2	+0.9
GULI	GuiLin	9.51	91	⇑P	Pn	23 42 55.5	+7.8
GULI				pmax	pmax		
	comp=Z,40nm,1.1s						
GULI				LR	LR		
	comp=Z,3µm,7.1s						
GULI				LR	LR		
	comp=Z,5µm,8.7s						
ENH	Enshi	9.61	60	Pn	Pn	23 42 49.5	+0.3
GTK	Tadong	10.19	281	*e*P	Pn	23 42 56.2	-1.0
GTK				IAmb	IAmb	23 42 59.0	
	comp=Z,57nm,0.7s						
LZH	Lanzhou	10.82	17	⇓*i*P	Pn	23 43 07.8	+2.0
LZH				pP		23 43 14.5	
LZH				sP		23 43 17.8	
LZH				pmax	pmax		
	comp=Z,43nm,1.2s						
LZH				pmax	pmax		
	comp=Z,230nm,5.2s						
LZH				LR	LR		
	comp=Z,6µm,11.2s						
LZH				LR	LR		
	comp=Z,5µm,11.9s						
LZH				LR	LR		
	comp=Z,7µm,14.9s						
GOMU	GeErMu	11.24	339	P	Pn	23 43 10.5	-1.2
GOMU				pP		23 43 15.0	
GOMU				sP		23 43 16.0	
GOMU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,65nm,4.9s						
GOMU				LR	LR		
	comp=Z,8µm,10.4s						
GOMU				LR	LR		
	comp=Z,12µm,12.4s						
GOMU				LR	LR		
	comp=Z,4µm,10.1s						
XAN	Xi'an	11.37	42	⇑P	Pn	23 43 12.3	-1.0
XAN				S	Sn	23 45 17.5	-3.0
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
XAN				LR	LR		
	comp=Z,10µm,15.2s						
XAN				LR	LR		
	comp=Z,7µm,13.7s						
XAN				LR	LR		
	comp=Z,3µm,14.3s						
QIZ	Qiongzhong	11.42	124	P	Pn	23 43 13.0	-1.0
QIZ				LR	LR		
	comp=Z,5µm,15.0s						
QIZ				LR	LR		
	comp=Z,4µm,13.1s						
QIZ				LR	LR		
	comp=Z,2µm,14.6s						
CNSH	ChangSha	11.90	76	⇑P	Pn	23 43 19.3	-1.2
CNSH				S	Sn	23 45 30.5	-2.9
CNSH				LR	LR		
	comp=Z,11µm,10.9s						
CNSH				LR	LR		
	comp=Z,1µm,10.3s						
CNSH				LR	LR		
	comp=Z,3µm,18.8s						
JIRN	Jiri	12.36	282	*e*P	Pn	23 43 25.8	-1.3
GUN	Gumba	12.66	283	*e*P	Pn	23 43 29.1	-2.0
BOK	Bokaro	12.85	264	*e*P	Pn	23 43 33.6	+0.2
BOK				IAmb	IAmb	23 43 36.1	
	comp=Z,39nm,0.8s						
PKI	Pulchoki	13.04	281	*e*P	Pn	23 43 34.3	-2.1
	comp=Z,79nm,0.5s						
PKIN	Phulchoki	13.05	281	*e*P	Pn	23 43 34.3	-2.2
	comp=Z,100nm,0.5s						
KKN	Kakani	13.17	282	*e*P	Pn	23 43 36.0	-2.1
	comp=Z,285nm,1.4s						
DMN	Daman	13.31	281	*e*P	Pn	23 43 37.5	-2.5
GTA	Gaotai	13.59	360	*e*P	P	23 43 53.0	+0.3
GTA				pP	Pn	23 44 00.5	+17
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GTA				LR	LR		
	comp=N,980nm,11.6s						
GTA				LR	LR		
	comp=E,5µm,12.4s						
GTA				LR	LR		
	comp=Z,2µm,14.5s						
WHN	Wuhan	13.63	66	P	Pn	23 43 45.5	+1.4
WHN				sP	P	23 43 53.0	-0.1
WHN				S	Sn	23 46 20.3	+4.6
WHN				SS	S	23 46 38.8	0.0
WHN				pmax	pmax		
	comp=Z,70nm,1.0s						
WHN				pmax	pmax		
	comp=Z,560nm,3.7s						
WHN				LR	LR		
	comp=Z,10µm,6.9s						
WHN				LR	LR		
	comp=Z,6µm,8.6s						
WHN				LR	LR		
	comp=Z,14µm,10.5s						
GKN	Gorkha	13.76	283	*e*P	Pn	23 43 43.3	-2.7
LYN	LuoYang	13.96	48	⇓*i*P	Pn	23 43 46.3	-2.3
LYN				pP	P	23 43 55.5	-1.2
LYN				S	Sn	23 46 19.3	-4.5
LYN				pmax	pmax		
	comp=Z,20nm,0.6s						
LYN				LR	LR		
	comp=Z,5µm,13.8s						
LYN				LR	LR		
	comp=Z,3µm,9.0s						
DANN	Dangsing	14.57	284	*e*P	Pn	23 43 52.8	-4.4
	comp=Z,117nm,0.8s						
KOLN	Koldanda	14.65	281	*e*P	Pn	23 43 54.1	-4.2
	comp=Z,168nm,1.7s						
PYUN	Piuthan	15.22	282	*e*P	Pn	23 44 00.9	-5.0
	comp=Z,120nm,0.6s						
TIY	Taiyuan	15.97	39	*e*P	P	23 44 19.0	-0.1
TIY				pmax	pmax		
	comp=Z,38nm,0.7s						
TIY				LR	LR		
	comp=Z,3µm,9.1s						
TIY				LR	LR		
	comp=Z,4µm,9.6s						
TIY				LR	LR		
	comp=Z,2µm,10.6s						
BTO	Baotou	17.03	27	*e*P	Pn	23 44 27.5	-1.6
BTO				pP	sP	23 44 36.5	+0.5
BTO				sP	pP	23 44 43.0	+8.7
BTO				S	Sn	23 47 31.8	-6.7
BTO				sS	sS	23 47 49.5	-4.4
BTO				SS	SnSn	23 47 55.3	+3.4
BTO				pmax	pmax		
	comp=Z,26nm,0.9s						
BTO				pmax	pmax		
	comp=Z,480nm,4.5s						
BTO				LR	LR		
	comp=Z,9µm,11.3s						
BTO				LR	LR		
	comp=Z,14µm,10.7s						
BTO				LR	LR		
	comp=Z,7µm,8.9s						
SRIT	Nakonsritamara	17.10	181		P	23 44 33.1	+1.5
HNS	HongShan	17.12	44	⇑P	P	23 44 32.5	+0.7
HNS				S	S	23 47 45.8	-4.3
HNS				pmax	pmax		
	comp=Z,15nm,1.2s						
HNS				LR	LR		
	comp=Z,6µm,11.9s						
HNS				LR	LR		
	comp=Z,3µm,11.2s						
HNS				LR	LR		
	comp=Z,2µm,13.5s						
NJ2	Nanjing	17.76	65	*e*P	Pn	23 44 34.0	-4.0
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,280nm,5.7s						
NJ2				LR	LR		
	comp=Z,4µm,11.4s						
NJ2				LR	LR		
	comp=Z,3µm,9.8s						
HHC	Hu-ho-hao-te	17.90	30	*e*P	P	23 44 41.0	+0.5
HHC				PP	PnPn	23 44 57.0	+6.3
HHC				S	Sn	23 47 56.8	-2.7
HHC				sS	sS	23 48 07.8	-3.8
HHC				pmax	pmax		
	comp=Z,31nm,0.9s						
HHC				pmax	pmax		
	comp=Z,230nm,5.4s						
HHC				LR	LR		
	comp=Z,7µm,8.5s						
HHC				LR	LR		
	comp=Z,3µm,8.2s						
HHC				LR	LR		
	comp=Z,5µm,10.5s						
TIA	Tai'an	18.06	51	P	P	23 44 42.3	+0.1
TIA				S	S	23 48 07.3	-2.0
TIA				pmax	pmax		
	comp=Z,17nm,0.9s						
TIA				pmax	pmax		
	comp=Z,120nm,4.6s						
TIA				LR	LR		
	comp=Z,1µm,8.8s						
TIA				LR	LR		
	comp=Z,4µm,12.2s						
TIA				LR	LR		
	comp=Z,5µm,12.9s						
SSE	Sheshan	19.48	69	P	Pn	23 44 58.5	-0.5
SSE				S	Sn	23 48 35.8	-1.8
SSE				pmax	pmax		
	comp=Z,18nm,0.6s						
SSE				LR	LR		
	comp=Z,2µm,15.7s						
SSE				LR	LR		
	comp=Z,810nm,13.3s						
BJT	Baijiatuau	19.68	40	P	Pn	23 44 59.4	-1.9
BJT	Baijiatuau	19.68	40	P	Pn	23 44 59.4	-1.9
BJT				pmax	pmax		
	comp=Z,27nm,1.3s						
BJI	Beijing	19.70	40	P	Pn	23 45 00.8	-0.7
BJI				pP	sP	23 45 06.3	+1.2
BJI				sP	pP	23 45 12.3	+8.8
BJI				sS	sS	23 48 46.3	-1.3
BJI				pmax	pmax		
	comp=Z,11nm,1.2s						
BJI				LR	LR		
	comp=Z,4µm,14.1s						
BJI				LR	LR		
	comp=Z,3µm,14.9s						
BJI				LR	LR		
	comp=Z,1µm,9.3s						
WMQ	Urumqi	20.54	334	*e*P	Pn	23 45 09.3	-2.2
WMQ				pP	pP	23 45 11.5	-1.3
WMQ				pmax	pmax		
	comp=Z,27nm,1.3s						
WMQ				LR	LR		
	comp=Z,2µm,12.5s						
WMQ				LR	LR		
	comp=Z,570nm,14.3s						
BHPL	Bhopal	20.56	268	*e*P	Pn	23 45 09.7	-2.2
BHPL				IAmb	IAmb	23 45 18.1	
	comp=Z,36nm,0.9s						
SMLA	Simla	20.63	290	*e*P	P	23 45 09.6	-0.7
SMLA				IAmb	IAmb	23 45 15.4	
	comp=Z,30nm,0.8s						
IPM	Ipoh	21.22	177	P	P	23 45 18.1	+1.4
HYB	Hyderabad	21.46	251	*e*P	P	23 45 23.8	+4.4
XLT	XiLinHaoTe	22.38	32	⇑*i*P	P	23 45 29.3	+0.2
XLT				S	S	23 49 34.5	-0.5
XLT				sS	sS	23 49 40.5	-0.3
XLT				SS	SnSn	23 50 13.8	+11
XLT				pmax	pmax		
	comp=Z,14nm,0.8s						
XLT				pmax	pmax		
	comp=Z,72nm,4.3s						
XLT				LR	LR		
	comp=Z,2µm,8.9s						
XLT				LR	LR		
	comp=Z,2µm,10.0s						
DL2	Dalian	22.50	49	P	P	23 45 30.5	+0.1
DL2				S	S	23 49 37.5	+0.2
DL2				pmax	pmax		
	comp=Z,17nm,0.9s						
DL2				LR	LR		
	comp=Z,1µm,8.8s						
DL2				LR	LR		
	comp=Z,1µm,13.7s						
DL2				LR	LR		
	comp=Z,1µm,10.9s						
SONM	Songino Array	22.60	12	P	P	23 45 30.8	-0.7
	comp=Z,8.8nm,1.1s,baz=196,slow=10,SNR=25						
SONM				LR	LR	23 55 12.5	
	comp=Z,2µm,19.0s,baz=188,slow=39						
	comp=Z,8.8nm,1.1s						
SONM	Songino Array	22.60	12	P	P	23 45 31.5	0.0
SONM	Songino Array	22.60	12	*e*P	P	23 45 32.2	+0.7
SONM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ULN	Ulaanbaatar	22.76	13	P	P	23 45 31.7	-1.5
ULN	Ulaanbaatar	22.76	13	*i* P	P	23 45 34.6	+1.4
ULN				pmax	pmax		
	comp=Z,13nm,1.2s						
PSI	Prapat	22.87	182	P	P	23 45 35.2	+0.6
PSI				pmax	pmax		
	comp=Z,19nm,1.2s						
TGY	Tagaytay City	22.93	116	LR	LR	23 54 17.9	
	comp=Z,966nm,18.3s,baz=222,slow=36						
RPSI	Rantau Prapat	22.98	182	P	P	23 45 35.2	-0.4
TARG	Taragay, Kyrgy	24.16	317	P	P	23 45 47.9	+0.3
TARG				IAmb	IAmb	23 46 01.5	
	comp=Z,20nm,0.9s						
TARG	Taragay, Kyrgy	24.16	317	P	P	23 45 47.9	+0.3
TARG				pmax	pmax		
	comp=Z,21nm,0.9s						
KSH	Kashi	24.23	310	P	P	23 45 49.5	+1.6
KSH				pP	sP	23 45 56.0	+2.7
KSH				S	S	23 50 11.0	+4.5
KSH				pmax	pmax		

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          comp=Z,16nm,1.1s
KSH                               LR      LR
          comp=Z,920nm,15.2s
KSH                               LR      LR
          comp=Z,1µm,11.4s
KSH                               LR      LR
          comp=Z,2µm,10.8s
NIL   Nilore            24.35 295  P      P       23 45 48.0 -0.9
NIL   Nilore            24.35 295  P      P       23 45 48.0 -0.9
NIL                                pmax   pmax
          comp=Z,55nm,1.1s
ZAK   Zakamensk         24.70   5 eP      P       23 45 51.5 -0.4
ZAK                                pmax   pmax
          comp=Z,8.0nm,1.2s
KDJ   Kajisay           24.78 317  P      P       23 45 53.2 +0.4
KDJ                                IAmb   IAmb    23 46 03.5
          comp=Z,19nm,0.9s
KDJ   Kajisay           24.78 317  P      P       23 45 53.2 +0.4
KDJ                                pmax   pmax
          comp=Z,19nm,0.9s
KKM   Kota Kinabalu     25.10 139  P      P       23 45 56.4 +0.6
NRN   Naryn             25.15 314  P      P       23 45 56.4  0.0
NRN   Naryn             25.15 314  P      P       23 45 56.4  0.0
NRN                                pmax   pmax
          comp=Z,10.0nm,0.9s
MK31  Makanchi Array    25.19 331  P      P       23 45 56.9 +0.6
MK31                               IAmb   IAmb    23 46 10.0
          comp=Z,15nm,0.9s
MK31  Makanchi Array    25.19 331  P      P       23 45 56.9 +0.6
MK31                               pmax   pmax
          comp=Z,15nm,1.0s
MKAR  Makanchi Array    25.19 331  P      P       23 45 56.4 +0.1
          comp=Z,11nm,0.8s,baz=141,slow=9.9,SNR=58
MKAR                               LR     LR      23 57 25.1
          comp=Z,179nm,18.2s,baz=152,slow=40
          comp=Z,11nm,0.8s
MKAR  Makanchi Array    25.19 331  P      P       23 45 56.9 +0.5
MKAR  Makanchi Array    25.19 331 eP      P       23 45 57.0 +0.7
MKAR                               pmax   pmax
          comp=Z,11nm,0.8s
SNY   Shenyang          25.27  45 ⇓P      P       23 46 00.0 +3.0
SNY                                pmax   pmax
          comp=Z,14nm,0.5s
SNY                                LR     LR
          comp=Z,2µm,13.5s
SNY                                LR     LR
          comp=Z,2µm,12.3s
JOW   Kunigami          25.48  81  P      P       23 45 59.8 +0.7
          comp=Z,32nm,0.8s,baz=215,slow=10,SNR=4.0
JOW                                LR     LR      23 56 51.4
          comp=Z,1µm,19.8s,baz=320,slow=39
          comp=Z,32nm,0.8s
DGZ   Jazzator, Alta    25.75 341 i P     P       23 46 04.0 +2.5
DGZ                                pmax   pmax
          comp=Z,13nm,0.9s
MOY   Mondy             25.86   2 eP      P       23 46 02.4  0.0
KBK   Karagaybulak      26.45 316  P      P       23 46 09.6 +1.6
          SNR=9.4
KSRS  Korea Array       26.48  57  P      P       23 46 08.0 -0.1
          comp=Z,2.3nm,0.8s,baz=260,slow=11,SNR=1.9
KSRS                               LR     LR      23 56 11.0
          comp=Z,688nm,19.0s,baz=255,slow=36
          comp=Z,2.3nm,0.8s
KSRS  Korea Array       26.48  57 eP      P       23 46 12.8 +4.7
KSRS                               pmax   pmax
          comp=Z,3.0nm,0.9s
SDSI  Sungai Dareh      26.61 176  P      P       23 46 15.2 +5.9
          comp=Z,10nm,1.4s
AAK   Ala-Archa         26.73 315  P      P       23 46 12.1 +1.6
          SNR=5.8
AAK   Ala-Archa         26.73 315  P      P       23 46 11.8 +1.2
          comp=Z,2.7nm,0.5s,baz=136,slow=5.3,SNR=17
AAK                                LR     LR      23 57 40.6
          comp=Z,644nm,19.0s,baz=112,slow=39
          comp=Z,2.7nm,0.5s
AAK   Ala-Archa         26.73 315  P      P       23 46 11.9 +1.4
AAK                                IAmb   IAmb    23 46 21.0
          comp=Z,11nm,1.0s
AAK   Ala-Archa         26.73 315 i P     P       23 46 11.7 +1.2
AAK                                pmax   pmax
          comp=Z,9.0nm,1.0s
FRU1  Bishkek           26.73 316  P      P       23 46 11.2 +0.8
FRU1                               IAmb   IAmb    23 46 20.8
          comp=Z,17nm,1.1s
FRU1  Bishkek           26.73 316  P      P       23 46 11.2 +0.8
FRU1                               pmax   pmax
          comp=Z,17nm,1.1s
AML   Almayashu         26.99 314  P      P       23 46 14.5 +1.4
          SNR=11
USP   Ospenovka         27.05 317  P      P       23 46 14.3 +1.1
          SNR=8.1
EKS2  Erkin-Say         27.20 315  P      P       23 46 16.4 +1.8
          SNR=9.1
CN2   Changchun         27.48  43 eP      P       23 46 17.3 +0.3
CN2                               eS      S       23 50 55.8 -1.9
CN2                                pmax   pmax
          comp=Z,10.0nm,0.5s
CN2                                LR     LR
          comp=Z,2µm,17.0s
CN2                                LR     LR
          comp=Z,860nm,12.0s
JNU   Nakatsue          27.91  67  P      P       23 46 21.3 +0.2
          comp=Z,9.8nm,1.0s,baz=120,slow=15,SNR=2.1
JNU                                LR     LR      23 57 29.2
          comp=Z,718nm,19.4s,baz=257,slow=37
          comp=Z,9.8nm,1.0s
KBL   Kabul             27.95 296  P      P       23 46 21.3 -0.3
KBL   Kabul             27.95 296  P      P       23 46 21.3 -0.3
KBL                                pmax   pmax
          comp=Z,27nm,1.1s
GAR   Garm              28.07 305  P      P       23 46 21.2 -1.3
GAR                                IAmb   IAmb    23 46 41.0
          comp=Z,13nm,0.8s
BTK   Batken            28.08 308  P      P       23 46 22.7 +0.2
BTK                                IAmb   IAmb    23 46 41.6
          comp=Z,11nm,0.9s
BTK   Batken            28.08 308  P      P       23 46 22.7 +0.2
BTK                                pmax   pmax
          comp=Z,11nm,1.0s
CHGR  Chuyangaron       28.82 304  P      P       23 46 29.4 +0.2
CHGR                               IAmb   IAmb    23 46 41.4
          comp=Z,18nm,1.1s
CHGR  Chuyangaron       28.82 304  P      P       23 46 29.4 +0.2
CHGR                               pmax   pmax
          comp=Z,18nm,1.1s
KK31  Karatay Array     29.52 313  P      P       23 46 34.8 -0.5
KK31  Karatay Array     29.52 313  P      P       23 46 34.8 -0.5
KK31                               pmax   pmax
          comp=Z,5.0nm,1.5s
KKAR  Karatay Array     29.52 313  P      P       23 46 35.0 -0.2
KKAR  Karatay Array     29.52 313  P      P       23 46 35.1 -0.2
KURBB Kurchatov Arra    29.72 332  P      P       23 46 36.8  0.0
          comp=Z,1.3nm,0.6s,baz=138,slow=9.8,SNR=12
KURBB                              LR     LR      23 58 20.7
          comp=Z,1µm,20.8s,baz=102,slow=36
          comp=Z,1.3nm,0.6s
KURK  Kurchatov         29.75 332  P      P       23 46 37.1 -0.1
KURK  Kurchatov         29.75 332 i P     P       23 46 37.9 +0.8
KURK                               pmax   pmax
          comp=Z,3.0nm,0.9s
ZAA0  Zalesovo Array    30.27 342  P      P       23 46 42.0 +0.3
ZAA0                               IAmb   IAmb    23 46 45.3
          comp=Z,12nm,1.3s
ZALV  Zalesovo Beam     30.27 342  P      P       23 46 40.5 -1.2
          comp=Z,7.9nm,1.1s,baz=139,slow=9.2,SNR=11
ZALV                               LR     LR      00 00 05.9
          comp=Z,323nm,20.9s,baz=165,slow=39
          comp=Z,7.9nm,1.1s
ZALV  Zalesovo Beam     30.27 342         P       23 46 41.3 -0.4
ZALV  Zalesovo Beam     30.27 342 eP      P       23 46 41.0 -0.7
ZALV                               pmax   pmax
          comp=Z,8.0nm,1.1s
JMN   Monobe            30.48  67  P      P       23 46 43.0 -0.9
TOLI2 Tolitoli          31.76 137  P      P       23 46 52.8 -2.4
TOLI2                              IAmb   IAmb    23 47 07.6
          comp=Z,7.6nm,1.0s
USA0B Ussuriysk Arra    31.82  47  P      P       23 46 54.0 -1.5
USA0B Ussuriysk Arra    31.82  47  P      P       23 46 54.0 -1.5
USA0B                              pmax   pmax
          comp=Z,4.0nm,0.9s
USRK  Ussuriysk Ar.     31.82  47  P      P       23 46 54.2 -1.3
          comp=Z,3.3nm,0.9s,baz=255,slow=6.1,SNR=5.2
USRK                               LR     LR      00 01 12.5
          comp=Z,612nm,18.8s,baz=198,slow=39
          comp=Z,3.3nm,0.9s
USRK  Ussuriysk Ar.     31.82  47  P      P       23 46 53.9 -1.6
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USRK  Ussuriysk Ar.     31.82  47  P      P       23 46 53.9 -1.6
HEH   HeiHe             32.35  34 eP      P       23 47 01.5 +1.5
HEH                                LR     LR
          comp=Z,3µm,13.1s
HEH                                LR     LR
          comp=Z,2µm,13.1s
HEH                                LR     LR
          comp=Z,2µm,11.4s
KLR   Kul'dur           34.05  38  LR     LR      00 01 18.9
          comp=Z,521nm,21.1s,baz=236,slow=37
KLR   Kul'dur           34.05  38 i P     P       23 47 16.3 +1.3
KLR                                pmax   pmax
          comp=Z,2.0nm,1.3s
BVAR  Borovoye Array    35.02 329  LR     LR      00 03 08.2
          comp=Z,672nm,18.1s,baz=119,slow=39
BRVK  Borovoye          35.09 329  P      P       23 47 24.0 +0.1
BRVK                               IAmb   IAmb    23 47 31.6
          comp=Z,10.0nm,1.1s
BRVK  Borovoye          35.09 329 i P     P       23 47 24.5 +0.6
BRVK                               pmax   pmax
          comp=Z,11nm,1.1s
KAPI  Kappang           36.20 145  LR     LR      00 04 59.5
          comp=Z,330nm,20.1s,baz=314,slow=40
GEYT  Alibeck           37.17 299  P      P       23 47 42.1 +0.1
          comp=Z,9.0nm,1.0s,baz=126,slow=7.5,SNR=19
          comp=Z,9.0nm,1.0s
GEYT  Alibeck           37.17 299  P      P       23 47 42.3 +0.3
GEYT                               IAmb   IAmb    23 47 49.7
          comp=Z,11nm,0.9s
GEYT  Alibeck           37.17 299  P      P       23 47 42.3 +0.3
GEYT                               pmax   pmax
          comp=Z,11nm,1.0s
GYA0B ALIBECK ARRAY     37.17 299  P      P       23 47 42.5 +0.6
GYA0B                              IAmb   IAmb    23 47 49.7
          comp=Z,12nm,0.9s
WSAR  Wadi Sarin        37.49 275  LR     LR      00 05 46.0
          comp=Z,299nm,18.3s,baz=102,slow=40
ABKAR Akbulak array     38.75 318  P      P       23 47 55.0  0.0
ASAJ  Asahikawa         39.01  51  P      P       23 47 57.3 -0.1
          comp=Z,2.2nm,0.2s,baz=158,slow=26,SNR=1.9
          comp=Z,2.2nm,0.2s
YAK   Yakutsk           41.38  21  LR     LR      00 06 10.7
          comp=Z,290nm,19.9s,baz=224,slow=37
SVE   Sverdlovsk        41.81 329 eP      P       23 48 21.4 +1.1
ARU   Arti              42.60 327c iP     P       23 48 28.1 +1.3
ARU                                               23 50 02.3
ARU                                S      S       23 54 50.1 +0.6
ARU                                SS     SS      23 57 54.6 -4.6
ARU                                pmax   pmax
          comp=Z,15nm,2.0s
NRIK  Noril'sk          44.18 354  P      P       23 48 39.0 -0.3
          comp=Z,2.4nm,0.6s,baz=169,slow=7.1,SNR=5.8
          comp=Z,2.4nm,0.6s
NRIK  Noril'sk          44.18 354  P      P       23 48 39.4  0.0
NRIK  Noril'sk          44.18 354 i P     P       23 48 40.9 +1.5
NRIK                               pmax   pmax
          comp=Z,7.0nm,1.1s
SRPI  Serui, Papua      44.65 122  P      P       23 48 56.0  +12
GNI   Garni             47.69 302  P      P       23 49 08.2 +0.5
GNI   Garni             47.69 302 i P     P       23 49 08.5 +0.8
GNI                                pmax   pmax
          comp=Z,13nm,1.3s
NCK   Nalchik           48.61 306ceP      P       23 49 15.8 +1.2
AKH   Akhalkalaki       48.64 303  P      P       23 49 15.9 +0.8
AKH   Akhalkalaki       48.64 303  P      P       23 49 15.9 +0.8
AKH                                pmax   pmax
          comp=Z,27nm,1.2s
ONI   Oni               48.69 305  P      P       23 49 15.6 +0.3
ONI                                IAmb   IAmb    23 49 26.5
          comp=Z,10.0nm,1.1s
ONI   Oni               48.69 305  P      P       23 49 15.6 +0.3
ONI                                pmax   pmax
          comp=Z,10.0nm,1.1s
TIXI  Tiksi             48.69  12  P      P       23 49 13.2 -1.5
TIXI                               IAmb   IAmb    23 49 18.8
          comp=Z,6.4nm,1.0s
TIXI  Tiksi             48.69  12 i P     P       23 49 14.6 -0.1
TIXI                               pmax   pmax
          comp=Z,10.0nm,1.3s
GOF   Gofitskoye        49.08 308⇑eP      P       23 49 18.6 +0.5
GOF                                pmax   pmax
          comp=Z,57nm,0.9s
KBZ   Khabaz            49.13 307  P      P       23 49 17.9 -0.6
          comp=Z,1.1nm,0.8s,baz=153,slow=13,SNR=2.9
          comp=Z,1.1nm,0.8s
KBZ   Khabaz            49.13 307 i P     P       23 49 19.9 +1.4
KBZ                                pmax   pmax
          comp=Z,7.0nm,1.4s
RAYN  Ar Rayn           49.16 280  P      P       23 49 17.9 -1.2
RAYN  Ar Rayn           49.16 280  P      P       23 49 17.9 -1.2
RAYN                               pmax   pmax
          comp=Z,5.0nm,1.2s
SKR   Severo-Kuril’s    49.28  44 eP      P       23 49 13.4 -6.1
KIV   Kislovodsk        49.29 307  P      P       23 49 19.7 -0.1
KIV                                IAmb   IAmb    23 49 32.3
          comp=Z,9.8nm,1.0s
KIV   Kislovodsk        49.29 307 eP      P       23 49 20.3 +0.4
KIV                                pmax   pmax
          comp=Z,11nm,1.1s
KIV                                MLR    MLR
          comp=Z,366nm,16.0s
SHA1  Shidzhatmaz       49.30 307 i P     P       23 49 21.1 +1.0
GURO  Guroymak-BITLI    49.84 300  P      P       23 49 24.7 +0.5
KLMR  Klimovskoe        53.44 328 eP      P       23 49 47.1 -3.5
KLMR                               AMP            23 49 57.9
          comp=Z,24nm,1.5s
KLMR  Klimovskoe        53.44 328 eP      P       23 49 47.1 -3.5
KLMR                               pmax   pmax
          comp=Z,24nm,1.5s
TOKA  Tokat             54.00 302  P      P       23 49 55.2 +0.1
TOKA                               IAmb   IAmb    23 50 05.9
          comp=Z,10.0nm,1.5s
OBN   Obninsk           54.06 321⇑eP      P       23 49 54.6 -0.6
OBN                               e               23 51 04.3
OBN                               e               23 51 57.1
OBN                                pmax   pmax
          comp=Z,4.0nm,0.9s
OBN                                MLR    MLR
          comp=Z,446nm,17.0s
BNN   Bunyan            54.63 301  P      P       23 49 59.2 -0.6
ILGA  Ilgaz             56.02 303  P      P       23 50 09.5 -0.5
BR131 Keskin Array S    56.23 302  P      P       23 50 11.6 +0.2
BR131                              IAmb   IAmb    23 50 18.6
          comp=Z,5.3nm,0.9s
BR131 Keskin Array S    56.23 302  P      P       23 50 11.6 +0.2
BR131                              pmax   pmax
          comp=Z,5.0nm,1.0s
BRTR  Keskin Array B    56.23 302  P      P       23 50 10.8 -0.5
          comp=Z,1.9nm,1.1s,baz=112,slow=8.3,SNR=7.5
          comp=Z,1.9nm,1.1s
BRTR  Keskin Array B    56.23 302  P      P       23 50 11.2 -0.2
BRTR  Keskin Array B    56.23 302  P      P       23 50 11.2 -0.2
WRA   Warramunga Arr    56.47 140  P      P       23 50 13.4 +0.4
          comp=Z,6.1nm,1.0s,baz=328,slow=7.8,SNR=14
          comp=Z,6.1nm,1.0s
WRA   Warramunga Arr    56.47 140 eP      P       23 50 15.4 +2.4
WRA                                pmax   pmax
          comp=Z,4.0nm,0.7s
WB2   Warramunga Arr    56.47 140  P      P       23 50 13.2 +0.2
WB2                                IAmb   IAmb    23 50 16.3
          comp=Z,9.9nm,1.0s
ANTO  Ankara            56.86 302  P      P       23 50 15.5 -0.3
ANTO  Ankara            56.86 302  P      P       23 50 15.5 -0.3
ANTO                               pmax   pmax
          comp=Z,9.0nm,0.9s
BILL  Bilibino          57.55  24⇑eP      P       23 50 23.3 +3.2
BILL                              e               23 51 14.8
BILL                              e               23 52 36.9
BILL                               pmax   pmax
          comp=Z,3.0nm,1.1s
BILL                               MLR    MLR
          comp=Z,370nm,14.0s
MDUB  Mudurnu           57.99 303  P      P       23 50 23.8 +0.1
AKASG Malin Array Be    58.40 315  P      P       23 50 24.9 -1.4
          comp=Z,0.9nm,0.5s,baz=76,slow=6.2,SNR=12
          comp=Z,0.9nm,0.5s
AKASG Malin Array Be    58.40 315 eP      P       23 50 28.7 +2.4
AKASG                              pmax   pmax
          comp=Z,2.0nm,0.5s
AKBB  Malin Array Si    58.40 315  P      P       23 50 25.7 -0.5
AKBB                               IAmb   IAmb    23 50 29.8
          comp=Z,12nm,1.2s
AKBB  Malin Array Si    58.40 315  P      P       23 50 25.7 -0.5
AKBB                               pmax   pmax
          comp=Z,12nm,1.2s
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ISP   Isparta           58.92 300  P      P       23 50 29.4 -0.9
ISP   Isparta           58.92 300  P      P       23 50 29.4 -0.9
ISP                                pmax   pmax
          comp=Z,3.0nm,0.8s
MNK   Minsk             59.06 320 i P     P       23 50 31.1 +0.3
          comp=E,3.0nm,1.1s
MNK                               i P     P       23 50 31.1 +0.3
          comp=N,24nm,0.8s
MNK                               i P     P       23 50 31.1 +0.3
          comp=Z,11nm,0.8s,baz=268
MNK                               i PP    PP      23 52 41.5 +0.5
MNK                               i PPP   PPP     23 54 01.8
MNK                               i S     S       23 58 35.4 -2.1
MNK                               i SS    SS      00 02 18.6  -13
MNK                               i SSS   SSS     00 05 08.1
MNK                               i LR    LR      00 16 15.9
MNK                               i LRM   MLR     00 18 04.4
          comp=Z,174nm,12.2s
MNK                               i LRM   MLR     00 18 14.1
          comp=N,678nm,18.7s
MNK                               i LRM   MLR     00 18 14.7
          comp=E,44nm,13.5s
MNK   Minsk             59.06 320 i P     P       23 50 31.0 +0.3
MNK                               i               23 51 19.9
MNK                               i               23 52 41.5
MNK                               i PPP   PPP     23 54 01.7
MNK                               i S     S       23 58 35.4 -2.1
MNK                               i               00 00 18.2
MNK                                pmax   pmax
          comp=Z,11nm,0.8s
MNK                                pmax   pmax
          comp=E,3.0nm,1.1s
MNK                                pmax   pmax
          comp=N,24nm,0.8s
MNK                                MLR    MLR
          comp=Z,174nm,12.0s
MNK                                MLR    MLR
          comp=N,678nm,19.0s
MNK                                MLR    MLR
          comp=E,44nm,14.0s
SORM  Soroca            59.15 312 ⇑P      P       23 50 30.2 -1.3
SORM  Soroca            59.15 312 ⇑P      P       23 50 30.2 -1.3
ASAR  Alice Springs     59.19 143  P      P       23 50 33.5 +1.4
          comp=E,3.0nm,1.1s,baz=318,slow=6.9,SNR=9.2
ASAR                               LR     LR      00 21 00.5
          comp=E,101nm,19.0s,baz=318,slow=41
          comp=E,3.0nm,1.1s
ASAR  Alice Springs     59.19 143  P      P       23 50 31.5 -0.6
ELL   Elmali            59.60 299  P      P       23 50 33.9 -1.1
ELL   Elmali            59.60 299  P      P       23 50 33.9 -1.1
CFR   Carcaliu          59.61 309 ⇑P      P       23 50 33.7 -1.1
CFR   Carcaliu          59.61 309 ⇑P      P       23 50 33.7 -1.1
NACGM Naroch            59.68 320 eP      P       23 50 34.4 -0.7
          comp=Z,14nm,0.9s,baz=88
FINES FINESS Array B    59.97 328  P      P       23 50 36.8 -0.1
          comp=Z,1.5nm,0.9s,baz=98,slow=10,SNR=1.1
          comp=Z,1.5nm,0.9s
ICOR  Ion Corvin        59.99 308 ⇓P      P       23 50 38.1 +0.7
TESR  Tescani           60.48 311 ⇓P      P       23 50 40.4 -0.4
VRI   Vrincioaia        60.51 310 ⇑P      P       23 50 41.8 +0.8
VRI   Vrincioaia        60.51 310 ⇑P      P       23 50 41.8 +0.8
PLOR  Plostina          60.56 310 ⇓P      P       23 50 42.0 +0.6
PLOR  Plostina          60.56 310 ⇓P      P       23 50 42.0 +0.6
ARCES ARCESS Array B    60.62 337  P      P       23 50 39.9 -1.5
          comp=Z,3.0nm,0.8s,baz=91,slow=9.4,SNR=1.3
          comp=Z,3.0nm,0.8s
BALB  Balikesir         60.64 303  P      P       23 50 41.2 -0.7
MLR   Muntele Rosu      61.10 309 ⇑P      P       23 50 46.0 +0.9
MLR   Muntele Rosu      61.10 309  P      P       23 50 45.5 +0.3
MLR   Muntele Rosu      61.10 309 ⇑P      P       23 50 46.0 +0.9
BURAR Bucovina Array    61.30 312 ⇑P      P       23 50 45.9 -0.5
BURAR Bucovina Array    61.30 312  P      P       23 50 45.5 -1.0
BUR08 Bucovina Ar. S    61.31 312  P      P       23 50 46.5  0.0
BUR08                              IAmb   IAmb    23 50 58.9
          comp=Z,9.8nm,1.4s
VOIR                    61.73 310 ⇓P      P       23 50 48.9 -0.5
VOIR                    61.73 310 ⇓P      P       23 50 48.9 -0.5
HUMR  Humele            61.93 309 ⇑P      P       23 50 50.5 -0.1
ARCR  ARCALIA           61.96 311 ⇓P      P       23 50 49.3 -1.4
BMR   Baia Mare         62.45 312 ⇓P      P       23 50 54.4 +0.4
BMR   Baia Mare         62.45 312 ⇓P      P       23 50 54.4 +0.4
CJR   Cluj-Napoca       62.53 311 ⇓P      P       23 50 54.5 -0.1
CJR   Cluj-Napoca       62.53 311 ⇓P      P       23 50 54.5 -0.1
MARR  Marisel-Cluj      62.86 311 ⇓P      P       23 50 57.2 +0.2
DRGR                    63.12 311 ⇓P      P       23 50 58.3 -0.3
DRGR                    63.12 311 ⇓P      P       23 50 58.3 -0.3
DEV   Deva              63.14 310 ⇑P      P       23 50 59.6 +0.9
DEV   Deva              63.14 310 ⇑P      P       23 50 59.6 +0.9
VTS   Vitosha           63.52 307 ⇑P      P       23 51 15.8  +14
HERR  Herculane         63.66 309 ⇓P      P       23 51 01.4 -0.7
SURR  Surduc            63.70 310 ⇑P      P       23 51 03.1 +0.7
SIRR  Siria             63.92 311 ⇑P      P       23 51 04.2 +0.3
LANS  Liptovska Anna    64.84 314 eP      P       23 51 14.7 +4.8
LANS  Liptovska Anna    64.84 314 eP      P       23 51 14.7 +4.8
VYHS  Vyhne             65.38 314 eP      P       23 51 18.7 +5.4
VYHS  Vyhne             65.38 314 eP      P       23 51 18.7 +5.4
FRGS  Fruska Gora       65.42 310 ⇑P      P       23 51 12.2 -1.4
KBN   Korca             65.75 305  P      P       23 51 14.4 -1.5
KBN   Korca             65.75 305  P      P       23 51 14.5 -1.5
KBN                                pmax   pmax
          comp=Z,17nm,0.9s
MORC  Moravsky Berou    65.95 315 ⇑P      P       23 51 19.4 +2.4
MORC  Moravsky Berou    65.95 315 ⇑P      P       23 51 19.4 +2.4
MORH  Mrgy, Hungar      65.98 311 ⇓P      P       23 51 16.7 -0.6
KRLC  Kraliky           66.36 316 eP      P       23 51 23.0 +3.3
KRLC  Kraliky           66.36 316 eP      P       23 51 23.0 +3.3
DPC   Dobruska-Polom    66.59 316 eP      P       23 51 21.8 +0.6
DPC   Dobruska-Polom    66.59 316 eP      P       23 51 21.8 +0.6
CHVC  Chvalec           66.71 316 eP      P       23 51 22.7 +0.8
CHVC  Chvalec           66.71 316 eP      P       23 51 22.7 +0.8
NB2   NORSAR Subarra    67.15 328  P      P       23 51 26.0 +1.5
          comp=Z,3.9nm,1.0s,baz=80,slow=6.5
NOA   NORSAR Array B    67.15 328  P      P       23 51 22.7 -1.8
          comp=Z,1.4nm,0.8s,baz=78,slow=6.3,SNR=4.6
          comp=Z,1.4nm,0.8s
NOA   NORSAR Array B    67.15 328 eP      P       23 51 26.4 +1.9
NOA                                pmax   pmax
          comp=Z,2.0nm,0.9s
CONA  Conrad Observa    67.44 314 eP      P       23 51 26.8 +0.2
          comp=Z,7.2nm,1.3s
BRG   Berggiesshubel    67.95 317 eP      P       23 51 32.1 +2.5
BRG                                Amp            23 51 35.2
          comp=Z,6.9nm,1.3s
BRG   Berggiesshubel    67.95 317 eP      P       23 51 32.1 +2.5
BRG                                pmax   pmax
          comp=Z,7.0nm,1.3s
CKRC  Cesky Krumlov     68.22 315 eP      P       23 51 32.0 +0.5
CKRC  Cesky Krumlov     68.22 315 eP      P       23 51 32.0 +0.5
CLL   Collm             68.42 318 eP      P       23 51 33.0 +0.4
CLL                               eS      S       00 00 36.0 +1.9
CLL                               eSSS    SSS     00 08 12.0
CLL                                AMS    AMS     00 19 00.0
          comp=N,700nm,21.1s
CLL                                AMS    AMS     00 19 00.0
          comp=E,300nm,21.1s
CLL   Collm             68.42 318 eP      P       23 51 33.0 +0.4
CLL                               eS      S       00 00 36.0 +1.9
MOA   Molln             68.50 314 eP      P       23 51 34.5 +1.3
          comp=E,5.8nm,1.3s
GEC2  GERESS Array S    68.61 315  P      P       23 51 33.7 -0.3
GEC2                               IAmb   IAmb    23 51 40.4
          comp=Z,3.0nm,0.8s
GERES GERESS Array B    68.61 315  P      P       23 51 32.5 -1.5
          comp=Z,0.8nm,0.4s,baz=52,slow=6.4,SNR=4.8
          comp=Z,0.8nm,0.4s
GERES GERESS Array B    68.61 315  P      P       23 51 34.1 +0.1
GERES GERESS Array B    68.61 315 eP      P       23 51 36.4 +2.4
GERES                              pmax   pmax
          comp=Z,2.0nm,0.7s
KHC   Kasperske Hory    68.61 315 eP      P       23 51 34.0 +0.1
KHC   Kasperske Hory    68.61 315 eP      P       23 51 34.0 +0.1
KBA   Koelnbreinsper    69.31 313 eP      P       23 51 39.5 +1.0
          comp=Z,6.4nm,1.2s
STKA  Stephens Creek    69.82 143  P      P       23 51 43.8 +2.3
          comp=Z,2.9nm,0.7s,baz=21,slow=2.4,SNR=3.5
          comp=Z,2.9nm,0.7s
STKA  Stephens Creek    69.82 143 eP      P       23 51 47.3 +5.8
STKA                               pmax   pmax
          comp=Z,3.0nm,0.8s
ABTA  Abfaltersbach     69.95 313 eP      P       23 51 42.9 +0.6
          comp=Z,3.2nm,0.9s
WTTA  Wattenberg        70.37 314 eP      P       23 51 44.6 -0.4
          comp=Z,5.0nm,1.0s
SQTA  Sankt Quirin      70.67 314 eP      P       23 51 47.3 +0.6
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	comp=Z,4.6nm,0.9s						
MOTA	**Moosalm**	**70.70**	**314**	*e*P	**P**	**23 51 46.7**	**-0.3**
	comp=Z,5.5nm,0.9s						
FETA	**Feichten**	**71.04**	**314**	*e*P	**P**	**23 51 48.3**	**-0.8**
	comp=Z,5.8nm,1.0s						
FUORN	**Ofenpass-Fuorn**	**71.47**	**313**	P	**P**	**23 51 52.5**	**+0.7**
PRMA	**PARMA**	**72.02**	**312**	P	**P**	**23 51 56.5**	**+1.7**
WLF	**Walferdange**	**73.08**	**317**	P	**P**	**23 52 01.4**	**+0.4**
WLF	**Walferdange**	**73.08**	**317**	P	**P**	**23 52 01.5**	**+0.4**
WLF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
H21K	**Melozitna Rive**	**73.60**	**24**	P	**P**	**23 52 02.4**	**-1.4**
H21K				IAmb	IAmb	23 52 21.5	
	comp=Z,5.9nm,1.2s						
MLY	**Manley**	**74.66**	**25**	P	**P**	**23 52 09.8**	**-0.3**
MLY				IAmb	IAmb	23 52 27.6	
	comp=Z,6.4nm,1.2s						
BPAW	**Bear Paw Mtn.**	**75.00**	**25**	P	**P**	**23 52 11.5**	**-0.6**
BPAW				IAmb	IAmb	23 52 23.8	
	comp=Z,4.6nm,0.9s						
MDM	**Murphy Dome**	**75.62**	**24**	P	**P**	**23 52 14.8**	**-0.8**
MDM				IAmb	IAmb	23 52 21.1	
	comp=Z,12nm,1.4s						
POKR	**Poker Plat Res**	**75.83**	**24**	P	**P**	**23 52 17.3**	**+0.5**
POKR				IAmb	IAmb	23 52 20.4	
	comp=Z,10.0nm,1.4s						
MCK	**McKinley**	**75.98**	**25**	P	**P**	**23 52 18.3**	**+0.7**
MCK				IAmb	IAmb	23 52 34.4	
	comp=Z,7.8nm,1.4s						
MCK	**McKinley**	**75.98**	**25**	P	**P**	**23 52 18.3**	**+0.7**
MCK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ILAR	**Eielson Array**	**76.21**	**24**	P	**P**	**23 52 18.6**	**-0.3**
	comp=Z,2.7nm,1.3s,baz=273,slow=4.6,SNR=6.5						
	comp=Z,2.7nm,1.3s						
ILAR	**Eielson Array**	**76.21**	**24**	*e*P	**P**	**23 52 20.9**	**+2.0**
ILAR				pmax	pmax		
	comp=Z,2.0nm,1.2s						
A36M	**Sachs Harbour**	**77.69**	**13**	P	**P**	**23 52 27.0**	**-0.1**
A36M				IAmb	IAmb	23 52 55.2	
	comp=Z,4.5nm,0.8s						
SUMG	**Summit**	**77.89**	**348**	*i* P	P	23 52 34.0	+5.2
INK	**Inuvik**	**78.36**	**18**	P	**P**	**23 52 30.9**	**0.0**
INK				IAmb	IAmb	23 52 38.1	
	comp=Z,6.0nm,1.1s						
INK	**Inuvik**	**78.36**	**18**	P	**P**	**23 52 30.9**	**0.0**
INK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BCAR	**Beaver Creek A**	**79.04**	**24**	P	**P**	**23 52 35.0**	**+0.2**
C36M	**Paulatuk**	**79.97**	**14**	P	**P**	**23 52 39.4**	**-0.2**
C36M				IAmb	IAmb	23 52 45.0	
	comp=Z,8.4nm,1.1s						
ANGG	**Ammassalik, Gr**	**83.24**	**344**	P	**P**	**23 52 56.9**	**-0.1**
ESDC	**Sonseca Array**	**83.75**	**311**	P	**P**	**23 52 58.6**	**-1.6**
	comp=Z,0.7nm,0.7s,baz=40,slow=5.4,SNR=4.7						
	comp=Z,0.7nm,0.7s						
YKA	**Yellowknife Ar**	**87.82**	**15**	P	**P**	**23 53 20.0**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=328,slow=4.7,SNR=3.5						
	comp=Z,0.6nm,0.8s						
YKA	**Yellowknife Ar**	**87.82**	**15**	*e*P	P	23 53 24.6	+4.7
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**91.54**	**285**	P	**P**	**23 53 38.7**	**+0.4**
	comp=Z,3.6nm,0.3s,baz=46,slow=5.0,SNR=2.3						
	comp=Z,3.6nm,0.3s						
MAW	**Mawson**	**97.10**	**193**	LR	LR	00 33 06.3	
	comp=Z,163nm,18.0s,baz=36,slow=32						
ELIB	**Princess Elisa**	**110.21**	**199**	*d*PKiKP	**PKiKP**	**23 59 02.8**	**+0.7**
TXAR	**Lajitas Array**	**120.73**	**24**	PKP	**PKPdf**	**23 59 22.1**	**-1.5**
	comp=Z,0.2nm,0.5s,baz=152,slow=0.2,SNR=6.3						
ROSC	**El Rosal**	**149.04**	**349**	PKPbc	**PKiKP**	**00 00 20.6**	**-1.2**
	comp=Z,11nm,0.6s,baz=65,slow=17,SNR=6.1						

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*IDC **26** 23:55:01.1±0.5, 25°.93N×99°.91E, h0^{km}, mb4.5/26, mbtmp4.6/28, ML5.1/1, MS4.4/73, Error ellipse: s-maj=14.5km s-min=10.9km az=50.0*

*BJI **26** 23:55:01.8±0.0, 25°.89N×99°.80E, h12^{km}, mb4.8/66, mB5.2/38, ML5.0/14, Ms5.1/81, Ms7 4.8/72*

*MOS **26** 23:55:02.5±0.9, 25°.86N×99°.82E, h19^{km}, mb5.1/67, MS4.6/8, Error ellipse: s-maj=6.9km s-min=3.7km az=125.8*

*GCMT **26** 23:55:03.3±0.2, 25°.82N±0°.01×99°.84E±0°.01, h20^{km}±1^{km}, MW5.1/120, Moment Tensor Solution. s46,c55; s120,c176; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.08±.16; $M_{\theta\theta}$-5.05±.13; $M_{\phi\phi}$4.97±.13; $M_{r\theta}$0.26±.28; $M_{\theta\phi}$0.52±.12; $M_{\phi r}$0.36±.22; Best double couple: $M_0$5.05600×10^{16} NP1:ϕ_s48.00000°,δ89.00000°, λ5.00000°. NP2:ϕ_s318.00000°,δ85.00000°,λ179.00000°. Principal axes: T 5.0250, Plg4.0000°, Azm273.0000°; N 0.0580, Plg85.0000°, Azm62.0000°; P -5.0870, Plg3.0000°, Azm183.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **26** 23:55:06.3±1.6, 25°.94N±0°.06×99°.84E±0°.07, h28^{km}±4^{km}, mb5.0/163 Error ellipse: s-maj=9.2km s-min=8.6km az=167.0*

*BGR **26** 23:55:08.9, 26°.38N×99°.94E, h10^{km}, mb4.6*

ISC 26 23:55:04.9±0.3, **25°.90N**±0°.03×**99°.79E**±0°.03, **h23**^{km}±3^{km}, **h23**^{km}**:pP-P, n653, σ1°.54**/638, **mb4.9**/166, **MS4.5**/88, **43C-19D, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNCH	**TengChong**	**1.44**	**233**	⇑Pn	**Pn**	**23 55 28.3**	**-1.5**
TNCH				Pg	Pb	23 55 29.5	-1.7
TNCH				Sg	**Sn**	**23 55 47.3**	**-0.8**
TNCH				smax	smax		
	comp=N,102μm,1.0s						
TNCH				smax	smax		
	comp=E,110μm,0.9s						
PZH	**PanZhiHua**	**1.86**	**71**	Pg	**Pn**	**23 55 35.0**	**-0.5**
PZH				Sg	**Sb**	**23 56 00.3**	**-0.8**
PZH				smax	smax		
	comp=N,20μm,0.8s						
PZH				smax	smax		
	comp=E,23μm,1.0s						
KMI	**Kunming**	**2.78**	**106**	⇑Pn	**Pn**	**23 55 48.8**	**+0.5**
KMI				Pg	**Pb**	**23 55 52.8**	**-1.3**
KMI				Sn	**Sn**	**23 56 20.3**	**-1.0**
KMI				Sg	**Sb**	**23 56 29.5**	**+1.7**
KMI				smax	smax		
	comp=N,4μm,1.2s						
KMI				smax	smax		
	comp=E,3μm,1.3s						
MOKO	**MOKOCHONG**	**4.76**	**276**	*e*P	**Pn**	**23 56 18.4**	**+3.0**
JORH	**JORHAT**	**5.04**	**281**	*e*P	**Pn**	**23 56 20.6**	**+1.5**
KOHI	**KOHIMA**	**5.12**	**269**	*e*P	**Pn**	**23 56 23.1**	**+2.7**
MND	**Mandalay**	**5.12**	**222**	Pn	**Pn**	**23 56 21.4**	**+1.1**
MND					**Pb**	**23 56 35.3**	**+1.4**
MND	**Mandalay**	**5.12**	**222**	P	**Pn**	**23 56 23.7**	**+3.4**
IMP	**Imphal**	**5.39**	**260**	*e*P	**Pn**	**23 56 28.1**	**+4.0**
ZIRO	**ZIRO**	**5.55**	**288**	*e*P	**Pn**	**23 56 26.8**	**+0.4**
ITAN	**ITANAGAR**	**5.57**	**284**	*e*P	**Pn**	**23 56 27.3**	**+0.9**
CRAI	**Chiangrai**	**5.67**	**174**	Pn	**Pn**	**23 56 27.0**	**-0.9**
CD2	**Chengdu**	**6.09**	**34**	Pn	**Pn**	**23 56 34.0**	**+0.4**
CD2				Pg	**Pb**	**23 56 50.5**	**+0.1**
CD2				Sg	Sb	23 58 14.8	+12
CD2				smax	smax		
	comp=N,760nm,1.6s						
CD2				smax	smax		
	comp=E,2μm,1.8s						
CD2				LR	LR		
	comp=N,42μm,7.4s						
CD2				LR	LR		
	comp=E,49μm,7.5s						
CD2				LR	LR		
	comp=Z,17μm,8.9s						
GYA	**Guiyang**	**6.20**	**83**	⇑Pn	**Pn**	**23 56 36.0**	**+0.7**
GYA				Sn	**Sn**	**23 57 50.3**	**+4.7**
GYA				smax	smax		
	comp=N,330nm,1.9s						
GYA				smax	smax		
	comp=E,290nm,1.2s						
GYA				LR	LR		
	comp=N,12μm,5.8s						
GYA				LR	LR		
	comp=E,7μm,7.1s						
GYA				LR	LR		
	comp=Z,6μm,13.4s						
TEZP	**TEZPUR**	**6.31**	**278**	*e*P	**Pn**	**23 56 37.1**	**+0.5**
SAIH	**SAIHA**	**7.08**	**243**	*e*P	**Pn**	**23 56 49.8**	**+2.5**
CHTO	**Chiang Mai**	**7.10**	**186**	Pn	**Pn**	**23 56 47.9**	**+0.4**
CHTO	**Chiang Mai**	**7.10**	**186**	P	**Pn**	**23 56 47.9**	**+0.4**
SHL	**Shillong**	**7.13**	**269**	Pn	**Pn**	**23 56 48.0**	**-0.1**
SHL	**Shillong**	**7.13**	**269**	*e*P	**Pn**	**23 56 48.1**	**-0.1**
SHL				IAmb	IAmb	23 56 52.4	
	comp=Z,89nm,0.7s						
SHL	**Shillong**	**7.13**	**269**	P	**Pn**	**23 56 48.0**	**-0.1**
GUWA	**GUWAHATI**	**7.29**	**274**	*e*P	**Pn**	**23 56 49.5**	**-0.5**
PHRA	**Phrae**	**7.38**	**177**	Pn	**Pn**	**23 56 51.3**	**0.0**
CM31	**Chiang Mai Arr**	**7.45**	**186**		**Pn**	**23 56 53.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**7.45**	**186**	Pn	**Pn**	**23 56 52.8**	**+0.5**
	comp=Z,8.5nm,0.3s,baz=3.0,slow=13,SNR=127						
CMAR				Pg	**Pb**	**23 57 16.5**	**+2.9**
	comp=Z,25nm,0.3s,baz=358,slow=14,SNR=38						
CMAR				Lg	Lg	23 58 56.1	
	comp=Z,1.1nm,0.3s,baz=5.5,slow=29,SNR=2.6						
CMAR				LR	LR	00 00 05.5	
	comp=Z,4μm,20.4s,baz=25,slow=41						
	comp=Z,57nm,0.7s						
CMAR	**Chiang Mai Arr**	**7.45**	**186**	Pn	**Pn**	**23 56 52.6**	**+0.3**
BRDH	**Bariadhala**	**8.09**	**248**	Pn	**Pn**	**23 57 01.7**	**+0.6**
	comp=Z,48nm,0.4s,baz=90,slow=12,SNR=9.7						
BRDH				Sn	Sn	23 58 43.3	+11
	comp=Z,15nm,0.3s,baz=270,slow=18,SNR=1.5						
BRDH				LR	LR	00 00 38.3	
	comp=Z,3μm,18.2s,baz=88,slow=41						
LSA	**Lhasa**	**8.53**	**298**	P	**Pn**	**23 57 07.8**	**+0.3**
LSA				S	**Sn**	**23 58 39.8**	**-3.5**
LSA				LR	LR		
	comp=Z,7μm,18.5s						
LSA				LR	LR		
	comp=Z,3μm,13.9s						
LSA				LR	LR		
	comp=Z,5μm,14.2s						
LSA	**Lhasa**	**8.53**	**298**	Pn	**Pn**	**23 57 08.2**	**+0.7**
LSA	**Lhasa**	**8.53**	**298**	P	**Pn**	**23 57 08.2**	**+0.7**
GULI	**GuiLin**	**9.57**	**91**	⇑P	Pn	23 57 27.3	+5.9
GULI				S	**Sn**	**23 59 12.5**	**+4.3**
GULI				pmax	pmax		
	comp=Z,90nm,1.2s						
GULI				LR	LR		
	comp=Z,2μm,7.3s						
GULI				LR	LR		
	comp=Z,6μm,9.2s						
GULI				LR	LR		
	comp=Z,8μm,9.5s						
ENH	**Enshi**	**9.61**	**61**	Pn	**Pn**	**23 57 21.1**	**-0.8**
GTK	**Tadong**	**10.11**	**280**	*e*P	**Pn**	**23 57 27.4**	**-1.5**
LZH	**Lanzhou**	**10.73**	**18**	⇓*i*P	**Pn**	**23 57 39.3**	**+1.9**
LZH				pP		23 57 46.5	
LZH				sP		23 57 49.8	
LZH				SS	Sn	23 59 48.3	+11
LZH				pmax	pmax		
	comp=Z,89nm,1.3s						
LZH				pmax	pmax		
	comp=Z,340nm,4.6s						
LZH				LR	LR		
	comp=Z,6μm,11.7s						
LZH				LR	LR		
	comp=Z,9μm,12.4s						
LZH				LR	LR		
	comp=Z,5μm,12.5s						
GOMU	**GeErMu**	**11.11**	**339**	P	**Pn**	**23 57 41.3**	**-1.4**
GOMU				pP		23 57 44.8	
GOMU				S	**Sn**	**23 59 45.0**	**-1.4**
GOMU				sS		23 59 56.3	
GOMU				pmax	pmax		
	comp=Z,15nm,1.1s						
GOMU				LR	LR		
	comp=Z,8μm,10.1s						
GOMU				LR	LR		
	comp=Z,13μm,12.4s						
GOMU				LR	LR		
	comp=Z,4μm,9.9s						
XAN	**Xi'an**	**11.33**	**42**	⇑P	**Pn**	**23 57 43.5**	**-2.0**
XAN				pP		23 57 48.5	
XAN				S	**Sn**	**23 59 56.3**	**+4.9**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XAN				LR	LR		
	comp=Z,13μm,15.2s						
XAN				LR	LR		
	comp=Z,9μm,14.6s						
XAN				LR	LR		
	comp=Z,5μm,15.2s						
QIZ	**Qiongzhong**	**11.54**	**124**	P	**Pn**	**23 57 45.8**	**-2.6**
QIZ				S	**Sn**	**23 59 52.5**	**-4.1**
QIZ				LR	LR		
	comp=Z,8μm,13.9s						
QIZ				LR	LR		
	comp=Z,5μm,17.5s						
QIZ				LR	LR		
	comp=Z,2μm,15.4s						
NAYO	**Nakonayok**	**11.62**	**173**	P	**Pn**	**23 57 53.6**	**+4.1**
	comp=Z,422nm,1.3s						
CNSH	**ChangSha**	**11.94**	**76**	⇑P	**Pn**	**23 57 51.0**	**-2.7**
CNSH				S	**Sn**	**00 00 02.0**	**-4.2**
CNSH				pmax	pmax		
	comp=Z,87nm,0.6s						
CNSH				LR	LR		
	comp=Z,11μm,10.1s						
CNSH				LR	LR		
	comp=Z,1μm,6.6s						
CNSH				LR	LR		
	comp=Z,4μm,18.0s						
JIRN	**Jiri**	**12.27**	**281**	*e*P	**Pn**	**23 57 57.2**	**-1.5**
	comp=Z,476nm,0.9s						
GUN	**Gumba**	**12.57**	**282**	*e*P	**Pn**	**23 58 01.1**	**-1.7**
	comp=Z,233nm,0.6s						
GZH	**Guangzhou**	**12.66**	**100**	P	**Pn**	**23 58 02.3**	**-1.3**
GZH				S	**Sn**	**00 00 25.5**	**+1.6**
GZH				pmax	pmax		
	comp=Z,31nm,0.5s						
GZH				LR	LR		
	comp=Z,3μm,5.9s						
GZH				LR	LR		
	comp=Z,3μm,6.1s						
BOK	**Bokaro**	**12.79**	**264**	*e*P	**Pn**	**23 58 04.6**	**-1.0**
BOK				IAmb	IAmb	23 58 06.5	
	comp=Z,80nm,0.8s						
PKI	**Pulchoki**	**12.96**	**281**	*e*P	**Pn**	**23 58 05.5**	**-2.5**
	comp=Z,144nm,0.6s						
PKIN	**Phulchoki**	**12.97**	**281**	*e*P	**Pn**	**23 58 05.5**	**-2.6**
KKN	**Kakani**	**13.09**	**281**	*e*P	**Pn**	**23 58 07.3**	**-2.4**
	comp=Z,853nm,1.2s						
DMN	**Daman**	**13.23**	**281**	*e*P	**Pn**	**23 58 08.8**	**-2.9**
GTA	**Gaotai**	**13.47**	**0**	⇓P	**Pn**	**23 58 15.3**	**+0.5**
GTA				pP	P	23 58 24.5	+0.6
GTA				sP		23 58 29.0	
GTA				pmax	pmax		
	comp=Z,6.0nm,2.3s						
GTA				LR	LR		
	comp=Z,2μm,16.0s						
GTA				LR	LR		
	comp=Z,2μm,14.2s						
GTA				LR	LR		
	comp=Z,2μm,15.6s						
WHN	**Wuhan**	**13.64**	**67**	⇓P	**Pn**	**23 58 17.0**	**-0.1**
WHN				sP	**P**	**23 58 24.5**	**-1.2**
WHN				S	**Sn**	**00 00 50.0**	**+2.1**
WHN				pmax	pmax		
	comp=Z,160nm,0.8s						
WHN				pmax	pmax		
	comp=Z,940nm,6.1s						
WHN				LR	LR		
	comp=Z,11μm,7.5s						
WHN				LR	LR		
	comp=Z,7μm,6.9s						
WHN				LR	LR		
	comp=Z,16μm,11.0s						
GKN	**Gorkha**	**13.67**	**282**	*e*P	Pn	23 58 14.0	-3.6
LYN	**LuoYang**	**13.93**	**49**	⇓*i*P	**Pn**	**23 58 17.5**	**-3.5**
LYN				sP	P	23 58 29.5	+0.6
LYN				pmax	pmax		
	comp=Z,25nm,0.7s						
LYN				pmax	pmax		
	comp=Z,350nm,6.4s						
LYN				LR	LR		
	comp=Z,10μm,12.2s						
LYN				LR	LR		
	comp=Z,6μm,11.6s						
LYN				LR	LR		
	comp=Z,4μm,9.8s						
DGPR	**DIGLIPUR**	**14.21**	**208**	*e*P	**P**	**23 58 33.5**	**+1.5**
DANN	**Dangsing**	**14.48**	**283**	*e*P	Pn	23 58 23.9	-4.9
	comp=Z,167nm,0.7s						
KOLN	**Koldanda**	**14.57**	**281**	*e*P	Pn	23 58 25.5	-4.5
PYUN	**Piuthan**	**15.13**	**282**	*e*P	**Pn**	**23 58 32.2**	**-5.3**
	comp=Z,222nm,0.8s						
PBA	**Port Blair**	**15.65**	**206**		**Pn**	**23 58 43.9**	**-0.3**
PBA				IAmb	IAmb	23 58 49.2	
	comp=Z,90nm,1.0s						
PBA	**Port Blair**	**15.65**	**206**	*e*P	**P**	**23 58 47.9**	**-0.2**
PBA				IAmb	IAmb	23 58 49.4	
	comp=Z,69nm,1.0s						
TIY	**Taiyuan**	**15.92**	**39**	*e*P	**P**	**23 58 50.3**	**-0.8**
TIY				pmax	pmax		
	comp=Z,76nm,0.7s						
TIY				LR	LR		
	comp=Z,4μm,9.6s						
TIY				LR	LR		
	comp=Z,6μm,9.3s						
TIY				LR	LR		
	comp=Z,3μm,12.2s						
SURA	**Surathani**	**16.65**	**181**	P	**P**	**23 58 59.8**	**+0.6**
BTO	**Baotou**	**16.96**	**28**	*e*P	**Pn**	**23 58 59.0**	**-1.8**
BTO				pP	**pP**	**23 59 06.8**	**-2.8**
BTO				sP	**sP**	**23 59 11.3**	**-1.4**
BTO				PP	**PnPn**	**23 59 13.5**	**+2.9**
BTO				S	**Sn**	**00 02 03.5**	**-5.1**
BTO				sS	**S**	**00 02 19.0**	**+0.6**
BTO				SS	**SnSn**	**00 02 26.8**	**+4.7**
BTO				pmax	pmax		
	comp=Z,69nm,1.0s						
BTO				pmax	pmax		
	comp=Z,970nm,7.5s						
BTO				LR	LR		
	comp=Z,13μm,11.0s						
BTO				LR	LR		
	comp=Z,19μm,10.4s						
BTO				LR	LR		
	comp=Z,11μm,9.5s						
HNS	**HongShan**	**17.08**	**44**	⇑P	**P**	**23 59 02.3**	**-1.6**
HNS				pmax	pmax		
	comp=Z,30nm,1.0s						
HNS				LR	LR		
	comp=Z,8μm,12.0s						
HNS				LR	LR		
	comp=Z,5μm,11.3s						
HNS				LR	LR		
	comp=Z,3μm,12.7s						
SRIT	**Nakonsritamara**	**17.21**	**181**		**Pn**	**23 59 04.3**	**+0.3**
SRIT	**Nakonsritamara**	**17.21**	**181**	P	**P**	**23 59 06.4**	**+1.0**
VIS	**Vishakhapatnam**	**17.30**	**245**	*e*P	**Pn**	**23 59 05.1**	**0.0**
VIS				IAmb	IAmb	23 59 08.0	
	comp=Z,83nm,1.5s						
NJ2	**Nanjing**	**17.76**	**65**	*e*P	**Pn**	**23 59 08.0**	**-2.7**
NJ2				sP	**P**	**23 59 14.0**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,17nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,490nm,5.9s						
NJ2				LR	LR		
	comp=Z,12μm,12.3s						
NJ2				LR	LR		
	comp=Z,4μm,11.8s						
NJ2				LR	LR		
	comp=Z,3μm,9.7s						
HHC	**Hu-ho-hao-te**	**17.83**	**30**	*e*P	**P**	**23 59 12.5**	**+0.3**
HHC				pmax	pmax		
	comp=Z,31nm,0.8s						
HHC				pmax	pmax		
	comp=Z,420nm,5.5s						
HHC				LR	LR		
	comp=Z,9μm,8.1s						
HHC				LR	LR		
	comp=Z,4μm,8.5s						
HHC				LR	LR		
	comp=Z,6μm,10.6s						
TIA	**Tai'an**	**18.04**	**51**	P	**Pn**	**23 59 13.0**	**-1.1**
TIA				pmax	pmax		
	comp=Z,56nm,0.8s						
TIA				pmax	pmax		
	comp=Z,360nm,7.5s						
TIA				LR	LR		
	comp=Z,2μm,13.7s						
TIA				LR	LR		
	comp=Z,5μm,12.3s						
TIA				LR	LR		
	comp=Z,6μm,13.4s						
SKLT	**Songkhla**	**18.65**	**177**	P	**Pn**	**23 59 22.9**	**+1.2**
TPUB	**Ta-pu**	**19.13**	**93**	P	**Pn**	**23 59 27.3**	**-0.2**
TPUB	**Ta-pu**	**19.13**	**93**	P	**Pn**	**23 59 33.3**	**+5.8**
	comp=Z,75nm,1.5s						
SSLB	**Suanglung**	**19.32**	**92**	P	**P**	**23 59 27.1**	**-1.6**
SSE	**Sheshan**	**19.50**	**70**	P	**P**	**23 59 30.3**	**-0.2**
SSE				sP	**sP**	**23 59 42.0**	**+1.2**
SSE				S	**Sn**	**00 03 09.3**	**-0.7**
SSE				pmax	pmax		
	comp=Z,18nm,0.7s						
SSE				LR	LR		
	comp=Z,2μm,12.5s						
BJT	**Baijiatuau**	**19.63**	**40**	P	**Pn**	**23 59 32.5**	**-0.8**
BJT	**Baijiatuau**	**19.63**	**40**	P	**Pn**	**23 59 32.5**	**-0.8**
BJT				pmax	pmax		
	comp=Z,33nm,0.9s						
TWG	**Pinlang**	**19.63**	**94**	P	**Pn**	**23 59 33.2**	**-0.3**
TWG				IAmb	IAmb	23 59 43.8	
	comp=Z,120nm,1.4s						
BJI	**Beijing**	**19.65**	**40**	P	**Pn**	**23 59 32.5**	**-1.0**
BJI				pP	**pP**	**23 59 36.8**	**-2.4**
BJI				sP	**sP**	**23 59 41.0**	**-1.4**
BJI				PP	**PnPn**	**23 59 51.0**	**+3.7**
BJI				S	**Sn**	**00 03 17.8**	**+4.3**
BJI				pmax	pmax		
	comp=Z,26nm,0.9s						
YULB	**Yu-li**	**19.71**	**93**	P	**Pn**	**23 59 33.1**	**-1.4**
YULB				IAmb	IAmb	23 59 43.5	
	comp=Z,81nm,1.2s						
YULB	**Yu-li**	**19.71**	**93**	P	**Pn**	**23 59 38.9**	**+4.5**
	comp=Z,53nm,1.0s						
NACB	**Ninganchiao**	**19.84**	**90**	P	**Pn**	**23 59 35.3**	**-0.6**
NACB				IAmb	IAmb	23 59 42.6	
	comp=Z,60nm,1.0s						
NACB	**Ninganchiao**	**19.84**	**90**	P	**Pn**	**23 59 39.7**	**+3.8**
WMQ	**Urumqi**	**20.40**	**334**	*e*P	**P**	**23 59 40.3**	**-0.1**
WMQ				pP	Pn	23 59 42.8	+0.3
WMQ				S	**S**	**00 03 27.8**	**-0.1**
WMQ				pmax	pmax		
	comp=Z,41nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,160nm,3.9s						
WMQ				LR	LR		
	comp=Z,2μm,12.9s						
WMQ				LR	LR		
	comp=Z,2μm,14.9s						
WMQ				LR	LR		
	comp=Z,810nm,22.3s						
BHPL	**Bhopal**	**20.51**	**267**	*e*P	**P**	**23 59 41.1**	**-0.5**
BHPL				IAmb	IAmb	23 59 49.6	
	comp=Z,148nm,1.2s						
KULM	**Kulim**	**20.52**	**178**	P	**P**	**23 59 41.7**	**+0.1**
KULM				IAmb	IAmb	23 59 45.6	
	comp=Z,47nm,1.2s						
SMLA	**Simla**	**20.53**	**290**	*e*P	**P**	**23 59 40.1**	**-1.7**
SMLA				IAmb	IAmb	23 59 51.2	
	comp=Z,62nm,0.8s						
LHMI	**Lhok Sumawe**	**20.74**	**188**	P	**P**	**23 59 45.2**	**+1.2**
LHMI				IAmb	IAmb	23 59 51.0	
	comp=Z,52nm,0.8s						
YOJ	**Yonaguni jima**	**21.07**	**89**	P		23 59 49.4	
YOJ	**Yonaguni jima**	**21.07**	**89**	P		23 59 49.4	
YOJ				pmax	pmax		
	comp=Z,205nm,1.4s						
IPM	**Ipoh**	**21.34**	**177**	P	**P**	**23 59 49.9**	**-0.7**
IPM				IAmb	IAmb	23 59 52.9	
	comp=Z,72nm,1.5s						
IPM	**Ipoh**	**21.34**	**177**	P	**P**	**23 59 52.4**	**+1.8**
HYB	**Hyderabad**	**21.44**	**251**	*e*P	**P**	**23 59 51.1**	**-0.6**
HYB				IAmb	IAmb	23 59 54.5	
	comp=Z,39nm,0.9s						
HYB	**Hyderabad**	**21.44**	**251**	*e*P	**P**	**23 59 50.7**	**-1.0**
XLT	**XiLinHaoTe**	**22.31**	**32**	*e*P	**P**	**00 00 00.8**	**-0.1**
XLT				sP	sP	00 00 11.5	+0.1
XLT				sS	Sn	00 04 12.0	-5.6
XLT				SS	**SnSn**	**00 04 44.0**	**+11**
XLT				pmax	pmax		
	comp=Z,29nm,1.2s						
XLT				pmax	pmax		
	comp=Z,180nm,6.7s						
XLT				LR	LR		

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      comp=Z,2µm,9.8s
XLT                                LR      LR
      comp=Z,3µm,9.6s
DL2   Dalian           22.47  49   P       P       00 00 01.8  -0.8
DL2                                S       S       00 04 06.5  -1.5
DL2                                pmax    pmax
      comp=Z,25nm,0.9s
DL2                                LR      LR
      comp=Z,2µm,12.1s
DL2                                LR      LR
      comp=Z,2µm,13.5s
DL2                                LR      LR
      comp=Z,2µm,11.6s
SONM  Songino Array    22.50  12   P       P       00 00 01.8  -1.2
      comp=Z,16nm,1.0s,baz=196,slow=11,SNR=50
SONM                               LR      LR      00 09 43.0
      comp=Z,1µm,19.7s,baz=190,slow=39
      comp=Z,16nm,1.0s
SONM  Songino Array    22.50  12   P       P       00 00 03.5  +0.5
SONM  Songino Array    22.50  12   P       P       00 00 03.5  +0.5
SONM                               pmax    pmax
      comp=Z,17nm,1.0s
ULN   Ulaanbaatar      22.66  13   P       P       00 00 03.8  -0.8
ULN                                        pP      00 00 04.9  -6.8
ULN   Ulaanbaatar      22.66  13   P       P       00 00 03.8  -0.8
ULN                                *PP     pP      00 00 04.9  -6.8
ULN                                pmax    pmax
      comp=Z,30nm,1.1s
PSI   Prapat           22.99 182   P       P       00 00 09.9  +1.6
PSI   Prapat           22.99 182   P       P       00 00 08.5  +0.2
PSI                                pmax    pmax
      comp=Z,63nm,1.2s
TGY   Tagaytay City    23.04 117   LR      LR      00 08 11.9
      comp=Z,725nm,19.9s,baz=258,slow=34
RPSI  Rantau Prapat    23.09 182   P       P       00 00 08.5  -0.7
RPSI                               IAmb    IAmb    00 00 12.1
      comp=Z,63nm,1.2s
TARG  Taragay, Kyrgy   24.04 317   P       P       00 00 19.8  +1.1
TARG                               IAmb    IAmb    00 00 38.0
      comp=Z,52nm,1.0s
TARG  Taragay, Kyrgy   24.04 317   P       P       00 00 19.8  +1.1
TARG                               pmax    pmax
      comp=Z,52nm,1.0s
KSH   Kashi            24.11 310   P       P       00 00 20.5  +1.4
KSH                                sP      sP      00 00 32.3  +2.5
KSH                                pmax    pmax
      comp=Z,13nm,0.9s
KSH                                LR      LR
      comp=Z,2µm,19.0s
KSH                                LR      LR
      comp=Z,1µm,20.9s
KSH                                LR      LR
      comp=Z,1µm,20.3s
UZB   Uzynbulak        24.15 321  eP       P       00 00 20.7  +1.2
      baz=321
UZB   Uzynbulak        24.15 321  eP       P       00 00 20.7  +1.2
NIL   Nilore           24.25 295   P       P       00 00 19.6  -0.7
NIL   Nilore           24.25 295   P       P       00 00 19.6  -0.7
NIL                                pmax    pmax
      comp=Z,77nm,0.9s
SATY  Saty             24.45 320 i P       P       00 00 23.6  +1.3
      comp=Z,42nm,1.4s,baz=320
SATY  Saty             24.45 320 i P       P       00 00 23.5  +1.3
SATY                               pmax    pmax
      comp=Z,42nm,1.4s
ZHN   Zhinishke        24.50 320⇑iP       P       00 00 24.0  +1.3
      baz=320
ZHN   Zhinishke        24.50 320c iP       P       00 00 23.9  +1.3
KPKS  Kokpek           24.55 321  eP       P       00 00 23.9  +0.9
      baz=321
KPKS  Kokpek           24.55 321  eP       P       00 00 23.9  +0.9
ZAK   Zakamensk        24.59   5  eP       P       00 00 22.4  -0.9
ZAK                                pmax    pmax
      comp=Z,14nm,1.4s
KDJ   Kajisay          24.65 317   P       P       00 00 25.4  +1.4
KDJ                                IAmb    IAmb    00 00 31.2
      comp=Z,32nm,0.8s
KDJ   Kajisay          24.65 317   P       P       00 00 25.4  +1.4
KDJ                                pmax    pmax
      comp=Z,33nm,0.8s
NRN   Naryn            25.02 314   P       P       00 00 28.5  +0.9
NRN                                IAmb    IAmb    00 00 33.1
      comp=Z,30nm,1.1s
NRN   Naryn            25.02 314   P       P       00 00 28.5  +0.9
NRN                                pmax    pmax
      comp=Z,30nm,1.1s
MK31  Makanchi Array   25.06 331   P       P       00 00 28.1  +0.6
MK31                               IAmb    IAmb    00 00 43.9
      comp=Z,39nm,0.8s
MK31  Makanchi Array   25.06 331d iP       P       00 00 27.9  +0.4
MKAR  Makanchi Array   25.06 331   P       P       00 00 28.1  +0.6
      comp=Z,33nm,0.8s,baz=139,slow=10.0,SNR=254
MKAR                               LR      LR      00 11 10.1
      comp=Z,555nm,18.1s,baz=161,slow=39
      comp=Z,33nm,0.8s
KKM   Kota Kinabalu    25.23 139   P       P       00 00 30.5  +1.1
KKM                                IAmb    IAmb    00 00 36.9
      comp=Z,47nm,1.0s
KKM   Kota Kinabalu    25.23 139   P       P       00 00 33.7  +4.3
SNY   Shenyang         25.23  45 ⇓P       P       00 00 29.8  +0.7
SNY                                pmax    pmax
      comp=Z,41nm,0.7s
SNY                                LR      LR
      comp=Z,2µm,13.5s
SNY                                LR      LR
      comp=Z,3µm,11.6s
SNY                                LR      LR
      comp=Z,2µm,12.1s
ULHL  Ulahol           25.29 316   P       P       00 00 31.4  +1.4
      SNR=9.6
TNSS  Tian-Shan        25.30 318  eP       P       00 00 31.2  +1.0
      baz=318
TNSS  Tian-Shan        25.30 318  eP       P       00 00 31.2  +1.0
MDOK  Medeo            25.32 319  eP       P       00 00 31.5  +1.5
      baz=318
MDOK  Medeo            25.32 319  eP       P       00 00 31.5  +1.5
JOW   Kunigami         25.52  82   P       P       00 00 30.2  -1.7
      comp=Z,28nm,0.7s,baz=309,slow=16,SNR=2.6
JOW                                LR      LR      00 11 41.0
      comp=Z,2µm,19.0s,baz=284,slow=39
      comp=Z,28nm,0.7s
DGZ   Jazzator, Alta   25.62 341 i P       P       00 00 33.1  +0.4
DGZ                                pmax    pmax
      comp=Z,40nm,1.4s
TJN   Taejon           25.73  59ceP       P       00 00 34.1  +0.4
MOY   Mondy            25.74   2  eP       P       00 00 34.1  +0.3
CHKK  Chushkaly        25.76 320  eP       P       00 00 34.5  +0.5
      baz=320
CHKK  Chushkaly        25.76 320  eP       P       00 00 34.4  +0.5
TKM2  Tokmak 2         26.06 317   P       P       00 00 38.3  +1.4
      SNR=19
KUU   Kurty            26.16 319  eP       P       00 00 38.5  +0.9
      comp=Z,66nm,1.5s,baz=319
KUU   Kurty            26.16 319  eP       P       00 00 38.4  +0.9
KUU                                pmax    pmax
      comp=Z,66nm,1.5s
SBUM  Sibu             26.21 151   P       P       00 00 39.4  +1.3
KBK   Karagaybulak     26.32 316   P       P       00 00 40.8  +1.6
      SNR=19
UCH   Uchtor           26.38 314   P       P       00 00 41.7  +1.6
      SNR=9.5
KS19  Wonju Array Si   26.44  57   P       P       00 00 41.7  +1.6
KS19                               IAmb    IAmb    00 01 12.0
      comp=Z,56nm,1.7s
KSRS  Korea Array      26.47  57   P       P       00 00 39.2  -1.1
      comp=Z,1.8nm,0.8s,baz=236,slow=9.3,SNR=6.2
KSRS                               LR      LR      00 10 42.2
      comp=Z,876nm,18.9s,baz=250,slow=36
      comp=Z,1.8nm,0.8s
AAK   Ala-Archa        26.60 315   P       P       00 00 43.5  +1.8
      SNR=24
AAK   Ala-Archa        26.60 315   P       P       00 00 43.2  +1.5
      comp=Z,21nm,1.0s,baz=135,slow=5.9,SNR=23
AAK                                LR      LR      00 12 01.8
      comp=Z,772nm,20.9s,baz=112,slow=38
      comp=Z,21nm,1.0s
AAK   Ala-Archa        26.60 315   P       P       00 00 43.4  +1.6
AAK                                IAmb    IAmb    00 00 52.9
      comp=Z,41nm,0.9s
AAK   Ala-Archa        26.60 315ceP       P       00 00 43.5  +1.8
AAK                                pmax    pmax
      comp=Z,37nm,1.3s
FRU1  Bishkek          26.60 316   P       P       00 00 42.8  +1.2
FRU1                               IAmb    IAmb    00 00 48.6
      comp=Z,41nm,0.9s
FRU1  Bishkek          26.60 316   P       P       00 00 42.8  +1.2
FRU1                               pmax    pmax
      comp=Z,41nm,0.9s
CHMS  Chumysh          26.63 316   P       P       00 00 42.4  +0.6
      SNR=10
AML   Almayashu        26.86 314   P       P       00 00 46.2  +1.9
      SNR=26
USP   Ospenovka        26.92 316   P       P       00 00 45.9  +1.4
      SNR=42
SGDS  Sogindy          26.94 317  eP       P       00 00 45.8  +1.1
      baz=317
SGDS  Sogindy          26.94 317  eP       P       00 00 45.8  +1.1
EKS2  Erkin-Say        27.07 315   P       P       00 00 47.8  +1.9
      SNR=17
MYLDM Lahad Datu       27.30 136   P       P       00 00 47.9  -0.2
MYLDM                              IAmb    IAmb    00 01 19.0
      comp=Z,30nm,1.2s
CN2   Changchun        27.44  43  eP       P       00 00 58.5  +9.5
KBL   Kabul            27.84 295   P       P       00 00 52.5  -0.5
KBL                                IAmb    IAmb    00 01 03.7
      comp=Z,39nm,1.1s
KBL   Kabul            27.84 295   P       P       00 00 52.5  -0.5
KBL                                pmax    pmax
      comp=Z,39nm,1.1s
JNU   Nakatsue         27.93  68   P       P       00 00 52.3  -1.3
      comp=Z,19nm,1.0s,baz=20,slow=9.3,SNR=2.1
JNU                                LR      LR      00 11 51.1
      comp=Z,912nm,21.7s,baz=258,slow=36
      comp=Z,19nm,1.0s
JNU   Nakatsue         27.93  68   P       P       00 00 54.0  +0.5
JNU                                IAmb    IAmb    00 00 59.3
      comp=Z,30nm,0.8s
JNU   Nakatsue         27.93  68   P       P       00 00 58.7  +5.1
      comp=Z,47nm,0.9s
GAR   Garm             27.95 305   P       P       00 00 53.0  -0.8
GAR                                IAmb    IAmb    00 01 36.0
      comp=Z,29nm,0.9s
BTK   Batken           27.95 308   IAmb    IAmb    00 01 18.1
      comp=Z,31nm,1.1s
HIA   Hailar           28.01  28 i P       P       00 00 55.2  +1.1
CHGR  Chuyangaron      28.71 304   P       P       00 01 00.8  +0.2
CHGR                               IAmb    IAmb    00 01 37.6
      comp=Z,29nm,0.9s
CHGR  Chuyangaron      28.71 304   P       P       00 01 00.8  +0.2
CHGR                               pmax    pmax
      comp=Z,29nm,0.9s
DZA   Taraz            28.76 313  eP       P       00 01 02.1  +1.1
      baz=313
DZA   Taraz            28.76 313  eP       P       00 01 02.0  +1.1
IUG   Iuzhnay          29.31 311  eP       P       00 01 07.4  +1.5
      baz=311
IUG   Iuzhnay          29.31 311  eP       P       00 01 07.4  +1.5
KK31  Karatay Array    29.40 313   P       P       00 01 07.4  +0.9
KK31  Karatay Array    29.40 313   P       P       00 01 07.4  +0.9
KK31                               pmax    pmax
      comp=Z,4.0nm,0.9s
KKAR  Karatay Array    29.40 313   P       P       00 01 07.0  +0.5
KKAR  Karatay Array    29.40 313   P       P       00 01 07.0  +0.5
KURBB Kurchatov Arra   29.59 332   P       P       00 01 08.1  +0.1
      comp=Z,3.3nm,0.6s,baz=127,slow=7.6,SNR=43
KURBB                              LR      LR      00 12 51.8
      comp=Z,1µm,22.0s,baz=108,slow=36
      comp=Z,3.3nm,0.6s
KURK  Kurchatov        29.62 332   P       P       00 01 08.4  +0.1
KURK  Kurchatov        29.62 332ceP       P       00 01 08.9  +0.6
KURK                               pmax    pmax
      comp=Z,11nm,0.7s
BNX   BinXian          29.65  41 ⇑P       P       00 01 10.3  +1.6
BNX                                pmax    pmax
      comp=Z,7.0nm,2.1s
BNX                                pmax    pmax
      comp=Z,590nm,7.4s
ZAA0  Zalesovo Array   30.14 342   P       P       00 01 12.7  -0.3
ZAA0                               IAmb    IAmb    00 01 16.9
      comp=Z,31nm,1.2s
ZALV  Zalesovo Beam    30.14 342   P       P       00 01 12.9   0.0
      comp=Z,7.5nm,0.8s,baz=154,slow=10,SNR=23
ZALV                               LR      LR      00 13 40.8
      comp=Z,327nm,18.3s,baz=162,slow=37
      comp=Z,7.5nm,0.8s
ZALV  Zalesovo Beam    30.14 342   P       P       00 01 12.7  -0.3
ZALV  Zalesovo Beam    30.14 342 i P       P       00 01 12.8  -0.1
ZALV                               pmax    pmax
      comp=Z,8.0nm,0.8s
USA0B Ussuriysk Arra   31.79  47   P       P       00 01 26.6  -1.0
USA0B Ussuriysk Arra   31.79  47   P       P       00 01 26.6  -1.0
USA0B                              pmax    pmax
      comp=Z,13nm,1.2s
USRK  Ussuriysk Ar.    31.79  47   P       P       00 01 25.2  -2.3
      comp=Z,3.7nm,0.8s,baz=234,slow=10,SNR=7.1
USRK                               LR      LR      00 15 36.2
      comp=Z,856nm,18.0s,baz=242,slow=39
      comp=Z,3.7nm,0.8s
USRK  Ussuriysk Ar.    31.79  47   P       P       00 01 27.2  -0.4
BRZS  Berezniki        31.85 326  eP       P       00 01 29.4  +1.2
      baz=326
BRZS  Berezniki        31.85 326  eP       P       00 01 29.3  +1.2
HEH   HeiHe            32.28  34  eP       P       00 01 33.8  +1.9
HEH                                pmax    pmax
      comp=Z,7.0nm,0.8s
HEH                                LR      LR
      comp=Z,4µm,13.5s
HEH                                LR      LR
      comp=Z,3µm,12.8s
HEH                                LR      LR
      comp=Z,1µm,11.4s
INU   Inuyama          33.23  64   P       P       00 01 41.2  +0.9
KLR   Kul'dur          34.00  38   LR      LR      00 15 39.1
      comp=Z,505nm,19.2s,baz=235,slow=36
KLR   Kul'dur          34.00  38 i P       P       00 01 47.9  +1.0
KLR                                pmax    pmax
      comp=Z,3.0nm,0.9s
MJAR  Matsushiro Arr   34.33  63   P       P       00 01 49.6  -0.3
      comp=Z,4.7nm,0.9s,baz=268,slow=9.6,SNR=6.9
MJAR                               LR      LR      00 17 10.1
      comp=Z,632nm,18.9s,baz=264,slow=39
      comp=Z,4.7nm,0.9s
LUWI  Luwuk            34.80 137   P       P       00 01 54.0  -0.1
BVAR  Borovoye Array   34.89 329   LR      LR      00 17 06.8
      comp=Z,833nm,19.4s,baz=118,slow=38
BRVK  Borovoye         34.96 329   P       P       00 01 55.1   0.0
BRVK                               IAmb    IAmb    00 01 59.8
      comp=Z,25nm,0.9s
BRVK  Borovoye         34.96 329ceP       P       00 01 55.7  +0.6
BRVK                               pmax    pmax
      comp=Z,37nm,1.3s
KAPI  Kappang          36.33 145   LR      LR      00 17 28.5
      comp=Z,509nm,20.7s,baz=311,slow=37
GEYT  Alibeck          37.06 299   P       P       00 02 13.9  +0.5
      comp=Z,14nm,0.9s,baz=121,slow=7.1,SNR=18
GEYT                               LR      LR      00 20 00.3
      comp=Z,497nm,18.8s,baz=82,slow=40
      comp=Z,14nm,0.9s
GEYT  Alibeck          37.06 299   P       P       00 02 13.6  +0.2
GEYT                               IAmb    IAmb    00 02 26.5
      comp=Z,23nm,0.9s
GEYT  Alibeck          37.06 299   P       P       00 02 13.6  +0.2
GEYT                               pmax    pmax
      comp=Z,23nm,1.0s
GYA0B ALIBECK ARRAY    37.06 299   P       P       00 02 13.5  +0.1
GYA0B                              IAmb    IAmb    00 02 26.5
      comp=Z,22nm,1.0s
WSAR  Wadi Sarin       37.42 275   LR      LR      00 20 16.1
      comp=Z,336nm,18.0s,baz=100,slow=40
JCJ   Chichijima       37.83  79   LR      LR      00 18 13.7
      comp=Z,446nm,19.1s,baz=270,slow=37
ABKAR Akbulak array    38.62 318   P       P       00 02 26.9  +0.6
ASAJ  Asahikawa        38.98  51   LR      LR      00 17 41.3
      comp=Z,340nm,21.1s,baz=248,slow=35
ASAJ  Asahikawa        38.98  51   P       P       00 02 29.8  +0.3
ASAJ                               pmax    pmax
      comp=Z,34nm,1.0s
JKA   Kamikawa-asahi   38.99  51   P       P       00 02 29.8  +0.3
JKA                                IAmb    IAmb    00 02 39.9
      comp=Z,34nm,1.0s
YSS   Yuzh-Sakhalins   39.83  47deP       P       00 02 34.0  -2.4
AKTO  Aktyubinsk       40.22 319   LR      LR      00 21 18.2
      comp=Z,357nm,20.2s,baz=110,slow=39
MMRI  Maumere          40.69 145   P       P       00 02 44.4  +0.5
MMRI                               IAmb    IAmb    00 02 48.1
      comp=Z,45nm,1.1s
YAK   Yakutsk          41.30  21   LR      LR      00 20 41.4
      comp=Z,438nm,19.2s,baz=227,slow=37
YAK   Yakutsk          41.30  21  eP       P       00 02 48.9  +0.6
YAK                               e*PP     pP      00 02 52.3  -3.7
YAK                               e                00 04 28.5
YAK                               e                00 04 46.5
YAK                               eS       S       00 09 04.0  +3.0
YAK                               e*SS     sS      00 09 16.9  +3.1
YAK                               e                00 12 49.5
YAK                                pmax    pmax
      comp=Z,11nm,0.8s
YAK                                pmax    pmax
      comp=E,2.0nm,0.8s
YAK                                pmax    pmax
      comp=Z,282nm,5.8s
YAK                                pmax    pmax
      comp=N,215nm,6.8s
YAK                                pmax    pmax
      comp=E,265nm,6.3s
YAK                                smax    smax
      comp=N,170nm,6.1s
YAK                                smax    smax
      comp=E,103nm,5.2s
YAK                                MLR     MLR
      comp=Z,1µm,15.0s
YAK                                MLR     MLR
      comp=N,586nm,14.0s
YAK                                MLR     MLR
      comp=E,485nm,18.0s
SVE   Sverdlovsk       41.67 329  eP       P       00 02 52.6  +1.1
SVE                                pmax    pmax
      comp=Z,38nm,1.0s
ARU   Arti             42.47 327   LR      LR      00 22 28.8
      comp=Z,553nm,18.2s,baz=112,slow=39
ARU   Arti             42.47 327   P       P       00 02 58.4  +0.4
ARU                                IAmb    IAmb    00 03 02.6
      comp=Z,24nm,1.0s
ARU   Arti             42.47 327d iP       P       00 02 58.3  +0.3
ARU                                                00 04 49.7
ARU                                S       S       00 09 21.1  +2.5
ARU                                SS      SS      00 12 28.7  +0.6
ARU                                pmax    pmax
      comp=Z,28nm,1.0s
SOEI  Soe              42.70 143   P       P       00 03 01.3  +0.8
SOEI  Soe              42.70 143   P       P       00 03 03.2  +2.7
GUMO  Guam             43.96  97   LR      LR      00 20 19.2
      comp=Z,220nm,20.9s,baz=282,slow=35
NRIK  Noril'sk         44.06 354   P       P       00 03 09.8  -0.9
      comp=Z,9.9nm,0.7s,baz=162,slow=6.5,SNR=14
NRIK                               LR      LR      00 22 32.8
      comp=Z,504nm,18.6s,baz=163,slow=38
      comp=Z,9.9nm,0.7s
NRIK  Noril'sk         44.06 354   P       P       00 03 10.1  -0.6
NRIK                               IAmb    IAmb    00 03 14.3
      comp=Z,51nm,1.5s
NRIK  Noril'sk         44.06 354ceP       P       00 03 10.8  +0.1
NRIK                               pmax    pmax
      comp=Z,23nm,1.3s
AKT   Akhty            45.34 304  eP       P       00 03 22.4  +0.9
AKT                               e                00 05 02.2
AKT                                pmax    pmax
      comp=Z,17nm,1.0s
MAK   Makhachkala      45.61 306  eP       P       00 03 24.3  +0.9
MAK                               eS       S       00 10 05.8  +1.1
MAK                                pmax    pmax
      comp=Z,60nm,1.1s
MAK                                MLR     MLR
      comp=Z,268nm,16.0s
GROC  Groznyy          46.88 306  eP       P       00 03 35.1  +1.7
GROC                              eS       S       00 10 24.6  +1.7
BELG  Belogornoye      47.01 319   LR      LR      00 24 41.2
      comp=Z,480nm,18.4s,baz=102,slow=38
BELG  Belogornoye      47.01 319 i P       P       00 03 34.5  +0.3
BELG                               pmax    pmax
      comp=Z,10.0nm,1.0s
GNI   Garni            47.58 302   P       P       00 03 39.4  +0.2
GNI                                IAmb    IAmb    00 03 58.9
      comp=Z,20nm,1.1s
GNI   Garni            47.58 302ceP       P       00 03 38.4  -0.7
GNI                                pmax    pmax
      comp=Z,14nm,1.3s
KIRV  Kirov            47.85 327   LR      LR      00 25 37.3
      comp=Z,519nm,18.7s,baz=112,slow=38
KIRV  Kirov            47.85 327ceP       P       00 03 41.6  +0.9
MA2   Magadan          48.50  32   P       P       00 03 45.7  -0.1
MA2                                IAmb    IAmb    00 04 33.1
      comp=Z,10.0nm,0.9s
MA2   Magadan          48.50  32   P       P       00 03 45.7  -0.1
MA2                                pmax    pmax
      comp=Z,10.0nm,0.9s
AKH   Akhalkalaki      48.53 303   P       P       00 03 47.1  +0.6
AKH   Akhalkalaki      48.53 303   P       P       00 03 47.1  +0.6
AKH                                pmax    pmax
      comp=Z,41nm,1.1s
ONI   Oni              48.57 305   P       P       00 03 47.5  +0.8
ONI                                IAmb    IAmb    00 03 54.6
      comp=Z,11nm,0.7s
ONI   Oni              48.57 305   P       P       00 03 47.5  +0.8
ONI                                pmax    pmax
      comp=Z,11nm,0.7s
TIXI  Tiksi            48.59  12   P       P       00 03 45.1  -1.1
TIXI  Tiksi            48.59  12ceP       P       00 03 44.9  -1.3
TIXI                               pmax    pmax
      comp=Z,27nm,1.7s
KARS  Kars             48.84 302   P       P       00 03 49.3  +0.4
KARS  Kars             48.84 302   P       P       00 03 49.3  +0.4
KARS                               pmax    pmax
      comp=Z,45nm,0.6s
GEVA  Gevas            48.93 299   P       P       00 03 49.6   0.0
GOF   Gofitskoye       48.96 308⇑eP       P       00 03 50.2  +0.7
KBZ   Khabaz           49.01 306   P       P       00 03 50.2  +0.3
      comp=Z,2.0nm,0.8s,baz=100,slow=8.1,SNR=5.3
KBZ                                LR      LR      00 27 36.5
      comp=Z,424nm,18.1s,baz=81,slow=40
      comp=Z,2.0nm,0.8s
KBZ   Khabaz           49.01 306ceP       P       00 03 50.4  +0.5
KBZ                                pmax    pmax
      comp=Z,10.0nm,1.5s
RAYN  Ar Rayn          49.08 279   P       P       00 03 49.2  -1.6
RAYN  Ar Rayn          49.08 279   P       P       00 03 49.2  -1.6
RAYN                               pmax    pmax
      comp=Z,7.0nm,1.0s
KIV   Kislovodsk       49.17 307   P       P       00 03 52.0  +0.7
KIV                                IAmb    IAmb    00 03 55.0
      comp=Z,22nm,1.2s
KIV   Kislovodsk       49.17 307  eP       P       00 03 51.6  +0.4
KIV                                pmax    pmax
      comp=Z,13nm,1.0s
KIV                                MLR     MLR
      comp=Z,173nm,16.0s
SHA1  Shidzhatmaz      49.18 306 i P       P       00 03 51.1  -0.4
GURO  Guroymak-BITLI   49.72 300   P       P       00 03 55.5  -0.1
GURO                               IAmb    IAmb    00 04 11.0
      comp=Z,10nm,1.0s
VRH   Novokhopyorsk    50.40 316  eP       P       00 03 59.7  -0.6
VRH                                pmax    pmax
      comp=Z,30nm,0.9s
SEY   Seymchan         50.46  28   LR      LR      00 27 39.9
      comp=Z,415nm,18.3s,baz=288,slow=39
PETK  Petropavlovsk-   50.57  41   LR      LR      00 25 22.7
      comp=Z,706nm,18.9s,baz=259,slow=36
SOC   Sochi            51.31 306  eP       P       00 04 08.5  +1.1
SOC                               e                00 06 01.9
SOC                               ePPP     PPP     00 07 02.8
SOC                               eS       S       00 11 28.6  +3.4
SOC                               eSS      SS      00 14 58.1  -2.6
SOC                               eSSS     SSS     00 16 37.9
SOC                                pmax    pmax
      comp=Z,14nm,1.0s
SOC                                MLR     MLR
      comp=Z,272nm,15.0s
VORD  Divnogorie       51.90 316  eP       P       00 04 11.6   0.0
VORD                               pmax    pmax
      comp=Z,10.0nm,0.6s
VSR   Storozhevoye     52.00 316  eP       P       00 04 11.0  -1.3
VSR                                pmax    pmax
      comp=Z,30nm,1.5s
VORR  Voronezh         52.01 317  eP       P       00 04 13.5  +1.1
VORR                               pmax    pmax
      comp=Z,30nm,0.5s
LPSR  Galich'ya Gora   52.28 318  eP       P       00 04 15.4  +1.0
LPSR                               pmax    pmax
      comp=Z,10.0nm,0.8s
KLMR  Klimovskoe       53.31 328  eP       P       00 04 20.2  -1.7
KLMR                               AMP             00 04 30.9
      comp=Z,42nm,2.0s
KLMR  Klimovskoe       53.31 328  eP       P       00 04 20.1  -1.8
KLMR                               pmax    pmax
      comp=Z,42nm,2.0s
GAZ   Gaziantep        53.65 298   P       P       00 04 26.0  +1.1
GAZ                                IAmb    IAmb    00 04 37.7
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	comp=Z,7.1nm,0.8s						
TOKA	Tokat	53.89	302	P	P	00 04 26.8	+0.3
TOKA				IAmb	IAmb	00 05 12.1	
	comp=Z,18nm,1.6s						
OBN	Obninsk	53.93	321	LR	LR	00 27 57.6	
	comp=Z,144nm,20.4s,baz=145,slow=37						
OBN	Obninsk	53.93	321	P	P	00 04 26.9	+0.4
OBN	Obninsk	53.93	321	eP	P	00 04 25.8	-0.7
OBN				pmax	pmax		
	comp=Z,32nm,1.7s						
BNN	Bunyan	54.52	301	P	P	00 04 31.2	-0.2
ASF	Jabal al Asfar	54.67	292	LR	LR	00 31 13.0	
	comp=Z,3µm,21.5s,baz=108,slow=40						
BZK	Bozkurt	55.60	304	P	P	00 04 36.3	-2.6
MMAI	Mount Meron Ar	55.75	294	LR	LR	00 32 20.1	
	comp=Z,170nm,19.0s,baz=153,slow=40						
ILGA	Ilgaz	55.91	303	P	P	00 04 41.6	+0.2
BR131	Keskin Array S	56.12	302	P	P	00 04 42.1	-0.7
BR131	Keskin Array S	56.12	302	P	P	00 04 42.1	-0.7
BR131				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BRTR	Keskin Array B	56.12	302	P	P	00 04 41.9	-1.0
	comp=Z,0.9nm,0.6s,baz=119,slow=8.0,SNR=12						
	comp=Z,0.9nm,0.6s						
BRTR	Keskin Array B	56.12	302	P	P	00 04 42.1	-0.7
WB0	Warramunga Arr	56.49	140	P	P	00 04 45.7	+0.2
WRAB	Tennant Creek	56.59	140	P	P	00 04 46.0	-0.1
WRAB	Tennant Creek	56.59	140	ceP	P	00 04 47.2	+1.0
WRAB				pmax	pmax		
	comp=Z,34nm,1.3s						
WRA	Warramunga Arr	56.60	140	P	P	00 04 45.5	-0.7
	comp=Z,5.4nm,0.7s,baz=329,slow=7.5,SNR=42						
WRA				LR	LR	00 30 33.9	
	comp=Z,150nm,20.0s,baz=306,slow=38						
	comp=Z,5.4nm,0.7s						
WRA	Warramunga Arr	56.60	140	P	P	00 04 46.9	+0.7
WRA	Warramunga Arr	56.60	140	iP	P	00 04 45.7	-0.5
WRA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WB2	Warramunga Arr	56.60	140	P	P	00 04 46.3	+0.1
ANTO	Ankara	56.75	302	P	P	00 04 47.1	-0.1
ANTO				IAmb	IAmb	00 04 56.5	
	comp=Z,16nm,1.1s						
ANTO	Ankara	56.75	302	P	P	00 04 47.1	-0.1
ANTO				pmax	pmax		
	comp=Z,16nm,1.1s						
EIL	Elat	56.82	290	LR	LR	00 31 26.1	
	comp=Z,303nm,19.5s,baz=62,slow=38						
MORW	Morawa	56.84	163	P	P	00 04 48.3	+0.5
APA	Apatity	57.34	335	⇓iP	P	00 04 55.0	+4.2
APA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,2µm,16.0s						
BILL	Bilibino	57.47	24	P	P	00 04 50.7	-1.1
BILL	Bilibino	57.47	24	iP	P	00 04 49.8	-2.0
BILL				i		00 04 58.1	
BILL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,493nm,14.0s						
MDUB	Mudurnu	57.88	303	P	P	00 04 54.8	-0.4
PMG	Port Moresby	57.91	121	P	P	00 04 54.9	-0.7
PMG	Port Moresby	57.91	121	ceP	P	00 04 55.5	0.0
PMG				pmax	pmax		
	comp=Z,24nm,1.0s						
AKASG	Malin Array Be	58.27	315	P	P	00 04 56.9	-0.7
	comp=Z,6.1nm,0.8s,baz=74,slow=6.0,SNR=20						
AKASG				LR	LR	00 34 22.9	
	comp=Z,364nm,18.6s,baz=85,slow=40						
	comp=Z,6.1nm,0.8s						
AKASG	Malin Array Be	58.27	315	P	P	00 04 57.7	+0.1
AKASG				IAmb	IAmb	00 05 01.6	
	comp=Z,35nm,1.9s						
AKASG	Malin Array Be	58.27	315	P	P	00 04 57.7	+0.1
AKASG				pmax	pmax		
	comp=Z,35nm,2.0s						
AKBB	Malin Array Si	58.27	315	P	P	00 04 57.1	-0.6
AKBB				IAmb	IAmb	00 05 00.8	
	comp=Z,14nm,0.8s						
AKBB	Malin Array Si	58.27	315	iP	P	00 04 56.4	-1.2
AKBB				pmax	pmax		
	comp=Z,12nm,0.9s						
BORA	Eskisehir	58.53	302	P	P	00 04 58.6	-1.1
BORA				IAmb	IAmb	00 05 08.0	
	comp=Z,11nm,0.9s						
KRVT	Keravat (AS076	58.83	113	LR	LR	00 27 34.2	
	comp=Z,133nm,21.9s,baz=78,slow=33						
MNK	Minsk	58.93	320	iP	P	00 04 58.8	-3.4
MNK				i		00 05 47.4	
MNK				i		00 07 09.5	
MNK				iS	S	00 13 03.8	-3.0
MNK				i		00 14 46.1	
MNK				iSS	SS	00 16 59.3	-0.9
MNK				pmax	pmax		
	comp=N,37nm,0.8s						
MNK				pmax	pmax		
	comp=E,4.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MNK				MLR	MLR		
	comp=E,57nm,15.0s						
MNK				MLR	MLR		
	comp=N,608nm,17.0s						
MNK				MLR	MLR		
	comp=Z,148nm,12.0s						
TLCR		59.01	309	⇑P	P	00 05 04.9	+2.0
TLCR		59.01	309	P	P	00 05 04.9	+2.0
SORM	Soroca	59.02	312	⇑P	P	00 05 03.9	+0.9
SORM	Soroca	59.02	312	P	P	00 05 03.8	+0.9
AS31	Alice Springs	59.32	143	P	P	00 05 05.4	+0.1
ASAR	Alice Springs	59.32	143	P	P	00 05 04.8	-0.4
	comp=Z,2.6nm,0.6s,baz=329,slow=6.6,SNR=31						
ASAR				LR	LR	00 32 06.9	
	comp=Z,150nm,18.4s,baz=314,slow=38						
	comp=Z,2.6nm,0.6s						
ASAR	Alice Springs	59.32	143	P	P	00 05 06.7	+1.4
TIRR	Tirgusor	59.38	308	⇓P	P	00 05 07.5	+2.0
TIRR	Tirgusor	59.38	308	P	P	00 05 07.5	+2.0
ELL	Elmali	59.49	299	P	P	00 05 05.2	-1.3
ELL	Elmali	59.49	299	P	P	00 05 05.2	-1.3
ELL				pmax	pmax		
	comp=Z,146nm,1.2s						
FINES	FINESS Array B	59.84	328	P	P	00 05 08.3	0.0
	comp=Z,5.2nm,0.8s,baz=109,slow=8.6,SNR=8.5						
FINES				LR	LR	00 34 11.4	
	comp=Z,308nm,18.2s,baz=97,slow=39						
	comp=Z,5.2nm,0.8s						
FINES	FINESS Array B	59.84	328	iP	P	00 05 10.6	+2.3
FINES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TESR	Tescani	60.35	310	⇑P	P	00 05 12.9	+0.8
VRI	Vrincioaia	60.38	310	⇓P	P	00 05 12.9	+0.5
VRI	Vrincioaia	60.38	310	P	P	00 05 12.9	+0.5
PLOR	Plostina	60.44	310	⇑P	P	00 05 13.8	+1.0
PLOR	Plostina	60.44	310	P	P	00 05 13.8	+1.0
SHEM	Shemya Is, Ala	60.46	42	LR	LR	00 32 14.2	
	comp=Z,184nm,18.9s,baz=307,slow=37						
ARCES	ARCESS Array B	60.49	337	P	P	00 05 13.5	+0.8
	comp=Z,7.4nm,0.9s,baz=59,slow=5.8,SNR=5.9						
ARCES				LR	LR	00 33 31.5	
	comp=Z,526nm,18.5s,baz=91,slow=38						
	comp=Z,7.4nm,0.9s						
BALB	Balikesir	60.52	303	P	P	00 05 12.8	-0.6
ISR	Istrita	60.61	309	⇑P	P	00 05 14.3	+0.3
ISR	Istrita	60.61	309	P	P	00 05 14.3	+0.3
COVR	Voineasa-Covas	60.75	310	⇑P	P	00 05 16.6	+1.7
NWAO	Narrogin (SRO)	60.82	163	LR	LR	00 31 01.5	
	comp=Z,378nm,21.8s,baz=6.0,slow=36						
MLR	Muntele Rosu	60.98	309	⇑P	P	00 05 17.8	+1.2
MLR	Muntele Rosu	60.98	309	LR	LR	00 35 34.3	
	comp=Z,427nm,21.2s,baz=64,slow=40						
MLR	Muntele Rosu	60.98	309	P	P	00 05 17.5	+0.9
MLR	Muntele Rosu	60.98	309	P	P	00 05 17.5	+0.9
MLR				pmax	pmax		
	comp=Z,21nm,0.8s						
OZUR		61.00	310	⇑P	P	00 05 17.2	+0.6
ARG	Arkhangelos	61.00	299	P	P	00 05 17.2	+0.5
ARG	Arkhangelos	61.00	299	P	P	00 05 17.2	+0.5
ARG				pmax	pmax		
	comp=Z,34nm,1.3s						
PABE	Paberze	61.13	321	P	P	00 05 18.2	+1.0
BURAR	Bucovina Array	61.18	312	⇓P	P	00 05 18.3	+0.4
BURAR	Bucovina Array	61.18	312	P	P	00 05 18.3	+0.4
BURAR	Bucovina Array	61.18	312	P	P	00 05 18.2	+0.4
BUR08	Bucovina Ar. S	61.19	312	P	P	00 05 18.0	+0.1
VOIR		61.61	309	⇑P	P	00 05 21.4	+0.5
VOIR		61.61	309	P	P	00 05 21.3	+0.5
STFAR	Stefanesti-Arg	61.76	309	⇑P	P	00 05 22.3	+0.5
HUMR	Humele	61.80	308	⇑P	P	00 05 23.0	+1.0
ARCR	ARCALIA	61.83	311	⇑P	P	00 05 23.1	+0.9
KARP	Karpathos	61.91	298	P	P	00 05 21.5	-1.4
BMR	Baia Mare	62.32	312	⇓P	P	00 05 27.0	+1.6
BMR	Baia Mare	62.32	312	P	P	00 05 27.0	+1.6
LOT	Lotru	62.50	310	⇑P	P	00 05 27.6	+0.8
MARR	Marisel-Cluj	62.73	311	⇑P	P	00 05 28.9	+0.5
MESR	Meseseni	62.77	312	⇓P	P	00 05 29.6	+1.1
TRPA	Tarpa	62.88	313	⇑P	P	00 05 29.4	+0.2
DRGR		62.99	311	⇓P	P	00 05 30.5	+0.4
DRGR		62.99	311	P	P	00 05 30.4	+0.4
DEV	Deva	63.02	310	⇑P	P	00 05 31.3	+1.2
DEV	Deva	63.02	310	P	P	00 05 31.3	+1.2
SPITS	Spitsbergen Ar	63.48	347	LR	LR	00 37 31.3	
	comp=Z,387nm,18.7s,baz=62,slow=40						
HERR	Herculane	63.54	309	⇑P	P	00 05 35.2	+1.6
SURR	Surduc	63.58	310	⇓P	P	00 05 34.6	+0.8
IDI	Anoyia	63.78	298	LR	LR	00 38 18.0	
	comp=Z,106nm,21.5s,baz=83,slow=41						
SIRR	Siria	63.80	311	⇑P	P	00 05 36.4	+1.1
KNT	Kendrikon	63.95	305	P	P	00 05 37.0	+0.6
BZS	Buzias	63.95	310	⇓P	P	00 05 37.7	+1.4
BZS	Buzias	63.95	310	P	P	00 05 37.7	+1.4
MDVR	Moldovita	64.05	309	⇑P	P	00 05 37.8	+0.8
NIE	Niedzica	64.13	314	eP	P	00 05 39.3	+1.9
CTA	Charters Tower	64.23	131	LR	LR	00 36 04.8	
	comp=Z,76nm,19.5s,baz=276,slow=38						
BOVS	Bovan	64.29	308	⇓P	P	00 05 38.8	+0.3
OJC	Ojcow	64.31	315	eP	P	00 05 40.6	+2.0
OJC	Ojcow	64.31	315	P	P	00 05 40.0	+1.4
OJC				IAmb	IAmb	00 05 43.5	
	comp=Z,7.9nm,0.7s						
OJC	Ojcow	64.31	315	P	P	00 05 40.0	+1.4
OJC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
GRG	Griva	64.36	305	P	P	00 05 37.3	-1.8
IMMV	Iera Moni Meta	64.45	299	P	P	00 05 37.8	-2.0
PSZ	Piszkesteto	64.67	313	P	P	00 05 40.6	-0.5
PSZ				IAmb	IAmb	00 06 14.5	
	comp=Z,17nm,1.0s						
PSZ	Piszkesteto	64.67	313	P	P	00 05 40.6	-0.5
AGG	Agios Georgios	64.86	303	P	P	00 05 40.5	-1.9
THL	Klokotos Trika	64.97	304	P	P	00 05 40.1	-2.9
KZN	Kozani	64.98	304	P	P	00 05 42.3	-0.9
MAKR	Makrakomi, Fth	65.01	303	P	P	00 05 41.8	-1.6
FNA	Florina	65.16	305	P	P	00 05 42.1	-2.2
ANX	Ano Chora	65.27	302	P	P	00 05 43.6	-1.6
EVR	Evrytania	65.28	303	P	P	00 05 43.4	-1.8
FRGS	Fruska Gora	65.29	310	⇑P	P	00 05 46.6	+1.5
LAKA	Lakka	65.32	302	P	P	00 05 44.6	-0.8
DIVS	Divibare	65.40	309	P	P	00 05 46.5	+0.7
DIVS				IAmb	IAmb	00 05 49.4	
	comp=Z,13nm,1.0s						
LODK	Lodwar	65.55	262	P	P	00 05 46.9	-0.4
PVO	Paravola	65.57	303	P	P	00 05 46.9	-0.1
DRO	Drossia	65.59	302	P	P	00 05 48.1	+0.9
ITM	Ithomi	65.62	301	P	P	00 05 45.3	-2.1
KBN	Korca	65.63	305	P	P	00 05 47.2	-0.2
KBN	Korca	65.63	305	P	P	00 05 47.2	-0.2
KBN				pmax	pmax		
	comp=Z,22nm,1.0s						
PHP	Peshkopia	65.63	306	P	P	00 05 47.6	+0.2
RLS	Riolos of Patr	65.75	302	P	P	00 05 46.9	-1.2
MORC	Moravsky Berou	65.82	315	P	P	00 05 47.9	-0.5
MORC				IAmb	IAmb	00 05 52.8	
	comp=Z,27nm,1.7s						
MORC	Moravsky Berou	65.82	315	eP	P	00 05 48.4	-0.1
MORC	Moravsky Berou	65.82	315	P	P	00 05 47.9	-0.5
MORC				pmax	pmax		
	comp=Z,27nm,1.7s						
MORH	Mrgy, Hungar	65.86	311	⇑P	P	00 05 49.1	+0.4
LSK	Leskovik	65.88	304	P	P	00 05 47.7	-1.4
JAVC	Velka Javorina	65.93	314	eP	P	00 05 51.4	+2.2
NYDR	Nydri-Lefkada	66.17	303	P	P	00 05 47.6	-3.2
EVGI	Lefkada island	66.23	303	P	P	00 05 45.7	-5.5
KRLC	Kraliky	66.24	316	eP	P	00 05 50.8	-0.3
KRLC	Kraliky	66.24	316	eP	P	00 05 52.2	+1.1
KRLC	Kraliky	66.24	316	eP	P	00 05 52.2	+1.1
LTHK	Lithakia	66.32	302	P	P	00 05 49.4	-2.4
DPC	Dobruska-Polom	66.47	316	eP	P	00 05 53.1	+0.5
DPC	Dobruska-Polom	66.47	316	eP	P	00 05 54.1	+1.5
DPC				AMS	AMS	00 36 10.0	
	comp=Z,700nm,17.0s						
DPC	Dobruska-Polom	66.47	316	eP	P	00 05 54.1	+1.5
DPC				MLR	MLR		
	comp=Z,700nm,17.0s						
VRAC	Vranov	66.52	315	⇓P	P	00 05 54.2	+1.2
VRAC	Vranov	66.52	315	LR	LR	00 36 40.2	
	comp=Z,409nm,18.3s,baz=79,slow=38						
VRAC	Vranov	66.52	315	eP	P	00 05 53.9	+1.0
VRAC	Vranov	66.52	315	P	P	00 05 54.1	+1.2
CHVC	Chvalec	66.58	316	eP	P	00 05 53.4	+0.1
CHVC	Chvalec	66.58	316	eP	P	00 05 54.7	+1.4
CHVC	Chvalec	66.58	316	eP	P	00 05 54.7	+1.4
UPC	Upice	66.62	316	eP	P	00 05 55.9	+2.4
UPC	Upice	66.62	316	eP	P	00 05 57.4	+3.9
UPC	Upice	66.62	316	eP	P	00 05 55.9	+2.4
KRUC	Moravsky	66.70	315	eP	P	00 05 55.6	+1.5
NB2	NORSAR Subarra	67.02	328	P	P	00 05 54.9	-1.0
	comp=Z,8.7nm,0.9s,baz=78,slow=6.5						
NOA	NORSAR Array B	67.02	328	P	P	00 05 56.8	+0.9
	comp=Z,3.4nm,0.7s,baz=78,slow=6.3,SNR=17						
NOA				LR	LR	00 37 09.4	
	comp=Z,333nm,19.6s,baz=95,slow=38						
	comp=Z,3.4nm,0.7s						
RONA	Rosalia, Austr	67.08	313	eP	P	00 05 59.7	+3.1
	comp=Z,5.2nm,1.1s						
TREC	Trest	67.23	315	eP	P	00 06 01.7	+4.2
TREC	Trest	67.23	315	AMS	AMS	00 36 30.0	
	comp=Z,500nm,19.7s						
TREC	Trest	67.23	315	eP	P	00 06 01.7	+4.2
CONA	Conrad Observa	67.31	314	iP	P	00 05 59.7	+1.6
	comp=Z,16nm,1.4s						
PVCC	Panska Ves	67.52	317	eP	P	00 06 02.9	+3.7
PVCC	Panska Ves	67.52	317	eP	P	00 06 03.3	+4.1
PVCC	Panska Ves	67.52	317	eP	P	00 06 03.3	+4.1
TNA	Tin City	67.66	27	P	P	00 05 59.7	-0.1
TNA				IAmb	IAmb	00 06 01.8	
	comp=Z,31nm,2.0s						
TNA	Tin City	67.66	27	P	P	00 05 59.3	-0.5
	baz=283						
PRU	Pruhonice	67.66	316	eP	P	00 06 02.4	+2.3
PRU				AMS	AMS	00 38 40.0	
	comp=Z,500nm,15.3s						
PRU	Pruhonice	67.66	316	eP	P	00 06 02.4	+2.3
ARSA	Arzberg	67.70	313	iP	P	00 06 02.5	+2.0
	comp=Z,0.4nm,0.4s						
BRG	Berggiesshubel	67.82	317	eP	P	00 06 04.7	+3.6
BRG				Amp		00 06 06.3	
	comp=Z,5.4nm,0.7s						
BRG				Amp		00 25 38.0	
	comp=E,0.2nm,15.3s						
BRG				Amp		00 25 38.0	
	comp=Z,0.4nm,16.7s						
BRG				Amp		00 25 39.0	
	comp=N,0.3nm,18.3s						
BRG				Amp		00 40 19.0	
	comp=Z,0.8nm,17.9s						
BRG	Berggiesshubel	67.82	317	eP	P	00 06 04.7	+3.6
BRG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BRG				MLR	MLR		
	comp=Z,759nm,17.9s						
GOLS	Golise	67.95	312	iP	P	00 06 04.5	+2.4
CKRC	Cesky Krumlov	68.10	315	eP	P	00 06 03.6	+0.7
CKRC	Cesky Krumlov	68.10	315	eP	P	00 06 03.3	+0.4
CKRC				AMS	AMS	00 36 50.0	
	comp=Z,500nm,18.8s						
CKRC	Cesky Krumlov	68.10	315	eP	P	00 06 03.6	+0.7
SOKA	Soboth	68.17	312	iP	P	00 06 06.8	+3.3
	comp=Z,5.0nm,0.6s,SNR=4.8						
HNR	Honiara	68.20	113	LR	LR	00 33 02.6	
	comp=Z,2µm,21.3s,baz=320,slow=34						
CLL	Collm	68.29	318	eP	P	00 06 04.0	0.0
	comp=Z,6.0nm,1.5s						
CLL				e(pP)	pP	00 06 11.0	-1.1
CLL				AMS	AMS	00 33 00.0	
	comp=N,900nm,21.5s						
CLL				AMS	AMS	00 33 00.0	
	comp=E,400nm,19.6s						
CLL				AMS	AMS	00 36 00.0	
	comp=Z,400nm,20.1s						
CLL	Collm	68.29	318	eP	P	00 06 04.0	0.0
CLL				e		00 06 11.0	
CLL				pmax	pmax		
	comp=Z,6.0nm,1.5s						
CLL				MLR	MLR		
	comp=Z,400nm,20.1s						
MOA	Molln	68.38	314	iP	P	00 06 07.1	+2.4
	comp=Z,5.3nm,0.7s,SNR=5.5						
GEC2	GERESS Array S	68.48	315	P	P	00 06 06.1	+0.7
GERES	GERESS Array B	68.48	315	P	P	00 06 06.0	+0.5
	comp=Z,4.5nm,0.6s,baz=62,slow=6.6,SNR=24						
GERES				LR	LR	00 37 49.7	
	comp=Z,418nm,20.9s,baz=75,slow=38						
	comp=Z,4.5nm,0.6s						
GERES	GERESS Array B	68.48	315	P	P	00 06 05.7	+0.3
GERES	GERESS Array B	68.48	315	P	P	00 06 06.0	+0.5
KHC	Kasperske Hory	68.48	315	eP	P	00 06 05.5	+0.1
KHC	Kasperske Hory	68.48	315	eP	P	00 06 05.5	+0.1
VISS	Visnje	68.53	312	iP	P	00 06 08.2	+2.5
BIOA	Bad Ischl, Aus	68.83	314	iP	P	00 06 08.4	+0.9
	comp=Z,7.5nm,1.7s						
CEY	Cerknica	68.83	312	iP	P	00 06 09.9	+2.4
NKC	Novy Kostel	68.91	317	eP	P	00 06 12.8	+4.8
NKC	Novy Kostel	68.91	317	eP	P	00 06 13.2	+5.2
NKC				AMS	AMS	00 35 10.0	
	comp=Z,700nm,6.9s						
NKC	Novy Kostel	68.91	317	eP	P	00 06 13.2	+5.2
NKC				MLR	MLR		
	comp=Z,700nm,6.9s						
MYKA	Terra Mystica	69.11	313	eP	P	00 06 12.3	+2.9
	comp=Z,2.6nm,0.6s						
KBA	Koelnbreinsper	69.18	313	iP	P	00 06 12.4	+2.5
	comp=Z,4.9nm,0.6s,SNR=5.6						
CUC	Castrocucco	69.46	305	P	P	00 06 11.8	+0.2
CUC				IAmb	IAmb	00 06 16.2	
	comp=Z,22nm,1.2s						
GRA1	Grafenberg Arr	69.81	316	P	P	00 06 13.9	+0.3
GRF	Grafenberg Arr	69.81	316	P	P	00 06 13.9	+0.3
GRF				pmax	pmax		
	comp=Z,59nm,2.0s						
GRF	Grafenberg Arr	69.81	316	eP	P	00 06 17.2	+3.7
	comp=Z,4.4nm,0.8s,baz=78,slow=5.4						
GRFO	Grafenberg	69.82	316	P	P	00 06 14.8	+1.2
GRFO	Grafenberg	69.82	316	P	P	00 06 14.8	+1.2
GRFO				pmax	pmax		
	comp=Z,48nm,1.9s						
ABTA	Abfaltersbach	69.82	313	iP	P	00 06 16.3	+2.6
	comp=Z,4.8nm,0.8s						
STAL	STALIGIAL	69.83	312	P	P	00 06 14.7	+1.0
STAL				IAmb	IAmb	00 06 22.1	
	comp=Z,14nm,0.9s						
A21K	Barrow	69.93	19	P	P	00 06 13.6	-0.2
A21K					pP	00 06 13.8	-8.1
A21K	Barrow	69.93	19	P	P	00 06 14.1	+0.2
	baz=291						
STKA	Stephens Creek	69.95	143	P	P	00 06 14.9	+0.4
	comp=Z,13nm,0.9s,baz=322,slow=7.5,SNR=12						
	comp=Z,13nm,0.9s						
STKA	Stephens Creek	69.95	143	P	P	00 06 15.5	+1.0
STKA	Stephens Creek	69.95	143	P	P	00 06 15.5	+1.0
STKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CIMO	Cimolais	70.00	313	P	P	00 06 15.1	+0.3
CIMO				IAmb	IAmb	00 06 36.4	
	comp=Z,17nm,1.3s						
WTTA	Wattenberg	70.25	314	iP	P	00 06 17.5	+1.0
	comp=Z,8.6nm,1.3s						
WATA	Walderalm	70.27	314	iP	P	00 06 18.1	+1.6
	comp=Z,4.1nm,0.7s						
SQTA	Sankt Quirin	70.54	314	iP	P	00 06 19.9	+1.7
	comp=Z,8.0nm,0.6s,SNR=5.7						
MOTA	Moosalm	70.57	314	iP	P	00 06 21.4	+3.0
	comp=Z,19nm,1.3s						
CTI	Castel Tesino	70.60	312	P	P	00 06 18.8	+0.2
CTI				IAmb	IAmb	00 06 38.6	
	comp=Z,24nm,1.6s						
CTI	Castel Tesino	70.60	312	P	P	00 06 18.8	+0.2
CTI				pmax	pmax		
	comp=Z,24nm,1.6s						
RETA	Reutte	70.75	314	iP	P	00 06 20.2	+0.7
	comp=Z,9.5nm,0.7s						
TEOL	Teolo	70.79	312	P	P	00 06 20.1	+0.5
FETA	Feichten	70.91	314	iP	P	00 06 20.9	+0.4
	comp=Z,11nm,0.9s,SNR=6.1						
EIDS	Eidsvold	71.07	132	P	P	00 06 22.4	+0.9
DAG	Danmarks Havn	71.09	348	iP	P	00 06 23.3	+2.4
DAG				IAmb	IAmb	00 06 32.9	
	comp=Z,5.4nm,0.9s						
VAE	Valguarnera	71.27	303	LR	LR	00 40 49.7	
	comp=Z,130nm,19.6s,baz=59,slow=38						
FUORN	Ofenpass-Fuorn	71.34	313	P	P	00 06 24.1	+0.9
STU	Stuttgart	71.36	316	P	P	00 06 23.8	+0.8
STU				IAmb	IAmb	00 06 30.9	
	comp=Z,12nm,0.7s						
STU	Stuttgart	71.36	316	P	P	00 06 23.8	+0.8
STU				pmax	pmax		
	comp=Z,12nm,0.7s						
DAVA	Damuels	71.38	314	iP	P	00 06 23.7	+0.3
	comp=Z,6.3nm,1.1s						
MBAR	Mbarara	71.49	260	LR	LR	00 39 15.5	
	comp=Z,145nm,18.9s,baz=43,slow=37						
MBAR	Mbarara	71.49	260	P	P	00 06 24.4	0.0
MBAR	Mbarara	71.49	260	P	P	00 06 24.5	0.0
MBAR				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BFO	Black Forest	72.04	315	P	P	00 06 27.0	-0.2
BFO				IAmb	IAmb	00 06 30.1	
	comp=Z,37nm,2.0s						
BFO	Black Forest	72.04	315	P	P	00 06 27.0	-0.2
BFO				pmax	pmax		
	comp=Z,37nm,2.0s						
F21K	Alatna River	72.59	23	P	P	00 06 29.5	-0.6
	baz=295						
D23K	Nanushuk River	72.75	21	P	P	00 06 31.3	+0.3
	baz=297						
DBG	Daneborg	72.81	346	iP	P	00 06 31.7	+0.4
DBG				IAmb	IAmb	00 06 40.3	
	comp=Z,6.9nm,1.2s						
G21K	Allakaket	72.88	24	P	P	00 06 31.2	-0.6
	baz=296						
F22K	John River	72.92	23	P	P	00 06 31.5	-0.5
	baz=296						
WLF	Walferdange	72.95	317	P	P	00 06 32.6	+0.1
WLF				IAmb	IAmb	00 06 47.4	
	comp=Z,12nm,0.8s						
WLF	Walferdange	72.95	317	P	P	00 06 32.6	+0.1
WLF				pmax	pmax		
	comp=Z,12nm,0.8s						
IMAR	Indian Mountai	73.03	24	P	P	00 06 33.2	+0.6
N16K	Nishlik Lake	73.21	30	P	P	00 06 35.5	+1.7
	baz=293						
D24K	Happy Valley	73.25	20	P	P	00 06 35.1	+1.2
	baz=299						
H21K	Melozitna Rive	73.52	24	P	P	00 06 35.5	-0.1
H21K	Melozitna Rive	73.52	24	P	P	00 06 35.2	-0.3
	baz=296						
COLD	Coldfoot	73.73	22	P	P	00 06 37.3	+0.5
COLD				IAmb	IAmb	00 06 40.7	
	comp=Z,16nm,1.6s						
E24K	Your Creek	73.89	21	P	P	00 06 37.4	-0.4
	baz=299						
D25K	Kavik River	73.93	20	P	P	00 06 37.7	-0.3
	baz=301						
G23K	Bananza Creek	74.03	23	P	P	00 06 38.1	-0.6
	baz=298						
I21K	Tanana	74.04	25	P	P	00 06 38.2	-0.4
I21K				IAmb	IAmb	00 06 55.2	
	comp=Z,11nm,1.2s						
I21K	Tanana	74.04	25	P	P	00 06 38.6	0.0
	baz=297						
K20K	Telida	74.04	27	P	P	00 06 39.0	+0.3
K20K	Telida	74.04	27	P	P	00 06 38.8	+0.1
	baz=296						
C26K	Camden Bay	74.05	19	P	P	00 06 40.2	+1.6
	baz=302						
EUNU	Eureka	74.20	1	P	P	00 06 40.0	+0.5
BNI	Bardonecchia	74.22	313	P	P	00 06 41.6	+1.4
BNI				IAmb	IAmb	00 07 51.5	
	comp=Z,22nm,1.4s						
BNI	Bardonecchia	74.22	313	P	P	00 06 41.7	+1.4
BNI				pmax	pmax		
	comp=Z,22nm,1.4s						
L19K	White Mountain	74.23	28	P	P	00 06 39.6	-0.2

L19K	**White Mountain**	**74.23**	**28**	P	**P**	**00 06 39.9**	**0.0**
	baz=296						
SDPT	**Sand Point**	**74.36**	**36**	P	**P**	**00 06 39.3**	**-1.3**
CHUM	**Lake Minchumin**	**74.51**	**26**	P	**P**	**00 06 41.1**	**-0.2**
	baz=297						
C27K	**Jago River**	**74.56**	**19**	P	**P**	**00 06 42.0**	**+0.4**
	baz=303						
MLY	**Manley**	**74.58**	**25**	P	**P**	**00 06 41.5**	**-0.4**
MLY	**Manley**	**74.58**	**25**	P	**P**	**00 06 41.7**	**-0.1**
	baz=298						
H23K	**Yukon River**	**74.63**	**24**	P	**P**	**00 06 42.4**	**+0.3**
H23K	**Yukon River**	**74.63**	**24**	P	**P**	**00 06 42.8**	**+0.7**
	baz=299						
CAST	**Castle Rocks**	**74.81**	**26**	P	**P**	**00 06 43.3**	**0.0**
CAST				IAmb	IAmb	00 06 47.4	
	comp=Z,35nm,2.0s						
CAST	**Castle Rocks**	**74.81**	**26**	P	**P**	**00 06 43.2**	**0.0**
	baz=298						
ARMA	**Armidale**	**74.82**	**135**	P	**P**	**00 06 45.0**	**+1.2**
ARMA				IAmb	IAmb	00 06 51.3	
	comp=Z,18nm,0.9s						
BPAW	**Bear Paw Mtn.**	**74.92**	**25**	P	**P**	**00 06 43.6**	**-0.2**
BPAW				IAmb	IAmb	00 06 49.9	
	comp=Z,6.1nm,0.7s						
BPAW	**Bear Paw Mtn.**	**74.92**	**25**	P	**P**	**00 06 43.2**	**-0.7**
	baz=298						
PPLA	**Purkeypile**	**75.01**	**27**	P	**P**	**00 06 45.6**	**+1.1**
PPLA	**Purkeypile**	**75.01**	**27**	P	**P**	**00 06 45.6**	**+1.1**
	baz=298						
I23K	**Minto, Yukon-K**	**75.03**	**24**	P	**P**	**00 06 45.1**	**+0.8**
O18K	**Koktuh Hills**	**75.08**	**30**	P	**P**	**00 06 45.6**	**+0.8**
O18K	**Koktuh Hills**	**75.08**	**30**	P	**P**	**00 06 45.2**	**+0.3**
	baz=296						
M20K	**Styx River**	**75.09**	**28**	P	**P**	**00 06 44.8**	**-0.1**
M20K				IAmb	IAmb	00 07 01.6	
	comp=Z,8.0nm,0.8s						
M20K	**Styx River**	**75.09**	**28**	P	**P**	**00 06 44.8**	**-0.1**
	baz=297						
H24K	**Noodor Dome**	**75.22**	**23**	P	**P**	**00 06 47.0**	**+1.4**
	baz=300						
P18K	**Big Mountain,**	**75.28**	**31**	P	**P**	**00 06 46.7**	**+0.8**
P18K				IAmb	IAmb	00 07 10.0	
	comp=Z,11nm,1.1s						
NEEM	**North Greenlan**	**75.41**	**354**	*e*P	**P**	**00 06 46.6**	**-0.1**
NEA2	**Nenana**	**75.42**	**25**	P	**P**	**00 06 46.2**	**-0.4**
NEA2				IAmb	IAmb	00 06 49.2	
	comp=Z,28nm,1.8s						
NEA2	**Nenana**	**75.42**	**25**	P	**P**	**00 06 46.2**	**-0.4**
	baz=300						
BMAR	**Burnt Mountain**	**75.50**	**21**	P	**P**	**00 06 47.0**	**-0.1**
MDM	**Murphy Dome**	**75.54**	**24**	P	**P**	**00 06 46.9**	**-0.4**
MDM				IAmb	IAmb	00 06 51.7	
	comp=Z,7.5nm,0.8s						
KEST	**Kesra**	**75.70**	**303**	LR	LR	00 45 32.0	
	comp=Z,89nm,20.7s,baz=300,slow=40						
KEST	**Kesra**	**75.70**	**303**	P	**P**	**00 06 49.2**	**+0.3**
KEST				IAmb	IAmb	00 07 39.8	
	comp=Z,30nm,1.8s						
SKT	**Skwentna**	**75.72**	**27**	P	**P**	**00 06 48.4**	**0.0**
SKT	**Skwentna**	**75.72**	**27**	P	**P**	**00 06 47.8**	**-0.6**
	baz=298						
TCOL	**CIGO, UAF Yank**	**75.72**	**24**	P	**P**	**00 06 48.9**	**+0.6**
COLA	**College**	**75.72**	**24**	P	**P**	**00 06 49.4**	**+1.1**
COLA	**College**	**75.72**	**24**	P	**P**	**00 06 49.4**	**+1.1**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
POKR	**Poker Plat Res**	**75.75**	**24**	P	**P**	**00 06 48.9**	**+0.4**
POKR				IAmb	IAmb	00 07 47.2	
	comp=Z,8.3nm,0.9s						
POKR	**Poker Plat Res**	**75.75**	**24**	P	**P**	**00 06 48.7**	**+0.2**
	baz=301						
FYU	**Fort Yukon**	**75.75**	**22**	P	**P**	**00 06 49.7**	**+1.2**
CCB	**Clear Creek Bu**	**75.86**	**24**	P	**P**	**00 06 50.1**	**+1.0**
SPU	**Mount Spurr**	**75.87**	**28**	P	**P**	**00 06 49.8**	**+0.5**
MCK	**McKinley**	**75.90**	**25**	P	**P**	**00 06 50.1**	**+0.7**
MCK				IAmb	IAmb	00 06 53.5	
	comp=Z,34nm,2.0s						
MCK	**McKinley**	**75.90**	**25**	P	**P**	**00 06 50.1**	**+0.7**
MCK				pmax	pmax		
	comp=Z,34nm,2.0s						
MCK	**McKinley**	**75.90**	**25**	P	**P**	**00 06 49.3**	**-0.1**
	baz=300						
E27K	**Coleen River**	**76.01**	**20**	P	**P**	**00 06 49.8**	**-0.2**
	baz=305						
G26K	**Porcupine Rive**	**76.02**	**21**	P	**P**	**00 06 50.4**	**+0.4**
	baz=304						
CUT	**Chulitna**	**76.03**	**27**	P	**P**	**00 06 50.8**	**+0.6**
CUT				IAmb	IAmb	00 08 16.3	
	comp=Z,21nm,1.0s						
IL31		**76.13**	**24**	P	**P**	**00 06 50.8**	**+0.2**
ILAR	**Eielson Array**	**76.13**	**24**	P	**P**	**00 06 50.1**	**-0.6**
	comp=Z,1.2nm,0.9s,baz=292,slow=4.8,SNR=9.2						
ILAR				LR	LR	00 42 38.7	
	comp=Z,360nm,19.1s,baz=278,slow=38						
	comp=Z,1.2nm,0.9s						
ILAR	**Eielson Array**	**76.13**	**24**	P	**P**	**00 06 50.8**	**+0.1**
ILAR	**Eielson Array**	**76.13**	**24**	P	**P**	**00 06 50.8**	**+0.1**
PRP	**Porcupine Dome**	**76.22**	**23**	P	**P**	**00 06 51.1**	**-0.3**
	baz=303						
SUA	**Susitna One**	**76.29**	**28**	IAmb	IAmb	00 06 53.0	
	comp=Z,9.0nm,0.8s						
SUA	**Susitna One**	**76.29**	**28**	P	**P**	**00 06 50.9**	**-0.9**
	baz=299						
CAN	**Canberra**	**76.64**	**140**	P	**P**	**00 06 54.6**	**+0.6**
CAN	**Canberra**	**76.64**	**140**	P	**P**	**00 06 54.6**	**+0.6**
CAN				pmax	pmax		
	comp=Z,90nm,2.0s						
PMR	**Palmer**	**76.90**	**27**	P	**P**	**00 06 54.4**	**-0.7**
PMR	**Palmer**	**76.90**	**27**	P	**P**	**00 06 54.4**	**-0.7**
PMR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RC01	**Rabbit Creek A**	**76.90**	**28**	P	**P**	**00 06 55.1**	**0.0**
RC01				IAmb	IAmb	00 07 05.4	
	comp=Z,9.8nm,1.0s						
K24K	**Donnelly Dome**	**77.06**	**24**	P	**P**	**00 06 55.2**	**-0.8**
	baz=303						
SML	**Sawmill**	**77.12**	**27**	P	**P**	**00 06 55.7**	**-0.7**
SML				IAmb	IAmb	00 07 03.6	
	comp=Z,9.7nm,0.8s						
H27K	**Steamboat Moun**	**77.18**	**21**	P	**P**	**00 06 56.8**	**+0.2**
	baz=306						
KDAK	**Kodiak Island**	**77.25**	**32**	LR	LR	00 42 11.8	
	comp=Z,444nm,19.6s,baz=267,slow=37						
KDAK	**Kodiak Island**	**77.25**	**32**	P	**P**	**00 06 57.8**	**+0.7**
	baz=298						
RIDG	**Independent Ri**	**77.44**	**24**	P	**P**	**00 06 58.4**	**+0.2**
RIDG				IAmb	IAmb	00 08 03.9	
	comp=Z,33nm,1.8s						
TULEG	**Thule**	**77.55**	**357**	P	**P**	**00 06 59.4**	**+0.9**
TULEG				IAmb	IAmb	00 07 03.8	
	comp=Z,11nm,1.2s						
A36M	**Sachs Harbour**	**77.59**	**13**	P	**P**	**00 06 58.8**	**+0.1**
A36M				IAmb	IAmb	00 07 21.8	
	comp=Z,10nm,0.8s						
A36M	**Sachs Harbour**	**77.59**	**13**	P	**P**	**00 06 59.4**	**+0.6**
	baz=319						
PWL	**Port Wells**	**77.61**	**28**	P	**P**	**00 06 59.1**	**0.0**
PWL				IAmb	IAmb	00 07 06.1	
	comp=Z,12nm,0.9s						
SCRK	**Sand Creek**	**77.62**	**24**	P	**P**	**00 06 57.7**	**-1.6**
SCRK				IAmb	IAmb	00 07 41.0	
	comp=Z,16nm,1.8s						
SCRK	**Sand Creek**	**77.62**	**24**	P	**P**	**00 06 58.8**	**-0.5**
	baz=304						
SUMG	**Summit**	**77.77**	**348**	*i* P	**P**	**00 07 00.3**	**0.0**
KOUNC	**Koumac, New Ca**	**77.78**	**120**	P	**P**	**00 07 00.7**	**+0.1**
DOT	**Dot Lake**	**77.78**	**24**	P	**P**	**00 07 00.0**	**0.0**
DOT				IAmb	IAmb	00 07 10.9	
	comp=Z,15nm,1.8s						
KLU	**Klutina**	**78.26**	**27**	P	**P**	**00 07 02.5**	**-0.3**
KLU				IAmb	IAmb	00 07 36.7	
	comp=Z,12nm,1.1s						
INK	**Inuvik**	**78.27**	**18**	LR	LR	00 45 11.0	
	comp=Z,252nm,20.3s,baz=334,slow=38						
INK	**Inuvik**	**78.27**	**18**	P	**P**	**00 07 01.9**	**-0.7**
INK	**Inuvik**	**78.27**	**18**	P	**P**	**00 07 01.9**	**-0.7**
INK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
INK	**Inuvik**	**78.27**	**18**	P	**P**	**00 07 02.0**	**-0.5**
	baz=312						
G30M	**tAoh Zraii Nji**	**78.38**	**19**	P	**P**	**00 07 02.6**	**-0.7**
	baz=310						
DIV	**Divide**	**78.52**	**27**	P	**P**	**00 07 04.3**	**0.0**
DIV				IAmb	IAmb	00 07 41.2	
	comp=Z,11nm,1.1s						
KULLO	**Kullorsuaq**	**78.65**	**354**	*e*P	**P**	**00 07 03.5**	**-1.1**
N25K	**Chitina, Valde**	**78.72**	**26**	P	**P**	**00 07 05.9**	**+0.5**
	baz=304						
L27K	**Beaver Creek,**	**78.94**	**24**	P	**P**	**00 07 06.6**	**+0.1**
L27K	**Beaver Creek,**	**78.94**	**24**	P	**P**	**00 07 06.3**	**-0.2**
	baz=306						
BCAR	**Beaver Creek A**	**78.96**	**24**	P	**P**	**00 07 05.9**	**-0.6**
RES	**Resolute Bay**	**79.20**	**4**	P	**P**	**00 07 08.6**	**+1.0**
RES	**Resolute Bay**	**79.20**	**4**	P	**P**	**00 07 08.6**	**+1.0**
RES				pmax	pmax		
	comp=Z,5.0nm,1.2s						
DAWY	**Dawson**	**79.20**	**23**	P	**P**	**00 07 08.0**	**+0.1**
DAWY				IAmb	IAmb	00 09 01.6	
	comp=Z,21nm,1.9s						
C36M	**Paulatuk**	**79.87**	**14**	P	**P**	**00 07 11.5**	**+0.2**
C36M	**Paulatuk**	**79.87**	**14**	P	**P**	**00 07 10.6**	**-0.7**
	baz=321						
K29M	**Barlow Dome**	**79.99**	**22**	P	**P**	**00 07 12.6**	**+0.3**
	baz=310						
LIFNC	**LIFOU**	**80.22**	**119**	P	**P**	**00 07 14.5**	**+0.5**
UPNV	**Upernavik**	**80.22**	**353**	*i* P	**P**	**00 07 13.9**	**+0.8**
L29M	**L29M**	**80.25**	**23**	P	**P**	**00 07 14.9**	**+1.3**
	baz=309						
DZM	**Mont Dzumac**	**80.29**	**120**	LR	LR	00 40 32.7	
	comp=Z,94nm,21.9s,baz=345,slow=34						
DZM	**Mont Dzumac**	**80.29**	**120**	P	**P**	**00 07 15.3**	**+0.9**
LSZ	**Lusaka**	**80.76**	**248**	LR	LR	00 42 06.8	
	comp=Z,314nm,20.1s,baz=57,slow=35						
N31M	**Braeburn, Yuko**	**82.14**	**24**	P	**P**	**00 07 23.0**	**-0.6**
N31M				IAmb	IAmb	00 07 51.6	
	comp=Z,24nm,1.4s						
O30N	**Mendenhall**	**82.50**	**24**	P	**P**	**00 07 26.8**	**+1.3**
	baz=311						
ESDC	**Sonseca Array**	**83.62**	**311**	P	**P**	**00 07 31.0**	**-0.8**
	comp=Z,1.2nm,0.9s,baz=53,slow=3.8,SNR=2.5						
ESDC				LR	LR	00 49 35.7	
	comp=Z,153nm,18.8s,baz=48,slow=39						
	comp=Z,1.2nm,0.9s						
TAM	**Tamanrasset**	**83.94**	**292**	P	**P**	**00 07 33.9**	**0.0**
TAM	**Tamanrasset**	**83.94**	**292**	P	**P**	**00 07 33.9**	**0.0**
TAM				pmax	pmax		
	comp=Z,3.0nm,1.0s						
DY2G	**Dye2**	**84.37**	**347**	*e*P	**P**	**00 07 35.7**	**+0.4**
SFJD	**Kangerlussuaq**	**84.74**	**349**	LR	LR	00 49 54.0	
	comp=Z,267nm,21.0s,baz=25,slow=39						
MVO	**Moncorvo**	**84.94**	**313**	*e*P	**P**	**00 07 40.5**	**+2.0**
MTE	**Manteigas**	**85.66**	**313**	*e*P	P	00 07 47.1	+5.0
DLBC	**Dease Lake**	**86.34**	**24**	LR	LR	00 51 52.3	
	comp=Z,210nm,18.7s,baz=316,slow=40						
MDT	**Midelt**	**87.37**	**305**	LR	LR	00 53 31.8	
	comp=Z,75nm,19.0s,baz=50,slow=40						
MSVF	**Nonsavu**	**87.53**	**111**	LR	LR	00 42 12.1	
	comp=Z,135nm,19.2s,baz=349,slow=32						
LBTB	**Lobatse**	**87.71**	**241**	LR	LR	00 44 53.9	
	comp=Z,166nm,21.7s,baz=5.0,slow=34						
YKA	**Yellowknife Ar**	**87.72**	**15**	P	**P**	**00 07 49.6**	**-2.0**
	comp=Z,0.6nm,0.7s,baz=328,slow=4.7,SNR=13						
YKA				PP	**PP**	**00 11 14.6**	**-1.8**
	comp=Z,0.6nm,0.8s,baz=337,slow=8.0,SNR=5.3						
YKA				LR	LR	00 52 26.4	
	comp=Z,189nm,18.4s,baz=324,slow=39						
	comp=Z,0.6nm,0.7s						
YKA	**Yellowknife Ar**	**87.72**	**15**	*i* P	**P**	**00 07 51.7**	**+0.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FRB	**Frobisher Bay**	**90.18**	**355**	LR	LR	00 51 16.0	
	comp=Z,145nm,18.4s,baz=14,slow=37						
TORD	**Torodi Ar. Bea**	**91.45**	**285**	P	**P**	**00 08 08.9**	**-1.1**
	comp=Z,3.8nm,0.2s,baz=58,slow=4.6,SNR=4.2						
TORD				LR	LR	00 55 03.5	
	comp=Z,140nm,18.1s,baz=68,slow=39						
	comp=Z,3.8nm,0.2s						
TSUM	**Tsumeb**	**91.52**	**249**	LR	LR	00 48 14.9	
	comp=Z,156nm,21.7s,baz=69,slow=35						
AFI	**Afiamalu**	**94.58**	**103**	LR	LR	00 45 41.1	
	comp=Z,114nm,21.2s,baz=4.5,slow=32						
SUR	**Sutherland**	**94.92**	**236**	LR	LR	00 46 28.7	
	comp=Z,219nm,21.3s,baz=53,slow=32						
MAW	**Mawson**	**97.20**	**193**	LR	LR	00 49 10.5	
	comp=Z,125nm,18.2s,baz=53,slow=33						
SCHQ	**Schefferville**	**98.78**	**352**	LR	LR	00 58 51.7	
	comp=Z,138nm,18.3s,baz=32,slow=39						
NEW	**Newport**	**99.09**	**24**	LR	LR	00 56 07.8	
	comp=Z,226nm,18.9s,baz=325,slow=37						
TXAR	**Lajitas Array**	**120.64**	**24**	PKP	**PKPdf**	**00 13 55.0**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=171,slow=1.4,SNR=12						
TXAR	**Lajitas Array**	**120.64**	**24**	PKIKP	**PKPdf**	**00 13 55.0**	**-0.6**
BARC	**Barichara**	**146.98**	**347**	*e*P	**PKiKP**	**00 14 53.1**	**+3.6**
DBBC	**Dabeiba**	**147.04**	**353**	*e*P	**PKPbc**	**00 14 46.2**	**-0.6**
PTBC	**PUERTO BERRIO,**	**147.27**	**349**	*e*P	**PKPdf**	**00 14 45.0**	**-0.1**
RUSC	**La Rusia**	**147.64**	**347**	*e*P	**PKPdf**	**00 14 46.2**	**-0.1**
SPBC	**San Pablo de B**	**148.07**	**348**	*e*P	**PKPbc**	**00 14 48.5**	**-1.1**
CBOC	**Ciudad Bolivar**	**148.16**	**352**	*e*P	**PKiKP**	**00 14 51.6**	**-0.1**
BDFB	**Brasilia**	**148.29**	**282**	PKPbc	**PKPbc**	**00 14 51.2**	**+1.0**
	comp=Z,3.6nm,0.9s,baz=240,slow=10,SNR=3.4						
NORC	**Norcasia**	**148.29**	**350**	*e*P	**PKPbc**	**00 14 50.2**	**0.0**
ROSC	**El Rosal**	**148.91**	**349**	PKPbc	**PKPbc**	**00 14 52.2**	**0.0**
	comp=Z,18nm,0.8s,baz=188,slow=16,SNR=9.2						
ORTC	**Ortega, Tolima**	**149.97**	**350**	*e*P	**PKPbc**	**00 14 53.1**	**-1.3**
YOTC	**Yotoco, Valle**	**150.05**	**352**	*e*P	**PKPdf**	**00 14 48.9**	**-0.9**
POPC	**Popayan, Colom**	**151.52**	**353**	*e*P	**PKPbc**	**00 14 56.4**	**-1.9**

IDC 27 00:22:57.6±4.1**, 5°.37S**×**148°.87E, h0^{km}, mb3.1**/2**, mbtmp3.3**/2**, Error ellipse: s-maj=137.2km s-min=51.3km az=111.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.36**	**203**	Sn	Sb	00 25 04.5	-3.8
	5.4nm,0.3s,baz=331,slow=19,SNR=7.8						
WRA	**Warramunga Arr**	**20.24**	**223**	P	P	00 27 33.9	-0.7
	0.6nm,0.8s,baz=49,slow=11,SNR=7.7						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**23.21**	**217**	P	P	00 28 06.7	+0.2
	0.4nm,0.4s,baz=49,slow=8.3,SNR=12						
	0.4nm,0.4s						
TORD	**Torodi Ar. Bea**	**146.72**	**286**	PKPbc	PKPbc	00 42 42.1	-0.5
	0.3nm,0.7s,baz=54,slow=2.5,SNR=1.8						

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*FUNV **27** 00:35:21.1, 10°.29N×69°.93W, h17^{km}, MW3.3*

ISC 27 00:35:20.4±1.3**, 10°.29N**±0°.04×**69°.78W**±0°.04**, h6^{km}**±12^{km}**, n22,** σ**1^{s}41**/28**, 2C, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CURV	**Curarigua**	**0.33**	**214**⇑	*e*P	**Pg**	**00 35 26.6**	**-0.2**
CURV				*e*S	**Sg**	**00 35 31.4**	**+0.3**
SIQV	**Siquisique**	**0.36**	**355**⇑	*e*P	**Pg**	**00 35 29.1**	**+1.6**
SIQV				*e*S	**Sb**	**00 35 34.7**	**-0.6**
JACV	**Jacura**	**1.23**	**49**	*e*P	**Pn**	**00 35 45.1**	**+1.0**
JACV				*e*S	**Sn**	**00 36 02.4**	**+1.3**
MAPV	**Macapo**	**1.38**	**109**	*e*P	**Pn**	**00 35 46.3**	**0.0**
MAPV				*e*S	**Sn**	**00 36 06.2**	**+1.4**
TURV	**Turiamo**	**1.91**	**85**	*e*P	**Pn**	**00 35 54.2**	**+0.6**
TURV				*e*S	**Sn**	**00 36 19.7**	**+1.7**
BENV	**Beln**	**2.17**	**98**	*e*P	**Pn**	**00 35 58.4**	**+1.2**
BENV				*e*S	**Sn**	**00 36 24.9**	**+0.4**
BAUV	**El Baul**	**2.17**	**128**	*e*P	**Pn**	**00 35 57.9**	**+0.8**
BAUV				*e*S	**Sn**	**00 36 25.1**	**+0.8**
URIC	**Uribia, Colomb**	**2.59**	**303**	*e*P	**Pb**	**00 36 04.6**	**-2.7**
TACV	**Tcata**	**2.71**	**93**	*e*P	**Pn**	**00 36 04.9**	**+0.3**
TACV				*e*S	**Sn**	**00 36 38.0**	**+0.3**
FUNV	**FUNVISIS**	**2.92**	**86**	*e*P	**Pn**	**00 36 07.9**	**+0.3**
FUNV				*e*S	**Sn**	**00 36 42.4**	**-0.8**
CRJC	**Cerrejon, Guaj**	**3.14**	**284**	*e*P	**Pn**	**00 36 10.0**	**-0.6**
BIRV	**Birongo**	**3.46**	**87**	*e*P	**Pn**	**00 36 15.6**	**+0.7**
BIRV				*e*S	**Sn**	**00 36 55.1**	**-1.0**
PAMC	**Pamplona, Colo**	**4.11**	**225**	*e*P	**Pn**	**00 36 26.7**	**+2.4**
CACV	**CAICARA DEL OR**	**4.19**	**130**	*e*P	Pn	00 36 30.9	+6.0
CACV				*e*S	**Sb**	**00 37 23.7**	**-1.7**
ARGC	**Ariguani, Magd**	**4.42**	**265**	*e*P	Pb	00 36 32.8	-5.8
SJCC	**San Jacinto, C**	**5.33**	**266**	*e*P	Pn	00 36 44.0	+3.3
RUSC	**La Rusia**	**5.46**	**217**	*e*P	**Pn**	**00 36 44.8**	**+2.1**
ZARC	**Zaragoza, Cauc**	**5.74**	**241**	*e*P	**Pn**	**00 36 48.4**	**+2.2**
PTBC	**PUERTO BERRIO,**	**5.94**	**232**	*e*P	**Pn**	**00 36 48.9**	**-0.1**
SPBC	**San Pablo de B**	**6.27**	**223**	*e*P	**Pn**	**00 36 56.1**	**+2.5**
CBOC	**Ciudad Bolivar**	**7.58**	**235**	*e*P	Pn	00 37 14.8	+3.1
PLMC	**San Jos del P**	**8.38**	**231**	*e*P	Pn	00 37 26.1	+3.6

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*IDC **27** 00:36:28.3±4.2, 5°.77S×152°.50E, h69^{km}±29^{km}, mb3.2/5, mbtmp3.6/6, ML2.3/1, Error ellipse: s-maj=53.7km s-min=12.4km az=110.0*

ISC 27 00:36:25.8±1.4**, 5°.81S**±0°.09×**152°.7E**±0°.2**, h50^{km}, n8,** σ**1^{s}30**/10**, mb3.3**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.63**	**336**	P	**Pn**	**00 36 52.4**	**+0.2**
	191nm,0.3s,baz=162,slow=19,SNR=26						
KRVT				S	**Sn**	**00 37 12.9**	**+0.8**
	249nm,0.3s,baz=162,slow=20,SNR=18						
PMG	**Port Moresby**	**6.55**	**237**	P	**Pn**	**00 38 00.3**	**+0.7**
	3.6nm,0.3s,baz=59,slow=12,SNR=3.8						
PMG				S	**Sn**	**00 39 13.2**	**+0.2**
	9.1nm,0.4s,baz=72,slow=20,SNR=1.7						
	11nm,0.3s						
WRA	**Warramunga Arr**	**22.71**	**230**	P	**P**	**00 41 22.3**	**-1.4**
	0.3nm,0.6s,baz=52,slow=10,SNR=4.8						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**25.34**	**224**	P	**P**	**00 41 49.8**	**+1.5**
	0.6nm,0.9s,baz=57,slow=9.0,SNR=3.2						
	0.6nm,0.9s						
SONM	**Songino Array**	**67.12**	**328**	P	**P**	**00 47 12.7**	**-1.8**
	0.1nm,0.3s,baz=116,slow=6.6,SNR=2.0						
	0.1nm,0.3s						
ZALV	**Zalesovo Beam**	**81.93**	**326**	P	**P**	**00 48 40.4**	**+0.4**
	0.3nm,0.3s,baz=101,slow=6.0,SNR=2.7						
	0.3nm,0.3s						
ILAR	**Eielson Array**	**83.13**	**22**	P	**P**	**00 48 47.3**	**+1.2**
	0.8nm,0.9s,baz=240,slow=5.8,SNR=6.1						
	0.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**150.50**	**286**	PKPbc	**PKPbc**	**00 56 11.7**	**-1.4**
	0.4nm,0.8s,baz=89,slow=3.0,SNR=2.4						

IDC 27 00:45:06.4±2.7**, 52°.82N**×**87°.36E, h0^{km}, mbtmp2.7**/2**, ML2.6**/2**, Error ellipse: s-maj=33.3km s-min=15.0km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**1.89**	**308**	Pg	Pn	00 45 40.1	+0.2
	0.2nm,0.3s,baz=122,slow=19,SNR=3.8						
ZALV				Lg	Lg	00 46 07.1	
	1.1nm,0.3s,baz=125,slow=35,SNR=14						
MKAR	**Makanchi Array**	**6.86**	**210**	Pn	Pn	00 46 49.6	+1.3
	0.1nm,0.3s,baz=31,slow=14,SNR=6.2						
	0.2nm,0.2s						
SONM	**Songino Array**	**13.13**	**105**	Pn	Pn	00 48 15.1	+0.9
	baz=299,slow=15,SNR=1.6						
	0.1nm,0.4s						

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*IDC **27** 01:05:31.6±1.5, 8°.76S×80°.49W, h0^{km}, mb3.2/3, mbtmp3.3/6, ML3.4/3, Error ellipse: s-maj=34.5km s-min=21.8km az=39.0*

ISC 27 01:05:36.5±1.1**, 8°.77S**±0°.08×**80°.5W**±0°.1**, h35^{km}, n11,** σ**0^{s}72**/10**, Off coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**2.63**	**52**	Pn	**Pn**	**01 06 15.9**	**-1.1**
	9.0nm,0.3s,baz=207,slow=6.3,SNR=23						
ATAH				Sn	**Sn**	**01 06 49.3**	**+1.4**
	7.7nm,0.3s,baz=275,slow=14,SNR=6.1						
	9.6nm,0.4s						
NNA	**Nana**	**4.80**	**132**	Pn	**Pn**	**01 06 46.7**	**+0.2**
	2.3nm,0.3s,baz=345,slow=21,SNR=2.3						
NNA				Sn	**Sn**	**01 07 41.1**	**+0.1**
	4.2nm,0.3s,baz=252,slow=19,SNR=2.2						
	4.7nm,0.3s						
LPAZ	**La Paz**	**14.18**	**123**	Pn	**Pn**	**01 08 55.3**	**-0.3**
	0.1nm,0.3s,baz=301,slow=9.6,SNR=1.9						
	0.3nm,0.3s						
SIV	**San Ignacio**	**20.26**	**113**	P	**P**	**01 10 09.2**	**-0.1**
	3.1nm,1.1s,baz=311,slow=12,SNR=3.2						
	3.1nm,1.1s						
H03N2	**Juan Fernandez**	**24.59**	**177**	T	T	01 36 45.4	
	baz=357,slow=76,SNR=24						
H03N1	**Juan Fernandez**	**24.59**	**177**	T	T	01 36 47.5	
	baz=357,slow=76,SNR=31						
H03N3	**Juan Fernandez**	**24.61**	**177**	T	T	01 36 48.4	
	baz=357,slow=76,SNR=31						
TXAR	**Lajitas Array**	**43.98**	**330**	P	**P**	**01 13 41.1**	**+0.3**
	0.1nm,0.4s,baz=159,slow=7.7,SNR=2.6						
	0.1nm,0.4s						
PDAR	**Pinedale Array**	**57.74**	**335**	P	**P**	**01 15 24.6**	**+0.3**
	0.1nm,0.3s,baz=126,slow=9.1,SNR=2.3						
	0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**134.80**	**19**	PKP	**PKPdf**	**01 24 51.3**	**-0.4**
	0.1nm,0.2s,baz=327,slow=2.5,SNR=5.2						
WRA	**Warramunga Arr**	**135.40**	**230**	PKP	**PKPdf**	**01 24 53.7**	**-0.1**
	0.6nm,0.9s,baz=135,slow=1.7,SNR=2.8						

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*IDC **27** 01:09:32.0±1.4, 25°.86N×100°.04E, h0^{km}, mb3.2/4, mbtmp3.3/5, ML4.1/1, MS3.7/4, Error ellipse: s-maj=52.3km s-min=21.9km az=78.0*

ISC 27 01:09:33.5±0.9**, 25°.93N**±0°.09×**99°.70E**±0°.08**, h10^{km}, n11,** σ**2^{s}95**/10**, mb3.3**/4**, MS3.7**/4**, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNCH	**TengChong**	**1.39**	**230**	Pg	**Pn**	**01 09 57.5**	**-1.7**
TNCH				Sg	**Sb**	**01 10 13.5**	**-4.2**
TNCH				smax	smax		
	comp=N,1µm,0.7s						
TNCH				smax	smax		
	comp=E,2µm,0.8s						
TNCH				LR	LR		
	comp=N,2µm,1.7s						
TNCH				LR	LR		
	comp=E,1µm,1.6s						
TNCH				LR	LR		
	comp=Z,110nm,1.7s						
PZH	**PanZhiHua**	**1.92**	**72**	Pg	**Pn**	**01 10 05.0**	**-1.4**
PZH				Sg	**Sn**	**01 10 28.5**	**-2.2**
PZH				smax	smax		
	comp=N,310nm,0.7s						
PZH				smax	smax		
	comp=E,580nm,0.8s						
CMAR	**Chiang Mai Arr**	**7.47**	**186**	Pn	**Pn**	**01 11 21.5**	**-1.1**
	comp=E,0.7nm,0.3s,baz=2.9,slow=13,SNR=2.7						
CMAR				Pg	**Pb**	**01 11 47.5**	**+4.3**
	comp=E,0.7nm,0.3s,baz=5.0,slow=14,SNR=2.2						
	comp=E,1.3nm,0.4s						
SONM	**Songino Array**	**22.50**	**12**	P	**P**	**01 14 33.2**	**-0.1**
	comp=E,0.8nm,1.1s,baz=183,slow=5.3,SNR=2.5						
	comp=E,0.8nm,1.1s						
MKAR	**Makanchi Array**	**25.00**	**331**	P	**P**	**01 14 58.0**	**+0.5**
	comp=E,0.4nm,0.6s,baz=141,slow=7.8,SNR=3.7						
	comp=E,0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**29.53**	**332**	P	**P**	**01 15 41.4**	**+3.4**
	comp=E,0.2nm,0.4s,baz=138,slow=9.9,SNR=1.5						
	comp=E,0.2nm,0.4s						
GEYT	**Alibeck**	**36.98**	**299**	LR	LR	01 35 37.2	
	comp=E,100nm,19.7s,baz=124,slow=42						
GUMO	**Guam**	**44.04**	**97**	LR	LR	01 36 24.9	
	comp=E,37nm,20.5s,baz=127,slow=37						
KVAR	**Kislovodsk Arr**	**49.09**	**307**	LR	LR	01 42 47.8	
	comp=E,85nm,20.8s,baz=261,slow=40						
PETK	**Petropavlovsk-**	**50.61**	**41**	LR	LR	01 40 36.8	
	comp=E,137nm,18.3s,baz=271,slow=37						
WRA	**Warramunga Arr**	**56.66**	**140**	P	**P**	**01 19 15.7**	**-1.5**
	comp=E,0.3nm,0.7s,baz=321,slow=8.7,SNR=1.7						
	comp=E,0.3nm,0.7s						

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*NEIC **27** 01:10:25.4±2.3, 25°.93N±0°.08×100°.01E±0°.04, h10^{km}±2^{km}, mb4.1/14, Error ellipse: s-maj=13.2km s-min=5.3km az=186.0*

*IDC **27** 01:10:25.5±0.7, 25°.91N×100°.05E, h0^{km}, mb3.8/17, mbtmp3.9/18, ML4.8/1, MS3.7/20, Error ellipse: s-maj=26.3km s-min=12.5km az=67.0*

*BJI **27** 01:10:26.3±0.0, 25°.81N×99°.81E, h10^{km}, mb4.3/22, mB4.5/9, ML4.2/13, Ms4.4/37, Ms7 4.1/30*

ISC 27 01:10:27.6±0.3**, 25°.86N**±0°.04×**99°.84E**±0°.03**, h10^{km}, n92,** σ**2^{s}31**/91**, mb4.0**/25**, MS3.8**/21**, 6C-1D, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNCH	**TengChong**	**1.45**	**235**	Pn	**Pn**	**01 10 53.3**	**-0.8**
TNCH				Pg	**Pb**	**01 10 54.5**	**-0.4**
TNCH				Sg	**Sn**	**01 11 12.0**	**-1.3**
TNCH				smax	smax		
	comp=N,17µm,0.9s						
TNCH				smax	smax		
	comp=E,18µm,0.9s						
PZH	**PanZhiHua**	**1.82**	**69**	Pg	**Pn**	**01 10 59.5**	**+0.4**
PZH				Sg	**Sn**	**01 11 23.8**	**+1.4**

PZH				smax	smax		
	comp=N,3µm,0.7s						
PZH				smax	smax		
	comp=E,6µm,0.8s						
KMI	**Kunming**	**2.72**	**105**	⇑Pg	**Pb**	**01 11 16.8**	**+0.3**
KMI				Sg	**Sb**	**01 11 53.8**	**+3.7**
KMI				smax	smax		
	comp=N,1µm,0.8s						
KMI				smax	smax		
	comp=E,670nm,0.8s						
LKP	**Lekhapani**	**3.86**	**293**	*e*P	Pb	01 11 39.8	+4.0
MOKO	**MOKOCHONG**	**4.81**	**277**	*e*P	**Pn**	**01 11 43.1**	**+2.8**
MND	**Mandalay**	**5.13**	**222**	Pn	**Pn**	**01 11 43.8**	**-0.7**
KOHI	**KOHIMA**	**5.17**	**270**	*e*P	**Pn**	**01 11 48.3**	**+3.1**
IMP	**Imphal**	**5.43**	**260**	⇑*e*P	**Pb**	**01 12 04.0**	**+1.4**
ZIRO	**ZIRO**	**5.61**	**289**	*e*P	**Pn**	**01 11 51.5**	**+0.3**
CRAI	**Chiangrai**	**5.63**	**175**	Pn	**Pn**	**01 11 49.7**	**-1.7**
CD2	**Chengdu**	**6.10**	**34**	Pn	**Pn**	**01 11 59.0**	**+1.2**
CD2				Pg	Pb	01 12 19.8	+5.8
CD2				Sg	**Sg**	**01 13 41.0**	**-2.4**
CD2				smax	smax		
	comp=N,130nm,1.4s						
CD2				smax	smax		
	comp=E,200nm,1.7s						
CD2				LR	LR		
	comp=N,6µm,6.9s						
CD2				LR	LR		
	comp=E,8µm,8.0s						
CD2				LR	LR		
	comp=Z,3µm,9.4s						
GYA	**Guiyang**	**6.16**	**83**	Pg	Pb	01 12 22.5	+7.4
GYA				Sn	**Sn**	**01 13 12.5**	**+3.1**
GYA				Sg	**Sb**	**01 13 36.0**	**+7.1**
GYA				smax	smax		
	comp=N,57nm,0.7s						
GYA				smax	smax		
	comp=E,61nm,0.6s						
GYA				LR	LR		
	comp=N,740nm,7.3s						
GYA				LR	LR		
	comp=E,400nm,4.8s						
GYA				LR	LR		
	comp=Z,530nm,6.1s						
TEZP	**TEZPUR**	**6.37**	**278**	*e*P	**Pn**	**01 12 00.7**	**-0.8**
CHTO	**Chiang Mai**	**7.06**	**187**	Pn	**Pn**	**01 12 10.2**	**-0.9**
SHL	**Shillong**	**7.18**	**269**	Pn	**Pn**	**01 12 12.0**	**-0.8**
SHL	**Shillong**	**7.18**	**269**	*e*P	**Pn**	**01 12 13.0**	**+0.1**
SHL				*e*P	Pb	01 12 13.1	-19
SHL				IAmb	IAmb	01 12 13.9	
	comp=Z,20nm,1.0s						
GUWA	**GUWAHATI**	**7.34**	**274**	*e*P	**Pn**	**01 12 15.0**	**+0.2**
PHRA	**Phrae**	**7.34**	**177**	Pn	**Pn**	**01 12 13.9**	**-1.0**
CM31	**Chiang Mai Arr**	**7.42**	**187**	Pn	**Pn**	**01 12 14.3**	**-1.7**
CMAR	**Chiang Mai Arr**	**7.42**	**187**	Pn	**Pn**	**01 12 17.2**	**+1.3**
	comp=Z,3.7nm,0.3s,baz=2.4,slow=13,SNR=15						
CMAR				Pg	Pb	01 12 43.8	+7.4
	comp=Z,3.9nm,0.3s,baz=1.8,slow=15,SNR=43						
CMAR				Sn	**Sn**	**01 13 43.6**	**+3.4**
	baz=4.6,slow=24						
CMAR				Lg	Lg	01 14 20.9	
	comp=Z,0.7nm,0.3s,baz=8.8,slow=15,SNR=2.3						
CMAR				LR	LR	01 15 27.8	
	comp=Z,625nm,18.7s,baz=5.0,slow=40						
	comp=Z,6.1nm,0.4s						
CMAR	**Chiang Mai Arr**	**7.42**	**187**	Pn	**Pn**	**01 12 15.5**	**-0.4**
BRDH	**Bariadhala**	**8.12**	**249**	LR	LR	01 16 03.3	
	comp=Z,452nm,18.8s,baz=90,slow=41						
LSA	**Lhasa**	**8.59**	**298**	P	**Pn**	**01 12 33.0**	**+0.5**
LSA				S	**Sn**	**01 14 12.5**	**+2.8**
LSA				LR	LR		
	comp=Z,1µm,20.3s						
LSA				LR	LR		
	comp=Z,950nm,17.8s						
LSA				LR	LR		
	comp=Z,670nm,14.9s						
LSA	**Lhasa**	**8.59**	**298**	Pn	**Pn**	**01 12 31.3**	**-1.2**
GULI	**GuiLin**	**9.52**	**91**	P	Pn	01 12 52.0	+7.2
GULI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GULI				LR	LR		
	comp=Z,630nm,6.7s						
GULI				LR	LR		
	comp=Z,790nm,8.8s						
GULI				LR	LR		
	comp=Z,960nm,9.3s						
ENH	**Enshi**	**9.59**	**61**	Pn	Pn	01 12 40.3	-5.4
GTK	**Tadong**	**10.16**	**281**	*e*P	**Pn**	**01 12 52.7**	**-1.1**
LZH	**Lanzhou**	**10.75**	**18**	⇑P	**Pn**	**01 13 04.3**	**+2.5**
LZH				pP		01 13 07.5	
LZH				sP		01 13 10.0	
LZH				pmax	pmax		
	comp=Z,26nm,1.0s						
LZH				LR	LR		
	comp=Z,1µm,11.7s						
LZH				LR	LR		
	comp=Z,2µm,12.7s						
LZH				LR	LR		
	comp=Z,1µm,11.7s						
GOMU	**GeErMu**	**11.16**	**339**	P	Pn	01 13 00.8	-6.8
GOMU				pP		01 13 04.5	
GOMU				sP		01 13 05.3	
GOMU				S	Sn	01 15 00.5	-12
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,94nm,5.5s						
GOMU				LR	LR		
	comp=N,1µm,10.6s						
GOMU				LR	LR		
	comp=E,2µm,12.4s						
GOMU				LR	LR		
	comp=Z,750nm,10.3s						
XAN	**Xi'an**	**11.33**	**42**	P	**Pn**	**01 13 12.3**	**+2.8**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
XAN				LR	LR		
	comp=Z,1µm,11.4s						
XAN				LR	LR		
	comp=Z,990nm,10.8s						
QIZ	**Qiongzhong**	**11.48**	**124**	P	**Pn**	**01 13 10.5**	**-1.1**
QIZ				S	**Sn**	**01 15 21.5**	**+1.6**
QIZ				LR	LR		
	comp=Z,1µm,12.9s						
QIZ				LR	LR		
	comp=Z,810nm,16.6s						
QIZ				LR	LR		
	comp=Z,710nm,13.1s						
CNSH	**ChangSha**	**11.90**	**76**	⇑P	**Pn**	**01 13 16.5**	**-0.8**
CNSH				S	**Sn**	**01 15 26.5**	**-3.7**
CNSH				LR	LR		
	comp=Z,2µm,10.7s						
CNSH				LR	LR		
	comp=Z,330nm,6.3s						
WHN	**Wuhan**	**13.62**	**67**	⇑P	**P**	**01 13 50.0**	**+0.2**
WHN				LR	LR		
	comp=N,4µm,10.8s						
WHN				LR	LR		
	comp=E,2µm,9.1s						
WHN				LR	LR		
	comp=Z,3µm,10.8s						
LYN	**LuoYang**	**13.93**	**49**	⇓P	Pn	01 13 42.5	-2.5
LYN				S	**Sn**	**01 16 14.8**	**-4.9**
LYN				pmax	pmax		
	comp=Z,13nm,0.5s						
LYN				pmax	pmax		
	comp=Z,74nm,3.2s						
LYN				LR	LR		
	comp=Z,2µm,12.9s						
LYN				LR	LR		
	comp=Z,1µm,13.9s						
LYN				LR	LR		
	comp=Z,710nm,9.4s						
BTO	**Baotou**	**16.97**	**27**	*e*P	**Pn**	**01 14 24.0**	**-1.2**
BTO				pP	**P**	**01 14 31.5**	**+4.4**
BTO				sP	**sP**	**01 14 36.3**	**+4.0**
BTO				PP	**PnPn**	**01 14 38.5**	**+3.6**
BTO				S	**Sn**	**01 17 35.0**	**+1.1**
BTO				sS	**S**	**01 17 41.0**	**-3.1**
BTO				SS	**SnSn**	**01 17 52.5**	**+5.2**
BTO				pmax	pmax		
	comp=Z,36nm,0.8s						
BTO				pmax	pmax		
	comp=Z,600nm,5.0s						
BTO				LR	LR		
	comp=Z,2µm,11.0s						
BTO				LR	LR		
	comp=Z,3µm,10.0s						
BTO				LR	LR		
	comp=Z,2µm,10.8s						
HNS	**HongShan**	**17.08**	**44**	⇑P	**Pn**	**01 14 25.5**	**-0.9**
HNS				S	**Sn**	**01 17 40.0**	**+3.6**
HNS				LR	LR		
	comp=Z,720nm,11.0s						
HNS				LR	LR		
	comp=Z,750nm,10.6s						
HNS				LR	LR		
	comp=Z,410nm,12.0s						
TIA	**Tai'an**	**18.02**	**51**	*e*P	**Pn**	**01 14 39.3**	**+1.1**
TIA				PP	**PnPn**	**01 14 52.0**	**+2.8**
TIA				S	**Sn**	**01 17 59.5**	**+0.2**
TIA				SS	**SnSn**	**01 18 15.0**	**+2.0**
TIA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TIA				pmax	pmax		
	comp=Z,130nm,6.6s						
TIA				LR	LR		
	comp=Z,290nm,11.5s						
TIA				LR	LR		
	comp=Z,760nm,12.2s						
TIA				LR	LR		
	comp=Z,930nm,11.5s						
BJT	**Baijiatuau**	**19.63**	**40**	P	**P**	**01 14 53.1**	**-3.2**
BJI	**Beijing**	**19.65**	**40**	P	**P**	**01 14 57.5**	**+1.1**
BJI				PP	**PnPn**	**01 15 15.0**	**+3.6**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BJI				LR	LR		
	comp=Z,750nm,14.5s						
BJI				LR	LR		
	comp=Z,660nm,14.0s						
BJI				LR	LR		
	comp=Z,300nm,9.7s						
WMQ	**Urumqi**	**20.46**	**334**	*e*P	**P**	**01 15 07.0**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,13nm,0.6s						
WMQ				LR	LR		
	comp=Z,550nm,12.7s						
WMQ				LR	LR		
	comp=Z,390nm,13.5s						
WMQ				LR	LR		
	comp=Z,120nm,14.7s						
BHPL	**Bhopal**	**20.55**	**267**	*e*P	**P**	**01 15 04.0**	**-2.5**
BHPL				IAmb	IAmb	01 15 06.5	
	comp=Z,8.2nm,0.7s						
XLT	**XiLinHaoTe**	**22.32**	**32**	*e*P	**P**	**01 15 27.0**	**+1.6**
XLT				S	**S**	**01 19 35.0**	**+4.2**
XLT				pmax	pmax		
	comp=Z,8.0nm,0.7s						
XLT				pmax	pmax		
	comp=Z,95nm,6.8s						
XLT				LR	LR		
	comp=Z,380nm,10.0s						
XLT				LR	LR		
	comp=Z,450nm,10.4s						
SONM	**Songino Array**	**22.53**	**12**	P	**P**	**01 15 26.6**	**-1.1**
	comp=Z,2.6nm,1.0s,baz=195,slow=8.3,SNR=13						
	comp=Z,2.6nm,1.0s						
SONM	**Songino Array**	**22.53**	**12**	P	**P**	**01 15 24.0**	**-3.7**
ULN	**Ulaanbaatar**	**22.69**	**13**	P	P	01 15 24.7	-4.7
ULN				IAmb	IAmb	01 15 45.4	
	comp=Z,8.6nm,1.4s						
RPSI	**Rantau Prapat**	**23.05**	**182**	P	**P**	**01 15 29.8**	**-3.5**
KSH	**Kashi**	**24.18**	**310**	P	P	01 15 53.0	+8.8
KSH				pP	sP	01 15 58.8	+9.2
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KSH				LR	LR		
	comp=N,230nm,12.7s						
KSH				LR	LR		
	comp=E,310nm,15.9s						
KSH				LR	LR		
	comp=Z,260nm,12.7s						
NIL	**Nilore**	**24.31**	**295**	P	**P**	**01 15 42.4**	**-3.1**
MK31	**Makanchi Array**	**25.11**	**331**	P	**P**	**01 15 48.7**	**-3.9**
MKAR	**Makanchi Array**	**25.11**	**331**	P	**P**	**01 15 52.8**	**+0.3**
	comp=Z,3.0nm,0.7s,baz=137,slow=10,SNR=25						
	comp=Z,3.0nm,0.7s						
MKAR	**Makanchi Array**	**25.11**	**331**	P	**P**	**01 15 49.4**	**-3.2**
AAK	**Ala-Archa**	**26.66**	**315**	P	**P**	**01 16 07.6**	**+0.8**
	comp=Z,2.1nm,0.6s,baz=115,slow=4.3,SNR=7.1						
	comp=Z,2.1nm,0.6s						
AAK	**Ala-Archa**	**26.66**	**315**	P	**P**	**01 16 04.2**	**-2.7**
AAK				IAmb	IAmb	01 16 20.9	
	comp=Z,4.5nm,0.9s						
DRK	**Karamyk**	**27.10**	**307**	P	**P**	**01 16 08.8**	**-2.2**
DRK				IAmb	IAmb	01 16 30.6	
	comp=Z,5.8nm,1.0s						
KBL	**Kabul**	**27.90**	**295**	P	**P**	**01 16 15.5**	**-2.6**
KURBB	**Kurchatov Arra**	**29.64**	**332**	P	**P**	**01 16 33.2**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=143,slow=10.0,SNR=8.1						
	comp=Z,0.6nm,0.6s						
KURK	**Kurchatov**	**29.68**	**332**	P	**P**	**01 16 31.7**	**-1.7**
KURK				IAmb	IAmb	01 16 50.8	
	comp=Z,3.3nm,1.1s						
ZAA0	**Zalesovo Array**	**30.20**	**342**	P	**P**	**01 16 36.5**	**-1.5**
ZAA0				IAmb	IAmb	01 16 40.0	
	comp=Z,3.4nm,1.1s						
ZALV	**Zalesovo Beam**	**30.20**	**342**	P	**P**	**01 16 38.0**	**0.0**
	comp=Z,0.7nm,0.5s,baz=156,slow=11,SNR=6.1						
ZALV				PcP	**PcP**	**01 19 36.2**	**-2.5**
	comp=Z,0.4nm,0.3s,baz=170,slow=3.3,SNR=2.1						
ZALV				LR	LR	01 30 13.5	
	comp=Z,62nm,19.7s,baz=160,slow=39						
	comp=Z,0.7nm,0.5s						
ZALV	**Zalesovo Beam**	**30.20**	**342**	P	P	01 16 36.0	-1.9
BRVK	**Borovoye**	**35.02**	**329**	P	P	01 17 17.9	-2.3
BRVK				IAmb	IAmb	01 17 21.3	
	comp=Z,3.1nm,0.7s						
GEYT	**Alibeck**	**37.12**	**299**	P	**P**	**01 17 39.5**	**+1.0**
	comp=Z,1.7nm,0.7s,baz=141,slow=9.6,SNR=4.6						
	comp=Z,1.7nm,0.7s						
GEYT	**Alibeck**	**37.12**	**299**	P	**P**	**01 17 37.5**	**-1.0**
GEYT				IAmb	IAmb	01 17 42.9	
	comp=Z,2.9nm,0.9s						
GYA0B	**ALIBECK ARRAY**	**37.12**	**299**	P	**P**	**01 17 37.8**	**-0.7**
GYA0B				IAmb	IAmb	01 17 46.4	
	comp=Z,2.8nm,0.8s						
ABKAR	**Akbulak array**	**38.68**	**318**	P	**P**	**01 17 50.2**	**-1.2**
AKTO	**Aktyubinsk**	**40.28**	**319**	P	**P**	**01 18 05.6**	**+0.9**
	comp=Z,1.5nm,0.7s,baz=98,slow=6.4,SNR=3.8						
	comp=Z,1.5nm,0.7s						
ARU	**Arti**	**42.53**	**327**	P	**P**	**01 18 23.3**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=216,slow=21,SNR=3.4						
	comp=Z,1.5nm,0.6s						
KBZ	**Khabaz**	**49.07**	**306**	P	**P**	**01 19 14.3**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=360,slow=19,SNR=2.1						
	comp=Z,1.0nm,0.8s						
MMAI	**Mount Meron Ar**	**55.81**	**294**	LR	LR	01 46 09.8	
	comp=Z,38nm,18.1s,baz=172,slow=38						
BRTR	**Keskin Array B**	**56.18**	**302**	P	**P**	**01 20 08.6**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=102,slow=5.4,SNR=1.9						
	comp=Z,0.2nm,0.5s						
WRA	**Warramunga Arr**	**56.53**	**140**	P	**P**	**01 20 09.7**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=330,slow=7.5,SNR=21						
	comp=Z,1.4nm,0.6s						
EIL	**Elat**	**56.88**	**290**	LR	LR	01 48 30.6	
	comp=Z,63nm,18.2s,baz=58,slow=40						
AKASG	**Malin Array Be**	**58.33**	**315**	P	**P**	**01 20 21.8**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=68,slow=6.0,SNR=3.1						
AKASG				LR	LR	01 48 47.3	
	comp=Z,69nm,18.2s,baz=51,slow=39						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	**59.26**	**143**	P	**P**	**01 20 29.6**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=320,slow=6.8,SNR=2.6						
	comp=Z,0.4nm,0.6s						
MLR	**Muntele Rosu**	**61.04**	**309**	LR	LR	01 50 12.9	
	comp=Z,62nm,18.0s,baz=50,slow=39						
SPITS	**Spitsbergen Ar**	**63.53**	**347**	LR	LR	01 52 04.7	
	comp=Z,95nm,18.4s,baz=48,slow=39						
VRAC	**Vranov**	**66.59**	**315**	LR	LR	01 51 54.8	
	comp=Z,70nm,18.4s,baz=70,slow=37						
NOA	**NORSAR Array B**	**67.08**	**328**	P	**P**	**01 21 21.1**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=77,slow=6.2,SNR=5.0						
	comp=Z,0.9nm,0.8s						
GERES	**GERESS Array B**	**68.54**	**315**	P	**P**	**01 21 30.4**	**-0.1**
	comp=Z,1.0nm,0.9s,baz=73,slow=4.5,SNR=6.0						
GERES				LR	LR	01 57 03.0	
	comp=Z,87nm,18.9s,baz=72,slow=41						
	comp=Z,1.0nm,0.9s						
STKA	**Stephens Creek**	**69.89**	**143**	P	**P**	**01 21 36.8**	**-2.0**
	comp=Z,0.9nm,0.5s,baz=327,slow=9.3,SNR=3.2						
	comp=Z,0.9nm,0.5s						
DAVOX	**Davos/Dischmat**	**71.60**	**314**	LR	LR	01 59 41.4	
	comp=Z,51nm,18.9s,baz=64,slow=41						
BORG	**Borgarnes**	**78.94**	**338**	LR	LR	01 59 57.2	
	comp=Z,21nm,20.1s,baz=3.6,slow=38						
LSZ	**Lusaka**	**80.79**	**248**	LR	LR	01 57 01.5	
	comp=Z,41nm,21.2s,baz=150,slow=34						
ESDC	**Sonseca Array**	**83.69**	**311**	LR	LR	02 04 26.3	
	comp=Z,32nm,18.6s,baz=18,slow=39						
SFJD	**Kangerlussuaq**	**84.79**	**349**	LR	LR	02 04 35.0	
	comp=Z,60nm,18.7s,baz=6.0,slow=38						
LBTB	**Lobatse**	**87.73**	**241**	LR	LR	02 02 30.3	
	comp=Z,39nm,18.9s,baz=42,slow=36						
YKA	**Yellowknife Ar**	**87.75**	**15**	P	**P**	**01 23 15.5**	**-0.9**
	comp=Z,0.4nm,1.0s,baz=328,slow=4.6,SNR=3.6						
	comp=Z,0.4nm,1.0s						
BOSA	**Boshof**	**89.78**	**238**	LR	LR	02 06 17.9	
	comp=Z,24nm,18.4s,baz=34,slow=37						
FRB	**Frobisher Bay**	**90.22**	**355**	LR	LR	02 08 05.0	
	comp=Z,74nm,18.5s,baz=256,slow=38						
TSUM	**Tsumeb**	**91.55**	**250**	LR	LR	02 06 18.3	
	comp=Z,33nm,18.0s,baz=162,slow=36						
SCHQ	**Schefferville**	**98.82**	**352**	LR	LR	02 12 46.5	
	comp=Z,34nm,20.3s,baz=62,slow=38						
TXAR	**Lajitas Array**	**120.66**	**24**	PKP	**PKPdf**	**01 29 18.2**	**-2.2**
	comp=Z,0.1nm,0.5s,baz=336,slow=2.7,SNR=1.6						

HEL ***27*** *01:33:04.2±0.2, 68°.06N×33°.61E, h0^{km}, ML2.1, Suspected explosion*
KOLA ***27*** *01:33:04.3, 67°.65N×33°.73E, h0^{km}, ML2.2, Error ellipse: s-maj=5.5km s-min=2.4km az=160.0, Khibiny, mines Kirovsk, Yukspor*
IDC ***27*** *01:33:06.4±1.9, 67°.74N×33°.42E, h0^{km}, mbtmp3.5/5, ML2.5/5, Error ellipse: s-maj=21.2km s-min=9.7km az=78.0*
ISC 27 01:33:03.3±0.9**, 67°.65N**±0°.04×**33°.72E**±0°.04**, h0^{km}, n27,** σ**1^{s}.26**/45**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA	**Apatity**	**0.15**	**236**	P	**Pg**	**01 33 06.7**	**+0.6**
APA0	**Apatity Array**	**0.28**	**261**	P	**Pg**	**01 33 09.2**	**+0.5**
APA0				S	**Sg**	**01 33 13.4**	**+1.1**
LVZ	**Lovozero**	**0.43**	**55**	P	**Pg**	**01 33 11.9**	**+0.3**
LVZ				S	**Sg**	**01 33 17.9**	**+0.7**
LVZ	**Lovozero**	**0.43**	**55**	PG	**Pg**	**01 33 11.8**	**+0.3**
LVZ				SG	**Sg**	**01 33 17.8**	**+0.7**
VRF	**Varrio**	**1.57**	**275**	PG	**Pn**	**01 33 32.2**	**-0.2**
VRF				MSG		01 33 50.6	
	comp=Z,26nm,0.2s						
VRF				SN	**Sn**	**01 33 52.5**	**-1.0**
TERR	**Teriberka**	**1.64**	**18**	P	**Pn**	**01 33 33.2**	**-0.2**
TERR				S	**Sn**	**01 33 54.5**	**-0.6**
KU6	**Riekki**	**2.23**	**225**	SN	**Sg**	**01 34 14.7**	**-0.1**
KU6				MSG		01 34 18.3	
	comp=Z,4.6nm,0.2s						
MSF	**Maaselka**	**2.55**	**229**	PN	**Pb**	**01 33 49.9**	**+0.1**
	baz=42						
MSF				SN	**Sg**	**01 34 24.4**	**-0.7**
SGF	**Sodankyl**	**2.77**	**269**	PN	**Pn**	**01 33 49.7**	**+0.8**
SGF				SG	**Sb**	**01 34 28.2**	**+0.1**
VADS	**Vadso**	**2.94**	**330**	P	**Pn**	**01 33 52.1**	**+0.9**
VADS				S	**Sn**	**01 34 26.6**	**-0.6**
RNF	**Rovaniemi**	**3.19**	**254**	PN	**Pn**	**01 33 55.4**	**+0.8**
RNF				SN	**Sn**	**01 34 35.7**	**+2.4**
KEV	**Kevo**	**3.24**	**314**	PG	**Pn**	**01 33 56.4**	**+1.2**
KEV				MSG		01 34 30.5	
	comp=Z,4.8nm,0.2s						
KEV				SG	**Sn**	**01 34 35.3**	**+0.9**
ARA0	**ARCESS Array S**	**3.56**	**306**	PB	**Pn**	**01 34 00.3**	**+0.6**
ARA0				SB	**Sn**	**01 34 42.2**	**-0.2**
ARCES	**ARCESS Array B**	**3.56**	**306**	Pn	**Pn**	**01 34 00.5**	**+0.8**
	comp=Z,1.0nm,0.3s,baz=122,slow=14,SNR=75						
ARCES				Pg	**Pb**	**01 34 07.9**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=121,slow=15,SNR=12						
ARCES				Sn	**Sn**	**01 34 41.9**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=122,slow=27,SNR=9.2						
ARCES				Lg	Lg	01 34 50.9	
	comp=Z,1.4nm,0.3s,baz=114,slow=33,SNR=11						
	comp=Z,2.7nm,0.3s						
ARCES	**ARCESS Array B**	**3.56**	**306**	P	**Pn**	**01 34 00.2**	**+0.5**
ARCES				S	**Sn**	**01 34 42.0**	**-0.4**
HEF	**Hetta**	**3.86**	**286**	PN	**Pn**	**01 34 04.4**	**+0.6**
TOF	**Tornio**	**4.03**	**251**	PB	**Pb**	**01 34 15.0**	**-0.1**
OUL	**Oulu**	**4.07**	**234**	PN	**Pn**	**01 34 09.3**	**+2.6**
OUL				SB	**Sg**	**01 35 13.0**	**-0.8**
LANU	**Lannavaara**	**4.46**	**281**	PN	**Pn**	**01 34 11.7**	**-0.4**
KALU	**Kalix**	**4.48**	**251**	PG	**Pb**	**01 34 24.6**	**+1.8**
KALU				SN	**Sn**	**01 35 04.6**	**-0.6**
OBF4	**Vikkela, Lumij**	**4.50**	**235**	PN	**Pn**	**01 34 15.1**	**+2.5**
ERTU	**Ertsjaerv**	**4.64**	**262**	PN	**Pn**	**01 34 14.7**	**+0.2**
ERTU				SN	**Sn**	**01 35 08.2**	**-0.8**
FINES	**FINESS Array B**	**7.04**	**211**	Pn	**Pn**	**01 34 47.5**	**0.0**
	comp=Z,0.1nm,0.3s,baz=26,slow=14,SNR=3.9						
FINES				Sn	**Sn**	**01 36 06.2**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=26,slow=19,SNR=1.4						
FINES				Lg	Lg	01 36 39.8	
	comp=Z,0.3nm,0.3s,baz=36,slow=26,SNR=8.2						
	comp=Z,1.2nm,0.8s						
FAUS	**Fauske**	**7.07**	**276**	S	**Sn**	**01 36 04.7**	**-4.1**
HFS	**Hagfors**	**11.55**	**239**	Pn	**Pn**	**01 35 48.3**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=35,slow=18,SNR=2.6						
HFS				Lg	Lg	01 38 59.8	
	comp=Z,0.1nm,0.3s,baz=48,slow=24,SNR=1.8						
	comp=Z,4.3nm,1.0s						
SPITS	**Spitsbergen Ar**	**11.65**	**342**	Pn	**Pn**	**01 35 48.0**	**-2.6**
	baz=147,slow=13						
	comp=Z,8.1nm,0.9s						
NOA	**NORSAR Array B**	**11.73**	**246**	Pn	**Pn**	**01 35 50.1**	**-1.6**
	baz=45,slow=11,SNR=1.6						
	comp=Z,0.3nm,0.7s						

IDC ***27*** *01:40:44.8±1.8, 5°.81S×153°.64E, h0^{km}, mb3.5/4, mbtmp3.6/5, ML3.4/1, MS3.1/2, Error ellipse: s-maj=39.5km s-min=23.7km az=61.0*
ISC 27 01:40:49.7±1.3**, 5°.8S**±0°.1×**153°.7E**±0°.1**, h35^{km}, n10,** σ**0^{s}.96**/8**, mb3.4**/3**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.22**	**311**	Pn	**Pn**	**01 41 24.1**	**0.0**
	11nm,0.3s,baz=165,slow=20,SNR=5.2						
KRVT				Sn	**Sn**	**01 41 50.6**	**+0.3**
	33nm,0.3s,baz=222,slow=22,SNR=14						
	83nm,0.6s						
PMG	**Port Moresby**	**7.43**	**241**	Sn	**Sn**	**01 43 59.4**	**+0.6**
	2.3nm,0.3s,baz=155,slow=16,SNR=1.4						
CTA	**Charters Tower**	**15.97**	**206**	LR	LR	01 49 29.8	
	comp=Z,66nm,21.0s,baz=250,slow=33						
DZM	**Mont Dzumac**	**20.35**	**144**	P	**P**	**01 45 24.3**	**+0.9**
	1.9nm,0.4s,baz=312,slow=22,SNR=2.5						
DZM				LR	LR	01 50 49.2	
	comp=Z,69nm,20.1s,baz=352,slow=30						
	1.9nm,0.4s						
WRA	**Warramunga Arr**	**23.52**	**231**	P	**P**	**01 45 56.3**	**-0.5**
	0.5nm,0.4s,baz=57,slow=10.0,SNR=10						
WRA				PcP	**PcP**	**01 49 40.5**	**-1.5**
	0.5nm,0.8s,baz=58,slow=2.1,SNR=2.2						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**26.08**	**225**	P	**P**	**01 46 19.6**	**-0.7**
	0.9nm,0.6s,baz=59,slow=9.1,SNR=11						
	0.9nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**27.30**	**28**	T	T	02 14 38.4	
	baz=208,slow=76,SNR=6.9						
H11S2	**WAKE ISLAND Hy**	**27.30**	**28**	T	T	02 14 37.4	
	baz=208,slow=76,SNR=5.6						
H11S1	**WAKE ISLAND Hy**	**27.32**	**28**	T	T	02 14 38.4	
	baz=208,slow=76,SNR=12						
MKAR	**Makanchi Array**	**81.65**	**319**	P	**P**	**01 53 04.9**	**+0.5**
	0.1nm,0.4s,baz=103,slow=4.2,SNR=1.6						
	0.1nm,0.4s						

IDC ***27*** *01:42:06.0±0.9, 35°.08N×23°.80E, h0^{km}, mb3.9/12, mbtmp3.8/18, ML3.5/6, MS3.4/1, Error ellipse: s-maj=21.5km s-min=10.1km az=0.0*
ISK ***27*** *01:42:10.8, 35°.07N×23°.96E, h19^{km}, ML3.5/24*
ATH ***27*** *01:42:11.4, 35°.02N×23°.84E, h15^{km}±2^{km}, ML3.5/5, Error ellipse: s-maj=2.9km s-min=1.5km az=230.0*
THE ***27*** *01:42:11.5, 35°.05N×23°.89E, h0^{km}±1^{km}, ML3.3/8, Error ellipse: s-maj=1.6km s-min=0.6km az=240.0*
DDA ***27*** *01:42:18.0±0.0, 35°.59N×24°.42E, h52^{km}, MW3.6*
ISC 27 01:42:10.6±0.7**, 35°.00N**±0°.03×**23°.89E**±0°.03**, h28^{km}**±5^{km}**,**

n131,$\sigma 1^{s}79$/150,mb3.8/12,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVDS	**Gavdos**	**0.23**	**134**	P	**Pb**	**01 42 16.6**	**-0.4**
GVDS				S	**Sb**	**01 42 21.3**	**+0.1**
	50µm,0.4s						
GVDS	**Gavdos**	**0.23**	**134**	Pg	**Pb**	**01 42 16.7**	**-0.3**
GVDS				Sg	**Sb**	**01 42 21.5**	**+0.2**
GVD	**Gavdhos**	**0.23**	**135**	P	**Pb**	**01 42 16.8**	**-0.2**
GVD				S	**Sb**	**01 42 21.9**	**+0.6**
	45µm,0.3s						
GVD	**Gavdhos**	**0.23**	**135**	Pg	**Pb**	**01 42 16.8**	**-0.2**
GVD				Sg	**Sb**	**01 42 21.9**	**+0.6**
GVD	**Gavdhos**	**0.23**	**135**	P	**Pb**	**01 42 16.8**	**-0.2**
GVD				S	**Sb**	**01 42 22.0**	**+0.6**
GVD				AML	AML	01 42 22.1	
	comp=E,89763µm,0.4s						
GVD				AML	AML	01 42 23.6	
	comp=N,90896µm,0.3s						
KNDR	**Palaiochora Ch**	**0.29**	**324**	P	**Pb**	**01 42 17.1**	**-0.6**
KNDR				S	**Sb**	**01 42 22.4**	**-0.2**
	comp=N,4µm,0.4s						
KNDR	**Palaiochora Ch**	**0.29**	**324**	Pg	**Pb**	**01 42 17.2**	**-0.6**
KNDR				Sg	**Sb**	**01 42 23.4**	**+0.8**
KNDR	**Palaiochora Ch**	**0.29**	**324**	P	**Pb**	**01 42 17.1**	**-0.6**
KNDR				S	**Sb**	**01 42 22.3**	**-0.2**
KNDR				AML	AML	01 42 25.3	
	comp=N,24433µm,0.2s						
KNDR				AML	AML	01 42 25.3	
	comp=E,20747µm,0.2s						
IMMV	**Iera Moni Meta**	**0.47**	**9**	P	**Pb**	**01 42 19.7**	**-0.7**
IMMV				S	**Sb**	**01 42 26.7**	**-0.4**
	comp=E,9µm,0.3s						
IMMV	**Iera Moni Meta**	**0.47**	**9**	Pg	**Pb**	**01 42 19.9**	**-0.6**
IMMV	**Iera Moni Meta**	**0.47**	**9**	P	**Pb**	**01 42 19.9**	**-0.6**
IMMV				S	**Sb**	**01 42 27.1**	**0.0**
IMMV				AML	AML	01 42 29.6	
	comp=N,14999µm,0.3s						
IMMV				AML	AML	01 42 30.3	
	comp=E,19103µm,0.3s						
CHAN	**Chania**	**0.53**	**13**	P	**Pb**	**01 42 21.1**	**-0.5**
CHAN				S	**Sb**	**01 42 29.8**	**+0.9**
CHAN				AML	AML	01 42 31.1	
	comp=N,10892µm,0.6s						
CHAN				AML	AML	01 42 36.5	
	comp=E,9476µm,0.3s						
RODP	**Rodopos**	**0.57**	**349**	P	**Pb**	**01 42 21.6**	**-0.6**
RODP				S	**Sb**	**01 42 30.0**	**0.0**
	comp=E,1µm,0.3s						
RODP	**Rodopos**	**0.57**	**349**	Pg	**Pb**	**01 42 21.9**	**-0.3**
PRNS	**Prines Rethymn**	**0.62**	**54**	P	**Pb**	**01 42 21.5**	**-1.4**
PRNS				S	**Sb**	**01 42 31.1**	**-0.2**
	comp=E,2µm,0.5s						
TMBK	**Timbaki Herakl**	**0.72**	**84**	P	**Pb**	**01 42 24.7**	**0.0**
TMBK				S	**Sn**	**01 42 36.4**	**+1.3**
	comp=E,2µm,0.7s						
TMBK	**Timbaki Herakl**	**0.72**	**84**	P	**Pb**	**01 42 24.8**	**+0.1**
TMBK				S	**Sn**	**01 42 37.1**	**+2.1**
TMBK				AML	AML	01 42 42.0	
	comp=N,6332µm,0.3s						
TMBK				AML	AML	01 42 45.5	
	comp=E,8060µm,0.6s						
IDI	**Anoyia**	**0.87**	**70**	Pn	**Pn**	**01 42 26.1**	**-1.0**
	comp=E,37nm,0.3s,baz=248,slow=13,SNR=394						
IDI				Lg	Lg	01 42 36.9	
	comp=E,110nm,0.3s,baz=346,slow=21,SNR=12						
IDI				LR	LR	01 42 43.9	
	comp=E,23nm,19.8s,baz=282,slow=41						
IDI	**Anoyia**	**0.87**	**70**	P	**Pn**	**01 42 26.3**	**-0.8**
IDI	**Anoyia**	**0.87**	**70**	Pg	**Pn**	**01 42 26.3**	**-0.8**
IDI	**Anoyia**	**0.87**	**70**	P	**Pb**	**01 42 28.4**	**+1.3**
ANKY	**Antikythira Is**	**0.99**	**331**	P	**Pn**	**01 42 29.1**	**+0.5**
ANKY	**Antikythira Is**	**0.99**	**331**	P	**Pn**	**01 42 29.2**	**+0.5**
KSTL	**Kastelli Herak**	**1.01**	**72**	P	**Pb**	**01 42 33.1**	**+3.5**
IACM	**Heraklion**	**1.01**	**72**	P	**Pn**	**01 42 29.4**	**+0.4**
HRKL	**Herakleio**	**1.04**	**72**	P	**Pb**	**01 42 30.1**	**+0.1**
HRKL	**Herakleio**	**1.04**	**72**	Pg	**Pb**	**01 42 30.2**	**+0.2**
KTHA	**Kythira Island**	**1.42**	**332**	P	**Pb**	**01 42 37.0**	**+0.4**
KTHA	**Kythira Island**	**1.42**	**332**	Pn	**Pb**	**01 42 36.7**	**+0.1**
FRMA	**Ierapetra Chan**	**1.51**	**89**	P	**Pb**	**01 42 41.2**	**+3.2**
FRMA	**Ierapetra Chan**	**1.51**	**89**	P	**Pb**	**01 42 40.3**	**+2.3**
MHLO	**Agia Marina, M**	**1.74**	**14**	P	**Pb**	**01 42 40.8**	**-1.1**
STIA	**Sitia Lasithi**	**1.81**	**83**	P	**Pb**	**01 42 44.1**	**+0.9**
THR6	**Thira Island,**	**1.83**	**42**	P	**Pb**	**01 42 44.2**	**+0.8**
SAP3	**Santorini-Thir**	**1.86**	**39**	P	**Pn**	**01 42 42.2**	**+1.6**
THR3	**Thira Island,**	**1.87**	**41**	P	**Pb**	**01 42 43.0**	**-1.1**
SANT	**Santorini**	**1.87**	**43**	P	**Pn**	**01 42 42.8**	**+2.0**
SANT	**Santorini**	**1.87**	**43**	Pn	**Pn**	**01 42 42.3**	**+1.5**
VLI	**Veliai**	**1.88**	**336**	P	**Pb**	**01 42 43.3**	**-1.0**
THR8	**Santorini-Mono**	**1.91**	**42**	P	**Pb**	**01 42 43.8**	**-1.0**
ZKR	**Zakros**	**1.91**	**86**	P	**Pb**	**01 42 45.1**	**+0.3**
ZKR	**Zakros**	**1.91**	**86**	Pn	**Pn**	**01 42 42.6**	**+1.2**
CMBO	**Columbo, Santo**	**1.92**	**40**	P	**Pb**	**01 42 43.6**	**-1.3**
KRND	**KRANIDI**	**2.45**	**346**	P	**Pn**	**01 42 50.4**	**+1.6**
PYL	**PYLOS**	**2.57**	**318**	P	**Pn**	**01 42 51.8**	**+1.4**
EPID	**Epidavros**	**2.68**	**347**	P	**Pn**	**01 42 55.0**	**+3.0**
ITM	**Ithomi**	**2.69**	**324**	P	**Pn**	**01 42 53.4**	**+1.3**
ITM	**Ithomi**	**2.69**	**324**	Pn	**Pn**	**01 42 53.2**	**+1.1**
KARP	**Karpathos**	**2.73**	**78**	Pn	**Pn**	**01 42 54.3**	**+1.6**
VLY	**Voula,Athens**	**2.85**	**358**	P	**Pn**	**01 42 56.4**	**+2.2**
ATHU	**Athens Univers**	**2.96**	**358**	P	**Pn**	**01 42 57.2**	**+1.4**
DION	**Dionisos Attik**	**3.07**	**1**	P	**Pn**	**01 43 00.2**	**+2.9**
GUR	**Goura**	**3.18**	**337**	P	**Pn**	**01 43 02.0**	**+3.0**
VILL	**Villia**	**3.19**	**352**	P	**Pn**	**01 43 00.7**	**+1.7**
KLV	**Kalavryta, Ach**	**3.34**	**336**	P	**Pn**	**01 43 03.2**	**+2.1**
EREA	**Eretria**	**3.41**	**1**	P	**Pn**	**01 43 04.0**	**+2.0**
DRO	**Drossia**	**3.43**	**330**	P	**Pn**	**01 43 04.4**	**+2.2**
BODT	**Bodrum**	**3.45**	**52**	Pn	**Pn**	**01 43 03.3**	**+0.8**
DAT	**Datca**	**3.46**	**59**	P	**Pn**	**01 43 04.9**	**+2.2**
DAT	**Datca**	**3.46**	**59**	Pn	**Pn**	**01 43 04.2**	**+1.5**
LAKA	**Lakka**	**3.58**	**335**	P	**Pn**	**01 43 05.8**	**+1.5**
SMG	**Samos**	**3.60**	**40**	P	**Pn**	**01 43 05.7**	**+1.1**
RLS	**Riolos of Patr**	**3.62**	**328**	P	**Pn**	**01 43 06.5**	**+1.6**
ARG	**Arkhangelos**	**3.66**	**69**	P	**Pn**	**01 43 08.1**	**+2.7**
ARG				S	**Sn**	**01 43 51.2**	**+3.6**
	comp=E,78nm,0.8s						
ARG	**Arkhangelos**	**3.66**	**69**	Pn	**Pn**	**01 43 07.3**	**+1.9**
SERG	**Sergoula**	**3.71**	**337**	P	**Pn**	**01 43 08.3**	**+2.2**
ATAL	**Atalanti**	**3.75**	**350**	P	**Pn**	**01 43 08.4**	**+1.8**
EFP	**Efpalio**	**3.77**	**336**	P	**Pn**	**01 43 10.8**	**+3.9**
CHOS	**Chios island**	**3.80**	**27**	Pn	**Pn**	**01 43 08.7**	**+1.3**
AXAR	**Agios Charalam**	**3.89**	**346**	P	**Pn**	**01 43 11.2**	**+2.7**
ANX	**Ano Chora**	**3.92**	**337**	P	**Pn**	**01 43 11.3**	**+2.3**
TURN	**Turunc**	**3.95**	**62**	Pn	**Pn**	**01 43 11.2**	**+1.8**
TURN	**Turunc**	**3.95**	**62**	P	**Pn**	**01 43 09.4**	**0.0**
URLA	**Izmir**	**4.00**	**32**	Pn	**Pn**	**01 43 11.0**	**+1.0**
VLS	**Valsamata**	**4.14**	**321**	P	**Pn**	**01 43 12.8**	**+0.9**
YER	**Yerkesik**	**4.15**	**58**	P	**Pn**	**01 43 15.4**	**+3.3**
YER	**Yerkesik**	**4.15**	**58**	Pn	**Pn**	**01 43 14.2**	**+2.1**
AGG	**Agios Georgios**	**4.20**	**343**	P	**Pn**	**01 43 14.9**	**+2.0**
MAKR	**Makrakomi, Fth**	**4.25**	**341**	P	**Pn**	**01 43 16.2**	**+2.7**
DALY	**Dalyan (Mula)**	**4.27**	**64**	Pn	**Pn**	**01 43 16.5**	**+2.8**
EVGI	**Lefkada island**	**4.45**	**325**	P	**Pn**	**01 43 18.2**	**+2.0**
NYDR	**Nydri-Lefkada**	**4.50**	**326**	P	**Pn**	**01 43 18.6**	**+1.6**
IZZE	**Mula-Seydike**	**4.57**	**70**	SPECP		01 43 18.0	
IZZE				P	**Pn**	**01 43 18.7**	**+0.8**
IZZE				S	**Sn**	**01 44 06.1**	**-4.0**
IZZE				*i* AML	AML	01 44 13.0	
	comp=E,28nm,0.4s						
LKD2	**Lefkada island**	**4.58**	**327**	P	**Pn**	**01 43 19.2**	**+1.1**
TAVA	**DENIZLI_Tavas**	**4.75**	**57**	P	**Pn**	**01 43 21.7**	**+1.3**
CAME	**Cameli-Denizli**	**4.80**	**65**	Pn	**Pn**	**01 43 23.3**	**+2.1**
AKAS	**Kas**	**4.81**	**74**	Pn	**Pn**	**01 43 22.8**	**+1.4**
AKAS	**Kas**	**4.81**	**74**	SPECP		01 43 22.0	
AKAS				P	**Pn**	**01 43 22.9**	**+1.6**
AKAS				S	**Sn**	**01 44 17.4**	**+1.1**
AKAS				*i* AML	AML	01 44 19.0	
	comp=E,28nm,0.6s						
CAEL	**Denizli, Camel**	**4.88**	**63**	P	**Pn**	**01 43 23.4**	**+1.0**
DNIZ	**Denizli-Tavas-**	**4.91**	**56**	SPECP		01 43 22.0	
DNIZ				P	**Pn**	**01 43 22.5**	**-0.2**
APMY	**Acipayam-Deniz**	**5.02**	**59**	Pn	**Pn**	**01 43 26.6**	**+2.4**
GOLH	**Golhisar**	**5.10**	**62**	P	**Pn**	**01 43 27.9**	**+2.6**
ELL	**Elmali**	**5.19**	**69**	Pn	**Pn**	**01 43 28.8**	**+2.3**
AKUM	**Antalya-Kumluc**	**5.42**	**74**	SPECP		01 43 30.0	
AKUM				P	**Pn**	**01 43 31.0**	**+1.4**
AKUM				S	**Sn**	**01 44 29.0**	**-1.9**
AKUM				*i* AML	AML	01 44 34.0	
	comp=E,15nm,0.3s						
USAK	**Uak-Merkez**	**5.54**	**46**	P	**Pn**	**01 43 33.2**	**+2.0**
PASA	**Karahalli, USA**	**5.60**	**52**	P	Pn	01 43 28.3	-3.9
KORT	**Korkueli**	**5.60**	**67**	Pn	**Pn**	**01 43 34.1**	**+1.9**
KORT	**Korkueli**	**5.60**	**67**	SPECP		01 43 32.0	
KORT				P	**Pn**	**01 43 32.5**	**+0.2**
BRDR	**BURDUR-Merkez**	**5.66**	**60**	P	Pn	01 43 29.1	-3.9
BUCA	**Burdur, Bucak-**	**5.87**	**65**	SPECP		01 43 38.0	
BUCA				P	**Pn**	**01 43 38.2**	**+2.4**
SUTC	**Sutluce-Ispart**	**6.25**	**65**	Pn	**Pn**	**01 43 44.0**	**+2.8**
SHUT	**Suhut-Afyon**	**6.41**	**55**	Pn	**Pn**	**01 43 46.2**	**+2.9**
BRTR	**Keskin Array B**	**9.08**	**56**	Pn	**Pn**	**01 44 22.1**	**+2.2**
	comp=E,0.1nm,0.3s,baz=225,slow=13,SNR=10						
	comp=E,1.1nm,0.7s						
MMAI	**Mount Meron Ar**	**9.76**	**98**	Pn	**Pn**	**01 44 27.1**	**-2.1**
	comp=E,1.5nm,0.3s,baz=286,slow=16,SNR=16						
MMAI				Sn	**Sn**	**01 46 13.3**	**-4.6**
	comp=E,1.0nm,0.3s,baz=286,slow=31,SNR=2.5						
	comp=E,0.5nm,0.2s						
EIL	**Elat**	**10.76**	**117**	Pn	**Pn**	**01 44 41.0**	**-1.9**
	comp=E,0.5nm,0.3s,baz=344,slow=4.0,SNR=9.2						
EIL				Sn	Sn	01 46 36.1	-6.2
	comp=E,0.3nm,0.3s,baz=22,slow=22,SNR=2.2						
	comp=E,1.1nm,0.3s						
ASF	**Jabal al Asfar**	**11.21**	**101**	Pn	**Pn**	**01 44 47.1**	**-2.0**
	comp=E,0.2nm,0.3s,baz=329,slow=5.9,SNR=2.0						
ASF				Sn	**Sn**	**01 46 47.8**	**-5.6**
	comp=E,0.2nm,0.3s,baz=342,slow=20,SNR=1.7						
	comp=E,0.7nm,0.4s						
ABTA	**Abfaltersbach**	**14.53**	**327**	*e*Pn	**P**	**01 45 42.2**	**+1.6**
	comp=E,1.2nm,0.5s						
WTTA	**Wattenberg**	**15.32**	**327**	*e*Pn	**P**	**01 45 51.6**	**+2.1**
	comp=E,1.6nm,0.6s						
WATA	**Walderalm**	**15.40**	**327**	*e*Pn	**P**	**01 45 53.7**	**+3.3**
	comp=E,1.1nm,0.4s						
SQTA	**Sankt Quirin**	**15.48**	**326**	*e*Pn	**P**	**01 45 52.9**	**+1.7**
	comp=E,0.9nm,0.4s						
FETA	**Feichten**	**15.56**	**324**	*e*Pn	**P**	**01 45 54.9**	**+2.8**
	comp=E,0.8nm,0.5s						
MOTA	**Moosalm**	**15.62**	**326**	*e*Pn	**P**	**01 45 56.9**	**+4.0**
	comp=E,0.7nm,0.5s						
GERES	**GERESS Array B**	**15.75**	**335**	Pn	**Pn**	**01 45 50.5**	**0.0**
	comp=E,0.1nm,0.3s,baz=142,slow=11,SNR=9.7						
	comp=E,0.7nm,0.5s						
DAVOX	**Davos/Dischmat**	**15.80**	**322**	Pn	**P**	**01 45 55.0**	**+0.1**
	comp=E,0.2nm,0.3s,baz=153,slow=14,SNR=2.1						
KHC	**Kasperske Hory**	**16.04**	**335**	*e*P	**P**	**01 45 57.5**	**+0.2**
AKASG	**Malin Array Be**	**16.16**	**12**	Pn	**Pn**	**01 45 56.6**	**+1.0**
	comp=E,1.2nm,0.3s,baz=206,slow=9.3,SNR=4.2						
KBZ	**Khabaz**	**17.06**	**54**	P	**Pn**	**01 46 07.2**	**+0.2**
	comp=E,0.1nm,0.3s,baz=249,slow=8.6,SNR=5.3						
	comp=E,1.3nm,0.6s						
ESDC	**Sonseca Array**	**22.59**	**290**	P	**P**	**01 47 07.4**	**-1.6**
	comp=E,0.7nm,0.6s,baz=81,slow=9.5,SNR=10						
	comp=E,0.7nm,0.6s						
HFS	**Hagfors**	**26.01**	**348**	P	**P**	**01 47 38.8**	**-2.2**
	comp=E,2.0nm,0.8s,baz=179,slow=7.2,SNR=8.8						
	comp=E,2.0nm,0.8s						
FINES	**FINESS Array B**	**26.50**	**2**	P	**P**	**01 47 42.8**	**-2.6**
	comp=E,3.0nm,1.0s,baz=199,slow=8.2,SNR=1.7						
	comp=E,3.0nm,1.0s						
NOA	**NORSAR Array B**	**27.30**	**347**	P	**P**	**01 47 50.8**	**-1.8**
	comp=E,0.2nm,0.5s,baz=156,slow=9.9,SNR=6.0						
	comp=E,0.2nm,0.5s						
EKA	**Eskdalemuir Ar**	**27.58**	**326**	P	**P**	**01 47 53.2**	**-1.9**
	comp=E,0.3nm,0.4s,baz=126,slow=9.8,SNR=1.5						
	comp=E,0.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**29.60**	**228**	P	**P**	**01 48 13.7**	**+0.2**
	comp=E,3.2nm,0.3s,baz=34,slow=8.9,SNR=4.8						
	comp=E,3.2nm,0.3s						
KURBB	**Kurchatov Arra**	**42.03**	**51**	P	**P**	**01 49 59.2**	**-0.3**
	comp=E,1.4nm,0.2s,baz=278,slow=8.4,SNR=8.7						
	comp=E,1.4nm,0.2s						
MKAR	**Makanchi Array**	**44.73**	**56**	P	**P**	**01 50 21.3**	**-0.1**
	comp=E,0.9nm,0.4s,baz=267,slow=8.4,SNR=21						
MKAR				PcP	**PcP**	**01 52 03.2**	**-0.1**
	comp=E,0.2nm,0.7s,baz=274,slow=4.2,SNR=1.8						
	comp=E,0.9nm,0.4s						
ZALV	**Zalesovo Beam**	**45.86**	**46**	P	**P**	**01 50 29.3**	**-0.9**
	comp=E,1.5nm,0.5s,baz=264,slow=8.8,SNR=5.8						
	comp=E,1.5nm,0.5s						
SONM	**Songino Array**	**60.39**	**50**	P	**P**	**01 52 17.5**	**+0.1**
	comp=E,0.4nm,0.6s,baz=287,slow=8.4,SNR=4.0						
	comp=E,0.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**67.62**	**83**	P	**P**	**01 53 06.9**	**+1.7**
	comp=E,1.7nm,0.3s,baz=301,slow=7.0,SNR=2.2						
	comp=E,1.7nm,0.3s						
YKA	**Yellowknife Ar**	**77.28**	**342**	P	**P**	**01 54 01.7**	**-0.2**
	comp=E,0.1nm,0.6s,baz=64,slow=4.3,SNR=2.4						
	comp=E,0.1nm,0.6s						
JTS	**Las Juntas de**	**99.18**	**289**	LR	LR	02 34 22.6	
	comp=E,18nm,21.8s,baz=333,slow=32						
WRA	**Warramunga Arr**	**117.61**	**96**	PKP	**PKPdf**	**02 00 53.5**	**-0.9**
	comp=E,0.3nm,0.8s,baz=297,slow=1.9,SNR=1.6						

NEIC ***27*** *01:45:54.9±1.2, 36.°155N±0.°006×118.°72W±0.°01, $h10^{km}\pm3^{km}$, Error ellipse: s-maj=1.6km s-min=0.6km az=63.0*

ANF ***27*** *01:45:54.5±0.2, 36.°17N×118.°71W, $h10^{km}\pm1^{km}$, ML3.8/35, ML3.6/35, Error ellipse: s-maj=1.4km s-min=1.1km az=121.0*

PAS ***27*** *01:45:55.3±1.2, 36.°17N±0.°01×118.°72W±0.°01, $h11^{km}\pm3^{km}$, ML3.6/310, ML3.3/114(NEIC), Error ellipse: s-maj=1.6km s-min=1.5km az=223.0*

NCEDC ***27*** *01:45:55.1, 36.°14N×118.°73W, $h8^{km}$*

ISC 27 01:45:54.8±0.8**, 36.°14N**±0.°01×**118.°71W**±0.°01**, h17**$^{km}\pm6^{km}$**,**
n169, $\sigma 0^{s}84$/227**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPG2	**Springville 2**	**0.08**	**320**		**Pg**	**01 45 59.0**	**+0.8**
WASM	**Alta Sierra Ca**	**0.42**	**163**		**Pb**	**01 46 03.8**	**-0.1**
WASM					**Sb**	**01 46 10.0**	**-0.1**
VES	**Vestal, Richgr**	**0.43**	**226**		**Pb**	**01 46 03.9**	**-0.1**
VES					**Sb**	**01 46 10.5**	**+0.4**
VES	**Vestal, Richgr**	**0.43**	**226**	P	**Pb**	**01 46 03.9**	**-0.1**
	baz=43,SNR=245						
VES				S	**Sb**	**01 46 10.2**	**+0.1**
	baz=43						
RCTC	**Rector, Farmer**	**0.47**	**291**		**Pg**	**01 46 03.7**	**-0.5**
RCTC					**Sg**	**01 46 09.6**	**-0.9**
ISA	**Isabella, Lake**	**0.51**	**159**	Pg	**Pb**	**01 46 05.2**	**-0.2**
ISA				Sg	**Sb**	**01 46 12.4**	**-0.2**
ISA				IAML		01 46 13.1	
	comp=N,3µm,0.4s						
ISA	**Isabella, Lake**	**0.51**	**159**	P	**Pb**	**01 46 05.3**	**-0.2**
	baz=336,SNR=119						
ISA				S	**Sb**	**01 46 12.7**	**+0.1**
	baz=336						
WHFM	**Hanning Flat**	**0.53**	**147**		**Pb**	**01 46 05.6**	**-0.1**
WHFM					**Sb**	**01 46 12.8**	**-0.3**
VOG	**Valley Oaks Go**	**0.58**	**288**		**Pb**	**01 46 06.0**	**-0.5**
VOG					**Sg**	**01 46 13.1**	**-0.9**
VOG	**Valley Oaks Go**	**0.58**	**288**	P	**Pb**	**01 46 06.0**	**-0.5**
	baz=109,SNR=37						
VOG				S	**Sg**	**01 46 13.6**	**-0.3**
	baz=109						
WORM	**Onyx Ranch**	**0.58**	**140**		**Pb**	**01 46 06.5**	**-0.1**
WORM					**Sb**	**01 46 14.7**	**+0.1**
CWC	**Cottonwood Cre**	**0.59**	**59**		**Pg**	**01 46 06.0**	**-0.5**
CWC					**Sg**	**01 46 13.6**	**-0.8**
CWC	**Cottonwood Cre**	**0.59**	**59**	P	**Pg**	**01 46 06.0**	**-0.5**
	baz=241						
CWC				S	**Sg**	**01 46 13.6**	**-0.8**
	baz=241						
WRVM	**Rose V. Centra**	**0.67**	**101**		**Pb**	**01 46 07.9**	**-0.3**
WRVM					**Sb**	**01 46 17.0**	**-0.3**
MFS	**McCloud Flat S**	**0.69**	**92**		**Pb**	**01 46 08.3**	**-0.2**
WNMM	**Nine Mile Cany**	**0.71**	**114**		**Pb**	**01 46 08.8**	**0.0**
WNMM					**Sb**	**01 46 18.8**	**+0.5**
JRC2	**Joshua Ridge**	**0.74**	**102**		**Pb**	**01 46 09.3**	**-0.1**
JRC2					**Sb**	**01 46 19.3**	**-0.1**
WVPM	**Volcano Peak E**	**0.74**	**105**		**Pb**	**01 46 09.3**	**-0.1**
WVPM					**Sb**	**01 46 19.4**	**+0.1**
WBSM	**Bird Springs**	**0.76**	**143**		**Pb**	**01 46 09.7**	**0.0**
WBSM					**Sb**	**01 46 20.3**	**+0.5**
WCSM	**Coso Springs S**	**0.77**	**98**		**Pb**	**01 46 09.7**	**-0.1**
WCSM					**Sb**	**01 46 20.0**	**0.0**
MAGC	**SCE Magundon P**	**0.80**	**193**		**Pb**	**01 46 10.6**	**+0.4**
MAGC					**Sn**	**01 46 22.1**	**-0.6**
TOW	**Tower One**	**0.83**	**113**		**Pn**	**01 46 11.4**	**-0.4**
TOW					**Sn**	**01 46 23.4**	**-0.3**
CGO	**Cerro Gordo**	**0.83**	**60**		**Pb**	**01 46 10.9**	**-0.1**
CGO					Pn	01 46 22.1	+10
BAKC	**Calstate**	**0.86**	**202**		**Pn**	**01 46 12.0**	**-0.1**
BAKC					**Sn**	**01 46 24.3**	**0.0**
SRTC	**Snort**	**0.90**	**120**		**Pn**	**01 46 12.6**	**-0.1**
SRTC					**Sn**	**01 46 25.4**	**+0.1**
TEJ	**El Tejon**	**0.91**	**179**		**Pb**	**01 46 12.2**	**+0.1**
TEJ					**Sb**	**01 46 24.9**	**+0.9**
CLC	**China Lake**	**0.95**	**110**		**Pb**	**01 46 13.1**	**+0.2**
CLC					**Sb**	**01 46 25.9**	**+0.5**
MPMC	**Manual Prospec**	**0.99**	**94**		**Pb**	**01 46 13.8**	**+0.1**
MPMC					**Sb**	**01 46 27.0**	**+0.6**
MPMC	**Manual Prospec**	**0.99**	**94**	P	**Pb**	**01 46 13.7**	**+0.1**
	baz=275,SNR=793						
MPMC				S	**Sb**	**01 46 26.6**	**+0.2**
	baz=275						
TIN	**Tinemaha, Big**	**0.99**	**23**		**Pg**	**01 46 13.3**	**-0.7**
TIN					**Sb**	**01 46 26.6**	**+0.2**
TIN	**Tinemaha, Big**	**0.99**	**23**	P	**Pg**	**01 46 13.2**	**-0.7**
	baz=204,SNR=29						
TIN				S	**Sg**	**01 46 26.2**	**-0.8**
	baz=204						
ARVC	**Arvin**	**1.02**	**186**		**Pn**	**01 46 14.3**	**-0.1**
ARVC					**Sn**	**01 46 28.6**	**+0.4**
ARVC	**Arvin**	**1.02**	**186**	P	**Pn**	**01 46 14.2**	**-0.1**
	baz=4.4,SNR=107						
ARVC				S	**Sn**	**01 46 28.5**	**+0.2**
	baz=4.4						
LRMC	**Laurel Mtn Rad**	**1.06**	**128**	P	**Pn**	**01 46 15.0**	**-0.1**
	baz=308,SNR=22						
LRMC				S	**Sb**	**01 46 29.2**	**+0.7**
	baz=308						
DTP	**Desert Tortois**	**1.12**	**141**		**Pn**	**01 46 16.0**	**+0.2**
DTP					**Sn**	**01 46 31.2**	**+0.4**
CCAC	**Calif City Air**	**1.14**	**150**		**Pn**	**01 46 16.2**	**+0.2**
CCAC				Sg	**Sn**	**01 46 31.2**	**0.0**
MTUM	**Tungsten Hills**	**1.22**	**5**		**Pn**	**01 46 17.1**	**-0.1**
CRGC	**Crocker Grade**	**1.22**	**223**		**Pg**	**01 46 17.8**	**-0.7**
CRGC					**Sn**	**01 46 34.9**	**+1.4**
THC	**Tehachapi Micr**	**1.23**	**178**		**Pg**	**01 46 18.1**	**-0.5**
CARC	**Carrizo Plain**	**1.25**	**228**		**Pg**	**01 46 18.1**	**-0.7**
CARC					**Sn**	**01 46 35.4**	**+1.4**
CCCA	**Chr Cany lake**	**1.25**	**119**		**Pg**	**01 46 18.5**	**-0.4**
CCCA					**Sn**	**01 46 35.9**	**+1.8**
PWMM	**Westland Maint**	**1.25**	**284**		**Pb**	**01 46 17.8**	**-0.2**
POCCA	**Poleta Canyon**	**1.27**	**16**		**Pb**	**01 46 18.2**	**-0.1**
TPO	**Tropico Hills**	**1.32**	**163**		**Pg**	**01 46 19.8**	**-0.5**
BCW	**Bitter Crk WRg**	**1.33**	**206**		**Sg**	**01 46 37.4**	**-0.5**
BCW	**Bitter Crk WRg**	**1.33**	**206**		**Pn**	**01 46 18.9**	**+0.2**
BCW	**Bitter Crk WRg**	**1.33**	**206**	IAML		01 46 38.5	
	comp=N,2µm,0.5s						
BCW				IAML		01 46 41.5	
	comp=E,1µm,0.6s						
SMMC	**Simmler**	**1.34**	**232**		**Pb**	**01 46 19.1**	**-0.3**
SMMC					**Sg**	**01 46 37.2**	**-0.8**
SMMC	**Simmler**	**1.34**	**232**	P	**Pb**	**01 46 19.1**	**-0.3**
	baz=51,SNR=21						
SMMC				S	**Sg**	**01 46 37.0**	**-1.0**
	baz=51						
TRAM	**Private Proper**	**1.35**	**250**		**Pb**	**01 46 19.4**	**-0.3**
DSP	**Deep Springs**	**1.36**	**25**	Pn	**Pb**	**01 46 19.8**	**0.0**
DSP				IAML		01 46 37.8	
	comp=N,435nm,0.4s						
DSP				IAML		01 46 38.8	
	comp=E,286nm,0.6s						
MHDM	**Hidden Dam**	**1.36**	**316**		**Pn**	**01 46 18.4**	**-0.7**
GRAC	**Grapevine Rang**	**1.37**	**51**		**Sg**	**01 46 38.8**	**-0.4**
GRAC	**Grapevine Rang**	**1.37**	**51**	Pn	**Pb**	**01 46 20.2**	**+0.1**
GRAC	**Grapevine Rang**	**1.37**	**51**	IAML		01 46 39.1	
	comp=N,1µm,0.4s						
GRAC				IAML		01 46 40.9	
	comp=E,2µm,0.4s						
GRAC	**Grapevine Rang**	**1.37**	**51**	Pb	**Pg**	**01 46 20.3**	**-1.0**
	baz=232,SNR=83						
GRAC				S	**Sg**	**01 46 38.7**	**-0.5**
	baz=232						
LCH	**Last Change Ra**	**1.38**	**38**	Pn	**Pb**	**01 46 20.0**	**-0.3**
LCH				IAML		01 46 39.9	
	comp=N,346nm,0.3s						
LCH				IAML		01 46 41.2	
	comp=E,525nm,0.2s						
EDW2	**Edwards Air Fo**	**1.39**	**155**		**Pg**	**01 46 20.6**	**-0.9**
EDW2	**Edwards Air Fo**	**1.39**	**155**	P	**Pg**	**01 46 20.5**	**-1.0**
	baz=335,SNR=121						
EDW2				S	**Sg**	**01 46 39.8**	**+0.3**
	baz=335						
TSCN	**Private Proper**	**1.46**	**246**		**Pb**	**01 46 21.1**	**-0.4**
BCH	**Branch Mountai**	**1.47**	**230**		**Pn**	**01 46 21.0**	**+0.3**
OMMB	**Old Mammoth Mi**	**1.49**	**351**	Pn	**Pb**	**01 46 21.7**	**-0.5**
OMMB				IAML		01 46 41.6	
	comp=E,666nm,0.5s						
OMMB				IAML		01 46 46.0	
	comp=N,577nm,0.5s						
MLAC	**Mammoth, Mammo**	**1.49**	**356**		**Pb**	**01 46 22.1**	**-0.1**
MLAC					**Sg**	**01 46 42.3**	**-0.7**
MLAC	**Mammoth, Mammo**	**1.49**	**356**	Pb	**Pb**	**01 46 22.1**	**-0.1**
	baz=177,SNR=58						
MLAC				S	**Sb**	**01 46 41.5**	**+0.6**
	baz=177						
QSM	**Queen of Sheba**	**1.50**	**96**	Pn	**Pn**	**01 46 21.3**	**+0.3**
QSM				IAML		01 46 45.9	
	comp=E,512nm,0.4s						
QSM				IAML		01 46 46.0	
	comp=N,606nm,0.7s						
MDPB	**Devils Postpil**	**1.52**	**349**	Pn	**Pb**	**01 46 22.4**	**-0.3**
MCSM	**Casa Diablo Ho**	**1.52**	**354**		**Pb**	**01 46 22.7**	**0.0**
FURC	**Furnace Creek,**	**1.52**	**77**		**Sg**	**01 46 44.1**	**+0.2**
FURC	**Furnace Creek,**	**1.52**	**77**	P	**Pn**	**01 46 21.7**	**+0.4**
	baz=258,SNR=92						
FURC				Sb	**Sg**	**01 46 44.2**	**+0.2**
	baz=258						
MMIM	**Miami Mountain**	**1.52**	**327**		**Pn**	**01 46 21.7**	**+0.2**
OSI	**Osito Audit: C**	**1.52**	**181**		**Pg**	**01 46 23.9**	**-0.3**
OSI	**Osito Audit: C**	**1.52**	**181**	Pb	**Pg**	**01 46 23.2**	**-1.0**
	baz=360,SNR=40						
OSI				Sb	**Sg**	**01 46 45.0**	**+1.0**
	baz=360						
PJUM	**Juniper Ridge**	**1.53**	**274**		**Pb**	**01 46 22.1**	**-0.7**
PSMM	**Smith Mountain**	**1.53**	**268**		**Pb**	**01 46 22.6**	**-0.2**
PKM	**Mcpherson Peak**	**1.54**	**216**	P	**Pn**	**01 46 22.0**	**+0.3**
	baz=35,SNR=20						
PKM				S	**Sg**	**01 46 43.7**	**-1.0**
	baz=35						
BENR	**Benton**	**1.57**	**4**		**Pb**	**01 46 23.5**	**-0.1**
HYS	**Haystack Butte**	**1.58**	**144**		**Pg**	**01 46 24.7**	**-0.4**
SGV	**South Grapevin**	**1.58**	**58**		**Pb**	**01 46 23.1**	**-0.6**
RYS	**Reyes Peak**	**1.59**	**200**		**Pg**	**01 46 24.4**	**-0.9**
GWY	**Greenwater Val**	**1.65**	**88**	Pn	**Pn**	**01 46 23.0**	**-0.1**
GWY				IAML		01 46 51.2	
	comp=N,573nm,0.5s						
PMPB	**Monarch Peak**	**1.70**	**273**	Pn	**Pn**	**01 46 24.4**	**+0.7**
GSC	**Goldstone, Bar**	**1.76**	**118**	Pn	**Pn**	**01 46 25.1**	**+0.5**
GSC				IAML		01 46 53.4	
	comp=N,285nm,0.7s						
GSC	**Goldstone, Bar**	**1.76**	**118**	P	**Pn**	**01 46 25.3**	**+0.7**
	baz=299,SNR=144						
WCT	**Wildcat Mounta**	**1.80**	**68**	Pn	**Pn**	**01 46 25.6**	**+0.4**
HOLC	**Holcomb Ridge**	**1.82**	**157**		**Pb**	**01 46 27.2**	**-0.5**
RAMR	**Ramage Ranch**	**1.83**	**255**		**Pn**	**01 46 26.2**	**+0.7**
RRX	**Edison Barstow**	**1.88**	**132**	P	**Pb**	**01 46 27.5**	**-1.3**
	baz=312,SNR=8.8						
RRX				S	**Sb**	**01 46 51.7**	**-0.2**
	baz=312						
MZP	**Montezuma Peak**	**1.88**	**34**	Pn	**Pn**	**01 46 27.4**	**+0.9**
SBC	**Santa Barbara**	**1.89**	**206**	Pb	**Pb**	**01 46 29.2**	**+0.5**
	baz=25						
SBC				Sb	**Sg**	**01 46 54.9**	**-0.7**
	baz=25						
CHFC	**Chilao Flat St**	**1.89**	**163**		**Pg**	**01 46 30.4**	**-0.7**
BLCC	**Black Canyon**	**1.89**	**179**		**Pb**	**01 46 29.4**	**+0.5**
DECC	**Green Verdugo**	**1.91**	**171**	P	**Pb**	**01 46 28.2**	**-1.0**
	baz=350,SNR=11						
DECC				S	**Sb**	**01 46 53.6**	**+0.8**
	baz=350						
BBGB	**Big Mountain B**	**1.93**	**284**	Pn	**Pn**	**01 46 27.8**	**+0.8**
XTL	**Crystal Lake,**	**1.97**	**159**		**Pb**	**01 46 29.0**	**-1.2**
AMDNV	**Amargosa**	**1.98**	**80**		**Pn**	**01 46 28.2**	**+0.6**
SHOC	**Shoshone, Teco**	**1.98**	**96**	P	**Pn**	**01 46 27.9**	**+0.2**
	baz=278,SNR=153						
SHOC				Sb	**Sg**	**01 46 58.7**	**0.0**
	baz=278						
PASC	**Pasadena Art C**	**2.01**	**168**	Pn	**Pn**	**01 46 28.6**	**+0.6**
PASC				IAML		01 47 01.2	
	comp=E,226nm,0.8s						
PASC				IAML		01 47 02.8	
	comp=N,220nm,0.7s						
BFSC	**Mount Baldy Ra**	**2.08**	**155**	P	**Pb**	**01 46 30.6**	**-1.6**
	baz=336,SNR=28						
BFSC				Sb	**Sg**	**01 47 01.3**	**-0.6**
	baz=336						
PEM	**Pine Mountain**	**2.08**	**161**		**Pb**	**01 46 31.0**	**-1.1**

SSK	**Sunset Peak**	2.10	156		Pb	01 46 31.9	-0.6
LHV	**Little Huntoon**	2.11	4	Pn	Pb	01 46 31.5	-1.1
LHV				IAML		01 47 04.8	
	comp=N,268nm,0.4s						
TPNV	**Topopah Spring**	2.13	67	Pn	Pn	01 46 30.7	+0.8
TPNV				IAML		01 47 05.5	
	comp=N,114nm,0.8s						
TPNV				IAML		01 47 13.3	
	comp=N,120nm,0.8s						
TPNV	**Topopah Spring**	2.13	67	P	Pn	01 46 30.9	+1.1
	baz=249,SNR=40						
TPNV				S	Sn	01 46 57.8	+1.8
	baz=249						
TPH	**Tonopah**	2.26	31	Pn	Pn	01 46 33.0	+1.3
SAO	**San Andreas Ge**	2.30	286	Pn	Pn	01 46 32.2	+0.3
NVAR	**Mina Array Bea**	2.31	8	Pn	Pn	01 46 33.5	+1.3
CMB	**Columbia Colle**	2.32	325	Pn	Pn	01 46 33.5	+1.2
CMB				IAML		01 47 08.0	
	comp=N,216nm,0.5s						
NV11	**Mina Array Sit**	2.33	11	Pn	Pn	01 46 33.7	+1.2
HEC	**Hector,Ludlow**	2.34	123	P	Pn	01 46 33.4	+0.9
	baz=305,SNR=26						
HEC				Sb	Sg	01 47 08.9	-1.1
	baz=305						
TUQ	**Turquoise Moun**	2.37	106		Pb	01 46 38.2	+1.1
TUQ	**Turquoise Moun**	2.37	106	P	Pn	01 46 33.6	+0.6
	baz=288,SNR=26						
TUQ				Sb	Sg	01 47 10.1	-0.9
	baz=288						
BBRC	**Big Bear Solar**	2.38	142	P	Pn	01 46 34.2	+1.0
	baz=322,SNR=15						
BBRC				Sb	Sg	01 47 11.0	-0.3
	baz=322						
WAKR	**Walker**	2.43	346	Pn	Pn	01 46 35.6	+1.7
FMP	**Fort Macarthur**	2.45	172	Sb	Sg	01 47 13.3	-0.1
	baz=352						
ELS	**Elsinore Mount**	2.70	157	Pn	Pn	01 46 38.3	+0.8
ELS				IAML		01 47 23.3	
	comp=E,89nm,1.0s						
CIS	**Catalina Islan**	2.74	175	S	Sn	01 47 11.7	+0.8
	baz=355						
S11A	**Rachel**	2.81	57	Pn	Pn	01 46 38.9	-0.1
S11A				IAML		01 47 28.4	
	comp=N,166nm,0.8s						
S11A				IAML		01 47 29.5	
	comp=E,181nm,0.6s						
BLAC	**Blackrock camp**	2.81	137		Pn	01 46 40.5	+1.4
MURC	**Murrieta**	2.82	153	P	Pn	01 46 40.2	+1.0
	baz=334						
MURC				S	Sn	01 47 14.5	+1.6
	baz=334						
GMRC	**Granite Mounta**	2.83	118	P	Pn	01 46 39.2	-0.2
	baz=299,SNR=23						
GMRC				Sb	Sg	01 47 24.3	-1.5
	baz=299						
POB	**Polly Butte**	2.85	149		Pn	01 46 41.9	+2.2
YERR	**Yerington**	2.87	352	Pn	Pn	01 46 41.0	+1.0
YERR				IAML		01 47 27.3	
	comp=N,112nm,0.4s						
SHPR	**Sheep Range**	2.88	82	Pn	Pn	01 46 41.2	+1.1
KVN	**Kaiserville**	2.94	9	Pn	Pn	01 46 42.4	+1.4
KVN				IAML		01 47 30.3	
	comp=N,66nm,0.7s						
Q09A	**Carvers**	2.95	24	Pn	Pn	01 46 41.7	+0.7
TPC	**Twentynine Pal**	2.98	132		Pn	01 46 42.3	+0.9
BELC	**Belle Mtn. Jos**	3.08	133	P	Pn	01 46 43.5	+0.7
	baz=314,SNR=17						
BELC				S	Sn	01 47 20.7	+1.4
	baz=314						
SNDA	**J Saunders Pla**	3.10	146		Pn	01 46 45.1	+1.9
PFO	**Pinyon Flats O**	3.13	143		Pn	01 46 44.9	+1.5
PFO	**Pinyon Flats O**	3.13	143	Pn	Pn	01 46 44.4	+0.9
PFO				IAML		01 47 39.3	
	comp=N,42nm,0.9s						
PFO				IAML		01 47 40.8	
	comp=N,41nm,0.8s						
PFO	**Pinyon Flats O**	3.13	143	P	Pn	01 46 44.4	+0.9
	baz=324,SNR=8.7						
PFO				S	Sn	01 47 22.4	+1.9
	baz=324						
PMD	**Palm Desert**	3.14	142	Pn	Pn	01 46 44.1	+0.6
PMD				IAML		01 47 41.9	
	comp=E,47nm,0.6s						
V12A	**Nelson**	3.15	96	Pn	Pn	01 46 44.3	+0.5
V12A				IAML		01 47 41.2	
	comp=N,48nm,0.6s						
PRN	**Pahroc Range**	3.19	66	Pn	Pn	01 46 44.7	+0.3
PRN				IAML		01 47 38.5	
	comp=N,76nm,0.7s						
PRN				IAML		01 47 53.3	
	comp=E,88nm,0.8s						
R11B	**Troy Canyon, C**	3.32	48	P	Pn	01 46 46.8	+0.6
	baz=230						
R11B				Sb	Sg	01 47 38.7	-2.9
	baz=230						
109C	**Camp Elliot, M**	3.50	157	S	Sn	01 47 30.7	+1.1
	baz=338						
IRM	**Iron Mountain**	3.52	123	P	Pn	01 46 49.1	+0.2
	baz=305,SNR=10.0						
IRM				Sb	Sg	01 47 44.9	-3.1
	baz=305						
BC3	**Big Chuckawall**	3.65	132	P	Pn	01 46 51.0	+0.4
	baz=314,SNR=12						
BAR	**Barrett**	3.84	153	Pn	Pn	01 46 54.5	+1.4
BAR				IAML		01 47 41.2	
	comp=E,32nm,0.7s						
BAR				IAML		01 47 59.4	
	comp=N,29nm,0.8s						
W13A	**Hualapai Mount**	4.06	103	Pn	Pn	01 46 56.5	+0.1
YUH	**Yuha Desert**	4.18	146	Pn	Pn	01 46 58.6	+0.8
YUH				IAML		01 48 17.7	
	comp=E,22nm,3.3s						
CBX	**Cerro Bola**	4.18	156	Pn	Pn	01 46 59.9	+2.0
CBX				IAML		01 48 12.1	
	comp=E,37nm,0.9s						
CBX				IAML		01 48 15.3	
	comp=N,30nm,1.8s						
BLYC	**Blythe**	4.18	124	Pn	Pn	01 46 57.8	-0.1
BLYC				IAML		01 48 12.9	
	comp=E,26nm,0.8s						
BLYC				IAML		01 48 16.9	
	comp=N,26nm,0.9s						
BMN	**Battle Mountai**	4.44	15	Pn	Pn	01 47 01.2	-0.3
BMN				IAML		01 48 14.2	
	comp=N,22nm,0.3s						
GLA	**Glamis**	4.44	133	Pn	Pn	01 47 01.7	+0.2
GLA				IAML		01 48 18.4	
	comp=E,42nm,0.8s						
GLA				IAML		01 48 21.9	
	comp=N,46nm,0.6s						
LCMT	**Little Creek M**	4.48	77	Pn	Pn	01 47 03.4	+1.3
SPR3	**Spring Creek 3**	4.50	49	Pn	Pn	01 47 03.4	+1.0
SPR3				IAML		01 48 16.8	
	comp=E,31nm,0.8s						
SPR3				IAML		01 48 21.7	
	comp=N,24nm,0.9s						
CCUT	**Cedar City**	4.51	70	Pn	Pn	01 47 03.5	+0.9
CCX	**Cicese**	4.59	158	Pn	Pn	01 47 03.9	+0.5
ESJX	**Sierra Juarez**	4.72	150	Pn	Pn	01 47 07.6	+2.2
ESJX				IAML		01 48 27.0	
	comp=N,14nm,3.9s						
ESJX				IAML		01 48 30.1	
	comp=E,13nm,1.3s						
SZCU	**Shurtz Canyon**	4.73	70	Pn	Pn	01 47 07.2	+1.6
KNB	**Kanab**	4.81	78	Pn	Pn	01 47 08.5	+1.8
KNB				IAML		01 48 30.6	
	comp=N,14nm,1.6s						
Y14A	**Wickenburg**	5.17	114	Pn	Pn	01 47 11.7	+0.2
Y14A				IAML		01 48 44.5	
	comp=E,17nm,1.0s						
Y14A				IAML		01 48 46.5	
	comp=N,19nm,1.1s						
PKCU	**Pink Cliffs**	5.29	74	Pn	Pn	01 47 13.5	+0.1
PKCU				IAML		01 48 43.9	
	comp=E,22nm,4.3s						
PKCU				IAML		01 49 10.6	
	comp=N,19nm,4.3s						
VTX	**Valle De La Tr**	5.33	152	Pn	Pn	01 47 15.2	+1.6
VTX				IAML		01 48 10.7	
	comp=N,11nm,5.0s						
VTX				IAML		01 48 48.4	
	comp=E,14nm,2.3s						
ELK	**Elko**	5.34	30	Pn	Pn	01 47 13.7	-0.3
MTPU	**Mount Pierson**	5.55	68	Pn	Pn	01 47 17.8	+0.8
TCRU	**Three Creeks R**	5.56	62	Pn	Pn	01 47 18.2	+1.2
MVU	**Marysvale**	5.69	64	Pn	Pn	01 47 19.2	+0.5
MSU	**Marysvale**	5.71	64	Pn	Pn	01 47 18.4	-0.7
WUAZ	**Wupatki**	5.99	94	Pn	Pn	01 47 23.5	+0.7
X16A	**Lo Mia Camp, P**	6.18	104	Pn	Pn	01 47 26.0	+0.4
214A	**Organ Pipe Nat**	6.43	129	Pn	Pn	01 47 28.3	-0.5
CTU	**Camp Tracy**	7.10	48	Pn	Pn	01 47 38.9	+0.8
SPUT	**South Promonto**	7.11	42	Pn	Pn	01 47 37.5	-0.7
X18A	**Snowflake**	7.33	100	Pn	Pn	01 47 40.1	-1.2
TUC	**Tucson**	7.59	118	Pn	Pn	01 47 45.0	+0.3
PV23	**Carpenter Ridg**	8.06	70	Pn	Pn	01 47 52.6	+1.2
PV13	**Radium Mtn., P**	8.15	73	Pn	Pn	01 47 53.6	+1.1

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*TEH **27** 01:56:53.5, 31°.56N×48°.62E, h10^{km}±40^{km}, ML2.9*
*ISN **27** 01:56:53.7±1.2, 31°.48N×48°.52E, h29^{km}±9^{km}, ML2.8*
ISC 27 01:56:54.4±1.1, **31°.53N**±0°.05×**48°.57E**±0°.04, **h10**^{km}, **n20**, σ**1^{s}09**/23, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AHWZ	**Ahwaz**	0.21	164	Pg	Pg	01 56 58.3	-0.5
AHWZ				Sg	Sg	01 57 02.8	+1.0
AMIS	**Naft Sefid**	0.62	78	Pg	Pg	01 57 04.8	-1.6
IKFM	**Kafar-mosalman**	2.08	343	Pn	Pn	01 57 30.3	+0.9
RAFI	**Al-Rafai**	2.11	276	*e*Pg	Pn	01 57 30.0	+0.3
	baz=96						
RAFI				*e*Sg	Sn	01 57 58.0	+2.0
RAFI				AML	AML	01 57 59.4	
	comp=E,288nm,0.5s						
RAFI				AML	AML	01 58 01.6	
	comp=N,237nm,0.3s						
SHK1	**Shahrekord**	2.12	67	Pn	Pn	01 57 30.8	+0.6
IDOB	**Doab**	2.27	352	Pn	Pn	01 57 32.9	+0.6
IPIR	**Pirpir**	2.28	59	Pn	Pn	01 57 33.2	+0.8
KLNJ	**Kolanjah**	2.64	101	Pn	Pn	01 57 36.8	-0.5
HSAM	**Samen**	2.67	0	Pn	Pn	01 57 38.6	+0.9
IBDR	**Badra**	2.74	306	*e*Pn	Pn	01 57 37.0	-1.4
IBDR				*e*Sn	Sn	01 58 10.0	-1.5
IBDR				AML	AML	01 58 21.3	
	comp=N,23nm,0.5s						
IBDR				AML	AML	01 58 29.2	
	comp=E,22nm,0.6s						
IKOM	**Komasi**	2.78	342	Pn	Pn	01 57 39.9	+0.7
IKLH	**Kolahrood**	3.10	54	Pn	Pn	01 57 44.7	+1.1
QAMS	**Qamsar**	3.24	47	Pn	Pn	01 57 46.9	+1.3
IRAM	**Ramesheh**	3.26	84	Pn	Pn	01 57 46.1	+0.3
HAGD	**Aghdareh**	3.31	8	Pn	Pn	01 57 48.3	+1.7
IZEF	**Zefreh**	3.46	66	Pn	Pn	01 57 48.6	0.0
IDHR	**Dehrash**	3.65	330	Pn	Pn	01 57 50.8	-0.4
KRSH	**Karshahi**	3.86	50	Pn	Pn	01 57 54.5	+0.5
IQOM	**Qom**	3.91	32	Pn	Pn	01 57 54.6	-0.1
IRAZ	**Razeghan**	4.02	16	Pn	Pn	01 57 57.3	+1.0

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*IDC **27** 02:02:18.8±1.5, 44°.92N×140°.14E, h0^{km}, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=79.6km s-min=19.4km az=25.0*
*JMA **27** 02:02:20.7±0.1, 42°.7N±0°.5×141°.0E±0°.6, h139^{km}, MV2.5/35, IBURI REGION*
ISC 27 02:02:20.3±0.9, **42°.68N**±0°.06×**141°.08E**±0°.05, **h144**^{km}±7^{km}, **n26**, σ**0^{s}60**/37, **mb3.7**/7, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JNB	**Noboribetsu**	0.21	188	*e*P	Pn	02 02 39.6	-0.3
JEW	**Eniwo**	0.32	59	*e*P	Pn	02 02 40.4	+0.1
JEW				*e*S	Sn	02 02 55.0	-0.3
JIAM	**Iburiatsuma**	0.62	94	*e*P	Pn	02 02 42.2	+0.6
JIAM				*e*S	Sn	02 02 58.5	+0.6
JISS	**Ishikarishitsu**	0.65	22	*e*P	Pn	02 02 41.9	0.0
JSH	**Shimam**	0.76	268	*e*P	Pn	02 02 42.4	-0.2
JSH				*e*S	Sn	02 02 58.9	-0.6
JYM2	**Yakumo 2**	0.77	224	*e*P	Pn	02 02 42.7	+0.1
JYM2				*e*S	Sn	02 02 59.0	-0.6
JKB	**Kayabe**	0.79	182	*e*P	Pn	02 02 43.0	+0.2
JKB				*e*S	Sn	02 03 00.4	+0.5
JBT2	**Biratori 2**	0.95	83	*e*P	Pn	02 02 44.2	+0.1
JHR	**Hokuryu**	1.17	24	*e*P	Pn	02 02 46.4	+0.4
JAB	**Ashibetsu**	1.18	45	*e*P	Pn	02 02 46.8	+0.6
JAB				*e*S	Sn	02 03 06.3	+0.4
JOT	**Ohata**	1.29	181	*e*P	Pn	02 02 47.8	+0.5
JNBK	**Urakawa-nobuka**	1.30	107	*e*P	Pn	02 02 47.5	+0.2
JOSM	**Okushiri--Mats**	1.33	244	*e*P	Pn	02 02 47.3	-0.3
JOMM	**Oshimamatsumae**	1.40	215	*e*P	Pn	02 02 48.7	+0.4
JOMM				*e*S	Sn	02 03 10.4	+0.7
JCH	**Churui**	1.69	91	*e*P	Pn	02 02 51.2	-0.2
JCH				*e*S	Sn	02 03 14.3	-1.0
JKK2	**Kamakawa 2**	1.71	45	*e*P	Pn	02 02 51.9	+0.2
JKK2				*e*S	Sn	02 03 15.5	-0.3
JSS	**Shosan**	1.81	18	P	Pn	02 02 53.6	+0.7
ASAJ	**Asahikawa**	1.82	37	Pn	Pn	02 02 53.2	+0.2
	3.9nm,0.3s,baz=69,slow=14,SNR=6.5						
ASAJ				Sn	Sn	02 03 18.2	+0.3
	0.8nm,0.3s,baz=97,slow=31,SNR=9.2						
JAR	**Ashorobuto**	2.07	72	*e*P	Pn	02 02 55.9	0.0
JAR				*e*S	Sn	02 03 21.9	-1.4
SONM	**Songino Array**	24.82	294	P	P	02 07 28.6	-0.5
	0.5nm,0.6s,baz=68,slow=7.7,SNR=3.6						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	38.10	307	P	P	02 09 24.8	-0.1
	0.7nm,0.4s,baz=73,slow=9.8,SNR=4.6						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	41.12	297	P	P	02 09 50.2	+0.2
	0.2nm,0.7s,baz=81,slow=9.2,SNR=2.1						
	0.2nm,0.7s						
KURBB	**Kurchatov Arra**	42.51	303	P	P	02 10 00.8	-0.3
	1.0nm,0.5s,baz=77,slow=8.8,SNR=7.3						
	1.0nm,0.5s						
BVAR	**Borovoye Array**	46.72	308	P	P	02 10 34.7	+0.2
	1.0nm,0.4s,baz=65,slow=11,SNR=7.7						
	1.0nm,0.4s						
FINES	**FINESS Array B**	63.73	331	P	P	02 12 35.0	-1.1
	1.9nm,0.9s,baz=66,slow=6.8,SNR=3.7						
	1.9nm,0.9s						
NOA	**NORSAR Array B**	68.90	336	P	P	02 13 10.8	+1.7
	0.6nm,0.9s,baz=54,slow=8.0,SNR=2.4						
	0.6nm,0.9s						

IDC 27 02:02:45.3±3.1, **5°.41S**×**153°.15E**, **h0**^{km}, **mb3.1**/2, **mbtmp3.1**/2, **Error ellipse: s-maj=61.0km s-min=26.1km az=73.0**, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	1.56	314	Pn	Pn	02 03 14.4	+0.1
	43nm,0.3s,baz=199,slow=3.5,SNR=9.1						
KRVT				Sn	Sg	02 03 37.1	+1.4
	53nm,0.3s,baz=103,slow=21,SNR=8.3						
WRA	**Warramunga Arr**	23.31	230	P	P	02 07 56.2	+1.0
	0.3nm,0.5s,baz=55,slow=11,SNR=6.4						
	0.3nm,0.5s						
ASAR	**Alice Springs**	25.95	224	P	P	02 08 19.0	-0.7
	0.2nm,0.5s,baz=50,slow=8.5,SNR=1.3						
	0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	150.82	287	PKPbc	PKPbc	02 22 40.1	-0.8
	0.4nm,0.5s,baz=52,slow=1.1,SNR=2.9						

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*BUL **27** 02:08:48.7±1.4, 26°.49S×27°.51E, h10^{km}±15^{km}, MD3.4*
PRE 27 02:08:45.8±0.9, **26°.42S**×**27°.46E**, **h2**^{km}, **ML1.9**, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PRYS	**Parys**	0.51	190	*e*P	Pg	02 08 56.4	+0.7
PRYS				*e*S	Sg	02 09 03.1	+0.7
PRYS				IAML		02 09 07.1	
	comp=Z,47nm,0.5s						
HRAO	**HartRAO**	0.56	21	*e*P	Pg	02 08 56.0	-0.6
HRAO				*e*S	Sg	02 09 04.4	+0.5
HRAO				IAML		02 09 05.3	
	comp=Z,35nm,0.1s						
KSR	**Koster**	0.76	318	*e*P	Pg	02 09 01.0	+0.7
KSR				*e*S	Sg	02 09 11.1	+0.9
KSR				IAML		02 09 21.5	
	comp=Z,64nm,0.3s						
LBTB	**Lobatse**	2.19	309	*i* P	Pn	02 09 22.9	-0.4
LBTB				*i* S	Sn	02 09 51.0	0.0
LBTB	**Lobatse**	2.19	309	*i* Pg	Pg	02 09 27.2	-0.6
LBTB				*i* Sg	Sg	02 09 56.5	+0.4
LBTB	**Lobatse**	2.19	309	*e*P	Pn	02 09 24.7	+1.4
LBTB				*e*S	Sn	02 09 52.1	+1.1
LBTB				IAML		02 09 57.7	
	comp=Z,19nm,0.5s						
CRLN	**Carolina, Mapu**	2.34	80	*e*P	Pn	02 09 25.9	+0.5
CRLN				*e*S	Sn	02 09 56.1	+1.3
CRLN				IAML		02 09 56.4	
	comp=Z,8.9nm,0.2s						
LEPH	**Lephalale, Lim**	2.57	7	*e*P	Pn	02 09 29.3	+0.8
LEPH				*e*S	Sn	02 10 00.5	+0.1
LEPH				IAML		02 10 06.5	
	comp=Z,11nm,0.3s						
BOSA	**Boshof**	2.94	221	*i* P	Pn	02 09 29.9	-3.7
BOSA				*i* S	Sn	02 10 03.2	-6.3
BOSA	**Boshof**	2.94	221	*i* P	Pn	02 09 34.0	+0.3
BOSA				*i* S	Sn	02 10 04.3	-5.2
BOSA	**Boshof**	2.94	221	*e*P	Pn	02 09 34.2	+0.5
BOSA				*e*S	Sn	02 10 10.1	+0.5
BOSA				IAML		02 10 22.3	
	comp=Z,4.3nm,0.3s						
PILG	**Pilgrimsrest,**	3.28	64	*e*P	Pn	02 09 39.0	+0.5
PILG				*e*S	Sn	02 10 18.2	0.0
PILG				IAML		02 10 29.7	
	comp=Z,9.9nm,0.7s						
MMAL	**MMAL**	3.38	85	*e*P	Pn	02 09 40.2	+0.5
MMAL				*e*S	Sn	02 10 20.0	-0.4
MMAL				IAML		02 10 34.2	
	comp=Z,7.2nm,0.3s						
KSTD	**Kokstad**	4.49	159	*e*P	Pn	02 09 56.5	+1.5
KSTD				*e*S	Sn	02 10 47.4	-0.5
KSTD				IAML		02 11 10.8	
	comp=Z,2.4nm,0.4s						
MOPA	**Mopani**	4.59	52	*i* P	Pn	02 09 53.3	-3.0
MOPA				*i* S	Sn	02 10 43.8	-6.4
MOPA	**Mopani**	4.59	52	*i* P	Pn	02 09 55.3	-1.0
MOPA				*i* S	Sn	02 10 43.5	-6.8
MUSN	**Musina, Limpop**	4.66	28	*i* P	Pn	02 09 55.6	-1.6
MUSN				*i* S	Sn	02 10 47.7	-4.2
MUSN	**Musina, Limpop**	4.66	28	*i* P	Pn	02 09 57.1	-0.2
MUSN				*i* S	Sn	02 10 47.4	-4.5
MUSN	**Musina, Limpop**	4.66	28	*e*P	Pn	02 09 57.2	0.0
MUSN				*e*S	Sn	02 10 51.4	-0.5
MUSN				IAML		02 11 17.1	
	comp=Z,2.2nm,0.6s						
BRAK	**Brakfontein**	6.67	216	*e*P	Pn	02 10 25.6	+0.6
BRAK				*e*S	Sn	02 11 38.5	-3.2
BRAK				IAML		02 12 20.9	
	comp=Z,1.7nm,0.5s						
ROOI	**Rooidraai Farm**	6.95	208	*e*P	Pn	02 10 29.0	+0.3
ROOI				*e*S	Sn	02 11 45.5	-2.9
ROOI				IAML		02 12 07.9	
	comp=Z,1.2nm,0.5s						
FRAZ	**Fraserburg**	7.63	223	*e*P	Pn	02 10 38.7	+0.7
FRAZ				*e*S	Sn	02 12 02.0	-3.2
FRAZ				IAML		02 12 08.1	
	comp=Z,0.8nm,0.2s						

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*IDC **27** 02:21:45.8±1.6, 46°.22N×123°.37E, h0^{km}, mb3.3/3, mbtmp3.3/7, ML3.2/4, MS3.3/1, Error ellipse: s-maj=24.1km s-min=18.8km az=20.0*
*KEA **27** 02:22:01.7, 45°.61N×123°.20E, h15^{km}, ML3.3/1*
ISC 27 02:21:47.4±0.7, **46°.08N**±0°.04×**123°.15E**±0°.05, **h10**^{km}, **n17**, σ**2^{s}08**/23, **mb3.5**/4, **Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CN2	**Changchun**	2.80	144	*e*Pg	Pg	02 22 44.5	+3.4
CN2				*e*Sg	Sg	02 23 17.5	+0.1
CN2				smax	smax		
	comp=N,360nm,0.6s						
CN2				smax	smax		
	comp=E,220nm,0.6s						
BNX	**BinXian**	2.99	95	Pn	Pn	02 22 32.3	-2.6
BNX				Pg	Pb	02 22 40.5	-0.2
BNX				Sg	Sb	02 23 16.8	-0.5
BNX				smax	smax		
	comp=N,340nm,0.6s						
BNX				SMZ			
	comp=N,330nm,0.7s						
HEH	**HeiHe**	5.06	33	Pn	Pn	02 23 00.3	-2.9
HEH				Pg	Pb	02 23 18.8	+2.9
HEH				Sg	Sb	02 24 20.0	+3.3
HEH				smax	smax		
	comp=N,170nm,0.9s						
HEH				smax	smax		
	comp=E,240nm,0.7s						
KGE	**Kanggye**	5.72	153	Sg	Sg	02 24 51.0	+0.1
HYSN	**Hyesan**	5.94	140	Sg	Sg	02 24 59.6	+1.6
SUJ	**Sinuiju**	6.05	170	Pg	Pg	02 23 46.6	+3.3
SUJ				Sg	Sg	02 25 00.5	-1.2
SUJ				AML	AML		
	comp=N,39nm,0.5s						
SUJ				AML	AML		
	comp=E,52nm,0.5s						
SUJ				AML	AML		
	comp=Z,31nm,1.1s						
USRK	**Ussuriysk Ar.**	6.53	104	Pn	Pn	02 23 20.7	-2.8
	comp=Z,0.2nm,0.3s,baz=324,slow=14,SNR=3.0						
USRK				Lg	Lg	02 25 09.3	
	comp=Z,4.5nm,0.3s,baz=306,slow=27,SNR=9.3						
	comp=Z,0.7nm,0.5s						
KLR	**Kul'dur**	6.61	58	Pn	Pn	02 23 22.1	-2.4
	comp=Z,0.6nm,0.3s,baz=284,slow=14,SNR=8.7						
KLR				Lg	Lg	02 25 06.1	
	comp=Z,2.4nm,0.3s,baz=214,slow=16,SNR=4.5						
	comp=Z,1.1nm,0.3s						
PYS	**Pyongsong**	7.11	163	Sg	Sg	02 25 34.6	-0.9
HJU	**Haeju**	8.26	166	Sg	Sg	02 26 11.1	-1.2
KSRS	**Korea Array**	9.32	156	Pn	Pn	02 24 01.6	-0.2
	comp=Z,0.4nm,0.3s,baz=46,slow=37,SNR=1.8						
KSRS				Lg	Lg	02 26 46.8	
	comp=Z,0.8nm,0.3s,baz=342,slow=28,SNR=5.0						
	comp=Z,0.6nm,0.3s						
SONM	**Songino Array**	11.59	285	Pn	Pn	02 24 31.9	-1.0
	comp=Z,0.2nm,0.3s,baz=96,slow=13,SNR=5.3						
SONM				Sn	Sn	02 26 42.7	+0.4
	comp=Z,0.2nm,0.3s,baz=228,slow=32,SNR=3.2						
SONM				Lg	Lg	02 27 58.6	
	comp=Z,0.8nm,0.3s,baz=94,slow=26,SNR=6.5						
	comp=Z,0.4nm,0.4s						
SEY	**Seymchan**	23.61	34	P	P	02 26 56.9	-1.2
	comp=Z,0.7nm,0.4s,baz=250,slow=11,SNR=4.0						
	comp=Z,0.7nm,0.4s						
WMQ	**Urumqi**	25.07	278	*e*P	P	02 27 13.5	+1.6
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
MKAR	**Makanchi Array**	27.95	286	LR	LR	02 38 56.9	
	comp=Z,51nm,18.4s,baz=330,slow=37						
ILAR	**Eielson Array**	49.54	34	P	P	02 30 37.5	-0.4
	comp=Z,0.2nm,0.8s,baz=301,slow=8.2,SNR=4.1						
	comp=Z,0.2nm,0.8s						
YKA	**Yellowknife Ar**	62.39	26	P	P	02 32 07.7	-2.1
	comp=Z,0.2nm,0.7s,baz=312,slow=7.5,SNR=4.8						
	comp=Z,0.2nm,0.7s						

IDC 27 02:30:19.1±3.5, **55°.67N**×**86°.25E**, **h0**^{km}, **mbtmp2.6**/2, **ML2.3**/2, **Error ellipse: s-maj=28.9km s-min=27.8km az=4.0**, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	1.92	206	I	I	02 43 40.0	
	baz=26,slow=341,SNR=5.4						
ZALV	**Zalesovo Beam**	1.92	206	Pn	Pn	02 30 52.2	-0.7
	1.0nm,0.3s,baz=24,slow=15,SNR=10						
ZALV				Lg	Lg	02 31 19.8	
	2.1nm,0.3s,baz=25,slow=32,SNR=10						
KURBB	**Kurchatov Arra**	6.86	226	Pn	Pn	02 32 00.6	-0.3
	baz=45,slow=15,SNR=3.4						
KURBB				Lg	Lg	02 33 56.7	
	baz=26,slow=27,SNR=1.9						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	9.23	197	Pn	Pn	02 32 34.0	+0.6
	baz=17,slow=13,SNR=2.4						
	0.1nm,0.4s						

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*SOME **27** 02:37:31.1, 42°.20N×80°.43E, h5^{km}*
*KRNET **27** 02:37:31.3±0.1, 42°.29N×80°.73E, mb3.5*
*NNC **27** 02:37:32.9±0.8, 42°.28N×80°.42E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=5.1km s-min=4.3km az=128.0*
ISC 27 02:37:33.9±1.9, **42°.54N**±0°.06×**80°.75E**±0°.06, **h16**^{km}±11^{km}, **n64**, σ**1^{s}32**/79, **16C-15D**, **Kyrgyzstan-Xinjiang border region**

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

PDGK	**Podgornoye**	**1.21**	**311**	⇑P	**Pn**	**02 37 56.0**	**-0.3**
	11nm,0.3s						
PDGK				⇑S	**Sg**	**02 38 13.8**	**+0.6**
	108nm,0.3s						
UZB	**Uzynbulak**	**1.41**	**296**	P	**Pn**	**02 37 58.0**	**-0.9**
	167nm,0.2s						
UZB				S	**Sb**	**02 38 17.5**	**-0.1**
UZB	**Uzynbulak**	**1.41**	**296**	*e*P	**Pn**	**02 37 58.0**	**-0.9**
	36nm,0.2s						
UZB				*e*S	**Sb**	**02 38 17.3**	**-0.3**
	167nm,0.2s						
PRZ	**Przheval'sk**	**1.73**	**269**	⇓*i*P	**Pn**	**02 38 03.5**	**0.0**
	baz=78						
PRZ				⇓*i*S	**Sb**	**02 38 26.7**	**-0.4**
	baz=78						
KPKS	**Kokpek**	**1.77**	**302**	*e*P	**Pb**	**02 38 05.4**	**-0.6**
	93nm,0.3s						
KPKS				*e*S	**Sg**	**02 38 29.6**	**-1.4**
	765nm,0.3s						
SATY	**Saty**	**1.80**	**288**	*e*P	**Pn**	**02 38 05.1**	**+0.8**
	48nm,0.3s						
SATY				*e*S	**Sb**	**02 38 28.9**	**0.0**
	203nm,0.2s						
ZHN	**Zhinishke**	**1.81**	**291**	*e*P	**Pn**	**02 38 05.1**	**+0.6**
	77nm,0.3s						
ZHN				*e*S	**Sb**	**02 38 29.4**	**+0.2**
	644nm,0.2s						
DJR	**Jarkent**	**1.92**	**339**	Pg	**Pg**	**02 38 11.2**	**+0.4**
	34nm,0.2s						
DJR				Lg	Lg	02 38 39.5	
	134nm,0.4s						
DJR	**Jarkent**	**1.92**	**339**	*e*Pg	**Pg**	**02 38 11.2**	**+0.4**
	34nm,0.2s						
DJR				*e*Lg	Lg	02 38 39.5	
	134nm,0.4s						
KURS	**Kuram**	**2.11**	**298**	Pg	**Pb**	**02 38 11.1**	**-0.7**
	42nm,0.4s						
KURS				Lg	Lg	02 38 39.6	
	113nm,0.5s						
KURS	**Kuram**	**2.11**	**298**	*e*Pg	**Pb**	**02 38 11.1**	**-0.7**
	42nm,0.4s						
KURS				*e*Lg	Lg	02 38 39.6	
	113nm,0.5s						
BLB	**Baldybastay**	**2.27**	**314**	Pg	**Pb**	**02 38 14.5**	**-0.1**
	99nm,0.2s						
BLB				Lg	Lg	02 38 45.3	
	861nm,0.4s						
ANVS	**Anan'yevo**	**2.28**	**277**	⇑*i*P	**Pn**	**02 38 12.2**	**+1.1**
	baz=83						
ANVS				⇑*i*S	**Sb**	**02 38 41.6**	**-1.3**
	baz=83						
TARG	**Taragay, Kyrgy**	**2.33**	**251**	⇓*i*P	**Pn**	**02 38 11.0**	**-0.9**
	baz=57						
TARG				⇓*i*S	**Sn**	**02 38 40.2**	**-0.2**
	baz=57						
KDJ	**Kajisay**	**2.67**	**262**	⇓*e*P	**Pn**	**02 38 16.4**	**0.0**
	baz=68						
KDJ				⇓*i*S	**Sn**	**02 38 49.4**	**+0.8**
	baz=68						
ARXS	**Arharly**	**2.71**	**309**	*e*Pg	**Pb**	**02 38 22.1**	**+0.1**
	29nm,0.2s						
ARXS				*e*Lg	Lg	02 38 58.5	
	308nm,0.5s						
KOTS	**Kotyrbulak**	**2.76**	**286**	Pg	**Pb**	**02 38 21.6**	**-1.3**
	49nm,0.3s						
KOTS				Lg	Lg	02 38 57.3	
	824nm,0.4s						
KOTS	**Kotyrbulak**	**2.76**	**286**	*e*Pg	**Pb**	**02 38 21.6**	**-1.3**
	49nm,0.3s						
KOTS				*e*Lg	Lg	02 38 57.3	
	824nm,0.4s						
MDOK	**Medeo**	**2.79**	**284**	⇓Pg	**Pb**	**02 38 20.9**	**-2.4**
	29nm,0.4s						
MDOK				Pg	**Pb**	**02 38 21.0**	**-2.4**
	49nm,0.3s						
MDOK				Lg	Lg	02 38 57.0	
	198nm,0.5s						
MDOK				⇑Lg	Lg	02 38 57.7	
	150nm,0.5s						
MDOK	**Medeo**	**2.79**	**284**	*e*Pg	**Pb**	**02 38 21.0**	**-2.4**
	49nm,0.3s						
MDOK				*e*Lg	Lg	02 38 57.0	
	198nm,0.5s						
TNSS	**Tian-Shan**	**2.84**	**281**	Pg	**Pb**	**02 38 22.1**	**-2.3**
	37nm,0.3s						
TNSS				Lg	Lg	02 38 58.5	
	79nm,0.4s						
TNSS	**Tian-Shan**	**2.84**	**281**	*e*Pg	**Pb**	**02 38 22.1**	**-2.3**
	37nm,0.3s						
TNSS				*e*Lg	Lg	02 38 58.5	
	79nm,0.4s						
KNDC	**Almaty**	**2.86**	**285**	⇑Pg	**Pb**	**02 38 22.3**	**-2.2**
	126nm,0.8s						
KNDC				⇑Lg	Lg	02 39 00.4	
	391nm,0.6s						
AAA	**Alma-Ata**	**2.89**	**285**	Pg	**Pb**	**02 38 23.1**	**-2.0**
	80nm,0.3s						
AAA				Lg	Lg	02 39 00.5	
	484nm,0.4s						
AAA	**Alma-Ata**	**2.89**	**285**	*e*Pg	**Pb**	**02 38 23.1**	**-2.0**
	80nm,0.3s						
AAA				*e*Lg	Lg	02 39 00.5	
	484nm,0.4s						
TDK	**Taldyqorghan**	**2.99**	**326**	*e*P	**Pn**	**02 38 20.1**	**-0.5**
	61nm,0.4s						
TDK				*e*S	**Sn**	**02 38 54.4**	**-1.7**
	141nm,0.4s						
CHKK	**Chushkaly**	**3.05**	**297**	Pg	**Pb**	**02 38 26.3**	**-1.4**
	4.0nm,0.2s						
CHKK				Lg	Lg	02 39 05.4	
	115nm,0.3s						
CHKK	**Chushkaly**	**3.05**	**297**	*e*Pg	**Pb**	**02 38 26.3**	**-1.4**
	4.0nm,0.2s						
CHKK				*e*Lg	Lg	02 39 05.4	
	115nm,0.3s						
IZV	**Izvestkoviy**	**3.08**	**281**	Pg	**Pb**	**02 38 26.3**	**-2.1**
	22nm,0.2s						
IZV				Lg	Lg	02 39 05.4	
	97nm,0.5s						
IZV	**Izvestkoviy**	**3.08**	**281**	*e*Pg	**Pb**	**02 38 26.3**	**-2.1**
	22nm,0.2s						
IZV				*e*Lg	Lg	02 39 05.4	
	97nm,0.5s						
KTBS	**Karatobe**	**3.20**	**293**	Pg	**Pb**	**02 38 29.6**	**-0.7**
	5.9nm,0.1s						
KTBS				Lg	Lg	02 39 10.9	
	441nm,0.6s						
KTBS	**Karatobe**	**3.20**	**293**	*e*Pg	**Pb**	**02 38 29.6**	**-0.7**
	5.9nm,0.1s						
KTBS				*e*Lg	Lg	02 39 10.9	
	441nm,0.6s						
MTBS	**Maitube**	**3.23**	**282**	Pg	**Pb**	**02 38 28.5**	**-2.3**
	22nm,0.3s						
MTBS				Lg	Lg	02 39 09.1	
	218nm,0.4s						
MTBS	**Maitube**	**3.23**	**282**	*e*Pg	**Pb**	**02 38 28.5**	**-2.3**
	22nm,0.3s						
MTBS				*e*Lg	Lg	02 39 09.1	
	218nm,0.4s						
ULHL	**Ulahol**	**3.35**	**267**	⇓*i*P	**Pn**	**02 38 26.0**	**+0.3**
	baz=71						
ULHL				⇓*i*S	**Sn**	**02 39 06.0**	**+0.8**
	baz=71						
KUU	**Kurty**	**3.49**	**294**	Pg	**Pb**	**02 38 34.6**	**-0.7**
	4.2nm,0.4s						
KUU				Lg	Lg	02 39 19.5	
	129nm,0.3s						
KUU	**Kurty**	**3.49**	**294**	*e*Pg	**Pb**	**02 38 34.6**	**-0.7**
	4.2nm,0.4s						
KUU				*e*Lg	Lg	02 39 19.5	
	129nm,0.3s						
BOOM	**Boomskoye usch**	**3.55**	**271**	⇓*i*P	**Pn**	**02 38 29.3**	**+0.8**
	baz=75						
BOOM				⇓*i*S	**Sn**	**02 39 11.3**	**+1.1**
	baz=75						
KST	**Kastek**	**3.56**	**280**	Pg	**Pb**	**02 38 35.4**	**-1.1**
	32nm,0.3s						
KST				Lg	Lg	02 39 20.7	
	74nm,0.7s						
KST	**Kastek**	**3.56**	**280**	*e*Pg	**Pb**	**02 38 35.4**	**-1.1**
	32nm,0.3s						
KST				*e*Lg	Lg	02 39 20.7	
	74nm,0.7s						
NRN	**Naryn**	**3.71**	**254**	⇑*e*P	**Pn**	**02 38 30.5**	**-0.2**
	baz=58						
NRN				⇑*i*S	**Sn**	**02 39 14.1**	**-0.1**
	baz=58						
DGS	**Degeres**	**3.72**	**283**	Pg	**Pb**	**02 38 37.4**	**-1.8**
	15nm,0.4s						
DGS				Lg	Lg	02 39 24.5	
	141nm,0.7s						
DGS	**Degeres**	**3.72**	**283**	*e*Pg	**Pb**	**02 38 37.4**	**-1.8**
	15nm,0.4s						
DGS				*e*Lg	Lg	02 39 24.5	
	141nm,0.7s						
TKM2	**Tokmak 2**	**3.81**	**278**	P	**Pn**	**02 38 34.4**	**+2.3**
	SNR=10						
TKM2	**Tokmak 2**	**3.81**	**278**	⇑*i*P	**Pn**	**02 38 33.3**	**+1.2**
	baz=81						
TKM2				⇑*i*S	**Sn**	**02 39 18.3**	**+1.6**
	baz=81						
KRBS	**Karabastau**	**3.89**	**289**	Pg	**Pb**	**02 38 41.1**	**-1.0**
	7.8nm,0.3s						
KRBS				Lg	Lg	02 39 30.6	
	34nm,0.4s						
KRBS	**Karabastau**	**3.89**	**289**	*e*Pg	**Pb**	**02 38 41.0**	**-1.0**
	7.8nm,0.3s						
KRBS				*e*Lg	Lg	02 39 30.6	
	34nm,0.4s						
KBK	**Karagaybulak**	**4.28**	**274**	P	**Pn**	**02 38 40.6**	**+2.1**
	SNR=6.8						
MK31	**Makanchi Array**	**4.40**	**14**	⇓Pn	Pb	02 38 45.0	-5.7
	1.8nm,0.3s,baz=199,slow=12,SNR=143						
MK31				⇑Sn	**Sb**	**02 39 42.9**	**-0.5**
	8.5nm,0.6s,baz=149,slow=40,SNR=3.6						
MK31				⇑Lg	Lg	02 40 01.0	
	17nm,0.6s						
SGDS	**Sogindy**	**4.58**	**284**	Pg	**Pb**	**02 38 52.2**	**-1.6**
	4.7nm,0.5s						
SGDS				Lg	Lg	02 39 49.5	
	20nm,0.1s						
AAK	**Ala-Archa**	**4.62**	**273**	P	**Pb**	**02 38 56.1**	**+1.6**
	SNR=5.7						
UCH	**Uchtor**	**4.63**	**268**	P	**Pb**	**02 38 56.0**	**+1.1**
	SNR=7.9						
USP	**Ospenovka**	**4.64**	**281**	P	**Pb**	**02 38 54.9**	**0.0**
	SNR=7.8						
ARLS	**Aral**	**4.82**	**264**	⇓*i*P	**Pn**	**02 38 46.0**	**+0.1**
	baz=67						
ARLS				⇓*i*S	**Sn**	**02 39 40.9**	**-0.5**
	baz=67						
EKS2	**Erkin-Say**	**5.14**	**274**	P	**Pb**	**02 39 03.1**	**-0.4**
	SNR=12						
AML	**Almayashu**	**5.24**	**268**	P	**Pb**	**02 39 05.9**	**+0.5**
	SNR=12						
BTLS	**Baital**	**5.46**	**300**	Pg	**Pb**	**02 39 10.4**	**+1.6**
	3.6nm,0.5s						
BTLS				Lg	Lg	02 40 21.1	
	7.4nm,0.7s						
BTLS	**Baital**	**5.46**	**300**	*e*Pg	**Pb**	**02 39 10.4**	**+1.6**
	3.6nm,0.5s						
BTLS				*e*Lg	Lg	02 40 21.1	
	7.4nm,0.7s						
MRKS	**Merke**	**5.55**	**275**	Pg	**Pb**	**02 39 09.6**	**-0.8**
	6.8nm,0.4s						
MRKS				Lg	Lg	02 40 19.5	
	13nm,0.4s						
MRKS	**Merke**	**5.55**	**275**	*e*Pg	**Pb**	**02 39 09.6**	**-0.8**
	6.8nm,0.4s						
MRKS				*e*Lg	Lg	02 40 19.6	
	13nm,0.4s						
ZSN	**Zaisan**	**5.71**	**29**	*e*Pg	**Pg**	**02 39 23.6**	**+0.3**
	2.8nm,0.2s						
ZSN				*e*Lg	Lg	02 40 43.5	
	15nm,0.4s						
KK31	**Karatay Array**	**7.55**	**278**	⇑Pg	**Pb**	**02 39 46.4**	**+2.1**
	1.5nm,0.6s,baz=89,slow=16,SNR=12						
KK31				⇓Lg	Lg	02 41 24.3	
	3.8nm,0.5s,baz=88,slow=28						
OTUK	**Ortayu**	**8.22**	**317**	⇑Lg	Lg	02 41 57.0	
	16nm,1.1s						
KURBB	**Kurchatov Arra**	**8.23**	**350**	⇑Lg	Lg	02 42 00.9	
	14nm,0.8s						

NEIC ***27*** *02:41:58.6±1.1, 11°.57S±0°.07×161°.9E±0°.1, h10km±1km, mb5.1/86, Error ellipse: s-maj=17.5km s-min=10.8km az=66.0*

BJI ***27*** *02:41:59.3±0.0, 11°.00S×161°.93E, h10km, mb4.8/48, mB5.1/18, Ms4.7/3, Ms7 4.4/3*

GCMT ***27*** *02:42:01.6±0.3, 11°.70S±0°.02×161°.92E±0°.03, h20km, MW5.0/93, Moment Tensor Solution. s36,c37; s93,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.21±.18; $M_{\theta\theta}$2.95±.13; $M_{\phi\phi}$0.26±.11; $M_{r\theta}$-1.10±.22; $M_{\theta\phi}$-1.22±.09; $M_{\phi r}$-1.02±.25; Best double couple: $M_0$3.63500×10^{16} NP1:ϕ_s91.00000°,δ54.00000°,λ-115.00000°. NP2: ϕ_s310.00000°,δ43.00000°,λ-59.00000°. Principal axes: T 3.4910, Plg6.0000°, Azm199.0000°; N 0.2890, Plg20.0000°, Azm107.0000°; P -3.7790, Plg69.0000°, Azm305.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***27*** *02:42:01.7±1.1, 11°.39S×161°.64E, h33km, mb5.1/33 Error ellipse: s-maj=9.9km s-min=8.2km az=100.7*

IDC ***27*** *02:42:05.3±2.4, 11°.53S×161°.70E, h54km±21km, mb4.3/24, mbtmp4.6/28, ML4.5/4, MS3.8/41, Error ellipse: s-maj=16.9km s-min=12.2km az=84.0*

ISC 27 02:42:03.0±0.3**, 11°.60S**±0°.05×**161°.81E**±0°.06**, h39**km**, n457, σ1^{s}29**/450**, mb4.9**/103**, MS3.9**/40**, 10C-3D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.83**	**319**	P	**Pn**	**02 42 47.5**	**+1.9**
	463nm,0.3s,baz=318,slow=0.7,SNR=10.0						
HNR				S	**Sn**	**02 43 14.6**	**-3.8**
	8μm,0.3s,baz=266,slow=16,SNR=6.5						
	1μm,0.3s						
HNR	**Honiara**	**2.83**	**319**	Pn	**Pn**	**02 42 43.0**	**-2.6**
HNR	**Honiara**	**2.83**	**319**	P	**Pn**	**02 42 43.0**	**-2.6**
KOUNC	**Koumac, New Ca**	**9.21**	**165**	Pn	**Pn**	**02 44 11.1**	**-2.3**
LIFNC	**LIFOU**	**10.51**	**151**	Pn	**Pn**	**02 44 28.6**	**-2.5**
DZM	**Mont Dzumac**	**11.32**	**158**	*e*Pn	**Pn**	**02 44 38.9**	**-3.4**
	78nm,1.5s						
DZM				*e*LR	LR	02 47 14.4	
	comp=Z,1μm,27.6s						
DZM	**Mont Dzumac**	**11.32**	**158**	P	**Pn**	**02 44 44.9**	**+2.6**
	0.7nm,0.3s,baz=342,slow=20,SNR=4.4						
DZM				S	**Sn**	**02 46 45.9**	**-1.7**
	14nm,0.5s,baz=281,slow=19,SNR=3.5						
DZM				LR	LR	02 48 24.3	
	comp=Z,336nm,18.3s,baz=6.0,slow=33						
	5.6nm,0.6s						
DZM	**Mont Dzumac**	**11.32**	**158**	Pn	**Pn**	**02 44 39.4**	**-2.9**
ONTNC	**Ouen Toro**	**11.54**	**158**	Pn	**Pn**	**02 44 43.4**	**-1.8**
OUENC	**Ouen Island, N**	**11.79**	**157**	Pn	**Pn**	**02 44 47.1**	**-1.5**
PMG	**Port Moresby**	**14.57**	**277**	LR	LR	02 51 08.3	
	comp=Z,358nm,19.4s,baz=117,slow=38						
MSVF	**Nonsavu**	**16.85**	**113**	P	**P**	**02 45 59.8**	**+1.9**
	0.1nm,0.3s,baz=248,slow=11,SNR=6.2						
MSVF				LR	LR	02 51 43.8	
	comp=Z,211nm,18.2s,baz=357,slow=34						
	9.0nm,0.9s						
MSVF	**Nonsavu**	**16.85**	**113**	P	**Pn**	**02 45 54.5**	**-1.7**
MSVF	**Nonsavu**	**16.85**	**113**	P	**Pn**	**02 45 54.5**	**-1.7**
MSVF				pmax	pmax		
	comp=Z,62nm,2.0s						
EIDS	**Eidsvold**	**17.04**	**215**	P	**P**	**02 46 01.5**	**+1.6**
	baz=17,SNR=3.8						
EIDS	**Eidsvold**	**17.04**	**215**		**Pn**	**02 45 58.0**	**-0.5**
CTA	**Charters Tower**	**17.17**	**239**	P	**P**	**02 46 01.7**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=73,slow=12,SNR=8.5						
CTA				LR	LR	02 52 13.4	
	comp=Z,243nm,18.8s,baz=69,slow=36						
	comp=Z,18nm,0.8s						
CTAO	**Charters Tower**	**17.17**	**239**	P	**Pn**	**02 46 00.6**	**+0.5**
CTAO	**Charters Tower**	**17.17**	**239**	P	**Pn**	**02 46 00.6**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,61nm,1.3s						
MTSU	**Mount Surprise**	**18.10**	**247**	P	**P**	**02 46 15.8**	**+4.1**
	baz=18,SNR=5.2						
COEN	**Coen**	**18.32**	**261**	P	**P**	**02 46 14.0**	**-0.1**
	baz=18,SNR=4.5						
COEN	**Coen**	**18.32**	**261**	P	**P**	**02 46 12.7**	**-1.4**
RMQ	**Roma**	**19.25**	**218**	P	**Pn**	**02 46 27.6**	**+2.2**
	baz=19,SNR=17						
ARMA	**Armidale**	**20.97**	**205**	P	Pn	02 46 45.7	-0.1
	baz=21,SNR=5.2						
ARMA	**Armidale**	**20.97**	**205**	P	**P**	**02 46 41.2**	**-1.8**
QIS	**Mount Isa**	**23.09**	**245**	P	**P**	**02 47 06.3**	**+0.7**
	baz=23,SNR=11						
GENI	**Genyem**	**23.24**	**291**	P	**P**	**02 47 08.1**	**+1.0**
	comp=Z,30nm,0.6s,comp=Z,3μm						
MGCD	**Mangrove Creek**	**23.64**	**203**	P	**P**	**02 47 12.8**	**+2.0**
	baz=24						
CMSA	**Cobar Meteorol**	**24.80**	**214**	P	**P**	**02 47 22.5**	**+1.0**
	baz=25,SNR=6.4						
SMPI	**Sarmi**	**24.82**	**291**	P	**P**	**02 47 21.5**	**-0.3**
	comp=Z,83nm,1.1s						
AFI	**Afiamalu**	**25.86**	**98**	LR	LR	02 55 16.0	
	comp=Z,91nm,21.7s,baz=346,slow=30						
STKA	**Stephens Creek**	**27.47**	**220**	P	**P**	**02 47 46.4**	**+0.9**
	comp=Z,2.9nm,0.7s,baz=328,slow=7.0,SNR=4.6						
STKA				LR	LR	02 57 42.9	
	comp=Z,766nm,21.3s,baz=32,slow=34						
	comp=Z,2.9nm,0.7s						
WB0	**Warramunga Arr**	**27.58**	**249**	P	**P**	**02 47 45.2**	**-1.6**
WRAB	**Tennant Creek**	**27.66**	**249**	P	**P**	**02 47 46.9**	**-0.6**
WRAB				IAmb	IAmb	02 47 49.3	
	comp=Z,55nm,1.7s						
WRAB	**Tennant Creek**	**27.66**	**249**	*ce*P	**P**	**02 47 48.3**	**+0.9**
WRAB				pmax	pmax		
	comp=Z,32nm,1.7s						
WB2	**Warramunga Arr**	**27.66**	**249**	P	**P**	**02 47 47.4**	**0.0**
	baz=28						
WB2	**Warramunga Arr**	**27.66**	**249**	P	**P**	**02 47 46.2**	**-1.2**
WRA	**Warramunga Arr**	**27.67**	**249**	P	**P**	**02 47 47.1**	**-0.4**
	comp=Z,8.9nm,0.9s,baz=77,slow=9.6,SNR=33						
WRA				LR	LR	02 58 14.1	
	comp=Z,357nm,18.5s,baz=76,slow=35						
	comp=Z,8.9nm,0.9s						
WRA	**Warramunga Arr**	**27.67**	**249**	P	**P**	**02 47 47.5**	**-0.1**
WRA	**Warramunga Arr**	**27.67**	**249**	P	**P**	**02 47 47.5**	**-0.1**
WRA				pmax	pmax		
	comp=Z,3.0nm,1.6s						
KDU	**Kakadu**	**28.69**	**265**	P	**P**	**02 47 56.7**	**0.0**
	baz=29,SNR=3.5						
AS31	**Alice Springs**	**29.11**	**242**	P	**P**	**02 47 57.8**	**-2.5**
ASAR	**Alice Springs**	**29.11**	**242**	P	**P**	**02 47 59.5**	**-0.8**
	comp=Z,4.6nm,0.9s,baz=71,slow=9.6,SNR=30						
ASAR				LR	LR	02 59 17.8	
	comp=Z,206nm,18.9s,baz=68,slow=36						
	comp=Z,4.6nm,0.9s						
ASAR	**Alice Springs**	**29.11**	**242**	P	**P**	**02 47 58.8**	**-1.6**
URZ	**Urewera**	**29.86**	**155**	LR	LR	02 58 20.5	
	comp=Z,247nm,18.5s,baz=61,slow=32						
GUMO	**Guam**	**30.14**	**326**	LR	LR	02 59 24.8	
	comp=Z,112nm,21.9s,baz=112,slow=35						
BBOO	**Buckleboo**	**31.68**	**224**	P	**P**	**02 48 23.4**	**+0.4**
	baz=32						
SIJI	**Sorong**	**32.13**	**287**	LR	LR	03 03 11.2	
	comp=Z,80nm,18.4s,baz=200,slow=40						
KNRA	**Kununurra**	**32.35**	**259**	P	**P**	**02 48 27.8**	**-1.2**
	baz=32,SNR=6.6						
KNRA	**Kununurra**	**32.35**	**259**	P	**P**	**02 48 27.7**	**-1.2**
KNRA				IAmb	IAmb	02 48 30.0	
	comp=Z,23nm,0.7s						
RPZ	**Rata Peaks**	**32.98**	**168**	P	**P**	**02 48 35.3**	**+1.1**
	comp=Z,12nm,0.8s,baz=27,slow=9.0,SNR=2.8						
RPZ				LR	LR	03 00 30.8	
	comp=Z,143nm,19.4s,baz=329,slow=33						
	comp=Z,12nm,0.8s						
MLZ	**Mavora Lakes**	**34.08**	**172**	P	**P**	**02 48 43.1**	**-0.7**
WRKA	**Warakurna**	**34.39**	**242**	P	**P**	**02 48 46.3**	**-0.4**
	baz=34,SNR=9.9						
NLAI	**Namlea**	**35.37**	**281**	P	**P**	**02 48 55.4**	**+0.2**
	comp=Z,11nm,1.1s						
LBMI	**Labuha**	**35.75**	**285**	P	**P**	**02 48 59.2**	**+0.7**
	comp=Z,64nm,1.1s						
FORT	**Forrest**	**36.59**	**233**	P	**P**	**02 49 06.4**	**+0.9**
	baz=37,SNR=7.2						
FORT	**Forrest**	**36.59**	**233**	P	**P**	**02 49 05.4**	**-0.1**
SANI	**Sanana**	**36.76**	**282**	P	**P**	**02 49 06.6**	**-0.6**
	comp=Z,43nm,1.0s						
SOEI	**Soe**	**36.92**	**269**	P	**P**	**02 49 09.7**	**+1.1**
	comp=Z,28nm,1.1s						
MMRI	**Maumere**	**39.04**	**271**	P	**P**	**02 49 27.6**	**+1.2**
	comp=Z,77nm,0.6s						
GTOI	**Gorontalo**	**40.41**	**285**	P	**P**	**02 49 39.1**	**+1.3**
	comp=Z,18nm,0.8s,comp=Z,210nm						
KMBL	**Kambalda**	**41.73**	**236**	P	**P**	**02 49 49.0**	**+0.5**
	baz=42						
KAPI	**Kappang**	**42.09**	**275**	LR	LR	03 08 32.6	
	comp=Z,70nm,18.8s,baz=110,slow=38						
KAPI	**Kappang**	**42.09**	**275**	P	**P**	**02 49 50.8**	**-0.8**
KAPI				IAmb	IAmb	02 50 00.3	
	comp=Z,61nm,1.4s						
KAPI	**Kappang**	**42.09**	**275**	P	**P**	**02 49 50.8**	**-0.8**
KAPI				pmax	pmax		
	comp=Z,61nm,1.5s						
TOLI2	**Tolitoli**	**42.67**	**284**	P	**P**	**02 49 55.2**	**-1.2**
JCJ	**Chichijima**	**42.92**	**334**	LR	LR	03 04 34.4	
	comp=Z,112nm,21.7s,baz=73,slow=32						
MPSI	**Mapaga**	**43.28**	**283**	P	**P**	**02 49 59.5**	**-1.8**
	comp=Z,15nm,0.8s,comp=Z,1μm						
BLDU	**Ballidu**	**45.77**	**238**	P	**P**	**02 50 21.8**	**+0.8**
	baz=46,SNR=6.2						
NWAO	**Narrogin (SRO)**	**45.96**	**235**	LR	LR	03 09 40.2	
	comp=Z,245nm,19.5s,baz=86,slow=36						
NWAO	**Narrogin (SRO)**	**45.96**	**235**	P	**P**	**02 50 22.9**	**+0.5**
	baz=46,SNR=3.9						
NWAO				P	**P**	**02 50 22.9**	**+0.5**
	baz=46,SNR=3.9						
MORW	**Morawa**	**45.98**	**241**	P	**P**	**02 50 23.3**	**+0.7**
	baz=46,SNR=4.0						
MYLDM	**Lahad Datu**	**46.19**	**289**	P	**P**	**02 50 24.1**	**-0.4**
PPT2	**Papeete2**	**47.32**	**103**	*e*LR	LR	03 03 53.4	
	comp=Z,136nm,31.0s						
KKM	**Kota Kinabalu**	**48.62**	**289**	P	**P**	**02 50 42.4**	**-1.1**
SMRI	**Semarang**	**50.84**	**270**	P	**P**	**02 50 59.1**	**-1.1**
MJAR	**Matsushiro Arr**	**52.79**	**336**	P	**P**	**02 51 15.1**	**+0.7**
	comp=Z,1.8nm,0.6s,baz=173,slow=8.6,SNR=2.5						
MJAR				LR	LR	03 12 30.2	
	comp=Z,73nm,21.9s,baz=128,slow=35						
	comp=Z,1.8nm,0.6s						
JNU	**Nakatsue**	**53.37**	**327**	P	**P**	**02 51 18.4**	**-0.4**
	comp=Z,17nm,1.0s,baz=68,slow=5.4,SNR=3.1						
JNU				LR	LR	03 12 45.6	
	comp=Z,32nm,19.1s,baz=156,slow=35						
	comp=Z,17nm,1.0s						
CNJI	**Cibinong**	**54.04**	**269**	P	**P**	**02 51 24.8**	**+0.8**
	comp=Z,27nm,1.1s						
CGJI	**Cibinong**	**55.56**	**270**	P	**P**	**02 51 34.5**	**-0.5**
TAOE	**Nuku Hiva Isla**	**57.11**	**93**	*e*LR	LR	03 08 24.7	
	comp=Z,50nm,22.0s						
JKA	**Kamikawa-asahi**	**58.14**	**344**	P	**P**	**02 51 51.6**	**-1.1**
JKA				IAmb	IAmb	02 52 08.8	
	comp=Z,18nm,1.1s						
ASAJ	**Asahikawa**	**58.14**	**344**	P	**P**	**02 51 52.5**	**-0.2**
	comp=Z,5.4nm,0.7s,baz=249,slow=12,SNR=5.5						
ASAJ				LR	LR	03 13 45.7	
	comp=Z,197nm,22.0s,baz=160,slow=33						
	comp=Z,5.4nm,0.7s						
ASAJ	**Asahikawa**	**58.14**	**344**	P	**P**	**02 51 51.6**	**-1.1**
ASAJ				pmax	pmax		
	comp=Z,18nm,1.1s						
KSRS	**Korea Array**	**58.24**	**329**	P	**P**	**02 51 53.2**	**-0.3**
	comp=Z,4.9nm,1.0s,baz=126,slow=6.2,SNR=4.8						
KSRS				LR	LR	03 15 44.5	
	comp=Z,49nm,20.1s,baz=150,slow=35						
	comp=Z,4.9nm,1.0s						
KSAR	**Wonju Array Be**	**58.25**	**329**	P	**P**	**02 51 52.9**	**-0.7**
KSAR	**Wonju Array Be**	**58.25**	**329**	P	**P**	**02 51 52.9**	**-0.7**
NJ2	**Nanjing**	**59.77**	**318**	*e*P	**P**	**02 52 05.3**	**+1.0**
NJ2				pP	pP	02 52 05.8	-8.3
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
YSS	**Yuzh-Sakhalins**	**60.73**	**345**	*e*P	P	02 52 20.3	+10
USA0B	**Ussuriysk Arra**	**61.79**	**336**	P	**P**	**02 52 16.5**	**-1.3**
USA0B				IAmb	IAmb	02 52 29.4	
	comp=Z,14nm,0.9s						
USA0B	**Ussuriysk Arra**	**61.79**	**336**	P	**P**	**02 52 16.5**	**-1.3**
USA0B				pmax	pmax		
	comp=Z,14nm,1.0s						
USRK	**Ussuriysk Ar.**	**61.79**	**336**	P	**P**	**02 52 17.7**	**-0.1**
	comp=Z,6.1nm,0.9s,baz=142,slow=6.2,SNR=13						
	comp=Z,6.1nm,0.9s						
USRK	**Ussuriysk Ar.**	**61.79**	**336**	P	**P**	**02 52 16.9**	**-0.9**
USRK	**Ussuriysk Ar.**	**61.79**	**336**	P	**P**	**02 52 16.9**	**-0.9**
IPM	**Ipoh**	**62.52**	**281**	P	**P**	**02 52 22.7**	**-0.7**
MDJ	**Mudanjiang**	**63.11**	**335**	P	**P**	**02 52 27.3**	**+0.7**
MDJ				pP	pP	02 52 30.5	-6.2
MDJ				sP	sP	02 52 31.8	-8.3
MDJ				PcP	**PcP**	**02 53 04.3**	**+0.3**
MDJ				PP	**PP**	**02 54 43.0**	**-3.0**
MDJ				S	**S**	**03 01 00.5**	**+5.6**
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.8s						
MDJ				pmax	pmax		

	comp=Z,140nm,10.8s						
MDJ	**Mudanjiang**	63.11	335	P	P	02 52 25.7	-0.9
MDJ				IAmb	IAmb	02 52 48.6	
	comp=Z,17nm,1.4s						
TIA	**Tai'an**	63.52	321	*e*P	P	02 52 29.0	-0.5
TIA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
RPSI	**Rantau Prapat**	64.10	279	P	P	02 52 32.7	-1.0
RPSI				IAmb	IAmb	02 52 35.7	
	comp=Z,12nm,1.1s						
PSI	**Prapat**	64.12	279	P	P	02 52 32.7	-1.4
PSI				pmax	pmax		
	comp=Z,12nm,1.1s						
CN2	**Changchun**	64.31	332	*e*P	P	02 52 33.8	-0.7
PET	**Petropavlovsk**	64.42	358	*ce*P	P	02 52 33.2	-1.8
PET				pmax	pmax		
	comp=Z,29nm,1.7s						
PETK	**Petropavlovsk-**	64.54	357	P	P	02 52 36.1	+0.2
	comp=Z,3.1nm,0.8s,baz=209,slow=14,SNR=3.7						
PETK				LR	LR	03 16 51.5	
	comp=Z,55nm,19.8s,baz=147,slow=32						
	comp=Z,3.1nm,0.8s						
SHEM	**Shemya Is, Ala**	64.94	8	LR	LR	03 15 59.3	
	comp=Z,112nm,19.9s,baz=346,slow=31						
BNX	**BinXian**	64.94	334	⇑P	P	02 52 38.0	-0.6
BNX				pmax	pmax		
	comp=Z,8.0nm,1.7s						
BNX				pmax	pmax		
	comp=Z,57nm,3.6s						
ENH	**Enshi**	65.30	311	P	P	02 52 39.9	-1.4
ENH				IAmb	IAmb	02 52 43.0	
	comp=Z,16nm,1.1s						
HNS	**HongShan**	65.77	320	⇑P	P	02 52 54.3	+10
HNS				pmax	pmax		
	comp=Z,13nm,1.1s						
VNDA	**Vanda**	65.91	180	P	P	02 52 46.1	+1.7
	comp=Z,4.1nm,0.7s,baz=348,slow=6.3,SNR=20						
VNDA				LR	LR	03 16 17.6	
	comp=Z,96nm,20.9s,baz=356,slow=31						
	comp=Z,4.1nm,0.7s						
VNDA	**Vanda**	65.91	180	P	P	02 52 44.9	+0.5
VNDA	**Vanda**	65.91	180	P	P	02 52 44.9	+0.5
VNDA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KLR	**Kul'dur**	66.10	339	P	P	02 52 46.0	0.0
	comp=Z,2.6nm,0.6s,baz=136,slow=7.8,SNR=6.1						
KLR				LR	LR	03 18 20.9	
	comp=Z,82nm,21.7s,baz=178,slow=33						
	comp=Z,2.6nm,0.6s						
KLR	**Kul'dur**	66.10	339	*ce*P	P	02 52 45.5	-0.5
KLR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
XAN	**Xi'an**	67.69	314	P	P	02 52 56.8	+0.3
XAN				pP	pP	02 53 05.8	-1.0
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
PHRA	**Phrae**	67.69	296	P	P	02 52 57.4	+0.6
KMI	**Kunming**	68.15	303	⇑P	P	02 53 02.0	+2.2
KMI				pP	pP	02 53 04.5	-5.5
KMI				sP	sP	02 53 11.0	-3.1
KMI				pmax	pmax		
	comp=Z,25nm,1.2s						
CRAI	**Chiangrai**	68.20	297	P	P	02 52 59.0	-1.0
HEH	**HeiHe**	68.54	337	*e*P	P	02 53 00.3	-1.1
HEH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CM31	**Chiang Mai Arr**	68.82	295	P	P	02 53 03.2	-0.7
CMAR	**Chiang Mai Arr**	68.82	295	P	P	02 53 05.0	+1.1
	comp=Z,12nm,1.0s,baz=116,slow=4.5,SNR=42						
CMAR				LR	LR	03 26 03.8	
	comp=Z,14nm,18.2s,baz=100,slow=38						
	comp=Z,12nm,1.0s						
CMAR	**Chiang Mai Arr**	68.82	295	P	P	02 53 02.8	-1.1
CMAR	**Chiang Mai Arr**	68.82	295	*i* P	P	02 53 05.8	+1.9
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CHTO	**Chiang Mai**	68.94	295	P	P	02 53 04.2	-0.4
CHTO	**Chiang Mai**	68.94	295	P	P	02 53 04.2	-0.4
CHTO				pmax	pmax		
	comp=Z,1.0nm,1.3s						
XLT	**XiLinHaoTe**	69.12	326	*e*P	P	02 52 55.8	-10
XLT				pP	pP	02 53 00.0	-15
XLT				sP	sP	02 53 02.5	-17
XLT				pmax	pmax		
	comp=Z,9.0nm,0.7s						
XLT				pmax	pmax		
	comp=Z,96nm,5.9s						
PZH	**PanZhiHua**	69.54	304	P	P	02 53 09.3	+0.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,100nm,6.1s						
HHC	**Hu-ho-hao-te**	69.81	322	*e*P	P	02 53 12.8	+3.1
HHC				pmax	pmax		
	comp=Z,21nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,6.0s						
CD2	**Chengdu**	69.91	309	P	P	02 53 12.5	+2.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BTO	**Baotou**	70.61	321	*e*P	P	02 53 14.0	-0.6
BTO				pP	pP	02 53 19.5	-5.1
BTO				sP	sP	02 53 21.0	-7.4
BTO				PP	PP	02 55 55.5	+4.0
BTO				S	S	03 02 27.8	+1.9
BTO				pmax	pmax		
	comp=Z,24nm,0.5s						
BTO				pmax	pmax		
	comp=Z,410nm,4.1s						
BTO				LR	LR		
	comp=Z,580nm,15.6s						
BTO				LR	LR		
	comp=Z,330nm,6.8s						
HIA	**Hailar**	71.00	332	P	P	02 53 16.0	-0.7
HIA				IAmb	IAmb	02 54 32.8	
	comp=Z,9.0nm,0.4s						
HIA	**Hailar**	71.00	332	P	P	02 53 16.0	-0.7
HIA				pmax	pmax		
	comp=Z,9.0nm,0.4s						
MA2	**Magadan**	71.49	354	P	P	02 53 18.1	-1.2
MA2				IAmb	IAmb	02 53 20.0	
	comp=Z,8.9nm,0.9s						
MA2	**Magadan**	71.49	354	P	P	02 53 18.1	-1.2
MA2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LZH	**Lanzhou**	72.31	314	*e*P	P	02 53 26.5	+1.5
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
SEY	**Seymchan**	74.66	356	P	P	02 53 37.6	-0.4
	comp=Z,4.5nm,0.9s,baz=163,slow=4.5,SNR=11						
	comp=Z,4.5nm,0.9s						
SEY	**Seymchan**	74.66	356	*ce*P	P	02 53 38.7	+0.7
SEY				pmax	pmax		
	comp=Z,14nm,1.7s						
CHGN	**Chignik**	75.29	22	P	P	02 53 42.4	+0.6
	baz=220						
ULN	**Ulaanbaatar**	76.52	326	P	P	02 53 48.2	-1.0
ULN				IAmb	IAmb	02 53 53.6	
	comp=Z,46nm,1.9s						
ULN	**Ulaanbaatar**	76.52	326	*ce*P	P	02 53 50.3	+1.1
ULN				pmax	pmax		
	comp=Z,23nm,1.7s						
GTA	**Gaotai**	76.69	315	*e*P	P	02 53 51.5	+1.1
GTA				pP	pP	02 54 01.0	+0.2
GTA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SONM	**Songino Array**	76.87	325	P	P	02 53 51.7	+0.6
	comp=Z,3.6nm,0.7s,baz=146,slow=5.6,SNR=23						
SONM				LR	LR	03 28 28.1	
	comp=Z,40nm,18.6s,baz=134,slow=36						
	comp=Z,3.6nm,0.7s						
SONM	**Songino Array**	76.87	325	P	P	02 53 50.6	-0.6
SONM	**Songino Array**	76.87	325	P	P	02 53 50.6	-0.6
SONM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
R17K	**Ugashik Creek**	77.03	22	P	P	02 53 53.2	+1.5
	baz=222						
SHL	**Shillong**	77.41	300	P	P	02 53 53.6	-1.1
SHL				IAmb	IAmb	02 53 59.6	
	comp=Z,16nm,1.1s						
SHL	**Shillong**	77.41	300	P	P	02 53 53.6	-1.1
SHL				pmax	pmax		
	comp=Z,16nm,1.1s						
P16K	**Nushagak River**	77.53	20	P	P	02 53 54.9	+0.5
	baz=220						
YAK	**Yakutsk**	77.58	345	LR	LR	03 26 54.6	
	comp=Z,24nm,20.4s,baz=52,slow=35						
YAK	**Yakutsk**	77.58	345	P	P	02 53 54.7	+0.1
YAK	**Yakutsk**	77.58	345	*e*P	P	02 53 54.5	-0.1
YAK				*e*		02 54 04.2	
YAK				*e*		02 56 48.9	
YAK				*e*S	S	03 03 46.5	+3.5
YAK				*e**SS	pS	03 03 54.8	-0.5
YAK				*e*		03 04 17.2	
YAK				*e*SS	SS	03 08 42.7	-0.7
YAK				pmax	pmax		
	comp=Z,25nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,256nm,3.9s						
YAK				pmax	pmax		
	comp=N,69nm,5.0s						
YAK				smax	smax		
	comp=E,142nm,4.8s						
YAK				smax	smax		
	comp=N,135nm,5.1s						
Q17K	**Contact Creek**	77.68	21	P	P	02 53 56.6	+1.2
	baz=222						
Q16K	**King Salmon**	77.71	21	P	P	02 53 56.2	+0.8
	baz=222						
OHAK	**Old Harbor**	77.89	23	P	P	02 53 57.1	+0.7
	baz=225						
O16K	**Kokwok River B**	77.92	20	P	P	02 53 58.0	+1.4
	baz=220						
Q18K	**Katmai Hardscr**	78.27	21	P	P	02 53 59.8	+1.0
	baz=223,SNR=6.2						
N16K	**Nishlik Lake**	78.38	19	P	P	02 54 00.5	+1.3
	baz=219						
O17K	**Koliganek Bris**	78.39	20	P	P	02 54 00.1	+1.0
	baz=221						
QSPA	**South Pole Qui**	78.41	180	LR	LR	03 26 14.1	
	comp=N,61nm,18.2s,baz=78,slow=34						
QSPA	**South Pole Qui**	78.41	180	P	P	02 53 59.9	+0.4
QSPA				IAmb	IAmb	02 54 05.0	
	comp=Z,20nm,1.1s						
KDAK	**Kodiak Island**	78.55	23	P	P	02 54 01.4	+1.3
	comp=Z,7.2nm,0.7s,baz=287,slow=4.8,SNR=6.5						
KDAK				LR	LR	03 25 53.5	
	comp=Z,81nm,18.3s,baz=209,slow=34						
	comp=Z,7.2nm,0.7s						
KDAK	**Kodiak Island**	78.55	23	P	P	02 54 00.8	+0.7
	baz=226						
P18K	**Big Mountain,**	78.74	21	P	P	02 54 00.5	-0.7
P18K				IAmb	IAmb	02 54 05.9	
	comp=Z,22nm,1.1s						
P18K	**Big Mountain,**	78.74	21	P	P	02 54 02.0	+0.8
	baz=223						
GOMU	**GeErMu**	78.91	311	P	P	02 54 04.5	+1.4
GOMU				pP	PcP	02 54 08.3	-3.4
GOMU				sP	pP	02 54 10.0	-3.5
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,81nm,7.2s						
BILL	**Bilibino**	79.49	2	P	P	02 54 05.2	+0.1
BILL				IAmb	IAmb	02 54 10.3	
	comp=Z,22nm,1.0s						
BILL	**Bilibino**	79.49	2	*i* P	P	02 54 06.1	+1.0
BILL				*i*		02 54 12.5	
BILL				*i*		02 57 02.8	
BILL				pmax	pmax		
	comp=Z,25nm,1.0s						
P19K	**Oil Pt**	79.63	21	P	P	02 54 06.6	+0.6
	baz=225						
O19K	**Port Alsworth**	79.64	21	P	P	02 54 07.0	+0.9
	baz=224						
SVW2	**Sparrevohn**	79.88	20	P	P	02 54 05.7	-1.6
SVW2				IAmb	IAmb	02 54 12.5	
	comp=Z,22nm,0.9s						
ANM	**Nome**	79.90	14	P	P	02 54 07.0	-0.4
ANM				IAmb	IAmb	02 54 19.7	
	comp=Z,29nm,1.6s						
ANM	**Nome**	79.90	14	P	P	02 54 07.0	-0.4
ANM				pmax	pmax		
	comp=Z,29nm,1.6s						
ANM	**Nome**	79.90	14	P	P	02 54 09.3	+1.9
	baz=213						
ILSW	**Iliamna Southw**	79.90	21	P	P	02 54 06.4	-1.2
ZAK	**Zakamensk**	79.98	326	*e*P	P	02 54 07.6	-0.6
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
N19K	**Bonanza Creek**	80.03	20	P	P	02 54 08.9	+0.6
	baz=223						
O20K	**Slope Mountain**	80.16	21	P	P	02 54 09.7	+0.8
	baz=225						
TNA	**Tin City**	80.19	12	P	P	02 54 09.8	+0.9
	baz=210						
CNPM	**China Poot**	80.27	22	P	P	02 54 08.9	-0.6
RSO	**Redoubt South**	80.38	21	P	P	02 54 08.4	-1.8
BRSE	**Bradley Lake S**	80.60	22	P	P	02 54 11.9	+0.6
	baz=227						
M19K	**Big River Lodg**	80.86	19	P	P	02 54 12.6	-0.1
M19K				IAmb	IAmb	02 54 28.5	
	comp=Z,24nm,1.1s						
M19K	**Big River Lodg**	80.86	19	P	P	02 54 14.3	+1.7
	baz=223						
L19K	**White Mountain**	80.92	19	P	P	02 54 12.3	-0.6
L19K				IAmb	IAmb	02 54 18.0	
	comp=Z,12nm,0.9s						
L19K	**White Mountain**	80.92	19	P	P	02 54 14.2	+1.3
	baz=223,SNR=9.5						
SPCR	**Spurr Chakacha**	81.09	21	P	P	02 54 15.1	+1.2
	baz=225						
TTA	**Tatalina**	81.11	18	P	P	02 54 14.4	+0.4
TTA	**Tatalina**	81.11	18	P	P	02 54 14.4	+0.4
TTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TTA	**Tatalina**	81.11	18	P	P	02 54 15.8	+1.8
	baz=222,SNR=5.6						
M20K	**Styx River**	81.26	20	P	P	02 54 16.2	+1.4
	baz=224						
L20K	**Farewell, AK**	81.44	19	P	P	02 54 17.0	+1.3
	baz=224						
O22K	**Cooper Landing**	81.48	22	P	P	02 54 14.2	-1.7
O22K	**Cooper Landing**	81.48	22	P	P	02 54 17.3	+1.5
	baz=228						
SUA	**Susitna One**	81.78	21	P	P	02 54 17.4	-0.2
SUA	**Susitna One**	81.78	21	P	P	02 54 17.9	+0.3
	baz=227						
SKT	**Skwentna**	81.87	20	P	P	02 54 16.6	-1.3
SKT				IAmb	IAmb	02 56 42.0	
	comp=Z,23nm,1.8s						
SKT	**Skwentna**	81.87	20	P	P	02 54 18.2	+0.2
	baz=226						
RC01	**Rabbit Creek A**	81.88	22	P	P	02 54 17.3	-0.7
RC01	**Rabbit Creek A**	81.88	22	P	P	02 54 18.5	+0.4
	baz=228						
K20K	**Telida**	82.02	18	P	P	02 54 18.9	+0.1
K20K				IAmb	IAmb	02 54 23.8	
	comp=Z,18nm,1.1s						
K20K	**Telida**	82.02	18	P	P	02 54 20.0	+1.3
	baz=223,SNR=12						
P23K	**Montague Islan**	82.03	23	P	P	02 54 20.0	+1.2
	baz=230						
Q23K	**Middleton Isla**	82.08	24	P	P	02 54 20.1	+1.0
	baz=231						
GCSA	**Galena City Sc**	82.23	17	P	P	02 54 20.5	+0.8
	baz=221						
PWL	**Port Wells**	82.24	22	P	P	02 54 21.7	+1.8
	baz=229						
PPLA	**Purkeypile**	82.29	19	P	P	02 54 21.6	+1.3
	baz=225						
PMR	**Palmer**	82.44	21	P	P	02 54 21.1	+0.2
PMR				IAmb	IAmb	02 56 49.0	
	comp=Z,15nm,1.4s						
PMR	**Palmer**	82.44	21	P	P	02 54 21.1	+0.2
PMR				pmax	pmax		
	comp=Z,15nm,1.4s						
PMR	**Palmer**	82.44	21	P	P	02 54 22.1	+1.3
	baz=228						
KNK	**Knik Glacier**	82.56	22	P	P	02 54 22.7	+1.1
	baz=229						
CUT	**Chulitna**	82.59	20	P	P	02 54 22.6	+0.9
	baz=227						
GHO	**Glory Hole Cre**	82.63	21	P	P	02 54 20.7	-1.4
GHO				IAmb	IAmb	02 54 32.4	
	comp=Z,9.4nm,1.0s						
CAST	**Castle Rocks**	82.69	19	P	P	02 54 21.8	-0.4
CAST				IAmb	IAmb	02 54 32.7	
	comp=Z,11nm,0.8s						
CAST	**Castle Rocks**	82.69	19	P	P	02 54 22.9	+0.7
	baz=225,SNR=12						
SML	**Sawmill**	82.87	21	P	P	02 54 23.3	+0.1
SML	**Sawmill**	82.87	21	P	P	02 54 23.7	+0.5
	baz=229						
CHUM	**Lake Minchumin**	82.95	19	P	P	02 54 24.5	+1.0
	baz=225						
M23K	**Glacier View**	83.08	22	P	P	02 54 25.4	+1.2
	baz=230						
KTH	**Kantishna Hill**	83.16	19	P	P	02 54 23.8	-0.9
KTH				IAmb	IAmb	02 54 34.9	
	comp=Z,7.0nm,0.8s						
SCM	**Sheep Creek Mo**	83.25	22	P	P	02 54 24.7	-0.5
SCM	**Sheep Creek Mo**	83.25	22	P	P	02 54 24.7	-0.5
SCM				pmax	pmax		
	comp=Z,38nm,1.4s						
SCM	**Sheep Creek Mo**	83.25	22	P	P	02 54 26.5	+1.3
	baz=230						
TRF	**Thorofare Moun**	83.30	20	P	P	02 54 23.9	-1.7
TRF				IAmb	IAmb	02 54 28.9	
	comp=Z,7.9nm,1.0s						
TRF	**Thorofare Moun**	83.30	20	P	P	02 54 25.8	+0.2
	baz=227						
RDOG	**Red Dog Mine**	83.37	13	P	P	02 54 25.4	-0.2
RDOG	**Red Dog Mine**	83.37	13	P	P	02 54 26.8	+1.2
	baz=215						
DIV	**Divide**	83.38	23	P	P	02 54 24.8	-1.1
DIV				IAmb	IAmb	02 54 31.3	
	comp=Z,14nm,1.0s						
WAT1	**Susitna Watana**	83.47	21	P	P	02 54 27.2	+0.9
	baz=229						
BPAW	**Bear Paw Mtn.**	83.52	19	P	P	02 54 26.1	-0.4
BPAW				IAmb	IAmb	02 54 31.1	
	comp=Z,18nm,1.7s						
BPAW	**Bear Paw Mtn.**	83.52	19	P	P	02 54 27.7	+1.2
	baz=226						
KLU	**Klutina**	83.55	22	P	P	02 54 26.5	-0.3
KLU				IAmb	IAmb	02 54 40.3	
	comp=Z,15nm,1.0s						
KLU	**Klutina**	83.55	22	P	P	02 54 27.8	+1.1
	baz=231						
M24K	**Tolsona, Glenn**	83.84	22	P	P	02 54 27.6	-0.7
M24K	**Tolsona, Glenn**	83.84	22	P	P	02 54 29.2	+1.0
	baz=231						
MCK	**McKinley**	83.94	20	P	P	02 54 28.6	0.0
MCK				IAmb	IAmb	02 54 30.1	
	comp=Z,16nm,1.0s						
MCK	**McKinley**	83.94	20	P	P	02 54 28.6	0.0
MCK				pmax	pmax		
	comp=Z,16nm,1.0s						
MCK	**McKinley**	83.94	20	P	P	02 54 29.4	+0.7
	baz=228,SNR=11						
I21K	**Tanana**	83.97	18	P	P	02 54 28.1	-0.6
I21K				IAmb	IAmb	02 54 34.1	
	comp=Z,18nm,1.2s						
I21K	**Tanana**	83.97	18	P	P	02 54 29.6	+0.9
	baz=225						
IMAR	**Indian Mountai**	84.03	17	P	P	02 54 29.0	0.0
H21K	**Melozitna Rive**	84.06	17	P	P	02 54 28.9	-0.3
H21K				IAmb	IAmb	02 54 35.5	
	comp=Z,10nm,1.1s						
H21K	**Melozitna Rive**	84.06	17	P	P	02 54 30.5	+1.3
	baz=224						
N25K	**Chitina, Valde**	84.12	23	P	P	02 54 30.2	+0.6
N25K				IAmb	IAmb	02 54 34.1	
	comp=Z,9.7nm,1.0s						
N25K	**Chitina, Valde**	84.12	23	P	P	02 54 30.5	+0.8
	baz=232						
MLY	**Manley**	84.24	18	P	P	02 54 30.0	-0.2
MLY	**Manley**	84.24	18	P	P	02 54 31.4	+1.2
	baz=226,SNR=7.4						
HARP	**HAARP**	84.40	22	P	P	02 54 31.9	+0.9
	baz=232						
NEA2	**Nenana**	84.47	19	P	P	02 54 31.2	-0.1
NEA2				IAmb	IAmb	02 54 34.9	
	comp=Z,8.2nm,0.9s						
NEA2	**Nenana**	84.47	19	P	P	02 54 31.9	+0.6
	baz=228,SNR=10						
G21K	**Allakaket**	84.48	16	P	P	02 54 31.4	+0.1
	baz=224						
MCARA	**McCarthy VSAT**	84.59	23	P	P	02 54 32.7	+0.8
	baz=234						
PAX	**Paxson**	84.64	21	P	P	02 54 33.4	+1.1
	baz=231						
WRH	**Wood River Hil**	84.70	20	P	P	02 54 32.3	-0.2
WRH				IAmb	IAmb	02 54 36.1	
	comp=Z,11nm,0.9s						
I23K	**Minto, Yukon-K**	84.75	19	P	P	02 54 34.1	+1.5
	baz=228						
CCB	**Clear Creek Bu**	84.91	19	P	P	02 54 33.2	-0.3
MDM	**Murphy Dome**	84.98	19	P	P	02 54 33.2	-0.7
MDM				IAmb	IAmb	02 54 37.5	
	comp=Z,9.2nm,0.9s						
F21K	**Alatna River**	85.00	16	P	P	02 54 35.0	+1.1
	baz=224						
HDA	**Harding Lake**	85.04	20	P	P	02 54 34.6	+0.4
HDA	**Harding Lake**	85.04	20	P	P	02 54 35.2	+1.1
	baz=230,SNR=12						
TCOL	**CIGO, UAF Yank**	85.04	19	P	P	02 54 33.4	-0.7
TCOL	**CIGO, UAF Yank**	85.04	19	P	P	02 54 35.0	+0.9
	baz=229						
COLA	**College**	85.05	19	P	P	02 54 33.0	-1.2
COLA	**College**	85.05	19	P	P	02 54 33.0	-1.2
COLA				pmax	pmax		
	comp=Z,17nm,0.9s						
COLA	**College**	85.05	19	P	P	02 54 34.8	+0.7
	baz=229						
K24K	**Donnelly Dome**	85.05	21	P	P	02 54 35.3	+1.0
	baz=231						
H23K	**Yukon River**	85.15	18	P	P	02 54 35.8	+1.1
	baz=228						
M26K	**Nabesna, AK**	85.20	23	P	P	02 54 35.9	+0.8
	baz=234						
ILAR	**Eielson Array**	85.30	20	P	P	02 54 35.5	0.0
	comp=Z,2.6nm,0.7s,baz=238,slow=4.8,SNR=18						
ILAR				LR	LR	03 25 35.0	
	comp=Z,107nm,20.8s,baz=235,slow=31						
	comp=Z,2.6nm,0.7s						
ILAR	**Eielson Array**	85.30	20	P	P	02 54 34.4	-1.1
ILAR	**Eielson Array**	85.30	20	P	P	02 54 34.4	-1.1
G22K	**Bettles**	85.33	17	P	P	02 54 37.0	+1.5
	baz=226						
RIDG	**Independent Ri**	85.34	21	P	P	02 54 37.0	+1.2
	baz=232						
POKR	**Poker Plat Res**	85.34	19	P	P	02 54 37.5	+1.8
	baz=230						
O28M	**Mount Upton**	85.37	25	P	P	02 54 37.5	+1.3
	baz=236						
L26K	**Log Cabin Wild**	85.44	22	P	P	02 54 37.5	+1.2
	baz=233						
F22K	**John River**	85.56	16	P	P	02 54 37.9	+1.1
	baz=225						
M27K	**Edge Creek, AK**	85.60	23	P	P	02 54 38.5	+1.3
	baz=235						
G23K	**Bananza Creek**	85.61	17	P	P	02 54 38.4	+1.4
	baz=227						
H24K	**Noodor Dome**	85.67	19	P	P	02 54 38.7	+1.3
	baz=229						
SCRK	**Sand Creek**	85.78	21	P	P	02 54 37.1	-1.0
SCRK				IAmb	IAmb	02 54 42.4	
	comp=Z,13nm,1.1s						
SCRK	**Sand Creek**	85.78	21	P	P	02 54 38.8	+0.8
	baz=233,SNR=12						
YUK3	**Moose Creek**	85.82	24	P	P	02 54 39.4	+1.0
	baz=236,SNR=5.4						
YUK8	**Steele Glacier**	85.82	24	P	P	02 54 39.6	+1.1
	baz=237,SNR=5.1						
COLD	**Coldfoot**	85.91	17	P	P	02 54 40.7	+2.2
	baz=227						
TIXI	**Tiksi**	85.93	350	P	P	02 54 37.9	-0.6
	comp=Z,0.9nm,0.2s,baz=270,slow=3.4,SNR=1.3						
TIXI				LR	LR	03 31 27.7	
	comp=Z,39nm,21.2s,baz=178,slow=34						
	comp=Z,0.9nm,0.2s						
TIXI	**Tiksi**	85.93	350	*ce*P	P	02 54 40.3	+1.9
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.7s						
BVCY	**Beaver Creek**	86.02	23	P	P	02 54 40.8	+1.6
	baz=236						
L27K	**Beaver Creek,**	86.02	22	P	P	02 54 40.7	+1.5
	baz=235,SNR=8.4						
YUK6	**Outpost Mounta**	86.21	25	P	P	02 54 41.6	+1.2
	baz=238						
PRP	**Porcupine Dome**	86.22	19	P	P	02 54 41.3	+1.1
	baz=231						
YUK4	**Talbot Arm**	86.31	25	P	P	02 54 42.0	+1.2

	baz=238						
G24K	Hadweenzic Riv	86.36	18	P	P	02 54 42.3	+1.6
	baz=229						
K27K	Chicken	86.49	21	P	P	02 54 43.3	+1.9
	baz=234						
HYT	Haines Junctio	86.51	25	P	P	02 54 43.0	+1.3
	baz=239						
E23K	Chandalar	86.65	16	P	P	02 54 43.1	+0.9
	baz=227						
SKAG	Skagway	86.76	27	P	P	02 54 44.0	+1.2
	baz=241						
WMQ	Urumqi	86.77	316	eP	P	02 54 42.0	-1.3
WMQ				PcP	PcP	02 54 44.3	-1.3
WMQ				pP	pP	02 54 48.8	-5.1
WMQ				sP	sP	02 54 50.8	-7.0
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
F24K	Squaw Lake	86.77	17	P	P	02 54 43.8	+1.1
	baz=229						
G25K	Bearman Lake	86.82	18	P	P	02 54 44.4	+1.5
	baz=231						
I26K	Coal Creek Min	86.87	20	P	P	02 54 44.8	+1.6
	baz=233						
M29M	Somme Creek	86.97	24	P	P	02 54 45.0	+1.1
	baz=238						
E24K	Your Creek	86.97	17	P	P	02 54 45.1	+1.4
	baz=228						
D23K	Nanushuk River	86.98	15	P	P	02 54 45.1	+1.4
	baz=226						
N30M	Aishikik Lake	87.01	25	P	P	02 54 45.6	+1.5
	baz=239						
YBH	Yreka Blue Hor	87.06	47	LR	LR	03 25 39.3	
	comp=Z,73nm,21.0s,baz=334,slow=30						
EGAK	Eagle	87.25	21	P	P	02 54 46.5	+1.5
	baz=235,SNR=18						
A21K	Barrow	87.30	12	P	P	02 54 46.3	+1.2
	baz=220						
L29M	L29M	87.45	23	P	P	02 54 47.3	+1.1
	baz=238						
F25K	Christian Rive	87.48	18	P	P	02 54 48.0	+1.8
	baz=231						
DAWY	Dawson	87.49	22	P	P	02 54 47.5	+1.1
	baz=237,SNR=8.5						
I27K	Kandik River	87.57	20	P	P	02 54 48.2	+1.5
	baz=235						
D24K	Happy Valley	87.60	16	P	P	02 54 48.7	+2.1
	baz=228						
G26K	Porcupine Rive	87.66	19	P	P	02 54 48.8	+1.9
	baz=233						
BMAR	Burnt Mountain	87.70	18	P	P	02 54 47.2	0.0
M30M	Minto, Yukon	87.70	24	P	P	02 54 49.3	+2.0
	baz=239						
E25K	Arctic Village	87.84	17	P	P	02 54 49.7	+1.8
	baz=231						
H27K	Steamboat Moun	87.96	20	P	P	02 54 50.5	+2.0
	baz=235						
F26K	Sheenjek River	88.00	18	P	P	02 54 50.5	+1.9
	baz=232						
C24K	Franklin Bluff	88.01	15	P	P	02 54 50.4	+1.8
	baz=228						
VES	Vestal, Richgr	88.05	53	P	P	02 54 50.3	+0.8
	baz=254						
ARVC	Arvin	88.06	54	P	P	02 54 50.3	+0.6
	baz=254						
K29M	Barlow Dome	88.07	23	P	P	02 54 50.6	+1.5
	baz=239						
J29M	Klondike Camp	88.13	22	P	P	02 54 51.2	+1.8
	baz=238,SNR=7.3						
G27K	Doyon Strip	88.25	19	P	P	02 54 51.3	+1.5
	baz=235						
D25K	Kavik River	88.37	16	P	P	02 54 51.8	+1.4
	baz=230						
I29M	Ogilvie Camp,	88.58	21	P	P	02 54 51.2	-0.3
I29M				IAmb	IAmb	02 55 03.9	
	comp=Z,13nm,0.9s						
I29M	Ogilvie Camp,	88.58	21	P	P	02 54 52.9	+1.5
	baz=238,SNR=6.7						
EDW2	Edwards Air Fo	88.66	54	P	P	02 54 52.8	+0.3
	baz=255						
DGZ	Jazzator, Alta	88.89	321	i P	P	02 54 52.7	-0.7
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FARO	Faro, Yukon	88.94	25	P	P	02 54 55.5	+2.3
	baz=242						
CWC	Cottonwood Cre	89.00	53	P	P	02 54 55.6	+1.4
	baz=255						
E27K	Coleen River	89.06	18	P	P	02 54 55.9	+2.3
	baz=235						
C26K	Camden Bay	89.15	16	P	P	02 54 56.1	+2.2
	baz=232						
C27K	Jago River	89.30	17	P	P	02 54 57.2	+2.5
	baz=233						
NVAR	Mina Array Bea	89.34	51	P	P	02 54 56.7	+0.8
	comp=Z,1.4nm,0.8s,baz=234,slow=7.3,SNR=11						
NVAR				LR	LR	03 29 04.3	
	comp=Z,56nm,19.9s,baz=301,slow=32						
	comp=Z,1.4nm,0.8s						
MPMC	Manual Prospec	89.36	53	P	P	02 54 57.0	+0.9
	baz=255						
MONP2	Monument Peak	89.43	56	P	P	02 54 57.6	+1.2
	baz=256						
PFO	Pinyon Flats O	89.57	56	LR	LR	03 26 19.9	
	comp=Z,43nm,21.3s,baz=246,slow=30						
KVN	Kaiserville	89.66	50	P	P	02 54 57.0	-0.3
KVN				IAmb	IAmb	02 55 04.1	
	comp=Z,13nm,1.6s						
KVN	Kaiserville	89.66	50	P	P	02 54 57.1	-0.3
KVN				pmax	pmax		
	comp=Z,13nm,1.6s						
EPYK	Eagle Plains	89.67	21	P	P	02 54 58.7	+2.2
	baz=239						
GRAC	Grapevine Rang	89.69	52	P	P	02 54 58.3	+1.0
	baz=255						
GSC	Goldstone, Bar	89.71	54	P	P	02 54 59.0	+1.4
	baz=256						
SWSC	Sam W. Stewart	89.95	56	P	P	02 54 59.7	+1.1
	baz=256						
FURC	Furnace Creek,	89.95	53	P	P	02 55 00.5	+2.0
	baz=256						
HEC	Hector,Ludlow	89.97	55	P	P	02 54 59.9	+1.1
	baz=256						
MMPY	Sheldon Lake,	89.98	25	P	P	02 54 59.4	+1.3
	baz=244						
WTLY	Watson Lake, Y	90.01	28	P	P	02 54 59.1	+0.8
	baz=246						
BELC	Belle Mtn. Jos	90.04	55	P	P	02 54 59.8	+0.7
	baz=256						
G30M	tAoh Zraii Nji	90.15	20	P	P	02 55 00.4	+1.6
	baz=240						
BELA	Belgrano 2	90.20	177	P	P	02 54 58.9	0.0
BELA				IAmb	IAmb	02 55 01.1	
	comp=Z,27nm,1.7s						
SHOC	Shoshone, Teco	90.27	54	P	P	02 55 01.2	+1.2
	baz=256						
BC3	Big Chuckawall	90.40	56	P	P	02 55 01.8	+1.0
	baz=256						
GMRC	Granite Mounta	90.50	55	P	P	02 55 01.7	+0.5
	baz=256						
TPNV	Topopah Spring	90.55	52	P	P	02 55 02.2	+0.7
	baz=256						
IRM	Iron Mountain	90.76	55	P	P	02 55 03.5	+1.2
	baz=256						
GLA	Glamis	90.77	57	P	P	02 55 03.3	+0.9
	baz=257						
F31M	Tsiigehtchic	91.22	20	P	P	02 55 05.5	+1.9
	baz=242						
MK31	Makanchi Array	91.30	317	P	P	02 55 03.8	-0.7
MK31	Makanchi Array	91.30	317	P	P	02 55 03.8	-0.7
MK31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MKAR	Makanchi Array	91.30	317	P	P	02 55 04.0	-0.6
	comp=Z,2.0nm,0.7s,baz=99,slow=6.2,SNR=24						
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	91.30	317	P	P	02 55 03.9	-0.7
MKAR	Makanchi Array	91.30	317	i P	P	02 55 04.4	-0.2
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
R11B	Troy Canyon, C	91.39	51	P	P	02 55 06.2	+0.7
	baz=256						
PDMCI	Parker Dam,Lak	91.61	55	P	P	02 55 06.5	+0.3
	baz=257						
INK	Inuvik	91.69	20	P	P	02 55 05.6	-0.2
	comp=Z,2.2nm,1.0s,baz=207,slow=4.3,SNR=5.8						
INK				LR	LR	03 31 58.8	
	comp=Z,122nm,19.4s,baz=236,slow=33						
	comp=Z,2.2nm,1.0s						
INK	Inuvik	91.69	20	P	P	02 55 06.1	+0.3
INK				IAmb	IAmb	02 55 07.8	
	comp=Z,8.8nm,1.4s						
INK	Inuvik	91.69	20	P	P	02 55 06.1	+0.3
INK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
INK	Inuvik	91.69	20	P	P	02 55 06.8	+1.0
	baz=242						
ZALV	Zalesovo Beam	91.76	325	P	P	02 55 05.0	-1.4
	comp=Z,2.3nm,1.0s,baz=108,slow=4.8,SNR=6.9						
ZALV				LR	LR	03 37 52.8	
	comp=Z,25nm,18.1s,baz=96,slow=36						
	comp=Z,2.3nm,1.0s						
Q12A	Willow Creek R	92.13	51	P	P	02 55 07.8	-0.9
ELK	Elko	92.21	49	LR	LR	03 29 16.5	
	comp=Z,40nm,20.6s,baz=316,slow=31						
PLID	Pearl Lake	92.68	45		P	02 55 09.4	-1.8
PLID				IAmb	IAmb	02 55 13.4	
	comp=Z,6.1nm,1.1s						
NEW	Newport	92.69	41	LR	LR	03 28 34.4	
	comp=Z,74nm,21.4s,baz=299,slow=30						
NEW	Newport	92.69	41	P	P	02 55 11.1	+0.1
	baz=256						
DUG	Dugway, Tooele	93.90	50	P	P	02 55 16.2	-0.7
	baz=258						
KSH	Kashi	94.10	309	P	P	02 55 21.8	+4.0
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	Kurchatov	94.61	321	ceP	P	02 55 19.6	-0.1
KURK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
C36M	Paulatuk	95.26	20	P	P	02 55 22.1	-0.1
C36M				IAmb	IAmb	02 55 26.3	
	comp=Z,7.9nm,1.0s						
C36M	Paulatuk	95.26	20	P	P	02 55 22.4	+0.2
	baz=251						
NRIK	Noril'sk	95.30	340	LR	LR	03 36 23.0	
	comp=Z,116nm,22.0s,baz=121,slow=34						
A36M	Sachs Harbour	95.77	17	P	P	02 55 25.4	+1.0
	baz=250						
SNAA	Sanae	96.28	185	LR	LR	03 35 55.7	
	comp=Z,61nm,20.0s,baz=194,slow=34						
YKA	Yellowknife Ar	97.25	28	P	P	02 55 30.9	-0.5
	comp=Z,2.1nm,0.9s,baz=255,slow=4.6,SNR=28						
	comp=Z,2.1nm,0.9s						
TXAR	Lajitas Array	99.49	62	LR	LR	03 31 48.0	
	comp=Z,42nm,21.9s,baz=254,slow=30						
LAO	LASA Array	99.68	44	P	Pdif	02 55 42.2	-0.6
	baz=263						
BVAR	Borovoye Array	100.01	322	P	Pdif	02 55 42.7	-1.3
	comp=Z,1.3nm,0.8s,baz=111,slow=6.3,SNR=4.3						
BVAR				LR	LR	03 41 01.1	
	comp=Z,52nm,21.1s,baz=79,slow=35						
	comp=Z,1.3nm,0.8s						
L44A	Lake County Fo	112.71	49	P	PKiKP	03 00 36.1	+0.5
	baz=275						
ARCES	ARCESS Array B	115.86	344	PKP	PKPdf	03 00 41.3	+0.3
	comp=Z,2.3nm,0.6s,baz=11,slow=1.9,SNR=3.6						
P52A	Corning	117.34	51	P	PKPdf	03 00 43.9	-0.7
	baz=278						
O53A	New Philadelph	117.96	51	P	PKPdf	03 00 45.5	-0.4
	baz=279						
KMSC	Kings Mountain	118.51	56	P	PKPdf	03 00 46.6	-0.4
	baz=276						
KIV	Kislovodsk	118.85	314	ePKIKP	PKPdf	03 00 47.1	-0.4
KIV				pmax	pmax		
	comp=Z,3.0nm,1.1s						
OBN	Obninsk	119.23	327	i PKIKP	PKPdf	03 00 47.5	-0.2
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SSPA	Standing Stone	120.39	50	P	PKiKP	03 00 50.7	+0.1
	baz=281						
FINES	FINESS Array B	120.82	337	PKP	PKPdf	03 00 49.9	-0.8
	comp=Z,4.2nm,0.9s,baz=94,slow=5.6,SNR=5.6						
BINY	Binghamton	121.45	47	P	PKPdf	03 00 52.2	-0.3
	baz=284						
LONY	Lake Ozonia	121.81	44	P	PKPdf	03 00 52.8	-0.3
	baz=286						
BOSA	Boshof	122.02	225	PKP	PKPdf	03 00 54.0	-0.2
	comp=Z,1.6nm,0.8s,baz=220,slow=3.9,SNR=4.0						
PAL	Palisades	123.25	48	P	PKPdf	03 00 55.5	-0.4
	baz=285						
LPAZ	La Paz	123.37	118	PKP	PKiKP	03 00 58.0	+0.1
	comp=Z,1.5nm,0.9s,baz=225,slow=7.7,SNR=5.5						
LPAZ	La Paz	123.37	118	PKIKP	PKiKP	03 00 58.0	+0.1
L61B	Northampton	123.75	46	P	PKiKP	03 00 57.3	+0.1
	baz=286						
NACGM	Naroch	124.29	330	ePKP	PKPdf	03 00 56.9	-0.6
	comp=Z,19nm,1.3s,baz=57						
AKASG	Malin Array Be	125.16	325	PKP	PKPdf	03 00 59.2	-0.1
	comp=Z,3.8nm,0.8s,baz=56,slow=2.1,SNR=13						
AKASG				PP	PP	03 02 50.0	+1.3
	comp=Z,0.3nm,0.2s,baz=12,slow=7.4,SNR=5.1						
AKASG	Malin Array Be	125.16	325	PKPdf	PKPdf	03 00 58.4	-0.9
PKME	Peaks-Kenny Pk	125.17	42	P	PKiKP	03 01 00.2	+0.3
	baz=291						
NB2	NORSAR Subarra	126.15	343	PKPdf	PKPdf	03 01 01.3	+0.3
	comp=Z,8.3nm,1.0s,baz=37,slow=1.9						
NB2	NORSAR Subarra	126.15	343	PKPdf	PKPdf	03 01 01.3	+0.3
	baz=37,slow=1.9						
NOA	NORSAR Array B	126.15	343	PKP	PKPdf	03 01 01.2	+0.3
	comp=Z,2.9nm,0.8s,baz=36,slow=2.0,SNR=11						
CPUP	Villa Florida	126.44	135	PKP	PKiKP	03 01 03.3	+0.3
	comp=Z,5.6nm,1.0s,baz=234,slow=4.1,SNR=7.4						
BRTR	Keskin Array B	126.45	311	PKP	PKiKP	03 01 03.3	+0.5
	comp=Z,1.2nm,1.0s,baz=14,slow=2.5,SNR=5.5						
BRTR	Keskin Array B	126.45	311	PKPdf	PKPdf	03 01 01.9	-0.5
BRTR	Keskin Array B	126.45	311	PKIKP	PKPdf	03 01 01.9	-0.5
SIV	San Ignacio	129.49	122	PKP	PKiKP	03 01 09.6	+0.2
	comp=Z,3.1nm,1.0s,baz=267,slow=3.0,SNR=9.4						
VYHS	Vyhne	132.03	327	ePKIKP	PKiKP	03 01 15.0	+1.5
VYHS	Vyhne	132.03	327	ePKP	PKiKP	03 01 15.0	+1.5
BRG	Berggiesshubel	132.86	333	ePKP	PKiKP	03 01 15.5	+0.3
BRG				Amp		03 01 18.3	
	comp=Z,3.9nm,0.8s						
BRG	Berggiesshubel	132.86	333	ePKIKP	PKiKP	03 01 15.4	+0.3
BRG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MODS	Modra-Piesok	132.92	328	ePKIKP	PKiKP	03 01 15.8	+0.4
MODS	Modra-Piesok	132.92	328	ePKP	PKiKP	03 01 15.8	+0.4
CLL	Collm	132.97	334	i PKPdf	PKiKP	03 01 15.8	+0.5
	comp=Z,6.0nm,0.9s						
CLL				eSKPdf	SKiKP	03 04 53.0	+4.5
CLL	Collm	132.97	334	i PKIKP	PKiKP	03 01 15.8	+0.5
CLL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
RONA	Rosalia, Austr	133.85	328	ePKiKP	PKiKP	03 01 18.1	+0.8
	comp=Z,4.2nm,0.9s						
CONA	Conrad Observa	133.93	328	i PKiKP	PKiKP	03 01 17.7	+0.2
	comp=Z,3.4nm,1.1s						
KHC	Kasperske Hory	134.25	331	ePKP	PKiKP	03 01 18.5	+0.4
KHC	Kasperske Hory	134.25	331	ePKIKP	PKiKP	03 01 18.5	+0.4
GERES	GERESS Array B	134.39	331	PKP	PKPdf	03 01 16.9	-0.1
	comp=Z,1.7nm,0.8s,baz=90,slow=1.3,SNR=12						
MOA	Molln	134.79	329	epPKiKP	PKiKP	03 01 22.0	+2.8
	comp=Z,5.2nm,1.4s						
BIOA	Bad Ischl, Aus	135.21	330	ePKiKP	PKiKP	03 01 19.5	-0.5
	comp=Z,5.3nm,1.3s						
OBKA	Obir	135.54	328	ePKP	PKPdf	03 01 19.8	+0.6
	comp=Z,11nm,1.5s						
KBA	Koelnbreinsper	135.77	329	i PKiKP	PKiKP	03 01 22.0	+0.6
	comp=Z,6.4nm,1.1s						
MEM	Membach	136.34	338	dPKP	PKiKP	03 01 23.1	+0.9
ABTA	Abfaltersbach	136.42	329	ePKP	PKPdf	03 01 20.7	-0.2
	comp=Z,9.5nm,1.3s						
WATA	Walderalm	136.46	331	ePKiKP	PKPdf	03 01 21.9	+0.9
	comp=Z,8.6nm,1.1s						
WTTA	Wattenberg	136.49	331	ePKiKP	PKiKP	03 01 22.8	-0.1
	comp=Z,5.5nm,0.8s						
MOTA	Moosalm	136.68	331	ePKiKP	PKiKP	03 01 23.0	-0.2
	comp=Z,4.8nm,0.9s						
SQTA	Sankt Quirin	136.72	331	ePKiKP	PKiKP	03 01 22.9	-0.3
	comp=Z,4.6nm,0.8s						
RETA	Reutte	136.74	331	ePKiKP	PKiKP	03 01 23.2	0.0
	comp=Z,3.5nm,1.4s						
BMRD	Maredsous	137.04	338	dPKP	PKiKP	03 01 24.3	+0.7
WLF	Walferdange	137.05	337	dPKP	PKiKP	03 01 24.2	+0.5
FETA	Feichten	137.09	331	ePKiKP	PKiKP	03 01 23.6	-0.5
	comp=Z,4.1nm,0.9s						
DAVA	Damuels	137.30	332	ePKiKP	PKiKP	03 01 23.9	-0.6
	comp=Z,6.7nm,1.2s						
MDP	Montagnes des	145.34	98	PKPbc	PKPab	03 01 38.4	+0.6
	comp=Z,52nm,1.1s,baz=266,slow=4.1,SNR=5.7						
KEST	Kesra	145.39	319	PKPbc	PKPbc	03 01 36.9	-0.3
	comp=Z,12nm,0.9s,baz=344,slow=3.4,SNR=9.1						
POLO	Lamas de Olo	148.97	345	ePKP	PKiKP	03 01 48.0	-0.5
PVRL	Vila Real	149.04	345	ePKP	PKiKP	03 01 48.2	-0.4
ESDC	Sonseca Array	149.32	338	PKPbc	PKPbc	03 01 47.7	-0.4
	comp=Z,2.8nm,1.0s,baz=360,slow=4.1,SNR=11						
PVIS	Viseu	149.61	344	ePKP	PKiKP	03 01 50.2	+0.4
MTE	Manteigas	149.81	344	ePKP	PKiKP	03 01 50.2	-0.1
COI	Coimbra	150.22	345	ePKP	PKiKP	03 01 52.3	+1.3
PCBR	Castelo Branco	150.31	343	ePKP	PKiKP	03 01 51.2	0.0
PMRV	Marv??o	150.67	343	ePKP	PKiKP	03 01 52.1	+0.1
PMTG	Montargil	151.24	344	ePKP	PKPbc	03 01 52.8	+0.2
PESTR	Estremoz	151.25	343	ePKP	PKPbc	03 01 52.8	+0.1
EVO	Evora	151.68	343	ePKP	PKiKP	03 01 54.9	+0.8
PBAR	Barrancos	151.72	341	ePKP	PKiKP	03 01 54.7	+0.5
PBEJ	Beja	152.11	342	ePKP	PKiKP	03 01 55.7	+0.7
TORD	Torodi Ar. Bea	160.51	277	PKP	PKPdf	03 01 59.5	-0.2
	comp=Z,3.1nm,1.0s,baz=49,slow=1.0,SNR=13						
TORD				PKPab	PKPab	03 02 41.4	+0.4
	comp=Z,7.9nm,1.1s,baz=84,slow=3.9,SNR=7.4						

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*SJA **27** 03:03:31.6±1.4, 36°.19S×71°.86W, h90^{km}±34^{km}, ML4.8, MW4.7, Hypocentre not reviewed by the ISC*

*NEIC **27** 03:03:32.1, 36°.24S×71°.76W, h86^{km}*

*GUC **27** 03:03:32.9±0.6, 36°.25S×71°.77W, h92^{km}±6^{km}, ML5.1*

*NEIC **27** 03:03:32.3±1.5, 36°.24S±0°.05×71°.74W±0°.09, h89^{km}±5^{km}, mb4.8/71, Mwr5.0/50, Mwr5.1(GUC), Error ellipse: s-maj=11.0km s-min=7.0km az=102.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.09; $M_{\theta\theta}$-1.56; $M_{\phi\phi}$1.47; $M_{r\theta}$0.55; $M_{\theta\phi}$1.15; $M_{\phi r}$-3.40; Fault plane solution: $M_0$3.94000×10^{16} NP1:ϕ_s341.85000°, δ89.53000°, λ-118.14000°. NP2:ϕ_s250.97000°, δ28.14000°, λ-1.00000°. Principal axes: T 4.3055, Plg38.0000°, Azm97.0000°; N -0.8823, Plg28.0000°, Azm342.0000°; P -3.4231, Plg39.0000°, Azm226.0000°;*

*VAO **27** 03:03:32.2±0.3, 36°.32S×71°.76W, h85^{km}, mb5.1*

*IDC **27** 03:03:33.3±0.6, 36°.19S×71°.53W, h88^{km}±5^{km}, mb4.5/14, mbtmp4.8/19, MS3.8/24, Error ellipse: s-maj=16.7km s-min=8.7km az=96.0*

*GCMT **27** 03:03:35.3±0.2, 36°.34S±0°.01×71°.79W±0°.02, h103^{km}±2^{km}, MW5.1/103, Moment Tensor Solution. s53,c65; s103,c148; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.53±.12; $M_{\theta\theta}$-2.06±.12; $M_{\phi\phi}$2.59±.15; $M_{r\theta}$1.16±.07; $M_{\theta\phi}$2.31±.10; $M_{\phi r}$-3.37±.09; Best double couple: $M_0$4.85600×10^{16} NP1:ϕ_s341.00000°, δ86.00000°, λ-132.00000°. NP2:ϕ_s246.00000°, δ42.00000°, λ-6.00000°. Principal axes: T 5.0140, Plg29.0000°, Azm103.0000°; N -0.3200, Plg42.0000°, Azm344.0000°; P -4.6980, Plg35.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 03:03:32.6±0.4**, 36°.23S**±0°.03×**71°.79W**±0°.05**, h91**^{km}±3^{km}**, h91**^{km}**:pP-P, n316, **σ**1^{s}31**/338**, mb4.8**/52**, 5C-22D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ML02	Panimavida	0.56	33	⇓iP	Pn	03 03 47.8	-0.1
GO05	Huala	1.22	355	⇓iP	Pn	03 03 55.5	+0.5
GO05				eS	Sn	03 04 12.2	+0.4
GO05				IAML		03 04 15.3	
	comp=N,30µm,0.2s						
CCSP	San Pedro de C	1.23	240	eP	Pn	03 03 55.3	+0.4
CCSP				eS	Sn	03 04 12.1	+0.2
BI05	Punta Hualpn	1.24	245	Pn	Pn	03 03 55.7	+0.5
BI05	Punta Hualpn	1.24	245	⇑iP	Pn	03 03 55.5	+0.4
BI05				eS	Sn	03 04 12.5	+0.3
BI05				IAML		03 04 14.0	
	comp=N,47µm,0.2s						
BO02	Sierra Bellavi	1.65	30		Pn	03 04 01.1	+0.7
BO02				Sn	Sn	03 04 20.8	-0.7
BO02	Sierra Bellavi	1.65	30	⇓iP	Pn	03 04 01.1	+0.7
BO02				eS	Sn	03 04 22.0	+0.5
BO02				IAML		03 04 25.6	
	comp=E,33µm,0.2s						
BO02	Sierra Bellavi	1.65	30	i P		03 04 01.2	
BO02				eS		03 04 22.7	
BO02				IAML		03 04 24.9	
	comp=Z,12µm,0.1s						
BO03	Pichilemu	1.73	355	⇓iP	Pn	03 04 01.6	+0.2
BO03				eS	Sn	03 04 23.4	+0.2
BO03				IAML		03 04 25.7	
	comp=E,16µm,0.2s						
BO01	Tunca	1.92	18	Pn	Pn	03 04 03.8	0.0
BO01				Sn	Sn	03 04 26.5	-1.0
BO01	Tunca	1.92	18	⇓eP	Pn	03 04 04.0	+0.2
BO01				eS	Sn	03 04 27.2	-0.4
BO01				IAML		03 04 29.5	
	comp=N,12µm,0.2s						
BO01	Tunca	1.92	18	i P		03 04 04.1	
BO01				eS		03 04 26.9	
BO01				IAML		03 04 28.6	
	comp=Z,8µm,0.3s						
EDS3	Malargue	1.99	77	i P		03 04 06.1	
EDS3				eS		03 04 30.2	
MT01	Popeta	2.40	11	Pn	Pn	03 04 10.2	+0.1
MT01				Sn	Sn	03 04 37.5	-1.4
MT01	Popeta	2.40	11	⇓eP	Pn	03 04 10.3	+0.1
MT01				eS	Sn	03 04 39.3	+0.5
MT01				IAML		03 04 41.0	
	comp=E,15µm,0.3s						
MT01	Popeta	2.40	11	i P		03 04 10.7	
MT01				eS		03 04 38.1	
MT01				IAML		03 04 44.4	
	comp=Z,5µm,0.3s						
MT09	Talagante	2.53	15	Pn	Pn	03 04 11.9	-0.1
MT09	Talagante	2.53	15	⇓iP	Pn	03 04 12.0	-0.1
MT09				eS	Sn	03 04 42.0	-0.3
VA05	Santo Domingo	2.57	3	Pn	Pn	03 04 11.6	-0.8
VA05	Santo Domingo	2.57	3	eP	Pn	03 04 11.8	-0.6
VA05				i S	Sn	03 04 41.6	-1.2
VA05				IAML		03 04 49.1	
	comp=N,14µm,0.4s						
MT12	Pirque	2.69	23	⇓eP	Pn	03 04 14.0	0.0
MT12				eS	Sn	03 04 46.2	+0.4
LMEL	Las Melosas	2.71	29	Pn	Pn	03 04 15.6	+1.2
LMEL	Las Melosas	2.71	29	eP	Pn	03 04 15.6	+1.2
LMEL				eS	Sn	03 04 47.3	+0.8
BI04	Isla Mocha	2.75	217	i P	Pn	03 04 13.1	-1.6
BI04				eS	Sn	03 04 45.5	-1.5
MT13	San Alfonso	2.77	27	Pn	Pn	03 04 16.0	+0.8
MT13	San Alfonso	2.77	27	⇓eP	Pn	03 04 16.2	+1.0
MT13				eS	Sn	03 04 48.2	+0.4
MT13				IAML		03 04 53.1	
	comp=E,5µm,0.3s						
LC02	Puerto Saavedr	2.85	206	Pn	Pn	03 04 15.1	-0.9
LC02	Puerto Saavedr	2.85	206	eP	Pn	03 04 15.2	-0.9
LC02				eS	Sn	03 04 48.4	-1.3
MT03	Universidad Ad	2.92	21	Pn	Pn	03 04 17.4	+0.1
MT03	Universidad Ad	2.92	21	⇓eP	Pn	03 04 17.2	-0.1
MT03				eS	Sn	03 04 51.8	+0.3
MT03				IAML		03 04 58.6	
	comp=E,6µm,0.2s						
MT03	Universidad Ad	2.92	21	i P		03 04 17.6	
MT03				IAML		03 04 56.8	
	comp=Z,2µm,0.2s						
MT05	Renca	2.96	17	Pn	Pn	03 04 17.6	0.0
MT05	Renca	2.96	17	⇓eP	Pn	03 04 17.7	0.0
MT05				eS	Sn	03 04 52.8	+0.4
MT05				IAML		03 04 56.2	
	comp=N,7µm,0.3s						
MT05	Renca	2.96	17	i P		03 04 18.0	
MT05				IAML		03 04 55.2	
	comp=Z,3µm,0.2s						
MT02	Curacav	3.01	10	Pn	Pn	03 04 18.0	-0.3
MT02	Curacav	3.01	10	⇓eP	Pn	03 04 18.0	-0.3
MT02				i S	Sn	03 04 52.5	-1.0
MT02				IAML		03 04 54.8	
	comp=N,4µm,0.3s						
MT02	Curacav	3.01	10	i P		03 04 18.3	
MT02				eS		03 04 52.9	
MT02				IAML		03 05 05.7	
	comp=Z,2µm,0.8s						
MT10	Hacienda Santa	3.12	20	⇓eP	Pn	03 04 20.0	+0.1
MT10				eS	Sn	03 04 56.7	+0.2
MT04	Ro Olivares	3.13	26	⇓eP	Pn	03 04 20.8	+0.7
MT04				eS	Sn	03 04 57.2	+0.5
MT04				IAML		03 05 02.2	
	comp=N,4µm,0.2s						
MT08	Bocatoma Ro	3.14	28	Pn	Pn	03 04 21.0	+0.8
MT08	Bocatoma Ro	3.14	28	⇓eP	Pn	03 04 21.3	+1.1
MT08				eS	Sn	03 04 57.4	+0.5
FCH	Farellones	3.15	24	⇓eP	Pn	03 04 20.7	+0.3

FCH				IAML		03 05 01.0	
	comp=E,5µm,0.3s						
VA01	Torpederas	3.20	2	Pn	Pn	03 04 20.1	-0.8
VA01	Torpederas	3.20	2	⇓eP	Pn	03 04 20.3	-0.5
VA01				iS	Sn	03 04 56.6	-1.4
VA01				IAML		03 04 58.0	
	comp=E,5µm,0.4s						
VA01	Torpederas	3.20	2	iP		03 04 20.5	
VA01				IAML		03 04 59.4	
	comp=Z,1µm,0.5s						
PEL	Peldehue	3.21	17	Pn	Pn	03 04 21.0	0.0
PEL	Peldehue	3.21	17	⇓eP	Pn	03 04 21.0	0.0
PEL				eS	Sn	03 04 57.6	-0.7
PEL	Peldehue	3.21	17	eP		03 04 21.2	
PEL				eS		03 04 58.9	
ROC1	El Roble	3.31	11	Pn	Pn	03 04 22.4	-0.2
ROC1	El Roble	3.31	11	iP		03 04 22.5	
ROCH	El Roble	3.31	11	⇓eP	Pn	03 04 22.4	-0.2
ROCH				eS	Sn	03 05 00.7	-0.4
GO06	Curarrehue	3.36	176	Pn	Pn	03 04 23.4	+0.4
GO06	Curarrehue	3.36	176	eP	Pn	03 04 23.6	+0.5
GO06				iS	Sn	03 05 03.5	+1.5
LR03	Panguipulli	3.43	187	Pn	Pn	03 04 23.4	-0.4
LR03	Panguipulli	3.43	187	⇓eP	Pn	03 04 23.6	-0.2
LR03				eS	Sn	03 05 02.5	-0.9
VA03	San Esteban	3.60	17	Pn	Pn	03 04 26.1	-0.3
VA03	San Esteban	3.60	17	⇓eP	Pn	03 04 26.1	-0.3
VA03				iS	Sn	03 05 07.3	-0.6
VA03	San Esteban	3.60	17	iP		03 04 26.3	
VA03				IAML		03 05 11.6	
	comp=Z,3µm,0.2s						
VA06	Catapilco	3.68	7	Pn	Pn	03 04 26.5	-0.8
LR02	Universidad Au	3.75	197	eP	Pn	03 04 27.2	-1.0
LR02				iS	Sn	03 05 07.9	-3.4
LR04	Corral	3.87	199	Pn	Pn	03 04 28.2	-1.5
LR04	Corral	3.87	199	⇑eP	Pn	03 04 28.3	-1.5
LR04				eS	Sn	03 05 10.0	-4.1
AAGR	Agrelo	3.97	39	iP		03 04 32.5	
AAGR				IAML		03 05 46.0	
	comp=Z,692nm,1.4s						
LR05	Currie	4.00	182	⇓eP	Pn	03 04 31.8	+0.3
ASAL	Salagasta	4.38	35	iP		03 04 37.9	
ASAL				IAML		03 06 13.8	
	comp=Z,257nm,1.4s						
PLCA	Paso Flores	4.60	168	P	Pn	03 04 40.5	+0.7
	comp=Z,140nm,0.5s,baz=336,slow=11,SNR=832						
PLCA				S	Sn	03 05 33.3	+1.2
	comp=Z,159nm,0.8s,baz=273,slow=6.3,SNR=5.9						
PLCA	Paso Flores	4.60	168	Pn	Pn	03 04 39.6	-0.3
PLCA	Paso Flores	4.60	168	iP		03 04 40.8	
PLCA				IAML		03 06 05.3	
	comp=Z,221nm,1.2s						
LL04	Puerto Octay	4.70	186	Pn	Pn	03 04 40.2	-0.9
RTLS	Leoncito	4.88	26	iP		03 04 45.4	
RTLS				IAML		03 05 43.6	
	comp=Z,2µm,0.9s						
LL03	Petrohue	4.93	185	Pn	Pn	03 04 43.6	-0.5
CO02	Combarbal	5.05	8	Pn	Pn	03 04 45.0	-1.1
CO02	Combarbal	5.05	8	iP		03 04 45.0	
CO02				IAML		03 05 43.8	
	comp=Z,1µm,0.2s						
LL05	Los Muermos	5.33	194	Pn	Pn	03 04 47.5	-2.2
ZON	Zonda	5.34	30	Pn	Pn	03 04 49.9	0.0
CO03	El Pedregal	5.45	10	Pn	Pn	03 04 50.7	-0.8
CFA	Coronel Fontan	5.48	34	P	Pn	03 04 51.2	-0.5
	comp=Z,123nm,0.4s,baz=192,slow=13,SNR=528						
CFA				S	Sn	03 05 51.5	-1.9
	comp=Z,128nm,0.3s,baz=306,slow=20,SNR=11						
CO06	Fray Jorge	5.54	1	Pn	Pn	03 04 51.1	-1.5
GO04	Tololo Observa	6.10	8	Pn	Pn	03 04 58.8	-1.6
LL06	Loncomilla	6.15	193	Pn	Pn	03 04 58.2	-2.5
CO05	La Serena	6.31	4	Pn	Pn	03 05 01.4	-1.7
VA04	Juan Fernndez	6.33	292	Pn	Pn	03 05 04.6	+1.3
CO01	Juntas del Tor	6.39	13	Pn	Pn	03 05 04.1	-0.4
LL07	Hotel Espejo d	6.72	191	Pn	Pn	03 05 06.4	-2.2
LL02	Futaleuf	6.95	180	Pn	Pn	03 05 11.2	-0.6
GO07	Milladeo Hill,	7.03	191	Pn	Pn	03 05 10.1	-2.7
LCO	Las Campanas	7.26	8	Pn	Pn	03 05 14.5	-1.7
AC05	El Transito	7.48	10	Pn	Pn	03 05 17.7	-1.5
AC04	Llanos de Chal	8.02	5	Pn	Pn	03 05 24.5	-1.9
TRQA	Tornquist	8.04	106	Pn	Pn	03 05 25.7	-1.0
AY01	Puyuhuapi	8.21	184	Pn	Pn	03 05 27.4	-1.3
GO03	Copiap	8.71	9	Pn	Pn	03 05 33.3	-2.6
AC06	Mina Casimiro	8.93	8	Pn	Pn	03 05 36.0	-2.8
COYC	Coyhaique	9.34	181	Pn	Pn	03 05 42.8	-1.4
AC01	Pan de Azucar	10.10	6	Pn	Pn	03 05 51.0	-3.7
AY02	Valle Explorad	10.30	185	Pn	Pn	03 05 56.3	-1.0
GO02	Mina Guanaco	11.19	10	Pn	Pn	03 06 06.9	-3.0
GO08	Villa O'Higgin	12.24	182	Pn	Pn	03 06 21.8	-1.7
VACA	Villa Angela C	12.72	51	eP	Pn	03 06 30.3	+0.3
MECA	Mercedes	13.38	63	eP	Pn	03 06 37.9	-0.8
LVC	Limon Verde	13.80	11	P	Pn	03 06 44.5	-0.1
	comp=Z,5.0nm,0.5s,baz=173,slow=11,SNR=12						
LVC				LR	LR	03 12 29.5	
	comp=Z,247nm,19.9s,baz=207,slow=39						
LVC	Limon Verde	13.80	11	Pn	Pn	03 06 43.2	-1.4
LVC	Limon Verde	13.80	11	eP	Pn	03 06 44.9	+0.3
ITQB	Itaqui	14.31	67	Pn	Pn	03 06 47.0	-3.8
ITQB	Itaqui	14.31	67	eP	Pn	03 06 50.0	-0.8
PB09	IPOC Station P	14.55	9	Pn	Pn	03 06 53.6	-0.6
PB02	IPOC Station P	14.95	7	Pn	Pn	03 06 57.6	-1.6
GO09	Cerro Castillo	15.04	181	Pn	Pn	03 06 58.0	-2.0
RODS	Rosario do Sul	15.06	72	eP	Pn	03 06 59.4	-1.0
PB01	IPOC Station P	15.26	8	Pn	Pn	03 07 02.2	-1.0
MG05	Puerto Natales	15.45	182	Pn	Pn	03 07 03.2	-2.0
AZCA	Azaras, Argent	15.65	63	eP	Pn	03 07 07.3	-0.5
PLTB	Pedras Altas	15.72	79	Pn	Pn	03 07 06.6	-2.2
PLTB	Pedras Altas	15.72	79	eP	Pn	03 07 07.4	-1.5
CPUP	Villa Florida	15.80	55	P	Pn	03 07 08.4	-1.4
	comp=Z,12nm,1.0s,baz=228,slow=11,SNR=20						
CPUP				LR	LR	03 13 49.1	
	comp=Z,837nm,18.6s,baz=236,slow=40						
CPUP	Villa Florida	15.80	55	P	Pn	03 07 10.0	+0.2
CPUP	Villa Florida	15.80	55	eP	P	03 07 11.1	-0.7
ESFA	Espinillo Form	16.02	49	eP	P	03 07 13.9	-0.4
PB08	IPOC Station P	16.20	9	Pn	Pn	03 07 13.8	-1.3
CPSB	Cacapava Do Su	16.39	75	eP	Pn	03 07 15.6	-1.6
PB11	IPOC Station P	16.51	7	Pn	Pn	03 07 18.0	-0.9
MNMC	Minye Minye	17.14	7		Pn	03 07 25.7	-1.0
CRSM	Crissiumal (Br	17.39	65	eP	Pn	03 07 28.4	-1.0
ALGR	Alto Alegre (B	17.46	70	eP	P	03 07 27.0	-3.2
MG03	Isla Dawson	17.64	177		P	03 07 31.0	-1.0
EFI	East Falkland	18.28	152	P	P	03 07 37.6	-1.3
USHA	Ushuaia	18.75	174	P	Pn	03 07 45.8	+0.3
	comp=Z,52nm,0.9s,baz=34,slow=4.3,SNR=9.0						
CNLB	Canela	18.89	75	eP	P	03 07 45.6	-0.3
ITAB	Concordia	18.95	67	P	P	03 07 45.0	-1.4
ITAB	Concordia	18.95	67	eP	P	03 07 46.0	-0.5
FRBT	Francisco Belt	18.99	63	eP	P	03 07 46.4	-0.6
MCR1	Marechal Candi	19.26	57	eP	P	03 07 49.7	-0.3
AMBA	Amambai (Brazi	19.69	52	eP	P	03 07 54.4	-0.2
LPAZ	La Paz	20.13	10	P	Pn	03 08 02.0	-0.5
	comp=Z,18nm,0.9s,baz=177,slow=9.9,SNR=20						
	comp=Z,18nm,0.9s						
PTGB	Pitanga	20.47	61	eP	P	03 08 01.7	-1.4
BDQN	Bodoquena, MS	20.51	44	eP	P	03 08 02.8	-0.7
AQDB	Aquidauana	21.09	46	P	P	03 08 08.0	-1.7
AQDB	Aquidauana	21.09	46	eP	P	03 08 08.9	-0.8
BBSD	Serra de San D	21.40	31	eP	P	03 08 13.3	+0.3
SIV	San Ignacio	22.30	28	P	P	03 08 22.1	-0.6
	comp=Z,42nm,1.0s,baz=218,slow=10,SNR=78						
SIV				LR	LR	03 18 43.8	
	comp=Z,168nm,20.0s,baz=236,slow=41						
	comp=Z,42nm,1.0s						
PTLB	Pontes e Lacer	23.57	32	P	P	03 08 33.7	-1.4
PTLB	Pontes e Lacer	23.57	32	eP	P	03 08 34.6	-0.4
PP1B	Ponte de Pedra	23.84	43	eP	P	03 08 37.0	-0.4
C2SB	Chapadao do Su	24.11	49	eP	P	03 08 39.3	-0.5
PET01	Itanhaem-SP	24.22	67	eP	P	03 08 39.7	-1.1
SPB	Sao Paulo	24.51	66	P	P	03 08 41.8	-1.6
SPB	Sao Paulo	24.51	66	eP	P	03 08 43.8	+0.4
NNA	Nana	24.56	348	LR	LR	03 16 47.6	
	comp=Z,78nm,18.3s,baz=173,slow=32						
SALV	Santo Antonio	24.81	39	eP	P	03 08 45.9	-0.3
ITRB	Iturama	25.00	55	eP	P	03 08 46.7	-1.3
RCLB	Rio Claro- Sao	25.15	63	eP	P	03 08 48.5	-0.8
VAO	Valinhos	25.20	65	eP	P	03 08 49.6	-0.3
BB19B	Bebedouro	25.31	60	eP	P	03 08 49.8	-1.0
VILB	Vilhena	25.41	27	P	P	03 08 50.4	-1.3
VILB	Vilhena	25.41	27	eP	P	03 08 51.6	-0.2
PARB	Paraibuna	26.00	68	eP	P	03 08 57.3	+0.2
ETMB	Extrema	26.78	12	P	P	03 09 04.2	+0.2
ETMB				IAmb	IAmb	03 09 06.2	
	comp=Z,42nm,1.2s						
ETMB	Extrema	26.78	12	eP	P	03 09 05.3	+1.3
ARAG	Araguaiana, MT	27.11	46	eP	P	03 09 05.9	-1.1
PDRB	Porto dos Gac	28.03	33	eP	P	03 09 14.7	-0.6
VAS01	Vassouras-RJ	28.25	68	eP	P	03 09 17.1	0.0
SAML	Samuel	28.26	18	P	P	03 09 15.5	-1.8
SAML	Samuel	28.26	18	eP	P	03 09 17.6	+0.3
CZSB	Cruzeiro do Su	28.38	358	P	P	03 09 18.3	-0.1
CZSB				IAmb	IAmb	03 10 15.4	
	comp=Z,21nm,1.1s						
CZSB	Cruzeiro do Su	28.38	358	eP	P	03 09 19.8	+1.5
PMNB	Patos De Minas	28.46	58	eP	P	03 09 18.4	-0.7
PMSA	Palmer Station	28.96	173	LR	LR	03 20 07.5	
	comp=Z,202nm,18.8s,baz=320,slow=34						
CLDB	Colider	29.10	34	eP	P	03 09 25.1	+0.4
DUB01	Friburgo-RJ	29.17	69	eP	P	03 09 25.3	-0.1
BDFB	Brasilia	29.48	52	P	P	03 09 26.3	-1.9
	comp=Z,19nm,0.9s,baz=221,slow=6.5,SNR=25						
BDFB				LR	LR	03 22 34.3	
	comp=Z,219nm,19.7s,baz=218,slow=39						
	comp=Z,19nm,0.9s						
BDFB	Brasilia	29.48	52	P	P	03 09 25.5	-2.7
BDFB	Brasilia	29.48	52	eP	P	03 09 27.0	-1.3
CAM01	Campos-RJ	29.86	70	eP	P	03 09 32.3	+0.9
SNDB	Serra Nova Dou	30.41	43	eP	P	03 09 35.5	-0.8
TBTG	Tabatinga, AM	31.93	4	P	P	03 09 49.6	-0.1
TBTG	Tabatinga, AM	31.93	4	eP	P	03 09 51.1	+1.4
SJMB	Sao Joao De Ma	32.09	65	eP	P	03 09 50.5	-0.7
JANB	Januaria	32.34	56	eP	P	03 09 51.7	-1.6
NPGB	Novo Progresso	32.71	31	eP	P	03 09 56.0	-0.5
RPN	Rapa Nui	33.05	275	LR	LR	03 20 03.6	
	comp=Z,185nm,18.7s,baz=101,slow=30						
TEFE	Tefe	33.22	13	eP	P	03 10 01.5	+0.5
SDBA	SAO DESIDERIO	33.89	52	eP	P	03 10 05.8	-1.0
GUA01	Guaratinga, BA	34.46	64	eP	P	03 10 10.3	-1.4
MACA	Manacapuru-AM	34.47	20		P	03 10 09.8	-1.9
MACA				IAmb	IAmb	03 11 00.1	
	comp=Z,17nm,1.1s						
MACA	Manacapuru-AM	34.47	20	eP	P	03 10 11.9	+0.2
ITTB	Itaituba	34.99	29	eP	P	03 10 15.8	-0.4
SMTB	Santa Maria do	35.03	45	eP	P	03 10 16.2	-0.4
PRPB	Parauapebas	36.06	39	eP	P	03 10 24.8	-0.7
SGCB	S£o Gabriel d	36.20	8	eP	P	03 10 26.4	-0.1
OTAV	Otavalo	36.81	349	P	P	03 10 29.6	-2.7
OTAV	Otavalo	36.81	349	P	P	03 10 36.3	+4.0
OTAV				pP	pP	03 10 56.5	+3.1
BOAV	Boa Vista	39.84	18	P	P	03 10 56.1	-1.1
BOAV				IAmb	IAmb	03 10 57.4	
	comp=Z,13nm,1.2s						
BOAV	Boa Vista	39.84	18	eP	P	03 10 57.3	+0.1
MCPB	Macapa, AP	40.12	32	eP	P	03 10 59.7	+0.2
TMAB	Tom-Au,PA,Br	40.19	38	eP	P	03 10 60.0	-0.1
ROSC	El Rosal	40.92	356	P	P	03 11 07.3	+0.8
	comp=Z,9.0nm,0.5s,baz=148,slow=13,SNR=3.5						
	comp=Z,9.0nm,0.5s						
BELA	Belgrano 2	44.66	170	P	P	03 11 36.5	+0.9
BELA				IAmb	IAmb	03 11 60.0	
	comp=Z,13nm,1.0s						
RCBR	Riachuelo	44.68	56	eP	P	03 11 37.5	+1.0
MDP	Montagnes des	44.86	28	P	P	03 11 37.7	-0.2
	comp=Z,31nm,1.0s,baz=205,slow=9.2,SNR=7.9						
MDP				pP	pP	03 11 58.5	-1.2
	comp=Z,15nm,0.8s,baz=196,slow=10,SNR=2.4						
MDP				LR	LR	03 30 59.5	
	comp=Z,81nm,18.8s,baz=205,slow=37						
	comp=Z,31nm,1.0s						
SDV	Santo Domingo	44.89	2	P	P	03 11 37.8	-0.5
SDV	Santo Domingo	44.89	2	eP	P	03 11 39.0	+0.7
BAUV	El Baul	45.07	5	P	P	03 11 38.9	-0.7
VNA3	Neumayer Olymp	47.23	157	P	P	03 11 57.2	+1.3
VNA1	Neumayer--Stat	47.55	156	P	P	03 11 59.7	+1.3
VNA2	Neumayer--Watz	47.89	156	P	P	03 12 02.3	+1.3
	baz=281,slow=8.0						
SNAA	Sanae	49.45	157	P	P	03 12 14.2	+1.1
SNAA	Sanae	49.45	157	P	P	03 12 12.6	-0.5
TROLL	Troll, Antarti	51.16	157	P	P	03 12 26.8	+0.9
QSPA	South Pole Qui	54.01	180	P	P	03 12 48.6	+1.5
	comp=Z,20nm,0.8s,baz=168,slow=2.3,SNR=50						
	comp=Z,20nm,0.8s						
QSPA	South Pole Qui	54.01	180	P	P	03 12 48.0	+0.8
QSPA	South Pole Qui	54.01	180	P	P	03 12 47.5	+0.4
QSPA				pP	pP	03 13 09.6	0.0
CRPR	Cabo Rojo, PR	54.12	6	P	P	03 12 46.8	-1.4
CELP	Cerrillos	54.23	6	P	P	03 12 48.8	-0.2
SJG	San Juan	54.31	7	LR	LR	03 39 14.0	
	comp=Z,47nm,20.2s,baz=170,slow=40						
VNDA	Vanda	61.96	191	P	P	03 13 44.4	+2.1
	comp=Z,3.6nm,1.0s,baz=144,slow=5.6,SNR=7.5						
VNDA				LR	LR	03 38 12.7	
	comp=Z,40nm,18.0s,baz=106,slow=34						
	comp=Z,3.6nm,1.0s						
VNDA	Vanda	61.96	191	P	P	03 13 44.4	+2.1
VNDA	Vanda	61.96	191	P	P	03 13 45.1	+2.8
VNDA				pP	pP	03 14 06.2	+1.1
VNDA				sP	sP	03 14 16.5	+1.2
TBI	Tubuai	67.01	257	eLR	LR	03 34 35.5	
	comp=Z,2µm,32.8s						
TAOE	Nuku Hiva Isla	67.38	276	eLR	LR	03 34 45.9	
	comp=Z,303nm,33.6s						
CCD	Concordia, Ant	68.50	184	P	P	03 14 25.6	+0.6
CCD				pP	pP	03 14 47.9	-0.4
PPT2	Papeete2	70.13	262	eLR	LR	03 36 02.2	
	comp=Z,315nm,34.0s						
PPT2				eLR	LR	03 36 02.2	
	comp=Z,458nm,30.8s						
HPIG		70.48	328	P	P	03 14 35.7	-1.8
Y52A	Lilburn	70.67	349	P	P	03 14 37.9	-0.4
Y52A				IAmb	IAmb	03 14 40.3	
	comp=Z,11nm,1.0s						
Z47A	Carrollton	70.73	346	P	P	03 14 38.0	-0.6
Z47A				IAmb	IAmb	03 15 06.4	
	comp=Z,20nm,1.1s						
MAW	Mawson	70.99	163	LR	LR	03 46 07.3	
	comp=Z,147nm,18.2s,baz=165,slow=36						
MAW	Mawson	70.99	163	P	P	03 14 40.3	+0.4
MAW				IAmb	IAmb	03 16 53.0	
	comp=Z,21nm,1.9s						
JCT	Junction City	71.38	335	P	P	03 14 43.5	+0.8
JCT				IAmb	IAmb	03 14 48.6	
	comp=Z,19nm,1.2s						
JCT	Junction City	71.38	335	P	P	03 14 47.7	+5.0
	baz=156						
W57A	Gilead	71.43	353	P	P	03 14 42.9	+0.1
W57A				IAmb	IAmb	03 14 51.5	
	comp=Z,13nm,1.2s						
X51A	Calhoun	71.48	349	P	P	03 14 43.4	+0.3
X51A				IAmb	IAmb	03 14 48.4	
	comp=Z,14nm,0.8s						
KMSC	Kings Mountain	71.56	352	P	P	03 14 44.0	+0.4
KMSC	Kings Mountain	71.56	352	P	P	03 14 47.9	+4.3
	baz=172						
FPAL	Fort Paine	71.58	348	P	P	03 14 45.0	+1.2
FPAL				IAmb	IAmb	03 17 11.6	
	comp=Z,24nm,1.7s						
BG3	Lake Jocassee	71.61	350	P	P	03 14 45.0	+1.0
BG3				IAmb	IAmb	03 15 26.8	
	comp=Z,32nm,1.8s						
X48A	Hartselle	71.74	347	P	P	03 14 45.1	+0.4
X48A				IAmb	IAmb	03 15 12.6	
	comp=Z,12nm,0.9s						
TX31	Lajitas Ar. Si	71.78	331	P	P	03 14 46.7	+1.5
TX31				IAmb	IAmb	03 14 50.8	
	comp=Z,28nm,1.3s						
TX32	Lajitas Array	71.78	331	P	P	03 14 46.2	+1.0
TXAR	Lajitas Array	71.78	331	P	P	03 14 46.8	+1.6
	comp=Z,5.0nm,1.1s,baz=152,slow=8.1,SNR=17						
TXAR				pP	pP	03 15 08.5	-0.1
	comp=Z,2.7nm,1.0s,baz=159,slow=7.7,SNR=4.4						
	comp=Z,5.0nm,1.1s						
TXAR	Lajitas Array	71.78	331	P	P	03 14 45.7	+0.5
WHTX	Lake Whitney,	72.00	337	P	P	03 14 51.5	+5.1
	baz=158						
W50A	Signal Mountai	72.17	348	P	P	03 14 47.5	+0.2
W50A				IAmb	IAmb	03 15 15.0	
	comp=Z,13nm,1.0s						
V55A	Taylorsville	72.25	352	P	P	03 14 47.8	0.0
V55A				IAmb	IAmb	03 15 26.3	
	comp=Z,44nm,1.8s						
V53A	Saluda	72.27	351	P	P	03 14 48.1	+0.2
V53A				IAmb	IAmb	03 16 57.2	
	comp=Z,17nm,1.5s						
SWET	Sewanee	72.29	348	P	P	03 14 48.9	+0.8
SWET				IAmb	IAmb	03 14 52.6	
	comp=Z,22nm,1.2s						
CPCT	Cooper Cave	72.29	349	P	P	03 14 47.3	-0.7
TKL	Tuckaleechee C	72.39	350	P	P	03 14 48.5	0.0
PLAL	Pickwick Lake	72.45	346	P	P	03 14 48.9	-0.1
PLAL				IAmb	IAmb	03 15 14.3	
	comp=Z,37nm,1.8s						
V52A	Sevierville	72.54	350	P	P	03 14 49.5	0.0
V52A				IAmb	IAmb	03 17 05.4	
	comp=Z,28nm,1.8s						
BBTS	Babate	72.66	56	LR	LR	03 45 53.1	
	comp=Z,150nm,20.3s,baz=225,slow=35						
T59A	Double "B" Far	73.03	355	P	P	03 14 50.5	-1.8
T59A				IAmb	IAmb	03 15 22.3	
	comp=Z,41nm,1.8s						
TZTN	Tazewell	73.22	350	P	P	03 14 53.3	-0.2
TZTN				IAmb	IAmb	03 15 35.4	
	comp=Z,13nm,1.2s						
ABTX	Abilene, Hawle	73.29	336	P	P	03 14 58.1	+4.1
	baz=157						
SUR	Sutherland	73.59	118	LR	LR	03 41 58.7	
	comp=Z,58nm,21.8s,baz=211,slow=31						
SUR	Sutherland	73.59	118	P	P	03 14 56.6	+0.3
LCAR	Lake Charles	74.15	344	P	P	03 14 58.7	-0.2
FCAR	Ozark Folk Cen	74.20	343	P	P	03 14 59.4	+0.2
FCAR				IAmb	IAmb	03 15 38.8	
	comp=Z,25nm,1.9s						
S51A	Beattyville	74.31	350	P	P	03 14 59.9	+0.1
S51A				IAmb	IAmb	03 15 03.9	
	comp=Z,41nm,1.9s						
MNTX	Cornudas Mount	74.55	331	P	P	03 15 02.1	+0.7
	baz=152						
WMOK	Wichita Mounta	74.95	337	P	P	03 15 07.8	+4.1
	baz=158						
T42A	Van Buren	75.06	344	P	P	03 15 04.3	+0.2
TUL1	Leonard	75.17	340	P	P	03 15 05.9	+1.1
LIC	Lamto	75.30	71	⇑iP	P	03 15 06.1	0.0
	comp=Z,110nm,1.0s						
OK030	Cody Creek RV	75.46	339	P	P	03 15 06.2	-0.3
OK030				IAmb	IAmb	03 17 01.4	
	comp=Z,22nm,1.0s						
TIC	Toumodi	75.57	70	⇑eP	P	03 15 07.8	+0.1
	comp=Z,57nm,1.0s						
KIC	Kosan Boka	75.61	71	⇑eP	P	03 15 07.9	0.0
	comp=Z,127nm,0.8s						
DBIC	Dimbokro	75.71	71	P	P	03 15 08.7	+0.2
	comp=Z,34nm,0.9s,baz=230,slow=6.0,SNR=42						
	comp=Z,34nm,0.9s						
DBIC	Dimbokro	75.71	71	P	P	03 15 07.9	-0.5
FVM	French Village	75.83	345	P	P	03 15 08.6	+0.1
CCM	Cathedral Cave	76.08	344	P	P	03 15 09.4	-0.5
CCM				IAmb	IAmb	03 15 15.0	
	comp=Z,14nm,0.9s						
CCM	Cathedral Cave	76.08	344	P	P	03 15 10.9	+1.0
	baz=164						
WIN	Windhoek	76.17	108	P	P	03 15 09.5	-1.8
WIN				IAmb	IAmb	03 15 13.2	
	comp=Z,16nm,0.8s						
S39A	Bolivar	76.21	343	P	P	03 15 10.7	0.0
S39A				IAmb	IAmb	03 15 48.8	
	comp=Z,16nm,1.4s						
P48A	Milroy	76.36	349	P	P	03 15 11.3	-0.2
P48A				IAmb	IAmb	03 15 47.1	
	comp=Z,17nm,1.3s						
R40A	Maddies Statio	76.53	344	P	P	03 15 12.7	+0.2
SOE	Somerset East	76.75	121	P	P	03 15 13.2	-1.0
GRHM	Grahamstown, E	76.99	122	P	P	03 15 13.5	-2.1
TUC	Tucson	77.34	327	P	P	03 15 22.5	+5.2
	baz=149						
P40A	Paris	77.67	344	P	P	03 15 18.9	+0.1
P40A				IAmb	IAmb	03 15 23.9	
	comp=Z,19nm,1.0s						
ANMO	Albuquerque	77.83	331	P	P	03 15 25.0	+4.8
	baz=152						
TSUM	Tsumeb	78.42	105	LR	LR	03 46 52.7	
	comp=Z,49nm,18.6s,baz=192,slow=33						
TSUM	Tsumeb	78.42	105	P	P	03 15 23.3	-0.5
TSUM				IAmb	IAmb	03 15 25.6	
	comp=Z,27nm,1.2s						
BOSA	Boshof	78.86	117	P	P	03 15 26.3	+0.2
	comp=Z,37nm,1.0s,baz=234,slow=4.9,SNR=41						
BOSA				LR	LR	03 45 01.4	
	comp=Z,72nm,20.6s,baz=181,slow=32						
	comp=Z,37nm,1.0s						
BOSA	Boshof	78.86	117	P	P	03 15 25.6	-0.5
T25A	Trinidad	79.02	334	P	P	03 15 25.9	-0.8
T25A				IAmb	IAmb	03 15 33.3	
	comp=Z,15nm,1.1s						
N35A	Tabor	79.78	342	P	P	03 15 30.8	+0.4
N35A				IAmb	IAmb	03 15 38.1	
	comp=Z,11nm,0.7s						
SDCO	Great Sand Dun	79.95	333	P	P	03 15 32.0	+0.2
MVCO	Mesa Verde	80.61	331	P	P	03 15 38.9	+3.7
	baz=151						
PFO	Pinyon Flats O	81.05	324	LR	LR	03 44 10.6	
	comp=Z,59nm,19.6s,baz=54,slow=30						
PFO	Pinyon Flats O	81.05	324	P	P	03 15 41.5	+4.0
	baz=145						
LBTB	Lobatse	81.19	114	LR	LR	03 47 07.3	
	comp=Z,94nm,20.9s,baz=202,slow=32						
LBTB	Lobatse	81.19	114	P	P	03 15 38.0	-0.6
RPZ	Rata Peaks	82.09	221	LR	LR	03 43 22.9	
	comp=Z,80nm,21.0s,baz=122,slow=29						
K31A	O'Neill	82.25	340	P	P	03 15 44.2	+0.7
URZ	Urewera	82.31	228	LR	LR	03 46 23.5	
	comp=Z,72nm,18.4s,baz=211,slow=31						
ECSD	EROS Data Cent	82.73	342	P	P	03 15 46.0	0.0
ECSD				IAmb	IAmb	03 15 51.1	
	comp=Z,11nm,1.1s						
N23A	Red Feather La	82.91	335	P	P	03 15 51.9	+4.6
	baz=153						
SRU	San Rafael Swe	83.05	331	P	P	03 15 48.2	+0.2
VES	Vestal, Richgr	84.11	323	P	P	03 15 56.3	+3.1
	baz=143						
SPR3	Spring Creek 3	84.53	328	P	P	03 15 56.0	+0.4
R11B	Troy Canyon, C	84.53	327	P	P	03 15 58.5	+3.0
	baz=146						
K22A	Casper	84.66	335	P	P	03 16 00.7	+4.6
	baz=152						
TOA0	Torodi Ar. Sit	84.78	70	P	P	03 15 56.5	-0.7
TORD	Torodi Ar. Bea	84.78	70	P	P	03 15 57.2	+0.1
	comp=Z,17nm,1.0s,baz=242,slow=4.9,SNR=35						
TORD				pP	pP	03 16 20.3	-1.0
	comp=Z,5.7nm,0.8s,baz=238,slow=4.1,SNR=4.4						
TORD				LR	LR	03 49 53.2	
	comp=Z,36nm,21.1s,baz=210,slow=33						
	comp=Z,17nm,1.0s						
TORD	Torodi Ar. Bea	84.78	70	P	P	03 15 56.5	-0.7
NVAR	Mina Array Bea	85.83	325	P	P	03 16 04.2	+2.2
	comp=Z,2.3nm,1.0s,baz=146,slow=5.7,SNR=12						
NVAR				pP	pP	03 16 27.5	+1.4
	comp=Z,1.3nm,1.0s,baz=131,slow=6.3,SNR=3.2						
	comp=Z,2.3nm,1.0s						
PDAR	Pinedale Array	85.84	333	P	P	03 16 03.1	+1.1
	comp=Z,0.9nm,0.9s,baz=180,slow=2.4,SNR=5.0						
PDAR				pP	pP	03 16 26.7	+0.6
	comp=Z,1.4nm,1.1s,baz=138,slow=6.9,SNR=3.0						
	comp=Z,0.9nm,0.9s						
AGMN	Agassiz Nation	86.85	344	P	P	03 16 05.4	-1.1
ULM	Lac du Bonnet	88.70	345	P	P	03 16 15.9	+0.7
	comp=Z,3.8nm,0.9s,baz=188,slow=4.6,SNR=4.4						
	comp=Z,3.8nm,0.9s						
ULM	Lac du Bonnet	88.70	345	P	P	03 16 15.5	+0.3
ULM				IAmb	IAmb	03 16 19.5	
	comp=Z,9.0nm,1.2s						
LSZ	Lusaka	88.92	108	LR	LR	03 51 31.6	
	comp=Z,85nm,21.1s,baz=166,slow=32						
AFI	Afiamalu	89.75	253	LR	LR	03 48 22.7	
	comp=Z,70nm,21.6s,baz=50,slow=30						
MDT	Midelt	93.06	51	LR	LR	03 57 59.0	
	comp=Z,49nm,20.4s,baz=253,slow=35						
TAM	Tamanrasset	93.60	64	P	P	03 16 38.1	-0.8
TAM				IAmb	IAmb	03 16 41.0	
	comp=Z,6.2nm,1.1s						
MBAR	Mbarara	99.74	98	LR	LR	03 57 39.7	
	comp=Z,47nm,20.8s,baz=205,slow=33						
DZM	Mont Dzumac	100.08	233	eLR	LR	03 49 54.7	
	comp=Z,186nm,25.6s						
GERES	GERESS Array B	113.56	46	PKiKP	PKiKP	03 22 00.1	+0.3
	comp=Z,0.1nm,0.3s,baz=289,slow=3.0,SNR=3.9						
WRA	Warramunga Arr	118.91	208	PKP	PKPdf	03 22 10.7	-0.3
	comp=Z,0.4nm,0.5s,baz=162,slow=1.7,SNR=17						
BRTR	Keskin Array B	122.72	62	PKP	PKiKP	03 22 18.2	+0.2
	comp=Z,0.5nm,0.7s,baz=235,slow=5.1,SNR=3.3						
AKASG	Malin Array Be	123.53	48	PKP	PKPdf	03 22 18.2	-0.4
	comp=Z,0.9nm,0.6s,baz=264,slow=2.6,SNR=7.7						
ARCES	ARCESS Array B	125.94	26	PKP	PKPdf	03 22 22.9	0.0
	comp=Z,2.6nm,0.8s,baz=302,slow=2.0,SNR=4.1						

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NRIK  Noril'sk          144.95  13  PKP     PKPdf   03 22 58.1 +0.2
      comp=Z,4.6nm,0.5s,baz=48,slow=3.8,SNR=7.6
KSH   Kashi             154.42  73  PKPbc   PKPdf   03 23 11.0 -3.0
KSH                                 pPKP    PKPab   03 23 37.0 -0.1
KSH                                 sPKP            03 23 49.8
ZALV  Zalesovo Beam     155.96  35  PKP     PKPdf   03 23 14.6 -0.8
      comp=Z,0.4nm,0.4s,baz=215,slow=1.8,SNR=4.9
ZALV                                PKPab   PKPab   03 23 41.8 -1.2
      comp=Z,1.7nm,0.7s,baz=305,slow=5.2,SNR=4.6
MKAR  Makanchi Array    158.00  53  PKP     PKPdf   03 23 18.8 +0.4
      comp=Z,0.8nm,0.9s,baz=266,slow=0.8,SNR=5.8
MKAR                                PKPab   sPKPdf  03 23 52.8 -0.5
      comp=Z,3.1nm,0.8s,baz=288,slow=3.7,SNR=19
MKAR                                PP      PP      03 27 30.8 -1.8
      comp=Z,1.3nm,1.0s,baz=276,slow=5.2,SNR=5.9
CMAR  Chiang Mai Arr    160.50 153  PKPab   PKPab   03 24 05.0 +1.5
      comp=Z,1.2nm,0.3s,baz=241,slow=4.6,SNR=4.9
MDJ   Mudanjiang        161.73 304  PKP     PKPdf   03 23 23.8 +1.2
WMQ   Urumqi            162.58  58 ePKP     PKPdf   03 23 23.3 -0.3
WMQ                                 LR      LR
      comp=Z,43nm,24.5s
SONM  Songino Array     168.32   6  PKPab   PKPab   03 24 38.6 +1.2
      comp=Z,1.2nm,0.8s,baz=335,slow=2.4,SNR=7.0
PZH   PanZhiHua         168.84 149  PKP     PKPdf   03 23 27.5 -1.8
NJ2   Nanjing           170.25 248 ePKP     PKPdf   03 23 29.5 -0.2
HHC   Hu-ho-hao-te      174.69 331 ePKP     PKPdf   03 23 29.3 -2.3
BTO   Baotou            175.41 343 ePKP     PKPdf   03 23 31.5 -0.3
BTO                                 PP      PP      03 29 02.5 +1.4
BTO                                 SS      SS      03 50 21.0 +2.6
BTO                                 LR      LR
      comp=Z,330nm,11.4s
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*SJA **27** 03:18:52.9±1.9, 20°.60S×68°.86W, h100^{km}, ML4.1, MW3.9, Hypocentre not reviewed by the ISC*

*VAO **27** 03:18:54.9±0.4, 20°.61S×69°.12W, h122^{km}, mb4.1*

*NEIC **27** 03:18:54.2±1.8, 20°.62S±0°.02×69°.09W±0°.06, h120^{km}±5^{km}, mb4.3/12, ML4.1(GUC), Error ellipse: s-maj=8.7km s-min=2.9km az=89.0*

*IDC **27** 03:18:55.8±1.5, 20°.71S×68°.70W, h119^{km}±14^{km}, mb3.5/4, mbtmp3.9/7, Error ellipse: s-maj=30.2km s-min=14.4km az=109.0*

*GUC **27** 03:18:55.7±0.7, 20°.62S×69°.02W, h113^{km}±3^{km}, ML4.1*

ISC 27 03:18:54.0±0.6**, 20°.59S**±0°.03×**69°.00W**±0°.05**, h118**^{km}±6^{km}**, n116, σ1^{s}.48**/141**, mb4.4**/3**, 8C-1D, Northern Chile**

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Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                   Op      ISC       h  m  s   ISC
PB08  IPOC Station P     0.47 342          Pn       03 19 12.7 +0.6
PB08                               Sn      Sn       03 19 26.1 +0.6
PB08  IPOC Station P     0.47 342⇓iP      Pn       03 19 13.0 +0.9
PB08                              i S      Sn       03 19 26.2 +0.6
PB08                               IAML             03 19 26.6
      comp=N,14µm,0.2s
PB08  IPOC Station P     0.47 342 eP                03 19 12.8
PB08                              eS                03 19 26.3
PB08                               IAML             03 19 26.7
      comp=Z,5µm,0.2s
PB01  IPOC Station P     0.64 225  Pn      Pn       03 19 13.2 +0.4
PB01                               Sn      Sn       03 19 26.5 -0.5
PB01  IPOC Station P     0.64 225⇑iP      Pn       03 19 13.2 +0.4
PB01                              i S      Sn       03 19 26.9 -0.1
PB01                               IAML             03 19 27.8
      comp=N,11µm,0.2s
PB01  IPOC Station P     0.64 225 eP                03 19 13.2
PB01                              eS                03 19 27.2
PB01                               IAML             03 19 28.7
      comp=Z,4µm,0.2s
GO01  Chusmiza           0.93 349  Pn      Pn       03 19 16.6 +0.8
GO01                               Sn      Sn       03 19 33.0 +0.9
GO01  Chusmiza           0.93 349 eP                03 19 16.8
GO01                              eS                03 19 34.2
GO01                               IAML             03 19 35.5
      comp=Z,4µm,0.1s
PB11  IPOC Station P     1.03 323  Pn      Pn       03 19 16.3 -0.1
PB11                               Sn      Sn       03 19 33.6 +0.4
PB11  IPOC Station P     1.03 323⇑iP      Pn       03 19 17.1 +0.8
PB11                              i S      Sn       03 19 33.6 +0.4
PB11  IPOC Station P     1.03 323 eP                03 19 16.0
PB11                              eP                03 19 16.8
PB11                              eS                03 19 34.4
PB11                               IAML             03 19 35.6
      comp=Z,5µm,0.2s
TA01  Diego Aracena      1.10 271  Pn      Pn       03 19 17.1 +0.3
TA01                               Sn      Sn       03 19 33.4 -0.9
TA01  Diego Aracena      1.10 271⇑iP      Pn       03 19 17.2 +0.3
TA01                              i S      Sn       03 19 33.5 -0.7
TA01                               IAML             03 19 35.6
      comp=E,2µm,0.3s
TA01  Diego Aracena      1.10 271 eP                03 19 16.0
TA01                              eP                03 19 17.0
TA01                              eS                03 19 34.3
TA01                              eS                03 19 35.1
TA02  Huaiquique         1.10 286  Pn      Pn       03 19 17.3 +0.4
TA02                               Sn      Sn       03 19 33.5 -0.7
TA02  Huaiquique         1.10 286 eP       Pn       03 19 17.3 +0.4
TA02                              i S      Sn       03 19 34.3 +0.1
TA02  Huaiquique         1.10 286 eP                03 19 16.0
TA02                              eS                03 19 34.8
TA02                               IAML             03 19 37.7
      comp=Z,4µm,0.1s
PB02  IPOC Station P     1.11 229  Pn      Pn       03 19 17.5 +0.4
PB02                               Sn      Sn       03 19 34.0 -0.5
PB02  IPOC Station P     1.11 229 eP                03 19 16.0
PB02                              eS                03 19 35.1
PB02                               IAML             03 19 38.6
      comp=Z,5µm,0.2s
PB09  IPOC Station P     1.22 190  Pn      Pn       03 19 19.2 +0.8
PB09                               Sn      Sn       03 19 37.2 +0.4
PB09  IPOC Station P     1.22 190⇑iP      Pn       03 19 19.4 +1.0
PB09                              i S      Sn       03 19 37.6 +0.7
PB09                               IAML             03 19 40.1
      comp=N,2µm,0.3s
PB09  IPOC Station P     1.22 190 eP                03 19 19.4
PB09                              eS                03 19 38.2
PB09                               IAML             03 19 39.3
      comp=Z,2µm,0.6s
PB07  IPOC Station P     1.40 216  Pn      Pn       03 19 20.6 +0.3
PB07                               Sn      Sn       03 19 39.4 -0.9
PB07  IPOC Station P     1.40 216⇑iP      Pn       03 19 20.8 +0.5
PB07                              i S      Sn       03 19 39.7 -0.7
PB07                               IAML             03 19 40.2
      comp=N,2µm,0.2s
PB07  IPOC Station P     1.40 216 eP                03 19 20.0
PB07                              eS                03 19 39.9
PB07                               IAML             03 19 41.9
      comp=Z,2µm,0.3s
MNMC  Minye Minye        1.55 339  Pn      Pn       03 19 23.7 +1.4
MNMC  Minye Minye        1.55 339 eP       Pn       03 19 23.5 +1.3
MNMC                              i S      Sn       03 19 45.1 +1.4
MNMC                               IAML             03 19 46.8
      comp=E,6µm,0.3s
PB03  IPOC Station P     1.61 206  Pn      Pn       03 19 23.2 +0.4
PB03  IPOC Station P     1.61 206⇑iP      Pn       03 19 23.4 +0.6
PB03                              i S      Sn       03 19 44.0 -0.7
PB03                               IAML             03 19 45.8
      comp=N,1µm,0.5s
PB03  IPOC Station P     1.61 206 eP                03 19 22.0
PB03                              eS                03 19 44.5
PB03                               IAML             03 19 46.3
      comp=Z,2µm,0.2s
LVC   Limon Verde        2.01 178  P       Pn       03 19 29.2 +1.3
      comp=Z,46nm,0.3s,baz=35,slow=9.8,SNR=143
LVC                                S       Sn       03 19 53.4 -0.4
      comp=Z,294nm,0.4s,baz=109,slow=18,SNR=45
LVC   Limon Verde        2.01 178  Pn      Pn       03 19 28.6 +0.7
LVC   Limon Verde        2.01 178 eP       Pn       03 19 29.2 +1.3
LVC                               i S      Sn       03 19 54.8 +1.0
LVC   Limon Verde        2.01 178 eP       Pn       03 19 28.2 +0.3
LVC   Limon Verde        2.01 178 eP                03 19 29.2
LVC                               eS                03 19 55.4
PB04  IPOC Station P     2.04 211  Pn      Pn       03 19 28.6 +0.6
PB04  IPOC Station P     2.04 211⇑eP      Pn       03 19 28.5 +0.4
PB04                              i S      Sn       03 19 52.5 -1.5
PB04                               IAML             03 19 55.7
      comp=E,1µm,0.3s
PB04  IPOC Station P     2.04 211 eP                03 19 28.0
PB04                              eS                03 19 53.0
PB04                               IAML             03 19 55.7
      comp=Z,868nm,0.3s
PB06  IPOC Station P     2.17 194 eP                03 19 29.0
PB06                              eS                03 19 55.8
PB06                               IAML             03 20 03.5
      comp=Z,535nm,0.3s
PB16  IPOC Station P     2.29 348  Pn      Pn       03 19 32.4 +0.7
PB16  IPOC Station P     2.29 348 eP       Pn       03 19 33.5 +1.8
PB16                              i S      Sn       03 20 01.9 +1.5
PB16  IPOC Station P     2.29 348 eP                03 19 32.0
PB16                              eS                03 20 03.5
PB12  IPOC Station P     2.33 327  Pn      Pn       03 19 31.0 -0.6
PB12  IPOC Station P     2.33 327 eP       Pn       03 19 31.6  0.0
PB12                              i S      Sn       03 19 58.9 -1.6
PB12                               IAML             03 20 02.3
      comp=N,2µm,0.8s
PB12  IPOC Station P     2.33 327 eP                03 19 31.5
PB12                              eS                03 20 00.3
PB12                               IAML             03 20 06.8
      comp=Z,561nm,0.4s
AP01  Chacalluta         2.54 330  Pn      Pn       03 19 33.8 -0.5
AP01  Chacalluta         2.54 330 eP       Pn       03 19 34.9 +0.6
AP01                              i S      Sn       03 20 04.1 -1.1
AP01                               IAML             03 20 15.6
      comp=N,1µm,0.5s
AP01  Chacalluta         2.54 330 eP                03 19 34.0
AP01                              eS                03 20 04.4
AP01                               IAML             03 20 09.6
      comp=Z,786nm,0.2s
PB15  IPOC Station P     2.64 189 eP                03 19 36.0
PB15                              eS                03 20 07.8
PB15                               IAML             03 20 10.7
      comp=Z,2µm,0.3s
PB15  IPOC Station P     2.64 189  Pn      Pn       03 19 36.3 +0.5
PB15  IPOC Station P     2.64 189⇑eP      Pn       03 19 36.5 +0.7
PB15                              i S      Sn       03 20 08.0 +0.2
PB18  Visviri            3.02 351  Pn      Pn       03 19 43.7 +2.6
PB18  Visviri            3.02 351 eP       Pn       03 19 45.1 +4.1
PB10  IPOC Station P     3.25 206  Pn      Pn       03 19 42.4 -1.1
PB10  IPOC Station P     3.25 206 eP       Pn       03 19 42.7 -0.8
PB10  IPOC Station P     3.25 206 eP                03 19 42.8
PB10                              eS                03 20 06.5
PB14  IPOC Station P     4.22 198  Pn      Pn       03 19 55.1 -1.6
PB14  IPOC Station P     4.22 198 eP       Pn       03 19 55.3 -1.5
PB14  IPOC Station P     4.22 198 eS                03 20 40.8
HJA   Humahuaca          4.23 129 eP                03 19 59.0
LPAZ  La Paz             4.36  11  P       Pn       03 20 02.1 +3.2
      comp=Z,14nm,0.4s,baz=196,slow=4.7,SNR=162
LPAZ                               S       Sn       03 20 45.8 -3.4
      comp=Z,6.3nm,0.5s,baz=196,slow=17,SNR=1.8
LPAZ  La Paz             4.36  11  Pn      Pn       03 20 01.2 +2.3
LPAZ  La Paz             4.36  11 eP       Pn       03 20 01.4 +2.5
GO02  Mina Guanaco       4.58 187  Pn      Pn       03 20 00.4 -1.2
AC01  Pan de Azucar      5.72 195  Pn      Pn       03 20 14.1 -2.6
AC06  Mina Casimiro      6.85 190  Pn      Pn       03 20 28.8 -3.1
GO03  Copiap             7.06 189  Pn      Pn       03 20 31.5 -3.3
AC04  Llanos de Chal     7.81 194  Pn      Pn       03 20 40.1 -4.9
AC05  El Transito        8.29 188  Pn      Pn       03 20 48.6 -2.9
LCO   Las Campanas       8.53 190  Pn      Pn       03 20 50.4 -4.4
SIV   San Ignacio        8.81  60  P       Pn       03 20 56.9 -1.7
      comp=Z,3.9nm,0.4s,baz=245,slow=11,SNR=37
SIV                                S       Sn       03 22 29.8 -6.4
      comp=Z,2.0nm,0.8s,baz=330,slow=19,SNR=3.9
CO01  Juntas del Tor     9.40 186  Pn      Pn       03 21 03.4 -3.2
GO04  Tololo Observa     9.68 189  Pn      Pn       03 21 06.9 -3.5
PTLB  Pontes e Lacer    10.69  63  Pn      Pn       03 21 22.1 -1.7
CO02  Combarbal         10.72 189  Pn      Pn       03 21 19.4 -5.0
ETMB  Extrema           11.04  14  Pn      Pn       03 21 28.6  0.0
ETMB  Extrema           11.04  14 eP       Pn       03 21 28.9 +0.3
VILB  Vilhena           11.34  49  Pn      Pn       03 21 33.5 +0.9
VILB  Vilhena           11.34  49 eP       Pn       03 21 33.7 +1.0
CPUP  Villa Florida     12.14 120  P       Pn       03 21 39.3 -3.8
      comp=Z,1.3nm,0.8s,baz=274,slow=19,SNR=2.0
CPUP  Villa Florida     12.14 120  Pn      Pn       03 21 42.0 -1.1
CPUP  Villa Florida     12.14 120 eP       Pn       03 21 43.6 +0.6
AQDB  Aquidauana        12.46  92 eP       Pn       03 21 48.5 +1.1
MT02  Curacav           12.76 188  Pn      Pn       03 21 49.0 -2.2
AMBA  Amambai (Brazi    13.23 103 eP       Pn       03 21 57.3  0.0
MT01  Popeta            13.37 188  Pn      Pn       03 21 58.3 -0.8
SALV  Santo Antonio     13.47  72 eP       Pn       03 22 02.3 +1.8
BO02  Sierra Bellavi    14.24 186  Pn      Pn       03 22 08.2 -2.1
PDRB  Porto dos Gac     14.78  55 eP       Pn       03 22 18.3 +1.0
FRBT  Francisco Belt    15.59 113 eP       Pn       03 22 28.3 +0.9
ALGR  Alto Alegre (B    16.65 123 eP       P        03 22 41.4 +0.6
ITAB  Concordia         16.78 116          Pn       03 22 41.8 -0.2
ITAB                               IAmb    IAmb     03 22 46.7
      comp=Z,8.4nm,0.9s
ITAB  Concordia         16.78 116 eP       P        03 22 43.1 +1.0
ARAG  Araguaiana, MT    17.04  76 eP       P        03 22 45.9 +0.7
CPSB  Cacapava Do Su    17.10 128 eP       P        03 22 47.1 +1.4
TEFE  Tefe              17.50  15 eP       Pn       03 22 51.4 +0.6
FRTB  Fartura           18.24 102 eP       Pn       03 22 59.6  0.0
TRQA  Tornquist         18.44 162  P       P        03 23 01.0 +0.6
TRQA                               IAmb    IAmb     03 23 17.4
      comp=Z,15nm,1.4s
NPGB  Novo Progresso    18.87  46 eP       Pn       03 23 06.6 -0.5
SNDB  Serra Nova Dou    19.02  66 eP       P        03 23 06.8 -0.1
GO06  Curarrehue        19.05 186  P       P        03 23 06.9 -0.2
BB19B Bebedouro         19.15  95 eP       P        03 23 08.8 +0.6
IPMB  Ipameri, GO       19.80  86 eP       P        03 23 15.0 -0.3
RCLB  Rio Claro- Sao    20.06  99 eP       P        03 23 18.6 +0.4
PLCA  Paso Flores       20.12 183  P       P        03 23 19.9 +1.3
      comp=Z,2.9nm,0.9s,baz=349,slow=12,SNR=6.9
      comp=Z,2.9nm,0.9s
PLCA  Paso Flores       20.12 183  P       P        03 23 17.7 -0.9
PLCA                               IAmb    IAmb     03 23 21.3
      comp=Z,7.9nm,1.1s
PLCA  Paso Flores       20.12 183 eP       P        03 23 19.4 +0.8
PET01 Itanhaem-SP       20.41 104 eP       P        03 23 22.6 +0.7
SGCB  S£o Gabriel d     20.43   6 eP       P        03 23 22.6 +0.5
LL04  Puerto Octay      20.46 187  P       P        03 23 22.4 +0.2
LL04                               IAmb    IAmb     03 23 57.9
      comp=Z,20nm,1.4s
BDFB  Brasilia          20.54  80  P       P        03 23 23.5 +0.1
      comp=Z,2.8nm,0.5s,baz=238,slow=9.3,SNR=7.6
      comp=Z,2.8nm,0.5s
BDFB  Brasilia          20.54  80  P       P        03 23 23.6 +0.2
BDFB  Brasilia          20.54  80 eP       P        03 23 24.0 +0.6
VAO   Valinhos          20.60 101 eP       P        03 23 24.2 +0.2
ITTB  Itaituba          20.66  40 eP       P        03 23 23.8 -0.7
PMNB  Patos De Minas    21.36  88 eP       P        03 23 32.2  0.0
PARB  Paraibuna         21.85 101 eP       P        03 23 37.5 +0.1
PRPB  Parauapebas       23.49  55 eP       P        03 23 53.7 +0.3
SMTB  Santa Maria do    23.73  64 eP       P        03 23 56.3 +0.7
VAS01 Vassouras-RJ      23.84  99 eP       P        03 23 57.2 +0.6
JANB  Januaria          24.13  81 eP       P        03 23 59.6 +0.4
BOAV  Boa Vista         24.31  21  P       P        03 24 01.3 +0.6
BOAV  Boa Vista         24.31  21 eP       P        03 24 00.7  0.0
SDBA  SAO DESIDERIO     24.47  74 eP       P        03 24 03.7 +1.3
SJMB  Sao Joao De Ma    26.25  91 eP       P        03 24 19.6 +1.2
GUA01 Guaratinga, BA    27.94  87 eP       P        03 24 33.7 +0.2
RCBR  Riachuelo         35.30  70 eP       P        03 25 39.9 +1.9
CELP  Cerrillos         38.50   4  P       P        03 26 03.5 -1.4
SJG   San Juan          38.56   4  P       P        03 26 03.8 -1.6
CBYP  Canovanas         38.74   5  P       P        03 26 04.1 -2.9
CBYP                               IAmb    IAmb     03 26 10.2
      comp=Z,15nm,1.1s
250A  Grady             54.82 342  P       P        03 28 11.6 -0.3
DBIC  Dimbokro          68.56  74  P       P        03 29 44.6 +0.1
      comp=Z,3.7nm,0.6s,baz=255,slow=8.6,SNR=11
      comp=Z,3.7nm,0.6s
DBIC  Dimbokro          68.56  74  P       P        03 29 43.5 -1.0
DBIC                               IAmb    IAmb     03 29 45.6
      comp=Z,4.4nm,0.8s
YKA   Yellowknife Ar    90.30 341  P       P        03 31 42.6 +1.5
      comp=Z,0.1nm,0.6s,baz=131,slow=5.7,SNR=2.2
      comp=Z,0.1nm,0.6s
MKAR  Makanchi Array   144.95  35  PKP     PKPdf    03 38 18.4 +1.1
      comp=Z,0.6nm,0.5s,baz=333,slow=2.1,SNR=9.5
PZH   PanZhiHua        169.67  53  PKP     PKPdf    03 38 47.5 -0.8
```

IDC 27 03:44:54.4±5.4**, 2°.66S×138°.84E, h0**^{km}**, mb3.4**/2**, mbtmp3.4**/3**, ML3.2**/1**, Error ellipse: s-maj=217.0km s-min=32.6km az=86.0, Irian Jaya**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                   Op      ISC       h  m  s   ISC
WRA   Warramunga Arr    17.73 194  P       Pn       03 49 01.1 -1.8
      0.1nm,0.3s,baz=15,slow=13,SNR=1.8
      0.4nm,0.5s
ASAR  Alice Springs     21.42 192  P       P        03 49 44.9 +0.7
      1.4nm,0.9s,baz=19,slow=11,SNR=6.6
      1.4nm,0.9s
MKAR  Makanchi Array    69.83 322  P       P        03 56 07.0 +0.1
      0.2nm,0.5s,baz=115,slow=6.5,SNR=2.5
      0.2nm,0.5s
```

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*IDC **27** 03:58:08.3±4.5, 36°.24N×71°.27E, h153^{km}±31^{km}, mb3.2/5, mbtmp3.6/11, MS2.9/1, Error ellipse: s-maj=52.8km s-min=22.8km az=149.0*

*NNC **27** 03:58:15.6±4.2, 37°.19N×69°.76E, h0^{km}, mb4.3, mpv4.4, Error ellipse: s-maj=37.8km s-min=28.3km az=123.0*

ISC 27 03:58:14.5±1.5**, 36°.9N**±0°.1×**70°.79E**±0°.08**, h150**^{km}**, n23, σ1^{s}.81**/26**, mb3.6**/5**, 2C-3D, Hindu Kush region**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                   Op      ISC       h  m  s   ISC
AML   Almayashu          5.66  23  P       Pn       03 59 37.5 +0.5
      SNR=70
UCH   Uchtor             6.02  27  P       Pn       03 59 42.2 +0.4
      SNR=12
EKS2  Erkin-Say          6.17  21  P       Pn       03 59 44.6 +1.1
      SNR=9.5
KK31  Karatay Array      6.17 358 ⇓P       Pn       03 59 44.8 +1.4
      14nm,0.3s,baz=178,slow=12,SNR=224
KK31                              ⇑S       Sn       04 00 54.7 +1.8
      4.7nm,0.5s,baz=188,slow=23,SNR=6.2
AAK   Ala-Archa          6.37  25  P       Pn       03 59 47.0 +0.8
      SNR=7.2
AAK   Ala-Archa          6.37  25  P       Pn       03 59 46.5 +0.3
      3.6nm,0.3s,baz=158,slow=3.9,SNR=15
AAK                                S       Sn       04 00 59.9 +1.8
      6.3nm,0.5s,baz=304,slow=20,SNR=10
USP   Ospenovka          6.94  23  P       Pn       03 59 53.5 -0.1
      SNR=7.5
TKM2  Tokmak 2           7.03  30  P       Pn       03 59 56.3 +1.2
      SNR=11
GEYT  Alibeck           10.13 279  P       Pn       04 00 38.0 +1.8
      1.0nm,0.5s,baz=115,slow=9.7,SNR=3.0
GEYT                               S       Sn       04 02 26.7 -1.5
      2.0nm,0.4s,baz=242,slow=34,SNR=2.8
MKAR  Makanchi Array    13.04  37  P       Pn       04 01 11.7 -2.4
      0.2nm,0.5s,baz=215,slow=12,SNR=1.3
AB31  Akbulak array     14.62 331  P       Pn       04 01 34.6 +0.6
      1.2nm,0.5s,baz=148,slow=11,SNR=55
AB31                              ⇑S       Sn       04 04 11.2 -5.0
      0.8nm,0.6s,baz=153,slow=23,SNR=3.1
KURBB Kurchatov Arra    14.77  20  P       Pn       04 01 34.5 -1.3
      0.4nm,0.6s,baz=208,slow=11,SNR=6.2
BVAR  Borovoye Array    16.09 359  P       P        04 01 53.2 +0.7
      1.1nm,0.6s,baz=163,slow=10,SNR=6.0
AKTO  Aktyubinsk        16.32 330  P       P        04 01 57.0 +1.9
      1.3nm,0.4s,baz=141,slow=14,SNR=4.3
AKTO  Aktyubinsk        16.32 330 ⇓P       P        04 01 58.8 +3.6
      4.4nm,1.4s
AKTO                              ⇓S       Sn       04 04 56.1 -0.8
      2.0nm,1.4s
ZALV  Zalesovo Beam     19.59  25  P       P        04 02 29.9 -0.9
      2.3nm,0.5s,baz=216,slow=11,SNR=11
      2.3nm,0.5s
KBZ   Khabaz            22.25 296  LR      LR       04 15 20.6
      comp=Z,25nm,18.1s,baz=352,slow=45
FINES FINESS Array B    37.03 326  P       P        04 05 09.1 -0.3
      3.1nm,1.0s,baz=134,slow=11,SNR=4.3
      3.1nm,1.0s
HFS   Hagfors           42.62 322  P       P        04 05 55.6  0.0
      0.6nm,0.4s,baz=98,slow=11,SNR=8.6
      0.6nm,0.4s
NB2   NORSAR Subarra    43.93 323  P       P        04 06 05.7 -0.4
      comp=Z,0.3nm,0.5s,baz=98,slow=7.9
NOA   NORSAR Array B    43.93 323  P       P        04 06 05.7 -0.4
      comp=Z,0.3nm,0.5s,baz=104,slow=7.3,SNR=3.7
      comp=Z,0.3nm,0.5s
TORD  Torodi Ar. Bea    65.56 268  P       P        04 08 37.9 -4.5
      comp=Z,61nm,0.5s,baz=47,slow=5.7,SNR=7.4
YKA   Yellowknife Ar    80.82   3  P       P        04 10 08.8 -2.2
      comp=Z,0.1nm,0.5s,baz=350,slow=5.1,SNR=2.6
      comp=Z,0.1nm,0.5s
```

WEL 27 04:00:16.2±1.2**, 41°S**±7°×**17°3E**±°**, h120**^{km}±8^{km}**, M1.8**/3**, MLv1.8**/3**, Error ellipse: s-maj=0.0km s-min=0.0km az=157.5, confirmed, South Island**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                   Op      ISC       h  m  s   ISC
TKNZ  Takaka Hill        0.12  21  P       Pn       04 00 33.7 +1.0
TKNZ                               S       Sn       04 00 47.1 +2.0
MRNZ  Matariki Terra     0.28 203  P       Pn       04 00 34.1 +1.1
MRNZ                               S       Sn       04 00 48.1 +2.3
NNZ   Nelson             0.37 101  P       Pn       04 00 34.3 +0.9
NNZ                                S       Sn       04 00 48.6 +2.3
QRZ   Quartz Range       0.43 319  P       Pn       04 00 34.7 +1.0
QRZ                                S       Sn       04 00 48.7 +1.8
THZ   Tophouse           0.61 180  P       Pn       04 00 35.9 +1.0
THZ                                S       Sn       04 00 51.1 +1.9
TUWZ  Tuamarina          0.83 110  P       Pn       04 00 37.3 +0.7
DUWZ  D'Urville Isla     0.84  66  P       Pn       04 00 37.3 +0.5
DUWZ                               S       Sn       04 00 54.1 +1.7
BSWZ  Blackbirch Sta     0.93 128  P       Pn       04 00 38.0 +0.6
DSZ   Denniston Nort     1.02 234  P       Pn       04 00 38.9 +0.5
DSZ                                S       Sn       04 00 55.7 +0.4
TCW   Tory Channel       1.04  94  P       Pn       04 00 38.9 +0.3
TCW                                S       Sn       04 00 55.6 +0.1
KIW   Kapiti Island      1.55  80  P       Pn       04 00 43.4 -0.7
CAW   Cannon Point       1.64  89  P       Pn       04 00 44.2 -1.0
CAW                                S       Sn       04 01 05.6 -1.6
PLWZ  Palliser           1.82 104  P       Pn       04 00 46.2 -1.2
PLWZ                               S       Sn       04 01 08.7 -2.6
INZ   Inchbonnie         1.92 214  P       Pn       04 00 47.7 -0.8
INZ                                S       Sn       04 01 11.8 -1.5
MQZ   McQueen's Vall     2.56 184  P       Pn       04 00 54.9 -1.8
MQZ                                S       Sn       04 01 23.8 -4.2
MHCZ  Mount Hutt         2.58 202  P       Pn       04 00 55.4 -1.6
MHCZ                               S       Sn       04 01 25.0 -3.4
TMZ   Timaru             3.52 203  P       Pn       04 01 07.2 -2.1
TMZ                                P       Sn       04 01 46.6 -3.9
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*JMA **27** 04:06:57.4±0.2, 25°N±1°×122°.4E±0°.5, h0^{km}, MV3.1/9, TAIWAN REGION*

*TAP **27** 04:06:58.1, 24°.89N×122°.32E, h6^{km}, ML3.2, D*

ISC 27 04:06:57.2±1.1**, 24°.94N**±0°.03×**122°.42E**±0°.02**, h10**^{km}±8^{km}**, n77, σ0^{s}.59**/128**, 2C, Taiwan region**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                   Op      ISC       h  m  s   ISC
TWB1  Santiao Chiao      0.40 281 i P      Pb       04 07 05.7 -0.6
      baz=292
TWB1                              i S      Sg       04 07 11.0 +0.7
      baz=292
EGS                      0.45 259 i P      Pg       04 07 05.7 -0.3
      baz=262
SXI1  Grass Mountain     0.52 288⇑iP      Pb       04 07 08.2 -0.2
      baz=297
SXI1                              i S      Sg       04 07 15.0 +0.8
      baz=297
TIPB  Shuangxi           0.54 274 i P      Pb       04 07 08.6 -0.1
      baz=280
TIPB                               S       Sg       04 07 15.5 +0.7
      baz=280
EOS2  EOS2               0.54 198 eP       Pb       04 07 09.0 +0.3
      baz=189
EOS2                               S       Sb       04 07 17.1 +0.7
      baz=189
WFSB  Wu-fen Shan        0.59 283 i P      Pb       04 07 09.5 -0.2
      baz=290
WFSB                              i S      Sb       04 07 17.8 -0.3
      baz=290
TWC   Suao               0.61 238 i P      Pg       04 07 08.8 -0.2
      baz=236
TWC                                S       Sg       04 07 16.2 -0.9
      baz=236
TNOU  National Taiwa     0.62 290 i P      Pb       04 07 10.0 -0.1
      baz=297
TNOU                               S       Sb       04 07 18.3 -0.6
      baz=297
ILA   Ilan               0.63 255  P       Pg       04 07 09.4 -0.1
      baz=256
ILA                                S       Sb       04 07 19.1  0.0
      baz=256
EOS3  EOS3               0.65 188  P       Pb       04 07 11.0 +0.4
      baz=179
EOS3                              eS       Sb       04 07 20.3 +0.7
      baz=179
JYNG  Yonagunijimaku     0.68 135 eP       Pb       04 07 10.7 -0.5
JYNG                              eS       Sb       04 07 20.2 -0.4
NDS   Dongshan           0.70 245 i P      Pb       04 07 11.3 -0.3
      baz=245
NDS                                S       Sg       04 07 20.6 +0.5
      baz=245
TWE   Neicheng           0.71 253 i P      Pg       04 07 11.2 +0.2
```

	baz=253						
TWE				*i* S	**Sg**	**04 07 20.9**	**+0.5**
	baz=253						
YOJ	**Yonaguni jima**	**0.72**	**131**	P	**Pg**	**04 07 11.1**	**0.0**
YOJ				*e*S	**Sb**	**04 07 20.9**	**-0.8**
YOJ	**Yonaguni jima**	**0.72**	**131**	⇑P	**Pb**	**04 07 11.9**	**+0.1**
	baz=123						
TWA	**Mucha**	**0.76**	**274**	*i* P	**Pb**	**04 07 12.4**	**-0.1**
	baz=277						
TWA				*i* S	**Sb**	**04 07 22.9**	**+0.1**
	baz=277						
EWUT	**Wuta**	**0.76**	**230**	*e*P	**Pg**	**04 07 12.0**	**+0.1**
	baz=227						
FUSB	**Fushanzhiwuyua**	**0.77**	**257**	*i* P	**Pg**	**04 07 12.2**	**0.0**
	baz=259						
FUSB				S	**Sb**	**04 07 23.8**	**+0.4**
	baz=259						
ENA	**Nanau**	**0.80**	**231**	*i* P	**Pg**	**04 07 12.4**	**-0.2**
	baz=228						
ENA				S	**Sg**	**04 07 22.3**	**-0.7**
	baz=228						
YM01	**YM01**	**0.80**	**285**	*i* P	**Pb**	**04 07 13.0**	**-0.1**
	baz=290						
YM01				S	**Sg**	**04 07 23.1**	**+0.1**
	baz=290						
NHDH	**Xindian Distri**	**0.81**	**272**	*i* P	**Pb**	**04 07 13.6**	**+0.2**
	baz=275						
NHDH				S	**Sb**	**04 07 24.0**	**-0.3**
	baz=275						
TWY	**Chenhua**	**0.81**	**295**	*i* P	**Pb**	**04 07 13.2**	**-0.3**
	baz=300						
TWY				*i* S	**Sb**	**04 07 24.8**	**+0.4**
	baz=300						
ENTT	**Nioudou**	**0.83**	**249**	*i* P	**Pg**	**04 07 12.9**	**-0.3**
	baz=249						
ENTT				S	**Sg**	**04 07 23.9**	**-0.1**
	baz=249						
TAP	**Taipei**	**0.83**	**277**	*i* S	**Sb**	**04 07 25.1**	**+0.1**
	baz=281						
NWLT	**Wulai**	**0.84**	**259**	P	**Pg**	**04 07 13.6**	**+0.1**
	baz=261						
NWLT				*i* S	**Sg**	**04 07 24.7**	**+0.2**
	baz=261						
ANP	**Anpu**	**0.85**	**287**	*i* P	**Pb**	**04 07 14.6**	**+0.4**
	baz=292						
ANP				*i* S	**Sb**	**04 07 25.7**	**+0.1**
	baz=292						
EHP	**Heping Village**	**0.88**	**225**	S	**Sg**	**04 07 25.9**	**+0.4**
	baz=221						
LATG	**Datong**	**0.90**	**244**	*i* P	**Pg**	**04 07 14.8**	**+0.2**
	baz=243						
LATG				*i* S	**Sg**	**04 07 26.5**	**+0.1**
	baz=243						
NTST	**Danshui**	**0.91**	**285**	*e*P	**Pn**	**04 07 15.9**	**0.0**
	baz=289						
NTST				*e*S	**Sn**	**04 07 29.0**	**-0.1**
	baz=289						
TWS1	**Kuangyinshan**	**0.92**	**281**	P	**Pg**	**04 07 14.6**	**-0.4**
	baz=284						
TWS1				*i* S	**Sb**	**04 07 28.1**	**+0.6**
	baz=284						
YHNB	**Yeheng**	**0.98**	**255**	*i* P	**Pg**	**04 07 15.9**	**-0.2**
	baz=255						
YHNB				*i* S	**Sg**	**04 07 29.1**	**+0.1**
	baz=255						
NSK	**Sanguang**	**0.99**	**255**	P	**Pg**	**04 07 16.3**	**-0.2**
	baz=256						
NSK				*i* S	**Sg**	**04 07 29.5**	**+0.1**
	baz=256						
ETL	**Fush Village**	**1.06**	**223**	P	**Pg**	**04 07 17.4**	**-0.2**
	baz=220						
ETL				S	**Sg**	**04 07 31.3**	**-0.1**
	baz=220						
NACB	**Ninganchiao**	**1.06**	**225**	*i* P	**Pg**	**04 07 16.9**	**-0.8**
	baz=222						
NACB				*i* S	**Sg**	**04 07 30.5**	**-1.1**
	baz=222						
NNSB	**Datong**	**1.07**	**242**	*i* P	**Pg**	**04 07 17.3**	**-0.5**
	baz=241						
NNSB				*i* S	**Sg**	**04 07 31.2**	**-0.5**
	baz=241						
NNS	**Nan Shan**	**1.07**	**243**	P	**Pg**	**04 07 17.6**	**-0.3**
	baz=242						
NNS				S	**Sg**	**04 07 31.1**	**-0.7**
	baz=242						
ETLH	**Xiulin Townshi**	**1.12**	**230**	P	**Pg**	**04 07 18.2**	**-0.5**
	baz=228						
ETLH				S	**Sg**	**04 07 32.4**	**-0.9**
	baz=228						
TWD	**Chiawan**	**1.13**	**221**	*i* P	**Pb**	**04 07 18.7**	**-0.2**
	baz=218						
TWD				S	**Sg**	**04 07 33.0**	**-0.7**
	baz=218						
HWA	**Hwalien**	**1.21**	**218**	*e*P	**Pn**	**04 07 19.7**	**-0.4**
	baz=215						
HWA				*e*S	**Sb**	**04 07 36.0**	**+0.2**
	baz=215						
NFF	**Wufeng Townshi**	**1.22**	**256**	*e*P	**Pn**	**04 07 20.1**	**-0.2**
	baz=256						
NFF				*e*S	**Sg**	**04 07 36.6**	**+0.1**
	baz=256						
LIOB	**Emei**	**1.30**	**258**	P	**Pn**	**04 07 21.1**	**-0.4**
	baz=258						
LIOB				*e*S	**Sb**	**04 07 38.6**	**0.0**
	baz=258						
WHF	**Hehuan Shan**	**1.31**	**233**	P	**Pn**	**04 07 22.1**	**+0.2**
	baz=232						
WHF				*i* S	**Sb**	**04 07 39.1**	**-0.1**
	baz=232						
TWT	**Tachien**	**1.32**	**239**	*i* P	**Pn**	**04 07 22.1**	**+0.3**
	baz=238						
TWT				*i* S	**Sn**	**04 07 40.2**	**+0.7**
	baz=238						
NSTT	**Nanjuang**	**1.32**	**257**	*i* P	**Pn**	**04 07 21.1**	**-0.6**
	baz=257						
NSTT				S	**Sg**	**04 07 40.8**	**+1.0**
	baz=257						
TDCB	**Techi**	**1.33**	**240**	P	**Pn**	**04 07 22.2**	**+0.2**
	baz=239						
TDCB				S	**Sn**	**04 07 40.1**	**+0.3**
	baz=239						
IRIF	**Iriomote-Funau**	**1.34**	**116**	*e*P	**Pg**	**04 07 23.1**	**+0.2**
CHGB	**Renai**	**1.43**	**233**	P	**Pb**	**04 07 24.2**	**+0.1**
	baz=231						
CHGB				S	**Sn**	**04 07 42.7**	**+0.4**
	baz=231						
ESL	**Shilin**	**1.43**	**219**	*e*P	**Pb**	**04 07 24.2**	**+0.2**
	baz=216						
ESL				S	**Sn**	**04 07 42.0**	**-0.1**
	baz=216						
WHP	**Taichung City**	**1.49**	**244**	P	**Pb**	**04 07 25.2**	**+0.2**
	baz=244						
WHP				*e*S	**Sn**	**04 07 42.5**	**-1.1**
	baz=244						
OWD	**Renai**	**1.49**	**229**	*e*P	**Pn**	**04 07 24.3**	**+0.1**
	baz=228						
WUSB	**Renai**	**1.51**	**232**	P	**Pb**	**04 07 25.2**	**-0.2**
	baz=230						
WUSB				S	**Sn**	**04 07 43.6**	**-0.6**
	baz=230						
NMLH	**Miaoli**	**1.53**	**255**	*e*P	**Pn**	**04 07 24.8**	**+0.2**
	baz=255						
NMLH				*e*S	**Sn**	**04 07 44.3**	**-0.2**
	baz=255						
HATJ	**Hateruma jima**	**1.54**	**124**	*e*P	**Pb**	**04 07 25.7**	**-0.1**
EGFH	**Guangfu**	**1.55**	**216**	*e*P	**Pg**	**04 07 26.7**	**-0.3**
	baz=213						
EGFH				*e*S	**Sn**	**04 07 44.8**	**-0.3**
	baz=213						
TWQ1	**Liyutan**	**1.60**	**249**	*e*P	**Pn**	**04 07 26.2**	**+0.5**
	baz=249						
TWQ1				*e*S	**Sn**	**04 07 45.2**	**-1.1**
	baz=249						
JKRS	**Kuro-shima**	**1.61**	**115**	*e*P	**Pg**	**04 07 28.4**	**+0.3**
WCS	**Beigang Elemen**	**1.63**	**238**	*e*P	**Pn**	**04 07 26.6**	**+0.7**
	baz=237						
VWDT	**VWDT**	**1.65**	**225**	P	**Pn**	**04 07 26.9**	**+0.6**
	baz=223						
VWDT				S	**Sb**	**04 07 48.6**	**0.0**
	baz=223						
JIJ	**Ishigaki jima**	**1.67**	**110**	*e*P	**Pg**	**04 07 28.4**	**-0.9**
HGSD	**Ruisui**	**1.70**	**212**	*e*P	**Pn**	**04 07 27.2**	**+0.3**
	baz=210						
SMLT	**Sun Moon Lake**	**1.73**	**233**	*e*P	**Pn**	**04 07 27.4**	**-0.1**
	baz=232						
EHY	**Hungye**	**1.74**	**215**	*e*P	**Pn**	**04 07 28.4**	**+1.0**
	baz=213						
EHY				*e*S	**Sn**	**04 07 50.9**	**+1.2**
	baz=213						
SSLB	**Suanglung**	**1.76**	**230**	P	**Pn**	**04 07 28.8**	**+1.1**
	baz=228						
SSLB				S	**Sb**	**04 07 51.6**	**-0.1**
	baz=228						
YULB	**Yu-li**	**1.84**	**214**	*e*P	**Pn**	**04 07 28.1**	**-0.9**
	baz=211						
YULB				*e*S	**Sn**	**04 07 51.6**	**-0.7**
	baz=211						
EYUL	**Yuli**	**1.87**	**213**	*e*P	**Pb**	**04 07 31.6**	**+0.1**
	baz=210						
WHYT	**Xinyi Township**	**1.89**	**229**	*e*P	**Pn**	**04 07 30.0**	**+0.5**
	baz=228						
ALS	**Alishan**	**2.04**	**226**	*e*P	**Pn**	**04 07 32.5**	**+0.6**
	baz=224						
CHN5	**Tsauling**	**2.07**	**230**	*e*P	**Pb**	**04 07 34.2**	**-0.7**
	baz=229						
EHD	**Haiduan**	**2.09**	**212**	*e*P	**Pn**	**04 07 33.3**	**+1.0**
	baz=210						
EDH	**Donghe**	**2.20**	**208**	*e*P	**Pn**	**04 07 35.6**	**+1.8**
	baz=205						
CHN4	**Tsaushan**	**2.29**	**227**	*e*P	**Pn**	**04 07 36.0**	**+0.9**
	baz=225						
TPUB	**Ta-pu**	**2.31**	**225**	*e*P	**Pn**	**04 07 36.7**	**+1.4**
	baz=224						
STYH	**Taoyuan**	**2.31**	**221**	*e*P	**Pn**	**04 07 36.7**	**+1.4**
	baz=219						
WTP	**Ta-pu**	**2.35**	**225**	*e*P	**Pb**	**04 07 38.2**	**-1.5**
	baz=223						
TWK	**Hsinying**	**2.42**	**227**	*e*P	**Pn**	**04 07 37.9**	**+1.0**
	baz=225						
CHN1	**Nanshi**	**2.45**	**225**	*e*P	**Pn**	**04 07 37.9**	**+0.6**
	baz=223						
SGST	**Jiashian**	**2.49**	**223**	*e*P	**Pn**	**04 07 39.7**	**+1.9**
	baz=221						

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*IDC **27** 04:13:56.5±1.1,2°.74S×138°.95E,h0^{km},mb3.9/7,mbtmp3.9/9,ML3.7/2,MS3.5/2,Error ellipse: s-maj=32.3km s-min=12.5km az=91.0*

ISC 27 04:14:02.2±0.9,**2°.71S**±0°.08×**138°.9E**±0°.1,**h37**^{km},**n11**,σ**1^{s}.50**/13,**mb3.9**/7,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**7.87**	**283**	Pn	**Pn**	**04 15 52.6**	**-1.5**
	1.6nm,0.3s,baz=78,slow=11,SNR=6.4						
SIJI				Sn	**Sn**	**04 17 22.8**	**+0.8**
	1.8nm,0.3s,baz=169,slow=24,SNR=2.1						
SIJI				LR	LR	04 19 33.3	
	comp=Z,266nm,19.2s,baz=209,slow=43						
	7.3nm,0.5s						
WRA	**Warramunga Arr**	**17.70**	**194**	P	**Pn**	**04 18 03.5**	**-2.5**
	0.3nm,0.3s,baz=16,slow=12,SNR=11						
WRA				S	**Sn**	**04 21 22.1**	**-0.2**
	1.1nm,0.9s,baz=14,slow=23,SNR=2.8						
	1.7nm,0.9s						
KAPI	**Kappang**	**19.26**	**263**	LR	LR	04 27 07.2	
	comp=Z,131nm,18.0s,baz=92,slow=41						
ASAR	**Alice Springs**	**21.39**	**193**	P	**P**	**04 18 46.5**	**-0.3**
	4.3nm,0.7s,baz=20,slow=9.1,SNR=23						
ASAR				S	**S**	**04 22 45.2**	**+2.8**
	0.6nm,0.8s,baz=6.5,slow=25,SNR=2.7						
	4.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**44.62**	**300**	P	**P**	**04 22 12.9**	**+1.5**
	1.2nm,0.3s,baz=99,slow=5.8,SNR=1.5						
	1.2nm,0.3s						
SONM	**Songino Array**	**57.81**	**335**	P	**P**	**04 23 50.8**	**+0.7**
	0.4nm,0.8s,baz=148,slow=6.8,SNR=2.4						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**69.92**	**322**	P	**P**	**04 25 09.4**	**-0.2**
	2.5nm,0.8s,baz=114,slow=7.9,SNR=24						
	2.5nm,0.8s						
ZALV	**Zalesovo Beam**	**72.04**	**330**	P	**P**	**04 25 21.0**	**-1.3**
	0.8nm,0.4s,baz=99,slow=7.4,SNR=3.7						
	0.8nm,0.4s						
VNDA	**Vanda**	**75.76**	**175**	P	**P**	**04 25 44.4**	**+0.7**
	0.7nm,0.8s,baz=328,slow=7.1,SNR=2.1						
	0.7nm,0.8s						
ILAR	**Eielson Array**	**85.75**	**24**	P	**P**	**04 26 37.0**	**-0.3**
	0.3nm,0.6s,baz=279,slow=4.6,SNR=5.5						
	0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**136.46**	**286**	PKP	**PKPdf**	**04 33 21.8**	**+0.5**
	0.4nm,0.8s,baz=81,slow=1.7,SNR=2.2						

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*NEIC **27** 04:16:20.7±1.6,57°.33N±0°.08×154°.0W±0°.1,h57^{km}±11^{km},Error ellipse: s-maj=13.8km s-min=8.8km az=141.0*

*IDC **27** 04:16:20.9±4.0,57°.49N×154°.33W,h39^{km}±33^{km},mb3.4/8,mbtmp3.6/9,ML3.0/1,MS3.6/1,Error ellipse: s-maj=40.3km s-min=20.7km az=17.0*

*AEIC **27** 04:16:22.1±1.6,57°.39N±0°.08×154°.1W±0°.1,h42^{km}±9^{km},ML3.3,mb3.5/2(NEIC),ML3.5/42(NEIC),Error ellipse: s-maj=11.5km s-min=7.5km az=167.0*

ISC 27 04:16:21.9±0.9,**57°.42N**±0°.06×**154°.01W**±0°.04,**h52**^{km}±9^{km},**n113**,σ**1^{s}.18**/122,**mb3.6**/7,**Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**0.44**	**117**	Pn	**Pn**	**04 16 31.3**	**-1.2**
OHAK				Sn	**Sn**	**04 16 39.0**	**-1.1**
OHAK				IAML		04 16 40.0	
	comp=E,4μm,0.3s						
OHAK				IAML		04 16 41.1	
	comp=N,3μm,0.4s						
OHAK	**Old Harbor**	**0.44**	**117**	P	**Pn**	**04 16 31.5**	**-1.0**
	baz=292						
OHAK				S	**Sn**	**04 16 39.3**	**-0.8**
	baz=292						
KDAK	**Kodiak Island**	**0.85**	**64**	Pn	**Pn**	**04 16 37.2**	**-0.4**
	comp=N,85nm,0.3s,baz=262,slow=6.3,SNR=2415						
KDAK				Sn	**Sn**	**04 16 49.3**	**+0.3**
	comp=N,133nm,0.3s,baz=264,slow=11,SNR=14						
KDAK				LR	LR	04 17 05.2	
	comp=N,143nm,20.0s,baz=191,slow=45						
KDAK	**Kodiak Island**	**0.85**	**64**	Pn	**Pn**	**04 16 37.3**	**-0.3**
KDAK				Sn	**Sn**	**04 16 49.1**	**+0.1**
KDAK				IAML		04 16 52.1	
	comp=N,2μm,0.7s						
KDAK				IAML		04 16 52.1	
	comp=N,983nm,0.5s						
KDAK	**Kodiak Island**	**0.85**	**64**	P	**Pn**	**04 16 37.3**	**-0.3**
	baz=244						
KDAK				S	**Sn**	**04 16 49.5**	**+0.4**
	baz=244						
R17K	**Ugashik Creek**	**1.30**	**281**	P	**Pn**	**04 16 43.1**	**-0.6**
	baz=101						
R17K				S	**Sn**	**04 16 59.9**	**-0.1**
	baz=101						
Q17K	**Contact Creek**	**1.31**	**311**	P	**Pn**	**04 16 43.3**	**-0.7**
	baz=131						
Q18K	**Katmai Hardscr**	**1.34**	**337**	P	**Pn**	**04 16 44.1**	**-0.3**
	baz=158						
Q18K				S	**Sn**	**04 17 01.9**	**+0.7**
	baz=158						
Q20K	**Shuyak Island**	**1.47**	**35**	P	**Pn**	**04 16 46.2**	**+0.3**
	baz=216						
Q20K				S	**Sn**	**04 17 05.2**	**+1.2**
	baz=216						
Q19K	**Cape Douglas,**	**1.52**	**7**	Pn	**Pn**	**04 16 46.9**	**+0.2**
Q19K	**Cape Douglas,**	**1.52**	**7**	P	**Pn**	**04 16 47.3**	**+0.6**
	baz=188						
Q19K				S	**Sn**	**04 17 07.7**	**+2.2**
	baz=188						
Q16K	**King Salmon**	**1.89**	**313**	P	**Pn**	**04 16 51.1**	**-0.5**
	baz=132						
R16K	**Pilot Point**	**1.93**	**276**	P	**Pn**	**04 16 51.7**	**-0.5**
	baz=94						
P18K	**Big Mountain,**	**2.08**	**342**	P	**Pn**	**04 16 53.7**	**-0.6**
	baz=162						
OPT	**Oil Point**	**2.27**	**10**	P	**Pn**	**04 16 57.8**	**+0.8**
	baz=191						
P19K	**Oil Pt**	**2.27**	**10**	Pn	**Pn**	**04 16 58.1**	**+1.2**
P19K				IAML		04 17 32.3	
	comp=E,322nm,0.6s						
P19K				IAML		04 17 34.5	
	comp=N,289nm,0.5s						
P19K	**Oil Pt**	**2.27**	**10**	P	**Pn**	**04 16 57.7**	**+0.7**
	baz=191						
O18K	**Koktuh Hills**	**2.52**	**346**	Pn	**Pn**	**04 16 59.9**	**-0.4**
O18K				IAML		04 17 44.3	
	comp=N,221nm,0.8s						
O18K	**Koktuh Hills**	**2.52**	**346**	P	**Pn**	**04 17 00.0**	**-0.3**
	baz=166						
CNPM	**China Poot**	**2.56**	**33**	Pn	**Pn**	**04 17 01.5**	**+0.6**
CNPM				IAML		04 17 42.7	
	comp=N,159nm,0.7s						
HOM	**Homer**	**2.56**	**28**	Pn	**Pn**	**04 17 01.6**	**+0.8**
HOM				IAML		04 17 49.8	
	comp=E,361nm,1.1s						
ILSW	**Iliamna Southw**	**2.61**	**10**	Pn	**Pn**	**04 17 00.7**	**-0.9**
P16K	**Nushagak River**	**2.66**	**309**	P	**Pn**	**04 17 01.6**	**-0.5**
	baz=127						
CHGN	**Chignik**	**2.67**	**247**	Pn	**Pn**	**04 17 00.9**	**-1.4**
O20K	**Slope Mountain**	**2.76**	**15**	P	**Pn**	**04 17 04.5**	**+0.8**
	baz=196						
BRLK	**Bradley Lake**	**2.86**	**33**	Pn	**Pn**	**04 17 04.6**	**-0.4**
BRSE	**Bradley Lake S**	**2.89**	**35**		**Pn**	**04 17 05.1**	**-0.2**
BRSE	**Bradley Lake S**	**2.89**	**35**	P	**Pn**	**04 17 05.1**	**-0.2**
	baz=218						
RSO	**Redoubt South**	**3.12**	**11**	Pn	**Pn**	**04 17 09.7**	**+1.0**
N19K	**Bonanza Creek**	**3.41**	**356**	Pn	**Pn**	**04 17 13.0**	**+0.4**
N19K				IAML		04 18 10.0	
	comp=E,94nm,0.7s						
N19K	**Bonanza Creek**	**3.41**	**356**	P	**Pn**	**04 17 13.0**	**+0.4**
	baz=176						
SLKM	**Skilak Lake**	**3.66**	**31**		**Pn**	**04 17 15.4**	**-0.5**
CAPN	**Captain Cook N**	**3.67**	**22**	Pn	**Pn**	**04 17 17.3**	**+1.4**
SVW2	**Sparrevohn**	**3.78**	**348**	Pn	**Pn**	**04 17 17.7**	**+0.2**
SVW2				IAML		04 18 22.1	
	comp=E,62nm,1.0s						
SVW2				IAML		04 18 24.2	
	comp=N,66nm,0.6s						
O22K	**Cooper Landing**	**3.79**	**34**	Pn	**Pn**	**04 17 17.0**	**-0.6**
SPU	**Mount Spurr**	**3.90**	**14**	Pn	**Pn**	**04 17 19.3**	**+0.1**
RC01	**Rabbit Creek A**	**4.28**	**29**	Pn	**Pn**	**04 17 24.0**	**-0.4**
RC01	**Rabbit Creek A**	**4.28**	**29**	P	**Pn**	**04 17 24.0**	**-0.4**
	baz=213						
SUA	**Susitna One**	**4.38**	**21**	Pn	**Pn**	**04 17 26.0**	**+0.1**
SUA				IAML		04 18 27.2	
	comp=N,53nm,0.7s						
SUA				IAML		04 18 28.0	
	comp=E,59nm,0.6s						
SUA	**Susitna One**	**4.38**	**21**	P	**Pn**	**04 17 25.9**	**0.0**
	baz=204						
PWL	**Port Wells**	**4.52**	**38**	Pn	**Pn**	**04 17 26.8**	**-0.8**
PWL				IAML		04 18 18.0	
	comp=E,36nm,0.5s						
PWL				IAML		04 18 41.2	
	comp=N,34nm,0.5s						
PWL	**Port Wells**	**4.52**	**38**	P	**Pn**	**04 17 26.8**	**-0.8**
	baz=223						
SKT	**Skwentna**	**4.74**	**14**	Pn	**Pn**	**04 17 30.8**	**0.0**
SKT				IAML		04 20 17.7	
	comp=E,49nm,0.2s						
SKT				IAML		04 20 18.1	
	comp=N,55nm,0.3s						
PMR	**Palmer**	**4.86**	**29**	Pn	**Pn**	**04 17 31.0**	**-1.4**
PMR				IAML		04 18 43.6	
	comp=E,32nm,0.6s						
KNK	**Knik Glacier**	**4.90**	**33**	Pn	**Pn**	**04 17 31.8**	**-1.2**
KNK				IAML		04 18 49.4	
	comp=N,33nm,1.3s						
KNK				IAML		04 20 35.4	
	comp=E,37nm,0.1s						
KNK	**Knik Glacier**	**4.90**	**33**	P	**Pn**	**04 17 32.0**	**-1.0**
	baz=218						
GHO	**Glory Hole Cre**	**5.07**	**28**	Pn	**Pn**	**04 17 34.8**	**-0.5**
SML	**Sawmill**	**5.26**	**31**	Pn	**Pn**	**04 17 37.2**	**-0.6**
SML				IAML		04 20 28.2	
	comp=E,40nm,0.4s						
EYAK	**Cordova Ski Ar**	**5.30**	**50**	Pn	**Pn**	**04 17 36.9**	**-1.3**
PPLA	**Purkeypile**	**5.57**	**9**	Pn	**Pn**	**04 17 43.1**	**+1.0**
SCM	**Sheep Creek Mo**	**5.57**	**35**	Pn	**Pn**	**04 17 41.8**	**-0.3**
SCM	**Sheep Creek Mo**	**5.57**	**35**	P	**Pn**	**04 17 41.7**	**-0.5**
	baz=220						
TTA	**Tatalina**	**5.62**	**351**	Pn	**Pn**	**04 17 41.7**	**-1.0**
DIV	**Divide**	**5.62**	**45**	Pn	**Pn**	**04 17 41.7**	**-1.1**
KLU	**Klutina**	**5.80**	**42**	Pn	**Pn**	**04 17 44.7**	**-0.6**
KLU	**Klutina**	**5.80**	**42**	P	**Pn**	**04 17 44.6**	**-0.6**
	baz=229						
K20K	**Telida**	**5.96**	**360**	Pn	**Pn**	**04 17 48.4**	**+1.0**
K20K	**Telida**	**5.96**	**360**	P	**Pn**	**04 17 47.1**	**-0.3**
	baz=180						
WAT7	**Susitna Watana**	**6.01**	**23**		**Pn**	**04 17 47.7**	**-0.5**
CAST	**Castle Rocks**	**6.09**	**8**	Pn	**Pn**	**04 17 50.6**	**+1.3**
CAST	**Castle Rocks**	**6.09**	**8**	P	**Pn**	**04 17 49.2**	**0.0**
	baz=190						
M24K	**Tolsona, Glenn**	**6.14**	**37**	Pn	**Pn**	**04 17 50.4**	**+0.4**
TRF	**Thorofare Moun**	**6.32**	**15**	Pn	**Pn**	**04 17 52.7**	**+0.2**
KTH	**Kantishna Hill**	**6.34**	**13**	Pn	**Pn**	**04 17 52.3**	**-0.3**
N25K	**Chitina, Valde**	**6.36**	**45**	Pn	**Pn**	**04 17 52.5**	**-0.5**
GLB	**Gilahina Butte**	**6.58**	**48**	Pn	**Pn**	**04 17 55.4**	**-0.5**
VRDI	**Verde Repeater**	**6.61**	**50**	Pn	**Pn**	**04 17 55.6**	**-0.9**
HARP	**HAARP**	**6.68**	**38**	P	**Pn**	**04 17 57.4**	**+0.1**
	baz=226						
MCK	**McKinley**	**6.80**	**19**	Pn	**Pn**	**04 17 57.3**	**-1.7**
MCK	**McKinley**	**6.80**	**19**	P	**Pn**	**04 17 57.3**	**-1.7**
	baz=204						
BPAW	**Bear Paw Mtn.**	**6.86**	**11**	Pn	**Pn**	**04 18 00.4**	**+0.7**
MCARA	**McCarthy VSAT**	**6.87**	**50**	Pn	**Pn**	**04 17 58.2**	**-1.6**
KIAG	**Kiagna River**	**6.94**	**55**		**Pn**	**04 18 00.1**	**-0.9**
BALM	**Baldy**	**6.99**	**54**		**Pn**	**04 18 01.1**	**-0.6**
PAX	**Paxson**	**7.00**	**34**	Pn	**Pn**	**04 18 00.7**	**-1.0**
BARN	**Barnard Glacie**	**7.30**	**55**	Pn	**Pn**	**04 18 05.1**	**-0.8**
NEA2	**Nenana**	**7.58**	**16**	Pn	**Pn**	**04 18 10.3**	**+0.7**
PCA	**Pinnacle**	**7.63**	**64**	Pn	**Pn**	**04 18 08.3**	**-2.0**
WRH	**Wood River Hil**	**7.63**	**20**	Pn	**Pn**	**04 18 08.9**	**-1.4**
L26K	**Log Cabin Wild**	**7.72**	**39**	Pn	**Pn**	**04 18 12.1**	**+0.6**
RIDG	**Independent Ri**	**7.77**	**32**	Pn	**Pn**	**04 18 10.7**	**-1.5**
MLY	**Manley**	**7.80**	**10**	Pn	**Pn**	**04 18 12.3**	**-0.2**
HDA	**Harding Lake**	**7.80**	**23**	Pn	**Pn**	**04 18 12.3**	**-0.3**
I21K	**Tanana**	**7.85**	**6**	P	**Pn**	**04 18 12.7**	**-0.5**
	baz=188						
MDM	**Murphy Dome**	**8.06**	**18**	Pn	**Pn**	**04 18 14.8**	**-1.3**
IL31		**8.13**	**22**	Pn	**Pn**	**04 18 15.7**	**-1.4**
ILAR	**Eielson Array**	**8.13**	**22**	Pn	**Pn**	**04 18 16.4**	**-0.7**
	comp=E,0.3nm,0.3s,baz=220,slow=13,SNR=12						
ILAR				Sn	**Sn**	**04 19 39.4**	**-8.1**
	comp=E,0.2nm,0.3s,baz=218,slow=12,SNR=0.9						
ILAR	**Eielson Array**	**8.13**	**22**	Pn	**Pn**	**04 18 17.0**	**-0.2**
SCRK	**Sand Creek**	**8.20**	**33**	Pn	**Pn**	**04 18 17.7**	**-0.5**
BCAR	**Beaver Creek A**	**8.30**	**42**	Pn	**Pn**	**04 18 19.0**	**-0.4**
IMAR	**Indian Mountai**	**8.60**	**1**	Pn	**Pn**	**04 18 24.5**	**+1.1**
ANM	**Nome**	**9.03**	**327**	Pn	**Pn**	**04 18 29.4**	**-0.1**
PRP	**Porcupine Dome**	**9.07**	**23**	Pn	**Pn**	**04 18 29.2**	**-0.8**
HYT	**Haines Junctio**	**9.14**	**61**	Pn	**Pn**	**04 18 30.8**	**-0.2**
EGAK	**Eagle**	**9.63**	**35**	Pn	**Pn**	**04 18 36.1**	**-1.5**
SKAG	**Skagway**	**10.00**	**70**	Pn	**Pn**	**04 18 41.7**	**-0.9**
TNA	**Tin City**	**10.50**	**327**	Pn	**Pn**	**04 18 50.5**	**+1.0**
BMAR	**Burnt Mountain**	**10.93**	**19**	Pn	**Pn**	**04 18 54.1**	**-1.3**
M31M	**Drury Creek, Y**	**10.95**	**56**	Pn	**Pn**	**04 18 56.1**	**+0.4**
FARO	**Faro, Yukon**	**11.43**	**56**	Pn	**Pn**	**04 19 01.5**	**-0.8**
INK	**Inuvik**	**14.27**	**32**	Pn	**Pn**	**04 19 43.0**	**+2.4**
	baz=354,slow=13,SNR=1.1						
	comp=E,0.2nm,0.3s						
INK	**Inuvik**	**14.27**	**32**	Pn	**Pn**	**04 19 41.9**	**+1.2**
C36M	**Paulatuk**	**17.70**	**36**	P	**Pn**	**04 20 24.2**	**0.0**
C36M				IAmb	IAmb	04 20 26.9	
	comp=Z,2.3nm,0.7s						
A36M	**Sachs Harbour**	**18.77**	**28**	P	**Pn**	**04 20 37.0**	**-0.1**
A36M				IAmb	IAmb	04 20 40.6	
	comp=Z,3.3nm,0.8s						
YKA	**Yellowknife Ar**	**20.12**	**59**	P	**P**	**04 20 51.6**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=270,slow=9.9,SNR=14						
	comp=Z,0.6nm,0.8s						
PETK	**Petropavlovsk-**	**27.38**	**282**	P	**P**	**04 22 00.1**	**-1.8**
	comp=Z,2.4nm,0.9s,baz=78,slow=13,SNR=2.1						
	comp=Z,2.4nm,0.9s						
NVAR	**Mina Array Bea**	**30.04**	**114**	P	**P**	**04 22 27.9**	**+2.0**
	comp=Z,0.3nm,0.5s,baz=315,slow=8.9,SNR=2.8						
	comp=Z,0.3nm,0.5s						
PDAR	**Pinedale Array**	**31.42**	**98**	P	**P**	**04 22 40.1**	**+2.1**
	comp=Z,0.6nm,0.5s,baz=317,slow=4.5,SNR=8.0						
	comp=Z,0.6nm,0.5s						
SONM	**Songino Array**	**55.90**	**307**	P	**P**	**04 25 53.4**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=34,slow=5.4,SNR=2.7						
	comp=Z,0.6nm,0.8s						
EKA	**Eskdalemuir Ar**	**65.15**	**18**	LR	LR	04 58 20.6	
	comp=Z,38nm,19.3s,baz=356,slow=39						
MKAR	**Makanchi Array**	**66.12**	**321**	P	**P**	**04 27 02.6**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=19,slow=6.1,SNR=4.2						
	comp=Z,0.3nm,0.4s						
AKASG	**Malin Array Be**	**72.21**	**358**	P	**P**	**04 27 40.5**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=14,slow=6.5,SNR=1.5						
	comp=Z,0.3nm,0.4s						
ESDC	**Sonseca Array**	**80.04**	**23**	P	**P**	**04 28 26.5**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=325,slow=5.6,SNR=1.7						
	comp=Z,0.3nm,0.4s						

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*NEIC **27** 04:18:52.1±2.0,21°.1S±0°.1×175°.9W±0°.1,h155^{km}±7^{km},* *mb4.6/31, Error ellipse: s-maj=20.7km s-min=13.8km az=178.0*

*IDC **27** 04:18:57.4±3.0, 21°.09S×176°.39W, h197km±26km, mb3.8/10, mbtmp4.3/12, Error ellipse: s-maj=21.8km s-min=15.5km az=121.0*

ISC 27 04:18:56.2±0.5, 21°.2S±0°.1×176°.19W±0°.09, h196km, n63, σ1s.25/65, mb4.4/22, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	6.25	71	Pn	Pn	04 20 20.1	-6.5
MSVF	Nonsavu	6.44	301	P	Pn	04 20 29.4	+0.2
	9.1nm,0.4s,baz=157,slow=11,SNR=14						
MSVF	Nonsavu	6.44	301	Pn	Pn	04 20 28.5	-0.7
PINNC	Pines Island,	15.26	262		P	04 22 22.6	+0.4
PINNC				IAmb	IAmb	04 22 27.1	
	comp=Z,21nm,0.7s						
LIFNC	LIFOU	15.48	269		Pn	04 22 24.2	-0.3
OUENC	Ouen Island, N	15.81	262		Pn	04 22 30.7	+2.2
DZM	Mont Dzumac	16.18	264	P	Pn	04 22 35.5	+2.5
	comp=Z,21nm,0.7s,baz=84,slow=17,SNR=25						
DZM	Mont Dzumac	16.18	264	P	Pn	04 22 33.9	+0.9
DZM				IAmb	IAmb	04 22 37.7	
	comp=Z,24nm,0.8s						
URZ	Urewera	17.96	197	P	P	04 22 51.8	0.0
	comp=Z,13nm,0.8s,baz=326,slow=3.2,SNR=6.8						
URZ				S	S	04 25 55.7	-12
	comp=Z,26nm,1.2s,baz=263,slow=9.8,SNR=2.0						
KOUNC	Koumac, New Ca	18.26	269	P	Pn	04 22 56.9	-0.7
BKZ	Black Stump Fm	18.98	198	P	P	04 23 03.0	+0.1
BKZ				IAmb	IAmb	04 23 23.1	
	comp=Z,26nm,1.4s						
MRZ	Mangatainoka R	20.63	198	P	P	04 23 17.9	-2.6
MRZ				IAmb	IAmb	04 23 45.4	
	comp=Z,50nm,1.4s						
PLWZ	Palliser	21.56	198	P	P	04 23 29.9	-0.4
QRZ	Quartz Range	21.79	204	P	P	04 23 32.9	+0.3
QRZ				IAmb	IAmb	04 23 35.4	
	comp=Z,23nm,0.7s						
NNZ	Nelson	21.83	202	P	P	04 23 34.0	+1.0
NNZ				IAmb	IAmb	04 23 45.4	
	comp=Z,31nm,1.2s						
MRNZ	Matariki Terra	22.21	202	P	P	04 23 37.0	+0.4
THZ	Tophouse	22.48	202	P	P	04 23 40.5	+1.4
THZ				IAmb	IAmb	04 23 46.6	
	comp=Z,23nm,1.0s						
DSZ	Denniston Nort	22.86	204	P	P	04 23 43.5	+0.9
DSZ				IAmb	IAmb	04 23 48.1	
	comp=Z,24nm,0.9s						
LTZ	Lake Taylor	23.60	202	P	P	04 23 49.5	+0.2
LTZ				IAmb	IAmb	04 23 54.1	
	comp=Z,26nm,0.7s						
INZ	Inchbonnie	23.84	203	P	P	04 23 51.2	-0.2
RPZ	Rata Peaks	24.84	202	P	P	04 24 02.6	+2.1
	comp=Z,14nm,0.5s,baz=5.4,slow=1.1,SNR=16						
	comp=Z,14nm,0.5s						
RPZ	Rata Peaks	24.84	202	P	P	04 24 01.6	+1.1
RPZ				IAmb	IAmb	04 24 19.0	
	comp=Z,21nm,1.1s						
FOZ	Fox Glacier	25.14	204	P	P	04 24 04.0	+0.8
PPTF	Pamatai, Papee	25.36	86	P	P	04 24 00.6	-4.9
MLZ	Mavora Lakes	27.34	205	P	P	04 24 23.8	+0.8
MLZ				IAmb	IAmb	04 24 27.9	
	comp=Z,34nm,1.5s						
WHZ	Wether Hill Ro	27.85	204	P	P	04 24 28.5	+1.1
WHZ				IAmb	IAmb	04 24 37.0	
	comp=Z,28nm,1.4s						
CTA	Charters Tower	35.11	265	P	P	04 25 31.2	0.0
	comp=Z,6.9nm,0.7s,baz=92,slow=7.1,SNR=2.6						
	comp=Z,6.9nm,0.7s						
STKA	Stephens Creek	39.02	245	P	P	04 26 03.9	-0.1
	comp=Z,3.1nm,0.5s,baz=95,slow=9.1,SNR=7.1						
	comp=Z,3.1nm,0.5s						
STKA	Stephens Creek	39.02	245	P	P	04 26 03.9	-0.1
COEN	Coen	39.32	274	P	P	04 26 07.1	+0.5
COEN				IAmb	IAmb	04 26 08.0	
	comp=Z,6.5nm,0.7s						
ASAR	Alice Springs	46.01	257	P	P	04 26 60.0	-0.5
	comp=Z,6.2nm,0.8s,baz=91,slow=8.1,SNR=37						
ASAR				PcP	PcP	04 28 34.4	+0.7
	comp=Z,1.1nm,0.6s,baz=106,slow=3.5,SNR=5.4						
	comp=Z,6.2nm,0.8s						
WB0	Warramunga Arr	46.17	263	P	P	04 27 00.1	-1.6
WB2	Warramunga Arr	46.17	262	P	P	04 26 59.8	-1.8
WRA	Warramunga Arr	46.19	262	P	P	04 27 00.6	-1.2
	comp=Z,4.4nm,0.8s,baz=98,slow=7.0,SNR=28						
WRA				PcP	PcP	04 28 34.7	+0.4
	comp=Z,0.9nm,0.9s,baz=102,slow=2.7,SNR=3.5						
	comp=Z,4.4nm,0.8s						
WRA	Warramunga Arr	46.19	262	P	P	04 26 59.7	-2.1
FORT	Forrest	50.58	247	P	P	04 27 33.0	-2.1
MTN	Manton Dam	50.86	270	P	P	04 27 36.0	-1.4
MTN				IAmb	IAmb	04 27 37.6	
	comp=Z,10nm,0.8s						
KNRA	Kununurra	52.30	266	P	P	04 27 47.8	-0.3
KNRA				IAmb	IAmb	04 27 49.6	
	comp=Z,14nm,0.9s						
MBWA	Marble Bar	59.36	257	P	P	04 28 36.8	-1.3
MBWA				IAmb	IAmb	04 28 42.2	
	comp=Z,14nm,1.1s						
MORW	Morawa	61.13	248	P	P	04 28 48.7	-1.4
TOLI2	Tolitoli	65.41	281	P	P	04 29 18.8	+0.5
QSPA	South Pole Qui	68.88	180	P	P	04 29 40.5	+1.0
QSPA				IAmb	IAmb	04 29 45.3	
	comp=Z,12nm,1.5s						
NVAR	Mina Array Bea	80.38	42	P	P	04 30 47.1	+1.1
	comp=Z,0.5nm,0.7s,baz=225,slow=8.0,SNR=5.3						
	comp=Z,0.5nm,0.7s						
SUA	Susitna One	84.88	12	P	P	04 31 08.0	-0.5
TXAR	Lajitas Array	86.01	57	P	P	04 31 16.7	+1.7
	comp=Z,0.7nm,0.8s,baz=221,slow=5.0,SNR=5.1						
	comp=Z,0.7nm,0.8s						
SEY	Seymchan	87.44	346	P	P	04 31 21.3	+0.4
	comp=Z,2.7nm,0.6s,baz=147,slow=6.3,SNR=6.8						
	comp=Z,2.7nm,0.6s						
ILAR	Eielson Array	88.63	12	P	P	04 31 26.6	+0.1
	comp=Z,0.3nm,0.7s,baz=216,slow=5.4,SNR=6.1						
	comp=Z,0.3nm,0.7s						
YKA	Yellowknife Ar	96.44	24	P	P	04 32 03.4	+0.9
	comp=Z,0.3nm,0.8s,baz=234,slow=3.3,SNR=5.9						
	comp=Z,0.3nm,0.8s						
ZALV	Zalesovo Beam	112.10	321	PKiKP	PKiKP	04 37 08.1	+0.2
	comp=Z,0.8nm,0.6s,baz=132,slow=2.1,SNR=3.9						
MKAR	Makanchi Array	112.91	313	PKiKP	PKiKP	04 37 10.1	+0.4
	comp=Z,0.9nm,0.6s,baz=103,slow=0.7,SNR=15						
GAR	Garm	121.01	304	PKPdf	PKiKP	04 37 26.4	+0.5
ABKAR	Akbulak array	127.76	317	PKPdf	PKiKP	04 37 39.3	+0.6
GEYT	Alibeck	130.59	302	PKP	PKiKP	04 37 44.8	0.0
	comp=Z,1.0nm,0.4s,baz=28,slow=3.4,SNR=4.0						
AKASG	Malin Array Be	144.43	332	PKP	PKPab	04 38 07.4	-0.2
	comp=Z,5.2nm,0.6s,baz=40,slow=4.2,SNR=34						
AKBB	Malin Array Si	144.43	332	PKPdf	PKPab	04 38 07.2	-0.4
BRTR	Keskin Array B	148.56	313	PKPbc	PKPbc	04 38 20.8	+0.5
	comp=Z,3.2nm,0.6s,baz=143,slow=4.4,SNR=20						
CLL	Collm	149.10	349	⇓ *i*PKPbc	PKiKP	04 38 22.2	0.0
	comp=Z,6.0nm,0.5s						
CLL				*e*PKPab	PKPab	04 38 26.0	+0.1
CSS	Mathiatis	150.69	304		PKPbc	04 38 25.4	-0.1
KHC	Kasperske Hory	151.06	347	*e*PKP	PKiKP	04 38 26.5	+0.1
GERES	GERESS Array B	151.30	346	PKPbc	PKiKP	04 38 27.1	+0.2
	comp=Z,0.6nm,0.7s,baz=55,slow=4.1,SNR=3.3						
ELL	Elmali	152.53	310	PKPbc	PKPbc	04 38 29.0	-0.7
PRED	Cave del Predi	153.59	345	PKPab	PKPab	04 38 43.0	-1.9
TORD	Torodi Ar. Bea	171.74	165	PKPab	PKPab	04 40 07.1	+2.3
	comp=Z,3µm,0.7s,baz=194,slow=4.1,SNR=128						

WEL 27 04:32:57.6±0.5, 42°S±3°×17°4E±°, h5km, M2.3/5, ML2.6/6, MLv2.3/5, Error ellipse: s-maj=0.0km s-min=0.0km az=113.5, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	Kahutara	0.19	218	P	Pg	04 33 01.9	+0.4
KHZ				S	Sg	04 33 05.6	+1.6
BSWZ	Blackbirch Sta	0.56	13	P	Pg	04 33 08.7	+0.3
THZ	Tophouse	0.78	310	P	Pg	04 33 13.0	+0.5
TUWZ	Tuamarina	0.85	12	P	Pg	04 33 14.0	0.0
GVZ	Greta Valley S	0.86	215	P	Pg	04 33 14.0	-0.1
GVZ				S	Sb	04 33 26.7	-0.2
NNZ	Nelson	1.07	347	P	Pg	04 33 17.9	-0.3
MRNZ	Matariki Terra	1.11	320	P	Pb	04 33 19.3	-0.1
LTZ	Lake Taylor	1.18	243	P	Pg	04 33 18.9	-1.3
LTZ				S	Sg	04 33 35.1	-0.3
DUWZ	D'Urville Isla	1.47	7	P	Pn	04 33 23.4	-1.4
DSZ	Denniston Nort	1.51	289	P	Pn	04 33 25.5	+0.2
CAW	Cannon Point	1.54	42	P	Pn	04 33 22.7	-3.1
PAWZ	Paruwai Farm	1.56	56	P	Pn	04 33 22.1	-4.0
MQZ	McQueen's Vall	1.63	208	P	Pn	04 33 23.3	-3.8
MTW	Mount Morrison	1.74	51	P	Pn	04 33 24.5	-4.0
MRZ	Mangatainoka R	2.13	42	P	Pn	04 33 30.3	-3.6
WPHZ	Waipukurau	3.02	44	P	Pn	04 33 48.9	+2.8
MHEZ	Mangahewa	3.22	9	P	Pn	04 33 49.3	+0.5
PXZ	Pawanui	3.27	48	P	Pn	04 33 51.0	+1.5

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*UPP **27** 04:34:49.5±0.1, 67°.84N×20°.21E, h0km, ML2.8, Confirmed Induced event*

*HEL **27** 04:34:50.3±0.3, 67°.83N×20°.26E, h0km, ML1.6, Explosion*

*DNK **27** 04:34:50.0±0.8, 67°.85N×20°.20E, h0km, ML2.8(UPP), Suspected explosion*

ISC 27 04:34:48.8±0.8, 67°.81N±0°.02×20°.35E±0°.03, h0km, n36, σ0s.97/59, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RATU	Laukkuluspa	0.29	273	P	Pg	04 34 54.2	-0.1
RATU				S	Sg	04 34 57.4	-0.6
RATU	Laukkuluspa	0.29	273	P	Pg	04 34 54.2	-0.1
RATU				S	Sg	04 34 57.4	-0.6
KOVU	Salmi	0.42	350	P	Pg	04 34 56.9	+0.1
KOVU	Salmi	0.42	350	P	Pg	04 34 56.9	+0.1
NIKU	Nikkaluokta	0.50	277	P	Pg	04 34 58.0	-0.3
NIKU	Nikkaluokta	0.50	277	P	Pg	04 34 58.0	-0.3
LANU	Lannavaara	0.67	68	P	Pb	04 35 02.8	-0.4
LANU				S	Sb	04 35 12.4	-0.6
LANU	Lannavaara	0.67	68	P	Pb	04 35 02.8	-0.4
LANU				S	Sb	04 35 12.4	-0.6
LANU	Lannavaara	0.67	68	PG	Pb	04 35 02.6	-0.6
LANU				SG	Sb	04 35 12.1	-0.9
DUNU	Dundret	0.70	173	P	Pb	04 35 03.3	-0.4
DUNU				S	Sb	04 35 13.4	-0.5
DUNU	Dundret	0.70	173	P	Pb	04 35 03.3	-0.4
DUNU				S	Sb	04 35 13.4	-0.5
SALU	Saltoluokta	0.83	239	P	Pg	04 35 04.5	0.0
SALU	Saltoluokta	0.83	239	P	Pg	04 35 04.5	0.0
KIF	Kilpisjarvi	1.21	8	*e*P	Pb	04 35 12.4	-0.1
KIF	Kilpisjarvi	1.21	8	PG	Pb	04 35 12.3	-0.2
KIF				MSG		04 35 27.6	
	comp=Z,6.7nm,0.2s						
KIF				SG	Sg	04 35 28.0	+0.3
PAJU	Pajala	1.33	125	P	Pn	04 35 15.0	+0.5
PAJU				S	Sn	04 35 33.5	+0.6
PAJU	Pajala	1.33	125	P	Pn	04 35 15.0	+0.5
PAJU				S	Sn	04 35 33.5	+0.6
PAJU	Pajala	1.33	125	PG	Pn	04 35 14.7	+0.1
	baz=304						
PAJU				SB	Sn	04 35 33.4	+0.5
HEF	Hetta	1.38	63	*e*P	Pb	04 35 15.4	0.0
HEF	Hetta	1.38	63	PG	Pb	04 35 15.4	0.0
HEF				MSG		04 35 32.5	
	comp=Z,3.8nm,0.2s						
HEF				SG	Sn	04 35 34.4	+0.2
KTK1	Kautokeino	1.61	40	PG	Pb	04 35 19.2	-0.2
KTK1				SN	Sg	04 35 43.3	+2.8
HARU	Harads	1.67	171	P	Pg	04 35 20.7	-0.1
HARU				S	Sg	04 35 44.4	+2.0
HARU	Harads	1.67	171	P	Pg	04 35 20.7	-0.1
HARU				S	Sg	04 35 44.4	+2.0
TRO	Tromso	1.91	345	PG	Pb	04 35 24.5	+0.2
TRO				SB	Sb	04 35 47.8	-0.8
KALU	Kalix	2.29	147	P	Pb	04 35 30.4	-0.5
KALU	Kalix	2.29	147	P	Pb	04 35 30.4	-0.5
KALU	Kalix	2.29	147	PB	Pb	04 35 30.3	-0.5
	baz=326						
KALU				SG	Sg	04 36 02.0	-0.2
TOF	Tornio	2.34	136	PB	Pb	04 35 31.6	-0.1
TOF				MSG		04 36 00.8	
	comp=Z,2.9nm,0.2s						
TOF				SG	Sg	04 36 03.8	0.0
SJUU	Sjulsmark	2.37	167	P	Pb	04 35 31.2	-1.0
SJUU	Sjulsmark	2.37	167	P	Pb	04 35 31.2	-1.0
SGF	Sodankyl	2.39	96	PB	Pb	04 35 31.7	-1.0
SGF				SG	Sg	04 36 05.4	-0.1
RNF	Rovaniemi	2.51	116	PB	Pb	04 35 34.1	-0.6
RNF				SG	Sg	04 36 07.8	-1.5
ARA0	ARCESS Array S	2.56	45	PB	Pb	04 35 33.7	-1.8
	baz=230						
ARA0				SG	Sb	04 36 08.7	+1.2
KEV	Kevo	3.11	48	PB	Pb	04 35 44.1	-0.8
KEV				MSG		04 36 22.0	
	comp=Z,1.5nm,0.2s						
KEV				SG	Sb	04 36 23.6	+0.3
VRF	Varrio	3.52	87	PB	Pb	04 35 49.2	-2.7
VRF				SG	Sg	04 36 39.4	-2.3
KU6	Riekki	4.16	111	PG	Pb	04 36 05.4	+2.7

WEL 27 04:35:17.4±0.7, 41°S±4°×17°3E±°, h117km±5km, M3.0/13, MLv3.0/13, Error ellipse: s-maj=0.0km s-min=0.0km az=108.1, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRNZ	Matariki Terra	0.14	165	P	Pn	04 35 34.8	+1.2
MRNZ				S	Sn	04 35 48.2	+2.4
TKNZ	Takaka Hill	0.30	40	P	Pn	04 35 35.2	+1.1
TKNZ				S	Sn	04 35 48.7	+2.2
QRZ	Quartz Range	0.46	343	P	Pn	04 35 36.1	+1.3
QRZ				S	Sn	04 35 49.8	+2.0
NNZ	Nelson	0.51	85	P	Pn	04 35 35.7	+0.7
NNZ				S	Sn	04 35 50.1	+1.8
THZ	Tophouse	0.52	164	P	Pn	04 35 36.3	+1.0
THZ				S	Sn	04 35 51.0	+2.3
DSZ	Denniston Nort	0.83	234	P	Pn	04 35 38.5	+0.8
DSZ				S	Sn	04 35 53.8	+0.8
TUWZ	Tuamarina	0.94	101	P	Pn	04 35 39.0	+0.3
TUWZ				S	Sn	04 35 55.1	+0.4
BSWZ	Blackbirch Sta	0.99	118	P	Pn	04 35 39.2	+0.2
DUWZ	D'Urville Isla	1.03	64	P	Pn	04 35 39.9	+0.4
DUWZ				S	Sn	04 35 57.6	+1.5
TCW	Tory Channel	1.18	88	P	Pn	04 35 41.0	0.0
KHZ	Kahutara	1.31	152	P	Pn	04 35 42.4	-0.1
LTZ	Lake Taylor	1.56	192	P	Pn	04 35 45.3	0.0
KIW	Kapiti Island	1.71	77	P	Pn	04 35 46.1	-1.1
GVZ	Greta Valley S	1.72	172	P	Pn	04 35 47.1	-0.2
INZ	Inchbonnie	1.74	212	P	Pn	04 35 47.5	0.0
CAW	Cannon Point	1.79	86	P	Pn	04 35 46.7	-1.3
OGWZ	Otaki Gorge	1.91	77	P	Pn	04 35 48.3	-1.4
PLWZ	Palliser	1.94	100	P	Pn	04 35 48.2	-1.8
NMEZ	Namu Road	2.05	26	P	Pn	04 35 51.6	+0.3
PAWZ	Paruwai Farm	2.05	94	P	Pn	04 35 49.4	-1.9
MTW	Mount Morrison	2.11	88	P	Pn	04 35 50.2	-1.9
OXZ	Oxford	2.12	193	P	Pn	04 35 51.2	-1.1
HOWZ	Holdsworth Sta	2.15	81	P	Pn	04 35 50.7	-2.0
NBEZ	Newall Road No	2.18	24	P	Pn	04 35 53.2	+0.2
KHEZ	Kahui Hut	2.20	27	P	Pn	04 35 53.3	-0.1
PREZ	Palmer Road	2.21	31	P	Pn	04 35 53.6	+0.1
NEZ	North Egmont	2.25	29	P	Pn	04 35 53.9	-0.1
MRZ	Mangatainoka R	2.25	76	P	Pn	04 35 51.7	-2.2
PKE	Pukeiti	2.28	26	P	Pn	04 35 54.3	0.0
WAZ	Wanganui	2.30	50	P	Pn	04 35 54.4	-0.1
WVZ	Waitaha Valley	2.33	218	P	Pn	04 35 54.2	-0.6
MHCZ	Mount Hutt	2.42	200	P	Pn	04 35 55.4	-0.7
MQZ	McQueen's Vall	2.44	181	P	Pn	04 35 54.8	-1.6
RACZ	Rakaia	2.50	189	P	Pn	04 35 55.8	-1.2
AKCZ	Akaroa Harbour	2.61	177	P	Pn	04 35 57.3	-1.3
VRZ	Vera Road	2.65	37	P	Pn	04 35 58.5	-0.5
GCSZ	Gaunt Creek Bo	2.71	220	P	Pn	04 35 58.7	-1.0
BFZ	Birch Farm	2.74	79	P	Pn	04 35 57.7	-2.5
RPZ	Rata Peaks	2.74	206	P	Pn	04 35 59.3	-0.9
WACZ	Wakanui South	2.76	193	P	Pn	04 35 59.2	-1.1
PKVZ	Pokaka	2.82	47	P	Pn	04 36 00.3	-1.0
MTVZ	Mangateitei	2.82	49	P	Pn	04 36 00.3	-1.1
ARCZ	Arundel	2.91	202	P	Pn	04 36 00.7	-1.8
TRVZ	Turoa	2.92	49	P	Pn	04 36 01.4	-1.4
WNVZ	Wahianoa	2.94	50	P	Pn	04 36 01.5	-1.5
FWVZ	Far West T-bar	2.96	48	P	Pn	04 36 02.3	-1.0
PNHZ	Pukenui	2.98	64	P	Pn	04 36 00.6	-2.8
TUVZ	Tukino	3.01	50	P	Pn	04 36 02.8	-1.1
TWVZ	Taurewa	3.03	45	P	Pn	04 36 02.7	-1.4
NGZ	Ngauruhoe	3.04	48	P	Pn	04 36 03.0	-1.3
SNVZ	South Ngauruho	3.05	48	P	Pn	04 36 03.0	-1.5
WTVZ	West Tongariro	3.08	47	P	Pn	04 36 04.3	-0.4
NNVZ	North Ngauruho	3.08	47	P	Pn	04 36 03.2	-1.6
OTVZ	Oturere	3.08	48	P	Pn	04 36 03.2	-1.7
KRVZ	Karewarewa	3.12	47	P	Pn	04 36 04.3	-1.0
FOZ	Fox Glacier	3.12	222	P	Pn	04 36 03.7	-1.4
ETVZ	East Tongariro	3.13	48	P	Pn	04 36 03.7	-1.8
TMVZ	Te Maari	3.14	48	P	Pn	04 36 04.5	-1.0
HIZ	Hauiti	3.20	32	P	Pn	04 36 05.1	-1.2
KATZ	Kakaramea	3.23	46	P	Pn	04 36 05.9	-0.9
TMZ	Timaru	3.36	201	P	Pn	04 36 06.5	-1.9
KAHZ	Kahuranaki	3.50	67	P	Pn	04 36 07.2	-3.1
BKZ	Black Stump Fm	3.57	55	P	Pn	04 36 08.7	-2.5
NMHZ	Naumai	3.81	57	P	Pn	04 36 11.7	-2.8
JCZ	Jackson Bay	4.03	225	P	Pn	04 36 15.8	-1.6
ODZ	Otahua Downs	4.07	201	P	Pn	04 36 15.9	-1.9
MHGZ	Mahia Peninsul	4.50	64	P	Pn	04 36 23.0	-0.6
WIAZ	Waiheke Island	4.84	24	P	Pn	04 36 28.0	-0.2

WEL 27 04:44:28.9±1.1, 40°S±9°×17°3E±°, h101km±12km, M2.3/2, MLv2.3/2, Error ellipse: s-maj=0.0km s-min=0.0km az=176.4, confirmed, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	D'Urville Isla	0.67	146	P	Pn	04 44 47.6	+1.4
DUWZ				S	Sn	04 45 01.1	+2.0
TKNZ	Takaka Hill	0.86	205	P	Pn	04 44 48.5	+0.4
TKNZ				P	Sn	04 45 03.7	+1.2
QRZ	Quartz Range	0.90	230	P	Pn	04 44 49.1	+0.7
NNZ	Nelson	0.97	183	P	Pn	04 44 49.3	+0.2
NNZ				S	Sn	04 45 04.7	+0.5
TCW	Tory Channel	1.15	147	P	Pn	04 44 52.3	+1.2
TCW				S	Sn	04 45 09.3	+1.4
TUWZ	Tuamarina	1.24	162	P	Pn	04 44 52.8	+0.6
MRNZ	Matariki Terra	1.26	204	P	Pn	04 44 52.1	-0.2
MRNZ				S	Sn	04 45 09.7	-0.4
KIW	Kapiti Island	1.28	119	P	Pn	04 44 53.5	+0.9
MHEZ	Mangahewa	1.36	31	P	Pn	04 44 49.3	-4.2
OGWZ	Otaki Gorge	1.44	114	P	Pn	04 44 55.2	+0.8
OGWZ				S	Sn	04 45 13.5	-0.3
CAW	Cannon Point	1.51	125	P	Pn	04 44 55.4	+0.1
MTW	Mount Morrison	1.81	121	P	Pn	04 44 58.7	-0.4
PLWZ	Palliser	1.91	134	P	Pn	04 44 59.6	-0.8
NTVZ	North Tongarir	2.08	57	P	Pn	04 45 01.8	-0.9

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*IDC **27** 04:51:00.8±7.7, 20°.00S×178°.68W, h599km±70km, mb3.1/4, mbtmp4.0/5, Error ellipse: s-maj=146.6km s-min=34.1km az=146.0*

ISC 27 04:51:00.4±2.4, 20°.1S±0°.8×178°.5W±0°.4, h602km, n7, σ1s.19/9, mb3.6/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.16	260	P	P	04 54 01.7	+0.8
	2.9nm,0.7s,baz=85,slow=18,SNR=2.4						
ASAR	Alice Springs	44.12	256	P	P	04 58 16.6	-0.6
	4.2nm,0.5s,baz=96,slow=7.6,SNR=61						
ASAR				PcP	PcP	04 59 49.4	+0.6
	0.5nm,0.4s,baz=105,slow=4.0,SNR=5.8						
	4.2nm,0.5s						
WRA	Warramunga Arr	44.16	262	P	P	04 58 16.9	-0.7
	1.1nm,0.3s,baz=97,slow=7.2,SNR=114						
WRA				PcP	PcP	04 59 49.2	+0.3
	0.6nm,0.9s,baz=99,slow=3.6,SNR=1.8						
	1.1nm,0.3s						
ILAR	Eielson Array	88.07	13	P	P	05 02 47.2	-0.2
	0.3nm,0.6s,baz=220,slow=4.6,SNR=3.0						
	0.3nm,0.6s						
PDAR	Pinedale Array	89.04	43	P	P	05 02 53.5	+0.8
	0.2nm,0.5s,baz=232,slow=4.4,SNR=2.0						
	0.2nm,0.5s						
AKASG	Malin Array Be	142.46	331	PKP	PKPdf	05 09 23.2	-2.3
	1.0nm,0.4s,baz=36,slow=4.0,SNR=8.4						
BRTR	Keskin Array B	146.23	312	PKPbc	PKPbc	05 09 35.7	+0.8
	0.4nm,0.5s,baz=137,slow=3.2,SNR=3.1						

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*IDC **27** 04:55:51.5±4.0, 33°.82N×79°.95E, h0km, mb3.8/2, mbtmp3.6/5, ML3.1/3, Error ellipse: s-maj=86.3km s-min=35.3km az=102.0*

ISC 27 04:55:51.6±2.1, 33°.8N±0°.2×80°.3E±0°.2, h10km, n6, σ0s.23/7, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	9.95	334	Pn	Pn	04 58 14.8	+0.1
	0.2nm,0.3s,baz=176,slow=16,SNR=2.3						
AAK				Sn	Sn	05 00 06.5	0.0
	0.1nm,0.3s,baz=52,slow=22,SNR=1.4						
	0.9nm,0.5s						
MKAR	Makanchi Array	13.09	6	Pn	Pn	04 58 57.8	+0.2
	0.1nm,0.3s,baz=183,slow=13,SNR=5.7						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	16.89	356	Pn	Pn	04 59 47.7	-0.2
	0.1nm,0.3s,baz=175,slow=15,SNR=19						
	1.0nm,0.8s						
BVAR	Borovoye Array	20.50	343	P	P	05 00 29.3	-0.3
	1.1nm,0.4s,baz=157,slow=12,SNR=8.1						
	1.1nm,0.4s						
FINES	FINESS Array B	43.99	326	P	P	05 03 59.0	+0.1
	2.1nm,0.9s,baz=119,slow=8.7,SNR=1.6						
	2.1nm,0.9s						
TORD	Torodi Ar. Bea	73.40	275	P	P	05 07 24.3	0.0
	0.5nm,0.9s,baz=62,slow=6.0,SNR=2.5						

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*PDG **27** 05:19:43.1±0.1, 43°.46N×17°.39E, h1km, MD3.4/1, ML3.3/12, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*

*BEO **27** 05:19:43.8±0.4, 43°.47N×17°.38E, h10km±2km, ML2.9/15*

*RHSSO **27** 05:19:44.0±0.2, 43°.45N×17°.42E, h5km±1km, ML3.2/22*

*PRU **27** 05:19:45.2±0.0, 43°.57N×17°.33E, h0km*

ISC 27 05:19:43.6±1.1, 43°.48N±0°.02×17°.43E±0°.01, h2km±9km, n100, σ1s.23/186, 10C-12D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RICI	Ricice	0.21	274	*i* Pg	Pg	05 19 48.1	+0.3
RICI				Sg	Sg	05 19 51.5	+0.9
MAKA	Makarska	0.35	237	*i* Pg	Pg	05 19 50.1	-0.2
MAKA				Sg	Sg	05 19 55.8	+0.8
SRKY	Kupres RS	0.62	342	*e*Pg	Pg	05 19 55.2	-0.3
SRKY				*e*Sg	Sg	05 20 04.9	+1.4
STON	Ston	0.64	162	*i* Pg	Pg	05 19 55.0	-0.9
STON				Sg	Sg	05 20 03.6	-0.5
STON	Ston	0.64	162	*e*Pg	Pg	05 19 55.1	-0.8
STON				*e*Sg	Sg	05 20 05.2	+1.1
STON	Ston	0.64	162	⇓ *i*Pg	Pg	05 19 54.8	-1.1
STON				*e*Sg	Sg	05 20 04.5	+0.4
LSTV	Lastovo	0.81	209	*i* Pg	Pg	05 19 58.0	-1.1
LSTV				Sg	Sb	05 20 10.3	-1.5
KIJV	Kijevo	0.91	306	*e*Pg	Pg	05 20 00.3	-0.8
DBRK	Dubrovnik	0.97	147	*e*Pg	Pg	05 20 00.8	-1.3
DBRK				Sg	Sg	05 20 13.8	-0.9
MGRS	Mrkonjic Grad	0.97	345	⇓ *i*Pg	Pg	05 20 01.9	-0.3
MGRS				*e*Sg	Sg	05 20 15.8	+1.0
BRY	Bratogost	1.00	125	⇑ *i*Pg	Pg	05 20 01.1	-1.6
BRY				*e*Sg	Sg	05 20 15.8	+0.2
BRY	Bratogost	1.00	125	⇓ *i*Pg	Pg	05 20 01.5	-1.2
BRY				*i* Sg	Sg	05 20 17.0	+1.4
TREB	Trebinje	1.02	138	*e*Pg	Pg	05 20 01.5	-1.6
TREB				*e*Sg	Sg	05 20 17.3	+1.0
TREB	Trebinje	1.02	138	⇑ *i*Pg	Pg	05 20 01.5	-1.6
TREB				*e*Sg	Sg	05 20 16.3	0.0
UPM	Unac-Piva	1.11	104	*e*Pg	Pg	05 20 04.0	-1.0
UPM				*e*Sg	Sg	05 20 20.0	+0.6
UPM	Unac-Piva	1.11	104	⇓ *i*Pg	Pg	05 20 03.9	-1.0
UPM				*i* Sg	Sb	05 20 21.7	+1.0
A050A	Klekovaca	1.19	327	⇓ *i*Pg	Pg	05 20 05.6	-0.9
A050A				*e*Sg	Sg	05 20 22.5	+0.6
HAPS	Han Pijesak,BI	1.26	61	*e*Pg	Pg	05 20 07.2	-0.6
HAPS				*e*Sg	Sb	05 20 25.8	+0.9
HAPS	Han Pijesak,BI	1.26	61	⇑ *i*Pg	Pg	05 20 06.9	-0.9
HAPS				*e*Sg	Sg	05 20 24.4	+0.3
BLY	Banja Luka	1.28	352	*e*Pg	Pn	05 20 07.7	-0.8
BLY				*e*Sg	Sn	05 20 26.4	+0.1
BLY	Banja Luka	1.28	352	⇑ *i*Pg	Pn	05 20 07.8	-0.8
BLY				*e*Sg	Sn	05 20 26.0	-0.3
MORI	Morici	1.31	288	*e*Pg	Pn	05 20 07.4	-1.5
MORI				Sg	Sn	05 20 26.7	-0.2
ZIRJ	Zirje	1.31	278	*e*Pg	Pn	05 20 08.4	-0.5
ZIRJ				Sg	Sn	05 20 26.5	-0.4
NKME	Niksic	1.32	122	⇑ *i*Pg	Pn	05 20 07.6	-1.6

NKME				i Sg	Sn	05 20 28.4	+1.0
DOB	Doboj	1.34	21	ePg	Pn	05 20 08.2	-1.2
DOB				eSg	Sb	05 20 26.8	-0.4
RUDO	Rudo	1.42	84	ePg	Pn	05 20 09.2	-1.3
RUDO				eSg	Sb	05 20 29.3	-0.1
CEME	Cevo	1.44	130	⇓iPg	Pn	05 20 09.3	-1.4
CEME				i Sg	Sg	05 20 32.0	+2.2
PLE	Pljevlja	1.44	95	⇓iPg	Pn	05 20 10.0	-0.8
PLE				i Sg	Sg	05 20 33.0	+3.2
BBLS	Lazići	1.49	74	ePg	Pn	05 20 11.2	-0.2
BBLS				eSg	Sn	05 20 31.7	+0.2
BBLS	Lazići	1.49	74	⇑iPg	Pn	05 20 10.7	-0.7
BBLS				eSg	Sn	05 20 31.3	-0.2
A051A	Mrakovica	1.58	346	⇑iPn	Pn	05 20 12.4	-0.3
A051A				eSn	Sn	05 20 33.5	-0.2
PRIJ	Prijedor	1.58	341	ePn	Pn	05 20 12.2	-0.5
PRIJ				eSn	Sn	05 20 33.7	0.0
UDBI	Udbina	1.59	312	ePn	Pb	05 20 13.8	0.0
UDBI				Sn	Sg	05 20 37.5	+2.6
BUM	Brajici-Budva	1.60	137	⇓iPn	Pn	05 20 12.5	-0.4
BUM				i Sn	Sg	05 20 36.9	+2.0
A052A	Srbac	1.62	2	ePn	Pn	05 20 13.8	+0.6
A052A				eSn	Sb	05 20 35.8	+0.6
KOME	Kolasin	1.65	112	⇓iPn	Pn	05 20 13.9	+0.2
KOME				i Sn	Sg	05 20 39.1	+2.4
PDG	Podgorica	1.70	127	ePn	Pn	05 20 14.4	+0.1
PDG				eSg	Sb	05 20 38.2	+0.7
PDG	Podgorica	1.70	127	⇓iPn	Pn	05 20 14.6	+0.3
PDG				i Sn	Sg	05 20 39.3	+1.0
DUGI	Dugi Otok	1.79	287	i Pn	Pn	05 20 16.0	+0.5
DUGI				Sn	Sg	05 20 41.3	+0.1
DRME	Dracevica, Mon	1.83	134	ePn	Pn	05 20 15.2	-0.8
DRME				eSn	Sn	05 20 39.6	-0.2
DRME	Dracevica, Mon	1.83	134	⇑iPn	Pn	05 20 16.5	+0.5
DRME				i Sn	Sg	05 20 43.3	+1.0
TEKS	Tekeris	1.85	54	ePn	Pn	05 20 16.0	-0.5
TEKS	Tekeris	1.85	54	ePn	Pn	05 20 16.9	+0.4
TEKS				eSn	Sn	05 20 41.1	+0.6
SJES	Sjenica	1.87	96	ePn	Pn	05 20 17.6	+0.9
SJES				eSg	Sb	05 20 43.5	+1.1
SJES	Sjenica	1.87	96	ePn	Pn	05 20 17.1	+0.4
SJES				eSn	Sn	05 20 40.7	-0.3
VIRC	Vir	1.90	296	ePn	Pn	05 20 17.5	+0.5
VIRC				Sn	Sg	05 20 43.8	-0.8
IVA	Berane	1.90	108	⇓iPn	Pb	05 20 18.9	-0.2
IVA				i Sn	Sg	05 20 45.5	+0.8
PLIT	Plitvice	1.91	318	ePn	Pb	05 20 18.6	-0.6
PLIT				Sn	Sb	05 20 43.0	-0.5
DIVS	Divibare	1.96	71	ePn	Pn	05 20 17.6	-0.3
DIVS				eSg	Sg	05 20 47.7	+1.2
DIVS	Divibare	1.96	71	ePn	Pn	05 20 18.4	+0.5
DIVS				eSn	Sn	05 20 42.6	-0.5
IVAS	Ivanjica	1.98	86	ePn	Pn	05 20 17.3	-1.0
IVAS				eSn	Sn	05 20 43.7	0.0
ULC	Ulcinj	2.02	138	⇓iPn	Pn	05 20 19.1	+0.4
ULC				i Sn	Sb	05 20 47.8	+1.1
PVY	Plav	2.06	115	⇑iPn	Pb	05 20 21.5	-0.2
PVY				i Sn	Sb	05 20 49.0	+1.2
NVLJ	Novalja	2.14	301	ePn	Pn	05 20 20.8	+0.4
NVLJ				Sn	Sb	05 20 49.2	-0.8
MOSL	Moslavina	2.19	348	ePn	Pn	05 20 20.8	-0.2
TRUS	Trudelj	2.28	70	ePn	Pn	05 20 21.0	-1.3
TRUS				eSn	Sn	05 20 51.0	+0.1
RABC	Rab	2.29	305	ePn	Pb	05 20 24.3	-1.3
RABC				Sn	Sb	05 20 53.0	-1.4
FRGS	Fruska Gora	2.40	45	ePn	Pn	05 20 21.8	-2.1
FRGS				eSn	Sn	05 20 52.3	-1.5
FRGS	Fruska Gora	2.40	45	eSn	Sn	05 20 54.3	+0.5
GRUS	Gruza	2.42	79	ePn	Pn	05 20 24.1	-0.1
BOJS	Bojanci	2.55	323	ePn	Pn	05 20 26.4	+0.4
BOJS				eSn	Sn	05 20 57.4	-0.3
OZLJ	Ozalj	2.55	327	ePn	Pn	05 20 27.1	+1.1
PTJ	Puntijarka	2.64	337	ePn	Pn	05 20 27.1	-0.2
SELS	Selova	2.71	94	ePn	Pn	05 20 28.2	0.0
SELS				eSn	Sn	05 21 00.2	-1.3
CRES	Cresnjev	2.73	330	ePn	Pn	05 20 28.3	-0.3
CRES				eSn	Sn	05 21 02.5	+0.3
KALN	Kalnik	2.74	346	ePn	Pn	05 20 28.0	-0.6
SMRN	Sveta Marina	2.82	305	Sn	Sn	05 21 05.8	+1.6
LOBO	Lobor	2.84	341	ePn	Pn	05 20 29.7	-0.4
MORH	Mrgy, Hungar	2.87	17	ePn	Pn	05 20 31.5	+1.1
MORH				eSn	Sn	05 21 05.6	+0.2
BEHE	Becsehely	3.03	351	ePn	Pn	05 20 32.4	-0.1
BEHE				eSn	Sn	05 21 09.0	-0.3
BOVS	Bovan	3.11	86	ePn	Pn	05 20 34.6	+0.9
CEY	Cerknica	3.11	318	ePn	Pn	05 20 34.0	+0.2
CEY				eSn	Sn	05 21 11.0	-0.5
SKDS	Skadanscina	3.20	311	ePn	Pn	05 20 35.2	+0.3
SKDS				eSn	Sn	05 21 13.2	-0.4
BARS	Barje	3.28	100	ePn	Pn	05 20 36.6	+0.6
OHR	Ohrid	3.44	132	i Pn	Pn	05 20 41.7	+3.4
OHR				i Sn	Sn	05 21 22.3	+2.6
ZAGS	Zajecar	3.50	83	ePn	Pn	05 20 38.7	-0.4
ZAGS				eSn	Sn	05 21 20.2	-0.9
SOKA	Soboth	3.62	333	i Pn	Pn	05 20 41.2	+0.4
	5.5nm,0.3s						
SOKA				i Sn	Sn	05 21 23.1	-1.0
	12nm,0.6s						
OBKA	Obir	3.65	327	i Pn	Pn	05 20 42.5	+1.3
	1.2nm,0.2s						
OBKA				i Sn	Sn	05 21 26.7	+1.8
	37nm,0.7s						
OBKA	Obir	3.65	327	ePn	Pn	05 20 41.0	-0.2
OBKA				eSn	Sn	05 21 24.4	-0.5
ZAPS	Zavoj	3.80	91	ePn	Pn	05 20 42.9	-0.3
ZAPS				eSn	Sn	05 21 27.3	-1.2
STIP	Stip	3.94	115	i Pn	Pn	05 20 47.7	+2.6
STIP				i Sn	Sn	05 21 35.9	+4.0
ARSA	Arzberg	4.00	341	i Pn	Pn	05 20 46.1	+0.1
	8.6nm,0.3s,SNR=11						
ARSA				eSn	Sn	05 21 32.0	-1.4
	5.6nm,0.5s						
ARSA	Arzberg	4.00	341	⇑iPn	Pn	05 20 46.0	+0.1
ARSA				eSn	Sn	05 21 32.0	-1.4
MYKA	Terra Mystica	4.14	321	i Pn	Pn	05 20 47.7	-0.1
	2.6nm,0.4s						
MYKA				eSn	Sn	05 21 37.7	+0.8
	6.1nm,0.5s						
RONA	Rosalia, Austr	4.29	350	i Pn	Pn	05 20 50.3	+0.3
	1.2nm,0.2s						
RONA				eSn	Sn	05 21 40.6	-0.1
	7.7nm,0.7s						
CONA	Conrad Observa	4.58	347	i Pn	Pn	05 20 53.8	-0.2
	1.1nm,0.2s						
CONA				eSn	Sn	05 21 45.3	-2.6
	6.6nm,0.4s						
KBA	Koelnbreinsper	4.61	323	i Pn	Pn	05 20 55.5	+1.0
	0.7nm,0.2s						
KBA				i Sn	Sn	05 21 50.2	+1.6
	4.8nm,0.7s						
MODS	Modra-Piesok	4.90	359	ePN	Pn	05 20 59.7	+1.5
MODS				eSN	Sn	05 21 52.7	-2.8
MOA	Molln	4.90	334	i Pn	Pn	05 20 59.8	+1.5
	2.6nm,0.2s						
BIOA	Bad Ischl, Aus	4.98	329	ePn	Pn	05 20 58.9	-0.5
	2.0nm,0.3s						
BIOA				eSn	Sn	05 21 58.9	+1.3
	6.1nm,0.4s						
VYHS	Vyhne	5.11	11	ePN	Pn	05 21 00.9	-0.3
VYHS				eSN	Sn	05 21 59.4	-1.4
WTTA	Wattenberg	5.56	315	i Pn	Pn	05 21 08.7	+1.2
	1.7nm,0.2s,SNR=4.6						
WTTA				eSn	Sn	05 22 14.1	+2.0
	8.9nm,0.6s						
WATA	Walderalm	5.64	315	ePn	Pn	05 21 07.8	-0.8
	2.5nm,0.2s						
WATA				eSn	Sn	05 22 15.4	+1.4
	3.5nm,0.4s						
SQTA	Sankt Quirin	5.76	313	i Pn	Pn	05 21 12.4	+2.2
	2.0nm,0.2s						
SQTA				eSn	Sn	05 22 20.3	+3.3
	8.5nm,0.6s						
CKRC	Cesky Krumlov	5.76	339	eSN	Sn	05 22 12.9	-3.9
MOTA	Moosalm	5.89	313	ePn	Pn	05 21 13.1	+1.0
	2.9nm,0.3s						
MOTA				eSn	Sn	05 22 21.5	+1.2
	4.4nm,0.4s						
FETA	Feichten	5.91	309	ePn	Pn	05 21 13.2	+0.9
	0.5nm,0.4s						
FETA				eSn	Sn	05 22 24.0	+3.4
	3.7nm,0.7s						
RETA	Reutte	6.16	313	i Pn	Pn	05 21 14.7	-1.1
	0.6nm,0.2s						
RETA				eSn	Sn	05 22 28.3	+1.5
	3.1nm,0.3s						
KHC	Kasperske Hory	6.25	336	ePN	Pn	05 21 17.0	+0.2
KHC				eSN	Sn	05 22 24.9	-3.9
DAVA	Damuels	6.54	308	i Pn	Pn	05 21 21.2	+0.3
	1.1nm,0.2s						
DAVA				eSn	Sn	05 22 37.1	+1.1
	5.1nm,0.7s						

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*IDC **27** 05:29:05.4±1.0, 2°.70N×84°.62W, h0^{km}, mb3.5/7, mbtmp3.7/10, ML2.9/3, MS3.6/23, Error ellipse: s-maj=35.7km s-min=17.0km az=56.0*

ISC 27 05:29:10.9±0.8**, 2°.85N**±0°.08×**84°.5W**±0°.1**, h35^{km}, n68, σ1^{s}.51**/47**, mb3.6**/8**, MS3.5**/19**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FLF1	Flavio Alfaro-	5.60	125	eP	Pn	05 30 31.6	-0.2
TUMC	Tumaco	5.81	100	eP	Pn	05 30 32.8	-1.8
PAC1	Pacto, Paraso	6.21	114	eP	Pn	05 30 39.6	-0.7
GR1C	Gorgona, Isla	6.28	88	eP	Pn	05 30 39.4	-1.7
OTAV	Otavalo	6.53	113	eP	Pn	05 30 44.3	-0.8
CUSE	Cuicocha Este	6.55	113	eP	Pn	05 30 45.3	0.0
PAYG	Puerto Ayora	6.81	239	eP	Pn	05 30 53.3	+4.9
TULM	Tulcn-Chalpat	6.99	108	eP	Pn	05 30 50.9	-0.4
MALC	Bahia Malaga	7.19	81	eP	Pn	05 30 54.5	+0.8
BBAC	Balboa, Cauca	7.24	96	eP	Pn	05 30 53.8	-0.7
PIAT	Ana Tenorio	7.27	122	eP	Pn	05 30 56.2	+1.0
BONI	La Bonita	7.32	109	eP	Pn	05 30 57.4	+1.8
JTS	Las Juntas de	7.41	356	Pn	Pn	05 30 56.8	+0.2
	69nm,0.3s,baz=136,slow=7.1,SNR=265						
JTS				Sn	Sn	05 32 14.7	-4.8
	baz=211,slow=12						
JTS				LR	LR	05 33 19.4	
	comp=Z,592nm,21.5s,baz=161,slow=34						
JTS	Las Juntas de	7.41	356	eP	Pn	05 30 57.5	+0.8
CRUC	La Cruz	7.60	100	eP	Pn	05 30 59.8	+0.2
POPC	Popayan, Colom	7.77	92	eP	Pn	05 31 00.7	-1.2
JAMC	Jamundi, Valle	7.77	87	eP	Pn	05 31 01.3	-0.6
YOTC	Yotoco, Valle	8.17	82	eP	Pn	05 31 06.5	-0.7
PLMC	San Jos del P	8.40	76	eP	Pn	05 31 09.8	-0.5
FLOC	Florencia	8.88	98	eP	Pn	05 31 19.1	+2.2
CBOC	Ciudad Bolivar	8.93	70	eP	Pn	05 31 17.1	-0.6
GARC	Garzon, Huila	8.97	94	eP	Pn	05 31 19.7	+1.4
BETC	Betania	9.00	91	eP	Pn	05 31 21.2	+2.7
ACON	Acoyapa	9.08	355	eP	Pn	05 31 20.9	+1.2
ANIL	Santa Ana	9.17	80	eP	Pn	05 31 22.8	+1.7
DBBC	Dabeiba	9.19	63	eP	Pn	05 31 22.7	+1.5
ORTC	Ortega, Tolima	9.24	83	eP	Pn	05 31 22.6	+0.7
HELC	Santa Helena	9.49	69	eP	Pn	05 31 26.3	+0.7
PRAC	Prado	9.58	85	eP	Pn	05 31 27.3	+0.7
UREC	San Jos de Ur	10.12	61	eP	Pn	05 31 36.1	+2.2
ROSC	El Rosal	10.29	79	Pn	Pn	05 31 39.0	+2.4
	1.5nm,0.3s,baz=192,slow=3.0,SNR=7.3						
ROSC				LR	LR	05 35 30.2	
	comp=Z,407nm,18.9s,baz=244,slow=37						
	11nm,0.7s						
PTBC	PUERTO BERRIO,	10.61	69	eP	Pn	05 31 42.3	+1.7
MACC	Macarena, Meta	10.61	94	eP	Pn	05 31 40.6	0.0
SPBC	San Pablo de B	10.71	75	eP	Pn	05 31 43.6	+1.5
VILC	Villavicencio,	10.81	83	eP	Pn	05 31 45.6	+2.2
ATAH	Atahualpa	11.62	149	Pn	Pn	05 31 54.2	-0.5
	0.3nm,0.3s,baz=3.1,slow=14,SNR=1.7						
	1.9nm,0.6s						
RUSC	La Rusia	11.73	75	eP	Pn	05 31 57.6	+1.3
PAMC	Pamplona, Colo	12.52	69	eP	Pn	05 32 11.3	+4.1
SDV	Santo Domingo	14.99	66	Pn	Pn	05 32 42.2	+1.7
	0.2nm,0.3s,baz=267,slow=12,SNR=1.8						
SDV				LR	LR	05 38 05.4	
	comp=Z,217nm,20.4s,baz=258,slow=36						
	3.9nm,0.4s						
NNA	Nana	16.57	153	LR	LR	05 38 57.7	
	comp=Z,100nm,19.2s,baz=311,slow=36						
CMIG	Matias Romero	17.47	325	P	P	05 33 15.5	+2.6
	0.8nm,0.3s,baz=129,slow=5.0,SNR=3.8						
SJG	San Juan	23.49	49	LR	LR	05 43 02.0	
	comp=Z,66nm,20.8s,baz=266,slow=35						
LPAZ	La Paz	24.94	140	P	P	05 34 30.5	-1.3
	1.7nm,0.8s,baz=336,slow=9.1,SNR=3.3						
	1.7nm,0.8s						
LVC	Limon Verde	29.51	150	LR	LR	05 46 00.5	
	comp=Z,90nm,20.9s,baz=297,slow=34						
SIV	San Ignacio	29.75	130	LR	LR	05 47 29.5	
	comp=Z,247nm,18.6s,baz=289,slow=37						
H06E1	SOCORRO T-PHAS	30.36	303	T	T	06 07 20.3	
MDP	Montagnes des	31.80	85	LR	LR	05 49 34.9	
	comp=Z,41nm,18.8s,baz=316,slow=38						
TXAR	Lajitas Array	32.05	327	P	P	05 35 33.6	-1.0
	0.3nm,0.8s,baz=140,slow=11,SNR=2.3						
TXAR				LR	LR	05 47 39.9	
	comp=Z,66nm,18.8s,baz=138,slow=35						
	0.3nm,0.8s						
TKL	Tuckaleechee C	32.65	1	LR	LR	05 48 00.2	
	comp=Z,78nm,20.4s,baz=162,slow=35						
LPIG	La Paz	32.71	312	LR	LR	05 45 49.8	
	comp=Z,51nm,22.0s,baz=173,slow=31						
H03N2	Juan Fernandez	36.47	172	T	T	06 14 55.4	
	baz=351,slow=76,SNR=23						
H03N1	Juan Fernandez	36.48	172	T	T	06 14 56.4	
	baz=351,slow=76,SNR=23						
H03N3	Juan Fernandez	36.49	172	T	T	06 14 56.1	
	baz=351,slow=76,SNR=25						
CFA	Coronel Fontan	37.58	157	LR	LR	05 49 13.4	
	comp=Z,45nm,19.2s,baz=298,slow=32						
ANMO	Albuquerque	37.92	330	P	P	05 36 24.5	-0.8
	0.8nm,0.9s,baz=85,slow=10,SNR=3.2						
ANMO				LR	LR	05 50 53.1	
	comp=Z,78nm,18.2s,baz=250,slow=34						
	0.8nm,0.9s						
RPN	Rapa Nui	38.27	217	LR	LR	05 46 39.9	
	comp=Z,21nm,20.4s,baz=88,slow=28						
CPUP	Villa Florida	39.11	140	LR	LR	05 55 12.5	
	comp=Z,97nm,18.5s,baz=318,slow=40						
SADO	Sadowa	42.00	6	LR	LR	05 54 12.9	
	comp=Z,68nm,19.3s,baz=144,slow=36						
PFO	Pinyon Flats O	42.78	319	LR	LR	05 53 29.4	
	comp=Z,83nm,18.0s,baz=217,slow=34						
PLCA	Paso Flores	45.20	165	P	P	05 37 23.7	-1.0
	2.6nm,1.0s,baz=324,slow=10,SNR=4.8						
	2.6nm,1.0s						
PDAR	Pinedale Array	45.62	334	P	P	05 37 28.7	+0.5
	0.3nm,0.7s,baz=132,slow=11,SNR=3.9						
PDAR				LR	LR	05 57 31.2	
	comp=Z,99nm,19.6s,baz=166,slow=37						
	0.3nm,0.7s						
ELK	Elko	46.84	328	LR	LR	05 57 10.1	
	comp=Z,85nm,18.8s,baz=149,slow=36						
NVAR	Mina Array Bea	47.00	323	P	P	05 37 39.7	+0.6
	0.4nm,0.6s,baz=128,slow=7.2,SNR=3.6						
NVAR				LR	LR	05 55 42.5	
	comp=Z,70nm,18.8s,baz=159,slow=34						
	0.4nm,0.6s						
YBH	Yreka Blue Hor	51.70	324	LR	LR	05 58 15.1	
	comp=Z,63nm,20.9s,baz=34,slow=34						
FRB	Frobisher Bay	61.87	8	LR	LR	06 05 53.2	
	comp=Z,80nm,18.5s,baz=218,slow=36						
YKA	Yellowknife Ar	63.59	345	P	P	05 39 38.6	+0.7
	0.2nm,0.8s,baz=140,slow=6.4,SNR=4.3						
	0.2nm,0.8s						
RAR	Rarotonga	77.39	248	LR	LR	06 08 18.0	
	comp=Z,117nm,20.1s,baz=266,slow=30						
TORD	Torodi Ar. Bea	85.61	77	P	P	05 41 46.6	0.0
	455nm,1.0s,baz=276,slow=5.1,SNR=12						

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*JMA **27** 05:31:47.6±0.0, 36°.72N±0°.06×140°.6E±0°.1, h7^{km}, MV3.8/20, NORTHERN IBARAKI PREF*
JMA Felt II J1 at NORTHERN IBARAKI PREF .
*NIED **27** 05:31:47.6, 36°.72N×140°.63E, h7^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.77; $M_{\theta\theta}$1.33; $M_{\phi\phi}$1.45; $M_{r\theta}$-0.90; $M_{\theta\phi}$-1.59; $M_{\phi r}$1.00; Fault plane solution: $M_0$3.18000×10^{14} NP1: ϕ_s137.00000°, δ58.00000°, λ-89.00000°. NP2: ϕ_s315.00000°, δ32.00000°, λ-92.00000°.*
*NEIC **27** 05:31:52.4±1.3, 36°.94N±0°.07×140°.3E±0°.1, h57^{km}±9^{km}, mb4.4/12 Error ellipse: s-maj=13.5km s-min=7.6km az=126.0*
*IDC **27** 05:31:53.0±2.7, 36°.79N×140°.56E, h51^{km}±23^{km}, mb3.5/13, mbtmp3.8/14, ML3.6/1, Error ellipse: s-maj=19.1km s-min=15.9km az=136.0*

ISC 27 05:31:46.2±1.2**, 36°.80N**±0°.04×**140°.66E**±0°.04**, h7^{km}**±8^{km}**, n64, σ1^{s}.45**/66**, mb4.0**/19**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	Hitachi	0.20	200	i P	Pg	05 31 50.3	+0.1
JHO				S	Sg	05 31 52.2	-0.7
JFFD	Fukushimafurud	0.30	346	i P	Pb	05 31 55.1	+1.1
JFFD				S	Sb	05 32 00.2	+1.0
ONAJ	Iwakimizuishiy	0.32	21	i P	Pn	05 31 55.8	-1.7
ONAJ				S	Sb	05 32 01.6	+1.7
JHYU	Hitachinakayam	0.46	187	P	Pg	05 31 55.1	0.0
JHYU				S	Sg	05 32 00.7	-0.5
JFK	Kawauchi	0.59	17	i P	Pn	05 32 00.5	-0.6
JFK				S	Sn	05 32 09.8	-1.4
JSB	Shiboa	0.61	286	P	Pb	05 32 00.3	+1.0
JYT	Yasato	0.68	213	i P	Pg	05 31 59.1	-0.2
JYT				S	Sg	05 32 07.2	-1.0
JOTO	OTAMA OYAMA	0.80	341	i P	Pn	05 32 04.5	+0.5
JOTO				S	Sn	05 32 16.0	-0.2
JFY	Yanaizu	0.97	309	i P	Pn	05 32 06.8	+0.5
JFY				S	Sb	05 32 20.1	+1.6
JAG	Ashikaga	1.04	249	i P	Pg	05 32 05.5	-0.6
JAG				S	Sg	05 32 18.6	-1.0
JMM	Marumori	1.07	6	Pn	Pn	05 32 08.7	+1.1
JMM	Marumori	1.07	6	P	Pn	05 32 09.2	+1.5
MJAR	Matsushiro Arr	1.98	263	P	Pn	05 32 21.4	+1.2
	71nm,0.6s,baz=84,slow=10,SNR=106						
MJAR				S	Sn	05 32 46.2	+0.8
	121nm,0.4s,baz=87,slow=26,SNR=8.0						
MJAR				LR	LR	05 32 47.4	
	comp=Z,77nm,19.4s,baz=338,slow=28						
MAJO	Matsushiro	1.98	263		Pn	05 32 20.4	+0.2
MJB9	Matsu-Tunnel	1.99	263		Pn	05 32 21.5	+1.2
JSD	Sado	2.27	304		Pn	05 32 25.2	+1.0
JSD	Sado	2.27	304	P	Pn	05 32 25.8	+1.6
JSG	Sagara	2.92	224	Pn	Pn	05 32 36.1	+3.0
JGF	Kuroka	2.92	247		Pn	05 32 34.4	+1.2
JGF	Kuroka	2.92	247	P	Pn	05 32 36.2	+3.0
INU	Inuyama	3.28	245		Pn	05 32 39.4	+1.3
INU	Inuyama	3.28	245	P	Pn	05 32 40.5	+2.4
JMN	Monobe	6.33	243	Pn	Pn	05 33 20.4	+0.3
JHS	Saijyo	6.38	256	Pn	Pn	05 33 18.9	-1.8
ASAJ	Asahikawa	7.46	11	P	Pn	05 33 39.4	+3.9
	0.9nm,0.3s,baz=50,slow=33,SNR=2.0						
	3.4nm,0.5s						
USA0B	Ussuriysk Arra	9.90	321	Pn	Pn	05 34 07.6	-1.4
SONM	Songino Array	27.41	305	P	P	05 37 32.6	+0.1
	1.0nm,0.6s,baz=111,slow=9.4,SNR=9.0						
	1.0nm,0.6s						
H11N2	WAKE ISLAND Hy	28.56	119	T	T	06 07 27.5	
	baz=313,slow=75,SNR=46						
H11N1	WAKE ISLAND Hy	28.56	119	T	T	06 07 29.3	
	baz=313,slow=75,SNR=35						
H11N3	WAKE ISLAND Hy	28.57	119	T	T	06 07 28.8	
	baz=313,slow=75,SNR=30						
H11S1	WAKE ISLAND Hy	29.25	121	T	T	06 08 20.1	
	baz=314,slow=76,SNR=138						
H11S3	WAKE ISLAND Hy	29.25	122	T	T	06 08 19.5	
	baz=314,slow=76,SNR=108						
H11S2	WAKE ISLAND Hy	29.26	122	T	T	06 08 21.0	
	baz=314,slow=76,SNR=110						
ZALV	Zalesovo Beam	41.62	313	P	P	05 39 35.3	+0.5
	1.8nm,0.5s,baz=98,slow=6.9,SNR=7.4						
	1.8nm,0.5s						
MKAR	Makanchi Array	43.73	302	P	P	05 39 53.2	+1.1
	0.5nm,0.8s,baz=88,slow=9.8,SNR=4.9						
MKAR				PcP	PcP	05 41 39.8	+0.9
	0.3nm,0.8s,baz=47,slow=3.0,SNR=2.1						
	0.5nm,0.8s						
KURK	Kurchatov	45.60	308	P	P	05 40 06.4	-0.4
KURK				IAmb	IAmb	05 40 07.8	
	comp=Z,3.8nm,0.8s						
KURBB	Kurchatov Arra	45.67	308	P	P	05 40 07.9	+0.5
	comp=Z,2.4nm,0.6s,baz=83,slow=7.8,SNR=31						
	comp=Z,2.4nm,0.6s						
N19K	Bonanza Creek	46.61	38	P	P	05 40 16.0	+1.2
N19K				IAmb	IAmb	05 40 19.0	
	comp=Z,6.7nm,1.2s						
ILAR	Eielson Array	50.02	32	P	P	05 40 42.5	+1.6
	comp=Z,0.2nm,0.6s,baz=270,slow=6.5,SNR=4.7						
	comp=Z,0.2nm,0.6s						
BVAR	Borovoye Array	50.28	312	P	P	05 40 43.2	+0.1
	comp=Z,0.7nm,0.6s,baz=76,slow=6.3,SNR=4.1						
	comp=Z,0.7nm,0.6s						
FYU	Fort Yukon	50.62	30	P	P	05 40 45.1	-0.2
FYU				IAmb	IAmb	05 40 49.0	
	comp=Z,2.6nm,0.7s						
KLU	Klutina	50.72	36	P	P	05 40 46.5	+0.1
BMAR	Burnt Mountain	50.83	29	P	P	05 40 47.1	0.0
L27K	Beaver Creek,	52.41	34	P	P	05 40 57.1	-1.9
L27K				IAmb	IAmb	05 41 01.5	
	comp=Z,5.7nm,1.5s						
BCAR	Beaver Creek A	52.43	34	P	P	05 40 59.1	0.0
EGAK	Eagle	52.46	32	P	P	05 40 59.0	-0.3
EGAK				IAmb	IAmb	05 41 12.7	
	comp=Z,3.0nm,1.2s						
KK31	Karatay Array	52.72	300	P	P	05 40 58.5	-3.0
KKAR	Karatay Array	52.72	300	P	P	05 40 58.5	-3.0
KNRA	Kununurra	53.38	194	P	P	05 41 05.0	-1.5
WB0	Warramunga Arr	56.57	187	P	P	05 41 29.4	-0.2
WB2	Warramunga Arr	56.75	187	P	P	05 41 30.7	-0.1
WB2				IAmb	IAmb	05 41 45.8	
	comp=Z,5.8nm,1.1s						
WRA	Warramunga Arr	56.75	187	P	P	05 41 30.3	-0.5
	comp=Z,1.1nm,0.7s,baz=1.7,slow=7.3,SNR=13						
	comp=Z,1.1nm,0.7s						
WRA	Warramunga Arr	56.75	187	P	P	05 41 30.6	-0.2
ABKAR	Akbulak array	57.63	310	P	P	05 41 33.6	-3.2
ASAR	Alice Springs	60.48	187	P	P	05 41 58.9	+2.1
	comp=Z,0.8nm,0.8s,baz=21,slow=10,SNR=4.0						
	comp=Z,0.8nm,0.8s						
RES	Resolute Bay	62.98	14	P	P	05 42 11.5	-1.5
YKA	Yellowknife Ar	64.31	30	P	P	05 42 23.3	+1.2
	comp=Z,0.2nm,0.8s,baz=303,slow=6.9,SNR=4.9						
	comp=Z,0.2nm,0.8s						
FINES	FINESS Array B	68.74	332	P	P	05 42 50.8	+0.5
	comp=Z,6.2nm,1.1s,baz=57,slow=7.0,SNR=3.1						
	comp=Z,6.2nm,1.1s						
AKASG	Malin Array Be	74.11	322	P	P	05 43 22.9	-0.1
	comp=Z,0.6nm,0.5s,baz=47,slow=5.8,SNR=2.6						
	comp=Z,0.6nm,0.5s						
NVAR	Mina Array Bea	75.61	53	P	P	05 43 34.1	+1.9
	comp=Z,0.4nm,0.6s,baz=286,slow=7.4,SNR=2.8						
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	78.26	45	P	P	05 43 48.4	+1.3
	comp=Z,0.2nm,0.5s,baz=194,slow=5.6,SNR=4.0						
	comp=Z,0.2nm,0.5s						
H03N2	Juan Fernandez	147.60	96	T	T	08 36 24.5	
	baz=291,slow=76,SNR=5.3						
H03N3	Juan Fernandez	147.62	96	T	T	08 36 26.1	
	baz=291,slow=76,SNR=6.3						
H03N1	Juan Fernandez	147.62	96	T	T	08 36 26.0	
	baz=291,slow=76,SNR=7.0						

IDC 27 05:44:58.2±2.2**, 7°.34S**×**129°.28E, h0^{km}, mb3.3**/1**, mbtmp3.7**/3**, ML4.1**/2**, Error ellipse: s-maj=105.7km s-min=33.5km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.45	159	Pn	Pn	05 48 10.2	-0.4
	1.1nm,0.3s,baz=338,slow=13,SNR=69						
WRA				Sn	Sn	05 50 24.9	-16
	0.2nm,0.3s,baz=338,slow=22,SNR=3.1						
	1.4nm,0.3s						
ASAR	Alice Springs	16.83	165	Pn	Pn	05 48 55.8	+0.3
	0.5nm,0.3s,baz=342,slow=9.7,SNR=33						
ASAR				Sn	Sn	05 51 53.3	-10
	0.2nm,0.3s,baz=352,slow=26,SNR=5.9						
	1.2nm,0.4s						
MKAR	Makanchi Array	68.12	327	P	P	05 56 00.1	0.0
	0.1nm,0.3s,baz=122,slow=7.9,SNR=1.7						
	0.1nm,0.3s						

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*IDC **27** 05:45:47.0±0.9, 35°.10N×23°.90E, h0^{km}, mb3.9/12, mbtmp3.9/16, ML3.6/4, MS3.5/5, Error ellipse: s-maj=22.0km s-min=12.6km az=1.0*
*ISK **27** 05:45:51.4, 35°.08N×23°.96E, h17^{km}, ML3.7/27*
*ATH **27** 05:45:52.3, 35°.02N×23°.85E, h9^{km}±4^{km}, ML3.7/5, Error ellipse: s-maj=4.3km s-min=1.2km az=105.0*
*THE **27** 05:45:52.0, 35°.05N×23°.88E, h0^{km}±1^{km}, ML3.5/7, Error*

ellipse: s-maj=1.7km s-min=0.6km az=236.0

*DDA **27** 05:45:55.0±0.0, 34°.82N×24°.13E, h36^{km}, MW3.8*

ISC 27 05:45:51.3±0.7, **34°.99N**±0°.03×**23°.88E**±0°.03, **h28**^{km}±5^{km}, **n113**, σ**1^{s}65**/134, **mb3.9**/13, **MS3.8**/4, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVDS	Gavdos	0.23	130	P	Pb	05 45 57.2	-0.5
GVDS				S	Sb	05 46 02.2	+0.2
	55μm,0.4s						
GVDS	Gavdos	0.23	130	Pg	Pb	05 45 57.4	-0.3
GVDS				Sg	Sb	05 46 02.0	0.0
GVD	Gavdhos	0.23	131	P	Pb	05 45 57.4	-0.2
GVD				S	Sb	05 46 02.1	+0.1
	46μm,0.5s						
GVD	Gavdhos	0.23	131	Pg	Pb	05 45 57.5	-0.2
GVD				Sg	Sb	05 46 02.2	+0.2
GVD	Gavdhos	0.23	131	P	Pb	05 45 57.5	-0.2
GVD				S	Sb	05 46 02.0	0.0
GVD				AML	AML	05 46 03.4	
GVD				AML	AML	05 46 03.5	
	comp=N,75873μm,0.3s						
KNDR	Palaiochora Ch	0.29	327	P	Pb	05 45 57.7	-0.7
KNDR				S	Sb	05 46 03.1	-0.2
	comp=N,5μm,0.4s						
KNDR	Palaiochora Ch	0.29	327	Pg	Pb	05 45 57.8	-0.7
KNDR				Sg	Sb	05 46 03.5	+0.2
KNDR	Palaiochora Ch	0.29	327	P	Pb	05 45 57.8	-0.7
KNDR				S	Sb	05 46 02.6	-0.7
KNDR				AML	AML	05 46 05.7	
	comp=E,25061μm,0.2s						
KNDR				AML	AML	05 46 06.4	
	comp=N,27834μm,0.3s						
IMMV	Iera Moni Meta	0.47	10	P	Pb	05 46 00.3	-1.0
IMMV				S	Sb	05 46 07.4	-0.6
	comp=N,16μm,0.4s						
IMMV	Iera Moni Meta	0.47	10	Pg	Pb	05 46 00.2	-1.0
IMMV	Iera Moni Meta	0.47	10	P	Pb	05 46 00.6	-0.7
IMMV				S	Sb	05 46 07.0	-1.0
IMMV				AML	AML	05 46 09.3	
	comp=N,30637μm,0.3s						
IMMV				AML	AML	05 46 11.0	
	comp=E,32065μm,0.5s						
CHAN	Chania	0.54	14	P	Pb	05 46 01.9	-0.5
CHAN				S	Sb	05 46 10.4	+0.5
CHAN				AML	AML	05 46 11.7	
	comp=N,19802μm,0.5s						
CHAN				AML	AML	05 46 13.1	
	comp=E,21042μm,0.3s						
RODP	Rodopos	0.57	350	P	Pb	05 46 02.4	-0.5
RODP				S	Sb	05 46 10.8	0.0
	comp=E,1μm,0.5s						
RODP	Rodopos	0.57	350	Pg	Pb	05 46 02.3	-0.6
PRNS	Prines Rethymn	0.63	54	P	Pb	05 46 02.3	-1.5
PRNS				S	Sb	05 46 11.4	-1.0
TMBK	Timbaki Herakl	0.73	83	P	Pb	05 46 05.3	-0.2
TMBK				S	Sn	05 46 17.5	+1.5
	comp=E,3μm,0.6s						
TMBK	Timbaki Herakl	0.73	83	P	Pb	05 46 05.4	-0.1
TMBK				S	Sn	05 46 16.9	+1.0
TMBK				AML	AML	05 46 26.2	
	comp=E,15164μm,0.6s						
TMBK				AML	AML	05 46 26.4	
	comp=N,15456μm,0.6s						
IDI	Anoyia	0.88	70	Pn	Pb	05 46 07.1	-0.9
	comp=N,60nm,0.3s,baz=246,slow=12,SNR=148						
IDI				Sn	Sb	05 46 18.9	-0.6
	comp=N,142nm,0.3s,baz=349,slow=21,SNR=11						
IDI	Anoyia	0.88	70	P	Pb	05 46 07.0	-1.1
IDI	Anoyia	0.88	70	Pg	Pb	05 46 07.1	-0.9
IDI	Anoyia	0.88	70	P	Pn	05 46 09.2	+1.4
ANKY	Antikythira Is	0.99	332	P	Pn	05 46 09.7	+0.4
ANKY	Antikythira Is	0.99	332	P	Pn	05 46 09.8	+0.4
IACM	Heraklion	1.03	72	P	Pn	05 46 10.3	+0.5
HRKL	Herakleio	1.05	72	P	Pb	05 46 11.6	+0.7
HRKL	Herakleio	1.05	72	Pg	Pn	05 46 10.6	+0.5
HRKL	Herakleio	1.05	72	P	Pb	05 46 12.6	+1.7
KTHA	Kythira Island	1.43	332	P	Pb	05 46 17.3	0.0
KTHA	Kythira Island	1.43	332	Pn	Pb	05 46 17.2	0.0
KTHA	Kythira Island	1.43	332	P	Pb	05 46 17.3	0.0
MHLO	Agia Marina, M	1.75	14	P	Pn	05 46 21.3	+1.6
STIA	Sitia Lasithi	1.83	83	P	Pb	05 46 24.7	+0.7
THR6	Thira Island,	1.84	42	P	Pb	05 46 23.9	-0.4
THR5	Thira Island,	1.86	40	P	Pb	05 46 23.2	-1.4
THR3	Thira Island,	1.88	41	P	Pb	05 46 23.8	-1.2
SANT	Santorini	1.88	43	P	Pn	05 46 23.5	+1.9
SANT	Santorini	1.88	43	Pn	Pn	05 46 22.2	+0.6
VLI	Veliai	1.88	336	P	Pb	05 46 23.9	-1.1
THR8	Santorini-Mono	1.92	42	P	Pn	05 46 23.7	+1.6
ZKR	Zakros	1.92	86	P	Pb	05 46 26.1	+0.4
ZKR	Zakros	1.92	86	Pn	Pb	05 46 24.8	-0.9
CMBO	Columbo, Santo	1.93	40	P	Pb	05 46 24.5	-1.3
CMBO				S	Sb	05 46 51.4	+2.0
	comp=N,858nm,0.5s						
KRND	KRANIDI	2.46	346	P	Pn	05 46 31.3	+1.8
PYL	PYLOS	2.57	318	P	Pn	05 46 32.8	+1.8
ITM	Ithomi	2.69	325	P	Pn	05 46 34.0	+1.2
ITM	Ithomi	2.69	325	Pn	Pn	05 46 34.8	+2.0
KARP	Karpathos	2.74	77	Pn	Pn	05 46 35.7	+2.3
VLY	Voula,Athens	2.85	359	P	Pn	05 46 37.0	+2.0
KOSK	Kos Island	3.07	54	Pn	Pn	05 46 39.2	+1.3
GUR	Goura	3.19	338	P	Pn	05 46 43.1	+3.5
VILL	Villia	3.20	352	P	Pn	05 46 41.2	+1.5
KLV	Kalavryta, Ach	3.35	336	P	Pn	05 46 44.0	+2.2
DRO	Drossia	3.43	330	P	Pn	05 46 45.2	+2.3
BODT	Bodrum	3.46	52	Pn	Pn	05 46 45.1	+1.7
DAT	Datca	3.47	59	Pn	Pn	05 46 44.5	+1.0
DAT	Datca	3.47	59	P	Pn	05 46 44.9	+1.4
BDRM	Kayabasi	3.56	53	P	Pn	05 46 46.1	+1.5
ARG	Arkhangelos	3.67	69	P	Pn	05 46 48.4	+2.2
ARG	Arkhangelos	3.67	69	Pn	Pn	05 46 47.7	+1.5
CHOS	Chios island	3.81	27	Pn	Pn	05 46 49.3	+1.1
TURN	Turunc	3.97	62	Pn	Pn	05 46 52.0	+1.8
TURN	Turunc	3.97	62	P	Pn	05 46 52.2	+2.0
TURN				S	Sn	05 47 37.7	+2.0
URLA	Izmir	4.01	32	Pn	Pn	05 46 51.8	+1.0
YER	Yerkesik	4.16	58	P	Pn	05 46 56.7	+3.8
YER	Yerkesik	4.16	58	Pn	Pn	05 46 55.0	+2.1
AYDN	Tasoluk	4.19	49	P	Pn	05 46 55.3	+2.0
AGG	Agios Georgios	4.21	343	P	Pn	05 46 55.4	+1.8
AGG	Agios Georgios	4.21	343	Pn	Pn	05 46 55.3	+1.7
DALY	Dalyan (Mula)	4.28	63	Pn	Pn	05 46 57.2	+2.6
FETY	Fethiye	4.54	67	Pn	Pn	05 46 59.7	+1.6
FETY	Fethiye	4.54	67	P	Pn	05 47 01.9	+3.8
FETY				S	Sn	05 47 52.3	+2.4
IZZE	Mula-Seydike	4.58	70	SPECP		05 46 59.0	
IZZE				P	Pn	05 46 59.8	+1.1
IZZE				S	Sn	05 47 50.2	-0.8
TAVA	DENIZLI_Tavas	4.76	57	SPECP		05 47 04.0	
TAVA				P	Pn	05 47 04.3	+3.1
CAME	Cameli-Denizli	4.81	65	Pn	Pn	05 47 04.2	+2.2
AKAS	Kas	4.83	73	Pn	Pn	05 47 03.9	+1.7
AKAS	Kas	4.83	73	SPECP		05 47 03.0	
AKAS				P	Pn	05 47 03.5	+1.3
AKAS				S	Sn	05 47 57.4	+0.2
CAEL	Denizli, Camel	4.89	63	P	Pn	05 47 06.5	+3.3
CAEL				S	Sn	05 48 04.4	+5.5
DNIZ	Denizli-Tavas-	4.93	56	P	Pn	05 47 06.5	+3.0
APMY	Acipayam-Deniz	5.03	59	Pn	Pn	05 47 06.9	+1.9
GOLH	Golhisar	5.12	62	P	Pn	05 47 08.2	+2.0
ELL	Elmali	5.20	69	Pn	Pn	05 47 09.7	+2.4
AKUM	Antalya-Kumluc	5.43	74	P	Pn	05 47 11.7	+1.4
AKUM				S	Sn	05 48 12.2	+0.4
PASA	Karahalli, USA	5.62	52	P	Pn	05 47 15.8	+2.8
KORT	Korkueli	5.62	67	P	Pn	05 47 07.4	-5.6
KEPZ	Antalya-Kepez	6.55	71	P	Pn	05 47 28.7	+2.9
KEPZ				S	Sn	05 48 39.4	-0.2
GAZI	Gazipasa	6.98	77	P	Pn	05 47 31.5	-0.2
GAZI				S	Sn	05 48 43.3	-6.9
KKBE	Karaman, Kazim	7.67	71	P	Pn	05 47 43.9	+2.8
KKBE				S	Sn	05 49 02.3	-4.8
BRTR	Keskin Array B	9.09	56	Pn	Pn	05 47 59.4	-1.4
	comp=N,0.1nm,0.3s,baz=224,slow=12,SNR=1.4						
	comp=N,1.8nm,0.7s						
MMAI	Mount Meron Ar	9.77	98	Pn	Pn	05 48 09.4	-0.6
	comp=N,2.6nm,0.3s,baz=308,slow=14,SNR=5.5						
MMAI				Sn	Sn	05 49 54.5	-4.3
	comp=N,2.8nm,0.3s,baz=164,slow=40,SNR=2.2						
	comp=N,1.3nm,0.3s						
MLR	Muntele Rosu	10.61	8	LR	LR	05 52 20.1	
	comp=N,71nm,18.2s,baz=354,slow=38						
EIL	Elat	10.76	116	Pn	Pn	05 48 22.9	-0.7
	comp=N,0.5nm,0.3s,baz=312,slow=12,SNR=2.4						
EIL				Sn	Sn	05 50 16.4	-6.6
	comp=N,0.6nm,0.3s,baz=63,slow=21,SNR=2.6						
	comp=N,2.2nm,0.3s						
GERES	GERESS Array B	15.76	335	Pn	P	05 49 35.4	+0.5
	comp=N,0.4nm,0.3s,baz=142,slow=11,SNR=12						
DAVOX	Davos/Dischmat	15.80	322	Pn	P	05 49 37.8	+2.3
	comp=N,0.6nm,0.3s,baz=156,slow=4.3,SNR=5.0						
KHC	Kasperske Hory	16.04	335	*e*P	P	05 49 38.5	+0.5
AKASG	Malin Array Be	16.18	12	Pn	Pn	05 49 37.8	+1.4
	comp=N,1.6nm,0.3s,baz=211,slow=10,SNR=6.3						
KBZ	Khabaz	17.07	54	Pn	P	05 49 49.2	-0.2
	comp=N,0.2nm,0.3s,baz=240,slow=11,SNR=5.7						
	comp=N,1.9nm,0.6s						
ESDC	Sonseca Array	22.58	290	P	P	05 50 50.7	+1.3
	comp=N,1.3nm,0.6s,baz=78,slow=9.8,SNR=12						
	comp=N,1.3nm,0.6s						
HFS	Hagfors	26.01	348	P	P	05 51 20.1	-1.4
	comp=N,1.3nm,0.4s,baz=156,slow=9.4,SNR=9.0						
	comp=N,1.3nm,0.4s						
FINES	FINESS Array B	26.51	2	P	P	05 51 23.9	-2.1
	comp=N,2.5nm,0.9s,baz=170,slow=11,SNR=1.5						
	comp=N,2.5nm,0.9s						
NOA	NORSAR Array B	27.30	347	P	P	05 51 31.7	-1.6
	comp=N,0.3nm,0.5s,baz=145,slow=9.3,SNR=1.6						
NOA				LR	LR	06 03 28.6	
	comp=N,32nm,18.8s,baz=340,slow=39						
	comp=N,0.3nm,0.5s						
EKA	Eskdalemuir Ar	27.58	326	P	P	05 51 35.8	+0.1
	comp=N,0.5nm,0.4s,baz=130,slow=8.8,SNR=8.3						
	comp=N,0.5nm,0.4s						
TORD	Torodi Ar. Bea	29.59	228	P	P	05 51 54.1	+0.1
	comp=N,97nm,0.3s,baz=31,slow=8.9,SNR=8.0						
ARCES	ARCESS Array B	34.61	1	P	P	05 52 35.0	-2.5
	comp=N,6.6nm,1.0s,baz=172,slow=7.3,SNR=3.7						
	comp=N,6.6nm,1.0s						
MKAR	Makanchi Array	44.74	56	P	P	05 54 01.9	-0.1
	comp=N,1.4nm,0.3s,baz=267,slow=8.0,SNR=39						
	comp=N,1.4nm,0.3s						
ZALV	Zalesovo Beam	45.88	46	P	P	05 54 09.9	-1.0
	comp=N,1.7nm,0.4s,baz=268,slow=8.5,SNR=8.0						
	comp=N,1.7nm,0.4s						
SONM	Songino Array	60.40	50	P	P	05 55 57.9	-0.2
	comp=N,0.5nm,0.5s,baz=273,slow=6.1,SNR=5.6						
SONM				LR	LR	06 27 24.9	
	comp=N,78nm,18.5s,baz=52,slow=41						
	comp=N,0.5nm,0.5s						
SCHQ	Schefferville	62.63	319	P	P	05 56 12.3	-0.6
	comp=N,2.3nm,0.7s,baz=71,slow=4.6,SNR=4.3						
	comp=N,2.3nm,0.7s						
SUR	Sutherland	67.08	183	LR	LR	06 27 50.9	
	comp=N,42nm,18.7s,baz=208,slow=38						
YKA	Yellowknife Ar	77.28	342	P	P	05 57 42.2	-0.4
	comp=N,0.1nm,0.5s,baz=29,slow=5.5,SNR=4.6						
	comp=N,0.1nm,0.5s						
ILAR	Eielson Array	80.30	356	P	P	05 57 59.1	-0.1
	comp=N,0.1nm,0.5s,baz=339,slow=4.0,SNR=2.0						
	comp=N,0.1nm,0.5s						
ASAJ	Asahikawa	83.58	39	LR	LR	06 40 36.1	
	comp=N,47nm,18.0s,baz=326,slow=39						
WRA	Warramunga Arr	117.62	96	PKP	PKPdf	06 04 34.0	-1.0
	comp=N,0.6nm,1.2s,baz=328,slow=2.0,SNR=4.8						
ASAR	Alice Springs	119.06	100	PKP	PKPdf	06 04 36.8	-0.9
	comp=N,0.3nm,0.6s,baz=275,slow=1.2,SNR=2.3						

WEL 27 05:56:47.5±0.4, **42°S**±3°×**17°3E**±°, **h5**^{km}, **M2.3**/2, **ML2.4**/7, **MLv2.3**/2, **Error ellipse: s-maj=0.0km s-min=0.0km az=52.6, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	Kahutara	0.18	100	P	Pg	05 56 51.0	0.0
KHZ				S	Sg	05 56 54.0	+0.6
GVZ	Greta Valley S	0.61	199	P	Pg	05 56 59.6	+0.4
GVZ				S	Sb	05 57 09.0	-0.6
THZ	Tophouse	0.69	335	P	Pg	05 57 01.0	+0.3
THZ				S	Sg	05 57 10.1	+0.5
BSWZ	Blackbirch Sta	0.80	33	P	Pg	05 57 03.2	+0.4
LTZ	Lake Taylor	0.86	242	P	Pg	05 57 03.0	-1.0
CMWZ	Cape Campbell	0.93	47	MLv			
MRNZ	Matariki Terra	1.07	337	P	Pb	05 57 08.4	0.0
TUWZ	Tuamarina	1.07	27	P	Pb	05 57 08.3	-0.2
DSZ	Denniston Nort	1.29	299	P	Pg	05 57 12.0	-0.1
MQZ	McQueen’s Vall	1.40	200	P	Pn	05 57 10.3	-3.4
INZ	Inchbonnie	1.41	256	P	Pn	05 57 13.0	-0.8
AKCZ	Akaroa Harbour	1.51	191	P	Pn	05 57 12.2	-3.0
QRZ	Quartz Range	1.66	339	P	Pb	05 57 18.0	-0.6

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*IDC **27** 06:07:50.2±1.4, 27°.31S×178°.69W, h334^{km}±13^{km}, mb3.6/6, mbtmp4.3/7, Error ellipse: s-maj=23.6km s-min=19.3km az=74.0*

ISC 27 06:07:48.7±0.6, **27°.58S**±0°.06×**178°.3W**±0°.1, **h350**^{km}, **n40**, σ**2^{s}13**/44, **mb3.9**/6, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	Raoul Island	1.69	170	P	Pn	06 08 40.0	+2.1
RAO	Raoul Island	1.69	170	P	Pn	06 08 39.9	+2.0
	1μm,0.2s,baz=91,slow=6.9,SNR=27						
RAO				S	S	06 09 16.0	-1.5
	609nm,0.4s,baz=110,slow=22,SNR=1.6						
GLKZ	Green Lake	1.70	170	P	Pn	06 08 39.9	+1.9
MSVF	Nonsavu	10.37	340	P	Pn	06 10 09.4	-2.0
	14nm,0.6s,baz=178,slow=5.1,SNR=24						
HAZ	Te Kaha	10.69	197	P	P	06 10 15.4	-0.2
HAZ				P	S	06 12 11.9	-2.8
RUGZ	Raukumara Rang	10.91	197	P	P	06 10 19.1	+0.9
RUGZ				P	S	06 12 10.5	-9.4
MWZ	Matawai	11.30	197	P	P	06 10 23.7	+1.3
MWZ				P	S	06 12 23.4	-4.9
URZ	Urewera	11.34	199	P	P	06 10 22.8	-0.1
	6.1nm,0.4s,baz=353,slow=4.9,SNR=11						
URZ				S	S	06 12 22.7	-6.5
	13nm,0.3s,baz=341,slow=21,SNR=16						
URZ	Urewera	11.34	199	P	Pn	06 10 22.7	+0.2
URZ				P	S	06 12 24.8	-4.4
RIGZ	Rimuhau	11.59	196	P	P	06 10 26.8	+1.1
NMHZ	Naumai	12.21	198	P	Pn	06 10 34.2	+1.4
ARHZ	Aropaoanui	12.31	198	P	Pn	06 10 34.0	0.0
BKZ	Black Stump Fm	12.36	199	P	Pn	06 10 35.1	+0.4
NTVZ	North Tongarir	12.56	202	P	Pn	06 10 38.2	+1.1
OTVZ	Oturere	12.62	202	P	P	06 10 37.4	+0.1
KWHZ	Kaweka Forest	12.62	199	P	P	06 10 36.7	-0.5
SNVZ	South Ngauruho	12.65	202	P	Pn	06 10 39.1	+0.9
BHHZ	Black Hill Sta	12.79	200	P	Pn	06 10 39.4	-0.3
WNVZ	Wahianoa	12.79	202	P	Pn	06 10 40.0	+0.2
KAHZ	Kahuranaki	12.84	197	P	Pn	06 10 40.5	+0.2
PNHZ	Pukenui	13.14	199	P	P	06 10 43.1	+0.3
AFI	Afiamalu	14.88	25	P	P	06 11 00.6	-1.6
	20nm,0.7s,baz=216,slow=18,SNR=2.2						
AFI				S	S	06 13 37.1	-5.6
	16nm,0.8s,baz=56,slow=20,SNR=1.3						
DZM	Mont Dzumac	14.93	288	P	Pn	06 11 05.0	0.0
	8.7nm,0.5s,baz=95,slow=14,SNR=22						
ASAR	Alice Springs	43.11	264	P	P	06 15 15.8	-0.2
	1.0nm,0.5s,baz=92,slow=6.7,SNR=25						
	1.0nm,0.5s						
WRA	Warramunga Arr	43.84	269	P	P	06 15 21.1	-0.7
	3.3nm,0.5s,baz=110,slow=6.4,SNR=64						
	3.3nm,0.5s						
QSPA	South Pole Qui	62.52	180	P	P	06 17 41.3	+5.3
	1.4nm,0.8s,baz=93,slow=1.0,SNR=5.6						
	1.4nm,0.8s						
MJAR	Matsushiro Arr	75.81	325	P	P	06 18 57.5	+0.6
	1.4nm,0.4s,baz=151,slow=5.7,SNR=4.9						
	1.4nm,0.4s						
PETK	Petropavlovsk-	83.03	346	P	P	06 19 35.1	-0.1
	2.0nm,0.5s,baz=140,slow=7.0,SNR=2.9						
	2.0nm,0.5s						
KLR	Kul'dur	88.49	330	P	P	06 20 04.0	+2.1
	1.4nm,0.7s,baz=134,slow=6.9,SNR=5.0						
	1.4nm,0.7s						
MKAR	Makanchi Array	115.77	311	PKP	PKiKP	06 25 50.2	+0.4
	0.2nm,0.5s,baz=112,slow=1.8,SNR=3.0						
KURBB	Kurchatov Arra	118.97	315	PKP	PKiKP	06 25 57.2	+1.4
	0.4nm,0.6s,baz=123,slow=3.4,SNR=2.5						
BVAR	Borovoye Array	124.21	317	PKP	PKiKP	06 26 07.7	+1.6
	1.1nm,0.6s,baz=22,slow=1.6,SNR=5.0						
ARCES	ARCESS Array B	135.79	348	PKP	PKiKP	06 26 29.5	+0.6
	8.5nm,1.1s,baz=24,slow=2.5,SNR=2.1						
FINES	FINESS Array B	142.42	341	PKhKP	PKPpre	06 26 36.4	
	1.7nm,0.7s,baz=90,slow=3.8,SNR=5.6						
NB2	NORSAR Subarra	145.94	352	PKP	PKPab	06 26 48.8	+0.5
	comp=Z,2.2nm,0.9s,baz=17,slow=2.9						
NOA	NORSAR Array B	145.94	352	PKPbc	PKPab	06 26 48.2	-0.1
	comp=Z,2.2nm,0.8s,baz=16,slow=2.6,SNR=6.9						
AKASG	Malin Array Be	148.89	325	PKPbc	PKiKP	06 26 56.8	+0.5
	comp=Z,2.3nm,0.5s,baz=40,slow=3.6,SNR=14						
MMAI	Mount Meron Ar	150.52	289	PKPbc	PKiKP	06 27 02.6	+2.2
	comp=Z,5.5nm,0.6s,baz=88,slow=4.6,SNR=9.9						
BRTR	Keskin Array B	150.97	303	PKPbc	PKiKP	06 27 02.7	+1.5
	comp=Z,1.9nm,0.8s,baz=242,slow=3.1,SNR=2.8						
TORD	Torodi Ar. Bea	165.64	180	PKPab	PKPab	06 28 17.1	+3.8
	comp=Z,0.6nm,0.7s,baz=166,slow=0.8,SNR=3.6						

NEIC 27 06:16:56.4±0.4, **40°.449N**±0°.004×**104°.65W**±0°.01, **h8**^{km}±2^{km}, **ML1.9**/20, **Error ellipse: s-maj=1.6km s-min=0.7km az=87.0, Colorado**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRIGG	Briggsdale	0.29	62	Pg	Pg	06 17 02.6	+0.4
BRIGG				Sg	Sg	06 17 06.8	+0.8
BRIGG				IAML		06 17 07.2	
	comp=N,210nm,0.2s						
BRIGG				IAML		06 17 07.9	
	comp=E,116nm,0.1s						
ISCO	Idaho Springs	0.98	229	Pg	Pg	06 17 14.8	-0.5
ISCO				Sg	Sg	06 17 27.1	-1.0
PHWY	Pilot Hill	1.05	325	Pg	Pg	06 17 15.9	-0.7
PHWY				Sg	Sg	06 17 29.5	-0.7
PHWY				IAML		06 17 29.9	
	comp=E,20nm,0.2s						
N23A	Red Feather La	1.08	295	Pg	Pg	06 17 16.8	-0.4
N23A				Sg	Sg	06 17 30.5	-0.7
N23A				IAML		06 17 31.5	
	comp=E,24nm,0.2s						
N23A				IAML		06 17 32.5	
	comp=N,20nm,0.2s						
Q24A	Divide	1.53	195		Pn	06 17 24.4	+0.1
Q24A				Sg	Sn	06 17 44.3	-0.3
RWWY	Rawlins	2.30	303	Pn	Pn	06 17 33.7	-1.1
PDAR	Pinedale Array	4.35	304	Pn	Pn	06 18 01.3	-1.7

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*SOME **27** 06:17:08.1, 41°.55N×83°.52E, h15^{km}*

*NNC **27** 06:17:11.5±2.6, 41°.72N×83°.42E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=23.2km s-min=14.9km az=177.0*

ISC 27 06:17:17.7±3.0, **42°.1N**±0°.2×**83°.1E**±0°.1, **h10**^{km}, **n14**, σ**1^{s}86**/17, **4C-5D**, **Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	2.96	297	Pg	Pb	06 18 12.3	+1.8
	1.3nm,0.3s						
PDGK				Lg	Lg	06 18 57.5	
	8.3nm,0.5s						
PDGK	Podgornoye	2.96	297	⇓Pn	Pn	06 18 03.2	-1.5
	1.4nm,0.6s						
PDGK				⇑Pg	Pg	06 18 14.8	+0.5
	4.2nm,0.6s						
PDGK				⇓Sn	Sb	06 18 46.4	-0.3
	7.3nm,0.5s						
PDGK				⇓Lg	Lg	06 18 57.5	
	13nm,0.6s						
UZB	Uzynbulak	3.21	291	Pg	Pb	06 18 16.1	+1.3
	4.6nm,0.3s						
UZB				Lg	Lg	06 19 04.4	
	9.8nm,0.3s						
UZB	Uzynbulak	3.21	291	*e*Pg	Pb	06 18 16.1	+1.3
	4.6nm,0.3s						
UZB				*e*Lg	Lg	06 19 04.4	
	9.8nm,0.3s						
DJR	Jarkent	3.32	314	Pg	Pg	06 18 19.9	-1.4
	3.5nm,0.4s						
DJR				Lg	Lg	06 19 10.7	
	9.3nm,0.4s						
DJR	Jarkent	3.32	314	*e*Pg	Pg	06 18 19.9	-1.4
	1.9nm,0.7s						
DJR				*e*Lg	Lg	06 19 10.7	
	9.3nm,0.8s						
KPKS	Kokpek	3.55	295	Pg	Pb	06 18 20.6	0.0
	15nm,0.2s						
KPKS				Lg	Lg	06 19 12.1	
	11nm,0.4s						
KPKS	Kokpek	3.55	295	*e*Pg	Pb	06 18 20.6	0.0
	15nm,0.2s						
KPKS				*e*Lg	Lg	06 19 12.1	
	11nm,0.4s						
MDOK	Medeo	4.61	286	Pg	Pg	06 18 43.0	-2.9
	8.5nm,1.1s						
MDOK				Lg	Lg	06 19 50.5	
	6.7nm,0.8s						
TNSS	Tian-Shan	4.66	284	Pg	Pb	06 18 41.3	+1.7
	1.9nm,0.6s						
TNSS				Lg	Lg	06 19 48.2	
	3.1nm,0.4s						
TNSS	Tian-Shan	4.66	284	*e*Pg	Pb	06 18 41.3	+1.7
	1.9nm,0.6s						
TNSS				*e*Lg	Lg	06 19 48.2	
	3.1nm,0.4s						
MK31	Makanchi Array	4.76	353	⇑Pn	Pn	06 18 30.0	+0.5
	0.1nm,0.3s,baz=191,slow=14,SNR=7.7						
MK31				⇑Pg	Pb	06 18 44.4	+3.2
	0.3nm,0.3s,baz=170,slow=14,SNR=4.5						
MK31				⇓Lg	Lg	06 19 57.3	
	5.0nm,0.6s,baz=164,slow=26,SNR=5.8						
ZSN	Zaisan	5.53	12	*e*Pg	Pg	06 19 00.6	-2.9
	1.8nm,0.3s						
ZSN				*e*Lg	Lg	06 20 21.4	
	7.3nm,0.9s						
TKM2	Tokmak 2	5.62	281	⇑Pn	Pn	06 18 43.1	+1.6
	3.2nm,1.1s						
TKM2				⇓Lg	Lg	06 20 20.7	
	5.3nm,0.8s						

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*NEIC **27** 06:19:39.5±1.3, 15°.3S±0°.1×168°.3E±0°.1, h10^{km}±1^{km}, mb4.5/6, Error ellipse: s-maj=25.1km s-min=15.6km az=335.0*

*IDC **27** 06:19:40.0±1.7, 15°.23S×168°.26E, h0^{km}, mb3.8/5, mbtmp3.7/6, ML3.0/1, Error ellipse: s-maj=52.9km s-min=31.5km az=131.0*

ISC 27 06:19:39.8±0.7, **15°.35S**±0°.09×**168°.24E**±0°.09, **h10**^{km}, **n19**, σ**1^{s}62**/20, **mb4.0**/8, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIFNC	LIFOU	5.48	190	Pn	Pn	06 21 01.2	-0.4
KOUNC	Koumac, New Ca	6.39	215	Pn	Pn	06 21 13.7	-0.4
DZM	Mont Dzumac	6.89	194	Pn	Pn	06 21 24.9	+3.8
	0.3nm,0.3s,baz=52,slow=20,SNR=1.6						
DZM				Sn	Sn	06 22 39.4	-0.3
	baz=95,slow=13						
	1.1nm,0.3s						
DZM	Mont Dzumac	6.89	194	Pn	Pn	06 21 22.0	+0.9
ONTNC	Ouen Toro	7.12	193	Pn	Pn	06 21 24.0	-0.1
OUENC	Ouen Island, N	7.15	190	Pn	Pn	06 21 24.8	+0.3
MSVF	Nonsavu	9.70	105	Pn	Pn	06 21 58.7	-0.9
AFI	Afiamalu	19.39	88	P	P	06 24 04.8	-1.4
AFI				IAmb	IAmb	06 24 06.4	
	comp=Z,35nm,1.0s						
COEN	Coen	24.29	270	P	P	06 24 55.4	-2.2
COEN				IAmb	IAmb	06 25 03.2	
	comp=Z,12nm,1.3s						
WRA	Warramunga Arr	32.59	257	P	P	06 26 13.5	+1.7
	comp=Z,0.6nm,0.9s,baz=91,slow=7.2,SNR=2.4						
	comp=Z,0.6nm,0.9s						
AS31	Alice Springs	33.34	250	P	P	06 26 17.7	-0.7
ASAR	Alice Springs	33.34	250	P	P	06 26 20.7	+2.4
	comp=Z,0.7nm,0.8s,baz=77,slow=8.8,SNR=7.1						
	comp=Z,0.7nm,0.8s						
ASAR	Alice Springs	33.34	250	P	P	06 26 17.7	-0.6
PSA00	Pilbara Seismi	46.17	255	P	P	06 28 02.8	-2.3
PSA00				IAmb	IAmb	06 28 21.9	
	comp=Z,5.6nm,1.1s						
QSPA	South Pole Qui	74.68	180	P	P	06 31 20.6	+1.1
SONM	Songino Array	83.55	323	P	P	06 32 09.6	+1.3
	comp=Z,0.4nm,0.4s,baz=116,slow=6.6,SNR=3.7						
	comp=Z,0.4nm,0.4s						
PMR	Palmer	83.78	19	P	P	06 32 08.1	-0.8
PMR				IAmb	IAmb	06 32 28.3	
	comp=Z,5.5nm,1.2s						
NVAR	Mina Array Bea	86.97	49	P	P	06 32 27.4	+1.6
	comp=Z,0.1nm,0.3s,baz=226,slow=6.2,SNR=2.3						
	comp=Z,0.1nm,0.3s						
MKAR	Makanchi Array	98.30	316	P	P	06 33 18.4	+0.7
	comp=Z,0.3nm,0.7s,baz=117,slow=4.5,SNR=2.8						
	comp=Z,0.3nm,0.7s						

IDC 27 06:21:47.8±1.9, 6°.30S×129°.72E, h0km, mb3.6/1, mbtmp3.4/4, ML3.5/3, Error ellipse: s-maj=72.3km s-min=28.9km az=81.0, Banda Sea

```
Code  Station Name         Δ°  AZ°   Phase ID          Time      Res
                                     Op      ISC     h  m  s     ISC
SIJI  Sorong              5.62  16   Pn      Pn      06 23 14.2 +1.5
      1.5nm,0.3s,baz=308,slow=22,SNR=7.7
SIJI                                 Sn      Sn      06 24 12.5 -5.4
      5.4nm,0.3s,baz=275,slow=23,SNR=13
      4.2nm,0.3s
WRA   Warramunga Arr     14.28 162   Pn      Pn      06 25 10.7 -0.8
      0.2nm,0.3s,baz=348,slow=14,SNR=16
WRA                                  Sn      Sn      06 27 35.4  -15
      0.1nm,0.3s,baz=342,slow=21,SNR=2.1
      0.6nm,0.7s
ASAR  Alice Springs      17.73 167   P       P       06 25 57.3 +0.1
      0.1nm,0.3s,baz=347,slow=9.6,SNR=5.1
ASAR                                 S       Sn      06 29 03.8  -11
      0.4nm,0.7s,baz=352,slow=24,SNR=3.4
      0.2nm,0.3s
MKAR  Makanchi Array     67.49 327   P       P       06 32 45.1 -0.6
      0.3nm,0.4s,baz=116,slow=6.6,SNR=3.6
      0.3nm,0.4s
```

WEL 27 06:50:10.2±0.4, 43°S±3°×17°3E±°, h5km, M2.1/3, ML2.5/8, MLv2.1/3, Error ellipse: s-maj=0.0km s-min=0.0km az=123.4, confirmed, South Island

```
Code  Station Name         Δ°  AZ°   Phase ID          Time      Res
                                     Op      ISC     h  m  s     ISC
KHZ   Kahutara            0.38  72   P       Pg      06 50 17.6  0.0
KHZ                                  S       Sg      06 50 23.6 +1.0
GVZ   Greta Valley S      0.43 181   P       Pg      06 50 18.8 +0.3
GVZ                                  S       Sg      06 50 25.3 +1.1
LTZ   Lake Taylor         0.62 247   P       Pg      06 50 22.4 +0.3
LTZ                                  S       Sb      06 50 31.5 -1.1
AMCZ  Amberley            0.70 204   P       Pb      06 50 24.5 -0.4
THZ   Tophouse            0.78 352   P       Pg      06 50 25.3 +0.1
THZ                                  S       Sg      06 50 35.7 +0.5
BSWZ  Blackbirch Sta      1.03  37   P       Pg      06 50 30.0 +0.1
OXZ   Oxford              1.08 223   P       Pg      06 50 30.3 -0.6
OXZ                                  S       Sg      06 50 45.2 +0.3
MRNZ  Matariki Terra      1.16 349   P       Pg      06 50 32.4 +0.1
INZ   Inchbonnie          1.20 260   P       Pb      06 50 33.4  0.0
MQZ   McQueen's Vall      1.20 194   P       Pg      06 50 31.4 -1.9
MQZ                                  S       Sg      06 50 47.3 -1.6
DSZ   Denniston Nort      1.22 310   P       Pn      06 50 34.0 +0.1
DSZ                                  S       Sn      06 50 51.7 +0.9
TUWZ  Tuamarina           1.29  31   P       Pn      06 50 34.5 -0.4
NNZ   Nelson              1.34  11   P       Pn      06 50 35.6  0.0
RACZ  Rakaia              1.36 209   P       Pn      06 50 34.0 -1.8
MHCZ  Mount Hutt          1.47 227   P       Pn      06 50 35.8 -1.6
WACZ  Wakanui South       1.66 212   P       Pn      06 50 38.0 -1.9
QRZ   Quartz Range        1.75 347   P       Pb      06 50 42.2 -0.6
ARCZ  Arundel             1.96 223   P       Pn      06 50 42.5 -1.6
KIW   Kapiti Island       2.18  40   P       Pn      06 50 47.0 -0.1
TMZ   Timaru              2.37 218   P       Pn      06 50 48.1 -1.6
```

IDC 27 06:53:49.1±1.5, 34°.68N×24°.31E, h0km, mb3.7/4, mbtmp3.6/5, ML4.3/1, Error ellipse: s-maj=58.5km s-min=28.3km az=136.0
ATH 27 06:53:52.5, 34°.73N×24°.23E, h28km±1km, ML3.4/6, Error ellipse: s-maj=4.9km s-min=1.5km az=175.0
ISK 27 06:53:52.9, 34°.86N×24°.28E, h22km, ML3.5/20
DDA 27 06:53:54.0±0.0, 34°.27N×24°.49E, h38km, ML3.1
THE 27 06:53:54.9, 34°.91N×24°.25E, h0km±1km, ML3.1/7, Error ellipse: s-maj=1.7km s-min=0.6km az=150.0
ISC 27 06:53:53.8±0.8, 34°.83N±0°.05×24°.23E±0°.02, h24km±5km, n70, σ1s.31/92, mb3.8/4, Crete

```
Code  Station Name         Δ°  AZ°   Phase ID          Time      Res
                                     Op      ISC     h  m  s     ISC
GVDS  Gavdos              0.11 278   P       Pb      06 53 58.2 -0.2
GVDS                                 S       Sb      06 54 01.8 +0.3
      27µm,0.2s
GVDS  Gavdos              0.11 278   Pg      Pb      06 53 58.3 -0.2
GVDS                                 Sg      Sb      06 54 02.4 +0.9
GVD   Gavdhos             0.12 275   P       Pb      06 53 58.1 -0.4
GVD                                  S       Sb      06 54 01.5  0.0
      27µm,0.2s
GVD   Gavdhos             0.12 275   Pg      Pb      06 53 57.9 -0.5
GVD                                  Sg      Sb      06 54 03.0 +1.5
GVD   Gavdhos             0.12 275   P       Pb      06 53 58.0 -0.4
GVD                                  S       Sb      06 54 01.9 +0.4
GVD                                  AML     AML     06 54 03.9
      comp=N,65010µm,0.2s
GVD                                  AML     AML     06 54 04.3
      comp=E,43433µm,0.2s
TMBK  Timbaki Herakl      0.51  61   P       Pb      06 54 04.0 -0.1
TMBK                                 S       Sb      06 54 11.8 +0.7
      comp=E,2µm,0.4s
TMBK  Timbaki Herakl      0.51  61   P       Pb      06 54 04.0 -0.1
TMBK                                 S       Sb      06 54 11.1 +0.1
TMBK                                 AML     AML     06 54 16.9
      comp=E,10253µm,0.3s
TMBK                                 AML     AML     06 54 18.8
      comp=N,7849µm,0.3s
PRNS  Prines Rethymn      0.58  23   P       Pb      06 54 03.9 -1.5
PRNS                                 S       Sb      06 54 12.4 -0.8
KNDR  Palaiochora Ch      0.60 313   P       Pb      06 54 06.1 +0.4
KNDR                                 S       Sn      06 54 16.4 +0.5
KNDR  Palaiochora Ch      0.60 313   Pg      Pb      06 54 05.9 +0.1
KNDR  Palaiochora Ch      0.60 313   P       Pb      06 54 05.8 +0.1
KNDR                                 S       Sn      06 54 15.8 -0.1
KNDR                                 AML     AML     06 54 18.9
      comp=E,3202µm,0.2s
KNDR                                 AML     AML     06 54 21.4
      comp=N,4829µm,0.4s
IMMV  Iera Moni Meta      0.66 342   P       Pb      06 54 05.8 -1.0
IMMV                                 S       Sb      06 54 16.0 +0.4
      comp=N,5µm,0.4s
IMMV  Iera Moni Meta      0.66 342   Pg      Pb      06 54 05.8 -1.0
IMMV                                 Sg      Sb      06 54 16.5 +0.9
IMMV  Iera Moni Meta      0.66 342   P       Pb      06 54 05.9 -0.8
IMMV                                 S       Sb      06 54 16.4 +0.8
IMMV                                 AML     AML     06 54 17.6
      comp=E,10044µm,0.3s
IMMV                                 AML     AML     06 54 18.4
      comp=N,8553µm,0.4s
CHAN  Chania              0.71 348   P       Pn      06 54 06.9 -1.4
CHAN                                 S       Sb      06 54 18.5 +1.7
CHAN                                 AML     AML     06 54 21.8
      comp=E,4426µm,0.3s
CHAN                                 AML     AML     06 54 21.9
      comp=N,4798µm,0.7s
IDI   Anoyia              0.71  50   P       Pb      06 54 06.7 -1.0
IDI                                  S       Sb      06 54 17.4 +0.4
      comp=N,1µm,0.6s
IDI   Anoyia              0.71  50   Pg      Pb      06 54 06.6 -1.0
IDI   Anoyia              0.71  50   P       Pb      06 54 06.6 -1.0
IDI                                  S       Sb      06 54 17.3 +0.2
IDI                                  AML     AML     06 54 18.8
      comp=E,2094µm,0.7s
IDI                                  AML     AML     06 54 19.0
      comp=N,2222µm,0.5s
RODP  Rodopos             0.83 332   P       Pn      06 54 09.2 -0.8
RODP                                 S       Sn      06 54 22.1 +0.6
      comp=N,520nm,0.3s
RODP  Rodopos             0.83 332   Pg      Pn      06 54 09.3 -0.8
KSTL  Kastelli Herak      0.84  55   P       Pb      06 54 12.0 +2.3
IACM  Heraklion           0.84  55   P       Pb      06 54 10.3 +0.5
HRKL  Herakleio           0.86  56   P       Pb      06 54 11.8 +1.6
HRKL  Herakleio           0.86  56   Pg      Pn      06 54 08.9 -1.6
FRMA  Ierapetra Chan      1.25  81   P       Pb      06 54 19.9 +3.1
ANKY  Antikythira Is      1.28 324   P       Pb      06 54 17.5 +0.2
ANKY                                 S       Sb      06 54 35.8 +2.4
      comp=N,530nm,0.8s
STIA  Sitia Lasithi       1.57  76   P       Pb      06 54 23.3 +1.0
ZKR   Zakros              1.66  80   P       Pb      06 54 23.8 +0.1
ZKR   Zakros              1.66  80   Pn      Pn      06 54 20.9 -0.6
KTHA  Kythira Island      1.71 327   P       Pb      06 54 24.8 +0.2
KTHA  Kythira Island      1.71 327   Pn      Pn      06 54 21.7 -0.5
SANT  Santorini           1.84  33   Pn      Pn      06 54 23.6 -0.4
SAP3  Santorini-Thir      1.84  29   P       Pn      06 54 25.7 +1.7
THR8  Santorini-Mono      1.88  33   P       Pn      06 54 25.6 +1.1
VLI   Veliai              2.16 331   P       Pb      06 54 30.9 -1.3
KARP  Karpathos           2.51  73   P       Pn      06 54 35.5 +2.3
KARP  Karpathos           2.51  73   Pn      Pn      06 54 33.2  0.0
KRND  KRANIDI             2.69 341   P       Pn      06 54 36.9 +1.2
EPID  Epidavros           2.92 342   P       Pn      06 54 40.1 +1.2
VLY   Voula,Athens        3.04 354   P       Pn      06 54 41.7 +1.2
DAT   Datca               3.32  54   Pn      Pn      06 54 44.3 -0.1
DAT   Datca               3.32  54   P       Pn      06 54 45.6 +1.2
VILL  Villia              3.41 348   P       Pn      06 54 46.2 +0.6
GUR   Goura               3.45 334   P       Pn      06 54 47.6 +1.3
ARG   Arkhangelos         3.47  65   Pn      Pn      06 54 46.4  0.0
KLV   Kalavryta, Ach      3.62 333   P       Pn      06 54 50.0 +1.5
DRO   Drossia             3.72 328   P       Pn      06 54 53.2 +3.4
TURN  Turunc              3.80  58   Pn      Pn      06 54 51.6 +0.7
TURN  Turunc              3.80  58   P       Pn      06 54 52.1 +1.2
YER   Yerkesik            4.01  54   Pn      Pn      06 54 54.9 +1.0
DALY  Dalyan (Mula)       4.11  60   Pn      Pn      06 54 55.7 +0.6
MULA  Mugla, Merkez-      4.11  53   P       Pn      06 54 57.6 +2.3
FETY  Fethiye             4.34  64   Pn      Pn      06 54 58.8 +0.4
FETY  Fethiye             4.34  64   P       Pn      06 55 01.4 +3.0
FETY                                 S       Sn      06 55 50.7 +2.4
IZZE  Mula-Seydike        4.38  67   P       Pn      06 54 58.9  0.0
IZZE                                 S       Sn      06 55 47.0 -2.1
IZZE                                 i AML   AML     06 55 53.0
      comp=N,20nm,0.6s
AKAS  Kas                 4.60  71   Pn      Pn      06 55 02.5 +0.4
AKAS  Kas                 4.60  71   P       Pn      06 55 02.9 +0.8
AKAS                                 S       Sn      06 55 54.2 -0.7
AKAS                                 i AML   AML     06 56 09.0
      comp=N,54nm,1.2s
AKAS                                 i AML   AML     06 57 27.0
      comp=N,30nm,1.8s
TAVA  DENIZLI_Tavas       4.62  54   P       Pn      06 55 04.9 +2.7
CAME  Cameli-Denizli      4.63  61   Pn      Pn      06 55 03.2 +0.7
DNIZ  Denizli-Tavas-      4.79  53   P       Pn      06 55 05.9 +1.3
DNIZ                                 i AML   AML     06 56 58.0
      comp=N,13nm,1.1s
DNIZ                                 i AML   AML     06 56 59.0
      comp=N,23nm,0.7s
APMY  Acipayam-Deniz      4.88  56   Pn      Pn      06 55 06.2 +0.3
LKD2  Lefkada island      4.88 325   P       Pn      06 55 07.7 +1.9
LKD2                                 S       Sn      06 56 04.8 +3.2
GOLH  Golhisar            4.95  59   P       Pn      06 55 08.0 +1.2
GOLH                                 i AML   AML     06 56 44.0
      comp=N,19nm,2.1s
GOLH                                 i AML   AML     06 57 08.0
      comp=N,24nm,2.4s
KEPZ  Antalya-Kepez       6.34  69   P       Pn      06 55 27.1 +1.2
KEPZ                                 i AML   AML     06 56 55.0
      comp=N,5.4nm,1.7s
GAZI  Gazipasa            6.74  76   P       Pn      06 55 28.6 -2.8
GAZI                                 i AML   AML     06 57 01.0
      comp=N,12nm,1.2s
GAZI                                 i AML   AML     06 57 23.0
      comp=N,6.7nm,0.8s
AKASG Malin Array Be     16.28  11   Pn      Pn      06 57 41.1 +0.4
      comp=N,1.0nm,0.3s,baz=204,slow=10,SNR=5.1
      comp=N,0.3nm,0.3s
TORD  Torodi Ar. Bea     29.69 229   P       P       06 59 57.0 -1.1
      comp=N,3.0nm,0.4s,baz=44,slow=8.1,SNR=2.3
      comp=N,3.0nm,0.4s
MKAR  Makanchi Array     44.59  56   P       P       07 02 03.1 -1.0
      comp=N,0.6nm,0.5s,baz=272,slow=8.4,SNR=7.4
      comp=N,0.6nm,0.5s
SONM  Songino Array      60.29  50   P       P       07 03 59.8 -0.8
      comp=N,0.2nm,0.3s,baz=292,slow=7.6,SNR=2.1
      comp=N,0.2nm,0.3s
YKA   Yellowknife Ar     77.53 342   P       P       07 05 46.4 -0.9
      comp=N,0.1nm,0.4s,baz=41,slow=4.7,SNR=1.8
      comp=N,0.1nm,0.4s
```

IDC 27 07:02:02.5±5.5, 2°.62S×139°.08E, h0km, mb3.5/2, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=224.2km s-min=29.3km az=86.0, Near north coast of Irian Jaya

```
Code  Station Name         Δ°  AZ°   Phase ID          Time      Res
                                     Op      ISC     h  m  s     ISC
WRA   Warramunga Arr     17.83 195   P       Pn      07 06 12.1 -0.1
      0.2nm,0.3s,baz=16,slow=13,SNR=9.9
WRA                                  S       Sn      07 09 19.4  -12
      0.6nm,1.0s,baz=17,slow=21,SNR=1.7
      0.4nm,0.4s
ASAR  Alice Springs      21.52 193   P       P       07 06 53.2  0.0
      1.1nm,0.6s,baz=20,slow=9.1,SNR=10
      1.1nm,0.6s
MKAR  Makanchi Array     69.94 322   P       P       07 13 15.8 +0.1
      0.5nm,0.7s,baz=105,slow=8.1,SNR=6.8
      0.5nm,0.7s
```

IDC 27 07:10:57.0±2.8, 6°.41N×127°.21E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=215.7km s-min=27.1km az=66.0, Philippine Islands region

```
Code  Station Name         Δ°  AZ°   Phase ID          Time      Res
                                     Op      ISC     h  m  s     ISC
WRA   Warramunga Arr     27.11 165   P       P       07 16 41.8 -0.1
      0.5nm,0.4s,baz=345,slow=9.9,SNR=14
      0.5nm,0.4s
ASAR  Alice Springs      30.60 168   P       P       07 17 13.0 +0.1
      0.3nm,0.5s,baz=355,slow=8.2,SNR=8.8
      0.3nm,0.5s
MKAR  Makanchi Array     55.66 324   P       P       07 20 34.9 -0.1
      0.2nm,0.3s,baz=113,slow=8.1,SNR=4.7
      0.2nm,0.3s
```

IDC 27 07:11:24.7±2.2, 0°.08N×126°.67E, h0km, mb3.0/3, mbtmp3.1/3, Error ellipse: s-maj=176.7km s-min=29.5km az=65.0, Northern Molucca Sea

```
Code  Station Name         Δ°  AZ°   Phase ID          Time      Res
                                     Op      ISC     h  m  s     ISC
WRA   Warramunga Arr     21.27 160   P       P       07 16 14.2 +1.3
      0.2nm,0.4s,baz=339,slow=10,SNR=7.0
      0.2nm,0.4s
ASAR  Alice Springs      24.63 164   P       P       07 16 45.8 -1.4
      0.3nm,1.0s,baz=347,slow=9.2,SNR=1.4
      0.3nm,1.0s
MKAR  Makanchi Array     60.52 326   P       P       07 21 36.9 +0.1
      0.1nm,0.4s,baz=122,slow=5.2,SNR=2.3
      0.1nm,0.4s
```

IDC 27 07:43:01.8±1.6, 42°.04N×126°.79W, h0km, mb3.6/6, mbtmp3.4/9, ML2.7/3, MS3.0/6, Error ellipse: s-maj=44.8km s-min=13.2km az=32.0
ISC 27 07:43:03.6±1.3, 42°.1N±0°.2×126°.8W±0°.1, h10km, n18, σ0s.97/11, mb3.7/6, Off coast of Oregon

```
Code  Station Name         Δ°  AZ°   Phase ID          Time      Res
                                     Op      ISC     h  m  s     ISC
YBH   Yreka Blue Hor      3.05  95   Pn      Pn      07 43 52.5 +0.5
      1.4nm,0.3s,baz=292,slow=13,SNR=22
YBH                                  Sn      Sn      07 44 27.1 -1.6
      baz=282,slow=14
YBH                                  LR      LR      07 44 55.5
      comp=Z,108nm,19.6s,baz=336,slow=37
      5.7nm,0.4s
NVAR  Mina Array Bea      7.43 117   Pn      Pn      07 44 52.4 +0.1
      0.2nm,0.3s,baz=297,slow=14,SNR=4.5
NVAR                                 LR      LR      07 48 00.9
      comp=Z,77nm,19.6s,baz=336,slow=40
      0.4nm,0.6s
ELK   Elko                8.77  95   Pn      Pn      07 45 11.8 +1.0
      baz=72,slow=7.8,SNR=2.0
ELK                                  LR      LR      07 48 54.5
      comp=Z,97nm,21.3s,baz=311,slow=40
      0.4nm,0.4s
PDAR  Pinedale Array     12.75  81   Pn      Pn      07 46 05.7 +0.6
      0.1nm,0.3s,baz=279,slow=13,SNR=1.8
PDAR                                 LR      LR      07 51 27.7
      comp=Z,64nm,18.0s,baz=320,slow=40
ANMO  Albuquerque        17.40 107   LR      LR      07 53 36.6
      comp=Z,54nm,19.7s,baz=30,slow=36
YKA   Yellowknife Ar     21.69  15   P       P       07 47 53.8 -0.6
      1.3nm,0.8s,baz=204,slow=11,SNR=14
      1.3nm,0.8s
TXAR  Lajitas Array      22.58 117   P       P       07 48 05.3 +1.0
      0.6nm,1.0s,baz=305,slow=8.8,SNR=4.8
      0.6nm,1.0s
ULM   Lac du Bonnet      22.78  58   LR      LR      07 57 44.0
      comp=Z,81nm,18.7s,baz=302,slow=39
ILAR  Eielson Array      25.47 340   P       P       07 48 32.5 +1.0
      1.8nm,0.8s,baz=156,slow=8.5,SNR=26
      1.8nm,0.8s
H11N3 WAKE ISLAND Hy     59.62 270   T       T       08 57 27.2
      baz=52,slow=75,SNR=96
H11N2 WAKE ISLAND Hy     59.62 270   T       T       08 57 31.5
      baz=52,slow=75,SNR=65
H11N1 WAKE ISLAND Hy     59.64 270   T       T       08 57 30.3
      baz=52,slow=75,SNR=93
H11S1 WAKE ISLAND Hy     60.52 269   T       T       08 58 37.0
      baz=52,slow=74,SNR=121
H11S2 WAKE ISLAND Hy     60.53 269   T       T       08 58 37.0
      baz=52,slow=74,SNR=93
H11S3 WAKE ISLAND Hy     60.54 269   T       T       08 58 38.3
      baz=52,slow=74,SNR=60
SONM  Songino Array      78.89 327   P       P       07 55 06.8 -0.3
      0.6nm,0.7s,baz=60,slow=3.5,SNR=3.7
      0.6nm,0.7s
KURBB Kurchatov Arra     85.07 344   P       P       07 55 39.0 -0.4
      0.8nm,0.7s,baz=18,slow=4.8,SNR=8.7
      0.8nm,0.7s
MKAR  Makanchi Array     87.82 340   P       P       07 55 52.1 -0.9
      0.2nm,0.6s,baz=356,slow=4.8,SNR=1.9
      0.2nm,0.6s
```

UPA 27 07:44:37.8±1.1, 8°.25N×82°.57W, h44km±6km, ML3.2, MW3.2
UCR 27 07:44:38.3±1.9, 8°.22N×82°.59W, h30km±3km, MW3.6
ISC 27 07:44:37.5±1.9, 8°.19N±0°.08×82°.59W±0°.04, h25km±12km, n49, σ0s.79/79, 8C-3D, Panama-Costa Rica border region

```
Code  Station Name         Δ°  AZ°   Phase ID          Time      Res
                                     Op      ISC     h  m  s     ISC
PTPM  Petroterminale      0.28 274⇓iP        Pn      07 44 45.9 -0.1
PTPM                                 iS      Sn      07 44 53.2 +1.8
LOCO3 Loma Colorada,      0.28  38   iP      Pn      07 44 45.7 -0.3
LOCO3                                 AMP            07 44 45.8
      comp=Z,2µm,0.1s
LOCO3                                iS      Sn      07 44 51.1 -0.4
DVD   David               0.29  30   iP      Pn      07 44 45.6 -0.5
DVD                                  iS      Sn      07 44 52.0 +0.4
LESP3 La Esperanza,       0.29 319   iP      Pn      07 44 45.6 -0.6
LESP3                                iS      Sn      07 44 51.5 -0.2
CCOL  Caracol de Cor      0.44 301   eP      Pn      07 44 47.5 -0.6
CCOL                                 eS      Sn      07 44 55.9 +0.6
CDITO Canoas              0.47 324   eP      Pb      07 44 47.6 +0.3
CDITO                                eS      Sn      07 44 55.6 -0.6
PTAR3 Potrerillos Ar      0.51  11   iP      Pb      07 44 48.4 +0.4
PTAR3                                iS      Sb      07 44 55.3 +0.1
BCO2  Palmira             0.53   7⇑iP        Pb      07 44 48.6 +0.2
BCO2                                 iS      Sn      07 44 57.0 -0.9
BRU2  Volcan              0.61 351⇑iP        Pb      07 44 49.6 -0.1
BRU2                                 iS      Sn      07 44 59.0 -0.9
BRU2  Volcan              0.61 351⇑iP        Pb      07 44 49.6 -0.1
BRU2                                 eS      Sn      07 44 58.9 -1.0
LNBQ3 Los Naranjos,       0.62  14   iP      Pb      07 44 49.5 -0.3
LNBQ3                                iS      Sb      07 44 58.4 +0.2
BC3P  Paso Ancho          0.63 359   iP      Pb      07 44 49.7 -0.3
BC3P                                 iS      Sb      07 44 58.9 +0.4
MLIR3 Monte Lirio, C      0.65 339   iP      Pn      07 44 50.7 -0.5
MLIR3                                eS      Sn      07 45 00.5 -0.1
FITO  Golfito             0.71 308⇑iP        Pb      07 44 50.3 -0.8
FITO                                 eS      Sb      07 45 00.4 -0.1
CTCR  Cotoan              0.72 347   eP      Pb      07 44 51.0 -0.6
CTCR                                 eS      Sb      07 45 01.3  0.0
EDAD  Golfito             0.73 309   eP      Pb      07 44 50.8 -0.9
EDAD                                 eS      Sb      07 45 01.0 -0.3
VITO  San Vito            0.73 329   eP      Pb      07 44 51.6 -0.1
VITO                                 eS      Sn      07 45 03.1 +0.4
EDSV  San Vito            0.73 329⇑iP        Pb      07 44 51.5 -0.2
EDSV                                 eS      Sn      07 45 03.3 +0.5
POTG  Potrero Grande      1.01 329⇑iP        Pb      07 44 55.4 -0.9
POTG                                 eS      Sn      07 45 09.7 +0.3
EDP2  Potrero Grande      1.01 325⇑eP        Pb      07 44 55.6 -0.6
EDP2                                 eS      Sn      07 45 10.1 +0.8
EDPN  Palmar Norte        1.15 312   eP      Pn      07 44 57.4 -0.6
PLAN  Los Planes de       1.18 294   eP      Pn      07 44 57.2 -1.1
EDBA  Buenos Aires        1.18 325⇑iP        Pn      07 44 58.6 +0.2
EDBA                                 eS      Sn      07 45 16.2 +2.4
BURE  Buenos Aires        1.23 323⇓eP        Pn      07 44 58.7 -0.3
BURE                                 eS      Sn      07 45 15.5 +0.6
SRBA  San Rafael, Bu      1.29 324⇓iP        Pn      07 44 59.3 -0.6
SRBA                                 eS      Sn      07 45 15.8 -0.7
BRIBI Bribri              1.45 350   eP      Pb      07 45 03.2 -0.7
BRIBI                                eS      Sb      07 45 24.0 +2.1
PEZE  Perez Zeledon,      1.60 318   eP      Pn      07 45 03.9 -0.3
PEZE                                 eS      Sn      07 45 24.4 +0.2
BUS1  Rivas               1.77 320   eP      Pn      07 45 06.7 -0.3
BUS1                                 eS      Sn      07 45 29.3 +0.3
CDM   Cerro de Muert      1.79 320   eP      Pn      07 45 06.8 -0.3
CDM                                  eS      Sn      07 45 29.8 +0.6
MRVA  Moravia de Chi      1.83 333   eP      Pn      07 45 07.8 +0.3
MRVA                                 eS      Sb      07 45 31.9 -1.1
LLNJ  Naranjito           1.96 311   eP      Pn      07 45 10.1 +1.0
RIMA  Rio Macho           2.01 322   eP      Pn      07 45 10.0  0.0
RIMA                                 eS      Sn      07 45 34.7 +0.3
TURIB Turrialba           2.02 328   eP      Pn      07 45 10.5 +0.4
VERB  Verbena             2.06 328   eP      Pn      07 45 11.6 +1.0
REPA  Paraso              2.06 322   eP      Pn      07 45 10.8 +0.2
RVSTA Santa Teresita      2.06 330   eP      Pn      07 45 11.8 +1.2
LCR2  La Lucha 2          2.08 318   eP      Pn      07 45 10.7 -0.3
ABE2  San Pablo           2.09 316   eP      Pn      07 45 11.7 +0.6
PCAYA Pacayas             2.10 325   eP      Pn      07 45 12.8 +1.6
PCAYA                                eS      Sb      07 45 39.4 -1.4
RAFA  San Farael, Vo      2.13 326   eP      Pn      07 45 13.4 +1.6
RVLA  Villa Bonita        2.15 333   eP      Pn      07 45 13.1 +1.4
VTLO  VTLO                2.16 329   eP      Pn      07 45 12.9 +0.8
OCM   Ochomogo            2.17 322   eP      Pn      07 45 12.6 +0.4
CORON Coronado            2.26 322   eP      Pn      07 45 13.9 +0.5
HDC3  Heredia 3           2.35 320   eP      Pn      07 45 14.9 +0.4
HDC   Heredia             2.35 320   eP      Pn      07 45 15.4 +0.8
BELE  Belen               2.38 319   eP      Pn      07 45 15.4 +0.5
JUNT  Juntas              3.13 312   eP      Pn      07 45 26.6 +1.3
JTS   Las Juntas de       3.13 312   eP      Pn      07 45 25.6 +0.4
```

WEL 27 07:55:47.4±0.6, 42°S±3°×17°4E±°, h5km, M2.1/4, ML2.5/9, MLv2.1/4, Error ellipse: s-maj=0.0km s-min=0.0km az=114.0, confirmed, Cook Strait

```
Code  Station Name         Δ°  AZ°   Phase ID          Time      Res
                                     Op      ISC     h  m  s     ISC
CMWZ  Cape Campbell       0.13 193   P       Pg      07 55 50.8 +0.8
BSWZ  Blackbirch Sta      0.30 252   P       Pg      07 55 53.3 +0.1
TUWZ  Tuamarina           0.30 309   P       Pg      07 55 53.9 +0.7
TCW   Tory Channel        0.41   2   P       Pg      07 55 55.8 +0.6
TCW                                  S       Sg      07 56 02.0 +1.4
NNZ   Nelson              0.77 301   P       Pg      07 56 02.0 -0.2
NNZ                                  S       Sg      07 56 13.0 +0.8
CAW   Cannon Point        0.80  50   P       Pg      07 56 02.8 +0.1
DUWZ  D'Urville Isla      0.86 343   P       Pb      07 56 04.3 -0.5
DUWZ                                 S       Sg      07 56 15.6 +0.7
KHZ   Kahutara            0.96 214   P       Pg      07 56 05.2 -0.5
KHZ                                  S       Sb      07 56 19.1 -0.2
THZ   Tophouse            1.02 262   P       Pg      07 56 06.2 -0.7
MTW   Mount Morrison      1.05  64   P       Pg      07 56 07.4  0.0
MRNZ  Matariki Terra      1.15 281   P       Pg      07 56 08.9 -0.4
MRNZ                                 S       Sb      07 56 25.2 +0.4
MRZ   Mangatainoka R      1.39  47   P       Pn      07 56 12.0 -1.4
QRZ   Quartz Range        1.52 301   P       Pn      07 56 15.0 -0.3
GVZ   Greta Valley S      1.62 214   P       Pn      07 56 15.8 -0.8
DSZ   Denniston Nort      1.84 265   P       Pn      07 56 20.4 +0.8
LTZ   Lake Taylor         1.88 231   P       Pn      07 56 18.1 -2.0
NTVZ  North Tongarir      2.74  24   P       Pn      07 56 30.8 -1.4
```

WEL 27 08:14:03.5±1.1, 39°S±6°×17°6E±°, h47km±10km, M1.5/6, ML1.8/13, MLv1.5/6, Error ellipse: s-maj=0.0km s-min=0.0km az=164.6, confirmed, North Island

```
Code  Station Name         Δ°  AZ°   Phase ID          Time      Res
                                     Op      ISC     h  m  s     ISC
BKZ   Black Stump Fm      0.13 106   P       Pn      08 14 12.8 +1.5
BKZ                                  S       Sn      08 14 20.3 +3.6
MRHZ  Matea Rd            0.30  13   P       Pn      08 14 13.7 +1.2
MRHZ                                 S       Sn      08 14 21.3 +2.5
KWHZ  Kaweka Forest       0.30 166   P       Pn      08 14 13.8 +1.2
NMHZ  Naumai              0.37  85   P       Pn      08 14 14.8 +1.6
NMHZ                                 S       Sn      08 14 23.8 +3.6
BHHZ  Black Hill Sta      0.41 210   P       Pn      08 14 15.0 +1.3
BHHZ                                 S       Sn      08 14 23.6 +2.7
MCHZ  McNeill Hill        0.43 138   P       Pn      08 14 14.8 +1.1
MTHZ  Maungataniwha       0.49  56   P       Pn      08 14 15.5 +1.0
MTHZ                                 S       Sn      08 14 25.0 +2.7
NTVZ  North Tongarir      0.51 273   P       Pn      08 14 16.2 +1.4
OTVZ  Oturere             0.52 266   P       Pn      08 14 16.4 +1.4
OTVZ                                 S       Sn      08 14 26.0 +2.8
```

ARHZ	Aropaoanui	0.54	105	P	Pn	08 14 16.1	+1.0
SNVZ	South Ngauruho	0.54	264	P	Pn	08 14 16.6	+1.4
SNVZ				S	Sn	08 14 26.2	+2.6
NGZ	Ngauruhoe	0.57	265	P	Pn	08 14 16.9	+1.3
NGZ				S	Sn	08 14 26.8	+2.5
WNVZ	Wahianoa	0.60	251	P	Pn	08 14 17.1	+1.1
WNVZ				S	Sn	08 14 26.6	+1.6
FWVZ	Far West T-bar	0.61	258	P	Pn	08 14 17.3	+1.1
FWVZ				S	Sn	08 14 27.4	+1.9
TRVZ	Turoa	0.63	254	P	Pn	08 14 17.4	+1.0
MTVZ	Mangateitei	0.71	249	P	Pn	08 14 18.3	+0.9
RTZ	Ruatahuna	0.72	45	P	Pn	08 14 17.9	+0.4
KAHZ	Kahuranaki	0.79	148	P	Pn	08 14 18.5	+0.1
NGRZ	Ngongotaha	1.03	354	P	Pn	08 14 17.1	-4.6
URZ	Urewera	1.06	35	P	Pn	08 14 22.0	0.0
BSWZ	Blackbirch Sta	3.19	215	P	Pn	08 14 49.1	-2.1

---

*IDC **27** 08:20:35.3±0.5, 9°.47N×122°.48E, h0^{km}, mb4.3/26, mbtmp4.3/26, MS3.7/30, Error ellipse: s-maj=22.0km s-min=11.8km az=79.0*

*NEIC **27** 08:20:38.3±1.6, 9°.53N±0°.05×122°.50E±0°.07, h12^{km}±3^{km}, mb4.6/86, Error ellipse: s-maj=12.2km s-min=4.4km az=123.0*

*MAN **27** 08:20:39.3, 9°.52N×122°.28E, h22^{km}, mb4.1, ML2.9, MS2.5*

MAN INTENSITY IV - SIPALAY CITY NEGROS OCCIDENTAL; INTENSITY III - HINOBA-AN NEGROS OCCIDENTAL; BASAY NEGROS ORIENTAL; ILOILO CITY ILOILO; INTENSITY II - BAYAWAN CITY NEGROS ORIENTAL.

*DJA **27** 08:20:49.0±2.3, 9°N±8°×12°2E±°, h11^{km}±19^{km}, M4.7/9, mB5.0/5, mb4.8/9, MLv4.9/5, Mw(mB)4.4/5*

ISC 27 08:20:40.2±0.6, **9°.49N**±0°.02×**122°.38E**±0°.03, **h31**^{km}±3^{km}, **n222**, σ1^{s}**73**/239, **mb4.5**/75, **MS3.7**/29, **13C-22D, Negros**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNOP	Candoni, Negro	0.43	38	⇓eP	Pb	08 20 48.8	-0.8
CNOP				eS	Sb	08 20 54.2	-1.8
GUIM	Jordan	1.15	11	⇓eP	Pn	08 20 59.6	-0.6
GUIM				eS	Sb	08 21 15.6	-0.6
LSIP	Lazi, Siquijor	1.29	106	⇓iP	Pb	08 21 02.9	-1.0
LSIP				i S	Sb	08 21 20.7	+0.6
DCPH	Dipolog City	1.32	133	⇓iP	Pn	08 21 02.9	+0.4
DCPH				i S	Sb	08 21 21.6	+0.7
TBP	Tagbilaran	1.48	82	⇓iP	Pb	08 21 05.9	-1.2
TBP				i S	Sb	08 21 25.8	+0.2
LLP	Lapu-Lapu	1.77	62	⇓iP	Pn	08 21 10.0	+1.3
LLP				i S	Sb	08 21 33.1	-0.8
CUYO	Cuyo Island	1.90	316	⇓eP	Pn	08 21 09.9	-0.6
CUYO				eS	Sn	08 21 31.6	-1.9
PAGZ	Pagadian	1.91	148	⇓eP	Pb	08 21 12.9	-1.5
PAGZ				eS	Sb	08 21 36.9	-1.0
GHBP	Garcia Hernand	1.93	86	⇓iP	Pn	08 21 12.2	+1.4
GHBP				i S	Sb	08 21 38.5	+0.2
TABP	Talibon, Bohol	2.02	73	⇓eP	Pn	08 21 13.3	+1.2
TABP				eS	Sb	08 21 38.8	-2.3
RCP	Roxas	2.09	10	⇓eP	Pn	08 21 15.1	+2.0
RCP				eS	Sb	08 21 42.0	-1.2
IBAJ	Ibajay, Aklan	2.33	355	⇑eP	Pn	08 21 17.2	+0.8
CGP	Cagayan de Oro	2.51	114	⇑eP	Pn	08 21 20.4	+1.5
CGP				eS	Sn	08 21 51.2	+2.7
MSLP	Maasin	2.53	75	⇓eP	Pn	08 21 20.6	+1.4
MSLP				eS	Sb	08 21 52.4	-3.3
ZCP	Zamboanga City	2.56	187	⇑iP	Pn	08 21 20.4	+0.9
ZCP				i S	Sn	08 21 48.7	-0.9
OCLP	Ormoc	2.69	55	⇑eP	Pn	08 21 22.9	+1.5
OCLP				eS	Sb	08 21 56.9	-3.4
OTRP	Odiongan	2.88	353	⇑eP	Pn	08 21 24.3	+0.4
OTRP				eS	Sn	08 21 58.2	+0.6
CTBH	Cotabato--PC H	2.92	140	⇑iP	Pn	08 21 27.2	+2.8
SCPH	Surigao	3.08	84	⇓eP	Pn	08 21 28.2	+1.4
SCPH				eS	Sn	08 21 58.6	-4.0
SJMP	San Jose	3.20	337	⇑eP	Pn	08 21 29.1	+0.7
BUTP	Butuan	3.25	99	⇑eP	Pn	08 21 32.3	+3.3
BUTP				eS	Sb	08 22 12.0	-4.3
BUSP	Coron	3.29	320	⇑eP	Pn	08 21 29.1	-0.5
BUSP				eS	Sn	08 22 05.4	-2.3
ENPP	El Nido	3.37	301	⇓eP	Pn	08 21 29.9	-0.7
ENPP				eS	Sn	08 22 05.4	-4.2
TASP	Talacogon, Agu	3.54	107	⇓eP	Pn	08 21 36.7	+3.6
KCP	Kidapawan	3.65	132	⇓eP	Pb	08 21 39.3	-4.7
SKMP	Bagumbayan, Su	3.65	144	⇓eP	Pn	08 21 38.9	+4.4
SKMP				eS	Sn	08 22 17.6	+1.0
GLSP	General Luna,	3.71	85	⇓eP	Pn	08 21 37.5	+2.0
GLSP				eS	Sb	08 22 23.5	-6.2
CNP	Catarman	3.75	37	⇑eP	Pn	08 21 37.3	+1.3
CNP				eS	Sb	08 22 28.4	-2.4
DAV	Davao City (W)	3.98	127	Pn	Pn	08 21 41.5	+2.4
	31nm,0.3s,baz=311,slow=11,SNR=1.4						
DAV				LR	LR	08 22 53.5	
	comp=Z,591nm,19.6s,baz=266,slow=36						
BOAC	Boac	3.98	353	⇑eP	Pn	08 21 40.5	+1.4
BOAC				eS	Sn	08 22 26.2	+1.5
BIPH	Bislig	4.15	108	⇑eP	Pn	08 21 43.7	+2.3
PGP	Puerto Galera	4.23	341	⇓eP	Pn	08 21 43.9	+1.4
PGP				eS	Sn	08 22 28.4	-2.5
CDOP	Cateel, Davao	4.36	113	⇓iP	Pn	08 21 48.6	+4.3
PVCP	Virac	4.44	23	⇑eP	Pn	08 21 47.4	+1.9
TGY	Tagaytay City	4.80	343	Pn	Pn	08 21 54.4	+3.9
	47nm,0.3s,baz=205,slow=6.0,SNR=1.7						
TGY				Sn	Sn	08 22 46.9	+1.8
	27nm,0.3s,baz=194,slow=23,SNR=1.2						
TGY	Tagaytay City	4.80	343	⇓eP	Pn	08 21 51.1	+0.7
MYLDM	Lahad Datu	5.75	222	Pn	Pn	08 22 05.9	+2.4
KKM	Kota Kinabalu	7.00	241	Pn	Pn	08 22 21.9	+1.2
TOLI2	Tolitoli	8.47	191	Pn	Pn	08 22 40.7	-0.1
GTOI	Gorontalo	8.82	176	P	Pn	08 22 46.4	+0.8
	13nm,0.7s						
MPSI	Mapaga	9.42	195	P	Pn	08 22 54.3	+0.5
	27nm,0.6s,592nm						
LUWI	Luwuk	10.47	178	Pn	Pn	08 23 08.8	+0.6
LUWI	Luwuk	10.47	178	P	Pn	08 23 11.6	+3.4
	90nm,1.0s						
LBMI	Labuha	11.28	153	P	Pn	08 23 25.4	+6.0
	60nm,0.4s,2µm						
BKB	Balikpapan	11.99	207	Pn	Pn	08 23 27.8	-1.3
SANI	Sanana	12.01	162	P	Pn	08 23 34.6	+5.2
	20nm,0.9s						
SBUM	Sibu	12.28	236	Pn	Pn	08 23 34.0	+1.0
SIJI	Sorong	13.57	139	LR	LR	08 29 26.8	
	comp=Z,324nm,19.3s,baz=350,slow=39						
KAPI	Kappang	14.64	190	LR	LR	08 29 41.6	
	comp=Z,402nm,21.1s,baz=1.0,slow=37						
QIZ	Qiongzhong	15.40	309	P	Pn	08 24 17.0	+1.6
QIZ				S	Sn	08 27 05.8	+0.7
QIZ				LR	LR		
	comp=N,600nm,13.6s						
QIZ				LR	LR		
	comp=E,480nm,13.7s						
QIZ				LR	LR		
	comp=Z,670nm,19.7s						
MMRI	Maumere	18.00	180		Pn	08 24 47.9	-0.4
JOW	Kunigami	18.13	17	LR	LR	08 31 30.4	
	comp=Z,261nm,20.5s,baz=244,slow=36						
PPBI	Pangkal Pinang	19.89	235	P	Pn	08 25 12.6	+1.6
NGJI	Ngawi	19.96	213	P	Pn	08 25 28.2	+16
KPJI	Karang Pucung	21.41	219	P	P	08 25 30.0	+4.3
IPM	Ipoh	21.76	258	P	P	08 25 30.9	+1.4
KULM	Kulim	21.94	261	P	P	08 25 32.6	+1.3
KULM				IAmb	IAmb	08 25 36.5	
	comp=Z,23nm,1.1s						
GUMO	Guam	22.41	77	LR	LR	08 32 41.3	
	comp=Z,155nm,21.8s,baz=250,slow=32						
NJ2	Nanjing	22.69	352	eP	P	08 25 41.3	+2.1
NJ2				pP	pP	08 25 48.3	+0.7
NJ2				sP	sP	08 25 51.0	-0.3
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
JSU	Suzuyama	23.16	18	P	P	08 25 43.8	-0.3
PHRA	Phrae	23.26	295	P	P	08 25 47.1	+1.9
CRAI	Chiangrai	23.76	299	P	P	08 25 51.5	+1.3
RPSI	Rantau Prapat	24.26	255	P	P	08 25 56.6	+1.8
RPSI				IAmb	IAmb	08 25 58.4	
	comp=Z,19nm,1.0s						
CM31	Chiang Mai Arr	24.40	294	P	P	08 25 56.9	+0.9
CM31				IAmb	IAmb	08 25 58.3	
	comp=Z,12nm,1.1s						
CMAR	Chiang Mai Arr	24.40	294	P	P	08 25 56.5	+0.5
	comp=Z,2.7nm,0.9s,baz=120,slow=8.1,SNR=13						
CMAR				LR	LR	08 35 28.5	
	comp=Z,110nm,18.5s,baz=115,slow=36						
	comp=Z,2.7nm,0.9s						
CMAR	Chiang Mai Arr	24.40	294	P	P	08 25 56.8	+0.8
CHTO	Chiang Mai	24.51	295	P	P	08 25 58.0	+0.9
JNU	Nakatsue	24.80	17	LR	LR	08 35 22.1	
	comp=Z,128nm,21.2s,baz=202,slow=36						
JCJ	Chichijima	25.63	44	LR	LR	08 34 47.4	
	comp=Z,253nm,21.6s,baz=156,slow=33						
KNRA	Kununurra	25.79	166	P	P	08 26 08.0	-0.6
KNRA				IAmb	IAmb	08 26 25.1	
	comp=Z,22nm,0.9s						
PZH	PanZhiHua	25.84	314	P	P	08 26 13.0	+3.8
PZH				S	S	08 30 35.0	-2.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,70nm,4.1s						
PZH				LR	LR		
	comp=N,430nm,18.4s						
PZH				LR	LR		
	comp=E,480nm,17.9s						
PZH				LR	LR		
	comp=Z,700nm,21.8s						
JHS	Saijyo	27.23	20	P	P	08 26 21.3	-0.2
TNCH	TengChong	27.45	307	eP	P	08 26 26.0	+2.2
TNCH				pP	pP	08 26 29.0	-3.0
TNCH				Pn	PP	08 27 19.3	-6.9
TNCH				pmax	pmax		
	comp=Z,91nm,0.5s						
TNCH				smax	smax		
	comp=N,970nm,0.7s						
TNCH				smax	smax		
	comp=E,1µm,0.7s						
TNCH				LR	LR		
	comp=N,2µm,1.0s						
TNCH				LR	LR		
	comp=E,1µm,1.3s						
CD2	Chengdu	27.47	324	P	P	08 26 26.5	+2.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				LR	LR		
	comp=N,140nm,14.5s						
CD2				LR	LR		
	comp=E,150nm,9.4s						
CD2				LR	LR		
	comp=Z,320nm,17.0s						
FITZ	Fitzroy Crossi	27.60	173	P	P	08 26 25.0	+0.2
KSAR	Wonju Array Be	28.27	9	P	P	08 26 31.4	+0.7
KSRS	Korea Array	28.29	9	P	P	08 26 30.0	-0.9
	comp=Z,1.3nm,0.7s,baz=183,slow=11,SNR=5.0						
	comp=Z,1.3nm,0.7s						
KS19	Wonju Array Si	28.33	9	P	P	08 26 31.5	+0.2
KS19				IAmb	IAmb	08 26 35.0	
	comp=Z,21nm,1.4s						
MJAR	Matsushiro Arr	30.53	26	LR	LR	08 37 43.2	
	comp=Z,121nm,20.5s,baz=206,slow=34						
PSA00	Pilbara Seismi	30.97	185	P	P	08 26 53.8	-1.0
PSA00				IAmb	IAmb	08 27 02.1	
	comp=Z,15nm,1.4s						
LZH	Lanzhou	31.39	330	eP	P	08 27 02.3	+3.7
LZH				pP	pwP	08 27 10.5	+0.9
LZH				sP	sP	08 27 14.8	+4.2
LZH				pmax	pmax		
	comp=Z,23nm,0.6s						
LZH				LR	LR		
	comp=N,320nm,15.2s						
LZH				LR	LR		
	comp=E,330nm,13.7s						
LZH				LR	LR		
	comp=Z,320nm,16.8s						
WB0	Warramunga Arr	31.39	158	P	P	08 26 58.6	0.0
WB0				IAmb	IAmb	08 27 07.5	
	comp=Z,10nm,1.2s						
WRAB	Tennant Creek	31.52	158	P	P	08 27 00.1	+0.4
WRAB				IAmb	IAmb	08 27 02.8	
	comp=Z,5.1nm,0.8s						
WRA	Warramunga Arr	31.53	158	P	P	08 26 58.6	-1.2
	comp=Z,3.1nm,0.8s,baz=341,slow=9.4,SNR=31						
WRA				PcP	PcP	08 29 51.2	-1.1
	comp=Z,2.7nm,0.8s,baz=344,slow=3.2,SNR=10						
	comp=Z,3.1nm,0.8s						
WRA	Warramunga Arr	31.53	158	P	P	08 27 00.1	+0.4
WB2	Warramunga Arr	31.53	158	P	P	08 27 00.0	+0.2
WB2				IAmb	IAmb	08 27 10.7	
	comp=Z,7.3nm,1.0s						
BRDH	Bariadhala	32.23	298	LR	LR	08 41 50.7	
	comp=Z,168nm,18.1s,baz=116,slow=40						
HHC	Hu-ho-hao-te	32.67	345	eP	P	08 27 12.8	+3.1
HHC				pmax	pmax		
	comp=Z,25nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,5.6s						
BTO	Baotou	32.88	343	eP	P	08 27 17.0	+5.5
BTO				pmax	pmax		
	comp=Z,35nm,0.6s						
BTO				pmax	pmax		
	comp=Z,250nm,6.4s						
AS31	Alice Springs	34.83	161	P	P	08 27 28.7	+0.2
ASAR	Alice Springs	34.83	161	P	P	08 27 28.7	+0.2
	comp=Z,5.4nm,0.6s,baz=341,slow=7.3,SNR=86						
ASAR				PcP	PcP	08 30 00.5	-1.0
	comp=Z,2.5nm,0.7s,baz=345,slow=2.5,SNR=10						
	comp=Z,5.4nm,0.6s						
ASAR	Alice Springs	34.83	161	P	P	08 27 27.8	-0.8
ASAR				PcP	PcP	08 30 00.8	-0.6
MDJ	Mudanjiang	35.55	9	P	P	08 27 35.5	+1.0
MDJ				pP	pP	08 27 44.5	+1.2
MDJ				sP	sP	08 27 48.8	+1.7
MDJ				PcP	PcP	08 29 59.8	-3.4
MDJ				S	S	08 33 14.3	+6.0
MDJ				ScP	ScP	08 33 38.5	-8.6
MDJ				PcS	PcS	08 33 48.5	-1.7
MDJ				SS	SnSn	08 35 34.3	+4.1
MDJ	Mudanjiang	35.55	9	ScS	ScS	08 37 49.8	-1.8
MDJ				pmax	pmax		
	comp=Z,17nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,120nm,8.0s						
MDJ	Mudanjiang	35.55	9	P	P	08 27 34.2	-0.3
MDJ				IAmb	IAmb	08 27 36.4	
	comp=Z,16nm,1.1s						
USA0B	Ussuriysk Arra	35.58	12	P	P	08 27 33.5	-1.2
USA0B				IAmb	IAmb	08 27 36.1	
	comp=Z,6.5nm,0.8s						
USRK	Ussuriysk Ar.	35.58	12	P	P	08 27 35.5	+0.8
	comp=Z,4.4nm,0.8s,baz=204,slow=8.3,SNR=11						
USRK				LR	LR	08 41 18.3	
	comp=Z,94nm,21.6s,baz=164,slow=35						
	comp=Z,4.4nm,0.8s						
USRK	Ussuriysk Ar.	35.58	12	P	P	08 27 32.8	-1.9
GTA	Gaotai	35.97	330	eP	P	08 27 46.3	+7.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
BNX	BinXian	36.38	6	⇓P	P	08 27 42.3	+0.7
BNX				pmax	pmax		
	comp=Z,14nm,1.3s						
BNX				pmax	pmax		
	comp=Z,120nm,4.3s						
CTA	Charters Tower	37.63	141	LR	LR	08 44 42.9	
	comp=Z,94nm,19.3s,baz=264,slow=38						
ASAJ	Asahikawa	38.71	23	P	P	08 28 01.6	+0.2
	comp=Z,3.1nm,0.6s,baz=227,slow=6.7,SNR=8.7						
	comp=Z,3.1nm,0.6s						
JKA	Kamikawa-asahi	38.71	23	P	P	08 28 00.2	-1.2
JKA				IAmb	IAmb	08 28 28.5	
	comp=Z,19nm,1.4s						
MORW	Morawa	38.81	189	P	P	08 28 03.0	+0.6
MORW				IAmb	IAmb	08 28 14.6	
	comp=Z,21nm,1.3s						
ULN	Ulaanbaatar	40.38	344	P	P	08 28 16.2	+0.7
KLR	Kul'dur	40.38	9	P	P	08 28 15.2	0.0
	comp=Z,3.2nm,0.7s,baz=187,slow=7.4,SNR=13						
KLR				LR	LR	08 44 45.3	
	comp=Z,84nm,21.2s,baz=199,slow=36						
	comp=Z,3.2nm,0.7s						
FORT	Forrest	40.41	172	P	P	08 28 16.8	+1.2
SONM	Songino Array	40.54	343	P	P	08 28 17.0	+0.3
	comp=Z,2.3nm,0.8s,baz=164,slow=8.9,SNR=11						
SONM				PcP	PcP	08 30 20.2	+1.5
	comp=Z,0.6nm,0.7s,baz=195,slow=2.0,SNR=2.4						
SONM				LR	LR	08 47 16.8	
	comp=Z,123nm,19.1s,baz=160,slow=40						
	comp=Z,2.3nm,0.8s						
SONM	Songino Array	40.54	343	P	P	08 28 17.7	+1.1
HEH	HeiHe	40.85	5	eP	P	08 28 20.3	+1.2
YSS	Yuzh-Sakhalins	41.17	21	P	P	08 28 22.0	+0.3
PALK	Pallekele	41.27	270	LR	LR	08 44 34.1	
	comp=Z,124nm,21.4s,baz=200,slow=35						
HNR	Honiara	41.86	116	LR	LR	08 44 31.4	
	comp=Z,944nm,19.3s,baz=218,slow=34						
NWAO	Narrogin (SRO)	42.46	186	P	P	08 28 33.1	+0.7
BBOO	Buckleboo	44.04	163	P	P	08 28 45.7	+0.5
EIDS	Eidsvold	44.52	142	P	P	08 28 48.2	-0.9
STKA	Stephens Creek	45.05	157	P	P	08 28 52.9	-0.4
	comp=Z,3.8nm,0.7s,baz=324,slow=8.3,SNR=8.1						
STKA				LR	LR	08 50 07.9	
	comp=Z,59nm,18.3s,baz=23,slow=39						
	comp=Z,3.8nm,0.7s						
STKA	Stephens Creek	45.05	157	P	P	08 28 52.6	-0.7
ARMA	Armidale	48.62	146	P	P	08 29 21.2	-0.2
MK31	Makanchi Array	50.39	325	P	P	08 29 35.9	+1.3
MKAR	Makanchi Array	50.39	325	P	P	08 29 35.6	+1.0
	comp=Z,3.4nm,0.8s,baz=123,slow=6.6,SNR=24						
	comp=Z,3.4nm,0.8s						
TARG	Taragay, Kyrgy	50.61	317	P	P	08 29 36.3	-0.5
TARG				IAmb	IAmb	08 29 54.0	
	comp=Z,5.4nm,1.0s						
KSH	Kashi	50.95	314	P	P	08 29 44.3	+5.2
KSH				pP	pwP	08 29 53.8	+2.5
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PEA0B	Petropavlovsk-	51.98	26	P	P	08 29 46.7	+0.3
PETK	Petropavlovsk-	51.98	26	P	P	08 29 45.8	-0.6
	comp=Z,1.6nm,0.5s,baz=212,slow=5.3,SNR=13						
PETK				LR	LR	08 54 41.8	
	comp=Z,50nm,18.1s,baz=206,slow=39						
	comp=Z,1.6nm,0.5s						
PETK	Petropavlovsk-	51.98	26	P	P	08 29 46.7	+0.3
LIFNC	LIFOU	53.38	125	P	P	08 29 57.4	+0.2
DZM	Mont Dzumac	53.40	127	LR	LR	08 52 40.5	
	comp=Z,82nm,19.0s,baz=32,slow=36						
DZM	Mont Dzumac	53.40	127	P	P	08 29 57.4	0.0
DZM				IAmb	IAmb	08 29 57.8	
	comp=Z,18nm,1.5s						
ZAA0	Zalesovo Array	53.53	333	P	P	08 29 58.0	+0.2
ZALV	Zalesovo Beam	53.53	333	P	P	08 29 57.8	0.0
	comp=Z,0.9nm,0.4s,baz=113,slow=6.9,SNR=5.5						
	comp=Z,0.9nm,0.4s						
MA2	Magadan	54.36	17	P	P	08 30 03.5	-0.3
	comp=Z,4.5nm,0.6s,baz=209,slow=7.9,SNR=5.7						
MA2				LR	LR	08 56 24.0	
	comp=Z,39nm,18.1s,baz=176,slow=40						
	comp=Z,4.5nm,0.6s						
MA2	Magadan	54.36	17	P	P	08 30 03.8	0.0
MA2				IAmb	IAmb	08 30 04.9	
	comp=Z,6.5nm,0.8s						
KURK	Kurchatov	54.59	327	P	P	08 30 06.2	+0.6
KURK				IAmb	IAmb	08 30 14.6	
	comp=Z,10nm,1.1s						
GAR	Garm	54.88	311	P	P	08 30 08.6	+0.5
KK31	Karatay Array	56.10	316	P	P	08 30 17.9	+1.2
KKAR	Karatay Array	56.10	316	P	P	08 30 16.9	+0.2
SEY	Seymchan	57.56	16	P	P	08 30 27.2	+0.6
	comp=Z,3.8nm,0.6s,baz=219,slow=6.3,SNR=16						
	comp=Z,3.8nm,0.6s						
TIXI	Tiksi	62.24	2	P	P	08 30 58.5	-0.1
	comp=Z,3.0nm,0.6s,baz=90,slow=23,SNR=9.1						
	comp=Z,3.0nm,0.6s						
TIXI	Tiksi	62.24	2	P	P	08 30 57.6	-1.0
WSAR	Wadi Sarin	62.25	291	LR	LR	09 04 40.6	
	comp=Z,30nm,18.4s,baz=100,slow=42						
NRIK	Noril'sk	63.86	347	P	P	08 31 09.4	0.0
	comp=Z,3.8nm,0.7s,baz=118,slow=6.5,SNR=5.2						
	comp=Z,3.8nm,0.7s						
NRIK	Noril'sk	63.86	347	P	P	08 31 09.8	+0.3
GEYT	Alibeck	63.96	308	P	P	08 31 12.5	+1.7
	comp=Z,2.1nm,0.7s,baz=164,slow=35,SNR=2.1						
GEYT				LR	LR	09 00 24.5	
	comp=Z,54nm,18.6s,baz=102,slow=37						
	comp=Z,2.1nm,0.7s						
GEYT	Alibeck	63.96	308	P	P	08 31 10.3	-0.4
GEYT				IAmb	IAmb	08 31 30.4	
	comp=Z,4.5nm,1.1s						
ABKAR	Akbulak array	64.99	320	P	P	08 31 17.7	+0.5
ABKAR				IAmb	IAmb	08 31 20.0	
	comp=Z,3.5nm,1.0s						
URZ	Urewera	69.67	137	LR	LR	09 03 48.0	
	comp=Z,92nm,18.4s,baz=48,slow=37						
BKZ	Black Stump Fm	69.73	138	P	P	08 31 46.9	-0.4
RTZ	Ruatahuna	69.77	137	P	P	08 31 46.8	-0.9
RTZ				IAmb	IAmb	08 31 47.5	
	comp=Z,5.3nm,0.8s						
TNA	Tin City	73.06	24	P	P	08 32 07.3	+0.3
RAYN	Ar Rayn	74.30	292	P	P	08 32 15.2	0.0
KBZ	Khabaz	75.91	313	P	P	08 32 24.9	+0.9
	comp=Z,2.2nm,0.8s,baz=233,slow=2.6,SNR=5.1						
	comp=Z,2.2nm,0.8s						
GURO	Guroymak-BITLI	76.62	307	P	P	08 32 29.2	+0.9
O18K	Koktuh Hills	78.05	31	P	P	08 32 35.4	-0.3
O18K				IAmb	IAmb	08 32 36.8	
	comp=Z,11nm,1.1s						
A21K	Barrow	78.19	19	P	P	08 32 36.7	+0.5
A21K				IAmb	IAmb	08 33 10.8	
	comp=Z,5.7nm,1.1s						
M19K	Big River Lodg	78.51	29	P	P	08 32 37.1	-1.1
M19K				IAmb	IAmb	08 32 55.3	
	comp=Z,6.7nm,1.3s						
IMAR	Indian Mountai	78.90	25	P	P	08 32 40.3	0.0
M20K	Styx River	79.10	29	P	P	08 32 42.1	+0.5
M20K				IAmb	IAmb	08 32 42.7	
	comp=Z,6.0nm,1.1s						
H21K	Melozitna Rive	79.28	25	P	P	08 32 43.0	+0.5
PPLA	Purkeypile	79.54	28	P	P	08 32 44.1	0.0
PPLA				IAmb	IAmb	08 32 50.9	
	comp=Z,17nm,1.5s						
CAST	Castle Rocks	79.59	27	P	P	08 32 44.5	+0.3
I21K	Tanana	79.62	25	P	P	08 32 44.8	+0.5
I21K				IAmb	IAmb	08 33 15.4	
	comp=Z,6.8nm,1.4s						
SKT	Skwentna	79.86	29	P	P	08 32 45.4	-0.2
SKT				IAmb	IAmb	08 33 25.5	
	comp=Z,5.2nm,1.2s						
MLY	Manley	80.15	25	P	P	08 32 47.8	+0.6
SUA	Susitna One	80.25	29	P	P	08 32 47.2	-0.6
SUA				IAmb	IAmb	08 32 47.5	
	comp=Z,4.1nm,0.8s						
COLD	Coldfoot	80.32	23	P	P	08 32 48.0	0.0
H23K	Yukon River	80.63	25	P	P	08 32 49.9	+0.1
I23K	Minto, Yukon-K	80.73	25	P	P	08 32 51.0	+0.8
RC01	Rabbit Creek A	80.75	29	P	P	08 32 50.4	0.0
RC01				IAmb	IAmb	08 32 55.6	
	comp=Z,16nm,1.5s						
MCK	McKinley	80.99	27	P	P	08 32 51.0	-0.7
MCK				IAmb	IAmb	08 32 51.5	
	comp=Z,5.2nm,0.9s						
PMR	Palmer	81.01	29	P	P	08 32 51.1	-0.6
PMR				IAmb	IAmb	08 33 21.1	
	comp=Z,5.6nm,1.2s						
MDM	Murphy Dome	81.22	26	P	P	08 32 53.7	+0.8
MDM				IAmb	IAmb	08 33 22.2	
	comp=Z,6.2nm,1.4s						
KNK	Knik Glacier	81.35	29	P	P	08 32 53.0	-0.6
KNK				IAmb	IAmb	08 32 56.1	
	comp=Z,7.2nm,1.2s						
SML	Sawmill	81.38	29	P	P	08 32 53.6	-0.2
SML				IAmb	IAmb	08 33 02.9	
	comp=Z,8.2nm,1.1s						
CCB	Clear Creek Bu	81.42	26	P	P	08 32 53.7	-0.2
PWL	Port Wells	81.44	30	P	P	08 32 53.6	-0.5
ILAR	Eielson Array	81.81	26	P	P	08 32 54.6	-1.3
	comp=Z,0.7nm,0.8s,baz=256,slow=5.3,SNR=6.5						
	comp=Z,0.7nm,0.8s						
M24K	Tolsona, Glenn	82.37	28	P	P	08 32 59.8	+0.7
BMAR	Burnt Mountain	82.48	23	P	P	08 33 00.1	+0.5
EIL	Elat	83.15	299	LR	LR	09 15 52.9	
	comp=Z,31nm,18.1s,baz=59,slow=40						
ARCES	ARCESS Array B	83.58	339	P	P	08 33 05.2	+0.1
	comp=Z,6.4nm,1.0s,baz=80,slow=6.5,SNR=7.5						
	comp=Z,6.4nm,1.0s						
K27K	Chicken	83.97	26	P	P	08 33 07.4	+0.2
K27K				IAmb	IAmb	08 33 09.0	
	comp=Z,7.3nm,1.4s						
BCAR	Beaver Creek A	84.26	27	P	P	08 33 08.9	+0.1
AKASG	Malin Array Be	84.73	320	P	P	08 33 10.7	-0.5
	comp=Z,0.2nm,0.3s,baz=64,slow=4.8,SNR=5.1						
	comp=Z,0.2nm,0.3s						
FINES	FINESS Array B	84.74	331	P	P	08 33 10.8	-0.4
	comp=Z,2.5nm,0.8s,baz=58,slow=5.6,SNR=7.4						
	comp=Z,2.5nm,0.8s						
DAWY	Dawson	85.13	26	P	P	08 33 13.2	+0.1
I29M	Ogilvie Camp,	85.31	25	P	P	08 33 14.2	+0.2
I29M				IAmb	IAmb	08 33 16.5	
	comp=Z,9.4nm,1.4s						

J29M	**Klondike Camp**	**85.55**	**25**	P	**P**	**08 33 16.5**	**+1.3**
J29M				IAmb	IAmb	08 33 16.9	
	comp=Z,6.9nm,0.9s						
INK	**Inuvik**	**86.41**	**21**	P	**P**	**08 33 18.7**	**-0.6**
	comp=Z,4.6nm,1.1s,baz=262,slow=7.0,SNR=10						
	comp=Z,4.6nm,1.1s						
INK	**Inuvik**	**86.41**	**21**	P	**P**	**08 33 19.1**	**-0.1**
INK				IAmb	IAmb	08 33 20.1	
	comp=Z,8.8nm,1.2s						
N31M	**Braeburn, Yuko**	**87.33**	**28**	P	**P**	**08 33 25.3**	**+1.3**
N31M				IAmb	IAmb	08 33 45.2	
	comp=Z,8.4nm,1.3s						
MAW	**Mawson**	**87.67**	**199**	P	**P**	**08 33 25.1**	**-0.1**
A36M	**Sachs Harbour**	**87.78**	**17**	P	**P**	**08 33 25.8**	**0.0**
A36M				IAmb	IAmb	08 33 26.6	
	comp=Z,5.3nm,1.1s						
MLR	**Muntele Rosu**	**87.78**	**316**	LR	LR	09 17 34.8	
	comp=Z,88nm,18.1s,baz=46,slow=39						
FARO	**Faro, Yukon**	**88.24**	**27**	P	**P**	**08 33 28.2**	**-0.1**
FARO				IAmb	IAmb	08 33 42.8	
	comp=Z,2.9nm,1.0s						
C36M	**Paulatuk**	**89.24**	**19**	P	**P**	**08 33 32.9**	**+0.1**
C36M				IAmb	IAmb	08 33 39.2	
	comp=Z,5.6nm,1.3s						
VNDA	**Vanda**	**89.67**	**172**	P	**P**	**08 33 34.8**	**+0.2**
	comp=Z,1.8nm,0.9s,baz=321,slow=4.3,SNR=6.6						
	comp=Z,1.8nm,0.9s						
VNDA	**Vanda**	**89.67**	**172**	P	**P**	**08 33 35.2**	**+0.7**
VNDA				IAmb	IAmb	08 33 40.0	
	comp=Z,4.4nm,1.3s						
HFS	**Hagfors**	**90.94**	**332**	LR	LR	09 15 35.9	
	comp=Z,62nm,18.3s,baz=356,slow=36						
PPT	**Papeete**	**90.98**	**108**	LR	LR	09 08 05.6	
	comp=Z,52nm,18.7s,baz=256,slow=31						
RES	**Resolute Bay**	**92.91**	**9**	P	**P**	**08 33 49.0**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=327,slow=4.1,SNR=5.3						
	comp=Z,1.0nm,0.8s						
VRAC	**Vranov**	**92.97**	**321**	LR	LR	09 19 09.2	
	comp=Z,18nm,20.6s,baz=14,slow=38						
YKA	**Yellowknife Ar**	**96.00**	**23**	P	**P**	**08 34 03.4**	**-0.7**
	comp=Z,1.0nm,0.9s,baz=298,slow=4.4,SNR=12						
	comp=Z,1.0nm,0.9s						
LSZ	**Lusaka**	**96.45**	**256**	LR	LR	09 14 23.5	
	comp=Z,63nm,19.8s,baz=160,slow=33						
DAVOX	**Davos/Dischmat**	**98.07**	**320**	LR	LR	09 20 59.0	
	comp=Z,28nm,20.1s,baz=78,slow=37						
TORD	**Torodi Ar. Bea**	**116.96**	**290**	PKP	**PKPdf**	**08 39 22.5**	**-0.4**
	comp=Z,117nm,0.6s,baz=59,slow=1.5,SNR=4.1						
TXAR	**Lajitas Array**	**121.21**	**47**	PKP	**PKPdf**	**08 39 30.6**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=297,slow=0.2,SNR=10						
TKL	**Tuckaleechee C**	**128.76**	**27**	PKPdf	**PKiKP**	**08 39 45.4**	**-0.3**
LRAL	**Lakeview Retre**	**129.29**	**32**	PKPdf	**PKPdf**	**08 39 46.1**	**0.0**
LL04	**Puerto Octay**	**146.07**	**160**	PKPbc	**PKPbc**	**08 40 17.5**	**+0.1**
GTBY	**Guantanamo Bay**	**146.08**	**30**	PKPbc	**PKPbc**	**08 40 17.7**	**-0.3**
PLCA	**Paso Flores**	**146.84**	**162**	PKPbc	**PKPbc**	**08 40 19.8**	**0.0**
	comp=Z,8.6nm,0.8s,baz=227,slow=3.3,SNR=29						
GO06	**Curarrehue**	**147.58**	**160**	PKPbc	**PKPbc**	**08 40 21.9**	**0.0**
SDD	**Santo Domingo**	**149.70**	**24**	PKPdf	**PKPdf**	**08 40 23.0**	**-0.2**
ML02	**Panimavida**	**150.98**	**156**	PKPdf	**PKPdf**	**08 40 24.7**	**0.0**
ML02					**PKPbc**	**08 40 30.0**	**-0.4**
ML02				PKPab	**sPKPdf**	**08 40 37.5**	**+0.1**
TRQA	**Tornquist**	**151.29**	**173**	PKPbc	**PKPbc**	**08 40 30.7**	**-0.4**
BO02	**Sierra Bellavi**	**152.08**	**156**	PKPbc	**PKPbc**	**08 40 32.4**	**-0.7**
BO01	**Tunca**	**152.31**	**156**	PKPdf	**PKPdf**	**08 40 24.5**	**-2.2**
BO01				PKPbc	**PKPbc**	**08 40 33.1**	**-0.4**
BO01				PKPab	**pPKPbc**	**08 40 42.3**	**-0.7**
MT01	**Popeta**	**152.69**	**155**	PKPbc	**PKPbc**	**08 40 34.1**	**-0.3**
VA05	**Santo Domingo**	**152.72**	**154**	PKPdf	**PKPdf**	**08 40 26.4**	**-1.0**
SVB	**Belmont**	**157.10**	**9**	PKPdf	**PKPdf**	**08 40 30.7**	**-3.2**
SVB				PKPab	**PKPab**	**08 41 02.1**	**-2.1**
LPAZ	**La Paz**	**167.73**	**124**	PKP	**PKPdf**	**08 40 45.5**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=245,slow=2.2,SNR=4.2						

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*AEIC **27** 08:23:19.8±1.1, 59°.72N±0°.04×153°.20W±0°.07, h108^{km}±5^{km}, ML2.6, ML2.9/60(NEIC), Error ellipse: s-maj=6.0km s-min=5.3km az=190.0*

NEIC 27 08:23:19.1±0.9**, 59°.70N**±0°.04×**153°.24W**±0°.04**, h109**^{km}±6^{km}**, Error ellipse: s-maj=6.0km s-min=1.9km az=206.0, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
P19K	**Oil Pt**	**0.05**	**172**	Pn	Pn	08 23 34.2	0.0
P19K				Sn	Sn	08 23 45.6	+0.1
P19K				IAML		08 23 46.2	
	comp=E,111nm,0.5s						
ILSW	**Iliamna Southw**	**0.29**	**10**		Pn	08 23 34.6	-0.2
ILSW				Sn	Sn	08 23 46.4	-0.4
O19K	**Port Alsworth**	**0.73**	**313**		Pn	08 23 37.6	+0.1
O19K				Sn	Sn	08 23 51.4	-0.2
O19K				IAML		08 23 51.8	
	comp=E,77nm,0.5s						
Q19K	**Cape Douglas,**	**0.80**	**195**	Pn	Pn	08 23 38.5	+0.2
Q19K				Sn	Sn	08 23 52.6	-0.2
Q19K				IAML		08 24 00.4	
	comp=N,97nm,1.8s						
Q19K				IAML		08 24 00.9	
	comp=E,191nm,1.1s						
RSO	**Redoubt South**	**0.80**	**18**		Pn	08 23 38.5	0.0
HOM	**Homer**	**0.81**	**92**		Pn	08 23 38.5	+0.2
HOM	**Homer**	**0.81**	**92**	Sn	Sn	08 23 53.9	+1.1
HOM				IAML		08 24 02.5	
	comp=N,131nm,1.3s						
HOM				IAML		08 24 14.3	
	comp=E,156nm,1.2s						
O18K	**Koktuh Hills**	**1.00**	**280**	Pn	Pn	08 23 40.4	+0.1
O18K				Sn	Sn	08 23 56.2	0.0
CNPM	**China Poot**	**1.04**	**99**		Pn	08 23 40.4	-0.2
CNPM				Sn	Sn	08 23 56.5	-0.4
P18K	**Big Mountain,**	**1.06**	**254**	Pn	Pn	08 23 40.6	-0.2
BRLK	**Bradley Lake**	**1.20**	**86**		Pn	08 23 41.8	-0.6
BRLK				Sn	Sn	08 23 59.4	-0.5
BRLK				IAML		08 24 38.9	
	comp=E,226nm,0.1s						
BRLK				IAML		08 24 43.8	
	comp=N,88nm,0.2s						
BRSE	**Bradley Lake S**	**1.27**	**87**		Pn	08 23 42.5	-0.6
BRSE					Sn	08 24 00.6	-0.8
N19K	**Bonanza Creek**	**1.28**	**332**	Pn	Pn	08 23 43.3	0.0
CAPN	**Captain Cook N**	**1.50**	**43**	Pn	Pn	08 23 47.0	+1.4
CAPN				IAML		08 24 10.1	
	comp=N,112nm,0.7s						
CAPN				IAML		08 24 53.7	
	comp=E,106nm,0.3s						
SPU	**Mount Spurr**	**1.60**	**21**	Pn	Pn	08 23 47.0	0.0
SLKM	**Skilak Lake**	**1.72**	**61**		Pn	08 23 48.2	-0.3
SVW2	**Sparrevohn**	**1.82**	**321**	Pn	Pn	08 23 49.5	-0.2
O22K	**Cooper Landing**	**1.93**	**65**		Pn	08 23 51.1	0.0
KDAK	**Kodiak Island**	**1.95**	**170**	Pn	Pn	08 23 50.8	-0.6
SUA	**Susitna One**	**2.16**	**34**		Pn	08 23 54.4	+0.3
M20K	**Styx River**	**2.19**	**1**	Pn	Pn	08 23 54.8	+0.3
M20K				IAML		08 25 07.6	
	comp=E,37nm,2.0s						
M20K				IAML		08 25 08.5	
	comp=N,26nm,0.9s						
RC01	**Rabbit Creek A**	**2.23**	**50**		Pn	08 23 54.8	-0.1
M19K	**Big River Lodg**	**2.28**	**346**	Pn	Pn	08 23 55.4	-0.2
SKT	**Skwentna**	**2.44**	**19**	Pn	Pn	08 23 57.8	+0.2
OHAK	**Old Harbor**	**2.49**	**181**	Pn	Pn	08 23 57.7	-0.5
L19K	**White Mountain**	**2.61**	**343**	Pn	Pn	08 23 59.9	0.0
L19K				IAML		08 25 16.3	
	comp=E,18nm,0.8s						
L19K				IAML		08 25 16.3	
	comp=N,20nm,0.7s						
PWL	**Port Wells**	**2.71**	**62**		Pn	08 24 00.1	-1.1
PMR	**Palmer**	**2.78**	**45**	Pn	Pn	08 24 01.2	-0.8
KNK	**Knik Glacier**	**2.92**	**52**		Pn	08 24 03.0	-1.0
GHO	**Glory Hole Cre**	**2.97**	**44**		Pn	08 24 03.9	-0.7
CUT	**Chulitna**	**3.08**	**27**	Pn	Pn	08 24 06.6	+0.7
SML	**Sawmill**	**3.21**	**47**	Pn	Pn	08 24 07.0	-0.8
SML				IAML		08 25 33.8	
	comp=E,85nm,0.9s						
PPLA	**Purkeypile**	**3.25**	**9**	Pn	Pn	08 24 10.5	+2.2
SCM	**Sheep Creek Mo**	**3.60**	**51**		Pn	08 24 12.4	-0.6
K20K	**Telida**	**3.69**	**354**	Pn	Pn	08 24 14.4	+0.2
K20K				IAML		08 25 02.5	
	comp=N,17nm,0.6s						
K20K				IAML		08 25 04.7	
	comp=E,9.4nm,1.4s						
CAST	**Castle Rocks**	**3.77**	**8**	Pn	Pn	08 24 15.8	+0.6
CAST				IAML		08 25 04.2	
	comp=N,15nm,0.6s						
CAST				IAML		08 25 43.6	
	comp=E,11nm,0.5s						
WAT7	**Susitna Watana**	**3.79**	**32**		Pn	08 24 15.2	-0.4
EYAK	**Cordova Ski Ar**	**3.84**	**74**	Pn	Pn	08 24 16.3	+0.1
WAT1	**Susitna Watana**	**3.87**	**34**		Pn	08 24 15.9	-0.7
TRF	**Thorofare Moun**	**4.02**	**19**		Pn	08 24 18.7	0.0
KTH	**Kantishna Hill**	**4.02**	**15**	Pn	Pn	08 24 18.2	-0.4
KLU	**Klutina**	**4.03**	**60**		Pn	08 24 18.1	-0.7
M24K	**Tolsona, Glenn**	**4.21**	**52**	Pn	Pn	08 24 21.2	0.0
MCK	**McKinley**	**4.54**	**25**	Pn	Pn	08 24 25.8	+0.3
BPAW	**Bear Paw Mtn.**	**4.54**	**13**	Pn	Pn	08 24 26.5	+0.9
N25K	**Chitina, Valde**	**4.66**	**62**	Pn	Pn	08 24 28.0	+0.7
BWN	**Browne**	**4.83**	**20**	Pn	Pn	08 24 29.8	+0.4
GLB	**Gilahina Butte**	**4.97**	**65**	Pn	Pn	08 24 31.3	-0.1
PAX	**Paxson**	**4.98**	**45**	Pn	Pn	08 24 32.5	+1.0
VRDI	**Verde Repeater**	**5.08**	**68**	Pn	Pn	08 24 32.2	-0.9
NEA2	**Nenana**	**5.29**	**20**	Pn	Pn	08 24 35.3	-0.3
MCARA	**McCarthy VSAT**	**5.32**	**67**	Pn	Pn	08 24 36.7	+0.6
WRH	**Wood River Hil**	**5.36**	**25**	Pn	Pn	08 24 35.8	-0.8
MLY	**Manley**	**5.48**	**11**	Pn	Pn	08 24 38.8	+0.5
I21K	**Tanana**	**5.53**	**6**	Pn	Pn	08 24 39.0	+0.2
CCB	**Clear Creek Bu**	**5.58**	**25**	Pn	Pn	08 24 38.6	-0.9
M26K	**Nabesna, AK**	**5.67**	**57**	Pn	Pn	08 24 41.8	+1.0
RIDG	**Independent Ri**	**5.69**	**41**	Pn	Pn	08 24 41.4	+0.3
I23K	**Minto, Yukon-K**	**5.76**	**17**	Pn	Pn	08 24 42.1	+0.2
MDM	**Murphy Dome**	**5.77**	**22**	Pn	Pn	08 24 42.1	0.0
IL31		**5.89**	**28**	Pn	Pn	08 24 43.3	-0.4
BARN	**Barnard Glacie**	**5.91**	**72**	Pn	Pn	08 24 44.6	+0.5
H23K	**Yukon River**	**6.38**	**14**	Pn	Pn	08 24 50.6	+0.2
PCA	**Pinnacle**	**6.55**	**81**	Pn	Pn	08 24 53.7	+0.9
PRP	**Porcupine Dome**	**6.83**	**28**	Pn	Pn	08 24 56.9	+0.3
EGAK	**Eagle**	**7.59**	**43**	Pn	Pn	08 25 06.4	-0.4
BMAR	**Burnt Mountain**	**8.66**	**23**	Pn	Pn	08 25 21.6	+0.3

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*AEIC **27** 08:24:12.4±1.2, 60°.15N±0°.04×153°.35W±0°.08, h138^{km}±4^{km}, ML2.8, mb3.9/3(NEIC), ML3.3/70(NEIC), Error ellipse: s-maj=6.2km s-min=4.3km az=131.0*

NEIC 27 08:24:11.2±1.2**, 60°.16N**±0°.03×**153°.38W**±0°.06**, h143**^{km}±5^{km}**, Error ellipse: s-maj=6.2km s-min=1.8km az=136.0, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILSW	**Iliamna Southw**	**0.21**	**146**		Pn	08 24 30.3	-0.5
ILSW				Sn	Sn	08 24 44.9	-0.8
ILSW				IAML		08 24 47.0	
	comp=E,152nm,0.7s						
ILSW				IAML		08 24 47.1	
	comp=N,128nm,0.4s						
RSO	**Redoubt South**	**0.43**	**45**		Pn	08 24 31.6	-0.1
O19K	**Port Alsworth**	**0.47**	**275**		Pn	08 24 31.4	-0.1
O19K				Sn	Sn	08 24 45.9	-1.1
O19K				IAML		08 24 46.5	
	comp=E,1µm,0.5s						
O19K				IAML		08 24 47.0	
	comp=N,419nm,0.4s						
P19K	**Oil Pt**	**0.52**	**172**		Pn	08 24 32.0	+0.1
P19K				Sn	Sn	08 24 47.5	0.0
P19K				IAML		08 24 48.9	
	comp=E,709nm,0.8s						
N19K	**Bonanza Creek**	**0.85**	**321**	Pn	Pn	08 24 34.3	+0.1
N19K				Sn	Sn	08 24 50.9	-0.9
N19K				IAML		08 24 51.6	
	comp=N,141nm,0.7s						
N19K				IAML		08 24 51.9	
	comp=E,116nm,0.9s						
O18K	**Koktuh Hills**	**0.97**	**252**	Pn	Pn	08 24 35.0	-0.1
O18K				Sn	Sn	08 24 52.5	-0.7
HOM	**Homer**	**1.01**	**119**	Sn	Sn	08 24 53.4	-0.3
HOM	**Homer**	**1.01**	**119**		Pn	08 24 35.4	0.0
P18K	**Big Mountain,**	**1.21**	**231**		Pn	08 24 37.0	-0.3
SPU	**Mount Spurr**	**1.21**	**32**		Pn	08 24 37.4	+0.1
Q19K	**Cape Douglas,**	**1.24**	**186**	Pn	Pn	08 24 37.5	-0.1
Q19K				IAML		08 24 58.9	
	comp=E,406nm,0.7s						
Q19K				IAML		08 25 02.5	
	comp=N,360nm,1.1s						
CNPM	**China Poot**	**1.25**	**120**	Pn	Pn	08 24 37.5	-0.2
CNPM					Sn	08 24 56.9	-1.0
CAPN	**Captain Cook N**	**1.26**	**60**	Pn	Pn	08 24 38.9	+1.3
CAPN				IAML		08 25 04.2	
	comp=E,503nm,0.4s						
BRLK	**Bradley Lake**	**1.31**	**107**	Pn	Pn	08 24 37.9	-0.5
BRLK				IAML		08 24 58.7	
	comp=N,642nm,0.5s						
BRSE	**Bradley Lake S**	**1.39**	**106**		Pn	08 24 38.8	-0.2
SVW2	**Sparrevohn**	**1.44**	**312**		Pn	08 24 39.5	-0.1
SVW2	**Sparrevohn**	**1.44**	**312**	P	Pn	08 24 39.5	0.0
SLKM	**Skilak Lake**	**1.61**	**76**		Pn	08 24 40.9	-0.5
SLKM					Sn	08 25 02.5	-2.0
M20K	**Styx River**	**1.73**	**4**		Pn	08 24 43.5	+0.6
M19K	**Big River Lodg**	**1.82**	**345**		Pn	08 24 43.9	+0.2
M19K				IAML		08 25 08.9	
	comp=E,35nm,0.5s						
SUA	**Susitna One**	**1.84**	**43**		Pn	08 24 44.2	+0.1
SUA					Sn	08 25 09.1	-0.1
SUA				IAML		08 25 10.2	
	comp=N,319nm,0.4s						
FIS	**Fire Island**	**1.84**	**56**	Pn	Pn	08 24 44.9	+1.0
FIS				IAML		08 25 10.9	
	comp=N,442nm,0.7s						
FIS				IAML		08 25 11.8	
	comp=E,348nm,0.7s						
O22K	**Cooper Landing**	**1.85**	**78**		Pn	08 24 43.9	-0.1
RC01	**Rabbit Creek A**	**2.02**	**61**		Pn	08 24 45.6	-0.5
RC01				IAML		08 25 12.7	
	comp=N,226nm,0.3s						
RC01				IAML		08 25 12.9	
	comp=E,214nm,0.3s						
SKT	**Skwentna**	**2.03**	**25**		Pn	08 24 46.8	+0.5
SKT				IAML		08 25 14.8	
	comp=N,64nm,0.6s						
SKT				IAML		08 25 16.7	
	comp=E,78nm,0.4s						
L19K	**White Mountain**	**2.15**	**341**		Pn	08 24 47.8	+0.1
KDAK	**Kodiak Island**	**2.42**	**170**	IAML		08 25 21.0	
	comp=E,162nm,0.8s						
KDAK	**Kodiak Island**	**2.42**	**170**	Pn	Pn	08 24 49.4	-1.5
KDAK				IAML		08 25 20.6	
	comp=E,272nm,0.3s						
PMR	**Palmer**	**2.52**	**53**	Pn	Pn	08 24 51.4	-0.7
PMR				IAML		08 25 22.5	
	comp=N,99nm,0.4s						
PMR				IAML		08 25 23.0	
	comp=E,95nm,0.4s						
PWL	**Port Wells**	**2.59**	**72**		Pn	08 24 53.3	+0.3
PWL				IAML		08 25 23.7	
	comp=E,169nm,0.3s						
PWL				IAML		08 25 23.8	
	comp=N,157nm,0.4s						
CUT	**Chulitna**	**2.71**	**32**		Pn	08 24 55.0	+0.5
GHO	**Glory Hole Cre**	**2.71**	**51**	Pn	Pn	08 24 54.6	0.0
KNK	**Knik Glacier**	**2.72**	**60**	Pn	Pn	08 24 55.3	+0.6
KNK				IAML		08 25 26.5	
	comp=N,173nm,0.3s						
PPLA	**Purkeypile**	**2.80**	**11**		Pn	08 24 57.5	+1.6
OHAK	**Old Harbor**	**2.95**	**179**		Pn	08 24 55.8	-1.7
OHAK				IAML		08 25 45.1	
	comp=N,36nm,2.6s						
TTA	**Tatalina**	**3.05**	**337**	Pn	Pn	08 24 58.9	-0.1
TTA	**Tatalina**	**3.05**	**337**	P	Pn	08 24 58.9	0.0
K20K	**Telida**	**3.23**	**354**		Pn	08 25 01.7	+0.6
CAST	**Castle Rocks**	**3.33**	**10**	Pn	Pn	08 25 02.9	+0.4
SCM	**Sheep Creek Mo**	**3.39**	**58**	Pn	Pn	08 25 03.0	-0.3
SCM				IAML		08 25 41.8	
	comp=E,126nm,0.7s						
SCM				IAML		08 25 43.4	
	comp=N,90nm,0.5s						
KTH	**Kantishna Hill**	**3.60**	**18**	Pn	Pn	08 25 06.3	+0.4
KTH				IAML		08 25 51.8	
	comp=E,17nm,0.6s						
KTH				IAML		08 26 11.1	
	comp=N,18nm,3.8s						
TRF	**Thorofare Moun**	**3.61**	**23**	Pn	Pn	08 25 06.8	+0.5
TRF				IAML		08 25 48.7	
	comp=E,41nm,0.4s						
TRF				IAML		08 25 48.8	
	comp=N,29nm,0.4s						
Q23K	**Middleton Isla**	**3.63**	**99**	Pn	Pn	08 25 06.7	+0.4
Q23K				IAML		08 26 24.3	
	comp=E,110nm,2.7s						
Q23K				IAML		08 26 45.0	
	comp=N,96nm,1.5s						
MID	**Middleton Isla**	**3.63**	**99**	Pn	Pn	08 25 06.7	+0.3
MID	**Middleton Isla**	**3.63**	**99**	P	Pn	08 25 07.8	+1.5
EYAK	**Cordova Ski Ar**	**3.81**	**81**	Pn	Pn	08 25 08.4	-0.3
EYAK	**Cordova Ski Ar**	**3.81**	**81**	P	Pn	08 25 08.4	-0.3
DIV	**Divide**	**3.87**	**72**	Pn	Pn	08 25 09.7	+0.2
KLU	**Klutina**	**3.89**	**67**	Pn	Pn	08 25 09.3	-0.4
RND	**Reindeer**	**3.90**	**31**	Pn	Pn	08 25 10.3	+0.4
M24K	**Tolsona, Glenn**	**4.00**	**58**		Pn	08 25 11.1	-0.1
BPAW	**Bear Paw Mtn.**	**4.11**	**15**	Pn	Pn	08 25 12.6	0.0
MCK	**McKinley**	**4.15**	**28**	Pn	Pn	08 25 13.6	+0.5
BWN	**Browne**	**4.42**	**23**	Pn	Pn	08 25 17.7	+1.0
N25K	**Chitina, Valde**	**4.53**	**68**	Pn	Pn	08 25 18.4	+0.2
CHGN	**Chignik**	**4.70**	**217**	Pn	Pn	08 25 20.5	+0.1
PAX	**Paxson**	**4.71**	**50**		Pn	08 25 20.5	-0.2
GLB	**Gilahina Butte**	**4.86**	**71**	Pn	Pn	08 25 22.7	+0.1
NEA2	**Nenana**	**4.88**	**22**		Pn	08 25 23.1	+0.4
WRH	**Wood River Hil**	**4.98**	**27**	Pn	Pn	08 25 23.8	-0.3
VRDI	**Verde Repeater**	**4.99**	**73**	Pn	Pn	08 25 24.6	+0.1
MLY	**Manley**	**5.04**	**13**		Pn	08 25 24.8	-0.1
I21K	**Tanana**	**5.08**	**7**		Pn	08 25 25.4	0.0
CCB	**Clear Creek Bu**	**5.19**	**28**		Pn	08 25 26.4	-0.5
HDA	**Harding Lake**	**5.21**	**32**		Pn	08 25 26.7	-0.5
MCARA	**McCarthy VSAT**	**5.22**	**72**	Pn	Pn	08 25 27.8	+0.4
I23K	**Minto, Yukon-K**	**5.34**	**19**		Pn	08 25 28.3	-0.5
MDM	**Murphy Dome**	**5.37**	**24**		Pn	08 25 29.1	-0.2
TCOL	**CIGO, UAF Yank**	**5.37**	**26**		Pn	08 25 29.3	0.0
COLA	**College**	**5.38**	**26**		Pn	08 25 29.4	+0.1
COLA	**College**	**5.38**	**26**	P	Pn	08 25 29.3	0.0
	comp=N,9.0nm,0.9s						
MENT	**Mentasta**	**5.39**	**55**		Pn	08 25 30.2	+0.6
RIDG	**Independent Ri**	**5.39**	**45**		Pn	08 25 29.7	+0.1
M26K	**Nabesna, AK**	**5.49**	**61**	Pn	Pn	08 25 31.5	+0.6
IL31		**5.52**	**30**		Pn	08 25 30.7	-0.5
ILAR	**Eielson Array**	**5.52**	**30**	Pn	Pn	08 25 30.5	-0.7
H21K	**Melozitna Rive**	**5.52**	**2**		Pn	08 25 31.5	+0.2
L26K	**Log Cabin Wild**	**5.58**	**55**		Pn	08 25 33.4	+1.3
DOT	**Dot Lake**	**5.62**	**48**	Pn	Pn	08 25 32.8	+0.1
POKR	**Poker Plat Res**	**5.68**	**26**	Pn	Pn	08 25 33.6	+0.2
SCRK	**Sand Creek**	**5.84**	**45**	Pn	Pn	08 25 34.8	-0.8
BARN	**Barnard Glacie**	**5.84**	**76**	Pn	Pn	08 25 36.3	+0.5
IMAR	**Indian Mountai**	**5.85**	**359**	Pn	Pn	08 25 36.1	+0.4
H23K	**Yukon River**	**5.95**	**15**		Pn	08 25 37.8	+0.8
M27K	**Edge Creek, AK**	**5.97**	**63**	Pn	Pn	08 25 38.6	+1.2
H24K	**Noodor Dome**	**6.22**	**21**		Pn	08 25 40.5	-0.2
L27K	**Beaver Creek,**	**6.23**	**57**	Pn	Pn	08 25 43.6	+2.8
BCAR	**Beaver Creek A**	**6.25**	**57**	Pn	Pn	08 25 41.9	+0.9
PRP	**Porcupine Dome**	**6.46**	**30**	Pn	Pn	08 25 43.7	-0.2
PCA	**Pinnacle**	**6.56**	**85**	Pn	Pn	08 25 45.6	+0.4
K27K	**Chicken**	**6.57**	**49**	Pn	Pn	08 25 45.5	+0.3
I26K	**Coal Creek Min**	**6.97**	**38**		Pn	08 25 49.8	-0.8
PNL	**Peninsula**	**7.05**	**88**	P	Pn	08 25 52.1	+0.4
	comp=N,33nm,1.3s						
COLD	**Coldfoot**	**7.23**	**10**		Pn	08 25 54.9	+0.8
EGAK	**Eagle**	**7.31**	**45**		Pn	08 25 54.3	-0.8
FYU	**Fort Yukon**	**7.39**	**26**	Pn	Pn	08 25 55.7	-0.5
DAWY	**Dawson**	**7.63**	**53**	Pn	Pn	08 26 00.6	+1.0
HYT	**Haines Junctio**	**7.87**	**78**	Pn	Pn	08 26 03.5	+0.7
BMAR	**Burnt Mountain**	**8.26**	**24**	Pn	Pn	08 26 06.4	-1.5
M30M	**Minto, Yukon**	**8.32**	**66**	Pn	Pn	08 26 07.7	-1.1
I29M	**Ogilvie Camp,**	**8.64**	**46**	Pn	Pn	08 26 11.8	-1.3
N31M	**Braeburn, Yuko**	**8.70**	**74**	Pn	Pn	08 26 12.4	-1.4
SKAG	**Skagway**	**9.12**	**87**	Pn	Pn	08 26 19.2	-0.2
SKAG	**Skagway**	**9.12**	**87**	P	Pn	08 26 21.9	+2.5
	comp=N,6.8nm,1.8s						
M31M	**Drury Creek, Y**	**9.39**	**69**	Pn	Pn	08 26 22.7	-0.3
UNV	**Unalaska Valle**	**9.54**	**234**	Pn	Pn	08 26 24.8	-0.3
BESE	**Bessie Mountai**	**9.58**	**91**	Pn	Pn	08 26 24.4	-1.2
SIT	**Sitka**	**9.91**	**100**	P	Pn	08 26 31.2	+1.3
	comp=N,37nm,1.7s						
C36M	**Paulatuk**	**15.34**	**41**	Pn	Pn	08 27 38.9	-0.9
C36M				IAmb	IAmb	08 27 39.0	
	comp=Z,6.2nm,1.4s						
A36M	**Sachs Harbour**	**16.22**	**32**	Pn	P	08 27 50.7	-0.2
A36M				IAmb	IAmb	08 27 51.6	
	comp=Z,6.9nm,0.9s						
WAPA	**Wapiti River**	**18.77**	**90**	P	P	08 28 20.0	+0.9
WAPA				IAmb	IAmb	08 28 25.9	
	comp=Z,4.7nm,0.6s						

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*IDC **27** 08:27:52.5±1.4, 24°.27N×122°.19E, h0^{km}, mb3.4/4, mbtmp3.5/4, MS3.6/1, Error ellipse: s-maj=66.7km s-min=30.2km az=66.0*

*JMA **27** 08:27:56.5±0.1, 24°.2N±0°.5×121°.7E±0°.5, h33^{km}, MV3.1/9, TAIWAN REGION*

*TAP **27** 08:27:57.3, 24°.26N×121°.75E, h25^{km}, ML3.9, B*

ISC 27 08:27:56.7±0.8**, 24°.21N**±0°.01×**121°.82E**±0°.02**, h23**^{km}±4^{km}**, n137, σ1^{s}.03**/260**, mb3.4**/4**, 7C-19D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.13**	**325**	*i* P	**Pb**	**08 28 01.6**	**+0.2**
	baz=2.0						
EHP				S	**Sb**	**08 28 05.1**	**+0.5**
	baz=2.0						
ETL	**Fush Village**	**0.19**	**255**	⇑*i*P	**Pb**	**08 28 02.5**	**+0.4**
	baz=230						
ETL				S	**Sb**	**08 28 06.6**	**+0.9**
	baz=230						
NACB	**Ninganchiao**	**0.21**	**261**	⇑*i*P	**Pb**	**08 28 02.5**	**+0.2**
	baz=240						
NACB				*i* S	**Sb**	**08 28 06.5**	**+0.4**
	baz=240						
ENA	**Nanau**	**0.23**	**342**	⇓*i*P	**Pb**	**08 28 02.6**	**0.0**
	baz=1.0						
ENA				*i* S	**Sb**	**08 28 06.8**	**+0.2**
	baz=1.0						
EWUT	**Wuta**	**0.24**	**351**	⇓*i*P	**Pb**	**08 28 02.8**	**+0.1**
	baz=9.0						
EWUT				*i* S	**Sb**	**08 28 07.0**	**+0.1**
	baz=9.0						
TWD	**Chiawan**	**0.24**	**239**	⇑*i*P	**Pb**	**08 28 03.1**	**+0.4**
	baz=217						
TWD				S	**Sb**	**08 28 08.0**	**+1.2**
	baz=217						
HWA	**Hwalien**	**0.30**	**221**	⇑P	**Pn**	**08 28 05.0**	**-0.6**
	baz=204						
HWA				*e*S	**Sn**	**08 28 11.4**	**0.0**
	baz=204						
ETLH	**Xiulin Townshi**	**0.31**	**270**	⇑*i*P	**Pb**	**08 28 03.9**	**+0.1**
	baz=259						
ETLH				*i* S	**Sb**	**08 28 08.7**	**+0.1**
	baz=259						
ETM	**Tongmen**	**0.38**	**231**	P	**Pb**	**08 28 05.4**	**+0.5**
	baz=219						
ETM				*e*S	**Sb**	**08 28 11.6**	**+1.1**
	baz=219						
TEYL	**Yanliau Villag**	**0.39**	**211**	P	**Pn**	**08 28 06.0**	**-0.9**
	baz=201						
TEYL				*e*S	**Sn**	**08 28 13.2**	**-0.5**
	baz=201						
TWC	**Suao**	**0.40**	**4**	⇓*i*P	**Pb**	**08 28 05.2**	**0.0**
	baz=16						
TWC				*i* S	**Sb**	**08 28 11.3**	**+0.3**
	baz=16						
LATG	**Datong**	**0.42**	**321**	⇓*i*P	**Pb**	**08 28 05.3**	**-0.3**
	baz=324						
LATG				S	**Sb**	**08 28 11.2**	**-0.6**
	baz=324						
EOS2	**EOS2**	**0.43**	**60**	*i* P	**Pn**	**08 28 07.6**	**+0.3**
	baz=70						
EOS2				*e*S	**Sn**	**08 28 16.4**	**+2.0**
	baz=70						
NDS	**Dongshan**	**0.44**	**347**	*i* P	**Pb**	**08 28 05.8**	**0.0**
	baz=356						
NDS				*e*S	**Sb**	**08 28 12.2**	**+0.2**
	baz=356						
NNSB	**Datong**	**0.46**	**299**	⇓*i*P	**Pb**	**08 28 06.2**	**0.0**
	baz=298						
NNSB				S	**Sb**	**08 28 12.5**	**-0.2**
	baz=298						
NNSH	**Datong**	**0.46**	**299**	⇓P	**Pb**	**08 28 06.2**	**0.0**
	baz=298						
NNSH				*e*S	**Sb**	**08 28 12.4**	**-0.3**
	baz=298						
EOS3	**EOS3**	**0.46**	**80**	*i* P	**Pn**	**08 28 08.5**	**+0.8**
	baz=87						
EOS3				S	**Sn**	**08 28 17.7**	**+2.6**
	baz=87						
EOS4	**EOS4**	**0.46**	**101**	*i* P	**Pn**	**08 28 07.8**	**+0.3**
	baz=104						
EOS4				*e*S	**Sn**	**08 28 16.2**	**+1.4**
	baz=104						
NNS	**Nan Shan**	**0.47**	**300**	⇓P	**Pb**	**08 28 06.4**	**0.0**

	baz=299						
NNS	baz=299			*e*S	**Sb**	**08 28 12.9**	**-0.2**
NDT	**Datong Townshi** baz=328	**0.48**	**325**	⇓*i*P	**Pb**	**08 28 06.3**	**-0.3**
NDT	baz=328			*e*S	**Sb**	**08 28 13.3**	**0.0**
ENTT	**Nioudou** baz=337	**0.49**	**332**	⇓*i*P	**Pb**	**08 28 06.3**	**-0.4**
ENTT	baz=337			*e*S	**Sb**	**08 28 13.1**	**-0.4**
WHF	**Hehuan Shan** baz=256	**0.51**	**263**	⇑*i*P	**Pb**	**08 28 07.5**	**+0.2**
WHF	baz=256			*e*S	**Sb**	**08 28 14.6**	**+0.1**
ESL	**Shilin** baz=212	**0.53**	**222**	P	**Pb**	**08 28 07.6**	**+0.3**
ESL	baz=212			S	**Sn**	**08 28 15.9**	**-1.1**
TWE	**Neicheng** baz=353	**0.53**	**345**	⇓*i*P	**Pb**	**08 28 07.2**	**-0.2**
TWE	baz=353			S	**Sb**	**08 28 14.5**	**-0.1**
TEGC	**Jichi Village** baz=199	**0.56**	**207**	P	**Pn**	**08 28 08.8**	**-0.4**
TEGC	baz=199			*e*S	**Sn**	**08 28 18.1**	**+0.4**
ILA	**Ilan** baz=1.0	**0.56**	**353**	*e*P	**Pb**	**08 28 08.1**	**+0.2**
ILA	baz=1.0			*e*S	**Sb**	**08 28 16.1**	**+0.6**
FUSB	**Fushanzhiwuyua** baz=344	**0.59**	**339**	⇓*i*P	**Pb**	**08 28 08.1**	**-0.3**
FUSB	baz=344			S	**Sb**	**08 28 15.8**	**-0.6**
TWT	**Tachien** baz=269	**0.59**	**275**	*e*P	**Pb**	**08 28 09.2**	**+0.7**
TWT	baz=269			*e*S	**Sb**	**08 28 17.0**	**+0.5**
TDCB	**Techi** baz=270	**0.61**	**275**	P	**Pb**	**08 28 09.2**	**+0.4**
TDCB	baz=270			*e*S	**Sb**	**08 28 16.9**	**0.0**
CHGB	**Renai** baz=250	**0.61**	**256**	P	**Pb**	**08 28 09.2**	**+0.4**
CHGB	baz=250			*e*S	**Sb**	**08 28 17.3**	**+0.2**
YHNB	**Yeheng** baz=321	**0.61**	**319**	⇓*i*P	**Pb**	**08 28 08.6**	**-0.2**
YHNB	baz=321			S	**Sb**	**08 28 16.5**	**-0.6**
NSK	**Sanguang** baz=320	**0.63**	**318**	⇓*i*P	**Pb**	**08 28 08.8**	**-0.3**
NSK	baz=320			S	**Sb**	**08 28 16.9**	**-0.6**
NWLT	**Wulai** baz=337	**0.64**	**333**	⇓*i*P	**Pb**	**08 28 08.8**	**-0.4**
NWLT	baz=337			S	**Sb**	**08 28 17.1**	**-0.6**
OWD	**Renai** baz=240	**0.64**	**247**	*e*P	**Pb**	**08 28 09.6**	**+0.3**
OWD	baz=240			*e*S	**Sb**	**08 28 18.8**	**+0.8**
EGS	baz=17	**0.64**	**9**	⇓*i*P	**Pb**	**08 28 09.7**	**+0.4**
EGS	baz=17			S	**Sb**	**08 28 18.5**	**+0.7**
EGFH	**Guangfu** baz=207	**0.65**	**214**	*e*P	**Pb**	**08 28 09.4**	**+0.1**
EGFH	baz=207			*e*S	**Sn**	**08 28 19.6**	**-0.3**
NTC	**Toucheng** baz=7.0	**0.65**	**1**	*e*P	**Pb**	**08 28 09.5**	**+0.2**
NTC	baz=7.0			*e*S	**Sb**	**08 28 18.4**	**+0.5**
WUSB	**Renai** baz=246	**0.68**	**252**	⇓P	**Pb**	**08 28 10.2**	**+0.3**
WUSB	baz=246			*e*S	**Sb**	**08 28 19.4**	**+0.5**
TIPB	**Shuangxi** baz=6.0	**0.76**	**0**	⇓*i*P	**Pb**	**08 28 11.2**	**-0.1**
TIPB	baz=6.0			S	**Sb**	**08 28 21.4**	**+0.1**
NFF	**Wufeng Townshi** baz=303	**0.77**	**304**	*e*P	**Pb**	**08 28 11.6**	**+0.1**
NFF	baz=303			*e*S	**Sb**	**08 28 21.3**	**-0.2**
VWDT	**VWDT** baz=228	**0.77**	**234**	⇓*e*P	**Pb**	**08 28 11.7**	**+0.3**
VWDT	baz=228			*e*S	**Sn**	**08 28 22.7**	**-0.2**
HGSD	**Ruisui** baz=201	**0.80**	**207**	⇑*e*P	**Pn**	**08 28 12.6**	**+0.1**
HGSD	baz=201			*e*S	**Sn**	**08 28 25.0**	**+1.3**
NHDH	**Xindian Distri** baz=344	**0.80**	**340**	*e*P	**Pn**	**08 28 11.8**	**-0.7**
NHDH	baz=344			*e*S	**Sb**	**08 28 22.3**	**0.0**
TWA	**Mucha** baz=349	**0.80**	**344**	*e*P	**Pn**	**08 28 11.9**	**-0.7**
TWA	baz=349			*e*S	**Sb**	**08 28 22.3**	**-0.1**
WHP	**Taichung City** baz=272	**0.80**	**275**	*e*P	**Pn**	**08 28 12.6**	**0.0**
WHP	baz=272			*e*S	**Sb**	**08 28 22.7**	**+0.2**
TWB1	**Santiao Chiao** baz=17	**0.81**	**11**	*e*P	**Pn**	**08 28 12.3**	**-0.4**
TWB1	baz=17			*e*S	**Sb**	**08 28 23.1**	**+0.4**
WPL	**Puli Township** baz=252	**0.81**	**256**	*e*P	**Pb**	**08 28 12.9**	**+0.7**
WPL	baz=252			*e*S	**Sb**	**08 28 23.4**	**+0.7**
TATO	**Taipei** baz=342	**0.82**	**338**	*e*P	**Pn**	**08 28 12.1**	**-0.8**
TATO	baz=342			*e*S	**Sb**	**08 28 22.9**	**-0.1**
EHY	**Hungye** baz=207	**0.83**	**213**	*e*P	**Pb**	**08 28 11.6**	**-0.9**
EHY	baz=207			*e*S	**Sn**	**08 28 25.6**	**+1.0**
DPDB	**Guoxing** baz=254	**0.83**	**258**	*e*P	**Pb**	**08 28 13.1**	**+0.6**
DPDB	baz=254			*e*S	**Sn**	**08 28 24.6**	**-0.1**
WCS	**Beigang Elemen** baz=256	**0.84**	**260**	*e*P	**Pn**	**08 28 13.0**	**-0.1**
WCS	baz=256			*e*S	**Sb**	**08 28 23.9**	**+0.3**
LIOB	**Emei** baz=300	**0.85**	**301**	*e*P	**Pn**	**08 28 13.5**	**+0.2**
LIOB	baz=300			*e*S	**Sb**	**08 28 24.1**	**+0.1**
NSTT	**Nanjuang** baz=299	**0.86**	**300**	*e*P	**Pn**	**08 28 13.4**	**+0.1**
NSTT	baz=299			*e*S	**Sb**	**08 28 23.7**	**-0.3**
BACT	**New Taipei Cit** baz=339	**0.86**	**336**	*e*P	**Pb**	**08 28 13.7**	**+0.7**
BACT	baz=339			*e*S	**Sn**	**08 28 25.4**	**+0.2**
WFSB	**Wu-fen Shan** baz=2.0	**0.86**	**358**	*e*P	**Pn**	**08 28 13.3**	**-0.1**
WFSB	baz=2.0			*e*S	**Sb**	**08 28 24.7**	**+0.6**
TAP	**Taipei** baz=345	**0.88**	**341**	*e*P	**Pb**	**08 28 14.1**	**+0.9**
TAP	baz=345			*e*S	**Sb**	**08 28 25.6**	**+1.1**
SXI1	**Grass Mountain** baz=8.0	**0.89**	**3**	*e*P	**Pn**	**08 28 13.7**	**-0.1**
SXI1	baz=8.0			*e*S	**Sb**	**08 28 25.2**	**+0.4**
SSLB	**Suanglung** baz=237	**0.90**	**242**	*e*P	**Pn**	**08 28 13.5**	**-0.4**
SSLB	baz=237			*e*S	**Sn**	**08 28 25.8**	**-0.4**
SMLT	**Sun Moon Lake** baz=244	**0.90**	**249**	*e*P	**Pb**	**08 28 14.0**	**+0.3**
SMLT	baz=244			*e*S	**Sn**	**08 28 26.5**	**+0.1**
HSN1	**Hsinchu** baz=308	**0.93**	**308**	*e*P	**Pn**	**08 28 14.6**	**+0.3**
TYC	**Yuchr** baz=247	**0.93**	**251**	*e*P	**Pn**	**08 28 14.2**	**-0.1**
TYC	baz=247			*e*S	**Sn**	**08 28 27.2**	**+0.2**
TNOU	**National Taiwa** baz=2.0	**0.94**	**357**	*e*P	**Pn**	**08 28 14.7**	**+0.2**
TNOU	baz=2.0			*e*S	**Sn**	**08 28 26.8**	**-0.4**
YULB	**Yu-li** baz=206	**0.94**	**211**	*e*P	**Pn**	**08 28 13.1**	**-1.4**
YULB	baz=206			*e*S	**Sn**	**08 28 26.5**	**-0.8**
ECBN	**Changbin** baz=196	**0.95**	**201**	*e*P	**Pb**	**08 28 14.6**	**+0.1**
ECBN	baz=196			*e*S	**Sn**	**08 28 28.6**	**+1.3**
NCU	**National Centr** baz=325	**0.95**	**323**	*e*P	**Pn**	**08 28 14.9**	**+0.2**
NCU	baz=325			*e*S	**Sb**	**08 28 28.7**	**+1.9**
NCUH	**Zhongli** baz=324	**0.95**	**323**	*e*P	**Pn**	**08 28 14.9**	**+0.3**
NCUH	baz=324			*e*S	**Sb**	**08 28 28.4**	**+1.7**
SBCB	**Hsinchu** baz=308	**0.96**	**308**	*e*P	**Pb**	**08 28 15.5**	**+0.8**
SBCB	baz=308			*e*S	**Sb**	**08 28 29.3**	**+2.4**
TWS1	**Kuangyinshan** baz=341	**0.96**	**338**	*e*P	**Pn**	**08 28 14.8**	**0.0**
TWS1	baz=341			*e*S	**Sb**	**08 28 28.8**	**+1.7**
YM01	**YM01** baz=350	**0.96**	**346**	*e*P	**Pn**	**08 28 14.4**	**-0.4**
YM01	baz=350			*e*S	**Sb**	**08 28 28.2**	**+1.1**
TWQ1	**Liyutan** baz=276	**0.97**	**279**	*e*P	**Pb**	**08 28 16.3**	**+1.5**
TWQ1	baz=276			*e*S	**Sb**	**08 28 29.5**	**+2.4**
EYUL	**Yuli** baz=203	**0.97**	**208**	*e*P	**Pn**	**08 28 14.1**	**-0.8**
EYUL	baz=203			*e*S	**Sb**	**08 28 28.9**	**+1.7**
HSN	**Hsinchu** baz=311	**0.98**	**308**	*e*P	**Pb**	**08 28 15.4**	**+0.5**
HSN	baz=311			*e*S	**Sb**	**08 28 29.2**	**+1.8**
TWF1	**Yuli** baz=204	**0.98**	**210**	*e*P	**Pn**	**08 28 13.7**	**-1.3**
TWF1	baz=204			*e*S	**Sb**	**08 28 27.8**	**+0.4**
NMLH	**Miaoli** baz=288	**0.99**	**290**	*e*P	**Pb**	**08 28 16.5**	**+1.2**
NMLH	baz=288			*e*S	**Sb**	**08 28 29.7**	**+1.7**
YM08	**YM08** baz=351	**1.00**	**348**	*e*P	**Pn**	**08 28 15.6**	**+0.3**
YM08	baz=351			*e*S	**Sn**	**08 28 28.4**	**-0.2**
NTST	**Danshui** baz=343	**1.01**	**341**	*e*P	**Pn**	**08 28 15.6**	**+0.2**
NTST	baz=343			*e*S	**Sb**	**08 28 29.8**	**+1.4**
ANP	**Anpu** baz=348	**1.01**	**344**	*e*P	**Pn**	**08 28 15.4**	**-0.2**
ANP	baz=348			*e*S	**Sn**	**08 28 28.4**	**-0.8**
WHYT	**Xinyi Township** baz=236	**1.02**	**240**	*e*P	**Pb**	**08 28 16.1**	**+0.4**
WHYT	baz=236			*e*S	**Sb**	**08 28 30.7**	**+2.0**
TCU	**Taichung** baz=264	**1.05**	**267**	*e*P	**Pb**	**08 28 17.5**	**+1.3**
TCU	baz=264			*e*S	**Sb**	**08 28 32.1**	**+2.7**
JYNG	**Yonagunijimaku**	**1.05**	**76**	P	**Pb**	**08 28 16.6**	**+0.4**
JYNG				*e*S	**Sb**	**08 28 31.3**	**+1.7**
YUS	**Yu-Shan** baz=223	**1.07**	**228**	*e*P	**Pb**	**08 28 16.7**	**-0.1**
YUS	baz=223			*e*S	**Sn**	**08 28 30.5**	**-0.6**
WJS	**Zhushan** baz=245	**1.07**	**249**	*e*P	**Pb**	**08 28 17.0**	**+0.4**
WJS	baz=245			*e*S	**Sb**	**08 28 32.6**	**+2.5**
TWY	**Chenhua** baz=353	**1.08**	**349**	*e*P	**Pb**	**08 28 17.2**	**+0.4**
TWY	baz=353			*e*S	**Sb**	**08 28 31.6**	**+1.1**
WDJ	**Dajia District** baz=275	**1.09**	**278**	*e*S	**Sb**	**08 28 33.0**	**+2.4**
WNT	**Mingjian** baz=249	**1.09**	**253**	*e*P	**Pb**	**08 28 18.2**	**+1.3**
WNT	baz=249			*e*S	**Sb**	**08 28 32.5**	**+1.8**
FULB	**Fuli** baz=202	**1.11**	**206**	*e*P	**Pb**	**08 28 17.2**	**0.0**
FULB	baz=202			*e*S	**Sb**	**08 28 33.0**	**+1.6**
YOJ	**Yonaguni jima**	**1.11**	**77**	*e*P	**Pb**	**08 28 17.4**	**+0.2**
YOJ				*e*S	**Sb**	**08 28 32.7**	**+1.4**
YOJ	**Yonaguni jima** baz=79	**1.11**	**77**	*e*P	**Pb**	**08 28 17.4**	**+0.2**
YOJ	baz=79			*e*S	**Sb**	**08 28 32.5**	**+1.1**
ALS	**Alishan** baz=229	**1.16**	**234**	⇓*e*P	**Pb**	**08 28 18.4**	**+0.2**
ALS	baz=229			*e*S	**Sb**	**08 28 34.8**	**+1.8**
WCHH	**Zhanghua** baz=261	**1.16**	**264**	*e*P	**Pb**	**08 28 19.2**	**+1.2**
WCHH	baz=261			*e*S	**Sb**	**08 28 35.3**	**+2.7**
CHKT	**Chengkung** baz=197	**1.18**	**201**	*e*P	**Pn**	**08 28 17.1**	**-0.6**
CHKT	baz=197			*e*S	**Sn**	**08 28 32.4**	**-0.6**
EHD	**Haiduan** baz=204	**1.19**	**208**	*e*P	**Pn**	**08 28 16.8**	**-1.2**
EHD	baz=204			*e*S	**Sb**	**08 28 34.8**	**+1.1**
ELDTW	**Lidau** baz=212	**1.25**	**216**	*e*P	**Pn**	**08 28 18.4**	**-0.4**
ELDTW	baz=212			*e*S	**Sb**	**08 28 35.6**	**+0.1**
WGK	**Gukeng** baz=242	**1.26**	**246**	*e*P	**Pb**	**08 28 20.9**	**+1.1**
WGK	baz=242			*e*S	**Sb**	**08 28 38.6**	**+3.0**
WDLH	**Douliu** baz=243	**1.28**	**247**	*e*P	**Pb**	**08 28 19.9**	**-0.3**
EDH	**Donghe** baz=198	**1.32**	**201**	*e*P	**Pn**	**08 28 19.2**	**-0.5**
EDH	baz=198			*e*S	**Sb**	**08 28 37.2**	**+0.1**
WCKO	**Fanlu** baz=232	**1.35**	**236**	*e*P	**Pn**	**08 28 20.6**	**+0.5**
WCKO	baz=232			*e*S	**Sb**	**08 28 40.5**	**+2.3**
WRL	**Guolierlin Hig** baz=254	**1.35**	**257**	*e*P	**Pb**	**08 28 21.1**	**-0.2**
WRL	baz=254			*e*S	**Sb**	**08 28 39.2**	**+0.9**
CHN2	**Minshiung** baz=238	**1.40**	**242**	*e*P	**Pb**	**08 28 23.9**	**+1.7**
CHN2	baz=238			*e*S	**Sb**	**08 28 43.4**	**+3.7**
STYH	**Taoyuan** baz=220	**1.41**	**223**	*e*P	**Pb**	**08 28 21.9**	**-0.4**
STYH	baz=220			*e*S	**Sb**	**08 28 39.9**	**+0.1**
WTK	**Tuku** baz=246	**1.41**	**249**	*e*P	**Pb**	**08 28 22.7**	**+0.4**
WTK	baz=246			*e*S	**Sb**	**08 28 41.6**	**+1.8**
CHN4	**Tsaushan** baz=230	**1.41**	**233**	*e*P	**Pb**	**08 28 23.0**	**+0.7**
CHN4	baz=230			*e*S	**Sb**	**08 28 42.6**	**+2.7**
TPUB	**Ta-pu** baz=227	**1.42**	**231**	*e*P	**Pb**	**08 28 22.7**	**+0.2**
TPUB	baz=227			*e*S	**Sb**	**08 28 41.1**	**+1.0**
STYT	**Tauyuan** baz=220	**1.43**	**223**	*e*P	**Pb**	**08 28 22.4**	**-0.2**
STYT	baz=220			*e*S	**Sb**	**08 28 40.8**	**+0.4**
LONT	**Longtian** baz=203	**1.44**	**206**	*e*P	**Pn**	**08 28 20.6**	**-0.8**
LONT	baz=203			*e*S	**Sb**	**08 28 41.2**	**+0.4**
CHY	**Chiayi** baz=238	**1.46**	**241**	*e*P	**Pb**	**08 28 23.9**	**+0.7**
CHY	baz=238			*e*S	**Sb**	**08 28 43.6**	**+2.3**
WTP	**Ta-pu** baz=226	**1.46**	**229**	*e*P	**Pb**	**08 28 23.5**	**+0.3**
WTP	baz=226			*e*S	**Sb**	**08 28 43.4**	**+2.0**
TWK	**Hsinying** baz=229	**1.54**	**233**	*e*P	**Pb**	**08 28 24.8**	**+0.2**
TWK	baz=229			*e*S	**Sb**	**08 28 45.3**	**+1.6**
TWG	**Pinlang** baz=203	**1.54**	**207**	*e*P	**Pn**	**08 28 21.2**	**-1.6**
TWG	baz=203			*e*S	**Sn**	**08 28 40.0**	**-2.0**
TWGBT	**Beinan** baz=203	**1.54**	**206**	*e*P	**Pn**	**08 28 21.7**	**-1.1**
LDUT	**Ludao** baz=189	**1.56**	**192**	*e*P	**Pn**	**08 28 21.8**	**-1.2**
LDUT	baz=189			*e*S	**Sn**	**08 28 41.5**	**-0.9**
CHN1	**Nanshi** baz=226	**1.56**	**230**	*e*P	**Pb**	**08 28 25.3**	**+0.4**
CHN1	baz=226			*e*S	**Sb**	**08 28 46.5**	**+2.2**
WSF	**Szhu** baz=246	**1.57**	**249**	*e*S	**Sb**	**08 28 46.4**	**+2.0**
SGST	**Jiashian** baz=222	**1.59**	**226**	*e*P	**Pb**	**08 28 24.7**	**-0.8**
SGST	baz=222			*e*S	**Sb**	**08 28 46.6**	**+1.4**
WSL	**Shuilin Townsh** baz=242	**1.61**	**245**	*e*P	**Pb**	**08 28 26.1**	**+0.4**
WSL	baz=242			*e*S	**Sb**	**08 28 47.7**	**+2.1**
ICHU	**Yijhu** baz=236	**1.64**	**240**	*e*P	**Pb**	**08 28 26.1**	**-0.2**
ICHU	baz=236			*e*S	**Sb**	**08 28 47.9**	**+1.3**
IRIF	**Iriomote-Funau**	**1.75**	**85**	P	**Pn**	**08 28 26.1**	**+0.6**
IRIF				S	**Sn**	**08 28 47.9**	**+0.8**
ECL	**Taimali** baz=204	**1.79**	**207**	*e*P	**Pb**	**08 28 27.5**	**-1.3**
ECL	baz=204			*e*S	**Sb**	**08 28 49.9**	**-0.9**
SCST	**Cishan** baz=220	**1.79**	**223**	*e*P	**Pb**	**08 28 28.6**	**-0.2**
SCST	baz=220			*e*S	**Sb**	**08 28 53.8**	**+2.9**
SSD	**Sandimen** baz=214	**1.82**	**217**	*e*P	**Pb**	**08 28 28.6**	**-0.6**
SSD	baz=214			*e*S	**Sb**	**08 28 50.5**	**-1.1**
TWM1	**Shoushan** baz=220	**1.88**	**223**	*e*P	**Pb**	**08 28 30.5**	**+0.1**
MASBT	**Mashibuluo** baz=212	**1.93**	**215**	*e*P	**Pn**	**08 28 29.0**	**+1.0**
MASBT	baz=212			*e*S	**Sb**	**08 28 55.0**	**+0.3**
JKRS	**Kuro-shima**	**2.00**	**89**	P	**Pb**	**08 28 30.5**	**-1.8**
JKRS				*e*S	**Sb**	**08 28 55.3**	**-1.5**
TAWH	**Dawu Township** baz=203	**2.05**	**205**	*e*P	**Pb**	**08 28 31.2**	**-2.0**
TAWH	baz=203			*e*S	**Sn**	**08 28 54.1**	**-0.3**
JIJ	**Ishigaki jima**	**2.12**	**85**	P	**Pn**	**08 28 31.6**	**+0.8**
JIJ				*e*S	**Sn**	**08 28 56.6**	**+0.2**
PHUB	**P'eng-hu** baz=250	**2.17**	**252**	*e*P	**Pn**	**08 28 30.0**	**-1.4**
PHUB	baz=250			*e*S	**Sn**	**08 28 58.5**	**+1.0**
WDGT	**Dungji** baz=242	**2.19**	**245**	*e*P	**Pn**	**08 28 32.8**	**+1.1**
VWUC	**VWUC** baz=289	**2.30**	**290**	*e*P	**Pn**	**08 28 32.7**	**-0.4**
VWUC	baz=289			*e*S	**Sn**	**08 28 59.0**	**-1.6**
JISG	**Ishigakijimahi**	**2.30**	**80**	P	**Pn**	**08 28 34.1**	**+0.9**
JISG				S	**Sn**	**08 29 01.5**	**+0.8**
VCHM	**Qimei** baz=244	**2.41**	**246**	*e*P	**Pn**	**08 28 35.8**	**+1.1**
MATB	**Ma-tsu** baz=319	**2.58**	**319**	*e*P	**Pn**	**08 28 36.4**	**-0.6**
MATB	baz=319			*e*S	**Sn**	**08 29 05.9**	**-1.6**
PTMZ	**Houxiangcun** baz=288	**2.59**	**289**	*e*P	**Pn**	**08 28 37.1**	**-0.1**
PTMZ	baz=288			*e*S	**Sn**	**08 29 06.3**	**-1.7**
SONM	**Songino Array** 0.4nm,0.6s,baz=156,slow=7.9,SNR=2.5 0.4nm,0.6s	**26.58**	**336**	P	**P**	**08 33 33.4**	**+0.3**
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=96,slow=9.3,SNR=3.5 0.2nm,0.5s	**38.73**	**316**	P	**P**	**08 35 19.8**	**+0.8**
KURBB	**Kurchatov Arra** comp=Z,72nm,21.0s,baz=158,slow=36	**42.47**	**320**	LR	LR	08 53 19.5	
WRA	**Warramunga Arr** 0.7nm,1.1s,baz=343,slow=8.7,SNR=2.4 0.7nm,1.1s	**45.55**	**163**	P	**P**	**08 36 14.0**	**-0.8**
YKA	**Yellowknife Ar** 0.3nm,0.6s,baz=310,slow=5.1,SNR=10 0.3nm,0.6s	**82.72**	**23**	P	**P**	**08 40 16.8**	**-1.5**

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*TAP **27** 08:28:45.3, 24°.94N×122°.33E, h11^{km}±1^{km}, ML3.2, C*
*JMA **27** 08:28:45.1±0.3, 24°.9N±0°.8×122°.3E±0°.3, h2^{km}±3^{km},*
MV3.1/5, TAIWAN REGION
ISC 27 08:28:45.3±1.1**, 24°.90N**±0°.04×**122°.34E**±0°.03**, h13**^{km}±11^{km}**,**
n23, σ**0^{s}.41**/42**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=283	**0.34**	**288**	*i* P	**Pg**	**08 28 52.3**	**+0.2**
TWB1	baz=283			S	**Sg**	**08 28 57.2**	**+0.5**
SXI1	**Grass Mountain** baz=291	**0.46**	**295**	*i* P	**Pb**	**08 28 55.2**	**-0.2**
SXI1	baz=291			S	**Sg**	**08 29 01.4**	**+0.7**
TIPB	**Shuangxi** baz=275	**0.47**	**279**	*i* P	**Pb**	**08 28 55.3**	**-0.2**
TIPB	baz=275			*e*S	**Sb**	**08 29 02.3**	**-0.2**
EOS2	**EOS2** baz=189	**0.49**	**192**	*e*P	**Pb**	**08 28 55.9**	**+0.1**
EOS2	baz=189			*e*S	**Sb**	**08 29 03.5**	**+0.7**
TWC	**Suao** baz=232	**0.53**	**237**	*i* P	**Pg**	**08 28 55.8**	**0.0**
TWC	baz=232			*e*S	**Sg**	**08 29 02.8**	**0.0**
WFSB	**Wu-fen Shan** baz=285	**0.54**	**288**	P	**Pb**	**08 28 56.5**	**0.0**
WFSB	baz=285			*e*S	**Sb**	**08 29 03.7**	**-0.5**
TNOU	**National Taiwa** baz=293	**0.57**	**296**	*e*P	**Pb**	**08 28 57.1**	**-0.1**
TNOU	baz=293			*e*S	**Sb**	**08 29 04.9**	**-0.3**
TWE	**Neicheng** baz=250	**0.64**	**254**	*i* P	**Pb**	**08 28 58.5**	**+0.2**
TWE	baz=250			*e*S	**Sb**	**08 29 06.8**	**-0.4**
EWUT	**Wuta** baz=226	**0.68**	**228**	P	**Pb**	**08 28 59.0**	**-0.1**
EWUT	baz=226			*e*S	**Sb**	**08 29 08.3**	**-0.2**
TWA	**Mucha** baz=274	**0.69**	**277**	*e*P	**Pb**	**08 28 59.4**	**+0.2**
FUSB	**Fushanzhiwuyua** baz=255	**0.70**	**258**	*e*P	**Pb**	**08 28 59.8**	**+0.4**
JYNG	**Yonagunijimaku**	**0.71**	**129**	P	**Pg**	**08 28 58.8**	**-0.3**
JYNG				*e*S	**Sg**	**08 29 08.2**	**-0.2**
YM08	**YM08** baz=291	**0.74**	**293**	*e*P	**Pb**	**08 28 59.9**	**-0.2**
YM08	baz=291			*e*S	**Sb**	**08 29 09.8**	**-0.3**
YM01	**YM01** baz=287	**0.74**	**289**	*e*P	**Pb**	**08 29 00.2**	**+0.1**
YM01	baz=287			*e*S	**Sb**	**08 29 10.4**	**+0.3**
NHDH	**Xindian Distri** baz=272	**0.74**	**275**	*e*P	**Pb**	**08 29 00.2**	**+0.1**
NHDH	baz=272			*e*S	**Sb**	**08 29 10.4**	**+0.2**

ENTT	Nioudou	0.75	250	eP	Pb	08 29 00.6	+0.3
	baz=247						
ENTT				eS	Sb	08 29 11.5	+1.0
	baz=247						
YOJ	Yonaguni jima	0.75	126	P	Pg	08 28 59.5	-0.4
YOJ				eS	Sg	08 29 09.6	-0.1
YOJ	Yonaguni jima	0.75	126	i P	Pg	08 28 59.4	-0.5
	baz=127						
YOJ				S	Sg	08 29 09.2	-0.6
	baz=127						
TWY	Chenhua	0.77	299	eP	Pb	08 29 00.4	-0.1
	baz=297						
NWLT	Wulai	0.77	261	eP	Pb	08 29 00.7	+0.1
	baz=258						
LATG	Datong	0.82	244	eP	Pb	08 29 01.6	0.0
	baz=241						
LATG				eS	Sb	08 29 13.1	+0.4
	baz=241						
NACB	Ninganchiao	0.99	223	eP	Pg	08 29 04.1	-0.4
	baz=221						
NACB				eS	Sg	08 29 16.8	-0.7
	baz=221						
IRIF	Iriomote-Funau	1.39	114	eP	Pb	08 29 11.8	+0.7
IRIF				eS	Sb	08 29 29.4	+0.7

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*PRU **27** 08:43:54.5±0.0, 50°.59N×18°.55E, h0km*

ISC 27 08:43:48.6±0.9**, 50°.18N**±0°.05×**19°.01E**±0°.03**, h0km, n13, σ0s.59**/24**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.51	85	ePg	Pg	08 43 57.7	-0.6
OJC				eSg	Sg	08 44 04.2	-0.7
MORC	Moravsky Berou	1.03	248	ePG	Pb	08 44 09.7	+0.4
MORC				eSG	Sb	08 44 23.0	-0.4
LANS	Liptovska Anna	1.07	164	ePG	Pg	08 44 09.6	+0.5
LANS				eSG	Sg	08 44 22.8	-0.2
LANS				eLG	Lg	08 44 27.9	
MAUC	Maruska	1.12	224	ePG	Pn	08 44 11.6	+0.1
MAUC				eSG	Sn	08 44 27.9	+0.2
	comp=Z,33nm,0.6s						
NIE	Niedzica	1.13	132	ePg	Pn	08 44 12.3	+0.6
NIE				eSg	Sn	08 44 28.2	+0.3
KRLC	Kraliky	1.44	267	ePG	Pn	08 44 15.4	-0.6
KRLC				eSG	Sn	08 44 35.5	-0.1
	comp=Z,7.1nm,0.3s						
STHS	Stebnicka Huta	1.64	117	ePN	Pn	08 44 18.5	-0.1
STHS				eSN	Sg	08 44 42.1	+1.0
STHS				eLG	Lg	08 44 47.5	
VYHS	Vyhne	1.69	184	ePN	Pn	08 44 19.0	-0.4
VYHS				eSN	Sn	08 44 41.1	-0.6
DPC	Dobruska-Polom	1.73	277	ePG	Pn	08 44 20.4	+0.4
DPC				eSG	Sg	08 44 44.2	-0.1
	comp=Z,14nm,0.6s						
VRAC	Vranov	1.79	242	ePN	Pb	08 44 22.1	-0.2
VRAC				eSG	Sg	08 44 46.0	-0.2
KSP	Ksiaz	1.86	292	ePg	Pg	08 44 24.5	+0.3
KSP				eSg	Sg	08 44 49.4	+1.1
KRUC	Moravsky	2.04	238	ePN	Pb	08 44 26.8	+0.4
KHC	Kasperske Hory	3.68	256	eSG	Sg	08 45 45.5	-1.4

WEL 27 08:47:11.1±0.4**, 42°S**±2°×**17°4E**±°**, h12km, M2.3**/5**, ML2.6**/9**, MLv2.3**/5**, Error ellipse: s-maj=0.0km s-min=0.0km az=92.6, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.19	185	P	Pb	08 47 16.2	-0.5
KHZ				S	Sg	08 47 19.8	+1.5
BSWZ	Blackbirch Sta	0.56	25	P	Pg	08 47 22.2	+0.2
THZ	Tophouse	0.67	313	P	Pb	08 47 24.9	0.0
THZ				S	Sb	08 47 34.3	+0.2
GVZ	Greta Valley S	0.84	207	P	Pb	08 47 27.9	+0.2
GVZ				S	Sn	08 47 40.6	-0.6
TUWZ	Tuamarina	0.84	20	P	Pb	08 47 27.6	-0.1
NNZ	Nelson	1.01	352	P	Pb	08 47 30.4	-0.2
MRNZ	Matariki Terra	1.02	324	P	Pn	08 47 31.2	0.0
LTZ	Lake Taylor	1.11	239	P	Pb	08 47 32.0	-0.2
LTZ				S	Sn	08 47 47.4	-0.3
TCW	Tory Channel	1.14	28	P	Pb	08 47 32.0	-0.9
AMCZ	Amberley	1.17	215	P	Pb	08 47 32.3	-0.9
TKNZ	Takaka Hill	1.27	339	P	Pn	08 47 33.7	-1.0
DSZ	Denniston Nort	1.40	289	P	Pb	08 47 37.4	+0.3
DUWZ	D’Urville Isla	1.45	11	P	Pb	08 47 37.6	-0.4
OXZ	Oxford	1.57	225	P	Pn	08 47 37.2	-1.7
CAW	Cannon Point	1.58	46	P	Pn	08 47 37.8	-1.2
QRZ	Quartz Range	1.60	331	P	Pb	08 47 40.3	-0.2
MQZ	McQueen’s Vall	1.63	204	P	Pn	08 47 37.1	-2.4
INZ	Inchbonnie	1.65	252	P	Pn	08 47 40.3	+0.4
AKCZ	Akaroa Harbour	1.72	196	P	Pn	08 47 39.1	-1.8
MTW	Mount Morrison	1.80	54	P	Pg	08 47 45.6	-0.1
WACZ	Wakanui South	2.13	216	P	Pn	08 47 44.7	-1.8
MRZ	Mangatainoka R	2.18	45	P	Pn	08 47 46.0	-1.2

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*BUC **27** 09:11:21.7±0.3, 45°.50N×26°.39E, h131km±2km, ml3.7/49, Error ellipse: s-maj=2.0km s-min=1.7km az=169.0*

*BEO **27** 09:11:21.1±0.9, 45°.43N×26°.07E, h0km, ML2.8/6*

*MCSM **27** 09:11:21.3±0.6, 46°N±5°×2°6E±°, h129km±5km, ML3.7*

*SOF **27** 09:11:22.8, 45°.48N×26°.34E, h100km, MD3.3*

ISC 27 09:11:20.2±1.3**, 45°.52N**±0°.03×**26°.35E**±0°.03**, h144**km±6km**, n92, σ0s.94**/134**, 55C-37D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEHR	Nehoiu	0.10	204	⇑P	Pn	09 11 40.3	+0.6
NEHR				⇑S	Sn	09 11 54.2	-0.1
BISRR	Bisoca	0.25	83	⇑P	Pn	09 11 40.8	+0.9
BISRR				⇑S	Sn	09 11 54.9	0.0
MLR	Muntele Rosu	0.29	264	⇑P	Pn	09 11 40.6	+0.5
MLR				⇑S	Sn	09 11 54.7	-0.5
MLR	Muntele Rosu	0.29	264	P	Pn	09 11 40.6	+0.5
MLR				S	Sn	09 11 55.0	-0.2
COVR	Voineasa-Covas	0.34	342	⇑P	Pn	09 11 40.4	+0.2
COVR				⇑S	Sn	09 11 54.7	-0.7
PLOR	Plostina	0.39	32	⇑P	Pn	09 11 40.7	+0.3
PLOR				⇓S	Sn	09 11 54.8	-1.0
PLOR	Plostina	0.39	32	P	Pn	09 11 40.6	+0.3
ISR	Istrita	0.42	161	⇑P	Pn	09 11 41.3	+0.7
VRI	Vrincioaia	0.43	37	⇑P	Pn	09 11 41.1	+0.5
VRI				⇓S	Sn	09 11 54.5	-1.6
VRI	Vrincioaia	0.43	37	P	Pn	09 11 41.0	+0.5
GRER		0.46	107	⇓S	Sn	09 11 54.6	-1.6
SECR		0.52	203	⇑P	Pn	09 11 42.0	+1.0
SECR				⇓S	Sn	09 11 56.3	-0.4
ODBI	Odobesti	0.55	63	⇑S	Sn	09 11 57.0	+0.1
PLAR	PLOIESTI	0.65	201	⇓P	Pn	09 11 42.8	+1.1
PANC	Panciu	0.66	57	⇑P	Pn	09 11 42.7	+1.0
PANC				⇑S	Sn	09 11 57.9	-0.3
OZUR		0.70	326	⇓P	Pn	09 11 42.3	+0.3
OZUR				⇓S	Sn	09 11 57.4	-1.3
PGOR	Pogoanele	0.76	144	⇑P	Pn	09 11 43.4	+1.0
DOPR	Dopca	0.81	304	⇓P	Pn	09 11 43.2	+0.4
DOPR				⇓S	Sn	09 11 59.3	-0.8
SULR		0.84	185	⇓P	Pn	09 11 44.0	+0.9
SULR				⇑S	Sn	09 12 01.2	+0.8
GHRR		0.92	53	⇓P	Pn	09 11 44.8	+1.2
GHRR				⇓S	Sn	09 12 01.5	0.0
VOIR		0.92	265	⇓P	Pn	09 11 44.2	+0.4
VOIR				⇑S	Sn	09 12 01.0	-0.7
VOIR		0.92	265	P	Pn	09 11 44.1	+0.4
TUDR		0.93	85	⇑P	Pn	09 11 44.0	+0.3
TUDR				⇓S	Sn	09 12 00.8	-0.8
MTUR	Matau	0.95	253	⇓P	Pn	09 11 44.8	+0.7
IZVR	Izvoarele	0.99	88	⇑P	Pn	09 11 44.4	+0.1
IZVR				⇑S	Sn	09 12 01.2	-1.4
SLCR	Slobozia Conac	1.00	85	⇓P	Pn	09 11 44.8	+0.5
SLCR				⇑S	Sn	09 12 01.2	-1.4
TESR	Tescani	1.01	12	⇓P	Pn	09 11 44.8	+0.4
TESR				⇑S	Sn	09 12 01.6	-1.5
TESR	Tescani	1.01	12	P	Pn	09 11 44.9	+0.4
SCHL	Schela	1.04	91	⇑P	Pn	09 11 44.9	+0.3
SCHL				⇓S	Sn	09 12 01.8	-1.5
INCR	INCERC-Sediu C	1.09	187	⇑S	Sn	09 12 04.1	-0.1
AMRR	Amara	1.15	142	⇑P	Pn	09 11 46.5	+0.9
AMRR				⇑S	Sn	09 12 05.3	+0.2
BIR	Birlad	1.16	50	⇓P	Pn	09 11 46.6	+0.8
BIR				⇓S	Sn	09 12 05.0	-0.4
SCTR	Scanteiesti	1.16	82	⇑P	Pn	09 11 46.7	+0.9
SCTR				⇑S	Sn	09 12 05.3	-0.1
BUC1	Bucharest	1.19	191	⇑S	Sn	09 12 05.8	-0.1
TATR	Tatarca	1.20	86	⇓P	Pn	09 11 47.0	+0.9
TATR				⇓S	Sn	09 12 05.6	-0.3
GISR	Galati	1.20	93	⇑S	Sn	09 12 05.2	-0.8
CFR	Carcaliu	1.30	105	⇓P	Pn	09 11 47.7	+0.5
CFR				⇑S	Sn	09 12 06.4	-1.3
GIUM	Giurgiulesti	1.30	91	⇑P	Pn	09 11 48.2	+1.0
GIUM				⇑S	Sn	09 12 07.9	+0.1
SGRR	Singureni	1.32	192	⇑P	Pn	09 11 48.5	+1.0
SGRR				⇑S	Sn	09 12 07.4	-0.8
HUMR	Humele	1.39	225	⇓P	Pn	09 11 48.7	+0.6
HUMR				⇓S	Sn	09 12 09.0	-0.4
HUMR	Humele	1.39	225	P	Pn	09 11 48.3	+0.2
HARR	Harsova	1.39	126	⇑P	Pn	09 11 48.7	+0.6
BIZ	Bicaz	1.43	353	⇓S	Sn	09 12 10.7	+0.5
VASR	Vaslui	1.50	41	⇑P	Pn	09 11 50.2	+0.9
VASR				⇑S	Sn	09 12 10.9	-0.6
TLBR	Topalu	1.55	128	⇑P	Pn	09 11 49.9	+0.2
TLBR				⇑S	Sn	09 12 11.0	-1.4
COPA	Copaceanca	1.60	211	⇑P	Pn	09 11 51.0	+0.6
COPA				⇑S	Sn	09 12 12.5	-1.0
TPGR	Topolog	1.60	114	⇑P	Pn	09 11 50.8	+0.3
TPGR				⇑S	Sn	09 12 12.0	-1.5
LEOM	Leova	1.63	53	⇑P	Pn	09 11 51.6	+1.0
LEOM				⇑S	Sn	09 12 13.3	-0.7
CVDA	Cernavoda	1.69	134	⇑S	Sn	09 12 14.1	-1.0
ICOR	Ion Corvin	1.74	143	⇑P	Pn	09 11 52.5	+0.6
ICOR				⇓S	Sn	09 12 15.7	-0.5
TLCR		1.77	100	⇑P	Pn	09 11 53.2	+1.0
TLCR				⇓S	Sn	09 12 15.5	-1.2
LOT	Lotru	1.82	269	⇓P	Pn	09 11 53.5	+0.5
LOT				⇓S	Sn	09 12 19.0	+1.0
LOT	Lotru	1.82	269	P	Pn	09 11 53.2	+0.3
RAZG	Razgrad	1.96	177	⇓S	Sn	09 12 19.4	-1.3
MFTR	Murfatlar	1.99	132	⇓S	Sn	09 12 20.7	-0.7
VLAD	Vladila	2.06	223	⇓P	Pn	09 11 56.1	+0.5
TSCT	Constanta Port	2.13	129	⇑P	Pn	09 11 57.4	+0.9
TSCT				⇓S	Sn	09 12 23.7	-0.6
MILM	Milestii Mici	2.21	50	⇑iP	Pn	09 11 56.3	-1.0
	20nm,0.2s						
MILM				eS	Sn	09 12 22.4	-3.6
	220nm,0.4s						
BURAR	Bucovina Array	2.24	340	⇓P	Pn	09 12 00.2	+2.4
PSN	Preselentsi	2.25	144	i P	Pn	09 11 59.3	+1.3
KIS	Kishinev	2.26	48	eP	Pn	09 11 58.0	0.0
KIS				eS	Sn	09 12 26.0	-1.1
	150nm,0.3s						
SZH	Strazhica	2.27	188	i P	Pn	09 11 58.9	+0.7
SRE	Strehaia	2.39	250	⇓P	Pn	09 12 00.2	+0.6
PRD	Provadia	2.44	162	i P	Pn	09 12 02.0	+1.8
GZR	Gura Zlata	2.52	268	ePn	Pn	09 12 02.0	+0.7
MARR	Marisel-Cluj	2.53	298	⇑P	Pn	09 12 02.4	+1.0
ROIA	ROIAK	2.54	163	i P	Pn	09 12 02.6	+1.2
PUNG	Punghina	2.73	244	ePn	Pn	09 12 03.3	-0.5
PUNG				eSn	Sn	09 12 35.1	-2.4
HERR	Herculane	2.85	258	⇑P	Pn	09 12 05.6	+0.2
MPEP	Malo Peshtene	2.86	222	i P	Pn	09 12 06.5	+1.0
SURR	Surduc	2.98	276	⇑P	Pn	09 12 08.0	+1.1
KMPD	K-Podol'skiy	3.05	1	P	Pn	09 12 08.6	+0.8
KMPD				sP		09 12 37.2	
KMPD				S	Sn	09 12 45.5	+0.8
BZS	Buzias	3.33	273	ePn	Pn	09 12 11.8	+0.4
MDVR	Moldovita	3.37	259	⇓P	Pn	09 12 12.8	+0.7
MDVR	Moldovita	3.37	259	ePn	Pn	09 12 12.7	+0.7
ZAGS	Zajecar	3.40	241	ePn	Pn	09 12 11.7	-0.7
ZAPS	Zavoj	3.48	231	ePn	Pn	09 12 13.8	+0.2
ZAPS				eSn	Sn	09 12 53.2	-1.7
KUBS	Kucevo	3.50	253	ePn	Pn	09 12 12.0	-1.7
BOVS	Bovan	3.82	242	ePn	Pn	09 12 17.8	0.0
BOVS				eSn	Sn	09 13 01.9	-0.6
PRVS	Prvonek	4.31	227	ePn	Pn	09 12 25.6	+1.2
GRUS	Gruza	4.34	250	ePn	Pn	09 12 25.1	+0.4
SELS	Selova	4.40	240	ePn	Pn	09 12 26.0	+0.5
LUBAR	Lubar, Ukraine	4.50	12	P	Pn	09 12 27.2	+0.4
DIVS	Divibare	4.74	255	ePn	Pn	09 12 30.1	0.0
IVAS	Ivanjica	4.84	249	ePn	Pn	09 12 31.2	-0.2
BBLS	Lazići	5.22	254	ePn	Pn	09 12 37.6	+1.2
SEV	Sevastopol'	5.28	98	eS	Sn	09 13 37.4	+0.4
SEV				Sm		09 13 37.9	
	comp=N,4.0nm,0.4s						
SEV				Sm		09 13 37.9	
	comp=E,3.0nm,0.4s						
AK09	Malin Array Si	5.46	20	P	Pn	09 12 40.9	+1.4
AK08	Malin Array Si	5.47	20	P	Pn	09 12 40.9	+1.3
AK01	Malin Array Si	5.52	19	P	Pn	09 12 41.1	+0.9
AKBB	Malin Array Si	5.53	19	P	Pn	09 12 41.7	+1.3
AK04	Malin Array Si	5.54	19	P	Pn	09 12 41.0	+0.5

WEL 27 09:11:48.6±0.4**, 42°S**±2°×**17°4E**±°**, h5km, M2.0**/4**, ML2.5**/8**, MLv2.0**/4**, Error ellipse: s-maj=0.0km s-min=0.0km az=86.1, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.21	186	P	Pg	09 11 53.2	+0.5
KHZ				S	Sg	09 11 56.8	+1.3
BSWZ	Blackbirch Sta	0.54	25	P	Pg	09 11 59.4	+0.3
THZ	Tophouse	0.66	312	P	Pg	09 12 01.9	+0.6
THZ				S	Sg	09 12 11.1	+1.1
TUWZ	Tuamarina	0.83	20	P	Pg	09 12 04.6	+0.2
GVZ	Greta Valley S	0.86	207	P	Pg	09 12 04.9	-0.1
GVZ				S	Sb	09 12 17.5	-0.3
NNZ	Nelson	1.00	352	P	Pg	09 12 07.5	-0.2
MRNZ	Matariki Terra	1.01	323	P	Pb	09 12 08.3	-0.3
LTZ	Lake Taylor	1.12	239	P	Pg	09 12 09.0	-1.0
LTZ				S	Sg	09 12 24.3	-0.3
TCW	Tory Channel	1.13	28	P	Pg	09 12 09.3	-1.0
TKNZ	Takaka Hill	1.26	339	P	Pg	09 12 12.2	-0.5
TKNZ				S	Sb	09 12 29.5	+0.2
DSZ	Denniston Nort	1.39	289	P	Pn	09 12 14.6	-0.2
DUWZ	D’Urville Isla	1.43	11	P	Pn	09 12 14.0	-1.3
QRZ	Quartz Range	1.58	330	P	Pn	09 12 17.4	+0.1
OXZ	Oxford	1.59	225	P	Pn	09 12 14.2	-3.2
MQZ	McQueen’s Vall	1.64	204	P	Pn	09 12 14.2	-3.9
INZ	Inchbonnie	1.65	251	P	Pn	09 12 17.1	-1.2
AKCZ	Akaroa Harbour	1.73	196	P	Pn	09 12 16.2	-3.2
MRZ	Mangatainoka R	2.16	45	P	Pn	09 12 22.3	-3.0
LREZ	Lake Rotokare	2.82	13	P	Pn	09 12 32.5	-1.8

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*REN **27** 09:19:30.8±1.8, 39°.19N±0°.03×115°.95W±0°.02, h0km±6km, ML3.0/15, ML2.8/92(NEIC), Error ellipse: s-maj=4.1km s-min=2.2km az=188.0*

NEIC 27 09:19:31.3±1.4**, 39°.18N**±0°.03×**115°.94W**±0°.02**, h6**km±6km**, Error ellipse: s-maj=4.5km s-min=0.6km az=159.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Q12A	Willow Creek R	0.88	99		Pg	09 19 47.7	-0.5
Q12A					Sg	09 20 00.2	+0.6
Q09A	Carvers	1.03	251		Pg	09 19 50.6	-0.5
Q09A					Sg	09 20 04.7	+0.3
SPR3	Spring Creek 3	1.27	98		Pg	09 19 55.4	-0.3
SPR3					Sb	09 20 12.7	+0.2
SPR3	Spring Creek 3	1.27	98	IAML		09 20 14.4	
	comp=E,200nm,0.5s						
SPR3				IAML		09 20 16.0	
	comp=N,237nm,0.4s						
TPH	Tonopah	1.49	223		Pn	09 19 57.9	-0.9
TPH					Sn	09 20 18.2	-0.5
S11A	Rachel	1.54	174		Pb	09 20 00.0	-0.4
S11A					Sb	09 20 20.1	-0.1
BMN	Battle Mountai	1.59	322		Pn	09 19 59.0	-1.1
BMN					Sn	09 20 20.9	-0.2
BMN	Battle Mountai	1.59	322	IAML		09 20 22.9	
	comp=E,213nm,0.5s						
ELK	Elko	1.65	19		Pn	09 20 00.3	-0.8
ELK					Sb	09 20 23.4	-0.1
ELK	Elko	1.65	19	IAML		09 20 26.1	
	comp=E,119nm,0.2s						
ELK				IAML		09 20 26.1	
	comp=E,121nm,0.4s						
KVN	Kaiserville	1.68	266		Pn	09 20 00.6	-0.9
KVN					Sb	09 20 24.3	0.0
MZP	Montezuma Peak	1.86	218		Pn	09 20 03.5	-0.5
MZP				IAML		09 20 31.7	
	comp=N,64nm,0.4s						
MZP				IAML		09 20 32.4	
	comp=E,60nm,0.3s						
NV11	Mina Array Sit	1.88	247	Pn	Pn	09 20 03.8	-0.4
NV11				IAML		09 20 31.6	
	comp=N,80nm,0.4s						
NV11				IAML		09 20 32.7	
	comp=E,85nm,0.5s						
PRN	Pahroc Range	1.91	158		Pn	09 20 04.0	-0.4
NVAR	Mina Array Bea	1.99	249		Pn	09 20 05.4	-0.3
NV08	Mina Array Sit	2.01	248		Pn	09 20 05.4	-0.6
NV09	Mina Array Sit	2.01	249		Pn	09 20 05.6	-0.4
LHV	Little Huntoon	2.21	246	Pn	Pb	09 20 11.6	0.0
TPNV	Topopah Spring	2.24	186		Pn	09 20 08.8	-0.3
TPNV	Topopah Spring	2.24	186	IAML		09 20 45.1	
	comp=E,65nm,0.7s						
TPNV				IAML		09 20 52.8	
	comp=E,61nm,1.0s						
CPY	CP-1	2.25	182		Pn	09 20 08.5	-0.7
SGV	South Grapevin	2.36	202		Pn	09 20 10.5	-0.2
LCH	Last Change Ra	2.36	215		Pn	09 20 10.4	-0.3
LCH	Last Change Ra	2.36	215	IAML		09 20 48.0	
	comp=E,63nm,0.4s						
LCH				IAML		09 20 53.5	
	comp=N,34nm,0.5s						
DSP	Deep Springs	2.41	222	Pn	Pn	09 20 12.4	+1.1
WCT	Wildcat Mounta	2.44	193		Pn	09 20 11.5	-0.3
GRAC	Grapevine Rang	2.45	208	Pn	Pb	09 20 14.6	-1.3
MLNR	Milner Canyon	2.46	231		Pn	09 20 12.6	+0.4
YERR	Yerington	2.57	267		Pn	09 20 13.6	-0.2
CCUT	Cedar City	2.60	128		Pn	09 20 13.6	-0.5
CCUT	Cedar City	2.60	128	IAML		09 20 56.4	
	comp=E,27nm,0.6s						
CCUT				IAML		09 20 59.9	
	comp=N,27nm,0.7s						
DUG	Dugway, Tooele	2.62	66	Pn	Pn	09 20 14.0	-0.2
DUG				IAML		09 20 55.0	
	comp=N,38nm,0.7s						
DUG				IAML		09 21 05.8	
	comp=N,35nm,0.7s						
PAHR	Pah Rah Range	2.72	282	Pn	Pn	09 20 16.8	+1.2
PAHR				IAML		09 20 57.5	
	comp=E,31nm,0.7s						
PAHR				IAML		09 20 59.4	
	comp=N,30nm,0.4s						
AMDNV	Amargosa	2.74	186		Pn	09 20 15.7	0.0
SHPR	Sheep Range	2.74	167	Pn	Pn	09 20 16.2	+0.2
WAKR	Walker	2.81	257		Pn	09 20 16.1	-0.9
WAKR	Walker	2.81	257	IAML		09 20 59.9	
	comp=N,42nm,0.5s						
WAKR				IAML		09 21 02.8	
	comp=E,56nm,0.5s						
BGU	Big Grassy Mou	2.83	51		Pn	09 20 17.4	+0.1
OMMB	Old Mammoth Mi	2.87	238	Pn	Pn	09 20 19.4	+1.6
MDPB	Devils Postpil	2.91	239	Pn	Pn	09 20 19.7	+1.3
MVU	Marysvale	2.99	102		Pn	09 20 20.6	+1.1
MSU	Marysvale	3.02	102		Pn	09 20 20.9	+1.1
LCMT	Little Creek M	3.04	135		Pn	09 20 20.4	+0.4
LCMT	Little Creek M	3.04	135	IAML		09 21 14.0	
	comp=E,22nm,0.2s						
GWY	Greenwater Val	3.04	191	Pn	Pn	09 20 20.7	+0.6
GWY				IAML		09 21 20.3	
	comp=N,25nm,0.6s						
GWY				IAML		09 21 20.5	
	comp=E,21nm,0.5s						
EMB	Emerald Bay	3.24	268	Pn	Pn	09 20 23.0	+0.1
EMB				IAML		09 21 15.9	
	comp=N,28nm,0.5s						
EMB				IAML		09 21 16.1	
	comp=E,22nm,0.3s						
KNB	Kanab	3.28	130	Pn	Pn	09 20 23.2	-0.1
QSM	Queen of Sheba	3.29	193	Pn	Pn	09 20 23.1	-0.4
PKCU	Pink Cliffs	3.34	120		Pn	09 20 24.9	+0.5
SPUT	South Promonto	3.42	50	Pn	Pn	09 20 25.9	+0.7
SPUT				IAML		09 21 21.7	
	comp=E,14nm,1.3s						
SPUT				IAML		09 21 21.8	
	comp=N,18nm,0.5s						
HVU	Hansel Valley	3.55	42		Pn	09 20 26.6	-0.4
HVU				IAML		09 21 33.2	
	comp=E,19nm,0.6s						
HVU				IAML		09 21 35.4	
	comp=N,30nm,0.6s						
V12A	Nelson	3.56	166		Pn	09 20 26.9	-0.2
V12A				IAML		09 21 29.9	
	comp=E,12nm,1.1s						
V12A				IAML		09 21 30.0	
	comp=N,17nm,1.1s						
CMB	Columbia Colle	3.66	253	Pn	Pn	09 20 28.7	+0.1
Q16A	Castle Valley	3.72	93	Pn	Pn	09 20 29.4	-0.1
WVOR	Wild Horse Val	3.84	329	Pn	Pn	09 20 34.1	+3.0
WVOR				IAML		09 21 39.7	
	comp=N,12nm,0.9s						
WVOR				IAML		09 22 06.7	
	comp=N,11nm,4.0s						
SRU	San Rafael Swe	4.21	89		Pn	09 20 38.7	+2.5
SRU				IAML		09 21 30.5	
	comp=N,9.1nm,4.5s						
SRU				IAML		09 21 46.1	
	comp=E,9.6nm,0.8s						
HLID	Hailey	4.53	14		Pn	09 20 41.0	+0.4
HLID				IAML		09 21 56.1	
	comp=E,8.5nm,0.7s						
HLID				IAML		09 21 59.0	
	comp=E,7.6nm,1.5s						

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*IDC **27** 09:19:54.8±1.0, 41°.88N×126°.92W, h0km, mb3.9/18, mbtmp3.9/21, ML3.0/3, MS3.7/44, Error ellipse: s-maj=28.2km s-min=11.2km az=23.0*

*NEIC **27** 09:19:56.1±2.7, 41°.83N±0°.06×126°.84W±0°.08, h10km±1km, mb4.5/97, ML3.5/54, Mwr4.2/40, ML3.4/10(NCEDC), Error ellipse: s-maj=12.0km s-min=8.6km az=223.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-2.49; $M_{\theta\theta}$1.05; $M_{\phi\phi}$1.44; $M_{r\theta}$-0.60; $M_{\theta\phi}$-0.36; $M_{\phi r}$-0.13; Fault plane solution: $M_0$2.28000×10^{15} NP1: ϕ_s337.13000°, δ42.87000°, λ-75.98000°. NP2: ϕ_s138.32000°, δ48.69000°, λ-102.67000°. Principal axes: T 1.6695, Plg3.0000°, Azm237.0000°; N 0.9254, Plg9.0000°, Azm147.0000°; P -2.5949, Plg80.0000°, Azm344.0000°;*

*NEIC **27** 09:19:56, 41°.82N×126°.84W, h10km*

*NCEDC **27** 09:19:57.4±2.1, 41°.81N±0°.06×126°.80W±0°.05, h9km±1km, Error ellipse: s-maj=11.8km s-min=3.8km az=207.0*

ISC 27 09:19:56.2±0.6**, 41°.81N**±0°.08×**126°.90W**±0°.07**, h10km, n364, σ0s.97**/284**, mb4.4**/62**, MS3.7**/37**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRPM	Rodgers	2.25	106	IAML		09 21 12.8	
	comp=E,298nm,1.8s						
KRPM				IAML		09 21 28.7	
	comp=N,246nm,1.8s						
KRPM	Rodgers	2.25	106		Pn	09 20 32.4	-1.2
KRPM					Sn	09 21 00.5	-1.0
KCTM	Capetown	2.35	124		Pn	09 20 33.5	-1.4
JCC	Jacoby Creek,	2.38	114		Pn	09 20 33.2	-2.0
JCC	Jacoby Creek,	2.38	114		Sn	09 21 02.3	-2.1
L02F	Cave Junction	2.50	82		Pn	09 20 34.7	-2.3
KMPM	Mount Pierce	2.52	123		Pn	09 20 36.0	-1.2
KMPM	Mount Pierce	2.52	123	IAML		09 21 17.4	
	comp=N,208nm,1.5s						
KMPM				IAML		09 21 19.0	
	comp=E,192nm,1.6s						
K02D	Willamette Mer	2.56	69		Pn	09 20 36.0	-1.8
KHMM	Horse Mountain	2.56	110		Pn	09 20 36.9	-1.0
KHMM					Sn	09 21 07.9	-1.3
KHMM	Horse Mountain	2.56	110	IAML		09 21 32.4	
	comp=E,246nm,1.8s						
J01E	Myrtle Point	2.58	57		Pn	09 20 35.5	-2.4
J01E				IAML		09 21 07.1	
	comp=N,190nm,0.2s						
J01E				IAML		09 21 08.4	
	comp=E,144nm,0.2s						
KOMM	Orleans Mounta	2.64	100		Pn	09 20 38.0	-0.9
KCRM	Chalk Rock	2.71	120		Pn	09 20 38.5	-1.3
KMRM	Mail Ridge	2.89	122		Pn	09 20 41.9	-0.4
KMRM	Mail Ridge	2.89	122	IAML		09 21 32.4	
	comp=N,117nm,1.2s						
KMRM				IAML		09 21 34.1	
	comp=E,149nm,1.4s						
DBO	Dodson Butte	3.00	63		Pn	09 20 42.7	-1.2
DBO				IAML		09 21 22.2	

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                   comp=E,128nm,1.6s
KHBM   Hayfork Bally       3.00 111          Pn       09 20 42.8 -1.2
HUMO   Hull Mountain       3.03  73          Pn       09 20 42.8 -1.5
HUMO   Hull Mountain       3.03  73          Pn       09 20 42.9 -1.4
HUMO                                 IAML             09 21 20.9
       comp=N,61nm,1.6s
HUMO                                 IAML             09 21 21.5
       comp=E,51nm,1.1s
YBH    Yreka Blue Hor      3.13  90  Pn      Pn       09 20 45.5 -0.2
       comp=E,1.6nm,0.3s,baz=286,slow=13,SNR=48
YBH                                  Sn      Sn       09 21 24.4 +1.2
       comp=E,1.8nm,0.3s,baz=266,slow=13,SNR=3.2
YBH                                  LR      LR       09 21 49.2
       comp=E,786nm,20.6s,baz=317,slow=36
       comp=E,37nm,0.7s
YBH    Yreka Blue Hor      3.13  90  Pn      Pn       09 20 45.5 -0.2
LGPM   Granite Peak        3.19 105          Pn       09 20 45.8 -0.7
I03D   Drain, OR           3.22  53          Pn       09 20 44.8 -2.0
LBKM   Bonanza King        3.26 101          Pn       09 20 47.2 -0.3
KCPM   Cahto Peak          3.29 129          Pn       09 20 45.5 -2.5
KCPM                                 IAML             09 22 01.7
       comp=E,83nm,2.1s
BBOR   Butler Butte        3.31  70          Pn       09 20 47.5 -0.7
B040   Montague            3.34  88          Pn       09 20 48.6  0.0
LBPM   Beegum Peak         3.38 115          Pn       09 20 48.4 -0.8
KBNM   Bluenose Ridge      3.40 123          Pn       09 20 49.0 -0.4
KFPM   Farley Peak         3.42 128          Pn       09 20 48.1 -1.4
L04D   Klamath Falls       3.45  82  Pn      Pn       09 20 49.4 -0.6
GTC    Three Chop Rid      3.50 132          Pn       09 20 50.2 -0.6
LHEM   Herd Peak           3.51  91          Pn       09 20 51.4 +0.4
LMPM   Military Pass       3.56  94          Pn       09 20 52.7 +1.0
BUCK   Buck Mountain       3.73  49  Pn      Pn       09 20 53.1 -0.8
BUCK                                 IAML             09 21 38.7
       comp=E,101nm,1.8s
BUCK                                 IAML             09 21 43.7
       comp=N,125nm,1.4s
M04C   Macdoel             3.78  89          Pn       09 20 54.9 +0.2
LBFM   Black Fox Moun      3.78  95          Pn       09 20 56.1 +1.3
GVV    Valley View         3.79 121          Pn       09 20 54.4 -0.5
LGMM   Garner Mountai      3.79  92          Pn       09 20 55.4 +0.5
LSHM   Sage Hen Hill       3.80 104          Pn       09 20 55.7 +0.9
J04A   Umpqua Nationa      3.81  66  Pn      Pn       09 20 55.0 -0.2
COR    Corvallis           3.82  42          Pn       09 20 54.7 -0.4
COR                                  IAML             09 21 46.2
       comp=N,99nm,1.6s
COR                                  IAML             09 21 47.2
       comp=N,109nm,1.1s
I04A   Tendick Farm,       3.85  58          Pn       09 20 54.6 -0.9
K04D   Chiloquin, OR       3.91  76          Pn       09 20 55.9 -0.5
H04D   Lebanon             4.07  47          Pn       09 20 57.8 -0.8
G03D   McMinnville, O      4.30  37          Pn       09 21 00.8 -0.9
G03D                                 IAML             09 22 00.3
       comp=E,66nm,1.7s
H04A   Detroit Lake        4.48  49  Pn      Pn       09 21 02.9 -1.3
H04A                                 IAML             09 21 57.4
       comp=E,41nm,0.7s
H04A                                 IAML             09 22 02.8
       comp=N,33nm,0.5s
K05A   Summer Lake         4.55  76  IAML             09 23 33.6
       comp=N,62nm,4.7s
K05A                                 IAML             09 23 57.0
       comp=E,41nm,5.0s
I05D   Terrebonne, OR      4.79  56  IAML             09 23 02.5
       comp=N,44nm,4.6s
I05D                                 IAML             09 23 31.1
       comp=E,49nm,3.8s
PINE   Pine Mountain       4.81  64  IAML             09 22 24.3
       comp=N,38nm,4.6s
PINE                                 IAML             09 23 05.9
       comp=E,30nm,3.5s
F04A   Amboy               5.24  37          Pn       09 21 14.6 +0.1
F04A                                 IAML             09 22 19.8
       comp=E,38nm,0.9s
F04A                                 IAML             09 22 19.9
       comp=N,28nm,1.1s
G05A   Wamic               5.31  48          Pn       09 21 15.2 -0.4
LON    Longmire            6.14  35          Pn       09 21 27.0  0.0
NVAR   Mina Array Bea      7.40 114  LR      LR       09 24 52.6
       comp=N,554nm,18.2s,baz=291,slow=40
BMO    Blue Mountains      7.62  63  Pn      Pn       09 21 47.1 -0.3
SMMC   Simmler             8.44 138  P       Pn       09 21 59.1 +0.5
       baz=322
B08A   Colville Reser      8.45  37  Pn      Pn       09 21 58.7  0.0
VES    Vestal, Richgr      8.52 132  P       Pn       09 22 00.5 +0.9
       baz=317
ELK    Elko                8.84  93  LR      LR       09 25 36.2
       comp=N,611nm,21.4s,baz=278,slow=38
ISA    Isabella, Lake      9.00 130  Pn      Pn       09 22 06.4 +0.2
ISA    Isabella, Lake      9.00 130  P       Pn       09 22 08.0 +1.8
       baz=316
ARVC   Arvin               9.19 134  P       Pn       09 22 10.0 +1.2
       baz=319
NEW    Newport             9.46  44  LR      LR       09 25 55.0
       comp=N,1µm,19.0s,baz=230,slow=38
NEW    Newport             9.46  44  P       Pn       09 22 13.6 +1.1
       baz=230
LLLB   Lillooet            9.46  20  Pn      Pn       09 22 11.6 -0.8
BFSC   Mount Baldy Ra     10.49 133  P       Pn       09 22 27.5 +0.7
       baz=319
MSO    Missoula           10.55  57          Pn       09 22 27.4 -0.1
MSO    Missoula           10.55  57  P       Pn       09 22 28.4 +0.9
       baz=246
MCMT   McKenzie Canyo     10.67  69  Pn      Pn       09 22 29.4 +0.1
CIS    Catalina Islan     10.75 139  P       Pn       09 22 30.4 +0.2
       baz=324
DLMT   Dillon             10.96  66          Pn       09 22 34.4 +1.2
LRM    Limekiln Ridge     11.18  64          Pn       09 22 36.1 -0.1
PFO    Pinyon Flats O     11.62 131  LR      LR       09 27 09.4
       comp=N,216nm,18.1s,baz=326,slow=37
PFO    Pinyon Flats O     11.62 131  P       Pn       09 22 42.6 +0.3
       baz=318
TPFO   Pinon Flats        11.63 131  P       Pn       09 22 43.4 +1.1
       baz=318
BOZ    Bozeman (W)        11.68  66          Pn       09 22 43.2 +0.2
BOZ    Bozeman (W)        11.68  66  P       Pn       09 22 43.8 +0.8
       baz=256
MVU    Marysvale          11.71 102          Pn       09 22 44.0 +0.4
MSU    Marysvale          11.73 101          Pn       09 22 44.0 +0.2
HRY    Holter Researc     11.86  61  Pn      Pn       09 22 46.3 +0.9
IMW    Indian Meadow      11.90  75          Pn       09 22 46.6 +0.5
MOOW   Moose Ponds        12.03  75  Pn      Pn       09 22 48.1 +0.3
PDAR   Pinedale Array     12.88  80  Pn      Pn       09 23 00.8 +1.3
       baz=271,slow=8.9,SNR=3.1
PDAR                                 LR      LR       09 28 19.4
       comp=N,455nm,18.2s,baz=282,slow=39
BRLDA  Berland Lookou     13.82  24          Pn       09 23 12.5 +0.4
EDM    Edmonton           14.60  34          Pn       09 23 25.4 +2.7
214A   Organ Pipe Nat     14.94 127  P       Pn       09 23 28.4 +0.9
       baz=315
K22A   Casper             15.12  80  P       Pn       09 23 32.7 +2.8
K22A                                 IAmb    IAmb     09 23 42.6
       comp=Z,27nm,1.5s
K22A   Casper             15.12  80  P       Pn       09 23 30.1 +0.2
       baz=274
X18A   Snowflake          15.17 113  P       P        09 23 34.1 -1.7
X18A                                 IAmb    IAmb     09 23 46.8
       comp=Z,19nm,1.3s
T35M   Bob Quinn          15.34 353  P       Pn       09 23 34.1 +1.5
       baz=170
LAO    LASA Array         15.58  65  P       P        09 23 38.5 -1.7
LAO                                  IAmb    IAmb     09 23 49.0
       comp=Z,39nm,1.2s
LAO    LASA Array         15.58  65  P       Pn       09 23 36.5 +0.6
       baz=259,SNR=8.4
N23A   Red Feather La     15.76  86  P       Pn       09 23 38.5  0.0
       baz=280
S22A   4UR Ranch, Cre     15.95  98  P       Pn       09 23 41.2 +0.3
       baz=291
TUC    Tucson             15.96 121          P        09 23 43.5 -1.0
TUC    Tucson             15.96 121  P       Pn       09 23 41.6 +0.7
       baz=311
SIT    Sitka              16.19 343  P       Pn       09 23 45.7 +2.1
       baz=157
ISCO   Idaho Springs      16.24  90  P       Pn       09 23 45.7 +1.0
ISCO   Idaho Springs      16.24  90  P       Pn       09 23 46.0 +1.3
       baz=284
S34M   Telegraph Cree     16.34 352  P       Pn       09 23 47.6 +2.1
       baz=169
DLBC   Dease Lake         16.76 354  Pn      Pn       09 23 50.2 -0.7
       baz=192,slow=26,SNR=2.2
       comp=Z,2.0nm,1.0s
DLBC   Dease Lake         16.76 354  P       Pn       09 23 52.7 +1.7
       baz=172
RSSD   Black Hills        16.88  74  P       Pn       09 23 54.2 +1.5
       baz=270
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SDCO   Great Sand Dun     16.93  97  P       Pn       09 23 54.0 +0.6
       baz=290,SNR=20
R32K   Eaglecrest         17.17 346  P       Pn       09 23 57.4 +1.3
       baz=160
DGMT   Dagmar             17.31  60  IAmb    IAmb     09 24 07.1
       comp=Z,31nm,1.2s
DGMT   Dagmar             17.31  60  P       P        09 23 59.3 +0.1
       baz=256
ANMO   Albuquerque        17.41 107  P       Pn       09 24 00.4 +1.0
       baz=98,slow=7.8,SNR=4.9
ANMO                                 LR      LR       09 31 09.8
       comp=Z,226nm,21.1s,baz=34,slow=39
       comp=Z,1.6nm,0.9s
ANMO   Albuquerque        17.41 107  P       Pn       09 24 00.2 +0.8
       baz=299
319A   Douglas            17.53 121  P       P        09 24 04.1 +2.1
319A                                 IAmb    IAmb     09 24 15.9
       comp=Z,37nm,1.4s
121A   Cookes Peak, D     17.80 115  P       P        09 24 06.7 +1.8
121A   Cookes Peak, D     17.80 115  P       Pn       09 24 04.5 +0.3
       baz=307
HILA   High Level         17.88  17  P       Pn       09 24 03.7 -1.2
T25A   Trinidad           17.96  98  P       Pn       09 24 04.9 -1.3
T25A   Trinidad           17.96  98  P       Pn       09 24 06.8 +0.6
       baz=292
WTLY   Watson Lake, Y     18.36 357  P       Pn       09 24 11.5 +0.7
       baz=176
KOTAN  Kotaneelee Air     18.43   5  P       P        09 24 12.5 +1.1
       baz=187
P33M   Teslin, Yukon      18.78 351  P       Pn       09 24 17.1 +1.2
       baz=166
O30N   Mendenhall         19.80 347  P       Pn       09 24 28.2 +0.1
       baz=159
O29M   Mount Kennedy      19.86 343  P       P        09 24 28.6 +1.3
       baz=154
MNTX   Cornudas Mount     19.93 113  P       P        09 24 28.8 +0.6
       baz=306,SNR=8.2
HYT    Haines Junctio     20.11 345  P       P        09 24 30.6 +0.6
HYT    Haines Junctio     20.11 345  P       P        09 24 31.5 +1.4
       baz=156
MDND   Maddock            20.22  63  P       P        09 24 31.8 +0.6
       baz=263
GDL2   Guadalupe Moun     20.34 111  P       Pn       09 24 38.0 +3.2
YUK6   Outpost Mounta     20.39 344  P       P        09 24 34.1 +0.8
       baz=155
N31M   Braeburn, Yuko     20.42 348  P       P        09 24 35.1 +1.8
       baz=161
SUSD   Miller             20.52  73  IAmb    IAmb     09 24 41.5
       comp=Z,18nm,1.0s
SUSD   Miller             20.52  73  P       P        09 24 35.2 +0.6
       baz=272
MSTX   Muleshoe           20.54 105  P       P        09 24 35.4 +0.5
       baz=300
N30M   Aishikik Lake      20.62 346  P       P        09 24 36.5 +1.0
       baz=158
O28M   Mount Upton        20.65 341  P       P        09 24 36.7 +0.6
       baz=151
FARO   Faro, Yukon        20.81 351  P       P        09 24 36.0 -1.5
FARO   Faro, Yukon        20.81 351  P       P        09 24 38.5 +1.0
       baz=166
YUK4   Talbot Arm         20.82 344  P       P        09 24 38.0 +0.3
       baz=155
K31A   O'Neill            20.82  78  IAmb    IAmb     09 24 45.4
       comp=Z,25nm,1.1s
FFC    Flin Flon          20.88  43          P        09 24 36.6 -1.7
CBKS   Cedar Bluff        20.89  89  IAmb    IAmb     09 24 46.9
       comp=Z,25nm,1.3s
CBKS   Cedar Bluff        20.89  89  P       P        09 24 38.8 +0.2
       baz=287
AMTX   Amarillo           20.91 101  P       P        09 24 37.2 -1.6
AMTX   Amarillo           20.91 101  P       P        09 24 38.1 -0.7
       baz=297
M31M   Drury Creek, Y     20.91 350  P       P        09 24 38.1 -0.5
       baz=164
YUK8   Steele Glacier     21.00 343  P       P        09 24 40.0 +0.1
       baz=152
BARN   Barnard Glacie     21.26 340  P       P        09 24 43.0 +0.4
BARN                                 IAmb    IAmb     09 24 52.7
       comp=Z,32nm,1.3s
BGNE   Belgrade           21.46  81  P       P        09 24 44.7  0.0
       baz=281
WRGLY  Wrigley            21.55   4  P       P        09 24 46.0 +0.6
       baz=187
YUK3   Moose Creek        21.59 342  P       P        09 24 46.3 +0.2
       baz=152
M30M   Minto, Yukon       21.61 348  P       P        09 24 47.1 +0.9
       baz=160
M29M   Somme Creek        21.78 345  P       P        09 24 49.5 +1.4
       baz=156
MCARA  McCarthy VSAT      21.89 339  IAmb    IAmb     09 24 52.0
       comp=Z,33nm,1.4s
MCARA  McCarthy VSAT      21.89 339  P       P        09 24 50.0 +0.9
       baz=146
YKA    Yellowknife Ar     21.97  15  P       P        09 24 48.8 -1.1
       comp=Z,2.9nm,0.9s,baz=206,slow=11,SNR=25
YKA                                  LR      LR       09 33 56.8
       comp=Z,100nm,21.0s,baz=238,slow=38
       comp=Z,2.9nm,0.9s
BVCY   Beaver Creek       22.25 343  P       P        09 24 53.5 +0.5
       baz=152
ECSD   EROS Data Cent     22.26  75  IAmb    IAmb     09 25 00.9
       comp=Z,26nm,1.2s
ECSD   EROS Data Cent     22.26  75  P       P        09 24 53.4 +0.2
       baz=276,SNR=14
L29M   L29M               22.34 347  P       P        09 24 55.1 +1.2
       baz=158
LPIG   La Paz             22.42 137  LR      LR       09 32 31.3
       comp=Z,75nm,20.7s,baz=284,slow=34
OK038  West end E0370     22.42  94  IAmb    IAmb     09 24 58.5
       comp=Z,18nm,0.9s
M27K   Edge Creek, AK     22.43 342  IAmb    IAmb     09 24 59.1
       comp=Z,25nm,1.3s
M27K   Edge Creek, AK     22.43 342  P       P        09 24 55.9 +0.8
       baz=150
N25K   Chitina, Valde     22.51 338  P       P        09 24 56.1 +0.3
       baz=144,SNR=7.2
TXAR   Lajitas Array      22.55 116  P       P        09 24 58.5 +1.9
       comp=Z,0.5nm,0.6s,baz=298,slow=8.4,SNR=10
TXAR                                 LR      LR       09 34 31.0
       comp=Z,152nm,18.5s,baz=302,slow=39
       comp=Z,0.5nm,0.6s
TXAR   Lajitas Array      22.55 116  P       P        09 24 58.2 +1.7
M26K   Nabesna, AK        22.74 340  P       P        09 24 59.0 +0.8
       baz=148
AGMN   Agassiz Nation     22.76  63  P       P        09 24 58.5  0.0
AGMN                                 IAmb    IAmb     09 25 30.4
       comp=Z,16nm,1.2s
AGMN   Agassiz Nation     22.76  63  P       P        09 24 59.3 +0.8
       baz=265,SNR=5.5
KLU    Klutina            22.81 336  IAmb    IAmb     09 25 08.0
       comp=Z,25nm,1.5s
KLU    Klutina            22.81 336  P       P        09 24 59.8 +0.9
       baz=141
KAN14  Manchester OK      22.83  93  IAmb    IAmb     09 25 08.1
       comp=Z,24nm,1.1s
K29M   Barlow Dome        22.92 348  P       P        09 25 00.4 +0.2
       baz=159
ULM    Lac du Bonnet      23.00  58  P       P        09 25 01.9 +1.0
       comp=Z,5.8nm,0.7s,baz=265,slow=10,SNR=8.4
ULM                                  LR      LR       09 34 29.5
       comp=Z,233nm,20.0s,baz=304,slow=38
       comp=Z,5.8nm,0.7s
ULM    Lac du Bonnet      23.00  58  P       P        09 24 59.4 -1.6
ULM                                  IAmb    IAmb     09 25 04.2
       comp=Z,32nm,1.5s
BCAR   Beaver Creek A     23.03 343  P       P        09 25 01.7 +0.5
L27K   Beaver Creek,      23.03 343  P       P        09 25 01.4 +0.2
       baz=151
PWL    Port Wells         23.11 333  P       P        09 25 03.1 +1.1
       baz=136
WMOK   Wichita Mounta     23.11  99  IAmb    IAmb     09 25 11.6
       comp=Z,15nm,1.5s
WMOK   Wichita Mounta     23.11  99  P       P        09 25 03.1 +0.8
       baz=296
BRSE   Bradley Lake S     23.22 329  P       P        09 25 04.2 +1.0
       baz=130
L26K   Log Cabin Wild     23.36 341  P       P        09 25 05.4 +0.9
       baz=148,SNR=5.4
N35A   Tabor              23.43  82  P       P        09 25 05.5 +0.1
DAWY   Dawson             23.44 346  P       P        09 25 05.9 +0.5
DAWY                                 IAmb    IAmb     09 25 07.7
       comp=Z,19nm,1.4s
DAWY   Dawson             23.44 346  P       P        09 25 06.6 +1.2
       baz=156,SNR=7.5
SCM    Sheep Creek Mo     23.50 335  P       P        09 25 06.3 +0.3
SCM                                  IAmb    IAmb     09 25 12.8
       comp=Z,19nm,1.2s
SCM    Sheep Creek Mo     23.50 335  P       P        09 25 07.3 +1.3
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       baz=139
KNK    Knik Glacier       23.55 334  IAmb    IAmb     09 25 13.2
       comp=Z,22nm,1.4s
KNK    Knik Glacier       23.55 334  P       P        09 25 07.6 +1.1
       baz=137
M23K   Glacier View       23.59 335  P       P        09 25 07.6 +0.7
       baz=138
J29M   Klondike Camp      23.60 348  IAmb    IAmb     09 25 09.7
       comp=Z,10nm,1.1s
RC01   Rabbit Creek A     23.75 332  IAmb    IAmb     09 25 19.4
       comp=Z,16nm,1.3s
RC01   Rabbit Creek A     23.75 332  P       P        09 25 09.0 +0.6
       baz=134
SML    Sawmill            23.80 335  P       P        09 25 09.2 +0.3
SML                                  IAmb    IAmb     09 25 11.0
       comp=Z,24nm,1.5s
SML    Sawmill            23.80 335  P       P        09 25 09.4 +0.5
       baz=137
PMR    Palmer             23.90 333  IAmb    IAmb     09 25 23.7
       comp=Z,16nm,1.4s
PMR    Palmer             23.90 333  P       P        09 25 10.3 +0.5
       baz=136,SNR=6.4
Q19K   Cape Douglas,      23.92 325  P       P        09 25 10.4 +0.3
       baz=124
K27K   Chicken            23.93 343  P       P        09 25 11.3 +1.2
       baz=151
GHO    Glory Hole Cre     23.96 334  IAmb    IAmb     09 25 12.1
       comp=Z,14nm,1.1s
OK052  Battle Ridge R     24.06  94  IAmb    IAmb     09 25 31.6
       comp=Z,13nm,1.1s
B35A   Bob, Littlefor     24.18  63  IAmb    IAmb     09 25 29.5
       comp=Z,20nm,1.4s
RIDG   Independent Ri     24.33 341  P       P        09 25 14.6 +0.8
       baz=146
SUA    Susitna One        24.37 332  IAmb    IAmb     09 25 20.6
       comp=Z,11nm,1.3s
SUA    Susitna One        24.37 332  P       P        09 25 14.8 +0.5
       baz=133,SNR=5.2
EGAK   Eagle              24.41 345  P       P        09 25 15.2 +0.7
       baz=154
JCT    Junction City      24.53 109  P       P        09 25 15.5 -0.4
JCT    Junction City      24.53 109  P       P        09 25 15.9  0.0
       baz=305
K24K   Donnelly Dome      24.61 340  P       P        09 25 17.0 +0.6
       baz=144
WAT1   Susitna Watana     24.63 336  P       P        09 25 16.6 +0.1
       baz=139
SPCR   Spurr Chakacha     24.72 330  P       P        09 25 17.7 +0.2
       baz=130
TUL1   Leonard            24.84  93  P       P        09 25 18.9 +0.2
       baz=293
SPMN   Marine on St.      24.85  71  P       P        09 25 19.0 +0.3
       baz=274
P18K   Big Mountain,      24.86 325  P       P        09 25 18.4 -0.2
       baz=122
CUT    Chulitna           24.86 334  P       P        09 25 18.8 +0.3
       baz=135
O19K   Port Alsworth      24.93 327  P       P        09 25 19.6 +0.4
       baz=125
SKT    Skwentna           24.99 332  P       P        09 25 20.5 +0.7
       baz=133
O18K   Koktuh Hills       25.10 326  P       P        09 25 21.1 +0.3
       baz=123
EPYK   Eagle Plains       25.21 351  P       P        09 25 22.5 +0.8
       baz=163,SNR=11
I27K   Kandik River       25.24 346  P       P        09 25 22.5 +0.4
       baz=154
N19K   Bonanza Creek      25.35 328  P       P        09 25 23.7 +0.5
       baz=126
HDA    Harding Lake       25.41 340  IAmb    IAmb     09 25 26.2
       comp=Z,13nm,1.4s
HDA    Harding Lake       25.41 340  P       P        09 25 24.4 +0.9
       baz=143
MCK    McKinley           25.43 337  IAmb    IAmb     09 25 28.0
       comp=Z,10nm,1.0s
MCK    McKinley           25.43 337  P       P        09 25 24.7 +0.9
       baz=139
M20K   Styx River         25.50 331  IAmb    IAmb     09 25 40.6
       comp=Z,15nm,1.4s
M20K   Styx River         25.50 331  P       P        09 25 25.3 +0.8
       baz=130
TRF    Thorofare Moun     25.62 336  IAmb    IAmb     09 25 37.4
       comp=Z,19nm,1.4s
TRF    Thorofare Moun     25.62 336  P       P        09 25 26.4 +0.7
       baz=137
EYMN   Ely                25.66  64  P       P        09 25 28.1 +2.1
EYMN                                 IAmb    IAmb     09 25 30.2
       comp=Z,10nm,1.1s
EYMN   Ely                25.66  64  P       P        09 25 27.5 +1.5
       baz=269
IL31                      25.69 340  P       P        09 25 25.4 -0.6
IL31                                 IAmb    IAmb     09 25 27.6
       comp=Z,16nm,1.2s
ILAR   Eielson Array      25.69 340  P       P        09 25 26.6 +0.5
       comp=Z,4.4nm,0.9s,baz=156,slow=7.9,SNR=43
ILAR                                 PcP     PcP      09 28 56.3 +0.3
       comp=Z,0.6nm,0.8s,baz=173,slow=2.1,SNR=6.8
ILAR                                 LR      LR       09 33 54.2
       comp=Z,156nm,18.2s,baz=182,slow=33
       comp=Z,4.4nm,0.9s
ILAR   Eielson Array      25.69 340  P       P        09 25 26.3 +0.2
U38A   Gravette           25.69  91  P       P        09 25 26.7 +0.3
G30M   tAoh Zraii Nji     25.74 352  P       P        09 25 26.7 +0.1
       baz=164
WRH    Wood River Hil     25.76 339  IAmb    IAmb     09 25 33.7
       comp=Z,11nm,1.1s
H27K   Steamboat Moun     25.79 346  P       P        09 25 27.5 +0.4
       baz=154
PPLA   Purkeypile         25.84 333  P       P        09 25 28.2 +0.5
PPLA   Purkeypile         25.84 333  P       P        09 25 27.6 -0.1
       baz=133,SNR=6.5
O17K   Koliganek Bris     25.87 324  P       P        09 25 27.4 -0.3
       baz=120
P16K   Nushagak River     25.90 322  P       P        09 25 28.5 +0.5
       baz=118
F31M   Tsiigehtchic       25.95 354  P       P        09 25 28.4 -0.1
       baz=168
M19K   Big River Lodg     25.98 330  P       P        09 25 28.9 +0.2
       baz=128
PRP    Porcupine Dome     25.98 342  IAmb    IAmb     09 25 32.9
       comp=Z,9.3nm,1.4s
PRP    Porcupine Dome     25.98 342  P       P        09 25 29.4 +0.6
       baz=147
S39A   Bolivar            26.04  88  IAmb    IAmb     09 25 39.7
       comp=Z,18nm,1.4s
833A   Chaparral WMA,     26.09 112  P       P        09 25 30.0 -0.1
       baz=308
POKR   Poker Plat Res     26.10 340  P       P        09 25 30.2 +0.4
       baz=144
NEA2   Nenana             26.12 338  P       P        09 25 30.5 +0.5
       baz=140
L20K   Farewell, AK       26.15 331  P       P        09 25 30.4  0.0
       baz=130
CAST   Castle Rocks       26.17 334  P       P        09 25 30.9 +0.4
       baz=134
MDM    Murphy Dome        26.18 339  IAmb    IAmb     09 25 36.2
       comp=Z,8.7nm,1.3s
O16K   Kokwok River B     26.22 323  P       P        09 25 30.9  0.0
       baz=119
BPAW   Bear Paw Mtn.      26.31 336  P       P        09 25 30.0 -1.7
BPAW   Bear Paw Mtn.      26.31 336  P       P        09 25 31.4 -0.4
       baz=136
L19K   White Mountain     26.32 330  P       P        09 25 32.8 +0.9
       baz=128,SNR=9.8
G27K   Doyon Strip        26.34 347  P       P        09 25 31.1 -1.0
       baz=155
L40A   Anamosa            26.42  77  IAmb    IAmb     09 25 35.0
       comp=Z,8.5nm,0.8s
CHUM   Lake Minchumin     26.56 335  P       P        09 25 32.3 -1.7
       baz=134
FCC    Fort Churchill     26.58  39  P       P        09 25 33.4 -0.8
FCC                                  IAmb    IAmb     09 25 35.3
       comp=Z,9.7nm,1.4s
I23K   Minto, Yukon-K     26.63 339  P       P        09 25 35.3 +0.7
       baz=140,SNR=8.7
K20K   Telida             26.79 333  IAmb    IAmb     09 25 38.6
       comp=Z,13nm,1.2s
K20K   Telida             26.79 333  P       P        09 25 36.3 +0.3
       baz=131,SNR=6.2
INK    Inuvik             26.79 355  P       P        09 25 35.8 -0.2
       comp=Z,1.2nm,1.0s,baz=140,slow=4.3,SNR=3.6
       comp=Z,1.2nm,1.0s
INK    Inuvik             26.79 355  P       P        09 25 36.9 +0.9
       baz=169
H24K   Noodor Dome        26.80 341  IAmb    IAmb     09 25 41.9
       comp=Z,13nm,1.4s
H24K   Noodor Dome        26.80 341  P       P        09 25 35.7 -0.5
       baz=144
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G26K	Porcupine Rive	26.85	345	P	P	09 25 37.1	+0.6
	baz=151						
MLY	Manley	26.92	338	IAmb	IAmb	09 25 39.1	
	comp=Z,15nm,1.3s						
MLY	Manley	26.92	338	P	P	09 25 38.4	+1.1
	baz=138,SNR=8.6						
G25K	Bearman Lake	27.16	343	P	P	09 25 39.8	+0.5
	baz=147						
TTA	Tatalina	27.20	331	P	P	09 25 39.5	-0.4
	baz=127						
H23K	Yukon River	27.20	340	IAmb	IAmb	09 25 42.6	
	comp=Z,13nm,1.5s						
H23K	Yukon River	27.20	340	P	P	09 25 39.9	+0.1
	baz=141						
I21K	Tanana	27.39	337	IAmb	IAmb	09 25 43.9	
	comp=Z,15nm,1.2s						
I21K	Tanana	27.39	337	P	P	09 25 42.4	+1.0
	baz=136						
G24K	Hadweenzic Riv	27.41	342	P	P	09 25 42.8	+1.3
	baz=145,SNR=7.1						
E27K	Coleen River	27.59	348	P	P	09 25 43.9	+0.7
	baz=156,SNR=12						
C36M	Paulatuk	27.64	2	P	P	09 25 43.0	-0.5
	baz=185						
WHAR	Wooly Hollow	27.71	92	IAmb	IAmb	09 25 51.3	
	comp=Z,9.5nm,1.3s						
F25K	Christian Rive	27.77	345	P	P	09 25 46.0	+1.1
	baz=149						
H21K	Melozitna Rive	27.97	337	IAmb	IAmb	09 26 03.1	
	comp=Z,7.3nm,1.4s						
H21K	Melozitna Rive	27.97	337	P	P	09 25 47.4	+0.7
	baz=136						
G23K	Bananza Creek	28.02	341	P	P	09 25 48.5	+1.4
	baz=141						
F24K	Squaw Lake	28.17	343	P	P	09 25 50.2	+1.8
	baz=146						
E25K	Arctic Village	28.21	345	P	P	09 25 50.0	+1.2
	baz=150						
COLD	Coldfoot	28.47	341	P	P	09 25 52.0	+0.9
	baz=142						
G22K	Bettles	28.56	340	P	P	09 25 52.5	+0.7
	baz=139						
GCSA	Galena City Sc	28.63	333	P	P	09 25 53.0	+0.5
	baz=129						
E24K	Your Creek	28.76	343	P	P	09 25 54.8	+1.0
	baz=145						
G21K	Allakaket	28.79	338	P	P	09 25 54.7	+0.7
	baz=136						
L44A	Lake County Fo	28.81	76	P	P	09 25 54.7	+0.4
	baz=283						
E23K	Chandalar	29.00	343	P	P	09 25 56.6	+0.8
	baz=144,SNR=8.7						
F22K	John River	29.17	340	P	P	09 25 58.1	+0.7
	baz=139						
C27K	Jago River	29.22	348	P	P	09 25 59.0	+1.3
	baz=154						
F21K	Alatna River	29.30	339	P	P	09 25 59.8	+1.4
	baz=137						
D25K	Kavik River	29.40	346	P	P	09 25 60.0	+0.6
	baz=150						
E22K	Anaktuvuk Pass	29.57	341	P	P	09 26 02.2	+1.4
	baz=140						
C26K	Camden Bay	29.67	348	P	P	09 26 03.2	+1.5
	baz=152						
D23K	Nanushuk River	29.96	343	P	P	09 26 06.5	+2.2
	baz=143						
C24K	Franklin Bluff	30.17	345	P	P	09 26 07.1	+1.0
	baz=146						
A36M	Sachs Harbour	30.26	1	P	P	09 26 08.1	+1.2
	baz=182						
PLAL	Pickwick Lake	30.98	90	P	P	09 26 14.0	+0.3
ANM	Nome	31.59	329	IAmb	IAmb	09 27 00.8	
	comp=Z,7.5nm,1.4s						
ANM	Nome	31.59	329	P	P	09 26 19.0	+0.3
	baz=117						
TNA	Tin City	33.01	330	P	P	09 26 31.6	+0.5
	baz=116						
A21K	Barrow	33.08	343	P	P	09 26 32.0	+0.4
	baz=137,SNR=15						
BRAL	Brewton	33.48	95	P	P	09 26 35.2	-0.4
	baz=300						
TKL	Tuckaleechee C	33.92	86	LR	LR	09 41 01.8	
	comp=Z,183nm,19.8s,baz=309,slow=37						
SADO	Sadowa	34.49	69	LR	LR	09 41 24.4	
	comp=Z,204nm,18.5s,baz=300,slow=37						
RES	Resolute Bay	36.02	14	LR	LR	09 39 37.3	
	comp=Z,72nm,21.8s,baz=268,slow=33						
RES	Resolute Bay	36.02	14	P	P	09 26 56.9	-0.2
CMIG	Matias Romero	36.85	122	LR	LR	09 43 10.9	
	comp=Z,74nm,18.6s,baz=307,slow=38						
FRB	Frobisher Bay	39.70	36	LR	LR	09 44 13.1	
	comp=Z,218nm,18.4s,baz=226,slow=37						
SHEM	Shemya Is, Ala	40.41	306	LR	LR	09 40 26.3	
	comp=Z,52nm,21.3s,baz=346,slow=30						
SCHQ	Schefferville	40.75	50	LR	LR	09 45 24.6	
	comp=Z,174nm,18.4s,baz=212,slow=38						
SFJD	Kangerlussuaq	47.12	31	LR	LR	09 48 45.8	
	comp=Z,189nm,18.6s,baz=277,slow=37						
JTS	Las Juntas de	48.31	118	LR	LR	09 51 18.0	
	comp=Z,38nm,18.0s,baz=350,slow=39						
SEY	Seymchan	49.78	324	P	P	09 28 48.1	-0.5
	comp=Z,2.0nm,0.8s,baz=138,slow=13,SNR=24						
	comp=Z,2.0nm,0.8s						
PETK	Petropavlovsk-	49.95	310	P	P	09 28 49.3	-0.7
	comp=Z,0.8nm,0.5s,baz=86,slow=10,SNR=4.2						
PETK				LR	LR	09 45 56.7	
	comp=Z,34nm,21.6s,baz=92,slow=31						
	comp=Z,0.8nm,0.5s						
SUMG	Summit	50.25	23	*i* P	P	09 28 52.0	-0.5
DAG	Danmarks Havn	53.67	16	*i* P	P	09 29 16.4	-1.0
DBG	Daneborg	54.50	19	*i* P	P	09 29 22.4	-1.1
TIXI	Tiksi	55.13	338	LR	LR	09 52 07.9	
	comp=Z,38nm,18.4s,baz=7.5,slow=35						
SJG	San Juan	56.45	95	LR	LR	09 57 52.2	
	comp=Z,24nm,18.1s,baz=294,slow=40						
SPITS	Spitsbergen Ar	58.24	8	LR	LR	09 54 13.7	
	comp=Z,53nm,18.5s,baz=346,slow=35						
BORG	Borgarnes	59.08	29	LR	LR	09 55 17.5	
	comp=Z,97nm,19.3s,baz=306,slow=36						
SDV	Santo Domingo	59.19	107	LR	LR	09 56 32.6	
	comp=Z,22nm,21.2s,baz=270,slow=37						
ROSC	El Rosal	59.45	113	LR	LR	09 59 49.4	
	comp=Z,24nm,18.4s,baz=216,slow=40						
H11N3	WAKE ISLAND Hy	59.53	270	T	T	10 34 25.1	
	baz=52,slow=75,SNR=389						
H11N2	WAKE ISLAND Hy	59.53	270	T	T	10 34 26.9	
	baz=52,slow=75,SNR=243						
H11N1	WAKE ISLAND Hy	59.55	270	T	T	10 34 26.2	
	baz=52,slow=75,SNR=273						
YAK	Yakutsk	59.74	328	LR	LR	09 54 12.1	
	comp=Z,61nm,18.6s,baz=78,slow=34						
H11S1	WAKE ISLAND Hy	60.43	269	T	T	10 35 28.9	
	baz=52,slow=75,SNR=289						
H11S2	WAKE ISLAND Hy	60.43	269	T	T	10 35 33.0	
	baz=52,slow=75,SNR=425						
H11S3	WAKE ISLAND Hy	60.45	269	T	T	10 35 31.3	
	baz=52,slow=75,SNR=209						
PPT	Papeete	62.70	204	LR	LR	09 53 28.3	
	comp=Z,30nm,18.3s,baz=7.0,slow=32						
NRIK	Noril'sk	66.29	347	P	P	09 30 43.9	-0.2
	comp=Z,1.0nm,0.5s,baz=8.1,slow=7.1,SNR=4.2						
	comp=Z,1.0nm,0.5s						
NRIK	Noril'sk	66.29	347	P	P	09 30 43.1	-1.0
ARCES	ARCESS Array B	67.12	10	LR	LR	09 59 54.4	
	comp=Z,60nm,18.4s,baz=272,slow=36						
AFI	Afiamalu	69.16	227	LR	LR	09 54 05.6	
	comp=Z,107nm,21.9s,baz=31,slow=30						
NOA	NORSAR Array B	71.98	20	LR	LR	10 02 43.1	
	comp=Z,36nm,18.4s,baz=10.0,slow=36						
KSRS	Korea Array	75.73	308	P	P	09 31 42.0	0.0
	comp=Z,0.8nm,0.7s,baz=54,slow=6.2,SNR=2.3						
	comp=Z,0.8nm,0.7s						
SONM	Songino Array	79.06	327	P	P	09 32 00.5	-0.1
	comp=Z,1.6nm,0.9s,baz=42,slow=4.8,SNR=9.1						
	comp=Z,1.6nm,0.9s						
LPAZ	La Paz	79.21	123	P	P	09 32 03.0	+0.7
	comp=Z,0.9nm,0.8s,baz=338,slow=6.9,SNR=4.5						
	comp=Z,0.9nm,0.8s						
ZALV	Zalesovo Beam	80.80	342	P	P	09 32 09.2	-0.5
	comp=Z,0.6nm,0.4s,baz=30,slow=7.5,SNR=4.7						
	comp=Z,0.6nm,0.4s						
HHC	Hu-ho-hao-te	82.18	319	*e*P	P	09 32 17.0	-0.4
HHC				pmax	pmax		
	comp=Z,28nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,4.9s						
GERES	GERESS Array B	83.28	25	P	P	09 32 24.0	+1.0
	comp=Z,0.1nm,0.3s,baz=359,slow=3.9,SNR=3.6						
GERES				LR	LR	10 09 25.7	
	comp=Z,55nm,21.2s,baz=16,slow=36						
	comp=Z,0.1nm,0.3s						
VRAC	Vranov	83.75	23	LR	LR	10 10 19.6	
	comp=Z,55nm,18.9s,baz=344,slow=36						
ESDC	Sonseca Array	83.76	41	LR	LR	10 07 18.0	
	comp=Z,52nm,18.1s,baz=316,slow=34						
DAVOX	Davos/Dischmat	83.79	28	LR	LR	10 08 22.0	
	comp=Z,45nm,21.8s,baz=326,slow=35						
BVAR	Borovoye Array	84.37	350	P	P	09 32 28.4	0.0
	comp=Z,2.7nm,0.8s,baz=28,slow=3.5,SNR=9.9						
	comp=Z,2.7nm,0.8s						
KURBB	Kurchatov Arra	85.30	344	P	P	09 32 32.4	-0.6
	comp=Z,2.2nm,0.9s,baz=16,slow=4.8,SNR=11						
	comp=Z,2.2nm,0.9s						
AKASG	Malin Array Be	85.53	15	P	P	09 32 33.1	-1.1
	comp=Z,0.4nm,0.4s,baz=344,slow=4.7,SNR=8.7						
	comp=Z,0.4nm,0.4s						
KRVT	Keravat (AS076	86.21	261	LR	LR	10 06 16.2	
	comp=Z,96nm,18.1s,baz=180,slow=32						
AKTO	Aktyubinsk	88.03	357	P	P	09 32 46.0	-0.4
	comp=Z,2.4nm,0.9s,baz=340,slow=4.6,SNR=3.3						
AKTO				LR	LR	10 11 23.5	
	comp=Z,26nm,21.8s,baz=211,slow=35						
	comp=Z,2.4nm,0.9s						
MKAR	Makanchi Array	88.04	340	P	P	09 32 45.8	-0.8
	comp=Z,0.3nm,0.6s,baz=28,slow=5.8,SNR=4.5						
	comp=Z,0.3nm,0.6s						
DZM	Mont Dzumac	88.48	238	LR	LR	10 06 39.0	
	comp=Z,52nm,18.0s,baz=25,slow=32						
MDT	Midelt	88.74	45	LR	LR	10 10 16.0	
	comp=Z,24nm,20.3s,baz=334,slow=34						
WMQ	Urumqi	89.27	336	*e*P	P	09 32 53.0	+0.5
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
LZH	Lanzhou	89.64	321	*e*P	P	09 32 55.0	+0.5
LZH				pP	pwP	09 33 00.8	+0.5
LZH				sP	sP	09 33 03.0	+5.1
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
BBTS	Babate	94.86	66	LR	LR	10 12 49.2	
	comp=Z,88nm,20.8s,baz=258,slow=34						
BRTR	Keskin Array B	96.94	15	LR	LR	10 19 11.3	
	comp=Z,24nm,18.3s,baz=330,slow=37						
PZH	PanZhiHua	98.50	317	P	P	09 33 34.8	-0.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,170nm,5.1s						
IDI	Anoyia	99.03	23	LR	LR	10 21 21.1	
	comp=Z,25nm,18.4s,baz=271,slow=37						

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*ISK **27** 09:34:11.9, 38°.87N×26°.44E, h14^{km}, ML2.7/19*
*DDA **27** 09:34:12.2±0.0, 38°.86N×26°.41E, h7^{km}±2^{km}, ML2.4*
ISC 27 09:34:12.5±0.9**, 38°.86N**±0°.02×**26°.44E**±0°.03**, h16**^{km}±7^{km}**,**
n32, σ0^{s}.44/46**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARB	zmir-Karabur	0.20	186	P	Pg	09 34 17.0	-0.2
KARB				*i* AML	AML	09 34 20.0	
	comp=E,491nm,0.2s						
KARB				S	Sg	09 34 20.2	-0.1
KARB				*i* AML	AML	09 34 21.0	
	comp=N,490nm,0.3s						
DKL	Dikili	0.42	60	Pg	Pg	09 34 20.7	-0.4
DKL				Sg	Sg	09 34 27.1	+0.2
AYVA	Ayvalik	0.49	24	P	Pg	09 34 21.9	-0.5
ZEDA	zmir-Bergama	0.51	78	P	Pg	09 34 22.7	0.0
ZEDA				*i* AML	AML	09 34 30.0	
	comp=E,279nm,0.3s						
ZEDA				*i* AML	AML	09 34 30.0	
	comp=N,198nm,0.2s						
ZEDA				S	Sb	09 34 30.4	+0.1
URLA	Izmir	0.51	166	Pg	Pg	09 34 22.6	-0.1
URLA				Sg	Sb	09 34 30.3	-0.1
URLA	Izmir	0.51	166	P	Pg	09 34 22.4	-0.4
URLA				S	Sb	09 34 30.2	-0.2
URLA				*i* AML	AML	09 34 32.0	
	comp=E,269nm,0.3s						
URLA				*i* AML	AML	09 34 36.0	
	comp=N,236nm,1.0s						
CHOS	Chios island	0.56	213	Pg	Pg	09 34 23.6	0.0
CHOS				Sg	Sb	09 34 32.3	+0.5
SIGR	SIGRI	0.57	308	Pg	Pb	09 34 24.8	+0.6
SIGR				Sg	Sb	09 34 32.2	0.0
ZEYE	Izmir, Urla-Ze	0.62	175	P	Pg	09 34 24.6	-0.1
ZEYE				S	Sn	09 34 35.0	-1.3
ZEYE				*i* AML	AML	09 34 37.0	
	comp=N,724nm,0.4s						
ZEYE				*i* AML	AML	09 34 37.0	
	comp=E,796nm,0.3s						
GPNR	Gulpinar-Canak	0.64	338	Pg	Pg	09 34 24.8	-0.4
BLCB	Balcova	0.67	135	Pg	Pb	09 34 25.7	-0.1
BUHA	Balikesir, Bur	0.81	38	P	Pg	09 34 27.7	-0.6
BUHA				S	Sn	09 34 40.5	-0.6
BUHA				*i* AML	AML	09 34 42.0	
	comp=E,405nm,0.7s						
BUHA				*i* AML	AML	09 34 44.0	
	comp=N,198nm,0.4s						
BAYC	CANAKKALE_Bayr	0.89	5	P	Pb	09 34 28.9	-0.6
BAYC				S	Sg	09 34 42.3	+0.9
BAYC				*i* AML	AML	09 34 43.0	
	comp=N,248nm,0.6s						
BAYC				*i* AML	AML	09 34 43.0	
	comp=E,214nm,0.6s						
EZN	Ezine	0.97	355	Pg	Pb	09 34 30.9	-0.1
BOZC	Bozcaada	1.03	343	Pg	Pb	09 34 32.0	0.0
BOZC	Bozcaada	1.03	343	P	Pb	09 34 32.2	+0.2
BOZC				S	Sg	09 34 45.6	-0.2
BOZC				*i* AML	AML	09 34 48.0	
	comp=E,276nm,0.4s						
BOZC				*i* AML	AML	09 34 48.0	
	comp=N,154nm,0.2s						
STEP	BALIKESIR_Sava	1.12	62	P	Pn	09 34 33.8	+0.2
STEP				S	Sn	09 34 49.7	+1.0
STEP				*i* AML	AML	09 34 51.0	
	comp=N,245nm,0.8s						
STEP				*i* AML	AML	09 34 52.0	
	comp=E,278nm,0.6s						
ECEA	Canakkale, Ece	1.20	350	P	Pb	09 34 35.2	+0.3
ECEA				S	Sg	09 34 51.5	0.0
ECEA				*i* AML	AML	09 34 53.0	
	comp=N,327nm,0.6s						
ECEA				*i* AML	AML	09 34 53.0	
	comp=E,360nm,0.5s						
COMU	Canakkale	1.24	1	Pn	Pn	09 34 35.1	-0.1
CANM	Can-anakkale	1.25	22	Pn	Pn	09 34 35.2	-0.1
BALY	Balya	1.27	46	P	Pn	09 34 36.0	+0.3
BALY				S	Sg	09 34 54.8	+1.1
BALY				*i* AML	AML	09 34 56.0	
	comp=E,85nm,0.4s						
BALY				*i* AML	AML	09 34 58.0	
	comp=N,130nm,0.4s						
GCAM	G?zelcaml?	1.31	151	Pn	Pn	09 34 36.3	+0.1
BALB	Balikesir	1.36	55	Pn	Pn	09 34 36.8	-0.1
GADA	Gvkgeada	1.40	343	Pn	Pn	09 34 37.4	0.0
GONE	Gonen-Balikesi	1.53	39	Pn	Pn	09 34 39.3	+0.1
LPK	Lapseki	1.53	9	Pn	Pn	09 34 39.3	0.0
GELI	Tayfur-Gelibol	1.54	1	Pn	Pn	09 34 39.5	+0.2
KRBG	Karabiga-Canak	1.67	23	Pn	Pn	09 34 41.1	0.0
KULA	Kula-Manisa	1.77	100	Pn	Pn	09 34 43.1	+0.5
EDC	Edincik	1.85	36	Pn	Pn	09 34 43.7	+0.1
BODT	Bodrum	1.92	159	Pn	Pn	09 34 44.9	+0.3
SIMA	Simav-Kutahya	2.00	83	Pn	Pn	09 34 45.8	+0.1

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*IDC **27** 09:42:02.8±1.4, 6°.24S×154°.36E, h67^{km}±12^{km}, mb3.7/9, mbtmp4.0/13, MS3.5/6, Error ellipse: s-maj=15.8km s-min=10.7km az=40.0*
*NEIC **27** 09:42:02.1±2.4, 6°.14S±0°.06×154°.50E±0°.08, h54^{km}±8^{km}, mb4.5/20, Error ellipse: s-maj=14.6km s-min=3.4km az=53.0*
ISC 27 09:42:02.5±0.5**, 6°.17S**±0°.06×**154°.41E**±0°.06**, h61**^{km}**, n43,**
σ1^{s}.21/47**, mb4.2**/16**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	2.98	311	Pn	Pn	09 42 49.3	+2.0
KRVT	Keravat (AS076	3.01	308	P	Pn	09 42 47.9	+0.1
	35nm,0.3s,baz=267,slow=2.9,SNR=26						
KRVT				S	Sn	09 43 24.6	+1.9
	165nm,0.4s,baz=152,slow=19,SNR=7.1						
HNR	Honiara	6.37	121	P	Pn	09 43 35.1	+1.3
	474nm,0.3s,baz=260,slow=5.3,SNR=5.0						
HNR				S	Sn	09 44 47.9	+2.6
	554nm,0.4s,baz=188,slow=23,SNR=1.4						
HNR	Honiara	6.37	121	Pn	Pn	09 43 30.7	-3.1
PMG	Port Moresby	7.87	245	P	Pn	09 43 52.6	-1.7
	26nm,0.8s,baz=45,slow=11,SNR=6.7						
PMG				S	Sn	09 45 22.6	+0.7
	30nm,1.0s,baz=13,slow=23,SNR=4.5						
PMG				LR	LR	09 47 07.8	
	comp=Z,430nm,19.9s,baz=12,slow=39						
PMG	Port Moresby	7.87	245		Pn	09 43 54.8	+0.5
PATS	Pohnpei	13.50	17	Pn	Pn	09 45 08.9	-2.3
CTA	Charters Tower	15.94	209	P	Pn	09 45 41.6	-1.4
	8.0nm,0.9s,baz=32,slow=13,SNR=4.4						
CTA				LR	LR	09 50 46.7	
	comp=Z,180nm,20.9s,baz=77,slow=33						
CTAO	Charters Tower	15.94	209		P	09 45 46.0	+0.4
CTAO				IAmb	IAmb	09 45 51.8	
	comp=Z,47nm,1.5s						
LIFNC	LIFOU	19.12	141	Pn	Pn	09 46 22.8	+0.8
LIFNC				IAmb	IAmb	09 46 42.2	
	comp=Z,22nm,0.9s						
DZM	Mont Dzumac	19.62	145	P	P	09 46 26.0	-0.2
	comp=Z,3.5nm,0.6s,baz=269,slow=11,SNR=6.5						
DZM	Mont Dzumac	19.62	145	P	P	09 46 26.6	+0.4
DZM				IAmb	IAmb	09 46 29.7	
	comp=Z,29nm,1.5s						
OUENC	Ouen Island, N	20.12	145	P	P	09 46 31.8	+0.2
WB0	Warramunga Arr	23.69	233	P	P	09 47 09.3	+0.4
WRAB	Tennant Creek	23.81	233	P	P	09 47 09.9	-0.1
WRAB				IAmb	IAmb	09 47 10.7	
	comp=Z,12nm,1.0s						
WB2	Warramunga Arr	23.81	233	P	P	09 47 09.8	-0.3
WRA	Warramunga Arr	23.82	233	P	P	09 47 08.4	-1.7
	comp=Z,6.5nm,0.9s,baz=58,slow=9.6,SNR=21						
WRA				PcP	PcP	09 50 52.4	+0.2
	comp=Z,1.9nm,0.9s,baz=49,slow=1.8,SNR=6.6						
WRA				LR	LR	09 56 13.3	
	comp=Z,149nm,20.6s,baz=98,slow=36						
	comp=Z,6.5nm,0.9s						
WRA	Warramunga Arr	23.82	233	P	P	09 47 09.4	-0.7
MTN	Manton Dam	23.88	252	P	P	09 47 11.1	+0.4
MTN				IAmb	IAmb	09 47 42.7	
	comp=Z,16nm,1.1s						
ASAR	Alice Springs	26.30	226	P	P	09 47 30.6	-2.0
	comp=Z,1.7nm,0.9s,baz=59,slow=8.6,SNR=10						
ASAR				PcP	PcP	09 50 57.8	+0.1
	comp=Z,0.6nm,0.7s,baz=42,slow=2.2,SNR=4.6						
ASAR				ScP	ScP	09 54 33.7	+1.2
	comp=Z,0.5nm,0.7s,baz=38,slow=2.5,SNR=5.3						
ASAR				LR	LR	09 57 15.4	
	comp=Z,143nm,21.1s,baz=94,slow=35						
	comp=Z,1.7nm,0.9s						
STKA	Stephens Creek	28.24	203	LR	LR	09 59 28.8	
	comp=Z,102nm,19.0s,baz=24,slow=37						
RTZ	Ruatahuna	38.22	151	P	P	09 49 17.1	+0.5
BKZ	Black Stump Fm	38.43	152	P	P	09 49 19.7	+1.4
LTZ	Lake Taylor	39.74	159	P	P	09 49 31.4	+2.2
TPUB	Ta-pu	44.12	313	P	P	09 50 05.4	+0.2
SSLB	Suanglung	44.19	314	P	P	09 50 07.0	+1.2
KSRS	Korea Array	49.94	332	P	P	09 50 49.9	-0.3
	comp=Z,1.4nm,0.8s,baz=134,slow=8.2,SNR=4.2						
	comp=Z,1.4nm,0.8s						
PETK	Petropavlovsk-	59.12	2	LR	LR	10 17 40.8	
	comp=Z,24nm,19.0s,baz=131,slow=36						
SONM	Songino Array	68.33	327	P	P	09 52 57.6	+0.1
	comp=Z,0.4nm,0.5s,baz=130,slow=6.2,SNR=2.3						
	comp=Z,0.4nm,0.5s						
L19K	White Mountain	78.41	22	P	P	09 53 57.4	+1.0
L19K				IAmb	IAmb	09 54 34.9	
	comp=Z,11nm,1.4s						
IMAR	Indian Mountai	81.14	19	P	P	09 54 10.4	-0.6
KLU	Klutina	81.54	25	P	P	09 54 12.7	-0.6
KLU				IAmb	IAmb	09 54 29.4	
	comp=Z,8.5nm,1.5s						
MK31	Makanchi Array	82.41	319	P	P	09 54 18.3	+0.2
MKAR	Makanchi Array	82.41	319	P	P	09 54 18.2	+0.1
	comp=Z,0.4nm,0.6s,baz=113,slow=5.3,SNR=6.2						
	comp=Z,0.4nm,0.6s						
ILAR	Eielson Array	82.83	22	P	P	09 54 18.1	-1.8
	comp=Z,0.4nm,0.8s,baz=270,slow=4.4,SNR=5.0						
	comp=Z,0.4nm,0.8s						
QSPA	South Pole Qui	83.80	180	P	P	09 54 24.7	-0.4
QSPA				IAmb	IAmb	09 54 41.1	
	comp=Z,4.7nm,1.1s						
BMAR	Burnt Mountain	84.98	20	P	P	09 54 30.3	-0.6
EGAK	Eagle	84.99	23	P	P	09 54 30.6	-0.3
EGAK				IAmb	IAmb	09 55 12.6	
	comp=Z,5.5nm,1.4s						
NVAR	Mina Array Bea	91.67	52	P	P	09 55 04.2	+0.4
	comp=Z,2.0nm,0.8s,baz=257,slow=6.7,SNR=13						
	comp=Z,2.0nm,0.8s						
NV11	Mina Array Sit	91.79	52	P	P	09 55 04.7	+0.5
NV11				IAmb	IAmb	09 55 05.0	
	comp=Z,3.5nm,1.1s						
YKA	Yellowknife Ar	95.89	28	P	P	09 55 22.0	-0.2
	comp=Z,0.3nm,0.8s,baz=260,slow=4.9,SNR=3.3						
	comp=Z,0.3nm,0.8s						
PDAR	Pinedale Array	98.58	48	P	P	09 55 34.0	-1.2
	comp=Z,0.4nm,0.8s,baz=266,slow=3.6,SNR=3.5						
	comp=Z,0.4nm,0.8s						
TORD	Torodi Ar. Bea	152.24	286	PKPbc	PKPbc	10 01 51.7	-0.7
	comp=Z,3.8nm,0.9s,baz=73,slow=2.0,SNR=18						

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*AEIC **27** 09:53:45.7±2.3, 51°.1N±0°.3×179°.4W±0°.2, h33^{km}±9^{km}, Error ellipse: s-maj=40.0km s-min=12.6km az=164.0*
NEIC 27 09:53:46.1±2.5**, 51°.2N**±0°.5×**179°.3W**±0°.2**, h29**^{km}±35^{km}**,**
ML2.8(AEIC)**, Error ellipse: s-maj=67.7km s-min=16.4km az=177.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIWB	Kanaga Island	1.52	62	Pn	Pn	09 54 10.4	-0.9
KIWB					Sn	09 54 30.2	+0.1
ADK	Adak	1.80	65	Pn	Pn	09 54 15.2	+0.1
ADK					Sn	09 54 37.7	+0.8
GSTR	Great Sitkin T	2.23	64	Pn	Pn	09 54 21.1	-0.1
CLES	Cleveland East	6.05	70	Pn	Pn	09 55 12.2	-1.4
UNV	Unalaska Valle	8.27	66	Pn	Pn	09 55 43.8	-0.1
PET	Petropavlovsk	13.67	286	Pn	Pn	09 56 58.5	+0.7
ANM	Nome	15.30	23	Pn	Pn	09 57 18.1	-1.7
RIDG	Independent Ri	22.08	42	P	P	09 58 35.6	-2.9

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*IPEC **27** 09:54:28.4±2.1, 51°.44N×16°.24E, h1^{km}, ML2.5/4, Error ellipse: s-maj=13.0km s-min=7.6km az=27.0*
*PRU **27** 09:54:33.0±0.0, 51°.30N×16°.05E, h0^{km}*
ISC 27 09:54:29.7±1.1**, 51°.42N**±0°.05×**16°.11E**±0°.03**, h0**^{km}**, n24,**
σ1^{s}.05/50**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.59	169	*e*Pg	Pg	09 54 40.5	-0.5
KSP				*e*Sg	Sg	09 54 49.3	+0.7
CHVC	Chvalec	0.83	182	*e*PG	Pb	09 54 46.3	-0.8
CHVC				*e*SG	Sb	09 54 59.3	+0.5
	comp=Z,60nm,0.7s						
OSTC	Ostas	0.86	176	*e*PG	Pb	09 54 47.3	-0.3
OSTC				*e*SG	Sb	09 54 59.5	-0.3
	comp=Z,52nm,0.9s						
UPC	Upice	0.91	184	*e*PN	Pb	09 54 48.0	-0.5
UPC				*e*PG	Pn	09 54 49.5	-0.4
UPC				*e*SG	Sb	09 55 01.5	+0.3
	comp=Z,89nm,0.5s						
DPC	Dobruska-Polom	1.08	173	*e*PG	Pg	09 54 50.0	-0.4
DPC				*e*SG	Sb	09 55 06.0	+0.1
	comp=Z,48nm,0.8s						
PVCC	Panska Ves	1.32	228	*e*PG	Pb	09 54 55.6	+0.2
PVCC				*e*SG	Sg	09 55 13.1	+1.0
	comp=Z,78nm,0.3s						
KRLC	Kraliky	1.41	162	*e*PG	Pn	09 54 55.7	-1.0
KRLC				*e*SG	Sg	09 55 14.8	-0.2
	comp=Z,92nm,1.1s						
BRG	Berggiesshubel	1.47	249	Pg	Pn	09 54 56.7	-0.8
BRG				Sg	Sg	09 55 16.5	-0.5
BRG				Amp		09 55 19.2	
	comp=Z,62nm,0.3s						
GOPC	GO Pecny, Ondr	1.73	210	*e*PG	Pb	09 55 02.2	-0.1
GOPC				*e*SG	Sn	09 55 24.4	+0.6
	comp=Z,24nm,0.5s						
PRU	Pruhonice	1.75	215	*e*PG	Pg	09 55 03.0	-0.2
PRU				*e*SG	Sg	09 55 26.3	+0.6
	comp=Z,36nm,0.8s						

MORC	Moravsky Berou	1.88	150	ePn	Pn	09 55 01.5	-1.7
	baz=334						
MORC				eSg	Sn	09 55 26.7	-0.9
	comp=Z,26nm,0.7s,baz=334						
CLL	Collm	1.95	268	ePn	Pn	09 55 02.0	-2.1
CLL				ePg	Pb	09 55 06.0	-0.1
CLL				ex	x	09 55 09.0	
CLL				ex	x	09 55 21.0	
CLL				eSg	Sb	09 55 31.0	0.0
	comp=Z,32nm,0.7s						
OKC	Ostrava-Krasne	2.05	140	ePG	Pb	09 55 07.2	-0.6
OKC				eSG	Sg	09 55 34.1	-1.3
	comp=Z,54nm,0.8s						
VRAC	Vranov	2.13	171	ePn	Pn	09 55 05.1	-1.5
	baz=354						
VRAC				eSg	Sb	09 55 35.5	-0.8
	comp=Z,27nm,0.7s,baz=354						
KRUC	Moravsky	2.37	175	eSG	Sb	09 55 43.0	0.0
KRUC	Moravsky	2.37	175	eSg	Sb	09 55 42.9	0.0
	comp=Z,29nm,0.9s,baz=358						
NKC	Novy Kostel	2.61	244	ePN	Pn	09 55 12.8	-0.4
NKC				ePG	Pg	09 55 19.7	0.0
NKC				eSG	Sg	09 55 54.5	+1.0
	comp=Z,41nm,0.4s						
OJC	Ojcow	2.63	116	ePg	Pg	09 55 19.9	-0.2
OJC				eSg	Sg	09 55 54.4	+0.2
JAVC	Velka Javorina	2.75	158	ePn	Pn	09 55 13.3	-1.9
	baz=341						
KHC	Kasperske Hory	2.81	216	ePN	Pn	09 55 15.8	-0.1
KHC				ePG	Pb	09 55 22.1	+1.3
KHC				eSN	Sn	09 55 50.7	+0.2
KHC				eSG	Sg	09 56 00.0	+0.1
	comp=Z,18nm,0.6s						
CKRC	Cesky Krumlov	2.85	205	ePN	Pn	09 55 17.1	+0.7
CKRC				ePG	Pb	09 55 22.6	+1.2
CKRC				eSG	Sg	09 56 01.7	+0.5
	comp=Z,20nm,0.7s						
LANS	Liptovska Anna	3.13	135	eSG	Sg	09 56 10.7	+0.5
VYHS	Vyhne	3.42	148	ePG	Pg	09 55 36.7	+1.5
VYHS				eSG	Sg	09 56 19.0	-0.4
STHS	Stebnicka Huta	3.85	119	ePG	Pg	09 55 45.4	+2.0
STHS				eSG	Sg	09 56 37.4	+4.2

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*JMA **27** 10:22:19.7±0.2, 34°.4N±0°.8×137°.0E±0°.7, h353^{km}±1^{km}, MV3.8/39, ENSYUNADA*

*NIED **27** 10:22:19.7, 34°.37N×136°.97E, h353^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.88; $M_{\theta\theta}$0.48; $M_{\phi\phi}$-1.36; $M_{r\theta}$1.49; $M_{\theta\phi}$-0.98; $M_{\phi r}$-3.83; Fault plane solution: $M_0$4.38000×10^{15} NP1: ϕ_s162.00000°, δ85.00000°, λ72.00000°. NP2: ϕ_s56.00000°, δ19.00000°, λ163.00000°.*

*NEIC **27** 10:22:20.1±1.7, 34°.29N±0°.08×136°.94E±0°.09, h341^{km}±6^{km}, mb4.4/204 Error ellipse: s-maj=12.1km s-min=9.7km az=137.0*

*BGR **27** 10:22:20.4, 34°.22N×137°.01E, h347^{km}, mb6.2, mB_BB6.6*

*IDC **27** 10:22:20.1±0.7, 34°.26N×136°.98E, h347^{km}±6^{km}, mb3.8/32, mbtmp4.5/38, Error ellipse: s-maj=10.1km s-min=7.6km az=123.0*

ISC 27 10:22:20.1±0.5**, 34°.29N**±0°.05×**136°.97E**±0°.04**, h348**^{km}±4^{km}**, n300,** σ1s.04/250**, mb4.3**/138**, 4C-9D, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIE	Ise	0.24	295	P	Pn	10 23 04.3	+0.7
JIE				eS	S	10 23 38.1	-0.5
JAA	Atsumi	0.37	23	eP	Pn	10 23 04.2	+0.4
JAA				eS	S	10 23 38.8	0.0
TTO1	TONANKAI O.B.S	0.69	193	P	Pn	10 23 05.0	+0.7
TK02	Tokai 2	0.74	117	P	Pn	10 23 05.3	+0.9
TK02				eS	S	10 23 40.6	+0.6
INU	Inuyama	1.05	2	Pn	Pn	10 23 05.0	-0.7
INU	Inuyama	1.05	2	P	Pn	10 23 06.0	+0.3
JSG	Sagara	1.08	69		Pn	10 23 06.1	+0.3
JWY	Kouya	1.14	267	P	Pn	10 23 06.4	+0.1
JWY				eS	S	10 23 43.0	-0.3
JTNC	Tanabenakahech	1.22	248	P	Pn	10 23 06.9	+0.2
JTNC				eS	S	10 23 43.9	0.0
JYTA	Yamagatataniai	1.31	352	⇓P	Pn	10 23 07.1	+0.2
JYTA				⇓S	S	10 23 43.8	-0.7
JGF	Kuroka	1.34	14	Pn	Pn	10 23 06.8	-0.3
JGF	Kuroka	1.34	14	P	Pn	10 23 07.3	+0.2
JWT	Wachi	1.62	308	P	Pn	10 23 08.9	+0.2
JWT				eS	S	10 23 46.6	-1.1
JFNN	Fujinakano	1.68	57	eP	Pn	10 23 09.1	+0.1
JYN	Shimob	1.77	47	⇓P	Pn	10 23 09.4	-0.3
JOD2	Odawara 2	2.00	60	P	Pn	10 23 10.9	-0.2
JOD2				eS	S	10 23 51.8	-0.3
JKG	Kaga	2.05	345	⇓P	Pn	10 23 11.3	-0.1
JKG				⇓eS	S	10 23 51.7	-1.0
JAI	Aioi	2.15	257	P	Pn	10 23 12.4	+0.2
JAI				eS	S	10 23 53.7	-0.4
JRY	Ryogami san	2.34	42	⇓P	Pn	10 23 13.6	0.0
JRY				⇓eS	S	10 23 55.3	-1.4
MJAR	Matsushiro Arr	2.46	24	P	Pn	10 23 14.3	-0.3
	377nm,0.8s,baz=202,slow=8.6,SNR=611						
MJAR				S	S	10 23 58.7	+0.2
	23nm,0.7s,baz=106,slow=35,SNR=0.8						
MAJO	Matsushiro	2.46	24	Pn	Pn	10 23 13.9	-0.7
MAJO	Matsushiro	2.46	24	P	Pn	10 23 14.8	+0.2
MAT	Matsushiro	2.46	24	P	Pn	10 23 14.2	-0.4
MAT				S	S	10 23 57.0	-1.5
MJB9	Matsu-Tunnel	2.46	24	Pn	Pn	10 23 15.0	+0.4
JMN	Monobe	2.63	259	Pn	Pn	10 23 15.3	-0.7
JMN	Monobe	2.63	259	P	Pn	10 23 16.9	+0.8
JMN	Monobe	2.63	259	P	Pn	10 23 16.5	+0.4
JMN				eS	S	10 24 00.1	-1.0
JHJ2	Mitsune	2.65	116	Pn	Pn	10 23 16.5	+0.2
JHJ2	Mitsune	2.65	116	P	Pn	10 23 16.5	+0.2
JHS	Saijyo	3.25	284	Pn	Pn	10 23 21.7	+0.1
JHS	Saijyo	3.25	284	P	Pn	10 23 22.5	+0.9
JHS	Saijyo	3.25	284	P	Pn	10 23 22.2	+0.6
JHS				eS	S	10 24 10.8	-0.3
BSO1	Boso 1	3.33	83	P	Pn	10 23 20.0	-1.7
JOI	OKI	3.64	304	P	Pn	10 23 25.3	+0.1
JTO	Tosashimizu	3.76	249	P	Pn	10 23 26.9	+0.4
JTO				eS	S	10 24 19.4	-0.7
JSD	Sado	3.88	15	Pn	Pn	10 23 26.4	-1.2
JSD	Sado	3.88	15	P	Pn	10 23 27.2	-0.4
JMM	Marumori	4.72	40		Pn	10 23 34.8	-1.6
JMM	Marumori	4.72	40	P	Pn	10 23 35.1	-1.4
JNU	Nakatsue	5.21	259	P	Pn	10 23 42.4	+0.5
	53nm,0.8s,baz=71,slow=6.4,SNR=21						
JNU	Nakatsue	5.21	259	Pn	Pn	10 23 40.2	-1.7
JNU	Nakatsue	5.21	259	P	Pn	10 23 42.7	+0.8
JSU	Suzuyama	6.14	245	P	Pn	10 23 53.4	+0.9
JTU	Tsushima	6.26	274	P	Pn	10 23 54.6	+0.8
JTM	Tenmabayashi	7.25	25	P	Pn	10 24 04.5	-0.7
KSRS	Korea Array	7.99	296	P	Pn	10 24 15.3	+1.4
	20nm,0.8s,baz=111,slow=12,SNR=58						
KSRS				ScP	ScP	10 33 09.4	-0.1
	1.3nm,0.5s,baz=112,slow=0.3,SNR=6.5						
KSAR	Wonju Array Be	8.02	296	Pn	Pn	10 24 13.8	-0.5
KS19	Wonju Array Si	8.05	296		Pn	10 24 14.2	-0.5
JCJ	Chichijima	8.46	147	S	S	10 25 45.4	-12
	118nm,0.4s,baz=285,slow=21,SNR=5.5						
INCN	Inchon	8.97	294		Pn	10 24 26.4	+0.8
ERM	Erimo	9.12	30		Pn	10 24 26.2	-1.1
ERM	Erimo	9.12	30	P	Pn	10 24 27.4	+0.1
JEM	Erimo	9.12	30	P	Pn	10 24 27.6	+0.3
USA0B	Ussuriysk Arra	10.62	340	P	Pn	10 24 44.7	-0.5
USRK	Ussuriysk Ar.	10.62	340	P	P	10 24 45.7	-0.5
	6.7nm,0.7s,baz=161,slow=11,SNR=23						
USRK	Ussuriysk Ar.	10.62	340		Pn	10 24 45.2	0.0
ASAJ	Asahikawa	10.73	22	P	P	10 24 47.1	-0.4
	24nm,0.6s,baz=230,slow=13,SNR=36						
ASAJ				S	S	10 26 38.4	-8.6
	23nm,0.7s,baz=336,slow=24,SNR=7.3						
JKA	Kamikawa-asahi	10.74	22		Pn	10 24 45.3	-1.3
DL2	Dalian	13.15	295	P	P	10 25 14.3	-0.1
DL2				pmax	pmax		
	comp=Z,43nm,0.6s						
YSS	Yuzh-Sakhalins	13.38	17		P	10 25 17.2	+0.4
YSS	Yuzh-Sakhalins	13.38	17	P	Pn	10 25 19.3	+1.4
BNX	BinXian	13.57	330	⇑P	P	10 25 19.0	+0.1
BNX				pmax	pmax		
	comp=Z,15nm,0.8s						
BNX				pmax	pmax		
	comp=Z,160nm,4.5s						
KLR	Kul'dur	15.42	347	P	P	10 25 38.6	-0.5
	comp=Z,17nm,0.7s,baz=156,slow=9.9,SNR=59						
TIA	Tai'an	16.32	282	⇓P	P	10 25 49.3	+0.2
TIA				pmax	pmax		
	comp=Z,76nm,0.6s						
YHNB	Yeheng	16.60	239	P	P	10 25 50.7	-1.6
YHNB	Yeheng	16.60	239	P	P	10 25 53.0	+0.7
NACB	Ninganchiao	16.76	237	P	P	10 25 53.4	-0.5
NACB	Ninganchiao	16.76	237	P	P	10 25 54.0	0.0
SSLB	Suanglung	17.46	237	IAmb	IAmb	10 26 09.7	
	comp=Z,19nm,0.8s						
SSLB	Suanglung	17.46	237	P	P	10 26 00.1	-1.4
YULB	Yu-li	17.48	236	P	P	10 25 58.1	-3.5
YULB				IAmb	IAmb	10 26 09.1	
	comp=Z,23nm,0.9s						
YULB	Yu-li	17.48	236	P	P	10 26 00.8	-0.9
BJT	Baijiatuau	17.52	295	P	P	10 26 01.2	-0.8
BJT				IAmb	IAmb	10 26 01.7	
	comp=Z,10nm,0.7s						
BJT	Baijiatuau	17.52	295	P	P	10 26 03.0	+1.1
TPUB	Ta-pu	18.00	237	P	P	10 26 05.2	-2.1
TPUB	Ta-pu	18.00	237	P	P	10 26 06.4	-0.8
TWGBT	Beinan	18.01	235	P	P	10 26 07.5	+0.1
HNS	HongShan	18.30	286	⇑P	P	10 26 09.3	-1.0
HNS				pmax	pmax		
	comp=Z,95nm,0.8s						
WHN	Wuhan	19.45	265	⇑P	P	10 26 22.0	-0.5
WHN				pmax	pmax		
	comp=Z,160nm,1.0s						
LYN	LuoYang	20.20	278	⇓iP	P	10 26 29.3	-0.8
LYN				pmax	pmax		
	comp=Z,21nm,1.0s						
ENH	Enshi	23.55	268	P	P	10 26 59.9	-0.6
ENH	Enshi	23.55	268	P	P	10 27 00.6	+0.1
PETK	Petropavlovsk-	23.90	32	P	P	10 27 03.2	-0.1
	comp=Z,12nm,0.9s,baz=215,slow=9.0,SNR=12						
	comp=Z,12nm,0.9s						
PETK	Petropavlovsk-	23.90	32	P	P	10 27 03.9	+0.5
PET	Petropavlovsk	24.26	33	P	P	10 27 07.5	+0.9
ULN	Ulaanbaatar	26.12	310	P	P	10 27 24.1	+0.6
SONM	Songino Array	26.53	310	P	P	10 27 28.2	+1.1
	comp=Z,5.2nm,0.8s,baz=119,slow=9.0,SNR=26						
SONM				ScP	ScP	10 33 46.7	-0.9
	comp=Z,0.8nm,0.6s,baz=82,slow=4.0,SNR=5.7						
	comp=Z,5.2nm,0.8s						
SONM	Songino Array	26.53	310	P	P	10 27 28.5	+1.4
MA2	Magadan	26.88	16	P	P	10 27 29.9	+0.1
	comp=Z,15nm,0.8s,baz=197,slow=8.4,SNR=16						
	comp=Z,15nm,0.8s						
MA2	Magadan	26.88	16	P	P	10 27 30.3	+0.5
MA2				IAmb	IAmb	10 27 31.3	
	comp=Z,23nm,1.0s						
GTA	Gaotai	30.02	291	⇑P	P	10 27 58.0	0.0
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SEY	Seymchan	30.25	14	P	P	10 27 60.0	+0.5
	comp=Z,7.4nm,0.7s,baz=204,slow=7.8,SNR=28						
	comp=Z,7.4nm,0.7s						
GOMU	GeErMu	34.29	285	P	P	10 28 35.5	+0.4
GOMU				pmax	pmax		
	comp=Z,20nm,1.0s						
GOMU				pmax	pmax		
	comp=Z,38nm,5.8s						
TNCH	TengChong	34.49	265	eP	P	10 28 37.5	+0.7
TNCH				pmax	pmax		
	comp=Z,93nm,5.5s						
CRAI	Chiangrai	35.21	256	P	P	10 28 43.4	+0.7
CRAI				IAmb	IAmb	10 28 44.0	
	comp=Z,18nm,0.9s						
SIJI	Sorong	35.38	190	P	P	10 28 44.0	-0.1
	comp=Z,7.8nm,0.7s,baz=176,slow=21,SNR=4.5						
	comp=Z,7.8nm,0.7s						
PHRA	Phrae	36.24	254	P	P	10 28 52.0	+0.6
TOLI2	Tolitoli	36.31	208	P	P	10 28 51.1	-0.8
TOLI2				IAmb	IAmb	10 28 51.6	
	comp=Z,22nm,1.4s						
TOLI2	Tolitoli	36.31	208	P	P	10 28 51.7	-0.3
KIWB	Kanaga Island	37.12	48	P	P	10 28 58.5	+0.2
FAKI	Fak Fak	37.28	188	P	P	10 28 58.3	-1.7
FAKI				IAmb	IAmb	10 29 18.2	
	comp=Z,31nm,1.1s						
FAKI	Fak Fak	37.28	188	P	P	10 28 58.5	-1.5
	comp=Z,28nm,1.3s						
CMAR	Chiang Mai Arr	37.29	255	P	P	10 29 00.1	-0.1
	comp=Z,3.4nm,0.5s,baz=48,slow=6.8,SNR=24						
CMAR				ScP	ScP	10 34 24.6	0.0
	comp=Z,0.6nm,0.3s,baz=29,slow=3.6,SNR=6.2						
	comp=Z,3.4nm,0.5s						
ADK	Adak	37.41	48	P	P	10 29 01.3	+0.6
SANI	Sanana	37.59	198	P	P	10 29 02.3	-0.3
TIXI	Tiksi	37.67	356	P	P	10 29 02.1	-0.5
	comp=Z,6.1nm,0.4s,baz=270,slow=23,SNR=18						
	comp=Z,6.1nm,0.4s						
TIXI	Tiksi	37.67	356	P	P	10 29 02.4	-0.2
TIXI				IAmb	IAmb	10 29 03.1	
	comp=Z,8.9nm,0.8s						
BILL	Bilibino	37.70	18	P	P	10 29 03.7	+0.8
ZALV	Zalesovo Beam	41.18	315	P	P	10 29 31.6	+0.1
	comp=Z,0.9nm,0.5s,baz=96,slow=9.1,SNR=4.6						
ZALV				PcP	PcP	10 31 23.1	0.0
	comp=Z,0.7nm,0.6s,baz=101,slow=1.6,SNR=3.7						
ZALV				ScP	ScP	10 34 37.5	-1.5
	comp=Z,1.2nm,0.5s,baz=106,slow=3.2,SNR=6.3						
	comp=Z,0.9nm,0.5s						
NIKH	Nikolski High	42.30	47	P	P	10 29 41.4	+0.9
	comp=Z,168nm,1.3s						
KAPI	Kappang	42.34	206	P	P	10 29 40.6	-0.6
	comp=Z,10nm,0.6s,baz=32,slow=9.5,SNR=4.8						
	comp=Z,10nm,0.6s						
TAPN	Taplejung	42.53	274	eP	P	10 29 42.7	-0.4
	comp=Z,22nm,0.4s						
MK31	Makanchi Array	42.58	304	P	P	10 29 43.0	+0.1
MKAR	Makanchi Array	42.58	304	P	P	10 29 43.4	+0.5
	comp=Z,5.0nm,0.8s,baz=91,slow=9.7,SNR=48						
MKAR				ScP	ScP	10 34 43.1	-1.7
	comp=Z,0.8nm,0.4s,baz=75,slow=5.4,SNR=15						
	comp=Z,5.0nm,0.8s						
MKAR	Makanchi Array	42.58	304	P	P	10 29 43.2	+0.3
RAMN	Ramite	43.60	274	eP	P	10 29 51.0	-0.5
JIRN	Jiri	43.67	276	eP	P	10 29 52.4	+0.2
	comp=Z,106nm,0.4s						
GUN	Gumba	43.83	276	eP	P	10 29 53.4	-0.1
KULM	Kulim	44.30	238	P	P	10 29 56.4	-0.5
NRIK	Noril'sk	44.32	337	P	P	10 29 56.8	+0.5
	comp=Z,3.6nm,0.4s,baz=103,slow=9.9,SNR=2.9						
	comp=Z,3.6nm,0.4s						
NRIK	Noril'sk	44.32	337	P	P	10 29 55.6	-0.6
PKI	Pulchoki	44.34	276	eP	P	10 29 56.8	-0.7
	comp=Z,16nm,0.4s						
PKIN	Phulchoki	44.35	276	eP	P	10 29 56.6	-0.9
	comp=Z,22nm,0.4s						
DMN	Daman	44.58	276	eP	P	10 29 58.8	-0.4
	comp=Z,12nm,0.3s						
GKN	Gorkha	44.82	277	eP	P	10 30 00.7	-0.3
KURK	Kurchatov	44.84	310	P	P	10 30 00.6	0.0
KURK				IAmb	IAmb	10 30 01.3	
	comp=Z,8.6nm,0.6s						
KURBB	Kurchatov Arra	44.90	310	ScP	ScP	10 34 52.5	-1.7
	comp=Z,0.2nm,0.4s,baz=93,slow=4.4,SNR=2.2						
TNA	Tin City	45.01	29	P	P	10 30 03.2	+1.6
TNA				IAmb	IAmb	10 30 04.3	
	comp=Z,14nm,0.9s						
DANN	Dangsing	45.41	278	eP	P	10 30 05.9	+0.1
	comp=Z,127nm,0.5s						
ANM	Nome	45.80	31	P	P	10 30 09.5	+1.6
PYUN	Piuthan	46.14	278	eP	P	10 30 11.3	0.0
	comp=Z,51nm,0.5s						
MTN	Manton Dam	47.20	188	P	P	10 30 18.4	-0.7
MTN				IAmb	IAmb	10 30 18.8	
	comp=Z,13nm,0.6s						
RPSI	Rantau Prapat	47.35	237	P	P	10 30 19.3	-1.1
KSH	Kashi	48.24	295	P	P	10 30 31.5	+4.4
KSH				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AAK	Ala-Archa	48.63	299	P	P	10 30 29.3	-0.8
GSI	Gunungsitoli	49.28	237	P	P	10 30 34.3	-0.7
TTA	Tatalina	49.72	34	P	P	10 30 38.9	+1.1
SVW2	Sparrevohn	49.88	36	P	P	10 30 39.1	+0.2
P18K	Big Mountain,	50.07	38	IAmb	IAmb	10 30 42.5	
	comp=Z,20nm,0.8s						
O18K	Koktuh Hills	50.07	38	IAmb	IAmb	10 30 44.0	
	comp=Z,14nm,0.6s						
K20K	Telida	50.61	33	IAmb	IAmb	10 30 47.0	
	comp=Z,17nm,0.8s						
KK31	Karatay Array	51.39	301	IAmb	IAmb	10 30 51.3	
	comp=Z,9.7nm,0.6s						
KKAR	Karatay Array	51.39	301	IAmb	IAmb	10 30 51.3	
	comp=Z,9.7nm,0.6s						
PPLA	Purkeypile	51.47	34	IAmb	IAmb	10 30 53.0	
	comp=Z,12nm,0.6s						
KDAK	Kodiak Island	51.54	40	P	P	10 30 51.0	-0.2
	comp=Z,16nm,0.5s,baz=294,slow=2.8,SNR=132						
	comp=Z,16nm,0.5s						
NIL	Nilore	52.04	288	P	P	10 30 54.7	-0.6
NIL				IAmb	IAmb	10 30 56.5	
	comp=Z,9.3nm,0.7s						
SUA	Susitna One	52.20	35	IAmb	IAmb	10 30 58.7	
	comp=Z,16nm,0.7s						
BRLK	Bradley Lake	52.25	38	IAmb	IAmb	10 30 58.7	
	comp=Z,17nm,0.8s						
CUT	Chulitna	52.37	34	IAmb	IAmb	10 30 58.9	
	comp=Z,12nm,0.8s						
H23K	Yukon River	52.56	30	IAmb	IAmb	10 31 01.6	
	comp=Z,15nm,0.8s						
GAR	Garm	52.61	296	IAmb	IAmb	10 31 00.3	
	comp=Z,15nm,1.0s						
BWN	Browne	52.65	32	IAmb	IAmb	10 31 02.0	
	comp=Z,21nm,0.8s						
RC01	Rabbit Creek A	52.71	36	IAmb	IAmb	10 31 01.6	
	comp=Z,32nm,1.4s						
NEA2	Nenana	52.80	31	IAmb	IAmb	10 31 02.5	
	comp=Z,20nm,0.9s						
RND	Reindeer	52.96	33	IAmb	IAmb	10 31 02.9	
	comp=Z,11nm,0.8s						
PMR	Palmer	52.96	35	IAmb	IAmb	10 31 02.8	
	comp=Z,13nm,1.0s						
PMR	Palmer	52.96	35	P	P	10 31 02.4	+0.9
GHO	Glory Hole Cre	53.05	35	IAmb	IAmb	10 31 03.9	
	comp=Z,15nm,0.6s						
H24K	Noodor Dome	53.24	30	IAmb	IAmb	10 31 05.9	
	comp=Z,9.5nm,0.7s						
KNK	Knik Glacier	53.30	35	IAmb	IAmb	10 31 05.6	
	comp=Z,21nm,0.9s						
COLA	College	53.31	31	P	P	10 31 05.8	+1.9
SML	Sawmill	53.32	35	IAmb	IAmb	10 31 06.3	
	comp=Z,14nm,0.8s						
PWL	Port Wells	53.42	36	IAmb	IAmb	10 31 06.6	
	comp=Z,18nm,0.6s						
ILAR	Eielson Array	53.72	31	P	P	10 31 07.0	+0.1
	comp=Z,3.8nm,0.7s,baz=266,slow=4.9,SNR=40						
ILAR				PcP	PcP	10 32 06.5	-1.4
	comp=Z,0.4nm,0.6s,baz=270,slow=4.1,SNR=1.9						
	comp=Z,3.8nm,0.7s						
HDA	Harding Lake	53.73	32	IAmb	IAmb	10 31 08.6	
	comp=Z,12nm,1.0s						
SCM	Sheep Creek Mo	53.80	35	IAmb	IAmb	10 31 09.5	
	comp=Z,25nm,1.0s						
WB0	Warramunga Arr	53.81	183	P	P	10 31 06.6	-1.5
WRAB	Tennant Creek	53.98	183	P	P	10 31 08.6	-0.6
WRAB	Tennant Creek	53.98	183	P	P	10 31 08.7	-0.6
WB2	Warramunga Arr	53.99	183	P	P	10 31 08.8	-0.6
WRA	Warramunga Arr	53.99	183	P	P	10 31 08.6	-0.7
	comp=Z,6.4nm,0.3s,baz=0.1,slow=7.7,SNR=385						
	comp=Z,6.4nm,0.3s						
FYU	Fort Yukon	54.27	29	IAmb	IAmb	10 31 13.9	
	comp=Z,23nm,1.2s						
M24K	Tolsona, Glenn	54.30	34	P	P	10 31 12.1	+0.9
M24K				IAmb	IAmb	10 31 13.4	
	comp=Z,17nm,1.1s						
BMAR	Burnt Mountain	54.46	28	P	P	10 31 14.2	+2.0
KLU	Klutina	54.50	35	IAmb	IAmb	10 31 14.8	
	comp=Z,19nm,1.2s						
DIV	Divide	54.62	35	IAmb	IAmb	10 31 15.5	
	comp=Z,14nm,0.6s						
RIDG	Independent Ri	54.71	32	P	P	10 31 14.2	+0.2
EYAK	Cordova Ski Ar	54.72	36	P	P	10 31 15.1	+1.1
	comp=Z,19nm,0.6s						
SCRK	Sand Creek	55.06	32	IAmb	IAmb	10 31 18.1	
	comp=Z,12nm,1.0s						
DOT	Dot Lake	55.07	32	P	P	10 31 16.8	+0.2
N25K	Chitina, Valde	55.11	35	P	P	10 31 18.0	+1.0
I26K	Coal Creek Min	55.25	30	P	P	10 31 18.2	+0.4
MENT	Mentasta	55.32	33	P	P	10 31 19.5	+1.1
MENT				IAmb	IAmb	10 31 20.7	
	comp=Z,15nm,1.0s						
L26K	Log Cabin Wild	55.48	33	IAmb	IAmb	10 31 21.9	
	comp=Z,11nm,0.9s						
VRDI	Verde Repeater	55.72	35	IAmb	IAmb	10 31 23.5	
	comp=Z,21nm,1.2s						
M26K	Nabesna, AK	55.74	34	IAmb	IAmb	10 31 23.8	
	comp=Z,19nm,1.2s						
K27K	Chicken	55.89	32	IAmb	IAmb	10 31 24.6	
	comp=Z,18nm,1.2s						
MCARA	McCarthy VSAT	55.90	35	P	P	10 31 23.7	+1.3
L27K	Beaver Creek,	56.16	33	IAmb	IAmb	10 31 26.8	
	comp=Z,12nm,1.2s						
EGAK	Eagle	56.16	31	P	P	10 31 24.7	+0.5
EGAK				IAmb	IAmb	10 31 25.5	
	comp=Z,5.6nm,0.6s						
BCAR	Beaver Creek A	56.17	33	P	P	10 31 25.8	+1.4
BARN	Barnard Glacie	56.60	35	IAmb	IAmb	10 31 29.6	
	comp=Z,9.1nm,0.6s						
ABKAR	Akbulak array	56.94	310	P	P	10 31 30.1	+0.2
DAWY	Dawson	57.04	31	P	P	10 31 31.6	+1.2
I29M	Ogilvie Camp,	57.24	30	IAmb	IAmb	10 31 34.0	
	comp=Z,14nm,1.1s						
J29M	Klondike Camp	57.47	31	IAmb	IAmb	10 31 36.0	
	comp=Z,12nm,1.0s						
MBWA	Marble Bar	57.53	199	P	P	10 31 33.8	-0.4
AS01	Alice Springs	57.71	183	P	P	10 31 34.4	-1.1
	comp=Z,6.0nm,0.6s						
AS31	Alice Springs	57.71	183	P	P	10 31 35.2	-0.3
ASAR	Alice Springs	57.71	183	P	P	10 31 35.0	-0.5
	comp=Z,2.2nm,0.3s,baz=358,slow=5.5,SNR=141						
	comp=Z,2.2nm,0.3s						
ASAR	Alice Springs	57.71	183	P	P	10 31 35.2	-0.3
PSA00	Pilbara Seismi	57.90	199	P	P	10 31 36.5	-0.2
	comp=Z,28nm,3.0s						
PNL	Peninsula	58.01	36	P	P	10 31 38.2	+1.1
	comp=Z,34nm,1.4s						
INK	Inuvik	58.45	26	P	P	10 31 40.4	+0.5
	comp=Z,7.8nm,0.6s,baz=293,slow=6.4,SNR=45						
	comp=Z,7.8nm,0.6s						
INK	Inuvik	58.45	26	P	P	10 31 40.9	+1.0
HYT	Haines Junctio	58.63	35	P	P	10 31 43.3	+1.8
N31M	Braeburn, Yuko	59.26	34	IAmb	IAmb	10 31 48.5	
	comp=Z,14nm,1.1s						
WRKA	Warakurna	59.58	189	P	P	10 31 47.0	-1.2
M31M	Drury Creek, Y	59.70	33	IAmb	IAmb	10 31 50.8	
	comp=Z,7.0nm,0.9s						
SKAG	Skagway	60.06	36	P	P	10 31 51.7	+0.7
A36M	Sachs Harbour	60.13	21	P	P	10 31 52.5	+1.2
FARO	Faro, Yukon	60.16	33	P	P	10 31 53.5	+1.8
FARO				IAmb	IAmb	10 31 54.0	
	comp=Z,12nm,1.0s						
GIRL	Giralia	60.61	204	P	P	10 31 55.2	+0.1
	comp=Z,140nm,1.9s						
C36M	Paulatuk	61.41	24	P	P	10 32 00.6	+0.8
OOD	Oodnadatta	61.76	181	P	P	10 32 02.8	+0.1
	comp=Z,12nm,2.7s						
GEYT	Alibeck	61.97	298	P	P	10 32 04.5	+0.2
	comp=Z,3.6nm,0.6s,baz=114,slow=1.8,SNR=6.3						
	comp=Z,3.6nm,0.6s						
GEYT	Alibeck	61.97	298	P	P	10 32 04.8	+0.6
NOR	Nord	63.54	356	i P	P	10 32 13.5	-0.1
NOR				IAmb	IAmb	10 32 14.6	
	comp=Z,1.8nm,0.7s						
MULG	Mulgathing	64.29	183	P	P	10 32 18.5	-0.6
LCRK	Leigh Creek	64.40	179	P	P	10 32 19.9	0.0
ARCES	ARCESS Array B	65.26	339	P	P	10 32 24.7	-0.3
	comp=Z,7.4nm,1.0s,baz=64,slow=8.2,SNR=14						
	comp=Z,7.4nm,1.0s						
FORT	Forrest	65.27	188	P	P	10 32 24.6	-0.8
RES	Resolute Bay	66.12	13	P	P	10 32 30.4	+0.2
	comp=Z,6.7nm,0.6s,baz=307,slow=6.9,SNR=40						
	comp=Z,6.7nm,0.6s						
RES	Resolute Bay	66.12	13	IAmb	IAmb	10 32 31.5	
	comp=Z,7.6nm,0.8s						
YKA	Yellowknife Ar	67.96	28	P	P	10 32 42.1	+0.2
	comp=Z,2.8nm,0.7s,baz=294,slow=5.8,SNR=45						
YKA				PcP	PcP	10 33 06.2	+0.8
	comp=Z,0.6nm,0.7s,baz=298,slow=4.1,SNR=3.8						
	comp=Z,2.8nm,0.7s						
DAG	Danmarks Havn	68.16	354	i P	P	10 32 41.8	-1.1
DAG				IAmb	IAmb	10 32 43.8	
	comp=Z,6.6nm,0.8s						
TULEG	Thule	68.25	6	P	P	10 32 43.7	+0.3
TULEG				IAmb	IAmb	10 32 44.4	
	comp=Z,6.2nm,0.7s						
NEEM	North Greenlan	68.42	2	i P	P	10 32 44.4	-0.5
NEEM				IAmb	IAmb	10 32 45.9	
	comp=Z,10nm,0.5s						
NWAO	Narrogin (SRO)	69.39	198	P	P	10 32 50.1	-0.9
	comp=Z,24nm,0.9s						
FINES	FINESS Array B	69.51	331	P	P	10 32 51.2	-0.2

	comp=Z,2.6nm,0.5s,baz=67,slow=5.2,SNR=22						
	comp=Z,2.6nm,0.5s						
KBZ	**Khabaz**	**69.90**	**310**	P	**P**	**10 32 54.7**	**+0.7**
	comp=Z,4.4nm,0.8s,baz=37,slow=1.5,SNR=13						
	comp=Z,4.4nm,0.8s						
DBG	**Daneborg**	**70.61**	**354**	*i* P	**P**	**10 32 56.8**	**-1.0**
KULLO	**Kullorsuaq**	**71.00**	**4**	*i* P	**P**	**10 32 59.2**	**-0.9**
KULLO				IAmb	IAmb	10 33 01.1	
	comp=Z,8.9nm,0.7s						
UPNV	**Upernavik**	**72.83**	**4**	*i* P	**P**	**10 33 10.5**	**-0.4**
UPNV				IAmb	IAmb	10 33 12.1	
	comp=Z,10nm,0.7s						
SUMG	**Summit**	**73.37**	**359**	*i* P	**P**	**10 33 15.2**	**+0.6**
SUMG				IAmb	IAmb	10 33 16.5	
	comp=Z,6.9nm,0.6s						
EDM	**Edmonton**	**73.71**	**36**	P	**P**	**10 33 17.4**	**+0.9**
K02D	**Willamette Mer**	**73.77**	**49**	P	**P**	**10 33 18.4**	**+1.3**
AKASG	**Malin Array Be**	**74.19**	**321**	P	**P**	**10 33 19.4**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=63,slow=3.0,SNR=1.5						
	comp=Z,0.3nm,0.4s						
PINE	**Pine Mountain**	**74.86**	**47**	P	**P**	**10 33 25.1**	**+1.7**
YBH	**Yreka Blue Hor**	**74.88**	**50**	P	**P**	**10 33 24.8**	**+1.4**
	comp=Z,3.6nm,0.7s,baz=333,slow=6.8,SNR=5.8						
	comp=Z,3.6nm,0.7s						
NB2	**NORSAR Subarra**	**75.26**	**336**	P	**P**	**10 33 24.9**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=44,slow=5.9						
NOA	**NORSAR Array B**	**75.26**	**336**	P	**P**	**10 33 24.6**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=45,slow=5.6,SNR=4.1						
	comp=Z,0.9nm,0.6s						
MOD	**Modoc Plateau**	**76.29**	**49**	IAmb	IAmb	10 33 33.0	
	comp=Z,3.3nm,0.7s						
J08A	**Circle Bar Ran**	**76.59**	**47**	IAmb	IAmb	10 33 35.4	
	comp=Z,11nm,1.2s						
ICESG	**Greenland Ices**	**76.89**	**359**	*i* P	**P**	**10 33 34.6**	**+0.1**
WVOR	**Wild Horse Val**	**77.02**	**47**	IAmb	IAmb	10 33 37.0	
	comp=Z,3.1nm,0.6s						
BRTR	**Keskin Array B**	**77.89**	**310**	P	**P**	**10 33 41.3**	**+1.0**
	comp=Z,1.6nm,0.8s,baz=169,slow=2.5,SNR=3.9						
	comp=Z,1.6nm,0.8s						
FFC	**Flin Flon**	**77.93**	**31**	P	**P**	**10 33 40.5**	**+0.5**
FFC				IAmb	IAmb	10 33 41.0	
	comp=Z,4.5nm,0.6s						
FCC	**Fort Churchill**	**78.03**	**24**	IAmb	IAmb	10 33 41.5	
	comp=Z,5.3nm,0.8s						
PAHR	**Pah Rah Range**	**78.10**	**50**	IAmb	IAmb	10 33 42.8	
	comp=Z,4.8nm,0.7s						
MFID	**Camas Ranch**	**78.13**	**45**	P	**P**	**10 33 42.4**	**+0.9**
MFID				IAmb	IAmb	10 33 43.5	
	comp=Z,4.9nm,0.8s						
RAYN	**Ar Rayn**	**78.28**	**290**	P	**P**	**10 33 42.9**	**+0.3**
CMB	**Columbia Colle**	**78.41**	**52**	IAmb	IAmb	10 33 44.6	
	comp=Z,4.2nm,0.8s						
WAKR	**Walker**	**78.75**	**51**	IAmb	IAmb	10 33 47.1	
	comp=Z,4.9nm,0.8s						
HLID	**Hailey**	**78.87**	**45**	P	**P**	**10 33 46.8**	**+1.2**
HLID				IAmb	IAmb	10 33 47.8	
	comp=Z,3.0nm,0.8s						
BOZ	**Bozeman (W)**	**79.21**	**42**	IAmb	IAmb	10 33 49.2	
	comp=Z,6.3nm,1.1s						
KVN	**Kaiserville**	**79.29**	**50**	IAmb	IAmb	10 33 49.5	
	comp=Z,5.4nm,0.7s						
NVAR	**Mina Array Bea**	**79.52**	**51**	P	**P**	**10 33 50.3**	**+1.0**
	comp=Z,3.8nm,0.8s,baz=294,slow=5.1,SNR=27						
	comp=Z,3.8nm,0.8s						
LKWY	**Lake**	**80.53**	**42**	IAmb	IAmb	10 33 58.3	
	comp=Z,6.8nm,0.9s						
LCH	**Last Change Ra**	**80.64**	**51**	IAmb	IAmb	10 33 57.8	
	comp=Z,2.9nm,0.7s						
IMW	**Indian Meadow**	**80.66**	**43**	IAmb	IAmb	10 33 57.9	
	comp=Z,5.6nm,0.8s						
FLWY	**Flagg Ranch**	**80.67**	**42**	IAmb	IAmb	10 33 58.3	
	comp=Z,8.4nm,0.9s						
RLMT	**Red Lodge**	**80.80**	**41**	IAmb	IAmb	10 33 57.9	
	comp=Z,2.6nm,0.6s						
MOOW	**Moose Ponds**	**80.86**	**43**	P	**P**	**10 33 57.3**	**+1.1**
TPAW	**Teton Pass**	**80.90**	**43**	IAmb	IAmb	10 33 58.9	
	comp=Z,5.2nm,0.7s						
HVU	**Hansel Valley**	**80.92**	**45**	P	**P**	**10 33 57.6**	**+1.1**
HVU				IAmb	IAmb	10 33 58.7	
	comp=Z,6.2nm,0.7s						
SNOW	**Snow King Moun**	**81.03**	**43**	IAmb	IAmb	10 33 59.6	
	comp=Z,4.5nm,0.7s						
WCT	**Wildcat Mounta**	**81.56**	**51**	IAmb	IAmb	10 34 01.0	
	comp=Z,2.3nm,0.6s						
CLL	**Collm**	**81.59**	**328**	*e*P	**P**	**10 34 00.0**	**+0.4**
S11A	**Rachel**	**81.62**	**50**	IAmb	IAmb	10 34 02.2	
	comp=Z,7.1nm,0.9s						
HWUT	**Hardware Ranch**	**81.73**	**45**	IAmb	IAmb	10 34 03.0	
	comp=Z,9.0nm,1.0s						
DUG	**Dugway, Tooele**	**81.87**	**47**	IAmb	IAmb	10 34 03.6	
	comp=Z,4.8nm,1.1s						
TCUT	**Toone Canyon**	**82.13**	**45**	IAmb	IAmb	10 34 05.0	
	comp=Z,7.1nm,0.8s						
BW06	**Boulder Array**	**82.15**	**43**	IAmb	IAmb	10 34 04.3	
	comp=Z,4.9nm,0.8s						
PD31	**Pinedale Array**	**82.15**	**43**	P	**P**	**10 34 03.0**	**0.0**
PD31				IAmb	IAmb	10 34 04.3	
	comp=Z,4.6nm,0.8s						
PDAR	**Pinedale Array**	**82.15**	**43**	P	**P**	**10 34 03.4**	**+0.4**
	comp=Z,3.7nm,0.7s,baz=292,slow=2.4,SNR=38						
	comp=Z,3.7nm,0.7s						
PRN	**Pahroc Range**	**82.20**	**50**	IAmb	IAmb	10 34 05.5	
	comp=Z,6.6nm,1.2s						
NLU	**North Lily Min**	**82.47**	**46**	IAmb	IAmb	10 34 06.8	
	comp=Z,6.7nm,1.3s						
MPU	**Maple Canyon**	**82.69**	**46**	IAmb	IAmb	10 34 08.4	
	comp=Z,5.1nm,1.0s						
GERES	**GERESS Array B**	**83.05**	**326**	P	**P**	**10 34 06.8**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=51,slow=10,SNR=5.8						
	comp=Z,1.1nm,0.7s						
TCRU	**Three Creeks R**	**83.08**	**48**	IAmb	IAmb	10 34 10.2	
	comp=Z,4.1nm,0.7s						
PFO	**Pinyon Flats O**	**83.57**	**54**	P	**P**	**10 34 10.5**	**+0.2**
	comp=Z,9.0nm,0.8s,baz=309,slow=4.2,SNR=14						
	comp=Z,9.0nm,0.8s						
PFO	**Pinyon Flats O**	**83.57**	**54**	P	**P**	**10 34 10.3**	**+0.1**
LCMT	**Little Creek M**	**83.58**	**49**	IAmb	IAmb	10 34 12.4	
	comp=Z,4.9nm,0.9s						
MTPU	**Mount Pierson**	**83.60**	**48**	IAmb	IAmb	10 34 13.2	
	comp=Z,6.0nm,0.8s						
Q16A	**Castle Valley**	**83.66**	**47**	IAmb	IAmb	10 34 12.4	
	comp=Z,2.9nm,0.7s						
ULM	**Lac du Bonnet**	**83.75**	**31**	P	**P**	**10 34 10.5**	**-0.1**
	comp=Z,3.2nm,0.8s,baz=300,slow=5.7,SNR=4.7						
	comp=Z,3.2nm,0.8s						
KNB	**Kanab**	**83.84**	**49**	IAmb	IAmb	10 34 14.0	
	comp=Z,9.1nm,1.0s						
PV23	**Carpenter Ridg**	**85.26**	**46**	P	**P**	**10 34 20.0**	**+1.3**
PV11	**David Mesa, Pa**	**85.44**	**46**	IAmb	IAmb	10 34 21.7	
	comp=Z,5.9nm,0.8s						
SMCO	**Snowmass**	**85.98**	**44**	IAmb	IAmb	10 34 24.4	
	comp=Z,6.9nm,0.8s						
S22A	**4UR Ranch, Cre**	**87.02**	**45**	IAmb	IAmb	10 34 29.6	
	comp=Z,3.4nm,0.9s						
SDCO	**Great Sand Dun**	**87.79**	**45**	P	**P**	**10 34 31.9**	**+1.0**
T25A	**Trinidad**	**88.84**	**45**	IAmb	IAmb	10 34 37.5	
	comp=Z,4.5nm,0.9s						
G40A	**Rib Lake**	**90.02**	**31**	IAmb	IAmb	10 34 42.7	
	comp=Z,3.1nm,0.8s						
TX32	**Lajitas Array**	**94.66**	**50**	P	**P**	**10 35 03.5**	**+0.9**
TX32				IAmb	IAmb	10 35 03.8	
	comp=Z,2.6nm,0.8s						
TXAR	**Lajitas Array**	**94.66**	**50**	P	**P**	**10 35 03.5**	**+1.0**
	comp=Z,2.1nm,0.7s,baz=294,slow=3.2,SNR=31						
	comp=Z,2.1nm,0.7s						
ETMB	**Extrema**	**147.68**	**47**		**PKPbc**	**10 41 23.5**	**-1.0**
SAML	**Samuel**	**148.71**	**41**		**PKPbc**	**10 41 26.7**	**-0.5**
LPAZ	**La Paz**	**151.21**	**58**	PKPbc	**PKiKP**	**10 41 34.2**	**-0.1**
	comp=Z,2.1nm,0.6s,baz=25,slow=3.7,SNR=7.8						

*IDC **27** 10:27:39.1±0.7, 12.°48N×143.°78E, h0^{km}, mb3.8/11, mbtmp3.8/11, MS3.0/5, Error ellipse: s-maj=24.4km s-min=15.9km az=120.0*

ISC 27 10:27:43.0±0.8, **12.°4N**±0.°1×**143.°8E**±0.°1, **h27**^{km}, **n24**, σ**1.^{s}06**/15, **mb3.8**/11, **MS3.0**/3, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.54**	**42**	Pn	**Pn**	**10 28 08.5**	**-0.3**
	22nm,0.3s,baz=194,slow=13,SNR=16						
GUMO				Sn	**Sn**	**10 28 28.2**	**+0.2**
	32nm,0.3s,baz=338,slow=24,SNR=5.7						
GUMO				LR	LR	10 28 54.8	
	comp=Z,585nm,20.9s,baz=261,slow=49						
SIJI	**Sorong**	**18.16**	**224**	LR	LR	10 37 35.5	
	comp=Z,40nm,18.8s,baz=26,slow=33						
DAV	**Davao City (W)**	**18.73**	**255**	LR	LR	10 38 25.3	
	comp=Z,47nm,21.8s,baz=5.0,slow=34						
H11S3	**WAKE ISLAND Hy**	**22.85**	**72**	T	T	10 56 32.6	
	baz=258,slow=78,SNR=9.0						
H11S1	**WAKE ISLAND Hy**	**22.87**	**72**	T	T	10 56 33.7	
	baz=258,slow=78,SNR=8.9						
H11S2	**WAKE ISLAND Hy**	**22.87**	**72**	T	T	10 56 34.6	
	baz=258,slow=78,SNR=18						
H11N1	**WAKE ISLAND Hy**	**23.32**	**69**	T	T	10 57 03.0	
	baz=255,slow=75,SNR=35						
H11N2	**WAKE ISLAND Hy**	**23.33**	**69**	T	T	10 57 02.4	
	baz=255,slow=75,SNR=24						
H11N3	**WAKE ISLAND Hy**	**23.34**	**69**	T	T	10 57 03.1	
	baz=255,slow=75,SNR=30						
JNU	**Nakatsue**	**23.74**	**332**	LR	LR	10 41 54.3	
	comp=Z,27nm,18.1s,baz=148,slow=36						
MJAR	**Matsushiro Arr**	**24.52**	**349**	LR	LR	10 40 59.9	
	comp=Z,64nm,19.7s,baz=174,slow=33						
KAPI	**Kappang**	**29.53**	**235**	LR	LR	10 46 02.3	
	comp=Z,36nm,18.2s,baz=104,slow=37						
WRA	**Warramunga Arr**	**33.50**	**196**	P	**P**	**10 34 20.6**	**+0.2**
	5.0nm,0.7s,baz=18,slow=9.6,SNR=23						
	5.0nm,0.7s						
ASAR	**Alice Springs**	**37.17**	**195**	P	**P**	**10 34 52.0**	**+0.1**
	0.6nm,0.6s,baz=21,slow=13,SNR=7.8						
ASAR				PcP	**PcP**	**10 37 09.6**	**-2.2**
	0.4nm,0.7s,baz=42,slow=2.9,SNR=2.6						
	0.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**43.57**	**284**	P	**P**	**10 35 45.7**	**+0.7**
	0.6nm,0.3s,baz=89,slow=5.5,SNR=1.0						
	0.6nm,0.3s						
SONM	**Songino Array**	**47.09**	**326**	P	**P**	**10 36 11.9**	**-0.8**
	0.2nm,0.4s,baz=143,slow=7.5,SNR=1.4						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**61.60**	**317**	P	**P**	**10 38 00.0**	**+1.8**
	0.3nm,0.7s,baz=96,slow=9.6,SNR=3.0						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**64.83**	**320**	P	**P**	**10 38 18.8**	**-0.8**
	0.4nm,0.5s,baz=104,slow=7.0,SNR=5.9						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**70.05**	**25**	P	**P**	**10 38 51.2**	**-1.1**
	0.3nm,0.5s,baz=259,slow=5.9,SNR=8.0						
	0.3nm,0.5s						
BVAR	**Borovoye Array**	**70.19**	**322**	P	**P**	**10 38 53.3**	**-0.1**
	0.6nm,0.5s,baz=96,slow=8.9,SNR=2.8						
	0.6nm,0.5s						
INK	**Inuvik**	**75.82**	**22**	P	**P**	**10 39 26.6**	**+0.2**
	1.2nm,0.9s,baz=283,slow=5.7,SNR=3.9						
	1.2nm,0.9s						
YKA	**Yellowknife Ar**	**84.35**	**27**	P	**P**	**10 40 12.6**	**0.0**
	0.3nm,0.4s,baz=284,slow=4.8,SNR=8.6						
	0.3nm,0.4s						
NVAR	**Mina Array Bea**	**88.45**	**51**	P	**P**	**10 40 35.1**	**+1.6**
	2.1nm,0.7s,baz=260,slow=5.7,SNR=16						
	2.1nm,0.7s						
LPAZ	**La Paz**	**148.85**	**101**	PKPbc	**PKiKP**	**10 47 31.5**	**+0.2**
	2.1nm,0.8s,baz=237,slow=2.5,SNR=5.9						

*IDC **27** 10:48:48.4±0.6, 59.°17S×17.°78W, h0^{km}, mb4.5/17, mbtmp4.5/17, ML5.6/1, MS4.8/14, Error ellipse: s-maj=17.9km s-min=14.7km az=12.0*

*NEIC **27** 10:48:51.0±1.4, 59.°1S±0.°1×17.°7W±0.°2, h10^{km}±1^{km}, mb4.9/37, Ms_20 5.0/10, Mwb5.3/11, Error ellipse: s-maj=20.6km s-min=16.1km az=210.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.02; M$_{\theta\theta}$0.12; M$_{\phi\phi}$-0.13; M$_{r\theta}$0.34; M$_{\theta\phi}$0.95; M$_{\phi r}$0.29; Fault plane solution: M$_0$1.06000×10^{17} NP1:ϕ_s95.80000°, δ75.21000°, λ16.32000°. NP2:ϕ_s1.53000°, δ74.24000°, λ164.62000°. Principal axes: T 1.1343, Plg22.0000°, Azm319.0000°; N -0.1627, Plg68.0000°, Azm137.0000°; P -0.9716, Plg1.0000°, Azm229.0000°;*

*NEIC **27** 10:48:51.3, 59.°09S×17.°76W, h10^{km}*

*GCMT **27** 10:48:54.0±0.2, 59.°21S±0.°01×17.°36W±0.°02, h14^{km}±1^{km}, MW5.4/123, Moment Tensor Solution. s61,c92; s123,c212; Duration: 1.^{s}2 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.00±.03; M$_{\theta\theta}$-0.46±.04; M$_{\phi\phi}$0.46±.03; M$_{r\theta}$0.14±.07; M$_{\theta\phi}$1.37±.03; M$_{\phi r}$-0.02±.06; Best double couple: M$_0$1.45300×10^{17} NP1:ϕ_s261.00000°, δ88.00000°, λ-5.00000°. NP2:ϕ_s351.00000°, δ85.00000°, λ-178.00000°. Principal axes: T 1.4500, Plg3.0000°, Azm306.0000°; N 0.0050, Plg84.0000°, Azm63.0000°; P -1.4550, Plg5.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 10:48:50.2±0.5, **59.°14S**±0.°08×**17.°69W**±0.°09, **h10**^{km}, **n78**, σ**0.^{s}92**/64, **mb4.8**/25, **MS4.8**/18, **2D**, **East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**11.40**	**287**	Pn	**Pn**	**10 51 33.1**	**+0.2**
VNA1	**Neumayer--Stat**	**12.21**	**165**	P	**Pn**	**10 51 43.8**	**0.0**
VNA2	**Neumayer--Watz**	**12.58**	**164**	P	**Pn**	**10 51 47.9**	**-1.0**
	baz=332,slow=16						
VNA2				S	Sn	10 53 57.9	-11
	baz=338,slow=21						
VNA3	**Neumayer Olymp**	**12.60**	**168**	P	**Pn**	**10 51 48.5**	**-0.6**
VNA3				S	Sn	10 53 58.0	-11
SNAA	**Sanae**	**13.95**	**160**	P	**Pn**	**10 52 07.2**	**-0.4**
SNAA	**Sanae**	**13.95**	**160**	Pn	**Pn**	**10 52 06.8**	**-0.8**
	30nm,0.3s,baz=322,slow=14,SNR=296						
SNAA				Sn	Sn	10 54 29.8	-13
	1.3nm,0.3s,baz=354,slow=22,SNR=2.8						
SNAA				LR	LR	10 56 32.5	
	comp=Z,3µm,19.1s,baz=330,slow=33						
SNAA	**Sanae**	**13.95**	**160**	Pn	**Pn**	**10 52 07.4**	**-0.3**
TROLL	**Troll, Antarti**	**15.25**	**156**	P	**Pn**	**10 52 24.5**	**-0.8**
BELA	**Belgrano 2**	**19.65**	**191**		**Pn**	**10 53 20.1**	**+0.1**
BELA				IAmb	IAmb	10 53 31.2	
	comp=Z,57nm,0.6s						
ELIB	**Princess Elisa**	**20.71**	**145**	*d*P	**P**	**10 53 30.1**	**-0.2**
	comp=Z,40nm,1.2s						
ELIB				*d*x	x	10 53 52.4	
PMSA	**Palmer Station**	**22.08**	**236**	LR	LR	10 59 22.9	
	comp=Z,242nm,21.5s,baz=126,slow=29						
EFI	**East Falkland**	**23.79**	**270**	P	**P**	**10 54 02.3**	**-0.3**
GO10	**Punta Arenas**	**29.62**	**258**	P	**P**	**10 54 55.4**	**+0.2**
QSPA	**South Pole Qui**	**31.10**	**180**	P	**P**	**10 55 09.0**	**+0.6**
	comp=Z,6.6nm,0.8s,baz=214,slow=5.7,SNR=13						
	comp=Z,6.6nm,0.8s						
QSPA	**South Pole Qui**	**31.10**	**180**	P	**P**	**10 55 09.0**	**+0.6**
QSPA				IAmb	IAmb	10 55 30.6	
	comp=Z,24nm,1.0s						
MAW	**Mawson**	**34.53**	**138**	LR	LR	11 07 28.3	
	comp=Z,2µm,21.6s,baz=262,slow=32						
TRQA	**Tornquist**	**35.18**	**287**	P	**P**	**10 55 43.0**	**-1.0**
TRQA				IAmb	IAmb	10 55 47.8	
	comp=Z,16nm,1.1s						
AY01	**Puyuhuapi**	**35.92**	**269**	P	**P**	**10 55 51.7**	**+1.4**
AY01				IAmb	IAmb	10 55 57.3	
	comp=Z,14nm,0.8s						
SUR	**Sutherland**	**37.05**	**61**	P	**P**	**10 56 00.7**	**+0.4**
	comp=Z,5.5nm,0.7s,baz=198,slow=7.9,SNR=6.2						
SUR				LR	LR	11 07 32.5	
	comp=Z,1µm,19.3s,baz=200,slow=30						
	comp=Z,5.5nm,0.7s						
SUR	**Sutherland**	**37.05**	**61**	P	**P**	**10 56 00.9**	**+0.6**
SUR	**Sutherland**	**37.05**	**61**	IAMs_20	IAMs_20	11 10 35.4	
	comp=Z,2µm,21.0s						
PLCA	**Paso Flores**	**37.49**	**275**	P	**P**	**10 56 02.9**	**-0.9**
	comp=Z,2.4nm,0.9s,baz=133,slow=8.2,SNR=5.6						
PLCA				LR	LR	11 11 06.9	
	comp=Z,1µm,18.8s,baz=133,slow=36						
	comp=Z,2.4nm,0.9s						
PLCA	**Paso Flores**	**37.49**	**275**	P	**P**	**10 56 03.8**	**0.0**
BOSA	**Boshof**	**42.27**	**63**	P	**P**	**10 56 43.3**	**-0.4**
	comp=Z,2.9nm,0.7s,baz=208,slow=7.2,SNR=5.9						
BOSA				LR	LR	11 10 30.4	
	comp=Z,3µm,20.4s,baz=199,slow=31						
	comp=Z,2.9nm,0.7s						
CPUP	**Villa Florida**	**42.75**	**302**	P	**P**	**10 56 46.8**	**-0.7**
	comp=Z,4.4nm,0.9s,baz=124,slow=6.5,SNR=9.2						
CPUP				LR	LR	11 14 13.5	
	comp=Z,688nm,19.7s,baz=147,slow=36						
	comp=Z,4.4nm,0.9s						
CPUP	**Villa Florida**	**42.75**	**302**	P	**P**	**10 56 47.3**	**-0.2**
SBA	**Scott Base**	**43.23**	**181**	P	**P**	**10 56 52.6**	**+1.8**
SBA				IAmb	IAmb	10 57 06.8	
	comp=Z,49nm,1.4s						
PEL	**Peldehue**	**43.40**	**283**	IAMs_20	IAMs_20	11 13 06.4	
	comp=Z,2µm,18.0s						
CFA	**Coronel Fontan**	**43.42**	**287**	P	**P**	**10 56 51.9**	**-1.0**
	comp=Z,15nm,0.8s,baz=152,slow=8.9,SNR=15						
CFA				LR	LR	11 14 40.9	
	comp=Z,728nm,20.1s,baz=150,slow=36						
	comp=Z,15nm,0.8s						
VNDA	**Vanda**	**43.60**	**180**	P	**P**	**10 56 52.8**	**-1.0**
	comp=Z,3.0nm,1.0s,baz=201,slow=5.4,SNR=7.3						
VNDA				LR	LR	11 13 48.9	
	comp=Z,880nm,21.7s,baz=172,slow=34						
	comp=Z,3.0nm,1.0s						
VNDA	**Vanda**	**43.60**	**180**	P	**P**	**10 56 54.9**	**+1.2**
ZON	**Zonda**	**43.68**	**286**	P	**P**	**10 56 55.3**	**+0.2**
CO03	**El Pedregal**	**45.26**	**285**	P	**P**	**10 57 08.1**	**+0.4**
LBTB	**Lobatse**	**45.51**	**61**	P	**P**	**10 57 10.6**	**+0.9**
	comp=Z,6.1nm,0.8s,baz=202,slow=7.6,SNR=7.3						
LBTB				LR	LR	11 13 20.4	
	comp=Z,2µm,19.3s,baz=214,slow=32						
	comp=Z,6.1nm,0.8s						
LBTB	**Lobatse**	**45.51**	**61**	P	**P**	**10 57 10.4**	**+0.7**
LBTB				IAmb	IAmb	10 57 31.6	
	comp=Z,15nm,1.1s						
CO01	**Juntas del Tor**	**45.66**	**286**	P	**P**	**10 57 12.1**	**+1.0**
GO04	**Tololo Observa**	**45.85**	**285**	P	**P**	**10 57 12.9**	**+0.3**
AC05	**El Transito**	**46.69**	**287**	P	**P**	**10 57 20.7**	**+1.7**
LCO	**Las Campanas**	**46.76**	**286**	P	**P**	**10 57 20.4**	**+0.7**
TSUM	**Tsumeb**	**47.32**	**48**	LR	LR	11 13 31.0	
	comp=Z,2µm,20.8s,baz=157,slow=31						
TSUM	**Tsumeb**	**47.32**	**48**	IAMs_20	IAMs_20	11 13 08.6	
	comp=Z,2µm,21.0s						
AC04	**Llanos de Chal**	**47.60**	**286**	P	**P**	**10 57 26.7**	**+0.7**
BDFB	**Brasilia**	**48.83**	**320**	P	**P**	**10 57 35.9**	**+0.3**
	comp=Z,3.5nm,0.7s,baz=134,slow=6.5,SNR=5.2						
BDFB				LR	LR	11 15 26.8	
	comp=Z,2µm,19.4s,baz=140,slow=33						
	comp=Z,3.5nm,0.7s						
H10S2	**ASCENSION HYDR**	**50.12**	**4**	T	T	11 52 08.3	
	baz=38,slow=74,SNR=22						
H10S3	**ASCENSION HYDR**	**50.13**	**4**	T	T	11 51 50.9	
	baz=182,slow=74,SNR=44						
H10N3	**ASCENSION HYDR**	**51.24**	**4**	T	T	11 53 22.1	
	baz=181,slow=74,SNR=14						
H10N2	**ASCENSION HYDR**	**51.25**	**4**	T	T	11 53 08.6	
	baz=273,slow=74,SNR=5.9						
LVC	**Limon Verde**	**51.25**	**293**	P	**P**	**10 57 54.3**	**0.0**
	comp=Z,6.3nm,0.8s,baz=147,slow=9.0,SNR=8.7						
LVC				LR	LR	11 18 02.2	
	comp=Z,450nm,21.4s,baz=144,slow=34						
	comp=Z,6.3nm,0.8s						
LVC	**Limon Verde**	**51.25**	**293**	P	**P**	**10 57 54.3**	**0.0**
LVC				IAmb	IAmb	10 58 17.3	
	comp=Z,21nm,0.9s						
PB08	**IPOC Station P**	**53.48**	**294**	P	**P**	**10 58 11.4**	**+0.5**
PB08				IAmb	IAmb	10 58 23.1	
	comp=Z,17nm,1.0s						
SIV	**San Ignacio**	**53.49**	**305**	LR	LR	11 22 03.9	
	comp=Z,387nm,18.7s,baz=154,slow=37						
LPAZ	**La Paz**	**56.35**	**297**	P	**P**	**10 58 32.2**	**+0.3**
	comp=Z,2.0nm,0.5s,baz=125,slow=5.9,SNR=12						
LPAZ				LR	LR	11 21 54.3	
	comp=Z,546nm,21.9s,baz=174,slow=35						
	comp=Z,2.0nm,0.5s						
LPAZ	**La Paz**	**56.35**	**297**	P	**P**	**10 58 32.2**	**+0.3**
SAML	**Samuel**	**60.70**	**306**	P	**P**	**10 59 00.4**	**-1.1**
SAML				IAmb	IAmb	10 59 02.1	
	comp=Z,10nm,1.1s						
SAML	**Samuel**	**60.70**	**306**	IAMs_20	IAMs_20	11 30 08.0	
	comp=Z,929nm,19.0s						
NNA	**Nana**	**64.18**	**291**	IAMs_20	IAMs_20	11 19 21.3	
	comp=Z,1µm,20.0s						
DBIC	**Dimbokro**	**66.39**	**14**	P	**P**	**10 59 39.1**	**0.0**
	comp=Z,3.5nm,0.7s,baz=184,slow=9.2,SNR=5.6						
	comp=Z,3.5nm,0.7s						
ATAH	**Atahualpa**	**69.14**	**292**	P	**P**	**10 59 55.7**	**-1.4**
	comp=Z,2.5nm,0.7s,baz=151,slow=6.1,SNR=1.5						
	comp=Z,2.5nm,0.7s						
MBAR	**Mbarara**	**69.45**	**53**	IAMs_20	IAMs_20	11 26 41.9	
	comp=Z,1µm,19.0s						
BOAV	**Boa Vista**	**69.99**	**314**	P	**P**	**11 00 02.1**	**+0.4**
BOAV				IAmb	IAmb	11 00 22.9	
	comp=Z,15nm,1.2s						
TOA0	**Torodi Ar. Sit**	**73.74**	**20**	P	**P**	**11 00 23.8**	**-0.3**
TOA0				IAmb	IAmb	11 00 39.0	
	comp=Z,9.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.74**	**20**	P	**P**	**11 00 23.8**	**-0.3**
	comp=Z,16nm,0.3s,baz=196,slow=5.9,SNR=13						
	comp=Z,16nm,0.3s						
OTAV	**Otavalo**	**75.62**	**296**	P	**P**	**11 00 36.9**	**+1.1**
OTAV				IAmb	IAmb	11 01 02.4	
	comp=Z,15nm,1.2s						
ROSC	**El Rosal**	**77.83**	**302**	P	**P**	**11 00 48.5**	**+0.3**
	comp=Z,4.4nm,0.3s,baz=30,slow=20,SNR=1.5						
	comp=Z,4.4nm,0.3s						
BAUV	**El Baul**	**78.89**	**309**	P	**P**	**11 00 51.1**	**-2.4**
SDV	**Santo Domingo**	**79.89**	**307**	P	**P**	**11 00 58.5**	**-0.7**
	comp=Z,4.5nm,0.8s,baz=190,slow=11,SNR=6.8						
	comp=Z,4.5nm,0.8s						
SDV	**Santo Domingo**	**79.89**	**307**	P	**P**	**11 01 00.7**	**+1.5**
SDV				IAmb	IAmb	11 01 21.0	
	comp=Z,12nm,1.0s						
ASAR	**Alice Springs**	**94.23**	**154**	P	**P**	**11 02 07.4**	**-2.0**
	comp=Z,0.5nm,0.9s,baz=194,slow=4.8,SNR=2.6						
	comp=Z,0.5nm,0.9s						
F33A	**5 Mile Ranch,**	**122.78**	**305**		**PKPdf**	**11 07 44.9**	**-0.3**
FINES	**FINESS Array B**	**124.93**	**24**	PKP	**PKiKP**	**11 07 49.4**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=149,slow=3.2,SNR=1.5						
PZH	**PanZhiHua**	**127.40**	**101**	PKP	**PKiKP**	**11 07 57.3**	**+1.9**
SONM	**Songino Array**	**145.88**	**84**	PKPbc	**PKPdf**	**11 08 28.4**	**+0.2**
	comp=Z,2.9nm,1.0s,baz=216,slow=2.7,SNR=4.2						
DLBC	**Dease Lake**	**146.29**	**299**		**PKPdf**	**11 08 28.6**	**+0.2**
NRIK	**Noril'sk**	**148.12**	**40**	PKPbc	**PKPbc**	**11 08 34.5**	**+0.2**
	comp=Z,1.7nm,0.5s,baz=270,slow=3.0,SNR=1.6						
KSRS	**Korea Array**	**149.03**	**119**	PKPbc	**PKPbc**	**11 08 36.8**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=209,slow=2.0,SNR=2.8						
M30M	**Minto, Yukon**	**151.12**	**303**		**PKPbc**	**11 08 41.4**	**-0.5**
INK	**Inuvik**	**151.52**	**315**	PKPbc	**PKPbc**	**11 08 42.2**	**-0.4**
	comp=Z,6.9nm,1.0s,baz=137,slow=1.0,SNR=3.7						
DAWY	**Dawson**	**152.71**	**305**	PKPdf	**PKPdf**	**11 08 41.0**	**+2.6**

*NEIC **27** 10:48:51.2±2.7, 16.°97N±0.°07×95.°41W±0.°05, h101^{km}±11^{km}, mb4.6/168, Md4.6/93(MEX), Error ellipse: s-maj=10.6km s-min=6.6km az=187.0*

*MEX **27** 10:48:52.3±0.7, 17.°00N×95.°47W, h108^{km}±6^{km}, MD4.6*

*IDC **27** 10:48:53.3±0.8, 17.°17N×95.°01W, h104^{km}±4^{km}, mb3.6/11, mbtmp4.0/13, MS2.9/1, Error ellipse: s-maj=29.6km s-min=14.8km az=50.0*

ISC 27 10:48:51.5±0.6, **17.°04N**±0.°03×**95.°45W**±0.°02, **h109**^{km}±5^{km}, **n284**, σ**1.^{s}70**/278, **mb4.6**/54, **Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.54**	**84**	P	**Pn**	**10 49 08.1**	**-0.5**
	10µm,0.4s,baz=248,slow=8.8						
CMIG				S	**Sn**	**10 49 20.0**	**-1.4**
	4µm,0.4s,baz=132,slow=21,SNR=62						
CMIG	**Matias Romero**	**0.54**	**84**	*i* P	**Pn**	**10 49 08.4**	**-0.2**
CMIG				*i* S	**Sn**	**10 49 20.0**	**-1.4**
NEUV	**Arroyo Zacate**	**0.75**	**333**	*i* P	**Pn**	**10 49 10.1**	**-0.2**
NEUV				*i* S	**Sn**	**10 49 23.6**	**-0.7**
NILT	**Santiago Nilte**	**0.93**	**121**	*e*P	**Pn**	**10 49 11.4**	**-0.5**
NILT				*i* S	**Sn**	**10 49 25.9**	**-1.3**
OXBJ	**Oaxaca**	**1.22**	**271**		**Pn**	**10 49 15.8**	**+0.6**
OXBJ					**Sn**	**10 49 33.6**	**+0.3**
OXBJ	**Oaxaca**	**1.22**	**271**	*e*P	**Pn**	**10 49 15.8**	**+0.6**
OXBJ				*e*S	**Sn**	**10 49 33.6**	**+0.3**
OXIG	**Oaxaca**	**1.23**	**272**		**Pn**	**10 49 16.3**	**+0.9**
OXIG					**Sn**	**10 49 33.6**	**+0.2**
VHO	**Vista Hermosa**	**1.23**	**272**	*e*P	**Pn**	**10 49 16.3**	**+0.9**
VHO				*e*S	**Sn**	**10 49 33.6**	**+0.2**
MIHL	**Minatitlan**	**1.28**	**42**	*e*P	**Pn**	**10 49 16.0**	**+0.3**
MIHL				*e*S	**Sn**	**10 49 33.5**	**-0.5**
TUIG	**Tuzandepetl**	**1.39**	**45**	*e*P	**Pn**	**10 49 17.2**	**+0.2**
TUIG				*e*S	**Sn**	**10 49 34.3**	**-2.0**
HUIG	**Huatulco**	**1.41**	**207**		**Pn**	**10 49 15.9**	**-1.4**
HUIG					**Sn**	**10 49 35.0**	**-1.8**
HUIG	**Huatulco**	**1.41**	**207**	*e*P	**Pn**	**10 49 15.9**	**-1.4**
HUIG				*e*S	**Sn**	**10 49 35.0**	**-1.8**
PMUV	**Sontecomapan**	**1.53**	**12**	*e*P	**Pn**	**10 49 18.6**	**-0.1**
PMUV				*e*S	**Sn**	**10 49 37.5**	**-1.9**
PANG	**Puerto Angel**	**1.68**	**216**		**Pn**	**10 49 18.4**	**-2.2**
PANG					**Sn**	**10 49 40.9**	**-1.7**
PANG	**Puerto Angel**	**1.68**	**216**	*e*P	**Pn**	**10 49 18.4**	**-2.2**
PANG				*e*S	**Sn**	**10 49 40.9**	**-1.7**
PEIG	**Puerto Escondi**	**1.93**	**238**		**Pn**	**10 49 21.9**	**-1.7**
PEIG					**Sn**	**10 49 46.6**	**-1.5**
PEIG	**Puerto Escondi**	**1.93**	**238**	*e*P	**Pn**	**10 49 21.9**	**-1.7**
PEIG				*e*S	**Sn**	**10 49 46.6**	**-1.5**
YOIG	**Yosondua**	**2.02**	**265**		**Pn**	**10 49 25.1**	**+0.2**

YOIG					Sn	10 49 49.0	-1.5
YOIG	Yosondua	2.02	265	eP	Pn	10 49 25.1	+0.2
YOIG				eS	Sn	10 49 49.0	-1.5
TXIG	Tlaxiaco	2.23	276		Pn	10 49 28.8	+1.1
TXIG					Sn	10 49 53.7	-1.7
TXIG	Tlaxiaco	2.23	276	eP	Pn	10 49 28.8	+1.1
TXIG				eS	Sn	10 49 53.7	-1.7
TGIG		2.24	96		Pn	10 49 27.7	+0.1
TGIG					Sn	10 49 53.0	-2.2
TGIG		2.24	96	eP	Pn	10 49 27.7	+0.1
TGIG				eS	Sn	10 49 53.0	-2.2
TGBT	Tuxtla Gutierr	2.27	96		Pn	10 49 28.4	+0.4
TGBT					Sn	10 49 54.0	-1.9
TGBT	Tuxtla Gutierr	2.27	96	eP	Pn	10 49 28.4	+0.4
TGBT				eS	Sn	10 49 54.0	-1.9
TPIG	Tehuac#an	2.28	307		Pn	10 49 30.5	+2.2
TPIG					Sn	10 49 57.2	+0.8
TPIG	Tehuac#an	2.28	307	eP	Pn	10 49 30.5	+2.2
TPIG				eS	Sn	10 49 57.2	+0.8
HLIG	Huajuapan de L	2.38	290		Pn	10 49 30.9	+1.3
HLIG					Sn	10 49 57.8	-1.0
HLIG	Huajuapan de L	2.38	290	eP	Pn	10 49 30.9	+1.3
HLIG				eS	Sn	10 49 57.8	-1.0
OZST	Orizaba	2.40	319	eP	Pn	10 49 29.4	-0.3
OZST				eS	Sn	10 49 58.4	-0.6
PCIG		2.52	122		Pn	10 49 31.5	+0.3
PCIG		2.52	122	eP	Pn	10 49 31.5	+0.3
PCIG				eS	Sn	10 50 02.2	+0.6
PNIG	Pinotepa	2.65	256		Pn	10 49 31.8	-1.1
PNIG					Sn	10 50 01.1	-3.6
PNIG	Pinotepa	2.65	256	i P	Pn	10 49 31.8	-1.1
PNIG				eS	Sn	10 50 01.1	-3.6
JAUV	Jalcomulco	2.65	331	eP	Pn	10 49 32.5	-0.5
JAUV				eS	Sn	10 50 03.3	-1.5
FTIG	Fresnillo de T	2.71	289		Pn	10 49 35.6	+1.8
FTIG					Sn	10 50 05.1	-1.1
FTIG	Fresnillo de T	2.71	289	eP	Pn	10 49 35.6	+1.8
FTIG				eS	Sn	10 50 05.1	-1.1
LVIG	Laguna Verde	2.82	341	eP	Pn	10 49 33.7	-1.5
LVIG				eS	Sn	10 50 05.0	-3.8
TLIG	Tlapa	3.02	280		Pn	10 49 39.4	+1.4
TLIG	Tlapa	3.02	280	eP	Pn	10 49 39.4	+1.4
TLIG				i S	Sn	10 50 07.3	-6.4
MGIG	Malinaltepec	3.05	274		Pn	10 49 39.1	+0.7
MGIG	Malinaltepec	3.05	274	eP	Pn	10 49 39.1	+0.7
MGIG				eS	Sn	10 50 08.1	-6.4
CCIG	Comitan	3.26	103		Pn	10 49 41.1	-0.1
CCIG	Comitan	3.26	103	eP	Pn	10 49 41.7	+0.5
CCIG				eS	Sn	10 50 16.0	-3.4
PATR	El Naranjo	3.63	121	eP	Pn	10 49 47.4	+1.2
PATR				eS	Sn	10 50 28.9	+0.5
PAVE	Pavencul	3.64	120	eP	Pn	10 49 47.1	+0.9
PAVE				eS	Sn	10 50 29.2	+0.6
CXUV	Coxquihui	3.72	327	eP	Pn	10 49 47.9	+0.7
CXUV				eS	Sn	10 50 24.0	-6.3
THIG		3.72	124		Pn	10 49 48.6	+1.4
THIG		3.72	124	eP	Pn	10 49 48.6	+1.4
THIG				eS	Sn	10 50 31.2	+1.0
CHUJ	Union Juarez	3.75	121	eP	Pn	10 49 48.6	+0.8
CHUJ				eS	Sn	10 50 30.4	-0.8
YAIG	Yautepec	3.89	298		Pn	10 49 52.2	+2.6
YAIG					Sn	10 50 33.2	-1.3
YAIG	Yautepec	3.89	298	eP	Pn	10 49 52.2	+2.6
YAIG				eS	Sn	10 50 33.2	-1.3
MPVM	San Francisco	4.01	303	eS	Sn	10 50 28.6	-8.9
DAIG	Los Arroyos	4.02	270		Pn	10 49 50.6	-0.5
DAIG	Los Arroyos	4.02	270	eP	Pn	10 49 50.6	-0.5
DAIG				eS	Sn	10 50 33.2	-4.3
MEIG	Mezcala	4.08	283		Pn	10 49 54.0	+1.9
MEIG					Sn	10 50 36.4	-2.5
MEIG	Mezcala	4.08	283	eP	Pn	10 49 54.0	+1.9
MEIG				eS	Sn	10 50 36.4	-2.5
PLIG	Platanillo	4.09	290		Pn	10 49 54.4	+2.2
PLIG					Sn	10 50 36.9	-2.3
PLIG	Platanillo	4.09	290	eP	Pn	10 49 54.4	+2.2
PLIG				eS	Sn	10 50 36.9	-2.3
XCVM	Xochimilco	4.12	303	eP	Pn	10 49 52.4	-0.4
XCVM				eS	Sn	10 50 34.9	-5.4
HUEH	Huehuetenango	4.16	114		Pn	10 49 51.0	-2.3
VTVM	Tizayuca	4.17	311	eP	Pn	10 49 58.2	+4.8
VTVM				eS	Sn	10 50 36.4	-5.0
UNM	Universidad Na	4.21	303	eS	Sn	10 50 41.0	-1.4
MAVM	Malinalco, Edo	4.30	297	i P	Pn	10 50 07.5	+12
MAVM				eS	Sn	10 50 56.3	+12
AOVM	Tlapan	4.30	302	eP	Pn	10 49 55.9	+0.5
AOVM				eS	Sn	10 50 42.0	-2.8
INVM	La Marquesa	4.36	301	eP	Pn	10 49 54.7	-1.4
INVM				eS	Sn	10 50 37.6	-8.6
RTAL	Retalhuleu	4.39	124		Pn	10 49 56.7	+0.5
ZUVM	ZUMPANGO	4.42	309		Pn	10 49 59.4	+2.5
ZUVM	ZUMPANGO	4.42	309	eP	Pn	10 49 59.4	+2.5
ZUVM				eS	Sn	10 50 37.6	-10
SCIG	Sabancuy	4.49	64	eP	Pn	10 49 56.1	-1.3
SCIG				eS	Sn	10 50 43.1	-5.5
CAIG	El Cayaco	4.61	271		Pn	10 49 59.0	-0.1
CAIG	El Cayaco	4.61	271	eP	Pn	10 49 59.0	-0.1
CAIG				eS	Sn	10 50 45.0	-6.6
DEIG	Demacu	4.70	314	eP	Pn	10 50 03.1	+2.6
DEIG				eS	Sn	10 50 54.6	+0.4
DHIG	Demacu	4.70	314		Pn	10 50 03.1	+2.6
ARIG	Puente Sto Nin	4.83	286		Pn	10 50 04.5	+2.3
ARIG					Sn	10 50 54.5	-2.6
ARIG	Puente Sto Nin	4.83	286	eP	Pn	10 50 04.5	+2.3
ARIG				eS	Sn	10 50 54.5	-2.6
CTUV	Llano Grande	5.19	329	eP	Pn	10 50 07.3	+0.4
CTUV				eS	Sn	10 51 00.0	-5.7
PETF	Flores	5.34	91		Pn	10 50 08.7	-0.3
ZIIG	Zihuatanejo	5.78	276		Pn	10 50 16.3	+1.4
ZIIG	Zihuatanejo	5.78	276	eP	Pn	10 50 16.3	+1.4
ZIIG				eS	Sn	10 51 19.6	-0.3
ESQI	Esquipulas	6.37	112		Pn	10 50 24.1	+1.1
TEIG	Tepich	7.50	64	Pn	Pn	10 50 35.8	-2.5
HZTE	Horizontes, Gu	11.44	122	Pn	Pn	10 51 31.9	+0.1
ORTG	Ortega, Santa	11.75	123		Pn	10 51 35.7	-0.2
833A	Chaparral WMA,	11.80	343	Pn	Pn	10 51 37.3	+0.9
833A	Chaparral WMA,	11.80	343	P	Pn	10 51 33.9	-2.5
	baz=160,SNR=5.2						
DUNO	Dulce Nombre,	11.89	124		Pn	10 51 38.0	+0.4
JTS	Las Juntas de	12.20	122	P	Pn	10 51 41.4	-0.4
	4.8nm,0.3s,baz=321,slow=12,SNR=9.6						
JTS				LR	LR	10 56 30.6	
	comp=Z,51nm,19.4s,baz=271,slow=38						
JTS	Las Juntas de	12.20	122	Pn	Pn	10 51 42.8	+1.0
JACO	JACO, Garabito	12.80	124	Pn	Pn	10 51 49.5	-0.1
RIMA	Rio Macho	13.38	121		Pn	10 51 57.0	-0.4
435B	Jarrell	13.82	352	Pn	Pn	10 52 03.5	+0.7
435B	Jarrell	13.82	352	P	Pn	10 52 00.1	-2.7
	baz=171						
JCT	Junction City	13.96	344		Pn	10 52 04.8	+0.2
JCT	Junction City	13.96	344	P	Pn	10 52 03.3	-1.3
	baz=162,SNR=5.7						
TXAR	Lajitas Array	14.37	330	P	P	10 52 12.9	-0.9
	0.9nm,0.6s,baz=149,slow=13,SNR=14						
TXAR	Lajitas Array	14.37	330	Pn	Pn	10 52 11.3	+1.3
TX31	Lajitas Ar. Si	14.38	330	P	P	10 52 13.0	-0.8
TX32	Lajitas Array	14.38	330	P	P	10 52 12.7	-1.1
NATX	Nacogdoches	14.67	3	Pn	Pn	10 52 12.6	-1.1
NATX	Nacogdoches	14.67	3	P	Pn	10 52 12.1	-1.6
	baz=182						
344A	Westbrook Farm	14.98	16	P	P	10 52 19.2	-1.1
344A				IAmb	IAmb	10 52 21.4	
	comp=Z,38nm,0.9s						
WHTX	Lake Whitney,	15.00	353	P	P	10 52 19.4	-1.2
WHTX				IAmb	IAmb	10 52 23.9	
	comp=Z,34nm,0.8s						
WHTX	Lake Whitney,	15.00	353	P	Pn	10 52 16.1	-1.7
	baz=172,SNR=9.1						
FW13	Cleburne	15.35	354	P	P	10 52 23.7	-0.8
FW13				IAmb	IAmb	10 52 28.3	
	comp=Z,47nm,1.0s						
FW16	Waxahatchie	15.43	355	P	P	10 52 24.7	-0.7
FW16				IAmb	IAmb	10 52 28.8	
	comp=Z,60nm,0.7s						
FW07	Weatherford	15.74	353	P	P	10 52 28.1	-0.7
FW07				IAmb	IAmb	10 52 32.6	
	comp=Z,43nm,0.6s						
VBMS	Vicksburg	15.76	16	P	Pn	10 52 25.7	-1.6
	baz=197						
ABTX	Abilene, Hawle	15.97	347		P	10 52 31.4	-0.1
ABTX				IAmb	IAmb	10 52 35.2	
	comp=Z,21nm,0.8s						
ABTX	Abilene, Hawle	15.97	347	P	Pn	10 52 28.9	-1.1
	baz=165,SNR=11						
FW06	Azle	15.98	354	P	P	10 52 31.4	-0.1
FW06				IAmb	IAmb	10 52 34.9	
	comp=Z,70nm,0.7s						
FW03	Perrin-Whitt E	16.11	352	P	Pn	10 52 31.3	-0.3
FW03				IAmb	IAmb	10 52 37.2	
	comp=Z,41nm,0.9s						
Z38A	Mt. Pleasant	16.16	1		Pn	10 52 31.9	-0.4
Z35A	Perchaven, San	16.30	355	IAmb	IAmb	10 52 38.8	
	comp=Z,34nm,0.8s						
Z41A	Richland Creek	16.32	8	P	Pn	10 52 33.7	-0.7
ODSA	Odessa	16.34	338	IAmb	IAmb	10 52 40.8	
	comp=Z,20nm,1.3s						
WLAR	White Oak Lake	16.71	7		P	10 52 40.6	+1.1
WLAR				IAmb	IAmb	10 52 43.7	
	comp=Z,40nm,0.9s						
POST	Post	16.87	342	P	P	10 52 42.0	+0.6
POST				IAmb	IAmb	10 52 43.2	
	comp=Z,8.9nm,0.8s						
WTFS	Witchita Falls	16.88	351		Pn	10 52 40.3	-0.8
WTFS				IAmb	IAmb	10 52 56.0	
	comp=Z,28nm,1.3s						
LOOK	Love County	16.95	355		P	10 52 42.5	+0.3
LOOK				IAmb	IAmb	10 53 01.0	
	comp=Z,26nm,0.8s						
CLNB	Carlsbad	16.97	335	P	P	10 52 44.2	+1.7
DWPF	Disney Wildern	16.98	47	P	Pn	10 52 39.8	-2.6
	baz=233						
250A	Grady	17.04	28	P	P	10 52 41.8	-1.4
250A				IAmb	IAmb	10 52 48.4	
	comp=Z,41nm,0.8s						
GDL2	Guadalupe Moun	17.12	333	P	Pn	10 52 46.2	+2.0
MNTX	Cornudas Mount	17.16	330	P	P	10 52 44.1	-0.4
	baz=145						
352A	Blakely	17.26	32	IAmb	IAmb	10 52 54.3	
	comp=Z,20nm,0.7s						
Z47A	Carrollton	17.41	21	P	Pn	10 52 46.8	-0.8
X37A	Clayton	17.48	0	P	Pn	10 52 48.5	+0.1
X37A				IAmb	IAmb	10 52 52.3	
	comp=Z,20nm,0.7s						
MIAR	Mount Ida	17.51	5	P	Pn	10 52 48.3	-0.5
MIAR				IAmb	IAmb	10 52 50.9	
	comp=Z,20nm,0.7s						
MIAR	Mount Ida	17.51	5	P	P	10 52 47.3	-1.1
	baz=186,SNR=18						
X40A	Basin Creek Fa	17.53	7	P	Pn	10 52 48.7	-0.4
X34A	Smith Ranch, M	17.62	353	IAmb	IAmb	10 53 02.0	
	comp=Z,26nm,0.7s						
LRAL	Lakeview Retre	17.66	24		Pn	10 52 49.5	-1.1
LRAL	Lakeview Retre	17.66	24	P	Pn	10 52 49.6	-1.1
	baz=207,SNR=6.1						
WMOK	Wichita Mounta	17.88	351	P	P	10 52 52.1	-0.3
	baz=169,SNR=9.4						
UALR	University of	17.88	8	P	P	10 52 51.6	-0.7
UALR				IAmb	IAmb	10 52 55.1	
	comp=Z,36nm,0.8s						
TIGA	Tifton	17.93	35	P	Pn	10 52 52.8	-1.1
TIGA				IAmb	IAmb	10 53 00.6	
	comp=Z,28nm,0.7s						
TIGA	Tifton	17.93	35	P	P	10 52 52.1	-0.9
	baz=220						
MSTX	Muleshoe	18.10	340	IAmb	IAmb	10 52 58.5	
	comp=Z,20nm,0.7s						
MSTX	Muleshoe	18.10	340	P	P	10 52 54.8	-0.1
	baz=156,SNR=13						
OXF	Oxford	18.22	16	IAmb	IAmb	10 52 59.0	
	comp=Z,36nm,0.9s						
OXF	Oxford	18.22	16	P	P	10 52 54.9	-1.3
	baz=198,SNR=6.6						
AMTX	Amarillo	18.62	344	P	P	10 53 00.5	-0.1
	baz=160						
OK029	Liberty Lake	18.77	355	IAmb	IAmb	10 53 07.2	
	comp=Z,21nm,0.9s						
TUL1	Leonard	18.80	359	IAmb	IAmb	10 53 04.6	
	comp=Z,32nm,0.7s						
TUL1	Leonard	18.80	359	P	P	10 53 02.3	-0.2
	baz=179,SNR=12						
W45A	Hickory Valley	18.89	16	IAmb	IAmb	10 53 07.0	
	comp=Z,29nm,0.8s						
255A	Hazlehurst	18.92	36	IAmb	IAmb	10 53 14.0	
	comp=Z,32nm,1.0s						
OK033	Mehan	18.98	356		Pn	10 53 05.3	-1.0
OK033				IAmb	IAmb	10 53 07.3	
	comp=Z,42nm,1.0s						
FCAR	Ozark Folk Cen	19.01	8	IAmb	IAmb	10 53 07.0	
	comp=Z,46nm,1.0s						
121A	Cookes Peak, D	19.04	326	P	P	10 53 05.7	+0.5
	baz=141						
PLAL	Pickwick Lake	19.05	19	P	P	10 53 04.5	-0.6
RLO	Rose Lookout	19.05	1	P	P	10 53 05.3	+0.1
RLO				IAmb	IAmb	10 53 07.1	
	comp=Z,18nm,0.7s						
HHAR	Hobbs	19.21	4	IAmb	IAmb	10 53 09.0	
	comp=Z,33nm,0.8s						
ELIS	Ellis County	19.28	350	IAmb	IAmb	10 53 12.9	
	comp=Z,18nm,0.8s						
LCAR	Lake Charles	19.33	11	IAmb	IAmb	10 53 10.1	
	comp=Z,25nm,0.8s						
U38A	Gravette	19.35	3	IAmb	IAmb	10 53 10.6	
	comp=Z,34nm,0.7s						
CROK	Carrier	19.52	354		Pn	10 53 11.4	-1.2
FPAL	Fort Paine	19.53	25		P	10 53 09.9	-0.5
Y52A	Lilburn	19.63	29	IAmb	IAmb	10 53 24.8	
	comp=Z,37nm,0.9s						
T35A	Sooner Cattle	19.82	357	IAmb	IAmb	10 53 15.5	
	comp=Z,57nm,1.2s						
OK032	Salt Plains WL	19.84	353	IAmb	IAmb	10 53 20.0	
	comp=Z,24nm,0.6s						
Y22D	IRIS PASSCAL I	19.84	331	P	Pn	10 53 14.9	-1.7
	baz=145						
Y22F	Passcal Instru	19.84	331	P	P	10 53 14.5	+0.5
	baz=145						
V48A	Smith Brothers	20.14	21	IAmb	IAmb	10 53 47.7	
	comp=Z,23nm,0.8s						
PBMO	Poplar Bluff	20.16	12	P	Pn	10 53 17.9	-2.1
WVT	Waverly	20.18	18	P	P	10 53 16.4	-1.0
T42A	Van Buren	20.28	10	IAmb	IAmb	10 53 20.8	
	comp=Z,29nm,0.9s						
ANMO	Albuquerque	20.37	333	P	Pn	10 53 24.0	+1.3
	comp=Z,4.0nm,0.7s,baz=236,slow=11,SNR=22						
	comp=Z,4.0nm,0.7s						
ANMO	Albuquerque	20.37	333	P	P	10 53 20.6	+0.9
ANMO	Albuquerque	20.37	333	P	Pn	10 53 20.9	-1.8
	baz=148						
TUC	Tucson	20.59	320	P	Pn	10 53 24.4	-0.8
TUC	Tucson	20.59	320	P	Pn	10 53 23.3	-1.9
	baz=133						
S39A	Bolivar	20.66	5	IAmb	IAmb	10 53 24.7	
	comp=Z,16nm,0.8s						
CPCT	Cooper Cave	20.76	26		P	10 53 22.1	-1.5
HODGE	Hodges	20.81	32	IAmb	IAmb	10 53 24.3	
	comp=Z,30nm,0.7s						
CGM3	Cape Girardeau	20.82	13	P	P	10 53 24.2	0.0
CGM3				IAmb	IAmb	10 53 25.4	
	comp=Z,22nm,1.0s						
BG3	Lake Jocassee	21.09	30	P	P	10 53 25.5	-1.7
BG3				IAmb	IAmb	10 53 44.0	
	comp=Z,31nm,0.7s						
NHSC	New Hope	21.11	38	P	P	10 53 26.7	-0.7
	baz=224						
V51A	Loudon	21.14	26	IAmb	IAmb	10 53 29.9	
	comp=Z,20nm,0.7s						
T47A	Sharon Grove	21.20	19	IAmb	IAmb	10 53 31.7	
	comp=Z,24nm,0.7s						
TKL	Tuckaleechee C	21.26	27	P	P	10 53 28.3	-0.8
	comp=Z,10.0nm,0.7s,baz=183,slow=12,SNR=23						
	comp=Z,10.0nm,0.7s						
CCM	Cathedral Cave	21.26	9	P	P	10 53 28.2	-0.8
CCM				IAmb	IAmb	10 53 32.4	
	comp=Z,33nm,1.3s						
CCM	Cathedral Cave	21.26	9	P	P	10 53 28.9	-0.1
	baz=191						
S44A	Carbondale	21.29	14	IAmb	IAmb	10 53 31.4	
	comp=Z,33nm,0.7s						
SIUC	Southern Illin	21.32	14	IAmb	IAmb	10 53 31.5	
	comp=Z,30nm,0.7s						
R32A	Long Quarter,	21.50	353	IAmb	IAmb	10 53 39.7	
	comp=Z,24nm,0.7s						
PAULI	Pauline	21.50	32	IAmb	IAmb	10 53 32.5	
	comp=Z,22nm,0.8s						
T25A	Trinidad	21.53	340	P	P	10 53 32.8	+0.7
	baz=156						
214A	Organ Pipe Nat	21.64	317	P	P	10 53 33.9	+0.7
	baz=129						
KMSC	Kings Mountain	21.99	32	IAmb	IAmb	10 53 37.7	
	comp=Z,32nm,0.7s						
KMSC	Kings Mountain	21.99	32	P	P	10 53 35.8	-1.1
	baz=218,SNR=16						
KSU1	Kansas State U	22.00	358	P	P	10 53 36.7	-0.2
	baz=177,SNR=7.9						
CBKS	Cedar Bluff	22.02	351	P	P	10 53 36.9	-0.2
CBKS	Cedar Bluff	22.02	351	P	P	10 53 37.0	-0.2
	baz=169,SNR=6.5						
W18A	Petrified Fore	22.06	327	P	P	10 53 37.7	-0.1
	baz=141						
TZTN	Tazewell	22.10	26	IAmb	IAmb	10 53 39.8	
	comp=Z,16nm,0.8s						
TZTN	Tazewell	22.10	26	P	P	10 53 36.7	-1.3
	baz=211,SNR=6.5						
SDCO	Great Sand Dun	22.45	339	P	P	10 53 41.9	+0.1
	baz=154						
WCI	Wyandotte Cave	22.59	19	P	P	10 53 41.6	-1.3
WCI				IAmb	IAmb	10 53 43.4	
	comp=Z,24nm,0.7s						
WCI	Wyandotte Cave	22.59	19	P	P	10 53 42.6	-0.3
	baz=203						
P40A	Paris	22.60	7	IAmb	IAmb	10 53 44.6	
	comp=Z,23nm,0.8s						
KSCO	Kaye Shedlock'	22.77	345	P	P	10 53 45.4	+0.5
	baz=162						
U54A	Nelsons Funny	22.85	29	IAmb	IAmb	10 53 45.8	
	comp=Z,38nm,0.7s						
S22A	4UR Ranch, Cre	22.93	336	P	P	10 53 47.3	+0.6
	baz=151						
S51A	Beattyville	23.02	25	IAmb	IAmb	10 53 47.0	
	comp=Z,14nm,0.7s						
P43A	Skaggs, Pawnee	23.10	12	P	P	10 53 48.2	+0.3
P43A				IAmb	IAmb	10 53 49.2	
	comp=Z,48nm,1.0s						
MVCO	Mesa Verde	23.16	333	P	P	10 53 49.3	+0.5
	baz=146						
WUAZ	Wupatki	23.23	325	P	P	10 53 50.3	+0.8
	baz=138						
R50A	Paris	23.30	23	IAmb	IAmb	10 53 49.7	
	comp=Z,14nm,0.6s						
V58A	Windy Hill, Pi	23.66	35	IAmb	IAmb	10 53 54.1	
	comp=Z,32nm,1.1s						
N35A	Tabor	23.74	360	IAmb	IAmb	10 53 56.2	
	comp=Z,23nm,0.9s						
P48A	Milroy	23.99	19	IAmb	IAmb	10 53 56.6	
	comp=Z,24nm,0.7s						
HDIL	Hopedale	24.03	12	IAmb	IAmb	10 53 58.2	
	comp=Z,19nm,0.5s						
HDIL	Hopedale	24.03	12	P	P	10 53 56.6	+0.3
	baz=194,SNR=6.6						
S54A	Dingess, Beckl	24.13	28	IAmb	IAmb	10 53 57.7	
	comp=Z,23nm,1.0s						
P49A	Miami Univ. Ec	24.28	20	IAmb	IAmb	10 53 59.5	
	comp=Z,25nm,0.8s						
P49A	Miami Univ. Ec	24.28	20	P	P	10 53 58.1	-0.5
	baz=206,SNR=5.6						
IKP	In-Ko-Pah, Jac	24.29	314	P	P	10 54 00.5	+1.6
	baz=124						
ISCO	Idaho Springs	24.34	341	P	P	10 54 00.7	+1.2
	baz=155						
SFIN	Lafayette	24.36	16	P	P	10 53 59.3	0.0
	baz=199						
BGNE	Belgrade	24.40	355	P	P	10 54 00.8	+1.1
	baz=173						
BC3	Big Chuckawall	24.43	316	P	P	10 54 01.6	+1.3
	baz=127						
OGNE	Ogallala	24.49	348	IAmb	IAmb	10 54 06.5	
	comp=Z,47nm,1.1s						
OGNE	Ogallala	24.49	348	P	P	10 54 01.9	+1.2
	baz=164,SNR=6.8						
T57A	Hurt	24.49	33	IAmb	IAmb	10 54 02.2	
	comp=Z,13nm,0.7s						
IRM	Iron Mountain	24.54	318	P	P	10 54 02.8	+1.6
	baz=129						
MONP2	Monument Peak	24.64	314	P	P	10 54 03.9	+1.7
	baz=124						
Q52A	Bidwell	24.69	25	P	P	10 54 02.2	-0.2
O48B	Farmland	24.80	19	P	P	10 54 04.0	+0.7
	baz=204,SNR=27						
P51A	Williamsport	24.83	23	IAmb	IAmb	10 54 05.2	
	comp=Z,24nm,0.7s						
SCIA	State Center	24.86	4	P	P	10 54 04.5	+0.7
	baz=185,SNR=11						
BELC	Belle Mtn. Jos	25.00	316	P	P	10 54 07.3	+1.8
	baz=127						
R55A	Marlinton	25.07	29	IAmb	IAmb	10 54 07.9	
	comp=Z,22nm,0.6s						
TPFO	Pinon Flats	25.07	315	P	P	10 54 07.6	+1.6
	baz=126						
109C	Camp Elliot, M	25.11	313	P	P	10 54 07.8	+1.5
	baz=123						
L40A	Anamosa	25.20	7	IAmb	IAmb	10 54 09.3	
	comp=Z,30nm,0.8s						
Q54A	Coxs Mills	25.32	27	P	P	10 54 07.7	-0.4
Q54A				IAmb	IAmb	10 54 08.4	
	comp=Z,13nm,0.6s						
P52A	Corning	25.32	25	P	P	10 54 07.5	-0.5
P52A				IAmb	IAmb	10 54 09.8	
	comp=Z,20nm,0.8s						
P52A	Corning	25.32	25	P	P	10 54 07.3	-0.8
	baz=211,SNR=7.8						
N23A	Red Feather La	25.44	341	P	P	10 54 09.6	+0.1
	baz=156						
SDV	Santo Domingo	25.48	105	P	P	10 54 10.0	0.0
	comp=Z,2.9nm,0.6s,baz=309,slow=6.5,SNR=6.4						
	comp=Z,2.9nm,0.6s						
P53A	Whipple	25.50	26	IAmb	IAmb	10 54 12.1	
	comp=Z,20nm,0.6s						
ACSO	Alum Creek Sta	25.51	23	IAmb	IAmb	10 54 12.7	
	comp=Z,29nm,1.2s						
ACSO	Alum Creek Sta	25.51	23	P	P	10 54 09.5	-0.3
	baz=208						
K38A	Parkersburg	25.63	5	IAmb	IAmb	10 54 11.9	
	comp=Z,22nm,0.9s						
K31A	O'Neill	25.66	354	IAmb	IAmb	10 54 51.6	
	comp=Z,25nm,1.2s						
BBRC	Big Bear Solar	25.77	316	P	P	10 54 13.5	+1.0
	baz=126						
O52A	Adamsville	25.85	24	IAmb	IAmb	10 54 13.6	
	comp=Z,16nm,0.9s						
L44A	Lake County Fo	25.87	13	P	P	10 54 13.2	+0.2
	baz=196						
JFWS	Jewell Farm	26.17	9	IAmb	IAmb	10 54 16.9	
	comp=Z,16nm,0.8s						
JFWS	Jewell Farm	26.17	9	P	P	10 54 15.3	-0.4
	baz=191,SNR=9.3						
O53A	New Philadelph	26.21	25	P	P	10 54 15.2	-0.9
	baz=212,SNR=7.5						
BFSC	Mount Baldy Ra	26.25	315	P	P	10 54 16.8	0.0
	baz=125						
K43A	Burlington	26.29	12	IAmb	IAmb	10 54 18.0	
	comp=Z,21nm,0.8s						
GSC	Goldstone, Bar	26.32	318	P	P	10 54 17.0	-0.3
	baz=128						
O54A	Avella	26.51	27	IAmb	IAmb	10 54 20.9	
	comp=Z,8.2nm,0.6s						
ECSD	EROS Data Cent	26.63	358	P	P	10 54 20.1	+0.2
	baz=177						
I40A	Norwalk	27.08	8	IAmb	IAmb	10 54 25.8	
	comp=Z,19nm,1.2s						
I42A	Draeger Farm,	27.33	10	IAmb	IAmb	10 54 27.4	
	comp=Z,14nm,1.1s						
M53A	WI Miller and	27.44	25	P	P	10 54 26.2	-0.9
	baz=212						
SSPA	Standing Stone	27.99	29	P	P	10 54 31.3	-0.7
	baz=218						
SPMN	Marine on St.	28.19	4	P	P	10 54 34.2	+0.5
	baz=185						
PDAR	Pinedale Array	28.33	338	P	P	10 54 39.2	+4.0
	comp=Z,0.1nm,0.4s,baz=133,slow=9.2,SNR=3.1						
	comp=Z,0.1nm,0.4s						
ELK	Elko	29.16	328	P	P	10 54 47.0	+4.3
	comp=Z,0.4nm,0.5s,baz=135,slow=11,SNR=2.0						
	comp=Z,0.4nm,0.5s						
NVAR	Mina Array Bea	29.23	321	P	P	10 54 47.3	+3.9
	comp=Z,1.1nm,0.7s,baz=137,slow=8.9,SNR=12						
	comp=Z,1.1nm,0.7s						
E38A	The Farm, Brul	29.66	5	IAmb	IAmb	10 54 47.9	
	comp=Z,8.8nm,0.8s						
BINY	Binghamton	30.10	30	P	P	10 54 50.4	-0.4
	baz=219						
PAL	Palisades	30.25	33	P	P	10 54 51.2	-0.9
	baz=224						
AGMN	Agassiz Nation	31.18	359	IAmb	IAmb	10 55 01.6	
	comp=Z,7.8nm,0.7s						
AGMN	Agassiz Nation	31.18	359	P	P	10 55 00.4	+0.3
	baz=179,SNR=6.7						
DELO	Deloro Mine	31.24	25	IAmb	IAmb	10 55 00.8	
	comp=Z,14nm,0.8s						

LONY	**Lake Ozonia**	**32.62**	**28**	IAmb	IAmb	10 55 13.1	
	comp=Z,8.4nm,0.7s						
LONY	**Lake Ozonia**	**32.62**	**28**	P	**P**	**10 55 12.1**	**-0.8**
	baz=219						
ULM	**Lac du Bonnet**	**33.13**	**359**	P	**P**	**10 55 17.3**	**+0.2**
	comp=Z,1.2nm,0.4s,baz=186,slow=11,SNR=3.3						
	comp=Z,1.2nm,0.4s						
LBNH	**Lisbon**	**33.60**	**31**	P	**P**	**10 55 20.5**	**-0.9**
	baz=224						
TRQ	**Mont Tremblant**	**33.89**	**26**	P	**P**	**10 55 23.4**	**-0.5**
TRQ				IAmb	IAmb	10 55 25.0	
	comp=Z,20nm,1.2s						
PKME	**Peaks-Kenny Pk**	**35.65**	**32**	P	**P**	**10 55 38.4**	**-0.5**
	baz=226						
FFC	**Flin Flon**	**37.95**	**354**	P	**P**	**10 55 59.4**	**+1.1**
SCHQ	**Schefferville**	**43.66**	**24**	P	**P**	**10 56 43.7**	**-1.5**
	comp=Z,2.4nm,0.8s,baz=240,slow=9.2,SNR=4.9						
	comp=Z,2.4nm,0.8s						
GRNB	**Grenville Isla**	**45.44**	**332**	P	**P**	**10 57 02.1**	**+2.7**
YKA	**Yellowknife Ar**	**47.35**	**348**	P	**P**	**10 57 15.3**	**+1.1**
	comp=Z,1.0nm,0.5s,baz=154,slow=7.6,SNR=20						
	comp=Z,1.0nm,0.5s						
PLCA	**Paso Flores**	**61.96**	**159**	P	**P**	**10 59 01.3**	**+1.3**
	comp=Z,1.6nm,0.8s,baz=334,slow=12,SNR=3.6						
	comp=Z,1.6nm,0.8s						
ESDC	**Sonseca Array**	**80.44**	**51**	P	**P**	**11 00 52.4**	**+0.9**
	comp=Z,1.3nm,0.9s,baz=293,slow=6.8,SNR=4.2						
	comp=Z,1.3nm,0.9s						

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*IDC **27** 10:50:16.6±0.3, 52°.72N×172°.27E, h0^{km}, mb5.5/46, mbtmp5.6/47, ML4.5/1, MS5.9/94, Error ellipse: s-maj=12.2km s-min=7.5km az=168.0*

*AEIC **27** 10:50:18.9±3.2, 52°.52N±0°.09×172°.16E±0°.08, h20^{km}±3^{km}, Error ellipse: s-maj=13.0km s-min=7.0km az=174.0*

*KRSC **27** 10:50:18.0±2.1, 52°.44N×171°.99E, h60^{km}±46^{km}, Ml6.3*

*BJI **27** 10:50:18.3±0.0, 52°.72N×172°.11E, h10^{km}, mb5.9/91, mB6.2/80, Ms6.4/99, Ms7 6.2/95*

*NEIC **27** 10:50:19.2, 52°.77N×172°.22E, h10^{km}*

*NEIC **27** 10:50:19.3, 52°.79N×172°.20E, h10^{km}*

*NEIC **27** 10:50:19, 52°.80N×172°.20E, h12^{km}*

*MOS **27** 10:50:20.7±1.1, 52°.68N×172°.13E, h40^{km}, mb6.0/83, MS6.1/72, Error ellipse: s-maj=5.8km s-min=3.7km az=128.9*

*NEIC **27** 10:50:20.2±2.1, 52°.76N±0°.08×172°.26E±0°.08, h20^{km}±1^{km}, mb5.9/923, Ms_20 6.0/401, Mwb6.1/109, Mwc6.1/45, Mww6.2, ML5.6(AEIC), Error ellipse: s-maj=13.9km s-min=7.9km az=184.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.89; $M_{\theta\theta}$-1.29; $M_{\phi\phi}$0.40; $M_{r\theta}$1.00; $M_{\theta\phi}$-0.08; $M_{\phi r}$0.67; Fault plane solution: $M_0$1.66000×10^{18} NP1:ϕ_s295.76000°,δ29.56000°, λ139.10000°. NP2:ϕ_s62.76000°,δ71.16000°,λ66.80000°. Principal axes: T 1.5828, Plg58.0000°, Azm302.0000°; N 0.1493, Plg22.0000°, Azm71.0000°; P -1.7321, Plg23.0000°, Azm170.0000°;*

*GCMT **27** 10:50:24.2±0.1, 52°.71N×172°.24E, h29^{km}, MW6.2/170, Moment Tensor Solution. s168,c409; s170,c605; Duration: 3^{s}2 Moment tensor: Scale 10^{18}Nm; M_{rr}1.17±.01; $M_{\theta\theta}$-1.73±.01; $M_{\phi\phi}$0.56±.01; $M_{r\theta}$1.92±.03; $M_{\theta\phi}$0.00±.01; $M_{\phi r}$1.27±.02; Best double couple: $M_0$2.76300×10^{18} NP1:ϕ_s62.00000°,δ76.00000°, λ69.00000°. NP2:ϕ_s300.00000°,δ25.00000°,λ146.00000°. Principal axes: T 2.7380, Plg54.0000°, Azm306.0000°; N 0.0510, Plg20.0000°, Azm67.0000°; P -2.7890, Plg28.0000°, Azm168.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **27** 10:50:24, 52°.70N×172°.03E, h26^{km}, Moment Tensor Solution. Duration: 10^{s}0 Moment tensor: Scale 10^{18}Nm; M_{rr}1.05; $M_{\theta\theta}$-1.19; $M_{\phi\phi}$0.14; $M_{r\theta}$1.83; $M_{\theta\phi}$0.13; $M_{\phi r}$0.80; Fault plane solution: $M_0$2.29000×10^{18} NP1: ϕ_s297.00000°,δ19.00000°,λ134.00000°. NP2: ϕ_s71.00000°,δ76.00000°,λ77.00000°. Principal axes: T 2.3351, Plg56.0000°, Azm324.0000°; N -0.0871, Plg13.0000°, Azm74.0000°; P -2.2480, Plg30.0000°, Azm172.0000°;*

*NEIC **27** 10:50:33.2, 52°.57N×172°.18E, h29^{km}, Moment Tensor Solution. Duration: 6^{s}4 Moment tensor: Scale 10^{18}Nm; M_{rr}1.13; $M_{\theta\theta}$-1.63; $M_{\phi\phi}$0.51; $M_{r\theta}$0.94; $M_{\theta\phi}$0.04; $M_{\phi r}$0.76; Fault plane solution: $M_0$1.89000×10^{18} NP1: ϕ_s299.77000°,δ35.52000°,λ139.85000°. NP2: ϕ_s64.24000°,δ68.00000°,λ61.38000°. Principal axes: T 1.8322, Plg57.0000°, Azm296.0000°; N 0.1062, Plg26.0000°, Azm76.0000°; P -1.9385, Plg18.0000°, Azm175.0000°;*

ISC 27 10:50:20.9±0.3**, 52°.66N**±0°.03×**172°.20E**±0°.02**, h25**^{km}±1^{km}**, h24**^{km}**:pP-P, n2630, σ1^{s}76**/2907**, mb5.9**/696**, MS6.1**/392**, 316C-87D, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHEM	**Shemya Is, Ala**	**1.16**	**86**	Pn	**Pn**	**10 50 40.0**	**-1.6**
	15µm,0.3s,baz=231,slow=1.4,SNR=1978						
SHEM				Sn	**Sn**	**10 50 53.2**	**-3.4**
	14µm,0.3s,baz=327,slow=3.9,SNR=58						
SHEM				LR	LR	10 51 08.9	
	comp=Z,197µm,19.5s,baz=286,slow=47						
SMY	**Shemya**	**1.16**	**86**		**Pn**	**10 50 40.2**	**-1.4**
SMY	**Shemya**	**1.16**	**86**	⇑P	**Pn**	**10 50 40.0**	**-1.6**
SMY	**Shemya**	**1.16**	**86**	P	**Pn**	**10 50 39.8**	**-1.7**
SMY				S	**Sn**	**10 50 55.2**	**-1.4**
BKI	**Bering**	**4.47**	**307**	P	**Pn**	**10 51 27.7**	**+0.6**
BKI				S	**Sn**	**10 52 17.2**	**-1.0**
BKI	**Bering**	**4.47**	**307**	*e*P	**Pn**	**10 51 27.7**	**+0.6**
BKI				*e*S	**Sn**	**10 52 17.2**	**-1.0**
MKZ	**Mys Kozlova**	**6.51**	**291**	P	**Pn**	**10 51 54.7**	**-0.3**
MKZ				S	**Sn**	**10 53 05.1**	**-3.4**
MKZ	**Mys Kozlova**	**6.51**	**291**	*e*P	**Pn**	**10 51 54.7**	**-0.3**
MKZ				*e*S	**Sn**	**10 53 05.1**	**-3.4**
KBTR	**Krutoberegovo**	**6.52**	**307**	P	**Pn**	**10 51 56.1**	**+0.9**
KBTR				S	**Sn**	**10 53 06.4**	**-2.3**
KBTR	**Krutoberegovo**	**6.52**	**307**	*e*P	**Pn**	**10 51 56.1**	**+0.9**
KBTR				*e*S	**Sn**	**10 53 06.4**	**-2.3**
KIWB	**Kanaga Island**	**6.59**	**93**		**Pn**	**10 51 56.3**	**+0.1**
KBG	**Krutoberegovo**	**6.60**	**307**	P	**Pn**	**10 51 56.4**	**+0.2**
KBG				S	**Sn**	**10 53 09.6**	**-1.0**
KBG	**Krutoberegovo**	**6.60**	**307**	*e*P	**Pn**	**10 51 56.4**	**+0.2**
KBG				*e*S	**Sn**	**10 53 09.6**	**-1.0**
ADK	**Adak**	**6.87**	**92**	Pn	**Pn**	**10 52 00.5**	**+0.5**
ADK	**Adak**	**6.87**	**92**	P	**Pn**	**10 52 01.0**	**+1.0**
ADK	**Adak**	**6.87**	**92**	⇑P	**Pn**	**10 52 00.5**	**+0.5**
ADK	**Adak**	**6.87**	**92**	P	**Pn**	**10 52 00.5**	**+0.5**
GSTR	**Great Sitkin T**	**7.21**	**90**		**Pn**	**10 52 05.3**	**+0.5**
SMKR	**Semkarok**	**7.36**	**306**	P	**Pn**	**10 52 08.3**	**+1.5**
SMKR				S	**Sn**	**10 53 29.6**	**+0.1**
SMKR	**Semkarok**	**7.36**	**306**	*e*P	**Pn**	**10 52 08.3**	**+1.5**
SMKR				*e*S	**Sn**	**10 53 29.6**	**+0.1**
SPN	**Mys Shipunski**	**7.38**	**278**	P	**Pn**	**10 52 04.5**	**-2.5**
SPN				S	**Sn**	**10 53 21.5**	**-8.4**
SPN	**Mys Shipunski**	**7.38**	**278**	*e*P	**Pn**	**10 52 04.5**	**-2.5**
SPN				*e*S	**Sn**	**10 53 21.5**	**-8.4**
TUMD	**Tumrok D**	**7.42**	**295**	*e*P	**Pn**	**10 52 07.4**	**-0.1**
TUMD				*e*S	**Sn**	**10 53 27.7**	**-3.0**
BZGR	**Bezymyannyi-Gr**	**7.49**	**301**	P	**Pn**	**10 52 09.8**	**+1.3**
BZGR				S	**Sn**	**10 53 31.6**	**-1.0**
BZGR	**Bezymyannyi-Gr**	**7.49**	**301**	*e*P	**Pn**	**10 52 09.8**	**+1.3**
BZGR				*e*S	**Sn**	**10 53 31.6**	**-1.0**
CIRR	**Tsirk**	**7.53**	**302**	P	**Pn**	**10 52 10.9**	**+1.8**
CIRR	**Tsirk**	**7.53**	**302**	*e*P	**Pn**	**10 52 10.9**	**+1.8**
SRKR	**Sorokina**	**7.54**	**306**	P	**Pn**	**10 52 10.6**	**+1.3**
SRKR	**Sorokina**	**7.54**	**306**	*e*P	**Pn**	**10 52 10.6**	**+1.3**
LGNR	**Loginova**	**7.54**	**302**	*e*S	**Sn**	**10 53 33.8**	**-0.4**
BZP	**Bezymyannyi-Pe**	**7.56**	**300**	*e*P	**Pn**	**10 52 09.0**	**-0.6**
BZP				*e*S	**Sn**	**10 53 34.1**	**-0.4**
TUMR	**Tumrok**	**7.58**	**295**	P	**Pn**	**10 52 07.4**	**-2.4**
TUMR				S	**Sn**	**10 53 27.7**	**-7.1**
TUMR	**Tumrok**	**7.58**	**295**	*e*P	**Pn**	**10 52 11.2**	**+1.4**
TUMR				*e*S	**Sn**	**10 53 29.4**	**-5.4**
BZMR	**Bezymyannaya**	**7.59**	**300**	P	**Pn**	**10 52 10.0**	**0.0**
BZMR	**Bezymyannaya**	**7.59**	**300**	*e*P	**Pn**	**10 52 10.0**	**0.0**
BZWR	**Bezymyannyi-We**	**7.60**	**300**	P	**Pn**	**10 52 10.0**	**-0.2**
BZWR				S	**Sn**	**10 53 31.2**	**-4.3**
BZWR	**Bezymyannyi-We**	**7.60**	**300**	*e*P	**Pn**	**10 52 10.0**	**-0.2**
BZWR				*e*S	**Sn**	**10 53 31.2**	**-4.3**
KLY	**Klyuchi**	**7.65**	**303**	P	**Pn**	**10 52 10.7**	**0.0**
KLY				S	**Sn**	**10 53 34.1**	**-2.4**
KLY	**Klyuchi**	**7.65**	**303**	*e*P	**Pn**	**10 52 10.7**	**0.0**
KLY				*e*S	**Sn**	**10 53 34.1**	**-2.4**
KMNR	**Kamenistaya**	**7.67**	**299**	P	**Pn**	**10 52 11.3**	**+0.3**
KMNR				S	**Sn**	**10 53 36.2**	**-0.8**
KMNR	**Kamenistaya**	**7.67**	**299**	*e*P	**Pn**	**10 52 11.3**	**+0.3**
KMNR				*e*S	**Sn**	**10 53 36.2**	**-0.8**
KIRR	**Kirishev**	**7.68**	**300**	P	**Pn**	**10 52 12.6**	**+1.4**
KIRR				S	**Sn**	**10 53 37.0**	**-0.4**
KIRR	**Kirishev**	**7.68**	**300**	*e*P	**Pn**	**10 52 12.6**	**+1.4**
KIRR				*e*S	**Sn**	**10 53 37.0**	**-0.4**
KPT	**Kopyto**	**7.75**	**300**	P	**Pn**	**10 52 13.4**	**+1.3**
KPT				S	**Sn**	**10 53 38.9**	**-0.1**
KPT	**Kopyto**	**7.75**	**300**	*e*P	**Pn**	**10 52 13.4**	**+1.3**
KPT				*e*S	**Sn**	**10 53 38.9**	**-0.1**
KII	**Karymskiy**	**7.75**	**285**	P	**Pn**	**10 52 11.9**	**-0.3**
KII				S	**Sn**	**10 53 33.7**	**-5.5**
KII	**Karymskiy**	**7.75**	**285**	*e*P	**Pn**	**10 52 11.9**	**-0.3**
KII				*e*S	**Sn**	**10 53 33.7**	**-5.5**
NLC	**Nalytchevo**	**7.79**	**279**	P	**Pn**	**10 52 13.0**	**+0.5**
NLC				S	**Sn**	**10 53 35.8**	**-4.1**
NLC	**Nalytchevo**	**7.79**	**279**	*e*P	**Pn**	**10 52 13.0**	**+0.5**
NLC				*e*S	**Sn**	**10 53 35.8**	**-4.1**
KOZ	**Kozyrevsk**	**7.96**	**300**	P	**Pn**	**10 52 15.8**	**+0.8**
KOZ				S	**Sn**	**10 53 42.3**	**-1.8**
KOZ	**Kozyrevsk**	**7.96**	**300**	*e*P	**Pn**	**10 52 15.8**	**+0.8**
KOZ				*e*S	**Sn**	**10 53 42.3**	**-1.8**
UGLR	**Uglovaya**	**8.10**	**279**	P	**Pn**	**10 52 16.8**	**-0.2**
UGLR	**Uglovaya**	**8.10**	**279**	*e*P	**Pn**	**10 52 16.8**	**-0.2**
SMAR	**Somma**	**8.11**	**280**	P	**Pn**	**10 52 17.0**	**-0.2**
SMAR				S	**Sn**	**10 53 41.6**	**-6.6**
SMAR	**Somma**	**8.11**	**280**	*e*P	**Pn**	**10 52 17.0**	**-0.2**
SMAR				*e*S	**Sn**	**10 53 41.6**	**-6.6**
KRER	**Koryakskii**	**8.14**	**280**	P	**Pn**	**10 52 17.5**	**-0.1**
KRER	**Koryakskii**	**8.14**	**280**	*e*P	**Pn**	**10 52 17.5**	**-0.1**
DALK	**Dalny**	**8.15**	**278**	P	**Pn**	**10 52 14.4**	**-3.1**
DALK				S	**Sn**	**10 53 42.6**	**-6.2**
DALK	**Dalny**	**8.15**	**278**	*e*P	**Pn**	**10 52 14.4**	**-3.1**
DALK				*e*S	**Sn**	**10 53 42.6**	**-6.2**
AVH	**Avacha**	**8.15**	**280**	P	**Pn**	**10 52 17.5**	**-0.1**
AVH				S	**Sn**	**10 53 42.5**	**-6.4**
AVH	**Avacha**	**8.15**	**280**	*e*P	**Pn**	**10 52 17.5**	**-0.1**
AVH				*e*S	**Sn**	**10 53 42.5**	**-6.4**
KRX	**Arik**	**8.20**	**280**	P	**Pn**	**10 52 18.1**	**-0.3**
KRX	**Arik**	**8.20**	**280**	*e*P	**Pn**	**10 52 18.1**	**-0.3**
PET	**Petropavlovsk**	**8.21**	**278**	Pn	**Pn**	**10 52 17.9**	**-0.5**
PET	**Petropavlovsk**	**8.21**	**278**	P	**Pn**	**10 52 18.8**	**+0.4**
PET	**Petropavlovsk**	**8.21**	**278**	⇑P	**Pn**	**10 52 17.6**	**-0.7**
PET	**Petropavlovsk**	**8.21**	**278**	⇑*i*P	**Pn**	**10 52 17.7**	**-0.7**
PET				*e*S	**Sn**	**10 53 44.9**	**-5.4**
PET				pmax	pmax		
	comp=Z,14µm,18.2s						
PET				pmax	pmax		
	comp=Z,1µm,1.2s						
PET				smax	smax		
	comp=N,4µm,0.6s						
PET				smax	smax		
	comp=E,4µm,0.7s						
PET				MLR	MLR		
	comp=Z,58µm,14.0s						
PET				MLR	MLR		
	comp=Z,56µm,13.0s						
PET	**Petropavlovsk**	**8.21**	**278**	*e*P	**Pn**	**10 52 18.7**	**+0.3**
PET				*e*S	**Sn**	**10 53 44.4**	**-5.9**
KOK	**Koryaka**	**8.21**	**280**	P	**Pn**	**10 52 18.4**	**-0.1**
KOK				S	**Sn**	**10 53 46.3**	**-4.2**
KOK	**Koryaka**	**8.21**	**280**	*e*P	**Pn**	**10 52 18.4**	**-0.1**
KOK				*e*S	**Sn**	**10 53 46.3**	**-4.2**
MTVR	**Mutnovka**	**8.54**	**274**	P	**Pn**	**10 52 22.8**	**-0.2**
MTVR				S	**Sn**	**10 53 52.1**	**-6.5**
MTVR	**Mutnovka**	**8.54**	**274**	*e*P	**Pn**	**10 52 22.8**	**-0.2**
MTVR				*e*S	**Sn**	**10 53 52.1**	**-6.5**
ESO	**Esso**	**8.54**	**298**	P	**Pn**	**10 52 24.4**	**+1.4**
ESO				S	**Sn**	**10 53 55.4**	**-3.1**
ESO	**Esso**	**8.54**	**298**	*e*P	**Pn**	**10 52 24.4**	**+1.4**
ESO				*e*S	**Sn**	**10 53 55.4**	**-3.1**
GRL	**Gorelyy**	**8.60**	**275**	P	**Pn**	**10 52 23.9**	**0.0**
GRL				S	**Sn**	**10 53 54.7**	**-5.3**
GRL	**Gorelyy**	**8.60**	**275**	*e*P	**Pn**	**10 52 23.9**	**0.0**
GRL				*e*S	**Sn**	**10 53 54.7**	**-5.3**
GNL	**Ganaly**	**8.63**	**283**	P	**Pn**	**10 52 24.4**	**+0.2**
GNL				S	**Sn**	**10 53 57.0**	**-3.7**
GNL	**Ganaly**	**8.63**	**283**	*e*P	**Pn**	**10 52 24.4**	**+0.2**
GNL				*e*S	**Sn**	**10 53 57.0**	**-3.7**
PEA0B	**Petropavlovsk-**	**8.78**	**279**	Pn	**Pn**	**10 52 26.1**	**-0.1**
PEA0B	**Petropavlovsk-**	**8.78**	**279**	*c i*P	**Pn**	**10 52 26.5**	**+0.3**
PETK	**Petropavlovsk-**	**8.78**	**279**	Pn	**Pn**	**10 52 26.3**	**+0.1**
	comp=Z,29nm,0.3s,baz=92,slow=17,SNR=213						
PETK				Sn	**Sn**	**10 54 01.0**	**-3.3**
	comp=Z,60nm,0.3s,baz=277,slow=13,SNR=8.0						
PETK				LR	LR	10 55 53.7	
	comp=Z,55µm,20.9s,baz=96,slow=38						
	comp=Z,678nm,0.9s						
SKR	**Severo-Kuril’s**	**10.19**	**265**	*e*P	**Pn**	**10 52 46.1**	**+0.7**
SKR				pmax	pmax		
	comp=Z,1µm,0.9s						
SKR				MLR	MLR		
	comp=Z,44µm,17.0s						
SKR	**Severo-Kuril’s**	**10.19**	**265**	*e*P	**Pn**	**10 52 44.0**	**-1.4**
SKR				*e*S	Sn	10 54 29.2	-9.5
SPIA	**Saint Paul Isl**	**11.06**	**59**		**Pn**	**10 52 59.9**	**+2.6**
SPIA	**Saint Paul Isl**	**11.06**	**59**	P	**Pn**	**10 53 00.6**	**+3.3**
SPIA	**Saint Paul Isl**	**11.06**	**59**	P	**Pn**	**10 52 58.0**	**+0.7**
	baz=254						
NIKH	**Nikolski High**	**11.47**	**81**	Pn	**Pn**	**10 53 06.0**	**+3.0**
NIKH	**Nikolski High**	**11.47**	**81**	P	Pn	10 53 08.2	+5.2
NIKH	**Nikolski High**	**11.47**	**81**	P	**Pn**	**10 53 04.0**	**+1.0**
	baz=277						
NIKH				S	**Sn**	**10 55 14.6**	**+4.5**
	baz=277						
UNV	**Unalaska Valle**	**12.80**	**76**	Pn	**Pn**	**10 53 22.6**	**+1.4**
UNV	**Unalaska Valle**	**12.80**	**76**	P	**Pn**	**10 53 21.1**	**0.0**
	baz=274						
UNV				S	**Sn**	**10 55 49.3**	**+6.6**
	baz=274						
AKUT	**Akutan**	**13.22**	**75**	Pn	**Pn**	**10 53 28.1**	**+1.2**
AKUT	**Akutan**	**13.22**	**75**	P	**Pn**	**10 53 30.9**	**+4.1**
AKUT	**Akutan**	**13.22**	**75**	⇑P	**Pn**	**10 53 29.9**	**+3.1**
MA2	**Magadan**	**13.77**	**309**	LR	LR	10 58 45.5	
	comp=Z,124µm,20.8s,baz=109,slow=37						
MA2	**Magadan**	**13.77**	**309**		**Pn**	**10 53 34.8**	**+0.5**
MA2	**Magadan**	**13.77**	**309**	P	**Pn**	**10 53 35.7**	**+1.4**
	comp=Z,533nm,0.9s						
MA2	**Magadan**	**13.77**	**309**	P	**Pn**	**10 53 34.8**	**+0.5**
FALS	**False Pass**	**14.57**	**72**		**Pn**	**10 53 43.3**	**-1.9**
FALS	**False Pass**	**14.57**	**72**	P	**P**	**10 53 49.7**	**-1.8**
FALS	**False Pass**	**14.57**	**72**	P	**Pn**	**10 53 46.2**	**+1.0**
	baz=272						
FALS				S	**Sn**	**10 56 28.4**	**+2.6**
	baz=272						
SEY	**Seymchan**	**14.67**	**322**	LR	LR	10 59 07.5	
	comp=Z,95µm,19.4s,baz=115,slow=36						
SEY	**Seymchan**	**14.67**	**322**	⇓*e*P	**Pn**	**10 53 47.6**	**+1.0**
SEY				pmax	pmax		
	comp=Z,173nm,2.5s						
SEY				MLR	MLR		
	comp=Z,99µm,20.0s						
S12K	**Black Hills**	**15.34**	**68**	P	**Pn**	**10 53 56.5**	**+0.9**
	baz=270,SNR=13						
S12K				S	**Sn**	**10 56 47.8**	**+3.2**
	baz=270						
BILL	**Bilibino**	**15.69**	**352**	P	**Pn**	**10 54 00.9**	**+0.9**
BILL	**Bilibino**	**15.69**	**352**	*d i*P	**Pn**	**10 54 01.5**	**+1.5**
BILL				*i* S	**S**	**10 57 01.3**	**-6.1**
BILL				pmax	pmax		
	comp=Z,229nm,1.1s						
BILL				MLR	MLR		
	comp=Z,91µm,18.0s						
SDPT	**Sand Point**	**16.24**	**70**	P	**P**	**10 54 08.7**	**-1.4**
SDPT	**Sand Point**	**16.24**	**70**	P	**P**	**10 54 11.4**	**+1.3**
SDPT	**Sand Point**	**16.24**	**70**	P	**P**	**10 54 10.0**	**-0.1**
	baz=272						
SDPT				S	**Sn**	**10 57 09.4**	**+2.9**
	baz=272						
TNA	**Tin City**	**16.36**	**30**	P	**P**	**10 54 10.1**	**-1.1**
TNA	**Tin City**	**16.36**	**30**	⇑P	**P**	**10 54 10.4**	**-0.9**
TNA	**Tin City**	**16.36**	**30**	P	**P**	**10 54 10.4**	**-0.9**
	baz=228,SNR=167						
TNA				S	**S**	**10 57 19.2**	**-1.9**
	baz=228						
ANM	**Nome**	**16.57**	**35**	P	**P**	**10 54 12.7**	**-1.0**
ANM	**Nome**	**16.57**	**35**	P	**P**	**10 54 12.7**	**-1.0**
ANM				pmax	pmax		
	comp=Z,175nm,0.8s						
ANM	**Nome**	**16.57**	**35**	P	**P**	**10 54 13.2**	**-0.5**
	baz=235,SNR=178						
ANM				S	**S**	**10 57 22.3**	**-3.1**
	baz=235						
CHGN	**Chignik**	**17.39**	**66**	P	**Pn**	**10 54 20.2**	**-1.3**
CHGN	**Chignik**	**17.39**	**66**	P	**P**	**10 54 23.9**	**+1.1**
	baz=271						
CHGN				S	**Sn**	**10 57 37.0**	**+2.8**
	baz=271						
OKH	**Okha**	**17.54**	**285**	*c i*P	**P**	**10 54 27.3**	**+2.9**
OKH				*e*S	**Sn**	**10 57 35.0**	**-2.9**
OKH				pmax	pmax		
	comp=Z,31µm,10.1s						
OKH				smax	smax		
	comp=E,14µm,9.1s						
OKH				smax	smax		
	comp=N,26µm,20.4s						
OKH				MLR	MLR		
	comp=N,45µm,15.0s						
OKH				MLR	MLR		
	comp=Z,57µm,16.0s						
OKH				MLR	MLR		
	comp=E,54µm,16.0s						
KUR	**Kuril'sk**	**17.57**	**255**	*c i*P	**Pn**	**10 54 23.0**	**-0.9**
KUR				*i* S	**Sn**	**10 57 34.9**	**-3.7**
KUR				pmax	pmax		
	comp=Z,13µm,6.2s						
KUR				pmax	pmax		
	comp=Z,409nm,0.8s						
KUR				pmax	pmax		
	comp=N,73nm,0.9s						
KUR				smax	smax		
	comp=N,46µm,16.7s						
KUR				smax	smax		
	comp=E,13µm,21.4s						
KUR				MLR	MLR		
	comp=Z,12µm,17.0s						
N16K	**Nishlik Lake**	**17.68**	**52**	P	**P**	**10 54 26.7**	**+0.7**
	baz=257,SNR=71						
N16K				S	**Sn**	**10 57 44.1**	**+2.8**
	baz=257						
P16K	**Nushagak River**	**17.80**	**57**	P	**P**	**10 54 27.9**	**+0.6**
	baz=262,SNR=42						
P16K				S	**S**	**10 57 48.3**	**-2.2**
	baz=262						
O16K	**Kokwok River B**	**17.84**	**55**	P	**P**	**10 54 27.4**	**-0.2**
	baz=261						
O16K				S	**Sn**	**10 57 48.0**	**+3.0**
	baz=261						
R16K	**Pilot Point**	**17.88**	**62**	P	**P**	**10 54 28.6**	**+0.4**
	baz=267						
R16K				S	**S**	**10 57 52.1**	**-0.1**
	baz=267						
TYV	**Tymovskoe**	**18.32**	**276**	*e*P	**Pn**	**10 54 35.7**	**+2.6**
TYV				pmax	pmax		
	comp=Z,801nm,2.2s						
TYV				pmax	pmax		
	comp=Z,40µm,5.4s						
TYV				MLR	MLR		
	comp=N,29µm,18.0s						
TYV				MLR	MLR		
	comp=Z,27µm,18.0s						
O17K	**Koliganek Bris**	**18.37**	**55**	P	**P**	**10 54 33.1**	**-0.4**
	baz=261,SNR=52						
O17K				S	**Sn**	**10 57 58.6**	**+0.9**
	baz=261						
Q16K	**King Salmon**	**18.45**	**59**	P	**P**	**10 54 34.2**	**-0.2**
	baz=265,SNR=72						
Q16K				S	**Sn**	**10 58 01.2**	**+1.5**
	baz=265						
R17K	**Ugashik Creek**	**18.52**	**62**	P	**P**	**10 54 34.3**	**-0.9**
	baz=268,SNR=18						
R17K				S	**Sn**	**10 58 00.7**	**-0.9**
	baz=268						
Q17K	**Contact Creek**	**18.82**	**60**	P	**Pn**	**10 54 39.0**	**-0.2**
	baz=267,SNR=36						
Q17K				S	**Sn**	**10 58 09.2**	**+0.3**
	baz=267						
NKL	**Nikolayevsk**	**18.94**	**284**	*e*P	**P**	**10 54 37.9**	**-1.9**
NKL				*e*S	**Sn**	**10 58 12.4**	**+0.7**
NKL				pmax	pmax		
	comp=N,833nm,1.4s						
NKL				pmax	pmax		
	comp=E,3µm,1.6s						
NKL				pmax	pmax		
	comp=Z,4µm,1.6s						
NKL				smax	smax		
	comp=E,6µm,3.5s						
NKL				smax	smax		
	comp=N,11µm,6.6s						
NKL				MLR	MLR		
	comp=E,158µm,17.0s						
NKL				MLR	MLR		
	comp=N,34µm,14.0s						
NKL				MLR	MLR		
	comp=Z,174µm,16.0s						
P18K	**Big Mountain,**	**19.26**	**57**	P	**Pn**	**10 54 44.3**	**-0.1**
	baz=264						
P18K				S	**Sn**	**10 58 17.4**	**-2.0**
	baz=264						
UGL	**Uglegorsk**	**19.28**	**271**	⇑*i*P	**Pn**	**10 54 46.1**	**+1.4**
UGL				*e*S	**Sn**	**10 58 11.8**	**-8.1**
UGL				pmax	pmax		
	comp=Z,25µm,4.9s						
UGL				pmax	pmax		
	comp=Z,1µm,1.5s						
UGL				smax	smax		
	comp=E,26µm,8.0s						
UGL				smax	smax		
	comp=N,36µm,14.0s						
UGL				MLR	MLR		
	comp=E,38µm,16.0s						
UGL				MLR	MLR		
	comp=N,14µm,14.0s						
UGL				MLR	MLR		
	comp=Z,29µm,14.0s						
Q18K	**Katmai Hardscr**	**19.30**	**59**	P	**P**	**10 54 42.8**	**-1.1**
	baz=267,SNR=75						
Q18K				S	**Sn**	**10 58 19.1**	**-1.6**
	baz=267						
O18K	**Koktuh Hills**	**19.32**	**55**		**P**	**10 54 44.0**	**0.0**
O18K	**Koktuh Hills**	**19.32**	**55**	P	**Pn**	**10 54 45.0**	**-0.1**
	baz=263,SNR=92						
O18K				S	**Sn**	**10 58 20.7**	**-0.2**
	baz=263						
SVW2	**Sparrevohn**	**19.34**	**51**	P	**Pn**	**10 54 44.9**	**-0.5**
SVW2	**Sparrevohn**	**19.34**	**51**	P	**Pn**	**10 54 45.3**	**-0.1**
YUK	**Yuzh-Kuril'sk**	**19.43**	**254**	*d i*P	**P**	**10 54 42.8**	**-2.4**
YUK				*i* S	**S**	**10 58 21.8**	**-1.4**
YUK				pmax	pmax		
	comp=Z,2µm,3.1s						
YUK				pmax	pmax		
	comp=Z,942nm,1.2s						
YUK				pmax	pmax		
	comp=N,496nm,1.1s						
YUK				pmax	pmax		
	comp=E,827nm,1.1s						
YUK				MLR	MLR		
	comp=N,6µm,14.0s						
RDOG	**Red Dog Mine**	**19.50**	**28**	P	**P**	**10 54 46.1**	**+0.2**
RDOG	**Red Dog Mine**	**19.50**	**28**	P	**Pn**	**10 54 46.9**	**-0.4**
	baz=230,SNR=62						
TTA	**Tatalina**	**19.59**	**46**	P	**Pn**	**10 54 48.5**	**0.0**
TTA	**Tatalina**	**19.59**	**46**	⇑P	**P**	**10 54 47.6**	**+0.6**
TTA	**Tatalina**	**19.59**	**46**	P	**P**	**10 54 47.0**	**0.0**
	baz=253,SNR=132						
TTA				S	**Sn**	**10 58 28.1**	**+0.6**
	baz=253						
YSS	**Yuzh-Sakhalins**	**19.76**	**265**	P	**Pn**	**10 54 49.8**	**-0.5**
YSS				IAmb	IAmb	10 54 56.0	
	comp=Z,1µm,1.9s						
YSS	**Yuzh-Sakhalins**	**19.76**	**265**	P	**Pn**	**10 54 51.9**	**+1.5**
YSS	**Yuzh-Sakhalins**	**19.76**	**265**	⇑P	**Pn**	**10 54 50.5**	**+0.1**
YSS	**Yuzh-Sakhalins**	**19.76**	**265**	κ*e*P	**Pn**	**10 54 50.3**	**-0.1**
YSS				*e*S	**S**	**10 58 26.7**	**-3.3**
YSS				pmax	pmax		
	comp=Z,16µm,8.7s						
YSS				pmax	pmax		
	comp=E,10µm,8.0s						
YSS				pmax	pmax		
	comp=Z,240nm,1.4s						
YSS				smax	smax		
	comp=N,24µm,9.1s						
YSS				smax	smax		
	comp=E,20µm,9.7s						
YSS				MLR	MLR		

	comp=Z,42µm,16.0s						
YSS				MLR	MLR		
	comp=N,19µm,17.0s						
YSS				MLR	MLR		
	comp=E,24µm,17.0s						
O19K	**Port Alsworth**	**19.81**	**54**	P	**P**	**10 54 50.0**	**+0.8**
	baz=263,SNR=78						
O19K				S	**Sn**	**10 58 32.4**	**-0.1**
	baz=263						
N19K	**Bonanza Creek**	**19.82**	**53**	P	**P**	**10 54 49.5**	**0.0**
	baz=261						
N19K				S	**Sn**	**10 58 32.9**	**0.0**
	baz=261						
GCSA	**Galena City Sc**	**19.85**	**40**	P	**P**	**10 54 50.1**	**+0.5**
	baz=247,SNR=529						
GCSA				S	**Sn**	**10 58 32.7**	**-0.8**
	baz=247						
L19K	**White Mountain**	**19.91**	**49**	P	**P**	**10 54 48.9**	**-1.6**
	baz=257						
L19K				S	**S**	**10 58 33.5**	**+0.4**
	baz=257						
Q19K	**Cape Douglas,**	**20.03**	**58**	IAmb	IAmb	10 55 01.5	
	comp=Z,1µm,1.2s						
Q19K	**Cape Douglas,**	**20.03**	**58**	P	**P**	**10 54 49.9**	**-1.9**
	baz=267,SNR=22						
Q19K				S	**S**	**10 58 34.2**	**-1.4**
	baz=267						
M19K	**Big River Lodg**	**20.07**	**49**	P	**P**	**10 54 51.3**	**-0.8**
	baz=258,SNR=114						
OHAK	**Old Harbor**	**20.20**	**63**	P	**P**	**10 54 52.4**	**-1.1**
OHAK	**Old Harbor**	**20.20**	**63**	P	**P**	**10 54 51.4**	**-2.1**
	baz=272,SNR=18						
P19K	**Oil Pt**	**20.29**	**56**	IAmb	IAmb	10 55 02.4	
	comp=Z,1µm,1.1s						
P19K	**Oil Pt**	**20.29**	**56**	P	**P**	**10 54 53.5**	**-1.1**
	baz=266						
P19K				S	Sn	10 58 44.6	+0.3
	baz=266						
ILSW	**Iliamna Southw**	**20.37**	**55**	IAmb	IAmb	10 55 03.7	
	comp=Z,627nm,1.1s						
L20K	**Farewell, AK**	**20.43**	**48**	P	**P**	**10 54 56.1**	**+0.1**
	baz=257,SNR=109						
L20K				S	Sn	10 58 48.5	+1.1
	baz=257						
K20K	**Telida**	**20.56**	**45**	P	**P**	**10 54 58.3**	**+0.8**
	baz=255						
KDAK	**Kodiak Island**	**20.57**	**62**	P	**P**	**10 54 55.7**	**-1.8**
	comp=Z,25nm,0.4s,baz=276,slow=2.5,SNR=75						
KDAK				S	**S**	**10 58 40.4**	**-5.6**
	comp=Z,10nm,0.8s,baz=305,slow=5.5,SNR=0.8						
	comp=Z,25nm,0.4s						
KDAK	**Kodiak Island**	**20.57**	**62**	P	**P**	**10 54 55.6**	**-1.9**
KDAK	**Kodiak Island**	**20.57**	**62**	IAMs_20	IAMs_20	11 04 02.6	
	comp=Z,57µm,19.0s						
KDAK	**Kodiak Island**	**20.57**	**62**	⇓P	**P**	**10 54 55.6**	**-1.9**
KDAK	**Kodiak Island**	**20.57**	**62**	_de_P	**P**	**10 54 55.9**	**-1.6**
KDAK				pmax	pmax		
	comp=Z,201nm,1.1s						
KDAK				MLR	MLR		
	comp=Z,96µm,19.0s						
KDAK	**Kodiak Island**	**20.57**	**62**	P	**P**	**10 54 54.9**	**-2.6**
	baz=271						
KDAK				S	**S**	**10 58 46.1**	**0.0**
	baz=271						
O20K	**Slope Mountain**	**20.64**	**55**	P	**P**	**10 54 58.5**	**+0.1**
	baz=265,SNR=21						
O20K				S	**S**	**10 58 48.3**	**+0.6**
	baz=265						
M20K	**Styx River**	**20.65**	**50**	P	**P**	**10 54 59.4**	**+1.0**
	baz=260						
Q20K	**Shuyak Island**	**20.67**	**59**	P	**P**	**10 54 56.4**	**-2.2**
	baz=269,SNR=36						
Q20K				S	**S**	**10 58 47.2**	**-0.9**
	baz=269						
JMP	**Maruseppu**	**20.92**	**257**	P	**P**	**10 55 01.7**	**+0.2**
SPCR	**Spurr Chakacha**	**20.97**	**52**	P	**P**	**10 55 02.9**	**+0.9**
	baz=262,SNR=113						
SPCR				S	**S**	**10 58 56.7**	**+2.5**
	baz=262						
JWK2	**Keihoku**	**21.08**	**262**	P	**P**	**10 55 04.3**	**+1.1**
JWK2				S	Sn	10 59 00.5	-2.9
HOM	**Homer**	**21.10**	**56**	P	**P**	**10 55 01.3**	**-1.9**
	baz=267,SNR=17						
HOM				S	**S**	**10 58 55.5**	**-1.1**
	baz=267						
PPLA	**Purkeypile**	**21.28**	**47**	P	**P**	**10 55 06.0**	**+0.7**
	baz=258,SNR=156						
PPLA				S	**S**	**10 58 60.0**	**-0.4**
	baz=258						
CNPM	**China Poot**	**21.30**	**57**	P	**P**	**10 55 04.1**	**-1.4**
JKA	**Kamikawa-asahi**	**21.31**	**258**	P	**P**	**10 55 05.8**	**+0.1**
JKA				IAmb	IAmb	10 55 12.2	
	comp=Z,438nm,0.8s						
ASAJ	**Asahikawa**	**21.31**	**258**	P	**P**	**10 55 05.2**	**-0.4**
	comp=Z,67nm,1.0s,baz=58,slow=9.9,SNR=57						
ASAJ				S	**S**	**10 58 57.6**	**-3.4**
	comp=Z,10nm,1.0s,baz=45,slow=25,SNR=1.2						
ASAJ				LR	LR	11 02 47.0	
	comp=Z,21µm,20.5s,baz=74,slow=35						
	comp=Z,67nm,1.0s						
ASAJ	**Asahikawa**	**21.31**	**258**	P	**P**	**10 55 06.2**	**+0.5**
ASAJ	**Asahikawa**	**21.31**	**258**	P	**P**	**10 55 05.8**	**+0.1**
ASAJ				pmax	pmax		
	comp=Z,438nm,0.8s						
SKT	**Skwentna**	**21.41**	**50**	IAmb	IAmb	10 55 16.3	
	comp=Z,438nm,1.1s						
SKT	**Skwentna**	**21.41**	**50**	P	**P**	**10 55 07.3**	**+0.7**
	baz=261,SNR=135						
SKT				S	**S**	**10 59 04.8**	**+2.1**
	baz=261						
CAPN	**Captain Cook N**	**21.43**	**53**	IAMs_20	IAMs_20	11 03 02.9	
	comp=Z,39µm,18.0s						
CAPN	**Captain Cook N**	**21.43**	**53**	P	**P**	**10 55 06.1**	**-0.6**
	baz=265						
CAST	**Castle Rocks**	**21.44**	**46**	P	**P**	**10 55 06.5**	**-0.4**
	baz=257,SNR=311						
CAST				S	**S**	**10 59 04.0**	**+0.6**
	baz=257						
CHUM	**Lake Minchumin**	**21.45**	**45**	P	**P**	**10 55 07.1**	**0.0**
	baz=255,SNR=392						
CHUM				S	**S**	**10 59 05.2**	**+1.7**
	baz=255						
IMAR	**Indian Mountai**	**21.54**	**39**	P	**P**	**10 55 07.4**	**-0.5**
BRSE	**Bradley Lake S**	**21.56**	**56**	P	**P**	**10 55 06.3**	**-1.9**
	baz=268,SNR=34						
BRSE				S	**S**	**10 59 02.8**	**-3.0**
	baz=268						
SUA	**Susitna One**	**21.70**	**51**	P	**P**	**10 55 09.5**	**-0.4**
	baz=263,SNR=142						
SUA				S	**S**	**10 59 09.2**	**+0.4**
	baz=263						
H21K	**Melozitna Rive**	**21.79**	**40**	IAmb	IAmb	10 55 15.6	
	comp=Z,556nm,0.9s						
H21K				IAMs_20	IAMs_20	11 03 13.6	
	comp=Z,53µm,20.0s						
H21K	**Melozitna Rive**	**21.79**	**40**	P	**P**	**10 55 09.7**	**-0.9**
	baz=250						
H21K				S	**S**	**10 59 12.1**	**+2.1**
	baz=250						
G21K	**Allakaket**	**21.83**	**37**	P	**P**	**10 55 10.7**	**-0.4**
	baz=248,SNR=336						
G21K				S	**S**	**10 59 09.9**	**-1.0**
	baz=248						
FIS	**Fire Island**	**21.92**	**52**	IAmb	IAmb	10 55 29.6	
	comp=Z,300nm,0.8s						
I21K	**Tanana**	**21.96**	**41**	IAMs_20	IAMs_20	11 03 29.3	
	comp=Z,46µm,20.0s						
I21K	**Tanana**	**21.96**	**41**	P	**P**	**10 55 11.2**	**-1.3**
	baz=253						
I21K				S	**S**	**10 59 12.8**	**-0.5**
	baz=253						
KTH	**Kantishna Hill**	**21.98**	**46**	IAmb	IAmb	10 55 17.1	
	comp=Z,471nm,1.1s						
CUT	**Chulitna**	**22.06**	**49**	IAmb	IAmb	10 55 29.6	
	comp=Z,644nm,1.6s						
CUT	**Chulitna**	**22.06**	**49**	P	**P**	**10 55 11.2**	**-2.4**
	baz=261,SNR=25						
BPAW	**Bear Paw Mtn.**	**22.08**	**44**	P	**P**	**10 55 13.6**	**-0.1**
	baz=256,SNR=191						
BPAW				S	**S**	**10 59 15.3**	**-0.4**
	baz=256						
O22K	**Cooper Landing**	**22.11**	**54**	P	**P**	**10 55 12.2**	**-1.9**
	baz=267,SNR=47						
O22K				S	**S**	**10 59 12.0**	**-4.2**
	baz=267						
F21K	**Alatna River**	**22.12**	**36**	P	**P**	**10 55 13.8**	**-0.4**
	baz=246,SNR=216						
F21K				S	**S**	**10 59 16.4**	**-0.1**
	baz=246						
RC01	**Rabbit Creek A**	**22.15**	**53**	P	**P**	**10 55 12.1**	**-2.4**
	baz=265,SNR=66						
RC01				S	**S**	**10 59 13.2**	**-3.9**
	baz=265						
ERM	**Erimo**	**22.23**	**253**	P	**P**	**10 55 15.8**	**+0.4**
ERM				IAmb	IAmb	10 55 21.9	
	comp=Z,866nm,1.2s						
ERM	**Erimo**	**22.23**	**253**	P	**P**	**10 55 18.1**	**+2.6**
ERM	**Erimo**	**22.23**	**253**	⇑P	**P**	**10 55 15.7**	**+0.2**
ERM	**Erimo**	**22.23**	**253**	_ce_P	**P**	**10 55 16.0**	**+0.5**
ERM				pmax	pmax		
	comp=Z,850nm,1.2s						
ERM				MLR	MLR		
	comp=Z,26µm,18.0s						
JEM	**Erimo**	**22.23**	**253**	P	**P**	**10 55 18.1**	**+2.6**
JEM	**Erimo**	**22.23**	**253**	P	**P**	**10 55 15.7**	**+0.2**
TRF	**Thorofare Moun**	**22.24**	**46**	IAmb	IAmb	10 55 30.5	
	comp=Z,646nm,1.1s						
TRF	**Thorofare Moun**	**22.24**	**46**	P	**P**	**10 55 15.5**	**-0.1**
	baz=259,SNR=169						
TRF				S	**S**	**10 59 17.8**	**-1.2**
	baz=259						
MLY	**Manley**	**22.42**	**42**	IAmb	IAmb	10 55 39.8	
	comp=Z,378nm,1.0s						
MLY	**Manley**	**22.42**	**42**	P	**P**	**10 55 16.5**	**-1.0**
	baz=254,SNR=281						
MLY				S	**S**	**10 59 22.7**	**+0.6**
	baz=254						
PMR	**Palmer**	**22.49**	**51**	P	**P**	**10 55 18.7**	**+0.6**
PMR	**Palmer**	**22.49**	**51**	P	**P**	**10 55 16.1**	**-2.0**
	baz=264,SNR=42						
PMR				S	**S**	**10 59 18.6**	**-4.6**
	baz=264						
GHO	**Glory Hole Cre**	**22.61**	**51**	IAmb	IAmb	10 55 39.4	
	comp=Z,749nm,1.8s						
F22K	**John River**	**22.70**	**36**	P	**P**	**10 55 19.7**	**-0.7**
	baz=247						
G22K	**Bettles**	**22.72**	**37**	P	**P**	**10 55 19.7**	**-0.8**
	baz=249						
JEW	**Eniwo**	**22.73**	**257**	P	**P**	**10 55 20.6**	**-0.3**
KNK	**Knik Glacier**	**22.79**	**52**	IAmb	IAmb	10 55 25.5	
	comp=Z,361nm,0.9s						
KNK	**Knik Glacier**	**22.79**	**52**	P	**P**	**10 55 19.4**	**-2.1**
	baz=266,SNR=178						
KNK				S	**S**	**10 59 26.1**	**-2.7**
	baz=266						
PWL	**Port Wells**	**22.82**	**53**	IAmb	IAmb	10 55 25.6	
	comp=Z,315nm,0.8s						
PWL	**Port Wells**	**22.82**	**53**	P	**P**	**10 55 19.6**	**-2.0**
	baz=267,SNR=113						
PWL				S	**S**	**10 59 23.7**	**-5.5**
	baz=267						
MCK	**McKinley**	**22.89**	**46**	IAmb	IAmb	10 55 29.0	
	comp=Z,334nm,0.8s						
MCK	**McKinley**	**22.89**	**46**	P	**P**	**10 55 21.1**	**-1.2**
	baz=260,SNR=221						
MCK				S	**S**	**10 59 27.7**	**-2.7**
	baz=260						
SML	**Sawmill**	**22.89**	**51**	IAmb	IAmb	10 55 26.6	
	comp=Z,428nm,0.8s						
SML	**Sawmill**	**22.89**	**51**	P	**P**	**10 55 21.8**	**-0.6**
	baz=265,SNR=254						
SML				S	**S**	**10 59 26.7**	**-3.8**
	baz=265						
WAT1	**Susitna Watana**	**22.91**	**48**	P	**P**	**10 55 20.1**	**-2.5**
	baz=262						
WAT1				S	**S**	**10 59 26.4**	**-4.3**
	baz=262						
NEA2	**Nenana**	**23.00**	**44**	IAmb	IAmb	10 55 27.3	
	comp=Z,800nm,1.5s						
NEA2	**Nenana**	**23.00**	**44**	P	**P**	**10 55 22.6**	**-1.0**
	baz=257,SNR=229						
NEA2				S	**S**	**10 59 29.6**	**-2.7**
	baz=257						
I23K	**Minto, Yukon-K**	**23.01**	**42**	IAmb	IAmb	10 55 26.8	
	comp=Z,256nm,0.7s						
I23K				IAMs_20	IAMs_20	11 05 52.1	
	comp=Z,40µm,18.0s						
I23K	**Minto, Yukon-K**	**23.01**	**42**	P	**P**	**10 55 23.1**	**-0.5**
	baz=256,SNR=306						
I23K				S	**S**	**10 59 30.9**	**-1.5**
	baz=256						
E22K	**Anaktuvuk Pass**	**23.08**	**34**	P	**P**	**10 55 23.6**	**-0.7**
	baz=246,SNR=308						
E22K				S	**S**	**10 59 30.3**	**-3.3**
	baz=246						
H23K	**Yukon River**	**23.12**	**41**	IAMs_20	IAMs_20	11 04 35.0	
	comp=Z,42µm,20.0s						
H23K	**Yukon River**	**23.12**	**41**	P	**P**	**10 55 24.1**	**-0.7**
	baz=254,SNR=95						
H23K				S	**S**	**10 59 32.3**	**-1.9**
	baz=254						
M23K	**Glacier View**	**23.17**	**51**	P	**P**	**10 55 24.0**	**-1.4**
	baz=265,SNR=220						
M23K				S	**S**	**10 59 31.9**	**-3.3**
	baz=265						
G23K	**Bananza Creek**	**23.20**	**38**	P	**P**	**10 55 24.4**	**-1.1**
	baz=252,SNR=519						
G23K				S	**S**	**10 59 35.0**	**-0.6**
	baz=252						
P23K	**Montague Islan**	**23.25**	**56**	P	**P**	**10 55 25.1**	**-1.0**
	baz=270,SNR=44						
P23K				S	**S**	**10 59 34.0**	**-2.5**
	baz=270						
A21K	**Barrow**	**23.26**	**25**	IAmb	IAmb	10 55 28.3	
	comp=Z,479nm,0.8s						
A21K				IAMs_20	IAMs_20	11 04 57.9	
	comp=Z,71µm,20.0s						
A21K	**Barrow**	**23.26**	**25**	P	**P**	**10 55 24.9**	**-1.1**
	baz=233,SNR=401						
A21K				S	**S**	**10 59 33.3**	**-3.1**
	baz=233						
COLD	**Coldfoot**	**23.31**	**37**	IAmb	IAmb	10 55 50.1	
	comp=Z,410nm,1.3s						
COLD	**Coldfoot**	**23.31**	**37**	P	**P**	**10 55 24.5**	**-2.1**
	baz=250						
COLD				S	**S**	**10 59 35.4**	**-1.9**
	baz=250						
SCM	**Sheep Creek Mo**	**23.37**	**51**	IAmb	IAmb	10 55 45.8	
	comp=Z,422nm,0.8s						
SCM	**Sheep Creek Mo**	**23.37**	**51**	P	**P**	**10 55 26.0**	**-1.3**
	baz=266,SNR=146						
SCM				S	**S**	**10 59 35.1**	**-3.4**
	baz=266						
WRH	**Wood River Hil**	**23.39**	**44**	IAmb	IAmb	10 55 41.9	
	comp=Z,378nm,1.0s						
MDM	**Murphy Dome**	**23.43**	**43**	IAmb	IAmb	10 55 32.2	
	comp=Z,468nm,0.8s						
CCB	**Clear Creek Bu**	**23.55**	**44**	IAmb	IAmb	10 55 31.7	
	comp=Z,319nm,0.9s						
TCOL	**CIGO, UAF Yank**	**23.57**	**43**	P	**P**	**10 55 29.2**	**+0.1**
	baz=258,SNR=277						
TCOL				S	**S**	**10 59 39.8**	**-1.8**
	baz=258						
COLA	**College**	**23.57**	**43**	P	**P**	**10 55 28.8**	**-0.4**
COLA	**College**	**23.57**	**43**	P	**P**	**10 55 29.3**	**+0.1**
COLA	**College**	**23.57**	**43**	⇑P	**P**	**10 55 28.1**	**-1.1**
COLA	**College**	**23.57**	**43**	_c i_P	**P**	**10 55 28.6**	**-0.6**
COLA				pmax	pmax		
	comp=Z,302nm,0.7s						
COLA				MLR	MLR		
	comp=Z,32µm,17.0s						
COLA	**College**	**23.57**	**43**	P	**P**	**10 55 28.6**	**-0.6**
	baz=258						
COLA				S	**S**	**10 59 40.5**	**-1.1**
	baz=258						
JSH	**Shimam**	**23.68**	**258**	P	**P**	**10 55 30.2**	**-0.2**
JSH				S	**S**	**10 59 49.1**	**+5.5**
H24K	**Noodor Dome**	**23.78**	**41**	IAmb	IAmb	10 55 40.7	
	comp=Z,454nm,1.0s						
H24K				IAMs_20	IAMs_20	11 04 56.4	
	comp=Z,40µm,20.0s						
H24K	**Noodor Dome**	**23.78**	**41**	P	**P**	**10 55 29.9**	**-1.3**
	baz=256						
H24K				S	**S**	**10 59 43.8**	**-1.3**
	baz=256						
Q23K	**Middleton Isla**	**23.79**	**57**	P	**P**	**10 55 29.9**	**-1.4**
	baz=272						
Q23K				S	**S**	**10 59 45.3**	**+0.2**
	baz=272						
POKR	**Poker Plat Res**	**23.80**	**43**	IAMs_20	IAMs_20	11 06 16.9	
	comp=Z,47µm,18.0s						
POKR	**Poker Plat Res**	**23.80**	**43**	P	**P**	**10 55 30.5**	**-0.9**
	baz=258,SNR=275						
POKR				S	**S**	**10 59 43.6**	**-1.7**
	baz=258						
D23K	**Nanushuk River**	**23.80**	**33**	P	**P**	**10 55 30.8**	**-0.5**
	baz=246						
D23K				S	**S**	**10 59 42.7**	**-2.5**
	baz=246						
E23K	**Chandalar**	**23.81**	**35**	P	**P**	**10 55 30.5**	**-1.0**
	baz=249						
E23K				S	**S**	**10 59 44.4**	**-1.2**
	baz=249						
JOT	**Ohata**	**23.85**	**254**	P	**P**	**10 55 30.6**	**-1.5**
HDA	**Harding Lake**	**23.87**	**45**	IAmb	IAmb	10 55 37.6	
	comp=Z,268nm,0.9s						
HDA	**Harding Lake**	**23.87**	**45**	P	**P**	**10 55 30.1**	**-2.0**
	baz=260,SNR=320						
HDA				S	**S**	**10 59 42.3**	**-4.0**
	baz=260						
HDA				S	**S**	**10 59 42.3**	**-4.0**
	baz=260						
M24K	**Tolsona, Glenn**	**23.93**	**50**	P	**P**	**10 55 32.9**	**+0.1**
	baz=266,SNR=160						
M24K				S	**S**	**10 59 46.4**	**-1.1**
	baz=266						
ILAR	**Eielson Array**	**23.96**	**44**	P	**P**	**10 55 31.4**	**-1.5**
	comp=Z,425nm,0.9s,baz=249,slow=7.0,SNR=438						
ILAR				S	**S**	**10 59 51.1**	**+3.3**
	comp=Z,4.1nm,0.9s,baz=275,slow=11,SNR=2.0						
ILAR				LR	LR	11 06 09.6	
	comp=Z,28µm,18.2s,baz=251,slow=40						
	comp=Z,425nm,0.9s						
KLU	**Klutina**	**24.01**	**52**	IAmb	IAmb	10 55 48.0	
	comp=Z,523nm,1.2s						
KLU	**Klutina**	**24.01**	**52**	P	**P**	**10 55 33.1**	**-0.4**
	baz=268,SNR=119						
KLU				S	**S**	**10 59 46.8**	**-2.1**
	baz=268						
DIV	**Divide**	**24.07**	**53**	IAmb	IAmb	10 55 57.1	
	comp=Z,815nm,1.8s						
EYAK	**Cordova Ski Ar**	**24.08**	**54**	P	**P**	**10 55 33.7**	**-0.3**
EYAK	**Cordova Ski Ar**	**24.08**	**54**	P	**P**	**10 55 33.7**	**-0.3**
	baz=270,SNR=17						
EYAK				S	**S**	**10 59 48.2**	**-1.5**
	baz=270						
G24K	**Hadweenzic Riv**	**24.16**	**39**	P	**P**	**10 55 34.8**	**0.0**
	baz=254						
G24K				S	**S**	**10 59 50.7**	**-0.4**
	baz=254						
E24K	**Your Creek**	**24.21**	**35**	P	**P**	**10 55 35.2**	**-0.1**
	baz=250						
JTM	**Tenmabayashi**	**24.22**	**253**	P	**P**	**10 55 34.1**	**-1.4**
JTM				IAmb	IAmb	10 55 40.1	
	comp=Z,584nm,1.1s						
JTM	**Tenmabayashi**	**24.22**	**253**	P	**P**	**10 55 37.6**	**+2.1**
JTM	**Tenmabayashi**	**24.22**	**253**	P	**P**	**10 55 35.4**	**-0.1**
JTM	**Tenmabayashi**	**24.22**	**253**	⇑P	**P**	**10 55 36.0**	**+0.5**
F24K	**Squaw Lake**	**24.25**	**37**	P	**P**	**10 55 35.0**	**-0.6**
	baz=252,SNR=132						
F24K				S	**S**	**10 59 51.0**	**-1.5**
	baz=252						
K24K	**Donnelly Dome**	**24.28**	**46**	P	**P**	**10 55 34.5**	**-1.4**
	baz=263,SNR=346						
K24K				S	**S**	**10 59 53.7**	**+0.6**
	baz=263						
PAX	**Paxson**	**24.33**	**48**	IAmb	IAmb	10 55 51.0	
	comp=Z,418nm,1.1s						
PAX	**Paxson**	**24.33**	**48**	P	**P**	**10 55 35.8**	**-0.6**
	baz=265,SNR=291						
PAX				S	**S**	**10 59 53.8**	**-0.1**
	baz=265						
YAK	**Yakutsk**	**24.34**	**309**	P	**P**	**10 55 35.2**	**-1.2**
	comp=Z,220nm,0.6s,baz=87,slow=4.4,SNR=100						
YAK				S	**S**	**10 59 51.4**	**-2.5**
	comp=Z,5.9nm,0.5s,baz=184,slow=20,SNR=1.0						
YAK				LR	LR	11 05 20.0	
	comp=Z,61µm,19.8s,baz=102,slow=37						
	comp=Z,220nm,0.6s						
YAK	**Yakutsk**	**24.34**	**309**	P	**P**	**10 55 35.1**	**-1.2**
YAK				IAMs_20	IAMs_20	11 05 08.0	
	comp=Z,59µm,20.0s						
YAK	**Yakutsk**	**24.34**	**309**	⇑P	**P**	**10 55 35.2**	**-1.2**
YAK	**Yakutsk**	**24.34**	**309**	_c i_P	**P**	**10 55 35.5**	**-0.9**
YAK				_e_*PP	**sP**	**10 55 44.7**	**-0.7**
YAK				_e_PPP	PPP	10 56 13.8	
YAK				_e_		10 59 14.9	
YAK				_e_S	**S**	**10 59 52.2**	**-1.7**
YAK				_e_*SS	**sS**	**11 00 10.7**	**+5.5**
YAK				pmax	pmax		
	comp=Z,803nm,1.5s						
YAK				pmax	pmax		
	comp=N,161nm,1.6s						
YAK				pmax	pmax		
	comp=E,522nm,1.6s						
YAK				pmax	pmax		
	comp=Z,999nm,1.3s						
YAK				pmax	pmax		
	comp=N,320nm,1.4s						
YAK				pmax	pmax		
	comp=E,481nm,1.4s						
YAK				smax	smax		
	comp=N,8µm,4.4s						
YAK				smax	smax		
	comp=E,7µm,4.2s						
YAK				MLR	MLR		
	comp=Z,60µm,15.0s						
YAK				MLR	MLR		
	comp=N,12µm,13.0s						
YAK				MLR	MLR		
	comp=E,41µm,15.0s						
HARP	**HAARP**	**24.43**	**50**	P	**P**	**10 55 37.1**	**-0.1**
	baz=266,SNR=40						
HARP				S	**S**	**10 59 56.6**	**+1.2**
	baz=266						
TEY	**Ternei**	**24.43**	**266**	⇑_i_P	**P**	**10 55 36.8**	**-0.6**
TEY				_e_S	**S**	**10 59 49.0**	**-6.7**
TEY				pmax	pmax		
	comp=E,110nm,2.2s						
TEY				pmax	pmax		
	comp=Z,180nm,2.2s						
TEY				pmax	pmax		
	comp=N,40nm,2.0s						
TEY				pmax	pmax		
	comp=E,3µm,8.9s						
TEY				pmax	pmax		
	comp=N,1µm,8.7s						
TEY				pmax	pmax		
	comp=Z,5µm,7.6s						
TEY				smax	smax		
	comp=N,200nm,15.0s						
TEY				MLR	MLR		
	comp=E,6µm,16.0s						
TEY				MLR	MLR		
	comp=N,7µm,15.0s						
TEY				MLR	MLR		
	comp=Z,10µm,17.0s						
N25K	**Chitina, Valde**	**24.65**	**52**	IAmb	IAmb	10 55 54.8	
	comp=Z,205nm,0.8s						
N25K	**Chitina, Valde**	**24.65**	**52**	P	**P**	**10 55 38.4**	**-1.0**
	baz=269,SNR=94						
N25K				S	**S**	**10 59 57.9**	**-1.2**
	baz=269						
PRP	**Porcupine Dome**	**24.66**	**42**	IAmb	IAmb	10 55 42.6	
	comp=Z,280nm,0.8s						
PRP	**Porcupine Dome**	**24.66**	**42**	P	**P**	**10 55 38.4**	**-1.1**
	baz=259,SNR=359						
RIDG	**Independent Ri**	**24.68**	**47**	IAmb	IAmb	10 55 41.8	
	comp=Z,426nm,1.1s						
RIDG	**Independent Ri**	**24.68**	**47**	P	**P**	**10 55 38.7**	**-0.9**
	baz=264,SNR=282						
G25K	**Bearman Lake**	**24.71**	**39**	P	**P**	**10 55 39.6**	**-0.1**
	baz=256						
C24K	**Franklin Bluff**	**24.75**	**32**	P	**P**	**10 55 39.1**	**-0.9**
	baz=247						
FYU	**Fort Yukon**	**25.00**	**40**	P	**P**	**10 55 41.6**	**-0.7**
FYU				IAMs_20	IAMs_20	11 05 54.4	
	comp=Z,38µm,19.0s						
DOT	**Dot Lake**	**25.02**	**47**	IAmb	IAmb	10 55 45.3	
	comp=Z,419nm,1.0s						
GLB	**Gilahina Butte**	**25.03**	**52**	IAmb	IAmb	10 55 47.1	
	comp=Z,383nm,0.9s						
SCRK	**Sand Creek**	**25.09**	**46**	P	**P**	**10 55 40.6**	**-2.7**
	baz=264						
F25K	**Christian Rive**	**25.09**	**37**	P	**P**	**10 55 43.1**	**-0.1**
	baz=255,SNR=563						
F25K				S	**S**	**11 00 03.6**	**-2.5**
	baz=255						
MENT	**Mentasta**	**25.12**	**49**	IAmb	IAmb	10 56 04.8	
	comp=Z,345nm,1.0s						
MENT	**Mentasta**	**25.12**	**49**	P	**P**	**10 55 43.7**	**+0.2**
	comp=Z,309nm,0.9s						
VRDI	**Verde Repeater**	**25.20**	**53**	IAmb	IAmb	10 55 49.0	
	comp=Z,357nm,0.9s						

E25K	**Arctic Village**	**25.27**	**36**	P	**P**	**10 55 44.6**	**-0.1**
	baz=254,SNR=821						
E25K				S	**S**	**11 00 09.0**	**+0.2**
	baz=254						
L26K	**Log Cabin Wild**	**25.30**	**48**	IAmb	IAmb	10 56 16.0	
	comp=Z,308nm,1.1s						
L26K	**Log Cabin Wild**	**25.30**	**48**	P	**P**	**10 55 44.6**	**-0.5**
	baz=267,SNR=189						
L26K				S	**S**	**11 00 08.6**	**-0.7**
	baz=267						
D25K	**Kavik River**	**25.36**	**33**	P	**P**	**10 55 44.7**	**-1.0**
	baz=250						
MCARA	**McCarthy VSAT**	**25.41**	**52**	P	**P**	**10 55 45.6**	**-0.5**
	baz=271,SNR=190						
MCARA				S	**S**	**11 00 10.4**	**-0.6**
	baz=271						
M26K	**Nabesna, AK**	**25.43**	**50**	P	**P**	**10 55 45.9**	**-0.5**
	baz=268,SNR=126						
M26K				S	**S**	**11 00 11.8**	**+0.2**
	baz=268						
BMAR	**Burnt Mountain**	**25.45**	**38**	P	**P**	**10 55 46.1**	**-0.4**
KLR	**Kul'dur**	**25.48**	**279**	P	**P**	**10 55 46.4**	**-0.4**
	comp=Z,208nm,0.8s,baz=68,slow=8.2,SNR=126						
KLR				S	**S**	**11 00 11.4**	**-1.0**
	comp=Z,5.5nm,1.1s,baz=310,slow=21,SNR=0.7						
KLR				LR	LR	11 07 00.4	
	comp=Z,28µm,18.6s,baz=68,slow=39						
	comp=Z,208nm,0.8s						
KLR	**Kul'dur**	**25.48**	**279***c*	*i*P	**P**	**10 55 46.9**	**+0.1**
KLR				pmax	pmax		
	comp=Z,281nm,1.0s						
KLR				MLR	MLR		
	comp=Z,29µm,16.0s						
I26K	**Coal Creek Min**	**25.61**	**43**	IAMs_20	IAMs_20	11 07 21.8	
	comp=Z,31µm,18.0s						
I26K	**Coal Creek Min**	**25.61**	**43**	P	**P**	**10 55 45.5**	**-2.3**
	baz=262						
I26K				S	**S**	**11 00 11.4**	**-2.8**
	baz=262						
MIDW	**Midway**	**25.63**	**158**	IAMs_20	IAMs_20	11 04 24.1	
	comp=Z,38µm,19.0s						
MIDW	**Midway**	**25.63**	**158**	P	**P**	**10 55 54.1**	**+5.8**
G26K	**Porcupine Rive**	**25.64**	**39**	P	**P**	**10 55 47.9**	**-0.2**
	baz=258						
G26K				S	**S**	**11 00 15.1**	**+0.4**
	baz=258						
F26K	**Sheenjek River**	**25.68**	**37**	P	**P**	**10 55 47.9**	**-0.6**
	baz=256						
F26K				S	**S**	**11 00 15.7**	**+0.5**
	baz=256						
K27K	**Chicken**	**25.93**	**46**	IAmb	IAmb	10 55 56.8	
	comp=Z,406nm,0.9s						
K27K	**Chicken**	**25.93**	**46**	P	**P**	**10 55 50.3**	**-0.5**
	baz=266						
K27K				S	**S**	**11 00 18.9**	**-0.4**
	baz=266						
M27K	**Edge Creek, AK**	**25.95**	**50**	IAmb	IAmb	10 56 09.0	
	comp=Z,459nm,1.1s						
M27K	**Edge Creek, AK**	**25.95**	**50**	P	**P**	**10 55 51.0**	**-0.2**
	baz=270,SNR=161						
M27K				S	**S**	**11 00 20.6**	**+0.7**
	baz=270						
L27K	**Beaver Creek,**	**25.99**	**48**	IAmb	IAmb	10 56 00.2	
	comp=Z,217nm,1.0s						
L27K	**Beaver Creek,**	**25.99**	**48**	P	**P**	**10 55 51.0**	**-0.4**
	baz=268,SNR=175						
L27K				S	**S**	**11 00 19.5**	**-0.9**
	baz=268						
BCAR	**Beaver Creek A**	**26.01**	**48**	P	**P**	**10 55 51.2**	**-0.4**
C26K	**Camden Bay**	**26.05**	**32**	P	**P**	**10 55 51.6**	**-0.1**
	baz=251,SNR=524						
C26K				S	**S**	**11 00 20.2**	**-0.8**
	baz=251						
BARN	**Barnard Glacie**	**26.07**	**53**	IAmb	IAmb	10 56 17.8	
	comp=Z,501nm,1.0s						
BARN				IAMs_20	IAMs_20	11 07 40.6	
	comp=Z,33µm,18.0s						
I27K	**Kandik River**	**26.29**	**43**	P	**P**	**10 55 52.1**	**-1.9**
	baz=263,SNR=93						
JMM	**Marumori**	**26.34**	**248**	IAmb	IAmb	10 56 33.2	
	comp=Z,283nm,1.2s						
JMM	**Marumori**	**26.34**	**248**	P	**P**	**10 55 56.9**	**+2.2**
JMM	**Marumori**	**26.34**	**248**	⇓P	**P**	**10 55 56.6**	**+1.9**
C27K	**Jago River**	**26.35**	**33**	P	**P**	**10 55 54.0**	**-0.6**
	baz=253,SNR=212						
C27K				S	**S**	**11 00 23.7**	**-2.2**
	baz=253						
EGAK	**Eagle**	**26.39**	**45**	P	**P**	**10 55 53.6**	**-1.4**
	baz=265,SNR=464						
EGAK				S	**S**	**11 00 24.1**	**-2.4**
	baz=265						
H27K	**Steamboat Moun**	**26.40**	**41**	P	**P**	**10 55 53.6**	**-1.6**
	baz=262,SNR=94						
H27K				S	**S**	**11 00 27.6**	**+0.8**
	baz=262						
BVCY	**Beaver Creek**	**26.43**	**50**	P	**P**	**10 55 54.3**	**-1.1**
	baz=270,SNR=23						
BVCY				S	**S**	**11 00 25.7**	**-1.5**
	baz=270						
G27K	**Doyon Strip**	**26.44**	**40**	P	**P**	**10 55 54.9**	**-0.6**
	baz=261,SNR=375						
G27K				S	**S**	**11 00 29.5**	**+2.1**
	baz=261						
JYA	**Atsumi**	**26.45**	**251**	P	**P**	**10 55 56.4**	**+0.6**
ZEA	**Zeya**	**26.61**	**290**	*e*P	**P**	**10 55 56.3**	**-0.7**
ZEA				*e*S	**S**	**11 00 25.3**	**-4.9**
ZEA				pmax	pmax		
	comp=E,3µm,7.4s						
ZEA				pmax	pmax		
	comp=Z,5µm,7.3s						
ZEA				pmax	pmax		
	comp=N,100nm,0.9s						
ZEA				pmax	pmax		
	comp=E,40nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,320nm,1.3s						
ZEA				MLR	MLR		
	comp=E,14µm,14.0s						
ZEA				MLR	MLR		
	comp=N,7µm,15.0s						
ZEA				MLR	MLR		
	comp=Z,20µm,15.0s						
YUK3	**Moose Creek**	**26.62**	**51**	P	**P**	**10 55 56.1**	**-1.3**
	baz=272,SNR=112						
YUK3				S	**S**	**11 00 28.6**	**-2.1**
	baz=272						
E27K	**Coleen River**	**26.73**	**37**	P	**P**	**10 55 57.9**	**-0.1**
	baz=258						
E27K				S	**S**	**11 00 30.9**	**-1.0**
	baz=258						
TIXI	**Tiksi**	**26.80**	**331**	P	**P**	**10 55 58.1**	**-0.4**
	comp=Z,99nm,0.7s,baz=90,slow=23,SNR=134						
TIXI				LR	LR	11 06 46.3	
	comp=Z,29µm,18.7s,baz=89,slow=37						
	comp=Z,99nm,0.7s						
TIXI	**Tiksi**	**26.80**	**331**	P	**P**	**10 55 58.2**	**-0.4**
TIXI	**Tiksi**	**26.80**	**331**	⇑P	**P**	**10 55 58.1**	**-0.4**
TIXI	**Tiksi**	**26.80**	**331***c*	*i*P	**P**	**10 55 57.9**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,678nm,2.5s						
TIXI				MLR	MLR		
	comp=Z,33µm,16.0s						
O28M	**Mount Upton**	**26.80**	**53**	P	**P**	**10 55 58.3**	**-0.8**
	baz=274						
O28M				S	**S**	**11 00 31.4**	**-2.3**
	baz=274						
PINM	**Pinnacle**	**26.83**	**55**	P	**P**	**10 55 58.1**	**-1.0**
	baz=276,SNR=20						
YUK8	**Steele Glacier**	**26.98**	**52**	P	**P**	**10 55 60.0**	**-0.6**
	baz=274,SNR=32						
YUK8				S	**S**	**11 00 34.1**	**-2.3**
	baz=274						
DAWY	**Dawson**	**27.11**	**46**	IAmb	IAmb	10 56 07.2	
	comp=Z,252nm,1.0s						
DAWY	**Dawson**	**27.11**	**46**	⇑P	**P**	**10 56 00.8**	**-0.7**
DAWY	**Dawson**	**27.11**	**46**	P	**P**	**10 56 01.2**	**-0.4**
	baz=268,SNR=204						
DAWY				S	**S**	**11 00 37.5**	**-0.6**
	baz=268						
BCPM	**Bancas Point**	**27.15**	**55**	IAMs_20	IAMs_20	11 08 10.3	
	comp=Z,41µm,19.0s						
PNL	**Peninsula**	**27.30**	**56**	P	**P**	**10 56 04.7**	**+1.4**
PNL	**Peninsula**	**27.30**	**56**	P	**P**	**10 56 02.4**	**-0.8**
	baz=277,SNR=10						
PNL				S	**S**	**11 00 39.0**	**-2.1**
	baz=277						
YUK4	**Talbot Arm**	**27.51**	**52**	P	**P**	**10 56 04.8**	**-0.6**
	baz=274,SNR=97						
M29M	**Somme Creek**	**27.54**	**50**	P	**P**	**10 56 04.8**	**-0.6**
	baz=272						
M29M				S	**S**	**11 00 44.0**	**-0.9**
	baz=272						
I29M	**Ogilvie Camp,**	**27.64**	**43**	IAMs_20	IAMs_20	11 09 02.4	
	comp=Z,43µm,18.0s						
I29M	**Ogilvie Camp,**	**27.64**	**43**	P	**P**	**10 56 04.7**	**-1.5**
	baz=267,SNR=94						
I29M				S	**S**	**11 00 44.4**	**-1.8**
	baz=267						
J29M	**Klondike Camp**	**27.64**	**45**	P	**P**	**10 56 05.7**	**-0.6**
	baz=269,SNR=63						
J29M				S	**S**	**11 00 45.2**	**-1.1**
	baz=269						
O29M	**Mount Kennedy**	**27.64**	**54**	P	**P**	**10 56 05.7**	**-0.7**
	baz=276,SNR=29						
O29M				S	**S**	**11 00 45.4**	**-1.2**
	baz=276						
JSD	**Sado**	**27.67**	**252**	P	**P**	**10 56 09.2**	**+2.5**
JSD	**Sado**	**27.67**	**252**	P	**P**	**10 56 07.6**	**+1.0**
JSD	**Sado**	**27.67**	**252**	⇑P	**P**	**10 56 06.8**	**+0.2**
HEH	**HeiHe**	**27.67**	**283**	P	**P**	**10 56 05.3**	**-1.3**
HEH				PcP	**PcP**	**10 59 22.8**	**-0.2**
HEH				S	**S**	**11 00 44.5**	**-2.4**
HEH				ScS	**ScS**	**11 06 51.3**	**-2.3**
HEH				pmax	pmax		
	comp=Z,250nm,1.3s						
HEH				LR	LR		
	comp=Z,30µm,14.5s						
HEH				LR	LR		
	comp=Z,50µm,15.9s						
HEH				LR	LR		
	comp=Z,74µm,16.3s						
L29M	**L29M**	**27.67**	**48**	P	**P**	**10 56 06.2**	**-0.4**
	baz=271						
L29M				S	**S**	**11 00 46.0**	**-0.9**
	baz=271						
USA0B	**Ussuriysk Arra**	**27.68**	**268***c*	*i*P	**P**	**10 56 06.1**	**-0.6**
USRK	**Ussuriysk Ar.**	**27.68**	**268**	P	**P**	**10 56 06.2**	**-0.5**
	comp=Z,35nm,1.0s,baz=66,slow=11,SNR=18						
USRK				PcP	**PcP**	**10 59 23.2**	**0.0**
	comp=Z,26nm,0.8s,baz=56,slow=1.5,SNR=7.1						
USRK				LR	LR	11 08 49.3	
	comp=Z,17µm,18.5s,baz=55,slow=40						
	comp=Z,35nm,1.0s						
YUK6	**Outpost Mounta**	**27.68**	**53**	P	**P**	**10 56 06.1**	**-0.8**
	baz=275,SNR=21						
YUK6				S	**S**	**11 00 47.6**	**+0.2**
	baz=275						
K29M	**Barlow Dome**	**27.94**	**47**	P	**P**	**10 56 08.6**	**-0.4**
	baz=270						
K29M				S	**S**	**11 00 51.3**	**+0.1**
	baz=270						
HYT	**Haines Junctio**	**28.11**	**53**	P	**P**	**10 56 10.2**	**-0.3**
	baz=276,SNR=84						
HYT				S	**S**	**11 00 51.8**	**-2.1**
	baz=276						
N30M	**Aishikik Lake**	**28.25**	**52**	P	**P**	**10 56 11.2**	**-0.5**
	baz=275,SNR=20						
N30M				S	**S**	**11 00 54.6**	**-1.5**
	baz=275						
M30M	**Minto, Yukon**	**28.31**	**49**	IAMs_20	IAMs_20	11 09 30.4	
	comp=Z,27µm,20.0s						
M30M	**Minto, Yukon**	**28.31**	**49**	P	**P**	**10 56 11.6**	**-0.6**
	baz=274,SNR=17						
M30M				S	**S**	**11 00 57.7**	**+0.8**
	baz=274						
VLA	**Vladivostok**	**28.33**	**267***c*	*i*P	**P**	**10 56 10.8**	**-1.7**
VLA				pmax	pmax		
	comp=Z,93nm,1.1s						
EPYK	**Eagle Plains**	**28.35**	**41**	IAMs_20	IAMs_20	11 08 27.1	
	comp=Z,34µm,20.0s						
EPYK	**Eagle Plains**	**28.35**	**41**	P	**P**	**10 56 12.1**	**-0.5**
	baz=266,SNR=104						
EPYK				S	**S**	**11 00 56.1**	**-1.4**
	baz=266						
P30M	**Million Dollar**	**28.46**	**55**	P	**P**	**10 56 13.3**	**-0.3**
	baz=278						
G30M	**tAoh Zraii Nji**	**28.59**	**40**	P	**P**	**10 56 14.3**	**-0.4**
	baz=266						
G30M				S	**S**	**11 01 00.8**	**-0.4**
	baz=266						
MAYO	**Mayo, Yukon**	**28.67**	**47**	IAmb	IAmb	10 57 04.8	
	comp=Z,304nm,0.9s						
MAYO	**Mayo, Yukon**	**28.67**	**47**	P	**P**	**10 56 15.4**	**0.0**
	baz=272,SNR=34						
MAYO				S	**S**	**11 01 03.9**	**+1.4**
	baz=272						
JRY	**Ryogami san**	**28.71**	**248**	P	**P**	**10 56 16.5**	**+0.5**
MAJO	**Matsushiro**	**28.73**	**249**	P	**P**	**10 56 16.8**	**+0.6**
MAJO				IAmb	IAmb	10 56 33.7	
	comp=Z,496nm,1.4s						
MAJO	**Matsushiro**	**28.73**	**249**	P	**P**	**10 56 18.2**	**+2.0**
MAJO	**Matsushiro**	**28.73**	**249**	⇑P	**P**	**10 56 17.1**	**+0.9**
MAJO	**Matsushiro**	**28.73**	**249***d*	*e*P	**P**	**10 56 17.5**	**+1.3**
MAJO				pmax	pmax		
	comp=Z,141nm,1.0s						
MAT	**Matsushiro**	**28.73**	**249**	P	**P**	**10 56 16.7**	**+0.5**
MJAR	**Matsushiro Arr**	**28.73**	**249**	P	**P**	**10 56 16.6**	**+0.4**
	comp=Z,32nm,0.8s,baz=47,slow=7.4,SNR=60						
MJAR				LR	LR	11 09 40.2	
	comp=Z,4µm,19.9s,baz=62,slow=40						
	comp=Z,32nm,0.8s						
MJB9	**Matsu-Tunnel**	**28.73**	**249**	IAmb	IAmb	10 56 34.7	
	comp=Z,448nm,1.4s						
O30N	**Mendenhall**	**28.81**	**53**	P	**P**	**10 56 16.6**	**0.0**
	baz=277						
O30N				S	**S**	**11 01 02.9**	**-1.8**
	baz=277						
PLBC	**Pleasant Camp**	**28.86**	**56**	P	**P**	**10 56 15.9**	**-1.2**
	baz=280						
PLBC				S	**S**	**11 01 04.2**	**-1.3**
	baz=280						
N31M	**Braeburn, Yuko**	**28.87**	**52**	IAMs_20	IAMs_20	11 08 52.6	
	comp=Z,28µm,18.0s						
N31M	**Braeburn, Yuko**	**28.87**	**52**	P	**P**	**10 56 17.0**	**-0.2**
	baz=276,SNR=14						
N31M				S	**S**	**11 01 05.4**	**-0.4**
	baz=276						
MDJ	**Mudanjiang**	**28.92**	**271**	P	**P**	**10 56 17.0**	**-0.7**
MDJ				PP	**PnPn**	**10 57 13.8**	**+4.4**
MDJ				PcP	**PcP**	**10 59 24.0**	**-2.2**
MDJ				S	**S**	**11 01 08.8**	**+2.1**
MDJ				ScP	**ScP**	**11 03 07.0**	**+1.2**
MDJ				ScS	**ScS**	**11 07 01.3**	**+1.9**
MDJ				pmax	pmax		
	comp=Z,74nm,2.5s						
MDJ				pmax	pmax		
	comp=Z,5µm,11.7s						
MDJ				LR	LR		
	comp=Z,27µm,16.9s						
MDJ				LR	LR		
	comp=Z,23µm,18.2s						
MDJ				LR	LR		
	comp=Z,27µm,19.4s						
MDJ	**Mudanjiang**	**28.92**	**271**	IAMs_20	IAMs_20	11 08 11.1	
	comp=Z,26µm,20.0s						
MDJ	**Mudanjiang**	**28.92**	**271**	P	**P**	**10 56 18.2**	**+0.5**
	comp=Z,73nm,1.0s						
S31K	**Pelican**	**29.21**	**59**	P	**P**	**10 56 20.2**	**+0.1**
	baz=282						
S31K				S	**S**	**11 01 08.9**	**-2.0**
	baz=282						
R31K	**City Hall, Gus**	**29.37**	**58**	P	**P**	**10 56 20.9**	**-0.7**
	baz=282						
SKAG	**Skagway**	**29.38**	**56**	P	**P**	**10 56 23.0**	**+1.3**
SKAG	**Skagway**	**29.38**	**56**	P	**P**	**10 56 21.3**	**-0.4**
	baz=280,SNR=19						
SKAG				S	**S**	**11 01 14.9**	**+1.3**
	baz=280						
M31M	**Drury Creek, Y**	**29.45**	**50**	P	**P**	**10 56 22.8**	**+0.4**
	baz=276,SNR=49						
M31M				S	**S**	**11 01 16.6**	**+1.7**
	baz=276						
JGN	**Niukaw**	**29.47**	**250**	P	**P**	**10 56 23.4**	**+0.7**
F31M	**Tsiigehtchic**	**29.58**	**39**	P	**P**	**10 56 22.8**	**-0.6**
	baz=267,SNR=110						
F31M				S	**S**	**11 01 16.4**	**-0.2**
	baz=267						
BNX	**BinXian**	**29.68**	**275**	⇑P	**P**	**10 56 23.5**	**-0.9**
BNX				S	**S**	**11 01 17.3**	**-1.2**
BNX				pmax	pmax		
	comp=Z,210nm,1.2s						
BNX				pmax	pmax		
	comp=Z,3µm,3.5s						
BNX				LR	LR		
	comp=Z,35µm,18.9s						
BNX				LR	LR		
	comp=Z,21µm,18.3s						
BNX				LR	LR		
	comp=Z,28µm,19.0s						
INK	**Inuvik**	**29.72**	**38**	P	**P**	**10 56 23.6**	**-1.0**
	comp=Z,53nm,0.7s,baz=270,slow=7.6,SNR=159						
INK				S	**S**	**11 01 16.1**	**-2.7**
	comp=Z,6.7nm,1.1s,baz=60,slow=0.8,SNR=0.9						
INK				LR	LR	11 09 59.1	
	comp=Z,26µm,18.2s,baz=246,slow=40						
	comp=Z,53nm,0.7s						
INK	**Inuvik**	**29.72**	**38**	P	**P**	**10 56 23.6**	**-1.0**
INK				IAmb	IAmb	10 56 43.5	
	comp=Z,171nm,1.0s						
INK	**Inuvik**	**29.72**	**38**	P	**P**	**10 56 24.1**	**-0.4**
	baz=266,SNR=125						
INK				S	**S**	**11 01 17.2**	**-1.5**
	baz=266						
JGF	**Kuroka**	**29.89**	**249**	P	**P**	**10 56 28.3**	**+1.9**
JGF	**Kuroka**	**29.89**	**249**	P	**P**	**10 56 27.3**	**+0.9**
JGF	**Kuroka**	**29.89**	**249**	⇑P	**P**	**10 56 27.4**	**+1.0**
SIT	**Sitka**	**29.89**	**60**	IAmb	IAmb	10 56 29.9	
	comp=Z,173nm,1.0s						
SIT	**Sitka**	**29.89**	**60**	P	**P**	**10 56 28.5**	**+2.3**
SIT	**Sitka**	**29.89**	**60**	P	**P**	**10 56 26.5**	**+0.3**
	baz=284,SNR=15						
SIT				S	**S**	**11 01 23.3**	**+1.6**
	baz=284						
FARO	**Faro, Yukon**	**29.94**	**50**	P	**P**	**10 56 26.6**	**0.0**
	baz=277,SNR=39						
FARO				S	**S**	**11 01 24.2**	**+1.8**
	baz=277						
R32K	**Eaglecrest**	**30.03**	**58**	P	**P**	**10 56 27.4**	**-0.1**
	baz=283,SNR=25						
JIS	**Juneau Island**	**30.10**	**58**	IAmb	IAmb	10 56 51.4	
	comp=Z,234nm,1.3s						
JIS	**Juneau Island**	**30.10**	**58**	P	**P**	**10 56 28.9**	**+0.9**
	comp=Z,131nm,1.0s						
P32M	**Atlin**	**30.17**	**55**	P	**P**	**10 56 28.9**	**+0.2**
	baz=281,SNR=54						
P32M				S	**S**	**11 01 29.4**	**+3.3**
	baz=281						
S32K	**Killisnoo**	**30.19**	**59**	P	**P**	**10 56 29.2**	**+0.4**
	baz=284,SNR=18						
S32K				S	**S**	**11 01 29.7**	**+3.4**
	baz=284						
INU	**Inuyama**	**30.26**	**249**	P	**P**	**10 56 32.6**	**+2.9**
P33M	**Teslin, Yukon**	**30.50**	**54**	IAMs_20	IAMs_20	11 10 14.6	
	comp=Z,37µm,19.0s						
P33M	**Teslin, Yukon**	**30.50**	**54**	P	**P**	**10 56 32.1**	**+0.5**
	baz=281,SNR=83						
P33M				S	**S**	**11 01 33.0**	**+1.7**
	baz=281						
Q32M	**Nakina River**	**31.02**	**56**	P	**P**	**10 56 37.2**	**+0.7**
	baz=283						
Q32M				S	**S**	**11 01 41.9**	**+2.0**
	baz=283						
JIE	**Ise**	**31.13**	**248**	P	**P**	**10 56 39.0**	**+1.6**
T33K	**Petersburg**	**31.21**	**60**	P	**P**	**10 56 39.1**	**+1.3**
	baz=286,SNR=12						
T33K				S	**S**	**11 01 43.3**	**+0.9**
	baz=286						
JWT	**Wachi**	**31.23**	**251**	P	**P**	**10 56 39.6**	**+1.3**
U33K	**Whale Pass**	**31.32**	**62**	P	**P**	**10 56 39.9**	**+1.1**
	baz=287,SNR=12						
U33K				S	**S**	**11 01 47.7**	**+3.6**
	baz=287						
CRAG	**Craig**	**31.52**	**63**	P	**P**	**10 56 44.9**	**+4.3**
CRAG	**Craig**	**31.52**	**63**	⇑P	**P**	**10 56 44.0**	**+3.4**
CRAG	**Craig**	**31.52**	**63**	P	**P**	**10 56 42.1**	**+1.5**
	baz=288,SNR=8.0						
WRAK	**Wrangell Islan**	**31.65**	**61**	IAMs_20	IAMs_20	11 08 36.5	
	comp=Z,33µm,20.0s						
WRAK	**Wrangell Islan**	**31.65**	**61**	P	**P**	**10 56 42.5**	**+0.8**
	baz=287,SNR=12						
WRAK				S	**S**	**11 01 52.4**	**+3.3**
	baz=287						
S34M	**Telegraph Cree**	**31.86**	**58**	P	**P**	**10 56 44.2**	**+0.6**
	baz=286,SNR=25						
S34M				S	**S**	**11 01 55.4**	**+2.8**
	baz=286						
CN2	**Changchun**	**31.87**	**273**	*e*P	**P**	**10 56 41.3**	**-2.6**
CN2				*e*sP	pP	10 56 50.0	-0.4
CN2				*e*PP	**PnPn**	**10 57 46.8**	**-1.9**
CN2				*e*S	**S**	**11 01 49.5**	**-3.5**
CN2				pmax	pmax		
	comp=Z,140nm,1.9s						
CN2				pmax	pmax		
	comp=Z,3µm,3.5s						
CN2				LR	LR		
	comp=Z,27µm,19.0s						
CN2				LR	LR		
	comp=Z,10µm,19.0s						
CN2				LR	LR		
	comp=Z,30µm,20.0s						
JAD	**Aida**	**32.19**	**252**	P	**P**	**10 56 46.7**	**0.0**
DLBC	**Dease Lake**	**32.29**	**56**	IAmb	IAmb	10 57 42.9	
	comp=Z,182nm,1.3s						
DLBC	**Dease Lake**	**32.29**	**56**	P	**P**	**10 56 47.6**	**+0.2**
	baz=286,SNR=39						
DLBC				S	**S**	**11 01 59.8**	**+0.5**
	baz=286						
V35K	**Ketchikan**	**32.38**	**62**	P	**P**	**10 56 48.8**	**+0.7**
	baz=289,SNR=19						
V35K				S	**S**	**11 02 04.5**	**+4.0**
	baz=289						
WTLY	**Watson Lake, Y**	**32.48**	**53**	P	**P**	**10 56 49.3**	**+0.2**
	baz=284,SNR=50						
WTLY				S	**S**	**11 02 03.3**	**+1.1**
	baz=284						
T35M	**Bob Quinn**	**32.58**	**59**	P	**P**	**10 56 50.5**	**+0.5**
	baz=288,SNR=60						
HIA	**Hailar**	**32.61**	**285**	IAmb	IAmb	10 56 51.7	
	comp=Z,215nm,1.3s						
HIA	**Hailar**	**32.61**	**285**	IAMs_20	IAMs_20	11 11 54.9	
	comp=Z,37µm,18.0s						
HIA	**Hailar**	**32.61**	**285**	P	**P**	**10 56 51.0**	**+0.7**
HIA	**Hailar**	**32.61**	**285***c*	*i*P	**P**	**10 56 49.1**	**-1.2**
HIA				pmax	pmax		
	comp=Z,91nm,1.0s						
HIA				MLR	MLR		
	comp=Z,35µm,17.0s						
DIB	**Dawson Inlet,**	**32.65**	**67**	IAmb	IAmb	10 57 30.7	
	comp=Z,152nm,1.2s						
H02S1	**DAWSON INLET T**	**32.65**	**67**	P	**P**	**10 56 49.1**	**-1.4**
A36M	**Sachs Harbour**	**32.74**	**31**	IAmb	IAmb	10 57 00.8	
	comp=Z,134nm,0.9s						
A36M	**Sachs Harbour**	**32.74**	**31**	P	**P**	**10 56 51.3**	**+0.2**
	baz=268,SNR=94						
A36M				S	**S**	**11 02 06.7**	**+0.8**
	baz=268						
JHS	**Saijyo**	**32.76**	**253**	P	**P**	**10 56 53.5**	**+1.8**
HHU	**Hamhung**	**32.85**	**265**	P	**P**	**10 56 52.8**	**+0.4**
HHU				S	**S**	**11 02 09.7**	**+1.5**
HHU				AmB			
	comp=Z,3µm,2.4s						
HHU				AMS	AMS		
	comp=Z,10µm,13.4s						
MOBC	**Moresby Island**	**32.95**	**66**	IAmb	IAmb	10 56 56.7	
	comp=Z,163nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**33.13**	**189**	T	T	11 32 15.1	
	baz=5.6,slow=76,SNR=736						
H11N3	**WAKE ISLAND Hy**	**33.14**	**189**	T	T	11 32 15.1	
	baz=5.6,slow=76,SNR=651						
H11N1	**WAKE ISLAND Hy**	**33.15**	**189**	T	T	11 32 19.4	
	baz=5.6,slow=76,SNR=1560						
C36M	**Paulatuk**	**33.16**	**36**	IAmb	IAmb	10 57 12.9	
	comp=Z,184nm,0.9s						
C36M	**Paulatuk**	**33.16**	**36**	P	**P**	**10 56 54.4**	**-0.5**
	baz=273,SNR=252						
C36M				S	**S**	**11 02 10.9**	**-1.5**
	baz=273						
JMN	**Monobe**	**33.22**	**251**	P	**P**	**10 56 59.6**	**+3.8**
HG4B	**Hotspring**	**33.72**	**67**	IAmb	IAmb	10 57 03.9	
	comp=Z,256nm,1.0s						
JCJ	**Chichijima**	**33.95**	**233**	P	**P**	**10 57 03.1**	**+1.0**
	comp=Z,183nm,1.0s,baz=314,slow=19,SNR=1.8						
JCJ				LR	LR	11 13 17.9	
	comp=Z,2µm,18.3s,baz=22,slow=41						
	comp=Z,183nm,1.0s						
LIRD	**Liard River Hi**	**33.98**	**54**	P	**P**	**10 57 02.9**	**+0.8**
	baz=287,SNR=16						
LIRD				S	**S**	**11 02 26.7**	**+1.2**
	baz=287						
SNY	**Shenyang**	**34.12**	**271**	⇑P	**P**	**10 57 03.0**	**-0.5**
SNY				S	**S**	**11 02 20.5**	**-7.3**
SNY				pmax	pmax		

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            comp=Z,100nm,2.2s
SNY                                      pmax     pmax
            comp=Z,4µm,11.0s
SNY                                      LR       LR
            comp=Z,17µm,16.1s
SNY                                      LR       LR
            comp=Z,14µm,14.6s
SNY                                      LR       LR
            comp=Z,32µm,15.5s
KSRS  Korea Array         34.18 261      P        P         10 57 05.2 +1.3
            comp=Z,53nm,1.1s,baz=54,slow=7.9,SNR=62
KSRS                                     PcP      PcP       10 59 41.6 +1.2
            comp=Z,5.9nm,0.8s,baz=73,slow=1.7,SNR=4.1
KSRS                                     LR       LR        11 09 42.1
            comp=Z,7µm,21.2s,baz=50,slow=34
            comp=Z,53nm,1.1s
KS19  Wonju Array Si      34.18 262      IAmb     IAmb      10 57 07.8
            comp=Z,287nm,1.5s
WRGLY Wrigley             34.25  46      P        P         10 57 04.7 +0.4
            baz=283,SNR=54
WRGLY                                    S        S         11 02 30.5 +1.0
            baz=283
H11S1 WAKE ISLAND Hy      34.36 189      T        T         11 33 54.4
            baz=5.7,slow=76,SNR=2602
H11S3 WAKE ISLAND Hy      34.37 189      T        T         11 34 02.0
            baz=5.7,slow=76,SNR=2053
H11S2 WAKE ISLAND Hy      34.37 189      T        T         11 33 48.3
            baz=5.7,slow=76,SNR=1642
PYAG  Pyongyang           34.47 266      P        P         10 57 07.0 +0.6
PYAG                                     S        S         11 02 35.4 +2.2
PYAG                                     AmB
            comp=Z,4µm,2.6s
PYAG                                     AMS      AMS
            comp=Z,15µm,15.2s
SUJ   Sinuiju             34.59 268      P        P         10 57 07.6  0.0
SUJ                                      S        S         11 02 36.7 +1.6
SUJ                                      AmB
            comp=Z,4µm,2.6s
SUJ                                      AMS      AMS
            comp=Z,21µm,17.2s
KOTAN Kotaneelee Air      34.77  52      P        P         10 57 09.4 +0.5
            baz=287,SNR=60
KOTAN                                    S        S         11 02 40.5 +2.9
            baz=287
INCN  Inchon              34.94 263      P        P         10 57 11.8 +1.2
INCN                                     IAmb     IAmb      10 57 13.9
            comp=Z,238nm,1.1s
INCN  Inchon              34.94 263      P        P         10 57 13.6 +3.0
INCN  Inchon              34.94 263      P        P         10 57 11.8 +1.2
INCN                                     pmax     pmax
            comp=Z,238nm,1.2s
CIT   Chita               34.98 293     eP        P         10 57 11.1 +0.2
CIT                                     e                   10 57 20.9
CIT                                     e                   10 58 30.1
CIT                                     e                   10 59 43.9
CIT                                     e                   11 02 39.1
CIT                                     e                   11 03 01.1
CIT                                      pmax     pmax
            comp=Z,1µm,2.7s
HJU   Haeju               35.12 264      P        P         10 57 12.6 +0.5
HJU                                      S        S         11 02 45.7 +2.3
HJU                                      AmB
            comp=Z,7µm,3.5s
HJU                                      AMS      AMS
            comp=Z,13µm,13.3s
TJN   Taejon              35.22 261      P        P         10 57 14.8 +1.8
TJN   Taejon              35.22 261ceP            P         10 57 14.5 +1.5
JNU   Nakatsue            35.39 253      P        P         10 57 15.1 +0.4
            comp=Z,25nm,0.8s,baz=36,slow=3.2,SNR=11
JNU                                      LR       LR        11 11 05.1
            comp=Z,11µm,20.8s,baz=66,slow=35
            comp=Z,25nm,0.8s
JNU   Nakatsue            35.39 253      IAmb     IAmb      10 57 32.6
            comp=Z,271nm,1.3s
JNU   Nakatsue            35.39 253      P        P         10 57 17.6 +3.0
JNU   Nakatsue            35.39 253 ⇑P            P         10 57 16.2 +1.6
BBB   Bella Bella         35.49  66      LR       LR        11 10 15.3
            comp=Z,11µm,20.4s,baz=295,slow=34
BBB   Bella Bella         35.49  66      IAmb     IAmb      10 57 28.7
            comp=Z,227nm,1.1s
BBB   Bella Bella         35.49  66 ⇑P            P         10 57 16.2 +1.0
HOLB  Holberg             36.16  69      IAmb     IAmb      10 57 49.8
            comp=Z,325nm,1.4s
JSU   Suzuyama            36.81 252 ⇑P            P         10 57 27.9 +1.2
DL2   Dalian              37.07 269⇑iP            P         10 57 28.8  0.0
DL2                                      pP       pwP       10 57 38.8 -1.1
DL2                                      sP       sP        10 57 42.5 +4.9
DL2                                      PP       PnPn      10 58 57.3 +3.6
DL2                                      PcP      PcP       10 59 50.0 +1.0
DL2                                      S        S         11 03 12.8 -0.3
DL2                                      SS       SS        11 05 38.5  -17
DL2                                      ScS      ScS       11 07 38.3 -3.2
DL2                                      pmax     pmax
            comp=Z,170nm,0.8s
DL2                                      pmax     pmax
            comp=Z,3µm,5.3s
DL2                                      LR       LR
            comp=Z,14µm,14.1s
DL2                                      LR       LR
            comp=Z,12µm,16.4s
DL2                                      LR       LR
            comp=Z,12µm,14.5s
KEKH  Kekaha              37.45 134      P        P         10 57 33.7 +1.5
KEKH                                     IAmb     IAmb      10 57 34.8
            comp=Z,234nm,1.1s
XLT   XiLinHaoTe          37.49 280⇑iP            P         10 57 32.5  0.0
XLT                                      pP       pP        10 57 37.3 -1.7
XLT                                      sP       sP        10 57 39.3 -2.4
XLT                                      S        S         11 03 21.3 +1.7
XLT                                      sS       sS        11 03 30.3  0.0
XLT                                      pmax     pmax
            comp=Z,220nm,1.0s
XLT                                      pmax     pmax
            comp=Z,4µm,10.2s
XLT                                      LR       LR
            comp=Z,25µm,15.5s
XLT                                      LR       LR
            comp=Z,33µm,15.5s
CBB   Campbell River      38.01  68      IAmb     IAmb      10 57 52.5
            comp=Z,215nm,1.2s
YKA   Yellowknife Ar      38.35  46      P        P         10 57 38.6 -0.8
            comp=Z,140nm,0.8s,baz=287,slow=8.0,SNR=265
YKA                                      PcP      PcP       10 59 52.3 -0.2
            comp=Z,11nm,0.9s,baz=295,slow=3.8,SNR=3.9
            comp=Z,140nm,0.8s
OPA   Opana               38.46 132      P        P         10 57 41.3 +0.6
OPA   Opana               38.46 132      P        P         10 57 41.3 +0.6
OPA                                      pmax     pmax
            comp=Z,457nm,1.2s
JOHN  Johnston Islan      38.64 151      IAMs_20  IAMs_20   11 10 20.5
            comp=Z,35µm,20.0s
KIP   Kipapa              38.69 132      P        P         10 57 44.0 +1.4
KIP                                      IAmb     IAmb      10 57 46.0
            comp=Z,361nm,1.1s
KIP   Kipapa              38.69 132      IAMs_20  IAMs_20   11 10 39.2
            comp=Z,22µm,20.0s
KIP   Kipapa              38.69 132      P        P         10 57 44.0 +1.4
KIP   Kipapa              38.69 132      P        P         10 57 45.4 +2.8
KIP   Kipapa              38.69 132deP            P         10 57 44.8 +2.2
KIP                                      pmax     pmax
            comp=Z,610nm,1.7s
WAPA  Wapiti River        38.97  58      IAmb     IAmb      10 57 47.9
            comp=Z,336nm,0.9s
LLLB  Lillooet            39.68  66      IAmb     IAmb      10 57 54.3
            comp=Z,167nm,0.9s
BJI   Beijing             39.69 274      P        P         10 57 50.5 -0.3
BJI                                      PP       PnPn      10 59 26.8 +1.6
BJI                                      PcP      PcP       10 59 58.3 +1.2
BJI                                      S        S         11 03 53.5 +0.9
BJI                                      ScS      ScS       11 07 56.8 +0.2
BJI                                      pmax     pmax
            comp=Z,63nm,2.6s
BJI                                      pmax     pmax
            comp=Z,3µm,9.9s
BJI                                      LR       LR
            comp=Z,11µm,16.3s
BJI                                      LR       LR
            comp=Z,22µm,15.5s
BJT   Baijiatuau          39.70 274      IAMs_20  IAMs_20   11 14 23.4
            comp=Z,24µm,19.0s
BJT   Baijiatuau          39.70 274      P        P         10 57 53.5 +2.5
KHLH  Kahului Airpor      39.87 131      IAmb     IAmb      10 57 55.9
            comp=Z,295nm,1.2s
IRK   Irkutsk             39.99 298     eP        P         10 57 51.8 -1.4
IRK                                      pmax     pmax
            comp=Z,607nm,3.1s
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NLWA  Neilton Lookou      40.20  71      IAmb     IAmb      10 57 58.8
            comp=Z,223nm,1.1s
NLWA  Neilton Lookou      40.20  71 ⇑P            P         10 57 55.5 +0.4
NRIK  Noril'sk            40.39 327      P        P         10 57 55.9 -0.4
            comp=Z,43nm,0.9s,baz=70,slow=7.4,SNR=58
NRIK                                     S        S         11 03 60.0 -2.6
            comp=Z,10.0nm,1.0s,baz=359,slow=12,SNR=2.1
NRIK                                     LR       LR        11 15 17.7
            comp=Z,25µm,19.4s,baz=76,slow=37
            comp=Z,43nm,0.9s
NRIK  Noril'sk            40.39 327      IAmb     IAmb      10 58 22.2
            comp=Z,426nm,1.6s
NRIK  Noril'sk            40.39 327c iP           P         10 57 55.7 -0.6
NRIK                                     pmax     pmax
            comp=Z,54nm,1.0s
NRIK                                     MLR      MLR
            comp=Z,20µm,15.0s
WISH  Wishkah             40.41  71      IAmb     IAmb      10 58 21.0
            comp=Z,370nm,1.2s
EUNU  Eureka              40.52  15 ⇑P            P         10 57 57.4  0.0
ULN   Ulaanbaatar         40.65 290      P        P         10 57 58.9 +0.1
ULN   Ulaanbaatar         40.65 290 ⇑P            P         10 57 58.9 +0.1
ULN   Ulaanbaatar         40.65 290c iP           P         10 57 59.2 +0.3
ULN                                      pmax     pmax
            comp=Z,403nm,2.5s
ULN                                      MLR      MLR
            comp=Z,38µm,17.0s
ULN   Ulaanbaatar         40.65 290      P        P         10 57 59.0 +0.1
ULN                                      P        P         10 57 59.0 +0.1
ULN                                      P        P         10 57 59.0 +0.1
E03A  Lebam               40.83  72      IAmb     IAmb      10 58 11.5
            comp=Z,195nm,1.0s
RES   Resolute Bay        40.85  24      P        P         10 57 59.4 -0.7
            comp=Z,32nm,0.9s,baz=274,slow=9.0,SNR=54
RES                                      PcP      PcP       10 59 59.5 -0.7
            comp=Z,44nm,0.8s,baz=308,slow=6.8,SNR=4.3
RES                                      S        S         11 04 03.4 -5.9
            comp=Z,7.9nm,1.1s,baz=72,slow=16,SNR=1.7
RES                                      LR       LR        11 17 41.4
            comp=Z,18µm,19.7s,baz=292,slow=40
            comp=Z,32nm,0.9s
RES   Resolute Bay        40.85  24      P        P         10 57 58.9 -1.1
RES   Resolute Bay        40.85  24 ⇑P            P         10 57 59.3 -0.7
HPAH  Hawaii Prepara      40.96 130      IAmb     IAmb      10 58 05.3
            comp=Z,396nm,1.2s
SONM  Songino Array       41.04 291      P        P         10 58 02.4 +0.3
            comp=Z,60nm,0.6s,baz=63,slow=7.2,SNR=141
SONM                                     PcP      PcP       11 00 01.4 -0.2
            comp=Z,27nm,0.8s,baz=76,slow=2.2,SNR=5.5
SONM                                     LR       LR        11 17 00.7
            comp=Z,32µm,18.1s,baz=57,slow=39
            comp=Z,60nm,0.6s
SONM  Songino Array       41.04 291      IAmb     IAmb      10 58 04.8
            comp=Z,815nm,2.0s
KHLU  Kahalu`u            41.25 131      IAmb     IAmb      10 58 06.8
            comp=Z,318nm,1.3s
POHA  Pohakuloa           41.27 130      P        P         10 58 03.3 -1.1
POHA                                     IAmb     IAmb      10 58 07.3
            comp=Z,357nm,1.1s
POHA  Pohakuloa           41.27 130      IAMs_20  IAMs_20   11 11 51.4
            comp=Z,19µm,20.0s
POHA  Pohakuloa           41.27 130      P        P         10 58 07.6 +3.2
D05A  Enumclaw            41.39  70      IAmb     IAmb      10 58 08.5
            comp=Z,213nm,1.1s
F04D  Rainier, OR         41.41  72      IAmb     IAmb      10 58 24.7
            comp=Z,182nm,0.9s
HMH   Humu‘ula Sheep      41.43 130      P        P         10 58 06.6 +0.8
HMH                                      IAmb     IAmb      10 58 09.0
            comp=Z,394nm,1.4s
ZAK   Zakamensk           41.45 296     eP        P         10 58 04.5 -0.9
ZAK                                     e                   11 00 03.4
ZAK                                      pmax     pmax
            comp=Z,125nm,1.9s
ZAK                                      pmax     pmax
            comp=Z,59nm,1.4s
MWH   Moku‘aweowe         41.48 131      IAmb     IAmb      10 58 09.2
            comp=Z,379nm,1.2s
TIA   Tai'an              41.54 269 ⇑P            P         10 58 06.8 +0.6
TIA                                      PP       PnPn      10 59 50.3 +3.3
TIA                                      S        S         11 04 21.3 +0.9
TIA                                      SS       SS        11 07 24.3 -0.9
TIA                                      pmax     pmax
            comp=Z,460nm,1.0s
TIA                                      pmax     pmax
            comp=Z,4µm,2.7s
TIA                                      LR       LR
            comp=Z,9µm,16.5s
TIA                                      LR       LR
            comp=Z,10µm,15.1s
TIA                                      LR       LR
            comp=Z,5µm,10.8s
MLH   Mauna Loa           41.57 130      P        P         10 58 07.3 +0.5
MLH                                      IAmb     IAmb      10 58 09.9
            comp=Z,443nm,1.3s
JOW   Kunigami            41.58 249      P        P         10 58 06.6  0.0
            comp=Z,112nm,0.8s,baz=41,slow=5.8,SNR=11
JOW                                      S        S         11 04 19.2 -1.9
            comp=Z,22nm,1.0s,baz=122,slow=20,SNR=1.8
            comp=Z,112nm,0.8s
JOW   Kunigami            41.58 249      P        P         10 58 06.6  0.0
JOW   Kunigami            41.58 249      P        P         10 58 08.6 +2.0
JOW   Kunigami            41.58 249 ⇑P            P         10 58 06.9 +0.3
AIN   Ainahou             41.64 131      IAmb     IAmb      10 58 10.5
            comp=Z,316nm,1.1s
KHU   Kahuku              41.68 131      IAmb     IAmb      10 58 10.5
            comp=Z,464nm,1.1s
PUH   Pauahi              41.75 130      IAmb     IAmb      10 58 10.8
            comp=Z,342nm,1.2s
HHC   Hu-ho-hao-te        41.98 279     eP        P         10 58 10.0 +0.1
HHC                                      PP       PP        10 59 48.8 +1.8
HHC                                      S        S         11 04 26.0 -1.1
HHC                                      SS       SS        11 07 32.8 -1.2
HHC                                      pmax     pmax
            comp=Z,310nm,1.4s
HHC                                      LR       LR
            comp=Z,23µm,16.5s
HHC                                      LR       LR
            comp=Z,42µm,17.1s
HHC                                      LR       LR
            comp=Z,24µm,17.2s
MOY   Mondy               42.03 298     eP        P         10 58 09.8 -0.4
MOY                                      pmax     pmax
            comp=Z,41nm,1.8s
COR   Corvallis           42.08  74      P        P         10 58 10.7 +0.2
COR                                      IAmb     IAmb      10 58 34.6
            comp=Z,245nm,1.1s
COR   Corvallis           42.08  74      P        P         10 58 10.7 +0.2
COR                                      pmax     pmax
            comp=Z,245nm,1.1s
HNS   HongShan            42.24 272 ⇑P            P         10 58 12.8 +1.0
HNS                                      PP       PP        10 59 54.3 +4.6
HNS                                      S        S         11 04 31.0 +0.4
HNS                                      SS       SS        11 07 38.5 -0.4
HNS                                      pmax     pmax
            comp=Z,530nm,1.4s
HNS                                      LR       LR
            comp=Z,8µm,17.5s
HNS                                      LR       LR
            comp=Z,29µm,18.1s
HNS                                      LR       LR
            comp=Z,22µm,17.1s
BUCK  Buck Mountain       42.49  75      IAmb     IAmb      10 58 43.8
            comp=Z,223nm,1.2s
I03D  Drain, OR           42.56  75      IAmb     IAmb      10 58 27.8
            comp=Z,434nm,1.8s
SSE   Sheshan             42.58 260      P        P         10 58 13.5 -1.2
SSE                                      S        S         11 04 36.3 +0.5
SSE                                      SS       SS        11 07 47.0 +1.2
SSE                                      pmax     pmax
            comp=Z,100nm,1.3s
SSE                                      pmax     pmax
            comp=Z,700nm,3.6s
SSE                                      LR       LR
            comp=Z,6µm,19.0s
G05A  Wamic               42.86  72      IAmb     IAmb      10 58 41.8
            comp=Z,213nm,0.9s
BTO   Baotou              43.06 280⇑iP            P         10 58 19.5 +0.9
BTO                                      pP       pP        10 58 24.0 -1.3
BTO                                      sP       sP        10 58 26.8 -1.2
BTO                                      PP       PP        11 00 03.3 +4.7
BTO                                      S        S         11 04 47.3 +4.4
BTO                                      pmax     pmax
            comp=Z,2µm,1.9s
BTO                                      pmax     pmax
            comp=Z,10µm,5.4s
BTO                                      LR       LR
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            comp=Z,79µm,20.1s
HAWA  Hanford             43.24  70      IAmb     IAmb      10 58 22.7
            comp=Z,200nm,1.1s
HAWA  Hanford             43.24  70 ⇑P            P         10 58 19.5 -0.3
NJ2   Nanjing             43.31 263⇑iP            P         10 58 21.0 +0.4
NJ2                                      pP       pP        10 58 23.8 -3.1
NJ2                                      sP       sP        10 58 28.5 -0.9
NJ2                                      S        S         11 04 49.0 +2.5
NJ2                                      sS       sS        11 05 02.5 +5.8
NJ2                                      SS       SS        11 07 59.0 -1.1
NJ2                                      ScS      ScS       11 08 19.8 +1.0
NJ2                                      pmax     pmax
            comp=Z,150nm,1.2s
NJ2                                      pmax     pmax
            comp=Z,4µm,3.9s
NJ2                                      LR       LR
            comp=Z,14µm,15.0s
NJ2                                      LR       LR
            comp=Z,9µm,15.8s
NJ2                                      LR       LR
            comp=Z,14µm,15.6s
TIY   Taiyuan             43.42 275     eP        P         10 58 22.5 +1.0
TIY                                      PP       PcP       11 00 10.5 +1.0
TIY                                      S        S         11 04 51.5 +3.3
TIY                                      pmax     pmax
            comp=Z,220nm,2.5s
TIY                                      pmax     pmax
            comp=Z,5µm,7.5s
TIY                                      LR       LR
            comp=Z,12µm,23.4s
TIY                                      LR       LR
            comp=Z,10µm,20.6s
TIY                                      LR       LR
            comp=Z,12µm,23.4s
HUMO  Hull Mountain       43.44  76      IAMs_20  IAMs_20   11 16 34.8
            comp=Z,13µm,19.0s
HUMO  Hull Mountain       43.44  76 ⇑P            P         10 58 22.4 +0.8
NEW   Newport             43.55  66      LR       LR        11 15 37.8
            comp=Z,10µm,21.1s,baz=303,slow=35
NEW   Newport             43.55  66      IAmb     IAmb      10 58 25.0
            comp=Z,177nm,0.9s
NEW   Newport             43.55  66      P        P         10 58 21.6 -0.8
            baz=304,SNR=89
NEW                                      S        S         11 04 47.4 -2.4
            baz=304
J04A  Umpqua Nationa      43.56  75      IAmb     IAmb      10 58 46.6
            comp=Z,198nm,0.9s
E09A  Wood Farm, Sta      43.96  69      IAmb     IAmb      10 58 28.2
            comp=Z,157nm,1.0s
YBH   Yreka Blue Hor      44.11  77      LR       LR        11 14 16.8
            comp=Z,9µm,21.8s,baz=308,slow=33
YBH   Yreka Blue Hor      44.11  77      IAMs_20  IAMs_20   11 17 20.7
            comp=Z,12µm,18.0s
K04D  Chiloquin, OR       44.14  76      IAmb     IAmb      10 59 08.3
            comp=Z,185nm,0.9s
KMRM  Mail Ridge          44.45  80      IAmb     IAmb      10 59 01.1
            comp=Z,236nm,1.5s
K05A  Summer Lake         44.59  75      IAmb     IAmb      10 58 55.1
            comp=Z,231nm,1.1s
GUMO  Guam                44.66 219      LR       LR        11 13 32.4
            comp=Z,5µm,21.4s,baz=36,slow=31
TULEG Thule               45.42  17      IAmb     IAmb      10 58 46.7
            comp=Z,220nm,1.4s
TULEG                                    IAMs_20  IAMs_20   11 18 51.8
            comp=Z,26µm,20.0s
TULEG Thule               45.42  17 ⇑P            P         10 58 35.9 -1.0
TULEG Thule               45.42  17 i P           P         10 58 36.0 -0.9
TULEG                                    IAmb     IAmb      10 58 39.0
            comp=Z,41nm,0.7s
MOD   Modoc Plateau       45.43  75      IAmb     IAmb      10 59 08.0
            comp=Z,133nm,1.0s
MOD                                      IAMs_20  IAMs_20   11 16 27.5
            comp=Z,12µm,19.0s
LYN   LuoYang             45.48 271⇑iP            P         10 58 39.0 +1.1
LYN                                      pP       pP        10 58 43.5 -0.7
LYN                                      S        S         11 05 21.0 +3.0
LYN                                      pmax     pmax
            comp=Z,410nm,1.8s
LYN                                      pmax     pmax
            comp=Z,4µm,13.8s
LYN                                      LR       LR
            comp=Z,15µm,20.2s
LYN                                      LR       LR
            comp=Z,11µm,18.6s
LYN                                      LR       LR
            comp=Z,14µm,19.4s
HOPS  Hopland Field       45.60  81      IAmb     IAmb      10 59 09.2
            comp=Z,358nm,1.6s
HOPS                                     IAMs_20  IAMs_20   11 13 57.4
            comp=Z,21µm,22.0s
GDXM  Geysers             45.89  81      IAmb     IAmb      10 59 12.0
            comp=Z,208nm,1.5s
NOR   Nord                45.89   2 ⇑P            P         10 58 39.8 -0.9
PLID  Pearl Lake          46.01  69      IAMs_20  IAMs_20   11 19 32.2
            comp=Z,13µm,18.0s
WVOR  Wild Horse Val      46.09  74 ⇑P            P         10 58 42.3 -0.5
MSO   Missoula            46.14  66      IAmb     IAmb      10 58 57.6
            comp=Z,191nm,1.1s
MSO                                      IAMs_20  IAMs_20   11 20 31.4
            comp=Z,11µm,18.0s
MSO   Missoula            46.14  66      P        P         10 58 42.5 -0.6
            baz=306,SNR=116
MSO                                      S        S         11 05 25.4 -2.1
            baz=306
MCCM  Marconi Confer      46.26  81      IAMs_20  IAMs_20   11 13 58.9
            comp=Z,16µm,22.0s
PLTX  Planet X, Gerl      46.67  76      IAmb     IAmb      10 59 17.1
            comp=Z,210nm,1.1s
TATO  Taipei              46.92 254      P        P         10 58 49.2 -0.1
PATS  Pohnpei             47.09 199      IAMs_20  IAMs_20   11 15 11.4
            comp=Z,19µm,20.0s
WHN   Wuhan               47.10 266⇑iP            P         10 58 51.0 +0.3
WHN                                      pP       pP        10 58 54.5 -2.6
WHN                                      S        S         11 05 41.8 +0.5
WHN                                      ScS      ScS       11 08 42.5 -0.7
WHN                                      pmax     pmax
            comp=Z,900nm,0.9s
WHN                                      LR       LR
            comp=Z,36µm,15.3s
WHN                                      LR       LR
            comp=Z,28µm,13.5s
WHN                                      LR       LR
            comp=Z,46µm,14.9s
MFID  Camas Ranch         47.12  71      IAmb     IAmb      10 59 04.8
            comp=Z,102nm,1.1s
YHNB  Yeheng              47.21 254      P        P         10 58 54.1 +2.4
MPK   Martis Peak         47.23  78      IAmb     IAmb      10 59 21.4
            comp=Z,235nm,1.3s
PAHR  Pah Rah Range       47.35  77      IAmb     IAmb      10 59 22.1
            comp=Z,112nm,1.1s
NEEM  North Greenlan      47.40  12 i P           P         10 58 51.8 -1.0
NEEM                                     IAmb     IAmb      10 58 56.6
            comp=Z,232nm,0.9s
NACB  Ninganchiao         47.47 253      IAmb     IAmb      10 59 14.0
            comp=Z,104nm,1.2s
NACB  Ninganchiao         47.47 253      P        P         10 58 57.6 +4.0
EGMT  Eagleton            47.74  63      P        P         10 58 54.7 -0.9
            baz=307,SNR=147
EGMT                                     S        S         11 05 48.3 -1.9
            baz=307
FFC   Flin Flon           47.80  51      P        P         10 58 54.5 -1.3
FFC                                      IAmb     IAmb      10 58 57.9
            comp=Z,117nm,0.9s
FFC   Flin Flon           47.80  51      IAMs_20  IAMs_20   11 18 58.9
            comp=Z,22µm,21.0s
FFC   Flin Flon           47.80  51      P        P         10 58 54.5 -1.3
FFC                                      pmax     pmax
            comp=Z,117nm,1.0s
FFC                                      MLR      MLR
            comp=Z,22µm,21.0s
CMB   Columbia Colle      47.83  80      IAmb     IAmb      10 59 26.7
            comp=Z,152nm,1.5s
CMB                                      IAMs_20  IAMs_20   11 15 08.3
            comp=Z,21µm,22.0s
HLID  Hailey              47.84  70      IAMs_20  IAMs_20   11 18 05.6
            comp=Z,12µm,21.0s
HLID  Hailey              47.84  70      P        P         10 58 56.0 -0.6
            baz=308,SNR=85
HLID                                     S        S         11 05 49.9 -2.1
            baz=308
XAN   Xi'an               47.98 273 ⇑P            P         10 58 57.5 -0.1
XAN                                      pP       sP        10 59 06.3 -0.7
XAN                                      PcP      PcP       11 00 26.8 +1.3
XAN                                      PP       PP        11 00 51.0 +1.5
XAN                                      S        S         11 05 52.5 -1.4
XAN                                      ScS      ScS       11 08 48.3 -0.8
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XAN				pmax	pmax		
	comp=Z,220nm,1.3s						
XAN				pmax	pmax		
	comp=Z,4µm,9.8s						
XAN				LR	LR		
	comp=Z,21µm,17.5s						
XAN				LR	LR		
	comp=Z,18µm,17.8s						
XAN				LR	LR		
	comp=Z,22µm,19.4s						
SAO	**San Andreas Ge**	**48.02**	**82**	P	**P**	**10 58 57.5**	**-0.3**
SAO				IAMs_20	IAMs_20	11 14 23.6	
	comp=Z,15µm,22.0s						
SAO	**San Andreas Ge**	**48.02**	**82**	P	**P**	**10 58 57.5**	**-0.3**
SAO				pmax	pmax		
	comp=Z,77nm,1.2s						
SSLB	**Suanglung**	**48.13**	**254**	P	**P**	**10 59 00.0**	**+1.2**
KBS	**Kingsbay**	**48.14**	**355**	IAMs_20	IAMs_20	11 17 41.1	
	comp=Z,17µm,21.0s						
KBS	**Kingsbay**	**48.14**	**355**	⇓*e*P	**P**	**10 58 59.2**	**+1.0**
KBS				pmax	pmax		
	comp=Z,34nm,1.2s						
KBS	**Kingsbay**	**48.14**	**355**	*e*P	**P**	**10 58 58.0**	**-0.1**
KBS				*e*PP	**PP**	**11 00 51.0**	**+1.0**
KBS				*e*S	**S**	**11 05 56.2**	**+1.3**
KBS				*e*ScS	**ScS**	**11 08 50.3**	**+1.6**
KBS				IVMs_BB	IVMs_BB	11 16 53.4	
	comp=Z,7µm,24.7s						
BOZ	**Bozeman (W)**	**48.17**	**66**	IAmb	IAmb	10 59 00.9	
	comp=Z,167nm,1.1s						
BOZ				IAMs_20	IAMs_20	11 21 46.9	
	comp=Z,10µm,18.0s						
BOZ	**Bozeman (W)**	**48.17**	**66**	P	**P**	**10 58 58.3**	**-0.7**
	baz=308,SNR=196						
BOZ				S	**S**	**11 05 53.8**	**-2.7**
	baz=308						
YULB	**Yu-li**	**48.24**	**253**	P	**P**	**10 58 58.3**	**-1.3**
YULB	**Yu-li**	**48.24**	**253**	P	**P**	**10 59 01.1**	**+1.5**
BBGB	**Big Mountain B**	**48.39**	**82**	IAmb	IAmb	10 59 27.1	
	comp=Z,167nm,1.0s						
KVN	**Kaiserville**	**48.53**	**77**	IAmb	IAmb	10 59 31.5	
	comp=Z,111nm,1.1s						
SPA0	**Spitsbergen Ar**	**48.59**	**354**	*e*P	**P**	**10 59 01.7**	**0.0**
SPA0				IVmBBB		10 59 10.4	
	comp=Z,5µm,1.3s						
SPA0				*e*PP	**PP**	**11 00 56.4**	**+2.3**
SPA0				*e*S	**S**	**11 06 03.9**	**+2.5**
SPA0				*e*ScS	**ScS**	**11 08 53.7**	**+1.9**
SPA0				IVMs_BB	IVMs_BB	11 17 28.4	
	comp=Z,8µm,24.2s						
SPITS	**Spitsbergen Ar**	**48.59**	**354**	LR	LR	11 18 15.6	
	comp=Z,22µm,21.6s,baz=351,slow=35						
TPUB	**Ta-pu**	**48.70**	**253**	P	**P**	**10 59 02.7**	**-0.5**
TPUB	**Ta-pu**	**48.70**	**253**	P	**P**	**10 59 05.2**	**+2.0**
TWGBT	**Beinan**	**48.81**	**253**	P	**P**	**10 59 06.7**	**+2.7**
TWG	**Pinlang**	**48.81**	**253**	IAmb	IAmb	10 59 22.5	
	comp=Z,108nm,1.0s						
LHV	**Little Huntoon**	**48.81**	**78**	IAmb	IAmb	10 59 34.1	
	comp=Z,168nm,1.2s						
NVAR	**Mina Array Bea**	**48.82**	**78**	P	**P**	**10 59 03.2**	**-1.0**
	comp=Z,14nm,0.7s,baz=297,slow=7.2,SNR=94						
NVAR				ScP	**ScP**	**11 04 22.0**	**+0.3**
	comp=Z,5.1nm,1.0s,baz=282,slow=4.2,SNR=3.7						
NVAR				LR	LR	11 16 54.3	
	comp=Z,12µm,21.5s,baz=298,slow=33						
	comp=Z,14nm,0.7s						
KULLO	**Kullorsuaq**	**48.84**	**16**	*i* P	**P**	**10 59 03.2**	**-0.3**
KULLO				IAmb	IAmb	10 59 12.5	
	comp=Z,213nm,1.1s						
MDPB	**Devils Postpil**	**48.88**	**79**	IAmb	IAmb	10 59 34.5	
	comp=Z,108nm,1.0s						
OMMB	**Old Mammoth Mi**	**48.94**	**79**	IAmb	IAmb	10 59 41.1	
	comp=Z,157nm,1.5s						
ZALV	**Zalesovo Beam**	**48.99**	**309**	P	**P**	**10 59 02.8**	**-2.2**
	comp=Z,13nm,0.7s,baz=50,slow=6.7,SNR=43						
ZALV				PcP	**PcP**	**11 00 29.1**	**+0.4**
	comp=Z,31nm,0.7s,baz=28,slow=3.4,SNR=6.7						
ZALV				S	**S**	**11 06 03.5**	**-4.0**
	comp=Z,1.6nm,0.7s,baz=318,slow=10.0,SNR=2.5						
ZALV				LR	LR	11 21 43.1	
	comp=Z,24µm,18.7s,baz=54,slow=38						
	comp=Z,13nm,0.7s						
MLAC	**Mammoth, Mammo**	**49.02**	**79**	P	**P**	**10 59 05.7**	**-0.1**
	baz=311						
MLAC				S	**S**	**11 06 09.9**	**+1.0**
	baz=311						
YMR	**Madison River**	**49.11**	**67**	IAmb	IAmb	10 59 09.1	
	comp=Z,245nm,1.2s						
ELK	**Elko**	**49.13**	**73**	P	**P**	**10 59 06.0**	**-0.6**
	comp=Z,26nm,0.9s,baz=302,slow=9.0,SNR=68						
ELK				S	**S**	**11 06 04.3**	**-6.0**
	comp=Z,0.3nm,0.3s,baz=139,slow=0.8,SNR=1.2						
ELK				LR	LR	11 19 12.9	
	comp=Z,12µm,19.0s,baz=302,slow=35						
	comp=Z,26nm,0.9s						
ELK	**Elko**	**49.13**	**73**	IAMs_20	IAMs_20	11 18 52.1	
	comp=Z,12µm,19.0s						
ELK	**Elko**	**49.13**	**73**	P	**P**	**10 59 06.0**	**-0.6**
YNM	**Yellowstone No**	**49.22**	**67**	IAmb	IAmb	10 59 18.4	
	comp=Z,212nm,1.4s						
Q09A	**Carvers**	**49.22**	**77**	IAmb	IAmb	10 59 37.0	
	comp=Z,217nm,1.2s						
YNR	**Norris Junctio**	**49.24**	**67**	IAmb	IAmb	10 59 33.6	
	comp=Z,137nm,1.1s						
YUF	**Upper Falls**	**49.33**	**66**	IAmb	IAmb	10 59 27.6	
	comp=Z,104nm,1.1s						
HOPEN	**Hopen**	**49.40**	**350**	*e*P	**P**	**10 59 10.4**	**+2.6**
HOPEN				IVmBBB		10 59 17.5	
	comp=Z,5µm,2.9s						
HOPEN				*e*PP	**PP**	**11 01 01.6**	**+0.1**
HOPEN				*e*S	**S**	**11 06 16.6**	**+3.9**
HOPEN				IVMs_BB	IVMs_BB	11 21 25.2	
	comp=Z,11µm,24.8s						
H17A	**Grant Village**	**49.50**	**67**	IAmb	IAmb	10 59 13.4	
	comp=Z,204nm,1.1s						
H17A	**Grant Village**	**49.50**	**67**	P	**P**	**10 59 09.0**	**-0.4**
	baz=309,SNR=183						
H17A				S	**S**	**11 06 17.1**	**+1.7**
	baz=309						
YMP	**Mirror Lake Pl**	**49.52**	**66**	IAmb	IAmb	10 59 12.5	
	comp=Z,128nm,1.1s						
VOG	**Valley Oaks Go**	**49.56**	**81**	P	**P**	**10 59 08.8**	**-0.8**
	baz=312						
VOG				S	**S**	**11 06 16.0**	**0.0**
	baz=312						
IMW	**Indian Meadow**	**49.60**	**68**	IAmb	IAmb	10 59 25.1	
	comp=Z,109nm,1.1s						
FLWY	**Flagg Ranch**	**49.62**	**67**	IAmb	IAmb	10 59 23.9	
	comp=Z,162nm,0.9s						
CNSH	**ChangSha**	**49.66**	**265**	⇑P	**P**	**10 59 10.5**	**+0.1**
CNSH				S	**S**	**11 06 16.5**	**-0.9**
CNSH				pmax	pmax		
	comp=Z,190nm,0.9s						
CNSH				pmax	pmax		
	comp=Z,4µm,6.4s						
CNSH				LR	LR		
	comp=Z,4µm,22.8s						
CNSH				LR	LR		
	comp=Z,9µm,16.9s						
CNSH				LR	LR		
	comp=Z,9µm,18.6s						
LZH	**Lanzhou**	**49.68**	**279**	⇑P	**P**	**10 59 11.5**	**+0.8**
LZH				pP	pP	10 59 16.0	-1.5
LZH				sP	sP	10 59 19.0	-1.1
LZH				PP	**PP**	**11 01 05.5**	**+0.4**
LZH				S	**S**	**11 06 15.5**	**-2.5**
LZH				ScS	**ScS**	**11 09 00.5**	**-0.2**
LZH				pmax	pmax		
	comp=Z,520nm,1.5s						
LZH				pmax	pmax		
	comp=Z,6µm,4.1s						
LZH				LR	LR		
	comp=Z,30µm,17.1s						
LZH				LR	LR		
	comp=Z,36µm,16.2s						
LZH				LR	LR		
	comp=Z,54µm,16.5s						
HSPB	**Hornsund (broa**	**49.76**	**353**	*e*P	**P**	**10 59 10.1**	**-0.5**
HSPB				*e*S	**S**	**11 06 19.3**	**+1.5**
HSPB				*e*L	L	11 17 40.4	
	comp=Z,22µm,24.1s						
TIN	**Tinemaha, Big**	**49.76**	**79**	P	**P**	**10 59 10.8**	**-0.5**
	baz=312						
TIN				S	**S**	**11 06 18.8**	**-0.2**
	baz=312						
RLMT	**Red Lodge**	**49.77**	**65**	IAMs_20	IAMs_20	11 21 23.3	
	comp=Z,11µm,20.0s						
RLMT	**Red Lodge**	**49.77**	**65**	P	**P**	**10 59 11.3**	**-0.1**
	baz=309,SNR=245						
RLMT				S	**S**	**11 06 17.2**	**-1.9**
	baz=309						
SMMC	**Simmler**	**49.87**	**82**	P	**P**	**10 59 11.8**	**-0.2**
	baz=313,SNR=8.0						
SMMC				S	**S**	**11 06 20.5**	**+0.2**
	baz=313						
GTA	**Gaotai**	**49.89**	**285**	⇑P	**P**	**10 59 12.5**	**+0.3**
GTA				PP	**PP**	**11 01 05.5**	**-1.3**
GTA				S	**S**	**11 06 22.0**	**+1.3**
GTA				ScS	**ScS**	**11 09 00.8**	**-1.1**
GTA				pmax	pmax		
	comp=Z,240nm,2.0s						
GTA				pmax	pmax		
	comp=Z,4µm,5.3s						
GTA				LR	LR		
	comp=Z,21µm,16.7s						
GTA				LR	LR		
	comp=Z,30µm,17.8s						
GTA				LR	LR		
	comp=Z,40µm,16.7s						
HVU	**Hansel Valley**	**49.90**	**71**	IAmb	IAmb	10 59 26.4	
	comp=Z,96nm,1.0s						
SNOW	**Snow King Moun**	**49.98**	**68**	IAmb	IAmb	10 59 27.7	
	comp=Z,137nm,1.4s						
VES	**Vestal, Richgr**	**50.06**	**81**	P	**P**	**10 59 12.5**	**-0.9**
	baz=313,SNR=23						
VES				S	**S**	**11 06 22.8**	**-0.2**
	baz=313						
BBP	**Basco**	**50.15**	**250**	⇑*i*P	**P**	**10 59 14.0**	**-0.2**
AHID	**Auburn Hatcher**	**50.23**	**69**	IAmb	IAmb	10 59 32.5	
	comp=Z,115nm,1.1s						
ENH	**Enshi**	**50.25**	**269**	P	**P**	**10 59 16.0**	**+1.0**
CWC	**Cottonwood Cre**	**50.26**	**80**	P	**P**	**10 59 14.3**	**-0.8**
	baz=312						
CWC				S	**S**	**11 06 25.9**	**-0.2**
	baz=312						
DGZ	**Jazzator, Alta**	**50.26**	**303**	*c* *i*P	**P**	**10 59 14.3**	**-0.7**
DGZ				pmax	pmax		
	comp=Z,72nm,1.4s						
DGZ				MLR	MLR		
	comp=Z,32µm,18.0s						
PKM	**Mcpherson Peak**	**50.26**	**82**	P	**P**	**10 59 14.7**	**-0.6**
	baz=313,SNR=8.9						
PKM				S	**S**	**11 06 26.8**	**+0.6**
	baz=313						
GRAC	**Grapevine Rang**	**50.32**	**79**	IAmb	IAmb	10 59 52.4	
	comp=Z,174nm,1.4s						
GRAC	**Grapevine Rang**	**50.32**	**79**	P	**P**	**10 59 15.3**	**-0.1**
	baz=312						
GRAC				S	**S**	**11 06 26.3**	**-0.4**
	baz=312						
DGMT	**Dagmar**	**50.42**	**59**	P	**P**	**10 59 15.4**	**-0.6**
	baz=308,SNR=81						
DGMT				S	**S**	**11 06 27.1**	**-0.7**
	baz=308						
DGMT	**Dagmar**	**50.42**	**59**	P	**P**	**10 59 15.2**	**-0.8**
	baz=308,SNR=81						
DGMT				S	**S**	**11 06 27.1**	**-0.7**
	baz=308						
LAO	**LASA Array**	**50.46**	**62**	IAMs_20	IAMs_20	11 20 06.1	
	comp=Z,12µm,20.0s						
LAO	**LASA Array**	**50.46**	**62**	P	**P**	**10 59 16.4**	**0.0**
	baz=309,SNR=172						
LAO				S	**S**	**11 06 27.2**	**-1.1**
	baz=309						
LAO	**LASA Array**	**50.46**	**62**	P	**P**	**10 59 16.4**	**0.0**
	baz=309,SNR=172						
LAO				S	**S**	**11 06 24.2**	**-4.2**
	baz=309						
UPNV	**Upernavik**	**50.47**	**17**	*i* P	**P**	**10 59 15.2**	**-0.8**
UPNV				IAmb	IAmb	10 59 19.4	
	comp=Z,160nm,0.5s						
BCW	**Bitter Crk WRg**	**50.47**	**82**	IAmb	IAmb	10 59 45.9	
	comp=Z,190nm,1.2s						
Q12A	**Willow Creek R**	**50.47**	**75**	IAmb	IAmb	10 59 38.6	
	comp=Z,248nm,1.4s						
R11B	**Troy Canyon, C**	**50.48**	**76**	P	**P**	**10 59 15.9**	**-0.9**
	baz=312,SNR=78						
R11B				S	**S**	**11 06 27.4**	**-1.8**
	baz=312						
ISA	**Isabella, Lake**	**50.55**	**81**	P	**P**	**10 59 16.3**	**-0.9**
ISA	**Isabella, Lake**	**50.55**	**81**	P	**P**	**10 59 16.3**	**-0.9**
ISA				pmax	pmax		
	comp=Z,36nm,0.8s						
ISA	**Isabella, Lake**	**50.55**	**81**	P	**P**	**10 59 16.0**	**-1.3**
	baz=313						
ISA				S	**S**	**11 06 26.5**	**-3.5**
	baz=313						
SBC	**Santa Barbara**	**50.63**	**83**	P	**P**	**10 59 16.6**	**-1.1**
	baz=313						
SBC				S	**S**	**11 06 31.0**	**+0.1**
	baz=313						
DAG	**Danmarks Havn**	**50.65**	**3**	*i* P	**P**	**10 59 15.6**	**-1.7**
DAG				IAmb	IAmb	10 59 27.3	
	comp=Z,136nm,1.2s						
ARVC	**Arvin**	**50.70**	**81**	P	**P**	**10 59 17.0**	**-1.2**
	baz=313						
ARVC				S	**S**	**11 06 30.6**	**-1.2**
	baz=313						
S11A	**Rachel**	**50.85**	**77**	IAmb	IAmb	11 00 01.6	
	comp=Z,138nm,1.0s						
MPMC	**Manual Prospec**	**50.87**	**80**	P	**P**	**10 59 19.0**	**-0.8**
	baz=313,SNR=38						
MPMC				S	**S**	**11 06 33.2**	**-1.4**
	baz=313						
DUG	**Dugway, Tooele**	**50.90**	**72**	IAmb	IAmb	10 59 37.9	
	comp=Z,149nm,1.0s						
DUG				IAMs_20	IAMs_20	11 20 07.8	
	comp=Z,11µm,19.0s						
DUG	**Dugway, Tooele**	**50.90**	**72**	P	**P**	**10 59 19.5**	**-0.4**
	baz=311,SNR=121						
DUG				S	**S**	**11 06 34.7**	**-0.1**
	baz=311						
FURC	**Furnace Creek,**	**50.97**	**79**	P	**P**	**10 59 19.9**	**-0.4**
	baz=312,SNR=34						
FURC				S	**S**	**11 06 33.9**	**-1.6**
	baz=312						
SCZ2	**Santa Cruz Isl**	**50.98**	**83**	P	**P**	**10 59 19.4**	**-1.0**
	baz=314						
TPNV	**Topopah Spring**	**51.02**	**78**	IAmb	IAmb	10 59 48.4	
	comp=Z,157nm,1.0s						
TPNV				IAMs_20	IAMs_20	11 17 21.5	
	comp=Z,20µm,22.0s						
TPNV	**Topopah Spring**	**51.02**	**78**	⇑P	**P**	**10 59 20.4**	**-0.5**
TPNV	**Topopah Spring**	**51.02**	**78**	P	**P**	**10 59 20.6**	**-0.3**
	baz=312,SNR=69						
TPNV				S	**S**	**11 06 36.1**	**-0.4**
	baz=312						
BW06	**Boulder Array**	**51.10**	**68**	IAmb	IAmb	10 59 24.0	
	comp=Z,138nm,1.1s						
BW06	**Boulder Array**	**51.10**	**68**	P	**P**	**10 59 20.4**	**-1.1**
	baz=310,SNR=160						
BW06				S	**S**	**11 06 34.7**	**-3.0**
	baz=310						
PD31	**Pinedale Array**	**51.10**	**68**	IAmb	IAmb	10 59 24.1	
	comp=Z,124nm,1.1s						
PD31	**Pinedale Array**	**51.10**	**68**	⇑P	**P**	**10 59 20.8**	**-0.7**
PDAR	**Pinedale Array**	**51.10**	**68**	P	**P**	**10 59 20.4**	**-1.0**
	comp=Z,100nm,1.0s,baz=305,slow=3.1,SNR=312						
PDAR				S	**S**	**11 06 36.2**	**-1.5**
	comp=Z,1.1nm,1.0s,baz=46,slow=8.6,SNR=2.1						
PDAR				LR	LR	11 20 44.2	
	comp=Z,9µm,20.4s,baz=326,slow=36						
	comp=Z,100nm,1.0s						
OSI	**Osito Audit: C**	**51.11**	**82**	P	**P**	**10 59 19.9**	**-1.5**
	baz=313						
OSI				S	**S**	**11 06 38.1**	**+0.4**
	baz=313						
LRMC	**Laurel Mtn Rad**	**51.15**	**80**	P	**P**	**10 59 20.7**	**-1.1**
	baz=313						
LRMC				S	**S**	**11 06 36.1**	**-2.2**
	baz=313						
GWY	**Greenwater Val**	**51.28**	**79**	IAmb	IAmb	10 59 52.8	
	comp=Z,359nm,1.5s						
EDW2	**Edwards Air Fo**	**51.37**	**81**	P	**P**	**10 59 21.9**	**-1.5**
	baz=313,SNR=9.9						
EDW2				S	**S**	**11 06 39.7**	**-1.5**
	baz=313						
PRN	**Pahroc Range**	**51.42**	**77**	IAmb	IAmb	10 59 53.5	
	comp=Z,210nm,1.2s						
PRN	**Pahroc Range**	**51.42**	**77**	⇑P	**P**	**10 59 23.6**	**-0.3**
SNCC	**San Nicolas Is**	**51.56**	**84**	P	**P**	**10 59 24.0**	**-0.8**
	baz=314						
SNCC				S	**S**	**11 06 42.4**	**-1.4**
	baz=314						
DECC	**Green Verdugo**	**51.59**	**82**	P	**P**	**10 59 23.3**	**-1.7**
	baz=314,SNR=14						
DECC				S	**S**	**11 06 42.5**	**-1.7**
	baz=314						
SHOC	**Shoshone, Teco**	**51.71**	**79**	P	**P**	**10 59 24.6**	**-1.3**
	baz=313,SNR=23						
SHOC				S	**S**	**11 06 43.3**	**-2.5**
	baz=313						
PASC	**Pasadena Art C**	**51.73**	**82**	IAmb	IAmb	10 59 55.8	
	comp=Z,430nm,1.7s						
PASC	**Pasadena Art C**	**51.73**	**82**	IAMs_20	IAMs_20	11 16 48.9	
	comp=Z,13µm,22.0s						
GSC	**Goldstone, Bar**	**51.79**	**80**	IAmb	IAmb	10 59 56.5	
	comp=Z,276nm,1.4s						
GSC	**Goldstone, Bar**	**51.79**	**80**	P	**P**	**10 59 24.7**	**-1.8**
	baz=313,SNR=35						
GSC				S	**S**	**11 06 45.8**	**-1.3**
	baz=313						
BJO1	**Bjornoya**	**51.85**	**351**	*e*P	**P**	**10 59 26.0**	**-0.3**
BJO1				*e*S	**S**	**11 06 49.1**	**+2.4**
BJO1				IVMs_BB	IVMs_BB	11 24 35.7	
	comp=Z,9µm,4.7s						
SGCP	**Gonzaga**	**51.85**	**248**	⇑*e*P	**P**	**10 59 26.4**	**-0.7**
BSUT	**Blindstream Ca**	**51.86**	**71**	IAmb	IAmb	10 59 45.4	
	comp=Z,203nm,1.2s						
RRX	**Edison Barstow**	**51.97**	**80**	P	**P**	**10 59 26.3**	**-1.5**
	baz=313						
RRX				S	**S**	**11 06 47.2**	**-2.2**
	baz=313						
FMP	**Fort Macarthur**	**51.98**	**82**	P	**P**	**10 59 27.1**	**-0.8**
	baz=314						
FMP				S	**S**	**11 06 49.0**	**-0.6**
	baz=314						
BFSC	**Mount Baldy Ra**	**52.01**	**81**	P	**P**	**10 59 25.1**	**-3.1**
	baz=314,SNR=17						
BFSC				S	**S**	**11 06 48.6**	**-1.6**
	baz=314						
NUUG	**Nuugaatsiaq**	**52.01**	**17**	*i* P	**P**	**10 59 26.9**	**-0.7**
CIS	**Catalina Islan**	**52.12**	**83**	P	**P**	**10 59 27.1**	**-1.9**
	baz=314						
CIS				S	**S**	**11 06 50.9**	**-0.7**
	baz=314						
TCRU	**Three Creeks R**	**52.16**	**74**	IAmb	IAmb	10 59 47.8	
	comp=Z,137nm,1.2s						
TUQ	**Turquoise Moun**	**52.23**	**79**	P	**P**	**10 59 26.7**	**-3.2**
	baz=313						
TUQ				S	**S**	**11 06 51.0**	**-2.3**
	baz=313						
MVU	**Marysvale**	**52.36**	**74**	IAmb	IAmb	10 59 45.7	
	comp=Z,253nm,1.0s						
HEC	**Hector,Ludlow**	**52.40**	**80**	P	**P**	**10 59 28.5**	**-2.6**
	baz=314						
HEC				S	**S**	**11 06 55.0**	**-0.5**
	baz=314						
CVP	**Callao Caves**	**52.41**	**248**	⇓*e*P	**P**	**10 59 32.4**	**+1.2**
TMUT	**Trail Mountain**	**52.42**	**72**	IAmb	IAmb	10 59 46.0	
	comp=Z,178nm,1.0s						
BBRC	**Big Bear Solar**	**52.43**	**81**	P	**P**	**10 59 30.1**	**-1.4**
	baz=314,SNR=8.0						
BBRC				S	**S**	**11 06 54.5**	**-1.8**
	baz=314						
RDMU	**Red Mountain**	**52.52**	**70**	IAmb	IAmb	10 59 35.1	
	comp=Z,180nm,0.9s						
P17A	**Butcher Ranch,**	**52.58**	**72**	IAmb	IAmb	10 59 58.5	
	comp=Z,145nm,1.2s						
PALP	**Palanan**	**52.59**	**247**	⇓*e*P	**P**	**10 59 33.3**	**+0.8**
MURC	**Murrieta**	**52.72**	**82**	P	**P**	**10 59 31.8**	**-1.7**
	baz=314,SNR=14						
MURC				S	**S**	**11 06 59.4**	**-0.4**
	baz=314						
GMRC	**Granite Mounta**	**52.83**	**79**	P	**P**	**10 59 31.9**	**-2.4**
	baz=314,SNR=17						
GMRC				S	**S**	**11 07 00.6**	**-0.8**
	baz=314						
K22A	**Casper**	**52.88**	**66**	IAmb	IAmb	10 59 52.7	
	comp=Z,104nm,0.9s						
K22A	**Casper**	**52.88**	**66**	P	**P**	**10 59 32.5**	**-2.1**
	baz=311,SNR=82						
K22A				S	**S**	**11 06 58.2**	**-3.7**
	baz=311						
K22A	**Casper**	**52.88**	**66**	P	**P**	**10 59 34.0**	**-0.7**
	baz=311,SNR=82						
K22A				S	**S**	**11 06 58.0**	**-4.0**
	baz=311						
SRU	**San Rafael Swe**	**52.94**	**72**	IAmb	IAmb	10 59 49.6	
	comp=Z,219nm,1.0s						
CAUP	**Cauayan**	**53.02**	**247**	⇓*e*P	**P**	**10 59 36.1**	**+0.4**
DBG	**Daneborg**	**53.04**	**4**	⇑P	**P**	**10 59 33.6**	**-1.5**
DBG	**Daneborg**	**53.04**	**4**	*i* P	**P**	**10 59 33.8**	**-1.4**
PFO	**Pinyon Flats O**	**53.16**	**81**	P	**P**	**10 59 35.4**	**-1.4**
	comp=Z,9.7nm,0.9s,baz=347,slow=5.9,SNR=7.5						
PFO				LR	LR	11 18 09.2	
	comp=Z,16µm,21.7s,baz=291,slow=32						
	comp=Z,9.7nm,0.9s						
PFO	**Pinyon Flats O**	**53.16**	**81**	P	**P**	**10 59 35.2**	**-1.6**
PFO	**Pinyon Flats O**	**53.16**	**81**	IAMs_20	IAMs_20	11 17 22.3	
	comp=Z,17µm,22.0s						
PFO	**Pinyon Flats O**	**53.16**	**81**	P	**P**	**10 59 35.2**	**-1.6**
PFO				pmax	pmax		
	comp=Z,60nm,1.3s						
PFO	**Pinyon Flats O**	**53.16**	**81**	P	**P**	**10 59 36.0**	**-0.8**
	baz=314						
PFO				S	**S**	**11 07 04.2**	**-1.7**
	baz=314						
TPFO	**Pinon Flats**	**53.17**	**81**	P	**P**	**10 59 35.5**	**-1.3**
	baz=314						
TPFO				S	**S**	**11 07 04.0**	**-2.0**
	baz=314						
BELC	**Belle Mtn. Jos**	**53.17**	**80**	P	**P**	**10 59 34.2**	**-2.6**
	baz=314,SNR=20						
BELC				S	**S**	**11 07 04.2**	**-1.8**
	baz=314						
GZH	**Guangzhou**	**53.18**	**260**	P	**P**	**10 59 33.3**	**-3.5**
GZH				S	**S**	**11 06 59.0**	**-7.1**
GZH				pmax	pmax		
	comp=Z,80nm,1.3s						
GZH				LR	LR		
	comp=Z,3µm,15.1s						
GZH				LR	LR		
	comp=Z,3µm,13.1s						
MDND	**Maddock**	**53.19**	**57**	P	**P**	**10 59 36.4**	**-0.3**
	baz=311,SNR=56						
MDND				S	**S**	**11 07 03.3**	**-2.6**
	baz=311						
MDND	**Maddock**	**53.19**	**57**	P	**P**	**10 59 36.6**	**-0.1**
	baz=311,SNR=56						
MDND				S	**S**	**11 07 03.3**	**-2.6**
	baz=311						
SUMG	**Summit**	**53.24**	**11**	*i* P	**P**	**10 59 37.0**	**-0.2**
109C	**Camp Elliot, M**	**53.27**	**82**	IAmb	IAmb	11 00 07.5	
	comp=Z,288nm,1.7s						
109C	**Camp Elliot, M**	**53.27**	**82**	P	**P**	**10 59 36.9**	**-0.6**
	baz=314,SNR=12						
109C				S	**S**	**11 07 05.9**	**-1.3**
	baz=314						
RSSD	**Black Hills**	**53.28**	**63**	P	**P**	**10 59 36.7**	**-0.9**
RSSD				IAmb	IAmb	10 59 48.2	
	comp=Z,208nm,1.3s						
RSSD	**Black Hills**	**53.28**	**63**	IAMs_20	IAMs_20	11 20 52.0	
	comp=Z,11µm,21.0s						
RSSD	**Black Hills**	**53.28**	**63**	⇑P	**P**	**10 59 36.8**	**-0.9**
RSSD	**Black Hills**	**53.28**	**63**	P	**P**	**10 59 36.7**	**-0.9**
RSSD				pmax	pmax		
	comp=Z,208nm,1.3s						
RSSD	**Black Hills**	**53.28**	**63**	P	**P**	**10 59 36.2**	**-1.5**
	baz=311						
RSSD				S	**S**	**11 07 04.7**	**-2.9**
	baz=311						
RSSD	**Black Hills**	**53.28**	**63**	P	**P**	**10 59 36.9**	**-0.7**
	baz=311,SNR=72						
RSSD				S	**S**	**11 07 04.8**	**-2.7**
	baz=311						
CD2	**Chengdu**	**53.29**	**274**	⇑P	**P**	**10 59 37.8**	**+0.1**
CD2				sP	pP	10 59 44.5	0.0
CD2				PcP	**PcP**	**11 00 49.0**	**+3.9**
CD2				PP	**PP**	**11 01 40.5**	**+2.8**
CD2				S	**S**	**11 07 09.5**	**+1.9**
CD2				ScS	**ScS**	**11 09 24.5**	**-1.0**
CD2				SS	**SKiKP**	**11 10 50.8**	**-1.9**
CD2				pmax	pmax		
	comp=Z,290nm,1.2s						
CD2				pmax	pmax		
	comp=Z,4µm,6.9s						
CD2				LR	LR		
	comp=Z,6µm,16.2s						
CD2				LR	LR		
	comp=Z,7µm,13.7s						
CD2				LR	LR		

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       comp=Z,19µm,16.2s
HKPS   Hong Kong Po S    53.31 259   IAMs_20 IAMs_20 11 24 59.8
       comp=Z,11µm,18.0s
GULI   GuiLin            53.33 264 ⇑P       P       10 59 45.3 +7.4
GULI                               S        S       11 07 16.8 +8.7
GULI                               pmax     pmax
       comp=Z,220nm,0.9s
GULI                               LR       LR
       comp=N,8µm,21.7s
GULI                               LR       LR
       comp=E,6µm,24.0s
GULI                               LR       LR
       comp=Z,12µm,15.5s
SAMP   Sagada Mountai    53.43 248⇑iP       P       10 59 36.7 -2.0
E28A   Huff              53.46  59   P       P       10 59 38.3 -0.4
       baz=311,SNR=126
E28A                                 S       S       11 07 07.9 -1.7
       baz=311
NEE2   Needles Airpor    53.47  79   P       P       10 59 38.2 -0.7
       baz=314
NEE2                                 S       S       11 07 08.8 -1.0
       baz=314
ULM    Lac du Bonnet     53.49  53   P       P       10 59 38.0 -0.8
       comp=Z,125nm,0.7s,baz=311,slow=7.3,SNR=96
ULM                                  S       S       11 06 59.9  -10
       comp=Z,6.5nm,1.1s,baz=283,slow=13,SNR=1.8
ULM                                  LR      LR      11 23 44.0
       comp=Z,12µm,18.7s,baz=316,slow=38
       comp=Z,125nm,0.7s
ULM    Lac du Bonnet     53.49  53   IAmb    IAmb    10 59 40.8
       comp=Z,192nm,0.9s
ULM    Lac du Bonnet     53.49  53 ⇑P       P       10 59 38.0 -0.8
O20A   White River Ci    53.57  70   IAmb    IAmb    10 59 59.1
       comp=Z,120nm,0.9s
O20A   White River Ci    53.57  70   P       P       10 59 38.3 -1.5
       baz=312,SNR=75
O20A                                 S       S       11 07 10.0 -1.5
       baz=312
IRM    Iron Mountain     53.57  80   P       P       10 59 39.1 -0.6
       baz=314,SNR=41
IRM                                  S       S       11 07 10.2 -1.2
       baz=314
BAR    Barrett           53.68  82   IAmb    IAmb    11 00 10.2
       comp=Z,222nm,1.7s
MONP2  Monument Peak     53.68  82   P       P       10 59 41.2 +0.5
       baz=315,SNR=7.2
MONP2                                S       S       11 07 13.2  0.0
       baz=315
BC3    Big Chuckawall    53.73  80   P       P       10 59 40.2 -0.7
       baz=314,SNR=18
WMQ    Urumqi            53.88 297 ⇑P       P       10 59 41.8 -0.1
WMQ                                  PcP     PcP     11 00 47.5 +0.3
WMQ                                  PP      PP      11 01 44.3 +1.5
WMQ                                  S       S       11 07 14.0 -1.4
WMQ                                  SS      SS      11 11 01.5 +5.5
WMQ                                  pmax    pmax
       comp=Z,140nm,1.3s
WMQ                                  pmax    pmax
       comp=Z,6µm,5.3s
WMQ                                  LR      LR
       comp=Z,38µm,19.9s
WMQ                                  LR      LR
       comp=Z,31µm,23.7s
WMQ                                  LR      LR
       comp=Z,26µm,25.3s
KURK   Kurchatov         53.98 308   P       P       10 59 41.2 -1.2
KURK   Kurchatov         53.98 308c iP       P       10 59 41.4 -0.9
KURK                                 pmax    pmax
       comp=Z,273nm,1.0s
KURK                                 MLR     MLR
       comp=Z,31µm,17.0s
KURK   Kurchatov         53.98 308   P       P       10 59 41.4 -0.9
KURK                                 P       P       10 59 41.4 -0.9
KURK                                 P       P       10 59 41.4 -0.9
SWSC   Sam W. Stewart    54.02  81   P       P       10 59 42.1 -0.8
       baz=315
SWSC                                 S       S       11 07 16.8 -0.5
       baz=315
IKP    In-Ko-Pah, Jac    54.04  82   P       P       10 59 42.0 -1.2
       baz=315
IKP                                  S       S       11 07 18.0 +0.3
       baz=315
PDMCI  Parker Dam,Lak    54.07  79   P       P       10 59 42.3 -0.9
       baz=314,SNR=16
PDMCI                                S       S       11 07 17.9 -0.1
       baz=314
KURBB  Kurchatov Arra    54.09 308   LR      LR      11 24 54.5
       comp=Z,32µm,18.8s,baz=53,slow=38
BALP   Baler             54.13 247⇓eP       P       10 59 45.3 +1.4
BLYC   Blythe            54.23  80   IAmb    IAmb    11 00 07.6
       comp=Z,84nm,0.9s
PV23   Carpenter Ridg    54.26  72   IAmb    IAmb    11 00 05.2
       comp=Z,100nm,0.9s
SMPP   San Manuel, Pa    54.30 248⇑eP       P       10 59 43.6 -1.5
N23A   Red Feather La    54.36  67   IAmb    IAmb    11 00 51.3
       comp=Z,127nm,1.1s
N23A   Red Feather La    54.36  67   P       P       10 59 45.7  0.0
       baz=312,SNR=48
N23A                                 S       S       11 07 20.9 -1.5
       baz=312
ILULI  Ilulissat         54.37  18   IAMs_20 IAMs_20 11 25 04.7
       comp=Z,20µm,20.0s
ILULI  Ilulissat         54.37  18 i P       P       10 59 44.3 -0.6
PVCP   Virac             54.47 243⇑eP       P       10 59 47.7 +1.4
PV07   Paradox Valley    54.48  71   IAmb    IAmb    11 00 50.7
       comp=Z,183nm,1.3s
GLA    Glamis            54.53  80   P       P       10 59 46.6 -0.1
       baz=315,SNR=16
GLA                                  S       S       11 07 23.2 -1.1
       baz=315
BOLP   Bolinao           54.55 249⇓eP       P       10 59 48.0 +1.1
VADS   Vadso             54.60 345 eP       P       10 59 45.8 -0.9
VADS                                 IVmBBB          11 00 05.1
       comp=Z,6µm,5.4s
VADS                                ePP      PP      11 01 50.2 +1.6
VADS                                eScP     ScP     11 04 46.7 +0.8
VADS                                eS       S       11 07 24.2  0.0
VADS                                 IVMs_BB IVMs_BB 11 25 45.5
       comp=Z,7µm,5.0s
PV15   Paradox Valley    54.64  71   IAmb    IAmb    11 00 02.4
       comp=Z,192nm,1.1s
CPBX   Cerro Prieto      54.68  81   IAmb    IAmb    11 00 39.2
       comp=Z,130nm,1.2s
FRB    Frobisher Bay     54.69  28   LR      LR      11 26 11.1
       comp=Z,13µm,19.1s,baz=306,slow=39
FRB    Frobisher Bay     54.69  28 ⇑P       P       10 59 45.9 -1.5
JCNP   Jose Panganiba    54.69 245⇑iP       P       10 59 48.2 +0.3
GYA    Guiyang           54.72 268 ⇑P       P       10 59 48.3 +0.1
GYA                                  pP      pP      10 59 53.3 -1.3
GYA                                  ScS     ScS     11 09 34.0 -1.9
GYA                                  pmax    pmax
       comp=Z,250nm,2.0s
GYA                                  pmax    pmax
       comp=Z,4µm,4.3s
GYA                                  LR      LR
       comp=Z,9µm,14.3s
GYA                                  LR      LR
       comp=Z,6µm,17.3s
GYA                                  LR      LR
       comp=Z,15µm,18.2s
SCSP   San Jose Seism    54.76 243⇑eP       P       10 59 50.0 +1.6
MK31   Makanchi Array    54.76 303c iP       P       10 59 46.6 -1.6
MKAR   Makanchi Array    54.76 303   P       P       10 59 46.5 -1.8
       comp=Z,24nm,0.6s,baz=51,slow=6.6,SNR=113
MKAR                                 LR      LR      11 23 59.6
       comp=Z,50µm,21.6s,baz=43,slow=37
MKAR                                 PKP2bc          11 30 11.5
       comp=Z,0.6nm,0.8s,baz=246,slow=2.8,SNR=2.7
       comp=Z,24nm,0.6s
MKAR   Makanchi Array    54.76 303 i P       P       10 59 46.9 -1.3
MKAR                                 pmax    pmax
       comp=Z,24nm,0.6s
AGMN   Agassiz Nation    54.79  55   IAMs_20 IAMs_20 11 23 29.1
       comp=Z,14µm,19.0s
AGMN   Agassiz Nation    54.79  55   P       P       10 59 46.9 -1.4
       baz=312,SNR=203
AGMN                                 S       S       11 07 24.1 -3.2
       baz=312
AGMN   Agassiz Nation    54.79  55   P       P       10 59 47.5 -0.8
       baz=312,SNR=203
AGMN                                 S       S       11 07 25.8 -1.5
       baz=312
WUAZ   Wupatki           54.88  76   IAMs_20 IAMs_20 11 19 44.3
       comp=Z,14µm,22.0s
WUAZ   Wupatki           54.88  76 ⇑P       P       10 59 49.4  0.0
WUAZ   Wupatki           54.88  76   P       P       10 59 49.4  0.0
       baz=314,SNR=30
WUAZ                                 S       S       11 07 29.1 -0.1
       baz=314
HAMF   Hammerfest        54.93 348 eP       P       10 59 48.0 -1.0
HAMF                                eS       S       11 07 30.2 +1.5
HAMF                                 IVMs_BB IVMs_BB 11 22 43.3
       comp=Z,8µm,12.7s
SMCO   Snowmass          54.94  70   IAMs_20 IAMs_20 11 22 38.3
       comp=Z,10µm,20.0s
SMCO   Snowmass          54.94  70 ⇑P       P       10 59 49.7 -0.3
GOMU   GeErMu            54.97 285   P       P       10 59 49.8 -0.5
GOMU                                 pP      pP      10 59 55.5 -1.6
GOMU                                 sP      sP      10 59 58.3 -1.4
GOMU                                 PcP     PcP     11 00 56.5 +4.6
GOMU                                 PP      PP      11 01 53.8 +0.7
GOMU                                 S       S       11 07 29.0 -1.9
GOMU                                 pmax    pmax
       comp=Z,110nm,1.0s
GOMU                                 LR      LR
       comp=Z,13µm,17.3s
GOMU                                 LR      LR
       comp=Z,10µm,17.2s
GOMU                                 LR      LR
       comp=Z,15µm,18.8s
D32A   Dogwood Acres,    54.98  56   IAmb    IAmb    10 59 51.2
       comp=Z,131nm,0.9s
D32B   Dogwood Acres,    54.98  56   P       P       10 59 48.8 -1.0
       baz=312,SNR=12
KEV    Kevo              55.29 346   IAMs_20 IAMs_20 11 26 02.0
       comp=Z,18µm,19.0s
KEV    Kevo              55.29 346 ⇑P       P       10 59 52.0 +0.4
ISCO   Idaho Springs     55.29  68   IAmb    IAmb    11 00 11.1
       comp=Z,152nm,1.1s
ISCO                                 IAMs_20 IAMs_20 11 25 17.5
       comp=Z,10µm,20.0s
ISCO   Idaho Springs     55.29  68   P       P       10 59 52.7 +0.2
       baz=313,SNR=126
ISCO                                 S       S       11 07 35.0 +0.1
       baz=313
ISCO   Idaho Springs     55.29  68   P       P       10 59 52.9 +0.4
       baz=313,SNR=126
ISCO                                 S       S       11 07 35.2 +0.3
       baz=313
QVP    Quezon City--P    55.36 246⇑eP       P       10 59 52.1 -0.7
MVCO   Mesa Verde        55.40  72   IAmb    IAmb    11 00 19.2
       comp=Z,88nm,0.8s
MVCO                                 IAMs_20 IAMs_20 11 21 03.3
       comp=Z,10µm,22.0s
MVCO   Mesa Verde        55.40  72   P       P       10 59 52.9 -0.3
       baz=314,SNR=53
MVCO                                 S       S       11 07 37.1 +0.8
       baz=314
LQP    Lukban            55.48 246⇓eP       P       10 59 54.8 +0.9
BRIGG  Briggsdale        55.49  67   IAmb    IAmb    10 59 57.5
       comp=Z,184nm,1.0s
LVZ    Lovozero          55.66 342   P       P       10 59 52.8 -1.5
LVZ                                  IAMs_20 IAMs_20 11 27 07.1
       comp=Z,17µm,20.0s
LVZ    Lovozero          55.66 342 ⇑P       P       10 59 53.8 -0.6
LVZ    Lovozero          55.66 342ceP       P       10 59 53.5 -0.9
LVZ                                  pmax    pmax
       comp=Z,198nm,0.8s
LVZ                                  MLR     MLR
       comp=Z,17µm,19.0s
ARA0   ARCESS Array S    55.71 346 eP       P       10 59 55.4 +0.8
ARA0                                 IVmBBB          11 00 05.0
       comp=Z,6µm,4.1s
ARA0                                eS       S       11 07 36.1 -3.0
ARA0                                 IVMs_BB IVMs_BB 11 26 00.2
       comp=Z,13µm,16.6s
ARCES  ARCESS Array B    55.71 346   P       P       10 59 53.5 -1.1
       comp=Z,53nm,0.8s,baz=29,slow=6.5,SNR=60
ARCES                                PcP     PcP     11 00 53.4 -0.3
       comp=Z,68nm,0.8s,baz=15,slow=5.0,SNR=7.1
ARCES                                LR      LR      11 26 13.3
       comp=Z,26µm,18.6s,baz=24,slow=39
       comp=Z,53nm,0.8s
ARCES  ARCESS Array B    55.71 346   P       P       10 59 53.8 -0.8
SUSD   Miller            55.79  60   P       P       10 59 55.1 -0.5
       baz=313,SNR=81
SUSD                                 S       S       11 07 37.5 -3.4
       baz=313
SUSD   Miller            55.79  60   P       P       10 59 54.9 -0.7
       baz=313,SNR=81
B35A   Bob, Littlefor    55.80  54   P       P       10 59 54.6 -1.0
       baz=313,SNR=95
B35A                                 S       S       11 07 37.8 -3.1
       baz=313
MACP   Maragondon, Ca    55.81 247⇑eP       P       10 59 56.1 +0.1
TGY    Tagaytay City     55.82 246⇑eP       P       10 59 52.0 -4.1
BOAC   Boac              55.84 245⇓eP       P       10 59 58.2 +2.0
S22A   4UR Ranch, Cre    56.00  71   IAmb    IAmb    11 00 24.3
       comp=Z,223nm,1.1s
S22A   4UR Ranch, Cre    56.00  71   P       P       10 59 58.1 +0.5
       baz=314,SNR=201
S22A                                 S       S       11 07 45.4 +1.0
       baz=314
W18A   Petrified Fore    56.12  75   IAmb    IAmb    11 00 28.3
       comp=Z,116nm,1.2s
W18A   Petrified Fore    56.12  75   P       P       10 59 57.8 -0.5
       baz=314,SNR=13
W18A                                 S       S       11 07 47.2 +1.4
       baz=314
Q24A   Divide            56.12  69   P       P       10 59 58.7 +0.3
       baz=314,SNR=18
Q24A                                 S       S       11 07 45.6 -0.4
       baz=314
BVAR   Borovoye Array    56.17 315   LR      LR      11 25 55.5
       comp=Z,60µm,20.4s,baz=48,slow=38
BRVK   Borovoye          56.19 315   P       P       10 59 57.6 -0.6
BRVK   Borovoye          56.19 315 ⇑P       P       10 59 57.8 -0.5
BRVK   Borovoye          56.19 315c iP       P       10 59 57.7 -0.6
BRVK                                 pmax    pmax
       comp=Z,146nm,1.0s
BRVK                                 MLR     MLR
       comp=Z,59µm,20.0s
BRVK   Borovoye          56.19 315   P       P       10 59 57.8 -0.5
BRVK                                 P       P       10 59 57.8 -0.5
BRVK                                 P       P       10 59 57.8 -0.5
F33A   5 Mile Ranch,     56.23  57   P       P       10 59 57.4 -1.2
       baz=313,SNR=52
F33A                                 S       S       11 07 43.0 -3.6
       baz=313
PGP    Puerto Galera     56.30 246⇓eP       P       11 00 01.0 +1.5
ICESG  Greenland Ices    56.32  13 ⇑P       P       10 59 58.2 -1.2
ICESG  Greenland Ices    56.32  13 i P       P       10 59 58.5 -1.0
OCLP   Ormoc             56.34 241⇓eP       P       11 00 00.8 +1.0
JETT   Jettan, Norway    56.36 348 eP       P       10 59 59.7 +0.4
JETT                                 IVmB_BB         11 00 04.0
       comp=Z,7µm,4.4s
JETT                                eS       S       11 07 49.1 +1.3
JETT                                 IVMs_BB IVMs_BB 11 20 54.9
       comp=Z,7µm,5.3s
SFJD   Kangerlussuaq     56.38  19   LR      LR      11 26 10.8
       comp=Z,22µm,20.6s,baz=334,slow=38
SFJD   Kangerlussuaq     56.38  19   P       P       10 59 57.8 -1.6
SFJD                                 IAmb    IAmb    11 00 02.2
       comp=Z,153nm,1.4s
SFJD   Kangerlussuaq     56.38  19 ⇑P       P       10 59 58.2 -1.2
SFJD   Kangerlussuaq     56.38  19   P       P       10 59 57.8 -1.6
SFJD                                 pmax    pmax
       comp=Z,153nm,1.4s
SFJD                                 MLR     MLR
       comp=Z,20µm,20.0s
SFJD   Kangerlussuaq     56.38  19 i P       P       10 59 58.5 -1.0
SFJD                                 IAmb    IAmb    11 00 01.7
       comp=Z,60nm,0.7s
XMAS   Kiritimati        56.40 143   IAMs_20 IAMs_20 11 19 50.5
       comp=Z,11µm,20.0s
TRO    Tromso            56.46 349   IVmB_BB         11 00 00.4
       comp=Z,10µm,4.1s
TRO                                 eP       P       11 00 00.9 +0.9
TRO                                 eS       S       11 07 50.3 +1.3
TRO                                  IVMs_BB IVMs_BB 11 21 04.6
       comp=Z,8µm,4.8s
LUBP   Lubang            56.50 247⇑iP       P       10 59 60.0 -1.0
KTK1   Kautokeino        56.51 347 eP       P       11 00 01.2 +0.8
KTK1                                 IVmB_BB         11 01 22.7
       comp=Z,5µm,3.8s
KTK1                                eS       S       11 07 51.5 +1.8
KTK1                                 IVMs_BB IVMs_BB 11 23 33.1
       comp=Z,9µm,24.5s
214A   Organ Pipe Nat    56.51  80   IAmb    IAmb    11 00 30.4
       comp=Z,165nm,1.2s
214A   Organ Pipe Nat    56.51  80   P       P       11 00 00.3 -0.7
       baz=315,SNR=44
214A                                 S       S       11 07 50.0 -0.8
       baz=315
OGNE   Ogallala          56.51  65   IAMs_20 IAMs_20 11 28 38.4
       comp=Z,9µm,18.0s
OGNE   Ogallala          56.51  65   P       P       11 00 00.4 -0.5
       baz=314,SNR=76
OGNE                                 S       S       11 07 51.0 +0.3
       baz=314
OGNE   Ogallala          56.51  65   P       P       11 00 01.2 +0.3
       baz=314,SNR=76
OGNE                                 S       S       11 07 50.8 +0.1
       baz=314
GLSP   General Luna,     56.61 238⇑eP       P       11 00 01.0 -0.7
OTRP   Odiongan          56.64 244⇓eP       P       11 00 03.9 +1.9
JMIC   Jan Mayen         56.65   0   LR      LR      11 22 34.9
       comp=Z,7µm,21.8s,baz=9.5,slow=34
JMIC   Jan Mayen         56.65   0 eP       P       11 00 05.5 +4.2
JMIC                                 IVmBBB          11 00 07.6
       comp=Z,3µm,2.2s
JMIC                                eS       S       11 07 56.2 +4.7
JMIC                                 IVMs_BB IVMs_BB 11 21 05.7
       comp=Z,7µm,5.1s
SCO    Scoresbysund      56.74   6   P       P       11 00 00.9 -1.0
SCO                                  IAmb    IAmb    11 00 32.4
       comp=Z,145nm,1.3s
SCO                                  IAMs_20 IAMs_20 11 23 35.8
       comp=Z,16µm,22.0s
SCO    Scoresbysund      56.74   6 ⇑P       P       11 00 01.7 -0.2
SCO    Scoresbysund      56.74   6   P       P       11 00 00.9 -1.0
SCO                                  pmax    pmax
       comp=Z,145nm,1.3s
SCO    Scoresbysund      56.74   6 i P       P       11 00 00.6 -1.3
SCO                                  IAmb    IAmb    11 00 13.1
       comp=Z,211nm,1.6s
SDCO   Great Sand Dun    56.76  70   IAmb    IAmb    11 00 29.5
       comp=Z,199nm,1.2s
SDCO                                 IAMs_20 IAMs_20 11 23 48.5
       comp=Z,14µm,21.0s
SDCO   Great Sand Dun    56.76  70   P       P       11 00 03.2 +0.3
       baz=314,SNR=170
SDCO                                 S       S       11 07 55.7 +1.2
       baz=314
SDCO   Great Sand Dun    56.76  70   P       P       11 00 03.1 +0.1
       baz=314,SNR=170
SDCO                                 S       S       11 07 55.0 +0.5
       baz=314
RCP    Roxas             56.91 243⇓iP       P       11 00 05.9 +2.0
SCPH   Surigao           56.94 239 eP       P       11 00 00.5 -3.6
MSLP   Maasin            56.97 240⇓eP       P       11 00 04.0 -0.3
SJMP   San Jose          57.06 245⇓eP       P       11 00 06.8 +1.9
K31A   O'Neill           57.14  61   P       P       11 00 05.1 -0.2
       baz=314,SNR=54
K31A                                 S       S       11 07 57.4 -1.4
       baz=314
EYMN   Ely               57.17  53   IAMs_20 IAMs_20 11 27 28.9
       comp=Z,13µm,18.0s
EYMN   Ely               57.17  53   P       P       11 00 05.0 -0.3
       baz=314,SNR=71
EYMN                                 S       S       11 07 56.6 -2.4
       baz=314
EYMN   Ely               57.17  53   P       P       11 00 04.9 -0.5
       baz=314,SNR=71
EYMN                                 S       S       11 07 57.1 -2.0
       baz=314
BRZS   Berezniki         57.27 311⇑iP       P       11 00 05.0 -1.0
       comp=Z,63nm,0.9s,baz=311
BRZS   Berezniki         57.27 311c iP       P       11 00 05.0 -1.0
BRZS                                 pmax    pmax
       comp=Z,63nm,0.9s
TABP   Talibon, Bohol    57.29 240⇓iP       P       11 00 05.3 -1.2
SVE    Sverdlovsk        57.35 323deP       P       11 00 06.7 +0.2
SVE                                 e                11 02 13.0
SVE                                 ePPP     PPP     11 03 36.3
SVE                                 eS       S       11 08 07.2 +6.1
SVE                                  pmax    pmax
       comp=Z,361nm,2.5s
SVE                                  MLR     MLR
       comp=Z,34µm,20.0s
SVE                                  MLR     MLR
       comp=N,15µm,18.0s
SVE                                  MLR     MLR
       comp=E,17µm,18.0s
TUC    Tucson            57.47  78   P       P       11 00 06.0 -1.8
TUC    Tucson            57.47  78   IAMs_20 IAMs_20 11 26 20.1
       comp=Z,8µm,18.0s
TUC    Tucson            57.47  78 ⇑P       P       11 00 07.6 -0.2
TUC    Tucson            57.47  78   P       P       11 00 06.0 -1.8
TUC                                  pmax    pmax
       comp=Z,97nm,1.2s
TUC                                  MLR     MLR
       comp=Z,8µm,18.0s
TUC    Tucson            57.47  78   P       P       11 00 07.3 -0.5
       baz=316
TUC                                  S       S       11 08 04.1 +0.5
       baz=316
ECSD   EROS Data Cent    57.51  59   IAmb    IAmb    11 00 09.8
       comp=Z,118nm,1.0s
ECSD   EROS Data Cent    57.51  59   IAMs_20 IAMs_20 11 28 10.4
       comp=Z,11µm,20.0s
ECSD   EROS Data Cent    57.51  59   P       P       11 00 06.6 -1.2
       baz=314,SNR=97
ECSD                                 S       S       11 08 00.0 -3.6
       baz=314
ECSD   EROS Data Cent    57.51  59   P       P       11 00 06.6 -1.2
       baz=314,SNR=97
ECSD                                 S       S       11 08 00.2 -3.4
       baz=314
KSCO   Kaye Shedlock’    57.51  67   P       P       11 00 08.5 +0.4
       baz=314,SNR=68
KSCO                                 S       S       11 08 04.1 +0.1
       baz=314
KSCO   Kaye Shedlock’    57.51  67   P       P       11 00 08.4 +0.4
       baz=314,SNR=68
KSCO                                 S       S       11 08 03.9 -0.2
       baz=314
BUTP   Butuan            57.56 238⇑eP       P       11 00 08.3 -0.2
F36A   Milaca            57.62  56   P       P       11 00 07.7 -0.8
       baz=314,SNR=59
F36A                                 S       S       11 08 03.3 -1.6
       baz=314
DY2G   Dye2              57.66  17 ⇑P       P       11 00 07.2 -1.6
DY2G   Dye2              57.66  17 i P       P       11 00 07.2 -1.6
PZH    PanZhiHua         57.68 272   P       P       11 00 09.0 -0.4
PZH                                  pP      pP      11 00 13.8 -2.0
PZH                                  S       S       11 08 06.5  0.0
PZH                                  ScS     ScS     11 09 56.0 -1.4
PZH                                  pmax    pmax
       comp=Z,230nm,1.6s
PZH                                  pmax    pmax
       comp=Z,3µm,4.2s
PZH                                  LR      LR
       comp=Z,7µm,18.4s
PZH                                  LR      LR
       comp=Z,8µm,18.2s
PZH                                  LR      LR
       comp=Z,10µm,19.4s
GUIM   Jordan            57.77 242⇑eP       P       11 00 09.9  0.0
T25A   Trinidad          57.80  70   IAmb    IAmb    11 00 28.9
       comp=Z,223nm,1.1s
T25A   Trinidad          57.80  70   P       P       11 00 10.5 +0.2
       baz=315,SNR=106
T25A                                 S       S       11 08 09.9 +1.8
       baz=315
TBP    Tagbilaran        57.87 240⇑iP       P       11 00 10.2 -0.5
TASP   Talacogon, Agu    57.90 238⇓iP       P       11 00 09.5 -1.3
BUSP   Coron             57.94 245⇓eP       P       11 00 12.2 +1.0
TDK    Taldyqorghan      57.97 303⇑iP       P       11 00 11.0  0.0
       comp=Z,117nm,0.9s,baz=303
TDK                                 ePP      PP      11 02 17.8 -1.4
       baz=303
TDK                                  LR      LR      11 24 50.9
       comp=Z,22µm,18.2s,baz=303
TDK    Taldyqorghan      57.97 303c iP       P       11 00 11.0  0.0
TDK                                 e                11 02 17.7
TDK                                  pmax    pmax
       comp=Z,117nm,0.9s
TDK                                  MLR     MLR
       comp=Z,22µm,18.0s
E38A   The Farm, Brul    58.08  54   P       P       11 00 10.9 -0.8
       baz=315,SNR=97
E38A                                 S       S       11 08 08.1 -2.9
       baz=315
KMI    Kunming           58.09 270 ⇑P       P       11 00 12.0 -0.4
KMI                                  sP      pP      11 00 19.5 +0.7
KMI                                  PP      PP      11 02 22.8 +1.9
KMI                                  S       S       11 08 11.0 -1.0
KMI                                  ScS     ScS     11 09 59.8 -0.8
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KMI				SS	SS	11 12 02.0	-1.2
KMI				pmax	pmax		
	comp=Z,110nm,1.1s						
KMI				pmax	pmax		
	comp=Z,3µm,6.9s						
KMI				LR	LR		
	comp=Z,5µm,16.5s						
KMI				LR	LR		
	comp=Z,11µm,16.5s						
KMI				LR	LR		
	comp=Z,8µm,16.1s						
ANMO	Albuquerque	58.16	73	P	P	11 00 12.7	-0.1
	comp=Z,42nm,1.0s,baz=46,slow=7.4,SNR=62						
ANMO				LR	LR	11 23 06.4	
	comp=Z,8µm,21.1s,baz=46,slow=34						
	comp=Z,42nm,1.0s						
ANMO	Albuquerque	58.16	73	P	P	11 00 12.2	-0.5
ANMO	Albuquerque	58.16	73	IAMs_20	IAMs_20	11 22 45.1	
	comp=Z,9µm,21.0s						
ANMO	Albuquerque	58.16	73	⇑P	P	11 00 12.7	-0.1
ANMO	Albuquerque	58.16	73	c iP	P	11 00 12.5	-0.3
ANMO				pmax	pmax		
	comp=Z,51nm,1.1s						
ANMO	Albuquerque	58.16	73	P	P	11 00 12.7	-0.1
	baz=315						
ANMO				S	S	11 08 13.6	+0.8
	baz=315						
ANMO	Albuquerque	58.16	73	P	P	11 00 12.7	-0.1
	baz=315,SNR=81						
ANMO				S	S	11 08 14.1	+1.4
	baz=315						
BGNE	Belgrade	58.31	62	P	P	11 00 12.9	-0.6
	baz=314,SNR=88						
BGNE				S	S	11 08 12.8	-1.3
	baz=314						
BGNE	Belgrade	58.31	62	P	P	11 00 12.8	-0.6
	baz=314,SNR=88						
BGNE				S	S	11 08 12.2	-1.9
	baz=314						
QIZ	Qiongzhong	58.37	260	P	P	11 00 15.3	+1.2
QIZ				S	S	11 08 17.5	+2.1
QIZ				ScS	ScS	11 10 03.0	+0.7
QIZ				SS	SS	11 12 10.0	+2.5
QIZ				pmax	pmax		
	comp=Z,150nm,2.0s						
QIZ				pmax	pmax		
	comp=Z,4µm,4.0s						
QIZ				LR	LR		
	comp=Z,10µm,16.5s						
QIZ				LR	LR		
	comp=Z,4µm,16.0s						
QIZ				LR	LR		
	comp=Z,12µm,16.3s						
QIZ	Qiongzhong	58.37	260	IAmb	IAmb	11 00 18.0	
	comp=Z,182nm,1.1s						
QIZ	Qiongzhong	58.37	260	P	P	11 00 17.8	+3.7
	comp=Z,176nm,2.4s						
CNOP	Candoni, Negro	58.41	242	⇑eP	P	11 00 13.2	-1.2
ARU	Arti	58.41	323	LR	LR	11 28 34.6	
	comp=Z,28µm,18.1s,baz=44,slow=39						
ARU	Arti	58.41	323	P	P	11 00 13.2	-0.7
ARU	Arti	58.41	323	⇑P	P	11 00 13.5	-0.4
ARU	Arti	58.41	323	c iP	P	11 00 13.4	-0.5
ARU						11 00 58.5	
ARU						11 02 19.2	
ARU				PPP	PPP	11 03 41.9	
ARU				S	S	11 08 18.8	+3.8
ARU						11 09 55.7	
ARU				SS	SS	11 12 10.2	+3.7
ARU				SSS	SSS	11 14 34.6	
ARU				pmax	pmax		
	comp=Z,165nm,0.9s						
ARU				MLR	MLR		
	comp=Z,27µm,17.0s						
SPMN	Marine on St.	58.42	56	P	P	11 00 13.9	-0.3
	baz=315,SNR=77						
SPMN				S	S	11 08 14.0	-1.5
	baz=315						
SPMN	Marine on St.	58.42	56	P	P	11 00 13.8	-0.4
	baz=315,SNR=77						
SPMN				S	S	11 08 14.4	-1.1
	baz=315						
CUYO	Cuyo Island	58.44	244	⇓eP	P	11 00 16.5	+1.9
LSIP	Lazi, Siquijor	58.46	240	⇑iP	P	11 00 14.3	-0.4
LOF	Lofoten	58.48	351	eP	P	11 00 15.0	+0.8
LOF				IVmBBB		11 00 23.6	
	comp=Z,5µm,5.0s						
LOF				ePP	PP	11 02 24.6	+1.5
LOF				eS	S	11 08 20.2	+4.7
LOF				IVMs_BB	IVMs_BB	11 21 01.9	
	comp=Z,6µm,4.5s						
STEI	Steigen	58.50	350	eP	P	11 00 14.7	+0.4
STEI				IVmBBB		11 00 45.7	
	comp=Z,5µm,4.1s						
STEI				ePP	PP	11 02 23.6	+0.3
STEI				eS	S	11 08 20.2	+4.5
STEI				IVMs_BB	IVMs_BB	11 23 26.8	
	comp=Z,8µm,17.3s						
Y22D	IRIS PASSCAL I	58.51	74	IAMs_20	IAMs_20	11 24 54.1	
	comp=Z,16µm,19.0s						
Y22D	IRIS PASSCAL I	58.51	74	P	P	11 00 15.4	+0.3
	baz=315,SNR=13						
Y22D				S	S	11 08 15.8	-1.4
	baz=315						
Y22D	IRIS PASSCAL I	58.51	74	P	P	11 00 16.3	+1.2
	baz=315,SNR=13						
Y22F	Passcal Instru	58.51	74	P	P	11 00 15.2	+0.1
	baz=315,SNR=13						
Y22F				S	S	11 08 15.8	-1.4
	baz=315						
Y22A	Socorro	58.58	74	P	P	11 00 16.2	+0.5
	baz=316,SNR=149						
Y22A				S	S	11 08 18.3	+0.2
	baz=316						
ARXS	Arharly	58.82	303	eP	P	11 00 15.4	-1.7
L34A	Svendsen Farm,	58.86	61	P	P	11 00 16.4	-1.0
	baz=315,SNR=81						
L34A				S	S	11 08 18.3	-3.0
	baz=315						
KPKS	Kokpek	58.90	302	⇑iP	P	11 00 17.1	-0.6
	comp=Z,63nm,1.0s,baz=302						
KPKS	Kokpek	58.90	302	c iP	P	11 00 17.1	-0.6
KPKS				pmax	pmax		
	comp=Z,63nm,1.0s						
UZB	Uzynbulak	58.95	301	⇑iP	P	11 00 17.4	-0.7
	comp=Z,44nm,1.1s,baz=301						
UZB	Uzynbulak	58.95	301	c iP	P	11 00 17.4	-0.7
UZB				pmax	pmax		
	comp=Z,44nm,1.1s						
I37B	Waseca	58.97	57	P	P	11 00 17.9	-0.2
	baz=315,SNR=104						
I37B				S	S	11 08 19.9	-2.8
	baz=315						
ENPP	El Nido	59.02	246	⇑eP	P	11 00 19.2	+0.6
FAUS	Fauske	59.02	350	eP	P	11 00 19.9	+1.9
FAUS				IVmBBB		11 00 52.1	
	comp=Z,7µm,4.7s						
FAUS				eS	S	11 08 23.4	+0.8
FAUS				IVMs_BB	IVMs_BB	11 21 15.5	
	comp=Z,8µm,5.4s						
DCPH	Dipolog City	59.07	240	⇑eP	P	11 00 19.7	+0.7
121A	Cookes Peak, D	59.09	76	IAmb	IAmb	11 00 48.9	
	comp=Z,114nm,1.1s						
121A	Cookes Peak, D	59.09	76	P	P	11 00 19.1	-0.1
	baz=316,SNR=25						
121A				S	S	11 08 25.9	+1.1
	baz=316						
121A	Cookes Peak, D	59.09	76	P	P	11 00 19.5	+0.2
	baz=316,SNR=25						
121A				S	S	11 08 24.4	-0.5
	baz=316						
RABL	Rabaul	59.13	203	P	P	11 00 25.1	+5.7
	comp=Z,141nm,1.1s						
N33B	J Bar K, Exete	59.15	62	P	P	11 00 18.1	-1.2
	baz=315,SNR=8.9						
N33B				S	S	11 08 23.4	-1.8
	baz=315						
DAV	Davao City (W)	59.19	237	LR	LR	11 22 16.5	
	comp=Z,2µm,21.6s,baz=79,slow=32						
D41A	Chassel	59.20	52	P	P	11 00 19.4	-0.1
	baz=316,SNR=41						
D41A				S	S	11 08 26.1	+0.5
	baz=316						
ZHN	Zhinishke	59.24	302	⇑iP	P	11 00 19.6	-0.5
	baz=302						
ZHN	Zhinishke	59.24	302	c iP	P	11 00 19.5	-0.5
CBKS	Cedar Bluff	59.26	65	IAmb	IAmb	11 00 34.6	
	comp=Z,149nm,0.9s						
CBKS				IAMs_20	IAMs_20	11 25 36.3	
	comp=Z,10µm,20.0s						
CBKS	Cedar Bluff	59.26	65	P	P	11 00 20.3	+0.2
	baz=315,SNR=33						
CBKS				S	S	11 08 27.7	+1.1
	baz=315						
CBKS	Cedar Bluff	59.26	65	P	P	11 00 19.6	-0.5
	baz=315,SNR=33						
CBKS				S	S	11 08 25.6	-1.0
	baz=315						
KRVT	Keravat (AS076	59.27	204	S	S	11 08 24.5	-2.5
	comp=Z,20nm,1.0s,baz=234,slow=19,SNR=1.7						
KRVT				LR	LR	11 23 06.0	
	comp=Z,9µm,19.5s,baz=145,slow=33						
SATY	Saty	59.33	302	⇑iP	P	11 00 20.4	-0.4
	comp=Z,80nm,1.5s,baz=302						
SATY				eS	S	11 08 28.6	+1.0
	baz=302						
SATY	Saty	59.33	302	c iP	P	11 00 20.3	-0.4
SATY				eS	S	11 08 28.6	+1.0
SATY				pmax	pmax		
	comp=Z,80nm,1.5s						
CHKK	Chushkaly	59.50	303	eP	P	11 00 20.3	-1.4
	baz=303						
CHKK	Chushkaly	59.50	303	eP	P	11 00 20.3	-1.4
COWI	Conover	59.62	53	IAmb	IAmb	11 00 38.2	
	comp=Z,137nm,0.9s						
COWI				IAMs_20	IAMs_20	11 28 29.7	
	comp=Z,15µm,18.0s						
COWI	Conover	59.62	53	P	P	11 00 21.6	-0.8
	baz=316						
COWI				S	S	11 08 30.1	-0.9
	baz=316						
PAGZ	Pagadian	59.67	240	⇑eP	P	11 00 22.3	-0.8
G40A	Rib Lake	59.69	54	P	P	11 00 21.9	-1.1
	baz=316,SNR=47						
G40A				S	S	11 08 30.4	-1.5
	baz=316						
ISOG	Isortoq, Green	59.72	14	⇑P	P	11 00 21.1	-1.8
ISOG	Isortoq, Green	59.72	14	i P	P	11 00 21.0	-1.8
HSIG		59.73	81	IAmb	IAmb	11 00 26.3	
	comp=Z,141nm,1.1s						
CTBH	Cotabato--PC H	59.75	239	⇑eP	P	11 00 25.8	+2.1
KUU	Kurty	59.80	304	eP	P	11 00 22.2	-1.6
	comp=Z,75nm,0.9s,baz=304						
KUU				LR	LR	11 26 00.8	
	comp=Z,11µm,16.4s,baz=304						
KUU	Kurty	59.80	304	eP	P	11 00 22.2	-1.6
KUU				pmax	pmax		
	comp=Z,75nm,0.9s						
KUU				MLR	MLR		
	comp=Z,11µm,16.0s						
KIRV	Kirov	59.81	329	LR	LR	11 29 29.2	
	comp=Z,23µm,19.3s,baz=35,slow=39						
KIRV	Kirov	59.81	329	c iP	P	11 00 24.0	+0.5
ANGG	Ammassalik, Gr	59.85	14	IAmb	IAmb	11 00 47.9	
	comp=Z,119nm,0.9s						
ANGG	Ammassalik, Gr	59.85	14	⇑P	P	11 00 22.6	-1.1
ANGG	Ammassalik, Gr	59.85	14	i P	P	11 00 21.7	-2.0
MDOK	Medeo	59.96	303	i P	P	11 00 24.4	-0.6
	baz=303						
MDOK				eS	S	11 08 36.3	+0.6
	baz=303						
MDOK				LR	LR	11 25 40.9	
	comp=Z,13µm,19.9s,baz=303						
MDOK	Medeo	59.96	303	i P	P	11 00 24.4	-0.6
MDOK				eS	S	11 08 36.3	+0.6
MDOK				MLR	MLR		
	comp=Z,13µm,20.0s						
AAA	Alma-Ata	59.99	303	eP	P	11 00 25.3	+0.1
	baz=303						
AAA				LR	LR	11 26 17.4	
	baz=303						
AAA	Alma-Ata	59.99	303	eP	P	11 00 25.2	+0.1
N35A	Tabor	60.03	61	P	P	11 00 24.9	-0.5
	baz=316,SNR=54						
N35A				S	S	11 08 35.5	-0.9
	baz=316						
TNSS	Tian-Shan	60.10	303	i P	P	11 00 25.7	-0.6
	baz=303						
TNSS	Tian-Shan	60.10	303	i P	P	11 00 25.7	-0.6
R32A	Long Quarter,	60.10	65	IAmb	IAmb	11 00 39.6	
	comp=Z,148nm,1.1s						
R32A	Long Quarter,	60.10	65	P	P	11 00 24.9	-1.1
	baz=316,SNR=28						
R32A				S	S	11 08 36.4	-1.1
	baz=316						
KONS	Konsvik	60.11	350	eP	P	11 00 24.9	-0.5
BTLS	Baital	60.12	306	⇑iP	P	11 00 25.2	-0.8
	comp=Z,41nm,1.0s,baz=306						
BTLS	Baital	60.12	306	c iP	P	11 00 25.1	-0.8
BTLS				pmax	pmax		
	comp=Z,41nm,1.0s						
SRIG	Santa Rosalia	60.19	83	P	P	11 00 25.6	-1.0
SRIG				IAmb	IAmb	11 00 54.0	
	comp=Z,105nm,1.0s						
SRIG	Santa Rosalia	60.19	83	⇑P	P	11 00 26.4	-0.2
SKMP	Bagumbayan, Su	60.19	238	⇑eP	P	11 00 26.8	+0.1
KAPO	Kapuskasing	60.26	46	⇑P	P	11 00 25.4	-1.4
K38A	Parkersburg	60.27	58	IAmb	IAmb	11 00 39.2	
	comp=Z,142nm,1.2s						
K38A	Parkersburg	60.27	58	P	P	11 00 26.0	-0.9
	baz=316,SNR=7.1						
K38A				S	S	11 08 37.9	-1.5
	baz=316						
STOK	Stokkvaagen	60.28	350	eP	P	11 00 26.5	-0.1
MOR8	Moi Rana	60.29	350	eP	P	11 00 24.9	-1.8
MOR8				IVmBBB		11 00 53.3	
	comp=Z,4µm,5.2s						
MOR8				eS	S	11 08 38.6	-0.4
MOR8				IVMs_BB	IVMs_BB	11 24 05.1	
	comp=Z,10µm,26.2s						
F42A	Maple Grove Fa	60.35	53	IAmb	IAmb	11 00 43.6	
	comp=Z,136nm,0.9s						
F42A	Maple Grove Fa	60.35	53	P	P	11 00 27.4	-0.1
	baz=316,SNR=12						
F42A				S	S	11 08 40.3	0.0
	baz=316						
KIDD	KIDD Seismic O	60.39	76	P	P	11 00 30.0	+1.9
	baz=316,SNR=22						
E43A	Lone Tree Farm	60.45	51	P	P	11 00 27.5	-0.6
	baz=317,SNR=45						
E43A				S	S	11 08 41.0	-0.6
	baz=317						
I40A	Norwalk	60.47	56	IAmb	IAmb	11 00 30.3	
	comp=Z,138nm,1.1s						
I40A	Norwalk	60.47	56	P	P	11 00 27.5	-0.8
	baz=316,SNR=37						
I40A				S	S	11 08 40.6	-1.4
	baz=316						
SCIA	State Center	60.57	59	IAMs_20	IAMs_20	11 30 17.3	
	comp=Z,12µm,18.0s						
SCIA	State Center	60.57	59	P	P	11 00 28.6	-0.5
	baz=316,SNR=32						
SCIA				S	S	11 08 41.1	-2.1
	baz=316						
SCIA	State Center	60.57	59	P	P	11 00 28.1	-0.9
	baz=316,SNR=32						
SCIA				S	S	11 08 40.0	-3.2
	baz=316						
TARG	Taragay, Kyrgy	60.59	301	P	P	11 00 29.4	-0.3
TARG				IAmb	IAmb	11 00 51.8	
	comp=Z,226nm,1.7s						
TARG	Taragay, Kyrgy	60.59	301	P	P	11 00 29.4	-0.3
TARG				pmax	pmax		
	comp=Z,226nm,1.7s						
KLMR	Klimovskoe	60.70	336	⇑iP	P	11 00 29.5	-0.1
KLMR				⇓iP	P	11 00 29.5	-0.1
KLMR				⇓iP	P	11 00 29.5	-0.1
KLMR				AMP		11 00 31.8	
	comp=Z,3µm,2.8s						
KLMR				AMP		11 00 32.4	
	comp=Z,266nm,1.2s						
KLMR				PP	PP	11 02 50.0	+7.2
KLMR				PPP	PPP	11 04 18.1	
KLMR				S	S	11 08 46.6	+2.3
KLMR				S	S	11 08 46.6	+2.3
KLMR				⇓SS	SS	11 13 06.3	+24
KLMR				⇓SS	SS	11 13 06.3	+24
KLMR				LQ	LQ	11 21 07.1	
KLMR				LQ	LQ	11 21 07.1	
KLMR				LR	LR	11 22 22.1	
KLMR	Klimovskoe	60.70	336	c iP	P	11 00 29.5	-0.1
KLMR						11 02 49.9	
KLMR				PPP	PPP	11 04 18.1	
KLMR				S	S	11 08 46.6	+2.3
KLMR				pmax	pmax		
	comp=Z,266nm,1.2s						
KLMR				pmax	pmax		
	comp=Z,3µm,2.8s						
TNCH	TengChong	60.73	274	⇑P	P	11 00 31.0	+0.4
TNCH				pP	pP	11 00 34.0	-3.5
TNCH				PP	PP	11 02 46.5	+2.3
TNCH				ScP	ScP	11 05 15.0	+1.1
TNCH				S	S	11 08 45.8	-0.3
TNCH				ScS	SKKSac	11 10 18.5	-1.4
TNCH				SS	SS	11 12 45.0	+0.5
TNCH				pmax	pmax		
	comp=Z,220nm,2.7s						
TNCH				pmax	pmax		
	comp=Z,3µm,6.5s						
TNCH				LR	LR		
	comp=Z,6µm,15.9s						
TNCH				LR	LR		
	comp=Z,6µm,16.1s						
TNCH				LR	LR		
	comp=Z,15µm,17.0s						
KSU1	Kansas State U	60.77	63	IAmb	IAmb	11 01 15.7	
	comp=Z,98nm,0.8s						
KSU1	Kansas State U	60.77	63	IAMs_20	IAMs_20	11 25 29.1	
	comp=Z,11µm,21.0s						
KSU1	Kansas State U	60.77	63	⇓P	P	11 00 29.2	-1.3
KSU1	Kansas State U	60.77	63	P	P	11 00 29.1	-1.3
	baz=316,SNR=21						
KSU1				S	S	11 08 43.8	-2.1
	baz=316						
KSU1	Kansas State U	60.77	63	P	P	11 00 29.0	-1.5
	baz=316,SNR=21						
KSU1				S	S	11 08 43.2	-2.7
	baz=316						
TKM2	Tokmak 2	60.88	303	P	P	11 00 30.7	-0.7
	SNR=113						
AMTX	Amarillo	60.96	70	IAmb	IAmb	11 00 50.0	
	comp=Z,96nm,0.9s						
AMTX				IAMs_20	IAMs_20	11 26 22.8	
	comp=Z,8µm,20.0s						
AMTX	Amarillo	60.96	70	P	P	11 00 30.7	-1.3
	baz=316						
AMTX				S	S	11 08 49.7	+1.0
	baz=316						
AMTX	Amarillo	60.96	70	P	P	11 00 31.5	-0.4
	baz=316,SNR=24						
AMTX				S	S	11 08 50.2	+1.5
	baz=316						
SGDS	Sogindy	60.98	304	⇑iP	P	11 00 31.6	-0.3
	baz=304						
SGDS	Sogindy	60.98	304	c iP	P	11 00 31.6	-0.3
MSTX	Muleshoe	60.99	71	IAmb	IAmb	11 00 50.1	
	comp=Z,201nm,1.2s						
MSTX	Muleshoe	60.99	71	P	P	11 00 32.2	+0.1
	baz=316,SNR=51						
MSTX				S	S	11 08 50.8	+1.7
	baz=316						
MSTX	Muleshoe	60.99	71	P	P	11 00 31.6	-0.5
	baz=316,SNR=51						
MSTX				S	S	11 08 50.0	+0.9
	baz=316						
ULHL	Ulahol	61.03	302	P	P	11 00 32.2	-0.3
	SNR=68						
MNTX	Cornudas Mount	61.10	75	P	P	11 00 32.9	+0.1
	baz=317,SNR=161						
MNTX				S	S	11 08 53.1	+2.7
	baz=317						
MNTX	Cornudas Mount	61.10	75	P	P	11 00 33.0	+0.1
	baz=317,SNR=161						
MNTX				S	S	11 08 51.4	+1.0
	baz=317						
USP	Ospenovka	61.18	304	P	P	11 00 33.0	-0.2
	SNR=122						
CHMS	Chumysh	61.25	304	P	P	11 00 33.4	-0.3
	SNR=30						
NOKA	Waynoka	61.26	67	IAmb	IAmb	11 00 48.4	
	comp=Z,218nm,1.5s						
SMPI	Sarmi	61.30	219	P	P	11 00 35.0	+0.8
	comp=Z,187nm,1.4s,comp=Z,4µmcomp=Z,5µm						
KAN12	Harper NE Stat	61.30	65	IAmb	IAmb	11 00 48.2	
	comp=Z,111nm,1.2s						
GENI	Genyem	61.30	217	P	P	11 00 34.5	+0.3
	comp=Z,119nm,1.9s,comp=Z,5µm						
I42A	Draeger Farm,	61.32	55	IAmb	IAmb	11 00 42.9	
	comp=Z,122nm,0.9s						
I42A	Draeger Farm,	61.32	55	P	P	11 00 33.5	-0.7
	baz=317,SNR=32						
I42A				S	S	11 08 51.8	-1.0
	baz=317						
OK035	E0210 Rd and N	61.33	66	IAmb	IAmb	11 00 48.1	
	comp=Z,109nm,1.1s						
OK035				IAMs_20	IAMs_20	11 29 20.2	
	comp=Z,8µm,18.0s						
N38A	Joes South For	61.36	60	P	P	11 00 33.1	-1.3
	baz=316						
N38A				S	S	11 08 51.1	-2.2
	baz=316						
JFWS	Jewell Farm	61.36	56	IAmb	IAmb	11 00 55.3	
	comp=Z,98nm,0.7s						
JFWS	Jewell Farm	61.36	56	P	P	11 00 33.5	-0.9
	baz=317,SNR=36						
JFWS				S	S	11 08 51.9	-1.5
	baz=317						
JFWS	Jewell Farm	61.36	56	P	P	11 00 33.5	-0.9
	baz=317,SNR=36						
JFWS				S	S	11 08 51.7	-1.7
	baz=317						
ELIS	Ellis County	61.39	67	IAmb	IAmb	11 00 49.0	
	comp=Z,124nm,1.2s						
KBK	Karagaybulak	61.40	304	P	P	11 00 34.8	-0.1
	SNR=58						
U32A	Winter Ranch,	61.40	67	IAmb	IAmb	11 00 48.8	
	comp=Z,128nm,1.1s						
U32A	Winter Ranch,	61.40	67	P	P	11 00 34.0	-0.8
	baz=316						
U32A				S	S	11 08 53.7	-0.4
	baz=316						
KAN06	Argonia West S	61.41	65	IAmb	IAmb	11 00 48.9	
	comp=Z,124nm,1.3s						
H43A	Windswept, Lux	61.46	53	P	P	11 00 34.3	-0.8
	baz=317,SNR=18						
H43A				S	S	11 08 53.4	-1.1
	baz=317						
OK038	West end E0370	61.48	67	IAmb	IAmb	11 00 49.3	
	comp=Z,98nm,1.1s						
OK038				IAMs_20	IAMs_20	11 31 57.1	
	comp=Z,12µm,18.0s						
L40A	Anamosa	61.48	57	IAmb	IAmb	11 00 37.0	
	comp=Z,120nm,0.9s						
L40A	Anamosa	61.48	57	P	P	11 00 33.9	-1.3
	baz=317,SNR=43						
L40A				S	S	11 08 52.6	-2.3
	baz=317						
OK032	Salt Plains WL	61.54	66	IAmb	IAmb	11 00 50.0	
	comp=Z,116nm,1.2s						
OK032				IAMs_20	IAMs_20	11 30 25.7	
	comp=Z,8µm,18.0s						
KS20	Mayfield South	61.59	65	IAmb	IAmb	11 00 52.3	
	comp=Z,140nm,1.2s						
KAN17	Caldwell West	61.61	65	IAmb	IAmb	11 00 50.3	
	comp=Z,168nm,1.1s						
AAK	Ala-Archa	61.64	304	P	P	11 00 36.3	-0.2
	SNR=72						
AAK	Ala-Archa	61.64	304	LR	LR	11 29 20.1	
	comp=Z,23µm,18.7s,baz=47,slow=38						
AAK	Ala-Archa	61.64	304	P	P	11 00 35.7	-0.8
AAK				IAmb	IAmb	11 00 38.6	
	comp=Z,154nm,1.1s						
AAK	Ala-Archa	61.64	304	⇑P	P	11 00 36.1	-0.5
AAK	Ala-Archa	61.64	304	c iP	P	11 00 36.0	-0.5
AAK				pmax	pmax		
	comp=Z,417nm,2.5s						
AAK				MLR	MLR		
	comp=Z,22µm,18.0s						
AAK	Ala-Archa	61.64	304	i P	P	11 00 35.7	-0.8
	SNR=104						
AAK	Ala-Archa	61.64	304	P	P	11 00 36.1	-0.5
AAK				P	P	11 00 36.1	-0.5
ZIRO	ZIRO	61.72	279	eP	P	11 00 39.2	+2.0
E46A	Sault Ste Mari	61.72	50	P	P	11 00 35.8	-0.9
	baz=318,SNR=54						
LSA	Lhasa	61.74	283	P	P	11 00 38.0	+0.3
LSA				S	S	11 08 49.8	-10
LSA				LR	LR		
	comp=Z,6µm,13.5s						

LSA				LR	LR		
	comp=Z,15µm,18.5s						
LSA				LR	LR		
	comp=Z,12µm,22.8s						
LSA	**Lhasa**	**61.74**	**283**	IAMs_20	IAMs_20	11 30 50.6	
	comp=Z,11µm,20.0s						
LSA	**Lhasa**	**61.74**	**283**	P	**P**	**11 00 38.3**	**+0.5**
KAN13	**South Haven SW**	**61.79**	**65**	IAmb	IAmb	11 00 50.9	
	comp=Z,166nm,1.2s						
CROK	**Carrier**	**61.88**	**66**	IAmb	IAmb	11 00 52.3	
	comp=Z,140nm,1.0s						
UCH	**Uchtor**	**61.93**	**303**	P	**P**	**11 00 38.5**	**-0.3**
	SNR=52						
EKS2	**Erkin-Say**	**61.98**	**304**	P	**P**	**11 00 38.6**	**-0.2**
	SNR=112						
IVI	**Ivigtut**	**62.01**	**21**	IAmb	IAmb	11 00 40.1	
	comp=Z,115nm,0.8s						
IVI	**Ivigtut**	**62.01**	**21**	⇓P	**P**	**11 00 38.0**	**-0.5**
IVI	**Ivigtut**	**62.01**	**21**	*i* P	**P**	**11 00 37.7**	**-0.8**
P38A	**Dawn**	**62.05**	**61**	IAmb	IAmb	11 00 52.5	
	comp=Z,147nm,1.1s						
P38A	**Dawn**	**62.05**	**61**	P	**P**	**11 00 37.5**	**-1.6**
	baz=317,SNR=16						
P38A				S	**S**	**11 08 59.7**	**-2.4**
	baz=317						
G45A	**Suttons Bay**	**62.06**	**52**	P	**P**	**11 00 38.3**	**-0.8**
	baz=318,SNR=23						
G45A				P	**P**	**11 00 38.3**	**-0.8**
	baz=318,SNR=23						
G45A				S	**S**	**11 09 02.4**	**+0.3**
	baz=318						
G45A				S	**S**	**11 09 02.4**	**+0.3**
	baz=318						
ITAN	**ITANAGAR**	**62.07**	**279**	*e*P	**P**	**11 00 40.2**	**+0.8**
ITAN				IAmb	IAmb	11 00 43.1	
	comp=Z,559nm,0.9s						
NSS	**Namsos**	**62.14**	**350**	*e*P	**P**	**11 00 42.4**	**+3.1**
NSS				IVmB_BB		11 00 44.9	
	comp=Z,4µm,3.7s						
NSS				IVMs_BB	IVMs_BB	11 22 46.0	
	comp=Z,9µm,4.3s						
MOKO	**MOKOCHONG**	**62.20**	**278**	*e*P	**P**	**11 00 41.2**	**+0.8**
SCHQ	**Schefferville**	**62.25**	**34**	P	**P**	**11 00 39.4**	**-0.9**
	comp=Z,300nm,0.8s,baz=334,slow=7.1,SNR=192						
SCHQ				LR	LR	11 29 45.6	
	comp=Z,17µm,19.7s,baz=322,slow=38						
	comp=Z,300nm,0.8s						
SCHQ	**Schefferville**	**62.25**	**34**	⇑P	**P**	**11 00 39.3**	**-0.9**
L42A	**Oliver, Polo**	**62.32**	**56**	IAmb	IAmb	11 00 49.0	
	comp=Z,130nm,0.8s						
L42A	**Oliver, Polo**	**62.32**	**56**	P	**P**	**11 00 39.4**	**-1.5**
	baz=317,SNR=19						
L42A				S	**S**	**11 09 03.6**	**-1.9**
	baz=317						
POST	**Post**	**62.38**	**71**	IAmb	IAmb	11 00 43.6	
	comp=Z,106nm,1.0s						
T35A	**Sooner Cattle**	**62.40**	**65**	IAmb	IAmb	11 01 02.3	
	comp=Z,84nm,1.1s						
T35B	**Sooner Cattle**	**62.40**	**65**	P	**P**	**11 00 40.3**	**-1.2**
	baz=317,SNR=13						
T35B				S	**S**	**11 09 03.8**	**-2.9**
	baz=317						
AML	**Almayashu**	**62.41**	**304**	P	**P**	**11 00 42.0**	**0.0**
	SNR=109						
ODSA	**Odessa**	**62.46**	**73**	IAmb	IAmb	11 01 09.2	
	comp=Z,130nm,1.2s						
BORG	**Borgarnes**	**62.46**	**6**	LR	LR	11 27 19.3	
	comp=Z,11µm,21.5s,baz=351,slow=36						
BORG	**Borgarnes**	**62.46**	**6**	P	**P**	**11 00 42.2**	**+0.8**
BORG				IAmb	IAmb	11 00 44.9	
	comp=Z,68nm,0.9s						
BORG	**Borgarnes**	**62.46**	**6**	IAMs_20	IAMs_20	11 27 08.0	
	comp=Z,11µm,22.0s						
BORG	**Borgarnes**	**62.46**	**6**	⇑P	**P**	**11 00 43.0**	**+1.6**
BORG	**Borgarnes**	**62.46**	**6**	P	**P**	**11 00 42.2**	**+0.8**
BORG				pmax	pmax		
	comp=Z,68nm,1.0s						
K43A	**Burlington**	**62.48**	**55**	P	**P**	**11 00 41.0**	**-0.9**
	baz=318,SNR=30						
K43A				S	**S**	**11 09 06.0**	**-1.4**
	baz=318						
OK051	**E0350 and S346**	**62.52**	**65**	IAmb	IAmb	11 00 56.3	
	comp=Z,78nm,1.1s						
OK051				IAMs_20	IAMs_20	11 27 45.5	
	comp=Z,9µm,20.0s						
OK048	**Pawnee Station**	**62.52**	**65**	IAmb	IAmb	11 00 56.5	
	comp=Z,84nm,1.1s						
OK048				IAMs_20	IAMs_20	11 27 45.7	
	comp=Z,8µm,19.0s						
I45A	**Fountain**	**62.53**	**53**	P	**P**	**11 00 41.5**	**-0.7**
	baz=318						
I45A				P	**P**	**11 00 41.5**	**-0.7**
	baz=318						
I45A				S	**S**	**11 09 08.1**	**0.0**
	baz=318						
I45A				S	**S**	**11 09 08.1**	**0.0**
	baz=318						
NRS	**Narsarsuaq**	**62.63**	**19**	P	**P**	**11 00 40.9**	**-1.7**
NRS				IAmb	IAmb	11 01 08.3	
	comp=Z,147nm,1.2s						
NRS	**Narsarsuaq**	**62.63**	**19**	P	**P**	**11 00 40.9**	**-1.7**
NRS				pmax	pmax		
	comp=Z,147nm,1.2s						
NRS				MLR	MLR		
	comp=Z,19µm,18.0s						
N41A	**Harden Midland**	**62.66**	**58**	P	**P**	**11 00 41.8**	**-1.4**
	baz=317,SNR=35						
N41A				S	**S**	**11 09 08.0**	**-1.8**
	baz=317						
OK029	**Liberty Lake**	**62.69**	**66**	IAmb	IAmb	11 00 59.6	
	comp=Z,160nm,1.2s						
OK029				IAMs_20	IAMs_20	11 32 41.1	
	comp=Z,7µm,19.0s						
WMOK	**Wichita Mounta**	**62.71**	**68**	IAmb	IAmb	11 00 58.1	
	comp=Z,90nm,1.1s						
WMOK	**Wichita Mounta**	**62.71**	**68**	IAMs_20	IAMs_20	11 28 41.0	
	comp=Z,10µm,20.0s						
WMOK	**Wichita Mounta**	**62.71**	**68**	⇑P	**P**	**11 00 43.0**	**-0.6**
WMOK	**Wichita Mounta**	**62.71**	**68**	P	**P**	**11 00 43.1**	**-0.6**
	baz=317,SNR=64						
WMOK				S	**S**	**11 09 11.8**	**+1.1**
	baz=317						
WMOK	**Wichita Mounta**	**62.71**	**68**	P	**P**	**11 00 43.0**	**-0.6**
	baz=317,SNR=64						
WMOK				S	**S**	**11 09 11.5**	**+0.8**
	baz=317						
GLMI	**Grayling**	**62.72**	**51**	P	**P**	**11 00 43.2**	**-0.3**
	baz=318,SNR=29						
GLMI				S	**S**	**11 09 10.9**	**+0.5**
	baz=318						
GLMI	**Grayling**	**62.72**	**51**	P	**P**	**11 00 43.0**	**-0.5**
	baz=318,SNR=29						
GLMI				S	**S**	**11 09 10.7**	**+0.2**
	baz=318						
HNR	**Honiara**	**62.73**	**194**	S	**S**	**11 09 06.6**	**-4.3**
	comp=Z,181nm,0.5s,baz=223,slow=11,SNR=1.4						
HNR				LR	LR	11 25 37.3	
	comp=Z,73µm,19.8s,baz=351,slow=34						
HNR	**Honiara**	**62.73**	**194**	P	**P**	**11 00 43.7**	**-0.1**
HNR				IAmb	IAmb	11 01 47.7	
	comp=Z,144nm,1.0s						
HNR				IAMs_20	IAMs_20	11 32 10.5	
	comp=Z,8µm,19.0s						
HNR	**Honiara**	**62.73**	**194**	P	P	11 00 50.4	+6.6
HNR	**Honiara**	**62.73**	**194**	P	**P**	**11 00 43.7**	**-0.1**
OK033	**Mehan**	**62.79**	**66**	IAMs_20	IAMs_20	11 29 05.9	
	comp=Z,8µm,19.0s						
KOHI	**KOHIMA**	**62.89**	**277**	*e*P	**P**	**11 00 44.7**	**-0.3**
P40A	**Paris**	**62.90**	**60**	P	**P**	**11 00 43.3**	**-1.5**
	baz=317,SNR=110						
P40A				S	**S**	**11 09 10.6**	**-2.2**
	baz=317						
OK052	**Battle Ridge R**	**62.91**	**66**	IAmb	IAmb	11 01 06.0	
	comp=Z,149nm,1.3s						
OK052				IAMs_20	IAMs_20	11 28 58.9	
	comp=Z,8µm,20.0s						
OK031	**S. Brethren Rd**	**62.92**	**66**	IAmb	IAmb	11 01 06.1	
	comp=Z,213nm,1.4s						
OK031				IAMs_20	IAMs_20	11 32 58.1	
	comp=Z,8µm,18.0s						
OK030	**Cody Creek RV**	**62.97**	**66**	IAMs_20	IAMs_20	11 33 00.4	
	comp=Z,9µm,18.0s						
OKCSW	**OKLAHOMA CITY**	**62.98**	**66**		**P**	**11 00 44.9**	**-0.5**
TEZP	**TEZPUR**	**63.02**	**279**	*e*P	**P**	**11 00 45.2**	**-0.5**
TEZP				IAmb	IAmb	11 00 47.3	
	comp=Z,235nm,1.2s						
DZA	**Taraz**	**63.03**	**306**	*e*P	**P**	**11 00 45.4**	**-0.3**
	baz=306						
DZA	**Taraz**	**63.03**	**306**	*e*P	**P**	**11 00 45.3**	**-0.3**
L44A	**Lake County Fo**	**63.08**	**55**	IAMs_20	IAMs_20	11 29 58.4	
	comp=Z,15µm,19.0s						
L44A	**Lake County Fo**	**63.08**	**55**	P	**P**	**11 00 44.6**	**-1.2**
	baz=318,SNR=18						
L44A				S	**S**	**11 09 13.2**	**-1.8**
	baz=318						
L44A	**Lake County Fo**	**63.08**	**55**	P	**P**	**11 00 44.8**	**-1.1**
	baz=318,SNR=18						
L44A				S	**S**	**11 09 13.5**	**-1.4**
	baz=318						
FINES	**FINESS Array B**	**63.09**	**343**	P	**P**	**11 00 45.1**	**-0.5**
	comp=Z,96nm,0.7s,baz=32,slow=7.6,SNR=126						
FINES				LR	LR	11 32 42.0	
	comp=Z,12µm,18.2s,baz=24,slow=40						
	comp=Z,96nm,0.7s						
FINES	**FINESS Array B**	**63.09**	**343**	*i* P	**P**	**11 00 45.5**	**-0.2**
FINES				pmax	pmax		
	comp=Z,97nm,0.7s						
FNO	**Franklin**	**63.11**	**67**	IAmb	IAmb	11 01 00.6	
	comp=Z,152nm,1.2s						
KSH	**Kashi**	**63.16**	**300**	PKP	**PKiKP**	**11 07 36.0**	**+2.1**
KSH	**Kashi**	**63.16**	**300**	P	**P**	**11 00 50.3**	**+3.7**
KSH				pP	sP	11 00 57.3	+0.9
KSH				PP	PP	11 03 16.5	+11
KSH				S	**S**	**11 09 21.8**	**+5.5**
KSH				SS	**SS**	**11 13 27.5**	**+5.7**
KSH				pmax	pmax		
	comp=Z,270nm,1.5s						
KSH				pmax	pmax		
	comp=Z,2µm,9.2s						
KSH				LR	LR		
	comp=Z,15µm,25.4s						
KSH				LR	LR		
	comp=Z,17µm,24.1s						
KSH				LR	LR		
	comp=Z,34µm,24.1s						
DEOK	**Depew**	**63.19**	**66**		**P**	**11 00 45.8**	**-1.0**
DEOK				IAmb	IAmb	11 01 22.3	
	comp=Z,173nm,1.4s						
AKTO	**Aktyubinsk**	**63.24**	**319**	LR	LR	11 31 12.8	
	comp=Z,14µm,18.9s,baz=36,slow=39						
KK31	**Karatay Array**	**63.28**	**307**	IAmb	IAmb	11 00 49.0	
	comp=Z,148nm,0.9s						
KKAR	**Karatay Array**	**63.28**	**307**	IAmb	IAmb	11 00 49.0	
	comp=Z,148nm,0.9s						
KKAR	**Karatay Array**	**63.28**	**307**	⇑P	**P**	**11 00 46.5**	**-0.7**
SIJI	**Sorong**	**63.38**	**227**	S	**S**	**11 09 19.9**	**+0.7**
	comp=Z,1.3nm,0.3s,baz=288,slow=22,SNR=8.8						
SIJI				LR	LR	11 23 59.7	
	comp=Z,3µm,21.7s,baz=20,slow=32						
ABKAR	**Akbulak array**	**63.38**	**317**	⇑P	**P**	**11 00 47.4**	**-0.4**
TUL1	**Leonard**	**63.53**	**65**	IAmb	IAmb	11 01 04.3	
	comp=Z,158nm,1.3s						
TUL1				IAMs_20	IAMs_20	11 28 17.2	
	comp=Z,8µm,21.0s						
TUL1	**Leonard**	**63.53**	**65**	P	**P**	**11 00 48.3**	**-0.7**
	baz=317,SNR=10						
TUL1				S	**S**	**11 09 18.5**	**-2.3**
	baz=317						
TUL1	**Leonard**	**63.53**	**65**	P	**P**	**11 00 47.9**	**-1.1**
	baz=317,SNR=10						
TUL1				S	**S**	**11 09 18.4**	**-2.4**
	baz=317						
TBLU	**Trondheim**	**63.56**	**351**	*e*P	**P**	**11 00 48.8**	**+0.1**
TBLU				*e*S	**S**	**11 09 20.6**	**+0.3**
S39A	**Bolivar**	**63.57**	**62**	P	**P**	**11 00 48.3**	**-0.9**
	baz=318,SNR=13						
HDIL	**Hopedale**	**63.58**	**57**	IAMs_20	IAMs_20	11 30 55.8	
	comp=Z,9µm,19.0s						
HDIL	**Hopedale**	**63.58**	**57**	P	**P**	**11 00 48.0**	**-1.1**
	baz=318,SNR=34						
HDIL				S	**S**	**11 09 19.6**	**-1.6**
	baz=318						
HDIL	**Hopedale**	**63.58**	**57**	P	**P**	**11 00 48.1**	**-1.1**
	baz=318,SNR=34						
HDIL				S	**S**	**11 09 20.0**	**-1.3**
	baz=318						
M44A	**Midewin, Midew**	**63.59**	**56**	P	**P**	**11 00 48.5**	**-0.8**
	baz=318,SNR=22						
M44A				S	**S**	**11 09 19.0**	**-2.4**
	baz=318						
WTFS	**Witchita Falls**	**63.60**	**68**		**P**	**11 00 48.7**	**-0.8**
WTFS				IAmb	IAmb	11 01 46.4	
	comp=Z,111nm,1.1s						
IMP	**Imphal**	**63.65**	**277**	*e*P	**P**	**11 00 50.3**	**+0.3**
IMP				IAmb	IAmb	11 00 51.8	
	comp=Z,173nm,0.9s						
R40A	**Maddies Statio**	**63.69**	**61**	IAmb	IAmb	11 01 03.1	
	comp=Z,201nm,1.3s						
R40A	**Maddies Statio**	**63.69**	**61**	P	**P**	**11 00 48.1**	**-1.9**
	baz=318,SNR=56						
R40A				S	**S**	**11 09 18.8**	**-3.9**
	baz=318						
LPIG	**La Paz**	**63.73**	**84**	P	**P**	**11 00 50.3**	**-0.2**
	comp=Z,165nm,1.1s,baz=316,slow=1.1,SNR=8.8						
LPIG				LR	LR	11 22 59.2	
	comp=Z,9µm,21.4s,baz=313,slow=31						
	comp=Z,165nm,1.1s						
TNTI	**Ternate**	**63.73**	**232**	IAmb	IAmb	11 01 25.5	
	comp=Z,92nm,1.0s						
RLO	**Rose Lookout**	**63.76**	**64**	IAmb	IAmb	11 01 04.0	
	comp=Z,63nm,1.2s						
ABTX	**Abilene, Hawle**	**63.77**	**70**	P	**P**	**11 00 50.1**	**-0.6**
	baz=318,SNR=36						
ABTX				S	**S**	**11 09 24.1**	**+0.2**
	baz=318						
ABTX	**Abilene, Hawle**	**63.77**	**70**	P	**P**	**11 00 50.3**	**-0.3**
	baz=318,SNR=36						
ABTX				S	**S**	**11 09 24.8**	**+0.9**
	baz=318						
PUL	**Pulkovo**	**63.79**	**340**	⇑*e*P	**P**	**11 00 49.7**	**-0.6**
PUL				pmax	pmax		
	comp=Z,83nm,0.7s						
J47A	**Sunmer**	**63.81**	**53**	P	**P**	**11 00 50.0**	**-0.7**
	baz=319,SNR=17						
J47A				P	**P**	**11 00 50.0**	**-0.7**
	baz=319,SNR=17						
J47A				S	**S**	**11 09 24.1**	**+0.1**
	baz=319						
J47A				S	**S**	**11 09 24.1**	**+0.1**
	baz=319						
TX31	**Lajitas Ar. Si**	**63.84**	**75**	P	**P**	**11 00 50.8**	**-0.4**
	baz=318,SNR=209						
TX31				S	**S**	**11 09 25.0**	**0.0**
	baz=318						
TX32	**Lajitas Array**	**63.84**	**75**	IAmb	IAmb	11 00 54.1	
	comp=Z,115nm,1.0s						
TXAR	**Lajitas Array**	**63.84**	**75**	P	**P**	**11 00 50.4**	**-0.9**
	comp=Z,83nm,0.9s,baz=302,slow=3.6,SNR=198						
TXAR				LR	LR	11 28 15.5	
	comp=Z,4µm,18.3s,baz=313,slow=36						
TXAR				PKPPKP	**P'P'df**	**11 29 42.9**	**-4.9**
	comp=Z,1.2nm,1.1s,baz=153,slow=4.8,SNR=4.0						
	comp=Z,83nm,0.9s						
U38A	**Gravette**	**63.91**	**64**	P	**P**	**11 00 49.8**	**-1.7**
	baz=318,SNR=22						
U38A				S	**S**	**11 09 21.6**	**-3.9**
	baz=318						
GUWA	**GUWAHATI**	**63.99**	**280**	*e*P	**P**	**11 00 51.4**	**-0.8**
GUWA				IAmb	IAmb	11 00 53.6	
	comp=Z,221nm,0.9s						
L46A	**Eue Claire**	**64.00**	**54**	IAmb	IAmb	11 01 07.3	
	comp=Z,154nm,1.1s						
L46A	**Eue Claire**	**64.00**	**54**	P	**P**	**11 00 51.0**	**-1.0**
	baz=319,SNR=11						
L46A				P	**P**	**11 00 51.0**	**-1.0**
	baz=319,SNR=11						
L46A				S	**S**	**11 09 24.7**	**-1.8**
	baz=319						
L46A				S	**S**	**11 09 24.7**	**-1.8**
	baz=319						
P43A	**Skaggs, Pawnee**	**64.14**	**58**	P	**P**	**11 00 51.8**	**-1.2**
	baz=318,SNR=13						
P43A				S	**S**	**11 09 25.9**	**-2.3**
	baz=318						
IUG	**Iuzhnay**	**64.23**	**306**	⇑*i*P	**P**	**11 00 53.5**	**-0.1**
	comp=Z,122nm,1.1s,baz=306						
IUG				*e*S	**S**	**11 09 30.8**	**+1.3**
	baz=306						
IUG	**Iuzhnay**	**64.23**	**306***c*	*i*P	**P**	**11 00 53.5**	**-0.1**
IUG				*e*S	**S**	**11 09 30.8**	**+1.3**
IUG				pmax	pmax		
	comp=Z,122nm,1.1s						
RAF	**Rauma**	**64.23**	**345**	*e*P	**P**	**11 00 52.9**	**-0.3**
I49A	**Point Hope**	**64.23**	**51**	P	**P**	**11 00 52.9**	**-0.6**
	baz=319,SNR=42						
I49A				P	**P**	**11 00 52.9**	**-0.6**
	baz=319,SNR=42						
I49A				S	**S**	**11 09 29.4**	**+0.1**
	baz=319						
I49A				S	**S**	**11 09 29.4**	**+0.1**
	baz=319						
SLBS	**Sierra La Lagu**	**64.26**	**84**	P	**P**	**11 00 54.0**	**-0.1**
SLBS	**Sierra La Lagu**	**64.26**	**84**	IAMs_20	IAMs_20	11 23 02.6	
	comp=Z,8µm,21.0s						
SLBS	**Sierra La Lagu**	**64.26**	**84**	⇓P	**P**	**11 00 54.6**	**+0.5**
O44A	**Mansfield**	**64.30**	**57**	IAmb	IAmb	11 01 09.4	
	comp=Z,90nm,0.7s						
O44A	**Mansfield**	**64.30**	**57**	P	**P**	**11 00 52.7**	**-1.3**
	baz=318,SNR=14						
O44A				S	**S**	**11 09 28.6**	**-1.6**
	baz=318						
SHL	**Shillong**	**64.34**	**279**	*e*P	**P**	**11 00 53.9**	**-0.9**
SHL				IAmb	IAmb	11 00 56.0	
	comp=Z,257nm,1.0s						
SHL	**Shillong**	**64.34**	**279**	P	**P**	**11 00 53.8**	**-0.9**
	SNR=132						
FW03	**Perrin-Whitt E**	**64.36**	**69**	IAmb	IAmb	11 01 04.7	
	comp=Z,116nm,1.3s						
CCM	**Cathedral Cave**	**64.41**	**60**	P	**P**	**11 00 52.4**	**-2.4**
CCM				IAmb	IAmb	11 01 09.7	
	comp=Z,94nm,1.2s						
CCM	**Cathedral Cave**	**64.41**	**60**	IAMs_20	IAMs_20	11 32 45.2	
	comp=Z,12µm,19.0s						
CCM	**Cathedral Cave**	**64.41**	**60**	⇑P	**P**	**11 00 52.8**	**-1.9**
CCM	**Cathedral Cave**	**64.41**	**60**	P	**P**	**11 00 52.4**	**-2.4**
CCM				pmax	pmax		
	comp=Z,94nm,1.3s						
CCM				MLR	MLR		
	comp=Z,12µm,19.0s						
CCM	**Cathedral Cave**	**64.41**	**60**	P	**P**	**11 00 53.1**	**-1.6**
	baz=318						
CCM				S	**S**	**11 09 27.9**	**-3.7**
	baz=318						
CCM	**Cathedral Cave**	**64.41**	**60**	P	**P**	**11 00 53.0**	**-1.7**
	baz=318,SNR=23						
CCM				S	**S**	**11 09 28.0**	**-3.7**
	baz=318						
HPIG		**64.42**	**79**	⇑P	**P**	**11 00 54.6**	**-0.7**
MND	**Mandalay**	**64.44**	**273**	P	**P**	**11 00 55.7**	**+0.6**
	comp=Z,112nm,2.3s						
MOL	**Molde**	**64.47**	**352**	*e*P	**P**	**11 00 53.3**	**-1.4**
MOL				*e*S	**S**	**11 09 34.6**	**+3.0**
MOL				IVMs_BB	IVMs_BB	11 30 46.5	
	comp=Z,3µm,17.0s						
SLM	**Saint Louis**	**64.51**	**59**	IAmb	IAmb	11 01 10.7	
	comp=Z,110nm,1.1s						
MYLDM	**Lahad Datu**	**64.52**	**243**	⇑P	**P**	**11 00 57.2**	**+1.5**
MEF	**Metsahovi**	**64.54**	**343**	*e*P	**P**	**11 00 55.2**	**0.0**
Z35A	**Perchaven, San**	**64.60**	**68**	IAmb	IAmb	11 01 22.0	
	comp=Z,82nm,0.9s						
Z35A	**Perchaven, San**	**64.60**	**68**	P	**P**	**11 00 56.5**	**+0.4**
	baz=318,SNR=6.8						
Z35A				S	**S**	**11 09 31.8**	**-2.4**
	baz=318						
FW06	**Azle**	**64.70**	**68**	IAmb	IAmb	11 01 22.9	
	comp=Z,64nm,0.8s						
X37A	**Clayton**	**64.73**	**66**	IAmb	IAmb	11 01 53.3	
	comp=Z,85nm,1.2s						
X37A	**Clayton**	**64.73**	**66**	P	**P**	**11 00 56.1**	**-0.8**
	baz=318,SNR=18						
X37A				S	**S**	**11 09 33.8**	**-1.9**
	baz=318						
FW07	**Weatherford**	**64.77**	**69**	IAmb	IAmb	11 01 42.8	
	comp=Z,66nm,0.9s						
FAKI	**Fak Fak**	**64.77**	**225**	IAmb	IAmb	11 01 18.7	
	comp=Z,140nm,1.0s						
FAKI	**Fak Fak**	**64.77**	**225**	P	**P**	**11 00 59.2**	**+1.9**
FAKI	**Fak Fak**	**64.77**	**225**	P	**P**	**11 00 56.4**	**-0.9**
	comp=Z,144nm,1.0s,comp=Z,2µmcomp=Z,4µm						
U40A	**Yellville**	**64.81**	**63**	P	**P**	**11 00 55.4**	**-2.0**
	baz=318,SNR=35						
U40A				P	**P**	**11 00 55.4**	**-2.0**
	baz=318,SNR=35						
SFIN	**Lafayette**	**64.83**	**56**	IAmb	IAmb	11 01 12.9	
	comp=Z,150nm,0.9s						
SFIN	**Lafayette**	**64.83**	**56**	P	**P**	**11 00 56.6**	**-0.8**
	baz=319,SNR=22						
SFIN				S	**S**	**11 09 34.6**	**-2.1**
	baz=319						
SFIN	**Lafayette**	**64.83**	**56**	P	**P**	**11 00 56.4**	**-1.0**
	baz=319,SNR=22						
SFIN				S	**S**	**11 09 34.6**	**-2.1**
	baz=319						
DOMB	**Dombas**	**64.86**	**351**	*e*P	**P**	**11 00 57.9**	**+0.5**
DOMB				*e*S	**S**	**11 09 37.3**	**+0.7**
DOMB				IVMs_BB	IVMs_BB	11 32 22.5	
	comp=Z,5µm,4.4s						
FVM	**French Village**	**64.89**	**60**	P	**P**	**11 00 56.7**	**-1.2**
	baz=318,SNR=18						
FVM				S	**S**	**11 09 34.6**	**-3.0**
	baz=318						
LBMI	**Labuha**	**64.90**	**231**	P	**P**	**11 00 58.1**	**-0.1**
	comp=Z,142nm,1.1s,comp=Z,5µm						
AKN	**Aaknes**	**64.91**	**352**	*e*P	**P**	**11 00 58.2**	**+0.6**
AKN				IVmB_BB		11 00 59.4	
	comp=Z,3µm,1.0s						
AKN				*e*S	**S**	**11 09 39.1**	**+2.0**
AKN				IVMs_BB	IVMs_BB	11 22 50.5	
	comp=Z,3µm,4.6s						
Q44A	**Meyer Farm, Va**	**64.95**	**58**	IAmb	IAmb	11 01 12.7	
	comp=Z,179nm,1.1s						
Q44A	**Meyer Farm, Va**	**64.95**	**58**	P	**P**	**11 00 56.9**	**-1.3**
	baz=319,SNR=22						
Q44A				S	**S**	**11 09 36.7**	**-1.5**
	baz=319						
L48A	**N Adams**	**64.97**	**53**	IAmb	IAmb	11 01 13.9	
	comp=Z,128nm,1.1s						
L48A	**N Adams**	**64.97**	**53**	P	**P**	**11 00 57.3**	**-1.1**
	baz=319,SNR=13						
L48A				P	**P**	**11 00 57.3**	**-1.1**
	baz=319,SNR=13						
L48A				S	**S**	**11 09 37.4**	**-1.0**
	baz=319						
L48A				S	**S**	**11 09 37.4**	**-1.0**
	baz=319						
GTK	**Tadong**	**65.01**	**283**	*e*P	**P**	**11 00 59.6**	**+0.7**
GTK				IAmb	IAmb	11 01 17.1	
	comp=Z,181nm,1.1s						
KKM	**Kota Kinabalu**	**65.05**	**245**	P	**P**	**11 01 01.8**	**+2.5**
KKM	**Kota Kinabalu**	**65.05**	**245**	⇑P	**P**	**11 00 59.8**	**+0.5**
AAM	**Ann Arbor**	**65.08**	**52**	IAmb	IAmb	11 01 14.8	
	comp=Z,141nm,1.1s						
AAM				IAMs_20	IAMs_20	11 29 58.1	
	comp=Z,11µm,20.0s						
AAM	**Ann Arbor**	**65.08**	**52**	P	**P**	**11 00 56.2**	**-2.8**
	baz=320,SNR=5.1						
AAM				S	**S**	**11 09 38.5**	**-1.2**
	baz=320						
CHTO	**Chiang Mai**	**65.14**	**269**	P	**P**	**11 00 59.0**	**-0.7**
CHTO	**Chiang Mai**	**65.14**	**269**	P	**P**	**11 00 59.0**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
N47A	**Urbana**	**65.15**	**55**	IAmb	IAmb	11 01 14.3	
	comp=Z,116nm,1.1s						
N47A	**Urbana**	**65.15**	**55**	P	**P**	**11 00 57.7**	**-1.8**
	baz=319,SNR=19						
N47A				P	**P**	**11 00 57.7**	**-1.8**
	baz=319,SNR=19						
N47A				S	**S**	**11 09 37.9**	**-2.8**
	baz=319						
N47A				S	**S**	**11 09 37.9**	**-2.8**
	baz=319						
K50A	**Casco**	**65.21**	**52**	S	**S**	**11 09 40.8**	**-0.6**
	baz=320						
K50A				S	**S**	**11 09 40.8**	**-0.6**
	baz=320						
FW13	**Cleburne**	**65.23**	**69**	IAmb	IAmb	11 01 50.0	
	comp=Z,70nm,1.0s						
JCT	**Junction City**	**65.25**	**72**	IAmb	IAmb	11 01 02.8	
	comp=Z,139nm,1.0s						
JCT				IAMs_20	IAMs_20	11 30 49.6	
	comp=Z,11µm,19.0s						
JCT	**Junction City**	**65.25**	**72**	⇑P	**P**	**11 00 59.4**	**-1.0**
JCT	**Junction City**	**65.25**	**72**	P	**P**	**11 00 59.1**	**-1.3**
	baz=318,SNR=66						
JCT				S	**S**	**11 09 41.2**	**-1.1**
	baz=318						
JCT	**Junction City**	**65.25**	**72**	P	**P**	**11 00 59.7**	**-0.7**
	baz=318,SNR=66						
JCT				S	**S**	**11 09 41.5**	**-0.8**
	baz=318						
T42A	**Van Buren**	**65.25**	**61**	P	**P**	**11 00 58.1**	**-2.1**

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      baz=318
T42A                           S        S         11 09 37.2 -4.8
      baz=318
SADO  Sadowa           65.30  48 LR       LR        11 29 19.3
      comp=Z,13µm,21.1s,baz=340,slow=36
SADO  Sadowa           65.30  48 IAmb     IAmb      11 01 01.2
      comp=Z,87nm,0.9s
SADO  Sadowa           65.30  48 ⇑P       P         11 00 58.5 -1.9
P46A  Rosedale         65.34  57 P        P         11 00 59.7 -1.0
      baz=319
P46A                             S        S         11 09 41.7 -1.3
      baz=319
CM31  Chiang Mai Arr   65.41 268 IAmb     IAmb      11 01 04.0
      comp=Z,119nm,0.9s
CM31  Chiang Mai Arr   65.41 268 P        P         11 01 01.7 +0.2
      SNR=30
CM31                             P        P         11 01 01.7 +0.2
      SNR=30
CMAR  Chiang Mai Arr   65.41 268 P        P         11 01 01.3 -0.2
      comp=Z,53nm,0.8s,baz=27,slow=7.3,SNR=158
CMAR                             S        S         11 09 44.4  0.0
      comp=Z,0.5nm,0.3s,baz=81,slow=32,SNR=1.4
CMAR                             LR       LR        11 32 02.6
      comp=Z,3µm,18.2s,baz=40,slow=38
      comp=Z,53nm,0.8s
PMG   Port Moresby     65.44 207 S        S         11 09 40.7 -3.8
      comp=Z,4.8nm,0.5s,baz=335,slow=18,SNR=1.2
PMG                              LR       LR        11 25 24.7
      comp=Z,5µm,21.7s,baz=358,slow=32
PMG   Port Moresby     65.44 207 P        P         11 01 01.4 -0.1
PMG                              IAmb     IAmb      11 01 25.2
      comp=Z,137nm,1.4s
PMG   Port Moresby     65.44 207 P        P         11 01 06.6 +5.1
      comp=Z,79nm,2.4s
PMG   Port Moresby     65.44 207deP       P         11 01 02.1 +0.6
PMG                              pmax     pmax
      comp=Z,66nm,1.5s
WHTX  Lake Whitney,    65.48  69 P        P         11 01 00.5 -1.3
      baz=318,SNR=11
WHTX                             S        S         11 09 44.8 -0.2
      baz=318
WHTX  Lake Whitney,    65.48  69 P        P         11 01 01.0 -0.8
      baz=318,SNR=11
WHTX                             S        S         11 09 44.4 -0.5
      baz=318
BELG  Belogornoye      65.48 326 LR       LR        11 32 53.5
      comp=Z,19µm,18.6s,baz=40,slow=39
BELG  Belogornoye      65.48 326c iP      P         11 01 01.2 -0.3
BELG                             pmax     pmax
      comp=Z,62nm,1.0s
BELG                             MLR      MLR
      comp=Z,3µm,18.0s
TAPN  Taplejung        65.51 283 eP       P         11 01 02.5 +0.1
      comp=Z,936nm,1.0s
OLIL  Olney            65.55  58 IAmb     IAmb      11 01 17.8
      comp=Z,127nm,1.1s
OLIL  Olney            65.55  58 P        P         11 01 01.3 -0.8
      baz=319,SNR=18
FOO   Floro            65.63 353 eP       P         11 01 01.8 -0.5
FOO                              eS       S         11 09 46.6 +0.8
FOO                              IVMs_BB  IVMs_BB   11 25 35.5
      comp=Z,6µm,28.2s
NB2   NORSAR Subarra   65.63 350 P        P         11 01 01.7 -0.7
      comp=Z,131nm,0.7s,baz=12,slow=6.5
NB2   NORSAR Subarra   65.63 350 P        P         11 01 01.7 -0.7
      baz=12,slow=6.5
NOA   NORSAR Array B   65.63 350 P        P         11 01 01.5 -0.9
      comp=Z,93nm,0.7s,baz=13,slow=6.5,SNR=307
NOA                              LR       LR        11 31 02.8
      comp=Z,7µm,19.7s,baz=10.0,slow=37
      comp=Z,93nm,0.7s
MOS   Moscow           65.65 334 eP       P         11 01 00.0 -2.5
MOS                              e                  11 01 32.5
MOS                              e                  11 03 24.5
MOS                              eS       S         11 09 45.3 -1.0
MOS                              e                  11 10 53.4
MOS                              eSS      SS        11 14 04.7 +5.3
MOS                              pmax     pmax
      comp=Z,408nm,1.5s
MOS                              pmax     pmax
      comp=Z,5µm,5.0s
MOS                              smax     smax
      comp=E,4µm,6.5s
MOS                              MLR      MLR
      comp=N,15µm,20.0s
MOS                              MLR      MLR
      comp=Z,22µm,20.0s
MOS                              MLR      MLR
      comp=E,17µm,17.0s
S44A  Carbondale       65.73  59 IAmb     IAmb      11 01 18.6
      comp=Z,68nm,0.8s
S44A  Carbondale       65.73  59 P        P         11 01 02.0 -1.3
      baz=319
S44A                             S        S         11 09 46.1 -1.7
      baz=319
SIUC  Southern Illin   65.73  59 IAmb     IAmb      11 01 18.6
      comp=Z,71nm,0.9s
VSU   Vasula           65.73 341c iP      P         11 01 02.7 -0.3
VSU                              pmax     pmax
      comp=Z,164nm,0.9s
VSU                              MLR      MLR
      comp=Z,38µm,21.0s
VSU   Vasula           65.73 341 eP       P         11 01 03.1 +0.2
MIAR  Mount Ida        65.75  65 IAMs_20  IAMs_20   11 31 46.2
      comp=Z,8µm,19.0s
MIAR  Mount Ida        65.75  65 ⇑P       P         11 01 02.5 -1.1
MIAR  Mount Ida        65.75  65 P        P         11 01 01.6 -2.0
      baz=318,SNR=36
MIAR                             S        S         11 09 46.9 -1.3
      baz=318
MIAR  Mount Ida        65.75  65 P        P         11 01 02.7 -0.8
      baz=318,SNR=36
MIAR                             S        S         11 09 46.4 -1.8
      baz=318
NAO01 NORSAR Array S   65.86 350 IAmb     IAmb      11 01 05.7
      comp=Z,139nm,0.9s
N49A  Columbus Grove   65.87  54 IAmb     IAmb      11 01 19.5
      comp=Z,122nm,1.1s
N49A  Columbus Grove   65.87  54 P        P         11 01 02.9 -1.2
      baz=320,SNR=16
N49A                             P        P         11 01 02.9 -1.2
      baz=320,SNR=16
N49A                             S        S         11 09 47.1 -2.3
      baz=320
N49A                             S        S         11 09 47.1 -2.3
      baz=320
O48B  Farmland         65.89  55 P        P         11 01 03.0 -1.4
      baz=320,SNR=21
O48B                             S        S         11 09 47.2 -2.6
      baz=320
O48B  Farmland         65.89  55 P        P         11 01 02.7 -1.7
      baz=320,SNR=21
O48B                             S        S         11 09 45.8 -3.9
      baz=320
NC602 NORSAR Array S   65.89 350 eP       P         11 01 04.2 +0.2
NC602                            eS       S         11 09 50.5 +1.3
NC602                            IVMs_BB  IVMs_BB   11 33 02.7
      comp=Z,3µm,6.4s
Z38A  Mt. Pleasant     65.93  66 IAmb     IAmb      11 01 20.3
      comp=Z,210nm,1.4s
Z38A  Mt. Pleasant     65.93  66 P        P         11 01 03.9 -0.8
      baz=318,SNR=9.8
Z38A                             S        S         11 09 48.4 -2.0
      baz=318
LCAR  Lake Charles     65.93  62 P        P         11 01 04.1 -0.5
      baz=319,SNR=13
HYA   Hoyanger         65.97 353 eP       P         11 01 05.4 +0.9
HYA                              eS       S         11 09 53.0 +3.0
HYA                              IVMs_BB  IVMs_BB   11 26 12.6
      comp=Z,5µm,24.3s
SAIH  SAIHA            65.98 276 eP       P         11 01 05.0 -0.3
SAIH                             IAmb     IAmb      11 01 09.2
      comp=Z,316nm,1.2s
GTOI  Gorontalo        66.00 236 P        P         11 01 03.8 -1.4
      comp=Z,29nm,1.6s,comp=Z,715nm
BLO   Bloomington      66.03  57 IAmb     IAmb      11 01 20.6
      comp=Z,152nm,1.1s
MTSE  Matsula          66.05 343 eP       P         11 01 05.3 +0.3
M50A  Fremont          66.06  53 IAmb     IAmb      11 01 19.0
      comp=Z,70nm,0.9s
M50A  Fremont          66.06  53 P        P         11 01 04.1 -1.2
      baz=320,SNR=9.3
M50A                             P        P         11 01 04.1 -1.2
      baz=320,SNR=9.3
GUN   Gumba            66.18 285 eP       P         11 01 06.6 -0.2
      comp=Z,1µm,1.0s
TRQ   Mont Tremblant   66.18  44 IAmb     IAmb      11 01 06.8
      comp=Z,141nm,1.1s
JIRN  Jiri             66.18 285 eP       P         11 01 06.7 -0.1
      comp=Z,916nm,0.8s
DELO  Deloro Mine      66.18  47 IAmb     IAmb      11 01 22.6
      comp=Z,70nm,1.0s
SUE   Sulen            66.19 353 eP       P         11 01 08.2 +2.4
SUE                              eS       S         11 09 55.0 +2.3
SUE                              IVMs_BB  IVMs_BB   11 25 22.3
      comp=Z,6µm,30.7s
X40A  Basin Creek Fa   66.20  64 P        P         11 01 06.4  0.0
      baz=319,SNR=18
X40A                             P        P         11 01 06.4  0.0
      baz=319,SNR=18
HFS   Hagfors          66.23 348 PKP2bc             11 29 42.8
      comp=Z,3.0nm,1.1s,baz=111,slow=3.2,SNR=2.0
HFS                              LR       LR        11 31 47.0
      comp=Z,10µm,19.3s,baz=4.0,slow=38
SKAR  Skarslia         66.27 351 eP       P         11 01 08.1 +1.6
SKAR                             eS       S         11 09 55.8 +1.9
SKAR                             IVMs_BB  IVMs_BB   11 32 14.1
      comp=Z,3µm,5.8s
435B  Jarrell          66.30  70 IAmb     IAmb      11 01 53.0
      comp=Z,123nm,1.0s
435B                             IAMs_20  IAMs_20   11 31 11.2
      comp=Z,7µm,20.0s
435B  Jarrell          66.30  70 P        P         11 01 06.6 -0.5
      baz=319
435B                             S        S         11 09 55.3 +0.3
      baz=319
435B  Jarrell          66.30  70 P        P         11 01 06.6 -0.5
      baz=319
435B                             S        S         11 09 55.7 +0.6
      baz=319
O49A  Covington        66.35  54 IAmb     IAmb      11 01 22.6
      comp=Z,95nm,0.9s
O49A  Covington        66.35  54 P        P         11 01 05.9 -1.4
      baz=320,SNR=24
O49A                             P        P         11 01 05.9 -1.4
      baz=320,SNR=24
O49A                             S        S         11 09 52.6 -2.8
      baz=320
O49A                             S        S         11 09 52.6 -2.8
      baz=320
P48A  Milroy           66.36  56 P        P         11 01 05.8 -1.6
      baz=320,SNR=36
P48A                             P        P         11 01 05.8 -1.6
      baz=320,SNR=36
P48A                             S        S         11 09 52.7 -2.8
      baz=320
P48A                             S        S         11 09 52.7 -2.8
      baz=320
237A  Washetta, Mont   66.41  68 IAmb     IAmb      11 01 23.4
      comp=Z,134nm,1.4s
237A  Washetta, Mont   66.41  68 S        S         11 09 53.9 -2.3
      baz=319
ICQ   Pointe Anglais   66.43  38 ⇓P       P         11 01 07.1 -0.4
RAMN  Ramite           66.47 284 eP       P         11 01 08.3 -0.2
      comp=Z,1µm,0.8s
OBN   Obninsk          66.48 334 LR       LR        11 32 33.9
      comp=Z,6µm,20.8s,baz=15,slow=38
OBN   Obninsk          66.48 334c iP      P         11 01 07.4 -0.4
OBN                              i                  11 01 16.9
OBN                              i                  11 01 35.4
OBN                              e                  11 03 42.9
OBN                              i S      S         11 09 55.8 -0.6
OBN                              i SS     SS        11 14 12.4 +0.1
OBN                              pmax     pmax
      comp=Z,124nm,1.0s
OBN                              MLR      MLR
      comp=Z,23µm,20.0s
T45A  Paducah          66.55  59 IAmb     IAmb      11 01 22.0
      comp=Z,126nm,0.8s
T45B  Paducah          66.56  59 S        S         11 09 55.6 -2.3
      baz=319
BRDH  Bariadhala       66.65 277 LR       LR        11 32 17.9
      comp=Z,6µm,20.3s,baz=88,slow=38
WLAR  White Oak Lake   66.65  65 IAmb     IAmb      11 01 40.3
      comp=Z,112nm,0.8s
P49A  Miami Univ. Ec   66.66  55 IAmb     IAmb      11 01 24.3
      comp=Z,128nm,1.1s
P49A                             IAMs_20  IAMs_20   11 30 15.3
      comp=Z,13µm,20.0s
P49A  Miami Univ. Ec   66.66  55 P        P         11 01 06.8 -2.5
      baz=320,SNR=9.2
P49A                             S        S         11 09 57.0 -2.1
      baz=320
P49A  Miami Univ. Ec   66.66  55 P        P         11 01 07.9 -1.3
      baz=320,SNR=9.2
P49A                             S        S         11 09 56.3 -2.8
      baz=320
MRSI  Marisa           66.67 237 P        P         11 01 08.7 -0.9
      comp=Z,189nm,1.0s,comp=Z,3µmcomp=Z,5µm
PKI   Pulchoki         66.71 285 eP       P         11 01 09.9 -0.2
      comp=Z,760nm,0.8s
PKIN  Phulchoki        66.71 285 eP       P         11 01 09.9 -0.2
      comp=Z,718nm,0.8s
ASK   Askoy            66.72 353 eP       P         11 01 09.7 +0.4
ASK                              eS       S         11 10 01.2 +2.0
TOLI2 Tolitoli         66.73 238 IAmb     IAmb      11 01 11.4
      comp=Z,101nm,0.9s
TOLI2 Tolitoli         66.73 238 P        P         11 01 10.3 +0.3
N51A  Ashland          66.75  53 IAmb     IAmb      11 01 25.1
      comp=Z,142nm,1.1s
N51A  Ashland          66.75  53 P        P         11 01 08.9 -0.9
      baz=320,SNR=19
N51A                             P        P         11 01 08.9 -0.9
      baz=320,SNR=19
M52A  Chesterland      66.76  52 P        P         11 01 09.0 -0.9
      baz=321,SNR=15
M52A                             P        P         11 01 09.0 -0.9
      baz=321,SNR=15
M52A                             S        S         11 09 58.1 -2.2
      baz=321
M52A                             S        S         11 09 58.1 -2.2
      baz=321
OSL   Oslo             66.77 350 eP       P         11 01 09.5  0.0
OSL                              eS       S         11 10 01.9 +2.2
BER   Bergen           66.81 353 eP       P         11 01 08.8 -1.0
BER                              eS       S         11 10 02.0 +1.7
BER                              IVMs_BB  IVMs_BB   11 26 09.2
      comp=Z,5µm,28.5s
GKN   Gorkha           66.84 286 eP       P         11 01 10.4 -0.4
      comp=Z,673nm,1.0s
DMN   Daman            66.86 285 eP       P         11 01 10.9 -0.1
      comp=Z,545nm,0.8s
LMQ   La Malbaie       66.86  41 IAmb     IAmb      11 01 25.6
      comp=Z,147nm,1.2s
SANI  Sanana           66.86 232 P        P         11 01 10.2 -0.5
SANI  Sanana           66.86 232 P        P         11 01 09.7 -1.0
      comp=Z,100nm,0.8s,comp=Z,3µmcomp=Z,4µm
WCI   Wyandotte Cave   66.86  57 P        P         11 01 08.9 -1.6
WCI                              IAmb     IAmb      11 01 26.1
      comp=Z,117nm,0.9s
WCI   Wyandotte Cave   66.86  57 IAMs_20  IAMs_20   11 33 14.6
      comp=Z,12µm,19.0s
WCI   Wyandotte Cave   66.86  57 ⇑P       P         11 01 09.5 -1.1
WCI   Wyandotte Cave   66.86  57 P        P         11 01 08.9 -1.6
WCI                              pmax     pmax
      comp=Z,117nm,1.0s
WCI                              MLR      MLR
      comp=Z,12µm,19.0s
WCI   Wyandotte Cave   66.86  57 P        P         11 01 08.6 -1.9
      baz=320
WCI                              S        S         11 10 00.5 -1.0
      baz=320
WCI   Wyandotte Cave   66.86  57 P        P         11 01 09.4 -1.1
      baz=320,SNR=17
WCI                              S        S         11 10 00.6 -1.0
      baz=320
PECO  Prince Edward    66.92  47 IAmb     IAmb      11 01 11.9
      comp=Z,121nm,1.0s
ERPA  Erie             66.96  50 IAMs_20  IAMs_20   11 31 14.9
      comp=Z,13µm,19.0s
ERPA  Erie             66.96  50 P        P         11 01 10.1 -1.0
      baz=321,SNR=29
ERPA                             S        S         11 10 01.5 -1.2
      baz=321
ERPA  Erie             66.96  50 P        P         11 01 10.4 -0.8
      baz=321,SNR=29
ERPA                             S        S         11 09 59.6 -3.2
      baz=321
ACSO  Alum Creek Sta   66.98  54 IAmb     IAmb      11 01 12.9
      comp=Z,67nm,0.9s
ACSO                             IAMs_20  IAMs_20   11 31 53.7
      comp=Z,11µm,20.0s
ACSO  Alum Creek Sta   66.98  54 P        P         11 01 10.6 -0.7
      baz=320,SNR=13
ACSO                             S        S         11 10 01.2 -1.8
      baz=320
ACSO  Alum Creek Sta   66.98  54 P        P         11 01 10.5 -0.8
      baz=320,SNR=13
J55A  Hilton           67.07  48 P        P         11 01 10.3 -1.5
      baz=322,SNR=24
J55A                             P        P         11 01 10.3 -1.5
      baz=322,SNR=24
DANN  Dangsing         67.09 287 eP       P         11 01 12.4 -0.1
      comp=Z,724nm,0.9s
833A  Chaparral WMA,   67.09  73 IAmb     IAmb      11 01 22.1
      comp=Z,156nm,1.4s
833A  Chaparral WMA,   67.09  73 P        P         11 01 11.9 -0.3
      baz=319,SNR=13
833A                             S        S         11 10 04.8 +0.2
      baz=319
833A  Chaparral WMA,   67.09  73 P        P         11 01 12.0 -0.2
      baz=319,SNR=13
833A                             S        S         11 10 05.3 +0.7
      baz=319
MNTQ  Montreal, Queb   67.15  44 IAmb     IAmb      11 01 12.7
      comp=Z,92nm,0.9s
NAYO  Nakonayok        67.15 264 P        P         11 01 14.1 +1.4
KONO  Kongsberg        67.16 351 P        P         11 01 11.3 -0.8
KONO                             IAmb     IAmb      11 01 14.4
      comp=Z,112nm,0.8s
KONO  Kongsberg        67.16 351 IAMs_20  IAMs_20   11 32 17.8
      comp=Z,7µm,20.0s
KONO  Kongsberg        67.16 351 ⇑P       P         11 01 11.8 -0.3
KONO  Kongsberg        67.16 351c iP      P         11 01 11.7 -0.4
KONO                             pmax     pmax
      comp=Z,90nm,0.9s
KONO                             MLR      MLR
      comp=Z,7µm,18.0s
KONO  Kongsberg        67.16 351 eP       P         11 01 11.5 -0.6
KONO                             eS       S         11 10 06.3 +1.8
KONO                             IVmB_BB            11 26 47.9
      comp=Z,3µm,5.7s
M53A  WI Miller and    67.17  51 P        P         11 01 11.8 -0.7
      baz=321,SNR=114
M53A                             S        S         11 10 03.6 -1.5
      baz=321
ODD1  Odda             67.18 352 eP       P         11 01 12.3  0.0
ODD1                             eS       S         11 10 05.8 +0.9
ODD1                             eSS      SS        11 14 26.5 +3.5
ODD1                             IVMs_BB  IVMs_BB   11 27 01.8
      comp=Z,5µm,20.3s
NATX  Nacogdoches      67.23  67 IAmb     IAmb      11 01 30.1
      comp=Z,100nm,1.0s
NATX                             IAMs_20  IAMs_20   11 29 05.6
      comp=Z,10µm,21.0s
NATX  Nacogdoches      67.23  67 P        P         11 01 12.7 -0.3
      baz=319,SNR=5.7
NATX                             S        S         11 10 05.2 -1.0
      baz=319
ALLY  Alegheny Colle   67.25  51 P        P         11 01 12.5 -0.5
      baz=321,SNR=34
ALLY                             S        S         11 10 05.2 -1.0
      baz=321
AAI   Ambon            67.26 229 P        P         11 01 13.6 +0.3
      comp=Z,250nm,1.1s,comp=Z,3µm
BMNY  Brushton-Moira   67.30  45 P        P         11 01 11.0 -2.2
      baz=323,SNR=33
SLIT  Slitere, Latvi   67.35 343 eP       P         11 01 13.2 -0.1
R49A  Shelbyville      67.38  56 P        P         11 01 13.1 -0.7
      baz=320,SNR=21
R49A                             P        P         11 01 13.1 -0.7
      baz=320,SNR=21
R49A                             S        S         11 10 06.6 -1.2
      baz=320
R49A                             S        S         11 10 06.6 -1.2
      baz=320
T47A  Sharon Grove     67.38  58 P        P         11 01 13.2 -0.7
      baz=320,SNR=37
T47A                             S        S         11 10 07.0 -0.8
      baz=320
WVNY  West Valley, N   67.38  49 IAmb     IAmb      11 01 26.2
      comp=Z,171nm,1.1s
WVNY  West Valley, N   67.38  49 P        P         11 01 12.8 -1.0
      baz=322,SNR=28
WVNY                             S        S         11 10 03.9 -3.9
      baz=322
LRW   Lerwick          67.43 356 eP       P         11 01 13.0 -0.7
LRW                              IAMs_20  IAMs_20   11 28 01.6
      comp=Z,10µm,19.8s
LRW   Lerwick          67.43 356 ⇑P       P         11 01 14.1 +0.3
LONY  Lake Ozonia      67.44  45 IAmb     IAmb      11 01 14.5
      comp=Z,71nm,1.1s
LONY  Lake Ozonia      67.44  45 P        P         11 01 12.0 -2.2
      baz=323,SNR=24
WCNY  West Carthage    67.47  46 P        P         11 01 12.5 -1.8
      baz=323,SNR=13
WCNY                             S        S         11 10 03.8 -5.0
      baz=323
J56A  Wolcott          67.50  48 P        P         11 01 12.9 -1.6
      baz=322,SNR=24
J56A                             P        P         11 01 12.9 -1.6
      baz=322,SNR=24
LUWI  Luwuk            67.56 235 P        P         11 01 15.6 +0.4
LUWI  Luwuk            67.56 235 P        P         11 01 13.4 -1.8
      comp=Z,358nm,1.3s,comp=Z,8µm
N53A  Lisbon           67.58  52 P        P         11 01 13.9 -1.1
      baz=321,SNR=28
N53A                             P        P         11 01 13.9 -1.1
      baz=321,SNR=28
N53A                             S        S         11 10 08.7 -1.5
      baz=321
N53A                             S        S         11 10 08.7 -1.5
      baz=321
STRU  Stroemstad       67.60 350 i P      P         11 01 14.2 -0.6
735A  Kenedy           67.61  72 IAmb     IAmb      11 01 46.2
      comp=Z,101nm,0.8s
735A  Kenedy           67.61  72 P        P         11 01 16.1 +0.7
      baz=319,SNR=7.8
735A                             S        S         11 10 13.1 +2.2
      baz=319
O52A  Adamsville       67.63  53 P        P         11 01 14.2 -1.2
      baz=321,SNR=64
O52A                             P        P         11 01 14.2 -1.2
      baz=321,SNR=64
O52A                             S        S         11 10 08.1 -2.7
      baz=321
O52A                             S        S         11 10 08.1 -2.7
      baz=321
WVT   Waverly          67.65  60 P        P         11 01 14.6 -1.0
WVT                              IAmb     IAmb      11 01 31.3
      comp=Z,62nm,0.8s
WVT   Waverly          67.65  60 IAMs_20  IAMs_20   11 34 48.0
      comp=Z,10µm,18.0s
WVT   Waverly          67.65  60 P        P         11 01 14.6 -1.0
WVT                              pmax     pmax
      comp=Z,62nm,0.9s
WVT                              MLR      MLR
      comp=Z,10µm,18.0s
W45A  Hickory Valley   67.67  61 P        P         11 01 14.9 -0.9
      baz=320,SNR=16
W45A                             S        S         11 10 11.1 -0.3
      baz=320
BLS5  Blasjo           67.67 352 eP       P         11 01 16.3 +0.9
BLS5                             IVmBBB             11 01 17.1
      comp=Z,2µm,0.9s
BLS5                             eS       S         11 10 10.8  0.0
BLS5                             IVMs_BB  IVMs_BB   11 27 15.4
      comp=Z,5µm,28.0s
FRNY  Flat Rock        67.69  45 P        P         11 01 13.4 -2.3
      baz=323,SNR=15
PYUN  Piuthan          67.72 287 eP       P         11 01 16.0 -0.5
      comp=Z,718nm,1.0s
AFI   Afiamalu         67.73 163 LR       LR        11 24 40.4
      comp=Z,24µm,21.0s,baz=338,slow=30
D62A  Allapoint, All   67.74  40 IAmb     IAmb      11 01 17.5
      comp=Z,72nm,0.9s
D62A  Allapoint, All   67.74  40 P        P         11 01 14.9 -1.0
      baz=325,SNR=18
D62A                             P        P         11 01 14.9 -1.0
      baz=325,SNR=18
J57A  Williamstown     67.78  47 IAmb     IAmb      11 01 17.3
      comp=Z,129nm,1.1s
J57A  Williamstown     67.78  47 P        P         11 01 14.8 -1.4
      baz=323,SNR=18
J57A                             P        P         11 01 14.8 -1.4
      baz=323,SNR=18
R50A  Paris            67.81  56 IAmb     IAmb      11 01 32.5
      comp=Z,120nm,1.1s
R50A  Paris            67.81  56 P        P         11 01 15.9 -0.7
      baz=320,SNR=25
R50A                             P        P         11 01 15.9 -0.7
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	baz=320,SNR=25						
R50A				S	**S**	**11 10 10.4**	**-2.6**
	baz=320						
R50A				S	**S**	**11 10 10.4**	**-2.6**
	baz=320						
O53A	**New Philadelph**	**67.83**	**52**	IAmb	IAmb	11 01 18.5	
	comp=Z,102nm,0.8s						
O53A	**New Philadelph**	**67.83**	**52**	P	**P**	**11 01 15.8**	**-0.9**
	baz=321,SNR=28						
O53A				S	**S**	**11 10 11.2**	**-2.0**
	baz=321						
MPSI	**Mapaga**	**67.85**	**239**	P	**P**	**11 01 16.6**	**-0.4**
	comp=Z,126nm,1.2s,comp=Z,3µmcomp=Z,5µm						
P52A	**Corning**	**67.86**	**53**	IAmb	IAmb	11 01 31.2	
	comp=Z,111nm,1.2s						
P52A				IAMs_20	IAMs_20	11 32 39.9	
	comp=Z,12µm,20.0s						
P52A	**Corning**	**67.86**	**53**	P	**P**	**11 01 15.7**	**-1.2**
	baz=321,SNR=14						
P52A				S	**S**	**11 10 10.8**	**-2.7**
	baz=321						
HKT	**Hockley**	**67.93**	**69**	P	**P**	**11 01 16.7**	**-0.6**
HKT				IAmb	IAmb	11 01 33.9	
	comp=Z,103nm,1.4s						
HKT	**Hockley**	**67.93**	**69**	IAMs_20	IAMs_20	11 36 17.9	
	comp=Z,11µm,18.0s						
HKT	**Hockley**	**67.93**	**69**	⇓P	**P**	**11 01 17.6**	**+0.2**
HKT	**Hockley**	**67.93**	**69**	*d* *i*P	**P**	**11 01 18.6**	**+1.3**
HKT				pmax	pmax		
	comp=Z,32nm,1.1s						
HKT				MLR	MLR		
	comp=Z,10µm,18.0s						
HKT	**Hockley**	**67.93**	**69**	P	**P**	**11 01 17.3**	**0.0**
	baz=319						
HKT				S	**S**	**11 10 14.3**	**-0.1**
	baz=319						
E62A	**Clayton Lake**	**67.93**	**41**	P	**P**	**11 01 15.8**	**-1.4**
	baz=325,SNR=43						
E62A				P	**P**	**11 01 15.8**	**-1.4**
	baz=325,SNR=43						
M55A	**Ridgway**	**68.04**	**50**	P	**P**	**11 01 17.1**	**-0.9**
	baz=322,SNR=70						
M55A				P	**P**	**11 01 17.1**	**-0.9**
	baz=322,SNR=70						
M55A				S	**S**	**11 10 13.0**	**-2.7**
	baz=322						
M55A				S	**S**	**11 10 13.0**	**-2.7**
	baz=322						
OXF	**Oxford**	**68.04**	**62**	IAMs_20	IAMs_20	11 30 32.5	
	comp=Z,12µm,20.0s						
OXF	**Oxford**	**68.04**	**62**	P	**P**	**11 01 16.9**	**-1.2**
	baz=320,SNR=35						
OXF				S	**S**	**11 10 14.2**	**-1.6**
	baz=320						
OXF	**Oxford**	**68.04**	**62**	P	**P**	**11 01 17.1**	**-1.0**
	baz=320,SNR=35						
OXF				S	**S**	**11 10 13.7**	**-2.1**
	baz=320						
LPSR	**Galich'ya Gora**	**68.05**	**331**	*e*P	**P**	**11 01 16.7**	**-1.1**
LPSR				pmax	pmax		
	comp=Z,180nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,11µm,16.0s						
L56A	**Greenwood**	**68.08**	**49**	P	**P**	**11 01 17.1**	**-1.1**
	baz=322,SNR=61						
L56A				P	**P**	**11 01 17.1**	**-1.1**
	baz=322,SNR=61						
L56A				S	**S**	**11 10 13.3**	**-2.8**
	baz=322						
L56A				S	**S**	**11 10 13.3**	**-2.8**
	baz=322						
K57A	**Scipio Center**	**68.08**	**48**	P	**P**	**11 01 16.7**	**-1.5**
	baz=322,SNR=35						
K57A				S	**S**	**11 10 12.3**	**-3.8**
	baz=322						
NCB	**Newcomb**	**68.11**	**45**	IAmb	IAmb	11 01 19.2	
	comp=Z,75nm,0.9s						
NCB	**Newcomb**	**68.11**	**45**	P	**P**	**11 01 16.6**	**-1.8**
	baz=323,SNR=21						
J58A	**Remsen**	**68.13**	**47**	P	**P**	**11 01 16.8**	**-1.8**
	baz=323,SNR=45						
J58A				P	**P**	**11 01 16.8**	**-1.8**
	baz=323,SNR=45						
O54A	**Avella**	**68.28**	**52**	IAmb	IAmb	11 01 34.5	
	comp=Z,132nm,1.1s						
O54A	**Avella**	**68.28**	**52**	P	**P**	**11 01 18.4**	**-1.1**
	baz=322,SNR=20						
O54A				P	**P**	**11 01 18.4**	**-1.1**
	baz=322,SNR=20						
O54A				S	**S**	**11 10 17.4**	**-1.2**
	baz=322						
O54A				S	**S**	**11 10 17.4**	**-1.2**
	baz=322						
Q52A	**Bidwell**	**68.31**	**54**	IAmb	IAmb	11 01 34.9	
	comp=Z,146nm,1.4s						
Q52A	**Bidwell**	**68.31**	**54**	P	**P**	**11 01 17.8**	**-1.9**
	baz=321,SNR=13						
Q52A				P	**P**	**11 01 17.8**	**-1.9**
	baz=321,SNR=13						
Q52A				S	**S**	**11 10 16.8**	**-2.2**
	baz=321						
Q52A				S	**S**	**11 10 16.8**	**-2.2**
	baz=321						
143A	**Socs Landing,**	**68.33**	**64**	IAmb	IAmb	11 01 54.2	
	comp=Z,83nm,0.9s						
143A	**Socs Landing,**	**68.33**	**64**	P	**P**	**11 01 19.0**	**-0.9**
	baz=320						
P53A	**Whipple**	**68.34**	**53**	IAmb	IAmb	11 01 34.5	
	comp=Z,148nm,1.3s						
P53A	**Whipple**	**68.34**	**53**	P	**P**	**11 01 18.2**	**-1.7**
	baz=321,SNR=13						
P53A				P	**P**	**11 01 18.2**	**-1.7**
	baz=321,SNR=13						
P53A				S	**S**	**11 10 16.9**	**-2.3**
	baz=321						
P53A				S	**S**	**11 10 16.9**	**-2.3**
	baz=321						
F62A	**Pittston Farm,**	**68.34**	**42**	IAmb	IAmb	11 01 21.2	
	comp=Z,144nm,1.0s						
F62A	**Pittston Farm,**	**68.34**	**42**	P	**P**	**11 01 18.6**	**-1.2**
	baz=325,SNR=38						
F62A				P	**P**	**11 01 18.6**	**-1.2**
	baz=325,SNR=38						
J59A	**Piesco**	**68.39**	**46**	IAmb	IAmb	11 01 20.9	
	comp=Z,79nm,0.8s						
J59A	**Piesco**	**68.39**	**46**	P	**P**	**11 01 18.1**	**-2.0**
	baz=323,SNR=34						
J59A				P	**P**	**11 01 18.1**	**-2.0**
	baz=323,SNR=34						
PLAL	**Pickwick Lake**	**68.40**	**61**	IAmb	IAmb	11 01 53.4	
	comp=Z,85nm,0.9s						
PLAL				IAMs_20	IAMs_20	11 32 11.8	
	comp=Z,9µm,19.0s						
DHRM	**DHARAMSHALA**	**68.40**	**295**	*e*P	**P**	**11 01 19.9**	**-0.7**
DHRM				IAmb	IAmb	11 01 21.9	
	comp=Z,372nm,0.8s						
VRH	**Novokhopyorsk**	**68.42**	**329**	*e*P	**P**	**11 01 20.1**	**-0.1**
VRH				pmax	pmax		
	comp=Z,530nm,0.7s						
VRH				MLR	MLR		
	comp=Z,12µm,15.0s						
U49A	**Red Boiling Sp**	**68.43**	**58**	IAmb	IAmb	11 01 36.1	
	comp=Z,88nm,1.0s						
U49A	**Red Boiling Sp**	**68.43**	**58**	P	**P**	**11 01 19.5**	**-1.0**
	baz=320,SNR=31						
U49A				S	**S**	**11 10 19.8**	**-0.7**
	baz=320						
Y45A	**Yeager Farm, C**	**68.46**	**62**	P	**P**	**11 01 19.6**	**-1.1**
	baz=320,SNR=27						
Y45A				S	**S**	**11 10 19.4**	**-1.5**
	baz=320						
V48A	**Smith Brothers**	**68.48**	**59**	IAmb	IAmb	11 01 36.4	
	comp=Z,95nm,1.1s						
V48A	**Smith Brothers**	**68.48**	**59**	P	**P**	**11 01 19.8**	**-1.1**
	baz=320,SNR=24						
T50A	**Nancy**	**68.52**	**57**	IAmb	IAmb	11 01 36.9	
	comp=Z,173nm,1.1s						
T50A	**Nancy**	**68.52**	**57**	P	**P**	**11 01 20.2**	**-0.8**
	baz=321						
T50A				P	**P**	**11 01 20.2**	**-0.8**
	baz=321						
T50A				S	**S**	**11 10 19.9**	**-1.7**
	baz=321						
T50A				S	**S**	**11 10 19.9**	**-1.7**
	baz=321						
E63A	**Oxbow**	**68.53**	**40**	P	**P**	**11 01 19.3**	**-1.6**
	baz=325,SNR=13						
E63A				P	**P**	**11 01 19.3**	**-1.6**
	baz=325,SNR=13						
E63A				S	**S**	**11 10 17.5**	**-3.8**
	baz=325						
E63A				S	**S**	**11 10 17.5**	**-3.8**
	baz=325						
TJOU	**Tjoern**	**68.53**	**349**	*i* P	**P**	**11 01 20.1**	**-0.6**
KVTX	**Kingsville**	**68.55**	**73**	S	**S**	**11 10 26.2**	**+4.1**
	baz=319						
VSVD	**Vaisvydziai**	**68.60**	**341**	*e*P	**P**	**11 01 21.9**	**+0.7**
HOMB	**Homborsund**	**68.63**	**351**	*i* P	**P**	**11 01 20.9**	**-0.4**
HOMB	**Homborsund**	**68.63**	**351**	*e*P	**P**	**11 01 20.3**	**-1.0**
HOMB				*e*S	**S**	**11 10 24.9**	**+2.8**
HOMB				*e*SS	**SS**	**11 14 52.5**	**+7.1**
HOMB				IVMs_BB	IVMs_BB	11 29 54.5	
	comp=Z,2µm,4.7s						
MCVT	**Middlebury Col**	**68.66**	**45**	P	**P**	**11 01 20.1**	**-1.7**
	baz=324,SNR=12						
G62A	**West of Eustis**	**68.66**	**42**	IAmb	IAmb	11 01 23.4	
	comp=Z,134nm,0.9s						
G62A	**West of Eustis**	**68.66**	**42**	P	**P**	**11 01 20.8**	**-1.1**
	baz=325,SNR=29						
G62A				P	**P**	**11 01 20.8**	**-1.1**
	baz=325,SNR=29						
S51A	**Beattyville**	**68.68**	**56**	IAmb	IAmb	11 01 37.5	
	comp=Z,77nm,0.8s						
S51A	**Beattyville**	**68.68**	**56**	P	**P**	**11 01 21.2**	**-0.8**
	baz=321,SNR=25						
S51A				P	**P**	**11 01 21.2**	**-0.8**
	baz=321,SNR=25						
S51A				S	**S**	**11 10 22.7**	**-0.6**
	baz=321						
S51A				S	**S**	**11 10 22.7**	**-0.6**
	baz=321						
SNART	**Snartemo**	**68.68**	**352**	*i* P	**P**	**11 01 21.6**	**-0.1**
SNART	**Snartemo**	**68.68**	**352**	*e*P	**P**	**11 01 21.6**	**-0.1**
SNART				*e*S	**S**	**11 10 24.3**	**+1.6**
BATG	**Bathurst New B**	**68.74**	**38**	IAmb	IAmb	11 01 23.8	
	comp=Z,102nm,1.0s						
BINY	**Binghamton**	**68.74**	**48**	IAmb	IAmb	11 01 23.8	
	comp=Z,140nm,1.1s						
BINY	**Binghamton**	**68.74**	**48**	P	**P**	**11 01 20.8**	**-1.6**
	baz=323,SNR=22						
BINY				S	**S**	**11 10 20.5**	**-3.5**
	baz=323						
BINY	**Binghamton**	**68.74**	**48**	P	**P**	**11 01 21.2**	**-1.1**
	baz=323,SNR=22						
BINY				S	**S**	**11 10 20.0**	**-4.0**
	baz=323						
SMLA	**Simla**	**68.77**	**294**	*e*P	**P**	**11 01 21.6**	**-1.0**
SMLA				IAmb	IAmb	11 01 23.8	
	comp=Z,212nm,0.7s						
VORR	**Voronezh**	**68.78**	**331**	*e*P	**P**	**11 01 22.8**	**+0.4**
VORR				*e*S	**S**	**11 10 19.0**	**-5.1**
VORR				pmax	pmax		
	comp=Z,120nm,0.5s						
VORR				smax	smax		
	comp=E,340nm,5.2s						
VORR				MLR	MLR		
	comp=Z,19µm,15.0s						
BORU	**Boraas**	**68.78**	**348**	*i* P	**P**	**11 01 21.2**	**-1.2**
ACCN	**Adirondack Com**	**68.82**	**46**	IAmb	IAmb	11 01 23.7	
	comp=Z,97nm,0.8s						
ACCN	**Adirondack Com**	**68.82**	**46**	P	**P**	**11 01 21.4**	**-1.4**
	baz=324,SNR=28						
ACCN				S	**S**	**11 10 19.9**	**-5.0**
	baz=324						
342A	**Flagon Creek P**	**68.83**	**66**	IAmb	IAmb	11 01 38.6	
	comp=Z,86nm,1.1s						
DDI	**Dehra Dun**	**68.88**	**292**	*e*P	**P**	**11 01 23.4**	**-0.1**
DDI				IAmb	IAmb	11 01 40.6	
	comp=Z,160nm,0.8s						
LBNH	**Lisbon**	**68.88**	**44**	IAmb	IAmb	11 01 24.4	
	comp=Z,98nm,1.0s						
LBNH	**Lisbon**	**68.88**	**44**	P	**P**	**11 01 21.8**	**-1.4**
	baz=324,SNR=20						
LBNH				S	**S**	**11 10 21.6**	**-4.0**
	baz=324						
LBNH	**Lisbon**	**68.88**	**44**	P	**P**	**11 01 21.9**	**-1.3**
	baz=324,SNR=20						
LBNH				S	**S**	**11 10 21.2**	**-4.3**
	baz=324						
M57A	**Sunshine Farm,**	**68.90**	**49**	IAmb	IAmb	11 01 36.5	
	comp=Z,179nm,1.1s						
M57A	**Sunshine Farm,**	**68.90**	**49**	P	**P**	**11 01 22.4**	**-0.9**
	baz=323,SNR=26						
M57A				P	**P**	**11 01 22.4**	**-0.9**
	baz=323,SNR=26						
M57A				S	**S**	**11 10 21.7**	**-4.3**
	baz=323						
M57A				S	**S**	**11 10 21.7**	**-4.3**
	baz=323						
H62A	**Milan**	**68.93**	**43**	P	**P**	**11 01 22.3**	**-1.2**
	baz=324,SNR=67						
H62A				P	**P**	**11 01 22.3**	**-1.2**
	baz=324,SNR=67						
PBUR	**Paburge**	**68.94**	**343**	*e*P	**P**	**11 01 23.6**	**+0.3**
MCWV	**Mont Chateau**	**68.95**	**52**	IAmb	IAmb	11 01 39.4	
	comp=Z,143nm,1.1s						
MCWV				IAMs_20	IAMs_20	11 32 56.5	
	comp=Z,9µm,18.0s						
MCWV	**Mont Chateau**	**68.95**	**52**	P	**P**	**11 01 23.0**	**-0.7**
	baz=322,SNR=12						
MCWV				S	**S**	**11 10 24.4**	**-2.1**
	baz=322						
MCWV	**Mont Chateau**	**68.95**	**52**	P	**P**	**11 01 22.9**	**-0.7**
	baz=322,SNR=12						
R53A	**Hurricane**	**68.96**	**54**	P	**P**	**11 01 22.8**	**-1.0**
	baz=321,SNR=20						
R53A				P	**P**	**11 01 22.8**	**-1.0**
	baz=321,SNR=20						
R53A				S	**S**	**11 10 24.9**	**-1.8**
	baz=321						
R53A				S	**S**	**11 10 24.9**	**-1.8**
	baz=321						
NIL	**Nilore**	**69.00**	**298**	P	**P**	**11 01 23.6**	**-0.5**
NIL	**Nilore**	**69.00**	**298**	P	**P**	**11 01 23.6**	**-0.5**
NIL				pmax	pmax		
	comp=Z,328nm,1.0s						
NIL				MLR	MLR		
	comp=Z,25µm,19.0s						
Q54A	**Coxs Mills**	**69.00**	**53**	P	**P**	**11 01 22.7**	**-1.3**
	baz=322,SNR=16						
Q54A				P	**P**	**11 01 22.7**	**-1.3**
	baz=322,SNR=16						
Q54A				S	**S**	**11 10 23.6**	**-3.5**
	baz=322						
Q54A				S	**S**	**11 10 23.6**	**-3.5**
	baz=322						
F64A	**Sherman**	**69.02**	**41**	IAmb	IAmb	11 01 36.0	
	comp=Z,90nm,1.1s						
F64A	**Sherman**	**69.02**	**41**	P	**P**	**11 01 22.6**	**-1.4**
	baz=326,SNR=13						
F64A				P	**P**	**11 01 22.6**	**-1.4**
	baz=326,SNR=13						
NACGM	**Naroch**	**69.03**	**339**	⇑*i*P	**P**	**11 01 24.5**	**+0.6**
	comp=Z,276nm,1.1s,baz=22						
PABE	**Paberze**	**69.04**	**341**	*e*P	**P**	**11 01 24.3**	**+0.3**
HCNY	**Howe Caverns**	**69.05**	**46**	P	**P**	**11 01 22.6**	**-1.6**
	baz=323,SNR=20						
SSPA	**Standing Stone**	**69.11**	**50**	P	**P**	**11 01 23.4**	**-1.2**
SSPA	**Standing Stone**	**69.11**	**50**	⇑P	**P**	**11 01 23.6**	**-1.0**
SSPA	**Standing Stone**	**69.11**	**50**	P	**P**	**11 01 23.6**	**-1.0**
	baz=322						
SSPA				S	**S**	**11 10 26.2**	**-2.2**
	baz=322						
SSPA	**Standing Stone**	**69.11**	**50**	P	**P**	**11 01 23.8**	**-0.9**
	baz=322,SNR=78						
SSPA				S	**S**	**11 10 25.4**	**-3.0**
	baz=322						
ONAU	**Onsala**	**69.12**	**349**	*i* P	**P**	**11 01 23.9**	**-0.5**
PKME	**Peaks-Kenny Pk**	**69.13**	**42**	IAmb	IAmb	11 01 37.0	
	comp=Z,179nm,1.4s						
PKME	**Peaks-Kenny Pk**	**69.13**	**42**	P	**P**	**11 01 24.1**	**-0.5**
	baz=325,SNR=23						
PKME				S	**S**	**11 10 24.2**	**-4.3**
	baz=325						
PKME	**Peaks-Kenny Pk**	**69.13**	**42**	P	**P**	**11 01 23.4**	**-1.3**
	baz=325,SNR=23						
PKME				S	**S**	**11 10 23.8**	**-4.7**
	baz=325						
BIGH	**Upper Bighouse**	**69.16**	**358**	*e*P	**P**	**11 01 24.4**	**-0.2**
BIGH				IAmb	IAmb	11 01 26.7	
	comp=Z,110nm,0.8s						
BIGH				IAMs_20	IAMs_20	11 28 00.8	
	comp=Z,10µm,22.1s						
HNH	**Hanover**	**69.16**	**44**	P	**P**	**11 01 24.1**	**-0.8**
	baz=324,SNR=12						
MNK	**Minsk**	**69.16**	**339**	*i* P	**P**	**11 01 25.0**	**+0.3**
	comp=Z,308nm,0.9s,baz=22						
MNK				*i* P	**P**	**11 01 25.0**	**+0.3**
	comp=E,9.0nm,0.9s						
MNK				*i* P	**P**	**11 01 25.0**	**+0.3**
	comp=N,175nm,0.9s						
MNK				*i* PcP	**PcP**	**11 01 49.1**	**+0.6**
MNK				*i* PP	PP	11 03 40.7	-16
MNK				*i* PPP	PPP	11 05 22.5	
MNK				*i* S	**S**	**11 10 29.0**	**+0.4**
MNK				*i* SS	**SS**	**11 14 55.5**	**+1.7**
MNK				*i* SSS	SSS	11 18 12.2	
MNK				*i* LQ	LQ	11 26 35.5	
MNK				*i* LR	LR	11 29 51.4	
MNK				*i* LRM	MLR	11 32 47.1	
	comp=E,2µm,17.0s						
MNK				*i* LRM	MLR	11 35 14.7	
	comp=N,9µm,17.1s						
MNK				*i* LRM	MLR	11 35 17.4	
	comp=Z,12µm,17.1s						
MNK	**Minsk**	**69.16**	**339**	*c* *i*P	**P**	**11 01 25.0**	**+0.3**
L59A	**Walton**	**69.17**	**47**	P	**P**	**11 01 23.6**	**-1.5**
	baz=323,SNR=26						
L59A				P	**P**	**11 01 23.6**	**-1.5**
	baz=323,SNR=26						
L59A				S	**S**	**11 10 24.8**	**-4.4**
	baz=323						
L59A				S	**S**	**11 10 24.8**	**-4.4**
	baz=323						
VBMS	**Vicksburg**	**69.19**	**64**	IAmb	IAmb	11 02 03.9	
	comp=Z,156nm,1.2s						
VBMS				IAMs_20	IAMs_20	11 36 42.0	
	comp=Z,9µm,18.0s						
VBMS	**Vicksburg**	**69.19**	**64**	P	**P**	**11 01 24.1**	**-1.1**
	baz=320,SNR=6.8						
VBMS				S	**S**	**11 10 28.0**	**-1.5**
	baz=320						
VBMS	**Vicksburg**	**69.19**	**64**	P	**P**	**11 01 24.5**	**-0.8**
	baz=320,SNR=6.8						
VBMS				S	**S**	**11 10 27.3**	**-2.2**
	baz=320						
VSR	**Storozhevoye**	**69.19**	**331**	*e*P	**P**	**11 01 24.2**	**-0.8**
VSR				*e*S	**S**	**11 10 24.0**	**-5.0**
VSR				pmax	pmax		
	comp=Z,240nm,1.0s						
VSR				smax	smax		
	comp=N,760nm,6.8s						
VSR				MLR	MLR		
	comp=Z,21µm,20.0s						
BOK	**Bokaro**	**69.26**	**282**	*e*P	**P**	**11 01 27.3**	**+1.5**
J61A	**Chester**	**69.33**	**45**	IAmb	IAmb	11 01 27.2	
	comp=Z,69nm,0.9s						
J61A	**Chester**	**69.33**	**45**	P	**P**	**11 01 24.6**	**-1.4**
	baz=324,SNR=14						
J61A				P	**P**	**11 01 24.6**	**-1.4**
	baz=324,SNR=14						
SWET	**Sewanee**	**69.35**	**59**	IAmb	IAmb	11 01 41.4	
	comp=Z,117nm,1.2s						
X48A	**Hartselle**	**69.35**	**60**	P	**P**	**11 01 24.8**	**-1.4**
	baz=320,SNR=21						
X48A				S	**S**	**11 10 28.1**	**-3.2**
	baz=320						
KSPA	**Keystone Colle**	**69.35**	**48**	IAmb	IAmb	11 01 27.3	
	comp=Z,90nm,0.9s						
KSPA	**Keystone Colle**	**69.35**	**48**	P	**P**	**11 01 24.7**	**-1.4**
	baz=323,SNR=22						
KSPA				S	**S**	**11 10 27.1**	**-4.1**
	baz=323						
VORD	**Divnogorie**	**69.38**	**330**	*e*P	**P**	**11 01 24.8**	**-1.3**
VORD				*e*S	**S**	**11 10 30.2**	**-0.9**
VORD				pmax	pmax		
	comp=Z,220nm,0.8s						
VORD				smax	smax		
	comp=N,280nm,5.4s						
VORD				MLR	MLR		
	comp=Z,11µm,15.0s						
OVD	**Ostervraa, Den**	**69.39**	**350**	*i* P	**P**	**11 01 25.6**	**-0.5**
OVD				IAmb	IAmb	11 01 29.1	
	comp=Z,209nm,0.7s						
ZAIG	**Zacatecas**	**69.40**	**79**	IAmb	IAmb	11 01 55.3	
	comp=Z,105nm,1.2s						
ZAIG	**Zacatecas**	**69.40**	**79**	⇑P	**P**	**11 01 26.9**	**-0.2**
FABU	**Falkenberg**	**69.41**	**348**	*i* P	**P**	**11 01 25.4**	**-0.8**
TAVE	**Taveuni**	**69.42**	**172**	P	P	11 01 33.2	+6.6
I62A	**Tamworth**	**69.42**	**44**	P	**P**	**11 01 24.9**	**-1.7**
	baz=325,SNR=11						
I62A				P	**P**	**11 01 24.9**	**-1.7**
	baz=325,SNR=11						
N58A	**Sunbury**	**69.49**	**49**	IAmb	IAmb	11 01 28.6	
	comp=Z,146nm,1.0s						
N58A	**Sunbury**	**69.49**	**49**	P	**P**	**11 01 25.9**	**-1.1**
	baz=323,SNR=32						
N58A				P	**P**	**11 01 25.9**	**-1.1**
	baz=323,SNR=32						
N58A				S	**S**	**11 10 29.7**	**-3.2**
	baz=323						
N58A				S	**S**	**11 10 29.7**	**-3.2**
	baz=323						
LINV	**Loch Inver, As**	**69.53**	**359**	*e*P	**P**	**11 01 26.8**	**-0.2**
LINV				IAMs_20	IAMs_20	11 27 16.8	
	comp=Z,8µm,21.5s						
TZTN	**Tazewell**	**69.55**	**56**	IAmb	IAmb	11 01 46.5	
	comp=Z,121nm,1.1s						
TZTN				IAMs_20	IAMs_20	11 33 58.8	
	comp=Z,13µm,20.0s						
TZTN	**Tazewell**	**69.55**	**56**	P	**P**	**11 01 26.6**	**-0.8**
	baz=321,SNR=18						
TZTN				S	**S**	**11 10 33.5**	**-0.2**
	baz=321						
WVL	**Waterville**	**69.56**	**42**	IAmb	IAmb	11 01 28.6	
	comp=Z,78nm,0.9s						
WVL	**Waterville**	**69.56**	**42**	P	**P**	**11 01 26.5**	**-0.9**
	baz=325,SNR=16						
I63A	**Otisfield**	**69.60**	**43**	IAmb	IAmb	11 01 29.2	
	comp=Z,131nm,0.9s						
I63A	**Otisfield**	**69.60**	**43**	P	**P**	**11 01 26.4**	**-1.2**
	baz=325,SNR=21						
I63A				P	**P**	**11 01 26.4**	**-1.2**
	baz=325,SNR=21						
FFD	**Franklin Falls**	**69.62**	**44**	IAmb	IAmb	11 01 29.1	
	comp=Z,62nm,0.7s						
FFD	**Franklin Falls**	**69.62**	**44**	P	**P**	**11 01 28.4**	**+0.7**
	baz=324,SNR=7.0						
344A	**Westbrook Farm**	**69.65**	**65**	IAmb	IAmb	11 02 01.8	
	comp=Z,142nm,1.1s						
344A	**Westbrook Farm**	**69.65**	**65**	P	**P**	**11 01 27.6**	**-0.6**
	baz=320,SNR=6.3						
146A	**Union**	**69.66**	**63**	P	**P**	**11 01 27.6**	**-0.6**
	baz=320,SNR=16						
146A				S	**S**	**11 10 33.3**	**-1.8**
	baz=320						
BLEU	**Blekinge**	**69.67**	**346**	*i* P	**P**	**11 01 26.2**	**-1.6**
W50A	**Signal Mountai**	**69.68**	**58**	IAmb	IAmb	11 01 47.2	
	comp=Z,70nm,0.8s						
W50A	**Signal Mountai**	**69.68**	**58**	P	**P**	**11 01 27.1**	**-1.3**
	baz=321,SNR=29						
W50A				S	**S**	**11 10 34.0**	**-1.3**
	baz=321						
V51A	**Loudon**	**69.71**	**57**	IAmb	IAmb	11 01 30.7	
	comp=Z,115nm,1.0s						
V51A	**Loudon**	**69.71**	**57**	P	**P**	**11 01 27.4**	**-1.0**
	baz=321,SNR=34						
V51A				S	**S**	**11 10 33.9**	**-1.7**
	baz=321						
SAUI	**Saumlaki**	**69.72**	**224**	P	**P**	**11 01 28.9**	**+0.3**
	comp=Z,963nm,1.1s,comp=Z,10µm						
Q56A	**Snyder Ridge,**	**69.75**	**52**	IAmb	IAmb	11 01 41.1	
	comp=Z,193nm,1.4s						
Q56A	**Snyder Ridge,**	**69.75**	**52**	P	**P**	**11 01 27.5**	**-1.2**
	baz=322,SNR=13						
Q56A				P	**P**	**11 01 27.5**	**-1.2**
	baz=322,SNR=13						
Q56A				S	**S**	**11 10 34.4**	**-1.7**
	baz=322						
Q56A				S	**S**	**11 10 34.4**	**-1.7**
	baz=322						
Z47A	**Carrollton**	**69.76**	**62**	P	**P**	**11 01 27.5**	**-1.3**
	baz=320,SNR=18						
GOET	**G??ttrup**	**69.78**	**350**	*i* P	**P**	**11 01 28.9**	**+0.5**
GOET				IAmb	IAmb	11 01 31.1	
	comp=Z,225nm,0.8s						
DEL	**Delary**	**69.78**	**347**	*i* P	**P**	**11 01 28.0**	**-0.5**
G65A	**Princeton**	**69.88**	**41**	IAmb	IAmb	11 01 44.8	
	comp=Z,136nm,1.2s						
G65A	**Princeton**	**69.88**	**41**	P	**P**	**11 01 28.0**	**-1.3**
	baz=326,SNR=12						
G65A				P	**P**	**11 01 28.0**	**-1.3**

	baz=326,SNR=12						
G65A				S	**S**	**11 10 33.6**	**-3.6**
	baz=326						
G65A				S	**S**	**11 10 33.6**	**-3.6**
	baz=326						
R55A	**Marlinton**	**69.89**	**53**	IAmb	IAmb	11 01 32.0	
	comp=Z,111nm,0.9s						
R55A	**Marlinton**	**69.89**	**53**	P	**P**	**11 01 28.4**	**-1.3**
	baz=322,SNR=36						
R55A				P	**P**	**11 01 28.4**	**-1.3**
	baz=322,SNR=36						
R55A				S	**S**	**11 10 36.0**	**-1.8**
	baz=322						
R55A				S	**S**	**11 10 36.0**	**-1.8**
	baz=322						
CPCT	**Cooper Cave**	**69.90**	**58**	IAmb	IAmb	11 01 45.1	
	comp=Z,128nm,1.1s						
NPNY	**Mohonk Preserv**	**69.92**	**47**	P	**P**	**11 01 28.6**	**-1.1**
	baz=324,SNR=10.0						
P57A	**Homestead Farm**	**69.96**	**51**	S	**S**	**11 10 37.0**	**-1.4**
	baz=323						
P57A				S	**S**	**11 10 37.0**	**-1.4**
	baz=323						
L61B	**Northampton**	**70.00**	**45**	P	**P**	**11 01 29.3**	**-0.8**
	baz=324,SNR=9.2						
L61B				S	**S**	**11 10 34.6**	**-4.3**
	baz=324						
L61B	**Northampton**	**70.00**	**45**	P	**P**	**11 01 27.7**	**-2.4**
	baz=324,SNR=9.2						
K62A	**Royalston**	**70.02**	**45**	P	**P**	**11 01 29.0**	**-1.3**
	baz=324						
K62A				P	**P**	**11 01 29.0**	**-1.3**
	baz=324						
FPAL	**Fort Paine**	**70.03**	**59**	IAmb	IAmb	11 01 45.9	
	comp=Z,141nm,1.1s						
DRLN	**Deer Lake**	**70.06**	**32**	IAmb	IAmb	11 01 43.3	
	comp=Z,91nm,1.1s						
DRLN	**Deer Lake**	**70.06**	**32**	⇑P	**P**	**11 01 30.1**	**-0.3**
V52A	**Sevierville**	**70.07**	**57**	IAmb	IAmb	11 01 46.5	
	comp=Z,115nm,1.2s						
V52A	**Sevierville**	**70.07**	**57**	P	**P**	**11 01 29.8**	**-0.9**
	baz=321						
V52A				S	**S**	**11 10 38.1**	**-1.7**
	baz=321						
TKL	**Tuckaleechee C**	**70.12**	**57**	P	**P**	**11 01 29.9**	**-1.0**
	comp=Z,44nm,1.0s,baz=321,slow=3.4,SNR=29						
TKL				LR	LR	11 35 10.1	
	comp=Z,11µm,18.6s,baz=331,slow=38						
	comp=Z,44nm,1.0s						
TKL	**Tuckaleechee C**	**70.12**	**57**	IAmb	IAmb	11 01 46.6	
	comp=Z,135nm,1.2s						
TKL	**Tuckaleechee C**	**70.12**	**57**	P	**P**	**11 01 30.2**	**-0.8**
	baz=321,SNR=22						
TKL				S	**S**	**11 10 39.1**	**-1.3**
	baz=321						
Y49A	**Blount Mountai**	**70.14**	**60**	P	**P**	**11 01 29.3**	**-1.9**
	baz=321,SNR=15						
Y49A				S	**S**	**11 10 37.2**	**-3.6**
	baz=321						
GGN	**Saint George**	**70.23**	**40**	IAmb	IAmb	11 01 32.8	
	comp=Z,98nm,1.0s						
SBUM	**Sibu**	**70.24**	**247**	P	**P**	**11 01 30.9**	**-1.0**
SBUM				IAmb	IAmb	11 01 49.1	
	comp=Z,229nm,1.6s						
BRNY	**Black Rk. Fore**	**70.25**	**47**	P	**P**	**11 01 30.2**	**-1.5**
	baz=324,SNR=13						
ODNJ	**Ogdensburg**	**70.25**	**48**	P	**P**	**11 01 30.3**	**-1.3**
	baz=324,SNR=10						
UNH	**University of**	**70.26**	**44**	P	**P**	**11 01 30.3**	**-1.4**
	baz=325,SNR=13						
BJUU	**Bjuv**	**70.27**	**348**	*i* P	**P**	**11 01 31.2**	**-0.3**
MSVF	**Nonsavu**	**70.28**	**174**	LR	LR	11 27 39.6	
	comp=Z,13µm,19.7s,baz=9.4,slow=32						
MSVF	**Nonsavu**	**70.28**	**174**	P	**P**	**11 01 33.3**	**+1.2**
MSVF				IAmb	IAmb	11 02 16.4	
	comp=Z,124nm,1.5s						
MSVF	**Nonsavu**	**70.28**	**174**	IAMs_20	IAMs_20	11 27 49.5	
	comp=Z,13µm,20.0s						
MSVF	**Nonsavu**	**70.28**	**174**	P	**P**	**11 01 35.4**	**+3.4**
MSVF	**Nonsavu**	**70.28**	**174**	⇑P	**P**	**11 01 34.4**	**+2.3**
MSVF	**Nonsavu**	**70.28**	**174**	P	**P**	**11 01 33.3**	**+1.2**
MSVF				pmax	pmax		
	comp=Z,124nm,1.5s						
LUPA	**Lehigh Univers**	**70.30**	**48**	IAmb	IAmb	11 01 33.4	
	comp=Z,121nm,1.0s						
MVL	**Millersville**	**70.33**	**49**	IAmb	IAmb	11 01 33.8	
	comp=Z,134nm,0.9s						
EMMW	**East Machias**	**70.33**	**41**	IAmb	IAmb	11 01 33.5	
	comp=Z,71nm,0.9s						
EMMW	**East Machias**	**70.33**	**41**	P	**P**	**11 01 31.4**	**-0.7**
	baz=326,SNR=8.7						
KPL	**Plockton**	**70.34**	**359**	*e*P	**P**	**11 01 31.4**	**-0.5**
KPL				IAMs_20	IAMs_20	11 30 01.0	
	comp=Z,10µm,21.4s						
MUD	**Monsted U'grnd**	**70.35**	**350**	⇑P	**P**	**11 01 32.7**	**+0.7**
MUD	**Monsted U'grnd**	**70.35**	**350**	*i* P	**P**	**11 01 31.9**	**-0.1**
MUD				IAmb	IAmb	11 01 35.0	
	comp=Z,88nm,0.9s						
346A	**Big Creek Wild**	**70.39**	**64**	IAmb	IAmb	11 02 06.6	
	comp=Z,111nm,1.1s						
346A	**Big Creek Wild**	**70.39**	**64**	S	**S**	**11 10 41.7**	**-2.0**
	baz=320						
LMN	**Caledonia Moun**	**70.40**	**38**	IAmb	IAmb	11 01 34.0	
	comp=Z,118nm,1.0s						
X51A	**Calhoun**	**70.41**	**59**	IAmb	IAmb	11 01 48.2	
	comp=Z,192nm,1.3s						
X51A	**Calhoun**	**70.41**	**59**	P	**P**	**11 01 31.9**	**-0.9**
	baz=321,SNR=14						
X51A				P	**P**	**11 01 31.9**	**-0.9**
	baz=321,SNR=14						
X51A				S	**S**	**11 10 41.6**	**-2.2**
	baz=321						
X51A				S	**S**	**11 10 41.6**	**-2.2**
	baz=321						
U54A	**Nelsons Funny**	**70.44**	**55**	IAmb	IAmb	11 01 48.9	
	comp=Z,104nm,1.1s						
U54A	**Nelsons Funny**	**70.44**	**55**	P	**P**	**11 01 32.2**	**-0.8**
	baz=322,SNR=19						
U54A				P	**P**	**11 01 32.2**	**-0.8**
	baz=322,SNR=19						
U54A				S	**S**	**11 10 42.9**	**-1.3**
	baz=322						
U54A				S	**S**	**11 10 42.9**	**-1.3**
	baz=322						
HRV	**Adam Dziewonsk**	**70.44**	**45**	P	**P**	**11 01 30.6**	**-2.2**
HRV	**Adam Dziewonsk**	**70.44**	**45**	⇓P	**P**	**11 01 31.8**	**-1.0**
HRV	**Adam Dziewonsk**	**70.44**	**45**	P	**P**	**11 01 30.6**	**-2.2**
HRV				pmax	pmax		
	comp=Z,67nm,1.0s						
HRV				MLR	MLR		
	comp=Z,17µm,18.0s						
HRV	**Adam Dziewonsk**	**70.44**	**45**	P	**P**	**11 01 32.0**	**-0.8**
	baz=325						
HRV				S	**S**	**11 10 40.5**	**-3.4**
	baz=325						
LRAL	**Lakeview Retre**	**70.46**	**61**	IAMs_20	IAMs_20	11 32 18.4	
	comp=Z,8µm,20.0s						
LRAL	**Lakeview Retre**	**70.46**	**61**	P	**P**	**11 01 31.9**	**-1.2**
	baz=321,SNR=16						
LRAL				S	**S**	**11 10 40.6**	**-3.8**
	baz=321						
LRAL	**Lakeview Retre**	**70.46**	**61**	P	**P**	**11 01 31.5**	**-1.6**
	baz=321,SNR=16						
LRAL				S	**S**	**11 10 41.1**	**-3.4**
	baz=321						
W52A	**Murphy**	**70.48**	**58**	IAmb	IAmb	11 01 48.2	
	comp=Z,93nm,1.0s						
W52A	**Murphy**	**70.48**	**58**	P	**P**	**11 01 32.2**	**-1.0**
	baz=321,SNR=22						
W52A				S	**S**	**11 10 43.1**	**-1.6**
	baz=321						
SDMD	**Soldier’s Deli**	**70.57**	**50**	IAmb	IAmb	11 01 35.2	
	comp=Z,118nm,0.9s						
SDMD	**Soldier’s Deli**	**70.57**	**50**	P	**P**	**11 01 32.8**	**-0.8**
	baz=323,SNR=40						
BRNJ	**Basking Ridge**	**70.59**	**48**	P	**P**	**11 01 32.5**	**-1.2**
	baz=324,SNR=5.4						
KLNR	**Kaliningrad**	**70.60**	**343**	⇓*e*P	**P**	**11 01 33.1**	**-0.4**
KLNR				pmax	pmax		
	comp=Z,67nm,0.9s						
KLNR				MLR	MLR		
	comp=Z,15µm,17.0s						
V53A	**Saluda**	**70.60**	**56**	IAmb	IAmb	11 01 49.8	
	comp=Z,119nm,1.1s						
V53A	**Saluda**	**70.60**	**56**	P	**P**	**11 01 33.3**	**-0.7**
	baz=322,SNR=32						
V53A				P	**P**	**11 01 33.3**	**-0.7**
	baz=322,SNR=32						
V53A				S	**S**	**11 10 44.7**	**-1.5**
	baz=322						
V53A				S	**S**	**11 10 44.7**	**-1.5**
	baz=322						
PAL	**Palisades**	**70.63**	**47**	IAmb	IAmb	11 01 35.1	
	comp=Z,112nm,0.8s						
PAL	**Palisades**	**70.63**	**47**	P	**P**	**11 01 31.9**	**-2.0**
	baz=324,SNR=16						
PAL				S	**S**	**11 10 40.9**	**-5.2**
	baz=324						
PAL	**Palisades**	**70.63**	**47**	P	**P**	**11 01 32.7**	**-1.3**
	baz=324,SNR=16						
WES	**Weston**	**70.64**	**45**	IAmb	IAmb	11 01 35.2	
	comp=Z,70nm,0.8s						
WES	**Weston**	**70.64**	**45**	P	**P**	**11 01 33.6**	**-0.4**
	baz=325,SNR=11						
LUNU	**Lund**	**70.65**	**347**	*i* P	**P**	**11 01 33.1**	**-0.7**
DRUM	**Mains of Drumt**	**70.70**	**357**	*e*P	**P**	**11 01 33.0**	**-1.2**
DRUM				IAMs_20	IAMs_20	11 28 24.0	
	comp=Z,10µm,22.5s						
TUPA	**Temple Univers**	**70.73**	**49**	P	**P**	**11 01 34.4**	**-0.1**
	baz=324,SNR=21						
COP	**Copenhagen**	**70.73**	**348**	*i* P	**P**	**11 01 33.3**	**-1.0**
COP				IAmb	IAmb	11 01 36.9	
	comp=Z,198nm,1.0s						
UCCT	**U. Connecticut**	**70.73**	**46**	IAmb	IAmb	11 01 35.8	
	comp=Z,93nm,1.0s						
WSPT	**Westport, CT**	**70.75**	**47**	IAmb	IAmb	11 01 35.5	
	comp=Z,92nm,1.1s						
BKB	**Balikpapan**	**70.77**	**241**	P	P	11 01 16.5	-19
PANJ	**Princeton**	**70.78**	**48**	P	**P**	**11 01 33.5**	**-1.4**
	baz=324						
PANJ				S	**S**	**11 10 43.7**	**-4.2**
	baz=324						
CPNY	**Central Park**	**70.78**	**47**	IAmb	IAmb	11 01 36.2	
	comp=Z,131nm,0.8s						
GEDE	**Greenville**	**70.81**	**49**	P	**P**	**11 01 34.0**	**-1.1**
	baz=324,SNR=9.6						
S57A	**Dark Hollow, R**	**70.87**	**53**	IAmb	IAmb	11 01 37.5	
	comp=Z,96nm,0.9s						
S57A	**Dark Hollow, R**	**70.87**	**53**	P	**P**	**11 01 34.8**	**-0.8**
	baz=323,SNR=39						
S57A				P	**P**	**11 01 34.8**	**-0.8**
	baz=323,SNR=39						
S57A				S	**S**	**11 10 49.0**	**-0.1**
	baz=323						
S57A				S	**S**	**11 10 49.0**	**-0.1**
	baz=323						
COEN	**Coen**	**70.92**	**210**	P	**P**	**11 01 38.7**	**+2.8**
COEN	**Coen**	**70.92**	**210**	⇑P	**P**	**11 01 36.6**	**+0.8**
BRYW	**Bryant College**	**70.93**	**45**	IAmb	IAmb	11 01 36.8	
	comp=Z,63nm,0.9s						
BSD	**Bornholm Skovb**	**70.95**	**346**	⇓P	**P**	**11 01 35.8**	**+0.2**
BSD	**Bornholm Skovb**	**70.95**	**346**	*e*P	**P**	**11 01 36.2**	**+0.6**
BSD	**Bornholm Skovb**	**70.95**	**346**	*i* P	**P**	**11 01 35.2**	**-0.4**
BG3	**Lake Jocassee**	**71.07**	**57**	IAmb	IAmb	11 01 49.4	
	comp=Z,156nm,1.2s						
CASEE	**Lake Jocassee**	**71.07**	**57**	P	**P**	**11 01 37.2**	**+0.4**
	baz=322,SNR=38						
LLD	**Lille Linde**	**71.10**	**348**	*i* P	**P**	**11 01 36.3**	**-0.3**
LLD				IAmb	IAmb	11 01 39.6	
	comp=Z,139nm,1.0s						
M63A	**Gales Ferry**	**71.13**	**46**	IAmb	IAmb	11 01 38.0	
	comp=Z,105nm,0.9s						
M63A	**Gales Ferry**	**71.13**	**46**	P	**P**	**11 01 35.2**	**-1.8**
	baz=325,SNR=8.5						
M63A				P	**P**	**11 01 35.2**	**-1.8**
	baz=325,SNR=8.5						
Z51A	**Franklin**	**71.21**	**60**	IAmb	IAmb	11 01 51.8	
	comp=Z,194nm,1.7s						
Z51A	**Franklin**	**71.21**	**60**	P	**P**	**11 01 35.8**	**-1.9**
	baz=321						
L64A	**Middleborough**	**71.22**	**45**	IAmb	IAmb	11 01 54.0	
	comp=Z,154nm,1.4s						
R58B	**Mineral**	**71.23**	**52**	IAmb	IAmb	11 01 52.8	
	comp=Z,96nm,1.1s						
R58B	**Mineral**	**71.23**	**52**	P	**P**	**11 01 36.8**	**-0.9**
	baz=323,SNR=17						
R58B				P	**P**	**11 01 36.8**	**-0.9**
	baz=323,SNR=17						
R58B				S	**S**	**11 10 52.4**	**-0.7**
	baz=323						
R58B				S	**S**	**11 10 52.4**	**-0.7**
	baz=323						
INVG	**Invergeldie, C**	**71.23**	**358**	*e*P	**P**	**11 01 36.3**	**-1.0**
INVG				IAMs_20	IAMs_20	11 29 43.6	
	comp=Z,10µm,23.0s						
V55A	**Taylorsville**	**71.26**	**55**	IAmb	IAmb	11 01 53.5	
	comp=Z,83nm,1.1s						
V55A	**Taylorsville**	**71.26**	**55**	P	**P**	**11 01 36.7**	**-1.2**
	baz=322,SNR=16						
V55A				P	**P**	**11 01 36.7**	**-1.2**
	baz=322,SNR=16						
V55A				S	**S**	**11 10 51.1**	**-2.7**
	baz=322						
V55A				S	**S**	**11 10 51.1**	**-2.7**
	baz=322						
CBN	**Corbin Frederi**	**71.28**	**51**	IAmb	IAmb	11 01 39.7	
	comp=Z,113nm,0.9s						
CBN	**Corbin Frederi**	**71.28**	**51**	P	**P**	**11 01 36.5**	**-1.4**
	baz=323,SNR=6.9						
CBN				S	**S**	**11 10 52.9**	**-0.9**
	baz=323						
U56A	**King**	**71.29**	**54**	IAmb	IAmb	11 01 53.7	
	comp=Z,111nm,1.2s						
T57A	**Hurt**	**71.33**	**53**	P	**P**	**11 01 37.1**	**-1.2**
	baz=323,SNR=19						
T57A				P	**P**	**11 01 37.1**	**-1.2**
	baz=323,SNR=19						
Y52A	**Lilburn**	**71.37**	**59**	IAmb	IAmb	11 01 40.8	
	comp=Z,82nm,0.9s						
Y52A	**Lilburn**	**71.37**	**59**	P	**P**	**11 01 37.8**	**-0.8**
	baz=322,SNR=31						
Y52A				P	**P**	**11 01 37.8**	**-0.8**
	baz=322,SNR=31						
Y52A				S	**S**	**11 10 52.8**	**-2.2**
	baz=322						
Y52A				S	**S**	**11 10 52.8**	**-2.2**
	baz=322						
LAWE	**Loch Awe, Argy**	**71.42**	**359**	*e*P	**P**	**11 01 38.1**	**-0.4**
LAWE				IAMs_20	IAMs_20	11 29 18.2	
	comp=Z,9µm,20.4s						
SPSI	**Sidrap Palu**	**71.58**	**236**	P	**P**	**11 01 39.9**	**-0.1**
	comp=Z,62nm,1.0s,comp=Z,2µmcomp=Z,5µm						
M65A	**Busby, Falmout**	**71.60**	**45**	P	**P**	**11 01 35.4**	**-4.4**
	baz=325						
250A	**Grady**	**71.67**	**61**	P	**P**	**11 01 39.1**	**-1.4**
	baz=321,SNR=12						
250A				S	**S**	**11 10 54.7**	**-3.7**
	baz=321						
RGN	**Rugen**	**71.72**	**347**	IAMs_20	IAMs_20	11 35 52.5	
	comp=Z,12µm,19.0s						
RGN	**Rugen**	**71.72**	**347**	*e*P	**P**	**11 01 40.8**	**+0.5**
	baz=11,slow=5.5						
KMSC	**Kings Mountain**	**71.76**	**56**	P	**P**	**11 01 38.6**	**-2.4**
	baz=322,SNR=32						
KMSC				S	**S**	**11 10 56.8**	**-2.6**
	baz=322						
KMSC	**Kings Mountain**	**71.76**	**56**	P	**P**	**11 01 39.8**	**-1.2**
	baz=322,SNR=32						
KMSC				S	**S**	**11 10 56.9**	**-2.6**
	baz=322						
PAULI	**Pauline**	**71.77**	**56**	IAmb	IAmb	11 01 56.5	
	comp=Z,116nm,1.2s						
PAULI	**Pauline**	**71.77**	**56**	P	**P**	**11 01 39.7**	**-1.3**
	baz=322,SNR=23						
PGBU	**Glenifferbraes**	**71.86**	**358**	*e*P	**P**	**11 01 41.8**	**+0.6**
PGBU				IAMs_20	IAMs_20	11 30 04.0	
	comp=Z,7µm,19.1s						
BRAL	**Brewton**	**71.88**	**62**	IAMs_20	IAMs_20	11 33 05.1	
	comp=Z,11µm,21.0s						
BRAL	**Brewton**	**71.88**	**62**	P	**P**	**11 01 40.6**	**-1.1**
	baz=321						
BRAL				S	**S**	**11 10 59.9**	**-0.9**
	baz=321						
152A	**Waverly Hall**	**71.95**	**60**	IAmb	IAmb	11 01 57.0	
	comp=Z,130nm,1.4s						
152A	**Waverly Hall**	**71.95**	**60**	P	**P**	**11 01 40.5**	**-1.6**
	baz=322,SNR=21						
152A				S	**S**	**11 10 58.3**	**-3.5**
	baz=322						
GBN	**Guysborough**	**72.00**	**37**	IAmb	IAmb	11 01 57.9	
	comp=Z,196nm,1.5s						
HODGE	**Hodges**	**72.01**	**57**	IAmb	IAmb	11 01 54.9	
	comp=Z,152nm,1.2s						
HODGE	**Hodges**	**72.01**	**57**	P	**P**	**11 01 42.0**	**-0.5**
	baz=322,SNR=47						
KSM	**Kuching**	**72.11**	**248**	IAmb	IAmb	11 01 45.6	
	comp=Z,91nm,1.0s						
KSM	**Kuching**	**72.11**	**248**	P	**P**	**11 01 44.8**	**+1.6**
T59A	**Double "B" Far**	**72.17**	**52**	IAmb	IAmb	11 01 45.3	
	comp=Z,92nm,0.9s						
T59A	**Double "B" Far**	**72.17**	**52**	P	**P**	**11 01 42.5**	**-0.8**
	baz=323,SNR=31						
T59A				P	**P**	**11 01 42.5**	**-0.8**
	baz=323,SNR=31						
SURA	**Surathani**	**72.20**	**262**	P	**P**	**11 01 45.4**	**+1.6**
EKA	**Eskdalemuir Ar**	**72.30**	**357**	LR	LR	11 32 03.9	
	comp=Z,8µm,19.4s,baz=16,slow=35						
ESK	**Eskdalemuir**	**72.32**	**357**	*e*P	**P**	**11 01 43.7**	**-0.2**
ESK				IAMs_20	IAMs_20	11 31 47.4	
	comp=Z,9µm,19.2s						
ESK	**Eskdalemuir**	**72.32**	**357**	P	**P**	**11 01 43.4**	**-0.5**
ESK				IAmb	IAmb	11 01 46.2	
	comp=Z,124nm,0.8s						
ESK	**Eskdalemuir**	**72.32**	**357**	IAMs_20	IAMs_20	11 31 41.9	
	comp=Z,8µm,20.0s						
ESK	**Eskdalemuir**	**72.32**	**357**	⇑P	**P**	**11 01 43.6**	**-0.4**
ESK	**Eskdalemuir**	**72.32**	**357**	P	**P**	**11 01 43.4**	**-0.5**
ESK				pmax	pmax		
	comp=Z,125nm,0.8s						
V58A	**Windy Hill, Pi**	**72.35**	**54**	IAmb	IAmb	11 02 00.2	
	comp=Z,143nm,1.2s						
V58A	**Windy Hill, Pi**	**72.35**	**54**	P	**P**	**11 01 43.5**	**-1.0**
	baz=323,SNR=22						
V58A				P	**P**	**11 01 43.5**	**-1.0**
	baz=323,SNR=22						
AKASG	**Malin Array Be**	**72.37**	**336**	P	**P**	**11 01 43.8**	**-0.5**
	comp=Z,195nm,0.8s,baz=27,slow=6.0,SNR=137						
AKASG				LR	LR	11 37 32.3	
	comp=Z,10µm,18.0s,baz=30,slow=39						
	comp=Z,195nm,0.8s						
AKBB	**Malin Array Si**	**72.37**	**336*c***	*i*P	**P**	**11 01 43.7**	**-0.6**
GKP	**Gorka Klasztor**	**72.38**	**345**	*e*P	**P**	**11 01 44.5**	**+0.1**
GKP				*e*S	**SKiKP**	**11 11 12.0**	**-5.6**
GKP				*e*L	L	11 33 46.3	
	comp=Z,18µm,21.7s						
GKP	**Gorka Klasztor**	**72.38**	**345**	*e*P	**P**	**11 01 45.2**	**+0.9**
W57A	**Gilead**	**72.42**	**55**	P	**P**	**11 01 43.6**	**-1.3**
	baz=323,SNR=14						
W57A				P	**P**	**11 01 43.6**	**-1.3**
	baz=323,SNR=14						
W57A				S	**S**	**11 11 04.5**	**-2.5**
	baz=323						
W57A				S	**S**	**11 11 04.5**	**-2.5**
	baz=323						
T60A	**Surry**	**72.43**	**51**	P	**P**	**11 01 44.0**	**-0.9**
	baz=324,SNR=15						
T60A				P	**P**	**11 01 44.0**	**-0.9**
	baz=324,SNR=15						
T60A				S	**S**	**11 11 06.4**	**-0.7**
	baz=324						
T60A				S	**S**	**11 11 06.4**	**-0.7**
	baz=324						
JSC	**Jenkinsville**	**72.48**	**56**	IAmb	IAmb	11 02 00.8	
	comp=Z,112nm,1.2s						
JSC	**Jenkinsville**	**72.48**	**56**	P	**P**	**11 01 44.8**	**-0.5**
	baz=322,SNR=18						
KAPI	**Kappang**	**72.48**	**236**	S	**S**	**11 11 08.7**	**+0.7**
	comp=Z,2.7nm,0.3s,baz=98,slow=14,SNR=1.5						
KAPI	**Kappang**	**72.48**	**236**	P	**P**	**11 01 45.1**	**-0.3**
KAPI				IAmb	IAmb	11 02 21.3	
	comp=Z,334nm,1.9s						
KAPI	**Kappang**	**72.48**	**236**	P	P	11 01 50.9	+5.5
KAPI	**Kappang**	**72.48**	**236**	⇑P	**P**	**11 01 45.3**	**-0.1**
KAPI	**Kappang**	**72.48**	**236*c***	*i*P	**P**	**11 01 45.5**	**+0.1**
KAPI				pmax	pmax		
	comp=Z,33nm,1.0s						
KAPI	**Kappang**	**72.48**	**236**	P	**P**	**11 01 44.8**	**-0.6**
NEWG	**New Galloway**	**72.55**	**358**	*e*P	**P**	**11 01 44.5**	**-0.7**
NEWG				IAmb	IAmb	11 01 47.2	
	comp=Z,81nm,0.7s						
NEWG				IAMs_20	IAMs_20	11 30 44.0	
	comp=Z,7µm,20.3s						
U59A	**Littleton**	**72.55**	**53**	P	**P**	**11 01 44.9**	**-0.8**
	baz=323,SNR=15						
U59A				P	**P**	**11 01 44.9**	**-0.8**
	baz=323,SNR=15						
BKSI	**Bulukumba**	**72.56**	**235**	P	**P**	**11 01 45.0**	**-0.9**
	comp=Z,98nm,0.8s,comp=Z,2µmcomp=Z,5µm						
MOIG	**Morelia**	**72.58**	**80**	P	**P**	**11 01 46.8**	**+0.5**
BIRD	**Birdtown, Kers**	**72.59**	**56**	P	**P**	**11 01 45.3**	**-0.6**
	baz=323,SNR=16						
CLGH	**Cloghs, Cushen**	**72.61**	**359**	*e*P	**P**	**11 01 44.8**	**-0.8**
CLGH				IAMs_20	IAMs_20	11 30 17.0	
	comp=Z,9µm,20.6s						
SRIT	**Nakonsritamara**	**72.67**	**261**	IAmb	IAmb	11 01 49.1	
	comp=Z,141nm,0.9s						
SRIT	**Nakonsritamara**	**72.67**	**261**	P	**P**	**11 01 48.3**	**+1.7**
BSEG	**Bad Segeberg**	**72.70**	**349**	*e*P	**P**	**11 01 46.0**	**-0.2**
	comp=Z,1µm,2.6s,baz=11,slow=5.5						
HLG	**Helgoland**	**72.72**	**350**	*e*P	**P**	**11 01 46.2**	**-0.1**
	comp=Z,1µm,2.3s,baz=11,slow=5.5						
EDMD	**Edmundbyers**	**72.76**	**356**	*e*P	**P**	**11 01 45.6**	**-1.0**
EDMD				IAMs_20	IAMs_20	11 29 59.8	
	comp=Z,8µm,20.9s						
352A	**Blakely**	**72.77**	**61**	IAmb	IAmb	11 02 09.1	
	comp=Z,260nm,1.6s						
GAL1	**Galloway**	**72.81**	**358**	*e*P	**P**	**11 01 46.4**	**-0.5**
GAL1				IAMs_20	IAMs_20	11 30 31.7	
	comp=Z,8µm,20.1s						
154A	**Montrose**	**72.84**	**59**	IAmb	IAmb	11 02 27.9	
	comp=Z,153nm,0.9s						
154A	**Montrose**	**72.84**	**59**	P	**P**	**11 01 46.1**	**-1.3**
	baz=322,SNR=9.6						
154A				S	**S**	**11 11 09.2**	**-2.7**
	baz=322						
451A	**Vernon**	**73.01**	**62**	S	**S**	**11 11 12.5**	**-1.3**
	baz=322						
HAW	**Hawthorne Fire**	**73.03**	**57**	P	**P**	**11 01 48.1**	**-0.4**
	baz=323,SNR=36						
KESW	**Keswick, Cumbr**	**73.04**	**357**	*e*P	**P**	**11 01 47.8**	**-0.4**
KESW				IAMs_20	IAMs_20	11 29 21.4	
	comp=Z,8µm,24.3s						
BSSI	**Bau Bau, Buton**	**73.08**	**235**	P	**P**	**11 01 47.7**	**-1.3**
	comp=Z,244nm,0.9s,comp=Z,4µmcomp=Z,5µm						
GDLE	**Glaisdale, N Y**	**73.12**	**356**	*e*P	**P**	**11 01 48.2**	**-0.5**
GDLE				IAMs_20	IAMs_20	11 29 02.8	
	comp=Z,6µm,23.2s						
BEL	**Belsk**	**73.13**	**342**	*e*P	**P**	**11 01 49.6**	**+0.7**
BEL				*e*L	L	11 34 12.8	
	comp=Z,19µm,22.6s						
DGPR	**DIGLIPUR**	**73.13**	**270**	*e*P	**P**	**11 01 49.1**	**-0.2**
DGPR				IAmb	IAmb	11 01 51.1	
	comp=Z,585nm,1.1s						
SKLT	**Songkhla**	**73.18**	**260**	P	**P**	**11 01 50.5**	**+0.9**
GEYT	**Alibeck**	**73.20**	**311**	P	**P**	**11 01 49.1**	**-0.4**
	comp=Z,53nm,0.7s,baz=14,slow=3.1,SNR=54						
GEYT				LR	LR	11 36 57.6	
	comp=Z,26µm,19.6s,baz=50,slow=38						
	comp=Z,53nm,0.7s						
GEYT	**Alibeck**	**73.20**	**311**	IAmb	IAmb	11 01 52.2	
	comp=Z,111nm,0.9s						
X58A	**Rowland**	**73.23**	**55**	P	**P**	**11 01 48.7**	**-0.9**
	baz=323						
X58A				P	**P**	**11 01 48.7**	**-0.9**
	baz=323						
X58A				S	**S**	**11 11 14.7**	**-1.5**
	baz=323						
X58A				S	**S**	**11 11 14.7**	**-1.5**
	baz=323						
KOUNC	**Koumac, New Ca**	**73.23**	**188**	⇑P	**P**	**11 01 51.7**	**+2.2**
LIFNC	**LIFOU**	**73.25**	**185**	IAMs_20	IAMs_20	11 28 38.7	
	comp=Z,12µm,20.0s						
LIFNC	**LIFOU**	**73.25**	**185**	P	P	11 01 56.6	+6.9
GOF	**Gofitskoye**	**73.33**	**325**	⇓*i*P	**P**	**11 01 51.3**	**+1.2**
GOF				*e*S	**SKiKP**	**11 11 18.8**	**-0.5**
GOF				pmax	pmax		
	comp=Z,649nm,0.7s						
CNNC	**Cliffs of the**	**73.39**	**53**	P	**P**	**11 01 49.1**	**-1.6**
	baz=324						
CNNC				S	**S**	**11 11 17.4**	**-0.7**
	baz=324						
GMM	**Mts of Mourne**	**73.45**	**359**	*e*P	**P**	**11 01 50.3**	**-0.3**
TAOE	**Nuku Hiva Isla**	**73.49**	**130**	*e*P	**P**	**11 01 54.3**	**+2.8**
	comp=Z,603nm,24.8s						
TAOE				*e*S	**SKiKP**	**11 11 23.4**	**+3.2**
	comp=Z,3µm,28.2s						
TAOE	**Nuku Hiva Isla**	**73.49**	**130**	*e*LR	LR	11 24 24.7	
	comp=Z,27µm,22.7s						
KDU	**Kakadu**	**73.50**	**221**	P	**P**	**11 01 51.2**	**-0.1**
KDU	**Kakadu**	**73.50**	**221**	⇑P	**P**	**11 01 50.5**	**-0.8**
MAK	**Makhachkala**	**73.50**	**321**	*e*P	**P**	**11 01 48.5**	**-2.6**
MAK				*e*		11 04 38.2	
MAK				*e*PPP	PPP	11 06 24.7	

MAK				eS	S	11 11 16.9	-2.1
MAK				eSS	SS	11 15 58.0	-2.6
MAK				eSSS	SSS	11 19 19.1	
MAK				pmax	pmax		
	comp=Z,478nm,1.5s						
MAK				MLR	MLR		
	comp=Z,19µm,19.0s						
TIGA	Tifton	73.51	60	IAmb	IAmb	11 02 07.2	
	comp=Z,283nm,1.5s						
TIGA	Tifton	73.51	60	P	P	11 01 48.7	-2.7
	baz=322,SNR=5.2						
TIGA				S	S	11 11 16.7	-2.8
	baz=322						
TIGA	Tifton	73.51	60	P	P	11 01 52.3	+0.9
	baz=322						
TIGA				S	S	11 11 17.5	-2.0
	baz=322						
WIM	Isle of Man	73.53	358	eP	P	11 01 50.5	-0.6
Y58A	Scranton	73.58	55	IAmb	IAmb	11 01 54.0	
	comp=Z,169nm,0.8s						
HPK	Haverah Park	73.62	356	eP	P	11 01 51.5	-0.2
HPK				IAMs_20	IAMs_20	11 32 58.6	
	comp=Z,6µm,19.2s						
RUE	Ruedersdorf	73.67	346	eP	P	11 01 51.5	-0.4
	comp=Z,1000nm,2.6s,baz=11,slow=5.5						
255A	Hazlehurst	73.71	59	P	P	11 01 52.3	-0.3
	baz=322						
255A				S	SKiKP	11 11 19.7	-0.5
	baz=322						
BBKI	Banjar Baru	73.72	241	P	P	11 01 51.0	-1.7
	comp=Z,215nm,1.1s,comp=Z,6µm						
GROC	Groznyy	73.94	322	eP	P	11 01 51.8	-1.9
GROC				eS	S	11 11 24.3	+0.3
NHSC	New Hope	73.96	56	P	P	11 01 53.3	-0.7
	baz=323,SNR=11						
NHSC				S	S	11 11 23.2	-1.2
	baz=323						
RETH	Rethem/Aller,	73.99	349	eP	P	11 01 53.8	0.0
	comp=Z,675nm,2.3s,baz=11,slow=5.5						
553A	Crawfordville	74.05	61	IAmb	IAmb	11 01 57.2	
	comp=Z,140nm,1.1s						
553A	Crawfordville	74.05	61	S	S	11 11 24.3	-1.2
	baz=322						
UNM	Universidad Na	74.05	79	IAMs_20	IAMs_20	11 29 16.4	
	comp=Z,10µm,22.0s						
NRDL	Niedersach Rie	74.14	349	eP	P	11 01 54.5	-0.1
	comp=Z,649nm,2.6s,baz=11,slow=5.5						
FLTG	Flechtingen	74.16	348	eP	P	11 01 54.5	-0.3
	comp=Z,309nm,2.0s,baz=11,slow=5.5						
MTN	Manton Dam	74.17	222	P	P	11 01 59.5	+4.2
LBWR	Ladybower, Pea	74.18	356	eP	P	11 01 54.3	-0.6
LBWR				IAMs_20	IAMs_20	11 33 05.8	
	comp=Z,7µm,19.6s						
Y60A	Bolivia	74.22	54	IAmb	IAmb	11 01 57.5	
	comp=Z,149nm,0.9s						
WME	Myndd Eilian	74.27	358	eP	P	11 01 54.6	-0.8
WLF1	Llynfaes	74.38	358	eP	P	11 01 56.7	+0.7
WLF1				IAmb	IAmb	11 02 00.5	
	comp=Z,129nm,1.0s						
WLF1				IAMs_20	IAMs_20	11 30 12.9	
	comp=Z,13µm,20.6s						
MMRI	Maumere	74.39	232	IAmb	IAmb	11 02 27.3	
	comp=Z,230nm,1.4s						
MMRI	Maumere	74.39	232	P	P	11 01 58.6	+2.0
MMRI	Maumere	74.39	232	P	P	11 01 56.0	-0.6
	comp=Z,116nm,1.1s,comp=Z,3µmcomp=Z,4µm						
LVV	L'vov	74.39	339	d iP	P	11 01 56.2	0.0
LVV				e		11 02 10.6	
LVV				e		11 04 39.8	
LVV				eS	S	11 11 27.0	-1.9
LVV				ePS		11 12 00.4	
LVV				eSS	SS	11 16 19.6	+5.7
LVV				eSSS	SSS	11 19 28.2	
LVV				pmax	pmax		
	comp=Z,800nm,2.8s						
KVAR	Kislovodsk Arr	74.41	325	LR	LR	11 40 35.5	
	comp=Z,10µm,18.8s,baz=276,slow=41						
SOEI	Soe	74.41	229	IAmb	IAmb	11 02 38.3	
	comp=Z,227nm,1.2s						
SOEI	Soe	74.41	229	P	P	11 01 59.4	+2.5
SOEI	Soe	74.41	229	P	P	11 01 56.4	-0.5
	comp=Z,137nm,0.9s,comp=Z,4µmcomp=Z,4µm						
KIV	Kislovodsk	74.41	325	P	P	11 01 56.8	+0.2
KIV				IAMs_20	IAMs_20	11 40 49.0	
	comp=Z,10µm,18.0s						
KIV	Kislovodsk	74.41	325	⇑P	P	11 01 57.3	+0.7
KIV	Kislovodsk	74.41	325	eP	P	11 01 57.0	+0.4
KIV				e		11 04 38.4	
KIV				ePPP	PPP	11 06 28.4	
KIV				eS	S	11 11 32.0	+2.5
KIV				eSS	SS	11 16 20.8	+6.1
KIV				pmax	pmax		
	comp=Z,117nm,1.1s						
KIV				pmax	pmax		
	comp=Z,2µm,4.3s						
KIV	Kislovodsk	74.41	325	i P	P	11 01 57.0	+0.4
	SNR=90						
KIV	Kislovodsk	74.41	325	P	P	11 01 57.1	+0.4
ASSE	Asse, Remlinge	74.43	348	eP	P	11 01 56.1	-0.2
	comp=Z,555nm,2.4s,baz=11,slow=5.5						
PBA	Port Blair	74.43	269	P	P	11 01 56.4	-0.5
PBA	Port Blair	74.43	269	eP	P	11 01 57.1	+0.2
PBA	Port Blair	74.43	269	P	P	11 01 56.1	-0.8
	SNR=5.6						
DSB	Dublin	74.45	359	IAmb	IAmb	11 01 59.0	
	comp=Z,136nm,0.7s						
DSB				IAMs_20	IAMs_20	11 31 39.3	
	comp=Z,9µm,21.0s						
KBZ	Khabaz	74.53	324	P	P	11 01 57.4	+0.3
	comp=Z,125nm,0.8s,baz=38,slow=2.3,SNR=116						
KBZ				S	S	11 11 32.1	+1.5
	comp=Z,0.9nm,0.5s,baz=178,slow=18,SNR=1.9						
KBZ				LR	LR	11 40 45.3	
	comp=Z,15µm,18.7s,baz=18,slow=41						
	comp=Z,125nm,0.8s						
KBZ	Khabaz	74.53	324	c iP	P	11 01 57.9	+0.8
MTSU	Mount Surprise	74.54	207	P	P	11 02 00.9	+3.5
YATNC	Mamie plateau,	74.55	185	P	P	11 01 59.6	+2.3
DZM	Mont Dzumac	74.58	186	eP	P	11 01 58.9	+1.3
	comp=Z,265nm,1.6s						
DZM				eS	S	11 11 36.0	+4.4
	comp=Z,4µm,27.9s						
DZM				eSS	SS	11 16 24.6	+5.1
	comp=Z,3µm,24.8s						
DZM				eLR	LR	11 24 56.5	
	comp=Z,28µm,24.2s						
DZM	Mont Dzumac	74.58	186	LR	LR	11 29 41.1	
	comp=Z,14µm,20.4s,baz=31,slow=32						
DZM	Mont Dzumac	74.58	186	IAmb	IAmb	11 02 17.3	
	comp=Z,217nm,1.5s						
DZM	Mont Dzumac	74.58	186	P	P	11 01 59.4	+1.8
DZM	Mont Dzumac	74.58	186	⇑P	P	11 02 00.3	+2.7
IBBN	Ibbenburen	74.59	350	eP	P	11 01 57.2	-0.2
	baz=11,slow=5.5						
NOUC	Port Laguerre	74.62	186	P	P	11 02 00.8	+3.1
KULM	Kulim	74.66	258	IAmb	IAmb	11 02 00.2	
	comp=Z,100nm,1.0s						
KULM	Kulim	74.66	258	⇑P	P	11 01 57.8	-0.4
BHPL	Bhopal	74.66	288	eP	P	11 01 57.7	-0.6
BHPL				IAmb	IAmb	11 01 59.5	
	comp=Z,276nm,0.9s						
AKT	Akhty	74.67	320	eP	P	11 01 58.4	+0.2
AKT				e		11 02 12.0	
AKT				pmax	pmax		
	comp=Z,278nm,1.2s						
WACR	West Acre	74.75	355	eP	P	11 01 57.7	-0.5
WACR				IAmb	IAmb	11 02 00.2	
	comp=Z,314nm,1.1s						
WACR				IAMs_20	IAMs_20	11 26 56.1	
	comp=Z,12µm,41.6s						
FOEL	Foel Wylfa	74.75	357	eP	P	11 01 57.4	-0.9
FOEL				IAMs_20	IAMs_20	11 30 45.6	
	comp=Z,8µm,21.6s						
CLZ	Clausthal	74.75	348	eP	P	11 01 57.9	-0.4
	comp=Z,190nm,1.5s,baz=11,slow=5.5						
PBKI	Pangkalan Bun	74.80	244	P	P	11 01 58.8	-0.3
	comp=Z,135nm,1.0s						
ONTNC	Ouen Toro	74.82	186	IAmb	IAmb	11 02 13.7	
	comp=Z,291nm,1.7s						
OJC	Ojcow	74.86	342	eP	P	11 01 59.5	+0.5
OJC				ePP	PP	11 04 44.9	-0.9
OJC				eS	S	11 11 30.0	-4.2
OJC				eSS	SS	11 16 40.6	+20
OJC				eL	L	11 35 04.6	
	comp=Z,16µm,22.2s						
OJC	Ojcow	74.86	342	IAmb	IAmb	11 02 02.0	
	comp=Z,175nm,1.0s						
OJC	Ojcow	74.86	342	⇑P	P	11 01 59.2	+0.3
KSP	Ksiaz	74.88	344	eP	P	11 01 59.0	-0.1
KSP				ePP	PP	11 04 45.8	-0.1
KSP				eS	SKiKP	11 11 18.6	-2.9
KSP				eL	L	11 34 59.5	
	comp=Z,13µm,22.1s						
KSP	Ksiaz	74.88	344	⇑P	P	11 01 59.0	-0.1
456A	Hilliard	74.90	59	IAmb	IAmb	11 02 12.8	
	comp=Z,129nm,0.7s						
CLL	Collm	74.93	347	IAMs_20	IAMs_20	11 35 33.2	
	comp=Z,10µm,20.0s						
CLL	Collm	74.93	347	i P	P	11 01 58.6	-0.7
	comp=Z,335nm,2.0s						
CLL				ePmax		11 02 00.0	
CLL				ePlp		11 02 02.0	
	comp=Z,3µm,20.1s						
CLL				esP	pP	11 02 07.0	+0.4
CLL				i (PcP)	PcP	11 02 16.1	+3.0
CLL				ePP	PP	11 04 49.0	+2.8
CLL				ePPP	PPP	11 06 30.0	
CLL				eS	S	11 11 33.0	-1.8
CLL				ePS		11 12 12.0	
CLL				ePPS	PPS	11 12 24.0	
CLL				ex	x	11 13 24.0	
CLL				eSS	SS	11 16 24.0	+2.1
CLL				eSSS	SSS	11 20 06.0	
CLL				AMS	AMS	11 35 00.0	
	comp=Z,10µm,21.5s						
CLL				AMS	AMS	11 36 00.0	
CLL	Collm	74.93	347	i P	P	11 01 58.6	-0.7
CLL				e		11 02 07.0	
CLL				eS	S	11 11 33.0	-1.8
CLL				pmax	pmax		
	comp=Z,335nm,2.0s						
CLL				MLR	MLR		
	comp=Z,10µm,21.5s						
CLL	Collm	74.93	347	eP	P	11 01 58.7	-0.7
	comp=Z,335nm,2.0s,baz=11,slow=5.5						
SORM	Soroca	74.96	336	⇑P	P	11 02 00.1	+0.5
SORM	Soroca	74.96	336	P	P	11 02 00.0	+0.5
ZKTA	Zakatala	74.97	321	P	P	11 02 00.3	+0.5
PINNC	Pines Island,	75.07	185	IAmb	IAmb	11 02 22.8	
	comp=Z,254nm,1.3s						
PINNC	Pines Island,	75.07	185	P	P	11 02 03.2	+2.9
IPM	Ipoh	75.08	258	IAmb	IAmb	11 02 02.1	
	comp=Z,110nm,1.0s						
IPM	Ipoh	75.08	258	P	P	11 02 01.3	+0.6
IPM	Ipoh	75.08	258	⇑P	P	11 01 59.7	-1.0
GTTG	Gottingen	75.09	349	eP	P	11 01 60.0	-0.3
	comp=Z,325nm,2.1s,baz=11,slow=5.5						
HLM1	Long Mynd	75.11	357	eP	P	11 01 59.8	-0.6
HLM1				IAMs_20	IAMs_20	11 31 20.1	
	comp=Z,8µm,20.6s						
SEKA	Sheki	75.11	320	P	P	11 02 00.8	+0.1
CHVC	Chvalec	75.17	345	eP	P	11 02 01.3	+0.5
CHVC				ePP	PP	11 04 57.5	+9.2
CHVC				AMS	AMS	11 34 40.0	
	comp=Z,13µm,21.0s						
CHVC	Chvalec	75.17	345	eP	P	11 02 01.3	+0.5
CHVC				e		11 04 57.5	
CHVC				MLR	MLR		
	comp=Z,13µm,21.0s						
OSTC	Ostas	75.17	344	eP	P	11 02 01.3	+0.5
OSTC				ePP	PP	11 04 50.9	+2.5
OSTC				eS	S	11 11 38.4	+0.8
OSTC				eSS	SS	11 16 37.2	+12
OSTC				AMS	AMS	11 34 50.0	
	comp=Z,12µm,21.4s						
OSTC	Ostas	75.17	344	eP	P	11 02 01.3	+0.5
OSTC				e		11 04 50.9	
OSTC				eS	S	11 11 38.4	+0.8
OSTC				MLR	MLR		
	comp=Z,12µm,21.4s						
NEUB	Neuenburg	75.19	347	eP	P	11 02 00.5	-0.4
	comp=Z,353nm,1.9s,baz=11,slow=5.5						
BRG	Berggiesshubel	75.22	346	i P	P	11 02 00.6	-0.4
BRG				Amp		11 02 04.0	
	comp=Z,34nm,1.0s						
BRG	Berggiesshubel	75.22	346	P	P	11 02 08.1	+7.1
BRG				Amp		11 02 10.5	
	comp=Z,39nm,1.0s						
BRG				⇑PP	PcP	11 02 16.7	+2.4
BRG				Amp		11 02 19.1	
	comp=Z,74nm,1.0s						
BRG	Berggiesshubel	75.22	346	PP	PP	11 04 51.0	+2.3
BRG				Amp		11 04 57.3	
	comp=Z,38nm,1.6s						
BRG	Berggiesshubel	75.22	346	SS	SS	11 16 24.0	-2.3
BRG				Amp		11 38 23.0	
	comp=E,3.8nm,15.8s						
BRG				Amp		11 38 33.0	
	comp=N,8.4nm,21.9s						
BRG				Amp		11 38 38.0	
	comp=Z,10nm,20.2s						
BRG	Berggiesshubel	75.22	346	i P	P	11 02 00.6	-0.4
BRG						11 02 08.1	
BRG						11 02 16.7	
BRG						11 04 51.0	
BRG				S	S	11 11 39.0	+1.0
BRG				SS	SS	11 16 24.0	-2.3
BRG				pmax	pmax		
	comp=Z,34nm,1.0s						
BRG				pmax	pmax		
	comp=Z,39nm,1.0s						
BRG				pmax	pmax		
	comp=Z,74nm,1.0s						
BRG				pmax	pmax		
	comp=Z,38nm,1.6s						
BRG				pmax	pmax		
	comp=E,4µm,15.8s						
BRG				MLR	MLR		
	comp=N,8µm,21.9s						
BRG				MLR	MLR		
	comp=Z,10µm,20.2s						
BRG	Berggiesshubel	75.22	346	eP	P	11 02 00.3	-0.6
	comp=Z,156nm,1.5s,baz=11,slow=5.5						
UPC	Upice	75.25	345	eP	P	11 02 01.8	+0.6
UPC				ePP	PP	11 04 52.0	+3.0
UPC				ex	x	11 06 48.6	
UPC				eS	S	11 11 39.8	+1.3
UPC				eSS	SS	11 16 31.0	+4.1
UPC				AMS	AMS	11 34 50.0	
	comp=Z,14µm,21.2s						
UPC	Upice	75.25	345	eP	P	11 02 01.8	+0.6
UPC				e		11 04 52.0	
UPC				eS	S	11 11 39.8	+1.3
UPC				eSS	SS	11 16 31.0	+4.1
UPC				MLR	MLR		
	comp=Z,14µm,21.2s						
FBE	Freiberg	75.25	346	eP	P	11 02 01.0	-0.3
	comp=Z,623nm,2.1s,baz=11,slow=5.5						
ONI	Oni	75.33	323	IAmb	IAmb	11 02 22.8	
	comp=Z,132nm,1.2s						
DPC	Dobruska-Polom	75.35	344	eP	P	11 02 02.2	+0.3
DPC				ePP	PP	11 04 53.0	+3.1
DPC				ex	x	11 06 53.8	
DPC				eS	S	11 11 39.8	+0.1
DPC				eSS	SS	11 16 35.4	+6.9
DPC				AMS	AMS	11 35 00.0	
	comp=Z,11µm,22.4s						
DPC	Dobruska-Polom	75.35	344	eP	P	11 02 02.2	+0.3
DPC				e		11 04 53.0	
DPC				eS	S	11 11 39.8	+0.1
DPC				eSS	SS	11 16 35.4	+6.9
DPC				MLR	MLR		
	comp=Z,11µm,22.4s						
STHS	Stebnicka Huta	75.35	341	eP	P	11 02 02.9	+1.1
STHS				pmax	pmax		
	comp=Z,125nm,1.4s						
STHS	Stebnicka Huta	75.35	341	eP	P	11 02 02.9	+1.1
ELMS	Elmsett, Ipswi	75.35	354	eP	P	11 02 01.0	-0.7
ELMS				IAMs_20	IAMs_20	11 28 09.2	
	comp=Z,9µm,29.3s						
ANN	Anapa	75.43	329	eP	P	11 02 02.0	-0.3
ANN				e		11 02 10.5	
ANN				e		11 04 50.1	
ANN				ePPP	PPP	11 06 41.5	
ANN				eS	S	11 11 40.4	-0.1
ANN				e		11 12 12.7	
ANN				pmax	pmax		
	comp=Z,201nm,0.7s						
ANN				pmax	pmax		
	comp=N,30nm,0.8s						
ANN				pmax	pmax		
	comp=E,22nm,0.5s						
ANN				MLR	MLR		
	comp=E,3µm,14.0s						
ANN				MLR	MLR		
	comp=Z,10µm,21.0s						
ANN				MLR	MLR		
	comp=N,20µm,17.0s						
VIS	Vishakhapatnam	75.44	280	eP	P	11 02 02.8	0.0
PVCC	Panska Ves	75.46	345	eP	P	11 02 03.5	+1.1
PVCC				ePP	PP	11 04 59.6	+8.8
PVCC				ex	x	11 06 50.2	
PVCC				eS	S	11 11 42.2	+1.5
PVCC				eSS	SS	11 16 35.5	+5.5
PVCC				AMS	AMS	11 38 50.0	
	comp=N,10µm,17.7s						
PVCC	Panska Ves	75.46	345	eP	P	11 02 03.5	+1.1
PVCC				e		11 04 59.6	
PVCC				eS	S	11 11 42.2	+1.5
PVCC				eSS	SS	11 16 35.5	+5.5
PVCC				MLR	MLR		
	comp=Z,10µm,17.7s						
BUG	Bochum--Univer	75.50	350	eP	P	11 02 02.0	-0.5
	comp=Z,632nm,2.4s,baz=11,slow=5.5						
MNGR	Mingechevir, A	75.53	320	P	P	11 02 03.6	+0.7
OKC	Ostrava-Krasne	75.53	343	eP	P	11 02 03.8	+1.0
OKC				ePP	PP	11 04 53.4	+2.0
OKC				ex	x	11 06 50.5	
OKC				eS	S	11 11 44.1	+2.5
OKC				eSS	SS	11 16 43.0	+12
OKC				AMS	AMS	11 39 00.0	
	comp=Z,13µm,17.2s						
OKC	Ostrava-Krasne	75.53	343	eP	P	11 02 03.8	+1.0
OKC				e		11 04 53.4	
OKC				eS	S	11 11 44.1	+2.5
OKC				MLR	MLR		
	comp=Z,13µm,17.2s						
NIE	Niedzica	75.54	341	eP	P	11 02 04.3	+1.4
NIE				eS	S	11 11 56.4	+15
NIE				eL	L	11 36 03.6	
	comp=Z,10µm,22.3s						
KRLC	Kraliky	75.54	344	eP	P	11 02 03.5	+0.6
KRLC				ePP	PP	11 04 53.3	+1.8
KRLC				ex	x	11 06 52.5	
KRLC				eS	S	11 11 43.3	+1.5
KRLC				AMS	AMS	11 39 30.0	
	comp=Z,8µm,19.7s						
KRLC	Kraliky	75.54	344	eP	P	11 02 02.9	0.0
KRLC				e		11 04 54.1	
KRLC				eS	S	11 11 41.6	-0.2
KRLC				eSS	SS	11 16 39.2	+7.8
KRLC				MLR	MLR		
	comp=Z,10µm,20.7s						
MYKOM	Kota Tinggi	75.57	254	⇑P	P	11 02 03.4	-0.1
MYKOM				⇓P	pP	11 02 04.9	-5.4
KASTN	Kahler Asten	75.61	350	eP	P	11 02 02.6	-0.6
	comp=Z,798nm,2.8s,baz=11,slow=5.5						
MCH1	Michaelchurch	75.63	357	eP	P	11 02 02.5	-0.8
MCH1				IAmb	IAmb	11 02 05.3	
	comp=Z,216nm,0.7s						
MCH1				IAMs_20	IAMs_20	11 31 45.9	
	comp=Z,14µm,20.4s						
MCH1	Michaelchurch	75.63	357	⇑P	P	11 02 02.9	-0.5
PMOR	Pomariorio Ree	75.67	140	eT	T	12 24 24.0	
	comp=Z,29nm,0.2s						
MORC	Moravsky Berou	75.70	343	⇑P	P	11 02 04.4	+0.5
MORC	Moravsky Berou	75.70	343	IAmb	IAmb	11 02 06.9	
	comp=Z,136nm,1.2s						
MORC	Moravsky Berou	75.70	343	eP	P	11 02 03.5	-0.4
MORC	Moravsky Berou	75.70	343	P	P	11 02 04.3	+0.5
656A	Willston	75.70	60	IAmb	IAmb	11 02 17.2	
	comp=Z,152nm,1.1s						
RSBS	Rosebush, Pemb	75.72	358	eP	P	11 02 03.6	-0.2
RSBS				IAMs_20	IAMs_20	11 30 05.5	
	comp=Z,6µm,20.0s						
SOC	Sochi	75.76	326	eP	P	11 02 03.5	-0.7
SOC				e		11 04 50.6	
SOC				ePPP	PPP	11 06 40.1	
SOC				eS	S	11 11 46.3	+2.0
SOC				pmax	pmax		
	comp=Z,196nm,0.9s						
SOC				MLR	MLR		
	comp=Z,13µm,18.0s						
MOX	Moxa	75.77	347	eP	P	11 02 03.7	-0.5
	comp=Z,412nm,2.2s,baz=11,slow=5.5						
TLIG	Tlapa	75.78	80	IAmb	IAmb	11 02 16.5	
	comp=Z,344nm,1.7s						
MONM	Monmouth	75.78	357	eP	P	11 02 02.6	-1.6
MONM				IAmb	IAmb	11 02 06.8	
	comp=Z,144nm,1.0s						
STRD	Stroud	75.83	356	eP	P	11 02 04.2	-0.3
STRD				IAmb	IAmb	11 02 06.7	
	comp=Z,235nm,0.8s						
STRD				IAMs_20	IAMs_20	11 30 34.3	
	comp=Z,7µm,22.0s						
PLN	Plauen	75.85	347	eP	P	11 02 04.3	-0.3
	comp=Z,652nm,2.4s,baz=11,slow=5.5						
TANN	Tannenbergstha	75.88	347	eP	P	11 02 04.4	-0.5
	comp=Z,309nm,1.9s,baz=11,slow=5.5						
CTA	Charters Tower	75.88	205	LR	LR	11 34 52.9	
	comp=Z,3µm,18.7s,baz=19,slow=35						
CTA	Charters Tower	75.88	205	P	P	11 02 06.9	+1.9
	comp=Z,93nm,1.2s						
CTAO	Charters Tower	75.88	205	P	P	11 02 04.7	-0.3
CTAO	Charters Tower	75.88	205	IAMs_20	IAMs_20	11 33 43.3	
	comp=Z,5µm,19.0s						
CTAO	Charters Tower	75.88	205	P	P	11 02 07.0	+1.9
CTAO	Charters Tower	75.88	205	⇑P	P	11 02 05.1	+0.1
CTAO	Charters Tower	75.88	205	P	P	11 02 04.7	-0.3
CTAO				pmax	pmax		
	comp=Z,65nm,0.9s						
KIS	Kishinev	75.90	335	⇑iP	P	11 02 04.0	-1.0
	comp=Z,1µm,6.3s						
KIS	Kishinev	75.90	335	ePP	PP	11 04 53.0	-1.6
KIS				eS	S	11 11 46.0	+0.3
KIS				eL	L	11 31 03.0	
KIS				LQM		11 36 30.0	
	comp=Z,3µm,16.0s						
KIS				LRM	MLR	11 39 04.0	
	comp=Z,5µm,18.0s						
KIS	Kishinev	75.90	335	c iP	P	11 02 04.0	-1.0
KIS				e		11 02 15.0	
KIS				e		11 04 53.0	
KIS				eS	S	11 11 46.0	+0.3
KIS				pmax	pmax		
	comp=Z,1µm,6.3s						
KIS				MLR	MLR		
	comp=Z,5µm,18.0s						
KIS				MLR	MLR		
	comp=E,4µm,17.0s						
GANJ	Ganja	75.94	321	P	P	11 02 06.1	+0.8
GUNZ	Gunzen	75.94	347	eP	P	11 02 04.8	-0.4
	comp=E,466nm,2.1s,baz=11,slow=5.5						
LANS	Liptovska Anna	75.95	342	eP	P	11 02 06.7	+1.4
MILM	Milestii Mici	75.97	335	⇑iP	P	11 02 03.0	-2.4
	comp=E,940nm,1.7s						
MILM	Milestii Mici	75.97	335	ePP	PP	11 04 52.0	-3.2
MILM	Milestii Mici	75.97	335	i P	P	11 02 03.0	-2.4
MILM				i		11 04 52.0	
MILM				ePPP	PPP	11 06 47.0	
MILM				eS	S	11 11 46.0	-0.5
MILM				ePS		11 12 25.0	
MILM				pmax	pmax		
	comp=Z,3µm,6.6s						
MILM				MLR	MLR		
	comp=Z,13µm,18.0s						
MILM				MLR	MLR		
	comp=N,10µm,19.0s						
PRU	Pruhonice	75.99	345	eP	P	11 02 05.7	+0.3
PRU				ePP	PP	11 04 57.4	+2.2
PRU				ex	x	11 06 53.3	
PRU				eS	S	11 11 46.3	-0.3
PRU				eSS	SS	11 16 50.3	+12
PRU				AMS	AMS	11 39 00.0	
	comp=N,11µm,19.1s						
PRU	Pruhonice	75.99	345	eP	P	11 02 05.7	+0.3
PRU				e		11 04 57.4	
PRU				eS	S	11 11 46.3	-0.3
PRU				MLR	MLR		
	comp=Z,11µm,19.1s						
WERN	Wernitzgruen	76.01	347	eP	P	11 02 05.3	-0.3
	comp=Z,201nm,1.4s,baz=11,slow=5.5						
GOPC	GO Pecny, Ondr	76.02	345	eP	P	11 02 06.2	+0.5
GOPC				ePP	PP	11 04 59.0	+3.4

GOPC				ex	x	11 06 53.0	
GOPC				eS	S	11 11 48.1	+1.1
GOPC				eSS	SS	11 16 50.5	+12
GOPC				AMS	AMS	11 39 10.0	
	comp=Z,12µm,18.4s						
GOPC	GO Pecny, Ondr	76.02	345	eP	P	11 02 06.2	+0.5
GOPC				e		11 04 59.0	
GOPC				eS	S	11 11 48.1	+1.1
GOPC				MLR	MLR		
	comp=Z,12µm,18.4s						
MAUC	Maruska	76.05	343	eP	P	11 02 07.0	+1.2
MAUC				ePP	PP	11 04 56.8	+1.0
MAUC				eS	S	11 11 53.3	+6.0
MAUC				eSS	SS	11 16 56.3	+17
MAUC				AMS	AMS	11 39 20.0	
	comp=Z,22µm,17.5s						
NKC	Novy Kostel	76.06	347	eP	P	11 02 06.5	+0.6
NKC				ePP	PP	11 04 58.4	+2.6
NKC				ex	x	11 06 55.1	
NKC				eS	S	11 11 37.4	-10
NKC				eSS	SS	11 16 53.8	+15
NKC				AMS	AMS	11 33 40.0	
	comp=Z,13µm,24.3s						
NKC	Novy Kostel	76.06	347	eP	P	11 02 06.5	+0.6
NKC				e		11 04 58.4	
NKC				eS	S	11 11 37.4	-10
NKC				MLR	MLR		
	comp=Z,13µm,24.3s						
SWN1	Swindon	76.07	356	eP	P	11 02 03.0	-2.8
SWN1				IAmb	IAmb	11 02 08.2	
	comp=Z,447nm,1.3s						
SWN1				IAMs_20	IAMs_20	11 30 55.1	
	comp=Z,8µm,20.8s						
BUR08	Bucovina Ar. S	76.18	338	IAmb	IAmb	11 02 09.6	
	comp=Z,128nm,0.8s						
BURAR	Bucovina Array	76.20	338	⇑P	P	11 02 08.0	+1.2
BURAR	Bucovina Array	76.20	338	P	P	11 02 08.0	+1.2
TRPA	Tarpa	76.31	340	⇓P	P	11 02 08.5	+1.3
SIM	Simferopol'	76.31	331	eP	P	11 02 08.4	+1.0
SIM				eS	S	11 11 49.0	-1.3
SIM				pmax	pmax		
	comp=Z,181nm,0.8s						
VRAC	Vranov	76.31	344	⇓P	P	11 02 08.3	+1.0
VRAC	Vranov	76.31	344	LR	LR	11 39 02.6	
	comp=Z,9µm,20.4s,baz=9.5,slow=38						
VRAC	Vranov	76.31	344	eP	P	11 02 07.6	+0.3
VRAC	Vranov	76.31	344	P	P	11 02 08.3	+1.0
MANZ	Manzenberg	76.34	347	eP	P	11 02 06.7	-0.8
	comp=Z,30nm,1.5s,baz=11,slow=5.5						
KECS	Kecovo	76.39	341	eP	P	11 02 09.1	+1.3
KECS				pmax	pmax		
	comp=Z,118nm,1.0s						
KECS	Kecovo	76.39	341	eP	P	11 02 09.1	+1.3
AHRW	Bad Neuenahr-A	76.40	350	eP	P	11 02 07.4	-0.4
	comp=Z,1µm,2.9s,baz=11,slow=5.5						
MEM	Membach	76.44	351	dP	P	11 02 06.4	-1.6
BTNL	Ternell	76.45	351	dP	P	11 02 07.4	-0.7
VASR	Vaslui	76.49	336	⇑P	P	11 02 10.2	+1.9
BSTI	Sart Tilman	76.51	351	dP	P	11 02 08.0	-0.4
TREC	Trest	76.51	345	eP	P	11 02 09.1	+0.6
TREC				ePP	PP	11 05 02.0	+2.3
TREC				ex	x	11 07 00.1	
TREC				eS	S	11 11 53.1	+0.7
TREC				eSS	SS	11 16 58.4	+12
TREC				AMS	AMS	11 39 40.0	
	comp=Z,12µm,18.9s						
TREC	Trest	76.51	345	eP	P	11 02 09.1	+0.6
TREC				e		11 05 02.0	
TREC				eS	S	11 11 53.1	+0.7
TREC				MLR	MLR		
	comp=Z,12µm,18.9s						
ROTZ	Rotzenmuhle	76.55	347	eP	P	11 02 08.1	-0.6
	comp=Z,62nm,1.8s,baz=11,slow=5.5						
BASI	Baing, Sumba	76.56	233	P	P	11 02 08.6	-0.4
	comp=Z,335nm,1.8s,comp=Z,7µm						
JAVC	Velka Javorina	76.56	343	eP	P	11 02 10.2	+1.4
TNS	Taunus Mts	76.57	349	eP	P	11 02 08.1	-0.7
	comp=Z,538nm,2.6s,baz=11,slow=5.5						
KRUC	Moravsky	76.59	344	eP	P	11 02 08.9	+0.1
LKRN	Lenkeran, Azer	76.61	318	P	P	11 02 09.4	+0.3
BCLA	Clavier	76.69	351	dP	P	11 02 09.4	0.0
BHOU	Houvegnez	76.69	351	dP	P	11 02 09.6	+0.1
SNF	Seneffe	76.70	352	dP	P	11 02 09.8	+0.4
VYHS	Vyhne	76.70	342	eP	P	11 02 10.3	+0.8
VYHS				pmax	pmax		
	comp=Z,192nm,1.2s						
VYHS	Vyhne	76.70	342	eP	P	11 02 10.3	+0.8
PLAI	Plampang	76.74	236	P	P	11 02 09.8	-0.3
	comp=Z,153nm,0.8s						
PLAI	Plampang	76.74	236	P	P	11 02 08.3	-1.8
	comp=Z,151nm,0.8s,comp=Z,3µmcomp=Z,4µm						
BGES	Gesves	76.75	352	dP	P	11 02 09.2	-0.5
GRA1	Grafenberg Arr	76.75	347	IAmb	IAmb	11 02 12.6	
	comp=Z,275nm,1.6s						
GRA1				IAMs_20	IAMs_20	11 38 55.5	
	comp=Z,9µm,20.0s						
GRF	Grafenberg Arr	76.75	347	eP	P	11 02 09.1	-0.7
	comp=Z,359nm,1.7s,baz=11,slow=5.5						
GRFO	Grafenberg	76.75	347	P	P	11 02 10.3	+0.5
GRFO				IAmb	IAmb	11 02 12.6	
	comp=Z,284nm,1.6s						
GRFO				IAMs_20	IAMs_20	11 38 55.5	
	comp=Z,9µm,20.0s						
GRFO	Grafenberg	76.75	347	P	P	11 02 10.3	+0.5
GRFO				pmax	pmax		
	comp=Z,284nm,1.6s						
GRFO				MLR	MLR		
	comp=Z,9µm,20.0s						
BMRD	Maredsous	76.86	352	dP	P	11 02 10.4	+0.1
TESR	Tescani	76.90	336	⇑P	P	11 02 11.5	+0.8
ARCR	ARCALIA	76.90	338	⇑P	P	11 02 12.1	+1.4
LHMI	Lhok Sumawe	76.92	261	P	P	11 02 15.8	+4.6
LHMI	Lhok Sumawe	76.92	261	P	P	11 02 11.9	+0.7
	comp=Z,1µm,0.9s,comp=Z,12µmcomp=Z,11µm						
SMOL	Smolenice	76.94	343	eP	P	11 02 12.4	+1.6
SMOL				pmax	pmax		
	comp=Z,114nm,1.2s						
RCHB	Rochefort	76.96	351	dP	P	11 02 10.8	-0.1
KHC	Kasperske Hory	76.97	346	IAmb	IAmb	11 02 14.1	
	comp=Z,166nm,1.2s						
KHC	Kasperske Hory	76.97	346	eP	P	11 02 11.6	+0.5
KHC				ePP	PP	11 05 06.2	+2.7
KHC				ex	x	11 07 02.5	
KHC				eS	S	11 11 53.4	-4.1
KHC				eSS	SS	11 16 58.5	+5.6
KHC				AMS	AMS	11 36 40.0	
	comp=Z,13µm,20.7s						
KHC	Kasperske Hory	76.97	346	⇑P	P	11 02 11.0	0.0
KHC	Kasperske Hory	76.97	346	eP	P	11 02 11.6	+0.5
KHC				e		11 05 06.2	
KHC				eS	S	11 11 53.4	-4.1
KHC				eSS	SS	11 16 58.5	+5.6
KHC				MLR	MLR		
	comp=Z,13µm,20.7s						
GNI	Garni	76.97	321	LR	LR	11 40 17.0	
	comp=Z,23µm,21.1s,baz=33,slow=39						
GNI	Garni	76.97	321	P	P	11 02 12.2	+0.9
GNI	Garni	76.97	321	⇑P	P	11 02 12.9	+1.5
GNI	Garni	76.97	321	c iP	P	11 02 12.4	+1.0
GNI				pmax	pmax		
	comp=Z,74nm,1.0s						
GNI				MLR	MLR		
	comp=Z,22µm,21.0s						
GNI	Garni	76.97	321	P	P	11 02 12.7	+1.3
GNI	Garni	76.97	321	P	P	11 02 12.9	+1.5
DSRI	Dabo	76.98	252	P	P	11 02 11.1	-0.4
	comp=Z,92nm,1.5s,comp=Z,3µmcomp=Z,6µm						
PSZ	Piszkesteto	77.05	341	⇑P	P	11 02 12.6	+1.0
PSZ	Piszkesteto	77.05	341	IAmb	IAmb	11 02 15.3	
	comp=Z,206nm,1.2s						
PSZ	Piszkesteto	77.05	341	P	P	11 02 12.6	+1.0
DOU	Dourbes	77.08	352	dP	P	11 02 11.6	+0.1
MODS	Modra-Piesok	77.10	343	eP	P	11 02 12.8	+1.0
MODS				pmax	pmax		
	comp=Z,551nm,1.3s						
MODS	Modra-Piesok	77.10	343	eP	P	11 02 12.8	+1.0
GHRR		77.13	336	⇑P	P	11 02 13.0	+1.1
CKRC	Cesky Krumlov	77.16	345	eP	P	11 02 12.5	+0.4
CKRC				ePP	PP	11 05 08.4	+3.3
CKRC				ex	x	11 07 06.6	
CKRC				eS	S	11 11 59.4	-0.1
CKRC				eSS	SS	11 17 11.5	+16
CKRC				AMS	AMS	11 38 50.0	
	comp=Z,11µm,21.0s						
CKRC	Cesky Krumlov	77.16	345	eP	P	11 02 12.5	+0.4
CKRC				e		11 05 08.4	
CKRC				eS	S	11 11 59.4	-0.1
CKRC				MLR	MLR		
	comp=Z,11µm,21.0s						
VLDR	Vladesti	77.16	335	⇓P	P	11 02 13.0	+0.9
GEC2	GERESS Array S	77.23	346	IAmb	IAmb	11 02 15.1	
	comp=Z,143nm,1.3s						
GEC2	GERESS Array S	77.23	346	eP	P	11 02 12.0	-0.5
	comp=Z,165nm,1.3s,baz=11,slow=5.5						
GERES	GERESS Array B	77.23	346	P	P	11 02 12.7	+0.1
	comp=Z,22nm,0.5s,baz=33,slow=5.8,SNR=74						
GERES				LR	LR	11 38 00.1	
	comp=Z,12µm,22.0s,baz=24,slow=37						
	comp=Z,22nm,0.5s						
DWPF	Disney Wildern	77.28	60	P	P	11 02 13.5	+0.4
DWPF				IAmb	IAmb	11 02 15.4	
	comp=Z,118nm,1.1s						
DWPF	Disney Wildern	77.28	60	IAMs_20	IAMs_20	11 41 02.1	
	comp=Z,10µm,18.0s						
DWPF	Disney Wildern	77.28	60	⇑P	P	11 02 13.6	+0.4
DWPF	Disney Wildern	77.28	60	P	P	11 02 12.1	-1.0
	baz=324						
DWPF				S	S	11 11 59.4	-2.0
	baz=324						
ZST	Bratislava	77.30	343	eP	P	11 02 14.6	+1.7
ZST	Bratislava	77.30	343	eP	P	11 02 14.6	+1.7
TSI	Tuntungan	77.33	259	P	P	11 02 13.2	-0.3
	comp=Z,288nm,0.8s,comp=Z,8µm						
WLF	Walferdange	77.36	351	IAmb	IAmb	11 02 15.9	
	comp=Z,114nm,1.2s						
WLF	Walferdange	77.36	351	dP	P	11 02 13.5	+0.3
WLF	Walferdange	77.36	351	eP	P	11 02 12.7	-0.5
	comp=Z,132nm,1.5s,baz=11,slow=5.5						
PANC	Panciu	77.37	336	⇓P	P	11 02 14.2	+0.9
PPT	Papeete	77.38	143	P	P	11 02 14.8	+1.3
	comp=Z,25nm,0.8s,baz=5.0,slow=11,SNR=1.7						
PPT				LR	LR	11 28 46.4	
	comp=Z,15µm,21.5s,baz=303,slow=30						
	comp=Z,25nm,0.8s						
PPT2	Papeete2	77.40	143	eP	P	11 02 16.7	+3.0
	comp=Z,711nm,24.8s						
PPT2				eS	S	11 12 06.5	+3.8
	comp=Z,6µm,31.5s						
PPT2				eSS	SS	11 17 06.9	+4.8
	comp=Z,3µm,25.0s						
PPT2				eLR	LR	11 26 13.6	
	comp=Z,36µm,23.0s						
CJR	Cluj-Napoca	77.42	338	⇓P	P	11 02 14.4	+0.8
CJR	Cluj-Napoca	77.42	338	P	P	11 02 14.4	+0.8
SRBI	Singaraja	77.42	238	P	P	11 02 13.0	-0.9
SRO	Srobarova	77.45	342	eP	P	11 02 15.4	+1.7
SRO				pmax	pmax		
	comp=Z,165nm,1.2s						
SRO	Srobarova	77.45	342	eP	P	11 02 15.4	+1.7
PPBI	Pangkal Pinang	77.45	249	P	P	11 02 13.6	-0.5
	comp=Z,46nm,0.8s,comp=Z,6µm						
TIAR	Tiarei	77.45	143	eP	P	11 02 15.0	+1.0
	comp=Z,7.2nm,0.9s						
VRI	Vrincioaia	77.48	336	⇓P	P	11 02 14.7	+0.7
VRI	Vrincioaia	77.48	336	P	P	11 02 14.6	+0.7
OZUR		77.50	337	⇓P	P	11 02 14.8	+0.8
TUDR		77.50	335	⇑P	P	11 02 15.5	+1.5
RAR	Rarotonga	77.51	153	LR	LR	11 29 44.6	
	comp=Z,12µm,20.6s,baz=322,slow=30						
PLOR	Plostina	77.51	336	⇑P	P	11 02 14.6	+0.4
PLOR	Plostina	77.51	336	P	P	11 02 14.6	+0.4
NAX	Nakhchivan	77.53	320	P	P	11 02 14.7	+0.3
DRGR		77.54	339	⇓P	P	11 02 15.1	+0.7
DRGR		77.54	339	P	P	11 02 15.1	+0.7
MARR	Marisel-Cluj	77.56	339	⇓P	P	11 02 15.2	+0.7
TLCR		77.58	334	⇑P	P	11 02 15.6	+1.1
TLCR		77.58	334	P	P	11 02 15.5	+1.1
COVR	Voineasa-Covas	77.63	336	⇓P	P	11 02 16.4	+1.6
PSI	Prapat	77.67	258	P	P	11 02 16.5	+1.0
ABJI	Asem Bagus	77.69	239	P	P	11 02 13.4	-2.0
	comp=Z,84nm,2.5s,comp=Z,3µm						
KNRA	Kununurra	77.70	223	P	P	11 02 16.8	+1.5
	comp=Z,86nm,1.2s						
DOPR	Dopca	77.71	337	⇑P	P	11 02 16.1	+0.9
RPSI	Rantau Prapat	77.75	258	IAmb	IAmb	11 02 17.9	
	comp=Z,96nm,0.9s						
CFR	Carcaliu	77.77	335	⇑P	P	11 02 16.4	+0.8
CFR	Carcaliu	77.77	335	P	P	11 02 16.3	+0.8
CONA	Conrad Observa	77.77	344	i pP	P	11 02 16.6	+0.9
	comp=Z,137nm,1.2s,SNR=33						
BISRR	Bisoca	77.78	336	⇑P	P	11 02 17.1	+1.3
KCSI	Kotacane, Aceh	77.78	260	P	P	11 02 14.4	-1.6
	comp=Z,37nm,1.2s,comp=Z,2µm						
GRER		77.87	336	⇓P	P	11 02 17.6	+1.5
STU	Stuttgart	77.91	349	IAMs_20	IAMs_20	11 35 19.1	
	comp=Z,8µm,22.0s						
STU	Stuttgart	77.91	349	eP	P	11 02 15.3	-0.9
	comp=Z,1µm,2.6s,baz=11,slow=5.5						
RONA	Rosalia, Austr	77.92	344	i pP	P	11 02 17.4	+1.0
	comp=Z,88nm,1.0s,SNR=41						
JURR	Jurilovca	77.96	334	⇓P	P	11 02 18.1	+1.5
BLJI	Banyuglugur	77.98	240	P	P	11 02 16.4	-0.6
	comp=Z,54nm,1.1s,comp=Z,2µm						
TPGR	Topolog	77.99	335	⇓P	P	11 02 17.5	+0.6
NEHR	Nehoiu	78.00	336	⇑P	P	11 02 17.5	+0.6
MLSI	Meulaboh, Aceh	78.01	261	P	P	11 02 15.3	-2.0
	comp=Z,70nm,0.9s,comp=Z,333nm						
MLR	Muntele Rosu	78.02	336	⇑P	P	11 02 18.6	+1.5
MLR	Muntele Rosu	78.02	336	LR	LR	11 41 05.0	
	comp=Z,20µm,18.5s,baz=18,slow=39						
MLR	Muntele Rosu	78.02	336	IAmb	IAmb	11 02 29.8	
	comp=Z,77nm,0.9s						
MLR	Muntele Rosu	78.02	336	P	P	11 02 18.6	+1.5
MOA	Molln	78.11	345	epP	P	11 02 17.8	+0.4
	comp=Z,47nm,1.4s,SNR=12						
QIS	Mount Isa	78.23	211	P	P	11 02 21.1	+2.8
FUR	Furstenfeldbru	78.24	347	eP	P	11 02 17.4	-0.8
	comp=Z,382nm,1.9s,baz=11,slow=5.5						
SIRR	Siria	78.27	340	⇓P	P	11 02 19.3	+1.0
HARR	Harsova	78.27	335	⇑P	P	11 02 19.8	+1.5
HARR	Harsova	78.27	335	P	P	11 02 19.8	+1.5
UWJI	Ujung Watu	78.28	243	P	P	11 02 18.4	-0.3
	comp=Z,110nm,2.0s,comp=Z,4µm						
VOIR		78.29	337	⇓P	P	11 02 19.7	+1.2
VOIR		78.29	337	P	P	11 02 19.7	+1.2
CMIG	Matias Romero	78.35	77	LR	LR	11 32 59.9	
	comp=Z,10µm,21.5s,baz=302,slow=33						
BIOA	Bad Ischl, Aus	78.36	345	i pP	P	11 02 19.2	+0.4
	comp=Z,36nm,0.9s,SNR=13						
TIRR	Tirgusor	78.36	334	⇑P	P	11 02 19.9	+1.0
TIRR	Tirgusor	78.36	334	P	P	11 02 19.8	+1.0
TLBR	Topalu	78.38	335	⇑P	P	11 02 19.9	+0.9
BKNI	Bangkinang	78.39	255	P	P	11 02 21.6	+2.2
	comp=Z,230nm,1.1s						
JSA	Saint Aubin	78.41	356	eP	P	11 02 18.1	-0.9
JSA				IAMs_20	IAMs_20	11 32 15.7	
	comp=Z,8µm,25.0s						
JSA	Saint Aubin	78.41	356	⇑P	P	11 02 18.6	-0.4
SECR		78.42	336	⇑P	P	11 02 19.4	+0.2
RJOB	Jochberg	78.44	346	eP	P	11 02 18.6	-0.8
	comp=Z,69nm,0.9s,baz=11,slow=5.5						
BFO	Black Forest	78.45	349	P	P	11 02 18.3	-1.0
BFO				IAmb	IAmb	11 02 21.6	
	comp=Z,245nm,1.8s						
BFO				IAMs_20	IAMs_20	11 39 06.3	
	comp=Z,6µm,20.0s						
BFO	Black Forest	78.45	349	⇑P	P	11 02 18.9	-0.4
BFO	Black Forest	78.45	349	P	P	11 02 18.3	-1.0
BFO				pmax	pmax		
	comp=Z,245nm,1.8s						
BFO				MLR	MLR		
	comp=Z,6µm,20.0s						
BFO	Black Forest	78.45	349	eP	P	11 02 18.5	-0.8
	comp=Z,531nm,2.3s,baz=11,slow=5.5						
MTUR	Matau	78.49	337	⇓P	P	11 02 21.0	+1.4
MTUR	Matau	78.49	337	P	P	11 02 21.0	+1.4
ARSA	Arzberg	78.49	344	i pP	P	11 02 20.3	+0.8
	comp=Z,96nm,1.0s,SNR=30						
ARSA	Arzberg	78.49	344	⇑P	P	11 02 20.4	+0.8
ARSA				⇑P	P	11 02 20.4	+0.8
AMRR	Amara	78.50	335	⇑P	P	11 02 20.1	+0.5
AMRR	Amara	78.50	335	P	P	11 02 20.1	+0.5
HYB	Hyderabad	78.52	284	eP	P	11 02 19.7	-0.5
HYB				IAmb	IAmb	11 02 21.9	
	comp=Z,329nm,1.1s						
HYB	Hyderabad	78.52	284	⇑eP	P	11 02 19.9	-0.3
HYB				IVmB_BB		11 02 20.9	
	comp=Z,3µm,2.4s						
HYB				ePP	PP	11 05 18.9	+1.3
HYB				eS	S	11 12 13.5	-1.6
HYB				IVMs_BB	IVMs_BB	11 40 03.5	
	comp=Z,3µm,18.1s						
MFTR	Murfatlar	78.62	334	⇑P	P	11 02 21.2	+1.0
KOPT	Kop Dagi	78.65	324	IAmb	IAmb	11 02 38.9	
	comp=Z,149nm,0.9s						
SURR	Surduc	78.66	339	⇑P	P	11 02 21.5	+1.1
EFOR	EFORIE	78.66	334	⇑P	P	11 02 22.1	+1.6
ECH	Echery	78.69	350	IAMs_20	IAMs_20	11 42 42.1	
	comp=Z,6µm,20.0s						
ECH	Echery	78.69	350	⇑P	P	11 02 20.1	-0.5
ICOR	Ion Corvin	78.84	335	⇑P	P	11 02 22.3	+0.8
UBR	Ueberruh	78.87	348	eP	P	11 02 20.7	-1.0
	comp=Z,226nm,1.6s,baz=11,slow=5.5						
BZS	Buzias	78.89	339	⇑P	P	11 02 21.9	+0.1
BZS	Buzias	78.89	339	P	P	11 02 21.9	+0.1
MANR	Mangalia	78.91	334	⇑P	P	11 02 23.2	+1.3
MORH	Mrgy, Hungar	78.93	342	⇓P	P	11 02 21.7	-0.2
DIKM	Dikmen	78.95	329	⇑P	P	11 02 23.4	+1.2
RETA	Reutte	78.97	347	i pP	P	11 02 22.9	+0.7
	comp=Z,50nm,1.2s,SNR=13						
KBA	Koelnbreinsper	79.00	345	i pP	P	11 02 23.5	+0.9
	comp=Z,176nm,0.7s,SNR=123						
KBA	Koelnbreinsper	79.00	345	⇑P	P	11 02 23.2	+0.7
WATA	Walderalm	79.01	347	i pP	P	11 02 22.8	+0.2
	comp=Z,53nm,0.7s,SNR=29						
BHUJ	Bhuj	79.06	294	eP	P	11 02 23.9	+0.9
MOTA	Moosalm	79.07	347	i pP	P	11 02 23.0	+0.1
	comp=Z,166nm,1.3s,SNR=34						
WTTA	Wattenberg	79.07	347	i pP	P	11 02 23.1	+0.2
	comp=Z,173nm,1.1s,SNR=48						
SMRI	Semarang	79.08	243	P	P	11 02 21.8	-1.4
	comp=Z,160nm,2.2s						
SOKA	Soboth	79.12	344	i pP	P	11 02 23.7	+0.6
	comp=Z,182nm,1.3s,SNR=64						
KOGS	Kog	79.14	343	i P	P	11 02 23.5	+0.4
PSN	Preselentsi	79.15	334	i P	P	11 02 33.3	+10
PWJI	Pagerwojo	79.16	241	P	P	11 02 20.9	-2.6
	comp=Z,112nm,1.1s						
SQTA	Sankt Quirin	79.18	347	i pP	P	11 02 23.8	+0.4
	comp=Z,146nm,1.1s,SNR=32						
SDSI	Sungai Dareh	79.18	254	P	P	11 02 21.9	-1.8
GEVA	Gevas	79.21	322	IAmb	IAmb	11 02 27.0	
	comp=Z,168nm,1.5s						
DAVA	Damuels	79.29	348	i pP	P	11 02 24.5	+0.4
	comp=Z,43nm,1.2s,SNR=11						
DAVA	Damuels	79.29	348	⇑P	P	11 02 23.8	-0.3
CLF	Chambon-Foret	79.32	353	IAMs_20	IAMs_20	11 37 38.2	
	comp=Z,8µm,20.0s						
CLF	Chambon-Foret	79.32	353	⇑P	P	11 02 24.4	+0.4
061Z	Ochoppi	79.36	61	IAmb	IAmb	11 02 34.6	
	comp=Z,290nm,1.1s						
061Z	Ochoppi	79.36	61	S	S	11 12 24.9	+1.1
	baz=324						
OBKA	Obir	79.37	344	i pP	P	11 02 25.0	+0.5
	comp=Z,123nm,0.7s,SNR=43						
OBKA	Obir	79.37	344	⇑iP	P	11 02 24.5	0.0
GURO	Guroymak-BITLI	79.39	322	IAmb	IAmb	11 02 28.2	
	comp=Z,199nm,1.7s						
MYKA	Terra Mystica	79.39	345	i P	P	11 02 24.5	-0.1
	comp=Z,72nm,1.5s,SNR=15						
WRAB	Tennant Creek	79.42	216	P	P	11 02 23.9	-0.9
WRAB	Tennant Creek	79.42	216	IAMs_20	IAMs_20	11 33 14.4	
	comp=Z,8µm,21.0s						
WRAB	Tennant Creek	79.42	216	P	P	11 02 24.8	0.0
WRAB	Tennant Creek	79.42	216	⇓P	P	11 02 24.5	-0.3
WRAB				⇓P	pP	11 02 26.9	-4.8
WRAB				⇑P	PcP	11 02 27.3	-5.5
WRAB	Tennant Creek	79.42	216	d iP	P	11 02 24.9	+0.1
WRAB				pmax	pmax		
	comp=Z,55nm,1.2s						
HERR	Herculane	79.42	339	⇑P	P	11 02 24.8	+0.1
WRA	Warramunga Arr	79.43	216	P	P	11 02 24.0	-0.8
	comp=Z,41nm,1.1s,baz=30,slow=6.4,SNR=131						
WRA				S	S	11 12 34.2	+10
	comp=Z,1.7nm,1.2s,baz=20,slow=9.0,SNR=4.8						
WRA				PKKPbc	PKKPbc	11 21 13.1	+0.1
	comp=Z,2.1nm,0.9s,baz=235,slow=1.5,SNR=9.3						
WRA				LR	LR	11 33 58.1	
	comp=Z,6µm,21.5s,baz=14,slow=33						
	comp=Z,41nm,1.1s						
FETA	Feichten	79.44	347	i pP	P	11 02 25.3	+0.4
	comp=Z,104nm,1.2s,SNR=24						
SRE	Strehaia	79.45	338	⇑P	P	11 02 26.5	+1.6
SRE	Strehaia	79.45	338	P	P	11 02 26.4	+1.6
ABTA	Abfaltersbach	79.45	346	i pP	P	11 02 25.0	+0.1
	comp=Z,131nm,1.1s,SNR=44						
COPA	Copaceanca	79.48	336	⇓P	P	11 02 24.7	-0.2
SNSI	Sinabang, Aceh	79.53	260	P	P	11 02 24.2	-1.5
	comp=Z,237nm,1.2s,comp=Z,6µmcomp=Z,8µm						
PRED	Cave del Predi	79.59	345	IAmb	IAmb	11 02 28.1	
	comp=Z,127nm,0.8s						
PTCC	Patocco-Chiusa	79.66	345	⇑P	P	11 02 25.5	-0.5
GSI	Gunungsitoli	79.67	258	IAmb	IAmb	11 02 38.0	
	comp=Z,180nm,1.1s						
GSI	Gunungsitoli	79.67	258	P	P	11 02 28.4	+2.0
GSI	Gunungsitoli	79.67	258	P	P	11 02 24.6	-1.8
	comp=Z,137nm,0.9s,comp=Z,9µm						
RAZG	Razgrad	79.69	335	⇓P	P	11 02 26.2	0.0
FRGS	Fruska Gora	79.71	341	⇑P	P	11 02 26.6	+0.4
FRGS	Fruska Gora	79.71	341	⇑iP	P	11 02 26.5	+0.2
PDSI	Padang	79.73	255	P	P	11 02 24.0	-2.7
	comp=Z,44nm,2.2s,comp=Z,5µmcomp=Z,5µm						
TEIG	Tepich	79.75	70	P	P	11 02 25.7	-1.1
TEIG	Tepich	79.75	70	⇑P	P	11 02 26.5	-0.3
TOKA	Tokat	79.76	327	IAmb	IAmb	11 02 30.2	
	comp=Z,138nm,0.8s						
UGM	Wanagama	79.76	242	P	P	11 02 25.4	-1.4
	comp=Z,196nm,1.8s						
DAVOX	Davos/Dischmat	79.78	348	LR	LR	11 38 00.1	
	comp=Z,10µm,21.8s,baz=14,slow=36						
VLAD	Vladila	79.80	337	⇑P	P	11 02 27.8	+1.1
LJU	Ljubljana	79.82	344	i P	P	11 02 26.8	0.0
LJU				i PP	PP	11 05 29.3	+1.9
LJU				e		11 07 36.2	
LJU				e		11 08 50.5	
LJU				e		11 12 27.2	
LJU				e		11 17 48.0	
EIDS	Eidsvold	79.86	199	P	P	11 02 30.2	+3.2
CRES	Cresnjev	79.88	344	⇑iP	P	11 02 27.2	0.0
CIMO	Cimolais	79.89	346	IAmb	IAmb	11 02 52.1	
	comp=Z,50nm,1.0s						
FUORN	Ofenpass-Fuorn	79.89	347	IAmb	IAmb	11 02 30.6	
	comp=Z,121nm,1.2s						
FUORN				IAMs_20	IAMs_20	11 37 54.9	
	comp=Z,6µm,22.0s						
SABO	M.te Sabotino	80.03	345	IAmb	IAmb	11 02 31.6	
	comp=Z,345nm,2.0s						
SZH	Strazhica	80.11	336	i P	P	11 02 28.1	-0.4
CEY	Cerknica	80.14	344	⇑iP	P	11 02 28.5	-0.1
KPJI	Karang Pucung	80.14	244	P	P	11 02 26.8	-2.1
	comp=Z,42nm,1.1s						
TUE	Stuetta	80.16	348	IAmb	IAmb	11 02 31.9	
	comp=Z,99nm,1.0s						
A052A	Srbac	80.21	342	⇑iP	P	11 02 29.0	+0.1
BOJS	Bojanci	80.23	344	i P	P	11 02 29.2	+0.2
BOJS				i PP	PP	11 05 31.9	+1.2
BOJS				e		11 07 40.2	
BOJS				e		11 08 54.2	
BOJS				e		11 12 31.7	
BOJS	Bojanci	80.23	344	⇑iP	P	11 02 29.4	+0.4
CTI	Castel Tesino	80.26	346	IAmb	IAmb	11 02 31.5	
	comp=Z,101nm,1.0s						
TRI	Trieste	80.27	345	IAmb	IAmb	11 02 31.3	
	comp=Z,138nm,1.3s						
TRI	Trieste	80.27	345	⇑P	P	11 02 28.7	-0.6
PBSI	Pulau Batu	80.33	257	P	P	11 02 28.2	-1.8
	comp=Z,105nm,1.4s,comp=Z,4µm						
TEKS	Tekeris	80.35	341	⇑iP	P	11 02 28.9	-0.8
SKDS	Skadanscina	80.39	345	⇑iP	P	11 02 29.5	-0.4
POO	Poona	80.41	288	eP	P	11 02 30.2	-0.2
POO				IAmb	IAmb	11 02 32.2	
	comp=Z,244nm,0.9s						
A051A	Mrakovica	80.41	342	⇑iP	P	11 02 30.0	-0.1
MASI	Maura Aman, Be	80.49	252	P	P	11 02 29.7	-1.1
	comp=Z,144nm,0.9s,comp=Z,5µm						
MPEP	Malo Peshtene	80.56	337	i P	P	11 02 31.5	+0.6
BLY	Banja Luka	80.61	342	⇑P	P	11 02 31.2	+0.1
BLY	Banja Luka	80.61	342	⇑iP	P	11 02 31.4	+0.3
DIVS	Divibare	80.69	340	⇑iP	P	11 02 31.6	0.0
KSI	Kapahiang	80.70	251	P	P	11 02 29.7	-2.3
	comp=Z,65nm,0.9s						
SALO	Salr	80.84	347	⇑P	P	11 02 32.0	-0.3
SISI	Saibi	80.87	256	P	P	11 02 32.4	-0.4
HAPS	Han Pijesak,BI	80.91	341	⇑iP	P	11 02 33.4	+0.5

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MGRS  Mrkonjic Grad     80.95 342⇑iP     P         11 02 33.7 +0.7
A050A Klekovaca         80.99 343⇑iP     P         11 02 33.6 +0.4
BBLS  Lazi&#263;i       81.03 340⇑iP     P         11 02 34.0 +0.6
FITZ  Fitzroy Crossi    81.17 224  P     P         11 02 35.1 +0.9
FITZ  Fitzroy Crossi    81.17 224 ⇑P     P         11 02 34.1 -0.1
FITZ                              ⇑P     P         11 02 34.1 -0.1
BR131 Keskin Array S    81.21 329c iP    P         11 02 34.5  0.0
BR131 Keskin Array S    81.21 329  P     P         11 02 34.6  0.0
      SNR=48
BRTR  Keskin Array B    81.21 329  P     P         11 02 34.1 -0.5
      comp=Z,143nm,0.7s,baz=50,slow=2.7,SNR=163
BRTR                               LR    LR        11 43 57.4
      comp=Z,7µm,19.1s,baz=25,slow=40
      comp=Z,143nm,0.7s
BRTR  Keskin Array B    81.21 329 i P    P         11 02 34.7 +0.1
BRTR                               pmax  pmax
      comp=Z,148nm,0.7s
PGB   Panagyurishte     81.22 337 i P    P         11 02 35.0 +0.5
MDUB  Mudurnu           81.28 331 ⇑P     P         11 02 35.1 +0.3
BNN   Bunyan            81.29 327 ⇑P     P         11 02 35.6 +0.5
BNN                               ⇑P     PcP       11 02 35.7 -5.5
ANTO  Ankara            81.35 330  P     P         11 02 35.6 +0.4
ANTO                               IAmb  IAmb      11 02 38.9
      comp=Z,148nm,0.8s
ANTO  Ankara            81.35 330  IAMs_20 IAMs_20 11 42 54.1
      comp=Z,7µm,20.0s
ANTO  Ankara            81.35 330 ⇑P     P         11 02 35.9 +0.7
ANTO  Ankara            81.35 330  P     P         11 02 35.6 +0.4
ANTO                               pmax  pmax
      comp=Z,148nm,0.8s
ANTO                               MLR   MLR
      comp=Z,7µm,20.0s
ANTO  Ankara            81.35 330  P     P         11 02 35.9 +0.7
BR231 Keskin MP Arra    81.38 330  IAmb  IAmb      11 02 39.1
      comp=Z,122nm,0.8s
VTS   Vitosha           81.38 337 ⇑sP    sP        11 02 49.9 +4.8
VTS   Vitosha           81.38 337 i P    P         11 02 35.8 +0.4
RMQ   Roma              81.43 201  P     P         11 02 38.7 +3.2
SJES  Sjenica           81.49 340⇑iP     P         11 02 36.5 +0.5
PLE   Pljevlja          81.55 340⇑iP     P         11 02 36.4 +0.1
MONC  Moncucco Torin    81.71 349 ⇑P     P         11 02 36.8 -0.2
UPM   Unac-Piva         81.77 341⇑iP     P         11 02 38.5 +1.0
UPM   Unac-Piva         81.77 341⇑iP     P         11 02 36.9 -0.6
SSB   Saint Sauveur     81.86 351  IAMs_20 IAMs_20 11 37 11.5
      comp=Z,9µm,22.0s
SSB   Saint Sauveur     81.86 351 ⇑P     P         11 02 37.9 +0.1
BNI   Bardonecchia      81.87 350  IAmb  IAmb      11 03 09.7
      comp=Z,133nm,1.0s
BNI                                IAMs_20 IAMs_20 11 42 27.2
      comp=Z,7µm,20.0s
BNI   Bardonecchia      81.87 350 ⇑P     P         11 02 38.9 +0.9
IVA   Berane            81.88 340⇑iP     P         11 02 38.1 +0.1
BBSR  BB Station        81.89  46  P     P         11 02 36.3 -1.7
BBSR                               IAmb  IAmb      11 02 39.9
      comp=Z,118nm,1.1s
NGCH  Negor - Chabah    81.97 301  P     P         11 02 38.2 -0.3
KOME  Kolasin           81.98 340⇑iP     P         11 02 38.7 +0.2
RAO   Raoul Island      82.02 171  LR    LR        11 32 42.1
      comp=Z,11µm,21.0s,baz=8.0,slow=31
BORA  Eskisehir         82.04 331  IAmb  IAmb      11 02 41.5
      comp=Z,145nm,0.8s
BRY   Bratogost         82.13 341⇑iP     P         11 02 38.5 -0.9
BRY   Bratogost         82.13 341⇑iP     P         11 02 38.9 -0.5
PVY   Plav              82.14 340⇑iP     P         11 02 39.9 +0.5
RDO   Rodhopi           82.21 335  P     P         11 02 39.8 +0.2
RDO   Rodhopi           82.21 335  IAmb  IAmb      11 02 42.5
      comp=Z,162nm,0.8s
RDO   Rodhopi           82.21 335 ⇑P     P         11 02 33.1 -6.5
RTAL  Retalhuleu        82.25  76  IAmb  IAmb      11 02 42.4
      comp=Z,110nm,0.8s
MSSA  Maissana          82.25 348  IAmb  IAmb      11 02 42.0
      comp=Z,134nm,0.8s
ALN   Alexandroupoli    82.31 335  P     P         11 02 39.3 -0.8
ALN   Alexandroupoli    82.31 335  IAmb  IAmb      11 02 42.7
      comp=Z,106nm,0.9s
ALN   Alexandroupoli    82.31 335 ⇑P     P         11 02 40.1  0.0
STON  Ston              82.33 341⇑iP     P         11 02 39.2 -1.0
GAZ   Gaziantep         82.34 325 ⇑P     P         11 02 41.5 +1.0
GAZ                               ⇑P     PcP       11 02 41.6 -4.1
CEME  Cevo              82.40 340⇑iP     P         11 02 40.3 -0.4
SKO   Skopje            82.41 338 i P    P         11 02 41.1 +0.4
NVR   Nevrokopi         82.43 337  P     P         11 02 42.2 +1.4
ENEZ  Enez              82.43 335  P     P         11 02 40.1 -0.7
PDG   Podgorica         82.44 340 ⇑P     P         11 02 40.4 -0.3
PDG   Podgorica         82.44 340  IAmb  IAmb      11 02 43.0
      comp=Z,128nm,0.9s
PDG   Podgorica         82.44 340 ⇑P     P         11 02 40.5 -0.3
PDG   Podgorica         82.44 340⇑iP     P         11 02 40.6 -0.2
STIP  Stip              82.50 338 i P    P         11 02 40.8 -0.3
QLP   Quilpie           82.60 205  P     P         11 02 44.4 +2.8
QLP   Quilpie           82.60 205 ⇑P     P         11 02 43.0 +1.4
BUM   Brajici-Budva     82.64 340⇑iP     P         11 02 41.5 -0.4
DRME  Dracevica, Mon    82.69 340⇑iP     P         11 02 42.0 -0.1
DRME  Dracevica, Mon    82.69 340⇑iP     P         11 02 42.1 -0.1
SRS   Serrai            82.72 337  P     P         11 02 41.3 -1.0
TBI   Tubuai            82.73 145 eP     P         11 02 45.1 +2.8
      comp=Z,4µm,28.5s
TBI   Tubuai            82.73 145 eS     S         11 13 02.0 +3.6
      comp=Z,10µm,24.8s
TBI                               eSS    SS        11 18 26.4 +4.7
      comp=Z,12µm,24.8s
TBI   Tubuai            82.73 145 eLR    LR        11 28 41.7
      comp=Z,101µm,25.0s
TBI                               eLR    LR        11 28 41.8
      comp=Z,513µm,22.0s
TBI   Tubuai            82.73 145 eT     T         12 33 34.5
      comp=Z,13nm,0.4s
VAY   Valandovo         82.77 337 i P    P         11 02 43.0 +0.4
KNT   Kendrikon         82.84 337  P     P         11 02 42.5 -0.4
ULC   Ulcinj            82.89 340⇑iP     P         11 02 42.8 -0.4
KOKK  Kokkinochori,     82.90 336  P     P         11 02 42.5 -0.7
PHP   Peshkopia         82.90 339  P     P         11 02 42.5 -0.8
GUMA  Gualdo di Mace    82.92 345  IAmb  IAmb      11 02 46.7
      comp=Z,313nm,0.9s
THAS  Thassos island    82.92 336  P     P         11 02 43.1 -0.2
AS01  Alice Springs     82.99 215  P     P         11 02 45.1 +1.4
      comp=Z,62nm,1.3s
BALB  Balikesir         83.00 333  IAmb  IAmb      11 02 46.0
      comp=Z,79nm,0.9s
ASAR  Alice Springs     83.01 215  P     P         11 02 43.6 -0.2
      comp=Z,18nm,0.8s,baz=17,slow=5.5,SNR=75
ASAR                               PKiKP PKiKP     11 08 04.0 +1.3
      comp=Z,1.1nm,0.8s,baz=27,slow=2.7,SNR=2.1
ASAR                               PKKPbc PKKPbc   11 21 05.7 +0.8
      comp=Z,2.0nm,1.0s,baz=180,slow=1.1,SNR=7.6
ASAR                               PKPPKP P'P'df   11 29 12.6 +6.2
      comp=Z,1.6nm,1.0s,baz=168,slow=2.0,SNR=5.8
ASAR                               LR    LR        11 37 46.3
      comp=Z,3µm,20.5s,baz=22,slow=34
      comp=Z,18nm,0.8s
SOH   Sokhos            83.06 337  P     P         11 02 43.7 -0.4
RUSF  Rustrel           83.09 350 ⇑P     P         11 02 47.8 +3.5
RUSF                              ⇓P     PcP       11 02 48.5 -0.3
GRG   Griva             83.15 337  P     P         11 02 44.3 -0.3
JASK  Jask - Hormozg    83.22 304  P     P         11 02 45.0 -0.1
      SNR=9.4
EZN   Ezine             83.24 334  P     P         11 02 44.0 -1.0
MGAB  Montegabbione     83.26 345 ⇑P     P         11 02 44.8 -0.3
THE   Thessaloniki      83.33 337  P     P         11 02 44.3 -1.1
TIR   Tirane            83.35 339 ⇑P     P         11 02 45.9 +0.4
TIR   Tirane            83.35 339  P     P         11 02 45.2 -0.3
TIR   Tirane            83.35 339 ⇑P     P         11 02 45.9 +0.4
TIR   Tirane            83.35 339  P     P         11 02 45.9 +0.4
OUR   Ouranopolis       83.36 336  P     P         11 02 45.5 -0.1
OHR   Ohrid             83.37 339 i P    P         11 02 45.8 +0.1
LIA   Limnos Island     83.47 335  P     P         11 02 46.1 -0.1
FNA   Florina           83.55 338  P     P         11 02 45.5 -1.2
CASP  Castiglione de    83.56 346  IAmb  IAmb      11 02 48.9
      comp=Z,100nm,0.9s
DKL   Dikili            83.79 334 ⇑P     P         11 02 46.6 -1.2
KULA  Kula-Manisa       83.82 332  P     P         11 02 46.7 -1.4
KBN   Korca             83.84 339  P     P         11 02 46.7 -1.5
MANT  Manisa            83.88 332  IAmb  IAmb      11 02 50.7
      comp=Z,170nm,1.2s
KZN   Kozani            83.92 338  P     P         11 02 48.8 +0.2
ISP   Isparta           83.92 330  IAMs_20 IAMs_20 11 43 35.8
      comp=Z,7µm,20.0s
ISP   Isparta           83.92 330c iP    P         11 02 48.2 -0.5
ISP                                pmax  pmax
      comp=Z,125nm,0.9s
SHME  Shamm             83.93 306 i P    P         11 02 47.8 -1.0
      SNR=13
SHME  Shamm             83.93 306  P     P         11 02 47.6 -1.2
      SNR=5.7
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LIT   Litokhoron        83.95 337  P     P         11 02 46.7 -2.0
BANOM Banah             83.96 305 i P    P         11 02 47.9 -1.0
      SNR=11
BANOM Banah             83.96 305  P     P         11 02 48.0 -1.0
      SNR=6.1
PENT  Pentalofos        84.17 338  P     P         11 02 49.1 -0.8
LSK   Leskovik          84.33 339  P     P         11 02 50.6 -0.1
KPRO  Kipourio          84.35 338  P     P         11 02 50.6 -0.2
SNET  Serv Nac Est T    84.36  75  IAMs_20 IAMs_20 11 35 35.1
      comp=Z,8µm,22.0s
MRVN  Minervino Murg    84.36 342 ⇑P     P         11 02 50.6 -0.2
TYRN  Tyrnavos          84.38 337  P     P         11 02 48.5 -2.3
BLCB  Balcova           84.40 333  P     P         11 02 49.1 -1.8
AULRC Lightning Ridg    84.44 201  P     P         11 02 57.0 +6.0
      comp=Z,61nm,1.8s
MDH   Madha             84.48 305 i P    P         11 02 49.8 -1.7
      SNR=8.6
MDH   Madha             84.48 305  P     P         11 02 50.1 -1.5
MASF  Masafi            84.49 305  P     P         11 02 50.7 -1.0
MSFE  Esma-Masafi       84.50 305 i P    P         11 02 50.5 -1.2
      SNR=11
XMI   Christmas Isla    84.50 245  P     P         11 02 52.7 +1.0
      comp=Z,110nm,1.0s
THL   Klokotos Trika    84.57 337  P     P         11 02 49.1 -2.7
ARMA  Armidale          84.66 198  P     P         11 02 54.4 +2.2
ARMA                               IAmb  IAmb      11 03 09.0
      comp=Z,88nm,1.1s
ARMA  Armidale          84.66 198  P     P         11 02 55.3 +3.1
ARMA  Armidale          84.66 198 ⇑P     P         11 02 54.7 +2.5
JAN   Janina            84.75 338  P     P         11 02 52.1 -0.6
UOSS  Minazif           84.82 305  P     P         11 02 51.6 -1.7
UOSS  Minazif           84.82 305  IAMs_20 IAMs_20 11 44 52.3
      comp=Z,7µm,20.0s
UOSS  Minazif           84.82 305 i P    P         11 02 51.9 -1.3
      SNR=7.2
UOSS  Minazif           84.82 305  P     P         11 02 52.0 -1.3
SCTE  Santa Cesarea     84.87 340  IAmb  IAmb      11 03 14.1
      comp=Z,125nm,1.0s
KEK   Kerkira           84.93 339  P     P         11 02 53.3 -0.3
KEK   Kerkira           84.93 339  IAmb  IAmb      11 02 56.6
      comp=Z,71nm,1.0s
KEK   Kerkira           84.93 339 ⇑P     P         11 02 53.9 +0.3
HATD  Hatta, Dubai      84.95 305 i P    P         11 02 53.0 -1.0
      SNR=17
HATD  Hatta, Dubai      84.95 305  P     P         11 02 52.8 -1.2
      SNR=8.4
IGT   Igoumenitsa       84.98 339  P     P         11 02 53.0 -0.9
WSAR  Wadi Sarin        85.00 302  LR    LR        11 44 43.8
      comp=Z,7µm,20.0s,baz=64,slow=38
WSAR  Wadi Sarin        85.00 302  P     P         11 02 53.5 -0.8
      SNR=11
AGG   Agios Georgios    85.01 337 ⇑P     P         11 02 55.4 +1.4
BIDO  Bidbid            85.03 303  P     P         11 02 53.6 -0.8
      SNR=14
NAZ   Nazwa, Dubai      85.05 305 i P    P         11 02 53.5 -1.0
      SNR=7.7
NAZ   Nazwa, Dubai      85.05 305  P     P         11 02 53.2 -1.2
      SNR=5.4
BEIL  Beino             85.07 325 eP     P         11 02 54.2 -0.2
SMG   Samos             85.09 333  P     P         11 02 52.7 -1.8
ELL   Elmali            85.10 330 ⇑P     P         11 02 54.2 -0.4
ASHO  Ashiyiah          85.11 305 i P    P         11 02 53.2 -1.6
      SNR=19
ASHO  Ashiyiah          85.11 305  P     P         11 02 53.5 -1.3
      SNR=12
AXAR  Agios Charalam    85.17 337  P     P         11 02 52.1 -2.8
PALK  Pallekele         85.18 276  LR    LR        11 45 15.8
      comp=Z,5µm,19.7s,baz=124,slow=39
PALK  Pallekele         85.18 276  P     P         11 02 54.8 -0.5
PALK                               IAmb  IAmb      11 02 57.6
      comp=Z,120nm,1.1s
PALK                               IAMs_20 IAMs_20 11 45 23.9
      comp=Z,6µm,20.0s
PALK  Pallekele         85.18 276  P     P         11 02 54.8 -0.5
PALK                               pmax  pmax
      comp=Z,120nm,1.1s
PALK                               MLR   MLR
      comp=Z,6µm,20.0s
TGUH  Tegucigalpa,Un    85.22  73  IAMs_20 IAMs_20 11 37 23.5
      comp=Z,7µm,22.0s
TGUH  Tegucigalpa,Un    85.22  73 ⇑P     P         11 02 55.9 +0.4
YER   Yerkesik          85.22 332  P     P         11 02 54.9 -0.3
FAQ   Al Faqa, Dubai    85.29 305 i P    P         11 02 54.1 -1.5
      SNR=17
FAQ   Al Faqa, Dubai    85.29 305  P     P         11 02 54.3 -1.3
      SNR=7.4
SOHO  SOHO              85.33 304 i P    P         11 02 53.7 -2.1
      SNR=28
SOHO  SOHO              85.33 304  P     P         11 02 54.1 -1.7
WBK   Wadi Bani Khal    85.34 302  P     P         11 02 55.7 -0.3
      SNR=13
HOQ   Hoqain            85.39 303  P     P         11 02 54.9 -1.3
      SNR=16
SMDO  Samad             85.45 303  P     P         11 02 55.8 -0.8
      SNR=17
JLN   Jalan Bani Buh    85.49 301  P     P         11 02 55.9 -0.8
ANX   Ano Chora         85.51 337  P     P         11 02 55.1 -1.6
ASUD  Al Ashush, Dub    85.52 305 i P    P         11 02 55.3 -1.5
      SNR=7.9
ASUD  Al Ashush, Dub    85.52 305  P     P         11 02 55.6 -1.2
BODT  Bodrum            85.56 333  P     P         11 02 55.8 -1.0
LKD2  Lefkada island    85.62 338  P     P         11 02 56.0 -1.1
CSS   Mathiatis         85.66 327  IAMs_20 IAMs_20 11 47 03.5
      comp=Z,7µm,20.0s
EFP   Efpalio           85.68 337  P     P         11 02 54.5 -2.8
NYDR  Nydri-Lefkada     85.68 338  P     P         11 02 53.9 -3.5
AJN   Ajban             85.74 306 i P    P         11 02 56.0 -1.8
      SNR=11
AJN   Ajban             85.74 306  P     P         11 02 56.6 -1.2
      SNR=5.4
PGAV  Gavieira, Arco    85.75   0 eP     P         11 02 57.6 -0.2
PGAV                               A     A         11 03 34.4
      comp=Z,130nm,1.9s
PGAV                               A     A         11 39 50.4
      comp=Z,8µm,22.0s
KSL   Kastellorizon     85.75 330  P     P         11 02 56.0 -1.7
EVGI  Lefkada island    85.78 338  P     P         11 02 56.0 -1.9
ALNE  Al Ain            85.78 305 i P    P         11 02 56.8 -1.4
      SNR=31
ALNE  Al Ain            85.78 305  P     P         11 02 57.0 -1.1
      SNR=21
DAT   Datca             85.80 332  P     P         11 02 55.5 -2.6
BHL   Bhannes           85.83 325 eP     P         11 02 58.0 -0.4
LAKA  Lakka             85.84 337  P     P         11 02 56.6 -1.6
PBRG  Braganca          85.90 359 eP     P         11 02 57.9 -0.6
PBRG                               A     A         11 03 15.6
      comp=Z,105nm,1.6s
FSK   Fiskardo          85.96 338  P     P         11 02 57.0 -1.7
KLV   Kalavryta, Ach    85.98 337  P     P         11 02 57.2 -1.8
JMDO  Jabal Madar       85.99 302  P     P         11 02 58.2 -1.0
      SNR=27
ARQ   Araqi             86.00 304  P     P         11 02 58.2 -1.0
      SNR=37
PCAB  Cabril            86.00   0 eP     P         11 02 58.8 -0.2
PCAB                               A     A         11 03 10.7
      comp=Z,105nm,1.7s
GUR   Goura             86.04 337  P     P         11 02 57.2 -2.1
DQRL  Deir Qamar        86.04 325 eP     P         11 02 59.4  0.0
TIP   Timpagrande       86.08 341 ⇑P     P         11 02 58.5 -0.9
TIP   Timpagrande       86.08 341  IAmb  IAmb      11 03 42.0
      comp=Z,151nm,1.8s
TIP   Timpagrande       86.08 341 ⇑P     P         11 02 58.6 -0.9
ARG   Arkhangelos       86.12 332  P     P         11 02 58.5 -1.1
ARG   Arkhangelos       86.12 332 ⇑P     P         11 02 58.6 -1.0
ARG                               ⇑P     PcP       11 02 59.7 -2.5
RLS   Riolos of Patr    86.13 337  P     P         11 02 59.7 +0.1
RCY   Rachaya           86.14 325 eP     P         11 02 59.4 -0.5
BSY   Bisya             86.14 303  P     P         11 02 59.2 -0.7
      SNR=31
QRWL  Qaraoun           86.15 325 eP     P         11 02 59.4 -0.4
DRO   Drossia           86.17 337  P     P         11 02 58.8 -1.1
VLS   Valsamata         86.22 338  P     P         11 02 57.6 -2.5
OOD   Oodnadatta        86.23 212  P     P         11 03 02.2 +2.3
PSDA  Pessada-Kefalo    86.28 338  P     P         11 02 58.2 -2.1
WRKA  Warakurna         86.31 219  P     P         11 03 02.4 +1.9
      comp=Z,62nm,2.2s
WRKA  Warakurna         86.31 219 ⇓P     P         11 03 01.5 +1.0
POLO  Lamas de Olo      86.34 360 eP     P         11 03 00.9 +0.2
POLO                               A     A         11 03 11.3
      comp=Z,47nm,2.0s
PVRL  Vila Real         86.44 360 eP     P         11 03 01.5 +0.4
MBWA  Marble Bar        86.46 228  P     P         11 03 00.5 -0.7
MBWA                               IAmb  IAmb      11 03 24.8
      comp=Z,76nm,1.2s
MBWA  Marble Bar        86.46 228  P     P         11 03 01.8 +0.6
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MBWA  Marble Bar        86.46 228 ⇓P     P         11 03 00.7 -0.5
JRN   Qarnain Island    86.47 308  P     P         11 02 59.9 -1.5
TRD   Trivandrum        86.47 279 eP     P         11 03 01.6  0.0
MVO   Moncorvo          86.55 359 eP     P         11 03 01.8 +0.1
MVO                                A     A         11 03 12.4
      comp=Z,89nm,2.4s
MVO   Moncorvo          86.55 359  A     A         11 51 19.0
      comp=Z,5µm,18.0s
SHMA  Al-Shehemyia      86.59 309  P     P         11 03 00.7 -1.3
SAKB  Bahrain           86.69 310  P     P         11 03 01.2 -1.3
SANT  Santorini         86.72 334  IAMs_20 IAMs_20 11 46 11.0
      comp=Z,9µm,20.0s
MMAI  Mount Meron Ar    86.73 325  LR    LR        11 47 43.9
      comp=Z,7µm,18.2s,baz=106,slow=40
ITM   Ithomi            86.86 337  P     P         11 03 01.2 -2.0
ITM   Ithomi            86.86 337 ⇑P     P         11 03 01.9 -1.3
ITM                               ⇑P     PcP       11 03 02.4 -3.1
ASF   Jabal al Asfar    86.95 323  LR    LR        11 47 32.2
      comp=Z,8µm,19.9s,baz=58,slow=40
MZWR  Madinat Zayed     86.96 306  P     P         11 03 02.2 -1.7
CMSA  Cobar Meteorol    86.99 202  P     P         11 03 08.6 +5.0
PVIS  Viseu             87.00   0 eP     P         11 03 03.5 -0.4
PVIS                               A     A         11 03 16.4
      comp=Z,83nm,2.0s
KARP  Karpathos         87.02 332  P     P         11 03 01.8 -2.3
KARP  Karpathos         87.02 332  IAMs_20 IAMs_20 11 47 01.1
      comp=Z,8µm,20.0s
CEL   Celeste           87.13 342  IAMs_20 IAMs_20 11 49 45.4
      comp=Z,6µm,19.0s
UMZA  Um Al Zommool     87.20 305  P     P         11 03 03.9 -1.2
MHTO  MHTO              87.20 301  P     P         11 03 04.7 -0.3
      SNR=64
MAHO  Mahon             87.22 351  IAMs_20 IAMs_20 11 39 52.4
      comp=Z,5µm,21.0s
MAHO  Mahon             87.22 351  P     P         11 03 04.8 -0.1
GTBY  Guantanamo Bay    87.27  60  IAmb  IAmb      11 03 49.1
      comp=Z,77nm,1.1s
GHWR  Ruwais            87.28 307  P     P         11 03 04.1 -1.3
MTE   Manteigas         87.31 360  IAMs_20 IAMs_20 11 40 06.5
      comp=Z,7µm,21.0s
MTE   Manteigas         87.31 360 eP     P         11 03 04.1 -1.3
MTE                                A     A         11 03 22.3
      comp=Z,63nm,2.2s
UCM   Universidad Co    87.32 357  P     P         11 03 04.2 -1.2
MTDJ  Mount Denham      87.36  63  IAMs_20 IAMs_20 11 46 25.3
      comp=Z,4µm,19.0s
MTDJ  Mount Denham      87.36  63 ⇑P     P         11 03 05.9 -0.1
BOAB  BOACO BROADBA87.43   73  IAMs_20 IAMs_20 11 43 48.3
      comp=Z,10µm,22.0s
KTHA  Kythira Island    87.45 335  P     P         11 03 03.6 -2.5
ETOS  Mallorca          87.48 352  P     P         11 03 05.2 -1.0
COI   Coimbra           87.50   0 eP     P         11 03 06.5 +0.3
COI                                A     A         11 03 20.2
      comp=Z,88nm,2.8s
OUZ   Omahuta           87.53 179  IAMs_20 IAMs_20 11 35 33.8
      comp=Z,8µm,22.0s
PCAS  Casmilo, Conde    87.66   1 eP     P         11 03 06.4 -0.6
PCAS                               A     A         11 03 23.8
      comp=Z,101nm,1.2s
ZKR   Zakros            87.69 333  P     P         11 03 05.4 -1.9
MZR   Muzera            87.79 306 i P    P         11 03 06.8 -1.1
      SNR=24
MZR   Muzera            87.79 306  P     P         11 03 07.0 -0.9
      SNR=18
PCBR  Castelo Branco    87.87 360 eP     P         11 03 07.7 -0.3
PCBR                               A     A         11 03 38.3
      comp=Z,56nm,1.3s
IDI   Anoyia            87.89 334  LR    LR        11 46 49.5
      comp=Z,6µm,19.1s,baz=354,slow=39
IDI   Anoyia            87.89 334  P     P         11 02 59.7 -8.6
IDI   Anoyia            87.89 334  IAMs_20 IAMs_20 11 46 19.1
      comp=Z,7µm,20.0s
IDI   Anoyia            87.89 334 ⇑P     P         11 03 06.4 -1.9
LCRK  Leigh Creek       87.92 209  P     P         11 03 11.3 +3.2
ECHE  Chera             87.93 355  P     P         11 03 08.4  0.0
IMMV  Iera Moni Meta    87.97 335  P     P         11 03 06.0 -2.6
ESDC  Sonseca Array     87.98 357  P     P         11 03 07.8 -0.9
      comp=Z,23nm,1.0s,baz=352,slow=4.5,SNR=39
ESDC                               S     S         11 13 47.2 -3.1
      comp=Z,0.3nm,0.4s,baz=105,slow=29,SNR=1.6
ESDC                               LR    LR        11 40 04.1
      comp=Z,5µm,21.9s,baz=1.5,slow=34
      comp=Z,23nm,1.0s
PAB   San Pablo         88.12 357  P     P         11 03 08.3 -0.9
PAB   San Pablo         88.12 357  IAMs_20 IAMs_20 11 48 32.9
      comp=Z,6µm,21.0s
PAB   San Pablo         88.12 357  P     P         11 03 10.4 +1.1
PAB   San Pablo         88.12 357 ⇑P     P         11 03 09.2 -0.1
PAB   San Pablo         88.12 357  P     P         11 03 08.4 -0.9
PAB                                pmax  pmax
      comp=Z,36nm,1.2s
PMRV  Marv??o           88.28 360 eP     P         11 03 07.3 -2.7
PMRV                               A     A         11 03 32.9
      comp=Z,44nm,1.4s
PMRV                               A     A         11 41 07.4
      comp=Z,6µm,22.0s
DQM   DQM               88.30 301  P     P         11 03 10.1 -0.3
      SNR=13
STKA  Stephens Creek    88.33 206  P     P         11 03 09.7 -0.3
      comp=Z,10.0nm,0.7s,baz=36,slow=5.2,SNR=17
      comp=Z,10.0nm,0.7s
STKA  Stephens Creek    88.33 206  P     P         11 03 13.1 +3.1
STKA  Stephens Creek    88.33 206⇑eP     P         11 03 09.6 -0.4
EIBI  Ibiza             88.34 353  P     P         11 03 08.1 -2.1
RAFF  Raffo Rosso       88.43 342  IAmb  IAmb      11 03 46.6
      comp=Z,117nm,1.4s
GVDS  Gavdos            88.53 334  P     P         11 03 09.6 -1.6
GVD   Gavdhos           88.53 334  P     P         11 03 09.0 -2.2
CMLA  Cha da Macela     88.63  14  IAMs_20 IAMs_20 11 38 38.0
      comp=Z,6µm,18.0s
PMTG  Montargil         88.64   0 eP     P         11 03 10.6 -1.1
PMTG                               A     A         11 03 31.2
      comp=Z,46nm,1.7s
PMAFR Mafra             88.75   1  P     P         11 03 10.5 -1.7
PMAFR Mafra             88.75   1 eP     P         11 03 10.7 -1.5
PMAFR                              A     A         11 03 26.5
      comp=Z,254nm,1.8s
PESTR Estremoz          88.84 360  P     P         11 03 11.2 -1.5
PESTR Estremoz          88.84 360 eP     P         11 03 11.6 -1.1
PESTR                              A     A         11 03 23.3
      comp=Z,49nm,1.6s
PESTR                              A     A         11 41 55.5
      comp=Z,7µm,20.0s
HZTE  Horizontes, Gu    88.86  74  IAmb  IAmb      11 03 45.4
      comp=Z,106nm,1.0s
LIS   Lisbon            88.98   1 eP     P         11 03 12.2 -1.1
LIS                               e                11 13 42.0
LIS   Lisbon            88.98   1 eP     P         11 03 12.2 -1.1
LIS                               eSKSac SKSac     11 13 42.0 +0.8
LIS                                IAMs_20 IAMs_20 11 39 37.1
      comp=Z,9µm,20.4s
YNG   Young             89.06 200  P     P         11 03 19.3 +5.9
      comp=Z,69nm,2.2s
MULG  Mulgathing        89.06 212  P     P         11 03 17.2 +3.7
      comp=Z,75nm,1.7s
EVO   Evora             89.18   0 eP     P         11 03 12.8 -1.4
EVO                                A     A         11 03 30.6
      comp=Z,52nm,1.4s
ORTG  Ortega, Santa     89.22  74  IAmb  IAmb      11 03 16.9
      comp=Z,69nm,1.1s
DUNO  Dulce Nombre,     89.42  74  IAmb  IAmb      11 03 18.1
      comp=Z,116nm,1.0s
PBAR  Barrancos         89.53 359 eP     P         11 03 16.4 +0.5
PBAR                               A     A         11 03 18.4
      comp=Z,75nm,1.2s
COVE  Coope Vega, Sa    89.55  73  IAmb  IAmb      11 03 43.2
      comp=Z,108nm,1.3s
JTS   Las Juntas de     89.57  74  LR    LR        11 44 14.1
      comp=Z,2µm,21.2s,baz=310,slow=36
JTS   Las Juntas de     89.57  74  P     P         11 03 15.6 -0.9
JTS   Las Juntas de     89.57  74⇓eP     P         11 03 14.9 -1.5
JTS                                pmax  pmax
      comp=Z,17nm,1.4s
JTS                                MLR   MLR
      comp=Z,4µm,23.0s
PNCL  Nicolau / Gran    89.59   1 eP     P         11 03 16.1 -0.1
PNCL                               A     A         11 03 47.3
      comp=Z,81nm,1.6s
PBEJ  Beja              89.68   0 eP     P         11 03 16.6  0.0
PBEJ                               A     A         11 03 41.1
      comp=Z,66nm,1.5s
MESJ  Messejana         89.87   0 eP     P         11 03 16.3 -1.2
MESJ                              e                11 06 49.0
MESJ  Messejana         89.87   0 eP     P         11 03 16.4 -1.1
MESJ                               A     A         11 03 34.1
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	comp=Z,54nm,1.7s						
MESJ	Messejana	89.87	0	eP	P	11 03 16.3	-1.2
MESJ				ePP	PP	11 06 49.0	-0.1
MESJ				eSKSac	SKSac	11 13 47.2	+0.8
MESJ				IAMs_20	IAMs_20	11 42 08.6	
	comp=Z,9µm,20.6s						
EIL	Elat	89.92	324	LR	LR	11 50 38.8	
	comp=Z,4µm,18.2s,baz=36,slow=40						
CART	Cartagena	89.93	355	IAMs_20	IAMs_20	11 44 04.8	
	comp=Z,7µm,20.0s						
SDDR	Presa de Saban	90.05	58	IAmb	IAmb	11 03 21.3	
	comp=Z,113nm,0.9s						
SDDR				IAMs_20	IAMs_20	11 44 04.0	
	comp=Z,9µm,22.0s						
SDDR	Presa de Saban	90.05	58	⇓P	P	11 03 18.7	0.0
PCVE	Castro Verde	90.08	0	eP	P	11 03 19.4	+1.0
PCVE				A	A	11 03 21.9	
	comp=Z,81nm,1.8s						
PTEO	Sao Teotonio	90.16	1	eP	P	11 03 18.3	-0.5
PTEO				A	A	11 03 36.1	
	comp=Z,127nm,1.6s						
HDC	Heredia	90.29	73	eP	P	11 03 22.2	+2.3
PVAQ	Vaqueiros	90.30	360	eP	P	11 03 20.0	+0.5
PVAQ				A	A	11 03 29.8	
	comp=Z,62nm,1.7s						
PVAQ				A	A	11 42 50.0	
	comp=Z,9µm,20.0s						
MORF	Marmelete	90.40	1	eP	P	11 03 18.7	-1.3
MORF				e		11 06 53.3	
MORF				e		11 13 50.5	
MORF	Marmelete	90.40	1	eP	P	11 03 18.6	-1.4
MORF				A	A	11 03 36.7	
	comp=Z,106nm,1.4s						
MORF	Marmelete	90.40	1	eP	P	11 03 18.7	-1.3
MORF				ePP	PP	11 06 53.3	-0.1
MORF				eSKSac	SKSac	11 13 50.5	+0.9
MORF				IAMs_20	IAMs_20	11 43 17.4	
	comp=N,7µm,18.9s						
PBDV	Barranco-do-Ve	90.47	0	eP	P	11 03 18.9	-1.4
PBDV				A	A	11 03 30.1	
	comp=N,114nm,1.7s						
PFVI	Vila Bisbo	90.57	1	eP	P	11 03 19.9	-0.8
PFVI				A	A	11 03 31.1	
	comp=N,168nm,1.6s						
BATAN	Batan	90.64	73	IAmb	IAmb	11 03 23.4	
	comp=Z,96nm,1.0s						
URZ	Urewera	90.65	176	LR	LR	11 37 22.0	
	comp=Z,11µm,21.7s,baz=114,slow=31						
KEST	Kesra	90.71	346	P	P	11 03 20.4	-1.2
	comp=Z,20nm,0.8s,baz=3.3,slow=1.2,SNR=17						
KEST				S	SKSac	11 13 50.5	-1.2
	comp=Z,1.2nm,0.4s,baz=38,slow=17,SNR=1.2						
KEST				LR	LR	11 44 03.1	
	comp=Z,6µm,21.9s,baz=321,slow=36						
	comp=Z,20nm,0.8s						
KEST	Kesra	90.71	346	IAmb	IAmb	11 03 23.2	
	comp=Z,70nm,1.4s						
KEST	Kesra	90.71	346	P	P	11 03 21.8	+0.2
	SNR=7.9						
BBOO	Buckleboo	90.77	210	IAmb	IAmb	11 03 39.7	
	comp=Z,127nm,1.4s						
BBOO	Buckleboo	90.77	210	P	P	11 03 26.0	+4.6
	comp=Z,68nm,1.9s						
SHAO	Shalim	90.88	302	i P	P	11 03 21.0	-1.5
	SNR=7.3						
RTZ	Ruatahuna	91.00	176	IAMs_20	IAMs_20	11 40 23.9	
	comp=Z,6µm,20.0s						
RAYN	Ar Rayn	91.11	313	P	P	11 03 22.5	-1.0
RAYN				IAmb	IAmb	11 03 25.2	
	comp=Z,79nm,1.1s						
RAYN	Ar Rayn	91.11	313	P	P	11 03 22.5	-1.0
RAYN				pmax	pmax		
	comp=Z,79nm,1.1s						
RAYN	Ar Rayn	91.11	313	i P	P	11 03 22.2	-1.3
	SNR=54						
RAYN	Ar Rayn	91.11	313	P	P	11 03 22.1	-1.4
SFS	San Fernando	91.23	359	IAMs_20	IAMs_20	11 45 34.2	
	comp=Z,7µm,20.0s						
SRBA	San Rafael, Bu	91.35	73	IAmb	IAmb	11 03 27.5	
	comp=Z,73nm,1.1s						
DMTO	DMTO	91.49	302	P	P	11 03 24.7	-0.6
BKZ	Black Stump Fm	91.53	177	IAmb	IAmb	11 03 41.1	
	comp=Z,65nm,1.3s						
FORT	Forrest	91.58	217	IAmb	IAmb	11 03 27.5	
	comp=Z,53nm,0.8s						
FORT	Forrest	91.58	217	P	P	11 03 26.8	+1.6
	comp=Z,95nm,0.8s						
WHFO	Wadi Hawf	91.92	303	P	P	11 03 26.0	-1.3
	SNR=6.5						
CDITO	Canoas	92.16	73	IAmb	IAmb	11 04 14.3	
	comp=Z,53nm,1.2s						
ABTO	Aybut	92.64	303	P	P	11 03 29.8	-0.9
TAF	Taforalt	92.76	356	P	P	11 03 33.0	+1.9
AOPR	Arecibo Observ	92.88	55	IAmb	IAmb	11 03 34.7	
	comp=Z,77nm,1.1s						
MRZ	Mangatainoka R	92.99	177	IAMs_20	IAMs_20	11 38 12.6	
	comp=Z,7µm,22.0s						
BFZ	Birch Farm	93.03	177	IAMs_20	IAMs_20	11 44 06.7	
	comp=Z,7µm,20.0s						
MLPR	Magueyes Islan	93.05	55	IAmb	IAmb	11 03 35.3	
	comp=Z,36nm,0.8s						
QRZ	Quartz Range	93.11	180	IAMs_20	IAMs_20	11 45 43.8	
	comp=Z,5µm,19.0s						
CELP	Cerrillos	93.20	55	IAmb	IAmb	11 03 34.9	
	comp=Z,40nm,1.0s						
OBIP	Obispado Ponce	93.21	55	IAmb	IAmb	11 03 34.0	
	comp=Z,51nm,1.0s						
JBK	JBK	93.25	356	P	P	11 03 35.0	+1.5
SJG	San Juan	93.38	54	P	P	11 03 31.9	-2.1
	comp=Z,27nm,0.7s,baz=291,slow=2.8,SNR=9.7						
SJG				LR	LR	11 47 20.2	
	comp=Z,3µm,19.1s,baz=318,slow=37						
	comp=Z,27nm,0.7s						
SJG	San Juan	93.38	54	P	P	11 03 35.1	+1.2
SJG				IAmb	IAmb	11 03 55.9	
	comp=Z,34nm,0.9s						
SJG	San Juan	93.38	54	IAMs_20	IAMs_20	11 49 35.8	
	comp=Z,6µm,20.0s						
BCIP	Isla Barro Col	93.44	70	IAMs_20	IAMs_20	11 48 51.1	
	comp=Z,4µm,20.0s						
BCIP	Isla Barro Col	93.44	70	⇑P	P	11 03 33.6	-0.7
HUMP	Col San Antoni	93.50	54	IAmb	IAmb	11 03 46.4	
	comp=Z,54nm,1.4s						
NNZ	Nelson	93.51	179	IAMs_20	IAMs_20	11 46 14.3	
	comp=Z,6µm,20.0s						
MTP	Monte Pirata	93.68	54	IAmb	IAmb	11 03 37.2	
	comp=Z,56nm,0.9s						
DSZ	Denniston Nort	94.03	180	IAMs_20	IAMs_20	11 42 06.1	
	comp=Z,8µm,21.0s						
THZ	Tophouse	94.05	179	IAMs_20	IAMs_20	11 42 45.6	
	comp=Z,8µm,20.0s						
PMPST	Porto Santo, M	94.29	7	eP	P	11 03 35.7	-2.3
PMPST				A	A	11 04 02.7	
	comp=Z,126nm,1.7s						
PMPS	Porto Santo	94.32	7	eP	P	11 03 40.9	+2.8
PMPS				A	A	11 03 49.2	
	comp=Z,209nm,1.7s						
CDVI	St. Croix	94.36	53	IAmb	IAmb	11 03 39.8	
	comp=Z,81nm,0.9s						
AVE	Averroes	94.40	360	IAMs_20	IAMs_20	11 42 18.1	
	comp=Z,5µm,22.0s						
TDRA	Tendrara	94.51	355	P	P	11 03 42.0	+2.7
FUL	Funchal	94.68	8	eP	P	11 03 40.1	+0.3
FUL				A	A	11 03 43.2	
	comp=Z,85nm,0.5s						
MDT	Midelt	94.84	357	LR	LR	11 44 47.5	
	comp=Z,4µm,21.8s,baz=22,slow=34						
MDT	Midelt	94.84	357	P	P	11 03 42.0	+1.4
LTZ	Lake Taylor	95.07	180	IAMs_20	IAMs_20	11 44 15.5	
	comp=Z,8µm,21.0s						
PAYG	Puerto Ayora	95.10	84	IAMs_20	IAMs_20	11 37 20.8	
	comp=Z,6µm,22.0s						
KAAM	Kaadhehdhoo	95.20	278	IAMs_20	IAMs_20	11 50 17.2	
	comp=Z,8µm,21.0s						
FIGM	Figuig	95.37	354	P	P	11 03 45.0	+1.8
OXZ	Oxford	95.61	180	IAMs_20	IAMs_20	11 47 33.9	
	comp=Z,7µm,20.0s						
ANWB	Willy Bob	95.87	51	IAMs_20	IAMs_20	11 48 17.3	
	comp=Z,7µm,21.0s						
ANWB	Willy Bob	95.87	51	e	P	11 03 42.8	-2.6
GOLM	Goulmima	95.95	358	P	P	11 03 49.0	+3.2
MQZ	McQueen's Vall	95.99	180	IAMs_20	IAMs_20	11 46 07.0	
	comp=Z,8µm,20.0s						
RPZ	Rata Peaks	96.00	181	LR	LR	11 41 38.9	
	comp=Z,12µm,20.4s,baz=18,slow=32						
ARF	Arif	96.20	357	P	P	11 03 49.1	+2.2
ANBD	Bethesda, Anti	96.41	51	e	P	11 03 41.3	-6.6
OUK	Oukaimeden	96.49	0	P	P	11 03 51.0	+2.5
CTZ	Chatham Island	96.50	172	IAMs_20	IAMs_20	11 42 02.5	
	comp=Z,5µm,21.0s						
ABD	La Joyeuse, An	97.04	51	e	P	11 03 50.4	-0.3
CBE	Ff, Capester	97.33	51	e	P	11 03 47.4	-4.7
ODZ	Otahua Downs	97.34	181	IAMs_20	IAMs_20	11 41 36.6	
	comp=Z,8µm,21.0s						
ZGR	Zagora	97.55	358	P	Pdif	11 03 54.0	+0.9
TAU	Tasmania Unive	97.59	198	IAMs_20	IAMs_20	11 48 22.1	
	comp=Z,6µm,20.0s						
MAGL	Barre de l'ile	97.59	51	IAMs_20	IAMs_20	11 52 18.0	
	comp=Z,8µm,20.0s						
MAGL	Barre de l'ile	97.59	51	e	P	11 03 50.5	-2.8
MLZ	Mavora Lakes	97.72	183	IAMs_20	IAMs_20	11 46 14.6	
	comp=Z,8µm,21.0s						
NWAO	Narrogin (SRO)	97.76	224	LR	LR	11 46 58.5	
	comp=Z,3µm,20.0s,baz=32,slow=35						
DCZ	Deep Cove	97.85	184	IAMs_20	IAMs_20	11 39 17.0	
	comp=Z,7µm,22.0s						
WHZ	Wether Hill Ro	98.25	183	IAMs_20	IAMs_20	11 49 31.6	
	comp=Z,6µm,20.0s						
PYZ	Puysegur Point	98.56	184	IAMs_20	IAMs_20	11 40 33.1	
	comp=Z,7µm,20.0s						
SVN	Savane Anatole	98.60	52	IAMs_20	IAMs_20	11 49 44.8	
	comp=Z,7µm,21.0s						
FDF	Fort de France	98.70	52	IAMs_20	IAMs_20	11 49 46.6	
	comp=Z,7µm,21.0s						
FDF	Fort de France	98.70	52	e	Pdif	11 03 58.4	+0.1
ILAM	Ilet Lapin Mar	98.80	51	IAMs_20	IAMs_20	11 47 05.1	
	comp=Z,7µm,22.0s						
SDV	Santo Domingo	98.81	63	P	P	11 03 57.6	-1.3
	comp=Z,7.7nm,0.9s,baz=289,slow=1.0,SNR=6.5						
SDV				LR	LR	11 52 17.0	
	comp=Z,3µm,18.5s,baz=342,slow=38						
	comp=Z,7.7nm,0.9s						
SDV	Santo Domingo	98.81	63		P	11 03 58.1	-0.9
SDV				IAMs_20	IAMs_20	11 56 26.6	
	comp=Z,5µm,19.0s						
SDV	Santo Domingo	98.81	63	eP	Pdif	11 03 59.9	+0.9
BIM	Bigot	98.93	52	IAMs_20	IAMs_20	11 49 33.6	
	comp=Z,8µm,21.0s						
BIM	Bigot	98.93	52	e	P	11 03 53.5	-5.8
MPOM	Morne Pois Mar	99.09	52	IAMs_20	IAMs_20	11 53 43.8	
	comp=Z,7µm,20.0s						
MPOM	Morne Pois Mar	99.09	52	e	Pdif	11 03 58.5	-1.4
SLBI	Saint Lucia, B	99.40	52	e	Pdif	11 03 58.7	-2.7
GRGR	Grenville	100.70	53	IAMs_20	IAMs_20	11 51 55.8	
	comp=Z,6µm,20.0s						
DGAR	Diego Garcia	101.77	273	IAMs_20	IAMs_20	11 56 36.6	
	comp=Z,6µm,19.0s						
ATD	Arta Tunnel	102.77	309	eP	Pdif	11 04 13.9	-2.5
TAM	Tamanrasset	103.97	347	IAMs_20	IAMs_20	11 56 26.1	
	comp=Z,6µm,22.0s						
DESE	Dese	104.62	312	eP	Pdif	11 04 28.4	+3.5
ANKE	Ethiopia-Afar	105.92	311	eP	Pdif	11 04 29.2	-1.6
FURI	Furi	107.01	311	eP	Pdif	11 04 32.2	-3.5
SACV	Santiago Islan	111.27	16	IAMs_20	IAMs_20	11 53 07.9	
	comp=Z,5µm,20.0s						
NNA	Nana	112.14	81	IAMs_20	IAMs_20	11 45 59.6	
	comp=Z,5µm,22.0s						
TORD	Torodi Ar. Bea	113.95	350	Pdiff	Pdif	11 05 06.2	+0.1
	comp=Z,196nm,0.3s,baz=356,slow=4.7,SNR=29						
TORD				PKiKP	PKiKP	11 08 57.3	-0.5
	comp=Z,6.0nm,0.7s,baz=351,slow=2.8,SNR=25						
TORD				PKKPbc	PKKPbc	11 19 36.6	-0.7
	comp=Z,2.0nm,1.0s,baz=152,slow=2.0,SNR=4.9						
ROCAM	Rodrigues Isla	116.85	272	IAMs_20	IAMs_20	12 00 03.4	
	comp=Z,5µm,21.0s						
SAML	Samuel	117.67	67		PKPdf	11 09 04.6	-0.3
SAML	Samuel	117.67	67	IAMs_20	IAMs_20	12 04 47.8	
	comp=Z,4µm,21.0s						
SAML	Samuel	117.67	67	PKIKP	PKPdf	11 09 04.6	-0.3
NPGB	Novo Progresso	120.31	58	eP	PKiKP	11 09 10.7	+0.6
LPAZ	La Paz	120.70	76	PKP	PKPdf	11 09 10.2	-1.2
	comp=Z,4.7nm,1.0s,baz=18,slow=2.6,SNR=11						
LPAZ				PKKPab	PKKPab	11 19 16.9	-0.4
	comp=Z,1.9nm,0.7s,baz=178,slow=5.9,SNR=7.0						
LPAZ	La Paz	120.70	76	PKPdf	PKPdf	11 09 10.4	-1.0
DBIC	Dimbokro	120.84	357	PKP	PKPdf	11 09 09.4	-1.7
	comp=Z,16nm,0.9s,baz=30,slow=2.2,SNR=16						
DBIC				PKKPab	PKKPab	11 19 20.5	+2.1
	comp=Z,1.8nm,0.6s,baz=221,slow=4.7,SNR=3.0						
DBIC	Dimbokro	120.84	357	PKPdf	PKPdf	11 09 08.3	-2.8
DBIC	Dimbokro	120.84	357	PKIKP	PKPdf	11 09 08.3	-2.8
DBIC	Dimbokro	120.84	357	eP	PKPdf	11 09 09.5	-1.6
TIC	Toumodi	120.87	357	⇓iPKP1	PKiKP	11 09 11.4	+0.1
	comp=Z,61nm,0.9s						
KIC	Kosan Boka	121.15	356	⇑ePKP1	PKPdf	11 09 10.8	-0.9
	comp=Z,66nm,1.0s						
LIC	Lamto	121.29	357	⇑ePKP1	PKPdf	11 09 11.8	-0.2
	comp=Z,80nm,0.9s						
ROSB	Rosrio	122.00	44	eP	PKPdf	11 09 13.2	-0.1
PRPB	Parauapebas	122.32	52	eP	PKPdf	11 09 14.0	+0.1
VILB	Vilhena	122.61	66	eP	PKPdf	11 09 14.4	0.0
CLDB	Colider	123.30	61	eP	PKiKP	11 09 16.0	+0.1
PDRB	Porto dos Gac	123.42	62	eP	PKPdf	11 09 15.9	0.0
LVC	Limon Verde	125.11	81	IAMs_20	IAMs_20	11 53 59.3	
	comp=Z,3µm,20.0s						
LVC	Limon Verde	125.11	81	eP	PKPdf	11 09 19.2	-0.2
PTLB	Pontes e Lacer	125.23	67	eP	PKPdf	11 09 18.9	-0.4
SMTB	Santa Maria do	125.72	51	eP	PKPdf	11 09 20.4	0.0
BBSD	Serra de San D	125.79	70	eP	PKPdf	11 09 20.3	-0.1
ABPO	Ambohimpanom	125.96	287	eP	PKPdf	11 09 20.1	-0.7
SNDB	Serra Nova Dou	126.57	57	eP	PKPdf	11 09 21.7	-0.3
SALV	Santo Antonio	127.51	64	eP	PKPdf	11 09 23.3	-0.4
RCBR	Riachuelo	127.92	36	IAMs_20	IAMs_20	12 05 29.3	
	comp=Z,5µm,19.0s						
RCBR	Riachuelo	127.92	36	eP	PKPdf	11 09 24.5	-0.1
VOI	Vohitsoka	128.45	285	eP	PKPdf	11 09 25.4	-0.1
ARAG	Araguaiana, MT	129.44	60	eP	PKPdf	11 09 27.4	0.0
VNDA	Vanda	130.07	183	PKP	PKPdf	11 09 26.6	-0.2
	comp=Z,3.4nm,1.0s,baz=16,slow=2.3,SNR=6.3						
VNDA				SKPbc	SKPbc	11 12 48.5	+0.8
	comp=Z,2.8nm,1.1s,baz=2.5,slow=6.4,SNR=4.7						
VNDA				PKKPab	SKKSac	11 18 33.8	-0.1
	comp=Z,0.4nm,0.4s,baz=92,slow=1.7,SNR=8.5						
VNDA	Vanda	130.07	183	PKPdf	PKPdf	11 09 25.4	-1.4
VNDA	Vanda	130.07	183	PKIKP	PKPdf	11 09 25.4	-1.4
SDBA	SAO DESIDERIO	130.08	50	eP	PKPdf	11 09 28.2	-0.5
SBA	Scott Base	130.29	182		PKPdf	11 09 26.6	-0.5
SBA	Scott Base	130.29	182	IAMs_20	IAMs_20	11 56 21.6	
	comp=Z,4µm,21.0s						
SBA	Scott Base	130.29	182	PKIKP	PKPdf	11 09 26.6	-0.5
RVDE	Rio Verde (Bra	130.47	66	eP	PKPdf	11 09 28.9	-0.4
BDQN	Bodoquena, MS	130.58	69	eP	PKPdf	11 09 29.1	-0.3
MURT	Porto Murtinho	131.05	70	eP	PKPdf	11 09 30.2	-0.1
AQDB	Aquidauana	131.20	68	eP	PKPdf	11 09 30.5	-0.1
BDFB	Brasilia	131.35	56	PKP	PKPdf	11 09 30.2	-0.9
	comp=Z,25nm,1.0s,baz=331,slow=2.4,SNR=18						
BDFB				SKPbc	SKPab	11 12 55.0	+0.2
	comp=Z,14nm,0.9s,baz=331,slow=3.3,SNR=5.4						
BDFB	Brasilia	131.35	56	eP	PKPdf	11 09 31.4	+0.3
C2SB	Chapadao do Su	131.41	63	eP	PKPdf	11 09 31.4	+0.4
PEL	Peldehue	131.64	92	IAMs_20	IAMs_20	12 00 11.5	
	comp=Z,4µm,20.0s						
JANB	Januaria	132.66	51	eP	PKPdf	11 09 32.9	-0.7
TICA	Tres Isletas	133.05	77	eP	PKPdf	11 09 33.6	-0.3
ESFA	Espinillo Form	133.09	74	eP	PKPdf	11 09 34.2	+0.2
IPMB	Ipameri, GO	133.22	58	eP	PKPdf	11 09 34.2	-0.4
ITRB	Iturama	133.51	61	eP	PKPdf	11 09 34.8	-0.2
AMBA	Amambai (Brazi	133.54	69	eP	PKPdf	11 09 34.2	-0.8
VACA	Villa Angela C	133.78	79	eP	PKPdf	11 09 35.6	+0.4
PCMB	Pacaembu	134.57	64	eP	PKPdf	11 09 37.1	+0.1
PMNB	Patos De Minas	134.59	56	eP	PKPdf	11 09 36.9	-0.3
CPUP	Villa Florida	134.80	74	PKP	PKPdf	11 09 36.6	-0.6
	comp=Z,5.3nm,0.8s,baz=261,slow=2.5,SNR=10						
CPUP				SKPbc	SKPbc	11 13 05.6	-0.1
	comp=Z,8.4nm,1.0s,baz=356,slow=3.0,SNR=6.0						
CPUP	Villa Florida	134.80	74	eP	PKPdf	11 09 37.1	-0.1
ASCN	Ascension	135.08	9	IAMs_20	IAMs_20	12 11 00.6	
	comp=Z,4µm,21.0s						
MCR1	Marechal Candi	135.28	69	eP	PKPdf	11 09 38.1	-0.1
BB19B	Bebedouro	135.60	61	eP	PKPdf	11 09 39.5	+0.6
GUA01	Guaratinga, BA	136.08	47	eP	PKPdf	11 09 39.5	-0.3
MECA	Mercedes	136.51	78	eP	PKPdf	11 09 40.1	-0.1
PTGB	Pitanga	136.59	67	eP	PKPdf	11 09 41.6	+0.8
PLCA	Paso Flores	136.68	100	PKhKP	PKPpre	11 09 28.7	
	comp=Z,1.0nm,0.7s,baz=233,slow=2.7,SNR=4.5						
PLCA				PKP	PKPdf	11 09 40.9	+0.5
	comp=Z,9.3nm,0.8s,baz=266,slow=3.4,SNR=8.0						
PLCA	Paso Flores	136.68	100	eP	PKiKP	11 09 41.4	-0.8
FRTB	Fartura	136.89	64	eP	PKPdf	11 09 41.4	+0.1
AZCA	Azaras, Argent	136.90	75	eP	PKPdf	11 09 41.8	+0.7
FRBT	Francisco Belt	137.00	70	eP	PKPdf	11 09 41.6	+0.2
RCLB	Rio Claro- Sao	137.24	61	eP	PKPdf	11 09 41.8	-0.2
SJMB	Sao Joao De Ma	137.29	50	eP	PKPdf	11 09 42.2	+0.1
CRSM	Crissiumal (Br	137.60	72	eP	PKPdf	11 09 42.8	+0.4
ITQB	Itaqui	137.70	77	eP	PKPdf	11 09 42.4	-0.1
ABR01	Abrolhos, BA	137.78	47	eP	PKPdf	11 09 43.2	+0.3
VAO	Valinhos	138.01	60	eP	PKPdf	11 09 42.8	-0.6
SPB	Sao Paulo	138.24	61	eP	PKPdf	11 09 43.8	+0.2
ITAB	Concordia	138.50	70	eP	PKPdf	11 09 44.3	+0.3
COYC	Coyhaique	138.61	107	PKPdf	PKPdf	11 09 43.5	-0.2
COYC	Coyhaique	138.61	107	IAMs_20	IAMs_20	12 10 26.5	
	comp=Z,4µm,19.0s						
TIJ01	Guaruva-PR	138.77	65	eP	PKPdf	11 09 44.2	-0.5
PET01	Itanhaem-SP	138.89	62	eP	PKPdf	11 09 45.3	+0.4
PARB	Paraibuna	139.00	59	eP	PKPdf	11 09 45.5	+0.3
RODS	Rosario do Sul	139.04	76	eP	PKPdf	11 09 45.1	+0.1
ALF01	Guarapari-ES	139.16	51	eP	PKPdf	11 09 45.5	0.0
ALGR	Alto Alegre (B	139.16	72	eP	PKPdf	11 09 45.3	-0.1
VAS01	Vassouras-RJ	139.24	56	eP	PKPdf	11 09 45.7	+0.1
HOED	Hoedspruit, Li	139.38	299	eP	PKPdf	11 09 38.6	-7.2
DUB01	Friburgo-RJ	139.60	54	eP	PKPdf	11 09 45.9	-0.4
CAM01	Campos-RJ	139.74	53	eP	PKPdf	11 09 46.3	-0.2
CPSB	Cacapava Do Su	140.11	74	eP	PKPdf	11 09 46.9	0.0
TRQA	Tornquist	140.20	91	PKPdf	PKPdf	11 09 46.3	-0.5
TRQA	Tornquist	140.20	91	PKIKP	PKPdf	11 09 46.3	-0.5
TRQA	Tornquist	140.20	91	eP	PKPdf	11 09 46.9	0.0
MMAL	MMAL	140.55	297	eP	PKPdf	11 09 42.5	-5.4
HAGI	HAGI	140.61	297	eP	PKPdf	11 09 44.1	-4.1
CNLB	Canela	140.81	71	eP	PKPdf	11 09 47.9	-0.4
PLTB	Pedras Altas	141.00	76	PKPdf	PKPdf	11 09 47.8	-0.7
PLTB	Pedras Altas	141.00	76	eP	PKPdf	11 09 48.3	-0.2
NHAM	Northam, North	141.69	303	eP	PKPdf	11 09 44.9	-5.2
HRAO	HartRAO	142.29	301	eP	PKPdf	11 09 45.7	-5.5
QSPA	South Pole Qui	142.41	180		PKPpre	11 09 45.9	
LBTB	Lobatse	142.64	305	eP	PKPdf	11 09 44.2	-7.5
SHEL	Horse Pasture	143.34	357	IAMs_20	IAMs_20	12 27 45.5	
	comp=Z,3µm,21.0s						
MAW	Mawson	144.08	218	PKP	PKPab	11 09 50.2	-0.1
	comp=Z,72nm,1.0s,baz=72,slow=4.6,SNR=14						
BOSA	Boshof	145.76	302	PKPbc	PKPdf	11 09 56.9	-0.3
	comp=Z,69nm,0.9s,baz=39,slow=2.9,SNR=53						
BOSA	Boshof	145.76	302	PKPdf	PKPdf	11 09 56.1	-1.0
BOSA	Boshof	145.76	302	PKP2	PKPdf	11 09 56.1	-1.0
BOSA	Boshof	145.76	302	⇑iP	PKPdf	11 09 57.0	-0.1
PMSA	Palmer Station	149.50	135		PKPbc	11 10 04.6	-1.8
PMSA	Palmer Station	149.50	135	eP	PKPdf	11 10 02.3	+0.4
EFI	East Falkland	149.66	109		PKPdf	11 10 02.2	-0.4
EFI	East Falkland	149.66	109	PKHKP	PKPpre	11 10 02.2	
NMMU	Nelson Mandela	149.72	295	eP	PKPbc	11 10 08.4	+0.4
SUR	Sutherland	151.06	303		PKPbc	11 10 09.0	-2.5
SUR	Sutherland	151.06	303	⇓iP	PKiKP	11 10 12.8	+0.7
MATJ	Matjiesfontein	151.88	302	eP	PKiKP	11 10 13.7	+0.1
ELIB	Princess Elisa	156.36	204	dPKP	PKPab	11 10 44.2	+3.7
TROLL	Troll, Antarti	160.06	189	P	PKPdf	11 10 16.2	-0.3
SNAA	Sanae	160.80	185	P	PKPdf	11 10 14.9	-2.3
VNA3	Neumayer Olymp	161.33	178	P	PKPdf	11 10 16.4	-1.3
VNA2	Neumayer--Watz	161.67	180	P	PKPdf	11 10 16.8	-1.2
	baz=10.0,slow=30						

IDC 27 11:02:59.3±3.5, 52°.61N×172°.33E, h0^{km}, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=77.0km s-min=34.7km az=10.0, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHEM	Shemya Is, Ala	1.09	83	Pn	Pn	11 03 22.3	+0.6
	104nm,0.3s,baz=191,slow=1.1,SNR=30						
SHEM				Sn	Sn	11 03 37.5	0.0
	251nm,0.3s,baz=166,slow=23,SNR=41						
ILAR	Eielson Array	23.95	44	P	P	11 08 13.9	-0.8
	1.2nm,0.8s,baz=255,slow=7.6,SNR=5.3						
	1.2nm,0.8s						
YKA	Yellowknife Ar	38.34	46	P	P	11 10 21.4	+0.1
	0.4nm,0.5s,baz=287,slow=7.6,SNR=6.4						
	0.4nm,0.5s						
PDAR	Pinedale Array	51.05	68	P	P	11 12 03.1	-0.1
	0.3nm,0.5s,baz=331,slow=2.1,SNR=6.1						
	0.3nm,0.5s						
TXAR	Lajitas Array	63.78	75	P	P	11 13 33.2	+0.1
	0.2nm,0.5s,baz=298,slow=6.0,SNR=3.9						
	0.2nm,0.5s						

BEO 27 11:03:06.9±0.3, 44°.42N×21°.96E, h0^{km}, ML1.6/6, 2C, Mining explosion., Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUBS	Kucevo	0.21	268	ePg	Pg	11 03 08.5	-2.4
KUBS				eSg	Sg	11 03 12.3	-1.2
MDVR	Moldovita	0.40	334	⇑P	Pg	11 03 13.7	-0.9
MDVR				⇑S	Sg	11 03 18.7	-1.2
MDVR	Moldovita	0.40	334	ePg	Pg	11 03 13.5	-1.1
MDVR				eSg	Sg	11 03 19.7	-0.1
ZAGS	Zajecar	0.64	162	ePg	Pg	11 03 18.1	-1.0
ZAGS				eSg	Sg	11 03 26.7	-0.7
GRUS	Gruza	1.04	240	ePg	Pg	11 03 27.0	+0.1
GRUS				eSg	Sb	11 03 42.0	-0.1
BZS	Buzias	1.22	349	ePg	Pg	11 03 28.8	-1.5
BZS				eSg	Sb	11 03 46.7	-0.5
ZAPS	Zavoj	1.25	157	ePg	Pg	11 03 29.8	-1.0
ZAPS				eSg	Sb	11 03 47.5	-0.4

ISK 27 11:08:09.9, 36°.52N×33°.20E, h21^{km}±1^{km}, ML2.5/9
DDA 27 11:08:10.6±0.0, 36°.51N×33°.16E, h7^{km}±2^{km}, ML2.1

ISC 27 11:08:10.9±1.0, 36°.52N±0°.03×33°.20E±0°.03, h15^{km}±8^{km}, n19, σ0^{s}.54/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEVE	Tevekalti-Mers	0.21	113	Pg	Pg	11 08 15.9	+0.1
TEVE				Sg	Sb	11 08 19.7	-0.6
OREN	Orenkoy-Mersin	0.37	146	Pg	Pg	11 08 18.4	-0.1
OREN				Sg	Sb	11 08 24.4	-0.4
TEKE	Tekeli-Mersin	0.38	191	Pg	Pg	11 08 18.5	-0.2
TEKE				Sg	Sb	11 08 24.7	-0.4
TEPK	Tepekoy-MERSIN	0.40	137	Pg	Pg	11 08 18.9	-0.2
GULN	MERSIN_Gulnar	0.43	141	P	Pg	11 08 19.6	0.0
GULN				S	Sb	11 08 26.3	-0.3
AKKU	Akkuyu-Mersin	0.46	142	Pg	Pg	11 08 19.7	-0.3
AKKU				Sg	Sb	11 08 26.9	-0.4
AKK2	Akkuyu-Mersin	0.47	144	Pg	Pg	11 08 19.9	-0.4
AKK2				Sg	Sb	11 08 27.0	-0.7
IKL	Isikli	0.48	126	Pg	Pg	11 08 20.0	-0.4
IKL				Sg	Sb	11 08 27.9	0.0
TISA	Tisan-Mersin	0.52	133	Pg	Pg	11 08 20.9	-0.4
TISA				Sg	Sb	11 08 29.1	-0.1
KRMN	Karaman	0.66	4	Pg	Pg	11 08 23.1	-0.7
KRMN				Sg	Sg	11 08 32.9	+0.4
HDMB	Hadim	0.73	308	Pg	Pg	11 08 24.7	-0.5
HDMB				Sg	Sg	11 08 35.4	+0.6
KKBE	Karaman, Kazim	0.73	343	P	Pg	11 08 24.5	-0.7
KKBE				S	Sg	11 08 35.5	+0.7
KIZK	Mersin	0.76	93	Pg	Pg	11 08 25.3	-0.4
KIZK	Mersin	0.76	93	P	Pg	11 08 25.6	-0.1
KIZK				S	Sb	11 08 35.9	-0.1
GAZI	Gazipasa	0.77	249	Pg	Pb	11 08 25.3	-0.8
GAZI	Gazipasa	0.77	249	P	Pb	11 08 25.7	-0.4
GAZI				S	Sb	11 08 35.8	-0.6
GAZI				i AML	AML	11 08 40.0	
	comp=N,76nm,0.3s						
KERG	Konya-Eregli	1.16	39	P	Pn	11 08 32.5	-0.3
KERG				S	Sn	11 08 49.3	+0.9
KERG				i AML	AML	11 08 55.0	
	comp=N,40nm,0.3s						
KEPZ	Antalya-Kepez	1.34	287	P	Pn	11 08 35.8	+0.6
KEPZ				S	Sn	11 08 52.9	+0.1
SEDI	Konya, Seydise	1.49	309	P	Pn	11 08 38.0	+0.7
SEDI				S	Sn	11 08 57.9	+1.4
SEDI				i AML	AML	11 09 06.0	
	comp=E,25nm,0.5s						

IDC 27 11:41:14.1±2.3, 32°.72S×78°.42E, h0^{km}, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=193.9km s-min=33.2km az=11.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	25.55	346	T	T	12 13 46.1	
	baz=170,slow=76,SNR=69						
H08S1	Diego Carcia H	25.56	346	T	T	12 13 46.6	
	baz=170,slow=76,SNR=60						

H08S3	**Diego Garcia H**	**25.57**	**346**	T	T	12 13 46.7	
	baz=170,slow=76,SNR=98						
H01W2	**Cape Leeuwin H**	**29.66**	**104**	T	T	12 18 55.4	
	baz=262,slow=74,SNR=6.8						
H01W3	**Cape Leeuwin H**	**29.66**	**104**	T	T	12 18 55.4	
	baz=262,slow=74,SNR=6.2						
H01W1	**Cape Leeuwin H**	**29.67**	**104**	T	T	12 18 57.2	
	baz=262,slow=74,SNR=5.4						
ASAR	**Alice Springs**	**49.25**	**94**	P	P	11 50 04.3	-0.4
	0.4nm,0.8s,baz=241,slow=7.3,SNR=4.9						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**51.18**	**90**	P	P	11 50 19.4	+0.1
	0.5nm,0.6s,baz=245,slow=7.3,SNR=5.8						
	0.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**86.17**	**288**	P	P	11 53 57.4	-0.2
	142nm,0.5s,baz=134,slow=4.2,SNR=5.7						
YKA	**Yellowknife Ar**	**149.07**	**12**	PKPbc	PKPbc	12 01 03.2	-0.2
	0.2nm,0.7s,baz=320,slow=2.7,SNR=5.9						

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*DDA **27** 12:02:53.5±0.0, 39°.51N×26°.19E, h7^{km}, ML2.0*
*ISK **27** 12:02:53.3, 39°.53N×26°.16E, h8^{km}, ML2.5/15*
ISC 27 12:02:53.5±0.9, **39°.52N**±0°.02×**26°.16E**±0°.03, **h9**^{km}±5^{km}, **n30**, σ0^{s}.**47**/44, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.02**	**229**	P	**Pg**	**12 02 55.2**	**-0.1**
KOCA				S	**Sg**	**12 02 56.5**	**0.0**
GPNR	**Gulpinar-Canak**	**0.06**	**198**	Pg	**Pg**	**12 02 55.2**	**-0.4**
GPNR				Sg	**Sg**	**12 02 57.3**	**+0.3**
BOZC	**Bozcaada**	**0.34**	**346**	Pg	**Pg**	**12 03 00.2**	**0.0**
BOZC				Sg	**Sg**	**12 03 05.4**	**+0.7**
BOZC	**Bozcaada**	**0.34**	**346**	P	**Pg**	**12 03 00.1**	**0.0**
BOZC				S	**Sg**	**12 03 05.4**	**+0.7**
EZN	**Ezine**	**0.34**	**22**	Pg	**Pg**	**12 03 00.2**	**0.0**
EZN				Sg	**Sg**	**12 03 05.3**	**+0.7**
BAYC	**CANAKKALE_Bayr**	**0.37**	**53**	P	**Pg**	**12 03 00.6**	**-0.3**
BAYC				S	**Sg**	**12 03 05.9**	**0.0**
BAYC				*i* AML	AML	12 03 06.0	
	comp=E,194nm,0.2s						
SIGR	**SIGRI**	**0.39**	**218**	Pg	**Pg**	**12 03 01.5**	**+0.4**
SIGR				Sg	**Sb**	**12 03 08.0**	**-0.5**
AYVA	**Ayvalik**	**0.46**	**117**	P	**Pg**	**12 03 02.3**	**-0.2**
AYVA				S	**Sg**	**12 03 09.0**	**+0.4**
AYVA				*i* AML	AML	12 03 14.0	
	comp=N,142nm,0.6s						
ECEA	**Canakkale, Ece**	**0.53**	**1**	P	**Pg**	**12 03 04.1**	**+0.3**
ECEA				S	**Sb**	**12 03 11.8**	**-0.9**
ECEA				*i* AML	AML	12 03 12.0	
	comp=N,206nm,0.3s						
COMU	**Canakkale**	**0.63**	**22**	Pg	**Pg**	**12 03 05.8**	**0.0**
COMU				Sg	**Sb**	**12 03 14.9**	**-0.8**
BUHA	**Balikesir, Bur**	**0.71**	**91**	P	**Pg**	**12 03 07.3**	**+0.1**
BUHA				S	**Sg**	**12 03 16.6**	**0.0**
DKL	**Dikili**	**0.73**	**127**	Pg	**Pb**	**12 03 08.3**	**-0.1**
DKL				Sg	**Sb**	**12 03 19.0**	**+0.6**
CANM	**Can-anakkale**	**0.85**	**54**	Pg	**Pb**	**12 03 10.0**	**-0.4**
KARB	**zmir-Karabur**	**0.87**	**167**	P	**Pg**	**12 03 10.2**	**-0.1**
KARB				S	**Sb**	**12 03 23.3**	**+0.7**
KARB				*i* AML	AML	12 03 25.0	
	comp=E,47nm,0.5s						
ZEDA	**zmir-Bergama**	**0.90**	**127**	P	**Pg**	**12 03 10.8**	**0.0**
ZEDA				*i* AML	AML	12 03 24.0	
	comp=E,48nm,0.2s						
ZEDA				S	**Sb**	**12 03 24.4**	**+1.0**
GELI	**Tayfur-Gelibol**	**0.91**	**15**	Pg	**Pg**	**12 03 10.9**	**-0.2**
LPK	**Lapseki**	**0.97**	**28**	Pg	**Pg**	**12 03 12.1**	**-0.1**
CHOS	**Chios island**	**1.13**	**184**	Pn	**Pg**	**12 03 14.9**	**-0.4**
ERIK	**Erikli-Kesan**	**1.19**	**13**	Pn	**Pg**	**12 03 15.5**	**-0.8**
URLA	**Izmir**	**1.20**	**163**	Pn	**Pg**	**12 03 15.4**	**-1.2**
ENEZ	**Enez**	**1.22**	**360**	Pn	**Pn**	**12 03 16.8**	**+0.1**
KRBG	**Karabiga-Canak**	**1.24**	**45**	Pn	**Pb**	**12 03 16.8**	**-0.3**
GONE	**Gonen-Balikesi**	**1.29**	**65**	Pn	**Pb**	**12 03 17.8**	**-0.1**
BLCB	**Balcova**	**1.32**	**148**	Pn	**Pn**	**12 03 17.9**	**-0.2**
BALB	**Balikesir**	**1.34**	**84**	Pn	**Pb**	**12 03 18.6**	**-0.1**
ALN	**Alexandroupoli**	**1.38**	**356**	Pn	**Pn**	**12 03 19.1**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.41**	**33**	Pn	**Pn**	**12 03 19.5**	**+0.1**
EDC	**Edincik**	**1.55**	**57**	Pn	**Pn**	**12 03 21.7**	**+0.4**
UKOP	**Uzunkopru-Edir**	**1.65**	**13**	Pn	**Pn**	**12 03 22.9**	**+0.2**
RDO	**Rodhopi**	**1.70**	**344**	Pn	**Pn**	**12 03 23.6**	**+0.3**

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*IDC **27** 12:07:23.4±0.8, 6°.80N×73°.07W, h151^{km}±15^{km}, mb2.8/1, mbtmp3.6/3, Error ellipse: s-maj=62.7km s-min=7.5km az=131.0*
*RSNC **27** 12:07:25.7±1.1, 6°.78N×73°.15W, h140^{km}±4^{km}, ML3.3, Mw3.7*
ISC 27 12:07:23.7±0.9, **6°.82N**±0°.03×**73°.10W**±0°.04, **h148**^{km}±6^{km}, **n44**, σ1^{s}.**87**/83, **1C-2D**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**200**	⇓*i*P	**Pn**	**12 07 44.6**	**+0.4**
BARC				*e*S	**Sn**	**12 07 59.6**	**-0.1**
BARC				*i*		12 08 00.7	
	comp=Z,469nm,0.1s						
PAMC	**Pamplona, Colo**	**0.65**	**37**	⇓*i*P	**Pn**	**12 07 47.5**	**+1.2**
PAMC				*e*S	**Sn**	**12 08 04.2**	**+0.7**
PAMC				*i*		12 08 06.8	
	comp=Z,877nm,0.6s						
BRRC	**Barranca, Sant**	**0.67**	**295**	⇑*i*P	**Pn**	**12 07 46.5**	**+0.6**
BRRC				*e*S	**Sn**	**12 08 03.4**	**+0.7**
RUSC	**La Rusia**	**0.92**	**179**	*e*P	**Pn**	**12 07 48.7**	**+0.4**
RUSC				*e*S	**Sn**	**12 08 06.3**	**-0.6**
RUSC				*i*		12 08 08.6	
	comp=Z,277nm,0.5s						
PTBC	**PUERTO BERRIO,**	**1.38**	**259**	*e*P	**Pn**	**12 07 51.5**	**-0.3**
PTBC				*e*S	**Sn**	**12 08 12.2**	**-1.2**
PTBC				*i*		12 08 15.7	
	comp=Z,246nm,0.2s						
SPBC	**San Pablo de B**	**1.51**	**220**	*e*P	**Pn**	**12 07 53.8**	**+0.4**
SPBC				*e*S	**Sn**	**12 08 15.1**	**-0.9**
SPBC				*i*		12 08 19.5	
	comp=Z,225nm,0.1s						
ZARC	**Zaragoza, Cauc**	**1.87**	**291**	*e*P	**Pn**	**12 07 57.8**	**+0.5**
ZARC				*e*S	**Sn**	**12 08 23.0**	**0.0**
ZARC				*i*		12 08 28.8	
	comp=Z,458nm,0.1s						
CHIC	**Chingaza**	**2.26**	**196**	*e*P	**Pn**	**12 08 03.0**	**+0.8**
CHIC				*e*S	**Sn**	**12 08 31.7**	**-0.2**
CHIC				*i*		12 08 36.6	
	comp=Z,82nm,0.7s						
ROSC	**El Rosal**	**2.31**	**212**	P	**Pn**	**12 08 04.2**	**+1.4**
	comp=Z,58nm,0.3s,baz=299,slow=10,SNR=50						
ROSC				S	**Sn**	**12 08 33.1**	**+0.2**
	comp=Z,91nm,0.3s,baz=11,slow=23,SNR=15						
HELC	**Santa Helena**	**2.49**	**256**	*e*P	**Pn**	**12 08 05.7**	**+0.7**
HELC				*e*S	**Sn**	**12 08 35.6**	**-1.2**
HELC				*i*		12 08 44.0	
	comp=Z,118nm,0.2s						
UREC	**San Jos de Ur**	**2.59**	**291**	*e*P	**Pn**	**12 08 06.0**	**+0.2**
UREC				*e*S	**Sn**	**12 08 36.0**	**-2.3**
UREC				*i*		12 08 38.8	
	comp=Z,175nm,0.1s						
LL1C	**La Loma 1 Cana**	**2.75**	**351**	*e*P	**Pn**	**12 08 08.5**	**+0.7**
LL1C				*e*S	**Sn**	**12 08 46.1**	**+4.2**
LL1C				*i*		12 08 52.0	
	comp=Z,245nm,0.3s						
VILC	**Villavicencio,**	**2.75**	**192**	*e*P	**Pn**	**12 08 08.2**	**+0.2**
VILC				*e*S	**Sn**	**12 08 42.2**	**-0.1**
VILC				*i*		12 08 46.5	
	comp=Z,46nm,0.1s						
PTGC	**Puerto Gaitan,**	**2.77**	**160**	*e*P	**Pn**	**12 08 07.8**	**-0.3**
PTGC				*e*S	**Sn**	**12 08 41.2**	**-1.3**
PTGC				*i*		12 08 43.8	
	comp=Z,109nm,0.2s						
RECRC	**Villamaria, Ca**	**2.90**	**231**	*e*P	**Pn**	**12 08 13.4**	**+3.1**
RECRC				*e*S	**Sn**	**12 08 49.1**	**+2.8**
NIZA	**Niza - Manizal**	**2.94**	**234**	*e*P	**Pn**	**12 08 10.1**	**-0.4**
NIZA				*e*S	**Sn**	**12 08 52.0**	**+5.4**
CBOC	**Ciudad Bolivar**	**3.04**	**252**	*e*P	**Pn**	**12 08 12.9**	**+1.1**
CBOC				*e*S	**Sn**	**12 08 46.0**	**-2.8**
CBOC				*i*		12 08 54.0	
	comp=Z,29nm,0.3s						
DBBC	**Dabeiba**	**3.09**	**274**	*e*P	**Pn**	**12 08 13.0**	**+0.7**
DBBC				*e*S	**Sn**	**12 08 48.2**	**-1.6**
DBBC				*i*		12 08 52.2	
	comp=Z,57nm,0.2s						
SDV	**Santo Domingo**	**3.19**	**50**	P	**Pn**	**12 08 14.3**	**+0.6**
	comp=Z,38nm,0.3s,baz=233,slow=10,SNR=92						
SDV				S	**Sn**	**12 08 51.9**	**-0.4**
	comp=Z,81nm,0.6s,baz=246,slow=21,SNR=24						
ARGC	**Ariguani, Magd**	**3.23**	**340**	*e*P	**Pn**	**12 08 15.5**	**+1.5**
ARGC				*e*S	**Sn**	**12 08 53.4**	**+0.5**
ARGC				*i*		12 09 01.8	
	comp=Z,39nm,0.3s						
ANIL	**Santa Ana**	**3.25**	**225**	*e*P	**Pn**	**12 08 16.3**	**+1.7**
ANIL				*e*S	**Sn**	**12 08 53.2**	**-0.7**
ANIL				*i*		12 09 01.7	
	comp=Z,138nm,0.2s						
PRAC	**Prado**	**3.56**	**210**	*e*P	**Pn**	**12 08 18.7**	**+0.4**
PRAC				*e*S	**Sn**	**12 09 00.7**	**+0.1**
PRAC				*i*		12 09 05.1	
	comp=Z,86nm,0.5s						
ORTC	**Ortega, Tolima**	**3.59**	**217**	*e*P	**Pn**	**12 08 20.0**	**+1.3**
ORTC				*e*S	**Sn**	**12 09 03.3**	**+2.0**
ORTC				*i*		12 09 07.8	
	comp=Z,75nm,0.3s						
APAC	**Apartado, Choc**	**3.62**	**288**	*e*P	**Pn**	**12 08 19.1**	**+0.2**
APAC				*e*S	**Sn**	**12 09 00.7**	**-1.1**
APAC				*i*		12 09 06.6	
	comp=Z,58nm,0.3s						
SJCC	**San Jacinto, C**	**3.69**	**326**	*e*P	**Pn**	**12 08 19.6**	**-0.4**
SJCC				*e*S	**Sn**	**12 09 00.6**	**-3.0**
SJCC				*i*		12 09 08.9	
	comp=Z,34nm,0.3s						
PLMC	**San Jos del P**	**3.69**	**239**	*e*P	**Pn**	**12 08 20.9**	**+0.9**
PLMC				*e*S	**Sn**	**12 09 03.0**	**-0.6**
PLMC				*i*		12 09 09.0	
	comp=Z,46nm,0.3s						
LCBC	**Los crdobas,**	**3.82**	**302**	*e*S	**Sn**	**12 09 08.2**	**+1.7**
LCBC				*i*		12 09 11.6	
	comp=Z,75nm,0.2s						
CRJC	**Cerrejon, Guaj**	**4.18**	**3**	*e*P	**Pn**	**12 08 25.4**	**-1.0**
CRJC				*e*S	**Sn**	**12 09 10.9**	**-4.4**
CRJC				*i*		12 09 17.5	
	comp=Z,42nm,0.1s						
GUVC	**San Jose del G**	**4.27**	**174**	*e*P	**Pn**	**12 08 27.8**	**+0.3**
GUVC				*e*S	**Sn**	**12 09 16.6**	**-0.5**
GUVC				*i*		12 09 24.4	
	comp=Z,38nm,0.2s						
YOTC	**Yotoco, Valle**	**4.28**	**229**	*e*P	**Pn**	**12 08 28.0**	**+0.2**
YOTC				*e*S	**Sn**	**12 09 17.3**	**-0.3**
SMRC	**Santa Marta, M**	**4.46**	**346**	*e*P	**Pn**	**12 08 29.8**	**-0.2**
SMRC				*e*S	**Sn**	**12 09 18.7**	**-2.9**
SMRC				*i*		12 09 22.6	
	comp=Z,28nm,0.2s						
PTAC	**Punta Ardita,**	**4.69**	**274**	*e*P	**Pn**	**12 08 31.7**	**-1.3**
PTAC				*e*S	**Sn**	**12 09 24.7**	**-2.2**
PTAC				*i*		12 09 27.7	
	comp=Z,11nm,0.1s						
MACC	**Macarena, Meta**	**4.70**	**189**	*e*P	**Pn**	**12 08 32.0**	**-1.2**
MACC				*e*S	**Sn**	**12 09 22.9**	**-4.4**
MACC				*i*		12 09 28.5	
	comp=Z,22nm,0.2s						
BETC	**Betania**	**4.72**	**210**	*e*P	**Pn**	**12 08 33.4**	**-0.1**
BETC				*e*S	**Sn**	**12 09 25.9**	**-2.0**
BETC				*i*		12 09 31.1	
	comp=Z,13nm,0.4s						
URIC	**Uribia, Colomb**	**4.98**	**13**	*e*P	**Pn**	**12 08 35.6**	**-1.2**
URIC				*e*S	**Sn**	**12 09 28.2**	**-5.6**
URIC				*i*		12 09 33.8	
	comp=Z,17nm,0.3s						
JAMC	**Jamundi, Valle**	**5.05**	**225**	*e*P	**Pn**	**12 08 39.1**	**+1.1**
JAMC				*i*		12 09 51.1	
	comp=Z,16nm,0.1s						
MALC	**Bahia Malaga**	**5.05**	**237**	*e*P	**Pn**	**12 08 40.1**	**+2.3**
MALC				*e*S	**Sn**	**12 09 37.6**	**+2.0**
GARC	**Garzon, Huila**	**5.18**	**208**	*e*P	**Pn**	**12 08 39.2**	**-0.6**
GARC				*e*S	**Sn**	**12 09 34.9**	**-4.2**
GARC				*i*		12 09 39.6	
	comp=Z,32nm,0.6s						
FLOC	**Florencia**	**5.79**	**206**	*e*P	**Pn**	**12 08 47.4**	**-0.3**
FLOC				*e*S	**Sn**	**12 09 49.8**	**-3.5**
BBAC	**Balboa, Cauca**	**6.31**	**221**	*e*P	**Pn**	**12 08 56.4**	**+1.6**
BBAC				*e*S	**Sn**	**12 10 04.8**	**-1.1**
BBAC				*i*		12 10 11.0	
	comp=Z,5.5nm,0.1s						
GR1C	**Gorgona, Isla**	**6.31**	**233**	*e*P	**Pn**	**12 08 53.8**	**-0.8**
GR1C				*e*S	**Sn**	**12 10 03.4**	**-2.3**
GR1C				*i*		12 10 14.5	
	comp=Z,47nm,0.3s						
YKA	**Yellowknife Ar**	**63.27**	**340**	P	**P**	**12 17 35.8**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=132,slow=6.7,SNR=6.1						
	comp=Z,0.2nm,0.6s						
ASAR	**Alice Springs**	**149.12**	**234**	PKPbc	**PKPdf**	**12 26 54.3**	**+3.2**
	comp=Z,0.4nm,0.8s,baz=114,slow=2.9,SNR=4.2						
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc	**PKPbc**	**12 26 57.6**	**-0.9**
	comp=Z,0.3nm,0.8s,baz=106,slow=2.7,SNR=1.8						

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*DJA **27** 12:12:32.5±0.4, 6°N±3°×12°6E±°, h148^{km}±4^{km}, M4.6/17, mB5.0/8, mb4.5/17, MLv4.9/11, Mw(mB)4.4/8*
*IDC **27** 12:12:34.0±0.6, 6°.05N×125°.85E, h139^{km}±5^{km}, mb3.9/12, mbtmp4.3/14, Error ellipse: s-maj=24.4km s-min=9.4km az=73.0*
*MAN **27** 12:12:33.6, 6°.16N×125°.96E, h130^{km}, mb5.0, ML3.9, MS4.0*
*NEIC **27** 12:12:34.7±2.2, 6°.11N±0°.07×125°.95E±0°.09, h132^{km}±7^{km}, mb4.5/33, Error ellipse: s-maj=13.2km s-min=10.6km az=76.0*
ISC 27 12:12:34.2±0.5, **6°.06N**±0°.04×**126°.01E**±0°.05, **h130**^{km}±5^{km}, **n120**, σ1^{s}.**35**/137, **mb4.4**/33, **5C-13D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	**Mati**	**0.91**	**16**	⇓*e*P	**Pn**	**12 12 55.9**	**-0.5**
MATI				*e*S	**Sn**	**12 13 13.6**	**+0.4**
GSPH	**General Santos**	**1.05**	**271**	⇓*i*P	**Pn**	**12 12 56.2**	**-1.6**
GSPH				*i* S	**Sn**	**12 13 13.6**	**-2.0**
DAV	**Davao City (W)**	**1.09**	**337**	P	**Pn**	**12 12 58.1**	**+0.1**
	2μm,0.6s,baz=97,slow=1.9,SNR=55						
DAV				S	**Sn**	**12 13 16.8**	**+0.6**
	2μm,0.3s,baz=233,slow=23,SNR=14						
DAV	**Davao City (W)**	**1.09**	**337**		**Pn**	**12 12 57.8**	**-0.2**
KCP	**Kidapawan**	**1.31**	**316**	⇓*i*P	**Pn**	**12 12 59.9**	**-0.4**
KCP				*i* S	**Sn**	**12 13 20.1**	**-0.2**
SKMP	**Bagumbayan, Su**	**1.53**	**287**	⇓*e*P	**Pn**	**12 13 01.3**	**-1.4**
SKMP				*e*S	**Sn**	**12 13 24.6**	**+0.3**
CDOP	**Cateel, Davao**	**1.76**	**14**	⇑*i*P	**Pn**	**12 13 04.3**	**-1.1**
CDOP				*i* S	**Sn**	**12 13 27.6**	**-1.6**
CTBH	**Cotabato--PC H**	**2.10**	**303**	⇑*i*P	**Pn**	**12 13 08.3**	**-1.1**
BIPH	**Bislig**	**2.14**	**9**	⇓*i*P	**Pn**	**12 13 08.6**	**-1.3**
BIPH				*i* S	**Sn**	**12 13 35.5**	**-1.8**
TASP	**Talacogon, Agu**	**2.38**	**355**	⇓*i*P	**Pn**	**12 13 13.9**	**+0.9**
TASP				*i* S	**Sn**	**12 13 44.6**	**+1.8**
SGSI	**Sangihe**	**2.41**	**191**	P	**Pn**	**12 13 13.1**	**-0.2**
SGSI				S	**Sn**	**12 13 45.7**	**+2.3**
CGP	**Cagayan de Oro**	**2.71**	**331**	⇓*e*P	Pn	12 13 07.5	-10
CGP				*i* S	Sn	12 13 16.3	-34
BUTP	**Butuan**	**2.91**	**352**	⇓*e*P	**Pn**	**12 13 20.2**	**+0.4**
BUTP				*e*S	**Sn**	**12 13 57.1**	**+2.2**
PAGZ	**Pagadian**	**3.15**	**304**	⇓*e*P	**Pn**	**12 13 22.3**	**-0.6**
PAGZ				*e*S	**Sn**	**12 13 58.5**	**-1.9**
DCPH	**Dipolog City**	**3.63**	**314**	⇓*e*P	Pn	12 13 18.5	-11
GLSP	**General Luna,**	**3.70**	**2**	⇑*e*P	**Pn**	**12 13 29.4**	**-0.7**
GLSP				*e*S	**Sn**	**12 14 12.3**	**-1.0**
SCPH	**Surigao**	**3.73**	**352**	*e*P	**Pn**	**12 13 29.0**	**-1.5**
TBP	**Tagbilaran**	**4.19**	**330**	⇓*i*P	**Pn**	**12 13 35.5**	**-1.0**
MSLP	**Maasin**	**4.20**	**344**	⇓*e*P	**Pn**	**12 13 34.9**	**-1.8**
MSLP				*e*S	**Sn**	**12 14 23.1**	**-2.1**
TABP	**Talibon, Bohol**	**4.33**	**338**	⇓*i*P	**Pn**	**12 13 37.7**	**-0.8**
TABP				*i* S	**Sn**	**12 14 27.0**	**-1.4**
CNOP	**Candoni, Negro**	**5.01**	**318**	⇑*e*P	**Pn**	**12 13 47.6**	**0.0**
CNOP				*e*S	Sn	12 14 59.1	+15
TNTI	**Ternate**	**5.43**	**165**	Pn	**Pn**	**12 13 52.9**	**-0.3**
TNTI	**Ternate**	**5.43**	**165**	P	**Pn**	**12 13 52.7**	**-0.4**
	183nm,1.0s,3μm0.8nm						
GTOI	**Gorontalo**	**6.17**	**209**	P	**Pn**	**12 14 03.1**	**+0.1**
	57nm,0.9s,592nm0.2nm						
RCP	**Roxas**	**6.34**	**330**	⇑*i*P	**Pn**	**12 14 06.0**	**+0.6**
LBMI	**Labuha**	**6.82**	**167**	P	**Pn**	**12 14 12.0**	**+0.1**
	50nm,0.8s,2μm1.0nm						
MRSI	**Marisa**	**6.88**	**216**	P	**Pn**	**12 14 13.4**	**+0.8**
	98nm,0.5s,1μm1.2nm						
TOLI2	**Tolitoli**	**7.17**	**227**	Pn	**Pn**	**12 14 15.7**	**-0.8**
MYLDM	**Lahad Datu**	**7.52**	**264**		**Pn**	**12 14 24.6**	**+3.3**
LUWI	**Luwuk**	**7.76**	**205**	Pn	**Pn**	**12 14 28.6**	**+4.1**
LUWI	**Luwuk**	**7.76**	**205**	P	**Pn**	**12 14 25.5**	**+1.0**
	71nm,0.8s,0.5nm						
SANI	**Sanana**	**8.06**	**180**	P	**Pn**	**12 14 25.8**	**-2.7**
MPSI	**Mapaga**	**8.34**	**227**	P	**Pn**	**12 14 32.1**	**-0.2**
	13nm,1.0s,1μm						
SIJI	**Sorong**	**8.66**	**143**	P	**Pn**	**12 14 36.9**	**+0.3**
	7.6nm,0.3s,baz=218,slow=23,SNR=11						
SIJI				S	**Sn**	**12 16 09.7**	**-3.0**
	7.0nm,0.7s,baz=275,slow=23,SNR=1.5						
NLAI	**Namlea**	**9.30**	**173**	P	**Pn**	**12 14 43.5**	**-1.8**
	53nm,0.9s,4μm						
AAI	**Ambon**	**9.93**	**167**	P	**Pn**	**12 14 52.4**	**-1.3**
	24nm,0.5s						
FAKI	**Fak Fak**	**10.88**	**145**	Pn	**Pn**	**12 15 06.6**	**+0.1**
SPSI	**Sidrap Palu**	**11.75**	**212**	P	**Pn**	**12 15 16.2**	**-1.7**
	10nm,1.0s						
KAPI	**Kappang**	**12.65**	**210**	P	**Pn**	**12 15 29.0**	**-0.7**
	6.3nm,0.3s,baz=41,slow=7.6,SNR=6.6						
SBUM	**Sibu**	**14.21**	**256**	P	**P**	**12 15 55.2**	**+2.0**
BBKI	**Banjar Baru**	**14.62**	**230**	P	**P**	**12 15 57.6**	**-0.2**
MTN	**Manton Dam**	**19.46**	**165**	P	**P**	**12 16 52.1**	**+1.2**
MTN				IAmb	IAmb	12 16 59.4	
	comp=Z,23nm,1.1s						
KNRA	**Kununurra**	**21.77**	**173**	P	**P**	**12 17 17.2**	**+1.4**
KNRA				IAmb	IAmb	12 17 21.3	
	comp=Z,21nm,0.6s						
SDSI	**Sungai Dareh**	**25.50**	**255**	P	**P**	**12 17 51.3**	**+0.5**
PMG	**Port Moresby**	**26.08**	**126**	P	**P**	**12 17 55.8**	**-0.2**
	comp=Z,18nm,0.6s,baz=283,slow=1.1,SNR=4.9						
	comp=Z,18nm,0.6s						
COEN	**Coen**	**26.19**	**140**	P	**P**	**12 17 56.7**	**-0.2**
COEN				IAmb	IAmb	12 18 01.3	
	comp=Z,20nm,0.8s						
NJ2	**Nanjing**	**26.71**	**346**	*e*P	**P**	**12 18 03.0**	**+1.6**
NJ2				pP	**pP**	**12 18 29.5**	**+0.5**
NJ2				sP	**sP**	**12 18 42.5**	**-1.6**
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
WB0	**Warramunga Arr**	**26.96**	**162**	P	**P**	**12 18 03.5**	**-0.3**
WB0				IAmb	IAmb	12 18 29.3	
	comp=Z,6.8nm,0.7s						
WRAB	**Tennant Creek**	**27.11**	**163**	P	**P**	**12 18 04.3**	**-0.8**
WRAB				IAmb	IAmb	12 18 05.3	
	comp=Z,8.6nm,1.0s						
WRA	**Warramunga Arr**	**27.11**	**163**	P	**P**	**12 18 04.5**	**-0.6**
	comp=Z,2.7nm,0.5s,baz=342,slow=9.3,SNR=54						
WRA				S	**S**	**12 22 29.2**	**-4.8**
	comp=Z,0.4nm,0.6s,baz=332,slow=18,SNR=2.0						
	comp=Z,2.7nm,0.5s						
WRA	**Warramunga Arr**	**27.11**	**163**	P	**P**	**12 18 04.3**	**-0.9**
WB2	**Warramunga Arr**	**27.11**	**163**	P	**P**	**12 18 04.6**	**-0.6**
WB2				IAmb	IAmb	12 18 47.2	
	comp=Z,8.4nm,0.9s						
PSA00	**Pilbara Seismi**	**28.12**	**192**	P	**P**	**12 18 14.0**	**-0.1**
PSA00	**Pilbara Seismi**	**28.12**	**192**	P	**P**	**12 18 14.1**	**0.0**
CMAR	**Chiang Mai Arr**	**29.12**	**297**	P	**P**	**12 18 21.6**	**-1.5**
	comp=Z,0.5nm,0.4s,baz=116,slow=7.3,SNR=4.6						
	comp=Z,0.5nm,0.4s						
QIS	**Mount Isa**	**29.64**	**154**	P	**P**	**12 18 28.0**	**+0.4**
MTSU	**Mount Surprise**	**30.07**	**143**	P	**P**	**12 18 32.6**	**+1.1**
AS31	**Alice Springs**	**30.54**	**166**	P	**P**	**12 18 35.5**	**0.0**
AS31				IAmb	IAmb	12 18 36.8	
	comp=Z,3.4nm,0.5s						
ASAR	**Alice Springs**	**30.54**	**166**	P	**P**	**12 18 35.5**	**0.0**
	comp=Z,7.6nm,0.6s,baz=341,slow=6.7,SNR=178						
ASAR				S	**S**	**12 23 27.1**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=331,slow=12,SNR=12						
ASAR				ScP	**ScP**	**12 25 00.2**	**-1.9**
	comp=Z,0.4nm,0.5s,baz=342,slow=3.3,SNR=5.2						
	comp=Z,7.6nm,0.6s						
AS01	**Alice Springs**	**30.55**	**166**	P	**P**	**12 18 35.5**	**-0.1**
PZH	**PanZhiHua**	**30.80**	**314**	P	**P**	**12 18 41.0**	**+3.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,180nm,6.1s						
WRKA	**Warakurna**	**30.99**	**176**	P	**P**	**12 18 39.6**	**+0.1**
KSRS	**Korea Array**	**31.30**	**3**	P	**P**	**12 18 40.9**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=288,slow=14,SNR=2.3						
	comp=Z,0.3nm,0.3s						
CTA	**Charters Tower**	**32.74**	**143**	P	**P**	**12 18 56.3**	**+1.5**
CTAO	**Charters Tower**	**32.74**	**143**	P	**P**	**12 18 56.0**	**+1.1**
CTAO				IAmb	IAmb	12 19 08.4	
	comp=Z,18nm,1.1s						
OOD	**Oodnadatta**	**34.93**	**165**	P	**P**	**12 19 13.7**	**0.0**
LZH	**Lanzhou**	**36.15**	**329**	*e*P	**P**	**12 19 27.0**	**+2.8**
LZH				pP	pP	12 19 33.0	-20
LZH				pmax	pmax		
	comp=Z,13nm,0.6s						
MORW	**Morawa**	**36.22**	**195**	P	**P**	**12 19 24.6**	**-0.2**
MORW				IAmb	IAmb	12 19 25.9	
	comp=Z,31nm,1.4s						
MORW	**Morawa**	**36.22**	**195**	P	**P**	**12 19 24.5**	**-0.2**
INKA	**Innaminka**	**36.50**	**158**	P	**P**	**12 19 27.8**	**+0.8**
FORT	**Forrest**	**36.69**	**177**	P	**P**	**12 19 28.5**	**-0.1**
FORT	**Forrest**	**36.69**	**177**	P	**P**	**12 19 28.7**	**+0.1**
QLP	**Quilpie**	**36.95**	**152**	P	**P**	**12 19 30.8**	**-0.1**
MULG	**Mulgathing**	**36.95**	**168**	P	**P**	**12 19 31.4**	**+0.5**
HHC	**Hu-ho-hao-te**	**36.97**	**342**	*e*P	**P**	**12 19 32.0**	**+0.9**
HHC				pmax	pmax		
	comp=Z,30nm,0.9s						
HHC				pmax	pmax		
	comp=Z,1μm,5.8s						
BTO	**Baotou**	**37.26**	**340**	*e*P	**P**	**12 19 34.3**	**+0.8**
BTO				pmax	pmax		
	comp=Z,19nm,0.7s						
BTO				pmax	pmax		
	comp=Z,3μm,14.2s						
KMBL	**Kambalda**	**37.43**	**186**	P	**P**	**12 19 34.6**	**-0.3**
BLDU	**Ballidu**	**37.54**	**193**	P	**P**	**12 19 35.5**	**-0.4**
RK1H	**Rockhampton Ha**	**37.80**	**142**	P	**P**	**12 19 38.9**	**+0.8**
LCRK	**Leigh Creek**	**38.14**	**163**	P	**P**	**12 19 41.6**	**+0.7**
MDJ	**Mudanjiang**	**38.53**	**4**	P	**P**	**12 19 45.5**	**+1.5**
MDJ				pmax	pmax		
	comp=Z,4.0nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,1μm,8.2s						
MUN	**Mundaring**	**38.97**	**193**	P	**P**	**12 19 47.8**	**0.0**
EIDS	**Eidsvold**	**39.63**	**143**	P	**P**	**12 19 53.2**	**-0.1**
NWAO	**Narrogin (SRO)**	**39.66**	**192**	P	**P**	**12 19 53.6**	**+0.1**
NWAO	**Narrogin (SRO)**	**39.66**	**192**	P	**P**	**12 19 53.7**	**+0.2**
NWAO	**Narrogin (SRO)**	**39.66**	**192**	P	**P**	**12 19 53.8**	**+0.2**
BBOO	**Buckleboo**	**39.82**	**167**	P	**P**	**12 19 55.6**	**+0.8**
BBOO	**Buckleboo**	**39.82**	**167**	P	**P**	**12 19 55.4**	**+0.5**
STKA	**Stephens Creek**	**40.55**	**159**	P	**P**	**12 20 01.6**	**+0.8**
	comp=Z,16nm,0.7s,baz=334,slow=8.7,SNR=32						
	comp=Z,16nm,0.7s						
STKA	**Stephens Creek**	**40.55**	**159**	P	**P**	**12 20 01.8**	**+0.9**
STKA	**Stephens Creek**	**40.55**	**159**	P	**P**	**12 20 01.7**	**+0.8**
HTT	**Hallett**	**41.14**	**163**	P	**P**	**12 20 06.9**	**+1.1**
CMSA	**Cobar Meteorol**	**41.85**	**154**	P	**P**	**12 20 12.3**	**+0.8**
ARMA	**Armidale**	**43.80**	**147**	P	**P**	**12 20 27.9**	**+0.5**
ARMA				IAmb	IAmb	12 20 37.7	
	comp=Z,22nm,1.5s						
ARPS	**Mount Arapiles**	**45.11**	**162**	P	**P**	**12 20 38.7**	**+1.1**
CAN	**Canberra**	**46.51**	**154**	P	**P**	**12 20 50.0**	**+1.4**
CAN	**Canberra**	**46.51**	**154**	P	**P**	**12 20 50.5**	**+1.9**
DZM	**Mont Dzumac**	**48.48**	**127**	P	**P**	**12 21 05.1**	**+0.9**
DZM				IAmb	IAmb	12 21 21.0	
	comp=Z,10nm,1.1s						
LIFNC	**LIFOU**	**48.48**	**125**	P	**P**	**12 21 05.1**	**+1.0**
WMQ	**Urumqi**	**50.42**	**324**	*e*P	**P**	**12 21 21.0**	**+2.5**
PETK	**Petropavlovsk-**	**53.57**	**23**	P	**P**	**12 21 42.2**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=202,slow=4.5,SNR=4.9						
	comp=Z,1.6nm,0.8s						
MK31	**Makanchi Array**	**55.24**	**325**	P	**P**	**12 21 51.5**	**-2.4**
MKAR	**Makanchi Array**	**55.24**	**325**	P	**P**	**12 21 51.8**	**-2.1**
	comp=Z,0.6nm,0.5s,baz=117,slow=7.3,SNR=14						
	comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	**55.24**	**325**	P	**P**	**12 21 51.5**	**-2.4**
KURK	**Kurchatov**	**59.40**	**327**	P	**P**	**12 22 22.2**	**-0.8**
BKZ	**Black Stump Fm**	**64.79**	**138**	P	**P**	**12 22 59.2**	**0.0**
TIXI	**Tiksi**	**65.54**	**1**	P	**P**	**12 23 03.0**	**-0.3**
TIXI				IAmb	IAmb	12 23 08.5	
	comp=Z,3.9nm,1.1s						
RAYN	**Ar Rayn**	**78.92**	**293**	P	**P**	**12 24 21.2**	**-2.8**
RAYN				IAmb	IAmb	12 24 22.8	
	comp=Z,3.8nm,0.8s						
O18K	**Koktuh Hills**	**79.15**	**30**	P	**P**	**12 24 25.2**	**+0.8**
O18K				IAmb	IAmb	12 25 03.0	
	comp=Z,11nm,1.2s						
CAST	**Castle Rocks**	**80.99**	**27**	P	**P**	**12 24 34.8**	**+0.6**
SKT	**Skwentna**	**81.14**	**28**	P	**P**	**12 24 34.3**	**-0.7**
I21K	**Tanana**	**81.17**	**25**	P	**P**	**12 24 35.9**	**+0.8**
I21K				IAmb	IAmb	12 24 37.4	
	comp=Z,5.7nm,1.1s						
SUA	**Susitna One**	**81.48**	**29**	P	**P**	**12 24 37.0**	**0.0**
SUA				IAmb	IAmb	12 24 38.4	
	comp=Z,5.3nm,0.8s						
MLY	**Manley**	**81.69**	**25**	P	**P**	**12 24 38.9**	**+0.9**
ILAR	**Eielson Array**	**83.32**	**26**	P	**P**	**12 24 45.1**	**-1.2**

	comp=Z,0.8nm,0.6s,baz=242,slow=5.2,SNR=15						
	comp=Z,0.8nm,0.6s						
EGAK	Eagle	85.77	25	P	P	12 24 59.2	+0.6
ARCES	ARCESS Array B	88.03	340	P	P	12 25 07.2	-2.2
	comp=Z,3.1nm,0.8s,baz=72,slow=4.0,SNR=5.4						
	comp=Z,3.1nm,0.8s						
FINES	FINESS Array B	89.45	332	P	P	12 25 13.7	-2.5
	comp=Z,2.6nm,0.9s,baz=72,slow=6.2,SNR=6.3						
	comp=Z,2.6nm,0.9s						
QSPA	South Pole Qui	95.95	180	P	P	12 25 46.7	+0.5
QSPA				IAmb	IAmb	12 26 03.1	
	comp=Z,3.0nm,1.2s						
YKA	Yellowknife Ar	97.68	24	P	Pdif	12 25 54.0	-0.1
	comp=Z,0.3nm,0.8s,baz=302,slow=5.0,SNR=5.3						
	comp=Z,0.3nm,0.8s						

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*MDD **27** 12:31:29.2±1.5, 32°.27N×7°.70W, h7^{km}±6^{km}, Mb4.0/3, M_mb3.4/3, Error ellipse: s-maj=11.0km s-min=8.9km az=54.0*

*IGIL **27** 12:31:30.2, 32°.25N×7°.71W, h10^{km}, ML2.5*

INMG 27 12:31:43.6±1.4**, 33°.33N×7°.06W, h13^{km}, ML2.3, 3C, Error ellipse: s-maj=11.5km s-min=5.5km az=110.0, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBDV	Barranco-do-Ve	3.97	350	eP	Pn	12 32 43.1	-1.1
PBDV				eS	Sn	12 33 28.5	-2.1
PBDV				A	A	12 33 37.1	
	4.4nm,0.7s						
PFVI	Vila Bisbo	4.06	340	eP	Pn	12 32 45.2	-0.2
PFVI				eS	Sn	12 33 30.3	-2.5
PFVI				A	A	12 33 37.0	
	7.4nm,0.8s						
PVAQ	Vaqueiros	4.10	353	eP	Pn	12 32 44.6	-1.4
PVAQ				eS	Sn	12 33 30.6	-3.2
MORF	Marmelete	4.17	342	eS	Sn	12 33 33.4	-2.3
MORF	Marmelete	4.17	342	eP	Pn	12 32 44.7	-2.3
EGRO	El Granado	4.21	355	Pn	Pn	12 32 47.4	-0.1
EGRO				⇑iVmb_V		12 32 50.6	
	135nm,SNR=0.9						
EGRO				Sn	Sb	12 33 44.5	-3.7
PCVE	Castro Verde	4.37	350	eP	Pn	12 32 48.7	-0.9
PCVE				eS	Sn	12 33 37.4	-3.0
PCVE				A	A	12 33 51.9	
	3.6nm,0.6s						
EMIN	Mina Concepcio	4.44	4	⇑iVmb_V		12 32 50.9	
	85nm,SNR=0.8						
EMIN				Pn	Pn	12 32 51.1	+0.5
EMIN				Sn	Sb	12 33 50.7	-4.1
MESJ	Messejana	4.60	348	eP	Pn	12 32 51.9	-0.9
MESJ				eS	Sn	12 33 43.1	-3.0
MESJ				A	A	12 33 59.3	
	2.7nm,0.5s						
MESJ	Messejana	4.60	348	eS	Sn	12 33 50.5	+4.4
MESJ				IAML		12 33 54.0	
	comp=N,6.5nm,0.8s						
PBAR	Barrancos	4.83	0	eP	Pn	12 32 55.8	-0.2
PBAR				eS	Sn	12 33 48.9	-3.0
PBAR				A	A	12 34 05.5	
	comp=N,2.1nm,0.8s						
ECAB	El Cabril	4.92	15	Pn	Pn	12 32 57.9	+0.6
ECAB				⇑iVmb_V		12 33 01.2	
	comp=N,93nm,SNR=1.3						
ECAB				Sn	Sb	12 34 03.9	-4.8
PNCL	Nicolau / Gran	4.92	346	eP	Pn	12 32 55.4	-1.8
PMTG	Montargil	5.80	351	eP	Pn	12 33 08.2	-1.2
PMTG				eS	Sn	12 34 12.3	-3.5
PMTG				A	A	12 34 36.9	
	comp=N,2.6nm,0.7s						

WEL 27 12:38:50.6±0.5**, 42°S**±3°×**17°4E**±°**, h5^{km}, M2.4**/1**, ML2.2**/7**, MLv2.4**/1**, Error ellipse: s-maj=0.0km s-min=0.0km az=104.1, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.22	202	P	Pg	12 38 55.4	+0.4
KHZ				S	Sg	12 38 59.0	+1.0
BSWZ	Blackbirch Sta	0.52	19	P	Pg	12 39 00.6	0.0
BSWZ				S	Sg	12 39 08.3	+0.9
CMWZ	Cape Campbell	0.62	43	MLv			
THZ	Tophouse	0.71	308	P	Pb	12 39 05.0	-0.5
THZ				S	Sg	12 39 14.3	+0.8
TUWZ	Tuamarina	0.81	16	P	Pg	12 39 06.1	0.0
TUWZ				S	Sb	12 39 17.6	-0.8
GVZ	Greta Valley S	0.89	211	P	Pb	12 39 08.4	-0.1
GVZ				S	Sn	12 39 22.1	-0.9
MRNZ	Matariki Terra	1.05	320	P	Pb	12 39 11.1	-0.1
MRNZ				S	Sb	12 39 26.1	+0.8
LTZ	Lake Taylor	1.17	240	P	Pg	12 39 12.4	-0.7
DSZ	Denniston Nort	1.45	288	P	Pb	12 39 18.1	-0.1
QRZ	Quartz Range	1.62	328	P	Pn	12 39 20.4	+0.6
MQZ	McQueen's Vall	1.67	206	P	Pn	12 39 17.6	-2.9

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*NEIC **27** 12:45:50.1±1.0, 18°.8N±0°.1×145°.2E±0°.2, h166^{km}±10^{km}, mb4.1/27, Error ellipse: s-maj=32.4km s-min=15.5km az=99.0*

*IDC **27** 12:45:51.5±2.6, 18°.61N×145°.70E, h181^{km}±25^{km}, mb3.2/8, mbtmp3.8/9, MS4.0/1, Error ellipse: s-maj=40.4km s-min=16.5km az=111.0*

ISC 27 12:45:52.6±0.7**, 18°.60N**±0°.08×**145°.3E**±0°.2**, h200^{km}, n43, σ0^{s}.89**/42**, mb3.9**/23**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.00	185	P	Pn	12 47 07.2	+0.1
	26nm,0.2s,baz=6.2,slow=3.7,SNR=12						
GUMO				S	Sn	12 48 04.9	-1.0
	30nm,0.4s,baz=336,slow=23,SNR=1.6						
GUMO	Guam	5.00	185	Pn	Pn	12 47 04.8	-2.3
KLR	Kul'dur	32.45	343	LR	LR	13 03 09.2	
	comp=Z,295nm,20.9s,baz=352,slow=32						
MTN	Manton Dam	34.22	205	P	P	12 52 19.7	+0.2
WB0	Warramunga Arr	39.60	196	P	P	12 53 06.0	+1.2
WB0				IAmb	IAmb	12 53 11.8	
	comp=Z,10nm,1.4s						
WRAB	Tennant Creek	39.77	196	P	P	12 53 07.6	+1.4
WRAB				IAmb	IAmb	12 53 44.2	
	comp=Z,9.0nm,1.4s						
WB2	Warramunga Arr	39.78	196	P	P	12 53 07.7	+1.4
WB2				IAmb	IAmb	12 53 47.6	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	39.78	196	P	P	12 53 07.8	+1.5
	comp=Z,1.2nm,0.4s,baz=12,slow=8.3,SNR=58						
	comp=Z,1.2nm,0.4s						
WRA	Warramunga Arr	39.78	196	P	P	12 53 06.9	+0.6
FITZ	Fitzroy Crossi	41.27	209	P	P	12 53 19.2	+0.8
AS31	Alice Springs	43.45	195	P	P	12 53 37.0	+1.0
ASAR	Alice Springs	43.45	195	P	P	12 53 37.6	+1.6
	comp=Z,0.3nm,0.4s,baz=9.6,slow=6.3,SNR=23						
	comp=Z,0.3nm,0.4s						
ASAR	Alice Springs	43.45	195	P	P	12 53 37.5	+1.4
BBOO	Buckleboo	51.88	190	P	P	12 54 41.7	+1.1
MK31	Makanchi Array	58.24	314	P	P	12 55 24.5	-1.6
MKAR	Makanchi Array	58.24	314	P	P	12 55 29.0	+2.9
	comp=Z,0.2nm,0.6s,baz=82,slow=10,SNR=2.2						
	comp=Z,0.2nm,0.6s						
SKT	Skwentna	61.21	29	P	P	12 55 45.6	-0.5
SKT				IAmb	IAmb	12 55 54.5	
	comp=Z,3.3nm,1.3s						
CAST	Castle Rocks	61.36	27	P	P	12 55 47.4	+0.4
CAST				IAmb	IAmb	12 55 55.9	
	comp=Z,2.5nm,1.3s						
IMAR	Indian Mountai	61.47	24	P	P	12 55 48.3	+0.6
H21K	Melozitna Rive	61.73	25	P	P	12 55 49.0	-0.5
H21K				IAmb	IAmb	12 56 24.3	
	comp=Z,4.8nm,1.5s						
RC01	Rabbit Creek A	61.83	30	P	P	12 55 50.4	+0.2
I21K	Tanana	61.91	25	P	P	12 55 50.9	+0.2
I21K				IAmb	IAmb	12 56 09.1	
	comp=Z,2.4nm,1.2s						
GHO	Glory Hole Cre	62.37	29	P	P	12 55 53.8	-0.1
MLY	Manley	62.37	26	P	P	12 55 54.2	+0.4
A21K	Barrow	62.51	18	P	P	12 55 55.0	+0.5
A21K				IAmb	IAmb	12 56 24.6	
	comp=Z,2.9nm,1.1s						
SML	Sawmill	62.65	29	P	P	12 55 55.0	-0.7
I23K	Minto, Yukon-K	62.97	26	P	P	12 55 58.1	+0.5
I23K				IAmb	IAmb	12 56 04.8	
	comp=Z,4.4nm,1.4s						
SCM	Sheep Creek Mo	63.12	29	P	P	12 55 59.6	+0.8
MDM	Murphy Dome	63.39	26	P	P	12 56 00.7	+0.2
MDM				IAmb	IAmb	12 56 24.2	
	comp=Z,2.3nm,1.1s						
H24K	Noodor Dome	63.73	25	P	P	12 56 03.2	+0.4
H24K				IAmb	IAmb	12 56 03.7	
	comp=Z,5.7nm,1.5s						
ILAR	Eielson Array	63.91	26	P	P	12 56 03.0	-0.9
	comp=Z,0.3nm,0.6s,baz=250,slow=5.9,SNR=5.3						
	comp=Z,0.3nm,0.6s						
PAX	Paxson	64.18	28	P	P	12 56 05.0	-0.7
PAX				IAmb	IAmb	12 56 41.5	
	comp=Z,3.5nm,1.3s						
RIDG	Independent Ri	64.58	28	P	P	12 56 08.7	+0.4
RIDG				IAmb	IAmb	12 56 46.1	
	comp=Z,2.1nm,1.0s						
BMAR	Burnt Mountain	65.36	24	P	P	12 56 13.9	+0.7
BCAR	Beaver Creek A	65.85	28	P	P	12 56 16.1	-0.4
DAWY	Dawson	67.02	28	P	P	12 56 24.1	+0.2
DAWY				IAmb	IAmb	12 57 05.7	
	comp=Z,3.9nm,1.4s						
INK	Inuvik	69.61	23	P	P	12 56 39.8	+0.1
	comp=Z,0.6nm,0.7s,baz=270,slow=4.6,SNR=2.3						
	comp=Z,0.6nm,0.7s						
A36M	Sachs Harbour	72.30	19	P	P	12 56 55.9	+0.1
C36M	Paulatuk	72.98	22	P	P	12 56 59.2	-0.7
C36M				IAmb	IAmb	12 57 00.1	
	comp=Z,5.4nm,1.4s						
ABKAR	Akbulak array	73.14	317	P	P	12 57 02.0	+0.8
YKA	Yellowknife Ar	78.26	28	P	P	12 57 29.9	-0.1
	comp=Z,0.4nm,0.6s,baz=288,slow=5.3,SNR=7.3						
	comp=Z,0.4nm,0.6s						
NVAR	Mina Array Bea	83.51	52	P	P	12 57 58.4	-0.1
	comp=Z,1.2nm,0.7s,baz=266,slow=5.8,SNR=12						
	comp=Z,1.2nm,0.7s						
PDAR	Pinedale Array	88.17	45	P	P	12 58 20.9	-0.5
	comp=Z,0.2nm,0.4s,baz=213,slow=1.5,SNR=4.5						
	comp=Z,0.2nm,0.4s						

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*RSNC **27** 12:47:47.3±0.9, 10°.42N×72°.54W, h9^{km}±6^{km}, ML2.8, Mw2.8*

*FUNV **27** 12:47:51.1, 10°.42N×72°.18W, h5^{km}, MW3.4*

ISC 27 12:47:46.6±0.9**, 10°.54N**±0°.04×**72°.45W**±0°.03**, h17^{km}, n14, σ2^{s}.33**/28**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRJC	Cerrejon, Guaj	0.64	319	⇓iP	Pg	12 47 59.6	+0.4
CRJC				eS	Sg	12 48 09.5	+1.7
URIC	Uribia, Colomb	1.24	21	eP	Pg	12 48 11.2	+0.6
URIC				eS	Sg	12 48 29.8	+3.0
URIC				i		12 48 31.6	
	comp=Z,259nm,0.3s						
LL1C	La Loma 1 Cana	1.47	228	eP	Pn	12 48 09.6	-2.7
LL1C				eS	Sn	12 48 28.4	-2.8
LL1C				i		12 48 32.6	
	comp=Z,353nm,0.3s						
LL5C	La Loma 5 El P	1.48	238	eP	Pn	12 48 11.3	-1.1
LL5C				eS	Sn	12 48 30.4	-0.9
SMRC	Santa Marta, M	1.85	290	eP	Pn	12 48 17.2	-0.4
SMRC				eS	Sn	12 48 38.2	-2.3
ARGC	Ariguani, Magd	1.89	249	eP	Pn	12 48 17.4	-0.7
ARGC				eS	Sn	12 48 39.6	-2.0
ARGC				i		12 48 42.6	
	comp=Z,44nm,0.2s						
CURV	Curarigua	2.51	102	eP	Pn	12 48 27.5	+0.8
CURV				eS	Sn	12 48 55.4	-1.6
SIQV	Siquisique	2.60	87	eP	Pn	12 48 29.5	+1.5
SIQV				eS	Sn	12 48 58.5	-0.8
CAPV	Capacho	2.66	177	eP	Pb	12 48 32.0	-2.0
CAPV				eS	Sn	12 49 03.5	+2.5
SJCC	San Jacinto, C	2.76	257	eP	Pn	12 48 31.5	+1.3
SJCC				eS	Sn	12 49 05.6	+2.5
PAMC	Pamplona, Colo	3.19	184	eP	Pn	12 48 38.6	+2.2
PAMC				eS	Sn	12 49 18.2	+3.8
PAMC				i		12 49 23.3	
	comp=Z,25nm,0.3s						
ZARC	Zaragoza, Cauc	3.85	218	eP	Pn	12 48 45.3	+0.2
ZARC				eS	Sn	12 49 31.8	+1.8
ZARC				i		12 49 43.8	
	comp=Z,9.1nm,0.1s						
BAUV	El Baul	4.63	110	eP	Pn	12 48 56.6	+0.8
BAUV				eS	Sn	12 49 43.9	-5.3
BENV	Beln	4.81	96	eP	Pn	12 48 59.5	+1.1
BENV				eS	Sn	12 49 49.5	-4.3

IDC 27 12:52:13.0±3.7**, 2°.62S×151°.49E, h0^{km}, mb3.6**/2**, mbtmp3.6**/2**, Error ellipse: s-maj=157.2km s-min=46.0km az=114.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.03	223	P	P	12 57 30.4	+0.6
	0.4nm,0.3s,baz=48,slow=8.9,SNR=16						
	0.4nm,0.3s						
ASAR	Alice Springs	26.97	218	P	P	12 57 56.3	-0.3
	0.4nm,0.3s,baz=47,slow=8.4,SNR=18						
	0.4nm,0.3s						
TORD	Torodi Ar. Bea	148.35	291	PKPbc	PKPbc	13 12 01.7	-0.8
	224nm,0.8s,baz=48,slow=2.1,SNR=7.1						

NNC 27 12:56:57.4±11.0**, 37°.00N×69°.68E, h0^{km}, mb3.9, mpv3.5, 3C-2D, Error ellipse: s-maj=92.2km s-min=90.2km az=51.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.99	30	P	Pn	12 58 27.8	0.0
	SNR=74						
AML	Almayashu	5.99	30	⇑Pn	Pn	12 58 27.5	-0.3
	0.6nm,0.3s						
AML				⇑Sn	Sn	12 59 37.0	-0.3
	2.7nm,0.6s						
KK31	Karatay Array	6.13	6	⇓Pn	Pn	12 58 32.1	+2.7
	1.0nm,0.2s,baz=190,slow=12,SNR=57						
KK31				⇑Sn	Sn	12 59 42.4	+2.2
	1.1nm,0.5s,baz=191,slow=26,SNR=3.6						
UCH	Uchtor	6.42	34	P	Pn	12 58 32.9	-0.8
	SNR=24						
EKS2	Erkin-Say	6.48	28	P	Pn	12 58 34.1	0.0
	SNR=8.3						
AAK	Ala-Archa	6.74	32	P	Pn	12 58 37.3	-0.6
	SNR=6.8						
USP	Ospenovka	7.27	29	P	Pn	12 58 44.0	-0.9
	SNR=7.0						
TKM2	Tokmak 2	7.46	36	P	Pn	12 58 45.5	-2.2
	SNR=11						
TKM2	Tokmak 2	7.46	36	⇓Pn	Pn	12 58 45.6	-2.1
	5.2nm,0.7s						

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*IDC **27** 13:10:39.9±3.0, 15°.69S×173°.95W, h64^{km}±27^{km}, mb3.9/11, mbtmp4.2/12, ML4.7/1, MS4.3/2, Error ellipse: s-maj=27.4km s-min=15.7km az=136.0*

*NEIC **27** 13:10:40.3±0.9, 15°.72S±0°.07×173°.83W±0°.06, h66^{km}±7^{km}, mb4.6/40, Error ellipse: s-maj=11.1km s-min=8.0km az=205.0*

ISC 27 13:10:38.9±0.5**, 15°.70S**±0°.07×**173°.80W**±0°.08**, h50^{km}, n72, σ1^{s}.10**/52**, mb4.6**/29**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.65	48	P	Pn	13 11 22.0	+2.8
	117nm,0.3s,baz=198,slow=2.2,SNR=204						
AFI				S	Sn	13 11 49.4	-0.7
	2µm,0.5s,baz=95,slow=23,SNR=21						
	660nm,0.6s						
AFI	Afiamalu	2.65	48		Pn	13 11 21.7	+2.5
NIUE	Niue	5.00	133		Pn	13 11 52.9	+1.5
MSVF	Nonsavu	8.06	254	P	Pn	13 12 37.8	+4.3
	1.4nm,0.7s,baz=193,slow=18,SNR=1.4						
MSVF	Nonsavu	8.06	254	Pn	Pn	13 12 34.2	+0.7
PINNC	Pines Island,	18.99	246	Pn	P	13 14 57.1	+0.7
PINNC				IAmb	IAmb	13 15 30.0	
	comp=Z,37nm,1.3s						
DZM	Mont Dzumac	19.73	248	P	P	13 15 03.6	-1.0
TARA	Tarawa	21.43	321	P	P	13 15 20.9	-2.0
URZ	Urewera	23.86	198	P	P	13 15 46.9	-0.7
	comp=Z,12nm,0.8s,baz=338,slow=2.9,SNR=11						
	comp=Z,12nm,0.8s						
TOZ	Tahuroa Road	23.90	201	P	P	13 15 48.0	0.0
TOZ				IAmb	IAmb	13 16 29.3	
	comp=Z,42nm,1.5s						
BFZ	Birch Farm	26.35	197	P	P	13 16 08.8	-1.5
BFZ				IAmb	IAmb	13 16 22.2	
	comp=Z,48nm,1.2s						
TCW	Tory Channel	27.44	200	P	P	13 16 19.9	-0.1
NNZ	Nelson	27.74	201	P	P	13 16 21.2	-1.5
MRNZ	Matariki Terra	28.12	202	P	P	13 16 24.9	-1.3
MLZ	Mavora Lakes	33.26	204	P	P	13 17 10.8	-0.6
ARMA	Armidale	34.85	239	P	P	13 17 25.2	-0.4
ARMA				IAmb	IAmb	13 17 42.2	
	comp=Z,10nm,1.1s						
KRVT	Keravat (AS076	35.44	285	P	P	13 17 29.5	-1.2
	comp=Z,18nm,0.7s,baz=153,slow=14,SNR=3.9						
	comp=Z,18nm,0.7s						
H11S2	WAKE ISLAND Hy	39.02	330	T	T	13 59 09.0	
	baz=146,slow=75,SNR=12						
H11S3	WAKE ISLAND Hy	39.03	330	T	T	13 59 05.0	
	baz=146,slow=75,SNR=9.9						
H11S1	WAKE ISLAND Hy	39.04	330	T	T	13 59 04.1	
	baz=146,slow=75,SNR=8.3						
WAKE	Wake Island	39.73	330	P	P	13 18 06.7	0.0
H11N3	WAKE ISLAND Hy	39.98	331	T	T	14 00 17.5	
	baz=146						
H11N1	WAKE ISLAND Hy	39.99	331	T	T	14 00 15.7	
	baz=146						
H11N2	WAKE ISLAND Hy	40.00	331	T	T	14 00 16.9	
	baz=146						
STKA	Stephens Creek	43.55	240	P	P	13 18 37.9	-0.2
BBOO	Buckleboo	48.33	240	P	P	13 19 14.3	-1.4
WB0	Warramunga Arr	49.36	257	P	P	13 19 22.2	-1.6
WB0				IAmb	IAmb	13 19 28.3	
	comp=Z,12nm,1.4s						
WRAB	Tennant Creek	49.39	257	P	P	13 19 21.9	-2.1
WRAB				IAmb	IAmb	13 20 01.9	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	49.40	257	P	P	13 19 22.2	-1.9
	comp=Z,1.7nm,0.7s,baz=95,slow=6.3,SNR=56						
WRA				PcP	PcP	13 20 44.9	-1.0
	comp=Z,0.6nm,0.8s,baz=98,slow=3.4,SNR=2.8						
	comp=Z,1.7nm,0.7s						
AS31	Alice Springs	49.65	252	P	P	13 19 24.2	-1.7
AS31				IAmb	IAmb	13 19 25.9	
	comp=Z,4.9nm,0.7s						
ASAR	Alice Springs	49.65	252	P	P	13 19 24.2	-1.7
	comp=Z,18nm,0.6s,baz=86,slow=7.9,SNR=364						
	comp=Z,18nm,0.6s						
GUMO	Guam	50.17	303	LR	LR	13 35 32.4	
	comp=Z,102nm,21.4s,baz=171,slow=30						
MTN	Manton Dam	53.32	266	P	P	13 19 52.0	-1.5
FITZ	Fitzroy Crossi	57.77	258	P	P	13 20 24.0	-1.4
PSA00	Pilbara Seismi	62.75	254	P	P	13 20 57.6	-1.8
MBWA	Marble Bar	62.91	254	P	P	13 20 58.2	-2.3
SBA	Scott Base	62.92	185	P	P	13 21 00.4	+0.8
SBA				IAmb	IAmb	13 21 40.4	
	comp=Z,9.3nm,1.3s						
JKA	Kamikawa-asahi	71.59	328	P	P	13 21 55.3	+0.4
JKA				IAmb	IAmb	13 22 38.0	
	comp=Z,13nm,1.5s						
PEA0B	Petropavlovsk-	72.80	342	P	P	13 22 01.5	-0.5
PETK	Petropavlovsk-	72.80	342	P	P	13 22 00.7	-1.2
	comp=Z,4.7nm,0.9s,baz=81,slow=9.8,SNR=5.9						
	comp=Z,4.7nm,0.9s						
PETK	Petropavlovsk-	72.80	342	P	P	13 22 01.5	-0.5
QSPA	South Pole Qui	74.34	180	P	P	13 22 10.6	-0.5
	comp=Z,3.2nm,0.9s,baz=60,slow=14,SNR=5.3						
	comp=Z,3.2nm,0.9s						
QSPA	South Pole Qui	74.34	180	P	P	13 22 10.4	-0.7
QSPA				IAmb	IAmb	13 22 44.2	
	comp=Z,13nm,1.5s						
NVAR	Mina Array Bea	74.81	42	P	P	13 22 14.6	+0.2
	comp=Z,1.4nm,1.0s,baz=246,slow=9.1,SNR=5.0						
	comp=Z,1.4nm,1.0s						
P18K	Big Mountain,	76.34	10	P	P	13 22 21.4	-1.0
P18K				IAmb	IAmb	13 22 30.7	
	comp=Z,14nm,1.3s						
N19K	Bonanza Creek	77.81	10	P	P	13 22 29.4	-1.3
N19K				IAmb	IAmb	13 22 34.3	
	comp=Z,12nm,1.5s						
SVW2	Sparrevohn	77.91	9	P	P	13 22 30.3	-0.9
SVW2				IAmb	IAmb	13 22 54.2	
	comp=Z,8.2nm,1.4s						
M19K	Big River Lodg	78.86	9	P	P	13 22 35.8	-0.6
TRF	Thorofare Moun	80.99	10	P	P	13 22 47.8	-0.2
TXAR	Lajitas Array	81.10	56	P	P	13 22 49.5	+0.2
	comp=Z,0.2nm,0.7s,baz=219,slow=7.0,SNR=2.1						
	comp=Z,0.2nm,0.7s						
TNA	Tin City	81.14	2	P	P	13 22 48.5	0.0
MCK	McKinley	81.49	11	P	P	13 22 49.7	-0.8
MCK				IAmb	IAmb	13 22 51.2	
	comp=Z,9.1nm,1.1s						
DLBC	Dease Lake	82.12	22	LR	LR	13 52 39.1	
	comp=Z,585nm,20.2s,baz=112,slow=31						
HDA	Harding Lake	82.47	11	P	P	13 22 55.3	-0.3
CCB	Clear Creek Bu	82.53	11	P	P	13 22 55.0	-0.9
TCOL	CIGO, UAF Yank	82.73	11	P	P	13 22 56.0	-0.9
TCOL				IAmb	IAmb	13 22 59.4	
	comp=Z,8.6nm,1.1s						
COLA	College	82.73	11	P	P	13 22 56.1	-0.8
COLA				IAmb	IAmb	13 22 56.9	
	comp=Z,5.9nm,0.9s						
MDM	Murphy Dome	82.74	11	P	P	13 22 56.0	-1.0
PDAR	Pinedale Array	82.75	42	P	P	13 22 57.3	-0.6
	comp=Z,0.4nm,0.8s,baz=222,slow=2.0,SNR=3.7						
	comp=Z,0.4nm,0.8s						
PDAR	Pinedale Array	82.75	42	P	P	13 22 56.9	-1.0
ILAR	Eielson Array	82.81	11	P	P	13 22 56.5	-0.8
	comp=Z,0.9nm,0.9s,baz=234,slow=6.4,SNR=12						
	comp=Z,0.9nm,0.9s						
IMAR	Indian Mountai	82.82	8	P	P	13 22 57.4	0.0
POKR	Poker Plat Res	83.03	11	P	P	13 22 57.7	-0.8
POKR				IAmb	IAmb	13 22 58.6	
	comp=Z,9.7nm,1.1s						
PRP	Porcupine Dome	83.74	11	P	P	13 23 01.9	-0.5
PRP				IAmb	IAmb	13 23 02.8	
	comp=Z,5.6nm,0.9s						
DAWY	Dawson	83.81	14	P	P	13 23 02.1	-0.5
COLD	Coldfoot	84.50	9	P	P	13 23 05.9	-0.1
COLD				IAmb	IAmb	13 23 09.1	
	comp=Z,4.3nm,1.0s						
FYU	Fort Yukon	84.73	11	P	P	13 23 06.9	-0.2
FYU				IAmb	IAmb	13 23 49.9	
	comp=Z,11nm,1.5s						
BMAR	Burnt Mountain	85.62	11	P	P	13 23 12.1	+0.5
YKA	Yellowknife Ar	90.53	24	P	P	13 23 34.3	-0.7
	comp=Z,0.4nm,0.8s,baz=244,slow=4.2,SNR=6.7						
	comp=Z,0.4nm,0.8s						
A36M	Sachs Harbour	93.28	14	P	P	13 23 47.5	-0.1
BRTR	Keskin Array B	146.14	320	PKPbc	PKPdf	13 30 12.8	-0.3
	comp=Z,4.3nm,0.8s,baz=113,slow=2.8,SNR=8.8						
GERES	GERESS Array B	146.38	351	PKPbc	PKPdf	13 30 13.5	+0.3
	comp=Z,0.4nm,0.6s,baz=64,slow=3.1,SNR=3.7						

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*MOS **27** 13:15:23.3±0.8, 0°.58N×98°.49E, h42^{km}, mb5.1/45, Error ellipse: s-maj=8.9km s-min=4.4km az=109.7*

*BJI **27** 13:15:25.5±0.0, 0°.66N×98°.47E, h56^{km}, mb4.8/62, mB5.2/30, Ms4.6/20, Ms7 4.4/22*

*DJA **27** 13:15:26.3±0.2, 1°N±2°×9°8E±°, h49^{km}±2^{km}, M4.9/55, mb5.0/55, mB5.3/19, MLv5.2/21, Mw4.7/18, Mw(mB)4.8/19*

*NEIC **27** 13:15:26.6±1.1, 0°.61N±0°.06×98°.42E±0°.05, h52^{km}±6^{km}, mb5.1/86, Error ellipse: s-maj=10.3km s-min=6.7km az=213.0*

*IDC **27** 13:15:26.1±1.9, 0°.58N×98°.52E, h50^{km}±16^{km}, mb4.3/25, mbtmp4.6/27, ML4.5/2, MS4.0/5, Error ellipse: s-maj=17.7km s-min=9.3km az=51.0*

ISC 27 13:15:26.2±0.3**, 0°.59N**±0°.04×**98°.43E**±0°.04**, h52^{km}**±2^{km}**, h53^{km}:pP-P, n379, σ1^{s}.21**/422**, mb4.9**/129**, MS4.3**/13**, 38C-11D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBSI	Pulau Batu	0.65	194	P	Pn	13 15 39.5	0.0
PBSI				S	Sn	13 15 50.1	+1.0
GSI	Gunungsitoli	1.12	310	Pn	Pn	13 15 45.8	+0.2
GSI				Sn	Sn	13 15 59.2	-0.8
GSI	Gunungsitoli	1.12	310	P	Pn	13 15 45.8	+0.2
GSI				S	Sn	13 16 00.6	+0.7
RPSI	Rantau Prapat	2.15	13	Pn	Pn	13 16 00.3	+0.7
PSI	Prapat	2.25	13	P	Pn	13 16 00.4	-0.8
PDSI	Padang	2.51	126	P	Pn	13 16 05.2	+0.6
PDSI				S	Sn	13 16 34.9	+0.8
BKNI	Bangkinang	2.62	96		Pn	13 16 07.5	+1.5
BKNI	Bangkinang	2.62	96	P	Pn	13 16 07.6	+1.5
SNSI	Sinabang, Aceh	2.78	311	P	Pn	13 16 08.6	+0.4
TSI	Tuntungan	2.90	3	P	Pn	13 16 11.5	+1.6

KCSI	Kotacane, Aceh	2.99	347	P	Pn	13 16 11.3	+0.1
SDSI	Sungai Dareh	3.35	117	P	Pn	13 16 17.6	+1.5
PPSI	Pulau Pagai	3.68	155	P	Pn	13 16 21.5	+0.9
MLSI	Meulaboh, Aceh	4.18	331	P	Pn	13 16 27.5	0.0
IPM	Ipoh	4.65	34	Pn	Pn	13 16 34.3	+0.3
LHMI	Lhok Sumawe	4.85	342		Pn	13 16 36.6	+0.1
LHMI	Lhok Sumawe	4.85	342	P	Pn	13 16 36.7	+0.1
KULM	Kulim	5.17	25	Pn	Pn	13 16 42.2	+1.2
MASI	Maura Aman, Be	5.31	134	P	Pn	13 16 43.0	0.0
	995nm,1.0s,9µm9.9nm						
MYKOM	Kota Tinggi	5.54	77	Pn	Pn	13 16 46.8	+0.6
TPRI	Tanjung Pinang	6.10	87	P	Pn	13 16 55.1	+1.3
	97nm,0.5s,0.9nm						
DSRI	Dabo	6.23	100	P	Pn	13 16 55.7	0.0
	116nm,0.8s,2µm0.8nm						
MNAI	Manna	6.67	137	Pn	Pn	13 17 01.9	+0.2
MNAI	Manna	6.67	137	P	Pn	13 17 01.9	+0.2
	241nm,0.7s,7µm3.1nm						
LWLI	Liwa	7.91	135	P	Pn	13 17 19.9	+1.2
	312nm,0.7s,6µm2.2nm						
SRIT	Nakonsritamara	8.04	8	Pn	Pn	13 17 19.3	-1.1
PPBI	Pangkal Pinang	8.17	110	P	Pn	13 17 23.6	+1.4
KASI	Kota Agung	8.57	135	P	Pn	13 17 27.4	-0.3
	99nm,0.7s						
CGJI	Cibinong	10.18	135	P	Pn	13 17 49.4	-0.3
	42nm,0.9s,968nm						
SKJI	Sukabumi	11.07	133	P	Pn	13 18 00.8	-1.1
	95nm,0.6s						
CNJI	Cibinong	11.69	132	P	Pn	13 18 09.2	-1.2
	32nm,0.8s,1µm						
COCO	West Island	12.79	187	Pn	Pn	13 18 25.6	+0.2
COCO	West Island	12.79	187	P	Pn	13 18 25.6	+0.2
CMJI	Cimerak	12.99	130	P	Pn	13 18 28.3	+0.1
	49nm,0.7s						
KPJI	Karang Pucung	13.10	127	P	Pn	13 18 28.4	-1.2
	70nm,0.6s						
PBKI	Pangkalan Bun	13.63	104	P	Pn	13 18 37.8	+0.9
	72nm,0.8s						
SBUM	Sibu	13.90	82	Pn	Pn	13 18 40.3	-0.3
UWJI	Ujung Watu	14.30	119	P	Pn	13 18 46.4	+0.5
	73nm,0.8s						
UGM	Wanagama	14.71	125	Pn	Pn	13 18 48.0	-3.4
UGM	Wanagama	14.71	125	P	Pn	13 18 52.1	+0.7
	146nm,1.4s						
NGJI	Ngawi	15.21	122	P	Pn	13 18 59.0	+1.2
	60nm,1.1s						
PWJI	Pagerwojo	15.84	123	P	Pn	13 19 05.3	-0.5
	22nm,0.6s						
GRJI	Gresik	15.87	118	P	Pn	13 19 07.4	+1.1
	126nm,0.9s						
BBKI	Banjar Baru	16.88	104	P	P	13 19 20.1	-0.3
	87nm,0.9s						
BLJI	Banyuglugur	17.23	119	P	Pn	13 19 22.5	-0.9
	47nm,1.3s,3µm						
GMJI	Gumukmas	17.36	121	P	P	13 19 25.5	-0.1
	23nm,1.4s						
CM31	Chiang Mai Arr	17.77	2		Pn	13 19 29.4	-0.5
CMAR	Chiang Mai Arr	17.77	2	P	Pn	13 19 29.7	-0.2
	1.6nm,0.3s,baz=192,slow=11,SNR=31						
CMAR				LR	LR	13 26 00.6	
	comp=Z,253nm,21.1s,baz=195,slow=36						
	4.6nm,0.5s						
CMAR	Chiang Mai Arr	17.77	2	P	Pn	13 19 29.3	-0.6
CMAR	Chiang Mai Arr	17.77	2	*i* P	P	13 19 30.1	0.0
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ABJI	Asem Bagus	17.82	118	P	Pn	13 19 29.5	-1.1
	comp=Z,43nm,0.9s						
PHRA	Phrae	17.89	6		Pn	13 19 30.7	-0.7
PHRA				IAmb	IAmb	13 19 41.8	
	comp=Z,130nm,1.3s						
CHTO	Chiang Mai	18.12	2		P	13 19 33.1	-0.9
CHTO	Chiang Mai	18.12	2	P	P	13 19 33.2	-0.9
BKB	Balikpapan	18.55	96	P	Pn	13 19 40.7	+1.2
	comp=Z,122nm,0.8s						
KKM	Kota Kinabalu	18.55	73	Pn	Pn	13 19 40.3	+0.7
PALK	Pallekele	18.89	291	P	Pn	13 19 44.1	+0.5
	comp=Z,0.3nm,0.3s,baz=208,slow=8.8,SNR=11						
PALK				LR	LR	13 25 56.2	
	comp=Z,611nm,20.5s,baz=250,slow=33						
	comp=Z,10nm,0.8s						
CRAI	Chiangrai	19.61	5	P	P	13 19 50.0	-0.4
MYLDM	Lahad Datu	20.55	77		Pn	13 20 02.4	-0.8
TWSI	Taliwang, Sumb	20.58	117	P	P	13 20 01.8	+0.8
	comp=Z,43nm,1.0s						
PLAI	Plampang	21.42	116	P	P	13 20 10.2	+0.2
	comp=Z,45nm,1.3s						
MPSI	Mapaga	21.46	91	P	P	13 20 12.0	+1.5
	comp=Z,51nm,1.2s,comp=Z,626nm						
SPSI	Sidrap Palu	21.79	102	P	P	13 20 14.5	+0.5
	comp=Z,25nm,1.4s						
KAPI	Kappang	22.01	105	P	P	13 20 19.4	+3.1
	comp=Z,12nm,0.3s,baz=281,slow=8.6,SNR=7.8						
KAPI				LR	LR	13 29 47.2	
	comp=Z,436nm,18.2s,baz=246,slow=39						
KAPI	Kappang	22.01	105	⇑*e*P	P	13 20 16.3	0.0
KAPI				pmax	pmax		
	comp=Z,13nm,1.4s						
TOLI2	Tolitoli	22.35	89	P	P	13 20 19.1	-0.9
SAIH	SAIHA	22.41	347	*e*P	P	13 20 20.6	-0.1
BKSI	Bulukumba	22.44	105	P	P	13 20 21.6	+0.6
	comp=Z,49nm,0.8s						
MRSI	Marisa	23.51	90	P	P	13 20 31.4	-0.3
	comp=Z,114nm,1.0s,comp=Z,886nm						
PCHI	Peechi	24.08	295	⇓*e*P	P	13 20 39.0	+2.1
TNCH	TengChong	24.30	0	P	P	13 20 38.5	-0.6
TNCH				pP	pP	13 20 51.5	-0.9
TNCH				pmax	pmax		
	comp=Z,43nm,0.9s						
LUWI	Luwuk	24.39	94	P	P	13 20 38.6	-1.2
LUWI	Luwuk	24.39	94	P	P	13 20 39.4	-0.4
	comp=Z,230nm,1.1s						
BASI	Baing, Sumba	24.51	117	P	P	13 20 41.3	+0.4
	comp=Z,170nm,0.9s						
GTOI	Gorontalo	24.57	90	P	P	13 20 40.9	-0.6
	comp=Z,32nm,0.9s						
KMI	Kunming	24.75	9	⇑P	P	13 20 41.5	-1.7
KMI				LR	LR		
	comp=Z,440nm,18.5s						
KMI				LR	LR		
	comp=Z,270nm,14.2s						
KMI				LR	LR		
	comp=Z,490nm,19.0s						
KOHI	KOHIMA	25.34	351	*e*P	P	13 20 50.2	+1.8
MMRI	Maumere	25.43	112	P	P	13 20 49.2	-0.1
	comp=Z,71nm,1.1s						
SHL	Shillong	25.63	346	P	P	13 20 50.7	-0.5
SHL	Shillong	25.63	346	*e*P	P	13 20 50.8	-0.4
SHL				IAmb	IAmb	13 20 53.1	
	comp=Z,111nm,0.7s						
SHL	Shillong	25.63	346	P	P	13 20 50.7	-0.4
SHL				pmax	pmax		
	comp=Z,146nm,0.7s						
MOKO	MOKOCHONG	25.86	352	*e*P	P	13 20 53.2	0.0
BOK	Bokaro	26.09	333	*e*P	P	13 20 56.6	+1.4
BOK				IAmb	IAmb	13 20 59.0	
	comp=Z,98nm,1.3s						
TEZP	TEZPUR	26.44	349	*e*P	P	13 20 58.0	-0.2
TEZP				IAmb	IAmb	13 21 01.3	
	comp=Z,29nm,0.6s						
H08S2	Diego Garcia H	27.13	252	T	T	13 48 42.9	
	baz=72,slow=75,SNR=934						
H08S3	Diego Garcia H	27.13	252	T	T	13 48 37.2	
	baz=72,slow=75,SNR=919						
ZIRO	ZIRO	27.15	351	*e*P	P	13 21 03.2	-1.6
H08S1	Diego Carcia H	27.15	252	T	T	13 48 35.8	
	baz=72,slow=75,SNR=1019						
SANI	Sanana	27.67	96	P	P	13 21 11.6	+2.1
	comp=Z,16nm,1.0s						
SOEI	Soe	27.69	112	P	P	13 21 09.9	+0.1
SOEI				IAmb	IAmb	13 21 20.4	
	comp=Z,43nm,0.9s						
SOEI	Soe	27.69	112	P	P	13 21 10.6	+0.8
	comp=Z,62nm,1.0s						
DAV	Davao City (W)	27.82	76	LR	LR	13 32 57.8	
	comp=Z,456nm,21.6s,baz=236,slow=38						
LBMI	Labuha	29.09	92	P	P	13 21 22.7	+0.5
	comp=Z,35nm,0.9s						
AAI	Ambon	30.04	98	P	P	13 21 30.6	0.0
	comp=Z,43nm,0.7s						
ENH	Enshi	31.34	19	P	P	13 21 41.5	-0.3
WHN	Wuhan	33.41	25	P	P	13 22 09.3	+9.4
XAN	Xi'an	34.70	15	⇑P	P	13 22 10.3	-0.9
XAN				pmax	pmax		
	comp=Z,16nm,0.7s						
MTN	Manton Dam	35.07	114	P	P	13 22 13.8	-0.8
	baz=35,SNR=9.6						
LZH	Lanzhou	35.68	8	*e*P	P	13 22 20.0	+0.3
LZH				pP	sP	13 22 38.5	-0.9
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
LYN	LuoYang	36.25	20	*e*P	P	13 22 25.0	+0.6
LYN				S	S	13 28 02.5	+1.3
LYN				pmax	pmax		
	comp=Z,19nm,0.8s						
LYN				LR	LR		
	comp=Z,310nm,16.3s						
LYN				LR	LR		
	comp=Z,300nm,24.3s						
LYN				LR	LR		
	comp=Z,540nm,22.2s						
SMLA	Simla	36.45	328	*e*P	P	13 22 26.2	0.0
SMLA				IAmb	IAmb	13 22 34.7	
	comp=Z,18nm,0.5s						
MUN	Mundaring	36.50	154	P	P	13 22 29.2	+2.6
	baz=37,SNR=3.9						
NJ2	Nanjing	36.76	30	*e*P	P	13 22 30.0	+1.2
NJ2				pP	pP	13 22 43.3	+0.9
NJ2				sP	sP	13 22 49.8	+1.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KLBR	Kellerberrin	36.87	152	P	P	13 22 31.6	+1.9
	baz=37,SNR=6.6						
NWAO	Narrogin (SRO)	37.76	154	P	P	13 22 37.7	+0.5
	comp=Z,16nm,0.8s,baz=322,slow=7.6,SNR=6.2						
	comp=Z,16nm,0.8s						
NWAO	Narrogin (SRO)	37.76	154	P	P	13 22 38.5	+1.3
WRKA	Warakurna	38.52	134	P	P	13 22 43.1	-0.8
	baz=39,SNR=9.0						
GTA	Gaotai	38.66	2	⇓P	P	13 22 44.8	-0.1
GTA				pmax	pmax		
	comp=Z,13nm,1.3s						
KMBL	Kambalda	38.79	147	P	P	13 22 47.6	+1.7
	baz=39,SNR=11						
TIA	Tai'an	39.47	24	⇑P	P	13 22 53.0	+1.5
TIA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HNS	HongShan	39.59	20	⇑P	P	13 22 53.3	+0.8
HNS				pmax	pmax		
	comp=Z,16nm,0.8s						
NIL	Nilore	40.50	327	P	P	13 22 59.7	-0.5
NIL				IAmb	IAmb	13 23 01.1	
	comp=Z,29nm,0.8s						
NIL	Nilore	40.50	327	P	P	13 22 59.7	-0.5
NIL				pmax	pmax		
	comp=Z,29nm,0.8s						
WB0	Warramunga Arr	40.63	122	P	P	13 22 59.0	-2.5
WRA	Warramunga Arr	40.66	122	P	P	13 22 59.9	-1.9
	comp=Z,4.8nm,0.7s,baz=305,slow=8.8,SNR=40						
WRA				PcP	PcP	13 25 03.1	+0.3
	comp=Z,2.0nm,0.5s,baz=315,slow=2.6,SNR=8.3						
WRA				S	S	13 29 05.0	-3.4
	comp=Z,0.7nm,1.0s,baz=297,slow=17,SNR=3.0						
	comp=Z,4.8nm,0.7s						
WRA	Warramunga Arr	40.66	122	P	P	13 22 59.5	-2.2
WRAB	Tennant Creek	40.67	122	P	P	13 22 59.6	-2.1
WRAB	Tennant Creek	40.67	122	⇓*e*P	P	13 22 59.8	-2.0
WRAB	Tennant Creek	40.67	122	P	P	13 22 59.0	-2.8
WRAB				pP	pP	13 23 11.4	-4.1
WB2	Warramunga Arr	40.67	122	P	P	13 22 59.4	-2.4
BTO	Baotou	41.20	13	*e*P	P	13 23 07.0	+1.1
BTO				pP	pP	13 23 22.3	+2.6
BTO				sP	sP	13 23 29.5	+3.7
BTO				PP	PnPn	13 24 46.8	+0.1
BTO				S	S	13 29 17.8	+1.9
BTO				pmax	pmax		
	comp=Z,38nm,0.9s						
BTO				pmax	pmax		
	comp=Z,930nm,10.3s						
BTO				LR	LR		
	comp=Z,870nm,21.1s						
BTO				LR	LR		
	comp=Z,830nm,15.7s						
BTO				LR	LR		
	comp=Z,1µm,19.2s						
HHC	Hu-ho-hao-te	41.81	15	*e*P	P	13 23 11.5	+0.6
HHC				pmax	pmax		
	comp=Z,37nm,0.8s						
HHC				pmax	pmax		
	comp=Z,190nm,4.6s						
FORT	Forrest	42.02	141	P	P	13 23 14.6	+2.0
	baz=42,SNR=11						
FORT	Forrest	42.02	141	P	P	13 23 13.5	+0.9
FORT				IAmb	IAmb	13 23 27.0	
	comp=Z,41nm,0.7s						
AS31	Alice Springs	42.04	127	P	P	13 23 11.4	-1.6
ASAR	Alice Springs	42.04	127	P	P	13 23 11.4	-1.6
	comp=Z,4.2nm,0.7s,baz=298,slow=7.7,SNR=60						
ASAR				PcP	PcP	13 25 08.0	+0.6
	comp=Z,3.1nm,0.8s,baz=298,slow=4.6,SNR=7.0						
ASAR				ScP	ScP	13 28 54.8	+1.2
	comp=Z,1.2nm,0.9s,baz=303,slow=4.2,SNR=5.2						
ASAR				S	S	13 29 29.7	+0.9
	comp=Z,0.8nm,0.8s,baz=297,slow=14,SNR=6.2						
	comp=Z,4.2nm,0.7s						
ASAR	Alice Springs	42.04	127	P	P	13 23 11.3	-1.7
BJT	Baijiatuau	42.45	20	P	P	13 23 15.9	-0.1
BJT				IAmb	IAmb	13 23 18.1	
	comp=Z,18nm,0.8s						
BJT	Baijiatuau	42.45	20	P	P	13 23 15.9	-0.1
BJT				pmax	pmax		
	comp=Z,18nm,0.8s						
BJI	Beijing	42.47	20	P	P	13 23 17.3	+1.2
BJI				pmax	pmax		
	comp=Z,17nm,0.9s						
BJI				LR	LR		
	comp=Z,150nm,18.0s						
BJI				LR	LR		
	comp=Z,120nm,18.3s						
BJI				LR	LR		
	comp=Z,230nm,20.7s						
JSU	Suzuyama	43.16	41	P	P	13 23 21.0	-1.0
DL2	Dalian	43.66	26	P	P	13 23 26.8	+1.0
DL2				pmax	pmax		
	comp=Z,35nm,1.0s						
KSH	Kashi	43.84	335	P	P	13 23 26.5	-0.9
KSH				pP	sP	13 23 46.0	-1.3
KSH				PcP	PcP	13 25 17.8	+4.7
KSH				PcS	PcS	13 29 09.3	+3.1
KSH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KSH				LR	LR		
	comp=Z,950nm,16.5s						
KSH				LR	LR		
	comp=Z,380nm,15.2s						
KSH				LR	LR		
	comp=Z,390nm,17.1s						
WMQ	Urumqi	44.10	349	*e*P	P	13 23 30.3	+0.9
WMQ				pP	pP	13 23 43.5	+0.3
WMQ				pmax	pmax		
	comp=Z,27nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,270nm,5.1s						
WMQ				LR	LR		
	comp=Z,250nm,17.9s						
WMQ				LR	LR		
	comp=Z,290nm,13.5s						
WMQ				LR	LR		
	comp=Z,310nm,18.7s						
JNU	Nakatsue	44.47	40	P	P	13 23 32.5	+0.1
	comp=Z,6.1nm,0.6s,baz=288,slow=3.2,SNR=1.9						
	comp=Z,6.1nm,0.6s						
WSAR	Wadi Sarin	44.72	303	LR	LR	13 40 57.6	
	comp=Z,206nm,19.0s,baz=308,slow=34						
QIS	Mount Isa	45.43	120	P	P	13 23 39.9	-0.4
	baz=45,SNR=4.1						
NRN	Naryn	45.44	336	P	P	13 23 40.5	+0.1
NRN				IAmb	IAmb	13 23 42.1	
	comp=Z,49nm,1.2s						
NRN	Naryn	45.44	336	P	P	13 23 40.5	+0.1
NRN				pmax	pmax		
	comp=Z,49nm,1.2s						
KDJ	Kajisay	45.57	338	P	P	13 23 41.8	+0.6
KDJ				IAmb	IAmb	13 23 43.7	
	comp=Z,41nm,0.9s						
KDJ	Kajisay	45.57	338	P	P	13 23 41.8	+0.6
KDJ				pmax	pmax		
	comp=Z,41nm,0.9s						
KSAR	Wonju Array Be	45.64	33	P	P	13 23 41.0	-0.6
KSAR	Wonju Array Be	45.64	33	P	P	13 23 41.0	-0.6
SHLS	Shalkode	45.66	341	*e*P	P	13 23 41.9	0.0
SHLS				pmax	pmax		
	comp=Z,18nm,1.0s						
KSRS	Korea Array	45.67	33	P	P	13 23 41.4	-0.4
	comp=Z,9.6nm,0.8s,baz=224,slow=8.9,SNR=27						
	comp=Z,9.6nm,0.8s						
UZB	Uzynbulak	45.80	340	*e*P	P	13 23 44.4	+1.3
	comp=Z,8.5nm,0.4s,baz=340						
UZB	Uzynbulak	45.80	340	*e*P	P	13 23 44.3	+1.3
UZB				pmax	pmax		
	comp=Z,9.0nm,0.4s						
XLT	XiLinHaoTe	45.91	18	*e*P	P	13 23 44.8	+1.1
XLT				pP	pP	13 23 59.8	+2.1
XLT				sP	sP	13 24 04.8	+1.0
XLT				pmax	pmax		
	comp=Z,13nm,1.4s						
XLT				pmax	pmax		
	comp=Z,260nm,8.0s						
XLT				LR	LR		
	comp=Z,290nm,19.6s						
XLT				LR	LR		
	comp=Z,290nm,19.6s						
SATY	Saty	45.94	340	⇓*i*P	P	13 23 45.5	+1.4
	comp=Z,18nm,0.8s,baz=340						
SATY	Saty	45.94	340	*d i*P	P	13 23 45.4	+1.4
SATY				pmax	pmax		
	comp=Z,18nm,0.8s						
ULHL	Ulahol	46.03	337	P	P	13 23 45.9	+1.0
	SNR=14						
GAR	Garm	46.09	329	P	P	13 23 44.7	-0.5
GAR				IAmb	IAmb	13 23 47.6	
	comp=Z,26nm,0.8s						
KPKS	Kokpek	46.20	340	*e*P	P	13 23 47.1	+1.1
	comp=Z,7.8nm,1.0s,baz=340						
KPKS	Kokpek	46.20	340	*e*P	P	13 23 47.1	+1.1
KPKS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BOOM	Boomskoye usch	46.36	337	P	P	13 23 47.2	-0.2
BOOM				IAmb	IAmb	13 23 49.2	
	comp=Z,57nm,1.6s						
BOOM	Boomskoye usch	46.36	337	P	P	13 23 47.2	-0.2
BOOM				pmax	pmax		
	comp=Z,57nm,1.6s						
CHGR	Chuyangaron	46.43	328	P	P	13 23 47.2	-0.8
CHGR	Chuyangaron	46.43	328	P	P	13 23 47.2	-0.8
CHGR				pmax	pmax		
	comp=Z,67nm,1.2s						
TNSS	Tian-Shan	46.44	338	*e*P	P	13 23 49.5	+1.1
	baz=338						
TNSS	Tian-Shan	46.44	338	*e*P	P	13 23 49.4	+1.1
MDOK	Medeo	46.51	338	*i* P	P	13 23 49.9	+1.3
	baz=338						
MDOK	Medeo	46.51	338	*i* P	P	13 23 49.8	+1.3
AAA	Alma-Ata	46.60	338	*e*P	P	13 23 50.3	+1.1
	baz=338						
AAA	Alma-Ata	46.60	338	*e*P	P	13 23 50.3	+1.1
BTK	Batken	46.64	331	P	P	13 23 49.7	+0.1
BTK				IAmb	IAmb	13 23 51.5	
	comp=Z,13nm,0.6s						
BTK	Batken	46.64	331	P	P	13 23 49.7	+0.1
BTK				pmax	pmax		
	comp=Z,13nm,0.6s						
UCH	Uchtor	46.71	336	P	P	13 23 51.7	+1.2
	SNR=22						
TKM2	Tokmak 2	46.86	337	P	P	13 23 52.4	+1.0
	SNR=30						
KBK	Karagaybulak	46.89	336	P	P	13 23 53.3	+1.8
	SNR=17						
AML	Almayashu	46.98	335	P	P	13 23 53.8	+1.2
	SNR=25						
AAK	Ala-Archa	47.06	336	P	P	13 23 54.5	+1.6
	SNR=7.7						
AAK	Ala-Archa	47.06	336	P	P	13 23 53.2	+0.3
AAK	Ala-Archa	47.06	336	P	P	13 23 53.2	+0.3
AAK				pmax	pmax		
	comp=Z,12nm,1.1s						
AAK	Ala-Archa	47.06	336	P	P	13 23 53.4	+0.5
AAK				pP	sP	13 24 09.8	-3.0
AAK				sP	pP	13 24 16.0	+9.2
JHS	Saijyo	47.09	40	P	P	13 23 52.6	-0.5
CHKK	Chushkaly	47.13	339	*e*P	P	13 23 53.4	+0.1
	baz=339						
CHKK	Chushkaly	47.13	339	*e*P	P	13 23 53.3	+0.1
CHMS	Chumysh	47.26	336	P	P	13 23 55.2	+1.0
	SNR=8.2						
EKS2	Erkin-Say	47.38	335	P	P	13 23 56.9	+1.6
	SNR=9.1						
KUU	Kurty	47.40	338	*e*P	P	13 23 55.8	+0.4
	baz=338						
KUU	Kurty	47.40	338	*e*P	P	13 23 55.8	+0.4
SONM	Songino Array	47.57	7	P	P	13 23 57.6	+0.9
	comp=Z,7.7nm,0.7s,baz=187,slow=9.7,SNR=55						
	comp=Z,7.7nm,0.7s						
SONM	Songino Array	47.57	7	P	P	13 23 57.2	+0.5
SONM				IAmb	IAmb	13 24 21.0	
	comp=Z,10nm,0.8s						
SONM	Songino Array	47.57	7	P	P	13 23 57.2	+0.5
SONM				pmax	pmax		
	comp=Z,10.0nm,0.8s						
USP	Ospenovka	47.58	336	P	P	13 23 57.9	+1.1
	SNR=26						
TDK	Taldyqorghan	47.65	341	*e*P	P	13 23 57.6	+0.4
	baz=341						
TDK	Taldyqorghan	47.65	341	*e*P	P	13 23 57.6	+0.4
SGDS	Sogindy	47.68	337	*e*P	P	13 23 58.4	+0.8
	baz=336						
SGDS	Sogindy	47.68	337	*e*P	P	13 23 58.3	+0.7
ULN	Ulaanbaatar	47.68	8	P	P	13 23 57.6	-0.1
ULN				IAmb	IAmb	13 24 25.3	
	comp=Z,8.2nm,0.8s						
ULN	Ulaanbaatar	47.68	8	*de*P	P	13 23 58.5	+0.9
ULN				pmax	pmax		
	comp=Z,17nm,1.7s						
ULN	Ulaanbaatar	47.68	8	P	P	13 23 57.6	-0.1
ULN				pP	pP	13 24 08.6	-3.1
MK31	Makanchi Array	48.14	345	P	P	13 24 01.0	-0.1
MK31				IAmb	IAmb	13 24 02.4	
	comp=Z,18nm,0.8s						
MK31	Makanchi Array	48.14	345	*d i*P	P	13 24 01.4	+0.4
MKAR	Makanchi Array	48.14	345	P	P	13 24 01.7	+0.7
	comp=Z,25nm,0.7s,baz=155,slow=7.9,SNR=192						
	comp=Z,25nm,0.7s						
MKAR	Makanchi Array	48.14	345	P	P	13 24 01.2	+0.2
ZSN	Zaisan	48.15	348	*e*P	P	13 24 02.3	+1.2
	comp=Z,14nm,1.2s,baz=348						
ZSN	Zaisan	48.15	348	*e*P	P	13 24 02.2	+1.2
ZSN				pmax	pmax		
	comp=Z,15nm,1.2s						
BBOO	Buckleboo	48.59	137	P	P	13 24 05.2	+0.5
	baz=49,SNR=7.2						
BBOO	Buckleboo	48.59	137	P	P	13 24 04.3	-0.4
DZA	Taraz	48.62	333	*e*P	P	13 24 05.2	+0.3
	comp=Z,9.7nm,0.7s,baz=334						
DZA	Taraz	48.62	333	*e*P	P	13 24 05.1	+0.3
DZA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
IUG	Iuzhnay	48.63	332	*e*P	P	13 24 05.4	+0.4
MTSU	Mount Surprise	48.79	115	P	P	13 24 05.6	-0.9
	baz=49,SNR=5.0						
KK31	Karatay Array	49.16	333	P	P	13 24 08.2	-0.7
KK31				IAmb	IAmb	13 24 10.5	
	comp=Z,19nm,1.4s						
KK31	Karatay Array	49.16	333	P	P	13 24 08.2	-0.7
KK31				pmax	pmax		
	comp=Z,19nm,1.4s						
KKAR	Karatay Array	49.16	333	P	P	13 24 08.3	-0.6
KKAR	Karatay Array	49.16	333	P	P	13 24 08.4	-0.5
KKAR				IAmb	IAmb	13 24 10.5	
	comp=Z,19nm,1.4s						
KKAR	Karatay Array	49.16	333	P	P	13 24 08.3	-0.5
KKAR				pmax	pmax		
	comp=Z,19nm,1.4s						
BTLS	Baital	49.24	337	⇓*i*P	P	13 24 09.9	+0.4
	comp=Z,7.0nm,0.8s,baz=337						
BTLS	Baital	49.24	337	*d i*P	P	13 24 09.9	+0.4
BTLS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CN2	Changchun	49.30	26	*e*P	P	13 24 09.8	-0.2
CN2				*e*sP	sP	13 24 32.5	+2.4
CN2				*e*S	S	13 31 11.0	-1.6
CN2				*e*sS	sS	13 31 37.5	+1.3
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,300nm,5.0s						
CN2				LR	LR		
	comp=Z,390nm,21.0s						
CN2				LR	LR		

	comp=Z,290nm,21.0s						
CN2				LR	LR		
	comp=Z,270nm,22.0s						
ZAK	**Zakamensk**	49.78	4	eP	P	13 24 13.6	0.0
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
DGZ	**Jazzator, Alta**	49.83	351	d iP	P	13 24 15.0	+0.9
DGZ				pmax	pmax		
	comp=Z,20nm,0.9s						
HTT	**Hallett**	50.92	136	P	P	13 24 22.8	+0.4
	baz=51,SNR=6.8						
MOY	**Mondy**	50.94	2	eP	P	13 24 22.3	-0.1
MJAR	**Matsushiro Arr**	51.32	41	P	P	13 24 26.1	+0.7
	comp=Z,0.6nm,0.5s,baz=234,slow=8.9,SNR=1.9						
	comp=Z,0.6nm,0.5s						
BNX	**BinXian**	51.69	26	⇑P	P	13 24 28.3	+0.4
BNX				pmax	pmax		
	comp=Z,13nm,0.8s						
BNX				pmax	pmax		
	comp=Z,110nm,4.3s						
MDJ	**Mudanjiang**	51.81	28	P	P	13 24 30.3	+1.4
MDJ				pmax	pmax		
	comp=Z,6.0nm,2.2s						
MDJ				pmax	pmax		
	comp=Z,420nm,9.1s						
STKA	**Stephens Creek**	52.03	132	P	P	13 24 30.5	-0.3
	comp=Z,4.1nm,0.5s,baz=308,slow=8.2,SNR=11						
	comp=Z,4.1nm,0.5s						
STKA	**Stephens Creek**	52.03	132	P	P	13 24 30.7	-0.1
	baz=52,SNR=6.2						
STKA	**Stephens Creek**	52.03	132	P	P	13 24 30.1	-0.7
GEYT	**Alibeck**	52.47	320	P	P	13 24 34.4	+0.4
	comp=Z,4.3nm,0.8s,baz=141,slow=9.6,SNR=7.1						
	comp=Z,4.3nm,0.8s						
GEYT	**Alibeck**	52.47	320	P	P	13 24 33.2	-0.8
USA0B	**Ussuriysk Arra**	52.67	30	P	P	13 24 34.7	-0.5
USA0B				IAmb	IAmb	13 24 50.2	
	comp=Z,16nm,1.1s						
USA0B	**Ussuriysk Arra**	52.67	30	⇑eP	P	13 24 35.9	+0.7
USRK	**Ussuriysk Ar.**	52.67	30	P	P	13 24 35.7	+0.5
	comp=Z,6.6nm,0.9s,baz=218,slow=6.3,SNR=12						
	comp=Z,6.6nm,0.9s						
USRK	**Ussuriysk Ar.**	52.67	30	P	P	13 24 34.6	-0.6
KURK	**Kurchatov**	52.71	344	P	P	13 24 35.0	-0.4
KURK				IAmb	IAmb	13 24 37.0	
	comp=Z,29nm,0.9s						
KURK	**Kurchatov**	52.71	344	d iP	P	13 24 35.9	+0.5
KURK				pmax	pmax		
	comp=Z,34nm,1.0s						
KURK	**Kurchatov**	52.71	344	P	P	13 24 34.8	-0.6
KURK				pP	pP	13 24 48.9	-0.7
BRZS	**Berezniki**	53.90	340	eP	P	13 24 44.5	+0.3
	comp=Z,6.9nm,1.1s,baz=340						
BRZS	**Berezniki**	53.90	340	eP	P	13 24 44.5	+0.3
BRZS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ZAA0	**Zalesovo Array**	54.36	350	P	P	13 24 47.0	-0.5
ZAA0				IAmb	IAmb	13 25 02.1	
	comp=Z,28nm,0.8s						
ZALV	**Zalesovo Beam**	54.36	350	P	P	13 24 47.7	+0.2
	comp=Z,12nm,0.4s,baz=176,slow=6.2,SNR=80						
	comp=Z,12nm,0.4s						
ZALV	**Zalesovo Beam**	54.36	350	P	P	13 24 47.0	-0.5
CMSA	**Cobar Meteorol**	54.96	130	P	P	13 24 52.3	+0.1
	baz=55,SNR=12						
HEH	**HeiHe**	55.30	22	eP	P	13 24 54.5	+0.2
HEH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
RAYN	**Ar Rayn**	56.13	298	P	P	13 24 59.5	-1.4
RAYN				IAmb	IAmb	13 25 02.4	
	comp=Z,14nm,1.1s						
RAYN	**Ar Rayn**	56.13	298	P	P	13 24 59.5	-1.4
RAYN				pmax	pmax		
	comp=Z,14nm,1.1s						
RAYN	**Ar Rayn**	56.13	298	P	P	13 25 00.8	-0.1
RAYN				pP	pP	13 25 15.4	+0.4
KLR	**Kul'dur**	56.26	26	ceP	P	13 25 01.9	+0.7
KLR				pmax	pmax		
	comp=Z,11nm,1.0s						
EIDS	**Eidsvold**	57.01	121	P	P	13 25 06.5	-0.5
	baz=57,SNR=6.3						
EIDS	**Eidsvold**	57.01	121	P	P	13 25 06.3	-0.7
BRVK	**Borovoye**	57.30	340	P	P	13 25 07.5	-1.0
BRVK				IAmb	IAmb	13 25 09.2	
	comp=Z,21nm,1.2s						
BRVK	**Borovoye**	57.30	340	ceP	P	13 25 08.4	-0.1
BRVK				pmax	pmax		
	comp=Z,14nm,1.0s						
BRVK	**Borovoye**	57.30	340	P	P	13 25 07.6	-1.0
BRVK				pP	pP	13 25 21.4	-1.5
BRVK				sP	sP	13 25 29.4	+0.5
ZEA	**Zeya**	58.09	20	eP	P	13 25 16.2	+2.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZEA				MLR	MLR		
	comp=Z,300nm,16.0s						
BOD	**Bodaibo**	58.39	10	eP	P	13 25 15.9	-0.2
BOD				pmax	pmax		
	comp=Z,13nm,1.4s						
ASAJ	**Asahikawa**	58.42	36	P	P	13 25 15.9	-0.6
ASAJ				pmax	pmax		
	comp=Z,25nm,1.8s						
JKA	**Kamikawa-asahi**	58.42	36	P	P	13 25 15.9	-0.6
JKA				IAmb	IAmb	13 25 37.8	
	comp=Z,25nm,1.8s						
ABKAR	**Akbulak array**	58.64	331	P	P	13 25 17.0	-0.9
ABKAR				IAmb	IAmb	13 25 18.7	
	comp=Z,24nm,1.4s						
ABKAR	**Akbulak array**	58.64	331	P	P	13 25 16.9	-1.1
CAN	**Canberra**	59.10	133	P	P	13 25 22.0	+0.5
CAN	**Canberra**	59.10	133	P	P	13 25 22.0	+0.5
CAN				pmax	pmax		
	comp=Z,350nm,2.0s						
YSS	**Yuzh-Sakhalins**	60.17	33	⇑eP	P	13 25 28.3	-0.2
YSS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIBK	**Kibwezi**	60.44	267	P	P	13 25 31.6	+0.4
AKT	**Akhty**	61.15	318	eP	P	13 25 35.6	+0.1
AKT				e		13 26 17.3	
AKT				pmax	pmax		
	comp=Z,40nm,1.7s						
KMBO	**Kilima Mbogo**	61.20	268	P	P	13 25 36.4	-0.2
KMBO	**Kilima Mbogo**	61.20	268	P	P	13 25 36.4	-0.2
KMBO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GNI	**Garni**	62.59	316	ceP	P	13 25 46.1	+0.8
GNI				pmax	pmax		
	comp=Z,27nm,2.5s						
SVE	**Sverdlovsk**	63.71	338	eP	P	13 25 52.6	+0.4
SVE				pmax	pmax		
	comp=Z,23nm,1.1s						
GURO	**Guroymak-BITLI**	63.89	313	P	P	13 25 53.7	-0.2
GURO				IAmb	IAmb	13 25 55.7	
	comp=Z,18nm,1.6s						
ARU	**Arti**	64.23	337	P	P	13 25 54.6	-1.0
ARU				IAmb	IAmb	13 25 56.2	
	comp=Z,18nm,1.3s						
ARU	**Arti**	64.23	337	c iP	P	13 25 55.4	-0.2
ARU				*PP	pP	13 26 07.9	-2.2
ARU				S	S	13 34 29.4	+0.3
ARU				SS	SS	13 38 38.6	-0.8
ARU				pmax	pmax		
	comp=Z,23nm,1.9s						
ARU	**Arti**	64.23	337	P	P	13 25 54.4	-1.2
ARU				pP	pP	13 26 07.9	-2.2
ONI	**Oni**	64.50	318	P	P	13 25 57.8	+0.1
ONI	**Oni**	64.50	318	P	P	13 25 57.8	+0.1
ONI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KBZ	**Khabaz**	65.34	319	P	P	13 26 03.5	+0.5
	comp=Z,6.3nm,0.8s,baz=138,slow=6.3,SNR=18						
	comp=Z,6.3nm,0.8s						
KIV	**Kislovodsk**	65.58	319	eP	P	13 26 05.2	+0.5
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
YAK	**Yakutsk**	65.67	16	P	P	13 26 03.6	-1.2
YAK				IAmb	IAmb	13 26 18.0	
	comp=Z,15nm,0.5s						
YAK	**Yakutsk**	65.67	16	eP	P	13 26 03.8	-1.0
YAK				e*PP	pP	13 26 19.9	+0.5
YAK				e		13 26 31.9	
YAK				e		13 28 32.0	
YAK				eS	S	13 34 46.2	-0.4
YAK				e*SS	sS	13 35 12.2	+1.1
YAK				e		13 35 54.9	
YAK				eSS	SS	13 38 57.9	-3.7
YAK				pmax	pmax		
	comp=Z,13nm,0.8s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,173nm,4.4s						
YAK				pmax	pmax		
	comp=E,56nm,5.2s						
YAK				pmax	pmax		
	comp=N,74nm,4.1s						
YAK				smax	smax		
	comp=N,50nm,3.2s						
YAK				smax	smax		
	comp=E,15nm,2.3s						
YAK				MLR	MLR		
	comp=Z,453nm,22.0s						
YAK				MLR	MLR		
	comp=N,194nm,27.0s						
YAK				MLR	MLR		
	comp=E,312nm,24.0s						
KOUNC	**Koumac, New Ca**	67.68	112	P	P	13 26 16.9	-1.6
KOUNC				IAmb	IAmb	13 26 19.8	
	comp=Z,18nm,1.0s						
MBAR	**Mbarara**	67.70	269	ceP	P	13 26 21.7	+2.7
MBAR				pmax	pmax		
	comp=Z,13nm,2.5s						
NRIK	**Noril'sk**	69.02	356	P	P	13 26 25.3	-0.6
	comp=Z,2.3nm,0.4s,baz=144,slow=3.5,SNR=6.3						
	comp=Z,2.3nm,0.4s						
NRIK	**Noril'sk**	69.02	356	P	P	13 26 25.1	-0.7
NRIK	**Noril'sk**	69.02	356	ceP	P	13 26 25.7	-0.2
KIRV	**Kirov**	69.38	335	ceP	P	13 26 28.4	+0.1
BR131	**Keskin Array S**	70.44	312	P	P	13 26 34.4	-1.0
BR131				IAmb	IAmb	13 26 52.8	
	comp=Z,8.4nm,0.7s						
BR131	**Keskin Array S**	70.44	312	P	P	13 26 34.4	-1.0
BR131				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BRTR	**Keskin Array B**	70.44	312	P	P	13 26 35.0	-0.4
	comp=Z,3.7nm,0.8s,baz=127,slow=7.9,SNR=9.2						
	comp=Z,3.7nm,0.8s						
BRTR	**Keskin Array B**	70.44	312	P	P	13 26 34.6	-0.8
BRTR	**Keskin Array B**	70.44	312	i P	P	13 26 35.2	-0.2
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MA2	**Magadan**	71.36	25	P	P	13 26 40.5	+0.2
MA2				IAmb	IAmb	13 26 44.2	
	comp=Z,51nm,2.0s						
MA2	**Magadan**	71.36	25	ceP	P	13 26 41.3	+0.9
MA2				pmax	pmax		
	comp=Z,19nm,1.7s						
MA2	**Magadan**	71.36	25	P	P	13 26 40.6	+0.2
MA2				pP	pP	13 26 55.3	+0.2
PEA0B	**Petropavlovsk-**	71.57	33	P	P	13 26 41.7	-0.1
PEA0B				IAmb	IAmb	13 27 32.1	
	comp=Z,54nm,1.6s						
PEA0B	**Petropavlovsk-**	71.57	33	P	P	13 26 41.7	-0.1
PEA0B				pmax	pmax		
	comp=Z,54nm,1.6s						
PETK	**Petropavlovsk-**	71.57	33	P	P	13 26 42.5	+0.8
	comp=Z,0.9nm,0.7s,baz=204,slow=6.3,SNR=1.8						
	comp=Z,0.9nm,0.7s						
PETK	**Petropavlovsk-**	71.57	33	P	P	13 26 41.7	0.0
MDUB	**Mudurnu**	72.44	312	P	P	13 26 46.6	-0.8
TIXI	**Tiksi**	73.58	10	P	P	13 26 52.4	-1.0
TIXI	**Tiksi**	73.58	10	⇑P	P	13 26 52.8	-0.5
OBN	**Obninsk**	73.79	328	i P	P	13 26 53.7	-1.2
OBN				i		13 27 12.8	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SEY	**Seymchan**	73.84	23	ceP	P	13 26 55.6	+0.5
SEY				pmax	pmax		
	comp=Z,11nm,1.7s						
KLMR	**Klimovskoe**	74.84	334	eP	P	13 26 58.5	-2.4
KLMR				AMP		13 27 04.7	
	comp=Z,32nm,1.8s						
KLMR	**Klimovskoe**	74.84	334	eP	P	13 26 58.4	-2.4
KLMR				pmax	pmax		
	comp=Z,32nm,1.8s						
SORM	**Soroca**	76.37	320	⇑P	P	13 27 10.1	+0.2
SORM	**Soroca**	76.37	320	⇑P	P	13 27 10.1	+0.2
AKASG	**Malin Array Be**	76.50	322	P	P	13 27 10.1	-0.5
	comp=Z,0.3nm,0.3s,baz=89,slow=4.6,SNR=15						
	comp=Z,0.3nm,0.3s						
AKASG	**Malin Array Be**	76.50	322	P	P	13 27 09.7	-0.9
AKBB	**Malin Array Si**	76.50	322	P	P	13 27 09.6	-1.0
AKBB				IAmb	IAmb	13 28 55.1	
	comp=Z,24nm,1.6s						
AKBB	**Malin Array Si**	76.50	322	ceP	P	13 27 10.5	-0.1
VRI	**Vrincioaia**	76.91	317	⇑P	P	13 27 13.4	+0.3
VRI	**Vrincioaia**	76.91	317	⇑P	P	13 27 13.4	+0.3
PLOR	**Plostina**	76.95	317	⇑P	P	13 27 13.6	+0.2
PLOR	**Plostina**	76.95	317	⇑P	P	13 27 13.6	+0.2
TESR	**Tescani**	77.10	318	⇑P	P	13 27 14.1	-0.1
MLR	**Muntele Rosu**	77.36	317	⇑P	P	13 27 15.8	+0.1
MLR	**Muntele Rosu**	77.36	317	P	P	13 27 14.7	-1.1
MLR				IAmb	IAmb	13 27 17.4	
	comp=Z,18nm,0.9s						
MLR	**Muntele Rosu**	77.36	317	⇑P	P	13 27 15.8	+0.1
LBZ	**Lake Benmore**	77.44	136	P	P	13 27 16.1	+0.1
RPZ	**Rata Peaks**	77.90	135	P	P	13 27 19.1	+0.4
	comp=Z,11nm,0.5s,baz=268,slow=4.3,SNR=17						
	comp=Z,11nm,0.5s						
RPZ	**Rata Peaks**	77.90	135	P	P	13 27 19.0	+0.4
VOIR		77.96	316	⇑P	P	13 27 18.8	-0.2
VOIR		77.96	316	⇑P	P	13 27 18.8	-0.2
BURAR	**Bucovina Array**	78.30	319	⇑P	P	13 27 21.4	+0.5
BURAR	**Bucovina Array**	78.30	319	P	P	13 27 21.5	+0.5
BURAR				IAmb	IAmb	13 27 23.3	
	comp=Z,11nm,0.8s						
BURAR	**Bucovina Array**	78.30	319	⇑P	P	13 27 21.4	+0.5
BUR08	**Bucovina Ar. S**	78.31	319	P	P	13 27 21.6	+0.6
BUR08				IAmb	IAmb	13 27 23.1	
	comp=Z,12nm,0.9s						
MNK	**Minsk**	78.32	326	i P	P	13 27 19.6	-1.2
	comp=E,3.0nm,0.8s						
MNK				i P	P	13 27 19.6	-1.2
	comp=N,6.0nm,0.8s						
MNK				i P	P	13 27 19.6	-1.2
	comp=Z,15nm,0.8s,baz=105						
MNK				i pP	pP	13 27 36.2	+0.5
MNK				i sP	sP	13 27 42.9	+1.3
MNK				i PP	PP	13 30 15.4	-2.9
MNK				i PPP	PPP	13 32 03.1	
MNK				i S	S	13 37 07.9	-4.1
MNK				i sS	ScS	13 37 36.7	-0.1
MNK				i SS	SS	13 42 26.0	+11
MNK				i SSS	SSS	13 46 30.0	
MNK	**Minsk**	78.32	326	i P	P	13 27 19.5	-1.2
MNK				i		13 27 29.0	
MNK				i *PP	pP	13 27 36.2	+0.5
MNK				i		13 30 15.4	
MNK				i PPP	PPP	13 32 03.1	
MNK				i S	S	13 37 07.9	-4.1
MNK				i *SS	ScS	13 37 36.6	-0.1
MNK				pmax	pmax		
	comp=E,3.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,6.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,15nm,0.8s						
QRZ	**Quartz Range**	78.38	132	P	P	13 27 22.1	+0.7
OXZ	**Oxford**	78.52	134	P	P	13 27 22.0	0.0
LTZ	**Lake Taylor**	78.58	134	P	P	13 27 23.0	+0.6
MRNZ	**Matariki Terra**	78.66	132	P	P	13 27 22.8	-0.1
THZ	**Tophouse**	78.84	133	P	P	13 27 24.2	+0.2
THZ				IAmb	IAmb	13 30 03.5	
	comp=Z,50nm,1.3s						
MARR	**Marisel-Cluj**	79.52	317	⇑P	P	13 27 27.7	0.0
DRGR		79.82	317	⇑P	P	13 27 29.6	+0.4
DRGR		79.82	317	⇑P	P	13 27 29.6	+0.4
BZS	**Buzias**	80.37	316	⇑P	P	13 27 32.7	+0.6
BZS	**Buzias**	80.37	316	⇑P	P	13 27 32.7	+0.6
SIRR	**Siria**	80.44	317	⇑P	P	13 27 32.7	+0.2
MRZ	**Mangatainoka R**	80.64	131	P	P	13 27 33.3	-0.3
FINES	**FINESS Array B**	81.11	332	P	P	13 27 35.9	+0.2
	comp=Z,5.0nm,0.5s,baz=106,slow=5.6,SNR=32						
	comp=Z,5.0nm,0.5s						
FINES	**FINESS Array B**	81.11	332	P	P	13 27 35.3	-0.4
BKZ	**Black Stump Fm**	81.11	130	P	P	13 27 35.8	-0.5
STHS	**Stebnicka Huta**	81.23	320	eP	P	13 27 37.5	+0.9
STHS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
STHS	**Stebnicka Huta**	81.23	320	eP	P	13 27 37.5	+0.9
DIVS	**Divibare**	81.29	314	P	P	13 27 36.9	-0.3
DIVS				IAmb	IAmb	13 27 38.5	
	comp=Z,25nm,1.6s						
RTZ	**Ruatahuna**	81.42	129	P	P	13 27 37.3	-0.7
RTZ				IAmb	IAmb	13 27 38.1	
	comp=Z,37nm,1.4s						
URZ	**Urewera**	81.47	129	P	P	13 27 37.4	-0.7
	comp=Z,5.6nm,0.8s,baz=270,slow=5.1,SNR=1.7						
	comp=Z,5.6nm,0.8s						
LANS	**Liptovska Anna**	82.34	319	eP	P	13 27 43.5	+1.0
LANS				pmax	pmax		
	comp=Z,3.0nm,1.1s						
LANS	**Liptovska Anna**	82.34	319	eP	P	13 27 43.5	+1.0
VYHS	**Vyhne**	82.67	319	eP	P	13 27 44.8	+0.6
VYHS				pmax	pmax		
	comp=Z,9.0nm,1.3s						
VYHS	**Vyhne**	82.67	319	eP	P	13 27 44.8	+0.6
JAVC	**Velka Javorina**	83.48	319	eP	P	13 27 49.8	+1.4
ARCES	**ARCESS Array B**	83.53	340	P	P	13 27 48.5	+0.3
	comp=Z,5.6nm,1.0s,baz=98,slow=4.7,SNR=15						
	comp=Z,5.6nm,1.0s						
ARCES	**ARCESS Array B**	83.53	340	P	P	13 27 48.3	+0.1
MORC	**Moravsky Berou**	83.67	320	P	P	13 27 50.0	+0.6
MORC	**Moravsky Berou**	83.67	320	eP	P	13 27 49.9	+0.6
MORC	**Moravsky Berou**	83.67	320	P	P	13 27 50.0	+0.6
MODS	**Modra-Piesok**	83.68	318	eP	P	13 27 50.4	+1.0
MODS				pmax	pmax		
	comp=Z,23nm,1.1s						
MODS	**Modra-Piesok**	83.68	318	eP	P	13 27 50.4	+1.0
VRAC	**Vranov**	84.23	319	eP	P	13 27 53.4	+1.2
KRUC	**Moravsky**	84.33	319	eP	P	13 27 52.3	-0.4
PRED	**Cave del Predi**	86.03	316	P	P	13 28 01.4	0.0
PRED				IAmb	IAmb	13 28 02.6	
	comp=Z,8.9nm,0.9s						
GEC2	**GERESS Array S**	86.09	319	P	P	13 28 01.9	+0.3
GEC2				IAmb	IAmb	13 28 03.2	
	comp=Z,12nm,1.3s						
GERES	**GERESS Array B**	86.09	319	P	P	13 28 02.2	+0.6
	comp=Z,3.0nm,1.0s,baz=117,slow=5.0,SNR=14						
	comp=Z,3.0nm,1.0s						
GERES	**GERESS Array B**	86.09	319	P	P	13 28 01.7	+0.1
CLUD	**Cludinico**	86.51	316	P	P	13 28 02.9	-0.8
CLUD				IAmb	IAmb	13 28 04.7	
	comp=Z,18nm,1.0s						
CLL	**Collm**	86.68	321	eP	P	13 28 05.0	+0.7
CLL				epP	pP	13 28 18.0	-1.5
CLL				ePP	PP	13 31 26.0	-1.0
CLL	**Collm**	86.68	321	eP	P	13 28 05.0	+0.7
CLL				e*PP	pP	13 28 18.0	-1.5
CIMO	**Cimolais**	86.81	316	P	P	13 28 04.6	-0.5
CIMO				IAmb	IAmb	13 28 06.3	
	comp=Z,9.8nm,0.9s						
SPITS	**Spitsbergen Ar**	87.80	348	P	P	13 28 08.8	-0.5
SPITS				pmax	pmax		
	comp=Z,70nm,1.4s						
SALO	**Salr**	88.12	315	P	P	13 28 11.1	-0.3
NB2	**NORSAR Subarra**	88.14	331	P	P	13 28 10.7	-0.5
	comp=Z,6.0nm,1.0s,baz=96,slow=4.8						
NOA	**NORSAR Array B**	88.14	331	P	P	13 28 10.8	-0.4
	comp=Z,3.4nm,1.0s,baz=95,slow=4.9,SNR=4.7						
	comp=Z,3.4nm,1.0s						
KEST	**Kesra**	88.92	306	P	P	13 28 16.8	+1.2
	comp=Z,6.8nm,1.0s,baz=69,slow=3.5,SNR=4.9						
	comp=Z,6.8nm,1.0s						
QSPA	**South Pole Qui**	90.53	180	P	P	13 28 23.6	+1.2
	comp=Z,0.6nm,0.8s,baz=20,slow=0.4,SNR=7.5						
	comp=Z,0.6nm,0.8s						
A21K	**Barrow**	94.22	18	P	P	13 28 39.7	+0.6
A21K				IAmb	IAmb	13 28 54.2	
	comp=Z,8.9nm,0.9s						
TORD	**Torodi Ar. Bea**	96.43	283	P	P	13 28 50.7	+0.2
	comp=Z,0.8nm,0.9s,baz=70,slow=4.5,SNR=3.5						
YKA	**Yellowknife Ar**	112.35	16	PP	PP	13 34 43.2	+1.8
	comp=Z,0.6nm,1.0s,baz=320,slow=6.6,SNR=7.5						
PDAR	**Pinedale Array**	130.04	27	PKP	PKiKP	13 34 31.7	0.0
	comp=Z,0.2nm,0.5s,baz=205,slow=3.1,SNR=3.7						
PDAR				SKPbc	SKPab	13 37 48.5	-0.5
	comp=Z,0.8nm,1.0s,baz=64,slow=3.4,SNR=4.2						
TXAR	**Lajitas Array**	143.52	34	PKP	PKPdf	13 34 54.8	-1.1
	comp=Z,0.5nm,0.6s,baz=234,slow=2.4,SNR=5.7						
X48A	**Hartselle**	144.77	8		PKPab	13 34 56.1	-0.6
CPUP	**Villa Florida**	145.36	220	PKPbc	PKPab	13 34 60.0	+0.9
	comp=Z,2.8nm,0.7s,baz=147,slow=2.2,SNR=7.2						
CPUP	**Villa Florida**	145.36	220	PKIKP	PKPab	13 35 00.0	+0.9
CO01	**Juntas del Tor**	148.80	199		PKiKP	13 35 10.6	+0.3

SKO 27 13:37:39.6, 40.°09N×20.°59E, h19km, ML2.0, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	0.59	200	i Pg	Pb	13 37 50.8	-0.5
IGT				i Sg	Sn	13 38 00.8	-1.4
FNA	**Florina**	0.92	41	i Pg	Pb	13 37 56.5	-0.4
FNA				i Sg	Sn	13 38 10.6	+0.3
OHR	**Ohrid**	1.03	9	i Pg	Pb	13 37 57.1	-1.8
OHR				i Sg	Sg	13 38 13.3	0.0
OHR				eLg	Lg	13 38 15.4	
	comp=N,28nm,0.7s						
TIR	**Tirane**	1.37	337	i Pg	Pn	13 37 59.9	-3.9
GRG	**Griva**	1.63	57	i Pg	Pn	13 38 07.8	+0.4

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*ATH **27** 13:38:14.9, 40.°20N×20.°38E, h6km±2km, ML2.7/14, Error ellipse: s-maj=2.8km s-min=1.2km az=158.0*

*THE **27** 13:38:14.4, 40.°16N×20.°38E, h16km, ML2.6/8, Error ellipse: s-maj=1.2km s-min=0.5km az=161.0*

ISC 27 13:38:14.1±1.1, 40.°19N±0.°04×20.°38E±0.°03, h13km±8km, n37, σ0.s59/52, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSK	**Leskovik**	0.17	103	P	Pb	13 38 19.0	-0.3
LSK				S	Sg	13 38 22.1	+1.1
	2µm,0.5s						
SRN	**Sarande**	0.42	224	P	Pg	13 38 21.8	-0.8
SRN				S	Sb	13 38 28.8	-1.0
	1µm,0.6s						
KASA	**Kassiopi**	0.56	218	P	Pg	13 38 24.7	-0.4
KASA				S	Sb	13 38 34.2	+0.5
KASA				AML	AML	13 38 35.1	
	comp=N,1654µm,0.4s						
KASA				AML	AML	13 38 39.4	
	comp=E,1296µm,0.2s						
PENT	**Pentalofos**	0.58	89	P	Pg	13 38 25.1	-0.4
PENT				S	Sb	13 38 34.5	+0.1
PENT	**Pentalofos**	0.58	89	P	Pg	13 38 25.1	-0.4
JAN	**Janina**	0.64	146	P	Pg	13 38 26.5	-0.2
JAN				S	Sb	13 38 35.6	-0.5
	comp=E,1µm,0.3s						
JAN	**Janina**	0.64	146	P	Pg	13 38 26.5	-0.2
JAN				S	Sb	13 38 35.6	-0.5
JAN				AML	AML	13 38 38.6	
	comp=N,2649µm,0.4s						
JAN				AML	AML	13 38 39.1	
	comp=E,3302µm,0.4s						
KEK	**Kerkira**	0.65	224	P	Pg	13 38 26.8	0.0
KEK				S	Sb	13 38 36.4	0.0
	comp=E,470nm,0.4s						
KEK	**Kerkira**	0.65	224	P	Pg	13 38 26.8	0.0
KEK				S	Sb	13 38 36.4	0.0
KEK				AML	AML	13 38 41.5	
	comp=N,858µm,0.3s						
KEK				AML	AML	13 38 41.6	
	comp=E,1011µm,0.4s						
IGT	**Igoumenitsa**	0.66	183	P	Pg	13 38 26.5	-0.4
IGT				S	Sb	13 38 36.2	-0.3
	comp=E,602nm,0.3s						
IGT	**Igoumenitsa**	0.66	183	P	Pg	13 38 26.5	-0.4
IGT				S	Sb	13 38 37.6	+1.1
IGT				AML	AML	13 38 40.9	
	comp=N,1272µm,0.4s						
IGT				AML	AML	13 38 42.0	
	comp=E,1124µm,0.3s						
KPRO	**Kipourio**	0.79	107	P	Pg	13 38 29.3	-0.1
KPRO				S	Sb	13 38 40.3	-0.1
	comp=E,358nm,0.5s						
KPRO	**Kipourio**	0.79	107	P	Pg	13 38 29.3	-0.1
KPRO				S	Sb	13 38 40.3	-0.1
KPRO				AML	AML	13 38 47.0	
	comp=N,709µm,0.5s						

KPRO				AML	AML	13 38 48.0	
	comp=E,718µm,0.5s						
FNA	Florina	0.96	52	P	Pg	13 38 31.9	-0.9
FNA				S	Sn	13 38 47.4	+0.3
	comp=E,785nm,0.5s						
FNA	Florina	0.96	52	P	Pg	13 38 31.9	-0.9
FNA				S	Sn	13 38 48.3	+1.2
FNA				AML	AML	13 38 49.5	
	comp=E,2014µm,0.5s						
FNA				AML	AML	13 38 50.8	
	comp=N,1122µm,0.5s						
KZN	Kozani	1.07	83	P	Pn	13 38 34.9	-0.1
KZN				S	Sn	13 38 50.3	+0.6
	comp=N,258nm,0.4s						
KZN	Kozani	1.07	83	P	Pn	13 38 34.9	-0.1
KZN				AML	AML	13 38 53.0	
	comp=N,520µm,0.5s						
KZN				AML	AML	13 38 58.7	
	comp=E,507µm,0.4s						
TSLK	Tsoukalades, L	1.38	171	P	Pn	13 38 38.6	-0.5
TSLK	Tsoukalades, L	1.38	171	P	Pg	13 38 39.9	-0.7
TSLK				AML	AML	13 39 00.9	
	comp=E,744µm,1.0s						
TSLK				AML	AML	13 39 01.5	
	comp=N,868µm,0.4s						
THL	Klokotos Trika	1.40	116	P	Pn	13 38 39.3	-0.1
THL	Klokotos Trika	1.40	116	P	Pb	13 38 40.2	0.0
THL				AML	AML	13 39 05.3	
	comp=N,242µm,0.5s						
THL				AML	AML	13 39 05.6	
	comp=E,229µm,0.5s						
LKD2	Lefkada island	1.41	171	P	Pg	13 38 40.9	-0.4
LKD2				AML	AML	13 39 01.3	
	comp=N,810µm,0.4s						
LKD2				AML	AML	13 39 01.4	
	comp=E,952µm,0.9s						
SCTE	Santa Cesarea	1.47	266	P	Pb	13 38 41.4	+0.1
EVGI	Lefkada island	1.58	172	P	Pb	13 38 43.3	0.0
LIT	Litokhoron	1.62	92	P	Pn	13 38 42.5	+0.1
LIT	Litokhoron	1.62	92	P	Pn	13 38 42.8	+0.4
EVR	Evrytania	1.68	139	P	Pb	13 38 44.8	-0.2
EVR				AML	AML	13 39 13.5	
	comp=N,373µm,0.9s						
EVR				AML	AML	13 39 14.2	
	comp=E,306µm,0.7s						
GRG	Griva	1.72	63	P	Pn	13 38 43.7	-0.2
GRG	Griva	1.72	63	P	Pn	13 38 43.7	-0.2
FSK	Fiskardo	1.73	175	P	Pb	13 38 45.3	-0.5
FSK				AML	AML	13 39 09.8	
	comp=N,272µm,0.7s						
FSK				AML	AML	13 39 10.5	
	comp=E,379µm,0.5s						
MAKR	Makrakomi, Fth	1.79	130	P	Pb	13 38 46.9	+0.1
MAKR				AML	AML	13 39 15.1	
	comp=E,482µm,0.5s						
MAKR				AML	AML	13 39 21.8	
	comp=N,342µm,0.4s						
AGG	Agios Georgios	1.90	127	P	Pn	13 38 46.3	0.0
ANX	Ano Chora	1.99	143	P	Pn	13 38 48.1	+0.5
ANX				AML	AML	13 39 23.4	
	comp=N,297µm,0.5s						
ANX				AML	AML	13 39 23.9	
	comp=E,295µm,1.1s						
EFP	Efpalio	2.12	146	P	Pb	13 38 51.2	-1.2
SERG	Sergoula	2.20	143	P	Pb	13 38 52.0	-1.7
SOH	Sokhos	2.35	73	P	Pn	13 38 53.0	+0.4
KLV	Kalavryta, Ach	2.55	147	P	Pn	13 38 56.2	+1.0

IDC 27 13:44:52.6±635.0, 57°.62N×0°.71E, h0km, Error ellipse: s-maj=242.8km s-min=196.6km az=88.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I26DE	FREYUNG INFRAS	11.72	133	I	I	14 59 50.0	
	baz=323,slow=324,SNR=1.6						
I37NO	I37NO	13.94	27	I	I	15 12 40.0	
	baz=224,slow=334,SNR=1.7						
I43RU	DUBNA INFRASON	19.67	77	I	I	15 46 57.8	
	0.1nm,0.5s,baz=288,slow=325,SNR=1.2						
I31KZ	AKTYUBINSK INF	33.53	77	I	I	17 12 21.8	
	baz=303,slow=323,SNR=3.1						

BER 27 13:44:56.0±1.1, 60°.07N×9°.66E, h0km, ML0.8, Suspected explosion, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KONO	Kongsberg	0.42	184	*e*S	Sg	13 45 08.6	-0.9
SKAR	Skarslia	0.91	313	*e*P	Pg	13 45 12.4	-1.0
SKAR				*e*S	Sg	13 45 24.6	-0.6
SKAR				IAML		13 45 26.4	
	comp=Z,2.2nm,0.1s						
NAO01	NORSAR Array S	0.99	37	*e*P	Pg	13 45 14.3	-0.6
NAO01				*e*S	Sg	13 45 27.1	-0.5
NAO01				IAML		13 45 31.1	
	comp=Z,4.1nm,0.2s						
NBO00	NORSAR Array S	1.11	29	*e*P	Pg	13 45 15.9	-1.3
NBO00				*e*S	Sg	13 45 29.6	-2.0
NBO00				IAML		13 45 35.1	
	comp=Z,2.2nm,0.2s						
NC602	NORSAR Array S	1.15	54	*e*P	Pg	13 45 16.3	-1.7
NC602				*e*S	Sg	13 45 31.8	-1.0
NC602				IAML		13 45 36.0	
	comp=Z,3.2nm,0.2s						
NB201	NORSAR Array S	1.27	39	*e*P	Pg	13 45 18.1	-2.3
NB201				*e*S	Sg	13 45 35.4	-1.4
NB201				IAML		13 45 36.5	
	comp=Z,2.7nm,0.4s						
STRU	Stroemstad	1.29	143	*e*P	Pg	13 45 18.9	-1.8
STRU				*e*S	Sg	13 45 36.9	-0.6
NC204	NORSAR Array S	1.33	24	*e*P	Pg	13 45 19.9	-1.5
NC204				*e*S	Sg	13 45 37.3	-1.3
NC204				IAML		13 45 41.0	
	comp=Z,3.6nm,0.4s						
NC303	NORSAR Array S	1.43	35	*e*P	Pn	13 45 21.7	-1.6
NC303				*e*S	Sg	13 45 40.6	-1.4
NC303				IAML		13 45 43.8	
	comp=Z,1.7nm,0.1s						

JMA ***27*** *13:50:04.2±0.3, 24°.9N±0°.7×122°.4E±0°.3, h0km±2km, MV2.6/8, TAIWAN REGION*

TAP ***27*** *13:50:05.0, 24°.90N×122°.29E, h11km, ML2.8, D*

ISC 27 13:50:04.5±1.1, 24°.89N±0°.03×122°.34E±0°.02, h8km±9km, n70, σ0ˢ.60/109, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.35	291	⇑*i*P	Pg	13 50 11.7	+0.3
	baz=282						
TWB1				*i* S	Sg	13 50 16.2	+0.3
	baz=282						
EGS		0.38	264	P	Pb	13 50 12.6	-0.8
	baz=260						
EGS				S	Sg	13 50 17.6	+0.6
	baz=260						
SXI1	Grass Mountain	0.47	296	⇑*i*P	Pb	13 50 14.5	-0.7
	baz=290						
SXI1				*i* S	Sg	13 50 20.8	+0.8
	baz=290						
EOS2	EOS2	0.47	192	P	Pb	13 50 15.0	0.0
	baz=209						
TIPB	Shuangxi	0.48	280	P	Pb	13 50 14.7	-0.5
	baz=280						
TIPB				S	Sb	13 50 21.2	-1.2
	baz=280						
TWC	Suao	0.53	239	*i* P	Pg	13 50 15.1	+0.4
	baz=234						
TWC				*i* S	Sg	13 50 21.8	+0.1
	baz=234						
WFSB	Wu-fen Shan	0.54	290	*i* P	Pb	13 50 15.8	-0.5
	baz=290						
WFSB				*i* S	Sb	13 50 23.7	-0.6
	baz=290						
ILA	Ilan	0.56	258	*e*P	Pg	13 50 15.7	+0.4
	baz=241						
ILA				S	Sb	13 50 25.3	+0.8
	baz=241						
TNOU	National Taiwa	0.58	297	*i* P	Pb	13 50 16.5	-0.5
	baz=298						
TNOU				S	Sb	13 50 24.3	-1.0
	baz=298						
EOS3	EOS3	0.60	182	*i* P	Pb	13 50 17.3	+0.2
	baz=175						
EOS3				S	Sb	13 50 26.3	+0.7
	baz=175						
NDS	Dongshan	0.62	246	*i* P	Pb	13 50 17.5	-0.2
	baz=236						
NDS				S	Sb	13 50 25.7	-0.8
	baz=236						
TWE	Neicheng	0.64	255	P	Pg	13 50 17.0	+0.2
	baz=242						
TWE				S	Sb	13 50 26.4	-0.5
	baz=242						
EWUT	Wuta	0.68	230	P	Pb	13 50 18.2	-0.4
	baz=226						
EWUT				S	Sb	13 50 27.0	-1.0
	baz=226						
JYNG	Yonagunijimaku	0.70	128	P	Pg	13 50 17.7	-0.2
JYNG				*e*S	Sg	13 50 27.4	+0.3
TWA	Mucha	0.70	278	*i* P	Pb	13 50 18.7	-0.2
	baz=277						
TWA				S	Sb	13 50 28.8	+0.1
	baz=277						
FUSB	Fushanzhiwuyua	0.70	260	*i* P	Pb	13 50 18.4	-0.6
	baz=258						
FUSB				S	Sb	13 50 28.5	-0.3
	baz=258						
ENA	Nanau	0.71	230	*i* P	Pb	13 50 18.8	-0.4
	baz=218						
ENA				*i* S	Sg	13 50 27.7	+0.1
	baz=218						
YOJ	Yonaguni jima	0.74	125	P	Pg	13 50 18.4	-0.4
YOJ				*e*S	Sg	13 50 27.9	-0.5
NHDH	Xindian Distri	0.75	276	*i* P	Pb	13 50 19.8	0.0
	baz=275						
NHDH				*i* S	Sb	13 50 30.1	0.0
	baz=275						
ENTT	Nioudou	0.75	251	*i* P	Pb	13 50 19.6	-0.2
	baz=248						
ENTT				*i* S	Sb	13 50 30.9	+0.7
	baz=248						
YM01	YM01	0.75	290	*i* P	Pb	13 50 19.3	-0.5
	baz=291						
YM01				*i* S	Sb	13 50 29.7	-0.5
	baz=291						
NWLT	Wulai	0.77	262	*i* P	Pb	13 50 19.9	-0.4
	baz=260						
NWLT				S	Sb	13 50 30.6	-0.3
	baz=260						
TAP	Taipei	0.78	282	P	Pb	13 50 20.6	+0.4
	baz=281						
TWY	Chenhua	0.78	300	*i* P	Pg	13 50 19.5	0.0
	baz=287						
TWY				S	Sg	13 50 30.2	+0.5
	baz=287						
ANP	Anpu	0.81	292	*i* P	Pb	13 50 20.9	0.0
	baz=292						
ANP				*i* S	Sb	13 50 31.4	-0.4
	baz=292						
LATG	Datong	0.82	245	S	Sb	13 50 32.1	-0.3
	baz=243						
NTST	Danshui	0.86	289	*e*P	Pn	13 50 22.7	-0.2
	baz=289						
TWS1	Kuangyinshan	0.87	285	P	Pb	13 50 21.8	0.0
	baz=295						
TWS1				*i* S	Sb	13 50 34.5	+0.9
	baz=295						
YHNB	Yeheng	0.91	256	*i* P	Pg	13 50 22.1	+0.1
	baz=248						
YHNB				S	Sg	13 50 33.9	+0.1
	baz=248						
NSK	Sanguang	0.92	257	*i* P	Pg	13 50 22.1	-0.1
	baz=255						
NSK				*i* S	Sb	13 50 34.6	-0.6
	baz=255						
ETL	Fush Village	0.98	222	*e*P	Pb	13 50 23.8	+0.1
	baz=220						
NACB	Ninganchiao	0.98	224	P	Pg	13 50 23.0	-0.4
	baz=222						
NACB				S	Sg	13 50 35.4	-0.8
	baz=222						
NNSB	Datong	0.99	243	P	Pg	13 50 23.5	0.0
	baz=230						
NNSB				S	Sb	13 50 36.8	-0.3
	baz=230						
NNS	Nan Shan	0.99	244	*i* P	Pb	13 50 23.9	0.0
	baz=230						
NNS				*i* S	Sb	13 50 37.9	+0.7
	baz=230						
ETLH	Xiulin Townshi	1.04	229	P	Pb	13 50 25.1	+0.4
	baz=227						
ETLH				S	Sb	13 50 38.8	+0.3
	baz=227						
TWD	Chiawan	1.05	221	P	Pg	13 50 24.6	-0.1
	baz=227						
TWD				S	Sb	13 50 38.8	-0.1
	baz=227						
NFF	Wufeng Townshi	1.14	258	*e*P	Pg	13 50 25.8	-0.7
	baz=256						
NFF				*e*S	Sg	13 50 41.1	-0.2
	baz=256						
WHF	Hehuan Shan	1.23	233	P	Pb	13 50 28.3	+0.1
	baz=231						
WHF				S	Sn	13 50 45.5	+0.2
	baz=231						
LIOB	Emei	1.23	259	*e*P	Pg	13 50 27.0	-1.2
	baz=258						
TWT	Tachien	1.24	240	*e*P	Pn	13 50 29.1	+0.9
	baz=229						
NSTT	Nanjuang	1.25	259	*e*P	Pn	13 50 28.4	+0.2
	baz=257						
NSTT				*e*S	Sg	13 50 44.2	-0.5
	baz=257						
CHGB	Renai	1.35	233	P	Pg	13 50 30.2	-0.2
	baz=231						
CHGB				*e*S	Sg	13 50 46.9	-1.0
	baz=231						
ESL	Shilin	1.35	218	*e*P	Pn	13 50 29.2	-0.4
	baz=217						
IRIF	Iriomote-Funau	1.38	113	P	Pn	13 50 30.2	+0.3
IRIF				*e*S	Sb	13 50 48.2	0.0
WHP	Taichung City	1.41	245	*e*P	Pn	13 50 30.9	+0.3
	baz=243						
WHP				*e*S	Sb	13 50 48.7	-0.6
	baz=243						
OWD	Renai	1.41	229	*e*P	Pg	13 50 31.4	-0.2
	baz=228						
OWD				*e*S	Sn	13 50 50.6	+1.1
	baz=228						
WUSB	Renai	1.43	232	P	Pn	13 50 31.2	+0.3
	baz=230						
WUSB				*e*S	Sb	13 50 49.2	-0.6
	baz=230						
EGFH	Guangfu	1.47	215	*e*P	Pb	13 50 32.0	-0.1
	baz=198						
WCS	Beigang Elemen	1.54	238	*e*P	Pb	13 50 33.1	-0.3
	baz=228						
VWDT	VWDT	1.57	225	*e*P	Pn	13 50 33.0	+0.3
	baz=224						
HGSD	Ruisui	1.62	211	*e*P	Pg	13 50 35.2	-0.5
	baz=197						
JKRS	Kuro-shima	1.65	113	P	Pn	13 50 34.1	+0.4
SMLT	Sun Moon Lake	1.65	233	*e*P	Pb	13 50 35.4	+0.2
	baz=215						
EHY	Hungye	1.66	214	*e*P	Pn	13 50 33.6	-0.3
	baz=212						
TYC	Yuchr	1.67	235	*e*P	Pb	13 50 35.8	+0.3
	baz=233						
SSLB	Suanglung	1.67	230	*e*P	Pb	13 50 35.2	-0.4
	baz=229						
JIJ	Ishigaki jima	1.72	107	*e*P	Pn	13 50 35.1	+0.4
YULB	Yu-li	1.77	213	*e*P	Pn	13 50 34.9	-0.6
	baz=213						
EYUL	Yuli	1.79	212	*e*P	Pb	13 50 37.9	+0.3
	baz=212						
WHYT	Xinyi Township	1.80	229	*e*P	Pb	13 50 37.4	-0.4
	baz=219						
YUS	Yu-Shan	1.88	223	*e*P	Pn	13 50 37.3	-0.1
	baz=223						
ALS	Alishan	1.96	226	*e*P	Pn	13 50 38.9	+0.6
	baz=226						
CHN5	Tsauling	1.99	230	*e*P	Pb	13 50 40.2	-0.8
	baz=230						
ELDTW	Lidau	2.08	216	*e*P	Pb	13 50 41.6	-1.0
	baz=203						
WCKO	Fanlu	2.15	228	*e*P	Pn	13 50 42.2	+1.6
	baz=229						
TPUB	Ta-pu	2.22	225	*e*P	Pn	13 50 42.7	+1.0
	baz=209						
STYH	Taoyuan	2.23	220	*e*P	Pn	13 50 42.7	+1.0
	baz=205						
WTP	Ta-pu	2.27	224	*e*P	Pn	13 50 43.9	+1.5
	baz=225						
TWK	Hsinying	2.34	227	*e*P	Pn	13 50 44.9	+1.6
	baz=227						
CHN1	Nanshi	2.37	225	*e*P	Pb	13 50 45.8	-1.7
	baz=226						

UCR ***27*** *13:58:36.5±2.3, 8°.68N×82°.86W, h28km±3km, MW3.5*

UPA ***27*** *13:58:37.0±1.0, 8°.68N×82°.77W, h18km±1km, MD3.6, ML3.5, MW3.4*

ISC 27 13:58:36.4±0.9, 8°.68N±0°.03×82°.82W±0°.02, h28km±5km, n42, σ0ˢ.80/69, 8C-10D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLIR3	Monte Lirio, C	0.11	359	⇓*i*P	Pb	13 58 41.6	-0.1
MLIR3				*i* S	Sb	13 58 45.7	+0.5
CDITO	Canoas	0.12	205	⇑*i*P	Pb	13 58 41.1	-0.4
CDITO				*i* S	Sb	13 58 44.2	-0.8
CDITO	Canoas	0.12	205	⇑*i*P	Pb	13 58 41.1	-0.4
CDITO				*e*S	Sb	13 58 45.2	+0.1
BRU2	Volcan	0.17	49	⇓*i*P	Pb	13 58 41.9	-0.4
BRU2				*e*S	Sb	13 58 44.6	-1.7
BRU2				*e*S		13 58 46.0	
BRU2	Volcan	0.17	49	⇓*i*P	Pb	13 58 41.9	-0.4
BRU2				*e*S	Sb	13 58 46.2	0.0
EDSV	San Vito	0.20	314	*e*P	Pb	13 58 42.6	+0.1
EDSV				*e*S	Sb	13 58 48.2	+1.5
BC3P	Paso Ancho	0.25	57	*e*P	Pb	13 58 42.7	-0.5
BC3P				AMP		13 58 45.4	
	comp=Z,3µm,0.1s						
BC3P				*e*S	Sb	13 58 47.4	-0.5
LESP3	La Esperanza,	0.27	173	*e*P	Pb	13 58 43.1	-0.2
LESP3				*e*S	Sb	13 58 48.7	+0.8
BCO2	Palmira	0.29	82	⇑*i*P	Pb	13 58 43.6	-0.2
BCO2				AMP		13 58 44.5	
	comp=Z,23µm,0.1s						
BCO2				*e*S	Sb	13 58 48.3	-0.4
CCOL	Caracol de Cor	0.31	209	*e*P	Pb	13 58 43.6	-0.2
CCOL				*e*S	Sb	13 58 49.9	+1.1
PTAR3	Potrerillos Ar	0.32	88	⇑*i*P	Pb	13 58 44.0	-0.1
PTAR3				*e*S	Sb	13 58 49.1	-0.2
FITO	Golfito	0.33	261	⇓*e*P	Pb	13 58 43.1	-1.0
FITO				*e*S	Sb	13 58 48.3	-1.1
EDAD	Golfito	0.34	265	⇓*e*P	Pb	13 58 43.2	-1.1
EDAD				*e*S	Sb	13 58 48.7	-0.9
LNBQ3	Los Naranjos,	0.39	74	⇓*e*P	Pb	13 58 44.1	-1.1
LNBQ3				*e*S	Sb	13 58 50.3	-0.8
DVD	David	0.44	123	⇓*e*P	Pb	13 58 45.5	-0.3
DVD				*e*S	Sb	13 58 52.5	+0.4
PTPM	Petroterminale	0.47	187	⇓*i*P	Pb	13 58 46.2	-0.2
PTPM				*e*S	Sn	13 58 54.9	+0.1
LOCO3	Loma Colorada,	0.48	124	⇑*i*P	Pb	13 58 46.2	-0.2
LOCO3				*e*S	Sb	13 58 53.2	0.0
EDP2	Potrero Grande	0.48	314	*e*P	Pb	13 58 46.6	+0.1
EDP2				*e*S	Sb	13 58 54.8	+1.4
PSOM3	Paja de Sombre	0.49	89	⇓*i*P	Pb	13 58 46.3	-0.4
PSOM3				*i* S	Sb	13 58 53.1	-0.6
EDBA	Buenos Aires	0.66	317	*e*P	Pb	13 58 49.4	+0.1
EDBA				*e*S	Sb	13 58 59.5	+1.3
SRBA	San Rafael, Bu	0.76	316	*e*P	Pb	13 58 50.3	-1.0
SRBA				*e*S	Sb	13 59 00.6	-0.7
CNI2	El Empalme, Bo	0.82	25	⇑*i*P	Pb	13 58 51.2	-0.8
CNI2				*i* S	Sb	13 59 02.5	-0.3
REME3	Remedios, Chir	1.08	115	*e*P	Pn	13 58 55.4	-0.3
REME3				*e*S	Sb	13 59 08.6	-1.6
PEZE	Perez Zeledon,	1.10	310	*e*P	Pn	13 58 55.5	-0.5
BUS1	Rivas	1.26	314	⇑*i*P	Pn	13 58 58.1	-0.5
BUS1				*e*S	Sn	13 59 14.4	-0.4
CDM	Cerro de Muert	1.27	313	*e*P	Pn	13 58 58.0	-0.8
CDM				*e*S	Sn	13 59 14.3	-0.8
MRVA	Moravia de Chi	1.29	332	⇑*e*P	Pn	13 58 58.8	+0.1
LCOCO	El Coco	1.57	333	*e*P	Pn	13 59 03.6	+1.1
LCR2	La Lucha 2	1.57	312	*e*P	Pn	13 59 02.9	+0.2
RAFA	San Farael, Vo	1.60	323	*e*P	Pn	13 59 04.0	+0.9
CVTV	Tajo	1.60	325	*e*P	Pn	13 59 04.3	+1.1
CVTQ	Turrialba Volc	1.61	325	*e*P	Pn	13 59 04.3	+0.9
VTCG	Tajo	1.62	325	*e*P	Pn	13 59 04.3	+0.8
VTCE	Turrialba Volc	1.62	325	*e*P	Pn	13 59 04.5	+0.9
VICA	Volcano Irazu	1.64	322	*e*P	Pn	13 59 04.7	+0.9
SAFE3	Santa Fe, Vera	1.73	95	⇓*e*P	Pn	13 59 06.0	+1.3
SAFE3				*e*S	Sn	13 59 25.9	0.0
STIA3	Santiago, Vera	1.92	107	*e*P	Pn	13 59 07.5	+0.2
MARI3	Mariato, Verag	2.08	119	*e*P	Pn	13 59 09.6	+0.1
JTS	Las Juntas de	2.64	307	*e*P	Pn	13 59 17.8	+0.6
AZU	Azuero	2.67	109	*e*P	Pn	13 59 18.2	+0.6
VTON	El Valle, Cocl	2.68	91	*e*P	Pn	13 59 20.0	+2.2
BCIP	Isla Barro Col	2.99	80	*e*P	Pn	13 59 22.2	+0.3
BCIP				*i* S	Sn	13 59 58.0	+1.1

IDC ***27*** *14:06:51.4±0.8, 37°.90N×120°.75E, h0km, mb4.0/9, mbtmp3.9/14, ML3.4/5, Error ellipse: s-maj=19.2km s-min=13.5km az=23.0*

NEIC ***27*** *14:06:54.8±2.4, 37°.97N±0°.09×120°.66E±0°.10, h16km±4km, mb4.3/12, Error ellipse: s-maj=14.1km s-min=9.8km az=211.0*

KEA ***27*** *14:06:57.5, 38°.19N×121°.07E, h16km, ML4.4/7*

ISC 27 14:06:53.3±0.6, 37°.91N±0°.07×120°.63E±0°.05, h10km, n46, σ1ˢ.63/59, mb4.2/13, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUJ	Sinuiju	3.72	53	Pn	Pn	14 07 48.1	-2.7
SUJ				Pg	Pb	14 07 59.5	+0.3
SUJ				Sg	Sb	14 08 42.0	-2.3
SUJ				AML	AML		
	comp=N,2µm,0.6s						
SUJ				AML	AML		
	comp=E,2µm,0.6s						
SUJ				AML	AML		
	comp=Z,1µm,0.5s						
HJU	Haeju	4.03	87	Pn	Pn	14 07 52.9	-2.2
HJU				Pg	Pb	14 08 05.3	+0.9
HJU				Sg	Sb	14 08 54.3	+1.1
HJU				AML	AML		
	comp=N,1µm,0.6s						
HJU				AML	AML		
	comp=E,662nm,0.5s						
HJU				AML	AML		
	comp=Z,696nm,0.5s						
BJT	Baijiatuau	4.06	303		Pn	14 07 54.7	-0.8
PYAG	Pyongyang	4.18	73	Pn	Pn	14 07 55.1	-2.1
PYAG				Pg	Pb	14 08 08.4	+1.4
PYAG				Sg	Sb	14 08 57.1	-0.5
PYAG				AML	AML		
	comp=N,1µm,0.7s						
PYAG				AML	AML		
	comp=E,698nm,0.1s						
PYAG				AML	AML		
	comp=Z,679nm,0.6s						
PYS	Pyongsong	4.31	70	Pn	Pn	14 07 57.2	-1.7
PYS				Pg	Pb	14 08 11.1	+1.9
PYS				Sg	Sb	14 09 01.0	-0.2
PYS				AML	AML		
	comp=N,2µm,0.3s						
PYS				AML	AML		
	comp=E,1µm,0.2s						
PYS				AML	AML		
	comp=Z,648nm,0.3s						
INCN	Inchon	4.78	93	Pn	Pn	14 08 05.4	-0.1
WOSN	Wonsan	5.47	75	Pg	Pb	14 08 32.1	+3.1
WOSN				Sg	Sb	14 09 38.2	+3.6
WOSN				AML	AML		
	comp=N,576nm,0.7s						
WOSN				AML	AML		
	comp=E,394nm,0.8s						
WOSN				AML	AML		
	comp=Z,132nm,0.4s						
KGE	Kanggye	5.54	55	Pg	Pb	14 08 32.5	+2.4
KGE				Sg	Sb	14 09 39.1	+2.6
KGE				AML	AML		
	comp=N,582nm,0.6s						
KGE				AML	AML		
	comp=E,524nm,0.9s						
KGE				AML	AML		
	comp=Z,292nm,0.3s						
TJN	Taejon	5.59	104	Pn	Pn	14 08 16.3	-0.3
HHU	Hamhung	5.75	67	Pn	Pn	14 08 16.2	-2.4
HHU				Pg	Pb	14 08 36.8	+3.2

HHU				Sg	Sb	14 09 46.0	+3.5
HHU				AML	AML		
	comp=N,816nm,0.9s						
HHU				AML	AML		
	comp=E,511nm,0.2s						
HHU				AML	AML		
	comp=Z,184nm,0.1s						
KS19	Wonju Array Si	5.75	92		Pn	14 08 16.7	-2.1
KSAR	Wonju Array Be	5.78	92		Pn	14 08 16.6	-2.4
KSRS	Korea Array	5.80	92	Pn	Pn	14 08 17.1	-2.4
	comp=Z,2.5nm,0.3s,baz=279,slow=14,SNR=47						
KSRS				Pg	Pb	14 08 35.6	+0.9
	comp=Z,6.3nm,0.3s,baz=276,slow=16,SNR=16						
KSRS				Sn	Sn	14 09 22.9	-3.2
	comp=Z,7.4nm,0.3s,baz=262,slow=16,SNR=2.0						
KSRS				Lg	Lg	14 09 50.1	
	comp=Z,27nm,0.3s,baz=279,slow=29,SNR=8.4						
	comp=Z,14nm,0.6s						
JTU	Tsushima	7.85	113	Pn	Pn	14 08 47.3	-0.3
JNU	Nakatsue	9.62	117	Pn	Pn	14 09 10.7	-1.3
	comp=Z,0.4nm,0.3s,baz=285,slow=11,SNR=5.2						
JNU				Lg	Lg	14 11 54.8	
	comp=Z,0.6nm,0.3s,baz=135,slow=16,SNR=3.9						
	comp=Z,12nm,1.1s						
USA0B	Ussuriysk Arra	10.63	50	Pn	Pn	14 09 24.5	-1.1
USRK	Ussuriysk Ar.	10.63	50	Pn	Pn	14 09 24.6	-1.0
	comp=Z,0.4nm,0.3s,baz=251,slow=14,SNR=6.0						
USRK				Lg	Lg	14 12 18.5	
	comp=Z,0.9nm,0.3s,baz=243,slow=20,SNR=4.5						
	comp=Z,1.3nm,0.5s						
USRK	Ussuriysk Ar.	10.63	50	Pn	Pn	14 09 24.3	-1.3
KLR	Kul'dur	13.87	32	Pn	Pn	14 10 09.1	-0.9
	comp=Z,0.1nm,0.3s,baz=240,slow=12,SNR=5.9						
KLR				Lg	Lg	14 14 03.3	
	comp=Z,0.3nm,0.3s,baz=117,slow=22,SNR=8.9						
	comp=Z,1.1nm,0.6s						
SONM	Songino Array	14.37	318	Pn	Pn	14 10 14.3	-2.6
	comp=Z,0.2nm,0.3s,baz=133,slow=14,SNR=3.5						
SONM				Sn	Sn	14 12 43.1	-13
	comp=Z,0.3nm,0.3s,baz=122,slow=27,SNR=3.1						
SONM				Lg	Lg	14 14 28.8	
	comp=Z,0.2nm,0.3s,baz=128,slow=26,SNR=3.6						
ASAJ	Asahikawa	17.68	63	P	Pn	14 10 58.4	-1.1
	comp=Z,0.1nm,0.3s,baz=259,slow=5.2,SNR=2.4						
	comp=Z,1.4nm,0.7s						
ERM	Erimo	17.74	70	P	Pn	14 11 01.0	+0.7
ERM				IAmb	IAmb	14 11 27.1	
	comp=Z,22nm,1.1s						
MK31	Makanchi Array	29.44	300	P	P	14 12 57.7	+0.6
MKAR	Makanchi Array	29.44	300	P	P	14 12 57.7	+0.6
	comp=Z,0.9nm,0.6s,baz=95,slow=11,SNR=11						
	comp=Z,0.9nm,0.6s						
KURK	Kurchatov	32.23	307	P	P	14 13 21.8	+0.2
KURK				IAmb	IAmb	14 13 28.1	
	comp=Z,5.1nm,1.4s						
KURBB	Kurchatov Arra	32.27	307	P	P	14 13 22.3	+0.3
	comp=Z,2.9nm,0.9s,baz=97,slow=9.5,SNR=16						
	comp=Z,2.9nm,0.9s						
TIXI	Tiksi	34.07	5		P	14 13 38.0	+0.5
AAK	Ala-Archa	35.17	293	P	P	14 13 49.3	+1.8
BVAR	Borovoye Array	37.51	310	P	P	14 14 07.3	+0.1
	comp=Z,1.6nm,0.6s,baz=118,slow=12,SNR=6.3						
	comp=Z,1.6nm,0.6s						
BRVK	Borovoye	37.58	310	P	P	14 14 08.2	+0.5
KK31	Karatay Array	37.99	294	P	P	14 14 12.5	+1.1
KK31				IAmb	IAmb	14 14 13.3	
	comp=Z,4.5nm,0.9s						
KKAR	Karatay Array	37.99	294	P	P	14 14 12.6	+1.1
CHGR	Chuyangaron	39.97	288	P	P	14 14 29.0	+0.9
ABKAR	Akbulak array	44.28	305	P	P	14 15 03.0	0.0
ANM	Nome	49.76	33	P	P	14 15 45.4	-0.2
ANM				IAmb	IAmb	14 15 48.6	
	comp=Z,4.2nm,0.9s						
MTN	Manton Dam	51.44	167	P	P	14 15 58.2	-0.5
IMAR	Indian Mountai	54.34	30	P	P	14 16 18.6	-1.1
CAST	Castle Rocks	55.72	33	P	P	14 16 31.3	+1.6
CAST				IAmb	IAmb	14 16 33.0	
	comp=Z,2.5nm,0.8s						
BMAR	Burnt Mountain	57.39	27	P	P	14 16 41.3	-0.3
ILAR	Eielson Array	57.44	31	P	P	14 16 42.4	+0.5
	comp=Z,1.0nm,1.0s,baz=287,slow=7.1,SNR=6.6						
	comp=Z,1.0nm,1.0s						
WRA	Warramunga Arr	58.97	165	P	P	14 16 52.5	-0.6
	comp=Z,1.8nm,0.9s,baz=350,slow=7.4,SNR=9.7						
	comp=Z,1.8nm,0.9s						
ASAR	Alice Springs	62.51	166	P	P	14 17 16.5	-0.6
	comp=Z,0.8nm,0.9s,baz=350,slow=6.5,SNR=5.1						
	comp=Z,0.8nm,0.9s						
YKA	Yellowknife Ar	70.58	24	P	P	14 18 06.7	-1.5
	comp=Z,1.8nm,0.9s,baz=320,slow=5.6,SNR=27						
	comp=Z,1.8nm,0.9s						
STKA	Stephens Creek	72.13	161	P	P	14 18 17.2	-0.7
	comp=Z,2.3nm,0.8s,baz=254,slow=6.0,SNR=3.0						
	comp=Z,2.3nm,0.8s						
STKA	Stephens Creek	72.13	161	P	P	14 18 18.4	+0.4
STKA				IAmb	IAmb	14 18 55.8	
	comp=Z,3.7nm,1.4s						
NVAR	Mina Array Bea	86.67	42	P	P	14 19 37.4	-0.2
	comp=Z,0.4nm,0.7s,baz=313,slow=4.5,SNR=2.3						
	comp=Z,0.4nm,0.7s						

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*IDC **27** 14:16:31.4±2.5, 10°.43S×161°.42E, h73^{km}±18^{km}, mb3.9/13, mbtmp4.2/14, MS3.6/3, Error ellipse: s-maj=22.2km s-min=15.8km az=85.0*

*NEIC **27** 14:16:31.6±1.5, 10°.37S±0°.09×161°.4E±0°.1, h67^{km}±2^{km}, mb4.5/44, Error ellipse: s-maj=16.6km s-min=11.6km az=57.0*

*NOU **27** 14:16:31.6, 10°.42S×161°.50E, h51^{km}, mb4.4/20, Solomon Islands*

ISC 27 14:16:30.4±0.5**, 10°.40S**±0°.06×**161°.50E**±0°.07**, h61**^{km}**, n89,** σ**1^{s}.17**/90**, mb4.4**/37**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.81	302	P	Pn	14 16 59.5	+0.2
	4µm,0.3s,baz=153,slow=5.3,SNR=29						
HNR				S	Sn	14 17 21.8	+0.6
	9µm,0.4s,baz=313,slow=15,SNR=14						
HNR	Honiara	1.81	302		Pn	14 16 59.0	-0.3
HNR	Honiara	1.81	302	P	Pn	14 16 59.8	+0.5
KOUNC	Koumac, New Ca	10.44	165	Pn	Pn	14 18 58.4	+1.0
KOUNC	Koumac, New Ca	10.44	165	P	Pn	14 18 58.7	+1.2
	32nm,0.5s						
LIFNC	LIFOU	11.70	153	Pn	Pn	14 19 13.9	-0.7
LIFNC	LIFOU	11.70	153	P	Pn	14 19 14.3	-0.4
	42nm,1.0s						
NOUC	Port Laguerre	12.51	159	P	Pn	14 19 27.1	+1.4
	19nm,1.0s						
DZM	Mont Dzumac	12.54	158	P	Pn	14 19 27.8	+1.7
	4.0nm,0.3s,baz=140,slow=20,SNR=52						
DZM				S	Sn	14 21 39.8	-4.4
	2.8nm,0.8s,baz=232,slow=21,SNR=1.8						
DZM	Mont Dzumac	12.54	158		Pn	14 19 27.4	+1.3
DZM	Mont Dzumac	12.54	158	P	Pn	14 19 27.8	+1.7
	17nm,2.4s						
YATNC	Mamie plateau,	12.69	157	P	Pn	14 19 29.6	+1.4
ONTNC	Ouen Toro	12.76	159	Pn	Pn	14 19 30.4	+1.4
ONTNC	Ouen Toro	12.76	159	P	Pn	14 19 31.2	+2.2
	26nm,1.2s						
OUENC	Ouen Island, N	13.00	157	Pn	Pn	14 19 34.0	+1.6
OUENC	Ouen Island, N	13.00	157	P	Pn	14 19 34.3	+1.9
	18nm,1.9s						
PINNC	Pines Island,	13.41	156	Pn	Pn	14 19 39.6	+1.6
FUNA	Funafuti	17.55	85	P	P	14 20 33.8	+2.3
FUNA	Funafuti	17.55	85	P	P	14 20 34.0	+2.6
	68nm,2.6s						
CTA	Charters Tower	17.57	235	P	P	14 20 33.0	+1.5
	7.2nm,0.7s,baz=57,slow=8.8,SNR=6.8						
CTAO	Charters Tower	17.57	235	P	P	14 20 33.1	+1.5
	46nm,2.8s						
COEN	Coen	18.26	257	P	Pn	14 20 42.0	+2.3
	14nm,1.2s						
MTSU	Mount Surprise	18.33	243	P	Pn	14 20 42.6	+2.0
	13nm,0.8s						
RMQ	Roma	20.02	215	P	Pn	14 21 01.3	+0.6
	12nm,0.9s						
ARMA	Armidale	21.94	203	P	P	14 21 18.9	-0.2
ARMA	Armidale	21.94	203	P	P	14 21 19.3	+0.2
	10nm,1.7s						
CMSA	Cobar Meteorol	25.63	213	P	P	14 21 55.7	+1.3
INKA	Innaminka	26.05	226	P	P	14 21 59.1	+0.9
	42nm,2.0s						
WB0	Warramunga Arr	27.74	247	P	P	14 22 12.8	-0.8
WRAB	Tennant Creek	27.83	247	P	P	14 22 13.4	-0.9
WB2	Warramunga Arr	27.83	247	P	P	14 22 13.6	-0.7
WRA	Warramunga Arr	27.84	247	P	P	14 22 13.6	-0.8
	2.7nm,0.5s,baz=76,slow=8.9,SNR=44						
	2.7nm,0.5s						
STKA	Stephens Creek	28.21	218	P	P	14 22 17.1	-0.4
	0.9nm,0.4s,baz=56,slow=13,SNR=3.9						
STKA				LR	LR	14 32 37.3	
	comp=Z,150nm,18.9s,baz=21,slow=34						
	0.9nm,0.4s						
AS31	Alice Springs	29.43	240	P	P	14 22 26.9	-1.6
ASAR	Alice Springs	29.43	240	P	P	14 22 27.1	-1.4
	1.0nm,0.5s,baz=64,slow=10,SNR=33						
ASAR				LR	LR	14 32 05.9	
	comp=Z,143nm,19.4s,baz=46,slow=32						
	1.0nm,0.5s						
ASAR	Alice Springs	29.43	240	P	P	14 22 26.8	-1.7
MTN	Manton Dam	29.84	262	P	P	14 22 30.8	-1.4
MTN				IAmb	IAmb	14 22 56.8	
	comp=Z,11nm,0.9s						
WAKE	Wake Island	29.93	10	P	P	14 22 33.1	+0.3
TOO	Toolangi	30.65	205	P	P	14 22 39.5	+0.3
TOO				IAmb	IAmb	14 22 41.6	
	comp=Z,8.1nm,0.9s						
BKZ	Black Stump Fm	31.62	157	P	P	14 22 48.5	+0.8
KNRA	Kununurra	32.30	257	P	P	14 22 53.3	-0.5
BBOO	Buckleboo	32.34	223	P	P	14 22 54.0	0.0
FITZ	Fitzroy Crossi	35.54	253	P	P	14 23 20.9	-1.1
FORT	Forrest	37.07	232	P	P	14 23 35.0	+0.1
PSA00	Pilbara Seismi	41.43	249	P	P	14 24 09.7	-1.7
MBWA	Marble Bar	41.48	250	P	P	14 24 10.5	-1.3
JKA	Kamikawa-asahi	56.91	344	P	P	14 26 08.5	-0.7
JKA				IAmb	IAmb	14 26 10.3	
	comp=Z,4.5nm,0.8s						
ASAJ	Asahikawa	56.91	344	P	P	14 26 09.2	+0.1
	comp=Z,4.0nm,0.7s,baz=218,slow=10,SNR=7.7						
	comp=Z,4.0nm,0.7s						
KSRS	Korea Array	57.07	328	P	P	14 26 10.1	-0.3
	comp=Z,0.6nm,0.5s,baz=141,slow=7.6,SNR=2.8						
	comp=Z,0.6nm,0.5s						
USA0B	Ussuriysk Arra	60.58	336	P	P	14 26 35.1	+0.4
USA0B				IAmb	IAmb	14 26 50.0	
	comp=Z,4.6nm,0.8s						
USRK	Ussuriysk Ar.	60.58	336	P	P	14 26 34.8	+0.1
	comp=Z,3.8nm,0.8s,baz=152,slow=6.8,SNR=5.7						
	comp=Z,3.8nm,0.8s						
USRK	Ussuriysk Ar.	60.58	336	P	P	14 26 34.9	+0.3
KLR	Kul'dur	64.88	339	LR	LR	14 50 55.2	
	comp=Z,33nm,21.9s,baz=12,slow=32						
HEH	HeiHe	67.33	337	P	P	14 27 18.0	-0.8
HEH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CMAR	Chiang Mai Arr	68.04	295	P	P	14 27 23.2	-0.8
	comp=Z,0.4nm,0.3s,baz=126,slow=4.6,SNR=2.3						
	comp=Z,0.4nm,0.3s						
ULN	Ulaanbaatar	75.37	326	P	P	14 28 06.9	-0.7
SONM	Songino Array	75.72	325	P	P	14 28 09.6	0.0
	comp=Z,3.1nm,0.6s,baz=143,slow=5.8,SNR=17						
	comp=Z,3.1nm,0.6s						
SONM	Songino Array	75.72	325	P	P	14 28 08.6	-1.0
SONM				IAmb	IAmb	14 28 10.2	
	comp=Z,3.0nm,0.7s						
YAK	Yakutsk	76.35	345	P	P	14 28 11.7	-1.0
BILL	Bilibino	78.31	2	P	P	14 28 23.2	-0.3
BILL				IAmb	IAmb	14 28 23.7	
	comp=Z,3.5nm,1.0s						
SVW2	Sparrevohn	78.86	20	P	P	14 28 27.1	+0.3
SVW2				IAmb	IAmb	14 28 29.2	
	comp=Z,7.0nm,0.8s						
N19K	Bonanza Creek	79.02	20	P	P	14 28 26.9	-0.8
N19K				IAmb	IAmb	14 29 05.0	
	comp=Z,5.7nm,1.1s						
QSPA	South Pole Qui	79.60	180	P	P	14 28 30.7	-0.3
QSPA				IAmb	IAmb	14 28 36.0	
	comp=Z,12nm,1.5s						
M19K	Big River Lodg	79.84	20	P	P	14 28 32.8	+0.8
M19K				IAmb	IAmb	14 28 34.2	
	comp=Z,5.6nm,0.8s						
L19K	White Mountain	79.89	19	P	P	14 28 32.8	+0.5
L19K				IAmb	IAmb	14 28 33.8	
	comp=Z,4.6nm,0.9s						
M20K	Styx River	80.24	20	P	P	14 28 35.2	+0.8
CAST	Castle Rocks	81.67	19	P	P	14 28 40.9	-0.9
CAST				IAmb	IAmb	14 28 42.0	
	comp=Z,6.0nm,0.9s						
KTH	Kantishna Hill	82.14	19	P	P	14 28 43.9	-0.4
KTH				IAmb	IAmb	14 28 44.9	
	comp=Z,3.4nm,0.8s						
TRF	Thorofare Moun	82.28	20	P	P	14 28 44.8	-0.4
MCK	McKinley	82.92	20	P	P	14 28 47.4	-0.9
MCK				IAmb	IAmb	14 28 49.1	
	comp=Z,6.0nm,0.9s						
I21K	Tanana	82.93	18	P	P	14 28 48.6	+0.3
IMAR	Indian Mountai	82.97	17	P	P	14 28 48.7	+0.2
H21K	Melozitna Rive	83.02	17	P	P	14 28 49.9	+1.1
N25K	Chitina, Valde	83.14	23	P	P	14 28 50.5	+1.0
MDM	Murphy Dome	83.95	19	P	P	14 28 53.0	-0.6
MDM				IAmb	IAmb	14 28 54.0	
	comp=Z,4.0nm,1.0s						
HDA	Harding Lake	84.02	20	P	P	14 28 53.7	-0.2
HDA				IAmb	IAmb	14 28 54.7	
	comp=Z,4.3nm,0.9s						
H23K	Yukon River	84.11	18	P	P	14 28 54.5	+0.1
H23K				IAmb	IAmb	14 28 55.5	
	comp=Z,2.9nm,0.8s						
ILAR	Eielson Array	84.27	20	P	P	14 28 54.5	-0.8
	comp=Z,0.9nm,0.7s,baz=250,slow=4.8,SNR=9.4						
	comp=Z,0.9nm,0.7s						
ILAR	Eielson Array	84.27	20	P	P	14 28 55.1	-0.1
M27K	Edge Creek, AK	84.62	23	P	P	14 28 58.8	+1.6
M27K				IAmb	IAmb	14 29 29.0	
	comp=Z,8.0nm,1.4s						
HYT	Haines Junctio	85.56	25	P	P	14 29 03.3	+1.4
HYT				IAmb	IAmb	14 29 42.0	
	comp=Z,8.0nm,1.4s						
A21K	Barrow	86.20	12	P	P	14 29 04.9	+0.2
A21K				IAmb	IAmb	14 29 05.7	
	comp=Z,2.4nm,0.8s						
EGAK	Eagle	86.25	21	P	P	14 29 05.5	+0.4
EGAK				IAmb	IAmb	14 29 06.6	
	comp=Z,4.1nm,0.9s						
M30M	Minto, Yukon	86.74	24	P	P	14 29 08.1	+0.5
M30M				IAmb	IAmb	14 29 09.2	
	comp=Z,1.9nm,0.8s						
G05A	Wamic	88.44	44	P	P	14 29 16.9	+0.8
NVAR	Mina Array Bea	88.82	51	P	P	14 29 18.1	-0.3
	comp=Z,0.6nm,0.7s,baz=233,slow=6.2,SNR=4.6						
	comp=Z,0.6nm,0.7s						
MKAR	Makanchi Array	90.22	318	P	P	14 29 23.2	-1.2
	comp=Z,0.8nm,0.5s,baz=95,slow=6.3,SNR=18						
	comp=Z,0.8nm,0.5s						
ZALV	Zalesovo Beam	90.61	325	P	P	14 29 25.3	-0.7
	comp=Z,0.4nm,0.4s,baz=108,slow=7.7,SNR=1.9						
	comp=Z,0.4nm,0.4s						
YKA	Yellowknife Ar	96.33	28	P	P	14 29 51.5	-0.6
	comp=Z,0.6nm,0.7s,baz=256,slow=4.6,SNR=12						
	comp=Z,0.6nm,0.7s						

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*IDC **27** 14:28:13.9±1.8, 6°.23S×152°.97E, h0^{km}, mb3.4/3, mbtmp3.6/5, ML2.8/2, Error ellipse: s-maj=51.0km s-min=24.4km az=115.0*

ISC 27 14:28:19.1±1.6**, 6°.15S**±0°.09×**152°.8E**±0°.2**, h33**^{km}**, n6,** σ**0^{s}.55**/7**, mb3.3**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	2.00	336	Pn	Pn	14 28 50.8	+0.2
	24nm,0.3s,baz=225,slow=1.3,SNR=66						
KRVT				Sn	Sn	14 29 14.4	-0.1
	58nm,0.3s,baz=180,slow=22,SNR=22						
	66nm,0.3s						
PMG	Port Moresby	6.49	240	Pn	Pn	14 29 52.9	+0.5
	3.3nm,0.3s,baz=63,slow=9.0,SNR=3.9						
	9.1nm,0.3s						
WRA	Warramunga Arr	22.61	231	P	P	14 33 16.5	-0.7
	0.7nm,1.0s,baz=56,slow=10,SNR=3.1						
	0.7nm,1.0s						
ASAR	Alice Springs	25.20	224	P	P	14 33 41.6	-0.4
	0.6nm,0.7s,baz=58,slow=9.4,SNR=9.9						
	0.6nm,0.7s						
ILAR	Eielson Array	83.39	22	P	P	14 40 43.0	+0.3
	0.5nm,0.9s,baz=238,slow=5.2,SNR=4.9						
	0.5nm,0.9s						
TORD	Torodi Ar. Bea	150.74	286	PKPbc	PKiKP	14 48 09.4	-0.3
	0.5nm,0.7s,baz=80,slow=1.8,SNR=2.8						

WEL 27 14:39:02.9±0.5**, 45°S**±4°×**16°8E**±°**, h5**^{km}**, M2.8**/3**, ML2.9**/6**, MLv2.8**/3**, Error ellipse: s-maj=0.0km s-min=0.0km az=138.9, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSZ	Milford Sound	0.32	246	P	Pg	14 39 09.9	+0.7
MSZ				S	Sg	14 39 14.5	+1.1
WKZ	Wanaka	0.56	121	P	Pb	14 39 14.6	-0.6
WKZ				S	Sg	14 39 22.0	+1.0
JCZ	Jackson Bay	0.57	34	P	Pg	14 39 13.9	+0.1
JCZ				S	Sg	14 39 21.8	+0.6
MLZ	Mavora Lakes	0.84	191	P	Pg	14 39 19.2	+0.2
MLZ				S	Sg	14 39 30.7	+0.8
EAZ	Earnscleugh	0.97	135	P	Pg	14 39 21.8	+0.2
DCZ	Deep Cove	1.25	222	P	Pg	14 39 25.9	-0.9
LBZ	Lake Benmore	1.33	84	P	Pg	14 39 28.8	+0.4
LBZ				S	Sg	14 39 45.5	-0.1
WHZ	Wether Hill Ro	1.38	191	P	Pn	14 39 28.5	-0.3
FOZ	Fox Glacier	1.47	47	P	Pn	14 39 30.1	+0.1
TUZ	Tuapeka	1.68	148	P	Pb	14 39 34.5	+0.2
ODZ	Otahua Downs	1.72	108	P	Pb	14 39 35.0	+0.1
GCSZ	Gaunt Creek Bo	1.89	50	P	Pb	14 39 38.3	+0.5
TMZ	Timaru	1.92	86	P	Pb	14 39 37.3	-1.0
PYZ	Puysegur Point	2.00	215	P	Pb	14 39 39.5	-0.3
SYZ	Scrubby Hill	2.07	165	P	Pb	14 39 40.1	-0.9
RPZ	Rata Peaks	2.12	68	P	Pg	14 39 43.6	0.0
ARCZ	Arundel	2.12	75	P	Pg	14 39 43.2	-0.4
WVZ	Waitaha Valley	2.27	51	P	Pg	14 39 45.7	-0.8
APZ	The Paps	2.30	186	P	Pn	14 39 42.7	+1.1
MHCZ	Mount Hutt	2.54	68	P	Pg	14 39 51.5	-0.1

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*NEIC **27** 14:42:07.2±1.2, 18°.8S±0°.1×177°.5W±0°.2, h620^{km}±13^{km}, mb4.4/20, Error ellipse: s-maj=24.3km s-min=20.5km az=115.0*

*IDC **27** 14:42:08.1±3.6, 18°.74S×177°.65W, h625^{km}±28^{km}, mb3.3/6, mbtmp4.3/7, Error ellipse: s-maj=82.4km s-min=24.5km az=40.0*

ISC 27 14:42:05.7±1.3**, 18°.8S**±0°.1×**177°.6W**±0°.2**, h600**^{km}**, n32,** σ**0^{s}.78**/30**, mb4.3**/16**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.32	284	P	P	14 43 36.7	+3.2
	5.9nm,0.9s,baz=117,slow=11,SNR=4.4						
MSVF	Nonsavu	4.32	284	P	P	14 43 36.2	+2.6
AFI	Afiamalu	7.38	50	P	P	14 44 01.7	+2.3
LIFNC	LIFOU	14.45	260	P	P	14 45 08.4	-0.5
PINNC	Pines Island,	14.54	252	P	P	14 45 09.8	+0.1
TARA	Tarawa	22.12	334	P	P	14 46 18.0	-0.6
CTA	Charters Tower	34.12	262	P	P	14 48 02.6	+0.2
	11nm,1.1s,baz=85,slow=11,SNR=2.5						
	11nm,1.1s						
CTAO	Charters Tower	34.12	262	P	P	14 48 02.4	-0.1
TOO	Toolangi	37.25	232	P	P	14 48 28.2	+0.1
COEN	Coen	37.93	271	P	P	14 48 33.8	-0.1
STKA	Stephens Creek	38.92	242	P	P	14 48 42.6	+1.0
	1.6nm,0.6s,baz=76,slow=10,SNR=3.2						
	1.6nm,0.6s						
STKA	Stephens Creek	38.92	242	P	P	14 48 40.5	-1.2
MCQ	Macquarie Isla	39.91	201	P	P	14 48 48.2	-0.8
BBOO	Buckleboo	43.70	242	P	P	14 49 19.6	+0.4
BBOO				IAmb	IAmb	14 49 32.0	
	comp=Z,28nm,1.4s						
WB0	Warramunga Arr	45.25	261	P	P	14 49 30.5	-0.8
WB0				IAmb	IAmb	14 49 31.4	
	comp=Z,3.5nm,0.5s						
WB2	Warramunga Arr	45.27	260	P	P	14 49 30.6	-0.8
WB2				IAmb	IAmb	14 49 57.4	
	comp=Z,12nm,1.4s						
WRAB	Tennant Creek	45.27	260	P	P	14 49 30.8	-0.7
WRAB				IAmb	IAmb	14 50 10.5	
	comp=Z,7.4nm,1.4s						
WRA	Warramunga Arr	45.28	260	P	P	14 49 31.2	-0.4
	comp=Z,1.7nm,0.4s,baz=97,slow=6.9,SNR=84						
	comp=Z,1.7nm,0.4s						
AS31	Alice Springs	45.34	255	P	P	14 49 31.8	-0.2
ASAR	Alice Springs	45.34	255	P	P	14 49 32.0	0.0
	comp=Z,3.2nm,0.7s,baz=88,slow=7.9,SNR=96						
	comp=Z,3.2nm,0.7s						
ASAR	Alice Springs	45.34	255	P	P	14 49 31.4	-0.6
MTN	Manton Dam	49.59	269	P	P	14 50 02.8	-0.9
MTN				IAmb	IAmb	14 50 10.4	
	comp=Z,18nm,1.2s						
FORT	Forrest	50.37	245	P	P	14 50 08.9	-0.3
FORT				IAmb	IAmb	14 50 44.4	
	comp=Z,34nm,1.1s						
KNRA	Kununurra	51.22	265	P	P	14 50 15.7	+0.2
KNRA				IAmb	IAmb	14 50 43.8	
	comp=Z,17nm,1.2s						
SIJI	Sorong	53.24	283	P	P	14 50 30.1	+0.1
	comp=Z,3.5nm,0.4s,baz=90,slow=11,SNR=2.0						
	comp=Z,3.5nm,0.4s						
FITZ	Fitzroy Crossi	53.69	261	P	P	14 50 33.2	+0.2
PSA00	Pilbara Seismi	58.48	256	P	P	14 51 05.6	-0.4
PSA00				IAmb	IAmb	14 51 31.3	
	comp=Z,31nm,1.4s						
MBWA	Marble Bar	58.65	256	P	P	14 51 06.7	-0.4
MBWA				IAmb	IAmb	14 51 33.0	
	comp=Z,34nm,1.4s						
VNDA	Vanda	59.62	185	P	P	14 51 13.5	+0.9
	comp=Z,1.7nm,0.3s,baz=0.0,slow=11,SNR=27						
	comp=Z,1.7nm,0.3s						
VNDA	Vanda	59.62	185	P	P	14 51 13.2	+0.6
KKM	Kota Kinabalu	69.75	284	P	P	14 52 16.6	-0.8
KKM				IAmb	IAmb	14 52 40.7	
	comp=Z,28nm,1.2s						
CCB	Clear Creek Bu	86.28	12	P	P	14 53 44.3	-0.1

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*TIR **27** 14:57:02.7, 40°.16N×20°.32E, h16^{km}±3^{km}, Md2.7, Ml2.8*

*ATH **27** 14:57:02.7, 40°.24N×20°.36E, h4^{km}±2^{km}, ML2.5/13, Error ellipse: s-maj=2.5km s-min=1.4km az=138.0*

*THE **27** 14:57:03.3, 40°.18N×20°.36E, h19^{km}±2^{km}, ML2.4/9, Error ellipse: s-maj=2.9km s-min=0.8km az=123.0*

ISC 27 14:57:02.9±0.9**, 40°.20N**±0°.03×**20°.35E**±0°.03**, h17**^{km}±7^{km}**, n40,** σ**0^{s}.89**/58**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSK	Leskovik	0.20	105	P	Pb	14 57 07.7	-0.5
LSK				S	Sg	14 57 12.3	+1.0
	2µm,0.6s						
LSK	Leskovik	0.20	105	P	Pb	14 57 07.8	-0.3
	baz=92						
LSK				S	Sg	14 57 11.8	+0.5
	baz=92						
LSK				AMP			
	comp=N,9.8nm,0.4s,baz=92						
SRN	Sarande	0.42	220	P	Pg	14 57 10.5	-1.0
SRN				S	Sb	14 57 18.3	+0.5
	comp=N,690nm,0.6s						
SRN	Sarande	0.42	220	P	Pg	14 57 10.2	-1.2
	baz=222						
SRN				S	Sg	14 57 16.6	-0.6
	baz=222						
SRN				AMP			
	comp=N,3.0nm,0.6s,baz=222						
KBN	Korca	0.54	39	P	Pb	14 57 13.3	-0.6
KBN				S	Sg	14 57 22.8	+1.8
	comp=N,280nm,0.6s						
KBN	Korca	0.54	39	P	Pb	14 57 10.8	-3.2
	baz=37						
KBN				S	Sb	14 57 19.9	-1.5
	baz=37						
KASA	Kassiopi	0.56	215	P	Pb	14 57 13.6	-0.5
KASA				AML	AML	14 57 26.5	
	comp=N,694µm,0.4s						
KASA				AML	AML	14 57 28.7	
	comp=E,822µm,0.4s						
PENT	Pentalofos	0.61	90	P	Pb	14 57 14.1	-1.0
PENT				S	Sg	14 57 23.8	+0.7
PENT	Pentalofos	0.61	90	P	Pb	14 57 14.1	-1.0
KEK	Kerkira	0.65	221	P	Pg	14 57 15.9	+0.2
KEK				S	Sg	14 57 25.4	+1.1
	comp=E,245nm,0.3s						
KEK	Kerkira	0.65	221	P	Pg	14 57 15.9	+0.2
KEK				S	Sg	14 57 25.4	+1.1
KEK				AML	AML	14 57 32.5	
	comp=N,411µm,0.3s						
KEK				AML	AML	14 57 32.6	
	comp=E,569µm,0.6s						

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JAN   Janina             0.67 144  P      Pb     14 57 15.1 -1.0
JAN                                S      Sb     14 57 24.5 -0.6
      comp=E,650nm,0.3s
JAN   Janina             0.67 144  P      Pb     14 57 15.1 -1.0
JAN                                S      Sb     14 57 24.5 -0.6
JAN                                AML    AML    14 57 28.4
      comp=E,1657µm,0.3s
JAN                                AML    AML    14 57 28.7
      comp=N,928µm,0.4s
IGT   Igoumenitsa        0.67 181  P      Pb     14 57 15.0 -1.1
IGT                                S      Sg     14 57 25.8 +0.8
      comp=N,375nm,0.4s
IGT   Igoumenitsa        0.67 181  P      Pg     14 57 16.1  0.0
      baz=179
IGT                                S      Sb     14 57 24.5 -0.6
      baz=179
IGT   Igoumenitsa        0.67 181  P      Pb     14 57 15.0 -1.1
IGT                                S      Sg     14 57 25.8 +0.8
IGT                                AML    AML    14 57 29.7
      comp=E,708µm,0.5s
IGT                                AML    AML    14 57 30.1
      comp=N,783µm,0.3s
KPRO  Kipourio           0.82 107  P      Pb     14 57 18.2 -0.5
KPRO                               S      Sg     14 57 30.3 +0.6
      comp=N,242nm,0.4s
KPRO  Kipourio           0.82 107  P      Pb     14 57 18.2 -0.5
KPRO                               AML    AML    14 57 35.9
      comp=N,393µm,0.4s
KPRO                               AML    AML    14 57 36.1
      comp=E,582µm,0.4s
FNA   Florina            0.98  53  P      Pb     14 57 20.9 -0.5
FNA                                S      Sn     14 57 36.2 +0.9
      comp=E,278nm,0.5s
FNA   Florina            0.98  53  P      Pb     14 57 20.9 -0.5
FNA                                AML    AML    14 57 38.5
      comp=E,538µm,0.5s
FNA                                AML    AML    14 57 39.6
      comp=N,570µm,0.4s
KZN   Kozani             1.09  84  P      Pb     14 57 23.4  0.0
KZN                                S      Sg     14 57 38.5  0.0
      comp=N,148nm,0.6s
KZN   Kozani             1.09  84  P      Pn     14 57 23.8 +0.3
KZN                                AML    AML    14 57 41.9
      comp=N,268µm,0.7s
KZN                                AML    AML    14 57 44.0
      comp=E,323µm,0.5s
TSLK  Tsoukalades, L     1.40 170  P      Pb     14 57 28.9 +0.4
TSLK                               S      Sg     14 57 48.3 +0.2
TSLK                               AML    AML    14 57 48.9
      comp=E,452µm,0.6s
TSLK                               AML    AML    14 57 49.6
      comp=N,485µm,0.4s
LKD2  Lefkada island     1.43 170  P      Pn     14 57 27.9 -0.2
LKD2                               AML    AML    14 57 50.1
      comp=N,524µm,0.4s
LKD2                               AML    AML    14 57 50.2
      comp=E,540µm,0.8s
THL   Klokotos Trika     1.43 116  P      Pn     14 57 28.3 +0.3
THL                                AML    AML    14 57 51.0
      comp=E,115µm,0.5s
THL                                AML    AML    14 57 52.4
      comp=N,158µm,0.6s
SCTE  Santa Cesarea      1.45 265  P      Pn     14 57 28.0 -0.2
PHP   Peshkopia          1.48   3  P      Pb     14 57 31.4 +1.4
      baz=3.0
EVGI  Lefkada island     1.60 171  P      Pb     14 57 32.1 +0.2
EVR   Evrytania          1.71 138  P      Pb     14 57 33.9  0.0
EVR                                AML    AML    14 58 01.9
      comp=E,146µm,0.6s
EVR                                AML    AML    14 58 02.5
      comp=N,160µm,0.6s
GRG   Griva              1.74  64  P      Pn     14 57 32.3  0.0
GRG   Griva              1.74  64  P      Pn     14 57 32.3  0.0
FSK   Fiskardo           1.75 174  P      Pb     14 57 34.3 -0.2
MAKR  Makrakomi, Fth     1.82 130  P      Pb     14 57 35.2 -0.5
MAKR                               AML    AML    14 58 04.6
      comp=E,251µm,0.7s
MAKR                               AML    AML    14 58 08.9
      comp=N,222µm,0.6s
AGG   Agios Georgios     1.93 127  P      Pn     14 57 35.4 +0.4
ANX   Ano Chora          2.02 142  P      Pn     14 57 36.5 +0.3
VLS   Valsamata          2.03 175  P      Pb     14 57 37.8 -1.5
VLS                                AML    AML    14 58 07.1
      comp=E,253µm,0.4s
VLS                                AML    AML    14 58 08.5
      comp=N,169µm,0.3s
PSDA  Pessada-Kefalo     2.09 175  P      Pn     14 57 37.5 +0.4
SERG  Sergoula           2.23 143  P      Pn     14 57 40.2 +1.2
LAKA  Lakka              2.33 147  P      Pn     14 57 40.7 +0.2
KLV   Kalavryta, Ach     2.57 146  P      Pn     14 57 45.0 +1.2
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*SJA **27** 15:04:00.0±1.2, 22°.70S×66°.18W, h270km±7km, ML4.5, MW4.1, Hypocentre not reviewed by the ISC*

*IDC **27** 15:04:01.9±1.0, 22°.65S×66°.17W, h242km±13km, mb3.3/2, mbtmp4.1/8, Error ellipse: s-maj=20.8km s-min=14.8km az=110.0*

*NEIC **27** 15:04:02.3±1.9, 22°.67S±0°.08×66°.3W±0°.1, h254km±13km, mb4.3/8, Error ellipse: s-maj=17.3km s-min=11.5km az=105.0*

*VAO **27** 15:04:03.8±0.3, 22°.47S×66°.23W, h246km±6km, mb4.1*

ISC 27 15:04:01.5±0.5**, 22°.68S**±0°.05×**66°.26W**±0°.05**, h250km, n103, σ1ˢ37**/121**, mb4.2**/4**, 10C, Jujuy Province**

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Code  Station Name        Δ°  AZ°    Phase ID         Time      Res
                                   Op     ISC     h  m  s     ISC
YJA   Yavi               0.85  54  i P           15 04 37.0
HJA   Humahuaca          0.94 124  eP            15 04 38.4
HJA                                eS            15 05 05.2
SLA   San Lorenzo        2.15 161  eP            15 04 45.0
LVC   Limon Verde        2.45 271  P      Pn     15 04 50.5 +1.8
      90nm,0.3s,baz=96,slow=5.5,SNR=59
LVC                                S      S      15 05 26.4 +0.6
      86nm,0.5s,baz=22,slow=1.4,SNR=4.4
LVC   Limon Verde        2.45 271         Pn     15 04 50.3 +1.7
LVC   Limon Verde        2.45 271  eP     Pn     15 04 50.2 +1.5
LVC                                eS     S      15 05 26.5 +0.7
LVC   Limon Verde        2.45 271  eP     Pn     15 04 50.5 +1.8
LVC                                eS     S      15 05 26.5 +0.7
LVC   Limon Verde        2.45 271  eP            15 04 49.8
PB09  IPOC Station P     2.90 287         Pn     15 04 55.0 +1.9
PB09  IPOC Station P     2.90 287  eP     Pn     15 04 54.5 +1.4
PB09                               eS     S      15 05 33.9  0.0
PB09                                IAML         15 05 40.4
      comp=N,350nm,0.4s
PB09  IPOC Station P     2.90 287  i P           15 04 54.0
PB09                               eS            15 05 33.9
PB09                                IAML         15 05 36.9
      comp=Z,364nm,1.0s
PB15  IPOC Station P     3.01 259         Pn     15 04 55.9 +1.6
PB15  IPOC Station P     3.01 259  eP            15 04 55.7
PB15                               eS            15 05 36.4
PB06  IPOC Station P     3.06 269  eP            15 04 56.3
PB06                               eS            15 05 37.0
PB06                                IAML         15 05 43.2
      comp=Z,425nm,0.4s
PB03  IPOC Station P     3.29 280         Pn     15 04 58.5 +1.1
PB03  IPOC Station P     3.29 280⇑eP     Pn     15 04 58.6 +1.2
PB03                               eS     S      15 05 40.6 -1.1
PB03                                IAML         15 05 41.6
      comp=N,1µm,0.3s
PB03  IPOC Station P     3.29 280  i P           15 04 58.0
PB03                               eS            15 05 40.8
PB03                                IAML         15 05 42.2
      comp=Z,991nm,0.1s
PB01  IPOC Station P     3.41 298         Pn     15 04 59.6 +0.9
PB01  IPOC Station P     3.41 298⇑eP     Pn     15 04 59.8 +1.1
PB01                               eS     S      15 05 42.5 -1.4
PB01  IPOC Station P     3.41 298  eP            15 04 59.9
PB01                               eS            15 05 43.8
PB01                                IAML         15 05 46.0
      comp=Z,318nm,0.2s
PB07  IPOC Station P     3.49 285         Pn     15 05 00.6 +0.9
PB07  IPOC Station P     3.49 285⇑eP     Pn     15 05 00.7 +1.0
PB07                               eS     S      15 05 44.2 -1.5
PB07  IPOC Station P     3.49 285  eP            15 05 01.1
PB07                                IAML         15 05 50.8
      comp=Z,432nm,0.4s
PB04  IPOC Station P     3.61 275         Pn     15 05 01.9 +0.9
PB04  IPOC Station P     3.61 275⇑eP     Pn     15 05 01.8 +0.8
PB04                               eS     S      15 05 46.4 -1.7
PB04  IPOC Station P     3.61 275  eP            15 05 02.1
PB04                               eS            15 05 47.4
PB04                                IAML         15 05 49.2
      comp=Z,827nm,0.1s
PB02  IPOC Station P     3.64 291         Pn     15 05 02.0 +0.7
PB02  IPOC Station P     3.64 291⇑eP     Pn     15 05 01.8 +0.5
PB02                               eS     S      15 05 46.4 -2.2
PB02  IPOC Station P     3.64 291  eP            15 05 02.1
PB08  IPOC Station P     3.69 313         Pn     15 05 03.8 +1.6
PB08  IPOC Station P     3.69 313⇑eP     Pn     15 05 03.9 +1.7
PB08                               eS     S      15 05 49.3 -0.9
PB08  IPOC Station P     3.69 313  i P           15 05 03.0
PB08                               eS            15 05 49.3
GO02  Mina Guanaco       3.92 230   Pn    Pn     15 05 06.4 +1.7
GO02  Mina Guanaco       3.92 230⇑eP     Pn     15 05 06.3 +1.7
GO02                               eS     S      15 05 54.4 -0.5
GO02  Mina Guanaco       3.92 230  i P           15 05 06.0
PB10  IPOC Station P     4.04 257   Pn    Pn     15 05 06.7 +0.9
PB10  IPOC Station P     4.04 257  eP            15 05 06.0
PB10                               eS            15 05 55.1
PB10                                IAML         15 05 57.3
      comp=Z,340nm,0.3s
GO01  Chusmiza           4.06 317         Pn     15 05 07.7 +1.2
GO01  Chusmiza           4.06 317⇑eP     Pn     15 05 07.4 +0.9
GO01                               eS     S      15 05 56.4 -1.7
GO01  Chusmiza           4.06 317  i P           15 05 07.0
TA01  Diego Aracena      4.21 299   Pn    Pn     15 05 07.9 +0.1
TA01  Diego Aracena      4.21 299  i P           15 05 07.0
PB14  IPOC Station P     4.27 242   Pn    Pn     15 05 08.7  0.0
PB14  IPOC Station P     4.27 242  i P           15 05 09.0
PB14                               eS            15 06 00.6
PB14                                IAML         15 06 05.0
      comp=Z,501nm,0.3s
PB11  IPOC Station P     4.30 312         Pn     15 05 09.3 +0.2
PB11  IPOC Station P     4.30 312⇑eP     Pn     15 05 09.1  0.0
PB11                               eS     S      15 05 58.8 -3.9
PB11  IPOC Station P     4.30 312  eP            15 05 09.5
PB11                               eS            15 06 00.6
PB11                                IAML         15 06 03.4
      comp=Z,224nm,0.2s
TA02  Huaiquique         4.33 303         Pn     15 05 09.3 +0.1
MNMC  Minye Minye        4.71 318         Pn     15 05 14.8 +0.6
MNMC  Minye Minye        4.71 318⇑eP     Pn     15 05 15.0 +0.9
MNMC                               eS     S      15 06 09.6 -2.3
MNMCX Minye Minye        4.71 318  eP            15 05 15.1
MNMCX                              eS            15 06 10.1
MNMCX                               IAML         15 06 16.5
      comp=Z,329nm,0.2s
AC01  Pan de Azucar      5.25 228   Pn    Pn     15 05 20.7 +0.4
AC01  Pan de Azucar      5.25 228  i P           15 05 20.0
PB16  IPOC Station P     5.29 324         Pn     15 05 22.6 +1.1
PB16  IPOC Station P     5.29 324  i P           15 05 22.0
PB16                               eS            15 06 22.1
PB12  IPOC Station P     5.56 316   Pn    Pn     15 05 23.0 -1.3
AP01  Chacalluta         5.75 318   Pn    Pn     15 05 25.8 -0.7
AC06  Mina Casimiro      5.96 218         Pn     15 05 29.2 +0.1
GO03  Copiap             6.08 216         Pn     15 05 30.6  0.0
LPAZ  La Paz             6.60 344   P     Pn     15 05 38.9 +1.1
      comp=Z,14nm,0.4s,baz=149,slow=8.0,SNR=44
LPAZ                                S     S      15 06 53.5 -1.4
      comp=Z,10.0nm,0.6s,baz=138,slow=19,SNR=6.9
LPAZ  La Paz             6.60 344         Pn     15 05 38.6 +0.7
LPAZ  La Paz             6.60 344  eP     Pn     15 05 38.9 +1.1
LPAZ                               eS     S      15 06 53.2 -1.6
AC04  Llanos de Chal     7.01 217   Pn    Pn     15 05 42.3  0.0
AC05  El Transito        7.12 210         Pn     15 05 44.4 +0.6
LCO   Las Campanas       7.47 211         Pn     15 05 48.1 -0.2
BBSD  Serra de San D     7.62  45  eP     Pn     15 05 49.4 -0.7
BBSD                               eS     S      15 07 13.9 -3.5
CO01  Juntas del Tor     8.04 205   Pn    Pn     15 05 57.2 +1.7
MURT  Porto Murtinho     8.08  84  eP     Pn     15 05 55.7 -0.2
SIV   San Ignacio        8.26  37   P     Pn     15 05 57.8 -0.5
      comp=Z,23nm,0.6s,baz=223,slow=7.1,SNR=87
GO04  Tololo Observa     8.50 208         Pn     15 06 01.1 -0.2
CO03  El Pedregal        9.04 205   Pn    Pn     15 06 08.7 +0.7
CFA   Coronel Fontan     9.06 191   P     Pn     15 06 08.5 +0.3
      comp=Z,1.8nm,0.3s,baz=26,slow=17,SNR=18
CFA                                 S     S      15 07 45.1 -5.6
      comp=Z,14nm,0.3s,baz=252,slow=19,SNR=17
BDQN  Bodoquena, MS      9.12  78  eP     Pn     15 06 08.9 -0.1
CO02  Combarbal          9.48 205   Pn    Pn     15 06 13.2 -0.4
PTLB  Pontes e Lacer     9.85  44         Pn     15 06 17.3 -1.0
PTLB  Pontes e Lacer     9.85  44  eP     Pn     15 06 17.6 -0.6
AQDB  Aquidauana        10.07  79  eP     Pn     15 06 21.3 +0.4
AZCA  Azaras, Argent    10.73 122  eP     P      15 06 36.7 +2.7
VA03  San Esteban       10.74 200         Pn     15 06 30.5 +1.1
VA06  Catapilco         10.81 203   Pn    Pn     15 06 31.4 +1.2
RVDE  Rio Verde (Bra    11.19  73  eP     P      15 06 40.6 +1.4
VILB  Vilhena           11.26  32   P     P      15 06 39.3 -0.7
VILB  Vilhena           11.26  32  eP     P      15 06 39.3 -0.7
MCR1  Marechal Candi    11.35 101  eP     P      15 06 43.1 +2.2
MT02  Curacav           11.38 201         Pn     15 06 38.0 +0.6
MT09  Talagante         11.81 200   P     P      15 06 47.6 +1.5
MT01  Popeta            11.98 200   Pn    Pn     15 06 45.0 +0.3
SALV  Santo Antonio     12.04  58  eP     Pn     15 06 46.7 +1.1
CRSM  Crissiumal (Br    12.06 116  eP     P      15 06 51.0 +2.3
BO01  Tunca             12.41 199   P     P      15 06 54.3 +1.7
FRBT  Francisco Belt    12.47 108  eP     P      15 06 55.4 +2.0
RODS  Rosario do Sul    12.50 130  eP     P      15 06 55.6 +1.9
BO02  Sierra Bellavi    12.70 197         Pn     15 06 54.9 +1.1
PTGB  Pitanga           13.16 102  eP     P      15 07 03.5 +2.4
ALGR  Alto Alegre (B    13.39 120  eP     P      15 07 05.2 +1.6
ITAB  Concordia         13.59 112   P     P      15 07 06.5 +0.8
ITAB  Concordia         13.59 112  eP     P      15 07 07.5 +1.7
CPSB  Cacapava Do Su    13.81 127  eP     P      15 07 09.8 +1.7
PCMB  Pacaembu          13.94  88  eP     P      15 07 11.7 +1.9
PLTB  Pedras Altas      14.43 132   P     Pn     15 07 15.1 +0.2
PLTB  Pedras Altas      14.43 132  eP     P      15 07 15.9 +0.8
ITRB  Iturama           15.12  82  eP     Pn     15 07 24.4 +1.1
BI05  Punta Hualpn      15.25 202   P     P      15 07 24.2 +0.2
ARAG  Araguaiana, MT    15.30  66  eP     Pn     15 07 25.6 +0.1
FRTB  Fartura           15.39  96  eP     Pn     15 07 27.1 +0.7
TRQA  Tornquist         15.76 167   P     P      15 07 29.3 -0.3
TRQA                                IAmb  IAmb   15 07 32.0
      comp=Z,5.1nm,0.6s
RCLB  Rio Claro- Sao    17.30  93  eP     P      15 07 47.6 +0.9
GO06  Curarrehue        17.43 194   P     Pn     15 07 49.7 -0.7
PET01 Itanhaem-SP       17.49  99  eP     P      15 07 48.5 -0.1
VAO   Valinhos          17.79  95  eP     P      15 07 52.7 +0.7
SNDB  Serra Nova Dou    17.80  56  eP     P      15 07 52.0 -0.1
PLCA  Paso Flores       18.36 190   P     P      15 07 59.3 +1.3
      comp=Z,1.1nm,0.8s,baz=9.3,slow=17,SNR=1.9
BDFB  Brasilia          18.59  71   P     P      15 08 01.3 +0.6
      comp=Z,7.2nm,0.6s,baz=246,slow=12,SNR=14
BDFB  Brasilia          18.59  71   P     P      15 08 01.1 +0.3
BDFB                                IAmb  IAmb   15 08 02.6
      comp=Z,9.0nm,0.8s
BDFB  Brasilia          18.59  71  eP     P      15 08 01.0 +0.3
PARB  Paraibuna         19.01  96  eP     Pn     15 08 09.3 +0.2
DBIC  Dimbokro          66.74  72   P     P      15 14 26.1 -0.4
      comp=Z,2.1nm,0.7s,baz=243,slow=6.0,SNR=3.5
      comp=Z,2.1nm,0.7s
DBIC  Dimbokro          66.74  72   P     P      15 14 25.9 -0.6
DBIC                                IAmb  IAmb   15 14 31.1
      comp=Z,5.5nm,1.2s
TOA0  Torodi Ar. Sit    75.46  69   P     P      15 15 18.4 -0.2
TORD  Torodi Ar. Bea    75.46  69   P     P      15 15 18.5 -0.2
      comp=Z,2.8nm,0.5s,baz=253,slow=5.4,SNR=17
TORD  Torodi Ar. Bea    75.46  69   P     P      15 15 18.0 -0.7
PDAR  Pinedale Array    76.37 329   P     P      15 15 25.4 +1.9
      comp=Z,0.2nm,0.5s,baz=149,slow=3.7,SNR=2.2
      comp=Z,0.2nm,0.5s
BOSA  Boshof            80.72 117   P     P      15 15 47.6 +0.1
BOSA                                IAmb  IAmb   15 15 52.7
      comp=Z,11nm,1.4s
MKAR  Makanchi Array   145.07  39   PKPbc PKPab  15 23 10.7 +1.4
      comp=Z,1.7nm,0.7s,baz=313,slow=3.2,SNR=19
PZH   PanZhiHua        168.44  68   PKP   PKPdf  15 23 36.5 -2.4
```

IDC 27 15:06:10.1±2.1**, 56°.18S**×**24°.11W, h0km, mb4.8**/2**, mbtmp4.8**/2**, MS3.7**/1**, Error ellipse: s-maj=92.8km s-min=44.5km az=8.0, South Sandwich Islands region**

```
Code  Station Name        Δ°  AZ°    Phase ID         Time      Res
                                   Op     ISC     h  m  s     ISC
TROLL Troll, Antarti    19.39 155  P      P      15 10 22.5  -15
BOSA  Boshof            44.34  73  LR     LR     15 28 29.8
      comp=Z,85nm,18.5s,baz=278,slow=30
LPAZ  La Paz            51.88 302  P      P      15 15 20.8 -0.1
      2.8nm,0.5s,baz=153,slow=6.8,SNR=12
      2.8nm,0.5s
TORD  Torodi Ar. Bea    72.36  26  P      P      15 17 37.5 -0.1
      7.3nm,0.4s,baz=201,slow=6.5,SNR=2.4
      7.3nm,0.4s
SONM  Songino Array    149.02  84  PKPbc  PKPbc  15 25 58.6 -0.6
      1.0nm,0.8s,baz=225,slow=1.8,SNR=4.5
ILAR  Eielson Array    151.49 311  PKPbc  PKPbc  15 26 04.3 -0.1
      0.3nm,0.6s,baz=126,slow=0.5,SNR=6.2
```

IDC 27 15:11:44.5±50.0**, 22°.79S**×**173°.35W, h0km, mb3.9**/3**, mbtmp3.9**/3**, Error ellipse: s-maj=956.4km s-min=183.9km az=87.0, Tonga Islands region**

```
Code  Station Name        Δ°  AZ°    Phase ID         Time      Res
                                   Op     ISC     h  m  s     ISC
STKA  Stephens Creek    40.80 247  P      P      15 19 26.8 -1.0
      4.0nm,1.2s,baz=82,slow=7.1,SNR=1.5
      4.0nm,1.2s
ASAR  Alice Springs     48.25 258  P      P      15 20 27.6 +0.1
      0.9nm,1.0s,baz=90,slow=7.3,SNR=13
      0.9nm,1.0s
WRA   Warramunga Arr    48.60 263  P      P      15 20 30.4 +0.2
      1.3nm,0.5s,baz=102,slow=8.0,SNR=32
      1.3nm,0.5s
```

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*IDC **27** 15:26:51.9±0.9, 39°.71N×75°.79E, h0km, mb3.7/12, mbtmp3.8/19, ML3.4/7, MS3.2/8, Error ellipse: s-maj=16.9km s-min=16.5km az=86.0*

*SOME **27** 15:26:55.9, 40°.13N×75°.70E, h10km*

*KRNET **27** 15:26:56.9±0.1, 40°.07N×75°.70E, mb4.2*

*NNC **27** 15:26:57.8±1.9, 40°.20N×75°.73E, h0km, mb4.5, mpv4.1, Error ellipse: s-maj=15.2km s-min=10.6km az=162.0*

*MOS **27** 15:26:59.3±0.9, 39°.98N×75°.70E, h56km, mb4.2/7, Error ellipse: s-maj=7.5km s-min=3.6km az=87.8*

*NEIC **27** 15:27:01.0±2.4, 40°.16N±0°.06×75°.57E±0°.08, h43km±7km, mb4.6/11, Error ellipse: s-maj=11.4km s-min=5.8km az=132.0*

ISC 27 15:26:54.8±1.3**, 40°.12N**±0°.03×**75°.79E**±0°.02**, h4km**±8km**, n224, σ2ˢ12**/259**, mb4.1**/26**, 41C-36D, Kyrgyzstan-Xinjiang border region**

```
Code  Station Name        Δ°  AZ°    Phase ID         Time      Res
                                   Op     ISC     h  m  s     ISC
KSH   Kashi              0.62 166  Pg     Pn     15 27 15.0 +4.4
KSH                                Sg     Sn     15 27 28.8 +7.8
KSH                                pmax   pmax
      comp=Z,900nm,0.7s
KSH                                smax   smax
      comp=N,2µm,0.9s
KSH                                smax   smax
      comp=E,2µm,0.8s
KSH                                LR     LR
      comp=N,4µm,1.7s
KSH                                LR     LR
      comp=E,2µm,1.4s
KSH                                LR     LR
      comp=Z,2µm,5.2s
NRN   Naryn              1.32   7  Pn     Pn     15 27 22.2 +1.7
NRN                                Sn     Sn     15 27 38.5 -0.3
NRN   Naryn              1.32   7⇓iP     Pn     15 27 22.3 +1.7
      baz=9.0
NRN                               ⇓iS     Sn     15 27 41.0 +2.2
      baz=9.0
NRN   Naryn              1.32   7  P      Pn     15 27 22.2 +1.7
NRN                                              15 27 38.5
ARLS  Aral               2.06 328⇓iP     Pb     15 27 34.1 +1.1
      baz=30
ARLS                              ⇓iS     Sg     15 28 01.4 +0.2
      baz=30
ARLS  Aral               2.06 328  PN     Pb     15 27 34.1 +1.1
ARLS                               S      Sg     15 28 01.4 +0.2
ULHL  Ulahol             2.15   9  P      Pg     15 27 36.8 +0.7
      SNR=33
ULHL  Ulahol             2.15   9⇑iP     Pg     15 27 36.4 +0.3
      baz=11
ULHL                              ⇑iS     Sg     15 28 05.0 +0.9
      baz=11
ULHL  Ulahol             2.15   9  PN     Pg     15 27 36.4 +0.3
ULHL                               S      Sg     15 28 05.0 +0.9
KDJ   Kajisay            2.27  27  Pn     Pg     15 27 37.9 -0.5
KDJ   Kajisay            2.27  27⇓iP     Pg     15 27 38.1 -0.2
      baz=28
KDJ                               ⇓iS     Sg     15 28 08.2 +0.4
      baz=28
KDJ   Kajisay            2.27  27  PN     Pg     15 27 37.9 -0.5
UCH   Uchtor             2.32 336  P      Pg     15 27 38.9 -0.4
      SNR=268
UCH   Uchtor             2.32 336⇓iP     Pb     15 27 38.0 +0.5
      baz=38
UCH                               ⇓iS     Sg     15 28 07.9 -1.4
      baz=38
UCH   Uchtor             2.32 336  PN     Pb     15 27 38.0 +0.5
UCH                                S      Sg     15 28 08.4 -0.9
OHH   Osh                2.33 281⇑iP     Pb     15 27 37.1 -0.4
      baz=82
OHH                               ⇑iS     Sb     15 28 06.5 -0.2
      baz=82
OHH   Osh                2.33 281  PN     Pb     15 27 37.1 -0.4
OHH                                S      Sb     15 28 06.5 -0.2
BOOM  Boomskoye usch     2.37   3         Pb     15 27 38.9 +0.6
BOOM  Boomskoye usch     2.37   3⇑iP     Pb     15 27 39.2 +0.9
      baz=4.0
BOOM                              ⇑iS     Sg     15 28 10.2 -0.9
      baz=4.0
BOOM  Boomskoye usch     2.37   3  PN     Pb     15 27 38.9 +0.6
AML   Almayashu          2.56 323  P      Pb     15 27 41.7 +0.1
      SNR=88
AML   Almayashu          2.56 323  Pn     Pb     15 27 41.3 -0.3
      comp=Z,18nm,0.7s
AML                                ⇑Lg    Lg     15 28 18.6
      comp=Z,55nm,0.6s
AML   Almayashu          2.56 323⇓iP     Pb     15 27 41.0 -0.6
      baz=24
AML                               ⇓iS     Sb     15 28 13.0 -0.6
      baz=24
AML   Almayashu          2.56 323  PN     Pb     15 27 41.5 -0.1
AML                                S      Sb     15 28 13.5 -0.1
KBK   Karagaybulak       2.61 346  P      Pb     15 27 43.3 +0.9
      SNR=263
KBK   Karagaybulak       2.61 346⇓iP     Pb     15 27 42.5 +0.1
      baz=48
KBK                               ⇓iS     Sb     15 28 15.3 +0.3
      baz=48
KBK   Karagaybulak       2.61 346  PN     Pb     15 27 42.5 +0.1
KBK                                S      Sb     15 28 15.3 +0.3
AAK   Ala-Archa          2.70 339  P      Pb     15 27 44.4 +0.6
      SNR=76
AAK   Ala-Archa          2.70 339  Pn     Pb     15 27 44.4 +0.6
      comp=Z,28nm,0.3s,baz=162,slow=8.7,SNR=633
AAK                                Lg     Lg     15 28 19.6
      comp=Z,24nm,0.3s,baz=83,slow=9.2,SNR=2.5
AAK                                LR     LR     15 29 05.6
      comp=Z,291nm,20.7s,baz=174,slow=43
      comp=Z,146nm,0.4s
AAK   Ala-Archa          2.70 339  Pn     Pb     15 27 44.3 +0.4
AAK   Ala-Archa          2.70 339⇓iP     Pb     15 27 43.4 -0.4
      baz=41
AAK                               ⇓iS     Sb     15 28 17.3 -0.1
      baz=41
TKM2  Tokmak 2           2.81 357  P      Pb     15 27 46.1 +0.5
      SNR=58
TKM2  Tokmak 2           2.81 357 ⇑Pn     Pb     15 27 45.7 +0.1
      comp=Z,45nm,0.5s
TKM2                               ⇑Pg    Pg     15 27 50.1 +1.5
      comp=Z,127nm,0.7s
TKM2                               ⇓Lg    Lg     15 28 26.8
      comp=Z,642nm,0.6s
TKM2  Tokmak 2           2.81 357⇓iP     Pb     15 27 45.1 -0.6
      baz=59
TKM2                              ⇓iS     Sb     15 28 20.0 -0.4
      baz=59
TKM2  Tokmak 2           2.81 357  PN     Pb     15 27 45.2 -0.5
TKM2                               S      Sb     15 28 20.1 -0.4
FRU1  Bishkek            2.83 342         Pb     15 27 45.5 -0.5
FRU1  Bishkek            2.83 342⇑iP     Pb     15 27 45.2 -0.8
      baz=44
FRU1                              ⇑iS     Sb     15 28 20.4 -0.6
      baz=44
FRU1  Bishkek            2.83 342  PN     Pb     15 27 45.6 -0.4
FRU1                               S      Sb     15 28 20.9 -0.1
KST   Kastek             2.93   3  Pg     Pb     15 27 48.0 +0.3
      comp=Z,166nm,0.8s
KST                                Lg     Lg     15 28 30.8
      comp=Z,563nm,0.7s
KST   Kastek             2.93   3 ePg     Pg     15 27 51.4 +0.5
      comp=Z,85nm,0.7s
KST                               eLg     Lg     15 28 30.8
```

	comp=Z,563nm,0.7s						
EKS2	Erkin-Say	2.96	330	P	Pb	15 27 47.8	-0.5
	SNR=97						
EKS2	Erkin-Say	2.96	330	⇓iP	Pb	15 27 46.9	-1.3
	baz=31						
EKS2				⇓iS	Sb	15 28 23.0	-1.8
	baz=31						
EKS2	Erkin-Say	2.96	330	PN	Pb	15 27 46.9	-1.3
EKS2				S	Sb	15 28 23.0	-1.8
CHMS	Chumysh	2.98	345	P	Pb	15 27 48.3	-0.3
	SNR=63						
CHMS	Chumysh	2.98	345	⇑iP	Pb	15 27 47.3	-1.3
	baz=47						
CHMS				⇑iS	Sb	15 28 24.1	-1.3
	baz=47						
CHMS	Chumysh	2.98	345	PN	Pb	15 27 47.3	-1.3
CHMS				S	Sb	15 28 24.1	-1.3
IZV	Izvestkoviy	2.98	12	Pg	Pb	15 27 48.7	+0.1
	comp=Z,40nm,0.5s						
IZV				Lg	Lg	15 28 32.5	
	comp=Z,425nm,0.8s						
IZV	Izvestkoviy	2.98	12	ePg	Pg	15 27 51.9	-0.1
	comp=Z,57nm,0.6s						
IZV				eLg	Lg	15 28 32.5	
	comp=Z,425nm,0.8s						
ANVS	Anan'yevo	3.02	27	⇓iP	Pb	15 27 48.5	-0.7
	baz=28						
ANVS				⇓iS	Sb	15 28 26.0	-0.5
	baz=28						
ANVS	Anan'yevo	3.02	27	PN	Pb	15 27 48.5	-0.7
ANVS				S	Sb	15 28 26.0	-0.5
TNSS	Tian-Shan	3.04	16	Pg	Pb	15 27 49.5	-0.4
	comp=Z,202nm,0.4s						
TNSS				Lg	Lg	15 28 34.0	
	comp=Z,178nm,0.5s						
TNSS	Tian-Shan	3.04	16	i P	Pb	15 27 49.5	-0.4
	baz=19						
TNSS	Tian-Shan	3.04	16	ePg	Pg	15 27 52.8	-0.4
	comp=Z,55nm,0.6s						
TNSS				eLg	Lg	15 28 34.0	
	comp=Z,178nm,0.5s						
TNSS	Tian-Shan	3.04	16	i PN	Pb	15 27 49.5	-0.4
MTBS	Maitube	3.05	9	Pg	Pb	15 27 49.8	0.0
	comp=Z,158nm,0.7s						
MTBS				Lg	Lg	15 28 34.1	
MTBS	Maitube	3.05	9	ePg	Pg	15 27 52.6	-0.6
	comp=Z,74nm,0.5s						
MTBS				eLg	Lg	15 28 34.1	
	comp=Z,281nm,0.8s						
DGS	Degeres	3.12	360	Pg	Pb	15 27 50.6	-0.4
	comp=Z,114nm,0.5s						
DGS				Lg	Lg	15 28 35.9	
	comp=Z,460nm,0.6s						
DGS	Degeres	3.12	360	ePg	Pg	15 27 54.0	-0.7
	comp=Z,175nm,0.6s						
DGS				eLg	Lg	15 28 35.9	
	comp=Z,460nm,0.6s						
MDOK	Medeo	3.19	17	Pg	Pb	15 27 51.2	-1.0
	comp=Z,63nm,0.5s						
MDOK				⇓Pn	Pb	15 27 51.2	-1.0
	comp=Z,41nm,0.5s						
MDOK				Lg	Lg	15 28 36.6	
	comp=Z,422nm,0.9s						
MDOK				⇑Lg	Lg	15 28 38.3	
	comp=Z,448nm,0.7s						
MDOK	Medeo	3.19	17	i P	Pb	15 27 51.3	-0.8
	baz=19						
MDOK	Medeo	3.19	17	ePg	Pg	15 27 55.0	-0.9
	comp=Z,32nm,0.4s						
MDOK				eLg	Lg	15 28 37.8	
	comp=Z,422nm,0.9s						
MDOK	Medeo	3.19	17	PN	Pb	15 27 51.2	-1.0
MDOK				S	Sg	15 28 38.3	+1.1
AAA	Alma-Ata	3.20	15	Pg	Pb	15 27 52.5	+0.1
	comp=Z,153nm,0.3s						
AAA				Lg	Lg	15 28 39.2	
	comp=Z,50nm,0.6s						
AAA	Alma-Ata	3.20	15	eP	Pb	15 27 51.8	-0.6
	baz=17						
AAA	Alma-Ata	3.20	15	ePg	Pg	15 27 55.5	-0.7
	comp=Z,30nm,0.3s						
AAA				eLg	Lg	15 28 39.2	
	comp=Z,618nm,0.7s						
AAA	Alma-Ata	3.20	15	ePN	Pb	15 27 51.8	-0.6
KNDC	Almaty	3.22	16	⇑Pn	Pb	15 27 52.3	-0.4
	comp=Z,107nm,0.3s						
KNDC				⇑Lg	Lg	15 28 40.6	
	comp=Z,2µm,0.5s						
KNDC	Almaty	3.22	16	PN	Pb	15 27 52.3	-0.4
MRKS	Merke	3.25	325	Pg	Pb	15 27 51.5	-1.8
	comp=Z,44nm,0.6s						
MRKS				Lg	Lg	15 28 37.1	
	comp=Z,176nm,0.4s						
MRKS	Merke	3.25	325	ePg	Pb	15 27 55.5	+2.2
	comp=Z,40nm,0.5s						
MRKS				eLg	Lg	15 28 38.8	
	comp=Z,176nm,0.4s						
KOTS	Kotyrbulak	3.27	17	Pg	Pb	15 27 52.8	-0.7
	comp=Z,86nm,0.5s						
KOTS				Lg	Lg	15 28 39.5	
	comp=Z,871nm,0.7s						
KOTS	Kotyrbulak	3.27	17	ePg	Pg	15 27 56.7	-0.8
	comp=Z,20nm,0.6s						
KOTS				eLg	Lg	15 28 40.9	
	comp=Z,871nm,0.7s						
USP	Ospenovka	3.29	343	P	Pb	15 27 52.7	-1.1
	SNR=101						
USP	Ospenovka	3.29	343	⇑iP	Pb	15 27 51.6	-2.3
	baz=45						
USP				⇑iS	Sb	15 28 31.6	-2.7
	baz=45						
ARK	Arkit	3.35	301	⇑iP	Pn	15 27 51.5	+3.4
	baz=3.0						
ARK				⇑iS	Sn	15 28 31.3	+2.9
	baz=3.0						
MNAS	Manas	3.42	315	⇑iP	Pn	15 27 52.9	+3.7
	baz=16						
MNAS				⇑iS	Sn	15 28 33.9	+3.6
	baz=16						
SGDS	Sogindy	3.44	346	Pg	Pb	15 27 56.2	-0.2
	comp=Z,10nm,0.5s						
SGDS				Lg	Lg	15 28 45.2	
	comp=Z,237nm,0.7s						
SGDS	Sogindy	3.44	346	i P	Pb	15 27 53.9	-2.6
	baz=347						
SGDS	Sogindy	3.44	346	i PN	Pb	15 27 53.8	-2.6
SATY	Saty	3.54	33	Pg	Pb	15 27 58.5	+0.4
	comp=Z,32nm,0.6s						
SATY				Lg	Lg	15 28 49.3	
	comp=Z,219nm,0.6s						
SATY	Saty	3.54	33	eP	Pb	15 27 55.6	-2.4
	baz=35						
SATY	Saty	3.54	33	ePg	Pg	15 28 01.7	-0.9
	comp=Z,29nm,0.8s						
SATY				eLg	Lg	15 28 49.3	
	comp=Z,219nm,0.6s						
SATY	Saty	3.54	33	ePN	Pb	15 27 55.6	-2.4
ZHN	Zhinishke	3.64	32	Pg	Pb	15 28 00.7	+0.9
	comp=Z,14nm,0.3s						
ZHN				Lg	Lg	15 28 52.7	
	comp=Z,227nm,0.6s						
ZHN	Zhinishke	3.64	32	eP	Pb	15 27 57.0	-2.9
	baz=34						
ZHN	Zhinishke	3.64	32	ePg	Pg	15 28 04.0	-0.6
	comp=Z,24nm,0.6s						
ZHN				eLg	Lg	15 28 52.7	
	comp=Z,227nm,0.6s						
ZHN	Zhinishke	3.64	32	ePN	Pb	15 27 56.9	-2.9
KTBS	Karatobe	3.65	10	Pg	Pb	15 28 00.7	+0.6
	comp=Z,94nm,0.4s						
KTBS				Lg	Lg	15 28 53.1	
	comp=Z,564nm,0.6s						
KTBS	Karatobe	3.65	10	ePg	Pg	15 28 03.8	-1.1
	comp=Z,94nm,0.4s						
KTBS				eLg	Lg	15 28 53.1	
	comp=Z,564nm,0.6s						
KUU	Kurty	3.79	6	Pg	Pb	15 28 03.0	+0.6
	comp=Z,5.3nm,0.6s						
KUU				Lg	Lg	15 28 56.8	
	comp=Z,499nm,1.0s						
KUU	Kurty	3.79	6	i P	Pb	15 27 58.6	-3.9
	baz=7.8						
KUU	Kurty	3.79	6	ePg	Pg	15 28 06.0	-1.5
	comp=Z,8.2nm,0.5s						
KUU				eLg	Lg	15 28 56.4	
	comp=Z,499nm,1.0s						
KUU	Kurty	3.79	6	i PN	Pb	15 27 58.5	-3.9
TRKS	Terek-Say	3.80	293	⇑iP	Pn	15 27 56.8	+2.5
	baz=93						
TRKS				⇑iS	Sn	15 28 41.1	+1.5
	baz=93						
KURS	Kuram	3.81	27	ePg	Pg	15 28 06.7	-1.1
	comp=Z,26nm,0.7s						
KURS				eLg	Lg	15 28 57.1	
	comp=Z,126nm,1.4s						
BTK	Batken	3.81	271	Pn	Pn	15 27 55.9	+1.4
BTK	Batken	3.81	271	⇓iP	Pn	15 27 57.2	+2.7
	baz=71						
BTK				⇓iS	Sn	15 28 41.8	+2.0
	baz=71						
BTK	Batken	3.81	271	PN	Pn	15 27 55.9	+1.4
CHKK	Chushkaly	3.84	13	Pg	Pb	15 28 04.1	+1.0
	comp=Z,6.8nm,0.3s						
CHKK				Lg	Lg	15 28 58.7	
	comp=Z,659nm,0.7s						
CHKK	Chushkaly	3.84	13	eP	Pb	15 27 59.5	-3.7
	baz=15						
CHKK	Chushkaly	3.84	13	ePg	Pg	15 28 07.6	-0.8
	comp=Z,19nm,0.6s						
CHKK				eLg	Lg	15 28 58.7	
	comp=Z,659nm,0.7s						
CHKK	Chushkaly	3.84	13	ePN	Pb	15 27 59.5	-3.7
UZB	Uzynbulak	3.88	38	Pg	Pb	15 28 04.7	+0.8
	comp=Z,23nm,0.8s						
UZB				Lg	Lg	15 28 59.9	
	comp=Z,65nm,0.8s						
UZB	Uzynbulak	3.88	38	eP	Pb	15 28 00.8	-3.2
	baz=40						
UZB	Uzynbulak	3.88	38	ePg	Pg	15 28 07.7	-1.5
	comp=Z,23nm,0.8s						
UZB				eLg	Lg	15 28 59.9	
	comp=Z,65nm,0.8s						
UZB	Uzynbulak	3.88	38	ePN	Pb	15 28 00.7	-3.2
KPKS	Kokpek	3.99	32	Pg	Pb	15 28 06.3	+0.6
	comp=Z,23nm,0.4s						
KPKS				Lg	Lg	15 29 02.6	
	comp=Z,200nm,0.4s						
KPKS	Kokpek	3.99	32	eP	Pb	15 28 02.1	-3.6
	baz=34						
KPKS	Kokpek	3.99	32	ePg	Pg	15 28 09.8	-1.5
	comp=Z,24nm,0.6s						
KPKS				eLg	Lg	15 29 02.6	
	comp=Z,200nm,0.4s						
KPKS	Kokpek	3.99	32	ePN	Pb	15 28 02.1	-3.6
SHLS	Shalkode	4.10	41	eP	Pb	15 28 06.4	-1.4
	baz=46						
SHLS	Shalkode	4.10	41	ePg	Pg	15 28 16.5	+3.1
	comp=Z,32nm,0.5s						
SHLS				eLg	Lg	15 29 14.7	
	comp=Z,170nm,0.8s						
SHLS	Shalkode	4.10	41	ePN	Pb	15 28 06.3	-1.4
PDGK	Podgornoye	4.24	40	Pg	Pb	15 28 10.7	+0.6
	comp=Z,13nm,0.9s						
PDGK				Lg	Lg	15 29 10.1	
	comp=Z,63nm,0.9s						
PDGK	Podgornoye	4.24	40	⇑Pn	Pn	15 28 04.6	+4.2
	comp=Z,36nm,0.9s						
PDGK				⇑Pg	Pg	15 28 16.8	+0.7
	comp=Z,54nm,0.7s						
PDGK				⇑Sn	Sb	15 28 56.8	-4.9
	comp=Z,63nm,0.8s						
PDGK				⇓Lg	Lg	15 29 13.7	
	comp=Z,146nm,0.7s						
PDGK	Podgornoye	4.24	40	PN	Pn	15 28 04.6	+4.2
PDGK				S	Sb	15 28 56.8	-4.9
ARXS	Arharly	4.37	20	Pg	Pb	15 28 13.4	+1.3
ARXS				Lg	Lg	15 29 14.2	
ARXS	Arharly	4.37	20	ePg	Pg	15 28 16.4	-2.0
	comp=Z,14nm,0.6s						
ARXS				eLg	Lg	15 29 14.2	
	comp=Z,105nm,0.7s						
GAR	Garm	4.37	257	Pn	Pn	15 28 03.7	+1.5
GAR	Garm	4.37	257	⇑iP	Pn	15 28 05.0	+2.8
	baz=57						
GAR				⇑iS	Sn	15 28 55.1	+1.4
	baz=57						
IUG	Iuzhnay	4.79	297	⇑iP	Pn	15 28 11.2	+3.2
	baz=296						
IUG	Iuzhnay	4.79	297	ePg	Pb	15 28 23.7	+4.2
	comp=Z,34nm,0.4s						
IUG				eLg	Lg	15 29 26.8	
	comp=Z,191nm,1.1s						
IUG	Iuzhnay	4.79	297	c iPN	Pn	15 28 11.2	+3.2
KK31	Karatay Array	4.95	309	Pn	Pn	15 28 12.1	+2.0
KK31	Karatay Array	4.95	309	⇑Pn	Pn	15 28 12.4	+2.3
	comp=Z,6.7nm,0.7s,baz=116,slow=13,SNR=76						
KK31				⇑Pg	Pg	15 28 27.0	-2.7
	comp=Z,16nm,0.6s,baz=126,slow=14,SNR=9.2						
KK31				⇓Lg	Lg	15 29 32.3	
	comp=Z,60nm,0.7s,baz=127,slow=27,SNR=7.7						
KK31	Karatay Array	4.95	309	PN	Pn	15 28 12.1	+2.0
KKAR	Karatay Array	4.95	309		Pn	15 28 12.0	+1.9
KKAR	Karatay Array	4.95	309	Pn	Pn	15 28 12.0	+1.9
KKAR	Karatay Array	4.95	309	⇑iP	Pn	15 28 13.9	+3.8
	baz=10.0						
KKAR				⇑iS	Sn	15 29 10.2	+2.4
	baz=10.0						
KKAR	Karatay Array	4.95	309	PN	Pn	15 28 13.4	+3.3
KKAR				S	Sn	15 29 10.1	+2.3
BTLS	Baital	5.08	346	Pg	Pb	15 28 25.8	+1.4
	comp=Z,6.4nm,1.0s						
BTLS				Lg	Lg	15 29 35.8	
	comp=Z,13nm,0.6s						
BTLS	Baital	5.08	346	eP	Pn	15 28 15.9	+4.0
	baz=347						
BTLS	Baital	5.08	346	ePg	Pg	15 28 28.9	-3.3
	comp=Z,8.6nm,0.1s						
BTLS				eLg	Lg	15 29 35.9	
	comp=Z,13nm,0.6s						
BTLS	Baital	5.08	346	ePN	Pn	15 28 15.8	+4.0
DJR	Jarkent	5.16	34	Pg	Pb	15 28 28.7	+3.0
	comp=Z,8.7nm,0.6s						
DJR				Lg	Lg	15 29 40.9	
	comp=Z,40nm,0.6s						
DJR	Jarkent	5.16	34	ePg	Pg	15 28 31.7	-1.9
	comp=Z,23nm,0.5s						
DJR				eLg	Lg	15 29 40.9	
	comp=Z,40nm,0.6s						
CHGR	Chuyangaron	5.34	256	Pn	Pn	15 28 16.2	+0.7
CHGR	Chuyangaron	5.34	256	PN	Pn	15 28 16.2	+0.7
CHCP	Chirah Chowk	6.76	198	P	Pn	15 28 37.5	+2.6
NIL	Nilore	6.77	198	Pn	Pn	15 28 37.2	+2.2
NIL	Nilore	6.77	198	PN	Pn	15 28 37.2	+2.2
CEP	Cherat	7.00	207	P	Pn	15 28 41.2	+2.8
THN	Thein Dam	7.67	180	eP	Pn	15 28 49.3	+1.9
THN				eS	Sn	15 30 16.2	+1.6
THN				IAML		15 30 21.5	
	comp=E,21nm,0.3s						
THN				IAML		15 30 22.8	
	comp=N,22nm,0.6s						
THW	Thamme Wali	8.00	205	P	Pn	15 28 53.4	+1.5
MK31	Makanchi Array	8.18	33	Pn	Pn	15 28 58.1	+3.8
MK31	Makanchi Array	8.18	33	⇑Pn	Pn	15 28 58.3	+4.0
	comp=N,4.8nm,0.5s,baz=212,slow=15,SNR=63						
MK31				⇓Lg	Lg	15 31 19.1	
	comp=N,4.5nm,0.6s						
MK31	Makanchi Array	8.18	33	d iP	Pn	15 28 58.4	+4.0
MKAR	Makanchi Array	8.18	33	Pn	Pn	15 28 58.7	+4.4
	comp=N,1.1nm,0.3s,baz=212,slow=15,SNR=110						
MKAR				Lg	Lg	15 31 15.7	
	comp=N,0.5nm,0.3s,baz=216,slow=27,SNR=2.5						
MKAR				LR	LR	15 32 40.5	
	comp=N,70nm,18.9s,baz=218,slow=41						
	comp=N,6.2nm,0.6s						
MKAR	Makanchi Array	8.18	33		Pn	15 28 58.0	+3.7
SARP	Sargodha	8.56	198	P	Pn	15 28 59.7	+0.1
SMLA	Simla	9.04	172	eP	Pn	15 29 06.3	+0.2
SMLA				eS	Sn	15 30 42.4	-5.9
SMLA				i S	Sn	15 30 42.4	-5.9
SMLA				IAML		15 31 09.6	
	comp=E,34nm,0.5s						
WMQ	Urumqi	9.61	63	eP	Pn	15 29 21.0	+7.0
BRZS	Berezniki	10.11	348	eP	Pn	15 29 24.9	+4.2
	baz=349						
BRZS	Berezniki	10.11	348	eP	Pn	15 29 24.9	+4.2
KURBB	Kurchatov Arra	10.68	9	Pn	Pn	15 29 30.6	+2.0
	comp=E,0.1nm,0.3s,baz=191,slow=12,SNR=8.3						
KURBB				Lg	Lg	15 32 33.0	
	comp=E,0.2nm,0.3s,baz=212,slow=35,SNR=6.2						
	comp=E,0.7nm,0.6s						
KURBB	Kurchatov Arra	10.68	9	⇓Pn	Pn	15 29 31.5	+2.9
	comp=E,1.6nm,0.7s						
KURBB				⇓Lg	Lg	15 32 39.1	
	comp=E,36nm,0.7s						
KURK	Kurchatov	10.78	10	Pn	Pn	15 29 32.0	+2.0
KURK	Kurchatov	10.78	10	⇓Lg	Lg	15 32 40.3	
	comp=E,59nm,1.3s						
KURK	Kurchatov	10.78	10	⇑eP	Pn	15 29 31.9	+2.0
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
DGZ	Jazzator, Alta	12.63	37	deP	Pn	15 29 59.0	+3.6
PYUN	Piuthan	13.38	151	eP	Pn	15 30 00.5	-5.3
	comp=Z,14nm,0.4s						
BVAR	Borovoye Array	13.43	346	Pn	Pn	15 30 07.2	+1.0
	baz=153,slow=12,SNR=18						
BVAR				Lg	Lg	15 33 59.2	
	comp=Z,0.1nm,0.3s,baz=152,slow=26,SNR=8.8						
BVAR				LR	LR	15 35 40.5	
	comp=Z,116nm,21.1s,baz=133,slow=38						
	comp=Z,3.3nm,0.8s						
DANN	Dangsing	13.46	148	eP	Pn	15 30 02.4	-4.5
	comp=Z,12nm,0.3s						
BRVK	Borovoye	13.48	346	Pn	Pn	15 30 07.5	+0.7
BRVK	Borovoye	13.48	346	⇑eP	Pn	15 30 07.3	+0.5
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GEYT	Alibeck	13.91	267	Pn	Pn	15 30 09.4	-3.5
	comp=Z,0.4nm,0.3s,baz=105,slow=11,SNR=2.9						
GEYT				Sn	Sn	15 32 39.0	-8.8
	comp=Z,0.4nm,0.3s,baz=77,slow=16,SNR=4.4						
GEYT				LR	LR	15 35 03.9	
	comp=Z,43nm,21.1s,baz=176,slow=35						
	comp=Z,1.1nm,0.5s						
GKN	Gorkha	14.12	146	eP	Pn	15 30 11.6	-4.3
	comp=Z,17nm,0.3s						
ABKAR	Akbulak array	14.48	314		Pn	15 30 20.1	-0.4
DMN	Daman	14.67	145	eP	Pn	15 30 18.3	-5.2
	comp=Z,6.2nm,0.3s						
GUN	Gumba	14.76	142	eP	Pn	15 30 20.2	-4.6
	comp=Z,12nm,0.4s						
PKIN	Phulchoki	14.82	145	eP	Pn	15 30 20.7	-4.9
	comp=Z,3.5nm,0.2s						
PKI	Pulchoki	14.84	145	eP	Pn	15 30 20.6	-5.2
	comp=Z,2.9nm,0.2s						
JIRN	Jiri	15.12	142	eP	Pn	15 30 25.2	-4.4
	comp=Z,25nm,0.4s						
ZAA0	Zalesovo Array	15.12	21		Pn	15 30 30.4	+1.2
ZALV	Zalesovo Beam	15.12	21	Pn	Pn	15 30 29.9	+0.7
	comp=Z,0.2nm,0.3s,baz=211,slow=14,SNR=5.8						
ZALV				Lg	Lg	15 34 58.7	
	baz=221,slow=26						
ZALV				LR	LR	15 36 47.2	
	comp=Z,75nm,18.9s,baz=54,slow=38						
	comp=Z,1.4nm,0.6s						
ZALV	Zalesovo Beam	15.12	21	i P	Pn	15 30 30.7	+1.5
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
RAMN	Ramite	15.91	142	eP	Pn	15 30 34.1	-5.8
	comp=Z,9.5nm,0.3s						
TAPN	Taplejung	16.12	139	eP	Pn	15 30 38.0	-4.6
	comp=Z,5.1nm,0.4s						
AKTO	Aktyubinsk	16.17	316	Pn	Pn	15 30 43.0	+0.1
	comp=Z,0.2nm,0.3s,baz=109,slow=9.8,SNR=5.7						
AKTO				LR	LR	15 37 38.8	
	comp=Z,83nm,19.0s,baz=12,slow=39						
	comp=Z,2.4nm,0.8s						
AKTO	Aktyubinsk	16.17	316	P	Pn	15 30 43.0	+0.1
GTA	Gaotai	18.48	84	eP	Pn	15 31 14.5	+2.6
GTA				pP	sP	15 31 19.5	+5.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARU	Arti	19.85	331	P	P	15 31 27.6	+1.0
	comp=Z,1.1nm,0.3s,baz=135,slow=20,SNR=2.0						
	comp=Z,1.1nm,0.3s						
ARU	Arti	19.85	331	c iP	Pn	15 31 31.1	+2.9
ARU				pmax	pmax		
	comp=Z,49nm,5.1s						
BELG	Belogornoye	22.86	312	⇓eP	P	15 31 59.6	+0.6
BELG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM	Songino Array	23.23	60	P	P	15 32 03.4	+0.3
	comp=Z,0.7nm,1.0s,baz=232,slow=8.9,SNR=2.9						
	comp=Z,0.7nm,1.0s						
ULN	Ulaanbaatar	23.67	61	⇑eP	P	15 32 08.2	+0.7
ULN				pmax	pmax		
	comp=Z,11nm,3.9s						
KIV	Kislovodsk	24.79	290	eP	P	15 32 16.5	-1.4
KIV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KIRV	Kirov	24.96	327	⇓eP	P	15 32 19.8	+0.7
PZH	PanZhiHua	25.48	114	P	P	15 32 28.0	+3.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,130nm,5.3s						
HHC	Hu-ho-hao-te	27.11	77	eP	P	15 32 42.8	+3.9
HHC				pmax	pmax		
	comp=Z,51nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,6.4s						
NRIK	Noril'sk	29.95	8	⇓eP	P	15 33 05.0	+1.2
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRTR	Keskin Array B	32.11	283	P	P	15 33 23.4	0.0
	comp=Z,1.3nm,0.6s,baz=57,slow=4.6,SNR=3.5						
	comp=Z,1.3nm,0.6s						
WHN	Wuhan	32.66	95	P	P	15 33 35.5	+7.4
NJ2	Nanjing	35.44	89	eP	P	15 33 53.0	+0.8
NJ2				pP	sP	15 34 05.0	+10
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
FINES	FINESS Array B	36.76	322	P	P	15 34 03.4	+0.3
	comp=Z,1.6nm,0.4s,baz=113,slow=9.1,SNR=16						
	comp=Z,1.6nm,0.4s						
FINES	FINESS Array B	36.76	322	P	P	15 34 03.1	0.0
ARCES	ARCESS Array B	39.36	335	P	P	15 34 25.3	+0.2
	comp=Z,3.6nm,0.8s,baz=108,slow=5.8,SNR=4.2						
	comp=Z,3.6nm,0.8s						
TIXI	Tiksi	41.00	23	P	P	15 34 38.7	+0.2
TIXI				IAmb	IAmb	15 34 46.7	
	comp=Z,5.4nm,1.1s						
TIXI	Tiksi	41.00	23	⇓eP	P	15 34 39.2	+0.7
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YOJ	Yonaguni jima	42.36	97	P	P	15 34 52.4	+2.1
YOJ	Yonaguni jima	42.36	97	P	P	15 34 52.4	+2.1
YOJ				pmax	pmax		
	comp=Z,60nm,1.1s						
NOA	NORSAR Array B	43.87	321	P	P	15 35 01.4	-0.7
	comp=Z,0.7nm,0.6s,baz=89,slow=8.0,SNR=3.2						
NOA				LR	LR	15 53 52.9	
	comp=Z,39nm,19.3s,baz=350,slow=37						
	comp=Z,0.7nm,0.6s						
GERES	GERESS Array B	44.03	303	P	P	15 35 03.3	-0.3
	comp=Z,0.3nm,0.5s,baz=81,slow=13,SNR=3.7						
	comp=Z,0.3nm,0.5s						
JOW	Kunigami	45.14	90	P	P	15 35 13.7	+1.1
ASAJ	Asahikawa	48.49	62	LR	LR	15 58 25.8	
	comp=Z,51nm,18.4s,baz=34,slow=39						
BILL	Bilibino	53.68	28	i P	P	15 36 16.0	-1.3
BILL				i		15 36 27.2	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ESDC	Sonseca Array	59.11	298	P	P	15 36 53.9	-2.6
	comp=Z,0.4nm,0.6s,baz=56,slow=4.8,SNR=1.5						
	comp=Z,0.4nm,0.6s						
IMAR	Indian Mountai	67.55	20	P	P	15 37 51.2	-0.7
K20K	Telida	69.51	22	P	P	15 38 04.9	+0.6
K20K				IAmb	IAmb	15 38 13.8	
	comp=Z,3.8nm,1.2s						
TOA0	Torodi Ar. Sit	69.52	270	P	P	15 38 02.6	-2.4
TORD	Torodi Ar. Bea	69.52	270	P	P	15 38 02.9	-2.1
	comp=Z,1.1nm,0.5s,baz=51,slow=5.4,SNR=7.5						
ILAR	Eielson Array	70.23	18	P	P	15 38 07.2	-1.5
	comp=Z,0.5nm,0.8s,baz=300,slow=5.3,SNR=5.7						
	comp=Z,0.5nm,0.8s						
PPLA	Purkeypile	70.40	21	P	P	15 38 09.4	-0.5
PPLA				IAmb	IAmb	15 38 39.8	
	comp=Z,11nm,1.5s						
O18K	Koktuh Hills	71.91	24	P	P	15 38 19.6	+0.7
O18K				IAmb	IAmb	15 39 02.8	
	comp=Z,9.3nm,1.1s						
SML	Sawmill	72.34	20	P	P	15 38 21.1	-0.4
SML				IAmb	IAmb	15 38 52.8	
	comp=Z,12nm,1.3s						
SCM	Sheep Creek Mo	72.58	20	P	P	15 38 22.2	-0.8
SCM				IAmb	IAmb	15 39 03.2	
	comp=Z,16nm,1.4s						
SCM	Sheep Creek Mo	72.58	20	P	P	15 38 22.2	-0.8
SCM				pmax	pmax		
	comp=Z,16nm,1.4s						

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BCAR  Beaver Creek A     72.86  17  P      P      15 38 23.9 -0.7
YKA   Yellowknife Ar     77.39   5  P      P      15 38 50.0 -0.6
      comp=Z,0.7nm,0.7s,baz=349,slow=5.5,SNR=15
      comp=Z,0.7nm,0.7s
WRA   Warramunga Arr     80.86 126  P      P      15 39 07.7 -2.5
      comp=Z,0.2nm,0.7s,baz=325,slow=5.3,SNR=1.6
      comp=Z,0.2nm,0.7s
WRAB  Tennant Creek      80.86 126⇑eP      P      15 39 13.0 +2.8
WRAB                                pmax   pmax
      comp=Z,39nm,4.5s
ASAR  Alice Springs      83.39 128  P      P      15 39 19.4 -4.1
      comp=Z,0.3nm,0.9s,baz=319,slow=4.9,SNR=1.6
      comp=Z,0.3nm,0.9s
ASAR  Alice Springs      83.39 128  P      P      15 39 25.5 +2.1
ASAR  Alice Springs      83.39 128  P      P      15 39 25.5 +2.1
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*IDC **27** 15:32:56.9±0.9, 28°.39N×142°.54E, h0km, mb3.7/9, mbtmp3.7/11, ML3.1/2, MS3.2/2, Error ellipse: s-maj=32.0km s-min=13.6km az=85.0*

*JMA **27** 15:32:59.4±0.1, 28°.5N±0°.2×14°2E±°, h42km, MV4.1/23, NEAR CHICHIJIMA ISLAND*

ISC 27 15:33:00.5±0.9**, 28°.47N**±0°.05×**142°.6E**±0°.2**, h25km, n29, σ1s.06**/25**, mb3.7**/9**, Bonin Islands region**

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Code  Station Name        Δ°   AZ°    Phase ID         Time     Res
                                    Op     ISC      h  m  s    ISC
CBIJ  Chichi jima         1.41 194 eS      Sn     15 33 41.7 -0.6
JCJ   Chichijima          1.41 194  Pn     Pn     15 33 23.1 -1.4
      18nm,0.3s,baz=304,slow=21,SNR=2.0
JCJ                                 Sn     Sn     15 33 41.2 -1.1
      72nm,0.3s,baz=75,slow=22,SNR=11
BSO1  Boso 1              6.32 348 eP      Pn     15 34 31.0 -0.5
BSO1                               eS      Sn     15 35 40.6 -2.1
BSO3  Boso 3              6.56 345 eP      Pn     15 34 35.4 +0.3
JOD2  Odawara 2           7.40 337  P      Pn     15 34 48.3 +1.5
JHU   Hanno               7.88 340  P      Pn     15 34 53.6 +0.2
JYT   Yasato              8.00 346  P      Pn     15 34 54.4 -0.7
JRY   Ryogami san         8.15 338 eP      Pn     15 34 58.0 +0.8
JHO   Hitachi             8.30 349 eP      Pn     15 34 57.4 -1.8
JAG   Ashikaga            8.36 342  P      Pn     15 34 59.7 -0.4
MJAR  Matsushiro Arr      8.86 337  Pn     Pn     15 35 07.3 +0.4
      0.2nm,0.3s,baz=156,slow=11,SNR=13
MJAR                                Sn     Sn     15 36 46.1 +0.2
      0.1nm,0.3s,baz=190,slow=8.6,SNR=1.9
      1.3nm,0.3s
KSRS  Korea Array        15.21 310  LR     LR     15 41 33.3
      comp=Z,28nm,19.6s,baz=240,slow=34
USRK  Ussuriysk Ar.      17.84 334  P      P      15 37 06.6 -1.0
      0.1nm,0.3s,baz=140,slow=11,SNR=2.7
      0.8nm,0.5s
KLR   Kul'dur            22.34 341  P      P      15 37 56.4 +0.1
      1.7nm,0.9s,baz=149,slow=12,SNR=4.5
      1.7nm,0.9s
H11N2 WAKE ISLAND Hy     23.81 106  T      T      16 03 05.2
      baz=297
H11N1 WAKE ISLAND Hy     23.81 106  T      T      16 03 04.6
      baz=297
H11N3 WAKE ISLAND Hy     23.82 106  T      T      16 03 04.6
      baz=297
H11S3 WAKE ISLAND Hy     24.20 109  T      T      16 02 58.3
      baz=304,slow=75,SNR=6.7
H11S1 WAKE ISLAND Hy     24.20 109  T      T      16 02 57.3
      baz=304,slow=75,SNR=6.8
H11S2 WAKE ISLAND Hy     24.21 109  T      T      16 02 59.2
      baz=304,slow=75,SNR=7.5
SONM  Songino Array      33.99 315  P      P      15 39 40.9 -1.2
      0.5nm,0.5s,baz=130,slow=10,SNR=2.5
      0.5nm,0.5s
ZALV  Zalesovo Beam      48.69 318  P      P      15 41 43.8 +1.3
      0.5nm,0.3s,baz=98,slow=5.9,SNR=3.5
ZALV                                PcP    PcP    15 43 08.2 +0.8
      0.3nm,0.3s,baz=74,slow=5.1,SNR=2.2
      0.5nm,0.3s
WRA   Warramunga Arr     48.78 190  P      P      15 41 43.0 -0.6
      2.2nm,0.8s,baz=12,slow=8.5,SNR=24
      2.2nm,0.8s
MKAR  Makanchi Array     49.88 309  P      P      15 41 52.5 +0.7
      0.9nm,0.7s,baz=93,slow=9.4,SNR=10
      0.9nm,0.7s
ASAR  Alice Springs      52.50 190  P      P      15 42 10.6 -1.0
      0.2nm,0.5s,baz=9.7,slow=8.9,SNR=10
      0.2nm,0.5s
BVAR  Borovoye Array     57.28 317  P      P      15 42 46.8 +0.9
      2.9nm,0.6s,baz=92,slow=8.3,SNR=15
      2.9nm,0.6s
YKA   Yellowknife Ar     70.78  29  P      P      15 44 14.8 +0.4
      0.3nm,0.7s,baz=298,slow=5.5,SNR=4.0
      0.3nm,0.7s
RPZ   Rata Peaks         76.43 159  LR     LR     16 17 48.0
      comp=Z,34nm,18.6s,baz=342,slow=35
NVAR  Mina Array Bea     79.40  52  P      P      15 45 06.3 +1.4
      0.5nm,0.8s,baz=290,slow=3.7,SNR=1.5
      0.5nm,0.8s
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*IDC **27** 15:40:53.8±1.4, 6°.12N×77°.17W, h0km, mb3.6/2, mbtmp3.7/4, ML2.4/2, MS3.4/1, Error ellipse: s-maj=42.7km s-min=26.6km az=45.0*

*RSNC **27** 15:40:56.1±1.4, 5°.75N×76°.87W, h2km±5km, ML2.9*

ISC 27 15:40:54.0±0.7**, 5°.81N**±0°.03×**76°.92W**±0°.03**, h10km, n31, σ2s.13**/49**, 1D, Colombia**

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Code  Station Name        Δ°   AZ°    Phase ID         Time     Res
                                    Op     ISC      h  m  s    ISC
SOLC  Bahia Solano        0.64 310 eP      Pn     15 41 08.7 -0.4
SOLC                               eS      Sn     15 41 19.2 -0.2
SOLC                               i              15 41 24.2
      comp=Z,476nm,0.4s
CBOC  Ciudad Bolivar      0.91  87⇓iP      Pb     15 41 11.5 -0.5
CBOC                               eS      Sg     15 41 23.0 -0.3
PIZC  Pizarro, Choco      0.95 208 eP      Pn     15 41 14.6 +1.3
PIZC                               eS      Sn     15 41 29.7 +2.8
PLMC  San Jos del P       1.10 145 eP      Pb     15 41 13.3 -1.9
PLMC                               eS      Sg     15 41 26.2 -3.4
PLMC                               i              15 41 28.9
      comp=Z,278nm,0.3s
DBBC  Dabeiba             1.39  30 eP      Pg     15 41 20.3 -0.5
DBBC                               i              15 41 38.5
      comp=Z,40nm,0.1s
HELC  Santa Helena        1.44  75 eP      Pb     15 41 20.5 -0.6
HELC                               eS      Sb     15 41 38.6 -1.0
HELC                               i              15 41 41.1
      comp=Z,145nm,0.6s
PTAC  Punta Ardita,       1.59 326 eP      Pb     15 41 22.8 -0.8
PTAC                               eS      Sn     15 41 41.5 -1.4
NIZA  Niza - Manizal      1.62 117 eP      Pg     15 41 25.2  0.0
NIZA                               eS      Sb     15 41 44.9 -0.1
RECRC Villamaria, Ca      1.77 118 eP      Pb     15 41 26.8 -0.2
RECRC                              eS      Sb     15 41 49.2 -0.3
MALC  Bahia Malaga        1.83 193 eP      Pb     15 41 27.3 -0.4
YOTC  Yotoco, Valle       1.90 162 eP      Pn     15 41 24.8 -1.8
ANIL  Santa Ana           2.00 131 eP      Pb     15 41 29.4 -1.3
ANIL                               eS      Sn     15 41 53.8 +0.4
ANIL                               i              15 42 02.2
      comp=Z,183nm,0.4s
NORC  Norcasia            2.06  97 eP      Pb     15 41 30.8 -0.7
NORC                               eS      Sb     15 41 56.0 -1.1
NORC                               i              15 41 57.9
      comp=Z,93nm,0.5s
APAC  Apartado, Choc      2.10   9 eP      Pb     15 41 32.4 +0.1
UREC  San Jos de Ur       2.37  35 eP      Pb     15 41 35.5 -1.3
UREC                               eS      Sb     15 42 04.6 -1.6
UREC                               i              15 42 13.2
      comp=Z,51nm,0.4s
ORTC  Ortega, Tolima      2.52 138 eP      Pb     15 41 37.4 -2.0
ORTC                               eS      Sn     15 42 05.9  0.0
ORTC                               i              15 42 21.8
      comp=Z,54nm,0.8s
PTBC  PUERTO BERRIO,      2.56  73 eP      Pb     15 41 38.0 -2.0
PTBC                               eS      Sb     15 42 10.0 -1.5
PTBC                               i              15 42 16.9
      comp=Z,70nm,0.5s
JAMC  Jamundi, Valle      2.59 175 eP      Pn     15 41 37.6 +1.4
ZARC  Zaragoza, Cauc      2.64  51 eP      Pb     15 41 39.9 -1.6
ZARC                               eS      Sb     15 42 12.1 -1.9
ZARC                               i              15 42 18.5
      comp=Z,54nm,0.5s
ROSC  El Rosal            2.76 110  Pn     Pb     15 41 43.1 -0.7
      comp=Z,8.5nm,0.3s,baz=288,slow=20,SNR=7.1
ROSC                                Sn     Sg     15 42 20.4 -2.4
      comp=Z,9.6nm,0.3s,baz=193,slow=23,SNR=7.2
      comp=Z,29nm,0.4s
PRAC  Prado               2.91 136 eP      Pb     15 41 43.6 -2.4
PRAC                               eS      Sb     15 42 18.4 -3.2
PRAC                               i              15 42 23.7
      comp=Z,22nm,0.4s
POPC  Popayan, Colom      3.26 176 eP      Pn     15 41 48.1 +2.7
CHIC  Chingaza            3.38 110 eP      Pb     15 41 53.3 -1.1
BARC  Barichara           3.80  78 eP      Pb     15 41 56.7 -4.6
BARC                               eS      Sn     15 42 41.0 +3.3
BARC                               i              15 42 52.2
      comp=Z,28nm,0.2s
RUSC  La Rusia            3.82  89 eP      Pb     15 41 57.8 -4.0
RUSC                               i              15 43 01.1
      comp=Z,11nm,0.6s
PAMC  Pamplona, Colo      4.46  70 eP      Pn     15 42 06.0 +3.8
PAMC                               eS      Sn     15 42 57.7 +3.3
PAMC                               i              15 43 00.8
      comp=Z,19nm,0.7s
SDV   Santo Domingo       6.94  64  Pn     Pn     15 42 37.7 +1.6
      comp=Z,0.7nm,0.3s,baz=250,slow=15,SNR=5.9
SDV                                 Sn     Sn     15 43 56.1 +0.8
      comp=Z,0.8nm,0.3s,baz=215,slow=23,SNR=2.1
      comp=Z,1.9nm,0.3s
SIV   San Ignacio        26.75 144  P      P      15 46 40.5 +6.4
      comp=Z,1.0nm,0.7s,baz=304,slow=11,SNR=4.8
      comp=Z,1.0nm,0.7s
SADO  Sadowa             38.85 357  LR     LR     16 06 55.6
      comp=Z,56nm,19.6s,baz=303,slow=40
YKA   Yellowknife Ar     62.96 341  P      P      15 51 20.0 -0.5
      comp=Z,0.3nm,0.6s,baz=132,slow=7.0,SNR=8.1
      comp=Z,0.3nm,0.6s
ASAR  Alice Springs     145.44 236  PKPbc  PKPbc  16 00 32.0 -1.2
      comp=Z,0.2nm,0.7s,baz=125,slow=4.1,SNR=4.2
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*IDC **27** 15:49:35.7±0.8, 51°.51N×15°.89E, h0km, mb3.3/1, mbtmp3.4/8, ML3.1/6, Error ellipse: s-maj=12.5km s-min=9.1km az=108.0*

*IPEC **27** 15:49:35.7±2.0, 51°.52N×16°.17E, h1km, ML2.8/4, Error ellipse: s-maj=14.0km s-min=6.4km az=31.0*

*BGR **27** 15:49:36.6±0.5, 51°.50N×16°.14E, h1km, ML3.2/11, Error ellipse: s-maj=6.7km s-min=3.3km az=18.0*

*VIE **27** 15:49:37.2, 51°.42N×16°.06E, h0km, mb3.0/8, ml3.1/7   75 km WNW of Wroclaw Suspected Mining induced.*

*PRU **27** 15:49:37.9±0.0, 51°.42N×16°.11E, h0km*

ISC 27 15:49:34.5±0.7**, 51°.58N**±0°.03×**16°.13E**±0°.02**, h0km, n57, σ1s.14**/108**, Poland**

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Code  Station Name        Δ°   AZ°    Phase ID         Time     Res
                                    Op     ISC      h  m  s    ISC
KSP   Ksiaz               0.74 172 ePg     Pg     15 49 49.3 +0.6
KSP                                eSg     Sg     15 49 58.8 +0.5
KSP   Ksiaz               0.74 172 ePg     Pg     15 49 49.4 +0.6
KSP                                eSg     Sg     15 49 58.9 +0.5
CHVC  Chvalec             0.99 183 ePG     Pg     15 49 54.2 +0.7
CHVC                               eSG     Sg     15 50 07.4 +1.1
      comp=Z,148nm,0.5s
OSTC  Ostas               1.02 177 ePG     Pg     15 49 54.8 +0.7
OSTC                               eSG     Sg     15 50 08.1 +0.8
      comp=Z,169nm,0.9s
UPC   Upice               1.07 184 ePG     Pg     15 49 55.3 +0.3
UPC                                eSG     Sg     15 50 09.4 +0.5
      comp=Z,171nm,0.3s
DPC   Dobruska-Polom      1.23 174 ePG     Pg     15 49 58.2  0.0
DPC                                eSG     Sg     15 50 14.0 -0.1
      comp=Z,133nm,0.8s
DPC   Dobruska-Polom      1.23 174 ePg     Pg     15 49 58.1  0.0
PVCC  Panska Ves          1.44 224 ePG     Pb     15 50 02.5 +0.4
PVCC                               eSG     Sn     15 50 21.8 +0.4
      comp=Z,342nm,0.3s
BRG   Berggiesshubel      1.54 244  Pn     Pn     15 50 02.8 -0.4
BRG                                 Pg     Pg     15 50 04.6 +0.6
BRG                                 Sg     Sg     15 50 24.9 +0.8
BRG                                 Amp           15 50 25.8
      comp=Z,160nm,0.4s
BRG   Berggiesshubel      1.54 244 ePn     Pb     15 50 03.9 -0.1
BRG                                eSg     Sg     15 50 25.1 +1.1
KRLC  Kraliky             1.56 164 ePG     Pb     15 50 04.4 +0.1
KRLC                               eSG     Sn     15 50 24.1 -0.4
      comp=Z,89nm,0.6s
FBE   Freiberg            1.86 250 ePn     Pb     15 50 09.9 +0.6
FBE                                eSg     Sg     15 50 34.7 +0.4
GOPC  GO Pecny, Ondr      1.87 208 ePN     Pn     15 50 07.6 -0.2
GOPC                               ePG     Pb     15 50 09.7 +0.2
GOPC                               eSG     Sb     15 50 33.7 +0.3
      comp=Z,88nm,0.8s
PRU   Pruhonice           1.88 213 ePN     Pn     15 50 07.7 -0.2
PRU                                ePG     Pb     15 50 09.8 +0.1
PRU                                eSG     Sb     15 50 34.2 +0.4
      comp=Z,75nm,0.6s
CLL   Collm               1.97 263 i Pn    Pn     15 50 08.6 -0.5
      comp=Z,23nm,0.5s
CLL                                i Pg    Pb     15 50 11.7 +0.4
CLL                                i x     x      15 50 14.8
CLL                                eSg     Sg     15 50 38.0 +0.2
      comp=Z,76nm,0.4s
CLL   Collm               1.97 263 ePn     Pn     15 50 08.6 -0.5
MORC  Moravsky Berou      2.02 153 ePn     Pn     15 50 09.4 -0.3
MORC  Moravsky Berou      2.02 153 ePn     Pn     15 50 09.5 -0.3
      baz=334
MORC                               eSg     Sb     15 50 36.9 -0.7
      comp=Z,56nm,0.6s,baz=334
OKC   Ostrava-Krasne      2.16 143 ePG     Pg     15 50 16.4 +0.5
OKC                                eSG     Sb     15 50 42.7 +0.8
      comp=Z,65nm,0.6s
VRAC  Vranov              2.29 172  Pn     Pn     15 50 13.9 +0.4
      comp=Z,2.6nm,0.3s,baz=343,slow=16,SNR=9.4
VRAC                                Lg     Lg     15 50 47.5
      comp=Z,9.5nm,0.3s,baz=88,slow=18,SNR=12
      comp=Z,12nm,0.3s
VRAC  Vranov              2.29 172 ePn     Pn     15 50 13.6 +0.1
      baz=353
VRAC                               eSg     Sb     15 50 45.6 +0.1
      comp=Z,51nm,0.5s,baz=353
TREC  Trest               2.32 190 ePN     Pn     15 50 14.2 +0.2
TREC                               ePG     Pb     15 50 18.1 +0.9
TREC                               eSG     Sb     15 50 47.9 +1.5
      comp=Z,52nm,0.6s
MAUC  Maruska             2.47 153 ePN     Pn     15 50 16.2 +0.2
MAUC                               ePG     Pg     15 50 21.7  0.0
MAUC                               eSG     Sg     15 50 54.9 +1.2
      comp=Z,144nm,0.9s
KRUC  Moravsky            2.52 176 ePn     Pn     15 50 16.8 +0.1
      baz=357
KRUC  Moravsky            2.52 176 ePg     Pb     15 50 20.9 +0.2
      baz=357
KRUC                               eSg     Sb     15 50 52.9 +0.7
      comp=Z,54nm,0.9s,baz=357
TANN  Tannenbergstha      2.59 245 ePn     Pn     15 50 17.8 +0.1
TANN                               eSg     Sg     15 50 57.8 +0.1
NKC   Novy Kostel         2.69 241 ePN     Pn     15 50 19.7 +0.7
NKC                                ePG     Pg     15 50 26.6 +0.6
NKC                                eSG     Sg     15 51 03.6 +2.8
      comp=Z,146nm,0.5s
OJC   Ojcow               2.69 119 ePg     Pg     15 50 26.8 +0.7
OJC                                eSg     Sg     15 51 01.7 +0.7
OJC   Ojcow               2.69 119 ePn     Pn     15 50 18.9 -0.2
JAVC  Velka Javorina      2.90 159 ePn     Pn     15 50 21.7 -0.2
      baz=341
KHC   Kasperske Hory      2.94 215 ePN     Pn     15 50 22.6 +0.1
KHC                                ePG     Pb     15 50 29.2 +1.4
KHC                                eSG     Sg     15 51 08.1 -0.9
      comp=Z,27nm,0.4s
MOX   Moxa                2.99 254 eSg     Sg     15 51 12.1 +1.5
CKRC  Cesky Krumlov       3.00 204 ePN     Pn     15 50 24.0 +0.8
CKRC                               ePG     Pb     15 50 30.1 +1.4
CKRC                               eSG     Sg     15 51 09.6 -1.1
      comp=Z,41nm,0.6s
MANZ  Manzenberg          3.01 240 ePn     Pn     15 50 24.0 +0.6
ROTZ  Rotzenmuhle         3.08 236 ePn     Pn     15 50 24.8 +0.3
GEC2  GERESS Array S      3.15 211 ePn     Pn     15 50 26.3 +0.9
GEC2                               eSg     Sb     15 51 13.1 +2.8
GERES GERESS Array B      3.15 211  Pn     Pn     15 50 25.2 -0.2
      comp=Z,2.6nm,0.3s,baz=32,slow=13,SNR=34
GERES                               Lg     Lg     15 51 10.6
      comp=Z,4.5nm,0.3s,baz=26,slow=20,SNR=7.7
      comp=Z,5.0nm,0.3s
LANS  Liptovska Anna      3.24 137 ePN     Pn     15 50 28.2 +1.6
LANS                               ePG     Pg     15 50 36.3 -0.2
LANS                               eSG     Sg     15 51 18.3 -0.1
MODS  Modra-Piesok        3.29 167 ePG     Pg     15 50 37.5 -0.1
MODS                               eSG     Sg     15 51 18.2 -2.0
NIE   Niedzica            3.43 127 eP      Pg     15 50 41.8 +1.6
NIE                                eS      Sg     15 51 25.7 +1.0
VYHS  Vyhne               3.55 149 ePN     Pn     15 50 30.4 -0.4
VYHS                               ePG     Pg     15 50 43.5 +1.1
VYHS                               eSG     Sb     15 51 24.9 +3.2
CLZ   Clausthal           3.59 276 ePn     Pn     15 50 32.0 +0.6
GRF   Grafenberg Arr      3.65 241 ePn     Pn     15 50 32.7 +0.5
CONA  Conrad Observa      3.66 183 i Pn    Pn     15 50 32.9 +0.5
      comp=Z,2.3nm,0.3s,SNR=7.4
CONA                                Sg     Sg     15 51 31.9  0.0
      comp=Z,36nm,0.6s
RONA  Rosalia, Austr      3.88 178 i Pn    Pn     15 50 36.3 +0.9
      comp=Z,0.4nm,0.1s
RONA                               eSg     Sg     15 51 36.3 -2.9
      comp=Z,14nm,0.4s
STHS  Stebnicka Huta      3.92 122 ePN     Pn     15 50 35.6 -0.3
STHS                               ePG     Pg     15 50 50.9 +1.4
STHS                               eSG     Sg     15 51 42.9 +2.6
MOA   Molln               3.92 199 i Pn    Pn     15 50 36.4 +0.4
      comp=Z,13nm,0.4s,SNR=10.0
MOA                                 Sg     Sg     15 51 39.8 -0.6
      comp=Z,28nm,0.7s
BIOA  Bad Ischl, Aus      4.21 204 i Pn    Pn     15 50 40.8 +0.9
      comp=Z,5.9nm,0.3s
BIOA                                Sg     Sg     15 51 47.3 -2.4
      comp=Z,66nm,0.8s
ARSA  Arzberg             4.35 185 ePn     Pn     15 50 43.3 +1.4
      comp=Z,3.7nm,0.3s
ARSA                               eSg     Sg     15 51 51.4 -2.7
      comp=Z,18nm,0.7s
KBA   Koelnbreinsper      4.86 203 i Pn    Pn     15 50 49.7 +0.7
      comp=Z,6.5nm,0.4s,SNR=12
KBA                                 Sg     Sg     15 52 10.1 -0.3
      comp=Z,18nm,0.6s
ABTA  Abfaltersbach       5.38 208 i Pn    Pn     15 50 57.2 +1.1
      comp=Z,0.3nm,0.1s
ABTA                               eSg     Sg     15 52 25.1 -2.3
      comp=Z,16nm,0.6s
DAVOX Davos/Dischmat      6.31 223  Pn     Pn     15 51 07.5 -1.4
      comp=Z,0.2nm,0.3s,baz=31,slow=17,SNR=1.9
DAVOX                               Lg     Lg     15 52 47.2
      comp=Z,0.2nm,0.3s,baz=197,slow=19,SNR=1.4
      comp=Z,1.0nm,0.3s
AKASG Malin Array Be      8.29  91  Pn     Pn     15 51 35.8  0.0
      comp=Z,0.6nm,0.3s,baz=280,slow=12,SNR=6.1
AKASG                               Sn     Sn     15 53 05.7 -4.4
      comp=Z,0.5nm,0.3s,baz=274,slow=22,SNR=1.5
      comp=Z,0.4nm,0.4s
HFS   Hagfors             8.69 352  Pn     Pn     15 51 40.5 -0.8
      comp=Z,3.5nm,1.1s,baz=173,slow=13,SNR=1.9
FINES FINESS Array B     11.30  25  Pn     Pn     15 52 15.7 -1.3
      comp=Z,0.1nm,0.3s,baz=210,slow=11,SNR=3.9
      comp=Z,4.5nm,0.9s
EKA   Eskdalemuir Ar     12.09 296  Pn     Pn     15 52 25.4 -2.4
      baz=102,slow=12
      comp=Z,0.4nm,0.5s
YKA   Yellowknife Ar     59.80 336  P      P      15 59 41.4 +0.5
      comp=Z,0.3nm,0.6s,baz=26,slow=6.8,SNR=4.3
      comp=Z,0.3nm,0.6s
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*NOU **27** 16:08:00.2, 14°.63S×167°.43E, h128km, MLv4.7/15, Vanuatu Islands*

*NEIC **27** 16:08:04.1±1.7, 14°.9S±0°.1×167°.3E±0°.2, h138km±21km, mb4.0/5, Error ellipse: s-maj=28.8km s-min=14.4km az=101.0*

*IDC **27** 16:08:12.2±9.5, 14°.60S×166°.82E, h220km±75km, mb3.2/3, mbtmp4.2/4, Error ellipse: s-maj=78.6km s-min=35.8km az=110.0*

ISC 27 16:08:03.6±1.1**, 14°.88S**±0°.09×**167°.3E**±0°.1**, h150km, n27, σ1s.22**/28**, mb3.7**/4**, Vanuatu Islands**

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Code  Station Name        Δ°   AZ°    Phase ID         Time     Res
                                    Op     ISC      h  m  s    ISC
DVP   Devils Point        2.96 163  P      Pn     16 08 49.2 -1.2
LIFNC LIFOU               5.86 180  Pn     Pn     16 09 26.3 -2.2
LIFNC LIFOU               5.86 180  P      Pn     16 09 26.6 -1.8
KOUNC Koumac, New Ca      6.32 206  Pn     Pn     16 09 34.6  0.0
KOUNC Koumac, New Ca      6.32 206  P      Pn     16 09 35.1 +0.5
YATNC Mamie plateau,      7.15 183  P      Pn     16 09 44.0 -1.6
DZM   Mont Dzumac         7.20 186  Pn     Pn     16 09 46.4 +0.2
DZM   Mont Dzumac         7.20 186  P      Pn     16 09 46.5 +0.2
NOUC  Port Laguerre       7.24 187  P      Pn     16 09 47.5 +0.7
ONTNC Ouen Toro           7.43 186  Pn     Pn     16 09 51.6 +2.2
ONTNC Ouen Toro           7.43 186  P      Pn     16 09 50.3 +1.0
OUENC Ouen Island, N      7.51 183  Pn     Pn     16 09 51.6 +1.2
OUENC Ouen Island, N      7.51 183  P      Pn     16 09 51.0 +0.6
PINNC Pines Island,       7.69 179  Pn     Pn     16 09 53.4 +0.6
PINNC Pines Island,       7.69 179  P      Pn     16 09 53.4 +0.6
HNR   Honiara             8.99 306  P      Pn     16 10 10.9 +0.6
      132nm,0.4s,baz=140,slow=12,SNR=2.1
HNR                                 S      Sn     16 11 48.6 -1.6
      204nm,0.4s,baz=194,slow=23,SNR=2.6
HNR   Honiara             8.99 306  Pn     Pn     16 10 10.1 -0.1
TARA  Tarawa             17.07  20  P      P      16 11 54.4 +1.7
EIDS  Eidsvold           18.43 233  Pn     Pn     16 12 09.8 +0.3
EIDS                                IAmb   IAmb   16 12 36.9
      comp=Z,20nm,1.2s
STKA  Stephens Creek     28.91 230  P      P      16 13 49.9 +1.4
      comp=Z,1.2nm,0.4s,baz=64,slow=12,SNR=9.5
      comp=Z,1.2nm,0.4s
STKA  Stephens Creek     28.91 230  P      P      16 13 49.4 +0.9
WRA   Warramunga Arr     31.81 256  P      P      16 14 13.0 -1.2
      comp=Z,0.2nm,0.5s,baz=84,slow=7.7,SNR=1.7
      comp=Z,0.2nm,0.5s
AS31  Alice Springs      32.63 249  P      P      16 14 20.1 -1.4
AS31                                IAmb   IAmb   16 14 41.4
      comp=Z,2.0nm,1.3s
ASAR  Alice Springs      32.64 249  P      P      16 14 20.6 -0.9
      comp=Z,0.7nm,0.4s,baz=78,slow=9.3,SNR=39
      comp=Z,0.7nm,0.4s
ASAR  Alice Springs      32.64 249  P      P      16 14 20.1 -1.4
BBOO  Buckleboo          33.50 232  P      P      16 14 29.8 +1.0
ARCES ARCESS Array B    120.40 345  PKP    PKPdf  16 26 36.0 -0.6
      comp=Z,2.7nm,1.0s,baz=48,slow=1.3,SNR=0.8
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*SJA **27** 16:11:19.1±1.0, 24°.03S×67°.06W, h223km±7km, ML4.1, MW3.8, Hypocentre not reviewed by the ISC*

*GUC **27** 16:11:22.5±0.7, 24°.03S×67°.25W, h213km±12km, ML4.1*

*NEIC **27** 16:11:22.1±1.8, 24°.06S±0°.08×67°.2W±0°.2, h197km±14km, mb4.0/5, ML4.1(GUC), Error ellipse: s-maj=25.9km s-min=10.6km az=99.0*

*IDC **27** 16:11:25.6±8.7, 23°.74S×66°.88W, h210km±66km, mb4.4/1, mbtmp4.4/3, Error ellipse: s-maj=85.9km s-min=32.0km az=20.0*

ISC 27 16:11:21.0±0.7**, 24°.05S**±0°.05×**67°.13W**±0°.08**, h200km, n55, σ1s.33**/67**, 11C-1D, Chile-Argentina border region**

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Code  Station Name        Δ°   AZ°    Phase ID         Time     Res
                                    Op     ISC      h  m  s    ISC
SLA   San Lorenzo         1.63 115 eP             16 11 56.4
SLA                                eS             16 12 23.4
HJA   Humahuaca           1.79  63 eP             16 11 58.2
HJA                                eS             16 12 27.0
LVC   Limon Verde         2.17 311         Pn     16 12 03.1 +1.4
LVC   Limon Verde         2.17 311⇑iP      Pn     16 12 03.3 +1.6
LVC                                i S     Sn     16 12 33.6 +0.3
LVC   Limon Verde         2.17 311 eP             16 12 03.1
LVC                                eS             16 12 34.8
PB15  IPOC Station P      2.30 291         Pn     16 12 04.6 +1.6
PB15  IPOC Station P      2.30 291⇑iP      Pn     16 12 04.7 +1.8
PB15                               i S     Sn     16 12 35.9 +0.4
PB15  IPOC Station P      2.30 291 eP             16 12 04.3
PB15                               eS             16 12 36.8
YJA   Yavi                2.38  39 eP             16 12 04.1
YJA                                eS             16 12 37.5
GO02  Mina Guanaco        2.50 243         Pn     16 12 06.7 +1.5
GO02  Mina Guanaco        2.50 243⇑iP      Pn     16 12 06.7 +1.5
GO02                               i S     Sn     16 12 40.7 +1.1
GO02                                IAML          16 12 43.5
      comp=N,366nm,0.3s
GO02  Mina Guanaco        2.50 243 eP             16 12 06.8
GO02                               eS             16 12 40.1
PB06  IPOC Station P      2.61 300 eP             16 12 06.7
PB06                               eS             16 12 41.8
PB06                                IAML          16 12 47.4
      comp=Z,321nm,0.3s
PB09  IPOC Station P      2.96 319         Pn     16 12 12.2 +1.7
PB09  IPOC Station P      2.96 319⇑iP      Pn     16 12 12.3 +1.9
PB09                               i S     Sn     16 12 49.3 +0.2
PB09                                IAML          16 12 51.3
      comp=E,217nm,0.6s
PB09  IPOC Station P      2.96 319 eP             16 12 10.6
PB14  IPOC Station P      3.04 258         Pn     16 12 12.4 +1.0
PB14  IPOC Station P      3.04 258⇑iP      Pn     16 12 12.6 +1.1
PB14                               i S     Sn     16 12 50.1 -0.7
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PB03	IPOC Station P	3.13	309		Pn	16 12 13.4	+1.0
PB03	IPOC Station P	3.13	309	⇑iP	Pn	16 12 13.5	+1.2
PB03				IAML		16 12 52.5	
	comp=N,354nm,0.3s						
PB03	IPOC Station P	3.13	309	eP		16 12 12.4	
PB03				eS		16 12 52.0	
PB03				IAML		16 12 52.7	
	comp=Z,364nm,0.2s						
PB10	IPOC Station P	3.18	279		Pn	16 12 14.1	+1.3
PB10	IPOC Station P	3.18	279	⇑iP	Pn	16 12 14.3	+1.5
PB10				i S	Sn	16 12 53.1	-0.1
PB04	IPOC Station P	3.26	301		Pn	16 12 14.8	+0.9
PB04	IPOC Station P	3.26	301	eP	Pn	16 12 15.1	+1.2
PB04				i S	Sn	16 12 54.1	-1.1
PB04	IPOC Station P	3.26	301	eP		16 12 13.9	
PB04				IAML		16 12 57.4	
	comp=Z,259nm,0.3s						
PB07	IPOC Station P	3.43	312		Pn	16 12 16.8	+0.8
PB07	IPOC Station P	3.43	312	⇑iP	Pn	16 12 17.0	+1.0
PB07				i S	Sn	16 12 57.5	-1.6
PB01	IPOC Station P	3.70	323		Pn	16 12 19.9	+0.8
PB01	IPOC Station P	3.70	323	⇓iP	Pn	16 12 20.0	+0.8
PB01	IPOC Station P	3.70	323	eP		16 12 18.7	
PB01				eS		16 13 03.5	
PB02	IPOC Station P	3.72	316		Pn	16 12 19.9	+0.4
PB02	IPOC Station P	3.72	316	eP	Pn	16 12 20.1	+0.6
PB02				eS	Sn	16 13 02.7	-2.7
PB02	IPOC Station P	3.72	316	eP		16 12 19.3	
PB02				IAML		16 13 10.0	
	comp=Z,286nm,0.3s						
AC01	Pan de Azucar	3.77	236		Pn	16 12 20.0	0.0
AC01	Pan de Azucar	3.77	236	⇑eP	Pn	16 12 20.1	0.0
AC01				eS	Sn	16 13 04.4	-2.0
PB08	IPOC Station P	4.31	334		Pn	16 12 28.1	+1.0
PB08	IPOC Station P	4.31	334	⇑iP	Pn	16 12 28.6	+1.4
AC06	Mina Casimiro	4.39	221		Pn	16 12 27.4	-0.4
TA01	Diego Aracena	4.47	320	Pn	Pn	16 12 29.3	+0.6
GO03	Copiap	4.50	218		Pn	16 12 28.7	-0.4
GO03	Copiap	4.50	218	⇑eP	Pn	16 12 28.5	-0.6
GO03				eS	Sn	16 13 20.4	-2.4
GO01	Chusmiza	4.76	336		Pn	16 12 33.3	+0.4
PB11	IPOC Station P	4.86	331	Pn	Pn	16 12 33.3	-0.6
MNMC	Minye Minye	5.40	334		Pn	16 12 40.8	-0.1
AC04	Llanos de Chal	5.45	220	Pn	Pn	16 12 40.1	-1.0
AC05	El Transito	5.54	210	Pn	Pn	16 12 41.9	-0.5
LCO	Las Campanas	5.89	212	Pn	Pn	16 12 46.0	-1.1
PB16	IPOC Station P	6.10	338		Pn	16 12 49.8	-0.4
PB12	IPOC Station P	6.17	331	Pn	Pn	16 12 50.1	-0.6
CO01	Juntas del Tor	6.47	203	Pn	Pn	16 12 54.5	-0.1
CO05	La Serena	6.90	211	Pn	Pn	16 12 58.6	-1.3
GO04	Tololo Observa	6.92	207	Pn	Pn	16 12 59.0	-1.5
CO03	El Pedregal	7.47	204	Pn	Pn	16 13 05.8	-1.5
LPAZ	La Paz	7.78	353	P	Pn	16 13 13.6	+1.6
	comp=Z,1.5nm,0.3s,baz=172,slow=11,SNR=7.0						
LPAZ				S	Sn	16 14 38.3	-1.9
	comp=Z,0.6nm,0.4s,baz=205,slow=24,SNR=1.6						
LPAZ	La Paz	7.78	353		Pn	16 13 12.1	+0.1
CO02	Combarbal	7.91	205	Pn	Pn	16 13 12.6	-0.5
GO06	Curarrehue	15.92	192		Pn	16 14 55.5	+1.0
GO06				IAmb	IAmb	16 15 34.1	
	comp=Z,6.4nm,1.3s						
LL04	Puerto Octay	17.39	193	P	Pn	16 15 11.0	-0.8
LL04				IAmb	IAmb	16 15 14.9	
	comp=Z,12nm,1.4s						
BDFB	Brasilia	19.82	69	P	Pn	16 15 37.3	-3.5
	comp=Z,10nm,0.7s,baz=240,slow=12,SNR=6.6						
BDFB	Brasilia	19.82	69	P	Pn	16 15 37.1	-3.7
BELA	Belgrano 2	56.01	172	P	P	16 20 39.6	+1.2
BELA				IAmb	IAmb	16 21 07.1	
	comp=Z,5.0nm,1.5s						
TOA0	Torodi Ar. Sit	76.70	69	P	P	16 22 51.7	+1.2
TORD	Torodi Ar. Bea	76.70	69	P	P	16 22 51.8	+1.3
	comp=Z,5.9nm,0.4s,baz=247,slow=6.0,SNR=4.0						
	comp=Z,5.9nm,0.4s						
WRA	Warramunga Arr	131.53	207	PKP	PKiKP	16 30 13.3	+1.7
	comp=Z,0.6nm,1.1s,baz=154,slow=1.8,SNR=2.5						
MKAR	Makanchi Array	146.64	39	PKPbc	PKiKP	16 30 41.3	-0.3
	comp=Z,0.3nm,0.5s,baz=304,slow=2.9,SNR=4.5						
PZH	PanZhiHua	169.64	74	PKP	PKPdf	16 31 05.0	-0.1

*NEIC **27** 16:14:19.7±1.0, 17°.8S±0°.2×178°.3W±0°.2, h566^{km}±15^{km}, mb4.4/19, Error ellipse: s-maj=27.1km s-min=22.8km az=211.0*

*IDC **27** 16:14:20.1±1.1, 17°.92S×178°.24W, h582^{km}±9^{km}, mb3.4/4, mbtmp4.3/7, Error ellipse: s-maj=31.4km s-min=16.8km az=162.0*

ISC 27 16:14:20.6±0.8**, 17°.6S**±0°.2×**178°.3W**±0°.1**, h600**^{km}**, n30,** σ**1^{s}.27**/35**, mb4.3**/14**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.50	267	P	P	16 15 41.3	-1.6
	126nm,0.7s,baz=93,slow=19,SNR=183						
MSVF				S	S	16 16 48.0	-1.9
	4.2nm,0.7s,baz=289,slow=23,SNR=5.8						
AFI	Afiamalu	7.25	61	P	P	16 16 11.7	-1.3
	28nm,0.8s,baz=128,slow=3.5,SNR=4.3						
AFI	Afiamalu	7.25	61	P	P	16 16 11.3	-1.7
DZM	Mont Dzumac	15.05	250	P	P	16 17 27.7	-1.7
	1.3nm,0.6s,baz=90,slow=20,SNR=1.4						
URZ	Urewera	20.99	190	P	P	16 18 19.6	-3.4
	6.3nm,0.7s,baz=354,slow=9.2,SNR=2.1						
	6.3nm,0.7s						
LTZ	Lake Taylor	26.37	196	P	P	16 19 09.6	-1.2
LTZ				IAmb	IAmb	16 19 18.3	
	comp=Z,15nm,1.2s						
INZ	Inchbonnie	26.54	197	P	P	16 19 11.4	-0.8
LBZ	Lake Benmore	28.43	198	P	P	16 19 26.8	-1.8
LBZ				IAmb	IAmb	16 19 27.5	
	comp=Z,23nm,1.4s						
DCZ	Deep Cove	30.34	201	P	P	16 19 43.8	-1.2
DCZ				IAmb	IAmb	16 20 24.3	
	comp=Z,22nm,1.4s						
STKA	Stephens Creek	38.89	241	P	P	16 20 57.1	+0.8
	comp=Z,2.7nm,0.5s,baz=88,slow=9.6,SNR=12						
	comp=Z,2.7nm,0.5s						
STKA	Stephens Creek	38.89	241	P	P	16 20 56.6	+0.3
BBOO	Buckleboo	43.67	241	P	P	16 21 34.4	+0.5
WB0	Warramunga Arr	44.78	259	P	P	16 21 42.1	-0.5
WB0				IAmb	IAmb	16 22 25.3	
	comp=Z,15nm,1.5s						
WB2	Warramunga Arr	44.80	259	P	P	16 21 42.2	-0.5
WB2				IAmb	IAmb	16 22 17.6	
	comp=Z,13nm,1.4s						
WRAB	Tennant Creek	44.80	259	P	P	16 21 42.3	-0.4
WRAB				IAmb	IAmb	16 22 06.1	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	44.81	259	P	P	16 21 42.4	-0.4
	comp=Z,0.9nm,0.4s,baz=95,slow=6.8,SNR=51						
WRA				PcP	PcP	16 23 12.8	+1.2
	comp=Z,0.4nm,0.5s,baz=90,slow=3.7,SNR=2.6						
WRA				S	S	16 27 39.1	+1.3
	comp=Z,0.3nm,0.7s,baz=100,slow=12,SNR=1.8						
	comp=Z,0.9nm,0.4s						
AS31	Alice Springs	45.00	254	P	P	16 21 44.4	+0.2
ASAR	Alice Springs	45.00	254	P	P	16 21 44.2	0.0
	comp=Z,13nm,0.5s,baz=89,slow=7.7,SNR=528						
ASAR				PcP	PcP	16 23 13.2	+1.1
	comp=Z,0.7nm,0.6s,baz=92,slow=3.4,SNR=4.9						
ASAR				S	S	16 27 40.7	+0.3
	comp=Z,0.9nm,1.1s,baz=81,slow=14,SNR=4.7						
	comp=Z,13nm,0.5s						
ASAR	Alice Springs	45.00	254	P	P	16 21 44.0	-0.2
MTN	Manton Dam	48.93	268	P	P	16 22 13.6	-0.1
MTN				IAmb	IAmb	16 22 29.2	
	comp=Z,21nm,1.4s						
FORT	Forrest	50.26	244	P	P	16 22 23.1	-0.1
KNRA	Kununurra	50.64	264	P	P	16 22 26.7	+0.5
KNRA				IAmb	IAmb	16 22 38.4	
	comp=Z,17nm,1.3s						
FITZ	Fitzroy Crossi	53.20	260	P	P	16 22 45.7	+1.2
PSA00	Pilbara Seismi	58.11	255	P	P	16 23 18.7	+0.3
PSA00				IAmb	IAmb	16 23 35.2	
	comp=Z,32nm,1.5s						
MBWA	Marble Bar	58.27	256	P	P	16 23 19.4	0.0
MBWA				IAmb	IAmb	16 23 59.6	
	comp=Z,33nm,1.5s						
UGM	Wanagama	69.78	268	P	P	16 24 33.4	+1.0
QSPA	South Pole Qui	72.47	180	P	P	16 24 49.5	+2.3
QSPA				IAmb	IAmb	16 24 50.7	
	comp=Z,4.2nm,0.8s						
BELA	Belgrano 2	82.47	173	P	P	16 25 42.5	+1.7
MKAR	Makanchi Array	109.00	314	PKiKP	PKiKP	16 31 44.5	+1.6
	comp=Z,0.1nm,0.5s,baz=90,slow=1.5,SNR=1.7						
GERES	GERESS Array B	147.33	345	PKPbc	PKiKP	16 32 59.9	+0.4
	comp=Z,0.4nm,0.5s,baz=14,slow=2.8,SNR=4.9						

*NOU **27** 16:15:20.3, 42°.42S×173°.91E, h13^{km}, MLv3.9/10, South Island, New Zealand*

*WEL **27** 16:15:21.5, 42°S±4°×17°4E±°, h26^{km}±12^{km}, M3.1/8, ML3.4/9, MLv3.1/8, Error ellipse: s-maj=0.0km s-min=0.0km az=78.8, confirmed*

ISC 27 16:15:21.2±1.1**, 42°.36S**±0°.03×**173°.82E**±0°.04**, h20**^{km}±2^{km}**, n65,** σ**1^{s}.23**/75**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.21	254	P	Pb	16 15 27.0	0.0
KHZ	Kahutara	0.21	254	P	Pb	16 15 26.9	0.0
BSWZ	Blackbirch Sta	0.64	4	P	Pb	16 15 33.4	-0.4
BSWZ				S	Sb	16 15 42.0	-0.4
CMWZ	Cape Campbell	0.68	26	P	Pn	16 15 35.8	+0.3
GVZ	Greta Valley S	0.84	223	P	Pn	16 15 38.8	+0.9
GVZ				S	Sn	16 15 51.7	+2.1
THZ	Tophouse	0.90	311	P	Pb	16 15 37.2	-0.9
THZ				S	Sb	16 15 47.8	-2.0
TUWZ	Tuamarina	0.93	6	P	Pb	16 15 38.6	0.0
TUWZ				S	Sb	16 15 51.0	+0.5
NNZ	Nelson	1.19	344	P	Pn	16 15 42.2	-0.3
AMCZ	Amberley	1.19	226	P	Pb	16 15 43.2	+0.2
TCW	Tory Channel	1.20	17	P	Pn	16 15 42.8	+0.1
TCW				S	Sb	16 15 57.4	-0.7
LTZ	Lake Taylor	1.22	249	P	Pb	16 15 43.4	-0.2
LTZ				S	Sb	16 15 59.1	+0.3
SNZO	South Karori	1.24	33	P	Pb	16 15 43.6	-0.2
MRNZ	Matariki Terra	1.24	320	P	Pn	16 15 43.4	+0.1
WEL	Wellington	1.29	34	P	Pb	16 15 44.4	-0.3
PLWZ	Palliser	1.33	54	P	Pn	16 15 44.7	+0.1
TKNZ	Takaka Hill	1.47	334	P	Pn	16 15 46.9	+0.4
TKNZ				S	Sn	16 16 05.8	+0.7
PAWZ	Paruwai Farm	1.55	52	P	Pn	16 15 47.4	-0.2
DUWZ	D’Urville Isla	1.56	3	P	Pb	16 15 48.7	-0.6
CAW	Cannon Point	1.56	37	P	Pn	16 15 47.9	+0.2
MQZ	McQueen’s Vall	1.60	212	P	Pn	16 15 48.0	-0.2
MQZ				S	Sn	16 16 07.7	-0.5
DSZ	Denniston Nort	1.62	292	P	Pn	16 15 49.5	+0.9
DSZ				S	Sb	16 16 10.3	-0.1
OXZ	Oxford	1.63	233	P	Pn	16 15 48.4	-0.2
OXZ				S	Sn	16 16 07.9	-1.1
AKCZ	Akaroa Harbour	1.65	203	P	Pn	16 15 49.4	+0.4
TRWZ	Traveller	1.69	56	P	Pn	16 15 49.3	-0.3
KIW	Kapiti Island	1.70	29	P	Pn	16 15 50.2	+0.5
MTW	Mount Morrison	1.74	47	P	Pn	16 15 49.8	-0.3
INZ	Inchbonnie	1.79	257	P	Pn	16 15 51.2	+0.3
QRZ	Quartz Range	1.81	327	P	Pn	16 15 52.3	+1.1
QRZ	Quartz Range	1.81	327	P	Pn	16 15 52.3	+1.1
RACZ	Rakaia	1.84	221	P	Pn	16 15 51.4	-0.2
OGWZ	Otaki Gorge	1.84	34	P	Pn	16 15 51.7	+0.1
HOWZ	Holdsworth Sta	1.94	42	P	Pb	16 15 59.1	+3.3
TMWZ	Te Maipa	1.99	52	P	Pn	16 15 53.3	-0.4
MHCZ	Mount Hutt	2.03	234	P	Pn	16 15 53.8	-0.4
WACZ	Wakanui South	2.15	222	P	Pn	16 15 55.7	-0.1
MRZ	Mangatainoka R	2.15	39	P	Pn	16 15 55.5	-0.3
WVZ	Waitaha Valley	2.38	251	P	Pn	16 15 59.6	+0.6
RPZ	Rata Peaks	2.44	235	P	Pn	16 15 59.8	0.0
RPZ	Rata Peaks	2.44	235	P	Pn	16 15 59.7	-0.2
BFZ	Birch Farm	2.48	48	P	Pn	16 15 59.6	-0.7
ARCZ	Arundel	2.50	230	P	Pn	16 16 00.5	-0.2
GCSZ	Gaunt Creek Bo	2.74	248	P	Pn	16 16 04.8	+0.9
WAZ	Wanganui	2.75	19	P	Pb	16 16 11.2	+1.6
TMZ	Timaru	2.88	224	P	Pn	16 16 05.8	-0.1
KHEZ	Kahui Hut	3.06	3	P	Pn	16 16 10.3	+1.8
KHEZ	Kahui Hut	3.06	3	P	Pb	16 16 15.5	+0.4
NEZ	North Egmont	3.09	4	P	Pb	16 16 15.0	-0.5
FOZ	Fox Glacier	3.16	247	P	Pn	16 16 10.5	+0.7
VRZ	Vera Road	3.31	13	P	Pn	16 16 13.5	+1.8
WNVZ	Wahianoa	3.31	25	P	Pb	16 16 17.4	-1.9
TRVZ	Turoa	3.33	24	P	Pb	16 16 16.4	-3.1
LBZ	Lake Benmore	3.34	231	P	Pn	16 16 12.5	+0.3
TUVZ	Tukino	3.39	25	P	Pn	16 16 15.2	+2.3
NGZ	Ngauruhoe	3.45	24	P	Pb	16 16 19.0	-2.7
OTVZ	Oturere	3.48	24	P	Pn	16 16 16.0	+1.6
NNVZ	North Ngauruho	3.50	24	P	Pb	16 16 20.3	-2.2
ODZ	Otahua Downs	3.54	220	P	Pn	16 16 14.7	-0.2
ODZ	Otahua Downs	3.54	220	P	Pn	16 16 14.6	-0.3
HIZ	Hauiti	3.92	12	P	Pn	16 16 20.0	-0.2
HIZ	Hauiti	3.92	12	P	Pb	16 16 25.6	-4.0
JCZ	Jackson Bay	4.06	243	P	Pn	16 16 22.3	+0.1
JCZ	Jackson Bay	4.06	243	P	Pn	16 16 22.5	+0.4
TLZ	Tolley Road	4.23	19	P	Pn	16 16 28.4	+3.9
EAZ	Earnscleugh	4.35	227	P	Pn	16 16 25.9	-0.2
SYZ	Scrubby Hill	5.36	217	P	Pn	16 16 40.7	+0.9

*SCB **27** 16:24:53.5±1.3, 21°.90S×67°.24W, h178^{km}±10^{km}, ML3.5/6, MW3.0, Error ellipse: s-maj=4.4km s-min=3.1km az=0.0*

*GUC **27** 16:24:53.5±0.7, 21°.91S×67°.48W, h221^{km}±7^{km}, ML3.8*

ISC 27 16:24:51.9±1.8**, 21°.91S**±0°.05×**67°.24W**±0°.05**, h203**^{km}±14^{km}**, n36,** σ**1^{s}.14**/56**, 10C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	1.63	100	Pg	Pn	16 25 27.5	0.0
MOCB	Mochara	1.63	67	Pg	Pn	16 25 27.5	-0.1
MOCB				Sg	S	16 25 52.6	-2.1
MOCB				IAML		16 25 57.3	
	149nm,0.2s						
LVC	Limon Verde	1.69	245	⇑iP	Pn	16 25 28.8	+0.9
LVC				i S	S	16 25 55.6	0.0
LVC	Limon Verde	1.69	245	Pg	Pn	16 25 28.9	+0.9
PB09	IPOC Station P	1.86	273	i P	Pn	16 25 30.4	+1.1
PB09				i S	S	16 25 58.9	+0.9
PB09	IPOC Station P	1.86	273	Pg	Pn	16 25 30.5	+1.1
PB01	IPOC Station P	2.26	292	⇑iP	Pn	16 25 34.1	+0.6
PB01				i S	S	16 26 05.3	+0.1
PB01				IAML		16 26 06.5	
	comp=N,452nm,0.3s						
PB01	IPOC Station P	2.26	292	Pg	Pn	16 25 34.0	+0.6
PB01				Sg	S	16 26 05.1	-0.1
PB01				IAML		16 26 07.1	
	comp=N,248nm,0.2s						
PB06	IPOC Station P	2.30	249	Pg	Pn	16 25 34.4	+0.5
PB03	IPOC Station P	2.33	266	i P	Pn	16 25 35.3	+1.0
PB03				i S	S	16 26 05.8	-0.9
PB03				IAML		16 26 07.6	
	comp=E,239nm,0.1s						
PB03	IPOC Station P	2.33	266	Pg	Pn	16 25 35.0	+0.7
PB15	IPOC Station P	2.43	237	i S	S	16 26 08.9	+0.2
PB07	IPOC Station P	2.46	274	⇑eP	Pn	16 25 36.6	+0.9
PB07				eS	S	16 26 08.5	-0.7
PB07				IAML		16 26 10.1	
	comp=N,229nm,0.2s						
PB07	IPOC Station P	2.46	274	Pg	Pn	16 25 36.6	+0.9
PB07				Sg	S	16 26 08.7	-0.5
PB07				IAML		16 26 10.1	
	comp=N,197nm,0.2s						
PB08	IPOC Station P	2.50	314	⇑iP	Pn	16 25 38.0	+1.6
PB08				i S	S	16 26 11.5	+0.9
PB08				IAML		16 26 13.3	
	comp=N,90nm,0.3s						
PB08	IPOC Station P	2.50	314	Pg	Pn	16 25 37.7	+1.2
PB02	IPOC Station P	2.54	283	eP	Pn	16 25 35.8	-0.7
PB02				i S	S	16 26 09.9	-0.7
PB02				IAML		16 26 11.6	
	comp=E,346nm,0.2s						
PB02	IPOC Station P	2.54	283	Pg	Pn	16 25 37.0	+0.5
PB02				Sg	S	16 26 10.2	-0.4
PB02				IAML		16 26 11.3	
	comp=E,208nm,0.3s						
PB04	IPOC Station P	2.73	261	eP	Pn	16 25 39.2	+0.5
PB04				eS	S	16 26 13.3	-1.3
PB04				IAML		16 26 15.2	
	comp=N,134nm,0.2s						
PB04	IPOC Station P	2.73	261	Pg	Pn	16 25 39.1	+0.4
PB04				Sg	S	16 26 13.5	-1.1
PB04				IAML		16 26 15.0	
	comp=N,104nm,0.2s						
GO01	Chusmiza	2.88	320	⇑iP	Pn	16 25 42.1	+1.2
GO01				IAML		16 26 23.7	
	comp=N,287nm,0.2s						
GO01	Chusmiza	2.88	320	Pg	Pn	16 25 42.3	+1.5
TA01	Diego Aracena	3.05	295	⇑iP	Pn	16 25 42.3	0.0
TA01				i S	S	16 26 19.3	-1.7
TA01				IAML		16 26 20.4	
	comp=E,131nm,0.2s						
TA01	Diego Aracena	3.05	295	Pg	Pn	16 25 42.5	+0.2
TA01				Sg	S	16 26 19.7	-1.3
TA01				IAML		16 26 20.3	
	comp=E,114nm,0.2s						
PB11	IPOC Station P	3.11	313	⇑iP	Pn	16 25 43.6	+0.4
PB11				i S	S	16 26 21.3	-1.3
PB11				IAML		16 26 22.9	
	comp=N,277nm,0.1s						
SLA	San Lorenzo	3.22	151	Pg	Pn	16 25 46.0	+1.5
PB10	IPOC Station P	3.45	242	i P	Pn	16 25 47.4	+0.4
PB10				i S	S	16 26 27.2	-2.5
MNMC	Minye Minye	3.54	321	⇑iP	Pn	16 25 49.5	+1.1
MNMC				i S	S	16 26 31.4	-0.6
GO02	Mina Guanaco	3.89	213	⇑iP	Pn	16 25 53.5	+0.8
GO02	Mina Guanaco	3.89	213	Pg	Pn	16 25 53.6	+0.9
SOET	ToroToro	4.01	20	Pg	Pn	16 25 55.2	+0.9
PB16	IPOC Station P	4.14	329	⇑iP	Pn	16 25 57.8	+1.6
PB16				i S	S	16 26 46.1	+0.1
PB12	IPOC Station P	4.37	318	i P	Pn	16 25 57.7	-0.9
PB12				i S	S	16 26 46.9	-3.6
SOEJ	Jacaque	4.99	350	Pg	Pn	16 26 08.0	+1.2
BBOE	La Paz, Chanca	5.12	352	Pg	Pn	16 26 09.8	+1.3
LPAZ	La Paz	5.65	351	Pg	Pn	16 26 16.7	+1.3

IDC 27 16:27:25.9±674.0**, 56°.84N**×**0°.81W, h0**^{km}**, Error ellipse: s-maj=383.4km s-min=241.8km az=44.0, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I37NO	I37NO	15.01	27	I	I	17 59 40.0	
	baz=223,slow=333,SNR=1.7						
I43RU	DUBNA INFRASON	20.66	74	I	I	18 34 07.8	
	baz=287,slow=330,SNR=1.2						
I31KZ	AKTYUBINSK INF	34.52	75	I	I	20 00 29.5	
	baz=303,slow=330,SNR=3.8						

WEL 27 16:30:17.4±0.3**, 42°S**±2°×**17°4E**±°**, h5**^{km}**, M1.9**/3**, ML2.5**/10**, MLv1.9**/3**, Error ellipse: s-maj=0.0km s-min=0.0km az=112.0, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSWZ	Blackbirch Sta	0.34	36	P	Pg	16 30 24.4	+0.3
KHZ	Kahutara	0.42	187	P	Pg	16 30 26.0	+0.4
KHZ				S	Sg	16 30 31.9	+0.7
THZ	Tophouse	0.57	294	P	Pg	16 30 28.7	+0.2
THZ				S	Sg	16 30 36.6	+0.7
TUWZ	Tuamarina	0.62	24	P	Pg	16 30 29.5	+0.2
TUWZ				S	Sg	16 30 38.3	+1.0
NNZ	Nelson	0.80	348	P	Pg	16 30 32.7	0.0
MRNZ	Matariki Terra	0.87	313	P	Pg	16 30 34.5	+0.4
MRNZ				S	Sb	16 30 46.9	-0.1
GVZ	Greta Valley S	1.06	203	P	Pg	16 30 37.6	-0.1
GVZ				S	Sn	16 30 53.5	-0.6
TKNZ	Takaka Hill	1.08	333	P	Pg	16 30 38.1	0.0
DUWZ	D’Urville Isla	1.22	11	P	Pg	16 30 40.1	-0.6
LTZ	Lake Taylor	1.26	231	P	Pg	16 30 40.7	-1.0
DSZ	Denniston Nort	1.37	280	P	Pg	16 30 43.7	0.0
CAW	Cannon Point	1.41	51	P	Pn	16 30 42.7	-1.1
QRZ	Quartz Range	1.42	325	P	Pn	16 30 43.6	-0.3
OGWZ	Otaki Gorge	1.66	45	P	Pn	16 30 46.2	-1.1
OXZ	Oxford	1.76	221	P	Pn	16 30 46.5	-2.1
MQZ	McQueen’s Vall	1.85	202	P	Pn	16 30 46.9	-2.9
MRZ	Mangatainoka R	2.00	49	P	Pn	16 30 50.0	-1.8
MHCZ	Mount Hutt	2.15	224	P	Pn	16 30 51.9	-2.1

*IDC **27** 16:42:08.3±0.9, 37°.26N×69°.76E, h0^{km}, mb3.7/12, mbtmp3.8/19, ML3.6/5, Error ellipse: s-maj=15.9km s-min=12.5km az=136.0*

*NNC **27** 16:42:12.6±3.2, 37°.52N×69°.55E, h0^{km}, mb4.2, mpv3.8, Error ellipse: s-maj=24.7km s-min=20.0km az=178.0*

*NEIC **27** 16:42:13.7±1.5, 37°.34N±0°.04×69°.67E±0°.06, h34^{km}±8^{km}, mb4.0/5, Error ellipse: s-maj=9.0km s-min=1.7km az=49.0*

ISC 27 16:42:12.0±0.5**, 37°.29N**±0°.05×**69°.59E**±0°.05**, h27**^{km}**, n69,** σ**1^{s}.90**/75**, mb3.9**/14**, 11C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHGR	Chuyangaron	1.41	346		Pn	16 42 35.5	-0.6
GAR	Garm	1.81	18		Pn	16 42 42.1	+0.5
BTK	Batken	2.93	19		Pn	16 42 55.9	-1.0
CEP	Cherat	3.94	151	P	Pb	16 43 17.4	-3.5
CEP				S	Sb	16 44 06.0	-2.1
THW	Thamme Wali	4.82	158	P	Pn	16 43 26.1	+3.3
IUG	Iuzhnay	4.87	4	Pg	Pb	16 43 42.9	+6.3
	40nm,0.8s						
IUG				Lg	Lg	16 44 39.8	
	202nm,0.7s						
KSH	Kashi	5.49	64	Pn	Pn	16 43 29.3	-2.8
KSH				Sn	Sn	16 44 28.5	-5.9
KSH				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KSH				smax	smax		
	comp=N,110nm,1.0s						
KSH				smax	smax		
	comp=E,92nm,1.1s						
AML	Almayashu	5.78	32	P	Pn	16 43 37.7	+1.3
	SNR=23						
AML	Almayashu	5.78	32	⇓Pn	Pn	16 43 36.8	+0.4
	comp=E,1.1nm,0.7s						
AML				⇑Sn	Sn	16 44 41.9	-0.2
	comp=E,2.4nm,0.6s						
AML				⇓Lg	Lg	16 45 08.9	
	comp=E,8.1nm,0.8s						
KK31	Karatay Array	5.86	7	Pn	Pn	16 43 37.1	+0.1
KK31	Karatay Array	5.86	7	⇑Pn	Pn	16 43 37.4	+0.4
	comp=E,0.5nm,0.2s,baz=195,slow=13,SNR=19						
KK31				⇑Pg	Pb	16 43 55.3	+1.9
	comp=E,6.1nm,0.6s,baz=177,slow=13,SNR=9.8						
KK31				⇑Sn	Sn	16 44 43.7	+0.5
	comp=E,5.9nm,0.4s						
KK31				Lg	Lg	16 45 13.1	
	comp=E,22nm,0.5s,baz=191,slow=28,SNR=9.6						
KKAR	Karatay Array	5.86	7	Pn	Pn	16 43 36.9	-0.2
KKAR	Karatay Array	5.86	7		Pn	16 43 37.4	+0.4
MRKS	Merke	6.13	26	Pg	Pb	16 44 05.8	+7.8
	comp=E,8.0nm,1.0s						
MRKS				Lg	Lg	16 45 19.6	
	comp=E,30nm,0.6s						
UCH	Uchtor	6.23	36	P	Pn	16 43 43.4	+0.9
	SNR=22						
EKS2	Erkin-Say	6.26	30	P	Pn	16 43 44.5	+1.8
	SNR=20						
NRN	Naryn	6.47	48	Pn	Pn	16 43 44.9	-0.9
AAK	Ala-Archa	6.54	34	P	Pn	16 43 47.9	+1.3
	SNR=19						
AAK	Ala-Archa	6.54	34	Pn	Pn	16 43 47.6	+1.1
	comp=E,3.7nm,0.3s,baz=194,slow=6.8,SNR=63						
AAK				Sn	Sn	16 45 01.2	+0.8
	comp=E,0.5nm,0.3s,baz=186,slow=20,SNR=1.4						
AAK				Lg	Lg	16 45 33.5	
	comp=E,1.1nm,0.3s,baz=356,slow=19,SNR=4.5						
	comp=E,8.3nm,0.3s						
AAK	Ala-Archa	6.54	34	Pn	Pn	16 43 46.5	0.0
FRU1	Bishkek	6.74	33		Pn	16 43 49.1	-0.1
KBK	Karagaybulak	6.76	36	P	Pn	16 43 51.5	+1.9
	SNR=9.5						
CHMS	Chumysh	6.94	33	P	Pn	16 43 52.9	+0.9
	SNR=13						
THN	Thein Dam	6.99	132	eP	Pn	16 43 56.5	+4.0
THN				eS	Sn	16 45 15.4	+4.3
THN				eS	Sb	16 45 15.6	-20
USP	Ospenovka	7.06	31	P	Pn	16 43 54.0	+0.4
	SNR=9.3						
BOOM	Boomskoye usch	7.13	41	Pn	Pn	16 43 54.9	+0.2
SGDS	Sogindy	7.26	30	Pg	Pb	16 44 25.3	+7.9
	comp=E,3.8nm,0.4s						
SGDS				Lg	Lg	16 45 53.2	
	comp=E,14nm,1.3s						
TKM2	Tokmak 2	7.27	37	P	Pn	16 43 57.5	+0.8
	SNR=17						
TKM2	Tokmak 2	7.27	37	⇑Pn	Pn	16 43 57.1	+0.4
	comp=E,8.9nm,0.7s						
TKM2				⇑Lg	Lg	16 45 55.5	
	comp=E,11nm,0.7s						
KDJ	Kajisay	7.59	48	Pn	Pn	16 44 00.6	-0.4
DGS	Degeres	7.60	37	Pg	Pb	16 44 32.5	+9.4

	comp=E,8.7nm,0.5s						
DGS				Lg	Lg	16 46 06.0	
	comp=E,15nm,0.7s						
MDOK	**Medeo**	**8.19**	**42**	Pn	**Pn**	**16 44 10.0**	**+0.9**
	comp=E,10nm,0.7s						
MDOK				⇓Lg	Lg	16 46 29.9	
	comp=E,13nm,0.9s						
KUU	**Kurty**	**8.36**	**36**	Pg	Pb	16 44 45.9	+10
	comp=E,4.1nm,0.7s						
KUU				Lg	Lg	16 46 28.2	
	comp=E,13nm,1.0s						
SMLA	**Simla**	**8.78**	**132**	*e*x	x	16 45 56.3	
GEYT	**Alibeck**	**9.12**	**278**	Pn	**Pn**	**16 44 22.6**	**+0.6**
	comp=E,0.6nm,0.3s,baz=132,slow=8.6,SNR=5.1						
GEYT				Sn	**Sn**	**16 46 03.8**	**0.0**
	comp=E,0.4nm,0.3s,baz=108,slow=17,SNR=2.6						
	comp=E,1.2nm,0.4s						
GEYT	**Alibeck**	**9.12**	**278**	Pn	**Pn**	**16 44 22.5**	**+0.5**
GYA0B	**ALIBECK ARRAY**	**9.12**	**278**	Pn	**Pn**	**16 44 22.6**	**+0.6**
PDGK	**Podgornoye**	**9.67**	**48**	⇓Pn	**Pn**	**16 44 28.3**	**-1.2**
	comp=E,2.3nm,0.7s						
PDGK				⇑Sn	**Sn**	**16 46 21.3**	**+4.0**
	comp=E,5.6nm,1.4s						
PDGK				⇑Lg	Lg	16 47 14.8	
	comp=E,10nm,1.1s						
MK31	**Makanchi Array**	**13.38**	**41**	Pn	**Pn**	**16 45 17.9**	**-2.2**
MKAR	**Makanchi Array**	**13.38**	**41**	Pn	**Pn**	**16 45 18.7**	**-1.3**
	comp=E,0.1nm,0.3s,baz=228,slow=14,SNR=22						
MKAR				Lg	Lg	16 49 10.2	
	baz=232,slow=27,SNR=2.0						
	comp=E,2.0nm,0.7s						
MKAR	**Makanchi Array**	**13.38**	**41**	Pn	**Pn**	**16 45 18.2**	**-1.9**
AB31	**Akbulak array**	**13.86**	**333**	Pn	**Pn**	**16 45 23.7**	**-2.9**
	comp=E,1.1nm,0.5s,baz=155,slow=12,SNR=38						
AB31				⇑Sn	**Sn**	**16 47 57.6**	**-1.8**
	comp=E,5.3nm,1.2s,baz=152,slow=24,SNR=9.2						
ABKAR	**Akbulak array**	**13.86**	**333**		**Pn**	**16 45 23.9**	**-2.7**
KURBB	**Kurchatov Arra**	**14.79**	**23**	Pn	**Pn**	**16 45 34.9**	**-4.4**
	comp=E,1.4nm,0.2s,baz=211,slow=12,SNR=1.9						
KURBB				Lg	Lg	16 49 57.0	
	baz=214,slow=31,SNR=4.4						
WMQ	**Urumqi**	**15.22**	**59**	*e*P	**Pn**	**16 45 46.8**	**+1.7**
AKTO	**Aktyubinsk**	**15.54**	**331**	Pn	**Pn**	**16 45 48.3**	**-0.9**
	comp=E,0.9nm,0.3s,baz=150,slow=6.2,SNR=16						
AKTO				Sn	**Sn**	**16 48 34.5**	**-6.0**
	comp=E,0.2nm,0.3s,baz=75,slow=20,SNR=2.3						
	comp=E,3.3nm,0.7s						
AKTO	**Aktyubinsk**	**15.54**	**331**	⇑Pn	**P**	**16 45 51.6**	**-1.7**
	comp=E,8.1nm,0.9s						
AKTO				⇑Sn	**Sn**	**16 48 40.1**	**-0.4**
	comp=E,6.4nm,1.4s						
BVAR	**Borovoye Array**	**15.75**	**2**	Pn	**Pn**	**16 45 48.7**	**-3.2**
	comp=E,1.0nm,0.7s,baz=165,slow=12,SNR=4.9						
BVAR				Sn	Sn	16 48 34.1	-11
	baz=175,slow=18,SNR=1.6						
BVAR				Lg	Lg	16 50 26.1	
	baz=154,slow=27,SNR=2.0						
BRVK	**Borovoye**	**15.78**	**2**	Pn	**Pn**	**16 45 52.5**	**+0.2**
ZAA0	**Zalesovo Array**	**19.71**	**27**		**Pn**	**16 46 40.5**	**-0.1**
ZAA0				IAmb	IAmb	16 46 45.3	
	comp=Z,3.1nm,0.7s						
ZALV	**Zalesovo Beam**	**19.71**	**27**	P	**P**	**16 46 37.6**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=198,slow=8.9,SNR=11						
	comp=Z,2.7nm,0.7s						
ZALV	**Zalesovo Beam**	**19.71**	**27**	P	**P**	**16 46 38.7**	**-0.4**
ARU	**Arti**	**20.53**	**342**	P	**P**	**16 46 48.2**	**+0.1**
	comp=Z,1.9nm,0.3s,baz=144,slow=14,SNR=6.3						
	comp=Z,1.9nm,0.3s						
ARU	**Arti**	**20.53**	**342**	P	**P**	**16 46 48.7**	**+0.6**
ARU				IAmb	IAmb	16 47 26.6	
	comp=Z,6.3nm,1.1s						
KBZ	**Khabaz**	**21.24**	**296**	P	**P**	**16 46 57.0**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=113,slow=7.7,SNR=1.3						
	comp=Z,0.6nm,0.6s						
BELG	**Belogornoye**	**21.57**	**321**	P	**P**	**16 46 59.8**	**+0.6**
	comp=Z,8.1nm,0.3s,baz=180,slow=3.0,SNR=17						
	comp=Z,8.1nm,0.3s						
SONM	**Songino Array**	**28.84**	**57**	P	**P**	**16 48 07.6**	**-0.5**
	comp=Z,0.6nm,1.0s,baz=264,slow=8.5,SNR=3.0						
	comp=Z,0.6nm,1.0s						
PZH	**PanZhiHua**	**29.21**	**102**	P	**P**	**16 48 13.3**	**+1.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,6.0s						
NRIK	**Noril'sk**	**33.57**	**11**	P	**P**	**16 48 49.5**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=195,slow=14,SNR=3.8						
	comp=Z,0.7nm,0.4s						
FINES	**FINESS Array B**	**36.20**	**326**	P	**P**	**16 49 12.5**	**+0.4**
	comp=Z,3.3nm,1.0s,baz=108,slow=8.9,SNR=1.8						
	comp=Z,3.3nm,1.0s						
ARCES	**ARCESS Array B**	**39.99**	**338**	P	**P**	**16 49 44.8**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=110,slow=7.9,SNR=5.9						
	comp=Z,2.0nm,0.8s						
NC303	**NORSAR Array S**	**43.02**	**323**	P	**P**	**16 50 09.9**	**+1.1**
NOA	**NORSAR Array B**	**43.07**	**323**	P	**P**	**16 50 10.2**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=98,slow=7.3,SNR=2.2						
	comp=Z,0.4nm,0.5s						
TIXI	**Tiksi**	**45.48**	**22**	P	**P**	**16 50 28.1**	**-0.3**
TIXI				IAmb	IAmb	16 50 29.6	
	comp=Z,3.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**64.61**	**267**	P	**P**	**16 52 48.8**	**+1.4**
	comp=Z,0.5nm,0.5s,baz=43,slow=5.1,SNR=3.8						
ILAR	**Eielson Array**	**74.33**	**15**	P	**P**	**16 53 46.7**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=330,slow=4.7,SNR=3.2						
	comp=Z,0.4nm,0.8s						
YKA	**Yellowknife Ar**	**80.51**	**2**	P	**P**	**16 54 21.8**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=351,slow=5.2,SNR=22						
	comp=Z,0.9nm,0.8s						
WRA	**Warramunga Arr**	**83.37**	**121**	P	**P**	**16 54 38.1**	**+1.2**
	comp=Z,0.3nm,0.9s,baz=329,slow=4.9,SNR=1.6						
	comp=Z,0.3nm,0.9s						
ASAR	**Alice Springs**	**85.63**	**124**	P	**P**	**16 54 47.6**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=309,slow=4.6,SNR=4.9						
	comp=Z,0.2nm,0.6s						

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*SOME **27** 16:52:39.0, 40°.05N×76°.78E, h10^{km}*

*KRNET **27** 16:52:39.9±0.1, 40°.04N×76°.82E, mb3.2*

*NNC **27** 16:52:41.9±0.8, 40°.12N×76°.89E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=5.9km s-min=4.8km az=150.0*

ISC 27 16:52:42.4±1.7**, 40°.07N**±0°.09×**76°.87E**±0°.04**, h10**^{km}**, n74, σ1^{s}.28**/93**, 28C-19D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.51**	**334**	⇑*e*P	**Pn**	**16 53 08.5**	**-1.3**
	baz=35						
NRN				⇑*i*S	**Sb**	**16 53 29.4**	**-0.7**
	baz=35						
TARG	**Taragay, Kyrgy**	**1.80**	**23**	⇓*e*P	**Pn**	**16 53 14.0**	**+0.1**
	baz=23						
TARG				⇓*i*S	**Sg**	**16 53 39.0**	**-1.3**
	baz=23						
KDJ	**Kajisay**	**2.07**	**6**	⇑*e*P	**Pb**	**16 53 18.3**	**-1.9**
	baz=8.0						
KDJ				⇑*i*S	**Sb**	**16 53 46.3**	**+0.3**
	baz=8.0						
ULHL	**Ulahol**	**2.22**	**348**	P	**Pb**	**16 53 21.7**	**-1.1**
	SNR=53						
ULHL	**Ulahol**	**2.22**	**348**	⇑*e*P	**Pn**	**16 53 20.4**	**+0.9**
	baz=49						
ULHL				⇑*e*S	**Sb**	**16 53 49.9**	**-0.5**
	baz=49						
BOOM	**Boomskoye usch**	**2.51**	**344**	⇓*i*P	**Pn**	**16 53 24.4**	**+0.9**
	baz=45						
BOOM				⇓*i*S	**Sb**	**16 53 56.8**	**-2.0**
	baz=45						
ARLS	**Aral**	**2.63**	**314**	⇓*i*P	**Pn**	**16 53 25.6**	**+0.5**
	baz=15						
ARLS				⇓*i*S	**Sn**	**16 53 58.3**	**+1.2**
	baz=15						
PRZ	**Przheval'sk**	**2.67**	**25**	⇑*i*P	**Pn**	**16 53 26.9**	**+1.2**
	baz=25						
PRZ				⇑*i*S	**Sb**	**16 54 01.5**	**-1.8**
	baz=25						
ANVS	**Anan'yevo**	**2.77**	**12**	⇑*i*P	**Pn**	**16 53 28.3**	**+1.2**
	baz=13						
ANVS				⇑*i*S	**Sb**	**16 54 03.7**	**-2.6**
	baz=13						
UCH	**Uchtor**	**2.79**	**321**	P	**Pn**	**16 53 29.4**	**+1.8**
	SNR=17						
UCH	**Uchtor**	**2.79**	**321**	⇓*e*P	**Pn**	**16 53 28.3**	**+0.7**
	baz=22						
UCH				⇓*i*S	**Sn**	**16 54 03.5**	**+1.9**
	baz=22						
KBK	**Karagaybulak**	**2.96**	**331**	P	**Pn**	**16 53 31.8**	**+2.2**
	SNR=14						
KBK	**Karagaybulak**	**2.96**	**331**	⇑*e*P	**Pn**	**16 53 30.4**	**+0.8**
	baz=32						
KBK				⇑*i*S	**Sn**	**16 54 07.3**	**+2.0**
	baz=32						
TNSS	**Tian-Shan**	**2.96**	**1**	Pg	**Pb**	**16 53 34.5**	**-1.0**
	13nm,0.2s						
TNSS				Lg	Lg	16 54 14.6	
	22nm,0.7s						
TNSS	**Tian-Shan**	**2.96**	**1**	*e*Pg	**Pb**	**16 53 34.5**	**-1.0**
	13nm,0.2s						
TNSS				*e*Lg	Lg	16 54 14.6	
	22nm,0.7s						
IZV	**Izvestkoviy**	**2.97**	**356**	Pg	**Pb**	**16 53 35.3**	**-0.1**
	8.6nm,0.5s						
IZV				Lg	Lg	16 54 15.9	
	41nm,0.5s						
IZV	**Izvestkoviy**	**2.97**	**356**	*e*Pg	**Pb**	**16 53 35.3**	**-0.1**
	8.6nm,0.5s						
IZV				*e*Lg	Lg	16 54 15.9	
	41nm,0.5s						
TKM2	**Tokmak 2**	**3.00**	**342**	P	**Pn**	**16 53 32.3**	**+2.1**
	SNR=22						
TKM2	**Tokmak 2**	**3.00**	**342**	⇑Pn	**Pn**	**16 53 32.1**	**+1.8**
	6.3nm,0.5s						
TKM2				⇓Lg	Lg	16 54 15.6	
	14nm,0.6s						
TKM2	**Tokmak 2**	**3.00**	**342**	⇑*e*P	**Pn**	**16 53 31.1**	**+0.9**
	baz=43						
TKM2				⇑*i*S	**Sn**	**16 54 08.5**	**+2.1**
	baz=43						
KST	**Kastek**	**3.04**	**347**	Pg	**Pb**	**16 53 36.5**	**-0.2**
	5.1nm,0.3s						
KST				Lg	Lg	16 54 17.8	
	32nm,0.6s						
KST	**Kastek**	**3.04**	**347**	*e*Pg	**Pb**	**16 53 36.5**	**-0.2**
	5.1nm,0.3s						
KST				*e*Lg	Lg	16 54 17.8	
	32nm,0.6s						
MTBS	**Maitube**	**3.07**	**354**	Pg	**Pb**	**16 53 37.0**	**-0.2**
	14nm,0.6s						
MTBS				Lg	Lg	16 54 18.7	
	28nm,0.3s						
MTBS	**Maitube**	**3.07**	**354**	*e*Pg	**Pb**	**16 53 37.0**	**-0.2**
	14nm,0.6s						
MTBS				*e*Lg	Lg	16 54 18.7	
	28nm,0.3s						
MDOK	**Medeo**	**3.09**	**2**	⇑Pg	**Pb**	**16 53 36.8**	**-0.8**
	5.9nm,0.4s						
MDOK				Pg	**Pb**	**16 53 37.6**	**0.0**
	11nm,0.4s						
MDOK				Lg	Lg	16 54 19.5	
	41nm,0.6s						
MDOK				⇑Lg	Lg	16 54 19.6	
	30nm,0.5s						
MDOK	**Medeo**	**3.09**	**2**	*e*Pg	**Pb**	**16 53 37.6**	**0.0**
	11nm,0.4s						
MDOK				*e*Lg	Lg	16 54 19.5	
	41nm,0.6s						
AAK	**Ala-Archa**	**3.12**	**326**	P	**Pn**	**16 53 34.2**	**+2.3**
	SNR=8.7						
AAK	**Ala-Archa**	**3.12**	**326**	⇑*i*P	**Pn**	**16 53 32.7**	**+0.8**
	baz=27						
AAK				⇑*i*S	**Sn**	**16 54 11.1**	**+1.8**
	baz=27						
AAA	**Alma-Ata**	**3.13**	**1**	Pg	**Pb**	**16 53 38.7**	**+0.5**
	28nm,0.1s						
AAA				Lg	Lg	16 54 21.4	
	59nm,0.4s						
AAA	**Alma-Ata**	**3.13**	**1**	*e*Pg	**Pb**	**16 53 38.7**	**+0.5**
	28nm,0.1s						
AAA				*e*Lg	Lg	16 54 21.4	
	59nm,0.4s						
KNDC	**Almaty**	**3.14**	**1**	⇓Pg	**Pb**	**16 53 38.4**	**0.0**
	23nm,0.6s						
KNDC				⇑Lg	Lg	16 54 21.7	
	119nm,0.8s						
OHH	**Osh**	**3.16**	**280**	⇑*i*P	**Pn**	**16 53 32.3**	**+0.1**
	baz=80						
OHH				⇑*i*S	**Sn**	**16 54 10.6**	**+0.6**
	baz=80						
AML	**Almayashu**	**3.16**	**312**	P	**Pn**	**16 53 34.3**	**+1.7**
	SNR=18						
AML	**Almayashu**	**3.16**	**312**	⇓Pn	**Pn**	**16 53 34.0**	**+1.4**
	2.6nm,0.6s						
AML				⇓Lg	Lg	16 54 20.6	
	3.9nm,0.7s						
AML	**Almayashu**	**3.16**	**312**	⇓*i*P	**Pn**	**16 53 33.3**	**+0.7**
	baz=12						
AML				⇓*i*S	**Sn**	**16 54 12.1**	**+1.6**
	baz=12						
KOTS	**Kotyrbulak**	**3.16**	**3**	Pg	**Pb**	**16 53 38.7**	**-0.1**
	10nm,0.3s						
KOTS				Lg	Lg	16 54 21.9	
	89nm,0.7s						
KOTS	**Kotyrbulak**	**3.16**	**3**	*e*Pg	**Pb**	**16 53 38.7**	**-0.1**
	10nm,0.3s						
KOTS				*e*Lg	Lg	16 54 21.9	
	89nm,0.7s						
SATY	**Saty**	**3.20**	**21**	Pg	**Pb**	**16 53 39.1**	**-0.3**
	5.8nm,0.5s						
SATY				Lg	Lg	16 54 22.5	
	44nm,0.6s						
SATY	**Saty**	**3.20**	**21**	*e*Pg	**Pb**	**16 53 39.1**	**-0.3**
	5.8nm,0.5s						
SATY				*e*Lg	Lg	16 54 22.5	
	44nm,0.6s						
FRU1	**Bishkek**	**3.21**	**329**	⇑*i*P	**Pn**	**16 53 34.5**	**+1.5**
	baz=30						
FRU1				⇑*i*S	**Sn**	**16 54 13.5**	**+2.2**
	baz=30						
DGS	**Degeres**	**3.27**	**346**	Pg	**Pb**	**16 53 40.4**	**-0.2**
	5.3nm,0.7s						
DGS				Lg	Lg	16 54 24.9	
	28nm,0.7s						
DGS	**Degeres**	**3.27**	**346**	*e*Pg	**Pb**	**16 53 40.5**	**-0.2**
	5.3nm,0.7s						
DGS				*e*Lg	Lg	16 54 24.9	
	28nm,0.7s						
ZHN	**Zhinishke**	**3.31**	**20**	Pg	**Pb**	**16 53 41.2**	**-0.1**
	4.4nm,0.3s						
ZHN				Lg	Lg	16 54 26.1	
	49nm,0.5s						
ZHN	**Zhinishke**	**3.31**	**20**	*e*Pg	**Pb**	**16 53 41.2**	**-0.1**
	4.4nm,0.3s						
ZHN				*e*Lg	Lg	16 54 26.1	
	49nm,0.5s						
CHMS	**Chumysh**	**3.33**	**332**	P	**Pn**	**16 53 36.8**	**+2.3**
	SNR=7.6						
CHMS	**Chumysh**	**3.33**	**332**	⇑*e*P	**Pn**	**16 53 35.4**	**+0.8**
	baz=33						
CHMS				⇑*i*S	**Sn**	**16 54 15.9**	**+1.7**
	baz=33						
UZB	**Uzynbulak**	**3.47**	**27**	Pg	**Pb**	**16 53 44.3**	**+0.3**
	5.5nm,0.3s						
UZB				Lg	Lg	16 54 31.1	
	20nm,0.8s						
UZB	**Uzynbulak**	**3.47**	**27**	*e*Pg	**Pb**	**16 53 44.3**	**+0.3**
	5.5nm,0.3s						
UZB				*e*Lg	Lg	16 54 31.1	
	20nm,0.8s						
EKS2	**Erkin-Say**	**3.48**	**319**	P	**Pn**	**16 53 39.2**	**+2.5**
	SNR=18						
KURS	**Kuram**	**3.55**	**15**	Pg	**Pb**	**16 53 45.3**	**0.0**
	4.5nm,0.6s						
KURS				Lg	Lg	16 54 33.1	
	9.7nm,0.8s						
KURS	**Kuram**	**3.55**	**15**	*e*Pg	**Pb**	**16 53 45.3**	**0.0**
	4.5nm,0.6s						
KURS				*e*Lg	Lg	16 54 33.1	
	9.7nm,0.8s						
KTBS	**Karatobe**	**3.64**	**358**	Pg	**Pb**	**16 53 46.6**	**-0.2**
	7.6nm,0.5s						
KTBS				Lg	Lg	16 54 35.5	
	32nm,0.5s						
KTBS	**Karatobe**	**3.64**	**358**	*e*Pg	**Pb**	**16 53 46.6**	**-0.2**
	7.6nm,0.5s						
KTBS				*e*Lg	Lg	16 54 35.5	
	32nm,0.5s						
SHLS	**Shalkode**	**3.64**	**31**	Pg	**Pg**	**16 53 51.2**	**-1.0**
	8.2nm,0.5s						
SHLS				Lg	Lg	16 54 43.0	
	21nm,0.7s						
SHLS	**Shalkode**	**3.64**	**31**	*e*Pg	**Pg**	**16 53 51.2**	**-1.0**
	8.2nm,0.5s						
SHLS				*e*Lg	Lg	16 54 43.0	
	21nm,0.7s						
KPKS	**Kokpek**	**3.65**	**21**	Pg	**Pb**	**16 53 47.0**	**-0.1**
	6.7nm,0.5s						
KPKS				Lg	Lg	16 54 36.1	
	61nm,0.5s						
KPKS	**Kokpek**	**3.65**	**21**	*e*Pg	**Pb**	**16 53 47.0**	**-0.1**
	6.7nm,0.5s						
KPKS				*e*Lg	Lg	16 54 36.1	
	61nm,0.5s						
USP	**Ospenovka**	**3.65**	**332**	P	**Pn**	**16 53 41.3**	**+2.2**
	SNR=6.3						
SGDS	**Sogindy**	**3.77**	**334**	Pg	**Pb**	**16 53 48.9**	**-0.2**
	5.8nm,0.4s						
SGDS				Lg	Lg	16 54 39.0	
	12nm,0.8s						
CHKK	**Chushkaly**	**3.78**	**1**	Pg	**Pb**	**16 53 48.9**	**-0.3**
	8.2nm,0.4s						
CHKK				Lg	Lg	16 54 39.6	
	21nm,0.5s						
CHKK	**Chushkaly**	**3.78**	**1**	*e*Pg	**Pb**	**16 53 48.9**	**-0.3**
	8.2nm,0.4s						
CHKK				*e*Lg	Lg	16 54 39.6	
	21nm,0.5s						
PDGK	**Podgornoye**	**3.80**	**30**	Pg	**Pb**	**16 53 50.2**	**+0.6**
	2.3nm,0.5s						
PDGK				Lg	Lg	16 54 41.2	
	21nm,0.8s						
PDGK	**Podgornoye**	**3.80**	**30**	⇓Pn	**Pn**	**16 53 41.2**	**0.0**
	1.8nm,0.3s						
PDGK				⇑Pg	**Pb**	**16 53 49.9**	**+0.3**
	4.9nm,0.5s						
PDGK				⇓Lg	Lg	16 54 40.8	
	46nm,0.8s						
MRKS	**Merke**	**3.83**	**315**	Pg	**Pb**	**16 53 46.2**	**-3.9**
	5.7nm,0.4s						
MRKS				Lg	Lg	16 54 34.6	
	14nm,0.4s						
MRKS	**Merke**	**3.83**	**315**	*e*Pg	**Pb**	**16 53 46.2**	**-3.9**
	5.7nm,0.4s						
MRKS				*e*Lg	Lg	16 54 34.6	
	14nm,0.4s						
KUU	**Kurty**	**3.84**	**354**	Pg	**Pb**	**16 53 50.0**	**-0.2**
	2.5nm,0.5s						
KUU				Lg	Lg	16 54 41.3	
	43nm,0.8s						
KUU	**Kurty**	**3.84**	**354**	*e*Pg	**Pb**	**16 53 50.0**	**-0.2**
	2.5nm,0.5s						
KUU				*e*Lg	Lg	16 54 41.3	
	43nm,0.8s						
MNAS	**Manas**	**4.08**	**308**	⇓*i*P	**Pn**	**16 53 45.7**	**+0.7**
	baz=8.0						
MNAS				⇓*i*S	**Sn**	**16 54 33.4**	**+0.6**
	baz=8.0						
BLB	**Baldybastay**	**4.19**	**16**	Pg	**Pb**	**16 53 56.9**	**+0.5**
	12nm,0.6s						
BLB				Lg	Lg	16 54 52.7	
	24nm,0.5s						
ARXS	**Arharly**	**4.20**	**9**	Pg	**Pb**	**16 53 56.4**	**0.0**
	0.1nm,0.2s						
ARXS				Lg	Lg	16 54 52.2	
	21nm,0.6s						
ARXS	**Arharly**	**4.20**	**9**	*e*Pg	**Pb**	**16 53 56.4**	**0.0**
	0.1nm,0.2s						
ARXS				*e*Lg	Lg	16 54 52.2	
	21nm,0.6s						
DJR	**Jarkent**	**4.78**	**26**	Pg	**Pb**	**16 54 07.0**	**+0.7**
	1.6nm,0.6s						
DJR				Lg	Lg	16 55 10.4	
	10nm,0.5s						
DJR	**Jarkent**	**4.78**	**26**	*e*Pg	**Pb**	**16 54 07.0**	**+0.7**
	1.6nm,0.6s						
DJR				*e*Lg	Lg	16 55 10.4	
	10nm,0.5s						
KK31	**Karatay Array**	**5.65**	**304**	⇑Pg	**Pb**	**16 54 23.6**	**+2.6**
	0.5nm,0.4s,baz=126,slow=15,SNR=8.0						
KK31				⇓Lg	Lg	16 55 41.3	
	3.0nm,0.6s,baz=125,slow=29,SNR=6.2						

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*IDC **27** 17:07:44.8±2.4, 6°.34S×130°.49E, h0^{km}, mb3.7/1, mbtmp3.6/3, ML3.6/2, Error ellipse: s-maj=142.9km s-min=31.7km az=70.0*

ISC 27 17:08:00.5±1.1**, 7°.13S**±0°.08×**130°.3E**±0°.1**, h100**^{km}**, n17, σ2^{s}.32**/16**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.32**	**130**	P	Pn	17 08 31.7	+7.2
FAKI	**Fak Fak**	**4.62**	**25**	P	**Pn**	**17 09 06.4**	**-1.6**
MTN	**Manton Dam**	**5.74**	**172**	P	**Pn**	**17 09 27.6**	**+4.3**
KDU	**Kakadu**	**5.93**	**159**	P	**Pn**	**17 09 29.4**	**+3.6**
SOEI	**Soe**	**6.50**	**246**	P	**Pn**	**17 09 32.5**	**-1.2**
PLAI	**Plampang**	**12.50**	**261**	P	Pn	17 10 49.8	-5.1
WRA	**Warramunga Arr**	**13.33**	**163**	Pn	**Pn**	**17 11 04.7**	**-1.2**
	0.4nm,0.3s,baz=348,slow=13,SNR=25						
WRA				Sn	**Sn**	**17 13 27.6**	**-5.0**
	0.8nm,0.3s,baz=342,slow=23,SNR=10.0						
	0.9nm,0.5s						
COEN	**Coen**	**14.37**	**119**	P	**P**	**17 11 23.5**	**+0.2**
	10nm,0.5s						
ASAR	**Alice Springs**	**16.81**	**168**	P	**P**	**17 11 51.0**	**+0.6**
	0.2nm,0.3s,baz=348,slow=11,SNR=19						
ASAR				S	**Sn**	**17 14 55.4**	**-1.2**
	0.5nm,0.5s,baz=356,slow=28,SNR=6.2						
	0.4nm,0.4s						
AS01	**Alice Springs**	**16.82**	**168**	P	**P**	**17 11 51.9**	**+1.5**
MANU	**Manus Island**	**17.75**	**74**	P	**Pn**	**17 12 02.5**	**+1.1**
WRKA	**Warakurna**	**17.91**	**186**	P	**Pn**	**17 12 03.1**	**-0.1**
OOD	**Oodnadatta**	**21.18**	**167**	P	**P**	**17 12 39.1**	**+1.2**
INKA	**Innaminka**	**22.77**	**155**	P	**P**	**17 12 55.3**	**+0.7**
MULG	**Mulgathing**	**23.31**	**172**	P	**P**	**17 12 59.7**	**0.0**
LCRK	**Leigh Creek**	**24.36**	**163**	P	**P**	**17 13 10.3**	**+1.1**
	17nm,2.5s						
MKAR	**Makanchi Array**	**68.49**	**327**	P	P	17 18 45.6	-6.4
	0.4nm,0.5s,baz=127,slow=7.5,SNR=5.4						
	0.4nm,0.5s						

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*IDC **27** 17:28:58.0±3.5, 53°.72N×163°.00W, h0^{km}, mb3.4/2, mbtmp3.5/4, ML3.2/2, Error ellipse: s-maj=78.3km s-min=25.4km az=160.0*

*NEIC **27** 17:29:03.7±1.5, 54°.47N±0°.05×163°.17W±0°.09, h12^{km}±11^{km}, ML4.1/6, ML3.6(AEIC), Error ellipse: s-maj=8.0km s-min=7.2km az=148.0*

*AEIC **27** 17:29:04.1±1.8, 54°.55N±0°.05×163°.24W±0°.08, h11^{km}±7^{km}, Error ellipse: s-maj=7.5km s-min=7.1km az=178.0*

ISC 27 17:29:03.4±1.1**, 54°.47N**±0°.07×**163°.13W**±0°.06**, h10**^{km}**, n59, σ0^{s}.76**/51**, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FALS	**False Pass**	**0.43**	**337**		**Pg**	**17 29 11.8**	**0.0**
FALS	**False Pass**	**0.43**	**337**		**Sg**	**17 29 17.6**	**+0.2**
FALS	**False Pass**	**0.43**	**337**	P	**Pg**	**17 29 11.7**	**0.0**
	baz=161						
FALS				S	**Sg**	**17 29 17.6**	**+0.2**
	baz=161						
S12K	**Black Hills**	**1.38**	**26**	P	**Pn**	**17 29 28.4**	**-0.4**
	baz=210						
S12K				S	**Sb**	**17 29 47.1**	**+0.1**
	baz=210						
AKUT	**Akutan**	**1.58**	**259**		**Pn**	**17 29 30.9**	**-0.6**
AKUT				IAML		17 29 52.3	
	comp=E,2µm,0.3s						
AKUT	**Akutan**	**1.58**	**259**	P	**Pn**	**17 29 31.1**	**-0.4**
SDPT	**Sand Point**	**1.77**	**59**		**Pn**	**17 29 34.2**	**+0.2**
SDPT				IAML		17 29 59.9	
	comp=N,2µm,0.4s						
SDPT				IAML		17 30 00.4	
	comp=E,3µm,0.8s						
SDPT	**Sand Point**	**1.77**	**59**	P	**Pn**	**17 29 34.2**	**+0.2**
SDPT	**Sand Point**	**1.77**	**59**	P	**Pn**	**17 29 34.2**	**+0.2**
	baz=244						
UNV	**Unalaska Valle**	**2.08**	**254**		**Pn**	**17 29 38.1**	**-0.2**
CHGN	**Chignik**	**3.26**	**54**		**Pn**	**17 29 55.3**	**+0.8**
CHGN				IAML		17 30 49.7	
	comp=E,213nm,0.5s						
CHGN	**Chignik**	**3.26**	**54**	P	**Pn**	**17 29 55.3**	**+0.8**
	baz=239						
NIKH	**Nikolski High**	**3.72**	**249**		**Pn**	**17 30 00.7**	**-0.1**
NIKH	**Nikolski High**	**3.72**	**249**	P	**Pn**	**17 30 01.2**	**+0.4**
SPIA	**Saint Paul Isl**	**4.85**	**307**		**Pn**	**17 30 16.2**	**-0.1**
OHAK	**Old Harbor**	**6.19**	**60**	Pn	**Pn**	**17 30 35.0**	**+0.3**
P18K	**Big Mountain,**	**6.56**	**38**	Pn	**Pn**	**17 30 40.9**	**+1.0**
KDAK	**Kodiak Island**	**6.76**	**56**	Pn	**Pn**	**17 30 42.7**	**0.0**
	comp=E,0.6nm,0.3s,baz=260,slow=3.0,SNR=31						
KDAK				Sn	**Sn**	**17 31 58.7**	**-0.9**
	comp=E,0.4nm,0.3s,baz=348,slow=23,SNR=1.3						
	comp=E,2.4nm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KDAK	Kodiak Island	6.76	56	Pn	Pn	17 30 42.8	+0.2
Q19K	Cape Douglas,	6.87	46	Pn	Pn	17 30 43.6	-0.6
O18K	Koktuh Hills	6.91	35	Pn	Pn	17 30 46.1	+1.5
ILSW	Iliamna Southw	7.74	40	Pn	Pn	17 30 56.6	+0.6
SVW2	Sparrevohn	7.77	28	Pn	Pn	17 30 55.7	-0.7
SVW2	Sparrevohn	7.77	28	P	Pn	17 30 56.1	-0.4
N19K	Bonanza Creek	7.87	33	Pn	Pn	17 30 58.6	+0.7
CNPM	China Poot	8.23	47	Pn	Pn	17 31 04.5	+1.7
ADK	Adak	8.54	258	Pn	Pn	17 31 08.1	+1.1
ADK	Adak	8.54	258	P	Pn	17 31 08.7	+1.6
M19K	Big River Lodg	8.76	28	Pn	Pn	17 31 10.2	+0.1
KIWB	Kanaga Island	8.82	258	Pn	Pn	17 31 11.5	+0.6
L19K	White Mountain	8.87	26	Pn	Pn	17 31 11.2	-0.4
SPU	Mount Spurr	8.95	37		Pn	17 31 10.4	-2.2
M20K	Styx River	9.11	31		Pn	17 31 16.1	+1.3
SUA	Susitna One	9.60	38	Pn	Pn	17 31 22.4	+0.8
K20K	Telida	10.06	24		Pn	17 31 27.4	-0.4
PWL	Port Wells	10.17	45	Pn	Pn	17 31 29.4	0.0
PPLA	Purkeypile	10.18	29	Pn	Pn	17 31 30.2	+0.7
SCM	Sheep Creek Mo	11.12	42	Pn	Pn	17 31 43.0	+0.7
TRF	Thorofare Moun	11.16	31	Pn	Pn	17 31 43.3	+0.3
KLU	Klutina	11.50	45		Pn	17 31 47.0	-0.6
N25K	Chitina, Valde	12.11	46	Pn	Pn	17 31 55.6	-0.3
H21K	Melozitna Rive	12.33	20	Pn	Pn	17 31 58.4	-0.3
VRDI	Verde Repeater	12.44	49	Pn	Pn	17 32 00.0	-0.5
ILAR	Eielson Array	13.15	32	Pn	Pn	17 32 12.1	+2.1
	comp=E,0.1nm,0.3s,baz=222,slow=13,SNR=8.8						
	comp=E,0.4nm,0.5s						
M26K	Nabesna, AK	13.15	45	Pn	Pn	17 32 10.0	-0.1
RIDG	Independent Ri	13.16	38	Pn	Pn	17 32 10.8	+0.7
BCAR	Beaver Creek A	13.96	43	Pn	Pn	17 32 20.2	-0.9
I26K	Coal Creek Min	14.70	34	Pn	Pn	17 32 29.1	-1.9
PETK	Petropavlovsk-	22.98	283	P	P	17 34 06.4	-1.5
	comp=E,1.1nm,0.6s,baz=85,slow=12,SNR=6.1						
	comp=E,1.1nm,0.6s						
YKA	Yellowknife Ar	26.02	52	P	P	17 34 36.4	+0.1
	comp=E,0.3nm,0.7s,baz=275,slow=9.8,SNR=5.9						
	comp=E,0.3nm,0.7s						
H11N2	WAKE ISLAND Hy	41.51	225	T	T	18 20 35.0	
	baz=26,slow=76,SNR=40						
H11N3	WAKE ISLAND Hy	41.52	225	T	T	18 20 35.0	
	baz=26,slow=76,SNR=35						
H11N1	WAKE ISLAND Hy	41.53	225	T	T	18 20 35.0	
	baz=26,slow=76,SNR=43						
H11S1	WAKE ISLAND Hy	42.69	225	T	T	18 22 04.2	
	baz=24,slow=74,SNR=40						
H11S2	WAKE ISLAND Hy	42.70	225	T	T	18 22 04.2	
	baz=306,slow=74,SNR=61						
H11S3	WAKE ISLAND Hy	42.70	225	T	T	18 21 58.0	
	SNR=41						
H03N2	Juan Fernandez	113.33	115	T	T	19 50 48.5	
	baz=322,slow=77,SNR=5.7						
H03N1	Juan Fernandez	113.34	115	T	T	19 50 47.7	
	baz=322,slow=77,SNR=7.6						
H03N3	Juan Fernandez	113.34	115	T	T	19 50 49.0	
	baz=322,slow=77,SNR=5.6						

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*NNC **27** 17:43:31.2±1.2, 38°.49N×72°.99E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=9.4km s-min=6.2km az=172.0*

*NEIC **27** 17:43:32.2±1.0, 38°.21N±0°.06×72°.79E±0°.09, h35^{km}±2^{km}, mb4.1/3, Error ellipse: s-maj=13.9km s-min=6.3km az=304.0*

*IDC **27** 17:43:42.5±4.1, 38°.92N×73°.03E, h78^{km}±32^{km}, mb3.4/5, mbtmp3.6/11, Error ellipse: s-maj=33.8km s-min=23.3km az=40.0*

ISC 27 17:43:30.3±0.6**, 38°.39N**±0°.05×**73°.03E**±0°.05**, h10^{km}, n57,** σ**2^s.72**/56**, mb3.8**/9**, 8C-8D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.45	319		Pn	17 43 47.0	-10
GAR	Garm	2.21	287		Pn	17 44 05.9	-1.1
BTK	Batken	2.39	315		Pn	17 44 09.2	-0.3
KSH	Kashi	2.56	63	Pg	Pn	17 44 06.8	-5.1
KSH				pP	Pb	17 44 12.0	-4.3
KSH				Sg	Sn	17 44 35.0	-8.2
KSH				smax	smax		
	comp=N,340nm,0.8s						
KSH				smax	smax		
	comp=E,300nm,0.8s						
CHGR	Chuyangaron	3.04	276		Pn	17 44 15.5	-3.1
AML	Almayashu	3.77	8	⇑Pn	Pn	17 44 30.3	+1.5
	comp=E,1.5nm,0.6s						
AML				⇓Lg	Lg	17 45 27.1	
	comp=E,17nm,0.7s						
NRN	Naryn	3.80	36		Pn	17 44 31.5	+2.3
AAK	Ala-Archa	4.39	14	P	Pn	17 44 39.2	+2.1
	comp=E,4.6nm,0.5s,baz=165,slow=7.4,SNR=19						
AAK				S	Sn	17 45 25.9	-2.4
	comp=E,4.3nm,0.4s,baz=181,slow=23,SNR=1.3						
AAK	Ala-Archa	4.39	14		Pn	17 44 38.6	+1.5
CEP	Cherat	4.65	192	P	Pn	17 44 42.9	+2.2
BOOM	Boomskoye usch	4.66	28		Pn	17 44 43.1	+2.3
CHCP	Chirah Chowk	4.73	178	P	Pn	17 44 42.4	+0.7
KDJ	Kajisay	4.90	39		Pn	17 44 47.2	+3.0
TKM2	Tokmak 2	4.93	23	⇑Pg	Pb	17 44 57.6	+0.9
	comp=E,10nm,0.7s						
TKM2				⇑Lg	Lg	17 46 07.7	
	comp=E,44nm,1.4s						
KK31	Karatay Array	5.08	339		Pn	17 44 46.5	+0.1
KK31	Karatay Array	5.08	339	⇓Pn	Pn	17 44 46.6	+0.1
	comp=E,2.6nm,0.4s,baz=146,slow=11,SNR=102						
KK31				⇓Pg	Pb	17 45 01.2	+1.9
	comp=E,8.1nm,0.6s						
KK31				⇓Sn	Sn	17 45 47.4	+2.3
	comp=E,22nm,0.8s,baz=154,slow=23,SNR=4.0						
KK31				⇓Lg	Lg	17 46 09.5	
	comp=E,15nm,0.7s						
KKAR	Karatay Array	5.08	339		Pn	17 44 46.8	+0.3
KST	Kastek	5.15	25	Pg	Pb	17 45 03.9	+3.4
	comp=E,12nm,1.2s						
KST				Lg	Lg	17 46 11.3	
	comp=E,23nm,0.9s						
SGDS	Sogindy	5.20	13	Pg	Pg	17 45 05.1	-4.8
	comp=E,8.8nm,0.8s						
SGDS				Lg	Lg	17 46 13.6	
	comp=E,25nm,1.8s						
DGS	Degeres	5.27	22	Pg	Pb	17 45 05.5	+2.9
	comp=E,9.3nm,0.8s						
DGS				Lg	Lg	17 46 14.9	
	comp=E,22nm,1.2s						
IZV	Izvestkoviy	5.38	29	Pg	Pg	17 45 09.4	-3.9
	comp=E,4.5nm,0.7s						
IZV				Lg	Lg	17 46 20.9	
	comp=E,30nm,1.0s						
MTBS	Maitube	5.39	28	Pg	Pg	17 45 08.7	-4.8
	comp=E,10nm,1.0s						
MTBS				Lg	Lg	17 46 19.8	
	comp=E,18nm,1.1s						
TNSS	Tian-Shan	5.51	31	Pg	Pg	17 45 12.8	-3.1
	comp=E,7.2nm,0.5s						
TNSS				Lg	Lg	17 46 27.2	
	comp=E,11nm,1.0s						
MDOK	Medeo	5.66	31	Pg	Pb	17 45 12.3	+3.1
	comp=E,12nm,0.8s						
MDOK				Pg	Pg	17 45 13.9	-4.7
	comp=E,8.6nm,0.8s						
MDOK				⇑Lg	Lg	17 46 28.9	
	comp=E,20nm,0.8s						
MDOK				Lg	Lg	17 46 29.2	
	comp=E,17nm,1.1s						
KNDC	Almaty	5.67	31	⇓Pg	Pb	17 45 13.2	+3.9
	comp=E,33nm,0.7s						
KNDC				⇓Lg	Lg	17 46 28.2	
	comp=E,107nm,1.0s						
THW	Thamme Wali	5.68	191	P	Pn	17 44 54.2	-0.6
KOTS	Kotyrbulak	5.74	31	Pg	Pg	17 45 15.4	-4.8
	comp=E,10nm,0.7s						
KOTS				Lg	Lg	17 46 31.6	
	comp=E,26nm,0.8s						
JMU	Jammu	5.87	164	*e*S	Sn	17 46 00.9	-3.6
KTBS	Karatobe	5.99	26	Pg	Pg	17 45 19.4	-5.5
	comp=E,7.1nm,1.0s						
KTBS				Lg	Lg	17 46 38.0	
	comp=E,21nm,0.9s						
SATY	Saty	6.20	40	Pg	Pb	17 45 22.8	+4.4
	comp=E,4.1nm,0.6s						
SATY				Lg	Lg	17 46 44.0	
	comp=E,24nm,2.4s						
THN	Thein Dam	6.34	159	*e*P	Pn	17 45 03.1	-0.7
THN				*e*S	Sn	17 46 12.5	-3.6
ARXS	Arharly	6.85	30	Pg	Pb	17 45 34.0	+4.7
ARXS				Lg	Lg	17 47 03.0	
PDGK	Podgornoye	6.95	43	Pg	Pb	17 45 37.1	+6.0
	comp=E,1.4nm,0.7s						
PDGK				Lg	Lg	17 47 09.2	
	comp=E,5.5nm,1.3s						
PDGK	Podgornoye	6.95	43	⇑Pn	Pn	17 45 13.5	+1.3
	comp=E,5.0nm,1.1s						
PDGK				⇑Lg	Lg	17 47 07.9	
	comp=E,24nm,1.4s						
SMLA	Simla	8.01	154	*e*P	Pn	17 45 29.0	+2.3
SMLA				*e*S	Sn	17 46 49.3	-7.9
SMLA				IAML		17 46 55.1	
	comp=N,52nm,0.6s						
SMLA				IAML		17 46 57.8	
	comp=E,44nm,0.7s						
KUDL	Kundal	10.62	163	*e*S	Sn	17 47 49.2	-12
MK31	Makanchi Array	10.81	36		Pn	17 46 07.7	+2.5
MKAR	Makanchi Array	10.81	36	P	Pn	17 46 07.0	+1.9
	comp=E,1.3nm,0.9s,baz=213,slow=14,SNR=10						
MKAR	Makanchi Array	10.81	36	Pn	Pn	17 46 08.1	+3.0
WMQ	Urumqi	12.32	59	*e*P	Pn	17 46 29.5	+3.8
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
KURBB	Kurchatov Arra	12.84	16	P	Pn	17 46 34.9	+2.2
	comp=Z,0.3nm,0.6s,baz=206,slow=12,SNR=2.3						
AB31	Akbulak array	14.37	323	⇑Pn	Pn	17 46 52.6	-1.0
	comp=Z,0.8nm,0.5s,baz=133,slow=13,SNR=22						
AB31				⇑Sn	Sn	17 49 32.7	-0.2
	comp=Z,1.0nm,0.7s						
ABKAR	Akbulak array	14.37	323	Pn	Pn	17 46 49.5	-4.1
BVAR	Borovoye Array	14.75	354	P	Pn	17 46 59.8	+1.0
	comp=Z,0.6nm,0.7s,baz=155,slow=14,SNR=2.9						
AKTO	Aktyubinsk	16.08	323	P	Pn	17 47 17.6	+1.2
	comp=Z,1.1nm,0.4s,baz=117,slow=9.7,SNR=5.8						
AKTO	Aktyubinsk	16.08	323	⇓Pn	Pn	17 47 17.3	+1.0
	comp=Z,3.1nm,0.8s						
ZALV	Zalesovo Beam	17.53	24	P	Pn	17 47 35.0	+0.4
	comp=Z,1.0nm,0.5s,baz=214,slow=12,SNR=5.8						
BELG	Belogornoye	22.52	317	P	P	17 48 32.0	+2.0
	comp=Z,4.2nm,0.6s,baz=344,slow=23,SNR=4.0						
	comp=Z,4.2nm,0.6s						
SONM	Songino Array	25.95	58	P	P	17 49 04.7	+1.8
	comp=Z,1.5nm,1.0s,baz=265,slow=9.7,SNR=7.4						
	comp=Z,1.5nm,1.0s						
PZH	PanZhiHua	26.87	108	P	P	17 49 12.3	+1.0
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,4.3s						
HHC	Hu-ho-hao-te	29.63	73	*e*P	P	17 49 37.3	+1.4
HHC				pmax	pmax		
	comp=Z,17nm,0.7s						
HHC				pmax	pmax		
	comp=Z,180nm,4.9s						
CHTO	Chiang Mai	29.80	124	P	P	17 49 35.8	-1.7
CHTO				IAmb	IAmb	17 50 13.4	
	comp=Z,0.2nm,1.4s						
CMAR	Chiang Mai Arr	30.06	124	P	P	17 49 47.8	+8.1
	comp=Z,0.3nm,0.3s,baz=305,slow=11,SNR=4.2						
	comp=Z,0.3nm,0.3s						
ENH	Enshi	31.02	94	P	P	17 49 47.5	-0.7
ENH				IAmb	IAmb	17 49 57.2	
	comp=Z,12nm,1.5s						
CLL	Collm	43.29	308	*e*P	P	17 51 31.0	-0.9
ILAR	Eielson Array	72.51	17	P	P	17 54 57.5	+0.7
	comp=Z,0.8nm,1.0s,baz=334,slow=6.0,SNR=5.5						
	comp=Z,0.8nm,1.0s						
YKA	Yellowknife Ar	79.27	4	P	P	17 55 35.8	+0.4
	comp=Z,0.2nm,0.6s,baz=346,slow=5.3,SNR=4.4						
	comp=Z,0.2nm,0.6s						

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*IDC **27** 18:05:22.5±2.1, 43°.62N×105°.40W, h0^{km}, mbtmp3.1/3, ML2.5/2, Error ellipse: s-maj=45.0km s-min=10.5km az=150.0*

*NEIC **27** 18:05:24.2±1.0, 43°.75N±0°.05×105°.31W±0°.05, h0^{km}±2^{km}, ML3.1/70, Error ellipse: s-maj=9.3km s-min=3.4km az=328.0*

ISC 27 18:05:24.0±0.9**, 43°.75N**±0°.05×**105°.35W**±0°.05**, h0^{km}, n52,** σ**0^s.97**/51**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.02	68		Pg	18 05 42.9	-0.7
K22A	Casper	1.39	218		Pg	18 05 49.0	-1.7
K22A				IAML		18 06 13.9	
	comp=E,416nm,0.3s						
PHWY	Pilot Hill	2.45	182		Pn	18 06 05.2	-0.3
PHWY				IAML		18 06 46.9	
	comp=E,76nm,0.3s						
RWWY	Rawlins	2.47	214		Pn	18 06 05.8	0.0
N23A	Red Feather La	2.89	189		Pn	18 06 11.9	+0.4
N23A				IAML		18 07 00.2	
	comp=E,65nm,0.6s						
LAO	LASA Array	3.00	348		Pn	18 06 12.3	-0.6
LAO				IAML		18 07 02.8	
	comp=E,70nm,0.5s						
RLMT	Red Lodge	3.12	297	Pn	Pn	18 06 15.0	+0.3
RLMT				IAML		18 07 07.7	
	comp=E,40nm,0.6s						
RLMT				IAML		18 07 11.5	
	comp=E,39nm,0.7s						
PDAR	Pinedale Array	3.23	254	Pn	Pn	18 06 16.6	+0.5
	comp=E,3.7nm,0.4s,baz=78,slow=18,SNR=32						
PDAR				Lg	Lg	18 07 01.5	
	comp=E,12nm,0.3s,baz=72,slow=35,SNR=3.6						
BW06	Boulder Array	3.23	254		Pn	18 06 16.5	+0.4
BW06				IAML		18 07 08.0	
	comp=E,45nm,0.3s						
BW06				IAML		18 07 09.3	
	comp=E,31nm,0.4s						
BRIGG	Briggsdale	3.26	166		Pb	18 06 22.3	-0.5
YMP	Mirror Lake Pl	3.59	288	Pn	Pn	18 06 21.6	+0.4
GCMT	Greycliff	3.69	305	Pn	Pn	18 06 22.9	+0.5
LKWY	Lake	3.72	284	Pn	Pn	18 06 24.0	+1.0
LKWY				IAML		18 06 51.8	
	comp=E,27nm,0.6s						
OGNE	Ogallala	3.73	138		Pn	18 06 22.9	0.0
H17A	Grant Village	3.82	282		Pn	18 06 25.4	+1.1
FLWY	Flagg Ranch	3.88	277		Pn	18 06 25.5	+0.5
FLWY				IAML		18 07 33.2	
	comp=E,33nm,2.7s						
FLWY				IAML		18 08 53.8	
	comp=E,25nm,4.5s						
MOOW	Moose Ponds	3.91	272	Pn	Pn	18 06 26.8	+1.3
ISCO	Idaho Springs	3.95	183		Pn	18 06 26.5	+0.3
IMW	Indian Meadow	4.05	274	Pn	Pn	18 06 28.1	+0.6
IMW				IAML		18 06 56.4	
	comp=E,22nm,0.6s						
TPAW	Teton Pass	4.07	268	Pn	Pn	18 06 28.3	+0.5
TPAW				IAML		18 07 52.1	
	comp=E,16nm,1.0s						
TPAW				IAML		18 08 08.0	
	comp=E,18nm,2.4s						
FXWY	Fox Creek	4.12	270		Pn	18 06 30.1	+1.7
YMR	Madison River	4.14	285	Pn	Pn	18 06 29.4	+0.8
YMR				IAML		18 07 44.9	
	comp=N,28nm,1.0s						
YMR				IAML		18 07 59.1	
	comp=E,23nm,2.4s						
O20A	White River Ci	4.21	212		Pn	18 06 30.3	+0.7
O20A				IAML		18 07 39.6	
	comp=E,31nm,0.4s						
O20A				IAML		18 07 42.8	
	comp=N,29nm,1.2s						
AHID	Auburn Hatcher	4.31	259		Pn	18 06 31.7	+0.7
AHID				IAML		18 07 45.4	
	comp=N,23nm,0.4s						
AHID				IAML		18 07 49.5	
	comp=N,24nm,1.3s						
RDMU	Red Mountain	4.46	226		Pn	18 06 33.1	0.0
RDMU				IAML		18 07 48.8	
	comp=E,23nm,0.9s						
RDMU				IAML		18 07 54.6	
	comp=N,22nm,0.9s						
SMCO	Snowmass	4.73	195		Pb	18 06 49.8	+1.8
SMCO				IAML		18 07 55.3	
	comp=N,14nm,0.4s						
DGMT	Dagmar	4.79	9		Pn	18 06 39.0	+1.7
BOZ	Bozeman (W)	4.84	295		Pn	18 06 38.0	-0.2
BOZ				IAML		18 07 56.7	
	comp=N,10.0nm,1.3s						
BOZ				IAML		18 08 06.0	
	comp=N,11nm,4.0s						
HWUT	Hardware Ranch	5.06	247		Pn	18 06 41.6	+0.4
HWUT				IAML		18 08 32.0	
	comp=N,15nm,1.9s						
BSUT	Blindstream Ca	5.15	233		Pn	18 06 42.7	0.0
BSUT				IAML		18 08 14.5	
	comp=N,11nm,2.5s						
BSUT				IAML		18 08 36.8	
	comp=E,12nm,4.9s						
KSCO	Kaye Shedlock'	5.16	156		Pb	18 06 58.5	+3.4
EGMT	Eagleton	5.26	326		Pn	18 06 44.0	0.0
HRY	Holter Researc	5.45	305		Pn	18 06 47.3	+0.7
P18A	Preston Nutter	5.51	223		Pn	18 06 47.6	0.0
SPUT	South Promonto	5.78	247	Pn	Pn	18 06 52.3	+1.1
PV07	Paradox Valley	5.86	206		Pn	18 06 53.3	+1.0
P17A	Butcher Ranch,	5.88	225		Pn	18 06 52.7	+0.2
PV15	Paradox Valley	5.90	205	Pn	Pn	18 06 53.6	+0.7
PV23	Carpenter Ridg	5.97	209	Pn	Pn	18 06 54.0	+0.2
PV10	Paradox Valley	6.05	209	Pn	Pn	18 06 55.5	+0.6
SRU	San Rafael Swe	6.05	222		Pn	18 06 54.9	0.0
S22A	4UR Ranch, Cre	6.10	191	Pn	Pn	18 06 54.8	-0.9
PV13	Radium Mtn., P	6.17	206	Pn	Pn	18 06 56.0	-0.6
TMUT	Trail Mountain	6.25	227		Pn	18 06 58.7	+0.9
NLU	North Lily Min	6.29	235	Pn	Pn	18 06 57.8	-0.4
ECSD	EROS Data Cent	6.33	87	Pn	Pn	18 06 57.4	-1.1
Q16A	Castle Valley	6.52	224	Pn	Pn	18 07 01.8	+0.5
DUG	Dugway, Tooele	6.60	240	Pn	Pn	18 07 03.2	+0.9
MSU	Marysvale	7.34	227	Pn	Pn	18 07 12.4	-0.3
I10CA	LAC DU BONNET	9.06	41	I	I	19 00 10.0	
	baz=223,slow=328,SNR=2.8						
ULM	Lac du Bonnet	9.17	42	Pn	Pn	18 07 35.4	-2.1
	comp=E,0.2nm,0.3s,baz=233,slow=12,SNR=3.2						
ULM				Lg	Lg	18 10 08.9	
	comp=E,0.3nm,0.3s,baz=143,slow=12,SNR=1.6						
	comp=E,1.3nm,0.4s						
YKA	Yellowknife Ar	19.54	347	P	P	18 09 53.5	+0.7
	baz=160,slow=12,SNR=3.3						
	comp=E,0.1nm,0.4s						

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*NOU **27** 18:41:05.6, 34°.86S×179°.26E, h222^{km}, mb4.7/34, South of Kermadec Islands*

*IDC **27** 18:41:05.7±1.4, 34°.84S×179°.17E, h226^{km}±13^{km}, mb4.5/6, mbtmp5.0/8, Error ellipse: s-maj=22.0km s-min=15.0km az=114.0*

*NEIC **27** 18:41:06.9±1.4, 34°.7S±0°.1×178°.9E±0°.1, h210^{km}±5^{km}, mb4.9/27, Error ellipse: s-maj=15.5km s-min=14.8km az=180.0*

*WEL **27** 18:41:08.0±1.3, 35°S±17°×17°9E±1°4, h158^{km}±43^{km}, M4.3/48, mB4.9/18, ML5.2/49, MLv4.9/48, Mw(mB)4.2/18, Error ellipse: s-maj=0.0km s-min=0.0km az=31.6, confirmed*

ISC 27 18:41:10.8±0.7**, 35°.42S**±0°.06×**179°.08E**±0°.07**, h284^{km}**±6^{km}**, n254,** σ**1^s.57**/247**, mb4.7**/25**, 1D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.23	196		Pn	18 41 54.9	-3.2
MXZ	Matakaoa Point	2.23	196	P	Pn	18 41 56.1	-2.0
MXZ	Matakaoa Point	2.23	196	P	Pn	18 41 56.5	-1.5
MXZ				S	S	18 42 31.7	-4.0
HAZ	Te Kaha	2.56	204	P	Pn	18 41 59.3	-1.7
HAZ				S	S	18 42 40.4	-0.7
PKGZ	Pakihiroa	2.59	198	P	Pn	18 41 59.9	-1.6
PKGZ				S	S	18 42 39.7	-2.2
WSRZ	White Island S	2.60	216	S	S	18 42 40.1	-1.8
WIZ	White Island	2.60	215	P	Pn	18 42 00.9	-0.6
PUZ	Puketiti	2.73	194	P	Pn	18 42 01.3	-1.5
PUZ				S	S	18 42 43.1	-1.1
RUGZ	Raukumara Rang	2.78	204	P	Pn	18 42 01.8	-1.6
RUGZ				S	S	18 42 42.1	-3.2
TWGZ	Tauwhareparae	2.89	197	P	Pn	18 42 03.8	-0.5
TWGZ				S	S	18 42 48.6	+1.5
WHRZ	Whale Island	2.97	214	P	Pn	18 42 05.1	0.0
WHRZ				S	S	18 42 50.5	+2.1
KUZ	Kuaotunu	3.03	243	P	Pn	18 42 01.8	-3.9
KUZ	Kuaotunu	3.03	243	P	Pn	18 42 01.6	-4.1
CNGZ	Carnagh Statio	3.14	193	P	Pn	18 42 07.3	+0.4
MWZ	Matawai	3.17	203	P	Pn	18 42 06.5	-0.7
MWZ				S	S	18 42 53.3	+1.1
TKGZ	Te Karaka	3.17	198	P	Pn	18 42 06.7	-0.5
MARZ	Manawahe	3.21	216	P	Pn	18 42 07.1	-0.5
URZ	Urewera	3.25	209	P	Pn	18 42 06.4	-1.5
	190nm,0.8s,baz=351,slow=3.7,SNR=88						
URZ				S	S	18 42 53.2	-0.4
	644nm,0.5s,baz=178,slow=20,SNR=26						
URZ	Urewera	3.25	209	P	Pn	18 42 06.6	-1.4
URZ	Urewera	3.25	209	P	Pn	18 42 07.8	-0.2
URZ				S	S	18 42 53.6	+0.1
EDRZ	Edgecumbe	3.28	214	P	Pn	18 42 09.1	+0.8
RIGZ	Rimuhau	3.45	197	P	Pn	18 42 09.5	-0.6
OMRZ	Omania	3.46	218	P	Pn	18 42 10.6	+0.4
WIAZ	Waiheke Island	3.48	246	P	Pn	18 42 06.5	-4.0
TARZ	Mount Tarawera	3.49	216	P	Pn	18 42 11.3	+0.6
KMRZ	Kaimai	3.50	225	P	Pn	18 42 10.4	-0.3
MUGZ	Murupara	3.57	211	P	Pn	18 42 10.9	-0.5
HLRZ	Highlands Stat	3.58	217	P	Pn	18 42 12.1	+0.6
RTZ	Ruatahuna	3.61	207		Pn	18 42 10.3	-1.6
RTZ	Ruatahuna	3.61	207	P	Pn	18 42 10.6	-1.3
SNGZ	Shannon Statio	3.64	202	P	Pn	18 42 11.7	-0.4
HSRZ	Hossack Road	3.68	217	P	Pn	18 42 13.1	+0.5
TOZ	Tahuroa Road	3.69	230		Pn	18 42 09.9	-2.8
PRRZ	Plateau Road	3.75	214	P	Pn	18 42 12.8	-0.7
KNZ	Kokohu	3.77	197	P	Pn	18 42 12.7	-0.8
ALRZ	Allen Road	3.83	214	P	Pn	18 42 14.2	-0.1
RAHZ	Arahi	3.84	204	P	Pn	18 42 14.0	-0.4
MHGZ	Mahia Peninsul	3.84	194	P	Pn	18 42 14.3	-0.1
MTHZ	Maungataniwha	3.87	207	P	Pn	18 42 14.0	-0.8
WCZ	Waipu Caves	3.89	261	P	Pn	18 42 08.7	-6.3
WHHZ	Waihua	3.94	201	P	Pn	18 42 15.5	+0.1
MRHZ	Matea Rd	4.02	211	P	Pn	18 42 16.1	-0.4
TLZ	Tolley Road	4.07	223	P	Pn	18 42 17.5	+0.6
NMHZ	Naumai	4.10	206	P	Pn	18 42 17.2	-0.1
ARHZ	Aropaoanui	4.18	203	P	Pn	18 42 18.0	-0.2
WATZ	Wairara	4.24	218	P	Pn	18 42 19.8	+0.9
BKZ	Black Stump Fm	4.27	208		Pn	18 42 18.3	-1.0
BKZ	Black Stump Fm	4.27	208	P	Pn	18 42 19.1	-0.2
BKZ	Black Stump Fm	4.27	208	P	Pn	18 42 18.8	-0.5
RATZ	Rangitukua	4.34	217	P	Pn	18 42 21.2	+1.1
RITZ	Rihia Road	4.39	215	P	Pn	18 42 21.5	+0.9
MCHZ	McNeill Hill	4.45	205	P	Pn	18 42 21.2	0.0
OUZ	Omahuta	4.49	271	P	Pn	18 42 14.5	-7.3
CKHZ	Cape Kidnapper	4.52	200	P	Pn	18 42 22.2	+0.2
KWHZ	Kaweka Forest	4.53	207	P	Pn	18 42 21.8	-0.4
NTVZ	North Tongarir	4.57	215	P	Pn	18 42 22.6	-0.2
TMVZ	Te Maari	4.57	215	P	Pn	18 42 22.5	-0.3
ETVZ	East Tongariro	4.58	215	P	Pn	18 42 22.3	-0.6
HIZ	Hauiti	4.58	226	Pn	Pn	18 42 23.5	+0.7
HIZ	Hauiti	4.58	226	P	Pn	18 42 23.5	+0.7
HIZ	Hauiti	4.58	226	P	Pn	18 42 24.3	+1.5
KRVZ	Karewarewa	4.58	216	P	Pn	18 42 23.4	+0.5
WTVZ	West Tongariro	4.62	216	P	Pn	18 42 23.6	+0.2
NNVZ	North Ngauruho	4.62	216	P	Pn	18 42 23.8	+0.4
OTVZ	Oturere	4.63	215	P	Pn	18 42 22.9	-0.6
SNVZ	South Ngauruho	4.66	215	P	Pn	18 42 23.3	-0.5
TWVZ	Taurewa	4.66	217	P	Pn	18 42 24.1	+0.2
NGZ	Ngauruhoe	4.67	215	P	Pn	18 42 24.1	+0.2
KAHZ	Kahuranaki	4.71	201	P	Pn	18 42 24.0	-0.3
TUVZ	Tukino	4.71	214	P	Pn	18 42 24.2	-0.3
BHHZ	Black Hill Sta	4.72	210	P	Pn	18 42 23.6	-0.9
FWVZ	Far West T-bar	4.75	215	P	Pn	18 42 24.6	-0.4
WHVZ	Whangaehu Hut	4.76	215	P	Pn	18 42 24.7	-0.4
MOVZ	Moawhango	4.78	213	P	Pn	18 42 24.3	-0.9
WNVZ	Wahianoa	4.79	214	P	Pn	18 42 24.8	-0.5
TRVZ	Turoa	4.79	215	P	Pn	18 42 25.0	-0.4
PKVZ	Pokaka	4.88	216	P	Pn	18 42 26.2	-0.1
MTVZ	Mangateitei	4.89	215	P	Pn	18 42 26.1	-0.4
PXZ	Pawanui	4.93	200	P	Pn	18 42 26.0	-0.8
PNHZ	Pukenui	5.04	206	P	Pn	18 42 27.2	-0.9
VRZ	Vera Road	5.06	222	P	Pn	18 42 29.4	+1.1
WPHZ	Waipukurau	5.09	204	P	Pn	18 42 28.4	-0.3
PRHZ	Porangahau	5.21	201	P	Pn	18 42 29.9	-0.3
TSZ	Takapari Road	5.25	207	P	Pn	18 42 29.8	-0.8
DVHZ	Dannevirke	5.39	204	P	Pn	18 42 31.2	-1.1
WAZ	Wanganui	5.42	216	P	Pn	18 42 32.9	+0.3
NEZ	North Egmont	5.53	224	P	Pn	18 42 35.9	+1.9
PKE	Pukeiti	5.54	226	P	Pn	18 42 36.4	+2.3
KHEZ	Kahui Hut	5.59	225	P	Pn	18 42 35.9	+1.1
KHEZ	Kahui Hut	5.59	225	P	Pn	18 42 36.5	+1.7
POWZ	Post Office Ro	5.62	207	P	Pn	18 42 35.0	0.0

PRWZ	Pori Road	5.69	205	P	Pn	18 42 36.4	+0.5
BFZ	Birch Farm	5.71	202		Pn	18 42 35.2	-1.0
BFZ	Birch Farm	5.71	202	P	Pn	18 42 35.6	-0.5
BFZ	Birch Farm	5.71	202	P	Pn	18 42 35.4	-0.8
TIWZ	Tintock	5.91	204	P	Pn	18 42 38.3	-0.3
MRZ	Mangatainoka R	5.92	207	Pn	Pn	18 42 37.4	-1.3
MRZ	Mangatainoka R	5.92	207	P	Pn	18 42 37.3	-1.3
CPWZ	Castlepoint	5.94	202	P	Pn	18 42 39.3	+0.5
HOWZ	Holdsworth Sta	6.15	206	P	Pn	18 42 40.1	-1.3
OGWZ	Otaki Gorge	6.21	209	P	Pn	18 42 40.9	-1.3
TMWZ	Te Maipa	6.21	203	P	Pn	18 42 41.4	-0.8
KIW	Kapiti Island	6.35	210	P	Pn	18 42 42.2	-1.7
MTW	Mount Morrison	6.39	205	P	Pn	18 42 42.8	-1.5
CAW	Cannon Point	6.50	208	P	Pn	18 42 44.1	-1.5
TRWZ	Traveller	6.54	203	P	Pn	18 42 45.7	-0.5
PAWZ	Paruwai Farm	6.61	205	P	Pn	18 42 46.2	-0.9
DUWZ	D’Urville Isla	6.74	216	P	Pn	18 42 47.2	-1.5
SNZO	South Karori	6.81	209	Pn	Pn	18 42 47.6	-1.9
SNZO	South Karori	6.81	209	P	Pn	18 42 48.1	-1.4
BHW	Baring Head	6.83	208	Pn	Pn	18 42 48.0	-1.8
PLWZ	Palliser	6.84	205	Pn	Pn	18 42 48.7	-1.2
PLWZ	Palliser	6.84	205	P	Pn	18 42 48.4	-1.5
TCW	Tory Channel	6.91	212	Pn	Pn	18 42 48.8	-1.9
TCW	Tory Channel	6.91	212	P	Pn	18 42 48.7	-1.9
TUWZ	Tuamarina	7.23	212		Pn	18 42 52.6	-1.9
TUWZ	Tuamarina	7.23	212	P	Pn	18 42 52.7	-1.9
NNZ	Nelson	7.32	216	Pn	Pn	18 42 54.5	-1.3
NNZ	Nelson	7.32	216	P	Pn	18 42 54.1	-1.7
CMWZ	Cape Campbell	7.38	210	Pn	Pn	18 42 54.1	-2.4
TKNZ	Takaka Hill	7.39	219	Pn	Pn	18 42 53.9	-2.7
QRZ	Quartz Range	7.47	222	Pn	Pn	18 42 55.5	-2.1
QRZ	Quartz Range	7.47	222	P	Pn	18 42 56.6	-1.0
BSWZ	Blackbirch Sta	7.49	211	Pn	Pn	18 42 56.3	-1.6
BSWZ	Blackbirch Sta	7.49	211	P	Pn	18 42 56.5	-1.3
MRNZ	Matariki Terra	7.76	218	Pn	Pn	18 42 59.1	-2.2
THZ	Tophouse	7.97	216	Pn	Pn	18 43 02.1	-1.7
THZ	Tophouse	7.97	216	P	Pn	18 43 02.2	-1.6
KHZ	Kahutara	8.21	210	Pn	Pn	18 43 04.4	-2.3
KHZ	Kahutara	8.21	210	P	Pn	18 43 05.3	-1.5
DSZ	Denniston Nort	8.51	220	Pn	Pn	18 43 09.3	-1.1
DSZ	Denniston Nort	8.51	220	P	Pn	18 43 09.7	-0.8
GVZ	Greta Valley S	8.88	210	Pn	Pn	18 43 14.3	-0.7
GVZ	Greta Valley S	8.88	210	P	Pn	18 43 13.8	-1.2
CTZ	Chatham Island	8.94	160	Pn	P	18 43 21.7	+0.4
CTZ	Chatham Island	8.94	160	P	P	18 43 18.0	-3.3
LTZ	Lake Taylor	9.06	214		Pn	18 43 15.9	-1.3
LTZ	Lake Taylor	9.06	214	P	Pn	18 43 16.0	-1.3
AMCZ	Amberley	9.21	211	Pn	Pn	18 43 19.4	+0.2
INZ	Inchbonnie	9.40	217	Pn	Pn	18 43 20.0	-1.5
INZ	Inchbonnie	9.40	217	P	Pn	18 43 20.8	-0.8
OXZ	Oxford	9.59	212		Pn	18 43 22.4	-1.4
OXZ	Oxford	9.59	212	P	Pn	18 43 22.6	-1.3
OXZ				S	S	18 45 08.1	-4.1
MQZ	McQueen’s Vall	9.65	209	Pn	Pn	18 43 22.9	-1.6
MQZ	McQueen’s Vall	9.65	209	P	Pn	18 43 23.0	-1.6
AKCZ	Akaroa Harbour	9.69	208	P	Pn	18 43 24.6	-0.4
AKCZ				S	S	18 45 12.8	-1.6
MHCZ	Mount Hutt	9.97	213	P	Pn	18 43 28.1	-0.4
WACZ	Wakanui South	10.18	211	P	Pn	18 43 30.6	-0.4
WACZ				S	S	18 45 22.8	-2.6
RPZ	Rata Peaks	10.34	214	P	Pn	18 43 32.7	-0.5
	6.3nm,0.5s,baz=45,slow=18,SNR=2.8						
RPZ				S	S	18 45 27.4	-1.9
	6.9nm,0.3s,baz=297,slow=24,SNR=9.8						
RPZ	Rata Peaks	10.34	214	Pn	Pn	18 43 32.2	-0.9
ARCZ	Arundel	10.47	213	P	Pn	18 43 34.4	-0.3
FOZ	Fox Glacier	10.81	219	Pn	Pn	18 43 38.2	-0.6
FOZ	Fox Glacier	10.81	219	P	Pn	18 43 38.1	-0.8
TMZ	Timaru	10.89	212	P	Pn	18 43 39.4	-0.4
LBZ	Lake Benmore	11.26	215	Pn	Pn	18 43 43.9	-0.5
ODZ	Otahua Downs	11.57	211	Pn	P	18 43 49.0	-1.6
ODZ	Otahua Downs	11.57	211	P	P	18 43 49.6	-1.0
ODZ	Otahua Downs	11.57	211	P	P	18 43 49.3	-1.3
JCZ	Jackson Bay	11.72	219	P	Pn	18 43 50.8	+0.6
WKZ	Wanaka	12.14	216	Pn	Pn	18 43 54.3	-1.0
MLZ	Mavora Lakes	12.97	217	Pn	Pn	18 44 04.7	-0.7
WHZ	Wether Hill Ro	13.44	215	Pn	P	18 44 11.1	-0.2
DCZ	Deep Cove	13.52	218	Pn	P	18 44 14.0	+1.8
PINNC	Pines Island,	16.30	318	P	P	18 44 33.7	-9.3
DZM	Mont Dzumac	17.29	317	P	P	18 44 44.1	-10
	8.0nm,0.6s,baz=155,slow=9.1,SNR=11						
DZM	Mont Dzumac	17.29	317	P	P	18 44 47.1	-6.7
MSVF	Nonsavu	17.64	357	P	P	18 44 49.1	-8.5
	20nm,0.7s,baz=219,slow=8.6,SNR=26						
MSVF	Nonsavu	17.64	357	P	P	18 44 49.2	-8.4
KOUNC	Koumac, New Ca	19.71	315	P	P	18 45 14.6	-5.1
AFI	Afiamalu	22.94	23	P	P	18 45 47.1	-3.7
	48nm,0.9s,baz=69,slow=13,SNR=4.0						
	48nm,0.9s						
MGCD	Mangrove Creek	23.18	267	P	P	18 45 56.2	+3.4
ARMA	Armidale	23.54	274	P	P	18 45 55.8	-0.4
EIDS	Eidsvold	26.07	285	P	P	18 46 18.8	0.0
EIDS				IAmb	IAmb	18 46 24.5	
	comp=Z,75nm,1.9s						
RMQ	Roma	27.40	281	P	P	18 46 31.7	+1.0
CMSA	Cobar Meteorol	28.04	268	P	P	18 46 39.0	+2.7
HNR	Honiara	31.21	321	P	P	18 46 59.6	-4.6
	comp=Z,496nm,0.8s,baz=96,slow=0.5,SNR=5.3						
HNR	Honiara	31.21	321	P	P	18 46 59.3	-4.9
HNR				IAmb	IAmb	18 47 01.5	
	comp=Z,51nm,0.8s						
HNR	Honiara	31.21	321	P	P	18 46 59.4	-4.9
STKA	Stephens Creek	31.29	266	P	P	18 47 07.0	+2.2
	comp=Z,4.8nm,0.8s,baz=101,slow=12,SNR=9.0						
	comp=Z,4.8nm,0.8s						
STKA	Stephens Creek	31.29	266	P	P	18 47 07.2	+2.4
STKA	Stephens Creek	31.29	266	P	P	18 47 07.9	+3.1
CTA	Charters Tower	32.64	289	P	P	18 47 16.7	0.0
CTAO	Charters Tower	32.64	289	P	P	18 47 16.5	-0.2
CTAO	Charters Tower	32.64	289	P	P	18 47 16.7	0.0
CTAO	Charters Tower	32.64	289	P	P	18 47 16.2	-0.5
HTT	Hallett	33.03	262	P	P	18 47 22.9	+2.9
INKA	Innaminka	33.38	272	P	P	18 47 23.5	+0.5
LCRK	Leigh Creek	34.48	266	P	P	18 47 34.2	+1.8
MTSU	Mount Surprise	35.26	290	P	P	18 47 39.0	-0.1
OOD	Oodnadatta	37.49	269	P	P	18 47 59.9	+2.1
QIS	Mount Isa	37.61	283	P	P	18 47 59.4	+0.5
MULG	Mulgathing	37.92	265	P	P	18 48 02.9	+1.5
COEN	Coen	38.69	294	P	P	18 48 06.8	-1.0
COEN				IAmb	IAmb	18 48 08.0	
	comp=Z,26nm,0.8s						
COEN	Coen	38.69	294	P	P	18 48 07.3	-0.6
PMG	Port Moresby	38.95	304	P	P	18 48 07.8	-2.1
PMG				IAmb	IAmb	18 48 15.2	
	comp=Z,56nm,1.6s						
PMG	Port Moresby	38.95	304	P	P	18 48 08.8	-1.2
KRVT	Keravat (AS076	39.79	315	P	P	18 48 13.6	-3.3
	comp=Z,67nm,0.6s,baz=248,slow=0.1,SNR=18						
	comp=Z,67nm,0.6s						
RABL	Rabaul	39.80	315	P	P	18 48 14.2	-2.9
AS01	Alice Springs	40.66	274	P	P	18 48 25.0	+1.0
AS31	Alice Springs	40.70	274	P	P	18 48 24.6	+0.3
ASAR	Alice Springs	40.70	274	P	P	18 48 25.0	+0.7
	comp=Z,24nm,0.7s,baz=115,slow=8.0,SNR=550						
ASAR				ScP	ScP	18 53 47.2	+5.5
	comp=Z,0.6nm,0.8s,baz=125,slow=4.0,SNR=4.3						
	comp=Z,24nm,0.7s						
ASAR	Alice Springs	40.70	274	P	P	18 48 24.7	+0.4
WB2	Warramunga Arr	42.14	279	P	P	18 48 35.8	-0.2
WB2				IAmb	IAmb	18 48 37.4	
	comp=Z,30nm,0.7s						
WRAB	Tennant Creek	42.15	279	P	P	18 48 35.8	-0.2
WRAB				IAmb	IAmb	18 48 37.4	
	comp=Z,30nm,0.7s						
WRAB	Tennant Creek	42.15	279	P	P	18 48 36.1	+0.1
WRAB	Tennant Creek	42.15	279	P	P	18 48 34.1	-1.9
WRA	Warramunga Arr	42.15	279	P	P	18 48 36.0	-0.1
	comp=Z,27nm,0.7s,baz=120,slow=7.5,SNR=180						
WRA				PcP	PcP	18 50 26.2	+1.5
	comp=Z,1.0nm,0.8s,baz=130,slow=3.0,SNR=2.7						
	comp=Z,27nm,0.7s						
WRA	Warramunga Arr	42.15	279	P	P	18 48 35.7	-0.4
WB0	Warramunga Arr	42.20	280	P	P	18 48 36.1	-0.3
WB0				IAmb	IAmb	18 48 37.8	
	comp=Z,34nm,0.8s						
FORT	Forrest	42.61	261	P	P	18 48 41.3	+1.7
FORT				IAmb	IAmb	18 49 40.7	
	comp=Z,20nm,0.9s						
FORT	Forrest	42.61	261	P	P	18 48 41.3	+1.7
WRKA	Warakurna	44.66	269	P	P	18 48 56.6	+0.6
PTCN	Pitcairn Islan	44.68	91	P	P	18 48 55.0	-1.1
PTCN	Pitcairn Islan	44.68	91	P	P	18 48 54.4	-1.6
PTCN				pP	pP	18 49 44.4	-8.2
MTN	Manton Dam	48.62	285	P	P	18 49 26.7	+0.1
FITZ	Fitzroy Crossi	50.14	276	P	P	18 49 39.3	+1.4
MORW	Morawa	52.91	258	P	P	18 49 59.9	+1.6
MORW				IAmb	IAmb	18 51 04.4	
	comp=Z,68nm,1.6s						
PSA00	Pilbara Seismi	53.15	268	P	P	18 50 00.2	+0.1
PSA00				IAmb	IAmb	18 50 55.3	
	comp=Z,26nm,1.8s						
PSA00	Pilbara Seismi	53.15	268	P	P	18 49 59.8	-0.3
PSA00				IAmb	IAmb	18 51 13.1	
	comp=Z,36nm,1.4s						
FAKI	Fak Fak	54.04	296	P	P	18 50 05.2	-1.4
FAKI				IAmb	IAmb	18 50 23.6	
	comp=Z,69nm,1.1s						
QSPA	South Pole Qui	54.70	180	P	P	18 50 20.2	+9.4
QSPA				pP	PcP	18 51 09.2	-0.3
GIRL	Giralia	57.21	264	P	P	18 50 30.3	+1.4
MMRI	Maumere	58.15	283	P	P	18 50 35.5	0.0
MMRI				IAmb	IAmb	18 50 45.9	
	comp=Z,71nm,1.4s						
HMH	Humu‘ula Sheep	59.80	28	P	P	18 50 46.2	-0.8
BELA	Belgrano 2	65.15	173	P	P	18 51 29.9	+8.8
ELIB	Princess Elisa	71.58	188	*d*P	P	18 52 08.9	+8.0
TROLL	Troll, Antarti	72.84	181	P	P	18 52 16.8	+8.4
SNAA	Sanae	73.20	179	P	P	18 52 18.7	+8.3
SNAA	Sanae	73.20	179	P	P	18 52 18.7	+8.3
SNAA				IAmb	IAmb	18 53 56.7	
	comp=Z,14nm,1.4s						
VNA3	Neumayer Olymp	73.45	177	P	P	18 52 20.2	+8.4
VNA2	Neumayer--Watz	73.86	178	P	P	18 52 22.8	+8.6
	baz=197,slow=6.0						
VNA1	Neumayer--Stat	74.10	177	P	P	18 52 24.3	+8.8
PLCA	Paso Flores	80.85	134	P	P	18 53 02.9	+9.5
	comp=Z,1.1nm,0.6s,baz=229,slow=4.7,SNR=5.5						
PLCA	Paso Flores	80.85	134	P	P	18 53 01.2	+7.8
PLCA				IAmb	IAmb	18 54 54.3	
	comp=Z,19nm,1.9s						
VA01	Torpederas	85.04	127		P	18 53 21.6	+6.9
NJ2	Nanjing	87.72	312	*e*P	P	18 53 29.3	+1.8
NJ2				pP	pP	18 54 23.3	-11
NJ2				sP	pwP	18 54 44.8	+6.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PEA0B	Petropavlovsk-	90.10	347	P	P	18 53 37.6	-0.6
PETK	Petropavlovsk-	90.10	347	P	P	18 53 36.6	-1.5
	comp=Z,3.0nm,0.9s,baz=145,slow=5.3,SNR=4.0						
	comp=Z,3.0nm,0.9s						
PETK	Petropavlovsk-	90.10	347	P	P	18 53 37.6	-0.5
MDJ	Mudanjiang	91.43	327	P	P	18 53 45.3	+0.8
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,130nm,7.4s						
CMAR	Chiang Mai Arr	92.80	291	PP	PP	18 57 34.0	-4.2
	comp=Z,1.1nm,0.9s,baz=146,slow=7.0,SNR=6.3						
NVAR	Mina Array Bea	93.56	44	P	P	18 53 57.0	+2.2
	comp=Z,0.4nm,0.3s,baz=206,slow=7.5,SNR=4.9						
PZH	PanZhiHua	95.49	299	P	P	18 54 05.0	+1.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,180nm,5.4s						
HHC	Hu-ho-hao-te	97.99	315	*e*P	Pdif	18 54 18.5	+3.8
HHC				pmax	pmax		
	comp=Z,28nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,5.7s						
WMQ	Urumqi	114.36	307	*e*P	PKiKP	18 59 20.5	+4.0
MKAR	Makanchi Array	119.05	309	PKP	PKiKP	18 59 25.9	+0.5
	comp=Z,0.4nm,0.8s,baz=75,slow=1.7,SNR=5.0						
MKAR				PKKPab	PKKPab	19 09 48.2	+7.2
	comp=Z,0.4nm,0.8s,baz=316,slow=1.1,SNR=4.1						
ZALV	Zalesovo Beam	120.08	317	PKP	PKPdf	18 59 26.5	-0.6
	comp=Z,0.2nm,0.3s,baz=186,slow=1.4,SNR=3.7						
ARCES	ARCESS Array B	142.88	345	PKP		19 00 07.8	
	comp=Z,4.7nm,0.9s,baz=46,slow=1.4,SNR=11						
KBZ	Khabaz	145.56	297	PKPbc	PKPab	19 00 16.9	+0.5
	comp=Z,3.4nm,0.9s,baz=64,slow=0.7,SNR=9.2						
FINES	FINESS Array B	148.84	335	PKPbc	PKiKP	19 00 24.7	-0.4
	comp=Z,4.7nm,0.7s,baz=45,slow=4.5,SNR=13						
BRTR	Keskin Array B	152.38	289	PKPbc	PKiKP	19 00 34.7	+1.3
	comp=Z,1.9nm,0.8s,baz=178,slow=3.7,SNR=4.4						
NB2	NORSAR Subarra	153.21	347	PKPdf	PKiKP	19 00 34.6	+0.3
	comp=Z,1.0nm,0.8s,baz=22,slow=1.6						
NOA	NORSAR Array B	153.21	347	PKPbc	PKiKP	19 00 34.5	+0.2
	comp=Z,1.1nm,0.8s,baz=36,slow=2.0,SNR=4.3						
AKASG	Malin Array Be	153.44	314	PKPbc	PKiKP	19 00 35.6	+0.7
	comp=Z,2.1nm,0.6s,baz=59,slow=2.4,SNR=8.5						

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*IDC **27** 19:07:35.4±1.2, 19°.18N×122°.12E, h0^{km}, mb3.3/4, mbtmp3.3/5, ML3.4/1, Error ellipse: s-maj=65.2km s-min=22.6km az=79.0*

*MAN **27** 19:07:38.4, 19°.19N×120°.99E, h5^{km}, mb4.6, ML3.5, MS3.3*

ISC 27 19:07:38.2±1.4, **19°.21N**±0°.04×**121°.09E**±0°.05, **h9**^{km}±10^{km}, **n23**, σ2^{s}.**62**/26, **mb3.2**/4, **8C-4D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CICP	Calayan Island	0.37	81⇓	*i*P	Pb	19 07 48.8	+1.7
CICP				*i* S	Sb	19 07 55.4	+2.5
PACPP	Pamplona Cagay	0.78	162⇓	*i*P	Pg	19 07 53.8	+0.5
PACPP				*i* S	Sg	19 08 04.5	+0.9
PIP	Pasuquin	0.98	207⇑	*e*P	Pg	19 07 56.0	-1.2
PIP				*e*S	Sg	19 08 08.6	-1.4
SGCP	Gonzaga	1.32	137⇓	*e*P	Pn	19 08 02.2	-0.7
SGCP				*e*S	Sb	19 08 18.9	-1.3
SIPP	Brgy, Tapao	1.41	205⇓	*i*P	Pg	19 08 05.6	+0.2
SIPP				*i* S	Sn	19 08 28.6	+5.8
BBP	Basco	1.48	34⇑	*e*P	Pn	19 08 05.7	+0.6
BBP				*e*S	Sb	19 08 27.5	+2.8
CVP	Callao Caves	1.65	155⇑	*i*P	Pn	19 08 07.7	+0.3
CVP				*i* S	Sn	19 08 28.1	-0.6
SAMP	Sagada Mountai	2.12	185⇑	*e*P	Pn	19 08 14.9	+1.0
SAMP				*e*S	Sn	19 08 41.9	+1.4
CAUP	Cauayan	2.35	163⇑	*e*P	Pb	19 08 20.0	-0.9
CAUP				*e*S	Sb	19 08 52.1	+2.0
PALP	Palanan	2.48	149⇑	*e*P	Pn	19 08 20.7	+1.8
PALP				*e*S	Sn	19 08 51.5	+2.2
BALP	Baler	3.48	172⇑	*e*P	Pn	19 08 34.7	+2.2
PCPH	Palayan	3.62	180⇑	*e*P	Pn	19 08 37.5	+2.9
KSRS	Korea Array	19.14	17	P	P	19 11 56.4	-5.3
	0.1nm,0.3s,baz=197,slow=12,SNR=2.4						
	0.5nm,0.5s						
WRA	Warramunga Arr	41.02	161	P	P	19 15 17.2	-4.8
	0.3nm,0.7s,baz=341,slow=9.1,SNR=8.5						
	0.3nm,0.7s						
MKAR	Makanchi Array	41.96	320	P	P	19 15 33.3	+3.7
	0.1nm,0.4s,baz=116,slow=7.9,SNR=1.3						
	0.1nm,0.4s						
H11S3	WAKE ISLAND Hy	43.06	83	T	T	20 01 14.8	
	baz=279,slow=75,SNR=4.6						
H11S1	WAKE ISLAND Hy	43.07	83	T	T	20 01 11.6	
	baz=279,slow=75,SNR=5.2						
H11S2	WAKE ISLAND Hy	43.08	83	T	T	20 01 13.1	
	baz=279,slow=75,SNR=4.4						
H11N1	WAKE ISLAND Hy	43.08	81	T	T	20 01 12.2	
	baz=277,slow=75,SNR=31						
H11N2	WAKE ISLAND Hy	43.09	81	T	T	20 01 12.4	
	baz=277,slow=75,SNR=20						
H11N3	WAKE ISLAND Hy	43.10	81	T	T	20 01 13.4	
	baz=277,slow=75,SNR=14						
ASAR	Alice Springs	44.41	163	P	P	19 15 45.7	-3.8
	0.1nm,0.3s,baz=344,slow=6.5,SNR=10						
	0.1nm,0.3s						
YKA	Yellowknife Ar	87.57	23	P	P	19 20 23.8	-2.7
	0.6nm,0.8s,baz=308,slow=4.5,SNR=8.3						
	0.6nm,0.8s						

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*IDC **27** 19:26:55.8±2.3, 43°.40N×105°.40W, h0^{km}, mbtmp3.2/3, ML3.1/3, Error ellipse: s-maj=44.4km s-min=9.2km az=150.0*

*NEIC **27** 19:26:58.4±1.3, 43°.56N±0°.06×105°.33W±0°.07, h0^{km}±2^{km}, ML3.2/72, Error ellipse: s-maj=13.2km s-min=3.1km az=42.0*

ISC 27 19:26:57.0±0.9, **43°.56N**±0°.05×**105°.34W**±0°.05, **h0**^{km}, **n65**, σ1^{s}.**16**/65, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.10	59		Pg	19 27 18.4	+0.4
K22A	Casper	1.26	224	Pg	Pg	19 27 20.1	-1.1
PHWY	Pilot Hill	2.26	182	Pn	Pn	19 27 36.5	+0.6
RWWY	Rawlins	2.33	217		Pn	19 27 37.5	+0.6
RWWY				IAML		19 28 12.8	
	164nm,1.0s						
RWWY				IAML		19 28 14.3	
	176nm,0.8s						
N23A	Red Feather La	2.70	190		Pn	19 27 43.2	+1.2
N23A				IAML		19 28 20.7	
	comp=E,86nm,1.0s						
N23A				IAML		19 28 31.9	
	comp=N,112nm,0.7s						
PD31	Pinedale Array	3.19	257	Pn	Pn	19 27 49.2	+0.6
PDAR	Pinedale Array	3.19	257	Pn	Pn	19 27 49.2	+0.6
	comp=N,1.9nm,0.3s,baz=80,slow=18,SNR=46						
PDAR				Lg	Lg	19 28 33.2	
	comp=N,8.8nm,0.3s,baz=77,slow=32,SNR=2.4						
	comp=N,2.9nm,0.3s						
PDAR	Pinedale Array	3.19	257		Pn	19 27 49.5	+0.9
BW06	Boulder Array	3.19	257	Pn	Pn	19 27 49.1	+0.4
BW06				IAML		19 28 58.7	
	comp=N,46nm,1.9s						
LAO	LASA Array	3.19	349		Pn	19 27 49.9	+1.4
RLMT	Red Lodge	3.22	300	Pn	Pn	19 27 50.5	+1.5
RLMT				IAML		19 28 45.3	
	comp=N,47nm,1.9s						
RLMT				IAML		19 28 47.3	
	comp=N,54nm,1.5s						
OGNE	Ogallala	3.59	136		Pn	19 27 54.9	+0.9
YMP	Mirror Lake Pl	3.66	290	Pn	Pn	19 27 56.5	+1.3
ISCO	Idaho Springs	3.77	183		Pn	19 27 57.7	+1.0
GCMT	Greycliff	3.81	307		Pn	19 27 57.9	+0.8
H17A	Grant Village	3.87	284		Pn	19 27 59.4	+1.3
H17A				IAML		19 29 04.6	
	comp=E,34nm,2.2s						
H17A				IAML		19 29 05.3	
	comp=N,53nm,2.0s						
FLWY	Flagg Ranch	3.91	279	Pn	Pn	19 28 00.2	+1.7
FLWY				IAML		19 29 09.8	
	comp=N,48nm,1.9s						
MOOW	Moose Ponds	3.93	275		Pn	19 27 59.6	+0.9
YNR	Norris Junctio	4.01	289		Pn	19 27 58.8	-1.2
O20A	White River Ci	4.05	213	Pn	Pn	19 28 00.6	+0.1
IMW	Indian Meadow	4.07	277		Pn	19 28 02.7	+1.9
IMW				IAML		19 29 10.5	
	comp=N,25nm,0.8s						
IMW				IAML		19 29 12.9	
	comp=N,26nm,3.8s						
TPAW	Teton Pass	4.08	271		Pn	19 28 01.1	+0.1
TPAW				IAML		19 29 34.6	
	comp=N,24nm,2.2s						
TPAW				IAML		19 29 37.3	
	comp=N,36nm,2.2s						
FXWY	Fox Creek	4.13	273		Pn	19 28 00.6	-1.0
FXWY				IAML		19 29 20.9	
	comp=N,21nm,2.8s						
YMR	Madison River	4.20	287		Pn	19 28 01.7	-0.9
YMR				IAML		19 29 43.0	
	comp=E,44nm,1.0s						
AHID	Auburn Hatcher	4.29	261		Pn	19 28 03.6	-0.2
AHID				IAML		19 29 24.6	
	comp=E,29nm,1.2s						
AHID				IAML		19 29 37.4	
	comp=E,32nm,1.4s						
RDMU	Red Mountain	4.34	228		Pn	19 28 04.8	+0.3
RDMU				IAML		19 29 40.1	
	comp=N,24nm,2.3s						
SMCO	Snowmass	4.55	196		Pn	19 28 07.3	-0.2
SMCO				IAML		19 29 30.9	
	comp=N,33nm,1.5s						
QLMT	Earthquake Lak	4.56	288		Pn	19 28 05.9	-1.6
Q24A	Divide	4.60	178		Pn	19 28 08.8	+0.7
Q24A				IAML		19 29 24.2	
	comp=N,21nm,2.1s						
Q24A				IAML		19 29 24.3	
	comp=E,22nm,0.7s						
BOZ	Bozeman (W)	4.93	297		Pn	19 28 13.1	+0.5
BOZ				IAML		19 29 42.1	
	comp=E,17nm,1.0s						
BOZ				IAML		19 29 43.9	
	comp=E,16nm,1.0s						
DGMT	Dagmar	4.97	9		Pn	19 28 14.1	+1.2
KSCO	Kaye Shedlock’	4.99	155		Pn	19 28 12.7	-0.5
HWUT	Hardware Ranch	4.99	249	Pn	Pn	19 28 13.2	-0.2
HWUT				IAML		19 29 49.8	
	comp=E,24nm,1.9s						
BSUT	Blindstream Ca	5.04	235		Pn	19 28 14.5	+0.3
BSUT				IAML		19 29 53.1	
	comp=N,16nm,3.0s						
BSUT				IAML		19 30 07.6	
	comp=E,17nm,2.2s						
P18A	Preston Nutter	5.38	225		Pn	19 28 19.7	+0.8
EGMT	Eagleton	5.42	327		Pn	19 28 17.9	-1.3
DLMT	Dillon	5.50	292		Pb	19 28 35.7	+1.7
LRM	Limekiln Ridge	5.55	296		Pn	19 28 20.8	-0.3
CTU	Camp Tracy	5.56	241	Pn	Pn	19 28 21.1	-0.2
HRY	Holter Researc	5.57	307		Pn	19 28 21.7	+0.5
PV22	Blue Mesa, Par	5.66	209	Pn	Pn	19 28 23.9	+1.4
PV07	Paradox Valley	5.70	207	Pn	Pn	19 28 24.3	+1.1
PV21	Cone Mtn., Par	5.70	210	Pn	Pn	19 28 23.4	+0.2
SPUT	South Promonto	5.72	249	Pn	Pn	19 28 23.8	+0.4
PV15	Paradox Valley	5.73	206		Pn	19 28 24.0	+0.3
P17A	Butcher Ranch,	5.75	227		Pn	19 28 25.6	+1.7
PV23	Carpenter Ridg	5.81	210	Pn	Pn	19 28 24.8	0.0
SDCO	Great Sand Dun	5.81	181	Pn	Pn	19 28 24.2	-0.6
MDND	Maddock	5.87	41		Pn	19 28 25.1	-0.2
PV14	Lion Creek, Pa	5.89	209	Pn	Pn	19 28 27.6	+1.9
PV10	Paradox Valley	5.89	210	Pn	Pn	19 28 28.7	+2.9
PV20	West Nyswonger	5.89	209	Pn	Pn	19 28 27.9	+2.1
PV11	David Mesa, Pa	5.90	208	Pn	Pn	19 28 25.7	-0.2
PV16	Nyswonger Mesa	5.90	208	Pn	Pn	19 28 25.8	-0.2
SRU	San Rafael Swe	5.92	223		Pn	19 28 25.7	-0.4
S22A	4UR Ranch, Cre	5.92	192		Pn	19 28 25.0	-1.2
PV03	Paradox Valley	5.93	208	Pn	Pn	19 28 26.0	-0.3
PV13	Radium Mtn., P	6.01	207	Pn	Pn	19 28 26.1	-1.3
TMUT	Trail Mountain	6.13	228		Pn	19 28 27.6	-1.6
NLU	North Lily Min	6.19	237	Pn	Pn	19 28 29.6	-0.3
ECSD	EROS Data Cent	6.33	85	Pn	Pn	19 28 31.6	-0.1
DUG	Dugway, Tooele	6.51	241	Pn	Pn	19 28 33.6	-0.7
I10CA	LAC DU BONNET	9.20	41	I	I	20 20 15.0	
	comp=E,0.1nm,1.3s,baz=222,slow=322,SNR=6.2						
ULM	Lac du Bonnet	9.31	41	Pn	Pn	19 29 11.1	-1.3
	comp=E,0.6nm,0.3s,baz=232,slow=13,SNR=3.0						
ULM				Sn	Sn	19 30 53.8	-3.9
	comp=E,0.3nm,0.3s,baz=292,slow=19,SNR=1.9						
ULM				Lg	Lg	19 31 46.9	
	comp=E,0.3nm,0.3s,baz=138,slow=19,SNR=2.0						
	comp=E,1.5nm,0.3s						
YKA	Yellowknife Ar	19.73	347	P	P	19 31 29.0	+1.1
	comp=E,0.1nm,0.3s,baz=154,slow=12,SNR=3.2						
	comp=E,0.2nm,0.6s						

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*PGC **27** 19:40:54.5±0.0, 50°.22N×114°.82W, h0^{km}, ML2.7/5, 105km northeast of Cranbrook, Bc Alberta, Canada Mining explosion.*

*IDC **27** 19:40:55.5±6.2, 50°.31N×114°.31W, h0^{km}, mbtmp3.4/1, ML3.3/1, Error ellipse: s-maj=86.8km s-min=46.2km az=69.0*

ISC 27 19:40:51.0±0.9, **50°.40N**±0°.05×**114°.66W**±0°.05, **h0**^{km}, **n13**, σ1^{s}.**15**/15, **Alberta**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSPGA	Hill Springs,	1.23	148	P	Pn	19 41 15.4	-0.1
WALA	Waterton Lakes	1.43	160	P	Pn	19 41 17.9	-0.3
MKRVA	Milk River, Al	2.25	123	Pn	Pb	19 41 32.6	+0.1
MKRVA				Sg	Sg	19 42 03.8	+0.5
SLEB	Sale Mountain	2.34	291	Pn	Pb	19 41 34.4	+0.3
SLEB				Sg	Sg	19 42 06.7	+0.6
BSMT	Bassoo Peak	2.55	182	Pn	Pn	19 41 33.8	0.0
YBMT	Yellow Bay	2.57	170	Pn	Pn	19 41 34.4	+0.4
YBMT				Sg	Sb	19 42 09.0	-1.2
JTMT	Jette	2.67	175	Pn	Pn	19 41 35.2	-0.1
I56US	NEWPORT INFRAS	2.68	218	I	I	19 59 48.4	
	0.2nm,1.4s,baz=41,slow=320,SNR=5.2						
EDM	Edmonton	2.94	15	Pn	Pb	19 41 44.4	+0.1
MNB	Mounoet Dainar	2.95	309	Pn	Pb	19 41 44.1	-0.5
B08A	Colville Reser	3.68	238	Pn	Pn	19 41 49.0	-0.1
I10CA	LAC DU BONNET	11.92	84	I	I	20 54 30.0	
	baz=274,slow=320,SNR=6.1						
YKA	Yellowknife Ar	12.13	0	Pn	Pn	19 43 46.8	+1.9
	0.2nm,0.3s,baz=181,slow=13,SNR=8.4						
YKA				Sn	Sn	19 45 57.5	-3.1
	0.1nm,0.3s,baz=183,slow=23,SNR=4.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
YKA				Lg	Lg	19 47 16.9	
	baz=171,slow=28,SNR=4.3						
	0.4nm,0.3s						

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*SNET **27** 19:59:59.8±1.7, 12.°54N×88.°38W, h17km±13km, ML3.7*
*INET **27** 20:00:01.5±1.1, 12.°58N×88.°27W, h23km±6km, MW3.5*
ISC 27 19:59:59.6±2.1, **12.°5N**±0.°1×**88.°33W**±0.°06, **h29**km±17km, **n29**, σ**0.s53**/35, **2C-1D**, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
ALJI	Alcalda de J	0.83	344	*e*P	Pb	20 00 15.4	-0.2
ALJI				*e*S	Sb	20 00 26.5	0.0
ALJI				IAML		20 00 27.7	
	comp=Z,2µm,0.2s						
LCND	La Caada	0.89	29	*e*P	Pb	20 00 16.3	-0.2
LCND				*e*S	Sb	20 00 28.4	+0.3
LCND				IAML		20 00 32.4	
	comp=Z,2µm,0.2s						
CNCH	Conchagua	0.89	33	*e*P	Pb	20 00 16.4	-0.2
LCY	Lacayo	0.90	2	⇑*i*P	Pb	20 00 16.8	+0.1
PACA	Pacayal	0.94	0	*e*P	Pb	20 00 17.3	-0.2
PACA				*e*S	Sb	20 00 30.1	+0.4
PACA	Pacayal	0.94	0	*e*P	Pb	20 00 17.2	-0.2
TECA	Tecapa	0.98	350	*e*P	Pb	20 00 17.6	-0.6
COEB	Comit de Eme	0.99	349	*e*P	Pb	20 00 17.7	-0.6
COEB				IAML		20 00 37.9	
	comp=Z,1µm,0.3s						
PQSS	Presa 15 de Se	1.12	348	⇑*e*P	Pn	20 00 19.5	+0.1
FAGO	Alcalda de S	1.19	10	*e*P	Pn	20 00 20.6	+0.3
SCLA	Alcaldia de Sa	1.24	342	*i* P	Pn	20 00 21.4	+0.3
CRIN	San Cristobal	1.26	82	*e*P	Pn	20 00 22.2	+0.8
CRIN				*e*S	Sb	20 00 38.9	+0.2
SJTE	Alcalda de S	1.27	329	*e*P	Pn	20 00 21.3	-0.3
LFRS	El Faro	1.31	327	⇓*i*P	Pn	20 00 21.7	-0.4
PAVA	Las Pavas	1.32	333	*e*P	Pn	20 00 22.4	+0.1
LFU	La Fuente	1.44	328	*e*P	Pn	20 00 23.9	0.0
TEL3	Telica 3	1.45	88	*e*P	Pn	20 00 24.5	+0.6
P5NO	Presa 5 de nov	1.52	344	*e*P	Pn	20 00 25.1	+0.2
BOQS	Boqueron	1.52	323	*e*P	Pn	20 00 25.3	+0.2
JAYA	Jayaque - finc	1.57	316	*e*P	Pn	20 00 27.9	+2.1
JAYA				IAML		20 00 47.7	
	comp=Z,2µm,0.2s						
CNGN	Cerro Negro	1.59	91	*e*P	Pn	20 00 26.3	+0.3
CNGN				*e*S	Sn	20 00 45.0	-0.5
COPN	Copaltepe	1.73	101	*e*P	Pn	20 00 27.7	-0.1
MOMN	Momotombo	1.75	93	*e*P	Pn	20 00 28.3	+0.2
MOMN				*e*S	Sn	20 00 49.3	-0.2
SBLS	San Blas	1.82	316	*e*P	Pn	20 00 29.6	+0.4
NUBE	Las Nubes	1.97	314	*e*P	Pn	20 00 31.2	0.0
HUEN		2.11	95	*e*P	Pn	20 00 33.7	+0.7
MATN	Matagalpa	2.38	80	*e*P	Pn	20 00 37.2	+0.4
BOAB	BOACO BROADBAN	2.60	91	*e*P	Pn	20 00 40.0	+0.3
ACON	Acoyapa	3.13	100	*e*P	Pn	20 00 46.7	-0.4

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*SJA **27** 20:32:20.7±2.1, 20.°83S×67.°12W, h175km, ML4.0, MW4.0, Hypocentre not reviewed by the ISC*
*IDC **27** 20:32:21.5±0.7, 20.°89S×67.°25W, h196km±7km, mb3.8/8, mbtmp4.3/15, MS2.5/3, Error ellipse: s-maj=13.5km s-min=10.7km az=126.0*
*NEIC **27** 20:32:22.0±1.9, 20.°82S±0.°06×67.°34W±0.°09, h202km±7km, mb4.4/22, ML4.5(GUC), Error ellipse: s-maj=12.5km s-min=9.0km az=89.0*
*VAO **27** 20:32:22.2±0.2, 20.°74S×67.°35W, h203km±3km, mb4.3*
*SCB **27** 20:32:23.0±1.2, 20.°89S×67.°39W, h197km±8km, ML4.3/4, MW3.9, Error ellipse: s-maj=3.6km s-min=3.0km az=0.0*
*GUC **27** 20:32:23.2±0.7, 20.°87S×67.°51W, h220km±7km, ML4.5*
ISC 27 20:32:21.9±0.5, **20.°83S**±0.°03×**67.°37W**±0.°04, **h206**km±5km, **n181**, σ**1.s14**/205, **mb4.3**/15, **16C**, **Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
MOCB	Mochara	1.67	105	Pg	Pn	20 32 58.9	+0.8
MOCB				Sg	S	20 33 25.8	0.0
MOCB				IAML		20 33 30.5	
	2µm,0.6s						
PB08	IPOC Station P	1.81	292		Pn	20 33 00.5	+1.1
PB08	IPOC Station P	1.81	292	⇑*i*P	Pn	20 33 00.5	+1.1
PB08				*i* S	S	20 33 29.1	+1.1
PB08	IPOC Station P	1.81	292	Pg	Pn	20 33 00.5	+1.1
PB08	IPOC Station P	1.81	292	*e*P		20 33 00.5	
PB08				*e*S		20 33 29.3	
PB01	IPOC Station P	1.99	264		Pn	20 33 01.1	+0.3
PB01	IPOC Station P	1.99	264	⇑*i*P	Pn	20 33 01.1	+0.3
PB01				*i* S	S	20 33 30.6	0.0
PB01				IAML		20 33 32.3	
	comp=N,820nm,0.2s						
PB01	IPOC Station P	1.99	264	Pg	Pn	20 33 01.3	+0.5
PB01				Sg	S	20 33 31.1	+0.5
PB01				IAML		20 33 32.8	
	comp=N,506nm,0.6s						
PB01	IPOC Station P	1.99	264	*e*P		20 33 01.4	
PB01				*e*S		20 33 31.6	
PB01				IAML		20 33 32.4	
	comp=Z,557nm,0.2s						
PB09	IPOC Station P	1.99	241		Pn	20 33 02.1	+1.2
PB09	IPOC Station P	1.99	241	⇑*i*P	Pn	20 33 02.2	+1.2
PB09				*i* S	S	20 33 31.5	+0.6
PB09	IPOC Station P	1.99	241	Pg	Pn	20 33 02.2	+1.2
PB09	IPOC Station P	1.99	241	*e*P		20 33 02.1	
PB09				*e*S		20 33 32.5	
PB09				IAML		20 33 33.9	
	comp=Z,305nm,0.6s						
GO01	Chusmiza	2.07	304		Pn	20 33 02.9	+0.9
GO01	Chusmiza	2.07	304	⇑*i*P	Pn	20 33 03.0	+0.9
GO01				*i* S	S	20 33 34.0	+1.2
GO01	Chusmiza	2.07	304	Pg	Pn	20 33 03.1	+1.0
GO01	Chusmiza	2.07	304	*e*P		20 33 03.2	
GO01				*e*S		20 33 37.9	
GO01				IAML		20 33 39.5	
	comp=Z,240nm,0.8s						
YJA	Yavi	2.19	128	Pg	Pn	20 33 04.0	+0.8
LVC	Limon Verde	2.28	219	P	Pn	20 33 04.9	+0.8
	comp=Z,75nm,0.3s,baz=50,slow=8.2,SNR=155						
LVC				S	S	20 33 36.0	-0.6
	comp=Z,48nm,0.5s,baz=233,slow=18,SNR=20						
LVC				LR	LR	20 34 11.7	
	comp=Z,76nm,18.3s,baz=225,slow=48						
LVC	Limon Verde	2.28	219		Pn	20 33 04.8	+0.7
LVC	Limon Verde	2.28	219	⇑*i*P	Pn	20 33 04.9	+0.8
LVC				*i* S	S	20 33 36.7	+0.2
LVC	Limon Verde	2.28	219	Pg	Pn	20 33 05.1	+1.0
LVC	Limon Verde	2.28	219	*e*P	Pn	20 33 05.0	+0.8
LVC				*e*S	S	20 33 36.6	+0.1
LVC	Limon Verde	2.28	219	*e*P		20 33 05.1	
LVC				*e*S		20 33 38.6	
PB11	IPOC Station P	2.40	296		Pn	20 33 05.5	+0.4
PB11	IPOC Station P	2.40	296	⇑*i*P	Pn	20 33 05.6	+0.4
PB11				*i* S	S	20 33 38.0	-0.3
PB11	IPOC Station P	2.40	296	*e*P		20 33 05.7	
PB11				*e*S		20 33 39.7	
PB11				IAML		20 33 40.6	
	comp=Z,922nm,0.7s						
PB02	IPOC Station P	2.41	258		Pn	20 33 05.6	+0.4
PB02	IPOC Station P	2.41	258	⇑*i*P	Pn	20 33 05.7	+0.4
PB02				*i* S	S	20 33 37.8	-0.7
PB02				IAML		20 33 38.8	
	comp=N,2µm,0.5s						
PB02	IPOC Station P	2.41	258	Pg	Pn	20 33 05.8	+0.6
PB02				Sg	S	20 33 37.9	-0.7
PB02				IAML		20 33 38.6	
	comp=N,2µm,0.5s						
PB02	IPOC Station P	2.41	258	*e*P		20 33 05.6	
PB02				*e*S		20 33 38.4	
PB02				IAML		20 33 39.8	
	comp=Z,812nm,0.2s						
PB07	IPOC Station P	2.51	249		Pn	20 33 06.7	+0.3
PB07	IPOC Station P	2.51	249	⇑*i*P	Pn	20 33 06.9	+0.4
PB07				*i* S	S	20 33 39.7	-0.9
PB07				IAML		20 33 40.7	
	comp=N,2µm,0.8s						
PB07	IPOC Station P	2.51	249	Pg	Pn	20 33 07.2	+0.8
PB07				Sg	S	20 33 40.1	-0.6
PB07				IAML		20 33 42.2	
	comp=N,690nm,0.6s						
PB07	IPOC Station P	2.51	249	*e*P		20 33 06.8	
PB07				*e*S		20 33 40.5	
PB07				IAML		20 33 41.7	
	comp=Z,404nm,0.4s						
PB03	IPOC Station P	2.53	241		Pn	20 33 07.0	+0.4
PB03	IPOC Station P	2.53	241	⇑*i*P	Pn	20 33 07.1	+0.4
PB03				*i* S	S	20 33 40.3	-0.8
PB03				IAML		20 33 41.4	
	comp=N,1µm,0.7s						
PB03	IPOC Station P	2.53	241	Pg	Pn	20 33 07.4	+0.8
PB03	IPOC Station P	2.53	241	*e*P		20 33 07.2	
PB03				*e*S		20 33 40.5	
PB03				IAML		20 33 41.7	
	comp=Z,651nm,0.5s						
TA01	Diego Aracena	2.65	275		Pn	20 33 07.6	-0.1
TA01	Diego Aracena	2.65	275	⇑*i*P	Pn	20 33 07.7	0.0
TA01				*i* S	S	20 33 41.3	-1.7
TA01				IAML		20 33 42.3	
	comp=E,1µm,0.3s						
TA01	Diego Aracena	2.65	275	Pg	Pn	20 33 07.9	+0.2
TA01	Diego Aracena	2.65	275	*e*P		20 33 07.7	
TA01				*e*S		20 33 42.2	
TA01				IAML		20 33 43.3	
	comp=Z,350nm,0.8s						
TA02	Huaiquique	2.65	282		Pn	20 33 07.7	0.0
TA02	Huaiquique	2.65	282	*i* P	Pn	20 33 07.8	0.0
TA02				*i* S	S	20 33 41.8	-1.2
TA02	Huaiquique	2.65	282	Pg	Pn	20 33 08.0	+0.2
TA02	Huaiquique	2.65	282	*e*P		20 33 08.1	
TA02				*e*S		20 33 42.5	
TA02				IAML		20 33 45.2	
	comp=Z,676nm,0.2s						
MNMC	Minye Minye	2.69	309		Pn	20 33 09.3	+0.7
MNMC	Minye Minye	2.69	309	⇑*i*P	Pn	20 33 09.4	+0.9
MNMC				*i* S	S	20 33 44.8	+0.4
MNMC				IAML		20 33 48.2	
	comp=N,1µm,0.5s						
MNMCX	Minye Minye	2.69	309	*e*P		20 33 09.5	
MNMCX				*e*S		20 33 46.0	
MNMCX				IAML		20 33 46.5	
	comp=Z,573nm,0.4s						
PB06	IPOC Station P	2.77	227	Pg	Pn	20 33 10.1	+0.8
PB06	IPOC Station P	2.77	227	*e*P		20 33 09.9	
PB06				*e*S		20 33 46.3	
PB06				IAML		20 33 47.1	
	comp=Z,246nm,1.0s						
PB04	IPOC Station P	2.99	239		Pn	20 33 11.9	0.0
PB04	IPOC Station P	2.99	239	⇑*i*P	Pn	20 33 12.2	+0.3
PB04				*i* S	S	20 33 48.8	-1.6
PB04				IAML		20 33 55.3	
	comp=N,307nm,0.5s						
PB04	IPOC Station P	2.99	239	Pg	Pn	20 33 12.5	+0.6
PB04	IPOC Station P	2.99	239	*e*P		20 33 12.2	
PB04				*e*S		20 33 50.3	
PB04				IAML		20 33 53.3	
	comp=Z,210nm,0.1s						
PB15	IPOC Station P	3.07	219		Pn	20 33 13.2	+0.4
PB15	IPOC Station P	3.07	219	⇑*i*P	Pn	20 33 13.6	+0.7
PB15				*i* S	S	20 33 51.6	-0.5
PB15	IPOC Station P	3.07	219	*e*P		20 33 13.0	
PB15				*e*S		20 33 53.0	
PB15				IAML		20 33 57.2	
	comp=Z,435nm,0.1s						
PB16	IPOC Station P	3.20	321		Pn	20 33 15.9	+1.1
PB16	IPOC Station P	3.20	321	⇑*i*P	Pn	20 33 16.3	+1.6
PB16				*i* S	S	20 33 56.9	+1.4
PB16	IPOC Station P	3.20	321	*e*P		20 33 15.0	
PB16				*e*S		20 33 59.0	
PB16				IAML		20 33 59.9	
	comp=Z,141nm,0.7s						
PB12	IPOC Station P	3.55	308	Pn	Pn	20 33 17.7	-0.9
PB12	IPOC Station P	3.55	308	⇑*i*P	Pn	20 33 17.8	-0.8
PB12				*i* S	S	20 34 00.2	-2.2
PB12	IPOC Station P	3.55	308	*e*P		20 33 17.9	
PB12				IAML		20 34 03.5	
	comp=Z,302nm,0.4s						
AP01	Chacalluta	3.72	311		Pn	20 33 19.7	-0.7
AP01	Chacalluta	3.72	311	*i* P	Pn	20 33 19.9	-0.5
AP01				*i* S	S	20 34 04.0	-1.9
PB18	Visviri	3.79	328	⇑*i*P	Pn	20 33 24.4	+2.5
SOEJ	Jacaque	3.91	348	Pg	Pn	20 33 25.7	+2.3
PB10	IPOC Station P	3.98	227	Pn	Pn	20 33 23.4	-0.2
PB10	IPOC Station P	3.98	227	*e*P	Pn	20 33 23.3	-0.3
PB10				*i* S	S	20 34 08.7	-3.0
BBOE	La Paz, Chanca	4.04	352	Pg	Pn	20 33 27.5	+2.5
SLA	San Lorenzo	4.24	156	Pg	Pn	20 33 28.1	+1.1
BBOD	La Paz, Gloria	4.33	344	Pg	Pn	20 33 30.8	+2.2
BS00	La Paz	4.37	350	Pg	Pn	20 33 30.5	+1.5
LPAZ	La Paz	4.58	351	P	Pn	20 33 33.0	+1.3
	comp=Z,100nm,0.4s,baz=168,slow=7.8,SNR=202						
LPAZ				S	S	20 34 24.2	-2.0
	comp=Z,20nm,0.6s,baz=313,slow=16,SNR=1.7						
LPAZ				LR	LR	20 35 50.5	
	comp=Z,29nm,18.6s,baz=291,slow=45						
LPAZ	La Paz	4.58	351	Pn	Pn	20 33 32.8	+1.1
LPAZ	La Paz	4.58	351	Pg	Pn	20 33 33.2	+1.5
LPAZ	La Paz	4.58	351	*e*P	Pn	20 33 33.2	+1.5
PB14	IPOC Station P	4.70	216	Pn	Pn	20 33 32.6	-0.3
PB14	IPOC Station P	4.70	216	*e*S		20 34 25.2	
PB14				IAML		20 34 30.3	
	comp=Z,77nm,0.7s						
GO02	Mina Guanaco	4.77	205	Pn	Pn	20 33 33.8	0.0
GO02	Mina Guanaco	4.77	205	Pg	Pn	20 33 34.1	+0.3
GO02	Mina Guanaco	4.77	205	*e*P		20 33 34.1	
GO02				IAML		20 34 36.6	
	comp=Z,102nm,0.3s						
AC01	Pan de Azucar	6.07	209	Pn	Pn	20 33 48.7	-1.4
AC06	Mina Casimiro	7.05	202	Pn	Pn	20 34 01.3	-1.4
GO03	Copiap	7.22	201	Pn	Pn	20 34 03.1	-2.0
BBSD	Serra de San D	7.35	62	*e*P	Pn	20 34 04.4	-2.3
SIV	San Ignacio	7.67	52	P	Pn	20 34 08.9	-2.1
	comp=Z,81nm,0.5s,baz=241,slow=12,SNR=215						
SIV				S	S	20 35 28.6	-9.2
	comp=Z,14nm,1.0s,baz=296,slow=22,SNR=1.2						
AC05	El Transito	8.40	198	Pn	Pn	20 34 18.5	-1.9
TICA	Tres Isletas	8.46	132	*e*P	Pn	20 34 21.9	+0.8
LCO	Las Campanas	8.69	200	Pn	Pn	20 34 21.9	-2.4
ESFA	Espinillo Form	9.16	118	*e*P	Pn	20 34 30.9	+0.8
PTLB	Pontes e Lacer	9.48	57		Pn	20 34 32.4	-2.0
PTLB	Pontes e Lacer	9.48	57	*e*P	Pn	20 34 32.7	-1.7
GO04	Tololo Observa	9.80	198	Pn	Pn	20 34 35.7	-3.0
VILB	Vilhena	10.41	42	Pn	Pn	20 34 44.6	-1.8
VILB	Vilhena	10.41	42	*e*P	Pn	20 34 46.1	-0.3
CPUP	Villa Florida	10.71	123	P	Pn	20 34 48.6	-1.6
	comp=Z,2.1nm,0.8s,baz=302,slow=11,SNR=4.2						
CPUP				S	S	20 36 46.0	-4.0
	comp=Z,2.8nm,0.7s,baz=24,slow=17,SNR=2.1						
CPUP				LR	LR	20 38 38.1	
	comp=Z,78nm,20.7s,baz=217,slow=36						
CPUP	Villa Florida	10.71	123	Pn	Pn	20 34 48.9	-1.2
CFA	Coronel Fontan	10.76	184	P	Pn	20 34 50.0	-0.8
	comp=Z,2.4nm,0.4s,baz=32,slow=19,SNR=7.9						
AQDB	Aquidauana	10.93	90		Pn	20 34 52.0	-1.0
AQDB	Aquidauana	10.93	90	*e*P	Pn	20 34 53.4	+0.3
ETMB	Extrema	11.01	6	Pn	Pn	20 34 52.5	-1.6
ETMB	Extrema	11.01	6	*e*P	Pn	20 34 53.2	-0.9
AMBA	Amambai (Brazi	11.68	103	*e*P	Pn	20 35 02.8	+0.2
MECA	Mercedes	11.85	137	*e*P	Pn	20 35 06.1	+1.5
SALV	Santo Antonio	12.12	68	*e*P	Pn	20 35 07.8	-0.4
VA06	Catapilco	12.20	196	Pn	Pn	20 35 08.6	-0.5
VA03	San Esteban	12.22	193		Pn	20 35 08.9	-0.6
SAML	Samuel	12.48	19	P	P	20 35 15.8	-0.8
SAML	Samuel	12.48	19	*e*P	Pn	20 35 11.3	-1.5
AZCA	Azaras, Argent	12.63	127	*e*P	Pn	20 35 15.4	+0.9
MT02	Curacav	12.83	194	P	P	20 35 19.6	-0.6
ITQB	Itaqui	13.11	134	*e*P	P	20 35 23.3	-0.1
MT09	Talagante	13.29	193	Pn	Pn	20 35 22.5	-0.4
MT01	Popeta	13.43	194	Pn	Pn	20 35 23.5	-1.1
PDRB	Porto dos Gac	13.72	50	*e*P	Pn	20 35 27.8	-0.5
C2SB	Chapadao do Su	13.83	84	*e*P	Pn	20 35 30.1	+0.5
BO01	Tunca	13.90	193	Pn	Pn	20 35 29.3	-1.0
CZSB	Cruzeiro do Su	14.01	338	*e*P	Pn	20 35 31.5	-0.3
FRBT	Francisco Belt	14.09	114	*e*P	P	20 35 33.8	-0.6
BO02	Sierra Bellavi	14.23	191	P	Pn	20 35 35.1	+0.7
RODS	Rosario do Sul	14.49	133	*e*P	Pn	20 35 37.6	-0.1
PTGB	Pitanga	14.63	108	*e*P	P	20 35 41.1	+0.6
ALGR	Alto Alegre (B	15.24	124	*e*P	P	20 35 48.5	+1.4
ITAB	Concordia	15.30	118		Pn	20 35 46.9	-0.7
ITAB	Concordia	15.30	118	*e*P	P	20 35 49.2	+1.4
ARAG	Araguaiana, MT	15.62	74	*e*P	P	20 35 52.0	+0.5
CPSB	Cacapava Do Su	15.76	130	*e*P	Pn	20 35 54.1	+1.1
ITRB	Iturama	16.00	89	*e*P	Pn	20 35 56.7	+0.6
PLTB	Pedras Altas	16.44	134	P	P	20 35 59.6	-0.7
PLTB	Pedras Altas	16.44	134	*e*P	P	20 36 00.5	+0.2
FRTB	Fartura	16.69	102	*e*P	Pn	20 36 04.1	-0.2
CNLB	Canela	17.17	123	*e*P	P	20 36 08.7	+0.4
TIJ01	Guaruva-PR	17.48	108	*e*P	Pn	20 36 13.7	+0.1
BB19B	Bebedouro	17.60	94	*e*P	P	20 36 13.3	+0.2
SNDB	Serra Nova Dou	17.74	63	*e*P	P	20 36 14.9	+0.2
TRQA	Tornquist	17.79	166	P	P	20 36 14.5	-0.5
TRQA				IAmb	IAmb	20 36 22.4	
	comp=Z,11nm,0.8s						
TRQA	Tornquist	17.79	166	*e*P	Pn	20 36 17.8	+0.7
NPGB	Novo Progresso	17.97	42	*e*P	P	20 36 16.7	-0.5
IPMB	Ipameri, GO	18.29	84	*e*P	P	20 36 21.1	+0.4
RCLB	Rio Claro- Sao	18.51	99	*e*P	P	20 36 22.8	-0.3
SPB	Sao Paulo	18.66	102	*e*P	P	20 36 24.0	-0.6
MACA	Manacapuru-AM	18.73	21	*e*P	P	20 36 24.6	-0.8
PET01	Itanhaem-SP	18.87	104	*e*P	P	20 36 27.9	+1.1
GO06	Curarrehue	19.02	190	P	P	20 36 29.2	+0.7
VAO	Valinhos	19.05	100	*e*P	P	20 36 28.5	-0.4
BDFB	Brasilia	19.09	78	P	P	20 36 29.3	-0.1
	comp=Z,8.0nm,0.6s,baz=257,slow=12,SNR=12						
BDFB	Brasilia	19.09	78	P	P	20 36 29.4	0.0
BDFB				IAmb	IAmb	20 36 30.2	
	comp=Z,9.1nm,0.5s						
BDFB	Brasilia	19.09	78	*e*P	P	20 36 29.8	+0.4
PMNB	Patos De Minas	19.84	87	*e*P	P	20 36 37.2	-0.2
ITTB	Itaituba	19.89	36	*e*P	P	20 36 37.2	-0.7
PLCA	Paso Flores	20.02	187	P	P	20 36 38.3	-0.8
	comp=Z,6.2nm,0.8s,baz=15,slow=11,SNR=16						
PLCA	Paso Flores	20.02	187	P	P	20 36 38.4	-0.8
PLCA				IAmb	IAmb	20 36 44.0	
	comp=Z,8.7nm,0.8s						
PLCA	Paso Flores	20.02	187	*e*P	P	20 36 39.5	+0.4
PARB	Paraibuna	20.30	101	*e*P	P	20 36 41.3	-1.0
LL04	Puerto Octay	20.47	191	P	P	20 36 42.4	-1.4
SGCB	S£o Gabriel d	20.58	1	*e*P	P	20 36 45.1	-0.1
PRPB	Parauapebas	22.40	52	*e*P	P	20 37 01.1	-2.5
SMTB	Santa Maria do	22.49	61	*e*P	P	20 37 04.2	-0.1
JANB	Januaria	22.66	79	*e*P	P	20 37 05.2	-0.7
MALB	Monte Alegre	22.79	36	*e*P	P	20 37 07.6	+0.6
SDBA	SAO DESIDERIO	23.08	72	*e*P	P	20 37 09.2	-0.4
OTAV	Otavalo	23.58	331	*e*P	P	20 37 14.9	+0.2
SJMB	Sao Joao De Ma	24.72	90	*e*P	P	20 37 25.1	+0.6
GUA01	Guaratinga, BA	26.43	85	*e*P	P	20 37 39.3	-0.6
EFI	East Falkland	31.63	169	P	P	20 38 27.1	+1.6
MG03	Isla Dawson	33.05	183	P	P	20 38 38.0	+0.3
MG03				IAmb	IAmb	20 38 49.2	
	comp=Z,17nm,1.4s						
HOPE	Hope Point	40.79	153	P	P	20 39 45.5	+2.7
CCIG	Comitan	44.17	325	P	P	20 40 08.1	-2.6
CCIG				IAmb	IAmb	20 40 08.7	
	comp=Z,16nm,1.5s						
VNA3	Neumayer Olymp	60.25	162	PP	PP	20 44 16.3	-7.0
VNA1	Neumayer--Stat	60.44	161	PP	PP	20 44 14.7	-10
VNA2	Neumayer--Watz	60.81	161	PP	PP	20 44 20.0	-8.2
	baz=313,slow=13						
TXAR	Lajitas Array	60.92	324	P	P	20 42 14.4	+1.1
	comp=Z,0.5nm,0.6s,baz=148,slow=8.6,SNR=7.3						
	comp=Z,0.5nm,0.6s						
TXAR	Lajitas Array	60.92	324	P	P	20 42 13.5	+0.1
SNAA	Sanae	62.44	161	PP	PP	20 44 42.7	+0.1
SNAA	Sanae	62.44	161	P	P	20 42 23.1	+0.2
	comp=Z,3.3nm,0.9s,baz=264,slow=6.9,SNR=3.3						
	comp=Z,3.3nm,0.9s						
CCM	Cathedral Cave	62.73	339	P	P	20 42 25.5	+0.5
CCM				IAmb	IAmb	20 42 26.7	
	comp=Z,4.3nm,0.8s						
R40A	Maddies Statio	63.29	338	P	P	20 42 29.4	+0.6
R40A				IAmb	IAmb	20 42 30.0	
	comp=Z,3.1nm,0.6s						
E62A	Clayton Lake	67.16	358	P	P	20 42 54.9	+1.5
E62A				IAmb	IAmb	20 42 58.7	
	comp=Z,20nm,1.4s						
DBIC	Dimbokro	67.16	73	P	P	20 42 53.5	-0.7
	comp=Z,2.5nm,0.7s,baz=262,slow=4.5,SNR=4.4						
	comp=Z,2.5nm,0.7s						
DBIC	Dimbokro	67.16	73	P	P	20 42 53.6	-0.6
DBIC				IAmb	IAmb	20 43 10.9	
	comp=Z,9.9nm,1.4s						
F36A	Milaca	70.50	341	P	P	20 43 14.4	+0.4
MDND	Maddock	74.24	338	P	P	20 43 37.8	+1.7
ULM	Lac du Bonnet	75.13	342	P	P	20 43 41.0	-0.1
	comp=Z,4.4nm,0.6s,baz=151,slow=6.2,SNR=6.7						
	comp=Z,4.4nm,0.6s						
TOA0	Torodi Ar. Sit	75.78	70	P	P	20 43 44.9	-0.7
TOA0				IAmb	IAmb	20 43 46.1	
	comp=Z,5.4nm,0.8s						
TORD	Torodi Ar. Bea	75.78	70	P	P	20 43 45.2	-0.4
	comp=Z,3.4nm,0.2s,baz=252,slow=5.5,SNR=24						
	comp=Z,3.4nm,0.2s						
BOSA	Boshof	82.49	118	P	P	20 44 22.8	+0.8
	comp=Z,1.9nm,0.8s,baz=270,slow=3.6,SNR=7.1						
	comp=Z,1.9nm,0.8s						
BOSA	Boshof	82.49	118	P	P	20 44 22.9	+0.8
BOSA				IAmb	IAmb	20 44 24.0	
	comp=Z,11nm,1.4s						
LBTB	Lobatse	83.99	114	P	P	20 44 30.4	+0.6
LBTB				IAmb	IAmb	20 44 31.3	
	comp=Z,12nm,1.4s						
PAB	San Pablo	84.03	44	P	P	20 44 27.1	-2.4
ESDC	Sonseca Array	84.35	44	P	P	20 44 32.2	+1.2
	comp=Z,0.8nm,0.9s,baz=256,slow=6.0,SNR=4.6						
	comp=Z,0.8nm,0.9s						
MAW	Mawson	84.55	163	P	P	20 44 31.8	+0.3
YKA	Yellowknife Ar	91.04	340	P	P	20 45 03.6	+1.3
	comp=Z,1.2nm,0.8s,baz=132,slow=4.6,SNR=26						
	comp=Z,1.2nm,0.8s						
ASAR	Alice Springs	131.16	206	PKP	PKPdf	20 51 10.6	+0.5
	comp=Z,0.3nm,0.8s,baz=132,slow=1.4,SNR=1.4						
ASAR				SKPbc	SKPbc	20 54 15.8	+0.3
	comp=Z,0.9nm,0.9s,baz=151,slow=3.2,SNR=4.2						
WRA	Warramunga Arr	134.25	209	PKP	PKPdf	20 51 16.7	+0.8
	comp=Z,1.1nm,0.3s,baz=156,slow=1.7,SNR=67						
WRA				SKPbc	SKPbc	20 54 26.9	+0.7
	comp=Z,0.4nm,0.8s,baz=148,slow=3.0,SNR=4.9						
MKAR	Makanchi Array	144.25	36	PKP	PKPdf	20 51 33.8	+0.5
	comp=Z,0.4nm,0.4s,baz=342,slow=2.7,SNR=9.3						
ASAJ	Asahikawa	145.99	320	PKPbc	PKPab	20 51 39.3	+0.9
	comp=Z,3.4nm,0.9s,baz=148,slow=4.5,SNR=4.1						
PZH	PanZhiHua	168.54	58	PKP	PKPdf	20 52 00.8	-3.9

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*IDC **27** 20:40:42.6±1.6, 16.°00N×145.°71E, h198km±16km, mb2.9/7, mbtmp3.5/8, Error ellipse: s-maj=34.4km s-min=18.2km az=95.0*
ISC 27 20:40:42.7±1.0, **16.°0N**±0.°1×**145.°7E**±0.°3, **h200**km, **n8**, σ**0.s51**/10, **mb3.0**/7, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	2.54	198	P	Pn	20 41 27.6	+0.4
	99nm,0.9s,baz=114,slow=5.7,SNR=5.4						
GUMO				S	Sn	20 42 01.4	-0.4
	44nm,0.3s,baz=17,slow=21,SNR=2.5						
WRA	Warramunga Arr	37.44	198	P	P	20 47 36.8	-0.2
	0.2nm,0.5s,baz=7.0,slow=8.3,SNR=6.8						
	0.2nm,0.5s						
ASAR	Alice Springs	41.09	197	P	P	20 48 06.9	-0.2
	0.2nm,0.5s,baz=15,slow=6.8,SNR=4.3						
	0.2nm,0.5s						
SONM	Songino Array	45.23	323	P	P	20 48 39.4	-0.7
	0.3nm,0.5s,baz=133,slow=7.5,SNR=2.6						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	60.12	323	P	P	20 50 29.1	+0.1
	0.4nm,0.4s,baz=127,slow=9.7,SNR=3.1						
	0.4nm,0.4s						
MKAR	Makanchi Array	60.30	315	P	P	20 50 31.3	+0.9
	0.2nm,0.4s,baz=93,slow=8.6,SNR=6.3						
MKAR				pP	PcP	20 51 13.7	+0.1
	0.3nm,0.5s,baz=75,slow=8.9,SNR=5.9						
	0.2nm,0.4s						
ILAR	Eielson Array	66.05	26	P	P	20 51 07.8	+0.1
	0.4nm,0.4s,baz=248,slow=5.8,SNR=7.5						
	0.4nm,0.4s						
YKA	Yellowknife Ar	80.36	28	P	P	20 52 31.4	-0.1
	0.1nm,0.4s,baz=291,slow=5.2,SNR=2.1						
	0.1nm,0.4s						

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*NOU **27** 20:40:57.8, 43.°47S×174.°00E, h0km, MLv4.3/7, Off E. Coast of S. Island, N.Z.*
*WEL **27** 20:41:12.8, 42°S±4°×17°4E±°, h22km±8km, M3.1/10, ML3.4/11, MLv3.1/10, Error ellipse: s-maj=0.0km s-min=0.0km az=85.4, confirmed*
ISC 27 20:41:12.5±1.2, **42.°36S**±0.°03×**173.°93E**±0.°04, **h13**km±9km, **n75**, σ**1.s03**/80, **South Island**

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

KHZ	Kahutara	0.30	258	P	Pg	20 41 18.8	+0.2
KHZ	Kahutara	0.30	258	P	Pg	20 41 18.8	+0.2
KHZ				S	Sg	20 41 23.0	+0.3
CMWZ	Cape Campbell	0.64	19	P	Pb	20 41 26.4	+0.8
BSWZ	Blackbirch Sta	0.64	356	P	Pg	20 41 24.3	-0.7
GVZ	Greta Valley S	0.90	227	P	Pb	20 41 31.0	+1.0
GVZ				S	Sn	20 41 44.7	+0.8
TUWZ	Tuamarina	0.93	0	P	Pb	20 41 29.7	-0.6
THZ	Tophouse	0.97	307	P	Pb	20 41 29.3	-1.8
TCW	Tory Channel	1.17	13	P	Pn	20 41 33.8	-0.8
TCW				S	Sb	20 41 49.4	-0.3
SNZO	South Karori	1.19	29	P	Pn	20 41 34.6	-0.2
NNZ	Nelson	1.21	340	P	Pn	20 41 33.8	-1.3
WEL	Wellington	1.24	30	P	Pn	20 41 35.3	-0.2
WEL				S	Sb	20 41 51.8	+0.2
AMCZ	Amberley	1.25	229	P	Pb	20 41 36.5	+0.5
PLWZ	Palliser	1.26	52	P	Pn	20 41 35.5	-0.3
MRNZ	Matariki Terra	1.30	317	P	Pn	20 41 35.5	-0.8
MRNZ				S	Sb	20 41 52.2	-1.1
LTZ	Lake Taylor	1.30	250	P	Pn	20 41 36.0	-0.4
PAWZ	Paruwai Farm	1.48	49	P	Pn	20 41 38.2	-0.6
CAW	Cannon Point	1.51	35	P	Pn	20 41 38.8	-0.5
TKNZ	Takaka Hill	1.51	331	P	Pn	20 41 36.1	-3.2
DUWZ	D'Urville Isla	1.55	360	P	Pn	20 41 39.2	-0.7
TRWZ	Traveller	1.62	54	P	Pn	20 41 40.1	-0.7
MQZ	McQueen's Vall	1.65	214	P	Pn	20 41 40.2	-0.8
KIW	Kapiti Island	1.66	26	P	Pn	20 41 41.0	-0.4
MTW	Mount Morrison	1.68	45	P	Pn	20 41 40.7	-0.8
AKCZ	Akaroa Harbour	1.69	206	P	Pn	20 41 41.6	-0.2
DSZ	Denniston Nort	1.70	290	P	Pn	20 41 41.7	-0.2
DSZ				S	Sn	20 42 04.1	+0.6
OXZ	Oxford	1.70	235	P	Pn	20 41 40.9	-1.0
OGWZ	Otaki Gorge	1.79	32	P	Pn	20 41 42.6	-0.5
QRZ	Quartz Range	1.86	325	P	Pn	20 41 44.3	+0.3
QRZ	Quartz Range	1.86	325	P	Pn	20 41 44.0	0.0
INZ	Inchbonnie	1.88	258	P	Pn	20 41 43.8	-0.5
HOWZ	Holdsworth Sta	1.88	40	P	Pn	20 41 43.5	-0.8
RACZ	Rakaia	1.90	223	P	Pn	20 41 43.9	-0.7
TMWZ	Te Maipa	1.92	50	P	Pn	20 41 43.9	-1.0
MRZ	Mangatainoka R	2.10	37	P	Pn	20 41 46.4	-0.9
MHCZ	Mount Hutt	2.10	235	P	Pn	20 41 46.2	-1.1
TIWZ	Tintock	2.15	44	P	Pn	20 41 47.0	-1.1
WACZ	Wakanui South	2.21	223	P	Pn	20 41 48.1	-0.7
PRWZ	Pori Road	2.36	41	P	Pn	20 41 50.4	-0.5
BFZ	Birch Farm	2.41	47	P	Pn	20 41 50.4	-1.2
BFZ	Birch Farm	2.41	47	P	Pn	20 41 50.4	-1.2
WVZ	Waitaha Valley	2.46	252	P	Pn	20 41 52.1	-0.2
RPZ	Rata Peaks	2.51	236	P	Pn	20 41 52.2	-0.8
ARCZ	Arundel	2.57	231	P	Pn	20 41 53.2	-0.7
TSZ	Takapari Road	2.76	34	P	Pn	20 41 55.3	-1.1
GCSZ	Gaunt Creek Bo	2.82	249	P	Pn	20 41 57.6	+0.3
TMZ	Timaru	2.94	225	P	Pn	20 41 58.5	-0.5
PNHZ	Pukenui	2.98	36	P	Pn	20 41 58.0	-1.5
KHEZ	Kahui Hut	3.06	1	P	Pn	20 42 03.8	+3.2
KHEZ	Kahui Hut	3.06	1	P	Pn	20 42 03.7	+3.1
NBEZ	Newall Road No	3.08	359	P	Pb	20 42 07.2	0.0
PKE	Pukeiti	3.16	1	P	Pn	20 42 03.5	+1.6
MTVZ	Mangateitei	3.19	22	P	Pn	20 42 03.7	+1.3
PXZ	Pawanui	3.21	45	P	Pn	20 42 04.2	+1.6
FOZ	Fox Glacier	3.25	247	P	Pn	20 42 03.8	+0.7
WNVZ	Wahianoa	3.28	23	P	Pn	20 42 04.2	+0.5
BHHZ	Black Hill Sta	3.29	30	P	Pn	20 42 02.7	-1.0
VRZ	Vera Road	3.29	11	P	Pn	20 42 02.4	-1.3
TRVZ	Turoa	3.29	22	P	Pn	20 42 04.5	+0.5
FWVZ	Far West T-bar	3.33	22	P	Pn	20 42 04.9	+0.4
TUVZ	Tukino	3.35	24	P	Pn	20 42 05.1	+0.4
NGZ	Ngauruhoe	3.42	22	P	Pn	20 42 07.0	+1.3
SNVZ	South Ngauruho	3.42	23	P	Pn	20 42 06.3	+0.6
OTVZ	Oturere	3.45	23	P	Pn	20 42 06.2	+0.1
NNVZ	North Ngauruho	3.46	22	P	Pn	20 42 06.6	+0.4
WTVZ	West Tongariro	3.47	22	P	Pn	20 42 06.8	+0.5
ETVZ	East Tongariro	3.49	23	P	Pn	20 42 07.3	+0.7
TMVZ	Te Maari	3.50	23	P	Pn	20 42 07.2	+0.4
NTVZ	North Tongarir	3.51	23	P	Pn	20 42 07.2	+0.4
ODZ	Otahua Downs	3.59	220	P	Pn	20 42 07.2	-0.7
BKZ	Black Stump Fm	3.73	32	P	Pn	20 42 09.6	-0.2
HIZ	Hauiti	3.90	11	P	Pn	20 42 14.0	+1.9
HIZ	Hauiti	3.90	11	P	Pn	20 42 13.4	+1.3
JCZ	Jackson Bay	4.14	244	P	Pn	20 42 15.0	-0.5
URZ	Urewera	4.76	32	P	Pn	20 42 26.7	+2.8
MLZ	Mavora Lakes	5.17	232	P	Pn	20 42 28.0	-1.6

MAN 27 20:56:02.2, 19.°12N×121.°49E, h25^{km}, mb3.9, ML2.6, MS2.2, 2C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CICP	Calayan Island	0.14	357⇓	iP	Pn	20 56 08.4	-0.5
CICP				i S	Sb	20 56 15.0	+4.4
SGCP	Gonzaga	1.02	149⇑	eP	Pn	20 56 20.4	-0.6
SGCP				eS	Sn	20 56 38.8	+4.3
SAMP	Sagada Mountai	2.11	195⇑	eP	Pn	20 56 36.7	+0.7
SAMP				eS	Sn	20 57 02.2	+0.8

HEL 27 21:07:06.6±0.2, 67.°63N×33.°78E, h0^{km}, ML1.5, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVZ	Lovozero	0.43	51	PG	Pg	21 07 13.8	-1.0
LVZ				SG	Sg	21 07 20.2	-0.1
VRF	Varrio	1.60	276	PG	Pn	21 07 34.9	-1.2
VRF				MSG		21 07 54.3	
	comp=Z,3.8nm,0.2s						
VRF				SG	Sn	21 07 55.0	-2.3
OLKF	Oulanka, Finla	2.17	235	PG	Pb	21 07 45.3	-1.3
OLKF				MSG		21 08 10.9	
	comp=Z,2.7nm,0.2s						
OLKF				SG	Sb	21 08 13.9	-0.1
KU6	Riekki	2.23	225	PG	Pn	21 07 46.0	+1.3
KU6				MSG		21 08 12.7	
	comp=Z,1.6nm,0.2s						
KU6				SG	Sb	21 08 15.2	-0.6
MSF	Maaselka	2.55	230	PG	Pb	21 07 52.0	-1.2
MSF				SG	Sb	21 08 25.4	+0.3
RNF	Rovaniemi	3.20	255	PN	Pn	21 07 57.9	-0.2
	baz=69						
RNF				SB	Sn	21 08 39.2	+2.3
KEV	Kevo	3.27	314	PN	Pn	21 07 59.0	+0.1
KEV				SN	Sn	21 08 37.2	-1.2
RMF	Romuvaara	3.77	206	PN	Pn	21 08 06.2	+0.2
	baz=20						
KLF	Kolari	3.81	269	PG	Pb	21 08 14.8	+0.3
HEF	Hetta	3.88	286	PN	Pn	21 08 06.8	-0.7
TOF	Tornio	4.04	252	PG	Pb	21 08 20.1	+1.5
LANU	Lannavaara	4.48	281	PN	Pn	21 08 14.3	-1.4

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*CNRM **27** 21:07:23.5, 36.°12N×8.°20W, h70^{km}, ml2.5*

*MDD **27** 21:07:24.7±0.5, 36.°20N×8.°15W, h34^{km}±12^{km}, mb_Lg2.6/9, Error ellipse: s-maj=5.3km s-min=3.2km az=60.0*

*SFS **27** 21:07:24.9, 36.°21N×8.°15W, h33^{km}, ML3.2/13, ML2.9/9, MLv2.8/13*

*IGIL **27** 21:07:25.7, 36.°18N×8.°21W, h31^{km}, ML2.0*

*INMG **27** 21:07:25.2±1.5, 36.°19N×8.°19W, h36^{km}, ML2.1, Error ellipse: s-maj=4.5km s-min=2.6km az=67.0*

ISC 27 21:07:23.4±1.2, 36.°21N±0.°03×8.°12W±0.°04, h35^{km}, n68, σ1.^{s}40/114, 1C-3D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBDV	Barranco-do-Ve	1.04	8⇑	eP	Pn	21 07 42.6	+1.0
PBDV				eS	Sn	21 07 55.9	+0.9
PBDV				A	A	21 07 57.1	
	16nm,0.3s						
PFVI	Vila Bisbo	1.09	328	P	Pn	21 07 42.0	-0.2
PFVI	Vila Bisbo	1.09	328	P	Pn	21 07 43.2	+1.0
PFVI				S	Sn	21 08 00.4	+4.4
PFVI	Vila Bisbo	1.09	328	P	Pn	21 07 42.3	+0.1
PFVI				S	Sn	21 07 55.4	-0.6
PFVI	Vila Bisbo	1.09	328⇓	eP	Pn	21 07 42.3	+0.1
PFVI				eS	Sn	21 07 55.6	-0.4
PFVI				A	A	21 07 57.5	
	13nm,0.2s						
MORF	Marmelete	1.18	339⇓	eP	Pn	21 07 43.9	+0.4
MORF				eS	Sn	21 07 58.4	+0.1
MORF				A	A	21 08 03.0	
	21nm,0.4s						
MORF	Marmelete	1.18	339	eP	Pn	21 07 43.9	+0.4
MORF				eS	Sn	21 07 57.5	-0.9
MORF				IAML		21 07 59.4	
	comp=E,29nm,0.1s						
PVAQ	Vaqueiros	1.24	15	P	Pn	21 07 46.1	+1.9
PVAQ	Vaqueiros	1.24	15	P	Pn	21 07 46.3	+2.1
PVAQ				S	Sn	21 08 02.7	+3.0
PVAQ	Vaqueiros	1.24	15⇓	eP	Pn	21 07 45.2	+1.0
PVAQ				eS	Sn	21 08 00.1	+0.4
PVAQ				A	A	21 08 02.8	
	comp=E,17nm,0.1s						
EGRO	El Granado	1.42	21	S	Sn	21 08 03.9	-0.3
EGRO				P	Pn	21 07 47.8	+1.1
EGRO	El Granado	1.42	21	P	Pn	21 07 47.8	+1.1
EGRO				S	Sn	21 08 04.6	+0.4
PTEO	Sao Teotonio	1.42	340	eP	Pn	21 07 47.5	+0.7
PTEO				eS	Sn	21 08 04.9	+0.6
PTEO				A	A	21 08 09.6	
	comp=E,7.9nm,0.4s						
PCVE	Castro Verde	1.42	2	eP	Pn	21 07 47.9	+1.1
PCVE				eS	Sn	21 08 04.7	+0.4
PCVE				A	A	21 08 05.4	
	comp=E,14nm,0.1s						
MESJ	Messejana	1.63	357	eP	Pn	21 07 50.7	+1.0
MESJ				eS	Sn	21 08 09.7	+0.2
MESJ				A	A	21 08 10.4	
	comp=E,13nm,0.2s						
MESJ	Messejana	1.63	357	eP	Pn	21 07 50.6	+1.0
MESJ				eS	Sn	21 08 08.7	-0.7
MESJ				IAML		21 08 10.3	
	comp=N,13nm,0.1s						
PBEJ	Beja	1.83	6	eS	Sn	21 08 14.0	-0.3
PBEJ				A	A	21 08 16.6	
	comp=N,9.1nm,0.2s						
PNCL	Nicolau / Gran	1.93	350	eP	Pn	21 07 54.4	+0.6
PNCL				eS	Sn	21 08 16.4	-0.4
PNCL				A	A	21 08 24.2	
	comp=N,6.3nm,0.2s						
ESPR	Espera	1.94	69	P	Pn	21 07 55.4	+1.5
ESPR				S	Sn	21 08 17.6	+0.7
ESPR	Espera	1.94	69	P	Pn	21 07 54.5	+0.6
ESPR				S	Sn	21 08 17.6	+0.7
ESPR				i Vmb_Lg		21 08 19.1	
EMIN	Mina Concepcio	1.94	36	P	Pn	21 07 54.7	+0.8
EMIN				S	Sn	21 08 16.3	-0.7
EMIN				i Vmb_Lg		21 08 22.0	
PBAR	Barrancos	2.14	23	P	Pn	21 07 57.9	+1.2
PBAR				S	Sn	21 08 21.7	-0.4
PBAR	Barrancos	2.14	23	eP	Pn	21 07 57.9	+1.2
PBAR				eS	Sn	21 08 22.4	+0.3
PBAR				A	A	21 08 26.3	
	comp=N,3.9nm,0.3s						
CEU	Ceuta	2.24	97	P	Pn	21 08 00.7	+2.6
EVO	Evora	2.32	2	P	Pn	21 07 59.9	+0.8
EVO				S	Sn	21 08 25.3	-1.2
EVO	Evora	2.32	2	eP	Pn	21 08 00.0	+0.8
EVO				eS	Sn	21 08 25.9	-0.6
EVO				A	A	21 08 28.8	
	comp=N,11nm,0.2s						
CHEFC	Chefchaouen	2.51	115	P	Pn	21 08 03.6	+1.7
CHEFC				S	Sn	21 08 32.1	+0.9
PESTR	Estremoz	2.69	9	P	Sn	21 08 35.5	0.0
PESTR	Estremoz	2.69	9	S	Sn	21 08 34.3	-1.3
PESTR	Estremoz	2.69	9	eP	Pn	21 08 00.9	-3.3
PESTR				eS	Sn	21 08 35.2	-0.3
PESTR				A	A	21 08 52.9	
	comp=N,2.9nm,0.2s						
EBAD	Badajoz	2.69	19	P	Pn	21 08 05.5	+1.3
EBAD				S	Sn	21 08 35.7	+0.1
EBAD	Badajoz	2.69	19	P	Pn	21 08 05.5	+1.3
EBAD				S	Sn	21 08 35.2	-0.4
EBAD				i Vmb_Lg		21 08 40.0	
ECAB	El Cabril	2.85	48	P	Pn	21 08 07.7	+1.3
ECAB				S	Sn	21 08 39.6	0.0
ECAB	El Cabril	2.85	48	P	Pn	21 08 07.7	+1.3
ECAB				S	Sn	21 08 38.6	-1.0
ECAB				i Vmb_Lg		21 08 45.0	
PMTG	Montargil	2.86	358	eP	Pn	21 08 07.2	+0.7
PMTG				eS	Sn	21 08 39.0	-0.7
PMTG				A	A	21 08 40.1	
	comp=N,10nm,0.1s						
PMAFR	Mafra	2.90	342	P	Pn	21 08 08.2	+1.2
PMAFR				S	Sn	21 08 40.6	-0.1
PMAFR	Mafra	2.90	342	eP	Pn	21 08 08.5	+1.4
PMAFR				eS	Sn	21 08 41.0	+0.3
PMAFR				A	A	21 08 41.7	
	comp=N,20nm,0.4s						
AVE	Averroes	2.96	169	P	Pn	21 08 09.1	+1.2
ZHG	ZHG	3.01	156	P	Pn	21 08 09.4	+0.7
ZHG	ZHG	3.01	156	P	Pn	21 08 09.5	+0.8
PMRV	Marv??o	3.27	10	eP	Pn	21 08 13.1	+0.9
PMRV				eS	Sn	21 08 49.5	-0.3
PMRV				A	A	21 08 52.4	
	comp=N,2.9nm,0.3s						
EGOR	Sierra Gorda,	3.34	73	P	Pn	21 08 15.2	+1.9
EGOR				S	Sn	21 08 52.4	+0.5
EADA	Adamuz	3.44	54	P	Pn	21 08 15.6	+1.1
EADA				S	Sn	21 08 53.7	-0.3
EADA	Adamuz	3.44	54	P	Pn	21 08 15.6	+1.1
EADA				S	Sn	21 08 52.2	-1.8
EADA				i Vmb_Lg		21 08 55.4	
IFR	Ifrane	3.64	137	P	Pn	21 08 17.5	+0.1
PCBR	Castelo Branco	3.66	8	eP	Pn	21 08 18.4	+0.8
PCBR				eS	Sn	21 08 58.8	-0.7
PCBR				A	A	21 09 00.7	
	comp=N,4.0nm,0.3s						
LCRM	LCR	3.67	132	P	Pn	21 08 18.0	+0.1
LCRM	LCR	3.67	132	P	Pn	21 08 18.0	+0.1
ELGU	Los Guajares,	3.67	78	P	Pn	21 08 18.6	+0.8
ELGU				S	Sn	21 08 59.8	-0.2
PCAS	Casmilo, Conde	3.85	356	eP	Pn	21 08 21.5	+1.3
PCAS				eS	Sn	21 09 02.9	-1.3
PCAS				A	A	21 09 05.6	
	comp=N,3.5nm,0.3s						
EQUE	Quentar	3.89	74	P	Pn	21 08 21.9	+1.1
EQUE				S	Sn	21 09 04.5	-0.7
EPLA	Plasencia	4.17	22	P	Pn	21 08 25.3	+0.7
EPLA				S	Sn	21 09 10.2	-1.9
EPLA				i Vmb_Lg		21 09 12.9	
MTE	Manteigas	4.21	6	eS	Sn	21 09 11.2	-1.9
MD31	MD31	4.33	139	P	Pn	21 08 27.3	+0.4
PSIM	Granatula de C	4.34	52	P	Pn	21 08 28.1	+1.2
PSIM				S	Sn	21 09 13.9	-2.4
MDT	Midelt	4.45	138	P	Pn	21 08 28.4	-0.1
MDT	Midelt	4.45	138	P	Pn	21 08 29.0	+0.5
PAB	San Pablo	4.47	41	P	Pn	21 08 29.8	+1.0
PAB				S	Sn	21 09 16.1	-3.5
PAB				i Vmb_Lg		21 09 22.9	
PVIS	Viseu	4.50	2	eS	Sn	21 09 18.3	-2.1
JBK	JBK	4.91	111	P	Pn	21 08 34.9	0.0
OUK	Oukaimeden	4.99	178	P	Pn	21 08 36.1	-0.1
OUK				S	Sn	21 09 31.7	-1.2
MVO	Moncorvo	5.02	9	eP	Pn	21 08 37.6	+1.3
MVO				eS	Sn	21 09 30.3	-2.9
MVO				A	A	21 09 33.1	
	comp=N,3.0nm,0.4s						
POLO	Lamas de Olo	5.17	3	eP	Pn	21 08 40.8	+2.5
POLO				eS	Sn	21 09 34.0	-2.7
POLO				A	A	21 09 36.6	
	comp=N,1.2nm,0.5s						
TTIG	Tnine Tigouga,	5.65	183	P	Pn	21 08 41.1	-4.0
TTIG	Tnine Tigouga,	5.65	183	P	Pn	21 08 41.5	-3.6
PGAV	Gavieira, Arco	5.75	359	eS	Sn	21 09 48.5	-2.7
ETOB	Tobarra	5.76	63	P	Pn	21 08 46.9	+0.4
ETOB	Tobarra	5.76	63	P	Pn	21 08 47.0	+0.4
ETOB				S	Sn	21 09 49.0	-2.5

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*SFS **27** 21:08:57.5, 35.°44N×3.°61W, h21^{km}, ML2.4/7, ML2.5/7, MLv2.3/7*

*MDD **27** 21:08:58.8±0.5, 35.°50N×3.°68W, h13^{km}±4^{km}, mb_Lg2.1/6, Error ellipse: s-maj=3.5km s-min=3.2km az=22.0*

CNRM 27 21:08:58.4, 35.°55N×3.°64W, h21^{km}, ml2.1, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	Palemas	0.41	216	P	Pb	21 09 07.0	0.0
PALE	Palemas	0.41	216	P	Pb	21 09 06.5	-0.4
PALE				S	Sb	21 09 13.7	+1.0
WMELI	Melilla	0.61	112	S	Sb	21 09 16.7	-2.0
WMELI				P	Pb	21 09 09.6	-0.9
EMEL	Melilla	0.61	114	Pg	Pb	21 09 10.6	+0.1
EMEL				Sg	Sb	21 09 18.0	-0.8
GOG	Mont Gurugu	0.62	122	P	Pn	21 09 18.0	+5.9
GOG	Mont Gurugu	0.62	122	P	Pb	21 09 09.7	-1.1
GOG				S	Sb	21 09 19.0	-0.1
EALB	Alboran	0.63	52	S	Sn	21 09 21.0	-0.4
EALB				P	Pn	21 09 12.1	0.0
EALB	Alboran	0.63	52	Pg	Pn	21 09 12.1	0.0
EALB				Sg	Sn	21 09 21.2	-0.3
EALB				i Vmb_Lg		21 09 24.3	
PVLZ	Peæn de	0.66	235	S	Sb	21 09 19.2	-0.7
PVLZ				P	Pb	21 09 11.2	-0.1
AKLM	AKL	1.06	190	P	Pn	21 09 18.1	+0.1
AKLM				S	Sb	21 09 30.6	-0.9
CHAS	Isla Isabel II	1.06	110	S	Sb	21 09 28.7	-2.6
CHAS				P	Pn	21 09 16.2	-1.7
TAF	Taforalt	1.25	126	P	Pb	21 09 21.2	-0.1
TAF				S	Sb	21 09 39.2	+2.3
ELGU	Los Guajares,	1.31	1	S	Sb	21 09 39.0	+0.2
ELGU				P	Pb	21 09 22.7	+0.3
ELGU	Los Guajares,	1.31	1	Pg	Pb	21 09 23.0	+0.6
ELGU				Sn	Sb	21 09 39.7	+0.9
EMIJ	Mijas	1.36	318	S	Sb	21 09 40.3	+0.1
EMIJ				P	Pb	21 09 23.9	+0.7
EMIJ	Mijas	1.36	318	Pg	Pb	21 09 23.6	+0.3
EMIJ				Sg	Sb	21 09 40.4	+0.2
EMIJ				i Vmb_Lg		21 09 44.6	
EMAL	Malaga-Limoner	1.36	332	S	Sb	21 09 40.8	+0.6
ECEU	Ceuta	1.45	284	Pn	Pn	21 09 23.1	-0.3
ECEU				Sn	Sn	21 09 40.5	-1.3
ECEU				i Vmb_Lg		21 09 42.8	
CHEFC	Chefchaouen	1.46	253	P	Pb	21 09 24.8	0.0
CHEFC				S	Sn	21 09 42.1	0.0
EBER	Berja	1.47	24	P	Pb	21 09 25.4	+0.1
EBER	Berja	1.47	24	Pn	Pb	21 09 25.0	-0.2
EBER				Sn	Sb	21 09 44.1	+0.5
EBER				i Vmb_Lg		21 10 03.2	
JBK	JBK	1.50	144	P	Pn	21 09 22.4	-1.9
JBK	JBK	1.50	144	P	Pn	21 09 22.6	-1.7
JBK				S	Sn	21 09 43.8	+0.4
EGOR	Sierra Gorda,	1.60	347	Pg	Pb	21 09 30.7	+3.4
EGOR				S	Sb	21 09 48.8	+1.7
EGOR	Sierra Gorda,	1.60	347	Sn	Sb	21 09 46.6	-0.5
EGOR				Sg	Sn	21 09 50.5	+4.8
EGOR				i Vmb_Lg		21 09 59.3	
EQUE	Quentar	1.66	6	Pn	Pb	21 09 28.6	+0.3
EQUE				Sn	Sb	21 09 48.9	+0.1
EQUE				i Vmb_Lg		21 09 56.1	
IFR	Ifrane	2.37	212	S	Sn	21 10 02.4	-2.4
PVAQ	Vaqueiros	3.77	301	eP	Pb	21 10 01.9	-2.3
PVAQ				eS	Sn	21 10 40.9	+2.0
PVAQ				A	A	21 10 43.6	
	3.0nm,1.0s						
PBAR	Barrancos	3.78	315	eS	Sn	21 10 40.3	+1.1
PBDV	Barranco-do-Ve	3.85	297	eP	Pn	21 10 00.6	+4.2
PBDV				eS	Sn	21 10 44.1	+3.1
MESJ	Messejana	4.33	303	eS	Sn	21 10 55.4	+2.6
OUK	Oukaimeden	5.59	220	P	Pn	21 10 21.3	+0.6
OUK				S	Sn	21 11 24.3	-0.1

IDC 27 21:14:38.0±2.5, 3.°70N×127.°76E, h0^{km}, mb3.3/4, mbtmp3.3/4, 1C, Error ellipse: s-maj=226.8km s-min=23.7km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKMP	Bagumbayan, Su	4.25	311⇑	eP	Pn	21 15 45.7	+1.5
SKMP				eS	Sn	21 16 29.4	-5.1
WRA	Warramunga Arr	24.37	165	P	P	21 19 56.9	-1.2
	0.3nm,0.4s,baz=344,slow=9.6,SNR=7.0						
	0.3nm,0.4s						
ASAR	Alice Springs	27.86	168	P	P	21 20 30.8	+1.2
	0.1nm,0.4s,baz=347,slow=8.0,SNR=1.4						
	0.1nm,0.4s						
MKAR	Makanchi Array	58.17	325	P	P	21 24 33.7	-0.1
	0.2nm,0.4s,baz=129,slow=7.2,SNR=5.3						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	62.32	327	P	P	21 25 02.4	+0.2
	0.2nm,0.4s,baz=126,slow=6.8,SNR=2.4						
	0.2nm,0.4s						

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*IDC **27** 21:22:37.5±1.8, 4.°82S×153.°18E, h66^{km}±13^{km}, mb3.9/13, mbtmp4.3/14, MS3.3/4, Error ellipse: s-maj=19.7km s-min=12.2km az=74.0*

*NEIC **27** 21:22:37.2±1.7, 4.°69S±0.°06×153.°23E±0.°07, h70^{km}±7^{km}, mb4.5/34, Error ellipse: s-maj=13.6km s-min=1.6km az=46.0*

ISC 27 21:22:35.0±0.5, 4.°78S±0.°06×153.°29E±0.°07, h50^{km}, n77, σ1.^{s}00/75, mb4.4/29, MS3.0/3, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.26	298	Pn	Pn	21 22 58.1	+1.8
KRVT	Keravat (AS076	1.34	290	P	Pn	21 22 58.0	+0.6
	866nm,0.3s,baz=235,slow=1.7,SNR=129						
KRVT				S	Sn	21 23 15.6	+1.5
	3µm,0.4s,baz=230,slow=21,SNR=13						
PMG	Port Moresby	7.62	233	P	Pn	21 24 25.4	+1.9
	20nm,0.4s,baz=51,slow=13,SNR=9.2						
PMG				S	Sn	21 25 48.1	-0.6
	152nm,0.8s,baz=168,slow=20,SNR=16						
PMG	Port Moresby	7.62	233	Pn	Pn	21 24 24.6	+1.0
PATS	Pohnpei	12.58	24	Pn	Pn	21 25 31.1	-0.3
COEN	Coen	13.51	227	P	P	21 25 52.5	+0.5
CTA	Charters Tower	16.69	204	LR	LR	21 31 55.2	
	comp=Z,118nm,20.0s,baz=86,slow=34						
EIDS	Eidsvold	20.58	186	P	Pn	21 27 14.0	+1.4
EIDS				IAmb	IAmb	21 27 16.8	
	comp=Z,28nm,1.4s						
FAKI	Fak Fak	21.07	274	P	P	21 27 13.4	-1.9
DZM	Mont Dzumac	21.40	145	P	P	21 27 20.5	+1.6
	comp=Z,7.1nm,0.6s,baz=336,slow=9.4,SNR=11						
	comp=Z,7.1nm,0.6s						
DZM	Mont Dzumac	21.40	145	P	P	21 27 19.8	+0.9
OUENC	Ouen Island, N	21.90	144	P	P	21 27 23.2	-0.9
OUENC				IAmb	IAmb	21 27 33.2	
	comp=Z,14nm,1.1s						
SIJI	Sorong	22.33	279	P	P	21 27 28.6	-0.2
	comp=Z,5.5nm,0.3s,baz=118,slow=22,SNR=7.7						
SIJI				LR	LR	21 37 26.6	
	comp=Z,56nm,19.7s,baz=94,slow=40						
	comp=Z,5.5nm,0.3s						
MTN	Manton Dam	23.29	248	P	P	21 27 37.3	-1.4
WB0	Warramunga Arr	23.68	229	P	P	21 27 41.7	-0.6
WB0				IAmb	IAmb	21 28 22.5	
	comp=Z,27nm,1.5s						
WRAB	Tennant Creek	23.81	229	P	P	21 27 43.0	-0.6
WRAB				IAmb	IAmb	21 27 45.0	
	comp=Z,18nm,1.1s						
WB2	Warramunga Arr	23.81	229	P	P	21 27 42.4	-1.2
WB2				IAmb	IAmb	21 27 45.1	
	comp=Z,16nm,1.1s						
WRA	Warramunga Arr	23.82	229	P	P	21 27 43.6	-0.1
	comp=Z,4.2nm,0.5s,baz=54,slow=9.8,SNR=52						
WRA				PcP	PcP	21 31 25.3	-0.8
	comp=Z,0.4nm,0.6s,baz=62,slow=2.7,SNR=2.4						
WRA				ScP	ScP	21 34 58.7	-1.8
	comp=Z,1.1nm,0.9s,baz=60,slow=2.9,SNR=1.5						
	comp=Z,4.2nm,0.5s						
WRA	Warramunga Arr	23.82	229	P	P	21 27 42.2	-1.5
ARMA	Armidale	25.55	183	P	P	21 27 59.9	+0.5
ARMA				IAmb	IAmb	21 28 38.3	
	comp=Z,17nm,1.4s						
KNRA	Kununurra	26.41	244	P	P	21 28 06.1	-1.1
AS31	Alice Springs	26.49	223	P	P	21 28 07.3	-0.7
ASAR	Alice Springs	26.49	223	P	P	21 28 07.3	-0.7
	comp=Z,2.4nm,0.5s,baz=59,slow=9.1,SNR=17						
ASAR				PcP	PcP	21 31 32.1	0.0
	comp=Z,0.2nm,0.3s,baz=44,slow=3.1,SNR=1.9						
ASAR				ScP	ScP	21 35 06.7	-1.4
	comp=Z,0.7nm,0.7s,baz=46,slow=3.3,SNR=1.6						
ASAR				LR	LR	21 39 04.7	
	comp=Z,100nm,18.1s,baz=76,slow=37						
	comp=Z,2.4nm,0.5s						
H11S3	WAKE ISLAND Hy	26.63	29	T	T	21 55 56.2	
	baz=208,slow=72						
H11S2	WAKE ISLAND Hy	26.64	29	T	T	21 56 07.3	
	baz=208,slow=72						
H11S1	WAKE ISLAND Hy	26.65	29	T	T	21 56 09.0	
	baz=208,slow=72						
H11N1	WAKE ISLAND Hy	27.77	28	T	T	21 58 46.4	
	baz=204						

H11N3	WAKE ISLAND Hy	27.79	28	T	T	21 57 37.5	
	baz=204						
H11N2	WAKE ISLAND Hy	27.79	28	T	T	21 57 53.5	
	baz=204						
STKA	Stephens Creek	29.10	201	P	P	21 28 31.5	+0.4
	comp=Z,1.2nm,0.5s,baz=40,slow=15,SNR=3.8						
	comp=Z,1.2nm,0.5s						
STKA	Stephens Creek	29.10	201	P	P	21 28 31.4	+0.2
FITZ	Fitzroy Crossi	30.09	242	P	P	21 28 39.2	-0.9
KAPI	Kappang	33.41	268	LR	LR	21 44 54.5	
	comp=Z,24nm,19.6s,baz=128,slow=40						
FORT	Forrest	35.11	220	P	P	21 29 22.9	-0.9
MBWA	Marble Bar	36.40	240	P	P	21 29 34.1	-0.9
PSA00	Pilbara Seismi	36.46	240	P	P	21 29 34.0	-1.5
PSA00				IAmb	IAmb	21 30 02.5	
	comp=Z,12nm,1.5s						
RTZ	Ruatahuna	39.98	151	P	P	21 30 04.1	-0.8
RTZ				IAmb	IAmb	21 30 38.0	
	comp=Z,15nm,1.4s						
BKZ	Black Stump Fm	40.17	152	P	P	21 30 07.0	+0.4
TUWZ	Tuamarina	40.91	156	P	P	21 30 13.9	+1.4
LTZ	Lake Taylor	41.43	159	P	P	21 30 18.0	+1.2
LTZ				IAmb	IAmb	21 30 28.5	
	comp=Z,19nm,1.4s						
GVZ	Greta Valley S	41.87	158	P	P	21 30 20.5	+0.1
JNU	Nakatsue	43.27	332	P	P	21 30 32.3	+0.4
	comp=Z,5.9nm,0.9s,baz=6.3,slow=23,SNR=1.9						
	comp=Z,5.9nm,0.9s						
CMAR	Chiang Mai Arr	58.30	295	P	P	21 32 26.0	+0.6
	comp=Z,2.1nm,0.8s,baz=117,slow=5.3,SNR=17						
	comp=Z,2.1nm,0.8s						
SONM	Songino Array	66.56	328	P	P	21 33 21.1	+0.9
	comp=Z,0.5nm,0.5s,baz=149,slow=5.0,SNR=12						
	comp=Z,0.5nm,0.5s						
SONM	Songino Array	66.56	328	P	P	21 33 20.3	+0.1
VNDA	Vanda	72.83	178	P	P	21 33 59.0	+0.9
	comp=Z,2.0nm,0.6s,baz=336,slow=6.8,SNR=15						
	comp=Z,2.0nm,0.6s						
VNDA	Vanda	72.83	178	P	P	21 33 59.0	+0.9
CNPM	China Poot	77.49	25	P	P	21 34 24.3	-0.9
SUA	Susitna One	78.74	24	P	P	21 34 31.6	-0.5
SUA				IAmb	IAmb	21 34 57.5	
	comp=Z,7.3nm,1.3s						
MK31	Makanchi Array	80.63	319	P	P	21 34 42.9	+0.2
MK31				IAmb	IAmb	21 34 44.2	
	comp=Z,3.8nm,1.0s						
MKAR	Makanchi Array	80.63	319	P	P	21 34 43.2	+0.6
	comp=Z,2.8nm,0.7s,baz=99,slow=7.0,SNR=28						
	comp=Z,2.8nm,0.7s						
MKAR	Makanchi Array	80.63	319	P	P	21 34 41.7	-0.9
ZAA0	Zalesovo Array	81.40	326	P	P	21 34 44.6	-1.9
ZALV	Zalesovo Beam	81.40	326	P	P	21 34 46.3	-0.2
	comp=Z,0.8nm,0.5s,baz=121,slow=5.1,SNR=5.9						
	comp=Z,0.8nm,0.5s						
ZALV	Zalesovo Beam	81.40	326	P	P	21 34 46.5	0.0
ILAR	Eielson Array	81.96	22	P	P	21 34 49.8	+0.6
	comp=Z,0.3nm,0.6s,baz=243,slow=4.0,SNR=2.0						
	comp=Z,0.3nm,0.6s						
KDJ	Kajisay	82.95	313	P	P	21 34 54.6	-0.5
KDJ				IAmb	IAmb	21 34 57.1	
	comp=Z,3.2nm,0.7s						
KURK	Kurchatov	84.05	322	P	P	21 35 00.5	+0.2
KURK				IAmb	IAmb	21 35 01.4	
	comp=Z,4.7nm,0.9s						
TKM2	Tokmak 2	84.26	314	P	P	21 35 02.9	+1.0
	SNR=6.6						
KBK	Karagaybulak	84.68	313	P	P	21 35 05.3	+1.4
	SNR=5.1						
CHMS	Chumysh	84.89	314	P	P	21 35 05.8	+0.9
	SNR=6.1						
UCH	Uchtor	84.91	313	P	P	21 35 07.1	+1.6
	SNR=7.4						
AAK	Ala-Archa	85.00	313	P	P	21 35 06.8	+1.2
	SNR=6.2						
AAK	Ala-Archa	85.00	313	P	P	21 35 05.7	+0.1
AAK				IAmb	IAmb	21 35 07.4	
	comp=Z,4.9nm,0.7s						
USP	Ospenovka	85.12	314	P	P	21 35 07.0	+1.0
	SNR=7.4						
QSPA	South Pole Qui	85.18	180	P	P	21 35 06.2	+0.3
QSPA				IAmb	IAmb	21 35 07.5	
	comp=Z,5.9nm,0.7s						
AML	Almayashu	85.49	313	P	P	21 35 09.8	+1.5
	SNR=12						
EKS2	Erkin-Say	85.53	313	P	P	21 35 09.5	+1.4
	SNR=7.5						
NRIK	Noril'sk	86.10	341	P	P	21 35 10.3	+0.1
	comp=Z,3.7nm,0.5s,baz=117,slow=4.6,SNR=5.7						
	comp=Z,3.7nm,0.5s						
NRIK	Noril'sk	86.10	341	P	P	21 35 10.2	+0.1
NRIK				IAmb	IAmb	21 35 11.3	
	comp=Z,3.9nm,0.6s						
KK31	Karatay Array	87.97	313	P	P	21 35 19.0	-0.9
KK31				IAmb	IAmb	21 35 20.8	
	comp=Z,2.7nm,1.1s						
KKAR	Karatay Array	87.97	313	P	P	21 35 19.3	-0.6
KKAR				IAmb	IAmb	21 35 20.8	
	comp=Z,2.7nm,1.1s						
BRVK	Borovoye	89.58	323	P	P	21 35 26.4	-0.9
PLCA	Paso Flores	119.50	143	PKP	PKiKP	21 41 20.4	+0.7
	comp=Z,0.6nm,0.5s,baz=257,slow=4.5,SNR=6.5						
GERES	GERESS Array B	124.29	329	PKP	PKiKP	21 41 29.3	+0.4
	comp=Z,0.3nm,0.5s,baz=20,slow=1.6,SNR=4.1						
BDFB	Brasilia	150.74	134	PKPbc	PKiKP	21 42 23.6	0.0
	comp=Z,2.1nm,0.4s,baz=190,slow=3.5,SNR=5.5						
TORD	Torodi Ar. Bea	150.76	288	PKPbc	PKiKP	21 42 22.9	-0.7
	comp=Z,3.3nm,0.5s,baz=72,slow=2.2,SNR=34						
TORD				PKPab	pPKPdf	21 42 30.1	-1.8
	comp=Z,54nm,0.4s,baz=88,slow=3.8,SNR=9.9						

IDC 27 21:26:07.8±0.4, 6°.20N×33°.03W, h0^{km}, mb4.4/36, mbtmp4.5/37, ML5.0/1, MS3.8/49, Error ellipse: s-maj=13.2km s-min=11.0km az=166.0

NEIC 27 21:26:09.2±1.2, 6°.1N±0°.1×32°.96W±0°.10, h10^{km}±1^{km}, mb5.1/189, Error ellipse: s-maj=19.9km s-min=15.1km az=156.0

ISC 27 21:26:09.0±0.3**, 6°.13N**±0°.06×**32°.98W**±0°.06**, h10**^{km}**, n461,** σ**1^{s}08**/413**, mb5.0**/137**, MS3.8**/47**, 1C, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	Riachuelo	12.23	194	*e*P	Pn	21 29 01.7	-1.7
SACV	Santiago Islan	12.73	46	Pn	Pn	21 29 07.7	-2.5
TMAB	Tom-Au,PA,Br	17.29	241	*e*P	P	21 30 12.3	+0.2
MBO	M'Bour	17.77	61	Pn	Pn	21 30 15.0	-1.7
BBTS	Babate	18.26	61	P	P	21 30 23.2	+0.4
	4.7nm,0.3s,baz=147,slow=22,SNR=6.7						
BBTS				LR	LR	21 35 50.0	
	comp=Z,454nm,19.6s,baz=231,slow=32						
	51nm,0.8s						
MDP	Montagnes des	19.59	268	LR	LR	21 37 27.9	
	comp=Z,57nm,18.5s,baz=359,slow=35						
MCPB	Macapa, AP	20.10	252	*e*P	P	21 30 43.0	-0.1
PRPB	Parauapebas	20.77	234	*e*P	P	21 30 50.4	0.0
SMTB	Santa Maria do	20.82	224	*e*P	P	21 30 51.3	+0.3
SDBA	SAO DESIDERIO	21.90	213	*e*P	P	21 31 02.1	-0.5
MALB	Monte Alegre	22.68	250	*e*P	P	21 31 11.8	+0.9
H10N3	ASCENSION HYDR	23.07	127	T	T	21 55 09.1	
	baz=306,slow=75,SNR=52						
H10N2	ASCENSION HYDR	23.08	127	T	T	21 55 10.7	
	baz=306,slow=75,SNR=45						
H10N1	ASCENSION HYDR	23.09	127	T	T	21 55 10.6	
	baz=306,slow=75,SNR=41						
GUA01	Guaratinga, BA	23.55	197	*e*P	P	21 31 19.6	-0.2
H10S3	ASCENSION HYDR	23.62	129	T	T	21 55 50.8	
	baz=306,slow=74,SNR=78						
H10S2	ASCENSION HYDR	23.64	129	T	T	21 55 52.1	
	baz=274,slow=74,SNR=26						
JANB	Januaria	23.86	208	*e*P	P	21 31 23.4	+0.6
ITTB	Itaituba	24.99	246	*e*P	P	21 31 33.7	+0.4
SNDB	Serra Nova Dou	25.59	225	*e*P	P	21 31 39.5	+0.8
NPGB	Novo Progresso	25.88	240	*e*P	P	21 31 40.8	-0.5
SJMB	Sao Joao De Ma	25.96	198	*e*P	P	21 31 42.5	+0.5
BDFB	Brasilia	26.26	214	P	P	21 31 45.2	+0.5
	5.8nm,0.8s,baz=47,slow=8.5,SNR=7.6						
BDFB				LR	LR	21 41 11.2	
	comp=Z,467nm,18.1s,baz=344,slow=34						
	5.8nm,0.8s						
BDFB	Brasilia	26.26	214	P	P	21 31 42.9	-1.9
BDFB	Brasilia	26.26	214	*e*P	P	21 31 47.2	+2.4
BOAV	Boa Vista	27.71	263	P	P	21 31 57.0	-0.8
BOAV	Boa Vista	27.71	263	*e*P	P	21 31 58.5	+0.7
DBIC	Dimbokro	27.96	87	P	P	21 32 01.2	+1.2
	5.2nm,0.8s,baz=277,slow=11,SNR=9.4						
DBIC				LR	LR	21 40 53.2	
	comp=Z,75nm,21.1s,baz=283,slow=32						
	5.2nm,0.8s						
DBIC	Dimbokro	27.96	87	P	P	21 31 59.0	-1.1
H05S1	Guadeloupe/Mar	28.59	289	T	T	22 01 47.2	
	SNR=11						
ARAG	Araguaiana, MT	28.61	220	*e*P	P	21 32 07.1	+1.3
PDRB	Porto dos Gac	29.47	233	*e*P	P	21 32 13.9	+0.4
SALV	Santo Antonio	31.38	226	*e*P	P	21 32 31.1	+0.7
SMRT	St. Maarten	31.66	295	P	P	21 32 33.7	+0.9
SMRT				IAmb	IAmb	21 33 43.9	
	comp=Z,28nm,0.9s						
RVDE	Rio Verde (Bra	33.06	220	*e*P	P	21 32 46.5	+1.4
CDVI	St. Croix	33.11	293	P	P	21 32 44.5	-1.0
PET01	Itanhaem-SP	33.29	204	*e*P	P	21 32 47.9	+0.9
SAML	Samuel	33.62	244	P	P	21 32 50.0	0.0
SAML	Samuel	33.62	244	*e*P	P	21 32 51.0	+0.9
PTLB	Pontes e Lacer	33.63	230	P	P	21 32 48.8	-1.3
PTLB	Pontes e Lacer	33.63	230	*e*P	P	21 32 51.4	+1.4
SJG	San Juan	34.47	293	P	P	21 32 57.2	-0.1
	comp=Z,9.1nm,0.5s,baz=65,slow=6.1,SNR=6.0						
SJG				LR	LR	21 44 20.8	
	comp=Z,91nm,21.7s,baz=96,slow=32						
	comp=Z,9.1nm,0.5s						
CELP	Cerrillos	34.85	293	P	P	21 33 00.3	-0.4
CELP				IAmb	IAmb	21 33 01.8	
	comp=Z,26nm,0.8s						
BAUV	El Baul	34.86	277	P	P	21 33 01.2	+0.4
BAUV				IAmb	IAmb	21 33 02.8	
	comp=Z,30nm,1.1s						
TOA0	Torodi Ar. Sit	34.86	76	P	P	21 32 58.5	-2.3
TORD	Torodi Ar. Bea	34.86	76	P	P	21 33 01.0	+0.2
	comp=Z,12nm,0.6s,baz=269,slow=8.3,SNR=9.0						
TORD				LR	LR	21 45 37.7	
	comp=Z,126nm,19.2s,baz=255,slow=34						
	comp=Z,12nm,0.6s						
CRPR	Cabo Rojo, PR	35.32	293	P	P	21 33 04.7	0.0
SIV	San Ignacio	35.44	231	P	P	21 33 07.0	+1.2
	comp=Z,9.9nm,0.8s,baz=80,slow=10,SNR=26						
SIV				LR	LR	21 46 30.1	
	comp=Z,206nm,21.2s,baz=97,slow=34						
	comp=Z,9.9nm,0.8s						
BBSD	Serra de San D	35.80	229	*e*P	P	21 33 10.0	+1.1
ETMB	Extrema	36.70	245	P	P	21 33 15.6	-1.0
ETMB	Extrema	36.70	245	*e*P	P	21 33 17.2	+0.6
SDV	Santo Domingo	37.41	277	P	P	21 33 22.2	-0.7
SDV	Santo Domingo	37.41	277	*e*P	P	21 33 23.6	+0.7
MDT	Midelt	37.45	41	LR	LR	21 47 51.0	
	comp=Z,191nm,18.6s,baz=252,slow=35						
TBTG	Tabatinga, AM	38.27	255	P	P	21 33 29.3	-0.6
CRSM	Crissiumal (Br	39.14	210	*e*P	P	21 33 38.0	+1.0
SDDR	Presa de Saban	39.41	292	P	P	21 33 39.9	+0.5
RUSC	La Rusia	39.87	272	*e*P	P	21 33 44.7	+0.8
CPUP	Villa Florida	39.98	215	P	P	21 33 44.6	+0.6
	comp=Z,1.9nm,0.8s,baz=48,slow=11,SNR=2.9						
CPUP				LR	LR	21 50 04.3	
	comp=Z,424nm,18.1s,baz=47,slow=36						
	comp=Z,1.9nm,0.8s						
CPUP	Villa Florida	39.98	215	P	P	21 33 43.5	-0.5
CPUP	Villa Florida	39.98	215	*e*P	P	21 33 45.3	+1.2
ROSC	El Rosal	41.16	270	P	P	21 33 54.5	0.0
	comp=Z,6.6nm,0.4s,baz=113,slow=20,SNR=4.8						
ROSC				LR	LR	21 51 20.0	
	comp=Z,98nm,20.0s,baz=77,slow=37						
	comp=Z,6.6nm,0.4s						
ROSC	El Rosal	41.16	270	P	P	21 33 52.0	-2.5
ROSC				IAmb	IAmb	21 33 56.9	
	comp=Z,77nm,1.8s						
LPAZ	La Paz	41.30	237	P	P	21 33 56.0	+0.2
	comp=Z,10nm,0.8s,baz=59,slow=6.9,SNR=25						
LPAZ				LR	LR	21 50 21.9	
	comp=Z,143nm,18.5s,baz=70,slow=35						
	comp=Z,10nm,0.8s						
LPAZ	La Paz	41.30	237	P	P	21 33 54.9	-0.9
LPAZ	La Paz	41.30	237	*e*P	P	21 33 55.3	-0.5
LPAZ	La Paz	41.30	237	*e*P	P	21 33 56.4	+0.6
NORC	Norcasia	41.66	271	*e*P	P	21 33 54.4	-3.9
CZSB	Cruzeiro do Su	41.94	251	P	P	21 33 59.7	-0.7
CZSB				IAmb	IAmb	21 34 00.9	
	comp=Z,52nm,1.2s						
CZSB	Cruzeiro do Su	41.94	251	*e*P	P	21 34 00.3	-0.1
RODS	Rosario do Sul	42.06	209	*e*P	P	21 34 02.2	+1.1
ORTC	Ortega, Tolima	42.15	269	*e*P	P	21 34 00.1	-2.1
ESDC	Sonseca Array	42.40	34	P	P	21 34 04.6	+0.7
	comp=Z,0.9nm,0.9s,baz=224,slow=8.3,SNR=5.5						
ESDC				LR	LR	21 47 39.7	
	comp=Z,112nm,21.0s,baz=220,slow=30						
	comp=Z,0.9nm,0.9s						
PLTB	Pedras Altas	42.51	206	*e*P	P	21 34 06.3	+1.5
MECA	Mercedes	42.75	213	*e*P	P	21 34 08.0	+1.3
PLMC	San Jos del P	43.11	271	*e*P	P	21 34 07.8	-2.2
PB16	IPOC Station P	43.46	235	P	P	21 34 11.3	-2.1
LVC	Limon Verde	45.29	230	LR	LR	21 54 27.4	
	comp=Z,149nm,18.8s,baz=50,slow=38						
LVC	Limon Verde	45.29	230	P	P	21 34 25.9	-1.8
LVC				IAmb	IAmb	21 34 28.8	
	comp=Z,30nm,1.9s						
LVC	Limon Verde	45.29	230	*e*P	P	21 34 27.8	+0.1
OTAV	Otavalo	45.75	264	P	P	21 34 30.8	-0.9
OTAV	Otavalo	45.75	264	*e*P	P	21 34 33.2	+1.6
PB15	IPOC Station P	46.05	229	P	P	21 34 33.0	-0.6
PB15				IAmb	IAmb	21 34 35.6	
	comp=Z,17nm,1.1s						
NNA	Nana	47.18	248	LR	LR	21 53 41.7	
	comp=Z,123nm,20.7s,baz=72,slow=35						
ATAH	Atahualpa	47.18	254	LR	LR	21 55 34.3	
	comp=Z,145nm,18.2s,baz=64,slow=38						
GO02	Mina Guanaco	47.27	227	P	P	21 34 41.5	-1.7
KEST	Kesra	48.72	47	LR	LR	21 55 27.4	
	comp=Z,214nm,19.8s,baz=206,slow=36						
BRU2	Volcan	49.33	276	P	P	21 34 57.1	-2.0
BATG	Bathurst New B	49.83	331	P	P	21 35 02.1	-0.2
CFA	Coronel Fontan	50.39	220	LR	LR	21 56 30.7	
	comp=Z,128nm,18.3s,baz=58,slow=36						
CO01	Juntas del Tor	50.55	223	P	P	21 35 08.0	-0.3
TUPA	Temple Univers	50.76	318	P	P	21 35 10.0	+0.6
	baz=120						
U59A	Littleton	50.80	313	P	P	21 35 09.8	0.0
U59A	Littleton	50.80	313	P	P	21 35 10.9	+1.2
	baz=115						
U59A				P	P	21 35 10.9	+1.2
	baz=115						
T59A	Double "B" Far	50.89	314	P	P	21 35 11.0	+0.6
	baz=116						
T59A				P	P	21 35 11.0	+0.6
	baz=116						
NPNY	Mohonk Preserv	50.91	321	P	P	21 35 11.7	+1.1
	baz=123						
V58A	Windy Hill, Pi	51.54	312	P	P	21 35 15.8	+0.4
V58A				IAmb	IAmb	21 35 17.6	
	comp=Z,24nm,1.0s						
V58A	Windy Hill, Pi	51.54	312	P	P	21 35 16.9	+1.6
	baz=114,SNR=9.5						
V58A				P	P	21 35 16.9	+1.6
	baz=114,SNR=9.5						
R58B	Mineral	51.56	315	P	P	21 35 14.7	-0.8
R58B	Mineral	51.56	315	P	P	21 35 16.2	+0.8
	baz=116						
R58B				P	P	21 35 16.2	+0.8
	baz=116						
W57A	Gilead	51.95	310	P	P	21 35 19.5	+1.1
	baz=113						
W57A				P	P	21 35 19.5	+1.1
	baz=113						
BIRD	Birdtown, Kers	52.11	310	P	P	21 35 19.6	0.0
BIRD				IAmb	IAmb	21 35 22.0	
	comp=Z,30nm,1.3s						
BIRD	Birdtown, Kers	52.11	310	P	P	21 35 21.0	+1.4
	baz=112						
T57A	Hurt	52.13	313	P	P	21 35 20.6	+0.8
	baz=115						
T57A				P	P	21 35 20.6	+0.8
	baz=115						
S57A	Dark Hollow, R	52.24	314	P	P	21 35 20.1	-0.4
S57A				IAmb	IAmb	21 37 12.2	
	comp=Z,57nm,2.0s						
S57A	Dark Hollow, R	52.24	314	P	P	21 35 21.7	+1.2
	baz=115						
S57A				P	P	21 35 21.7	+1.2
	baz=115						
BOAB	BOACO BROADBAN	52.30	281	P	P	21 35 20.4	-1.0
BINY	Binghamton	52.32	320	P	P	21 35 21.3	+0.3
	baz=121						
P57A	Homestead Farm	52.34	316	P	P	21 35 21.9	+0.6
	baz=117						
P57A				P	P	21 35 21.9	+0.6
	baz=117						
J58A	Remsen	52.49	322	P	P	21 35 23.1	+0.8
	baz=123						
J58A				P	P	21 35 23.1	+0.8
	baz=123						
HAW	Hawthorne Fire	52.55	308	P	P	21 35 24.1	+1.2
	baz=110						
MATN	Matagalpa	52.57	282	P	P	21 35 22.9	-0.5
JSC	Jenkinsville	52.60	309	P	P	21 35 23.8	+0.6
	baz=111						
K57A	Scipio Center	52.93	321	P	P	21 35 26.0	+0.4
	baz=121						
KMSC	Kings Mountain	52.96	310	P	P	21 35 27.6	+1.6
	baz=112						
KMSC	Kings Mountain	52.96	310	P	P	21 35 26.2	+0.2
	baz=112						
PABK	Blue Knob Stat	53.09	317	P	P	21 35 26.9	+0.1
	baz=117						
V55A	Taylorsville	53.13	311	P	P	21 35 29.2	+2.0
	baz=112,SNR=6.9						
V55A				P	P	21 35 29.2	+2.0
	baz=112,SNR=6.9						
VAE	Valguarnera	53.15	47	LR	LR	21 58 26.6	
	comp=Z,177nm,19.5s,baz=312,slow=36						
PAULI	Pauline	53.22	309	P	P	21 35 29.0	+1.2
	baz=111						
L56A	Greenwood	53.29	319	P	P	21 35 28.4	0.0
	baz=120						
L56A				P	P	21 35 28.4	0.0
	baz=120						
HODGE	Hodges	53.35	309	P	P	21 35 30.4	+1.6
	baz=110,SNR=6.0						
PSDB	Penn State Uni	53.60	318	P	P	21 35 32.0	+1.4
	baz=118						
M55A	Ridgway	53.77	318	P	P	21 35 33.2	+1.4
	baz=118						
M55A				P	P	21 35 33.2	+1.4
	baz=118						
U54A	Nelsons Funny	53.84	311	P	P	21 35 34.1	+1.6
	baz=112						
U54A				P	P	21 35 34.1	+1.6
	baz=112						
S54A	Dingess, Beckl	53.95	313	IAmb	IAmb	21 35 35.5	
	comp=Z,18nm,0.9s						
S54A	Dingess, Beckl	53.95	313	P	P	21 35 34.5	+1.2
	baz=113						
S54A				P	P	21 35 34.5	+1.2
	baz=113						
Q54A	Coxs Mills	54.09	314	IAmb	IAmb	21 35 36.5	
	comp=Z,15nm,0.9s						
Q54A	Coxs Mills	54.09	314	P	P	21 35 36.0	+1.8
	baz=115,SNR=5.7						
Q54A				P	P	21 35 36.0	+1.8
	baz=115,SNR=5.7						
BG3	Lake Jocassee	54.13	309	P	P	21 35 34.0	-0.7
BG3				IAmb	IAmb	21 35 37.3	
	comp=Z,26nm,0.9s						
CASEE	Lake Jocassee	54.13	309	P	P	21 35 36.5	+1.9
	baz=110,SNR=10						
O54A	Avella	54.28	316	P	P	21 35 36.8	+1.2
	baz=116						
O54A				P	P	21 35 36.8	+1.2
	baz=116						
V53A	Saluda	54.28	310	IAmb	IAmb	21 35 38.0	
	comp=Z,18nm,1.2s						
V53A	Saluda	54.28	310	P	P	21 35 36.8	+1.1
	baz=111						
V53A				P	P	21 35 36.8	+1.1
	baz=111						
EKA	Eskdalemuir Ar	54.55	20	LR	LR	21 55 07.5	
	comp=Z,195nm,19.8s,baz=193,slow=32						
Y52A	Lilburn	54.65	307	P	P	21 35 38.1	-0.2
Y52A				IAmb	IAmb	21 35 40.4	
	comp=Z,9.4nm,0.8s						
Y52A	Lilburn	54.65	307	P	P	21 35 39.9	+1.6
	baz=109						
Y52A				P	P	21 35 39.9	+1.6
	baz=109						
P53A	Whipple	54.69	315	IAmb	IAmb	21 35 40.6	
	comp=Z,22nm,0.8s						
P53A	Whipple	54.69	315	P	P	21 35 40.1	+1.6
	baz=114,SNR=8.3						
P53A				P	P	21 35 40.1	+1.6
	baz=114,SNR=8.3						
DAVOX	Davos/Dischmat	54.70	35	LR	LR	21 56 57.2	
	comp=Z,106nm,19.0s,baz=260,slow=34						
N53A	Lisbon	54.86	317	P	P	21 35 41.0	+1.2
	baz=116						
N53A				P	P	21 35 41.0	+1.2
	baz=116						
O53A	New Philadelph	54.88	316	IAmb	IAmb	21 35 42.1	
	comp=Z,16nm,0.8s						
V52A	Sevierville	54.94	310	P	P	21 35 41.1	+0.7
	baz=110						
DAVA	Damuels	54.98	34	*i* P	P	21 35 42.3	+1.6
	comp=Z,7.6nm,1.4s						
TKL	Tuckaleechee C	55.01	310	P	P	21 35 40.6	-0.3
	comp=Z,7.8nm,0.8s,baz=144,slow=8.9,SNR=7.3						
	comp=Z,7.8nm,0.8s						
TKL	Tuckaleechee C	55.01	310	P	P	21 35 41.9	+1.0
	baz=110						
M53A	WI Miller and	55.03	317	P	P	21 35 42.5	+1.5
	baz=116						
Q52A	Bidwell	55.10	314	P	P	21 35 42.8	+1.2
	baz=113,SNR=6.3						
Q52A				P	P	21 35 42.8	+1.2
	baz=113,SNR=6.3						
TZTN	Tazewell	55.14	311	P	P	21 35 43.4	+1.5
	baz=111						
TZTN	Tazewell	55.14	311	P	P	21 35 43.4	+1.5
	baz=111						
O52A	Adamsville	55.26	315	IAmb	IAmb	21 35 44.9	
	comp=Z,21nm,0.8s						
O52A	Adamsville	55.26	315	P	P	21 35 43.9	+1.2
	baz=114						
O52A				P	P	21 35 43.9	+1.2
	baz=114						
P52A	Corning	55.27	315	P	P	21 35 44.0	+1.2
	baz=114						
FETA	Feichten	55.31	35	*e*P	P	21 35 45.2	+2.1
	comp=Z,2.7nm,0.9s						
X51A	Calhoun	55.49	308	P	P	21 35 45.7	+1.3
	baz=108						
X51A				P	P	21 35 45.7	+1.3
	baz=108						
V51A	Loudon	55.50	310	IAmb	IAmb	21 35 46.6	
	comp=Z,20nm,0.9s						
V51A	Loudon	55.50	310	P	P	21 35 45.6	+1.2
	baz=110						
CPCT	Cooper Cave	55.52	309	P	P	21 35 44.0	-0.6
CPCT				IAmb	IAmb	21 35 46.8	
	comp=Z,14nm,1.0s						
S51A	Beattyville	55.57	312	IAmb	IAmb	21 35 47.2	
	comp=Z,14nm,0.9s						
S51A	Beattyville	55.57	312	P	P	21 35 46.6	+1.7
	baz=111,SNR=5.1						
S51A				P	P	21 35 46.6	+1.7
	baz=111,SNR=5.1						
RETA	Reutte	55.59	35	*i* P	P	21 35 46.2	+1.2
	comp=Z,2.0nm,1.0s						
SCHQ	Schefferville	55.65	337	P	P	21 35 45.6	+0.5
	comp=Z,5.7nm,0.8s,baz=186,slow=14,SNR=7.3						
	comp=Z,5.7nm,0.8s						
SQTA	Sankt Quirin	55.70	35	*i* P	P	21 35 47.1	+1.2
	comp=Z,4.8nm,1.0s						
TSUM	Tsumeb	55.79	118	P	P	21 35 48.5	+1.6
	comp=Z,4.8nm,0.8s,baz=279,slow=8.4,SNR=4.6						
TSUM				LR	LR	21 55 45.1	
	comp=Z,57nm,18.7s,baz=248,slow=32						
	comp=Z,4.8nm,0.8s						
P51A	Williamsport	55.87	314	IAmb	IAmb	21 35 49.0	
	comp=Z,19nm,0.8s						
P51A	Williamsport	55.87	314	P	P	21 35 47.9	+0.8
	baz=113						
P51A				P	P	21 35 47.9	+0.8
	baz=113						
WTTA	Wattenberg	55.97	35	*i* P	P	21 35 49.2	+1.3
	comp=Z,3.4nm,0.8s						
N51A	Ashland	55.97	316	P	P	21 35 48.8	+1.0
	baz=114						
N51A				P	P	21 35 48.8	+1.0
	baz=114						
WATA	Walderalm	55.97	35	*i* P	P	21 35 48.9	+1.1
	comp=Z,3.1nm,0.8s						
W50A	Signal Mountai	56.05	309	IAmb	IAmb	21 35 50.3	
	comp=Z,12nm,0.8s						
W50A	Signal Mountai	56.05	309	P	P	21 35 50.0	+1.5

	baz=108,SNR=5.1						
ACSO	**Alum Creek Sta**	**56.11**	**315**	IAmb	IAmb	21 35 50.8	
	comp=Z,21nm,0.8s						
ACSO	**Alum Creek Sta**	**56.11**	**315**	P	**P**	**21 35 50.0**	**+1.2**
	baz=114						
ACSO	**Alum Creek Sta**	**56.11**	**315**	P	**P**	**21 35 49.6**	**+0.9**
	baz=114						
ABTA	**Abfaltersbach**	**56.20**	**36**	*e*P	**P**	**21 35 51.5**	**+2.1**
	comp=Z,6.3nm,1.0s						
T50A	**Nancy**	**56.28**	**311**	P	**P**	**21 35 51.2**	**+1.2**
	baz=110						
T50A				P	**P**	**21 35 51.2**	**+1.2**
	baz=110						
R50A	**Paris**	**56.34**	**312**	P	**P**	**21 35 51.7**	**+1.2**
	baz=111						
R50A				P	**P**	**21 35 51.7**	**+1.2**
	baz=111						
Y49A	**Blount Mountai**	**56.51**	**307**	IAmb	IAmb	21 35 53.9	
	comp=Z,29nm,1.4s						
Y49A	**Blount Mountai**	**56.51**	**307**	P	**P**	**21 35 52.9**	**+1.2**
	baz=107						
SWET	**Sewanee**	**56.53**	**308**	P	**P**	**21 35 52.9**	**+0.9**
LRAL	**Lakeview Retre**	**56.75**	**306**	IAmb	IAmb	21 35 56.1	
	comp=Z,18nm,1.1s						
LRAL	**Lakeview Retre**	**56.75**	**306**	P	**P**	**21 35 54.6**	**+1.2**
	baz=106						
LRAL	**Lakeview Retre**	**56.75**	**306**	P	**P**	**21 35 54.7**	**+1.2**
	baz=106,SNR=8.8						
U49A	**Red Boiling Sp**	**56.83**	**310**	IAmb	IAmb	21 35 56.3	
	comp=Z,23nm,1.1s						
U49A	**Red Boiling Sp**	**56.83**	**310**	P	**P**	**21 35 54.8**	**+0.9**
	baz=109,SNR=6.6						
KBA	**Koelnbreinsper**	**56.86**	**36**	*e*P	**P**	**21 35 55.8**	**+1.6**
	comp=Z,5.7nm,1.0s						
R49A	**Shelbyville**	**56.97**	**312**	IAmb	IAmb	21 35 57.0	
	comp=Z,11nm,0.9s						
R49A	**Shelbyville**	**56.97**	**312**	P	**P**	**21 35 55.3**	**+0.4**
	baz=110						
R49A				P	**P**	**21 35 55.3**	**+0.4**
	baz=110						
O49A	**Covington**	**57.05**	**315**	IAmb	IAmb	21 35 57.1	
	comp=Z,14nm,0.9s						
O49A	**Covington**	**57.05**	**315**	P	**P**	**21 35 56.1**	**+0.7**
	baz=112						
O49A				P	**P**	**21 35 56.1**	**+0.7**
	baz=112						
P49A	**Miami Univ. Ec**	**57.08**	**314**	P	**P**	**21 35 56.0**	**+0.3**
	baz=112						
CLTN	**Cedars of Leba**	**57.11**	**309**	P	**P**	**21 35 55.8**	**-0.2**
CLTN				IAmb	IAmb	21 35 58.1	
	comp=Z,17nm,1.2s						
X48A	**Hartselle**	**57.18**	**307**	P	**P**	**21 35 57.7**	**+1.2**
	baz=107						
BIOA	**Bad Ischl, Aus**	**57.35**	**36**	*e*P	**P**	**21 35 58.4**	**+1.0**
	comp=Z,5.2nm,0.9s						
V48A	**Smith Brothers**	**57.38**	**309**	IAmb	IAmb	21 36 00.0	
	comp=Z,20nm,0.8s						
V48A	**Smith Brothers**	**57.38**	**309**	P	**P**	**21 35 59.0**	**+1.0**
	baz=108,SNR=8.5						
P48A	**Milroy**	**57.56**	**313**	P	**P**	**21 35 59.7**	**+0.6**
	baz=111						
P48A				P	**P**	**21 35 59.7**	**+0.6**
	baz=111						
Z47A	**Carrollton**	**57.66**	**306**	P	**P**	**21 36 01.5**	**+1.7**
	baz=105						
O48B	**Farmland**	**57.66**	**314**	P	**P**	**21 36 00.6**	**+0.8**
	baz=112						
O48B	**Farmland**	**57.66**	**314**	P	**P**	**21 35 59.6**	**-0.1**
	baz=112						
GO06	**Curarrehue**	**57.71**	**215**	IAmb	IAmb	21 36 01.3	
	comp=Z,15nm,0.9s						
WCI	**Wyandotte Cave**	**57.77**	**312**	P	**P**	**21 36 01.3**	**+0.7**
WCI				IAmb	IAmb	21 36 02.7	
	comp=Z,15nm,0.8s						
WCI	**Wyandotte Cave**	**57.77**	**312**	P	**P**	**21 36 02.4**	**+1.8**
	baz=110						
WCI	**Wyandotte Cave**	**57.77**	**312**	P	**P**	**21 36 01.9**	**+1.3**
	baz=110,SNR=5.5						
MOA	**Molln**	**57.79**	**36**	*e*P	**P**	**21 36 01.6**	**+1.0**
	comp=Z,3.9nm,0.9s						
L48A	**N Adams**	**57.80**	**316**	P	**P**	**21 36 01.7**	**+1.0**
	baz=113						
L48A				P	**P**	**21 36 01.7**	**+1.0**
	baz=113						
GERES	**GERESS Array B**	**57.98**	**35**	P	**P**	**21 36 01.3**	**-0.7**
	comp=Z,1.5nm,0.8s,baz=235,slow=4.7,SNR=10						
GERES				LR	LR	21 58 35.0	
	comp=Z,122nm,20.1s,baz=255,slow=34						
	comp=Z,1.5nm,0.8s						
T47A	**Sharon Grove**	**57.98**	**310**	P	**P**	**21 36 03.0**	**+0.9**
	baz=108,SNR=15						
PLCA	**Paso Flores**	**57.99**	**213**	P	**P**	**21 36 02.2**	**+0.1**
	comp=Z,2.2nm,1.1s,baz=8.1,slow=10.0,SNR=3.2						
PLCA				LR	LR	22 00 44.4	
	comp=Z,397nm,20.6s,baz=59,slow=36						
	comp=Z,2.2nm,1.1s						
PLAL	**Pickwick Lake**	**58.15**	**308**	IAmb	IAmb	21 36 04.9	
	comp=Z,24nm,1.2s						
N47A	**Urbana**	**58.27**	**315**	P	**P**	**21 36 04.7**	**+0.7**
	baz=112						
N47A				P	**P**	**21 36 04.7**	**+0.7**
	baz=112						
P46A	**Rosedale**	**58.91**	**313**	P	**P**	**21 36 09.4**	**+0.9**
	baz=110						
W45A	**Hickory Valley**	**59.07**	**307**	P	**P**	**21 36 10.1**	**+0.4**
	baz=106						
OXF	**Oxford**	**59.08**	**307**	P	**P**	**21 36 10.5**	**+0.7**
	baz=105						
SFIN	**Lafayette**	**59.09**	**314**	IAmb	IAmb	21 36 11.5	
	comp=Z,21nm,0.9s						
SFIN	**Lafayette**	**59.09**	**314**	P	**P**	**21 36 10.5**	**+0.8**
	baz=110						
SFIN	**Lafayette**	**59.09**	**314**	P	**P**	**21 36 11.0**	**+1.3**
	baz=110						
BORG	**Borgarnes**	**59.10**	**6**	LR	LR	21 56 36.8	
	comp=Z,90nm,19.7s,baz=215,slow=31						
T45B	**Paducah**	**59.17**	**310**	P	**P**	**21 36 11.2**	**+0.8**
	baz=107						
OLIL	**Olney**	**59.28**	**312**	P	**P**	**21 36 12.0**	**+0.9**
	baz=108						
KRUC	**Moravsky**	**59.62**	**35**	*e*P	**P**	**21 36 14.4**	**+1.1**
DIVS	**Divibare**	**59.67**	**42**	P	**P**	**21 36 14.8**	**+0.9**
SIUC	**Southern Illin**	**59.81**	**310**	IAmb	IAmb	21 36 16.2	
	comp=Z,14nm,0.8s						
MODS	**Modra-Piesok**	**59.81**	**36**	*e*P	**P**	**21 36 16.5**	**+1.9**
S44A	**Carbondale**	**59.83**	**310**	IAmb	IAmb	21 36 16.2	
	comp=Z,15nm,0.9s						
S44A	**Carbondale**	**59.83**	**310**	P	**P**	**21 36 15.6**	**+0.7**
	baz=107						
VRAC	**Vranov**	**59.86**	**35**	LR	LR	21 59 24.4	
	comp=Z,76nm,20.6s,baz=294,slow=33						
VRAC	**Vranov**	**59.86**	**35**	*e*P	**P**	**21 36 16.5**	**+1.6**
O44A	**Mansfield**	**60.00**	**313**	P	**P**	**21 36 17.0**	**+0.9**
	baz=109						
Q44A	**Meyer Farm, Va**	**60.01**	**312**	P	**P**	**21 36 15.4**	**-0.7**
Q44A				IAmb	IAmb	21 36 17.3	
	comp=Z,18nm,0.8s						
Q44A	**Meyer Farm, Va**	**60.01**	**312**	P	**P**	**21 36 16.6**	**+0.4**
	baz=108,SNR=5.2						
M44A	**Midewin, Midew**	**60.11**	**315**	IAmb	IAmb	21 36 18.0	
	comp=Z,16nm,1.1s						
M44A	**Midewin, Midew**	**60.11**	**315**	P	**P**	**21 36 17.4**	**+0.6**
	baz=110						
SRO	**Srobarova**	**60.17**	**37**	*e*P	**P**	**21 36 19.9**	**+2.9**
IDI	**Anoyia**	**60.42**	**53**	LR	LR	22 03 06.3	
	comp=Z,139nm,21.4s,baz=270,slow=37						
K43A	**Burlington**	**60.76**	**316**	IAmb	IAmb	21 36 22.7	
	comp=Z,22nm,1.1s						
K43A	**Burlington**	**60.76**	**316**	P	**P**	**21 36 22.2**	**+1.0**
	baz=110						
VYHS	**Vyhne**	**60.79**	**37**	*e*P	**P**	**21 36 23.8**	**+2.5**
FVM	**French Village**	**60.80**	**310**	IAmb	IAmb	21 36 22.5	
	comp=Z,9.4nm,0.8s						
FVM	**French Village**	**60.80**	**310**	P	**P**	**21 36 21.7**	**+0.1**
	baz=106,SNR=5.2						
LCAR	**Lake Charles**	**60.85**	**308**	IAmb	IAmb	21 36 22.7	
	comp=Z,14nm,1.3s						
LCAR	**Lake Charles**	**60.85**	**308**	P	**P**	**21 36 21.9**	**0.0**
	baz=105,SNR=5.5						
DY2G	**Dye2**	**60.95**	**354**	*i* P	**P**	**21 36 21.4**	**-0.9**
DY2G				IAmb	IAmb	21 36 24.3	
	comp=Z,13nm,0.8s						
H43A	**Windswept, Lux**	**61.02**	**318**	P	**P**	**21 36 23.5**	**+0.6**
	baz=112						
T42A	**Van Buren**	**61.05**	**309**	P	**P**	**21 36 23.1**	**-0.2**
	baz=105						
CCM	**Cathedral Cave**	**61.44**	**310**	P	**P**	**21 36 24.9**	**-1.0**
CCM				IAmb	IAmb	21 36 26.8	
	comp=Z,16nm,0.9s						
CCM	**Cathedral Cave**	**61.44**	**310**	P	**P**	**21 36 25.8**	**-0.1**
	baz=106						
CCM	**Cathedral Cave**	**61.44**	**310**	P	**P**	**21 36 25.8**	**-0.1**
	baz=106,SNR=12						
WHAR	**Wooly Hollow**	**61.56**	**307**	IAmb	IAmb	21 36 27.6	
	comp=Z,15nm,1.3s						
I42A	**Draeger Farm,**	**61.58**	**317**	IAmb	IAmb	21 36 28.2	
	comp=Z,17nm,1.1s						
I42A	**Draeger Farm,**	**61.58**	**317**	P	**P**	**21 36 27.6**	**+0.9**
	baz=111,SNR=5.0						
N41A	**Harden Midland**	**61.91**	**313**	P	**P**	**21 36 28.9**	**-0.1**
	baz=107						
SFJD	**Kangerlussuaq**	**61.97**	**352**	P	**P**	**21 36 29.2**	**+0.3**
	comp=Z,6.2nm,0.8s,baz=186,slow=2.4,SNR=5.6						
SFJD				LR	LR	21 59 45.7	
	comp=Z,50nm,18.1s,baz=110,slow=33						
	comp=Z,6.2nm,0.8s						
JFWS	**Jewell Farm**	**62.16**	**316**	P	**P**	**21 36 30.2**	**-0.5**
JFWS				IAmb	IAmb	21 36 31.8	
	comp=Z,12nm,0.8s						
JFWS	**Jewell Farm**	**62.16**	**316**	P	**P**	**21 36 31.2**	**+0.5**
	baz=109						
JFWS	**Jewell Farm**	**62.16**	**316**	P	**P**	**21 36 30.5**	**-0.2**
	baz=109						
U40A	**Yellville**	**62.26**	**308**	P	**P**	**21 36 31.2**	**-0.2**
	baz=104,SNR=8.3						
U40A				P	**P**	**21 36 31.2**	**-0.2**
	baz=104,SNR=8.3						
R40A	**Maddies Statio**	**62.28**	**310**	IAmb	IAmb	21 36 32.4	
	comp=Z,13nm,0.8s						
R40A	**Maddies Statio**	**62.28**	**310**	P	**P**	**21 36 31.5**	**-0.1**
	baz=105,SNR=8.4						
MIAR	**Mount Ida**	**62.43**	**306**	P	**P**	**21 36 31.2**	**-1.4**
	baz=102						
P40A	**Paris**	**62.45**	**312**	P	**P**	**21 36 32.5**	**-0.1**
	baz=106,SNR=12						
D41A	**Chassel**	**62.51**	**321**	P	**P**	**21 36 33.1**	**+0.2**
	baz=112						
COWI	**Conover**	**62.52**	**319**	IAmb	IAmb	21 36 34.1	
	comp=Z,8.9nm,1.1s						
COWI	**Conover**	**62.52**	**319**	P	**P**	**21 36 32.5**	**-0.6**
	baz=112						
L40A	**Anamosa**	**62.58**	**314**	P	**P**	**21 36 32.7**	**-0.8**
L40A				IAmb	IAmb	21 36 34.2	
	comp=Z,11nm,0.9s						
L40A	**Anamosa**	**62.58**	**314**	P	**P**	**21 36 33.8**	**+0.3**
	baz=108						
G40A	**Rib Lake**	**62.92**	**318**	P	**P**	**21 36 35.4**	**-0.3**
	baz=110						
S39A	**Bolivar**	**62.94**	**309**	IAmb	IAmb	21 36 36.8	
	comp=Z,10nm,0.8s						
S39A	**Bolivar**	**62.94**	**309**	P	**P**	**21 36 35.8**	**-0.2**
	baz=104,SNR=9.6						
ICESG	**Greenland Ices**	**63.03**	**357**	*i* P	**P**	**21 36 36.3**	**-0.1**
ICESG				IAmb	IAmb	21 36 38.2	
	comp=Z,15nm,1.1s						
P38A	**Dawn**	**63.58**	**311**	IAmb	IAmb	21 36 40.5	
	comp=Z,7.9nm,0.7s						
P38A	**Dawn**	**63.58**	**311**	P	**P**	**21 36 40.0**	**-0.1**
	baz=105,SNR=5.6						
N38A	**Joes South For**	**63.66**	**313**	P	**P**	**21 36 40.8**	**0.0**
	baz=106						
237A	**Washetta, Mont**	**63.78**	**303**	P	**P**	**21 36 41.3**	**-0.4**
	baz=100						
SUR	**Sutherland**	**63.87**	**130**	P	**P**	**21 36 43.1**	**+0.7**
	comp=Z,4.6nm,0.8s,baz=196,slow=11,SNR=2.2						
SUR				LR	LR	21 58 46.0	
	comp=Z,54nm,19.6s,baz=258,slow=31						
	comp=Z,4.6nm,0.8s						
NB2	**NORSAR Subarra**	**63.92**	**22**	P	**P**	**21 36 43.4**	**+1.3**
	comp=Z,3.4nm,0.8s,baz=230,slow=6.5						
NOA	**NORSAR Array B**	**63.92**	**22**	P	**P**	**21 36 42.4**	**+0.3**
	comp=Z,3.3nm,0.9s,baz=231,slow=6.3,SNR=11						
NOA				LR	LR	22 02 26.3	
	comp=Z,124nm,18.8s,baz=230,slow=34						
	comp=Z,3.3nm,0.9s						
RLO	**Rose Lookout**	**63.92**	**307**	IAmb	IAmb	21 36 43.2	
	comp=Z,34nm,1.5s						
MLR	**Muntele Rosu**	**64.13**	**42**	LR	LR	22 02 42.8	
	comp=Z,60nm,21.1s,baz=286,slow=34						
MLR	**Muntele Rosu**	**64.13**	**42**	P	**P**	**21 36 43.9**	**0.0**
MLR				IAmb	IAmb	21 36 52.8	
	comp=Z,7.3nm,0.8s						
HFS	**Hagfors**	**64.33**	**24**	LR	LR	22 02 17.5	
	comp=Z,66nm,19.7s,baz=247,slow=34						
TUL1	**Leonard**	**64.48**	**307**	IAmb	IAmb	21 36 47.0	
	comp=Z,16nm,0.8s						
TUL1	**Leonard**	**64.48**	**307**	P	**P**	**21 36 46.0**	**-0.2**
	baz=102						
TUL1	**Leonard**	**64.48**	**307**	P	**P**	**21 36 45.6**	**-0.6**
	baz=102						
SPMN	**Marine on St.**	**64.64**	**317**	P	**P**	**21 36 46.6**	**-0.4**
	baz=108						
SCO	**Scoresbysund**	**64.67**	**4**	*i* P	**P**	**21 36 46.3**	**-0.4**
ELL	**Elmali**	**64.72**	**52**	P	**P**	**21 36 47.2**	**-0.7**
LBTB	**Lobatse**	**64.81**	**121**	LR	LR	22 00 27.0	
	comp=Z,55nm,19.4s,baz=181,slow=32						
WHTX	**Lake Whitney,**	**65.16**	**302**	P	**P**	**21 36 50.5**	**-0.1**
	baz=99						
WHTX	**Lake Whitney,**	**65.16**	**302**	P	**P**	**21 36 50.6**	**-0.1**
	baz=99						
Z35A	**Perchaven, San**	**65.20**	**304**	P	**P**	**21 36 51.3**	**+0.4**
	baz=99						
T35B	**Sooner Cattle**	**65.25**	**308**	P	**P**	**21 36 51.1**	**-0.1**
	baz=102,SNR=7.3						
OK033	**Mehan**	**65.42**	**307**	P	**P**	**21 36 51.5**	**-0.8**
OK051	**E0350 and S346**	**65.43**	**307**	IAmb	IAmb	21 39 09.7	
	comp=Z,16nm,0.9s						
N35A	**Tabor**	**65.45**	**312**	P	**P**	**21 36 52.6**	**+0.2**
	baz=104						
KSU1	**Kansas State U**	**65.78**	**310**	IAmb	IAmb	21 36 54.6	
	comp=Z,26nm,1.3s						
KSU1	**Kansas State U**	**65.78**	**310**	P	**P**	**21 36 53.8**	**-0.8**
	baz=102						
KSU1	**Kansas State U**	**65.78**	**310**	P	**P**	**21 36 53.7**	**-0.8**
	baz=102						
BOSA	**Boshof**	**65.82**	**125**	P	**P**	**21 36 55.8**	**+0.7**
	comp=Z,7.5nm,0.8s,baz=307,slow=5.3,SNR=15						
	comp=Z,7.5nm,0.8s						
BOSA	**Boshof**	**65.82**	**125**	P	**P**	**21 36 54.8**	**-0.3**
BOSA				IAmb	IAmb	21 36 57.5	
	comp=Z,8.5nm,0.8s						
KAN09	**Caldwell North**	**66.16**	**308**	P	**P**	**21 36 56.5**	**-0.6**
B35A	**Bob, Littlefor**	**66.23**	**321**	IAmb	IAmb	21 36 57.7	
	comp=Z,12nm,1.1s						
B35A	**Bob, Littlefor**	**66.23**	**321**	P	**P**	**21 36 57.0**	**-0.2**
	baz=109,SNR=5.3						
L34A	**Svendsen Farm,**	**66.25**	**313**	P	**P**	**21 36 57.4**	**-0.1**
	baz=104						
833A	**Chaparral WMA,**	**66.37**	**298**	P	**P**	**21 36 58.2**	**-0.3**
833A	**Chaparral WMA,**	**66.37**	**298**	P	**P**	**21 36 58.9**	**+0.4**
	baz=96						
833A	**Chaparral WMA,**	**66.37**	**298**	P	**P**	**21 36 59.2**	**+0.7**
	baz=96,SNR=6.0						
SUMG	**Summit**	**66.47**	**358**	*i* P	**P**	**21 36 58.2**	**-0.6**
JMIC	**Jan Mayen**	**66.62**	**9**	LR	LR	21 58 38.4	
	comp=Z,50nm,21.2s,baz=213,slow=29						
WMOK	**Wichita Mounta**	**66.68**	**305**	P	**P**	**21 37 00.1**	**-0.3**
	baz=99						
WMOK	**Wichita Mounta**	**66.68**	**305**	P	**P**	**21 36 60.0**	**-0.5**
	baz=99,SNR=6.5						
ECSD	**EROS Data Cent**	**66.85**	**315**	IAmb	IAmb	21 37 01.9	
	comp=Z,8.0nm,0.9s						
ECSD	**EROS Data Cent**	**66.85**	**315**	P	**P**	**21 37 01.1**	**-0.2**
	baz=104						
ECSD	**EROS Data Cent**	**66.85**	**315**	P	**P**	**21 37 01.0**	**-0.3**
	baz=104,SNR=7.1						
JCT	**Junction City**	**66.96**	**300**	P	**P**	**21 37 01.1**	**-1.3**
JCT				IAmb	IAmb	21 37 03.5	
	comp=Z,19nm,1.1s						
JCT	**Junction City**	**66.96**	**300**	P	**P**	**21 37 03.0**	**+0.6**
	baz=97						
JCT	**Junction City**	**66.96**	**300**	P	**P**	**21 37 02.6**	**+0.2**
	baz=97						
ABTX	**Abilene, Hawle**	**67.09**	**303**	P	**P**	**21 37 03.3**	**+0.2**
	baz=98						
R32A	**Long Quarter,**	**67.25**	**309**	P	**P**	**21 37 03.7**	**-0.3**
	baz=101						
BGNE	**Belgrade**	**67.42**	**312**	P	**P**	**21 37 04.8**	**-0.2**
	baz=102						
BGNE	**Belgrade**	**67.42**	**312**	P	**P**	**21 37 05.3**	**+0.3**
	baz=102						
AGMN	**Agassiz Nation**	**67.57**	**320**	P	**P**	**21 37 04.9**	**-0.9**
	baz=107						
EIL	**Elat**	**67.83**	**61**	LR	LR	22 07 35.0	
	comp=Z,118nm,19.4s,baz=240,slow=37						
AKASG	**Malin Array Be**	**67.87**	**37**	P	**P**	**21 37 07.8**	**+0.2**
	comp=Z,3.4nm,0.8s,baz=253,slow=6.1,SNR=11						
AKASG				LR	LR	22 06 33.2	
	comp=Z,30nm,19.5s,baz=250,slow=36						
	comp=Z,3.4nm,0.8s						
CBKS	**Cedar Bluff**	**68.11**	**309**	P	**P**	**21 37 09.4**	**0.0**
	baz=100						
CBKS	**Cedar Bluff**	**68.11**	**309**	P	**P**	**21 37 09.3**	**-0.2**
	baz=100						
K31A	**O'Neill**	**68.12**	**314**	P	**P**	**21 37 09.9**	**+0.4**
	baz=102						
ULM	**Lac du Bonnet**	**68.15**	**322**	P	**P**	**21 37 07.6**	**-1.8**
	comp=Z,4.3nm,0.9s,baz=97,slow=6.9,SNR=4.8						
	comp=Z,4.3nm,0.9s						
BRTR	**Keskin Array B**	**68.18**	**50**	P	**P**	**21 37 10.7**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=249,slow=3.4,SNR=5.3						
BRTR				LR	LR	22 07 23.1	
	comp=Z,60nm,20.7s,baz=294,slow=36						
	comp=Z,1.6nm,0.8s						
BRTR	**Keskin Array B**	**68.18**	**50**	P	**P**	**21 37 10.0**	**0.0**
DBG	**Daneborg**	**68.53**	**4**	*i* P	**P**	**21 37 10.2**	**-1.2**
MMAI	**Mount Meron Ar**	**68.58**	**57**	LR	LR	22 10 52.6	
	comp=Z,41nm,18.8s,baz=354,slow=39						
SUSD	**Miller**	**68.65**	**315**	P	**P**	**21 37 12.9**	**+0.2**
	baz=103						
MSTX	**Muleshoe**	**69.85**	**304**	P	**P**	**21 37 19.7**	**-0.8**
MSTX	**Muleshoe**	**69.85**	**304**	P	**P**	**21 37 21.2**	**+0.7**
	baz=96						
MDND	**Maddock**	**69.87**	**319**	P	**P**	**21 37 20.1**	**-0.1**
	baz=104						
MDND	**Maddock**	**69.87**	**319**	P	**P**	**21 37 19.8**	**-0.4**
	baz=104						
FCC	**Fort Churchill**	**70.07**	**331**	P	**P**	**21 37 21.0**	**-0.1**
FCC				IAmb	IAmb	21 37 22.0	
	comp=Z,12nm,0.7s						
TXAR	**Lajitas Array**	**70.19**	**299**	P	**P**	**21 37 22.9**	**+0.3**
	comp=Z,3.5nm,1.0s,baz=108,slow=5.4,SNR=18						
	comp=Z,3.5nm,1.0s						
TXAR	**Lajitas Array**	**70.19**	**299**	P	**P**	**21 37 21.6**	**-1.0**
TX31	**Lajitas Ar. Si**	**70.19**	**299**	IAmb	IAmb	21 37 24.2	
	comp=Z,26nm,1.4s						
TX31	**Lajitas Ar. Si**	**70.19**	**299**	P	**P**	**21 37 23.2**	**+0.5**
	baz=94,SNR=8.0						
FINES	**FINESS Array B**	**70.21**	**26**	P	**P**	**21 37 21.9**	**0.0**
	comp=Z,5.6nm,0.8s,baz=204,slow=4.2,SNR=5.7						
FINES				LR	LR	22 04 06.4	
	comp=Z,35nm,21.5s,baz=256,slow=32						
	comp=Z,5.6nm,0.8s						
E28A	**Huff**	**70.31**	**317**	P	**P**	**21 37 23.5**	**+0.5**
	baz=102						
GDL2	**Guadalupe Moun**	**71.01**	**302**	P	**P**	**21 37 27.0**	**-0.7**
T25A	**Trinidad**	**71.53**	**307**	P	**P**	**21 37 30.7**	**-0.1**
T25A				IAmb	IAmb	21 37 33.1	
	comp=Z,12nm,1.1s						
T25A	**Trinidad**	**71.53**	**307**	P	**P**	**21 37 32.0**	**+1.2**
	baz=96						
MNTX	**Cornudas Mount**	**71.83**	**301**	P	**P**	**21 37 32.4**	**-0.1**
	baz=94						
MNTX	**Cornudas Mount**	**71.83**	**301**	P	**P**	**21 37 32.6**	**+0.1**
	baz=94,SNR=12						
NEEM	**North Greenlan**	**71.93**	**356**	*i* P	**P**	**21 37 32.1**	**-0.4**
Q24A	**Divide**	**72.31**	**309**	IAmb	IAmb	21 37 38.0	
	comp=Z,26nm,1.3s						
Q24A	**Divide**	**72.31**	**309**	P	**P**	**21 37 36.8**	**+1.2**
	baz=97						
SDCO	**Great Sand Dun**	**72.46**	**308**	P	**P**	**21 37 37.8**	**+1.3**
	baz=96						
SDCO	**Great Sand Dun**	**72.46**	**308**	P	**P**	**21 37 36.9**	**+0.5**
	baz=96						
ISCO	**Idaho Springs**	**72.76**	**310**	P	**P**	**21 37 38.2**	**-0.1**
ISCO				IAmb	IAmb	21 37 40.7	
	comp=Z,9.6nm,0.9s						
ISCO	**Idaho Springs**	**72.76**	**310**	P	**P**	**21 37 39.9**	**+1.6**
	baz=96						
ISCO	**Idaho Springs**	**72.76**	**310**	P	**P**	**21 37 39.9**	**+1.6**
	baz=96,SNR=9.3						
FFC	**Flin Flon**	**72.95**	**325**	P	**P**	**21 37 38.2**	**-0.5**
FFC				IAmb	IAmb	21 37 40.0	
	comp=Z,13nm,1.1s						
ANMO	**Albuquerque**	**72.97**	**305**	P	**P**	**21 37 39.7**	**+0.2**
	comp=Z,3.1nm,0.9s,baz=204,slow=8.1,SNR=7.5						
ANMO				LR	LR	22 09 18.6	
	comp=Z,34nm,18.6s,baz=38,slow=36						
	comp=Z,3.1nm,0.9s						
ANMO	**Albuquerque**	**72.97**	**305**	P	**P**	**21 37 39.4**	**0.0**
ANMO	**Albuquerque**	**72.97**	**305**	P	**P**	**21 37 40.6**	**+1.1**
	baz=94						
ANMO	**Albuquerque**	**72.97**	**305**	P	**P**	**21 37 40.5**	**+1.1**
	baz=94,SNR=6.0						
DGMT	**Dagmar**	**73.01**	**319**	P	**P**	**21 37 40.5**	**+1.3**
	baz=100						
DGMT	**Dagmar**	**73.01**	**319**	P	**P**	**21 37 40.6**	**+1.5**
	baz=100,SNR=5.3						
N23A	**Red Feather La**	**73.14**	**311**	P	**P**	**21 37 40.0**	**-0.4**
N23A				IAmb	IAmb	21 37 42.8	
	comp=Z,18nm,1.0s						
N23A	**Red Feather La**	**73.14**	**311**	P	**P**	**21 37 42.5**	**+2.1**
	baz=97						
Y22A	**Socorro**	**73.32**	**303**	P	**P**	**21 37 42.2**	**+0.7**
	baz=94						
S22A	**4UR Ranch, Cre**	**73.50**	**307**	P	**P**	**21 37 44.3**	**+1.6**
	baz=95						
ARCES	**ARCESS Array B**	**73.62**	**18**	LR	LR	22 03 40.0	
	comp=Z,83nm,21.1s,baz=215,slow=31						
121A	**Cookes Peak, D**	**73.92**	**302**	P	**P**	**21 37 46.8**	**+1.7**
	baz=93						
121A	**Cookes Peak, D**	**73.92**	**302**	P	**P**	**21 37 46.6**	**+1.6**
	baz=93,SNR=6.4						
LAO	**LASA Array**	**74.08**	**317**	IAmb	IAmb	21 37 47.8	
	comp=Z,22nm,0.9s						
LAO	**LASA Array**	**74.08**	**317**	P	**P**	**21 37 46.8**	**+1.2**
	baz=98						
LAO	**LASA Array**	**74.08**	**317**	P	**P**	**21 37 47.2**	**+1.7**
	baz=98,SNR=6.8						
RWWY	**Rawlins**	**74.17**	**311**	P	**P**	**21 37 45.4**	**-1.1**
RWWY				IAmb	IAmb	21 37 47.6	
	comp=Z,12nm,1.0s						
MVCO	**Mesa Verde**	**74.79**	**307**	P	**P**	**21 37 51.6**	**+1.5**
	baz=94						
O20A	**White River Ci**	**74.81**	**310**	IAmb	IAmb	21 37 52.4	
	comp=Z,24nm,0.9s						
O20A	**White River Ci**	**74.81**	**310**	P	**P**	**21 37 51.4**	**+1.3**
	baz=95						
PV13	**Radium Mtn., P**	**75.11**	**308**	P	**P**	**21 37 52.1**	**+0.2**
PV13				IAmb	IAmb	21 37 54.4	
	comp=Z,18nm,1.0s						
319A	**Douglas**	**75.14**	**301**	P	**P**	**21 37 51.7**	**-0.4**
KBZ	**Khabaz**	**75.59**	**47**	P	**P**	**21 37 55.4**	**+1.1**
	comp=Z,3.9nm,1.0s,baz=293,slow=2.0,SNR=6.0						
KBZ				LR	LR	22 13 39.3	
	comp=Z,21nm,18.9s,baz=322,slow=38						
	comp=Z,3.9nm,1.0s						
W18A	**Petrified Fore**	**75.67**	**305**	IAmb	IAmb	21 37 57.2	
	comp=Z,12nm,0.9s						
W18A	**Petrified Fore**	**75.67**	**305**	P	**P**	**21 37 56.4**	**+1.3**
	baz=93						
NOR	**Nord**	**75.81**	**2**	*i* P	**P**	**21 37 55.0**	**+0.2**
X18A	**Snowflake**	**75.82**	**304**	P	**P**	**21 37 56.0**	**0.0**
RDMU	**Red Mountain**	**75.85**	**310**	IAmb	IAmb	21 37 58.0	
	comp=Z,40nm,1.8s						
ONI	**Oni**	**75.89**	**48**	P	**P**	**21 37 55.7**	**-0.4**
RLMT	**Red Lodge**	**76.01**	**315**	IAmb	IAmb	21 37 58.8	
	comp=Z,9.1nm,0.7s						
RLMT	**Red Lodge**	**76.01**	**315**	P	**P**	**21 37 58.1**	**+1.2**
	baz=95						
PDAR	**Pinedale Array**	**76.01**	**312**	P	**P**	**21 37 57.2**	**+0.2**
	comp=Z,2.5nm,0.7s,baz=112,slow=6.8,SNR=16						
	comp=Z,2.5nm,0.7s						
TUC	**Tucson**	**76.45**	**302**	P	**P**	**21 37 59.7**	**+0.2**
TUC				IAmb	IAmb	21 38 01.8	
	comp=Z,11nm,0.9s						
TUC	**Tucson**	**76.45**	**302**	P	**P**	**21 38 00.8**	**+1.3**
	baz=91						
SRU	**San Rafael Swe**	**76.50**	**309**	IAmb	IAmb	21 38 02.1	
	comp=Z,25nm,1.7s						
YMP	**Mirror Lake Pl**	**76.60**	**314**	P	**P**	**21 37 58.9**	**-1.5**
GNI	**Garni**	**76.70**	**50**	LR	LR	22 12 38.0	
	comp=Z,56nm,21.4s,baz=278,slow=36						
RES	**Resolute Bay**	**76.90**	**346**	P	**P**	**21 38 00.9**	**-0.2**
	comp=Z,4.5nm,0.9s,baz=96,slow=4.2,SNR=19						
	comp=Z,4.5nm,0.9s						
SNOW	**Snow King Moun**	**76.94**	**313**	IAmb	IAmb	21 38 04.2	
	comp=Z,16nm,1.1s						
FLWY	**Flagg Ranch**	**76.94**	**314**	P	**P**	**21 38 02.3**	**0.0**
FLWY				IAmb	IAmb	21 38 04.5	
	comp=Z,19nm,1.0s						
WUAZ	**Wupatki**	**77.02**	**305**	P	**P**	**21 38 02.7**	**-0.1**
WUAZ				IAmb	IAmb	21 38 05.6	
	comp=Z,24nm,0.9s						

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WUAZ  Wupatki             77.02 305    P      P       21 38 04.9 +2.1
      baz=92
X16A  Lo Mia Camp, P      77.05 304    P      P       21 38 01.9 -1.1
X16A                                   IAmb   IAmb    21 38 06.0
      comp=Z,11nm,1.0s
YMR   Madison River       77.17 314    IAmb   IAmb    21 38 06.1
      comp=Z,18nm,0.8s
HWUT  Hardware Ranch      77.42 311    IAmb   IAmb    21 38 06.6
      comp=Z,16nm,0.7s
BOZ   Bozeman (W)         77.70 315    P      P       21 38 07.3 +0.9
      baz=94
MTPU  Mount Pierson       77.75 307    P      P       21 38 07.0 -0.1
MTPU                                   IAmb   IAmb    21 38 09.8
      comp=Z,18nm,1.0s
EUNU  Eureka              78.03 352    IAmb   IAmb    21 38 09.8
      comp=Z,11nm,0.9s
214A  Organ Pipe Nat      78.16 301    P      P       21 38 08.0 -1.1
214A  Organ Pipe Nat      78.16 301    P      P       21 38 10.8 +1.7
      baz=90
DUG   Dugway, Tooele      78.31 310    P      P       21 38 11.7 +1.8
      baz=92
W13A  Hualapai Mount      79.07 304    P      P       21 38 12.7 -1.5
EDM   Edmonton            79.35 323    P      P       21 38 15.6 +0.4
EDM                                    IAmb   IAmb    21 38 17.1
      comp=Z,36nm,1.2s
BELG  Belogornoye         79.44  38    LR     LR      22 10 31.5
      comp=Z,52nm,21.5s,baz=335,slow=34
BLYC  Blythe              79.60 303    P      P       21 38 15.9 -1.0
BLYC                                   IAmb   IAmb    21 38 19.6
      comp=Z,20nm,1.1s
HLID  Hailey              79.60 313    P      P       21 38 18.2 +1.3
      baz=92
Q12A  Willow Creek R      79.84 308    P      P       21 38 17.8 -0.6
Q12A                                   IAmb   IAmb    21 38 20.9
      comp=Z,13nm,0.9s
IRM   Iron Mountain       80.11 304    P      P       21 38 21.5 +1.7
      baz=89
ELK   Elko                80.17 310    P      P       21 38 21.0 +0.9
      comp=Z,3.8nm,0.7s,baz=110,slow=4.1,SNR=14
ELK                                    LR     LR      22 11 13.6
      comp=Z,72nm,20.4s,baz=268,slow=34
      comp=Z,3.8nm,0.7s
BC3   Big Chuckawall      80.38 303    P      P       21 38 22.7 +1.5
      baz=89
R11B  Troy Canyon, C      80.43 308    P      P       21 38 22.8 +1.2
      baz=90
GMRC  Granite Mounta      80.53 304    P      P       21 38 23.5 +1.4
      baz=89
YKA   Yellowknife Ar      80.72 332    P      P       21 38 21.9 -0.5
      comp=Z,2.0nm,0.9s,baz=95,slow=5.5,SNR=19
      comp=Z,2.0nm,0.9s
TUQ   Turquoise Moun      80.73 305    P      P       21 38 25.1 +2.0
      baz=89
BELC  Belle Mtn. Jos      80.82 303    P      P       21 38 25.7 +2.0
      baz=89
KIRV  Kirov               80.84  32    LR     LR      22 14 04.5
      comp=Z,27nm,18.1s,baz=282,slow=36
TPNV  Topopah Spring      80.97 306    P      P       21 38 24.4 -0.1
TPNV  Topopah Spring      80.97 306    P      P       21 38 26.3 +1.9
      baz=89
GSC   Goldstone, Bar      81.46 305    P      P       21 38 28.5 +1.6
      baz=89
QSM   Queen of Sheba      81.49 305    P      P       21 38 27.0  0.0
QSM                                    IAmb   IAmb    21 38 29.8
      comp=Z,18nm,1.0s
NEW   Newport             81.56 318    P      P       21 38 27.2  0.0
      comp=Z,2.1nm,0.6s,baz=298,slow=2.8,SNR=4.0
      comp=Z,2.1nm,0.6s
BRLDA Berland Lookou      81.80 324    IAmb   IAmb    21 38 29.7
      comp=Z,13nm,1.0s
MPMC  Manual Prospec      81.99 305    P      P       21 38 31.5 +1.6
      baz=88
BFSC  Mount Baldy Ra      82.19 304    P      P       21 38 32.3 +1.4
      baz=88
DSP   Deep Springs        82.34 307    P      P       21 38 32.1 +0.7
NVAR  Mina Array Bea      82.57 308    P      P       21 38 33.2 +0.3
      comp=Z,1.0nm,0.5s,baz=108,slow=6.0,SNR=7.2
      comp=Z,1.0nm,0.5s
BELA  Belgrano 2          83.89 180    P      P       21 38 38.6  0.0
BELA                                   IAmb   IAmb    21 38 41.9
      comp=Z,9.8nm,1.1s
MOD   Modoc Plateau       83.96 311    P      P       21 38 38.2 -1.7
MOD                                    IAmb   IAmb    21 38 43.0
      comp=Z,31nm,1.8s
A36M  Sachs Harbour       84.92 342    P      P       21 38 44.3 +0.4
A36M                                   IAmb   IAmb    21 38 45.6
      comp=Z,8.8nm,0.8s
A36M  Sachs Harbour       84.92 342    P      P       21 38 44.9 +1.0
      baz=86
J04A  Umpqua Nationa      85.21 313    P      P       21 38 46.8 +0.5
YBH   Yreka Blue Hor      85.76 311    P      P       21 38 47.7 -1.2
      comp=Z,3.6nm,0.8s,baz=67,slow=1.5,SNR=5.8
      comp=Z,3.6nm,0.8s
ARU   Arti                85.80  34    LR     LR      22 16 04.0
      comp=Z,76nm,19.7s,baz=258,slow=35
ARU   Arti                85.80  34    P      P       21 38 48.4 -0.2
AKTO  Aktyubinsk          85.96  40    LR     LR      22 15 51.5
      comp=Z,38nm,21.0s,baz=140,slow=35
LIRD  Liard River Hi      86.36 329    P      P       21 38 52.9 +1.5
      baz=84
GEYT  Alibeck             87.15  52    P      P       21 38 56.2 +0.4
      comp=Z,1.5nm,0.7s,baz=273,slow=8.5,SNR=3.0
GEYT                                   LR     LR      22 21 32.1
      comp=Z,38nm,19.3s,baz=318,slow=38
      comp=Z,1.5nm,0.7s
INK   Inuvik              88.24 339    P      P       21 38 59.6 -0.6
      comp=Z,2.3nm,1.0s,baz=29,slow=5.9,SNR=4.9
      comp=Z,2.3nm,1.0s
F31M  Tsiigehtchic        88.50 338    P      P       21 39 02.3 +0.8
      baz=78
DLBC  Dease Lake          88.51 329    P      P       21 39 02.2 +0.4
      comp=Z,4.0nm,1.0s,baz=146,slow=5.9,SNR=3.5
      comp=Z,4.0nm,1.0s
EPYK  Eagle Plains        89.89 337    P      P       21 39 08.9 +0.8
      baz=75
E27K  Coleen River        91.16 339    P      P       21 39 14.9 +0.9
      baz=70
C27K  Jago River          91.37 341    P      P       21 39 16.3 +1.4
      baz=68
D25K  Kavik River         92.36 341    P      P       21 39 20.8 +1.2
      baz=66
BVAR  Borovoye Array      93.12  36    LR     LR      22 22 13.5
      comp=Z,61nm,18.1s,baz=282,slow=36
D23K  Nanushuk River      93.90 341    P      P       21 39 28.5 +1.9
      baz=62
ILAR  Eielson Array       94.41 337    P      P       21 39 29.3 +0.3
      comp=Z,1.4nm,0.9s,baz=49,slow=4.0,SNR=12
      comp=Z,1.4nm,0.9s
G21K  Allakaket           96.04 340    P      P       21 39 37.7 +1.2
      baz=59
XLT   XiLinHaoTe         122.91  26⇑ePKP  PKPdf   21 45 04.3 -1.7
HHC   Hu-ho-hao-te       123.05  32  eP     PKPdf   21 45 02.0 -4.4
PZH   PanZhiHua          125.45  51   PKP   PKPdf   21 45 11.3 -0.1
CMAR  Chiang Mai Arr     126.68  62   PKP   PKPdf   21 45 13.9 +0.1
      comp=Z,0.4nm,0.5s,baz=298,slow=4.6,SNR=5.1
ASAR  Alice Springs      158.48 145   PKP   PKPdf   21 46 07.8  0.0
      comp=Z,1.1nm,1.0s,baz=170,slow=1.7,SNR=5.3
ASAR                                  PKPab PKPab   21 46 42.6 +0.4
      comp=Z,0.3nm,0.6s,baz=205,slow=3.7,SNR=4.3
```

SJA ***27*** *21:39:35.7±0.7, 20°.49S×68°.87W, h116^{km}±4^{km}, ML4.0, MW3.9, Hypocentre not reviewed by the ISC*
IDC ***27*** *21:39:37.2±0.9, 20°.56S×68°.73W, h110^{km}±7^{km}, mb3.8/4, mbtmp4.1/8, Error ellipse: s-maj=29.0km s-min=8.8km az=100.0*
NEIC ***27*** *21:39:37.9±1.3, 20°.52S±0°.03×68°.93W±0°.08, h106^{km}±5^{km}, mb3.9/7, ML4.1(GUC), Error ellipse: s-maj=11.3km s-min=2.4km az=110.0*
VAO ***27*** *21:39:38.8±0.8, 20°.54S×69°.04W, h119^{km}, mb4.5*
GUC ***27*** *21:39:38.3±0.7, 20°.51S×68°.92W, h107^{km}±3^{km}, ML4.1*
ISC 27 21:39:36.9±0.6, **20°.50S**±0°.03×**68°.90W**±0°.06, **h107**^{km}±5^{km}, **n69**, σ1^{s}**35**/90, **mb4.0**/3, **7C-6D, Chile-Bolivia border region**

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Code  Station Name        Δ°   AZ°     Phase ID          Time      Res
                                     Op     ISC       h  m  s     ISC
PB08  IPOC Station P      0.43 327    Pn     Pn      21 39 53.4 -0.1
PB08                                  Sn     Sn      21 40 06.6 +0.7
PB08  IPOC Station P      0.43 327⇓iP     Pn      21 39 54.3 +0.8
PB08                               i S     Sn      21 40 06.8 +0.9
PB08                                  IAML           21 40 07.7
      comp=E,10µm,0.3s
PB08  IPOC Station P      0.43 327  eP               21 39 54.3
PB08                                eS               21 40 07.5
PB08                                  IAML           21 40 10.1
      comp=Z,3µm,0.3s
PB01  IPOC Station P      0.77 225    Pn     Pn      21 39 56.0 +0.3
PB01                                  Sn     Sn      21 40 10.1 +0.3
PB01  IPOC Station P      0.77 225⇑iP     Pn      21 39 56.2 +0.5
PB01                               i S     Sn      21 40 10.7 +0.8
PB01  IPOC Station P      0.77 225  eP               21 39 56.2
PB01                                eS               21 40 10.8
PB01                                  IAML           21 40 11.7
      comp=Z,4µm,0.2s
GO01  Chusmiza            0.87 342    Pn     Pn      21 39 57.9 +0.7
GO01                                  Sn     Sn      21 40 13.1 +0.7
GO01  Chusmiza            0.87 342⇓iP     Pn      21 39 58.0 +0.9
GO01                               i S     Sn      21 40 13.9 +1.5
GO01  Chusmiza            0.87 342  eP               21 39 57.0
GO01                                eS               21 40 14.8
GO01                                  IAML           21 40 16.7
      comp=Z,2µm,0.3s
PB11  IPOC Station P      1.02 316    Pn     Pn      21 39 58.9 +0.6
PB11                                  Sn     Sn      21 40 15.0 +0.6
PB11  IPOC Station P      1.02 316⇓iP     Pn      21 39 59.1 +0.8
PB11                               i S     Sn      21 40 15.4 +1.0
PB11                                  IAML           21 40 16.3
      comp=N,19µm,0.2s
PB11  IPOC Station P      1.02 316  eP               21 39 59.0
PB11                                eS               21 40 15.6
PB11                                  IAML           21 40 16.5
      comp=Z,5µm,0.5s
TA02  Huaiquique          1.18 281    Pn     Pn      21 40 00.3 +0.5
TA02                                  Sn     Sn      21 40 17.3 +0.3
TA02  Huaiquique          1.18 281  eP       Pn      21 39 59.9 +0.1
TA02                                eS       Sn      21 40 17.4 +0.3
TA02                                  IAML           21 40 20.4
      comp=N,9µm,0.1s
TA02  Huaiquique          1.18 281  eP               21 40 00.3
TA02                                eS               21 40 19.6
TA02                                  IAML           21 40 19.6
      comp=Z,4µm,0.1s
TA01  Diego Aracena       1.20 267    Pn     Pn      21 40 00.4 +0.3
TA01  Diego Aracena       1.20 267⇑iP     Pn      21 40 00.3 +0.3
TA01                               i S     Sn      21 40 17.5  0.0
TA01                                  IAML           21 40 18.7
      comp=E,2µm,0.3s
TA01  Diego Aracena       1.20 267  eP               21 40 00.3
TA01                                eS               21 40 20.2
TA01                                  IAML           21 40 28.9
      comp=Z,682nm,0.6s
PB02  IPOC Station P      1.23 229    Pn     Pn      21 40 01.1 +0.5
PB02  IPOC Station P      1.23 229⇑iP     Pn      21 40 01.2 +0.6
PB02                               i S     Sn      21 40 19.6 +1.2
PB02                                  IAML           21 40 22.2
      comp=E,5µm,0.2s
PB02  IPOC Station P      1.23 229  eP               21 40 01.2
PB02                                eS               21 40 20.3
PB02                                  IAML           21 40 21.5
      comp=Z,4µm,0.5s
PB09  IPOC Station P      1.33 194    Pn     Pn      21 40 02.7 +1.0
PB09  IPOC Station P      1.33 194⇑iP     Pn      21 40 02.7 +1.0
PB09                               i S     Sn      21 40 22.2 +1.8
PB09                                  IAML           21 40 24.5
      comp=E,1µm,0.3s
PB09  IPOC Station P      1.33 194  eP               21 40 02.7
PB09                                eS               21 40 23.3
PB09                                  IAML           21 40 24.0
      comp=Z,1µm,0.7s
MNMC  Minye Minye         1.51 334    Pn     Pn      21 40 05.2 +1.2
MNMC  Minye Minye         1.51 334⇓iP     Pn      21 40 05.3 +1.2
MNMC                               i S     Sn      21 40 26.9 +2.4
MNMC                                  IAML           21 40 32.6
      comp=E,4µm,0.2s
MNMCX Minye Minye         1.51 334  eP               21 40 04.0
MNMCX                               eS               21 40 27.5
MNMCX                                 IAML           21 40 28.7
      comp=Z,2µm,0.3s
PB07  IPOC Station P      1.53 217    Pn     Pn      21 40 04.5 +0.4
PB07  IPOC Station P      1.53 217⇑iP     Pn      21 40 04.5 +0.4
PB07                               i S     Sn      21 40 24.8 +0.2
PB07                                  IAML           21 40 28.2
      comp=N,3µm,0.3s
PB07  IPOC Station P      1.53 217  eP               21 40 04.5
PB07                                eS               21 40 26.1
PB07                                  IAML           21 40 31.8
      comp=Z,1µm,0.4s
PB03  IPOC Station P      1.73 207    Pn     Pn      21 40 07.2 +0.7
PB03  IPOC Station P      1.73 207  eP       Pn      21 40 07.0 +0.4
PB03                               i S     Sn      21 40 29.1  0.0
PB03                                  IAML           21 40 35.6
      comp=E,1µm,0.3s
PB03  IPOC Station P      1.73 207  eP               21 40 07.1
PB03                                eS               21 40 29.8
PB03                                  IAML           21 40 35.5
      comp=Z,1µm,0.3s
LVC   Limon Verde         2.10 180    P      Pn      21 40 12.7 +1.3
      comp=Z,66nm,0.3s,baz=10.0,slow=9.1,SNR=87
LVC                                   S      Sn      21 40 37.3 -0.4
      comp=Z,236nm,0.4s,baz=132,slow=20,SNR=37
LVC   Limon Verde         2.10 180    Pn     Pn      21 40 12.4 +1.1
LVC   Limon Verde         2.10 180⇓iP     Pn      21 40 12.8 +1.4
LVC                                i S     Sn      21 40 39.5 +1.8
LVC   Limon Verde         2.10 180  eP       Pn      21 40 13.2 +1.8
LVC   Limon Verde         2.10 180  eP               21 40 12.9
LVC                                 eS               21 40 36.3
LVC                                   IAML           21 40 44.1
      comp=Z,330nm,0.8s
PB04  IPOC Station P      2.16 212    Pn     Pn      21 40 12.7 +0.6
PB04  IPOC Station P      2.16 212⇓iP     Pn      21 40 12.9 +0.9
PB04                                  IAML           21 40 48.5
      comp=E,906nm,0.2s
PB04  IPOC Station P      2.16 212  eP               21 40 12.9
PB04                                eS               21 40 39.1
PB04                                  IAML           21 40 49.5
      comp=Z,904nm,0.3s
PB16  IPOC Station P      2.23 345    Pn     Pn      21 40 15.2 +1.8
PB16  IPOC Station P      2.23 345⇑iP     Pn      21 40 15.3 +2.0
PB16                               i S     Sn      21 40 43.5 +2.4
PB16                                  IAML           21 40 52.2
      comp=E,309nm,0.6s
PB16  IPOC Station P      2.23 345  eP               21 40 15.4
PB16                                eS               21 40 45.8
PB06  IPOC Station P      2.28 196  eP               21 40 14.0
PB06                                eS               21 40 36.7
PB06                                  IAML           21 40 48.9
      comp=Z,526nm,0.4s
PB12  IPOC Station P      2.31 324    Pn     Pn      21 40 14.0 +0.1
PB12  IPOC Station P      2.31 324⇑iP     Pn      21 40 14.1 +0.1
PB12                               i S     Sn      21 40 42.6 +0.4
PB12                                  IAML           21 40 49.0
      comp=E,1µm,0.4s
PB12  IPOC Station P      2.31 324  eP               21 40 14.1
PB12                                eS               21 40 38.0
PB12                                  IAML           21 40 48.3
      comp=Z,716nm,0.6s
AP01  Chacalluta          2.52 327    Pn     Pn      21 40 16.4 -0.1
AP01  Chacalluta          2.52 327  eP       Pn      21 40 16.9 +0.4
AP01                                  IAML           21 40 59.4
      comp=N,3µm,0.3s
AP01  Chacalluta          2.52 327  eP               21 40 17.0
AP01                                eS               21 40 41.0
AP01                                  IAML           21 40 58.3
      comp=Z,1µm,0.5s
PB15  IPOC Station P      2.74 191    Pn     Pn      21 40 21.5 +1.8
PB15  IPOC Station P      2.74 191  eP       Pn      21 40 20.8 +1.1
PB15                                  IAML           21 41 03.1
      comp=E,2µm,0.1s
PB15  IPOC Station P      2.74 191  eP               21 40 21.0
PB15                                eS               21 40 42.0
PB15                                  IAML           21 41 04.2
      comp=Z,1µm,0.3s
PB18  Visviri             2.95 349    Pn     Pn      21 40 26.7 +4.0
PB10  IPOC Station P      3.37 207    Pn     Pn      21 40 27.1 -0.7
PB10  IPOC Station P      3.37 207  eP               21 40 28.0
PB10                                eS               21 41 19.5
PB10                                  IAML           21 41 20.1
      comp=Z,154nm,0.4s
YJA   Yavi                3.57 118  eP               21 40 33.9
HJA   Humahuaca           4.22 130  eP               21 40 42.5
LPAZ  La Paz              4.25  10    P      Pn      21 40 43.0 +2.7
      comp=Z,16nm,0.4s,baz=217,slow=8.3,SNR=66
LPAZ                                  S      Sn      21 41 25.6 -3.7
      comp=Z,4.9nm,0.4s,baz=222,slow=9.7,SNR=1.3
LPAZ  La Paz              4.25  10    Pn     Pn      21 40 42.7 +2.4
LPAZ  La Paz              4.25  10  eP       Pn      21 40 42.4 +2.2
LPAZ  La Paz              4.25  10  eP               21 40 43.0
PB14  IPOC Station P      4.33 198    Pn     Pn      21 40 40.8 -0.2
GO02  Mina Guanaco        4.68 188    Pn     Pn      21 40 45.4 -0.3
AC01  Pan de Azucar       5.83 195    Pn     Pn      21 40 58.2 -2.8
AC06  Mina Casimiro       6.95 191    Pn     Pn      21 41 13.4 -2.7
SIV   San Ignacio         8.69  60    P      Pn      21 41 37.5 -2.3
      comp=Z,11nm,0.4s,baz=248,slow=9.7,SNR=42
VILB  Vilhena            11.21  49  eP       Pn      21 42 14.0 -0.1
CPUP  Villa Florida      12.10 121    P      Pn      21 42 24.2 -1.6
      comp=Z,2.1nm,0.7s,baz=319,slow=12,SNR=4.2
AQDB  Aquidauana         12.37  92  eP       Pn      21 42 31.2 +1.7
SAML  Samuel             12.74  27  eP       Pn      21 42 35.9 +1.5
BO02  Sierra Bellavi     14.33 186    P      P       21 42 59.8 +1.0
PDRB  Porto dos Gac      14.65  55  eP       Pn      21 43 01.8 +2.7
H03N1 Juan Fernandez     15.66 213    T      T       21 58 27.5
      baz=35,slow=72,SNR=3.6
H03N2 Juan Fernandez     15.67 213    T      T       21 58 19.7
      baz=35,slow=72,SNR=3.7
H03N3 Juan Fernandez     15.68 213    T      T       21 58 36.9
      baz=35,slow=72,SNR=5.3
ITAB  Concordia          16.73 117           Pn      21 43 25.6 +0.7
ITAB                                  IAmb   IAmb    21 43 51.2
      comp=Z,6.7nm,1.1s
FRTB  Fartura            18.16 102  eP       P       21 43 42.1 +0.9
TRQA  Tornquist          18.49 163    P      P       21 43 45.1 +0.5
TRQA                                  IAmb   IAmb    21 43 45.7
      comp=Z,4.2nm,0.7s
GO06  Curarrehue         19.15 186    P      P       21 43 52.8 +0.9
GO06                                  IAmb   IAmb    21 43 54.1
      comp=Z,7.3nm,0.8s
PLCA  Paso Flores        20.21 184    P      P       21 44 03.8 +0.4
      comp=Z,5.0nm,1.0s,baz=360,slow=13,SNR=8.4
      comp=Z,5.0nm,1.0s
PLCA  Paso Flores        20.21 184    P      P       21 44 02.8 -0.6
PLCA                                  IAmb   IAmb    21 44 05.8
      comp=Z,4.0nm,0.8s
LL04  Puerto Octay       20.56 188    P      P       21 44 06.4 -0.6
LL04                                  IAmb   IAmb    21 44 08.6
      comp=Z,4.7nm,0.6s
BOAV  Boa Vista          24.19  21    P      P       21 44 43.7 +0.1
MG03  Isla Dawson        33.31 182    P      P       21 46 05.3 +1.1
DBIC  Dimbokro           68.45  74    P      P       21 50 26.8 -1.1
      comp=Z,2.1nm,0.9s,baz=294,slow=8.1,SNR=1.8
      comp=Z,2.1nm,0.9s
TORD  Torodi Ar. Bea     77.02  71    P      P       21 51 18.1 -0.5
      comp=Z,3.9nm,0.4s,baz=254,slow=5.7,SNR=1.6
TORD                                  pP     pP      21 51 45.9 -1.3
      comp=Z,1.2nm,0.7s,baz=255,slow=4.8,SNR=5.5
      comp=Z,3.9nm,0.4s
YKA   Yellowknife Ar     90.25 341    P      P       21 52 24.5 -0.5
      comp=Z,0.5nm,0.8s,baz=136,slow=4.6,SNR=8.1
YKA                                   pP     pP      21 52 54.0 -0.4
      comp=Z,0.5nm,0.7s,baz=138,slow=4.9,SNR=4.2
      comp=Z,0.5nm,0.8s
WRA   Warramunga Arr    133.81 211    PKP    PKPdf   21 58 42.6 +0.4
      comp=Z,0.2nm,0.5s,baz=149,slow=1.7,SNR=1.9
MKAR  Makanchi Array    144.82  35    PKP    PKPab   21 59 00.2 -0.4
      comp=Z,0.3nm,0.7s,baz=325,slow=2.4,SNR=2.9
MKAR                                  pPKP   pPKPdf  21 59 29.4 -2.5
      comp=Z,0.2nm,0.7s,baz=322,slow=0.8,SNR=1.6
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HVO ***27*** *22:23:34.1±1.3, 19°.53N±0°.04×155°.08W±0°.03, h23^{km}±2^{km}, ML2.4/17, ML2.5/45(NEIC), Error ellipse: s-maj=5.3km s-min=3.2km az=156.0*
NEIC 27 22:23:32.6±1.1, **19°.50N**±0°.08×**155°.11W**±0°.05, **h32**^{km}±11^{km}, **Error ellipse: s-maj=12.7km s-min=5.1km az=160.0, Hawaiian Islands**

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Code  Station Name        Δ°   AZ°     Phase ID          Time      Res
                                     Op     ISC       h  m  s     ISC
NPOC  North of Pu‘u       0.11 182   Pg     Pb       22 23 38.4  0.0
NPOC                                 Sg     Sn       22 23 41.6 +0.1
NPOC                                 IAML            22 23 42.1
      comp=E,534nm,0.5s
NPOC                                 IAML            22 23 42.2
      comp=N,756nm,0.2s
JCUZ  Jacuzzi             0.12 178   Pg     Pn       22 23 38.2 -0.1
JCUZ                                        Sn       22 23 41.9 +0.2
JCUZ                                 IAML            22 23 42.1
      comp=E,869nm,0.6s
JCUZ                                 IAML            22 23 42.2
      comp=N,979nm,0.1s
JOKA  Jonika Flow         0.12 125          Pb       22 23 38.5 +0.1
JOKA                                        Sn       22 23 41.6  0.0
STCH  Steam Cracks        0.12 189   Pg     Pb       22 23 38.6 +0.2
STCH                                 IAML            22 23 42.7
      comp=N,980nm,0.1s
KNHH  Kane Nui o Ham      0.13 207          Pn       22 23 38.9 +0.3
PUH   Pauahi              0.16 220   Pg     Pn       22 23 39.0 -0.1
PUH                                  IAML            22 23 43.1
      comp=E,576nm,0.1s
PUH                                  IAML            22 23 45.6
      comp=N,465nm,0.3s
HATHI Halema‘uma‘u T      0.17 242   Pg     Pn       22 23 39.0  0.0
HATHI                                       Sn       22 23 42.8 -0.2
HATHI                                IAML            22 23 43.2
      comp=N,823nm,0.2s
HATHI                                IAML            22 23 43.3
      comp=E,699nm,0.1s
RSD   Rainshed            0.17 257   Pg     Pn       22 23 39.5 +0.4
BYL   Byron's Ledge       0.17 239   Pg     Pb       22 23 38.0 -0.8
SBLHI Steaming Bluff      0.17 245   Pg     Pb       22 23 38.7 -0.2
SBLHI                                Sg     Sn       22 23 42.8 -0.3
UWB   Uwekahuna B         0.18 245   Pg     Pb       22 23 39.0  0.0
UWB                                  Sg     Sb       22 23 42.9 -0.4
KKO   Keanakako`i         0.18 236   Pg     Pb       22 23 36.8 -2.2
KKO                                  IAML            22 23 43.7
      comp=E,451nm,1.2s
KKO                                  IAML            22 23 44.0
      comp=N,657nm,0.7s
NPH   North Pit           0.19 242   Pg     Pb       22 23 38.8 -0.2
NPH                                  Sg     Sb       22 23 43.1 -0.4
OBL   Observatory Le      0.19 244   Pg     Pb       22 23 37.4 -1.6
UWE   Uwekahuna           0.19 246   Pg     Pn       22 23 39.5  0.0
PHO   Puu Honuaula        0.20  95          Pb       22 23 39.1  0.0
WRMHI West Rim            0.21 243          Pn       22 23 39.6  0.0
WRMHI                                       Sb       22 23 43.8  0.0
SDHHI Sand Hill           0.21 238   Pg     Pn       22 23 39.9 +0.2
SDHHI                                IAML            22 23 44.8
      comp=E,524nm,0.6s
SDHHI                                IAML            22 23 44.9
      comp=N,454nm,0.4s
MLH   Mauna Loa           0.27 269   Pg     Pn       22 23 40.4 -0.1
HLP   Hilina Pali         0.28 223          Sn       22 23 45.7 -0.1
HLP   Hilina Pali         0.28 223   Pg     Pn       22 23 40.6  0.0
HLP                                  IAML            22 23 43.0
      comp=E,546nm,3.5s
HLP   Hilina Pali         0.28 223   IAML            22 23 46.2
      comp=N,473nm,2.0s
AIN   Ainahou             0.36 249   Pg     Pn       22 23 41.7  0.0
AIN                                  IAML            22 23 48.5
      comp=E,275nm,0.5s
HMH   Humu‘ula Sheep      0.37 286   Pg     Pn       22 23 41.9 -0.2
HMH                                  IAML            22 23 48.1
      comp=N,292nm,0.3s
HTC   Hot Caves           0.38 227          Pn       22 23 42.0 +0.1
MLOA  Mauna Loa Obse      0.45 275   Pg     Pb       22 23 42.9 +0.3
MLOA                                 Sg     Sb       22 23 49.3 -0.2
MLOA                                 IAML            22 23 49.8
      comp=N,348nm,0.3s
MWH   Moku‘aweowe         0.46 268   Pg     Pn       22 23 43.3 -0.2
MWH                                  Sg     Sb       22 23 49.6 -0.5
MWH                                  IAML            22 23 50.5
      comp=E,248nm,0.3s
MWH                                  IAML            22 23 51.9
      comp=N,308nm,1.9s
POHA  Pohakuloa           0.48 303   Pg     Pb       22 23 42.8 -0.1
ALEP  Alea Permanent      0.51 275          Pb       22 23 43.6 +0.1
ALEP                                        Pn       22 23 50.7 +6.7
KHU   Kahuku              0.54 242          Sb       22 23 51.5 -0.3
KHU   Kahuku              0.54 242   Pg     Pb       22 23 43.9 -0.1
KHU   Kahuku              0.54 242   IAML            22 24 01.9
      comp=N,227nm,3.0s
KHU                                  IAML            22 24 03.8
      comp=E,323nm,3.6s
HUH   Hualalai            0.71 285          Pn       22 23 46.5 -0.2
KHLU  Kahalu`u            0.75 277          Pn       22 23 46.6 -0.5
KHLU                                 IAML            22 24 03.5
      comp=N,201nm,3.5s
```

BJI ***27*** *22:31:18.1±0.0, 42°.13N×139°.09E, h28^{km}, mb5.1/85, mB5.3/58, ML5.0/2, Ms5.0/89, Ms7 4.8/83*
IDC ***27*** *22:31:19.9±0.3, 42°.05N×138°.47E, h0^{km}, mb4.9/34, mbtmp4.9/38, ML4.1/5, MS4.4/78, Error ellipse:*

s-maj=12.1km s-min=9.5km az=85.0

*NEIC **27** 22:31:21.8, 42.°04N×138.°55E, h12^{km}, Moment Tensor Solution. Duration: 1^s9 Moment tensor: Scale 10^{16}Nm; M_{rr}5.53; $M_{\theta\theta}$-4.05; $M_{\phi\phi}$-1.48; $M_{r\theta}$-0.15; $M_{\theta\phi}$-2.92; $M_{\phi r}$-2.30; Fault plane solution: $M_0$6.20000×10^{16} NP1: ϕ_s219.95000°, δ54.31000°, λ68.80000°. NP2: ϕ_s73.56000°, δ40.78000°, λ116.72000°. Principal axes: T 6.2693, Plg71.0000°, Azm77.0000°; N -0.1455, Plg17.0000°, Azm233.0000°; P -6.1238, Plg7.0000°, Azm325.0000°;*

*NEIC **27** 22:31:21.1±1.6, 42.°04N±0.°06×138.°55E±0.°08, h5^{km}±3^{km}, mb5.6/555, Ms_20 4.6/54, Mwr5.0/31, Mww5.1/27 Error ellipse: s-maj=8.7km s-min=7.8km az=139.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}2.81; $M_{\theta\theta}$-1.48; $M_{\phi\phi}$-1.33; $M_{r\theta}$1.66; $M_{\theta\phi}$-1.37; $M_{\phi r}$0.86; Fault plane solution: $M_0$3.36000×10^{16} NP1: ϕ_s218.22000°, δ29.12000°, λ75.07000°. NP2: ϕ_s55.20000°, δ61.95000°, λ98.17000°. Principal axes: T 3.4112, Plg72.0000°, Azm344.0000°; N -0.0949, Plg7.0000°, Azm231.0000°; P -3.3163, Plg17.0000°, Azm139.0000°;*

*NEIC **27** 22:31:21.8, 42.°04N×138.°55E, h12^{km}*

*NEIC **27** 22:31:21.8, 42.°04N×138.°55E, h10^{km}*

*JMA **27** 22:31:23.3±0.2, 42.°0N±0.°5×13°9E±°, h31^{km}±1^{km}, MD5.0/40, MW5.1/40, SW OFF HOKKAIDO*

JMA Felt I J1 at SW OFF HOKKAIDO .

*NIED **27** 22:31:23.3, 42.°01N×138.°70E, h31^{km}, MW5.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}3.74; $M_{\theta\theta}$-2.62; $M_{\phi\phi}$-1.12; $M_{r\theta}$2.15; $M_{\theta\phi}$-1.76; $M_{\phi r}$1.82; Fault plane solution: $M_0$4.70000×10^{16} NP1: ϕ_s53.00000°, δ63.00000°, λ86.00000°. NP2: ϕ_s241.00000°, δ27.00000°, λ97.00000°.*

*MOS **27** 22:31:24.6±1.2, 42.°05N×138.°43E, h39^{km}, mb5.6/78, MS5.0/34 Error ellipse: s-maj=5.4km s-min=3.8km az=116.2*

*SKHL **27** 22:31:24.7±0.4, 42.°20N×138.°50E, h40^{km}±5^{km}, mb5.3/12, mbv5.3/5, ms5.0/12, msh4.9/3*

*GCMT **27** 22:31:25.0±0.1, 42.°07N±0.°01×138.°38E±0.°02, h12^{km}, MW5.2/134, Moment Tensor Solution. s88,c122; s134,c225; Duration: 1^s0 Moment tensor: Scale 10^{16} Nm; M_{rr}6.80±.11; $M_{\theta\theta}$-4.28±.11; $M_{\phi\phi}$-2.52±.11; $M_{r\theta}$-1.12±.31; $M_{\theta\phi}$-3.76±.09; $M_{\phi r}$-3.25±.37; Best double couple: $M_0$7.83600×10^{16} NP1: ϕ_s218.00000°, δ58.00000°, λ74.00000°. NP2: ϕ_s65.00000°, δ35.00000°, λ113.00000°. Principal axes: T 7.8220, Plg72.0000°, Azm89.0000°; N 0.0290, Plg13.0000°, Azm226.0000°; P -7.8510, Plg11.0000°, Azm319.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **27** 22:31:28.0, 42.°06N×138.°51E, h30^{km}±1^{km}, mb5.1*

ISC 27 22:31:23.6±0.2**, 42.°03N**±0.°03×**138.°67E**±0.°02**, h21**^{km}±2^{km}**, h21**^{km}**:pP-P, n1765, σ**1^s**52**/1607**, mb5.5**/511**, MS4.7**/145**, 130C-75D, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOSM	**Okushiri--Mats**	**0.60**	**85**	⇓P	**Pb**	**22 31 34.7**	**-0.8**
JOSM				⇓*e*S	**Sb**	**22 31 42.7**	**-0.9**
JOSM	**Okushiri--Mats**	**0.60**	**85**	A	A	22 31 34.7	
	comp=E,129nm,4.6s,comp=E,92nm,5.3s						
JHST	**Hiyamasetana**	**0.98**	**66**	⇓*e*P	**Pb**	**22 31 40.8**	**-1.0**
JHST				⇓*e*S	**Sb**	**22 31 53.0**	**-1.2**
JHST	**Hiyamasetana**	**0.98**	**66**	A	A	22 31 40.8	
	comp=E,60nm,2.2s,comp=E,53nm,7.3s						
JOMM	**Oshimamatsumae**	**1.12**	**116**	⇓*i*P	**Pn**	**22 31 42.2**	**-1.8**
JOMM				⇓*e*S	**Sb**	**22 31 56.1**	**-2.2**
JOMM	**Oshimamatsumae**	**1.12**	**116**	A	A	22 31 42.2	
	comp=E,49nm,4.7s,comp=E,44nm,3.0s						
JSH	**Shimam**	**1.19**	**58**	⇓P	**Pn**	**22 31 43.7**	**-1.3**
JSH				⇓*e*S	**Sn**	**22 31 57.8**	**-2.8**
JSH	**Shimam**	**1.19**	**58**	A	A	22 31 43.7	
	comp=E,25nm,2.2s,comp=E,23nm,4.6s						
JYM2	**Yakumo 2**	**1.27**	**85**	⇓*e*P	**Pn**	**22 31 45.3**	**-0.8**
JYM2				⇓*e*S	**Sn**	**22 32 01.4**	**-1.1**
JYM2	**Yakumo 2**	**1.27**	**85**	A	A	22 31 45.3	
	comp=E,35nm,3.1s,comp=E,58nm,4.4s						
JSR	**Shiriuchi**	**1.40**	**110**	*e*P	**Pn**	**22 31 47.0**	**-0.9**
JSR	**Shiriuchi**	**1.40**	**110**	A	A	22 31 47.0	
	comp=E,60nm,3.0s,comp=E,84nm,3.1s						
JSI2	**Shiura 2**	**1.63**	**126**	A	A	22 31 50.2	
	comp=E,39nm,5.7s,comp=E,33nm,4.1s						
JIW	**Iwasaki**	**1.75**	**144**	⇓*e*P	**Pn**	**22 31 50.6**	**-2.1**
JIW				⇓*e*S	**Sn**	**22 32 12.1**	**-2.3**
JIW	**Iwasaki**	**1.75**	**144**	A	A	22 31 50.6	
	comp=E,69nm,1.7s,comp=E,65nm,2.3s						
JKB	**Kayabe**	**1.77**	**94**	⇓*e*P	**Pn**	**22 31 52.4**	**-0.5**
JKB	**Kayabe**	**1.77**	**94**	A	A	22 31 52.4	
	comp=E,26nm,3.3s,comp=E,30nm,2.3s						
JNB	**Noboribetsu**	**1.81**	**75**	⇓*e*P	**Pn**	**22 31 53.0**	**-0.5**
JHHS	**Hirosakihyakuz**	**1.87**	**137**	A	A	22 31 53.8	
	comp=E,89nm,2.6s,comp=E,141nm,3.1s						
JSK	**Shakotan**	**1.88**	**45**	*e*P	**Pn**	**22 31 53.4**	**-1.1**
JSK				*e*S	**Sn**	**22 32 14.6**	**-2.8**
JSK	**Shakotan**	**1.88**	**45**	A	A	22 31 53.4	
	comp=E,13nm,8.0s,comp=E,16nm,4.0s						
JOT	**Ohata**	**1.90**	**109**	⇓*e*P	**Pn**	**22 31 53.8**	**-0.9**
JOT				⇓*e*S	**Sn**	**22 32 16.2**	**-1.7**
JOT	**Ohata**	**1.90**	**109**	A	A	22 31 53.8	
	comp=E,31nm,2.8s,comp=E,41nm,4.2s						
JNTW	**Noshirotokiwa**	**2.09**	**147**	A	A	22 31 56.9	
	comp=E,88nm,3.1s,comp=E,95nm,3.1s						
JOG3	**Oga3**	**2.13**	**171**	A	A	22 31 59.7	
	comp=E,38nm,3.9s,comp=E,51nm,2.9s						
JAHD	**Aomorihigashid**	**2.14**	**110**	A	A	22 31 57.7	
	comp=E,35nm,2.9s,comp=E,30nm,4.1s						
JTM	**Tenmabayashi**	**2.19**	**124**	Pn	**Pn**	**22 31 57.7**	**-0.9**
JTM	**Tenmabayashi**	**2.19**	**124**	P	**Pn**	**22 31 58.1**	**-0.6**
JTM	**Tenmabayashi**	**2.19**	**124**	⇓P	**Pn**	**22 31 57.8**	**-0.9**
JTM	**Tenmabayashi**	**2.19**	**124**	A	A	22 31 57.8	
	comp=E,21nm,5.0s,comp=E,27nm,3.7s						
JEW	**Eniwo**	**2.21**	**68**	*e*P	**Pn**	**22 31 59.7**	**+0.7**
JEW	**Eniwo**	**2.21**	**68**	A	A	22 31 59.7	
	comp=E,18nm,4.1s,comp=E,28nm,4.0s						
JARK	**Aomorirokkasho**	**2.27**	**116**	A	A	22 31 59.5	
	comp=E,29nm,2.1s,comp=E,21nm,9.5s						
JAH	**Hinai**	**2.36**	**140**	A	A	22 32 00.8	
	comp=E,28nm,2.4s,comp=E,29nm,5.5s						
JISS	**Ishikarishitsu**	**2.38**	**58**	A	A	22 32 01.5	
	comp=E,28nm,4.7s,comp=E,38nm,4.9s						
JIAM	**Iburiatsuma**	**2.48**	**75**	A	A	22 32 02.8	
	comp=E,31nm,5.7s,comp=E,34nm,4.1s						
JANG	**Nango**	**2.71**	**127**	A	A	22 32 05.8	
	comp=E,12nm,4.1s,comp=E,12nm,3.3s						
JYW	**Yuwa**	**2.75**	**154**	A	A	22 32 06.4	
	comp=E,42nm,3.3s,comp=E,49nm,4.5s						
JHR	**Hokuryu**	**2.83**	**52**	A	A	22 32 07.8	
	comp=E,13nm,7.2s,comp=E,15nm,4.1s						
JBT2	**Biratori 2**	**2.84**	**73**	A	A	22 32 07.8	
	comp=E,15nm,4.9s,comp=E,9.0nm,3.9s						
JSHD	**Hidakashinhida**	**2.85**	**81**	A	A	22 32 08.0	
	comp=E,35nm,8.8s,comp=E,25nm,4.1s						
JSZI	**Iwateshizukuis**	**2.87**	**142**	A	A	22 32 08.6	
	comp=E,54nm,4.0s,comp=E,71nm,3.7s						
JTB	**Tobi-shima**	**2.91**	**166**	A	A	22 32 08.7	
	comp=E,18nm,3.8s,comp=E,22nm,1.0s						
JKEN	**Kujiedanarisaw**	**2.93**	**127**	A	A	22 32 09.0	
	comp=E,15nm,5.4s,comp=E,17nm,5.0s						
JAB	**Ashibetsu**	**3.00**	**59**	A	A	22 32 10.3	
	comp=E,13nm,3.4s,comp=E,11nm,5.4s						
JRG	**Rokugo**	**3.02**	**150**	A	A	22 32 10.3	
	comp=E,16nm,3.3s,comp=E,15nm,3.6s						
JNBK	**Urakawa-nobuka**	**3.05**	**84**	A	A	22 32 10.7	
	comp=E,13nm,4.7s,comp=E,9.0nm,3.6s						
JYYZ	**Yamagatayuza**	**3.16**	**162**	A	A	22 32 12.3	
	comp=E,32nm,3.3s,comp=E,44nm,3.1s						
JTH	**Tanohata**	**3.19**	**130**	A	A	22 32 12.7	
	comp=E,7.0nm,4.8s,comp=E,10.0nm,4.6s						
JOM	**Ohasama**	**3.24**	**141**	A	A	22 32 13.3	
	comp=E,8.0nm,3.0s,comp=E,6.0nm,5.1s						
ERM	**Erimo**	**3.34**	**89**	Pn	**Pn**	**22 32 14.3**	**-0.3**
ERM	**Erimo**	**3.34**	**89**	P	**Pn**	**22 32 15.2**	**+0.6**
ERM	**Erimo**	**3.34**	**89**	*de*P	**Pn**	**22 32 15.1**	**+0.5**
ERM				pmax	pmax		
	comp=Z,149nm,1.3s						
JEM	**Erimo**	**3.34**	**89**	P	**Pn**	**22 32 15.0**	**+0.4**
TEY	**Ternei**	**3.36**	**334**	⇓*e*P	**Pn**	**22 32 12.6**	**-2.2**
TEY				*e*		22 32 51.6	
TEY				pmax	pmax		
	comp=E,350nm,0.8s						
TEY				pmax	pmax		
	comp=N,940nm,0.6s						
TEY				pmax	pmax		
	comp=Z,10µm,0.6s						
TEY				pmax	pmax		
	comp=Z,5µm,0.7s						
TEY				pmax	pmax		
	comp=Z,4µm,0.8s						
TEY	**Ternei**	**3.36**	**334**	*e*P	**Pn**	**22 32 12.6**	**-2.2**
TEY				AMB	AMB	22 32 13.4	
	comp=Z,510nm,0.5s						
TEY				*e*S	**Sn**	**22 32 48.7**	**-5.4**
TEY				A	A	22 32 50.5	
	comp=Z,1µm,0.3s						
TEY				A	A	22 32 50.5	
	comp=Z,840nm,0.3s						
TEY				AMS	AMS	22 33 24.0	
	comp=Z,5µm,12.0s						
TEY				AMS	AMS	22 33 24.0	
	comp=Z,6µm,12.0s						
TEY				AMS	AMS	22 33 24.0	
	comp=Z,5µm,12.0s						
JYK	**Kaneyama**	**3.36**	**157**	A	A	22 32 15.1	
	comp=Z,10.0nm,3.3s,comp=Z,10.0nm,2.9s						
JKK2	**Kamakawa 2**	**3.52**	**57**	A	A	22 32 17.6	
	comp=Z,4.0nm,3.9s,comp=Z,6.0nm,3.2s						
JYA	**Atsumi**	**3.52**	**167**	A	A	22 32 17.4	
	comp=Z,14nm,0.8s,comp=Z,14nm,4.0s						
JCH	**Churui**	**3.53**	**79**	A	A	22 32 17.6	
	comp=Z,7.0nm,6.6s,comp=Z,6.0nm,4.0s						
ASAJ	**Asahikawa**	**3.56**	**53**	Pn	**Pn**	**22 32 17.8**	**+0.3**
	comp=Z,4.5nm,0.3s,baz=276,slow=10,SNR=13						
ASAJ				Sn	**Sn**	**22 32 55.8**	**-3.1**
	comp=Z,16nm,0.3s,baz=66,slow=30,SNR=5.2						
JKA	**Kamikawa-asahi**	**3.56**	**53**	Pn	**Pn**	**22 32 17.0**	**-0.5**
JKA	**Kamikawa-asahi**	**3.56**	**53**	*e*P	**Pn**	**22 32 17.8**	**+0.3**
JMK	**Ichinoseki**	**3.64**	**147**	A	A	22 32 19.0	
	comp=Z,9.0nm,5.3s,comp=Z,6.0nm,3.7s						
JRR	**Rishiri**	**3.65**	**31**	A	A	22 32 19.8	
	comp=Z,21nm,5.5s,comp=Z,31nm,6.7s						
OFUJ	**Ofunato**	**3.73**	**141**	A	A	22 32 20.2	
	comp=Z,8.0nm,3.9s,comp=Z,7.0nm,3.6s						
JOFO	**Osakifurukawao**	**3.83**	**153**	A	A	22 32 21.7	
	comp=Z,37nm,4.0s,comp=Z,41nm,3.3s						
JKMT	**Kesennumamotoy**	**3.86**	**145**	A	A	22 32 22.2	
	comp=Z,7.0nm,7.3s,comp=Z,8.0nm,3.8s						
JYS	**Shirataka**	**3.95**	**164**	A	A	22 32 23.5	
	comp=Z,14nm,0.7s,comp=Z,14nm,1.6s						
JSD	**Sado**	**4.00**	**185**	Pn	**Pn**	**22 32 20.9**	**-2.7**
JSD	**Sado**	**4.00**	**185**	P	**Pn**	**22 32 24.2**	**+0.6**
JYAR	**Yonezawaarcadi**	**4.26**	**164**	A	A	22 32 27.9	
	comp=Z,26nm,1.2s,comp=Z,13nm,1.3s						
JMM	**Marumori**	**4.47**	**158**	Pn	**Pn**	**22 32 27.9**	**-2.1**
JMM	**Marumori**	**4.47**	**158**	P	**Pn**	**22 32 28.5**	**-1.5**
AKK	**Akkeshi**	**4.67**	**76**	*e*P	**Pn**	**22 32 35.2**	**+2.4**
GRTR	**Gornotajezhnoj**	**5.07**	**292**	*e*P	**Pn**	**22 32 36.9**	**-1.4**
GRTR				AMB	AMB	22 32 46.4	
	comp=Z,80nm,0.5s						
GRTR				*e*S	**Sn**	**22 33 30.7**	**-5.6**
GRTR				A	A	22 33 45.0	
	comp=Z,370nm,0.5s						
GRTR				A	A	22 33 45.0	
	comp=Z,230nm,0.5s						
GRTR				AMS	AMS	22 34 15.0	
	comp=Z,11µm,15.0s						
GRTR				AMS	AMS	22 34 15.0	
	comp=Z,4µm,15.0s						
GRTR				AMS	AMS	22 34 15.0	
	comp=Z,5µm,15.0s						
VLA	**Vladivostok**	**5.13**	**285**	*c i*P	**Pn**	**22 32 35.6**	**-3.5**
VLA	**Vladivostok**	**5.13**	**285**	*e*P	**Pn**	**22 32 37.9**	**-1.2**
RUSJ	**Misakicho**	**5.25**	**64**	*e*P	Pn	22 32 46.9	+6.2
USRK	**Ussuriysk Ar.**	**5.35**	**296**	Pn	**Pn**	**22 32 39.6**	**-2.5**
	comp=Z,7.0nm,0.3s,baz=101,slow=15,SNR=141						
USRK				Sn	Sn	22 33 31.1	-12
	comp=Z,11nm,0.3s,baz=85,slow=24,SNR=4.6						
USRK				Lg	Lg	22 34 00.7	
	comp=Z,16nm,0.3s,baz=99,slow=26,SNR=5.0						
USRK				LR	LR	22 34 35.1	
	comp=Z,6µm,20.8s,baz=105,slow=38						
	comp=Z,55nm,0.6s						
USRK	**Ussuriysk Ar.**	**5.35**	**296**	Pn	**Pn**	**22 32 38.9**	**-3.2**
USA0B	**Ussuriysk Arra**	**5.35**	**296**	Pn	**Pn**	**22 32 40.0**	**-2.1**
USA0B	**Ussuriysk Arra**	**5.35**	**296**	*d i*P	**Pn**	**22 32 40.1**	**-2.1**
NMR	**Nemuro--Hokkai**	**5.37**	**73**	⇑*i*P	**Pn**	**22 32 43.0**	**+0.6**
NMR				S	**Sn**	**22 33 49.2**	**+5.6**
NMR	**Nemuro--Hokkai**	**5.37**	**73**	*i* P	**Pn**	**22 32 43.1**	**+0.6**
NMR				AMB	AMB	22 32 44.8	
	comp=Z,40nm,0.6s						
MJB9	**Matsu-Tunnel**	**5.49**	**184**	Pn	**Pn**	**22 32 42.3**	**-1.8**
MAJO	**Matsushiro**	**5.49**	**184**	Pn	**Pn**	**22 32 42.4**	**-1.7**
MAJO	**Matsushiro**	**5.49**	**184**	P	**Pn**	**22 32 46.3**	**+2.2**
MAJO	**Matsushiro**	**5.49**	**184**	⇑*e*P	**Pn**	**22 32 42.9**	**-1.2**
MJAR	**Matsushiro Arr**	**5.49**	**184**	Pn	**Pn**	**22 32 42.2**	**-1.9**
	comp=Z,8.1nm,0.6s,baz=6.0,slow=14,SNR=20						
MJAR				Sn	**Sn**	**22 33 41.7**	**-4.9**
	comp=Z,5.4nm,0.3s,baz=37,slow=32,SNR=8.7						
YUK	**Yuzh-Kuril'sk**	**5.64**	**67**	*c i*P	**Pn**	**22 32 48.3**	**+2.2**
YUK				*e*S	**Sn**	**22 33 58.3**	**+8.1**
YUK				pmax	pmax		
	comp=Z,120nm,0.2s						
YUK				pmax	pmax		
	comp=Z,762nm,1.2s						
YUK				smax	smax		
	comp=N,1µm,3.4s						
YUK				smax	smax		
	comp=E,690nm,0.9s						
YUK				MLR	MLR		
	comp=E,4µm,13.0s						
YUK				MLR	MLR		
	comp=Z,6µm,13.0s						
YUK	**Yuzh-Kuril'sk**	**5.64**	**67**	*e*P	**Pn**	**22 32 48.3**	**+2.2**
YUK				AMB	AMB	22 32 53.2	
	comp=Z,120nm,0.2s						
YUK				AMB	AMB	22 32 56.1	
	comp=Z,800nm,1.2s						
YUK				*e*S	**Sn**	**22 33 51.1**	**+0.9**
YUK				A	A	22 34 07.6	
	comp=Z,1µm,3.0s						
YUK				A	A	22 34 07.6	
	comp=Z,800nm,3.0s						
YUK				AMS	AMS	22 35 28.6	
	comp=Z,4µm,12.0s						
YUK				AMS	AMS	22 35 28.6	
	comp=Z,5µm,12.0s						
YUK				AMS	AMS	22 35 28.6	
	comp=Z,6µm,12.0s						
YSS	**Yuzh-Sakhalins**	**5.73**	**29**	Pn	**Pn**	**22 32 45.8**	**-1.5**
YSS	**Yuzh-Sakhalins**	**5.73**	**29**	*e*P	**Pn**	**22 32 47.9**	**+0.6**
YSS				*e*S	**Sn**	**22 33 57.9**	**+5.6**
YSS				pmax	pmax		
	comp=Z,200nm,1.2s						
YSS				pmax	pmax		
	comp=Z,400nm,3.3s						
YSS				MLR	MLR		
	comp=Z,8µm,12.0s						
YSS				MLR	MLR		
	comp=N,6µm,11.0s						
YSS	**Yuzh-Sakhalins**	**5.73**	**29**	*e*P	**Pn**	**22 32 48.1**	**+0.8**
YSS				AMB	AMB	22 32 48.9	
	comp=N,40nm,0.2s						
YSS				AMB	AMB	22 33 08.4	
	comp=N,400nm,3.3s						
YSS				*e*S	**Sn**	**22 33 50.0**	**-2.3**
YSS				A	A	22 34 03.8	
	comp=N,20nm,0.3s						
YSS				A	A	22 34 03.8	
	comp=N,30nm,0.3s						
YSS				AMS	AMS	22 35 16.0	
	comp=N,6µm,12.0s						
YSS				AMS	AMS	22 35 16.0	
	comp=N,7µm,12.0s						
YSS				AMS	AMS	22 35 16.0	
	comp=N,8µm,12.0s						
SHO	**Shikotan**	**6.26**	**70**	*d i*P	**Pn**	**22 32 56.5**	**+1.8**
SHO				*e*S	**Sn**	**22 34 06.7**	**+1.1**
SHO				pmax	pmax		
	comp=Z,215nm,1.1s						
SHO				pmax	pmax		
	comp=Z,80nm,0.4s						
SHO				pmax	pmax		
	comp=N,31nm,0.5s						
SHO				pmax	pmax		
	comp=E,52nm,0.5s						
SHO				smax	smax		
	comp=E,416nm,4.8s						
SHO				smax	smax		
	comp=N,207nm,1.7s						
SHO				MLR	MLR		
	comp=E,2µm,10.0s						
SHO				MLR	MLR		
	comp=Z,2µm,10.0s						
SHO				MLR	MLR		
	comp=N,1µm,9.0s						
SHO	**Shikotan**	**6.26**	**70**	*i* P	**Pn**	**22 32 56.8**	**+2.1**
SHO				AMB	AMB	22 32 57.8	
	comp=N,220nm,1.1s						
SHO				AMB	AMB	22 32 58.0	
	comp=N,80nm,0.4s						
SHO				*e*S	**Sn**	**22 34 05.5**	**-0.1**
SHO				A	A	22 34 16.2	
	comp=N,200nm,4.8s						
SHO				A	A	22 34 16.2	
	comp=N,400nm,4.8s						
SHO				AMS	AMS	22 36 31.7	
	comp=N,3µm,13.0s						
SHO				AMS	AMS	22 36 31.7	
	comp=N,4µm,13.0s						
SHO				AMS	AMS	22 36 31.7	
	comp=N,3µm,13.0s						
JGF	**Kuroka**	**6.50**	**189**	Pn	**Pn**	**22 32 56.5**	**-1.5**
KHBR	**Khabarovsk**	**6.93**	**340**	*e*P	**Pn**	**22 33 03.8**	**0.0**
KHBR				AMB	AMB	22 33 04.3	
	comp=N,140nm,0.4s						
MDJ	**Mudanjiang**	**7.11**	**294**	Pn	**Pn**	**22 33 05.0**	**-1.3**
MDJ				LR	LR		
	comp=N,13µm,12.2s						
MDJ				LR	LR		
	comp=N,8µm,15.4s						
MDJ				LR	LR		
	comp=N,11µm,6.5s						
MDJ	**Mudanjiang**	**7.11**	**294**	Pn	**Pn**	**22 33 04.7**	**-1.5**
KUR	**Kuril'sk**	**7.40**	**61**	*e*P	Pn	22 33 17.0	+6.7
KUR				S	Sn	22 34 45.3	+12
KUR				pmax	pmax		
	comp=N,54nm,0.8s						
KUR				pmax	pmax		
	comp=Z,123nm,0.8s						
KUR	**Kuril'sk**	**7.40**	**61**	*e*P	**Pn**	**22 33 13.6**	**+3.3**
KUR				AMB	AMB	22 33 23.4	
	comp=Z,110nm,0.8s						
KUR				*e*S	**Sn**	**22 34 34.1**	**+0.5**
KUR				AMS	AMS	22 36 42.0	
	comp=Z,3µm,14.0s						
KUR				AMS	AMS	22 36 42.0	
	comp=Z,4µm,14.0s						
KUR				AMS	AMS	22 36 42.0	
	comp=Z,5µm,14.0s						
UGL	**Uglegorsk**	**7.44**	**18**	*e*P	Pn	22 33 21.3	+10
UGL				pmax	pmax		
	comp=Z,600nm,1.8s						
UGL				MLR	MLR		
	comp=E,7µm,13.0s						
UGL				MLR	MLR		
	comp=N,4µm,10.0s						
UGL				MLR	MLR		
	comp=Z,4µm,9.0s						
UGL	**Uglegorsk**	**7.44**	**18**	*e*P	**Pn**	**22 33 12.6**	**+1.8**
UGL				AMB	AMB	22 33 24.1	
	comp=Z,400nm,1.0s						
UGL				AMS	AMS	22 37 41.0	
	comp=Z,4µm,12.0s						
UGL				AMS	AMS	22 37 41.0	
	comp=Z,7µm,12.0s						
UGL				AMS	AMS	22 37 41.0	
	comp=Z,4µm,12.0s						
JHS	**Saijyo**	**8.26**	**214**	Pn	**Pn**	**22 33 21.6**	**-0.5**
JHS	**Saijyo**	**8.26**	**214**	P	**Pn**	**22 33 23.2**	**+1.1**
KLR	**Kul'dur**	**8.68**	**328**	Pn	**Pn**	**22 33 26.2**	**-1.6**
	comp=Z,2.3nm,0.3s,baz=131,slow=14,SNR=100						
KLR				Sn	**Sn**	**22 34 56.7**	**-8.3**
	comp=Z,2.3nm,0.3s,baz=163,slow=22,SNR=0.7						
KLR				Lg	Lg	22 35 44.2	
	comp=Z,0.7nm,0.3s,baz=211,slow=20,SNR=8.4						
KLR				LR	LR	22 36 44.1	
	comp=Z,6µm,20.3s,baz=130,slow=38						
	comp=Z,31nm,0.8s						
KLR	**Kul'dur**	**8.68**	**328**	*d i*P	**Pn**	**22 33 26.5**	**-1.3**
KLR				pmax	pmax		
	comp=Z,43nm,1.0s						
KLR	**Kul'dur**	**8.68**	**328**	*e*P	**Pn**	**22 33 26.8**	**-1.0**
GRNR	**Gornyy**	**8.88**	**351**	⇑*i*P	**Pn**	**22 33 29.8**	**-0.8**
GRNR				*e*S	**Sn**	**22 35 10.5**	**+0.6**
GRNR				pmax	pmax		
	comp=E,6.0nm,0.7s						
GRNR				pmax	pmax		
	comp=N,10.0nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GRNR				smax	smax		
	comp=E,20nm,0.6s						
GRNR				MLR	MLR		
	comp=N,2µm,15.0s						
GRNR				MLR	MLR		
	comp=Z,2µm,16.0s						
GRNR				MLR	MLR		
	comp=E,3µm,12.0s						
GRNR	**Gornyy**	**8.88**	**351**	*e*P	**Pn**	**22 33 30.8**	**+0.2**
GRNR				AMB	AMB	22 33 38.1	
	comp=E,130nm,0.6s						
GRNR				AMS	AMS	22 36 39.0	
	comp=E,2µm,12.0s						
GRNR				AMS	AMS	22 36 39.0	
	comp=E,3µm,12.0s						
GRNR				AMS	AMS	22 36 39.0	
	comp=E,2µm,12.0s						
BNX	**BinXian**	**8.94**	**298**	⇓P	**Pn**	**22 33 34.3**	**+2.9**
BNX				smax	smax		
	comp=E,420nm,1.2s						
BNX				smax	smax		
	comp=E,290nm,1.2s						
JMN	**Monobe**	**9.11**	**206**	Pn	**Pn**	**22 33 34.8**	**+1.0**
JMN	**Monobe**	**9.11**	**206**	P	**Pn**	**22 33 36.1**	**+2.3**
TYV	**Tymovskoe**	**9.25**	**16**	*e*P	**Pn**	**22 33 38.2**	**+2.5**
TYV				*e*S	**Sn**	**22 35 22.5**	**+3.4**
TYV				pmax	pmax		
	comp=Z,300nm,4.5s						
TYV				pmax	pmax		
	comp=Z,21nm,0.8s						
TYV				smax	smax		
	comp=N,29nm,0.9s						
TYV				smax	smax		
	comp=E,20nm,0.9s						
TYV				smax	smax		
	comp=N,200nm,4.3s						
TYV				smax	smax		
	comp=E,300nm,4.3s						
TYV				MLR	MLR		
	comp=N,4µm,14.0s						
TYV				MLR	MLR		
	comp=Z,2µm,14.0s						
TYV	**Tymovskoe**	**9.25**	**16**	*e*P	**Pn**	**22 33 37.1**	**+1.4**
TYV				AMB	AMB	22 33 46.4	
	comp=Z,300nm,4.5s						
TYV				AMB	AMB	22 33 46.5	
	comp=Z,20nm,0.8s						
TYV				*e*S	**Sn**	**22 35 16.1**	**-3.0**
TYV				A	A	22 35 25.1	
	comp=Z,200nm,4.3s						
TYV				A	A	22 35 25.1	
	comp=Z,300nm,4.3s						
TYV				A	A	22 35 30.0	
	comp=Z,30nm,0.7s						
TYV				A	A	22 35 30.0	
	comp=Z,20nm,0.7s						
TYV				AMS	AMS	22 37 53.0	
	comp=Z,4µm,14.0s						
TYV				AMS	AMS	22 37 53.0	
	comp=Z,2µm,14.0s						
TYV				AMS	AMS	22 37 53.0	
	comp=Z,2µm,14.0s						
KSRS	**Korea Array**	**9.45**	**245**	Pn	**Pn**	**22 33 39.1**	**+0.6**
	comp=Z,3.2nm,0.3s,baz=61,slow=14,SNR=44						
KSRS				Sn	**Sn**	**22 35 23.5**	**-0.5**
	comp=Z,2.8nm,0.3s,baz=61,slow=13,SNR=4.8						
KSRS				LR	LR	22 36 39.2	
	comp=Z,2µm,19.0s,baz=55,slow=34						
KS19	**Wonju Array Si**	**9.46**	**245**	Pn	**Pn**	**22 33 38.3**	**-0.4**
KSAR	**Wonju Array Be**	**9.48**	**245**	Pn	**Pn**	**22 33 38.8**	**-0.1**
KSAR	**Wonju Array Be**	**9.48**	**245**	P	**Pn**	**22 33 38.8**	**-0.1**
CN2	**Changchun**	**9.86**	**285**	*e*P	**Pn**	**22 33 41.8**	**-2.2**
CN2				*e*PP	**PnPn**	**22 33 50.0**	**-1.5**
CN2				*e*S	**Sn**	**22 35 33.8**	**-0.3**
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						

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CN2                                LR        LR
      comp=Z,6µm,11.0s
CN2                                LR        LR
      comp=Z,4µm,11.0s
CN2                                LR        LR
      comp=Z,5µm,11.0s
INCN  Inchon            10.32 248  Pn        Pn        22 33 50.1  -0.2
INCN  Inchon            10.32 248  P         Pn        22 33 54.4  +4.1
INCN  Inchon            10.32 248  P         Pn        22 33 50.2  -0.2
INCN  Inchon            10.32 248  P         Pn        22 33 51.5  +1.2
TJN   Taejon            10.43 241  Pn        Pn        22 33 52.0  +0.2
TJN   Taejon            10.43 241  P         Pn        22 33 54.0  +2.2
TJN   Taejon            10.43 241deP         Pn        22 33 52.9  +1.1
JTU   Tsushima          10.45 227  Pn        Pn        22 33 52.6  +0.6
JTU   Tsushima          10.45 227  P         Pn        22 33 56.4  +4.3
JNU   Nakatsue          10.82 217  Pn        Pn        22 33 58.4  +1.1
      comp=Z,0.2nm,0.3s,baz=83,slow=13,SNR=2.4
JNU                                LR        LR        22 37 48.3
      comp=Z,660nm,18.9s,baz=38,slow=36
JNU   Nakatsue          10.82 217  Pn        Pn        22 33 56.1  -1.2
JNU   Nakatsue          10.82 217  P         Pn        22 33 59.6  +2.3
NKL   Nikolayevsk       11.21   6 eP         Pn        22 34 03.3  +0.9
NKL                                AMS       AMS       22 38 26.4
      comp=Z,9µm,13.0s
NKL                                AMS       AMS       22 38 26.4
      comp=Z,18µm,13.0s
NKL                                AMS       AMS       22 38 26.4
      comp=Z,19µm,13.0s
SNY   Shenyang          11.25 274 ⇑P         Pn        22 34 05.8  +2.8
SNY                                S         Sn        22 36 07.5  -0.5
SNY                                pmax      pmax
      comp=Z,27nm,1.4s
SNY                                pmax      pmax
      comp=Z,740nm,5.4s
SNY                                LR        LR
      comp=Z,7µm,10.2s
SNY                                LR        LR
      comp=Z,3µm,11.2s
SNY                                LR        LR
      comp=Z,4µm,13.1s
HEH   HeiHe             11.33 320 eP         Pn        22 34 01.8  -2.3
HEH                                S         Sn        22 36 08.5  -1.5
HEH                                SS        SnSn      22 36 26.8  +5.0
HEH                                pmax      pmax
      comp=Z,21nm,0.9s
HEH                                pmax      pmax
      comp=Z,460nm,5.1s
HEH                                LR        LR
      comp=Z,3µm,11.2s
HEH                                LR        LR
      comp=Z,3µm,10.3s
HEH                                LR        LR
      comp=Z,7µm,9.7s
OKH   Okha              11.88  12 eP         Pn        22 34 11.4  -0.1
OKH                                AMB       AMB       22 34 14.7
      comp=Z,130nm,0.4s
OKH                                AMB       AMB       22 34 15.0
      comp=Z,800nm,5.0s
OKH                                AMS       AMS       22 40 46.4
      comp=Z,2µm,13.0s
OKH                                AMS       AMS       22 40 46.4
      comp=Z,2µm,13.0s
OKH                                AMS       AMS       22 40 46.4
      comp=Z,2µm,13.0s
DL2   Dalian            13.35 262  P         Pn        22 34 33.0  +1.3
DL2                                S         Sn        22 37 01.5  +2.2
DL2                                pmax      pmax
      comp=Z,76nm,1.2s
DL2                                pmax      pmax
      comp=Z,410nm,6.5s
DL2                                LR        LR
      comp=Z,3µm,9.0s
DL2                                LR        LR
      comp=Z,2µm,11.4s
DL2                                LR        LR
      comp=Z,3µm,11.2s
ZEA   Zeya              13.97 331 eP         Pn        22 34 40.9  +0.7
ZEA                               eS         Sn        22 37 11.7  -2.9
ZEA                                pmax      pmax
      comp=E,300nm,3.8s
ZEA                                pmax      pmax
      comp=N,400nm,5.8s
ZEA                                pmax      pmax
      comp=Z,500nm,5.1s
ZEA                                pmax      pmax
      comp=E,30nm,0.8s
ZEA                                pmax      pmax
      comp=N,60nm,1.1s
ZEA                                pmax      pmax
      comp=Z,130nm,1.1s
ZEA                                smax      smax
      comp=N,200nm,4.7s
ZEA                                smax      smax
      comp=E,700nm,7.1s
ZEA                                MLR       MLR
      comp=Z,2µm,11.0s
ZEA                                MLR       MLR
      comp=E,1µm,9.0s
ZEA                                MLR       MLR
      comp=N,2µm,11.0s
ZEA   Zeya              13.97 331 eP         Pn        22 34 37.6  -2.6
ZEA                                AMB       AMB       22 34 41.2
      comp=N,20nm,0.3s
ZEA                                AMB       AMB       22 34 53.3
      comp=N,500nm,5.0s
ZEA                                AMS       AMS       22 41 44.0
      comp=N,2µm,11.0s
ZEA                                AMS       AMS       22 41 44.0
      comp=N,1µm,11.0s
ZEA                                AMS       AMS       22 41 44.0
      comp=N,2µm,11.0s
BMKR  Bomnak            14.25 336 eP         Pn        22 34 42.4  -1.6
BMKR                               AMB       AMB       22 34 55.0
      comp=N,210nm,1.0s
KROS  Kirovskiy         14.63 332 eP         Pn        22 34 45.5  -3.7
KROS                               AMB       AMB       22 34 51.1
      comp=N,10.0nm,0.7s
SKR   Severo-Kuril's    14.80  48⇑eP         P         22 34 56.2  -1.1
SKR   Severo-Kuril's    14.80  48 eP         Pn        22 34 50.2  -1.3
SKR                                AMB       AMB       22 34 52.1
      comp=N,40nm,0.7s
SKR                                AMB       AMB       22 35 53.1
      comp=N,60nm,2.8s
SKR                                AMS       AMS       22 41 21.0
      comp=N,700nm,21.0s
HIA   Hailar            15.06 305  Pn        Pn        22 34 53.2  -1.9
HIA   Hailar            15.06 305c iP        Pn        22 34 54.8  -0.3
HIA                                pmax      pmax
      comp=Z,38nm,1.2s
JCJ   Chichijima        15.17 168  LR        LR        22 41 11.7
      comp=Z,1µm,19.4s,baz=20,slow=39
XLT   XiLinHaoTe        16.63 284⇑iP         P         22 35 17.3  -0.5
XLT                                pP        pP        22 35 22.5   0.0
XLT                                sP        sP        22 35 24.5  -0.2
XLT                                S         S         22 38 25.0  -5.7
XLT                                SS        SnSn      22 38 45.5   +13
XLT                                pmax      pmax
      comp=Z,38nm,1.0s
XLT                                pmax      pmax
      comp=Z,930nm,6.0s
XLT                                LR        LR
      comp=Z,3µm,10.1s
XLT                                LR        LR
      comp=Z,2µm,9.4s
PEA0B Petropavlovsk-    16.91  43  Pn        Pn        22 35 17.8  -0.9
PEA0B Petropavlovsk-    16.91  43  P         Pn        22 35 17.8  -0.9
PEA0B                              pmax      pmax
      comp=Z,34nm,1.6s
PETK  Petropavlovsk-    16.91  43  Pn        Pn        22 35 17.7  -1.0
      comp=Z,0.6nm,0.3s,baz=258,slow=13,SNR=1.8
PETK                               LR        LR        22 42 01.1
      comp=Z,685nm,18.3s,baz=221,slow=38
PETK  Petropavlovsk-    16.91  43  Pn        Pn        22 35 18.8  +0.1
PETK  Petropavlovsk-    16.91  43  P         Pn        22 35 18.8  +0.1
BJI   Beijing           17.08 271  P         Pn        22 35 21.0   0.0
BJI                                sP        pP        22 35 27.5  +0.1
BJI                                PP        pwP       22 35 33.8  +1.6
BJI                                S         Sn        22 38 25.0  -5.2
BJI                                SS        SnSn      22 38 51.5  +8.2
BJI                                pmax      pmax
      comp=Z,79nm,0.9s
BJI                                pmax      pmax
      comp=Z,570nm,6.6s
BJI                                LR        LR
      comp=Z,2µm,14.8s
BJI                                LR        LR
      comp=Z,2µm,11.3s
BJT   Baijiatuau        17.09 271            Pn        22 35 20.5  -0.6
BJT   Baijiatuau        17.09 271  P         Pn        22 35 20.5  -0.6
BJT                                pmax      pmax
      comp=Z,167nm,1.2s
PET   Petropavlovsk     17.35  44⇑eP         P         22 35 27.7  +2.3
PET   Petropavlovsk     17.35  44 eP         Pn        22 35 21.5  -2.7
PET                                AMB       AMB       22 35 23.1
      comp=Z,20nm,0.2s
PET                                AMS       AMS       22 42 45.0
      comp=Z,2µm,16.0s
JOW   Kunigami          17.39 213  P         P         22 35 26.1  -0.1
      comp=Z,21nm,0.9s,baz=310,slow=7.9,SNR=2.8
TIA   Tai'an            17.68 258 ⇑P         P         22 35 29.3   0.0
TIA                                pmax      pmax
      comp=Z,180nm,1.6s
TIA                                LR        LR
      comp=Z,2µm,9.3s
TIA                                LR        LR
      comp=Z,3µm,10.1s
TIA                                LR        LR
      comp=Z,2µm,10.8s
SSE   Sheshan           17.75 238  P         Pn        22 35 28.8  -0.5
SSE                                S         Sn        22 38 46.0  -0.5
SSE                                pmax      pmax
      comp=Z,54nm,0.9s
SSE                                pmax      pmax
      comp=Z,770nm,6.5s
SSE                                LR        LR
      comp=Z,730nm,13.7s
SSE                                LR        LR
      comp=Z,890nm,13.7s
NJ2   Nanjing           18.65 244⇑iP         Pn        22 35 40.5  +0.1
NJ2                                pP        pwP       22 35 50.8  +1.2
NJ2                                S         S         22 39 14.5  +3.0
NJ2                                sS        sS        22 39 20.3  +0.3
NJ2                                SS        SnSn      22 39 34.5   +12
NJ2                                pmax      pmax
      comp=Z,330nm,1.0s
NJ2                                pmax      pmax
      comp=Z,2µm,3.5s
NJ2                                LR        LR
      comp=Z,2µm,12.0s
NJ2                                LR        LR
      comp=Z,3µm,13.7s
NJ2                                LR        LR
      comp=Z,2µm,13.9s
HNS   HongShan          18.98 264 ⇑P         Pn        22 35 45.0  +0.7
HNS                                S         S         22 39 21.5  +3.3
HNS                                SS        SnSn      22 39 45.8   +16
HNS                                pmax      pmax
      comp=Z,350nm,1.1s
HNS                                pmax      pmax
      comp=Z,2µm,3.5s
HNS                                LR        LR
      comp=Z,2µm,13.5s
HNS                                LR        LR
      comp=Z,1µm,11.8s
HNS                                LR        LR
      comp=Z,3µm,14.1s
MA2   Magadan           19.10  19  P         P         22 35 43.8  -0.9
      comp=Z,0.4nm,0.3s,baz=197,slow=11,SNR=8.9
MA2                                LR        LR        22 43 01.6
      comp=Z,536nm,20.1s,baz=208,slow=37
      comp=Z,13nm,0.8s
MA2   Magadan           19.10  19  P         P         22 35 43.3  -1.4
MA2   Magadan           19.10  19  P         Pn        22 35 45.9  +0.3
MA2   Magadan           19.10  19deP         Pn        22 35 45.4  -0.2
MA2                                pmax      pmax
      comp=Z,102nm,1.0s
MA2                                MLR       MLR
      comp=Z,470nm,13.0s
MA2   Magadan           19.10  19 eP         Pn        22 35 45.4  -0.2
CIT   Chita             19.73 309 eP         P         22 35 52.0  +0.3
CIT                               e                    22 39 33.6
CIT                                pmax      pmax
      comp=Z,431nm,2.7s
CIT   Chita             19.73 309 eP         P         22 35 52.0  +0.3
HHC   Hu-ho-hao-te      20.33 276 eP         P         22 35 59.3  +0.9
HHC                                S         S         22 39 46.8  +1.5
HHC                                pmax      pmax
      comp=Z,200nm,0.9s
HHC                                pmax      pmax
      comp=Z,2µm,5.3s
HHC                                LR        LR
      comp=Z,5µm,11.1s
HHC                                LR        LR
      comp=Z,4µm,10.2s
HHC                                LR        LR
      comp=Z,5µm,9.2s
TIY   Taiyuan           20.56 267 eP         Pn        22 36 02.3  -0.9
TIY                                S         Sn        22 39 53.0  -1.4
TIY                                pmax      pmax
      comp=Z,110nm,1.7s
TIY                                pmax      pmax
      comp=Z,1µm,3.8s
TIY                                LR        LR
      comp=Z,2µm,11.0s
TIY                                LR        LR
      comp=Z,3µm,14.4s
TIY                                LR        LR
      comp=Z,3µm,12.4s
YAK   Yakutsk           20.74 348  P         P         22 36 00.1  -2.5
      comp=Z,12nm,0.6s,baz=267,slow=1.0,SNR=1.7
YAK                                LR        LR        22 44 03.4
      comp=Z,2µm,18.0s,baz=154,slow=37
      comp=Z,12nm,0.6s
YAK   Yakutsk           20.74 348  P         P         22 36 00.7  -1.8
YAK                                IAMs_20   IAMs_20   22 43 43.6
      comp=Z,1µm,20.0s
YAK   Yakutsk           20.74 348 eP         P         22 36 01.3  -1.2
YAK                               e                    22 36 20.5
YAK                               eS         S         22 39 53.6  +0.6
YAK                               e                    22 40 11.8
YAK                               eSS        SnSn      22 40 15.1  +2.1
YAK                                pmax      pmax
      comp=Z,72nm,1.3s
YAK                                pmax      pmax
      comp=N,68nm,1.9s
YAK                                pmax      pmax
      comp=E,23nm,1.5s
YAK                                pmax      pmax
      comp=Z,158nm,1.5s
YAK                                pmax      pmax
      comp=N,80nm,1.5s
YAK                                pmax      pmax
      comp=E,84nm,1.5s
YAK                                smax      smax
      comp=E,274nm,3.2s
YAK                                smax      smax
      comp=N,685nm,2.7s
YAK                                MLR       MLR
      comp=Z,1µm,11.0s
YAK                                MLR       MLR
      comp=N,1µm,10.0s
YAK                                MLR       MLR
      comp=E,594nm,8.0s
BTO   Baotou            21.53 276 eP         P         22 36 12.0  +0.7
BTO                                pP        pP        22 36 16.0  -0.1
BTO                                sP        sP        22 36 19.3  +1.0
BTO                                PP        PnPn      22 36 36.3  +4.6
BTO                                S         Sn        22 40 14.0  -3.6
BTO                                SS        SnSn      22 40 41.5  +8.9
BTO                                pmax      pmax
      comp=E,330nm,1.2s
BTO                                pmax      pmax
      comp=E,3µm,4.5s
BTO                                LR        LR
      comp=E,9µm,9.3s
BTO                                LR        LR
      comp=E,9µm,11.1s
BTO                                LR        LR
      comp=E,9µm,10.3s
LYN   LuoYang           21.82 259 ⇑P         P         22 36 13.5  -0.9
LYN                                PP        PnPn      22 36 38.3  +2.6
LYN                                S         S         22 40 16.0  +1.3
LYN                                pmax      pmax
      comp=E,73nm,1.5s
LYN                                pmax      pmax
      comp=E,570nm,4.9s
LYN                                LR        LR
      comp=E,2µm,12.4s
LYN                                LR        LR
      comp=E,2µm,12.2s
LYN                                LR        LR
      comp=E,3µm,11.3s
TATO  Taipei            22.17 225  P         P         22 36 17.1  -1.1
TATO  Taipei            22.17 225  P         P         22 36 18.3  +0.1
BOD   Bodaibo           22.21 324 eP         P         22 36 17.2  -1.2
BOD                                pmax      pmax
      comp=Z,63nm,1.6s
SEY   Seymchan          22.45  17  P         P         22 36 20.2  -0.7
      comp=Z,31nm,1.0s,baz=202,slow=7.6,SNR=37
SEY                                LR        LR        22 44 58.4
      comp=Z,931nm,21.9s,baz=204,slow=36
      comp=Z,31nm,1.0s
SEY   Seymchan          22.45  17⇓eP         P         22 36 20.5  -0.3
SEY                                pmax      pmax
      comp=Z,82nm,1.1s
SEY                                MLR       MLR
      comp=Z,717nm,17.0s
SEY   Seymchan          22.45  17 eP         P         22 36 20.5  -0.3
YHNB  Yeheng            22.47 225  P         P         22 36 18.8  -2.7
YHNB  Yeheng            22.47 225  P         P         22 36 22.4  +0.9
WHN   Wuhan             22.63 247 ⇓P         P         22 36 19.3  -3.8
WHN                                S         S         22 40 18.8   -11
WHN                                pmax      pmax
      comp=Z,110nm,1.0s
WHN                                LR        LR
      comp=Z,2µm,11.2s
WHN                                LR        LR
      comp=Z,4µm,10.2s
WHN                                LR        LR
      comp=Z,5µm,12.2s
ULN   Ulaanbaatar       23.02 295  P         P         22 36 25.8  -1.4
ULN   Ulaanbaatar       23.02 295  IAMs_20   IAMs_20   22 45 46.1
      comp=Z,2µm,19.0s
ULN   Ulaanbaatar       23.02 295ceP         P         22 36 25.9  -1.4
ULN                                pmax      pmax
      comp=Z,113nm,1.3s
ULN   Ulaanbaatar       23.02 295  P         P         22 36 26.7  -0.5
ULN   Ulaanbaatar       23.02 295 eP         P         22 36 25.9  -1.4
SONM  Songino Array     23.46 295  P         P         22 36 29.5  -2.1
      comp=Z,15nm,1.0s,baz=99,slow=7.0,SNR=78
SONM                               PcP       PcP       22 40 17.8  +0.7
      comp=Z,6.8nm,0.9s,baz=158,slow=4.0,SNR=5.8
SONM                               LR        LR        22 45 28.5
      comp=Z,1µm,18.7s,baz=94,slow=36
      comp=Z,15nm,1.0s
SONM  Songino Array     23.46 295  P         P         22 36 29.6  -2.0
SONM  Songino Array     23.46 295  P         P         22 36 29.7  -2.0
SONM                               pmax      pmax
      comp=Z,74nm,1.4s
TPUB  Ta-pu             23.98 224  P         P         22 36 39.6  +2.9
      comp=Z,80nm,1.7s
TWGBT Beinan            24.15 223  P         P         22 36 39.0  +0.8
TWG   Pinlang           24.15 223  P         P         22 36 36.6  -1.6
XAN   Xi'an             24.66 261 ⇑P         P         22 36 41.3  -1.6
XAN                                pP        pP        22 36 45.5  -2.5
XAN                                PcP       PcP       22 40 20.3  +0.4
XAN                                S         S         22 41 07.3  +4.0
XAN                                pmax      pmax
      comp=Z,82nm,1.3s
XAN                                pmax      pmax
      comp=Z,710nm,7.1s
XAN                                LR        LR
      comp=Z,1µm,13.6s
XAN                                LR        LR
      comp=Z,790nm,14.0s
XAN                                LR        LR
      comp=Z,880nm,13.3s
CNSH  ChangSha          25.07 245 ⇑P         P         22 36 44.5  -2.0
CNSH                               S         S         22 41 10.0  +0.2
CNSH                               pmax      pmax
      comp=Z,45nm,1.4s
CNSH                               LR        LR
      comp=Z,2µm,13.6s
CNSH                               LR        LR
      comp=Z,2µm,13.5s
CNSH                               LR        LR
      comp=Z,3µm,14.2s
IRK   Irkutsk           25.31 306 eP         P         22 36 51.8  +3.3
IRK                                pmax      pmax
      comp=Z,110nm,2.0s
ZAK   Zakamensk         25.68 301 eP         P         22 36 50.0  -2.0
ZAK                                pmax      pmax
      comp=Z,25nm,1.4s
SHEM  Shemya Is, Ala    26.01  53  LR        LR        22 45 52.2
      comp=Z,231nm,21.9s,baz=317,slow=33
ENH   Enshi             26.20 253  P         P         22 36 53.7  -3.0
MOY   Mondy             27.24 304 eP         P         22 37 04.1  -2.0
MOY                                pmax      pmax
      comp=Z,26nm,1.9s
LZH   Lanzhou           27.56 269 ⇑P         P         22 37 08.3  -0.9
LZH                                pP        pP        22 37 13.5  -0.8
LZH                                sP        sP        22 37 15.8  -0.6
LZH                                PcP       PcP       22 40 28.0  +1.3
LZH                                SS        SS        22 43 04.8   -41
LZH                                pmax      pmax
      comp=Z,86nm,1.4s
LZH                                pmax      pmax
      comp=Z,360nm,4.7s
LZH                                LR        LR
      comp=Z,2µm,14.6s
LZH                                LR        LR
      comp=Z,2µm,14.9s
LZH                                LR        LR
      comp=Z,2µm,15.6s
HKPS  Hong Kong Po S    28.45 234  IAMs_20   IAMs_20   22 48 34.4
      comp=Z,790nm,19.0s
GTA   Gaotai            29.40 278 ⇑P         P         22 37 24.5  -1.0
GTA                                sP        sP        22 37 32.5  -0.2
GTA                                PcP       PcP       22 40 32.5  +1.4
GTA                                S         S         22 42 18.8  +0.6
GTA                                sS        sS        22 42 27.8  +1.1
GTA                                PcS       PcS       22 44 14.5  +0.3
GTA                                pmax      pmax
      comp=Z,26nm,1.2s
GTA                                LR        LR
      comp=Z,750nm,16.4s
GTA                                LR        LR
      comp=Z,1µm,14.5s
GTA                                LR        LR
      comp=Z,1µm,15.3s
BILL  Bilibino          29.96  20  P         P         22 37 29.0  -1.0
BILL  Bilibino          29.96  20 i P        P         22 37 29.6  -0.4
BILL                              i                    22 37 37.8
BILL                              i                    22 38 29.1
BILL                              i S        S         22 42 23.2  -3.0
BILL                               pmax      pmax
      comp=Z,4.0nm,1.0s
BILL                               MLR       MLR
      comp=Z,522nm,14.0s
CD2   Chengdu           30.00 260  P         P         22 37 28.5  -2.2
CD2                                S         S         22 42 28.8  +1.2
CD2                                pmax      pmax
      comp=Z,70nm,1.0s
CD2                                pmax      pmax
      comp=Z,200nm,5.9s
CD2                                LR        LR
      comp=Z,2µm,11.3s
CD2                                LR        LR
      comp=Z,1µm,12.3s
CD2                                LR        LR
      comp=Z,2µm,11.8s
TIXI  Tiksi             30.09 354  P         P         22 37 28.7  -2.5
      comp=Z,0.9nm,0.3s,baz=270,slow=22,SNR=4.9
TIXI                               LR        LR        22 49 23.4
      comp=Z,708nm,18.9s,baz=48,slow=36
      comp=Z,0.9nm,0.3s
TIXI  Tiksi             30.09 354  P         P         22 37 28.6  -2.5
TIXI                               IAMs_20   IAMs_20   22 49 12.6
      comp=Z,834nm,19.0s
TIXI  Tiksi             30.09 354⇓eP         P         22 37 29.1  -2.0
TIXI                               pmax      pmax
      comp=Z,7.0nm,1.0s
TIXI                               MLR       MLR
      comp=Z,566nm,14.0s
GYA   Guiyang           30.46 250 ⇑P         P         22 37 33.5  -1.5
GYA                                S         S         22 42 37.8  +2.7
GYA                                pmax      pmax
      comp=Z,14nm,0.9s
GYA                                pmax      pmax
      comp=Z,220nm,3.5s
GYA                                LR        LR
      comp=Z,1µm,12.3s
GYA                                LR        LR
      comp=Z,1µm,12.2s
GYA                                LR        LR
      comp=Z,2µm,11.5s
QIZ   Qiongzhong        33.52 236  P         P         22 38 00.5  -1.3
QIZ                                S         S         22 43 22.5  -0.2
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QIZ				LR	LR		
	comp=Z,1µm,13.2s						
QIZ				LR	LR		
	comp=Z,2µm,12.8s						
QIZ				LR	LR		
	comp=Z,2µm,13.4s						
QIZ	Qiongzhong	33.52	236	IAMs_20	IAMs_20	22 52 03.6	
	comp=Z,730nm,20.0s						
PZH	PanZhiHua	33.92	255	P	P	22 38 03.0	-2.4
PZH				S	S	22 43 23.5	-5.6
PZH				pmax	pmax		
	comp=Z,30nm,1.2s						
PZH				pmax	pmax		
	comp=Z,140nm,6.0s						
PZH				LR	LR		
	comp=Z,950nm,11.5s						
PZH				LR	LR		
	comp=Z,860nm,11.9s						
PZH				LR	LR		
	comp=Z,930nm,10.8s						
KMI	Kunming	34.05	252	⇑P	P	22 38 04.0	-2.6
KMI				PP	PP	22 39 22.8	-1.0
KMI				S	S	22 43 31.5	+0.2
KMI				pmax	pmax		
	comp=Z,19nm,0.9s						
KMI				LR	LR		
	comp=Z,1µm,14.1s						
KMI				LR	LR		
	comp=Z,980nm,13.4s						
KMI				LR	LR		
	comp=Z,1µm,14.1s						
GOMU	GeErMu	34.23	275	P	P	22 38 07.0	-1.2
GOMU				pP	pP	22 38 11.0	-2.4
GOMU				pmax	pmax		
	comp=Z,37nm,1.2s						
GOMU				LR	LR		
	comp=Z,740nm,12.7s						
GOMU				LR	LR		
	comp=Z,520nm,14.8s						
GOMU				LR	LR		
	comp=Z,550nm,15.3s						
SPIA	Saint Paul Isl	35.48	47	P	P	22 38 18.2	-0.1
	baz=267						
DGZ	Jazzator, Alta	35.89	300	c iP	P	22 38 21.3	-0.8
DGZ				pmax	pmax		
	comp=Z,38nm,1.0s						
DGZ				MLR	MLR		
	comp=Z,3µm,16.0s						
NIKH	Nikolski High	36.33	54	P	P	22 38 26.7	+1.1
	baz=274						
DAV	Davao City (W)	36.70	202	LR	LR	22 53 38.9	
	comp=Z,156nm,19.9s,baz=322,slow=36						
WMQ	Urumqi	36.89	290	eP	P	22 38 29.8	-0.8
WMQ				sP	sP	22 38 38.3	+0.3
WMQ				PcP	PcP	22 40 52.0	+0.1
WMQ				pmax	pmax		
	comp=Z,37nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.5s						
WMQ				LR	LR		
	comp=Z,3µm,14.3s						
WMQ				LR	LR		
	comp=Z,2µm,14.3s						
WMQ				LR	LR		
	comp=Z,880nm,16.1s						
ZAA0	Zalesovo Array	37.08	308	P	P	22 38 28.8	-3.2
ZALV	Zalesovo Beam	37.08	308	P	P	22 38 30.3	-1.7
	comp=Z,4.3nm,0.7s,baz=85,slow=8.1,SNR=16						
ZALV				PcP	PcP	22 40 52.1	-0.1
	comp=Z,16nm,0.8s,baz=88,slow=3.0,SNR=21						
ZALV				LR	LR	22 53 38.2	
	comp=Z,732nm,19.3s,baz=82,slow=36						
	comp=Z,4.3nm,0.7s						
ZALV	Zalesovo Beam	37.08	308	P	P	22 38 29.4	-2.6
ZALV	Zalesovo Beam	37.08	308	i P	P	22 38 30.6	-1.4
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TNCH	TengChong	37.13	256	⇑P	P	22 38 31.8	-1.2
TNCH				PP	PP	22 39 57.3	-0.4
TNCH				S	S	22 44 17.8	-0.6
TNCH				PcS	PcS	22 44 40.3	-1.4
TNCH				pmax	pmax		
	comp=Z,65nm,1.2s						
TNCH				pmax	pmax		
	comp=Z,190nm,4.0s						
TNCH				LR	LR		
	comp=Z,350nm,12.0s						
TNCH				LR	LR		
	comp=Z,740nm,12.6s						
TNCH				LR	LR		
	comp=Z,1µm,13.8s						
TNA	Tin City	37.69	33	P	P	22 38 37.6	+0.6
TNA				IAmb	IAmb	22 38 47.3	
	comp=Z,98nm,1.1s						
TNA	Tin City	37.69	33	P	P	22 38 37.4	+0.4
	baz=258,SNR=28						
NRIK	Noril'sk	37.85	333	P	P	22 38 36.7	-1.7
	comp=Z,4.5nm,0.7s,baz=110,slow=16,SNR=6.6						
NRIK				PcP	PcP	22 40 53.5	-0.7
	comp=Z,25nm,1.2s,baz=132,slow=5.6,SNR=4.1						
NRIK				LR	LR	22 54 58.9	
	comp=Z,2µm,18.2s,baz=110,slow=38						
	comp=Z,4.5nm,0.7s						
NRIK	Noril'sk	37.85	333	P	P	22 38 36.6	-1.8
NRIK	Noril'sk	37.85	333	⇓eP	P	22 38 36.9	-1.5
NRIK				pmax	pmax		
	comp=Z,11nm,1.0s						
ZSN	Zaisan	37.95	297	eP	P	22 38 38.6	-1.0
	baz=297						
ZSN	Zaisan	37.95	297	eP	P	22 38 38.6	-1.0
ANM	Nome	38.58	35	P	P	22 38 45.0	+0.4
ANM	Nome	38.58	35	P	P	22 38 45.0	+0.4
ANM				pmax	pmax		
	comp=Z,93nm,1.3s						
ANM	Nome	38.58	35	P	P	22 38 45.7	+1.1
	baz=262,SNR=17						
CRAI	Chiangrai	38.89	248	P	P	22 38 46.4	-1.3
FALS	False Pass	39.37	51	P	P	22 38 51.2	0.0
	baz=276						
MK31	Makanchi Array	39.82	297	P	P	22 38 52.9	-2.3
MK31	Makanchi Array	39.82	297	c iP	P	22 38 53.5	-1.7
MKAR	Makanchi Array	39.82	297	P	P	22 38 53.7	-1.5
	comp=Z,16nm,1.0s,baz=80,slow=9.5,SNR=76						
MKAR				PcP	PcP	22 41 00.6	-0.3
	comp=Z,2.8nm,0.9s,baz=79,slow=2.6,SNR=3.6						
MKAR				S	S	22 44 48.4	-10
	comp=Z,0.4nm,0.7s,baz=88,slow=6.5,SNR=2.0						
MKAR				LR	LR	22 56 09.4	
	comp=Z,914nm,20.0s,baz=89,slow=38						
	comp=Z,16nm,1.0s						
MKAR	Makanchi Array	39.82	297	P	P	22 38 52.8	-2.4
SGSI	Sangihe	39.95	201	P	P	22 38 55.7	-0.7
	comp=Z,227nm,0.4s						
LSA	Lhasa	39.95	268	P	P	22 38 56.3	-0.7
LSA				pmax	pmax		
	comp=Z,69nm,1.3s						
LSA	Lhasa	39.95	268	P	P	22 38 56.3	-0.7
LSA				IAMs_20	IAMs_20	22 56 28.4	
	comp=Z,550nm,18.0s						
LSA	Lhasa	39.95	268	P	P	22 38 56.3	-0.7
LSA				pmax	pmax		
	comp=Z,77nm,1.2s						
LSA				MLR	MLR		
	comp=Z,600nm,18.0s						
LSA	Lhasa	39.95	268	P	P	22 38 56.6	-0.4
LSA	Lhasa	39.95	268	eP	P	22 38 56.3	-0.7
S12K	Black Hills	40.06	49	P	P	22 38 57.8	+0.8
	baz=276						
RDOG	Red Dog Mine	40.12	30	P	P	22 38 57.2	-0.2
RDOG	Red Dog Mine	40.12	30	P	P	22 38 57.4	0.0
	baz=260,SNR=7.2						
PHRA	Phrae	40.17	246	P	P	22 38 56.8	-1.5
MND	Mandalay	40.72	254	P	P	22 39 02.0	-0.9
CHTO	Chiang Mai	40.83	248	P	P	22 39 02.6	-1.3
CHTO	Chiang Mai	40.83	248	P	P	22 39 02.6	-1.3
CHTO				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SDPT	Sand Point	40.99	50	P	P	22 39 05.0	+0.3
	baz=277						
CM31	Chiang Mai Arr	41.08	247	P	P	22 39 05.3	-0.6
CM31	Chiang Mai Arr	41.08	247	P	P	22 39 05.9	0.0
	SNR=8.0						
CMAR	Chiang Mai Arr	41.08	247	P	P	22 39 04.8	-1.1
	comp=Z,17nm,1.1s,baz=41,slow=7.0,SNR=58						
	comp=Z,17nm,1.1s						
CMAR	Chiang Mai Arr	41.08	247	P	P	22 39 04.5	-1.4
CMAR	Chiang Mai Arr	41.08	247	ceP	P	22 39 05.4	-0.5
CMAR				pmax	pmax		
	comp=Z,12nm,0.9s						
KURK	Kurchatov	41.29	303	P	P	22 39 05.6	-1.7
KURK	Kurchatov	41.29	303	IAMs_20	IAMs_20	22 54 22.0	
	comp=Z,658nm,22.0s						
KURK	Kurchatov	41.29	303	c iP	P	22 39 05.3	-1.9
KURK				pmax	pmax		
	comp=Z,43nm,1.0s						
KURK	Kurchatov	41.29	303	P	P	22 39 05.6	-1.7
KURK	Kurchatov	41.29	303	eP	P	22 39 05.3	-1.9
KURBB	Kurchatov Arra	41.37	303	LR	LR	22 56 37.5	
	comp=Z,586nm,18.8s,baz=126,slow=37						
N16K	Nishlik Lake	41.45	42	P	P	22 39 10.1	+1.6
	baz=273						
SHL	Shillong	41.66	262	P	P	22 39 08.2	-2.6
SHL	Shillong	41.66	262	eP	P	22 39 06.0	-4.8
SHL	Shillong	41.66	262	P	P	22 39 08.2	-2.6
SHL				pmax	pmax		
	comp=Z,50nm,0.9s						
SHL	Shillong	41.66	262	P	P	22 39 09.2	-1.6
	SNR=14						
O16K	Kokwok River B	41.85	43	P	P	22 39 13.0	+1.3
	baz=274						
P16K	Nushagak River	41.95	44	P	P	22 39 14.4	+1.9
	baz=275,SNR=17						
GCSA	Galena City Sc	42.24	35	P	P	22 39 15.5	+0.7
	baz=270						
TNTI	Ternate	42.31	197	P	P	22 39 15.2	-0.7
TNTI	Ternate	42.31	197	P	P	22 39 17.6	+1.7
TNTI	Ternate	42.31	197	P	P	22 39 14.9	-1.0
	comp=Z,82nm,1.3s,comp=Z,943nm						
O17K	Koliganek Bris	42.34	43	P	P	22 39 17.6	+1.9
	baz=275,SNR=28						
NAYO	Nakonayok	42.44	241	P	P	22 39 18.6	+1.6
	comp=Z,192nm,1.0s						
TTA	Tatalina	42.66	38	P	P	22 39 18.0	-0.3
TTA	Tatalina	42.66	38	P	P	22 39 20.0	+1.7
TTA	Tatalina	42.66	38	P	P	22 39 18.0	-0.3
TTA				pmax	pmax		
	comp=Z,41nm,1.4s						
TTA	Tatalina	42.66	38	P	P	22 39 19.1	+0.8
	baz=272,SNR=5.7						
Q16K	King Salmon	42.67	44	P	P	22 39 19.8	+1.4
	baz=277						
P17K	Kvichak River	42.73	43	P	P	22 39 20.4	+1.5
	baz=276						
A21K	Barrow	42.78	25	P	P	22 39 19.1	0.0
A21K	Barrow	42.78	25	P	P	22 39 19.6	+0.5
	baz=263,SNR=15						
SHLS	Shalkode	42.80	292	eP	P	22 39 16.0	-3.8
	baz=292						
SHLS	Shalkode	42.80	292	eP	P	22 39 16.0	-3.8
TDK	Taldyqorghan	42.92	295	⇑iP	P	22 39 20.0	-0.7
	comp=Z,109nm,1.5s,baz=295						
TDK	Taldyqorghan	42.92	295	c iP	P	22 39 20.0	-0.7
TDK				pmax	pmax		
	comp=Z,109nm,1.5s						
R17K	Ugashik Creek	42.94	46	P	P	22 39 22.1	+1.5
	baz=278						
SVW2	Sparrevohn	42.97	41	P	P	22 39 20.5	-0.4
SVW2	Sparrevohn	42.97	41	P	P	22 39 24.2	+3.3
UZB	Uzynbulak	43.11	292	⇑iP	P	22 39 20.9	-1.5
	baz=292						
UZB	Uzynbulak	43.11	292	c iP	P	22 39 20.9	-1.5
Q17K	Contact Creek	43.12	45	P	P	22 39 23.2	+1.0
	baz=278						
SWI	Sorong	43.22	191	P	P	22 39 23.0	-0.2
	comp=Z,73nm,1.1s,comp=Z,974nm						
SIJI	Sorong	43.22	191	P	P	22 39 23.4	+0.1
	comp=Z,23nm,0.8s,baz=33,slow=5.9,SNR=12						
SIJI				LR	LR	22 53 54.9	
	comp=Z,255nm,21.4s,baz=55,slow=31						
	comp=Z,23nm,0.8s						
KPKS	Kokpek	43.23	293	⇑iP	P	22 39 22.0	-1.3
	baz=293						
KPKS	Kokpek	43.23	293	c iP	P	22 39 22.0	-1.3
L19K	White Mountain	43.23	39	P	P	22 39 24.6	+1.6
	baz=274						
O18K	Koktuh Hills	43.28	42	P	P	22 39 23.8	+0.5
O18K				IAmb	IAmb	22 39 35.2	
	comp=Z,131nm,1.0s						
O18K	Koktuh Hills	43.28	42	P	P	22 39 25.2	+1.9
	baz=276,SNR=13						
P18K	Big Mountain,	43.32	43	P	P	22 39 24.6	+0.9
P18K				IAmb	IAmb	22 39 35.2	
	comp=Z,134nm,1.1s						
P18K	Big Mountain,	43.32	43	P	P	22 39 25.4	+1.7
	baz=277,SNR=13						
M19K	Big River Lodg	43.47	39	P	P	22 39 26.3	+1.4
	baz=275						
ZHN	Zhinishke	43.50	293	eP	P	22 39 24.3	-1.2
	baz=293						
ZHN	Zhinishke	43.50	293	eP	P	22 39 24.3	-1.2
K20K	Telida	43.51	37	P	P	22 39 25.9	+0.7
K20K				IAmb	IAmb	22 39 36.6	
	comp=Z,150nm,1.9s						
K20K	Telida	43.51	37	P	P	22 39 26.3	+1.1
	baz=274,SNR=8.6						
Q18K	Katmai Hardscr	43.53	44	P	P	22 39 26.3	+0.8
	baz=278,SNR=6.7						
N19K	Bonanza Creek	43.53	41	P	P	22 39 25.8	+0.3
	baz=276						
IMAR	Indian Mountai	43.54	33	P	P	22 39 25.4	0.0
BRDH	Bariadhala	43.55	259	LR	LR	22 57 47.4	
	comp=Z,270nm,18.2s,baz=91,slow=37						
GTOI	Gorontalo	43.56	203	P	P	22 39 24.7	-1.3
	comp=Z,47nm,1.2s,comp=Z,585nm						
SATY	Saty	43.56	293	eP	P	22 39 24.9	-1.2
	baz=292						
SATY	Saty	43.56	293	eP	P	22 39 24.8	-1.2
G21K	Allakaket	43.63	33	P	P	22 39 26.9	+0.8
	baz=271						
F21K	Alatna River	43.63	32	P	P	22 39 26.5	+0.3
	baz=270						
LBMI	Labuha	43.66	196	P	P	22 39 26.8	0.0
	comp=Z,127nm,0.9s,comp=Z,2µm						
L20K	Farewell, AK	43.66	38	P	P	22 39 27.7	+1.3
	baz=275						
O19K	Port Alsworth	43.68	42	P	P	22 39 27.3	+0.8
O19K				IAmb	IAmb	22 39 38.2	
	comp=Z,81nm,1.1s						
O19K	Port Alsworth	43.68	42	P	P	22 39 27.9	+1.4
	baz=277,SNR=5.2						
SRPI	Serui, Papua	43.75	184	P	P	22 39 27.0	-0.5
	comp=Z,60nm,0.6s						
TAPN	Taplejung	43.76	267	eP	P	22 39 27.3	-0.7
	comp=Z,221nm,1.2s						
TOLI2	Tolitoli	43.80	206	P	P	22 39 27.0	-0.9
TOLI2				IAmb	IAmb	22 39 29.5	
	comp=Z,129nm,1.6s						
TOLI2	Tolitoli	43.80	206	P	P	22 39 29.0	+1.0
SMPI	Sarmi	43.81	180	P	P	22 39 27.9	-0.1
	comp=Z,85nm,1.1s						
H21K	Melozitna Rive	43.94	34	P	P	22 39 29.4	+0.8
	baz=272						
MRSI	Marisa	44.03	204	P	P	22 39 29.4	-0.4
	comp=Z,154nm,1.3s,comp=Z,2µm						
M20K	Styx River	44.07	39	P	P	22 39 31.1	+1.3
	baz=276						
F22K	John River	44.14	31	P	P	22 39 30.9	+0.7
	baz=271,SNR=36						
Q19K	Cape Douglas,	44.19	43	P	P	22 39 31.7	+1.0
	baz=279						
CHUM	Lake Minchumin	44.26	36	P	P	22 39 32.7	+1.5
	baz=275						
CHKK	Chushkaly	44.26	294	eP	P	22 39 30.1	-1.4
	baz=294						
CHKK	Chushkaly	44.26	294	eP	P	22 39 30.0	-1.4
ILSW	Iliamna Southw	44.30	42	P	P	22 39 31.7	+0.1
P19K	Oil Pt	44.30	42	P	P	22 39 33.2	+1.6
	baz=278						
I21K	Tanana	44.31	34	P	P	22 39 31.9	+0.4
I21K				IAmb	IAmb	22 39 42.6	
	comp=Z,98nm,1.6s						
I21K	Tanana	44.31	34	P	P	22 39 32.8	+1.3
	baz=274,SNR=9.8						
CAST	Castle Rocks	44.40	37	P	P	22 39 32.5	+0.1
CAST	Castle Rocks	44.40	37	P	P	22 39 33.8	+1.5
	baz=275,SNR=12						
PPLA	Purkeypile	44.40	38	P	P	22 39 33.0	+0.5
PPLA	Purkeypile	44.40	38	P	P	22 39 34.2	+1.7
	baz=276,SNR=9.7						
RSO	Redoubt South	44.42	41	P	P	22 39 33.5	+0.8
GENI	Genyem	44.43	178	P	P	22 39 33.7	+0.7
GENI	Genyem	44.43	178	P	P	22 39 33.6	+0.6
	comp=Z,61nm,0.9s,comp=Z,2µm						
MDOK	Medeo	44.46	293	i P	P	22 39 32.4	-0.9
	baz=293						
MDOK	Medeo	44.46	293	i P	P	22 39 32.3	-0.9
AAA	Alma-Ata	44.53	293	eP	P	22 39 32.3	-1.4
	baz=293						
AAA	Alma-Ata	44.53	293	eP	P	22 39 32.3	-1.4
AAA	Alma-Ata	44.53	293	eP	P	22 39 32.3	-1.4
O20K	Slope Mountain	44.54	42	P	P	22 39 35.1	+1.6
	baz=278						
TNSS	Tian-Shan	44.57	293	eP	P	22 39 33.7	-0.8
	baz=293						
TNSS	Tian-Shan	44.57	293	eP	P	22 39 33.6	-0.8
SPCR	Spurr Chakacha	44.59	40	P	P	22 39 35.7	+1.8
	baz=278,SNR=18						
OHAK	Old Harbor	44.66	46	P	P	22 39 36.2	+1.8
OHAK	Old Harbor	44.66	46	P	P	22 39 35.4	+0.9
	baz=281						
D23K	Nanushuk River	44.67	29	P	P	22 39 35.4	+1.0
	baz=271						
KUU	Kurty	44.69	294	eP	P	22 39 33.2	-1.7
	comp=Z,73nm,1.3s,baz=294						
KUU	Kurty	44.69	294	eP	P	22 39 33.1	-1.7
KUU				pmax	pmax		
	comp=Z,73nm,1.3s						
JIRN	Jiri	44.72	269	eP	P	22 39 34.6	-1.2
	comp=Z,268nm,1.2s						
RAMN	Ramite	44.81	268	eP	P	22 39 34.9	-1.4
	comp=Z,219nm,0.8s						
SKT	Skwentna	44.81	39	P	P	22 39 37.3	+1.7
	baz=277						
GUN	Gumba	44.82	269	eP	P	22 39 35.4	-1.1
	comp=Z,378nm,0.8s						
BPAW	Bear Paw Mtn.	44.82	36	P	P	22 39 37.1	+1.4
	baz=276,SNR=8.7						
MPSI	Mapaga	44.82	207	P	P	22 39 36.0	-0.1
	comp=Z,51nm,1.4s,comp=Z,749nm						
MLY	Manley	44.84	35	IAmb	IAmb	22 39 46.9	
	comp=Z,106nm,1.7s						
MLY	Manley	44.84	35	P	P	22 39 37.3	+1.4
	baz=275,SNR=14						
Q20K	Shuyak Island	44.89	44	P	P	22 39 36.5	+0.3
	baz=280						
KTH	Kantishna Hill	44.91	37	IAmb	IAmb	22 39 48.7	
	comp=Z,144nm,1.4s						
KDAK	Kodiak Island	44.94	45	LR	LR	22 58 55.9	
	comp=Z,285nm,20.8s,baz=267,slow=37						
KDAK	Kodiak Island	44.94	45	P	P	22 39 36.8	+0.2
KDAK				IAmb	IAmb	22 39 46.8	
	comp=Z,110nm,1.0s						
KDAK	Kodiak Island	44.94	45	deP	P	22 39 37.6	+1.0
KDAK				pmax	pmax		
	comp=Z,46nm,0.9s						
KDAK	Kodiak Island	44.94	45	P	P	22 39 36.8	+0.2
	baz=281						
G23K	Bananza Creek	45.01	32	P	P	22 39 37.3	+0.2
	baz=274						
E23K	Chandalar	45.09	30	P	P	22 39 38.9	+1.0
	baz=273,SNR=28						
HOM	Homer	45.09	42	P	P	22 39 38.9	+1.1
	baz=280						
FAKI	Fak Fak	45.12	189	P	P	22 39 37.0	-1.4
FAKI				IAmb	IAmb	22 39 48.7	
	comp=Z,99nm,1.0s						
FAKI	Fak Fak	45.12	189	P	P	22 39 39.5	+1.0
FAKI	Fak Fak	45.12	189	P	P	22 39 38.0	-0.5
	comp=Z,127nm,1.2s,comp=Z,1µm						
CAPN	Captain Cook N	45.16	41	P	P	22 39 39.4	+1.1
	baz=279						
BRZS	Berezniki	45.16	304	eP	P	22 39 37.3	-1.3
	baz=304						
BRZS	Berezniki	45.16	304	eP	P	22 39 37.3	-1.3
TRF	Thorofare Moun	45.20	37	P	P	22 39 39.7	+0.8
	baz=277						
LUWI	Luwuk	45.22	203	P	P	22 39 38.8	-0.5
LUWI	Luwuk	45.22	203	P	P	22 39 37.4	-1.9
	comp=Z,176nm,1.3s,comp=Z,2µm						
SUA	Susitna One	45.25	40	P	P	22 39 40.3	+1.1
	baz=278,SNR=10						
H23K	Yukon River	45.27	33	IAmb	IAmb	22 39 51.2	
	comp=Z,90nm,1.2s						
H23K	Yukon River	45.27	33	P	P	22 39 40.9	+1.7
	baz=275						
CNPM	China Poot	45.32	42	IAmb	IAmb	22 39 51.6	
	comp=Z,94nm,1.0s						
CUT	Chulitna	45.34	38	P	P	22 39 40.7	+1.0
	baz=278						
PKI	Pulchoki	45.35	269	eP	P	22 39 39.1	-1.6
	comp=Z,331nm,1.2s						
C24K	Franklin Bluff	45.35	28	P	P	22 39 40.9	+1.1
	baz=272						
SANI	Sanana	45.35	198	P	P	22 39 39.9	-0.4
SANI	Sanana	45.35	198	P	P	22 39 39.2	-1.1
	comp=Z,128nm,1.3s,comp=Z,1µm						
PKIN	Phulchoki	45.36	269	eP	P	22 39 39.3	-1.4
	comp=Z,121nm,0.8s						
I23K	Minto, Yukon-K	45.41	34	P	P	22 39 40.5	+0.2
I23K				IAmb	IAmb	22 39 52.2	
	comp=Z,88nm,1.4s						
I23K	Minto, Yukon-K	45.41	34	P	P	22 39 41.7	+1.4
	baz=276,SNR=11						
BRLK	Bradley Lake	45.45	42	IAmb	IAmb	22 39 52.6	
	comp=Z,72nm,0.8s						
E24K	Your Creek	45.52	30	P	P	22 39 41.8	+0.6
	baz=274						
BRSE	Bradley Lake S	45.53	42	P	P	22 39 41.8	+0.5
	baz=280						
TKM2	Tokmak 2	45.54	293	P	P	22 39 41.2	-0.6
	SNR=68						
DMN	Daman	45.56	269	eP	P	22 39 41.0	-1.3
	comp=Z,239nm,0.9s						
NEA2	Nenana	45.60	35	IAmb	IAmb	22 39 52.9	
	comp=Z,133nm,1.8s						
NEA2	Nenana	45.60	35	P	P	22 39 43.1	+1.3
	baz=277,SNR=16						
GKN	Gorkha	45.70	270	eP	P	22 39 41.9	-1.3
	comp=Z,240nm,0.8s						
BVAR	Borovoye Array	45.72	308	LR	LR	22 59 17.2	
	comp=Z,918nm,18.3s,baz=77,slow=37						
MCK	McKinley	45.77	36	P	P	22 39 42.9	-0.3
MCK	McKinley	45.77	36	P	P	22 39 42.9	-0.3
MCK				pmax	pmax		
	comp=Z,25nm,1.0s						
MCK	McKinley	45.77	36	P	P	22 39 44.3	+1.1
	baz=278						
BRVK	Borovoye	45.78	308	P	P	22 39 41.5	-1.8
BRVK	Borovoye	45.78	308	IAMs_20	IAMs_20	22 59 53.6	
	comp=Z,986nm,19.0s						
BRVK	Borovoye	45.78	308	ceP	P	22 39 42.4	-1.0
BRVK				pmax	pmax		
	comp=Z,34nm,2.2s						
BRVK	Borovoye	45.78	308	P	P	22 39 42.6	-0.8
BRVK	Borovoye	45.78	308	eP	P	22 39 42.4	-1.0
F24K	Squaw Lake	45.78	31	P	P	22 39 44.1	+0.8
	baz=275						
RC01	Rabbit Creek A	45.79	40	P	P	22 39 43.9	+0.6
	baz=280,SNR=11						
BTLS	Baital	45.83	297	eP	P	22 39 42.3	-1.7
	baz=297						
BTLS	Baital	45.83	297	eP	P	22 39 42.2	-1.7
O22K	Cooper Landing	45.90	41	P	P	22 39 44.6	+0.4
	baz=280						
MDM	Murphy Dome	45.91	35	IAmb	IAmb	22 39 55.4	
	comp=Z,111nm,1.6s						
H24K	Noodor Dome	45.95	33	IAmb	IAmb	22 39 56.0	
	comp=Z,124nm,1.6s						
H24K	Noodor Dome	45.95	33	P	P	22 39 46.2	+1.5
	baz=277						
SBUM	Sibu	45.99	218	P	P	22 39 45.5	+0.1
PMR	Palmer	46.00	39	IAmb	IAmb	22 39 55.4	
	comp=Z,63nm,1.0s						
PMR	Palmer	46.00	39	P	P	22 39 47.6	+2.7
PMR	Palmer	46.00	39	P	P	22 39 45.1	+0.2
	baz=280,SNR=6.3						
SGDS	Sogindy	46.00	294	eP	P	22 39 44.2	-1.2
	baz=294						
SGDS	Sogindy	46.00	294	eP	P	22 39 44.1	-1.2
G24K	Hadweenzic Riv	46.02	32	P	P	22 39 46.1	+1.0
	baz=276						
KBK	Karagaybulak	46.08	293	P	P	22 39 45.4	-0.7
	SNR=43						
TCOL	CIGO, UAF Yank	46.08	35	IAmb	IAmb	22 39 57.4	
	comp=Z,139nm,1.4s						
TCOL	CIGO, UAF Yank	46.08	35	P	P	22 39 46.6	+1.0
	baz=278						
COLA	College	46.08	35	P	P	22 39 46.1	+0.6
COLA	College	46.08	35	P	P	22 39 49.2	+3.6

COLA	College	46.08	35	d iP	P	22 39 47.3	+1.7
COLA				pmax	pmax		
	comp=Z,86nm,1.3s						
COLA	College	46.08	35	P	P	22 39 46.9	+1.4
	baz=278						
CHMS	Chumysh	46.09	294	P	P	22 39 45.5	-0.5
	SNR=7.9						
USP	Ospenovka	46.16	294	P	P	22 39 45.5	-1.1
	SNR=22						
DANN	Dangsing	46.16	271	eP	P	22 39 46.3	-0.8
	comp=Z,1µm,0.7s						
D25K	Kavik River	46.20	28	P	P	22 39 47.3	+0.8
	baz=275						
POKR	Poker Plat Res	46.23	34	P	P	22 39 47.2	+0.4
POKR				IAmb	IAmb	22 39 58.2	
	comp=Z,127nm,1.4s						
POKR	Poker Plat Res	46.23	34	P	P	22 39 48.1	+1.3
	baz=278,SNR=8.4						
FRU1	Bishkek	46.24	294	IAmb	IAmb	22 39 47.8	
	comp=Z,93nm,1.4s						
NLAI	Namlea	46.27	196	P	P	22 39 47.3	-0.2
	comp=Z,40nm,1.7s						
SML	Sawmill	46.33	39	P	P	22 39 49.3	+1.6
	baz=280,SNR=10						
KNK	Knik Glacier	46.34	39	P	P	22 39 49.0	+1.2
	baz=280,SNR=11						
AAK	Ala-Archa	46.40	293	P	P	22 39 47.5	-1.1
	SNR=18						
AAK	Ala-Archa	46.40	293	LR	LR	22 59 28.6	
	comp=Z,763nm,20.1s,baz=68,slow=36						
AAK	Ala-Archa	46.40	293	P	P	22 39 46.6	-2.0
AAK	Ala-Archa	46.40	293	IAMs_20	IAMs_20	22 58 30.1	
	comp=Z,814nm,18.0s						
AAK	Ala-Archa	46.40	293	c iP	P	22 39 47.5	-1.1
AAK				pmax	pmax		
	comp=Z,39nm,1.4s						
AAK	Ala-Archa	46.40	293	i P	P	22 39 47.6	-1.1
	SNR=28						
AAK	Ala-Archa	46.40	293	P	P	22 39 47.6	-1.1
AAK	Ala-Archa	46.40	293	i P	P	22 39 47.5	-1.1
AAI	Ambon	46.49	194	P	P	22 39 48.2	-1.1
	comp=Z,128nm,1.2s,comp=Z,2µm						
PWL	Port Wells	46.51	40	P	P	22 39 49.7	+0.7
	baz=281,SNR=7.3						
IL31		46.51	35	P	P	22 39 48.6	-0.3
IL31				IAmb	IAmb	22 39 59.4	
	comp=Z,125nm,1.8s						
ILAR	Eielson Array	46.51	35	P	P	22 39 49.1	+0.2
	comp=Z,7.3nm,0.8s,baz=280,slow=7.2,SNR=40						
ILAR				LR	LR	23 02 31.6	
	comp=Z,297nm,18.7s,baz=282,slow=40						
	comp=Z,7.3nm,0.8s						
ILAR	Eielson Array	46.51	35	P	P	22 39 48.8	-0.1
HDA	Harding Lake	46.53	35	P	P	22 39 49.6	+0.4
	baz=279,SNR=14						
UCH	Uchtor	46.54	293	P	P	22 39 49.9	-0.2
	SNR=11						
G25K	Bearman Lake	46.56	32	P	P	22 39 50.5	+1.2
	baz=277						
KSH	Kashi	46.60	289	P	P	22 39 52.8	+2.6
KSH				PcP	PcP	22 41 26.8	+2.8
KSH				PP	PP	22 41 42.8	+3.1
KSH				pmax	pmax		
	comp=Z,23nm,1.3s						
KSH				pmax	pmax		
	comp=Z,180nm,3.8s						
KSH				LR	LR		
	comp=Z,2µm,17.1s						
KSH				LR	LR		
	comp=Z,1µm,15.9s						
KSH				LR	LR		
	comp=Z,2µm,16.5s						
E25K	Arctic Village	46.60	30	P	P	22 39 51.0	+1.3
	baz=276,SNR=14						
M23K	Glacier View	46.62	39	P	P	22 39 51.0	+1.1
	baz=281						
F25K	Christian Rive	46.63	31	P	P	22 39 51.2	+1.2
	baz=277						
C26K	Camden Bay	46.66	27	P	P	22 39 51.6	+1.6
	baz=275						
SCM	Sheep Creek Mo	46.80	39	P	P	22 39 52.5	+1.1
	baz=281,SNR=6.7						
PYUN	Piuthan	46.87	271	eP	P	22 39 51.5	-1.0
	comp=Z,734nm,1.0s						
EKS2	Erkin-Say	46.88	294	P	P	22 39 51.8	-0.5
	SNR=6.5						
PRP	Porcupine Dome	46.96	34	P	P	22 39 53.7	+1.0
	baz=279,SNR=6.7						
BMAR	Burnt Mountain	47.06	31	P	P	22 39 54.4	+1.1
C27K	Jago River	47.10	28	P	P	22 39 54.9	+1.4
	baz=277,SNR=63						
P23K	Montague Islan	47.13	41	P	P	22 39 54.7	+0.8
	baz=282						
AML	Almayashu	47.14	293	P	P	22 39 54.1	-0.5
	SNR=17						
K24K	Donnelly Dome	47.14	36	P	P	22 39 54.7	+0.7
	baz=280,SNR=8.1						
F26K	Sheenjek River	47.19	30	P	P	22 39 56.0	+1.7
	baz=278						
M24K	Tolsona, Glenn	47.28	38	P	P	22 39 56.7	+1.6
	baz=282,SNR=8.0						
BKB	Balikpapan	47.38	210	P	P	22 39 58.3	+2.0
	comp=Z,195nm,1.5s						
BKB	Balikpapan	47.38	210	P	P	22 39 54.6	-1.7
	comp=Z,90nm,0.7s,comp=Z,3µm						
SURA	Surathani	47.39	238	P	P	22 39 57.7	+1.3
	comp=Z,29nm,0.8s						
PAX	Paxson	47.43	37	P	P	22 39 57.9	+1.5
	baz=281,SNR=8.6						
G26K	Porcupine Rive	47.44	31	P	P	22 39 57.7	+1.6
	baz=279						
KLU	Klutina	47.52	39	P	P	22 39 58.7	+1.7
	baz=282,SNR=17						
RIDG	Independent Ri	47.56	36	IAmb	IAmb	22 40 08.4	
	comp=Z,79nm,1.3s						
RIDG	Independent Ri	47.56	36	P	P	22 39 58.0	+0.8
	baz=281						
HARP	HAARP	47.69	38	P	P	22 40 00.2	+2.0
	baz=282,SNR=11						
KRVT	Keravat (AS076	47.69	162	P	P	22 39 58.4	-0.3
	comp=Z,25nm,0.6s,baz=278,slow=19,SNR=1.9						
KRVT				LR	LR	22 59 40.3	
	comp=Z,74nm,21.4s,baz=120,slow=36						
	comp=Z,25nm,0.6s						
KSM	Kuching	47.74	220	P	P	22 39 58.8	-0.3
KSM	Kuching	47.74	220	P	P	22 40 00.4	+1.3
Q23K	Middleton Isla	47.78	42	P	P	22 40 00.2	+1.3
	baz=284						
EYAK	Cordova Ski Ar	47.81	40	P	P	22 39 59.7	+0.6
EYAK	Cordova Ski Ar	47.81	40	P	P	22 40 00.8	+1.6
EYAK	Cordova Ski Ar	47.81	40	P	P	22 40 00.7	+1.6
	baz=283,SNR=5.1						
SRIT	Nakonsritamara	47.85	237	P	P	22 40 00.9	+0.9
	comp=Z,101nm,1.1s						
SCRK	Sand Creek	47.89	35	P	P	22 40 00.5	+0.7
	baz=282,SNR=14						
DOT	Dot Lake	47.92	36	P	P	22 39 59.3	-0.7
I26K	Coal Creek Min	47.98	34	P	P	22 40 01.8	+1.4
	baz=281						
E27K	Coleen River	48.06	30	P	P	22 40 02.5	+1.4
	baz=280						
N25K	Chitina, Valde	48.12	39	P	P	22 40 03.7	+2.0
	baz=283,SNR=19						
MENT	Mentasta	48.22	37	IAmb	IAmb	22 40 13.8	
	comp=Z,99nm,1.3s						
MENT	Mentasta	48.22	37	P	P	22 40 05.4	+3.0
G27K	Doyon Strip	48.29	31	P	P	22 40 04.7	+1.9
	baz=281						
SKLT	Songkhla	48.33	235	P	P	22 40 04.8	+1.2
L26K	Log Cabin Wild	48.37	37	IAmb	IAmb	22 40 15.0	
	comp=Z,91nm,1.3s						
L26K	Log Cabin Wild	48.37	37	P	P	22 40 05.3	+1.8
	baz=283,SNR=5.7						
DZA	Taraz	48.45	295	eP	P	22 40 03.3	-1.1
	baz=295						
DZA	Taraz	48.45	295	eP	P	22 40 03.3	-1.1
H27K	Steamboat Moun	48.45	32	P	P	22 40 06.0	+1.9
	baz=282						
I27K	Kandik River	48.55	33	P	P	22 40 06.6	+1.8
	baz=282,SNR=21						
M26K	Nabesna, AK	48.67	37	P	P	22 40 07.6	+1.8
	baz=284						
K27K	Chicken	48.70	35	IAMs_20	IAMs_20	23 04 09.6	
	comp=Z,468nm,19.0s						
K27K	Chicken	48.70	35	P	P	22 40 07.4	+1.4
	baz=283						
SPSI	Sidrap Palu	48.90	205	P	P	22 40 05.2	-2.8
	comp=Z,24nm,1.2s						
MCARA	McCarthy VSAT	48.90	39	P	P	22 40 08.9	+1.3
MCARA	McCarthy VSAT	48.90	39	P	P	22 40 09.7	+2.1
	baz=285,SNR=13						
EGAK	Eagle	48.92	34	IAmb	IAmb	22 40 18.2	
	comp=Z,100nm,1.2s						
EGAK	Eagle	48.92	34	P	P	22 40 08.7	+1.1
	baz=283,SNR=24						
KK31	Karatay Array	48.92	296	P	P	22 40 06.0	-2.0
KK31	Karatay Array	48.92	296	P	P	22 40 06.0	-2.0
KK31				pmax	pmax		
	comp=Z,21nm,1.1s						
KKAR	Karatay Array	48.92	296	P	P	22 40 06.2	-1.8
KKAR	Karatay Array	48.92	296	P	P	22 40 06.2	-1.8
KKAR				pmax	pmax		
	comp=Z,21nm,1.1s						
L27K	Beaver Creek,	49.03	36	P	P	22 40 10.4	+1.8
	baz=284,SNR=47						
BCAR	Beaver Creek A	49.05	36	P	P	22 40 10.0	+1.2
M27K	Edge Creek, AK	49.18	37	P	P	22 40 12.0	+2.1
	baz=285						
BARN	Barnard Glacie	49.63	39	P	P	22 40 14.4	+1.0
BARN				IAmb	IAmb	22 40 24.9	
	comp=Z,79nm,0.8s						
IUG	Iuzhnay	49.63	295	⇑ iP	P	22 40 12.8	-0.8
	comp=Z,61nm,2.1s,baz=295						
IUG	Iuzhnay	49.63	295	c iP	P	22 40 12.7	-0.8
IUG				pmax	pmax		
	comp=Z,61nm,2.1s						
BVCY	Beaver Creek	49.63	37	P	P	22 40 14.9	+1.8
	baz=286,SNR=5.8						
KAPI	Kappang	49.89	205	P	P	22 40 15.5	-0.1
KAPI	Kappang	49.89	205	P	P	22 40 16.3	+0.7
KAPI	Kappang	49.89	205	c iP	P	22 40 15.8	+0.2
KAPI				pmax	pmax		
	comp=Z,163nm,1.1s						
KAPI	Kappang	49.89	205	P	P	22 40 16.0	+0.5
I29M	Ogilvie Camp,	49.95	33	IAmb	IAmb	22 40 26.9	
	comp=Z,124nm,1.6s						
I29M	Ogilvie Camp,	49.95	33	P	P	22 40 17.3	+1.8
	baz=285,SNR=5.8						
YUK3	Moose Creek	49.98	38	P	P	22 40 18.0	+1.9
	baz=286,SNR=10						
SVE	Sverdlovsk	50.05	315	d iP	P	22 40 17.0	+0.6
SVE				pmax	pmax		
	comp=Z,151nm,1.3s						
SVE				MLR	MLR		
	comp=Z,2µm,16.0s						
SVE	Sverdlovsk	50.05	315	i P	P	22 40 17.0	+0.6
BKSI	Bulukumba	50.07	204	P	P	22 40 15.6	-1.3
	comp=Z,39nm,1.1s						
BBKI	Banjar Baru	50.19	212	P	P	22 40 17.6	-0.2
	comp=Z,372nm,1.1s,comp=Z,12µm						
IPM	Ipoh	50.21	232	IAmb	IAmb	22 40 19.0	
	comp=Z,61nm,1.1s						
IPM	Ipoh	50.21	232	P	P	22 40 18.3	+0.2
EPYK	Eagle Plains	50.31	31	P	P	22 40 20.1	+1.9
	baz=286,SNR=19						
G30M	tAoh Zraii Nji	50.34	31	P	P	22 40 19.7	+1.2
	baz=286,SNR=50						
O28M	Mount Upton	50.40	39	P	P	22 40 21.0	+1.7
	baz=287						
YUK8	Steele Glacier	50.44	38	P	P	22 40 21.5	+1.9
	baz=287						
PINM	Pinnacle	50.57	40	P	P	22 40 22.0	+1.6
	baz=288						
L29M	L29M	50.64	36	P	P	22 40 23.6	+2.8
	baz=287						
K29M	Barlow Dome	50.69	35	P	P	22 40 23.4	+2.1
	baz=287						
M29M	Somme Creek	50.69	37	P	P	22 40 24.1	+2.8
	baz=287						
BSSI	Bau Bau, Buton	50.73	204	P	P	22 40 20.7	-1.2
	comp=Z,49nm,0.9s						
PBKI	Pangkalan Bun	50.81	216	P	P	22 40 22.6	0.0
	comp=Z,122nm,1.0s						
YUK4	Talbot Arm	50.94	38	P	P	22 40 25.3	+2.0
	baz=288,SNR=9.7						
INK	Inuvik	50.96	29	P	P	22 40 23.3	+0.2
INK				IAmb	IAmb	22 40 34.7	
	comp=Z,92nm,1.1s						
INK	Inuvik	50.96	29	P	P	22 40 23.3	+0.2
INK				pmax	pmax		
	comp=Z,93nm,1.1s						
INK	Inuvik	50.96	29	P	P	22 40 24.2	+1.1
	baz=287,SNR=18						
PNL	Peninsula	51.11	40	P	P	22 40 26.4	+2.0
	baz=289						
F31M	Tsiigehtchic	51.14	30	P	P	22 40 25.6	+1.2
	baz=287,SNR=19						
TPRI	Tanjung Pinang	51.16	226	P	P	22 40 25.7	+0.5
	comp=Z,43nm,0.9s						
YUK6	Outpost Mounta	51.20	38	P	P	22 40 27.6	+2.3
	baz=288,SNR=5.5						
BTDF	Bukit Timah Da	51.20	227	P	P	22 40 27.0	+1.5
NIL	Nilore	51.21	283	P	P	22 40 23.8	-1.7
NIL	Nilore	51.21	283	P	P	22 40 23.8	-1.7
NIL				pmax	pmax		
	comp=Z,45nm,1.0s						
ARU	Arti	51.27	315	LR	LR	23 04 18.5	
	comp=Z,1µm,21.0s,baz=70,slow=39						
ARU	Arti	51.27	315	P	P	22 40 24.4	-1.1
ARU				IAmb	IAmb	22 40 26.6	
	comp=Z,111nm,1.1s						
ARU	Arti	51.27	315	d iP	P	22 40 25.3	-0.2
ARU				PPP	PPP	22 43 21.3	
ARU				S	S	22 47 45.6	+2.7
ARU				SS	SS	22 51 19.7	+1.8
ARU				pmax	pmax		
	comp=Z,153nm,1.3s						
ARU				MLR	MLR		
	comp=Z,2µm,16.0s						
ARU	Arti	51.27	315	i P	P	22 40 25.3	-0.2
O29M	Mount Kennedy	51.30	39	P	P	22 40 28.7	+2.8
	baz=289						
M30M	Minto, Yukon	51.39	36	P	P	22 40 29.2	+2.8
	baz=288,SNR=20						
N30M	Aishikik Lake	51.61	38	P	P	22 40 30.4	+2.2
	baz=289						
HYT	Haines Junctio	51.63	38	P	P	22 40 31.3	+2.9
	baz=289,SNR=30						
CHGR	Chuyangaron	51.75	291	IAmb	IAmb	22 40 29.4	
	comp=Z,88nm,1.0s						
PMG	Port Moresby	51.77	169	LR	LR	23 01 16.5	
	comp=Z,154nm,18.9s,baz=352,slow=35						
LHMI	Lhok Sumawe	52.11	237	P	P	22 40 31.5	-0.8
	comp=Z,138nm,1.4s						
P30M	Million Dollar	52.12	39	P	P	22 40 34.6	+2.6
	baz=290						
N31M	Braeburn, Yuko	52.20	37	P	P	22 40 35.1	+2.6
	baz=290,SNR=18						
O30N	Mendenhall	52.30	38	P	P	22 40 35.8	+2.5
	baz=290,SNR=6.1						
DSRI	Dabo	52.31	225	P	P	22 40 33.3	-0.5
	comp=Z,54nm,1.0s						
A36M	Sachs Harbour	52.46	23	P	P	22 40 35.9	+1.7
	baz=291,SNR=48						
M31M	Drury Creek, Y	52.57	36	IAmb	IAmb	22 40 47.1	
	comp=Z,114nm,1.5s						
M31M	Drury Creek, Y	52.57	36	P	P	22 40 37.5	+2.3
	baz=291,SNR=8.8						
MMRI	Maumere	52.62	201	P	P	22 40 36.4	+0.4
MMRI	Maumere	52.62	201	P	P	22 40 34.6	-1.4
	comp=Z,106nm,1.4s,comp=Z,2µm						
PLBC	Pleasant Camp	52.64	40	P	P	22 40 37.5	+1.8
	baz=291						
PSI	Prapat	52.80	233	P	P	22 40 37.7	+0.1
RPSI	Rantau Prapat	52.89	233	IAmb	IAmb	22 40 38.6	
	comp=Z,72nm,1.0s						
KCSI	Kotacane, Aceh	52.93	235	P	P	22 40 35.9	-2.5
	comp=Z,34nm,1.1s						
PPBI	Pangkal Pinang	52.94	222	P	P	22 40 37.2	-1.2
	comp=Z,27nm,0.6s,comp=Z,11µm						
FARO	Faro, Yukon	53.02	36	P	P	22 40 40.6	+2.1
	baz=291,SNR=8.4						
SKAG	Skagway	53.13	40	P	P	22 40 41.1	+1.8
SKAG	Skagway	53.13	40	P	P	22 40 40.8	+1.5
	baz=292						
ABKAR	Akbulak array	53.18	307	IAmb	IAmb	22 40 40.7	
	comp=Z,103nm,1.1s						
MLSI	Meulaboh, Aceh	53.19	237	P	P	22 40 38.7	-1.6
	comp=Z,60nm,0.9s						
SOEI	Soe	53.20	198	P	P	22 40 40.9	+0.5
SOEI	Soe	53.20	198	P	P	22 40 39.3	-1.1
	comp=Z,150nm,0.9s						
BWJI	Bawean	53.23	213	P	P	22 40 39.4	-1.2
	comp=Z,102nm,1.6s						
S31K	Pelican	53.25	42	P	P	22 40 42.8	+2.5
	baz=292						
N32M	Quiet Lake	53.53	37	P	P	22 40 44.1	+1.7
	baz=292						
BKNI	Bangkinang	53.57	229	P	P	22 40 44.9	+1.8
	comp=Z,187nm,1.1s						
BKNI	Bangkinang	53.57	229	P	P	22 40 44.2	+1.1
	comp=Z,186nm,1.1s,comp=Z,2µm						
MMPY	Sheldon Lake,	53.77	35	P	P	22 40 46.8	+2.7
	baz=293,SNR=14						
C36M	Paulatuk	53.83	26	P	P	22 40 45.5	+1.2
	baz=294,SNR=24						
AKTO	Aktyubinsk	53.83	309	LR	LR	23 04 56.5	
	comp=Z,543nm,19.8s,baz=54,slow=38						
P32M	Atlin	53.84	39	P	P	22 40 46.9	+2.3
	baz=293						
R32K	Eaglecrest	53.97	41	P	P	22 40 47.2	+1.7
	baz=293						
P33M	Teslin, Yukon	54.02	38	P	P	22 40 48.0	+2.0
	baz=293,SNR=18						
SIT	Sitka	54.06	42	P	P	22 40 48.1	+2.0
SIT	Sitka	54.06	42	P	P	22 40 48.6	+2.4
	baz=294						
PLAI	Plampang	54.11	206	P	P	22 40 46.1	-0.9
PLAI	Plampang	54.11	206	P	P	22 40 46.4	-0.6
	comp=Z,105nm,0.9s						
S32K	Killisnoo	54.26	42	P	P	22 40 47.1	-0.5
	baz=294						
GRJI	Gresik	54.27	213	P	P	22 40 47.8	-0.3
	comp=Z,205nm,0.9s						
SRBI	Singaraja	54.30	209	P	P	22 40 48.4	+0.1
	comp=Z,179nm,1.2s						
TWSI	Taliwang, Sumb	54.32	207	P	P	22 40 47.6	-0.9
	comp=Z,172nm,1.0s,comp=Z,2µm						
SDSI	Sungai Dareh	54.39	228	P	P	22 40 49.5	+0.4
	comp=Z,41nm,0.5s,comp=Z,4µm						
ABJI	Asem Bagus	54.39	210	P	P	22 40 49.4	+0.4
	comp=Z,84nm,1.1s						
TBJI	Tambak Boyo	54.44	213	P	P	22 40 50.2	+0.8
	comp=Z,315nm,1.0s						
UWJI	Ujung Watu	54.45	215	P	P	22 40 49.0	-0.5
	comp=Z,95nm,1.4s						
BASI	Baing, Sumba	54.58	202	P	P	22 40 50.6	+0.2
	comp=Z,133nm,0.7s						
SNSI	Sinabang, Aceh	54.69	236	P	P	22 40 49.9	-1.4
	comp=Z,114nm,1.0s						
KDU	Kakadu	54.74	187	P	P	22 40 52.4	+0.9
Q32M	Nakina River	54.77	39	P	P	22 40 53.3	+1.6
	baz=294						
GSI	Gunungsitoli	54.80	234	P	P	22 40 52.7	+0.6
GSI	Gunungsitoli	54.80	234	P	P	22 40 52.1	0.0
	comp=Z,209nm,1.4s,comp=Z,3µm						
HNR	Honiara	54.80	154	LR	LR	23 02 48.1	
	comp=Z,4µm,20.2s,baz=320,slow=34						
PDSI	Padang	54.91	229	P	P	22 40 53.4	+0.5
	comp=Z,29nm,1.2s,comp=Z,2µm						
KIRV	Kirov	55.02	320	LR	LR	23 06 36.7	
	comp=Z,329nm,18.6s,baz=52,slow=38						
KIRV	Kirov	55.02	320	c iP	P	22 40 53.2	+0.1
MTN	Manton Dam	55.04	189	P	P	22 40 53.4	-0.3
MTN				IAmb	IAmb	22 41 03.2	
	comp=Z,78nm,0.9s						
MTN	Manton Dam	55.04	189	P	P	22 40 54.1	+0.4
NGJI	Ngawi	55.09	214	P	P	22 40 54.8	+0.7
	comp=Z,93nm,1.1s						
GMJI	Gumukmas	55.13	211	P	P	22 40 53.5	-0.9
	comp=Z,73nm,0.9s						
SPITS	Spitsbergen Ar	55.21	348	LR	LR	23 06 18.1	
	comp=Z,329nm,18.4s,baz=11,slow=38						
SMRI	Semarang	55.23	215	P	P	22 40 58.5	+3.3
SMRI	Semarang	55.23	215	P	P	22 40 56.1	+0.9
	comp=Z,231nm,1.1s						
KBS	Kingsbay	55.37	349	P	P	22 40 55.1	-0.3
KBS				IAmb	IAmb	22 40 57.6	
	comp=Z,44nm,1.0s						
KBS	Kingsbay	55.37	349	⇑ eP	P	22 40 56.1	+0.7
KBS				pmax	pmax		
	comp=Z,37nm,0.8s						
PBSI	Pulau Batu	55.47	232	P	P	22 40 57.0	+0.1
	comp=Z,139nm,1.2s						
PWJI	Pagerwojo	55.55	213	P	P	22 40 56.3	-1.1
	comp=Z,223nm,0.8s,comp=Z,2µm						
U33K	Whale Pass	55.56	43	P	P	22 40 57.4	+0.4
	baz=296						
EUNU	Eureka	55.57	9	IAmb	IAmb	22 40 59.0	
	comp=Z,44nm,1.1s						
S34M	Telegraph Cree	55.76	40	P	P	22 40 59.4	+0.9
	baz=296						
MASI	Maura Aman, Be	55.79	226	P	P	22 41 00.1	+0.9
	comp=Z,231nm,1.2s,comp=Z,2µm						
WRAK	Wrangell Islan	55.81	42	P	P	22 40 59.5	+0.7
	baz=296						
CRAG	Craig	55.84	43	P	P	22 40 59.7	+0.7
	baz=296						
WTLY	Watson Lake, Y	55.89	37	P	P	22 41 00.3	+0.9
	baz=296						
KLI	Kotabumi	55.90	222	P	P	22 41 00.3	+0.4
	comp=Z,442nm,1.0s						
NOR	Nord	55.93	356	i P	P	22 40 58.0	-1.4
NOR				IAmb	IAmb	22 41 00.8	
	comp=Z,29nm,1.1s						
UGM	Wanagama	55.98	214	P	P	22 41 00.5	0.0
UGM	Wanagama	55.98	214	P	P	22 41 00.1	-0.4
	comp=Z,455nm,1.1s						
YOGI	Yogyakarta	55.98	215	P	P	22 41 00.8	+0.2
	comp=Z,316nm,1.1s,comp=Z,3µm						
DLBC	Dease Lake	56.06	39	P	P	22 41 01.5	+0.8
	baz=296,SNR=6.6						
HSPB	Hornsund (broa	56.12	347	eP	P	22 41 01.4	+0.7
BLSI	Bandar Lampung	56.14	221	P	P	22 41 01.6	-0.1
	comp=Z,205nm,1.0s,comp=Z,2µm						
KPJI	Karang Pucung	56.14	216	P	P	22 41 01.1	-0.6
	comp=Z,168nm,1.3s,comp=Z,2µm						
CBJI	Citeko	56.28	219	P	P	22 41 04.7	+2.0
	comp=Z,74nm,0.9s,comp=Z,8µm						
KIP	Kipapa	56.36	91	⇑ eP	P	22 41 04.6	+1.3
KIP				pmax	pmax		
	comp=Z,545nm,4.3s						
LWLI	Liwa	56.43	223	P	P	22 41 03.1	-0.8
	comp=Z,119nm,0.7s						
HYB	Hyderabad	56.44	263	⇑ eP	P	22 41 02.9	-1.0
HYB				IVmB_BB		22 41 03.3	
	comp=Z,297nm,1.0s						
MNAI	Manna	56.44	224	P	P	22 41 03.1	-0.7
	comp=Z,159nm,1.1s						
T35M	Bob Quinn	56.60	41	P	P	22 41 06.1	+1.5
	baz=297						
KASI	Kota Agung	56.65	222	P	P	22 41 03.8	-1.5
	comp=Z,67nm,1.0s						
V35K	Ketchikan	56.67	43	P	P	22 41 04.1	-0.9
	baz=297						
PPSI	Pulau Pagai	56.69	228	P	P	22 41 05.4	-0.2
	comp=Z,204nm,1.2s						
WRGLY	Wrigley	56.74	32	P	P	22 41 05.9	+0.6
	baz=298,SNR=12						
CMJI	Cimerak	56.76	217	P	P	22 41 04.0	-2.0
	comp=Z,42nm,1.5s						
BBJI	Bungbulang	56.83	218	P	P	22 41 04.4	-2.3
CGJI	Cibinong	57.00	220	P	P	22 41 05.1	-2.7
	comp=Z,62nm,1.0s						
KOTAN	Kotaneelee Air	57.98	36	P	P	22 41 15.1	+0.9
	baz=300						
KNRA	Kununurra	58.14	191	P	P	22 41 16.8	+1.1
FLDN	Fort Liard	58.18	36	P	P	22 41 17.5	+1.9
	baz=300,SNR=5.1						
RES	Resolute Bay	58.30	15	LR	LR	23 08 15.2	
	comp=Z,231nm,19.5s,baz=320,slow=38						
RES	Resolute Bay	58.30	15	P	P	22 41 16.3	+0.1
RES				IAmb	IAmb	22 41 26.5	
	comp=Z,72nm,1.1s						
RES	Resolute Bay	58.30	15	P	P	22 41 16.3	+0.1
RES				pmax	pmax		
	comp=Z,72nm,1.1s						
KLMR	Klimovskoe	58.42	325	eP	P	22 41 13.8	-3.5
KLMR				AMP		22 41 18.6	
	comp=Z,103nm,1.3s						
KLMR				SS	SS	22 52 45.2	-25
KLMR				LQ	LQ	23 00 32.7	
KLMR				LQ	LQ	23 00 32.7	
KLMR				LR	LR	23 02 25.8	
KLMR				AMP		23 08 25.8	
	comp=Z,1µm,12.7s						
KLMR	Klimovskoe	58.42	325	eP	P	22 41 13.8	-3.5
KLMR				pmax	pmax		
	comp=Z,103nm,1.3s						
KLMR				MLR	MLR		
	comp=Z,1µm,13.0s						

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ARCES  ARCESS Array B   58.58 338    P          P          22 41 16.1  -2.1
       comp=Z,5.7nm,0.9s,baz=53,slow=15,SNR=2.4
ARCES                                LR         LR         23 09 09.9
       comp=Z,311nm,21.0s,baz=60,slow=39
       comp=Z,5.7nm,0.9s
BELG   Belogornoye      58.75 314    P          P          22 41 17.9  -1.8
       comp=Z,130nm,0.9s,baz=130,slow=0.7,SNR=32
BELG                                 LR         LR         23 08 59.4
       comp=Z,800nm,18.1s,baz=38,slow=38
       comp=Z,130nm,0.9s
BELG   Belogornoye      58.75 314c iP         P          22 41 19.4  -0.2
BELG                                 pmax       pmax
       comp=Z,23nm,0.9s
POHA   Pohakuloa        59.22  90    P          P          22 41 24.6  +0.9
GEYT   Alibeck          59.67 295    P          P          22 41 24.2  -2.1
       comp=Z,30nm,0.9s,baz=31,slow=3.5,SNR=52
GEYT                                 LR         LR         23 07 09.0
       comp=Z,259nm,19.7s,baz=78,slow=36
       comp=Z,30nm,0.9s
GEYT   Alibeck          59.67 295    P          P          22 41 25.1  -1.2
GEYT                                 IAmb       IAmb       22 41 26.9
       comp=Z,46nm,1.0s
GEYT   Alibeck          59.67 295    P          P          22 41 25.1  -1.2
GEYT                                 pmax       pmax
       comp=Z,46nm,1.0s
GYA0B  ALIBECK ARRAY    59.67 295    IAmb       IAmb       22 41 26.9
       comp=Z,45nm,1.1s
MTSU   Mount Surprise   60.09 174    P          P          22 41 30.0  +0.8
XMI    Christmas Isla   60.36 218    P          P          22 41 30.5  -0.7
       comp=Z,149nm,1.0s
TULEG  Thule            60.42   7  i P          P          22 41 30.2  -0.6
TULEG                                IAmb       IAmb       22 41 33.0
       comp=Z,142nm,1.5s
YKA    Yellowknife Ar   60.58  31    P          P          22 41 32.3  +0.2
       comp=Z,12nm,1.1s,baz=302,slow=7.2,SNR=68
YKA                                  LR         LR         23 08 32.0
       comp=Z,132nm,21.7s,baz=234,slow=37
       comp=Z,12nm,1.1s
YKA    Yellowknife Ar   60.58  31ceP            P          22 41 33.0  +0.9
YKA                                  pmax       pmax
       comp=Z,9.0nm,1.0s
DAG    Danmarks Havn    60.61 354  i P          P          22 41 31.9  -0.3
DAG                                  IAmb       IAmb       22 41 33.4
       comp=Z,22nm,1.0s
NEEM   North Greenlan   60.65   2  i P          P          22 41 32.5  -0.2
NEEM                                 IAmb       IAmb       22 41 43.2
       comp=Z,93nm,1.1s
TV1H   Townsville Har   61.44 171    P          P          22 41 40.4  +2.0
       comp=Z,63nm,1.1s
PALK   Pallekele        61.58 253    LR         LR         23 09 47.7
       comp=Z,142nm,20.0s,baz=145,slow=38
PALK   Pallekele        61.58 253    P          P          22 41 37.8  -1.9
PALK                                 IAmb       IAmb       22 41 40.3
       comp=Z,66nm,1.1s
PALK   Pallekele        61.58 253c iP         P          22 41 38.7  -0.9
PALK                                 pmax       pmax
       comp=Z,62nm,1.1s
PALK   Pallekele        61.58 253    P          P          22 41 38.8  -0.9
WB0    Warramunga Arr   61.61 185    IAmb       IAmb       22 41 48.8
       comp=Z,78nm,1.3s
WRAB   Tennant Creek    61.78 185    P          P          22 41 39.5  -1.2
WRAB                                 IAmb       IAmb       22 41 50.0
       comp=Z,73nm,1.3s
WRAB   Tennant Creek    61.78 185    P          P          22 41 40.3  -0.4
WRAB   Tennant Creek    61.78 185ceP            P          22 41 40.2  -0.4
WRAB                                 pmax       pmax
       comp=Z,60nm,2.5s
WRA    Warramunga Arr   61.79 185    P          P          22 41 39.1  -1.6
       comp=Z,16nm,1.0s,baz=360,slow=6.9,SNR=68
WRA                                  LR         LR         23 08 09.0
       comp=Z,59nm,20.3s,baz=8.5,slow=36
WRA                                  PKP2bc                23 11 00.1
       comp=Z,1.9nm,1.0s,baz=182,slow=2.4,SNR=6.3
       comp=Z,16nm,1.0s
WRA    Warramunga Arr   61.79 185  i P          P          22 41 40.2  -0.5
WRA                                  pmax       pmax
       comp=Z,14nm,0.9s
MOS    Moscow           62.01 321  eP           P          22 41 39.6  -2.3
MOS                                e                       22 41 49.5
MOS                                  pmax       pmax
       comp=Z,201nm,1.4s
MOS                                  pmax       pmax
       comp=Z,300nm,1.6s
MOS                                  MLR        MLR
       comp=Z,800nm,14.0s
CTA    Charters Tower   62.20 172    P          P          22 41 42.7  -0.8
       comp=Z,20nm,0.9s,baz=350,slow=5.7,SNR=6.8
CTA                                  LR         LR         23 07 24.8
       comp=Z,155nm,21.9s,baz=280,slow=35
       comp=Z,20nm,0.9s
CTAO   Charters Tower   62.20 172    P          P          22 41 43.4  -0.1
CTAO   Charters Tower   62.20 172    P          P          22 41 44.5  +1.0
CTAO   Charters Tower   62.20 172    P          P          22 41 43.4  -0.1
CTAO                                 pmax       pmax
       comp=Z,163nm,1.7s
QIS    Mount Isa        62.27 179    P          P          22 41 43.4  -0.6
VRH    Novokhopyorsk    62.50 315  eP           P          22 41 44.9  -0.3
VRH                                  pmax       pmax
       comp=Z,60nm,1.2s
VRH                                  MLR        MLR
       comp=Z,480nm,7.0s
PCHI   Peechi           62.52 259⇑eP            P          22 41 45.0  -0.9
PCHI                               eS           S          22 50 01.7   -11
OBN    Obninsk          62.86 321    LR         LR         23 10 49.2
       comp=Z,28nm,20.6s,baz=354,slow=38
OBN    Obninsk          62.86 321    P          P          22 41 46.4  -1.2
OBN    Obninsk          62.86 321c iP         P          22 41 46.2  -1.3
OBN                                i                       22 41 55.5
OBN                                i S          S          22 50 24.2  +8.6
OBN                                i SS         SS         22 54 17.4  -2.6
OBN                                  pmax       pmax
       comp=Z,100nm,1.1s
OBN                                  MLR        MLR
       comp=Z,691nm,14.0s
OBN    Obninsk          62.86 321  i P          P          22 41 46.2  -1.3
DBG    Daneborg         63.09 354  eP           P          22 41 49.0  +0.2
DBG                                  IAmb       IAmb       22 41 50.1
       comp=Z,29nm,1.5s
LPSR   Galich'ya Gora   63.15 318  eP           P          22 41 49.0  -0.5
LPSR                                 pmax       pmax
       comp=Z,130nm,1.0s
LPSR                                 MLR        MLR
       comp=Z,720nm,14.0s
KULLO  Kullorsuaq       63.19   5  i P          P          22 41 49.5   0.0
KULLO                              eP           pP         22 41 50.0  -5.0
KULLO                                IAmb       IAmb       22 42 00.4
       comp=Z,41nm,0.9s
FIA1   FINESS Array S   63.42 330    P          P          22 41 51.1  -0.1
FINES  FINESS Array B   63.42 330    P          P          22 41 49.9  -1.3
       comp=Z,65nm,0.8s,baz=58,slow=7.5,SNR=81
FINES                                LR         LR         23 11 23.0
       comp=Z,668nm,19.6s,baz=42,slow=38
       comp=Z,65nm,0.8s
FINES  FINESS Array B   63.42 330  i P          P          22 41 51.2   0.0
FINES                                pmax       pmax
       comp=Z,65nm,0.8s
VORR   Voronezh         63.54 317  eP           P          22 41 52.2  +0.1
VORR                               e                       22 42 00.5
VORR                                 pmax       pmax
       comp=Z,74nm,0.8s
VORR                                 MLR        MLR
       comp=Z,1µm,14.0s
MAK    Makhachkala      63.78 305  eP           P          22 41 49.4  -4.5
MAK                                eS           S          22 50 22.5  -5.0
MAK                                  pmax       pmax
       comp=Z,41nm,1.0s
VSR    Storozhevoye     63.82 316  eP           P          22 41 53.8  -0.2
VSR                                  pmax       pmax
       comp=Z,90nm,0.8s
VSR                                  MLR        MLR
       comp=Z,2µm,14.0s
VORD   Divnogorie       63.90 316  eP           P          22 41 54.2  -0.3
VORD                                 pmax       pmax
       comp=Z,80nm,1.1s
LLLB   Lillooet         64.14  44    IAmb       IAmb       22 42 07.4
       comp=Z,41nm,1.1s
AKT    Akhty            64.47 304⇑iP            P          22 41 57.9  -0.7
AKT                                e                       22 42 30.7
AKT                                  pmax       pmax
       comp=Z,49nm,0.8s
NGCH   Negor - Chabah   64.56 282    P          P          22 41 58.7  -0.6
GROC   Groznyy          64.68 306  eP           P          22 41 57.9  -1.9
GROC                               e                       22 44 20.0
MEF    Metsahovi        64.85 330  eP           P          22 42 00.7  +0.2
JMIC   Jan Mayen        64.85 349    LR         LR         23 12 07.5
       comp=Z,99nm,18.7s,baz=23,slow=38
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SEKA   Sheki            64.95 304    P          P          22 42 01.1  -0.6
UPNV   Upernavik        65.02   5  i P          P          22 42 01.8  +0.2
ZKTA   Zakatala         65.07 304    P          P          22 42 01.9  -0.5
VSU    Vasula           65.09 327d iP         P          22 42 02.8  +0.6
VSU                                  pmax       pmax
       comp=Z,316nm,1.0s
VSU    Vasula           65.09 327  eP           P          22 42 03.0  +0.8
MBWA   Marble Bar       65.27 199    P          P          22 42 02.8  -0.9
MBWA   Marble Bar       65.27 199    P          P          22 42 03.8  +0.1
RAF    Rauma            65.27 331  eP           P          22 42 03.7  +0.4
MNGR   Mingechevir, A   65.27 303    P          P          22 42 03.5  -0.2
LKRN   Lenkeran, Azer   65.38 301    P          P          22 42 04.3  -0.1
AS01   Alice Springs    65.51 185    P          P          22 42 05.8  +0.5
       comp=Z,38nm,0.9s
ASAR   Alice Springs    65.51 185    P          P          22 42 04.8  -0.5
       comp=Z,14nm,0.8s,baz=8.0,slow=5.9,SNR=97
ASAR                                 LR         LR         23 09 39.8
       comp=Z,122nm,21.9s,baz=12,slow=35
ASAR                                 PKP2bc                23 10 50.5
       comp=Z,1.6nm,1.2s,baz=173,slow=2.7,SNR=5.0
       comp=Z,14nm,0.8s
ASAR   Alice Springs    65.51 185    P          P          22 42 04.2  -1.1
B06A   Marblemount      65.57  46    IAmb       IAmb       22 42 16.5
       comp=Z,74nm,1.3s
PSA00  Pilbara Seismi   65.63 199    P          P          22 42 05.6  -0.5
PSA00  Pilbara Seismi   65.63 199    P          P          22 42 06.6  +0.5
SUMG   Summit           65.68 359  i P          P          22 42 06.7  +0.4
SUMG                                 IAmb       IAmb       22 42 08.8
       comp=Z,80nm,1.0s
GANJ   Ganja            65.82 304    P          P          22 42 06.9  -0.4
NCK    Nalchik          65.83 307⇓eP            P          22 42 07.4  +0.1
NCK                                  pmax       pmax
       comp=Z,63nm,1.1s
RK1H   Rockhampton Ha   66.00 168    P          P          22 42 09.3  +0.9
ZEI    Tsey             66.05 307  eP           P          22 42 06.8  -2.2
ZEI                                  pmax       pmax
       comp=Z,26nm,1.0s
MTSE   Matsula          66.07 329  eP           P          22 42 09.3  +0.8
KVAR   Kislovodsk Arr   66.09 308    LR         LR         23 11 55.2
       comp=Z,604nm,18.0s,baz=252,slow=37
KIV    Kislovodsk       66.09 308  ⇑P           P          22 42 09.5  +0.5
KIV    Kislovodsk       66.09 308    P          P          22 42 08.8  -0.2
KIV                                  IAMs_20    IAMs_20    23 12 01.1
       comp=Z,494nm,19.0s
KIV    Kislovodsk       66.09 308  eP           P          22 42 09.4  +0.3
KIV                                  pmax       pmax
       comp=Z,198nm,1.1s
KIV                                  MLR        MLR
       comp=Z,320nm,17.0s
KIV    Kislovodsk       66.09 308  i P          P          22 42 09.5  +0.5
       SNR=57
KIV    Kislovodsk       66.09 308    P          P          22 42 09.3  +0.3
KIV    Kislovodsk       66.09 308  eP           P          22 42 09.4  +0.3
KBZ    Khabaz           66.10 308    P          P          22 42 08.1  -0.8
       comp=Z,26nm,0.8s,baz=36,slow=4.8,SNR=55
KBZ                                  LR         LR         23 13 26.9
       comp=Z,645nm,18.3s,baz=56,slow=38
       comp=Z,26nm,0.8s
KBZ    Khabaz           66.10 308c iP         P          22 42 09.2  +0.3
KBZ                                  pmax       pmax
       comp=Z,44nm,0.9s
KBZ                                  MLR        MLR
       comp=Z,627nm,17.0s
KBZ    Khabaz           66.10 308  eP           P          22 42 09.2  +0.3
ONI    Oni              66.44 307    IAmb       IAmb       22 42 13.1
       comp=Z,41nm,1.1s
JASK   Jask - Hormozg   66.63 284    P          P          22 42 14.9  +2.3
       SNR=6.3
LTY    Liberty          66.77  47    IAmb       IAmb       22 42 24.3
       comp=Z,41nm,1.4s
B08A   Colville Reser   66.82  45    IAmb       IAmb       22 42 24.6
       comp=Z,43nm,1.3s
SCO    Scoresbysund     66.92 353  i P          P          22 42 13.3  -0.5
SCO                                  IAmb       IAmb       22 42 16.4
       comp=Z,26nm,1.2s
GNI    Garni            67.09 304    LR         LR         23 14 36.7
       comp=Z,408nm,18.6s,baz=84,slow=39
GNI    Garni            67.09 304    P          P          22 42 15.4  -0.2
GNI                                  IAmb       IAmb       22 42 37.9
       comp=Z,67nm,1.3s
GNI    Garni            67.09 304    IAMs_20    IAMs_20    23 14 24.6
       comp=Z,508nm,18.0s
GNI    Garni            67.09 304c iP         P          22 42 16.0  +0.4
GNI                                  pmax       pmax
       comp=Z,48nm,1.3s
GNI    Garni            67.09 304    P          P          22 42 15.7  +0.1
GNI    Garni            67.09 304    P          P          22 42 16.4  +0.8
MNK    Minsk            67.19 324  i P          P          22 42 15.3  -0.5
       comp=E,6.0nm,0.8s
MNK                                i P          P          22 42 15.3  -0.5
       comp=N,45nm,0.8s
MNK                                i P          P          22 42 15.3  -0.5
       comp=Z,117nm,0.8s,baz=49
MNK                                i PcP        PcP        22 42 43.1  -0.5
MNK                                i PP         PP         22 44 43.1  -0.3
MNK                                i PPP        PPP        22 46 19.3
MNK                                i S          S          22 51 10.3  +1.4
MNK                                i SS         SS         22 55 30.5  +3.0
MNK                                i SSS        SSS        22 58 42.7
MNK                                i LQ         LQ         23 06 54.4
MNK                                i LR         LR         23 09 28.7
MNK                                i LRM        MLR        23 13 51.8
       comp=Z,869nm,16.6s
MNK                                i LRM        MLR        23 14 01.7
       comp=E,172nm,16.6s
MNK                                i LRM        MLR        23 14 10.7
       comp=N,1µm,16.6s
MNK    Minsk            67.19 324  i P          P          22 42 15.3  -0.5
MNK                                i                       22 42 43.1
MNK                                i                       22 44 43.0
MNK                                i PPP        PPP        22 46 19.3
MNK                                i S          S          22 51 10.3  +1.4
MNK                                i SS         SS         22 55 30.5  +3.0
MNK                                  pmax       pmax
       comp=N,45nm,0.9s
MNK                                  pmax       pmax
       comp=E,6.0nm,0.9s
MNK                                  pmax       pmax
       comp=Z,117nm,0.9s
MNK                                  MLR        MLR
       comp=Z,869nm,17.0s
MNK                                  MLR        MLR
       comp=E,172nm,17.0s
MNK                                  MLR        MLR
       comp=N,1µm,17.0s
NAX    Nakhchivan       67.20 303    P          P          22 42 15.9  -0.3
NACGM  Naroch           67.41 325  eP           P          22 42 17.4  +0.2
       comp=E,3µm,1.1s
WRKA   Warakurna        67.41 190    P          P          22 42 18.2  +0.8
H04A   Detroit Lake     67.48  50    P          P          22 42 18.0  +0.2
WSAR   Wadi Sarin       67.65 282    P          P          22 42 19.1  -0.1
C09A   Chrisman Ranch   67.72  45    IAmb       IAmb       22 42 30.2
       comp=Z,70nm,1.2s
BANOM  Banah            67.72 285  i P          P          22 42 20.0  +0.4
       SNR=24
BANOM  Banah            67.72 285    P          P          22 42 20.0  +0.4
       SNR=11
JLN    Jalan Bani Buh   67.74 280    P          P          22 42 19.7  -0.1
SHME   Shamm            67.76 286  i P          P          22 42 19.6  -0.2
       SNR=13
SHME   Shamm            67.76 286    P          P          22 42 20.8  +1.0
       SNR=5.6
WBK    Wadi Bani Khal   67.78 281    P          P          22 42 22.0  +1.9
       SNR=5.7
BIDO   Bidbid           67.85 282    P          P          22 42 22.0  +1.6
       SNR=6.1
VSVD   Vaisvydziai      67.89 327  eP           P          22 42 20.7  +0.6
NEW    Newport          68.03  44    LR         LR         23 14 33.8
       comp=Z,158nm,18.0s,baz=334,slow=38
NEW    Newport          68.03  44    IAmb       IAmb       22 42 32.2
       comp=Z,32nm,1.1s
NEW    Newport          68.03  44    P          P          22 42 23.0  +1.7
       baz=309,SNR=5.8
SOC    Sochi            68.04 309  i P          P          22 42 20.0  -1.3
SOC                                e                       22 44 48.9
SOC                                ePPP         PPP        22 46 23.5
SOC                                eS           S          22 51 21.2  +1.7
SOC                                eSS          SS         22 55 41.5  +0.4
SOC                                  pmax       pmax
       comp=Z,50nm,0.9s
SOC                                  MLR        MLR
       comp=Z,410nm,18.0s
MDH    Madha            68.10 285    P          P          22 42 20.7  -1.2
MASF   Masafi           68.16 285    P          P          22 42 22.7  +0.3
       SNR=6.8
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MSFE   Esma-Masafi      68.16 285  i P          P          22 42 22.7  +0.3
       SNR=9.0
SMDO   Samad            68.19 282    P          P          22 42 24.0  +1.3
       SNR=7.5
PABE   Paberze          68.20 326  eP           P          22 42 22.6  +0.5
UOSS   Minazif          68.38 285    P          P          22 42 22.7  -1.0
UOSS                                 IAmb       IAmb       22 42 24.4
       comp=Z,48nm,0.8s
UOSS   Minazif          68.38 285  i P          P          22 42 23.4  -0.3
       SNR=20
UOSS   Minazif          68.38 285    P          P          22 42 23.3  -0.5
HOQ    Hoqain           68.40 283    P          P          22 42 25.0  +1.0
       SNR=6.8
J04A   Umpqua Nationa   68.40  51    P          P          22 42 24.1  +0.2
QLP    Quilpie          68.46 175    P          P          22 42 25.5  +1.6
HATD   Hatta, Dubai     68.50 284  i P          P          22 42 25.0  +0.4
       SNR=32
HATD   Hatta, Dubai     68.50 284    P          P          22 42 25.0  +0.4
       SNR=14
JMDO   Jabal Madar      68.56 281    P          P          22 42 26.0  +1.0
       SNR=6.4
ANN    Anapa            68.59 311  eP           P          22 42 22.2  -2.5
ANN                                  pmax       pmax
       comp=Z,93nm,1.1s
ANN                                  MLR        MLR
       comp=Z,677nm,17.0s
ANN                                  MLR        MLR
       comp=N,672nm,16.0s
SOHO   SOHO             68.63 284  i P          P          22 42 25.4  +0.1
       SNR=13
SOHO   SOHO             68.63 284    P          P          22 42 24.9  -0.4
ASHO   Ashiyiah         68.64 284  i P          P          22 42 25.3  -0.1
       SNR=18
ASHO   Ashiyiah         68.64 284    P          P          22 42 26.0  +0.5
       SNR=15
PBUR   Paburge          68.67 327  eP           P          22 42 24.2  -0.8
HFS    Hagfors          68.67 334    LR         LR         23 14 59.7
       comp=N,1µm,19.3s,baz=36,slow=38
NOUC   Port Laguerre    68.74 153    P          P          22 42 30.3  +4.6
NAZ    Nazwa, Dubai     68.74 285  i P          P          22 42 27.0  +1.0
       SNR=6.5
NAZ    Nazwa, Dubai     68.74 285    P          P          22 42 27.0  +1.0
       SNR=5.6
DZM    Mont Dzumac      68.76 152  eP           P          22 42 27.8  +1.8
       comp=N,137nm,1.3s
DZM                                eS           S          22 51 30.5  +2.1
       comp=N,176nm,31.9s
DZM                                eSS          SS         22 55 56.2  +2.2
       comp=N,309nm,26.3s
DZM                                eLR          LR         23 03 13.8
       comp=N,803nm,21.7s
DZM    Mont Dzumac      68.76 152    LR         LR         23 09 50.9
       comp=N,470nm,21.1s,baz=30,slow=34
DZM    Mont Dzumac      68.76 152    P          P          22 42 25.0  -1.0
DZM    Mont Dzumac      68.76 152    P          P          22 42 27.0  +1.0
NB2    NORSAR Subarra   68.77 336    P          P          22 42 25.6   0.0
       comp=Z,102nm,1.1s,baz=38,slow=6.5
NB2    NORSAR Subarra   68.77 336    P          P          22 42 25.6   0.0
       baz=38,slow=6.5
NOA    NORSAR Array B   68.77 336    P          P          22 42 25.7   0.0
       comp=Z,31nm,0.9s,baz=39,slow=6.2,SNR=84
NOA                                  LR         LR         23 15 43.1
       comp=Z,579nm,18.8s,baz=40,slow=39
       comp=Z,31nm,0.9s
RMQ    Roma             68.81 170    P          P          22 42 28.9  +2.8
ILULI  Ilulissat        68.84   4  i P          P          22 42 25.8  -0.1
YATNC  Mamie plateau,   68.90 152    P          P          22 42 30.7  +3.9
FAQ    Al Faqa, Dubai   68.94 285  i P          P          22 42 27.0  -0.2
       SNR=6.8
FAQ    Al Faqa, Dubai   68.94 285    P          P          22 42 26.7  -0.5
YBH    Yreka Blue Hor   68.98  52    LR         LR         23 12 28.6
       comp=Z,71nm,18.4s,baz=324,slow=36
ONTNC  Ouen Toro        68.98 152    P          P          22 42 28.2  +1.0
BSY    Bisya            69.00 282    P          P          22 42 29.0  +1.3
       SNR=10
NAO01  NORSAR Array S   69.02 336    P          P          22 42 26.0  -1.2
AKASG  Malin Array Be   69.08 320    P          P          22 42 26.9  -0.7
       comp=Z,46nm,0.8s,baz=44,slow=6.5,SNR=152
AKASG                                LR         LR         23 12 54.7
       comp=Z,235nm,18.8s,baz=54,slow=36
       comp=Z,46nm,0.8s
AKASG  Malin Array Be   69.08 320ceP            P          22 42 27.3  -0.4
AKASG                                pmax       pmax
       comp=Z,47nm,0.8s
AKBB   Malin Array Si   69.08 320c iP         P          22 42 27.0  -0.7
ARQ    Araqi            69.13 283    P          P          22 42 30.0  +1.5
       SNR=10.0
WALA   Waterton Lakes   69.17  42    P          P          22 42 27.7  -0.7
WALA                                 IAmb       IAmb       22 42 39.4
       comp=Z,34nm,1.1s
ICESG  Greenland Ices   69.19 359  i P          P          22 42 28.8  +0.2
ICESG                                IAmb       IAmb       22 42 30.8
       comp=Z,112nm,1.1s
ASUD   Al Ashush, Dub   69.20 285  i P          P          22 42 29.0  +0.2
       SNR=8.5
ASUD   Al Ashush, Dub   69.20 285    P          P          22 42 28.7  -0.1
OUENC  Ouen Island, N   69.22 152    P          P          22 42 29.5  +0.8
ALNE   Al Ain           69.25 284  i P          P          22 42 28.9  -0.2
       SNR=20
ALNE                               i P          P          22 42 29.8  +0.7
       SNR=10
ALNE   Al Ain           69.25 284    P          P          22 42 29.8  +0.7
       SNR=14
I07A   Izee             69.37  49    IAmb       IAmb       22 42 41.2
       comp=Z,45nm,1.4s
INKA   Innaminka        69.45 178    P          P          22 42 32.8  +2.8
AJN    Ajban            69.49 285    P          P          22 42 29.5  -1.1
MHTO   MHTO             69.51 280    P          P          22 42 31.0  +0.2
       SNR=26
OOD    Oodnadatta       69.53 183    P          P          22 42 31.4  +0.9
MSVF   Nonsavu          69.70 140    P          P          22 42 31.2  -0.7
MSVF   Nonsavu          69.70 140    P          P          22 42 35.8  +3.9
       comp=Z,58nm,1.4s
MSVF   Nonsavu          69.70 140⇑eP            P          22 42 34.0  +2.1
MSVF                                 pmax       pmax
       comp=Z,15nm,1.1s
GURO   Guroymak-BITLI   69.73 304    IAmb       IAmb       22 42 33.8
       comp=Z,46nm,0.9s
BMO    Blue Mountains   70.10  47    IAmb       IAmb       22 42 45.5
       comp=Z,61nm,1.6s
MOD    Modoc Plateau    70.28  51    IAmb       IAmb       22 42 46.7
       comp=Z,47nm,1.2s
SIM    Simferopol'      70.32 313  eP           P          22 42 35.7  +0.3
SIM                                  pmax       pmax
       comp=Z,117nm,1.0s
SIM                                  MLR        MLR
       comp=Z,281nm,17.0s
STRU   Stroemstad       70.34 334  i P          P          22 42 34.3  -1.0
KONO   Kongsberg        70.36 335    P          P          22 42 34.8  -0.6
KONO   Kongsberg        70.36 335⇓eP            P          22 42 36.0  +0.6
KONO                                 pmax       pmax
       comp=Z,55nm,1.7s
J08A   Circle Bar Ran   70.40  49    P          P          22 42 36.1   0.0
J08A                                 IAmb       IAmb       22 42 47.7
       comp=Z,67nm,1.3s
FCC    Fort Churchill   70.47  26    P          P          22 42 36.0  -0.1
FCC    Fort Churchill   70.47  26    P          P          22 42 36.0  -0.1
DQM    DQM              70.48 280    P          P          22 42 39.1  +2.3
       SNR=5.7
UMZA   Um Al Zommool    70.50 283    P          P          22 42 35.7  -1.1
MSO    Missoula         70.61  44    IAmb       IAmb       22 42 48.2
       comp=Z,41nm,1.2s
MSO    Missoula         70.61  44    P          P          22 42 38.5  +1.2
       baz=311,SNR=7.8
FFC    Flin Flon        70.64  32    P          P          22 42 36.6  -0.6
FFC    Flin Flon        70.64  32    P          P          22 42 36.6  -0.6
FFC                                  pmax       pmax
       comp=Z,86nm,1.1s
MZWR   Madinat Zayed    70.78 285    P          P          22 42 37.2  -1.3
JRN    Qarnain Island   70.79 287    P          P          22 42 37.2  -1.3
BLEU   Blekinge         70.82 330  i P          P          22 42 35.3  -3.0
BORU   Boraas           70.89 333  i P          P          22 42 37.1  -1.5
WVOR   Wild Horse Val   70.90  50    IAmb       IAmb       22 42 50.6
       comp=Z,60nm,1.2s
TJOU   Tjoern           70.97 333  i P          P          22 42 37.6  -1.6
SFJD   Kangerlussuaq    71.07   4    LR         LR         23 15 49.7
       comp=Z,166nm,18.4s,baz=349,slow=38
SFJD   Kangerlussuaq    71.07   4    P          P          22 42 39.0  -0.5
SFJD                                 IAmb       IAmb       22 42 50.0
       comp=Z,61nm,1.1s
SFJD   Kangerlussuaq    71.07   4    P          P          22 42 39.1  -0.5
SFJD                                 pmax       pmax
       comp=Z,61nm,1.1s
SFJD   Kangerlussuaq    71.07   4  i P          P          22 42 39.6   0.0
SFJD                                 IAmb       IAmb       22 42 41.3
       comp=Z,66nm,1.1s
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SORM  Soroca            71.22 318 ⇑P      P       22 42 40.4 -0.4
SORM  Soroca            71.22 318  P      P       22 42 40.4 -0.4
ONAU  Onsala            71.37 333 i P     P       22 42 40.5 -1.1
GHWR  Ruwais            71.37 286  P      P       22 42 40.9 -1.2
FABU  Falkenberg        71.40 332 i P     P       22 42 39.6 -2.1
DEL   Delary            71.40 331 i P     P       22 42 38.6 -3.2
MZR   Muzera            71.53 285 i P     P       22 42 43.0 -0.1
      SNR=33
MZR                               i P     P       22 42 43.0 -0.1
      SNR=7.3
MZR   Muzera            71.53 285  P      P       22 42 43.2  0.0
      SNR=7.6
SHMA  Al-Shehemyia      71.57 288  P      P       22 42 42.4 -0.9
LKBA  Tubou, Lakemba    71.67 137  P      P       22 42 45.6 +1.8
      comp=Z,2.9nm,0.4s
KIS   Kishinev          71.75 317 ⇑P      P       22 42 43.9 -0.1
KIS   Kishinev          71.75 317⇑iP      P       22 42 42.5 -1.6
      comp=Z,60nm,1.3s
KIS                               eL      L       23 16 22.0
KIS                                LRM    MLR     23 16 55.0
      comp=Z,400nm,15.0s
KIS   Kishinev          71.75 317c iP     P       22 42 42.5 -1.6
KIS                                pmax   pmax
      comp=Z,60nm,1.3s
KIS                                MLR    MLR
      comp=Z,400nm,15.0s
DY2G  Dye2              71.76   2 i P     P       22 42 43.6 -0.5
DY2G                               IAmb   IAmb    22 42 46.1
      comp=Z,176nm,1.1s
SAKB  Bahrain           71.79 289  P      P       22 42 43.7 -0.9
HOMB  Homborsund        71.80 335 i P     P       22 42 43.4 -0.8
MILM  Milestii Mici     71.81 317⇑iP      P       22 42 41.8 -2.6
      comp=Z,110nm,1.0s
MILM                              eL      L       23 15 04.0
MILM                               LRM    MLR     23 16 27.0
      comp=Z,800nm,17.0s
MILM  Milestii Mici     71.81 317 i P     P       22 42 41.8 -2.6
MILM                               pmax   pmax
      comp=Z,110nm,1.0s
MILM                               MLR    MLR
      comp=Z,800nm,17.0s
MFID  Camas Ranch       71.84  48  IAmb   IAmb    22 42 56.2
      comp=Z,52nm,1.3s
EGMT  Eagleton          71.91  41  IAmb   IAmb    22 42 56.1
      comp=Z,75nm,1.0s
EGMT  Eagleton          71.91  41  P      P       22 42 45.8 +0.7
      baz=313,SNR=13
TOKA  Tokat             71.96 308  IAmb   IAmb    22 42 47.3
      comp=Z,55nm,1.2s
BJUU  Bjuv              72.01 331 i P     P       22 42 45.2 -0.2
LRM   Limekiln Ridge    72.05  44  P      P       22 42 46.5 +0.3
BSD   Bornholm Skovb    72.06 330 eP      P       22 42 45.7  0.0
BSD   Bornholm Skovb    72.06 330 i P     P       22 42 44.0 -1.7
BSD                                IAmb   IAmb    22 42 46.5
      comp=Z,64nm,0.9s
MULG  Mulgathing        72.08 184  P      P       22 42 46.6 +0.6
LCRK  Leigh Creek       72.12 180  P      P       22 42 47.0 +0.8
LVV   L'vov             72.12 322 eP      P       22 42 46.8 +0.6
LVV                               e               22 45 33.0
LVV                               ePPP    PPP     22 47 15.6
LVV                               eS      S       22 52 06.5 -0.6
LVV                               ePS     PnS     22 52 51.4  +14
LVV                               eSS     SS      22 56 46.1 +2.6
LVV                                MLR    MLR
      comp=N,400nm,16.0s
LVV                                MLR    MLR
      comp=E,300nm,16.0s
LVV                                MLR    MLR
      comp=Z,600nm,16.0s
BEL   Belsk             72.13 325 eP      P       22 42 47.4 +1.2
BEL                               epP     sP      22 42 55.3 +1.5
LUNU  Lund              72.20 331 i P     P       22 42 45.4 -1.1
PAHR  Pah Rah Range     72.22  52  IAmb   IAmb    22 42 58.3
      comp=Z,69nm,1.2s
IAS   Iasi              72.25 318 ⇓P      P       22 42 47.5 +0.4
IAS   Iasi              72.25 318  P      P       22 42 47.4 +0.4
EMB   Emerald Bay       72.26  53  IAmb   IAmb    22 42 58.8
      comp=Z,66nm,1.2s
DLMT  Dillon            72.28  44  IAmb   IAmb    22 42 58.6
      comp=Z,63nm,1.0s
FRB   Frobisher Bay     72.38  12  LR     LR      23 15 59.1
      comp=Z,170nm,20.7s,baz=352,slow=37
LEOM  Leova             72.40 317 ⇑P      P       22 42 48.2 +0.2
LEOM  Leova             72.40 317  P      P       22 42 48.1 +0.2
BORG  Borgarnes         72.41 351  LR     LR      23 15 09.3
      comp=Z,110nm,21.1s,baz=8.1,slow=36
BORG  Borgarnes         72.41 351  P      P       22 42 47.4 -0.3
BORG  Borgarnes         72.41 351  P      P       22 42 47.4 -0.3
BORG                               pmax   pmax
      comp=Z,95nm,1.1s
VASR  Vaslui            72.51 318 ⇓P      P       22 42 49.4 +0.7
HLID  Hailey            72.52  47  P      P       22 42 48.8 -0.1
HLID  Hailey            72.52  47  P      P       22 42 48.7 -0.3
      baz=312
COP   Copenhagen        72.52 331 i P     P       22 42 48.3 -0.2
COP                                IAmb   IAmb    22 42 49.9
      comp=Z,121nm,0.9s
GKP   Gorka Klasztor    72.55 328 eP      P       22 42 49.1 +0.4
GKP   Gorka Klasztor    72.55 328 eP      P       22 42 49.3 +0.7
GOET  G??ttrup          72.56 334 i P     P       22 42 48.3 -0.4
BOZ   Bozeman (W)       72.62  44  IAmb   IAmb    22 43 00.7
      comp=Z,100nm,1.7s
BOZ   Bozeman (W)       72.62  44  P      P       22 42 50.8 +1.3
      baz=313,SNR=14
ANGG  Ammassalik, Gr    72.65 358  IAmb   IAmb    22 42 59.0
      comp=Z,36nm,1.0s
CMB   Columbia Colle    72.69  54  IAmb   IAmb    22 43 01.1
      comp=Z,56nm,1.1s
YERR  Yerington         72.76  53  IAmb   IAmb    22 43 01.9
      comp=Z,75nm,1.1s
VLDR  Vladesti          72.91 317 ⇑P      P       22 42 51.4 +0.4
WAKR  Walker            72.96  53  IAmb   IAmb    22 43 03.2
      comp=Z,50nm,1.3s
TLCR                    72.98 316 ⇓P      P       22 42 51.9 +0.5
TLCR                    72.98 316  P      P       22 42 51.9 +0.5
BMN   Battle Mountai    73.01  51  IAmb   IAmb    22 43 03.4
      comp=Z,65nm,1.3s
MUD   Monsted U'grnd    73.04 333 i P     P       22 42 56.8 +5.2
ARMA  Armidale          73.07 168  IAmb   IAmb    22 43 04.9
      comp=Z,53nm,1.2s
ARMA  Armidale          73.07 168  P      P       22 42 52.7 +0.6
ILGA  Ilgaz             73.08 310  P      P       22 42 50.3 -2.1
SHAO  Shalim            73.08 279 i P     P       22 42 54.2 +1.8
      SNR=5.2
SHAO  Shalim            73.08 279  P      P       22 42 51.7 -0.8
TATR  Tatarca           73.10 317 ⇑P      P       22 42 52.5 +0.4
BUR08 Bucovina Ar. S    73.10 320  P      P       22 42 52.0 -0.3
BUR08                              IAmb   IAmb    22 42 53.9
      comp=Z,34nm,0.8s
FORT  Forrest           73.11 190  IAmb   IAmb    22 43 02.3
      comp=Z,114nm,1.4s
FORT  Forrest           73.11 190  P      P       22 42 53.6 +1.5
      comp=Z,48nm,0.7s
GHRR                    73.11 317 ⇑P      P       22 42 53.2 +1.0
BURAR Bucovina Array    73.11 320 ⇑P      P       22 42 52.8 +0.5
BURAR Bucovina Array    73.11 320  P      P       22 42 51.9 -0.4
BURAR                              IAmb   IAmb    22 42 54.3
      comp=Z,40nm,0.8s
BURAR Bucovina Array    73.11 320  P      P       22 42 52.8 +0.5
TESR  Tescani           73.17 318 ⇑P      P       22 42 52.6  0.0
JURR  Jurilovca         73.24 316 ⇑P      P       22 42 53.9 +1.0
SLCR  Slobozia Conac    73.24 317 ⇑P      P       22 42 54.1 +1.1
QLMT  Earthquake Lak    73.25  44  P      P       22 42 52.4 -0.9
IZVR  Izvoarele         73.28 317 ⇑P      P       22 42 53.8 +0.6
CFR   Carcaliu          73.34 316 ⇑P      P       22 42 53.5  0.0
CFR   Carcaliu          73.34 316  P      P       22 42 54.3 +0.8
PANC  Panciu            73.37 317 ⇓P      P       22 42 55.0 +1.4
KVN   Kaiserville       73.40  52  IAmb   IAmb    22 43 05.6
      comp=Z,60nm,1.1s
TPGR  Topolog           73.41 316 ⇓P      P       22 42 54.5 +0.5
ODBI  Odobesti          73.49 317 ⇓P      P       22 42 54.6 +0.2
CMSA  Cobar Meteorol    73.49 174  P      P       22 42 55.8 +1.5
GAZ   Gaziantep         73.56 305  IAmb   IAmb    22 42 57.0
      comp=Z,56nm,0.9s
VRI   Vrincioaia        73.58 317 ⇑P      P       22 42 55.7 +0.7
VRI   Vrincioaia        73.58 317  P      P       22 42 56.0 +1.0
STKA  Stephens Creek    73.59 177  P      P       22 42 55.6 +0.6
      comp=Z,8.5nm,0.8s,baz=341,slow=8.4,SNR=8.8
STKA                               LR     LR      23 13 40.2
      comp=Z,117nm,21.6s,baz=17,slow=34
      comp=Z,8.5nm,0.8s
STKA  Stephens Creek    73.59 177  P      P       22 42 56.9 +2.0
      comp=Z,6.7nm,1.3s
STKA  Stephens Creek    73.59 177d iP     P       22 42 56.1 +1.2
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YMR   Madison River     73.60  44  IAmb   IAmb    22 43 06.8
      comp=Z,110nm,1.8s
PLOR  Plostina          73.63 318 ⇓P      P       22 42 56.1 +0.7
PLOR  Plostina          73.63 318  P      P       22 42 56.0 +0.7
SSRD  Sdr. Stenderup    73.67 333 i P     P       22 43 01.5 +6.3
SSRD                               IAmb   IAmb    22 43 03.6
      comp=Z,125nm,1.5s
STHS  Stebnicka Huta    73.68 323 eP      P       22 42 56.1 +0.6
STHS                               pmax   pmax
      comp=Z,42nm,1.3s
STHS  Stebnicka Huta    73.68 323 eP      P       22 42 56.1 +0.6
NVAR  Mina Array Bea    73.68  53  P      P       22 42 56.9 +0.9
      comp=Z,5.9nm,0.8s,baz=290,slow=5.3,SNR=21
      comp=Z,5.9nm,0.8s
TIRR  Tirgusor          73.69 316 ⇓P      P       22 42 56.0 +0.4
TIRR  Tirgusor          73.69 316  P      P       22 42 56.0 +0.4
OJC   Ojcow             73.73 324 eP      P       22 42 56.6 +0.8
OJC                               epP     sP      22 43 04.5 +1.1
MORW  Morawa            73.76 201  P      P       22 42 56.7 +0.7
DMTO  DMTO              73.78 279  P      P       22 42 55.5 -1.0
HARR  Harsova           73.78 316 ⇑P      P       22 42 57.3 +1.1
HARR  Harsova           73.78 316  P      P       22 42 57.2 +1.1
GRER                    73.79 317 ⇑P      P       22 42 58.2 +1.9
BISRR Bisoca            73.81 317 ⇓P      P       22 42 57.7 +1.3
NUUK  Nuuk              73.81   5 i P     P       22 42 57.0 +1.1
NUUK                               IAmb   IAmb    22 43 06.5
      comp=Z,102nm,1.1s
TLBR  Topalu            73.82 316 ⇑P      P       22 42 56.8 +0.5
COVR  Voineasa-Covas    73.86 318 ⇑P      P       22 42 56.8 +0.2
MFTR  Murfatlar         73.88 315 ⇑P      P       22 42 56.8 +0.1
MLAC  Mammoth, Mammo73.89  54      P      P       22 42 57.9 +0.7
      baz=311
BMR   Baia Mare         73.89 320 ⇑P      P       22 42 57.6 +0.8
BMR   Baia Mare         73.89 320  P      P       22 42 58.9 +2.1
OZUR                    73.89 318 ⇑P      P       22 42 58.0 +1.2
ARCR  ARCALIA           73.90 320 ⇑P      P       22 42 58.1 +1.3
H17A  Grant Village     73.99  44  P      P       22 42 58.6 +0.8
      baz=314,SNR=15
BR131 Keskin Array S    74.00 309  P      P       22 42 56.3 -1.5
BR131                              IAmb   IAmb    22 42 59.1
      comp=Z,169nm,1.9s
BR131 Keskin Array S    74.00 309  P      P       22 42 56.3 -1.5
BR131                              pmax   pmax
      comp=Z,169nm,1.9s
BR131 Keskin Array S    74.00 309  P      P       22 42 58.0 +0.3
      SNR=9.7
BRTR  Keskin Array B    74.00 309  P      P       22 42 56.5 -1.2
      comp=Z,13nm,0.8s,baz=66,slow=4.0,SNR=31
BRTR                               LR     LR      23 20 24.1
      comp=Z,277nm,18.7s,baz=46,slow=40
      comp=Z,13nm,0.8s
BRTR  Keskin Array B    74.00 309ceP      P       22 42 57.7  0.0
BRTR                               pmax   pmax
      comp=Z,13nm,0.8s
TRPA  Tarpa             74.01 321 ⇑P      P       22 42 58.3 +0.9
Q09A  Carvers           74.08  52  IAmb   IAmb    22 43 09.6
      comp=Z,44nm,0.9s
NIE   Niedzica          74.10 323 eP      P       22 42 59.8 +1.7
PGOR  Pogoanele         74.12 317 ⇑P      P       22 42 59.8 +1.7
IMW   Indian Meadow     74.14  45  IAmb   IAmb    22 43 10.7
      comp=Z,138nm,2.0s
RLMT  Red Lodge         74.16  43  IAmb   IAmb    22 43 10.1
      comp=Z,62nm,1.5s
RLMT  Red Lodge         74.16  43  P      P       22 43 00.3 +1.6
      baz=314,SNR=8.8
DOPR  Dopca             74.18 318 ⇓P      P       22 42 59.7 +1.2
ISR   Istrita           74.19 317 ⇓P      P       22 42 59.5 +0.9
ISR   Istrita           74.19 317  P      P       22 42 59.8 +1.1
DGMT  Dagmar            74.23  38  IAmb   IAmb    22 43 09.6
      comp=Z,76nm,1.1s
DGMT  Dagmar            74.23  38  P      P       22 42 60.0 +1.2
      baz=317,SNR=5.5
MLR   Muntele Rosu      74.24 318 ⇑P      P       22 42 59.4 +0.4
MLR   Muntele Rosu      74.24 318  LR     LR      23 18 16.0
      comp=Z,682nm,20.4s,baz=58,slow=38
MLR   Muntele Rosu      74.24 318  P      P       22 42 58.5 -0.5
MLR   Muntele Rosu      74.24 318  P      P       22 42 58.5 -0.5
MLR                                pmax   pmax
      comp=Z,41nm,1.2s
MLR                                MLR    MLR
      comp=Z,800nm,21.0s
ICOR  Ion Corvin        74.24 316 ⇑P      P       22 42 59.5 +0.7
MOOW  Moose Ponds       74.35  45  IAmb   IAmb    22 43 11.7
      comp=Z,68nm,1.4s
ANTO  Ankara            74.39 310 ⇑P      P       22 43 00.4 +0.4
ANTO  Ankara            74.39 310  P      P       22 42 59.3 -0.6
ANTO                               IAmb   IAmb    22 43 01.6
      comp=Z,63nm,1.0s
ANTO  Ankara            74.39 310  P      P       22 42 59.3 -0.6
ANTO                               pmax   pmax
      comp=Z,63nm,1.0s
ANTO  Ankara            74.39 310  P      P       22 43 00.2 +0.2
VOG   Valley Oaks Go    74.41  55  P      P       22 43 00.4 +0.4
      baz=311
BR231 Keskin MP Arra    74.42 310  IAmb   IAmb    22 43 01.8
      comp=Z,58nm,1.0s
RBK   Rabkut            74.46 280  P      P       22 43 01.0 +0.4
      SNR=5.4
SECR                    74.49 317 ⇓P      P       22 43 01.5 +1.2
RUE   Ruedersdorf       74.51 329 eP      P       22 43 01.5 +1.2
RUE   Ruedersdorf       74.51 329 eP      P       22 43 00.6 +0.4
      comp=Z,28nm,0.8s,baz=37,slow=5.7
WHFO  Wadi Hawf         74.51 280  P      P       22 42 59.4 -1.5
CBBR  Cluj-Babes-Bol    74.51 320 ⇑P      P       22 43 02.0 +1.6
MESR  Meseseni          74.53 320 ⇓P      P       22 43 01.8 +1.3
LAO   LASA Array        74.56  40  IAmb   IAmb    22 43 12.0
      comp=Z,82nm,1.2s
LAO   LASA Array        74.56  40  P      P       22 43 01.5 +0.7
      baz=316
DSP   Deep Springs      74.58  54  IAmb   IAmb    22 43 12.8
      comp=Z,59nm,1.1s
KMBL  Kambalda          74.65 195  P      P       22 43 01.8 +0.6
BSEG  Bad Segeberg      74.66 331 eP      P       22 43 01.4 +0.4
      comp=Z,30nm,0.9s,baz=37,slow=5.7
LANS  Liptovska Anna    74.67 324 eP      P       22 43 02.7 +1.4
LANS                               pmax   pmax
      comp=Z,20nm,1.0s
LANS  Liptovska Anna    74.67 324 eP      P       22 43 02.7 +1.4
VOIR                    74.72 318 ⇑P      P       22 43 02.5 +0.7
VOIR                    74.72 318  P      P       22 43 02.3 +0.5
OKC   Ostrava-Krasne    74.73 325 eP      P       22 43 02.7 +1.1
OKC                               ePCP    sP      22 43 11.3 +2.1
OKC                                AMS    AMS     23 18 20.0
      comp=Z,1µm,16.5s
OKC   Ostrava-Krasne    74.73 325 eP      P       22 43 02.7 +1.1
OKC                               e               22 43 11.3
OKC                                MLR    MLR
      comp=Z,1µm,16.5s
KSP   Ksiaz             74.76 326 eP      P       22 43 02.8 +1.1
KSP                               epP     sP      22 43 10.6 +1.3
MARR  Marisel-Cluj      74.78 320 ⇑P      P       22 43 02.9 +0.8
DRGR                    74.90 320 ⇑P      P       22 43 02.9 +0.2
DRGR                    74.90 320  P      P       22 43 02.9 +0.2
VES   Vestal, Richgr    74.90  55  P      P       22 43 03.0 +0.1
      baz=311
ARR   Arges             74.98 318 ⇑P      P       22 43 04.5 +1.3
OSTC  Ostas             75.01 326 eP      P       22 43 04.5 +1.3
OSTC                              ePCP    sP      22 43 12.9 +2.1
OSTC                               AMS    AMS     23 19 30.0
      comp=Z,900nm,14.9s
OSTC  Ostas             75.01 326 eP      P       22 43 04.5 +1.3
OSTC                              e               22 43 12.9
OSTC                               MLR    MLR
      comp=Z,900nm,14.9s
MORC  Moravsky Berou    75.04 325 ⇑P      P       22 43 04.4 +1.0
MORC  Moravsky Berou    75.04 325  P      P       22 43 02.3 -1.2
MORC                               IAmb   IAmb    22 43 05.5
      comp=Z,48nm,0.9s
MORC  Moravsky Berou    75.04 325 eP      P       22 43 04.1 +0.6
MORC  Moravsky Berou    75.04 325  P      P       22 43 02.3 -1.2
MORC                               pmax   pmax
      comp=Z,48nm,0.9s
CHVC  Chvalec           75.05 326 eP      P       22 43 04.5 +1.0
CHVC                              ePCP    sP      22 43 12.1 +1.0
CHVC                               AMS    AMS     23 18 20.0
      comp=Z,1µm,16.4s
CHVC  Chvalec           75.05 326 eP      P       22 43 04.5 +1.0
CHVC                              e               22 43 12.1
CHVC                               MLR    MLR
      comp=Z,1µm,16.4s
BLDU  Ballidu           75.07 199  P      P       22 43 04.2 +0.6
PKM   Mcpherson Peak    75.08  56  P      P       22 43 04.3 +0.2
      baz=311
PRD   Provadia          75.09 315 i P     P       22 43 04.1 +0.3
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HTT   Hallett           75.09 180  P      P       22 43 04.9 +1.2
SGRR  Singureni         75.11 317 ⇑P      P       22 43 04.7 +0.8
DPC   Dobruska-Polom    75.12 326 eP      P       22 43 05.3 +1.4
DPC                               ePCP    pwP     22 43 14.0 -0.3
DPC                                AMS    AMS     23 21 30.0
      comp=Z,1µm,12.9s
DPC   Dobruska-Polom    75.12 326 eP      P       22 43 05.3 +1.4
DPC                               e               22 43 14.0
DPC                                MLR    MLR
      comp=Z,1µm,12.9s
CWC   Cottonwood Cre    75.12  54  P      P       22 43 04.5 +0.2
      baz=312
UPC   Upice             75.13 326 eP      P       22 43 05.2 +1.3
UPC                               ePCP    pwP     22 43 13.7 -0.6
UPC                                AMS    AMS     23 18 20.0
      comp=Z,1µm,16.9s
UPC   Upice             75.13 326 eP      P       22 43 05.2 +1.3
UPC                               e               22 43 13.7
UPC                                MLR    MLR
      comp=Z,1µm,16.9s
KRLC  Kraliky           75.14 326 eP      P       22 43 05.2 +1.2
KRLC                              ePCP    pwP     22 43 13.8 -0.6
KRLC                               AMS    AMS     23 19 30.0
      comp=Z,900nm,9.5s
KRLC  Kraliky           75.14 326 eP      P       22 43 05.2 +1.2
KRLC                              e               22 43 13.8
KRLC                               MLR    MLR
      comp=Z,900nm,9.5s
GRAC  Grapevine Rang    75.18  53  P      P       22 43 05.5 +0.9
      baz=312
ABTO  Aybut             75.22 280  P      P       22 43 03.8 -1.2
MAUC  Maruska           75.22 325 eP      P       22 43 05.8 +1.3
MAUC                              ePCP    pwP     22 43 14.7 -0.2
MAUC                               AMS    AMS     23 18 50.0
      comp=Z,2µm,13.3s
RAZG  Razgrad           75.30 316 ⇑P      P       22 43 05.5 +0.5
Q12A  Willow Creek R    75.31  51  IAmb   IAmb    22 43 20.7
      comp=Z,82nm,1.6s
R11B  Troy Canyon, C    75.33  51  P      P       22 43 05.3 -0.2
      baz=312,SNR=12
LOT   Lotru             75.35 319 ⇓P      P       22 43 06.2 +0.8
PSZ   Piszkesteto       75.39 322 ⇓P      P       22 43 06.4 +0.8
PSZ   Piszkesteto       75.39 322  IAmb   IAmb    22 43 07.8
      comp=Z,56nm,1.1s
PSZ   Piszkesteto       75.39 322  P      P       22 43 06.3 +0.8
HWUT  Hardware Ranch    75.39  47  IAmb   IAmb    22 43 17.3
      comp=Z,126nm,1.8s
ISA   Isabella, Lake    75.39  55  P      P       22 43 07.1 +1.3
      baz=312
SBC   Santa Barbara     75.43  57  P      P       22 43 05.8 -0.1
      baz=311
VYHS  Vyhne             75.43 323 eP      P       22 43 06.6 +0.9
VYHS                               pmax   pmax
      comp=Z,83nm,1.9s
VYHS  Vyhne             75.43 323 eP      P       22 43 06.6 +0.9
DEV   Deva              75.46 319 ⇑P      P       22 43 06.5 +0.6
DEV   Deva              75.46 319  P      P       22 43 06.4 +0.6
ARVC  Arvin             75.53  56  P      P       22 43 05.7 -0.8
      baz=312
FLTG  Flechtingen       75.60 330 eP      P       22 43 06.6 +0.1
      comp=Z,38nm,0.8s,baz=37,slow=5.7
SPR3  Spring Creek 3    75.62  50  IAmb   IAmb    22 43 19.4
      comp=Z,52nm,1.4s
BW06  Boulder Array     75.66  45  IAmb   IAmb    22 43 18.1
      comp=Z,129nm,1.8s
BW06  Boulder Array     75.66  45  P      P       22 43 07.3 -0.1
      baz=315,SNR=42
PD31  Pinedale Array    75.66  45  IAmb   IAmb    22 43 18.1
      comp=Z,115nm,1.8s
PDAR  Pinedale Array    75.66  45  P      P       22 43 07.8 +0.4
      comp=Z,5.9nm,0.8s,baz=290,slow=1.7,SNR=47
PDAR                               LR     LR      23 18 37.0
      comp=Z,91nm,18.3s,baz=334,slow=38
      comp=Z,5.9nm,0.8s
DUG   Dugway, Tooele    75.67  49  IAmb   IAmb    22 43 18.9
      comp=Z,86nm,1.6s
DUG   Dugway, Tooele    75.67  49  P      P       22 43 08.2 +0.9
      baz=313,SNR=9.6
BSZH  Besenyszg         75.67 322 ⇑P      P       22 43 08.5 +1.5
JAVC  Velka Javorina    75.67 324 eP      P       22 43 08.8 +1.7
BRG   Berggiesshubel    75.69 327 i P     P       22 43 07.8 +0.7
BRG                                Amp            22 43 09.0
      comp=Z,30nm,1.1s
BRG   Berggiesshubel    75.69 327  P      P       22 43 16.6  +10
BRG                                Amp            22 43 17.4
      comp=Z,19nm,1.0s
BRG                                Amp            23 19 11.0
      comp=Z,1.1nm,16.8s
BRG                                Amp            23 19 15.0
      comp=N,0.7nm,16.3s
BRG                                Amp            23 19 16.0
      comp=E,0.4nm,18.1s
BRG   Berggiesshubel    75.69 327 i P     P       22 43 07.8 +0.7
BRG                                               22 43 16.6
BRG                                pmax   pmax
      comp=Z,30nm,1.1s
BRG                                pmax   pmax
      comp=Z,19nm,1.0s
BRG                                MLR    MLR
      comp=Z,1µm,16.8s
BRG                                MLR    MLR
      comp=N,690nm,16.3s
BRG                                MLR    MLR
      comp=E,358nm,18.1s
BRG   Berggiesshubel    75.69 327 eP      P       22 43 07.4 +0.3
      comp=E,12nm,0.8s,baz=37,slow=5.7
PVCC  Panska Ves        75.71 327 eP      P       22 43 08.5 +1.3
PVCC                              ePCP    pwP     22 43 17.1 -0.5
PVCC                               AMS    AMS     23 19 00.0
      comp=E,1µm,13.5s
PVCC  Panska Ves        75.71 327 eP      P       22 43 08.5 +1.3
PVCC                              e               22 43 17.1
PVCC                               MLR    MLR
      comp=Z,1µm,13.5s
CLL   Collm             75.73 328  IAmb   IAmb    22 43 08.7
      comp=Z,41nm,0.9s
CLL   Collm             75.73 328⇑iP      P       22 43 07.6 +0.3
      comp=Z,55nm,1.1s
CLL                               i x     x       22 43 16.2
CLL                               ePP     PP      22 45 54.0 -2.5
CLL                               eS      S       22 52 49.0 +1.4
CLL                               ePS     PnS     22 53 28.0 +3.4
CLL                               eSS     SS      22 57 42.0 +3.9
CLL                               eSSS    SSS     23 01 12.0
CLL                                AMS    AMS     23 19 00.0
      comp=Z,600nm,18.8s
CLL   Collm             75.73 328⇑iP      P       22 43 07.6 +0.3
CLL                               i *PP   sP      22 43 16.2 +1.3
CLL                               eS      S       22 52 49.0 +1.4
CLL                                pmax   pmax
      comp=Z,55nm,1.1s
CLL                                MLR    MLR
      comp=Z,600nm,18.8s
CLL   Collm             75.73 328 eP      P       22 43 07.9 +0.7
      comp=Z,28nm,0.9s,baz=37,slow=5.7
MPMC  Manual Prospec    75.73  54  P      P       22 43 08.3 +0.5
      baz=312,SNR=31
KLBR  Kellerberrin      75.75 198  P      P       22 43 07.9 +0.4
SIRR  Siria             75.78 320 ⇓P      P       22 43 08.4 +0.7
VRAC  Vranov            75.80 325 ⇑P      P       22 43 08.8 +1.1
VRAC  Vranov            75.80 325  LR     LR      23 19 18.2
      comp=Z,768nm,19.0s,baz=34,slow=38
VRAC  Vranov            75.80 325 eP      P       22 43 08.6 +0.8
VRAC  Vranov            75.80 325  P      P       22 43 09.0 +1.2
SZH   Strazhica         75.81 316 i P     P       22 43 08.0 +0.1
FURC  Furnace Creek,    75.84  54  P      P       22 43 08.3 +0.1
      baz=312,SNR=5.2
TPNV  Topopah Spring    75.88  53  IAmb   IAmb    22 43 20.0
      comp=Z,64nm,1.1s
TPNV  Topopah Spring    75.88  53  P      P       22 43 08.8 +0.2
      baz=312
NRDL  Niedersach Rie    75.89 330 eP      P       22 43 08.8 +0.7
      comp=Z,15nm,0.9s,baz=37,slow=5.7
FBE   Freiberg          75.89 328 eP      P       22 43 08.7 +0.5
      comp=Z,30nm,0.9s,baz=37,slow=5.7
SURR  Surduc            75.93 320 ⇓P      P       22 43 09.1 +0.5
ASSE  Asse, Remlinge    75.97 330 eP      P       22 43 09.1 +0.5
      comp=Z,7.8nm,0.9s,baz=37,slow=5.7
SMOL  Smolenice         76.04 324 eP      P       22 43 10.2 +1.0
SMOL                               pmax   pmax
      comp=Z,19nm,1.1s
KRUC  Moravsky          76.07 325 eP      P       22 43 10.0 +0.7
VLAD  Vladila           76.07 317 ⇓P      P       22 43 09.5 +0.1
GOPC  GO Pecny, Ondr    76.09 326 eP      P       22 43 10.7 +1.2
GOPC                              ePCP    pwP     22 43 19.3 -0.5
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GOPC                             AMS       AMS       23 20 00.0
      comp=Z,900nm,16.1s
GOPC  GO Pecny, Ondr   76.09 326 eP        P         22 43 10.7 +1.2
GOPC                             e                   22 43 19.3
GOPC                             MLR       MLR
      comp=Z,900nm,16.1s
PRU   Pruhonice        76.13 327 eP        P         22 43 11.0 +1.3
PRU                              ePCP      pwP       22 43 19.4 -0.6
PRU                              AMS       AMS       23 19 10.0
      comp=Z,1µm,15.4s
PRU   Pruhonice        76.13 327 eP        P         22 43 11.0 +1.3
PRU                              e                   22 43 19.4
PRU                              MLR       MLR
      comp=Z,1µm,15.4s
GWY   Greenwater Val   76.14  54 IAmb      IAmb      22 43 21.3
      comp=Z,57nm,1.1s
JLU   Jordanelle       76.14  48 P         P         22 43 09.9 -0.3
JLU                              IAmb      IAmb      22 43 21.6
      comp=Z,70nm,1.6s
SRO   Srobarova        76.18 323 eP        P         22 43 11.4 +1.5
SRO                              pmax      pmax
      comp=Z,75nm,1.2s
SRO   Srobarova        76.18 323 eP        P         22 43 11.4 +1.5
MODS  Modra-Piesok     76.21 324 eP        P         22 43 11.4 +1.2
MODS                             pmax      pmax
      comp=Z,93nm,1.3s
MODS  Modra-Piesok     76.21 324 eP        P         22 43 11.4 +1.2
BZS   Buzias           76.27 320 ⇑P        P         22 43 10.7 +0.2
BZS   Buzias           76.27 320 P         P         22 43 10.7 +0.2
TREC  Trest            76.28 326 eP        P         22 43 11.8 +1.3
TREC                             ePCP      pwP       22 43 20.3 -0.6
TREC                             AMS       AMS       23 20 20.0
      comp=Z,700nm,10.2s
TREC  Trest            76.28 326 eP        P         22 43 11.8 +1.3
TREC                             e                   22 43 20.3
TREC                             MLR       MLR
      comp=Z,700nm,10.2s
NEUB  Neuenburg        76.28 329 eP        P         22 43 11.2 +0.8
      comp=Z,34nm,0.8s,baz=37,slow=5.7
CLZ   Clausthal        76.31 330 eP        P         22 43 10.9 +0.3
      comp=Z,30nm,0.9s,baz=37,slow=5.7
DECC  Green Verdugo    76.41  56 P         P         22 43 11.7 +0.1
      baz=312
HERR  Herculane        76.42 319 ⇓P        P         22 43 11.8 +0.5
ZST   Bratislava       76.42 324 eP        P         22 43 13.4 +2.1
ZST   Bratislava       76.42 324 eP        P         22 43 13.3 +2.0
MPU   Maple Canyon     76.45  48 IAmb      IAmb      22 43 23.1
      comp=Z,115nm,1.8s
ULM   Lac du Bonnet    76.47  33 P         P         22 43 11.4 -0.1
      comp=Z,19nm,0.9s,baz=326,slow=6.5,SNR=22
ULM                              LR        LR        23 22 01.5
      comp=Z,194nm,18.1s,baz=332,slow=40
      comp=Z,19nm,0.9s
ULM   Lac du Bonnet    76.47  33 IAmb      IAmb      22 43 21.7
      comp=Z,75nm,1.1s
MUN   Mundaring        76.49 200 P         P         22 43 12.3 +0.6
BSUT  Blindstream Ca   76.57  47 P         P         22 43 13.0 +0.2
KPL   Plockton         76.57 341 eP        P         22 43 12.1 +0.1
KPL                              IAmb      IAmb      22 43 13.6
      comp=Z,43nm,1.1s
SHOC  Shoshone, Teco   76.57  54 P         P         22 43 12.8 +0.4
      baz=312
BAIL  Bailesti         76.58 318 ⇑P        P         22 43 13.4 +1.1
PUNG  Punghina         76.60 318 ⇑P        P         22 43 12.8 +0.4
TANN  Tannenbergstha   76.64 328 eP        P         22 43 13.3 +0.7
      comp=Z,5.9nm,0.9s,baz=37,slow=5.7
GSC   Goldstone, Bar   76.65  54 IAmb      IAmb      22 43 24.1
      comp=Z,39nm,1.1s
GSC   Goldstone, Bar   76.65  54 P         P         22 43 14.7 +1.7
      baz=312,SNR=6.7
BANR  Banloc           76.67 320 ⇑P        P         22 43 13.6 +0.9
GTTG  Gottingen        76.70 330 eP        P         22 43 13.7 +0.9
      comp=Z,30nm,1.0s,baz=37,slow=5.7
GUNZ  Gunzen           76.73 328 eP        P         22 43 13.8 +0.7
      comp=Z,9.6nm,0.8s,baz=37,slow=5.7
MDND  Maddock          76.76  36 P         P         22 43 14.3 +1.0
      baz=320,SNR=7.2
MDND  Maddock          76.76  36 P         P         22 43 15.2 +2.0
      baz=320
WERN  Wernitzgruen     76.77 328 eP        P         22 43 14.1 +0.8
      comp=Z,13nm,0.8s,baz=37,slow=5.7
NKC   Novy Kostel      76.79 328 eP        P         22 43 14.3 +0.9
NKC                              ePCP      sP        22 43 23.1 +2.1
NKC                              AMS       AMS       23 19 40.0
      comp=Z,800nm,19.9s
NKC   Novy Kostel      76.79 328 eP        P         22 43 14.3 +0.9
NKC                              e                   22 43 23.1
NKC                              MLR       MLR
      comp=Z,800nm,19.9s
MOX   Moxa             76.79 329 eP        P         22 43 14.1 +0.7
      comp=Z,9.2nm,0.9s,baz=37,slow=5.7
SHPR  Sheep Range      76.83  53 P         P         22 43 13.2 -0.8
MDVR  Moldovita        76.84 319 ⇓P        P         22 43 13.9 +0.1
BFSC  Mount Baldy Ra   76.84  56 P         P         22 43 14.4 +0.3
      baz=312,SNR=5.7
RAYN  Ar Rayn          76.88 290 P         P         22 43 12.7 -1.7
RAYN                             IAmb      IAmb      22 43 15.3
      comp=Z,114nm,1.6s
RAYN  Ar Rayn          76.88 290 IAMs_20   IAMs_20   23 16 59.5
      comp=Z,232nm,21.0s
RAYN  Ar Rayn          76.88 290 P         P         22 43 12.7 -1.7
RAYN                             pmax      pmax
      comp=Z,114nm,1.6s
RAYN                             MLR       MLR
      comp=Z,200nm,21.0s
RAYN  Ar Rayn          76.88 290 i P       P         22 43 14.3 -0.1
      SNR=12
RAYN  Ar Rayn          76.88 290 P         P         22 43 13.7 -0.7
IBBN  Ibbenburen       76.89 332 eP        P         22 43 14.4 +0.6
      comp=Z,34nm,1.0s,baz=37,slow=5.7
IBBN                             epP       sP        22 43 23.2 +1.7
CIS   Catalina Islan   76.93  57 P         P         22 43 14.6 +0.1
      baz=312
IVI   Ivigtut          76.97   3 i P       P         22 43 13.8 -0.3
INVG  Invergeldie, C   76.98 340 eP        P         22 43 14.2 -0.1
ISP   Isparta          77.08 309 IAMs_20   IAMs_20   23 18 45.8
      comp=Z,303nm,20.0s
ISP   Isparta          77.08 309⇑eP        P         22 43 14.8 -0.6
ISP                              pmax      pmax
      comp=Z,24nm,0.8s
TUQ   Turquoise Moun   77.09  54 P         P         22 43 16.7 +1.2
      baz=313,SNR=8.4
MANZ  Manzenberg       77.12 328 eP        P         22 43 16.0 +0.7
      comp=Z,3.2nm,0.9s,baz=37,slow=5.7
MANZ                             epP       sP        22 43 24.6 +1.7
CKRC  Cesky Krumlov    77.14 326 eP        P         22 43 16.4 +1.0
CKRC                             ePCP      sP        22 43 24.9 +1.9
CKRC                             AMS       AMS       23 22 50.0
      comp=Z,700nm,14.6s
CKRC  Cesky Krumlov    77.14 326 eP        P         22 43 16.4 +1.0
CKRC                             e                   22 43 24.9
CKRC                             MLR       MLR
      comp=Z,700nm,14.6s
NWAO  Narrogin (SRO)   77.15 198 P         P         22 43 15.2 -0.2
      comp=Z,60nm,0.9s,baz=26,slow=3.1,SNR=13
      comp=Z,60nm,0.9s
NWAO  Narrogin (SRO)   77.15 198 P         P         22 43 15.2 -0.2
NWAO                             IAmb      IAmb      22 43 26.4
      comp=Z,67nm,0.9s
NWAO  Narrogin (SRO)   77.15 198 P         P         22 43 17.1 +1.7
      comp=Z,91nm,1.0s
NWAO  Narrogin (SRO)   77.15 198 P         P         22 43 16.9 +1.5
      comp=Z,91nm,1.0s
RONA  Rosalia, Austr   77.15 324 i pP      P         22 43 16.9 +1.4
      comp=Z,43nm,1.0s,SNR=27
CONA  Conrad Observa   77.17 325 i pP      P         22 43 16.8 +1.2
      comp=Z,34nm,1.0s,SNR=19
MVU   Marysvale        77.17  49 P         P         22 43 15.7 -0.4
RDMU  Red Mountain     77.19  47 IAmb      IAmb      22 43 27.3
      comp=Z,41nm,0.9s
KHC   Kasperske Hory   77.20 327 eP        P         22 43 16.5 +0.8
KHC                              ePCP      PcP       22 43 25.4 -1.0
KHC                              AMS       AMS       23 19 40.0
      comp=Z,1µm,16.5s
KHC   Kasperske Hory   77.20 327c iP       P         22 43 16.2 +0.5
KHC                              pmax      pmax
      comp=Z,85nm,1.1s
KDZ   Kurdzhali        77.22 315 i P       P         22 43 16.9 +0.9
MORH  Mrgy, Hungar     77.22 322 ⇑P        P         22 43 15.9 +0.1
PGB   Panagyurishte    77.23 316 i P       P         22 43 16.8 +0.7
E28A  Huff             77.23  37 IAmb      IAmb      22 43 26.7
      comp=Z,82nm,1.2s
E28A  Huff             77.23  37 P         P         22 43 17.8 +1.8
      baz=319
ROTZ  Rotzenmuhle      77.25 328 eP        P         22 43 16.9 +0.9
      comp=Z,3.3nm,0.9s,baz=37,slow=5.7
ROTZ                             epP       PcP       22 43 25.6 -1.0
HEC   Hector,Ludlow    77.25  55 P         P         22 43 17.9 +1.5
      baz=313
BBRC  Big Bear Solar   77.28  55 P         P         22 43 17.5 +0.8
      baz=312
K22A  Casper           77.31  43 P         P         22 43 18.2 +1.6
      baz=316
K22A  Casper           77.31  43 P         P         22 43 18.3 +1.6
      baz=316
BALB  Balikesir        77.31 312 IAmb      IAmb      22 43 18.9
      comp=Z,74nm,1.5s
P17A  Butcher Ranch,   77.32  48 P         P         22 43 17.4 +0.7
P17A                             IAmb      IAmb      22 43 28.1
      comp=Z,123nm,1.6s
GEC2  GERESS Array S   77.37 326 eP        P         22 43 17.5 +0.7
      comp=Z,8.9nm,0.9s,baz=37,slow=5.7
GERES GERESS Array B   77.37 326 P         P         22 43 16.7 -0.1
      comp=Z,7.4nm,0.9s,baz=35,slow=4.9,SNR=46
GERES                            LR        LR        23 19 33.6
      comp=Z,526nm,19.5s,baz=40,slow=37
      comp=Z,7.4nm,0.9s
CSS   Mathiatis        77.37 306 IAmb      IAmb      22 43 18.0
      comp=Z,49nm,0.8s
CSS                              IAMs_20   IAMs_20   23 20 29.7
      comp=Z,173nm,19.0s
MMAI  Mount Meron Ar   77.40 303 LR        LR        23 21 08.5
      comp=Z,329nm,20.4s,baz=120,slow=39
ALN   Alexandroupoli   77.42 314 IAmb      IAmb      22 43 18.6
      comp=Z,46nm,1.0s
FRGS  Fruska Gora      77.47 321 ⇑P        P         22 43 17.9 +0.6
FRGS  Fruska Gora      77.47 321⇑iP        P         22 43 17.6 +0.3
LAWE  Loch Awe, Argy   77.47 340⇑eP        P         22 43 17.4 +0.3
P18A  Preston Nutter   77.48  48 IAmb      IAmb      22 43 29.2
      comp=Z,57nm,1.2s
RSSD  Black Hills      77.48  41 P         P         22 43 17.1 -0.6
RSSD                             IAmb      IAmb      22 43 28.3
      comp=Z,99nm,1.7s
RSSD  Black Hills      77.48  41 P         P         22 43 17.1 -0.6
RSSD                             pmax      pmax
      comp=Z,99nm,1.7s
RSSD  Black Hills      77.48  41 P         P         22 43 17.6 -0.1
      baz=318
RSSD  Black Hills      77.48  41 P         P         22 43 18.6 +1.0
      baz=318,SNR=8.7
MTPU  Mount Pierson    77.50  50 P         P         22 43 18.4 +0.3
MTPU                             IAmb      IAmb      22 43 30.2
      comp=Z,84nm,1.8s
V12A  Nelson           77.54  53 IAmb      IAmb      22 43 29.5
      comp=Z,46nm,1.2s
KASTN Kahler Asten     77.55 331 eP        P         22 43 18.4 +0.8
      comp=Z,14nm,0.9s,baz=37,slow=5.7
KASTN                            epP       PcP       22 43 27.0 -0.9
MURC  Murrieta         77.55  56 P         P         22 43 19.0 +1.0
      baz=312
CAN   Canberra         77.56 171 IAmb      IAmb      22 43 29.3
      comp=Z,69nm,1.2s
RZN   Rozhen           77.56 315 i P       P         22 43 18.8 +0.7
VTS   Vitosha          77.65 317 i P       P         22 43 19.2 +0.6
BOVS  Bovan            77.68 319 ⇓P        P         22 43 18.3 -0.2
GMRC  Granite Mounta   77.69  54 P         P         22 43 19.4 +0.5
      baz=313,SNR=9.6
GRA1  Grafenberg Arr   77.70 328 IAmb      IAmb      22 43 20.9
      comp=Z,76nm,1.0s
GRF   Grafenberg Arr   77.70 328 eP        P         22 43 19.4 +0.9
      comp=Z,43nm,0.9s,baz=37,slow=5.7
GRFO  Grafenberg       77.70 328 P         P         22 43 18.7 +0.2
GRFO                             IAmb      IAmb      22 43 20.8
      comp=Z,73nm,1.0s
GRFO                             IAMs_20   IAMs_20   23 18 18.9
      comp=Z,433nm,20.0s
GRFO  Grafenberg       77.70 328 P         P         22 43 18.7 +0.2
GRFO                             pmax      pmax
      comp=Z,73nm,1.0s
GRFO                             MLR       MLR
      comp=Z,400nm,20.0s
EKA   Eskdalemuir Ar   77.72 339 LR        LR        23 21 27.6
      comp=Z,430nm,18.2s,baz=24,slow=39
MANT  Manisa           77.74 311 IAmb      IAmb      22 43 20.2
      comp=Z,53nm,1.3s
ESK   Eskdalemuir      77.75 339 eP        P         22 43 18.8 +0.2
ESK                              IAmb      IAmb      22 43 19.5
      comp=Z,29nm,1.1s
ESK   Eskdalemuir      77.75 339 P         P         22 43 18.4 -0.2
ESK   Eskdalemuir      77.75 339 P         P         22 43 18.4 -0.2
ESK                              pmax      pmax
      comp=Z,27nm,1.1s
BUG   Bochum--Univer   77.77 331 eP        P         22 43 19.3 +0.5
      comp=Z,29nm,1.0s,baz=37,slow=5.7
EDMD  Edmundbyers      77.83 338 eP        P         22 43 19.1  0.0
ARSA  Arzberg          77.83 324 i pP      P         22 43 20.2 +0.9
      comp=Z,21nm,1.1s,SNR=11
MOA   Molln            77.91 325 i pP      P         22 43 20.4 +0.7
      comp=Z,11nm,1.1s,SNR=8.4
PFO   Pinyon Flats O   78.00  56 LR        LR        23 21 00.9
      comp=Z,50nm,18.0s,baz=94,slow=38
PFO   Pinyon Flats O   78.00  56 P         P         22 43 21.1 +0.5
PFO   Pinyon Flats O   78.00  56deP        P         22 43 21.9 +1.3
PFO                              pmax      pmax
      comp=Z,79nm,1.2s
PFO   Pinyon Flats O   78.00  56 P         P         22 43 21.2 +0.5
      baz=313
AGMN  Agassiz Nation   78.00  34 P         P         22 43 20.2  0.0
      baz=322,SNR=9.3
TPFO  Pinon Flats      78.00  56 P         P         22 43 21.8 +1.2
      baz=313
BELC  Belle Mtn. Jos   78.02  55 P         P         22 43 21.6 +0.9
      baz=313
109C  Camp Elliot, M   78.09  56 P         P         22 43 21.1 +0.2
      baz=313
MMB   Musomiste        78.15 316 i P       P         22 43 21.9 +0.7
DIVS  Divibare         78.17 320 IAmb      IAmb      22 43 22.8
      comp=Z,38nm,1.1s
DIVS  Divibare         78.17 320⇑iP        P         22 43 21.2 -0.1
O20A  White River Ci   78.21  46 IAmb      IAmb      22 43 32.6
      comp=Z,81nm,1.6s
O20A  White River Ci   78.21  46 P         P         22 43 22.7 +0.9
      baz=316
KKB   Krupnik          78.28 317 i P       P         22 43 22.6 +0.7
BIOA  Bad Ischl, Aus   78.30 326 i pP      P         22 43 22.7 +0.8
      comp=Z,24nm,1.0s,SNR=14
TNS   Taunus Mts       78.34 330 eP        P         22 43 22.9 +0.8
      comp=Z,17nm,1.0s,baz=37,slow=5.7
TNS                              epP       PcP       22 43 31.6 +0.2
KESW  Keswick, Cumbr   78.36 338 eP        P         22 43 22.1  0.0
KESW                             IAmb      IAmb      22 43 23.9
      comp=Z,83nm,1.1s
D32A  Dogwood Acres,   78.43  35 IAmb      IAmb      22 43 32.4
      comp=Z,52nm,1.0s
IRM   Iron Mountain    78.43  54 P         P         22 43 23.5 +0.7
      baz=313
ARPS  Mount Arapiles   78.48 177 P         P         22 43 24.3 +1.6
PERS  Pernice          78.48 324 i P       P         22 43 23.4 +0.4
PERS                             i pP      PcP       22 43 32.3 +0.2
SOKA  Soboth           78.49 324 i pP      P         22 43 23.6 +0.6
      comp=Z,61nm,1.1s,SNR=23
HPK   Haverah Park     78.50 337 eP        P         22 43 23.4 +0.6
HPK                              IAmb      IAmb      22 43 24.5
      comp=Z,56nm,1.1s
MONP2 Monument Peak    78.51  56 P         P         22 43 24.3 +0.8
      baz=313
GAL1  Galloway         78.55 339 eP        P         22 43 23.3 +0.3
GAL1                             IAmb      IAmb      22 43 24.3
      comp=Z,31nm,0.9s
AHRW  Bad Neuenahr-A   78.58 331 eP        P         22 43 24.1 +0.8
      comp=Z,29nm,0.9s,baz=37,slow=5.7
AHRW                             epP       PcP       22 43 33.2 +0.8
A052A Srbac            78.58 322⇑iP        P         22 43 23.3 -0.1
BC3   Big Chuckawall   78.58  55 P         P         22 43 23.5 -0.3
      baz=313,SNR=6.8
RJOB  Jochberg         78.61 326 eP        P         22 43 24.6 +0.9
      comp=Z,19nm,0.9s,baz=37,slow=5.7
RJOB                             epP       PcP       22 43 33.5 +0.9
BBLS  Lazi&#263;i      78.63 320⇑iP        P         22 43 24.2 +0.4
HAPS  Han Pijesak,Bl   78.68 320⇑iP        P         22 43 24.5 +0.3
AKAS  Kas              78.71 309 P         P         22 43 23.0 -1.5
AKAS                             IAmb      IAmb      22 43 25.3
      comp=Z,37nm,0.8s
CLGH  Cloghs, Cushen   78.71 340 eP        P         22 43 24.3 +0.3
CLGH                             IAmb      IAmb      22 43 25.5
      comp=Z,48nm,1.0s
SJES  Sjenica          78.81 319⇑iP        P         22 43 25.2 +0.3
B35A  Bob, Littlefor   78.83  33 IAmb      IAmb      22 43 35.0
      comp=Z,65nm,1.1s
B35A  Bob, Littlefor   78.83  33 P         P         22 43 25.0 +0.3
      baz=323
OBKA  Obir             78.83 324 i pP      P         22 43 25.1 +0.2
      comp=Z,11nm,0.9s,SNR=5.5
OBKA  Obir             78.83 324⇑iP        P         22 43 24.6 -0.3
RUDO  Rudo             78.83 320⇑iP        P         22 43 24.7 -0.2
SWSC  Sam W. Stewart   78.86  56 P         P         22 43 26.6 +1.4
      baz=313
STIP  Stip             78.86 317 i P       P         22 43 24.8 -0.2
IKP   In-Ko-Pah, Jac   78.86  56 P         P         22 43 26.3 +1.0
      baz=313
N23A  Red Feather La   78.88  44 IAmb      IAmb      22 43 37.1
      comp=Z,120nm,1.9s
N23A  Red Feather La   78.88  44 P         P         22 43 25.1 -0.4
      baz=317,SNR=5.4
BTNL  Ternell          78.88 331 dP        P         22 43 25.6 +0.6
      comp=Z,19nm,1.2s
BTNL                             dPcP      PcP       22 43 34.0 +0.3
FUR   Furstenfeldbru   78.90 327 eP        P         22 43 26.1 +0.9
      comp=Z,36nm,1.0s,baz=37,slow=5.7
FUR                              epP       PcP       22 43 34.8 +1.0
KBA   Koelnbreinsper   78.90 325 i pP      P         22 43 26.0 +0.6
      comp=Z,46nm,1.2s,SNR=17
A051A Mrakovica        78.93 322⇑iP        P         22 43 25.5  0.0
PDMCI Parker Dam,Lak   78.94  54 P         P         22 43 25.1 -0.5
      baz=314
VAY   Valandovo        78.94 316 i P       P         22 43 26.0 +0.5
CRES  Cresnjev         78.96 323⇑iP        P         22 43 25.4 -0.1
PV23  Carpenter Ridg   78.99  48 IAmb      IAmb      22 43 37.3
      comp=Z,69nm,1.3s
BLY   Banja Luka       79.01 322 eP        P         22 43 18.7 -7.1
LBWR  Ladybower, Pea   79.02 337⇑eP        P         22 43 26.3 +0.6
LBWR                             IAmb      IAmb      22 43 27.4
      comp=Z,151nm,1.1s
SKO   Skopje           79.03 318 i P       P         22 43 27.0 +1.0
IDGL  Inch Island, C   79.07 341 eP        P         22 43 26.6 +0.7
BSTI  Sart Tilman      79.08 332 dP        P         22 43 26.2 +0.1
BSTI                             dPcP      pwP       22 43 36.4 -0.2
BHOU  Houvegnez        79.12 331 dP        P         22 43 26.6 +0.3
      comp=Z,12nm,1.3s
BHOU                             dPcP      sP        22 43 35.8 +1.8
MYKA  Terra Mystica    79.13 325 i pP      P         22 43 26.6 +0.1
      comp=Z,38nm,1.3s,SNR=11
LJU   Ljubljana        79.20 324 eP        P         22 43 26.8 -0.1
STU   Stuttgart        79.23 329 IAmb      IAmb      22 43 28.8
      comp=Z,42nm,0.9s
STU                              IAMs_20   IAMs_20   23 22 48.4
      comp=Z,372nm,19.0s
STU   Stuttgart        79.23 329 eP        P         22 43 28.0 +1.0
      comp=Z,72nm,0.9s,baz=37,slow=5.7
STU                              epP       sP        22 43 36.4 +1.8
MILA  Mila             79.29 171 P         P         22 43 30.2 +3.0
      comp=Z,89nm,1.1s
BOJS  Bojanci          79.30 323 i P       P         22 43 27.1 -0.3
BOJS  Bojanci          79.30 323⇑iP        P         22 43 27.1 -0.3
MGRS  Mrkonjic Grad    79.31 322⇑iP        P         22 43 27.7 +0.2
BCLA  Clavier          79.31 332 dP        P         22 43 27.7 +0.3
      comp=Z,12nm,1.2s
BRAT  Ballarat         79.35 176 P         P         22 43 30.7 +3.3
      comp=Z,31nm,0.9s
PV15  Paradox Valley   79.36  48 P         P         22 43 28.0 -0.2
UPM   Unac-Piva        79.36 320⇑iP        P         22 43 28.4 +0.4
GLA   Glamis           79.38  55 P         P         22 43 28.8 +0.7
      baz=314
BGES  Gesves           79.42 332 dP        P         22 43 28.2 +0.3
      comp=Z,9.0nm,1.2s
BGES                             dPcP      sP        22 43 36.6 +1.0
WATA  Walderalm        79.44 327 i pP      P         22 43 28.6 +0.3
      comp=Z,49nm,1.7s,SNR=15
TOO   Toolangi         79.47 174 P         P         22 43 31.1 +3.0
WTTA  Wattenberg       79.47 326 i pP      P         22 43 29.1 +0.6
      comp=Z,27nm,1.0s,SNR=14
CWF   Charnwood Fore   79.48 337 eP        P         22 43 28.1 -0.1
CWF                              IAmb      IAmb      22 43 29.5
      comp=Z,52nm,1.2s
CEY   Cerknica         79.48 324⇑iP        P         22 43 28.2 -0.2
A050A Klekovaca        79.51 322⇑iP        P         22 43 28.7  0.0
ABTA  Abfaltersbach    79.51 326 i P       P         22 43 28.1 -0.5
      comp=Z,23nm,1.4s,SNR=10.0
SRKY  Kupres RS        79.53 321⇑iP        P         22 43 29.1 +0.3
RCHB  Rochefort        79.56 332 dP        P         22 43 29.1 +0.3
      comp=Z,17nm,1.2s
SMCO  Snowmass         79.58  46 IAmb      IAmb      22 43 40.6
      comp=Z,122nm,2.0s
SNF   Seneffe          79.60 332 dP        P         22 43 29.4 +0.6
      comp=Z,22nm,1.0s
SNF                              dPcP      sP        22 43 37.9 +1.5
BMRD  Maredsous        79.60 332 dP        P         22 43 28.9  0.0
      comp=Z,24nm,1.1s
MOTA  Moosalm          79.62 327 i pP      P         22 43 29.8 +0.5
      comp=Z,45nm,1.0s,SNR=25
WLF   Walferdange      79.64 331 dP        P         22 43 27.7 -1.4
WLF   Walferdange      79.64 331 eP        P         22 43 30.2 +1.0
      comp=Z,11nm,1.0s,baz=37,slow=5.7
RETA  Reutte           79.65 327 i pP      P         22 43 30.1 +0.8
      comp=Z,43nm,1.0s,SNR=19
SUSD  Miller           79.65  38 P         P         22 43 29.1 -0.2
SUSD  Miller           79.65  38 P         P         22 43 29.8 +0.4
      baz=320
SUSD  Miller           79.65  38 P         P         22 43 30.4 +1.1
      baz=320
SQTA  Sankt Quirin     79.68 327 i pP      P         22 43 30.2 +0.6
      comp=Z,38nm,1.5s,SNR=14
WUAZ  Wupatki          79.73  51 P         P         22 43 31.2 +1.1
      baz=315
F33A  5 Mile Ranch,    79.75  36 P         P         22 43 30.6 +0.8
      baz=322
UBR   Ueberruh         79.75 328 eP        P         22 43 30.5 +0.6
      comp=Z,7.0nm,1.0s,baz=37,slow=5.7
BRY   Bratogost        79.77 320⇑iP        P         22 43 29.6 -0.6
PDG   Podgorica        79.78 319 ⇑P        P         22 43 30.1 +0.1
PDG   Podgorica        79.78 319 IAmb      IAmb      22 43 31.4
      comp=Z,60nm,0.9s
PDG                              IAMs_20   IAMs_20   23 20 29.8
      comp=Z,352nm,21.0s
SKDS  Skadanscina      79.81 324⇑iP        P         22 43 25.4 -4.8
DOU   Dourbes          79.83 332 dP        P         22 43 30.4 +0.2
      comp=Z,10nm,1.3s
ISCO  Idaho Springs    79.85  45 P         P         22 43 31.4 +0.4
      baz=317,SNR=7.0
ISCO  Idaho Springs    79.85  45 P         P         22 43 32.5 +1.6
      baz=317,SNR=7.0
CIMO  Cimolais         79.89 325 IAmb      IAmb      22 43 31.0
      comp=Z,29nm,1.4s
FOEL  Foel Wylfa       79.89 338 eP        P         22 43 30.5  0.0
FOEL                             IAmb      IAmb      22 43 32.2
      comp=Z,60nm,1.0s
BFO   Black Forest     79.92 329 P         P         22 43 29.8 -1.0
BFO                              IAmb      IAmb      22 43 32.6
      comp=Z,60nm,1.1s
BFO   Black Forest     79.92 329 P         P         22 43 29.8 -1.0
BFO                              pmax      pmax
      comp=Z,60nm,1.1s
BFO   Black Forest     79.92 329 eP        P         22 43 31.7 +0.9
      comp=Z,30nm,1.0s,baz=37,slow=5.7
EIL   Elat             79.94 301 LR        LR        23 22 04.4
      comp=Z,156nm,18.0s,baz=59,slow=38
YLL   Llanberis        79.94 338 eP        P         22 43 31.2 +0.5
DRME  Dracevica, Mon   79.99 319⇑iP        P         22 43 31.5 +0.3
OHR   Ohrid            80.00 317 i P       P         22 43 32.2 +0.9
FETA  Feichten         80.03 327 i pP      P         22 43 32.3 +0.7
      comp=Z,21nm,1.0s,SNR=12
EYMN  Ely              80.04  32 IAmb      IAmb      22 43 41.5
      comp=Z,59nm,1.0s
EYMN  Ely              80.04  32 P         P         22 43 31.8 +0.4
      baz=325,SNR=16
MVCO  Mesa Verde       80.16  48 P         P         22 43 31.8 -0.8
MVCO                             IAmb      IAmb      22 43 43.8
      comp=Z,102nm,1.8s
MVCO  Mesa Verde       80.16  48 P         P         22 43 33.5 +1.0
      baz=316,SNR=5.7
DAVA  Damuels          80.16 327 i pP      P         22 43 32.8 +0.6
      comp=Z,38nm,0.9s,SNR=16
TIR   Tirane           80.29 318 ⇑P        P         22 43 33.0 +0.2
TIR   Tirane           80.29 318 IAmb      IAmb      22 43 34.5
      comp=Z,80nm,1.0s
TIR   Tirane           80.29 318 P         P         22 43 33.0 +0.2
FUORN Ofenpass-Fuorn   80.55 327 IAmb      IAmb      22 43 36.4
      comp=Z,166nm,1.9s
DAVOX Davos/Dischmat   80.57 327 P         P         22 43 34.6 +0.1
      comp=Z,16nm,1.1s,baz=7.1,slow=2.2,SNR=18
DAVOX                            LR        LR        23 22 34.3
      comp=Z,940nm,18.4s,baz=26,slow=38
      comp=Z,16nm,1.1s
MCH1  Michaelchurch    80.62 337 eP        P         22 43 33.8 -0.6
S22A  4UR Ranch, Cre   80.70  47 P         P         22 43 34.9 -0.6
S22A  4UR Ranch, Cre   80.70  47 P         P         22 43 36.6 +1.1
      baz=317,SNR=7.5
Q24A  Divide           80.71  45 P         P         22 43 36.0 +0.4
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	baz=318						
LPW	Lampeter	80.83	338	*e*P	P	22 43 35.3	-0.1
OGNE	Ogallala	80.84	42	P	P	22 43 36.3	+0.4
	baz=319						
F36A	Milaca	80.91	34	P	P	22 43 36.2	+0.1
	baz=324						
W18A	Petrified Fore	80.96	51	P	P	22 43 37.8	+1.0
	baz=316						
TEOL	Teolo	80.97	325	IAmb	IAmb	22 43 37.6	
	comp=Z,56nm,1.2s						
SCHQ	Schefferville	81.08	15	P	P	22 43 36.8	-0.1
	comp=Z,22nm,1.1s,baz=358,slow=5.9,SNR=13						
SCHQ				LR	LR	23 22 55.4	
	comp=Z,182nm,18.6s,baz=9.5,slow=38						
	comp=Z,22nm,1.1s						
E38A	The Farm, Brul	81.11	32	IAmb	IAmb	22 43 47.2	
	comp=Z,69nm,1.1s						
E38A	The Farm, Brul	81.11	32	P	P	22 43 37.8	+0.7
	baz=325						
K31A	O'Neill	81.14	39	IAmb	IAmb	22 43 47.9	
	comp=Z,64nm,1.1s						
SALO	Salr	81.25	326	IAmb	IAmb	22 43 39.0	
	comp=Z,44nm,1.0s						
ECSD	EROS Data Cent	81.26	37	IAmb	IAmb	22 43 48.3	
	comp=Z,55nm,1.2s						
ECSD	EROS Data Cent	81.26	37	P	P	22 43 38.5	+0.5
	baz=322,SNR=14						
214A	Organ Pipe Nat	81.36	55	P	P	22 43 39.1	+0.4
	baz=315,SNR=5.7						
SDCO	Great Sand Dun	81.42	46	P	P	22 43 37.9	-1.4
SDCO	Great Sand Dun	81.42	46	P	P	22 43 40.1	+0.8
	baz=318,SNR=7.8						
SDCO	Great Sand Dun	81.42	46	P	P	22 43 41.0	+1.7
	baz=318,SNR=7.8						
RAO	Raoul Island	81.45	143	LR	LR	23 12 56.0	
	comp=Z,209nm,21.5s,baz=314,slow=31						
KEK	Kerkira	81.55	317	P	P	22 43 38.5	-1.0
KEK				IAmb	IAmb	22 43 41.7	
	comp=Z,75nm,1.0s						
SPMN	Marine on St.	81.72	34	P	P	22 43 40.4	0.0
	baz=324						
SENIN	Lac Senin/Sane	81.94	328	IAmb	IAmb	22 43 42.6	
	comp=Z,85nm,1.1s						
KSCO	Kaye Shedlock'	81.99	44	P	P	22 43 42.1	0.0
	baz=319						
ZCCA	Zocca	82.08	325	P	P	22 43 42.6	+0.2
ZCCA				IAmb	IAmb	22 43 55.3	
	comp=Z,95nm,1.3s						
IDI	Anoyia	82.08	311	LR	LR	23 24 47.2	
	comp=Z,157nm,18.5s,baz=32,slow=39						
IDI	Anoyia	82.08	311	IAmb	IAmb	22 43 46.1	
	comp=Z,63nm,1.0s						
FDMO	Fiordimonte	82.20	323	P	P	22 43 42.8	-0.2
FDMO				IAmb	IAmb	22 43 44.9	
	comp=Z,89nm,1.4s						
TUC	Tucson	82.33	53	P	P	22 43 43.9	-0.1
TUC	Tucson	82.33	53	P	P	22 43 43.9	-0.1
TUC				pmax	pmax		
	comp=Z,34nm,1.4s						
TUC	Tucson	82.33	53	P	P	22 43 44.2	+0.3
	baz=316						
NRCA	Norcia	82.35	323	IAmb	IAmb	22 43 45.8	
	comp=Z,74nm,1.0s						
BGNE	Belgrade	82.37	39	P	P	22 43 43.7	-0.2
	baz=321						
CLF	Chambon-Foret	82.41	332	IAmb	IAmb	22 43 45.8	
	comp=Z,107nm,1.6s						
I37A	Lemond, Waseca	82.45	35	IAmb	IAmb	22 43 54.8	
	comp=Z,58nm,1.1s						
I37B	Waseca	82.45	35	P	P	22 43 45.4	+1.2
	baz=324						
T25A	Trinidad	82.45	46	P	P	22 43 44.9	+0.3
	baz=318						
CAMP	Campotosto	82.45	322	IAmb	IAmb	22 43 46.3	
	comp=Z,64nm,1.1s						
AQU	L'Aquila	82.60	322	IAMs_20	IAMs_20	23 22 37.5	
	comp=Z,452nm,18.0s						
OSSC	Osservatorio P	82.62	324	P	P	22 43 44.9	-0.3
OSSC				IAmb	IAmb	22 43 46.3	
	comp=Z,45nm,1.1s						
MSSA	Maissana	82.72	326	IAmb	IAmb	22 43 47.0	
	comp=Z,53nm,1.3s						
G40A	Rib Lake	82.75	32	IAmb	IAmb	22 43 56.1	
	comp=Z,39nm,1.1s						
G40A	Rib Lake	82.75	32	P	P	22 43 46.6	+0.8
	baz=326						
L34A	Svendsen Farm,	82.76	38	IAmb	IAmb	22 43 55.8	
	comp=Z,38nm,0.9s						
CESX	Cesi	82.77	323	IAmb	IAmb	22 43 47.1	
	comp=Z,39nm,1.2s						
ANMO	Albuquerque	82.94	49	P	P	22 43 46.9	-0.3
ANMO				IAmb	IAmb	22 43 58.9	
	comp=Z,43nm,1.5s						
ANMO	Albuquerque	82.94	49*c*	*i*P	P	22 43 48.6	+1.4
ANMO				pmax	pmax		
	comp=Z,35nm,1.6s						
ANMO	Albuquerque	82.94	49	P	P	22 43 47.9	+0.6
	baz=317						
ANMO	Albuquerque	82.94	49	P	P	22 43 49.0	+1.8
	baz=317,SNR=9.1						
E43A	Lone Tree Farm	83.06	30	IAmb	IAmb	22 43 57.3	
	comp=Z,41nm,1.1s						
PAOL	Paolisi	83.10	321	IAmb	IAmb	22 43 48.7	
	comp=Z,31nm,1.1s						
CUC	Castrocucco	83.31	319	IAmb	IAmb	22 43 51.4	
	comp=Z,33nm,1.2s						
Y22D	IRIS PASSCAL I	83.31	50	P	P	22 43 49.8	+0.7
	baz=317						
Y22F	Passcal Instru	83.31	50	P	P	22 43 50.8	+1.7
	baz=317						
TIP	Timpagrande	83.48	318	⇑P	P	22 43 50.1	+0.4
TIP	Timpagrande	83.48	318	IAMs_20	IAMs_20	23 23 28.0	
	comp=Z,601nm,22.0s						
CBKS	Cedar Bluff	83.60	42	IAMs_20	IAMs_20	23 25 30.5	
	comp=Z,528nm,18.0s						
CBKS	Cedar Bluff	83.60	42	P	P	22 43 50.5	+0.1
	baz=320						
I40A	Norwalk	83.72	33	IAmb	IAmb	22 44 00.9	
	comp=Z,28nm,0.9s						
I40A	Norwalk	83.72	33	P	P	22 43 51.4	+0.6
	baz=326						
319A	Douglas	83.89	53	IAmb	IAmb	22 44 03.3	
	comp=Z,56nm,1.2s						
121A	Cookes Peak, D	83.94	51	IAmb	IAmb	22 44 04.0	
	comp=Z,61nm,1.3s						
121A	Cookes Peak, D	83.94	51	P	P	22 43 53.1	+0.7
	baz=317,SNR=7.7						
121A	Cookes Peak, D	83.94	51	P	P	22 43 54.1	+1.8
	baz=317						
N35A	Tabor	83.97	38	IAmb	IAmb	22 44 02.8	
	comp=Z,52nm,1.1s						
N35A	Tabor	83.97	38	P	P	22 43 53.5	+1.3
	baz=323						
E46A	Sault Ste Mari	84.05	28	IAmb	IAmb	22 44 02.3	
	comp=Z,75nm,1.3s						
E46A	Sault Ste Mari	84.05	28	P	P	22 43 52.7	+0.3
	baz=330						
SCIA	State Center	84.23	36	P	P	22 43 53.8	+0.4
	baz=324						
H43A	Windswept, Lux	84.37	31	P	P	22 43 53.1	-1.0
H43A	Windswept, Lux	84.37	31	P	P	22 43 54.7	+0.6
	baz=327						
I42A	Draeger Farm,	84.41	32	IAmb	IAmb	22 44 04.7	
	comp=Z,48nm,1.1s						
I42A	Draeger Farm,	84.41	32	P	P	22 43 54.5	+0.2
	baz=327						
CEL	Celeste	84.62	318	IAMs_20	IAMs_20	23 26 08.1	
	comp=Z,421nm,20.0s						
JFWS	Jewell Farm	84.67	34	P	P	22 43 55.4	-0.3
	baz=326						
G45A	Suttons Bay	84.69	30	P	P	22 43 55.4	-0.3
	baz=329						
G45A				P	P	22 43 55.4	-0.3
	baz=329						
RAR	Rarotonga	84.77	125	LR	LR	23 16 21.2	
	comp=Z,265nm,19.5s,baz=291,slow=32						
KSU1	Kansas State U	84.91	40	IAmb	IAmb	22 44 06.7	
	comp=Z,23nm,0.8s						
KSU1	Kansas State U	84.91	40	P	P	22 43 56.7	-0.2
	baz=322						
L40A	Anamosa	84.96	35	IAmb	IAmb	22 44 07.0	
	comp=Z,47nm,1.1s						
L40A	Anamosa	84.96	35	P	P	22 43 57.4	+0.2
	baz=325						
N38A	Joes South For	85.12	37	P	P	22 43 57.2	-0.7
N38A				IAmb	IAmb	22 44 08.3	
	comp=Z,43nm,0.8s						
N38A	Joes South For	85.12	37	P	P	22 43 58.9	+0.9
	baz=324						
GLMI	Grayling	85.26	29	P	P	22 43 58.9	+0.3
	baz=329						
I45A	Fountain	85.33	31	P	P	22 43 59.6	+0.6
	baz=328						
I45A				P	P	22 43 59.6	+0.6
	baz=328						
AMTX	Amarillo	85.60	46	IAmb	IAmb	22 44 11.4	
	comp=Z,37nm,1.1s						
AMTX	Amarillo	85.60	46	P	P	22 44 00.9	+0.3
	baz=320						
K43A	Burlington	85.63	33	IAmb	IAmb	22 44 10.5	
	comp=Z,60nm,1.2s						
K43A	Burlington	85.63	33	P	P	22 44 01.2	+0.7
	baz=327						
MSTX	Muleshoe	85.70	47	P	P	22 44 00.6	-0.5
	baz=319						
OK035	E0210 Rd and N	85.74	43	IAMs_20	IAMs_20	23 29 18.3	
	comp=Z,539nm,21.0s						
KAN06	Argonia West S	85.75	42	IAmb	IAmb	22 44 11.6	
	comp=Z,31nm,1.0s						
KAN01	Argonia South	85.87	42	IAmb	IAmb	22 44 11.8	
	comp=Z,37nm,0.9s						
ELIS	Ellis County	85.88	44	IAmb	IAmb	22 44 12.9	
	comp=Z,52nm,1.0s						
OK038	West end E0370	85.91	43	IAmb	IAmb	22 44 12.7	
	comp=Z,38nm,0.9s						
KS20	Mayfield South	85.92	42	IAmb	IAmb	22 44 12.4	
	comp=Z,57nm,1.1s						
OK032	Salt Plains WL	85.92	42	P	P	22 44 02.0	-0.1
OK032				IAmb	IAmb	22 44 12.7	
	comp=Z,50nm,1.0s						
P38A	Dawn	85.93	38	IAmb	IAmb	22 44 12.5	
	comp=Z,44nm,1.1s						
P38A	Dawn	85.93	38	P	P	22 44 02.8	+0.8
	baz=324,SNR=10						
MNTX	Cornudas Mount	85.94	50	P	P	22 44 03.5	+1.2
	baz=318,SNR=10						
KAN09	Caldwell North	85.96	42	IAmb	IAmb	22 44 12.7	
	comp=Z,34nm,1.0s						
VAE	Valguarnera	85.96	319	LR	LR	23 26 25.3	
	comp=Z,337nm,18.7s,baz=86,slow=38						
KAN13	South Haven SW	86.12	42	IAmb	IAmb	22 44 13.5	
	comp=Z,41nm,1.0s						
TOZ	Tahuroa Road	86.20	152	P	P	22 44 04.7	+1.7
TOZ				IAmb	IAmb	22 44 15.3	
	comp=Z,55nm,1.1s						
N41A	Harden Midland	86.23	35	IAmb	IAmb	22 44 13.8	
	comp=Z,52nm,1.2s						
N41A	Harden Midland	86.23	35	P	P	22 44 04.3	+0.8
	baz=326						
L44A	Lake County Fo	86.24	33	P	P	22 44 03.2	-0.3
	baz=327						
CROK	Carrier	86.27	42	IAmb	IAmb	22 44 14.4	
	comp=Z,50nm,0.9s						
BLOK	Blackwell	86.45	42	IAmb	IAmb	22 44 15.2	
	comp=Z,30nm,0.9s						
I49A	Point Hope	86.67	29	IAmb	IAmb	22 44 16.1	
	comp=Z,60nm,0.9s						
P40A	Paris	86.67	37	IAmb	IAmb	22 44 16.3	
	comp=Z,56nm,1.1s						
P40A	Paris	86.67	37	P	P	22 44 06.4	+0.7
	baz=325,SNR=9.6						
T35A	Sooner Cattle	86.68	41	IAmb	IAmb	22 44 16.4	
	comp=Z,42nm,0.9s						
T35B	Sooner Cattle	86.68	41	P	P	22 44 06.5	+0.7
	baz=322,SNR=7.7						
OK051	E0350 and S346	86.84	42	P	P	22 44 06.5	-0.1
OK051				IAmb	IAmb	22 44 17.1	
	comp=Z,27nm,0.9s						
M44A	Midewin, Midew	86.85	33	IAmb	IAmb	22 44 16.8	
	comp=Z,59nm,1.2s						
M44A	Midewin, Midew	86.85	33	P	P	22 44 07.4	+0.9
	baz=327						
OK048	Pawnee Station	86.86	42	IAmb	IAmb	22 44 17.2	
	comp=Z,29nm,0.9s						
HDIL	Hopedale	87.03	35	IAmb	IAmb	22 44 17.7	
	comp=Z,66nm,1.2s						
HDIL	Hopedale	87.03	35	P	P	22 44 07.1	-0.3
	baz=326						
POST	Post	87.08	47	IAmb	IAmb	22 44 18.3	
	comp=Z,19nm,1.0s						
OK029	Liberty Lake	87.09	43	IAmb	IAmb	22 44 18.4	
	comp=Z,41nm,0.9s						
OK033	Mehan	87.15	42	IAmb	IAmb	22 44 18.7	
	comp=Z,72nm,1.5s						
OK033				IAMs_20	IAMs_20	23 17 17.2	
	comp=Z,419nm,18.0s						
QUOK	Quay	87.17	42	IAmb	IAmb	22 44 18.8	
	comp=Z,37nm,1.1s						
LMQ	La Malbaie	87.18	19	IAmb	IAmb	22 44 18.1	
	comp=Z,58nm,1.2s						
SADO	Sadowa	87.20	26	LR	LR	23 24 37.8	
	comp=Z,54nm,21.7s,baz=322,slow=37						
WMOK	Wichita Mounta	87.24	44	P	P	22 44 08.1	-0.5
	baz=321,SNR=8.4						
WMOK	Wichita Mounta	87.24	44	P	P	22 44 09.2	+0.7
	baz=321,SNR=8.4						
URZ	Urewera	87.25	151	LR	LR	23 18 32.6	
	comp=Z,168nm,20.1s,baz=64,slow=32						
OK052	Battle Ridge R	87.26	42	IAmb	IAmb	22 44 19.2	
	comp=Z,53nm,1.2s						
OK031	S. Brethren Rd	87.27	42	IAmb	IAmb	22 44 19.4	
	comp=Z,30nm,1.0s						
TRQ	Mont Tremblant	87.29	22	P	P	22 44 08.7	0.0
OK030	Cody Creek RV	87.32	42	IAmb	IAmb	22 44 19.6	
	comp=Z,77nm,1.6s						
OK030				IAMs_20	IAMs_20	23 21 54.6	
	comp=Z,572nm,22.0s						
DEOK	Depew	87.53	42	IAmb	IAmb	22 44 20.5	
	comp=Z,52nm,1.2s						
R40A	Maddies Statio	87.58	38	IAmb	IAmb	22 44 20.3	
	comp=Z,24nm,0.9s						
R40A	Maddies Statio	87.58	38	P	P	22 44 10.5	+0.4
	baz=325,SNR=9.1						
S39A	Bolivar	87.58	39	IAmb	IAmb	22 44 19.9	
	comp=Z,26nm,0.8s						
S39A	Bolivar	87.58	39	P	P	22 44 10.3	+0.1
	baz=324,SNR=14						
P43A	Skaggs, Pawnee	87.69	35	IAmb	IAmb	22 44 21.0	
	comp=Z,58nm,1.4s						
AAM	Ann Arbor	87.79	30	P	P	22 44 10.7	-0.3
	baz=330						
L48A	N Adams	87.80	31	P	P	22 44 12.2	+1.1
	baz=330,SNR=6.3						
L48A				P	P	22 44 12.2	+1.1
	baz=330,SNR=6.3						
TUL1	Leonard	87.83	41	P	P	22 44 11.8	+0.4
	baz=323						
X34A	Smith Ranch, M	87.83	44	IAmb	IAmb	22 44 22.4	
	comp=Z,32nm,1.0s						
W35A	Tecumseh	87.89	43	IAmb	IAmb	22 44 23.2	
	comp=Z,32nm,1.1s						
DELO	Deloro Mine	87.91	25	P	P	22 44 11.3	-0.2
DELO				IAmb	IAmb	22 44 21.6	
	comp=Z,39nm,1.0s						
D62A	Allapoint, All	87.92	19	IAmb	IAmb	22 44 22.6	
	comp=Z,26nm,0.9s						
DRLN	Deer Lake	87.99	11	IAmb	IAmb	22 44 22.5	
	comp=Z,53nm,1.2s						
SFIN	Lafayette	88.09	33	IAmb	IAmb	22 44 22.9	
	comp=Z,28nm,1.1s						
SFIN	Lafayette	88.09	33	P	P	22 44 12.6	+0.1
	baz=328						
SFIN	Lafayette	88.09	33	P	P	22 44 13.3	+0.8
	baz=328						
U38A	Gravette	88.09	40	IAmb	IAmb	22 44 22.7	
	comp=Z,24nm,0.8s						
U38A	Gravette	88.09	40	P	P	22 44 13.3	+0.8
	baz=324,SNR=8.2						
MNTQ	Montreal, Queb	88.21	22	IAmb	IAmb	22 44 23.1	
	comp=Z,25nm,0.9s						
N47A	Urbana	88.22	32	IAmb	IAmb	22 44 23.4	
	comp=Z,50nm,1.2s						
N47A	Urbana	88.22	32	P	P	22 44 13.9	+0.8
	baz=329,SNR=6.6						
N47A				P	P	22 44 13.9	+0.8
	baz=329,SNR=6.6						
CCM	Cathedral Cave	88.24	37	P	P	22 44 12.8	-0.4
CCM				IAmb	IAmb	22 44 23.6	
	comp=Z,41nm,0.9s						
CCM	Cathedral Cave	88.24	37	P	P	22 44 12.8	-0.4
CCM				pmax	pmax		
	comp=Z,41nm,0.9s						
CCM	Cathedral Cave	88.24	37	P	P	22 44 12.5	-0.8
	baz=325						
CCM	Cathedral Cave	88.24	37	P	P	22 44 14.0	+0.7
	baz=325,SNR=17						
BATG	Bathurst New B	88.41	17	IAmb	IAmb	22 44 24.7	
	comp=Z,40nm,0.9s						
ABTX	Abilene, Hawle	88.42	46	P	P	22 44 14.2	0.0
	baz=321						
LPIG	La Paz	88.47	59	LR	LR	23 20 50.2	
	comp=Z,46nm,20.0s,baz=288,slow=34						
BMNY	Brushton-Moira	88.56	23	P	P	22 44 15.1	+0.5
	baz=336,SNR=5.4						
FVM	French Village	88.67	37	IAmb	IAmb	22 44 25.8	
	comp=Z,24nm,1.0s						
FVM	French Village	88.67	37	P	P	22 44 16.4	+1.1
	baz=326,SNR=5.2						
TX31	Lajitas Ar. Si	88.68	51	P	P	22 44 16.9	+1.3
	baz=319						
TX32	Lajitas Array	88.68	51	IAmb	IAmb	22 44 26.6	
	comp=Z,44nm,1.5s						
TXAR	Lajitas Array	88.68	51	P	P	22 44 16.2	+0.5
	comp=Z,11nm,1.2s,baz=298,slow=2.7,SNR=28						
TXAR				PP	PP	22 47 38.3	-5.4
	comp=Z,0.1nm,0.4s,baz=325,slow=4.5,SNR=2.7						
TXAR				PKKPbc	PKKPbc	23 01 54.7	+0.3
	comp=Z,0.8nm,0.8s,baz=145,slow=4.6,SNR=3.7						
TXAR				PKPPKP	P'P'df	23 10 04.0	-4.9
	comp=Z,0.4nm,0.9s,baz=139,slow=8.1,SNR=4.3						
TXAR				LR	LR	23 22 18.0	
	comp=Z,63nm,21.2s,baz=333,slow=34						
	comp=Z,11nm,1.2s						
TXAR	Lajitas Array	88.68	51	P	P	22 44 14.4	-1.2
TXAR	Lajitas Array	88.68	51	P	P	22 44 14.4	-1.2
P46A	Rosedale	88.68	34	IAmb	IAmb	22 44 25.9	
	comp=Z,41nm,0.8s						
P46A	Rosedale	88.68	34	P	P	22 44 16.3	+1.0
	baz=328,SNR=7.4						
E63A	Oxbow	88.69	18	P	P	22 44 15.5	+0.3
	baz=340,SNR=5.5						
E63A				P	P	22 44 15.5	+0.3
	baz=340,SNR=5.5						
PPT2	Papeete2	88.73	115	*e*LR	LR	23 12 30.5	
	comp=Z,569nm,22.8s						
LONY	Lake Ozonia	88.74	23	P	P	22 44 13.9	-1.6
	baz=336						
N49A	Columbus Grove	88.78	31	IAmb	IAmb	22 44 26.4	
	comp=Z,46nm,1.0s						
N49A	Columbus Grove	88.78	31	P	P	22 44 16.6	+0.8
	baz=330,SNR=6.7						
N49A				P	P	22 44 16.6	+0.8
	baz=330,SNR=6.7						
M50A	Fremont	88.79	30	IAmb	IAmb	22 44 26.3	
	comp=Z,34nm,0.9s						
F62A	Pittston Farm,	88.81	20	IAmb	IAmb	22 44 25.9	
	comp=Z,31nm,1.0s						
F62A	Pittston Farm,	88.81	20	P	P	22 44 16.6	+0.8
	baz=339						
F62A				P	P	22 44 16.6	+0.8
	baz=339						
U40A	Yellville	88.88	39	P	P	22 44 17.0	+0.6
	baz=324,SNR=16						
U40A				P	P	22 44 17.0	+0.6
	baz=324,SNR=16						
FW03	Perrin-Whitt E	88.93	45	IAmb	IAmb	22 44 27.1	
	comp=Z,50nm,1.3s						
O48B	Farmland	88.97	32	P	P	22 44 15.6	-1.1
	baz=329						
O48B	Farmland	88.97	32	P	P	22 44 17.3	+0.6
	baz=329						
J55A	Hilton	88.97	26	IAmb	IAmb	22 44 26.7	
	comp=Z,47nm,1.1s						
OLIL	Olney	89.05	35	P	P	22 44 17.2	+0.2
OLIL				IAmb	IAmb	22 44 27.9	
	comp=Z,50nm,1.0s						
X37A	Clayton	89.08	42	P	P	22 44 18.5	+1.2
	baz=323						
ERPA	Erie	89.27	28	P	P	22 44 17.0	-1.0
	baz=332						
J56A	Wolcott	89.27	25	IAmb	IAmb	22 44 28.0	
	comp=Z,35nm,1.1s						
HPIG		89.29	54	IAmb	IAmb	22 44 29.6	
	comp=Z,38nm,1.3s						
M52A	Chesterland	89.29	29	P	P	22 44 19.6	+1.5
	baz=332,SNR=6.5						
M52A				P	P	22 44 19.6	+1.5
	baz=332,SNR=6.5						
TAOE	Nuku Hiva Isla	89.38	102	*e*LR	LR	23 12 48.4	
	comp=Z,294nm,21.6s						
J57A	Williamstown	89.42	24	IAmb	IAmb	22 44 29.0	
	comp=Z,42nm,1.2s						
J57A	Williamstown	89.42	24	P	P	22 44 19.4	+0.8
	baz=335						
J57A				P	P	22 44 19.4	+0.8
	baz=335						
S44A	Carbondale	89.42	36	P	P	22 44 19.7	+0.9
	baz=327,SNR=8.9						
NCB	Newcomb	89.44	23	P	P	22 44 19.3	+0.5
	baz=336						
N51A	Ashland	89.46	30	P	P	22 44 18.5	-0.5
N51A	Ashland	89.46	30	P	P	22 44 20.0	+1.0
	baz=331,SNR=6.8						
N51A				P	P	22 44 20.0	+1.0
	baz=331,SNR=6.8						
WVNY	West Valley, N	89.48	27	IAmb	IAmb	22 44 29.5	
	comp=Z,63nm,1.2s						
WVNY	West Valley, N	89.48	27	P	P	22 44 20.0	+1.0
	baz=333,SNR=6.0						
VT1	Waterbury	89.53	22	IAmb	IAmb	22 44 30.0	
	comp=Z,42nm,0.9s						
P48A	Milroy	89.54	33	IAmb	IAmb	22 44 29.8	
	comp=Z,29nm,0.9s						
P48A	Milroy	89.54	33	P	P	22 44 20.3	+1.0
	baz=329,SNR=5.7						
P48A				P	P	22 44 20.3	+1.0
	baz=329,SNR=5.7						
PKME	Peaks-Kenny Pk	89.57	19	P	P	22 44 19.2	-0.2
	baz=340						
FCAR	Ozark Folk Cen	89.61	39	IAmb	IAmb	22 44 29.8	
	comp=Z,29nm,1.1s						
M53A	WI Miller and	89.62	28	P	P	22 44 19.6	-0.1
	baz=332,SNR=9.2						
J58A	Remsen	89.68	24	IAmb	IAmb	22 44 30.1	
	comp=Z,50nm,1.4s						
J58A	Remsen	89.68	24	P	P	22 44 20.4	+0.4
	baz=336						
J58A				P	P	22 44 20.4	+0.4
	baz=336						
H62A	Milan	89.74	21	P	P	22 44 21.7	+1.5
	baz=338,SNR=5.6						
H62A				P	P	22 44 21.7	+1.5
	baz=338,SNR=5.6						
P49A	Miami Univ. Ec	89.76	32	P	P	22 44 20.0	-0.4
P49A				IAmb	IAmb	22 44 30.9	
	comp=Z,57nm,1.1s						
P49A	Miami Univ. Ec	89.76	32	P	P	22 44 20.3	0.0
	baz=329,SNR=5.8						
P49A	Miami Univ. Ec	89.76	32	P	P	22 44 21.5	+1.2
	baz=329,SNR=5.8						
KEST	Kesra	89.79	321	P	P	22 44 19.8	-0.9
	comp=Z,7.8nm,1.0s,baz=349,slow=4.5,SNR=6.7						
KEST				LR	LR	23 29 04.6	
	comp=Z,567nm,19.8s,baz=322,slow=39						
	comp=Z,7.8nm,1.0s						
J59A	Piesco	89.82	23	IAmb	IAmb	22 44 30.9	
	comp=Z,37nm,1.1s						
J59A	Piesco	89.82	23	P	P	22 44 21.4	+0.8
	baz=336,SNR=5.2						
J59A				P	P	22 44 21.4	+0.8
	baz=336,SNR=5.2						
ACSO	Alum Creek Sta	89.83	31	IAmb	IAmb	22 44 31.4	
	comp=Z,40nm,0.8s						
ACSO	Alum Creek Sta	89.83	31	P	P	22 44 20.3	-0.4
	baz=330,SNR=7.7						
ACSO	Alum Creek Sta	89.83	31	P	P	22 44 21.9	+1.2
	baz=330,SNR=7.7						
LBNH	Lisbon	89.84	21	P	P	22 44 20.2	-0.5
	baz=338						
LCAR	Lake Charles	89.91	38	P	P	22 44 21.8	+0.7
	baz=326,SNR=7.5						
JCT	Junction City	89.98	47	IAmb	IAmb	22 44 33.1	
	comp=Z,39nm,1.2s						
JCT	Junction City	89.98	47	P	P	22 44 21.5	-0.2
	baz=321						
MIAR	Mount Ida	90.00	41	IAmb	IAmb	22 44 32.4	
	comp=Z,31nm,0.9s						
MIAR	Mount Ida	90.00	41	P	P	22 44 22.6	+1.0
	baz=324,SNR=9.0						
WHAR	Wooly Hollow	90.02	39	IAmb	IAmb	22 44 32.0	
	comp=Z,35nm,1.0s						
PARMO	Parma	90.06	37	P	P	22 44 22.1	+0.3
L56A	Greenwood	90.07	26	IAmb	IAmb	22 44 31.7	
	comp=Z,22nm,0.8s						

L56A	Greenwood	90.07	26	P	P	22 44 22.8	+1.0
	baz=334						
L56A				P	P	22 44 22.8	+1.0
	baz=334						
WHTX	Lake Whitney,	90.07	45	IAmb	IAmb	22 44 32.5	
	comp=Z,33nm,0.9s						
WHTX	Lake Whitney,	90.07	45	P	P	22 44 22.1	+0.2
	baz=322						
WHTX	Lake Whitney,	90.07	45	P	P	22 44 23.7	+1.7
	baz=322						
OXZ	Oxford	90.11	156	IAmb	IAmb	22 44 32.3	
	comp=Z,53nm,0.9s						
N53A	Lisbon	90.12	29	P	P	22 44 23.5	+1.4
	baz=332,SNR=9.3						
N53A				P	P	22 44 23.5	+1.4
	baz=332,SNR=9.3						
ACCN	Adirondack Com	90.14	23	IAmb	IAmb	22 44 32.6	
	comp=Z,34nm,1.1s						
RPZ	Rata Peaks	90.18	157	LR	LR	23 19 16.8	
	comp=Z,190nm,21.6s,baz=340,slow=32						
WCI	Wyandotte Cave	90.24	34	P	P	22 44 22.6	0.0
WCI				IAmb	IAmb	22 44 32.8	
	comp=Z,22nm,0.8s						
WCI	Wyandotte Cave	90.24	34	P	P	22 44 22.6	0.0
WCI				pmax	pmax		
	comp=Z,22nm,0.9s						
WCI	Wyandotte Cave	90.24	34	P	P	22 44 22.6	0.0
	baz=328						
M55A	Ridgway	90.26	27	IAmb	IAmb	22 44 33.5	
	comp=Z,55nm,1.1s						
M55A	Ridgway	90.26	27	P	P	22 44 23.8	+1.1
	baz=333,SNR=8.5						
M55A				P	P	22 44 23.8	+1.1
	baz=333,SNR=8.5						
Z38A	Mt. Pleasant	90.34	42	P	P	22 44 24.6	+1.4
	baz=323						
O52A	Adamsville	90.36	30	P	P	22 44 24.2	+1.0
	baz=331,SNR=7.1						
O52A				P	P	22 44 24.2	+1.0
	baz=331,SNR=7.1						
X40A	Basin Creek Fa	90.41	40	P	P	22 44 24.9	+1.5
	baz=324,SNR=5.9						
X40A				P	P	22 44 24.9	+1.5
	baz=324,SNR=5.9						
P51A	Williamsport	90.45	31	IAmb	IAmb	22 44 34.0	
	comp=Z,50nm,1.2s						
O53A	New Philadelph	90.48	29	IAmb	IAmb	22 44 34.5	
	comp=Z,55nm,1.1s						
O53A	New Philadelph	90.48	29	P	P	22 44 24.2	+0.5
	baz=332,SNR=8.6						
BINY	Binghamton	90.52	25	P	P	22 44 23.9	0.0
BINY				IAmb	IAmb	22 44 33.8	
	comp=Z,25nm,0.9s						
BINY	Binghamton	90.52	25	P	P	22 44 22.8	-1.1
	baz=335						
P52A	Corning	90.67	30	IAmb	IAmb	22 44 35.0	
	comp=Z,58nm,1.3s						
P52A	Corning	90.67	30	P	P	22 44 24.9	+0.2
	baz=331,SNR=6.0						
L59A	Walton	90.82	24	P	P	22 44 26.4	+1.1
	baz=336,SNR=6.3						
L59A				P	P	22 44 26.4	+1.1
	baz=336,SNR=6.3						
O54A	Avella	90.84	29	IAmb	IAmb	22 44 36.5	
	comp=Z,38nm,1.0s						
O54A	Avella	90.84	29	P	P	22 44 26.7	+1.3
	baz=332,SNR=7.5						
O54A				P	P	22 44 26.7	+1.3
	baz=332,SNR=7.5						
PBRG	Braganca	90.89	335	*e*P	P	22 44 26.1	+0.4
PBRG				A	A	22 44 26.7	
	comp=Z,35nm,1.3s						
PBRG				*e*pP	sP	22 44 34.8	+1.5
M57A	Sunshine Farm,	90.93	26	P	P	22 44 27.0	+1.3
	baz=334,SNR=12						
M57A				P	P	22 44 27.0	+1.3
	baz=334,SNR=12						
T47A	Sharon Grove	90.94	35	IAmb	IAmb	22 44 36.6	
	comp=Z,36nm,0.8s						
T47A	Sharon Grove	90.94	35	P	P	22 44 26.8	+0.8
	baz=328,SNR=6.8						
435B	Jarrell	90.95	46	P	P	22 44 26.5	+0.5
	baz=322						
R50A	Paris	90.99	32	IAmb	IAmb	22 44 36.9	
	comp=Z,24nm,1.0s						
R50A	Paris	90.99	32	P	P	22 44 27.5	+1.4
	baz=330						
R50A				P	P	22 44 27.5	+1.4
	baz=330						
P53A	Whipple	91.08	30	IAmb	IAmb	22 44 37.4	
	comp=Z,59nm,1.2s						
P53A	Whipple	91.08	30	P	P	22 44 27.9	+1.4
	baz=332,SNR=5.8						
P53A				P	P	22 44 27.9	+1.4
	baz=332,SNR=5.8						
GBN	Guysborough	91.10	14	P	P	22 44 26.8	+0.4
KSPA	Keystone Colle	91.17	25	IAmb	IAmb	22 44 37.3	
	comp=Z,33nm,0.9s						
KSPA	Keystone Colle	91.17	25	P	P	22 44 27.7	+0.8
	baz=335						
Q52A	Bidwell	91.21	31	IAmb	IAmb	22 44 37.7	
	comp=Z,73nm,1.6s						
PGAV	Gavieira, Arco	91.22	336	*e*P	P	22 44 26.7	-0.6
PGAV				*e*pP	sP	22 44 34.9	0.0
PGAV				A	A	22 44 42.0	
	comp=Z,62nm,2.0s						
PGAV	Gavieira, Arco	91.22	336	*e*LR	LR	23 19 00.5	
PGAV				A	A	23 30 37.9	
	comp=Z,252nm,18.0s						
L61B	Northampton	91.28	23	P	P	22 44 26.6	-0.8
	baz=337						
SSPA	Standing Stone	91.30	27	P	P	22 44 26.4	-1.1
SSPA				IAmb	IAmb	22 44 38.4	
	comp=Z,45nm,1.0s						
SSPA	Standing Stone	91.30	27	P	P	22 44 27.1	-0.4
	baz=334						
SSPA	Standing Stone	91.30	27	P	P	22 44 28.7	+1.1
	baz=334,SNR=8.8						
PCAB	Cabril	91.38	336	*e*P	P	22 44 28.8	+0.9
PCAB				A	A	22 44 38.8	
	comp=Z,62nm,1.9s						
MCWV	Mont Chateau	91.49	29	IAmb	IAmb	22 44 39.8	
	comp=Z,62nm,1.4s						
MCWV	Mont Chateau	91.49	29	P	P	22 44 28.9	+0.5
	baz=332						
N58A	Sunbury	91.51	26	P	P	22 44 29.7	+1.2
	baz=335,SNR=5.7						
N58A				P	P	22 44 29.7	+1.2
	baz=335,SNR=5.7						
HRV	Adam Dziewonsk	91.55	22	P	P	22 44 28.1	-0.5
	baz=338						
MVO	Moncorvo	91.56	335	*e*P	P	22 44 28.1	-0.7
MVO				A	A	22 44 30.5	
	comp=Z,60nm,1.5s						
MVO				*e*pP	sP	22 44 38.5	+2.0
MVO	Moncorvo	91.56	335	*e*LR	LR	23 20 58.0	
MVO				A	A	23 30 50.2	
	comp=Z,523nm,16.0s						
POLO	Lamas de Olo	91.61	335	*e*P	P	22 44 29.5	+0.4
POLO				A	A	22 44 30.9	
	comp=Z,24nm,1.2s						
POLO				*e*pP	sP	22 44 38.2	+1.4
PVRL	Vila Real	91.68	335	*e*P	P	22 44 29.9	+0.6
PVRL				A	A	22 44 30.4	
	comp=Z,56nm,1.3s						
PVRL				*e*pP	sP	22 44 38.5	+1.5
KSCT	Kent School, K	91.71	23	IAmb	IAmb	22 44 40.0	
	comp=Z,51nm,1.4s						
Q54A	Coxs Mills	91.73	30	P	P	22 44 31.0	+1.5
	baz=332,SNR=5.4						
Q54A				P	P	22 44 31.0	+1.5
	baz=332,SNR=5.4						
T50A	Nancy	91.87	33	IAmb	IAmb	22 44 40.2	
	comp=Z,18nm,0.9s						
T50A	Nancy	91.87	33	P	P	22 44 31.2	+1.0
	baz=329						
T50A				P	P	22 44 31.2	+1.0
	baz=329						
833A	Chaparral WMA,	91.87	48	P	P	22 44 31.5	+1.2
	baz=321						
ESDC	Sonseca Array	91.88	332	P	P	22 44 29.3	-1.0
	comp=Z,2.9nm,1.0s,baz=24,slow=3.4,SNR=14						
ESDC				LR	LR	23 29 49.6	
	comp=Z,665nm,20.5s,baz=12,slow=38						
	comp=Z,2.9nm,1.0s						
U49A	Red Boiling Sp	91.91	34	P	P	22 44 30.6	+0.2
U49A				IAmb	IAmb	22 44 41.1	
	comp=Z,28nm,1.0s						
U49A	Red Boiling Sp	91.91	34	P	P	22 44 31.5	+1.1
	baz=329,SNR=6.8						
OXF	Oxford	92.00	38	P	P	22 44 32.1	+1.3
	baz=326						
TRNY	Table Rock, Ra	92.02	24	IAmb	IAmb	22 44 41.4	
	comp=Z,29nm,1.1s						
PAGS	Pennsylvania G	92.06	26	IAmb	IAmb	22 44 41.3	
	comp=Z,54nm,1.3s						
V48A	Smith Brothers	92.12	35	IAmb	IAmb	22 44 41.9	
	comp=Z,22nm,0.9s						
V48A	Smith Brothers	92.12	35	P	P	22 44 32.4	+1.0
	baz=328,SNR=5.1						
PAL	Palisades	92.25	24	P	P	22 44 31.1	-0.8
	baz=336						
PVIS	Viseu	92.25	335	*e*P	P	22 44 32.4	+0.4
PVIS				A	A	22 44 42.2	
	comp=Z,38nm,1.4s						
P57A	Homestead Farm	92.29	28	P	P	22 44 31.3	-0.8
MVL	Millersville	92.39	26	IAmb	IAmb	22 44 43.2	
	comp=Z,38nm,1.4s						
MTE	Manteigas	92.42	335	*e*P	P	22 44 42.4	+10
MTE				A	A	22 44 50.7	
	comp=Z,41nm,1.5s						
MTE	Manteigas	92.42	335	*e*LR	LR	23 22 29.8	
MTE				A	A	23 31 17.2	
	comp=Z,523nm,16.0s						
R55A	Marlinton	92.61	30	P	P	22 44 33.9	+0.2
R55A				IAmb	IAmb	22 44 44.6	
	comp=Z,48nm,1.6s						
R55A	Marlinton	92.61	30	P	P	22 44 35.4	+1.7
	baz=332						
R55A				P	P	22 44 35.4	+1.7
	baz=332						
GEDE	Greenville	92.79	26	P	P	22 44 35.0	+0.6
	baz=335						
TZTN	Tazewell	92.80	33	IAmb	IAmb	22 44 45.2	
	comp=Z,38nm,1.4s						
TZTN	Tazewell	92.80	33	P	P	22 44 35.4	+0.8
	baz=330						
TBI	Tubuai	92.85	119	*e*LR	LR	23 14 16.2	
	comp=Z,1µm,25.8s						
TBI				*e*LR	LR	23 14 24.5	
	comp=Z,5µm,24.0s						
PCBR	Castelo Branco	92.91	335	*e*P	P	22 44 36.4	+1.4
PCBR				A	A	22 44 45.6	
	comp=Z,38nm,1.7s						
PCAS	Casmilo, Conde	93.04	335	*e*P	P	22 44 35.8	+0.2
PCAS				A	A	22 44 37.9	
	comp=Z,45nm,1.5s						
PCAS				*e*pP	sP	22 44 45.1	+1.9
V51A	Loudon	93.11	34	P	P	22 44 37.0	+1.0
	baz=330						
PMRV	Marv??o	93.26	334	*e*P	P	22 44 37.1	+0.5
PMRV				A	A	22 44 40.4	
	comp=Z,42nm,1.8s						
PMRV				*e*pP	sP	22 44 44.5	+0.2
PMRV	Marv??o	93.26	334	*e*LR	LR	23 22 51.3	
PMRV				A	A	23 29 10.1	
	comp=Z,331nm,22.0s						
CPCT	Cooper Cave	93.35	34	IAmb	IAmb	22 44 47.5	
	comp=Z,23nm,1.0s						
V52A	Sevierville	93.39	33	P	P	22 44 38.5	+1.2
	baz=330						
BLA	Blacksburg	93.44	30	IAmb	IAmb	22 44 48.2	
	comp=Z,30nm,1.4s						
BLA	Blacksburg	93.44	30	P	P	22 44 37.7	+0.1
	baz=332						
TKL	Tuckaleechee C	93.48	33	LR	LR	23 30 56.7	
	comp=Z,114nm,21.1s,baz=324,slow=38						
TKL	Tuckaleechee C	93.48	33	P	P	22 44 38.8	+1.1
	baz=330						
PBAR	Barrancos	94.28	334	*e*P	P	22 44 41.8	+0.5
PBAR				A	A	22 44 56.9	
	comp=Z,30nm,1.7s						
LRAL	Lakeview Retre	94.33	37	P	P	22 44 40.6	-1.0
	baz=328						
KMSC	Kings Mountain	94.91	32	P	P	22 44 43.2	-1.1
	baz=332						
MESJ	Messejana	94.97	334	*e*P	P	22 44 41.6	-2.9
MESJ				A	A	22 44 46.6	
	comp=Z,33nm,1.5s						
PVAQ	Vaqueiros	95.20	334	*e*LR	LR	23 24 42.4	
PVAQ				A	A	23 32 37.5	
	comp=Z,574nm,18.0s						
MDT	Midelt	98.23	329	LR	LR	23 35 10.3	
	comp=Z,249nm,18.3s,baz=14,slow=39						
KMBO	Kilima Mbogo	99.23	277	IAMs_20	IAMs_20	23 28 22.5	
	comp=Z,128nm,18.0s						
KIBK	Kibwezi	99.46	275	P	Pdif	22 45 01.8	-3.4
TORD	Torodi Ar. Bea	112.32	314	PKiKP	PKiKP	22 49 57.9	-0.4
	comp=Z,3.1nm,1.1s,baz=12,slow=1.7,SNR=8.8						
VNDA	Vanda	120.14	174	PKP	PKPdf	22 50 11.3	0.0
	comp=Z,3.5nm,0.9s,baz=305,slow=6.2,SNR=10.0						
DBIC	Dimbokro	121.21	316	PKP	PKPdf	22 50 14.6	-0.7
	comp=Z,6.2nm,0.7s,baz=13,slow=2.5,SNR=10						
DBIC	Dimbokro	121.21	316	PKPdf	PKPdf	22 50 14.2	-1.1
DBIC	Dimbokro	121.21	316	PKIKP	PKPdf	22 50 14.2	-1.1
SDV	Santo Domingo	122.66	35	PKPdf	PKPdf	22 50 17.9	-0.5
SDV	Santo Domingo	122.66	35	*e*P	PKiKP	22 50 18.9	+0.3
PTBC	PUERTO BERRIO,	122.99	40	*e*P	PKPdf	22 50 17.5	-1.3
MAW	Mawson	123.10	206	PKP	PKPdf	22 50 16.0	-1.2
	comp=Z,5.5nm,0.8s,baz=0.0,slow=5.1,SNR=4.6						
MAW	Mawson	123.10	206	PKIKP	PKPdf	22 50 16.0	-1.2
PLMC	San Jos del P	123.49	43	*e*P	PKiKP	22 50 21.0	+0.9
RUSC	La Rusia	124.21	39	*e*P	PKPdf	22 50 19.4	-2.3
YOTC	Yotoco, Valle	124.24	44	*e*P	PKPdf	22 50 21.4	0.0
CHIC	Chingaza	125.00	41	*e*P	PKiKP	22 50 24.3	+0.8
BOSA	Boshof	125.31	261	PKP	PKPdf	22 50 22.2	-0.7
	comp=Z,8.3nm,0.8s,baz=36,slow=2.0,SNR=14						
BOSA	Boshof	125.31	261	PKPdf	PKPdf	22 50 21.1	-1.8
BETC	Betania	125.82	44	*e*P	PKiKP	22 50 25.2	+0.6
CRUC	La Cruz	125.97	46	*e*P	PKiKP	22 50 39.8	+14
OTAV	Otavalo	126.25	48	*e*P	PKPdf	22 50 25.6	-0.1
PIAT	Ana Tenorio	127.37	49	*e*P	PKiKP	22 50 29.0	+0.8
BOAV	Boa Vista	132.48	26	*e*P	PKiKP	22 50 38.0	0.0
CZSB	Cruzeiro do Su	136.02	48	PKPdf	PKPdf	22 50 42.4	-1.0
CZSB	Cruzeiro do Su	136.02	48	*e*P	PKiKP	22 50 44.4	-0.7
ELIB	Princess Elisa	137.15	204	*d*PKPdf	PKPdf	22 50 44.3	+0.3
MCPB	Macapa, AP	137.41	16	*e*P	PKiKP	22 50 47.0	-0.9
MACA	Manacapuru-AM	137.60	29	*e*P	PKiKP	22 50 48.4	+0.1
MALB	Monte Alegre	138.35	20	*e*P	PKPdf	22 50 48.6	+0.8
ITTB	Itaituba	140.35	23	*e*P	PKPdf	22 50 52.5	+1.0
SAML	Samuel	141.84	37	*e*P	PKPdf	22 50 54.9	+0.8
NPGB	Novo Progresso	143.01	24	*e*P	PKPbc	22 50 52.8	-0.1
TROLL	Troll, Antarti	143.22	201	P	PKPbc	22 50 52.0	-0.1
BELA	Belgrano 2	143.94	182		PKPpre	22 50 52.3	
SNAA	Sanae	144.81	200	P	PKPab	22 50 56.5	-0.2
SNAA	Sanae	144.81	200	PKPdf	PKPbc	22 50 56.8	0.0
SNAA	Sanae	144.81	200	PKIKP	PKPbc	22 50 56.8	0.0
LPAZ	La Paz	145.55	50	PKPbc	PKPdf	22 51 01.0	-0.3
	comp=Z,20nm,1.0s,baz=349,slow=3.8,SNR=23						
LPAZ	La Paz	145.55	50	PKP2	PKPdf	22 51 01.0	-0.3
LPAZ	La Paz	145.55	50	*e*P	PKPab	22 51 01.8	+0.2
VNA2	Neumayer--Watz	146.42	199	P	PKPdf	22 51 00.9	+0.6
	baz=120,slow=1.0						
CLDB	Colider	146.48	26	*e*P	PKPab	22 51 04.3	-0.1
SMTB	Santa Maria do	146.51	11	*e*P	PKPbc	22 51 03.7	0.0
VILB	Vilhena	146.71	35	*e*P	PKPbc	22 51 04.3	+0.1
VNA3	Neumayer Olymp	146.75	198	P	PKPbc	22 51 02.1	-0.6
VNA1	Neumayer--Stat	146.82	199	P	PKPbc	22 51 02.4	-0.4
PDRB	Porto dos Gac	146.84	28	*e*P	PKPbc	22 51 03.8	-0.8
PB11	IPOC Station P	147.34	56	PKPdf	PKPdf	22 51 01.6	-2.0
PB01	IPOC Station P	148.40	57		PKPdf	22 51 04.3	-1.0
SNDB	Serra Nova Dou	148.82	19	*e*P	PKPdf	22 51 06.7	+0.7
PTLB	Pontes e Lacer	149.39	35	PKPdf	PKPdf	22 51 05.8	-1.0
PTLB				PKPbc	PKPbc	22 51 11.0	-0.3
PTLB	Pontes e Lacer	149.39	35	*e*P	PKPdf	22 51 08.2	+1.3
BBSD	Serra de San D	150.24	39	*e*P	PKPdf	22 51 08.9	+0.7
SDBA	SAO DESIDERIO	150.33	7	*e*P	PKPdf	22 51 08.8	+0.3
SALV	Santo Antonio	151.18	30	*e*P	PKPdf	22 51 10.9	+1.3
GDU01	Guandu, BA	151.75	356	*e*P	PKPdf	22 51 11.0	+0.4
ARAG	Araguaiana, MT	152.26	22	*e*P	PKPdf	22 51 12.8	+1.5
JANB	Januaria	153.00	6	*e*P	PKPdf	22 51 13.3	+0.8
BDFB	Brasilia	153.08	14	PKP	PKPdf	22 51 12.8	+0.1
	comp=Z,5.5nm,1.0s,baz=30,slow=2.7,SNR=4.9						
BDFB	Brasilia	153.08	14	*e*P	PKPdf	22 51 13.9	+1.2
CMC01	Camacan, BA	153.38	356	*e*P	PKPdf	22 51 15.3	+2.3
PANT	Pantanal (Braz	153.61	34	*e*P	PKPdf	22 51 15.1	+1.9
VA03	San Esteban	155.11	78		PKPdf	22 51 13.3	-1.7
VA03				PKPbc	pPKPdf	22 51 22.6	+1.7
AQDB	Aquidauana	155.32	34	*e*P	PKPdf	22 51 18.4	+2.9
AMBA	Amambai (Brazi	157.79	35	*e*P	PKPdf	22 51 19.7	+1.0
PLCA	Paso Flores	158.08	96	PKP	PKPdf	22 51 18.2	-0.4
	comp=Z,2.0nm,0.8s,baz=288,slow=3.5,SNR=3.0						
PLCA				PKPab	PKPab	22 51 52.6	+0.3
	comp=Z,4.5nm,0.9s,baz=253,slow=6.2,SNR=6.3						
CPUP	Villa Florida	159.55	45	PKPab	PKPab	22 51 58.9	0.0
	comp=Z,7.6nm,1.1s,baz=320,slow=4.9,SNR=5.9						
PTGB	Pitanga	160.57	31	*e*P	PKPdf	22 51 22.5	+0.5
CRSM	Crissiumal (Br	162.16	40	*e*P	PKPdf	22 51 24.0	+0.5
TRQA	Tornquist	163.70	83	PKPdf	PKPdf	22 51 23.2	-1.5
TRQA				PKPab	PKPab	22 52 16.0	-0.9
TRQA	Tornquist	163.70	83	PKP2	PKPab	22 52 16.0	-0.9
TRQA						23 51 23.2	

IDC 27 22:31:35.6±2.1, 9°.23S×127°.61E, h0^{km}, mb3.9/1, mbtmp3.7/3, ML3.5/2, Error ellipse: s-maj=132.1km s-min=27.1km az=62.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	12.48	149	Pn	Pn	22 34 35.4	+0.7
	0.2nm,0.3s,baz=324,slow=12,SNR=19						
WRA				Sn	Sn	22 36 55.6	+1.1
	0.2nm,0.3s,baz=327,slow=23,SNR=1.6						
	0.4nm,0.4s						
ASAR	Alice Springs	15.57	158	Pn	Pn	22 35 16.4	-0.2
	0.4nm,0.3s,baz=341,slow=12,SNR=19						
ASAR				Sn	Sn	22 38 09.6	-0.3
	0.1nm,0.3s,baz=315,slow=32,SNR=1.7						
	0.7nm,0.3s						
MKAR	Makanchi Array	68.83	328	P	P	22 42 41.9	0.0
	1.0nm,0.8s,baz=140,slow=7.4,SNR=2.2						
	1.0nm,0.8s						

IDC 27 22:42:32.4±1.7, 52°.98N×168°.88W, h0^{km}, mb3.5/7, mbtmp3.6/10, ML3.3/3, Error ellipse: s-maj=40.4km s-min=21.5km az=175.0

NEIC 27 22:42:45.7±2.6, 53°.03N±0°.10×168°.4W±0°.1, h86^{km}±8^{km}, mb3.8/26, ML4.1/6, ML3.5(AEIC), Error ellipse: s-maj=15.9km s-min=7.3km az=150.0

AEIC 27 22:42:46.3±3.1, 53°.1N±0°.1×168°.5W±0°.1, h76^{km}±7^{km}, Error ellipse: s-maj=16.9km s-min=6.8km az=152.0

ISC 27 22:42:43.7±1.2, 52°.9N±0°.1×168°.56W±0°.09, h100^{km}, n76, σ1^{s}.64/63, mb3.4/7, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	0.18	280		Pn	22 42 58.2	+0.3
NIKH				Sn	Sn	22 43 06.9	-1.5
CLES	Cleveland East	0.82	262	Pn	Pn	22 43 04.1	+1.9
CLES				Sn	Sn	22 43 17.9	+1.8
CLES				IAML		22 43 19.3	
	comp=E,12µm,0.3s						
CLES				IAML		22 43 21.6	
	comp=N,14µm,0.3s						
UNV	Unalaska Valle	1.53	53	Pn	Pn	22 43 10.8	+0.5
UNV				Sn	Sn	22 43 28.6	-1.8
AKUT	Akutan	2.05	53	Pn	Pn	22 43 18.0	+1.2
AKUT				Sn	Sn	22 43 40.1	-2.0
AKUT				IAML		22 44 04.0	
	comp=E,158nm,0.8s						
SPIA	Saint Paul Isl	4.35	348	Pn	Pn	22 43 48.7	+1.1
SPIA				Sn	Sn	22 44 36.6	-0.5
ADK	Adak	5.09	261	Pn	Pn	22 44 01.4	+3.9
ADK				IAML		22 45 27.7	
	comp=E,110nm,4.3s						
ADK				IAML		22 46 45.9	
	comp=E,127nm,4.5s						
KIWB	Kanaga Island	5.37	262	Pn	Pn	22 44 07.0	+5.5
CHGN	Chignik	6.78	56	Pn	Pn	22 44 20.4	0.0
P18K	Big Mountain,	9.84	44	Pn	Pn	22 45 05.3	+3.3
O18K	Koktuh Hills	10.12	42	Pn	Pn	22 45 09.2	+3.3
Q19K	Cape Douglas,	10.28	48	Pn	Pn	22 45 11.0	+3.0
KDAK	Kodiak Island	10.30	56	Pn	Pn	22 45 05.9	-2.3
	comp=E,0.3nm,0.3s,baz=190,slow=5.3,SNR=14						
KDAK				Sn	Sn	22 46 51.9	-10
	comp=E,0.1nm,0.3s,baz=322,slow=21,SNR=1.9						
	comp=E,5.6nm,0.9s						
KDAK	Kodiak Island	10.30	56	Pn	Pn	22 45 08.4	+0.1
SVW2	Sparrevohn	10.79	36	Pn	Pn	22 45 15.5	+0.6
N19K	Bonanza Creek	11.00	39	Pn	Pn	22 45 18.6	+0.7
CNPM	China Poot	11.65	49	Pn	Pn	22 45 26.9	+0.3
M19K	Big River Lodg	11.76	35	Pn	Pn	22 45 30.6	+2.7
L19K	White Mountain	11.80	33	Pn	Pn	22 45 30.3	+1.8
M20K	Styx River	12.19	37	Pn	P	22 45 37.1	-5.0
TNA	Tin City	12.66	1	Pn	P	22 45 41.9	-5.3
K20K	Telida	12.90	30	Pn	P	22 45 45.8	-4.1
RC01	Rabbit Creek A	13.06	44	Pn	Pn	22 45 46.2	+1.0
PWL	Port Wells	13.55	46	Pn	Pn	22 45 50.3	-1.3
CAST	Castle Rocks	13.58	33	Pn	P	22 45 54.0	-3.4
Q23K	Middleton Isla	13.92	53	P	P	22 46 02.4	+1.2
MID	Middleton Isla	13.93	53	P	P	22 46 02.2	+1.0
SML	Sawmill	14.01	43	Pn	Pn	22 45 56.4	-1.1
KTH	Kantishna Hill	14.05	34	Pn	P	22 46 01.4	-1.4
BPAW	Bear Paw Mtn.	14.40	32	Pn	P	22 46 04.9	-1.6
SCM	Sheep Creek Mo	14.44	44	Pn	Pn	22 46 03.1	0.0
I21K	Tanana	14.87	28	Pn	P	22 46 09.8	-1.8
KLU	Klutina	14.88	46	Pn	Pn	22 46 07.9	-0.8
H21K	Melozitna Rive	15.01	26	Pn	P	22 46 11.9	-1.3
MLY	Manley	15.12	30	Pn	P	22 46 13.9	-0.7
MLY				IAmb	IAmb	22 46 17.6	
	comp=Z,5.9nm,0.7s						
NEA2	Nenana	15.35	33	Pn	P	22 46 15.4	-1.7
N25K	Chitina, Valde	15.51	47	Pn	Pn	22 46 15.7	-0.9
N25K				IAmb	IAmb	22 46 34.4	
	comp=Z,8.2nm,1.2s						
WRH	Wood River Hil	15.60	34	Pn	Pn	22 46 17.3	-0.4
WRH				IAmb	IAmb	22 46 29.1	
	comp=Z,10nm,1.5s						
I23K	Minto, Yukon-K	15.63	31		P	22 46 20.2	+0.1
I23K				IAmb	IAmb	22 46 26.5	
	comp=Z,6.6nm,1.2s						
GLB	Gilahina Butte	15.79	48	Pn	P	22 46 20.4	-1.6
GLB				IAmb	IAmb	22 47 02.2	
	comp=Z,8.4nm,1.3s						
CCB	Clear Creek Bu	15.81	34	Pn	P	22 46 20.3	-1.8
VRDI	Verde Repeater	15.88	49	Pn	P	22 46 21.8	-1.3
VRDI				IAmb	IAmb	22 46 45.4	
	comp=Z,7.5nm,1.0s						
H23K	Yukon River	16.04	29		P	22 46 25.7	+1.0
MCARA	McCarthy VSAT	16.13	48	Pn	P	22 46 25.2	-0.4
MCARA				IAmb	IAmb	22 46 60.0	
	comp=Z,12nm,1.0s						
IL31		16.20	35	Pn	P	22 46 24.6	-1.7
IL31				IAmb	IAmb	22 47 05.1	
	comp=Z,6.8nm,1.4s						
ILAR	Eielson Array	16.20	35	Pn	Pn	22 46 21.5	-3.6
	comp=Z,0.2nm,0.3s,baz=223,slow=12,SNR=11						
	comp=Z,0.6nm,0.6s						
M26K	Nabesna, AK	16.52	45		P	22 46 31.3	+1.3
H24K	Noodor Dome	16.55	31		P	22 46 31.4	+1.0
H24K				IAmb	IAmb	22 46 57.2	
	comp=Z,5.5nm,1.2s						
BARN	Barnard Glacie	16.65	50		P	22 46 33.1	+1.4
SCRK	Sand Creek	16.82	39	Pn	P	22 46 33.3	-0.1
M27K	Edge Creek, AK	16.98	46	Pn	Pn	22 46 35.0	+0.1
M27K				IAmb	IAmb	22 46 52.8	
	comp=Z,8.3nm,1.3s						
L27K	Beaver Creek,	17.27	44		Pn	22 46 38.7	+0.3
BCAR	Beaver Creek A	17.29	44		Pn	22 46 39.7	+1.1
I26K	Coal Creek Min	17.81	36	P	Pn	22 46 44.5	-0.3
I26K				IAmb	IAmb	22 46 48.8	
	comp=Z,4.5nm,1.0s						
EGAK	Eagle	18.28	39	P	Pn	22 46 50.8	+0.4
EGAK				IAmb	IAmb	22 46 52.0	
	comp=Z,5.0nm,1.1s						
HYT	Haines Junctio	18.56	53	P	Pn	22 46 56.3	+2.4
BMAR	Burnt Mountain	18.59	29	P	Pn	22 46 54.1	0.0
N31M	Braeburn, Yuko	19.51	51	P	Pn	22 47 06.1	+1.2
PETK	Petropavlovsk-	20.19	284	P	Pn	22 47 05.5	-7.5
	comp=Z,0.2nm,0.3s,baz=50,slow=12,SNR=1.9						
	comp=Z,0.7nm,0.4s						
EPYK	Eagle Plains	20.64	37	P	P	22 47 15.0	+0.1
P33M	Teslin, Yukon	20.77	55	P	P	22 47 19.4	+2.9
P33M				IAmb	IAmb	22 47 26.1	
	comp=Z,6.5nm,1.1s						
INK	Inuvik	22.59	34	P	P	22 47 34.3	-1.2
	comp=Z,1.7nm,0.6s,baz=257,slow=6.3,SNR=13						
	comp=Z,1.7nm,0.6s						
INK	Inuvik	22.59	34	P	P	22 47 34.9	-0.6
INK				IAmb	IAmb	22 47 36.1	
	comp=Z,2.3nm,0.7s						
GRNB	Grenville Isla	22.85	72	P	P	22 47 44.1	+5.9
B04A	Port Angeles	28.70	81	P	P	22 48 33.8	+2.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YKA	**Yellowknife Ar**	**29.49**	**50**	P	**P**	**22 48 37.2**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=272,slow=8.0,SNR=5.1						
	comp=Z,0.2nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**38.21**	**219**	T	T	23 30 59.5	
	baz=24,slow=76,SNR=8.4						
H11N3	**WAKE ISLAND Hy**	**38.22**	**219**	T	T	23 30 58.5	
	baz=24,slow=76,SNR=16						
H11N1	**WAKE ISLAND Hy**	**38.23**	**219**	T	T	23 30 59.2	
	baz=24,slow=76,SNR=17						
H11S1	**WAKE ISLAND Hy**	**39.40**	**219**	T	T	23 32 14.4	
	baz=23,slow=76,SNR=38						
H11S2	**WAKE ISLAND Hy**	**39.41**	**219**	T	T	23 32 34.2	
	baz=23,slow=76,SNR=40						
H11S3	**WAKE ISLAND Hy**	**39.42**	**219**	T	T	23 32 25.7	
	baz=23,slow=76,SNR=20						
PDAR	**Pinedale Array**	**39.81**	**80**	P	**P**	**22 50 08.5**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=356,slow=5.4,SNR=2.2						
	comp=Z,0.3nm,0.7s						
TXAR	**Lajitas Array**	**52.25**	**90**	P	P	22 51 47.6	+3.0
	comp=Z,0.2nm,0.5s,baz=288,slow=7.1,SNR=4.6						
	comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**63.77**	**314**	P	P	22 53 05.3	+0.6
	comp=Z,0.1nm,0.4s,baz=90,slow=6.5,SNR=1.5						
	comp=Z,0.1nm,0.4s						
FINES	**FINESS Array B**	**65.37**	**352**	P	**P**	**22 53 15.3**	**+0.6**
	comp=Z,3.9nm,1.0s,baz=15,slow=7.9,SNR=5.7						
	comp=Z,3.9nm,1.0s						
ESDC	**Sonseca Array**	**86.80**	**12**	P	P	22 55 18.8	+2.1
	comp=Z,0.2nm,0.6s,baz=341,slow=4.7,SNR=1.8						
	comp=Z,0.2nm,0.6s						

ANF 27 22:44:34.3±0.1, **34°.01N**×**117°.17W**, **h15**^{km}, **ML2.2**/23, **Error ellipse: s-maj=1.1km s-min=0.8km az=61.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBRC	**Big Bear Solar**	**0.33**	**39**	P	Pb	22 44 42.2	+0.1
	baz=219,SNR=8.5						
BBRC				S	Sb	22 44 46.7	-0.6
	baz=219						
MURC	**Murrieta**	**0.41**	**183**	P	Pb	22 44 43.4	+0.2
	baz=2.5,SNR=52						
MURC				S	Sb	22 44 49.1	-0.2
	baz=2.5						
BFSC	**Mount Baldy Ra**	**0.47**	**300**	P	Pb	22 44 44.3	-0.1
	baz=120,SNR=19						
BFSC				S	Sb	22 44 50.8	-0.4
	baz=120						
PFO	**Pinyon Flats O**	**0.71**	**123**	P	Pb	22 44 48.7	+0.3
	baz=304,SNR=7.6						
PFO				S	Sb	22 44 57.9	-0.2
	baz=304						
RRX	**Edison Barstow**	**0.88**	**9**	P	Pg	22 44 51.7	+0.3
	baz=190						
RRX				S	Sg	22 45 03.7	+0.7
	baz=190						
BELC	**Belle Mtn. Jos**	**0.97**	**90**	P	Pg	22 44 53.2	0.0
	baz=271						
BELC				S	Sg	22 45 06.4	+0.5
	baz=271						
DECC	**Green Verdugo**	**1.00**	**285**	P	Pb	22 44 53.4	+0.1
	baz=104						
DECC				S	Sg	22 45 07.0	+0.3
	baz=104						
HEC	**Hector,Ludlow**	**1.07**	**40**	P	Pg	22 44 55.1	+0.1
	baz=220						
HEC				S	Sg	22 45 09.0	-0.1
	baz=220						
EDW2	**Edwards Air Fo**	**1.11**	**322**	P	Pn	22 44 55.5	+0.2
	baz=142						
EDW2				S	Sg	22 45 10.1	-0.1
	baz=142						
109C	**Camp Elliot, M**	**1.11**	**177**	P	Pb	22 44 55.1	-0.2
	baz=357						
109C				S	Sb	22 45 09.4	-0.2
	baz=357						
CIS	**Catalina Islan**	**1.20**	**240**	S	Sn	22 45 12.8	+0.1
	baz=59						
MONP2	**Monument Peak**	**1.27**	**150**	Pg	Pg	22 44 58.8	-0.1
	baz=331						
MONP2				S	Sn	22 45 14.9	+0.2
	baz=331						
GSC	**Goldstone, Bar**	**1.33**	**13**	Pg	Pg	22 44 59.9	0.0
	baz=193						
GSC				Sb	Sg	22 45 17.0	-0.2
	baz=193						
OSI	**Osito Audit: C**	**1.42**	**296**	S	Sb	22 45 18.5	-0.1
	baz=115						
BC3	**Big Chuckawall**	**1.47**	**103**	P	Pn	22 45 00.4	0.0
	baz=284						
BC3				Sb	Sg	22 45 21.3	-0.5
	baz=284						
GMRC	**Granite Mounta**	**1.47**	**58**	Pb	Pb	22 45 01.4	0.0
	baz=238						
GMRC				Sb	Sg	22 45 21.4	-0.4
	baz=238						
LRMC	**Laurel Mtn Rad**	**1.53**	**344**	Sb	Sg	22 45 23.0	-0.7
	baz=164						
SWSC	**Sam W. Stewart**	**1.56**	**132**	Pg	Pg	22 45 04.4	+0.1
	baz=313						
SWSC				Sb	Sg	22 45 23.6	-0.9
	baz=313						
IKP	**In-Ko-Pah, Jac**	**1.62**	**146**	Pg	Pg	22 45 05.4	0.0
	baz=327						
IKP				Sb	Sg	22 45 25.5	-0.9
	baz=327						
IRM	**Iron Mountain**	**1.69**	**84**	Pg	Pg	22 45 06.6	-0.1
	baz=265						
IRM				S	Sn	22 45 24.0	-0.7
	baz=265						
TUQ	**Turquoise Moun**	**1.76**	**35**	Sb	Sg	22 45 30.4	-0.5
	baz=216						
ARVC	**Arvin**	**1.77**	**310**	Pg	Pg	22 45 07.9	-0.4
	baz=129						
ARVC				Sb	Sb	22 45 29.5	+1.1
	baz=129						
MPMC	**Manual Prospec**	**2.06**	**353**	Pg	Pg	22 45 14.0	0.0
	baz=173						
MPMC				Sb	Sg	22 45 39.8	-1.0
	baz=173						

IDC 27 22:48:51.1±1.2, **9°.43S**×**158°.45E**, **h0**^{km}, **mb3.6**/4, **mbtmp3.6**/4, **MS4.1**/2, **Error ellipse: s-maj=41.2km s-min=19.9km az=173.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.48**	**90**	Pn	Pb	22 49 20.1	+0.6
	644nm,0.3s,baz=224,slow=7.7,SNR=3.3						
HNR				Sn	Sg	22 49 38.5	-0.2
	919nm,0.3s,baz=254,slow=2.8,SNR=8.1						
HNR				LR	LR	22 49 41.1	
	comp=Z,2µm,19.2s,baz=312,slow=34						
WRA	**Warramunga Arr**	**25.52**	**243**	P	P	22 54 22.1	+0.4
	1.5nm,0.8s,baz=71,slow=9.8,SNR=8.0						
	1.5nm,0.8s						
ASAR	**Alice Springs**	**27.39**	**236**	P	P	22 54 38.3	-0.3
	0.2nm,0.4s,baz=68,slow=9.6,SNR=2.2						
	0.2nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**28.91**	**16**	T	T	23 23 44.0	
	baz=200,slow=74						
H11S2	**WAKE ISLAND Hy**	**28.91**	**16**	T	T	23 23 35.0	
	baz=200,slow=74						
H11S1	**WAKE ISLAND Hy**	**28.93**	**16**	T	T	23 23 33.2	
	baz=200						
SONM	**Songino Array**	**73.23**	**326**	P	P	23 00 24.8	+0.5
	0.8nm,0.7s,baz=133,slow=5.7,SNR=5.2						
	0.8nm,0.7s						
BBB	**Bella Bella**	**87.43**	**36**	LR	LR	23 35 45.8	
	comp=Z,89nm,18.7s,baz=268,slow=32						
MKAR	**Makanchi Array**	**87.48**	**318**	P	P	23 01 39.6	-1.3
	0.3nm,0.8s,baz=108,slow=4.7,SNR=3.3						
	0.3nm,0.8s						
RPN	**Rapa Nui**	**87.72**	**117**	LR	LR	23 34 50.1	
	comp=Z,84nm,21.1s,baz=281,slow=32						

*IDC **27** 22:52:47.1±0.9, 36°.51N×33°.58W, h0^{km}, mb3.8/12, mbtmp3.8/12, MS3.2/1, Error ellipse: s-maj=25.3km s-min=17.3km az=9.0*

*NEIC **27** 22:52:49.1±1.4, 36°.6N±0°.2×33°.6W±0°.1, h10^{km}±1^{km}, mb4.5/34, Error ellipse: s-maj=25.8km s-min=18.0km az=183.0*

ISC 27 22:52:48.6±0.6, **36°.5N**±0°.1×**33°.58W**±0°.08, **h10**^{km}, **n50**, σ**0^{s}.80**/50, **mb4.4**/29, **Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**23.47**	**73**	P	**P**	**22 57 57.9**	**-0.5**
	2.5nm,1.1s,baz=278,slow=10,SNR=9.5						
	2.5nm,1.1s						
ESDC	**Sonseca Array**	**23.47**	**73**	P	**P**	**22 57 57.9**	**-0.5**
MDT	**Midelt**	**24.07**	**90**	P	**P**	**22 58 05.0**	**+0.7**
	1.5nm,0.7s,baz=254,slow=6.1,SNR=4.5						
MDT				LR	LR	23 05 51.7	
	comp=Z,59nm,19.4s,baz=320,slow=33						
	1.5nm,0.7s						
BATG	**Bathurst New B**	**26.29**	**304**	P	**P**	**22 58 23.1**	**-1.1**
BATG				IAmb	IAmb	22 58 39.4	
	comp=Z,8.2nm,1.0s						
EKA	**Eskdalemuir Ar**	**27.98**	**38**	P	**P**	**22 58 39.4**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=247,slow=10,SNR=3.7						
	comp=Z,1.2nm,0.8s						
MVL	**Millersville**	**33.54**	**289**	P	**P**	**22 59 31.3**	**+2.8**
MVL				IAmb	IAmb	23 00 04.8	
	comp=Z,6.9nm,1.1s						
J56A	**Wolcott**	**33.59**	**295**	P	**P**	**22 59 29.5**	**+0.6**
AGPR	**Aguadilla, PR**	**34.52**	**248**	P	**P**	**22 59 36.6**	**-0.5**
TOA0	**Torodi Ar. Sit**	**39.23**	**117**	P	**P**	**23 00 18.7**	**+1.4**
TORD	**Torodi Ar. Bea**	**39.23**	**117**	P	**P**	**23 00 16.6**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=309,slow=6.9,SNR=2.8						
BAUV	**El Baul**	**41.60**	**237**	P	**P**	**23 00 36.0**	**-0.9**
BAUV				IAmb	IAmb	23 00 48.6	
	comp=Z,22nm,1.3s						
SIUC	**Southern Illin**	**43.83**	**289**	P	**P**	**23 00 54.4**	**-0.4**
SIUC				IAmb	IAmb	23 00 57.4	
	comp=Z,5.9nm,0.7s						
N41A	**Harden Midland**	**44.28**	**294**	P	**P**	**23 00 57.8**	**-0.6**
N41A				IAmb	IAmb	23 01 00.4	
	comp=Z,15nm,1.1s						
FCC	**Fort Churchill**	**44.59**	**320**	P	**P**	**23 01 01.7**	**+1.2**
FCC				IAmb	IAmb	23 01 19.2	
	comp=Z,7.8nm,1.4s						
T42A	**Van Buren**	**45.46**	**289**	P	**P**	**23 01 06.8**	**-1.0**
T42A				IAmb	IAmb	23 01 13.6	
	comp=Z,4.9nm,0.9s						
P40A	**Paris**	**45.47**	**292**	P	**P**	**23 01 07.4**	**-0.5**
P40A				IAmb	IAmb	23 01 13.8	
	comp=Z,6.6nm,1.0s						
N38A	**Joes South For**	**46.01**	**294**	P	**P**	**23 01 11.2**	**-1.1**
AKASG	**Malin Array Be**	**46.27**	**52**	P	**P**	**23 01 14.2**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=267,slow=9.0,SNR=4.9						
	comp=Z,0.2nm,0.4s						
AGMN	**Agassiz Nation**	**46.28**	**305**	P	**P**	**23 01 13.6**	**-0.6**
S39A	**Bolivar**	**46.95**	**290**	P	**P**	**23 01 19.1**	**-0.5**
S39A				IAmb	IAmb	23 01 25.6	
	comp=Z,4.9nm,0.9s						
RES	**Resolute Bay**	**47.65**	**342**	P	**P**	**23 01 24.3**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=106,slow=6.4,SNR=8.1						
	comp=Z,1.8nm,0.8s						
ECSD	**EROS Data Cent**	**47.72**	**299**	P	**P**	**23 01 25.9**	**+0.4**
MIAR	**Mount Ida**	**48.17**	**286**	P	**P**	**23 01 29.2**	**0.0**
MIAR				IAmb	IAmb	23 01 35.5	
	comp=Z,6.4nm,0.9s						
MANT	**Manisa**	**48.50**	**68**	P	**P**	**23 01 32.1**	**+0.2**
TUL1	**Leonard**	**49.40**	**289**	P	**P**	**23 01 38.2**	**-0.4**
TUL1				IAmb	IAmb	23 01 43.7	
	comp=Z,8.9nm,1.2s						
WHTX	**Lake Whitney,**	**52.14**	**285**	P	**P**	**23 01 59.4**	**+0.2**
YKA	**Yellowknife Ar**	**54.35**	**326**	P	**P**	**23 02 15.5**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=78,slow=7.2,SNR=22						
	comp=Z,1.6nm,0.8s						
A36M	**Sachs Harbour**	**56.25**	**338**	P	**P**	**23 02 28.0**	**-0.6**
A36M				IAmb	IAmb	23 02 52.8	
	comp=Z,3.1nm,0.8s						
YMP	**Mirror Lake Pl**	**56.72**	**304**	P	**P**	**23 02 33.2**	**+0.4**
YMP				IAmb	IAmb	23 02 34.4	
	comp=Z,5.4nm,0.9s						
PD31	**Pinedale Array**	**57.01**	**302**	P	**P**	**23 02 34.5**	**-0.3**
PDAR	**Pinedale Array**	**57.01**	**302**	P	**P**	**23 02 33.9**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=72,slow=9.5,SNR=5.2						
	comp=Z,0.8nm,0.8s						
PDAR	**Pinedale Array**	**57.01**	**302**	P	**P**	**23 02 34.4**	**-0.4**
YMR	**Madison River**	**57.28**	**304**	P	**P**	**23 02 37.0**	**+0.3**
QLMT	**Earthquake Lak**	**57.53**	**304**	P	**P**	**23 02 39.0**	**+0.5**
IMW	**Indian Meadow**	**57.54**	**303**	P	**P**	**23 02 38.5**	**-0.1**
IMW				IAmb	IAmb	23 02 45.5	
	comp=Z,6.8nm,1.3s						
FXWY	**Fox Creek**	**57.70**	**303**	P	**P**	**23 02 38.9**	**-0.7**
TX31	**Lajitas Ar. Si**	**58.11**	**285**	P	**P**	**23 02 41.7**	**-0.9**
TX31				IAmb	IAmb	23 02 52.7	
	comp=Z,4.6nm,0.9s						
TX32	**Lajitas Array**	**58.11**	**285**	P	**P**	**23 02 41.7**	**-0.9**
TXAR	**Lajitas Array**	**58.11**	**285**	P	**P**	**23 02 42.1**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=90,slow=7.0,SNR=4.7						
	comp=Z,1.0nm,0.8s						
TXAR	**Lajitas Array**	**58.11**	**285**	P	**P**	**23 02 41.9**	**-0.7**
INK	**Inuvik**	**60.13**	**335**	P	**P**	**23 02 55.4**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=25,slow=9.9,SNR=4.4						
	comp=Z,1.4nm,0.7s						
DUG	**Dugway, Tooele**	**60.26**	**300**	P	**P**	**23 02 56.8**	**-0.6**
PLID	**Pearl Lake**	**60.44**	**306**	P	**P**	**23 02 58.6**	**0.0**
PLID				IAmb	IAmb	23 02 59.9	
	comp=Z,4.7nm,0.9s						
MVU	**Marysvale**	**60.54**	**298**	P	**P**	**23 02 59.5**	**0.0**
LPAZ	**La Paz**	**61.82**	**218**	P	**P**	**23 03 09.3**	**+0.7**
	comp=Z,2.8nm,1.0s,baz=27,slow=4.5,SNR=5.5						
	comp=Z,2.8nm,1.0s						
BCAR	**Beaver Creek A**	**65.63**	**332**	P	**P**	**23 03 32.4**	**-0.2**
ILAR	**Eielson Array**	**66.52**	**335**	P	**P**	**23 03 39.0**	**+0.9**
	comp=Z,1.1nm,0.9s,baz=45,slow=6.2,SNR=11						
	comp=Z,1.1nm,0.9s						
MK31	**Makanchi Array**	**79.12**	**39**	P	**P**	**23 04 52.4**	**-1.0**
MKAR	**Makanchi Array**	**79.12**	**39**	P	**P**	**23 04 53.1**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=311,slow=5.6,SNR=4.1						
	comp=Z,0.4nm,0.8s						
MKAR	**Makanchi Array**	**79.12**	**39**	P	**P**	**23 04 51.8**	**-1.5**

*JMA **27** 22:53:05.9±0.1, 24°.1N±0°.7×123°.3E±0°.4, h32^{km}±1^{km}, MV3.2/11, NEAR ISHIGAKIJIMA ISLAND*

ISC 27 22:53:03.4±1.4, **24°.06N**±0°.08×**123°.25E**±0°.03, **h18**^{km}±6^{km}, **n13**, σ**0^{s}.50**/21, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.46**	**331**	P	**Pn**	**22 53 15.5**	**+0.5**
YOJ				*e*S	**Sn**	**22 53 22.4**	**-0.4**
JYNG	**Yonagunijimaku**	**0.48**	**325**	*i* P	**Pn**	**22 53 15.9**	**+0.5**
JYNG				*e*S	**Sn**	**22 53 23.1**	**-0.3**
HATJ	**Hateruma jima**	**0.51**	**90**	P	**Pn**	**22 53 16.0**	**+0.3**
HATJ				S	**Sn**	**22 53 23.4**	**-0.6**
IRIF	**Iriomote-Funau**	**0.52**	**58**	P	**Pn**	**22 53 16.1**	**+0.2**
IRIF				S	**Sn**	**22 53 23.6**	**-0.7**
JKRS	**Kuro-shima**	**0.72**	**75**	P	**Pn**	**22 53 19.6**	**+1.0**
JKRS				S	**Sn**	**22 53 29.7**	**+0.6**
JIJ	**Ishigaki jima**	**0.87**	**69**	P	**Pn**	**22 53 21.3**	**+0.6**
JIJ				S	**Sn**	**22 53 32.8**	**-0.1**
JISG	**Ishigakijimahi**	**1.10**	**61**	P	**Pg**	**22 53 25.1**	**+0.4**
JISG				*e*S	**Sg**	**22 53 39.1**	**-0.1**
JTJ	**Tarama**	**1.45**	**66**	P	**Pg**	**22 53 30.5**	**-0.8**
JTJ				*e*S	**Sb**	**22 53 47.9**	**+0.1**
NACB	**Ninganchiao**	**1.52**	**275**	P	**Pg**	**22 53 32.6**	**0.0**
YHNB	**Yeheng**	**1.81**	**290**	P	**Pg**	**22 53 38.3**	**0.0**
YULB	**Yu-li**	**1.91**	**250**	P	**Pb**	**22 53 37.5**	**-0.2**
TWGBT	**Beinan**	**2.34**	**239**	P	**Pb**	**22 53 45.0**	**-0.1**
TPUB	**Ta-pu**	**2.52**	**253**	P	**Pb**	**22 53 47.8**	**-0.3**

IDC 27 23:00:20.6±3.8, **19°.20S**×**167°.44E**, **h0**^{km}, **mb3.8**/4, **mbtmp3.8**/5, **ML3.2**/1, **Error ellipse: s-maj=62.7km s-min=32.1km az=53.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.00**	**198**	Pn	Pn	23 01 09.8	+0.2
	3.0nm,0.3s,baz=18,slow=20,SNR=31						
DZM				Sn	Sn	23 01 45.9	-0.5
	3.2nm,0.3s,baz=61,slow=17,SNR=4.3						
	8.2nm,0.4s						
URZ	**Urewera**	**20.77**	**158**	P	P	23 05 03.0	-0.1
	5.5nm,0.9s,baz=333,slow=11,SNR=3.4						
	5.5nm,0.9s						
STKA	**Stephens Creek**	**26.44**	**236**	P	P	23 05 59.6	+0.3
	2.0nm,0.7s,baz=60,slow=8.1,SNR=4.2						
	2.0nm,0.7s						
WRA	**Warramunga Arr**	**31.17**	**263**	P	P	23 06 40.9	-0.8
	0.3nm,0.9s,baz=88,slow=7.5,SNR=1.9						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**31.49**	**256**	P	P	23 06 44.8	+0.3
	1.6nm,0.6s,baz=81,slow=9.1,SNR=19						
	1.6nm,0.6s						

*IDC **27** 23:06:20.4±1.2, 36°.59N×33°.62W, h0^{km}, mb3.7/9, mbtmp3.7/9, MS3.5/3, Error ellipse: s-maj=37.5km s-min=21.9km az=170.0*

ISC 27 23:06:21.9±1.1, **36°.6N**±0°.2×**33°.6W**±0°.2, **h10**^{km}, **n11**, σ**1^{s}.15**/9, **mb3.8**/9, **MS3.8**/3, **Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**23.46**	**73**	P	**P**	**23 11 30.7**	**-0.8**
	1.6nm,1.0s,baz=280,slow=9.8,SNR=6.4						
	1.6nm,1.0s						
NOA	**NORSAR Array B**	**37.20**	**35**	LR	LR	23 27 45.4	
	comp=Z,23nm,19.0s,baz=25,slow=34						
AKASG	**Malin Array Be**	**46.21**	**52**	P	**P**	**23 14 45.9**	**-1.0**
	0.7nm,0.6s,baz=300,slow=36,SNR=1.8						
	0.7nm,0.6s						
YKA	**Yellowknife Ar**	**54.23**	**326**	P	**P**	**23 15 47.7**	**+0.2**
	1.2nm,0.7s,baz=79,slow=7.2,SNR=18						
	1.2nm,0.7s						
PDAR	**Pinedale Array**	**56.93**	**302**	P	**P**	**23 16 06.2**	**-1.3**
	0.6nm,0.8s,baz=76,slow=6.3,SNR=4.8						
	0.6nm,0.8s						
BELG	**Belogornoye**	**57.01**	**46**	LR	LR	23 40 00.3	
	comp=Z,88nm,19.0s,baz=145,slow=35						
TXAR	**Lajitas Array**	**58.06**	**285**	P	**P**	**23 16 15.1**	**-0.4**
	0.8nm,0.8s,baz=96,slow=6.1,SNR=6.8						
	0.8nm,0.8s						
LPAZ	**La Paz**	**61.90**	**218**	P	**P**	**23 16 42.9**	**+0.4**
	1.2nm,1.0s,baz=339,slow=7.3,SNR=2.5						
	1.2nm,1.0s						
ILAR	**Eielson Array**	**66.40**	**335**	P	**P**	**23 17 11.7**	**+0.9**
	0.6nm,0.9s,baz=51,slow=5.9,SNR=8.5						
	0.6nm,0.9s						
ZALV	**Zalesovo Beam**	**75.36**	**32**	P	**P**	**23 18 06.3**	**+1.0**
	0.4nm,0.5s,baz=306,slow=9.9,SNR=1.8						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**79.04**	**39**	P	**P**	**23 18 27.7**	**+1.5**
	0.4nm,0.8s,baz=320,slow=3.8,SNR=3.5						
MKAR				LR	LR	23 52 43.0	
	comp=Z,45nm,18.6s,baz=324,slow=35						
	0.4nm,0.8s						

*UPP **27** 23:18:23.9±0.0, 67°.84N×20°.20E, h1^{km}, ML2.7, Suspected explosion*

*HEL **27** 23:18:24.8±0.3, 67°.82N×20°.28E, h0^{km}, ML1.6, Explosion*

ISC 27 23:18:23.9±0.8, **67°.83N**±0°.02×**20°.23E**±0°.03, **h0**^{km}, **n27**, σ**0^{s}.77**/43, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATU	**Laukkuluspa**	**0.24**	**268**	P	**Pg**	**23 18 28.3**	**-0.2**
RATU				S	**Sg**	**23 18 31.7**	**0.0**
KOVU	**Salmi**	**0.39**	**356**	P	**Pg**	**23 18 31.2**	**-0.2**
KOVU				S	**Sg**	**23 18 36.1**	**-0.4**
NIKU	**Nikkaluokta**	**0.46**	**275**	P	**Pg**	**23 18 32.3**	**-0.4**
LANU	**Lannavaara**	**0.70**	**71**	P	**Pg**	**23 18 37.1**	**-0.2**
LANU	**Lannavaara**	**0.70**	**71**	PG	**Pg**	**23 18 37.0**	**-0.2**
LANU				SG	**Sg**	**23 18 46.8**	**+0.5**
DUNU	**Dundret**	**0.73**	**170**	P	**Pg**	**23 18 37.5**	**-0.3**
DUNU				S	**Sg**	**23 18 47.5**	**+0.3**
MASU	**Masugnsbyn**	**0.77**	**118**	P	**Pg**	**23 18 38.6**	**-0.1**
MASU				S	**Sg**	**23 18 49.2**	**+0.5**
SALU	**Saltoluokta**	**0.80**	**236**	P	**Pg**	**23 18 38.8**	**-0.5**
KIF	**Kilpisjarvi**	**1.20**	**10**	*e*P	**Pb**	**23 18 47.1**	**-0.3**
KIF	**Kilpisjarvi**	**1.20**	**10**	PG	**Pb**	**23 18 47.4**	**0.0**
	baz=189						
KIF				SG	**Sg**	**23 19 02.2**	**-0.1**
KIF				MSG		23 19 02.4	
	comp=Z,9.5nm,0.2s						
PAJU	**Pajala**	**1.38**	**125**	P	**Pg**	**23 18 49.1**	**-1.2**
PAJU	**Pajala**	**1.38**	**125**	PG	**Pg**	**23 18 48.9**	**-1.3**
PAJU				SN	**Sb**	**23 19 08.3**	**-0.4**
HEF	**Hetta**	**1.41**	**64**	*e*P	**Pn**	**23 18 49.9**	**-0.9**
HEF	**Hetta**	**1.41**	**64**	PG	**Pn**	**23 18 49.9**	**-0.9**
HEF				MSG		23 19 06.8	
	comp=Z,4.8nm,0.2s						
HEF				SB	**Sg**	**23 19 08.9**	**-0.2**
ERTU	**Ertsjaerv**	**1.49**	**148**	P	**Pn**	**23 18 51.5**	**-0.5**
ERTU				S	**Sn**	**23 19 12.3**	**+0.1**
ERTU	**Ertsjaerv**	**1.49**	**148**	PG	**Pn**	**23 18 51.2**	**-0.7**
ERTU				SN	**Sn**	**23 19 12.2**	**+0.1**
KLF	**Kolari**	**1.55**	**111**	PG	**Pn**	**23 18 52.4**	**-0.3**
KLF				MSG		23 19 10.7	
	comp=Z,2.4nm,0.2s						
KLF				SN	**Sg**	**23 19 14.6**	**+0.8**
KTK1	**Kautokeino**	**1.62**	**42**	PG	**Pn**	**23 18 53.5**	**-0.2**
KTK1				SN	**Sg**	**23 19 16.5**	**+0.5**
HARU	**Harads**	**1.70**	**170**	P	**Pn**	**23 18 55.1**	**+0.3**
TRO	**Tromso**	**1.87**	**346**	SG	**Sb**	**23 19 23.0**	**+0.2**
KALU	**Kalix**	**2.33**	**147**	PB	**Pn**	**23 19 04.6**	**+1.1**
	baz=330						
KALU				SG	**Sb**	**23 19 35.7**	**-0.5**
TOF	**Tornio**	**2.39**	**136**	PB	**Pn**	**23 19 05.5**	**+1.3**
TOF				MSG		23 19 34.8	
	comp=Z,1.9nm,0.2s						
TOF				SG	**Sb**	**23 19 38.2**	**+0.6**
RNF	**Rovaniemi**	**2.56**	**116**	PB	**Pb**	**23 19 08.6**	**-2.1**
RNF				SG	**Sb**	**23 19 42.7**	**0.0**
ARA0	**ARCESS Array S**	**2.58**	**46**	PN	**Pn**	**23 19 07.8**	**+1.0**
	baz=227						
ARA0				SG	**Sb**	**23 19 41.9**	**-1.2**
KEV	**Kevo**	**3.13**	**49**	SB	**Sn**	**23 19 54.0**	**+1.7**
KEV				MSG		23 19 56.5	
	comp=Z,2.0nm,0.2s						
OLKF	**Oulanka, Finla**	**3.89**	**109**	PG	**Pb**	**23 19 34.2**	**+0.9**
KU6	**Riekki**	**4.21**	**111**	PG	**Pb**	**23 19 39.9**	**+1.2**
	baz=297						

*IDC **27** 23:38:58.6±2.0, 58°.46N×156°.15W, h124^{km}±22^{km}, mb3.2/5, mbtmp3.7/9, Error ellipse: s-maj=25.4km s-min=21.0km az=64.0*

*NEIC **27** 23:38:58.3±3.0, 58°.15N±0°.05×156°.2W±0°.1, h142^{km}±12^{km}, Error ellipse: s-maj=9.6km s-min=7.0km az=70.0*

*AEIC **27** 23:39:01.2±2.4, 58°.24N±0°.06×156°.1W±0°.1, h140^{km}±8^{km}, ML3.3, ML3.4/62(NEIC), Error ellipse: s-maj=10.3km s-min=8.2km az=101.0*

ISC 27 23:38:59.9±0.8, **58°.30N**±0°.05×**156°.01W**±0°.04, **h150**^{km}±6^{km}, **n163**, σ**1^{s}.22**/186, **mb3.6**/4, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Q17K	**Contact Creek**	**0.07**	**116**	P	**Pn**	**23 39 19.6**	**-0.4**
	baz=272						
Q17K				S	**Sn**	**23 39 34.1**	**-1.2**
	baz=272						
Q16K	**King Salmon**	**0.51**	**319**	P	**Pn**	**23 39 21.1**	**0.0**
	baz=143						
Q16K				S	**Sn**	**23 39 36.7**	**-0.7**
	baz=143						
Q18K	**Katmai Hardscr**	**0.64**	**56**	P	**Pn**	**23 39 22.0**	**0.0**
	baz=236						
Q18K				S	**Sn**	**23 39 38.3**	**-0.6**
	baz=236						
R17K	**Ugashik Creek**	**0.69**	**197**	P	**Pn**	**23 39 22.0**	**-0.2**
	baz=15						
R17K				S	**Sn**	**23 39 38.4**	**-0.8**
	baz=15						
P17K	**Kvichak River**	**0.93**	**346**	P	**Pn**	**23 39 24.0**	**+0.1**
	baz=168						
P17K				S	**Sn**	**23 39 42.0**	**-0.3**
	baz=168						
R16K	**Pilot Point**	**1.11**	**229**	P	**Pn**	**23 39 25.2**	**-0.3**
	baz=48						
R16K				S	**Sn**	**23 39 44.7**	**-0.3**
	baz=48						
P18K	**Big Mountain,**	**1.17**	**20**	Pn	**Pn**	**23 39 26.0**	**-0.1**
P18K				Sn	**Sn**	**23 39 45.3**	**-1.0**
P18K	**Big Mountain,**	**1.17**	**20**	P	**Pn**	**23 39 26.0**	**-0.1**
	baz=201						
P18K				S	**Sn**	**23 39 45.5**	**-0.8**
	baz=201						
P16K	**Nushagak River**	**1.27**	**306**	P	**Pn**	**23 39 26.9**	**-0.1**
	baz=126						
P16K				S	**Sn**	**23 39 47.0**	**-0.8**
	baz=126						
Q19K	**Cape Douglas,**	**1.39**	**62**		**Pn**	**23 39 28.6**	**+0.3**
Q19K				Sn	**Sn**	**23 39 50.2**	**+0.2**
Q19K				IAML		23 39 58.2	

	comp=N,513nm,0.9s						
Q19K				IAML		23 39 58.8	
	comp=E,576nm,0.9s						
Q19K	Cape Douglas,	1.39	62	P	Pn	23 39 28.9	+0.6
	baz=243						
Q19K				S	Sn	23 39 50.6	+0.6
	baz=243						
O17K	Koliganek Bris	1.58	340	P	Pn	23 39 30.0	-0.2
	baz=160						
O17K				S	Sn	23 39 53.2	-0.3
	baz=160						
O18K	Koktuh Hills	1.62	15		Pn	23 39 31.1	+0.4
O18K				Sn	Sn	23 39 54.6	+0.4
O18K	Koktuh Hills	1.62	15	P	Pn	23 39 31.0	+0.4
	baz=196						
O16K	Kokwok River B	1.69	321	P	Pn	23 39 31.1	-0.3
	baz=141						
O16K				S	Sn	23 39 54.0	-1.5
	baz=141						
OHAK	Old Harbor	1.81	125	Pn	Pn	23 39 32.0	-0.8
OHAK				Sn	Sn	23 39 56.7	-1.3
OHAK				IAML		23 39 58.3	
	comp=N,100nm,0.2s						
OHAK				IAML		23 39 58.3	
	comp=E,134nm,0.2s						
OHAK	Old Harbor	1.81	125	P	Pn	23 39 32.1	-0.6
	baz=306						
KDAK	Kodiak Island	1.89	104	P	Pn	23 39 33.3	-0.4
	comp=E,63nm,0.3s,baz=313,slow=6.7,SNR=818						
KDAK				S	Sn	23 39 58.2	-1.4
	comp=E,64nm,0.3s,baz=288,slow=20,SNR=25						
KDAK	Kodiak Island	1.89	104	Pn	Pn	23 39 33.0	-0.7
KDAK				Sn	Sn	23 39 58.0	-1.7
KDAK				IAML		23 39 59.7	
	comp=E,194nm,0.3s						
KDAK				IAML		23 40 03.6	
	comp=E,186nm,0.4s						
Q20K	Shuyak Island	1.93	79	P	Pn	23 39 34.4	+0.3
	baz=262						
Q20K				S	Sn	23 39 59.3	-1.0
	baz=262						
OPT	Oil Point	1.98	45	P	Pn	23 39 35.7	+1.0
	baz=228						
P19K	Oil Pt	1.98	45	P	Pn	23 39 35.7	+1.0
	baz=228						
O19K	Port Alsworth	2.10	24	Pn	Pn	23 39 36.8	+0.8
O19K				Sn	Sn	23 40 04.2	+0.4
O19K				IAML		23 40 04.8	
	comp=N,207nm,0.5s						
O19K				IAML		23 40 26.3	
	comp=E,137nm,0.5s						
O19K	Port Alsworth	2.10	24	P	Pn	23 39 36.7	+0.8
	baz=206						
ILSW	Iliamna Southw	2.25	40		Pn	23 39 38.4	+0.4
ILSW				Sn	Sn	23 40 07.7	+0.4
ILSW				IAML		23 40 08.3	
	comp=E,120nm,1.0s						
ILSW				IAML		23 40 08.7	
	comp=N,71nm,0.8s						
CHGN	Chignik	2.39	214	Pn	Pn	23 39 38.5	-1.0
CHGN				Sn	Sn	23 39 59.3	-11
CHGN				IAML		23 40 09.2	
	comp=E,120nm,0.2s						
CHGN				IAML		23 40 09.8	
	comp=N,136nm,0.1s						
CHGN	Chignik	2.39	214	P	Pn	23 39 38.7	-0.8
	baz=32						
O20K	Slope Mountain	2.50	43	P	Pn	23 39 42.1	+1.2
	baz=226						
HOM	Homer	2.64	57		Sn	23 40 16.3	+0.6
N19K	Bonanza Creek	2.64	16	Pn	Pn	23 39 43.8	+1.1
N19K	Bonanza Creek	2.64	16	P	Pn	23 39 43.9	+1.1
	baz=198						
RSO	Redoubt South	2.74	36		Pn	23 39 45.0	+1.0
CNPM	China Poot	2.77	62		Pn	23 39 45.4	+1.2
CNPM				IAML		23 40 18.0	
	comp=E,166nm,0.6s						
CNPM				IAML		23 40 18.7	
	comp=N,185nm,0.6s						
SVW2	Sparrevohn	2.82	4	Pn	Pn	23 39 45.6	+0.8
BRLK	Bradley Lake	3.03	59	Pn	Pn	23 39 47.5	0.0
BRLK				Sn	Sn	23 40 21.9	-2.6
BRLK				IAML		23 40 23.1	
	comp=N,130nm,0.6s						
BRLK				IAML		23 40 25.4	
	comp=E,125nm,0.2s						
BRSE	Bradley Lake S	3.09	60	P	Pn	23 39 48.2	0.0
	baz=244						
SPCR	Spurr Chakacha	3.49	32	P	Pn	23 39 55.0	+1.5
	baz=215						
CAPN	Captain Cook N	3.50	43	Pn	Pn	23 39 56.1	+2.6
SPU	Mount Spurr	3.52	33	Pn	Pn	23 39 55.0	+1.2
SPU				Sn	Sn	23 40 39.2	+3.5
M19K	Big River Lodg	3.71	12		Pn	23 39 57.2	+1.0
M19K	Big River Lodg	3.71	12	P	Pn	23 39 57.4	+1.2
	baz=194						
M20K	Styx River	3.88	21	Pn	Pn	23 40 00.2	+1.7
O22K	Cooper Landing	3.89	53		Pn	23 39 59.9	+1.4
O22K	Cooper Landing	3.89	53	P	Pn	23 39 59.3	+0.8
	baz=238						
L19K	White Mountain	3.94	8		Pn	23 40 00.3	+1.1
FIS	Fire Island	4.09	43		Pn	23 40 02.9	+1.7
FIS				IAML		23 41 04.1	
	comp=E,96nm,3.4s						
FIS				IAML		23 42 11.1	
	comp=N,84nm,4.7s						
SUA	Susitna One	4.14	38	Pn	Pn	23 40 02.8	+0.9
SUA				IAML		23 40 50.2	
	comp=E,58nm,0.8s						
SUA				IAML		23 40 54.3	
	comp=N,57nm,0.4s						
SUA	Susitna One	4.14	38	P	Pn	23 40 02.7	+0.8
	baz=222						
RC01	Rabbit Creek A	4.24	46	Pn	Pn	23 40 03.5	+0.4
RC01				IAML		23 40 51.9	
	comp=N,90nm,0.4s						
RC01	Rabbit Creek A	4.24	46	P	Pn	23 40 03.3	+0.2
	baz=231						
SKT	Skwentna	4.32	29	Pn	Pn	23 40 05.8	+1.6
SKT				IAML		23 41 03.7	
	comp=E,15nm,1.0s						
SKT				IAML		23 41 04.2	
	comp=N,16nm,0.5s						
SKT	Skwentna	4.32	29	P	Pn	23 40 05.5	+1.3
	baz=213						
TTA	Tatalina	4.65	0	Pn	Pn	23 40 09.7	+1.1
TTA				IAML		23 42 51.4	
	comp=N,11nm,4.9s						
TTA	Tatalina	4.65	0	P	Pn	23 40 09.2	+0.6
	baz=180						
PWL	Port Wells	4.67	53		Pn	23 40 09.2	+0.3
PWL	Port Wells	4.67	53	P	Pn	23 40 08.6	-0.3
	baz=240						
P23K	Montague Islan	4.75	65	P	Pn	23 40 10.2	+0.4
	baz=252						
PMR	Palmer	4.79	43		Pn	23 40 10.0	-0.2
PMR				IAML		23 41 03.4	
	comp=E,26nm,0.4s						
PMR				IAML		23 41 07.2	
	comp=N,29nm,0.6s						
PMR	Palmer	4.79	43	P	Pn	23 40 09.8	-0.4
	baz=229						
KNK	Knik Glacier	4.93	47		Pn	23 40 11.7	-0.5
KNK	Knik Glacier	4.93	47	P	Pn	23 40 11.5	-0.7
	baz=234						
GHO	Glory Hole Cre	4.98	43		Pn	23 40 12.3	-0.6
GHO				IAML		23 41 10.6	
	comp=N,48nm,0.7s						
GHO				IAML		23 41 10.8	
	comp=E,36nm,0.4s						
PPLA	Purkeypile	4.99	21	Pn	Pn	23 40 15.4	+2.4
CUT	Chulitna	5.01	32		Pn	23 40 13.9	+0.7
CUT	Chulitna	5.01	32	P	Pn	23 40 13.5	+0.3
	baz=217						
Q23K	Middleton Isla	5.14	73	Pn	Pn	23 40 15.2	+0.2
MID	Middleton Isla	5.15	73	Pn	Pn	23 40 16.3	+1.2
K20K	Telida	5.17	10		Pn	23 40 16.1	+0.8
K20K				IAML		23 42 26.2	
	comp=E,12nm,4.4s						
K20K				IAML		23 43 39.2	
	comp=N,13nm,4.4s						
K20K	Telida	5.17	10	P	Pn	23 40 16.5	+1.2
	baz=192						
SML	Sawmill	5.21	44	Pn	Pn	23 40 15.3	-0.8
SML				IAML		23 41 21.2	
	comp=E,27nm,1.2s						
SML				IAML		23 41 21.6	
	comp=N,32nm,0.6s						
SML	Sawmill	5.21	44	P	Pn	23 40 15.0	-1.1
	baz=231						
FALS	False Pass	5.35	233	P	Pn	23 40 17.8	0.0
	baz=47						
M23K	Glacier View	5.43	46	P	Pn	23 40 18.3	-0.6
	baz=233						
CAST	Castle Rocks	5.49	19	Pn	Pn	23 40 21.1	+1.5
CAST	Castle Rocks	5.49	19	P	Pn	23 40 20.9	+1.3
	baz=202						
SCM	Sheep Creek Mo	5.61	47		Pn	23 40 20.8	-0.6
SCM	Sheep Creek Mo	5.61	47	P	Pn	23 40 20.7	-0.6
	baz=235						
EYAK	Cordova Ski Ar	5.71	62	P	Pn	23 40 22.4	-0.1
	baz=251						
KTH	Kantishna Hill	5.83	23		Pn	23 40 25.0	+0.9
TRF	Thorofare Moun	5.88	26		Pn	23 40 25.3	+0.4
TRF	Thorofare Moun	5.88	26	P	Pn	23 40 24.9	0.0
	baz=211						
DIV	Divide	5.91	57		Pn	23 40 25.5	+0.3
KLU	Klutina	6.00	53		Pn	23 40 26.7	+0.2
KLU	Klutina	6.00	53	P	Pn	23 40 26.3	-0.3
	baz=242						
M24K	Tolsona, Glenn	6.21	48		Pn	23 40 29.5	+0.2
M24K	Tolsona, Glenn	6.21	48	P	Pn	23 40 29.3	0.0
	baz=236						
BPAW	Bear Paw Mtn.	6.31	20		Pn	23 40 30.6	+0.1
BPAW	Bear Paw Mtn.	6.31	20	P	Pn	23 40 30.2	-0.3
	baz=205						
MCK	McKinley	6.45	29		Pn	23 40 32.0	-0.4
MCK	McKinley	6.45	29	P	Pn	23 40 31.8	-0.5
	baz=216						
N25K	Chitina, Valde	6.62	55		Pn	23 40 35.4	+0.6
N25K	Chitina, Valde	6.62	55	P	Pn	23 40 35.1	+0.3
	baz=245						
BWN	Browne	6.69	25	Pn	Pn	23 40 35.8	+0.3
HARP	HAARP	6.78	48	P	Pn	23 40 36.6	-0.1
	baz=237						
GLB	Gilahina Butte	6.90	58		Pn	23 40 38.9	+0.4
PAX	Paxson	6.99	43		Pn	23 40 39.3	-0.3
PAX	Paxson	6.99	43	P	Pn	23 40 39.3	-0.3
	baz=233						
VRDI	Verde Repeater	6.99	60		Pn	23 40 40.3	+0.5
NEA2	Nenana	7.14	25		Pn	23 40 40.6	-0.9
NEA2	Nenana	7.14	25	P	Pn	23 40 40.3	-1.2
	baz=211						
I21K	Tanana	7.17	14		Pn	23 40 42.8	+0.8
MLY	Manley	7.21	18		Pn	23 40 41.9	-0.7
MLY	Manley	7.21	18	P	Pn	23 40 41.3	-1.2
	baz=203						
MCARA	McCarthy VSAT	7.24	59		Pn	23 40 43.5	+0.7
MCARA	McCarthy VSAT	7.24	59	P	Pn	23 40 43.4	+0.5
	baz=250						
WRH	Wood River Hil	7.27	28		Pn	23 40 42.1	-1.2
K24K	Donnelly Dome	7.42	38	P	Pn	23 40 45.7	+0.3
	baz=227						
CCB	Clear Creek Bu	7.48	28		Pn	23 40 44.8	-1.3
HDA	Harding Lake	7.52	32	Pn	Pn	23 40 45.5	-1.1
HDA	Harding Lake	7.52	32	P	Pn	23 40 45.2	-1.4
	baz=220						
H21K	Melozitna Rive	7.54	10		Pn	23 40 48.1	+1.2
I23K	Minto, Yukon-K	7.56	22	Pn	Pn	23 40 46.5	-0.7
MENT	Mentasta	7.62	47	Pn	Pn	23 40 47.4	-0.7
MDM	Murphy Dome	7.64	26		Pn	23 40 47.1	-1.2
M26K	Nabesna, AK	7.65	52		Pn	23 40 49.3	+0.8
TCOL	CIGO, UAF Yank	7.65	27		Pn	23 40 48.1	-0.3
COLA	College	7.66	27		Pn	23 40 47.8	-0.6
RIDG	Independent Ri	7.69	40		Pn	23 40 49.2	+0.2
RIDG	Independent Ri	7.69	40	P	Pn	23 40 48.0	-0.9
	baz=230						
ANM	Nome	7.72	328	Pn	Pn	23 40 51.6	+2.3
BARN	Barnard Glacie	7.77	63		Pn	23 40 51.0	+0.8
IMAR	Indian Mountai	7.79	7		Pn	23 40 50.8	+0.6
L26K	Log Cabin Wild	7.81	47		Pn	23 40 51.4	+0.8
IL31		7.82	30	Pn	Pn	23 40 49.3	-1.2
ILAR	Eielson Array	7.82	30	P	Pn	23 40 49.9	-0.8
	comp=N,16nm,0.4s,baz=216,slow=13,SNR=264						
ILAR				S	Sn	23 42 11.9	-5.8
	comp=N,0.9nm,0.3s,baz=187,slow=26,SNR=4.3						
ILAR	Eielson Array	7.82	30	Pn	Pn	23 40 49.2	-1.4
IL03	Eielson Array	7.83	30	Pn	Pn	23 40 49.8	-0.9
POKR	Poker Plat Res	7.96	27	P	Pn	23 40 51.4	-1.1
	baz=215						
M27K	Edge Creek, AK	8.10	54		Pn	23 40 55.7	+1.1
SCRK	Sand Creek	8.13	41	Pn	Pn	23 40 54.1	-0.8
SCRK	Sand Creek	8.13	41	P	Pn	23 40 54.1	-0.8
	baz=231						
H23K	Yukon River	8.14	19	Pn	Pn	23 40 55.0	+0.1
PCA	Pinnacle	8.29	71	Pn	Pn	23 40 59.1	+2.1
PINM	Pinnacle	8.29	71	P	Pn	23 40 58.8	+1.8
	baz=264						
L27K	Beaver Creek,	8.43	50	Pn	Pn	23 40 59.5	+0.6
BCAR	Beaver Creek A	8.45	50	Pn	Pn	23 40 59.8	+0.7
H24K	Noodor Dome	8.47	23	Pn	Pn	23 40 58.4	-1.0
BCPM	Bancas Point	8.59	72	Pn	Pn	23 41 03.9	+3.0
PNL	Peninsula	8.69	74	P	Pn	23 41 03.5	+1.2
	baz=268						
PRP	Porcupine Dome	8.76	30	Pn	Pn	23 41 02.5	-0.8
K27K	Chicken	8.84	44	Pn	Pn	23 41 04.4	+0.1
I26K	Coal Creek Min	9.28	35	Pn	Pn	23 41 09.2	-0.9
EGAK	Eagle	9.60	41	Pn	Pn	23 41 13.4	-0.9
FYU	Fort Yukon	9.67	26	Pn	Pn	23 41 15.9	+0.7
HYT	Haines Junctio	9.72	67		Pn	23 41 18.3	+2.2
DAWY	Dawson	9.87	47	Pn	Pn	23 41 18.8	+0.8
M30M	Minto, Yukon	10.40	58	Pn	Pn	23 41 26.9	+1.8
BMAR	Burnt Mountain	10.52	25	Pn	Pn	23 41 25.0	-1.6
N31M	Braeburn, Yuko	10.64	64	Pn	Pn	23 41 30.1	+2.0
SKAG	Skagway	10.76	75	Pn	Pn	23 41 33.8	+4.1
BESE	Bessie Mountai	11.09	80	Pn	Pn	23 41 37.7	+3.6
SIT	Sitka	11.14	88	Pn	Pn	23 41 35.8	+1.2
JIS	Juneau Island	11.38	81	Pn	Pn	23 41 40.4	+2.6
M31M	Drury Creek, Y	11.41	61	Pn	Pn	23 41 40.7	+2.5
P33M	Teslin, Yukon	12.01	71	Pn	P	23 41 50.9	-1.8
EPYK	Eagle Plains	12.03	40	Pn	P	23 41 49.4	-3.4
DLBC	Dease Lake	13.61	78	P	Pn	23 42 07.2	+0.6
	comp=N,0.8nm,0.3s,baz=195,slow=7.5,SNR=1.7						
INK	Inuvik	14.13	36	P	Pn	23 42 11.6	-1.5
	comp=N,0.6nm,0.3s,baz=318,slow=19,SNR=5.5						
YKA	Yellowknife Ar	20.61	61	P	P	23 43 28.6	+1.7
	comp=N,1.6nm,0.6s,baz=275,slow=9.8,SNR=35 comp=N,1.6nm,0.6s						
PDAR	Pinedale Array	32.60	98	P	P	23 45 18.8	+1.6
	comp=N,0.1nm,0.3s,baz=304,slow=6.4,SNR=1.8 comp=N,0.1nm,0.3s						
SONM	Songino Array	54.51	305	P	P	23 48 12.6	+0.7
	comp=N,0.6nm,0.4s,baz=53,slow=5.6,SNR=5.7 comp=N,0.6nm,0.4s						
ZALV	Zalesovo Beam	57.80	322	P	P	23 48 34.6	-0.3
	comp=N,0.5nm,0.5s,baz=27,slow=11,SNR=2.5 comp=N,0.5nm,0.5s						
MKAR	Makanchi Array	64.76	320	P	P	23 49 21.6	-0.2
	comp=N,0.3nm,0.4s,baz=37,slow=8.0,SNR=6.1 comp=N,0.3nm,0.4s						

IDC 27 23:48:36.2±2.1**, 0°.66N×126°.65E, h0^{km}, mb3.4**/3**,**
mbtmp3.4/3**, Error ellipse: s-maj=168.9km**
s-min=27.0km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.82	160	P	P	23 53 30.7	+0.4
	0.6nm,0.5s,baz=339,slow=11,SNR=12 0.6nm,0.5s						
ASAR	Alice Springs	25.19	164	P	P	23 54 03.2	-0.4
	0.3nm,0.3s,baz=346,slow=13,SNR=2.4 0.3nm,0.3s						
MKAR	Makanchi Array	60.03	326	P	P	23 58 44.9	0.0
	0.2nm,0.5s,baz=129,slow=7.6,SNR=5.1 0.2nm,0.5s						

SOME ***28*** *00:30:12.2, 42°.08N×81°.02E, h20^{km}*
NNC ***28*** *00:30:13.4±0.7, 42°.16N×80°.89E, h0^{km}, mb3.7, mpv3.5,*
Error ellipse: s-maj=4.6km s-min=3.8km az=161.0
ISC 28 00:30:15.4±2.0**, 42°.27N**±0°.09×**80°.78E**±0°.07**, h10^{km}, n48,**
$\sigma 1^{s}.80$/56**, 8C-9D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	Shalkode	1.31	313	P	Pn	00 30 36.9	-3.1
	41nm,0.1s						
SHLS				S	Sn	00 30 55.1	-2.6
	317nm,0.4s						
SHLS	Shalkode	1.31	313	*e*P	Pn	00 30 36.9	-3.1
	41nm,0.1s						
SHLS				*e*S	Sn	00 30 55.1	-2.6
	317nm,0.4s						
PDGK	Podgornoye	1.42	319	P	Pb	00 30 42.2	0.0
	5.9nm,0.2s						
PDGK				S	Sg	00 31 03.8	+2.6
	13nm,0.2s						
PDGK	Podgornoye	1.42	319	⇑Pn	Pn	00 30 41.8	+0.3
	5.2nm,0.3s						
PDGK				⇓Sn	Sg	00 31 04.4	+3.2
	26nm,0.5s						
UZB	Uzynbulak	1.56	305	P	Pb	00 30 45.0	+0.4
	18nm,0.2s						
UZB				S	Sg	00 31 08.6	+2.9
	41nm,0.1s						
UZB	Uzynbulak	1.56	305	*e*P	Pb	00 30 45.0	+0.4
	16nm,0.1s						
UZB				*e*S	Sg	00 31 08.6	+2.9
	52nm,0.1s						
SATY	Saty	1.92	295	Pg	Pb	00 30 50.9	+0.3
	33nm,0.3s						
SATY				Lg	Lg	00 31 19.1	
	97nm,0.1s						
SATY	Saty	1.92	295	*e*Pg	Pb	00 30 50.9	+0.3
	19nm,0.1s						
SATY				*e*Lg	Lg	00 31 19.1	
	97nm,0.1s						
ZHN	Zhinishke	1.95	298	Pg	Pb	00 30 51.6	+0.5
	23nm,0.2s						
ZHN				Lg	Lg	00 31 20.0	
	222nm,0.1s						
ZHN	Zhinishke	1.95	298	*e*Pg	Pb	00 30 51.6	+0.5
	21nm,0.1s						
ZHN				*e*Lg	Lg	00 31 20.0	
	183nm,0.1s						
KPKS	Kokpek	1.95	309	Pg	Pb	00 30 51.5	+0.4
	35nm,0.2s						
KPKS				Lg	Lg	00 31 20.1	
	210nm,0.4s						
KPKS	Kokpek	1.95	309	*e*Pg	Pb	00 30 51.5	+0.4
	35nm,0.1s						
KPKS				*e*Lg	Lg	00 31 20.1	
	210nm,0.4s						
DJR	Jarkent	2.19	341	Pg	Pb	00 30 55.4	+0.2
	3.9nm,0.3s						
DJR				Lg	Lg	00 31 26.6	
	38nm,0.2s						
DJR	Jarkent	2.19	341	*e*Pg	Pb	00 30 55.4	+0.2
	3.0nm,0.1s						
DJR				*e*Lg	Lg	00 31 26.6	
	38nm,0.2s						
KURS	Kuram	2.27	303	Pg	Pb	00 30 57.3	+0.7
	12nm,0.6s						
KURS				Lg	Lg	00 31 29.6	
	44nm,0.3s						
KURS	Kuram	2.27	303	*e*Pg	Pb	00 30 57.3	+0.7
	11nm,0.5s						
KURS				*e*Lg	Lg	00 31 29.6	
	44nm,0.3s						
KOTS	Kotyrbulak	2.87	291	Pg	Pb	00 31 07.8	+1.0
	11nm,0.1s						
KOTS				Lg	Lg	00 31 48.0	
	100nm,0.3s						
KOTS	Kotyrbulak	2.87	291	*e*Pg	Pb	00 31 07.6	+0.9
	8.0nm,0.1s						
KOTS				*e*Lg	Lg	00 31 48.0	
	100nm,0.3s						
MDOK	Medeo	2.89	289	⇑Pg	Pb	00 31 07.3	+0.2
	4.7nm,0.4s						
MDOK				Pg	Pb	00 31 07.9	+0.7
	8.0nm,0.4s						
MDOK				Lg	Lg	00 31 48.2	
	40nm,0.7s						
MDOK				⇓Lg	Lg	00 31 48.4	
	35nm,0.6s						
MDOK	Medeo	2.89	289	*e*Pg	Pb	00 31 07.9	+0.7
	8.0nm,0.4s						
MDOK				*e*Lg	Lg	00 31 48.2	
	40nm,0.7s						
ARXS	Arharly	2.90	313	Pg	Pb	00 31 08.8	+1.5
	0.3nm,0.3s						
ARXS				Lg	Lg	00 31 49.5	
	26nm,0.3s						
ARXS	Arharly	2.90	313	*e*Pg	Pb	00 31 08.8	+1.5
	0.3nm,0.3s						
ARXS				*e*Lg	Lg	00 31 49.5	
	32nm,0.2s						
TNSS	Tian-Shan	2.93	287	Pg	Pb	00 31 08.9	+0.9
	10nm,0.2s						
TNSS				Lg	Lg	00 31 50.1	
	15nm,0.3s						
TNSS	Tian-Shan	2.93	287	*e*Pg	Pb	00 31 08.5	+0.6
	10nm,0.2s						
TNSS				*e*Lg	Lg	00 31 49.2	
	17nm,0.2s						
KNDC	Almaty	2.96	290	⇓Pg	Pb	00 31 09.9	+1.6
	15nm,0.4s						
KNDC				⇑Lg	Lg	00 31 51.3	
	44nm,0.6s						
AAA	Alma-Ata	3.00	290	Pg	Pb	00 31 10.3	+1.3
	23nm,0.1s						
AAA				Lg	Lg	00 31 52.2	
	66nm,0.2s						
AAA	Alma-Ata	3.00	290	*e*Pg	Pb	00 31 10.3	+1.3
	23nm,0.1s						
AAA				*e*Lg	Lg	00 31 52.2	
	66nm,0.2s						
IZV	Izvestkoviy	3.17	285	Pg	Pb	00 31 13.0	+1.1
	4.6nm,0.2s						
IZV				Lg	Lg	00 31 56.8	
	46nm,0.3s						
IZV	Izvestkoviy	3.17	285	*e*Pg	Pb	00 31 13.0	+1.1
	4.6nm,0.2s						
IZV				*e*Lg	Lg	00 31 56.8	
	46nm,0.3s						
CHKK	Chushkaly	3.20	301	Pg	Pb	00 31 13.6	+1.2
	4.0nm,0.3s						
CHKK				Lg	Lg	00 31 58.0	
	31nm,0.4s						
CHKK	Chushkaly	3.20	301	*e*Pg	Pb	00 31 13.6	+1.2
	2.3nm,0.2s						
CHKK				*e*Lg	Lg	00 31 58.0	
	31nm,0.4s						
TDK	Taldyqorghan	3.23	329	Pg	Pb	00 31 14.6	+1.7
	18nm,0.3s						
TDK				Lg	Lg	00 31 59.8	
	40nm,0.5s						
TDK	Taldyqorghan	3.23	329	*e*Pg	Pb	00 31 14.6	+1.7
	7.4nm,0.1s						
TDK				*e*Lg	Lg	00 31 59.8	
	43nm,0.2s						
MTBS	Maitube	3.32	287	Pg	Pb	00 31 15.1	+0.7
	7.5nm,0.2s						
MTBS				Lg	Lg	00 32 00.6	
	22nm,0.3s						
MTBS	Maitube	3.32	287	*e*Pg	Pb	00 31 15.1	+0.7
	7.7nm,0.2s						
MTBS				*e*Lg	Lg	00 32 00.6	
	19nm,0.5s						
KTBS	Karatobe	3.33	297	Pg	Pb	00 31 15.9	+1.2
	4.5nm,0.2s						
KTBS				Lg	Lg	00 32 01.8	
	58nm,0.3s						
KTBS	Karatobe	3.33	297	*e*Pg	Pb	00 31 15.9	+1.2
	3.9nm,0.1s						
KTBS				*e*Lg	Lg	00 32 01.5	
	70nm,0.2s						
KST	Kastek	3.63	284	Pg	Pb	00 31 21.3	+1.5
	7.9nm,0.2s						
KST				Lg	Lg	00 32 11.3	
	34nm,0.4s						
KST	Kastek	3.63	284	*e*Pg	Pb	00 31 21.3	+1.5
	5.2nm,0.2s						
KST				*e*Lg	Lg	00 32 11.3	
	34nm,0.4s						
KUU	Kurty	3.63	298	Pg	Pb	00 31 21.9	+2.1
	1.9nm,0.2s						
KUU				Lg	Lg	00 32 12.2	
	20nm,0.2s						
KUU	Kurty	3.63	298	*e*Pg	Pb	00 31 21.9	+2.1
	1.9nm,0.2s						
KUU				*e*Lg	Lg	00 32 12.2	
	20nm,0.2s						
DGS	Degeres	3.81	287	Pg	Pb	00 31 25.1	+2.3
	4.6nm,0.2s						
DGS				Lg	Lg	00 32 17.7	
	25nm,0.2s						

DGS	Degeres	3.81	287	ePg	Pb	00 31 25.1	+2.3
	4.6nm,0.2s						
DGS				eLg	Lg	00 32 17.6	
	25nm,0.2s						
TKM2	Tokmak 2	3.88	281	⇑Pn	Pn	00 31 18.1	+2.8
	1.7nm,0.6s						
TKM2				⇓Pg	Pb	00 31 26.5	+2.5
	2.3nm,0.6s						
TKM2				⇓Lg	Lg	00 32 20.8	
	14nm,0.7s						
MK31	Makanchi Array	4.66	13	⇓Pn	Pn	00 31 27.8	+2.0
	0.3nm,0.2s,baz=193,slow=12,SNR=60						
MK31				⇓Pg	Pg	00 31 40.8	-3.8
	0.9nm,0.5s,baz=184,slow=14,SNR=5.9						
MK31				⇑Sn	Sn	00 32 22.6	+2.7
	1.0nm,0.3s,baz=188,slow=23,SNR=5.5						
MK31				⇑Lg	Lg	00 32 41.9	
	2.1nm,0.4s,baz=190,slow=30,SNR=4.4						
AML	Almayashu	5.26	271	⇓Pg	Pg	00 31 52.9	-3.3
	0.3nm,0.7s						
AML				⇑Lg	Lg	00 33 04.7	
	0.5nm,0.5s						
KK31	Karatay Array	7.61	280	⇑Lg	Lg	00 34 18.8	
	0.8nm,0.5s,baz=91,slow=27,SNR=4.2						
KURK	Kurchatov	8.58	351	⇓Lg	Lg	00 34 47.9	
	5.3nm,1.3s						

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*IDC **28** 00:35:12.1±1.3, 14°.50S×73°.98W, h75^{km}±13^{km}, mb3.8/4, mbtmp4.1/11, MS3.0/1, Error ellipse: s-maj=29.0km s-min=8.8km az=41.0*

*NEIC **28** 00:35:12.8±1.7, 14°.54S±0°.08×73°.99W±0°.08, h87^{km}±12^{km}, mb4.5/10, Error ellipse: s-maj=16.6km s-min=1.5km az=222.0*

*VAO **28** 00:35:13.4±0.4, 14°.36S×74°.04W, h87^{km}, mb4.1*

ISC 28 00:35:12.4±0.6**, 14°.59S**±0°.06×**74°.05W**±0°.07**, h91**^{km}**, n80, σ1^{s}62**/87**, mb4.3**/10**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	3.75	313	P	Pn	00 36 08.7	+0.4
	115nm,0.3s,baz=130,slow=9.7,SNR=34						
NNA				S	Sn	00 36 51.0	-0.4
	217nm,0.3s,baz=199,slow=17,SNR=13						
NNA	Nana	3.75	313	Pn	Pn	00 36 08.6	+0.4
NNA				Sn	Sn	00 36 51.5	+0.1
AP01	Chacalluta	5.17	137		Pn	00 36 28.3	+0.8
AP01				Sn	Sn	00 37 25.3	-0.6
PB18	Visviri	5.31	125	Pn	Pn	00 36 34.5	+4.7
PB12	IPOC Station P	5.36	139		Pn	00 36 30.2	+0.1
PB12				Sn	Sn	00 37 28.5	-2.1
PB16	IPOC Station P	5.73	131		Pn	00 36 36.7	+1.2
PB16				Sn	Sn	00 37 39.6	-0.6
LPAZ	La Paz	5.95	107	P	Pn	00 36 39.0	+0.4
	16nm,0.4s,baz=320,slow=8.4,SNR=104						
LPAZ				S	Sn	00 37 46.3	+0.6
	7.0nm,0.7s,baz=315,slow=5.7,SNR=1.5						
LPAZ	La Paz	5.95	107	Pn	Pn	00 36 41.0	+2.4
LPAZ				Sn	Sn	00 37 49.9	+4.2
LPAZ	La Paz	5.95	107	eP	Pn	00 36 38.7	+0.2
MNMC	Minye Minye	6.21	137		Pn	00 36 41.6	-0.2
PB11	IPOC Station P	6.64	141		Pn	00 36 47.1	-0.4
TA02	Huaiquique	6.77	147		Pn	00 36 49.3	+0.1
GO01	Chusmiza	6.86	138		Pn	00 36 51.1	+0.3
CZSB	Cruzeiro do Su	6.94	11		Pn	00 36 48.7	-2.9
CZSB	Cruzeiro do Su	6.94	11	eP	Pn	00 36 48.4	-3.2
TA01	Diego Aracena	6.99	149		Pn	00 36 52.3	+0.1
PB08	IPOC Station P	7.23	140		Pn	00 36 56.0	+0.1
PB01	IPOC Station P	7.75	147		Pn	00 37 02.3	-0.3
PB02	IPOC Station P	7.77	150		Pn	00 37 02.7	-0.3
PB07	IPOC Station P	8.13	151		Pn	00 37 07.4	-0.4
PB03	IPOC Station P	8.46	152		Pn	00 37 12.6	+0.1
PB09	IPOC Station P	8.50	148		Pn	00 37 13.5	+0.6
PB04	IPOC Station P	8.54	155		Pn	00 37 13.3	-0.2
ATAH	Atahualpa	8.55	330	P	Pn	00 37 13.3	-0.5
	3.7nm,0.5s,baz=150,slow=6.6,SNR=6.5						
ATAH				S	Sn	00 38 46.0	-2.9
	9.3nm,0.8s,baz=103,slow=24,SNR=1.8						
ETMB	Extrema	9.01	59		Pn	00 37 17.7	-2.0
ETMB	Extrema	9.01	59	eP	Pn	00 37 17.5	-2.2
LVC	Limon Verde	9.35	149	P	Pn	00 37 24.6	-0.1
	6.0nm,0.3s,baz=356,slow=7.9,SNR=22						
LVC				S	Sn	00 39 06.7	-1.5
	5.2nm,0.4s,baz=293,slow=22,SNR=6.6						
LVC				LR	LR	00 41 17.5	
	comp=Z,88nm,19.7s,baz=305,slow=39						
LVC	Limon Verde	9.35	149		Pn	00 37 25.0	+0.4
PB10	IPOC Station P	9.47	160	Pn	Pn	00 37 26.0	0.0
PB15	IPOC Station P	9.60	154	Pn	Pn	00 37 29.2	+1.2
PB14	IPOC Station P	10.56	162	Pn	Pn	00 37 41.9	+0.8
TBTG	Tabatinga, AM	11.11	22	eP	Pn	00 37 45.6	-2.7
SAML	Samuel	12.02	63		Pn	00 37 58.4	-2.3
SAML	Samuel	12.02	63	eP	Pn	00 37 58.7	-1.9
SIV	San Ignacio	12.60	98	P	Pn	00 38 05.8	-2.6
	2.9nm,0.8s,baz=268,slow=12,SNR=18						
VILB	Vilhena	13.55	85	eP	Pn	00 38 19.4	-1.6
PTLB	Pontes e Lacer	14.43	95	eP	Pn	00 38 32.2	-0.1
CO03	El Pedregal	16.47	170	P	Pn	00 38 53.4	-4.6
PDRB	Porto dos Gac	17.12	82	eP	P	00 39 06.8	+0.3
MACA	Manacapuru-AM	17.40	51	eP	P	00 39 08.5	-1.0
CFA	Coronel Fontan	17.75	164	P	Pn	00 39 14.4	+0.7
	1.0nm,0.3s,baz=347,slow=10,SNR=12						
SALV	Santo Antonio	17.76	97	eP	Pn	00 39 13.1	-0.8
AQDB	Aquidauana	18.44	111	eP	Pn	00 39 21.8	-0.2
RVDE	Rio Verde (Bra	18.81	106	eP	Pn	00 39 26.8	+0.2
ROSC	El Rosal	19.30	359	P	Pn	00 39 37.0	+4.2
	24nm,0.9s,baz=204,slow=18,SNR=7.8						
CPUP	Villa Florida	19.51	129	P	Pn	00 39 34.4	-0.3
	2.8nm,0.8s,baz=303,slow=8.4,SNR=7.8						
CPUP	Villa Florida	19.51	129	eP	Pn	00 39 35.0	+0.3
NPGB	Novo Progresso	19.82	70	eP	Pn	00 39 35.7	-2.6
AMBA	Amambai (Brazi	19.84	118	eP	Pn	00 39 38.4	-0.2
ITTB	Itaituba	20.70	62	eP	P	00 39 45.0	-0.5
MECA	Mercedes	20.72	138	eP	Pn	00 39 48.6	-0.2
MCR1	Marechal Candi	21.24	121	eP	P	00 39 53.6	+2.4
AZCA	Azaras, Argent	21.48	132	eP	P	00 39 56.8	+3.0
SNDB	Serra Nova Dou	22.29	86	eP	P	00 40 02.5	0.0
CRSM	Crissiumal (Br	22.62	128	eP	P	00 40 07.0	+1.2
FRBT	Francisco Belt	22.67	123	eP	P	00 40 06.9	+0.4
ITRB	Iturama	23.19	106	eP	P	00 40 12.4	+0.9
RODS	Rosario do Sul	23.38	135	eP	P	00 40 14.1	+0.9
ITAB	Concordia	23.98	125	eP	P	00 40 19.6	+0.9
ALGR	Alto Alegre (B	24.05	129	eP	P	00 40 21.6	+2.2
CPSB	Cacapava Do Su	24.64	133	eP	P	00 40 27.1	+2.6
IPMB	Ipameri, GO	25.02	101	eP	P	00 40 28.5	+0.3
BB19B	Bebedouro	25.11	109	eP	P	00 40 31.3	+2.3
TXAR	Lajitas Array	52.20	327	P	P	00 44 15.7	+1.4
	0.2nm,0.4s,baz=152,slow=8.5,SNR=11						
	0.2nm,0.4s						
ANMO	Albuquerque	58.08	329	P	P	00 44 53.0	-3.6
ANMO				IAmb	IAmb	00 44 54.3	
	comp=Z,5.2nm,0.8s						
SDCO	Great Sand Dun	59.86	331	P	P	00 45 10.6	+1.6
SDCO				IAmb	IAmb	00 45 11.4	
	comp=Z,2.1nm,0.8s						
MVCO	Mesa Verde	60.88	329		P	00 45 14.7	-1.2
MVCO				IAmb	IAmb	00 45 20.3	
	comp=Z,4.6nm,0.8s						
PKCU	Pink Cliffs	63.03	326	P	P	00 45 31.6	+1.2
PKCU				IAmb	IAmb	00 45 32.9	
	comp=Z,5.4nm,0.7s						
MTPU	Mount Pierson	63.41	327	P	P	00 45 35.6	+2.7
MTPU				IAmb	IAmb	00 45 44.0	
	comp=Z,4.9nm,1.1s						
CCUT	Cedar City	63.68	326	P	P	00 45 36.0	+1.5
CCUT				IAmb	IAmb	00 45 41.9	
	comp=Z,3.7nm,0.9s						
P17A	Butcher Ranch,	63.74	329	P	P	00 45 35.3	+0.5
MDND	Maddock	66.21	341	P	P	00 45 51.3	+0.8
TORD	Torodi Ar. Bea	79.88	74	P	P	00 47 11.7	-0.1
	comp=Z,5.6nm,0.3s,baz=251,slow=5.2,SNR=3.4						
	comp=Z,5.6nm,0.3s						
YKA	Yellowknife Ar	83.12	342	P	P	00 47 28.4	+0.6
	comp=Z,0.8nm,0.8s,baz=138,slow=5.7,SNR=15						
	comp=Z,0.8nm,0.8s						
ESDC	Sonseca Array	84.53	47	P	P	00 47 36.5	+0.8
	comp=Z,1.1nm,1.0s,baz=256,slow=6.4,SNR=6.1						
	comp=Z,1.1nm,1.0s						
ASAR	Alice Springs	133.18	216	PKP	PKiKP	00 54 20.4	+0.7
	comp=Z,0.2nm,0.3s,baz=144,slow=3.3,SNR=2.2						
WRA	Warramunga Arr	135.76	220	PKP	PKiKP	00 54 24.8	-0.2
	comp=Z,0.4nm,0.8s,baz=130,slow=2.0,SNR=5.3						
ZALV	Zalesovo Beam	137.36	18	PKP	PKPdf	00 54 25.7	+0.5
	comp=Z,1.0nm,0.3s,baz=328,slow=1.9,SNR=7.3						
SONM	Songino Array	146.85	359	PKPbc	PKiKP	00 54 46.2	-0.8
	comp=Z,1.0nm,0.6s,baz=319,slow=2.4,SNR=7.6						
PZH	PanZhiHua	167.51	18	PKP	PKPdf	00 55 07.0	-1.8

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*TRN **28** 00:49:53.2, 19°.22N×63°.85W, h83^{km}*

*RSPR **28** 00:49:55.9, 19°.39N×64°.03W, h45^{km}±14^{km}, MD3.5/4*

*NEIC **28** 00:49:55.2±0.7, 19°.28N±0°.06×63°.95W±0°.04, h48^{km}±53^{km}, ML2.7/32, Md3.5/4(RSPR), Error ellipse: s-maj=10.6km s-min=3.4km az=153.0*

ISC 28 00:49:54.1±2.3**, 19°.3N**±0°.1×**63°.90W**±0°.05**, h34**^{km}**, n29, σ0^{s}68**/36**, 3C-3D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMRT	St. Maarten	1.49	148	Pn	Pn	00 50 19.0	+0.5
SMRT				Sn	Sn	00 50 37.4	+0.6
SMRT				IAML		00 50 40.4	
	comp=N,103nm,0.2s						
SMRT				IAML		00 50 40.4	
	comp=E,131nm,0.2s						
SMRT	St. Maarten	1.49	148	eP	Pn	00 50 19.1	+0.5
SMRT				eS	Sn	00 50 36.8	0.0
CUPR	Culebra, Puert	1.66	232	⇓eP	Pn	00 50 20.6	-0.2
CUPR	Culebra, Puert	1.66	232	eS	Sn	00 50 40.1	-0.7
CUPR	Culebra, Puert	1.66	232	Pn	Pn	00 50 20.6	-0.2
CUPR				Sn	Sn	00 50 40.4	-0.4
CDVI	St. Croix	1.77	208	⇓eP	Pn	00 50 23.0	+0.7
CDVI	St. Croix	1.77	208	Pn	Pn	00 50 22.8	+0.5
CDVI				Sn	Sn	00 50 42.8	-0.9
CDVI				IAML		00 50 51.9	
	comp=E,96nm,0.5s						
CDVI	St. Croix	1.77	208	eP	Pn	00 50 22.5	+0.2
CDVI				eS	Sn	00 50 44.4	+0.8
SABA	Saba	1.81	160	Pn	Pn	00 50 23.5	+0.6
MTP	Monte Pirata	1.99	232	⇑eP	Pn	00 50 25.3	-0.1
MTP	Monte Pirata	1.99	232	eS	Sn	00 50 48.5	-0.6
MTP	Monte Pirata	1.99	232	Pn	Pn	00 50 25.2	-0.1
CBYP	Canovanas	2.13	241	⇓eP	Pn	00 50 27.1	-0.2
CBYP	Canovanas	2.13	241	Pn	Pn	00 50 27.1	-0.2
CBYP				IAML		00 50 55.8	
	comp=E,60nm,0.2s						
CBYP				IAML		00 50 56.7	
	comp=N,60nm,0.2s						
HUMP	Col San Antoni	2.19	238	⇑eP	Pn	00 50 28.2	+0.1
HUMP	Col San Antoni	2.19	238	eS	Sn	00 50 53.0	-1.1
HUMP	Col San Antoni	2.19	238	Pn	Pn	00 50 28.5	+0.4
GCPR	Guaynabo City	2.30	244	Pn	Pn	00 50 30.2	+0.6
SJG	San Juan	2.45	241	Pn	Pn	00 50 32.2	+0.5
SJG				IAML		00 51 54.5	
	comp=N,21nm,0.2s						
SJG				IAML		00 51 57.5	
	comp=N,17nm,0.2s						
CELP	Cerrillos	2.83	244	⇑eP	Pn	00 50 37.2	+0.3
CELP	Cerrillos	2.83	244	Pn	Pn	00 50 36.9	0.0
CELP				IAML		00 52 23.4	
	comp=E,18nm,3.6s						
CELP				IAML		00 52 24.6	
	comp=N,17nm,2.2s						
OBIP	Obispado Ponce	2.87	244	Pn	Pn	00 50 36.6	-0.8
OBIP				IAML		00 51 24.2	
	comp=E,19nm,2.5s						
OBIP				IAML		00 51 42.5	
	comp=N,22nm,3.6s						
AOPR	Arecibo Observ	2.87	251	Pn	Pn	00 50 37.7	+0.2
AOPR				IAML		00 52 00.3	
	comp=E,32nm,2.5s						
AOPR				IAML		00 52 09.1	
	comp=N,32nm,2.1s						
AOPR	Arecibo Observ	2.87	251	eP	Pn	00 50 38.0	+0.5
AOPR				eS	Sn	00 51 12.4	+1.5
ANBD	Bethesda, Anti	3.04	138	eP	Pn	00 50 39.5	-0.3
ANBD				eS	Sn	00 51 13.1	-2.1
AGPR	Aguadilla, PR	3.16	255	Pn	Pn	00 50 41.8	+0.4
MLPR	Magueyes Islan	3.27	246	Pn	Pn	00 50 43.6	+0.6
MLPR				IAML		00 51 40.9	
	comp=N,15nm,3.9s						
MLPR				IAML		00 51 53.4	
	comp=E,17nm,3.6s						
CRPR	Cabo Rojo, PR	3.31	247	Pn	Pn	00 50 43.4	-0.1
CRPR				IAML		00 52 35.2	
	comp=E,22nm,2.2s						
CBE	Ff, Capester	3.91	146	Pn	Pn	00 50 52.5	+0.7

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*ANF **28** 00:54:52.1±0.1, 33°.47N×116°.46W, h9^{km}±1^{km}, ML2.6/21, Error ellipse: s-maj=1.2km s-min=1.2km az=83.0*

*NEIC **28** 00:54:52.8±1.3, 33°.46N±0°.01×116°.45W±0°.02, h9^{km}±2^{km}, Error ellipse: s-maj=2.0km s-min=1.8km az=86.0*

*PAS **28** 00:54:53.1±1.3, 33°.473N±0°.007×116°.47W±0°.02, h8^{km}±2^{km}, ML2.8/135, ML2.7/36(NEIC), Error ellipse: s-maj=2.0km s-min=1.0km az=79.0*

ISC 28 00:54:52.7±0.8**, 33°.47N**±0°.01×**116°.46W**±0°.01**, h12**^{km}±4^{km}**, n103, σ0^{s}63**/170**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRD	Ford Ranch, An	0.12	283		Pg	00 54 55.9	-0.1
FRD					Sg	00 54 57.9	-0.4
FRD	Ford Ranch, An	0.12	283		Pg	00 54 55.9	-0.1
FRD					Sg	00 54 58.0	-0.4
XPFO	Pion Flat	0.14	0		Pg	00 54 56.0	-0.3
XPFO					Sg	00 54 58.0	-0.8
PFO	Pinyon Flats O	0.14	359		Pg	00 54 55.8	-0.5
PFO				Sg	Sg	00 54 57.9	-1.0
PFO				IAML		00 54 58.3	
	2µm,0.2s						
PFO	Pinyon Flats O	0.14	359		Pg	00 54 56.0	-0.3
PFO					Sg	00 54 58.2	-0.7
PFO	Pinyon Flats O	0.14	359	P	Pg	00 54 56.0	-0.3
	baz=180,SNR=483						
PFO				S	Sg	00 54 58.1	-0.7
	baz=180						
SNDA	J Saunders Pla	0.16	303		Pg	00 54 56.5	0.0
SNDA					Sg	00 54 59.1	0.0
DNR	Dunn Ranch,Anz	0.18	304		Pg	00 54 56.8	0.0
DNR					Sg	00 54 59.9	+0.3
BZNA	Buzz No.’s Pla	0.18	278		Pg	00 54 56.9	+0.1
BZNA					Sg	00 54 59.6	0.0
PMD	Palm Desert	0.19	20		Pg	00 54 56.7	-0.3
PMD				Sg	Sg	00 54 59.2	-0.7
PMD				IAML		00 54 59.5	
	comp=N,2µm,0.3s						
PMD				IAML		00 54 59.5	
	comp=E,2µm,0.2s						
BORC	Borrego Spring	0.20	171		Pg	00 54 57.4	+0.3
BORC					Sg	00 55 00.2	+0.2
CRY	Cary Ranch	0.25	293		Pg	00 54 58.1	0.0
CRY					Sg	00 55 01.8	0.0
GVDA	Garner Valley	0.27	318		Pg	00 54 58.1	-0.3
GVDA	Garner Valley	0.27	318		Sg	00 55 01.9	-0.3
MATG	Mataguay Scout	0.31	211		Pg	00 54 59.4	+0.2
MATG					Sg	00 55 03.8	+0.4
SLH	Sleepy Hollow	0.32	148		Pg	00 54 59.8	+0.5
SLH					Sb	00 55 04.7	-0.9
PLM	Palomar	0.36	252		Pg	00 55 00.2	+0.2
PLM					Sg	00 55 05.2	+0.4
JUEM	Julian Eagle M	0.40	197		Pg	00 55 01.0	+0.2
JUEM					Sg	00 55 06.7	+0.5
CTCC	Cactus City	0.43	64		Pg	00 55 01.7	+0.4
CTCC					Sg	00 55 08.0	+0.9
SALN	Salton City	0.44	115		Sb	00 55 08.6	-0.3
POB	Polly Butte	0.45	300		Pg	00 55 01.4	-0.2
POB					Sg	00 55 07.3	-0.3
EW2	E Wide Canyon	0.47	5		Pg	00 55 02.1	0.0
EW2					Sg	00 55 08.7	+0.3
DEVC	Devers	0.48	348		Sg	00 55 08.8	+0.2
DGR	Domenigoni Val	0.50	292		Pg	00 55 02.2	-0.3
DGR					Sg	00 55 08.7	-0.4
BACC	Bachelor Mtn.	0.51	287		Pg	00 55 02.5	-0.3
BACC					Sg	00 55 09.1	-0.4
HMTC	Hemet	0.52	298		Pg	00 55 02.5	-0.4
HMTC					Sg	00 55 09.5	-0.3
CTW	Cottonwood Mou	0.53	67		Pg	00 55 03.3	+0.1
CTW					Sg	00 55 10.9	+0.7
MONP2	Monument Peak	0.57	177		Pg	00 55 04.1	+0.1
MONP2					Sg	00 55 11.6	0.0
MONP2	Monument Peak	0.57	177	P	Pg	00 55 04.1	+0.1
	baz=357,SNR=14						
MONP2				S	Sg	00 55 11.5	-0.2
	baz=357						
BLAC	Blackrock camp	0.60	5		Pg	00 55 04.3	-0.2
BLAC					Sg	00 55 12.6	0.0
BOMB	Bombay Beach	0.62	99		Pg	00 55 05.1	+0.4
BOMB					Sb	00 55 14.5	+0.4
DPP	Dos Picos Cty	0.62	221		Pg	00 55 04.6	-0.2
DPP					Sg	00 55 12.8	-0.1
BBSC	Beaumont Base	0.63	316		Pg	00 55 04.9	-0.1
BBSC					Sg	00 55 13.6	+0.2
MURC	Murrieta	0.63	282		Pg	00 55 04.7	-0.4
MURC					Sg	00 55 13.2	-0.2
MURC	Murrieta	0.63	282	P	Pg	00 55 04.7	-0.4
	baz=102,SNR=27						
MURC				S	Sg	00 55 13.3	-0.1
	baz=102						
ERRC	Elmore Ranch	0.64	123		Sb	00 55 15.8	+1.1
BELC	Belle Mtn. Jos	0.66	36		Pg	00 55 05.4	-0.2
BELC					Sg	00 55 13.9	-0.3
BELC	Belle Mtn. Jos	0.66	36	P	Pg	00 55 05.3	-0.2
	baz=216,SNR=6.7						
BELC				S	Sg	00 55 14.1	-0.1
	baz=216						
EML	El Monte Cty P	0.66	210		Pg	00 55 05.2	-0.4
EML					Sg	00 55 13.7	-0.5
HAY	Hayfield	0.69	69		Pb	00 55 06.7	0.0
HAY					Sb	00 55 16.1	-0.2
CRR	Carrizo Plain	0.71	145		Pg	00 55 06.7	+0.2
CRR					Pn	00 55 16.8	+8.2
GORC	Green Oak Ranc	0.72	244		Pg	00 55 06.1	-0.6
GORC					Pn	00 55 15.7	+7.0
TPC	Twentynine Pal	0.72	28		Pg	00 55 06.4	-0.4
PEC	Perris	0.72	306		Pg	00 55 06.4	-0.4
PEC					Sg	00 55 15.6	-0.7
SWSC	Sam W. Stewart	0.76	133		Pg	00 55 07.3	-0.1
SWSC					Pn	00 55 17.9	+8.7
SWSC	Sam W. Stewart	0.76	133	P	Pg	00 55 07.3	-0.1
	baz=314,SNR=7.2						
SWSC				S	Sb	00 55 17.9	-0.3
	baz=314						
CFT	Crafton Hills	0.79	316		Pg	00 55 07.7	-0.3
CFT					Sg	00 55 18.8	+0.5
109C	Camp Elliot, M	0.79	224		Pg	00 55 07.6	-0.5
109C				Sg	Sg	00 55 17.8	-0.6
109C	Camp Elliot, M	0.79	224	P	Pg	00 55 07.6	-0.5
	baz=43,SNR=19						
109C				S	Sg	00 55 17.9	-0.6
	baz=43						
CPE	Camp Elliot	0.79	224		Pg	00 55 07.6	-0.5
CPE					Sg	00 55 17.8	-0.6
BAR	Barrett	0.81	193		Pg	00 55 07.9	-0.5
BAR				Sg	Sg	00 55 18.7	-0.2
MTRP	Mission Trails	0.82	218		Pg	00 55 07.9	-0.7
MTRP					Pn	00 55 18.6	+8.4
GTM	Goat Mountain	0.83	6		Pg	00 55 08.4	-0.4
GTM					Sg	00 55 19.2	-0.5
SVD	Seven Oaks Dam	0.83	320		Pg	00 55 08.4	-0.4
SVD					Sg	00 55 19.8	+0.1
SDRC	San Diego Road	0.83	209		Pg	00 55 08.1	-0.8
SDRC					Pn	00 55 19.0	+8.7
BC3	Big Chuckawall	0.86	77		Pg	00 55 09.4	0.0
BC3					Sg	00 55 21.0	+0.4
BC3	Big Chuckawall	0.86	77	P	Pg	00 55 09.1	-0.3
	baz=258,SNR=52						
BC3				S	Sg	00 55 20.7	+0.1
	baz=258						
IKP	In-Ko-Pah, Jac	0.86	160		Pg	00 55 09.4	-0.1
IKP					Pn	00 55 20.6	+10
IKP	In-Ko-Pah, Jac	0.86	160	P	Pg	00 55 09.4	-0.1
	baz=340,SNR=15						
IKP				S	Sg	00 55 20.7	0.0
	baz=340						
COK2	Cook Ranch 2	0.87	135		Sn	00 55 23.0	-0.3
BBRC	Big Bear Solar	0.88	334		Pg	00 55 09.3	-0.5
BBRC					Sg	00 55 20.9	-0.5
BBRC	Big Bear Solar	0.88	334	P	Pg	00 55 09.3	-0.5
	baz=154						
BBRC				S	Sg	00 55 21.3	-0.1
	baz=154						
RSBC	Riverside Bore	0.88	305		Pg	00 55 09.7	-0.2
RSBC					Pn	00 55 20.6	+10
RSBC	Riverside Bore	0.88	305		Sg	00 55 21.0	-0.4
SDMC	San Diego Miss	0.89	220		Pg	00 55 09.2	-0.7
SDMC					Sg	00 55 20.9	-0.7
DUZA	Dulzura	0.90	197		Pg	00 55 09.4	-0.7
DUZA					Pn	00 55 21.1	+10
TKX	Tecate	0.91	188		Pg	00 55 09.7	-0.5
TKX				Sg	Sg	00 55 21.2	-0.8
RMX	La Rumorosa	0.92	160	Pg	Pn	00 55 11.5	-0.2
RMX				IAML		00 55 25.7	
	comp=E,243nm,0.4s						
RMX				IAML		00 55 29.6	
	comp=N,133nm,0.6s						
YUH	Yuha Desert	0.93	151		Pg	00 55 10.3	-0.5
YUH				Sg	Sg	00 55 22.7	-0.2
OLP	Otay Lakes Par	0.94	205		Pg	00 55 10.3	-0.7
CBX	Cerro Bola	1.16	189		Pb	00 55 14.4	-0.5
CBX				IAML		00 55 30.6	
	comp=E,148nm,0.3s						
CBX				IAML		00 55 30.8	
	comp=N,124nm,0.3s						
BFSC	Mount Baldy Ra	1.26	308	S	Sb	00 55 32.1	-0.7
	baz=127						
SSK	Sunset Peak	1.27	306		Pn	00 55 16.3	-0.2
IRM	Iron Mountain	1.29	57	P	Pn	00 55 16.8	+0.1
	baz=238,SNR=17						
IRM				S	Sg	00 55 34.4	+0.1
	baz=238						
GLA	Glamis	1.43	106		Pn	00 55 17.5	-1.0
GLA					Sn	00 55 35.8	-1.5
GLA				IAML		00 55 46.7	
	comp=E,93nm,0.6s						
GLA	Glamis	1.43	106	S	Sn	00 55 34.6	-2.7
	baz=288						
GMRC	Granite Mounta	1.47	26		Pg	00 55 20.9	-0.1
GMRC	Granite Mounta	1.47	26	P	Pn	00 55 18.5	-0.7
	baz=207						
GMRC				S	Sn	00 55 39.3	+0.7
	baz=207						
RRX	Edison Barstow	1.48	342	Pg	Pb	00 55 20.5	+0.3
	baz=162						
RRX				S	Sg	00 55 40.4	+0.2
	baz=162						
ESJX	Sierra Juarez	1.52	163		Pn	00 55 19.7	-0.3
ESJX				Sn	Sn	00 55 39.1	-0.7
ESJX					Sg	00 55 41.3	-0.4
ESJX				IAML		00 55 44.2	
	comp=N,61nm,0.1s						
ESJX				IAML		00 55 44.4	
	comp=E,61nm,0.1s						
PASC	Pasadena Art C	1.60	297	Pn	Pn	00 55 21.2	+0.3
PASC				Sn	Sn	00 55 42.3	+0.7
PASC				IAML		00 55 43.1	
	comp=E,96nm,0.4s						
PASC				IAML		00 55 43.3	
	comp=N,78nm,0.3s						
CCX	Cicese	1.60	186	Pn	Pn	00 55 21.8	+0.9
CCX				Sn	Sb	00 55 42.7	+0.1
CCX				IAML		00 55 45.5	
	comp=N,92nm,0.6s						
CCX				IAML		00 55 47.0	
	comp=E,72nm,0.3s						
BLYC	Blythe	1.64	80		Pn	00 55 22.3	+0.9
CIS	Catalina Islan	1.64	268	S	Sb	00 55 43.9	+0.3
	baz=87						
DECC	Green Verdugo	1.75	297	S	Sn	00 55 46.6	+1.4
	baz=116						
GSC	Goldstone, Bar	1.85	351	Pn	Pn	00 55 24.4	-0.1
GSC	Goldstone, Bar	1.85	351	P	Pn	00 55 24.2	-0.3
	baz=171						
GSC				Sb	Sg	00 55 51.7	-0.7
	baz=171						
EDW2	Edwards Air Fo	1.90	318	Pg	Pb	00 55 28.1	+0.7
	baz=138						
EDW2				S	Sb	00 55 51.9	+0.7
	baz=138						
NEE2	Needles Airpor	2.00	49	Pg	Pb	00 55 29.9	+0.8
	baz=230						
NEE2				Sb	Sg	00 55 56.1	-1.0
	baz=230						
TUQ	Turquoise Moun	2.01	12	Pg	Pb	00 55 30.2	+0.8
	baz=193						
TUQ				Sb	Sg	00 55 56.5	-1.0
	baz=193						
QSM	Queen of Sheba	2.52	352	Pn	Pn	00 55 33.5	0.0
QSM					Pb	00 55 39.3	+1.4
ARVC	Arvin	2.57	311	Sb	Sb	00 56 12.1	+1.8

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            baz=130
V12A   Nelson              2.62  30  Pn     Pn      00 55 35.8 +0.9
V12A                                        Pg      00 55 42.1 -0.8
W13A   Hualapai Mount      2.68  52  Pn     Pn      00 55 35.9 -0.1
W13A                                        Pb      00 55 42.5 +1.6
GWY    Greenwater Val      2.72 356         Pn      00 55 36.4 -0.1
MPMC   Manual Prospec      2.72 342         Pb      00 55 40.3 -1.2
MPMC   Manual Prospec      2.72 342  Sb     Sg      00 56 19.1 -1.2
            baz=162
ISA    Isabella, Lake      2.75 323  Pg     Pb      00 55 43.3 +1.3
BCW    Bitter Crk WRg      2.86 302  Pn     Pn      00 55 39.7 +1.4
Y14A   Wickenburg          2.92  80         Pb      00 55 46.3 +1.6
SHPR   Sheep Range         3.21  19  Pg     Pg      00 55 52.9 -1.4
WCT    Wildcat Mounta      3.32 358  Pg     Pg      00 55 55.0 -1.4
X16A   Lo Mia Camp, P      4.28  76  Pn     Pn      00 55 58.2 +0.3
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*IDC **28** 01:07:08.7±0.9, 28.°42N×142.°42E, h0km, mb3.9/15, mbtmp3.9/16, ML2.7/1, Error ellipse: s-maj=36.6km s-min=15.1km az=81.0*

*NEIC **28** 01:07:14.0±0.6, 28.°31N±0.°06×142.°2E±0.°2, h26km±6km, mb4.4/14, Error ellipse: s-maj=30.6km s-min=8.2km az=85.0*

ISC 28 01:07:12.7±0.6**, 28.°33N**±0.°06×**142.°3E**±0.°2**, h25**km**, n44, σ1.ˢ06**/42**, mb4.2**/23**, Bonin Islands region**

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Code   Station Name         Δ°   AZ°    Phase ID          Time     Res
                                     Op     ISC        h  m  s    ISC
JCJ    Chichijima          1.23 183  Pn     Pn      01 07 34.9 +0.6
            52nm,0.3s,baz=106,slow=19,SNR=6.8
JCJ                                  Sn     Sn      01 07 50.9 +0.8
            93nm,0.3s,baz=252,slow=22,SNR=7.7
JCJ    Chichijima          1.23 183         Pn      01 07 35.0 +0.6
JCJ                                  Sn     Sn      01 07 46.8 -3.3
MJAR   Matsushiro Arr      8.88 338  Pn     Pn      01 09 18.7 -0.8
            0.1nm,0.3s,baz=165,slow=14,SNR=1.9
            0.7nm,0.3s
JMM    Marumori            9.59 353  Pn     Pn      01 09 30.0 +0.8
KLR    Kul'dur            22.38 342  P      P       01 12 09.5 +0.5
            1.6nm,0.7s,baz=144,slow=7.7,SNR=7.8
            1.6nm,0.7s
H11N2  WAKE ISLAND Hy     24.04 105  T      T       01 37 20.4
            baz=296,slow=75,SNR=32
H11N1  WAKE ISLAND Hy     24.04 105  T      T       01 37 14.5
            baz=296,slow=75,SNR=33
H11N3  WAKE ISLAND Hy     24.05 105  T      T       01 37 17.7
            baz=296,slow=75,SNR=38
H11S3  WAKE ISLAND Hy     24.42 108  T      T       01 37 45.4
            baz=308
H11S1  WAKE ISLAND Hy     24.42 108  T      T       01 37 49.8
            baz=308
H11S2  WAKE ISLAND Hy     24.43 108  T      T       01 38 02.1
            baz=308
SONM   Songino Array      33.89 315  P      P       01 13 53.8 +0.2
            0.5nm,0.6s,baz=102,slow=6.4,SNR=4.4
            0.5nm,0.6s
SONM   Songino Array      33.89 315  P      P       01 13 54.7 +1.1
WB0    Warramunga Arr     48.41 190  P      P       01 15 53.2 +0.2
WB0                                  IAmb   IAmb    01 15 54.1
            comp=Z,9.7nm,1.3s
WRAB   Tennant Creek      48.58 190  P      P       01 15 55.2 +0.9
WB2    Warramunga Arr     48.59 190  P      P       01 15 54.5 +0.2
WB2                                  IAmb   IAmb    01 16 15.0
            comp=Z,8.5nm,1.2s
WRA    Warramunga Arr     48.59 190  P      P       01 15 54.6 +0.3
            comp=Z,1.1nm,0.4s,baz=12,slow=8.5,SNR=26
            comp=Z,1.1nm,0.4s
WRA    Warramunga Arr     48.59 190  P      P       01 15 54.4  0.0
ZALV   Zalesovo Beam      48.61 318  P      P       01 15 54.5 +0.3
            comp=Z,0.3nm,0.3s,baz=79,slow=7.5,SNR=2.6
ZALV                                 PcP    PcP     01 17 18.7 -0.7
            comp=Z,0.6nm,0.5s,baz=90,slow=4.3,SNR=2.3
            comp=Z,0.3nm,0.3s
MK31   Makanchi Array     49.75 309  P      P       01 16 02.5 -0.5
MKAR   Makanchi Array     49.75 309  P      P       01 16 02.2 -0.9
            comp=Z,0.5nm,0.7s,baz=90,slow=9.4,SNR=5.6
MKAR                                 PcP    PcP     01 17 23.1 -0.7
            comp=Z,0.2nm,0.4s,baz=72,slow=8.2,SNR=2.5
            comp=Z,0.5nm,0.7s
MKAR   Makanchi Array     49.75 309  P      P       01 16 02.7 -0.4
KURK   Kurchatov          52.18 314  P      P       01 16 20.5 -0.7
KURK                                 IAmb   IAmb    01 16 21.3
            comp=Z,2.9nm,1.0s
ASAR   Alice Springs      52.31 190  P      P       01 16 24.5 +2.0
            comp=Z,0.2nm,0.3s,baz=22,slow=10,SNR=4.7
            comp=Z,0.2nm,0.3s
BVAR   Borovoye Array     57.19 317  P      P       01 16 57.9 +0.4
            comp=Z,2.8nm,0.6s,baz=92,slow=8.2,SNR=18
            comp=Z,2.8nm,0.6s
BRVK   Borovoye           57.25 317  P      P       01 16 58.3 +0.3
BRVK                                 IAmb   IAmb    01 16 59.4
            comp=Z,3.0nm,0.8s
KK31   Karatay Array      58.43 305  P      P       01 17 06.8 +0.3
KK31                                 IAmb   IAmb    01 17 07.2
            comp=Z,2.9nm,1.0s
KKAR   Karatay Array      58.43 305  P      P       01 17 06.7 +0.3
KKAR                                 IAmb   IAmb    01 17 07.2
            comp=Z,2.9nm,1.0s
KKAR   Karatay Array      58.43 305  P      P       01 17 06.7 +0.3
ARU    Arti               63.50 322  P      P       01 17 40.7 +0.2
            comp=Z,2.4nm,0.4s,baz=68,slow=4.3,SNR=5.9
            comp=Z,2.4nm,0.4s
ABKAR  Akbulak array      64.29 314  P      P       01 17 46.4 +0.5
ABKAR                                IAmb   IAmb    01 17 54.3
            comp=Z,2.6nm,1.0s
ABKAR  Akbulak array      64.29 314  P      P       01 17 46.4 +0.5
AKTO   Aktyubinsk         65.20 316  P      P       01 17 52.0 +0.1
            comp=Z,2.1nm,0.6s,baz=70,slow=11,SNR=3.9
            comp=Z,2.1nm,0.6s
EUNU   Eureka             68.68   8  P      P       01 18 13.9 +0.3
EUNU                                 IAmb   IAmb    01 18 40.2
            comp=Z,4.6nm,1.4s
YKA    Yellowknife Ar     71.03  29  P      P       01 18 28.0 -0.2
            comp=Z,0.2nm,0.6s,baz=297,slow=5.5,SNR=3.0
            comp=Z,0.2nm,0.6s
TULEG  Thule              73.62   7  P      P       01 18 44.0 +0.6
FINES  FINESS Array B     76.88 334  P      P       01 19 03.5 +1.1
            comp=Z,5.6nm,1.0s,baz=58,slow=5.1,SNR=11
            comp=Z,5.6nm,1.0s
FINES  FINESS Array B     76.88 334  P      P       01 19 05.1 +2.7
WHZ    Wether Hill Ro     77.46 162  P      P       01 19 07.1 +1.4
AKASG  Malin Array Be     81.67 324  P      P       01 19 27.3 -1.4
            comp=Z,0.5nm,0.5s,baz=47,slow=4.8,SNR=2.0
            comp=Z,0.5nm,0.5s
NOA    NORSAR Array B     82.50 338  P      P       01 19 31.3 -1.6
            comp=Z,0.5nm,0.7s,baz=49,slow=4.3,SNR=1.6
            comp=Z,0.5nm,0.7s
BRTR   Keskin Array B     85.22 313  P      P       01 19 46.9 -0.6
            comp=Z,0.9nm,0.6s,baz=76,slow=11,SNR=1.6
            comp=Z,0.9nm,0.6s
TXAR   Lajitas Array      94.81  53  P      P       01 20 31.2 -1.7
            comp=Z,0.3nm,0.9s,baz=283,slow=4.5,SNR=2.0
            comp=Z,0.3nm,0.9s
TORD   Torodi Ar. Bea    123.82 312  PKP    PKPdf   01 26 08.3 -0.9
            comp=Z,0.7nm,1.0s,baz=339,slow=3.3,SNR=2.5
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*SOME **28** 01:10:50.1, 42.°07N×81.°02E, h20km*

*NNC **28** 01:10:53.9±3.0, 42.°31N×81.°05E, h0km, mb2.6, mpv2.4, Error ellipse: s-maj=24.5km s-min=14.0km az=153.0*

*KRNET **28** 01:10:54.8±0.1, 42.°30N×80.°79E, mb1.8*

ISC 28 01:10:55.2±1.9**, 42.°41N**±0.°09×**80.°90E**±0.°07**, h10**km**, n22, σ1.ˢ92**/32**, 9C-7D, Kyrgyzstan-Xinjiang border region**

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Code   Station Name         Δ°   AZ°    Phase ID          Time     Res
                                     Op     ISC        h  m  s    ISC
SHLS   Shalkode            1.30 306  eP     Pn      01 11 15.4 -4.1
            6.8nm,0.1s
SHLS                                 eS     Sb      01 11 33.8 -2.7
            48nm,0.3s
PDGK   Podgornoye          1.39 312 ⇑P      Pg      01 11 21.0 -0.9
            1.0nm,0.3s
PDGK                                ⇑S      Sg      01 11 43.3 +3.4
            4.8nm,0.6s
UZB    Uzynbulak           1.57 299  eP     Pb      01 11 23.6 -0.9
            3.7nm,0.2s
UZB                                  eS     Sg      01 11 47.6 +1.9
            12nm,0.1s
PRZ    Przheval'sk         1.85 273⇑iP      Pb      01 11 28.4 -0.9
            baz=77
PRZ                                ⇑iS      Sb      01 11 52.4 -0.2
            baz=77
KPKS   Kokpek              1.94 304  ePg    Pb      01 11 30.5 -0.2
            6.4nm,0.1s
KPKS                                 eLg    Lg      01 11 60.0
            35nm,0.3s
SATY   Saty                1.95 290  ePg    Pb      01 11 29.7 -1.2
            3.5nm,0.1s
SATY                                 eLg    Lg      01 11 58.3
            18nm,0.1s
ZHN    Zhinishke           1.97 293  ePg    Pb      01 11 30.1 -1.1
            6.7nm,0.1s
ZHN                                  eLg    Lg      01 11 59.2
            32nm,0.1s
DJR    Jarkent             2.08 337  ePg    Pg      01 11 33.7 -1.5
            0.9nm,0.2s
DJR                                  eLg    Lg      01 12 05.5
            5.4nm,1.4s
KURS   Kuram               2.28 299  ePg    Pb      01 11 35.7 -0.7
            2.0nm,0.2s
KURS                                 eLg    Lg      01 12 08.8
            7.3nm,0.2s
ANVS   Anan'yevo           2.42 280⇑iP      Pb      01 11 36.9 -2.0
            baz=83
ANVS                               ⇑iS      Sb      01 12 07.9 -1.0
            baz=83
KDJ    Kajisay             2.78 265⇑iP      Pn      01 11 41.3 +1.4
            baz=67
KDJ                                ⇑eS      Sn      01 12 15.6 +2.0
            baz=67
ARXS   Arharly             2.88 310  ePg    Pb      01 11 46.7  0.0
            0.2nm,0.1s
ARXS                                 eLg    Lg      01 12 27.6
            6.3nm,0.4s
KOTS   Kotyrbulak          2.91 288  ePg    Pb      01 11 46.3 -1.0
            1.8nm,0.3s
KOTS                                 eLg    Lg      01 12 26.9
            16nm,0.2s
MDOK   Medeo               2.94 286 ⇓P      Pb      01 11 44.8 -2.9
            1.2nm,0.4s
MDOK                                ⇓S      Sb      01 12 23.3 -0.4
            7.0nm,0.6s
MDOK   Medeo               2.94 286  ePg    Pb      01 11 46.8 -0.9
            2.7nm,0.3s
MDOK                                 eLg    Lg      01 12 27.6
            7.9nm,0.4s
TNSS   Tian-Shan           2.98 283  ePg    Pb      01 11 47.6 -1.1
            1.7nm,0.2s
TNSS                                 eLg    Lg      01 12 29.0
            2.8nm,0.3s
CHKK   Chushkaly           3.21 298  ePg    Pb      01 11 52.1 -0.2
            0.5nm,0.1s
CHKK                                 eLg    Lg      01 12 36.8
            5.7nm,0.2s
KTBS   Karatobe            3.35 294  ePg    Pb      01 11 54.5 -0.4
            1.0nm,0.3s
KTBS                                 eLg    Lg      01 12 40.6
            14nm,0.2s
KUU    Kurty               3.65 295  ePg    Pb      01 11 59.4 -0.5
            0.5nm,0.2s
KUU                                  eLg    Lg      01 12 49.0
            3.4nm,0.2s
BOOM   Boomskoye usch      3.67 273⇓iP      Pn      01 11 54.2 +1.9
            baz=75
BOOM                               ⇓iS      Sn      01 12 37.4 +1.7
            baz=75
DGS    Degeres             3.86 284  ePg    Pb      01 12 03.3 -0.2
            0.8nm,0.2s
DGS                                  eLg    Lg      01 12 56.1
            5.8nm,0.2s
MK31   Makanchi Array      4.49  12 ⇓Pn     Pn      01 12 05.3 +2.0
            baz=182,slow=14,SNR=9.4
MK31                                ⇓Pg     Pg      01 12 18.1 -3.2
            0.2nm,0.5s,baz=190,slow=12,SNR=2.6
MK31                                ⇓Sn     Sn      01 12 59.6 +4.0
            0.8nm,0.7s,baz=209,slow=17,SNR=4.5
MK31                                ⇑Lg     Lg      01 13 19.3
            0.6nm,0.5s
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*RSPR **28** 01:24:14.2, 19.°55N×64.°86W, h43km±25km, MD3.5/5*

*NEIC **28** 01:24:14.0±1.5, 19.°57N±0.°10×64.°98W±0.°09, h39km±56km, ML2.8/26, Md3.5/18(RSPR), Error ellipse: s-maj=15.6km s-min=9.6km az=211.0*

ISC 28 01:24:12.0±2.5**, 19.°56N**±0.°09×**65.°17W**±0.°03**, h13**km±15km**, n38, σ1.ˢ01**/45**, 7C-5D, Puerto Rico region**

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Code   Station Name         Δ°   AZ°    Phase ID          Time     Res
                                     Op     ISC        h  m  s    ISC
CUPR   Culebra, Puert      1.25 185⇓eP      Pb      01 24 35.5 +0.1
CUPR   Culebra, Puert      1.25 185  eS     Sn      01 24 50.6 -1.2
CUPR   Culebra, Puert      1.25 185         Pb      01 24 35.5 +0.1
CUPR                                        Sn      01 24 50.4 -1.4
CUPR                                 IAML           01 24 55.0
            comp=E,186nm,0.5s
CUPR                                 IAML           01 24 59.0
            comp=N,146nm,0.4s
CBYP   Canovanas           1.43 207⇑eP      Pn      01 24 38.1 +0.4
CBYP   Canovanas           1.43 207         Pn      01 24 37.9 +0.1
MTP    Monte Pirata        1.50 194⇑eP      Pb      01 24 39.3 -0.3
MTP    Monte Pirata        1.50 194  eS     Sb      01 24 58.4 -0.2
MTP    Monte Pirata        1.50 194         Pb      01 24 39.3 -0.3
MTP                                         Sb      01 24 58.5 -0.1
MTP                                  IAML           01 25 00.2
            comp=E,279nm,0.3s
MTP                                  IAML           01 25 03.0
            comp=N,140nm,0.5s
GCPR   Guaynabo City       1.51 215⇓eP      Pb      01 24 40.1 +0.1
GCPR   Guaynabo City       1.51 215         Pn      01 24 39.1 +0.3
HUMP   Col San Antoni      1.55 205⇓eP      Pn      01 24 40.0 +0.7
HUMP   Col San Antoni      1.55 205  eS     Sb      01 25 00.4 +0.3
HUMP   Col San Antoni      1.55 205         Pn      01 24 39.7 +0.5
HUMP                                        Sb      01 25 00.3 +0.2
HUMP                                 IAML           01 25 02.9
            comp=E,106nm,0.2s
HUMP                                 IAML           01 25 04.5
            comp=N,120nm,0.2s
EMPR   Esperanza - Ma      1.68 230⇑eP      Pb      01 24 43.5 +0.8
EMPR   Esperanza - Ma      1.68 230  eS     Sg      01 25 05.7 -0.3
EMPR   Esperanza - Ma      1.68 230         Pb      01 24 43.2 +0.5
EMPR                                 IAML           01 25 18.7
            comp=N,154nm,1.9s
EMPR                                 IAML           01 25 19.1
            comp=E,152nm,0.8s
SJG    San Juan            1.71 213         Pn      01 24 42.2 +0.7
SJG                                  IAML           01 25 06.4
            comp=E,67nm,0.2s
SJG                                  IAML           01 25 10.6
            comp=E,68nm,0.5s
IGPR   InterUniversit      1.81 209⇑eP      Pn      01 24 43.8 +0.8
CDVI   St. Croix           1.83 168         Pn      01 24 44.1 +0.9
CDVI   St. Croix           1.83 168  eP     Pb      01 24 47.0 +1.6
CDVI                                 eS     Sg      01 25 10.9 -0.1
AOPR   Arecibo Observ      1.92 232⇑eP      Pb      01 24 46.6 -0.4
AOPR   Arecibo Observ      1.92 232  eS     Sb      01 25 12.6 +1.7
AOPR   Arecibo Observ      1.92 232         Pb      01 24 46.0 -1.0
AOPR                                        Sb      01 25 12.4 +1.5
AOPR   Arecibo Observ      1.92 232  eP     Pb      01 24 46.1 -0.9
AOPR                                 eS     Sn      01 25 07.1 -1.5
UUPR   Utuado, UPR, P      1.96 229         Pb      01 24 46.7 -0.9
CELP   Cerrillos           1.99 222         Pn      01 24 46.7 +1.3
CELP                                 IAML           01 25 13.8
            comp=N,64nm,0.6s
OBIP   Obispado Ponce      2.03 222⇑eP      Pn      01 24 47.1 +1.2
OBIP   Obispado Ponce      2.03 222         Pn      01 24 46.0 +0.1
OBIP                                 IAML           01 25 17.6
            comp=E,50nm,0.6s
LSP    Las Mesas           2.28 233⇑eP      Pb      01 24 52.1 -0.9
MLPR   Magueyes Islan      2.38 229⇓eP      Pb      01 24 53.1 -1.5
MLPR   Magueyes Islan      2.38 229         Pn      01 24 52.6 +1.9
CRPR   Cabo Rojo, PR       2.40 230⇓eP      Pb      01 24 54.1 -0.9
CRPR   Cabo Rojo, PR       2.40 230  eS     Sb      01 25 24.1 -0.4
CRPR   Cabo Rojo, PR       2.40 230         Pb      01 24 53.7 -1.3
CRPR                                 IAML           01 25 35.1
            comp=E,43nm,0.7s
CRPR                                 IAML           01 25 59.4
            comp=N,33nm,2.3s
SMRT   St. Maarten         2.48 127  eP     Pb      01 24 56.1 -0.5
SMRT                                 eS     Sb      01 25 26.2 -0.9
MBFL   Flemmings, Mon      3.96 134  eP     Pb      01 25 19.6 -2.1
ANBD   Bethesda, Anti      4.08 127  eP     Pn      01 25 15.7 +1.6
ANBD   Bethesda, Anti      4.08 127  eS     Sn      01 26 02.7 +0.8
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*MOS **28** 01:24:58.5±1.3, 48.°24N×155.°23E, h39km, mb4.4/15, MS3.3/6, Error ellipse: s-maj=8.4km s-min=4.0km az=73.3*

*SKHL **28** 01:24:59.2±0.5, 48.°20N×155.°40E, h48km±5km, mb5.3/8, mbv5.3/3, ms4.3/4, msh4.9/4*

*KRSC **28** 01:25:00.6±2.0, 48.°40N×156.°43E, h16km±38km, Ml4.8*

*NEIC **28** 01:25:01.4±1.9, 48.°4N±0.°1×154.°9E±0.°2, h44km±7km, mb4.5/35, Error ellipse: s-maj=21.7km s-min=10.8km az=134.0*

*IDC **28** 01:25:02.4±2.5, 48.°53N×154.°90E, h58km±22km, mb3.6/15, mbtmp4.0/20, ML4.1/5, MS3.7/44, Error ellipse: s-maj=19.9km s-min=11.7km az=139.0*

ISC 28 01:24:58.6±0.5**, 48.°20N**±0.°05×**155.°28E**±0.°05**, h27**km**, n209, σ1.ˢ92**/200**, mb4.3**/48**, MS3.8**/41**, 13C-6D, Kuril Islands**

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Code   Station Name         Δ°   AZ°    Phase ID          Time     Res
                                     Op     ISC        h  m  s    ISC
SKR    Severo-Kuril's      2.55  12  ePN    Pn      01 25 37.6 -0.5
SKR                                  eS     Sn      01 26 08.9 +0.7
SKR                                   pmax  pmax
            comp=Z,249nm,0.5s
SKR                                   smax  smax
            comp=N,677nm,0.8s
SKR                                   smax  smax
            comp=E,759nm,0.9s
SKR                                   MLR   MLR
            comp=Z,400nm,8.0s
SKR    Severo-Kuril's      2.55  12  eP     Pn      01 25 37.5 -0.6
SKR                                  eS     Sn      01 26 04.7 -3.5
SKR    Severo-Kuril's      2.55  12  eP     Pn      01 25 37.2 -0.9
SKR                                   AMB   AMB     01 25 43.4
            comp=Z,360nm,0.4s
SKR                                  eS     Sn      01 26 05.3 -2.9
SKR                                   A     A       01 26 18.7
            comp=Z,660nm,0.4s
SKR                                   A     A       01 26 18.7
            comp=Z,850nm,0.4s
SKR                                   AMS   AMS     01 26 59.1
            comp=Z,400nm,9.0s
PAU    Pauzhetka           3.42  16   PN    Pn      01 25 51.8 +1.7
PAU                                   S     Sn      01 26 29.8 +0.1
PAU    Pauzhetka           3.42  16  eP     Pn      01 25 51.8 +1.7
PAU                                  eS     Sn      01 26 29.8 +0.1
PAU    Pauzhetka           3.42  16  eP     Pn      01 25 51.2 +1.1
PAU                                   AMB   AMB     01 26 00.3
            comp=Z,230nm,0.4s
PAU                                  eS     Sn      01 26 28.6 -1.1
PAU                                   A     A       01 26 40.0
            comp=Z,860nm,0.5s
PAU                                   A     A       01 26 40.0
            comp=Z,1μm,0.5s
PAU                                   AMS   AMS     01 27 10.0
            comp=Z,2μm,13.0s
PAU                                   AMS   AMS     01 27 10.0
            comp=Z,2μm,13.0s
PAU                                   AMS   AMS     01 27 10.0
            comp=Z,1μm,13.0s
KDTR   Khodutka, Kamc      4.04  25   PN    Pn      01 25 58.3 -0.3
KDTR   Khodutka, Kamc      4.04  25  eP     Pn      01 25 58.3 -0.3
KDTR                                 eS     Sn      01 26 41.4 -3.6
MTVR   Mutnovka            4.67  22   PN    Pn      01 26 08.2 +0.7
MTVR   Mutnovka            4.67  22  eP     Pn      01 26 08.2 +0.7
MTVR                                 eS     Sn      01 26 59.7 -1.1
GRL    Gorelyy             4.71  21   PN    Pn      01 26 09.0 +1.0
GRL    Gorelyy             4.71  21  eP     Pn      01 26 09.0 +1.0
APC    Apacha              4.88  13   PN    Pn      01 26 12.4 +2.2
APC    Apacha              4.88  13  eP     Pn      01 26 12.4 +2.2
KRMR   Karymshinskiy       4.98  20   PN    Pn      01 26 12.6 +1.1
KRMR   Karymshinskiy       4.98  20  eP     Pn      01 26 12.6 +1.1
PEA0B  Petropavlovsk-      5.15  16         Pn      01 26 15.6 +1.7
PEA0B  Petropavlovsk-      5.15  16d iPN    Pn      01 26 15.2 +1.3
PETK   Petropavlovsk-      5.15  16   P     Pn      01 26 14.6 +0.7
            comp=Z,6.0nm,0.3s,baz=186,slow=14,SNR=97
PETK                                  S     Sn      01 27 08.4 -4.0
            comp=Z,19nm,0.7s,baz=171,slow=19,SNR=1.8
PETK                                  LR    LR      01 28 28.2
            comp=Z,888nm,18.9s,baz=189,slow=42
            comp=Z,41nm,0.7s
PETK   Petropavlovsk-      5.15  16         Pn      01 26 14.2 +0.3
PET    Petropavlovsk       5.29  23         Pn      01 26 15.9 +0.1
PET    Petropavlovsk       5.29  23  ePN    Pn      01 26 15.8 +0.1
PET                                   MLR   MLR
            comp=Z,300nm,12.0s
PET    Petropavlovsk       5.29  23  eS     Sn      01 27 12.6 -3.1
PET    Petropavlovsk       5.29  23  eP     Pn      01 26 15.8 +0.1
PET                                   AMB   AMB     01 26 18.7
            comp=Z,230nm,0.4s
PET                                  eS     Sn      01 27 13.6 -2.1
PET                                   A     A       01 27 22.3
            comp=Z,140nm,0.4s
PET                                   A     A       01 27 22.3
            comp=Z,150nm,0.4s
PET                                   AMS   AMS     01 28 03.1
            comp=Z,300nm,12.0s
DALK   Dalny               5.32  23   PN    Pn      01 26 16.4 +0.2
DALK   Dalny               5.32  23  eP     Pn      01 26 16.4 +0.2
DALK                                 eS     Sn      01 27 14.1 -2.4
UGLR   Uglovaya            5.50  23   PN    Pn      01 26 21.1 +2.4
UGLR   Uglovaya            5.50  23  eP     Pn      01 26 21.1 +2.4
KOK    Koryaka             5.53  21   PN    Pn      01 26 20.6 +1.5
KOK    Koryaka             5.53  21  eP     Pn      01 26 20.6 +1.5
KOK    Koryaka             5.53  21  eP     Pn      01 26 20.6 +1.5
AVH    Avacha              5.53  22   PN    Pn      01 26 20.6 +1.5
AVH    Avacha              5.53  22  eP     Pn      01 26 20.6 +1.5
SMAR   Somma               5.54  22   PN    Pn      01 26 20.8 +1.3
SMAR   Somma               5.54  22  eP     Pn      01 26 20.8 +1.3
KRER   Koryakskii          5.56  22   PN    Pn      01 26 21.5 +1.8
KRER   Koryakskii          5.56  22  eP     Pn      01 26 21.5 +1.8
KRX    Arik                5.59  21   PN    Pn      01 26 21.4 +1.3
KRX    Arik                5.59  21  eP     Pn      01 26 21.4 +1.3
GNL    Ganaly              5.75  16   PN    Pn      01 26 23.8 +1.5
GNL    Ganaly              5.75  16  eP     Pn      01 26 23.8 +1.5
SPN    Mys Shipunski       5.76  30   PN    Pn      01 26 22.0 -0.2
SPN    Mys Shipunski       5.76  30  eP     Pn      01 26 22.0 -0.2
SPN                                  eS     Sn      01 27 24.7 -2.6
SPN    Mys Shipunski       5.76  30  eP     Pn      01 26 22.0 -0.2
KUR    Kuril'sk            5.90 243c iPN    Pn      01 26 27.5 +3.4
KUR                                  i S    Sn      01 27 33.9 +3.1
KUR                                   pmax  pmax
            comp=N,102nm,0.3s
KUR                                   pmax  pmax
            comp=Z,277nm,0.3s
KUR                                   pmax  pmax
            comp=E,28nm,0.4s
KUR                                   smax  smax
            comp=N,177nm,0.5s
KUR                                   smax  smax
            comp=E,106nm,0.5s
KUR    Kuril'sk            5.90 243  i P    Pn      01 26 26.5 +2.4
KUR                                   AMB   AMB     01 26 28.3
            comp=E,100nm,0.4s
KUR                                   AMB   AMB     01 26 28.3
            comp=E,30nm,0.4s
KUR                                   AMB   AMB     01 26 28.3
            comp=E,280nm,0.4s
KUR                                  i S    Sn      01 27 31.7 +0.9
KUR                                   A     A       01 27 42.3
            comp=E,180nm,0.4s
KUR                                   A     A       01 27 42.3
            comp=E,110nm,0.4s
KUR                                   AMS   AMS     01 28 51.9
            comp=E,1μm,14.0s
KUR                                   AMS   AMS     01 28 51.9
            comp=E,1μm,14.0s
KUR                                   AMS   AMS     01 28 51.9
            comp=E,1μm,14.0s
SHO    Shikotan            7.30 237c iPN    Pn      01 26 42.6 -0.8
SHO                                   pmax  pmax
            comp=N,22nm,0.3s
SHO                                   pmax  pmax
            comp=E,40nm,0.3s
SHO                                   pmax  pmax
            comp=Z,63nm,0.3s
SHO    Shikotan            7.30 237  i P    Pn      01 26 42.9 -0.5
SHO                                   AMB   AMB     01 26 46.4
            comp=Z,20nm,0.3s
SHO                                   AMB   AMB     01 26 46.4
            comp=Z,40nm,0.3s
SHO                                   AMB   AMB     01 26 46.4
            comp=Z,60nm,0.3s
SHO                                   AMB   AMB     01 26 53.1
            comp=Z,1μm,5.5s
SHO                                  eS     Sn      01 28 01.3 -4.0
SHO                                   A     A       01 28 14.0
            comp=Z,1μm,6.0s
SHO                                   A     A       01 28 14.0
            comp=Z,650nm,6.0s
MKZ    Mys Kozlova         7.54  30   PN    Pn      01 26 45.7 -0.8
MKZ    Mys Kozlova         7.54  30  eP     Pn      01 26 45.7 -0.8
TUMR   Tumrok              7.71  21   PN    Pn      01 26 52.1 +3.0
TUMR   Tumrok              7.71  21  eP     Pn      01 26 52.1 +3.0
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YUK	Yuzh-Kuril'sk	7.75	241	ePN	Pn	01 26 50.7	+1.1
YUK				pmax	pmax		
	comp=Z,169nm,0.4s						
YUK				pmax	pmax		
	comp=Z,254nm,1.1s						
YUK	Yuzh-Kuril'sk	7.75	241	eP	Pn	01 26 51.2	+1.6
YUK				AMB	AMB	01 26 52.1	
	comp=Z,170nm,0.4s						
YUK				AMB	AMB	01 26 52.1	
	comp=Z,300nm,1.1s						
YUK				eS	Sn	01 28 16.0	-0.5
YUK				A	A	01 28 22.0	
	comp=Z,1µm,4.0s						
YUK				A	A	01 28 22.0	
	comp=Z,920nm,4.0s						
YUK				AMS	AMS	01 29 58.0	
	comp=Z,2µm,13.0s						
YUK				AMS	AMS	01 29 58.0	
	comp=Z,2µm,13.0s						
YUK				AMS	AMS	01 29 58.0	
	comp=Z,970nm,13.0s						
RUSJ	Misakicho	8.08	243	ePN	Pn	01 26 56.9	+2.8
RUSJ				eS	Sn	01 28 28.7	+4.3
NMR	Nemuro--Hokkai	8.24	238	⇑iPN	Pn	01 26 55.1	-1.1
NMR	Nemuro--Hokkai	8.24	238	i P	Pn	01 26 55.1	-1.1
NMR				eS	Sn	01 28 23.6	-4.7
YSS	Yuzh-Sakhalins	8.56	266	ePN	Pn	01 27 03.9	+3.2
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				MLR	MLR		
	comp=Z,500nm,15.0s						
YSS	Yuzh-Sakhalins	8.56	266	eP	Pn	01 27 03.0	+2.3
YSS				AMB	AMB	01 27 05.1	
	comp=Z,20nm,0.4s						
YSS				AMB	AMB	01 27 06.4	
	comp=Z,220nm,4.0s						
YSS				eS	Sn	01 28 34.7	-1.6
YSS				A	A	01 28 43.3	
	comp=Z,10.0nm,0.7s						
YSS				A	A	01 28 43.3	
	comp=Z,10.0nm,0.7s						
YSS				A	A	01 28 45.0	
	comp=Z,160nm,5.0s						
YSS				A	A	01 28 45.0	
	comp=Z,170nm,5.0s						
YSS				AMS	AMS	01 31 00.0	
	comp=Z,500nm,15.0s						
TYV	Tymovskoe	8.63	293	ePN	Pn	01 27 03.2	+1.5
TYV				pmax	pmax		
	comp=Z,16nm,0.8s						
TYV				pmax	pmax		
	comp=Z,200nm,4.7s						
TYV				MLR	MLR		
	comp=Z,700nm,18.0s						
TYV	Tymovskoe	8.63	293	eP	Pn	01 27 03.6	+1.9
TYV				AMB	AMB	01 27 06.3	
	comp=Z,20nm,0.8s						
TYV				AMB	AMB	01 27 08.4	
	comp=Z,200nm,4.7s						
TYV				eS	Sn	01 28 35.8	-2.3
TYV				A	A	01 28 36.0	
	comp=Z,30nm,0.9s						
TYV				A	A	01 28 36.0	
	comp=Z,20nm,0.9s						
TYV				A	A	01 28 37.5	
	comp=Z,150nm,5.5s						
TYV				A	A	01 28 37.5	
	comp=Z,200nm,5.5s						
TYV				AMS	AMS	01 30 31.0	
	comp=Z,700nm,18.0s						
UGL	Uglegorsk	8.80	281	ePN	Pn	01 27 08.3	+4.4
UGL				e		01 28 51.6	
UGL				pmax	pmax		
	comp=Z,80nm,0.8s						
UGL	Uglegorsk	8.80	281	eP	Pn	01 27 06.2	+2.3
UGL				AMB	AMB	01 27 16.1	
	comp=Z,20nm,0.6s						
UGL				eS	Sn	01 28 41.0	-1.1
OKH	Okha	9.46	309	eP	Pn	01 27 14.3	+1.3
OKH				AMB	AMB	01 27 26.0	
	comp=Z,10.0nm,0.6s						
OKH				AMS	AMS	01 32 14.0	
	comp=Z,500nm,15.0s						
OKH				AMS	AMS	01 32 14.0	
	comp=Z,600nm,15.0s						
OKH				AMS	AMS	01 32 14.0	
	comp=Z,500nm,15.0s						
JKA	Kamikawa-asahi	9.70	250		Pn	01 27 18.9	+2.6
JKA	Kamikawa-asahi	9.70	250	eP	Pn	01 27 18.9	+2.6
ASAJ	Asahikawa	9.70	250	P	Pn	01 27 18.8	+2.4
	comp=Z,3.1nm,0.3s,baz=76,slow=14,SNR=26						
ASAJ				S	Sn	01 29 12.0	+7.7
	comp=Z,3.3nm,0.3s,baz=211,slow=28,SNR=1.2						
	comp=Z,30nm,0.8s						
ASAJ	Asahikawa	9.70	250	PN	Pn	01 27 18.9	+2.6
ERM	Erimo	10.56	239	Pn	Pn	01 27 27.8	-0.3
ERM	Erimo	10.56	239	PN	Pn	01 27 27.8	-0.3
MA2	Magadan	11.70	349	P	Pn	01 27 42.5	-1.1
	comp=Z,0.7nm,0.3s,baz=166,slow=10.0,SNR=4.4						
MA2				LR	LR	01 32 35.1	
	comp=Z,321nm,19.0s,baz=179,slow=40						
	comp=Z,2.1nm,0.3s						
GRNR	Gornyy	12.53	289	⇑iPN	Pn	01 27 57.3	+2.3
GRNR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,120nm,15.0s						
GRNR				MLR	MLR		
	comp=N,170nm,19.0s						
GRNR				MLR	MLR		
	comp=Z,220nm,14.0s						
GRNR	Gornyy	12.53	289	i P	Pn	01 27 57.3	+2.3
GRNR				AMB	AMB	01 27 58.5	
GRNR				AMS	AMS	01 32 57.0	
	comp=Z,200nm,16.0s						
GRNR				AMS	AMS	01 32 57.0	
	comp=Z,100nm,16.0s						
GRNR				AMS	AMS	01 32 57.0	
	comp=Z,200nm,16.0s						
JTM	Tenmabayashi	12.55	239	Pn	Pn	01 27 52.3	-3.1
SHEM	Shemya Is, Ala	12.81	62	LR	LR	01 33 25.3	
	comp=Z,76nm,18.9s,baz=302,slow=39						
SEY	Seymchan	14.86	355	P	Pn	01 28 25.7	-0.9
	comp=Z,0.2nm,0.3s,baz=155,slow=14,SNR=6.3						
	comp=Z,1.5nm,0.6s						
SEY	Seymchan	14.86	355	ceP	Pn	01 28 28.1	+1.5
SEY				pmax	pmax		
	comp=Z,14nm,2.3s						
KLR	Kul'dur	15.56	283	P	Pn	01 28 36.9	+1.0
	comp=Z,5.2nm,1.1s,baz=81,slow=12,SNR=9.3						
KLR				LR	LR	01 34 50.0	
	comp=Z,160nm,18.4s,baz=64,slow=38						
KLR	Kul'dur	15.56	283	deP	Pn	01 28 38.0	+2.1
KLR				pmax	pmax		
	comp=Z,21nm,1.7s						
KLR	Kul'dur	15.56	283	eP	Pn	01 28 33.5	-2.4
USA0B	Ussuriysk Arra	16.59	265		Pn	01 28 49.5	+0.3
USA0B	Ussuriysk Arra	16.59	265	P	Pn	01 28 49.5	+0.3
USA0B				pmax	pmax		
	comp=Z,4.0nm,0.7s						
USRK	Ussuriysk Ar.	16.59	265	P	Pn	01 28 49.1	-0.1
	comp=Z,0.3nm,0.3s,baz=153,slow=43,SNR=3.4						
	comp=Z,4.4nm,0.8s						
USRK	Ussuriysk Ar.	16.59	265	P	Pn	01 28 48.7	-0.5
USRK	Ussuriysk Ar.	16.59	265	P	Pn	01 28 48.7	-0.5
MJAR	Matsushiro Arr	17.13	233	P	Pn	01 28 52.6	-3.3
	comp=Z,4.3nm,0.8s,baz=27,slow=12,SNR=9.1						
MJAR				LR	LR	01 35 10.4	
	comp=Z,114nm,19.5s,baz=62,slow=36						
HEH	HeiHe	18.28	287	eP	P	01 29 09.8	-0.2
HEH				pmax	pmax		
	comp=Z,22nm,1.1s						
ZEA	Zeya	18.43	298	eP	P	01 29 13.5	+1.8
YAK	Yakutsk	19.96	323	LR	LR	01 37 06.7	
	comp=Z,122nm,18.3s,baz=86,slow=37						
YAK	Yakutsk	19.96	323	eP	P	01 29 28.4	0.0
YAK				pmax	pmax		
	comp=Z,23nm,0.9s						
YAK				pmax	pmax		
	comp=E,12nm,1.2s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
BILL	Bilibino	20.66	12	P	P	01 29 34.4	-1.5
BILL	Bilibino	20.66	12	⇓eP	P	01 29 34.4	-1.5
BILL				*SP	pwP	01 29 52.0	+6.4
BILL				e		01 29 57.2	
BILL				e		01 30 08.5	
BILL				S	S	01 33 26.0	+0.9
BILL				e		01 33 45.1	
BILL				SS	SnSn	01 33 48.0	+3.0
BILL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BILL				MLR	MLR		
	comp=Z,68nm,12.0s						
KSRS	Korea Array	22.64	252	P	P	01 29 54.9	-2.4
	comp=Z,4.0nm,0.7s,baz=49,slow=10,SNR=10						
KSRS				LR	LR	01 38 12.7	
	comp=Z,90nm,18.3s,baz=55,slow=35						
TJN	Taejon	23.65	250	ceP	P	01 30 08.7	+1.1
JNU	Nakatsue	23.72	240	LR	LR	01 40 33.2	
	comp=Z,62nm,18.1s,baz=47,slow=39						
TNA	Tin City	26.01	35	P	P	01 30 31.9	+3.1
TIXI	Tiksi	26.52	342	LR	LR	01 42 07.3	
	comp=Z,190nm,18.1s,baz=118,slow=39						
H11N2	WAKE ISLAND Hy	29.92	158	T	T	02 02 45.0	
	baz=345,slow=76,SNR=224						
H11N1	WAKE ISLAND Hy	29.93	158	T	T	02 02 49.2	
	baz=345,slow=76,SNR=331						
H11N3	WAKE ISLAND Hy	29.93	158	T	T	02 02 46.6	
	baz=345,slow=76,SNR=121						
H11S1	WAKE ISLAND Hy	31.04	159	T	T	02 04 11.8	
	baz=345,slow=76,SNR=3211						
H11S3	WAKE ISLAND Hy	31.05	159	T	T	02 04 12.6	
	baz=345,slow=76,SNR=4363						
H11S2	WAKE ISLAND Hy	31.06	159	T	T	02 04 13.7	
	baz=345,slow=76,SNR=1760						
A21K	Barrow	32.05	27	P	P	01 31 22.0	-0.5
A21K				IAmb	IAmb	01 31 24.0	
	comp=Z,9.7nm,0.8s						
H21K	Melozitna Rive	32.07	38	P	P	01 31 23.8	+1.1
H21K				IAmb	IAmb	01 31 24.8	
	comp=Z,3.1nm,0.8s						
SONM	Songino Array	32.26	288	P	P	01 31 22.3	-2.5
	comp=Z,0.5nm,0.8s,baz=82,slow=7.7,SNR=2.5						
SONM				LR	LR	01 45 32.5	
	comp=Z,193nm,18.8s,baz=74,slow=38						
	comp=Z,0.5nm,0.8s						
COLA	College	34.09	40	⇑eP	P	01 31 41.5	+1.2
COLA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ILAR	Eielson Array	34.50	40	P	P	01 31 42.8	-1.1
	comp=Z,0.8nm,0.8s,baz=247,slow=9.0,SNR=4.2						
	comp=Z,0.8nm,0.8s						
GUMO	Guam	35.58	198	LR	LR	01 44 22.0	
	comp=Z,69nm,20.8s,baz=94,slow=32						
NRIK	Noril'sk	38.29	328	LR	LR	01 48 29.9	
	comp=Z,57nm,18.0s,baz=102,slow=37						
INK	Inuvik	39.63	33	P	P	01 32 25.8	-1.6
	comp=Z,1.4nm,0.7s,baz=278,slow=7.7,SNR=7.9						
	comp=Z,1.4nm,0.7s						
A36M	Sachs Harbour	41.90	27	P	P	01 32 47.4	+1.3
A36M				IAmb	IAmb	01 32 48.9	
	comp=Z,5.9nm,0.8s						
C36M	Paulatuk	42.82	31	P	P	01 32 54.8	+1.2
C36M				IAmb	IAmb	01 33 17.8	
	comp=Z,8.5nm,1.3s						
ZALV	Zalesovo Beam	42.97	305	P	P	01 32 51.3	-3.6
	comp=Z,0.4nm,0.4s,baz=61,slow=8.9,SNR=2.2						
ZALV				LR	LR	01 51 25.0	
	comp=Z,98nm,18.8s,baz=67,slow=37						
	comp=Z,0.4nm,0.4s						
DGZ	Jazzator, Alta	43.19	299	⇑iP	P	01 32 58.0	+0.9
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
EUNU	Eureka	47.41	12	P	P	01 33 30.0	0.0
EUNU				IAmb	IAmb	01 33 31.9	
	comp=Z,4.8nm,0.8s						
MK31	Makanchi Array	47.59	297	P	P	01 33 29.6	-2.2
MK31				IAmb	IAmb	01 33 32.1	
	comp=Z,2.6nm,0.9s						
MK31	Makanchi Array	47.59	297	P	P	01 33 29.6	-2.2
MK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MKAR	Makanchi Array	47.59	297	P	P	01 33 28.3	-3.4
	comp=Z,1.6nm,0.6s,baz=64,slow=8.1,SNR=24						
MKAR				LR	LR	01 54 32.2	
	comp=Z,112nm,20.0s,baz=116,slow=38						
	comp=Z,1.6nm,0.6s						
KURK	Kurchatov	47.79	303	ceP	P	01 33 33.1	-0.1
KURK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
KURK	Kurchatov	47.79	303	eP	P	01 33 33.1	-0.1
YKA	Yellowknife Ar	48.88	38	P	P	01 33 41.5	+0.1
	comp=Z,1.6nm,1.0s,baz=296,slow=7.3,SNR=15						
	comp=Z,1.6nm,1.0s						
RES	Resolute Bay	48.99	19	LR	LR	01 55 39.4	
	comp=Z,98nm,20.8s,baz=2.5,slow=38						
RES	Resolute Bay	48.99	19	P	P	01 33 42.9	+0.8
RES				IAmb	IAmb	01 33 44.1	
	comp=Z,2.8nm,0.8s						
RES	Resolute Bay	48.99	19	P	P	01 33 42.9	+0.8
RES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BVAR	Borovoye Array	51.08	309	LR	LR	01 57 05.3	
	comp=Z,118nm,19.4s,baz=69,slow=38						
BRVK	Borovoye	51.11	309	⇑eP	P	01 33 58.2	-0.4
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRVK	Borovoye	51.11	309	eP	P	01 33 58.2	-0.4
PHRA	Phrae	53.27	256	P	P	01 34 16.0	+1.0
NEEM	North Greenlan	53.55	7	i P	P	01 34 11.6	-5.2
NEEM				IAmb	IAmb	01 34 17.1	
	comp=Z,6.9nm,0.9s						
CMAR	Chiang Mai Arr	54.13	257	P	P	01 34 20.6	-0.7
	comp=Z,1.2nm,0.3s,baz=32,slow=7.4,SNR=8.6						
CMAR				LR	LR	01 58 40.6	
	comp=Z,40nm,18.4s,baz=60,slow=37						
	comp=Z,1.2nm,0.3s						
CMAR	Chiang Mai Arr	54.13	257	P	P	01 34 21.4	+0.1
CMAR	Chiang Mai Arr	54.13	257	ceP	P	01 34 22.1	+0.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AAK	Ala-Archa	54.50	297	LR	LR	01 58 48.9	
	comp=Z,85nm,18.4s,baz=37,slow=37						
AAK	Ala-Archa	54.50	297	⇓eP	P	01 34 24.1	+0.1
AAK				pmax	pmax		
	comp=Z,6.0nm,2.5s						
AAK	Ala-Archa	54.50	297	eP	P	01 34 24.1	+0.1
ARU	Arti	54.94	318	LR	LR	01 58 09.4	
	comp=Z,49nm,20.6s,baz=140,slow=36						
ARU	Arti	54.94	318	d iP	P	01 34 28.9	+2.2
ARU						01 36 28.3	
ARU				S	S	01 42 10.5	+4.2
ARU				SS	SS	01 45 51.7	+2.5
ARU				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ARU	Arti	54.94	318	i P	P	01 34 28.9	+2.2
KULLO	Kullorsuaq	55.59	10	i P	P	01 34 29.5	-1.6
ARCES	ARCESS Array B	56.96	341	LR	LR	02 03 00.9	
	comp=Z,130nm,18.9s,baz=50,slow=40						
KIRV	Kirov	57.50	323	LR	LR	02 00 09.9	
	comp=Z,50nm,21.5s,baz=31,slow=37						
HNR	Honiara	57.53	175	LR	LR	01 56 09.3	
	comp=Z,745nm,21.4s,baz=16,slow=32						
PLID	Pearl Lake	57.64	57	P	P	01 34 48.4	+1.9
PLID				IAmb	IAmb	01 35 00.0	
	comp=Z,6.3nm,1.0s						
ABKAR	Akbulak array	58.62	310	P	P	01 34 51.5	-1.5
AKTO	Aktyubinsk	58.85	312	LR	LR	02 00 06.2	
	comp=Z,50nm,19.7s,baz=209,slow=36						
SUMG	Summit	59.14	5	i P	P	01 34 55.4	-1.3
SUMG				IAmb	IAmb	01 34 58.6	
	comp=Z,7.6nm,1.0s						
BOZ	Bozeman (W)	59.74	54	P	P	01 35 02.6	+1.7
BOZ				IAmb	IAmb	01 35 14.8	
	comp=Z,7.2nm,1.1s						
BOZ	Bozeman (W)	59.74	54	P	P	01 35 02.6	+1.7
BOZ				pmax	pmax		
	comp=Z,7.0nm,1.2s						
RLMT	Red Lodge	61.32	53	P	P	01 35 13.7	+1.9
RLMT				IAmb	IAmb	01 35 26.2	
	comp=Z,10nm,1.4s						
ICESG	Greenland Ices	62.51	6	i P	P	01 35 17.3	-2.2
PDAR	Pinedale Array	62.71	56	P	P	01 35 20.6	-0.6
	comp=Z,1.1nm,0.9s,baz=314,slow=3.3,SNR=7.3						
	comp=Z,1.1nm,0.9s						
FRB	Frobisher Bay	63.19	20	LR	LR	02 05 22.1	
	comp=Z,60nm,18.2s,baz=358,slow=38						
FINES	FINESS Array B	63.34	335	P	P	01 35 21.8	-2.9
	comp=Z,1.2nm,0.5s,baz=31,slow=7.3,SNR=10						
FINES				LR	LR	02 05 20.6	
	comp=Z,118nm,19.0s,baz=20,slow=38						
	comp=Z,1.2nm,0.5s						
FINES	FINESS Array B	63.34	335	i P	P	01 35 24.3	-0.5
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
RDMU	Red Mountain	64.17	57	P	P	01 35 31.3	+0.5
RDMU				IAmb	IAmb	01 35 44.9	
	comp=Z,6.5nm,0.9s						
RSSD	Black Hills	64.77	51	P	P	01 35 36.4	+1.7
RSSD	Black Hills	64.77	51	P	P	01 35 36.4	+1.7
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.6s						
OBN	Obninsk	64.93	326	⇑eP	P	01 35 35.9	+0.6
OBN				e*PP	pwP	01 35 47.8	+2.5
OBN				*SP	sP	01 35 54.0	+8.2
OBN						01 36 10.0	
OBN				S	S	01 44 10.0	-4.8
OBN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,81nm,19.0s						
OBN	Obninsk	64.93	326	eP	P	01 35 35.9	+0.6
GEYT	Alibeck	67.11	302	P	P	01 35 47.9	-1.8
	comp=Z,0.4nm,0.5s,baz=49,slow=15,SNR=1.2						
GEYT				LR	LR	02 07 15.1	
	comp=Z,72nm,20.0s,baz=118,slow=38						
	comp=Z,0.4nm,0.5s						
NOA	NORSAR Array B	67.32	342	P	P	01 35 47.6	-3.0
	comp=Z,0.8nm,1.1s,baz=28,slow=6.2,SNR=1.8						
NOA				LR	LR	02 09 38.4	
	comp=Z,58nm,19.4s,baz=25,slow=40						
	comp=Z,0.8nm,1.1s						
HFS	Hagfors	67.60	340	LR	LR	02 08 32.4	
	comp=Z,53nm,20.4s,baz=29,slow=39						
ECSD	EROS Data Cent	68.82	48	P	P	01 36 00.9	+0.6
ECSD				IAmb	IAmb	01 36 01.8	
	comp=Z,3.5nm,0.8s						
ANMO	Albuquerque	69.83	60	⇓eP	P	01 36 08.4	+1.5
ANMO				pmax	pmax		
	comp=Z,7.0nm,2.5s						
WB0	Warramunga Arr	70.19	201	P	P	01 36 09.7	+0.8
WRAB	Tennant Creek	70.36	201	ceP	P	01 36 11.4	+1.5
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WB2	Warramunga Arr	70.37	201	P	P	01 36 10.7	+0.8
WRA	Warramunga Arr	70.38	201	P	P	01 36 10.3	+0.3
	comp=Z,4.0nm,0.9s,baz=16,slow=6.5,SNR=20						
WRA				LR	LR	02 06 36.0	
	comp=Z,36nm,20.1s,baz=76,slow=35						
	comp=Z,4.0nm,0.9s						
WRA	Warramunga Arr	70.38	201	P	P	01 36 10.3	+0.3
KIV	Kislovodsk	70.83	315	eP	P	01 36 10.2	-2.5
KIV				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,39nm,18.0s						
KBZ	Khabaz	70.90	315	LR	LR	02 10 04.3	
	comp=Z,67nm,18.4s,baz=30,slow=38						
FITZ	Fitzroy Crossi	71.12	210	P	P	01 36 16.0	+1.5
AKASG	Malin Array Be	71.14	327	LR	LR	02 09 08.7	
	comp=Z,59nm,18.0s,baz=46,slow=37						
SCHQ	Schefferville	71.39	24	P	P	01 36 15.1	-0.8
	comp=Z,1.7nm,0.7s,baz=274,slow=8.9,SNR=3.8						
SCHQ				LR	LR	02 10 43.9	
	comp=Z,68nm,18.6s,baz=108,slow=38						
	comp=Z,1.7nm,0.7s						
SCHQ	Schefferville	71.39	24	P	P	01 36 14.4	-1.4
SCHQ				IAmb	IAmb	01 36 47.5	
	comp=Z,15nm,1.4s						
GNI	Garni	72.70	311	LR	LR	02 10 53.5	
	comp=Z,59nm,20.2s,baz=28,slow=38						
ASAR	Alice Springs	74.06	200	P	P	01 36 33.4	+1.4
	comp=Z,1.7nm,0.8s,baz=10,slow=5.1,SNR=11						
	comp=Z,1.7nm,0.8s						
BUR08	Bucovina Ar. S	75.15	328	P	P	01 36 36.6	-1.7
BUR08				IAmb	IAmb	01 36 46.1	
	comp=Z,6.4nm,1.4s						
BURAR	Bucovina Array	75.17	328	P	P	01 36 36.5	-1.9
TX31	Lajitas Ar. Si	75.51	62	P	P	01 36 41.8	+1.2
TX32	Lajitas Array	75.51	62	P	P	01 36 41.8	+1.2
TX32				IAmb	IAmb	01 36 55.0	
	comp=Z,5.9nm,1.4s						
TXAR	Lajitas Array	75.51	62	P	P	01 36 42.0	+1.5
	comp=Z,15nm,0.3s,baz=301,slow=4.4,SNR=9.5						
CLL	Collm	75.74	337	i P	P	01 36 40.6	-0.8
CLL	Collm	75.74	337	i P	P	01 36 40.6	-0.8
FVM	French Village	76.23	48	P	P	01 36 44.6	+0.1
FVM	French Village	76.23	48	P	P	01 36 44.6	+0.1
FVM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
VRAC	Vranov	76.53	334	LR	LR	02 13 21.8	
	comp=Z,110nm,19.4s,baz=7.0,slow=38						
MLR	Muntele Rosu	76.70	326	LR	LR	02 15 58.6	
	comp=Z,51nm,18.1s,baz=96,slow=40						
FCAR	Ozark Folk Cen	76.99	50	P	P	01 36 48.7	-0.1
FCAR				IAmb	IAmb	01 36 49.4	
	comp=Z,2.7nm,0.5s						
MIAR	Mount Ida	77.27	52	P	P	01 36 50.5	+0.1
MIAR				IAmb	IAmb	01 37 02.6	
	comp=Z,12nm,1.5s						
MIAR	Mount Ida	77.27	52	P	P	01 36 50.5	+0.1
MIAR				pmax	pmax		
	comp=Z,12nm,1.5s						
WSAR	Wadi Sarin	77.27	291	LR	LR	02 14 21.8	
	comp=Z,48nm,19.7s,baz=67,slow=38						
D62A	Allapoint, All	77.55	29	P	P	01 36 51.9	+0.2
GERES	GERESS Array B	77.78	335	P	P	01 36 52.2	-0.9
	comp=Z,0.4nm,0.5s,baz=51,slow=6.4,SNR=5.0						
GERES				LR	LR	02 14 09.7	
	comp=Z,93nm,19.3s,baz=54,slow=38						
	comp=Z,0.4nm,0.5s						
E62A	Clayton Lake	77.80	30	P	P	01 36 53.1	0.0
WVNY	West Valley, N	78.03	38	P	P	01 36 53.6	-0.9
PRED	Cave del Predi	80.00	334	P	P	01 37 03.5	-1.8
PRED				IAmb	IAmb	01 37 05.3	
	comp=Z,6.0nm,1.2s						
ALN	Alexandroupoli	80.56	323	P	P	01 37 05.5	-2.8
ALN				IAmb	IAmb	01 37 49.3	
	comp=Z,10.0nm,1.2s						
ALN	Alexandroupoli	80.56	323	P	P	01 37 05.5	-2.8
ALN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
DAVOX	Davos/Dischmat	80.71	337	LR	LR	02 16 18.1	
	comp=Z,52nm,19.7s,baz=20,slow=38						
RAO	Raoul Island	80.76	156	LR	LR	02 05 59.0	
	comp=Z,96nm,21.8s,baz=268,slow=30						
IDI	Anoyia	85.83	321	LR	LR	02 20 23.2	
	comp=Z,24nm,18.1s,baz=59,slow=39						
EIL	Elat	85.87	311	LR	LR	02 19 31.8	
	comp=Z,50nm,19.4s,baz=54,slow=38						
VAE	Valguarnera	87.85	330	LR	LR	02 20 00.9	
	comp=Z,36nm,21.0s,baz=145,slow=38						
ESDC	Sonseca Array	90.59	344	LR	LR	02 25 39.2	
	comp=Z,45nm,18.3s,baz=41,slow=40						
MDT	Midelt	97.36	343	LR	LR	02 29 43.2	
	comp=Z,39nm,18.3s,baz=356,slow=40						
CPUP	Villa Florida	146.47	61	PKPbc	PKPbc	01 44 37.6	+0.5
	comp=Z,0.6nm,0.5s,baz=41,slow=6.0,SNR=2.8						
PLCA	Paso Flores	146.86	94	PKPbc	PKPbc	01 44 38.4	+0.4
	comp=Z,2.1nm,1.0s,baz=303,slow=4.7,SNR=4.9						

TIF ***28*** *01:45:41.7, 43°.25N×45°.11E, h10^{km}±1^{km}*
MOS ***28*** *01:45:41.5±0.0, 43°.17N×45°.14E, h12^{km}, MPVA4.1*
NORS ***28*** *01:45:41.6±0.0, 43°.16N×45°.14E, h12^{km}, MPVA4.2*
DRS ***28*** *01:45:43.0±0.0, 43°.11N×45°.02E, h16^{km}*
ISC 28 01:45:43.4±0.9**, 43°.19N**±0°.02×**45°.14E**±0°.01**, h13**^{km}±6^{km}**,**
n112, σ1§22/206**, 11C-9D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMGR	Komgaron	0.24	237	ePg	Pg	01 45 47.7	-0.8
KMGR				eSg	Sg	01 45 52.7	+0.8
KMGR	Komgaron	0.24	237	ePG	Pg	01 45 47.7	-0.8
KMGR				eS	Sg	01 45 52.7	+0.8
VLKR	Vladikavkaz	0.36	248	ePg	Pg	01 45 50.4	-0.3
VLKR				eSg	Sb	01 45 57.4	0.0
VLKR	Vladikavkaz	0.36	248	ePG	Pg	01 45 50.4	-0.3
VLKR				eS	Sb	01 45 57.4	0.0
BTKR	Batakoyurt	0.47	293	ePg	Pg	01 45 51.8	-1.0
BTKR				eSg	Sb	01 46 02.8	+2.2
BTKR	Batakoyurt	0.47	293	ePG	Pg	01 45 52.3	-0.4
BTKR				eS	Sb	01 46 02.8	+2.2
GROC	Groznyy	0.48	88	ePg	Pb	01 45 53.7	0.0
	28nm,0.9s						
GROC				eSg	Sb	01 46 01.7	+1.0
	558nm,0.2s						

GROC	Groznyy	0.48	88	ePG	Pg	01 45 53.2	+0.3
GROC				e		01 45 59.5	
GROC				smax	smax		
	comp=N,836nm,0.5s						
GROC				smax	smax		
	comp=E,732nm,0.6s						
SHTL	Shatili	0.53	179	ePg	Pb	01 45 54.1	-0.6
SHTL				eSg	Sb	01 46 02.6	+0.4
SHTL	Shatili	0.53	179	PG	Pb	01 45 54.1	-0.6
SHTL				S	Sb	01 46 02.6	+0.4
SHTL	Shatili	0.53	179	P	Pb	01 45 54.1	-0.6
SHTL				S	Sb	01 46 02.6	+0.4
TRKR	Terskaya	0.61	331	ePg	Pg	01 45 55.5	+0.1
TRKR				eSg	Sb	01 46 05.8	+1.2
TRKR	Terskaya	0.61	331	ePG	Pg	01 45 55.5	+0.1
TRKR				eS	Sb	01 46 05.8	+1.2
ARNR	Ardon	0.62	270	ePg	Pg	01 45 55.1	-0.5
ARNR				eSg	Sn	01 46 07.1	-0.8
ARNR	Ardon	0.62	270	ePG	Pb	01 45 56.4	+0.2
ARNR				eS	Sn	01 46 08.3	+0.4
PNSH	Pansheti	0.67	215	ePg	Pg	01 45 56.2	-0.3
PNSH				eSg	Sb	01 46 06.3	-0.1
PNSH	Pansheti	0.67	215	PG	Pg	01 45 56.2	-0.3
PNSH				S	Sb	01 46 06.3	-0.1
PNSH	Pansheti	0.67	215	P	Pg	01 45 56.2	-0.3
PNSH				S	Sb	01 46 06.3	-0.1
LACR	Lac	0.71	240	ePg	Pg	01 45 57.0	-0.3
LACR				eSg	Sb	01 46 07.8	+0.2
LACR	Lac	0.71	240	ePG	Pg	01 45 57.0	-0.3
LACR				eS	Sb	01 46 07.8	+0.2
KORR	Kora	0.79	263	ePg	Pg	01 45 58.7	0.0
KORR				eSg	Sn	01 46 11.3	-0.7
KORR	Kora	0.79	263	ePG	Pg	01 45 58.7	0.0
KORR				eS	Sn	01 46 11.3	-0.7
STDR	Stavd-Durt	0.81	283	i Pg	Pg	01 45 59.4	+0.4
STDR				eSg	Sb	01 46 11.0	+0.9
STDR	Stavd-Durt	0.81	283	⇑iPG	Pg	01 45 59.4	+0.4
STDR				eS	Sn	01 46 13.1	+0.7
PRTR	Priterechnaya	0.84	313	ePg	Pg	01 45 59.4	-0.2
PRTR				eSg	Sn	01 46 13.5	+0.2
PRTR	Priterechnaya	0.84	313	ePG	Pg	01 45 59.4	-0.2
PRTR				eS	Sn	01 46 13.4	+0.2
PRTR				pmax	pmax		
	comp=Z,136nm,0.2s						
GUDG	Gudauri	0.87	214	ePg	Pg	01 45 59.6	-0.6
GUDG				eSg	Sb	01 46 12.6	+0.5
GUDG	Gudauri	0.87	214	PG	Pg	01 45 59.7	-0.6
GUDG				S	Sb	01 46 12.6	+0.5
GUDG	Gudauri	0.87	214	P	Pg	01 45 59.6	-0.6
GUDG				S	Sb	01 46 12.6	+0.5
BTLR	Botlikh	0.95	123	i Pg	Pg	01 46 00.8	-0.9
	comp=Z,317nm,0.2s						
BTLR				eSg	Sb	01 46 14.3	-0.1
	comp=Z,54nm,0.1s						
BTLR	Botlikh	0.95	123	d iPG	Pg	01 46 00.7	-1.1
BTLR				eS	Sn	01 46 15.6	-0.5
LSNR	Lesken	0.96	276	ePg	Pb	01 46 01.9	-0.1
LSNR				eSg	Sn	01 46 17.6	+1.3
LSNR	Lesken	0.96	276	ePG	Pb	01 46 01.9	-0.1
LSNR				pmax	pmax		
	comp=Z,77nm,0.3s						
ZEI	Tsey	0.99	247	ePg	Pg	01 46 01.2	-1.3
ZEI				i Sg	Sg	01 46 15.5	0.0
ZEI	Tsey	0.99	247	ePG	Pg	01 46 01.2	-1.3
ZEI				i S	Sg	01 46 15.5	0.0
ZEI				pmax	pmax		
	comp=Z,147nm,0.2s						
DLMR	Dylym	1.10	96	ePg	Pb	01 46 04.4	0.0
	comp=Z,558nm,0.2s						
DLMR				eSg	Sn	01 46 20.2	+0.6
	comp=Z,688nm,0.4s						
DLMR	Dylym	1.10	96	ePG	Pb	01 46 04.3	0.0
DLMR				i S	Sn	01 46 20.9	+1.3
DLMR				pmax	pmax		
	comp=Z,558nm,0.2s						
DLMR				smax	smax		
	comp=N,2μm,0.4s						
NCK	Nalchik	1.17	286	ePg	Pn	01 46 04.8	-0.6
NCK				eSg	Sn	01 46 22.8	+1.5
NCK	Nalchik	1.17	286	c iPG	Pn	01 46 04.7	-0.8
NCK				eS	Sn	01 46 22.8	+1.5
NCK				pmax	pmax		
	comp=Z,170nm,0.2s						
DIGR	Digorskoe uzhe	1.18	256	ePg	Pb	01 46 04.2	-1.5
DIGR				eSg	Sb	01 46 20.6	-0.4
DIGR	Digorskoe uzhe	1.18	256	ePG	Pb	01 46 04.0	-1.7
DIGR				eS	Sb	01 46 20.5	-0.4
DIGR				pmax	pmax		
	comp=Z,41nm,0.5s						
DBC	Dubki	1.25	97	i Pg	Pn	01 46 05.9	-0.8
	comp=Z,273nm,0.2s						
DBC				eSg	Sg	01 46 23.8	0.0
	comp=Z,340nm,0.5s						
DBC	Dubki	1.25	97	c iPG	Pn	01 46 05.9	-0.8
DBC				eS	Sg	01 46 23.7	0.0
DBC				pmax	pmax		
	comp=Z,272nm,0.2s						
UNCR	Uncukul	1.30	111	i Pg	Pn	01 46 07.0	-0.5
	comp=Z,230nm,0.3s						
UNCR				eSg	Sg	01 46 25.8	+0.3
	comp=Z,107nm,0.6s						
UNCR	Uncukul	1.30	111	⇑iPG	Pn	01 46 06.9	-0.5
UNCR				i S	Sg	01 46 26.2	+0.8
UNCR				pmax	pmax		
	comp=Z,230nm,0.3s						
UNCR				smax	smax		
	comp=E,471nm,0.5s						
HNZR	Khunzah	1.32	118	⇓iPG	Pn	01 46 07.5	-0.2
HNZR				i S	Sg	01 46 26.4	+0.5
HNZR				pmax	pmax		
	comp=Z,366nm,0.4s						
HNZR				smax	smax		
	comp=E,103nm,0.8s						
XNZR	Khunzakh	1.32	119	i Pg	Pn	01 46 07.5	-0.2
	comp=E,365nm,0.4s						
XNZR				eSg	Sg	01 46 26.0	0.0
	comp=E,252nm,0.3s						
KRNR	Karanay	1.35	105	i Pg	Pn	01 46 07.7	-0.4
	comp=E,128nm,0.4s						
KRNR				eSg	Sg	01 46 26.6	-0.2
	comp=E,187nm,0.3s						
KRNR	Karanay	1.35	105	⇓iPG	Pn	01 46 07.6	-0.4
KRNR				i S	Sg	01 46 27.2	+0.4
KRNR				pmax	pmax		
	comp=Z,128nm,0.4s						
KRNR				smax	smax		
	comp=N,235nm,0.2s						
ONI	Oni	1.37	245	ePg	Pn	01 46 07.9	-0.5
ONI				eSg	Sg	01 46 27.5	-0.2
ONI	Oni	1.37	245	PG	Pn	01 46 07.9	-0.5
ONI				S	Sg	01 46 27.5	-0.2
ONI	Oni	1.37	245	P	Pn	01 46 07.9	-0.5
ONI				S	Sg	01 46 27.5	-0.2
KBTC	Kuba-Taba	1.41	297	ePg	Pn	01 46 07.7	-1.1
KBTC				eSg	Sb	01 46 28.7	+1.2
KBTC	Kuba-Taba	1.41	297	ePG	Pn	01 46 08.1	-0.7
KBTC				eS	Sb	01 46 28.7	+1.2
SEAG	Tbilisi Sea	1.44	190	ePg	Pb	01 46 10.3	+0.1
SEAG				eSg	Sg	01 46 30.8	+1.0
SEAG	Tbilisi Sea	1.44	190	PG	Pb	01 46 10.3	+0.1
SEAG				S	Sg	01 46 30.8	+1.0
SEAG	Tbilisi Sea	1.44	190	P	Pb	01 46 10.3	+0.1
SEAG				S	Sg	01 46 30.8	+1.0
ARKR	Arakani	1.48	112	ePg	Pn	01 46 10.0	+0.1
	comp=N,1.0nm,0.4s						
ARKR				eSg	Sg	01 46 30.7	-0.4
	comp=N,938nm,0.4s						
ARKR	Arakani	1.48	112	ePG	Pn	01 46 10.0	+0.1
ARKR				i S	Sg	01 46 31.2	0.0
ARKR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARKR				smax	smax		
	comp=N,150nm,0.3s						
BUJR	Buynaksk	1.49	103	i Pg	Pb	01 46 10.6	-0.4
	comp=N,293nm,0.4s						
BUJR				eSg	Sg	01 46 32.0	+0.6
	comp=N,273nm,0.6s						
BUJR	Buynaksk	1.49	103	⇓iPG	Pb	01 46 10.5	-0.4
BUJR				i S	Sg	01 46 32.5	+1.1
BUJR				pmax	pmax		
	comp=Z,293nm,0.4s						
BUJR				smax	smax		
	comp=E,747nm,0.4s						
GNBR	Gunib	1.56	120	i Pg	Pn	01 46 11.4	+0.4
	comp=E,93nm,0.3s						
GNBR				eSg	Sg	01 46 33.1	-0.6
	comp=E,234nm,0.2s						
GNBR	Gunib	1.56	120	⇑iPG	Pn	01 46 11.3	+0.4
GNBR				i S	Sg	01 46 33.6	-0.1
GNBR				pmax	pmax		
	comp=Z,93nm,0.3s						
GNBR				smax	smax		
	comp=N,253nm,0.4s						
LGD	Lagodekhi	1.58	148	ePg	Pb	01 46 12.2	-0.2
LGD				eSg	Sg	01 46 33.4	-0.8
LGD	Lagodekhi	1.58	148	PN	Pb	01 46 12.2	-0.2
LGD				S	Sg	01 46 33.4	-0.8
LGD	Lagodekhi	1.58	148	P	Pb	01 46 12.2	-0.2
LGD				S	Sg	01 46 33.4	-0.8
KBZ	Khabaz	1.72	289	ePg	Pn	01 46 11.1	-1.9
KBZ				eSg	Sn	01 46 36.0	+1.1
KBZ	Khabaz	1.72	289	dePN	Pn	01 46 11.3	-1.7
KANR	Karaman	1.72	89	ePg	Pb	01 46 14.8	-0.1
KANR				eSg	Sb	01 46 35.9	-0.5
MAK	Makhachkala	1.75	97	ePg	Pn	01 46 13.3	-0.1
MAK				eSg	Sn	01 46 35.3	-0.3
MAK	Makhachkala	1.75	97	⇓iPN	Pn	01 46 13.9	+0.5
MAK				e		01 46 38.4	
MAK				pmax	pmax		
	comp=Z,125nm,0.3s						
MAK				smax	smax		
	comp=N,431nm,0.4s						
MAK				smax	smax		
	comp=N,533nm,0.4s						
NEY	Neytrino	1.77	273	ePg	Pn	01 46 13.3	-0.6
NEY				eSg	Sb	01 46 37.8	-0.2
NEY	Neytrino	1.77	273	c iPN	Pn	01 46 13.3	-0.6
TKB	Tkibuli	1.79	243	ePg	Pn	01 46 14.4	+0.4
TKB	Tkibuli	1.79	243	PN	Pn	01 46 14.4	+0.4
TKB				S	Sg	01 46 39.8	-1.0
TKB	Tkibuli	1.79	243	P	Pn	01 46 14.4	+0.4
TKB				S	Sg	01 46 39.8	-1.0
KMKR	Kumukh	1.79	125	ePg	Pn	01 46 14.8	+0.6
	comp=N,54nm,0.1s						
KMKR				eSg	Sb	01 46 38.3	-0.4
	comp=N,135nm,0.4s						
KMKR	Kumukh	1.79	125	ePN	Pn	01 46 14.8	+0.6
KMKR				pmax	pmax		
	comp=Z,54nm,0.1s						
TRLG	Trialeti	1.82	205	ePg	Pb	01 46 15.8	-0.8
TRLG	Trialeti	1.82	205	PN	Pb	01 46 15.8	-0.8
TRLG				S	Sg	01 46 42.2	+0.4
TRLG	Trialeti	1.82	205	P	Pb	01 46 15.8	-0.8
TRLG				S	Sg	01 46 42.2	+0.4
DDFL	Dedoflistskaro	1.89	157	ePn	Pg	01 46 19.9	+0.3
DDFL				eSn	Sg	01 46 50.9	+6.9
DDFL	Dedoflistskaro	1.89	157	PN	Pg	01 46 19.9	+0.3
DDFL				S	Sg	01 46 50.9	+6.9
DDFL	Dedoflistskaro	1.89	157	P	Pg	01 46 19.9	+0.3
DDFL				S	Sg	01 46 50.9	+6.9
SHA1	Shidzhatmaz	1.89	288	ePg	Pn	01 46 16.2	+0.6
SHA1				eSg	Sb	01 46 41.4	-0.1
SHA1	Shidzhatmaz	1.89	288	ePN	Pn	01 46 16.2	+0.6
SHA1				eS	Sb	01 46 41.4	-0.1
KIV0	Kislovodsk Arr	1.94	294	ePg	Pn	01 46 14.5	-1.7
KIV0				eSg	Sn	01 46 41.2	+0.8
KIV	Kislovodsk	1.94	294	i PN	Pn	01 46 14.7	-1.5
KIV				S	Sb	01 46 44.4	+1.5
KIV				pmax	pmax		
	comp=Z,50nm,1.2s						
SGKR	Sergokala	1.99	111	ePg	Pb	01 46 19.1	-0.5
	comp=Z,2.0nm,0.7s						
SGKR				eSg	Sg	01 46 46.5	-0.9
	comp=Z,134nm,0.4s						
SGKR	Sergokala	1.99	111	ePN	Pb	01 46 19.0	-0.5
SGKR				i S	Sg	01 46 47.1	-0.3
SGKR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SGKR				smax	smax		
	comp=N,145nm,0.5s						
AKH	Akhalkalaki	2.15	215	PN	Pb	01 46 21.4	-1.0
AKH	Akhalkalaki	2.15	215	P	Pb	01 46 21.4	-1.0
BGD	Bogdanovka	2.23	211	ePg	Pb	01 46 22.4	-1.4
BGD				eSg	Sb	01 46 50.8	-0.7
BGD	Bogdanovka	2.23	211	PN	Pb	01 46 22.4	-1.4
BGD				S	Sb	01 46 50.8	-0.7
BGD	Bogdanovka	2.23	211	P	Pb	01 46 22.4	-1.4
BGD				S	Sb	01 46 50.8	-0.7
ABS	Abastumani	2.24	231	PN	Pn	01 46 22.1	+1.8
ABS				S	Sb	01 46 52.0	+0.6
ABS	Abastumani	2.24	231	P	Pn	01 46 22.1	+1.8
ABS				S	Sb	01 46 52.0	+0.6
GOF	Gofitskoye	2.40	322	ePn	Pn	01 46 22.9	+0.4
GOF				eSn	Sn	01 46 52.5	+0.7
AKT	Akhty	2.57	131	ePN	Pn	01 46 26.8	+1.9
AKT				e		01 46 30.9	
AKT				e		01 46 34.0	
AKT				eS	Sb	01 47 00.5	-0.5
AKT				e		01 47 07.1	
AKT				e		01 47 12.4	
AKT				pmax	pmax		
	comp=Z,38nm,0.2s						
AKT				smax	smax		
	comp=N,55nm,0.4s						
AKT				smax	smax		
	comp=E,63nm,0.3s						
AKT				smax	smax		
	comp=E,53nm,0.3s						
AKT				MLR	MLR		
	comp=Z,39nm,2.0s						
DRN	Derbent	2.62	115	ePn	Pb	01 46 28.0	-2.3
DRN				eSn	Sn	01 46 55.8	-1.4
DRN	Derbent	2.62	115	i PN	Pb	01 46 28.6	-1.7
KSMR	Kasumkent	2.72	125	ePn	Pb	01 46 30.6	-1.4
KSMR				eSn	Sb	01 47 05.0	-0.3
ARXR	Arkhyz	2.84	279	ePn	Pn	01 46 29.1	+0.5
ARXR				eSn	Sn	01 47 03.3	+0.5
ARXR	Arkhyz	2.84	279	c iPN	Pn	01 46 29.1	+0.5
GNI	Garni	3.05	186	ePn	Pn	01 46 31.3	-0.2
GNI	Garni	3.05	186	cePN	Pb	01 46 36.5	-1.1
GUZR	Guzeripl'	3.73	284	ePn	Pn	01 46 41.7	+0.9
GUZR				eSn	Sn	01 47 25.0	+0.3
GUZR	Guzeripl'	3.73	284	⇑ePN	Pn	01 46 40.4	-0.4
AKTO	Aktyubinsk	11.41	46	⇓Pn	Pn	01 48 26.5	+0.5
	comp=Z,1.5nm,1.1s						
AKTO				⇓Sn	Sn	01 50 28.0	-5.3
	comp=Z,1.3nm,0.8s						
AB31	Akbulak array	11.91	54	Pn	Pn	01 48 33.0	+0.2
	comp=Z,0.3nm,0.5s,baz=261,slow=38,SNR=14						
AB31				⇑Sn	Sn	01 50 34.0	-12
	comp=Z,0.5nm,0.5s,baz=238,slow=17,SNR=4.7						
BRVK	Borovoye	19.38	51	⇓eP	Pn	01 50 10.7	+0.8
BRVK				pmax	pmax		
	comp=Z,6.0nm,3.0s						
KURK	Kurchatov	23.91	60	⇑eP	P	01 50 59.4	+2.7

DJA 28 02:10:37.5±0.7**,8°S**±5°×**10°7E**±°**,h24**^{km}±5^{km}**,M4.2**/15**,**
mb4.8/2**,MLv4.0**/15**,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNJI	Cibinong	0.56	4	P	Pn	02 10 50.3	+0.3
CNJI				S	Sn	02 10 58.8	+0.3
SKJI	Sukabumi	1.01	328	P	Pb	02 10 56.6	+0.3
SKJI				S	Sn	02 11 10.3	+0.7
CMJI	Cimerak	1.35	86	P	Pn	02 10 59.9	-0.9
CGJI	Cibinong	1.86	312	P	Pn	02 11 07.6	-0.4
KPJI	Karang Pucung	1.90	74	P	Pn	02 11 09.1	+0.7
SBJI	Serang	1.98	331	P	Pn	02 11 09.4	-0.2
YOGI	Yogyakarta	3.18	89	P	Pn	02 11 26.1	+0.1
UGM	Wanagama	3.40	91	P	Pn	02 11 29.1	0.0
SMRI	Semarang	3.42	76	P	Pn	02 11 30.3	+0.9
KASI	Kota Agung	3.47	312	P	Pn	02 11 30.0	-0.1
PWJI	Pagerwojo	4.67	92	P	Pn	02 11 46.7	+0.1
MNAI	Manna	5.39	310	P	Pn	02 11 56.0	-0.5
	150nm,1.3s,0.8nm						
GRJI	Gresik	5.43	80	P	Pn	02 11 56.7	-0.3

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*IDC **28** 02:11:56.0±1.6, 55°.22N×164°.15E, h0^{km}, mb3.4/5, mbtmp3.3/6, ML2.5/1, Error ellipse: s-maj=65.4km s-min=22.0km az=158.0*

*KRSC **28** 02:11:57.2±1.6, 55°.03N×164°.30E, h49^{km}±30^{km}, Ml3.9*

ISC 28 02:11:58.7±1.7**,55°.04N**±0°.04×**164°.42E**±0°.06**,h25**^{km}±15^{km}**,**
n49,σ**1§62**/71**,mb3.5**/5**,Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.91	79	eP	Pb	02 12 15.7	-0.1
BKI				eS	Sb	02 12 27.5	+0.1
KBTR	Krutoberegovo	1.48	323	eP	Pn	02 12 21.4	-2.4
KBTR				eS	Sn	02 12 38.4	-3.9
KBG	Krutoberegovo	1.56	322	eP	Pn	02 12 22.5	-2.3
KBG				eS	Sn	02 12 40.0	-4.2
MKZ	Mys Kozlova	1.63	254	eP	Pn	02 12 24.7	-1.1
MKZ				eS	Sn	02 12 42.9	-3.0
SMKR	Semkarok	2.27	314	eP	Pn	02 12 34.7	0.0
SMKR				eS	Sn	02 13 00.8	-1.1
BZGR	Bezymyannyi-Gr	2.30	295	eP	Pn	02 12 35.2	+0.1
BZGR				eS	Sn	02 13 02.9	+0.2
TUMD	Tumrok D	2.31	276	eP	Pn	02 12 35.1	-0.1
TUMD				eS	Sn	02 13 01.1	-1.8
CIRR	Tsirk	2.34	299	eP	Pn	02 12 36.9	+1.1
LGNR	Loginova	2.36	298	eP	Pn	02 12 36.8	+0.7
BZP	Bezymyannyi-Pe	2.37	293	eP	Pn	02 12 36.2	0.0
BZP				eS	Sn	02 13 03.6	-1.0
BZMR	Bezymyannaya	2.41	293	eP	Pn	02 12 36.9	+0.2
BZMR				eS	Sn	02 13 05.7	+0.3
BZWR	Bezymyannyi-We	2.42	294	eP	Pn	02 12 37.0	+0.3
BZWR				eS	Sn	02 13 05.1	-0.5
SRKR	Sorokina	2.44	313	eP	Pn	02 12 37.4	+0.3
SRKR				eS	Sn	02 13 06.1	-0.1
TUMR	Tumrok	2.46	277	eP	Pn	02 12 37.9	+0.5
TUMR				eS	Sn	02 13 06.0	-0.7
KLY	Klyuchi	2.48	302	eP	Pn	02 12 36.1	-1.5
KLY				eS	Sn	02 13 04.1	-3.0
KMNR	Kamenistaya	2.49	288	eP	Pn	02 12 38.4	+0.7
KIRR	Kirishev	2.49	293	eP	Pn	02 12 38.5	+0.7
KIRR				eS	Sn	02 13 07.9	+0.5
KPT	Kopyto	2.56	293	eP	Pn	02 12 39.6	+0.9
KPT				eS	Sn	02 13 09.2	+0.1
KOZ	Kozyrevsk	2.77	293	eP	Pn	02 12 42.6	+1.0
KOZ				eS	Sn	02 13 14.8	+0.6
SRDR	Sredinnyy	2.95	298	eP	Pn	02 12 44.7	+0.6
SRDR				eS	Sn	02 13 18.8	+0.1
KII	Karymskiy	3.06	253	eP	Pn	02 12 46.1	+0.6
KII				eS	Sn	02 13 20.5	-1.0
SPN	Mys Shipunski	3.24	235	eP	Pn	02 12 47.9	0.0
SPN				eS	Sn	02 13 22.6	-3.0
ESO	Esso	3.37	288	eP	Pn	02 12 51.6	+1.8
ESO				eS	Sn	02 13 29.1	+0.1
NLC	Nalytchevo	3.52	240	eP	Pn	02 12 53.6	+1.8
SMAR	Somma	3.75	244	eP	Pn	02 12 56.2	+1.1
KRER	Koryakskii	3.76	245	eP	Pn	02 12 56.6	+1.4
UGLR	Uglovaya	3.77	243	eP	Pn	02 12 56.5	+1.2
AVH	Avacha	3.78	244	eP	Pn	02 12 57.2	+1.8
KRX	Arik	3.78	246	eP	Pn	02 12 56.8	+1.3
KOK	Koryaka	3.82	245	eP	Pn	02 12 57.0	+1.0
DALK	Dalny	3.90	241	eP	Pn	02 12 55.8	-1.1
DALK				eS	Sn	02 13 38.8	-3.1
PET	Petropavlovsk	3.95	242	eP	Pn	02 12 59.8	+2.1
GNL	Ganaly	4.02	253	eP	Pn	02 13 00.2	+1.5
OSSR	Ossora	4.29	351	eP	Pn	02 13 01.9	-0.4
KRMR	Karymshinskiy	4.32	242	eP	Pn	02 13 03.7	+0.9
KRMR				eS	Sn	02 13 49.8	-2.6
RUS	Russkaya	4.37	236	eP	Pn	02 13 03.7	+0.2
PETK	Petropavlovsk-	4.40	247	Pn	Pn	02 13 04.0	+0.1
	1.2nm,0.3s,baz=72,slow=16,SNR=16						
PETK				Sn	Sn	02 13 53.2	-1.2
	1.6nm,0.3s,baz=34,slow=20,SNR=6.3						
	1.6nm,0.4s						
MTVR	Mutnovka	4.50	238	eP	Pn	02 13 06.1	+0.8
MTVR				eS	Sn	02 13 54.2	-2.7
GRL	Gorelyy	4.51	239	eP	Pn	02 13 06.5	+1.0
APC	Apacha	4.78	247	eP	Pn	02 13 11.2	+2.1
KDTR	Khodutka, Kamc	4.98	232	eP	Pn	02 13 12.0	+0.1
KDTR				eS	Sn	02 14 03.5	-5.1
ILAR	Eielson Array	25.62	48	P	P	02 17 26.7	+0.9
	0.3nm,0.7s,baz=264,slow=9.0,SNR=2.8						
	0.3nm,0.7s						
H11N2	WAKE ISLAND Hy	35.30	176	T	T	02 57 40.7	
	baz=359						
H11N3	WAKE ISLAND Hy	35.31	176	T	T	02 57 42.0	
	baz=359,slow=74						
H11N1	WAKE ISLAND Hy	35.32	176	T	T	02 57 41.7	
	baz=359,slow=74						
YKA	Yellowknife Ar	39.99	46	P	P	02 19 31.0	+0.2
	0.2nm,0.5s,baz=297,slow=7.8,SNR=4.1						
	0.2nm,0.5s						
MKAR	Makanchi Array	49.58	297	P	P	02 20 46.4	-1.0
	0.2nm,0.4s,baz=54,slow=7.3,SNR=2.2						
	0.2nm,0.4s						
TXAR	Lajitas Array	67.56	71	P	P	02 22 54.7	+1.7
	0.4nm,0.8s,baz=308,slow=4.4,SNR=6.1						
	0.4nm,0.8s						
ESDC	Sonseca Array	85.13	351	P	P	02 24 33.3	+0.9
	0.4nm,0.8s,baz=5.4,slow=6.3,SNR=2.4						
	0.4nm,0.8s						

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*IDC **28** 02:14:11.9±0.9, 15°.58S×173°.93W, h0^{km}, mb4.1/9, mbtmp4.1/10, ML4.2/1, MS3.5/16, Error ellipse: s-maj=48.9km s-min=17.5km az=143.0*

*NEIC **28** 02:14:15.9±1.3, 15°.74S±0°.09×173°.7W±0°.1, h35^{km}±2^{km}, mb4.8/11, Error ellipse: s-maj=22.3km s-min=13.6km az=115.0*

ISC 28 02:14:16.4±0.5**,15°.75S**±0°.08×**173°.69W**±0°.09**,h35**^{km}**,n57,**
σ**1§50**/41**,mb4.6**/15**,MS3.6**/17**,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.60	46	Pn	Pn	02 14 56.5	+0.5
	44nm,0.3s,baz=193,slow=4.4,SNR=15						
AFI				Sn	Sn	02 15 24.3	-2.1
	395nm,0.3s,baz=21,slow=20,SNR=12						
	85nm,0.3s						
AFI	Afiamalu	2.60	46		Pn	02 14 55.2	-0.8
AFI				Sn	Sn	02 15 24.2	-2.2
NIUE	Niue	4.88	133	Pn	Pn	02 15 26.4	-1.0
MSVF	Nonsavu	8.16	255	Pn	Pn	02 16 21.9	+9.5
	0.9nm,0.3s,baz=101,slow=12,SNR=23						
MSVF				LR	LR	02 18 03.7	
	comp=Z,73nm,21.2s,baz=81,slow=29						
PINNC	Pines Island,	19.07	246		P	02 18 34.6	-1.4
PINNC				IAmb	IAmb	02 18 44.5	
	comp=Z,163nm,2.0s						
DZM	Mont Dzumac	19.81	248	eLR	LR	02 23 57.9	
	comp=Z,326nm,28.9s						
DZM	Mont Dzumac	19.81	248	P	Pn	02 18 46.8	+0.9
	comp=Z,1.8nm,0.5s,baz=30,slow=20,SNR=1.9						
DZM				LR	LR	02 25 28.7	
	comp=Z,102nm,18.5s,baz=46,slow=34						
PPT	Papeete	23.17	98	LR	LR	02 26 02.3	
	comp=Z,32nm,21.7s,baz=258,slow=30						
URZ	Urewera	23.85	198	P	P	02 19 28.4	+2.0
	comp=Z,3.8nm,0.5s,baz=37,slow=5.0,SNR=1.7						
	comp=Z,3.8nm,0.5s						
TBI	Tubuai	24.03	112	eLR	LR	02 25 07.1	
	comp=Z,4μm,25.2s						
TBI				eLR	LR	02 25 07.3	
	comp=Z,1μm,27.8s						
TBI	Tubuai	24.03	112	eT	T	02 43 53.6	
	comp=Z,7.5nm,0.3s						
HNR	Honiara	26.47	281	LR	LR	02 28 59.8	
	comp=Z,2μm,21.2s,baz=108,slow=34						
SNZO	South Karori	27.38	199	P	P	02 19 57.8	-0.6
SNZO				IAmb	IAmb	02 20 11.5	
	comp=Z,51nm,1.1s						
INZ	Inchbonnie	29.75	202	P	P	02 20 20.4	+0.9
TAOE	Nuku Hiva Isla	33.44	82	eLR	LR	02 29 16.0	
	comp=Z,190nm,31.4s						
TAOE	Nuku Hiva Isla	33.44	82	eT	T	02 55 39.4	
	comp=Z,29nm,0.2s						
CTA	Charters Tower	38.30	257	LR	LR	02 33 59.9	
	comp=Z,76nm,21.5s,baz=83,slow=31						
PMG	Port Moresby	38.69	275	LR	LR	02 34 41.7	
	comp=Z,83nm,19.7s,baz=33,slow=32						
STKA	Stephens Creek	43.62	240	P	P	02 22 16.6	-1.0
	comp=Z,4.3nm,0.6s,baz=83,slow=9.3,SNR=6.3						
	comp=Z,4.3nm,0.6s						
STKA	Stephens Creek	43.62	240	P	P	02 22 14.7	-2.9
WB0	Warramunga Arr	49.46	257	P	P	02 23 02.6	-1.0
WB0				IAmb	IAmb	02 23 09.2	
	comp=Z,5.5nm,0.8s						
WB2	Warramunga Arr	49.48	257	P	P	02 23 00.8	-2.9
WB2				IAmb	IAmb	02 24 26.9	
	comp=Z,35nm,1.9s						
WRA	Warramunga Arr	49.50	257	P	P	02 23 02.5	-1.3
	comp=Z,3.1nm,0.6s,baz=97,slow=6.3,SNR=26						

WRA				PcP	PcP	02 24 26.6	+1.0
	comp=Z,0.6nm,0.5s,baz=88,slow=3.7,SNR=2.3						
	comp=Z,3.1nm,0.6s						
WRA	Warramunga Arr	49.50	257	P	P	02 23 02.0	-1.9
AS31	Alice Springs	49.74	252	P	P	02 23 04.6	-1.1
AS31				IAmb	IAmb	02 23 10.0	
	comp=Z,4.8nm,0.8s						
ASAR	Alice Springs	49.74	252	P	P	02 23 04.8	-0.9
	comp=Z,15nm,0.7s,baz=86,slow=8.2,SNR=67						
ASAR				LR	LR	02 42 55.5	
	comp=Z,72nm,19.4s,baz=115,slow=35						
	comp=Z,15nm,0.7s						
ASAR	Alice Springs	49.74	252	P	P	02 23 04.0	-1.7
KNRA	Kununurra	55.24	262	P	P	02 23 46.0	-0.5
VNDA	Vanda	63.00	186	P	P	02 24 40.5	+1.3
VNDA				IAmb	IAmb	02 24 40.7	
	comp=Z,9.3nm,1.6s						
MJAR	Matsushiro Arr	69.03	320	LR	LR	02 53 52.9	
	comp=Z,18nm,18.9s,baz=128,slow=35						
PETK	Petropavlovsk-	72.88	342	LR	LR	02 50 20.7	
	comp=Z,22nm,21.6s,baz=103,slow=30						
QSPA	South Pole Qui	74.30	180	P	P	02 25 49.8	-0.2
QSPA				IAmb	IAmb	02 27 47.5	
	comp=Z,25nm,1.9s						
KSRS	Korea Array	76.21	316	LR	LR	02 57 02.6	
	comp=Z,8.4nm,18.4s,baz=5.0,slow=34						
TXAR	Lajitas Array	81.03	56	P	P	02 26 28.8	+0.6
	comp=Z,1.3nm,1.0s,baz=210,slow=7.2,SNR=7.2						
	comp=Z,1.3nm,1.0s						
PDAR	Pinedale Array	82.71	42	P	P	02 26 38.0	+1.1
	comp=Z,0.3nm,0.6s,baz=246,slow=4.0,SNR=3.5						
	comp=Z,0.3nm,0.6s						
ILAR	Eielson Array	82.84	11	P	P	02 26 36.3	-0.4
	comp=Z,0.3nm,0.6s,baz=237,slow=6.2,SNR=1.9						
	comp=Z,0.3nm,0.6s						
CMIG	Matias Romero	84.26	71	LR	LR	02 54 34.9	
	comp=Z,39nm,20.9s,baz=196,slow=29						
PLCA	Paso Flores	89.48	132	LR	LR	03 00 17.8	
	comp=Z,43nm,18.1s,baz=194,slow=31						
YKA	Yellowknife Ar	90.53	23	P	P	02 27 15.3	+1.0
	comp=Z,0.1nm,0.6s,baz=242,slow=5.0,SNR=1.9						
	comp=Z,0.1nm,0.6s						
JTS	Las Juntas de	91.54	80	LR	LR	02 59 36.4	
	comp=Z,31nm,19.2s,baz=298,slow=30						
CMAR	Chiang Mai Arr	92.46	288	P	P	02 27 24.7	+0.4
	comp=Z,0.9nm,0.3s,baz=116,slow=2.1,SNR=1.3						
CMAR				LR	LR	03 07 20.4	
	comp=Z,12nm,18.1s,baz=120,slow=35						
	comp=Z,0.9nm,0.3s						
ATAH	Atahualpa	93.14	98	LR	LR	02 59 30.3	
	comp=Z,26nm,21.2s,baz=186,slow=29						
LVC	Limon Verde	97.11	116	LR	LR	03 02 30.6	
	comp=Z,29nm,19.0s,baz=219,slow=30						
TKL	Tuckaleechee C	98.94	56	LR	LR	03 10 32.5	
	comp=Z,75nm,18.2s,baz=312,slow=34						
ARCES	ARCESS Array B	124.91	352	PKP	PKiKP	02 33 13.3	+0.8
	comp=Z,4.3nm,0.8s,baz=321,slow=1.6,SNR=4.7						
CLL	Collm	144.12	353	ePKPdf	PKiKP	02 33 50.0	-1.9
BRTR	Keskin Array B	146.25	320	PKPbc	PKPab	02 33 53.8	-0.6
	comp=Z,3.1nm,0.7s,baz=68,slow=3.9,SNR=7.0						
GERES	GERESS Array B	146.44	351	PKPbc	PKPab	02 33 54.6	-0.2
	comp=Z,0.2nm,0.3s,baz=8.1,slow=1.9,SNR=5.3						
CONA	Conrad Observa	146.96	348	ePKP	PKiKP	02 33 59.1	+1.2
RONA	Rosalia, Austr	147.09	348	ePKP	PKiKP	02 34 02.5	+4.3
	comp=Z,0.3nm,0.1s						
KBA	Koelnbreinsper	148.22	351	ePKP	PKPab	02 34 02.6	+0.7
	comp=Z,0.5nm,0.3s						
MOTA	Moosalm	148.25	354	i PKiKP	PKPab	02 34 04.1	+2.1
	comp=Z,1.4nm,0.6s						
WTTA	Wattenberg	148.27	353	i PKP	PKPab	02 34 02.9	+0.7
	comp=Z,1.0nm,0.4s						
DAVA	Damuels	148.41	355	i PKP	PKPab	02 34 03.5	+0.8
	comp=Z,0.9nm,0.4s						
OBKA	Obir	148.57	349	ePKP	PKPbc	02 34 00.1	+0.3
	comp=Z,0.8nm,0.6s						
FETA	Feichten	148.60	354	i PKP	PKPab	02 34 03.5	+0.1
	comp=Z,1.3nm,0.8s						
ABTA	Abfaltersbach	148.66	352	i PKP	PKiKP	02 34 00.5	-1.0
	comp=Z,1.9nm,0.7s						

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*IDC **28** 02:50:32.3±1.6, 22°.58S×179°.64W, h577km±14km, mb3.5/10, mbtmp4.4/12, Error ellipse: s-maj=22.4km s-min=16.9km az=113.0*

ISC 28 02:50:31.1±0.7**, 22°.75S**±0°.07×**179°.9W**±0°.1**, h550km, n30, σ2s.60**/39**, mb4.0**/10**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.36	338	P	P	02 52 06.0	+1.7
	6.3nm,0.3s,baz=232,slow=22,SNR=23						
MSVF				S	S	02 53 24.6	+4.3
	4.1nm,0.7s,baz=114,slow=20,SNR=1.3						
RIZ	Raoul Island	6.70	165	P	P	02 52 19.7	+3.7
GLKZ	Green Lake	6.72	165	P	P	02 52 22.3	+6.1
GLKZ				S	S	02 53 47.4	+5.0
DZM	Mont Dzumac	12.70	270	P	P	02 53 19.2	+2.2
	3.9nm,0.7s,baz=90,slow=19,SNR=2.8						
WIAZ	Waiheke Island	14.65	196	P	P	02 53 40.5	+3.6
HAZ	Te Kaha	15.10	187	P	P	02 53 42.8	+1.4
RUGZ	Raukumara Rang	15.32	187	P	P	02 53 44.6	+0.8
RUGZ				S	S	02 56 18.6	-3.4
TWGZ	Tauwhareparae	15.49	186	P	P	02 53 46.6	+1.1
URZ	Urewera	15.68	189	P	P	02 53 44.2	-3.1
	8.5nm,0.3s,baz=352,slow=3.0,SNR=13						
URZ				S	S	02 56 22.2	-5.7
	3.5nm,0.5s,baz=153,slow=20,SNR=6.1						
URZ	Urewera	15.68	189	P	P	02 53 46.7	-0.6
URZ				S	S	02 56 24.5	-3.4
RTZ	Ruatahuna	16.05	189	P	P	02 53 50.5	-0.6
RTZ				S	S	02 56 30.4	-3.8
MTHZ	Maungataniwha	16.30	189	P	P	02 53 54.0	+0.7
MTHZ				S	S	02 56 33.6	-4.7
NMHZ	Naumai	16.55	189	P	P	02 53 56.4	+0.8
NMHZ				S	S	02 56 40.1	-2.4
BKZ	Black Stump Fm	16.66	190	P	P	02 53 55.6	-1.1
ETVZ	East Tongariro	16.77	192	P	P	02 53 58.3	+0.6
OTVZ	Oturere	16.80	192	P	P	02 53 57.8	-0.2
SNVZ	South Ngauruho	16.83	192	P	P	02 53 59.8	+1.5
KWHZ	Kaweka Forest	16.93	190	P	P	02 53 58.4	-0.7
WNVZ	Wahianoa	16.98	192	P	P	02 53 59.6	-0.1
CTA	Charters Tower	31.63	268	P	P	02 56 11.6	+1.9
	9.8nm,0.6s,baz=96,slow=9.8,SNR=10						
	9.8nm,0.6s						
ASAR	Alice Springs	42.37	259	P	P	02 57 38.5	+0.8
	4.2nm,0.7s,baz=93,slow=8.1,SNR=33						
ASAR				ScP	ScP	03 02 14.3	-2.6
	0.7nm,0.8s,baz=91,slow=4.6,SNR=3.0						
	4.2nm,0.7s						
WRA	Warramunga Arr	42.63	265	P	P	02 57 40.1	+0.3
	4.9nm,0.6s,baz=90,slow=5.7,SNR=212						
WRA				ScP	ScP	03 02 15.6	-2.4
	0.7nm,0.9s,baz=94,slow=3.5,SNR=5.0						
WRA				S	S	03 03 20.2	-3.3
	0.4nm,0.7s,baz=99,slow=14,SNR=2.1						
	4.9nm,0.6s						
QSPA	South Pole Qui	67.33	180	P	P	03 00 31.7	+0.3
	2.9nm,0.8s,baz=118,slow=0.4,SNR=12						
	2.9nm,0.8s						
MJAR	Matsushiro Arr	71.03	325	P	P	03 00 51.7	-2.2
	2.6nm,0.7s,baz=167,slow=5.5,SNR=5.6						
	2.6nm,0.7s						
ASAJ	Asahikawa	74.91	333	P	P	03 01 15.4	-0.5
	3.6nm,0.5s,baz=174,slow=4.1,SNR=3.9						
	3.6nm,0.5s						
PETK	Petropavlovsk-	78.02	346	P	P	03 01 30.5	-2.2
	2.9nm,0.7s,baz=131,slow=8.1,SNR=5.3						
	2.9nm,0.7s						
SEY	Seymchan	88.18	348	P	P	03 02 21.1	-2.1
	0.7nm,0.2s,baz=72,slow=18,SNR=4.1						
	0.7nm,0.2s						
CMAR	Chiang Mai Arr	89.26	290	P	P	03 02 29.8	+0.5
	1.2nm,0.3s,baz=146,slow=3.0,SNR=8.7						
	1.2nm,0.3s						
PDAR	Pinedale Array	91.77	44	P	P	03 02 38.2	-2.5
	0.5nm,0.8s,baz=242,slow=1.9,SNR=3.8						
	0.5nm,0.8s						
AKASG	Malin Array Be	144.07	328	PKP	PKPbc	03 09 00.5	-3.2
	1.4nm,0.5s,baz=40,slow=3.9,SNR=8.7						

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*AEIC **28** 02:54:00.2±2.3, 51°.2N±0°.2×177°.93E±0°.10, h10km±5km, Error ellipse: s-maj=23.2km s-min=8.3km az=186.0*

*MOS **28** 02:54:05.5±1.4, 51°.88N×177°.88E, h30km, mb4.7/11, Error ellipse: s-maj=11.5km s-min=9.1km az=100.9*

*NEIC **28** 02:54:07.5±2.0, 51°.3N±0°.2×177°.9E±0°.1, h48km±10km, mb4.3/61, ML3.7(AEIC), Error ellipse: s-maj=24.4km s-min=9.5km az=186.0*

*IDC **28** 02:54:11.5±2.7, 52°.01N×178°.01E, h63km±21km, mb3.6/16, mbtmp3.9/18, MS3.3/6, Error ellipse: s-maj=26.0km s-min=12.4km az=165.0*

ISC 28 02:54:06.9±0.6**, 51°.47N**±0°.10×**177°.95E**±0°.04**, h35km, n134, σ1s.56**/130**, mb4.3**/43**, MS3.6**/4**, 8C-6D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHEM	Shemya Is, Ala	2.69	299	P	Pn	02 54 48.4	+0.7
	192nm,0.7s,baz=198,slow=0.9,SNR=12						
SHEM				S	Sn	02 55 20.3	+1.4
	586nm,0.8s,baz=260,slow=23,SNR=12						
SMY	Shemya	2.69	299		Pn	02 54 47.9	+0.3
SMY				Sn	Sn	02 55 21.4	+2.5
SMY	Shemya	2.69	299	P	Pn	02 54 47.9	+0.3
SMY						02 55 21.4	
KIWB	Kanaga Island	3.08	81		Pn	02 54 53.7	+0.7
ADK	Adak	3.37	81	Pn	Pn	02 54 57.0	+0.1
ADK	Adak	3.37	81	P	Pn	02 54 57.0	+0.1
PEA0B	Petropavlovsk-	12.51	285	⇓eP	Pn	02 56 57.6	-4.6
SKR	Severo-Kuril’s	13.74	275	⇓eP	Pn	02 57 18.2	-0.9
P18K	Big Mountain,	17.06	52	P	Pn	02 58 04.9	+2.4
O18K	Koktuh Hills	17.21	50		Pn	02 58 06.6	+2.3
O18K				IAmb	IAmb	02 58 16.1	
	comp=Z,19nm,0.9s						
MA2	Magadan	17.29	309	LR	LR	03 04 05.8	
	comp=Z,45nm,18.6s,baz=116,slow=35						
SVW2	Sparrevohn	17.45	46		Pn	02 58 07.5	+0.3
BILL	Bilibino	17.57	345	P	P	02 58 11.5	+2.0
BILL	Bilibino	17.57	345	⇓eP	Pn	02 58 03.0	-5.7
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,72nm,15.0s						
O19K	Port Alsworth	17.73	50	P	Pn	02 58 12.0	+1.3
O19K				IAmb	IAmb	02 58 20.8	
	comp=Z,36nm,1.3s						
SEY	Seymchan	17.84	320	P	Pn	02 58 09.2	-2.9
	comp=Z,0.8nm,0.2s,baz=126,slow=12,SNR=6.5						
N19K	Bonanza Creek	17.85	48	P	Pn	02 58 14.1	+1.8
TTA	Tatalina	18.03	40	P	Pn	02 58 16.3	+1.9
TTA	Tatalina	18.03	40	P	Pn	02 58 16.3	+1.9
TTA				pmax	pmax		
	comp=Z,15nm,1.2s						
KDAK	Kodiak Island	18.09	58	LR	LR	03 04 12.8	
	comp=Z,110nm,18.2s,baz=223,slow=34						
P19K	Oil Pt	18.11	52	P	Pn	02 58 17.3	+1.8
L19K	White Mountain	18.19	43	P	P	02 58 16.7	+0.4
ILSW	Iliamna Southw	18.24	51	P	P	02 58 17.8	+0.7
ILSW				IAmb	IAmb	02 58 29.1	
	comp=Z,19nm,1.0s						
M19K	Big River Lodg	18.28	44	P	P	02 58 17.8	+0.4
RSO	Redoubt South	18.56	50	P	P	02 58 22.4	+1.8
M20K	Styx River	18.83	45	P	P	02 58 23.8	+0.3
K20K	Telida	19.01	40	P	P	02 58 26.3	+1.0
RDOG	Red Dog Mine	19.07	22	P	Pn	02 58 28.6	+1.6
SPU	Mount Spurr	19.09	48	P	P	02 58 28.0	+1.7
BRLK	Bradley Lake	19.30	52	P	P	02 58 26.4	-2.1
BRLK				IAmb	IAmb	02 58 50.9	
	comp=Z,35nm,1.4s						
SKT	Skwentna	19.57	46	P	P	02 58 33.0	+1.5
SKT				IAmb	IAmb	02 59 08.5	
	comp=Z,19nm,1.2s						
PPLA	Purkeypile	19.60	43		P	02 58 32.1	+0.1
PPLA				IAmb	IAmb	02 58 49.6	
	comp=Z,19nm,1.0s						
SUA	Susitna One	19.78	48		P	02 58 34.6	+0.8
SUA				IAmb	IAmb	02 58 43.4	
	comp=Z,18nm,1.2s						
CAST	Castle Rocks	19.85	41		P	02 58 36.0	+1.4
O22K	Cooper Landing	20.02	51	P	P	02 58 36.9	+0.6
RC01	Rabbit Creek A	20.15	49		P	02 58 39.0	+1.2
RC01				IAmb	IAmb	02 58 44.0	
	comp=Z,24nm,1.3s						
KTH	Kantishna Hill	20.38	42		P	02 58 42.1	+1.7
KTH				IAmb	IAmb	02 58 51.5	
	comp=Z,20nm,1.1s						
IMAR	Indian Mountai	20.40	34	P	P	02 58 41.3	+0.9
BPAW	Bear Paw Mtn.	20.57	40		P	02 58 44.0	+1.7
BPAW				IAmb	IAmb	02 58 45.7	
	comp=Z,16nm,1.4s						
H21K	Melozitna Rive	20.57	35	P	P	02 58 43.7	+1.4
TRF	Thorofare Moun	20.61	42	P	P	02 58 42.1	-0.8
TRF				IAmb	IAmb	02 59 05.9	
	comp=Z,16nm,1.1s						
I21K	Tanana	20.64	37	P	P	02 58 44.4	+1.3
I21K				IAmb	IAmb	02 58 52.6	
	comp=Z,17nm,1.2s						
GHO	Glory Hole Cre	20.70	47	P	P	02 58 44.5	+0.7
GHO				IAmb	IAmb	02 59 14.5	
	comp=Z,17nm,1.3s						
PWL	Port Wells	20.77	50	P	P	02 58 43.5	-1.0
KNK	Knik Glacier	20.83	48	P	P	02 58 44.9	-0.3
KNK				IAmb	IAmb	02 59 06.8	
	comp=Z,16nm,1.1s						
SML	Sawmill	20.98	47	P	P	02 58 45.4	-1.4
SML				IAmb	IAmb	02 58 56.9	
	comp=Z,29nm,1.3s						
MLY	Manley	21.05	38	P	P	02 58 46.6	-0.9
BWN	Browne	21.21	41	P	P	02 58 51.6	+2.4
SCM	Sheep Creek Mo	21.45	48	P	P	02 58 49.9	-2.0
SCM				IAmb	IAmb	02 58 56.7	
	comp=Z,18nm,1.0s						
SCM	Sheep Creek Mo	21.45	48	P	P	02 58 49.9	-2.0
SCM				pmax	pmax		
	comp=Z,18nm,1.0s						
NEA2	Nenana	21.53	40	P	P	02 58 51.2	-1.4
NEA2				IAmb	IAmb	02 58 56.6	
	comp=Z,10nm,1.0s						
MDM	Murphy Dome	22.00	39	P	P	02 58 59.4	+1.7
MDM				IAmb	IAmb	02 59 15.5	
	comp=Z,11nm,1.2s						
KLU	Klutina	22.04	49	P	P	02 58 57.6	-0.6
M24K	Tolsona, Glenn	22.04	47	P	P	02 58 58.2	0.0
DIV	Divide	22.04	50	P	P	02 58 58.2	0.0
CCB	Clear Creek Bu	22.05	40	P	P	02 58 58.8	+0.6
COLA	College	22.12	40	⇑eP	P	02 58 57.2	-1.7
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ILAR	Eielson Array	22.47	40	P	P	02 59 00.1	-2.6
	comp=Z,2.2nm,1.1s,baz=250,slow=9.0,SNR=12						
	comp=Z,2.2nm,1.1s						
H24K	Noodor Dome	22.47	37	P	P	02 59 02.9	+0.1
PAX	Paxson	22.55	45	P	P	02 59 02.1	-1.6
PAX				IAmb	IAmb	02 59 08.2	
	comp=Z,20nm,1.4s						
PAX	Paxson	22.55	45	P	P	02 59 02.1	-1.6
PAX				pmax	pmax		
	comp=Z,20nm,1.4s						
N25K	Chitina, Valde	22.68	49	P	P	02 59 04.7	-0.3
N25K				IAmb	IAmb	02 59 21.1	
	comp=Z,15nm,1.1s						
GLB	Gilahina Butte	23.03	49	P	P	02 59 08.2	-0.5
GLB				IAmb	IAmb	02 59 12.2	
	comp=Z,19nm,1.3s						
VRDI	Verde Repeater	23.17	50	P	P	02 59 11.3	+1.0
VRDI				IAmb	IAmb	02 59 45.6	
	comp=Z,13nm,1.2s						
YSS	Yuzh-Sakhalins	23.28	273	eP	P	02 59 05.8	-5.4
BARN	Barnard Glacie	24.02	51	P	P	02 59 18.1	-0.2
M27K	Edge Creek, AK	24.06	48	P	P	02 59 19.4	+0.7
M27K				IAmb	IAmb	02 59 50.4	
	comp=Z,17nm,1.4s						
L27K	Beaver Creek,	24.20	46	P	P	02 59 20.0	+0.2
L27K				IAmb	IAmb	02 59 23.7	
	comp=Z,13nm,1.1s						
BCAR	Beaver Creek A	24.22	46	P	P	02 59 20.1	0.0
JKA	Kamikawa-asahi	24.67	267	P	P	02 59 23.0	-1.2
JKA				IAmb	IAmb	02 59 29.5	
	comp=Z,12nm,1.0s						
ASAJ	Asahikawa	24.68	267	P	P	02 59 27.4	+3.1
	comp=Z,8.8nm,0.9s,baz=11,slow=6.0,SNR=7.6						
	comp=Z,8.8nm,0.9s						
ASAJ	Asahikawa	24.68	267	P	P	02 59 23.0	-1.3
ASAJ				pmax	pmax		
	comp=Z,12nm,1.0s						
EGAK	Eagle	24.83	42	P	P	02 59 23.8	-1.7
EGAK				IAmb	IAmb	02 59 32.9	
	comp=Z,9.5nm,1.1s						
DAWY	Dawson	25.44	44		P	02 59 30.2	-0.9
DAWY				IAmb	IAmb	02 59 41.3	
	comp=Z,10nm,1.1s						
HYT	Haines Junctio	26.03	52	P	P	02 59 36.9	+0.3
HYT				IAmb	IAmb	03 00 17.1	
	comp=Z,18nm,1.4s						
INK	Inuvik	28.56	36	P	P	02 59 58.3	-0.7
	comp=Z,1.9nm,1.0s,baz=234,slow=13,SNR=4.8						
	comp=Z,1.9nm,1.0s						
KLR	Kul'dur	29.19	284	P	P	03 00 05.6	+0.8
	comp=Z,1.3nm,0.7s,baz=77,slow=11,SNR=4.2						
	comp=Z,1.3nm,0.7s						
KLR	Kul'dur	29.19	284	⇓eP	P	03 00 05.3	+0.5
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
USA0B	Ussuriysk Arra	31.26	275	P	P	03 00 21.7	-1.4
USA0B	Ussuriysk Arra	31.26	275	P	P	03 00 21.7	-1.4
USA0B				pmax	pmax		
	comp=Z,7.0nm,0.7s						
USRK	Ussuriysk Ar.	31.26	275	P	P	03 00 20.9	-2.2
USRK	Ussuriysk Ar.	31.26	275	P	P	03 00 20.9	-2.2
A36M	Sachs Harbour	32.00	29	P	P	03 00 29.8	+0.5
JSG	Sagara	33.06	255	P	P	03 00 37.7	-1.3
YKA	Yellowknife Ar	36.64	46	P	P	03 01 07.2	-2.4
	comp=Z,1.2nm,0.8s,baz=282,slow=8.1,SNR=15						
	comp=Z,1.2nm,0.8s						
KSRS	Korea Array	37.60	268	P	P	03 01 20.6	+2.6
	comp=Z,0.6nm,0.3s,baz=65,slow=8.2,SNR=2.3						
	comp=Z,0.6nm,0.3s						
JNU	Nakatsue	38.57	260	LR	LR	03 15 59.3	
	comp=Z,17nm,21.8s,baz=42,slow=34						
TJN	Taejon	38.63	267	i P	P	03 01 27.4	+0.8
EDM	Edmonton	40.53	60	P	P	03 01 41.0	-1.4
EDM				IAmb	IAmb	03 01 43.7	
	comp=Z,4.3nm,0.7s						
EDM	Edmonton	40.53	60	P	P	03 01 41.0	-1.4
EDM				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NRIK	Noril'sk	43.29	329	⇑eP	P	03 02 02.0	-2.6
NRIK				pmax	pmax		
	comp=Z,8.0nm,2.2s						
ULN	Ulaanbaatar	44.38	295	⇑eP	P	03 02 13.7	-0.2
SONM	Songino Array	44.77	295	P	P	03 02 17.2	+0.3
	comp=Z,0.9nm,0.7s,baz=49,slow=10,SNR=6.6						
	comp=Z,0.9nm,0.7s						
NVAR	Mina Array Bea	45.55	81	P	P	03 02 24.0	+0.6
	comp=Z,0.5nm,0.5s,baz=309,slow=7.5,SNR=3.7						
	comp=Z,0.5nm,0.5s						
FCC	Fort Churchill	47.35	45	P	P	03 02 37.2	+0.3
FCC	Fort Churchill	47.35	45	P	P	03 02 37.2	+0.3
FCC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
PV13	Radium Mtn., P	51.51	75	P	P	03 03 09.8	+0.6
PV13				IAmb	IAmb	03 03 11.4	
	comp=Z,2.9nm,0.9s						
KURK	Kurchatov	57.47	312	P	P	03 03 51.2	-0.7
KURK	Kurchatov	57.47	312	ceP	P	03 03 51.3	-0.7
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MK31	Makanchi Array	58.36	307	d iP	P	03 03 57.3	-1.1
MKAR	Makanchi Array	58.36	307	P	P	03 03 56.8	-1.5
	comp=Z,1.7nm,0.9s,baz=53,slow=6.0,SNR=11						
	comp=Z,1.7nm,0.9s						
MKAR	Makanchi Array	58.36	307	P	P	03 03 57.4	-1.0
MKAR	Makanchi Array	58.36	307	P	P	03 03 57.4	-1.0
BVAR	Borovoye Array	59.48	318	LR	LR	03 29 56.1	
	comp=Z,42nm,21.7s,baz=23,slow=36						
BRVK	Borovoye	59.50	318	P	P	03 04 06.0	-0.1
BRVK				IAmb	IAmb	03 04 09.4	
	comp=Z,2.2nm,0.8s						
BRVK	Borovoye	59.50	318	ceP	P	03 04 04.9	-1.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TXAR	Lajitas Array	60.64	79	P	P	03 04 15.1	+0.7
	comp=Z,0.4nm,0.7s,baz=300,slow=4.8,SNR=5.2						
	comp=Z,0.4nm,0.7s						
TXAR	Lajitas Array	60.64	79	P	P	03 04 14.2	-0.3
ARU	Arti	61.43	327	c iP	P	03 04 19.2	0.0
ARU						03 06 31.0	
ARU				S	S	03 12 41.7	+4.3
ARU				SS	SS	03 16 39.8	+2.3
ARU				pmax	pmax		
	comp=Z,45nm,3.7s						
KIRV	Kirov	62.58	333	LR	LR	03 33 00.2	
	comp=Z,40nm,19.1s,baz=21,slow=38						
FINES	FINESS Array B	65.22	346	P	P	03 04 42.9	-1.2
	comp=Z,6.0nm,1.1s,baz=29,slow=16,SNR=4.0						
	comp=Z,6.0nm,1.1s						
FINES	FINESS Array B	65.22	346	P	P	03 04 43.2	-0.9
FINES	FINESS Array B	65.22	346	P	P	03 04 43.2	-0.9
AAK	Ala-Archa	65.22	308	⇑eP	P	03 04 41.2	-3.5
AAK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKTO	Aktyubinsk	66.41	323	LR	LR	03 36 13.7	
	comp=Z,46nm,19.1s,baz=26,slow=38						
ABKAR	Akbulak array	66.61	321	P	P	03 04 52.7	-0.6
NB2	NORSAR Subarra	67.34	353	P	P	03 04 56.9	-0.9
	comp=Z,1.9nm,0.9s,baz=7.8,slow=6.5						
NOA	NORSAR Array B	67.34	353	P	P	03 04 55.8	-2.0
	comp=Z,1.7nm,1.0s,baz=9.9,slow=6.6,SNR=4.5						
	comp=Z,1.7nm,1.0s						
CMAR	Chiang Mai Arr	68.98	273	P	P	03 05 09.7	+1.0
	comp=Z,0.9nm,0.3s,baz=21,slow=8.0,SNR=4.2						
	comp=Z,0.9nm,0.3s						
OBN	Obninsk	69.03	337	⇓eP	P	03 05 07.8	-0.6
OBN						03 05 32.0	
OBN				SS	SS	03 18 34.0	-1.5
OBN				pmax	pmax		
	comp=Z,14nm,1.3s						
AKASG	Malin Array Be	74.80	340	P	P	03 05 41.9	-1.2
	comp=Z,3.2nm,0.6s,baz=24,slow=6.0,SNR=9.5						
	comp=Z,3.2nm,0.6s						
AKBB	Malin Array Si	74.80	340	ceP	P	03 05 42.4	-0.7
LANS	Liptovska Anna	78.09	346	eP	P	03 06 02.5	+0.7
LANS	Liptovska Anna	78.09	346	eP	P	03 06 02.5	+0.7
BUR08	Bucovina Ar. S	78.53	342	P	P	03 06 04.3	-0.1
BURAR	Bucovina Array	78.56	342	P	P	03 06 04.2	-0.3
VYHS	Vyhne	78.82	346	eP	P	03 06 06.9	+1.0
VYHS	Vyhne	78.82	346	eP	P	03 06 06.9	+1.0
WRA	Warramunga Arr	80.71	221	P	P	03 06 19.6	+3.3
	comp=Z,0.4nm,0.9s,baz=30,slow=5.5,SNR=2.0						
	comp=Z,0.4nm,0.9s						
KBA	Koelnbreinsper	80.94	349	eP	P	03 06 17.5	-0.1
	comp=Z,7.4nm,1.1s						
WTTA	Wattenberg	80.94	351	eP	P	03 06 16.8	-0.7
	comp=Z,6.4nm,1.4s						
FETA	Feichten	81.28	351	eP	P	03 06 17.3	-2.1
	comp=Z,4.1nm,1.4s						
ABTA	Abfaltersbach	81.36	350	eP	P	03 06 18.6	-1.1
	comp=Z,6.0nm,1.3s						
ASAR	Alice Springs	84.22	220	P	P	03 06 39.2	+4.6
	comp=Z,0.1nm,0.3s,baz=35,slow=5.0,SNR=1.8						
	comp=Z,0.1nm,0.3s						

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*IDC **28** 03:18:04.0±1.7, 10°.74S×161°.32E, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=36.3km s-min=31.0km az=109.0*

ISC 28 03:18:05.8±1.4**, 10°.7S**±0°.2×**161°.3E**±0°.2**, h10km, n6, σ0s.97**/7**, mb3.5**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.78	314	Pn	Pb	03 18 37.7	-0.9
	407nm,0.3s,baz=162,slow=7.6,SNR=2.9						
HNR				LR	LR	03 18 58.7	
	comp=Z,1μm,19.7s,baz=164,slow=29						
HNR				Sn	Sb	03 19 01.6	+0.7
	2μm,0.3s,baz=110,slow=22,SNR=6.6						
WRA	Warramunga Arr	27.50	247	P	P	03 23 52.6	-0.2
	0.5nm,0.6s,baz=76,slow=9.7,SNR=5.5						
	0.5nm,0.6s						
ASAR	Alice Springs	29.07	240	P	P	03 24 06.8	0.0
	0.3nm,0.8s,baz=68,slow=10,SNR=2.2						
	0.3nm,0.8s						
SONM	Songino Array	75.81	325	P	P	03 29 53.8	+1.5
	0.3nm,0.5s,baz=141,slow=7.1,SNR=3.1						
	0.3nm,0.5s						
ILAR	Eielson Array	84.62	20	P	P	03 30 38.8	-0.5
	0.2nm,0.5s,baz=244,slow=5.1,SNR=5.0						
	0.2nm,0.5s						
MKAR	Makanchi Array	90.25	318	P	P	03 31 06.5	-0.4
	0.2nm,0.7s,baz=93,slow=2.9,SNR=2.1						
	0.2nm,0.7s						

IDC 28 03:20:15.7±3.1**, 3°.84S**×**136°.21E, h0km, mb3.3**/1**, mbtmp3.2**/3**, ML3.3**/1**, Error ellipse: s-maj=117.8km s-min=34.5km az=80.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.11	186	Pn	Pn	03 24 01.6	-2.1
	0.1nm,0.3s,baz=8.2,slow=13,SNR=5.9						
WRA				Sn	Sn	03 26 52.6	-11
	baz=153,slow=19						
	0.3nm,0.5s						
ASAR	Alice Springs	19.84	186	P	Pn	03 24 49.5	-0.4
	0.5nm,0.8s,baz=7.0,slow=10,SNR=2.4						
MKAR	Makanchi Array	69.18	324	P	P	03 31 24.2	0.0
	0.3nm,0.7s,baz=119,slow=5.1,SNR=3.1						
	0.3nm,0.7s						

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*IDC **28** 03:26:33.5±11.0, 21°.74N×143°.05E, h268km±108km, mb3.1/6, mbtmp3.7/6, Error ellipse: s-maj=37.4km s-min=22.4km az=87.0*

ISC 28 03:26:37.5±1.0**, 21°.7N**±0°.2×**143°.1E**±0°.3**, h311**km**, n7,** σ**0s.49**/8**, mb3.2**/6**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	42.24	192	P	P	03 34 00.9	-0.2
	0.1nm,0.4s,baz=11,slow=8.8,SNR=6.2						
	0.1nm,0.4s						
MKAR	Makanchi Array	54.63	313	P	P	03 35 35.1	+0.4
	0.1nm,0.4s,baz=88,slow=9.0,SNR=2.1						
MKAR				PcP	PcP	03 36 33.6	+0.1
	0.2nm,0.6s,baz=73,slow=5.0,SNR=2.0						
	0.1nm,0.4s						
ILAR	Eielson Array	62.10	27	P	P	03 36 25.3	-0.4
	0.3nm,0.7s,baz=267,slow=6.3,SNR=2.2						
	0.3nm,0.7s						
YKA	Yellowknife Ar	76.52	28	P	P	03 37 53.8	+0.3
	0.4nm,0.6s,baz=290,slow=5.6,SNR=7.9						
	0.4nm,0.6s						
ARCES	ARCESS Array B	78.91	341	P	P	03 38 06.3	-0.1
	6.0nm,1.0s,baz=70,slow=8.0,SNR=5.4						
	6.0nm,1.0s						
FINES	FINESS Array B	83.15	334	P	P	03 38 28.1	-0.7
	1.3nm,0.7s,baz=57,slow=5.1,SNR=7.0						
	1.3nm,0.7s						
PLCA	Paso Flores	145.82	131	PKPbc	PKPbc	03 45 41.2	+0.5
	0.5nm,0.5s,baz=243,slow=14,SNR=5.0						

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*IDC **28** 03:39:31.6±11.0, 21°.76N×143°.02E, h220km±108km, mb3.0/5, mbtmp3.5/5, Error ellipse: s-maj=39.3km s-min=22.2km az=88.0*

ISC 28 03:39:29.5±1.0**, 21°.8N**±0°.2×**143°.0E**±0°.3**, h200**km**, n6,** σ**0s.29**/7**, mb3.2**/5**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	42.31	192	P	P	03 47 04.0	+0.1
	0.2nm,0.3s,baz=14,slow=9.4,SNR=8.4						
	0.2nm,0.3s						
MKAR	Makanchi Array	54.51	313	P	P	03 48 36.5	-0.2
	0.1nm,0.5s,baz=114,slow=7.0,SNR=2.1						
MKAR				PcP	PcP	03 49 37.4	0.0
	0.2nm,0.6s,baz=79,slow=3.1,SNR=2.4						
	0.1nm,0.5s						
ILAR	Eielson Array	62.05	27	P	P	03 49 28.5	-0.1
	0.2nm,0.5s,baz=278,slow=7.0,SNR=1.9						
	0.2nm,0.5s						
YKA	Yellowknife Ar	76.47	28	P	P	03 50 57.0	+0.1
	0.2nm,0.4s,baz=292,slow=5.6,SNR=6.0						
	0.2nm,0.4s						
FINES	FINESS Array B	83.03	334	P	P	03 51 32.5	+0.3
	3.6nm,1.1s,baz=38,slow=5.3,SNR=7.0						
	3.6nm,1.1s						
PLCA	Paso Flores	145.94	131	PKPbc	PKPdf	03 58 44.4	-0.4
	0.6nm,0.5s,baz=252,slow=3.9,SNR=6.8						

WEL 28 04:04:19.6±0.4**, 42°S**±3°×**17°5E**±°**, h12**km**, M2.0**/7**, ML2.2**/10**, MLv2.0**/7**, Error ellipse: s-maj=0.0km s-min=0.0km az=156.1, confirmed, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WEL	Wellington	0.32	21	P	Pb	04 04 27.9	+0.7
CMWZ	Cape Campbell	0.35	241	P	Pb	04 04 28.2	+0.5
CMWZ				S	Sb	04 04 34.3	+1.2
TCW	Tory Channel	0.45	325	P	Pb	04 04 29.7	+0.2
TCW				S	Sb	04 04 37.2	+1.0
PLWZ	Palliser	0.48	89	P	Pb	04 04 29.6	-0.3
PLWZ				S	Sb	04 04 37.6	+0.6
MSWZ	Moikau Station	0.50	71	S	Sb	04 04 38.4	+0.8
TUWZ	Tuamarina	0.53	287	P	Pg	04 04 30.4	+0.4
TUWZ				S	Sb	04 04 38.3	-0.2
BSWZ	Blackbirch Sta	0.57	256	P	Pb	04 04 31.2	-0.4
BSWZ				S	Sb	04 04 39.9	+0.2
CAW	Cannon Point	0.58	35	P	Pb	04 04 31.9	+0.2
CAW				S	Sb	04 04 40.8	+0.8
PAWZ	Paruwai Farm	0.64	72	S	Sb	04 04 41.7	+0.1
KIW	Kapiti Island	0.75	17	P	Pb	04 04 34.6	-0.1
KIW				S	Sb	04 04 45.6	+0.7
MTW	Mount Morrison	0.79	58	P	Pg	04 04 34.3	-0.6
MTW				S	Sb	04 04 45.6	-0.3
OGWZ	Otaki Gorge	0.87	29	P	Pg	04 04 36.1	-0.3
OGWZ				S	Sb	04 04 48.5	+0.2
DUWZ	D'Urville Isla	0.94	326	P	Pg	04 04 37.6	-0.1
DUWZ				S	Sb	04 04 50.4	+0.1
HOWZ	Holdsworth Sta	0.96	45	P	Pg	04 04 36.8	-1.4
NNZ	Nelson	1.00	291	P	Pb	04 04 38.4	-0.5
TMWZ	Te Maipa	1.07	64	P	Pb	04 04 38.0	-2.1
MRZ	Mangatainoka R	1.17	38	P	Pb	04 04 39.9	-1.9

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*IDC **28** 04:14:18.4±0.9, 12°.03N×143°.18E, h0km, mb3.9/10, mbtmp3.9/11, ML4.3/1, MS3.4/8, Error ellipse: s-maj=30.6km s-min=19.1km az=117.0*

ISC 28 04:14:23.2±0.9**, 12°.0N**±0°.1×**143°.2E**±0°.2**, h31**km**, n23,** σ**0s.84**/12**, mb4.0**/10**, MS3.4**/7**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	2.26	46	Pn	Pn	04 14 57.7	-0.8
	74nm,0.3s,baz=288,slow=6.8,SNR=18						
GUMO				Sn	Sn	04 15 25.8	+0.4
	35nm,0.3s,baz=207,slow=23,SNR=5.6						
GUMO				LR	LR	04 15 59.8	
	comp=Z,441nm,18.5s,baz=120,slow=45						
	99nm,0.3s						
H11S3	WAKE ISLAND Hy	23.55	71	T	T	04 43 55.4	
	baz=261,slow=72,SNR=6.9						
H11S1	WAKE ISLAND Hy	23.56	71	T	T	04 43 58.2	
	baz=261,slow=72,SNR=7.7						
H11S2	WAKE ISLAND Hy	23.56	71	T	T	04 43 59.4	
	baz=261,slow=72,SNR=9.3						
JNU	Nakatsue	23.86	334	LR	LR	04 27 46.1	
	comp=Z,26nm,21.3s,baz=65,slow=34						
H11N1	WAKE ISLAND Hy	24.02	68	T	T	04 44 32.3	
	baz=254,slow=75,SNR=16						
H11N2	WAKE ISLAND Hy	24.03	68	T	T	04 44 31.3	
	baz=254,slow=75,SNR=15						
H11N3	WAKE ISLAND Hy	24.04	68	T	T	04 44 34.7	
	baz=254,slow=75,SNR=14						
HNR	Honiara	27.03	141	LR	LR	04 28 39.3	
	comp=Z,766nm,21.8s,baz=298,slow=32						
WRA	Warramunga Arr	32.93	195	P	P	04 20 54.3	-0.7
	2.2nm,1.1s,baz=19,slow=9.7,SNR=7.5						
WRA				LR	LR	04 33 51.7	
	comp=Z,43nm,19.5s,baz=70,slow=36						
	2.2nm,1.1s						
ASAR	Alice Springs	36.60	194	P	P	04 21 27.2	+0.4
	0.2nm,0.4s,baz=22,slow=12,SNR=2.0						
	0.2nm,0.4s						
KLR	Kul'dur	38.31	348	LR	LR	04 35 48.6	
	comp=Z,51nm,18.7s,baz=304,slow=34						
PETK	Petropavlovsk-	42.61	13	LR	LR	04 38 48.3	
	comp=Z,41nm,19.4s,baz=154,slow=34						
SONM	Songino Array	47.11	327	P	P	04 22 52.9	+0.3
	0.3nm,0.4s,baz=155,slow=7.7,SNR=2.6						
	0.3nm,0.4s						
MKAR	Makanchi Array	61.51	317	P	P	04 24 37.5	+0.3
	0.1nm,0.5s,baz=87,slow=8.8,SNR=2.8						
	0.1nm,0.5s						
ZALV	Zalesovo Beam	61.97	325	P	P	04 24 39.9	-0.3
	0.4nm,0.3s,baz=134,slow=8.3,SNR=1.5						
	0.4nm,0.3s						
AAK	Ala-Archa	66.32	311	LR	LR	04 56 10.6	
	comp=Z,42nm,19.2s,baz=134,slow=38						
BVAR	Borovoye Array	70.16	322	LR	LR	04 57 11.8	
	comp=Z,33nm,20.1s,baz=111,slow=37						
ILAR	Eielson Array	70.68	25	P	P	04 25 34.7	-1.1
	1.9nm,0.6s,baz=250,slow=5.9,SNR=26						
	1.9nm,0.6s						
YKA	Yellowknife Ar	85.00	27	P	P	04 26 56.5	+1.2
	0.2nm,0.4s,baz=285,slow=4.8,SNR=10						
	0.2nm,0.4s						
ARCES	ARCESS Array B	88.08	342	P	P	04 27 10.5	+0.2
	3.0nm,0.9s,baz=70,slow=7.8,SNR=1.3						
	3.0nm,0.9s						
NVAR	Mina Array Bea	89.17	51	P	P	04 27 17.4	+1.0
	1.8nm,0.8s,baz=268,slow=4.7,SNR=6.8						
	1.8nm,0.8s						
FINES	FINESS Array B	91.89	335	P	P	04 27 27.2	-1.0
	0.9nm,0.4s,baz=71,slow=6.9,SNR=7.7						
	0.9nm,0.4s						

IDC 28 04:19:14.7±4.5**, 17°.49N**×**145°.43E, h295**km±22km**, mb3.1**/4**, mbtmp3.8**/5**, Error ellipse: s-maj=87.7km s-min=23.6km az=71.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.92	188	P	Pn	04 20 20.9	+1.0
	39nm,0.4s,baz=9.5,slow=18,SNR=1.6						
GUMO				S	S	04 21 11.9	-0.2
	46nm,0.6s,baz=18,slow=20,SNR=1.7						
WRA	Warramunga Arr	38.77	197	P	P	04 26 11.2	-0.2
	0.7nm,0.3s,baz=18,slow=8.8,SNR=25						
	0.7nm,0.3s						
ASAR	Alice Springs	42.43	196	P	P	04 26 41.3	+0.1
	0.3nm,0.4s,baz=22,slow=12,SNR=4.6						
	0.3nm,0.4s						
CMAR	Chiang Mai Arr	44.14	279	P	P	04 26 55.2	+0.2
	1.2nm,0.3s,baz=73,slow=7.7,SNR=4.4						
	1.2nm,0.3s						
MKAR	Makanchi Array	59.12	314	P	P	04 28 44.2	-0.5
	0.2nm,0.5s,baz=86,slow=7.8,SNR=2.6						
	0.2nm,0.5s						

WEL 28 04:21:46.5±0.5**, 42°S**±3°×**17°3E**±°**, h5**km**, M1.9**/2**, ML2.3**/8**, MLv1.9**/2**, Error ellipse: s-maj=0.0km s-min=0.0km az=132.6, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.36	103	P	Pg	04 21 53.8	+0.3
KHZ				S	Sg	04 21 58.9	+0.7
THZ	Tophouse	0.59	348	P	Pg	04 21 58.5	+0.7
THZ				S	Sg	04 22 05.7	+0.3
GVZ	Greta Valley S	0.63	182	P	Pb	04 21 59.7	-0.3
LTZ	Lake Taylor	0.74	233	P	Pg	04 22 00.9	+0.2
LTZ				S	Sg	04 22 10.1	-0.1
BSWZ	Blackbirch Sta	0.87	44	P	Pg	04 22 03.4	+0.3
MRNZ	Matariki Terra	0.97	346	P	Pb	04 22 05.8	+0.1
DSZ	Denniston Nort	1.11	302	P	Pn	04 22 08.7	0.0
NNZ	Nelson	1.15	12	P	Pg	04 22 07.6	-0.9
OXZ	Oxford	1.24	217	P	Pg	04 22 09.3	-1.0
MQZ	McQueen's Vall	1.40	192	P	Pn	04 22 10.6	-2.0
MQZ				S	Sb	04 22 28.8	-2.5
TCW	Tory Channel	1.45	39	P	Pn	04 22 12.9	-0.4
QRZ	Quartz Range	1.56	345	P	Pb	04 22 15.7	-0.3
MHCZ	Mount Hutt	1.62	222	P	Pn	04 22 14.6	-1.2
WACZ	Wakanui South	1.84	209	P	Pn	04 22 17.2	-1.5
RPZ	Rata Peaks	2.02	226	P	Pn	04 22 20.0	-1.2
ARCZ	Arundel	2.12	220	P	Pn	04 22 21.6	-1.1

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*IDC **28** 04:37:09.6±2.8, 24°.38S×176°.73W, h114km±23km, mb3.8/7, mbtmp4.3/11, Error ellipse: s-maj=27.1km s-min=21.3km az=147.0*

ISC 28 04:37:07.5±0.7**, 24°.34S**±0°.07×**176°.52W**±0°.10**, h100**km**, n22,** σ**1s.42**/18**, mb4.3**/7**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.05	194	P	Pn	04 38 23.1	+2.3
	234nm,0.3s,baz=322,slow=3.3,SNR=3.9						
RAO				S	Sn	04 39 18.4	+0.5
	154nm,0.3s,baz=120,slow=23,SNR=1.2						
MSVF	Nonsavu	8.30	321	P	Pn	04 39 06.2	+1.0
	15nm,0.5s,baz=102,slow=23,SNR=16						
MSVF				S	Sn	04 40 37.7	+0.3
	11nm,0.9s,baz=276,slow=20,SNR=1.8						
URZ	Urewera	14.89	200	P	Pn	04 40 31.7	-1.1
	3.5nm,0.3s,baz=185,slow=7.5,SNR=6.1						
URZ				S	Sn	04 43 05.9	-11
	4.3nm,0.5s,baz=174,slow=22,SNR=2.2						
RAR	Rarotonga	15.76	82	P	Pn	04 40 41.1	-2.7
	8.2nm,0.3s,baz=279,slow=6.3,SNR=11						
RAR				S	Sn	04 43 18.8	-19
	12nm,0.5s,baz=177,slow=14,SNR=2.1						
DZM	Mont Dzumac	15.82	275	P	Pn	04 40 43.5	-1.2
	8.9nm,1.1s,baz=104,slow=19,SNR=3.5						
CTA	Charters Tower	34.65	270	P	P	04 43 46.7	-0.9
	4.3nm,0.3s,baz=90,slow=10,SNR=11						
	4.3nm,0.3s						
STKA	Stephens Creek	37.52	249	P	P	04 44 11.2	-0.7
	1.5nm,0.3s,baz=96,slow=10.0,SNR=4.0						
	1.5nm,0.3s						
ASAR	Alice Springs	45.09	260	P	P	04 45 12.8	-1.3
	1.8nm,0.4s,baz=103,slow=7.9,SNR=22						
	1.8nm,0.4s						
WRA	Warramunga Arr	45.54	265	P	P	04 45 15.8	-1.8
	3.2nm,0.6s,baz=100,slow=8.1,SNR=38						
WRA				PcP	PcP	04 46 55.3	+0.5
	1.4nm,0.9s,baz=99,slow=3.1,SNR=4.5						
	3.2nm,0.6s						
H03S2	Juan Fernandez	82.71	124	T	T	06 20 25.7	
	baz=244,slow=74,SNR=94						
H03S1	Juan Fernandez	82.73	124	T	T	06 20 26.9	
	baz=244,slow=74,SNR=95						
H03S3	Juan Fernandez	82.73	124	T	T	06 20 25.8	
	baz=244,slow=74,SNR=86						
H03N2	Juan Fernandez	82.87	123	T	T	06 20 47.8	
	baz=250,slow=72,SNR=179						
H03N3	Juan Fernandez	82.87	123	T	T	06 20 42.6	
	baz=250,slow=72,SNR=255						
H03N1	Juan Fernandez	82.89	123	T	T	06 20 35.6	
	baz=250,slow=72,SNR=132						
NVAR	Mina Array Bea	82.90	42	P	P	04 49 21.9	+0.5
	0.5nm,0.7s,baz=232,slow=5.6,SNR=2.1						
	0.5nm,0.7s						
TXAR	Lajitas Array	87.99	57	P	P	04 49 47.0	+0.2
	0.3nm,1.0s,baz=233,slow=4.3,SNR=3.4						
	0.3nm,1.0s						
SEY	Seymchan	90.41	346	P	P	04 49 58.2	+1.1
	0.8nm,0.3s,baz=29,slow=1.7,SNR=4.6						
	0.8nm,0.3s						
MKAR	Makanchi Array	114.80	312	PKP	PKPdf	04 55 36.3	0.0
	0.2nm,0.6s,baz=119,slow=1.8,SNR=3.7						
ARCES	ARCESS Array B	132.93	350	PKP	PKPdf	04 56 10.4	+0.1
	4.7nm,0.9s,baz=118,slow=1.3,SNR=4.5						
AKASG	Malin Array Be	147.01	330	PKPbc	PKPdf	04 56 38.5	+2.4
	1.4nm,0.4s,baz=44,slow=4.1,SNR=16						
BRTR	Keskin Array B	150.36	308	PKPbc	PKPbc	04 56 47.8	+0.2
	1.5nm,0.6s,baz=116,slow=5.6,SNR=4.4						

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*NEIC **28** 04:40:35.3±1.7, 54°.2S±0°.1×142°.1E±0°.1, h10km±1km, mb4.7/20, Error ellipse: s-maj=22.7km s-min=9.1km az=205.0*

*IDC **28** 04:40:35.2±0.6, 54°.07S×142°.25E, h0km, mb4.4/11, mbtmp4.4/11, MS3.9/32, Error ellipse: s-maj=26.7km s-min=16.0km az=76.0*

ISC 28 04:40:36.2±0.5**, 54°.18S**±0°.08×**142°.2E**±0°.1**, h10**km**, n112,** σ**1s.60**/78**, mb4.6**/16**, MS3.9**/35**, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQ	Macquarie Isla	9.81	99	Pn	Pn	04 42 56.0	-1.2
BRAT	Ballarat	16.68	5	P	P	04 44 33.7	+1.5
TOO	Toolangi	16.77	9		P	04 44 33.2	0.0
TOO				IAmb	IAmb	04 44 35.1	
	comp=Z,44nm,0.9s						
TOO	Toolangi	16.77	9	P	P	04 44 34.4	+1.1
CAN	Canberra	19.45	17	P	Pn	04 45 03.7	-0.3
CAN				IAmb	IAmb	04 45 07.8	
	comp=Z,38nm,1.3s						
CAN	Canberra	19.45	17	P	Pn	04 45 06.5	+2.4
LBZ	Lake Benmore	20.61	73	P	P	04 45 15.1	-0.3
LBZ				IAmb	IAmb	04 45 56.5	
	comp=Z,44nm,1.4s						
HTT	Hallett	20.87	352	P	Pn	04 45 19.3	-1.5
WHYH	Whyalla	21.39	349	P	P	04 45 24.0	+0.2
RPZ	Rata Peaks	21.52	73	P	P	04 45 25.1	-0.1
	comp=Z,16nm,1.0s,baz=173,slow=4.9,SNR=4.8						
RPZ				LR	LR	04 52 21.7	
	comp=Z,845nm,18.5s,baz=228,slow=33						
	comp=Z,16nm,1.0s						
RPZ	Rata Peaks	21.52	73	P	P	04 45 23.0	-2.2
RPZ				IAmb	IAmb	04 45 33.9	
	comp=Z,48nm,1.2s						
BBOO	Buckleboo	21.80	346	P	P	04 45 28.3	+0.1
BBOO				IAmb	IAmb	04 45 32.6	
	comp=Z,38nm,1.1s						
BBOO	Buckleboo	21.80	346	P	P	04 45 29.6	+1.4
STKA	Stephens Creek	22.30	359	P	P	04 45 33.5	-0.1
	comp=Z,8.7nm,1.0s,baz=182,slow=12,SNR=5.8						
STKA				LR	LR	04 53 02.9	
	comp=Z,1µm,18.7s,baz=197,slow=34						
	comp=Z,8.7nm,1.0s						
STKA	Stephens Creek	22.30	359	P	P	04 45 29.8	-3.8
STKA	Stephens Creek	22.30	359	P	P	04 45 33.9	+0.3
AUDCS	Dubbo College	22.42	14	P	P	04 45 37.3	+2.4
	comp=Z,21nm,1.6s						
CMSA	Cobar Meteorol	22.77	8	P	P	04 45 40.3	+1.7
LCRK	Leigh Creek	23.89	352	P	P	04 45 49.6	-0.2
VNDA	Vanda	24.49	170	P	P	04 45 55.8	+0.8
	comp=Z,1.8nm,0.8s,baz=338,slow=9.6,SNR=7.9						
VNDA				LR	LR	04 54 42.3	
	comp=Z,915nm,19.7s,baz=346,slow=34						
	comp=Z,1.8nm,0.8s						
VNDA	Vanda	24.49	170	P	P	04 45 54.2	-0.8
MULG	Mulgathing	24.59	343	P	P	04 45 56.8	+0.5
ARMA	Armidale	24.71	20	P	P	04 45 55.1	-2.4
ARMA				IAmb	IAmb	04 46 10.1	
	comp=Z,20nm,1.3s						
ARMA	Armidale	24.71	20	P	P	04 45 58.8	+1.3
AULRC	Lightning Ridg	25.09	12	P	P	04 46 03.5	+2.7
INKA	Innaminka	26.44	357	P	P	04 46 15.0	+2.0
H01W1	Cape Leeuwin H	27.47	303	T	T	05 14 58.6	
	baz=143,slow=76,SNR=12						
H01W2	Cape Leeuwin H	27.47	303	T	T	05 15 00.9	
	baz=143,slow=76,SNR=12						
H01W3	Cape Leeuwin H	27.48	303	T	T	05 15 00.5	
	baz=143,slow=76,SNR=11						
QLP	Quilpie	27.61	4	P	P	04 46 25.6	+2.0
RMQ	Roma	28.09	13	P	P	04 46 29.1	+1.2
URZ	Urewera	28.58	71	P	P	04 46 30.7	-1.4
	comp=Z,5.7nm,0.8s,baz=69,slow=10,SNR=2.1						
URZ				LR	LR	04 56 43.7	
	comp=Z,457nm,21.4s,baz=307,slow=34						
	comp=Z,5.7nm,0.8s						
AS01	Alice Springs	31.09	345	P	P	04 46 54.4	-0.2
ASAR	Alice Springs	31.10	345	P	P	04 46 54.0	-0.6
	comp=Z,7.2nm,0.8s,baz=167,slow=9.8,SNR=34						
ASAR				PcP	PcP	04 49 50.5	+0.7
	comp=Z,1.2nm,0.6s,baz=164,slow=3.1,SNR=5.4						
ASAR				LR	LR	04 57 15.7	
	comp=Z,249nm,21.9s,baz=162,slow=32						
	comp=Z,7.2nm,0.8s						
ASAR	Alice Springs	31.10	345	P	P	04 46 53.5	-1.2
AS31	Alice Springs	31.10	345	P	P	04 46 53.4	-1.2
MORW	Morawa	31.46	312	P	P	04 46 54.3	-3.4
MORW				IAmb	IAmb	04 47 13.0	
	comp=Z,16nm,1.1s						
QIS	Mount Isa	33.62	356	P	P	04 47 16.4	-0.3
CTA	Charters Tower	34.18	7	LR	LR	05 00 28.6	
	comp=Z,608nm,19.8s,baz=254,slow=35						
WB1	Warramunga Ar.	34.68	347	P	P	04 47 25.0	-0.9
WB2	Warramunga Arr	34.70	347	P	P	04 47 24.3	-1.8
WRA	Warramunga Arr	34.70	347	P	P	04 47 24.8	-1.3
	comp=Z,17nm,0.9s,baz=171,slow=7.8,SNR=51						
WRA				PcP	PcP	04 50 00.1	+0.2
	comp=Z,2.3nm,0.7s,baz=183,slow=2.6,SNR=8.5						
WRA				LR	LR	05 00 02.1	
	comp=Z,200nm,20.4s,baz=151,slow=34						
	comp=Z,17nm,0.9s						
WRA	Warramunga Arr	34.70	347	P	P	04 47 24.7	-1.3
WRAB	Tennant Creek	34.71	347	P	P	04 47 24.9	-1.2
WRAB	Tennant Creek	34.71	347	P	P	04 47 25.4	-0.7
WB0	Warramunga Arr	34.87	347	P	P	04 47 26.3	-1.2
QSPA	South Pole Qui	35.93	180	P	P	04 47 37.6	+1.2
	comp=Z,6.2nm,1.0s,baz=86,slow=0.9,SNR=8.0						
QSPA				LR	LR	05 02 03.2	
	comp=Z,706nm,20.1s,baz=18,slow=36						
	comp=Z,6.2nm,1.0s						
QSPA	South Pole Qui	35.93	180	P	P	04 47 35.1	-1.3
QSPA				IAmb	IAmb	04 47 46.8	
	comp=Z,20nm,1.3s						
MTSU	Mount Surprise	36.02	3	P	P	04 47 38.6	+1.2
MAW	Mawson	37.90	218	LR	LR	05 01 36.9	
	comp=Z,117nm,19.6s,baz=126,slow=33						
RAO	Raoul Island	38.07	65	LR	LR	05 01 08.9	
	comp=Z,199nm,18.2s,baz=224,slow=32						
FITZ	Fitzroy Crossi	38.21	334	P	P	04 47 55.1	-0.9
MTN	Manton Dam	42.15	344	P	P	04 48 27.0	-1.7
PMG	Port Moresby	44.83	7	LR	LR	05 06 45.3	
	comp=Z,174nm,18.3s,baz=191,slow=35						
MSVF	Nonsavu	45.67	51	LR	LR	05 03 02.6	
	comp=Z,111nm,22.0s,baz=215,slow=30						
KRVT	Keravat (AS076	50.37	13	LR	LR	05 10 13.4	
	comp=Z,178nm,19.0s,baz=288,slow=35						
SNAA	Sanae	52.04	193	LR	LR	05 11 32.7	
	comp=Z,648nm,19.0s,baz=112,slow=36						
KAPI	Kappang	52.30	331	P	P	04 49 48.0	+0.3
	comp=Z,2.7nm,0.3s,baz=195,slow=10,SNR=4.9						
KAPI				LR	LR	05 11 34.3	
	comp=Z,156nm,19.1s,baz=176,slow=36						
	comp=Z,2.7nm,0.3s						
KAPI	Kappang	52.30	331	P	P	04 49 46.6	-1.2
KAPI				IAmb	IAmb	04 49 54.2	
	comp=Z,13nm,1.1s						
AFI	Afiamalu	53.89	60	LR	LR	05 09 23.4	
	comp=Z,68nm,21.9s,baz=156,slow=32						
RAR	Rarotonga	54.47	77	LR	LR	05 10 05.1	
	comp=Z,79nm,19.1s,baz=234,slow=32						
TBI	Tubuai	58.81	87	*e*LR	LR	05 07 44.6	
	comp=Z,1µm,24.2s						
TBI				*e*LR	LR	05 07 44.8	
	comp=Z,6µm,23.5s						
DAV	Davao City (W)	62.60	341	LR	LR	05 19 45.3	
	comp=Z,70nm,18.1s,baz=330,slow=38						
PPT2	Papeete2	63.21	83	*e*LR	LR	05 09 47.2	
	comp=Z,252nm,29.5s						
PPT	Papeete	63.23	83	LR	LR	05 14 26.9	
	comp=Z,57nm,18.2s,baz=200,slow=32						
GUMO	Guam	67.54	3	LR	LR	05 21 02.4	
	comp=Z,26nm,19.2s,baz=106,slow=36						
H08S2	Diego Garcia H	71.98	282	T	T	06 10 39.4	
	baz=145,slow=76,SNR=5.0						
H08S1	Diego Carcia H	71.99	282	T	T	06 10 43.2	
	baz=145,slow=76,SNR=4.6						
H08S3	Diego Garcia H	72.00	282	T	T	06 10 38.8	
	baz=145,slow=76,SNR=5.0						
TAOE	Nuku Hiva Isla	75.66	85	*e*LR	LR	05 15 33.0	
	comp=Z,169nm,23.2s						
PALK	Pallekele	79.81	298	LR	LR	05 20 47.7	
	comp=Z,31nm,21.2s,baz=245,slow=30						
SUR	Sutherland	80.07	227	LR	LR	05 24 23.1	
	comp=Z,46nm,18.2s,baz=154,slow=33						
CMAR	Chiang Mai Arr	81.26	319	P	P	04 52 52.6	+0.4
	comp=Z,1.2nm,0.3s,baz=175,slow=5.4,SNR=8.8						
CMAR				LR	LR	05 30 20.7	
	comp=Z,38nm,18.3s,baz=150,slow=37						
	comp=Z,1.2nm,0.3s						
BOSA	Boshof	81.28	232	LR	LR	05 22 53.2	
	comp=Z,58nm,19.2s,baz=192,slow=31						
PLCA	Paso Flores	81.37	155	P	P	04 52 54.3	+1.4
	comp=Z,0.8nm,0.8s,baz=296,slow=6.4,SNR=3.5						
	comp=Z,0.8nm,0.8s						
JOW	Kunigami	81.57	347	LR	LR	05 27 17.5	
	comp=Z,27nm,20.9s,baz=122,slow=34						
LR03	Panguipulli	81.96	154	P	P	04 52 54.2	-1.7
CRAI	Chiangrai	82.33	321	P	P	04 52 56.2	-1.7
CRAI				IAmb	IAmb	04 53 04.1	
	comp=Z,4.6nm,0.7s						
LBTB	Lobatse	84.17	235	LR	LR	05 24 30.9	
	comp=Z,66nm,18.4s,baz=146,slow=31						
H03S2	Juan Fernandez	85.43	147	T	T	06 28 26.9	
	baz=201,slow=74,SNR=6.1						
H03S1	Juan Fernandez	85.43	147	T	T	06 28 28.5	
	baz=201,slow=74,SNR=7.9						
H03S3	Juan Fernandez	85.45	147	T	T	06 28 28.0	
	baz=201,slow=74,SNR=6.3						
JNU	Nakatsue	87.49	351	LR	LR	05 32 08.4	
	comp=Z,52nm,19.9s,baz=152,slow=35						
MJAR	Matsushiro Arr	90.42	357	P	P	04 53 37.6	+0.3
	comp=Z,3.0nm,0.8s,baz=175,slow=6.4,SNR=5.2						
MJAR				LR	LR	05 31 54.6	
	comp=Z,41nm,20.3s,baz=161,slow=34						
	comp=Z,3.0nm,0.8s						
KSRS	Korea Array	92.09	349	LR	LR	05 33 50.3	

	comp=Z,28nm,20.9s,baz=180,slow=35						
TSUM	Tsumeb	92.91	231	LR	LR	05 28 22.7	
	comp=Z,42nm,21.3s,baz=149,slow=31						
ASAJ	Asahikawa	97.92	0	LR	LR	05 37 15.7	
	comp=Z,20nm,21.9s,baz=127,slow=35						
CPUP	Villa Florida	98.07	162	LR	LR	05 37 00.5	
	comp=Z,46nm,18.1s,baz=188,slow=34						
GEYT	Alibeck	116.55	298	PKP	PKiKP	04 59 20.3	+0.5
	comp=Z,1.1nm,0.4s,baz=64,slow=3.4,SNR=1.8						
NVAR	Mina Array Bea	125.25	72	PKP	PKiKP	04 59 37.5	+0.4
	comp=Z,0.2nm,0.4s,baz=190,slow=3.7,SNR=3.5						
TXAR	Lajitas Array	127.19	90	PKP	PKiKP	04 59 41.4	+0.4
	comp=Z,0.2nm,0.8s,baz=123,slow=3.3,SNR=1.8						
ILAR	Eielson Array	130.44	32	PKP	PKiKP	04 59 45.8	-0.4
	comp=Z,0.4nm,0.6s,baz=295,slow=3.2,SNR=4.5						
YKA	Yellowknife Ar	141.17	46	PKhKP	PKPpre	04 59 57.8	
	comp=Z,0.4nm,0.6s,baz=238,slow=3.4,SNR=11						
ULM	Lac du Bonnet	145.09	72	PKPbc	PKPdf	05 00 12.9	+0.2
	comp=Z,1.9nm,0.6s,baz=24,slow=1.8,SNR=3.0						
RONA	Rosalia, Austr	146.01	282	*e*PKP	PKiKP	05 00 20.6	+2.0
	comp=Z,7.6nm,1.2s						
SOKA	Soboth	146.20	279	*e*PKP	PKiKP	05 00 20.9	+1.8
	comp=Z,5.1nm,0.8s						
ARSA	Arzberg	146.22	281	*i* PKP	PKiKP	05 00 18.9	-0.1
	comp=Z,2.8nm,0.7s						
CONA	Conrad Observa	146.38	282	*e*PKP	PKiKP	05 00 23.9	+4.5
	comp=Z,2.4nm,0.8s						
OBKA	Obir	146.39	279	*e*PKP	PKiKP	05 00 21.2	+1.7
	comp=Z,3.6nm,0.8s						
FINES	FINESS Array B	146.48	309	PKPbc	PKPab	05 00 16.4	-0.8
	comp=Z,5.0nm,0.6s,baz=10,slow=2.1,SNR=6.9						
MYKA	Terra Mystica	146.99	278	*e*PKP	PKiKP	05 00 20.5	-0.2
	comp=Z,2.4nm,0.5s						
KBA	Koelnbreinsper	147.40	279	*e*PKP	PKiKP	05 00 22.7	+1.0
	comp=Z,1.5nm,0.5s						
ABTA	Abfaltersbach	147.71	278	*e*PKP	PKPab	05 00 24.0	+1.4
	comp=Z,2.4nm,0.6s						
GERES	GERESS Array B	148.09	282	PKPbc	PKPbc	05 00 21.0	-0.2
	comp=Z,0.8nm,0.6s,baz=108,slow=4.3,SNR=7.9						
ARCES	ARCESS Array B	148.22	323	PKPbc	PKPbc	05 00 18.8	-2.0
	comp=Z,10nm,1.1s,baz=43,slow=2.1,SNR=2.1						
WTTA	Wattenberg	148.49	278	*e*PKiKP	PKPab	05 00 29.6	+3.8
	comp=Z,3.3nm,0.5s						
SQTA	Sankt Quirin	148.71	278	*e*PKP	PKPab	05 00 26.5	-0.1
	comp=Z,2.2nm,0.6s						
MOTA	Moosalm	148.84	278	*e*PKiKP	PKPab	05 00 31.4	+4.1
	comp=Z,3.5nm,0.6s						
FETA	Feichten	148.89	277	*e*PKP	PKPab	05 00 27.9	+0.4
	comp=Z,3.3nm,0.8s						
DAVA	Damuels	149.52	277	*e*PKP	PKPab	05 00 27.7	-2.3
	comp=Z,2.7nm,0.7s						
ESDC	Sonseca Array	153.01	251	PKPbc	PKiKP	05 00 34.8	+1.4
	comp=Z,1.1nm,0.7s,baz=89,slow=1.1,SNR=8.7						
NOA	NORSAR Array B	153.41	305	PKPbc	PKiKP	05 00 34.1	+0.7
	comp=Z,0.2nm,0.5s,baz=90,slow=3.1,SNR=2.7						

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*SSNC **28** 05:10:23.4±2.9, 18°.09N×72°.46W, h5^{km}±35^{km}, MD3.3, ML2.5*
*OSPL **28** 05:10:23.5±1.0, 18°.08N×72°.55W, h6^{km}±7^{km}, ML2.2*
ISC 28 05:10:22.8±1.9**, 18°.09N**±0°.08×**72°.54W**±0°.06**, h14**^{km}±12^{km}**,**
n10, σ0^{s}.71/17**, Haiti region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAPH	Port-au-Prince	0.49	28	*e*P	Pg	05 10 32.2	-0.2
PAPH				*e*S	Sg	05 10 38.8	-0.1
PAPH	Port-au-Prince	0.49	28	*i* P	Pg	05 10 32.3	-0.1
PAPH				*e*S	Sg	05 10 39.4	+0.5
PAPH				IAML		05 10 40.9	
	comp=Z,238nm,0.5s						
LOPE2	Hotel El Peder	0.76	94	*i* P	Pg	05 10 37.3	-0.2
LOPE2				*e*S	Sg	05 10 47.7	+0.2
LOPE2				IAML		05 10 47.9	
	comp=Z,100nm,0.1s						
PODR	Polo	1.20	86	*i* P	Pg	05 10 45.0	-0.9
PODR				*e*S	Sb	05 11 01.9	+1.0
SDDR	Presa de Saban	1.48	53	*e*P	Pn	05 10 49.3	+0.2
SDDR	Presa de Saban	1.48	53	*i* P	Pn	05 10 49.3	+0.2
SDDR				IAML		05 11 11.7	
	comp=Z,14nm,0.5s						
MASC	Masc	2.62	323	*e*P	Pn	05 11 05.1	+0.5
MASC				*e*S	Sn	05 11 35.1	-1.2
MASC				IAML		05 11 38.6	
	comp=N,15nm,0.7s						
MASC				IAML		05 11 39.1	
	comp=E,11nm,0.8s						
MASC	Masc	2.62	323	*i* P	Pn	05 11 04.8	+0.1
MASC				*e*S	Sn	05 11 35.0	-1.2
MASC				IAML		05 11 37.3	
	comp=Z,14nm,1.6s						
GTBY	Guantanamo Bay	3.04	307	*e*P	Pn	05 11 10.2	-0.3
GTBY				IAML		05 11 55.8	
	comp=Z,13nm,0.9s						
GTBY				IAML		05 11 56.8	
	comp=Z,17nm,0.3s						
RCC	Rio Carpintero	3.53	303	*e*P	Pn	05 11 18.1	+0.8
RCC				*e*S	Sn	05 11 59.5	+0.6
RCC				IAML		05 12 08.7	
	comp=N,5.5nm,0.8s						
RCC				IAML		05 12 15.4	
	comp=E,4.7nm,0.7s						

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*IDC **28** 05:11:38.7±52.0, 41°.97N×146°.44E, h0^{km}, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=1180.0km s-min=79.4km az=158.0*
*JMA **28** 05:12:35.0±0.4, 45°N±2°×14°3E±°, h278^{km}±3^{km}, MV2.8/32, NE OFF HOKKAIDO*
ISC 28 05:12:34.9±1.0**, 44°.88N**±0°.09×**143°.1E**±0°.1**, h278**^{km}±7^{km}**,**
n18, σ1^{s}.19/26**, mb3.5**/3**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSE	Soyaes	0.35	284	*e*P	Pn	05 13 10.6	0.0
JSE				*e*S	S	05 13 37.7	-1.0
ASAJ	Asahikawa	0.83	204	*e*P	Pn	05 13 13.3	+1.1
JMP	Maruseppu	0.90	166	*e*P	Pn	05 13 13.4	+0.9
JWK2	Keihoku	0.93	299	*i* P	Pn	05 13 12.8	+0.3
JWK2				*e*S	S	05 13 41.4	-0.8
JSS	Shosan	0.98	241	*e*P	Pn	05 13 13.4	+0.7
JKK2	Kamakawa 2	1.03	193	*e*P	Pn	05 13 14.6	+1.4
JTKR	Abashiri--Toko	1.09	146	P	Pn	05 13 14.7	+1.3
JTKR				*e*S	S	05 13 44.8	+0.9
JYG	Yagishiri	1.25	249	*e*P	Pn	05 13 14.5	+0.3
JHR	Hokuryu	1.48	221	*e*P	Pn	05 13 16.7	+0.9
JRBN	Rebuntou	1.51	292	*e*P	Pn	05 13 14.8	-1.0
JAR	Ashorobuto	1.66	162	*e*P	Pn	05 13 18.4	+1.3
JAR				*e*S	S	05 13 51.6	+1.1
JAK	Akkeshi	2.22	147	*e*P	Pn	05 13 21.9	+0.3
JAK				*e*S	S	05 13 57.8	-1.0
JCH	Churui	2.27	174	P	Pn	05 13 22.0	-0.1
JCH				*e*S	S	05 13 57.0	-2.7
NEM2	Nemuro 2	2.45	127	*e*P	Pn	05 13 23.5	-0.2
NEM2				*e*S	S	05 14 00.8	-1.7
JNBK	Urakawa-nobuka	2.60	185	*e*P	Pn	05 13 25.6	+0.4
JNBK				*e*S	S	05 14 03.4	-1.9
SONM	Songino Array	25.33	290	P	P	05 17 37.7	+1.1
	1.0nm,0.6s,baz=83,slow=8.2,SNR=8.8						
	1.0nm,0.6s						
MKAR	Makanchi Array	41.45	295	P	P	05 19 55.3	+0.6
	0.4nm,0.5s,baz=79,slow=8.9,SNR=5.6						
	0.4nm,0.5s						
FINES	FINESS Array B	62.50	331	P	P	05 22 27.9	-0.8
	0.9nm,0.7s,baz=54,slow=9.7,SNR=6.1						
	0.9nm,0.7s						

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*TAP **28** 05:23:06.7, 24°.99N×122°.42E, h122^{km}±1^{km}, ML3.1, C*
*JMA **28** 05:23:06.0±0.2, 25°N±3°×122°.4E±0°.7, h125^{km}±3^{km}, MV2.5/10, NW OFF ISHIGAKIJIMA IS*
ISC 28 05:23:06.6±2.1**, 24°.96N**±0°.09×**122°.43E**±0°.03,
h126^{km}±13^{km}**, n43, σ0^{s}.66**/81**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIPB	Shuangxi	0.55	271	*e*P	Pn	05 23 25.7	+0.2
	baz=267						
TIPB				*e*S	Sn	05 23 40.1	+0.3
	baz=267						
TWC	Suao	0.63	237	*e*P	Pn	05 23 25.9	-0.1
	baz=229						
TWC				*e*S	Sn	05 23 40.3	-0.4
	baz=229						
YOJ	Yonaguni jima	0.72	133	P	Pn	05 23 26.7	0.0
YOJ				*e*S	Sn	05 23 42.5	+0.6
TWE	Neicheng	0.73	251	*e*P	Pn	05 23 27.2	+0.4
	baz=255						
TWE				*e*S	Sn	05 23 42.1	+0.1
	baz=255						
EWUT	Wuta	0.78	229	*e*P	Pn	05 23 27.4	+0.2
	baz=220						
EWUT				*e*S	Sn	05 23 43.0	+0.3
	baz=220						
FUSB	Fushanzhiwuyua	0.79	256	P	Pn	05 23 27.3	-0.1
	baz=259						
FUSB				S	Sn	05 23 42.0	-1.0
	baz=259						
YM01	YM01	0.80	284	*e*P	Pn	05 23 27.4	0.0
	baz=281						
ENA	Nanau	0.82	230	*e*P	Pn	05 23 27.6	+0.1
	baz=221						
ENA				*e*S	Sn	05 23 44.0	+0.7
	baz=221						
ENTT	Nioudou	0.85	248	P	Pn	05 23 28.1	+0.4
	baz=248						
ENTT				*e*S	Sn	05 23 44.1	+0.4
	baz=248						
NWLT	Wulai	0.86	258	*e*P	Pn	05 23 27.5	-0.4
	baz=261						
NWLT				*e*S	Sn	05 23 43.1	-1.0
	baz=261						
LATG	Datong	0.93	243	P	Pn	05 23 29.3	+0.7
	baz=242						
LATG				S	Sn	05 23 45.8	+0.6
	baz=242						
YHNB	Yeheng	1.00	253	⇑ *i*P	Pn	05 23 29.4	+0.1
	baz=255						
YHNB				*i* S	Sn	05 23 45.7	-0.7
	baz=255						
NSK	Sanguang	1.01	254	*i* P	Pn	05 23 29.4	+0.1
	baz=255						
NSK				*i* S	Sn	05 23 45.8	-0.8
	baz=255						
NNSB	Datong	1.09	241	P	Pn	05 23 30.5	+0.4
	baz=247						
NNSB				S	Sn	05 23 48.3	+0.3
	baz=247						
NACB	Ninganchiao	1.09	224	*e*P	Pn	05 23 29.6	-0.5
	baz=216						
NACB				*e*S	Sn	05 23 47.2	-0.6
	baz=216						
NNS	Nan Shan	1.09	242	*e*P	Pn	05 23 30.9	+0.7
	baz=247						
NNS				*e*S	Sn	05 23 48.5	+0.5
	baz=247						
ETLH	Xiulin Townshi	1.14	229	*e*P	Pn	05 23 30.6	-0.1
	baz=227						
ETLH				*e*S	Sn	05 23 48.4	-0.5
	baz=227						
TWD	Chiawan	1.16	221	*e*P	Pn	05 23 30.3	-0.4
	baz=215						
TWD				*e*S	Sn	05 23 48.4	-0.6
	baz=215						
NFF	Wufeng Townshi	1.24	255	*e*P	Pn	05 23 31.4	-0.2
	baz=253						
NFF				*e*S	Sn	05 23 49.5	-1.1
	baz=253						
LIOB	Emei	1.32	257	*e*P	Pn	05 23 32.4	0.0
	baz=247						
LIOB				*e*S	Sn	05 23 50.8	-1.3
	baz=247						
IRIF	Iriomote-Funau	1.34	117	P	Pn	05 23 32.6	+0.1
IRIF				S	Sn	05 23 52.5	+0.2
WHF	Hehuan Shan	1.34	233	*e*P	Pn	05 23 33.4	+0.3
	baz=227						
WHF				*e*S	Sn	05 23 53.0	0.0
	baz=227						
TWT	Tachien	1.34	239	*e*P	Pn	05 23 33.7	+0.9
	baz=231						
TWT				*e*S	Sn	05 23 53.8	+1.0
	baz=231						
TDCB	Techi	1.35	239	*e*P	Pn	05 23 33.6	+0.7
	baz=231						
TDCB				*e*S	Sn	05 23 53.3	+0.3
	baz=231						
CHGB	Renai	1.45	232	*e*P	Pn	05 23 34.4	+0.3
	baz=230						
CHGB				*e*S	Sn	05 23 55.0	0.0
	baz=230						
WHP	Taichung City	1.51	244	*e*P	Pn	05 23 35.3	+0.6
	baz=248						
WHP				*e*S	Sn	05 23 55.6	-0.4
	baz=248						
OWD	Renai	1.52	229	*e*P	Pn	05 23 35.1	+0.3
	baz=222						
OWD				*e*S	Sn	05 23 55.1	-1.1
	baz=222						
WUSB	Renai	1.54	231	*e*P	Pn	05 23 35.4	+0.4
	baz=229						
WUSB				*e*S	Sn	05 23 56.1	-0.4
	baz=229						
HATJ	Hateruma jima	1.54	125	*e*P	Pn	05 23 35.5	+0.6
HATJ				*e*S	Sn	05 23 57.2	+0.9
JKRS	Kuro-shima	1.61	116	P	Pn	05 23 35.9	+0.3
JKRS				S	Sn	05 23 58.0	+0.3
WCS	Beigang Elemen	1.65	237	*e*P	Pn	05 23 36.4	+0.2
	baz=242						
WCS				*e*S	Sn	05 23 58.8	+0.1
	baz=242						
JIJ	Ishigaki jima	1.67	111	P	Pn	05 23 36.5	+0.1
JIJ				S	Sn	05 23 58.2	-0.8
VWDT	VWDT	1.68	225	*e*P	Pn	05 23 36.6	+0.1
	baz=218						
VWDT				*e*S	Sn	05 23 59.0	-0.3
	baz=218						
HGSD	Ruisui	1.73	212	*e*P	Pn	05 23 37.0	0.0
	baz=219						
HGSD				*e*S	Sn	05 24 00.0	-0.2
	baz=219						
JISG	Ishigakijimahi	1.75	102	P	Pn	05 23 37.1	-0.2
JISG				S	Sn	05 24 00.1	-0.6
SMLT	Sun Moon Lake	1.76	233	*e*P	Pn	05 23 38.6	+1.0
	baz=230						
SMLT				*e*S	Sn	05 24 02.7	+1.5
	baz=230						
TYC	Yuchr	1.78	234	*e*P	Pn	05 23 38.6	+1.0
	baz=232						
TYC				*e*S	Sn	05 24 01.4	+0.1
	baz=232						
SSLB	Suanglung	1.78	229	*e*S	Sn	05 24 02.1	+0.5
	baz=231						
YULB	Yu-li	1.87	214	*e*P	Pn	05 23 37.1	-1.7
	baz=218						
YULB				*e*S	Sn	05 24 01.1	-2.4
	baz=218						
WHYT	Xinyi Township	1.91	229	*e*S	Sn	05 24 05.8	+1.4
	baz=235						
JTJ	Tarama	2.09	98	P	Pn	05 23 41.7	+0.3
JTJ				*e*S	Sn	05 24 07.5	-0.6
CHN5	Tsauling	2.10	230	*e*S	Sn	05 24 08.9	+0.4
	baz=228						
EHD	Haiduan	2.12	212	*e*P	Pn	05 23 41.7	-0.2
	baz=216						

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*IDC **28** 05:47:11.9±1.1, 21°.47N×106°.72W, h0^{km}, mb3.7/9, mbtmp3.7/12, ML3.5/3, MS3.4/11, Error ellipse: s-maj=30.7km s-min=15.8km az=70.0*
*MEX **28** 05:47:13.5±0.8, 21°.67N×106°.86W, h3^{km}±17^{km}, MD4.4*
*NEIC **28** 05:47:16.8±2.6, 21°.70N±0°.06×106°.51W±0°.07, h10^{km}±1^{km}, mb4.1/44, Md4.4/45(MEX), Error ellipse: s-maj=13.0km s-min=7.2km az=226.0*
ISC 28 05:47:15.8±2.4**, 21°.70N**±0°.04×**106°.57W**±0°.05,
h15^{km}±15^{km}**, n103, σ2^{s}.24**/108**, mb4.2**/18**, MS3.5**/8**, Off coast of central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAIG	Mazatlaan	1.49	5		Pn	05 47 39.1	-3.0
MAIG					Sn	05 47 57.1	-4.3
MAIG	Mazatlaan	1.49	5	*e*P	Pn	05 47 39.1	-3.0
MAIG				*e*S	Sn	05 47 57.1	-4.3
TEPI	Tepic	1.55	96	*e*P	Pn	05 47 42.3	-0.7
TEPI				*e*S	Sg	05 48 04.4	-1.4
PUVA	Puert Vallarta	1.65	130		Pn	05 47 41.2	-3.0
PUVA					Sn	05 48 05.8	+0.5
PUVA	Puert Vallarta	1.65	130	*e*P	Pn	05 47 41.2	-3.0
PUVA				*e*S	Sn	05 48 05.8	+0.5
ANIG	Ahuacatlan	2.01	108		Pn	05 47 47.7	-1.8
ANIG					Sb	05 48 16.3	-0.9
ANIG	Ahuacatlan	2.01	108	*e*P	Pn	05 47 47.7	-1.8
ANIG				*e*S	Sb	05 48 16.3	-0.9
CJM	Chamela	2.61	147	*e*P	Pn	05 47 55.0	-2.6
CJM				*e*S	Sn	05 48 24.6	-4.4
CIHU	Emiliano Zapat	2.97	144	*e*P	Pn	05 48 00.3	-2.2
CIHU				*e*S	Sn	05 48 35.6	-2.2
SSIG	Sanalona	3.15	351		Pn	05 48 02.1	-2.9
SSIG	Sanalona	3.15	351	*e*P	Pn	05 48 02.1	-2.9
R15V		3.49	136		Pn	05 48 09.4	-0.3
R15V		3.49	136	*e*P	Pn	05 48 09.4	-0.3
R15V				*e*S	Sn	05 48 51.5	+0.6
PDIG	Papasquiaro	3.50	18		Pn	05 48 10.7	+0.7
PDIG					Sn	05 48 51.1	-0.2
PDIG	Papasquiaro	3.50	18	*e*P	Pn	05 48 10.7	+0.7
PDIG				*e*S	Sn	05 48 51.1	-0.2
SOMAC	Volcano de Col	3.50	128	*e*P	Pn	05 48 09.1	-1.0
SOMAC				*e*S	Sn	05 48 52.7	+1.2
INCO	Volcan de Coli	3.52	127	*e*P	Pn	05 48 10.1	-0.3
INCO				*e*S	Sn	05 48 52.7	+0.7
MNGA	Volcan de Coli	3.54	128	*e*P	Pn	05 48 10.5	-0.1
MNGA				*e*S	Sn	05 48 53.5	+1.1
EZ5V		3.55	128		Pn	05 48 11.0	+0.3
EZ5V		3.55	128	*e*P	Pn	05 48 11.0	+0.3
EZ5V				*i* S	Sn	05 48 51.3	-1.2
JUBC	Volcan de Coli	3.55	127	*e*P	Pn	05 48 11.1	+0.4
JUBC				*e*S	Sn	05 48 52.6	0.0
CDAR	Ciudad de Arme	3.64	138	*e*P	Pn	05 48 10.7	-1.1
CDAR				*e*S	Sn	05 48 52.9	-1.7
COIG	Colima	3.68	132	*e*P	Pn	05 48 12.3	0.0
COIG				*e*S	Sn	05 48 56.2	+0.6
SLBS	Sierra La Lagu	3.69	303	Pn	Pn	05 48 14.6	+2.1
SLBS					Sb	05 49 11.2	+5.7
ZAIG	Zacatecas	3.86	73	Pn	Pn	05 48 16.0	+1.0
ZAIG	Zacatecas	3.86	73	*e*P	Pn	05 48 16.5	+1.5
ZAIG				*i* S	Sb	05 49 07.0	-3.5
AAIG	Aguscalientes	3.90	85		Pn	05 48 12.7	-2.8
AAIG					Sn	05 49 04.3	+3.1
AAIG	Aguscalientes	3.90	85	*e*P	Pn	05 48 12.7	-2.8
AAIG				*e*S	Sn	05 49 04.3	+3.1
MMIG	Aquila	4.55	138		Pn	05 48 22.7	-1.5
MMIG					Sn	05 49 19.1	+2.3
MMIG	Aquila	4.55	138	*e*P	Pn	05 48 22.7	-1.5
MMIG				*e*S	Sn	05 49 19.1	+2.3
H06E1	SOCORRO T-PHAS	5.01	235	T	T	05 53 30.1	
	SNR=257						
HPIG		5.28	9		Pn	05 48 35.4	+0.9
MOIG	Morelia	5.42	111	Pn	Pn	05 48 36.9	+0.5
ARIG	Puente Sto Nin	6.77	119		Pn	05 48 56.4	+1.6
ARIG					Sn	05 50 19.9	+8.3
ARIG	Puente Sto Nin	6.77	119	*e*P	Pn	05 48 56.4	+1.6
ARIG				*e*S	Sn	05 50 19.9	+8.3
TX31	Lajitas Ar. Si	8.04	18		Pn	05 49 12.9	+0.5
TX32	Lajitas Array	8.04	18		Pn	05 49 13.1	+0.8
TXAR	Lajitas Array	8.04	18	Pn	Pn	05 49 13.2	+0.9
	0.4nm,0.3s,baz=208,slow=14,SNR=32						
TXAR				Lg	Lg	05 51 34.3	
	0.4nm,0.3s,baz=199,slow=30,SNR=5.3						
TXAR				LR	LR	05 52 42.3	
	comp=Z,232nm,21.7s,baz=200,slow=40						
	2.4nm,0.6s						
TLIG	Tlapa	8.59	117		Pn	05 49 21.5	+1.6
319A	Douglas	9.94	346		Pn	05 49 40.6	+2.3
GDL2	Guadalupe Moun	10.65	10	Pn	Pn	05 49 51.4	+3.4
121A	Cookes Peak, D	10.85	355	Pn	Pn	05 49 52.1	+1.2
TUC	Tucson	11.22	341	Pn	Pn	05 49 56.8	+1.0
CMIG	Matias Romero	11.94	111	Pn	Pn	05 50 07.0	+1.4
	0.4nm,0.3s,baz=293,slow=12,SNR=14						
CMIG				Lg	Lg	05 53 37.6	
	baz=196,slow=22,SNR=3.6						
CMIG				LR	LR	05 53 52.4	
	comp=Z,57nm,21.1s,baz=277,slow=33						
X18A	Snowflake	13.13	348		Pn	05 50 24.9	+2.9
ANMO	Albuquerque	13.20	0	Pn	Pn	05 50 25.7	+2.6
	0.1nm,0.3s,baz=276,slow=14,SNR=5.2						
	1.3nm,0.9s						
ANMO	Albuquerque	13.20	0	Pn	Pn	05 50 26.0	+3.0
X16A	Lo Mia Camp, P	13.38	342	Pn	Pn	05 50 27.6	+2.2
WUAZ	Wupatki	14.40	344		Pn	05 50 42.2	+2.8
WMOK	Wichita Mounta	14.69	26	P	P	05 50 47.8	-1.5
PFO	Pinyon Flats O	14.74	326	LR	LR	05 55 05.5	
	comp=Z,117nm,19.5s,baz=116,slow=32						
T25A	Trinidad	15.50	6	P	P	05 51 01.0	+2.4
T25A				IAmb	IAmb	05 51 10.6	
	comp=Z,8.6nm,1.1s						
MVCO	Mesa Verde	15.55	354	P	Pn	05 50 56.9	+2.0
MVCO				IAmb	IAmb	05 51 10.4	
	comp=Z,15nm,1.2s						
V12A	Nelson	15.74	334	IAmb	IAmb	05 51 00.4	
	comp=Z,9.1nm,1.1s						
S22A	4UR Ranch, Cre	16.00	359		P	05 51 04.4	+0.3
S22A				IAmb	IAmb	05 51 34.6	
	comp=Z,14nm,1.5s						
KNB	Kanab	16.20	342	IAmb	IAmb	05 51 13.2	
	comp=Z,20nm,1.5s						
LCMT	Little Creek M	16.32	341	IAmb	IAmb	05 51 14.4	
	comp=Z,22nm,0.8s						
Q16A	Castle Valley	17.61	348	IAmb	IAmb	05 51 25.1	
	comp=Z,12nm,1.0s						
SRU	San Rafael Swe	17.69	350	IAmb	IAmb	05 51 25.4	
	comp=Z,10nm,0.9s						
ISCO	Idaho Springs	18.07	2		Pn	05 51 28.1	+1.4
P17A	Butcher Ranch,	18.08	350	P	P	05 51 29.2	+2.2
P17A				IAmb	IAmb	05 51 44.8	
	comp=Z,15nm,1.5s						
P18A	Preston Nutter	18.15	351	IAmb	IAmb	05 51 47.3	
	comp=Z,11nm,1.2s						
RDMU	Red Mountain	18.99	353	IAmb	IAmb	05 51 52.8	
	comp=Z,8.7nm,1.0s						
NVAR	Mina Array Bea	19.50	331	P	P	05 51 42.1	-0.6
	comp=Z,0.1nm,0.3s,baz=157,slow=12,SNR=8.5						
	comp=Z,1.2nm,0.7s						
HWUT	Hardware Ranch	20.30	349	P	Pn	05 51 54.5	+1.1
HWUT				IAmb	IAmb	05 52 03.0	
	comp=Z,8.4nm,1.1s						
ELK	Elko	20.36	341	P	P	05 51 53.9	+1.8
	comp=Z,1.1nm,0.6s,baz=178,slow=5.7,SNR=4.9						
ELK				LR	LR	05 58 58.5	
	comp=Z,91nm,19.3s,baz=200,slow=34						
	comp=Z,1.1nm,0.6s						
ELK	Elko	20.36	341		P	05 51 53.6	+1.5
K22A	Casper	20.90	0	P	P	05 51 58.2	+0.4
PD31	Pinedale Array	21.16	354	P	P	05 52 01.6	+0.8
PDAR	Pinedale Array	21.16	354	P	P	05 52 01.0	+0.2
	comp=Z,0.4nm,0.7s,baz=179,slow=9.9,SNR=8.6						
	comp=Z,0.4nm,0.7s						
SNOW	Snow King Moun	21.98	352	P	P	05 52 10.4	+0.8
SNOW				IAmb	IAmb	05 52 26.4	
	comp=Z,12nm,1.0s						
TPAW	Teton Pass	22.04	351	P	P	05 52 11.4	+1.2
TPAW				IAmb	IAmb	05 52 26.0	
	comp=Z,12nm,1.1s						
FXWY	Fox Creek	22.19	351	IAmb	IAmb	05 52 22.6	
	comp=Z,10.0nm,0.9s						
MOOW	Moose Ponds	22.27	352	P	P	05 52 12.5	-0.1
MOOW				IAmb	IAmb	05 52 24.7	
	comp=Z,10nm,1.2s						
IMW	Indian Meadow	22.44	352	IAmb	IAmb	05 52 33.4	
	comp=Z,5.8nm,1.1s						
W50A	Signal Mountai	22.97	50	P	P	05 52 20.7	+0.8
JTS	Las Juntas de	23.64	115	P	P	05 52 24.9	-1.9
	comp=Z,4.1nm,0.8s,baz=290,slow=10,SNR=3.6						
JTS				LR	LR	06 00 46.5	
	comp=Z,99nm,19.3s,baz=302,slow=34						
	comp=Z,4.1nm,0.8s						
W52A	Murphy	23.91	51	IAmb	IAmb	05 52 39.9	
	comp=Z,15nm,1.4s						
V51A	Loudon	23.95	49	P	P	05 52 30.6	+1.0
V51A				IAmb	IAmb	05 52 32.6	
	comp=Z,9.1nm,0.9s						
BOZ	Bozeman (W)	24.20	351	IAmb	IAmb	05 52 41.3	
	comp=Z,5.2nm,1.1s						
TKL	Tuckaleechee C	24.29	50	P	P	05 52 34.0	+1.3
	comp=Z,2.5nm,0.8s,baz=192,slow=8.5,SNR=5.2						
	comp=Z,2.5nm,0.8s						
BG3	Lake Jocassee	24.59	52	P	P	05 52 38.4	+2.9
LAO	LASA Array	24.93	1	P	P	05 52 39.3	+0.8
MSO	Missoula	25.78	348	P	P	05 52 48.8	+2.6
MSO				IAmb	IAmb	05 52 55.0	
	comp=Z,7.0nm,0.9s						
OTAV	Otavalo	34.74	124	P	P	05 54 06.5	+0.3
CHSH	Refugio Sur-Vo	35.55	127	P	P	05 54 13.1	-0.3
PORT	Chimborazo Vol	35.60	127	P	P	05 54 14.8	+1.0
SDV	Santo Domingo	36.82	105	LR	LR	06 10 02.0	
	comp=Z,43nm,19.3s,baz=84,slow=37						

SDV	Santo Domingo	36.82	105	P	P	05 54 23.9	0.0
SDV				IAmb	IAmb	05 54 33.6	
	comp=Z,7.7nm,1.1s						
MTP	Monte Pirata	38.66	88	P	P	05 54 39.4	+0.2
YKA	Yellowknife Ar	41.14	354	P	P	05 54 58.2	-1.0
	comp=Z,0.2nm,0.9s,baz=163,slow=11,SNR=3.1						
	comp=Z,0.2nm,0.9s						
FRB	Frobisher Bay	49.08	21	LR	LR	06 17 02.1	
	comp=Z,74nm,21.2s,baz=204,slow=36						
INK	Inuvik	49.51	347	LR	LR	06 18 46.4	
	comp=Z,52nm,21.1s,baz=314,slow=38						
ILAR	Eielson Array	50.51	339	P	P	05 56 12.5	-0.6
	comp=Z,0.4nm,1.0s,baz=159,slow=5.4,SNR=2.7						
ILAR				LR	LR	06 18 44.8	
	comp=Z,78nm,21.0s,baz=186,slow=37						
	comp=Z,0.4nm,1.0s						
MDP	Montagnes des	54.70	99	LR	LR	06 21 53.4	
	comp=Z,36nm,18.9s,baz=212,slow=38						
SFJD	Kangerlussuaq	57.14	23	LR	LR	06 20 36.4	
	comp=Z,94nm,21.3s,baz=232,slow=35						
H03N2	Juan Fernandez	60.84	154	T	T	07 03 27.6	
	baz=331,slow=77,SNR=21						
H03N1	Juan Fernandez	60.84	154	T	T	07 03 28.7	
	baz=331,slow=77,SNR=28						
H03N3	Juan Fernandez	60.85	154	T	T	07 03 28.3	
	baz=331,slow=77,SNR=22						
CPUP	Villa Florida	67.50	133	P	P	05 58 09.5	-2.0
	comp=Z,2.8nm,0.7s,baz=322,slow=7.5,SNR=9.0						
	comp=Z,2.8nm,0.7s						
BDFB	Brasilia	68.35	118	P	P	05 58 16.3	-1.0
	comp=Z,4.0nm,0.7s,baz=279,slow=6.0,SNR=8.0						
	comp=Z,4.0nm,0.7s						
ESDC	Sonseca Array	85.58	49	P	P	05 59 53.9	-0.1
	comp=Z,0.4nm,0.7s,baz=274,slow=5.8,SNR=2.7						
	comp=Z,0.4nm,0.7s						
WRA	Warramunga Arr	123.37	260	PKP	PKPdf	06 06 11.2	-2.0
	comp=Z,0.7nm,1.1s,baz=68,slow=2.2,SNR=4.8						

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*IDC **28** 06:21:24.5±2.6, 53°.77N×87°.01E, h0^{km}, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=22.3km s-min=14.3km az=68.0*

*NNC **28** 06:21:26.2±3.5, 53°.76N×86°.83E, h5^{km}±34^{km}, mb2.9, mpv2.6, Error ellipse: s-maj=42.4km s-min=15.7km az=27.0, Suspected Mining explosion.*

ISC 28 06:21:25.9±3.7, **53°.9N**±0°.1×**86°.7E**±0°.2, **h0**^{km}, **n8**, σ**1^{s}.30**/11, **7C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.13	275	I	I	06 30 36.4	
	baz=99,slow=328,SNR=3.6						
ZAA0	Zalesovo Array	1.13	275	⇓P	Pb	06 21 48.2	-0.1
	0.4nm,0.5s						
ZAA0				⇑S	Sn	06 22 05.5	+0.3
	2.9nm,0.8s						
ZALV	Zalesovo Beam	1.13	275	Pg	Pn	06 21 48.2	-0.8
	2.5nm,0.3s,baz=100,slow=16,SNR=22						
ZALV				Lg	Lg	06 22 06.0	
	3.5nm,0.3s,baz=104,slow=30,SNR=8.8						
KURK	Kurchatov	5.89	241	⇑Lg	Lg	06 24 34.3	
	3.6nm,1.0s						
KURBB	Kurchatov Arra	5.99	241	Pn	Pn	06 22 56.8	+1.1
	0.1nm,0.3s,baz=56,slow=13,SNR=11						
KURBB				Sn	Sn	06 24 05.4	+0.5
	baz=63,slow=23,SNR=0.8						
KURBB				Lg	Lg	06 24 37.2	
	baz=63,slow=35,SNR=3.3						
	0.8nm,0.4s						
KURBB	Kurchatov Arra	5.99	241	⇑Pn	Pn	06 22 57.0	+1.3
	1.5nm,0.5s						
KURBB				⇑Sn	Sn	06 24 03.8	-1.0
	2.1nm,0.6s						
KURBB				⇓Lg	Lg	06 24 36.8	
	5.2nm,0.7s						
MK31	Makanchi Array	7.62	204	⇑Pn	Pn	06 23 20.1	+2.0
	0.2nm,0.3s,baz=18,slow=46,SNR=3.5						
MK31				⇑Sn	Sn	06 24 43.2	-1.9
	0.5nm,0.6s,baz=33,slow=27,SNR=2.6						
MK31				⇑Lg	Lg	06 25 24.1	
	2.6nm,1.1s,baz=33,slow=29,SNR=3.6						
MKAR	Makanchi Array	7.62	204	Pn	Pn	06 23 17.5	-0.6
	0.2nm,0.3s,baz=20,slow=11,SNR=7.4						
MKAR				Sn	Sn	06 24 44.3	-0.8
	0.2nm,0.3s,baz=27,slow=24,SNR=5.9						
MKAR				Lg	Lg	06 25 26.4	
	0.1nm,0.3s,baz=27,slow=32,SNR=3.1						
	0.3nm,0.3s						

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*NEIC **28** 06:26:23.0±1.0, 18°.98N±0°.07×65°.11W±0°.04, h35^{km}±2^{km}, ML2.6/34, Md3.5/32(RSPR), Error ellipse: s-maj=12.0km s-min=6.3km az=7.0*

*RSPR **28** 06:26:23.6, 19°.00N×65°.06W, h24^{km}±20^{km}, MD3.5/12*

ISC 28 06:26:22.4±1.6, **18°.97N**±0°.08×**65°.11W**±0°.04, **h25**^{km}, **n60**, σ**0^{s}.53**/69, **12C-3D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUPR	Culebra, Puert	0.68	194	⇓iP	Pb	06 26 35.9	+0.2
CUPR	Culebra, Puert	0.68	194	eS	Sb	06 26 45.5	+0.9
CUPR	Culebra, Puert	0.68	194		Pb	06 26 35.9	+0.2
CUPR					Sb	06 26 45.5	+0.9
CUPR	Culebra, Puert	0.68	194	IAML		06 26 46.5	
	comp=N,198nm,0.5s						
CUPR				IAML		06 26 46.6	
	comp=E,153nm,0.4s						
MTP	Monte Pirata	0.97	206	⇑iP	Pn	06 26 40.0	-0.4
MTP	Monte Pirata	0.97	206	eS	Sb	06 26 52.7	-0.1
MTP	Monte Pirata	0.97	206		Pn	06 26 40.0	-0.4
MTP					Sb	06 26 52.7	-0.1
MTP	Monte Pirata	0.97	206	IAML		06 26 54.2	
	comp=N,128nm,0.2s						
MTP				IAML		06 26 54.4	
	comp=E,122nm,0.2s						
CBYP	Canovanas	0.99	226	⇑eP	Pn	06 26 40.2	-0.6
CBYP	Canovanas	0.99	226	eS	Sb	06 26 53.9	+0.2
CBYP	Canovanas	0.99	226		Pn	06 26 40.2	-0.6
CBYP					Sb	06 26 53.9	+0.2
HUMP	Col San Antoni	1.08	221	⇑eP	Pn	06 26 41.4	-0.6
HUMP	Col San Antoni	1.08	221	eS	Sn	06 26 55.8	-0.4
HUMP	Col San Antoni	1.08	221		Pn	06 26 41.4	-0.6
HUMP					Sn	06 26 55.8	-0.4
HUMP	Col San Antoni	1.08	221	IAML		06 26 56.7	
	comp=E,119nm,0.2s						
HUMP				IAML		06 26 58.0	
	comp=N,120nm,0.2s						
GCPR	Guaynabo City	1.14	235	⇑eP	Pn	06 26 42.0	-0.7
GCPR	Guaynabo City	1.14	235	eS	Sn	06 26 57.2	-0.3
GCPR	Guaynabo City	1.14	235		Pn	06 26 42.0	-0.7
GCPR					Sn	06 26 57.2	-0.3
CDVI	St. Croix	1.26	165	⇑eP	Pn	06 26 44.5	+0.1
CDVI	St. Croix	1.26	165	eS	Sb	06 27 01.2	+0.1
CDVI	St. Croix	1.26	165		Pn	06 26 44.5	+0.1
CDVI					Sb	06 27 01.2	+0.1
SJG	San Juan	1.31	229	Pn	Pn	06 26 44.6	-0.4
SJG					Sn	06 27 00.8	-0.9
IGPR	InterUniversit	1.38	224	⇑eP	Pn	06 26 45.8	-0.3
IGPR	InterUniversit	1.38	224	eS	Sn	06 27 03.1	-0.3
IGPR	InterUniversit	1.38	224		Pn	06 26 45.8	-0.3
IGPR					Sn	06 27 03.1	-0.3
EMPR	Esperanza - Ma	1.43	250	⇑eP	Pn	06 26 47.0	+0.2
EMPR	Esperanza - Ma	1.43	250	eS	Sb	06 27 06.2	-0.1
EMPR	Esperanza - Ma	1.43	250		Pn	06 26 47.0	+0.2
EMPR					Sb	06 27 06.2	-0.1
EMPR	Esperanza - Ma	1.43	250	IAML		06 27 19.6	
	comp=E,88nm,1.8s						
EMPR				IAML		06 27 20.6	
	comp=N,97nm,1.8s						
CELP	Cerrillos	1.66	238	⇑eP	Pn	06 26 50.0	+0.1
CELP	Cerrillos	1.66	238	eS	Sn	06 27 09.8	-0.5
CELP	Cerrillos	1.66	238		Pn	06 26 50.0	+0.1
CELP					Sn	06 27 09.8	-0.5
AOPR	Arecibo Observ	1.68	249	⇑eP	Pn	06 26 50.1	-0.1
AOPR	Arecibo Observ	1.68	249	eS	Sn	06 27 10.9	-0.1
AOPR	Arecibo Observ	1.68	249		Pn	06 26 50.1	-0.1
AOPR					Sn	06 27 10.9	-0.1
AOPR	Arecibo Observ	1.68	249	IAML		06 27 21.7	
	comp=E,124nm,0.3s						
AOPR				IAML		06 27 21.9	
	comp=N,75nm,0.4s						
UUPR	Utuado, UPR, P	1.69	245	⇑eP	Pn	06 26 49.6	-0.7
UUPR	Utuado, UPR, P	1.69	245	eS	Sn	06 27 10.6	-0.6
UUPR	Utuado, UPR, P	1.69	245		Pn	06 26 49.6	-0.7
UUPR					Sn	06 27 10.6	-0.6
OBIP	Obispado Ponce	1.69	237	⇓eP	Pn	06 26 49.9	-0.5
OBIP	Obispado Ponce	1.69	237	eS	Sn	06 27 09.8	-1.5
OBIP	Obispado Ponce	1.69	237		Pn	06 26 49.9	-0.5
OBIP					Sn	06 27 09.8	-1.5
AGPR	Aguadilla, PR	1.96	256	⇑eP	Pn	06 26 54.0	-0.1
AGPR	Aguadilla, PR	1.96	256	eS	Sn	06 27 17.8	-0.2
AGPR	Aguadilla, PR	1.96	256		Pn	06 26 54.0	-0.1
AGPR					Sn	06 27 17.8	-0.2
AGPR	Aguadilla, PR	1.96	256	IAML		06 28 01.8	
	comp=N,80nm,2.1s						
AGPR				IAML		06 28 02.9	
	comp=E,63nm,2.4s						
LSP	Las Mesas	2.04	247	⇓eP	Pn	06 26 55.6	+0.5
LSP	Las Mesas	2.04	247	eS	Sn	06 27 20.2	+0.4
LSP	Las Mesas	2.04	247		Pn	06 26 55.6	+0.5
LSP					Sn	06 27 20.2	+0.4
MLPR	Magueyes Islan	2.09	242	⇑eP	Pn	06 26 56.4	+0.6
MLPR	Magueyes Islan	2.09	242	eS	Sn	06 27 21.3	+0.3
MLPR	Magueyes Islan	2.09	242		Pn	06 26 56.4	+0.6
MLPR					Sn	06 27 21.3	+0.3
MLPR	Magueyes Islan	2.09	242	IAML		06 27 37.4	
	comp=N,20nm,3.6s						
MLPR				IAML		06 27 41.5	
	comp=E,17nm,3.6s						
CRPR	Cabo Rojo, PR	2.13	243	⇑eP	Pn	06 26 56.8	+0.4
CRPR	Cabo Rojo, PR	2.13	243	eS	Sn	06 27 22.5	+0.5
CRPR	Cabo Rojo, PR	2.13	243		Pn	06 26 56.8	+0.4
CRPR					Sn	06 27 22.5	+0.5
CRPR	Cabo Rojo, PR	2.13	243	IAML		06 27 28.3	
	comp=E,22nm,0.9s						
CRPR				IAML		06 27 51.6	
	comp=N,27nm,3.3s						
SMRT	St. Maarten	2.14	115	Pn	Pn	06 26 55.5	-0.9
SMRT				IAML		06 27 24.6	
	comp=N,56nm,0.2s						
SMRT				IAML		06 27 28.8	
	comp=E,50nm,0.2s						
SEUS	St. Eustatius	2.50	126	Pn	Pn	06 27 00.8	-0.7
CBE	Ff, Capester	4.42	130	Pn	Pn	06 27 28.8	+0.9

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*GII **28** 06:42:52.2±0.0, 30°.65N×31°.41E, h10^{km}±3^{km}, MD3.2/4, Mm3.3/3*

*HLW **28** 06:42:58.5, 30°.28N×31°.95E, h1^{km}±5^{km}, Md2.6*

ISC 28 06:42:56.6±2.0, **30°.41N**±0°.07×**31°.89E**±0°.04, **h3**^{km}±17^{km}, **n21**, σ**0^{s}.90**/27, **Egypt**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOT	Kottamia	0.48	187	P	Pg	06 43 06.3	+0.5
	baz=197						
HHAG	Hagoal	0.49	158	P	Pg	06 43 06.0	+0.1
	baz=158						
HSAF	As Saff	0.84	201	P	Pg	06 43 12.9	+0.2
	baz=208						
GLL	Jalalah	0.84	191	P	Pg	06 43 12.8	0.0
	baz=197						
SUZ	Suez	0.99	125	P	Pg	06 43 15.9	+0.3
	baz=119						
HMYD	Mayadein	1.13	237	P	Pn	06 43 19.9	+0.5
	baz=245						
ZAF	Zafarana	1.26	153	P	Pn	06 43 19.7	-1.4
	baz=152						
ZNM	Zenema	1.34	140	P	Pn	06 43 21.7	-0.5
	baz=137						
HNAT	Natroun	1.35	235	P	Pg	06 43 23.4	+0.9
	baz=242						
NBNS	Bani Suef	1.85	196	P	Pn	06 43 29.5	+0.2
	baz=200						
RYAN	Fayoum	1.93	227	P	Pb	06 43 31.3	-1.2
	baz=232						
KZIT	Kziot	2.21	76	Pn	Pn	06 43 33.8	-0.5
KRMI	Paran Flat	2.47	96	Pn	Pn	06 43 38.6	+0.8
KRMI				Sn	Sb	06 44 13.3	+0.8
HKAT	Jabal Katrina	2.62	135	P	Pn	06 43 39.5	-0.6
	baz=133						
MBRI	Mt Berech	2.69	102	Pn	Pn	06 43 42.2	+1.3
MBRI				Sn	Sb	06 44 20.6	+1.7
PRNI	Paran	2.69	90	Pn	Pn	06 43 41.8	+1.0
PRNI				Sn	Sb	06 44 18.2	-0.7
HRFI	Mount Harif	2.75	97	Pn	Pn	06 43 42.8	+1.2
HRFI				Sn	Sb	06 44 21.2	+0.7
EIL	Elat	2.75	105	Pn	Pn	06 43 41.8	+0.1
EIL				Sn	Sb	06 44 20.6	0.0
ZFRI	Zfri	2.84	86	Pn	Pn	06 43 42.7	-0.2
DSI	Dead Sea	3.21	68	Pn	Pn	06 43 47.7	-0.3
HMDT	Nahal Hemdat	3.61	58	Pn	Pn	06 43 51.7	-1.8
HMDT				Sn	Sn	06 44 37.1	+0.4

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*IDC **28** 06:53:45.9±1.0, 12°.04N×144°.18E, h0^{km}, mb3.6/6, mbtmp3.6/6, MS3.7/1, Error ellipse: s-maj=51.4km s-min=18.6km az=111.0*

ISC 28 06:53:50.0±0.9, **12°.0N**±0°.2×**144°.2E**±0°.3, **h26**^{km}, **n9**, σ**1^{s}.14**/9, **mb3.8**/7, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.71	24	Pn	Pn	06 54 17.6	-0.6
	66nm,0.3s,baz=180,slow=7.7,SNR=26						
GUMO				Sn	Sn	06 54 40.1	+0.8
	72nm,0.3s,baz=14,slow=23,SNR=11						
TGY	Tagaytay City	22.70	278	LR	LR	07 09 07.7	
	comp=Z,199nm,18.6s,baz=124,slow=40						
WRA	Warramunga Arr	33.20	197	P	P	07 00 24.4	-0.4
	0.5nm,0.7s,baz=19,slow=9.4,SNR=3.2						
	0.5nm,0.7s						
ASAR	Alice Springs	36.85	196	P	P	07 00 56.7	+0.3
	0.3nm,0.6s,baz=20,slow=11,SNR=2.1						
	0.3nm,0.6s						
MKAR	Makanchi Array	62.13	317	P	P	07 04 09.6	+0.6
	0.2nm,0.6s,baz=91,slow=10,SNR=2.6						
	0.2nm,0.6s						
ILAR	Eielson Array	70.28	25	P	P	07 04 59.0	-1.9
	0.5nm,0.5s,baz=256,slow=5.8,SNR=9.5						
	0.5nm,0.5s						
YKA	Yellowknife Ar	84.57	27	P	P	07 06 20.9	+0.1
	0.3nm,0.5s,baz=284,slow=4.9,SNR=18						
	0.3nm,0.5s						
NVAR	Mina Array Bea	88.45	51	P	P	07 06 42.2	+1.6
	0.3nm,0.5s,baz=282,slow=4.5,SNR=1.9						
	0.3nm,0.5s						
FINES	FINESS Array B	92.28	335	P	P	07 06 57.5	-0.1
	5.5nm,1.1s,baz=95,slow=4.6,SNR=4.7						

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*WEL **28** 06:58:43.8±0.3, 42°S±2°×17°4E±°, h5^{km}, M2.8/15, ML3.0/12, MLv2.8/15, Error ellipse: s-maj=0.0km s-min=0.0km az=115.2, confirmed*

*NOU **28** 06:58:43.4, 42°.42S×173°.07E, h22^{km}, MLv3.5/5, South Island, New Zealand*

ISC 28 06:58:43.6±0.9, **42°.04S**±0°.02×**173°.75E**±0°.03, **h16**^{km}±9^{km}, **n57**, σ**1^{s}.15**/63, **South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSWZ	Blackbirch Sta	0.34	16	P	Pg	06 58 50.4	-0.2
BSWZ				S	Sg	06 58 55.6	+0.2
KHZ	Kahutara	0.41	202	P	Pg	06 58 52.2	+0.3
KHZ	Kahutara	0.41	202	P	Pg	06 58 52.3	+0.3
KHZ				S	Sg	06 58 58.8	+1.2
CMWZ	Cape Campbell	0.45	50	P	Pb	06 58 53.6	+0.4
TUWZ	Tuamarina	0.62	14	P	Pg	06 58 55.7	-0.3
TUWZ				S	Sb	06 59 04.8	+0.1
THZ	Tophouse	0.69	293	P	Pg	06 58 56.5	-0.6
THZ				S	Sg	06 59 05.6	-0.6
NNZ	Nelson	0.87	341	P	Pg	06 58 59.5	-1.0
NNZ				S	Sg	06 59 10.9	-0.9
TCW	Tory Channel	0.92	26	P	Pg	06 59 00.6	-0.8
MRNZ	Matariki Terra	0.98	310	P	Pg	06 59 01.9	-0.7
MRNZ				S	Sb	06 59 15.2	+0.3
GVZ	Greta Valley S	1.07	209	P	Pg	06 59 04.0	-0.3
GVZ				S	Sb	06 59 19.8	+2.3
TKNZ	Takaka Hill	1.17	329	P	Pg	06 59 05.3	-0.8
PLWZ	Palliser	1.22	68	P	Pg	06 59 05.4	-1.8
DUWZ	D'Urville Isla	1.24	6	P	Pg	06 59 06.0	-1.6
LTZ	Lake Taylor	1.32	235	P	Pn	06 59 07.8	+0.3
CAW	Cannon Point	1.36	47	P	Pn	06 59 07.9	0.0
AMCZ	Amberley	1.40	215	P	Pn	06 59 08.2	-0.3
PAWZ	Paruwai Farm	1.42	63	P	Pn	06 59 08.0	-0.8
KIW	Kapiti Island	1.47	37	P	Pn	06 59 09.9	+0.5
DSZ	Denniston Nort	1.48	281	P	Pg	06 59 11.4	-0.7
QRZ	Quartz Range	1.52	322	P	Pn	06 59 11.1	+1.0
QRZ	Quartz Range	1.52	322	P	Pn	06 59 11.0	+0.8
MTW	Mount Morrison	1.58	57	P	Pn	06 59 10.0	-1.0
TRWZ	Traveller	1.59	67	P	Pn	06 59 10.0	-1.1
OGWZ	Otaki Gorge	1.62	42	P	Pn	06 59 11.5	0.0
HOWZ	Holdsworth Sta	1.75	50	P	Pb	06 59 16.4	+1.0
OXZ	Oxford	1.80	224	P	Pn	06 59 13.2	-0.8
INZ	Inchbonnie	1.84	247	P	Pn	06 59 15.3	+0.8
MQZ	McQueen's Vall	1.85	205	P	Pn	06 59 13.1	-1.6
TMWZ	Te Maipa	1.86	61	P	Pn	06 59 13.7	-1.1
AKCZ	Akaroa Harbour	1.93	198	P	Pn	06 59 14.8	-1.0
MRZ	Mangatainoka R	1.95	46	P	Pn	06 59 15.5	-0.5
TIWZ	Tintock	2.04	53	P	Pg	06 59 23.0	+0.1
RACZ	Rakaia	2.06	214	P	Pn	06 59 16.4	-1.2
MHCZ	Mount Hutt	2.19	226	P	Pn	06 59 18.5	-1.0
PRWZ	Pori Road	2.24	49	P	Pb	06 59 25.4	+1.8
BFZ	Birch Farm	2.32	55	P	Pg	06 59 28.5	+0.4
WACZ	Wakanui South	2.36	216	P	Pn	06 59 20.5	-1.2
WAZ	Wanganui	2.47	23	P	Pb	06 59 28.5	+0.9
RPZ	Rata Peaks	2.59	229	P	Pn	06 59 24.6	-0.3
ARCZ	Arundel	2.68	224	P	Pn	06 59 25.3	-0.9
KHEZ	Kahui Hut	2.75	4	P	Pb	06 59 31.8	-0.6
KHEZ	Kahui Hut	2.75	4	P	Pb	06 59 32.4	0.0
PKE	Pukeiti	2.85	4	P	Pn	06 59 31.7	+3.2
VRZ	Vera Road	3.01	15	P	Pb	06 59 35.5	-1.4
MOVZ	Moawhango	3.04	31	P	Pb	06 59 36.6	-0.7
WNVZ	Wahianoa	3.05	28	P	Pb	06 59 35.7	-2.0
TRVZ	Turoa	3.06	27	P	Pb	06 59 36.4	-1.4
TMZ	Timaru	3.08	220	P	Pn	06 59 31.3	-0.4
TUVZ	Tukino	3.12	28	P	Pb	06 59 38.2	-0.7
NGZ	Ngauruhoe	3.19	27	P	Pb	06 59 39.1	-0.9
OTVZ	Oturere	3.22	28	P	Pn	06 59 37.3	+3.6
NNVZ	North Ngauruho	3.23	27	P	Pb	06 59 39.9	-0.8
TMVZ	Te Maari	3.28	28	P	Pb	06 59 40.3	-1.2
NTVZ	North Tongarir	3.28	27	P	Pb	06 59 40.6	-1.0
BKZ	Black Stump Fm	3.55	37	P	Pb	06 59 46.3	+0.2
ODZ	Otahua Downs	3.76	216	P	Pn	06 59 39.5	-1.4
MHGZ	Mahia Peninsul	4.28	49	P	Pn	06 59 53.7	+5.6

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*MAN **28** 07:07:38.8, 4°.76N×126°.87E, h54^{km}, mb4.9, ML3.9, MS3.9*

*BJI **28** 07:07:41.3±0.0, 4°.56N×127°.16E, h93^{km}, mb4.6/24, mB5.1/14*

*IDC **28** 07:07:42.9±1.8, 4°.94N×127°.00E, h73^{km}±16^{km}, mb4.0/15, mbtmp4.3/18, MS3.4/19, Error ellipse: s-maj=32.1km s-min=9.5km az=73.0*

*DJA **28** 07:07:43.4±0.5, 5°N±5°×12°7E±°, h78^{km}±6^{km}, M4.7/17, mB5.2/7, mb4.7/17, MLv4.7/13, Mw(mB)4.6/7*

*NEIC **28** 07:07:43.9±2.3, 4°.87N±0°.08×126°.8E±0°.1, h70^{km}±8^{km}, mb4.7/27, Error ellipse: s-maj=18.4km s-min=9.2km az=67.0*

ISC 28 07:07:43.9±0.4, **4°.81N**±0°.04×**126°.81E**±0°.07, **h76**^{km}, **n98**, σ**2^{s}.04**/92, **mb4.7**/31, **6C-5D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.69	229	P	Pn	07 08 10.0	-1.6
SGSI				S	Sn	07 08 32.4	-0.2
MATI	Mati	2.20	346	⇓eP	Pn	07 08 16.2	-2.2
MATI				eS	Sn	07 08 52.5	+7.8
GSPH	General Santos	2.25	305	⇑iP	Pn	07 08 14.0	-5.1
GSPH				i S	Sn	07 08 39.6	-6.4
DAV	Davao City (W)	2.56	332	P	Pn	07 08 21.3	-2.0
	231nm,0.4s,baz=183,slow=2.9,SNR=4.1						
DAV				S	Sn	07 08 53.0	-0.5
	505nm,0.5s,baz=221,slow=23,SNR=2.0						
DAV				LR	LR	07 09 29.2	
	comp=Z,418nm,21.6s,baz=141,slow=42						
KCP	Kidapawan	2.78	322	⇑eP	Pn	07 08 22.9	-3.3
KCP				i S	Sn	07 09 09.3	+10
SKMP	Bagumbayan, Su	2.82	307	⇓eP	Pn	07 08 25.1	-1.8
SKMP				eS	Sn	07 08 58.0	-1.9
BIPH	Bislig	3.39	353	⇓eP	Pn	07 08 29.2	-5.3
BIPH				eS	Sn	07 09 09.0	-4.5
CTBH	Cotabato--PC H	3.50	313	⇑iP	Pn	07 08 34.6	-1.4
TNTI	Ternate	4.04	172	Pn	Pn	07 08 43.5	0.0
TNTI	Ternate	4.04	172	P	Pn	07 08 43.4	-0.1
CGP	Cagayan de Oro	4.19	330	⇓eP	Pn	07 08 45.9	+0.5
CGP				eS	Sn	07 09 33.1	-0.1
PAGZ	Pagadian	4.55	312	⇑eP	Pn	07 08 50.6	+0.2
GLSP	General Luna,	4.99	352	⇑eP	Pn	07 08 56.6	+0.2
GLSP				eS	Sn	07 09 51.4	-1.5
SCPH	Surigao	5.11	345	⇑eP	Pn	07 08 55.7	-2.4
LBMI	Labuha	5.45	173	P	Pn	07 09 01.7	-1.0
	288nm,0.9s,3µm1.0nm						
GTOI	Gorontalo	5.62	223	S	Sn	07 10 07.4	-0.7
TBP	Tagbilaran	5.67	329	eP	Pn	07 09 02.8	-2.8
TBP				i S	Sn	07 10 17.0	+7.7
MRSI	Marisa	6.49	229	P	Pn	07 09 17.7	+0.8
	136nm,0.6s,1µm0.5nm						
MRSI				S	Sn	07 10 28.9	-0.6
	136nm,0.6s,1µm0.5nm						
SANI	Sanana	6.86	187	P	Pn	07 09 19.1	-2.8
	47nm,0.7s,1µm0.2nm						
TOLI2	Tolitoli	7.05	239		Pn	07 09 23.9	-0.6
LUWI	Luwuk	7.07	215	Pn	Pn	07 09 27.9	+3.1
LUWI	Luwuk	7.07	215	P	Pn	07 09 24.4	-0.4
	180nm,0.9s,5µm0.7nm						
SWI	Sorong	7.18	142	P	Pn	07 09 25.1	-1.1
	39nm,0.8s,0.1nm						
SIJI	Sorong	7.18	142	P	Pn	07 09 25.7	-0.7
	15nm,0.5s,baz=347,slow=14,SNR=8.7						
RCP	Roxas	7.82	329	⇓eP	Pn	07 09 33.8	-1.3
NLAI	Namlea	8.00	178	P	Pn	07 09 36.2	-1.3
	69nm,0.7s,4µm0.3nm						
MPSI	Mapaga	8.20	237	P	Pn	07 09 40.6	+0.3
	23nm,0.7s						
MYLDM	Lahad Datu	8.28	273	Pn	Pn	07 09 43.4	+2.0
MSAI	Masohi	8.37	165	P	Pn	07 09 41.7	-0.9
FAKI	Fak Fak	9.40	145	Pn	Pn	07 09 56.9	+0.1
FAKI	Fak Fak	9.40	145	P	Pn	07 09 55.8	-0.9
	46nm,1.1s						
KAPI	Kappang	12.03	216	P	Pn	07 10 33.5	+1.0
	5.2nm,0.3s,baz=25,slow=9.6,SNR=4.6						
KAPI				LR	LR	07 15 38.0	
	comp=Z,78nm,21.4s,baz=56,slow=39						
MTN	Manton Dam	18.05	166	P	P	07 11 47.3	-2.0
MTN				IAmb	IAmb	07 11 51.9	
	comp=Z,28nm,0.9s						
KNRA	Kununurra	20.44	175	P	Pn	07 12 16.7	-1.4
KNRA				IAmb	IAmb	07 12 24.9	
	comp=Z,29nm,0.9s						
JOW	Kunigami	21.95	4	LR	LR	07 24 41.9	
	comp=Z,21nm,19.0s,baz=252,slow=47						
FITZ	Fitzroy Crossi	22.79	183	P	P	07 12 40.2	-0.2
CNJI	Cibinong	23.03	239	P	P	07 12 53.5	+11
WB0	Warramunga Arr	25.53	163	P	P	07 13 05.9	+0.2
WB0				IAmb	IAmb	07 13 07.9	
	comp=Z,36nm,0.9s						
WRAB	Tennant Creek	25.68	163	P	P	07 13 07.3	+0.3
WRAB				IAmb	IAmb	07 13 09.4	
	comp=Z,33nm,1.0s						
WRA	Warramunga Arr	25.68	163	P	P	07 13 06.3	-0.8
	comp=Z,19nm,0.9s,baz=343,slow=10,SNR=70						
WRA				LR	LR	07 24 14.7	
	comp=Z,54nm,18.6s,baz=354,slow=38						
	comp=Z,19nm,0.9s						
WRA	Warramunga Arr	25.68	163	P	P	07 13 07.7	+0.6
WB2	Warramunga Arr	25.69	163	P	P	07 13 07.4	+0.3
WB2				IAmb	IAmb	07 13 09.4	
	comp=Z,30nm,0.9s						
MBWA	Marble Bar	26.72	195	P	P	07 13 16.6	+0.3
MBWA				IAmb	IAmb	07 13 47.9	
	comp=Z,29nm,1.2s						
PSA00	Pilbara Seismi	27.09	194	P	P	07 13 20.7	+1.0
PSA00				IAmb	IAmb	07 13 21.3	
	comp=Z,27nm,0.8s						
NJ2	Nanjing	28.11	346	eP	P	07 13 30.3	+1.6
NJ2				pP	pP	07 13 45.0	-0.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,340nm,3.5s						
AS31	Alice Springs	29.13	167	P	P	07 13 38.8	+0.9
ASAR	Alice Springs	29.13	167	P	P	07 13 37.9	0.0
	comp=Z,1.5nm,0.5s,baz=338,slow=5.5,SNR=9.8						
	comp=Z,1.5nm,0.5s						
ASAR	Alice Springs	29.13	167	P	P	07 13 37.3	-0.6
CMAR	Chiang Mai Arr	30.41	299	LR	LR	07 26 43.4	
	comp=Z,21nm,18.1s,baz=140,slow=37						
CTAO	Charters Tower	31.26	143	P	P	07 13 58.0	+1.2
CTAO				IAmb	IAmb	07 14 03.7	
	comp=Z,33nm,1.3s						
PZH	PanZhiHua	32.24	315	P	P	07 14 09.3	+3.9

PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,150nm,5.9s						
KSRS	Korea Array	32.51	2	P	P	07 14 05.1	-2.4
	comp=Z,0.7nm,0.5s,baz=174,slow=13,SNR=4.6						
KSRS				LR	LR	07 27 29.0	
	comp=Z,26nm,21.9s,baz=185,slow=37						
	comp=Z,0.7nm,0.5s						
XAN	Xi'an	33.50	332	P	P	07 14 20.3	+4.0
XAN				pmax	pmax		
	comp=Z,12nm,1.0s						
MORW	Morawa	35.23	196	P	P	07 14 31.5	+0.3
FORT	Forrest	35.40	178	P	P	07 14 32.8	+0.1
EIDS	Eidsvold	38.15	143	P	P	07 14 55.9	-0.2
HHC	Hu-ho-hao-te	38.41	341	eP	P	07 14 58.0	-0.2
HHC				pmax	pmax		
	comp=Z,21nm,0.7s						
HHC				pmax	pmax		
	comp=Z,210nm,5.6s						
BBOO	Buckleboo	38.43	167	P	P	07 14 59.1	+0.8
NWAO	Narrogin (SRO)	38.61	193	P	P	07 15 00.3	+0.5
	comp=Z,16nm,0.8s,baz=39,slow=5.8,SNR=5.3						
	comp=Z,16nm,0.8s						
NWAO	Narrogin (SRO)	38.61	193	P	P	07 15 00.5	+0.7
NWAO	Narrogin (SRO)	38.61	193	P	P	07 15 01.0	+1.2
NWAO				IAmb	IAmb	07 15 01.5	
	comp=Z,26nm,1.0s						
STKA	Stephens Creek	39.10	160	P	P	07 15 04.0	0.0
	comp=Z,13nm,0.7s,baz=343,slow=9.3,SNR=16						
	comp=Z,13nm,0.7s						
STKA	Stephens Creek	39.10	160	P	P	07 15 04.7	+0.7
ASAJ	Asahikawa	41.55	17	LR	LR	07 36 35.1	
	comp=Z,18nm,18.6s,baz=176,slow=42						
ARMA	Armidale	42.32	147	P	P	07 15 31.5	+0.8
ARMA				IAmb	IAmb	07 15 46.7	
	comp=Z,27nm,1.5s						
KLR	Kul'dur	44.47	5	P	P	07 15 45.5	-2.0
	comp=Z,1.4nm,0.6s,baz=212,slow=4.1,SNR=3.5						
	comp=Z,1.4nm,0.6s						
ULN	Ulaanbaatar	46.13	342	P	P	07 16 02.7	+1.9
ULN				IAmb	IAmb	07 16 04.8	
	comp=Z,5.0nm,0.8s						
SONM	Songino Array	46.31	341	P	P	07 16 01.4	-0.9
	comp=Z,1.5nm,0.6s,baz=156,slow=8.3,SNR=4.9						
	comp=Z,1.5nm,0.6s						
WMQ	Urumqi	51.90	325	eP	P	07 16 47.8	+2.9
MK31	Makanchi Array	56.72	325	P	P	07 17 18.3	-1.6
MK31				IAmb	IAmb	07 17 26.9	
	comp=Z,2.8nm,0.8s						
MKAR	Makanchi Array	56.72	325	P	P	07 17 18.8	-1.1
	comp=Z,1.3nm,0.5s,baz=122,slow=7.7,SNR=24						
MKAR				LR	LR	07 42 10.8	
	comp=Z,48nm,21.0s,baz=83,slow=36						
	comp=Z,1.3nm,0.5s						
MKAR	Makanchi Array	56.72	325	P	P	07 17 18.5	-1.4
MA2	Magadan	57.65	14	LR	LR	07 47 34.2	
	comp=Z,16nm,18.0s,baz=154,slow=42						
AAK	Ala-Archa	59.62	317	LR	LR	07 45 28.2	
	comp=Z,60nm,21.2s,baz=77,slow=38						
ZALV	Zalesovo Beam	59.67	333	P	P	07 17 38.8	-1.4
	comp=Z,0.5nm,0.3s,baz=134,slow=6.2,SNR=2.7						
ZALV				LR	LR	07 43 35.5	
	comp=Z,38nm,21.2s,baz=46,slow=36						
	comp=Z,0.5nm,0.3s						
KURK	Kurchatov	60.88	327	P	P	07 17 47.4	-1.1
KURK				IAmb	IAmb	07 17 54.8	
	comp=Z,4.7nm,0.8s						
KKAR	Karatay Array	62.51	317	P	P	07 17 59.3	-0.4
BVAR	Borovoye Array	66.47	327	LR	LR	07 49 43.6	
	comp=Z,42nm,19.0s,baz=83,slow=38						
BRVK	Borovoye	66.54	327	P	P	07 18 27.4	+1.7
BRVK				IAmb	IAmb	07 18 32.5	
	comp=Z,4.1nm,0.8s						
TIXI	Tiksi	66.77	1	P	P	07 18 24.1	-2.8
	comp=Z,0.5nm,0.3s,baz=270,slow=23,SNR=0.9						
	comp=Z,0.5nm,0.3s						
NRIK	Noril'sk	69.41	346	P	P	07 18 42.5	-1.0
	comp=Z,2.8nm,0.5s,baz=100,slow=4.7,SNR=5.2						
	comp=Z,2.8nm,0.5s						
ABKAR	Akbulak array	71.37	321	P	P	07 18 54.9	-0.9
ABKAR	Akbulak array	71.37	321	P	P	07 18 54.9	-0.9
AKTO	Aktyubinsk	72.87	321	LR	LR	07 53 05.2	
	comp=Z,46nm,19.6s,baz=218,slow=37						
KIRV	Kirov	79.35	329	LR	LR	07 56 34.3	
	comp=Z,47nm,20.2s,baz=42,slow=37						
KBZ	Khabaz	82.30	313	LR	LR	08 00 37.4	
	comp=Z,41nm,18.7s,baz=52,slow=39						
H24K	Noodor Dome	83.72	24	P	P	07 20 07.1	+2.7
ILAR	Eielson Array	84.11	25	P	P	07 20 04.5	-1.8
	comp=Z,0.6nm,0.7s,baz=281,slow=4.3,SNR=6.0						
	comp=Z,0.6nm,0.7s						
VNDA	Vanda	84.48	173	P	P	07 20 08.4	+0.6
	comp=Z,2.5nm,0.9s,baz=302,slow=4.3,SNR=6.4						
	comp=Z,2.5nm,0.9s						
VNDA	Vanda	84.48	173	P	P	07 20 08.8	+1.0
VNDA				IAmb	IAmb	07 20 09.9	
	comp=Z,4.3nm,1.1s						
MMAI	Mount Meron Ar	88.59	303	LR	LR	08 05 20.5	
	comp=Z,20nm,18.2s,baz=164,slow=39						
ARCES	ARCESS Array B	89.47	340	P	P	07 20 30.5	-1.8
	comp=Z,3.9nm,0.8s,baz=33,slow=2.9,SNR=5.0						
	comp=Z,3.9nm,0.8s						
FINES	FINESS Array B	90.93	332	P	P	07 20 38.4	-0.8
	comp=Z,1.0nm,0.5s,baz=66,slow=4.6,SNR=6.5						
FINES				LR	LR	08 03 18.9	
	comp=Z,31nm,20.0s,baz=263,slow=37						
	comp=Z,1.0nm,0.5s						
MLR	Muntele Rosu	94.18	316	LR	LR	08 07 11.1	
	comp=Z,45nm,19.3s,baz=88,slow=38						
QSPA	South Pole Qui	94.70	180	P	P	07 20 56.8	+0.2
QSPA				IAmb	IAmb	07 20 58.8	
	comp=Z,3.7nm,1.1s						
NOA	NORSAR Array B	97.86	334	LR	LR	08 09 35.3	
	comp=Z,38nm,18.4s,baz=50,slow=38						
YKA	Yellowknife Ar	98.49	24	P	Pdif	07 21 15.4	+1.7
	comp=Z,0.2nm,0.6s,baz=298,slow=4.0,SNR=4.2						
TORD	Torodi Ar. Bea	122.65	289	PKP	PKPdf	07 26 31.9	-0.1
	comp=Z,0.6nm,0.9s,baz=205,slow=2.1,SNR=3.3						

INET ***28*** *07:21:11.4±0.6, 12°.94N×88°.93W, h15^{km}±11^{km}, MW3.2*

SNET ***28*** *07:21:12.3±0.9, 12°.99N×88°.92W, h49^{km}, ML3.8*

ISC 28 07:21:12.4±1.8**, 13°.0N**±0°.1×**88°.96W**±0°.05**, h45**^{km}±25^{km}**,**
n45, σ0^{s}.54/58**, 1D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALJI	Alcalda de J	0.53	45	⇓iP	Pn	07 21 23.6	-0.2
ALJI				eS	Sn	07 21 32.8	+0.8
TECO	Alcaldia de Te	0.61	16	eP	Pn	07 21 24.3	-0.6
TECO				eS	Sn	07 21 33.7	-0.1
SJTE	Alcalda de S	0.66	356	i P	Pn	07 21 25.1	-0.5
SJTE				eS	Sn	07 21 35.2	+0.1
LFRS	El Faro	0.68	351	i P	Pn	07 21 25.4	-0.5
COEB	Comit de Eme	0.69	37	eP	Pn	07 21 25.5	-0.5
COEB				eS	Sn	07 21 36.0	+0.3
TECA	Tecapa	0.70	39	eP	Pn	07 21 25.7	-0.5
UESV	Universidad de	0.70	13	eP	Pn	07 21 25.7	-0.5
UESV				eS	Sn	07 21 36.3	+0.3
PAVA	Las Pavas	0.76	1	i P	Pn	07 21 26.7	-0.3
PAVA				eS	Sn	07 21 38.0	+0.5
PQSS	Presa 15 de Se	0.78	30	eP	Pn	07 21 26.7	-0.3
SCLA	Alcaldia de Sa	0.78	16	eP	Pn	07 21 26.9	-0.3
SCLA				eS	Sn	07 21 38.9	+1.0
SNET	Serv Nac Est T	0.78	340	eP	Pn	07 21 25.9	-1.3
SNET	Serv Nac Est T	0.78	340	eP	Pn	07 21 26.6	-0.6
UTEC	Universidad Te	0.79	342	eP	Pn	07 21 27.1	-0.1
UDBS	Universidad Do	0.79	346	eP	Pn	07 21 27.0	-0.2
SEMO	Seminario San	0.80	341	eP	Pn	07 21 27.6	+0.2
LCY	Lacayo	0.80	54	eP	Pn	07 21 27.0	-0.5
MAGS	Ministerio de	0.80	336	eP	Pn	07 21 26.9	-0.6
MAGS				eS	Sn	07 21 38.5	+0.1
UESS	Universidad de	0.80	343	eP	Pn	07 21 27.3	-0.2
PACA	Pacayal	0.81	50	eP	Pn	07 21 27.2	-0.3
PACA				eS	Sn	07 21 39.3	+0.8
LFU	La Fuente	0.81	349	i P	Pn	07 21 27.4	-0.3
UEES	Universidad Ev	0.81	340	eP	Pn	07 21 27.2	-0.4
VSM	San Miguel	0.82	54	eP	Pn	07 21 27.5	-0.4
PMON	Piamonte	0.84	335	eP	Pn	07 21 27.5	-0.4
BOQS	Boqueron	0.84	338	eP	Pn	07 21 27.9	-0.3
JAYA	Jayaque - finc	0.85	326	eP	Pn	07 21 27.7	-0.5
CNRM	Centro Naciona	0.93	56	eP	Pn	07 21 28.5	-0.6
QUEZ	Alcaldia de Qu	0.93	341	eP	Pn	07 21 29.0	-0.2
QUEZ				eS	Sn	07 21 42.0	+0.5
P5NO	Presa 5 de nov	1.05	11	i P	Pn	07 21 30.2	-0.6
CEVE	Cerro Verde	1.09	323	eP	Pn	07 21 31.6	+0.1
LCND	La Caada	1.10	71	eP	Pn	07 21 30.8	-0.6
LCND				eS	Sn	07 21 45.6	+0.2
SBLS	San Blas	1.10	324	eP	Pn	07 21 31.9	+0.3
FAGO	Alcalda de S	1.11	48	eP	Pn	07 21 30.8	-0.8
CNCH	Conchagua	1.14	73	eP	Pn	07 21 31.3	-0.8
CNCH				eS	Sn	07 21 47.0	+0.3
RTR	El Retiro	1.16	325	eP	Pn	07 21 32.4	0.0
UNIC	Universidad Ca	1.18	331	eP	Pn	07 21 32.6	0.0
UNIC				eS	Sn	07 21 48.3	+0.8
LLGN	La Laguna	1.21	1	eP	Pn	07 21 32.5	-0.5
NUBE	Las Nubes	1.24	320	eS	Sn	07 21 48.7	-0.5
SLOZ	Alcaldia de Sa	1.34	323	eP	Pn	07 21 34.2	-0.6
MTO3	Montecristo	1.50	345	eP	Pn	07 21 36.7	-0.3
ESQI	Esquipulas	1.65	347	eP	Pn	07 21 38.7	-0.3
CRIN	San Cristobal	1.88	97	eP	Pn	07 21 41.7	-0.4
TGUH	Tegucigalpa,Un	1.97	56	eP	Pn	07 21 42.8	-0.7
TGUH	Tegucigalpa,Un	1.97	56	eP	Pn	07 21 42.8	-0.7
TELN	Telica	2.10	99	eP	Pn	07 21 44.7	-0.6
RCON	San Juan de Ri	2.78	79	eP	Pn	07 21 55.8	+1.2

NNC ***28*** *07:25:32.2±0.3, 50°.00N×78°.74E, h0^{km}, mb3.4, mpv2.9, Error ellipse: s-maj=5.3km s-min=1.8km az=80.0, Suspected Mining explosion.*

IDC ***28*** *07:25:34.4±1.1, 50°.07N×78°.74E, h0^{km}, mbtmp3.1/2, ML2.6/2, Error ellipse: s-maj=19.5km s-min=6.4km az=67.0*

ISC 28 07:25:33.7±1.0**, 50°.02N**±0°.05×**78°.69E**±0°.06**, h0**^{km}**, n18,**
σ0^{s}.73/30**, 15C-13D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.57	349	⇑P	Pg	07 25 43.9	-0.9
KUR07				⇑S	Sg	07 25 52.9	+0.8
KUR06	Kurchatov Arra	0.59	350	⇑P	Pg	07 25 44.5	-0.6
KUR06				⇓S	Sg	07 25 53.0	+0.3
KUR14	Kurchatov Arra	0.60	354	⇓P	Pg	07 25 44.3	-0.8
KUR14				⇓S	Sg	07 25 53.1	+0.2
KUR15	Kurchatov Arra	0.60	353	⇑P	Pg	07 25 44.5	-0.8
KUR15				⇓S	Sg	07 25 53.6	+0.5
KURBB	Kurchatov Arra	0.61	351	Pg	Pg	07 25 45.3	-0.2
	3.2nm,0.3s,baz=167,slow=17,SNR=268						
KURBB				Lg	Lg	07 25 53.9	
	5.2nm,0.3s,baz=145,slow=45,SNR=17						
KURBB	Kurchatov Arra	0.61	351	⇓P	Pg	07 25 44.5	-0.9
	16nm,0.2s						
KURBB				⇑S	Sg	07 25 53.9	+0.6
	99nm,0.6s						
KUR16	Kurchatov Arra	0.62	349	⇑P	Pg	07 25 44.8	-0.8
KUR16				⇓S	Sg	07 25 53.9	+0.2
KUR17	Kurchatov Arra	0.63	347	⇓P	Pg	07 25 44.9	-0.9
KUR17				⇓S	Sg	07 25 54.0	+0.1
KUR05	Kurchatov Arra	0.63	351	⇑P	Pg	07 25 44.8	-1.0
KUR05				⇑S	Sg	07 25 53.0	-1.0
KUR04	Kurchatov Arra	0.65	352	⇑P	Pg	07 25 45.4	-0.8
KUR04				⇑S	Sg	07 25 54.8	+0.2
KURK	Kurchatov	0.70	357	⇓P	Pg	07 25 46.0	-1.1
	7.2nm,0.3s						
KURK				⇓S	Sg	07 25 56.0	-0.1
	28nm,0.6s						
MK31	Makanchi Array	4.02	142	⇓Pn	Pn	07 26 36.0	-0.6
	0.1nm,0.1s,baz=324,slow=10,SNR=49						
MK31				⇑Pg	Pb	07 26 45.3	-0.2
	0.8nm,0.3s,baz=323,slow=14,SNR=24						
MK31				⇑Lg	Lg	07 27 39.4	
	8.4nm,0.6s,baz=338,slow=28,SNR=16						
MKAR	Makanchi Array	4.02	142	Pn	Pn	07 26 36.9	+0.3
	0.3nm,0.3s,baz=322,slow=10,SNR=58						
MKAR				Pg	Pb	07 26 46.4	+1.0
	0.9nm,0.3s,baz=330,slow=15,SNR=16						
MKAR				Lg	Lg	07 27 41.1	
	2.3nm,0.3s,baz=331,slow=32,SNR=15						
	0.4nm,0.3s						
OTUK	Ortayu	4.53	249	⇑Pn	Pn	07 26 43.3	-0.3
	1.5nm,0.4s						
OTUK				⇑Pg	Pb	07 26 54.9	+0.9
	1.3nm,0.6s						
OTUK				⇑Lg	Lg	07 27 57.4	
	2.7nm,0.5s						
I46RU	ZALESOVO INFRA	5.46	42	I	I	07 57 50.0	
	baz=224,slow=322,SNR=3.1						
ZALV	Zalesovo Beam	5.46	42	Pn	Pn	07 26 57.4	+1.1
	0.9nm,0.3s,baz=230,slow=14,SNR=10						
ZALV				Lg	Lg	07 28 24.3	
	0.3nm,0.3s,baz=230,slow=22,SNR=1.5						
	2.1nm,0.2s						
BVA0	Borovoye Array	5.99	303	⇓Sn	Sn	07 28 12.3	-0.5
	2.1nm,0.8s,baz=112,slow=24,SNR=5.8						
BVA0				⇓Lg	Lg	07 28 43.6	
	1.7nm,0.5s						
BVAR	Borovoye Array	5.99	303	Sn	Sn	07 28 11.7	-1.1
	0.1nm,0.3s,baz=112,slow=24,SNR=7.9						
BVAR				Lg	Lg	07 28 44.8	
	0.1nm,0.3s,baz=114,slow=29,SNR=5.7						

WEL 28 07:25:57.8±0.4**, 43°S**±2°×**17°3E**±°**, h5**^{km}**, M1.9**/3**, ML2.3**/7**,**
MLv1.9/3**, Error ellipse: s-maj=0.0km s-min=0.0km**
az=112.5, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.19	62	P	Pg	07 26 01.5	0.0
KHZ				S	Sg	07 26 04.5	+0.5
GVZ	Greta Valley S	0.51	204	P	Pg	07 26 08.0	+0.5
GVZ				S	Sb	07 26 15.9	-1.0
THZ	Tophouse	0.80	338	P	Pg	07 26 13.0	-0.2
LTZ	Lake Taylor	0.82	250	P	Pg	07 26 13.2	-0.3
LTZ				S	Sg	07 26 24.2	+0.1
BSWZ	Blackbirch Sta	0.89	28	P	Pg	07 26 15.1	+0.2
MRNZ	Matariki Terra	1.18	339	P	Pg	07 26 19.9	-0.5
MRNZ				S	Sn	07 26 37.4	0.0
OXZ	Oxford	1.25	228	P	Pg	07 26 19.0	-2.7
NNZ	Nelson	1.29	2	P	Pn	07 26 21.5	-0.9
NNZ				S	Sn	07 26 39.7	-0.3
MQZ	McQueen’s Vall	1.29	202	P	Pn	07 26 19.0	-3.5
MQZ				S	Sg	07 26 35.1	-4.3
DSZ	Denniston Nort	1.36	304	P	Pn	07 26 22.5	-0.9
AKCZ	Akaroa Harbour	1.40	192	P	Pn	07 26 21.0	-2.9
MHCZ	Mount Hutt	1.64	231	P	Pn	07 26 24.3	-3.1
QRZ	Quartz Range	1.78	340	P	Pn	07 26 29.0	-0.2
QRZ				S	Sb	07 26 53.0	-0.4

IDC ***28*** *07:31:18.2±2.5, 36°.34N×70°.97E, h180^{km}±21^{km}, mb3.7/11, mbtmp4.2/17, Error ellipse: s-maj=18.1km s-min=14.5km az=1.0*

SOME ***28*** *07:31:21.9, 37°.95N×72°.10E, h0^{km}*

NEIC ***28*** *07:31:22.3±2.3, 36°.61N±0°.08×71°.03E±0°.05, h212^{km}±9^{km}, mb4.2/2, Error ellipse: s-maj=12.4km s-min=5.8km az=178.0*

NNC ***28*** *07:31:27.4±2.4, 37°.05N×70°.99E, h220^{km}±28^{km}, mb3.1, mpv4.2, Error ellipse: s-maj=23.4km s-min=14.0km az=20.0*

ISC 28 07:31:20.9±0.6**, 36°.56N**±0°.05×**71°.04E**±0°.06**, h200**^{km}**, n78,**
σ1^{s}.86/83**, mb4.0**/10**, 4C-3D, Afghanistan-Tajikistan**
border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.50	347	Pn	Pn	07 32 06.0	+1.2
CHGR	Chuyangaron	2.57	325	Pn	Pn	07 32 06.4	+0.8
DRK	Karamyk	2.98	11	Pn	Pn	07 32 07.6	-3.0
NIL	Nilore	3.42	147		Pn	07 32 17.9	+2.2
BTK	Batken	3.50	357		Pn	07 32 18.9	+2.4
KSH	Kashi	4.89	51	Pn	Pn	07 32 32.3	-1.6
KSH				Sn	Sn	07 33 24.5	-7.0
KSH				pmax	pmax		
	comp=Z,330nm,0.5s						
KSH				smax	smax		
	comp=N,150nm,0.4s						
KSH				smax	smax		
	comp=E,160nm,0.6s						
JMU	Jammu	4.98	139	eS	Sn	07 33 31.6	-2.0
JMU				eS		07 33 32.6	
IUG	Iuzhnay	5.63	352	ePg	Pn	07 32 45.8	+2.3
	comp=E,43nm,0.1s						
IUG				eLg	Lg	07 33 45.7	
	comp=E,212nm,0.0s						
THN	Thein Dam	5.65	135	eP	Pn	07 32 45.4	+1.9
THN				eS	Sn	07 33 49.0	+0.2
THN				IAML		07 33 51.2	
	comp=E,182nm,0.4s						
THN				IAML		07 33 51.3	
	comp=N,168nm,0.6s						
CHM	Chimkent	5.86	350	ePg	Pn	07 32 50.2	+4.0
	comp=N,61nm,0.1s						
CHM				eLg	Lg	07 33 53.1	
	comp=N,377nm,0.4s						
AML	Almayashu	5.93	19	P	Pn	07 32 49.0	+1.5
	SNR=133						
AML	Almayashu	5.93	19	⇓P	Pn	07 32 49.0	+1.5
	comp=N,4.6nm,0.5s						
AML				⇓S	Sn	07 33 54.1	-2.1
	comp=N,53nm,0.6s						
NRN	Naryn	6.21	37	Pn	Pn	07 32 43.3	-7.9
UCH	Uchtor	6.27	24	P	Pn	07 32 53.7	+1.7
	SNR=87						
DZA	Taraz	6.33	2	ePg	Pn	07 32 55.7	+3.4
	comp=N,104nm,0.1s						
DZA				eLg	Lg	07 34 02.6	
	comp=N,317nm,0.3s						
MRKS	Merke	6.40	15	ePg	Pn	07 32 54.7	+1.3
	comp=N,40nm,1.1s						
MRKS				eLg	Lg	07 34 00.5	
	comp=N,111nm,0.1s						
EKS2	Erkin-Say	6.45	18	P	Pn	07 32 55.8	+1.8
	SNR=16						
KK31	Karatay Array	6.55	357	Pn	Pn	07 32 56.2	+1.1
KK31	Karatay Array	6.55	357	P	Pn	07 32 56.0	+0.9
	comp=N,2.0nm,0.3s,baz=184,slow=12,SNR=58						
KK31				S	Sn	07 34 05.7	-4.2
	comp=N,15nm,0.4s,baz=188,slow=23,SNR=21						
KKAR	Karatay Array	6.55	357	Pn	Pn	07 32 56.1	+0.9
KKAR	Karatay Array	6.55	357		Pn	07 32 56.2	+1.1
AAK	Ala-Archa	6.63	23	P	Pn	07 32 58.3	+1.9
	SNR=52						
AAK	Ala-Archa	6.63	23	P	Pn	07 32 58.3	+1.9
	comp=N,28nm,0.3s,baz=197,slow=7.1,SNR=58						
AAK				S	Sn	07 34 12.2	+0.1
	comp=N,19nm,0.7s,baz=30,slow=17,SNR=4.8						
KBK	Karagaybulak	6.79	25	P	Pn	07 33 00.8	+2.2
	SNR=20						
BHK	Bhakra	6.80	137	eS	Sn	07 34 14.3	-1.8
ULHL	Ulahol	6.96	34	P	Pn	07 32 58.9	-1.9
	SNR=7.9						
BOOM	Boomskoye usch	7.03	31		Pn	07 33 02.9	+1.3
CHMS	Chumysh	7.04	23	P	Pn	07 33 03.8	+2.2
	SNR=5.7						
USP	Ospenovka	7.21	21	P	Pn	07 33 05.3	+1.6
	SNR=9.8						
TKM2	Tokmak 2	7.26	28	P	Pn	07 33 06.4	+1.8
	SNR=12						
TKM2	Tokmak 2	7.26	28	⇑P	Pn	07 33 06.1	+1.5
	comp=N,46nm,0.8s						
TKM2				⇓S	Sn	07 34 24.9	-2.1
	comp=N,17nm,0.8s						
KDJ	Kajisay	7.32	39	Pn	Pn	07 33 07.0	+1.7
SMLA	Simla	7.44	135	eP	Pn	07 33 08.3	+1.5
SMLA				eS	Sn	07 34 27.9	-3.1
SMLA				IAML		07 34 31.1	
	comp=N,74nm,0.3s						
SMLA				IAML		07 34 31.7	
	comp=E,134nm,0.6s						
KST	Kastek	7.50	29	ePg	Pn	07 33 12.3	+4.6
	comp=E,12nm,0.3s						
KST				eLg	Lg	07 34 31.1	
	comp=E,22nm,0.3s						
DGS	Degeres	7.60	27	ePg	Pn	07 33 14.3	+5.3
	comp=E,7.9nm,0.2s						
DGS				eLg	Lg	07 34 34.6	
	comp=E,7.5nm,0.3s						
MDOK	Medeo	8.05	33	⇑P	Pn	07 33 16.6	+1.7
	comp=E,22nm,0.6s						
PDGK	Podgornoye	9.37	41	⇑P	Pn	07 33 32.7	+0.7
	comp=E,5.3nm,0.9s						
KUDL	Kundal	9.57	150	eS	Sn	07 35 12.1	-10
GEYT	Alibeck	10.39	281	P	Pn	07 33 43.4	-1.8
	comp=E,2.2nm,0.3s,baz=88,slow=10,SNR=5.9						
GEYT				S	Sn	07 35 38.8	-2.4
	comp=E,1.9nm,0.4s,baz=288,slow=42,SNR=1.9						
GEYT	Alibeck	10.39	281	Pn	Pn	07 33 43.5	-1.6
PYUN	Piuthan	13.15	126	eP	Pn	07 34 21.8	+1.2
	comp=E,8.6nm,0.3s						
MK31	Makanchi Array	13.22	36	Pn	Pn	07 34 22.2	+1.1
MK31	Makanchi Array	13.22	36	P	Pn	07 34 21.7	+0.6
	comp=E,0.4nm,0.3s,baz=216,slow=12,SNR=38						
MKAR	Makanchi Array	13.22	36	P	Pn	07 34 21.9	+0.9
	comp=E,1.1nm,0.3s,baz=208,slow=10,SNR=22						
MKAR	Makanchi Array	13.22	36		Pn	07 34 22.5	+1.4
DANN	Dangsing	13.50	124	eP	Pn	07 34 26.4	+1.5
	comp=E,3.6nm,0.2s						
GKN	Gorkha	14.31	123	eP	Pn	07 34 35.5	+0.6
	comp=E,18nm,0.4s						
DMN	Daman	14.88	123	eP	Pn	07 34 43.6	+1.6
	comp=E,12nm,0.3s						
AB31	Akbulak array	15.05	331	P	Pn	07 34 42.6	-0.8
	comp=E,1.4nm,0.4s,baz=146,slow=12,SNR=73						
ABKAR	Akbulak array	15.05	331	P	Pn	07 34 42.9	-0.6
ABKAR	Akbulak array	15.05	331		Pn	07 34 42.6	-0.9
KURBB	Kurchatov Arra	15.06	19	P	Pn	07 34 43.4	-0.2
	comp=E,0.5nm,0.4s,baz=205,slow=11,SNR=7.2						
PKIN	Phulchoki	15.10	122	eP	Pn	07 34 46.0	+1.4
	comp=E,21nm,0.4s						
PKI	Pulchoki	15.11	122	eP	Pn	07 34 45.9	+1.1
	comp=E,9.3nm,0.3s						
GUN	Gumba	15.22	120	eP	Pn	07 34 46.9	+0.7
	comp=E,21nm,0.4s						
JIRN	Jiri	15.59	120	eP	P	07 34 51.2	+0.5
	comp=E,29nm,0.4s						
RAMN	Ramite	16.32	122	eP	P	07 34 59.1	+0.5
BVA0	Borovoye Array	16.47	359	P	Pn	07 35 01.4	+0.8
	comp=E,2.9nm,0.6s,baz=155,slow=40,SNR=21						
BVAR	Borovoye Array	16.47	359	P	Pn	07 35 01.4	+0.8
	comp=E,3.3nm,0.4s,baz=160,slow=8.9,SNR=21						
BRVK	Borovoye	16.51	358	P	P	07 35 01.2	+1.1
BRVK				IAmb	IAmb	07 35 05.9	
	comp=Z,2.8nm,0.7s						
AKTO	Aktyubinsk	16.74	330	P	P	07 35 03.9	+1.1
	comp=Z,6.6nm,0.3s,baz=142,slow=8.3,SNR=34						
AKTO	Aktyubinsk	16.74	330	⇑P	P	07 35 03.8	+1.0
	comp=Z,5.9nm,0.5s						
TAPN	Taplejung	16.85	118	eP	P	07 35 03.9	-0.6
	comp=Z,11nm,0.5s						
ZAA0	Zalesovo Array	19.85	25	P	P	07 35 36.0	-0.4
ZAA0				IAmb	IAmb	07 35 44.5	
	comp=Z,32nm,1.4s						
ZALV	Zalesovo Beam	19.85	25	P	P	07 35 36.2	-0.1
	comp=Z,1.3nm,0.4s,baz=98,slow=31,SNR=8.3						
	comp=Z,1.3nm,0.4s						
ZALV	Zalesovo Beam	19.85	25	P	P	07 35 36.9	+0.6
ARU	Arti	21.59	341	P	P	07 35 55.6	+0.9
	comp=Z,3.8nm,0.2s,baz=251,slow=6.9,SNR=3.2						
	comp=Z,3.8nm,0.2s						
NRIK	Noril'sk	34.06	10	P	P	07 37 47.9	+2.1
	comp=Z,2.6nm,0.4s,baz=207,slow=4.2,SNR=6.9						
	comp=Z,2.6nm,0.4s						
FINES	FINESS Array B	37.45	326	P	P	07 38 15.5	+0.9
	comp=Z,3.5nm,0.7s,baz=121,slow=7.6,SNR=8.0						
	comp=Z,3.5nm,0.7s						
FINES	FINESS Array B	37.45	326	P	P	07 38 15.2	+0.6
ARCES	ARCESS Array B	41.10	338	P	P	07 38 45.9	+1.2
	comp=Z,10nm,0.9s,baz=110,slow=7.5,SNR=25						
	comp=Z,10nm,0.9s						
NB2	NORSAR Subarra	44.35	323	P	P	07 39 10.9	-0.1
	comp=Z,1.7nm,0.8s,baz=98,slow=7.9						
NOA	NORSAR Array B	44.35	323	P	P	07 39 10.8	-0.2
	comp=Z,1.4nm,0.7s,baz=96,slow=7.8,SNR=6.3						
	comp=Z,1.4nm,0.7s						
TORD	Torodi Ar. Bea	65.75	269	P	P	07 41 42.8	-1.8
	comp=Z,6.0nm,0.4s,baz=45,slow=5.7,SNR=9.2						
	comp=Z,6.0nm,0.4s						
ILAR	Eielson Array	74.71	16	P	P	07 42 38.6	+0.5
	comp=Z,0.2nm,0.6s,baz=308,slow=5.1,SNR=6.0						
	comp=Z,0.2nm,0.6s						
YKA	Yellowknife Ar	81.18	3	P	P	07 43 14.7	+0.9
	comp=Z,1.1nm,0.5s,baz=352,slow=5.3,SNR=46						
	comp=Z,1.1nm,0.5s						
WRA	Warramunga Arr	82.00	122	P	P	07 43 18.1	-0.6
	comp=Z,0.4nm,0.5s,baz=322,slow=5.0,SNR=14						
	comp=Z,0.4nm,0.5s						
ASAR	Alice Springs	84.27	125	P	P	07 43 29.6	-0.6
	comp=Z,0.7nm,0.5s,baz=310,slow=5.0,SNR=19						
	comp=Z,0.7nm,0.5s						

IDC 28 08:07:05.7±1.6**, 36°.13S**×**78°.89E, h0**^{km}**, mb3.9**/4**,**
mbtmp3.9/4**, MS3.8**/26**, Error ellipse: s-maj=44.7km**

s-min=40.6km az=88.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	28.62	98	T	T	08 42 40.4	
	baz=257,slow=74,SNR=50						
H01W3	Cape Leeuwin H	28.63	98	T	T	08 42 40.9	
	baz=257,slow=74,SNR=40						
H01W1	Cape Leeuwin H	28.64	98	T	T	08 42 41.7	
	baz=257,slow=74,SNR=42						
H08S2	Diego Garcia H	28.95	347	T	T	08 43 54.1	
	baz=169,slow=76,SNR=37						
H08S1	Diego Carcia H	28.95	347	T	T	08 43 54.3	
	baz=169,slow=76,SNR=46						
H08S3	Diego Garcia H	28.96	347	T	T	08 43 55.5	
	baz=169,slow=76,SNR=41						
NWAO	Narrogin (SRO)	31.62	96	LR	LR	08 23 15.2	
	comp=Z,284nm,21.1s,baz=282,slow=31						
MAW	Mawson	32.82	191	LR	LR	08 24 32.6	
	comp=Z,169nm,18.6s,baz=12,slow=32						
PALK	Pallekele	43.20	3	LR	LR	08 28 34.9	
	comp=Z,55nm,20.5s,baz=288,slow=30						
BOSA	Boshof	45.44	264	LR	LR	08 30 27.1	
	comp=Z,92nm,20.9s,baz=167,slow=31						
LBTB	Lobatse	46.69	268	LR	LR	08 32 04.0	
	comp=Z,127nm,18.8s,baz=131,slow=32						
SUR	Sutherland	47.54	257	LR	LR	08 31 16.7	
	comp=Z,141nm,20.5s,baz=142,slow=30						
KAPI	Kappang	48.63	60	LR	LR	08 32 28.6	
	comp=Z,113nm,21.9s,baz=209,slow=31						
ASAR	Alice Springs	48.71	91	P	P	08 15 51.9	-0.2
	1.0nm,0.9s,baz=238,slow=6.8,SNR=6.1						
ASAR				LR	LR	08 33 58.1	
	comp=Z,148nm,19.5s,baz=214,slow=33						
	1.0nm,0.9s						
LSZ	Lusaka	49.57	281	LR	LR	08 33 59.8	
	comp=Z,108nm,19.3s,baz=172,slow=33						
WRA	Warramunga Arr	50.88	87	P	P	08 16 08.7	+0.1
	1.7nm,0.9s,baz=239,slow=7.6,SNR=5.6						
WRA				LR	LR	08 35 20.0	
	comp=Z,131nm,20.1s,baz=213,slow=33						
	1.7nm,0.9s						
STKA	Stephens Creek	51.37	105	LR	LR	08 34 21.6	
	comp=Z,83nm,20.1s,baz=204,slow=32						
SNAA	Sanae	53.58	203	LR	LR	08 34 36.9	
	comp=Z,128nm,21.6s,baz=358,slow=31						
QSPA	South Pole Qui	54.03	180	P	P	08 16 32.0	+0.4
	2.2nm,1.0s,baz=219,slow=8.1,SNR=3.0						
	2.2nm,1.0s						
TSUM	Tsumeb	55.99	270	LR	LR	08 37 20.1	
	comp=Z,166nm,20.6s,baz=154,slow=32						
CMAR	Chiang Mai Arr	57.51	23	LR	LR	08 38 09.1	
	comp=Z,41nm,19.5s,baz=210,slow=32						
SIJI	Sorong	59.80	66	LR	LR	08 41 48.0	
	comp=Z,38nm,18.2s,baz=158,slow=35						
CTA	Charters Tower	60.44	94	LR	LR	08 41 31.1	
	comp=Z,214nm,18.3s,baz=261,slow=34						
DAV	Davao City (W)	61.35	55	LR	LR	08 39 59.4	
	comp=Z,43nm,21.4s,baz=164,slow=32						
PMG	Port Moresby	66.98	85	LR	LR	08 44 18.7	
	comp=Z,115nm,21.9s,baz=256,slow=33						
KRVT	Keravat (AS076	73.86	83	LR	LR	08 50 08.8	
	comp=Z,66nm,19.5s,baz=348,slow=35						
DZM	Mont Dzumac	75.44	107	LR	LR	08 48 01.5	
	comp=Z,61nm,18.4s,baz=222,slow=32						
HNR	Honiara	77.31	92	LR	LR	08 51 21.0	
	comp=Z,540nm,18.1s,baz=198,slow=34						
MMAI	Mount Meron Ar	79.91	324	LR	LR	08 49 58.6	
	comp=Z,27nm,20.3s,baz=170,slow=32						
MKAR	Makanchi Array	82.60	2	P	P	08 19 31.8	+1.4
	0.8nm,1.0s,baz=174,slow=3.3,SNR=4.1						
	0.8nm,1.0s						
KSRS	Korea Array	86.16	37	LR	LR	08 54 32.8	
	comp=Z,9.7nm,21.5s,baz=230,slow=33						
SONM	Songino Array	87.13	18	LR	LR	08 55 21.4	
	comp=Z,27nm,21.2s,baz=90,slow=33						
TORD	Torodi Ar. Bea	87.59	288	LR	LR	08 58 19.9	
	comp=Z,80nm,18.0s,baz=117,slow=35						
DBIC	Dimbokro	88.86	279	LR	LR	08 57 25.5	
	comp=Z,68nm,19.4s,baz=145,slow=34						
KLR	Kul'dur	97.06	32	LR	LR	09 04 51.6	
	comp=Z,33nm,18.3s,baz=216,slow=36						
YKA	Yellowknife Ar	152.30	13	PKPbc	PKPbc	08 27 00.2	-2.4
	0.1nm,0.8s,baz=339,slow=3.3,SNR=2.2						

WEL 28 08:31:14.6±0.4**, 42°S**±2°×**17°4E**±°**, h5^{km}, M2.0**/5**, ML2.3**/6**, MLv2.0**/5**, Error ellipse: s-maj=0.0km s-min=0.0km az=90.7, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.19	181	P	Pg	08 31 18.8	+0.4
KHZ				S	Sg	08 31 22.2	+1.2
BSWZ	Blackbirch Sta	0.57	26	P	Pg	08 31 25.7	+0.2
BSWZ				S	Sg	08 31 34.1	+1.2
THZ	Tophouse	0.66	314	P	Pg	08 31 27.5	+0.2
THZ				S	Sb	08 31 37.3	-1.0
GVZ	Greta Valley S	0.83	207	P	Pb	08 31 31.7	+0.1
GVZ				S	Sn	08 31 44.8	-1.0
TUWZ	Tuamarina	0.85	21	P	Pg	08 31 31.1	+0.2
TUWZ				S	Sb	08 31 42.9	-0.6
MRNZ	Matariki Terra	1.01	324	P	Pg	08 31 34.4	+0.3
NNZ	Nelson	1.01	353	P	Pg	08 31 33.8	-0.3
LTZ	Lake Taylor	1.09	239	P	Pg	08 31 35.4	-0.2
TCW	Tory Channel	1.15	29	P	Pg	08 31 35.9	-0.8
TCW				S	Sb	08 31 52.3	0.0
DSZ	Denniston Nort	1.38	290	P	Pg	08 31 41.2	+0.1
DUWZ	D'Urville Isla	1.45	11	P	Pn	08 31 41.2	-0.3
QRZ	Quartz Range	1.59	331	P	Pn	08 31 44.0	+0.5
CAW	Cannon Point	1.60	46	P	Pn	08 31 41.9	-1.6
MQZ	McQueen's Vall	1.62	204	P	Pn	08 31 41.4	-2.4
INZ	Inchbonnie	1.63	251	P	Pb	08 31 45.0	-0.2
AKCZ	Akaroa Harbour	1.71	196	P	Pn	08 31 43.2	-2.0

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*IDC **28** 08:34:54.9±0.8, 37.°16N×141.°40E, h0^{km}, mb3.8/14, mbtmp3.7/16, ML3.0/2, MS2.7/1, Error ellipse: s-maj=21.0km s-min=17.3km az=124.0*

*JMA **28** 08:34:57.9±0.1, 37.°2N±0.°2×141.°3E±0.°7, h26^{km}, MD4.2/40, MV4.0/40, E OFF FUKUSHIMA PREF*

JMA Felt II J1 at E OFF FUKUSHIMA PREF .

*NIED **28** 08:34:57.9, 37.°24N×141.°25E, h26^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.86; $M_{\theta\theta}$4.20; $M_{\phi\phi}$-1.35; $M_{r\theta}$2.62; $M_{\theta\phi}$1.55; $M_{\phi r}$2.61; Fault plane solution: $M_0$5.42000×10^{14} NP1: ϕ_s230.00000°, δ70.00000°, λ-117.00000°. NP2: ϕ_s106.00000°, δ33.00000°, λ-38.00000°.*

ISC 28 08:34:57.1±1.5**, 37.°22N**±0.°04×**141.°31E**±0.°06**, h13**^{km}±8^{km}**, n53, σ1**^{s}**02**/49**, mb3.7**/14**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.37	293	P	Pg	08 35 05.1	+0.4
JFK				eS	Sg	08 35 10.0	+0.3
JFK	Kawauchi	0.37	293	A	A	08 35 05.1	
	comp=E,15nm,0.5s,comp=E,15nm,1.1s						
ONAJ	Iwakimizuishiy	0.42	254	P	Pg	08 35 06.0	+0.4
ONAJ				S	Sg	08 35 11.8	+0.5
ONAJ	Iwakimizuishiy	0.42	254	A	A	08 35 06.0	
	comp=E,44nm,0.2s,comp=E,28nm,0.2s						
JMST	Minamisoumatoc	0.60	327	P	Pg	08 35 08.8	-0.1
JMST				S	Sg	08 35 16.8	-0.1
JFFD	Fukushimafurud	0.61	258	P	Pg	08 35 09.1	+0.1
JFFD				S	Sg	08 35 16.9	-0.2
JMM	Marumori	0.76	328	P	Pb	08 35 11.5	-0.8
JMM	Marumori	0.76	328	iP	Pb	08 35 11.4	-0.8
JMM				S	Sb	08 35 21.5	-1.0
JOTO	OTAMA OYAMA	0.84	294	iP	Pb	08 35 13.3	-0.3
JOTO				iS	Sb	08 35 24.1	-0.8
JOTO	OTAMA OYAMA	0.84	294	A	A	08 35 13.3	
	comp=E,32nm,0.4s,comp=E,19nm,0.5s						
JHO	Hitachi	0.85	224	P	Pb	08 35 12.6	-1.1
JHO				eS	Sb	08 35 22.9	-2.1
JSB	Shiboa	1.14	258	P	Pn	08 35 18.7	0.0
JSB				S	Sn	08 35 33.3	-0.9
JYAR	Yonezawaarcadi	1.15	307	A	A	08 35 17.7	
	comp=E,28nm,0.7s,comp=E,19nm,0.5s						
JIO	Ouri	1.23	2	P	Pn	08 35 18.8	-1.2
JIO				S	Sb	08 35 33.8	-2.2
JOU	Okura	1.25	336	iP	Pn	08 35 19.9	-0.5
JOU				S	Sb	08 35 36.3	-0.3
JOU	Okura	1.25	336	A	A	08 35 19.9	
	comp=E,7.0nm,2.2s,comp=E,12nm,0.8s						
JFY	Yanaizu	1.29	279	iP	Pn	08 35 20.7	-0.1
JFY				S	Sb	08 35 37.1	-0.6
JYS	Shirataka	1.40	316	A	A	08 35 21.6	
	comp=E,12nm,0.7s,comp=E,7.0nm,1.1s						
JYA	Atsumi	1.86	318	A	A	08 35 28.4	
	comp=E,4.0nm,0.6s,comp=E,4.0nm,3.1s						
JSD	Sado	2.55	290	P	Pn	08 35 38.7	+0.5
MJAR	Matsushiro Arr	2.57	256	Pn	Pn	08 35 38.9	+0.4
	0.7nm,0.3s,baz=81,slow=17,SNR=20						
MJAR				Sn	Sb	08 36 12.3	-2.4
	1.2nm,0.3s,baz=189,slow=18,SNR=3.1						
	2.7nm,0.3s						
MAJO	Matsushiro	2.57	256	P	Pn	08 35 40.5	+2.0
JTM	Tenmabayashi	3.56	357	P	Pn	08 35 52.8	+0.7
JGF	Kuroka	3.57	244	P	Pn	08 35 53.7	+1.5
INU	Inuyama	3.94	243	P	Pn	08 35 59.2	+2.0
ERM	Erimo	5.00	16	P	Pn	08 36 12.5	+0.7
JEM	Erimo	5.00	16	P	Pn	08 36 12.8	+1.0
ASAJ	Asahikawa	6.96	8	Pn	Pn	08 36 37.8	-0.9
	0.6nm,0.3s,baz=223,slow=8.3,SNR=7.4						
ASAJ				Sn	Sn	08 37 58.9	+1.2
	0.3nm,0.3s,baz=173,slow=23,SNR=1.5						
	1.7nm,0.4s						
KSRS	Korea Array	10.66	275	LR	LR	08 41 22.6	
	comp=Z,41nm,21.6s,baz=100,slow=36						
SEY	Seymchan	26.62	11	P	P	08 40 35.6	+0.6
	0.4nm,0.3s,baz=215,slow=16,SNR=1.8						
	0.4nm,0.3s						
SONM	Songino Array	27.61	304	P	P	08 40 45.0	+0.8
	0.3nm,0.5s,baz=104,slow=9.5,SNR=1.5						
	0.3nm,0.5s						
H11N2	WAKE ISLAND Hy	28.32	121	T	T	09 10 30.1	
	baz=314,slow=75,SNR=150						
H11N1	WAKE ISLAND Hy	28.33	121	T	T	09 10 30.7	
	baz=314,slow=75,SNR=224						
H11N3	WAKE ISLAND Hy	28.34	121	T	T	09 10 31.4	
	baz=314,slow=75,SNR=193						
H11S1	WAKE ISLAND Hy	29.03	123	T	T	09 11 28.6	
	baz=316,slow=76,SNR=85						
H11S3	WAKE ISLAND Hy	29.04	123	T	T	09 11 48.4	
	baz=316,slow=76,SNR=73						
H11S2	WAKE ISLAND Hy	29.05	123	T	T	09 11 21.2	
	baz=316,slow=76,SNR=57						
ZALV	Zalesovo Beam	41.72	312	P	P	08 42 45.9	+0.3
	0.5nm,0.4s,baz=111,slow=3.2,SNR=1.6						
	0.5nm,0.4s						
MKAR	Makanchi Array	43.95	302	P	P	08 43 04.6	+0.9
	0.6nm,0.5s,baz=97,slow=7.4,SNR=2.5						
	0.6nm,0.5s						
KURBB	Kurchatov Arra	45.82	308	P	P	08 43 18.1	-0.3
	1.3nm,0.2s,baz=83,slow=8.4,SNR=2.0						
	1.3nm,0.2s						
ILAR	Eielson Array	49.38	32	P	P	08 43 45.7	-0.3
	0.9nm,0.7s,baz=275,slow=6.3,SNR=11						
	0.9nm,0.7s						
BVAR	Borovoye Array	50.38	312	P	P	08 43 55.2	+1.5
	0.7nm,0.7s,baz=52,slow=7.5,SNR=2.5						
	0.7nm,0.7s						
WRA	Warramunga Arr	57.23	188	P	P	08 44 43.2	-1.0
	0.5nm,0.6s,baz=5.1,slow=7.2,SNR=6.9						
	0.5nm,0.6s						
ASAR	Alice Springs	60.96	188	P	P	08 45 09.5	-0.5
	0.2nm,0.4s,baz=9.6,slow=6.1,SNR=2.1						
	0.2nm,0.4s						
YKA	Yellowknife Ar	63.69	30	P	P	08 45 27.9	+0.1
	0.2nm,0.8s,baz=301,slow=6.6,SNR=4.2						
	0.2nm,0.8s						
ARCES	ARCESS Array B	63.79	339	P	P	08 45 28.4	0.0
	6.6nm,1.0s,baz=46,slow=5.2,SNR=4.8						
	6.6nm,1.0s						
FINES	FINESS Array B	68.61	332	P	P	08 46 01.1	+1.7
	2.0nm,0.7s,baz=46,slow=10.0,SNR=2.2						
	2.0nm,0.7s						
AKASG	Malin Array Be	74.10	322	P	P	08 46 31.8	-0.9
	0.6nm,0.4s,baz=49,slow=6.3,SNR=4.4						
	0.6nm,0.4s						
PDAR	Pinedale Array	77.60	45	P	P	08 46 53.7	+0.5
	0.2nm,0.6s,baz=318,slow=1.2,SNR=2.5						
	0.2nm,0.6s						
H03N2	Juan Fernandez	147.13	96	T	T	11 39 26.5	
	baz=292,slow=76,SNR=6.3						
H03N3	Juan Fernandez	147.14	96	T	T	11 39 05.9	
	baz=292,slow=76,SNR=7.6						
H03N1	Juan Fernandez	147.15	96	T	T	11 39 10.2	
	baz=292,slow=76,SNR=9.4						
SIV	San Ignacio	151.03	49	PKPbc	PKPbc	08 54 50.4	+0.1
	0.8nm,0.6s,baz=315,slow=1.4,SNR=5.1						

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*MAN **28** 08:34:58.6, 4.°96N×127.°00E, h68^{km}, mb5.1, ML4.0, MS4.1*

*IDC **28** 08:34:59.4±1.5, 4.°90N×126.°84E, h44^{km}±15^{km}, mb3.8/10, mbtmp4.1/13, ML4.0/3, MS3.1/3, Error ellipse: s-maj=41.1km s-min=9.3km az=64.0*

*NEIC **28** 08:35:01.4±2.1, 4.°99N±0.°07×127.°0E±0.°1, h58^{km}±8^{km}, mb4.4/20, Error ellipse: s-maj=17.8km s-min=9.4km az=71.0*

*DJA **28** 08:35:02.1±0.5, 5°N±5°×12°7E±°, h60^{km}±20^{km}, M4.6/12, mB5.5/6, mb4.5/12, MLv4.4/12, Mw(mB)5.0/6*

ISC 28 08:35:01.3±0.9**, 4.°91N**±0.°04×**126.°89E**±0.°07**, h59**^{km}±10^{km}**, n67, σ1**^{s}**72**/78**, mb4.3**/18**, MS3.1**/3**, 7C-3D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.67	316	⇑eP	Pn	08 35 25.8	-2.5
DDMP				eS	Sn	08 35 49.0	+0.2
SGSI	Sangihe	1.82	228	P	Pn	08 35 29.9	-0.4
MATI	Mati	2.12	343	⇑eP	Pn	08 35 37.6	+3.1
MATI				eS	Sn	08 36 04.4	+4.7
GSPH	General Santos	2.26	301	⇑iP	Pn	08 35 32.9	-3.6
GSPH				iS	Sn	08 36 00.1	-3.2
DAV	Davao City (W)	2.52	329	P	Pn	08 35 37.8	-2.0
	36nm,0.3s,baz=269,slow=5.5,SNR=1.7						
DAV				S	Sn	08 36 06.6	-2.7
	166nm,0.3s,baz=105,slow=20,SNR=1.7						
	130nm,0.3s						
DAV	Davao City (W)	2.52	329	Pn	Pn	08 35 38.6	-1.2
KCP	Kidapawan	2.75	320	⇑iP	Pn	08 35 42.1	-1.0
KCP				iS	Sn	08 36 14.8	-0.4
SKMP	Bagumbayan, Su	2.83	305	⇑eP	Pn	08 35 44.4	+0.3
SKMP				eS	Sn	08 36 18.7	+1.6
BIPH	Bislig	3.30	351	⇑eP	Pn	08 35 49.9	-0.7
BIPH				eS	Sn	08 36 22.4	-6.2
CTBH	Cotabato--PC H	3.49	311	⇑iP	Pn	08 35 53.6	+0.4
TNTI	Ternate	4.13	173		Pn	08 36 02.2	+0.2
TNTI	Ternate	4.13	173	P	Pn	08 36 02.7	+0.7
TNTI				S	Sn	08 36 50.4	+1.3
CGP	Cagayan de Oro	4.15	328	⇓eP	Pn	08 36 16.6	+14
CGP				eS	Sn	08 36 52.9	+3.5
PAGZ	Pagadian	4.55	310	⇓eP	Pn	08 36 10.4	+2.7
PAGZ				eS	Sn	08 36 59.2	-0.1
GLSP	General Luna,	4.91	351	⇓eP	Pn	08 36 15.3	+2.7
GLSP				eS	Sn	08 37 04.3	-3.7
LBMI	Labuha	5.54	174	P	Pn	08 36 22.2	+0.9
	86nm,0.8s,4µm0.5nm						
GTOI	Gorontalo	5.74	223	P	Pn	08 36 23.6	-0.5
	14nm,0.6s,0.1nm						
MRSI	Marisa	6.62	228	P	Pn	08 36 35.6	-0.4
	89nm,0.5s,1µm0.4nm						
MRSI				S	Sn	08 37 49.3	-0.8
	89nm,0.5s,1µm0.4nm						
SANI	Sanana	6.97	187	P	Pn	08 36 37.6	-3.2
TOLI2	Tolitoli	7.17	238	Pn	Pn	08 36 43.8	+0.2
LUWI	Luwuk	7.20	215	Pn	Pn	08 36 48.1	+4.1
LUWI	Luwuk	7.20	215	P	Pn	08 36 43.7	-0.3
	88nm,1.0s,3µm0.3nm						
SIJI	Sorong	7.21	143	P	Pn	08 36 44.0	-0.1
	4.3nm,0.3s,baz=339,slow=18,SNR=8.5						
SIJI				S	Sn	08 38 03.7	-1.1
	4.8nm,0.4s,baz=3.4,slow=19,SNR=1.3						
	9.7nm,0.3s						
NLAI	Namlea	8.09	179	P	Pn	08 36 56.7	+0.5
	33nm,0.4s,17µm						
MPSI	Mapaga	8.33	237	P	Pn	08 36 58.9	-0.6
	10nm,1.2s,636nm						
FAKI	Fak Fak	9.44	145	Pn	Pn	08 37 15.5	+0.9
KAPI	Kappang	12.16	216	P	Pn	08 37 51.3	-0.6
	0.6nm,0.3s,baz=85,slow=15,SNR=3.5						
	3.2nm,0.4s						
SAUI	Saumlaki	13.54	161	P	Pn	08 38 11.4	+0.8
	220nm,1.2s						
SOEI	Soe	14.80	190	P	Pn	08 38 27.4	0.0
MTN	Manton Dam	18.13	167	P	P	08 39 07.2	-1.6
MTN				IAmb	IAmb	08 39 08.8	
	comp=Z,24nm,1.1s						
KNRA	Kununurra	20.53	175	P	P	08 39 35.7	+0.7
KNRA				IAmb	IAmb	08 39 39.0	
	comp=Z,16nm,0.8s						
FITZ	Fitzroy Crossi	22.89	183	P	P	08 40 00.2	-0.1
COEN	Coen	24.75	139	P	P	08 40 18.8	+1.2
COEN				IAmb	IAmb	08 40 30.3	
	comp=Z,22nm,1.4s						
WB0	Warramunga Arr	25.60	163	P	P	08 40 24.7	-0.6
WB0				IAmb	IAmb	08 40 26.8	
	comp=Z,26nm,1.1s						
WRAB	Tennant Creek	25.75	164	P	P	08 40 26.1	-0.6
WRAB				IAmb	IAmb	08 40 28.3	
	comp=Z,22nm,1.1s						
WRA	Warramunga Arr	25.76	164	P	P	08 40 25.6	-1.1
	comp=Z,8.8nm,0.8s,baz=343,slow=10,SNR=39						
WRA				PcP	PcP	08 43 54.5	-1.1
	comp=Z,0.2nm,0.5s,baz=340,slow=2.4,SNR=1.5						
WRA				LR	LR	08 51 59.2	
	comp=Z,51nm,19.0s,baz=120,slow=40						
	comp=Z,8.8nm,0.8s						
WRA	Warramunga Arr	25.76	164	P	P	08 40 25.9	-0.8
WB2	Warramunga Arr	25.76	164	P	P	08 40 26.3	-0.4
WB2				IAmb	IAmb	08 40 28.3	
	comp=Z,23nm,1.1s						
PSA00	Pilbara Seismi	27.20	194	P	P	08 40 39.9	+0.1
AS31	Alice Springs	29.21	167	P	P	08 40 59.0	+1.3
ASAR	Alice Springs	29.21	167	P	P	08 40 56.7	-0.9
	comp=Z,0.5nm,0.4s,baz=355,slow=7.6,SNR=13						
ASAR				PcP	PcP	08 44 02.7	-1.1
	comp=Z,0.3nm,0.4s,baz=357,slow=2.1,SNR=2.2						
	comp=Z,0.5nm,0.4s						
ASAR	Alice Springs	29.21	167	P	P	08 40 58.5	+0.9
TNCH	TengChong	33.79	309	P	P	08 41 38.8	+0.7
TNCH				pmax	pmax		
	comp=Z,200nm,0.5s						
FORT	Forrest	35.50	178	P	P	08 41 52.0	-0.5
EIDS	Eidsvold	38.18	143	P	P	08 42 15.2	-0.2
BBOO	Buckleboo	38.51	168	P	P	08 42 18.6	+0.6
STKA	Stephens Creek	39.17	160	P	P	08 42 23.1	-0.4
	comp=Z,4.3nm,0.4s,baz=343,slow=8.0,SNR=17						
	comp=Z,4.3nm,0.4s						
STKA	Stephens Creek	39.17	160	P	P	08 42 23.2	-0.4
STKA				IAmb	IAmb	08 42 26.1	
	comp=Z,1.4nm,0.6s						
ASAJ	Asahikawa	41.43	17	LR	LR	08 59 03.1	
	comp=Z,22nm,21.5s,baz=198,slow=35						
ARMA	Armidale	42.36	148	P	P	08 42 50.3	+0.3
SONM	Songino Array	46.24	341	P	P	08 43 20.3	-0.6
	comp=Z,0.6nm,0.6s,baz=151,slow=7.5,SNR=5.1						
	comp=Z,0.6nm,0.6s						
SONM	Songino Array	46.24	341	P	P	08 43 21.7	+0.8
MK31	Makanchi Array	56.69	325	P	P	08 44 38.1	-0.8
MKAR	Makanchi Array	56.69	325	P	P	08 44 37.8	-1.1
	comp=Z,0.4nm,0.4s,baz=122,slow=8.0,SNR=5.8						
	comp=Z,0.4nm,0.4s						
MKAR	Makanchi Array	56.69	325	P	P	08 44 38.9	+0.1
KSH	Kashi	57.33	314	P	P	08 44 49.5	+5.8
KSH				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MA2	Magadan	57.53	14	LR	LR	09 10 33.1	
	comp=Z,21nm,20.2s,baz=208,slow=37						
ZALV	Zalesovo Beam	59.62	333	P	P	08 44 57.0	-2.1
	comp=Z,0.5nm,0.3s,baz=120,slow=8.5,SNR=2.0						
	comp=Z,0.5nm,0.3s						
KURBB	Kurchatov Arra	60.84	327	P	P	08 45 08.0	+0.4
	comp=Z,2.2nm,0.2s,baz=129,slow=5.7,SNR=4.8						
	comp=Z,2.2nm,0.2s						
KURK	Kurchatov	60.84	327	P	P	08 45 08.0	+0.4
KURK				IAmb	IAmb	08 45 15.1	
	comp=Z,4.9nm,1.2s						
BVAR	Borovoye Array	66.43	327	P	P	08 45 45.1	+0.7
	comp=Z,1.3nm,0.6s,baz=116,slow=10,SNR=5.7						
	comp=Z,1.3nm,0.6s						
ABKAR	Akbulak array	71.35	320	P	P	08 46 14.5	-0.5
ILAR	Eielson Array	83.98	25	P	P	08 47 25.8	+0.8
	comp=Z,0.3nm,0.6s,baz=276,slow=9.9,SNR=1.7						
	comp=Z,0.3nm,0.6s						
VNDA	Vanda	84.56	173	P	P	08 47 27.5	-0.2
	comp=Z,1.3nm,0.8s,baz=309,slow=7.9,SNR=3.6						
	comp=Z,1.3nm,0.8s						
VNDA	Vanda	84.56	173	P	P	08 47 27.2	-0.4
VNDA				IAmb	IAmb	08 47 29.2	
	comp=Z,4.6nm,1.2s						
BCAR	Beaver Creek A	86.27	27	P	P	08 47 38.3	+1.7
QSPA	South Pole Qui	94.80	180	P	P	08 48 16.4	-0.1
QSPA				IAmb	IAmb	08 48 58.8	
	comp=Z,0.8nm,0.8s						

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*SJA **28** 08:36:36.3±0.7, 24.°22S×66.°85W, h238^{km}±6^{km}, ML3.9, MW3.7, Hypocentre not reviewed by the ISC*

*GUC **28** 08:36:41.4±0.6, 24.°01S×67.°29W, h244^{km}±9^{km}, ML3.8*

*IDC **28** 08:36:43.6±2.7, 23.°84S×66.°38W, h204^{km}±30^{km}, mbtmp3.5/3, Error ellipse: s-maj=34.2km s-min=21.0km az=104.0*

ISC 28 08:36:42.3±1.1**, 23.°99S**±0.°08×**67.°09W**±0.°09**, h200**^{km}**, n16, σ1**^{s}**22**/25**, 3C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.62	117	iP		08 37 12.9	
SLA				iS		08 37 39.4	
HJA	Humahuaca	1.73	63	iP		08 37 15.4	
HJA				iS		08 37 45.7	
LVC	Limon Verde	2.17	309	⇑eP	Pn	08 37 23.5	+0.5
LVC				iS	Sn	08 37 56.3	+1.8
LVC	Limon Verde	2.17	309	iP		08 37 23.2	
PB15	IPOC Station P	2.32	289	⇑iP	Pn	08 37 25.0	+0.6
PB15				iS	Sn	08 37 58.1	+0.9
PB06	IPOC Station P	2.62	299	iP		08 37 27.9	
PB06				iS		08 38 05.8	
PB06				IAML		08 38 08.0	
	comp=Z,236nm,0.1s						
PB09	IPOC Station P	2.95	317	⇑iP	Pn	08 37 32.6	+1.0
PB09				iS	Sn	08 38 11.6	+1.5
PB09				IAML		08 38 16.0	
	comp=N,118nm,0.7s						
PB09	IPOC Station P	2.95	317	iP		08 37 32.0	
PB09				iS		08 38 12.4	
PB09				IAML		08 38 15.9	
	comp=Z,118nm,0.4s						
PB10	IPOC Station P	3.21	278	eP	Pn	08 37 34.7	+0.2
PB10				iS	Sn	08 38 13.8	-1.4
PB10	IPOC Station P	3.21	278	⇓iP		08 37 33.7	
PB10				iS		08 38 16.1	
PB10				IAML		08 38 18.2	
	comp=Z,121nm,0.2s						
PB04	IPOC Station P	3.26	300	eP	Pn	08 37 35.5	+0.2
PB04				iS	Sn	08 38 16.1	-0.6
PB07	IPOC Station P	3.42	311	eP	Pn	08 37 37.5	+0.2
PB07				iS	Sn	08 38 19.8	-0.5
PB07	IPOC Station P	3.42	311	iP		08 37 37.0	
PB07				iS		08 38 22.0	
PB07				IAML		08 38 24.8	
	comp=Z,139nm,0.1s						
PB01	IPOC Station P	3.68	322	eP	Pn	08 37 40.2	-0.1
PB01				iS	Sn	08 38 25.3	-0.4
PB01	IPOC Station P	3.68	322	iP		08 37 40.3	
PB01				IAML		08 38 31.2	
	comp=Z,85nm,0.2s						
PB02	IPOC Station P	3.71	315	eP	Pn	08 37 40.6	-0.1
PB02				iS	Sn	08 38 25.4	-1.1
PB02	IPOC Station P	3.71	315	iP		08 37 40.1	
PB02				IAML		08 38 32.2	
	comp=Z,212nm,0.4s						
PB08	IPOC Station P	4.28	333	eP	Pn	08 37 48.7	+0.6
PB08				iS	Sn	08 38 40.3	+0.6
TA01	Diego Aracena	4.45	319	eP	Pn	08 37 48.9	-0.9
LPAZ	La Paz	7.73	353	P	Pn	08 38 33.6	+0.9
	comp=Z,0.6nm,0.3s,baz=173,slow=12,SNR=5.3						
LPAZ				S	Sn	08 40 01.4	+1.0
	comp=Z,0.7nm,0.5s,baz=46,slow=23,SNR=2.5						
PLCA	Paso Flores	16.94	189	P	Pn	08 40 30.6	+2.7
	comp=Z,0.7nm,0.9s,baz=3.8,slow=12,SNR=6.8						
BDFB	Brasilia	19.76	69	P	P	08 40 51.3	-6.1
	comp=Z,1.9nm,0.6s,baz=234,slow=13,SNR=3.6						
TORD	Torodi Ar. Bea	76.64	69	P	P	08 48 08.5	-3.0
	comp=Z,100nm,0.3s,baz=266,slow=6.3,SNR=2.8						
WRA	Warramunga Arr	131.59	207	PKP	PKPdf	08 55 31.4	-0.6
	comp=Z,0.4nm,0.9s,baz=168,slow=1.7,SNR=2.2						
MKAR	Makanchi Array	146.57	39	PKPbc	PKPdf	08 55 59.1	+0.8
	comp=Z,0.4nm,0.6s,baz=286,slow=4.6,SNR=5.2						

WEL 28 08:47:58.7±0.4**, 43°S**±3°×**17°3E**±°**, h12^{km}, M1.9**/2**, ML2.2**/9**, MLv1.9**/2**, Error ellipse: s-maj=0.0km s-min=0.0km**

az=7.9,confirmed,South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVZ	Greta Valley S	0.31	152	P	Pb	08 48 06.3	0.0
GVZ				S	Sb	08 48 11.8	+0.4
LTZ	Lake Taylor	0.43	258	P	Pb	08 48 07.9	-0.4
LTZ				S	Sg	08 48 13.6	+0.7
AMCZ	Amberley	0.51	196	P	Pb	08 48 10.3	+0.7
KHZ	Kahutara	0.59	62	P	Pg	08 48 10.4	+0.2
KHZ				S	Sb	08 48 18.8	-0.4
OXZ	Oxford	0.86	222	P	Pb	08 48 16.1	+0.4
OXZ				S	Sn	08 48 29.0	-0.3
THZ	Tophouse	0.93	3	P	Pg	08 48 16.2	-0.4
MQZ	McQueen's Vall	1.02	187	P	Pb	08 48 18.1	-0.3
MQZ				S	Sg	08 48 32.3	+0.5
INZ	Inchbonnie	1.03	268	P	Pn	08 48 18.9	-0.1
RACZ	Rakaia	1.16	206	P	Pb	08 48 20.1	-0.5
DSZ	Denniston Nort	1.22	321	P	Pb	08 48 21.8	0.0
DSZ				S	Sn	08 48 38.4	+0.4
MHCZ	Mount Hutt	1.25	227	P	Pn	08 48 21.4	-0.8
WACZ	Wakanui South	1.45	210	P	Pn	08 48 24.1	-0.6
ODZ	Otahua Downs	2.84	213	P	Pn	08 48 42.9	-1.0

WEL 28 09:12:34.7±0.5,42°S±3°×17°4E±°,h5^{km},M1.8/5,ML2.2/7, MLv1.8/5,Error ellipse: s-maj=0.0km s-min=0.0km az=120.6,confirmed,South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHZ	Kahutara	0.23	215	P	Pg	09 12 39.4	+0.2
KHZ				S	Sg	09 12 43.2	+1.0
BSWZ	Blackbirch Sta	0.53	13	P	Pg	09 12 44.9	+0.1
THZ	Tophouse	0.77	307	P	Pg	09 12 49.6	+0.2
TUWZ	Tuamarina	0.81	12	P	Pg	09 12 50.4	+0.1
TUWZ				S	Sb	09 13 02.7	+0.1
GVZ	Greta Valley S	0.90	214	P	Pg	09 12 51.9	0.0
GVZ				S	Sb	09 13 05.3	+0.3
MRNZ	Matariki Terra	1.10	319	P	Pb	09 12 55.9	-0.2
TCW	Tory Channel	1.10	22	P	Pg	09 12 54.7	-1.0
TCW				S	Sg	09 13 10.3	+0.3
LTZ	Lake Taylor	1.21	242	P	Pg	09 12 56.8	-1.0
LTZ				S	Sg	09 13 13.6	+0.2
DUWZ	D'Urville Isla	1.43	6	P	Pn	09 13 00.7	-0.7
DSZ	Denniston Nort	1.51	288	P	Pn	09 13 02.5	+0.1
OXZ	Oxford	1.65	228	P	Pn	09 13 01.6	-2.7
QRZ	Quartz Range	1.66	327	P	Pn	09 13 04.8	+0.4
MQZ	McQueen's Vall	1.67	208	P	Pn	09 13 01.1	-3.5
AKCZ	Akaroa Harbour	1.75	200	P	Pn	09 13 02.7	-3.0
INZ	Inchbonnie	1.75	253	P	Pn	09 13 03.4	-2.3
MHCZ	Mount Hutt	2.05	230	P	Pn	09 13 07.0	-2.8
WACZ	Wakanui South	2.20	218	P	Pn	09 13 08.9	-3.0
RPZ	Rata Peaks	2.46	232	P	Pn	09 13 13.0	-2.4
ARCZ	Arundel	2.53	226	P	Pn	09 13 13.9	-2.6
TMZ	Timaru	2.93	222	P	Pn	09 13 19.0	-2.9
PXZ	Pawanui	3.23	48	P	Pn	09 13 22.0	-4.1
ETVZ	East Tongariro	3.44	27	P	Pn	09 13 25.4	-3.6
ODZ	Otahua Downs	3.59	217	P	Pn	09 13 26.0	-5.0

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*IDC **28** 09:16:29.8±1.2,33°.10N×88°.02E,h0^{km},mb3.5/4, mbtmp3.6/7,ML3.8/3,MS3.2/7,Error ellipse: s-maj=37.0km s-min=25.8km az=69.0*

ISC 28 09:16:34.8±1.0,33°.3N±0°.1×88°.1E±0°.2,h35^{km},n14, σ1^{s}65/8,mb3.5/4,MS3.1/6,Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	14.22	344	Pn	Pn	09 19 51.3	-2.3
	baz=165,slow=12,SNR=2.2						
MKAR				LR	LR	09 26 06.3	
	comp=Z,52nm,18.7s,baz=148,slow=40						
	0.3nm,0.8s						
CMAR	Chiang Mai Arr	17.66	144	P	Pn	09 20 37.0	-1.2
	1.0nm,0.3s,baz=333,slow=10,SNR=4.1						
	1.6nm,0.3s						
KURBB	Kurchatov Arra	18.72	341	P	P	09 20 50.1	-0.1
	0.1nm,0.3s,baz=154,slow=12,SNR=7.5						
	2.9nm,0.8s						
SONM	Songino Array	20.06	38	P	Pn	09 21 06.9	-0.1
	1.6nm,0.8s,baz=228,slow=13,SNR=8.8						
	1.6nm,0.8s						
ZALV	Zalesovo Beam	20.81	355	LR	LR	09 30 24.4	
	comp=Z,77nm,18.6s,baz=274,slow=40						
BVAR	Borovoye Array	23.48	333	LR	LR	09 32 00.1	
	comp=Z,43nm,19.1s,baz=136,slow=39						
GEYT	Alibeck	24.76	289	LR	LR	09 33 27.8	
	comp=Z,52nm,19.5s,baz=358,slow=41						
USRK	Ussuriysk Ar.	35.56	59	LR	LR	09 40 30.4	
	comp=Z,39nm,18.7s,baz=135,slow=40						
OBN	Obninsk	41.73	317	LR	LR	09 45 05.9	
	comp=Z,31nm,19.3s,baz=348,slow=41						
MMAI	Mount Meron Ar	43.72	285	LR	LR	09 45 26.2	
	comp=Z,22nm,21.9s,baz=220,slow=40						
ASAR	Alice Springs	71.49	136	P	P	09 27 51.1	-0.9
	0.4nm,0.9s,baz=337,slow=6.1,SNR=2.6						
	0.4nm,0.9s						
ILAR	Eielson Array	73.32	21	P	P	09 28 04.0	+1.6
	0.3nm,0.9s,baz=313,slow=4.5,SNR=2.6						
	0.3nm,0.9s						
TORD	Torodi Ar. Bea	79.94	279	P	P	09 28 41.3	+0.7
	38nm,0.6s,baz=63,slow=6.0,SNR=6.3						
YKA	Yellowknife Ar	82.84	10	P	P	09 28 57.0	+1.8
	0.4nm,0.7s,baz=334,slow=5.0,SNR=8.6						
	0.4nm,0.7s						

IDC 28 09:29:06.6±2.3,54°.54N×83°.50E,h0^{km},mbtmp2.3/2, ML2.2/2,Error ellipse: s-maj=19.0km s-min=10.2km az=163.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.97	127	I	I	09 34 30.0	
	0.1nm,0.8s,baz=307,slow=335,SNR=6.2						
ZALV	Zalesovo Beam	0.97	127	Pg	Pg	09 29 25.1	-0.2
	2.1nm,0.3s,baz=308,slow=15,SNR=16						
ZALV				Lg	Lg	09 29 39.2	
	2.8nm,0.3s,baz=308,slow=28,SNR=11						
KURBB	Kurchatov Arra	4.96	220	Pn	Pn	09 30 21.9	-0.4
	baz=38,slow=15,SNR=1.6						
KURBB				Sn	Sn	09 31 20.4	+0.1
	baz=23,slow=29,SNR=1.5						
KURBB				Lg	Lg	09 31 45.4	
	baz=13,slow=29						
	0.1nm,0.3s						
MKAR	Makanchi Array	7.80	186	Pn	Pn	09 31 01.3	0.0
	0.1nm,0.3s,baz=7.3,slow=14,SNR=2.6						
MKAR				Lg	Lg	09 33 15.3	
	0.1nm,0.3s,baz=6.5,slow=27,SNR=2.4						
	0.1nm,0.4s						

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*MDD **28** 09:35:56.6±1.0,36°.83N×12°.07W,h0^{km},Mb4.0/10, M_mb3.3/12,Error ellipse: s-maj=7.6km s-min=6.7km az=36.0*

*INMG **28** 09:35:57.7±1.3,36°.66N×12°.49W,h30^{km},ML2.4,Error ellipse: s-maj=6.5km s-min=4.7km az=86.0*

*IGIL **28** 09:35:57.2,36°.83N×12°.07W,h0^{km},ML2.3*

*CNRM **28** 09:36:01.0,36°.22N×11°.36W,h0^{km}*

ISC 28 09:35:51.1±2.8,36°.66N±0°.07×12°.2W±0°.1,h10^{km},n49, σ2^{s}87/89,11C,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	Vila Bisbo	2.77	79	P	Pn	09 36 38.1	+2.6
PFVI				S	Sn	09 37 08.4	-0.7
PFVI	Vila Bisbo	2.77	79	S	Sn	09 37 08.8	-0.3
PFVI				P	Pn	09 36 38.6	+3.0
PFVI	Vila Bisbo	2.77	79	⇑*e*P	Pn	09 36 38.6	+3.0
PFVI				*e*S	Sn	09 37 09.9	+0.8
PFVI				A	A	09 37 12.2	
	12nm,0.4s						
MORF	Marmelete	2.94	76	*e*P	Pb	09 36 42.1	-1.5
MORF				*e*S	Sn	09 37 14.7	+1.4
MORF				A	A	09 37 15.7	
	10.0nm,0.1s						
MORF	Marmelete	2.94	76	*e*P	Pn	09 36 41.0	+3.1
MORF				*e*S	Sn	09 37 13.0	-0.3
MORF				IAML		09 37 15.4	
	comp=E,14nm,0.1s						
PTEO	Sao Teotonio	2.95	71	*e*P	Pn	09 36 41.1	+3.2
PTEO				*e*S	Sn	09 37 13.6	+0.3
PTEO				A	A	09 37 18.5	
	comp=E,8.8nm,0.5s						
PMAFR	Mafra	3.28	45	P	Pn	09 36 45.1	+2.7
PMAFR				S	Sn	09 37 21.2	-0.3
PMAFR	Mafra	3.28	45	*e*P	Pn	09 36 45.4	+2.9
PMAFR				*e*S	Sn	09 37 21.5	0.0
PMAFR				A	A	09 37 22.5	
	comp=E,39nm,0.2s						
PNCL	Nicolau / Gran	3.29	63	S	Sn	09 37 22.2	+0.3
PNCL				P	Pn	09 36 45.9	+3.2
PNCL	Nicolau / Gran	3.29	63	*e*P	Pn	09 36 46.0	+3.3
PNCL				*e*S	Sn	09 37 22.6	+0.8
PNCL				A	A	09 37 26.8	
	comp=E,6.6nm,0.1s						
MESJ	Messejana	3.42	69	*e*P	Pn	09 36 47.4	+3.0
MESJ				*e*S	Sn	09 37 25.7	+0.8
MESJ				A	A	09 37 29.5	
	comp=E,4.2nm,0.2s						
MESJ	Messejana	3.42	69	*e*P	Pn	09 36 47.3	+2.9
MESJ				*e*S	Sn	09 37 23.9	-1.0
MESJ				IAML		09 37 28.8	
	comp=N,6.6nm,0.2s						
PCVE	Castro Verde	3.49	73	*e*P	Pn	09 36 49.2	+3.8
PCVE				*e*S	Sn	09 37 27.5	+0.7
PCVE				A	A	09 37 30.5	
	comp=N,3.9nm,0.3s						
PBDV	Barranco-do-Ve	3.50	79	*e*S	Sn	09 37 28.0	+1.0
PBDV				A	A	09 37 33.0	
	comp=N,3.8nm,0.4s						
PVAQ	Vaqueiros	3.69	77	P	Pn	09 36 51.6	+3.4
PVAQ				S	Sn	09 37 30.9	-0.9
PVAQ	Vaqueiros	3.69	77	S	Sn	09 37 32.0	+0.2
PVAQ				P	Pn	09 36 51.6	+3.4
PVAQ	Vaqueiros	3.69	77	*e*P	Pn	09 36 51.5	+3.3
PVAQ				*e*S	Sn	09 37 32.2	+0.4
PVAQ				A	A	09 37 34.9	
	comp=N,4.7nm,0.4s						
EGRO	El Granado	3.90	76	P	Pn	09 36 54.3	+3.2
EGRO				⇑*i*Vmb_V		09 36 55.4	
	comp=N,98nm,SNR=1.4						
EGRO				S	Sn	09 37 36.2	-0.7
PMTG	Montargil	3.98	52	*e*P	Pn	09 36 54.5	+2.3
PMTG				*e*S	Sn	09 37 37.8	-1.2
PMTG				A	A	09 37 42.7	
	comp=N,3.1nm,0.3s						
PESTR	Estremoz	4.29	58	S	Sn	09 37 45.0	-1.6
PESTR				P	Pn	09 36 59.7	+3.3
PESTR	Estremoz	4.29	58	*e*P	Pn	09 37 00.0	+3.5
PESTR				*e*S	Sn	09 37 45.4	-1.2
PESTR				A	A	09 37 50.1	
	comp=N,2.5nm,0.6s						
PBAR	Barrancos	4.41	68	P	Pn	09 37 01.8	+3.7
PBAR				S	Sn	09 37 48.4	-1.0
PBAR	Barrancos	4.41	68	*e*P	Pn	09 37 01.7	+3.7
PBAR				*e*S	Sn	09 37 47.9	-1.5
PBAR				A	A	09 37 53.9	
	comp=N,2.0nm,0.2s						
PCAS	Casmilo, Conde	4.49	40	*e*P	Pn	09 37 01.9	+2.8
PCAS				*e*S	Sn	09 37 49.8	-1.6
PCAS				A	A	09 37 51.6	
	comp=N,4.6nm,0.5s						
EMIN	Mina Concepcio	4.58	74	P	Pn	09 37 03.4	+3.0
EMIN				S	Sn	09 37 52.4	-1.3
EMIN	Mina Concepcio	4.58	74	P	Pn	09 37 03.3	+2.9
EMIN				⇑*i*Vmb_V		09 37 05.2	
	comp=N,61nm,SNR=1.0						
EMIN				S	Sn	09 37 52.5	-1.2
EBAD	Badajoz	4.64	62	P	Pn	09 37 03.8	+2.6
EBAD				S	Sn	09 37 53.7	-1.5
EBAD	Badajoz	4.64	62	P	Pn	09 37 04.0	+2.8
EBAD				⇑*i*Vmb_V		09 37 04.5	
	comp=N,134nm,SNR=2.2						
EBAD				S	Sn	09 37 53.8	-1.4
PMRV	Marv??o	4.72	53	*e*P	Pn	09 37 05.3	+3.0
PMRV				*e*S	Sn	09 37 55.0	-2.1
PMRV				A	A	09 37 58.7	
	comp=N,3.2nm,0.2s						
PCBR	Castelo Branco	4.91	48	*e*P	Pn	09 37 07.8	+2.9
ESPR	Espera	5.13	86	P	Pn	09 37 10.8	+2.9
ESPR				⇑*i*Vmb_V		09 37 12.2	
	comp=N,118nm,SNR=2.0						
ESPR				S	Sn	09 38 07.1	0.0
MTE	Manteigas	5.24	43	*e*S	Sn	09 38 08.7	-1.4
PVIS	Viseu	5.29	39	*e*S	Sn	09 38 08.3	-2.9
PVIS				A	A	09 38 10.2	
	comp=N,5.5nm,0.1s						
ZHG	ZHG	5.60	123	P	Pn	09 37 14.7	+0.3
ZHG				S	Sn	09 38 10.9	-8.0
ECAB	El Cabril	5.61	73	P	Pn	09 37 17.3	+2.7
ECAB				S	Sn	09 38 17.3	-1.9
ECAB	El Cabril	5.61	73	P	Pn	09 37 17.4	+2.7
ECAB				⇑*i*Vmb_V		09 37 18.1	
	comp=N,80nm,SNR=1.1						
ECAB				S	Sn	09 38 16.6	-2.6
POLO	Lamas de Olo	5.84	35	*e*S	Sn	09 38 20.9	-4.0
POLO				A	A	09 38 24.3	
	comp=N,1.5nm,0.5s						
EPLA	Plasencia	5.91	53	P	Pn	09 37 21.5	+2.8
EPLA				⇑*i*Vmb_V		09 37 22.0	
	comp=N,74nm,SNR=0.8						
EPLA				S	Sn	09 38 23.8	-2.7
MVO	Moncorvo	6.06	40	*e*S	Sn	09 38 26.9	-3.4
MVO				A	A	09 38 33.6	
	comp=N,3.4nm,1.1s						
ELOB	Lobios	6.13	31	P	Pn	09 37 23.7	+1.9
ELOB				⇑*i*Vmb_V		09 37 25.0	
	comp=N,154nm,SNR=1.1						
ELOB				S	Sn	09 38 26.9	-5.0
PGAV	Gavieira, Arco	6.13	29	*e*S	Sn	09 38 27.9	-4.0
PGAV				A	A	09 38 32.9	
	comp=N,3.1nm,0.1s						
EADA	Adamuz	6.28	74	P	Pn	09 37 26.8	+3.0
EADA				⇑*i*Vmb_V		09 37 28.5	
	comp=N,48nm,SNR=1.0						
EADA				S	Sn	09 38 33.3	-2.3
OUK	Oukaimeden	6.54	145	P	Pn	09 37 28.8	+1.2
OUK				S	Sn	09 38 35.3	-7.1
EMAZ	Mazaricos	6.77	21	⇑*i*Vmb_V		09 37 34.1	
	comp=N,185nm,SNR=0.6						
EMAZ				S	Sn	09 38 40.7	-6.8
ECAL	Calabor	6.78	37	P	Pn	09 37 33.0	+2.2
ECAL				S	Sn	09 38 43.9	-4.1
PAB	San Pablo	6.86	63	P	Pn	09 37 34.0	+2.3
PAB				⇑*i*Vmb_V		09 37 34.9	
	comp=N,78nm,SNR=1.7						
PAB				S	Sn	09 38 47.6	-2.2
EAGO	Agolada(Pontev	6.92	26	P	Pn	09 37 35.4	+2.8
PSIM	Granatula de C	7.06	70	P	Pn	09 37 37.4	+2.9
PSIM				S	Sn	09 38 53.2	-1.6
MDT	Midelt	7.36	119	P	Pn	09 37 39.9	+1.3
MDT				S	Sn	09 38 55.8	-6.4

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*IDC **28** 09:38:20.0±2.9,53°.60N×87°.82E,h0^{km},mbtmp3.1/2, ML2.7/2,Error ellipse: s-maj=25.7km s-min=15.5km az=62.0*

ISC 28 09:38:21.5±4.9,53°.7N±0°.1×88°.2E±0°.3,h35^{km},n6,σ0^{s}90/8, 1C-2D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.99	277	I	I	09 51 03.1	
	baz=99,slow=333,SNR=4.3						
ZAA0	Zalesovo Array	1.99	277	⇓P	Pn	09 38 52.6	0.0
	0.3nm,0.4s						
ZAA0				⇑S	Sn	09 39 16.8	+0.5
	2.2nm,0.5s						
ZALV	Zalesovo Beam	1.99	277	Pn	Pn	09 38 51.8	-0.8
	1.2nm,0.3s,baz=101,slow=14,SNR=13						
ZALV				Lg	Lg	09 39 16.5	
	2.9nm,0.3s,baz=104,slow=23,SNR=12						
KURBB	Kurchatov Arra	6.70	246	Pn	Pn	09 39 58.1	+0.8
	0.1nm,0.3s,baz=60,slow=14,SNR=4.7						
KURBB				Lg	Lg	09 41 43.5	
	baz=64,slow=29						
	1.4nm,0.7s						
MK31	Makanchi Array	7.91	211	Pn	Pn	09 40 15.0	+1.1
	1.2nm,0.8s,baz=30,slow=14,SNR=10						
MK31				⇓Sn	Sn	09 41 41.4	-0.7
	0.3nm,0.4s,baz=18,slow=78,SNR=8.2						
MKAR	Makanchi Array	7.91	211	Pn	Pn	09 40 13.7	-0.3
	0.2nm,0.3s,baz=29,slow=14,SNR=10						
MKAR				Sn	Sn	09 41 41.2	-0.8
	0.1nm,0.3s,baz=28,slow=29,SNR=7.1						
MKAR				Lg	Lg	09 42 22.4	
	0.1nm,0.3s,baz=33,slow=32,SNR=7.8						
	0.8nm,0.6s						

IDC 28 10:07:54.6±600.0,24°.80N×129°.84E,h0^{km},Error ellipse: s-maj=261.6km s-min=184.6km az=61.0,Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I30JP	ISUMI INFRASON	13.84	38	I	I	11 33 00.0	
	baz=223,slow=321,SNR=1.7						
I39PW	PALAU INFRASON	17.75	165	I	I	12 00 40.0	
	baz=344,slow=306,SNR=0.5						
I45RU	USSURIYSK INFR	19.43	5	I	I	12 10 30.0	
	baz=186,slow=326,SNR=1.9						

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*DJA **28** 10:08:00.9±2.2,10°N±11°×12°6E±°,h17^{km}±20^{km},M5.2/12, mB5.3/7,mb5.1/12,MLv5.6/3,Mw(mB)4.8/7*

*IDC **28** 10:08:15.2±0.6,8°.10N×126°.26E,h0^{km},mb4.0/19, mbtmp4.1/21,ML4.3/2,MS3.4/14,Error ellipse: s-maj=21.6km s-min=11.1km az=90.0*

*NEIC **28** 10:08:17.4±1.4,8°.15N±0°.06×126°.10E±0°.07,h10^{km}±1^{km}, mb4.6/67,Error ellipse: s-maj=12.5km s-min=9.3km az=101.0*

*MAN **28** 10:08:18.6,8°.03N×126°.14E,h14^{km},mb5.1,ML4.0,MS4.1*

MAN INTENSITY IV - TRENTO AGUSAN DEL SUR; INTENSITY III - SANTA JOSEFA AGUSAN DEL SUR; INTENSITY II - BISLIG CITY; MONKAYO COMPOSTELLA VALLEY; ROSARIO AND BUNAWAN AGUSAN DEL SUR.

ISC 28 10:08:18.3±0.7,8°.12N±0°.02×126°.08E±0°.03,h20^{km}±3^{km}, n153,σ1^{s}46/167,mb4.5/58,MS3.5/12,10C-11D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	Bislig	0.29	76	⇑*i*P	Pn	10 08 26.2	-1.3
BIPH				*i* S	Sn	10 08 34.3	+1.0
BUTP	Butuan	0.96	332	⇓*e*P	Pn	10 08 38.0	+1.2
BUTP				*e*S	Sn	10 08 53.9	+4.1
DAV	Davao City (W)	1.15	205	Pn	Pn	10 08 39.6	+0.2
	1µm,0.3s,baz=57,slow=2.2,SNR=108						
DAV				LR	LR	10 08 56.1	
	comp=Z,696nm,21.2s,baz=164,slow=33						
DAV				Sn	Sg	10 08 57.9	+2.1
	1µm,0.3s,baz=73,slow=22,SNR=8.0						
DAV	Davao City (W)	1.15	205	Pn	Pn	10 08 39.3	0.0
DAV				Sn	Sg	10 08 57.1	+1.3
MATI	Mati	1.18	171	⇑*e*P	Pn	10 08 38.6	-1.1
MATI				*e*S	Sb	10 08 53.9	-1.0
CGP	Cagayan de Oro	1.41	284	⇑*i*P	Pb	10 08 43.9	-0.1
CGP				*i* S	Sg	10 09 05.3	+1.3
KCP	Kidapawan	1.47	222	⇓*i*P	Pn	10 08 44.3	+0.4
KCP				*i* S	Sn	10 09 02.2	-0.3
GLSP	General Luna,	1.66	2	⇓*e*P	Pb	10 08 48.5	+0.2
GLSP				*e*S	Sg	10 09 13.2	+1.3
SCPH	Surigao	1.75	341	⇑*e*P	Pb	10 08 49.9	0.0
SCPH				*e*S	Sg	10 09 14.6	-0.4
CTBH	Cotabato--PC H	2.02	244	⇑*i*P	Pn	10 08 52.5	+1.2
CTBH				*i* S	Sb	10 09 19.4	+0.2
DDMP	Don Marcelino,	2.03	190	⇑*e*P	Pn	10 08 51.8	+0.3
DDMP				*e*S	Sb	10 09 19.8	+0.3
SKMP	Bagumbayan, Su	2.20	224	⇓*e*P	Pn	10 08 53.8	0.0
SKMP				*e*S	Sg	10 09 31.4	+2.2
GSPH	General Santos	2.31	209	⇓*i*P	Pn	10 08 56.3	+0.9
GSPH				*i* S	Sg	10 09 30.6	-2.0
MSLP	Maasin	2.34	329	⇓*e*P	Pn	10 08 56.5	+0.8
MSLP				*e*S	Sg	10 09 42.8	+9.1
PAGZ	Pagadian	2.68	264	⇓*e*P	Pb	10 09 04.7	-1.0
PAGZ				*e*S	Sg	10 09 41.5	-3.1
TBP	Tagbilaran	2.69	306	⇓*e*P	Pn	10 09 02.5	+1.9
TBP				*e*S	Sb	10 09 36.4	-2.1
DCPH	Dipolog City	2.73	280	⇓*i*P	Pb	10 09 03.9	-2.7
DCPH				*i* S	Sg	10 09 44.9	-1.5
LLP	Lapu-Lapu	3.02	317	⇑*e*P	Pn	10 09 08.2	+3.1
LLP				*e*S	Sb	10 09 50.6	+2.6
OCLP	Ormoc	3.26	334	⇑*e*P	Pb	10 09 14.4	-1.1
OCLP				*e*S	Sb	10 09 54.6	-0.2
CNOP	Candoni, Negro	3.80	297	⇑*e*P	Pb	10 09 22.4	-2.3
CNOP				*e*S	Sn	10 09 55.3	-4.6
SGSI	Sangihe	4.43	187	P	Pn	10 09 27.7	+3.1
	438nm,0.7s,4.4nm						
CNP	Catarman	4.58	342	⇓*e*P	Pn	10 09 31.9	+5.3
CNP				*e*S	Sb	10 10 27.0	-6.0
RCP	Roxas	4.74	316	⇓*i*P	Pn	10 09 31.9	+3.1
PVCP	Virac	5.76	341	⇑*e*P	Pn	10 09 45.7	+2.8
TNTI	Ternate	7.41	170	Pn	Pn	10 10 06.0	+0.6
TNTI	Ternate	7.41	170	P	Pn	10 10 07.9	+2.5
	126nm,0.8s,1µm						
GTOI	Gorontalo	8.03	202	P	Pn	10 10 13.3	-0.7
	63nm,0.6s,512nm						
MYLDM	Lahad Datu	8.07	249	Pn	Pn	10 10 14.8	+0.3
I39PW	PALAU INFRASON	8.41	93	I	I	11 05 20.0	
	baz=275,slow=308,SNR=1.1						
MRSI	Marisa	8.63	209	P	Pn	10 10 22.4	+0.1
	64nm,0.6s						
TOLI2	Tolitoli	8.73	217	Pn	Pn	10 10 23.4	-0.2
LBMI	Labuha	8.81	171	P	Pn	10 10 28.9	+4.2
	102nm,0.7s						
LUWI	Luwuk	9.68	200	P	Pn	10 10 26.7	-10
SANI	Sanana	10.10	180	P	Pn	10 10 41.3	-1.1
SIJI	Sorong	10.32	150	Pn	Pn	10 10 45.1	-0.3
	7.1nm,0.3s,baz=148,slow=22,SNR=16						
SIJI				Sn	Sn	10 12 37.5	-3.1
	1.5nm,0.3s,baz=204,slow=20,SNR=2.4						
SIJI				LR	LR	10 14 56.4	
	comp=Z,69nm,21.3s,baz=12,slow=39						
	22nm,0.5s						
NLAI	Namlea	11.32	175	P	Pn	10 11 01.4	+2.2
	49nm,0.6s,3µm						
FAKI	Fak Fak	12.57	150	Pn	Pn	10 11 16.8	+0.6
KAPI	Kappang	14.49	206	LR	LR	10 17 21.7	
	comp=Z,120nm,19.6s,baz=34,slow=38						
YULB	Yu-li	15.87	344	Pn	Pn	10 11 58.7	-2.1
SSLB	Suanglung	16.34	343	Pn	Pn	10 12 04.2	-2.6
SAUI	Saumlaki	16.82	162	Pn	Pn	10 12 12.8	-0.1
SOEI	Soe	17.84	186	Pn	Pn	10 12 24.9	-0.9
SOEI				IAmb	IAmb	10 12 42.6	
	comp=Z,46nm,1.3s						
JOW	Kunigami	18.73	6	P	P	10 12 35.9	-0.1
	comp=Z,1.0nm,0.3s,baz=175,slow=12,SNR=2.3						
	comp=Z,8.2nm,0.6s						
MTN	Manton Dam	21.42	166	P	P	10 13 05.8	+0.5
MTN				IAmb	IAmb	10 13 10.8	
	comp=Z,19nm,0.6s						
JSU	Suzuyama	23.63	9	P	P	10 13 27.2	-1.1
JSU				IAmb	IAmb	10 13 53.8	
	comp=Z,16nm,1.1s						
KNRA	Kununurra	23.79	174	P	P	10 13 29.7	-0.3
KNRA				IAmb	IAmb	10 13 37.0	
	comp=Z,21nm,0.7s						
NJ2	Nanjing	24.75	345	*e*P	P	10 13 41.0	+2.3
NJ2				pP	pP	10 13 44.5	-0.2
NJ2				sP	sP	10 13 45.5	-1.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,150nm,3.5s						
JNU	Nakatsue	25.28	9	P	P	10 13 42.1	-1.5
	comp=Z,7.9nm,0.9s,baz=181,slow=3.5,SNR=4.3						
JNU				LR	LR	10 24 43.9	
	comp=Z,18nm,19.2s,baz=169,slow=39						
	comp=Z,7.9nm,0.9s						
FITZ	Fitzroy Crossi	26.05	181	P	P	10 13 50.0	-0.6
PMG	Port Moresby	27.28	129	P	P	10 14 01.3	-0.5
PMG				IAmb	IAmb	10 14 08.6	
	comp=Z,12nm,0.8s						
CMAR	Chiang Mai Arr	28.30	294	P	P	10 14 13.3	+2.4
	comp=Z,0.4nm,0.3s,baz=119,slow=7.3,SNR=1.4						
	comp=Z,0.4nm,0.3s						
WB0	Warramunga Arr	28.89	164	P	P	10 14 14.6	-1.5
INU	Inuyama	28.90	19	P	P	10 14 15.0	-1.0
WRAB	Tennant Creek	29.04	164	P	P	10 14 16.0	-1.4
WRAB				IAmb	IAmb	10 14 28.5	
	comp=Z,15nm,1.5s						
WRA	Warramunga Arr	29.04	164	P	P	10 14 16.1	-1.3
	comp=Z,0.9nm,0.6s,baz=336,slow=10,SNR=17						
	comp=Z,0.9nm,0.6s						
WRA	Warramunga Arr	29.04	164	P	P	10 14 17.1	-0.4
WB2	Warramunga Arr	29.05	164	P	P	10 14 16.8	-0.7
WB2				IAmb	IAmb	10 14 26.6	
	comp=Z,18nm,1.4s						

KSRS	Korea Array	29.25	3	P	P	10 14 19.7	+0.5
	comp=Z,0.7nm,0.7s,baz=182,slow=10,SNR=2.6						
KSRS				LR	LR	10 26 46.1	
	comp=Z,24nm,20.2s,baz=185,slow=38						
	comp=Z,0.7nm,0.7s						
KS19	Wonju Array Si	29.30	3	P	P	10 14 19.1	-0.4
KS19				IAmb	IAmb	10 14 37.9	
	comp=Z,12nm,1.2s						
PZH	PanZhiHua	29.46	311	P	P	10 14 23.5	+2.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,110nm,5.2s						
MBWA	Marble Bar	29.75	192	P	P	10 14 23.3	-0.4
PSA00	Pilbara Seismi	30.13	192	P	P	10 14 26.6	-0.4
PSA00				IAmb	IAmb	10 14 45.1	
	comp=Z,20nm,1.2s						
XAN	Xi'an	30.26	331	*e*P	P	10 14 33.8	+5.6
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MJAR	Matsushiro Arr	30.38	20	P	P	10 14 29.0	-0.2
	comp=Z,0.8nm,0.6s,baz=195,slow=8.7,SNR=2.2						
MJAR				LR	LR	10 24 08.2	
	comp=Z,46nm,20.6s,baz=188,slow=31						
	comp=Z,0.8nm,0.6s						
TNCH	TengChong	31.20	306	P	P	10 14 40.5	+3.7
TNCH				pmax	pmax		
	comp=Z,360nm,3.7s						
JMM	Marumori	32.47	22	P	P	10 14 47.5	-0.1
AS31	Alice Springs	32.50	167	P	P	10 14 46.4	-1.5
ASAR	Alice Springs	32.50	167	P	P	10 14 47.5	-0.5
	comp=Z,1.4nm,0.4s,baz=346,slow=6.8,SNR=21						
ASAR				PcP	PcP	10 17 36.5	+1.7
	comp=Z,0.5nm,0.7s,baz=348,slow=2.3,SNR=2.3						
	comp=Z,1.4nm,0.4s						
ASAR	Alice Springs	32.50	167	P	P	10 14 46.6	-1.4
CTAO	Charters Tower	34.35	145	P	P	10 15 05.1	+1.0
HHC	Hu-ho-hao-te	35.06	341	*e*P	P	10 15 08.8	-1.4
HHC				pmax	pmax		
	comp=Z,26nm,0.9s						
HHC				pmax	pmax		
	comp=Z,350nm,5.8s						
USA0B	Ussuriysk Arra	36.31	7	P	P	10 15 19.9	-0.8
USA0B				IAmb	IAmb	10 15 22.6	
	comp=Z,6.8nm,0.8s						
USRK	Ussuriysk Ar.	36.31	7	P	P	10 15 20.7	-0.1
	comp=Z,5.8nm,0.7s,baz=195,slow=8.0,SNR=12						
	comp=Z,5.8nm,0.7s						
USRK	Ussuriysk Ar.	36.31	7	P	P	10 15 20.4	-0.3
HNR	Honiara	37.97	117	LR	LR	10 30 15.9	
	comp=Z,466nm,19.6s,baz=149,slow=35						
MORW	Morawa	38.21	194	P	P	10 15 38.0	+1.0
MORW				IAmb	IAmb	10 15 52.3	
	comp=Z,10nm,1.0s						
ASAJ	Asahikawa	38.65	19	P	P	10 15 40.8	+0.3
	comp=Z,2.9nm,0.9s,baz=210,slow=5.1,SNR=2.1						
ASAJ				LR	LR	10 29 11.0	
	comp=Z,34nm,21.6s,baz=189,slow=32						
	comp=Z,2.9nm,0.9s						
JKA	Kamikawa-asahi	38.65	19	P	P	10 15 40.8	+0.3
FORT	Forrest	38.72	177	P	P	10 15 41.7	+0.5
WAKE	Wake Island	40.85	70	P	P	10 15 57.7	-1.5
BBOO	Buckleboo	41.79	167	P	P	10 16 07.2	+0.5
STKA	Stephens Creek	42.44	160	P	P	10 16 10.4	-1.6
	comp=Z,0.9nm,0.3s,baz=324,slow=9.8,SNR=4.6						
	comp=Z,0.9nm,0.3s						
STKA	Stephens Creek	42.44	160	P	P	10 16 12.0	0.0
SONM	Songino Array	42.97	341	P	P	10 16 17.0	+0.7
	comp=Z,0.3nm,0.5s,baz=147,slow=8.6,SNR=2.3						
SONM				LR	LR	10 36 35.4	
	comp=Z,60nm,18.6s,baz=328,slow=40						
	comp=Z,0.3nm,0.5s						
WMQ	Urumqi	48.81	323	*e*P	P	10 17 04.3	+1.9
DZM	Mont Dzumac	49.66	128	P	P	10 17 08.6	-0.7
DZM				IAmb	IAmb	10 17 30.6	
	comp=Z,6.9nm,0.9s						
MK31	Makanchi Array	53.63	324	P	P	10 17 37.8	-0.7
MKAR	Makanchi Array	53.63	324	P	P	10 17 40.1	+1.6
	comp=Z,1.0nm,0.6s,baz=125,slow=8.1,SNR=14						
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	53.63	324	P	P	10 17 38.0	-0.5
KSH	Kashi	54.54	313	P	P	10 17 49.5	+4.1
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KDJ	Kajisay	54.70	317	P	P	10 17 45.8	-0.7
KDJ				IAmb	IAmb	10 18 02.4	
	comp=Z,4.5nm,0.9s						
NIL	Nilore	54.80	306	P	P	10 17 47.2	0.0
FUNA	Funafuti	55.45	106	P	P	10 17 51.9	-0.3
ZAA0	Zalesovo Array	56.42	332	P	P	10 17 58.8	+0.4
ZALV	Zalesovo Beam	56.42	332	P	P	10 17 59.3	+0.8
	comp=Z,0.5nm,0.5s,baz=135,slow=5.1,SNR=2.4						
	comp=Z,0.5nm,0.5s						
ZALV	Zalesovo Beam	56.42	332	P	P	10 17 58.9	+0.4
AAK	Ala-Archa	56.73	316	LR	LR	10 44 10.1	
	comp=Z,77nm,22.0s,baz=100,slow=38						
MSVF	Nonsavu	57.40	117	P	P	10 18 05.0	-1.0
MSVF				IAmb	IAmb	10 18 14.6	
	comp=Z,8.8nm,0.9s						
KURK	Kurchatov	57.73	326	P	P	10 18 07.3	-0.5
KURK				IAmb	IAmb	10 18 20.7	
	comp=Z,6.1nm,1.1s						
KURBB	Kurchatov Arra	57.74	326	P	P	10 18 07.4	-0.4
	comp=Z,0.9nm,0.4s,baz=124,slow=6.6,SNR=8.0						
	comp=Z,0.9nm,0.4s						
GAR	Garm	58.53	311	P	P	10 18 13.4	-0.5
GAR				IAmb	IAmb	10 18 20.9	
	comp=Z,8.5nm,1.0s						
CHGR	Chuyangaron	59.31	310	P	P	10 18 17.5	-1.7
CHGR				IAmb	IAmb	10 18 32.4	
	comp=Z,6.0nm,0.7s						
KK31	Karatay Array	59.63	316	P	P	10 18 21.6	+0.3
KK31				IAmb	IAmb	10 18 27.9	
	comp=Z,6.8nm,1.4s						
KKAR	Karatay Array	59.63	316	P	P	10 18 20.8	-0.4
BVAR	Borovoye Array	63.33	326	P	P	10 18 46.0	0.0
	comp=Z,2.6nm,0.8s,baz=117,slow=8.3,SNR=10						
BVAR				LR	LR	10 46 08.0	
	comp=Z,30nm,18.8s,baz=75,slow=36						
	comp=Z,2.6nm,0.8s						
BRVK	Borovoye	63.40	326	P	P	10 18 46.3	-0.2
BRVK				IAmb	IAmb	10 19 01.5	
	comp=Z,3.7nm,0.8s						
TIXI	Tiksi	63.50	1	P	P	10 18 45.9	-0.8
	comp=Z,1.1nm,0.5s,baz=270,slow=23,SNR=4.9						
TIXI				LR	LR	10 48 18.5	
	comp=Z,46nm,18.9s,baz=183,slow=38						
	comp=Z,1.1nm,0.5s						
TIXI	Tiksi	63.50	1	P	P	10 18 47.1	+0.4
TIXI				IAmb	IAmb	10 18 57.7	
	comp=Z,2.4nm,0.8s						
ADK	Adak	63.76	36	P	P	10 18 48.0	-0.8
MRNZ	Matariki Terra	65.25	143	P	P	10 19 00.5	+1.7
AFI	Afiamalu	65.44	109	P	P	10 19 00.6	+0.1
BKZ	Black Stump Fm	66.28	139	P	P	10 19 06.3	+0.8
BKZ				IAmb	IAmb	10 19 09.9	
	comp=Z,7.2nm,0.9s						
RTZ	Ruatahuna	66.30	138	P	P	10 19 06.3	+0.6
ABKAR	Akbulak array	68.38	320	P	P	10 19 18.8	+0.2
ARU	Arti	70.91	327	LR	LR	10 54 03.1	
	comp=Z,32nm,18.5s,baz=139,slow=39						
O18K	Koktuh Hills	77.36	30	P	P	10 20 12.1	+0.4
N19K	Bonanza Creek	77.81	30	P	P	10 20 14.9	+0.6
N19K				IAmb	IAmb	10 20 21.2	
	comp=Z,16nm,1.5s						
A21K	Barrow	78.30	19	P	P	10 20 17.4	+0.7
A21K				IAmb	IAmb	10 20 30.1	
	comp=Z,5.2nm,1.1s						
M20K	Styx River	78.55	28	P	P	10 20 18.7	+0.3
M20K				IAmb	IAmb	10 20 19.4	
	comp=Z,7.8nm,1.5s						
IMAR	Indian Mountai	78.63	24	P	P	10 20 19.2	+0.5
CAST	Castle Rocks	79.14	27	P	P	10 20 21.6	+0.1
I21K	Tanana	79.30	25	P	P	10 20 22.8	+0.5
SKT	Skwentna	79.31	28	P	P	10 20 23.4	+0.9
SKT				IAmb	IAmb	10 20 41.4	
	comp=Z,7.1nm,1.4s						
GEVA	Gevas	79.56	307	P	P	10 20 24.2	-0.3
SUA	Susitna One	79.66	29	P	P	10 20 24.6	+0.1
SUA				IAmb	IAmb	10 20 42.7	
	comp=Z,8.5nm,1.3s						
BPAW	Bear Paw Mtn.	79.66	26	P	P	10 20 25.3	+1.0
BPAW				IAmb	IAmb	10 20 30.6	
	comp=Z,6.4nm,1.4s						
RC01	Rabbit Creek A	80.14	29	P	P	10 20 27.1	+0.1
RC01				IAmb	IAmb	10 20 53.6	
	comp=Z,16nm,1.4s						
I23K	Minto, Yukon-K	80.40	25	P	P	10 20 28.6	+0.4
PMR	Palmer	80.44	29	P	P	10 20 28.4	-0.1
PMR				IAmb	IAmb	10 20 29.8	
	comp=Z,5.7nm,1.3s						
MCK	McKinley	80.56	27	P	P	10 20 29.3	+0.1
MCK				IAmb	IAmb	10 20 40.6	
	comp=Z,4.9nm,1.0s						
SML	Sawmill	80.82	29	P	P	10 20 30.5	-0.2
SML				IAmb	IAmb	10 20 36.4	
	comp=Z,9.3nm,1.3s						
CCB	Clear Creek Bu	81.06	26	P	P	10 20 32.0	+0.2
SCM	Sheep Creek Mo	81.30	29	P	P	10 20 33.3	0.0
IL31		81.45	26	P	P	10 20 34.8	+0.9
ILAR	Eielson Array	81.45	26	P	P	10 20 33.6	-0.3
	comp=Z,0.4nm,0.7s,baz=237,slow=5.4,SNR=4.2						
	comp=Z,0.4nm,0.7s						
ILAR	Eielson Array	81.45	26	P	P	10 20 34.1	+0.2
BMAR	Burnt Mountain	82.31	23	P	P	10 20 37.7	-0.8
RIDG	Independent Ri	82.38	27	P	P	10 20 38.7	-0.2
RIDG				IAmb	IAmb	10 20 48.3	
	comp=Z,7.2nm,1.2s						
K27K	Chicken	83.58	26	P	P	10 20 46.0	+0.9
K27K				IAmb	IAmb	10 20 55.0	
	comp=Z,9.9nm,1.4s						
L27K	Beaver Creek,	83.78	27	P	P	10 20 46.8	+0.7
L27K				IAmb	IAmb	10 20 53.1	
	comp=Z,3.2nm,1.2s						
BCAR	Beaver Creek A	83.80	27	P	P	10 20 46.3	+0.1
EGAK	Eagle	83.90	25	P	P	10 20 45.6	-1.0
ARCES	ARCESS Array B	86.14	340	P	P	10 20 58.8	+1.0
	comp=Z,26nm,1.3s,baz=97,slow=6.5,SNR=2.5						
FINES	FINESS Array B	87.69	332	P	P	10 21 05.6	+0.1
	comp=Z,1.0nm,0.5s,baz=68,slow=5.0,SNR=7.5						
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	87.69	332	P	P	10 21 06.0	+0.5
A36M	Sachs Harbour	88.02	17	P	P	10 21 08.3	+1.4
A36M				IAmb	IAmb	10 21 19.8	
	comp=Z,3.5nm,0.8s						
AKASG	Malin Array Be	88.10	321	P	P	10 21 09.8	+2.1
	comp=Z,0.2nm,0.3s,baz=60,slow=4.6,SNR=1.5						
	comp=Z,0.2nm,0.3s						
HFS	Hagfors	93.86	332	LR	LR	11 06 21.1	
	comp=Z,36nm,18.8s,baz=21,slow=37						
NOA	NORSAR Array B	94.59	334	LR	LR	11 06 54.9	
	comp=Z,22nm,21.9s,baz=60,slow=37						
YKA	Yellowknife Ar	95.79	24	P	P	10 21 42.6	-0.4
	comp=Z,0.4nm,0.8s,baz=300,slow=4.4,SNR=7.1						
	comp=Z,0.4nm,0.8s						
TXAR	Lajitas Array	119.36	50	PKP	PKPdf	10 27 06.9	-0.4
	baz=245,slow=18,SNR=1.8						
TORD	Torodi Ar. Bea	120.86	291	PKP	PKPdf	10 27 09.7	-0.6
	comp=Z,112nm,0.6s,baz=37,slow=2.7,SNR=6.5						
PLCA	Paso Flores	144.30	158	PKP	PKPdf	10 27 53.7	+0.1
	comp=Z,0.6nm,0.9s,baz=95,slow=23,SNR=1.3						

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*REN **28** 10:19:31.8±2.0, 39°.32N±0°.04×117°.34W±0°.04, h11^{km}±6^{km}, ML2.5/17, ML2.5/60(NEIC), Error ellipse: s-maj=5.1km s-min=4.3km az=162.0*

NEIC 28 10:19:31.7±2.2**, 39°.30N**±0°.03×**117°.28W**±0°.04**, h6**^{km}±6^{km}**, Error ellipse: s-maj=4.8km s-min=3.9km az=105.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Q09A	Carvers	0.48	170		Pb	10 19 42.4	-0.2
Q09A					Sb	10 19 49.7	-0.1
Q09A				IAML		10 19 50.0	
	comp=N,392nm,0.7s						
Q09A				IAML		10 19 50.5	
	comp=E,471nm,0.7s						
KVN	Kaiserville	0.68	249		Pg	10 19 44.5	-0.3
KVN				IAML		10 19 57.9	
	comp=E,142nm,0.4s						
NV11	Mina Array Sit	1.10	218		Pg	10 19 52.5	-0.3
BMN	Battle Mountai	1.13	2		Pg	10 19 53.3	0.0
BMN				IAML		10 20 12.2	
	comp=E,61nm,0.3s						
TPH	Tonopah	1.23	178		Pn	10 19 55.6	0.0
TPH					Sn	10 20 12.1	-0.4
LHV	Little Huntoon	1.42	223		Pn	10 19 57.6	-0.3
LHV					Sb	10 20 16.7	-0.1
LHV				IAML		10 20 19.2	
	comp=E,67nm,0.3s						
LHV				IAML		10 20 21.9	
	comp=N,74nm,0.4s						
YERR	Yerington	1.56	259		Pn	10 19 58.5	-1.5
YERR					Sn	10 20 20.3	-0.3
YERR				IAML		10 20 21.1	
	comp=N,52nm,0.6s						
YERR				IAML		10 20 24.0	
	comp=E,68nm,0.4s						
MZP	Montezuma Peak	1.60	183		Pn	10 20 00.3	-0.4
MZP				IAML		10 20 25.0	
	comp=E,40nm,0.3s						
MZP				IAML		10 20 25.8	
	comp=N,56nm,0.6s						
PAHR	Pah Rah Range	1.67	285		Pn	10 20 00.4	-1.2
WAKR	Walker	1.86	245		Pn	10 20 02.8	-1.5
WAKR				IAML		10 20 31.1	
	comp=N,20nm,0.3s						
WAKR				IAML		10 20 36.6	
	comp=E,23nm,1.0s						
MLNR	Milner Canyon	1.90	206		Pn	10 20 05.3	+0.6
Q12A	Willow Creek R	1.93	97		Pb	10 20 06.5	-0.8
DSP	Deep Springs	2.00	196		Pn	10 20 05.9	-0.1
S11A	Rachel	2.05	143		Pn	10 20 07.8	+1.0
WVA	Winnemucca Val	2.06	289		Pn	10 20 06.9	-0.1
WVA					Sn	10 20 32.9	-0.2
LCH	Last Change Ra	2.09	188		Pn	10 20 08.1	+0.8
LCH				IAML		10 20 40.7	
	comp=E,42nm,0.5s						
LCH				IAML		10 20 43.0	
	comp=N,24nm,0.5s						
PEAR	Peavine Mounta	2.10	279		Pn	10 20 07.1	-0.4
PEAR					Sn	10 20 33.9	-0.1
ELK	Elko	2.13	47	Pn	Pn	10 20 08.7	+0.7
MPK	Martis Peak	2.13	271		Pn	10 20 06.7	-1.4
MPK				IAML		10 20 39.2	
	comp=N,24nm,0.4s						
MPK				IAML		10 20 39.3	
	comp=E,31nm,0.6s						
MDPB	Devils Postpil	2.19	221	Pn	Pn	10 20 08.4	-0.3
MDPB				IAML		10 20 40.9	
	comp=E,13nm,0.8s						
EMB	Emerald Bay	2.22	262	Pn	Pn	10 20 08.3	-0.9
EMB				IAML		10 20 23.8	
	comp=N,16nm,2.5s						
GRAC	Grapevine Rang	2.31	182	Pn	Pn	10 20 09.8	-0.4
SPR3	Spring Creek 3	2.31	97	Pn	Pn	10 20 11.2	+0.6
SPR3				IAML		10 20 49.1	
	comp=N,21nm,0.5s						
SPR3				IAML		10 20 51.3	
	comp=E,22nm,0.6s						
TPNV	Topopah Spring	2.49	161	Pn	Pn	10 20 13.6	+0.8
CPY	CP-1	2.56	157		Pn	10 20 15.2	+1.4
WCT	Wildcat Mounta	2.56	168	Pn	Pn	10 20 13.7	-0.1
WCT				IAML		10 20 55.0	
	comp=E,22nm,0.8s						
WCT				IAML		10 20 56.5	
	comp=N,24nm,0.5s						
PRN	Pahroc Range	2.58	136		Pn	10 20 15.5	+1.4
CMB	Columbia Colle	2.74	243	Pn	Pn	10 20 15.8	-0.4
GWY	Greenwater Val	3.15	171	Pn	Pn	10 20 19.8	-2.1
SHPR	Sheep Range	3.26	148	Pn	Pn	10 20 23.7	+0.2
QSM	Queen of Sheba	3.35	174	Pn	Pn	10 20 23.4	-1.1
MOD	Modoc Plateau	3.47	319	Pn	Pn	10 20 24.7	-1.6
MOD				IAML		10 21 23.3	
	comp=E,16nm,4.0s						
MOD				IAML		10 21 26.1	
	comp=N,14nm,3.5s						
CCUT	Cedar City	3.54	118	Pn	Pn	10 20 27.3	-0.1
BGU	Big Grassy Mou	3.64	62	Pn	Pn	10 20 28.9	+0.2
SZCU	Shurtz Canyon	3.71	116	Pn	Pn	10 20 30.8	+1.1

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*IDC **28** 10:25:39.2±1.3, 33°.59N×135°.33E, h0^{km}, mb3.4/3, mbtmp3.3/6, ML2.8/3, MS2.7/1, Error ellipse: s-maj=25.4km s-min=24.1km az=96.0*

*JMA **28** 10:25:40.8±0.0, 33°.7N±0°.1×135°.5E±0°.1, h12^{km}, MD4.0/20, MV3.9/20, SOUTHERN WAKAYAMA PREF*

JMA Felt II J1 at SOUTHERN WAKAYAMA PREF .

*NIED **28** 10:25:40.8, 33°.70N×135°.46E, h12^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.21; M$_{\theta\theta}$2.61; M$_{\phi\phi}$-2.40; M$_{r\theta}$-0.73; M$_{\theta\phi}$0.46; M$_{\phi r}$1.66; Fault plane solution: M$_0$3.08000×10^{14} NP1: φ$_s$128.00000°, δ80.00000°, λ-31.00000°. NP2: φ$_s$224.00000°, δ60.00000°, λ-168.00000°.*

ISC 28 10:25:40.2±0.8**, 33°.68N**±0°.05×**135°.41E**±0°.05**, h10**^{km}**, n20, σ1^{s}.24**/14**, mb3.6**/3**, 2D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWM	Minabe	0.17	345	P	Pg	10 25 44.8	+0.9
JWM				S	Sg	10 25 47.6	+1.1
JWM	Minabe	0.17	345	A	A	10 25 44.8	
	comp=E,58nm,0.3s,comp=E,37nm,0.3s						
JTNC	Tanabenakahech	0.22	51	⇓P	Pg	10 25 44.8	+0.1
JTNC				⇓S	Sg	10 25 47.6	-0.2
JTNC	Tanabenakahech	0.22	51	A	A	10 25 44.8	
	comp=E,75nm,0.3s,comp=E,32nm,0.7s						
JWKM	Wakayamakushim	0.37	128	*e*P	Pg	10 25 47.9	+0.3
JWKM				S	Sg	10 25 53.3	+0.8
JWKM	Wakayamakushim	0.37	128	A	A	10 25 47.9	
	comp=E,18nm,1.0s,comp=E,18nm,1.3s						
JNTK	Naratenkawa	0.71	34	A	A	10 25 53.6	
	comp=E,19nm,0.2s,comp=E,8.0nm,0.3s						
MJAR	Matsushiro Arr	3.66	38	Pn	Pn	10 26 37.8	+0.9
	0.2nm,0.3s,baz=228,slow=13,SNR=9.1						
MJAR				Sn	Sb	10 27 26.9	-2.6
	0.7nm,0.3s,baz=150,slow=12,SNR=5.2						
	1.9nm,0.5s						
JNU	Nakatsue	3.83	263	Pn	Pn	10 26 39.3	+0.1
	1.4nm,0.3s,baz=11,slow=5.3,SNR=11						
JNU				Sn	Sn	10 27 22.5	-1.8
	1.8nm,0.3s,baz=215,slow=16,SNR=1.9						
	3.4nm,0.3s						
KSRS	Korea Array	7.17	304	Pn	Pn	10 27 24.3	-0.7
	0.1nm,0.3s,baz=128,slow=15,SNR=1.8						
	0.4nm,0.5s						
DAV	Davao City (W)	28.00	201	LR	LR	10 43 40.6	
	comp=Z,13nm,18.9s,baz=343,slow=39						
H11N2	WAKE ISLAND Hy	31.23	108	T	T	11 04 29.5	
	baz=303,slow=75						
H11N1	WAKE ISLAND Hy	31.24	108	T	T	11 04 29.8	
	baz=303,slow=75						
H11N3	WAKE ISLAND Hy	31.25	108	T	T	11 04 31.2	
	baz=303,slow=75						
H11S3	WAKE ISLAND Hy	31.75	111	T	T	11 05 03.7	
	baz=305,slow=75						
H11S1	WAKE ISLAND Hy	31.75	111	T	T	11 05 02.8	
	baz=305,slow=75						
H11S2	WAKE ISLAND Hy	31.77	111	T	T	11 05 08.7	
	baz=305,slow=75						
MKAR	Makanchi Array	41.85	305	P	P	10 33 31.5	+1.3
	0.2nm,0.6s,baz=93,slow=8.2,SNR=2.3						
	0.2nm,0.6s						
WRA	Warramunga Arr	53.33	181	P	P	10 34 58.9	-0.8
	0.8nm,0.8s,baz=354,slow=7.7,SNR=8.7						
	0.8nm,0.8s						
ASAR	Alice Springs	57.05	182	P	P	10 35 26.9	+0.4
	0.4nm,0.7s,baz=16,slow=11,SNR=6.5						
	0.4nm,0.7s						

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*JMA **28** 10:28:25.2±0.1, 36°.0N±0°.3×140°.1E±0°.3, h61^{km}, MV3.2/37, SOUTHERN IBARAKI PREF*

JMA Felt I J1 at SOUTHERN IBARAKI PREF .

*IDC **28** 10:28:30.0±2.3, 35°.29N×138°.25E, h68^{km}±26^{km}, mb3.2/6, mbtmp3.5/6, Error ellipse: s-maj=40.7km s-min=22.4km az=68.0*

ISC 28 10:28:24.1±1.0**, 36°.02N**±0°.05×**140°.08E**±0°.06**, h71**^{km}±8^{km}**, n18, σ1^{s}.09**/24**, mb3.5**/6**, 10D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.23	23	*i* P	Pn	10 28 35.0	0.0
JYT				S	Sn	10 28 42.2	-0.7
JIHU	Itakohorinouch	0.36	99	P	Pn	10 28 36.4	+0.6
JAG	Ashikaga	0.65	309	⇓*i*P	Pn	10 28 39.2	+0.6
JAG				⇓S	Sn	10 28 49.4	+0.1
JRY	Ryogami san	0.96	270	⇓*i*P	Pn	10 28 42.9	+0.7
JRY				⇓S	Sn	10 28 56.4	+0.7
JKT	Katashina	1.00	318	⇓*i*P	Pn	10 28 43.4	+0.6
JKT				⇓S	Sn	10 28 57.5	+0.8
JOD2	Odawara 2	1.11	227	⇓*i*P	Pn	10 28 44.4	+0.3
JOD2				⇓S	Sn	10 28 58.1	-0.8
BSO3	Boso 3	1.27	164	P	Pn	10 28 47.0	+1.2
JYN	Shimob	1.36	248	⇓*i*P	Pn	10 28 48.4	+1.1
JYN				⇓S	Sn	10 29 05.7	+0.9
JIM2	Oshima 3	1.41	202	S	Sn	10 29 04.7	-1.1
JFNN	Fujinakano	1.41	235	P	Pn	10 28 48.6	+0.7
JFY	Yanaizu	1.42	348	P	Pn	10 28 49.2	+1.2
MJAR	Matsushiro Arr	1.60	289	P	Pn	10 28 51.2	+0.7
	42nm,0.3s,baz=22,slow=24,SNR=44						
MJAR				S	Sn	10 29 07.4	-3.0
	7.4nm,0.3s,baz=297,slow=28,SNR=4.1						
PETK	Petropavlovsk-	21.10	30	P	P	10 33 23.8	+21
	0.5nm,0.4s,baz=195,slow=16,SNR=1.7						
	0.5nm,0.4s						
SONM	Songino Array	27.49	306	P	P	10 34 02.2	-1.6
	0.3nm,0.5s,baz=113,slow=11,SNR=2.6						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	41.82	313	P	P	10 36 06.7	+0.1
	0.7nm,0.6s,baz=97,slow=10,SNR=1.6						
	0.7nm,0.6s						
MKAR	Makanchi Array	43.76	303	P	P	10 36 23.1	+0.6
	0.7nm,0.7s,baz=94,slow=9.1,SNR=5.1						
	0.7nm,0.7s						
WRA	Warramunga Arr	55.92	187	P	P	10 37 54.4	-0.5
	0.4nm,0.8s,baz=0.6,slow=7.6,SNR=8.8						
	0.4nm,0.8s						
ASAR	Alice Springs	59.65	187	P	P	10 38 21.4	+0.4
	0.2nm,0.7s,baz=16,slow=9.8,SNR=1.5						
	0.2nm,0.7s						

WEL 28 10:36:11.1±0.4**, 43°S**±3°×**17°3E**±°**, h5**^{km}**, M1.8**/2**, ML2.2**/10**, MLv1.8**/2**, Error ellipse: s-maj=0.0km s-min=0.0km az=133.5, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	Greta Valley S	0.32	184	P	Pg	10 36 18.1	+0.7
GVZ				S	Sb	10 36 23.3	-1.6
KHZ	Kahutara	0.42	57	P	Pg	10 36 19.3	+0.1
KHZ				S	Sg	10 36 25.7	+1.0
LTZ	Lake Taylor	0.60	257	P	Pg	10 36 22.6	0.0
LTZ				S	Sg	10 36 31.5	+1.1
AMCZ	Amberley	0.61	210	P	Pb	10 36 23.6	-0.7
THZ	Tophouse	0.89	352	P	Pg	10 36 27.7	-0.5
THZ				S	Sg	10 36 39.2	-0.6
OXZ	Oxford	1.01	228	P	Pg	10 36 30.1	-0.4
OXZ				S	Sb	10 36 44.2	-0.5
MQZ	McQueen's Vall	1.10	196	P	Pg	10 36 30.6	-1.6
MQZ				S	Sg	10 36 45.3	-1.1
BSWZ	Blackbirch Sta	1.11	33	P	Pg	10 36 32.3	-0.1
INZ	Inchbonnie	1.20	266	P	Pg	10 36 33.4	-0.6
MRNZ	Matariki Terra	1.27	350	P	Pg	10 36 34.9	-0.6
DSZ	Denniston Nort	1.30	314	P	Pn	10 36 35.5	-0.5
DSZ				S	Sn	10 36 53.7	0.0
TUWZ	Tuamarina	1.38	29	P	Pn	10 36 36.6	-0.4
MHCZ	Mount Hutt	1.41	231	P	Pn	10 36 35.6	-1.9
NNZ	Nelson	1.45	10	P	Pn	10 36 38.1	+0.1
QRZ	Quartz Range	1.86	347	P	Pn	10 36 44.2	+0.5
CAW	Cannon Point	2.15	45	P	Pn	10 36 45.9	-1.7
LREZ	Lake Rotokare	3.34	18	P	Pn	10 37 04.2	+0.2

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*IDC **28** 10:59:15.7±1.6, 33°.44N×90°.78E, h0^{km}, mb3.6/4, mbtmp3.5/8, ML3.8/3, MS3.3/4, Error ellipse: s-maj=73.5km s-min=20.0km az=68.0*

*NEIC **28** 10:59:21.7±1.5, 33°.64N±0°.09×91°.0E±0°.1, h30^{km}±6^{km}, mb4.2/9, Error ellipse: s-maj=15.6km s-min=11.9km az=60.0*

ISC 28 10:59:21.7±0.6**, 33°.59N**±0°.08×**90°.9E**±0°.1**, h35**^{km}**, n32, σ1^{s}.11**/28**, mb3.9**/6**, MS3.5**/3**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	3.88	177	Pn	Pn	11 00 19.7	+0.5
MND	Mandalay	12.41	157	Pn	Pn	11 02 15.8	0.0
TARG	Taragay, Kyrgy	13.18	312		Pn	11 02 25.4	-1.3
MK31	Makanchi Array	14.73	336		Pn	11 02 46.8	-0.7

MKAR	Makanchi Array	14.73	336	Pn	Pn	11 02 44.4	-3.1
	0.1nm,0.3s,baz=195,slow=13,SNR=4.3						
	0.5nm,0.7s						
MKAR	Makanchi Array	14.73	336	Pn	Pn	11 02 47.4	0.0
AAK	Ala-Archa	15.75	310	LR	LR	11 10 03.8	
	comp=Z,54nm,19.1s,baz=150,slow=41						
CMAR	Chiang Mai Arr	16.69	153	Pn	Pn	11 03 11.7	-1.1
	0.5nm,0.3s,baz=331,slow=11,SNR=5.3						
	0.6nm,0.3s						
CMAR	Chiang Mai Arr	16.69	153		P	11 03 14.4	-0.5
PHRA	Phrae	17.18	149	Pn	Pn	11 03 19.4	+0.4
PHRA				IAmb	IAmb	11 03 23.2	
	comp=Z,42nm,1.2s						
KBL	Kabul	18.15	279		P	11 03 32.6	+1.4
KBL				IAmb	IAmb	11 03 32.9	
	comp=Z,4.2nm,0.5s						
SONM	Songino Array	18.39	35	P	Pn	11 03 34.5	+0.6
	comp=Z,0.2nm,0.3s,baz=216,slow=12,SNR=2.5						
	comp=Z,0.3nm,0.3s						
KKAR	Karatay Array	18.58	307	P	Pn	11 03 35.6	-0.5
KURBB	Kurchatov Arra	19.30	336	P	P	11 03 42.6	-0.8
	comp=Z,0.3nm,0.6s,baz=154,slow=8.7,SNR=2.1						
ZAA0	Zalesovo Array	20.81	350	P	P	11 03 59.1	-0.7
ZALV	Zalesovo Beam	20.81	350	P	P	11 04 00.5	+0.7
	comp=Z,2.5nm,0.6s,baz=167,slow=11,SNR=10.0						
	comp=Z,2.5nm,0.6s						
ZALV	Zalesovo Beam	20.81	350	P	P	11 04 00.9	+1.1
ABKAR	Akbulak array	27.76	314	P	P	11 05 05.3	-1.6
KS19	Wonju Array Si	30.19	72	P	P	11 05 29.7	+1.1
KSAR	Wonju Array Be	30.21	72	P	P	11 05 28.3	-0.5
KSRS	Korea Array	30.24	72	LR	LR	11 18 17.4	
	comp=Z,17nm,21.1s,baz=185,slow=38						
USA0B	Ussuriysk Arra	33.36	59	P	P	11 05 56.2	-0.2
USA0B				IAmb	IAmb	11 05 59.1	
	comp=Z,3.8nm,0.8s						
OBN	Obninsk	43.10	317	LR	LR	11 27 03.5	
	comp=Z,56nm,18.4s,baz=8.0,slow=39						
FINES	FINESS Array B	49.20	325	P	P	11 08 07.7	+1.6
NC602	NORSAR Array S	56.28	325	P	P	11 08 59.7	+1.4
NC602				IAmb	IAmb	11 09 17.2	
	comp=Z,2.3nm,0.8s						
EKA	Eskdalemuir Ar	65.30	321	LR	LR	11 42 14.4	
	comp=Z,58nm,18.6s,baz=355,slow=40						
WRA	Warramunga Arr	67.43	136	P	P	11 10 13.4	-0.5
	comp=Z,0.4nm,0.7s,baz=321,slow=6.0,SNR=4.8						
	comp=Z,0.4nm,0.7s						
IMAR	Indian Mountai	69.13	23	P	P	11 10 23.1	-0.8
ASAR	Alice Springs	70.11	138	P	P	11 10 29.7	-0.8
	comp=Z,0.6nm,0.6s,baz=327,slow=6.2,SNR=10						
	comp=Z,0.6nm,0.6s						
A36M	Sachs Harbour	71.72	11	P	P	11 10 40.5	+0.9
A36M				IAmb	IAmb	11 10 41.3	
	comp=Z,1.4nm,0.8s						
ILULI	Ilulissat	73.78	347	P	P	11 10 52.6	+0.7
YKA	Yellowknife Ar	82.07	12	P	P	11 11 37.8	-0.2
	comp=Z,0.2nm,0.8s,baz=332,slow=5.2,SNR=4.3						
	comp=Z,0.2nm,0.8s						

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*ANF **28** 11:03:26.2±0.2, 32.°95N×115.°54W, h15^{km}, ML2.9/17, Error ellipse: s-maj=1.9km s-min=1.4km az=151.0*

*NEIC **28** 11:03:27.3±1.8, 32.°94N±0.°01×115.°56W±0.°01, h20^{km}±2^{km}, Error ellipse: s-maj=1.5km s-min=1.5km az=202.0*

*PAS **28** 11:03:27.6±2.0, 32.°943N±0.°006×115.°54W±0.°01, h11^{km}±2^{km}, ML3.0/83, ML2.9/42(NEIC), Error ellipse: s-maj=1.6km s-min=0.6km az=66.0*

ISC 28 11:03:27.2±0.8**, 32.°94N**±0.°02×**115.°55W**±0.°01**, h18**^{km}±2^{km}**, n103,** σ**0**^{s}**83**/135**, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMPE	Imperial	0.04	191		Pg	11 03 29.6	-0.8
IMPE					Sg	11 03 31.7	-0.7
WEMD	Westmorland, C	0.10	346		Pg	11 03 30.7	-0.2
WEMD					Sg	11 03 33.8	+0.4
SNR	Schaffner Ranc	0.12	128		Pg	11 03 31.1	0.0
SNR					Sg	11 03 34.3	+0.7
DREC	Desert Rsrch C	0.16	146		Pg	11 03 31.9	+0.4
DREC					Sg	11 03 36.1	+1.7
COK2	Cook Ranch 2	0.17	240		Pg	11 03 32.0	+0.3
CLI2	Calipatria 2	0.18	353		Pg	11 03 32.3	+0.4
CLI2					Sg	11 03 36.6	+1.5
SWSC	Sam W. Stewart	0.21	272		Pb	11 03 32.1	-0.1
SWSC					Sb	11 03 35.2	-0.4
SWSC	Sam W. Stewart	0.21	272	P	Pb	11 03 32.1	-0.1
	baz=90,SNR=170						
SWSC				S	Sb	11 03 35.4	-0.2
	baz=90						
SUP	Superstition M	0.23	275		Pb	11 03 32.4	-0.3
SUP					Sb	11 03 36.2	-0.2
WESC	Westside Schoo	0.23	220		Pg	11 03 32.9	+0.3
WESC					Sg	11 03 37.1	+0.8
ERRC	Elmore Ranch	0.29	308		Pb	11 03 34.2	+0.4
ERRC					Sb	11 03 39.4	+1.1
UABX	UABC, Campus M	0.32	163		Pg	11 03 33.5	-0.5
UABX					Sb	11 03 40.9	+1.7
UABX				IAML		11 03 41.0	
	comp=N,3µm,0.4s						
SGL	Mount Signal	0.32	207		Pg	11 03 34.1	+0.1
CRR	Carrizo Plain	0.35	262		Sg	11 03 40.0	+0.3
COA	Coachella	0.37	101		Pg	11 03 35.1	+0.2
COA					Sb	11 03 41.4	+0.7
YUH	Yuha Desert	0.42	227	Pg	Pg	11 03 35.9	0.0
YUH	Yuha Desert	0.42	227		Sg	11 03 41.9	+0.1
BOMB	Bombay Beach	0.45	341		Pg	11 03 36.5	+0.1
BOMB					Sb	11 03 44.0	+1.0
RUN	Ruthven	0.48	86		Pg	11 03 36.6	-0.4
RUN					Sg	11 03 43.5	-0.1
SALN	Salton City	0.50	313		Pg	11 03 37.4	+0.2
SALN					Sb	11 03 45.2	+0.8
EMSC	East Mesa	0.52	112		Pg	11 03 37.6	0.0
IKP	In-Ko-Pah, Jac	0.55	239		Sg	11 03 45.7	+0.1
IKP	In-Ko-Pah, Jac	0.55	239	P	Pg	11 03 38.2	0.0
	baz=58,SNR=43						
IKP				S	Sg	11 03 45.6	0.0
	baz=58						
RMX	La Rumorosa	0.56	233		Sg	11 03 45.9	0.0
RMX	La Rumorosa	0.56	233	Pg	Pg	11 03 38.3	0.0
RMX	La Rumorosa	0.56	233	IAML		11 03 47.3	
	comp=N,493nm,0.2s						
RMX				IAML		11 03 47.9	
	comp=E,511nm,0.6s						
CPBX	Cerro Prieto	0.56	158	Pg	Pg	11 03 37.5	-0.7
GLA	Glamis	0.62	79		Pb	11 03 39.0	-0.6
GLA	Glamis	0.62	79	P	Pb	11 03 38.9	-0.6
	baz=260,SNR=68						
GLA				S	Sb	11 03 47.0	-0.9
	baz=260						
SLH	Sleepy Hollow	0.64	294		Pb	11 03 39.7	-0.2
BC3	Big Chuckawall	0.72	7		Pb	11 03 41.0	-0.3
BC3					Sb	11 03 50.8	-0.1
BC3	Big Chuckawall	0.72	7	P	Pb	11 03 41.0	-0.3
	baz=186,SNR=154						
BC3				S	Sb	11 03 50.8	-0.1
	baz=186						
MONP2	Monument Peak	0.73	267		Sb	11 03 51.3	-0.1
MONP2	Monument Peak	0.73	267	P	Pb	11 03 41.1	-0.4
	baz=86,SNR=74						
MONP2				S	Sb	11 03 51.3	-0.1
	baz=86						
GUVIX	Guadalupe Vict	0.75	147	Pg	Pb	11 03 41.9	+0.2
GUVIX					Sn	11 03 53.1	-0.6
HAY	Hayfield	0.78	352		Pb	11 03 41.6	-0.6
HAY					Sb	11 03 52.6	+0.1
CTW	Cottonwood Mou	0.79	340		Pb	11 03 42.0	-0.4
CTW					Sb	11 03 52.8	+0.1
BORC	Borrego Spring	0.80	295		Pb	11 03 41.8	-0.7
BORC					Sb	11 03 53.4	+0.4
CTCC	Cactus City	0.81	333		Pb	11 03 42.2	-0.5
CTCC					Sb	11 03 53.7	+0.4
SLRCX	San Luis Rio C	0.86	124		Pb	11 03 43.1	-0.5
SLRCX					Sn	11 03 56.3	-0.1
JUEM	Julian Eagle M	0.89	280		Pb	11 03 43.6	-0.6
JUEM					Sb	11 03 56.2	+0.4
MATG	Mataguay Scout	0.96	286		Pb	11 03 44.6	-0.6
TKX	Tecate	0.96	248	Pg	Pb	11 03 45.8	+0.4
TKX				IAML		11 03 59.2	
	comp=E,364nm,0.2s						
BAR	Barrett	0.98	255	Pg	Pb	11 03 46.0	+0.4
BAR				IAML		11 03 58.9	
	comp=N,591nm,0.7s						
BAR				IAML		11 03 59.0	
	comp=E,347nm,0.5s						
ESJX	Sierra Juarez	0.99	200		Pb	11 03 45.8	-0.1
ESJX					Sb	11 03 58.7	+0.1
PMD	Palm Desert	0.99	316		Pb	11 03 45.1	-0.7
PMD				IAML		11 03 59.2	
	comp=N,223nm,0.5s						
PMD				IAML		11 03 59.3	
	comp=E,257nm,0.4s						
PMD	Palm Desert	0.99	316		Sb	11 03 58.8	+0.2
PFO	Pinyon Flats O	1.01	312		Pb	11 03 45.4	-1.0
PFO				IAML		11 04 00.5	
	comp=E,178nm,0.7s						
PFO	Pinyon Flats O	1.01	312	P	Pb	11 03 45.2	-1.2
	baz=131,SNR=79						
PFO				S	Sb	11 03 59.1	-0.3
	baz=131						
FRD	Ford Ranch, An	1.04	303		Pb	11 03 45.7	-1.1
SNDA	J Saunders Pla	1.08	305		Pb	11 03 46.6	-0.8
DUZA	Dulzura	1.08	253		Pb	11 03 46.8	-0.6
BZNA	Buzz No.'s Pla	1.09	301		Pb	11 03 46.5	-1.0
EML	El Monte Cty P	1.09	268		Pb	11 03 46.7	-0.7
BELC	Belle Mtn. Jos	1.12	341	S	Sb	11 04 02.4	-0.2
	baz=160						
CBX	Cerro Bola	1.12	237		Pg	11 03 48.8	-0.2
CBX				IAML		11 04 04.5	
	comp=E,200nm,0.8s						
CBX				IAML		11 04 11.2	
	comp=N,288nm,0.9s						
DPP	Dos Picos Cty	1.17	273		Pn	11 03 48.1	-0.6
CRY	Cary Ranch	1.17	303		Pb	11 03 49.8	+0.8
CRY					Sg	11 04 05.3	0.0
PLM	Palomar	1.18	291		Pn	11 03 48.0	-0.9
BLYC	Blythe	1.18	46	Pn	Pn	11 03 47.9	-0.9
BLYC				IAML		11 04 13.0	
	comp=N,429nm,0.4s						
BLYC				IAML		11 04 13.1	
	comp=E,430nm,0.9s						
SDRC	San Diego Road	1.19	261		Sb	11 04 03.3	-0.9
OLP	Otay Lakes Par	1.21	255		Pn	11 03 48.8	-0.4
OLP					Sb	11 04 04.5	-0.3
IRM	Iron Mountain	1.26	15	P	Pn	11 03 49.1	-0.9
	baz=195,SNR=45						
109C	Camp Elliot, M	1.31	268	Pn	Pn	11 03 50.0	-0.6
109C				IAML		11 04 08.5	
	comp=N,409nm,0.6s						
109C	Camp Elliot, M	1.31	268	P	Pn	11 03 49.7	-0.8
	baz=87						
109C				S	Sn	11 04 07.7	+0.2
	baz=87						
CPE	Camp Elliot	1.31	268		Sb	11 04 08.0	+0.3
POB	Polly Butte	1.37	303		Pn	11 03 51.0	-0.5
BACC	Bachelor Mtn.	1.42	299		Pg	11 03 54.3	-0.2
CCX	Cicese	1.42	222		Pb	11 03 53.2	0.0
CCX				IAML		11 04 22.2	
	comp=N,238nm,0.6s						
HMTC	Hemet	1.44	303		Sb	11 04 13.0	+1.5
113A	Mohawk Valley,	1.51	96	Pn	Pn	11 03 52.5	-0.8
MURC	Murrieta	1.53	296	Pg	Pb	11 03 55.7	+0.7
	baz=115						
MURC				Sb	Sb	11 04 15.4	+1.3
	baz=115						
VTX	Valle De La Tr	1.55	187		Pn	11 03 54.4	+0.4
VTX	Valle De La Tr	1.55	187		Sb	11 04 15.9	+1.1
ELS	Elsinore Mount	1.72	295		Pn	11 03 56.5	+0.1
PDMCI	Parker Dam,Lak	1.80	40	Sb	Sb	11 04 22.6	+0.8
	baz=221						
GMRC	Granite Mounta	1.84	357	P	Pn	11 03 57.5	-0.6
	baz=177,SNR=29						
NEE2	Needles Airpor	1.98	23	Sg	Sg	11 04 31.7	+0.6
	baz=203						
SFX	San Felipe	1.98	162	Pn	Pn	11 04 00.3	+0.4
BFSC	Mount Baldy Ra	2.19	307	Sb	Sb	11 04 35.3	+2.2
	baz=126						
PIX	Pinacate	2.24	127	Pn	Pn	11 04 02.0	-1.4
Y14A	Wickenburg	2.35	64	Pn	Pn	11 04 05.6	+0.6
CIS	Catalina Islan	2.44	282	Sb	Sb	11 04 42.0	+1.5
	baz=100						
214A	Organ Pipe Nat	2.52	112	Pn	Pn	11 04 06.4	-0.8
214A				IAML		11 04 56.6	
	comp=N,43nm,0.5s						
214A				IAML		11 04 58.5	
	comp=E,46nm,0.8s						
214A	Organ Pipe Nat	2.52	112	P	Pn	11 04 06.1	-1.2
	baz=294						
W13A	Hualapai Mount	2.56	32	Pn	Pn	11 04 08.0	-0.1
GSC	Goldstone, Bar	2.58	337	Pn	Pn	11 04 08.4	+0.2
GSC				IAML		11 04 59.2	
	comp=E,40nm,1.6s						
GSC				IAML		11 05 11.2	
	comp=N,28nm,0.9s						
EDW2	Edwards Air Fo	2.81	314	Pg	Pg	11 04 21.2	+0.1
	baz=133						
EDW2				Sb	Sb	11 04 53.6	+2.7
	baz=133						
V12A	Nelson	2.84	12	Pn	Pn	11 04 12.7	+0.9
QSM	Queen of Sheba	3.21	341	Pn	Pn	11 04 17.8	+1.0
CLC	China Lake	3.33	330		Pn	11 04 19.9	+1.4
SNCC	San Nicolas Is	3.35	276	Pn	Pn	11 04 17.8	-0.9
GWY	Greenwater Val	3.37	344	Pn	Pn	11 04 18.2	-0.9
ARVC	Arvin	3.49	310		Pb	11 04 25.0	-3.5
SHPR	Sheep Range	3.58	5	Pn	Pn	11 04 20.1	-1.8
ISA	Isabella, Lake	3.64	319	Pn	Pn	11 04 21.1	-1.6
X16A	Lo Mia Camp, P	3.73	66	Pn	Pn	11 04 24.9	+0.8
TUC	Tucson	4.07	98	IAML		11 05 53.9	
	comp=N,9.7nm,1.0s						
TUC	Tucson	4.07	98	Pn	Pn	11 04 27.9	-0.7
WUAZ	Wupatki	4.31	52	Pn	Pn	11 04 33.3	+1.2
KNB	Kanab	4.65	28	Pn	Pn	11 04 38.3	+1.6
MZP	Montezuma Peak	4.98	343	Pn	Pn	11 04 41.2	-0.2
121A	Cookes Peak, D	6.56	91	Pn	Pn	11 05 03.9	+1.0

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*NEIC **28** 11:15:31.6±2.5, 3.°16S±0.°06×75.°76W±0.°07, h129^{km}±4^{km}, mb4.6/240, Error ellipse: s-maj=11.2km s-min=8.2km az=54.0*

*IDC **28** 11:15:32.1±0.5, 3.°04S×75.°67W, h128^{km}±4^{km}, mb4.0/16, mbtmp4.5/21, MS3.1/2, Error ellipse: s-maj=15.6km s-min=8.5km az=62.0*

*GCMT **28** 11:15:32.6±0.4, 3.°26S±0.°03×75.°82W±0.°03, h135^{km}±6^{km}, MW4.8/78, Moment Tensor Solution. s9,c9; s78,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.92±.08; $M_{\theta\theta}$0.74±.10; $M_{\phi\phi}$0.17±.13; $M_{r\theta}$0.28±.06; $M_{\theta\phi}$0.74±.07; $M_{\phi r}$-1.33±.08; Best double couple: $M_0$1.70200×10^{16} NP1:ϕ_s17.00000°, δ71.00000°, λ-124.00000°. NP2: ϕ_s261.00000°, δ38.00000°, λ-32.00000°. Principal axes: T 1.4360, Plg19.0000°, Azm131.0000°; N 0.5310, Plg32.0000°, Azm29.0000°; P -1.9670, Plg52.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*VAO **28** 11:15:33.1±0.3, 3.°17S×75.°67W, h130^{km}, mb5.0*

*IGQ **28** 11:15:36±0.6, 3°S±5°×7°6W±°, h75^{km}*

ISC 28 11:15:31.1±0.3**, 3.°12S**±0.°03×**75.°76W**±0.°04**, h130**^{km}±2^{km}**, h130**^{km}**:pP-P, n694,** σ**1**^{s}**42**/754**, mb4.5**/116**, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOJ1	Universidad t	2.74	252	P	Pn	11 16 24.0	+9.4
APUY	Puyo	2.78	306	P	Pn	11 16 15.0	-0.1
APUY				S	Sn	11 16 46.0	-2.9
PUYO	Puyo, Santa Ro	2.79	305	P	Pn	11 16 15.0	-0.1
PUYO				S	Sn	11 16 45.0	-4.0
BPAT	Tungurahua Vol	3.12	301	P	Pn	11 16 20.0	+0.2
ARRY	Arrayan	3.14	301	P	Pn	11 16 20.0	+0.1
ARRY				S	Sn	11 16 56.0	-1.5
BRUN	Tungurahua Vol	3.16	302	P	Pn	11 16 20.0	-0.2
RETU	Refugio	3.16	302	P	Pn	11 16 20.0	-0.3
BMAS	Trigal station	3.16	301	P	Pn	11 16 20.0	-0.2
TUYU	Q. Yuibug Volc	3.17	301	P	Pn	11 16 20.0	-0.3
POND	Pondoa	3.18	302	P	Pn	11 16 20.0	-0.5
JUI6	Juive	3.19	302	P	Pn	11 16 20.0	-0.6
BBIL	Ulba Tungurahu	3.20	301	P	Pn	11 16 21.0	+0.4
BBIL				S	Sn	11 16 57.0	-1.8
BIL2	Estacion Bilba	3.21	301	P	Pn	11 16 21.0	+0.3
PIAT	Ana Tenorio	3.28	310	P	Pn	11 16 22.0	+0.3
PIAT	Ana Tenorio	3.28	310	*e*P	Pn	11 16 20.6	-1.1
APSY	Ecuador-Napo A	3.29	310	P	Pn	11 16 22.0	+0.1
IGUA	Igualata	3.31	299	P	Pn	11 16 23.0	+0.7
PIS1	Pisayambo	3.33	308	P	Pn	11 16 23.0	+0.4
TAMH	Tambohuasha Ch	3.41	297	P	Pn	11 16 25.0	+1.5
PORT	Chimborazo Vol	3.44	299	Pn	Pn	11 16 25.5	+1.5
PORT	Chimborazo Vol	3.44	299	P	Pn	11 16 25.0	+1.0
VCES	Cotopaxi	3.50	311	P	Pn	11 16 26.0	+1.1
VCES				S	Sn	11 17 00.0	-6.3
CHSH	Refugio Sur-Vo	3.51	297	Pn	Pn	11 16 25.8	+0.9
CHSH	Refugio Sur-Vo	3.51	297	P	Pn	11 16 26.0	+1.1
REVS	Reventador Sur	3.53	328	P	Pn	11 16 25.0	0.0
ANTS	Antisana-Sarah	3.55	317	P	Pn	11 16 26.0	+0.4
TAMB	Tambo	3.56	313	P	Pn	11 16 26.0	+0.5
REVN	San Rafael	3.56	328	P	Pn	11 16 26.0	+0.7
ANTM	Antisana-La Mi	3.56	316	P	Pn	11 16 26.0	+0.4
BTAM	Cotopaxi Volca	3.59	313	P	Pn	11 16 27.0	+1.0
CASC	Dorado de Casc	3.60	334	P	Pn	11 16 26.0	+0.2
ANTG	Antisana-Guama	3.61	316	P	Pn	11 16 27.0	+0.8
BVC2	Cotopaxi Volca	3.61	313	P	Pn	11 16 27.0	+0.7
VC1	Cotopaxi 1	3.62	313	P	Pn	11 16 27.0	+0.7
BREF	Cotopaxi Volca	3.62	312	P	Pn	11 16 28.0	+1.4
SLOR	San Lorenzo -	3.63	311	Pn	Pn	11 16 28.1	+1.6
SLOR	San Lorenzo -	3.63	311	P	Pn	11 16 28.0	+1.6
BNAS	Cotopaxi Volca	3.65	312	P	Pn	11 16 29.0	+2.2
NAS2	Nasa	3.66	312	P	Pn	11 16 28.0	+1.1
CAMI	Rancho Maria	3.67	311	P	Pn	11 16 28.0	+1.0
PITA	Cotopaxi Volc	3.69	314	P	Pn	11 16 29.0	+1.7
PAST	Pastocalle	3.76	310	P	Pn	11 16 31.0	+2.8
ILLI	Illinizas Sur	3.81	309	P	Pn	11 16 30.0	+1.1
CAYR	Refugio Cayamb	3.84	324	P	Pn	11 16 30.0	+0.5
ANGU	Angureal	3.87	324	P	Pn	11 16 31.0	+1.2
CAYA	Cayambe	3.88	325	P	Pn	11 16 31.0	+1.1
AMIL	Milagro (Trans	3.96	284	P	Pn	11 16 29.0	-1.4
BONI	La Bonita	3.97	333	P	Pn	11 16 31.0	+0.2
BONI	La Bonita	3.97	333	*e*P	Pn	11 16 28.9	-1.9
GGPC	Guagua Pichinc	4.08	316	P	Pn	11 16 34.0	+1.5
PINO	Pino	4.10	316	P	Pn	11 16 34.0	+1.2
YANA	Yana	4.10	317	P	Pn	11 16 35.0	+2.3
PULU	Pululahua	4.16	319	Pn	Pn	11 16 35.4	+1.9
PULU	Pululahua	4.16	319	P	Pn	11 16 35.0	+1.6
IMBA	Imbabura, San	4.17	324	Pn	Pn	11 16 36.7	+3.1
IMBA	Imbabura, San	4.17	324	P	Pn	11 16 36.0	+2.4
YAHU	Yahuarcocha	4.17	326	P	Pn	11 16 35.0	+1.4
CUSW	Cuicocha Oeste	4.27	323	P	Pn	11 16 37.0	+2.2
CUIC	Cuicocha-Domo	4.29	323	P	Pn	11 16 37.0	+1.9
OTAV	Otavalo	4.29	321	Pn	Pn	11 16 36.7	+1.5
OTAV	Otavalo	4.29	321	P	Pn	11 16 37.0	+1.8
OTAV	Otavalo	4.29	321	*e*P	Pn	11 16 34.7	-0.5
OTAV	Otavalo	4.29	321	*e*P	Pn	11 16 36.9	+1.8
COTA	Cotacachi	4.30	323	P	Pn	11 16 38.0	+2.6
CUSE	Cuicocha Este	4.31	322	P	Pn	11 16 37.0	+1.5
CUSE	Cuicocha Este	4.31	322	*e*P	Pn	11 16 37.0	+1.5
TULM	Tulcn-Chalpat	4.32	332	Pn	Pn	11 16 37.1	+1.5
TULM	Tulcn-Chalpat	4.32	332	P	Pn	11 16 37.0	+1.4
TULM	Tulcn-Chalpat	4.32	332	*e*P	Pn	11 16 33.9	-1.7
URCU	Urcuqui	4.33	325	P	Pn	11 16 38.0	+2.3
LNGL	El Angel-Carch	4.45	330	P	Pn	11 16 38.0	+0.6
CHL1	Volc¡n Chiles	4.46	331	P	Pn	11 16 39.0	+1.4
ECEN	Cerro Negro	4.50	331	P	Pn	11 16 40.0	+1.9
PAC1	Pacto, Paraso	4.53	318	P	Pn	11 16 40.0	+1.8
PAC1	Pacto, Paraso	4.53	318	*e*P	Pn	11 16 39.4	+1.2
CMBC	Cumbal	4.54	333	P	Pn	11 16 41.0	+2.5
CMBC	Cumbal	4.54	333	*e*P	Pn	11 16 41.4	+2.9
CHMA	Chilma	4.58	330	P	Pn	11 16 41.0	+2.0
GCUF	Volcan Galeras	4.60	340	*e*P	Pn	11 16 41.6	+2.2
FLOC	Florencia	4.67	1	P	Pn	11 16 41.0	+1.0
FLOC	Florencia	4.67	1	*e*P	Pn	11 16 39.9	-0.1
BV15	Puerto Quito-O	4.76	313	P	Pn	11 16 43.0	+2.0
ATAH	Atahualpa	4.77	213	P	Pn	11 16 42.7	+1.1
	98nm,0.6s,baz=327,slow=3.2,SNR=123						
ATAH				S	Sn	11 17 34.6	-1.8
	166nm,0.5s,baz=40,slow=10,SNR=5.7						
CRUC	La Cruz	4.81	346	*e*P	Pn	11 16 45.6	+3.5
FLF1	Flavio Alfaro-	4.92	304	P	Pn	11 16 44.0	+0.7
FLF1	Flavio Alfaro-	4.92	304	*e*P	Pn	11 16 42.9	-0.4
MAG1	Magdalena	5.03	307	P	Pn	11 16 46.0	+1.3
JAMA	Jama	5.28	303	P	Pn	11 16 47.0	-1.1
GARC	Garzon, Huila	5.28	3	*e*P	Pn	11 16 50.1	+1.8
SALI	Salinas	5.31	280	Pn	Pn	11 16 47.4	-1.1
SALI	Salinas	5.31	280	P	Pn	11 16 47.0	-1.4
BBAC	Balboa, Cauca	5.32	344	P	Pn	11 16 50.0	+1.2
BBAC	Balboa, Cauca	5.32	344	*e*P	Pn	11 16 50.2	+1.4
SNLR	San Lorenzo-Es	5.37	325	P	Pn	11 16 52.0	+2.8
CZSB	Cruzeiro do Su	5.49	147		Pn	11 16 51.9	+1.0
CZSB	Cruzeiro do Su	5.49	147	*e*P	Pn	11 16 51.9	+1.0
MACC	Macarena, Meta	5.57	20	*e*P	Pn	11 16 51.8	-0.2
POPC	Popayan, Colom	5.70	351	*e*P	Pn	11 16 53.9	0.0
TUMC	Tumaco	5.74	329	P	Pn	11 16 56.0	+1.8
TUMC	Tumaco	5.74	329	*e*P	Pn	11 16 56.1	+1.8
BETC	Betania	5.77	3	*e*P	Pn	11 16 52.6	-2.2
TBTG	Tabatinga, AM	5.93	100		Pn	11 16 58.5	+1.7
TBTG	Tabatinga, AM	5.93	100	*e*P	Pn	11 16 56.1	-0.6
TBTG	Tabatinga, AM	5.93	100	*e*P	Pn	11 16 58.1	+1.4
JAMC	Jamundi, Valle	6.36	352	*e*P	Pn	11 17 04.6	+1.8
GUVC	San Jose del G	6.44	29	*e*P	Pn	11 17 03.7	0.0
GR1C	Gorgona, Isla	6.54	338	*e*P	Pn	11 17 04.6	-0.5
PRAC	Prado	6.85	7	Pn	Pn	11 17 11.4	+2.2
PRAC	Prado	6.85	7	*e*P	Pn	11 17 11.3	+2.1
ORTC	Ortega, Tolima	7.00	4	*e*P	Pn	11 17 12.2	+1.0
YOTC	Yotoco, Valle	7.08	355	*e*P	Pn	11 17 12.5	0.0
MALC	Bahia Malaga	7.26	347	P	Pn	11 17 17.0	+2.3
MALC	Bahia Malaga	7.26	347	*e*P	Pn	11 17 19.1	+4.4
VILC	Villavicencio,	7.48	16	*e*P	Pn	11 17 19.4	+1.7
CHIC	Chingaza	7.96	15	*e*P	Pn	11 17 25.1	+0.6
PLMC	San Jos del P	7.99	356	*e*P	Pn	11 17 25.1	+0.5
ROSC	El Rosal	8.04	10	P	Pn	11 17 24.2	-1.3
	5.1nm,0.3s,baz=158,slow=16,SNR=1.1						
ROSC	El Rosal	8.04	10	Pn	Pn	11 17 26.6	+1.1
PTGC	Puerto Gaitan,	8.12	26	*e*P	Pn	11 17 25.9	-0.5
PIZC	Pizarro, Choco	8.19	349	*e*P	Pn	11 17 35.1	+7.8
NORC	Norcasia	8.67	6	*e*P	Pn	11 17 33.7	-0.1
NNA	Nana	8.87	187	P	Pn	11 17 37.0	+0.5
	63nm,0.3s,baz=355,slow=8.0,SNR=37						
NNA				S	Sn	11 19 10.8	-4.0
	142nm,0.3s,baz=304,slow=18,SNR=7.0						
NNA	Nana	8.87	187	Pn	Pn	11 17 38.0	+1.5
NNA	Nana	8.87	187	*e*P	Pn	11 17 36.1	-0.3
SPBC	San Pablo de B	8.88	11	*e*P	Pn	11 17 39.5	+3.0
CBOC	Ciudad Bolivar	8.93	358	*e*P	Pn	11 17 37.8	+0.4
SGCB	S£o Gabriel d	9.22	71	*e*P	Pn	11 17 41.1	0.0
HELC	Santa Helena	9.26	1	*e*P	Pn	11 17 51.7	+10
RUSC	La Rusia	9.35	17	*e*P	Pn	11 17 45.0	+1.7
PTBC	PUERTO BERRIO,	9.69	8	*e*P	Pn	11 17 51.8	+4.4
BARC	Barichara	9.99	15	*e*P	Pn	11 17 54.8	+3.2
DBBC	Dabeiba	10.08	357	*e*P	Pn	11 17 58.1	+5.3
BRRC	Barranca, Sant	10.37	11	*e*P	Pn	11 17 57.9	+1.4
PTAC	Punta Ardita,	10.41	349	*e*P	Pn	11 17 59.3	+2.3
ZARC	Zaragoza, Cauc	10.58	5	*e*P	Pn	11 17 56.1	-3.3
UREC	San Jos de Ur	10.80	1	*e*P	Pn	11 18 01.8	-0.6
PAMC	Pamplona, Colo	10.83	16	*e*P	Pn	11 18 05.7	+2.5
APAC	Apartado, Choc	10.98	356	*e*P	Pn	11 18 10.6	+5.9
TEFE	Tefe	11.11	92	*e*P	Pn	11 18 05.2	-1.2
ETMB	Extrema	11.58	126		Pn	11 18 10.7	-1.9
ETMB	Extrema	11.58	126	*e*P	Pn	11 18 10.6	-2.0
BCIP	Isla Barro Col	12.87	342	Pn	Pn	11 18 30.4	+1.0
BCIP	Isla Barro Col	12.87	342	*e*P	Pn	11 18 29.3	-0.2
SJCC	San Jacinto, C	12.95	3	*e*P	Pn	11 18 30.3	-0.2
SDV	Santo Domingo	12.98	23	P	Pn	11 18 33.7	+2.7
	12nm,0.4s,baz=178,slow=11,SNR=13						
SDV				S	Sn	11 20 51.4	-3.0
	4.5nm,0.4s,baz=36,slow=17,SNR=0.8						
SDV	Santo Domingo	12.98	23	Pn	Pn	11 18 31.1	+0.1
SDV	Santo Domingo	12.98	23	*e*P	Pn	11 18 32.6	+1.6
ARGC	Ariguani, Magd	12.98	7	*e*P	Pn	11 18 33.1	+2.2
CDITO	Canoas	13.62	329	Pn	Pn	11 18 38.9	-0.2
BRU2	Volcan	13.71	330	Pn	Pn	11 18 38.7	-1.7
SAML	Samuel	13.77	115	Pn	Pn	11 18 39.4	-1.7
SAML	Samuel	13.77	115	*e*P	Pn	11 18 38.8	-2.3
BAUV	El Baul	14.24	33		Pn	11 18 46.5	-0.6
SMRC	Santa Marta, M	14.28	6	*e*P	Pn	11 18 48.7	+1.2
CRJC	Cerrejon, Guaj	14.34	11	*e*P	P	11 18 51.8	+0.1
RGM0	Gandoca	14.36	332	Pn	Pn	11 18 48.7	+0.2
SRBA	San Rafael, Bu	14.43	328		Pn	11 18 48.2	-1.3
PEZE	Perez Zeledon,	14.72	328		Pn	11 18 52.2	-1.0
PAYG	Puerto Ayora	14.72	279	Pn	Pn	11 18 50.9	-2.3
PAYG	Puerto Ayora	14.72	279	*e*P	P	11 18 59.7	+3.9
MACA	Manacapuru-AM	15.05	91	Pn	Pn	11 18 55.5	-1.8
MACA	Manacapuru-AM	15.05	91	*e*P	Pn	11 18 57.3	0.0
LPAZ	La Paz	15.08	151	P	Pn	11 18 56.0	-2.3
	7.7nm,0.6s,baz=324,slow=6.8,SNR=13						
LPAZ				LR	LR	11 26 01.2	
	comp=Z,48nm,18.1s,baz=349,slow=42						
LPAZ	La Paz	15.08	151	Pn	Pn	11 18 55.7	-2.5
LPAZ				IAmb	IAmb	11 19 04.2	
	comp=Z,49nm,1.4s						

LPAZ	La Paz	15.08	151	eP	Pn	11 18 56.8	-1.4
LPAZ	La Paz	15.08	151	eP	Pn	11 18 56.7	-1.5
RIMA	Rio Macho	15.14	328	Pn	Pn	11 18 57.9	-0.7
RIMA				IAmb	IAmb	11 19 06.3	
	comp=Z,32nm,1.1s						
BATAN	Batan	15.17	330	Pn	Pn	11 18 56.9	-1.8
BATAN				IAmb	IAmb	11 19 09.0	
	comp=Z,66nm,1.1s						
URIC	Uribia, Colomb	15.20	14	eP	Pn	11 18 56.0	-3.1
JACO	JACO, Garabito	15.49	325	Pn	Pn	11 19 01.4	-1.3
JACO				IAmb	IAmb	11 19 07.3	
	comp=Z,26nm,1.0s						
PB18	Visviri	15.64	157	Pn	Pn	11 19 03.2	-1.9
JTS	Las Juntas de	16.17	326	P	P	11 19 13.7	+1.8
	comp=Z,10nm,0.8s,baz=135,slow=6.9,SNR=12						
JTS				LR	LR	11 25 11.5	
	comp=Z,80nm,19.0s,baz=138,slow=36						
JTS	Las Juntas de	16.17	326		Pn	11 19 10.7	-0.4
JTS	Las Juntas de	16.17	326	eP	P	11 19 13.2	+1.3
BOAV	Boa Vista	16.18	70		Pn	11 19 12.1	+0.8
BOAV	Boa Vista	16.18	70	eP	Pn	11 19 09.9	-1.5
BOAV	Boa Vista	16.18	70	eP	Pn	11 19 10.7	-0.6
COVE	Coope Vega, Sa	16.22	328		Pn	11 19 12.5	+0.7
COVE				IAmb	IAmb	11 19 18.4	
	comp=Z,26nm,1.0s						
PB12	IPOC Station P	16.29	161		Pn	11 19 11.3	-1.3
PB16	IPOC Station P	16.31	158		Pn	11 19 13.3	-0.1
DUNO	Dulce Nombre,	16.31	324		Pn	11 19 12.2	-0.6
ORTG	Ortega, Santa	16.52	324		Pn	11 19 14.4	-1.1
AUA1	Aruba	16.54	20		Pn	11 19 16.1	+0.4
AUA1				IAmb	IAmb	11 19 22.0	
	comp=Z,112nm,0.8s						
HZTE	Horizontes, Gu	16.88	325	P	P	11 19 18.6	-1.1
HZTE				IAmb	IAmb	11 19 27.1	
	comp=Z,47nm,1.0s						
MNMC	Minye Minye	17.01	160	P	P	11 19 20.2	-1.2
ESPN	Las Esperanzas	17.43	331	P	P	11 19 24.2	-1.5
ESPN				IAmb	IAmb	11 19 30.3	
	comp=Z,22nm,1.0s						
PB11	IPOC Station P	17.58	161	P	P	11 19 26.3	-1.2
GO01	Chusmiza	17.65	159	P	P	11 19 26.4	-2.2
GO01				IAmb	IAmb	11 19 35.5	
	comp=Z,42nm,0.8s						
TA02	Huaiquique	17.91	163	P	P	11 19 28.5	-2.4
PB08	IPOC Station P	18.10	160	P	P	11 19 31.1	-2.4
TA01	Diego Aracena	18.17	163	P	P	11 19 31.2	-2.6
VILB	Vilhena	18.22	123		P	11 19 31.8	-2.7
VILB				IAmb	IAmb	11 19 39.4	
	comp=Z,51nm,0.9s						
VILB	Vilhena	18.22	123	eP	Pn	11 19 36.2	+0.2
BOAB	BOACO BROADBAN	18.34	328	P	P	11 19 34.1	-1.6
BOAB				IAmb	IAmb	11 20 03.0	
	comp=Z,63nm,1.5s						
PB01	IPOC Station P	18.83	162	P	P	11 19 39.5	-1.6
MATN	Matagalpa	18.88	328	P	P	11 19 40.1	-1.6
PB02	IPOC Station P	18.96	163	P	P	11 19 41.9	-0.7
SIV	San Ignacio	19.30	132	P	P	11 19 46.8	+0.6
	comp=Z,10nm,0.6s,baz=292,slow=6.1,SNR=27						
SIV				S	Sn	11 23 26.3	+0.3
	comp=Z,3.7nm,0.6s,baz=252,slow=19,SNR=1.9						
PB07	IPOC Station P	19.35	163	P	P	11 19 44.9	-2.0
PB09	IPOC Station P	19.61	162	P	P	11 19 47.5	-2.2
PB03	IPOC Station P	19.70	163	P	P	11 19 46.8	-3.8
PB04	IPOC Station P	19.86	165	P	P	11 19 50.1	-2.2
ITTB	Itaituba	20.02	94	eP	P	11 19 53.7	-0.3
BBSD	Serra de San D	20.41	134	eP	P	11 19 59.2	+1.0
PTLB	Pontes e Lacer	20.44	128	P	P	11 19 58.6	+0.1
PTLB				IAmb	IAmb	11 20 04.7	
	comp=Z,42nm,1.0s						
PTLB	Pontes e Lacer	20.44	128	eP	P	11 19 59.5	+0.9
LVC	Limon Verde	20.48	162	P	Pn	11 20 02.3	-0.4
	comp=Z,30nm,0.6s,baz=27,slow=8.6,SNR=39						
LVC				S	S	11 23 47.7	+6.0
	comp=Z,2.1nm,0.6s,baz=327,slow=19,SNR=13						
	comp=Z,30nm,0.6s						
LVC	Limon Verde	20.48	162	P	P	11 19 57.3	-1.9
LVC	Limon Verde	20.48	162	eP	P	11 20 00.4	+1.1
TGUH	Tegucigalpa,Un	20.54	326	P	P	11 19 58.8	-0.9
TGUH				IAmb	IAmb	11 20 05.6	
	comp=Z,38nm,1.1s						
GRGR	Grenville	20.64	43	P	P	11 19 58.7	-1.9
PDRB	Porto dos Gac	20.65	115	eP	P	11 20 01.2	+0.4
NPGB	Novo Progresso	20.68	102	eP	P	11 20 00.8	-0.3
TOSP	Speyside	20.84	46	P	P	11 20 01.7	-1.1
TOSP				IAmb	IAmb	11 20 26.4	
	comp=Z,32nm,1.1s						
PB15	IPOC Station P	20.87	164	P	P	11 20 02.1	-1.2
PB10	IPOC Station P	20.89	167	P	P	11 20 01.6	-1.5
CLDB	Colider	21.24	112	eP	P	11 20 07.2	0.0
MTDJ	Mount Denham	21.29	355	P	P	11 20 06.4	-1.2
MTDJ				IAmb	IAmb	11 20 11.9	
	comp=Z,19nm,0.7s						
MALB	Monte Alegre	21.51	87	eP	P	11 20 10.2	+0.2
PAPH	Port-au-Prince	21.78	9	P	P	11 20 11.9	-0.9
PB14	IPOC Station P	21.99	167	P	P	11 20 13.7	-1.6
SDDR	Presa de Saban	22.40	11	P	P	11 20 17.4	-1.8
MLPR	Magueyes Islan	22.65	22	P	P	11 20 20.8	-0.8
DR12	Loma Pena Alta	22.66	16	P	P	11 20 19.5	-2.2
CRPR	Cabo Rojo, PR	22.66	22	P	P	11 20 20.6	-1.0
PCDR	Punta Cana, DR	22.69	18	P	P	11 20 20.0	-2.0
GO02	Mina Guanaco	22.70	165	P	P	11 20 21.1	-1.3
BIM	Bigot	22.78	39	P	P	11 20 21.5	-1.4
BIM				IAmb	IAmb	11 20 24.7	
	comp=Z,34nm,0.8s						
MPOM	Morne Pois Mar	22.86	40	P	P	11 20 21.8	-1.8
OBIP	Obispado Ponce	22.88	23	P	P	11 20 22.2	-1.6
OBIP				IAmb	IAmb	11 20 50.8	
	comp=Z,28nm,1.4s						
FDF	Fort de France	22.89	39	P	P	11 20 22.4	-1.5
CELP	Cerrillos	22.92	23	P	P	11 20 24.4	+0.2
AOPR	Arecibo Observ	23.10	22	P	P	11 20 25.7	-0.1
AOPR				IAmb	IAmb	11 20 27.1	
	comp=Z,21nm,0.9s						
HUMP	Col San Antoni	23.28	24	P	P	11 20 26.4	-1.1
HUMP				IAmb	IAmb	11 20 30.9	
	comp=Z,23nm,1.5s						
GCPR	Guaynabo City	23.33	24	P	P	11 20 27.3	-0.7
MTP	Monte Pirata	23.36	25	P	P	11 20 26.7	-1.5
CBYP	Canovanas	23.39	24	P	P	11 20 28.2	-0.3
CBYP				IAmb	IAmb	11 20 57.7	
	comp=Z,18nm,0.7s						
AC01	Pan de Azucar	23.42	168	P	P	11 20 26.8	-2.0
SALV	Santo Antonio	23.47	124	eP	P	11 20 30.2	+0.9
CBE	Ff, Capester	23.65	36	P	P	11 20 29.3	-1.6
CUPR	Culebra, Puert	23.66	25	P	P	11 20 28.5	-2.4
GDHS	Morne Mazeau,	23.72	35	P	P	11 20 29.1	-2.5
GDHS				IAmb	IAmb	11 20 57.1	
	comp=Z,28nm,0.8s						
MCPB	Macapa, AP	23.84	84	eP	P	11 20 33.7	+1.0
HUEH	Huehuetenango	24.06	320	P	P	11 20 34.8	0.0
SMRT	St. Maarten	24.47	30	P	P	11 20 36.4	-1.9
SMRT				IAmb	IAmb	11 20 37.5	
	comp=Z,27nm,1.0s						
MDP	Montagnes des	24.49	71	P	P	11 20 39.8	+1.2
	comp=Z,32nm,0.4s,baz=250,slow=8.6,SNR=61						
	comp=Z,32nm,0.4s						
AC06	Mina Casimiro	24.65	168	P	P	11 20 37.9	-1.9
AC06				IAmb	IAmb	11 20 52.8	
	comp=Z,28nm,1.2s						
ANWB	Willy Bob	24.83	33	P	P	11 20 40.9	-0.7
GRTK	Grand Turk	24.90	10	P	P	11 20 41.8	-0.3
GO03	Copiap	24.90	168	P	P	11 20 39.8	-2.4
GO03				IAmb	IAmb	11 21 04.1	
	comp=Z,49nm,1.4s						
PP1B	Ponte de Pedra	25.03	127	eP	P	11 20 44.8	+1.4
CCIG	Comitan	25.18	320	P	P	11 20 43.5	-1.5
MURT	Porto Murtinho	25.51	138	eP	P	11 20 48.1	+0.4
SNDB	Serra Nova Dou	25.77	111	eP	P	11 20 51.1	+0.9
RVDE	Rio Verde (Bra	25.77	129	eP	P	11 20 51.1	+0.9
PRPB	Parauapebas	26.03	98	eP	P	11 20 53.0	+0.4
AQDB	Aquidauana	26.07	133	P	P	11 20 53.9	+1.1
AQDB	Aquidauana	26.07	133	eP	P	11 20 53.6	+0.8
AC05	El Transito	26.10	169	P	P	11 20 54.0	+0.9
LCO	Las Campanas	26.19	170	P	P	11 20 53.8	-0.3
ARAG	Araguaiana, MT	26.68	119	eP	P	11 20 58.9	+0.5
C2SB	Chapadao do Su	27.29	126	eP	P	11 21 05.5	+1.8
GO04	Tololo Observa	27.31	171	P	P	11 21 02.3	-1.8
ESFA	Espinillo Form	27.35	144	eP	P	11 21 05.8	+1.6
TICA	Tres Isletas	27.43	149	eP	P	11 21 07.2	+2.3
CMIG	Matias Romero	27.57	317	P	P	11 21 07.9	+1.7
	comp=Z,3.4nm,0.4s,baz=148,slow=11,SNR=15						
	comp=Z,3.4nm,0.4s						
TMAB	Tom-Au,PA,Br	27.64	89	eP	P	11 21 08.1	+1.1
CO06	Fray Jorge	27.68	172	P	P	11 21 07.1	0.0
CO03	El Pedregal	27.98	171	P	P	11 21 09.3	-0.5
AMBA	Amambai (Brazi	28.15	136	eP	P	11 21 11.7	+0.3
CO02	Combarbal	28.29	171	P	P	11 21 11.3	-1.4
CO02				IAmb	IAmb	11 21 20.5	
	comp=Z,32nm,1.3s						
SMTB	Santa Maria do	28.57	103	eP	P	11 21 16.9	+1.7
CPUP	Villa Florida	29.07	144	P	P	11 21 20.4	+1.0
	comp=Z,2.4nm,0.7s,baz=331,slow=10,SNR=6.8						
	comp=Z,2.4nm,0.7s						
CPUP	Villa Florida	29.07	144	P	P	11 21 17.5	-2.0
CPUP	Villa Florida	29.07	144	eP	P	11 21 19.9	+0.5
CFA	Coronel Fontan	29.20	167	P	P	11 21 22.3	+1.6
	comp=Z,1.3nm,0.6s,baz=338,slow=5.4,SNR=1.8						
CFA				pP	pP	11 21 50.6	+1.9
	comp=Z,5.8nm,0.8s,baz=311,slow=11,SNR=4.6						
	comp=Z,1.3nm,0.6s						
ITRB	Iturama	29.77	126	eP	P	11 21 26.2	+0.4
MCR1	Marechal Candi	29.81	137	eP	P	11 21 27.1	+1.0
VA03	San Esteban	29.89	171	P	P	11 21 25.8	-0.9
VA03				IAmb	IAmb	11 21 46.5	
	comp=Z,21nm,1.3s						
BDFB	Brasilia	30.01	116	P	P	11 21 28.6	+0.5
	comp=Z,3.8nm,0.4s,baz=278,slow=7.0,SNR=6.3						
	comp=Z,3.8nm,0.4s						
BDFB	Brasilia	30.01	116	P	P	11 21 27.9	-0.2
BDFB				IAmb	IAmb	11 21 29.4	
	comp=Z,11nm,1.2s						
BDFB	Brasilia	30.01	116	eP	P	11 21 29.3	+1.3
ROC1	El Roble	30.03	172	P	P	11 21 25.7	-2.5
ROC1				IAmb	IAmb	11 21 47.7	
	comp=Z,9.4nm,0.7s						
PCMB	Pacaembu	30.07	130	eP	P	11 21 28.8	+0.3
PEL	Peldehue	30.24	172	P	P	11 21 28.1	-1.7
PEL				IAmb	IAmb	11 21 49.9	
	comp=Z,23nm,1.3s						
IPMB	Ipameri, GO	30.77	121	eP	P	11 21 35.1	+0.5
MT09	Talagante	30.82	172	P	P	11 21 34.3	-0.7
MT09				IAmb	IAmb	11 21 51.3	
	comp=Z,10nm,1.0s						
MT01	Popeta	30.87	173	P	P	11 21 34.1	-1.2
MT01				IAmb	IAmb	11 21 56.4	
	comp=Z,12nm,1.1s						
MECA	Mercedes	30.93	149	eP	P	11 21 36.7	+0.9
LMEL	Las Melosas	31.00	171	P	P	11 21 34.8	-1.8
LMEL				IAmb	IAmb	11 21 58.2	
	comp=Z,5.3nm,0.7s						
PTGB	Pitanga	31.34	135	eP	P	11 21 39.9	+0.2
BO01	Tunca	31.41	173	P	P	11 21 40.1	0.0
BO01				IAmb	IAmb	11 21 56.8	
	comp=Z,10nm,1.1s						
FRBT	Francisco Belt	31.48	138	eP	P	11 21 42.4	+1.6
ROSB	Rosrio	31.59	90	eP	P	11 21 42.7	+0.8
BO02	Sierra Bellavi	31.85	172	P	P	11 21 42.6	-1.3
SDBA	SAO DESIDERIO	31.89	109	eP	P	11 21 44.8	+0.2
CRSM	Crissiumal (Br	31.90	142	eP	P	11 21 44.0	-0.4
GO05	Huala	31.93	174	P	P	11 21 44.1	-0.4
BB19B	Bebedouro	31.94	126	eP	P	11 21 45.2	+0.3
ITQB	Itaqui	32.04	147	P	P	11 21 46.0	+0.4
ITQB	Itaqui	32.04	147	eP	P	11 21 46.4	+0.8
FRTB	Fartura	32.34	131	eP	P	11 21 48.7	+0.3
PMNB	Patos De Minas	32.53	120	eP	P	11 21 51.1	+0.9
ITAB	Concordia	32.94	139	P	P	11 21 51.1	-2.4
ITAB	Concordia	32.94	139	eP	P	11 21 53.9	+0.4
JANB	Januaria	33.18	113	eP	P	11 21 56.2	+0.4
RODS	Rosario do Sul	33.34	146	eP	P	11 21 56.8	-0.2
RCLB	Rio Claro- Sao	33.42	127	eP	P	11 21 58.9	+1.0
ALGR	Alto Alegre (B	33.46	142	eP	P	11 21 57.5	-0.6
SPB	Sao Paulo	34.11	129	eP	P	11 22 03.5	-0.3
553A	Crawfordville	34.15	347	P	P	11 22 04.2	+0.3
VAO	Valinhos	34.17	128	eP	P	11 22 04.5	+0.2
CPSB	Cacapava Do Su	34.38	144	eP	P	11 22 05.9	-0.1
PLTB	Pedras Altas	35.30	146	P	P	11 22 13.9	+0.1
PLTB	Pedras Altas	35.30	146	eP	P	11 22 14.2	+0.3
PARB	Paraibuna	35.41	127	eP	P	11 22 15.9	+1.0
BRAL	Brewton	35.76	343	P	P	11 22 18.4	+0.7
	baz=160						
TRQA	Tornquist	36.98	162	P	P	11 22 24.6	-3.5
TRQA				IAmb	IAmb	11 22 36.8	
	comp=Z,8.2nm,1.2s						
SJMB	Sao Joao De Ma	37.20	117	eP	P	11 22 30.8	+0.7
KVTX	Kingsville	37.22	326	P	P	11 22 30.5	+0.4
DUB01	Friburgo-RJ	37.48	123	eP	P	11 22 33.3	+0.8
LRAL	Lakeview Retre	37.50	344	P	P	11 22 31.3	-1.1
LRAL				IAmb	IAmb	11 22 37.1	
	comp=Z,8.7nm,1.4s						
LRAL	Lakeview Retre	37.50	344	P	P	11 22 32.9	+0.5
	baz=161						
X58A	Rowland	37.63	355	P	P	11 22 33.3	-0.2
HODGE	Hodges	37.66	351	P	P	11 22 34.9	+1.2
PLCA	Paso Flores	37.73	174	P	P	11 22 35.6	+1.2
	comp=Z,3.0nm,0.9s,baz=353,slow=8.0,SNR=6.9						
PLCA				pP	pP	11 23 05.6	+2.4
	comp=Z,3.2nm,0.9s,baz=341,slow=9.7,SNR=4.9						
	comp=Z,3.0nm,0.9s						
PLCA	Paso Flores	37.73	174	P	P	11 22 35.4	+0.9
PLCA	Paso Flores	37.73	174	eP	P	11 22 36.8	+2.3
LL04	Puerto Octay	37.74	176	P	P	11 22 34.9	+0.6
LL04				IAmb	IAmb	11 22 47.8	
	comp=Z,9.3nm,1.2s						
GUA01	Guaratinga, BA	37.77	113	eP	P	11 22 35.5	+0.6
ALF01	Guarapari-ES	38.29	120	eP	P	11 22 39.5	+0.2
833A	Chaparral WMA,	38.66	326	P	P	11 22 43.9	+1.6
	baz=140						
CPCT	Cooper Cave	39.24	349	P	P	11 22 48.5	+1.5
CPCT				IAmb	IAmb	11 23 11.4	
	comp=Z,9.9nm,1.4s						
TKL	Tuckaleechee C	39.30	350	P	P	11 22 48.2	+0.7
TKL				IAmb	IAmb	11 22 49.0	
	comp=Z,16nm,1.5s						
SWET	Sewanee	39.31	347	P	P	11 22 47.8	+0.1
SWET				IAmb	IAmb	11 23 16.2	
	comp=Z,11nm,1.4s						
RCBR	Riachuelo	39.82	95	eP	P	11 22 52.9	+0.7
T59A	Double "B" Far	39.92	358	P	P	11 22 53.1	+0.5
T59A				IAmb	IAmb	11 22 56.0	
	comp=Z,10nm,0.8s						
V48A	Smith Brothers	40.02	346	P	P	11 22 54.1	+0.6
LL02	Futaleuf	40.05	176	P	P	11 22 52.9	-0.7
LL02					pP	11 23 23.4	+0.9
LL02				sP	sP	11 23 36.1	-1.2
T57A	Hurt	40.05	356	P	P	11 22 55.1	+1.4
T57A				IAmb	IAmb	11 23 08.3	
	comp=Z,9.1nm,1.2s						
TZTN	Tazewell	40.13	350	P	P	11 22 55.1	+0.8
	baz=168						
JCT	Junction City	40.54	327	P	P	11 22 56.6	-1.3
WHTX	Lake Whitney,	40.55	331	P	P	11 22 59.3	+1.4
	baz=145						
WVT	Waverly	40.65	345	P	P	11 22 58.0	-0.6
WVT				IAmb	IAmb	11 22 59.3	
	comp=Z,11nm,1.5s						
T50A	Nancy	40.82	349	P	P	11 23 00.8	+0.8
MIAR	Mount Ida	41.05	337	P	P	11 23 02.6	+0.7
	baz=152						
S51A	Beattyville	41.20	351	P	P	11 23 02.4	-0.7
WHAR	Wooly Hollow	41.24	339	P	P	11 23 03.4	0.0
WHAR				IAmb	IAmb	11 23 04.0	
	comp=Z,5.8nm,0.5s						
T47A	Sharon Grove	41.28	346	P	P	11 23 03.5	-0.3
T47A				IAmb	IAmb	11 23 05.4	
	comp=Z,3.9nm,0.5s						
LCAR	Lake Charles	41.56	341	P	P	11 23 06.4	+0.4
FCAR	Ozark Folk Cen	41.72	340	P	P	11 23 07.2	-0.2
TXAR	Lajitas Array	41.92	322	P	P	11 23 11.2	+2.0
	comp=Z,1.0nm,0.6s,baz=146,slow=9.0,SNR=28						
TXAR				pP	pP	11 23 38.8	+0.3
	comp=Z,0.3nm,0.6s,baz=148,slow=8.6,SNR=1.9						
TXAR				PcP	PcP	11 25 03.8	+1.3
	comp=Z,1.1nm,0.7s,baz=154,slow=7.0,SNR=7.0						
	comp=Z,1.0nm,0.6s						
TXAR	Lajitas Array	41.92	322	P	P	11 23 10.8	+1.6
TX31	Lajitas Ar. Si	41.92	322	P	P	11 23 10.8	+1.6
TX31				IAmb	IAmb	11 23 11.8	
	comp=Z,16nm,1.4s						
TX32	Lajitas Array	41.92	322	P	P	11 23 10.8	+1.5
ABTX	Abilene, Hawle	42.15	329	P	P	11 23 12.8	+1.9
ABTX				IAmb	IAmb	11 23 13.3	
	comp=Z,5.7nm,0.7s						
ABTX	Abilene, Hawle	42.15	329	P	P	11 23 11.6	+0.7
	baz=143						
CGM3	Cape Girardeau	42.24	343	P	P	11 23 11.7	+0.1
T42A	Van Buren	42.42	342	P	P	11 23 12.4	-0.7
P57A	Homestead Farm	42.45	357	P	P	11 23 13.7	+0.5
WTFS	Witchita Falls	42.49	332	P	P	11 23 13.6	-0.1
WTFS				IAmb	IAmb	11 23 16.3	
	comp=Z,19nm,1.5s						
S44A	Carbondale	42.50	344	P	P	11 23 13.1	-0.6
S44A				IAmb	IAmb	11 23 15.1	
	comp=Z,7.5nm,0.8s						
SIUC	Southern Illin	42.51	344	P	P	11 23 13.6	-0.2
SIUC				IAmb	IAmb	11 23 15.7	
	comp=Z,8.7nm,0.8s						
HHAR	Hobbs	42.72	338	P	P	11 23 15.8	+0.3
W35A	Tecumseh	42.92	334	P	P	11 23 17.4	+0.3
W35A				IAmb	IAmb	11 23 18.3	
	comp=Z,7.7nm,0.6s						
U38A	Gravette	43.03	338	P	P	11 23 18.2	+0.2
RLO	Rose Lookout	43.03	337	P	P	11 23 18.5	+0.5
RLO				IAmb	IAmb	11 23 22.2	
	comp=Z,12nm,1.3s						
FVM	French Village	43.10	343	P	P	11 23 19.0	+0.5
FVM				IAmb	IAmb	11 23 19.4	
	comp=Z,24nm,1.4s						
FNO	Franklin	43.24	334	P	P	11 23 21.0	+1.3
FNO				IAmb	IAmb	11 23 21.3	
	comp=Z,11nm,0.5s						
CCM	Cathedral Cave	43.41	342	P	P	11 23 20.8	-0.2
CCM	Cathedral Cave	43.41	342	P	P	11 23 21.6	+0.5
	baz=157						
WMOK	Wichita Mounta	43.44	332	P	P	11 23 21.6	+0.3
WMOK	Wichita Mounta	43.44	332	P	P	11 23 22.1	+0.7
	baz=145						
POST	Post	43.46	328	P	P	11 23 22.5	+0.9
POST				IAmb	IAmb	11 23 23.8	
	comp=Z,6.3nm,1.0s						
OK030	Cody Creek RV	43.54	335	P	P	11 23 22.6	+0.4
OK030				IAmb	IAmb	11 23 23.1	
	comp=Z,6.5nm,0.6s						
OK031	S. Brethren Rd	43.59	335	P	P	11 23 22.9	+0.4
OK031				IAmb	IAmb	11 23 48.2	
	comp=Z,16nm,1.5s						
ACSO	Alum Creek Sta	43.65	352	P	P	11 23 23.6	+0.7
	baz=170						
S39A	Bolivar	43.76	340	P	P	11 23 23.7	-0.1
O48B	Farmland	44.02	350	P	P	11 23 26.8	+0.9
	baz=166						
CLNB	Carlsbad	44.16	325	P	P	11 23 26.4	-0.9
CLNB				pP	pP	11 23 56.1	-0.6
HTMS	Hat Mesa	44.18	325	P	P	11 23 27.0	-0.4
GDL2	Guadalupe Moun	44.40	325	P	P	11 23 31.7	+2.6
P43A	Skaggs, Pawnee	44.40	345	P	P	11 23 29.3	+0.4
BLOK	Blackwell	44.43	335	P	P	11 23 28.9	-0.4
BLOK				IAmb	IAmb	11 23 41.8	
	comp=Z,16nm,1.4s						
M55A	Ridgway	44.47	357	P	P	11 23 29.8	+0.4
M55A				IAmb	IAmb	11 23 50.4	
	comp=Z,14nm,1.4s						
SFIN	Lafayette	44.52	348	P	P	11 23 29.5	-0.3
CROK	Carrier	44.55	334	P	P	11 23 30.6	+0.4
CROK				IAmb	IAmb	11 23 32.9	
	comp=Z,8.2nm,0.6s						
MNTX	Cornudas Mount	44.64	323	P	P	11 23 32.4	+1.4
	baz=135						
N47A	Urbana	44.73	349	P	P	11 23 31.7	+0.2
N47A				IAmb	IAmb	11 23 32.8	
	comp=Z,10.0nm,0.7s						
MSTX	Muleshoe	44.83	328	P	P	11 23 31.8	-0.8
MSTX					pP	11 24 01.6	-0.6
MSTX				sP	sP	11 24 14.9	-1.8
MSTX	Muleshoe	44.83	328	P	P	11 23 33.7	+1.1
	baz=140						
U32A	Winter Ranch,	44.89	333	P	P	11 23 33.3	+0.4
OK032	Salt Plains WL	44.90	334	P	P	11 23 32.9	0.0
AMTX	Amarillo	44.97	329	P	P	11 23 32.5	-1.1
AMTX					pP	11 24 02.7	-0.5
HDIL	Hopedale	45.20	345	P	P	11 23 34.6	-0.6
	baz=161						
L61B	Northampton	45.45	3	P	P	11 23 38.1	+1.0
	baz=184						
K57A	Scipio Center	45.65	359	P	P	11 23 38.3	-0.4
K57A					pP	11 24 10.5	+2.2
J56A	Wolcott	46.20	359	P	P	11 23 42.3	-0.6
J56A				IAmb	IAmb	11 23 47.4	
	comp=Z,7.5nm,0.9s						
J56A					pP	11 24 13.0	+0.3
J56A				sP	sP	11 24 26.8	-0.4
J58A	Remsen	46.27	0	P	P	11 23 44.8	+1.2
J58A				IAmb	IAmb	11 24 04.4	
	comp=Z,17nm,1.4s						
J58A					pP	11 24 13.1	-0.2
J57A	Williamstown	46.32	360	P	P	11 23 45.5	+1.6
J57A					pP	11 24 14.0	+0.4
121A	Cookes Peak, D	46.68	322	P	P	11 23 47.2	+0.1
121A				IAmb	IAmb	11 23 51.2	
	comp=Z,16nm,1.5s						
121A	Cookes Peak, D	46.68	322	P	P	11 23 48.9	+1.8
	baz=133						
319A	Douglas	46.85	320	P	P	11 23 49.0	+0.5
319A				IAmb	IAmb	11 23 52.1	
	comp=Z,29nm,1.5s						
J47A	Sunmer	46.87	351	P	P	11 23 48.5	+0.3
J47A				IAmb	IAmb	11 23 50.0	
	comp=Z,15nm,0.9s						
BNM	Barren Site	47.12	324	P	P	11 23 50.6	0.0
L40A	Anamosa	47.12	344	P	P	11 23 49.4	-0.8
L40A				IAmb	IAmb	11 23 51.6	
	comp=Z,11nm,0.9s						
Y22D	IRIS PASSCAL I	47.23	324	P	P	11 23 54.2	+2.8
	baz=135						
Y22F	Passcal Instru	47.23	324	P	P	11 23 54.4	+3.0
	baz=135						
CBKS	Cedar Bluff	47.24	334	P	P	11 23 52.7	+1.5
	baz=146						
DUN6	Lazy B Ranch	47.50	321	P	P	11 23 53.4	-0.1
LONY	Lake Ozonia	47.54	1	P	P	11 23 55.5	+2.1
	baz=182						
ANMO	Albuquerque	47.59	325	P	P	11 23 54.0	-0.3
ANMO				IAmb	IAmb	11 23 56.9	
	comp=Z,5.8nm,0.8s						
ANMO				pP	pP	11 24 24.1	0.0
ANMO				sP	sP	11 24 37.7	-0.9
ANMO	Albuquerque	47.59	325	P	P	11 23 56.6	+2.4
	baz=136						
JFWS	Jewell Farm	47.66	346	P	P	11 23 57.2	+2.8
	baz=160						
H62A	Milan	47.66	4	P	P	11 23 54.4	0.0
H62A				IAmb	IAmb	11 23 57.2	
	comp=Z,29nm,1.4s						
FRNY	Flat Rock	47.78	2	P	P	11 23 54.6	-0.7
FRNY				IAmb	IAmb	11 23 57.1	
	comp=Z,14nm,1.4s						
GO09	Cerro Castillo	48.07	177	P	P	11 23 55.9	-1.5
GO09				IAmb	IAmb	11 24 05.8	
	comp=Z,27nm,1.4s						
K38A	Parkersburg	48.09	343	P	P	11 23 57.7	0.0
K38A				IAmb	IAmb	11 24 19.0	
	comp=Z,11nm,1.1s						
T25A	Trinidad	48.11	329	P	P	11 24 00.5	+2.3
	baz=140						
I42A	Draeger Farm,	48.27	347	P	P	11 23 59.3	+0.2
TUC	Tucson	48.42	319	P	P	11 24 02.0	+1.5
	baz=130						
MNTQ	Montreal, Queb	48.45	2	P	P	11 24 00.8	+0.4
MNTQ					pP	11 24 30.9	+0.7
MNTQ				sP	sP	11 24 43.8	-1.0
BGNE	Belgrade	48.79	338	P	P	11 24 02.5	-0.7
BGNE				IAmb	IAmb	11 24 05.0	
	comp=Z,16nm,0.8s						
BGNE	Belgrade	48.79	338	P	P	11 24 03.9	+0.8
	baz=150						
SDCO	Great Sand Dun	49.13	329	P	P	11 24 05.8	-0.3
SDCO				IAmb	IAmb	11 24 09.4	
	comp=Z,9.8nm,1.2s						
SDCO					pP	11 24 34.8	-1.4
SDCO	Great Sand Dun	49.13	329	P	P	11 24 08.0	+1.8
	baz=139,SNR=9.8						
214A	Organ Pipe Nat	49.54	318	P	P	11 24 10.8	+1.8
	baz=128						
W18A	Petrified Fore	49.62	323	P	P	11 24 11.6	+1.8
	baz=133						
S22A	4UR Ranch, Cre	49.84	328	P	P	11 24 12.1	+0.7
S22A	4UR Ranch, Cre	49.84	328	P	P	11 24 13.4	+1.9
	baz=138						
Q24A	Divide	49.88	330	P	P	11 24 13.5	+1.7
	baz=140						
OGNE	Ogallala	49.99	334	P	P	11 24 13.7	+1.4
	baz=145						
K31A	O'Neill	50.06	338	P	P	11 24 12.0	-0.7

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K31A                                IAmb   IAmb   11 24 14.2
      comp=Z,12nm,0.8s
X16A  Lo Mia Camp, P     50.20 321  P      P      11 24 13.4  -0.8
X16A                                IAmb   IAmb   11 24 17.8
      comp=Z,11nm,1.2s
ECSD  EROS Data Cent     50.27 340  P      P      11 24 14.4 +0.1
ECSD                                IAmb   IAmb   11 24 14.9
      comp=Z,9.3nm,1.4s
ECSD  EROS Data Cent     50.27 340  P      P      11 24 14.4 +0.1
      baz=152
MVCO  Mesa Verde         50.36 326  P      P      11 24 14.4  -1.0
MVCO                                IAmb   IAmb   11 24 17.7
      comp=Z,11nm,1.4s
MVCO  Mesa Verde         50.36 326  P      P      11 24 16.4 +1.0
      baz=136
ISCO  Idaho Springs      50.75 330  P      P      11 24 19.6 +1.3
ISCO  Idaho Springs      50.75 330  P      P      11 24 20.0 +1.6
      baz=140
WUAZ  Wupatki            50.88 322  P      P      11 24 18.4  -0.8
WUAZ                                IAmb   IAmb   11 24 22.8
      comp=Z,21nm,1.2s
WUAZ  Wupatki            50.88 322  P      P      11 24 21.1 +1.9
      baz=132,SNR=7.4
Y14A  Wickenburg         50.90 320  P      P      11 24 19.2   0.0
PV13  Radium Mtn., P     51.22 327  P      P      11 24 23.1 +1.3
PV13                                IAmb   IAmb   11 24 24.7
      comp=Z,17nm,1.3s
PV13                                       pP     11 24 52.0   0.0
PV13                                sP     sP     11 25 08.2 +1.8
F36A  Milaca             51.26 344  P      P      11 24 21.0  -0.6
F36A                                IAmb   IAmb   11 24 22.4
      comp=Z,7.0nm,1.2s
SUSD  Miller             51.71 339  P      P      11 24 25.3 +0.2
      baz=150
N23A  Red Feather La     51.76 331  P      P      11 24 28.2 +2.5
      baz=140
W13A  Hualapai Mount     52.19 320  P      P      11 24 28.3  -0.7
W13A                                IAmb   IAmb   11 24 32.8
      comp=Z,11nm,1.3s
EYMN  Ely                52.69 347  P      P      11 24 31.4  -0.8
EYMN                                IAmb   IAmb   11 24 32.9
      comp=Z,8.9nm,1.4s
EYMN  Ely                52.69 347  P      P      11 24 32.5 +0.2
      baz=160
KNB   Kanab              52.75 323  P      P      11 24 32.6  -0.5
KNB                                 IAmb   IAmb   11 24 37.7
      comp=Z,14nm,1.4s
SRU   San Rafael Swe     52.83 326  P      P      11 24 34.1 +0.5
TPFO  Pinon Flats        52.99 317  P      P      11 24 36.6 +1.8
      baz=125
PFO   Pinyon Flats O     52.99 317  P      P      11 24 36.8 +1.9
      baz=125
MTPU  Mount Pierson      53.05 324  P      P      11 24 35.6 +0.1
MTPU                                IAmb   IAmb   11 24 42.6
      comp=Z,3.3nm,0.7s
GMRC  Granite Mounta     53.15 319  P      P      11 24 37.0 +1.0
      baz=127
V12A  Nelson             53.20 320  P      P      11 24 36.4 +0.1
V12A                                IAmb   IAmb   11 24 39.0
      comp=Z,7.8nm,0.9s
P17A  Butcher Ranch,     53.20 326  P      P      11 24 37.8 +1.4
SZCU  Shurtz Canyon      53.29 323  P      P      11 24 37.0   0.0
SZCU                                IAmb   IAmb   11 24 40.3
      comp=Z,12nm,1.5s
K22A  Casper             53.38 332  P      P      11 24 39.0 +1.4
      baz=140
RSSD  Black Hills        53.43 335  P      P      11 24 38.6 +0.6
RSSD                                IAmb   IAmb   11 24 41.1
      comp=Z,8.9nm,1.3s
RSSD  Black Hills        53.43 335  P      P      11 24 39.2 +1.2
      baz=144
MURC  Murrieta           53.49 317  P      P      11 24 40.0 +1.6
      baz=125
HEC   Hector,Ludlow      53.62 318  P      P      11 24 40.5 +1.1
      baz=126
SHPR  Sheep Range        53.87 321  P      P      11 24 41.6 +0.3
BSUT  Blindstream Ca     53.96 327  P      P      11 24 42.9 +0.8
BSUT                                IAmb   IAmb   11 24 45.1
      comp=Z,9.5nm,1.2s
AGMN  Agassiz Nation     54.14 344  P      P      11 24 42.8 +0.1
AGMN                                IAmb   IAmb   11 24 43.4
      comp=Z,5.2nm,0.6s
AGMN  Agassiz Nation     54.14 344  P      P      11 24 43.2 +0.4
      baz=155
E28A  Huff               54.17 339  P      P      11 24 44.0 +0.9
GSC   Goldstone, Bar     54.21 319  P      P      11 24 45.0 +1.3
      baz=126
GWY   Greenwater Val     54.64 319  P      P      11 24 46.2  -0.7
GWY                                 IAmb   IAmb   11 24 49.8
      comp=Z,5.2nm,1.1s
EDW2  Edwards Air Fo     54.76 317  P      P      11 24 48.2 +0.6
      baz=125
TPNV  Topopah Spring     54.83 320  P      P      11 24 47.5  -0.8
TPNV                                IAmb   IAmb   11 24 51.8
      comp=Z,7.6nm,1.0s
TPNV  Topopah Spring     54.83 320  P      P      11 24 50.4 +2.2
      baz=128
DUG   Dugway, Tooele     54.86 326  P      P      11 24 47.4  -1.0
DUG                                 IAmb   IAmb   11 24 51.7
      comp=Z,15nm,1.4s
DUG   Dugway, Tooele     54.86 326  P      P      11 24 49.9 +1.5
      baz=133
MDND  Maddock            54.89 341  P      P      11 24 48.1  -0.1
MDND  Maddock            54.89 341  P      P      11 24 49.1 +0.9
      baz=150
FURC  Furnace Creek,     54.94 320  P      P      11 24 50.1 +1.4
      baz=127
BW06  Boulder Array      54.94 330  P      P      11 24 49.3 +0.3
BW06  Boulder Array      54.94 330  P      P      11 24 50.3 +1.3
      baz=137
PD31  Pinedale Array     54.94 330  P      P      11 24 49.0   0.0
PDAR  Pinedale Array     54.94 330  P      P      11 24 49.9 +0.9
      comp=Z,0.5nm,0.6s,baz=139,slow=9.2,SNR=6.8
PDAR                                pP     pP     11 25 18.9  -0.7
      comp=Z,0.4nm,0.5s,baz=115,slow=10,SNR=3.2
      comp=Z,0.5nm,0.6s
PDAR  Pinedale Array     54.94 330  P      P      11 24 48.4  -0.6
SPR3  Spring Creek 3     54.94 324  P      P      11 24 50.6 +1.4
SPR3                                IAmb   IAmb   11 24 52.0
      comp=Z,14nm,1.3s
WCT   Wildcat Mounta     54.98 320  P      P      11 24 50.1 +0.9
WCT                                 IAmb   IAmb   11 24 52.7
      comp=Z,12nm,1.3s
HWUT  Hardware Ranch     55.15 328  P      P      11 24 51.5 +1.0
R11B  Troy Canyon, C     55.28 322  P      P      11 24 53.2 +1.7
      baz=129
GRAC  Grapevine Rang     55.58 320  P      P      11 24 54.1 +0.7
      baz=127
CWC   Cottonwood Cre     55.72 319  P      P      11 24 55.5 +1.0
      baz=126
LCH   Last Change Ra     55.90 320  P      P      11 24 57.9 +2.1
LCH                                 IAmb   IAmb   11 24 59.1
      comp=Z,9.9nm,1.4s
ULM   Lac du Bonnet      55.91 345  P      P      11 24 55.0  -0.5
      comp=Z,3.6nm,0.6s,baz=170,slow=7.9,SNR=5.5
      comp=Z,3.6nm,0.6s
ULM   Lac du Bonnet      55.91 345  P      P      11 24 55.5 +0.1
ULM                                 IAmb   IAmb   11 24 56.9
      comp=Z,4.4nm,0.7s
VES   Vestal, Richgr     56.04 318  P      P      11 24 58.1 +1.4
      baz=124
DSP   Deep Springs       56.19 320  P      P      11 24 57.9 +0.2
DSP                                 IAmb   IAmb   11 25 00.6
      comp=Z,4.7nm,0.8s
LAO   LASA Array         56.41 335  P      P      11 25 00.6 +1.4
      baz=143
NVAR  Mina Array Bea     57.02 321  P      P      11 25 05.2 +1.4
      comp=Z,3.9nm,0.6s,baz=130,slow=7.6,SNR=30
NVAR                                pP     pP     11 25 33.6  -1.1
      comp=Z,0.5nm,0.6s,baz=73,slow=21,SNR=2.3
NVAR                                sP     sP     11 25 49.7 +0.7
      comp=Z,1.5nm,0.7s,baz=121,slow=6.8,SNR=3.5
      comp=Z,3.9nm,0.6s
GCMT  Greycliff          57.24 332  P      P      11 25 07.0 +1.8
KVN   Kaiserville        57.27 321  P      P      11 25 07.1 +1.6
KVN                                 IAmb   IAmb   11 25 08.3
      comp=Z,8.6nm,1.3s
BMN   Battle Mountai     57.58 323  P      P      11 25 09.3 +1.7
BMN                                 IAmb   IAmb   11 25 09.8
      comp=Z,5.6nm,0.7s
WAKR  Walker             57.79 320  P      P      11 25 10.1 +0.8
WAKR                                IAmb   IAmb   11 25 13.5
      comp=Z,8.0nm,1.3s
HLID  Hailey             58.02 328  P      P      11 25 12.0 +1.3
      baz=133
BOZ   Bozeman (W)        58.02 331  P      P      11 25 11.9 +1.2
BOZ   Bozeman (W)        58.02 331  P      P      11 25 12.1 +1.4
      baz=136
SCHQ  Schefferville      58.23   6  P      P      11 25 12.2 +0.5
      comp=Z,2.3nm,0.8s,baz=201,slow=7.8,SNR=3.9
      comp=Z,2.3nm,0.8s
MFID  Camas Ranch        58.69 327  P      P      11 25 17.2 +2.0
HRY   Holter Researc     58.93 332  P      P      11 25 18.2 +1.3
EGMT  Eagleton           58.96 334  P      P      11 25 18.6 +1.6
      baz=139
ORV   Oroville           59.71 320  P      P      11 25 24.3 +2.0
MCCM  Marconi Confer     59.84 318  P      P      11 25 22.5  -0.6
MSO   Missoula           60.03 331  P      P      11 25 25.8 +1.4
      baz=135
I07A  Izee               61.16 325  P      P      11 25 33.8 +1.7
I07A                                IAmb   IAmb   11 25 35.2
      comp=Z,12nm,1.1s
FFC   Flin Flon          61.60 343  P      P      11 25 35.2 +0.4
NEW   Newport            62.58 330  P      P      11 25 41.4  -0.1
      baz=132
EDM   Edmonton           64.37 336  P      P      11 25 53.7 +0.6
EDM                                 IAmb   IAmb   11 25 54.0
      comp=Z,7.1nm,0.5s
D05A  Enumclaw           64.44 327  P      P      11 25 55.3 +1.7
FRB   Frobisher Bay      66.92   3  P      P      11 26 09.0  -0.1
      comp=Z,3.9nm,0.9s,baz=189,slow=5.3,SNR=9.0
FRB                                 pP     pP     11 26 41.4 +0.5
      comp=Z,2.3nm,0.8s,baz=112,slow=10,SNR=2.6
      comp=Z,3.9nm,0.9s
DBIC  Dimbokro           71.44  82  P      P      11 26 38.0  -0.1
      comp=Z,14nm,0.5s,baz=269,slow=3.7,SNR=22
      comp=Z,14nm,0.5s
DBIC  Dimbokro           71.44  82  P      P      11 26 38.0  -0.1
DBIC                                IAmb   IAmb   11 26 40.8
      comp=Z,15nm,0.8s
YKA   Yellowknife Ar     71.75 342  P      P      11 26 39.4 +0.4
      comp=Z,1.0nm,0.5s,baz=141,slow=6.4,SNR=36
YKA                                 pP     pP     11 27 12.0 +0.9
      comp=Z,1.5nm,1.0s,baz=135,slow=6.9,SNR=3.9
      comp=Z,1.0nm,0.5s
KOTAN Kotaneelee Air     73.40 337  P      P      11 26 50.2 +1.3
      baz=129
LIRD  Liard River Hi     73.78 336  P      P      11 26 52.1 +1.1
      baz=127
V35K  Ketchikan          73.99 331  P      P      11 26 54.2 +1.9
      baz=121
T35M  Bob Quinn          74.20 332  P      P      11 26 55.5 +1.9
      baz=122
DLBC  Dease Lake         74.89 334  P      P      11 26 59.1 +1.5
      baz=123
S34M  Telegraph Cree     75.10 333  P      P      11 27 00.4 +1.7
      baz=122
WRGLY Wrigley            75.16 340  P      P      11 27 00.3 +1.4
      baz=130
WTLY  Watson Lake, Y     75.30 336  P      P      11 27 01.6 +1.8
      baz=124
Q32M  Nakina River       76.16 334  P      P      11 27 06.7 +1.7
      baz=121
R32K  Eaglecrest         76.84 332  P      P      11 27 09.9 +1.3
      baz=119
P33M  Teslin, Yukon      77.04 335  P      P      11 27 11.2 +1.4
      baz=121
PLBC  Pleasant Camp      78.24 333  P      P      11 27 17.8 +1.5
      baz=117
FARO  Faro, Yukon        78.30 336  P      P      11 27 17.9 +1.3
      baz=121
TOA0  Torodi Ar. Sit     78.52  76  P      P      11 27 19.1 +0.3
TOA0                                IAmb   IAmb   11 27 20.1
      comp=Z,8.0nm,1.1s
TORD  Torodi Ar. Bea     78.52  76  P      P      11 27 19.3 +0.6
      comp=Z,2.6nm,0.4s,baz=277,slow=5.5,SNR=25
RES   Resolute Bay       78.55 355  P      P      11 27 18.5 +0.7
RES                                        pP     11 27 51.5 +1.2
RES                                 sP     sP     11 28 04.9 +0.7
M31M  Drury Creek, Y     78.71 336  P      P      11 27 19.8 +0.9
M31M  Drury Creek, Y     78.71 336  P      P      11 27 20.8 +1.9
      baz=120
O30N  Mendenhall         78.73 334  P      P      11 27 20.4 +1.3
      baz=118
N31M  Braeburn, Yuko     78.94 335  P      P      11 27 21.4 +1.2
N31M                                IAmb   IAmb   11 27 34.8
      comp=Z,14nm,1.4s
N31M  Braeburn, Yuko     78.94 335  P      P      11 27 22.1 +1.9
      baz=118
N30M  Aishikik Lake      79.48 335  P      P      11 27 25.2 +2.1
      baz=117
O29M  Mount Kennedy      79.62 333  P      P      11 27 26.1 +2.1
      baz=115
TULEG Thule              79.65   2  P      P      11 27 24.6 +0.9
TULEG                                      pP     11 27 57.6 +1.2
TULEG                               sP     sP     11 28 10.7 +0.5
PNL   Peninsula          79.72 332  P      P      11 27 26.7 +2.2
      baz=115
YUK6  Outpost Mounta     79.80 334  P      P      11 27 26.8 +1.7
      baz=116
M30M  Minto, Yukon       79.87 336  P      P      11 27 26.8 +1.6
M30M                                IAmb   IAmb   11 27 27.3
      comp=Z,10nm,1.4s
M30M                                pP     pP     11 27 57.9  -0.1
M30M  Minto, Yukon       79.87 336  P      P      11 27 27.2 +2.0
      baz=117
YUK4  Talbot Arm         80.10 334  P      P      11 27 28.8 +2.1
      baz=116
M29M  Somme Creek        80.50 335  P      P      11 27 30.7 +2.0
      baz=116
YUK8  Steele Glacier     80.56 334  P      P      11 27 30.9 +1.6
      baz=114
L29M  L29M               80.66 336  P      P      11 27 31.4 +2.0
      baz=116
K29M  Barlow Dome        80.74 337  P      P      11 27 31.7 +1.8
      baz=117
YUK3  Moose Creek        81.07 334  P      P      11 27 33.5 +1.6
      baz=114
F31M  Tsiigehtchic       81.12 341  P      P      11 27 33.0 +1.3
      baz=121,SNR=11
A36M  Sachs Harbour      81.35 346  P      P      11 27 33.1 +0.3
A36M                                IAmb   IAmb   11 27 34.7
      comp=Z,13nm,0.8s
A36M                                       pP     11 28 07.1 +1.5
A36M  Sachs Harbour      81.35 346  P      P      11 27 33.6 +0.7
      baz=130
BVCY  Beaver Creek       81.50 335  P      P      11 27 35.7 +1.8
      baz=114
INK   Inuvik             81.50 341  P      P      11 27 35.3 +1.6
INK                                 IAmb   IAmb   11 27 36.4
      comp=Z,16nm,1.3s
INK   Inuvik             81.50 341  P      P      11 27 35.0 +1.3
      baz=121,SNR=10
DAWY  Dawson             81.58 337  P      P      11 27 34.8 +0.5
DAWY  Dawson             81.58 337  P      P      11 27 35.6 +1.3
      baz=115
EPYK  Eagle Plains       81.61 339  P      P      11 27 35.9 +1.5
EPYK                                IAmb   IAmb   11 27 37.0
      comp=Z,13nm,1.3s
EPYK  Eagle Plains       81.61 339  P      P      11 27 35.6 +1.2
      baz=118
I29M  Ogilvie Camp,      81.73 338  P      P      11 27 35.8 +0.8
I29M                                IAmb   IAmb   11 27 37.1
      comp=Z,7.8nm,1.1s
I29M                                pP     pP     11 28 06.5  -1.4
I29M                                sP     sP     11 28 19.6  -2.0
I29M  Ogilvie Camp,      81.73 338  P      P      11 27 36.7 +1.6
      baz=116
G30M  tAoh Zraii Nji     81.73 340  P      P      11 27 37.0 +2.0
      baz=119
M27K  Edge Creek, AK     81.92 334  P      P      11 27 37.2 +1.0
      baz=113
MCARA McCarthy VSAT      82.05 333  P      P      11 27 38.7 +1.9
      baz=112
BCAR  Beaver Creek A     82.15 335  P      P      11 27 39.1 +1.8
L27K  Beaver Creek,      82.17 335  P      P      11 27 39.3 +1.9
      baz=113
M26K  Nabesna, AK        82.41 334  P      P      11 27 39.8 +1.1
      baz=112
EGAK  Eagle              82.58 337  P      P      11 27 40.9 +1.5
EGAK                                IAmb   IAmb   11 27 41.9
      comp=Z,10.0nm,0.9s
EGAK                                       pP     11 28 11.7  -0.6
EGAK  Eagle              82.58 337  P      P      11 27 40.7 +1.3
      baz=114,SNR=9.0
K27K  Chicken            82.65 336  P      P      11 27 41.5 +1.7
      baz=113
L26K  Log Cabin Wild     82.80 335  P      P      11 27 42.2 +1.6
L26K  Log Cabin Wild     82.80 335  P      P      11 27 41.7 +1.1
      baz=112
N25K  Chitina, Valde     82.83 333  P      P      11 27 42.5 +1.6
      baz=110
MENT  Mentasta           82.92 335  P      P      11 27 42.3 +1.0
I27K  Kandik River       83.08 338  P      P      11 27 43.4 +1.3
      baz=113
H27K  Steamboat Moun     83.30 338  P      P      11 27 44.3 +1.1
      baz=114
DOT   Dot Lake           83.32 335  P      P      11 27 45.0 +1.6
HARP  HAARP              83.35 334  P      P      11 27 44.5 +0.9
      baz=110
KLU   Klutina            83.39 333  P      P      11 27 44.5 +0.7
      baz=109
SCRK  Sand Creek         83.41 336  P      P      11 27 44.6 +0.7
      baz=111
I26K  Coal Creek Min     83.56 337  P      P      11 27 45.5 +1.0
      baz=112
G27K  Doyon Strip        83.58 339  P      P      11 27 45.4 +0.8
      baz=113
RIDG  Independent Ri     83.68 335  P      P      11 27 46.1 +0.9
      baz=110
PAX   Paxson             83.68 334  P      P      11 27 45.8 +0.6
PAX   Paxson             83.68 334  P      P      11 27 46.3 +1.1
      baz=110
M24K  Tolsona, Glenn     83.71 334  P      P      11 27 46.4 +1.1
M24K  Tolsona, Glenn     83.71 334  P      P      11 27 47.0 +1.7
      baz=109
K24K  Donnelly Dome      84.09 335  P      P      11 27 48.2 +0.9
      baz=109
E27K  Coleen River       84.11 340  P      P      11 27 48.5 +1.2
      baz=114
SCM   Sheep Creek Mo     84.14 333  P      P      11 27 48.6 +1.1
      baz=108
M23K  Glacier View       84.31 333  P      P      11 27 49.3 +0.9
      baz=107
PWL   Port Wells         84.31 332  P      P      11 27 49.2 +0.8
      baz=107
SML   Sawmill            84.58 333  P      P      11 27 51.0 +1.2
      baz=107
HDA   Harding Lake       84.78 336  P      P      11 27 51.1 +0.5
      baz=108
ILAR  Eielson Array      84.86 336  P      P      11 27 51.6 +0.5
      comp=Z,1.5nm,0.8s,baz=113,slow=4.1,SNR=18
ILAR                                pP     pP     11 28 23.6  -0.6
      comp=Z,0.7nm,0.8s,baz=108,slow=4.3,SNR=4.4
      comp=Z,1.5nm,0.8s
PMR   Palmer             84.89 333  P      P      11 27 52.0 +0.8
      baz=106
RC01  Rabbit Creek A     85.03 332  P      P      11 27 52.8 +0.8
      baz=106
BRSE  Bradley Lake S     85.16 331  P      P      11 27 53.2 +0.5
      baz=104
POKR  Poker Plat Res     85.19 336  P      P      11 27 53.5 +0.8
      baz=108
G25K  Bearman Lake       85.21 338  P      P      11 27 54.4 +1.7
      baz=109
COLA  College            85.29 336  P      P      11 27 54.4 +1.2
      baz=108
TCOL  CIGO, UAF Yank     85.29 336  P      P      11 27 54.3 +1.1
      baz=108
F25K  Christian Rive     85.32 339  P      P      11 27 54.9 +1.6
      baz=110
C27K  Jago River         85.38 341  P      P      11 27 55.0 +1.5
      baz=112
MCK   McKinley           85.41 335  P      P      11 27 54.8 +1.0
      baz=106
MDM   Murphy Dome        85.47 336  P      P      11 27 55.0 +0.9
MDM                                 IAmb   IAmb   11 27 56.5
      comp=Z,5.4nm,0.9s
E25K  Arctic Village     85.47 339  P      P      11 27 55.9 +1.9
      baz=110
HOM   Homer              85.58 330  P      P      11 27 55.9 +1.2
      baz=104
H24K  Noodor Dome        85.59 337  P      P      11 27 56.3 +1.6
      baz=108
SUA   Susitna One        85.60 332  P      P      11 27 56.5 +1.5
      baz=105
CUT   Chulitna           85.63 333  P      P      11 27 55.9 +1.0
      baz=105
G24K  Hadweenzic Riv     85.70 338  P      P      11 27 56.7 +1.5
      baz=108
NEA2  Nenana             85.71 336  P      P      11 27 56.5 +1.2
NEA2                                IAmb   IAmb   11 27 57.6
      comp=Z,21nm,1.4s
NEA2                                       pP     11 28 27.0  -1.4
NEA2                                sP     sP     11 28 43.1 +1.0
NEA2  Nenana             85.71 336  P      P      11 27 56.2 +0.9
      baz=106,SNR=6.6
Q20K  Shuyak Island      85.72 329  P      P      11 27 57.4 +2.0
      baz=103
C26K  Camden Bay         85.88 341  P      P      11 27 57.9 +2.0
      baz=111
TRF   Thorofare Moun     85.91 334  P      P      11 27 57.9 +1.4
TRF   Thorofare Moun     85.91 334  P      P      11 27 57.9 +1.4
      baz=105
I23K  Minto, Yukon-K     85.98 336  P      P      11 27 58.2 +1.7
I23K                                IAmb   IAmb   11 27 58.4
      comp=Z,5.2nm,0.8s
I23K  Minto, Yukon-K     85.98 336  P      P      11 27 57.8 +1.2
      baz=106,SNR=5.3
SKT   Skwentna           86.09 333  P      P      11 27 58.1 +0.9
SKT   Skwentna           86.09 333  P      P      11 27 58.4 +1.2
      baz=104,SNR=15
F24K  Squaw Lake         86.11 338  P      P      11 27 58.9 +1.6
      baz=108
SPU   Mount Spurr        86.14 332  P      P      11 27 58.3 +0.8
SPCR  Spurr Chakacha     86.22 332  P      P      11 27 59.0 +1.1
      baz=103
H23K  Yukon River        86.25 337  P      P      11 27 58.8 +0.9
      baz=106
BPAW  Bear Paw Mtn.      86.38 335  P      P      11 27 59.3 +0.7
BPAW                                IAmb   IAmb   11 28 00.6
      comp=Z,19nm,1.4s
BPAW                                       pP     11 28 32.5 +0.7
BPAW                                sP     sP     11 28 47.8 +2.3
BPAW  Bear Paw Mtn.      86.38 335  P      P      11 27 59.8 +1.2
      baz=105,SNR=7.3
E24K  Your Creek         86.49 339  P      P      11 28 00.6 +1.4
      baz=107
MLY   Manley             86.51 336  P      P      11 28 00.8 +1.5
MLY                                 IAmb   IAmb   11 28 01.3
      comp=Z,5.5nm,0.6s
MLY                                 pP     pP     11 28 32.7 +0.2
MLY                                 sP     sP     11 28 48.0 +1.8
MLY   Manley             86.51 336  P      P      11 28 00.3 +1.1
      baz=105,SNR=9.9
PPLA  Purkeypile         86.61 334  P      P      11 28 00.5 +0.6
PPLA                                IAmb   IAmb   11 28 01.5
      comp=Z,9.5nm,0.7s
PPLA                                pP     pP     11 28 32.2  -0.9
PPLA  Purkeypile         86.61 334  P      P      11 28 01.1 +1.2
      baz=104
G23K  Bananza Creek      86.67 337  P      P      11 28 01.8 +1.8
      baz=106
CAST  Castle Rocks       86.68 334  P      P      11 28 01.2 +1.0
CAST                                IAmb   IAmb   11 28 02.1
      comp=Z,19nm,1.5s
CAST                                       pP     11 28 34.7 +1.5
CAST                                sP     sP     11 28 48.6 +1.7
CAST  Castle Rocks       86.68 334  P      P      11 28 00.9 +0.8
      baz=104,SNR=5.8
M20K  Styx River         86.81 332  P      P      11 28 01.8 +0.9
      baz=103
BNI   Bardonecchia       86.85  45  P      P      11 28 02.2 +0.8
COLD  Coldfoot           86.88 338  P      P      11 28 02.5 +1.6
      baz=106
CHUM  Lake Minchumin     86.89 334  P      P      11 28 01.7 +0.6
      baz=103
E23K  Chandalar          86.89 339  P      P      11 28 02.4 +1.3
      baz=106
O19K  Port Alsworth      87.02 331  P      P      11 28 03.0 +1.3
      baz=101
C24K  Franklin Bluff     87.05 341  P      P      11 28 03.6 +1.9
      baz=107
I21K  Tanana             87.06 336  P      P      11 28 02.6 +0.8
      baz=104
Q18K  Katmai Hardscr     87.06 329  P      P      11 28 03.1 +0.9
      baz=101
N19K  Bonanza Creek      87.22 331  P      P      11 28 03.7 +0.9
      baz=101
L20K  Farewell, AK       87.28 333  P      P      11 28 04.0 +1.0
      baz=102
P18K  Big Mountain,      87.31 330  P      P      11 28 04.0 +0.7
      baz=101
O18K  Koktuh Hills       87.39 330  P      P      11 28 04.4 +0.8
      baz=101
M19K  Big River Lodg     87.39 332  P      P      11 28 04.5 +1.0
      baz=102
Q17K  Contact Creek      87.45 329  P      P      11 28 05.2 +1.2
      baz=100
H21K  Melozitna Rive     87.51 336  P      P      11 28 04.8 +0.8
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      baz=103
D23K  Nanushuk River   87.52 340  P       P        11 28 05.9 +1.9
      baz=105
K20K  Telida           87.54 334  P       P        11 28 05.0 +0.8
      baz=102
R17K  Ugashik Creek    87.61 328  P       P        11 28 05.8 +1.2
      baz=100
L19K  White Mountain   87.66 333  P       P        11 28 05.9 +1.1
      baz=101
F22K  John River       87.69 338  P       P        11 28 06.5 +1.6
      baz=104
E22K  Anaktuvuk Pass   87.71 339  P       P        11 28 06.5 +1.6
      baz=104
Q16K  King Salmon      87.92 329  P       P        11 28 07.8 +1.8
      baz=99
G21K  Allakaket        87.97 337  P       P        11 28 08.2 +2.0
      baz=102
F21K  Alatna River     88.12 338  P       P        11 28 08.9 +2.0
      baz=102
R16K  Pilot Point      88.22 328  P       P        11 28 08.4 +0.8
      baz=98
O17K  Koliganek Bris   88.31 330  P       P        11 28 09.1 +1.2
      baz=99
TTA   Tatalina         88.33 333  P       P        11 28 08.7 +0.7
      baz=100
P16K  Nushagak River   88.66 329  P       P        11 28 10.6 +1.1
      baz=98
O16K  Kokwok River B   88.79 330  P       P        11 28 11.9 +1.7
      baz=98
GCSA  Galena City Sc   89.01 335  P       P        11 28 13.0 +2.0
      baz=99
N16K  Nishlik Lake     89.25 331  P       P        11 28 13.7 +1.3
      baz=98
A21K  Barrow           90.01 341  P       P        11 28 17.2 +1.6
      baz=100
S12K  Black Hills      90.47 326  P       P        11 28 18.9 +0.8
      baz=95
ZALV  Zalesovo Beam   126.89  14  PKP     PKPdf    11 34 20.3 +0.7
      comp=Z,1.3nm,0.4s,baz=290,slow=4.2,SNR=5.9
ZALV                              pPKP    pPKPdf   11 34 55.2 +0.7
      comp=Z,3.7nm,0.7s,baz=277,slow=2.5,SNR=8.3
MKAR  Makanchi Array  132.50  20  PKP     PKPdf    11 34 31.4 +0.8
      comp=Z,0.8nm,0.6s,baz=18,slow=3.9,SNR=3.6
MKAR                              pPKP    pPKPdf   11 35 06.6 +1.2
      comp=Z,1.3nm,0.7s,baz=325,slow=1.9,SNR=2.2
MKAR                              SKPbc   SKPbc    11 37 45.2 -0.6
      comp=Z,0.9nm,0.9s,baz=357,slow=4.0,SNR=3.8
KSRS  Korea Array     139.51 331  PKP     PKPdf    11 34 44.2 +0.4
      comp=Z,1.3nm,0.7s,baz=356,slow=1.7,SNR=5.7
KSRS                              pPKP    pPKPdf   11 35 20.6 +1.9
      comp=Z,1.4nm,0.7s,baz=25,slow=1.8,SNR=4.2
ASAR  Alice Springs   140.71 226  PKhKP   PKPpre   11 34 39.7
      comp=Z,1.2nm,0.6s,baz=122,slow=3.9,SNR=22
ASAR                              PKP     PKPdf    11 34 47.0 +0.6
      comp=Z,0.7nm,0.5s,baz=119,slow=2.5,SNR=5.8
WB2   Warramunga Arr  142.59 231  PKPdf   PKPdf    11 34 46.6 -3.3
WB2                               pPKPdf  pPKPdf   11 35 23.1 -1.7
WRAB  Tennant Creek   142.60 231  PKPdf   PKPdf    11 34 47.2 -2.7
WRAB                              pPKPdf  pPKPdf   11 35 22.9 -1.8
WRA   Warramunga Arr  142.60 231  PKhKP   PKPpre   11 34 46.3
      comp=Z,2.9nm,0.6s,baz=122,slow=2.8,SNR=46
WRA   Warramunga Arr  142.60 231  PKPdf   PKPdf    11 34 46.6 -3.3
WRA                               pPKPdf  pPKPdf   11 35 22.9 -1.8
WB0   Warramunga Arr  142.66 231  PKPdf   PKPdf    11 34 47.2 -2.8
WB0                               pPKPdf  pPKPdf   11 35 22.2 -2.7
JMZ   Minamidaito 2   145.64 314  PKPdf   PKPdf    11 34 54.2 -0.8
LYN   LuoYang         147.81 347 ePKPbc   PKPbc    11 35 02.0 +0.6
LYN                               pPKP    pPKPab   11 35 39.0 +1.1
XAN   Xi'an           148.93 352  PKPbc   PKPbc    11 35 05.8 +1.4
XAN                               sPKP             11 35 41.0
MTN   Manton Dam      148.94 239  PKPbc   PKPbc    11 35 04.9 +0.1
FITZ  Fitzroy Crossi  150.18 224  PKPbc   PKPbc    11 35 08.3 +0.4
PSA00 Pilbara Seismi  151.09 211  PKPbc   PKPbc    11 35 09.1 -0.8
PSA00                             pPKPbc  pPKPbc   11 35 45.7 +1.1
FAKI  Fak Fak         151.37 258  PKPdf   PKPdf    11 35 02.2 -2.4
TPUB  Ta-pu           154.43 323  PKPdf   PKPdf    11 35 07.2 -1.6
TPUB                              PKPab   PKPab    11 35 30.7 -1.2
PALK  Pallekele       156.20  79  PKPdf   PKPdf    11 35 09.5 -2.1
PALK                              PKPab   PKPab    11 35 36.8 -3.2
PZH   PanZhiHua       156.63   6  PKP     PKPdf    11 35 10.5 -1.4
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TAP 28 11:17:19.1, 24°.96N×122°.25E, h13km, ML2.2, C, Taiwan region

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Code  Station Name      Δ°  AZ°   Phase ID         Time      Res
                                  Op      ISC      h  m  s   ISC
TWB1  Santiao Chiao    0.24 282  i P      Pg       11 17 24.6 +0.5
      baz=277
TWB1                             i S      Sg       11 17 28.2 +0.7
      baz=277
EGS                    0.30 249   P       Pb       11 17 26.3 -0.1
      baz=243
SXI1  Grass Mountain   0.36 292   P       Pb       11 17 27.2 -0.2
      baz=288
SXI1                              S       Sb       11 17 32.6 -0.5
      baz=288
TIPB  Shuangxi         0.38 272   P       Pb       11 17 27.5 -0.2
      baz=273
TIPB                              S       Sb       11 17 33.1 -0.5
      baz=273
WFSB  Wu-fen Shan      0.44 285   S       Sb       11 17 35.1  0.0
      baz=285
TNOU  National Taiwa   0.47 294   P       Pb       11 17 29.3  0.0
      baz=302
TWC   Suao             0.50 226  i P      Pg       11 17 28.5 -0.4
      baz=223
TWC                               S       Sg       11 17 35.5  0.0
      baz=223
TWE   Neicheng         0.57 246  i P      Pb       11 17 31.0  0.0
      baz=246
TWE                              i S      Sb       11 17 39.7 +0.6
      baz=246
NDS   Dongshan         0.58 236   P       Pb       11 17 31.1  0.0
      baz=237
TWA   Mucha            0.60 272   P       Pb       11 17 32.1 +0.6
      baz=272
TWA                               S       Sb       11 17 41.3 +1.4
      baz=272
FUSB  Fushanzhiwuyua   0.63 252   P       Pb       11 17 31.9 -0.1
      baz=253
FUSB                              S       Sb       11 17 42.0 +1.3
      baz=253
YM01  YM01             0.64 287   P       Pb       11 17 32.8 +0.6
      baz=287
YM01                              S       Sb       11 17 41.4 +0.3
      baz=287
NHDH  Xindian Distri   0.65 271   P       Pb       11 17 33.1 +0.8
      baz=271
EWUT  Wuta             0.66 220   P       Pg       11 17 32.2 +0.2
      baz=213
EWUT                              S       Sb       11 17 41.4 -0.2
      baz=213
TWY   Chenhua          0.67 299  i P      Pb       11 17 33.2 +0.7
      baz=285
TWY                              i S      Sb       11 17 43.1 +1.3
      baz=285
EOS3  EOS3             0.67 174   P       Pb       11 17 32.8 +0.2
      baz=182
EOS3                              S       Sb       11 17 43.1 +1.3
      baz=182
ENTT  Nioudou          0.69 243  i P      Pg       11 17 32.8 +0.2
      baz=235
ANP   Anpu             0.70 289  i P      Pb       11 17 33.7 +0.6
      baz=277
ANP                               S       Sb       11 17 43.9 +1.2
      baz=277
ENA   Nanau            0.70 221  i P      Pb       11 17 32.9 -0.2
      baz=214
ENA                              i S      Sg       11 17 41.7 -0.1
      baz=214
NWLT  Wulai            0.70 255   P       Pb       11 17 33.4 +0.2
      baz=256
NWLT                              S       Sb       11 17 42.9 +0.2
      baz=256
LATG  Datong           0.78 237   P       Pb       11 17 34.6 +0.1
      baz=239
LATG                              S       Sb       11 17 44.8 -0.2
      baz=239
YHNB  Yeheng           0.84 250   P       Pg       11 17 35.2 -0.2
      baz=251
NSK   Sanguang         0.85 251  i P      Pb       11 17 35.9 +0.1
      baz=251
YOJ   Yonaguni jima    0.85 125   P       Pg       11 17 35.5  0.0
      baz=113
YOJ                               S       Sg       11 17 46.4 -0.3
      baz=113
NNSB  Datong           0.94 236   P       Pg       11 17 37.3  0.0
      baz=226
NNSB                              S       Sb       11 17 50.5 +0.6
      baz=226
NNS   Nan Shan         0.95 237  i P      Pb       11 17 37.7 +0.3
      baz=227
NNS                              i S      Sn       11 17 50.9 -0.7
      baz=227
ETL   Fush Village     0.98 216   P       Pb       11 17 37.5 -0.4
      baz=212
NACB  Ninganchiao      0.98 217   P       Pb       11 17 37.4 -0.6
      baz=209
NACB                              S       Sg       11 17 50.0 -0.8
      baz=209
ETLH  Xiulin Townshi   1.02 223   P       Pb       11 17 38.5 -0.2
      baz=216
ETLH                             i S      Sb       11 17 51.8 -0.2
      baz=216
NFF   Wufeng Townshi   1.07 253   P       Pb       11 17 39.2 -0.3
      baz=267
LIOB  Emei             1.16 255   P       Pb       11 17 40.8 -0.2
      baz=255
WHF   Hehuan Shan      1.20 228  i P      Pg       11 17 42.3  0.0
      baz=230
WHF                              i S      Sn       11 17 58.4 -0.1
      baz=230
CHGB  Renai            1.32 228   P       Pb       11 17 44.2 +0.3
      baz=230
CHGB                              S       Sg       11 18 02.0 +0.3
      baz=230
OWD   Renai            1.40 225   P       Pb       11 17 45.3 +0.2
      baz=228
OWD                               S       Sn       11 18 02.8  0.0
      baz=228
WUSB  Renai            1.41 227   P       Pb       11 17 45.4 +0.1
      baz=230
WUSB                              S       Sb       11 18 03.2  0.0
      baz=230
WCS   Beigang Elemen   1.51 234   P       Pg       11 17 48.2 +0.2
      baz=227
VWDT  VWDT             1.56 220   P       Pb       11 17 47.7 -0.2
      baz=223
SSLB  Suanglung        1.66 226   P       Pb       11 17 50.0 +0.5
      baz=229
SSLB                              S       Sg       11 18 12.3 -0.1
      baz=229
```

JMA 28 11:17:44.8±0.3, 24°.8N±0°.9×124°.0E±0°.5, h0km, MV0.7/6, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

```
Code  Station Name      Δ°  AZ°   Phase ID         Time      Res
                                  Op      ISC      h  m  s   ISC
JISG  Ishigakijimahi   0.33 123  eP       Pg       11 17 51.8 +0.6
JIJ   Ishigaki jima    0.42 162  eP       Pg       11 17 53.5 +0.5
JIJ                              eS       Sg       11 17 59.0 +0.6
IRIF  Iriomote-Funau   0.50 210   P       Pg       11 17 54.8 +0.4
IRIF                             eS       Sb       11 18 02.5 -1.7
JTJ   Tarama           0.65 101  eS       Sb       11 18 07.4 -1.2
HATJ  Hateruma jima    0.73 194  eS       Sg       11 18 09.6 +1.3
```

SOME 28 11:33:34.8, 44°.73N×81°.92E, h20km

NNC 28 11:33:34.4±0.9, 44°.66N×81°.95E, h0km, mb3.4, mpv3.6, Error ellipse: s-maj=10.6km s-min=3.8km az=129.0

ISC 28 11:33:34.1±1.1, 44°.66N±0°.06×82°.02E±0°.06, h10km, n21, σ0ˢ.99/24, 4C, Northern Xinjiang

```
Code  Station Name      Δ°  AZ°   Phase ID         Time      Res
                                  Op      ISC      h  m  s   ISC
DJR   Jarkent          1.63 259   P       Pg       11 34 04.7 -0.6
      6.6nm,0.4s
DJR                               S       Sg       11 34 26.0 -0.4
      12nm,0.4s
DJR   Jarkent          1.63 259  eP       Pg       11 34 04.7 -0.6
      6.6nm,0.4s
DJR                              eS       Sg       11 34 26.0 -0.4
      12nm,0.4s
MK31  Makanchi Array   2.14   5 ⇑Pn       Pn       11 34 11.6 +1.7
      3.7nm,0.4s,baz=189,slow=15,SNR=287
MK31                            ⇑Sn       Sb       11 34 39.5 -0.1
      6.6nm,0.5s,baz=188,slow=29,SNR=14
PDGK  Podgornoye       2.26 235   Pg      Pb       11 34 14.8 -0.3
      3.7nm,0.4s
PDGK                              Lg      Lg       11 34 43.4
      6.1nm,0.6s
PDGK  Podgornoye       2.26 235 ⇑Pg       Pb       11 34 14.2 -0.8
      4.3nm,0.5s
PDGK                            ⇑Lg       Lg       11 34 44.3
      8.2nm,0.5s
SHLS  Shalkode         2.38 232   Pg      Pn       11 34 13.7 +0.4
      15nm,0.0s
SHLS                              Lg      Lg       11 34 41.4
      27nm,0.3s
SHLS  Shalkode         2.38 232  ePg      Pn       11 34 13.7 +0.4
      15nm,0.0s
SHLS                             eLg      Lg       11 34 41.4
      19nm,0.1s
TDK   Taldyqorghan     2.59 279   Pg      Pg       11 34 22.7 -1.0
      32nm,0.3s
TDK                               Lg      Lg       11 34 56.9
      43nm,0.1s
TDK   Taldyqorghan     2.59 279  ePg      Pb       11 34 21.3 +0.7
      29nm,0.2s
TDK                              eLg      Lg       11 34 55.1
      40nm,0.1s
BLB   Baldybastay      2.60 259   Pg      Pg       11 34 22.0 -1.9
      14nm,0.0s
BLB                               Lg      Lg       11 34 55.5
      23nm,0.5s
UZB   Uzynbulak        2.64 236   Pg      Pb       11 34 22.5 +0.9
      1.6nm,0.1s
UZB                               Lg      Lg       11 34 56.6
      5.5nm,0.2s
UZB   Uzynbulak        2.64 236  ePg      Pb       11 34 22.5 +0.9
      1.6nm,0.1s
UZB                              eLg      Lg       11 34 56.6
      4.1nm,0.1s
KPKS  Kokpek           2.68 245   Pg      Pb       11 34 22.3  0.0
      11nm,0.2s
KPKS                              Lg      Lg       11 34 56.4
      17nm,0.1s
KPKS  Kokpek           2.68 245  ePg      Pb       11 34 22.3  0.0
      11nm,0.2s
KPKS                             eLg      Lg       11 34 56.4
      17nm,0.1s
ARXS  Arharly          3.04 263   Pg      Pb       11 34 28.6 +0.3
      3.2nm,0.4s
ARXS                              Lg      Lg       11 35 07.2
      7.6nm,0.3s
ARXS  Arharly          3.04 263  ePg      Pb       11 34 28.4 +0.2
      3.2nm,0.4s
ARXS                             eLg      Lg       11 35 07.0
      7.6nm,0.3s
SATY  Saty             3.06 240   Pg      Pb       11 34 29.1 +0.3
      2.2nm,0.2s
SATY                              Lg      Lg       11 35 08.0
      11nm,0.0s
SATY  Saty             3.06 240  ePg      Pb       11 34 29.1 +0.3
      2.2nm,0.1s
SATY                             eLg      Lg       11 35 08.0
      11nm,0.0s
ZSN   Zaisan           3.42  34   Pg      Pb       11 34 33.5 -1.3
      1.5nm,0.0s
ZSN                               Lg      Lg       11 35 15.6
      2.6nm,0.0s
KTBS  Karatobe         3.95 258  ePg      Pb       11 34 46.0 +2.1
      1.3nm,0.2s
KTBS                             eLg      Lg       11 35 37.4
      8.9nm,0.2s
WMQ   Urumqi           4.17 100  eP       Pn       11 34 39.3 +1.5
```

IDC 28 11:38:38.5±2.4, 9°.27S×108°.05E, h0km, mb3.7/6, mbtmp3.7/6, MS3.2/2, Error ellipse: s-maj=123.8km s-min=19.6km az=53.0

DJA 28 11:38:41.4±1.5, 9°S±7°×10°8E±°, h16km±14km, M4.3/15, mb4.8/7, mB5.3/1, MLv4.1/15, Mw(mB)4.7/1

ISC 28 11:38:42.0±0.9, 9°.31S±0°.08×107°.91E±0°.08, h28km, n25, σ1ˢ.19/26, mb3.7/6, South of Jawa

```
Code  Station Name      Δ°  AZ°   Phase ID         Time      Res
                                  Op      ISC      h  m  s   ISC
CMJI  Cimerak          1.61  19   P       Pn       11 39 08.2 -0.3
CMJI                              S       Sn       11 39 27.7 -0.6
CNJI  Cibinong         2.13 339   P       Pn       11 39 16.4 +0.7
CNJI                              S       Sn       11 39 42.5 +1.2
KPJI  Karang Pucung    2.21  27   P       Pn       11 39 17.4 +0.6
KPJI                              S       Sb       11 39 45.9 -2.3
SKJI  Sukabumi         2.65 330   P       Pn       11 39 23.4 +0.5
UGM   Wanagama         2.93  62   P       Pn       11 39 26.3 -0.5
SMRI  Semarang         3.37  48   P       Pn       11 39 33.5 +0.8
CGJI  Cibinong         3.46 321   P       Pn       11 39 32.6 -1.4
PWJI  Pagerwojo        4.06  72   P       Pn       11 39 43.0 +0.7
UWJI  Ujung Watu       4.16  47   P       Pn       11 39 45.2 +1.5
KASI  Kota Agung       5.06 318   P       Pn       11 39 56.5 +0.5
      20nm,0.9s,0.3nm
BLJI  Banyuglugur      5.83  75   P       Pn       11 40 08.3 +1.6
      54nm,0.7s,0.3nm
JAGI  Jajag, Banyuwa   6.23  83   P       Pn       11 40 12.0 -0.1
      60nm,0.8s,0.3nm
ABJI  Asem Bagus       6.43  77   P       Pn       11 40 16.2 +1.3
      45nm,0.5s,0.3nm
TWSI  Taliwang, Sumb   8.88  87   P       Pn       11 40 50.4 +1.8
      44nm,0.6s
PLAI  Plampang         9.76  88   P       Pn       11 41 01.7 +1.1
WRA   Warramunga Arr  27.63 115   P       P        11 44 27.2 -0.3
      0.3nm,0.8s,baz=288,slow=12,SNR=1.7
      0.3nm,0.8s
ASAR  Alice Springs   28.65 123   P       P        11 44 36.5 -0.1
      0.1nm,0.7s,baz=299,slow=9.1,SNR=4.9
ASAR                              PcP     PcP      11 47 48.4 +1.2
      0.3nm,0.6s,baz=320,slow=2.4,SNR=3.0
ASAR                              LR      LR       11 57 26.7
      comp=Z,47nm,19.1s,baz=162,slow=40
      0.1nm,0.7s
CMAR  Chiang Mai Arr  28.97 342   P       P        11 44 39.5 +0.1
      0.4nm,0.3s,baz=165,slow=8.4,SNR=4.7
CMAR                              LR      LR       11 58 08.8
      comp=Z,43nm,18.6s,baz=175,slow=40
      0.4nm,0.3s
H08S2 Diego Garcia H  35.06 270   T       T        12 22 40.6
      baz=95,slow=74,SNR=11
H08S3 Diego Garcia H  35.07 270   T       T        12 22 42.6
      baz=95,slow=74,SNR=9.6
H08S1 Diego Carcia H  35.08 270   T       T        12 22 47.9
      baz=95,slow=74,SNR=10
STKA  Stephens Creek  38.45 131   P       P        11 46 00.7 -0.9
      0.7nm,0.4s,baz=318,slow=15,SNR=1.9
      0.7nm,0.4s
SONM  Songino Array   56.91 359   P       P        11 48 25.3 +0.7
      1.2nm,0.6s,baz=172,slow=9.3,SNR=6.2
      1.2nm,0.6s
MKAR  Makanchi Array  60.35 340   P       P        11 48 49.2 +0.8
      2.7nm,0.6s,baz=141,slow=7.7,SNR=45
      2.7nm,0.6s
TXAR  Lajitas Array  144.35  52   PKP     PKiKP    11 58 17.5 -2.5
      0.4nm,0.9s,baz=236,slow=1.0,SNR=3.6
```

MAN 28 12:06:40.5, 19°.12N×121°.29E, h8km, mb4.4, ML3.2, MS3.0, 5C-3D, Philippine Islands region

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Code  Station Name      Δ°  AZ°   Phase ID         Time      Res
                                  Op      ISC      h  m  s   ISC
PIP   Pasuquin         1.01 219⇓eP       Pg       12 06 56.3 -3.6
PIP                             eS       Sg       12 07 09.3 -3.8
SGCP  Gonzaga          1.13 140⇑eP       Pg       12 07 01.7 -0.5
SGCP                            eS       Sn       12 07 18.0 -0.3
SIPP  Brgy, Tapao      1.43 214⇑eP       Pn       12 07 00.8 -5.9
SIPP                            eS       Sb       12 07 25.8 +0.1
BBP   Basco            1.46  26⇑eP       Pn       12 07 07.1 -0.1
BBP                             eS       Sn       12 07 26.6  0.0
CVP   Callao Caves     1.50 160⇑iP       Pn       12 07 07.0 -0.6
CVP                             i S      Sn       12 07 27.1 -0.3
SAMP  Sagada Mountai   2.06 190⇓eP       Pn       12 07 15.1 -0.3
SAMP                            eS       Sn       12 07 41.9 +0.6
CAUP  Cauayan          2.22 167⇓eP       Pb       12 07 19.3 -1.6
CAUP                            eS       Sg       12 07 56.9 +5.0
PALP  Palanan          2.31 152⇑eP       Pn       12 07 20.0 +1.1
PALP                            eS       Sb       12 07 49.9 -1.3
```

IDC 28 12:17:37.3±573.0, 56°.88N×31°.02E, h0km, Error ellipse: s-maj=212.1km s-min=79.2km az=89.0, Baltic States-Belarus-Northwestern Russia

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Code  Station Name      Δ°  AZ°   Phase ID         Time      Res
                                  Op      ISC      h  m  s   ISC
I43RU DUBNA INFRASON   3.41  90   I       I        12 40 40.0
      baz=274,slow=296,SNR=0.4
I37NO I37NO           13.43 341   I       I        13 35 40.0
      baz=145,slow=340,SNR=0.7
I31KZ AKTYUBINSK INF  17.20 101   I       I        14 05 40.0
      baz=302,slow=319,SNR=0.6
```

NOU 28 12:25:14.3, 37°.43S×176°.44E, h279km, MLv3.7/10, North Island, New Zealand

WEL 28 12:25:20.1±0.7, 37°S±7°×17°6E±°, h226km±7km, M2.8/24, ML2.9/8, MLv2.8/24, Error ellipse: s-maj=0.0km s-min=0.0km az=144.7, confirmed

ISC 28 12:25:13.5±2.3, 37°.52S±0°.10×176°.52E±0°.08, h279km±12km, n92, σ1ˢ.91/108, North Island

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Code  Station Name      Δ°  AZ°   Phase ID         Time      Res
                                  Op      ISC      h  m  s   ISC
TOZ   Tahuroa Road     0.84 255   P       Pn       12 25 52.3 +1.4
URZ   Urewera          0.87 148   P       Pn       12 25 51.8 +0.8
URZ   Urewera          0.87 148   P       Pn       12 25 51.7 +0.8
URZ                               S       S        12 26 17.2 -3.4
MUGZ  Murupara         0.97 168   P       Pn       12 25 52.7 +1.3
RUGZ  Raukumara Rang   1.02 116   P       Pn       12 25 52.2 +0.4
RUGZ                              S       S        12 26 18.5 -3.6
HAZ   Te Kaha          1.03 104   P       Pn       12 25 52.5 +0.9
HAZ                               S       S        12 26 18.7 -3.2
TLZ   Tolley Road      1.12 224   P       Pn       12 25 54.7 +2.4
MWZ   Matawai          1.14 136   P       Pn       12 25 53.6 +1.2
MWZ                               S       S        12 26 21.3 -1.8
RTZ   Ruatahuna        1.15 162   P       Pn       12 25 54.1 +1.6
RTZ                               S       S        12 26 20.7 -2.6
PKGZ  Pakihiroa        1.28 107   P       Pn       12 25 55.1 +1.8
TWGZ  Tauwhareparae    1.33 120   P       Pn       12 25 55.8 +2.3
TWGZ                              S       S        12 26 25.1  0.0
MTHZ  Maungataniwha    1.35 169   P       Pn       12 25 55.4 +1.8
MTHZ                              S       S        12 26 23.2 -2.2
TKGZ  Te Karaka        1.39 132   P       Pn       12 25 55.9 +2.1
TKGZ                              S       S        12 26 24.6 -1.2
SNGZ  Shannon Statio   1.41 153   P       Pn       12 25 56.2 +2.2
SNGZ                              S       S        12 26 24.3 -1.8
MXZ   Matakaoa Point   1.42  92   P       Pn       12 25 55.6 +1.6
MXZ   Matakaoa Point   1.42  92   P       Pn       12 25 55.7 +1.6
RAHZ  Arahi            1.46 163   P       Pn       12 25 56.7 +2.4
RAHZ                              S       S        12 26 25.7 -0.9
PUZ   Puketiti         1.48 112   P       Pn       12 25 56.4 +1.9
PUZ                               S       S        12 26 24.8 -2.1
RIGZ  Rimuhau          1.53 141   P       Pn       12 25 57.5 +2.7
NMHZ  Naumai           1.59 172   P       Pn       12 25 58.2 +3.0
NMHZ                              S       S        12 26 27.7 -0.7
CNGZ  Carnagh Statio   1.64 126   P       Pn       12 25 58.5 +2.9
BKZ   Black Stump Fm   1.64 181   P       Pn       12 25 57.3 +1.7
BKZ   Black Stump Fm   1.64 181   P       Pn       12 25 57.2 +1.6
BKZ                               S       S        12 26 26.6 -2.4
WHHZ  Waihua           1.65 160   P       Pn       12 25 58.2 +2.6
WHHZ                              S       S        12 26 28.8 -0.2
NTVZ  North Tongarir   1.71 203   P       Pn       12 25 58.5 +2.3
KNZ   Kokohu           1.75 149   P       Pn       12 25 58.6 +2.3
TWVZ  Taurewa          1.77 209   P       Pn       12 25 58.4 +1.8
OTVZ  Oturere          1.77 202   P       Pn       12 25 58.8 +2.0
ARHZ  Aropaoanui       1.78 168   P       Pn       12 25 59.2 +2.6
ARHZ                              S       S        12 26 29.9 -0.9
SNVZ  South Ngauruho   1.80 202   P       Pn       12 25 59.1 +2.1
FWVZ  Far West T-bar   1.89 203   P       Pn       12 25 59.6 +1.9
KWHZ  Kaweka Forest    1.90 182   P       Pn       12 25 60.0 +2.4
KWHZ                              S       S        12 26 31.3 -1.3
MCHZ  McNeill Hill     1.92 176   P       Pn       12 26 00.5 +2.8
WNVZ  Wahianoa         1.94 202   P       Pn       12 25 59.8 +1.7
MHGZ  Mahia Peninsul   1.96 147   P       Pn       12 26 00.7 +2.7
MOVZ  Moawhango        1.98 198   P       Pn       12 25 59.8 +1.5
PKVZ  Pokaka           1.99 207   P       Pn       12 26 00.1 +1.8
BHHZ  Black Hill Sta   2.00 190   P       Pn       12 26 00.2 +1.8
MTVZ  Mangateitei      2.04 204   P       Pn       12 26 00.6 +1.8
VRZ   Vera Road        2.12 220   P       Pn       12 26 02.2 +2.8
CKHZ  Cape Kidnapper   2.18 169   P       Pn       12 26 02.5 +2.6
KAHZ  Kahuranaki       2.29 173   P       Pn       12 26 03.4 +2.6
WCZ   Waipu Caves      2.36 311   P       Pn       12 26 04.0 +2.4
PNHZ  Pukenui          2.40 186   P       Pn       12 26 04.1 +2.2
WAZ   Wanganui         2.53 208   P       Pn       12 26 05.5 +2.3
TSZ   Takapari Road    2.57 190   P       Pn       12 26 05.5 +2.0
```

NEZ	North Egmont	2.58	227	P	Pn	12 26 07.2	+3.5
PKE	Pukeiti	2.60	229	P	Pn	12 26 07.0	+3.2
KHEZ	Kahui Hut	2.65	227	P	Pn	12 26 06.2	+1.9
KHEZ	Kahui Hut	2.65	227	P	Pn	12 26 07.6	+3.3
NBEZ	Newall Road No	2.72	229	P	Pn	12 26 08.6	+3.7
DVHZ	Dannevirke	2.79	186	P	Pn	12 26 07.5	+1.9
BFZ	Birch Farm	3.16	184	P	Pn	12 26 11.3	+1.9
BFZ	Birch Farm	3.16	184	P	Pn	12 26 11.3	+1.9
MRZ	Mangatainoka R	3.22	193	P	Pn	12 26 11.4	+1.3
TIWZ	Tintock	3.29	188	P	Pn	12 26 13.0	+2.2
OGWZ	Otaki Gorge	3.45	197	P	Pn	12 26 14.1	+1.6
HOWZ	Holdsworth Sta	3.46	193	P	Pn	12 26 14.0	+1.4
KIW	Kapiti Island	3.56	200	P	Pn	12 26 14.8	+1.1
MTW	Mount Morrison	3.72	192	P	Pn	12 26 16.5	+1.1
CAW	Cannon Point	3.75	197	P	Pn	12 26 17.1	+1.3
DUWZ	D’Urville Isla	3.85	211	P	Pn	12 26 17.9	+1.0
TRWZ	Traveller	3.92	189	P	Pn	12 26 19.4	+1.7
WEL	Wellington	4.00	199	P	Pn	12 26 19.8	+1.3
SNZO	South Karori	4.04	200	P	Pn	12 26 20.0	+1.1
TCW	Tory Channel	4.07	205	P	Pn	12 26 20.5	+1.1
PLWZ	Palliser	4.16	193	P	Pn	12 26 21.4	+1.0
TUWZ	Tuamarina	4.38	206	P	Pn	12 26 23.9	+1.0
NNZ	Nelson	4.42	212	P	Pn	12 26 23.9	+0.5
QRZ	Quartz Range	4.53	222	P	Pn	12 26 24.9	+0.3
QRZ	Quartz Range	4.53	222	P	Pn	12 26 24.6	-0.1
CMWZ	Cape Campbell	4.58	202	P	Pn	12 26 27.8	+2.5
BSWZ	Blackbirch Sta	4.66	205	P	Pn	12 26 27.7	+1.6
MRNZ	Matariki Terra	4.84	216	P	Pn	12 26 28.9	+0.5
THZ	Tophouse	5.07	212	P	Pn	12 26 31.8	+0.7
KHZ	Kahutara	5.40	204	P	Pn	12 26 36.3	+1.4
KHZ	Kahutara	5.40	204	P	Pn	12 26 36.3	+1.4
DSZ	Denniston Nort	5.57	219	P	Pn	12 26 37.0	-0.1
LTZ	Lake Taylor	6.18	210	P	Pn	12 26 45.2	+0.8
AMCZ	Amberley	6.37	206	P	Pn	12 26 47.6	+0.9
INZ	Inchbonnie	6.49	215	P	Pn	12 26 48.8	+0.7
OXZ	Oxford	6.73	209	P	Pn	12 26 51.1	0.0
MQZ	McQueen’s Vall	6.84	204	P	Pn	12 26 52.9	+0.5
RACZ	Rakaia	7.04	207	P	Pn	12 26 55.3	+0.5
MHCZ	Mount Hutt	7.09	211	P	Pn	12 26 56.0	+0.4
WACZ	Wakanui South	7.33	208	P	Pn	12 26 59.1	+0.6
ARCZ	Arundel	7.59	211	P	Pn	12 27 02.6	+0.8
TMZ	Timaru	8.02	210	P	Pn	12 27 07.7	+0.6
ODZ	Otahua Downs	8.72	209	P	Pn	12 27 17.6	+1.9
ODZ	Otahua Downs	8.72	209	P	Pn	12 27 17.3	+1.6
JCZ	Jackson Bay	8.79	219	P	Pn	12 27 17.6	+0.9
JCZ	Jackson Bay	8.79	219	P	Pn	12 27 17.7	+1.1

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*NEIC **28** 12:39:48.3±1.4, 1°.1N±0°.1×121°.4E±0°.1, h511^{km}±9^{km}, mb4.0/27, Error ellipse: s-maj=19.6km s-min=14.2km az=54.0*

*IDC **28** 12:39:49.0±1.5, 1°.14N×121°.54E, h522^{km}±18^{km}, mb3.1/11, mbtmp4.0/12, Error ellipse: s-maj=28.2km s-min=9.8km az=65.0*

ISC 28 12:39:47.5±0.5**, 1°.16N**±0°.07×**121°.46E**±0°.09**, h500**^{km}**, n63,** σ**1**^{s}.**19**/67**, mb3.8**/25**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOLI2	Tolitoli	0.68	266	P	P	12 40 49.7	+1.7
TOLI2				S	S	12 41 38.7	+1.5
LUWI	Luwuk	2.55	149	P	P	12 40 57.1	+1.4
MYLDM	Lahad Datu	4.97	324	P	P	12 41 15.8	+1.6
SANI	Sanana	5.54	125	P	P	12 41 19.5	0.0
	38nm,0.4s						
TNTI	Ternate	5.92	94	P	P	12 41 24.4	+1.3
TNTI	Ternate	5.92	94	P	P	12 41 24.4	+1.3
	40nm,0.7s						
KKM	Kota Kinabalu	7.13	313	P	P	12 41 36.8	+1.6
KKM	Kota Kinabalu	7.13	313	P	P	12 41 37.3	+2.1
	42nm,0.9s						
SBUM	Sibu	9.32	278	P	P	12 41 56.5	-1.3
SIJI	Sorong	10.01	102	P	P	12 42 06.2	+1.2
	5.8nm,0.4s,baz=338,slow=19,SNR=5.0						
PLAI	Plampang	10.58	200	P	P	12 42 13.5	+2.4
	28nm,0.8s						
SOEI	Soe	11.20	166	P	P	12 42 18.9	+1.1
SOEI	Soe	11.20	166	P	P	12 42 20.1	+2.3
	20nm,1.7s						
FAKI	Fak Fak	11.52	111	P	P	12 42 22.3	+1.2
FAKI	Fak Fak	11.52	111	P	P	12 42 22.4	+1.3
	19nm,1.2s						
BBJI	Bungbulang	16.22	238	P	P	12 43 11.9	+1.2
	30nm,0.6s						
MTN	Manton Dam	16.90	146	P	P	12 43 17.2	-0.4
MTN	Manton Dam	16.90	146	P	P	12 43 17.3	-0.4
	16nm,2.2s						
KDU	Kakadu	17.57	142	P	P	12 43 24.1	+0.1
	12nm,0.8s						
KNRA	Kununurra	18.22	157	P	P	12 43 28.1	-1.8
KNRA	Kununurra	18.22	157	P	P	12 43 28.8	-1.2
	22nm,0.8s						
FITZ	Fitzroy Crossi	19.58	168	P	P	12 43 41.7	-0.6
GSI	Gunungsitoli	23.88	271	P	P	12 44 20.4	-0.9
WB0	Warramunga Arr	24.36	149	P	P	12 44 24.5	-1.0
WB0				IAmb	IAmb	12 44 52.3	
	comp=Z,6.5nm,1.1s						
WRAB	Tennant Creek	24.48	150	P	P	12 44 25.7	-0.8
WRAB				IAmb	IAmb	12 44 26.6	
	comp=Z,8.1nm,1.4s						
WRA	Warramunga Arr	24.48	150	P	P	12 44 25.5	-1.1
	comp=Z,1.5nm,0.5s,baz=335,slow=9.5,SNR=81						
WRA				ScP	ScP	12 50 36.6	-3.2
	comp=Z,0.3nm,0.5s,baz=321,slow=2.7,SNR=7.3						
	comp=Z,1.5nm,0.5s						
WRA	Warramunga Arr	24.48	150	P	P	12 44 24.8	-1.7
WB2	Warramunga Arr	24.49	150	IAmb	IAmb	12 44 25.4	
	comp=Z,8.3nm,1.4s						
WB2				P	P	12 44 25.7	-0.9
AS31	Alice Springs	27.49	155	P	P	12 44 52.9	-0.2
AS31				IAmb	IAmb	12 44 57.0	
	comp=Z,1.9nm,1.4s						
ASAR	Alice Springs	27.49	155	P	P	12 44 52.8	-0.3
	comp=Z,0.7nm,0.5s,baz=333,slow=7.9,SNR=25						
ASAR				PcP	PcP	12 47 54.4	-1.2
	comp=Z,0.2nm,0.3s,baz=343,slow=2.3,SNR=5.5						
ASAR				ScP	ScP	12 50 45.9	-2.8
	comp=Z,1.1nm,0.7s,baz=338,slow=2.9,SNR=19						
	comp=Z,0.7nm,0.5s						
ASAR	Alice Springs	27.49	155	P	P	12 44 52.6	-0.4
CM31	Chiang Mai Arr	27.99	309	P	P	12 44 57.6	0.0
CM31				IAmb	IAmb	12 44 59.7	
	comp=Z,3.3nm,0.6s						
CMAR	Chiang Mai Arr	27.99	309	P	P	12 44 58.9	+1.4
	comp=Z,1.8nm,0.6s,baz=134,slow=6.9,SNR=11						
	comp=Z,1.8nm,0.6s						
CMAR	Chiang Mai Arr	27.99	309	P	P	12 44 56.9	-0.7
CHTO	Chiang Mai	28.20	310	P	P	12 44 59.9	+0.6
BBOO	Buckleboo	36.50	159	P	P	12 46 09.5	-0.3
KSRS	Korea Array	36.60	9	P	P	12 46 11.2	+0.6
	comp=Z,0.6nm,0.5s,baz=186,slow=9.6,SNR=2.3						
	comp=Z,0.6nm,0.5s						
STKA	Stephens Creek	38.00	152	P	P	12 46 22.4	+0.2
	comp=Z,2.9nm,0.5s,baz=324,slow=8.3,SNR=9.6						
	comp=Z,2.9nm,0.5s						
STKA	Stephens Creek	38.00	152	P	P	12 46 22.6	+0.4
MAJO	Matsushiro	38.47	22	P	P	12 46 24.4	-1.6
MAJO				IAmb	IAmb	12 46 52.5	
	comp=Z,12nm,1.2s						
MJB9	Matsu-Tunnel	38.47	22	P	P	12 46 24.5	-1.5
MJB9				IAmb	IAmb	12 46 52.5	
	comp=Z,12nm,1.2s						
USRK	Ussuriysk Ar.	43.86	11	P	P	12 47 08.6	-0.1
	comp=Z,1.9nm,0.6s,baz=190,slow=7.3,SNR=3.7						
	comp=Z,1.9nm,0.6s						
CAN	Canberra	44.49	147	P	P	12 47 12.7	-1.2
ASAJ	Asahikawa	46.71	21	P	P	12 47 30.4	-0.3
	comp=Z,0.9nm,0.5s,baz=202,slow=11,SNR=1.4						
	comp=Z,0.9nm,0.5s						
JKA	Kamikawa-asahi	46.71	21	P	P	12 47 30.5	-0.1
JKA				IAmb	IAmb	12 47 40.0	
	comp=Z,5.0nm,1.1s						
SONM	Songino Array	48.29	346	P	P	12 47 43.2	+0.7
	comp=Z,1.1nm,0.6s,baz=168,slow=8.0,SNR=7.6						
	comp=Z,1.1nm,0.6s						
SONM	Songino Array	48.29	346	P	P	12 47 43.3	+0.7
TARG	Taragay, Kyrgy	56.30	322	P	P	12 48 39.1	-1.6
TARG				IAmb	IAmb	12 48 44.3	
	comp=Z,1.6nm,0.6s						
MK31	Makanchi Array	56.83	329	P	P	12 48 43.9	+0.2
MKAR	Makanchi Array	56.83	329	P	P	12 48 43.9	+0.1
	comp=Z,0.8nm,0.4s,baz=126,slow=8.8,SNR=18						
	comp=Z,0.8nm,0.4s						
MKAR	Makanchi Array	56.83	329	P	P	12 48 44.0	+0.2
GAR	Garm	59.91	315	P	P	12 49 04.8	-0.2
GAR				IAmb	IAmb	12 49 06.0	
	comp=Z,7.4nm,1.0s						
ZAA0	Zalesovo Array	60.63	336	P	P	12 49 08.8	-0.4
ZAA0				IAmb	IAmb	12 49 09.5	
	comp=Z,2.0nm,1.1s						
ZALV	Zalesovo Beam	60.63	336	P	P	12 49 08.5	-0.8
	comp=Z,0.5nm,0.4s,baz=108,slow=4.8,SNR=5.2						
	comp=Z,0.5nm,0.4s						
ZALV	Zalesovo Beam	60.63	336	P	P	12 49 08.2	-1.0
KURK	Kurchatov	61.21	330	P	P	12 49 13.2	+0.1
KURK				IAmb	IAmb	12 49 13.7	
	comp=Z,4.1nm,0.7s						
KKAR	Karatay Array	61.64	320	P	P	12 49 15.7	-0.4
BRVK	Borovoye	66.77	329	P	P	12 49 47.8	-0.8
BRVK				IAmb	IAmb	12 49 49.4	
	comp=Z,2.6nm,0.8s						
ABKAR	Akbulak array	70.88	322	P	P	12 50 12.9	-0.6
NRIK	Noril'sk	71.74	348	P	P	12 50 17.9	-0.3
	comp=Z,1.9nm,0.4s,baz=131,slow=6.0,SNR=4.5						
	comp=Z,1.9nm,0.4s						
NRIK	Noril'sk	71.74	348	P	P	12 50 18.1	0.0
NRIK				IAmb	IAmb	12 50 18.5	
	comp=Z,2.0nm,0.8s						
INK	Inuvik	94.45	21	P	P	12 52 12.1	-1.2
INK				IAmb	IAmb	12 52 13.5	
	comp=Z,3.5nm,1.4s						
BOSA	Boshof	96.00	242	P	P	12 52 20.6	-0.8

WEL 28 12:42:10.6±0.3**, 42°S**±2°×**17°4E**±°**, h12**^{km}**, M2.3**/12**, ML2.5**/14**, MLv2.3**/12**, Error ellipse: s-maj=0.0km s-min=0.0km az=108.6, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSWZ	Blackbirch Sta	0.19	339	P	Pb	12 42 15.5	-0.6
BSWZ				S	Sg	12 42 18.9	+1.2
CMWZ	Cape Campbell	0.23	52	P	Pb	12 42 16.9	+0.1
CMWZ				S	Sg	12 42 21.3	+2.4
TUWZ	Tuamarina	0.46	358	P	Pb	12 42 20.4	-0.3
TUWZ				S	Sb	12 42 27.6	+0.1
KHZ	Kahutara	0.61	211	P	Pb	12 42 23.0	-0.2
KHZ				S	Sb	12 42 32.1	+0.4
TCW	Tory Channel	0.72	19	P	Pg	12 42 24.7	+0.1
THZ	Tophouse	0.80	279	P	Pg	12 42 26.3	+0.2
NNZ	Nelson	0.81	327	P	Pb	12 42 26.5	-0.1
WEL	Wellington	0.86	45	P	Pb	12 42 27.9	+0.5
PLWZ	Palliser	1.02	72	P	Pb	12 42 29.6	-0.6
MRNZ	Matariki Terra	1.03	298	P	Pg	12 42 30.6	+0.1
MRNZ				S	Sn	12 42 45.5	+0.2
DUWZ	D’Urville Isla	1.09	358	P	Pb	12 42 31.0	-0.4
CAW	Cannon Point	1.14	47	P	Pb	12 42 32.0	-0.2
KIW	Kapiti Island	1.25	35	P	Pn	12 42 33.9	0.0
GVZ	Greta Valley S	1.28	212	P	Pn	12 42 33.8	-0.5
GVZ				S	Sb	12 42 50.9	0.0
MTW	Mount Morrison	1.37	58	P	Pn	12 42 35.0	-0.5
OGWZ	Otaki Gorge	1.41	41	P	Pn	12 42 35.7	-0.4
QRZ	Quartz Range	1.52	314	P	Pn	12 42 37.5	-0.1
HOWZ	Holdsworth Sta	1.53	50	P	Pb	12 42 39.5	+0.5
LTZ	Lake Taylor	1.54	234	P	Pn	12 42 37.6	-0.3
DSZ	Denniston Nort	1.62	275	P	Pb	12 42 40.2	-0.3
MRZ	Mangatainoka R	1.73	45	P	Pn	12 42 39.7	-0.8
INZ	Inchbonnie	2.05	245	P	Pn	12 42 45.7	+0.8
MQZ	McQueen’s Vall	2.05	208	P	Pn	12 42 42.6	-2.3
BFZ	Birch Farm	2.10	56	P	Pg	12 42 51.7	+0.8
WAZ	Wanganui	2.27	20	P	Pb	12 42 50.2	-1.3
VRZ	Vera Road	2.83	13	P	Pn	12 42 57.3	+1.7
WNVZ	Wahianoa	2.85	26	P	Pb	12 43 00.1	-1.4
BHHZ	Black Hill Sta	2.88	34	P	Pb	12 43 02.2	+0.2
FWVZ	Far West T-bar	2.90	25	P	Pb	12 43 01.4	-0.9
OTVZ	Oturere	3.02	26	P	Pn	12 42 59.1	+0.7
NNVZ	North Ngauruho	3.03	25	P	Pb	12 43 04.7	+0.1
TLZ	Tolley Road	3.76	19	P	Pn	12 43 11.1	+2.7
RIGZ	Rimuhau	4.31	44	P	Pn	12 43 20.7	+4.8

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*STR **28** 12:44:23.2±0.8, 43°N±3°×°±°, h7^{km}, MLv1.8/6, Error ellipse: s-maj=0.0km s-min=0.0km az=95.9, preliminary*

*LDG **28** 12:44:23.4±0.1, 42°.92N×1°.56W, h2^{km}, Md1.9/2, Ml2.0/1, Error ellipse: s-maj=1.5km s-min=1.4km az=139.0*

MDD 28 12:44:24.3±0.4**, 42°.90N**×**1°.55W, h0**^{km}**, mb_Lg2.4**/4**, Error ellipse: s-maj=3.6km s-min=2.5km az=5.0, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EARA	Aranguren	0.13	190	Pg	Pg	12 44 25.5	-1.2
EARA				Sg	Sg	12 44 27.6	-0.7
EARA	Aranguren	0.13	190	Pg	Pg	12 44 25.3	-1.4
EARA				Sg	Sg	12 44 27.5	-0.8
EORO	Oroz-Betelu	0.18	92	Pg	Pg	12 44 26.8	-0.8
EORO				Sg	Sg	12 44 29.1	-0.9
EORO				*i* Vmb_Lg		12 44 31.7	
SJPF	Ste Jean	0.32	48	*e*Pg	Pg	12 44 29.7	-0.7
SJPF				*e*Sg	Sg	12 44 34.0	-0.6
	20nm,0.2s						
EALK	Alkurruntz	0.32	5	Pg	Pg	12 44 29.8	-0.7
EALK				Sg	Sg	12 44 34.7	0.0
EALK				*i* Vmb_Lg		12 44 38.2	
EALK	Alkurruntz	0.32	5	Pg	Pg	12 44 29.8	-0.6
EALK				Sg	Sg	12 44 35.4	+0.8
OSSF	Osses	0.41	30	Pg	Pg	12 44 31.3	-1.0
OSSF				Sg	Sg	12 44 35.7	-1.9
ATE	Arette	0.65	73	Pg	Pg	12 44 35.7	-1.1
ATE				Sg	Sg	12 44 44.7	-0.5
ETSF	Etsaut	0.73	90	*e*Pg	Pg	12 44 36.7	-1.5
ETSF				*e*Sg	Sg	12 44 47.1	-0.5
	9.2nm,0.3s						
CANF	Canfranc	0.77	100	Pg	Pg	12 44 38.6	-0.4
CANF				Sg	Sg	12 44 48.9	-0.1
TERF	Tercis-les-Bai	0.84	22	Pg	Pg	12 44 38.9	-1.6
VIEF	Viey	1.16	90	Pg	Pg	12 44 46.2	-0.3
ECHI	Chisagues Biel	1.30	100	Pg	Pg	12 44 48.7	-0.6
ECHI				Sg	Sg	12 45 06.2	0.0
ECHI				*i* Vmb_Lg		12 45 09.0	
ECHI	Chisagues Biel	1.30	100	Pg	Pg	12 44 48.8	-0.5
EPF	Esparros	1.39	84	*e*Pn	Pg	12 44 48.4	-2.6
EPF	Esparros	1.39	84	*e*Pg	Pg	12 44 49.6	-1.4
EPF				*e*Sg	Sg	12 45 07.8	-1.2
	2.1nm,0.2s						
ELAN	Lanestosa	1.42	284	Pg	Pn	12 44 49.9	-1.5
ELAN				Sg	Sg	12 45 10.0	+0.1
ESAC	San Caprasio	1.42	145	Pg	Pn	12 44 50.4	-1.0
ESAC				Sg	Sg	12 45 09.5	-0.4
LFF	La Frestale	2.63	38	*e*Pn	Pn	12 45 04.9	-3.0
MTLF	Montolieu	2.79	80	*e*Pn	Pn	12 45 07.3	-2.9
MTLF	Montolieu	2.79	80	*e*Pg	Pb	12 45 15.1	+0.1
CAF	Calviac	3.31	51	*e*Pg	Pb	12 45 24.4	+0.6

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*STR **28** 12:44:51.5±0.6, 43°N±3°×°±°, h6^{km}, MLv3.3/17, Error ellipse: s-maj=0.0km s-min=0.0km az=84.1, preliminary*

*INMG **28** 12:44:51.8±1.6, 42°.87N×1°.57W, h0^{km}, ML2.8, Error ellipse: s-maj=4.1km s-min=2.9km az=106.0*

*LDG **28** 12:44:52.6±0.1, 42°.90N×1°.53W, h2^{km}, Md3.2/2, Ml3.3/42, Error ellipse: s-maj=1.7km s-min=1.2km az=51.0*

*MDD **28** 12:44:52.3±0.2, 42°.86N×1°.54W, h0^{km}, mb_Lg3.3/13, Error ellipse: s-maj=1.9km s-min=1.3km az=166.0*

ISC 28 12:44:50.6±0.9**, 42°.94N**±0°.02×**1°.51W**±0°.02**, h7**^{km}±7^{km}**, n79,** σ**1**^{s}.**73**/143**, 2C-1D, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EORO	Oroz-Betelu	0.15	107	⇓Pg	Pg	12 44 55.0	+1.1
EORO				Sg	Sg	12 44 57.7	+1.5
EORO				*i* Vmb_Lg		12 44 59.9	
EARA	Aranguren	0.17	197	⇑Pg	Pg	12 44 53.8	-0.4
EARA				Sg	Sg	12 44 55.8	-0.8
EARA				*i* Vmb_Lg		12 44 56.2	
EARA	Aranguren	0.17	197	Pg	Pg	12 44 53.9	-0.3
EARA				Sg	Sg	12 44 55.9	-0.7
SJPF	Ste Jean	0.27	50	*e*Pg	Pb	12 44 57.9	0.0
SJPF				*e*Sg	Sb	12 45 02.8	+0.1
	391nm,0.2s						
EALK	Alkurruntz	0.28	1	⇑Pg	Pg	12 44 58.0	+1.7
EALK				Sg	Sb	12 45 03.2	+0.2
EALK				*i* Vmb_Lg		12 45 06.4	
EALK	Alkurruntz	0.28	1	Pg	Pb	12 44 58.2	+0.1
EALK				Sg	Sb	12 45 03.5	+0.5
OSSF	Osses	0.36	30	Pg	Pb	12 44 59.6	+0.1
OSSF				Sg	Sb	12 45 06.3	+1.0
ATE	Arette	0.61	76	Pg	Pb	12 45 04.0	+0.3
ATE				Sg	Sb	12 45 12.8	+0.4
ETSF	Etsaut	0.70	93	*e*Pg	Pg	12 45 04.9	+0.8
ETSF				*e*Sg	Sb	12 45 15.6	+0.5
	224nm,0.3s						
ETSF				*e*Sn	Sn	12 45 18.1	0.0
	623nm,0.6s						
CANF	Canfranc	0.75	103	Pg	Pb	12 45 06.4	+0.3
CANF				Sg	Sb	12 45 17.6	+1.1
TERF	Tercis-les-Bai	0.79	21	Pg	Pb	12 45 08.2	+1.4
TERF				Pn	Pn	12 45 09.5	+1.3
TERF				Sg	Sn	12 45 20.4	+0.1
PYLO	Lourdes	1.08	81	Pg	Pn	12 45 14.2	+2.0
PYLO				Sg	Sn	12 45 29.1	+1.6
VIEF	Viey	1.13	92	Pg	Pn	12 45 14.0	+1.1
VIEF				Sg	Sn	12 45 29.2	+0.5
ECHI	Chisagues Biel	1.28	102	Pg	Pg	12 45 17.2	+1.9
ECHI				Sg	Sn	12 45 34.6	+2.1
ECHI				*i* Vmb_Lg		12 45 37.2	
ECHI	Chisagues Biel	1.28	102	Pn	Pg	12 45 17.1	+1.8
ECHI				Sg	Sn	12 45 34.7	+2.1
EPF	Esparros	1.36	86	*e*Pg	Pg	12 45 17.4	+0.6
EPF				*e*Sg	Sg	12 45 36.1	+1.7
	228nm,0.4s						
ELAN	Lanestosa	1.44	282	Pg	Pn	12 45 17.8	+0.6
ELAN				Sg	Sg	12 45 38.5	+1.6
ELAN				*i* Vmb_Lg		12 45 44.0	
ESAC	San Caprasio	1.44	147	Pg	Pg	12 45 18.6	+0.3
ESAC				Sg	Sg	12 45 38.3	+1.4
MLS	Moulis	1.91	89	Pn	Pb	12 45 25.6	-0.3
MLS				Sn	Sg	12 45 53.7	+1.6
SALF	Salau	1.99	94	Pn	Pb	12 45 28.3	+1.0
ETOR	Torete	2.16	191	Pn	Pn	12 45 28.0	+0.9
ETOR				Sn	Sb	12 45 55.9	-1.0
ETOR				Sg	Sg	12 46 01.3	+1.3
ETOR				*i* Vmb_Lg		12 46 02.3	
PAND	Andorre	2.29	99	Pg	Pg	12 45 36.4	+1.9
ERTA	Horta de San J	2.41	145	Sg	Sg	12 46 07.4	-0.7
MONQ	Montcuq	2.43	53	Pn	Pn	12 45 32.2	+1.5
EMIR	Miracle	2.47	113	Pn	Pn	12 45 32.8	+1.4
EMIR				Sg	Sg	12 46 09.3	-0.7
EPOB	Poblet	2.49	129	Sn	Sn	12 46 00.5	-1.8
EPOB				Sg	Sb	12 46 08.4	+1.7
LFF	La Frestale	2.58	38	*e*Pn	Pb	12 45 35.8	-1.3
LFF				*e*Sn	Sn	12 46 05.5	+1.2
	77nm,0.5s						
CARF	Carcanieres	2.67	94	Pn	Pb	12 45 38.2	-0.6
EMOS	Mosqueruela	2.69	163	Pn	Pn	12 45 36.6	+2.2
EMOS				Sn	Sn	12 46 05.8	-1.5
EMOS				Sg	Sg	12 46 14.6	-2.4
EMOS				*i* Vmb_Lg		12 46 23.5	
EARI	Arriondas	2.73	279	Pn	Pn	12 45 35.8	+0.8
EARI				Sn	Sn	12 46 09.5	+1.3
EARI				*i* Vmb_Lg		12 46 27.8	
MTLF	Montolieu	2.76	80	*e*Pn	Pn	12 45 36.8	+1.6
MTLF				*e*Sn	Sn	12 46 08.3	-0.5
	32nm,0.3s						
MTLF	Montolieu	2.76	80	Pn	Pn	12 45 37.3	+2.1
FILF	Fillols	3.02	96	Pn	Pn	12 45 40.8	+1.9
GUD	Guadarrama	3.03	222	Sn	Sn	12 46 16.5	+0.9
GUD				Sg	Sg	12 46 25.2	-2.7
RJF	Les Rejaudoux	3.22	42	*e*Pn	Pn	12 45 42.9	+1.4
RJF				*e*Sn	Sn	12 46 20.0	-0.1
	30nm,0.3s						
RJF				*e*Sg	Sg	12 46 34.8	+0.9
	26nm,0.3s						
CAF	Calviac	3.26	51	*e*Pn	Pn	12 45 43.4	+1.3
CAF				*e*Sn	Sn	12 46 20.8	-0.3
	24nm,0.2s						
SJAF	Saint Jean de	3.27	96	Pn	Pn	12 45 44.9	+2.6
EJON	La Jonquera	3.28	97	Pn	Pn	12 45 41.7	-0.7
EJON				Sg	Sg	12 46 35.9	0.0
EJON				*i* Vmb_Lg		12 46 40.3	
ECHE	Chera	3.37	173	Sn	Sb	12 46 28.1	-3.8
CLAF	Gruissan	3.38	85	Pn	Pb	12 45 47.7	-3.1
MFF	Saint Martin d	3.79	14	*e*Pn	Pn	12 45 50.6	+1.2
MFF	Saint Martin d	3.79	14	*e*Pg	Pg	12 46 03.3	+0.1
MFF				*e*Sn	Sn	12 46 33.8	-0.4
	10nm,0.3s						
MFF				*e*Sg	Sg	12 46 53.1	+0.8
	11nm,0.3s						
MFF	Saint Martin d	3.79	14	Pn	Pn	12 45 50.8	+1.4
ECAL	Calabor	4.00	257	Pn	Pn	12 45 52.4	+0.1
ECAL				Sn	Sn	12 46 37.5	-1.9
ECAL				Sg	Sg	12 46 57.8	-1.1
ECAL				*i* Vmb_Lg		12 47 06.5	
PAB	San Pablo	4.01	213	Pn	Pn	12 45 51.8	-0.7
PAB	San Pablo	4.01	213	Pn	Pn	12 45 51.6	-0.8
PBRG	Braganca	4.04	255	*e*Pn	Pn	12 45 52.5	-0.4
PBRG				A	A	12 47 05.4	
	8.6nm,0.5s						
LASF	Ste Croix	4.07	72	*e*Pn	Pn	12 45 54.0	+0.8
LASF				*e*Sn	Sn	12 46 39.7	-1.4
	31nm,0.5s						
TCF	Toulx Ste Croi	4.27	37	*e*Pn	Pn	12 45 57.7	+1.6
TCF				*e*Sn	Sn	12 46 45.2	-1.0
	18nm,0.3s						
PYM	Petit Puy Mans	4.29	48	Pn	Pn	12 45 58.0	+1.7
MVO	Moncorvo	4.47	249	*e*Pn	Pn	12 45 58.8	-0.1
MVO				A	A	12 47 12.2	
	18nm,0.5s						
BGF	Bois d'Agland	4.77	39	*e*Pn	Pn	12 46 03.9	+1.1
BGF				*e*Sn	Sn	12 46 57.7	-0.6
	57nm,0.4s						
BGF				*e*Sg	Sg	12 47 23.2	-0.4
	41nm,0.4s						
VIVF	Saint-Julien-l	4.86	65	*e*Pn	Pn	12 46 05.1	+0.9
VIVF				*e*Sn	Sn	12 46 59.2	-1.5
	14nm,0.4s						
VIVF				*e*Sg	Sg	12 47 24.5	-2.2
	15nm,0.7s						
POLO	Lamas de Olo	4.93	254	*e*Pn	Pn	12 46 05.1	0.0
POLO				*e*Sg	Sb	12 47 22.2	+5.5
POLO				A	A	12 47 28.1	
	5.0nm,0.6s						
PCAB	Cabril	4.99	258	*e*Sg	Sg	12 47 25.3	-5.4
QUIF	Quistinic	5.11	347	*e*Pn	Pn	12 46 08.5	+1.0
QUIF				*e*Sn	Sn	12 47 04.9	-1.8
	21nm,0.6s						
AVF	Avril sur Loir	5.17	40	*e*Pn	Pn	12 46 09.2	+0.8
AVF	Avril sur Loir	5.17	40	*e*Pg	Pg	12 46 27.7	-2.0
AVF				*e*Sn	Sn	12 47 06.9	-1.4
	7.6nm,0.4s						
AVF				*e*Sg	Sg	12 47 35.4	-1.3
	12nm,0.5s						
MTE	Manteigas	5.18	243	*e*Sg	Sb	12 47 29.8	+5.8
SMRF	Simiane la Rot	5.26	76	*e*Pn	Pn	12 46 11.0	+1.3
SMRF				*e*Sn	Sn	12 47 08.7	-1.8
	7.1nm,0.6s						
SGMF	Saint Gilles	5.37	353	*e*Pn	Pn	12 46 11.3	+0.3
SGMF				*e*Sn	Sn	12 47 11.4	-1.6
	9.1nm,0.5s						
SGMF				*e*Sg	Sg	12 47 42.3	-0.6
	3.9nm,0.3s						
SSF	Saint Saulge	5.44	39	*e*Pn	Pn	12 46 13.2	+1.1
SSF				*e*Sn	Sn	12 47 13.3	-1.7
	14nm,0.5s						
PCBR	Castelo Branco	5.45	237	A	A	12 47 52.0	
	11nm,0.5s						
GRR	Gorron	5.47	5	*e*Pn	Pn	12 46 12.9	+0.4
GRR				*e*Sn	Sn	12 47 13.0	-2.5
	3.3nm,0.2s						
ROSF	Rostrenen	5.54	348	*e*Pn	Pn	12 46 14.5	+1.1
ROSF	Rostrenen	5.54	348	*e*Pg	Pg	12 46 35.7	-1.0
ROSF				*e*Sn	Sn	12 47 15.1	-2.1
	6.6nm,0.4s						
ROSF				*e*Sg	Sg	12 47 47.1	-1.3
	2.8nm,0.1s						
PMRV	Marv??o	5.66	234	*e*Pn	Pn	12 46 15.6	+0.5
PMRV				A	A	12 48 01.9	
	7.8nm,0.8s						
ORIF	Oris-en-Rattie	5.69	67	*e*Pn	Pn	12 46 16.5	+0.9
ORIF				*e*Sn	Sn	12 47 18.3	-2.9
	9.7nm,0.7s						
LDF	La Druitiere	5.74	9	*e*Pn	Pn	12 46 17.1	+0.9
LOR	Lormes	5.76	39	*e*Pn	Pn	12 46 17.5	+1.0
	baz=220						
LOR				*e*Sn	Sn	12 47 20.8	-2.0
	5.7nm,0.3s						
LOR				*e*Sg	Sg	12 47 53.9	-1.6
	6.2nm,0.5s						
LMR	La Mourre	5.88	83	*e*Pn	Pn	12 46 18.4	+0.3

LMR				*e*Sn	Sn	12 47 22.8	-2.9
PCAS	Casmilo, Conde	5.99	244	*e*Sg	Sg	12 47 58.7	-4.1
PCAS				A	A	12 48 03.6	
	8.7nm,0.7s						
PESTR	Estremoz	6.14	231	*e*Pn	Pn	12 46 21.9	+0.1
PESTR				A	A	12 48 11.4	
	5.0nm,0.6s						
MBDF	Montbardon	6.25	71	*e*Pn	Pn	12 46 23.8	+0.4
MBDF				*e*Sn	Sn	12 47 32.0	-3.1
	5.0nm,0.8s						
CABF	La Chapelle	6.54	53	*e*Pn	Pn	12 46 27.6	+0.4
CABF				*e*Sn	Sn	12 47 39.3	-2.7
	1.5nm,0.3s						
PGF	Pioggiola	7.75	89	*e*Pn	Pn	12 46 44.8	+1.0
PGF				*e*Sn	Sn	12 48 08.4	-3.4
	2.1nm,0.3s						
BAIF	Baives	8.14	27	*e*Pn	Pn	12 46 49.9	+0.8
CDF	Champ du Feu	8.23	45	*e*Pn	Pn	12 46 51.1	+0.6
CDF				*e*Sn	Sn	12 48 19.9	-3.8
	2.6nm,0.4s						
GIVF	Givet	8.39	29	*e*Sn	Sn	12 48 23.2	-4.2
	7.3nm,0.5s						
GIVF				*e*Sg	Sg	12 49 16.7	-3.0
	13nm,0.6s						

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*STR **28** 12:47:35.9±1.0, 43°N±3°×°±°, h5^{km}, MLv2.8/11, Error ellipse: s-maj=0.0km s-min=0.0km az=82.3, preliminary*
*INMG **28** 12:47:36.4±1.3, 42°.91N×1°.60W, h0^{km}, ML2.6, Error ellipse: s-maj=2.8km s-min=2.0km az=96.0*
*MDD **28** 12:47:37.1±0.2, 42°.86N×1°.56W, h0^{km}, mb_Lg3.0/20, Error ellipse: s-maj=1.8km s-min=1.2km az=162.0*
*LDG **28** 12:47:37.3±0.1, 42°.88N×1°.53W, h2^{km}, Md3.0/2, Ml3.0/25, Error ellipse: s-maj=1.3km s-min=1.1km az=117.0*
ISC 28 12:47:34.9±0.9**, 42°.93N**±0°.02×**1°.57W**±0°.02**, h7**^{km}±7^{km}**, n62,** σ**1^{s}.41**/119**, 2C, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EARA	Aranguren	0.16	182	⇑Pg	Pg	12 47 38.4	+0.2
EARA				Sg	Sg	12 47 40.4	0.0
EARA	Aranguren	0.16	182	Pg	Pg	12 47 38.4	+0.2
EARA				Sg	Sg	12 47 40.4	0.0
EORO	Oroz-Betelu	0.20	102	Pg	Pg	12 47 39.5	+0.6
EORO				Sg	Sg	12 47 41.5	-0.1
EORO				*i* Vmb_Lg		12 47 44.4	
EALK	Alkurruntz	0.29	9	⇑Pg	Pb	12 47 42.5	-0.1
EALK				Sg	Sb	12 47 46.8	-0.9
EALK				*i* Vmb_Lg		12 47 51.0	
EALK	Alkurruntz	0.29	9	Pg	Pb	12 47 42.6	-0.1
EALK				Sg	Sb	12 47 48.2	+0.5
SJPF	Ste Jean	0.31	55	*e*Pg	Pb	12 47 42.4	-0.5
SJPF				*e*Sg	Sb	12 47 47.3	-0.9
	454nm,0.3s						
OSSF	Osses	0.40	35	Pg	Pb	12 47 44.0	-0.3
ATE	Arette	0.66	76	Pg	Pb	12 47 48.5	-0.3
ATE				Sg	Sb	12 47 57.4	-0.8
ETSF	Etsaut	0.74	92	*e*Pg	Pb	12 47 49.6	-0.7
ETSF				*e*Sg	Sb	12 48 00.3	-0.4
	112nm,0.3s						
CANF	Canfranc	0.79	102	Pg	Pb	12 47 51.1	-0.1
CANF				Sg	Sn	12 48 04.2	-0.7
TERF	Tercis-les-Bai	0.82	24	Pg	Pn	12 47 52.7	-0.2
PYLO	Lourdes	1.13	81	Pg	Pn	12 48 00.0	+2.8
VIEF	Viey	1.17	92	Pg	Pb	12 47 57.6	0.0
VIEF				Sg	Sn	12 48 14.5	+0.3
ECHI	Chisagues Biel	1.33	101	Pg	Pn	12 48 00.8	+0.8
ECHI				Sg	Sn	12 48 19.0	+0.9
ECHI				*i* Vmb_Lg		12 48 22.3	
ECHI	Chisagues Biel	1.33	101	Pn	Pn	12 48 00.9	+0.8
ELAN	Lanestosa	1.40	283	Pg	Pg	12 48 02.4	+0.7
ELAN				Sg	Sn	12 48 22.6	+2.9
ELAN				*i* Vmb_Lg		12 48 26.0	
EPF	Esparros	1.41	85	*e*Pn	Pb	12 48 01.8	+0.2
EPF	Esparros	1.41	85	*e*Pg	Pb	12 48 03.4	+1.8
EPF				*e*Sg	Sn	12 48 21.3	+1.4
	51nm,0.2s						
ESAC	San Caprasio	1.46	146	Pn	Pb	12 48 02.6	+0.1
ESAC				Pg	Pg	12 48 03.1	+0.2
ESAC				Sg	Sn	12 48 23.2	+2.0
ESAC				*i* Vmb_Lg		12 48 27.6	
SALF	Salau	2.04	94	Pn	Pb	12 48 12.8	+0.5
SALF				Sg	Sg	12 48 41.4	+1.0
ETOR	Torete	2.14	190	Pn	Pn	12 48 12.7	+1.5
ETOR				Sn	Sn	12 48 36.9	-1.2
ETOR				Sg	Sg	12 48 43.9	+0.2
ETOR				*i* Vmb_Lg		12 48 46.8	
ERTA	Horta de San J	2.43	144	Pn	Pn	12 48 17.0	+1.9
ERTA				Sn	Sn	12 48 45.3	+0.1
ERTA				Sg	Sb	12 48 51.3	+2.0
ERTA				*i* Vmb_Lg		12 49 04.6	
MONQ	Montcuq	2.47	54	Pn	Pb	12 48 18.6	-1.0
MONQ				Sn	Sb	12 48 49.8	-0.4
EMIR	Miracle	2.51	113	Pn	Pn	12 48 17.1	+0.9
EMIR				Sg	Sg	12 48 54.9	-0.7
EMIR				*i* Vmb_Lg		12 49 02.3	
EPOB	Poblet	2.53	128	Pn	Pn	12 48 16.7	+0.2
EPOB				Sn	Sn	12 48 46.4	-1.2
EPOB				Sg	Sg	12 48 54.6	-1.5
EPOB				*i* Vmb_Lg		12 49 00.3	
LFF	La Frestale	2.61	39	*e*Pn	Pb	12 48 20.3	-1.8
LFF				*e*Sn	Sn	12 48 50.0	+0.5
	24nm,0.3s						
LFF				*e*Sg	Sg	12 49 02.1	+3.3
	23nm,0.3s						
EARI	Arriondas	2.69	279	Pn	Pn	12 48 20.8	+2.1
EARI				Sn	Sn	12 48 53.7	+2.2
EARI				*i* Vmb_Lg		12 49 15.8	
EMOS	Mosqueruela	2.70	162	Pn	Pn	12 48 20.1	+1.2
EMOS				Pg	Pg	12 48 25.6	-1.0
EMOS				Sn	Sn	12 48 53.1	+1.2
EMOS				Sg	Sb	12 48 59.5	+2.5
EMOS				*i* Vmb_Lg		12 49 11.4	
MTLF	Montolieu	2.80	80	*e*Pn	Pn	12 48 21.5	+1.3
MTLF				*e*Sn	Sn	12 48 53.5	-0.8
	16nm,0.4s						
MTLF	Montolieu	2.80	80	Pn	Pn	12 48 21.8	+1.5
GUD	Guadarrama	2.99	221	Pn	Pn	12 48 24.1	+1.1
GUD				Sn	Sn	12 48 58.8	-0.3
GUD				*i* Vmb_Lg		12 49 12.2	
FILF	Fillols	3.07	96	Pn	Pn	12 48 25.4	+1.5
RJF	Les Rejaudoux	3.25	42	*e*Pn	Pn	12 48 28.5	+2.1
RJF				*e*Sn	Sn	12 49 05.3	0.0
	14nm,0.3s						
CAF	Calviac	3.30	52	*e*Pn	Pn	12 48 28.3	+1.3
CAF				*e*Sn	Sn	12 49 06.2	-0.3
	10nm,0.2s						
ECHE	Chera	3.37	172	Pg	Pg	12 48 39.0	-0.5
ECHE				Sn	Sn	12 49 09.1	+0.8
ECHE				*i* Vmb_Lg		12 49 34.6	
EVIV	Cofrentes, Val	3.68	174	Pg	Pg	12 48 45.4	0.0
MFF	Saint Martin d	3.81	15	*e*Pn	Pn	12 48 35.6	+1.6
MFF	Saint Martin d	3.81	15	*e*Pg	Pg	12 48 47.4	-0.5
MFF				*e*Sn	Sn	12 49 18.8	-0.2
	5.5nm,0.4s						
MFF				*e*Sg	Sg	12 49 37.5	+0.3
	3.5nm,0.2s						
ECAL	Calabor	3.95	257	Pn	Pn	12 48 37.1	+1.0
ECAL				Sn	Sn	12 49 20.7	-1.9
ECAL				*i* Vmb_Lg		12 49 48.2	
PAB	San Pablo	3.98	213	Pn	Pn	12 48 36.8	+0.4
PAB				Sn	Sn	12 49 20.5	-2.9
PAB				*i* Vmb_Lg		12 49 55.6	
LASF	Ste Croix	4.11	72	*e*Pn	Pn	12 48 38.8	+0.6
LASF				*e*Sn	Sn	12 49 25.0	-1.6
	4.6nm,0.4s						
TCF	Toulx Ste Croi	4.31	38	*e*Pn	Pn	12 48 42.2	+1.3
TCF				*e*Sn	Sn	12 49 30.5	-0.9
	7.8nm,0.3s						
PSIM	Granatula de C	4.43	203	Pn	Pn	12 48 43.8	+1.2
PSIM				Sn	Sn	12 49 29.9	-4.6
MVO	Moncorvo	4.43	248	*e*Pn	Pn	12 48 43.4	+0.8
MVO				*e*Sn	Sn	12 49 34.3	-0.2
MVO				*e*Sg	Sg	12 49 55.9	-1.3
MVO				A	A	12 49 56.1	
	10nm,0.4s						
BGF	Bois d'Agland	4.80	39	*e*Pn	Pn	12 48 48.8	+1.1
BGF	Bois d'Agland	4.80	39	*e*Pg	Pg	12 49 06.9	0.0
BGF				*e*Sn	Sn	12 49 42.2	-1.3
	13nm,0.2s						
BGF				*e*Sg	Sg	12 50 07.5	-1.5
	18nm,0.4s						
POLO	Lamas de Olo	4.88	253	*e*Pn	Pn	12 48 49.7	+0.9
POLO				*e*Sn	Sn	12 49 44.0	-1.6
POLO				*e*Sg	Sg	12 50 08.0	-3.6
POLO				A	A	12 50 12.1	
	2.6nm,0.4s						
VIVF	Saint-Julien-l	4.91	65	*e*Pn	Pn	12 48 50.0	+0.9
VIVF				*e*Sn	Sn	12 49 44.1	-2.1
	5.8nm,0.4s						
ELOB	Lobios	4.92	260	Pn	Pn	12 48 49.9	+0.5
ELOB				*i* Vmb_Lg		12 51 06.5	
QUIF	Quistinic	5.11	348	*e*Pn	Pn	12 48 53.4	+1.5
QUIF				*e*Sn	Sn	12 49 50.5	-0.6
	5.4nm,0.4s						
AVF	Avril sur Loir	5.21	41	*e*Pn	Pn	12 48 54.4	+1.2
AVF	Avril sur Loir	5.21	41	*e*Pg	Pg	12 49 13.9	-0.8
AVF				*e*Sn	Sn	12 49 52.0	-1.6
	4.6nm,0.5s						
SMRF	Simiane la Rot	5.31	76	*e*Pn	Pn	12 48 55.0	+0.3
SGMF	Saint Gilles	5.37	353	*e*Sn	Sn	12 49 55.9	-1.5
	5.6nm,0.5s						
SSF	Saint Saulge	5.48	39	*e*Pn	Pn	12 48 58.1	+1.1
SSF				*e*Sn	Sn	12 49 58.2	-2.0
	2.4nm,0.2s						
ROSF	Rostrenen	5.53	348	*e*Pn	Pn	12 48 59.1	+1.4
ROSF				*e*Sn	Sn	12 50 00.2	-1.4
	2.7nm,0.3s						
PMRV	Marv??o	5.61	233	*e*Pn	Pn	12 48 59.5	+0.6
PMRV				*e*Sn	Sn	12 50 02.0	-1.6
PMRV				*e*Sg	Sg	12 50 31.4	-3.8
PMRV				A	A	12 50 41.6	
	5.0nm,0.4s						
ORIF	Oris-en-Rattie	5.74	67	*e*Pn	Pn	12 49 01.4	+0.8
LDF	La Druitiere	5.75	10	*e*Pn	Pn	12 49 02.1	+1.4
LDF				*e*Sn	Sn	12 50 05.2	-1.7
	2.2nm,0.3s						
LOR	Lormes	5.79	40	*e*Pn	Pn	12 49 02.4	+1.1
	baz=225						
LOR				*e*Sn	Sn	12 50 06.1	-1.9
	2.8nm,0.3s						
PESTR	Estremoz	6.10	230	*e*Pn	Pn	12 49 06.1	+0.5
PBAR	Barrancos	6.32	223	*e*Sg	Sg	12 50 55.2	-2.5
PBAR				A	A	12 51 03.3	
	4.3nm,0.6s						

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*IDC **28** 12:50:27.6±2.8, 8°.30S×112°.02E, h0^{km}, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=173.3km s-min=22.2km az=49.0*
*DJA **28** 12:50:30.1±0.4, 9°S±3°×11°1E±°, h10^{km}, M4.1/19, mb4.4/2, MLv4.0/19*
ISC 28 12:50:30.0±0.9**, 9°.44S**±0°.07×**111°.22E**±0°.05**, h35**^{km}**, n34,** σ**1^{s}.67**/34**, mb3.5**/5**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PWJI	Pagerwojo	1.52	22	P	Pn	12 50 54.7	0.0
PWJI				S	Sn	12 51 12.0	-1.2
UGM	Wanagama	1.66	336	P	Pn	12 50 57.6	+0.9
UGM	Wanagama	1.66	336	P	Pn	12 50 57.1	+0.4
UGM				S	Sn	12 51 17.5	+0.6
YOGI	Yogyakarta	1.85	330	P	Pn	12 51 00.1	+0.8
YOGI				S	Sn	12 51 21.3	-0.2
NGJI	Ngawi	2.07	7	P	Pn	12 51 04.9	+2.6
GMJI	Gumukmas	2.48	62	P	Pn	12 51 09.3	+1.4
SMRI	Semarang	2.50	342	P	Pn	12 51 10.4	+2.3
SMRI	Semarang	2.50	342	P	Pn	12 51 09.5	+1.4
GRJI	Gresik	2.80	27	P	Pn	12 51 12.8	+0.5
BLJI	Banyuglugur	2.89	55	P	Pn	12 51 15.4	+1.9
UWJI	Ujung Watu	3.01	355	P	Pn	12 51 15.7	+0.5
JAGI	Jajag, Banyuwa	3.05	72	P	Pn	12 51 17.0	+1.2
JAGI	Jajag, Banyuwa	3.05	72	P	Pn	12 51 16.5	+0.7
KPJI	Karang Pucung	3.08	313	P	Pn	12 51 18.0	+1.8
CMJI	Cimerak	3.19	301	P	Pn	12 51 18.5	+0.8
ABJI	Asem Bagus	3.40	62	P	Pn	12 51 22.4	+1.9
IGBI	Denpasar	3.93	81	P	Pn	12 51 29.6	+1.8
BBJI	Bungbulang	4.04	299	P	Pn	12 51 30.4	+1.0
CNJI	Cibinong	4.56	297	P	Pn	12 51 40.0	+3.4
XMI	Christmas Isla	5.54	259	P	Pn	12 51 50.4	+0.4
CGJI	Cibinong	6.15	297	P	Pn	12 52 00.3	+1.9
	13nm,0.7s,0.2nm						
PLAI	Plampang	6.50	85	P	Pn	12 52 05.2	+2.0
PLAI	Plampang	6.50	85	P	Pn	12 52 04.5	+1.3
GIRL	Giralia	13.45	168	P	Pn	12 53 37.7	-0.7
MBWA	Marble Bar	14.25	146	P	Pn	12 53 48.0	-1.3
PSA00	Pilbara Seismi	14.64	146	P	Pn	12 53 53.6	-1.1
WRA	Warramunga Arr	24.65	118	P	P	12 55 48.9	+1.3
	0.3nm,0.9s,baz=295,slow=11,SNR=2.4						
	0.3nm,0.9s						
ASAR	Alice Springs	25.88	126	P	P	12 56 01.9	+3.1
	0.3nm,0.7s,baz=303,slow=9.3,SNR=8.3						
	0.3nm,0.7s						
H08S2	Diego Garcia H	38.33	270	T	T	13 38 35.4	
	baz=94						
H08S3	Diego Garcia H	38.34	270	T	T	13 38 56.0	
	baz=94						
H08S1	Diego Carcia H	38.34	270	T	T	13 38 51.0	
	baz=94						
MKAR	Makanchi Array	61.64	338	P	P	13 00 42.2	-2.0
	0.6nm,0.4s,baz=147,slow=8.0,SNR=14						
	0.6nm,0.4s						
KURBB	Kurchatov Arra	66.21	338	P	P	13 01 12.4	-1.8
	0.2nm,0.5s,baz=154,slow=6.1,SNR=2.9						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	66.98	343	P	P	13 01 16.4	-2.6
	0.5nm,0.3s,baz=150,slow=6.1,SNR=2.4						
	0.5nm,0.3s						

IDC 28 13:09:03.9±2.3**, 6°.41S**×**129°.55E, h0**^{km}**, mb3.2**/1**, mbtmp3.4**/3**, ML3.7**/2**, Error ellipse: s-maj=126.0km s-min=32.8km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.24	161	Pn	Pn	13 12 27.1	+0.2
	0.3nm,0.3s,baz=341,slow=10.0,SNR=21						
WRA				Sn	Sn	13 14 52.2	-14
	0.6nm,0.3s,baz=334,slow=22,SNR=13						
	0.4nm,0.5s						
ASAR	Alice Springs	17.67	167	P	Pn	13 13 11.3	-0.3
	0.3nm,0.3s,baz=338,slow=11,SNR=50						
ASAR				S	Sn	13 16 12.8	-16
	0.5nm,0.6s,baz=320,slow=16,SNR=7.0						
	1.8nm,0.6s						
MKAR	Makanchi Array	67.49	327	P	P	13 20 01.8	+0.1
	0.2nm,0.8s,baz=111,slow=6.9,SNR=1.7						
	0.2nm,0.8s						

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*IDC **28** 13:23:06.3±2.8, 32°.25S×178°.18W, h0^{km}, mb4.1/2, mbtmp4.0/3, ML3.5/1, MS3.2/2, Error ellipse: s-maj=67.2km s-min=35.9km az=119.0*
*NEIC **28** 13:23:07.1±1.2, 32°.25S±0°.10×178°.1W±0°.2, h10^{km}±2^{km}, mb4.4/6, Error ellipse: s-maj=34.7km s-min=12.8km az=107.0*
ISC 28 13:23:08.0±1.3**, 32°.2S**±0°.1×**178°.3W**±0°.3**, h10**^{km}**, n20,** σ**0^{s}.68**/19**, mb4.3**/6**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.98	6	LR	LR	13 24 59.6	
	comp=Z,196nm,19.0s,baz=348,slow=38						
RAO	Raoul Island	2.98	6	Pn	Pn	13 23 54.8	-0.4
URZ	Urewera	7.10	211	Pn	Pn	13 24 52.2	+0.4
	0.8nm,0.3s,baz=338,slow=6.0,SNR=2.2						
URZ				Sn	Sn	13 26 13.0	+0.4
	3.4nm,0.3s,baz=251,slow=22,SNR=8.3						
	2.6nm,0.3s						
RTZ	Ruatahuna	7.45	210	Pn	Pn	13 24 56.9	0.0
BKZ	Black Stump Fm	8.12	210	Pn	Pn	13 25 05.6	-0.4
BFZ	Birch Farm	9.52	206	Pn	Pn	13 25 24.1	-0.9
MRZ	Mangatainoka R	9.76	209	Pn	Pn	13 25 27.6	-0.7
TUWZ	Tuamarina	11.09	212	Pn	Pn	13 25 46.0	-0.6
KHZ	Kahutara	12.07	210	Pn	Pn	13 25 58.5	-1.4
DZM	Mont Dzumac	16.91	303	LR	LR	13 32 43.2	
	comp=Z,149nm,19.8s,baz=48,slow=34						
AS31	Alice Springs	42.79	269	P	P	13 31 05.5	-0.6
AS31				IAmb	IAmb	13 31 12.4	
	comp=Z,1.1nm,0.8s						
ASAR	Alice Springs	42.79	269	P	P	13 31 06.7	+0.6
	comp=Z,1.3nm,0.7s,baz=108,slow=7.5,SNR=15						
	comp=Z,1.3nm,0.7s						
ASAR	Alice Springs	42.79	269	P	P	13 31 05.5	-0.6
WB2	Warramunga Arr	43.93	274	P	P	13 31 15.4	+0.1
WB2				IAmb	IAmb	13 31 32.6	
	comp=Z,12nm,1.4s						
WRAB	Tennant Creek	43.94	274	P	P	13 31 15.4	+0.1
WRAB				IAmb	IAmb	13 31 30.9	
	comp=Z,7.2nm,1.1s						
WRA	Warramunga Arr	43.94	274	P	P	13 31 15.9	+0.6
	comp=Z,1.6nm,0.4s,baz=112,slow=8.0,SNR=46						
	comp=Z,1.6nm,0.4s						
WRA	Warramunga Arr	43.94	274	P	P	13 31 15.7	+0.3
FORT	Forrest	45.36	257	P	P	13 31 27.1	+0.5
SBA	Scott Base	46.21	184	P	P	13 31 32.9	+0.3
SBA				IAmb	IAmb	13 31 51.8	
	comp=Z,25nm,1.5s						
FINES	FINESS Array B	146.75	339	PKPbc	PKPdf	13 42 48.8	+1.1
	comp=Z,1.8nm,0.4s,baz=46,slow=3.7,SNR=21						

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*FUNV **28** 13:28:13.9, 10°.34N×62°.34W, h1^{km}, MW2.8*
ISC 28 13:28:12.7±1.6**, 10°.2N**±0°.2×**62°.36W**±0°.06**, h10**^{km}**, n6,** σ**1^{s}.75**/7**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUV	Carupano	0.97	298	*e*S	Sg	13 28 43.5	-0.7
TRN	Trinidad (W)	1.03	65	*e*P	Pn	13 28 34.1	+0.9
TRN				*e*S	Sn	13 28 46.7	-1.1
PCRV	Puerto La Cruz	2.24	269	*e*P	Pn	13 28 51.5	+1.5
PCRV				*e*S	Sn	13 29 18.6	+0.9
GCMP	Grenada, Carri	2.44	22	*e*P	Pn	13 28 47.1	-5.4
GCMP				*e*S	Sn	13 29 10.8	-12
CACV	CAICARA DEL OR	4.90	238	*e*P	Pn	13 29 22.8	-3.7
CACV				*e*S	Sn	13 30 14.6	-8.7
BAUV	El Baul	5.74	258	*e*P	Pn	13 29 38.4	+0.3
BAUV				*e*S	Sn	13 30 41.6	-2.5

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*TAP **28** 13:58:53.6, 24°.05N×122°.62E, h25^{km}, ML2.5, C*
*JMA **28** 13:58:53.8±0.2, 24°.0N±0°.8×122°.6E±0°.6, h18^{km}, MV2.5/9, NW OFF ISHIGAKIJIMA IS*
ISC 28 13:58:53.3±0.9**, 23°.98N**±0°.03×**122°.63E**±0°.02**, h22**^{km}±5^{km}**, n76,** σ**0^{s}.80**/132**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	EOS4	0.32	297	P	Pb	13 59 00.2	+0.1
	baz=285						
EOS4				*e*S	Sb	13 59 05.0	+0.3
	baz=285						
EOS3	EOS3	0.42	318	P	Pb	13 59 01.9	0.0
	baz=309						
EOS3				*e*S	Sb	13 59 08.1	+0.2
	baz=309						
JYNG	Yonagunijimaku	0.55	32	P	Pb	13 59 03.8	-0.6
JYNG				S	Sb	13 59 10.6	-1.4
EOS2	EOS2	0.57	321	*e*P	Pb	13 59 04.7	+0.1
	baz=317						
YOJ	Yonaguni jima	0.60	36	P	Pb	13 59 04.6	-0.5
YOJ				S	Sb	13 59 13.2	0.0
YOJ	Yonaguni jima	0.60	36	P	Pb	13 59 04.6	-0.5
	baz=44						
YOJ				S	Sb	13 59 12.8	-0.3
	baz=44						
EWUT	Wuta	0.90	301	P	Pb	13 59 10.0	-0.3
	baz=297						
EWUT				S	Sn	13 59 22.8	-0.2
	baz=297						
ETL	Fush Village	0.93	281	P	Pb	13 59 11.1	+0.2
	baz=262						
TWD	Chiawan	0.95	276	*i* P	Pb	13 59 10.9	-0.2
	baz=272						
TWD				S	Sb	13 59 23.4	+0.2
	baz=272						
TWC	Suao	0.95	312	*i* P	Pb	13 59 10.2	-0.9
	baz=309						
TWC				*i* S	Sn	13 59 22.8	-1.3
	baz=309						
NACB	Ninganchiao	0.96	282	P	Pb	13 59 11.2	-0.1
	baz=263						
NACB				S	Sn	13 59 24.2	-0.3
	baz=263						
NDS	Dongshan	1.06	308	P	Pb	13 59 12.4	-0.6
	baz=305						
NDS				S	Sn	13 59 27.7	+0.9
	baz=305						
ETLH	Xiulin Townshi	1.07	283	P	Pb	13 59 13.2	-0.1
	baz=266						
ETLH				S	Sn	13 59 27.9	+0.6
	baz=266						
EGS		1.07	324	P	Pn	13 59 13.1	+0.1
	baz=332						
IRIF	Iriomote-Funau	1.07	70	P	Pb	13 59 13.6	+0.4
IRIF				*e*S	Sn	13 59 27.1	-0.1
HATJ	Hateruma jima	1.08	86	P	Pb	13 59 13.7	+0.4
HATJ				S	Sn	13 59 28.2	+0.8
EGFH	Guangfu	1.14	255	P	Pn	13 59 14.0	+0.1
	baz=251						
EGFH				S	Sb	13 59 28.9	+0.2
	baz=251						
LATG	Datong	1.15	299	P	Pb	13 59 14.3	-0.2
	baz=296						
LATG				S	Sn	13 59 31.4	+2.2
	baz=296						
HGSD	Ruisui	1.20	247	P	Pn	13 59 14.5	-0.3
	baz=244						
HGSD				S	Sn	13 59 31.0	+0.6
	baz=244						
NNSB	Datong	1.22	292	P	Pb	13 59 15.7	-0.1
	baz=289						
FUSB	Fushanzhiwuyua	1.23	310	P	Pb	13 59 15.9	0.0
	baz=307						
FUSB				S	Sn	13 59 32.1	+1.0
	baz=307						
TIPB	Shuangxi	1.23	324	P	Pb	13 59 15.2	-0.7
	baz=337						
TIPB				S	Sb	13 59 29.8	-1.6
	baz=337						
NNS	Nan Shan	1.23	292	*i* P	Pb	13 59 16.0	0.0
	baz=275						
WHF	Hehuan Shan	1.25	278	*i* S	Sn	13 59 32.7	+0.4
	baz=261						
EHY	Hungye	1.28	249	*i* P	Pn	13 59 15.7	-0.2
	baz=246						
EHY				S	Sn	13 59 32.8	+0.4
	baz=246						
JKRS	Kuro-shima	1.29	78	*e*P	Pb	13 59 17.6	+0.6
JKRS				S	Sb	13 59 34.1	+1.0
NWLT	Wulai	1.30	308	P	Pb	13 59 17.0	-0.1
	baz=305						
NWLT				S	Sb	13 59 33.9	+0.6
	baz=305						
SXI1	Grass Mountain	1.30	329	P	Pn	13 59 16.0	-0.3
	baz=339						
OWD	Renai	1.33	269	P	Pb	13 59 17.4	-0.2
	baz=266						
OWD				S	Sn	13 59 33.2	-0.5
	baz=266						
CHGB	Renai	1.33	274	P	Pn	13 59 17.1	+0.3
	baz=271						
CHGB				S	Sb	13 59 34.5	+0.1
	baz=271						
YHNB	Yeheng	1.33	301	P	Pb	13 59 17.5	-0.2
	baz=283						
YHNB				S	Sb	13 59 33.9	-0.5
	baz=283						
NSK	Sanguang	1.35	301	*i* P	Pb	13 59 17.9	-0.1
	baz=283						
NSK				*i* S	Sb	13 59 34.9	0.0
	baz=283						
YULB	Yu-li	1.35	245	P	Pn	13 59 16.9	0.0
	baz=230						
YULB				S	Sn	13 59 34.4	+0.3
	baz=230						
EYUL	Yuli	1.35	243	P	Pn	13 59 16.6	-0.3
	baz=230						
VWDT	VWDT	1.38	261	P	Pn	13 59 17.8	+0.6
	baz=250						
WUSB	Renai	1.38	271	P	Pb	13 59 18.6	0.0
	baz=268						
WUSB				S	Sb	13 59 36.4	+0.6
	baz=268						
JIJ	Ishigaki jima	1.44	74	P	Pn	13 59 18.6	+0.6
JIJ				S	Sb	13 59 37.2	-0.2
FULB	Fuli	1.45	238	P	Pn	13 59 17.2	-1.0
	baz=225						
FULB				S	Sn	13 59 37.9	+1.3
	baz=225						

CHKT	Chengkung baz=220	1.45	233	*i* S	Sn	13 59 35.3	-1.3
YM01	YM01 baz=318	1.51	321	P	Pb	13 59 19.4	-1.3
NFF	Wufeng Townshi baz=282	1.52	296	P	Pb	13 59 21.2	+0.3
SSLB	Suanglung baz=261	1.54	263	P	Pn	13 59 19.9	+0.4
SSLB	baz=261			S	Sb	13 59 40.3	0.0
EHD	Haiduan baz=225	1.54	238	P	Pn	13 59 19.3	-0.2
EHD	baz=225			S	Sn	13 59 38.7	-0.1
WHP	Taichung City baz=267	1.56	281	P	Pb	13 59 21.2	-0.5
WHP	baz=267			S	Sb	13 59 40.4	-0.6
WCS	Beigang Elemen baz=271	1.57	273	P	Pb	13 59 21.2	-0.5
EDH	Donghe baz=219	1.57	231	P	Pn	13 59 19.6	-0.3
EDH	baz=219			S	Sn	13 59 38.6	-1.0
SMLT	Sun Moon Lake baz=264	1.58	267	*i* P	Pb	13 59 21.8	-0.1
SMLT	baz=264			S	Sn	13 59 40.1	+0.1
YUS	Yu-Shan baz=250	1.61	253	*i* P	Pn	13 59 20.9	+0.1
YUS	baz=250			*i* S	Sn	13 59 41.2	0.0
LIOB	Emei baz=292	1.61	295	P	Pb	13 59 22.6	+0.1
NSTT	Nanjuang baz=291	1.62	294	*i* P	Pb	13 59 21.6	-1.0
NSTT	baz=291			S	Sb	13 59 41.9	-0.6
TYC	Yuchr baz=265	1.62	268	*i* P	Pb	13 59 21.9	-0.6
TYC	baz=265			S	Sn	13 59 41.5	+0.7
WHYT	Xinyi Township baz=246	1.65	261	P	Pb	13 59 22.7	-0.4
WHYT	baz=246			S	Sn	13 59 42.5	+1.0
JISG	Ishigakijimahi	1.65	68	P	Pn	13 59 21.4	+0.4
JISG				*e*S	Sb	13 59 42.6	-0.9
ELDTW	Lidau baz=240	1.67	242	*i* P	Pn	13 59 20.8	-0.6
ELDTW	baz=240			*i* S	Sn	13 59 42.1	-0.1
LDUT	Ludao baz=218	1.68	220	P	Pn	13 59 20.4	-1.0
LDUT	baz=218			S	Sn	13 59 41.6	-0.6
ALS	Alishan baz=252	1.73	255	*i* P	Pn	13 59 23.5	+1.1
ALS	baz=252			*i* S	Sb	13 59 45.7	-0.4
WJS	Zhushan baz=263	1.74	265	P	Pb	13 59 24.2	-0.5
WJS	baz=263			S	Sb	13 59 47.4	+1.3
CHN5	Tsauling baz=245	1.82	258	P	Pn	13 59 25.0	+1.5
CHN5	baz=245			S	Sb	13 59 48.0	-0.5
TWGBT	Beinan baz=220	1.83	231	P	Pn	13 59 23.0	-0.5
TWGBT	baz=220			S	Sn	13 59 45.5	-0.4
TWG	Pinlang baz=220	1.83	231	*i* P	Pn	13 59 23.3	-0.2
TWG	baz=220			S	Sn	13 59 45.3	-0.8
STYH	Taoyuan baz=235	1.88	245	P	Pn	13 59 25.5	+1.4
STYH	baz=235			S	Sn	13 59 49.1	+2.0
WCKO	Fanlu baz=252	1.93	254	P	Pb	13 59 27.2	-0.6
WCKO	baz=252			S	Sb	13 59 51.1	-0.4
WDLH	Douliu baz=259	1.93	262	S	Sb	13 59 53.1	+1.5
TPUB	Ta-pu baz=237	1.95	250	P	Pn	13 59 26.0	+0.9
TPUB	baz=237			S	Sn	13 59 51.0	+2.1
CHN4	Tsaushan baz=250	1.96	252	*i* P	Pb	13 59 27.6	-0.8
CHN4	baz=250			*i* S	Sb	13 59 53.5	+1.0
WTP	Ta-pu baz=237	1.98	249	*i* P	Pn	13 59 27.7	+2.1
WTP	baz=237			S	Sb	13 59 52.2	-0.9
WRL	Guolierlin Hig baz=279	2.06	268	P	Pb	13 59 29.3	-0.8
WRL	baz=279			S	Sb	13 59 54.6	-0.6
WTK	Tuku baz=260	2.07	262	S	Sb	13 59 55.2	-0.3
SGST	Jiashian baz=234	2.08	245	P	Pn	13 59 28.2	+1.4
SGST	baz=234			S	Sb	13 59 55.3	-0.5
CHN1	Nanshi baz=246	2.08	248	*i* P	Pb	13 59 29.8	-0.6
CHN1	baz=246			*i* S	Sn	13 59 53.4	+1.3
TWK	Hsinying baz=248	2.08	251	*i* P	Pn	13 59 29.1	+2.1
TWK	baz=248			*i* S	Sn	13 59 54.4	+2.1
WSL	Shuilin Townsh baz=256	2.24	259	S	Sb	13 59 59.2	-1.3
EAST	Anshuo baz=225	2.28	226	P	Pn	13 59 28.9	-0.8
MASBT	Mashibuluo baz=226	2.28	234	P	Pn	13 59 30.2	+0.6
SMST	Manzhou Townsh baz=219	2.55	221	P	Pn	13 59 32.7	-0.7
SMST	baz=219			S	Sn	14 00 04.8	+1.1
PTMZ	Houxiangcun baz=287	3.36	289	P	Pn	13 59 44.8	+0.2

WEL 28 14:05:00.7±0.3, 42°S±2°×17°4E±°, h5^{km}, M2.9/10, ML3.2/10, MLv2.9/10, Error ellipse: s-maj=0.0km s-min=0.0km az=103.3, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	Kahutara	0.22	178	P	Pg	14 05 05.5	+0.4
KHZ				S	Sg	14 05 08.7	+0.6
BSWZ	Blackbirch Sta	0.54	28	P	Pg	14 05 11.5	+0.4
BSWZ				S	Sb	14 05 19.6	-1.2
THZ	Tophouse	0.63	312	P	Pg	14 05 13.3	+0.4
CMWZ	Cape Campbell	0.68	49	P	Pb	14 05 14.7	-0.3
TUWZ	Tuamarina	0.82	22	P	Pg	14 05 16.7	+0.2
TUWZ				S	Sb	14 05 28.3	-0.5
GVZ	Greta Valley S	0.86	205	P	Pb	14 05 17.8	-0.3
GVZ				S	Sb	14 05 30.3	+0.4
MRNZ	Matariki Terra	0.98	324	P	Pg	14 05 19.7	+0.2
NNZ	Nelson	0.98	353	P	Pg	14 05 19.3	-0.2
NNZ				S	Sb	14 05 32.9	-0.5
LTZ	Lake Taylor	1.10	237	P	Pg	14 05 21.0	-0.8
TCW	Tory Channel	1.13	30	P	Pg	14 05 21.7	-0.7
AMCZ	Amberley	1.18	213	P	Pg	14 05 21.9	-1.4
TKNZ	Takaka Hill	1.23	340	P	Pg	14 05 24.0	-0.4
WEL	Wellington	1.30	46	P	Pn	14 05 24.1	-1.3
DSZ	Denniston Nort	1.36	289	P	Pn	14 05 26.5	+0.1
DUWZ	D'Urville Isla	1.42	12	P	Pn	14 05 26.8	-0.4
PLWZ	Palliser	1.43	65	P	Pn	14 05 24.7	-2.6
QRZ	Quartz Range	1.56	331	P	Pn	14 05 29.3	+0.2
OXZ	Oxford	1.58	224	P	Pn	14 05 26.7	-2.7
CAW	Cannon Point	1.58	47	P	Pn	14 05 27.5	-1.8
INZ	Inchbonnie	1.63	250	P	Pn	14 05 29.2	-0.9
PAWZ	Paruwai Farm	1.63	61	P	Pn	14 05 27.4	-2.7
MQZ	McQueen's Vall	1.65	203	P	Pn	14 05 26.9	-3.3
KIW	Kapiti Island	1.69	38	P	Pn	14 05 29.6	-1.2
AKCZ	Akaroa Harbour	1.74	195	P	Pn	14 05 28.8	-2.8
MTW	Mount Morrison	1.80	56	P	Pn	14 05 29.8	-2.6
RACZ	Rakaia	1.84	213	P	Pn	14 05 30.0	-3.0
OGWZ	Otaki Gorge	1.84	42	P	Pn	14 05 31.2	-1.8
MHCZ	Mount Hutt	1.97	226	P	Pn	14 05 32.1	-2.7
HOWZ	Holdsworth Sta	1.97	50	P	Pn	14 05 34.0	-0.8
TMWZ	Te Maipa	2.07	59	P	Pn	14 05 33.1	-3.1
WACZ	Wakanui South	2.14	215	P	Pn	14 05 34.2	-2.9
MRZ	Mangatainoka R	2.17	46	P	Pn	14 05 35.1	-2.4
WVZ	Waitaha Valley	2.24	246	P	Pn	14 05 37.6	-0.9
RPZ	Rata Peaks	2.37	229	P	Pn	14 05 37.9	-2.3
ARCZ	Arundel	2.46	224	P	Pn	14 05 38.9	-2.6
BFZ	Birch Farm	2.54	54	P	Pn	14 05 39.5	-3.0
GCSZ	Gaunt Creek Bo	2.61	243	P	Pn	14 05 43.0	-0.6
WAZ	Wanganui	2.67	25	P	Pb	14 05 48.6	-0.5
TMZ	Timaru	2.86	219	P	Pn	14 05 44.3	-2.8
NBEZ	Newall Road No	2.93	5	P	Pb	14 05 52.8	-0.6
PKE	Pukeiti	3.02	7	P	Pn	14 05 51.4	+2.3
FOZ	Fox Glacier	3.04	243	P	Pn	14 05 48.8	-0.7
VRZ	Vera Road	3.20	17	P	Pb	14 05 54.9	-3.2
LBZ	Lake Benmore	3.28	227	P	Pn	14 05 50.8	-2.0
OTVZ	Oturere	3.43	29	P	Pn	14 05 57.6	+2.6
KRVZ	Karewarewa	3.49	28	P	Pn	14 05 58.1	+2.4
ODZ	Otahua Downs	3.54	215	P	Pn	14 05 53.0	-3.3
HIZ	Hauiti	3.81	16	P	Pb	14 06 04.4	-4.0
JCZ	Jackson Bay	3.95	240	P	Pn	14 06 00.3	-1.7
EAZ	Earnscleugh	4.31	224	P	Pn	14 06 04.2	-2.7

WEL 28 14:14:56.8±0.4, 42°S±3°×17°4E±°, h5^{km}, M2.7/14, ML3.0/14, MLv2.7/14, Error ellipse: s-maj=0.0km s-min=0.0km az=149.5, confirmed, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.12	238	P	Pg	14 15 00.0	+0.9
BSWZ	Blackbirch Sta	0.35	266	P	Pg	14 15 03.8	+0.2
BSWZ				S	Sg	14 15 09.3	+1.1
TUWZ	Tuamarina	0.40	311	P	Pg	14 15 04.9	+0.5
TUWZ				S	Sg	14 15 11.0	+1.4
TCW	Tory Channel	0.48	354	P	Pg	14 15 06.5	+0.5
TCW				S	Sb	14 15 13.7	-1.3
WEL	Wellington	0.52	38	P	Pb	14 15 07.6	-0.6
PLWZ	Palliser	0.69	80	P	Pb	14 15 11.5	+0.2
CAW	Cannon Point	0.80	43	P	Pg	14 15 12.4	+0.4
NNZ	Nelson	0.86	303	P	Pg	14 15 13.0	-0.4
PAWZ	Paruwai Farm	0.87	70	P	Pb	14 15 14.1	-0.2
KIW	Kapiti Island	0.93	27	P	Pg	14 15 14.6	0.0
DUWZ	D'Urville Isla	0.94	340	P	Pg	14 15 14.6	-0.2
KHZ	Kahutara	0.94	219	P	Pg	14 15 14.6	-0.2
KHZ				S	Sb	14 15 28.2	-0.1
MTW	Mount Morrison	1.02	59	P	Pg	14 15 16.1	-0.2
TRWZ	Traveller	1.05	74	P	Pg	14 15 16.1	-0.7
OGWZ	Otaki Gorge	1.07	36	P	Pg	14 15 17.0	-0.2
THZ	Tophouse	1.08	266	P	Pg	14 15 16.8	-0.6
THZ				S	Sn	14 15 33.4	-0.6
HOWZ	Holdsworth Sta	1.19	49	P	Pg	14 15 19.1	-0.3
MRNZ	Matariki Terra	1.23	283	P	Pg	14 15 19.8	-0.4
TKNZ	Takaka Hill	1.23	302	P	Pg	14 15 19.5	-0.8
TMWZ	Te Maipa	1.30	64	P	Pn	14 15 19.7	-1.9
MRZ	Mangatainoka R	1.39	43	P	Pn	14 15 21.7	-1.1
GVZ	Greta Valley S	1.60	217	P	Pn	14 15 23.4	-2.4
QRZ	Quartz Range	1.62	302	P	Pn	14 15 25.9	0.0
PRWZ	Pori Road	1.67	48	P	Pg	14 15 29.5	+0.7
POWZ	Post Office Ro	1.69	40	P	Pb	14 15 28.1	-0.2
BFZ	Birch Farm	1.75	56	P	Pn	14 15 26.6	-1.2
LTZ	Lake Taylor	1.89	234	P	Pn	14 15 27.7	-2.0
DSZ	Denniston Nort	1.90	267	P	Pn	14 15 30.3	+0.4
DVHZ	Dannevirke	1.96	45	P	Pg	14 15 33.7	-0.5
WAZ	Wanganui	1.99	14	P	Pb	14 15 33.9	+0.5
TSZ	Takapari Road	2.04	38	P	Pb	14 15 34.1	-0.2
OXZ	Oxford	2.36	225	P	Pn	14 15 35.9	-0.3
INZ	Inchbonnie	2.39	243	P	Pb	14 15 39.3	-1.0
KHEZ	Kahui Hut	2.41	354	P	Pg	14 15 41.8	-1.1
NEZ	North Egmont	2.42	355	P	Pg	14 15 42.5	-0.7
AKCZ	Akaroa Harbour	2.42	205	P	Pn	14 15 38.0	+0.9
NBEZ	Newall Road No	2.45	351	P	Pg	14 15 42.9	-0.7
MTVZ	Mangateitei	2.46	21	P	Pb	14 15 41.8	+0.3
PKE	Pukeiti	2.51	354	P	Pb	14 15 41.4	-0.8
WNVZ	Wahianoa	2.55	22	P	Pb	14 15 42.6	-0.4
BHHZ	Black Hill Sta	2.56	31	P	Pb	14 15 43.2	0.0
TRVZ	Turoa	2.56	21	P	Pn	14 15 37.2	-1.9
VRZ	Vera Road	2.58	7	P	Pb	14 15 43.3	-0.2
FWVZ	Far West T-bar	2.60	21	P	Pb	14 15 44.0	0.0
NGZ	Ngauruhoe	2.69	21	P	Pb	14 15 45.3	-0.1
SNVZ	South Ngauruho	2.69	22	P	Pb	14 15 45.5	0.0
OTVZ	Oturere	2.72	22	P	Pb	14 15 45.0	-0.9
NNVZ	North Ngauruho	2.73	21	P	Pb	14 15 46.3	+0.2
WTVZ	West Tongariro	2.74	21	P	Pb	14 15 46.6	+0.3
ETVZ	East Tongariro	2.75	23	P	Pb	14 15 46.3	-0.3
KWHZ	Kaweka Forest	2.76	36	P	Pg	14 15 48.2	-1.5
TMVZ	Te Maari	2.77	22	P	Pb	14 15 46.6	-0.2
BKZ	Black Stump Fm	3.01	34	P	Pb	14 15 51.3	+0.5
HIZ	Hauiti	3.20	7	P	Pb	14 15 52.5	-1.5
TLZ	Tolley Road	3.48	16	P	Pb	14 15 56.9	-1.9

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*IDC **28** 14:16:04.2±2.8, 52°.29N×172°.09E, h0^{km}, mb3.4/5, mbtmp3.4/5, Error ellipse: s-maj=82.4km s-min=28.1km az=178.0*

ISC 28 14:16:09.4±2.4, 52°.5N±0°.5×172°.2E±0°.1, h28^{km}, n12, σ0^{s}.58/7, mb3.4/5, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHEM	Shemya Is, Ala 133nm,0.3s,baz=163,slow=1.9,SNR=123	1.18	78	Pn	Pn	14 16 29.4	-0.5
SHEM	189nm,0.3s,baz=151,slow=22,SNR=36			Sn	Sn	14 16 44.6	-0.4
ILAR	Eielson Array 0.9nm,0.8s,baz=250,slow=7.5,SNR=9.3 0.9nm,0.8s	24.07	43	P	P	14 21 22.1	0.0
H11N2	WAKE ISLAND Hy baz=6.1,slow=76,SNR=36	32.96	189	T	T	14 58 06.5	
H11N3	WAKE ISLAND Hy baz=6.1,slow=76,SNR=49	32.97	189	T	T	14 58 05.9	
H11N1	WAKE ISLAND Hy baz=6.1,slow=76,SNR=38	32.98	189	T	T	14 58 07.9	
H11S1	WAKE ISLAND Hy baz=5.9,slow=76,SNR=42	34.19	189	T	T	14 59 38.0	
H11S3	WAKE ISLAND Hy baz=5.9,slow=76,SNR=33	34.20	189	T	T	14 59 38.3	
H11S2	WAKE ISLAND Hy baz=5.9,slow=76,SNR=19	34.21	189	T	T	14 59 40.2	
YKA	Yellowknife Ar 0.3nm,0.4s,baz=288,slow=7.6,SNR=6.9 0.3nm,0.4s	38.47	46	P	P	14 23 28.9	+0.5
PDAR	Pinedale Array 0.4nm,0.5s,baz=329,slow=2.0,SNR=6.6 0.4nm,0.5s	51.16	68	P	P	14 25 10.2	+0.3
MKAR	Makanchi Array 0.1nm,0.4s,baz=34,slow=5.7,SNR=2.1 0.1nm,0.4s	54.86	303	P	P	14 25 36.3	-0.6
TXAR	Lajitas Array 0.2nm,0.5s,baz=308,slow=3.5,SNR=3.8 0.2nm,0.5s	63.87	75	P	P	14 26 39.9	+0.5

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*TAP **28** 14:16:19.6, 24°.95N×122°.25E, h14^{km}, ML3.1, C*

*JMA **28** 14:16:20.2±0.2, 25°N±1°×122°.3E±0°.6, h27^{km}, MV2.5/10, TAIWAN REGION*

ISC 28 14:16:18.1±1.1, 24°.99N±0°.03×122°.33E±0°.02, h12^{km}±8^{km}, n101, σ0^{s}.76/158, 4C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao baz=280	0.31	274	⇑ *i*P	Pb	14 16 25.4	-0.1
TWB1	baz=280			*i* S	Sg	14 16 29.3	+0.7
EGS	baz=250	0.39	249	*i* P	Pb	14 16 26.6	-0.3
EGS	baz=250			*i* S	Sg	14 16 30.7	-0.3
SXI1	Grass Mountain baz=289	0.42	285	⇑ *i*P	Pb	14 16 28.0	+0.5
SXI1	baz=289			*i* S	Sb	14 16 33.5	-0.5
TIPB	Shuangxi baz=274	0.46	268	*i* P	Pb	14 16 28.2	+0.1
TIPB	baz=274			S	Sg	14 16 33.4	+0.2
WFSB	Wu-fen Shan baz=286	0.50	280	*i* P	Pb	14 16 29.4	+0.6
WFSB	baz=286			S	Sb	14 16 35.8	-0.4
TNOU	National Taiwa baz=294	0.53	288	*i* P	Pb	14 16 30.1	+0.8
TNOU	baz=294			S	Sg	14 16 36.1	+0.5
EOS2	EOS2 baz=200	0.57	189	*e*P	Pb	14 16 30.8	+0.9
ILA	Ilan baz=249	0.57	248	*e*P	Pb	14 16 30.0	0.0
ILA	baz=249			S	Sg	14 16 37.3	+0.5
TWC	Suao baz=223	0.57	229	*i* P	Pg	14 16 29.2	-0.1
TWC	baz=223			*i* S	Sg	14 16 36.9	0.0
NWRT	Kuosheng baz=300	0.64	290	P	Pb	14 16 32.1	+0.9
NWRT	baz=300			S	Sb	14 16 40.0	-0.2
TWE	Neicheng baz=237	0.66	247	*i* P	Pb	14 16 31.4	-0.1
TWE	baz=237			*i* S	Sb	14 16 40.4	-0.2
NDS	Dongshan baz=228	0.66	238	*i* P	Pb	14 16 31.2	-0.3
NDS	baz=228			S	Sb	14 16 40.0	-0.6
TWA	Mucha baz=273	0.68	270	⇓ *i*P	Pn	14 16 32.9	-0.6
TWA	baz=273			*i* S	Sb	14 16 40.9	-0.3
YM01	YM01 baz=288	0.71	283	*i* P	Pn	14 16 33.6	-0.4
YM01	baz=288			*i* S	Sb	14 16 42.6	+0.5
FUSB	Fushanzhiwuyua baz=254	0.71	252	*i* P	Pb	14 16 32.4	0.0
FUSB	baz=254			*i* S	Sb	14 16 42.0	-0.1
TWY	Chenhua baz=286	0.72	294	⇑ *i*P	Pn	14 16 34.0	-0.1
TWY	baz=286			*i* S	Sb	14 16 43.7	+1.3
NHDH	Xindian Distri baz=272	0.73	268	*i* P	Pn	14 16 34.0	-0.2
NHDH	baz=272			*i* S	Sb	14 16 42.7	0.0
EWUT	Wuta baz=212	0.73	223	P	Pg	14 16 32.5	+0.1
EWUT	baz=212			S	Sg	14 16 41.0	-0.9
ANP	Anpu baz=278	0.76	285	*i* P	Pn	14 16 34.3	-0.4
ANP	baz=278			S	Sb	14 16 44.5	+0.8
TATO	Taipei	0.76	269	P	Pn	14 16 34.2	-0.5
ENA	Nanau baz=213	0.77	224	P	Pg	14 16 33.0	+0.1
ENA	baz=213			S	Sg	14 16 41.7	-1.4
ENTT	Nioudou baz=244	0.77	244	*i* P	Pb	14 16 33.7	+0.2
ENTT	baz=244			S	Sb	14 16 44.5	+0.5
NWLT	Wulai baz=257	0.78	255	*i* P	Pb	14 16 34.2	+0.6
NWLT	baz=257			S	Sg	14 16 43.4	0.0
YOJ	Yonaguni jima	0.81	130	P	Pn	14 16 35.1	-0.3
YOJ	Yonaguni jima	0.81	130	P	Pn	14 16 35.0	-0.3
YOJ				S	Sn	14 16 46.2	-1.0
YOJ	Yonaguni jima baz=112	0.81	130	P	Pn	14 16 35.0	-0.3
YOJ	baz=112			S	Sb	14 16 46.0	+1.0
NTST	Danshui baz=287	0.82	283	*e*P	Pn	14 16 35.5	+0.1
NTST	baz=287			*e*S	Sn	14 16 47.0	-0.4
TWS1	Kuangyinshan baz=282	0.83	278	*i* P	Pn	14 16 35.4	-0.3
TWS1	baz=282			*i* S	Sn	14 16 47.0	-0.9
LATG	Datong baz=239	0.86	239	*i* P	Pb	14 16 35.2	+0.2
LATG	baz=239			S	Sg	14 16 45.6	-0.3
YHNB	Yeheng	0.92	250	P	Pb	14 16 36.3	+0.3
YHNB	Yeheng baz=252	0.92	250	*i* P	Pb	14 16 36.1	+0.1
YHNB	baz=252			*i* S	Sb	14 16 49.0	+0.7
NSK	Sanguang baz=252	0.93	251	*i* P	Pb	14 16 36.3	+0.1
NSK	baz=252			S	Sg	14 16 48.1	-0.3
NNSB	Datong baz=227	1.02	237	*i* P	Pb	14 16 38.0	+0.1
NNSB	baz=227			*i* S	Sg	14 16 51.1	-0.1
NNS	Nan Shan baz=227	1.02	238	*i* P	Pn	14 16 38.3	-0.1
NNS	baz=227			*i* S	Sb	14 16 51.4	+0.1
NCU	National Centr baz=272	1.04	269	P	Pn	14 16 38.9	+0.4
NCU	baz=272			S	Sn	14 16 52.6	-0.3
NCUH	Zhongli baz=272	1.04	269	*e*P	Pn	14 16 39.7	+1.2
NCUH	baz=272			S	Sn	14 16 54.5	+1.5
ETL	Fush Village baz=217	1.04	218	*i* P	Pn	14 16 38.4	-0.2
ETL	baz=217			*i* S	Sg	14 16 51.1	-0.7
NACB	Ninganchiao	1.05	220	P	Pb	14 16 38.1	-0.1
NACB	Ninganchiao baz=209	1.05	220	⇑ *i*P	Pb	14 16 37.9	-0.3
NACB	baz=209			*i* S	Sg	14 16 50.8	-1.1
ETLH	Xiulin Townshi baz=214	1.09	225	*i* P	Pn	14 16 39.2	-0.1
ETLH	baz=214			S	Sb	14 16 52.2	-1.1
TWD	Chiawan baz=215	1.12	217	P	Pn	14 16 39.6	0.0
TWD	baz=215			S	Sb	14 16 52.7	-1.2
NFF	Wufeng Townshi baz=254	1.16	253	*e*P	Pn	14 16 40.2	+0.1
NFF	baz=254			*e*S	Sb	14 16 53.3	-1.7
HWA	Hwalien baz=220	1.20	213	*e*P	Pg	14 16 42.1	+0.9
HWA	baz=220			*e*S	Sn	14 16 58.1	+1.2
SBCB	Hsinchu baz=281	1.23	261	P	Pb	14 16 41.5	+0.1
SBCB	baz=281			*e*S	Sb	14 16 57.1	-0.1
LIOB	Emei baz=256	1.24	254	*i* P	Pb	14 16 41.5	0.0
LIOB	baz=256			S	Sb	14 16 57.6	+0.2
HSN	Hsinchu baz=264	1.25	262	*e*P	Pb	14 16 41.6	0.0
HSN	baz=264			*e*S	Sb	14 16 55.8	-1.8
NSTT	Nanjuang baz=255	1.26	254	*i* P	Pn	14 16 41.6	+0.1
NSTT	baz=255			*i* S	Sg	14 16 59.4	+0.8
TWT	Tachien baz=226	1.28	235	P	Pg	14 16 42.9	+0.3
TWT	baz=226			S	Sg	14 16 59.4	+0.1
WHF	Hehuan Shan baz=229	1.28	229	*i* P	Pg	14 16 43.4	+0.7
WHF	baz=229			*i* S	Sg	14 16 59.1	-0.3
TDCB	Techi baz=226	1.29	236	P	Pg	14 16 43.0	+0.1
TDCB	baz=226			S	Sg	14 16 59.7	0.0
CHGB	Renai baz=229	1.40	229	*i* P	Pb	14 16 44.4	+0.2
CHGB	baz=229			S	Sg	14 17 02.9	-0.2

ESL	Shilin	1.42	215	eP	Pg	14 16 45.8	+0.4
	baz=221						
ESL				eS	Sg	14 17 04.2	+0.3
	baz=221						
IRIF	Iriomote-Funau	1.43	117	P	Pn	14 16 43.9	+0.1
WHP	Taichung City	1.44	241	P	Pg	14 16 45.7	-0.1
	baz=257						
OWD	Renai	1.47	226	eP	Pb	14 16 45.7	+0.3
	baz=226						
OWD				eS	Sb	14 17 04.5	+0.3
	baz=226						
WUSB	Renai	1.48	228	P	Pb	14 16 45.8	+0.2
	baz=229						
WUSB				S	Sb	14 17 04.3	-0.1
	baz=229						
EGFH	Guangfu	1.55	212	eP	Pb	14 16 46.4	-0.2
	baz=227						
EGFH				eS	Sn	14 17 05.6	+0.1
	baz=227						
WCS	Beigang Elemen	1.59	235	eP	Pg	14 16 48.4	-0.2
	baz=229						
WCS				eS	Sb	14 17 08.0	+0.6
	baz=229						
HATJ	Hateruma jima	1.63	124	eP	Pb	14 16 47.6	-0.5
VWDT	VWDT	1.64	222	P	Pb	14 16 48.2	0.0
	baz=229						
VWDT				S	Sb	14 17 09.4	+0.7
	baz=229						
HGSD	Ruisui	1.70	209	eP	Pn	14 16 48.2	+0.7
	baz=196						
HGSD				eS	Sn	14 17 09.8	+0.5
	baz=196						
JKRS	Kuro-shima	1.70	116	eP	Pb	14 16 48.4	-0.9
SMLT	Sun Moon Lake	1.70	230	P	Pb	14 16 49.8	+0.4
	baz=231						
SMLT				eS	Sb	14 17 10.7	-0.1
	baz=231						
SSLB	Suanglung	1.73	227	P	Pb	14 16 49.8	0.0
SSLB	Suanglung	1.73	227	P	Pb	14 16 49.6	-0.2
	baz=227						
SSLB				eS	Sb	14 17 11.4	-0.2
	baz=227						
EHY	Hungye	1.74	212	eP	Pn	14 16 47.8	-0.3
	baz=213						
JIJ	Ishigaki jima	1.76	110	P	Pg	14 16 52.4	+0.4
JISG	Ishigakijimahi	1.84	102	eP	Pb	14 16 52.5	+0.8
YULB	Yu-li	1.84	211	P	Pb	14 16 50.8	-1.0
YULB	Yu-li	1.84	211	eP	Pn	14 16 50.0	+0.5
	baz=212						
WHYT	Xinyi Township	1.86	227	eP	Pb	14 16 51.7	-0.3
	baz=226						
WHYT				eS	Sg	14 17 17.8	-0.1
	baz=226						
WJS	Zhushan	1.86	232	eP	Pg	14 16 53.3	-0.5
	baz=252						
WJS				eS	Sg	14 17 18.9	+0.8
	baz=252						
YUS	Yu-Shan	1.95	220	eP	Pb	14 16 53.0	-0.8
	baz=222						
FULB	Fuli	2.01	208	eP	Pn	14 16 53.0	+1.1
	baz=192						
ALS	Alishan	2.02	224	eP	Pb	14 16 54.1	-0.8
	baz=208						
WRL	Guolierlin Hig	2.08	239	eP	Pb	14 16 55.7	-0.1
	baz=258						
WDLH	Douliu	2.08	232	eP	Pb	14 16 56.7	+0.9
	baz=235						
EHD	Haiduan	2.10	210	eP	Pn	14 16 53.3	+0.3
	baz=211						
ELDTW	Lidau	2.15	214	eP	Pn	14 16 54.4	+0.4
	baz=201						
WCKO	Fanlu	2.20	226	eP	Pb	14 16 57.4	-0.4
	baz=229						
EDH	Donghe	2.21	205	eP	Pn	14 16 54.9	+0.3
	baz=191						
CHN4	Tsaushan	2.27	225	eP	Pb	14 16 57.6	-1.4
	baz=227						
TPUB	Ta-pu	2.29	223	P	Pb	14 16 58.7	-0.6
STYH	Taoyuan	2.30	218	eP	Pb	14 16 57.8	-1.7
	baz=204						
WTP	Ta-pu	2.33	222	eP	Pb	14 16 58.9	-1.3
	baz=208						
TWK	Hsinying	2.40	225	eP	Pb	14 16 59.2	-2.0
	baz=228						
CHN1	Nanshi	2.43	223	eP	Pb	14 17 00.6	-1.2
	baz=226						
TWG	Pinlang	2.44	208	eP	Pn	14 16 58.1	+0.3
	baz=195						
TWGBT	Beinan	2.44	208	P	Pn	14 16 59.6	+1.8
TWGBT	Beinan	2.44	208	eP	Pn	14 16 58.1	+0.3
	baz=195						
SGST	Jiashian	2.48	220	eP	Pb	14 17 00.5	-2.1
	baz=223						
VWUC	VWUC	2.61	271	eP	Pn	14 16 59.9	-0.2
	baz=272						
SSD	Sandimen	2.72	215	eP	Pb	14 17 04.6	-2.1
	baz=202						
XPSS	Dashiqiu	2.73	316	eP	Pb	14 17 04.5	-2.4
	baz=316						
TSCK	Chigu Township	2.75	229	eP	Pb	14 17 05.9	-1.2
	baz=233						
LYJJ	Jianjiangzhen	2.79	304	eP	Pn	14 17 02.8	+0.2
	baz=305						
MASBT	Mashibuluo	2.83	214	eP	Pn	14 17 05.2	+2.2
	baz=202						
PTMZ	Houxiangcun	2.91	272	eP	Pn	14 17 04.5	+0.2
	baz=273						
EAST	Anshuo	2.92	208	eP	Pn	14 17 05.6	+1.1
	baz=198						
SMST	Manzhou Townsh	3.25	205	eP	Pn	14 17 11.4	+2.4
	baz=196						
AXDP	Jialang	3.96	270	eP	Pn	14 17 18.9	+0.2
	baz=270						

IDC 28 14:17:24.2±551.0, 57°.55N×30°.28E, h0^{km}, Error ellipse: s-maj=201.5km s-min=92.5km az=98.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	3.87	100	I	I	14 43 50.0	
	0.3nm,0.7s,baz=284,slow=312,SNR=0.6						
I37NO	I37NO	12.66	341	I	I	15 32 00.0	
	baz=146,slow=341,SNR=0.9						
I31KZ	AKTYUBINSK INF	17.73	102	I	I	16 06 10.0	
	baz=305,slow=313,SNR=0.6						

NEIC 28 14:23:28.9±1.6, 13°.0S±0°.2×167°.5E±0°.2, h253^{km}±22^{km}, mb4.5/10, Error ellipse: s-maj=29.7km s-min=22.2km az=215.0

IDC 28 14:23:32.0±6.8, 13°.28S×167°.11E, h258^{km}±75^{km}, mb3.4/5, mbtmp4.0/6, Error ellipse: s-maj=60.8km s-min=26.9km az=155.0

ISC 28 14:23:31.2±1.5, 13°.2S±0°.1×167°.2E±0°.2, h250^{km}, n18, σ1^{s}03/19, mb4.2/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOUNC	Koumac, New Ca	7.77	200	Pn	Pn	14 25 23.7	+2.1
DZM	Mont Dzumac	8.81	184	P	Pn	14 25 35.5	+0.7
	5.8nm,1.0s,baz=325,slow=17,SNR=7.5						
DZM				S	S	14 27 13.2	-1.4
	2.5nm,0.9s,baz=30,slow=21,SNR=1.3						
EIDS	Eidsvold	19.35	229	P	P	14 27 38.5	+0.1
EIDS				IAmb	IAmb	14 27 39.5	
	comp=Z,31nm,1.5s						
CTA	Charters Tower	21.13	248	P	P	14 27 58.3	+1.0
	comp=Z,5.1nm,0.9s,baz=84,slow=10,SNR=1.7						
	comp=Z,5.1nm,0.9s						
CTAO	Charters Tower	21.13	248	P	P	14 27 57.5	+0.2
CTAO				IAmb	IAmb	14 28 04.8	
	comp=Z,33nm,1.4s						
ARMA	Armidale	22.31	218	P	P	14 28 08.8	+0.6
ARMA				IAmb	IAmb	14 28 42.9	
	comp=Z,12nm,1.4s						
CAN	Canberra	27.42	214	P	P	14 28 52.8	-1.3
STKA	Stephens Creek	29.89	227	P	P	14 29 16.4	+0.4
	comp=Z,1.4nm,0.4s,baz=48,slow=8.6,SNR=10						
	comp=Z,1.4nm,0.4s						
STKA	Stephens Creek	29.89	227	P	P	14 29 16.2	+0.3
TOO	Toolangi	30.99	215	P	P	14 29 26.0	+0.4
TOO				IAmb	IAmb	14 30 05.1	
	comp=Z,23nm,1.5s						
WB0	Warramunga Arr	32.03	254	P	P	14 29 33.9	-1.0
WB0				IAmb	IAmb	14 29 44.9	
	comp=Z,10nm,1.5s						
WRA	Warramunga Arr	32.10	254	P	P	14 29 34.5	-1.0
	comp=Z,0.6nm,0.5s,baz=86,slow=9.2,SNR=11						
	comp=Z,0.6nm,0.5s						
AS31	Alice Springs	33.12	247	P	P	14 29 43.2	-1.1
ASAR	Alice Springs	33.12	247	P	P	14 29 43.3	-1.0
	comp=Z,1.4nm,0.5s,baz=76,slow=9.1,SNR=57						
	comp=Z,1.4nm,0.5s						
ASAR	Alice Springs	33.12	247	P	P	14 29 43.0	-1.3
KNRA	Kununurra	37.22	261	P	P	14 30 18.4	-0.8
KNRA				IAmb	IAmb	14 30 37.3	
	comp=Z,14nm,0.8s						
FORT	Forrest	39.97	238	P	P	14 30 41.6	-0.3
ILAR	Eielson Array	85.16	18	P	P	14 35 39.0	+0.1
	comp=Z,0.5nm,0.6s,baz=226,slow=7.3,SNR=9.5						
	comp=Z,0.5nm,0.6s						

WEL 28 14:36:16.7±0.4, 42°S±3°×17°4E±°, h5^{km}, M2.3/7, ML2.4/12, MLv2.3/7, Error ellipse: s-maj=0.0km s-min=0.0km az=127.2, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.36	203	P	Pg	14 36 23.7	0.0
BSWZ	Blackbirch Sta	0.39	17	P	Pg	14 36 24.7	+0.5
BSWZ				S	Sg	14 36 30.7	+1.3
CMWZ	Cape Campbell	0.50	47	P	Pb	14 36 27.3	-0.6
CMWZ				S	Sb	14 36 36.1	+0.6
TUWZ	Tuamarina	0.68	14	P	Pg	14 36 30.1	+0.4
TUWZ				S	Sb	14 36 40.3	-0.4
THZ	Tophouse	0.69	298	P	Pg	14 36 30.3	+0.3
THZ				S	Sg	14 36 39.9	+0.9
NNZ	Nelson	0.91	343	P	Pg	14 36 34.0	-0.1
TCW	Tory Channel	0.97	25	P	Pg	14 36 35.1	-0.2
MRNZ	Matariki Terra	1.00	313	P	Pg	14 36 36.0	+0.2
GVZ	Greta Valley S	1.02	210	P	Pb	14 36 36.7	-0.1
WEL	Wellington	1.12	45	P	Pg	14 36 34.6	-3.6
TKNZ	Takaka Hill	1.20	331	P	Pg	14 36 39.6	-0.1
PLWZ	Palliser	1.25	66	P	Pg	14 36 39.0	-1.8
LTZ	Lake Taylor	1.28	237	P	Pg	14 36 40.5	-0.8
DUWZ	D’Urville Isla	1.29	7	P	Pn	14 36 40.7	-0.7
CAW	Cannon Point	1.40	46	P	Pn	14 36 41.7	-1.3
DSZ	Denniston Nort	1.47	283	P	Pg	14 36 44.8	-0.1
KIW	Kapiti Island	1.52	36	P	Pn	14 36 44.1	-0.5
QRZ	Quartz Range	1.55	324	P	Pn	14 36 45.2	+0.2
MTW	Mount Morrison	1.62	56	P	Pn	14 36 44.0	-2.0
OGWZ	Otaki Gorge	1.67	41	P	Pn	14 36 45.5	-1.1
MQZ	McQueen’s Vall	1.80	206	P	Pn	14 36 46.0	-2.4
INZ	Inchbonnie	1.81	249	P	Pn	14 36 48.7	+0.2
MRZ	Mangatainoka R	2.00	45	P	Pn	14 36 49.4	-1.7

IDC 28 15:02:12.7±1.1, 52°.75N×169°.92W, h0^{km}, mb3.6/8, mbtmp3.6/9, ML3.1/1, Error ellipse: s-maj=30.9km s-min=20.7km az=157.0

AEIC 28 15:02:14.3±1.0, 52°.81N±0°.09×169°.66W±0°.07, h5^{km}±6^{km}, Error ellipse: s-maj=13.9km s-min=5.5km az=169.0

NEIC 28 15:02:14.9±0.8, 52°.9N±0°.1×169°.62W±0°.08, h7^{km}±9^{km}, mb3.7/9, ML3.6(AEIC), Error ellipse: s-maj=19.1km s-min=6.0km az=166.0

ISC 28 15:02:14.9±1.2, 52°.8N±0°.1×169°.65W±0°.06, h11^{km}±8^{km}, n46, σ0^{s}84/41, mb3.6/8, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLES	Cleveland East	0.15	274	Pg	Pg	15 02 18.2	-0.1
CLES				Sg	Sg	15 02 21.1	+0.4
NIKH	Nikolski High	0.51	71		Pg	15 02 24.1	-0.7
UNV	Unalaska Valle	2.15	60		Pn	15 02 50.8	+0.1
UNV	Unalaska Valle	2.15	60		Sn	15 03 18.6	+1.2
AKUT	Akutan	2.67	59		Pn	15 02 57.7	-0.1
GSTR	Great Sitkin T	3.99	262	Pn	Pn	15 03 16.7	+0.8
SPIA	Saint Paul Isl	4.39	356		Pn	15 03 21.3	-0.1
ADK	Adak	4.41	261		Pn	15 03 22.3	+0.5
KIWB	Kanaga Island	4.70	261		Pn	15 03 25.7	0.0
CHGN	Chignik	7.41	57	Pn	Pn	15 04 02.9	+0.1
P18K	Big Mountain,	10.39	45	Pn	Pn	15 04 43.6	-0.2
KDAK	Kodiak Island	10.92	56	Pn	Pn	15 04 49.9	-1.0
	0.2nm,0.3s,baz=220,slow=7.6,SNR=7.6						
KDAK	Kodiak Island	10.92	56	Pn	Pn	15 04 49.7	-1.2
M19K	Big River Lodg	12.25	36	Pn	Pn	15 05 08.5	-0.6
L19K	White Mountain	12.27	34	Pn	Pn	15 05 09.4	-0.1
M20K	Styx River	12.69	38	Pn	Pn	15 05 16.1	+0.8
TNA	Tin City	12.82	3	Pn	Pn	15 05 16.6	-0.2
GHO	Glory Hole Cre	14.29	43	Pn	Pn	15 05 37.4	+0.3
KNK	Knik Glacier	14.31	45	Pn	Pn	15 05 36.7	-0.6
SML	Sawmill	14.55	43	P	P	15 05 47.4	+0.2
BPAW	Bear Paw Mtn.	14.87	33	P	P	15 05 50.2	-0.4
KLU	Klutina	15.45	46	Pn	Pn	15 05 51.9	-0.8
MLY	Manley	15.57	31	P	P	15 05 58.2	-0.3
MLY				IAmb	IAmb	15 06 03.9	
	comp=Z,6.0nm,1.2s						
N25K	Chitina, Valde	16.08	47	Pn	Pn	15 06 00.5	-0.3
N25K				IAmb	IAmb	15 06 42.2	
	comp=Z,11nm,1.4s						
VRDI	Verde Repeater	16.46	49	P	P	15 06 09.3	+0.7
VRDI				IAmb	IAmb	15 06 10.0	
	comp=Z,4.0nm,0.8s						
ILAR	Eielson Array	16.68	35	Pn	Pn	15 06 06.5	-1.9
	comp=Z,0.1nm,0.3s,baz=228,slow=9.9,SNR=9.6						
	comp=Z,0.1nm,0.6s						
RIDG	Independent Ri	16.89	40		Pn	15 06 12.1	+1.0
H24K	Noodor Dome	17.00	31	Pn	Pn	15 06 12.1	-0.3
M27K	Edge Creek, AK	17.55	46	P	P	15 06 20.8	+0.4
M27K				IAmb	IAmb	15 06 41.4	
	comp=Z,11nm,1.5s						
BCAR	Beaver Creek A	17.84	44		Pn	15 06 23.4	+0.5
EGAK	Eagle	18.80	39	P	P	15 06 33.9	-0.2
EGAK				IAmb	IAmb	15 07 11.8	
	comp=Z,4.0nm,1.2s						
HYT	Haines Junctio	19.16	53	P	P	15 06 38.6	+0.3
SEY	Seymchan	22.24	312	P	P	15 07 10.0	-1.3
	comp=Z,1.5nm,0.9s,baz=100,slow=8.8,SNR=6.2						
	comp=Z,1.5nm,0.9s						
DLBC	Dease Lake	22.81	60	P	P	15 07 19.0	+1.5
	comp=Z,3.5nm,0.9s,baz=291,slow=5.8,SNR=3.7						
	comp=Z,3.5nm,0.9s						
INK	Inuvik	23.07	34	P	P	15 07 21.0	+1.0
	comp=Z,0.9nm,0.8s,baz=229,slow=9.3,SNR=2.2						
	comp=Z,0.9nm,0.8s						
H11N2	WAKE ISLAND Hy	37.70	218	T	T	15 50 52.4	
	baz=24						
H11N3	WAKE ISLAND Hy	37.70	218	T	T	15 50 52.7	
	baz=24,slow=74						
H11N1	WAKE ISLAND Hy	37.71	218	T	T	15 50 57.8	
	baz=24,slow=74						
NVAR	Mina Array Bea	37.84	91	P	P	15 09 33.5	+1.8
	comp=Z,0.9nm,0.8s,baz=300,slow=7.2,SNR=2.4						
	comp=Z,0.9nm,0.8s						
H11S1	WAKE ISLAND Hy	38.89	217	T	T	15 51 09.5	
	baz=23,slow=76,SNR=76						
H11S2	WAKE ISLAND Hy	38.90	217	T	T	15 51 10.6	
	baz=23,slow=76,SNR=63						
H11S3	WAKE ISLAND Hy	38.91	217	T	T	15 50 59.5	
	baz=23,slow=76,SNR=45						
PDAR	Pinedale Array	40.49	79	P	P	15 09 54.0	+0.2
	comp=Z,0.5nm,0.6s,baz=254,slow=2.8,SNR=2.0						
	comp=Z,0.5nm,0.6s						
TXAR	Lajitas Array	52.91	89	P	P	15 11 31.2	+0.2
	comp=Z,1.2nm,0.7s,baz=302,slow=5.7,SNR=6.3						
	comp=Z,1.2nm,0.7s						
WRA	Warramunga Arr	87.15	231	P	P	15 14 59.2	-1.6
	comp=Z,0.3nm,0.8s,baz=34,slow=5.7,SNR=2.1						
	comp=Z,0.3nm,0.8s						
ASAR	Alice Springs	90.55	230	P	P	15 15 15.8	-1.1
	comp=Z,0.6nm,0.7s,baz=29,slow=4.7,SNR=9.6						
	comp=Z,0.6nm,0.7s						

SKO 28 15:24:32.2, 41°.14N×20°.84E, h18^{km}, ML2.5

BEO 28 15:24:32.2±0.6, 41°.05N×20°.98E, h2^{km}±2^{km}, ML2.7/14

PDG 28 15:24:33.6±0.4, 41°.21N×20°.95E, h6^{km}±1^{km}, ML2.9/13, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0

THE 28 15:24:33.2, 41°.19N×20°.89E, h2^{km}±2^{km}, ML2.9/5, Error ellipse: s-maj=3.0km s-min=0.8km az=226.0

ATH 28 15:24:36.1, 41°.23N×21°.15E, h10^{km}±31^{km}, ML2.8/7, Error ellipse: s-maj=31.6km s-min=2.6km az=0.0

ISC 28 15:24:33.2±1.0, 41°.19N±0°.02×20°.92E±0°.02, h5^{km}±8^{km}, n88, σ1^{s}45/132, 20C-8D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.12	231	ePg	Pg	15 24 35.6	0.0
OHR				eSg	Sg	15 24 37.0	-0.2
OHR	Ohrid	0.12	231	⇑iPg	Pg	15 24 35.7	0.0
OHR				i Sg	Sg	15 24 37.2	0.0
OHR				eLg	Lg	15 24 37.3	
	comp=N,5µm,0.3s						
OHR				eLg	Lg	15 24 37.5	
	comp=E,3µm,0.5s						
FNA	Florina	0.53	139	P	Pg	15 24 43.4	0.0
FNA				S	Sb	15 24 51.7	-1.4
	comp=E,5µm,0.2s						
FNA	Florina	0.53	139	⇑iPg	Pg	15 24 43.4	0.0
FNA				i Sg	Sb	15 24 51.6	-1.4
FNA	Florina	0.53	139	P	Pg	15 24 43.6	+0.2
FNA				S	Sb	15 24 51.7	-1.4
FNA				AML	AML	15 24 52.5	
	comp=N,9414µm,0.2s						
FNA				AML	AML	15 24 53.7	
	comp=E,11960µm,0.3s						
KBN	Korca	0.57	190	P	Pg	15 24 43.9	-0.3
KBN				S	Sg	15 24 52.5	+0.9
	comp=E,1µm,0.4s						
PHP	Peshkopia	0.61	324	P	Pg	15 24 44.7	-0.3
TIR	Tirane	0.81	282	⇓P	Pg	15 24 48.6	-0.2
TIR				⇑S	Sb	15 25 01.1	0.0
TIR	Tirane	0.81	282	P	Pg	15 24 46.9	-1.9
TIR				S	Sg	15 25 00.0	+0.7
TIR	Tirane	0.81	282	ePg	Pg	15 24 47.9	-0.9
TIR				eSg	Sg	15 24 59.9	+0.7
TIR	Tirane	0.81	282	i Pg	Pg	15 24 46.8	-2.0
TIR				i Sg	Sg	15 25 00.3	+1.1
SKO	Skopje	0.88	26	ePg	Pb	15 24 50.8	-0.2
SKO				eSg	Sb	15 25 03.2	+0.1
SKO	Skopje	0.88	26	i Pg	Pb	15 24 51.0	-0.1
SKO				i Sg	Sn	15 25 03.7	-1.9
LSK	Leskovik	1.06	193	P	Pg	15 24 53.1	-0.5
LSK				S	Sg	15 25 08.0	+0.6
	comp=E,692nm,0.6s						
STIP	Stip	1.08	62	i Pg	Pn	15 24 57.5	+2.4
STIP				i Sg	Sn	15 25 15.7	+5.2
KZN	Kozani	1.09	143	P	Pb	15 24 54.6	0.0
KZN				S	Sn	15 25 10.3	-0.5
	comp=E,680nm,0.4s						
KZN	Kozani	1.09	143	P	Pb	15 24 54.6	0.0
KZN				S	Sn	15 25 10.4	-0.4
KZN				AML	AML	15 25 14.1	
	comp=N,1468µm,0.4s						
KZN				AML	AML	15 25 15.3	
	comp=E,1249µm,0.4s						
GRG	Griva	1.15	101	P	Pb	15 24 54.9	-0.7
GRG	Griva	1.15	101	i Pg	Pb	15 24 54.8	-0.7
GRG	Griva	1.15	101	P	Pb	15 24 54.9	-0.7
KTI	Kastanea	1.21	131	P	Pn	15 24 56.6	-0.3
KPRO	Kipourio	1.27	164	P	Pn	15 24 57.4	-0.4
KPRO				S	Sn	15 25 16.5	+1.1
	comp=E,452nm,0.4s						
KPRO	Kipourio	1.27	164	P	Pg	15 24 58.9	+1.2
KPRO				S	Sn	15 25 16.9	+1.5
KPRO				AML	AML	15 25 20.8	
	comp=N,806µm,0.4s						
KPRO				AML	AML	15 25 22.0	
	comp=E,995µm,0.5s						
ULC	Ulcinj	1.48	302	i Pg	Pn	15 25 00.2	-0.4
ULC	Ulcinj	1.48	302	⇓iPg	Pn	15 25 00.3	-0.3
ULC				i Sg	Sg	15 25 23.9	+3.2
KNT	Kendrikon	1.50	90	P	Pn	15 25 00.5	-0.4
KNT				S	Sg	15 25 21.0	-0.3
KNT	Kendrikon	1.50	90	i Pg	Pn	15 25 00.4	-0.4
KNT				eSg	Sg	15 25 22.2	+0.9
KNT	Kendrikon	1.50	90	P	Pn	15 25 00.4	-0.4
KNT				AML	AML	15 25 27.5	
	comp=E,108µm,0.5s						
KNT				AML	AML	15 25 28.0	
	comp=N,170µm,0.6s						
JAN	Janina	1.53	182	P	Pg	15 25 03.0	+0.5
PRVS	Prvonek	1.58	33	ePn	Pb	15 25 02.2	-0.8
PRVS				eSn	Sg	15 25 24.4	+0.4
PVY	Plav	1.58	333	ePg	Pn	15 25 02.4	+0.3
PVY				i Sg	Sg	15 25 26.3	+2.3
LIT	Litokhoron	1.61	132	P	Pb	15 25 03.1	-0.5
DRME	Dracevica, Mon	1.64	308	ePn	Pn	15 25 03.4	+0.6
DRME	Dracevica, Mon	1.64	308	⇑iPn	Pb	15 25 03.7	-0.3
DRME				i Sn	Sg	15 25 28.2	+2.3
KEK	Kerkira	1.70	211	P	Pg	15 25 05.9	+0.1
KEK				S	Sg	15 25 30.0	+2.2
KEK				AML	AML	15 25 37.6	
	comp=E,263µm,0.5s						
KEK				AML	AML	15 25 38.6	
	comp=N,186µm,0.5s						
IGT	Igoumenitsa	1.71	195	P	Pg	15 25 05.8	-0.2
IGT				S	Sg	15 25 29.9	+1.7
IGT				AML	AML	15 25 35.5	
	comp=N,554µm,0.5s						
IGT				AML	AML	15 25 35.7	
	comp=E,409µm,0.5s						
BOSS	Bosilegrad	1.75	41	ePn	Pn	15 25 04.5	+0.1
BOSS				eSn	Sg	15 25 28.3	-1.3
PDG	Podgorica	1.76	316	⇑P	Pb	15 25 06.3	+0.3
PDG				⇑S	Sn	15 25 26.2	-1.0
PDG	Podgorica	1.76	316	ePn	Pb	15 25 06.3	+0.3
PDG				eSg	Sg	15 25 33.2	+3.5
PDG	Podgorica	1.76	316	⇑iPn	Pb	15 25 06.0	0.0
PDG				i Sn	Sg	15 25 31.0	+1.3
BARS	Barje	1.76	22	ePn	Pb	15 25 05.6	-0.5
BARS				eSn	Sg	15 25 29.7	-0.1
BARS	Barje	1.76	22	ePn	Pb	15 25 05.4	-0.7
THL	Klokotos Trika	1.82	152	P	Pb	15 25 06.7	-0.4
THL				AML	AML	15 25 38.0	
	comp=E,259µm,0.6s						
THL				AML	AML	15 25 39.5	
	comp=N,265µm,0.5s						
BEY	Berane	1.85	336	ePn	Pb	15 25 07.8	+0.1
IVA	Berane	1.85	336	⇑iPn	Pb	15 25 07.4	-0.2
IVA				i Sn	Sg	15 25 33.1	+0.4
SOH	Sokhos	1.88	100	ePn	Pb	15 25 06.7	-1.4
BUM	Brajici-Budva	1.88	307	⇑iPn	Pb	15 25 07.9	-0.2
BUM				i Sn	Sg	15 25 33.9	+0.3
KOME	Kolasin	1.96	328	⇑iPn	Pb	15 25 09.9	+0.3
KOME				i Sn	Sg	15 25 35.8	-0.6
CEME	Cevo	2.02	313	⇓iPn	Pb	15 25 09.7	-0.8
CEME				i Sn	Sb	15 25 37.3	+1.3
SRS	Serrai	2.02	91	ePn	Pb	15 25 09.2	-1.2
SELS	Selova	2.04	4	ePn	Pn	15 25 08.5	+0.2
SELS				eSn	Sg	15 25 37.3	-1.4
NKME	Niksic	2.15	318	ePn	Pb	15 25 11.6	-1.2
NKME				i Sn	Sb	15 25 40.2	+0.3
SJES	Sjenica	2.19	342	ePn	Pb	15 25 12.4	-1.0
SJES				eSn	Sb	15 25 41.0	+0.1
SJES	Sjenica	2.19	342	ePn	Pb	15 25 11.8	-1.6
HCY	Herceg Novi	2.21	306	ePn	Pb	15 25 13.1	-0.6
HCY	Herceg Novi	2.21	306	⇓iPn	Pb	15 25 12.7	-1.0
HCY				i Sn	Sb	15 25 41.4	+0.1
VTS	Vitosha	2.25	50	⇑P	Pg	15 25 21.9	+5.7
VTS				⇑S	Sg	15 25 51.8	+6.5
LKD2	Lefkada island	2.40	185	P	Pb	15 25 15.6	-1.3
PLE	Pljevlja	2.42	333	⇑iPn	Pb	15 25 15.6	-1.8
ZAPS	Zavoj	2.44	31	ePn	Pn	15 25 15.2	+1.3
ZAPS				eSn	Sb	15 25 45.6	-2.6
TREB	Trebinje	2.45	309	ePn	Pn	15 25 15.8	+1.9
TREB	Trebinje	2.45	309	ePn	Pb	15 25 18.0	+0.2
IVAS	Ivanjica	2.46	347	ePn	Pn	15 25 14.6	+0.5
IVAS				eSn	Sb	15 25 46.4	-2.1
BRY	Bratogost	2.47	315	ePn	Pb	15 25 17.8	-0.3
BRY	Bratogost	2.47	315	⇑iPn	Pb	15 25 16.5	-1.6
BRY				i Sn	Sb	15 25 48.0	-0.9
UPM	Unac-Piva	2.51	324	ePn	Pb	15 25 19.3	+0.4
UPM	Unac-Piva	2.51	324	⇓iPn	Pb	15 25 17.2	-1.7
UPM				i Sn	Sb	15 25 48.6	-1.6
BOVS	Bovan	2.52	13	⇓P	Pn	15 25 16.3	+1.5
BOVS				⇑S	Sb	15 25 48.2	-2.0
BOVS	Bovan	2.52	13	ePn	Pn	15 25 15.1	+0.3
GRUS	Gruza	2.71	357	ePn	Pn	15 25 19.0	+1.6
ZAGS	Zajecar	2.80	20	ePn	Pn	15 25 18.2	-0.5
BBLS	Lazići	2.90	338	ePn	Pn	15 25 21.2	+1.0
BBLS	Lazići	2.90	338	ePn	Pn	15 25 21.2	+1.0
STON	Ston	2.93	306	ePn	Pb	15 25 24.5	-1.4
DIVS	Divibare	2.99	347	ePn	Pn	15 25 22.5	+1.1
DIVS	Divibare	2.99	347	ePn	Pn	15 25 22.3	+0.9
TRUS	Trudelj	3.06	353	ePn	Pn	15 25 23.1	+0.8
MATE	Matera	3.24	262	⇓P	Pn	15 25 23.2	-1.5
MATE				⇑S	Sn	15 26 02.0	-1.7

MDVR	Moldovita	3.64	9	⇓P	Pb	15 25 36.0	-2.2
HERR	Herculane	3.85	16	⇑P	Pb	15 25 39.0	-2.7
FRGS	Fruska Gora	4.05	349	⇑P	Pn	15 25 37.0	+1.0
FRGS				⇑S	Sn	15 26 23.3	-0.5
FRGS	Fruska Gora	4.05	349	*e*Pn	Pn	15 25 37.0	+1.0
FRGS	Fruska Gora	4.05	349	*e*Pn	Pn	15 25 34.3	-1.7
BZS	Buzias	4.46	6	⇑P	Pb	15 25 46.5	-5.5
A050A	Klekovaca	4.61	317	*e*Pn	Pn	15 25 47.4	+3.7
A051A	Mrakovica	4.82	324	*e*Pn	Pn	15 25 48.1	+1.5
CRES	Cresnjev	6.11	321	*e*Pn	Pn	15 26 08.2	+4.1
VYHS	Vyhne	7.46	349	*e*PN	Pn	15 26 27.7	+5.0

WEL 28 15:24:59.3±0.4**,42˚S**±2˚×**17˚4E**±˚**,h5**^{km}**,M1.6**/3**,ML2.2**/8**,**
MLv1.6/3**,Error ellipse: s-maj=0.0km s-min=0.0km**
az=88.7,confirmed,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.20	190	P	Pg	15 25 03.5	+0.4
KHZ				S	Sg	15 25 06.9	+1.1
BSWZ	Blackbirch Sta	0.55	23	P	Pg	15 25 09.8	-0.1
BSWZ				S	Sb	15 25 18.5	-1.2
THZ	Tophouse	0.69	312	P	Pg	15 25 12.7	+0.3
THZ				S	Sg	15 25 22.4	+1.0
TUWZ	Tuamarina	0.84	19	P	Pg	15 25 15.1	-0.2
GVZ	Greta Valley S	0.85	208	P	Pg	15 25 15.4	-0.2
GVZ				S	Sb	15 25 28.1	-0.1
MRNZ	Matariki Terra	1.03	323	P	Pg	15 25 19.2	+0.1
LTZ	Lake Taylor	1.12	240	P	Pg	15 25 19.7	-1.1
LTZ				S	Sg	15 25 35.1	-0.2
TKNZ	Takaka Hill	1.28	338	P	Pg	15 25 23.0	-0.8
DSZ	Denniston Nort	1.41	289	P	Pn	15 25 25.1	-0.6
DSZ				S	Sn	15 25 45.0	+0.3
CAW	Cannon Point	1.57	45	P	Pn	15 25 24.4	-3.5
OXZ	Oxford	1.58	225	P	Pn	15 25 24.7	-3.3
QRZ	Quartz Range	1.61	330	P	Pn	15 25 28.1	-0.2
MQZ	McQueen's Vall	1.63	204	P	Pn	15 25 24.5	-4.1
INZ	Inchbonnie	1.66	252	P	Pn	15 25 27.5	-1.5
WACZ	Wakanui South	2.14	216	P	Pn	15 25 32.4	-3.3
ODZ	Otahua Downs	3.54	216	P	Pn	15 25 51.2	-3.7

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*ISK **28** 15:34:59.9, 40˚.19N×24˚.96E, h10^{km}, ML3.6/60*
*IDC **28** 15:34:59.4±2.5, 40˚.18N×24˚.89E, h0^{km}, mb3.5/1, mbtmp3.5/5, ML3.5/4, MS2.7/3, Error ellipse: s-maj=39.6km s-min=16.4km az=73.0*
*ATH **28** 15:35:00.9, 40˚.16N×24˚.95E, h14^{km}±1^{km}, ML3.4/21, Error ellipse: s-maj=1.6km s-min=0.8km az=85.0*
*THE **28** 15:35:00.5, 40˚.16N×24˚.95E, h7^{km}±1^{km}, ML3.4/13, Error ellipse: s-maj=1.3km s-min=0.5km az=58.0*
*DDA **28** 15:35:01.1±0.0, 40˚.16N×25˚.00E, h41^{km}, MW3.7*
*BEO **28** 15:35:02.3±0.8, 40˚.23N×24˚.84E, h8^{km}±4^{km}, ML3.3/13*
ISC 28 15:35:00.7±0.9**,40˚.16N**±0˚.02×**24˚.93E**±0˚.02**,h12**^{km}±7^{km}**,**
n175,σ**1**^{s}**03**/230**,12C-11D,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIA	Limnos Island	0.32	143	P	Pg	15 35 07.2	0.0
LIA				S	Sg	15 35 11.5	-0.1
	45µm,0.2s						
LIA	Limnos Island	0.32	143	P	Pg	15 35 07.2	0.0
LIA				S	Sg	15 35 11.4	-0.2
LIA				AML	AML	15 35 11.8	
LIA				AML	AML	15 35 12.2	
THAS	Thassos island	0.48	340	P	Pg	15 35 10.2	+0.2
THAS				S	Sg	15 35 16.4	0.0
	6µm,0.2s						
THAS	Thassos island	0.48	340	P	Pg	15 35 10.3	+0.2
THAS				S	Sg	15 35 16.5	+0.2
THAS				AML	AML	15 35 17.5	
	comp=N,10670µm,0.3s						
THAS				AML	AML	15 35 21.1	
	comp=E,13804µm,0.2s						
SMTH	Samothraki Isl	0.56	56	P	Pg	15 35 10.9	-0.6
SMTH				S	Sg	15 35 19.0	+0.1
	comp=E,3µm,0.4s						
SMTH	Samothraki Isl	0.56	56	P	Pg	15 35 11.1	-0.4
SMTH				S	Sg	15 35 19.0	+0.1
SMTH				AML	AML	15 35 21.9	
	comp=N,7554µm,0.4s						
SMTH				AML	AML	15 35 22.8	
	comp=E,3444µm,0.2s						
GADA	Gvkgeada	0.74	87	Pg	Pg	15 35 14.4	-0.7
GADA				Sg	Sg	15 35 24.9	+0.1
OUR	Ouranopolis	0.75	284	Pg	Pg	15 35 15.5	+0.4
OUR				Sg	Sb	15 35 26.2	+0.5
OUR	Ouranopolis	0.75	284	P	Pg	15 35 15.5	+0.4
GOKA	anakkale-Gk	0.75	87	SPECP		15 35 15.0	
GOKA				P	Pb	15 35 15.4	-0.2
GOKA				S	Sb	15 35 25.8	0.0
KVLA	Kavala	0.88	332	P	Pb	15 35 18.6	+0.7
KVLA				AML	AML	15 35 32.7	
	comp=N,12844µm,0.4s						
KVLA				AML	AML	15 35 32.7	
	comp=E,10184µm,0.3s						
KAVA	Kavala	0.90	339	P	Pb	15 35 18.3	+0.2
KAVA				S	Sb	15 35 30.4	+0.3
BOZC	Bozcaada	0.92	110	Pg	Pg	15 35 17.8	-0.6
BOZC				Sg	Sg	15 35 30.6	+0.2
ECEA	Canakkale, Ece	0.96	96	SPECP	Pg	15 35 19.0	-0.2
ECEA				P	Pg	15 35 19.0	-0.2
ECEA				S	Sb	15 35 32.5	+0.6
KOKK	Kokkinochori,	0.97	313	P	Pg	15 35 19.3	-0.1
KOKK				S	Sb	15 35 32.4	+0.3
	comp=E,1µm,0.3s						
KOKK	Kokkinochori,	0.97	313	P	Pg	15 35 19.3	-0.1
KOKK				S	Sg	15 35 31.6	-0.4
KOKK				AML	AML	15 35 34.3	
	comp=N,9022µm,0.3s						
KOKK				AML	AML	15 35 34.6	
	comp=E,6101µm,0.4s						
CAVK	Edirne/Enez-Ca	1.09	60	SPECP		15 35 20.0	
CAVK				P	Pg	15 35 20.8	-0.8
CAVK				S	Sn	15 35 37.6	+1.0
RDO	Rodhopi	1.09	25	P	Pg	15 35 20.2	-1.5
RDO				S	Sb	15 35 35.8	+0.2
	comp=E,668nm,0.3s						
RDO	Rodhopi	1.09	25	Pg	Pg	15 35 20.2	-1.5
RDO	Rodhopi	1.09	25	P	Pg	15 35 20.1	-1.5
RDO				S	Sg	15 35 34.8	-1.1
RDO				AML	AML	15 35 38.8	
	comp=E,1380µm,0.4s						
RDO				AML	AML	15 35 39.2	
	comp=N,1324µm,0.2s						
ENEZ	Enez	1.10	58	P	Pg	15 35 20.7	-1.1
ENEZ				S	Sn	15 35 36.4	-0.5
	comp=N,6µm,0.3s						
ENEZ	Enez	1.10	58	Pg	Pg	15 35 20.9	-0.9
ENEZ				Sg	Sb	15 35 36.2	+0.3
EZN	Ezine	1.12	107	P	Pb	15 35 21.3	-0.7
EZN				S	Sg	15 35 36.8	-0.1
	comp=N,2µm,0.4s						
EZN	Ezine	1.12	107	Pn	Pb	15 35 21.3	-0.7
EZN				Sn	Sb	15 35 37.4	+0.9
ALN	Alexandroupoli	1.13	49	P	Pg	15 35 20.9	-1.4
ALN				S	Sn	15 35 37.1	-0.6
	comp=N,1µm,0.5s						
ALN	Alexandroupoli	1.13	49	Pn	Pg	15 35 20.9	-1.4
ALN	Alexandroupoli	1.13	49	P	Pg	15 35 20.9	-1.4
ALN				AML	AML	15 35 38.6	
	comp=N,2711µm,0.6s						
ALN				AML	AML	15 35 38.6	
	comp=E,2824µm,0.4s						
KOCA	Canakkale, Ayv	1.14	125	P	Pb	15 35 22.2	0.0
KOCA				S	Sg	15 35 37.1	-0.2
SIGR	SIGRI	1.19	143	Pn	Pb	15 35 23.1	+0.1
SIGR				Sn	Sn	15 35 39.9	+0.9
COMU	Canakkale	1.19	92	Pn	Pb	15 35 22.5	-0.6
COMU				Sn	Sn	15 35 39.3	+0.2
GELI	Tayfur-Gelibol	1.21	78	Pn	Pb	15 35 22.2	-1.2
GELI				Sn	Sg	15 35 39.4	-0.1
ALNA	Alonissos	1.30	219	P	Pn	15 35 23.6	-1.0
ALNA				AML	AML	15 35 45.9	
	comp=N,5688µm,0.7s						
ALNA				AML	AML	15 35 47.1	
	comp=E,4029µm,0.5s						
BAYC	CANAKKALE_Bayr	1.31	108	SPECP		15 35 24.0	
BAYC				P	Pn	15 35 24.4	-0.4
BAYC				S	Sb	15 35 41.1	-0.9
ERIK	Erikli-Kesan	1.31	67	Pn	Pn	15 35 23.6	-1.2
SOH	Sokhos	1.37	299	P	Pn	15 35 25.4	-0.3
SOH				S	Sg	15 35 45.2	+0.3
	comp=E,3µm,0.3s						
SOH	Sokhos	1.37	299	P	Pn	15 35 25.3	-0.3
SOH				S	Sb	15 35 42.2	-1.6
SOH				AML	AML	15 35 47.2	
	comp=E,6203µm,0.4s						
SOH				AML	AML	15 35 47.5	
	comp=N,8154µm,0.4s						
PRK	Paraskevi	1.38	131	P	Pn	15 35 25.5	-0.2
PRK				S	Sb	15 35 43.9	0.0
	comp=N,3µm,0.3s						
PRK	Paraskevi	1.38	131	P	Pn	15 35 25.6	-0.2
PRK				S	Sb	15 35 42.6	-1.3
PRK				AML	AML	15 35 46.3	
	comp=N,5552µm,1.0s						
PRK				AML	AML	15 35 46.3	
	comp=E,5008µm,0.4s						
SRS	Serrai	1.40	314	P	Pn	15 35 25.4	-0.6
SRS				S	Sg	15 35 45.8	+0.1
	comp=E,2µm,0.4s						
SRS	Serrai	1.40	314	*e*Pg	Pn	15 35 25.5	-0.6
SRS				*e*Sg	Sb	15 35 43.1	-1.4
SRS	Serrai	1.40	314	P	Pn	15 35 25.6	-0.4
SRS				S	Sb	15 35 42.9	-1.6
SRS				AML	AML	15 35 47.1	
	comp=E,4475µm,0.4s						
SRS				AML	AML	15 35 47.3	
	comp=N,1769µm,0.4s						
LPK	Lapseki	1.42	81	Pn	Pn	15 35 25.5	-0.7
NVR	Nevrokopi	1.44	326	P	Pn	15 35 26.8	+0.2
NVR				S	Sn	15 35 45.6	+0.1
	comp=N,625nm,0.2s						
NVR	Nevrokopi	1.44	326	P	Pn	15 35 26.9	+0.2
NVR				AML	AML	15 35 50.7	
	comp=E,1234µm,0.4s						
NVR				AML	AML	15 35 51.7	
	comp=N,1452µm,0.4s						
KDZ	Kurdzhali	1.54	14	Pn	Pn	15 35 26.9	-1.0
XOR	Xorichti	1.56	240	P	Pn	15 35 27.2	-1.0
XOR	Xorichti	1.56	240	P	Pn	15 35 27.2	-1.0
XOR				S	Sn	15 35 46.7	-1.6
XOR				AML	AML	15 35 47.6	
	comp=N,1049µm,0.5s						
XOR				AML	AML	15 35 59.0	
	comp=E,882µm,0.5s						
NEO	Neokhori	1.57	238	P	Pn	15 35 27.4	-0.9
NEO	Neokhori	1.57	238	P	Pn	15 35 27.3	-0.9
NEO				S	Sn	15 35 47.7	-0.8
THE	Thessaloniki	1.57	288	P	Pn	15 35 28.0	-0.4
THE	Thessaloniki	1.57	288	P	Pn	15 35 28.0	-0.4
UKOP	Uzunkopru-Edir	1.62	53	Pn	Pn	15 35 28.7	-0.3
CANM	Can-anakkale	1.64	94	Pn	Pn	15 35 29.1	-0.1
KYMI	Kymi, Euboea I	1.65	203	P	Pn	15 35 28.6	-0.9
KYMI	Kymi, Euboea I	1.65	203	P	Pn	15 35 28.6	-0.9
KYMI				AML	AML	15 36 00.2	
	comp=E,913µm,0.4s						
KYMI				AML	AML	15 36 03.1	
	comp=N,952µm,0.6s						
PSRA	Psara	1.69	163	P	Pn	15 35 30.3	+0.4
PSRA				AML	AML	15 35 57.3	
	comp=E,2355µm,0.3s						
PSRA				AML	AML	15 36 00.7	
	comp=N,1543µm,0.3s						
BUHA	Balikesir, Bur	1.78	111	SPECP		15 35 31.0	
BUHA				P	Pn	15 35 31.5	+0.3
BUHA				S	Sn	15 35 54.4	+0.7
RKY	Sarkoy-Tekirda	1.80	72	Pn	Pn	15 35 30.5	-1.0
KRBG	Karabiga-Canak	1.83	82	Pn	Pn	15 35 31.6	-0.3
KNT	Kendrikon	1.84	304	P	Pn	15 35 31.4	-0.6
KNT				S	Sb	15 35 57.1	-0.2
	comp=N,785nm,0.4s						
KNT	Kendrikon	1.84	304	Pn	Pn	15 35 31.5	-0.6
KNT	Kendrikon	1.84	304	P	Pn	15 35 31.5	-0.6
KNT				AML	AML	15 35 59.4	
	comp=E,1718µm,0.6s						
KNT				AML	AML	15 36 00.2	
	comp=N,1507µm,0.6s						
LIT	Litokhoron	1.87	269	P	Pn	15 35 32.0	-0.5
LIT	Litokhoron	1.87	269	P	Pn	15 35 31.9	-0.6
DKL	Dikili	1.87	125	Pn	Pn	15 35 32.7	+0.2
KARB	zmir-Karabur	1.88	142	SPECP		15 35 32.0	
KARB				P	Pn	15 35 32.6	0.0
KARB				S	Sn	15 35 54.6	-1.7
EREA	Eretria	1.90	204	P	Pn	15 35 32.2	-0.7
EREA	Eretria	1.90	204	P	Pn	15 35 32.3	-0.6
EREA				AML	AML	15 36 10.1	
	comp=E,1410µm,0.7s						
EREA				AML	AML	15 36 11.1	
	comp=N,1126µm,0.5s						
PLD	Plovdiv	1.95	355	Pn	Pn	15 35 34.2	+0.6
PLD	Plovdiv	1.95	355	*e*Pn	Pn	15 35 34.1	+0.5
PLD				*e*Sn	Sn	15 35 58.3	+0.2
CHOS	Chios island	1.97	153	P	Pn	15 35 33.7	-0.2
CHOS				S	Sn	15 35 59.1	+0.5
CHOS	Chios island	1.97	153	Pn	Pn	15 35 33.8	-0.2
CHOS	Chios island	1.97	153	P	Pn	15 35 33.7	-0.2
CHOS				AML	AML	15 36 07.5	
	comp=E,1652µm,0.4s						
CHOS				AML	AML	15 36 08.2	
	comp=N,1037µm,0.4s						
KNL	Balıkesir	1.99	86	SPECP		15 35 34.0	
KNL				P	Pn	15 35 34.7	+0.6
KNL				S	Sb	15 36 02.2	+0.6
ZEDA	zmir-Bergama	2.04	125	SPECP		15 35 35.0	
ZEDA				P	Pn	15 35 35.3	+0.5
ZEDA				S	Sn	15 35 59.7	-0.6
ATAL	Atalanti	2.08	226	P	Pn	15 35 34.9	-0.5
ATAL				AML	AML	15 36 12.8	
	comp=N,380µm,0.5s						
ATAL				AML	AML	15 36 13.5	
	comp=E,450µm,0.6s						
GRG	Griva	2.08	293	Pn	Pn	15 35 36.1	+0.6
GRG	Griva	2.08	293	P	Pn	15 35 36.1	+0.6
GONE	Gonen-Balikesi	2.12	92	Pn	Pn	15 35 36.0	+0.1
LKR	Lokris	2.12	225	P	Pn	15 35 35.1	-0.8
EDRB	Edirne	2.18	39	Pn	Pn	15 35 36.7	0.0
URLA	Izmir	2.21	144	Pn	Pn	15 35 37.0	-0.2
DION	Dionisos Attik	2.22	201	P	Pn	15 35 37.5	+0.3
DION	Dionisos Attik	2.22	201	P	Pn	15 35 37.6	+0.3
DION				AML	AML	15 36 18.9	
	comp=E,1167µm,0.6s						
DION				AML	AML	15 36 19.4	
	comp=N,1162µm,0.4s						
PTL	Penteli	2.26	202	P	Pn	15 35 37.7	-0.2
STEP	BALIKESIR_Sava	2.29	109	SPECP		15 35 39.0	
STEP				P	Pn	15 35 39.4	+1.2
AGG	Agios Georgios	2.31	241	P	Pn	15 35 38.4	-0.1
AGG	Agios Georgios	2.31	241	Pn	Pn	15 35 38.4	-0.1
AGG	Agios Georgios	2.31	241	P	Pn	15 35 38.3	-0.1
THL	Klokotos Trika	2.32	256	P	Pn	15 35 38.6	-0.1
THL	Klokotos Trika	2.32	256	P	Pn	15 35 38.5	-0.1
BALB	Balikesir	2.33	102	Pn	Pn	15 35 38.9	+0.1
VIL2	Platees	2.33	214	P	Pn	15 35 38.6	-0.3
VIL2				AML	AML	15 36 23.2	
	comp=E,1113µm,0.7s						
VIL2				AML	AML	15 36 23.3	
	comp=N,986µm,0.7s						
ATHU	Athens Univers	2.36	203	P	Pn	15 35 39.0	-0.3
KZN	Kozani	2.42	275	P	Pn	15 35 39.5	-0.6
MAKR	Makrakomi, Fth	2.44	243	P	Pn	15 35 40.6	+0.2
PHSR	Pinarhisar	2.46	52	Pn	Pn	15 35 40.7	+0.2
VLY	Voula,Athens	2.46	201	P	Pn	15 35 40.3	-0.3
STIP	Stip	2.58	307	*i* Pn	Pn	15 35 41.3	-1.0
STIP				*i* Sg	Sb	15 36 19.9	+1.3
KCTX	Karacabey (Bur	2.63	87	Pn	Pn	15 35 43.0	+0.1
SLVT	Silivri	2.71	66	Pn	Pn	15 35 44.2	+0.1
VTS	Vitosha	2.77	333	*e*Pn	Pn	15 35 46.3	+1.3
VTS				*e*Sn	Sn	15 36 17.7	-0.7
FNA	Florina	2.78	284	*e*Pn	Pn	15 35 45.6	+0.6
FNA	Florina	2.78	284	P	Pn	15 35 45.7	+0.6
CTYL	Yalikoy Yolu	2.87	62	Pn	Pn	15 35 46.6	+0.4
DST	Dursunbey	2.89	100	Pn	Pn	15 35 47.1	+0.5
CTKS	Kestanelik-??a	2.93	67	Pn	Pn	15 35 47.2	+0.2
BOSS	Bosilegrad	2.98	323	*e*Pn	Pn	15 35 48.7	+1.0
BOSS				*e*Sn	Sn	15 36 23.4	+0.1
KLV	Kalavryta, Ach	3.02	227	P	Pn	15 35 48.3	-0.1
ARMT	Armutlu	3.03	81	Pn	Pn	15 35 49.0	+0.5
MDNY	Mudanya-Bursa	3.03	85	Pn	Pn	15 35 48.9	+0.5
GCAM	G?zelcaml?	3.04	143	Pn	Pn	15 35 49.3	+0.8
BGKT	Bogazkoy	3.10	69	Pn	Pn	15 35 49.6	+0.3
PRVS	Prvonek	3.18	318	*e*Pn	Pn	15 35 50.8	+0.2
PRVS				*e*Sn	Sn	15 36 29.3	+0.8
ISK	Istanbul-Kandi	3.27	73	Pn	Pn	15 35 52.3	+0.6
KAVV	Kandilli-Istan	3.27	73	Pn	Pn	15 35 52.7	+1.0
OHR	Ohrid	3.28	288	*e*Pn	Pn	15 35 54.1	+2.2
SIMA	Simav-Kutahya	3.31	108	Pn	Pn	15 35 53.4	+1.1
KLYT	Kilyos	3.31	69	Pn	Pn	15 35 52.7	+0.4
KULA	Kula-Manisa	3.33	118	Pn	Pn	15 35 54.1	+1.5
YLV	Yalova	3.42	82	Pn	Pn	15 35 54.7	+0.9
BARS	Barje	3.54	320	*e*Pn	Pn	15 35 55.9	+0.5
BARS				*e*Sn	Sn	15 36 35.7	-1.5
ZAPS	Zavoj	3.56	332	*e*Pn	Pn	15 35 57.4	+1.7
ZAPS				*e*Sn	Sn	15 36 37.9	+0.2
TVSB	Tavsanli	3.56	100	Pn	Pn	15 35 56.8	+1.0
GEDZ	Gediz	3.64	106	Pn	Pn	15 35 57.7	+0.9
HRT	Hereke	3.67	78	Pn	Pn	15 35 57.9	+0.6
SILT	Sile	3.72	73	Pn	Pn	15 35 58.9	+1.0
CAVI	Cavuskoy	3.76	88	Pn	Pn	15 35 59.3	+0.8
KEK	Kerkira	3.97	265	P	Pn	15 36 01.9	+0.6
YER	Yerkesik	4.00	138	Pn	Pn	15 36 03.0	+1.2
DAT	Datca	4.00	148	Pn	Pn	15 36 03.0	+1.1
ZAGS	Zajecar	4.17	332	*e*Pn	Pn	15 36 04.6	+0.5
ZAGS				*e*Sn	Sn	15 36 50.7	-2.0
SELS	Selova	4.18	318	*e*Pn	Pn	15 36 03.9	-0.4
SELS				*e*Sn	Sn	15 36 51.5	-1.6
BOVS	Bovan	4.23	326	*e*Pn	Pn	15 36 04.7	-0.1
BOVS				*e*Sn	Sn	15 36 52.3	-1.8
TURN	Turunc	4.26	141	Pn	Pn	15 36 06.7	+1.4
GULT	Gulveren	4.28	85	Pn	Pn	15 36 07.0	+1.3
APMY	Acipayam-Deniz	4.34	127	Pn	Pn	15 36 07.6	+1.1
DALY	Dalyan (Mula)	4.43	138	Pn	Pn	15 36 09.3	+1.6
FETY	Fethiye	4.80	136	Pn	Pn	15 36 14.6	+1.9
MDUB	Mudurnu	4.80	84	Pn	Pn	15 36 14.9	+2.0
PDG	Podgorica	4.84	300	⇑P	Pn	15 36 17.7	+4.4
DJES	Djerdap	4.85	339	⇓P	Pn	15 36 16.1	+2.7
IDI	Anoyia	4.86	180	⇑P	Pn	15 36 17.6	+4.0
IDI	Anoyia	4.86	180	Pn	Pn	15 36 13.0	-0.6
	comp=N,0.3nm,0.3s,baz=183,slow=12,SNR=1.7						
IDI				Sn	Sn	15 37 07.0	-2.9
	baz=198,slow=11						
IDI				LR	LR	15 38 33.8	
	comp=N,33nm,18.5s,baz=272,slow=44						
	comp=N,14nm,1.0s						
IVAS	Ivanjica	4.94	315	*e*Pn	Pn	15 36 15.7	+1.0
TLBR	Topalu	4.96	27	⇑P	Pn	15 36 15.9	+1.0
TIRR	Tirgusor	5.01	30	⇑P	Pn	15 36 16.5	+0.8
TIRR	Tirgusor	5.01	30	Pn	Pn	15 36 16.4	+0.8
HERR	Herculane	5.07	339	⇓P	Pn	15 36 19.3	+2.9
ISR	Istrita	5.10	13	⇑P	Pn	15 36 18.2	+1.3
YUVA	Yuva-Kibriscik	5.17	85	Pn	Pn	15 36 19.6	+1.6
MDVR	Moldovita	5.20	334	⇑P	Pn	15 36 21.0	+2.8
VOIR		5.28	1	⇓P	Pn	15 36 20.9	+1.5
TPGR	Topolog	5.36	28	⇓P	Pn	15 36 21.2	+0.8
NEHR	Nehoiu	5.36	10	⇑P	Pn	15 36 22.3	+1.8
DIVS	Divibare	5.38	319	*e*Pn	Pn	15 36 21.0	+0.2
DIVS				*e*Sn	Sn	15 37 19.9	-2.9
MLR	Muntele Rosu	5.38	8	⇑P	Pn	15 36 22.2	+1.3
MLR	Muntele Rosu	5.38	8	Pn	Pn	15 36 22.1	+1.3
	comp=N,2.6nm,0.3s,baz=174,slow=9.2,SNR=13						
MLR				Sn	Sn	15 37 21.8	-1.0
	comp=N,1.1nm,0.3s,baz=122,slow=16,SNR=1.6						
MLR				LR	LR	15 38 50.3	
	comp=N,57nm,19.9s,baz=134,slow=43						
	comp=N,5.7nm,0.3s						
MLR	Muntele Rosu	5.38	8	Pn	Pn	15 36 22.7	+1.8
KIZT	Kizilcal	5.52	101	Pn	Pn	15 36 25.3	+2.5
CFR	Carcaliu	5.55	24	⇓P	Pn	15 36 23.0	+0.1
COVR	Voineasa-Covas	5.76	9	⇑P	Pn	15 36 27.6	+1.6
DOPR	Dopca	5.82	3	⇓P	Pn	15 36 28.0	+1.2
PLOR	Plostina	5.83	12	⇓P	Pn	15 36 27.5	+0.6
VRI	Vrincioaia	5.86	12	⇓P	Pn	15 36 28.0	+0.7
SURR	Surduc	5.96	341	⇓P	Pn	15 36 30.4	+1.7
BZS	Buzias	5.97	337	⇑P	Pn	15 36 29.9	+1.0
TESR	Tescani	6.47	11	⇑P	Pn	15 36 35.9	+0.2
MARR	Marisel-Cluj	6.65	349	⇑P	Pn	15 36 38.6	+0.4
BRTR	Keskin Array B	6.71	91	Pn	Pn	15 36 40.6	+1.6
	comp=N,0.9nm,0.3s,baz=273,slow=12,SNR=17						
	comp=N,1.9nm,0.4s						
DRGR		6.83	347	⇓P	Pn	15 36 40.8	+0.2
BURAR	Bucovina Array	7.46	2	⇓P	Pn	15 36 50.4	+1.1
AKASG	Malin Array Be	10.96	14	Pn	Pn	15 37 36.2	-1.1
	comp=N,0.7nm,0.3s,baz=199,slow=12,SNR=4.4						
	comp=N,0.2nm,0.3s						
FINES	FINESS Array B	21.33	2	LR	LR	15 49 14.0	
	comp=N,66nm,19.2s,baz=324,slow=40						
MKAR	Makanchi Array	41.35	61	P	P	15 42 47.2	+0.9
	comp=N,0.5nm,0.7s,baz=270,slow=9.9,SNR=2.2						
	comp=N,0.5nm,0.7s						

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*NOU **28** 16:01:00.6, 21˚.43S×173˚.64W, h0^{km}, mb5.2/81, Tonga Islands*
*BJI **28** 16:01:01.6±0.0, 21˚.03S×173˚.59W, h9^{km}, mb5.2/43, mB5.6/28, Ms5.2/16, Ms7 4.8/16*
*NEIC **28** 16:01:02.2±1.8, 21˚.16S±0˚.09×173˚.62W±0˚.08, h10^{km}±1^{km}, mb5.3/100, Error ellipse: s-maj=15.0km s-min=11.5km az=157.0*
*IDC **28** 16:01:02.5±0.4, 21˚.24S×174˚.20W, h0^{km}, mb4.8/27, mbtmp4.8/28, ML4.6/1, MS4.5/47, Error ellipse: s-maj=15.0km s-min=11.0km az=131.0*
*MOS **28** 16:01:06.4±1.3, 21˚.16S×174˚.25W, h33^{km}, mb5.4/25, Error ellipse: s-maj=12.7km s-min=9.4km az=41.0*
*GCMT **28** 16:01:07.2±0.2, 21˚.47S±0˚.02×173˚.63W±0˚.01, h13^{km}, MW5.1/125, Moment Tensor Solution. s64,c92; s125,c197; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.67±.15; M$_{\theta\theta}$-0.81±.10; M$_{\phi\phi}$-3.86±.10; M$_{r\theta}$1.27±.24; M$_{\theta\phi}$-1.62±.06; M$_{\phi r}$1.38±.21; Best double couple: M$_0$4.98000×10^{16} NP1:φ$_s$30.00000°, δ56.00000°, λ98.00000°. NP2:φ$_s$197.00000°, δ35.00000°, λ79.00000°. Principal axes: T 5.0690, Plg78.0000°, Azm326.0000°; N -0.1780, Plg6.0000°, Azm206.0000°; P -4.8900, Plg11.0000°, Azm115.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 28 16:01:02.8±0.5**,21˚.20S**±0˚.05×**173˚.83W**±0˚.05**,h9**^{km}±2^{km}**,**
h9^{km}**:pP-P,n646,**σ**1**^{s}**95**/639**,mb5.2**/107**,MS4.7**/55**,**
34C-24D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.23	61	P	Pn	16 02 04.3	-3.1
	baz=4.2,SNR=25						
NIUE	Niue	4.23	61		Pn	16 02 04.0	-3.4
NIUE	Niue	4.23	61	P	Pn	16 02 04.1	-3.4
AFI	Afiamalu	7.51	15	Pn	Pn	16 02 51.0	-1.5
	19nm,0.3s,baz=207,slow=2.0,SNR=23						
AFI				Sn	Sn	16 04 09.6	-8.2
	6.6nm,0.3s,baz=270,slow=24,SNR=2.3						
MSVF	Nonsavu	8.39	293	Pn	Pn	16 03 09.4	+4.7
	2.6nm,0.3s,baz=131,slow=10,SNR=66						
MSVF				LR	LR	16 06 02.2	
	comp=Z,6µm,19.4s,baz=79,slow=37						
MSVF	Nonsavu	8.39	293	Pn	Pn	16 03 08.2	+3.4
MSVF	Nonsavu	8.39	293	P	Pn	16 03 09.9	+5.2
MSVF	Nonsavu	8.39	293*c*	*i*P	Pn	16 03 04.9	+0.2
RAO	Raoul Island	8.83	204	Sn	Sn	16 04 40.5	-10
	50nm,0.3s,baz=272,slow=23,SNR=1.9						
RAO				LR	LR	16 06 02.5	
	comp=Z,1µm,20.2s,baz=46,slow=35						
GLKZ	Green Lake	8.84	204	P	Pn	16 03 08.0	-2.7
GLKZ				S	Sn	16 04 40.9	-10
RAR	Rarotonga	13.12	93	Pn	Pn	16 04 05.2	-4.1
	12nm,0.3s,baz=245,slow=10,SNR=17						
RAR				Sn	Sn	16 06 16.8	-19
	2.8nm,0.3s,baz=312,slow=23,SNR=2.2						
RAR	Rarotonga	13.12	93	Pn	Pn	16 04 04.8	-4.5
RAR	Rarotonga	13.12	93	P	Pn	16 04 05.4	-3.9
PINNC	Pines Island,	17.43	262		Pn	16 05 07.6	+1.4
PINNC	Pines Island,	17.43	262	P	Pn	16 05 07.8	+1.6
LIFNC	LIFOU	17.68	268	P	Pn	16 05 10.4	+1.0
YATNC	Mamie plateau,	17.94	264	P	Pn	16 05 14.3	+1.7
OUENC	Ouen Island, N	17.99	263	P	Pn	16 05 13.9	+0.7
OUENC	Ouen Island, N	17.99	263	P	Pn	16 05 14.6	+1.4
ONTNC	Ouen Toro	18.35	263	P	Pn	16 05 20.1	+2.5
DZM	Mont Dzumac	18.36	264	*e*Pn	P	16 05 17.0	-0.9
	123nm,1.5s						
DZM				*e*LR	LR	16 09 41.5	
	comp=Z,2µm,23.0s						
DZM	Mont Dzumac	18.36	264	P	P	16 05 18.2	+0.3
	26nm,0.8s,baz=81,slow=18,SNR=22						
DZM				LR	LR	16 11 26.3	
	comp=Z,2µm,18.3s,baz=98,slow=35						

DZM	Mont Dzumac	18.36	264	P	P	16 05 18.7	+0.8
DZM	Mont Dzumac	18.36	264	P	P	16 05 19.4	+1.5
NOUC	Port Laguerre	18.49	264	P	P	16 05 20.8	+1.6
URZ	Urewera	18.72	203	P	P	16 05 21.7	+0.2
	1.9nm,0.3s,baz=90,slow=6.9,SNR=12						
	65nm,0.9s						
TOZ	Tahuroa Road	18.89	207	P	P	16 05 24.2	+0.7
HIZ	Hauiti	19.82	207	P	P	16 05 34.5	+0.8
HIZ				IAmb	IAmb	16 05 38.4	
	comp=Z,169nm,1.2s						
KOUNC	Koumac, New Ca	20.46	268	P	Pn	16 05 44.1	+1.2
DREZ	Durham Road	20.67	207	P	P	16 05 38.3	-4.6
PKE	Pukeiti	20.76	208	P	P	16 05 36.8	-7.2
PKE				S	Sn	16 10 06.2	+25
NEZ	North Egmont	20.78	207	P	P	16 05 38.5	-5.7
PREZ	Palmer Road	20.81	207	P	P	16 05 40.2	-4.3
PREZ				S	Pn	16 05 45.2	-1.8
KHEZ	Kahui Hut	20.83	207	P	P	16 05 38.5	-6.3
KHEZ				S	Pn	16 05 42.1	-5.1
BFZ	Birch Farm	21.18	201	P	P	16 05 48.8	+0.4
BFZ	Birch Farm	21.18	201	P	P	16 05 48.9	+0.5
BFZ	Birch Farm	21.18	201	P	P	16 05 47.9	-0.5
BFZ				S	S	16 09 23.0	-21
MRZ	Mangatainoka R	21.39	203	P	P	16 05 46.9	-3.8
MRZ				S	S	16 09 30.7	-18
PLWZ	Palliser	22.31	202	P	P	16 05 59.6	-1.0
TBI	Tubuai	22.65	100	*e*P	P	16 06 02.8	-1.5
	comp=Z,1µm,34.0s						
TBI				*e*LR	LR	16 11 26.4	
	comp=Z,88µm,18.8s						
TBI				*e*LR	LR	16 11 26.5	
	comp=Z,10µm,19.5s						
QRZ	Quartz Range	22.74	208	P	P	16 06 05.2	+0.1
QRZ				IAmb	IAmb	16 06 13.6	
	comp=Z,112nm,1.3s						
QRZ	Quartz Range	22.74	208	P	P	16 06 03.1	-2.0
QRZ	Quartz Range	22.74	208	P	P	16 06 10.1	+4.9
MRNZ	Matariki Terra	23.12	206	P	P	16 06 11.9	+2.8
MRNZ				S	S	16 10 07.2	-13
PPT2	Papeete2	23.15	85	*e*LR	LR	16 11 40.0	
	comp=Z,4µm,17.5s						
PPT	Papeete	23.16	85	P	P	16 06 12.5	+2.8
	comp=Z,59nm,0.9s,baz=69,slow=19,SNR=3.6						
PPT				LR	LR	16 13 41.5	
	comp=Z,2µm,18.9s,baz=248,slow=32						
	comp=Z,59nm,0.9s						
THZ	Tophouse	23.36	206	P	P	16 06 10.9	-0.7
THZ				S	S	16 10 11.0	-14
TIAR	Tiarei	23.38	85	*e*P	P	16 06 13.3	+1.4
	comp=Z,12nm,0.9s						
KHZ	Kahutara	23.67	204	P	P	16 06 12.6	-1.9
KHZ	Kahutara	23.67	204	P	P	16 06 13.3	-1.2
DSZ	Denniston Nort	23.80	207	P	P	16 06 20.0	+4.0
GVZ	Greta Valley S	24.33	204	P	P	16 06 19.1	-1.7
LTZ	Lake Taylor	24.47	205	P	P	16 06 22.8	+0.6
INZ	Inchbonnie	24.76	207	P	P	16 06 22.4	-2.3
INZ				IAmb	IAmb	16 06 30.6	
	comp=Z,108nm,1.0s						
INZ	Inchbonnie	24.76	207	P	P	16 06 27.7	+3.0
RPZ	Rata Peaks	25.74	206	P	P	16 06 32.4	-1.2
	comp=Z,17nm,0.8s,baz=148,slow=1.6,SNR=9.9						
RPZ				S	S	16 11 04.3	+1.7
	comp=Z,2.9nm,0.6s,baz=262,slow=15,SNR=1.2						
	comp=Z,17nm,0.8s						
LBZ	Lake Benmore	26.65	206	P	P	16 06 42.1	+0.3
JCZ	Jackson Bay	27.00	208	P	P	16 06 43.9	-1.1
HNR	Honiara	27.81	291	P	P	16 06 51.6	-0.9
	comp=Z,517nm,0.8s,baz=230,slow=5.3,SNR=4.7						
HNR				LR	LR	16 17 25.9	
	comp=Z,11µm,18.3s,baz=130,slow=36						
HNR	Honiara	27.81	291	P	P	16 06 51.6	-0.9
HNR				IAmb	IAmb	16 06 54.1	
	comp=Z,41nm,0.8s						
HNR	Honiara	27.81	291	P	P	16 06 53.3	+0.8
HNR	Honiara	27.81	291	P	P	16 06 51.7	-0.8
HNR				pmax	pmax		
	comp=Z,41nm,0.9s						
ARMA	Armidale	32.32	246	P	P	16 07 31.6	-0.8
	baz=32,SNR=4.9						
ARMA	Armidale	32.32	246	P	P	16 07 30.4	-2.0
ARMA	Armidale	32.32	246	P	P	16 07 30.8	-1.6
EIDS	Eidsvold	32.44	256	P	P	16 07 32.1	-1.3
EIDS				IAmb	IAmb	16 07 33.6	
	comp=Z,137nm,2.0s						
AUPHS	Peel High Scho	33.05	245	P	P	16 07 37.4	-1.3
MGCD	Mangrove Creek	33.24	241	P	P	16 07 39.9	-0.5
RMQ	Roma	34.54	254	P	P	16 07 50.9	-0.8
	baz=35,SNR=7.4						
RMQ	Roma	34.54	254	P	P	16 07 51.3	-0.4
TAOE	Nuku Hiva Isla	34.68	74	*e*LR	LR	16 17 00.8	
	comp=Z,799nm,20.8s						
AUDCS	Dubbo College	35.12	244	P	P	16 07 56.3	-0.4
AULRC	Lightning Ridg	35.36	249	P	P	16 07 56.9	-1.8
KRVT	Keravat (AS076	37.15	292	LR	LR	16 22 56.2	
	comp=Z,380nm,18.3s,baz=238,slow=36						
CTA	Charters Tower	37.30	264	LR	LR	16 22 42.6	
	comp=Z,439nm,18.2s,baz=84,slow=35						
CMSA	Cobar Meteorol	37.51	246	P	P	16 08 14.6	-2.5
	baz=38,SNR=8.7						
CMSA	Cobar Meteorol	37.51	246	P	P	16 08 14.9	-2.3
CORO	Coronation Par	38.55	229	P	P	16 08 26.1	+0.3
QLP	Quilpie	38.59	254	P	P	16 08 23.7	-2.6
	baz=39,SNR=6.1						
QLP	Quilpie	38.59	254	P	P	16 08 24.1	-2.2
PMG	Port Moresby	39.30	281	LR	LR	16 23 35.6	
	comp=Z,729nm,18.0s,baz=182,slow=35						
PMG	Port Moresby	39.30	281	*ce*P	P	16 08 30.2	-2.1
PMG				pmax	pmax		
	comp=Z,20nm,1.0s						
MTSU	Mount Surprise	39.45	267	P	P	16 08 32.1	-1.5
	baz=40,SNR=8.9						
BRAT	Ballarat	39.89	236	P	P	16 08 37.6	+0.6
STKA	Stephens Creek	41.02	245	P	P	16 08 43.8	-2.7
	comp=Z,11nm,1.0s,baz=75,slow=8.6,SNR=10						
STKA				LR	LR	16 24 37.6	
	comp=Z,616nm,19.3s,baz=96,slow=35						
	comp=Z,11nm,1.0s						
STKA	Stephens Creek	41.02	245	P	P	16 08 44.5	-2.0
	baz=41,SNR=6.8						
STKA	Stephens Creek	41.02	245	P	P	16 08 44.5	-2.0
STKA	Stephens Creek	41.02	245	P	P	16 08 44.4	-2.0
STKA	Stephens Creek	41.02	245	P	P	16 08 44.5	-2.0
STKA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ARPS	Mount Arapiles	41.39	238	P	P	16 08 48.4	-1.0
INKA	Innaminka	41.67	252	P	P	16 08 50.5	-1.3
HTT	Hallett	43.38	243	P	P	16 09 03.6	-2.1
	baz=43,SNR=4.6						
HTT	Hallett	43.38	243	P	P	16 09 03.7	-2.0
LCRK	Leigh Creek	43.86	248	P	P	16 09 07.3	-2.3
OOD	Oodnadatta	46.15	251	P	P	16 09 26.3	-1.5
MULG	Mulgathing	47.46	248	P	P	16 09 35.5	-2.6
AS01	Alice Springs	48.11	257	P	P	16 09 40.9	-2.4
AS31	Alice Springs	48.15	257	P	P	16 09 40.6	-3.0
ASAR	Alice Springs	48.15	257	P	P	16 09 40.8	-2.9
	comp=Z,39nm,1.0s,baz=88,slow=8.4,SNR=127						
ASAR				PcP	PcP	16 11 11.0	-0.1
	comp=Z,2.4nm,0.8s,baz=106,slow=4.3,SNR=1.0						
ASAR				S	S	16 16 37.5	-5.5
	comp=Z,1.6nm,1.0s,baz=92,slow=17,SNR=5.8						
	comp=Z,39nm,1.0s						
ASAR	Alice Springs	48.15	257	P	P	16 09 40.6	-3.0
WB0	Warramunga Arr	48.34	262	P	P	16 09 42.0	-3.1
WB0				IAmb	IAmb	16 09 47.0	
	comp=Z,32nm,1.0s						
WB2	Warramunga Arr	48.35	262	P	P	16 09 42.5	-2.7
WB2				IAmb	IAmb	16 09 45.2	
	comp=Z,47nm,1.2s						
WB1	Warramunga Ar.	48.35	262	P	P	16 09 42.9	-2.3
WRAB	Tennant Creek	48.35	262	P	P	16 09 42.9	-2.3
WRA	Warramunga Arr	48.36	262	P	P	16 09 42.4	-2.9
	comp=Z,20nm,1.0s,baz=97,slow=7.7,SNR=70						
WRA				PcP	PcP	16 11 12.2	+0.3
	comp=Z,2.6nm,0.8s,baz=97,slow=3.4,SNR=4.8						
WRA				S	S	16 16 37.8	-8.1
	comp=Z,0.5nm,0.7s,baz=101,slow=14,SNR=2.1						
	comp=Z,20nm,1.0s						
GENI	Genyem	48.41	286	P	P	16 09 45.6	-0.1
SMPI	Sarmi	49.98	286	P	P	16 09 51.6	-6.1
	comp=Z,40nm,1.3s						
KDU	Kakadu	51.85	270	P	P	16 10 10.1	-1.7
	baz=52,SNR=5.9						
FORT	Forrest	52.60	247	P	P	16 10 14.8	-2.4
FORT				IAmb	IAmb	16 10 18.3	
	comp=Z,34nm,0.8s						
FORT	Forrest	52.60	247	P	P	16 10 15.7	-1.5
WRKA	Warakurna	53.02	254	P	P	16 10 17.8	-2.6
	baz=53,SNR=37						
WRKA	Warakurna	53.02	254	P	P	16 10 18.3	-2.1
GUMO	Guam	53.29	307	LR	LR	16 30 28.1	
	comp=Z,151nm,20.9s,baz=104,slow=33						
KNRA	Kununurra	54.49	265	P	P	16 10 29.7	-1.6
	baz=54,SNR=5.4						
FAKI	Fak Fak	55.45	282	P	P	16 10 30.0	-8.2
	comp=Z,45nm,1.4s						
FITZ	Fitzroy Crossi	56.79	262	P	P	16 10 45.4	-2.3
FITZ	Fitzroy Crossi	56.79	262	P	P	16 10 46.0	-1.7
SIJI	Sorong	57.19	283	LR	LR	16 34 38.0	
	comp=Z,465nm,19.7s,baz=113,slow=35						
VNDA	Vanda	57.60	186	P	P	16 10 54.8	+2.2
	comp=Z,2.9nm,0.9s,baz=17,slow=6.4,SNR=6.9						
VNDA				LR	LR	16 31 10.5	
	comp=Z,288nm,20.6s,baz=9.5,slow=31						
	comp=Z,2.9nm,0.9s						
VNDA	Vanda	57.60	186	P	P	16 10 53.1	+0.6
VNDA				IAmb	IAmb	16 12 42.8	
	comp=Z,68nm,1.9s						
RPN	Rapa Nui	58.60	110	LR	LR	16 30 50.4	
	comp=Z,710nm,18.9s,baz=270,slow=30						
SOEI	Soe	60.41	271	P	P	16 11 11.7	-1.5
SOEI	Soe	60.41	271	P	P	16 11 12.8	-0.4
KLBR	Kellerberrin	61.29	245	P	P	16 11 18.0	-0.9
	baz=61,SNR=7.7						
KLBR	Kellerberrin	61.29	245	P	P	16 11 17.9	-0.9
PSA00	Pilbara Seismi	61.30	256	P	P	16 11 16.4	-2.6
PSA00				IAmb	IAmb	16 11 18.1	
	comp=Z,21nm,1.2s						
TNTI	Ternate	61.41	283	P	P	16 11 17.6	-2.2
TNTI	Ternate	61.41	283	P	P	16 11 18.9	-0.9
MBWA	Marble Bar	61.50	257	P	P	16 11 17.9	-2.5
MBWA				IAmb	IAmb	16 11 19.3	
	comp=Z,45nm,1.3s						
NWAO	Narrogin (SRO)	61.54	243	LR	LR	16 37 13.4	
	comp=Z,525nm,18.1s,baz=284,slow=36						
SANI	Sanana	61.54	280	P	P	16 11 19.2	-1.5
BLDU	Ballidu	62.33	246	P	P	16 11 25.3	-0.5
	baz=62,SNR=9.2						
MORW	Morawa	63.16	247	P	P	16 11 31.1	-0.3
	baz=63,SNR=5.5						
MORW	Morawa	63.16	247	P	P	16 11 30.0	-1.4
MORW	Morawa	63.16	247	P	P	16 11 31.4	0.0
JCJ	Chichijima	64.17	317	LR	LR	16 36 34.6	
	comp=Z,114nm,19.3s,baz=106,slow=33						
LUWI	Luwuk	64.89	279	P	P	16 11 41.1	-1.8
LUWI	Luwuk	64.89	279	P	P	16 11 42.5	-0.4
KAPI	Kappang	66.22	274	P	P	16 11 49.7	-1.9
	comp=Z,2.0nm,0.4s,baz=149,slow=5.9,SNR=4.3						
KAPI				LR	LR	16 40 58.9	
	comp=Z,145nm,20.0s,baz=116,slow=36						
	comp=Z,2.0nm,0.4s						
PLAI	Plampang	66.77	269	P	P	16 11 56.2	+1.1
TOLI2	Tolitoli	67.56	280	P	P	16 11 58.2	-1.9
TOLI2				IAmb	IAmb	16 11 59.8	
	comp=Z,47nm,1.3s						
TOLI2	Tolitoli	67.56	280	P	P	16 11 58.8	-1.3
QSPA	South Pole Qui	68.88	180	P	P	16 12 08.8	+1.2
	comp=Z,18nm,1.0s,baz=30,slow=3.6,SNR=15						
QSPA				LR	LR	16 37 42.5	
	comp=Z,390nm,20.6s,baz=46,slow=32						
	comp=Z,18nm,1.0s						
BKB	Balikpapan	70.24	277	P	P	16 12 15.9	-0.9
JMM	Marumori	72.60	324	P	P	16 12 29.4	-1.0
JGF	Kuroka	72.99	320	P	P	16 12 31.9	-1.1
JGF				IAmb	IAmb	16 12 38.5	
	comp=Z,27nm,1.2s						
JGF	Kuroka	72.99	320	P	P	16 12 32.1	-0.8
MJAR	Matsushiro Arr	73.13	321	P	P	16 12 33.6	-0.1
	comp=Z,12nm,1.0s,baz=159,slow=5.7,SNR=15						
MJAR				LR	LR	16 41 14.1	
	comp=Z,147nm,19.5s,baz=121,slow=33						
	comp=Z,12nm,1.0s						
MAJO	Matsushiro	73.13	321	P	P	16 12 33.3	-0.4
MAJO				IAmb	IAmb	16 12 35.5	
	comp=Z,35nm,1.4s						
MAJO	Matsushiro	73.13	321	P	P	16 12 34.6	+0.9
MAJO	Matsushiro	73.13	321	P	P	16 12 33.3	-0.4
MAJO				pmax	pmax		
	comp=Z,35nm,1.4s						
MJB9	Matsu-Tunnel	73.14	321	P	P	16 12 33.2	-0.5
MJB9				IAmb	IAmb	16 12 35.5	
	comp=Z,34nm,1.4s						
JOW	Kunigami	73.63	308	LR	LR	16 40 55.0	
	comp=Z,160nm,20.8s,baz=124,slow=33						
JOW	Kunigami	73.63	308	P	P	16 12 38.1	+1.3
KKM	Kota Kinabalu	73.71	283	P	P	16 12 36.1	-1.6
KKM				IAmb	IAmb	16 12 38.4	
	comp=Z,51nm,1.3s						
JMN	Monobe	73.92	317	P	P	16 12 37.5	-0.9
JMN				IAmb	IAmb	16 12 41.0	
	comp=Z,49nm,1.0s						
JMN	Monobe	73.92	317	P	P	16 12 39.8	+1.4
JSD	Sado	74.13	322	P	P	16 12 36.6	-2.9
JSD				IAmb	IAmb	16 12 41.2	
	comp=Z,52nm,1.3s						
SHEM	Shemya Is, Ala	74.36	352	LR	LR	16 41 43.8	
	comp=Z,501nm,19.7s,baz=136,slow=33						
ERM	Erimo	74.41	328	P	P	16 12 39.9	-1.1
ERM	Erimo	74.41	328	P	P	16 12 39.9	-1.1
ERM				pmax	pmax		
	comp=Z,85nm,1.4s						
JSU	Suzuyama	74.80	313	P	P	16 12 42.9	-0.7
JSU				IAmb	IAmb	16 12 45.4	
	comp=Z,23nm,1.0s						
JSU	Suzuyama	74.80	313	P	P	16 12 44.5	+0.9
JHS	Saijyo	75.21	317	P	P	16 12 44.7	-1.2
JHS	Saijyo	75.21	317	P	P	16 12 47.3	+1.4
JNU	Nakatsue	75.50	315	P	P	16 12 47.1	-0.4
JNU				IAmb	IAmb	16 12 49.2	
	comp=Z,39nm,1.1s						
JNU	Nakatsue	75.50	315	P	P	16 12 48.3	+0.7
SBUM	Sibu	75.96	278	P	P	16 12 49.4	-1.3
SBUM				IAmb	IAmb	16 12 52.4	
	comp=Z,64nm,2.0s						
MCCM	Marconi Confer	75.97	39	P	P	16 12 48.5	-1.6
ASAJ	Asahikawa	76.25	329	LR	LR	16 41 10.2	
	comp=Z,253nm,20.1s,baz=164,slow=32						
LPIG	La Paz	76.46	57	LR	LR	16 39 59.8	
	comp=Z,690nm,19.2s,baz=204,slow=30						
SLBS	Sierra La Lagu	76.53	58	P	P	16 12 51.4	-2.3
SLBS				IAmb	IAmb	16 14 05.4	
	comp=Z,87nm,1.9s						
MURC	Murrieta	76.68	46	P	P	16 12 56.2	+1.8
	baz=233						
BFSC	Mount Baldy Ra	76.76	45	P	P	16 12 57.1	+2.3
	baz=232						
MONP2	Monument Peak	76.78	47	P	P	16 12 56.8	+1.7
	baz=234						
VES	Vestal, Richgr	76.82	43	P	P	16 12 57.2	+2.3
	baz=231						
IKP	In-Ko-Pah, Jac	76.86	47	P	P	16 12 57.0	+1.6
	baz=234						
EDW2	Edwards Air Fo	76.93	44	P	P	16 12 58.2	+2.4
	baz=232,SNR=7.5						
ISA	Isabella, Lake	77.10	43	P	P	16 12 59.1	+2.5
	baz=232						
PFO	Pinyon Flats O	77.18	46	P	P	16 13 00.0	+2.7
	comp=Z,6.1nm,0.9s,baz=273,slow=6.4,SNR=5.1						
	comp=Z,6.1nm,0.9s						
PFO	Pinyon Flats O	77.18	46	P	P	16 13 00.0	+2.7
	baz=234						
TPFO	Pinon Flats	77.18	46	P	P	16 13 00.0	+2.7
	baz=234						
SWSC	Sam W. Stewart	77.24	47	P	P	16 13 00.3	+2.9
	baz=234						
NACB	Ninganchiao	77.31	302	P	P	16 12 56.8	-1.3
NACB				IAmb	IAmb	16 12 58.6	
	comp=Z,40nm,1.1s						
NACB	Ninganchiao	77.31	302	P	P	16 12 58.2	+0.2
KSM	Kuching	77.36	277	P	P	16 12 59.5	+0.9
LRMC	Laurel Mtn Rad	77.50	44	P	P	16 13 01.7	+2.7
	baz=232						
SSLB	Suanglung	77.63	302	P	P	16 12 58.7	-1.2
SSLB				IAmb	IAmb	16 13 01.3	
	comp=Z,14nm,0.8s						
SSLB	Suanglung	77.63	302	P	P	16 12 59.3	-0.6
TPUB	Ta-pu	77.65	301	P	P	16 12 58.2	-1.8
TPUB				IAmb	IAmb	16 13 01.3	
	comp=Z,45nm,1.0s						
TPUB	Ta-pu	77.65	301	P	P	16 12 59.4	-0.6
BELC	Belle Mtn. Jos	77.72	46	P	P	16 13 02.7	+2.4
	baz=234						
YHNB	Yeheng	77.74	303	P	P	16 12 57.9	-2.6
YHNB	Yeheng	77.74	303	P	P	16 13 00.2	-0.3
CWC	Cottonwood Cre	77.83	43	P	P	16 13 03.3	+2.5
	baz=232						
BC3	Big Chuckawall	77.89	47	P	P	16 13 04.0	+2.8
	baz=234						
GSC	Goldstone, Bar	77.96	45	P	P	16 13 05.1	+3.5
	baz=233						
GLA	Glamis	77.97	47	P	P	16 13 04.9	+3.3
	baz=235						
MPMC	Manual Prospec	77.97	44	P	P	16 13 05.6	+3.9
	baz=232,SNR=9.6						
HEC	Hector,Ludlow	77.99	45	P	P	16 13 04.5	+2.8
	baz=233,SNR=11						
PEA0B	Petropavlovsk-	78.01	343	P	P	16 13 00.6	-0.7
PEA0B	Petropavlovsk-	78.01	343	P	P	16 13 00.6	-0.7
PEA0B				pmax	pmax		
	comp=Z,183nm,2.0s						
PETK	Petropavlovsk-	78.01	343	P	P	16 13 02.1	+0.8
	comp=Z,8.0nm,0.9s,baz=100,slow=8.6,SNR=8.9						
PETK				LR	LR	16 42 52.5	
	comp=Z,287nm,21.2s,baz=160,slow=32						
	comp=Z,8.0nm,0.9s						
PETK	Petropavlovsk-	78.01	343	P	P	16 13 00.6	-0.7
PETK	Petropavlovsk-	78.01	343	P	P	16 13 00.6	-0.7
MLAC	Mammoth, Mammo	78.09	42	P	P	16 13 05.9	+3.5
	baz=231						
YSS	Yuzh-Sakhalins	78.31	331	P	P	16 13 02.0	-1.1
YSS				IAmb	IAmb	16 13 06.0	
	comp=Z,28nm,1.0s						
YSS	Yuzh-Sakhalins	78.31	331	P	P	16 13 05.1	+2.0
	comp=Z,20nm,1.0s						
YSS	Yuzh-Sakhalins	78.31	331	*e*P	P	16 13 04.0	+0.9
YSS				*e*S	S	16 22 57.7	-0.7
YSS				*e*PS	S	16 23 09.0	+11
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
BELA	Belgrano 2	78.35	172	P	P	16 13 02.9	-0.1
BELA				IAmb	IAmb	16 15 21.7	
	comp=Z,20nm,0.6s						
IRM	Iron Mountain	78.39	46	P	P	16 13 06.0	+2.1
	baz=234						
GMRC	Granite Mounta	78.41	46	P	P	16 13 06.7	+2.6
	baz=234						
YBH	Yreka Blue Hor	78.46	36	P	P	16 13 07.4	+3.3
	comp=Z,13nm,0.9s,baz=126,slow=0.5,SNR=19						
YBH				LR	LR	16 41 58.0	
	comp=Z,429nm,18.7s,baz=232,slow=31						
	comp=Z,13nm,0.9s						
LCH	Last Change Ra	78.59	43	P	P	16 13 03.4	-1.6
GRAC	Grapevine Rang	78.62	43	P	P	16 13 08.6	+3.5
	baz=232,SNR=10.0						
214A	Organ Pipe Nat	78.76	49	P	P	16 13 09.1	+3.1
	baz=236						
NVAR	Mina Array Bea	78.91	41	P	P	16 13 09.8	+2.9
	comp=Z,14nm,0.9s,baz=224,slow=7.5,SNR=61						
NVAR				LR	LR	16 42 51.1	
	comp=Z,399nm,18.7s,baz=244,slow=32						
	comp=Z,14nm,0.9s						
PMSA	Palmer Station	79.08	156	LR	LR	16 45 45.3	
	comp=Z,312nm,18.4s,baz=113,slow=34						
PDMCI	Parker Dam,Lak	79.15	47	P	P	16 13 11.0	+3.0
	baz=235						
TPNV	Topopah Spring	79.30	43	P	P	16 13 07.2	-1.8
TPNV	Topopah Spring	79.30	43	P	P	16 13 07.2	-1.8
TPNV				pmax	pmax		
	comp=Z,11nm,1.0s						
TPNV	Topopah Spring	79.30	43	P	P	16 13 11.8	+2.8
	baz=233,SNR=8.4						
MOD	Modoc Plateau	79.93	38	P	P	16 13 10.3	-2.0
KSRS	Korea Array	80.03	317	P	P	16 13 14.2	+1.5
	comp=Z,9.3nm,1.1s,baz=135,slow=5.8,SNR=21						
KSRS				LR	LR	16 44 34.7	
	comp=Z,86nm,21.2s,baz=130,slow=33						
	comp=Z,9.3nm,1.1s						
KSAR	Wonju Array Be	80.04	317	P	P	16 13 12.3	-0.5
KSAR	Wonju Array Be	80.04	317	P	P	16 13 12.3	-0.5
TUC	Tucson	80.39	50	P	P	16 13 18.0	+3.1
	baz=237						
Q17K	Contact Creek	80.55	10	P	P	16 13 18.4	+3.2
	baz=197,SNR=5.3						
R11B	Troy Canyon, C	80.56	43	P	P	16 13 18.4	+2.6
	baz=233,SNR=7.4						
KDAK	Kodiak Island	80.65	11	LR	LR	16 42 43.4	
	comp=Z,445nm,20.7s,baz=224,slow=31						
KDAK	Kodiak Island	80.65	11	P	P	16 13 19.0	+3.4
	baz=200						
H04A	Detroit Lake	80.73	35	P	P	16 13 15.2	-1.1
Q16K	King Salmon	80.84	9	P	P	16 13 19.6	+3.1
	baz=196						
P16K	Nushagak River	80.99	8	P	P	16 13 18.7	+1.4
	baz=195,SNR=13						
Q18K	Katmai Hardscr	81.06	10	P	P	16 13 19.2	+1.3
	baz=198,SNR=6.4						
LCMT	Little Creek M	81.30	45	P	P	16 13 17.8	-1.9
LCMT				IAmb	IAmb	16 15 32.1	
	comp=Z,18nm,0.8s						
TYV	Tymovskoe	81.32	334	*e*P	P	16 13 20.4	+1.1
TYV				*e*S	S	16 23 31.4	+1.4
TYV				pmax	pmax		
	comp=Z,16nm,1.3s						
TYV				pmax	pmax		
	comp=Z,200nm,2.6s						
TYV				smax	smax		
	comp=E,200nm,9.8s						
P17K	Kvichak River	81.37	9	P	P	16 13 21.2	+1.9
	baz=196						
O16K	Kokwok River B	81.52	8	P	P	16 13 21.6	+1.4
	baz=195,SNR=9.1						
Q19K	Cape Douglas,	81.55	10	P	P	16 13 21.8	+1.4
	baz=199						
KNB	Kanab	81.58	45	P	P	16 13 19.2	-2.0
KNB				IAmb	IAmb	16 14 03.7	
	comp=Z,33nm,1.6s						
KNB	Kanab	81.58	45	P	P	16 13 19.2	-2.0
KNB				pmax	pmax		
	comp=Z,33nm,1.6s						
WUAZ	Wupatki	81.72	47	P	P	16 13 19.1	-2.9
WUAZ	Wupatki	81.72	47	P	P	16 13 24.3	+2.3
	baz=236						
P18K	Big Mountain,	81.74	9	P	P	16 13 20.7	-0.7
P18K				IAmb	IAmb	16 13 25.0	
	comp=Z,42nm,1.1s						
P18K	Big Mountain,	81.74	9	P	P	16 13 22.9	+1.5
	baz=197,SNR=7.6						
USA0B	Ussuriysk Arra	81.77	324	P	P	16 13 22.1	+0.3
USA0B				IAmb	IAmb	16 13 26.4	
	comp=Z,30nm,1.4s						
USA0B	Ussuriysk Arra	81.77	324	P	P	16 13 22.1	+0.3
USA0B				pmax	pmax		
	comp=Z,30nm,1.4s						
USRK	Ussuriysk Ar.	81.77	324	P	P	16 13 23.0	+1.1
	comp=Z,7.7nm,1.1s,baz=108,slow=6.2,SNR=13						
USRK				LR	LR	16 45 44.3	
	comp=Z,517nm,20.2s,baz=128,slow=33						
	comp=Z,7.7nm,1.1s						
USRK	Ussuriysk Ar.	81.77	324	P	P	16 13 21.6	-0.2
USRK	Ussuriysk Ar.	81.77	324	P	P	16 13 21.6	-0.2
O17K	Koliganek Bris	81.83	8	P	P	16 13 24.1	+2.4
	baz=196,SNR=9.1						
O18K	Koktuh Hills	82.18	9	P	P	16 13 25.5	+1.8
	baz=197,SNR=10						
ELK	Elko	82.20	41	P	P	16 13 27.1	+2.6
	comp=Z,3.9nm,1.0s,baz=261,slow=4.7,SNR=9.8						
ELK				LR	LR	16 45 02.9	
	comp=Z,375nm,18.8s,baz=238,slow=32						
	comp=Z,3.9nm,1.0s						
ELK	Elko	82.20	41	P	P	16 13 22.4	-2.1
ELK	Elko	82.20	41	P	P	16 13 22.4	-2.1
ELK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
N16K	Nishlik Lake	82.29	7	P	P	16 13 26.1	+1.8
	baz=194						
P19K	Oil Pt	82.31	10	P	P	16 13 25.9	+1.6
	baz=199						
W18A	Petrified Fore	82.63	48	P	P	16 13 30.2	+3.4
	baz=238						
O19K	Port Alsworth	82.64	10	P	P	16 13 25.9	-0.2
O19K	Port Alsworth	82.64	10	P	P	16 13 27.4	+1.3
	baz=198,SNR=7.0						
121A	Cookes Peak, D	82.67	51	P	P	16 13 28.9	+1.8
	baz=239						
121A	Cookes Peak, D	82.67	51	P	P	16 13 29.8	+2.7
	baz=239						
O20K	Slope Mountain	82.81	11	P	P	16 13 29.1	+2.1
	baz=200						
BRSE	Bradley Lake S	82.83	12	P	P	16 13 30.2	+3.1

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      baz=201
N19K  Bonanza Creek      83.21   9  P      P        16 13 30.5 +1.4
      baz=198
SVW2  Sparrevohn         83.32   9  P      P        16 13 31.6 +2.0
NJ2   Nanjing            83.35 308 ⇓P      P        16 13 32.0 +1.6
NJ2                                 pP     PcP      16 13 34.5 -0.3
NJ2                                 SKS    S        16 23 44.8 -6.8
NJ2                                 S      SKSac    16 23 52.5 -0.5
NJ2                                 pmax   pmax
      comp=Z,17nm,0.7s
NJ2                                 pmax   pmax
      comp=Z,220nm,3.8s
MDJ   Mudanjiang         83.37 323  P      P        16 13 32.0 +1.8
MDJ                                 pP     PcP      16 13 33.8 -0.8
MDJ                                 sP     pwP      16 13 37.5 -1.2
MDJ                                 PP     PP       16 16 40.3 -2.1
MDJ                                 S      S        16 23 53.0 +1.7
MDJ                                 sS     SKKSac   16 23 58.3 +1.3
MDJ                                 SS     SS       16 29 17.5 +0.3
MDJ                                 pmax   pmax
      comp=Z,13nm,2.1s
MDJ                                 pmax   pmax
      comp=Z,480nm,4.4s
MDJ   Mudanjiang         83.37 323  P      P        16 13 32.8 +2.6
BTDF  Bukit Timah Da     83.40 274  P      P        16 13 32.7 +1.6
MFID  Camas Ranch        83.45  38  P      P        16 13 29.1 -1.7
MFID                                IAmb   IAmb     16 13 35.8
      comp=Z,17nm,1.0s
MYKOM Kota Tinggi        83.48 274  P      P        16 13 31.0 -0.5
O22K  Cooper Landing     83.71  12  P      P        16 13 34.8 +3.3
      baz=202
CRAG  Craig              83.84  22  P      P        16 13 34.8 +2.5
      baz=218
SPCR  Spurr Chakacha     83.94  10  P      P        16 13 35.4 +2.6
      baz=200
SPU   Mount Spurr        83.95  10  P      P        16 13 32.5 -0.3
GRNR  Gornyy             83.96 331⇑iP      P        16 13 34.1 +1.0
GRNR                                pmax   pmax
      comp=N,2.0nm,1.1s
GRNR                                pmax   pmax
      comp=E,2.0nm,1.1s
GRNR                                pmax   pmax
      comp=Z,9.0nm,1.2s
Y22A  Socorro            83.97  50  P      P        16 13 36.6 +2.8
      baz=239
MNTX  Cornudas Mount     84.02  53  P      P        16 13 35.7 +1.8
      baz=241,SNR=7.6
MNTX  Cornudas Mount     84.02  53  P      P        16 13 36.2 +2.3
      baz=241
LENM  Lemitar            84.08  50  P      P        16 13 32.1 -2.2
TX31  Lajitas Ar. Si     84.19  56  P      P        16 13 37.9 +3.0
      baz=242
TXAR  Lajitas Array      84.19  56  P      P        16 13 38.0 +3.1
      comp=Z,4.1nm,0.9s,baz=209,slow=7.2,SNR=21
TXAR                                LR     LR       16 44 34.8
      comp=Z,393nm,19.9s,baz=244,slow=31
      comp=Z,4.1nm,0.9s
TXAR  Lajitas Array      84.19  56  P      P        16 13 38.0 +3.1
M19K  Big River Lodg     84.26   9  P      P        16 13 36.1 +1.7
      baz=198
V35K  Ketchikan          84.26  23  P      P        16 13 36.6 +2.2
      baz=219
RC01  Rabbit Creek A     84.27  12  P      P        16 13 36.1 +1.7
      baz=202
PWL   Port Wells         84.33  12  P      P        16 13 34.8  0.0
PWL                                 IAmb   IAmb     16 13 38.6
      comp=Z,31nm,0.9s
PWL   Port Wells         84.33  12  P      P        16 13 36.4 +1.6
      baz=204
HLID  Hailey             84.36  39  P      P        16 13 36.3 +0.8
      baz=234,SNR=14
PLID  Pearl Lake         84.36  37  P      P        16 13 34.8 -0.8
PLID                                IAmb   IAmb     16 13 39.7
      comp=Z,14nm,0.9s
M20K  Styx River         84.43  10  P      P        16 13 37.1 +1.7
      baz=199
SUA   Susitna One        84.44  11  P      P        16 13 36.6 +1.2
      baz=201,SNR=12
L19K  White Mountain     84.46   9  P      P        16 13 36.8 +1.5
      baz=198
SKT   Skwentna           84.78  10  P      P        16 13 36.8 -0.2
SKT                                 IAmb   IAmb     16 13 40.0
      comp=Z,27nm,1.2s
SKT   Skwentna           84.78  10  P      P        16 13 37.9 +0.8
      baz=201,SNR=8.5
KNK   Knik Glacier       84.81  12  P      P        16 13 38.3 +1.1
      baz=203,SNR=6.2
ANMO  Albuquerque        84.84  50  P      P        16 13 42.2 +4.0
      comp=Z,11nm,0.9s,baz=306,slow=5.8,SNR=17
ANMO                                LR     LR       16 45 17.6
      comp=Z,372nm,19.2s,baz=346,slow=31
      comp=Z,11nm,0.9s
ANMO  Albuquerque        84.84  50ceP      P        16 13 41.2 +3.0
ANMO                                pmax   pmax
      comp=Z,38nm,2.5s
ANMO  Albuquerque        84.84  50  P      P        16 13 38.4 +0.3
      baz=240
ANMO  Albuquerque        84.84  50  P      P        16 13 41.1 +3.0
      baz=240
PMR   Palmer             84.85  12  P      P        16 13 39.2 +1.9
PMR   Palmer             84.85  12  P      P        16 13 38.3 +1.0
      baz=203
WRAK  Wrangell Islan     84.86  22  P      P        16 13 38.8 +1.4
      baz=218
L20K  Farewell, AK       84.89   9  P      P        16 13 39.5 +2.0
      baz=198
TTA   Tatalina           85.02   8  P      P        16 13 40.5 +2.2
TTA   Tatalina           85.02   8  P      P        16 13 39.6 +1.4
      baz=196,SNR=21
KLR   Kul'dur            85.15 328  LR     LR       16 47 08.5
      comp=Z,346nm,20.6s,baz=136,slow=32
KLR   Kul'dur            85.15 328ceP      P        16 13 40.4 +1.3
KLR                                 pmax   pmax
      comp=Z,10.0nm,1.7s
SML   Sawmill            85.20  12  P      P        16 13 37.7 -1.4
SML   Sawmill            85.20  12  P      P        16 13 40.7 +1.6
      baz=204
CN2   Changchun          85.26 321 eP      P        16 13 41.0 +1.2
CN2                                eS      S        16 24 07.8 -2.5
CN2                                 pmax   pmax
      comp=Z,10.0nm,1.0s
CN2                                 pmax   pmax
      comp=Z,100nm,3.0s
CN2                                 LR     LR
      comp=Z,200nm,11.0s
CN2                                 LR     LR
      comp=Z,300nm,11.0s
CN2                                 LR     LR
      comp=Z,200nm,17.2s
BNX   BinXian            85.28 323 ⇑P      P        16 13 40.5 +0.7
BNX                                 pmax   pmax
      comp=Z,8.0nm,0.5s
BNX                                 pmax   pmax
      comp=Z,270nm,4.4s
M23K  Glacier View       85.30  12  P      P        16 13 40.9 +1.2
      baz=204
PNL   Peninsula          85.36  17  P      P        16 13 41.3 +1.3
      baz=212
KLU   Klutina            85.40  13  P      P        16 13 39.5 -0.7
KLU                                 IAmb   IAmb     16 13 45.0
      comp=Z,34nm,1.3s
KLU   Klutina            85.40  13  P      P        16 13 42.4 +2.2
      baz=206,SNR=5.1
CUT   Chulitna           85.40  11  P      P        16 13 39.9 -0.1
CUT   Chulitna           85.40  11  P      P        16 13 41.2 +1.1
      baz=202,SNR=11
SCM   Sheep Creek Mo     85.42  12  P      P        16 13 41.5 +1.2
      baz=204,SNR=9.6
PINM  Pinnacle           85.50  16  P      P        16 13 41.9 +1.2
      baz=211
PPLA  Purkeypile         85.54  10  P      P        16 13 42.7 +1.7
      baz=200
MA2   Magadan            85.54 343  LR     LR       16 47 27.4
      comp=Z,421nm,20.4s,baz=158,slow=33
MA2   Magadan            85.54 343  P      P        16 13 40.9  0.0
MA2                                 IAmb   IAmb     16 13 46.6
      comp=Z,69nm,1.9s
MA2   Magadan            85.54 343  P      P        16 13 41.8 +1.0
MA2   Magadan            85.54 343ceP      P        16 13 40.1 -0.7
MA2                                 pmax   pmax
      comp=Z,37nm,1.7s
K20K  Telida             85.69   9  P      P        16 13 43.3 +1.8
      baz=198,SNR=10
VRDI  Verde Repeater     85.70  14  P      P        16 13 41.4 -0.4
VRDI                                IAmb   IAmb     16 13 48.7
      comp=Z,36nm,1.2s
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NEW   Newport            85.71  34  P      P        16 13 44.0 +2.0
      comp=Z,3.2nm,0.7s,baz=219,slow=9.4,SNR=3.8
NEW                                 LR     LR       16 46 39.8
      comp=Z,879nm,19.2s,baz=222,slow=32
      comp=Z,3.2nm,0.7s
NEW   Newport            85.71  34  P      P        16 13 44.0 +2.0
NEW   Newport            85.71  34  P      P        16 13 42.7 +0.7
      baz=231
ANM   Nome               85.73   4  P      P        16 13 43.5 +1.8
      baz=188
N25K  Chitina, Valde     85.78  14  P      P        16 13 43.8 +1.7
      baz=207,SNR=8.8
M24K  Tolsona, Glenn     85.90  13  P      P        16 13 44.6 +1.9
      baz=206
MCARA McCarthy VSAT      85.94  14  P      P        16 13 41.1 -1.7
MCARA McCarthy VSAT      85.94  14  P      P        16 13 44.6 +1.8
      baz=208
PLCA  Paso Flores        85.94 132  P      P        16 13 45.2 +1.6
      comp=Z,5.2nm,1.1s,baz=232,slow=4.3,SNR=5.6
PLCA                                LR     LR       16 44 18.4
      comp=Z,300nm,19.4s,baz=225,slow=30
      comp=Z,5.2nm,1.1s
S22A  4UR Ranch, Cre     85.99  47  P      P        16 13 45.0 +1.0
      baz=239
WHN   Wuhan              86.02 305 ⇓P      P        16 13 45.5 +1.6
WHN                                 pmax   pmax
      comp=Z,74nm,1.1s
T35M  Bob Quinn          86.03  22  P      P        16 13 45.3 +1.9
      baz=220
PLBC  Pleasant Camp      86.03  18  P      P        16 13 45.3 +2.0
      baz=214
CAST  Castle Rocks       86.05  10  P      P        16 13 42.5 -0.8
CAST                                IAmb   IAmb     16 13 46.0
      comp=Z,15nm,0.9s
CAST  Castle Rocks       86.05  10  P      P        16 13 45.3 +2.0
      baz=200,SNR=14
O28M  Mount Upton        86.09  16  P      P        16 13 46.3 +2.3
      baz=211
O29M  Mount Kennedy      86.12  17  P      P        16 13 45.6 +1.7
      baz=212
CMIG  Matias Romero      86.21  70  P      P        16 13 47.3 +2.2
      comp=Z,1.8nm,0.7s,baz=233,slow=8.3,SNR=3.6
CMIG                                LR     LR       16 44 15.7
      comp=Z,471nm,19.4s,baz=194,slow=30
      comp=Z,1.8nm,0.7s
SKAG  Skagway            86.34  19  P      P        16 13 44.3 -0.5
SKAG                                IAmb   IAmb     16 13 50.7
      comp=Z,48nm,1.3s
SKAG  Skagway            86.34  19  P      P        16 13 46.4 +1.7
SKAG  Skagway            86.34  19  P      P        16 13 47.4 +2.7
      baz=215
ELIB  Princess Elisa     86.36 185 dP      P        16 13 46.3 +1.2
      comp=Z,21nm,1.1s
TRF   Thorofare Moun     86.37  10  P      P        16 13 46.3 +1.3
      baz=202,SNR=31
HARP  HAARP              86.37  13  P      P        16 13 47.3 +2.3
      baz=206
TPAW  Teton Pass         86.38  40  P      P        16 13 43.6 -2.2
P30M  Million Dollar     86.41  18  P      P        16 13 47.0 +1.8
      baz=214
FXWY  Fox Creek          86.42  40  P      P        16 13 44.4 -1.5
S34M  Telegraph Cree     86.44  21  P      P        16 13 47.7 +2.4
      baz=219
CHUM  Lake Minchumin     86.45   9  P      P        16 13 45.9 +0.7
      baz=200,SNR=16
MSO   Missoula           86.56  37  P      P        16 13 48.3 +2.0
      baz=234
TNA   Tin City           86.60   2  P      P        16 13 47.6 +1.7
      baz=185
YUK8  Steele Glacier     86.64  16  P      P        16 13 48.1 +1.5
      baz=211,SNR=5.2
GCSA  Galena City Sc     86.66   7  P      P        16 13 48.4 +2.2
      baz=196
YUK6  Outpost Mounta     86.72  16  P      P        16 13 49.1 +2.2
      baz=213
PAX   Paxson             86.82  13  P      P        16 13 45.7 -1.5
PAX                                 IAmb   IAmb     16 13 51.0
      comp=Z,16nm,1.0s
PAX   Paxson             86.82  13  P      P        16 13 45.7 -1.5
PAX                                 pmax   pmax
      comp=Z,16nm,1.0s
PAX   Paxson             86.82  13  P      P        16 13 49.9 +2.7
      baz=206,SNR=10
BW06  Boulder Array      86.84  42  P      P        16 13 50.2 +2.2
      baz=237
PDAR  Pinedale Array     86.84  42  P      P        16 13 49.5 +1.5
      comp=Z,2.5nm,0.8s,baz=211,slow=3.6,SNR=20
PDAR                                LR     LR       16 48 03.2
      comp=Z,226nm,18.2s,baz=264,slow=32
      comp=Z,2.5nm,0.8s
M26K  Nabesna, AK        86.84  14  P      P        16 13 49.3 +2.0
      baz=208
HYT   Haines Junctio     86.85  17  P      P        16 13 49.5 +2.1
      baz=213
BPAW  Bear Paw Mtn.      86.86  10  P      P        16 13 48.0 +0.7
      baz=201,SNR=8.3
MCK   McKinley           86.86  11  P      P        16 13 48.5 +1.2
      baz=203,SNR=32
Q32M  Nakina River       86.88  20  P      P        16 13 48.8 +1.1
      baz=218
YUK3  Moose Creek        86.89  15  P      P        16 13 49.5 +1.8
      baz=211,SNR=13
SDCO  Great Sand Dun     86.90  48  P      P        16 13 50.1 +1.7
      baz=240
SDCO  Great Sand Dun     86.90  48  P      P        16 13 50.4 +1.9
      baz=240
YUK4  Talbot Arm         86.98  16  P      P        16 13 51.2 +3.1
      baz=212
TROLL Troll, Antarti     87.01 179  P      P        16 13 48.6 +0.3
MSTX  Muleshoe           87.03  52  P      P        16 13 51.2 +2.2
      baz=242,SNR=6.6
MSTX  Muleshoe           87.03  52  P      P        16 13 50.7 +1.7
      baz=242
M27K  Edge Creek, AK     87.06  14  P      P        16 13 46.8 -1.7
M27K                                IAmb   IAmb     16 13 53.4
      comp=Z,34nm,1.0s
M27K  Edge Creek, AK     87.06  14  P      P        16 13 50.1 +1.7
      baz=209
833A  Chaparral WMA,     87.07  58  P      P        16 13 51.5 +2.4
      baz=244
IPM   Ipoh               87.08 276  P      P        16 13 47.4 -2.2
IPM   Ipoh               87.08 276  P      P        16 13 50.0 +0.4
VNA3  Neumayer Olymp     87.15 175  P      P        16 13 50.4 +1.6
BOZ   Bozeman (W)        87.16  38  P      P        16 13 51.1 +1.8
      baz=236,SNR=6.6
MENT  Mentasta           87.16  13  P      P        16 13 51.4 +2.6
SNAA  Sanae              87.17 177  P      P        16 13 50.7 +1.7
SNAA  Sanae              87.17 177  LR     LR       16 49 55.3
      comp=Z,441nm,19.8s,baz=177,slow=34
SNAA  Sanae              87.17 177  P      P        16 13 49.2 +0.2
SNAA                                IAmb   IAmb     16 13 52.1
      comp=Z,13nm,1.0s
SNAA  Sanae              87.17 177ceP      P        16 13 50.4 +1.4
SNAA                                pmax   pmax
      comp=Z,25nm,1.7s
BWN   Browne             87.18  10  P      P        16 13 47.7 -1.0
O30N  Mendenhall         87.19  18  P      P        16 13 52.3 +3.3
      baz=215,SNR=5.2
DLBC  Dease Lake         87.22  21  P      P        16 13 51.4 +2.2
      baz=220
L26K  Log Cabin Wild     87.32  13  P      P        16 13 52.2 +2.6
      baz=208,SNR=9.2
N30M  Aishikik Lake      87.49  17  P      P        16 13 52.5 +2.0
      baz=214
K24K  Donnelly Dome      87.51  12  P      P        16 13 52.5 +2.1
      baz=206,SNR=16
NEA2  Nenana             87.63  10  P      P        16 13 52.3 +1.3
      baz=203,SNR=7.0
RIDG  Independent Ri     87.64  12  P      P        16 13 52.5 +1.3
      baz=207,SNR=7.8
L27K  Beaver Creek,      87.68  14  P      P        16 13 53.4 +2.1
      baz=209
WRH   Wood River Hil     87.69  11  P      P        16 13 50.3 -1.0
JCT   Junction City      87.69  56  P      P        16 13 54.8 +2.6
      baz=244
P33M  Teslin, Yukon      87.70  19  P      P        16 13 53.8 +2.3
      baz=218
I21K  Tanana             87.72   9  P      P        16 13 52.9 +1.6
      baz=200
MLY   Manley             87.77  10  P      P        16 13 50.7 -1.0
MLY   Manley             87.77  10  P      P        16 13 52.6 +0.9
      baz=201,SNR=10
HDA   Harding Lake       87.84  11  P      P        16 13 53.5 +1.6
      baz=205,SNR=19
VNA1  Neumayer--Stat     87.84 175  P      P        16 13 54.9 +2.8
N31M  Braeburn, Yuko     87.87  17  P      P        16 13 53.7 +1.5
      baz=215
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CCB   Clear Creek Bu     87.90  11  P      P        16 13 51.3 -0.9
CCB                                 IAmb   IAmb     16 13 56.0
      comp=Z,32nm,1.1s
M29M  Somme Creek        87.95  16  P      P        16 13 54.2 +1.5
      baz=212
SEY   Seymchan           87.98 345ceP      P        16 13 53.6 +0.9
SEY                                 pmax   pmax
      comp=Z,28nm,0.9s
HEH   HeiHe              87.99 327 eP      P        16 13 53.5 +0.5
HEH                                 pP     PcP      16 13 56.5 +1.7
HEH                                 S      S        16 24 35.8 -0.6
HEH                                 pmax   pmax
      comp=Z,21nm,1.4s
HEH                                 pmax   pmax
      comp=Z,170nm,6.5s
HEH                                 LR     LR
      comp=Z,360nm,19.7s
HEH                                 LR     LR
      comp=Z,230nm,20.3s
HEH                                 LR     LR
      comp=Z,570nm,22.5s
SCRK  Sand Creek         88.03  13  P      P        16 13 54.4 +1.3
      baz=208,SNR=14
H21K  Melozitna Rive     88.06   9  P      P        16 13 55.0 +2.0
      baz=199
I23K  Minto, Yukon-K     88.10  10  P      P        16 13 52.1 -1.1
I23K  Minto, Yukon-K     88.10  10  P      P        16 13 54.8 +1.6
      baz=202,SNR=12
TCOL  CIGO, UAF Yank     88.10  11  P      P        16 13 54.5 +1.4
      baz=204
COLA  College            88.10  11  P      P        16 13 54.8 +1.6
COLA  College            88.10  11c iP     P        16 13 54.6 +1.5
COLA                                pmax   pmax
      comp=Z,44nm,1.2s
COLA  College            88.10  11  P      P        16 13 54.6 +1.5
      baz=204
MDM   Murphy Dome        88.11  11  P      P        16 13 52.5 -0.8
N23A  Red Feather La     88.17  45  P      P        16 13 54.8 +0.3
      baz=240
ILAR  Eielson Array      88.18  11  P      P        16 13 54.7 +1.1
      comp=Z,6.1nm,0.9s,baz=216,slow=5.0,SNR=40
      comp=Z,6.1nm,0.9s
ILAR  Eielson Array      88.18  11  P      P        16 13 53.0 -0.6
ILAR  Eielson Array      88.18  11  P      P        16 13 53.0 -0.6
EFI   East Falkland      88.36 146ceP      P        16 13 56.2 +1.3
EFI                                 pmax   pmax
      comp=Z,48nm,1.7s
N32M  Quiet Lake         88.37  18  P      P        16 13 56.3 +1.7
      baz=217
RPSI  Rantau Prapat      88.39 273  P      P        16 13 54.6 -1.2
POKR  Poker Plat Res     88.40  11  P      P        16 13 53.3 -1.3
POKR  Poker Plat Res     88.40  11  P      P        16 13 56.5 +1.9
      baz=204,SNR=5.7
GCMT  Greycliff          88.41  39  P      P        16 13 53.4 -1.9
PSI   Prapat             88.43 274  P      P        16 13 56.7 +0.5
PSI   Prapat             88.43 274  P      P        16 13 54.6 -1.6
PSI                                 pmax   pmax
      comp=Z,41nm,1.2s
K27K  Chicken            88.47  13  P      P        16 13 57.3 +2.3
      baz=209
M30M  Minto, Yukon       88.49  16  P      P        16 13 56.4 +1.2
      baz=214,SNR=10.0
MT09  Talagante          88.50 126  P      P        16 13 53.9 -2.3
MT09                                IAmb   IAmb     16 14 01.0
      comp=Z,21nm,1.1s
L29M  L29M               88.60  15  P      P        16 13 57.7 +2.0
      baz=213
G21K  Allakaket          88.78   8  P      P        16 13 58.5 +2.1
      baz=199
M31M  Drury Creek, Y     88.83  17  P      P        16 13 59.8 +3.0
      baz=216,SNR=6.3
WTLY  Watson Lake, Y     88.90  21  P      P        16 13 59.4 +2.2
      baz=221
HNS   HongShan           88.92 311 ⇑P      P        16 13 59.0 +1.3
HNS                                 pmax   pmax
      comp=Z,15nm,1.8s
H24K  Noodor Dome        88.98  10  P      P        16 13 58.6 +1.2
      baz=204
WAPA  Wapiti River       89.10  28  P      P        16 13 56.8 -1.4
PRP   Porcupine Dome     89.11  11  P      P        16 13 56.9 -1.2
PRP                                 IAmb   IAmb     16 14 03.0
      comp=Z,26nm,1.0s
PRP   Porcupine Dome     89.11  11  P      P        16 13 59.9 +1.8
      baz=206,SNR=26
DAWY  Dawson             89.11  14  P      P        16 13 60.0 +1.9
      baz=212,SNR=16
FARO  Faro, Yukon        89.15  18  P      P        16 14 00.2 +1.9
      baz=217
GSI   Gunungsitoli       89.15 272  P      P        16 14 00.7 +1.3
BJI   Beijing            89.15 314  P      P        16 13 59.5 +0.8
BJI                                 pmax   pmax
      comp=Z,9.0nm,2.2s
LYN   LuoYang            89.24 308 eP      P        16 14 01.5 +2.2
LYN                                 S      S        16 24 45.5 -3.5
LYN                                 pmax   pmax
      comp=Z,290nm,6.1s
LYN                                 LR     LR
      comp=Z,190nm,20.0s
LYN                                 LR     LR
      comp=Z,160nm,18.2s
EGAK  Eagle              89.32  13  P      P        16 14 01.5 +2.5
      baz=210,SNR=16
RDOG  Red Dog Mine       89.35   4  P      P        16 13 58.9 -0.2
RDOG  Red Dog Mine       89.35   4  P      P        16 14 01.0 +2.0
      baz=190
K29M  Barlow Dome        89.37  15  P      P        16 14 02.0 +2.6
      baz=213
G23K  Bananza Creek      89.45   9  P      P        16 14 01.9 +2.3
      baz=202
F21K  Alatna River       89.45   8  P      P        16 14 01.9 +2.4
      baz=199
F22K  John River         89.89   8  P      P        16 14 03.8 +2.2
      baz=200
SRIT  Nakonsritamara     89.89 279  P      P        16 14 05.8 +3.0
I27K  Kandik River       89.95  13  P      P        16 14 04.4 +2.4
      baz=210
MMPY  Sheldon Lake,      90.06  18  P      P        16 14 05.1 +2.6
      baz=219,SNR=8.9
SURA  Surathani          90.07 280  P      P        16 14 06.0 +2.4
ZEA   Zeya               90.17 329 eP      P        16 14 04.5 +1.3
ZEA                                 pmax   pmax
      comp=N,10.0nm,1.4s
ZEA                                 pmax   pmax
      comp=Z,20nm,1.2s
BILL  Bilibino           90.17 353  P      P        16 14 02.9  0.0
BILL                                IAmb   IAmb     16 14 07.3
      comp=Z,17nm,0.9s
BILL  Bilibino           90.17 353d iP     P        16 14 04.1 +1.2
BILL                               e                16 14 16.6
BILL                               e                16 17 34.1
BILL                               ePPP    PPP      16 19 35.3
BILL                               e                16 24 46.0
BILL                               eSS     SS       16 31 00.8 +4.9
BILL                                pmax   pmax
      comp=Z,21nm,1.0s
BILL                                MLR    MLR
      comp=Z,217nm,19.0s
WMOK  Wichita Mounta     90.32  53  P      P        16 14 05.7 +1.3
      baz=244
GYA   Guiyang            90.39 298 ⇓P      P        16 14 06.5 +1.4
GYA                                 sP     PcP      16 14 11.5 +5.3
GYA                                 pmax   pmax
      comp=Z,18nm,1.7s
GYA                                 pmax   pmax
      comp=Z,230nm,4.2s
NAYO  Nakonayok          90.40 285  P      P        16 14 06.5 +1.4
I29M  Ogilvie Camp,      90.46  14  P      P        16 14 07.6 +3.3
      baz=213,SNR=5.4
H27K  Steamboat Moun     90.51  13  P      P        16 14 06.9 +2.3
      baz=210,SNR=13
F24K  Squaw Lake         90.52  10  P      P        16 14 06.6 +2.1
      baz=204
E22K  Anaktuvuk Pass     90.53   8  P      P        16 14 06.5 +1.9
      baz=200
KOTAN Kotaneelee Air     90.55  22  P      P        16 14 07.0 +2.2
      baz=225,SNR=13
G26K  Porcupine Rive     90.71  11  P      P        16 14 07.9 +2.6
      baz=208
E23K  Chandalar          90.76   9  P      P        16 14 08.8 +3.0
      baz=202
E24K  Your Creek         90.94   9  P      P        16 14 09.0 +2.5
      baz=203
F25K  Christian Rive     90.95  10  P      P        16 14 08.9 +2.2
      baz=206
G27K  Doyon Strip        90.99  12  P      P        16 14 09.3 +2.6
      baz=210,SNR=10
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RSSD	Black Hills	90.99	43	P	P	16 14 06.7	-0.8
	baz=241						
RSSD	Black Hills	90.99	43	P	P	16 14 09.4	+1.9
	baz=241						
XLT	XiLinHaoTe	91.07	317	⇓iP	P	16 14 09.5	+1.8
XLT				pP	PcP	16 14 14.0	+5.3
XLT				sP	pwP	16 14 16.0	-0.3
XLT				pmax	pmax		
	comp=Z,11nm,1.7s						
XLT				pmax	pmax		
	comp=Z,140nm,3.9s						
E25K	Arctic Village	91.44	10	P	P	16 14 11.2	+2.4
	baz=206,SNR=17						
D23K	Nanushuk River	91.46	8	P	P	16 14 11.4	+2.6
	baz=201						
CFA	Coronel Fontan	91.53	125	LR	LR	16 49 35.7	
	comp=Z,201nm,18.1s,baz=236,slow=32						
EPYK	Eagle Plains	91.66	14	P	P	16 14 12.0	+2.1
	baz=214,SNR=8.0						
XAN	Xi'an	91.67	306	⇑P	P	16 14 12.0	+1.3
XAN				S	S	16 25 16.8	+5.2
XAN				pmax	pmax		
	comp=Z,18nm,1.7s						
NNA	Nana	92.12	104	LR	LR	16 46 19.7	
	comp=Z,222nm,20.4s,baz=212,slow=29						
E27K	Coleen River	92.20	12	P	P	16 14 14.8	+2.5
	baz=210						
G30M	tAoh Zraii Nji	92.28	14	P	P	16 14 14.7	+1.9
	baz=214						
D25K	Kavik River	92.40	9	P	P	16 14 15.5	+2.3
	baz=205						
C24K	Franklin Bluff	92.43	9	P	P	16 14 15.4	+2.2
	baz=203						
ATAH	Atahualpa	92.49	99	LR	LR	16 48 21.6	
	comp=Z,327nm,18.3s,baz=229,slow=31						
JTS	Las Juntas de	92.63	80	P	P	16 14 18.2	+2.6
	comp=Z,6.8nm,0.8s,baz=292,slow=5.4,SNR=5.4						
JTS				LR	LR	16 48 37.5	
	comp=Z,219nm,18.0s,baz=304,slow=31						
	comp=Z,6.8nm,0.8s						
JTS	Las Juntas de	92.63	80	i P	P	16 14 18.4	+2.8
JTS				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC	Hu-ho-hao-te	92.65	313	eP	P	16 14 15.5	+0.3
HHC				pmax	pmax		
	comp=Z,24nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,6.4s						
T35B	Sooner Cattle	92.91	52	P	P	16 14 18.4	+2.0
	baz=246						
DGMT	Dagmar	92.99	39	P	P	16 14 18.9	+2.4
	baz=241,SNR=5.9						
DGMT	Dagmar	92.99	39	P	P	16 14 19.9	+3.5
	baz=241						
C27K	Jago River	93.10	10	P	P	16 14 18.8	+2.4
	baz=208						
KMI	Kunming	93.15	296	⇓P	P	16 14 20.5	+2.5
KMI				pmax	pmax		
	comp=Z,19nm,1.2s						
KMI				LR	LR		
	comp=Z,200nm,13.0s						
KMI				LR	LR		
	comp=Z,260nm,14.2s						
KMI				LR	LR		
	comp=Z,280nm,16.9s						
C26K	Camden Bay	93.16	10	P	P	16 14 19.1	+2.4
	baz=207						
F31M	Tsiigehtchic	93.22	14	P	P	16 14 19.0	+2.0
	baz=217,SNR=29						
CRAI	Chiangrai	93.40	290	P	P	16 14 17.4	-1.6
CRAI				IAmb	IAmb	16 14 21.8	
	comp=Z,23nm,1.3s						
INK	Inuvik	93.96	14	LR	LR	16 54 24.1	
	comp=Z,218nm,18.3s,baz=192,slow=34						
INK	Inuvik	93.96	14	P	P	16 14 23.5	+3.1
	baz=217,SNR=12						
CM31	Chiang Mai Arr	94.03	288	P	P	16 14 21.6	-0.3
CM31				IAmb	IAmb	16 14 25.1	
	comp=Z,30nm,1.3s						
CMAR	Chiang Mai Arr	94.03	288	P	P	16 14 23.2	+1.4
	comp=Z,11nm,1.0s,baz=117,slow=2.9,SNR=44						
CMAR				LR	LR	16 53 12.5	
	comp=Z,32nm,21.9s,baz=110,slow=33						
	comp=Z,11nm,1.0s						
YAK	Yakutsk	94.25	337	P	P	16 14 21.1	-0.7
YAK				IAmb	IAmb	16 14 24.9	
	comp=Z,12nm,0.8s						
YAK	Yakutsk	94.25	337	ceP	P	16 14 21.5	-0.3
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
PZH	PanZhiHua	94.49	297	P	P	16 14 25.3	+1.3
PZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PZH				pmax	pmax		
	comp=Z,150nm,4.7s						
LVC	Limon Verde	94.86	116	LR	LR	16 48 16.9	
	comp=Z,344nm,20.4s,baz=227,slow=30						
N35A	Tabor	95.13	48	P	P	16 14 26.1	-0.3
	baz=246						
YKA	Yellowknife Ar	95.55	24	P	P	16 14 29.6	+1.9
	comp=Z,2.4nm,0.8s,baz=234,slow=4.3,SNR=38						
YKA				PKKPbc	PKKPbc	16 31 20.4	-1.2
	comp=Z,0.5nm,0.9s,baz=36,slow=2.2,SNR=4.8						
	comp=Z,2.4nm,0.8s						
ECSD	EROS Data Cent	95.62	45	P	P	16 14 29.8	+1.2
	baz=246						
ECSD	EROS Data Cent	95.62	45	P	P	16 14 30.1	+1.5
	baz=246						
LZH	Lanzhou	96.30	306	eP	P	16 14 35.3	+3.2
LZH				pP	sP	16 14 38.0	+4.1
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
TNCH	TengChong	96.69	294	⇓P	P	16 14 33.0	-1.1
TNCH				pP	sP	16 14 36.5	+0.6
TNCH				SKS	SKSac	16 25 08.5	-3.2
TNCH				S	SKKSac	16 25 45.8	+8.1
TNCH				pmax	pmax		
	comp=Z,14nm,0.6s						
TNCH				pmax	pmax		
	comp=Z,91nm,7.1s						
TNCH				LR	LR		
	comp=Z,120nm,5.1s						
TNCH				LR	LR		
	comp=Z,93nm,5.6s						
TNCH				LR	LR		
	comp=Z,200nm,13.3s						
C36M	Paulatuk	97.02	16	P	P	16 14 36.5	+2.2
	baz=226,SNR=6.1						
LPAZ	La Paz	98.19	111	LR	LR	16 50 44.6	
	comp=Z,425nm,19.8s,baz=247,slow=30						
ULN	Ulaanbaatar	98.46	318	ceP	P	16 14 40.9	-0.6
ULN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ULM	Lac du Bonnet	98.66	39	LR	LR	16 55 25.0	
	comp=Z,338nm,18.9s,baz=266,slow=33						
SONM	Songino Array	98.86	318	P	P	16 14 42.2	-1.1
	comp=Z,0.2nm,0.4s,baz=156,slow=5.0,SNR=3.9						
	comp=Z,0.2nm,0.4s						
GTA	Gaotai	100.44	308	eP	Pdif	16 14 53.8	+3.2
GTA				sP	pwP	16 15 01.3	+2.0
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
WMQ	Urumqi	110.33	310	ePKP	PKiKP	16 19 34.5	-0.9
ZALV	Zalesovo Beam	113.48	321	PKiKP	PKiKP	16 19 40.0	-1.0
	comp=Z,1.2nm,0.6s,baz=107,slow=1.5,SNR=7.0						
ZALV	Zalesovo Beam	113.48	321	i PKIKP	PKiKP	16 19 40.0	-1.0
MKAR	Makanchi Array	114.52	313	PKP	PKPdf	16 19 42.5	-0.7
	comp=Z,1.3nm,0.8s,baz=73,slow=1.4,SNR=11						
MKAR				PKKPbc	PKKPab	16 30 24.4	-2.6
	comp=Z,0.2nm,0.7s,baz=268,slow=5.5,SNR=4.3						
KURK	Kurchatov	117.15	317	i PKIKP	PKiKP	16 19 48.2	+0.1
KSH	Kashi	118.49	304	PKP	PKiKP	16 19 53.8	+2.5
AAK	Ala-Archa	119.79	308	i PKIKP	PKPdf	16 19 51.5	-2.2
BRVK	Borovoye	122.17	320		PKPdf	16 19 57.2	-0.6
BRVK	Borovoye	122.17	320	c iPKIKP	PKiKP	16 19 57.6	-0.3
BRVK				pmax	pmax		
	comp=Z,11nm,1.7s						
KKAR	Karatay Array	122.73	308		PKPdf	16 19 58.5	-0.6
KKAR	Karatay Array	122.73	308	PKIKP	PKPdf	16 19 58.5	-0.6
BOSA	Boshof	127.16	201	PKP	PKiKP	16 20 08.6	-0.2
	comp=Z,4.7nm,0.9s,baz=180,slow=2.0,SNR=3.4						
ARU	Arti	127.97	326	i PKIKP	PKiKP	16 20 09.3	0.0
ARU						16 22 10.1	
ARU						16 27 20.3	
ARU				SS	SS	16 39 19.2	-5.5
KIRV	Kirov	131.47	331	i PKIKP	PKiKP	16 20 15.6	-0.6
GEYT	Alibeck	132.44	302	PKP	PKiKP	16 20 18.7	-0.3
	comp=Z,2.9nm,0.7s,baz=180,slow=3.9,SNR=5.2						
BELG	Belogornoye	135.45	325	i PKIKP	PKiKP	16 20 24.0	-0.5
FINES	FINESS Array B	137.46	346	PKP	PKiKP	16 20 28.6	+0.3
	comp=Z,1.7nm,0.9s,baz=190,slow=31,SNR=4.3						
OBN	Obninsk	139.17	334	⇓ePKIKP	PKiKP	16 20 32.0	0.0
OBN				e		16 20 36.4	
OBN				ePPS	PPS	16 35 44.9	
OBN				pmax	pmax		
	comp=Z,46nm,2.1s						
MAK	Makhachkala	139.32	312	i P	Pdif	16 17 37.0	-6.2
MAK				i		16 20 27.9	
MAK				ePPP	PPP	16 26 26.1	
MAK				e		16 27 38.7	
MAK				pmax	pmax		
	comp=Z,103nm,1.0s						
KIV	Kislovodsk	142.21	315	i PKIKP	PKiKP	16 20 38.8	+0.1
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
RAYN	Ar Rayn	143.62	281	PKPdf	PKPbc	16 20 36.8	+0.6
RAYN	Ar Rayn	143.62	281	PKIKP	PKPbc	16 20 36.8	+0.6
AKASG	Malin Array Be	145.43	334	PKPbc	PKPab	16 20 41.3	+0.1
	comp=Z,14nm,0.9s,baz=38,slow=3.9,SNR=52						
AKBB	Malin Array Si	145.43	334	i PKIKP	PKPab	16 20 41.3	+0.2
LVV	L'vov	148.12	338	ePKP2	PKiKP	16 20 49.4	-1.2
BNN	Bunyan	149.05	311	PKPbc	PKPbc	16 20 50.1	-1.6
BUR08	Bucovina Ar. S	149.47	334	PKPab	PKPab	16 20 55.5	-1.8
CLL	Collm	149.47	352	PKPbc	PKPbc	16 20 50.7	-1.5
CLL	Collm	149.47	352	ePKPbc	PKPbc	16 20 51.0	-1.2
CLL				i PKiKP	PKiKP	16 20 53.1	-0.2
	comp=Z,30nm,1.1s						
CLL				i PKPab	sPKPab	16 20 57.0	-1.8
	comp=Z,53nm,1.5s						
CLL				i pPKPab	pPKPab	16 21 00.1	+1.8
CLL				ex	x	16 23 54.0	
CLL				ePP	PP	16 24 24.0	+0.2
CLL				ePPPP		16 30 00.0	
CLL				e(SS)		16 43 12.0	
CLL				ex	x	16 45 48.0	
CLL				ex	x	16 50 00.0	
CLL				AMS	AMS	17 28 00.0	
	comp=Z,100nm,20.5s						
CLL	Collm	149.47	352	ePKHKP	PKPpre	16 20 51.0	
CLL				i		16 20 53.1	
CLL				pmax	pmax		
	comp=Z,30nm,1.1s						
BURAR	Bucovina Array	149.48	334	⇓P	PKPab	16 20 55.5	-1.8
BURAR	Bucovina Array	149.48	334	PKPab	PKPab	16 20 55.5	-1.8
BURAR	Bucovina Array	149.48	334	⇓PKP2	PKPab	16 20 55.5	-1.8
OSTC	Ostas	149.65	347	ePKP	PKiKP	16 20 55.1	+1.4
OSTC				ex	x	16 21 00.8	
OSTC	Ostas	149.65	347	ePKP2	PKiKP	16 20 55.1	+1.4
CHVC	Chvalec	149.65	347	ePKP	PKiKP	16 20 54.0	+0.2
CHVC	Chvalec	149.65	347	ePKP2	PKiKP	16 20 54.0	+0.2
TESR	Tescani	149.73	331	⇓P	PKiKP	16 20 54.7	+0.7
UPC	Upice	149.73	347	ePKP	PKiKP	16 20 55.0	+1.1
UPC	Upice	149.73	347	ePKP2	PKiKP	16 20 55.0	+1.1
BRG	Berggiesshubel	149.76	350	i PKP	PKiKP	16 20 54.9	+0.9
BRG				Amp		16 20 56.9	
	comp=Z,20nm,1.2s						
BRG	Berggiesshubel	149.76	350	P	PKPab	16 21 00.1	+1.9
BRG				Amp		16 21 01.3	
	comp=Z,22nm,1.0s						
BRG	Berggiesshubel	149.76	350	i PKP2	PKiKP	16 20 54.8	+0.9
BRG				pmax	pmax		
	comp=Z,20nm,1.2s						
BRG				pmax	pmax		
	comp=Z,22nm,1.0s						
BRG				pmax	pmax		
	comp=Z,16nm,1.2s						
DPC	Dobruska-Polom	149.82	347	ePKP	PKiKP	16 20 55.3	+1.2
DPC				ex	x	16 21 00.7	
DPC	Dobruska-Polom	149.82	347	ePKP2	PKiKP	16 20 55.3	+1.2
OKC	Ostrava-Krasne	149.88	344	ePKP	PKPab	16 21 00.9	+2.2
OKC	Ostrava-Krasne	149.88	344	ePKP2	PKPab	16 21 00.9	+2.2
KRLC	Kraliky	149.98	346	ePKP	PKiKP	16 20 55.5	+1.0
KRLC				ex	x	16 21 00.8	
KRLC	Kraliky	149.98	346	ePKP2	PKiKP	16 20 55.5	+1.0
PVCC	Panska Ves	149.99	349	ePKP	PKPab	16 20 56.7	-2.4
PVCC				ex	x	16 21 02.9	
PVCC	Panska Ves	149.99	349	ePKP2	PKPab	16 20 56.7	-2.4
CFR	Carcaliu	150.02	328	⇑P	PKiKP	16 20 55.6	+1.0
CFR	Carcaliu	150.02	328	⇑PKP2	PKiKP	16 20 55.6	+1.0
TRPA	Tarpa	150.07	338	⇑P	PKiKP	16 20 55.8	+1.2
MORC	Moravsky Berou	150.08	345	⇑P	PKiKP	16 20 56.1	+1.4
MORC	Moravsky Berou	150.08	345	ePKP	PKiKP	16 20 55.6	+0.9
MORC	Moravsky Berou	150.08	345	⇑PKP2	PKiKP	16 20 56.1	+1.4
TPGR	Topolog	150.10	327	⇑P	PKiKP	16 20 56.1	+1.2
BRTR	Keskin Array B	150.15	314	PKPbc	PKiKP	16 20 55.5	+0.2
	comp=Z,9.2nm,0.8s,baz=151,slow=2.6,SNR=18						
LANS	Liptovska Anna	150.16	342	ePKIKP	PKPab	16 20 58.5	-1.4
LANS	Liptovska Anna	150.16	342	e	PKPab	16 20 58.5	-1.4
VRI	Vrincioaia	150.19	330	⇑P	PKiKP	16 20 56.0	+1.0
VRI	Vrincioaia	150.19	330	⇑PKP2	PKiKP	16 20 56.0	+1.0
PLOR	Plostina	150.23	330	⇓P	PKiKP	16 20 56.5	+1.4
PLOR	Plostina	150.23	330	⇓PKIKP	PKiKP	16 20 56.5	+1.4
ARCR	ARCALIA	150.26	335	⇑P	PKPab	16 21 02.9	+2.5
MAUC	Maruska	150.40	344	ePKP	PKiKP	16 20 56.2	+0.9
PRU	Pruhonice	150.51	349	ePKP	PKiKP	16 20 55.9	+0.4
PRU	Pruhonice	150.51	349	ePKIKP	PKiKP	16 20 55.9	+0.4
GOPC	GO Pecny, Ondr	150.54	349	ePKP	PKiKP	16 20 57.8	+2.2
GOPC	GO Pecny, Ondr	150.54	349	ePKIKP	PKiKP	16 20 57.8	+2.2
NKC	Novy Kostel	150.60	352	ePKP	PKiKP	16 20 57.2	+1.5
NKC				ex	x	16 21 03.1	
NKC	Novy Kostel	150.60	352	ePKIKP	PKiKP	16 20 57.2	+1.5
NKC				e		16 21 03.1	
ANTO	Ankara	150.64	315	⇑P	PKiKP	16 20 56.5	+0.3
ANTO	Ankara	150.64	315	⇑PKIKP	PKiKP	16 20 56.5	+0.3
VRAC	Vranov	150.74	346	⇑P	PKPab	16 21 04.7	+2.4
VRAC	Vranov	150.74	346	ePKP	PKiKP	16 20 56.9	+0.9
MLR	Muntele Rosu	150.83	331	⇑P	PKiKP	16 20 58.5	+2.0
MLR	Muntele Rosu	150.83	331	⇑PKIKP	PKiKP	16 20 58.5	+2.0
JAVC	Velka Javorina	150.90	344	ePKP	PKiKP	16 20 58.1	+1.7
VYHS	Vyhne	150.93	343	ePKIKP	PKiKP	16 20 57.4	+1.0
VYHS				e		16 21 05.5	
VYHS	Vyhne	150.93	343	ePKP	PKiKP	16 20 57.4	+1.0
VYHS				e		16 21 05.5	
KRUC	Moravsky	151.02	346	ePKP	PKiKP	16 20 57.4	+0.8
MARR	Marisel-Cluj	151.08	335	⇑P	PKiKP	16 20 58.3	+1.3
PSZ	Piszkesteto	151.13	341	⇓P	PKiKP	16 20 58.3	+1.3
PSZ	Piszkesteto	151.13	341	⇓PKIKP	PKiKP	16 20 58.3	+1.3
DRGR		151.14	336	⇓P	PKiKP	16 20 58.1	+1.1
DRGR		151.14	336	⇓PKIKP	PKiKP	16 20 58.1	+1.1
VOIR		151.27	332	⇓P	PKiKP	16 20 59.7	+2.4
VOIR		151.27	332	⇓PKIKP	PKiKP	16 20 59.7	+2.4
MODS	Modra-Piesok	151.45	344	ePKIKP	PKiKP	16 20 59.6	+2.1
MODS				e		16 21 08.1	
MODS	Modra-Piesok	151.45	344	ePKP	PKiKP	16 20 59.6	+2.1
MODS				e		16 21 08.1	
KHC	Kasperske Hory	151.50	350	ePKP	PKiKP	16 20 59.0	+1.4
KHC				ex	x	16 21 07.1	
KHC				ex	x	16 21 19.0	
KHC	Kasperske Hory	151.50	350	ePKIKP	PKiKP	16 20 59.0	+1.4
KHC				e		16 21 07.1	
ARR	Arges	151.51	332	⇑P	PKiKP	16 21 00.0	+2.2
CKRC	Cesky Krumlov	151.68	349	ePKP	PKiKP	16 20 58.4	+0.4
CKRC				ex	x	16 21 08.2	
CKRC	Cesky Krumlov	151.68	349	ePKIKP	PKiKP	16 20 58.4	+0.4
CKRC				e		16 21 08.2	
GERES	GERESS Array B	151.76	349	PKPbc	PKiKP	16 20 59.2	+1.0
	comp=Z,4.2nm,0.9s,baz=58,slow=3.3,SNR=18						
SIRR	Siria	151.97	337	⇑P	PKiKP	16 21 00.6	+1.9
CONA	Conrad Observa	152.21	346	epPKP	pPKPdf	16 20 52.3	-1.3
	comp=Z,12nm,1.2s						
CONA				epPKP	sPKPab	16 21 10.8	+0.4
	comp=Z,12nm,1.1s						
RONA	Rosalia, Austr	152.32	345	ePKP	PKPdf	16 20 51.6	-0.7
	comp=Z,9.7nm,1.0s						
RONA				epPKP	sPKPab	16 21 11.1	+0.3
	comp=Z,17nm,1.0s						
BZS	Buzias	152.54	336	⇑P	PKPab	16 21 11.6	+1.7
MOA	Molln	152.62	348	epPKP	PKPab	16 21 12.1	+2.0
	comp=Z,7.9nm,1.0s						
HERR	Herculane	152.84	334	⇓P	PKiKP	16 21 02.3	+1.9
BIOA	Bad Ischl, Aus	152.88	349	epPKP	PKPab	16 21 13.4	+2.1
	comp=Z,22nm,1.1s						
MORH	Mrgy, Hungar	153.04	341	⇓P	PKPbc	16 20 56.5	-4.1
MDVR	Moldovita	153.20	335	⇓P	PKiKP	16 21 03.4	+2.1
RETA	Reutte	153.51	353	epPKP	PKPab	16 21 15.6	+1.6
	comp=Z,11nm,1.0s						
KBA	Koelnbreinsper	153.53	349	epPKiKP	PKiKP	16 21 04.7	+2.7
	comp=Z,4.1nm,0.8s						
WATA	Walderalm	153.56	352	epPKP	PKPab	16 21 16.1	+1.8
	comp=Z,6.0nm,0.9s						
SOKA	Soboth	153.57	346	epPKP	PKiKP	16 21 03.1	+1.1
	comp=Z,4.7nm,1.2s						
SOKA				epPKP	sPKPab	16 21 15.7	-0.4
FRGS	Fruska Gora	153.59	338	⇓P	PKPab	16 21 16.0	+1.6
MOTA	Moosalm	153.61	352	epPKP	PKiKP	16 21 04.0	+1.8
	comp=Z,5.7nm,0.9s						
MOTA				epPKP	sPKPab	16 21 16.1	-0.3
	comp=Z,12nm,0.9s						
WTTA	Wattenberg	153.62	352	ePKiKP	PKiKP	16 21 02.0	-0.2
	comp=Z,4.0nm,0.7s						
WTTA				epPKP	sPKPab	16 21 16.1	-0.3
	comp=Z,14nm,1.1s						
SQTA	Sankt Quirin	153.72	352	epPKP	PKiKP	16 21 03.6	+1.2
	comp=Z,9.9nm,1.4s						
SQTA				epPKP	sPKPab	16 21 16.7	-0.1
	comp=Z,4.9nm,0.9s						
DAVA	Damuels	153.80	354	epPKP	PKPab	16 21 16.6	+1.3
	comp=Z,11nm,1.1s						
OBKA	Obir	153.84	347	ePKiKP	PKiKP	16 21 02.4	-0.2
	comp=Z,5.9nm,1.7s						
OBKA				ePKP	PKPab	16 21 14.7	-0.7
FETA	Feichten	153.97	353	epPKiKP	PKiKP	16 21 05.7	+2.8
	comp=Z,3.1nm,1.0s						
FETA				epPKP	sPKPab	16 21 17.5	-0.5
	comp=Z,11nm,1.2s						
ABTA	Abfaltersbach	153.99	350	epPKP	PKiKP	16 21 04.1	+1.2
	comp=Z,8.4nm,1.1s						
ESDC	Sonseca Array	159.64	23	PKP	PKPdf	16 21 03.9	+1.6
	comp=Z,0.2nm,0.3s,baz=318,slow=1.7,SNR=2.3						
ESDC				PKPab	sPKPab	16 21 42.5	+1.3
	comp=Z,1.9nm,0.7s,baz=314,slow=4.1,SNR=10						
DBIC	Dimbokro	162.05	142	PKP	PKPdf	16 21 06.5	+1.0
	comp=Z,5.0nm,0.8s,baz=147,slow=3.1,SNR=6.3						
DBIC				PKPab	sPKPab	16 21 52.6	+0.3
	comp=Z,4.8nm,0.9s,baz=236,slow=10,SNR=4.0						
TORD	Torodi Ar. Bea	170.93	151	PKP	PKPdf	16 21 12.6	+0.3
	comp=Z,2.3nm,0.9s,baz=222,slow=1.7,SNR=10						
TORD				PKPab	sPKPab	16 22 32.0	+0.6
	comp=Z,0.6nm,1.0s,baz=216,slow=4.8,SNR=6.1						
TORD				PP	PP	16 26 22.3	+2.2
	comp=Z,42nm,0.5s,baz=249,slow=4.0,SNR=6.5						

IDC 28 16:07:26.1±1.8**,8°.35N**×**58°.42E,h0^{km},mb3.8**/3**, mbtmp3.8**/3**,MS3.5**/6**,Error ellipse: s-maj=69.1km s-min=38.1km az=35.0,Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	14.81	1	LR	LR	16 15 43.9	
	comp=Z,92nm,19.9s,baz=162,slow=34						
PALK	Pallekele	22.10	91	LR	LR	16 18 40.6	
	comp=Z,65nm,20.2s,baz=321,slow=30						
MBAR	Mbarara	28.99	253	LR	LR	16 26 43.7	
	comp=Z,39nm,18.5s,baz=33,slow=40						
AAK	Ala-Archa	36.97	20	LR	LR	16 29 24.6	
	comp=Z,72nm,21.6s,baz=185,slow=36						
LSZ	Lusaka	38.06	232	LR	LR	16 30 50.6	
	comp=Z,104nm,19.3s,baz=123,slow=37						
ZALV	Zalesovo Beam	50.19	20	P	P	16 16 23.4	-0.1
	0.5nm,0.6s,baz=232,slow=7.1,SNR=2.5						
	0.5nm,0.6s						
ESDC	Sonseca Array	63.53	310	P	P	16 17 58.6	0.0
	1.2nm,0.8s,baz=88,slow=5.3,SNR=8.0						
	1.2nm,0.8s						
TIXI	Tiksi	76.01	18	LR	LR	16 57 15.1	
	comp=Z,100nm,20.0s,baz=126,slow=39						
ASAR	Alice Springs	80.22	116	P	P	16 19 39.2	+0.1
	0.7nm,0.9s,baz=286,slow=5.1,SNR=4.2						
	0.7nm,0.9s						

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*IDC **28** 16:07:41.9±1.1,55°.41S×157°.80E,h0^{km},mb4.1/7, mbtmp4.1/7,MS4.2/5,Error ellipse: s-maj=34.6km s-min=23.9km az=78.0*

*NEIC **28** 16:07:44.8±2.1,55°.22S±0°.08×158°.3E±0°.2,h10^{km}±2^{km}, mb4.4/8,Error ellipse: s-maj=25.3km s-min=9.5km az=116.0*

ISC 28 16:07:43.6±0.8**,55°.29S**±0°.10×**158°.2E**±0°.1**,h10^{km},n52,** σ1^{s}**45**/32**,mb4.2**/9**,MS4.1**/6**,Macquarie Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQ	Macquarie Isla	0.90	29		Pg	16 07 59.6	-1.3
PYZ	Puysegur Point	10.59	34	Pn	Pn	16 10 13.0	-2.2
WHZ	Wether Hill Ro	11.25	37		Pn	16 10 22.0	-2.3
DCZ	Deep Cove	11.36	34		Pn	16 10 26.5	+0.8
MLZ	Mavora Lakes	11.77	37		Pn	16 10 31.4	+0.1
WKZ	Wanaka	12.55	38		Pn	16 10 42.0	-0.1
TAU	Tasmania Unive	14.27	326		Pn	16 11 05.1	-0.4
TAU	Tasmania Unive	14.27	326	P	Pn	16 11 04.9	-0.6
MOO	Moorlands	14.73	326	P	Pn	16 11 11.7	-0.1
CORO	Coronation Par	15.64	328	P	Pn	16 11 25.0	+1.1
	33nm,0.6s						
GLAD	Gladstone	15.82	331	P	Pn	16 11 26.7	+0.5
DSZ	Denniston Nort	16.23	39	Pn	Pn	16 11 32.0	+0.5
QRZ	Quartz Range	17.30	39		P	16 11 46.9	+0.5
MILA	Mila	19.25	338	P	Pn	16 12 15.9	+6.9
TOO	Toolangi	19.71	329	P	Pn	16 12 14.5	0.0
TOO				IAmb	IAmb	16 12 16.3	
	comp=Z,29nm,1.2s						
TOO	Toolangi	19.71	329	P	Pn	16 12 19.7	+5.2
BRAT	Ballarat	20.22	325	P	Pn	16 12 29.0	+8.7
CNB	Canberra Magne	20.89	339	P	Pn	16 12 39.3	+11
CAN	Canberra	20.96	339	P	P	16 12 27.2	+0.7
CAN	Canberra	20.96	339	P	Pn	16 12 39.6	+10
URZ	Urewera	21.28	45	P	P	16 12 32.7	+2.8
	comp=Z,9.4nm,0.8s,baz=180,slow=5.1,SNR=1.5						
URZ				LR	LR	16 19 34.9	
	comp=Z,691nm,20.5s,baz=112,slow=33						
	comp=Z,9.4nm,0.8s						
ARPS	Mount Arapiles	21.63	322	P	P	16 12 47.6	+14
VNDA	Vanda	22.36	178	P	P	16 12 40.2	-1.1
	comp=Z,6.9nm,1.2s,baz=339,slow=12,SNR=5.0						
VNDA				LR	LR	16 19 19.0	
	comp=Z,318nm,21.2s,baz=354,slow=31						
	comp=Z,6.9nm,1.2s						
VNDA	Vanda	22.36	178	P	P	16 12 42.2	+0.9
VNDA				IAmb	IAmb	16 12 48.3	
	comp=Z,28nm,1.5s						
STKA	Stephens Creek	26.18	327	P	P	16 13 18.4	+0.4
	comp=Z,1.3nm,0.6s,baz=158,slow=9.7,SNR=1.7						
	comp=Z,1.3nm,0.6s						
DZM	Mont Dzumac	33.74	14	P	P	16 14 26.7	+1.5
	comp=Z,6.6nm,0.8s,baz=180,slow=3.0,SNR=4.0						
	comp=Z,6.6nm,0.8s						
ASAR	Alice Springs	36.35	320	P	P	16 14 47.4	-0.3
	comp=Z,3.5nm,0.7s,baz=159,slow=8.9,SNR=20						
	comp=Z,3.5nm,0.7s						
ASAR	Alice Springs	36.35	320	P	P	16 14 48.0	+0.4
AS31	Alice Springs	36.35	320	P	P	16 14 47.7	+0.1
H01W1	Cape Leeuwin H	36.38	286	T	T	16 53 39.6	
	baz=137,slow=75,SNR=1767						
H01W2	Cape Leeuwin H	36.39	286	T	T	16 53 39.0	
	baz=137,slow=75,SNR=1607						
H01W3	Cape Leeuwin H	36.40	286	T	T	16 53 40.3	
	baz=137,slow=75,SNR=1393						
WB2	Warramunga Arr	39.62	323	P	P	16 15 14.7	-0.5
WB2				IAmb	IAmb	16 15 33.3	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	39.62	323	P	P	16 15 14.2	-1.1
	comp=Z,1.7nm,0.7s,baz=157,slow=7.0,SNR=7.8						
WRA				LR	LR	16 29 59.1	
	comp=Z,763nm,18.9s,baz=136,slow=34						
	comp=Z,1.7nm,0.7s						
WB0	Warramunga Arr	39.77	324	P	P	16 15 15.7	-0.7
WB0				IAmb	IAmb	16 15 39.6	
	comp=Z,11nm,1.4s						
MSVF	Nonsavu	40.44	30	LR	LR	16 30 00.3	
	comp=Z,179nm,19.0s,baz=192,slow=33						
HNR	Honiara	45.76	2	LR	LR	16 30 42.7	
	comp=Z,5µm,18.3s,baz=191,slow=30						
PPT	Papeete	54.52	68	LR	LR	16 35 17.2	
	comp=Z,201nm,21.1s,baz=245,slow=30						
H03S2	Juan Fernandez	78.68	135	T	T	17 46 32.1	
	baz=207,slow=74,SNR=115						
H03S1	Juan Fernandez	78.69	135	T	T	17 46 35.5	
	baz=207,slow=74,SNR=173						
H03S3	Juan Fernandez	78.70	135	T	T	17 46 32.8	
	baz=207,slow=74,SNR=89						
H03N3	Juan Fernandez	79.02	134	T	T	17 47 10.6	
	baz=216,slow=76						
H03N2	Juan Fernandez	79.03	134	T	T	17 46 59.3	
	baz=216,slow=76						
H03N1	Juan Fernandez	79.03	134	T	T	17 47 15.5	
	baz=216,slow=76						

H08S2	Diego Garcia H	81.33	269	T	T	17 49 47.4	
	baz=144,slow=76,SNR=149						
H08S1	Diego Carcia H	81.34	269	T	T	17 49 48.3	
	baz=144,slow=76,SNR=118						
H08S3	Diego Garcia H	81.34	269	T	T	17 49 47.0	
	baz=144,slow=76,SNR=158						
CMAR	Chiang Mai Arr	88.89	305	P	P	16 20 36.7	-1.1
	comp=Z,0.1nm,0.3s,baz=186,slow=4.5,SNR=2.0						
	comp=Z,0.1nm,0.3s						
ILAR	Eielson Array	126.88	26	PKP	PKiKP	16 26 47.1	+0.7
	comp=Z,0.4nm,1.0s,baz=235,slow=3.2,SNR=2.1						
TORD	Torodi Ar. Bea	134.14	213	PKP	PKPdf	16 26 59.9	-1.4
	comp=Z,3.8nm,1.0s,baz=184,slow=0.6,SNR=17						
RES	Resolute Bay	146.61	28	PKPbc	PKPdf	16 27 22.0	+0.1
	comp=Z,1.4nm,0.8s,baz=270,slow=2.4,SNR=3.4						
AKASG	Malin Array Be	149.53	283	PKPbc	PKPbc	16 27 31.4	-0.5
	comp=Z,0.2nm,0.3s,baz=87,slow=2.4,SNR=2.3						

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*IPEC **28** 16:18:51.0±0.1, 49°.82N×18°.57E, h1km, ML1.3/4, Error ellipse: s-maj=1.7km s-min=0.7km az=161.0*

PRU 28 16:18:51.2±0.0**, 49°.85N×18°.52E, h0**km**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.24	267	ePG	Pg	16 18 55.9	+0.1
OKC				eSG	Sg	16 19 00.5	+1.6
	comp=Z,14nm,0.9s						
MORC	Moravsky Berou	0.64	264	ePg	Pg	16 19 03.8	+0.4
	baz=86						
MORC				eSg	Sg	16 19 12.0	+0.3
	8.0nm,0.4s,baz=86						
MAUC	Maruska	0.66	223	ePG	Pg	16 19 03.9	0.0
MAUC				eSG	Sg	16 19 13.1	+0.7
OJC	Ojcow	0.90	65	ePg	Pg	16 19 07.9	-0.6
OJC				eSg	Sg	16 19 20.5	+0.3
LANS	Liptovska Anna	0.93	138	ePG	Pg	16 19 08.5	-0.6
LANS				eSG	Sg	16 19 21.6	+0.4
LANS				eLG	Lg	16 19 26.4	
JAVC	Velka Javorina	1.14	210	ePG	Pg	16 19 13.0	0.0
JAVC	Velka Javorina	1.14	210	ePg	Pg	16 19 12.9	-0.1
	baz=31						
KRLC	Kraliky	1.15	282	ePG	Pg	16 19 11.9	-1.2
KRLC				eSG	Sg	16 19 28.0	0.0
	comp=Z,4.8nm,0.3s						
VRAC	Vranov	1.37	247	ePG	Pg	16 19 16.8	-0.6
VRAC				eSG	Sg	16 19 34.2	-0.9
VRAC	Vranov	1.37	247	ePg	Pg	16 19 16.7	-0.7
	baz=68						
VRAC				eSg	Sg	16 19 34.1	-1.0
	3.8nm,0.3s,baz=68						
VYHS	Vyhne	1.37	171	ePG	Pg	16 19 16.0	-1.5
VYHS				eSG	Sg	16 19 35.1	-0.2
DPC	Dobruska-Polom	1.50	290	ePG	Pn	16 19 17.8	-1.6
DPC				eSG	Sg	16 19 39.1	-0.3
	comp=Z,2.1nm,0.3s						
KRUC	Moravsky	1.59	241	ePg	Pn	16 19 20.1	-0.6
	baz=61						
KRUC				eSg	Sn	16 19 41.5	-0.5
	2.4nm,0.2s,baz=61						
OSTC	Ostas	1.64	296	ePG	Pn	16 19 21.5	+0.2
OSTC				eSG	Sb	16 19 43.6	0.0
UPC	Upice	1.74	293	eSG	Sb	16 19 46.1	-0.3
CHVC	Chvalec	1.75	296	eSG	Sb	16 19 46.8	+0.2

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*ISK **28** 16:27:18.5, 39°.59N×26°.02E, h14km, ML3.6/39*
*DDA **28** 16:27:18.6±0.0, 39°.56N×26°.04E, h11km, ML3.3*
*THE **28** 16:27:19.1, 39°.58N×26°.04E, h10km±1km, ML3.2/10, Error ellipse: s-maj=1.0km s-min=0.5km az=140.0*
*ATH **28** 16:27:19.7, 39°.54N×26°.02E, h18km±2km, ML3.1/11, Error ellipse: s-maj=2.9km s-min=1.1km az=111.0*
*SOF **28** 16:27:20.1, 39°.78N×25°.80E, h2km, MD3.3*

ISC 28 16:27:18.9±0.8**, 39°.56N**±0°.01×**26°.03E**±0°.02**, h10**km±6km**, n118, σ1ˢ21**/145**, 12C-9D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	Canakkale, Ayv	0.10	125	P	Pg	16 27 21.6	-0.1
KOCA				S	Sg	16 27 23.7	+0.2
GPNR	Gulpinar-Canak	0.14	142	Pg	Pg	16 27 21.8	-0.2
BOZC	Bozcaada	0.28	4	Pg	Pg	16 27 24.5	-0.1
BOZC				Sg	Sg	16 27 28.9	+0.5
EZN	Ezine	0.35	41	P	Pg	16 27 25.7	-0.2
EZN				S	Sg	16 27 30.8	+0.2
	6μm,0.1s						
EZN	Ezine	0.35	41	Pg	Pg	16 27 25.7	-0.2
EZN				Sg	Sg	16 27 31.1	+0.5
PRK	Paraskevi	0.37	149	P	Pg	16 27 26.2	0.0
PRK				S	Sg	16 27 31.8	+0.7
	13μm,0.2s						
PRK	Paraskevi	0.37	149	P	Pg	16 27 26.2	0.0
PRK				S	Sg	16 27 31.9	+0.8
PRK				AML	AML	16 27 32.1	
	comp=N,21072μm,0.2s						
PRK				AML	AML	16 27 32.2	
	comp=E,28922μm,0.3s						
SIGR	SIGRI	0.38	201	P	Pb	16 27 27.5	-0.1
SIGR				S	Sb	16 27 32.9	-0.6
	comp=E,11μm,0.2s						
SIGR	SIGRI	0.38	201	Pg	Pb	16 27 27.5	-0.1
SIGR				Sg	Sb	16 27 33.2	-0.4
SIGR	SIGRI	0.38	201	P	Pb	16 27 27.5	-0.1
SIGR				S	Sb	16 27 33.1	-0.4
SIGR				AML	AML	16 27 33.4	
	comp=E,22860μm,0.2s						
SIGR				AML	AML	16 27 33.8	
	comp=N,20740μm,0.3s						
BAYC	CANAKKALE_Bayr	0.44	66	SPECP		16 27 27.0	
BAYC				P	Pg	16 27 27.3	-0.2
BAYC				S	Sg	16 27 33.4	0.0
BAYC				i AML	AML	16 27 34.0	
	comp=N,2μm,0.2s						
BAYC				i AML	AML	16 27 34.0	
	comp=N,2μm,0.2s						
ECEA	Canakkale, Ece	0.49	13	SPECP		16 27 28.0	
ECEA				P	Pg	16 27 28.6	0.0
ECEA				i AML	AML	16 27 36.0	
	comp=N,5μm,0.2s						
ECEA				i AML	AML	16 27 36.0	
	comp=N,6μm,0.3s						
ECEA				S	Sb	16 27 36.5	-0.5
GOKA	anakkale-Gk	0.63	352	SPECP		16 27 30.0	
GOKA				P	Pg	16 27 30.9	-0.3
GOKA				i AML	AML	16 27 40.0	
	comp=N,1μm,0.6s						
GOKA				S	Sb	16 27 40.2	-0.8
GOKA				i AML	AML	16 27 45.0	
	comp=N,2μm,0.2s						
GADA	Gvkgeada	0.64	351	Pg	Pg	16 27 30.8	-0.5
GADA				Sg	Sg	16 27 39.7	+0.1
COMU	Canakkale	0.64	33	Pg	Pg	16 27 30.9	-0.4
LIA	Limnos Island	0.73	298	P	Pg	16 27 32.9	-0.1
LIA				S	Sb	16 27 44.6	+0.8
	comp=N,3μm,0.3s						
LIA	Limnos Island	0.73	298	P	Pg	16 27 33.0	-0.1
LIA				AML	AML	16 27 46.0	
	comp=E,6815μm,0.4s						
LIA				AML	AML	16 27 46.4	
	comp=N,5531μm,0.3s						
BUHA	Balikesir, Bur	0.81	94	S	Sg	16 27 45.6	+0.3
DKL	Dikili	0.84	125	Pg	Pg	16 27 35.3	+0.2
DKL				Sg	Sn	16 27 48.8	-0.4
GELI	Tayfur-Gelibol	0.90	22	Pg	Pg	16 27 35.7	-0.6
GELI				Sg	Sg	16 27 48.2	+0.1
CANM	Can-anakkale	0.91	60	Pg	Pg	16 27 36.3	-0.1
KARB	zmir-Karabur	0.95	161	SPECP		16 27 37.0	
KARB				P	Pg	16 27 37.2	0.0
KARB				S	Sg	16 27 49.9	+0.5
KARB				i AML	AML	16 27 51.0	
	comp=N,1μm,0.4s						
KARB				i AML	AML	16 27 52.0	
	comp=N,2μm,0.2s						
SMTH	Samothraki Isl	0.98	337	P	Pg	16 27 37.4	-0.5
SMTH				S	Sb	16 27 50.8	-0.3
	comp=N,792nm,0.2s						
SMTH	Samothraki Isl	0.98	337	P	Pg	16 27 37.4	-0.5
SMTH				AML	AML	16 27 53.4	
	comp=N,2028μm,0.3s						
SMTH				AML	AML	16 27 54.6	
	comp=E,1299μm,0.3s						
LPK	Lapseki	0.99	35	Pg	Pg	16 27 37.1	-0.8
ZEDA	zmir-Bergama	1.01	126	SPECP		16 27 38.0	
ZEDA				P	Pg	16 27 38.5	+0.1
ZEDA				S	Sn	16 27 53.0	-0.4
ZEDA				i AML	AML	16 27 53.0	
	comp=E,529nm,0.3s						
ZEDA				i AML	AML	16 27 54.0	
	comp=E,320nm,0.3s						
PSRA	Psara	1.08	200	P	Pb	16 27 39.4	-0.3
CAVK	Edirne/Enez-Ca	1.13	5	SPECP		16 27 40.0	
CAVK				P	Pb	16 27 40.2	-0.4
CAVK				S	Sn	16 27 56.4	-0.1
CAVK				i AML	AML	16 27 57.0	
	comp=E,891nm,0.3s						
CAVK				i AML	AML	16 28 03.0	
	comp=E,769nm,0.6s						
ERIK	Erikli-Kesan	1.17	18	Pn	Pb	16 27 40.1	-1.1
CHOS	Chios island	1.17	179	P	Pb	16 27 40.1	-1.2
CHOS				S	Sn	16 27 57.6	+0.1
	comp=E,2μm,0.2s						
CHOS	Chios island	1.17	179	Pn	Pb	16 27 40.6	-0.7
CHOS	Chios island	1.17	179	P	Pb	16 27 40.2	-1.1
CHOS				AML	AML	16 27 59.5	
	comp=N,2662μm,0.3s						
CHOS				AML	AML	16 28 01.8	
	comp=E,4252μm,0.3s						
ENEZ	Enez	1.18	5	P	Pb	16 27 40.8	-0.5
ENEZ				S	Sn	16 27 57.4	-0.1
	comp=E,2μm,0.3s						
ENEZ	Enez	1.18	5	Pn	Pb	16 27 40.8	-0.5
URLA	Izmir	1.28	160	Pn	Pn	16 27 41.7	-1.2
KRBG	Karabiga-Canak	1.28	49	Pn	Pn	16 27 42.5	-0.4
STEP	BALIKESIR_Sava	1.32	98	SPECP		16 27 43.0	
STEP				P	Pn	16 27 43.2	-0.3
STEP				S	Sg	16 28 02.7	+1.2
STEP				i AML	AML	16 28 07.0	
	comp=E,291nm,0.4s						
STEP				i AML	AML	16 28 08.0	
	comp=E,409nm,0.8s						
ALN	Alexandroupoli	1.33	1	P	Pn	16 27 43.0	-0.6
ALN				S	Sb	16 28 00.4	-0.8
	comp=E,738nm,0.3s						
ALN	Alexandroupoli	1.33	1	Pn	Pn	16 27 42.9	-0.6
ALN	Alexandroupoli	1.33	1	P	Pn	16 27 43.2	-0.4
ALN				AML	AML	16 28 02.5	
	comp=E,1644μm,0.3s						
ALN				AML	AML	16 28 02.6	
	comp=N,1303μm,0.4s						
GONE	Gonen-Balikesi	1.37	69	Pn	Pn	16 27 43.4	-0.6
ZEYE	Izmir, Urla-Ze	1.37	164	P	Pn	16 27 42.9	-1.2
ZEYE				S	Sn	16 28 02.1	-0.2
BLCB	Balcova	1.42	146	P	Pn	16 27 44.6	-0.1
BLCB				S	Sn	16 28 03.5	+0.1
BLCB	Balcova	1.42	146	Pn	Pn	16 27 44.9	+0.2
RKY	Sarkoy-Tekirda	1.43	38	Pn	Pn	16 27 44.1	-0.9
BALB	Balikesir	1.43	86	Pn	Pn	16 27 44.4	-0.6
THAS	Thassos island	1.45	317	P	Pn	16 27 44.1	-1.1
THAS	Thassos island	1.45	317	P	Pn	16 27 44.0	-1.1
THAS				AML	AML	16 28 07.8	
	comp=N,605μm,0.3s						
THAS				AML	AML	16 28 08.3	
	comp=E,367μm,0.2s						
EDC	Edincik	1.61	60	Pn	Pn	16 27 47.1	-0.4
RDO	Rodhopi	1.63	347	P	Pn	16 27 47.4	-0.2
RDO				S	Sn	16 28 07.9	-0.7
	comp=E,212nm,0.2s						
RDO	Rodhopi	1.63	347	Pn	Pn	16 27 46.7	-0.9
RDO	Rodhopi	1.63	347	P	Pn	16 27 47.9	+0.3
RDO				AML	AML	16 28 12.2	
	comp=N,425μm,0.5s						
RDO				AML	AML	16 28 12.7	
	comp=E,434μm,0.2s						
UKOP	Uzunkopru-Edir	1.63	16	Pn	Pn	16 27 46.9	-0.8
OUR	Ouranopolis	1.75	297	Pn	Pn	16 27 48.5	-0.8
KYMI	Kymi, Euboea I	1.76	239	P	Pn	16 27 48.0	-1.5
KYMI				S	Sn	16 28 12.2	+0.2
	comp=E,150nm,0.5s						
KYMI	Kymi, Euboea I	1.76	239	P	Pn	16 27 47.9	-1.5
TKR	Tekirdag	1.83	39	Pn	Pn	16 27 49.8	-0.7
KAVA	Kavala	1.84	322	P	Pn	16 27 50.0	-0.6
KAVA	Kavala	1.84	322	P	Pn	16 27 49.9	-0.6
KVLA	Kavala	1.86	318	P	Pn	16 27 51.0	+0.2
KCTX	Karacabey (Bur	1.93	68	Pn	Pn	16 27 50.8	-1.0
SMG	Samos	1.96	161	P	Pn	16 27 51.1	-1.1
SMG	Samos	1.96	161	P	Pn	16 27 51.0	-1.1
SMG				AML	AML	16 28 25.0	
	comp=N,1006μm,0.5s						
SMG				AML	AML	16 28 25.6	
	comp=E,978μm,0.3s						
EREA	Eretria	1.99	236	P	Pn	16 27 51.3	-1.4
KOKK	Kokkinochori,	2.00	310	P	Pn	16 27 52.0	-0.7
DST	Dursunbey	2.00	88	Pn	Pn	16 27 52.8	-0.1
BOTS	Marmara Eregli	2.07	46	Pn	Pn	16 27 53.5	-0.2
GCAM	G?zelcaml?	2.09	153	Pn	Pn	16 27 53.8	-0.1
KDZ	Kurdzhali	2.14	348	Pn	Pn	16 27 54.1	-0.6
KDZ	Kurdzhali	2.14	348	P	Pn	16 27 54.6	-0.1
DION	Dionisos Attik	2.21	228	P	Pn	16 27 54.8	-0.8
KULA	Kula-Manisa	2.30	116	Pn	Pn	16 27 56.9	-0.1
MDNY	Mudanya-Bursa	2.34	69	Pn	Pn	16 27 57.5	+0.1
RZN	Rozhen	2.35	335	P	Pn	16 27 57.8	+0.1
EDRB	Edirne	2.35	13	P	Pn	16 27 57.4	-0.1
EDRB	Edirne	2.35	13	Pn	Pn	16 27 57.1	-0.4
SLVT	Silivri	2.36	44	Pn	Pn	16 27 57.5	-0.2
PHSR	Pinarhisar	2.36	28	Pn	Pn	16 27 57.2	-0.5
ARMT	Armutlu	2.40	64	Pn	Pn	16 27 57.6	-0.6
SRS	Serrai	2.42	311	P	Pn	16 27 58.0	-0.6
SRS				AML	AML	16 28 38.4	
	comp=N,124μm,0.4s						
SRS				AML	AML	16 28 41.0	
	comp=E,242μm,0.5s						
NVR	Nevrokopi	2.43	318	P	Pn	16 27 59.0	+0.3
NVR				AML	AML	16 28 39.7	
	comp=E,151μm,0.4s						
NVR				AML	AML	16 28 40.3	
	comp=N,122μm,0.5s						
VLY	Voula,Athens	2.44	226	P	Pn	16 27 57.4	-1.5
DIM	Dimitrovgrad	2.51	352	eP	Pn	16 28 00.5	+0.7
CTKS	Kestanelik-??a	2.53	48	Pn	Pn	16 27 59.8	-0.2
CTYL	Yalikoy Yolu	2.57	41	Pn	Pn	16 28 00.9	+0.3
GEMT	Gemlik	2.58	69	Pn	Pn	16 28 00.9	+0.2
BGKT	Bogazkoy	2.65	52	Pn	Pn	16 28 01.7	0.0
TVSB	Tavsanli	2.66	91	Pn	Pn	16 28 02.5	+0.6
GEDZ	Gediz	2.68	100	Pn	Pn	16 28 02.4	+0.3
MMB	Musomiste	2.68	320	P	Pn	16 28 01.5	-0.6
KNT	Kendrikon	2.88	305	P	Pn	16 28 04.2	-0.7
EPID	Epidavros	3.00	230	P	Pn	16 28 05.0	-1.4
GUR	Goura	3.31	242	P	Pn	16 28 09.8	-1.0
ANX	Ano Chora	3.34	254	P	Pn	16 28 11.0	-0.3
KLV	Kalavryta, Ach	3.39	245	P	Pn	16 28 11.1	-0.8
LAKA	Lakka	3.42	249	P	Pn	16 28 11.6	-0.7
STIP	Stip	3.62	307	i Pn	Pn	16 28 13.9	-1.1
VTS	Vitosha	3.71	326	⇓P	Pg	16 28 31.1	+1.0
VTS				⇑S	Sb	16 29 12.2	+2.5
VTS	Vitosha	3.71	326	P	Pn	16 28 17.6	+1.2
RAZG	Razgrad	4.02	5	⇑P	Pn	16 28 24.4	+3.9
RAZG				⇑S	Sn	16 29 06.9	-0.7
MPEP	Malo Peshtene	4.16	336	P	Pn	16 28 23.2	+0.7
ICOR	Ion Corvin	4.74	16	⇑P	Pb	16 28 40.1	-2.0
BOVS	Bovan	5.20	323	⇓P	Pn	16 28 36.8	0.0
TIRR	Tirgusor	5.21	19	⇑P	Pn	16 28 39.6	+2.8
CFR	Carcaliu	5.83	15	⇓P	Pn	16 28 48.0	+2.7
ARR	Arges	5.89	350	⇓P	Pb	16 28 56.4	-5.4
MLR	Muntele Rosu	5.92	359	⇑P	Pn	16 28 49.7	+2.9
HERR	Herculane	5.95	334	⇓P	Pn	16 28 46.2	-0.8
LOT	Lotru	6.11	345	⇓P	Pn	16 28 53.5	+4.1
MDVR	Moldovita	6.12	330	⇑P	Pn	16 28 54.0	+4.6
COVR	Voineasa-Covas	6.28	1	⇓P	Pn	16 28 57.1	+5.4
PLOR	Plostina	6.30	4	⇑P	Pn	16 28 55.5	+3.6
VRI	Vrincioaia	6.32	4	⇑P	Pn	16 28 56.9	+4.8
VLDR	Vladesti	6.46	13	⇓P	Pn	16 28 57.8	+3.8
OZUR		6.53	359	⇑P	Pn	16 28 57.8	+2.8
BZS	Buzias	6.87	333	⇑P	Pn	16 29 01.2	+1.5
TESR	Tescani	6.96	4	⇑P	Pn	16 29 04.3	+3.4
BURAR	Bucovina Array	8.07	356	⇓P	Pn	16 29 12.1	-4.1

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*IDC **28** 16:34:01.4±2.6, 5°.71S×154°.48E, h98km±22km, mb3.4/7, mbtmp3.9/10, MS3.8/1, Error ellipse: s-maj=25.0km s-min=16.6km az=77.0*
*NEIC **28** 16:34:01.1±0.9, 5°.71S±0°.09×154°.5E±0°.1, h97km±16km, mb4.4/13, Error ellipse: s-maj=21.4km s-min=11.1km az=71.0*

ISC 28 16:34:02.9±0.8**, 5°.67S**±0°.08×**154°.42E**±0°.09**, h118**km**, n31, σ1ˢ01**/29**, mb3.9**/13**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	2.69	303	Pn	Pn	16 34 42.9	-2.1
KRVT	Keravat (AS076	2.75	299	P	Pn	16 34 44.9	-0.9
	36nm,0.6s,baz=32,slow=4.9,SNR=5.7						
KRVT				S	Sn	16 35 18.3	-0.5
	71nm,0.4s,baz=224,slow=22,SNR=7.4						
PMG	Port Moresby	8.10	242	P	Pn	16 35 57.7	-0.1
	100nm,0.8s,baz=59,slow=9.9,SNR=30						
PMG				S	Sn	16 37 27.7	0.0
	8.9nm,0.6s,baz=335,slow=13,SNR=1.6						
PMG	Port Moresby	8.10	242	Pn	Pn	16 35 56.4	-1.3
EIDS	Eidsvold	19.85	189	Pn	P	16 38 25.1	+0.5
DZM	Mont Dzumac	20.02	146	P	P	16 38 26.3	-0.3
	6.1nm,0.7s,baz=275,slow=11,SNR=12						
DZM	Mont Dzumac	20.02	146	P	P	16 38 25.4	-1.3
DZM				IAmb	IAmb	16 38 26.9	
	comp=Z,6.6nm,0.7s						
WB0	Warramunga Arr	24.00	232	P	P	16 39 06.7	-0.1
WB0				IAmb	IAmb	16 39 23.8	
	comp=Z,13nm,1.5s						
WRAB	Tennant Creek	24.12	232	P	P	16 39 07.9	0.0
WRAB				IAmb	IAmb	16 39 41.5	
	comp=Z,15nm,1.4s						
WB2	Warramunga Arr	24.13	232	P	P	16 39 08.0	0.0
WB2				IAmb	IAmb	16 39 10.5	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	24.14	232	P	P	16 39 08.3	+0.2
	comp=Z,1.7nm,0.6s,baz=56,slow=10,SNR=25						
	comp=Z,1.7nm,0.6s						
AS31	Alice Springs	26.65	226	P	P	16 39 30.2	-0.6
ASAR	Alice Springs	26.65	226	P	P	16 39 30.6	-0.2
	comp=Z,1.5nm,0.8s,baz=57,slow=9.0,SNR=22						
	comp=Z,1.5nm,0.8s						
ASAR	Alice Springs	26.65	226	P	P	16 39 30.4	-0.4
H11S3	WAKE ISLAND Hy	26.89	26	T	T	17 07 43.0	
	baz=207,slow=73,SNR=11						
H11S2	WAKE ISLAND Hy	26.89	27	T	T	17 07 42.2	
	baz=207,slow=73,SNR=11						
H11S1	WAKE ISLAND Hy	26.91	26	T	T	17 07 42.2	
	baz=207,slow=73,SNR=6.2						
KNRA	Kununurra	27.07	246	P	P	16 39 35.3	+0.7
KNRA				IAmb	IAmb	16 39 39.5	
	comp=Z,31nm,1.4s						
STKA	Stephens Creek	28.70	203	P	P	16 39 50.2	+1.2
	comp=Z,1.7nm,0.7s,baz=22,slow=16,SNR=2.9						
	comp=Z,1.7nm,0.7s						
STKA	Stephens Creek	28.70	203	P	P	16 39 49.7	+0.8
PSA00	Pilbara Seismi	37.01	241	P	P	16 40 59.6	-1.7
MRZ	Mangatainoka R	39.67	155	P	P	16 41 22.0	-1.4
BFZ	Birch Farm	39.97	154	P	P	16 41 24.9	-1.0
LTZ	Lake Taylor	40.20	160	P	P	16 41 27.0	-0.7
LTZ				IAmb	IAmb	16 41 40.1	
	comp=Z,8.6nm,1.2s						
PLWZ	Palliser	40.29	156	P	P	16 41 27.6	-0.9
MORW	Morawa	43.08	233	P	P	16 41 51.1	-0.4
MORW				IAmb	IAmb	16 42 28.8	
	comp=Z,27nm,1.3s						
USRK	Ussuriysk Ar.	53.60	340	LR	LR	17 04 58.5	
	comp=Z,94nm,19.0s,baz=154,slow=35						
CMAR	Chiang Mai Arr	59.71	295	P	P	16 43 57.6	+2.1
	comp=Z,0.8nm,0.9s,baz=120,slow=5.5,SNR=4.4						
	comp=Z,0.8nm,0.9s						
VNDA	Vanda	71.91	178	P	P	16 45 13.2	+0.4
	comp=Z,1.1nm,0.8s,baz=323,slow=6.2,SNR=3.8						
	comp=Z,1.1nm,0.8s						
MKAR	Makanchi Array	82.04	319	P	P	16 46 11.6	+1.6
	comp=Z,0.1nm,0.5s,baz=90,slow=5.8,SNR=1.5						
	comp=Z,0.1nm,0.5s						
ILAR	Eielson Array	82.36	22	P	P	16 46 11.4	+0.1
	comp=Z,0.3nm,0.8s,baz=258,slow=4.5,SNR=2.1						
	comp=Z,0.3nm,0.8s						

WEL 28 16:41:36.6±0.5**, 42°S**±3°×**17°4E**±°**, h12**km**, M2.0**/8**, ML2.2**/10**, MLv2.0**/8**, Error ellipse: s-maj=0.0km s-min=0.0km az=125.1, confirmed, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.06	97	P	Pg	16 41 39.8	+0.8
CMWZ				S	Sg	16 41 42.7	+1.9
BSWZ	Blackbirch Sta	0.20	278	P	Pb	16 41 41.6	-0.6
BSWZ				S	Sg	16 41 45.2	+1.3
TUWZ	Tuamarina	0.34	335	P	Pb	16 41 44.4	-0.3
TUWZ				S	Sb	16 41 49.9	-0.1
TCW	Tory Channel	0.54	11	P	Pg	16 41 47.5	+0.3
TCW				S	Sb	16 41 55.5	-0.3
NNZ	Nelson	0.77	312	P	Pb	16 41 51.8	-0.1
KHZ	Kahutara	0.81	213	P	Pg	16 41 52.4	+0.1
KHZ				S	Sb	16 42 04.4	+0.9
PLWZ	Palliser	0.85	79	P	Pg	16 41 52.7	-0.5
THZ	Tophouse	0.92	268	P	Pg	16 41 54.3	-0.1
THZ				S	Sn	16 42 09.3	+0.7
CAW	Cannon Point	0.94	48	P	Pb	16 41 55.0	0.0
DUWZ	D'Urville Isla	0.95	350	P	Pb	16 41 55.2	+0.1
DUWZ				S	Sb	16 42 08.5	+0.8
KIW	Kapiti Island	1.05	34	P	Pb	16 41 56.5	-0.3
KIW				S	Sn	16 42 12.1	+0.2
MRNZ	Matariki Terra	1.09	288	P	Pn	16 41 57.8	+0.1
MRNZ				S	Sn	16 42 13.3	+0.6
MTW	Mount Morrison	1.18	61	P	Pb	16 41 57.5	-1.5
OGWZ	Otaki Gorge	1.21	40	P	Pn	16 41 58.7	-0.6
QRZ	Quartz Range	1.52	307	P	Pb	16 42 04.4	-0.3
MRZ	Mangatainoka R	1.53	46	P	Pn	16 42 02.6	-1.2
LTZ	Lake Taylor	1.73	232	P	Pn	16 42 05.4	-1.2
KRVZ	Karewarewa	2.88	24	P	Pn	16 42 21.2	-1.3

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*NEIC **28** 16:56:59.9±0.8, 6°.74N±0°.08×72°.96W±0°.08, h162km±12km, mb4.3/1, Error ellipse: s-maj=15.0km s-min=6.9km az=132.0*
*IDC **28** 16:57:00.5±0.7, 6°.76N×72°.96W, h157km±10km, mb3.2/5, mbtmp3.8/7, Error ellipse: s-maj=33.3km s-min=7.4km az=131.0*
*RSNC **28** 16:57:02.0±1.1, 6°.81N×73°.10W, h144km±4km, ML3.4, Mw4.0*

ISC 28 16:56:60.0±0.7**, 6°.84N**±0°.03×**73°.05W**±0°.04**, h151**km±6km**, n68, σ1ˢ91**/110**, mb3.5**/6**, 1C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.28	209	⇓iP	Pn	16 57 21.7	+0.8
BARC				eS	Sn	16 57 36.4	-0.4
BARC				i		16 57 38.7	
	comp=Z,884nm,0.2s						
PAMC	Pamplona, Colo	0.61	35	eP	Pn	16 57 24.6	+2.0
PAMC				i		16 57 43.8	
	comp=Z,931nm,0.5s						
BRRC	Barranca, Sant	0.71	292	⇑iP	Pn	16 57 23.6	+0.9
BRRC				eS	Sn	16 57 40.4	+0.5
BRRC				i		16 57 45.3	
	comp=Z,296nm,0.2s						
RUSC	La Rusia	0.94	182		Pn	16 57 25.2	+0.3
RUSC	La Rusia	0.94	182	eP	Pn	16 57 25.7	+0.8
RUSC				eS	Sn	16 57 44.2	+0.2
RUSC				i		16 57 46.0	
	comp=Z,415nm,0.1s						
PTBC	PUERTO BERRIO,	1.43	258	eP	Pn	16 57 28.2	-0.7
PTBC				eS	Sn	16 57 48.9	-2.1
PTBC				i		16 57 52.6	
	comp=Z,425nm,0.2s						
SPBC	San Pablo de B	1.56	221	eP	Pn	16 57 30.6	+0.3
SPBC				eS	Sn	16 57 52.7	-0.9
SPBC				i		16 57 55.3	
	comp=Z,250nm,0.3s						
ZARC	Zaragoza, Cauc	1.91	290	eP	Pn	16 57 34.9	+0.8
ZARC				eS	Sn	16 57 59.9	-0.5
ZARC				i		16 58 06.7	
	comp=Z,445nm,0.3s						
NORC	Norcasia	2.21	235	eP	Pn	16 57 37.7	0.0
NORC				eS	Sn	16 58 05.8	-0.9
NORC				i		16 58 11.6	
	comp=Z,193nm,0.1s						
CHIC	Chingaza	2.29	197	eP	Pn	16 57 40.2	+1.1
CHIC				eS	Sn	16 58 08.9	-0.3
CHIC				i		16 58 12.8	
	comp=Z,189nm,0.1s						
ROSC	El Rosal	2.35	213	P	Pn	16 57 41.6	+1.8
	comp=Z,199nm,0.3s,baz=82,slow=12,SNR=68						
ROSC				S	Sn	16 58 11.6	+1.2
	comp=Z,412nm,0.5s,baz=44,slow=22,SNR=17						

ROSC	El Rosal	2.35	213		Pn	16 57 41.1	+1.3
ROSC	El Rosal	2.35	213	*e*P	Pn	16 57 41.6	+1.8
ROSC				*e*S	Sn	16 58 11.8	+1.4
ROSC				*i*		16 58 18.5	
	comp=Z,184nm,0.6s						
HELC	Santa Helena	2.55	256		Pn	16 57 43.5	+1.4
HELC	Santa Helena	2.55	256	*e*P	Pn	16 57 43.9	+1.8
HELC				*e*S	Sn	16 58 14.3	-0.2
HELC				*i*		16 58 21.1	
	comp=Z,290nm,0.4s						
UREC	San Jos de Ur	2.63	290	*e*P	Pn	16 57 42.2	-0.5
UREC				*e*S	Sn	16 58 13.8	-1.9
LL1C	La Loma 1 Cana	2.73	349	*e*P	Pn	16 57 46.6	+2.6
LL1C				*e*S	Sn	16 58 21.1	+3.0
PTGC	Puerto Gaitan,	2.77	161	*e*P	Pn	16 57 44.9	+0.3
PTGC				*e*S	Sn	16 58 17.8	-1.3
PTGC				*i*		16 58 21.0	
	comp=Z,212nm,0.3s						
VILC	Villavicencio,	2.78	193	*e*P	Pn	16 57 45.3	+0.5
VILC				*e*S	Sn	16 58 19.8	+0.4
VILC				*i*		16 58 23.5	
	comp=Z,177nm,0.3s						
RECRC	Villamaria, Ca	2.95	231	*e*P	Pn	16 57 49.5	+2.1
RECRC				*e*S	Sn	16 58 26.3	+2.4
NIZA	Niza - Manizal	2.99	234	*e*P	Pn	16 57 51.4	+3.9
NIZA				*e*S	Sn	16 58 24.6	+0.4
CBOC	Ciudad Bolivar	3.10	252	*e*P	Pn	16 57 50.0	+1.2
CBOC				*e*S	Sn	16 58 25.0	-1.6
CBOC				*i*		16 58 29.6	
	comp=Z,95nm,0.6s						
SDV	Santo Domingo	3.14	49	P	Pn	16 57 51.3	+1.9
	comp=Z,121nm,0.4s,baz=234,slow=9.4,SNR=84						
SDV				S	Sn	16 58 28.0	+0.4
	comp=Z,225nm,0.7s,baz=250,slow=22,SNR=26						
SDV	Santo Domingo	3.14	49		Pn	16 57 50.9	+1.5
DBBC	Dabeiba	3.14	273	*e*P	Pn	16 57 50.0	+0.7
DBBC				*e*S	Sn	16 58 25.6	-1.9
DBBC				*i*		16 58 30.9	
	comp=Z,136nm,0.1s						
ARGC	Ariguani, Magd	3.23	339	*e*P	Pn	16 57 53.2	+2.9
ARGC				*e*S	Sn	16 58 30.7	+1.4
ARGC				*i*		16 58 41.6	
	comp=Z,38nm,0.2s						
ANIL	Santa Ana	3.30	225	*e*P	Pn	16 57 54.0	+2.4
ANIL				*e*S	Sn	16 58 32.8	+1.3
PRAC	Prado	3.60	211		Pn	16 57 54.7	-0.5
PRAC	Prado	3.60	211	*e*P	Pn	16 57 55.6	+0.5
PRAC				*e*S	Sn	16 58 37.6	-0.4
PRAC				*i*		16 58 43.6	
	comp=Z,137nm,0.3s						
ORTC	Ortega, Tolima	3.64	217	*e*P	Pn	16 57 56.7	+1.0
ORTC				*i*		16 58 46.8	
	comp=Z,256nm,0.9s						
APAC	Apartado, Choc	3.66	287	*e*P	Pn	16 57 56.3	+0.4
APAC				*e*S	Sn	16 58 37.7	-1.4
APAC				*i*		16 58 44.4	
	comp=Z,44nm,0.6s						
SJCC	San Jacinto, C	3.70	325	*e*P	Pn	16 57 56.1	-0.3
SJCC				*e*S	Sn	16 58 37.4	-2.9
SJCC				*i*		16 58 41.5	
	comp=Z,204nm,0.8s						
PLMC	San Jos del P	3.75	239	*e*P	Pn	16 57 57.8	+0.7
PLMC				*e*S	Sn	16 58 41.6	+0.2
PLMC				*i*		16 58 46.6	
	comp=Z,114nm,0.3s						
LCBC	Los crdobas,	3.85	302	*e*P	Pn	16 57 58.5	+0.2
LCBC				*e*S	Sn	16 58 44.6	+0.9
LCBC				*i*		16 58 47.0	
	comp=Z,58nm,0.1s						
CRJC	Cerrejon, Guaj	4.16	2	*e*P	Pn	16 58 02.2	-0.3
CRJC				*e*S	Sn	16 58 49.7	-1.4
CRJC				*i*		16 58 54.6	
	comp=Z,77nm,0.1s						
GUVC	San Jose del G	4.28	174	*e*P	Pn	16 58 05.7	+1.7
GUVC				*e*S	Sn	16 58 51.5	-2.4
GUVC				*i*		16 58 59.2	
	comp=Z,63nm,0.2s						
YOTC	Yotoco, Valle	4.34	229	*e*P	Pn	16 58 04.6	-0.2
YOTC				*e*S	Sn	16 58 58.9	+3.7
SMRC	Santa Marta, M	4.45	345	*e*P	Pn	16 58 06.5	+0.3
SMRC				*e*S	Sn	16 58 55.0	-2.8
SMRC				*i*		16 58 59.5	
	comp=Z,28nm,0.4s						
PIZC	Pizarro, Choco	4.67	247	*e*P	Pn	16 58 10.5	+1.4
PIZC				*e*S	Sn	16 59 03.4	+0.4
PIZC				*i*		16 59 11.8	
	comp=Z,29nm,0.2s						
MACC	Macarena, Meta	4.73	190	*e*P	Pn	16 58 09.1	-0.8
MACC				*e*S	Sn	16 58 58.6	-5.7
PTAC	Punta Ardita,	4.73	274	*e*P	Pn	16 58 09.4	-0.5
PTAC				*e*S	Sn	16 58 58.8	-5.7
PTAC				*i*		16 59 04.3	
	comp=Z,16nm,0.2s						
BETC	Betania	4.77	210	*e*P	Pn	16 58 10.4	0.0
BETC				*e*S	Sn	16 58 55.5	-10
BETC				*i*		16 59 07.0	
	comp=Z,20nm,0.3s						
URIC	Uribia, Colomb	4.95	12		Pn	16 58 12.1	-0.6
URIC	Uribia, Colomb	4.95	12	*e*P	Pn	16 58 12.4	-0.3
URIC				*e*S	Sn	16 59 03.2	-6.3
URIC				*i*		16 59 10.9	
	comp=Z,20nm,0.1s						
JAMC	Jamundi, Valle	5.10	225	*e*P	Pn	16 58 15.5	+0.6
JAMC				*e*S	Sn	16 59 09.5	-3.9
JAMC				*i*		16 59 22.6	
	comp=Z,12nm,0.4s						
MALC	Bahia Malaga	5.11	237	*e*P	Pn	16 58 17.3	+2.5
MALC				*e*S	Sn	16 59 13.8	+0.5
MALC				*i*		16 59 22.3	
	comp=Z,11nm,0.8s						
GARC	Garzon, Huila	5.22	208	*e*P	Pn	16 58 15.5	-1.1
GARC				*e*S	Sn	16 59 11.1	-5.3
GARC				*i*		16 59 18.3	
	comp=Z,19nm,0.3s						
BAUV	El Baul	5.38	67		Pn	16 58 17.8	-0.7
POPC	Popayan, Colom	5.59	220	*e*P	Pn	16 58 22.1	+0.6
POPC				*e*S	Sn	16 59 20.8	-4.4
FLOC	Florencia	5.83	207	*e*P	Pn	16 58 24.5	0.0
FLOC				*e*S	Sn	16 59 27.5	-3.1
FLOC				*i*		16 59 36.1	
	comp=Z,8.6nm,0.5s						
BBAC	Balboa, Cauca	6.36	221	*e*P	Pn	16 58 33.1	+1.4
BBAC				*e*S	Sn	16 59 40.8	-2.6
BBAC				*i*		16 59 47.3	
	comp=Z,14nm,0.3s						
GCUF	Volcan Galeras	7.03	218	*e*P	Pn	16 58 43.2	+2.3
GCUF				*e*S	Sn	16 59 57.5	-2.5
GCUF				*i*		17 00 06.3	
	comp=Z,8.9nm,0.5s						
TUMC	Tumaco	7.54	229	Pn	Pn	16 58 46.7	-0.6
TULM	Tulcn-Chalpat	7.70	218		Pn	16 58 49.2	-0.6
OTAV	Otavalo	8.49	220		Pn	16 58 59.2	-1.1
SDDR	Presa de Saban	12.19	8	Pn	Pn	16 59 49.0	+0.1
BOAV	Boa Vista	13.24	109	Pn	Pn	16 59 59.8	-2.5
CUPR	Culebra, Puert	13.69	33	P	Pn	17 00 09.2	+1.3
GRTK	Grand Turk	14.71	7	P	Pn	17 00 22.6	+1.9
TXAR	Lajitas Array	36.51	312	P	P	17 03 52.1	+1.1
	comp=Z,0.5nm,0.6s,baz=121,slow=8.9,SNR=4.7						
	comp=Z,0.5nm,0.6s						
TXAR	Lajitas Array	36.51	312	P	P	17 03 50.7	-0.3
TX31	Lajitas Ar. Si	36.51	312	P	P	17 03 50.5	-0.5
TX31				IAmb	IAmb	17 03 56.4	
	comp=Z,8.4nm,1.4s						
PDAR	Pinedale Array	48.11	324	P	P	17 05 25.4	+0.6
	comp=Z,0.3nm,0.6s,baz=119,slow=7.3,SNR=2.1						
	comp=Z,0.3nm,0.6s						
SCHQ	Schefferville	48.12	5	P	P	17 05 25.4	+1.0
	comp=Z,1.7nm,0.5s,baz=198,slow=5.9,SNR=6.1						
	comp=Z,1.7nm,0.5s						
NVAR	Mina Array Bea	51.52	315	P	P	17 05 51.6	+1.0
	comp=Z,0.5nm,0.7s,baz=116,slow=6.1,SNR=3.1						
	comp=Z,0.5nm,0.7s						
YKA	Yellowknife Ar	63.27	340	P	P	17 07 12.4	+0.2
	comp=Z,0.6nm,0.7s,baz=133,slow=6.9,SNR=13						
	comp=Z,0.6nm,0.7s						
ASAR	Alice Springs	149.18	234	PKPbc	PKPbc	17 16 31.1	-0.4
	comp=Z,0.2nm,0.5s,baz=116,slow=3.6,SNR=6.5						
WRA	Warramunga Arr	150.41	241	PKPbc	PKPbc	17 16 34.0	-0.5
	comp=Z,0.4nm,0.5s,baz=110,slow=2.7,SNR=7.7						

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*IDC **28** 17:02:28.1±2.1, 1°69N×126°56E, h0^{km}, mb3.5/3, mbtmp3.6/3, Error ellipse: s-maj=180.5km s-min=24.9km az=66.0*

*DJA **28** 17:02:40.0±0.7, 2°N±4°×12°7E±°, h101^{km}±7^{km}, M3.6/8, mb3.8/1, mB5.3/2, MLv3.5/8, Mw(mB)4.7/2*

ISC 28 17:02:38.2±1.4**, 2°02N**±0°07×**127°6E**±0°2**, h100^{km}, n11,** σ**1^{s}56**/11**, mb3.5**/3**, 1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.26	189	P	Pn	17 03 04.2	+2.6
TNTI				S	Sn	17 03 21.0	+1.8
SGSI	Sangihe	2.61	309	P	Pn	17 03 17.2	-1.6
LBMI	Labuha	2.64	181	P	Pn	17 03 21.8	+2.5
SANI	Sanana	4.34	201	P	Pn	17 03 40.2	-1.8
GTOI	Gorontalo	4.75	253	P	Pn	17 03 46.3	-1.2
NLAI	Namlea	5.25	185	P	Pn	17 03 54.6	+0.3
SKMP	Bagumbayan, Su	5.38	326	⇑*e*P	Pn	17 03 58.9	+2.8
SKMP				*e*S	Sn	17 04 56.4	-0.4
LUWI	Luwuk	5.67	238	P	Pn	17 03 59.1	-0.9
WRA	Warramunga Arr	22.82	163	P	P	17 07 33.0	0.0
	0.9nm,0.4s,baz=340,slow=11,SNR=24						
	0.9nm,0.4s						
ASAR	Alice Springs	26.27	167	P	P	17 08 04.5	+0.1
	0.2nm,0.3s,baz=349,slow=8.5,SNR=7.7						
	0.2nm,0.3s						
MKAR	Makanchi Array	59.42	325	P	P	17 12 30.7	+0.3
	0.3nm,0.4s,baz=126,slow=8.4,SNR=6.9						
	0.3nm,0.4s						

WEL 28 17:12:43.9±0.4**, 43°S**±3°×**17°3E**±°**, h12^{km}, M2.2**/4**, ML2.2**/9**, MLv2.2**/4**, Error ellipse: s-maj=0.0km s-min=0.0km az=135.6, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVZ	Greta Valley S	0.38	146	P	Pb	17 12 52.3	-0.2
GVZ				S	Sb	17 12 58.1	-0.2
LTZ	Lake Taylor	0.38	250	P	Pb	17 12 52.2	-0.3
LTZ				S	Sb	17 12 57.8	-0.6
AMCZ	Amberley	0.53	188	P	Pb	17 12 55.5	+0.4
KHZ	Kahutara	0.63	68	P	Pb	17 12 57.0	+0.3
KHZ				S	Sb	17 13 06.2	+0.7
OXZ	Oxford	0.85	218	P	Pb	17 13 01.0	+0.5
OXZ				S	Sb	17 13 12.9	+0.9
THZ	Tophouse	0.90	7	P	Pb	17 13 01.6	+0.1
INZ	Inchbonnie	0.97	265	P	Pn	17 13 03.2	0.0
INZ				S	Sn	17 13 18.2	+1.4
MQZ	McQueen’s Vall	1.05	184	P	Pb	17 13 03.3	-0.7
MQZ				S	Sb	17 13 17.7	0.0
DSZ	Denniston Nort	1.15	322	P	Pg	17 13 07.0	+1.0
RACZ	Rakaia	1.16	202	P	Pb	17 13 05.3	-0.5
AKCZ	Akaroa Harbour	1.22	175	P	Pn	17 13 05.9	-0.9
MHCZ	Mount Hutt	1.23	224	P	Pn	17 13 06.3	-0.6
MRNZ	Matariki Terra	1.25	0	P	Pg	17 13 08.3	+0.3
WACZ	Wakanui South	1.45	207	P	Pn	17 13 09.1	-0.8
QRZ	Quartz Range	1.84	355	P	Pb	17 13 17.4	0.0
TMZ	Timaru	2.14	216	P	Pn	17 13 18.9	-0.5
ODZ	Otahua Downs	2.83	212	P	Pn	17 13 28.0	-1.0

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*SNET **28** 17:28:06.1±2.1, 12°57N×88°03W, h32^{km}, ML3.7*

*INET **28** 17:28:06.7±0.7, 12°59N×88°00W, h64^{km}±9^{km}, MW3.1*

ISC 28 17:28:05.9±1.9**, 12°5N**±0°1×**88°08W**±0°07**, h50^{km}, n14,** σ**0^{s}68**/18**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.78	18	*e*P	Pn	17 28 20.7	-0.1
CNCH				*e*S	Sn	17 28 31.8	+0.2
LCND	La Caada	0.79	13	*e*P	Pn	17 28 20.8	-0.1
LCND				*e*S	Sn	17 28 31.9	+0.1
LCY	Lacayo	0.91	347	*e*P	Pn	17 28 22.9	+0.3
PACA	Pacayal	0.96	346	*e*P	Pn	17 28 23.6	+0.3
CRIN	San Cristobal	1.02	80	*e*P	Pn	17 28 24.4	+0.5
CRIN				*e*S	Sn	17 28 38.4	+1.2
TECA	Tecapa	1.04	337	*e*P	Pn	17 28 24.8	+0.3
PQSS	Presa 15 de Se	1.18	337	*e*P	Pn	17 28 26.8	+0.7
TECO	Alcaldia de Te	1.21	326	*e*S	Sn	17 28 41.9	0.0
CNGN	Cerro Negro	1.35	91	*e*P	Pn	17 28 28.0	-0.4
LFRS	El Faro	1.45	319	*e*P	Pn	17 28 30.3	+0.5
COPN	Copaltepe	1.49	103	*e*P	Pn	17 28 30.2	-0.2
MOMN	Momotombo	1.51	94	*e*P	Pn	17 28 30.5	-0.1
MOMN				*e*S	Sn	17 28 48.4	-0.6
P5NO	Presa 5 de nov	1.59	335	*e*S	Sn	17 28 49.2	-1.9
TGUH	Tegucigalpa,Un	1.71	27	*e*P	Pn	17 28 33.3	-0.1

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*DJA **28** 17:29:10.0±0.5, 3°S±2°×12°8E±°, h26^{km}±5^{km}, M4.4/18, mb4.6/7, mB4.6/3, MLv4.3/18, Mw(mB)3.9/3*

*IDC **28** 17:29:14.6±1.7, 2°97S×127°84E, h72^{km}±17^{km}, mb3.7/9, mbtmp4.1/12, MS3.1/2, Error ellipse: s-maj=13.5km s-min=8.9km az=83.0*

ISC 28 17:29:12.0±0.9**, 2°91S**±0°04×**127°58E**±0°04**, h42^{km}**±11^{km}**, n39,** σ**1^{s}97**/50**, mb4.0**/9**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLAI	Namlea	0.58	235	P	Pn	17 29 20.9	-3.0
NLAI				S	Sn	17 29 31.3	-0.9
AAI	Ambon	0.99	141	P	Pn	17 29 27.5	-2.0
AAI				S	Sn	17 29 42.1	-0.2
MSAI	Masohi	1.42	108	P	Pn	17 29 36.7	+1.3
MSAI				S	Sn	17 29 52.8	-0.1
SANI	Sanana	1.80	298	P	Pn	17 29 38.8	-1.8
SANI	Sanana	1.80	298	P	Pn	17 29 38.4	-2.2
SANI				S	Sn	17 29 58.8	-3.5
LBMI	Labuha	2.26	358	P	Pn	17 29 46.3	-0.6
LBMI				S	Sn	17 30 13.1	-0.5
BNDI	Bandanaira	2.82	125	P	Pn	17 29 56.8	+2.1
BNDI	Bandanaira	2.82	125	P	Pn	17 29 55.3	+0.6
BNDI				S	Sn	17 30 28.0	+0.5
TNTI	Ternate	3.66	357	P	Pn	17 30 06.5	+0.3
TNTI	Ternate	3.66	357	P	Pn	17 30 06.2	0.0
SIJI	Sorong	4.21	61	P	Pn	17 30 12.7	-1.1
	47nm,0.2s,baz=74,slow=9.0,SNR=103						
SIJI				S	Sn	17 31 00.5	-1.2
	38nm,0.3s,baz=177,slow=0.3,SNR=20						
FAKI	Fak Fak	4.67	90	P	Pn	17 30 18.2	-1.8
FAKI				S	Sn	17 31 08.7	-4.3
LUWI	Luwuk	5.15	291	P	Pn	17 30 26.6	0.0
LUWI	Luwuk	5.15	291	P	Pn	17 30 25.3	-1.3
	72nm,0.7s,0.4nm						
LUWI				S	Sn	17 31 23.0	-1.8
	72nm,0.7s,0.4nm						
GTOI	Gorontalo	5.76	308	P	Pn	17 30 35.9	+0.8
	25nm,0.8s,284nm0.2nm						
GTOI				S	Sn	17 31 43.8	+3.8
	25nm,0.8s,284nm0.2nm						
MRSI	Marisa	6.56	301	P	Pn	17 30 45.7	-0.3
	35nm,0.6s,598nm0.2nm						
RKPI	Ransiki, Papua	6.74	78	P	Pn	17 30 46.1	-2.5
	57nm,0.7s,0.6nm						
SOEI	Soe	7.55	206	P	Pn	17 30 59.5	-0.3
	42nm,0.9s,0.2nm						
BKSI	Bulukumba	7.81	252	P	Pn	17 31 04.5	+1.3
	25nm,0.7s,0.1nm						
SPSI	Sidrap Palu	7.86	262	P	Pn	17 31 06.8	+2.9
TOLI2	Tolitoli	7.88	300	P	Pn	17 31 04.5	+0.3
KAPI	Kappang	8.08	255	P	Pn	17 31 11.3	+4.4
	6.4nm,0.3s,baz=114,slow=10,SNR=5.5						
KAPI				S	Sn	17 32 47.0	+10
	2.4nm,0.3s,baz=247,slow=21,SNR=1.5						
MPSI	Mapaga	8.32	293	P	Pn	17 31 08.9	-1.4
KDU	Kakadu	10.86	154	P	Pn	17 31 47.7	+2.8
KNRA	Kununurra	12.74	175	P	Pn	17 32 13.4	+2.7
	22nm,2.3s						
WRA	Warramunga Arr	18.17	159	P	P	17 33 20.0	-1.3
	4.0nm,0.7s,baz=342,slow=12,SNR=39						
WRA				S	Sn	17 36 41.5	-1.8
	1.0nm,0.9s,baz=344,slow=27,SNR=2.6						
QIS	Mount Isa	21.10	147	P	P	17 33 56.0	+2.8
ASAR	Alice Springs	21.52	164	P	P	17 33 56.7	-1.0
	1.9nm,0.3s,baz=334,slow=8.3,SNR=58						
ASAR				S	S	17 37 50.8	-3.5
	0.9nm,0.8s,baz=349,slow=23,SNR=5.2						
	1.9nm,0.3s						
WRKA	Warakurna	22.01	178	P	P	17 34 04.5	+1.5
STKA	Stephens Creek	31.69	157	P	P	17 35 30.3	-1.5
	0.7nm,0.4s,baz=344,slow=10,SNR=1.3						
	0.7nm,0.4s						
CMAR	Chiang Mai Arr	35.30	308	P	P	17 36 05.8	+2.5
	0.7nm,0.7s,baz=142,slow=8.0,SNR=6.2						
CMAR				LR	LR	17 51 17.4	
	comp=Z,18nm,21.1s,baz=215,slow=37						
	0.7nm,0.7s						
KSRS	Korea Array	40.16	0	P	P	17 36 44.4	+0.2
	1.0nm,0.7s,baz=190,slow=9.6,SNR=4.9						
	1.0nm,0.7s						
MJAR	Matsushiro Arr	40.48	13	P	P	17 36 45.5	-1.4
	3.3nm,1.0s,baz=186,slow=9.1,SNR=6.3						
	3.3nm,1.0s						
USRK	Ussuriysk Ar.	47.06	4	P	P	17 37 39.6	0.0
	2.1nm,0.6s,baz=182,slow=8.2,SNR=5.7						
	2.1nm,0.6s						
SONM	Songino Array	53.83	342	P	P	17 38 30.7	-0.1
	1.8nm,0.8s,baz=158,slow=8.2,SNR=8.1						
	1.8nm,0.8s						
MKAR	Makanchi Array	63.50	327	P	P	17 39 38.3	+0.2
	2.4nm,0.7s,baz=127,slow=7.8,SNR=30						
	2.4nm,0.7s						
ZALV	Zalesovo Beam	66.87	334	P	P	17 39 59.3	-0.4
	1.2nm,0.8s,baz=92,slow=4.5,SNR=4.3						
	1.2nm,0.8s						
KBZ	Khabaz	88.14	314	LR	LR	18 27 08.7	
	comp=Z,14nm,19.0s,baz=155,slow=39						
TORD	Torodi Ar. Bea	125.56	284	PKP	PKiKP	17 48 09.7	-0.6
	141nm,0.4s,baz=168,slow=0.4,SNR=14						

WEL 28 17:30:24.3±0.4**, 43°S**±2°×**17°3E**±°**, h5^{km}, M2.0**/3**, ML2.3**/8**, MLv2.0**/3**, Error ellipse: s-maj=0.0km s-min=0.0km az=106.4, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.34	72	P	Pg	17 30 30.9	0.0
KHZ				S	Sg	17 30 36.0	+0.7
GVZ	Greta Valley S	0.45	186	P	Pg	17 30 33.4	+0.5
GVZ				S	Sb	17 30 40.4	-1.3
LTZ	Lake Taylor	0.67	247	P	Pg	17 30 37.1	+0.1
LTZ				S	Sg	17 30 46.3	+0.5
AMCZ	Amberley	0.73	207	P	Pb	17 30 39.0	-0.6
THZ	Tophouse	0.77	349	P	Pg	17 30 39.1	0.0
THZ				S	Sg	17 30 49.4	+0.3
BSWZ	Blackbirch Sta	0.99	36	P	Pn	17 30 44.5	-0.4
BSWZ				S	Sn	17 31 00.2	+0.9
OXZ	Oxford	1.12	224	P	Pg	17 30 44.6	-1.1
OXZ				S	Sg	17 31 00.2	-0.1
MRNZ	Matariki Terra	1.15	347	P	Pb	17 30 46.5	-0.1
MQZ	McQueen’s Vall	1.23	195	P	Pg	17 30 45.4	-2.5
MQZ				S	Sg	17 31 01.5	-2.3
DSZ	Denniston Nort	1.24	308	P	Pg	17 30 48.0	-0.1
DSZ				S	Sn	17 31 05.1	-0.3
INZ	Inchbonnie	1.24	260	P	Pg	17 30 47.7	-0.4
RACZ	Rakaia	1.40	210	P	Pn	17 30 48.3	-2.1
TKNZ	Takaka Hill	1.49	356	P	Pg	17 30 53.2	+0.3
MHCZ	Mount Hutt	1.51	228	P	Pn	17 30 50.2	-1.8
QRZ	Quartz Range	1.75	346	P	Pb	17 30 56.4	-0.5
RPZ	Rata Peaks	1.92	231	P	Pn	17 30 55.9	-1.7
ARCZ	Arundel	2.00	224	P	Pn	17 30 56.9	-1.9
TMZ	Timaru	2.41	219	P	Pn	17 31 02.4	-1.9

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*IDC **28** 17:56:32.2±1.3, 8°36N×58°32E, h0^{km}, mb3.8/8, mbtmp3.8/8, MS3.6/22, Error ellipse: s-maj=43.6km s-min=23.6km az=31.0*

*NEIC **28** 17:56:35.8±1.8, 8°4N±0°2×58°2E±0°1, h10^{km}±2^{km}, mb4.2/19, Error ellipse: s-maj=28.2km s-min=22.0km az=148.0*

ISC 28 17:56:35.7±0.9**, 8°4N**±0°1×**58°3E**±0°1**, h20^{km}, n48,** σ**0^{s}93**/27**, mb4.2**/17**, MS3.6**/21**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	14.80	1	LR	LR	18 04 49.9	
	comp=Z,194nm,18.6s,baz=216,slow=34						
ATD	Arta Tunnel	15.53	283	LR	LR	18 05 41.9	
	comp=Z,4.7nm,18.4s,baz=146,slow=35						
UOSS	Minazif	16.61	353		P	18 00 29.2	-0.7
RAYN	Ar Rayn	19.42	322	P	P	18 00 59.9	-1.1
PALK	Pallekele	22.24	91	LR	LR	18 08 09.1	
	comp=Z,72nm,19.6s,baz=20,slow=31						
KIBK	Kibwezi	22.81	243	P	P	18 01 37.8	+0.2
KIBK				IAmb	IAmb	18 01 47.0	
	comp=Z,14nm,1.5s						
KMBO	Kilima Mbogo	22.99	247	P	P	18 01 39.4	-0.2
LODK	Lodwar	23.32	259	P	P	18 01 44.7	+1.9
LODK				IAmb	IAmb	18 02 27.0	
	comp=Z,9.1nm,1.3s						
MBAR	Mbarara	28.86	253	LR	LR	18 15 39.6	
	comp=Z,87nm,18.1s,baz=83,slow=40						
GEYT	Alibeck	29.44	360	LR	LR	18 14 06.6	
	comp=Z,50nm,18.4s,baz=205,slow=36						
EIL	Elat	30.47	317	LR	LR	18 14 05.4	
	comp=Z,58nm,18.7s,baz=234,slow=34						
BTK	Batken	33.49	18	P	P	18 03 15.4	+1.6
BTK				IAmb	IAmb	18 03 19.8	
	comp=Z,3.6nm,1.1s						
GNI	Garni	33.88	341	LR	LR	18 18 24.6	
	comp=Z,52nm,19.9s,baz=166,slow=39						
BRDH	Bariadhala	35.04	62	LR	LR	18 16 27.0	
	comp=Z,159nm,18.5s,baz=268,slow=34						
KOPT	Kop Dagi	35.30	336	P	P	18 03 30.3	+0.5
AKH	Akhalkalaki	35.43	341	P	P	18 03 31.5	+0.8
KK31	Karatay Array	36.23	15	P	P	18 03 38.2	+0.8
KK31				IAmb	IAmb	18 03 46.7	
	comp=Z,4.6nm,1.2s						
KKAR	Karatay Array	36.23	15	P	P	18 03 38.0	+0.7
KKAR				IAmb	IAmb	18 03 46.7	
	comp=Z,4.6nm,1.2s						
ONI	Oni	36.51	341	P	P	18 03 40.9	+1.1
ONI				IAmb	IAmb	18 03 54.8	
	comp=Z,3.3nm,1.0s						
AAK	Ala-Archa	37.00	20	LR	LR	18 19 15.9	
	comp=Z,112nm,20.6s,baz=208,slow=37						
AAK	Ala-Archa	37.00	20	P	P	18 03 45.5	+1.4
AAK				IAmb	IAmb	18 03 48.6	
	comp=Z,3.6nm,1.4s						
LSA	Lhasa	37.41	51	P	P	18 03 48.3	+0.2
LSA				IAmb	IAmb	18 03 55.8	
	comp=Z,5.9nm,1.1s						
LSZ	Lusaka	37.96	232	LR	LR	18 16 59.2	
	comp=Z,121nm,19.2s,baz=7.0,slow=32						
CMAR	Chiang Mai Arr	40.71	71	P	P	18 04 16.0	+0.6
	comp=Z,0.5nm,0.7s,baz=264,slow=6.4,SNR=5.5						
CMAR				LR	LR	18 19 37.4	
	comp=Z,24nm,21.3s,baz=245,slow=34						
	comp=Z,0.5nm,0.7s						
CMAR	Chiang Mai Arr	40.71	71	P	P	18 04 16.1	+0.7
ABKAR	Akbulak array	40.78	2	P	P	18 04 15.6	+0.1
ABKAR	Akbulak array	40.78	2	P	P	18 04 15.3	-0.2
ABKAR				IAmb	IAmb	18 04 24.1	
	comp=Z,4.6nm,1.1s						
MK31	Makanchi Array	43.45	24	P	P	18 04 37.3	-0.1
MKAR	Makanchi Array	43.45	24	P	P	18 04 37.2	-0.1
	comp=Z,1.0nm,1.2s,baz=216,slow=7.1,SNR=2.7						
	comp=Z,1.0nm,1.2s						
MKAR	Makanchi Array	43.45	24	P	P	18 04 37.5	+0.2
BVAR	Borovoye Array	45.61	10	LR	LR	18 26 03.6	
	comp=Z,76nm,19.1s,baz=206,slow=39						
TSUM	Tsumeb	48.57	235	LR	LR	18 24 52.1	
	comp=Z,49nm,19.7s,baz=69,slow=35						
AKASG	Malin Array Be	48.58	336	LR	LR	18 27 33.4	
	comp=Z,38nm,20.3s,baz=202,slow=38						
ZALV	Zalesovo Beam	50.22	20	P	P	18 05 28.4	-1.8
	comp=Z,1.2nm,0.8s,baz=220,slow=8.7,SNR=4.5						
ZALV				LR	LR	18 27 02.6	
	comp=Z,71nm,21.1s,baz=236,slow=36						
	comp=Z,1.2nm,0.8s						
SUR	Sutherland	54.02	220	LR	LR	18 26 33.8	
	comp=Z,90nm,20.5s,baz=12,slow=33						
DAVOX	Davos/Dischmat	56.19	322	P	P	18 06 13.7	-0.8
	comp=Z,1.1nm,0.5s,baz=154,slow=6.3,SNR=3.7						
	comp=Z,1.1nm,0.5s						
FINES	FINESS Array B	58.06	342	LR	LR	18 33 25.3	
	comp=Z,35nm,18.7s,baz=198,slow=38						
HFS	Hagfors	61.46	336	P	P	18 06 49.7	-0.9
	comp=Z,1.8nm,0.9s,baz=102,slow=6.1,SNR=2.3						
	comp=Z,1.8nm,0.9s						
DBIC	Dimbokro	62.56	273	LR	LR	18 34 34.1	
	comp=Z,42nm,18.3s,baz=160,slow=36						
ESDC	Sonseca Array	63.42	310	P	P	18 07 05.2	+0.9
	comp=Z,2.3nm,1.1s,baz=83,slow=5.5,SNR=10						
	comp=Z,2.3nm,1.1s						
ESDC	Sonseca Array	63.42	310	P	P	18 07 04.8	+0.6
ESDC				IAmb	IAmb	18 07 12.6	
	comp=Z,3.6nm,1.2s						
KLR	Kul'dur	72.92	41	LR	LR	18 41 16.4	
	comp=Z,48nm,18.5s,baz=260,slow=37						

MAW	**Mawson**	**75.85**	**178**	LR	LR	18 34 27.6	
	comp=Z,46nm,18.8s,baz=256,slow=30						
WRA	**Warramunga Arr**	**79.90**	**112**	P	**P**	**18 08 43.1**	**-0.7**
	comp=Z,0.6nm,0.9s,baz=294,slow=4.5,SNR=3.7						
	comp=Z,0.6nm,0.9s						
ASAJ	**Asahikawa**	**80.16**	**47**	LR	LR	18 46 50.2	
	comp=Z,34nm,18.3s,baz=226,slow=38						
ASAR	**Alice Springs**	**80.35**	**116**	P	**P**	**18 08 45.4**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=296,slow=5.1,SNR=5.6						
	comp=Z,0.7nm,0.7s						
PETK	**Petropavlovsk-**	**88.99**	**37**	LR	LR	18 50 16.4	
	comp=Z,50nm,19.8s,baz=130,slow=36						
SNAA	**Sanae**	**89.19**	**196**	LR	LR	18 42 13.7	
	comp=Z,39nm,19.0s,baz=52,slow=31						

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*IDC **28** 18:45:36.3±2.3, 5°.64S×152°.85E, h0km, mb3.7/4, mbtmp3.8/5, ML2.1/1, MS3.2/3, Error ellipse: s-maj=51.2km s-min=24.3km az=98.0*

*NEIC **28** 18:45:41.3±0.9, 5°.68S±0°.06×152°.37E±0°.09, h10km±1km, mb4.3/12, Error ellipse: s-maj=16.4km s-min=7.6km az=297.0*

ISC 28 18:45:44.5±0.9**, 5°.64S**±0°.06×**152°.3E**±0°.1**, h40km, n25, σ1ˢ.18**/27**, mb4.1**/10**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.36**	**348**	Pn	**Pn**	**18 46 05.9**	**-1.1**
	100nm,0.3s,baz=236,slow=0.5,SNR=305						
KRVT				Sn	**Sn**	**18 46 22.3**	**-1.5**
	250nm,0.3s,baz=170,slow=22,SNR=20						
RABL	**Rabaul**	**1.45**	**354**		**Pn**	**18 46 08.1**	**-0.2**
RABL				Sn	**Sn**	**18 46 28.6**	**+2.4**
MANU	**Manus Island**	**6.09**	**306**	Pn	**Pn**	**18 47 12.0**	**-0.1**
PMG	**Port Moresby**	**6.33**	**233**	Pn	**Pn**	**18 47 17.1**	**+1.7**
	2.4nm,0.3s,baz=45,slow=14,SNR=6.4						
PMG				Sn	**Sn**	**18 48 24.8**	**-1.7**
	6.7nm,0.3s,baz=330,slow=21,SNR=6.7						
PMG				LR	LR	18 50 20.2	
	comp=Z,133nm,18.6s,baz=354,slow=42						
	18nm,0.7s						
PMG	**Port Moresby**	**6.33**	**233**		**Pn**	**18 47 16.1**	**+0.7**
PMG				Sn	**Sn**	**18 48 24.8**	**-1.7**
CTA	**Charters Tower**	**15.52**	**202**	LR	LR	18 55 10.3	
	comp=Z,68nm,18.6s,baz=38,slow=36						
KOUNC	**Koumac, New Ca**	**18.84**	**143**	P	**P**	**18 50 00.3**	**-0.9**
KOUNC				IAmb	IAmb	18 50 11.1	
	comp=Z,9.7nm,0.9s						
DZM	**Mont Dzumac**	**21.30**	**141**	LR	LR	18 57 38.5	
	comp=Z,93nm,19.3s,baz=276,slow=34						
SIJI	**Sorong**	**21.53**	**282**	P	**P**	**18 50 32.6**	**+2.0**
	comp=Z,2.0nm,0.6s,baz=143,slow=20,SNR=2.0						
	comp=Z,2.0nm,0.6s						
WB0	**Warramunga Arr**	**22.38**	**230**	P	**P**	**18 50 39.4**	**-0.3**
WB0				IAmb	IAmb	18 50 46.5	
	comp=Z,8.7nm,1.2s						
WB2	**Warramunga Arr**	**22.52**	**229**	P	**P**	**18 50 42.0**	**+0.9**
WB2				IAmb	IAmb	18 50 59.4	
	comp=Z,7.6nm,1.1s						
WRA	**Warramunga Arr**	**22.53**	**229**	P	**P**	**18 50 42.3**	**+1.1**
	comp=Z,1.0nm,0.6s,baz=53,slow=9.9,SNR=7.1						
	comp=Z,1.0nm,0.6s						
KNRA	**Kununurra**	**25.17**	**245**	P	**P**	**18 51 06.3**	**-0.1**
KNRA				IAmb	IAmb	18 51 10.6	
	comp=Z,16nm,0.8s						
AS31	**Alice Springs**	**25.20**	**223**	P	**P**	**18 51 06.6**	**-0.1**
ASAR	**Alice Springs**	**25.20**	**223**	P	**P**	**18 51 07.2**	**+0.5**
	comp=Z,2.5nm,0.7s,baz=58,slow=8.6,SNR=38						
	comp=Z,2.5nm,0.7s						
ASAR	**Alice Springs**	**25.20**	**223**	P	**P**	**18 51 06.4**	**-0.3**
FITZ	**Fitzroy Crossi**	**28.83**	**242**	P	**P**	**18 51 39.0**	**-0.3**
Q19K	**Cape Douglas,**	**77.32**	**25**	P	**P**	**18 57 34.7**	**-0.1**
SVW2	**Sparrevohn**	**77.78**	**23**	P	**P**	**18 57 38.2**	**+0.8**
CNPM	**China Poot**	**78.68**	**26**	P	**P**	**18 57 43.3**	**+1.0**
L19K	**White Mountain**	**78.71**	**22**	P	**P**	**18 57 44.2**	**+1.7**
L19K				IAmb	IAmb	18 58 21.3	
	comp=Z,6.7nm,1.4s						
M19K	**Big River Lodg**	**78.72**	**23**	P	**P**	**18 57 43.9**	**+1.3**
M19K				IAmb	IAmb	18 57 54.1	
	comp=Z,5.9nm,1.2s						
K20K	**Telida**	**79.69**	**22**	P	**P**	**18 57 48.0**	**+0.2**
K20K				IAmb	IAmb	18 58 13.0	
	comp=Z,2.9nm,1.1s						
MKAR	**Makanchi Array**	**80.64**	**319**	P	**P**	**18 57 52.5**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=103,slow=5.5,SNR=4.0						
	comp=Z,0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**150.09**	**287**	PKPbc	**PKPbc**	**19 05 31.3**	**-0.7**
	comp=Z,22nm,0.3s,baz=71,slow=1.8,SNR=637						

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*IDC **28** 19:11:21.4±3.4, 5°.54S×152°.34E, h57km±24km, mb3.3/6, mbtmp3.6/7, ML2.0/1, Error ellipse: s-maj=47.3km s-min=14.3km az=108.0*

ISC 28 19:11:19.4±1.5**, 5°.61S**±0°.09×**152°.4E**±0°.2**, h40km, n9, σ1ˢ.19**/11**, mb3.6**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.34**	**345**	P	**Pn**	**19 11 41.6**	**0.0**
	584nm,0.3s,baz=236,slow=1.5,SNR=436						
KRVT				S	**Sn**	**19 11 58.9**	**+0.7**
	824nm,0.4s,baz=124,slow=22,SNR=21						
PMG	**Port Moresby**	**6.40**	**234**	P	**Pn**	**19 12 51.6**	**+0.5**
	1.8nm,0.3s,baz=207,slow=13,SNR=7.1						
PMG				S	**Sn**	**19 14 01.8**	**-1.2**
	15nm,0.3s,baz=332,slow=21,SNR=8.7						
	12nm,0.9s						
SIJI	**Sorong**	**21.58**	**282**	P	**P**	**19 16 06.1**	**+0.2**
	1.1nm,0.5s,baz=128,slow=19,SNR=1.5						
	1.1nm,0.5s						
WRA	**Warramunga Arr**	**22.59**	**229**	P	**P**	**19 16 18.1**	**+1.4**
	0.4nm,0.4s,baz=51,slow=9.7,SNR=7.9						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**25.27**	**223**	P	**P**	**19 16 43.7**	**+1.6**
	1.5nm,0.8s,baz=58,slow=8.7,SNR=15						
	1.5nm,0.8s						
MKAR	**Makanchi Array**	**80.65**	**319**	P	**P**	**19 23 27.7**	**-0.5**
	0.2nm,0.7s,baz=96,slow=4.5,SNR=2.3						
	0.2nm,0.7s						
ZALV	**Zalesovo Beam**	**81.59**	**326**	P	**P**	**19 23 31.0**	**-1.9**
	0.4nm,0.5s,baz=116,slow=4.8,SNR=2.4						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**83.07**	**22**	P	**P**	**19 23 40.8**	**+0.3**
	0.4nm,0.6s,baz=246,slow=5.1,SNR=8.5						
	0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**150.14**	**287**	PKPbc	**PKPbc**	**19 31 06.2**	**-0.8**
	0.2nm,0.3s,baz=81,slow=4.2,SNR=3.7						

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*TRN **28** 19:40:41.9, 10°.86N×62°.07W, h95km, MD3.1*

*FUNV **28** 19:40:41.5, 10°.85N×62°.15W, h90km, MW3.5*

ISC 28 19:40:38.8±1.5**, 10°.81N**±0°.06×**62°.19W**±0°.05**, h113km**±14km**, n19, σ1ˢ.69**/31**, 1C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.79**	**102**	*i* P	**Pn**	**19 40 59.3**	**+1.1**
TRN				*e*S	**Sn**	**19 41 11.4**	**-1.4**
TPP	**Pointe-a-Pierr**	**0.87**	**124**	*e*P	**Pn**	**19 41 00.1**	**+1.1**
CRUV	**Carupano**	**1.04**	**263⇑**	*e*P	**Pn**	**19 41 02.4**	**+1.8**
CRUV				*e*S	**Sn**	**19 41 15.9**	**-1.2**
TBH	**Brigand Hill**	**1.15**	**106**	*e*P	**Pn**	**19 41 03.1**	**+1.3**
GRGR	**Grenville**	**1.42**	**22**	*e*P	**Pn**	**19 41 05.7**	**+0.9**
GRGR				*e*S	**Sn**	**19 41 23.8**	**-0.8**
TOSP	**Speyside**	**1.69**	**73**	*e*P	**Pn**	**19 41 08.5**	**+0.4**
TOSP				*e*S	**Sn**	**19 41 28.5**	**-1.9**
GCMP	**Grenada, Carri**	**1.83**	**24**	*e*P	**Pn**	**19 41 10.3**	**+0.5**
GCMP				*e*S	**Sn**	**19 41 32.1**	**-1.3**
PCRV	**Puerto La Cruz**	**2.49**	**256**	*e*P	**Pn**	**19 41 20.1**	**+1.9**
SVB	**Belmont**	**2.61**	**20**	*e*P	**Pn**	**19 41 20.8**	**+1.0**
SVB				*e*S	**Sn**	**19 41 50.4**	**-1.0**
SVV	**Soufriere Volc**	**2.67**	**21**	*e*P	**Pn**	**19 41 21.7**	**+1.1**
SVV				*e*S	**Sn**	**19 41 51.3**	**-1.4**
SSV	**Crater Summit**	**2.69**	**21**	*e*P	**Pn**	**19 41 22.9**	**+2.1**
SSV				*e*S	**Sn**	**19 41 52.2**	**-1.0**
MCLT	**Moule a Chique**	**3.13**	**23**	*e*P	**Pn**	**19 41 28.8**	**+2.2**
MCLT				*e*S	**Sn**	**19 42 02.6**	**-1.0**
PRGV	**PARIAGUAN**	**3.16**	**230**	*e*P	**Pn**	**19 41 29.0**	**+1.9**
PRGV				*e*S	**Sn**	**19 42 04.8**	**+0.5**
SLBI	**Saint Lucia, B**	**3.41**	**20**	*e*S	**Sn**	**19 42 09.2**	**-1.0**
MPOM	**Morne Pois Mar**	**3.84**	**20**	*e*S	**Sn**	**19 42 19.7**	**-0.7**
CACV	**CAICARA DEL OR**	**5.37**	**233**	*e*P	Pn	19 41 53.1	-3.6
CACV				*e*S	Sn	19 42 46.9	-11
BENV	**Beln**	**5.39**	**262**	*e*P	**Pn**	**19 41 59.2**	**+2.2**
BENV				*e*S	**Sn**	**19 42 54.8**	**-3.1**
BAUV	**El Baul**	**6.06**	**253**	*e*P	**Pn**	**19 42 06.5**	**+0.5**
BAUV				*e*S	**Sn**	**19 43 10.9**	**-3.1**
MAPV	**Macapo**	**6.25**	**262**	*e*P	**Pn**	**19 42 09.6**	**+1.1**
MAPV				*e*S	**Sn**	**19 43 15.9**	**-2.7**

WEL 28 19:46:32.7±0.5**, 42°S**±3°×**17°2E**±°**, h5km, M2.1**/5**, ML2.3**/9**, MLv2.1**/5**, Error ellipse: s-maj=0.0km s-min=0.0km az=126.4, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRNZ	**Matariki Terra**	**0.31**	**64**	P	Pg	19 46 39.5	+0.7
MRNZ				S	Sg	19 46 44.1	+1.3
THZ	**Tophouse**	**0.45**	**120**	P	Pg	19 46 41.3	0.0
THZ				S	Sg	19 46 47.9	+0.7
DSZ	**Denniston Nort**	**0.48**	**244**	P	Pg	19 46 41.7	-0.4
DSZ				S	Sg	19 46 47.7	-0.6
TKNZ	**Takaka Hill**	**0.66**	**41**	P	Pg	19 46 45.4	0.0
TKNZ				S	Sg	19 46 54.8	+0.8
QRZ	**Quartz Range**	**0.72**	**9**	P	Pg	19 46 46.6	+0.1
QRZ				S	Sg	19 46 56.8	+1.0
NNZ	**Nelson**	**0.81**	**67**	P	Pg	19 46 48.1	-0.2
BSWZ	**Blackbirch Sta**	**1.13**	**100**	P	Pg	19 46 54.4	0.0
TUWZ	**Tuamarina**	**1.17**	**85**	P	Pg	19 46 54.2	-1.0
KHZ	**Kahutara**	**1.23**	**136**	P	Pn	19 46 56.5	+0.1
LTZ	**Lake Taylor**	**1.25**	**184**	P	Pg	19 46 56.5	-0.1
DUWZ	**D'Urville Isla**	**1.37**	**58**	P	Pn	19 46 57.9	-0.6
INZ	**Inchbonnie**	**1.38**	**210**	P	Pn	19 46 57.8	-0.8
TCW	**Tory Channel**	**1.46**	**78**	P	Pn	19 46 59.8	+0.1
GVZ	**Greta Valley S**	**1.51**	**162**	P	Pn	19 47 00.6	+0.2
KIW	**Kapiti Island**	**2.02**	**71**	P	Pb	19 47 09.3	-0.6
WIZ	**White Island**	**5.46**	**44**	P	Pn	19 47 54.5	-0.2

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*IDC **28** 20:02:08.2±1.7, 43°.95N×105°.51W, h0km, mb3.5/1, mbtmp3.2/4, ML3.2/3, Error ellipse: s-maj=45.1km s-min=8.4km az=147.0*

*NEIC **28** 20:02:09.3±1.8, 43°.98N±0°.05×105°.26W±0°.06, h0km±2km, ML3.0/66, Error ellipse: s-maj=8.8km s-min=6.6km az=344.0*

ISC 28 20:02:08.3±0.9**, 43°.98N**±0°.06×**105°.29W**±0°.06**, h0km, n52, σ1ˢ.05**/52**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.91**	**80**	Pg	**Pg**	**20 02 26.4**	**+0.6**
K22A	**Casper**	**1.60**	**215**		**Pn**	**20 02 38.4**	**+0.3**
K22A				IAML		20 03 03.5	
	comp=N,263nm,0.3s						
K22A				IAML		20 03 07.0	
	comp=E,213nm,0.3s						
PHWY	**Pilot Hill**	**2.68**	**183**	Pn	**Pn**	**20 02 53.2**	**+0.3**
PHWY				IAML		20 03 37.0	
	comp=E,55nm,0.8s						
RWWY	**Rawlins**	**2.69**	**212**		**Pn**	**20 02 53.8**	**+0.7**
RWWY				IAML		20 03 31.9	
	comp=E,51nm,0.8s						
RWWY				IAML		20 03 33.3	
	comp=E,50nm,0.9s						
LAO	**LASA Array**	**2.79**	**347**	Pn	**Pn**	**20 02 54.8**	**+0.5**
RLMT	**Red Lodge**	**3.07**	**293**		**Pn**	**20 02 59.3**	**+1.0**
RLMT				IAML		20 03 48.2	
	comp=E,37nm,0.9s						
N23A	**Red Feather La**	**3.12**	**189**		**Pn**	**20 03 00.7**	**+1.7**
N23A				IAML		20 03 56.7	
	comp=N,33nm,0.6s						
PD31	**Pinedale Array**	**3.34**	**250**		**Pn**	**20 03 03.8**	**+1.8**
PDAR	**Pinedale Array**	**3.34**	**250**	Pn	**Pn**	**20 03 03.3**	**+1.3**
	comp=N,2.1nm,0.3s,baz=68,slow=16,SNR=36						
PDAR				Pg	**Pb**	**20 03 08.0**	**-0.6**
	comp=N,3.5nm,0.3s,baz=70,slow=19,SNR=34						
PDAR				Lg	Lg	20 03 48.7	
	comp=N,4.8nm,0.3s,baz=66,slow=32,SNR=8.1						
	comp=N,1.5nm,0.4s						
PDAR	**Pinedale Array**	**3.34**	**250**		**Pn**	**20 03 03.1**	**+1.1**
YMP	**Mirror Lake Pl**	**3.57**	**284**		**Pn**	**20 03 06.4**	**+1.1**
YMP				IAML		20 04 14.7	
	comp=E,35nm,0.6s						
YMP				IAML		20 04 15.1	
	comp=N,36nm,0.9s						
GCMT	**Greycliff**	**3.60**	**302**		**Pn**	**20 03 06.6**	**+1.0**
OGNE	**Ogallala**	**3.87**	**140**		**Pn**	**20 03 09.0**	**-0.1**
FLWY	**Flagg Ranch**	**3.90**	**273**		**Pn**	**20 03 09.9**	**+0.1**
MOOW	**Moose Ponds**	**3.95**	**269**	Pn	**Pn**	**20 03 11.5**	**+1.1**
SNOW	**Snow King Moun**	**4.00**	**265**	Pn	**Pn**	**20 03 12.6**	**+1.5**
SNOW				IAML		20 04 55.2	
	comp=N,28nm,1.8s						
SNOW				IAML		20 04 58.0	
	comp=N,26nm,2.5s						
IMW	**Indian Meadow**	**4.08**	**271**		**Pn**	**20 03 13.6**	**+1.3**
IMW				IAML		20 04 27.6	
	comp=N,19nm,2.7s						
IMW				IAML		20 04 27.6	
	comp=N,15nm,0.8s						
YMR	**Madison River**	**4.13**	**282**	Pn	**Pn**	**20 03 14.3**	**+1.4**
TPAW	**Teton Pass**	**4.13**	**265**	Pn	**Pn**	**20 03 14.2**	**+1.3**
TPAW				IAML		20 04 33.7	
	comp=N,18nm,0.9s						
E28A	**Huff**	**4.16**	**50**	Pn	**Pn**	**20 03 13.6**	**+0.5**
FXWY	**Fox Creek**	**4.17**	**267**		**Pn**	**20 03 13.5**	**+0.1**
ISCO	**Idaho Springs**	**4.18**	**183**		**Pn**	**20 03 12.9**	**-0.8**
AHID	**Auburn Hatcher**	**4.41**	**256**	Pn	**Pn**	**20 03 17.6**	**+0.9**
AHID				IAML		20 04 36.3	
	comp=N,22nm,1.3s						
AHID				IAML		20 04 37.0	
	comp=N,17nm,0.8s						
O20A	**White River Ci**	**4.42**	**211**		**Pn**	**20 03 16.6**	**-0.3**
DGMT	**Dagmar**	**4.56**	**9**		**Pn**	**20 03 20.1**	**+1.6**
SUSD	**Miller**	**4.58**	**82**	Pn	**Pn**	**20 03 20.1**	**+1.3**
RDMU	**Red Mountain**	**4.66**	**224**	Pn	**Pn**	**20 03 20.8**	**+0.7**
RDMU				IAML		20 04 44.5	
	comp=N,14nm,1.1s						
RDMU				IAML		20 06 22.5	
	comp=E,18nm,0.7s						
BOZ	**Bozeman (W)**	**4.80**	**292**	Pn	**Pn**	**20 03 21.1**	**-0.8**
BOZ				IAML		20 04 41.6	
	comp=E,14nm,1.1s						
BOZ				IAML		20 04 45.2	
	comp=E,8.9nm,2.1s						
K31A	**O'Neill**	**4.96**	**104**	Pn	**Pn**	**20 03 25.5**	**+1.5**
SMCO	**Snowmass**	**4.96**	**195**	Pn	**Pn**	**20 03 25.4**	**+0.9**
SMCO				IAML		20 04 58.4	
	comp=E,11nm,1.8s						
SMCO				IAML		20 05 05.9	
	comp=E,11nm,3.1s						
EGMT	**Eagleton**	**5.11**	**324**	Pn	**Pn**	**20 03 26.3**	**+0.2**
HWUT	**Hardware Ranch**	**5.19**	**245**	Pn	**Pn**	**20 03 28.1**	**+0.7**
BSUT	**Blindstream Ca**	**5.32**	**232**	Pn	**Pn**	**20 03 29.4**	**+0.1**
BSUT				IAML		20 05 06.9	
	comp=E,11nm,2.8s						
BSUT				IAML		20 05 54.6	
	comp=N,7.7nm,3.9s						
KSCO	**Kaye Shedlock'**	**5.35**	**157**	Pn	**Pn**	**20 03 30.2**	**+0.7**
HRY	**Holter Researc**	**5.36**	**303**	Pn	**Pn**	**20 03 29.1**	**-0.6**
LRM	**Limekiln Ridge**	**5.41**	**292**	Pn	**Pn**	**20 03 31.2**	**+0.7**
MCMT	**McKenzie Canyo**	**5.48**	**282**	Pn	**Pn**	**20 03 32.0**	**+0.5**
P18A	**Preston Nutter**	**5.71**	**222**	Pn	**Pn**	**20 03 34.7**	**0.0**
BGNE	**Belgrade**	**5.85**	**114**	Pn	**Pn**	**20 03 37.1**	**+0.8**
PV07	**Paradox Valley**	**6.08**	**206**	Pn	**Pn**	**20 03 41.5**	**+1.7**
PV23	**Carpenter Ridg**	**6.19**	**208**	Pn	**Pn**	**20 03 41.0**	**-0.3**
SDCO	**Great Sand Dun**	**6.23**	**182**	Pn	**Pn**	**20 03 41.5**	**-0.3**
SRU	**San Rafael Swe**	**6.25**	**221**	Pn	**Pn**	**20 03 43.8**	**+1.8**
PV10	**Paradox Valley**	**6.27**	**208**	Pn	**Pn**	**20 03 44.3**	**+2.0**
ECSD	**EROS Data Cent**	**6.28**	**89**	Pn	**Pn**	**20 03 41.8**	**-0.4**
PV13	**Radium Mtn., P**	**6.39**	**206**	Pn	**Pn**	**20 03 45.0**	**+1.0**
MSO	**Missoula**	**6.73**	**298**	Pn	**Pn**	**20 03 49.3**	**+0.9**
L34A	**Svendsen Farm,**	**6.84**	**104**	Pn	**Pn**	**20 03 51.6**	**+1.7**
I10CA	**LAC DU BONNET**	**8.87**	**42**	I	I	20 54 10.0	
	baz=225,slow=326,SNR=2.8						
ULM	**Lac du Bonnet**	**8.97**	**42**	Pn	**Pn**	**20 04 19.1**	**+0.1**
	comp=N,0.9nm,0.3s,baz=230,slow=14,SNR=6.2						
ULM				Lg	Lg	20 06 48.5	
	comp=N,0.2nm,0.3s,baz=152,slow=18,SNR=1.6						
	comp=N,1.8nm,0.3s						
YKA	**Yellowknife Ar**	**19.33**	**347**	P	**Pn**	**20 06 36.0**	**+0.1**
	comp=N,0.1nm,0.3s,baz=152,slow=13,SNR=2.3						
	comp=N,0.1nm,0.3s						
MKAR	**Makanchi Array**	**89.37**	**355**	P	**P**	**20 15 04.7**	**-1.9**
	comp=N,0.2nm,0.8s,baz=15,slow=5.9,SNR=2.0						
	comp=N,0.2nm,0.8s						

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*IDC **28** 20:13:41.7±2.7, 1°.63N×127°.19E, h85km±29km, mb3.7/7, mbtmp4.0/9, Error ellipse: s-maj=25.7km s-min=15.2km az=60.0*

*DJA **28** 20:13:41.6±0.6, 2°N±4°×12°7E±°, h58km±10km, M4.2/12, mb4.3/7, mB4.8/5, MLv4.2/12, Mw(mB)4.0/5*

*NEIC **28** 20:13:42.1±1.4, 1°.73N±0°.09×127°.19E±0°.07, h94km±7km, mb4.3/14, Error ellipse: s-maj=13.3km s-min=8.9km az=203.0*

ISC 28 20:13:42.0±0.6**, 1°.81N**±0°.05×**127°.18E**±0°.06**, h100km, n59, σ1ˢ.59**/68**, mb4.1**/14**, 1C-2D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.05**	**170**		**Pn**	**20 14 01.6**	**-1.4**
TNTI				Sn	**Sn**	**20 14 16.6**	**-2.1**
TNTI	**Ternate**	**1.05**	**170**	P	**Pn**	**20 14 01.9**	**-1.1**
TNTI	**Ternate**	**1.05**	**170**	P	**Pn**	**20 14 01.4**	**-1.6**
TNTI				S	**Sn**	**20 14 16.0**	**-2.7**
LBMI	**Labuha**	**2.45**	**173**	P	**Pn**	**20 14 20.3**	**-0.2**
LBMI				S	**Sn**	**20 14 49.6**	**-0.4**
SGSI	**Sangihe**	**2.49**	**318**	P	**Pn**	**20 14 19.4**	**-1.6**
SANI	**Sanana**	**4.02**	**197**	P	**Pn**	**20 14 39.6**	**-1.9**
SANI	**Sanana**	**4.02**	**197**	P	**Pn**	**20 14 39.5**	**-1.9**
GTOI	**Gorontalo**	**4.33**	**254**	P	**Pn**	**20 14 46.6**	**+1.0**
GSPH	**General Santos**	**4.80**	**332⇓**	*e*P	**Pn**	**20 14 50.6**	**-1.5**
GSPH				*e*S	**Sn**	**20 15 44.3**	**-2.2**
SIJI	**Sorong**	**4.87**	**123**	P	**Pn**	**20 14 50.8**	**-2.2**
	1.7nm,0.3s,baz=320,slow=21,SNR=5.3						
SIJI				S	**Sn**	**20 15 45.5**	**-2.8**
	1.5nm,0.3s,baz=236,slow=23,SNR=1.2						
NLAI	**Namlea**	**5.02**	**181**	P	**Pn**	**20 14 54.6**	**-0.4**
	9.5nm,0.4s,0.2nm						
LUWI	**Luwuk**	**5.24**	**237**		**Pn**	**20 14 57.8**	**-0.2**
LUWI				Sn	**Sn**	**20 15 56.0**	**-1.3**
LUWI	**Luwuk**	**5.24**	**237**	P	**Pn**	**20 14 59.3**	**+1.3**
SKMP	**Bagumbayan, Su**	**5.37**	**331⇑**	*e*P	**Pn**	**20 14 59.1**	**-0.6**
SKMP				*e*S	**Sn**	**20 15 56.6**	**-3.7**
MRSI	**Marisa**	**5.41**	**256**	P	**Pn**	**20 15 00.4**	**+0.2**
	82nm,0.8s,1µm0.3nm						
AAI	**Ambon**	**5.55**	**170**	P	**Pn**	**20 15 02.1**	**-0.2**
	22nm,0.8s,0.1nm						
TOLI2	**Tolitoli**	**6.44**	**264**		**Pn**	**20 15 14.0**	**-0.2**
TOLI2				Sn	**Sn**	**20 16 22.3**	**-4.0**
FAKI	**Fak Fak**	**6.91**	**133**	Pn	**Pn**	**20 15 20.0**	**-0.7**
FAKI	**Fak Fak**	**6.91**	**133**	P	**Pn**	**20 15 22.9**	**+2.2**
PAGZ	**Pagadian**	**7.09**	**328⇓**	*e*P	**Pn**	**20 15 22.1**	**-1.0**
PAGZ				*e*S	**Sn**	**20 16 38.5**	**-3.8**
MPSI	**Mapaga**	**7.43**	**259**	P	**Pn**	**20 15 29.1**	**+1.4**
	11nm,0.8s,409nm0.0nm						
MYLDM	**Lahad Datu**	**9.29**	**291**	Pn	**Pn**	**20 15 52.9**	**-0.1**
BKSI	**Bulukumba**	**10.00**	**225**	P	**Pn**	**20 16 03.6**	**+0.9**
KAPI	**Kappang**	**10.05**	**228**	P	**Pn**	**20 16 02.4**	**-1.1**
	8.6nm,0.4s,baz=73,slow=17,SNR=1.4						
KAPI	**Kappang**	**10.05**	**228**	Pn	**Pn**	**20 16 02.5**	**-0.9**
SOEI	**Soe**	**11.85**	**194**	Pn	**Pn**	**20 16 25.9**	**-2.0**
MTN	**Manton Dam**	**15.08**	**165**	Pn	**Pn**	**20 17 07.2**	**-2.6**
KNRA	**Kununurra**	**17.45**	**175**	P	**Pn**	**20 17 38.7**	**-0.4**
KNRA				IAmb	IAmb	20 17 54.8	
	comp=Z,24nm,1.2s						
KNRA	**Kununurra**	**17.45**	**175**	P	**Pn**	**20 17 39.8**	**+0.7**
FITZ	**Fitzroy Crossi**	**19.84**	**184**	P	**P**	**20 18 04.7**	**-0.4**
WB0	**Warramunga Arr**	**22.58**	**162**	P	**P**	**20 18 33.3**	**-1.0**
WB0				IAmb	IAmb	20 18 35.0	
	comp=Z,7.8nm,0.8s						
WRA	**Warramunga Arr**	**22.73**	**162**	P	**P**	**20 18 34.8**	**-1.0**
	comp=Z,3.9nm,0.5s,baz=340,slow=10,SNR=47						
	comp=Z,3.9nm,0.5s						
WRA	**Warramunga Arr**	**22.73**	**162**	P	**P**	**20 18 33.3**	**-2.5**
WB2	**Warramunga Arr**	**22.73**	**162**	P	**P**	**20 18 34.9**	**-0.9**
WB2				IAmb	IAmb	20 18 36.8	
	comp=Z,5.1nm,0.8s						
QIS	**Mount Isa**	**25.35**	**152**	P	**P**	**20 19 00.7**	**+0.9**
AS31	**Alice Springs**	**26.16**	**166**	P	**P**	**20 19 06.5**	**-0.6**
ASAR	**Alice Springs**	**26.16**	**166**	P	**P**	**20 19 06.6**	**-0.5**
	comp=Z,1.5nm,0.4s,baz=348,slow=7.2,SNR=31						
	comp=Z,1.5nm,0.4s						
ASAR	**Alice Springs**	**26.16**	**166**	P	**P**	**20 19 06.0**	**-1.1**
WRKA	**Warakurna**	**26.71**	**178**	P	**P**	**20 19 12.2**	**+0.1**
	comp=Z,12nm,2.1s						
OOD	**Oodnadatta**	**30.55**	**165**	P	**P**	**20 19 45.6**	**-0.5**
CMAR	**Chiang Mai Arr**	**32.26**	**303**	P	**P**	**20 20 03.2**	**+1.9**
	comp=Z,0.3nm,0.6s,baz=125,slow=7.8,SNR=1.5						
	comp=Z,0.3nm,0.6s						
FORT	**Forrest**	**32.42**	**179**	P	**P**	**20 20 01.7**	**-0.8**
MORW	**Morawa**	**32.51**	**198**	P	**P**	**20 20 03.0**	**-0.3**
MULG	**Mulgathing**	**32.58**	**169**	P	**P**	**20 20 04.4**	**+0.5**
BBOO	**Buckleboo**	**35.44**	**167**	P	**P**	**20 20 28.4**	**-0.3**
BBOO	**Buckleboo**	**35.44**	**167**	P	**P**	**20 20 28.4**	**-0.3**
MJAR	**Matsushiro Arr**	**36.03**	**15**	P	**P**	**20 20 37.1**	**+3.4**
	comp=Z,0.5nm,0.5s,baz=197,slow=9.8,SNR=1.6						
	comp=Z,0.5nm,0.5s						
STKA	**Stephens Creek**	**36.19**	**159**	P	**P**	**20 20 34.9**	**-0.2**
	comp=Z,4.2nm,0.7s,baz=334,slow=8.1,SNR=13						
	comp=Z,4.2nm,0.7s						
STKA	**Stephens Creek**	**36.19**	**159**	P	**P**	**20 20 34.7**	**-0.3**
STKA				IAmb	IAmb	20 20 36.1	
	comp=Z,1.2nm,0.8s						
STKA	**Stephens Creek**	**36.19**	**159**	P	**P**	**20 20 35.0**	**0.0**
TOO	**Toolangi**	**42.70**	**158**	P	**P**	**20 21 30.4**	**+1.2**
TOO				IAmb	IAmb	20 21 36.5	
	comp=Z,29nm,1.5s						
MK31	**Makanchi Array**	**59.38**	**326**	P	**P**	**20 23 34.8**	**+0.9**
MK31				IAmb	IAmb	20 23 39.2	
	comp=Z,3.0nm,1.5s						
MKAR	**Makanchi Array**	**59.38**	**326**	P	**P**	**20 23 36.1**	**+2.3**
	comp=Z,0.9nm,0.6s,baz=122,slow=8.6,SNR=16						
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**59.38**	**326**	P	**P**	**20 23 34.7**	**+0.8**
MRNZ	**Matariki Terra**	**59.62**	**141**	P	**P**	**20 23 34.0**	**-1.6**
LBZ	**Lake Benmore**	**59.85**	**146**	P	**P**	**20 23 37.1**	**-0.1**
LBZ				IAmb	IAmb	20 23 59.4	
	comp=Z,11nm,1.2s						
BSWZ	**Blackbirch Sta**	**60.50**	**141**	P	**P**	**20 23 41.6**	**+0.1**
KURBB	**Kurchatov Arra**	**63.59**	**328**	P	**P**	**20 24 04.0**	**+2.0**
	comp=Z,1.0nm,0.5s,baz=129,slow=6.3,SNR=25						
	comp=Z,1.0nm,0.5s						
KURK	**Kurchatov**	**63.59**	**328**	P	**P**	**20 24 03.8**	**+1.7**
KURK				IAmb	IAmb	20 24 05.9	
	comp=Z,2.4nm,0.5s						

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*IDC **28** 20:48:54.1±1.5, 2°.86S×127°.65E, h0km, mb3.7/2, mbtmp3.9/4, ML3.8/2, Error ellipse: s-maj=33.7km s-min=25.4km az=78.0*

*DJA **28** 20:48:56.6±0.2, 3°S±2°×12°8E±°, h10km, M4.0/15, mb4.3/5, mB4.7/1, MLv3.8/15, Mw(mB)4.0/1*

ISC 28 20:48:59.1±0.9**, 2°.94S**±0°.05×**127°.56E**±0°.05**, h42km, n15, σ1ˢ.44**/19**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.55**	**237**	P	**Pn**	**20 49 09.2**	**-1.4**
NLAI				S	**Sn**	**20 49 18.8**	**+0.1**
AAI	**Ambon**	**0.98**	**140**	P	**Pn**	**20 49 15.0**	**-1.5**
AAI				S	**Sn**	**20 49 30.0**	**+0.8**
MSAI	**Masohi**	**1.43**	**107**	P	**Pn**	**20 49 23.2**	**+0.6**
SANI	**Sanana**	**1.80**	**299**	P	**Pn**	**20 49 25.7**	**-2.0**
LBMI	**Labuha**	**2.28**	**359**	P	**Pn**	**20 49 33.9**	**-0.5**
LBMI				S	**Sn**	**20 50 01.9**	**+0.6**
BNDI	**Bandanaira**	**2.82**	**124**	P	**Pn**	**20 49 42.8**	**+1.0**
TNTI	**Ternate**	**3.69**	**357**	P	**Pn**	**20 49 53.4**	**-0.3**
SIJI	**Sorong**	**4.24**	**61**	Pn	**Pn**	**20 49 60.0**	**-1.3**
	6.4nm,0.3s,baz=248,slow=19,SNR=54						
SIJI				Sn	**Sn**	**20 50 47.4**	**-2.1**
	3.0nm,0.3s,baz=27,slow=21,SNR=12						
	19nm,0.2s						
FAKI	**Fak Fak**	**4.69**	**90**	P	**Pn**	**20 50 05.9**	**-1.5**
LUWI	**Luwuk**	**5.14**	**291**	P	**Pn**	**20 50 14.1**	**+0.5**
	41nm,0.8s,0.2nm						
GTOI	**Gorontalo**	**5.77**	**308**	P	**Pn**	**20 50 25.6**	**+3.4**
	8.9nm,0.8s,0.1nm						
MRSI	**Marisa**	**6.56**	**301**	P	**Pn**	**20 50 34.0**	**+0.9**
	17nm,0.5s,560nm0.1nm						
WRA	**Warramunga Arr**	**18.15**	**159**	P	**Pn**	**20 53 07.7**	**-0.5**
	0.3nm,0.3s,baz=341,slow=12,SNR=21						
	1.4nm,0.6s						
ASAR	**Alice Springs**	**21.50**	**164**	P	**P**	**20 53 44.8**	**+0.1**
	1.4nm,0.3s,baz=343,slow=12,SNR=16						
	1.4nm,0.3s						
MKAR	**Makanchi Array**	**63.52**	**327**	P	**P**	**20 59 26.2**	**+1.0**
	0.5nm,0.7s,baz=130,slow=7.1,SNR=6.3						
	0.5nm,0.7s						

WEL 28 20:51:20.3±0.6**,33°S**±4°×**17°9W**±°**,h33**^{km}**,M4.3**/10**,mB4.8**/5**,ML4.6**/15**,MLv4.4**/10**,Mw(mB)4.0**/5**,Error ellipse: s-maj=0.0km s-min=0.0km az=110.3,confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	4.20	12	P	Pn	20 52 18.8	-3.1
GLKZ				S	Sn	20 53 06.9	-2.9
MXZ	**Matakaoa Point**	4.75	208	P	Pn	20 52 31.8	+2.2
MXZ				S	Sn	20 53 21.8	-1.6
PKGZ	**Pakihiroa**	5.12	208	P	Pn	20 52 35.7	+1.0
PKGZ				S	Sn	20 53 33.0	+0.3
HAZ	**Te Kaha**	5.13	211	P	Pn	20 52 36.1	+1.4
PUZ	**Puketiti**	5.21	205	S	Sn	20 53 35.8	+0.8
RUGZ	**Raukumara Rang**	5.35	210	P	Pn	20 52 39.3	+1.4
TWGZ	**Tauwhareparae**	5.41	207	P	Pn	20 52 41.2	+2.5
TWGZ				S	Sn	20 53 39.5	-0.4
KUZ	**Kuaotunu**	5.53	231	P	Pn	20 52 44.5	+4.1
CNGZ	**Carnagh Statio**	5.60	204	P	Pn	20 52 39.6	-1.6
CNGZ				S	Sn	20 53 49.0	+4.5
TKGZ	**Te Karaka**	5.69	207	P	Pn	20 52 42.5	+0.1
TKGZ				S	Sn	20 53 44.1	-2.5
MWZ	**Matawai**	5.72	209	P	Pn	20 52 43.8	+0.8
MWZ				S	Sn	20 53 44.1	-3.4
URZ	**Urewera**	5.84	212	P	Pn	20 52 45.9	+1.4
URZ				S	Sn	20 53 48.8	-1.5
RIGZ	**Rimuhau**	5.96	206	P	Pn	20 52 47.8	+1.7
RIGZ				S	Sn	20 53 49.3	-3.9
SNGZ	**Shannon Statio**	6.18	208	P	Pn	20 52 51.2	+1.9
SNGZ				S	Sn	20 53 58.9	+0.1
RTZ	**Ruatahuna**	6.19	211	P	Pn	20 52 49.9	+0.4
RAHZ	**Arahi**	6.40	209	P	Pn	20 52 54.5	+2.2
MTHZ	**Maungataniwha**	6.45	211	P	Pn	20 52 55.0	+2.1
MTHZ				S	Sn	20 54 06.3	+0.9
OUZ	**Omahuta**	6.46	251	P	Pn	20 52 56.3	+3.2
OUZ				S	Sn	20 54 06.2	+0.5
ARHZ	**Aropaoanui**	6.73	208	P	Pn	20 52 58.3	+1.5
BKZ	**Black Stump Fm**	6.86	211	P	Pn	20 52 59.1	+0.5
BKZ				S	Sn	20 54 12.2	-3.3

IDC 28 20:53:54.2±3.1**,4°.30S**×**135°.48E,h0**^{km}**,mb3.1**/1**,mbtmp3.3**/4**,ML3.2**/3**,MS3.2**/1**,Error ellipse: s-maj=99.1km s-min=29.4km az=72.0,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	5.41	309	Pn	Pn	20 55 16.4	+0.1
	2.4nm,0.3s,baz=165,slow=17,SNR=11						
	4.7nm,0.3s						
WRA	**Warramunga Arr**	15.59	184	Pn	Pn	20 57 35.6	+0.1
	baz=5.2,slow=12,SNR=2.2						
	0.4nm,0.8s						
CTA	**Charters Tower**	18.88	147	LR	LR	21 05 09.4	
	comp=Z,70nm,21.3s,baz=262,slow=36						
ASAR	**Alice Springs**	19.32	184	P	P	20 58 21.1	0.0
	0.1nm,0.3s,baz=12,slow=11,SNR=6.0						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	69.12	324	P	P	21 05 02.3	0.0
	0.1nm,0.4s,baz=121,slow=5.6,SNR=2.2						
	0.1nm,0.4s						

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*MOS **28** 20:59:54.1±1.1, 56°.46N×156°.48W, h34^{km}, mb5.1/55, Error ellipse: s-maj=9.2km s-min=4.3km az=92.7*

*NEIC **28** 20:59:57.4±1.8, 56°.38N±0°.08×156°.24W±0°.04, h55^{km}±5^{km}, Error ellipse: s-maj=11.6km s-min=0.8km az=166.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.09; $M_{\theta\theta}$1.05; $M_{\phi\phi}$-2.14; $M_{r\theta}$-1.52; $M_{\theta\phi}$4.60; $M_{\phi r}$-3.37; Fault plane solution: $M_0$6.18000×10^{15} NP1: ϕ_s283.75000°, δ54.09000°, λ12.39000°. NP2: ϕ_s186.41000°, δ79.99000°, λ143.45000°. Principal axes: T 6.3611, Plg33.0000°, Azm139.0000°; N -0.3811, Plg52.0000°, Azm353.0000°; P -5.9800, Plg17.0000°, Azm240.0000°;*

*NEIC **28** 20:59:57.4, 56°.36N×156°.22W, h54^{km}*

*IDC **28** 20:59:57.2±1.6, 56°.51N×156°.50W, h42^{km}±14^{km}, mb4.4/42, mbtmp4.7/47, ML4.7/5, MS3.5/35, Error ellipse: s-maj=14.0km s-min=7.4km az=12.0*

*AEIC **28** 20:59:58.3±2.0, 56°.31N±0°.08×156°.24W±0°.08, h46^{km}±5^{km}, ML4.3, mb5.0/139(NEIC), ML4.4/28(NEIC), Mwr4.5/34(NEIC), Error ellipse: s-maj=11.3km s-min=5.7km az=163.0*

ISC 28 20:59:56.2±0.5**,56°.38N**±0°.04×**156°.28W**±0°.03**,h42**^{km}±3^{km}**, h42**^{km}**:pP-P,n791,**$\sigma 1^{s}.46$/846**,mb4.9**/173**,MS3.5**/34**, 46C-10D,Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHGN	**Chignik**	1.19	267		Pn	21 00 17.9	+1.5
CHGN				Sn	Sn	21 00 32.7	+1.4
CHGN	**Chignik**	1.19	267	P	Pn	21 00 18.0	+1.6
	baz=89,SNR=282						
CHGN				S	Sn	21 00 33.0	+1.6
	baz=89						
R17K	**Ugashik Creek**	1.27	357	P	Pn	21 00 20.2	+2.7
	baz=176						
R17K				S	Sn	21 00 37.1	+3.8
	baz=176						
R16K	**Pilot Point**	1.39	330	P	Pn	21 00 21.4	+2.3
	baz=149,SNR=614						
R16K				S	Sn	21 00 39.6	+3.4
	baz=149						
OHAK	**Old Harbor**	1.85	62		Pn	21 00 26.8	+1.5
OHAK				Sn	Sn	21 00 47.1	-0.4
OHAK				IAML		21 00 49.7	
	comp=N,2μm,0.4s						
OHAK				IAML		21 00 49.9	
	comp=E,3μm,0.3s						
OHAK	**Old Harbor**	1.85	62	P	Pn	21 00 26.9	+1.5
OHAK	**Old Harbor**	1.85	62	P	Pn	21 00 26.9	+1.5
	baz=242,SNR=112						
OHAK				S	Sn	21 00 48.3	+0.7
	baz=242						
Q17K	**Contact Creek**	1.90	6	P	Pn	21 00 28.4	+2.2
	baz=186,SNR=104						
Q17K				S	Sn	21 00 51.0	+2.0
	baz=186						
Q16K	**King Salmon**	2.31	355	P	Pn	21 00 33.9	+2.1
	baz=174,SNR=118						
Q16K				S	Sn	21 01 00.6	+1.7
	baz=174						
Q18K	**Katmai Hardscr**	2.38	16	P	Pn	21 00 34.9	+2.1
	baz=196,SNR=70						
Q18K				S	Sn	21 01 02.3	+1.6
	baz=196						
KDAK	**Kodiak Island**	2.46	54	P	Pn	21 00 35.1	+1.4
	comp=E,249nm,0.3s,baz=234,slow=7.9,SNR=3983						
KDAK				S	Sn	21 01 03.1	+0.6
	comp=E,955nm,0.5s,baz=35,slow=22,SNR=26						
KDAK				LR	LR	21 01 48.2	
	comp=E,782nm,19.1s,baz=252,slow=45						
	comp=E,800nm,0.3s						
KDAK	**Kodiak Island**	2.46	54	Pn	Pn	21 00 35.1	+1.4
KDAK				IAML		21 01 03.7	
	comp=E,1μm,0.6s						
KDAK				IAML		21 01 04.0	
	comp=E,1μm,0.4s						
KDAK	**Kodiak Island**	2.46	54	P	Pn	21 00 35.2	+1.4
	baz=235						
KDAK				S	Sn	21 01 03.0	+0.4
	baz=235						
SDPT	**Sand Point**	2.58	248	Pn	Pn	21 00 37.4	+2.0
SDPT				IAML		21 01 20.4	
	comp=E,3μm,1.0s						
SDPT				IAML		21 01 24.0	
	comp=N,2μm,0.7s						
SDPT	**Sand Point**	2.58	248	P	Pn	21 00 37.6	+2.1
SDPT	**Sand Point**	2.58	248	P	Pn	21 00 37.0	+1.6
	baz=66,SNR=22						
P16K	**Nushagak River**	2.81	342	P	Pn	21 00 40.9	+2.2
	baz=160,SNR=233						
P16K				S	Sn	21 01 13.6	+2.3
	baz=160						
P17K	**Kvichak River**	2.83	358	P	Pn	21 00 40.8	+2.0
	baz=178,SNR=80						
P17K				S	Sn	21 01 12.7	+1.2
	baz=178						
Q19K	**Cape Douglas,**	2.92	28		Pn	21 00 42.2	+2.0
Q19K				IAML		21 01 43.6	
	comp=N,2μm,0.9s						
Q19K	**Cape Douglas,**	2.92	28	P	Pn	21 00 42.1	+2.0
	baz=209,SNR=76						
Q20K	**Shuyak Island**	3.06	42	P	Pn	21 00 44.0	+1.9
	baz=224,SNR=27						
P18K	**Big Mountain,**	3.07	10	Pn	Pn	21 00 44.0	+1.7
P18K	**Big Mountain,**	3.07	10	P	Pn	21 00 44.0	+1.7
	baz=190,SNR=24						
P18K				S	Sn	21 01 18.0	+0.2
	baz=190						
S12K	**Black Hills**	3.31	261	P	Pn	21 00 47.1	+1.6
	baz=77,SNR=20						
S12K				S	Sn	21 01 24.2	+0.5
	baz=77						
O16K	**Kokwok River B**	3.37	344	P	Pn	21 00 48.0	+1.8
	baz=162						
O16K				S	Sn	21 01 25.8	+0.9
	baz=162						
O17K	**Koliganek Bris**	3.43	353	P	Pn	21 00 48.8	+1.7
	baz=172,SNR=64						
O17K				S	Sn	21 01 27.2	+0.7
	baz=172						
O18K	**Koktuh Hills**	3.53	9	Pn	Pn	21 00 50.4	+1.9
O18K	**Koktuh Hills**	3.53	9	P	Pn	21 00 50.4	+1.9
	baz=189,SNR=31						
O18K				S	Sn	21 01 32.4	+3.4
	baz=189						
P19K	**Oil Pt**	3.66	25	P	Pn	21 00 52.6	+2.2
	baz=207						
P19K				S	Sn	21 01 34.4	+2.2
	baz=207						
O19K	**Port Alsworth**	3.96	14		Pn	21 00 56.2	+1.7
O19K				IAML		21 02 01.4	
	comp=E,1μm,0.5s						
O19K				IAML		21 02 09.9	
	comp=N,865nm,0.4s						
O19K	**Port Alsworth**	3.96	14	P	Pn	21 00 56.5	+2.1
	baz=195,SNR=47						
ILSW	**Iliamna Southw**	3.98	23		Pn	21 00 56.7	+2.0
HOM	**Homer**	4.11	35		Pn	21 00 58.4	+2.0
HOM	**Homer**	4.11	35	P	Pn	21 00 58.7	+2.3
	baz=218,SNR=7.8						
HOM				S	Sn	21 01 43.7	+0.6
	baz=218						
CNPM	**China Poot**	4.14	38	Pn	Pn	21 00 58.6	+1.7
CNPM				IAML		21 02 00.5	
	comp=N,382nm,0.8s						
CNPM				IAML		21 02 01.3	
	comp=E,310nm,0.8s						
O20K	**Slope Mountain**	4.18	26	P	Pn	21 01 00.1	+2.6
	baz=208,SNR=36						
N16K	**Nishlik Lake**	4.31	343	P	Pn	21 01 01.4	+2.1
	baz=161						
FALS	**False Pass**	4.33	252		Pn	21 01 01.2	+1.8
FALS	**False Pass**	4.33	252	P	Pn	21 01 02.2	+2.8
FALS	**False Pass**	4.33	252	P	Pn	21 01 01.2	+1.8
	baz=67,SNR=12						
BRLK	**Bradley Lake**	4.44	38	Pn	Pn	21 01 02.1	+1.1
BRLK				IAML		21 01 54.2	
	comp=E,321nm,0.5s						
BRLK				IAML		21 01 54.5	
	comp=N,327nm,0.3s						
BRSE	**Bradley Lake S**	4.47	39		Pn	21 01 02.7	+1.3
BRSE	**Bradley Lake S**	4.47	39	P	Pn	21 01 02.7	+1.3
	baz=223,SNR=71						
RSO	**Redoubt South**	4.50	23		Pn	21 01 04.4	+2.5
N19K	**Bonanza Creek**	4.55	11	P	Pn	21 01 04.9	+2.4
	baz=192						
SVW2	**Sparrevohn**	4.75	4	Pn	Pn	21 01 07.2	+1.9
SVW2				IAML		21 02 39.7	
	comp=E,222nm,1.3s						
SVW2	**Sparrevohn**	4.75	4	P	Pn	21 01 07.1	+1.9
CAPN	**Captain Cook N**	5.15	29		Pn	21 01 13.7	+3.0
CAPN	**Captain Cook N**	5.15	29	P	Pn	21 01 13.7	+3.0
	baz=213,SNR=22						
SLKM	**Skilak Lake**	5.22	35		Pn	21 01 12.3	+0.6
SPCR	**Spurr Chakacha**	5.28	22	P	Pn	21 01 14.5	+2.0
	baz=205,SNR=30						
SPU	**Mount Spurr**	5.29	23		Pn	21 01 14.6	+1.9
O22K	**Cooper Landing**	5.36	37		Pn	21 01 14.2	+0.5
O22K	**Cooper Landing**	5.36	37	P	Pn	21 01 14.4	+0.7
	baz=222,SNR=16						
M19K	**Big River Lodg**	5.63	9	P	Pn	21 01 19.5	+2.3
	baz=190						
FIS	**Fire Island**	5.72	31		Pn	21 01 20.6	+2.0
M20K	**Styx River**	5.75	15	P	Pn	21 01 21.7	+2.6
	baz=197						
RC01	**Rabbit Creek A**	5.82	33	Pn	Pn	21 01 21.1	+1.2
RC01	**Rabbit Creek A**	5.82	33	P	Pn	21 01 21.2	+1.3
	baz=218,SNR=62						
SUA	**Susitna One**	5.85	27		Pn	21 01 21.9	+1.5
SUA	**Susitna One**	5.85	27	P	Pn	21 01 21.9	+1.5
	baz=211,SNR=138						
L19K	**White Mountain**	5.87	7	P	Pn	21 01 23.0	+2.4
	baz=188						
P23K	**Montague Islan**	5.93	49	P	Pn	21 01 22.6	+1.2
	baz=236,SNR=7.9						
Q23K	**Middleton Isla**	6.11	56	P	Pn	21 01 25.2	+1.4
	baz=244						
PWL	**Port Wells**	6.11	39	Pn	Pn	21 01 24.5	+0.5
PWL	**Port Wells**	6.11	39	P	Pn	21 01 24.4	+0.5
	baz=226,SNR=19						
SKT	**Skwentna**	6.12	21		Pn	21 01 25.1	+1.0
SKT	**Skwentna**	6.12	21	P	Pn	21 01 25.6	+1.5
	baz=205,SNR=17						
L20K	**Farewell, AK**	6.24	10	P	Pn	21 01 28.2	+2.5
	baz=192						
UNV	**Unalaska Valle**	6.39	251	Pn	Pn	21 01 28.3	+0.6
UNV	**Unalaska Valle**	6.39	251	P	Pn	21 01 28.4	+0.6
	baz=63						
PMR	**Palmer**	6.40	32	Pn	Pn	21 01 28.0	+0.2
PMR	**Palmer**	6.40	32	P	Pn	21 01 28.7	+0.9
PMR	**Palmer**	6.40	32	P	Pn	21 01 28.0	+0.2
PMR	**Palmer**	6.40	32	P	Pn	21 01 27.9	+0.1
	baz=218,SNR=17						
KNK	**Knik Glacier**	6.47	35		Pn	21 01 29.3	+0.5
KNK	**Knik Glacier**	6.47	35	P	Pn	21 01 29.2	+0.4
	baz=222,SNR=23						
TTA	**Tatalina**	6.58	1	Pn	Pn	21 01 32.0	+1.7
TTA	**Tatalina**	6.58	1	P	Pn	21 01 32.3	+2.0
TTA	**Tatalina**	6.58	1	P	Pn	21 01 32.0	+1.7
TTA	**Tatalina**	6.58	1	P	Pn	21 01 32.3	+2.0
	baz=181,SNR=16						
GHO	**Glory Hole Cre**	6.60	32		Pn	21 01 31.0	+0.3
CUT	**Chulitna**	6.78	24	P	Pn	21 01 34.6	+1.6
	baz=209,SNR=16						
SML	**Sawmill**	6.81	34		Pn	21 01 34.0	+0.6
SML	**Sawmill**	6.81	34	P	Pn	21 01 34.2	+0.7
	baz=220,SNR=14						
PPLA	**Purkeypile**	6.86	16	Pn	Pn	21 01 36.5	+2.2
PPLA	**Purkeypile**	6.86	16	P	Pn	21 01 36.8	+2.6
	baz=199,SNR=15						
EYAK	**Cordova Ski Ar**	6.92	49		Pn	21 01 35.4	+0.4
EYAK	**Cordova Ski Ar**	6.92	49	P	Pn	21 01 36.3	+1.3
EYAK	**Cordova Ski Ar**	6.92	49	P	Pn	21 01 36.1	+1.2
	baz=237,SNR=33						
M23K	**Glacier View**	6.99	35	P	Pn	21 01 36.6	+0.7
	baz=222,SNR=25						
K20K	**Telida**	7.09	8		Pn	21 01 39.1	+1.8
K20K	**Telida**	7.09	8	P	Pn	21 01 39.6	+2.3
	baz=190,SNR=50						
SCM	**Sheep Creek Mo**	7.15	36		Pn	21 01 39.0	+0.8
SCM	**Sheep Creek Mo**	7.15	36	P	Pn	21 01 39.0	+0.8
SCM	**Sheep Creek Mo**	7.15	36	P	Pn	21 01 38.8	+0.7
	baz=224,SNR=30						
DIV	**Divide**	7.24	45		Pn	21 01 39.9	+0.4
CAST	**Castle Rocks**	7.37	15		Pn	21 01 42.7	+1.5
CAST	**Castle Rocks**	7.37	15	P	Pn	21 01 42.8	+1.6
	baz=198,SNR=26						
KLU	**Klutina**	7.41	42		Pn	21 01 42.2	+0.4
KLU	**Klutina**	7.41	42	P	Pn	21 01 42.4	+0.6
	baz=230,SNR=62						
KTH	**Kantishna Hill**	7.68	18	Pn	Pn	21 01 45.8	+0.4
TRF	**Thorofare Moun**	7.70	20		Pn	21 01 46.1	+0.3
TRF	**Thorofare Moun**	7.70	20	P	Pn	21 01 46.5	+0.7
	baz=205,SNR=14						
SPIA	**Saint Paul Isl**	7.72	282		Pn	21 01 48.4	+2.5
SPIA	**Saint Paul Isl**	7.72	282	P	Pn	21 01 48.8	+2.9
SPIA	**Saint Paul Isl**	7.72	282	P	Pn	21 01 48.6	+2.7
	baz=90						
M24K	**Tolsona, Glenn**	7.73	38		Pn	21 01 46.6	+0.5
M24K	**Tolsona, Glenn**	7.73	38	P	Pn	21 01 47.2	+1.1
	baz=226,SNR=23						
CHUM	**Lake Minchumin**	7.78	13	P	Pn	21 01 48.7	+1.9
	baz=196,SNR=15						
RND	**Reindeer**	7.97	25	Pn	Pn	21 01 49.9	+0.5
RND	**Reindeer**	7.97	25	P	Pn	21 01 49.9	+0.5
N25K	**Chitina, Valde**	7.98	44	Pn	Pn	21 01 50.4	+0.8
N25K	**Chitina, Valde**	7.98	44	P	Pn	21 01 50.3	+0.7
	baz=234,SNR=14						
NIKH	**Nikolski High**	8.05	250		Pn	21 01 51.3	+0.8
NIKH	**Nikolski High**	8.05	250	P	Pn	21 01 51.4	+1.0
	baz=60						
BPAW	**Bear Paw Mtn.**	8.18	17	Pn	Pn	21 01 52.4	+0.2
BPAW	**Bear Paw Mtn.**	8.18	17	P	Pn	21 01 52.7	+0.5
	baz=201,SNR=16						
GLB	**Gilahina Butte**	8.20	47	Pn	Pn	21 01 53.1	+0.5
MCK	**McKinley**	8.23	23	Pn	Pn	21 01 53.0	0.0
MCK	**McKinley**	8.23	23	P	Pn	21 01 53.0	0.0
MCK	**McKinley**	8.23	23	P	Pn	21 01 53.4	+0.4
	baz=209,SNR=15						
VRDI	**Verde Repeater**	8.24	49	Pn	Pn	21 01 53.3	+0.1
HARP	**HAARP**	8.28	39	P	Pn	21 01 55.2	+1.6
	baz=228,SNR=25						
MCARA	**McCarthy VSAT**	8.49	48		Pn	21 01 57.2	+0.6
MCARA	**McCarthy VSAT**	8.49	48	P	Pn	21 01 57.6	+1.1
	baz=239,SNR=12						
BWN	**Browne**	8.51	21		Pn	21 01 56.6	-0.1
KIAG	**Kiagna River**	8.56	52		Pn	21 01 57.8	+0.1
PAX	**Paxson**	8.57	35	Pn	Pn	21 01 57.7	+0.1
PAX	**Paxson**	8.57	35	P	Pn	21 01 57.7	+0.1
PAX	**Paxson**	8.57	35	P	Pn	21 01 57.8	+0.1
	baz=224,SNR=48						
BALM	**Baldy**	8.62	51		Pn	21 01 58.6	+0.3
BARN	**Barnard Glacie**	8.93	52		Pn	21 02 02.5	-0.2
NEA2	**Nenana**	8.97	20		Pn	21 02 02.2	-0.8
NEA2	**Nenana**	8.97	20	P	Pn	21 02 02.2	-0.8
	baz=206,SNR=39						
SAMH	**Samovar Hills**	8.99	59		Pn	21 02 04.0	+0.6
M26K	**Nabesna, AK**	9.06	43	P	Pn	21 02 05.3	+0.9
	baz=234						
WRH	**Wood River Hil**	9.06	23	Pn	Pn	21 02 03.1	-1.2
I21K	**Tanana**	9.07	12	P	Pn	21 02 05.6	+1.2
	baz=195,SNR=31						
MLY	**Manley**	9.09	15		Pn	21 02 04.4	-0.3
MLY	**Manley**	9.09	15	P	Pn	21 02 04.4	-0.3
	baz=200,SNR=18						
K24K	**Donnelly Dome**	9.10	31	P	Pn	21 02 06.5	+1.7
	baz=220,SNR=53						
MENT	**Mentasta**	9.13	39		Pn	21 02 05.2	-0.1
MENT	**Mentasta**	9.13	39	P	Pn	21 02 06.9	+1.6
PCA	**Pinnacle**	9.23	60		Pn	21 02 06.6	-0.1
PINM	**Pinnacle**	9.23	60	P	Pn	21 02 07.3	+0.6
	baz=253,SNR=14						
HDA	**Harding Lake**	9.27	26		Pn	21 02 06.1	-1.0
HDA	**Harding Lake**	9.27	26	P	Pn	21 02 06.7	-0.5
	baz=214,SNR=44						
CCB	**Clear Creek Bu**	9.28	23		Pn	21 02 06.0	-1.2
L26K	**Log Cabin Wild**	9.32	39		Pn	21 02 08.7	+0.9
L26K	**Log Cabin Wild**	9.32	39	P	Pn	21 02 09.5	+1.7
	baz=230,SNR=58						
RIDG	**Independent Ri**	9.32	33		Pn	21 02 08.2	+0.3
RIDG	**Independent Ri**	9.32	33	P	Pn	21 02 08.5	+0.7
	baz=222,SNR=26						
ANM	**Nome**	9.35	335		Pn	21 02 09.8	+1.6
ANM	**Nome**	9.35	335	P	Pn	21 02 09.8	+1.6
ANM	**Nome**	9.35	335	P	Pn	21 02 10.5	+2.3
	baz=147,SNR=261						
I23K	**Minto, Yukon-K**	9.42	18		Pn	21 02 08.3	-0.9
I23K	**Minto, Yukon-K**	9.42	18	P	Pn	21 02 08.6	-0.6
	baz=204,SNR=36						
H21K	**Melozitna Rive**	9.46	9	P	Pn	21 02 11.2	+1.5
	baz=192						
MDM	**Murphy Dome**	9.46	21		Pn	21 02 08.8	-0.9
TCOL	**CIGO, UAF Yank**	9.46	22	P	Pn	21 02 09.1	-0.7
	baz=209						
COLA	**College**	9.46	22	P	Pn	21 02 09.8	+0.1
COLA	**College**	9.46	22	*i* P	Pn	21 02 08.2	-1.5
COLA				pmax	pmax		
	comp=Z,7.0nm,0.4s						
COLA	**College**	9.46	22	P	Pn	21 02 09.1	-0.6
	baz=209						
M27K	**Edge Creek, AK**	9.47	45	P	Pn	21 02 11.3	+1.3
	baz=237						
O28M	**Mount Upton**	9.48	56	P	Pn	21 02 10.6	+0.3
	baz=249						
BCPM	**Bancas Point**	9.49	61		Pn	21 02 09.7	-0.5
DOT	**Dot Lake**	9.50	35		Pn	21 02 10.8	+0.5
PNL	**Peninsula**	9.54	63		Pn	21 02 10.5	-0.3
PNL	**Peninsula**	9.54	63	P	Pn	21 02 11.5	+0.7
PNL	**Peninsula**	9.54	63	P	Pn	21 02 10.8	-0.1
	baz=257,SNR=16						
IL31		9.59	25		Pn	21 02 10.3	-1.1
ILAR	**Eielson Array**	9.59	25	P	Pn	21 02 10.4	-1.1
	comp=Z,4.1nm,0.3s,baz=215,slow=14,SNR=107						
ILAR				S	Sn	21 03 49.5	-8.3
	comp=Z,2.7nm,0.4s,baz=101,slow=28,SNR=1.4						
	comp=Z,15nm,0.5s						
ILAR	**Eielson Array**	9.59	25	Pn	Pn	21 02 10.3	-1.3
IMAR	**Indian Mountai**	9.71	6	Pn	Pn	21 02 14.0	+0.8
SCRK	**Sand Creek**	9.76	34	Pn	Pn	21 02 13.6	-0.3
SCRK	**Sand Creek**	9.76	34	P	Pn	21 02 13.9	0.0
	baz=224,SNR=17						
YUK3	**Moose Creek**	9.76	50	P	Pn	21 02 15.5	+1.4
	baz=243,SNR=56						
POKR	**Poker Plat Res**	9.77	23		Pn	21 02 13.3	-0.6
POKR	**Poker Plat Res**	9.77	23	P	Pn	21 02 13.1	-0.8
	baz=210						
YUK8	**Steele Glacier**	9.86	53	P	Pn	21 02 17.6	+2.1
	baz=247,SNR=67						
L27K	**Beaver Creek,**	9.89	41	P	Pn	21 02 16.5	+0.8
	baz=234						
BVCY	**Beaver Creek**	9.90	46	P	Pn	21 02 16.8	+0.9
	baz=239						
BCAR	**Beaver Creek A**	9.91	41	Pn	Pn	21 02 15.7	-0.2
O29M	**Mount Kennedy**	10.09	60	P	Pn	21 02 19.4	+0.8
	baz=254						
G21K	**Allakaket**	10.26	6	P	Pn	21 02 22.3	+1.7
	baz=188						
H24K	**Noodor Dome**	10.31	20	P	Pn	21 02 20.4	-1.0
	baz=207						
YUK6	**Outpost Mounta**	10.38	56	P	Pn	21 02 23.4	+0.9
	baz=251						
YUK4	**Talbot Arm**	10.38	54	P	Pn	21 02 25.0	+2.5
	baz=249,SNR=24						
K27K	**Chicken**	10.41	37	P	Pn	21 02 23.8	+1.1
	baz=229						
PRP	**Porcupine Dome**	10.53	25		Pn	21 02 23.7	-0.8
PRP	**Porcupine Dome**	10.53	25	P	Pn	21 02 23.7	-0.8
	baz=214,SNR=33						
HYT	**Haines Junctio**	10.74	58		Pn	21 02 27.4	-0.1
HYT	**Haines Junctio**	10.74	58	P	Pn	21 02 27.8	+0.4
	baz=253						
G23K	**Bananza Creek**	10.78	13	P	Pn	21 02 27.4	-0.4
	baz=199						
TNA	**Tin City**	10.79	333		Pn	21 02 29.4	+1.6
TNA	**Tin City**	10.79	333	P	Pn	21 02 30.3	+2.5
	baz=143,SNR=50						
P30M	**Million Dollar**	10.84	62	P	Pn	21 02 30.3	+1.7
	baz=258						
M29M	**Somme Creek**	10.90	49	P	Pn	21 02 30.7	+1.2
	baz=244						
F21K	**Alatna River**	10.96	6	P	Pn	21 02 30.8	+0.6
	baz=188						
I26K	**Coal Creek Min**	10.98	30	P	Pn	21 02 30.0	-0.5
	baz=221						
S31K	**Pelican**	10.99	73	P	Pn	21 02 30.5	-0.2
	baz=270						
PLBC	**Pleasant Camp**	11.02	66	P	Pn	21 02 31.8	+0.8
	baz=262,SNR=17						
N30M	**Aishikik Lake**	11.13	55	P	Pn	21 02 32.8	+0.3
	baz=251						
G24K	**Hadweenzic Riv**	11.16	18	P	Pn	21 02 31.4	-1.5
	baz=206,SNR=8.1						
EGAK	**Eagle**	11.20	35		Pn	21 02 33.8	+0.3
EGAK	**Eagle**	11.20	35	P	Pn	21 02 34.1	+0.6
	baz=228,SNR=26						
F22K	**John River**	11.33	8	P	Pn	21 02 36.5	+1.2
	baz=192						
L29M	**L29M**	11.34	46	P	Pn	21 02 36.5	+1.1
	baz=241						
DAWY	**Dawson**	11.36	40		Pn	21 02 36.5	+0.8
DAWY	**Dawson**	11.36	40	P	Pn	21 02 37.1	+1.3
	baz=235,SNR=27						
O30N	**Mendenhall**	11.40	59	P	Pn	21 02 37.7	+1.4
	baz=256,SNR=13						
G25K	**Bearman Lake**	11.47	21	P	Pn	21 02 35.2	-2.0
	baz=209						
SKAG	**Skagway**	11.54	66	P	Pn	21 02 41.7	+3.5
SKAG	**Skagway**	11.54	66	P	Pn	21 02 39.4	+1.2
	baz=263						
I27K	**Kandik River**	11.63	31	P	Pn	21 02 39.1	-0.4
	baz=224						

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M30M  Minto, Yukon       11.66  50           Pn     21 02 40.7 +0.9
M30M  Minto, Yukon       11.66  50     P     Pn     21 02 40.5 +0.7
      baz=246,SNR=6.7
BESE  Bessie Mountai     11.73  70           Pn     21 02 41.7 +0.9
N31M  Braeburn, Yuko     11.73  56           Pn     21 02 42.2 +1.3
N31M  Braeburn, Yuko     11.73  56     P     Pn     21 02 42.6 +1.8
      baz=253,SNR=10
F24K  Squaw Lake         11.84  16     P     Pn     21 02 41.1 -1.1
      baz=203
S32K  Killisnoo          11.90  76     P     Pn     21 02 44.0 +1.0
      baz=274
R32K  Eaglecrest         11.90  72     P     Pn     21 02 43.4 +0.3
      baz=270
K29M  Barlow Dome        11.94  44     P     Pn     21 02 44.2 +0.5
      baz=240
JIS   Juneau Island      11.97  72     P     Pn     21 02 47.9 +3.9
E22K  Anaktuvuk Pass     11.98   8     P     Pn     21 02 45.8 +1.7
      baz=192
RDOG  Red Dog Mine       12.11 348     P     Pn     21 02 49.0 +3.1
      baz=162,SNR=28
E23K  Chandalar          12.12  12     P     Pn     21 02 47.5 +1.5
      baz=198
G26K  Porcupine Rive     12.12  24     P     Pn     21 02 45.5 -0.5
      baz=215
H27K  Steamboat Moun     12.12  29     P     Pn     21 02 45.6 -0.5
      baz=222
E24K  Your Creek         12.27  14     P     Pn     21 02 48.0 -0.2
      baz=201
F25K  Christian Rive     12.29  19     P     Pn     21 02 45.9 -2.5
      baz=209
BMAR  Burnt Mountain     12.35  21           Pn     21 02 46.6 -2.6
P32M  Atlin              12.38  66     P     Pn     21 02 49.6  0.0
      baz=264,SNR=7.4
I29M  Ogilvie Camp,      12.51  37     P     Pn     21 02 52.4 +1.0
      baz=232,SNR=14
G27K  Doyon Strip        12.52  27     P     Pn     21 02 50.1 -1.4
      baz=220
M31M  Drury Creek, Y     12.58  53           Pn     21 02 51.4 -0.9
M31M  Drury Creek, Y     12.58  53     P     Pn     21 02 53.8 +1.5
      baz=252,SNR=16
E25K  Arctic Village     12.77  18     P     Pn     21 02 52.4 -2.4
      baz=208,SNR=13
U33K  Whale Pass         12.87  82     P     Pn     21 02 56.0 -0.2
      baz=280
D23K  Nanushuk River     12.88   9     P     Pn     21 02 57.2 +0.8
      baz=194
P33M  Teslin, Yukon      12.89  63     Pn    Pn     21 02 55.6 -1.1
P33M  Teslin, Yukon      12.89  63     P     Pn     21 02 57.8 +1.1
      baz=263
N32M  Quiet Lake         12.91  59     P     Pn     21 02 57.2 +0.2
      baz=258
FARO  Faro, Yukon        13.05  54     P     Pn     21 03 00.2 +1.4
      baz=253,SNR=6.5
Q32M  Nakina River       13.08  69     P     Pn     21 03 00.8 +1.4
      baz=269,SNR=8.8
WRAK  Wrangell Islan     13.24  80     P     Pn     21 03 01.9 +0.6
      baz=280
E27K  Coleen River       13.62  24     P     Pn     21 03 08.0 +1.5
      baz=217
EPYK  Eagle Plains       13.64  35     P     Pn     21 03 08.7 +1.8
      baz=232,SNR=5.2
S34M  Telegraph Cree     13.71  73     P     Pn     21 03 10.5 +2.7
      baz=274,SNR=10
D25K  Kavik River        13.72  15     P     Pn     21 03 07.0 -0.9
      baz=204
V35K  Ketchikan          13.87  84     P     Pn     21 03 11.0 +1.1
      baz=284
MMPY  Sheldon Lake,      14.09  53     P     Pn     21 03 14.7 +1.8
      baz=255,SNR=30
G30M  tAoh Zraii Nji     14.18  33     P     Pn     21 03 14.2 +0.1
      baz=231
DLBC  Dease Lake         14.26  71     P     Pn     21 03 16.9 +1.5
      comp=Z,1.6nm,0.3s,baz=265,slow=11,SNR=15
DLBC                                   S     Sn     21 05 49.0 -3.0
      comp=Z,1.7nm,0.4s,baz=125,slow=23,SNR=2.2
DLBC                                   LR    LR     21 08 17.4
      comp=Z,278nm,18.3s,baz=278,slow=35
      comp=Z,6.7nm,0.5s
DLBC  Dease Lake         14.26  71     Pn    Pn     21 03 16.6 +1.3
DLBC  Dease Lake         14.26  71     P     Pn     21 03 17.3 +2.0
      baz=273,SNR=12
T35M  Bob Quinn          14.29  77     P     Pn     21 03 17.1 +1.4
      baz=278
C27K  Jago River         14.42  18     P     Pn     21 03 17.1 -0.1
      baz=209
C26K  Camden Bay         14.48  16     P     Pn     21 03 17.2 -0.9
      baz=206
A21K  Barrow             15.01 360     P     Pn     21 03 25.2 +0.1
      baz=179
F31M  Tsiigehtchic       15.23  34     P     Pn     21 03 27.2 -0.8
      baz=234,SNR=13
INK   Inuvik             15.81  32     P     Pn     21 03 35.3 -0.2
      comp=Z,1.9nm,0.3s,baz=223,slow=14,SNR=38
INK                                    S     Sn     21 06 31.6 +2.2
      comp=Z,1.8nm,0.6s,baz=162,slow=20,SNR=1.5
INK                                    ScP   ScP    21 12 02.0 -0.7
      comp=Z,1.4nm,0.7s,baz=315,slow=4.2,SNR=4.0
      comp=Z,8.8nm,0.4s
INK   Inuvik             15.81  32           Pn     21 03 35.0 -0.5
INK   Inuvik             15.81  32     P     Pn     21 03 35.2 -0.3
      baz=232,SNR=41
BBB   Bella Bella        16.91  93     LR    LR     21 09 18.3
      comp=Z,142nm,18.6s,baz=306,slow=33
KOTAN Kotaneelee Air     17.26  64     P     P      21 03 56.2 +1.3
      baz=271,SNR=14
SHEM  Shemya Is, Ala     17.50 270     P     Pn     21 03 54.5 -2.2
      comp=Z,2.9nm,0.3s,baz=86,slow=6.1,SNR=2.4
SHEM                                   LR    LR     21 11 25.7
      comp=Z,66nm,18.6s,baz=3.0,slow=40
      comp=Z,80nm,1.0s
C36M  Paulatuk           19.28  35     P     P      21 04 15.5 -1.4
C36M                                   IAmb  IAmb   21 04 18.6
      comp=Z,52nm,0.6s
C36M  Paulatuk           19.28  35     P     P      21 04 17.4 +0.5
      baz=244,SNR=83
A36M  Sachs Harbour      20.27  28     P     P      21 04 27.0 -0.7
A36M                                   IAmb  IAmb   21 04 32.8
      comp=Z,64nm,0.8s
A36M  Sachs Harbour      20.27  28     P     Pn     21 04 29.0 -0.9
      baz=236,SNR=42
BILL  Bilibino           20.60 319     P     P      21 04 29.6 -1.7
BILL  Bilibino           20.60 319d iP     P      21 04 30.7 -0.6
BILL                                 i *SP   sP     21 04 45.6 -1.3
BILL                                 i              21 04 47.4
BILL                                 i              21 04 57.3
BILL                                   S     S      21 08 21.0 +2.1
BILL                                   SSS   SSS    21 08 48.0
BILL                                   pmax  pmax
      comp=Z,27nm,1.0s
BILL                                   MLR   MLR
      comp=Z,88nm,15.0s
YKA   Yellowknife Ar     21.73  56     P     P      21 04 44.3 +0.8
      comp=Z,17nm,0.5s,baz=273,slow=9.7,SNR=352
YKA                                    PcP   PcP    21 08 43.2 +0.7
      comp=Z,1.3nm,0.7s,baz=273,slow=1.9,SNR=6.2
YKA                                    ScP   ScP    21 12 15.2 -0.7
      comp=Z,0.9nm,0.7s,baz=277,slow=2.1,SNR=12
YKA                                    LR    LR     21 14 39.2
      comp=Z,90nm,21.8s,baz=264,slow=40
      comp=Z,17nm,0.5s
EDM   Edmonton           24.64  79     P     P      21 05 10.9 -1.7
EDM                                    IAmb  IAmb   21 05 15.3
      comp=Z,38nm,0.8s
EDM   Edmonton           24.64  79     P     P      21 05 10.9 -1.7
EDM                                    pmax  pmax
      comp=Z,38nm,0.8s
NEW   Newport            24.98  92     P     P      21 05 17.3 +1.7
      comp=Z,9.8nm,0.8s,baz=286,slow=7.9,SNR=9.4
NEW                                    LR    LR     21 13 36.9
      comp=Z,129nm,18.0s,baz=305,slow=33
      comp=Z,9.8nm,0.8s
NEW   Newport            24.98  92     P     P      21 05 18.0 +2.4
      baz=304,SNR=7.6
PET   Petropavlovsk      25.90 282    eP     P      21 05 23.0 -0.8
PET                                   eS     S      21 09 43.6 -7.1
PET                                    pmax  pmax
      comp=Z,97nm,0.9s
PET                                    MLR   MLR
      comp=Z,100nm,10.0s
YBH   Yreka Blue Hor     26.10 110     P     P      21 05 28.8 +2.9
      comp=Z,2.4nm,0.7s,baz=353,slow=3.5,SNR=5.1
YBH                                    LR    LR     21 13 37.2
      comp=Z,102nm,19.6s,baz=304,slow=31
      comp=Z,2.4nm,0.7s
SEY   Seymchan           26.11 306     P     P      21 05 24.3 -1.4
      comp=Z,14nm,0.6s,baz=95,slow=9.6,SNR=68
      comp=Z,14nm,0.6s
SEY   Seymchan           26.11 306ceP     P      21 05 24.2 -1.5
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SEY                                    pmax  pmax
      comp=Z,21nm,1.0s
PEA0B Petropavlovsk-     26.38 282     P     P      21 05 26.5 -1.7
PEA0B                                  IAmb  IAmb   21 05 29.2
      comp=Z,64nm,1.3s
PEA0B Petropavlovsk-     26.38 282     P     P      21 05 26.5 -1.7
PEA0B                                  pmax  pmax
      comp=Z,64nm,1.3s
PETK  Petropavlovsk-     26.38 282     P     P      21 05 27.3 -1.0
      comp=Z,15nm,0.7s,baz=79,slow=12,SNR=30
PETK                                   LR    LR     21 15 51.0
      comp=Z,49nm,19.8s,baz=81,slow=36
      comp=Z,15nm,0.7s
PETK  Petropavlovsk-     26.38 282     P     P      21 05 27.0 -1.2
PETK  Petropavlovsk-     26.38 282     P     P      21 05 27.0 -1.2
MSO   Missoula           27.56  92     P     P      21 05 37.6 -1.4
MSO   Missoula           27.56  92     P     P      21 05 40.2 +1.2
      baz=306
MA2   Magadan            27.64 299     P     P      21 05 39.0 -0.4
      comp=Z,11nm,0.7s,baz=85,slow=8.9,SNR=8.3
MA2                                    LR    LR     21 17 32.2
      comp=Z,59nm,18.8s,baz=97,slow=38
      comp=Z,11nm,0.7s
MA2   Magadan            27.64 299ceP     P      21 05 39.3 -0.2
MA2                                    pmax  pmax
      comp=Z,14nm,1.0s
EGMT  Eagleton           29.21  87     P     P      21 05 55.1 +1.5
      baz=304,SNR=7.5
RES   Resolute Bay       29.32  28     P     P      21 05 54.3 +0.1
      comp=Z,1.8nm,0.7s,baz=260,slow=11,SNR=11
      comp=Z,1.8nm,0.7s
RES   Resolute Bay       29.32  28     P     P      21 05 54.3 +0.1
HLID  Hailey             29.33  98     P     P      21 05 56.0 +1.1
      baz=311
BOZ   Bozeman (W)        29.59  92     P     P      21 05 58.9 +1.8
      baz=308,SNR=12
ELK   Elko               30.79 103     P     P      21 06 11.2 +3.4
      comp=Z,2.3nm,0.7s,baz=312,slow=6.3,SNR=6.7
ELK                                    LR    LR     21 17 41.8
      comp=Z,73nm,18.8s,baz=268,slow=34
      comp=Z,2.3nm,0.7s
NVAR  Mina Array Bea     30.82 109     P     P      21 06 11.4 +3.3
      comp=Z,6.2nm,0.7s,baz=305,slow=8.6,SNR=40
NVAR                                   PcP   PcP    21 09 04.8 +0.5
      comp=Z,0.9nm,0.7s,baz=284,slow=1.8,SNR=4.0
      comp=Z,6.2nm,0.7s
NVAR  Mina Array Bea     30.82 109     P     P      21 06 07.5 -0.6
H17A  Grant Village      30.92  93     P     P      21 06 12.9 +3.9
      baz=309,SNR=15
IMW   Indian Meadow      31.04  94     P     P      21 06 10.5 +0.4
FLWY  Flagg Ranch        31.05  94     P     P      21 06 10.1 -0.1
FLWY                                   IAmb  IAmb   21 06 14.4
      comp=Z,29nm,0.8s
RLMT  Red Lodge          31.19  91     P     P      21 06 12.3 +1.0
RLMT  Red Lodge          31.19  91     P     P      21 06 13.5 +2.2
      baz=308,SNR=12
DSP   Deep Springs       31.79 110     P     P      21 06 15.3 -1.0
TIN   Tinemaha, Big      31.89 111     P     P      21 06 18.9 +1.4
      baz=320
LAO   LASA Array         31.94  86     P     P      21 06 19.5 +1.8
      baz=306
DGMT  Dagmar             32.03  82     P     P      21 06 20.1 +1.7
      baz=304
R11B  Troy Canyon, C     32.32 106     P     P      21 06 23.7 +2.5
      baz=317,SNR=15
FCC   Fort Churchill     32.38  59     P     P      21 06 22.3 +0.9
FCC   Fort Churchill     32.38  59     P     P      21 06 22.3 +0.9
FCC                                    pmax  pmax
      comp=Z,11nm,0.8s
CWC   Cottonwood Cre     32.44 112     P     P      21 06 23.3 +1.0
      baz=320
DUG   Dugway, Tooele     32.49 101     P     P      21 06 24.3 +1.6
      baz=315
BW06  Boulder Array      32.54  95     P     P      21 06 25.2 +2.0
      baz=311,SNR=19
PD31  Pinedale Array     32.54  95     P     P      21 06 24.8 +1.6
PD31                                   IAmb  IAmb   21 06 26.2
      comp=Z,12nm,0.6s
PDAR  Pinedale Array     32.54  95     P     P      21 06 25.4 +2.3
      comp=Z,12nm,0.6s,baz=312,slow=4.9,SNR=88
PDAR                                   PcP   PcP    21 09 09.0 +0.1
      comp=Z,0.3nm,0.5s,baz=48,slow=1.3,SNR=2.7
PDAR                                   LR    LR     21 17 47.0
      comp=Z,57nm,19.1s,baz=324,slow=33
      comp=Z,12nm,0.6s
PDAR  Pinedale Array     32.54  95     P     P      21 06 24.2 +1.1
PDAR                                   PcP   PcP    21 09 09.0 +0.1
TPNV  Topopah Spring     33.01 109     P     P      21 06 29.8 +2.6
      baz=319,SNR=15
MPMC  Manual Prospec     33.04 111     P     P      21 06 30.3 +2.7
      baz=320,SNR=7.2
LRMC  Laurel Mtn Rad     33.38 112     P     P      21 06 32.4 +1.9
      baz=321,SNR=5.2
TIXI  Tiksi              33.46 326     P     P      21 06 29.7 -1.0
      comp=Z,7.8nm,0.6s,baz=270,slow=23,SNR=11
TIXI                                   LR    LR     21 20 43.0
      comp=Z,36nm,18.2s,baz=38,slow=37
      comp=Z,7.8nm,0.6s
TIXI  Tiksi              33.46 326     P     P      21 06 29.0 -1.6
TIXI                                   IAmb  IAmb   21 06 30.7
      comp=Z,16nm,1.0s
TIXI  Tiksi              33.46 326ceP     P      21 06 28.2 -2.5
TIXI                                   pmax  pmax
      comp=Z,10.0nm,0.7s
SCZ2  Santa Cruz Isl     33.56 116     P     P      21 06 33.7 +1.7
      baz=323
EDW2  Edwards Air Fo     33.69 113     P     P      21 06 34.2 +1.1
      baz=322
GSC   Goldstone, Bar     33.97 111     P     P      21 06 37.5 +1.9
      baz=321
K22A  Casper             34.30  92     P     P      21 06 40.1 +1.6
      baz=311
BFSC  Mount Baldy Ra     34.36 114     P     P      21 06 40.8 +1.7
      baz=322
RWWY  Rawlins            34.55  94     P     P      21 06 41.5 +0.8
HEC   Hector,Ludlow      34.58 111     P     P      21 06 42.5 +1.6
      baz=321
RSSD  Black Hills        34.73  88     P     P      21 06 41.6 -0.6
RSSD                                   PcP   PcP    21 09 15.5 +0.5
RSSD  Black Hills        34.73  88     P     P      21 06 43.2 +1.0
      baz=309
MDND  Maddock            34.91  80     P     P      21 06 45.8 +2.3
      baz=306
GMRC  Granite Mounta     34.97 111     P     P      21 06 46.0 +1.8
      baz=321
O20A  White River Ci     35.04  97     P     P      21 06 47.5 +2.6
      baz=314,SNR=16
PFO   Pinyon Flats O     35.47 113     LR    LR     21 18 41.5
      comp=Z,68nm,18.2s,baz=186,slow=32
PFO   Pinyon Flats O     35.47 113     P     P      21 06 51.0 +2.4
      baz=322
ULM   Lac du Bonnet      35.56  74     P     P      21 06 50.2 +1.3
      comp=Z,4.2nm,0.5s,baz=303,slow=9.6,SNR=7.9
ULM                                    PcP   PcP    21 09 17.1 +0.1
      comp=Z,0.9nm,0.4s,baz=323,slow=5.2,SNR=3.2
ULM                                    LR    LR     21 20 53.7
      comp=Z,82nm,20.8s,baz=354,slow=35
      comp=Z,4.2nm,0.5s
IRM   Iron Mountain      35.72 111     P     P      21 06 53.3 +2.7
      baz=321,SNR=5.9
N23A  Red Feather La     35.79  94     P     P      21 06 53.3 +1.9
      baz=313,SNR=5.2
BC3   Big Chuckawall     35.95 112     P     P      21 06 54.8 +2.1
      baz=322
MONP2 Monument Peak      36.06 114     P     P      21 06 55.0 +1.3
      baz=323
PDMCI Parker Dam,Lak     36.13 110     P     P      21 06 56.3 +2.2
      baz=321
YAK   Yakutsk            36.40 310     P     P      21 06 54.5 -1.4
      comp=Z,22nm,0.6s,baz=149,slow=0.9,SNR=29
YAK                                    LR    LR     21 22 31.6
      comp=Z,72nm,21.1s,baz=87,slow=37
      comp=Z,22nm,0.6s
YAK   Yakutsk            36.40 310     P     P      21 06 54.0 -2.0
YAK   Yakutsk            36.40 310c iP     P      21 06 53.9 -2.0
YAK                                   e*PP   pP     21 07 09.7 +2.2
YAK                                   e             21 08 19.1
YAK                                   eS     S      21 12 25.5 -8.5
YAK                                   e*SS   sS     21 12 40.8  -12
YAK                                   eSS    SnSn   21 15 02.2 -1.9
YAK                                    pmax  pmax
      comp=Z,35nm,0.8s
YAK                                    pmax  pmax
      comp=E,10.0nm,1.1s
YAK                                    pmax  pmax
      comp=N,5.0nm,1.0s
YAK                                    pmax  pmax
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      comp=Z,92nm,3.4s
YAK                                    smax  smax
      comp=E,117nm,4.7s
WUAZ  Wupatki            36.67 105     P     P      21 06 57.7 -1.2
      baz=319
AGMN  Agassiz Nation     36.68  76     P     P      21 06 58.4 -0.2
AGMN                                   IAmb  IAmb   21 07 00.7
      comp=Z,26nm,0.9s
AGMN  Agassiz Nation     36.68  76     P     P      21 06 59.9 +1.3
      baz=306,SNR=19
ISCO  Idaho Springs      36.73  95     P     P      21 06 59.9 +0.4
      baz=314
GLA   Glamis             36.75 112     P     P      21 07 00.2 +0.8
      baz=322
UGL   Uglegorsk          36.90 285    eP     P      21 07 00.3 -0.1
UGL                                    pmax  pmax
      comp=Z,170nm,0.8s
MVCO  Mesa Verde         36.98 101     P     P      21 07 02.4 +0.8
      baz=317
SUSD  Miller             37.34  84     P     P      21 07 05.7 +1.4
      baz=310,SNR=5.7
S22A  4UR Ranch, Cre     37.51  98     P     P      21 07 06.7 +0.6
      baz=316
Q24A  Divide             37.57  95     P     P      21 07 09.0 +2.3
      baz=315
YSS   Yuzh-Sakhalins     37.78 282ceP     P      21 07 07.7 -0.2
YSS                                    pmax  pmax
      comp=Z,27nm,1.3s
B35A  Bob, Littlefor     37.80  75     P     P      21 07 07.9 -0.2
B35A                                   IAmb  IAmb   21 07 09.9
      comp=Z,19nm,1.2s
OGNE  Ogallala           37.93  90     P     P      21 07 10.7 +1.3
      baz=313
SDCO  Great Sand Dun     38.24  97     P     P      21 07 13.9 +1.7
      baz=316,SNR=8.4
214A  Organ Pipe Nat     38.66 111     P     P      21 07 17.5 +2.0
      baz=322
NEEM  North Greenlan     38.84  20   i P     P      21 07 16.9  0.0
NEEM                                   IAmb  IAmb   21 07 18.6
      comp=Z,9.8nm,0.9s
GRNR  Gornyy             38.90 291⇑iP     P      21 07 15.7 -1.6
GRNR                                   pmax  pmax
      comp=Z,30nm,0.6s
KSCO  Kaye Shedlock’     38.94  93     P     P      21 07 17.7 -0.2
KSCO                                   IAmb  IAmb   21 07 21.5
      comp=Z,22nm,1.0s
KSCO  Kaye Shedlock’     38.94  93     P     P      21 07 19.9 +2.0
      baz=314
ECSD  EROS Data Cent     39.09  83     P     P      21 07 19.1  0.0
ECSD                                   IAmb  IAmb   21 07 20.4
      comp=Z,12nm,0.7s
ECSD  EROS Data Cent     39.09  83     P     P      21 07 19.6 +0.6
      baz=310,SNR=10
EYMN  Ely                39.24  74     P     P      21 07 19.2 -1.0
EYMN                                   IAmb  IAmb   21 07 22.3
      comp=Z,36nm,1.1s
EYMN                                   PcP   PcP    21 09 28.6 +0.2
EYMN  Ely                39.24  74     P     P      21 07 20.8 +0.6
      baz=307,SNR=8.3
T25A  Trinidad           39.28  97     P     P      21 07 22.3 +1.4
      baz=316
F36A  Milaca             39.43  78     P     P      21 07 21.9 +0.1
TUC   Tucson             39.44 108     P     P      21 07 23.1 +1.0
      baz=321
ASAJ  Asahikawa          39.65 279     P     P      21 07 23.7  0.0
      comp=Z,9.1nm,0.6s,baz=248,slow=5.6,SNR=16
ASAJ                                   LR    LR     21 23 53.4
      comp=Z,20nm,21.1s,baz=103,slow=36
      comp=Z,9.1nm,0.6s
ANMO  Albuquerque        39.76 101     P     P      21 07 27.1 +2.2
      comp=Z,1.4nm,0.7s,baz=30,slow=6.4,SNR=4.4
ANMO                                   PcP   PcP    21 09 32.4 +1.9
      comp=Z,2.1nm,0.9s,baz=22,slow=5.8,SNR=4.0
ANMO                                   LR    LR     21 22 17.7
      comp=Z,96nm,18.6s,baz=30,slow=34
      comp=Z,1.4nm,0.7s
ANMO  Albuquerque        39.76 101ceP     P      21 07 25.5 +0.6
ANMO                                   pmax  pmax
      comp=Z,4.0nm,1.3s
ANMO  Albuquerque        39.76 101     P     P      21 07 25.9 +0.9
      baz=318
BGNE  Belgrade           39.78  87     P     P      21 07 25.6 +0.8
BGNE  Belgrade           39.78  87     P     P      21 07 25.8 +1.0
      baz=312
E38A  The Farm, Brul     40.03  76     P     P      21 07 27.2 +0.5
E38A                                   IAmb  IAmb   21 07 28.7
      comp=Z,40nm,1.2s
Y22D  IRIS PASSCAL I     40.16 102     P     P      21 07 28.4 +0.2
      baz=319
Y22F  Passcal Instru     40.16 102     P     P      21 07 29.7 +1.6
      baz=319
UPNV  Upernavik          40.17  27   i P     P      21 07 27.6  0.0
UPNV                                   IAmb  IAmb   21 07 28.8
      comp=Z,8.0nm,0.7s
SPMN  Marine on St.      40.23  78     P     P      21 07 29.5 +1.1
      baz=310
NOR   Nord               40.56   8   i P     P      21 07 30.3 -0.5
I37A  Lemond, Waseca     40.68  80     P     P      21 07 32.5 +0.4
CBKS  Cedar Bluff        40.68  91     P     P      21 07 33.8 +1.5
      baz=315
121A  Cookes Peak, D     40.87 105     P     P      21 07 36.2 +2.1
      baz=320
FRB   Frobisher Bay      41.05  43     P     P      21 07 35.5 +0.6
      comp=Z,8.2nm,0.6s,baz=311,slow=9.1,SNR=32
FRB                                    LR    LR     21 23 29.8
      comp=Z,80nm,18.8s,baz=310,slow=34
      comp=Z,8.2nm,0.6s
G40A  Rib Lake           41.61  76     P     P      21 07 40.2 +0.4
COWI  Conover            41.65  75     P     P      21 07 40.2  0.0
ZEA   Zeya               41.78 300    eP     P      21 07 39.0 -2.0
ZEA                                    pmax  pmax
      comp=Z,10.0nm,1.0s
SCIA  State Center       42.18  82     P     P      21 07 45.6 +1.1
      baz=312
KSU1  Kansas State U     42.22  88     P     P      21 07 45.7 +0.8
      baz=314
KLR   Kul'dur            42.24 292     P     P      21 07 44.2 -0.6
      comp=Z,28nm,0.7s,baz=59,slow=7.8,SNR=99
KLR                                    LR    LR     21 26 19.4
      comp=Z,33nm,18.0s,baz=72,slow=38
      comp=Z,28nm,0.7s
KLR   Kul'dur            42.24 292ceP     P      21 07 43.4 -1.4
KLR                                    pmax  pmax
      comp=Z,30nm,0.8s
I40A  Norwalk            42.28  78     P     P      21 07 45.9 +0.6
AMTX  Amarillo           42.43  97     P     P      21 07 47.9 +1.2
      baz=318
MSTX  Muleshoe           42.51  99     P     P      21 07 48.3 +0.9
MSTX  Muleshoe           42.51  99     P     P      21 07 48.6 +1.2
      baz=319
E43A  Lone Tree Farm     42.62  73     P     P      21 07 49.1 +1.1
E43A                                   IAmb  IAmb   21 07 50.1
      comp=Z,29nm,1.0s
MNTX  Cornudas Mount     42.81 103     P     P      21 07 51.3 +1.6
      baz=321
JFWS  Jewell Farm        43.13  79     P     P      21 07 52.4 +0.3
JFWS                                   IAmb  IAmb   21 07 53.2
      comp=Z,30nm,0.7s
JFWS  Jewell Farm        43.13  79     P     P      21 07 52.4 +0.3
JFWS                                   pmax  pmax
      comp=Z,30nm,0.7s
JFWS  Jewell Farm        43.13  79     P     P      21 07 52.6 +0.5
      baz=312,SNR=8.1
I42A  Draeger Farm,      43.21  77     P     P      21 07 53.2 +0.4
I42A                                   IAmb  IAmb   21 07 54.6
      comp=Z,24nm,0.7s
H43A  Windswept, Lux     43.44  76     P     P      21 07 55.3 +0.6
P38A  Dawn               43.56  85     P     P      21 07 56.1 +0.4
HEH   HeiHe              43.81 296     P     P      21 07 54.5 -3.0
HEH                                    pmax  pmax
      comp=Z,8.0nm,0.6s
E46A  Sault Ste Mari     44.05  71     P     P      21 07 59.0 -0.5
E46A                                   IAmb  IAmb   21 08 01.4
      comp=Z,20nm,0.9s
L42A  Oliver, Polo       44.06  80     P     P      21 07 59.2 -0.4
L42A                                   IAmb  IAmb   21 08 00.1
      comp=Z,15nm,0.7s
WMOK  Wichita Mounta     44.15  94     P     P      21 08 01.5 +1.1
      baz=318,SNR=5.4
DAG   Danmarks Havn      44.44  13   i P     P      21 08 01.1 -1.1
DAG                                    IAmb  IAmb   21 08 03.2
      comp=Z,21nm,0.6s
P40A  Paris              44.45  84     P     P      21 08 03.0 +0.2
P40A                                   IAmb  IAmb   21 08 04.1
      comp=Z,24nm,0.8s
GLMI  Grayling           44.90  73     P     P      21 08 07.0 +0.7
      baz=312
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TUL1   Leonard           44.95  91    P        P        21 08 06.5 -0.4
       baz=317,SNR=13
S39A   Bolivar           45.04  87    P        P        21 08 06.8 -0.7
SFJD   Kangerlussuaq     45.16  32    P        P        21 08 09.3 +1.2
       comp=Z,19nm,0.6s,baz=304,slow=6.8,SNR=18
       comp=Z,19nm,0.6s
SFJD   Kangerlussuaq     45.16  32    P        P        21 08 07.1 -1.0
SFJD                                  IAmb     IAmb     21 08 09.9
       comp=Z,20nm,0.7s
SFJD   Kangerlussuaq     45.16  32    P        P        21 08 07.1 -1.0
SFJD                                  pmax     pmax
       comp=Z,20nm,0.7s
SFJD   Kangerlussuaq     45.16  32  i P        P        21 08 08.0 -0.1
SFJD                                  IAmb     IAmb     21 08 09.7
       comp=Z,19nm,0.7s
R40A   Maddies Statio    45.20  85    P        P        21 08 08.3 -0.5
R40A                                  IAmb     IAmb     21 08 09.3
       comp=Z,19nm,0.5s
ABTX   Abilene, Hawle    45.25  97    P        P        21 08 09.2 -0.1
       baz=319
HDIL   Hopedale          45.26  81    P        P        21 08 09.1 -0.1
HDIL   Hopedale          45.26  81    P        P        21 08 09.9 +0.7
       baz=314,SNR=15
BOD    Bodaibo           45.30 311  e P        P        21 08 07.7 -1.6
BOD                                   pmax     pmax
       comp=Z,11nm,1.0s
U38A   Gravette          45.35  89             P        21 08 09.6 -0.4
U38A                                  IAmb     IAmb     21 08 10.8
       comp=Z,11nm,0.6s
USRK   Ussuriysk Ar.     45.35 286    P        P        21 08 08.4 -1.5
       comp=Z,3.0nm,0.4s,baz=53,slow=8.9,SNR=17
USRK                                  LR       LR       21 27 26.2
       comp=Z,62nm,20.0s,baz=48,slow=36
       comp=Z,3.0nm,0.4s
TXAR   Lajitas Array     45.57 104    P        P        21 08 14.6 +2.6
       comp=Z,6.1nm,0.7s,baz=310,slow=5.4,SNR=35
TXAR                                  PcP      PcP      21 09 50.9 +1.0
       comp=Z,0.9nm,0.5s,baz=213,slow=0.9,SNR=4.4
TXAR                                  LR       LR       21 26 46.2
       comp=Z,60nm,18.6s,baz=303,slow=35
       comp=Z,6.1nm,0.7s
SPA0   Spitsbergen Ar    45.62   2  e P        P        21 08 11.0 -0.7
CCM    Cathedral Cave    45.94  85    P        P        21 08 14.7 +0.1
       baz=315
LPIG   La Paz            46.31 115    LR       LR       21 25 01.2
       comp=Z,76nm,20.0s,baz=260,slow=32
DBG    Daneborg          46.32  15  i P        P        21 08 16.1 -1.1
DBG                                   IAmb     IAmb     21 08 18.2
       comp=Z,12nm,0.6s
MDJ    Mudanjiang        46.35 288    P        P        21 08 17.0 -0.7
MDJ                                   PcP      PcP      21 09 52.3 +0.1
MDJ                                   PP       PP       21 10 04.3 -2.5
MDJ                                   ScP      ScP      21 13 37.5 -4.3
MDJ                                   PcS      PcS      21 13 51.5 +4.8
MDJ                                   S        S        21 15 08.0 +6.2
MDJ                                   pmax     pmax
       comp=Z,15nm,0.9s
MDJ                                   pmax     pmax
       comp=Z,180nm,5.6s
NRIK   Noril'sk          46.38 334    P        P        21 08 17.1 -0.5
       comp=Z,34nm,0.6s,baz=55,slow=6.9,SNR=52
       comp=Z,34nm,0.6s
NRIK   Noril'sk          46.38 334    P        P        21 08 17.2 -0.5
SFIN   Lafayette         46.58  79    P        P        21 08 19.9 +0.3
SFIN   Lafayette         46.58  79    P        P        21 08 20.6 +0.9
       baz=314,SNR=11
ICESG  Greenland Ices    46.68  26  i P        P        21 08 19.9 -0.5
ICESG                                 IAmb     IAmb     21 08 21.4
       comp=Z,22nm,0.7s
BNX    BinXian           46.74 291  ⇓ P        P        21 08 20.0 -0.8
BNX                                   pmax     pmax
       comp=Z,11nm,0.7s
BNX                                   pmax     pmax
       comp=Z,140nm,5.0s
T42A   Van Buren         46.75  86    P        P        21 08 19.6 -1.4
DY2G   Dye2              46.79  31  i P        P        21 08 21.2  0.0
JCT    Junction City     46.79  99    P        P        21 08 23.3 +1.8
       baz=320
L48A   N Adams           46.95  76    P        P        21 08 22.8 +0.3
L48A                                  IAmb     IAmb     21 08 23.9
       comp=Z,17nm,0.6s
N47A   Urbana            47.00  78    P        P        21 08 21.8 -1.1
FCAR   Ozark Folk Cen    47.01  88    P        P        21 08 22.3 -0.7
P46A   Rosedale          47.06  80    P        P        21 08 22.6 -0.8
SCHQ   Schefferville     47.09  52    P        P        21 08 23.6 +0.2
       comp=Z,9.4nm,0.6s,baz=310,slow=7.3,SNR=26
SCHQ                                  LR       LR       21 28 20.4
       comp=Z,142nm,18.3s,baz=80,slow=36
       comp=Z,9.4nm,0.6s
SCHQ   Schefferville     47.09  52    P        P        21 08 22.9 -0.5
SCHQ                                  IAmb     IAmb     21 08 24.4
       comp=Z,9.5nm,0.6s
MIAR   Mount Ida         47.18  90    P        P        21 08 23.8 -0.6
MIAR                                  IAmb     IAmb     21 08 26.3
       comp=Z,12nm,0.9s
MIAR   Mount Ida         47.18  90    P        P        21 08 23.8 -0.6
MIAR                                  pmax     pmax
       comp=Z,12nm,0.9s
MIAR   Mount Ida         47.18  90    P        P        21 08 25.2 +0.8
       baz=318,SNR=8.5
OLIL   Olney             47.19  82    P        P        21 08 24.1 -0.3
MJAR   Matsushiro Arr    47.29 274    P        P        21 08 24.7 -0.6
       comp=Z,2.2nm,0.5s,baz=36,slow=6.1,SNR=9.5
MJAR                                  LR       LR       21 28 18.6
       comp=Z,24nm,20.7s,baz=62,slow=36
       comp=Z,2.2nm,0.5s
MAJO   Matsushiro        47.29 274    P        P        21 08 24.3 -1.0
MAJO                                  IAmb     IAmb     21 08 26.8
       comp=Z,12nm,0.9s
MAJO   Matsushiro        47.29 274  i P        P        21 08 24.6 -0.6
MAJO                                  pmax     pmax
       comp=Z,47nm,2.7s
CGM3   Cape Girardeau    47.35  84    P        P        21 08 25.1 -0.6
CGM3                                  IAmb     IAmb     21 08 26.0
       comp=Z,8.4nm,0.6s
O48B   Farmland          47.73  78    P        P        21 08 28.4 -0.2
       baz=315,SNR=15
435B   Jarrell           47.78  97    P        P        21 08 30.8 +1.7
       baz=320
N49A   Columbus Grove    47.79  77    P        P        21 08 29.3 +0.2
SADO   Sadowa            47.82  70    P        P        21 08 29.1 -0.1
       comp=Z,6.8nm,0.8s,baz=318,slow=6.9,SNR=7.2
SADO                                  LR       LR       21 27 28.5
       comp=Z,79nm,18.2s,baz=277,slow=34
       comp=Z,6.8nm,0.8s
USIN   University of     47.98  82    P        P        21 08 29.7 -0.8
P49A   Miami Univ. Ec    48.48  78    P        P        21 08 33.7 -0.6
       baz=315
WCI    Wyandotte Cave    48.54  81    P        P        21 08 35.1 +0.3
       baz=316
ACSO   Alum Creek Sta    48.93  77    P        P        21 08 37.7 -0.1
       baz=315
T47A   Sharon Grove      48.99  83    P        P        21 08 37.5 -0.8
T47A                                  IAmb     IAmb     21 08 39.8
       comp=Z,23nm,1.1s
CN2    Changchun         49.08 290  e P        P        21 08 38.0 -0.9
CN2                                   pmax     pmax
       comp=Z,20nm,0.8s
TRQ    Mont Tremblant    49.18  65    P        P        21 08 38.5 -1.3
TRQ                                   IAmb     IAmb     21 08 41.3
       comp=Z,10nm,0.8s
ERPA   Erie              49.20  73    P        P        21 08 39.4 -0.5
       baz=314
SCO    Scoresbysund      49.31  18  i P        P        21 08 41.4 +1.1
M53A   WI Miller and     49.31  74    P        P        21 08 39.8 -1.0
M53A   WI Miller and     49.31  74    P        P        21 08 40.8  0.0
       baz=315
ISOG   Isortoq, Green    49.51  29  i P        P        21 08 43.1 +1.2
OXF    Oxford            49.52  87    P        P        21 08 41.9 -0.5
OXF    Oxford            49.52  87    P        P        21 08 41.9 -0.5
OXF                                   pmax     pmax
       comp=Z,34nm,0.8s
OXF    Oxford            49.52  87    P        P        21 08 43.3 +0.9
       baz=318,SNR=5.9
WVNY   West Valley, N    49.74  71    P        P        21 08 43.5 -0.5
WVNY                                  IAmb     IAmb     21 08 45.5
       comp=Z,18nm,0.9s
P52A   Corning           49.81  77    P        P        21 08 43.8 -0.8
       baz=316
ANGG   Ammassalik, Gr    49.81  28  i P        P        21 08 42.6 -1.5
O53A   New Philadelph    49.87  75    P        P        21 08 44.3 -0.7
       baz=315
PLAL   Pickwick Lake     49.92  85    P        P        21 08 45.7 +0.3
V48A   Smith Brothers    50.05  84    P        P        21 08 46.0 -0.4
V48A                                  IAmb     IAmb     21 08 47.8
       comp=Z,10nm,0.6s
U49A   Red Boiling Sp    50.06  82    P        P        21 08 47.0 +0.5
CLTN   Cedars of Leba    50.07  83    P        P        21 08 47.7 +1.2
T50A   Nancy             50.21  81    P        P        21 08 47.3 -0.4
LONY   Lake Ozonia       50.28  67    P        P        21 08 47.6 -0.5
       baz=314
M55A   Ridgway           50.31  72    P        P        21 08 48.5 +0.2
M55A                                  IAmb     IAmb     21 08 49.8
       comp=Z,21nm,0.8s
P53A   Whipple           50.32  76    P        P        21 08 48.4  0.0
P53A                                  IAmb     IAmb     21 08 49.1
       comp=Z,12nm,0.7s
O54A   Avella            50.36  75    P        P        21 08 48.9 +0.1
S51A   Beattyville       50.45  79    P        P        21 08 49.0 -0.4
L56A   Greenwood         50.48  71    P        P        21 08 49.8 +0.2
J58A   Remsen            50.80  68    P        P        21 08 52.3 +0.3
J58A                                  IAmb     IAmb     21 08 53.6
       comp=Z,20nm,0.9s
R53A   Hurricane         50.84  78    P        P        21 08 52.7 +0.3
X48A   Hartselle         50.88  85    P        P        21 08 52.1 -0.6
X48A                                  IAmb     IAmb     21 08 53.3
       comp=Z,9.6nm,0.6s
Q54A   Coxs Mills        50.98  76    P        P        21 08 52.6 -0.8
Q54A                                  IAmb     IAmb     21 08 53.8
       comp=Z,8.8nm,0.7s
MCWV   Mont Chateau      51.02  75    P        P        21 08 53.2 -0.5
       baz=316
BINY   Binghamton        51.26  70    P        P        21 08 56.1 +0.6
       baz=315
TZTN   Tazewell          51.27  80    P        P        21 08 55.5 -0.1
TZTN                                  IAmb     IAmb     21 08 57.0
       comp=Z,16nm,1.0s
TZTN   Tazewell          51.27  80    P        P        21 08 55.7 +0.1
       baz=317,SNR=5.5
M57A   Sunshine Farm,    51.27  71    P        P        21 08 55.5  0.0
M57A                                  IAmb     IAmb     21 08 56.5
       comp=Z,13nm,0.9s
W50A   Signal Mountai    51.28  83    P        P        21 08 55.7 -0.1
SSPA   Standing Stone    51.37  73    P        P        21 08 56.9 +0.6
SSPA                                  IAmb     IAmb     21 08 57.6
       comp=Z,18nm,0.9s
SSPA   Standing Stone    51.37  73    P        P        21 08 56.2 -0.1
       baz=316
CPCT   Cooper Cave       51.54  82    P        P        21 08 57.2 -0.4
CPCT                                  IAmb     IAmb     21 08 58.1
       comp=Z,8.1nm,0.5s
FPAL   Fort Paine        51.61  84    P        P        21 08 57.6 -0.6
Y49A   Blount Mountai    51.67  85    P        P        21 08 58.4 -0.2
Y49A                                  IAmb     IAmb     21 08 59.4
       comp=Z,14nm,0.7s
V52A   Sevierville       51.76  81    P        P        21 08 59.6 +0.3
V52A                                  IAmb     IAmb     21 09 00.5
       comp=Z,17nm,1.1s
TKL    Tuckaleechee C    51.80  81    P        P        21 08 59.5 -0.1
       comp=Z,5.2nm,0.7s,baz=186,slow=2.5,SNR=7.4
TKL                                   LR       LR       21 30 52.0
       comp=Z,94nm,19.1s,baz=332,slow=36
       comp=Z,5.2nm,0.7s
TKL    Tuckaleechee C    51.80  81    P        P        21 08 59.0 -0.6
TKL    Tuckaleechee C    51.80  81    P        P        21 08 59.0 -0.6
TKL                                   pmax     pmax
       comp=Z,7.0nm,0.8s
N58A   Sunbury           51.84  72    P        P        21 08 59.3 -0.5
N58A                                  IAmb     IAmb     21 09 01.1
       comp=Z,8.4nm,0.8s
LBNH   Lisbon            51.89  65    P        P        21 08 59.8 -0.4
       baz=315
LRAL   Lakeview Retre    51.96  86    P        P        21 09 00.4 -0.4
       baz=319
U54A   Nelsons Funny     52.23  79    P        P        21 09 02.3 -0.5
KS19   Wonju Array Si    52.28 283    P        P        21 09 02.7 -0.4
KS19                                  IAmb     IAmb     21 09 05.1
       comp=Z,7.8nm,0.6s
KSRS   Korea Array       52.28 283    P        P        21 09 03.2 +0.2
       comp=Z,8.0nm,0.5s,baz=40,slow=7.3,SNR=35
KSRS                                  LR       LR       21 33 12.7
       comp=Z,16nm,18.2s,baz=75,slow=38
       comp=Z,8.0nm,0.5s
V53A   Saluda            52.31  81    P        P        21 09 02.6 -0.8
V53A                                  IAmb     IAmb     21 09 05.0
       comp=Z,20nm,0.8s
BLA    Blacksburg        52.49  77    P        P        21 09 04.6 -0.2
       baz=317
BG3    Lake Jocassee     52.75  81    P        P        21 09 06.4 -0.3
BG3                                   IAmb     IAmb     21 09 07.9
       comp=Z,15nm,1.1s
V55A   Taylorsville      53.05  79    P        P        21 09 09.2 +0.3
V55A                                  IAmb     IAmb     21 09 10.2
       comp=Z,13nm,0.8s
PAL    Palisades         53.20  70    P        P        21 09 10.7 +0.9
       baz=316
HRV    Adam Dziewonsk    53.32  67    P        P        21 09 11.7 +0.9
       baz=316
KMSC   Kings Mountain    53.52  80    P        P        21 09 11.4 -0.8
KMSC                                  IAmb     IAmb     21 09 13.2
       comp=Z,14nm,0.7s
KMSC   Kings Mountain    53.52  80    P        P        21 09 12.7 +0.5
       baz=318,SNR=5.1
HODGE  Hodges            53.69  81    P        P        21 09 13.0 -0.5
VADS   Vadso             53.74 358  e P        P        21 09 13.4  0.0
XLT    XiLinHaoTe        53.79 296⇑i P         P        21 09 14.0 -0.3
XLT                                   pmax     pmax
       comp=Z,21nm,0.8s
XLT                                   pmax     pmax
       comp=Z,69nm,3.6s
T59A   Double "B" Far    54.21  76    P        P        21 09 17.2 -0.1
T59A                                  IAmb     IAmb     21 09 18.6
       comp=Z,15nm,1.0s
W57A   Gilead            54.24  79    P        P        21 09 16.1 -1.5
W57A                                  IAmb     IAmb     21 09 17.9
       comp=Z,8.6nm,0.6s
TRO    Tromso            54.24   2  e P        P        21 09 18.2 +1.1
JETT   Jettan, Norway    54.35   1  e P        P        21 09 19.0 +1.1
ARA0   ARCESS Array S    54.38 359  e P        P        21 09 18.2 +0.1
ARCES  ARCESS Array B    54.38 359    P        P        21 09 17.8 -0.3
       comp=Z,3.0nm,0.4s,baz=19,slow=7.3,SNR=36
       comp=Z,3.0nm,0.4s
KTK1   Kautokeino        54.92   0  e P        P        21 09 21.7 -0.3
ZAK    Zakamensk         54.98 310  e P        P        21 09 21.4 -1.5
ZAK                                   pmax     pmax
       comp=Z,4.0nm,1.2s
MOY    Mondy             54.98 312  e P        P        21 09 22.8 -0.1
MOY                                   pmax     pmax
       comp=Z,9.0nm,2.1s
ULN    Ulaanbaatar       55.19 305    P        P        21 09 23.9 -0.5
ULN                                   IAmb     IAmb     21 09 25.1
       comp=Z,10nm,0.8s
ULN                                   PcP      PcP      21 10 25.8 +0.8
ULN    Ulaanbaatar       55.19 305ce P         P        21 09 24.2 -0.3
ULN                                   pmax     pmax
       comp=Z,13nm,1.0s
SONM   Songino Array     55.51 306    P        P        21 09 26.9 +0.2
       comp=Z,29nm,0.8s,baz=47,slow=6.5,SNR=145
SONM                                  PcP      PcP      21 10 27.2 +1.0
       comp=Z,2.6nm,0.6s,baz=109,slow=2.4,SNR=6.8
SONM                                  LR       LR       21 35 32.5
       comp=Z,54nm,18.1s,baz=250,slow=39
       comp=Z,29nm,0.8s
SONM   Songino Array     55.51 306    P        P        21 09 26.6 -0.1
SONM                                  PcP      PcP      21 10 27.5 +1.2
NHSC   New Hope          55.67  81    P        P        21 09 28.6 +0.7
       baz=319
STEI   Steigen           55.84   4  e P        P        21 09 28.6  0.0
HHC    Hu-ho-hao-te      58.30 297  e P        P        21 09 47.0 +0.5
HHC                                   pmax     pmax
       comp=Z,61nm,0.7s
HHC                                   pmax     pmax
       comp=Z,220nm,5.4s
ZAA0   Zalesovo Array    59.25 323    P        P        21 09 51.6 -1.2
ZAA0                                  IAmb     IAmb     21 09 53.3
       comp=Z,7.0nm,0.8s
ZALV   Zalesovo Beam     59.25 323    P        P        21 09 52.5 -0.2
       comp=Z,5.3nm,0.7s,baz=36,slow=7.7,SNR=24
       comp=Z,5.3nm,0.7s
ZALV   Zalesovo Beam     59.25 323    P        P        21 09 51.9 -0.9
HNS    HongShan          59.32 292  ⇑ P        P        21 09 53.5  0.0
HNS                                   pmax     pmax
       comp=Z,18nm,0.7s
JOW    Kunigami          60.13 274    LR       LR       21 36 43.3
       comp=Z,17nm,19.8s,baz=338,slow=37
CMIG   Matias Romero     60.17 105    P        P        21 10 00.6 +1.0
       comp=Z,3.9nm,0.6s,baz=333,slow=6.9,SNR=8.2
       comp=Z,3.9nm,0.6s
DGZ    Jazzator, Alta    61.84 319c i P        P        21 10 10.6 -0.1
DGZ                                   pmax     pmax
       comp=Z,10.0nm,1.7s
KLMR   Klimovskoe        62.45 351  e P        P        21 10 13.2 -1.2
KLMR                                  AMP               21 10 14.8
       comp=Z,20nm,1.0s
KLMR   Klimovskoe        62.45 351  e P        P        21 10 13.2 -1.2
KLMR                                  pmax     pmax
       comp=Z,20nm,1.0s
FIA1   FINESS Array S    62.50 359    P        P        21 10 14.3 -0.4
FIA1                                  IAmb     IAmb     21 10 15.8
       comp=Z,11nm,0.8s
FINES  FINESS Array B    62.50 359    P        P        21 10 14.6 -0.2
       comp=Z,12nm,0.8s,baz=20,slow=7.7,SNR=38
       comp=Z,12nm,0.8s
NB2    NORSAR Subarra    62.51   7    P        P        21 10 15.0 +0.1
       comp=Z,1.1nm,0.6s,baz=354,slow=6.9
NB2    NORSAR Subarra    62.51   7    P        P        21 10 15.0 +0.1
       baz=354,slow=6.9
NOA    NORSAR Array B    62.51   7    P        P        21 10 15.2 +0.3
       comp=Z,1.7nm,0.7s,baz=353,slow=6.7,SNR=13
       comp=Z,1.7nm,0.7s
ASK    Askoy             62.56  10  e P        P        21 10 15.2 +0.1
SKAR   Skarslia          62.65   8  e P        P        21 10 17.3 +1.5
LYN    LuoYang           62.67 292  ⇓ P        P        21 10 16.5 +0.2
LYN                                   pmax     pmax
       comp=Z,17nm,0.7s
NC602  NORSAR Array S    62.83   7  e P        P        21 10 17.3 +0.3
SVE    Sverdlovsk        63.28 338  e P        P        21 10 19.7 -0.3
SVE                                   pmax     pmax
       comp=Z,20nm,1.2s
KIRV   Kirov             63.56 345ce P         P        21 10 19.4 -2.3
HFS    Hagfors           63.56   6    LR       LR       21 39 45.6
       comp=Z,25nm,18.2s,baz=340,slow=38
BLS5   Blasjo            63.73  10  e P        P        21 10 23.6 +0.7
KURK   Kurchatov         64.02 325    P        P        21 10 23.5 -1.4
KURK                                  IAmb     IAmb     21 10 25.5
       comp=Z,11nm,0.9s
KURK   Kurchatov         64.02 325ce P         P        21 10 24.8 -0.1
KURK                                  pmax     pmax
       comp=Z,15nm,1.3s
ARU    Arti              64.07 339    P        P        21 10 23.7 -1.5
ARU                                   IAmb     IAmb     21 10 25.3
       comp=Z,19nm,1.2s
ARU    Arti              64.07 339d i P        P        21 10 24.8 -0.4
ARU                                                     21 10 56.5
ARU                                                     21 12 46.5
ARU                                   S        S        21 19 02.0 +3.8
ARU                                   SS       SS       21 23 07.2 +0.7
ARU                                   pmax     pmax
       comp=Z,17nm,1.1s
BRVK   Borovoye          64.43 331    P        P        21 10 26.6 -1.0
BRVK                                  IAmb     IAmb     21 10 28.0
       comp=Z,12nm,0.7s
BRVK   Borovoye          64.43 331ce P         P        21 10 26.0 -1.6
BRVK                                  pmax     pmax
       comp=Z,7.0nm,0.6s
BVAR   Borovoye Array    64.43 331    LR       LR       21 43 02.2
       comp=Z,34nm,18.0s,baz=31,slow=40
ZSN    Zaisan            64.65 319  e P        P        21 10 29.5 +0.2
       comp=Z,7.2nm,0.6s,baz=319
ZSN                                 i S        S        21 19 07.2 +1.3
       baz=319
ZSN    Zaisan            64.65 319  e P        P        21 10 29.4 +0.2
ZSN                                 i S        S        21 19 07.1 +1.3
ZSN                                   pmax     pmax
       comp=Z,7.0nm,0.6s
GTA    Gaotai            65.05 304  ⇑ P        P        21 10 31.5 -0.5
GTA                                   pmax     pmax
       comp=Z,26nm,0.9s
LZH    Lanzhou           65.80 299  e P        P        21 10 37.3 +0.3
LZH                                   pmax     pmax
       comp=Z,30nm,1.0s
MK31   Makanchi Array    66.14 320    P        P        21 10 37.4 -1.5
MK31   Makanchi Array    66.14 320    P        P        21 10 37.4 -1.5
MK31                                  pmax     pmax
       comp=Z,5.0nm,1.0s
MKAR   Makanchi Array    66.14 320    P        P        21 10 38.3 -0.6
       comp=Z,3.8nm,0.7s,baz=44,slow=5.8,SNR=48
MKAR                                  LR       LR       21 41 59.5
       comp=Z,54nm,18.7s,baz=108,slow=38
       comp=Z,3.8nm,0.7s
MKAR   Makanchi Array    66.14 320    P        P        21 10 37.4 -1.5
BRZS   Berezniki         66.50 328  e P        P        21 10 40.4 -0.7
       baz=328
BRZS   Berezniki         66.50 328  e P        P        21 10 40.3 -0.7
WMQ    Urumqi            66.63 315  e P        P        21 10 41.3 -0.8
WMQ                                   pmax     pmax
       comp=Z,6.0nm,0.9s
OBN    Obninsk           68.37 352ce P         P        21 10 51.6 -1.1
OBN                                   *PP      pP       21 11 03.0 -2.1
OBN                                 e *SP      sP       21 11 05.3 -4.6
OBN                                 i                   21 11 19.9
OBN                                   S        S        21 19 48.0 -2.4
OBN                                   SSS      SSS      21 27 09.0
OBN                                   pmax     pmax
       comp=Z,5.0nm,0.4s
PABE   Paberze           68.47 360    P        P        21 10 53.1 -0.2
MNK    Minsk             69.43 357  i P        P        21 10 59.5 +0.2
       comp=E,4.0nm,1.5s
MNK                                 i P        P        21 10 59.5 +0.2
       comp=N,41nm,1.0s
MNK                                 i P        P        21 10 59.5 +0.2
       comp=Z,12nm,0.9s,baz=2.8
MNK                                 i pP       pP       21 11 11.5 -0.2
MNK                                 i PP       PP       21 13 33.2 +0.9
MNK                                 i PPP      PPP      21 15 14.6
MNK                                 i S        S        21 20 08.6 +5.6
MNK                                 i sS       sS       21 20 25.2 +1.6
MNK                                 i SS       SS       21 24 33.7 +4.3
MNK                                 i SSS      SSS      21 28 01.0
MNK                                 i LQ       LQ       21 36 42.9
MNK                                 i LR       LR       21 40 15.1
MNK                                 i LRM      MLR      21 43 09.1
       comp=E,83nm,21.9s
MNK                                 i LRM      MLR      21 43 34.9
       comp=Z,127nm,30.1s
MNK                                 i LRM      MLR      21 44 08.2
       comp=N,2µm,22.7s
MNK    Minsk             69.43 357  i P        P        21 10 59.5 +0.2
MNK                                 i *PP      pP       21 11 11.4 -0.2
MNK                                 i                   21 13 33.2
MNK                                 i PPP      PPP      21 15 14.6
MNK                                 i S        S        21 20 08.5 +5.6
MNK                                 i *SS      sS       21 20 25.1 +1.6
MNK                                 i SS       SS       21 24 33.6 +4.3
MNK                                   pmax     pmax
       comp=Z,12nm,0.9s
MNK                                   pmax     pmax
       comp=E,4.0nm,1.5s
MNK                                   pmax     pmax
       comp=N,41nm,1.0s
MNK                                   MLR      MLR
       comp=E,83nm,22.0s
MNK                                   MLR      MLR
       comp=Z,127nm,30.0s
MNK                                   MLR      MLR
       comp=N,2µm,23.0s
BELG   Belogornoye       69.82 345  i P        P        21 11 00.7 -1.0
BELG                                  pmax     pmax
       comp=Z,5.0nm,0.9s
GOMU   GeErMu            69.95 305    P        P        21 11 03.3 -0.1
GOMU                                  pmax     pmax
       comp=Z,8.0nm,0.7s
GOMU                                  pmax     pmax
       comp=Z,100nm,5.7s
SHLS   Shalkode          70.29 320  e P        P        21 11 04.6 -0.5
       comp=Z,9.2nm,0.8s,baz=320
SHLS   Shalkode          70.29 320  e P        P        21 11 04.5 -0.5
SHLS                                  pmax     pmax
       comp=Z,9.0nm,0.8s
KPKS   Kokpek            70.30 321  e P        P        21 11 04.9 -0.1
       baz=321
KPKS   Kokpek            70.30 321  e P        P        21 11 04.9 -0.1
BTLS   Baital            70.47 325⇑i P         P        21 11 05.8 -0.1
       comp=Z,7.2nm,0.5s,baz=325
BTLS   Baital            70.47 325c i P        P        21 11 05.8 -0.1
BTLS                                  pmax     pmax
       comp=Z,7.0nm,0.5s
ABKAR  Akbulak array     70.50 336    P        P        21 11 05.7 -0.3
CHKK   Chushkaly         70.55 322  e P        P        21 11 05.7 -0.7
       baz=322
CHKK   Chushkaly         70.55 322  e P        P        21 11 05.7 -0.7
KUU    Kurty             70.73 323  e P        P        21 11 07.8 +0.1
       baz=322
KUU    Kurty             70.73 323  e P        P        21 11 07.7 +0.1
SATY   Saty              70.75 321  e P        P        21 11 08.2 +0.4
       baz=321
SATY   Saty              70.75 321  e P        P        21 11 08.2 +0.4
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MDOK	**Medeo**	**71.14**	**322**	*e*P	**P**	**21 11 10.1**	**-0.1**
	baz=322						
MDOK	**Medeo**	**71.14**	**322**	*e*P	**P**	**21 11 10.1**	**-0.1**
AAA	**Alma-Ata**	**71.14**	**322**	*e*P	**P**	**21 11 10.6**	**+0.4**
	comp=Z,11nm,0.6s,baz=322						
AAA	**Alma-Ata**	**71.14**	**322**	*e*P	**P**	**21 11 10.5**	**+0.4**
AAA				pmax	pmax		
	comp=Z,11nm,0.6s						
SDDR	**Presa de Saban**	**71.66**	**83**	P	**P**	**21 11 12.9**	**-0.6**
SDDR				IAmb	IAmb	21 11 14.9	
	comp=Z,13nm,0.9s						
SGDS	**Sogindy**	**71.70**	**323**	*e*P	**P**	**21 11 13.9**	**+0.5**
	baz=323						
SGDS	**Sogindy**	**71.70**	**323**	*e*P	**P**	**21 11 13.9**	**+0.5**
TKM2	**Tokmak 2**	**71.85**	**323**	P	**P**	**21 11 15.3**	**+0.7**
	SNR=5.3						
USP	**Ospenovka**	**71.91**	**323**	P	**P**	**21 11 15.2**	**+0.5**
	SNR=9.1						
KDJ	**Kajisay**	**72.00**	**321**	P	**P**	**21 11 15.1**	**-0.3**
KDJ	**Kajisay**	**72.00**	**321**	P	**P**	**21 11 15.1**	**-0.3**
KDJ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CHMS	**Chumysh**	**72.06**	**323**	P	**P**	**21 11 16.3**	**+0.7**
	SNR=9.8						
BOOM	**Boomskoye usch**	**72.11**	**322**	P	**P**	**21 11 15.6**	**-0.5**
BOOM	**Boomskoye usch**	**72.11**	**322**	P	**P**	**21 11 15.6**	**-0.5**
TARG	**Taragay, Kyrgy**	**72.14**	**320**	P	**P**	**21 11 16.7**	**+0.2**
TARG	**Taragay, Kyrgy**	**72.14**	**320**	P	**P**	**21 11 16.7**	**+0.2**
TARG				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ULHL	**Ulahol**	**72.22**	**322**	P	**P**	**21 11 17.7**	**+0.9**
	SNR=6.8						
KBK	**Karagaybulak**	**72.30**	**323**	P	**P**	**21 11 17.8**	**+0.6**
	SNR=16						
CLL	**Collm**	**72.31**	**7**	*i* P	**P**	**21 11 18.0**	**+1.1**
	comp=Z,5.0nm,0.8s						
CLL	**Collm**	**72.31**	**7**	*i* P	**P**	**21 11 18.0**	**+1.1**
CLL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AAK	**Ala-Archa**	**72.47**	**323**	P	**P**	**21 11 18.7**	**+0.5**
	SNR=13						
AAK	**Ala-Archa**	**72.47**	**323**	LR	LR	21 46 29.3	
	comp=Z,35nm,19.0s,baz=34,slow=39						
AAK	**Ala-Archa**	**72.47**	**323**	P	**P**	**21 11 18.0**	**-0.2**
AAK				IAmb	IAmb	21 11 19.7	
	comp=Z,12nm,0.9s						
AAK	**Ala-Archa**	**72.47**	**323**	*ce*P	**P**	**21 11 15.1**	**-3.1**
AAK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
EKS2	**Erkin-Say**	**72.69**	**324**	P	**P**	**21 11 20.2**	**+0.8**
	SNR=16						
BRG	**Berggiesshubel**	**72.81**	**6**	*e*P	**P**	**21 11 21.4**	**+1.5**
BRG				Amp		21 11 22.8	
	comp=Z,3.1nm,0.8s						
BRG	**Berggiesshubel**	**72.81**	**6**	*e*P	**P**	**21 11 21.4**	**+1.5**
BRG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AML	**Almayashu**	**73.19**	**323**	P	**P**	**21 11 23.5**	**+0.7**
	SNR=15						
AKASG	**Malin Array Be**	**73.19**	**356**	P	**P**	**21 11 21.6**	**-0.5**
	comp=Z,6.2nm,0.5s,baz=8.7,slow=5.7,SNR=35						
	comp=Z,6.2nm,0.5s						
AKASG	**Malin Array Be**	**73.19**	**356**	P	**P**	**21 11 21.6**	**-0.5**
AKBB	**Malin Array Si**	**73.19**	**356**	P	**P**	**21 11 21.2**	**-0.9**
AKBB				IAmb	IAmb	21 11 22.1	
	comp=Z,12nm,0.5s						
AKBB	**Malin Array Si**	**73.19**	**356**	P	**P**	**21 11 21.2**	**-0.9**
AKBB				pmax	pmax		
	comp=Z,12nm,0.5s						
PVCC	**Panska Ves**	**73.19**	**6**	*e*P	**P**	**21 11 24.3**	**+2.2**
PVCC	**Panska Ves**	**73.19**	**6**	*e*P	**P**	**21 11 24.3**	**+2.2**
CHVC	**Chvalec**	**73.21**	**5**	*e*P	**P**	**21 11 23.2**	**+0.9**
CHVC	**Chvalec**	**73.21**	**5**	*e*P	**P**	**21 11 23.2**	**+0.9**
OSTC	**Ostas**	**73.25**	**5**	*e*P	**P**	**21 11 23.8**	**+1.3**
OSTC	**Ostas**	**73.25**	**5**	*e*P	**P**	**21 11 23.8**	**+1.3**
UPC	**Upice**	**73.29**	**5**	*e*P	**P**	**21 11 24.2**	**+1.5**
UPC	**Upice**	**73.29**	**5**	*e*P	**P**	**21 11 24.2**	**+1.5**
KK31	**Karatay Array**	**73.33**	**326**	P	**P**	**21 11 22.3**	**-0.8**
KK31				IAmb	IAmb	21 11 24.1	
	comp=Z,16nm,0.8s						
KK31	**Karatay Array**	**73.33**	**326**	P	**P**	**21 11 22.3**	**-0.8**
KK31				pmax	pmax		
	comp=Z,16nm,0.8s						
KKAR	**Karatay Array**	**73.33**	**326**	P	**P**	**21 11 22.1**	**-1.0**
KKAR				IAmb	IAmb	21 11 24.1	
	comp=Z,16nm,0.8s						
KKAR	**Karatay Array**	**73.33**	**326**	P	**P**	**21 11 23.3**	**+0.2**
KKAR	**Karatay Array**	**73.33**	**326**	P	**P**	**21 11 22.1**	**-1.0**
KKAR				pmax	pmax		
	comp=Z,16nm,0.8s						
NKC	**Novy Kostel**	**73.34**	**8**	*e*P	**P**	**21 11 25.1**	**+2.0**
NKC	**Novy Kostel**	**73.34**	**8**	*e*P	**P**	**21 11 25.1**	**+2.0**
DPC	**Dobruska-Polom**	**73.46**	**5**	*e*P	**P**	**21 11 24.8**	**+1.0**
DPC	**Dobruska-Polom**	**73.46**	**5**	*e*P	**P**	**21 11 24.8**	**+1.0**
PRU	**Pruhonice**	**73.73**	**6**	*e*P	**P**	**21 11 26.5**	**+1.2**
PRU	**Pruhonice**	**73.73**	**6**	*e*P	**P**	**21 11 26.5**	**+1.2**
KRLC	**Kraliky**	**73.76**	**5**	*e*P	**P**	**21 11 27.1**	**+1.6**
KRLC	**Kraliky**	**73.76**	**5**	*e*P	**P**	**21 11 27.1**	**+1.6**
GRA1	**Grafenberg Arr**	**73.79**	**8**	P	**P**	**21 11 24.8**	**-0.9**
GRA1				IAmb	IAmb	21 11 45.2	
	comp=Z,18nm,1.5s						
GRF	**Grafenberg Arr**	**73.79**	**8**	P	**P**	**21 11 24.8**	**-0.9**
GRF				pmax	pmax		
	comp=Z,18nm,1.5s						
MORC	**Moravsky Berou**	**74.09**	**4**	P	**P**	**21 11 26.7**	**-0.8**
MORC	**Moravsky Berou**	**74.09**	**4**	*e*P	**P**	**21 11 27.0**	**-0.5**
MORC	**Moravsky Berou**	**74.09**	**4**	P	**P**	**21 11 26.7**	**-0.8**
MORC				pmax	pmax		
	comp=Z,7.0nm,1.4s						
CHM	**Chimkent**	**74.32**	**326**	*e*P	**P**	**21 11 29.1**	**+0.2**
	comp=Z,14nm,0.6s,baz=326						
CHM	**Chimkent**	**74.32**	**326**	*e*P	**P**	**21 11 29.1**	**+0.2**
CHM				pmax	pmax		
	comp=Z,14nm,0.6s						
IUG	**Iuzhnay**	**74.35**	**326**	*e*P	**P**	**21 11 29.8**	**+0.5**
	comp=Z,12nm,0.7s,baz=326						
IUG	**Iuzhnay**	**74.35**	**326**	*e*P	**P**	**21 11 29.7**	**+0.5**
IUG				pmax	pmax		
	comp=Z,12nm,0.7s						
MAUC	**Maruska**	**74.51**	**4**	*e*P	**P**	**21 11 30.8**	**+0.9**
VRAC	**Vranov**	**74.51**	**5**	⇓P	**P**	**21 11 31.7**	**+1.8**
VRAC	**Vranov**	**74.51**	**5**	*e*P	**P**	**21 11 30.8**	**+0.9**
VRAC	**Vranov**	**74.51**	**5**	⇓P	**P**	**21 11 31.7**	**+1.8**
KHC	**Kasperske Hory**	**74.52**	**7**	P	**P**	**21 11 29.1**	**-0.9**
KHC	**Kasperske Hory**	**74.52**	**7**	*e*P	**P**	**21 11 30.9**	**+0.9**
KHC				*e*x	x	21 11 40.2	
KHC	**Kasperske Hory**	**74.52**	**7**	P	**P**	**21 11 29.1**	**-0.9**
KHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
STHS	**Stebnicka Huta**	**74.55**	**2**	*e*P	**P**	**21 11 30.9**	**+0.7**
STHS				pmax	pmax		
	comp=Z,10.0nm,1.4s						
STHS	**Stebnicka Huta**	**74.55**	**2**	*e*P	**P**	**21 11 30.9**	**+0.7**
PZH	**PanZhiHua**	**74.61**	**295**	P	**P**	**21 11 30.8**	**-0.2**
PZH				pmax	pmax		
	comp=Z,30nm,0.9s						
PZH				pmax	pmax		
	comp=Z,130nm,5.1s						
KSH	**Kashi**	**74.74**	**321**	P	**P**	**21 11 35.0**	**+3.5**
KSH				pP	sP	21 11 49.8	+1.0
KSH				pmax	pmax		
	comp=Z,22nm,0.8s						
KRUC	**Moravsky**	**74.75**	**5**	*e*P	**P**	**21 11 32.2**	**+0.9**
LANS	**Liptovska Anna**	**74.78**	**3**	*e*P	**P**	**21 11 33.4**	**+1.9**
LANS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LANS	**Liptovska Anna**	**74.78**	**3**	*e*P	**P**	**21 11 33.4**	**+1.9**
GERES	**GERESS Array B**	**74.81**	**7**	P	**P**	**21 11 32.8**	**+1.0**
	comp=Z,2.0nm,0.6s,baz=352,slow=4.0,SNR=19						
	comp=Z,2.0nm,0.6s						
GERES	**GERESS Array B**	**74.81**	**7**	P	**P**	**21 11 31.4**	**-0.4**
GERES	**GERESS Array B**	**74.81**	**7**	P	**P**	**21 11 31.4**	**-0.4**
CKRC	**Cesky Krumlov**	**74.88**	**6**	*e*P	**P**	**21 11 32.6**	**+0.6**
CKRC	**Cesky Krumlov**	**74.88**	**6**	*e*P	**P**	**21 11 32.6**	**+0.6**
JAVC	**Velka Javorina**	**75.01**	**4**	*e*P	**P**	**21 11 33.3**	**+0.5**
VYHS	**Vyhne**	**75.42**	**3**	*e*P	**P**	**21 11 36.9**	**+1.8**
VYHS				pmax	pmax		
	comp=Z,10.0nm,1.4s						
VYHS	**Vyhne**	**75.42**	**3**	*e*P	**P**	**21 11 36.9**	**+1.8**
MODS	**Modra-Piesok**	**75.48**	**4**	*e*P	**P**	**21 11 37.6**	**+2.1**
MODS	**Modra-Piesok**	**75.48**	**4**	*e*P	**P**	**21 11 37.6**	**+2.1**
SORM	**Soroca**	**75.78**	**357**	⇑P	**P**	**21 11 36.8**	**-0.4**
SORM	**Soroca**	**75.78**	**357**	⇑P	**P**	**21 11 36.8**	**-0.4**
MOA	**Molln**	**75.84**	**7**	*e*P	**P**	**21 11 38.2**	**+0.6**
	comp=Z,1.4nm,0.6s						
CONA	**Conrad Observa**	**75.86**	**5**	*e*P	**P**	**21 11 38.2**	**+0.4**
	comp=Z,2.3nm,0.6s						
TRPA	**Tarpa**	**75.86**	**1**	⇓P	**P**	**21 11 38.8**	**+1.2**
BTK	**Batken**	**75.99**	**325**	P	**P**	**21 11 37.5**	**-1.2**
BTK				IAmb	IAmb	21 11 39.9	
	comp=Z,14nm,0.9s						
BTK	**Batken**	**75.99**	**325**	P	**P**	**21 11 37.5**	**-1.2**
BTK				pmax	pmax		
	comp=Z,14nm,0.9s						
RONA	**Rosalia, Austr**	**76.11**	**5**	*e*P	**P**	**21 11 40.4**	**+1.3**
	comp=Z,2.1nm,1.0s						
WTTA	**Wattenberg**	**76.23**	**8**	*e*P	**P**	**21 11 40.6**	**+0.6**
	comp=Z,1.4nm,0.4s						
SQTA	**Sankt Quirin**	**76.24**	**9**	*i* P	**P**	**21 11 40.4**	**+0.4**
	comp=Z,2.7nm,0.6s						
BUR08	**Bucovina Ar. S**	**76.34**	**359**	P	**P**	**21 11 40.5**	**-0.1**
BURAR	**Bucovina Array**	**76.37**	**359**	⇑P	**P**	**21 11 41.1**	**+0.4**
BURAR	**Bucovina Array**	**76.37**	**359**	P	**P**	**21 11 39.9**	**-0.8**
BURAR	**Bucovina Array**	**76.37**	**359**	⇑P	**P**	**21 11 41.1**	**+0.4**
ARSA	**Arzberg**	**76.51**	**6**	*e*P	**P**	**21 11 42.9**	**+1.4**
	comp=Z,3.7nm,0.8s						
KBA	**Koelnbreinsper**	**76.55**	**7**	*e*P	**P**	**21 11 43.2**	**+1.4**
	comp=Z,2.3nm,0.3s						
FUORN	**Ofenpass-Fuorn**	**76.75**	**9**	P	**P**	**21 11 42.5**	**-0.5**
SOKA	**Soboth**	**77.06**	**6**	*i* P	**P**	**21 11 45.8**	**+1.3**
	comp=Z,0.5nm,0.3s						
LSA	**Lhasa**	**77.06**	**304**	P	**P**	**21 11 45.4**	**0.0**
LSA				IAmb	IAmb	21 11 47.0	
	comp=Z,14nm,0.7s						
LSA	**Lhasa**	**77.06**	**304**	P	**P**	**21 11 45.4**	**0.0**
LSA				pmax	pmax		
	comp=Z,14nm,0.7s						
OBKA	**Obir**	**77.19**	**6**	*i* P	**P**	**21 11 46.3**	**+1.0**
	comp=Z,5.8nm,0.4s						
PRED	**Cave del Predi**	**77.19**	**7**	P	**P**	**21 11 43.8**	**-1.6**
CJR	**Cluj-Napoca**	**77.28**	**0**	⇓P	P	21 11 53.9	+8.1
CJR	**Cluj-Napoca**	**77.28**	**0**	⇓P	P	21 11 53.9	+8.1
TNCH	**TengChong**	**77.45**	**296**	⇑P	**P**	**21 11 47.5**	**+0.3**
TNCH				PP	**PP**	**21 14 43.8**	**+2.1**
TNCH				SKS	**SKSac**	**21 21 50.5**	**-6.6**
TNCH				pmax	pmax		
	comp=Z,11nm,0.9s						
TNCH				pmax	pmax		
	comp=Z,94nm,6.3s						
CHGR	**Chuyangaron**	**77.80**	**325**	P	**P**	**21 11 49.0**	**+0.1**
CHGR	**Chuyangaron**	**77.80**	**325**	P	**P**	**21 11 49.0**	**+0.1**
CHGR				pmax	pmax		
	comp=Z,69nm,0.8s						
OZUR		**77.88**	**359**	⇓P	**P**	**21 11 48.0**	**-1.1**
VLDR	**Vladesti**	**78.08**	**357**	⇑P	**P**	**21 11 50.2**	**+0.1**
VRI	**Vrincioaia**	**78.09**	**358**	⇑P	**P**	**21 11 51.2**	**+0.9**
VRI	**Vrincioaia**	**78.09**	**358**	⇑P	**P**	**21 11 51.2**	**+0.9**
PLOR	**Plostina**	**78.11**	**358**	⇑P	**P**	**21 11 51.5**	**+1.1**
PLOR	**Plostina**	**78.11**	**358**	⇑P	**P**	**21 11 51.5**	**+1.1**
SURR	**Surduc**	**78.23**	**1**	⇑P	**P**	**21 11 51.7**	**+0.7**
BZS	**Buzias**	**78.36**	**2**	⇑P	**P**	**21 11 51.6**	**-0.1**
BZS	**Buzias**	**78.36**	**2**	⇑P	**P**	**21 11 51.6**	**-0.1**
BISRR	**Bisoca**	**78.41**	**358**	⇑P	**P**	**21 11 48.1**	**-4.0**
UREC	**San Jos de Ur**	**78.46**	**93**	*e*P	**P**	**21 11 51.9**	**-0.8**
ANN	**Anapa**	**78.53**	**350**	*e*P	**P**	**21 11 50.0**	**-2.7**
ANN				pmax	pmax		
	comp=Z,222nm,1.2s						
ARR	**Arges**	**78.62**	**359**	⇑P	**P**	**21 11 55.0**	**+1.7**
TLCR		**78.72**	**356**	⇑P	**P**	**21 11 52.5**	**-1.2**
TLCR		**78.72**	**356**	⇑P	**P**	**21 11 52.5**	**-1.2**
CFR	**Carcaliu**	**78.75**	**357**	⇑P	**P**	**21 11 51.7**	**-2.1**
CFR	**Carcaliu**	**78.75**	**357**	⇑P	**P**	**21 11 51.7**	**-2.1**
KIV	**Kislovodsk**	**78.77**	**346**	*e*P	**P**	**21 11 53.6**	**-0.5**
KIV				pmax	pmax		
	comp=Z,16nm,1.1s						
ISR	**Istrita**	**78.84**	**358**	⇑P	P	21 11 49.4	-5.1
ISR	**Istrita**	**78.84**	**358**	⇑P	P	21 11 49.4	-5.1
KBZ	**Khabaz**	**78.96**	**346**	P	**P**	**21 11 55.7**	**+0.7**
	comp=Z,6.8nm,0.8s,baz=322,slow=4.0,SNR=12						
	comp=Z,6.8nm,0.8s						
KBZ	**Khabaz**	**78.96**	**346**	*ce*P	**P**	**21 11 55.5**	**+0.5**
KBZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MSSA	**Maissana**	**78.96**	**10**	P	**P**	**21 11 54.3**	**-0.9**
MSSA				IAmb	IAmb	21 12 36.6	
	comp=Z,18nm,1.2s						
ZARC	**Zaragoza, Cauc**	**79.05**	**93**	*e*P	**P**	**21 11 55.2**	**-0.7**
TIRR	**Tirgusor**	**79.46**	**357**	⇑P	**P**	**21 11 57.6**	**-0.1**
TIRR	**Tirgusor**	**79.46**	**357**	⇑P	**P**	**21 11 57.6**	**-0.1**
PTBC	**PUERTO BERRIO,**	**80.06**	**93**	*e*P	**P**	**21 12 00.4**	**-1.0**
PAMC	**Pamplona, Colo**	**80.38**	**91**	*e*P	**P**	**21 12 03.4**	**-0.3**
AKT	**Akhty**	**80.42**	**342**	*e*P	**P**	**21 12 03.3**	**+0.2**
AKT				*e*		21 12 10.2	
AKT				pmax	pmax		
	comp=Z,12nm,0.8s						
CRAI	**Chiangrai**	**80.50**	**292**	P	**P**	**21 12 03.2**	**-0.6**
CRAI				IAmb	IAmb	21 12 04.1	
	comp=Z,7.0nm,0.6s						
NORC	**Norcasia**	**80.63**	**94**	*e*P	**P**	**21 12 04.6**	**0.0**
TAPN	**Taplejung**	**80.63**	**306**	*e*P	**P**	**21 12 05.0**	**+0.2**
	comp=Z,55nm,0.8s						
SEKA	**Sheki**	**80.77**	**342**	P	**P**	**21 12 05.2**	**+0.2**
GUN	**Gumba**	**80.97**	**308**	*e*P	**P**	**21 12 06.7**	**+0.1**
	comp=Z,26nm,0.7s						
JIRN	**Jiri**	**81.05**	**307**	*e*P	**P**	**21 12 07.3**	**+0.2**
	comp=Z,79nm,0.5s						
RUSC	**La Rusia**	**81.35**	**92**	P	**P**	**21 12 07.8**	**-1.1**
RUSC				IAmb	IAmb	21 12 09.5	
	comp=Z,16nm,1.0s						
RUSC	**La Rusia**	**81.35**	**92**	*e*P	**P**	**21 12 08.4**	**-0.6**
GKN	**Gorkha**	**81.43**	**309**	*e*P	**P**	**21 12 08.7**	**-0.1**
GANJ	**Ganja**	**81.47**	**343**	P	**P**	**21 12 05.2**	**-3.5**
PKI	**Pulchoki**	**81.47**	**308**	*e*P	**P**	**21 12 08.9**	**-0.3**
	comp=Z,20nm,0.5s						
PKIN	**Phulchoki**	**81.47**	**308**	*e*P	**P**	**21 12 09.0**	**-0.2**
	comp=Z,23nm,0.5s						
ESBB	**Sonseca Array**	**81.47**	**21**	P	**P**	**21 12 08.8**	**0.0**
ESDC	**Sonseca Array**	**81.47**	**21**	P	**P**	**21 12 09.8**	**+1.1**
	comp=Z,2.9nm,0.6s,baz=342,slow=4.8,SNR=44						
	comp=Z,2.9nm,0.6s						
ESDC	**Sonseca Array**	**81.47**	**21**	P	**P**	**21 12 09.0**	**+0.2**
RAMN	**Ramite**	**81.48**	**307**	*e*P	**P**	**21 12 09.0**	**-0.2**
	comp=Z,69nm,0.8s						
DANN	**Dangsing**	**81.51**	**309**	*e*P	**P**	**21 12 09.8**	**+0.4**
	comp=Z,126nm,0.6s						
DMN	**Daman**	**81.57**	**308**	*e*P	**P**	**21 12 09.7**	**0.0**
	comp=Z,32nm,0.5s						
JAMC	**Jamundi, Valle**	**81.57**	**97**	*e*P	**P**	**21 12 10.6**	**+0.8**
GEYT	**Alibeck**	**81.62**	**333**	P	**P**	**21 12 10.3**	**+0.8**
	comp=Z,7.2nm,0.6s,baz=344,slow=4.8,SNR=18						
GEYT				LR	LR	21 55 27.6	
	comp=Z,32nm,18.9s,baz=85,slow=41						
	comp=Z,7.2nm,0.6s						
GEYT	**Alibeck**	**81.62**	**333**	P	**P**	**21 12 09.8**	**+0.3**
GEYT	**Alibeck**	**81.62**	**333**	P	**P**	**21 12 09.8**	**+0.3**
GYA0B	**ALIBECK ARRAY**	**81.62**	**333**	P	**P**	**21 12 09.1**	**-0.5**
GYA0B				IAmb	IAmb	21 12 11.2	
	comp=Z,26nm,1.5s						
BAUV	**El Baul**	**81.65**	**86**	P	**P**	**21 12 08.6**	**-1.3**
BAUV				IAmb	IAmb	21 12 10.5	
	comp=Z,18nm,1.0s						
DIKM	**Dikmen**	**81.85**	**351**	⇑P	**P**	**21 12 12.2**	**+1.6**
PHRA	**Phrae**	**82.02**	**291**	P	**P**	**21 12 09.9**	**-1.9**
PYUN	**Piuthan**	**82.06**	**310**	*e*P	**P**	**21 12 12.2**	**0.0**
POPC	**Popayan, Colom**	**82.13**	**97**	*e*P	**P**	**21 12 12.8**	**+0.1**
GNI	**Garni**	**82.20**	**344**	*ce*P	**P**	**21 12 13.7**	**+1.0**
GNI				pmax	pmax		
	comp=Z,9.0nm,1.3s						
FAKI	**Fak Fak**	**82.27**	**253**	P	**P**	**21 12 11.3**	**-1.8**
FAKI				IAmb	IAmb	21 12 45.6	
	comp=Z,20nm,1.2s						
CMAR	**Chiang Mai Arr**	**82.72**	**292**	P	**P**	**21 12 15.3**	**-0.2**
	comp=Z,10nm,0.7s,baz=12,slow=5.5,SNR=71						
	comp=Z,10nm,0.7s						
CMAR	**Chiang Mai Arr**	**82.72**	**292**	P	**P**	**21 12 14.6**	**-0.9**
CMAR	**Chiang Mai Arr**	**82.72**	**292**	P	**P**	**21 12 14.6**	**-0.9**
RDO	**Rodhopi**	**82.83**	**359**	P	**P**	**21 12 15.5**	**-0.2**
LKRN	**Lenkeran, Azer**	**82.92**	**340**	P	**P**	**21 12 12.9**	**-3.3**
NAX	**Nakhchivan**	**83.04**	**343**	P	**P**	**21 12 13.5**	**-3.5**
FNA	**Florina**	**83.19**	**2**	P	**P**	**21 12 17.3**	**-0.4**
FNA	**Florina**	**83.19**	**2**	P	**P**	**21 12 17.3**	**-0.4**
FNA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BRTR	**Keskin Array B**	**83.89**	**352**	P	**P**	**21 12 22.0**	**+0.6**
	comp=Z,2.1nm,0.7s,baz=321,slow=1.8,SNR=6.8						
	comp=Z,2.1nm,0.7s						
KEST	**Kesra**	**87.44**	**12**	P	**P**	**21 12 40.2**	**+1.2**
	comp=Z,2.7nm,0.7s,baz=23,slow=7.7,SNR=2.4						
	comp=Z,2.7nm,0.7s						
CSS	**Mathiatis**	**88.65**	**352**	P	**P**	**21 12 45.1**	**+0.4**
CSS				IAmb	IAmb	21 12 49.9	
	comp=Z,7.2nm,0.7s						
EIL	**Elat**	**93.76**	**350**	LR	LR	22 03 08.4	
	comp=Z,26nm,18.3s,baz=234,slow=40						
WRA	**Warramunga Arr**	**95.59**	**242**	P	**P**	**21 13 18.2**	**+1.4**
	comp=Z,0.7nm,1.0s,baz=33,slow=5.9,SNR=1.8						
	comp=Z,0.7nm,1.0s						
QSPA	**South Pole Qui**	**146.16**	**180**	PKPbc	**PKPbc**	**21 19 30.6**	**+0.2**
	comp=Z,5.9nm,0.7s,baz=11,slow=0.4,SNR=12						
BELA	**Belgrano 2**	**150.92**	**158**		**PKPbc**	**21 19 41.7**	**-0.7**
BOSA	**Boshof**	**152.23**	**357**	PKPbc	**PKPbc**	**21 19 46.4**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=5.3,slow=1.9,SNR=7.7						

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*NEIC **28** 21:06:05.6±1.0, 15.°99S±0.°09×168.°0E±0.°1, h153km±8km, mb4.8/31, Error ellipse: s-maj=19.3km s-min=13.0km az=81.0*

*IDC **28** 21:06:05.7±0.8, 16.°00S×167.°91E, h150km±6km, mb4.1/16, mbtmp4.5/18, MS3.6/3, Error ellipse: s-maj=15.6km s-min=9.8km az=85.0*

*NOU **28** 21:06:06.4, 16.°01S×167.°91E, h152km, mb4.8/32, Vanuatu Islands*

ISC 28 21:06:05.8±0.6**, 15.°99S**±0.°05×**167.°95E**±0.°07**, h157**km±4km**, h157**km**:pP-P, n122,** σ1.°17/132**, mb4.6**/34**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**4.81**	**188**	Pn	**Pn**	**21 07 15.6**	**-1.1**
LIFNC	**LIFOU**	**4.81**	**188**	P	**Pn**	**21 07 15.8**	**-1.0**
KOUNC	**Koumac, New Ca**	**5.72**	**217**	Pn	**Pn**	**21 07 29.1**	**+0.3**
KOUNC	**Koumac, New Ca**	**5.72**	**217**	P	**Pn**	**21 07 29.5**	**+0.7**
YATNC	**Mamie plateau,**	**6.12**	**189**	P	**Pn**	**21 07 33.0**	**-1.1**
DZM	**Mont Dzumac**	**6.21**	**193**	P	**Pn**	**21 07 35.0**	**-0.5**
	95nm,0.5s,baz=45,slow=7.7,SNR=146						
DZM				S	**Sn**	**21 08 46.9**	**+1.1**
	54nm,0.8s,baz=122,slow=23,SNR=3.7						
DZM	**Mont Dzumac**	**6.21**	**193**	Pn	**Pn**	**21 07 34.8**	**-0.6**
DZM	**Mont Dzumac**	**6.21**	**193**	P	**Pn**	**21 07 35.5**	**0.0**
NOUC	**Port Laguerre**	**6.28**	**194**	P	**Pn**	**21 07 36.5**	**+0.3**
ONTNC	**Ouen Toro**	**6.44**	**192**	Pn	**Pn**	**21 07 38.1**	**-0.3**
ONTNC	**Ouen Toro**	**6.44**	**192**	P	**Pn**	**21 07 40.5**	**+2.1**
OUENC	**Ouen Island, N**	**6.48**	**189**	Pn	**Pn**	**21 07 39.1**	**+0.2**
OUENC	**Ouen Island, N**	**6.48**	**189**	P	**Pn**	**21 07 40.7**	**+1.8**
PINNC	**Pines Island,**	**6.60**	**184**	Pn	**Pn**	**21 07 40.2**	**-0.3**
PINNC	**Pines Island,**	**6.60**	**184**	P	**Pn**	**21 07 40.7**	**+0.1**
MSVF	**Nonsavu**	**9.82**	**102**	P	**Pn**	**21 08 24.4**	**+1.0**
	3.3nm,0.8s,baz=288,slow=13,SNR=1.0						
MSVF				LR	LR	21 11 10.5	
	comp=Z,169nm,20.3s,baz=181,slow=31						
HNR	**Honiara**	**10.17**	**309**	P	**Pn**	**21 08 26.8**	**-1.2**
	320nm,0.3s,baz=144,slow=14,SNR=1.5						
HNR				S	**S**	**21 10 23.1**	**+1.1**
	375nm,0.3s,baz=154,slow=23,SNR=1.3						
HNR				LR	LR	21 12 12.9	
	comp=Z,2µm,19.2s,baz=180,slow=36						
HNR	**Honiara**	**10.17**	**309**		**Pn**	**21 08 25.1**	**-3.0**
HNR	**Honiara**	**10.17**	**309**	P	**Pn**	**21 08 30.1**	**+2.1**
EIDS	**Eidsvold**	**18.32**	**237**	P	**P**	**21 10 08.3**	**+0.2**
EIDS				IAmb	IAmb	21 10 10.8	
	comp=Z,28nm,0.8s						
EIDS	**Eidsvold**	**18.32**	**237**	P	**Pn**	**21 10 09.6**	**-0.4**
CTA	**Charters Tower**	**21.03**	**256**	P	**P**	**21 10 38.6**	**+1.3**
	comp=Z,8.7nm,0.8s,baz=87,slow=12,SNR=7.9						
	comp=Z,8.7nm,0.8s						
CTAO	**Charters Tower**	**21.03**	**256**	P	**P**	**21 10 36.6**	**-0.7**
CTAO				IAmb	IAmb	21 10 57.2	
	comp=Z,75nm,1.6s						
MGCD	**Mangrove Creek**	**22.93**	**219**	P	**P**	**21 10 58.2**	**+1.9**
HIZ	**Hauiti**	**23.24**	**166**	P	**P**	**21 10 58.9**	**-0.2**
RIV	**Riverview**	**23.34**	**217**	P	**P**	**21 11 00.1**	**+0.1**
URZ	**Urewera**	**23.60**	**162**	P	**P**	**21 11 04.2**	**+1.8**
	comp=Z,25nm,0.9s,baz=90,slow=4.7,SNR=7.0						
	comp=Z,25nm,0.9s						
BKZ	**Black Stump Fm**	**24.27**	**164**	P	**P**	**21 11 09.7**	**+1.2**
LTZ	**Lake Taylor**	**26.95**	**173**	P	**P**	**21 11 32.5**	**-0.2**
QIS	**Mount Isa**	**27.28**	**256**	P	**P**	**21 11 37.0**	**+1.2**
INKA	**Innaminka**	**27.76**	**240**	P	**P**	**21 11 41.0**	**+1.1**
RPZ	**Rata Peaks**	**27.76**	**175**	P	**P**	**21 11 40.5**	**+0.7**
	comp=Z,11nm,0.6s,baz=43,slow=3.5,SNR=12						
	comp=Z,11nm,0.6s						
RPZ	**Rata Peaks**	**27.76**	**175**	P	**P**	**21 11 39.6**	**-0.2**
RPZ				IAmb	IAmb	21 11 41.7	
	comp=Z,14nm,0.8s						
RPZ	**Rata Peaks**	**27.76**	**175**	P	**P**	**21 11 41.1**	**+1.3**
JCZ	**Jackson Bay**	**28.00**	**179**	P	**P**	**21 11 44.1**	**+2.1**
STKA	**Stephens Creek**	**28.71**	**232**	P	**P**	**21 11 48.7**	**+0.4**
	comp=Z,5.1nm,0.8s,baz=70,slow=10,SNR=5.6						
	comp=Z,5.1nm,0.8s						
STKA	**Stephens Creek**	**28.71**	**232**	P	**P**	**21 11 48.5**	**+0.2**
OOD	**Oodnadatta**	**32.06**	**243**	P	**P**	**21 12 18.8**	**+0.9**
WB0	**Warramunga Arr**	**32.13**	**258**	P	**P**	**21 12 17.4**	**-1.2**
WB0				IAmb	IAmb	21 12 18.3	
	comp=Z,6.9nm,0.7s						
WRAB	**Tennant Creek**	**32.17**	**258**	P	**P**	**21 12 18.3**	**-0.7**
WRAB	**Tennant Creek**	**32.17**	**258**	P	**P**	**21 12 18.2**	**-0.8**
WRA	**Warramunga Arr**	**32.18**	**258**	P	**P**	**21 12 18.1**	**-1.0**
	comp=Z,3.1nm,0.7s,baz=89,slow=9.1,SNR=36						
WRA				PcP	**PcP**	**21 15 04.3**	**0.0**
	comp=Z,0.2nm,0.3s,baz=88,slow=3.3,SNR=2.2						
WRA				ScP	**ScP**	**21 18 33.9**	**+0.5**
	comp=Z,2.0nm,0.9s,baz=87,slow=3.8,SNR=8.0						
	comp=Z,3.1nm,0.7s						
WRA	**Warramunga Arr**	**32.18**	**258**	P	**P**	**21 12 16.9**	**-2.2**
AS01	**Alice Springs**	**32.82**	**251**	P	**P**	**21 12 24.5**	**-0.2**
AS31	**Alice Springs**	**32.86**	**251**	P	**P**	**21 12 24.4**	**-0.7**
AS31				IAmb	IAmb	21 12 25.5	
	comp=Z,8.4nm,0.4s						
ASAR	**Alice Springs**	**32.87**	**251**	P	**P**	**21 12 24.8**	**-0.3**
	comp=Z,15nm,0.6s,baz=77,slow=8.9,SNR=169						
ASAR				pP	**pP**	**21 12 55.6**	**-1.4**
	comp=Z,3.7nm,0.8s,baz=80,slow=9.3,SNR=3.4						
ASAR				PcP	**PcP**	**21 15 06.7**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=94,slow=2.9,SNR=5.1						
ASAR				ScP	**ScP**	**21 18 36.2**	**+0.5**
	comp=Z,3.7nm,1.0s,baz=87,slow=3.4,SNR=12						
	comp=Z,15nm,0.6s						
ASAR	**Alice Springs**	**32.87**	**251**	P	**P**	**21 12 24.4**	**-0.7**
BBOO	**Buckleboo**	**33.35**	**234**	P	**P**	**21 12 28.9**	**-0.3**
BBOO				IAmb	IAmb	21 12 53.8	
	comp=Z,34nm,1.4s						
BBOO	**Buckleboo**	**33.35**	**234**	P	**P**	**21 12 29.5**	**+0.4**
MULG	**Mulgathing**	**34.11**	**239**	P	**P**	**21 12 35.5**	**-0.2**
KNRA	**Kununurra**	**37.67**	**265**	P	**P**	**21 13 05.0**	**-1.1**
KNRA	**Kununurra**	**37.67**	**265**	P	**P**	**21 13 05.3**	**-0.8**
WRKA	**Warakurna**	**38.10**	**250**	P	**P**	**21 13 09.6**	**-0.2**
FORT	**Forrest**	**39.24**	**241**	P	**P**	**21 13 18.5**	**-0.6**
FORT	**Forrest**	**39.24**	**241**	P	**P**	**21 13 18.2**	**-0.9**
FITZ	**Fitzroy Crossi**	**40.45**	**261**	P	**P**	**21 13 28.7**	**-0.5**
FITZ	**Fitzroy Crossi**	**40.45**	**261**	P	**P**	**21 13 29.4**	**+0.2**
MBWA	**Marble Bar**	**45.87**	**256**	P	**P**	**21 14 12.5**	**-0.2**
MBWA				IAmb	IAmb	21 14 33.3	
	comp=Z,39nm,1.4s						
MBWA	**Marble Bar**	**45.87**	**256**	P	**P**	**21 14 13.4**	**+0.7**
MORW	**Morawa**	**49.33**	**245**	P	**P**	**21 14 39.0**	**-0.3**
MORW				IAmb	IAmb	21 15 19.2	
	comp=Z,33nm,1.4s						
DRV	**Dumont d'Urvil**	**53.87**	**193**	P	**P**	**21 15 11.6**	**-0.8**
DRV				sP	**PcP**	**21 16 11.7**	**-4.1**
JMN	**Monobe**	**59.16**	**327**	P	**P**	**21 15 50.5**	**+0.2**
MJAR	**Matsushiro Arr**	**59.32**	**332**	P	**P**	**21 15 51.5**	**+0.2**
	comp=Z,6.4nm,0.9s,baz=166,slow=7.5,SNR=14						
	comp=Z,6.4nm,0.9s						
MAJO	**Matsushiro**	**59.32**	**332**		**P**	**21 15 50.9**	**-0.4**
MAJO				IAmb	IAmb	21 15 52.9	
	comp=Z,17nm,1.1s						
MAJO	**Matsushiro**	**59.32**	**332**	P	**P**	**21 15 51.9**	**+0.6**
MJB9	**Matsu-Tunnel**	**59.33**	**332**		**P**	**21 15 51.1**	**-0.2**
MJB9				IAmb	IAmb	21 15 52.9	
	comp=Z,18nm,1.1s						
VNDA	**Vanda**	**61.62**	**182**	P	**P**	**21 16 06.7**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=6.3,slow=5.3,SNR=7.8						
	comp=Z,2.1nm,0.7s						
VNDA	**Vanda**	**61.62**	**182**	P	**P**	**21 16 06.5**	**+0.3**
VNDA	**Vanda**	**61.62**	**182**	P	**P**	**21 16 05.8**	**-0.5**
VNDA				pP	**PcP**	**21 16 45.2**	**-1.0**
SBA	**Scott Base**	**61.88**	**180**	P	**P**	**21 16 09.6**	**+1.6**
SBA	**Scott Base**	**61.88**	**180**	P	**P**	**21 16 08.7**	**+0.7**
SBA				pP	**PcP**	**21 16 48.5**	**+1.2**
CCD	**Concordia, Ant**	**63.80**	**192**	P	**P**	**21 16 20.1**	**-1.2**
JKA	**Kamikawa-asahi**	**64.14**	**340**	P	**P**	**21 16 24.1**	**+0.8**
JKA				IAmb	IAmb	21 16 30.1	
	comp=Z,21nm,1.3s						

ASAJ	Asahikawa	64.15	340	P	P	21 16 25.4	+2.0
	comp=Z,5.6nm,0.5s,baz=222,slow=4.5,SNR=12						
ASAJ				LR	LR	21 39 32.2	
	comp=Z,17nm,21.3s,baz=154,slow=31						
	comp=Z,5.6nm,0.5s						
NJ2	Nanjing	67.04	316	*e*P	P	21 16 44.3	+2.1
NJ2				pP	pP	21 17 19.5	+0.4
NJ2				sP	sP	21 17 35.3	-0.5
NJ2				S	S	21 25 19.3	-4.1
NJ2				sS	SKiKP	21 26 27.3	+0.5
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,190nm,4.2s						
USRK	Ussuriysk Ar.	68.30	333	P	P	21 16 51.5	+1.7
	comp=Z,3.9nm,0.7s,baz=172,slow=5.8,SNR=11						
	comp=Z,3.9nm,0.7s						
USRK	Ussuriysk Ar.	68.30	333	P	P	21 16 50.3	+0.4
WHN	Wuhan	69.27	312	P	P	21 17 03.0	+6.9
MDJ	Mudanjiang	69.70	332	P	P	21 17 00.3	+1.8
MDJ				pP	pP	21 17 36.0	+0.3
MDJ				PP	PP	21 19 33.5	-1.4
MDJ				S	S	21 26 11.5	+17
MDJ				sS	SKiKP	21 26 16.5	-14
MDJ	Mudanjiang	69.70	332	SS	SS	21 30 27.5	+1.1
MDJ				pmax	pmax		
	comp=Z,17nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,240nm,5.9s						
MDJ	Mudanjiang	69.70	332	P	P	21 16 58.8	+0.3
MDJ				IAmb	IAmb	21 17 00.8	
	comp=Z,11nm,0.8s						
MDJ	Mudanjiang	69.70	332	P	P	21 16 59.1	+0.7
MDJ				pP	pP	21 17 35.7	0.0
CN2	Changchun	71.06	329	*e*P	P	21 17 08.0	+1.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
QSPA	South Pole Qui	74.04	180	P	P	21 17 24.7	+0.4
	comp=Z,18nm,0.9s,baz=5.0,slow=3.6,SNR=31						
	comp=Z,18nm,0.9s						
QSPA	South Pole Qui	74.04	180	P	P	21 17 24.5	+0.2
QSPA				IAmb	IAmb	21 17 25.8	
	comp=Z,24nm,0.9s						
HEH	HeiHe	74.97	334	P	P	21 17 30.3	+0.7
HEH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CMAR	Chiang Mai Arr	76.06	294	P	P	21 17 37.8	+1.2
	comp=Z,0.4nm,0.5s,baz=123,slow=4.4,SNR=1.5						
	comp=Z,0.4nm,0.5s						
PZH	PanZhiHua	76.93	303	P	P	21 17 43.8	+2.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,130nm,5.3s						
HHC	Hu-ho-hao-te	76.97	320	*e*P	P	21 17 42.3	+1.0
HHC				pmax	pmax		
	comp=Z,22nm,0.9s						
HHC				pmax	pmax		
	comp=Z,240nm,6.2s						
SONM	Songino Array	83.90	323	P	P	21 18 19.2	+1.1
	comp=Z,2.2nm,0.9s,baz=143,slow=6.0,SNR=9.0						
SONM				pP	pP	21 18 56.9	+0.4
	comp=Z,1.8nm,1.0s,baz=104,slow=6.3,SNR=3.7						
	comp=Z,2.2nm,0.9s						
SONM	Songino Array	83.90	323	P	P	21 18 18.4	+0.3
GTA	Gaotai	84.01	314	*e*P	P	21 18 21.8	+2.9
GTA				sP	pwP	21 19 03.0	+3.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SHL	Shillong	84.74	298	P	P	21 18 22.7	-0.3
SHL				IAmb	IAmb	21 19 04.6	
	comp=Z,11nm,1.0s						
CAST	Castle Rocks	85.00	17	P	P	21 18 22.3	-0.8
BELA	Belgrano 2	85.42	175	P	P	21 18 24.6	-0.6
TRF	Thorofare Moun	85.54	17	P	P	21 18 25.3	-0.7
TRF				IAmb	IAmb	21 18 45.5	
	comp=Z,16nm,1.6s						
ILAR	Eielson Array	87.52	18	P	P	21 18 34.4	-1.0
	comp=Z,0.5nm,0.5s,baz=242,slow=4.7,SNR=9.5						
ILAR				pP	pP	21 19 13.6	-1.0
	comp=Z,0.1nm,0.5s,baz=223,slow=8.7,SNR=3.3						
	comp=Z,0.5nm,0.5s						
TROLL	Troll, Antarti	91.66	184	P	P	21 18 55.2	+0.2
SNAA	Sanae	92.33	183	P	P	21 18 57.8	-0.2
SNAA	Sanae	92.33	183	P	P	21 18 57.7	-0.3
	comp=Z,5.1nm,0.8s,baz=215,slow=9.4,SNR=10						
	comp=Z,5.1nm,0.8s						
SNAA	Sanae	92.33	183		P	21 18 57.2	-0.9
VNA3	Neumayer Olymp	92.97	181	P	P	21 19 00.4	-0.5
VNA2	Neumayer--Watz	93.25	182	P	P	21 19 01.9	-0.2
	baz=240,slow=2.0						
WMQ	Urumqi	94.08	314	*e*P	P	21 19 07.5	+1.0
MK31	Makanchi Array	98.57	316	P	P	21 19 26.5	-0.3
MK31				IAmb	IAmb	21 19 50.5	
	comp=Z,3.4nm,1.7s						
MKAR	Makanchi Array	98.57	316	P	Pdif	21 19 27.6	+0.9
	comp=Z,0.3nm,0.6s,baz=84,slow=5.1,SNR=4.5						
MKAR				pP	pP	21 20 05.1	-0.5
	comp=Z,0.5nm,0.8s,baz=99,slow=7.9,SNR=3.8						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	98.57	316	P	P	21 19 26.3	-0.4
ARCES	ARCESS Array B	121.63	345	PKP	PKPdf	21 24 40.3	0.0
	comp=Z,1.4nm,0.5s,baz=76,slow=1.7,SNR=11						
FINES	FINESS Array B	127.13	338	PKP	PKPdf	21 24 51.0	0.0
	comp=Z,1.3nm,0.7s,baz=100,slow=2.1,SNR=8.4						
GERES	GERESS Array B	141.06	333	PKhKP	PKPpre	21 25 12.5	
	comp=Z,0.5nm,0.7s,baz=51,slow=2.6,SNR=3.7						
ARSA	Arzberg	141.37	330	*i* PKP	PKPdf	21 25 16.0	-2.1
	comp=Z,1.3nm,0.6s						
SOKA	Soboth	142.02	329	*e*PKP	PKPdf	21 25 16.6	-2.7
	comp=Z,0.7nm,0.5s						
KBA	Koelnbreinsper	142.53	331	*e*PKP	PKPdf	21 25 17.6	-2.8
	comp=Z,0.8nm,0.4s						
ABTA	Abfaltersbach	143.16	332	*e*PKP	PKPbc	21 25 18.8	0.0
	comp=Z,5.6nm,0.6s,SNR=5.9						
MOTA	Moosalm	143.33	333	*e*PKP	PKPbc	21 25 19.8	+0.5
	comp=Z,3.7nm,0.9s						
RETA	Reutte	143.37	334	*e*PKP	PKPbc	21 25 20.4	+1.2
	comp=Z,1.9nm,0.5s						
SQTA	Sankt Quirin	143.38	333	*i* PKP	PKPbc	21 25 20.4	+1.0
	comp=Z,2.9nm,0.5s						
FETA	Feichten	143.75	333	*e*PKP	PKPdf	21 25 21.8	-0.7
	comp=Z,2.8nm,0.5s						
DAVA	Damuels	143.90	334	*e*PKP	PKPdf	21 25 22.3	-0.5
	comp=Z,3.2nm,0.6s						
KEST	Kesra	152.60	320	PKPbc	PKPbc	21 25 43.7	-0.6
	comp=Z,3.3nm,0.7s,baz=87,slow=5.1,SNR=6.9						
ESDC	Sonseca Array	155.37	345	PKPab	PKPab	21 26 06.8	0.0
	comp=Z,0.3nm,0.7s,baz=12,slow=2.4,SNR=1.9						
TORD	Torodi Ar. Bea	166.40	260	PKPab	PKPab	21 26 55.7	-0.1
	comp=Z,0.8nm,0.8s,baz=102,slow=3.2,SNR=3.6						

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*IDC **28** 21:15:12.4±0.9, 48°.81S×9°.97W, h0^{km}, mb4.2/6, mbtmp4.2/6, MS3.7/17, Error ellipse: s-maj=32.7km s-min=25.4km az=123.0*

*NEIC **28** 21:15:14.9±1.5, 48°.74S±0°.08×10°.3W±0°.2, h10^{km}±1^{km}, mb4.7/15, Error ellipse: s-maj=23.6km s-min=11.2km az=107.0*

ISC 28 21:15:13.9±0.6**, 48°.7S**±0°.1×**10°.1W**±0°.1**, h10**^{km}**, n47, σ0^{s}.79**/29**, mb4.6**/13**, MS3.7**/17**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	17.26	241	Pn	Pn	21 19 07.7	-7.1
SNAA	Sanae	23.27	174	P	P	21 20 19.5	-1.7
	2.8nm,1.0s,baz=310,slow=21,SNR=20						
	2.8nm,1.0s						
SNAA	Sanae	23.27	174	P	P	21 20 19.5	-1.7
SNAA				IAmb	IAmb	21 20 20.8	
	comp=Z,19nm,1.5s						
SUR	Sutherland	28.37	66	LR	LR	21 30 12.6	
	comp=Z,168nm,18.0s,baz=214,slow=32						
BOSA	Boshof	33.74	66	P	P	21 21 55.8	+0.2
	comp=Z,4.7nm,0.8s,baz=220,slow=9.1,SNR=3.9						
BOSA				LR	LR	21 32 31.8	
	comp=Z,134nm,20.3s,baz=195,slow=31						
	comp=Z,4.7nm,0.8s						
BOSA	Boshof	33.74	66	P	P	21 21 55.6	0.0
BOSA				IAmb	IAmb	21 21 58.7	
	comp=Z,16nm,1.3s						
LBTB	Lobatse	36.61	63	LR	LR	21 34 28.5	
	comp=Z,56nm,19.8s,baz=186,slow=32						
TSUM	Tsumeb	36.97	47	LR	LR	21 34 59.6	
	comp=Z,40nm,18.9s,baz=169,slow=32						
MAW	Mawson	39.98	145	LR	LR	21 36 51.1	
	comp=Z,40nm,20.4s,baz=345,slow=33						
QSPA	South Pole Qui	41.53	180	LR	LR	21 39 19.8	
	comp=Z,66nm,18.7s,baz=155,slow=35						
QSPA	South Pole Qui	41.53	180	P	P	21 23 02.8	+1.7
LL02	Futaleuf	42.22	253	P	P	21 23 06.7	-0.1
LL02				IAmb	IAmb	21 23 10.8	
	comp=Z,14nm,1.4s						
PLCA	Paso Flores	42.65	257	LR	LR	21 37 37.3	
	comp=Z,124nm,22.0s,baz=160,slow=32						
CPUP	Villa Florida	42.74	284	LR	LR	21 37 40.2	
	comp=Z,89nm,19.7s,baz=167,slow=31						
LSZ	Lusaka	45.77	57	P	P	21 23 35.6	-0.1
	comp=Z,0.8nm,0.5s,baz=146,slow=6.0,SNR=2.9						
LSZ				LR	LR	21 41 01.8	
	comp=Z,109nm,18.0s,baz=176,slow=34						
	comp=Z,0.8nm,0.5s						
AQDB	Aquidauana	45.95	291	P	P	21 23 36.9	-0.1
AQDB				IAmb	IAmb	21 23 39.6	
	comp=Z,5.5nm,0.6s						
CFA	Coronel Fontan	46.42	269	P	P	21 23 41.9	+1.3
	comp=Z,0.8nm,0.4s,baz=132,slow=14,SNR=2.0						
CFA				LR	LR	21 39 41.9	
	comp=Z,76nm,20.6s,baz=192,slow=32						
	comp=Z,0.8nm,0.4s						
PTLB	Pontes e Lacer	51.88	292	P	P	21 24 22.4	-0.1
SIV	San Ignacio	52.66	290	LR	LR	21 44 11.6	
	comp=Z,106nm,19.5s,baz=106,slow=33						
LVC	Limon Verde	52.87	278	LR	LR	21 45 23.2	
	comp=Z,70nm,19.8s,baz=176,slow=34						
LVC	Limon Verde	52.87	278	P	P	21 24 29.9	-0.4
LVC				IAmb	IAmb	21 24 33.9	
	comp=Z,11nm,1.4s						
PB09	IPOC Station P	53.66	278	P	P	21 24 36.2	+0.4
PB09				IAmb	IAmb	21 24 39.9	
	comp=Z,22nm,1.4s						
PB02	IPOC Station P	54.42	278	P	P	21 24 41.6	+0.3
VILB	Vilhena	54.46	293	P	P	21 24 41.3	-0.3
OPO	Ambohidratompo	54.81	78	LR	LR	21 44 02.5	
	comp=Z,40nm,19.5s,baz=282,slow=32						
SAML	Samuel	59.40	293	P	P	21 25 16.3	-0.2
SAML				IAmb	IAmb	21 25 17.7	
	comp=Z,6.8nm,1.1s						
MBAR	Mbarara	59.44	49	LR	LR	21 49 13.0	
	comp=Z,57nm,18.1s,baz=185,slow=34						
ETMB	Extrema	60.58	290	P	P	21 25 24.2	-0.5
ETMB				IAmb	IAmb	21 25 26.0	
	comp=Z,9.6nm,1.4s						
TORD	Torodi Ar. Bea	62.49	13	P	P	21 25 36.5	-0.9
	comp=Z,6.9nm,0.3s,baz=196,slow=8.5,SNR=5.9						
	comp=Z,6.9nm,0.3s						
MDP	Montagnes des	65.16	312	LR	LR	21 50 47.4	
	comp=Z,84nm,20.7s,baz=116,slow=33						
TAM	Tamanrasset	72.56	15	P	P	21 26 41.6	+0.5
ROSC	El Rosal	77.02	293	LR	LR	21 59 56.0	
	comp=Z,104nm,18.5s,baz=221,slow=35						
RUSC	La Rusia	77.10	295	P	P	21 27 07.5	-0.6
RUSC				IAmb	IAmb	21 27 08.7	
	comp=Z,9.6nm,1.2s						
SJG	San Juan	83.08	307	LR	LR	22 02 27.3	
	comp=Z,40nm,18.4s,baz=148,slow=34						
H01W2	Cape Leeuwin H	83.09	137	T	T	23 00 49.9	
	baz=215,slow=75,SNR=8.2						
H01W1	Cape Leeuwin H	83.10	137	T	T	23 00 53.5	
	baz=215,slow=75,SNR=6.1						
H01W3	Cape Leeuwin H	83.10	137	T	T	23 00 53.5	
	baz=215,slow=75,SNR=7.4						
ESDC	Sonseca Array	88.19	5	P	P	21 28 05.2	+0.6
	comp=Z,1.1nm,1.1s,baz=193,slow=6.1,SNR=5.2						
	comp=Z,1.1nm,1.1s						
CMAR	Chiang Mai Arr	116.19	92	PKP	PKiKP	21 33 57.4	0.0
	comp=Z,0.2nm,0.3s,baz=216,slow=4.5,SNR=1.5						
PDAR	Pinedale Array	125.93	296	PKP	PKPdf	21 34 15.7	0.0
	comp=Z,0.2nm,0.6s,baz=76,slow=3.8,SNR=3.6						
YKA	Yellowknife Ar	137.78	318	PKP	PKiKP	21 34 38.2	-0.8
	comp=Z,0.5nm,0.9s,baz=119,slow=2.6,SNR=6.2						
M30M	Minto, Yukon	147.91	316	PKPbc	PKiKP	21 34 59.2	-0.7
BCAR	Beaver Creek A	150.17	317	PKPdf	PKPdf	21 35 00.1	+1.4
I26K	Coal Creek Min	150.44	321	PKPbc	PKiKP	21 35 05.3	+0.3
BMAR	Burnt Mountain	150.49	326	PKPbc	PKiKP	21 35 04.9	-0.2
ILAR	Eielson Array	152.10	321	PKPbc	PKiKP	21 35 08.7	+0.3
	comp=Z,1.6nm,0.9s,baz=342,slow=1.6,SNR=13						
ILAR	Eielson Array	152.10	321	PKPbc	PKiKP	21 35 08.4	-0.1

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*IDC **28** 21:18:09.2±5.3, 6°.29S×130°.13E, h114^{km}±69^{km}, mb3.4/1, mbtmp4.0/4, Error ellipse: s-maj=142.1km s-min=23.9km az=80.0*

ISC 28 21:18:07.5±1.2**, 6°.35S**±0°.07×**130°.5E**±0°.4**, h100**^{km}**, n4, σ4^{s}.00**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.50	8	P	Pn	21 19 29.1	+2.1
	47nm,0.3s,baz=204,slow=19,SNR=90						
SIJI				S	Sn	21 20 25.8	-3.2
	22nm,0.3s,baz=248,slow=24,SNR=15						
WRA	Warramunga Arr	14.02	165	P	Pn	21 21 23.4	+1.7
	1.1nm,0.3s,baz=347,slow=13,SNR=44						
WRA				S	Sn	21 23 53.6	-2.5
	1.5nm,0.6s,baz=358,slow=23,SNR=8.6						
ASAR	Alice Springs	17.52	170	P	P	21 22 08.4	+3.2
	1.0nm,0.5s,baz=351,slow=10,SNR=12						
ASAR				S	Sn	21 25 15.6	-5.3
	0.6nm,0.7s,baz=350,slow=26,SNR=3.3						
MKAR	Makanchi Array	67.96	326	P	P	21 28 54.2	-1.5
	0.4nm,0.4s,baz=117,slow=7.5,SNR=11						
	0.4nm,0.4s						

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*NOU **28** 21:19:34.0, 42°.62S×173°.68E, h0^{km}, MLv4.1/11, South Island, New Zealand*

*WEL **28** 21:19:37.0±0.6, 42°S±3°×17°4E±°, h8^{km}±3^{km}, M3.8/13, ML3.9/13, MLv3.8/13, Error ellipse: s-maj=0.0km s-min=0.0km az=117.7, confirmed*

ISC 28 21:19:34.8±1.2**, 42°.54S**±0°.03×**173°.70E**±0°.04**, h8**^{km}±9^{km}**, n81, σ1^{s}.08**/88**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.17	317	P	Pg	21 19 38.6	+0.3
KHZ	Kahutara	0.17	317	P	Pg	21 19 38.7	+0.4
KHZ				S	Sg	21 19 40.4	-0.3
GVZ	Greta Valley S	0.65	229	P	Pb	21 19 50.0	+1.6
GVZ				S	Sb	21 20 00.0	+2.4
BSWZ	Blackbirch Sta	0.84	9	P	Pg	21 19 51.9	+1.0
BSWZ				S	Sb	21 20 03.6	+0.6
CMWZ	Cape Campbell	0.88	26	P	Pb	21 19 53.9	+1.6
THZ	Tophouse	0.98	323	P	Pg	21 19 53.0	-0.5
THZ				S	Sg	21 20 03.7	-2.5
AMCZ	Amberley	1.00	230	P	Pg	21 19 55.2	+1.2
LTZ	Lake Taylor	1.08	257	P	Pg	21 19 55.6	+0.1
LTZ				S	Sb	21 20 10.1	+0.1
TUWZ	Tuamarina	1.13	9	P	Pg	21 19 56.7	+0.2
MRNZ	Matariki Terra	1.34	328	P	Pb	21 19 59.4	-0.7
MRNZ				S	Sn	21 20 16.9	-0.9
NNZ	Nelson	1.34	350	P	Pn	21 19 59.5	-0.4
MQZ	McQueen’s Vall	1.39	213	P	Pn	21 19 59.7	-0.8
MQZ				S	Sn	21 20 18.0	-1.1
TCW	Tory Channel	1.40	18	P	Pn	21 20 00.2	-0.4
SNZO	South Karori	1.44	32	P	Pn	21 20 01.1	-0.1
AKCZ	Akaroa Harbour	1.45	203	P	Pn	21 20 01.3	-0.1
OXZ	Oxford	1.45	237	P	Pn	21 20 00.4	-0.9
WEL	Wellington	1.49	33	P	Pn	21 20 01.9	0.0
PLWZ	Palliser	1.51	51	P	Pn	21 20 02.0	-0.3
TKNZ	Takaka Hill	1.60	340	P	Pn	21 20 03.8	+0.3
DSZ	Denniston Nort	1.62	299	P	Pn	21 20 03.1	-0.6
RACZ	Rakaia	1.64	223	P	Pn	21 20 03.4	-0.6
INZ	Inchbonnie	1.67	263	P	Pn	21 20 04.3	-0.1
PAWZ	Paruwai Farm	1.73	49	P	Pn	21 20 04.7	-0.6
DUWZ	D’Urville Isla	1.75	6	P	Pn	21 20 05.8	+0.4
CAW	Cannon Point	1.76	36	P	Pn	21 20 05.3	-0.3
MHCZ	Mount Hutt	1.85	237	P	Pn	21 20 05.8	-1.1
TRWZ	Traveller	1.87	53	P	Pn	21 20 06.6	-0.6
KIW	Kapiti Island	1.91	29	P	Pn	21 20 07.6	-0.1
QRZ	Quartz Range	1.93	333	P	Pn	21 20 08.5	+0.6
QRZ	Quartz Range	1.93	333	P	Pn	21 20 08.2	+0.3
MTW	Mount Morrison	1.93	45	P	Pn	21 20 07.3	-0.7
WACZ	Wakanui South	1.95	223	P	Pn	21 20 07.7	-0.5
OGWZ	Otaki Gorge	2.05	33	P	Pn	21 20 09.2	-0.4
HOWZ	Holdsworth Sta	2.13	40	P	Pn	21 20 10.0	-0.7
TMWZ	Te Maipa	2.18	50	P	Pn	21 20 10.6	-0.8
WVZ	Waitaha Valley	2.24	255	P	Pn	21 20 12.2	0.0
RPZ	Rata Peaks	2.26	238	P	Pn	21 20 11.5	-1.0
RPZ	Rata Peaks	2.26	238	P	Pn	21 20 11.7	-0.8
ARCZ	Arundel	2.31	232	P	Pn	21 20 12.3	-0.9
MRZ	Mangatainoka R	2.35	38	P	Pn	21 20 13.0	-0.8
GCSZ	Gaunt Creek Bo	2.59	252	P	Pn	21 20 17.4	+0.3
BFZ	Birch Farm	2.67	47	P	Pn	21 20 16.7	-1.4
TMZ	Timaru	2.69	226	P	Pn	21 20 17.8	-0.5
WAZ	Wanganui	2.95	20	P	Pn	21 20 23.2	+1.2
TSZ	Takapari Road	3.01	35	P	Pn	21 20 21.7	-1.1
FOZ	Fox Glacier	3.01	250	P	Pn	21 20 23.0	+0.3
LREZ	Lake Rotokare	3.12	10	P	Pn	21 20 27.9	+3.6
LBZ	Lake Benmore	3.15	233	P	Pn	21 20 24.3	-0.4
PNHZ	Pukenui	3.23	37	P	Pn	21 20 24.6	-1.4
KHEZ	Kahui Hut	3.25	4	P	Pn	21 20 27.7	+1.5
NEZ	North Egmont	3.28	5	P	Pb	21 20 31.7	-1.6
ODZ	Otahua Downs	3.34	220	P	Pn	21 20 26.6	-0.7
ODZ	Otahua Downs	3.34	220	P	Pn	21 20 26.6	-0.7
PKE	Pukeiti	3.35	4	P	Pn	21 20 31.1	+3.6
PKVZ	Pokaka	3.48	22	P	Pn	21 20 30.0	+0.7
MOVZ	Moawhango	3.50	27	P	Pn	21 20 29.0	-0.5
VRZ	Vera Road	3.51	14	P	Pn	21 20 30.9	+1.3
WNVZ	Wahianoa	3.52	25	P	Pn	21 20 30.7	+0.8
BHHZ	Black Hill Sta	3.54	31	P	Pn	21 20 29.3	-0.8
TUVZ	Tukino	3.59	25	P	Pn	21 20 31.3	+0.4
SNVZ	South Ngauruho	3.66	24	P	Pn	21 20 33.1	+1.2
OTVZ	Oturere	3.69	25	P	Pn	21 20 32.6	+0.3
NNVZ	North Ngauruho	3.71	24	P	Pn	21 20 33.4	+0.9
ETVZ	East Tongariro	3.73	25	P	Pn	21 20 34.9	+2.1
KWHZ	Kaweka Forest	3.74	34	P	Pn	21 20 31.7	-1.1
TMVZ	Te Maari	3.75	25	P	Pn	21 20 34.0	+1.0
JCZ	Jackson Bay	3.90	245	P	Pn	21 20 34.3	-0.8
JCZ	Jackson Bay	3.90	245	P	Pn	21 20 34.5	-0.5
BKZ	Black Stump Fm	3.98	33	P	Pn	21 20 37.2	+1.0
BKZ	Black Stump Fm	3.98	33	P	Pn	21 20 34.6	-1.6
HHSZ	Highcliff Hill	4.01	213	P	Pn	21 20 36.3	-0.3
WKZ	Wanaka	4.09	234	P	Pn	21 20 36.7	-0.9
HIZ	Hauiti	4.12	13	P	Pn	21 20 39.6	+1.6
HIZ	Hauiti	4.12	13	P	Pn	21 20 39.7	+1.6
EAZ	Earnscleugh	4.16	228	P	Pn	21 20 38.2	-0.4
TUZ	Tuapeka	4.49	219	P	Pn	21 20 42.4	-0.7
URZ	Urewera	5.01	32	P	Pn	21 20 51.2	+0.9
SYZ	Scrubby Hill	5.15	218	P	Pn	21 20 51.7	-0.5
SYZ	Scrubby Hill	5.15	218	P	Pn	21 20 52.6	+0.4
AWAZ	Awhitu Peninsu	5.52	8	P	Pn	21 20 58.1	+0.8
APZ	The Paps	5.91	222	P	Pn	21 21 02.0	-0.7

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*NEIC **28** 21:48:31.4±2.3, 15°.82N±0°.06×94°.17W±0°.05, h84^{km}±7^{km}, mb4.4/45, Md4.6/84(MEX), Error ellipse: s-maj=9.4km s-min=6.2km az=196.0*

*MEX **28** 21:48:32.8±0.7, 15°.87N×94°.19W, h85^{km}±13^{km}, MD4.6*

*IDC **28** 21:48:32.4±1.8, 16°.07N×93°.93W, h82^{km}±13^{km}, mb3.7/14, mbtmp4.0/16, Error ellipse: s-maj=44.9km s-min=16.2km az=47.0*

ISC 28 21:48:30.9±0.7**, 15°.86N**±0°.04×**94°.18W**±0°.03**, h83**^{km}±7^{km}**, n150, σ1^{s}.47**/210**, mb4.3**/27**, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NILT	Santiago Nilte	0.82	329	*e*P	Pn	21 48 48.9	+0.8
NILT				*e*S	Sn	21 49 01.8	+0.8
PCIG		0.94	99		Pn	21 48 49.9	+0.5
PCIG					Sn	21 49 04.0	+0.8
PCIG		0.94	99	*e*P	Pn	21 48 49.9	+0.5
PCIG				*e*S	Sn	21 49 04.0	+0.8
TGIG		1.37	48		Pn	21 48 55.1	+0.4
TGIG					Sn	21 49 11.8	-0.9
TGIG		1.37	48	*e*P	Pn	21 48 55.1	+0.4
TGIG				*i* S	Sn	21 49 11.8	-0.9
TGBT	Tuxtla Gutierr	1.39	49		Pn	21 48 55.1	+0.2
TGBT					Sn	21 49 12.5	-0.6
TGBT	Tuxtla Gutierr	1.39	49	*i* P	Pn	21 48 55.1	+0.2
TGBT				*e*S	Sn	21 49 12.5	-0.6
CMIG	Matias Romero	1.40	331	P	Pn	21 48 56.1	+0.9
	281nm,0.3s,baz=166,slow=13,SNR=815						
CMIG				S	Sn	21 49 13.8	+0.4
	1µm,0.3s,baz=142,slow=16,SNR=104						
CMIG	Matias Romero	1.40	331	*e*P	Pn	21 48 56.1	+0.9
CMIG				*e*S	Sn	21 49 14.0	+0.6
HUIG	Huatulco	1.86	268		Pn	21 49 00.8	-0.3
HUIG	Huatulco	1.86	268	*i* P	Pn	21 49 00.8	-0.3
HUIG				*e*S	Sn	21 49 21.5	-2.5
CCIG	Comitan	2.01	78	Pn	Pn	21 49 03.5	+0.3
CCIG				Sn	Sn	21 49 25.4	-2.4
CCIG	Comitan	2.01	78	*e*P	Pn	21 49 03.8	+0.6
CCIG				*e*S	Sn	21 49 27.8	+0.1
PATR	El Naranjo	2.01	111	*e*P	Pn	21 49 04.0	+0.6
PATR				*e*S	Sn	21 49 28.4	+0.4
PAVE	Pavencul	2.04	109	*e*P	Pn	21 49 05.1	+1.4
PAVE				*e*S	Sn	21 49 29.5	+0.9
THIG		2.07	117		Pn	21 49 03.6	-0.3
THIG					Sn	21 49 29.1	0.0
THIG		2.07	117	*e*P	Pn	21 49 03.6	-0.3
THIG				*e*S	Sn	21 49 29.1	0.0
CHUJ	Union Juarez	2.13	111	*e*P	Pn	21 49 05.9	+1.0
CHUJ				*e*S	Sn	21 49 31.6	+0.7
MIHL	Minatitlan	2.15	351	*e*P	Pn	21 49 05.5	+0.6
MIHL				*e*S	Sn	21 49 30.6	-0.3
TUIG	Tuzandepetl	2.18	354	*e*P	Pn	21 49 05.9	+0.6
TUIG				*e*S	Sn	21 49 32.1	+0.6
PANG	Puerto Angel	2.22	265		Pn	21 49 05.0	-0.9
PANG	Puerto Angel	2.22	265	*e*P	Pn	21 49 05.0	-0.9
PANG				*e*S	Sn	21 49 29.6	-2.9
NEUV	Arroyo Zacate	2.41	320	*e*P	Pn	21 49 09.1	+0.6
NEUV				*e*		21 49 30.9	
HUEH	Huehuetenango	2.63	101		Pn	21 49 11.8	+0.2
OXLC	Oaxaca	2.70	297	*e*P	Pn	21 49 12.8	+0.3
OXLC				*e*S	Sn	21 49 44.9	+0.4
OXBJ	Oaxaca	2.72	297		Pn	21 49 13.6	+0.8
OXBJ	Oaxaca	2.72	297	*e*P	Pn	21 49 13.6	+0.8
OXBJ				*e*S	Sn	21 49 42.2	-2.7
OXIG	Oaxaca	2.73	297		Pn	21 49 15.3	+2.4
OXIG					Sn	21 49 44.9	-0.3
VHO	Vista Hermosa	2.73	297	*e*P	Pn	21 49 15.3	+2.4
VHO				*e*S	Sn	21 49 44.9	-0.3
RTAL	Retalhuleu	2.74	119		Pn	21 49 13.8	+0.9
PMUV	Sontecomapan	2.82	341	*e*P	Pn	21 49 13.5	-0.5
PMUV				*e*S	Sn	21 49 45.5	-1.7
PEIG	Puerto Escondi	2.86	273		Pn	21 49 14.4	-0.1
PEIG	Puerto Escondi	2.86	273	*i* P	Pn	21 49 14.4	-0.1
PEIG				*e*S	Sn	21 49 46.0	-2.0
YOIG	Yosondua	3.38	288		Pn	21 49 23.3	+1.5
YOIG					Sn	21 50 00.3	-0.7
YOIG	Yosondua	3.38	288	*e*P	Pn	21 49 23.3	+1.5
YOIG				*e*S	Sn	21 50 00.3	-0.7
TOIG	Toxpalan	3.55	309		Pn	21 49 26.4	+2.5
TOIG					Sn	21 50 06.0	+1.2
TOIG	Toxpalan	3.55	309	*e*P	Pn	21 49 26.4	+2.5
TOIG				*e*S	Sn	21 50 06.0	+1.2
TXIG	Tlaxiaco	3.71	292		Pn	21 49 28.7	+2.4
TXIG					Sn	21 50 08.0	-1.1
TXIG	Tlaxiaco	3.71	292	*e*P	Pn	21 49 28.7	+2.4
TXIG				*e*S	Sn	21 50 08.0	-1.1
PNIG	Pinotepa	3.83	279		Pn	21 49 28.2	+0.5
PNIG	Pinotepa	3.83	279	*i* P	Pn	21 49 28.2	+0.5
PNIG				*e*S	Sn	21 50 07.9	-3.7
TPIG	Tehuac#an	3.97	310		Pn	21 49 31.1	+1.4
TPIG					Sn	21 50 15.8	+0.6
TPIG	Tehuac#an	3.97	310	*e*P	Pn	21 49 31.1	+1.4
TPIG				*e*S	Sn	21 50 15.8	+0.6
HLIG	Huajuapan de L	3.99	300		Pn	21 49 32.7	+2.7
HLIG					Sn	21 50 16.7	+1.0
HLIG	Huajuapan de L	3.99	300	*e*P	Pn	21 49 32.7	+2.7
HLIG				*e*S	Sn	21 50 16.7	+1.0
SCIG	Sabancuy	4.21	42	*e*P	Pn	21 49 32.5	-0.2
SCIG				*e*S	Sn	21 50 18.8	-2.0
PETF	Flores	4.27	75		Pn	21 49 34.0	+0.5
JAUV	Jalcomulco	4.29	325	*e*P	Pn	21 49 33.8	-0.2
JAUV				*e*S	Sn	21 50 21.4	-1.5
FTIG	Fresnillo de T	4.30	299		Pn	21 49 37.0	+2.9
FTIG					Sn	21 50 24.6	+1.4
FTIG	Fresnillo de T	4.30	299	*e*P	Pn	21 49 37.0	+2.9
FTIG				*e*S	Sn	21 50 24.6	+1.4
LVIG	Laguna Verde	4.40	331	*e*P	Pn	21 49 34.2	-1.1
LVIG				*i* S	Sn	21 50 23.2	-2.1
MGIG	Malinaltepec	4.49	288		Pn	21 49 39.0	+2.2
MGIG					Sn	21 50 25.8	-2.0
MGIG	Malinaltepec	4.49	288	*e*P	Pn	21 49 39.0	+2.2
MGIG				*i* S	Sn	21 50 25.8	-2.0
TLIG	Tlapa	4.53	293		Pn	21 49 39.7	+2.4

TLIG	Tlapa	4.53	293	*e*P	Pn	21 49 39.8	+2.5
TLIG				*e*S	Sn	21 50 27.6	-1.2
DAIG	Los Arroyos	5.38	283		Pn	21 49 50.0	+1.3
DAIG	Los Arroyos	5.38	283	*e*P	Pn	21 49 50.0	+1.3
DAIG				*e*S	Sn	21 50 47.0	-2.3
CXUV	Coxquihui	5.38	323	*e*P	Pn	21 49 50.0	+1.2
CXUV				*i* S	Sn	21 50 49.5	+0.1
YAIG	Yautepec	5.54	303		Pn	21 49 54.5	+3.4
YAIG					Sn	21 50 51.7	-1.8
YAIG	Yautepec	5.54	303	*e*P	Pn	21 49 54.5	+3.4
YAIG				*e*S	Sn	21 50 51.7	-1.8
MEIG	Mezcala	5.60	292		Pn	21 49 54.9	+3.1
MEIG					Sn	21 50 53.5	-1.4
MEIG	Mezcala	5.60	292	*e*P	Pn	21 49 54.9	+3.1
MEIG				*i* S	Sn	21 50 53.5	-1.4
PLIG	Platanillo	5.68	297		Pn	21 49 56.4	+3.5
PLIG					Sn	21 50 55.5	-1.4
PLIG	Platanillo	5.68	297	*e*P	Pn	21 49 56.4	+3.5
PLIG				*e*S	Sn	21 50 55.5	-1.4
CAIG	El Cayaco	5.96	282		Pn	21 49 58.0	+1.3
CAIG					Sn	21 51 02.1	-1.5
CAIG	El Cayaco	5.96	282	*e*P	Pn	21 49 58.0	+1.3
CAIG				*e*S	Sn	21 51 02.1	-1.5
ARIG	Puente Sto Nin	6.37	293		Pn	21 50 05.6	+3.3
ARIG					Sn	21 51 13.1	-0.6
ARIG	Puente Sto Nin	6.37	293	*e*P	Pn	21 50 05.6	+3.3
ARIG				*e*S	Sn	21 51 13.1	-0.6
MYIG	Mrida	6.59	39	*e*P	Pn	21 50 06.5	+1.2
MYIG				*e*S	Sn	21 51 16.8	-2.2
TGUH	Tegucigalpa,Un	6.91	104	Pn	Pn	21 50 09.4	-0.3
TEIG	Tepich	7.10	51	Pn	Pn	21 50 10.3	-1.8
TEIG	Tepich	7.10	51	*e*P	Pn	21 50 10.5	-1.7
TEIG				*e*S	Sn	21 51 25.5	-5.8
ZIIG	Zihuatanejo	7.20	285		Pn	21 50 15.9	+2.4
ZIIG					Sn	21 51 32.5	-1.3
ZIIG	Zihuatanejo	7.20	285	*e*P	Pn	21 50 15.9	+2.4
ZIIG				*e*S	Sn	21 51 32.5	-1.3
CRIN	San Cristobal	7.59	114	Pn	Pn	21 50 18.8	-0.2
MOIG	Morelia	7.68	301		Pn	21 50 22.4	+2.0
CNGN	Cerro Negro	7.98	114	Pn	Pn	21 50 24.7	+0.4
MATN	Matagalpa	8.51	109	Pn	Pn	21 50 31.9	+0.4
BOAB	BOACO BROADBAN	8.92	111	Pn	Pn	21 50 37.5	+0.4
ORTG	Ortega, Santa	10.10	122		Pn	21 50 54.6	+1.4
DUNO	Dulce Nombre,	10.23	123		Pn	21 50 56.2	+1.3
JTS	Las Juntas de	10.55	121	P	Pn	21 51 00.1	+0.7
	9.8nm,0.3s,baz=336,slow=12,SNR=9.7						
JTS	Las Juntas de	10.55	121		Pn	21 50 59.9	+0.6
RIMA	Rio Macho	11.74	120		Pn	21 51 16.1	+0.5
PEZE	Perez Zeledon,	12.10	121		Pn	21 51 21.1	+0.6
SOR	Soroa	12.60	55		Pn	21 51 24.4	-2.6
435B	Jarrell	15.18	349		Pn	21 52 01.3	+0.6
435B				lAmb	lAmb	21 52 32.9	
	comp=Z,26nm,0.5s						
JCT	Junction City	15.44	341	P	P	21 52 06.2	-0.6
JCT				lAmb	lAmb	21 52 10.1	
	comp=Z,11nm,0.8s						
TX31	Lajitas Ar. Si	16.01	329		Pn	21 52 11.3	0.0
TXAR	Lajitas Array	16.01	329	P	P	21 52 12.1	-1.1
	comp=Z,0.7nm,0.6s,baz=133,slow=12,SNR=5.4						
TXAR	Lajitas Array	16.01	329	Pn	P	21 52 12.0	-1.2
WHTX	Lake Whitney,	16.34	350		P	21 52 18.4	+1.7
WHTX				lAmb	lAmb	21 52 60.0	
	comp=Z,14nm,0.9s						
553A	Crawfordville	16.84	30		Pn	21 52 21.4	0.0
553A				lAmb	lAmb	21 53 00.5	
	comp=Z,18nm,0.9s						
656A	Willston	17.20	37		Pn	21 52 25.7	-0.1
656A				lAmb	lAmb	21 53 03.4	
	comp=Z,33nm,1.2s						
ABTX	Abilene, Hawle	17.41	344	P	P	21 52 28.2	-0.4
ABTX				lAmb	lAmb	21 52 32.0	
	comp=Z,15nm,0.6s						
ODSA	Odessa	17.89	336	P	Pn	21 52 34.5	+0.1
ODSA				lAmb	lAmb	21 52 38.2	
	comp=Z,14nm,0.8s						
POST	Post	18.37	340	P	Pn	21 52 39.7	-0.5
POST				lAmb	lAmb	21 52 42.6	
	comp=Z,12nm,0.6s						
MIAR	Mount Ida	18.62	2	P	P	21 52 41.7	-0.1
X37A	Clayton	18.68	357	P	Pn	21 52 43.0	-0.8
WMOK	Wichita Mounta	19.25	348		P	21 52 49.0	+0.2
MSTX	Muleshoe	19.63	338	P	Pn	21 52 53.8	-1.3
MSTX				lAmb	lAmb	21 52 57.9	
	comp=Z,20nm,1.1s						
FCAR	Ozark Folk Cen	20.03	5	P	P	21 52 56.5	-0.8
FCAR				lAmb	lAmb	21 53 01.1	
	comp=Z,7.1nm,0.5s						
AMTX	Amarillo	20.11	342	P	P	21 52 58.9	+0.7
LCAR	Lake Charles	20.31	7	P	P	21 52 59.0	-1.2
ELIS	Ellis County	20.66	348	P	P	21 53 04.5	+0.5
121A	Cookes Peak, D	20.69	326	P	Pn	21 53 05.8	-1.9
T35A	Sooner Cattle	21.08	355		P	21 53 07.9	-0.6
T35A				lAmb	lAmb	21 53 28.3	
	comp=Z,10.0nm,0.7s						
CPCT	Cooper Cave	21.34	22	P	P	21 53 09.8	-1.5
TKL	Tuckaleechee C	21.80	23	P	P	21 53 14.9	-1.4
	comp=Z,0.9nm,0.5s,baz=228,slow=12,SNR=1.9						
	comp=Z,0.9nm,0.5s						
ANMO	Albuquerque	21.97	332	P	P	21 53 18.8	+0.5
	comp=Z,1.4nm,0.6s,baz=249,slow=14,SNR=5.5						
	comp=Z,1.4nm,0.6s						
ANMO	Albuquerque	21.97	332	P	P	21 53 18.8	+0.5
CCM	Cathedral Cave	22.26	6	P	P	21 53 19.6	-1.5
T25A	Trinidad	23.06	339	P	P	21 53 30.4	+0.8
T25A				lAmb	lAmb	21 53 35.9	
	comp=Z,14nm,1.4s						
CBKS	Cedar Bluff	23.39	349	P	P	21 53 32.6	+0.2
CBKS				lAmb	lAmb	21 53 34.7	
	comp=Z,14nm,0.8s						
MVCO	Mesa Verde	24.77	332	P	P	21 53 45.6	+0.4
MVCO				lAmb	lAmb	21 54 03.2	
	comp=Z,11nm,1.0s						
SCIA	State Center	25.97	2	P	P	21 53 54.8	-1.0
ECSD	EROS Data Cent	27.86	356	P	P	21 54 12.1	-0.7
SPMN	Marine on St.	29.30	2	P	P	21 54 24.7	-0.7
PDAR	Pinedale Array	29.88	337	P	P	21 54 30.3	-0.6
	comp=Z,0.3nm,0.6s,baz=134,slow=13,SNR=3.6						
	comp=Z,0.3nm,0.6s						
F36A	Milaca	29.92	1	P	P	21 54 29.8	-1.1
F36A				lAmb	lAmb	21 54 30.6	
	comp=Z,5.6nm,1.0s						
E28A	Huff	31.11	351	P	P	21 54 41.4	0.0
EYMN	Ely	32.07	3	P	P	21 54 48.6	-1.3
EYMN				lAmb	lAmb	21 55 33.1	
	comp=Z,6.8nm,1.1s						
MDND	Maddock	32.21	353	P	P	21 54 50.8	-0.3
AGMN	Agassiz Nation	32.38	358	P	P	21 54 51.4	-1.1
AGMN				lAmb	lAmb	21 54 52.4	
	comp=Z,11nm,1.0s						
B35A	Bob, Littlefor	32.41	1	P	P	21 54 51.5	-1.3
B35A				lAmb	lAmb	21 54 52.2	
	comp=Z,8.5nm,0.7s						
ULM	Lac du Bonnet	34.33	358	P	P	21 55 08.0	-1.5
	comp=Z,4.4nm,0.5s,baz=181,slow=8.8,SNR=6.8						
	comp=Z,4.4nm,0.5s						
FFC	Flin Flon	39.26	353	P	P	21 55 51.4	+0.1
FFC				lAmb	lAmb	21 55 52.1	
	comp=Z,4.9nm,0.7s						
FCC	Fort Churchill	42.83	0	P	P	21 56 19.8	-0.7
FCC				lAmb	lAmb	21 56 20.5	
	comp=Z,5.4nm,0.8s						
YKA	Yellowknife Ar	48.76	348	P	P	21 57 07.5	+0.4
	comp=Z,1.4nm,0.6s,baz=153,slow=7.5,SNR=33						
	comp=Z,1.4nm,0.6s						
BDFB	Brasilia	55.29	122	P	P	21 57 56.5	+0.1
	comp=Z,2.0nm,0.6s,baz=284,slow=13,SNR=3.3						
	comp=Z,2.0nm,0.6s						
ILAR	Eielson Array	60.31	337	P	P	21 58 33.0	+2.3
	comp=Z,0.2nm,0.5s,baz=150,slow=4.8,SNR=4.5						
	comp=Z,0.2nm,0.5s						
BMAR	Burnt Mountain	60.84	340	P	P	21 58 35.5	+1.2
PPLA	Purkeypile	61.65	334	P	P	21 58 41.0	+1.0
EUNU	Eureka	64.33	1	P	P	21 58 57.7	+0.3
EUNU				lAmb	lAmb	21 58 58.4	
	comp=Z,4.9nm,0.8s						
SCO	Scoresbysund	69.24	20	P	P	21 59 28.8	+0.2
SCO				lAmb	lAmb	21 59 30.3	
	comp=Z,6.6nm,1.2s						
ESK	Eskdalemuir	77.67	36	P	P	22 00 18.3	-0.1
ESK				lAmb	lAmb	22 00 55.6	
	comp=Z,17nm,1.1s						
SPITS	Spitsbergen Ar	78.69	11	P	P	22 00 23.1	-0.6
	comp=Z,5.2nm,0.9s,baz=353,slow=3.3,SNR=1.3						
	comp=Z,5.2nm,0.9s						
ESDC	Sonseca Array	80.22	52	P	P	22 00 32.3	-0.4
	comp=Z,0.5nm,0.8s,baz=256,slow=3.8,SNR=3.0						
	comp=Z,0.5nm,0.8s						
NB2	NORSAR Subarra	83.52	28	P	P	22 00 50.6	+1.0
	comp=Z,0.7nm,0.7s,baz=291,slow=5.1						
NOA	NORSAR Array B	83.52	28	P	P	22 00 50.0	+0.5
	comp=Z,1.3nm,0.8s,baz=291,slow=5.2,SNR=6.0						
	comp=Z,1.3nm,0.8s						
NC602	NORSAR Array S	83.78	28	P	P	22 00 51.8	+1.0
HFS	Hagfors	84.99	29	P	P	22 00 57.2	+0.2
	comp=Z,2.4nm,0.8s,baz=335,slow=6.4,SNR=4.3						
	comp=Z,2.4nm,0.8s						
ARCES	ARCESS Array B	85.03	18	P	P	22 00 58.4	+1.3
	comp=Z,1.8nm,0.5s,baz=296,slow=5.2,SNR=15						
	comp=Z,1.8nm,0.5s						
ARCES	ARCESS Array B	85.03	18	P	P	22 00 57.5	+0.5
GERES	GERESS Array B	89.50	39	P	P	22 01 18.9	-0.2
	comp=Z,0.9nm,1.0s,baz=270,slow=1.3,SNR=4.7						
	comp=Z,0.9nm,1.0s						
ZCCA	Zocca	89.50	44	P	P	22 01 19.4	+0.3
FINES	FINESS Array B	89.70	25	P	P	22 01 19.2	-0.4
	comp=Z,1.9nm,0.9s,baz=305,slow=4.9,SNR=1.8						
	comp=Z,1.9nm,0.9s						
FINES	FINESS Array B	89.70	25	P	P	22 01 20.1	+0.5
WRA	Warramunga Arr	133.77	257	PKP	PKiKP	22 07 40.0	-0.4
	comp=Z,0.4nm,0.9s,baz=92,slow=3.7,SNR=4.9						
PZH	PanZhiHua	135.14	340	PKP	PKiKP	22 07 43.3	+0.1

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*IDC **28** 21:53:30.0±0.7, 38.°40N×37.°24E, h0^{km}, mb3.7/15, mbtmp3.7/27, ML3.6/10, MS2.9/3, Error ellipse: s-maj=13.1km s-min=9.2km az=170.0*
*ISK **28** 21:53:30.2, 38.°30N×37.°16E, h7^{km}, ML4.2/14*
*DDA **28** 21:53:30.8±0.0, 38.°29N×37.°18E, h12^{km}, MW4.0*
*NEIC **28** 21:53:31.6±1.4, 38.°29N±0.°04×37.°15E±0.°06, h10^{km}±1^{km}, mb4.0/14, Error ellipse: s-maj=8.2km s-min=6.5km az=78.0*
ISC 28 21:53:31.4±0.8**, 38.°31N**±0.°01×**37.°15E**±0.°01**, h11**^{km}±5^{km}**, n214, σ1.^{s}45**/265**, mb3.8**/27**, 10C-7D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELBS	KAHRAMANMARAS	0.03	317	P	Pg	21 53 33.3	-0.2
ELBS				S	Sg	21 53 35.3	+0.3
DARE	Darende-Malaty	0.37	44	Pg	Pg	21 53 37.9	-0.9
DARE				Sg	Sg	21 53 43.7	0.0
CUGUR	Gurin_SVAS	0.43	12	P	Pg	21 53 39.4	-0.5
CUGUR				S	Sb	21 53 46.6	-1.0
SARI	SarD1z-Kayseri	0.59	280	Pg	Pg	21 53 41.9	-1.0
SARI				Sg	Sg	21 53 50.8	+0.2
AKCD	Akcadag	0.60	91	P	Pg	21 53 41.6	-1.5
AKCD				S	Sg	21 53 51.3	+0.2
AKCA	Adyaman/G¶l	0.66	140	SPECP		21 53 42.0	
AKCA				P	Pg	21 53 43.1	-1.1
AKCA				S	Sg	21 53 52.8	-0.1
KAHM	Kahramanmaras,	0.80	190	SPECP		21 53 45.0	
KAHM				P	Pg	21 53 45.8	-1.0
KAHM				S	Sn	21 54 01.3	+0.7
KMRS	Kahramanmaras	0.82	194	Pg	Pg	21 53 46.3	-1.0
KMRS				Sg	Sb	21 53 58.6	-0.3
HEKM	Malatya_Hekimh	0.85	48	P	Pg	21 53 46.5	-1.3
HEKM				S	Sb	21 53 60.0	+0.1
SAIM	ADANA	0.91	249	P	Pg	21 53 47.1	-1.8
SAIM				S	Sg	21 54 00.0	-0.7
ANDN	Andirin	0.97	222	P	Pg	21 53 47.9	-2.1
ANDN				SPECP		21 53 48.0	
ANDN				S	Sn	21 54 04.8	-0.1
HCB	Kahramanmara	0.98	192	SPECP		21 53 49.0	
HCB				P	Pg	21 53 49.3	-0.9
HCB				S	Sb	21 54 03.7	+0.3
AZEY	Adyaman-Merk	0.99	119	SPECP		21 53 49.0	
AZEY				P	Pg	21 53 49.5	-1.1
AZEY				S	Sn	21 54 06.5	+1.0
MAYA	Malatya/Merkez	1.00	88	P	Pg	21 53 48.3	-2.3
MAYA				S	Sg	21 54 02.9	-0.8
GZT	Gaziantep	1.00	161	P	Pg	21 53 49.9	-0.8
GZT				SPECP		21 53 50.0	
GZT				S	Sg	21 54 03.8	0.0
CUAYA	Sivas-Altinyay	1.01	342	P	Pg	21 53 50.5	-0.4
CUAYA				S	Sn	21 54 05.4	-0.6
CUKAN	kangal_SIVAS	1.04	13	P	Pg	21 53 50.0	-1.4
CUKAN				S	Sb	21 54 05.4	+0.2
GAZ	Gaziantep	1.13	178	Pn	Pb	21 53 52.3	-0.8
GAZ				Sn	Sn	21 54 08.5	-0.4
GAZ	Gaziantep	1.13	178	Pn	Pb	21 53 52.2	-0.8
GAZ				Sg	Sg	21 54 07.9	0.0
BNN	Bunyan	1.16	298	Pn	Pb	21 53 52.4	-1.2
BNN				Sn	Sn	21 54 09.5	-0.2
BNN	Bunyan	1.16	298	Pn	Pb	21 53 52.4	-1.2
BNN				Sn	Sn	21 54 09.7	-0.1
KAMA	Osmaniye	1.18	199	P	Pb	21 53 52.8	-1.1
KAMA				S	Sn	21 54 10.1	0.0
ARPR	Arapgir-MALATY	1.21	49	Pn	Pb	21 53 52.7	-1.8
CUSAR	Sarkisla-SIVAS	1.32	328	P	Pn	21 53 55.5	-0.4
CUSAR				S	Sg	21 54 14.5	+0.6
NZIP	Nizip/Gaziante	1.33	162	P	Pn	21 53 55.8	-0.2
NZIP				S	Sg	21 54 14.4	+0.3
KOZT	Kozan	1.33	232	Pn	Pn	21 53 54.9	-1.1
NARI	Adyaman-Kaht	1.34	108	P	Pn	21 53 55.3	-0.8
NARI				S	Sg	21 54 14.9	+0.5
GUNE	Kayseri	1.34	297	P	Pn	21 53 55.9	-0.3
GUNE				S	Sg	21 54 16.8	+2.3
KEMA	Kemaliye	1.42	47	P	Pn	21 53 55.8	-1.4
KEMA				S	Sg	21 54 17.1	0.0
YAHY	KAYSERI_Yahyal	1.43	262	P	Pn	21 53 57.0	-0.4
YAHY				S	Sn	21 54 16.4	+0.2
ELZG	Elazig	1.45	82	P	Pn	21 53 56.0	-1.8
ELZG				S	Sg	21 54 17.6	-0.4
KUZU	Kuzuini	1.53	182	P	Pn	21 53 58.6	-0.2
KUZU				S	Sg	21 54 21.6	+1.0
HANM	anlurfa/Hi	1.54	117	P	Pn	21 53 58.7	-0.3
HANM				S	Sg	21 54 21.2	+0.1
SCER	sogukcermik	1.55	359	P	Pn	21 53 59.5	+0.3
SCER				S	Sg	21 54 22.8	+1.4
AKO	Adana	1.59	239	P	Pn	21 53 59.9	+0.3
AKO				S	Sg	21 54 24.5	+1.9
SVSK	Karacayir	1.61	356	Pn	Pn	21 54 00.3	+0.5
CUZAR	Zara_SIVAS	1.65	17	P	Pn	21 54 00.8	+0.3
CUZAR				S	Sg	21 54 28.2	+3.7
CEYT	Ceyhan	1.71	221	Pn	Pn	21 54 01.0	-0.1
HACI	Hacifakili, Ak	1.78	322	P	Pn	21 54 03.2	+0.9
HACI				S	Sg	21 54 29.7	+1.0
SURC	SANLIURFA_SURC	1.84	140	P	Pn	21 54 02.1	-0.8
SURC				S	Sg	21 54 30.2	-0.1
SANL	SANLIURFA_Merk	1.84	127	P	Pn	21 54 02.7	-0.3
AVNS	Nevsehir-Avano	1.88	286	P	Pn	21 54 04.1	+0.5
AVNS				S	Sg	21 54 31.5	-0.3
YURE	YUREGIR	1.91	220	P	Pn	21 54 04.6	+0.6
YURE				S	Sg	21 54 41.1	+8.3
YOZ	Yozgat	1.95	314	Pn	Pn	21 54 04.9	+0.2
KARA	Karaisali	1.96	239	Pn	Pn	21 54 04.6	-0.1
KOZK	Kozakli-Nevseh	2.00	298	Pn	Pn	21 54 05.4	+0.1
SUSE	Susehri	2.07	23	P	Pn	21 54 07.2	+1.0
TOKT	Tokat	2.07	347	Pn	Pn	21 54 06.3	+0.2
TOKA	Tokat	2.08	346		Pn	21 54 07.1	+0.7
TOKA	Tokat	2.08	346	P	Pn	21 54 07.2	+0.9
TOKA				S	Sg	21 54 39.6	+1.3
RHAN	Hatay/Reyhanl	2.09	192	P	Pg	21 54 10.4	-1.0
RHAN				S	Sg	21 54 38.0	-0.5
RSDY	Resadiye-TOKAT	2.09	4	Pn	Pn	21 54 06.7	+0.2
KOVA	Elazig, Kovanc	2.12	78	P	Pn	21 54 07.7	+0.7
KOVA				S	Sg	21 54 41.3	+1.7
CKRK	Yozgat, Cekere	2.18	324	P	Pn	21 54 08.8	+1.0
CKRK				S	Sg	21 54 43.2	+1.7
MCUR	KIREHR	2.23	293	P	Pn	21 54 09.0	+0.6
MCUR				S	Sg	21 54 41.4	-1.5
ASUZ	Hatay-Arsuz	2.29	209	P	Pn	21 54 10.2	+1.2
GULA	Gulagac	2.30	272	Pn	Pn	21 54 09.6	+0.3
DED	Mersin	2.30	235	P	Pn	21 54 09.6	+0.3
DIYA	Diyarbakir	2.37	98	P	Pn	21 54 10.9	+0.6
DYBB	Diyarbakir	2.38	98	Pn	Pn	21 54 10.5	0.0
YAYL	Yayladag	2.42	201	P	Pn	21 54 10.8	-0.2
EUZM	Uzumlu	2.43	54	P	Pn	21 54 11.9	+0.8
EUZM				S	Sg	21 54 49.1	-0.2
KELT	Kelkit	2.46	41	P	Pn	21 54 12.1	+0.4
CDAG	Cicekdag	2.54	302	P	Pn	21 54 13.4	+0.7
CDAG				S	Sg	21 54 53.0	+0.1
HANI	Diyarbakir_Han	2.55	87	P	Pn	21 54 13.6	+0.7
KERG	Konya-Eregli	2.56	251	P	Pn	21 54 14.9	+2.0
KERG				S	Sg	21 54 52.6	-1.0
COAL	Corum-Alaca	2.57	320	P	Pn	21 54 14.7	+1.5
KIRS	Kirsehir-Merke	2.66	289	P	Pn	21 54 16.2	+1.8
AKSY	AKSARAY - Alti	2.69	278	P	Pn	21 54 16.2	+1.6
AKSY				S	Sg	21 54 57.3	-0.3
ORDU	Ordu-Boztepe	2.74	11	P	Pn	21 54 16.1	+0.8
ORDU				S	Sg	21 54 58.4	-0.8
MAZI	Mazidag	2.74	107	Pn	Pn	21 54 15.2	-0.2
AKPI	Kirsehir/Akpin	2.74	297	P	Pn	21 54 16.6	+1.2
AKPI				S	Sb	21 54 56.7	+2.6
BNGB	Bingl	2.84	75	Pn	Pn	21 54 17.5	+0.6
CTAK	Corum_Osmancik	2.97	323	P	Pn	21 54 21.0	+2.3
CTAK				S	Sg	21 55 07.7	+0.9
HAVZ	Havza	2.98	339	P	Pn	21 54 21.0	+2.3
HAVZ				S	Sg	21 55 08.0	+0.9
KIZK	Mersin	3.01	234	P	Pn	21 54 16.2	-2.8
DELI	KIRIKKALE	3.03	305	P	Pn	21 54 20.8	+1.4
DELI				S	Sg	21 55 07.3	-1.4
BRTR	Keskin Array B	3.08	298	Pn	Pn	21 54 21.9	+1.7
	4.2nm,0.3s,baz=122,slow=11,SNR=72						
BRTR				Lg	Lg	21 55 09.1	
	24nm,0.3s,baz=126,slow=31,SNR=9.4						
	5.8nm,0.3s						
BRTR	Keskin Array B	3.08	298	Pn	Pn	21 54 21.1	+0.9
BR131	Keskin Array S	3.08	298	Pn	Pn	21 54 21.0	+0.9
SLHN	Bingol, Solhan	3.10	77	P	Pn	21 54 22.5	+2.0
KOPT	Kop Dagi	3.11	56		Pn	21 54 21.3	+0.6
KOPT	Kop Dagi	3.11	56	P	Pb	21 54 27.0	+0.1
SAMS	Samsun-Alacam	3.14	347	P	Pn	21 54 22.4	+1.6
SVAN	Silvan-Diyarba	3.19	92	P	Pn	21 54 24.6	+3.0
ECAT	Cat-ERZURUM	3.25	65	P	Pg	21 54 31.9	-1.7
BTMN	Batman	3.27	96	P	Pn	21 54 22.8	0.0
MACK	Trabzon	3.32	37	P	Pn	21 54 24.3	+1.0
KTUT	Trabzon	3.35	36	⇑P	Pb	21 54 32.8	+2.0
KTUT				⇑S	Sg	21 55 19.8	+0.7
BBAL	Bala	3.38	293	P	Pn	21 54 26.8	+2.5
KKUL	Konya-Kulu	3.42	286	P	Pn	21 54 27.4	+2.5
EMRE	Erzurum,Aziziy	3.43	59	P	Pg	21 54 34.6	-2.6
EMRE				S	Sg	21 55 25.4	+3.8
MUSM	Mu-Merkez	3.44	82	P	Pn	21 54 26.6	+1.5
VRTB	Varto-Mus	3.47	74	P	Pg	21 54 35.6	-2.3
MIDY	Mardin/Midyat-	3.48	104	P	Pn	21 54 26.0	+0.4
KAGI	orum-Kargı	3.50	325	P	Pn	21 54 27.3	+1.4
KKBE	Karaman, Kazim	3.51	253	P	Pn	21 54 29.4	+3.3
KRIK	Erzurum-spir	3.56	54	P	Pb	21 54 36.6	+2.1
IZDR	Rize	3.62	46	P	Pn	21 54 28.9	+1.5
ELDT	Eldivan	3.62	308	P	Pn	21 54 28.4	+0.9
DIKM	Dikmen	3.64	337	⇑P	Pb	21 54 33.6	-2.2
ANTO	Ankara	3.73	296	⇓P	Pn	21 54 31.9	+2.8
ANTO	Ankara	3.73	296		Pn	21 54 29.5	+0.4
BR231	Keskin MP Arra	3.74	296		Pn	21 54 29.9	+0.7
BOYA	Sinop/Boyabat-	3.74	330	P	Pn	21 54 30.9	+1.8
BOYA				S	Sg	21 55 35.7	+4.1
KONT	Konya--Tatoy	3.80	266	P	Pn	21 54 32.7	+2.8
KONT				S	Sg	21 55 33.0	-0.3
ILGA	Ilgaz	3.82	317		Pn	21 54 31.0	+0.7
ILGA	Ilgaz	3.82	317	P	Pn	21 54 32.2	+1.9
BEIL	Beino	3.84	192	*e*P	Pn	21 54 30.8	+0.3
GURO	Guroymak-BITLI	3.84	85		Pn	21 54 31.8	+1.2
BLIS	Bitlis-Merkez	3.90	87	P	Pb	21 54 41.8	+1.4
HWQ	Hawqa	4.14	194	*e*P	Pn	21 54 35.2	+0.6
PELI	Kastamonı-Ara	4.21	317	P	Pn	21 54 36.6	+1.0
CMDR	Camlidere-ANKA	4.23	303	P	Pn	21 54 37.9	+2.0
CMDR				S	Sg	21 55 45.6	-1.7
SEYI	Kastamonu-Seyd	4.24	323	P	Pn	21 54 37.8	+1.8
PERV	Siirt/Pervari-	4.26	93	P	Pn	21 54 37.8	+1.4
DOGA	KONYA_Doganhis	4.33	269	P	Pn	21 54 39.8	+2.5
BZK	Bozkurt	4.38	328	⇑P	Pn	21 54 36.3	-1.5
BZK	Bozkurt	4.38	328	Pn	Pn	21 54 36.5	-1.3
CSS	Mathiatis	4.54	224		Pn	21 54 39.6	-0.4
ZAHL	Zahle	4.56	193	*e*P	Pn	21 54 45.1	+4.6
BHL	Bhannes	4.56	196	*e*P	Pn	21 54 42.2	+1.8
DAGI	Agillar	4.60	51	P	Pb	21 54 50.8	-1.3
DBOC	Borcka	4.61	47	P	Pb	21 54 50.4	-2.0
KEPZ	Antalya-Kepez	4.62	254	P	Pn	21 54 46.2	+4.9
GEVA	Gevas	4.64	88	Pn	Pn	21 54 41.7	+0.1
DQRL	Deir Qamar	4.77	196	*e*P	Pn	21 54 45.5	+2.2
QRWL	Qaraoun	4.90	195	*e*P	Pn	21 54 47.0	+2.0
RCY	Rachaya	4.92	193	*e*P	Pn	21 54 47.0	+1.6
MDUB	Mudurnu	5.10	297		Pn	21 54 49.0	+1.2
BORA	Eskisehir	5.45	289	Pn	Pn	21 54 53.8	+1.2
MMAI	Mount Meron Ar	5.47	196	Pn	Pn	21 54 53.2	+0.3
	2.8nm,0.3s,baz=15,slow=13,SNR=14						
MMAI				Lg	Lg	21 56 27.1	
	3.2nm,0.3s,baz=19,slow=32,SNR=1.7						
MMAI				LR	LR	21 57 00.9	
	comp=Z,66nm,18.0s,baz=100,slow=38						
	1.5nm,0.3s						
ASF	Jabal al Asfar	6.12	182	Pn	Pn	21 55 02.7	+0.7
	1.0nm,0.3s,baz=142,slow=4.4,SNR=8.4						
ASF				Lg	Lg	21 56 43.8	
	3.4nm,0.3s,baz=198,slow=24,SNR=2.9						
	2.3nm,0.3s						
GNI	Garni	6.17	70	Pn	Pn	21 55 01.6	-1.1
	0.2nm,0.3s,baz=300,slow=20,SNR=2.2						
	7.1nm,1.3s						
GNI	Garni	6.17	70	Pn	Pn	21 55 02.4	-0.2
AKAS	Kas	6.37	253	Pn	Pn	21 55 04.8	-0.4
ONI	Oni	6.43	46		Pn	21 55 07.4	+1.3
YAL	Yalta	6.58	341	*e*P	Pn	21 55 07.8	-0.2
YAL				Pm		21 55 08.4	
	comp=Z,19nm,0.5s						
ALU	Alushta	6.70	343	*e*P	Pn	21 55 09.9	+0.2
ALU				Pm		21 55 14.8	
	comp=Z,8.0nm,0.4s						
SEV	Sevastopol'	6.76	338	*e*P	Pn	21 55 14.1	+3.6
SEV				Pm		21 55 20.3	
	comp=Z,7.0nm,0.5s						
SUDU	Sudak	6.77	347	*e*P	Pn	21 55 14.8	+4.1
SUDU				Pm		21 55 16.1	
	comp=Z,9.0nm,0.6s						
KBZ	Khabaz	6.94	37	Pn	Pn	21 55 12.2	-0.8
	comp=Z,0.9nm,0.8s,baz=230,slow=7.9,SNR=1.6						
KARP	Karpathos	8.46	254	Pn	Pn	21 55 34.0	0.0
MANR	Mangalia	8.49	313	⇓P	Pn	21 55 35.5	+1.2
EIL	Elat	8.80	193	Pn	Pn	21 55 40.9	+2.3
	comp=Z,1.3nm,0.7s,baz=73,slow=11,SNR=1.6						
ALN	Alexandroupoli	8.96	290	Pn	Pn	21 55 40.9	+0.2
ICOR	Ion Corvin	9.13	312	⇓P	Pn	21 55 44.9	+1.9
RDO	Rodhopi	9.39	291		Pn	21 55 47.6	+1.0
CFR	Carcaliu	9.62	318	⇓P	Pn	21 55 49.9	+0.2
PURM	Purcari	9.82	329	⇓P	Pn	21 55 52.4	-0.1
VLDR	Vladesti	10.11	321	⇓P	Pn	21 56 00.7	+4.3
IDI	Anoyia	10.29	257	⇑P	Pn	21 56 01.3	+2.3
IDI	Anoyia	10.29	257	Pn	Pn	21 56 00.6	+1.6
	comp=Z,1.1nm,0.3s,baz=96,slow=14,SNR=9.8						
IDI				LR	LR	21 59 50.7	
	comp=Z,51nm,20.7s,baz=90,slow=37						
	comp=Z,10nm,0.6s						
IDI	Anoyia	10.29	257	Pn	Pn	21 56 00.1	+1.1
MLR	Muntele Rosu	11.01	314	Pn	Pn	21 56 08.3	-0.6
	comp=Z,0.1nm,0.3s,baz=125,slow=16,SNR=1.8						
	comp=Z,1.0nm,0.5s						
TESR	Tescani	11.29	320	⇑P	Pn	21 56 14.4	+1.8
VOIR		11.49	312	⇑P	Pn	21 56 17.0	+1.6
DOPR	Dopca	11.61	315	⇑P	Pn	21 56 24.8	+7.8
SORM	Soroca	11.73	330	⇑P	Pn	21 56 25.0	+6.4
BURAR	Bucovina Array	12.75	321	⇓P	Pn	21 56 33.9	+1.1
BURAR	Bucovina Array	12.75	321	Pn	Pn	21 56 32.5	-0.3
BUR08	Bucovina Ar. S	12.78	321	Pn	Pn	21 56 32.3	-0.9
SURR	Surduc	13.41	308	⇑P	Pn	21 56 45.0	+3.4
AKASG	Malin Array Be	13.61	338	Pn	Pn	21 56 42.3	-2.0
	comp=Z,0.3nm,0.3s,baz=138,slow=13,SNR=1.6						
	comp=Z,0.1nm,0.2s						
TIP	Timpagrande	15.94	279		P	21 57 18.1	-1.3
TIP				lAmb	lAmb	21 57 33.5	
	comp=Z,7.7nm,1.1s						
VAE	Valguarnera	17.97	274	P	Pn	21 57 41.1	-0.1
	comp=Z,0.3nm,0.3s,baz=51,slow=6.5,SNR=0.8						
	comp=Z,17nm,1.2s						
AKTO	Aktyubinsk	19.14	44	P	P	21 57 54.1	-0.4
	comp=Z,0.2nm,0.3s,baz=244,slow=9.5,SNR=6.1						
	comp=Z,1.7nm,0.5s						
ABKAR	Akbulak array	19.68	49	P	P	21 58 00.3	-0.1
ABKAR	Akbulak array	19.68	49	P	P	21 57 59.7	-0.8
GEC2	GERESS Array S	19.91	309	P	P	21 58 03.0	-0.1
GERES	GERESS Array B	19.91	309	P	Pn	21 58 04.0	-0.8
	comp=Z,0.2nm,0.3s,baz=116,slow=9.1,SNR=5.6						
	comp=Z,0.5nm,0.4s						
GERES	GERESS Array B	19.91	309	P	P	21 58 02.2	-0.8
KHC	Kasperske Hory	20.10	310	P	Pn	21 58 06.0	-0.9
WTTA	Wattenberg	20.68	304	*e*Pn	Pn	21 58 14.2	+0.3
	comp=Z,2.9nm,0.5s						
UOSS	Minazif	20.93	124	P	P	21 58 12.7	-1.5

UOSS				IAmb	IAmb	21 58 20.2	
	comp=Z,7.7nm,0.9s						
SQTA	Sankt Quirin	20.95	303	eP	P	21 58 14.7	+0.3
	comp=Z,2.3nm,0.7s						
MOTA	Moosalm	21.05	304	epP	P	21 58 16.7	+1.2
	comp=Z,4.2nm,0.8s						
FETA	Feichten	21.22	303	eP	P	21 58 19.9	+2.6
	comp=Z,5.0nm,1.1s						
RETA	Reutte	21.32	304	epP	P	21 58 19.1	+0.9
	comp=Z,4.7nm,0.7s						
CLL	Collm	21.39	315	eP	P	21 58 20.0	+1.1
FUORN	Ofenpass-Fuorn	21.43	301	P	P	21 58 19.4	-0.3
FUORN				IAmb	IAmb	21 58 43.1	
	comp=Z,3.2nm,0.9s						
DAVOX	Davos/Dischmat	21.72	302	P	P	21 58 22.9	+0.1
	comp=Z,1.0nm,0.6s,baz=204,slow=12,SNR=2.0						
	comp=Z,1.0nm,0.6s						
KIRV	Kirov	21.80	17	P	P	21 58 22.8	-0.3
	comp=Z,11nm,0.7s,baz=147,slow=5.2,SNR=6.5						
	comp=Z,11nm,0.7s						
DAVA	Damuels	21.84	303	epP	P	21 58 24.7	+0.7
	comp=Z,3.1nm,0.5s						
KEST	Kesra	22.32	272	P	P	21 58 30.4	+1.2
	comp=Z,2.1nm,0.9s,baz=46,slow=17,SNR=1.8						
	comp=Z,2.1nm,0.9s						
ARU	Arti	23.05	31	P	P	21 58 36.1	-0.4
	comp=Z,2.1nm,0.5s,baz=190,slow=3.4,SNR=5.6						
	comp=Z,2.1nm,0.5s						
ARU	Arti	23.05	31	P	P	21 58 36.0	-0.4
ARU				IAmb	IAmb	21 58 36.7	
	comp=Z,6.3nm,1.2s						
SENIN	Lac Senin/Sane	23.39	300	P	P	21 58 39.3	-1.1
BNI	Bardonecchia	23.65	296	P	P	21 58 42.9	0.0
BNI				IAmb	IAmb	21 59 04.0	
	comp=Z,7.1nm,1.2s						
FINES	FINESS Array B	24.17	347	P	P	21 58 47.1	-0.3
	comp=Z,1.0nm,0.8s,baz=148,slow=11,SNR=1.3						
	comp=Z,1.0nm,0.8s						
FINES	FINESS Array B	24.17	347	P	P	21 58 47.8	+0.4
KK31	Karatay Array	25.63	69	P	P	21 59 00.3	-0.6
KK31				IAmb	IAmb	21 59 28.3	
	comp=Z,2.2nm,1.0s						
KKAR	Karatay Array	25.63	69	P	P	21 59 00.5	-0.5
GAR	Garm	25.83	78	P	P	21 59 03.5	+0.5
HFS	Hagfors	26.41	333	P	P	21 59 08.7	+0.9
	comp=Z,0.9nm,0.5s,baz=138,slow=11,SNR=4.9						
	comp=Z,0.9nm,0.5s						
BVAR	Borovoye Array	27.20	46	P	P	21 59 14.9	0.0
	comp=Z,1.3nm,0.8s,baz=230,slow=3.6,SNR=1.4						
	comp=Z,1.3nm,0.8s						
NOA	NORSAR Array B	27.92	333	P	P	21 59 20.4	-1.0
	comp=Z,0.3nm,0.8s,baz=130,slow=9.9,SNR=1.2						
	comp=Z,0.3nm,0.8s						
KURBB	Kurchatov Arra	31.58	54	P	P	21 59 53.4	-0.5
	comp=Z,1.2nm,0.9s,baz=272,slow=9.2,SNR=12						
	comp=Z,1.2nm,0.9s						
KURK	Kurchatov	31.65	53	P	P	21 59 54.2	-0.2
KURK				IAmb	IAmb	21 59 56.8	
	comp=Z,2.7nm,0.9s						
ESDC	Sonseca Array	31.79	286	P	P	21 59 55.6	-0.3
	comp=Z,0.3nm,0.7s,baz=69,slow=9.5,SNR=2.9						
	comp=Z,0.3nm,0.7s						
EKA	Eskdalemuir Ar	31.86	316	LR	LR	22 13 14.9	
	comp=Z,41nm,20.3s,baz=162,slow=37						
MKAR	Makanchi Array	33.92	61	P	P	22 00 14.9	+0.5
	comp=Z,0.2nm,0.7s,baz=263,slow=5.8,SNR=2.6						
	comp=Z,0.2nm,0.7s						
MKAR	Makanchi Array	33.92	61	P	P	22 00 14.3	-0.1
ZAA0	Zalesovo Array	35.80	48	P	P	22 00 30.7	+0.2
ZAA0				IAmb	IAmb	22 00 31.3	
	comp=Z,2.4nm,0.6s						
ZALV	Zalesovo Beam	35.80	48	P	P	22 00 30.8	+0.4
	comp=Z,2.3nm,0.5s,baz=268,slow=8.7,SNR=13						
	comp=Z,2.3nm,0.5s						
ZALV	Zalesovo Beam	35.80	48	P	P	22 00 30.7	+0.2
WMQ	Urumqi	38.02	65	eP	P	22 00 51.8	+2.2
TORD	Torodi Ar. Bea	40.20	241	P	P	22 01 08.4	+0.4
	comp=Z,1.1nm,0.8s,baz=45,slow=6.9,SNR=6.4						
DBIC	Dimbokro	49.32	241	P	P	22 02 20.5	-0.3
SONM	Songino Array	49.91	55	P	P	22 02 25.3	+0.3
	comp=Z,0.6nm,0.6s,baz=270,slow=5.2,SNR=1.9						
	comp=Z,0.6nm,0.6s						
PZH	PanZhiHua	54.79	82	P	P	22 03 01.3	-0.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,130nm,4.4s						
HHC	Hu-ho-hao-te	55.76	62	eP	P	22 03 08.3	-0.1
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,230nm,5.6s						
PETK	Petropavlovsk-	75.44	32	P	P	22 05 14.9	-0.3
	comp=Z,0.9nm,0.5s,baz=320,slow=6.5,SNR=1.7						
	comp=Z,0.9nm,0.5s						
YKA	Yellowknife Ar	77.00	347	P	P	22 05 24.8	+0.9
	comp=Z,0.1nm,0.5s,baz=21,slow=5.3,SNR=2.6						
	comp=Z,0.1nm,0.5s						

WEL 28 22:04:58.3±1.2,41°S±10°×17°2E±1°0,h158^{km}±8^{km},M2.0/4, MLv2.0/4,Error ellipse: s-maj=0.0km s-min=0.0km az=132.2,confirmed,South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRNZ	Matariki Terra	0.25	122	P	Pn	22 05 20.7	+1.0
MRNZ				S	Sn	22 05 38.1	+2.1
TKNZ	Takaka Hill	0.43	58	P	Pn	22 05 21.2	+0.9
TKNZ				S	Sn	22 05 39.2	+2.1
QRZ	Quartz Range	0.44	5	P	Pn	22 05 21.4	+1.0
QRZ				S	Sn	22 05 39.2	+2.1
THZ	Tophouse	0.59	147	P	Pn	22 05 22.0	+0.9
THZ				S	Sn	22 05 40.4	+1.7
NNZ	Nelson	0.68	86	P	Pn	22 05 21.9	+0.4
NNZ				S	Sn	22 05 40.9	+1.6
DSZ	Denniston Nort	0.70	226	P	Pn	22 05 22.5	+0.8
DSZ				S	Sn	22 05 40.9	+1.3
TUWZ	Tuamarina	1.12	99	P	Pn	22 05 24.9	+0.1
DUWZ	D'Urville Isla	1.19	68	P	Pn	22 05 25.4	-0.1
TCW	Tory Channel	1.36	88	P	Pn	22 05 26.7	-0.3
LTZ	Lake Taylor	1.52	186	P	Pn	22 05 28.8	+0.1
KIW	Kapiti Island	1.89	78	P	Pn	22 05 31.3	-1.3
OGWZ	Otaki Gorge	2.09	79	P	Pn	22 05 33.5	-1.4
PLWZ	Palliser	2.11	99	P	Pn	22 05 33.6	-1.7
HOWZ	Holdsworth Sta	2.33	82	P	Pn	22 05 35.8	-1.9

WEL 28 22:06:34.9±0.4,42°S±3°×17°4E±°,h5^{km},M2.6/11, ML2.7/12,MLv2.6/11,Error ellipse: s-maj=0.0km s-min=0.0km az=132.5,confirmed,South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSWZ	Blackbirch Sta	0.33	14	P	Pg	22 06 41.6	+0.3
BSWZ				S	Sg	22 06 47.0	+1.3
KHZ	Kahutara	0.42	204	P	Pg	22 06 43.0	0.0
KHZ				S	Sg	22 06 49.3	+0.9
CMWZ	Cape Campbell	0.44	49	P	Pg	22 06 44.2	+0.9
TUWZ	Tuamarina	0.62	12	P	Pg	22 06 47.2	+0.4
TUWZ				S	Sb	22 06 56.3	-0.9
THZ	Tophouse	0.70	293	P	Pg	22 06 48.5	+0.2
THZ				S	Sg	22 06 58.3	+0.8
NNZ	Nelson	0.87	340	P	Pg	22 06 51.5	0.0
NNZ				S	Sg	22 07 03.2	+0.4
TCW	Tory Channel	0.91	25	P	Pg	22 06 52.0	-0.3
MRNZ	Matariki Terra	0.99	310	P	Pg	22 06 54.1	+0.3
WEL	Wellington	1.06	45	P	Pb	22 06 55.8	+0.1
GVZ	Greta Valley S	1.08	210	P	Pg	22 06 55.7	+0.1
TKNZ	Takaka Hill	1.17	328	P	Pg	22 06 57.2	-0.1
DUWZ	D'Urville Isla	1.24	5	P	Pg	22 06 57.8	-0.8
LTZ	Lake Taylor	1.34	236	P	Pn	22 06 59.7	-0.6
PAWZ	Paruwai Farm	1.40	63	P	Pn	22 06 59.1	-2.0
KIW	Kapiti Island	1.45	37	P	Pn	22 07 01.2	-0.6
DSZ	Denniston Nort	1.50	281	P	Pb	22 07 03.4	+0.2
QRZ	Quartz Range	1.53	322	P	Pn	22 07 03.0	+0.2
OGWZ	Otaki Gorge	1.61	41	P	Pn	22 07 02.8	-1.2
HOWZ	Holdsworth Sta	1.74	50	P	Pn	22 07 06.4	+0.7
OXZ	Oxford	1.81	224	P	Pn	22 07 05.0	-1.8
INZ	Inchbonnie	1.85	247	P	Pb	22 07 08.5	-0.7
MQZ	McQueen's Vall	1.86	206	P	Pn	22 07 05.2	-2.2
MRZ	Mangatainoka R	1.93	45	P	Pn	22 07 06.6	-1.8
AKCZ	Akaroa Harbour	1.94	199	P	Pn	22 07 06.8	-1.8
PRWZ	Pori Road	2.22	49	P	Pg	22 07 18.2	+0.7
BFZ	Birch Farm	2.30	55	P	Pg	22 07 19.0	0.0
WVZ	Waitaha Valley	2.47	244	P	Pb	22 07 18.9	-0.8
TSZ	Takapari Road	2.58	41	P	Pb	22 07 22.0	+0.3
RPZ	Rata Peaks	2.61	229	P	Pn	22 07 17.9	+0.1
VRZ	Vera Road	3.00	15	P	Pb	22 07 26.1	-2.8
WNVZ	Wahianoa	3.04	28	P	Pb	22 07 28.4	-1.3
TRVZ	Turoa	3.05	27	P	Pb	22 07 28.8	-1.0
BHHZ	Black Hill Sta	3.08	35	P	Pb	22 07 29.7	-0.5
TUVZ	Tukino	3.11	28	P	Pb	22 07 30.6	-0.2
OTVZ	Oturere	3.21	27	P	Pb	22 07 31.8	-0.7
TMVZ	Te Maari	3.27	27	P	Pb	22 07 32.5	-1.0
MKRZ	Makatiti	4.41	29	P	Pb	22 07 47.9	-4.9

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*GCMT **28** 22:07:15.0±0.4,22°.86S±0°.05×69°.04E±0°.04,h22^{km}±1^{km}, MW4.8/75,Moment Tensor Solution. s23,c24; s75,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.43±.21; M$_{\theta\theta}$0.96±.13; M$_{\phi\phi}$1.46±.13; M$_{r\theta}$0.57±.23; M$_{\theta\phi}$-0.49±.07; M$_{\phi r}$0.73±.19; Best double couple: M$_0$2.23500×10^{16} NP1:φ$_s$165.00000°,δ52.00000°,λ-72.00000°. NP2: φ$_s$317.00000°,δ42.00000°,λ-112.00000°. Principal axes: T 1.7910, Plg5.0000°, Azm242.0000°; N 0.8810, Plg14.0000°, Azm334.0000°; P -2.6800, Plg75.0000°, Azm133.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

IDC 28 22:07:07.6±3.8,23°.29S×69°.19E,h0^{km},mb3.8/5, mbtmp3.8/5 Error ellipse: s-maj=113.3km s-min=34.0km az=54.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H	15.87	12	T	T	22 27 00.9	
	baz=192,slow=76,SNR=22						
H08S2	Diego Garcia H	15.87	12	T	T	22 26 58.7	
	baz=192,slow=76,SNR=22						
H08S3	Diego Garcia H	15.89	12	T	T	22 27 04.6	
	baz=192,slow=76,SNR=22						
H01W2	Cape Leeuwin H	40.64	117	T	T	22 58 17.1	
	baz=274						
H01W3	Cape Leeuwin H	40.64	117	T	T	22 58 17.3	
	baz=274						
H01W1	Cape Leeuwin H	40.65	117	T	T	22 58 13.2	
	baz=274						
CMAR	Chiang Mai Arr	50.65	38	P	P	22 16 08.8	0.0
	0.4nm,0.2s,baz=225,slow=6.4,SNR=5.8						
	0.4nm,0.2s						
ASAR	Alice Springs	58.87	104	P	P	22 17 08.3	-0.3
	0.7nm,0.6s,baz=255,slow=6.3,SNR=7.5						
	0.7nm,0.6s						
WRA	Warramunga Arr	60.21	100	P	P	22 17 18.2	+0.3
	0.5nm,0.8s,baz=255,slow=6.6,SNR=2.9						
	0.5nm,0.8s						
MKAR	Makanchi Array	70.75	9	P	P	22 18 25.2	-0.2
	0.7nm,0.7s,baz=184,slow=5.6,SNR=6.2						
	0.7nm,0.7s						
ZALV	Zalesovo Beam	78.09	9	P	P	22 19 08.1	+0.1
	2.1nm,0.9s,baz=204,slow=3.3,SNR=7.3						
	2.1nm,0.9s						
YKA	Yellowknife Ar	140.73	3	PKP	PKPdf	22 26 39.0	+0.3
	0.2nm,0.7s,baz=343,slow=1.9,SNR=2.5						

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*IDC **28** 22:17:22.4±1.2,30°.71S×178°.09W,h0^{km},mb4.1/6, mbtmp4.1/7,ML3.2/1,Error ellipse: s-maj=31.4km s-min=23.0km az=126.0*

*NEIC **28** 22:17:26.9±0.5,30°.56S±0°.08×178°.1W±0°.2,h28^{km}±11^{km}, mb4.2/4,Error ellipse: s-maj=28.5km s-min=8.4km az=106.0*

ISC 28 22:17:28.6±0.9,30°.59S±0°.08×178°.2W±0°.2,h46^{km},n22, σ1^{s}.60/18,mb4.1/6,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.35	9	Pn	Pn	22 17 50.6	-0.4
	52nm,0.3s,baz=106,slow=22,SNR=1.6						
RAO				Sn	Sn	22 18 06.7	-1.1
	208nm,0.3s,baz=154,slow=23,SNR=6.4						
RAO	Raoul Island	1.35	9	Pn	Pn	22 17 49.5	-1.5
RAO				Sn	Sn	22 18 05.8	-2.0
URZ	Urewera	8.59	206	Pn	Pn	22 19 24.7	-5.5
	0.3nm,0.3s,baz=102,slow=14,SNR=1.6						
URZ				Sn	Sn	22 21 01.7	-4.0
	2.6nm,0.3s,baz=262,slow=20,SNR=16						
	9.5nm,1.0s						
BKZ	Black Stump Fm	9.61	206	Pn	Pn	22 19 44.2	-0.1
CTA	Charters Tower	33.70	280	P	P	22 24 07.1	+1.6
	8.2nm,1.1s,baz=90,slow=8.1,SNR=1.5						
	8.2nm,1.1s						
STKA	Stephens Creek	34.30	257	P	P	22 24 11.8	+1.2
	3.2nm,0.7s,baz=87,slow=9.0,SNR=6.8						
	3.2nm,0.7s						
STKA	Stephens Creek	34.30	257	P	P	22 24 11.8	+1.2
STKA				IAmb	IAmb	22 24 18.0	
	comp=Z,2.2nm,1.1s						
ASAR	Alice Springs	42.96	267	P	P	22 25 23.6	+0.2
	comp=Z,0.5nm,0.5s,baz=100,slow=7.6,SNR=7.3						
	comp=Z,0.5nm,0.5s						
WRA	Warramunga Arr	43.97	272	P	P	22 25 32.0	+0.5
	comp=Z,1.0nm,0.4s,baz=112,slow=8.0,SNR=19						
	comp=Z,1.0nm,0.4s						
WRA	Warramunga Arr	43.97	272	P	P	22 25 31.2	-0.3
WB0	Warramunga Arr	43.99	273	P	P	22 25 31.8	+0.1
QSPA	South Pole Qui	59.52	180	P	P	22 27 27.4	+0.4
	comp=Z,2.0nm,1.0s,baz=4.9,slow=6.0,SNR=2.7						
	comp=Z,2.0nm,1.0s						
QSPA	South Pole Qui	59.52	180	P	P	22 27 27.5	+0.6
QSPA				IAmb	IAmb	22 27 44.4	
	comp=Z,4.5nm,1.2s						
H03S2	Juan Fernandez	80.47	124	T	T	23 58 35.8	
	baz=237,slow=74,SNR=4.8						
H03S1	Juan Fernandez	80.48	124	T	T	23 58 36.9	
	baz=237						
H03S3	Juan Fernandez	80.49	124	T	T	23 58 36.6	
	baz=237,slow=74,SNR=6.1						
H03N3	Juan Fernandez	80.67	123	T	T	23 58 54.2	
	baz=242,slow=72,SNR=4.4						
H03N2	Juan Fernandez	80.67	123	T	T	23 58 51.3	
	baz=242,slow=72,SNR=3.9						
H03N1	Juan Fernandez	80.68	123	T	T	23 58 50.1	
	baz=242,slow=72,SNR=9.0						
TXAR	Lajitas Array	92.61	57	P	P	22 30 37.9	+2.4
	comp=Z,0.3nm,0.5s,baz=210,slow=5.2,SNR=3.4						
	comp=Z,0.3nm,0.5s						
FINES	FINESS Array B	145.28	340	PKPbc	PKPbc	22 36 58.8	-1.5
	comp=Z,2.2nm,0.7s,baz=53,slow=4.3,SNR=14						
AKASG	Malin Array Be	151.37	322	PKPbc	PKPbc	22 37 15.9	-0.9
	comp=Z,0.5nm,0.5s,baz=59,slow=1.8,SNR=1.3						

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*IDC **28** 22:19:04.5±1.2,23°.29S×69°.18E,h0^{km},mb4.2/10, mbtmp4.2/10,MS4.2/9,Error ellipse: s-maj=39.2km s-min=22.9km az=25.0*

*NEIC **28** 22:19:07.1±1.6,23°.2S±0°.1×69°.1E±0°.1,h10^{km}±1^{km}, mb4.7/24,Error ellipse: s-maj=23.3km s-min=21.6km az=212.0*

*GCMT **28** 22:19:10.1±0.3,22°.89S±0°.03×69°.12E±0°.02,h12^{km}, MW4.8/92,Moment Tensor Solution. s20,c25; s92,c128; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.99±.07; M$_{\theta\theta}$0.23±.07; M$_{\phi\phi}$1.76±.06; M$_{r\theta}$0.94±.32; M$_{\theta\phi}$-0.85±.06; M$_{\phi r}$0.67±.25; Best double couple: M$_0$2.34900×10^{16} NP1:φ$_s$180.00000°,δ54.00000°,λ-58.00000°. NP2: φ$_s$313.00000°,δ47.00000°,λ-126.00000°. Principal axes: T 2.1560, Plg4.0000°, Azm248.0000°; N 0.3880, Plg25.0000°, Azm339.0000°; P -2.5420, Plg64.0000°, Azm150.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 22:19:06.5±0.7,23°.2S±0°.1×69°.1E±0°.1,h10^{km},n59, σ0^{s}.77/45,mb4.5/23,MS4.2/10,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H	15.80	12	T	T	22 38 56.0	
	baz=192,slow=76,SNR=47						
H08S2	Diego Garcia H	15.80	12	T	T	22 38 57.7	
	baz=192,slow=76,SNR=12						
H08S3	Diego Garcia H	15.81	12	T	T	22 38 57.1	
	baz=192,slow=76,SNR=10.0						
VOI	Vohitsoka	20.68	269	P	P	22 23 45.5	-1.5
VOI				IAmb	IAmb	22 23 51.3	
	comp=Z,47nm,1.4s						
PALK	Pallekele	32.33	22	LR	LR	22 36 07.3	
	comp=Z,484nm,19.0s,baz=308,slow=32						
KIBK	Kibwezi	36.57	300	P	P	22 26 13.2	+0.2
KMBO	Kilima Mbogo	37.93	301	P	P	22 26 25.0	+0.2
LBTB	Lobatse	39.66	258	LR	LR	22 40 01.7	
	comp=Z,297nm,20.6s,baz=144,slow=32						
H01W2	Cape Leeuwin H	40.72	117	T	T	23 10 05.3	
	baz=274,slow=75,SNR=4.8						
H01W3	Cape Leeuwin H	40.72	117	T	T	23 10 03.6	
	baz=274,slow=75,SNR=6.0						
H01W1	Cape Leeuwin H	40.73	117	T	T	23 10 02.5	
	baz=274,slow=75,SNR=7.5						
NWAO	Narrogin (SRO)	43.22	114	LR	LR	22 40 51.2	
	comp=Z,458nm,18.5s,baz=238,slow=30						
SUR	Sutherland	43.42	247	LR	LR	22 42 35.4	
	comp=Z,325nm,18.1s,baz=102,slow=32						
MBAR	Mbarara	43.52	296	LR	LR	22 43 38.0	
	comp=Z,92nm,18.6s,baz=107,slow=34						
MAW	Mawson	44.58	183	LR	LR	22 42 26.4	
	comp=Z,116nm,19.9s,baz=349,slow=32						
TSUM	Tsumeb	48.03	265	LR	LR	22 45 59.6	
	comp=Z,424nm,18.7s,baz=105,slow=34						
BRDH	Bariadhala	50.59	27	LR	LR	22 47 15.4	
	comp=Z,328nm,20.1s,baz=194,slow=33						
CMAR	Chiang Mai Arr	50.61	38	P	P	22 28 05.5	-0.5
	comp=Z,0.9nm,0.3s,baz=232,slow=7.8,SNR=15						
CMAR				LR	LR	22 48 09.2	
	comp=Z,128nm,18.2s,baz=220,slow=34						
	comp=Z,0.9nm,0.3s						
CMAR	Chiang Mai Arr	50.61	38	P	P	22 28 05.6	-0.3
CHTO	Chiang Mai	50.90	37	P	P	22 28 08.0	-0.1
SHL	Shillong	53.25	26	P	P	22 28 25.8	+0.1
SHL				IAmb	IAmb	22 28 27.5	
	comp=Z,14nm,1.1s						
LSA	Lhasa	56.70	23	P	P	22 28 51.5	+0.6
LSA				IAmb	IAmb	22 28 53.4	
	comp=Z,7.1nm,1.2s						
KBL	Kabul	57.42	360	P	P	22 28 55.8	+0.2
KBL				IAmb	IAmb	22 28 57.4	
	comp=Z,9.0nm,1.3s						
ASAR	Alice Springs	58.93	104	P	P	22 29 05.5	-0.9
	comp=Z,2.3nm,0.9s,baz=252,slow=5.9,SNR=12						
	comp=Z,2.3nm,0.9s						
ASAR	Alice Springs	58.93	104	P	P	22 29 06.1	-0.3
WRA	Warramunga Arr	60.27	100	P	P	22 29 14.6	-1.0
	comp=Z,2.3nm,1.1s,baz=251,slow=6.7,SNR=6.7						
	comp=Z,2.3nm,1.1s						
AAK	Ala-Archa	65.69	4	P	P	22 29 51.3	0.0
AAK				IAmb	IAmb	22 29 53.0	
	comp=Z,4.0nm,1.1s						
KK31	Karatay Array	65.99	1	P	P	22 29 53.5	+0.5
KK31				IAmb	IAmb	22 29 54.7	
	comp=Z,7.3nm,1.3s						
KKAR	Karatay Array	65.99	1	P	P	22 29 53.3	+0.3
QSPA	South Pole Qui	66.92	180	P	P	22 29 59.3	+0.3
GTA	Gaotai	68.57	25	eP	P	22 30 10.3	+0.7
GTA				pP	pwP	22 30 22.5	+6.6
GTA				sP	PcP	22 30 27.0	-7.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				LR	LR		
	comp=N,100nm,17.8s						
GTA				LR	LR		
	comp=E,91nm,17.4s						
GTA				LR	LR		
	comp=Z,130nm,17.1s						
WHN	Wuhan	68.83	41	P	P	22 30 22.8	+12
CAN	Canberra	69.03	120	P	P	22 30 13.2	+0.5
MK31	Makanchi Array	70.67	10	P	P	22 30 21.4	-0.9
MK31				IAmb	IAmb	22 30 23.2	
	comp=Z,5.9nm,1.1s						
MKAR	Makanchi Array	70.67	10	P	P	22 30 22.2	-0.1
	comp=Z,3.8nm,0.9s,baz=193,slow=5.9,SNR=24						
	comp=Z,3.8nm,0.9s						
MKAR	Makanchi Array	70.67	10	P	P	22 30 21.5	-0.8
BRTR	Keskin Array B	70.83	332	P	P	22 30 23.4	-0.3
	comp=Z,0.9nm,0.5s,baz=185,slow=6.0,SNR=3.9						
	comp=Z,0.9nm,0.5s						
BRTR	Keskin Array B	70.83	332	P	P	22 30 23.5	-0.1
ABKAR	Akbulak array	72.59	354	P	P	22 30 33.1	-0.6
ABKAR				IAmb	IAmb	22 30 34.9	
	comp=Z,7.2nm,1.1s						
ABKAR	Akbulak array	72.59	354	P	P	22 30 33.2	-0.6
KURK	Kurchatov	74.07	6	P	P	22 30 41.8	-0.6
KURK				IAmb	IAmb	22 30 43.7	
	comp=Z,6.5nm,1.1s						
TOA0	Torodi Ar. Sit	75.21	291	P	P	22 30 50.2	+0.3
TORD	Torodi Ar. Bea	75.21	291	P	P	22 30 50.0	+0.1
	comp=Z,3.9nm,1.2s,baz=112,slow=6.5,SNR=9.1						
ZAA0	Zalesovo Array	78.02	9	P	P	22 31 04.2	-0.7
ZAA0				IAmb	IAmb	22 31 05.8	
	comp=Z,8.5nm,1.0s						
ZALV	Zalesovo Beam	78.02	9	P	P	22 31 04.8	0.0
	comp=Z,5.9nm,0.9s,baz=213,slow=4.6,SNR=22						
	comp=Z,5.9nm,0.9s						
ZALV	Zalesovo Beam	78.02	9	P	P	22 31 04.2	-0.6
SONM	Songino Array	78.23	25	P	P	22 31 06.9	+0.5
	comp=Z,1.9nm,0.9s,baz=212,slow=5.3,SNR=10						
	comp=Z,1.9nm,0.9s						
SONM	Songino Array	78.23	25	P	P	22 31 06.4	0.0
ULN	Ulaanbaatar	78.51	25	P	P	22 31 07.8	-0.1
AKASG	Malin Array Be	81.58	336	P	P	22 31 24.5	+0.2
	comp=Z,0.2nm,0.3s,baz=145,slow=3.9,SNR=6.1						
	comp=Z,0.2nm,0.3s						
KSAR	Wonju Array Be	81.79	43	P	P	22 31 26.2	+0.5
KSRS	Korea Array	81.82	43	P	P	22 31 26.4	+0.5
	comp=Z,1.9nm,0.8s,baz=224,slow=3.5,SNR=4.8						
	comp=Z,1.9nm,0.8s						
USRK	Ussuriysk Ar.	88.29	40	P	P	22 31 57.3	-0.9
	comp=Z,1.1nm,0.8s,baz=219,slow=4.9,SNR=4.9						
	comp=Z,1.1nm,0.8s						
GRA1	Grafenberg Arr	88.89	327	P	P	22 32 01.9	+1.1
GRFO	Grafenberg	88.89	327	P	P	22 32 02.1	+1.2
GRFO				IAmb	IAmb	22 32 04.0	
	comp=Z,4.9nm,0.8s						
CLL	Collm	89.03	329	iP	P	22 32 04.0	+2.5
	comp=Z,4.0nm,0.9s						
CLL				ex	x	22 32 12.0	
YKA	Yellowknife Ar	140.65	3	PKP	PKPdf	22 38 36.3	+0.5
	comp=Z,1.1nm,1.1s,baz=342,slow=2.3,SNR=5.3						
YKA				PP	PP	22 41 32.9	-2.0
	comp=Z,0.1nm,0.5s,baz=355,slow=6.3,SNR=5.8						
ULM	Lac du Bonnet	150.57	340	PKPbc	PKPbc	22 38 57.8	-0.7
	comp=Z,3.2nm,0.9s,baz=16,slow=2.3,SNR=3.8						
NVAR	Mina Array Bea	163.54	21	PKPab	PKPab	22 40 01.9	+0.5
	comp=Z,1.0nm,0.9s,baz=191,slow=0.8,SNR=3.6						

IDC 28 22:20:29.7±1.8,23°.37S×69°.15E,h0^{km},mb4.2/5, mbtmp4.2/5,Error ellipse: s-maj=54.8km s-min=37.7km az=11.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H	15.96	12	T	T	22 40 28.1	
	baz=192						
H08S2	Diego Garcia H	15.96	12	T	T	22 40 26.7	
	baz=192						
H08S3	Diego Garcia H	15.98	12	T	T	22 40 23.5	
	baz=192						
CMAR	Chiang Mai Arr	50.74	38	P	P	22 29 31.9	+0.3
	0.7nm,0.4s,baz=230,slow=6.5,SNR=2.3						
	0.7nm,0.4s						
ASAR	Alice Springs	58.89	104	P	P	22 30 30.7	-0.1
	0.9nm,0.9s,baz=257,slow=6.4,SNR=2.2						
	0.9nm,0.9s						
MKAR	Makanchi Array	70.84	10	P	P	22 31 47.9	-0.2
	1.2nm,0.8s,baz=188,slow=5.5,SNR=5.7						
	1.2nm,0.8s						
TORD	Torodi Ar. Bea	75.28	292	P	P	22 32 15.2	+0.2
	8.1nm,0.4s,baz=116,slow=3.7,SNR=4.8						
	8.1nm,0.4s						
ZALV	Zalesovo Beam	78.18	9	P	P	22 32 30.5	0.0
	1.7nm,0.7s,baz=187,slow=4.9,SNR=6.1						
	1.7nm,0.7s						

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*DJA **28** 22:24:49.6±0.6,8°S±3°×10°9E±°,h25^{km}±5^{km},M4.2/18, mb4.4/3,MLv4.0/18*

*IDC **28** 22:25:00.1±2.5,10°.38S×109°.85E,h0^{km},mb3.7/4, mbtmp3.7/4,MS3.2/1,Error ellipse: s-maj=118.1km s-min=28.2km az=49.0*

ISC 28 22:24:45.9±1.1,8°.58S±0°.07×108°.82E±0°.04,h10^{km},n23, σ1^{s}.34/23,mb3.6/4,Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMJI	Cimerak	0.87	335	P	Pn	22 25 04.8	+0.6

CMJI				S	Sg	22 25 14.7	+0.7
KPJI	Karang Pucung	1.24	5	P	Pg	22 25 10.3	+0.6
KPJI				S	Sb	22 25 24.8	-0.6
YOGI	Yogyakarta	1.64	63	P	Pn	22 25 14.8	0.0
UGM	Wanagama	1.81	69	P	Pn	22 25 18.2	+1.0
UGM				S	Sn	22 25 38.0	-2.2
CNJI	Cibinong	2.10	307	P	Pn	22 25 22.6	+1.5
SMRI	Semarang	2.21	47	P	Pn	22 25 24.0	+1.4
SMRI				S	Sn	22 25 49.1	-0.9
SKJI	Sukabumi	2.73	305	P	Pn	22 25 30.9	+1.0
SKJI				S	Sn	22 26 02.1	-0.9
NGJI	Ngawi	2.88	66	P	Pn	22 25 33.5	+1.7
PWJI	Pagerwojo	3.00	80	P	Pn	22 25 35.0	+1.5
CGJI	Cibinong	3.66	302	P	Pn	22 25 43.9	+1.3
GRJI	Gresik	3.98	66	P	Pn	22 25 48.4	+1.4
GMJI	Gumukmas	4.58	87	P	Pn	22 25 55.9	+0.6
KASI	Kota Agung	5.25	305	P	Pn	22 26 02.6	-1.9
	27nm,0.7s,0.1nm						
JAGI	Jajag, Banyuwa	5.27	89	P	Pn	22 26 06.5	+1.7
	39nm,0.8s,0.3nm						
ABJI	Asem Bagus	5.41	82	P	Pn	22 26 09.0	+2.3
SIJI	Sorong	23.63	72	LR	LR	22 42 14.1	
	comp=Z,49nm,18.1s,baz=252,slow=44						
WRA	Warramunga Arr	27.14	117	P	P	22 30 29.6	0.0
	0.8nm,0.8s,baz=285,slow=11,SNR=7.7						
	0.8nm,0.8s						
ASAR	Alice Springs	28.31	125	P	P	22 30 39.3	-0.7
	0.5nm,0.5s,baz=300,slow=9.6,SNR=2.9						
	0.5nm,0.5s						
H08S2	Diego Garcia H	35.97	269	T	T	23 09 38.7	
	baz=93,slow=76,SNR=27						
H08S3	Diego Garcia H	35.98	269	T	T	23 09 38.1	
	baz=93,slow=76,SNR=17						
H08S1	Diego Carcia H	35.99	269	T	T	23 09 39.3	
	baz=93,slow=76,SNR=19						
STKA	Stephens Creek	38.25	132	P	P	22 32 05.8	-0.6
	1.0nm,0.3s,baz=325,slow=9.8,SNR=3.9						
	1.0nm,0.3s						
MKAR	Makanchi Array	59.98	339	P	P	22 35 22.1	+30
	0.4nm,0.7s,baz=139,slow=8.0,SNR=3.7						
	0.4nm,0.7s						

*DSN **28** 22:34:17.4±2.5, 25°.41N×61°.08E, h15^{km}, ML2.7/9, Error ellipse: s-maj=36.1km s-min=24.2km az=164.0*

*OMAN **28** 22:34:22.2±0.5, 25°.37N×60°.79E, h10^{km}, mb4.6/2, ml2.9/18, Mwp4.8/3, Error ellipse: s-maj=6.8km s-min=3.5km az=170.0*

ISC 28 22:34:21.5±1.2**, 25°.42N**±0°.07×**60°.84E**±0°.05**, h10^{km}, n33, σ1^{s}45**/53**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NGCH	Negor - Chabah	0.28	103	P	Pg	22 34 27.1	0.0
	SNR=454						
NGCH				S	Sb	22 34 34.5	+1.2
WSAR	Wadi Sarin	2.96	223	P	Pn	22 35 07.5	-1.2
WSAR				S	Sn	22 35 43.4	-0.8
BIDO	Bidbid	3.11	233	P	Pn	22 35 09.5	-1.2
BIDO				S	Sn	22 35 50.6	+2.6
WBK	Wadi Bani Khal	3.28	212	P	Pn	22 35 11.6	-1.4
	SNR=75						
WBK				S	Sn	22 35 52.2	+0.1
SMDO	Samad	3.46	228	P	Pn	22 35 15.5	-0.2
SMDO				P	Pn	22 35 15.5	-0.2
SMDO				S	Sn	22 35 57.5	+0.6
SMDO				S	Sn	22 35 57.5	+0.6
JLN	Jalan Bani Buh	3.51	202	P	Pn	22 35 14.6	-1.5
	SNR=20						
JLN				S	Sn	22 35 58.2	+0.5
HOQ	Hoqain	3.70	241	P	Pn	22 35 16.5	-2.3
HOQ				P	Pn	22 35 16.5	-2.3
HOQ				S	Sn	22 36 04.0	+1.6
HOQ				S	Sn	22 36 04.0	+1.6
JMDO	Jabal Madar	3.93	220	P	Pn	22 35 21.9	-0.2
JMDO				S	Sn	22 36 10.3	+2.1
MDH	Madha	4.11	269	P	Pn	22 35 21.1	-3.3
MDH	Madha	4.11	269	P	Pn	22 35 24.0	-0.5
MDH				P	Pn	22 35 24.0	-0.5
SOHO	SOHO	4.12	253	P	Pn	22 35 21.6	-2.9
BANOM	Banah	4.13	278	P	Pn	22 35 21.7	-3.0
BANOM	Banah	4.13	278	P	Pn	22 35 23.5	-1.2
	SNR=11						
UOSS	Minazif	4.22	265	P	Pn	22 35 22.5	-3.5
UOSS	Minazif	4.22	265	P	Pn	22 35 24.4	-1.6
MASF	Masafi	4.23	270	P	Pn	22 35 25.6	-0.6
MSFE	Esma-Masafi	4.23	270	P	Pn	22 35 25.3	-0.9
BSY	Bisya	4.26	232	P	Pn	22 35 26.6	+0.1
SHME	Shamm	4.28	279	P	Pn	22 35 26.4	-0.4
SHME	Shamm	4.28	279	P	Pn	22 35 26.6	-0.2
HATD	Hatta, Dubai	4.31	263	P	Pn	22 35 24.1	-3.1
HATD	Hatta, Dubai	4.31	263	P	Pn	22 35 27.3	+0.1
ASHO	Ashiyiah	4.40	261	P	Pn	22 35 27.7	-0.7
ASHO				S	Sn	22 36 20.8	+1.1
ASHO	Ashiyiah	4.40	261	P	Pn	22 35 29.0	+0.5
	SNR=23						
ASHO				S	Sn	22 36 20.2	+0.4
ARQ	Araqi	4.45	243	P	Pn	22 35 30.1	+1.0
	SNR=16						
FAQ	Al Faqa, Dubai	4.80	263	P	Pn	22 35 34.1	+0.1
FAQ	Al Faqa, Dubai	4.80	263	P	Pn	22 35 34.7	+0.7
FAQ				S	Sn	22 36 30.0	+0.3
ALNE	Al Ain	4.82	255	P	Pn	22 35 32.5	-1.7
ALNE	Al Ain	4.82	255	P	Pn	22 35 34.5	+0.3
	SNR=6.3						
ALNE				S	Sn	22 36 30.8	+0.7
ASUD	Al Ashush, Dub	5.06	262	P	Pn	22 35 38.1	+0.6
MHTO	MHTO	5.14	211	P	Pn	22 35 38.2	-0.4
MHTO				S	Sn	22 36 37.8	-0.2
UMZA	Um Al Zommool	5.85	244	P	Pn	22 35 47.7	-0.6
UMZA				S	Sn	22 36 56.1	+0.7
DQM	DQM	6.26	210	P	Pn	22 35 53.1	-0.8
DQM				S	Sn	22 37 04.1	-1.5

WEL 28 22:34:55.3±0.4**, 42°S**±3°×**17°3E**±°**, h5^{km}, M2.4**/6**, ML2.5**/7**, MLv2.4**/6**, Error ellipse: s-maj=0.0km s-min=0.0km az=64.0, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.08	158	P	Pg	22 34 57.1	0.0
KHZ				S	Sg	22 34 58.8	+0.5
BSWZ	Blackbirch Sta	0.69	24	P	Pg	22 35 08.8	+0.3
GVZ	Greta Valley S	0.71	209	P	Pb	22 35 09.6	-0.6
GVZ				S	Sb	22 35 21.2	+0.8
THZ	Tophouse	0.73	323	P	Pg	22 35 09.5	+0.1
THZ				S	Sg	22 35 19.5	+0.7
CMWZ	Cape Campbell	0.80	42	P	Pb	22 35 12.2	+0.5
TUWZ	Tuamarina	0.97	20	P	Pg	22 35 14.1	+0.1
LTZ	Lake Taylor	1.01	244	P	Pg	22 35 14.1	-0.5
LTZ				S	Sb	22 35 29.2	+0.3
MRNZ	Matariki Terra	1.09	329	P	Pg	22 35 16.4	+0.1
MRNZ				S	Sb	22 35 31.7	+0.4
NNZ	Nelson	1.13	355	P	Pg	22 35 16.7	-0.3
TCW	Tory Channel	1.27	27	P	Pg	22 35 18.7	-1.0
TKNZ	Takaka Hill	1.37	343	P	Pn	22 35 21.1	0.0
DSZ	Denniston Nort	1.40	295	P	Pn	22 35 21.6	+0.1
MQZ	McQueen’s Vall	1.50	204	P	Pn	22 35 20.2	-2.6
PLWZ	Palliser	1.52	60	P	Pn	22 35 21.0	-2.3
INZ	Inchbonnie	1.56	255	P	Pn	22 35 23.4	-0.4
DUWZ	D’Urville Isla	1.57	12	P	Pn	22 35 24.2	+0.3
AKCZ	Akaroa Harbour	1.59	196	P	Pn	22 35 22.3	-1.9
QRZ	Quartz Range	1.68	334	P	Pb	22 35 26.1	-0.7
CAW	Cannon Point	1.70	44	P	Pn	22 35 24.1	-1.6
PAWZ	Paruwai Farm	1.73	57	P	Pn	22 35 23.7	-2.4
KIW	Kapiti Island	1.82	36	P	Pn	22 35 26.1	-1.2
MHCZ	Mount Hutt	1.85	229	P	Pn	22 35 25.9	-1.9
MTW	Mount Morrison	1.91	52	P	Pn	22 35 26.1	-2.4
OGWZ	Otaki Gorge	1.98	40	P	Pn	22 35 27.8	-1.7
MRZ	Mangatainoka R	2.29	44	P	Pn	22 35 31.8	-2.0
OTVZ	Oturere	3.58	28	P	Pn	22 35 52.3	+0.7
MKRZ	Makatiti	4.77	29	P	Pn	22 36 08.1	+0.1

WEL 28 22:45:36.2±0.4**, 42°S**±3°×**17°4E**±°**, h5^{km}, M2.0**/3**, ML2.1**/7**, MLv2.0**/3**, Error ellipse: s-maj=0.0km s-min=0.0km az=115.1, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.23	178	P	Pg	22 45 41.0	+0.3
KHZ				S	Sg	22 45 44.7	+0.9
BSWZ	Blackbirch Sta	0.54	29	P	Pg	22 45 47.0	+0.4
BSWZ				S	Sb	22 45 55.0	-1.1
THZ	Tophouse	0.63	312	P	Pg	22 45 48.5	+0.2
THZ				S	Sg	22 45 57.6	+1.1
TUWZ	Tuamarina	0.82	22	P	Pg	22 45 52.0	+0.1
GVZ	Greta Valley S	0.86	205	P	Pg	22 45 52.9	+0.2
GVZ				S	Sb	22 46 05.8	+0.2
MRNZ	Matariki Terra	0.98	324	P	Pg	22 45 55.2	+0.2
LTZ	Lake Taylor	1.10	237	P	Pg	22 45 56.2	-1.2
TCW	Tory Channel	1.12	30	P	Pg	22 45 57.0	-0.8
DSZ	Denniston Nort	1.36	288	P	Pn	22 46 01.7	-0.2
MQZ	McQueen’s Vall	1.65	203	P	Pn	22 46 02.4	-3.5

*IDC **28** 22:51:29.4±0.8, 67°.64N×18°.78W, h0^{km}, mb3.6/8, mbtmp3.6/13, ML2.8/4, MS3.1/10, Error ellipse: s-maj=20.3km s-min=16.2km az=24.0*

ISC 28 22:51:30.8±0.7**, 67°.64N**±0°.08×**18°.63W**±0°.08**, h10^{km}, n22, σ0^{s}88**/20**, mb3.6**/9**, MS3.2**/3**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCO	Scoresbysund	3.09	339	*i* P	Pn	22 52 13.0	-6.6
BORG	Borgarnes	3.10	202	Pn	Pn	22 52 19.1	-0.6
	4.0nm,0.3s,baz=353,slow=5.8,SNR=21						
BORG				Sn	Sn	22 52 58.1	+1.3
	5.0nm,0.3s,baz=102,slow=20,SNR=10						
BORG				LR	LR	22 53 32.8	
	comp=Z,230nm,18.2s,baz=34,slow=40						
	24nm,0.5s						
SFJD	Kangerlussuaq	12.28	282	LR	LR	22 59 05.2	
	comp=Z,91nm,19.4s,baz=72,slow=37						
EKA	Eskdalemuir Ar	14.32	142	Pn	Pn	22 54 53.4	+0.1
	baz=345,slow=11						
EKA				LR	LR	22 59 11.8	
	comp=Z,51nm,21.5s,baz=5.0,slow=32						
	0.2nm,0.4s						
NB2	NORSAR Subarra	14.39	103	P	P	22 54 59.4	-1.9
	comp=Z,7.9nm,1.2s,baz=308,slow=11						
NOA	NORSAR Array B	14.39	103	Pn	Pn	22 54 54.0	-0.3
	baz=307,slow=11,SNR=2.5						
NOA				LR	LR	22 59 38.2	
	comp=Z,29nm,20.8s,baz=315,slow=34						
	comp=Z,0.6nm,1.0s						
HFS	Hagfors	15.91	103	Pn	Pn	22 55 13.2	-1.3
	comp=Z,1.5nm,0.9s,baz=309,slow=9.1,SNR=1.8						
HFS				LR	LR	23 00 24.5	
	comp=Z,67nm,20.1s,baz=274,slow=34						
ARCES	ARCESS Array B	15.96	63	LR	LR	22 59 57.3	
	comp=Z,45nm,20.0s,baz=104,slow=32						
FINES	FINESS Array B	19.79	87	P	P	22 56 01.8	+1.0
	comp=Z,0.1nm,0.3s,baz=310,slow=6.8,SNR=6.4						
FINES				LR	LR	23 02 55.8	
	comp=Z,87nm,18.7s,baz=316,slow=35						
	comp=Z,6.2nm,1.0s						
FRB	Frobisher Bay	20.43	283	P	P	22 56 06.7	-1.0
	comp=Z,8.0nm,1.2s,baz=56,slow=13,SNR=5.5						
	comp=Z,8.0nm,1.2s						
GERES	GERESS Array B	24.88	123	P	P	22 56 54.1	+0.7
	comp=Z,3.0nm,0.9s,baz=334,slow=8.9,SNR=14						
	comp=Z,3.0nm,0.9s						
SCHQ	Schefferville	25.69	264	LR	LR	23 05 27.8	
	comp=Z,83nm,18.1s,baz=92,slow=33						
AKASG	Malin Array Be	28.80	102	P	P	22 57 28.3	-0.2
	comp=Z,0.2nm,0.3s,baz=326,slow=9.0,SNR=1.5						
	comp=Z,0.2nm,0.3s						
YKA	Yellowknife Ar	36.89	310	P	P	22 58 38.3	-0.6
	comp=Z,0.3nm,0.8s,baz=43,slow=8.2,SNR=5.3						
YKA				PcP	PcP	23 00 59.9	-0.2
	comp=Z,0.2nm,0.7s,baz=37,slow=2.6,SNR=4.3						
	comp=Z,0.3nm,0.8s						
BVAR	Borovoye Array	42.25	64	P	P	22 59 24.8	+1.2
	comp=Z,0.4nm,0.6s,baz=305,slow=10.0,SNR=2.8						
	comp=Z,0.4nm,0.6s						
ILAR	Eielson Array	42.84	330	P	P	22 59 28.8	+0.5
	comp=Z,0.6nm,1.0s,baz=13,slow=5.9,SNR=5.1						
	comp=Z,0.6nm,1.0s						
GNI	Garni	43.55	96	LR	LR	23 17 11.1	
	comp=Z,26nm,20.7s,baz=328,slow=35						
ZALV	Zalesovo Beam	46.16	53	PcP	PcP	23 01 30.9	+0.3
	comp=Z,0.3nm,0.5s,baz=320,slow=4.3,SNR=3.6						
ZALV				LR	LR	23 24 25.8	
	comp=Z,26nm,18.4s,baz=78,slow=43						
KURBB	Kurchatov Arra	47.01	60	P	P	23 00 01.3	-0.4
	comp=Z,0.7nm,0.8s,baz=334,slow=7.4,SNR=4.6						
	comp=Z,0.7nm,0.8s						
MKAR	Makanchi Array	51.58	59	P	P	23 00 36.6	0.0
	comp=Z,0.9nm,1.0s,baz=337,slow=5.9,SNR=5.3						
MKAR				PcP	PcP	23 01 51.1	+0.8
	comp=Z,0.3nm,0.7s,baz=341,slow=3.1,SNR=2.6						
	comp=Z,0.9nm,1.0s						
TORD	Torodi Ar. Bea	56.06	156	P	P	23 01 10.1	+0.4
	comp=Z,1.2nm,1.1s,baz=354,slow=9.4,SNR=4.0						
CMAR	Chiang Mai Arr	82.96	58	P	P	23 03 56.1	+0.4
	comp=Z,1.8nm,0.3s,baz=320,slow=6.8,SNR=7.6						

IDC 28 23:12:12.1±1.4**, 4°.20S**×**150°.75E, h0^{km}, mb3.4**/3**, mbtmp3.4**/3**, MS3.7**/1**, Error ellipse: s-maj=38.9km s-min=19.2km az=163.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.28	95	Pn	Pn	23 12 37.7	+0.5
	160nm,0.3s,baz=239,slow=1.3,SNR=104						
KRVT				Sn	Sn	23 12 55.4	+0.3
	133nm,0.3s,baz=153,slow=22,SNR=16						
WRA	Warramunga Arr	22.37	224	P	P	23 17 13.9	+1.8
	0.2nm,0.4s,baz=51,slow=10,SNR=2.6						
	0.2nm,0.4s						
ASAR	Alice Springs	25.28	218	P	P	23 17 39.2	-1.2
	0.8nm,0.7s,baz=53,slow=9.7,SNR=8.5						
	0.8nm,0.7s						
TGY	Tagaytay City	34.71	302	LR	LR	23 32 51.3	
	comp=Z,121nm,20.2s,baz=118,slow=36						
ILAR	Eielson Array	82.38	23	P	P	23 24 35.8	0.0
	0.3nm,0.6s,baz=250,slow=4.5,SNR=7.6						
	0.3nm,0.6s						

WEL 28 23:13:37.5±0.7**, 42°S**±4°×**17°3E**±°**, h60^{km}**±7^{km}**, M2.3**/7**, ML2.7**/12**, MLv2.3**/7**, Error ellipse: s-maj=0.0km s-min=0.0km az=54.7, confirmed, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THZ	Tophouse	0.23	117	P	Pn	23 13 48.4	+1.2
THZ				S	Sn	23 13 57.0	+2.7
MRNZ	Matariki Terra	0.28	21	P	Pn	23 13 48.8	+1.3
MRNZ				S	Sn	23 13 57.7	+3.0
DSZ	Denniston Nort	0.62	262	P	Pn	23 13 52.0	+1.2
DSZ				S	Sn	23 14 02.8	+2.3
TKNZ	Takaka Hill	0.67	22	P	Pn	23 13 52.1	+0.6
TKNZ				S	Sn	23 14 03.1	+1.5
NNZ	Nelson	0.72	52	P	Pn	23 13 52.5	+0.5
NNZ				S	Sn	23 14 04.3	+1.8
QRZ	Quartz Range	0.83	355	P	Pn	23 13 54.1	+0.6
QRZ				S	Sn	23 14 06.4	+1.3
BSWZ	Blackbirch Sta	0.94	94	P	Pn	23 13 55.3	+0.5
BSWZ				S	Sn	23 14 09.5	+2.0
TUWZ	Tuamarina	1.02	77	P	Pn	23 13 56.0	+0.2
KHZ	Kahutara	1.02	138	P	Pn	23 13 55.5	-0.3
KHZ				S	Sn	23 14 09.8	+0.5
LTZ	Lake Taylor	1.15	193	P	Pn	23 13 57.9	+0.3
DUWZ	D’Urville Isla	1.30	49	P	Pn	23 13 60.0	+0.4
TCW	Tory Channel	1.32	71	P	Pn	23 13 59.6	-0.1
GVZ	Greta Valley S	1.34	167	P	Pn	23 13 59.7	-0.5
INZ	Inchbonnie	1.38	219	P	Pn	23 14 00.5	-0.1
AMCZ	Amberley	1.52	179	P	Pn	23 14 01.7	-0.7
OXZ	Oxford	1.72	194	P	Pn	23 14 04.1	-1.1
KIW	Kapiti Island	1.90	66	P	Pn	23 14 06.5	-1.1
CAW	Cannon Point	1.92	74	P	Pn	23 14 06.3	-1.6
PLWZ	Palliser	1.98	88	P	Pn	23 14 06.2	-2.5
WVZ	Waitaha Valley	1.99	224	P	Pn	23 14 08.6	-0.2
MHCZ	Mount Hutt	2.03	202	P	Pn	23 14 08.2	-1.2
MQZ	McQueen’s Vall	2.05	179	P	Pn	23 14 07.5	-2.1
OGWZ	Otaki Gorge	2.10	67	P	Pn	23 14 09.5	-0.8
RACZ	Rakaia	2.10	190	P	Pn	23 14 08.6	-1.7
MTW	Mount Morrison	2.22	78	P	Pn	23 14 09.5	-2.5
AKCZ	Akaroa Harbour	2.22	175	P	Pn	23 14 10.3	-1.8
HOWZ	Holdsworth Sta	2.31	72	P	Pn	23 14 10.3	-2.8
WACZ	Wakanui South	2.36	194	P	Pn	23 14 12.4	-1.4
RPZ	Rata Peaks	2.36	209	P	Pn	23 14 11.2	-2.7
MRZ	Mangatainoka R	2.44	67	P	Pn	23 14 12.4	-2.6
ARCZ	Arundel	2.52	204	P	Pn	23 14 14.6	-1.5
KHEZ	Kahui Hut	2.59	25	P	Pn	23 14 17.9	+0.8
PREZ	Palmer Road	2.59	27	P	Pn	23 14 18.1	+1.0
PKE	Pukeiti	2.67	23	P	Pn	23 14 19.0	+0.8
FOZ	Fox Glacier	2.79	227	P	Pn	23 14 19.1	-0.6
TMZ	Timaru	2.97	203	P	Pn	23 14 20.5	-1.7
TUVZ	Tukino	3.32	45	P	Pn	23 14 28.5	+1.3
WTVZ	West Tongariro	3.40	43	P	Pn	23 14 30.2	+2.0
NNVZ	North Ngauruho	3.40	43	P	Pn	23 14 30.2	+1.9
OTVZ	Oturere	3.41	44	P	Pn	23 14 30.0	+1.7
ODZ	Otahua Downs	3.68	202	P	Pn	23 14 30.0	-1.9
JCZ	Jackson Bay	3.71	228	P	Pn	23 14 31.7	-0.8

*NEIC **28** 23:33:32.4±1.4, 23°.25S±0°.08×69°.0E±0°.1, h10^{km}±1^{km}, mb4.8/21, Error ellipse: s-maj=18.8km s-min=12.6km az=65.0*

*IDC **28** 23:33:32.9±0.6, 23°.20S×69°.12E, h0^{km}, mb4.0/18, mbtmp4.0/18, MS4.1/18, Error ellipse: s-maj=21.0km s-min=19.1km az=93.0*

*GCMT **28** 23:33:44.3±0.1, 23°.08S±0°.01×69°.13E±0°.01, h12^{km}, MW5.2/139, Moment Tensor Solution. s72,c100; s139,c248; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M_{rr}-6.83±.10; $M_{\theta\theta}$0.94±.09; $M_{\phi\phi}$5.90±.09; $M_{r\theta}$-0.30±.32; $M_{\theta\phi}$-1.98±.08; $M_{\phi r}$3.69±.28; Best double couple: $M_0$7.66200×10^{16} NP1:ϕ_s167.00000°, δ59.00000°, λ-83.00000°. NP2:ϕ_s334.00000°, δ31.00000°, λ-101.00000°. Principal axes: T 7.4970, Plg14.0000°, Azm253.0000°; N 0.3360, Plg6.0000°, Azm344.0000°; P -7.8280, Plg75.0000°, Azm96.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 23:33:34.2±0.5**, 23°.1S**±0°.1×**68°.95E**±0°.09**, h14^{km}, n65, σ1^{s}42**/46**, mb4.3**/27**, MS4.0**/18**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROCAM	Rodrigues Isla	6.18	302	Pn	Pn	23 35 04.2	-0.8
H08S1	Diego Carcia H	15.75	13	T	T	23 53 30.6	
	baz=192,slow=76,SNR=268						
H08S2	Diego Garcia H	15.75	13	T	T	23 53 30.8	
	baz=192,slow=76,SNR=208						
H08S3	Diego Garcia H	15.77	13	T	T	23 53 33.5	
	baz=192,slow=76,SNR=272						
DGAR	Diego Garcia	15.97	13	Pn	Pn	23 37 16.8	-1.8
DGAR				IAmb	IAmb	23 37 39.8	
	comp=Z,134nm,1.4s						
OPO	Ambohidratompo	20.83	278	LR	LR	23 44 45.7	
	comp=Z,206nm,20.9s,baz=32,slow=32						
PALK	Pallekele	32.31	22	P	P	23 40 03.3	+0.3
	comp=Z,5.6nm,1.1s,baz=116,slow=8.4,SNR=2.0						
PALK				LR	LR	23 50 50.6	
	comp=Z,332nm,20.4s,baz=306,slow=32						
	comp=Z,5.6nm,1.1s						
KMBO	Kilima Mbogo	37.74	301	P	P	23 40 49.5	-0.6
BKNI	Bangkinang	38.94	58	P	P	23 40 59.0	-1.0
LSZ	Lusaka	39.18	274	LR	LR	23 56 31.3	
	comp=Z,188nm,18.0s,baz=121,slow=35						
LSZ	Lusaka	39.18	274	P	P	23 41 00.2	-2.0
LBTB	Lobatse	39.51	258	LR	LR	23 55 23.1	
	comp=Z,180nm,18.4s,baz=97,slow=33						
BOSA	Boshof	39.54	253	P	P	23 41 06.7	+1.6
	comp=Z,2.1nm,0.9s,baz=256,slow=22,SNR=1.3						
BOSA				LR	LR	23 56 22.9	
	comp=Z,309nm,18.3s,baz=93,slow=34						
	comp=Z,2.1nm,0.9s						
BOSA	Boshof	39.54	253	P	P	23 41 03.3	-1.7
BOSA				IAmb	IAmb	23 41 24.7	
	comp=Z,36nm,1.6s						
H01W2	Cape Leeuwin H	40.91	117	T	T	00 24 41.7	
	baz=274,slow=74,SNR=15						
H01W3	Cape Leeuwin H	40.91	117	T	T	00 24 44.9	
	baz=274,slow=74,SNR=23						
H01W1	Cape Leeuwin H	40.93	117	T	T	00 24 42.3	
	baz=274,slow=74,SNR=15						
SUR	Sutherland	43.29	247	LR	LR	23 56 03.7	
	comp=Z,339nm,21.4s,baz=104,slow=31						
MBAR	Mbarara	43.33	296	LR	LR	23 58 29.7	
	comp=Z,98nm,18.2s,baz=104,slow=34						
NWAO	Narrogin (SRO)	43.41	114	LR	LR	23 55 28.6	
	comp=Z,687nm,19.2s,baz=219,slow=30						
MAW	Mawson	44.66	183	LR	LR	23 55 05.2	
	comp=Z,225nm,21.7s,baz=354,slow=29						
WSAR	Wadi Sarin	47.16	347	LR	LR	23 58 08.0	
	comp=Z,48nm,19.4s,baz=158,slow=31						
TSUM	Tsumeb	47.87	265	LR	LR	00 01 27.3	
	comp=Z,420nm,18.4s,baz=104,slow=35						
BRDH	Bariadhala	50.59	27	LR	LR	00 00 39.1	
	comp=Z,243nm,21.7s,baz=342,slow=32						
CMAR	Chiang Mai Arr	50.65	38	P	P	23 42 35.2	+2.0
	comp=Z,0.7nm,0.3s,baz=240,slow=7.2,SNR=6.8						
CMAR				PcP	PcP	23 43 52.6	+2.0
	comp=Z,1.0nm,0.3s,baz=233,slow=4.4,SNR=2.1						
CMAR				LR	LR	00 03 29.4	
	comp=Z,125nm,18.1s,baz=220,slow=36						
	comp=Z,0.7nm,0.3s						
KAPI	Kappang	52.15	78	LR	LR	00 01 30.0	
	comp=Z,118nm,21.6s,baz=264,slow=32						
FITZ	Fitzroy Crossi	53.02	96	P	P	23 42 48.2	-2.9
ASAR	Alice Springs	59.12	105	P	P	23 43 34.0	-0.7
	comp=Z,0.8nm,0.6s,baz=258,slow=6.2,SNR=8.7						
	comp=Z,0.8nm,0.6s						
WRA	Warramunga Arr	60.46	101	P	P	23 43 43.5	-0.5
	comp=Z,2.0nm,1.1s,baz=258,slow=6.8,SNR=5.1						
	comp=Z,2.0nm,1.1s						
SIJI	Sorong	64.30	79	LR	LR	00 07 41.3	
	comp=Z,74nm,21.7s,baz=220,slow=32						
AAK	Ala-Archa	65.62	4	P	P	23 44 17.4	-0.4
	comp=Z,0.8nm,0.8s,baz=210,slow=12,SNR=3.9						
	comp=Z,0.8nm,0.8s						
AAK	Ala-Archa	65.62	4	P	P	23 44 16.7	-1.1
AAK				IAmb	IAmb	23 44 33.1	
	comp=Z,7.9nm,1.3s						
KK31	Karatay Array	65.90	1	P	P	23 44 18.4	-1.1
KK31				IAmb	IAmb	23 44 34.7	
	comp=Z,16nm,1.4s						
KKAR	Karatay Array	65.90	1	P	P	23 44 18.5	-0.9
KKAR				IAmb	IAmb	23 44 34.8	
	comp=Z,16nm,1.4s						
GURO	Guroymak-BITLI	66.33	337	P	P	23 44 22.5	0.0
GURO				IAmb	IAmb	23 44 40.8	
	comp=Z,9.0nm,1.3s						
CSS	Mathiatis	66.92	329	P	P	23 44 23.9	-2.2
QSPA	South Pole Qui	67.01	180	P	P	23 44 27.3	+0.8
	comp=Z,1.8nm,1.0s,baz=230,slow=17,SNR=2.3						
	comp=Z,1.8nm,1.0s						
QSPA	South Pole Qui	67.01	180	P	P	23 44 24.8	-1.8
VNDA	Vanda	68.23	166	P	P	23 44 33.8	-0.1
	comp=Z,0.5nm,0.6s,baz=344,slow=17,SNR=1.8						
	comp=Z,0.5nm,0.6s						
MK31	Makanchi Array	70.61	10	P	P	23 44 48.5	-0.5
MK31				IAmb	IAmb	23 45 03.2	
	comp=Z,12nm,1.2s						
MKAR	Makanchi Array	70.61	10	P	P	23 44 50.2	+1.3
	comp=Z,1.3nm,0.7s,baz=167,slow=5.7,SNR=13						
	comp=Z,1.3nm,0.7s						
BRTR	Keskin Array B	70.67	332	P	P	23 44 51.1	+1.4
	comp=Z,0.5nm,0.4s,baz=147,slow=8.2,SNR=1.4						
	comp=Z,0.5nm,0.4s						
BORA	Eskisehir	72.23	330	P	P	23 44 57.6	-1.3
BORA				IAmb	IAmb	23 45 20.2	
	comp=Z,7.7nm,1.1s						
ABKAR	Akbulak array	72.49	354	P	P	23 44 59.3	-0.8
ABKAR				IAmb	IAmb	23 45 14.9	
	comp=Z,8.2nm,1.1s						
KURBB	Kurchatov Arra	73.90	6	P	P	23 45 09.8	+1.4
	comp=Z,0.8nm,0.8s,baz=203,slow=6.3,SNR=8.2						
	comp=Z,0.8nm,0.8s						
KURK	Kurchatov	74.00	6	P	P	23 45 09.5	+0.5
KURK				IAmb	IAmb	23 45 23.8	
	comp=Z,13nm,1.2s						
TORD	Torodi Ar. Bea	75.02	292	P	P	23 45 17.3	+1.6
	comp=Z,0.9nm,0.9s,baz=106,slow=4.7,SNR=4.2						
PMG	Port Moresby	75.58	94	LR	LR	00 18 54.1	
	comp=Z,103nm,18.5s,baz=256,slow=36						
BVAR	Borovoye Array	75.82	1	P	P	23 45 21.7	+2.1
	comp=Z,0.5nm,0.5s,baz=200,slow=7.7,SNR=1.9						
	comp=Z,0.5nm,0.5s						
DBIC	Dimbokro	77.88	283	P	P	23 45 35.3	+3.3
	comp=Z,2.3nm,0.9s,baz=123,slow=5.8,SNR=2.9						
	comp=Z,2.3nm,0.9s						
ZAA0	Zalesovo Array	77.96	10	P	P	23 45 30.3	-1.3
ZALV	Zalesovo Beam	77.96	10	P	P	23 45 32.8	+1.2
	comp=Z,3.1nm,0.8s,baz=202,slow=4.7,SNR=11						
	comp=Z,3.1nm,0.8s						
SONM	Songino Array	78.22	25	P	P	23 45 35.2	+1.8

	comp=Z,0.9nm,0.7s,baz=210,slow=6.9,SNR=5.3						
	comp=Z,0.9nm,0.7s						
ULN	Ulaanbaatar	78.50	25	P	P	23 45 33.4	-1.5
MLR	Muntele Rosu	78.69	331	P	P	23 45 35.6	-0.3
MLR				IAmb	IAmb	23 46 02.1	
	comp=Z,11nm,1.2s						
DIVS	Divibare	80.51	327	P	P	23 45 45.7	-0.2
AKASG	Malin Array Be	81.43	336	P	P	23 45 52.4	+1.9
	comp=Z,0.4nm,0.3s,baz=142,slow=3.9,SNR=1.6						
	comp=Z,0.4nm,0.3s						
KSRS	Korea Array	81.88	44	P	P	23 45 53.7	+0.6
	comp=Z,0.6nm,0.4s,baz=234,slow=4.3,SNR=1.7						
	comp=Z,0.6nm,0.4s						
PMSA	Palmer Station	85.21	198	LR	LR	00 15 53.5	
	comp=Z,328nm,21.1s,baz=142,slow=30						
MJAR	Matsushiro Arr	88.21	49	LR	LR	00 22 28.7	
	comp=Z,98nm,21.8s,baz=234,slow=33						
KLR	Kul'dur	91.08	36	P	P	23 46 38.6	+0.5
	comp=Z,0.5nm,0.3s,baz=258,slow=3.1,SNR=4.6						
	comp=Z,0.5nm,0.3s						
YKA	Yellowknife Ar	140.56	3	PKP	PKPdf	23 53 01.4	-1.2
	comp=Z,0.3nm,0.9s,baz=342,slow=3.4,SNR=3.8						
ULM	Lac du Bonnet	150.43	340	PKPbc	PKiKP	23 53 26.4	+0.5
	comp=Z,2.4nm,0.8s,baz=3.7,slow=2.9,SNR=3.7						
PDAR	Pinedale Array	160.36	357	PKPab	PKPab	23 54 14.5	+0.1
	comp=Z,0.8nm,1.0s,baz=20,slow=2.9,SNR=4.6						
NVAR	Mina Array Bea	163.52	20	PKP	PKPdf	23 53 37.8	+0.7
	comp=Z,0.1nm,0.2s,baz=262,slow=1.8,SNR=1.3						
NVAR				PKPab	PKPab	23 54 29.2	+0.9
	comp=Z,0.2nm,0.3s,baz=270,slow=1.8,SNR=1.7						

*IDC **28** 23:35:21.5±1.3,23°.30S×69°.10E,h0^{km},mb4.3/11,
mbtmp4.2/11,Error ellipse: s-maj=39.5km s-min=27.4km
az=28.0*

ISC 28 23:35:23.1±1.3,**23°.3S**±0°.3×**69°.1E**±0°.2,**h10**^{km},**n19**,
σ**0^{s}.42**/14,**mb4.3**/12,**Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	15.93	12	T	T	23 55 09.8	
	baz=192,slow=76,SNR=4.5						
H08S2	Diego Garcia H	15.94	12	T	T	23 55 11.5	
	baz=192,slow=76,SNR=3.6						
H08S3	Diego Garcia H	15.95	12	T	T	23 55 11.4	
	baz=192,slow=76,SNR=3.7						
PALK	Pallekele	32.46	22	P	P	23 41 54.2	+0.4
	4.3nm,0.8s,baz=249,slow=8.9,SNR=2.3						
	4.3nm,0.8s						
H01W2	Cape Leeuwin H	40.68	117	T	T	00 26 15.6	
	baz=272						
H01W3	Cape Leeuwin H	40.68	117	T	T	00 26 16.1	
	baz=272						
H01W1	Cape Leeuwin H	40.70	117	T	T	00 26 16.2	
	baz=272						
CMAR	Chiang Mai Arr	50.74	38	P	P	23 44 23.5	+0.1
	1.0nm,0.3s,baz=235,slow=7.0,SNR=4.2						
CMAR				PcP	PcP	23 45 40.2	-0.3
	0.8nm,0.3s,baz=220,slow=5.5,SNR=1.4						
	1.0nm,0.3s						
ASAR	Alice Springs	58.93	104	P	P	23 45 23.3	+0.4
	1.6nm,0.7s,baz=251,slow=6.3,SNR=2.5						
	1.6nm,0.7s						
WRA	Warramunga Arr	60.27	100	P	P	23 45 32.1	-0.1
	6.6nm,1.2s,baz=256,slow=8.3,SNR=5.3						
	6.6nm,1.2s						
MKAR	Makanchi Array	70.81	10	P	P	23 46 39.0	-0.6
	1.7nm,0.6s,baz=198,slow=6.0,SNR=8.0						
	1.7nm,0.6s						
KURBB	Kurchatov Arra	74.10	6	P	P	23 46 58.9	-0.3
	1.1nm,0.6s,baz=202,slow=6.6,SNR=4.5						
	1.1nm,0.6s						
TORD	Torodi Ar. Bea	75.24	292	P	P	23 47 06.9	+0.3
	47nm,0.3s,baz=104,slow=5.8,SNR=5.6						
BVAR	Borovoye Array	76.05	1	P	P	23 47 09.9	-0.4
	1.1nm,0.6s,baz=166,slow=7.1,SNR=3.0						
	1.1nm,0.6s						
ZALV	Zalesovo Beam	78.15	9	P	P	23 47 22.0	-0.1
	4.9nm,0.8s,baz=212,slow=4.7,SNR=5.0						
	4.9nm,0.8s						
SONM	Songino Array	78.37	25	P	P	23 47 23.9	+0.2
	2.2nm,0.9s,baz=189,slow=10,SNR=3.8						
	2.2nm,0.9s						
AKASG	Malin Array Be	81.69	336	P	P	23 47 41.7	+0.3
	0.4nm,0.4s,baz=142,slow=3.4,SNR=2.1						
	0.4nm,0.4s						
KLR	Kul'dur	91.18	36	P	P	23 48 27.9	-0.2
	2.8nm,0.9s,baz=287,slow=6.7,SNR=3.8						
	2.8nm,0.9s						
ULM	Lac du Bonnet	150.69	340	PKPbc	PKPbc	23 55 14.6	-0.7
	2.4nm,0.5s,baz=1.7,slow=3.8,SNR=3.1						

*IDC **28** 23:51:18.8±1.0,37°.41N×72°.12E,h0^{km},mb3.9/14,
mbtmp3.9/20,ML3.2/6,MS2.9/3,Error ellipse:
s-maj=20.7km s-min=15.2km az=159.0*

*SOME **28** 23:51:19.9,37°.72N×72°.17E,h5^{km}*

*NNC **28** 23:51:22.7±1.4,37°.79N×71°.77E,h0^{km},mb4.6,mpv4.3,
Error ellipse: s-maj=11.9km s-min=8.1km az=168.0*

*NEIC **28** 23:51:22.9±2.1,37°.62N±0°.08×71°.7E±0°.1,h16^{km}±5^{km},
mb4.1/8,Error ellipse: s-maj=17.2km s-min=4.7km
az=128.0*

ISC 28 23:51:21.7±0.5,**37°.57N**±0°.04×**71°.75E**±0°.04,**h10**^{km},**n122**,
σ**2^{s}.05**/125,**mb4.0**/19,**9C-9D,Afghanistan-Tajikistan
border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	1.82	322		Pb	23 51 54.2	-0.9
CHGR	Chuyangaron	2.31	299	Pn	Pn	23 51 59.5	-0.5
BTK	Batken	2.59	344	Pn	Pb	23 52 07.4	-0.9
CEP	Cherat	3.74	178	P	Pb	23 52 26.4	-1.5
CHCP	Chirah Chowk	4.09	162	P	Pn	23 52 28.4	+4.1
NIL	Nilore	4.10	162	Pn	Pn	23 52 28.3	+3.9
TAS	Tashkent	4.20	334	Pn	Pn	23 52 28.9	+3.1
IUG	Iuzhnay	4.76	344	Pg	Pb	23 52 47.9	+2.7
	141nm,0.5s						
IUG				Lg	Lg	23 53 47.5	
	288nm,0.8s						
IUG	Iuzhnay	4.76	344	*e*Pg	Pb	23 52 47.9	+2.7
	141nm,0.5s						
IUG				*e*Lg	Lg	23 53 47.5	
	227nm,0.4s						
THW	Thamme Wali	4.76	180	P	Pn	23 52 37.5	+3.9
AML	Almayashu	4.80	18	P	Pn	23 52 35.8	+1.5
	SNR=60						
AML	Almayashu	4.80	18	⇑Pn	Pn	23 52 35.0	+0.6
	5.1nm,0.6s						
AML				⇓Sn	Sn	23 53 30.8	+0.6
	16nm,0.7s						
CHM	Chimkent	5.02	342	*e*Pg	Pb	23 52 53.0	+3.4
	72nm,0.1s						
CHM				*e*Lg	Lg	23 53 56.0	
	264nm,0.3s						
UCH	Uchtor	5.12	24	P	Pn	23 52 40.2	+1.5
	SNR=23						
MRKS	Merke	5.29	12	Pg	Pb	23 52 55.5	+1.1
	33nm,0.2s						
MRKS				Lg	Lg	23 54 00.0	
	56nm,0.5s						
MRKS	Merke	5.29	12	*e*Pg	Pb	23 52 55.5	+1.1
	33nm,0.2s						
MRKS				*e*Lg	Lg	23 54 00.1	
	56nm,0.5s						
EKS2	Erkin-Say	5.32	16	P	Pn	23 52 43.2	+1.9
	SNR=24						
DZA	Taraz	5.33	357	Pg	Pb	23 52 56.7	+1.8
	108nm,0.3s						
DZA				Lg	Lg	23 54 01.9	
	124nm,0.3s						
DZA	Taraz	5.33	357	*e*Pg	Pb	23 52 56.7	+1.8
	108nm,0.3s						
DZA				*e*Lg	Lg	23 54 01.9	
	124nm,0.3s						
AAK	Ala-Archa	5.48	22	P	Pn	23 52 45.1	+1.6
	SNR=15						
AAK	Ala-Archa	5.48	22	Pn	Pn	23 52 45.4	+1.8
	1.2nm,0.3s,baz=205,slow=8.9,SNR=18						
AAK				Lg	Lg	23 53 59.6	
	0.8nm,0.3s,baz=232,slow=19,SNR=1.8						
	9.8nm,0.7s						
AAK	Ala-Archa	5.48	22	Pn	Pn	23 52 44.5	+0.9
JMU	Jammu	5.49	151	*e*P	Pn	23 52 44.7	+1.3
JMU				*e*S	Sn	23 53 46.8	+0.2
KK31	Karatay Array	5.61	351	Pn	Pn	23 52 47.0	+1.8
KK31	Karatay Array	5.61	351	Pn	Pn	23 52 45.6	+0.5
	8.5nm,0.4s,baz=172,slow=13,SNR=140						
KK31				Pg	Pb	23 53 01.8	+2.1
	32nm,0.6s,baz=178,slow=17,SNR=16						
KK31				⇓Sn	Sn	23 53 47.7	-1.9
	27nm,0.5s,baz=174,slow=24,SNR=3.6						
KK31				⇓Lg	Lg	23 54 12.4	
	72nm,0.6s						
KKAR	Karatay Array	5.61	351	Pn	Pn	23 52 47.0	+1.9
FRU1	Bishkek	5.68	22	Pn	Pn	23 52 47.5	+1.3
USP	Ospenovka	6.07	19	P	Pn	23 52 52.7	+1.3
	SNR=12						
THN	Thein Dam	6.07	146	*e*P	Pn	23 52 52.8	+1.3
THN				*e*S	Sn	23 54 02.0	+1.0
THN				IAML		23 54 05.0	
	comp=E,211nm,0.5s						
THN				IAML		23 54 08.0	
	comp=N,157nm,0.5s						
TKM2	Tokmak 2	6.10	28	P	Pn	23 52 55.0	+2.9
	SNR=7.5						
TKM2	Tokmak 2	6.10	28	⇑Pn	Pn	23 52 53.7	+1.6
	comp=N,12nm,0.9s						
TKM2				⇑Pg	Pb	23 53 10.3	+2.1
	comp=N,19nm,0.7s						
TKM2				⇓Lg	Lg	23 54 32.4	
	comp=N,80nm,1.4s						
KDJ	Kajisay	6.18	41	Pn	Pn	23 52 54.2	+1.0
SGDS	Sogindy	6.27	20	Pg	Pb	23 53 12.8	+1.8
	comp=N,21nm,0.6s						
SGDS				Lg	Lg	23 54 29.1	
	comp=N,18nm,0.5s						
KST	Kastek	6.35	29	Pg	Pb	23 53 13.2	+0.9
	comp=N,17nm,0.4s						
KST				Lg	Lg	23 54 29.6	
	comp=N,38nm,0.5s						
KST	Kastek	6.35	29	*e*Pg	Pb	23 53 13.2	+0.9
	comp=N,17nm,0.3s						
KST				*e*Lg	Lg	23 54 29.6	
	comp=N,20nm,0.4s						
DGS	Degeres	6.45	27	Pg	Pb	23 53 15.1	+1.1
	comp=N,32nm,0.8s						
DGS				Lg	Lg	23 54 33.3	
	comp=N,30nm,0.5s						
DGS	Degeres	6.45	27	*e*Pg	Pb	23 53 15.1	+1.1
	comp=N,32nm,0.8s						
DGS				*e*Lg	Lg	23 54 33.3	
	comp=N,30nm,0.5s						
MTBS	Maitube	6.61	31	Pg	Pb	23 53 17.9	+1.2
	comp=N,9.4nm,0.4s						
MTBS				Lg	Lg	23 54 37.6	
	comp=N,17nm,0.6s						
MTBS	Maitube	6.61	31	*e*Pg	Pb	23 53 17.9	+1.2
	comp=N,6.0nm,0.3s						
MTBS				*e*Lg	Lg	23 54 37.6	
	comp=N,12nm,0.4s						
TNSS	Tian-Shan	6.75	34	Pg	Pb	23 53 21.1	+1.7
	comp=N,8.3nm,0.5s						
TNSS				Lg	Lg	23 54 43.1	
	comp=N,11nm,0.5s						
TNSS	Tian-Shan	6.75	34	*e*Pg	Pb	23 53 21.1	+1.7
	comp=N,7.2nm,0.3s						
TNSS				*e*Lg	Lg	23 54 43.1	
	comp=N,7.5nm,0.3s						
MDOK	Medeo	6.90	34	Pn	Pn	23 53 03.5	+0.5
	comp=N,5.6nm,0.8s						
MDOK				Pg	Pb	23 53 22.9	+1.2
	comp=N,11nm,0.5s						
MDOK				⇓Pg	Pg	23 53 26.9	-6.9
	comp=N,14nm,0.8s						
MDOK				Lg	Lg	23 54 46.4	
	comp=N,38nm,0.5s						
MDOK				⇑Lg	Lg	23 54 57.9	
	comp=N,64nm,1.2s						
KOTS	Kotyrbulak	6.98	34	Pg	Pb	23 53 24.7	+1.5
	comp=N,11nm,0.6s						
KOTS				Lg	Lg	23 54 49.1	
	comp=N,57nm,0.6s						
KOTS	Kotyrbulak	6.98	34	*e*Pg	Pb	23 53 24.7	+1.5
	comp=N,11nm,0.6s						
KOTS				*e*Lg	Lg	23 54 49.1	
	comp=N,23nm,0.5s						
KTBS	Karatobe	7.19	30	Pg	Pb	23 53 28.8	+2.2
	comp=N,7.7nm,1.0s						
KTBS				Lg	Lg	23 54 55.8	
	comp=N,38nm,0.8s						
KTBS	Karatobe	7.19	30	*e*Pg	Pb	23 53 28.8	+2.2
	comp=N,6.3nm,0.4s						
KTBS				*e*Lg	Lg	23 54 55.8	
	comp=N,16nm,0.4s						
KUU	Kurty	7.21	27	Pg	Pb	23 53 29.4	+2.4
	comp=N,7.7nm,0.7s						
KUU				Lg	Lg	23 54 57.2	
	comp=N,34nm,1.0s						
KUU	Kurty	7.21	27	*e*Pg	Pb	23 53 29.4	+2.4
	comp=N,5.8nm,0.9s						
KUU				*e*Lg	Lg	23 54 57.2	
	comp=N,30nm,0.5s						
BHK	Bhakra	7.25	147	*e*S	Sn	23 54 28.4	-1.6
CHKK	Chushkaly	7.43	31	Pg	Pb	23 53 33.1	+2.3
	comp=N,7.1nm,0.3s						
CHKK				Lg	Lg	23 55 03.0	
	comp=N,11nm,0.4s						
CHKK	Chushkaly	7.43	31	*e*Pg	Pb	23 53 33.0	+2.3
	comp=N,2.3nm,0.1s						
CHKK				*e*Lg	Lg	23 55 03.0	
	comp=N,8.4nm,0.3s						
SATY	Saty	7.48	41	Pg	Pb	23 53 33.6	+2.0
	comp=N,13nm,0.8s						
SATY				Lg	Lg	23 55 03.8	
	comp=N,31nm,0.9s						
SATY	Saty	7.48	41	*e*Pg	Pb	23 53 33.5	+2.0
	comp=N,11nm,0.6s						
SATY				*e*Lg	Lg	23 55 03.8	
	comp=N,24nm,0.6s						
BTLS	Baital	7.66	12	Pg	Pb	23 53 39.1	+4.5
	comp=N,7.2nm,0.7s						
BTLS				Lg	Lg	23 55 13.0	
	comp=N,2.8nm,0.5s						
BTLS	Baital	7.66	12	*e*Pg	Pb	23 53 39.1	+4.5
	comp=N,5.9nm,0.3s						
BTLS				*e*Lg	Lg	23 55 13.1	
	comp=N,4.3nm,0.5s						
KURS	Kuram	7.67	38	Pg	Pb	23 53 36.9	+2.1
	comp=N,12nm,0.4s						
KURS				Lg	Lg	23 55 09.7	
	comp=N,28nm,1.1s						
KURS	Kuram	7.67	38	*e*Pg	Pb	23 53 36.9	+2.1
	comp=N,12nm,0.3s						
KURS				*e*Lg	Lg	23 55 09.7	
	comp=N,14nm,0.6s						
SMLA	Simla	7.83	144	*e*P	Pn	23 53 14.1	-1.6
SMLA				*e*S	Sn	23 54 40.9	-3.4
SMLA				IAML		23 54 43.2	
	comp=E,168nm,0.4s						
SMLA				IAML		23 54 45.8	
	comp=N,142nm,0.5s						
UZB	Uzynbulak	7.87	43	Pg	Pb	23 53 40.7	+2.6
	comp=N,6.9nm,0.5s						
UZB				Lg	Lg	23 55 16.0	
	comp=N,14nm,0.8s						
UZB	Uzynbulak	7.87	43	*e*Pg	Pb	23 53 40.7	+2.6
	comp=N,3.3nm,0.1s						
UZB				*e*Lg	Lg	23 55 16.0	
	comp=N,4.2nm,0.3s						
KPKS	Kokpek	7.91	40	Pg	Pb	23 53 41.0	+2.1
	comp=N,6.4nm,0.4s						
KPKS				Lg	Lg	23 55 16.5	
	comp=N,20nm,0.5s						
KPKS	Kokpek	7.91	40	*e*Pg	Pb	23 53 41.0	+2.1
	comp=N,3.7nm,0.2s						
KPKS				*e*Lg	Lg	23 55 16.5	
	comp=N,15nm,0.7s						
PDGK	Podgornoye	8.24	43	⇑Pn	Pn	23 53 21.2	-0.2
	comp=N,7.1nm,0.7s						
PDGK				⇑Lg	Lg	23 55 41.3	
	comp=N,31nm,0.9s						
KUDL	Kundal	10.21	156	*e*P	Pn	23 53 46.5	-1.7
KUDL				*e*S	Sn	23 55 32.5	-10
PTH	Pithoragarh	10.67	136	*e*P	Pn	23 53 53.1	-1.6
OTUK	Ortayu	10.68	2	⇓Pn	Pn	23 53 54.9	+0.3
	comp=N,6.4nm,1.4s						
OTUK				⇑Lg	Lg	23 56 54.5	
	comp=N,30nm,1.3s						
LGTI	Lohaghat	10.76	136	*e*P	Pn	23 53 56.7	+0.9
LGTI				*e*S	Sn	23 55 46.9	-9.4
GEYT	Alibeck	10.80	276	Pn	Pn	23 53 56.3	-0.1
	comp=N,2.1nm,0.3s,baz=101,slow=8.7,SNR=28						
GEYT				Sn	Sn	23 55 56.6	-0.8
	comp=N,1.2nm,0.3s,baz=73,slow=21,SNR=2.2						
GEYT				LR	LR	23 59 01.1	
	comp=N,65nm,21.4s,baz=164,slow=42						
GEYT	Alibeck	10.80	276	Pn	Pn	23 53 56.4	0.0
GYA0B	ALIBECK ARRAY	10.80	276	Pn	Pn	23 53 56.0	-0.4
GYA0B	ALIBECK ARRAY	10.80	276	⇑Pn	Pn	23 53 57.2	+0.9
GYA0B				⇑Sn	Sn	23 56 00.5	+3.1
MK31	Makanchi Array	12.08	37	Pn	Pn	23 54 13.8	0.0
MK31	Makanchi Array	12.08	37	Pn	Pn	23 54 14.5	+0.7
	comp=N,2.8nm,0.8s,baz=227,slow=12,SNR=19						
MKAR	Makanchi Array	12.08	37	Pn	Pn	23 54 13.8	0.0
	comp=N,0.1nm,0.3s,baz=229,slow=12,SNR=11						
	comp=N,0.9nm,0.6s						
MKAR	Makanchi Array	12.08	37	Pn	Pn	23 54 12.6	-1.2
PYUN	Piuthan	13.35	132	*e*P	Pn	23 54 25.8	-5.6
	comp=N,11nm,0.3s						
WMQ	Urumqi	13.61	58	*e*P	Pn	23 54 33.8	-0.9
WMQ				PP	P	23 54 47.5	+3.7
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				LR	LR		
	comp=Z,120nm,22.3s						
DANN	Dangsing	13.63	129	*e*P	Pn	23 54 29.2	-6.2
	comp=Z,17nm,0.4s						
KURBB	Kurchatov Arra	13.92	18	Pn	Pn	23 54 36.1	-2.7
	comp=Z,0.1nm,0.3s,baz=212,slow=12,SNR=6.5						
KURBB				Lg	Lg	23 58 37.0	
	baz=202,slow=27,SNR=2.2						
	comp=Z,0.7nm,0.5s						
GKN	Gorkha	14.43	128	*e*P	Pn	23 54 39.3	-6.8
	comp=Z,17nm,0.3s						
AB31	Akbulak array	14.47	328	Pn	Pn	23 54 45.5	-0.9
	comp=Z,1.7nm,0.5s,baz=284,slow=6.0,SNR=54						
AB31				⇓Sn	Sn	23 57 23.6	-3.2
	comp=Z,7.6nm,0.6s,baz=143,slow=22,SNR=10						
ABKAR	Akbulak array	14.47	328	Pn	Pn	23 54 44.8	-1.7
PKIN	Phulchoki	15.20	127	*e*P	Pn	23 54 49.1	-7.6
	comp=Z,11nm,0.5s						
PKI	Pulchoki	15.22	127	*e*P	Pn	23 54 49.1	-7.8
	comp=Z,6.9nm,0.4s						
GUN	Gumba	15.29	125	*e*P	Pn	23 54 49.8	-8.1
	comp=Z,9.1nm,0.4s						
BVAR	Borovoye Array	15.49	357	Pn	Pn	23 54 57.8	-2.2
	baz=157,slow=13,SNR=9.6						
BVAR				Lg	Lg	23 59 31.5	
	baz=165,slow=20,SNR=3.7						
BVAR				LR	LR	00 01 34.1	
	comp=Z,27nm,18.2s,baz=193,slow=39						
	comp=Z,2.1nm,0.8s						
BRVK	Borovoye	15.52	357	Pn	Pn	23 54 58.4	-2.1
BRVK				IAmb	IAmb	23 55 11.0	
	comp=Z,4.6nm,0.9s						
JIRN	Jiri	15.66	125	*e*P	Pn	23 54 54.8	-8.0
	comp=Z,18nm,0.4s						
AKTO	Aktyubinsk	16.18	327	Pn	Pn	23 55 08.7	-0.4
	comp=Z,0.3nm,0.3s,baz=137,slow=12,SNR=3.5						
AKTO				Sn	Sn	23 58 00.1	-8.4
	comp=Z,0.2nm,0.3s,baz=142,slow=23,SNR=3.6						
	comp=Z,2.1nm,0.6s						
AKTO	Aktyubinsk	16.18	327	⇓Pn	Pn	23 55 08.9	-0.2
	comp=Z,7.6nm,0.9s						
AKTO				⇓Sn	Sn	23 58 07.3	-1.2
	comp=Z,10nm,1.1s						
RAMN	Ramite	16.41	126	*e*P	Pn	23 55 03.8	-8.5
TAPN	Taplejung	16.87	123	*e*P	Pn	23 55 09.3	-8.9
	comp=Z,6.5nm,0.4s						
UOSS	Minazif	18.27	231		Pn	23 55 34.6	-0.7
GOMU	GeErMu	18.50	87	P	P	23 55 37.0	-1.4
GOMU				pP	Pn	23 55 40.8	+2.3
GOMU				sP	pP	23 55 41.5	-0.7
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,94nm,4.8s						
ZAA0	Zalesovo Array	18.70	25	P	P	23 55 37.9	-2.1
ZALV	Zalesovo Beam	18.70	25	P	P	23 55 38.1	-1.9
	comp=Z,0.4nm,0.3s,baz=213,slow=11,SNR=8.4						
ZALV				LR	LR	00 02 57.0	
	comp=Z,53nm,18.0s,baz=352,slow=37						
	comp=Z,1.2nm,0.4s						
ZALV	Zalesovo Beam	18.70	25	P	P	23 55 37.1	-2.8
ARU	Arti	20.83	339	P	P	23 56 03.3	+0.1
	comp=Z,1.0nm,0.3s,baz=164,slow=11,SNR=4.0						
	comp=Z,1.0nm,0.3s						
GNI	Garni	21.16	285	P	P	23 56 10.8	+3.7
	comp=Z,9.1nm,0.7s,baz=5.1,slow=0.5,SNR=14						
	comp=Z,9.1nm,0.7s						
GNI	Garni	21.16	285	P	P	23 56 06.8	-0.3
GTA	Gaotai	22.02	77	*e*P	P	23 56 16.3	0.0
GTA				pP	sP	23 56 24.0	+2.1
GTA				sP	pP	23 56 28.0	+7.9
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA				LR	LR		
	comp=N,140nm,21.1s						
GTA				LR	LR		
	comp=E,130nm,19.6s						
GTA				LR	LR		
	comp=Z,200nm,20.0s						
KBZ	Khabaz	22.67	295	P	P	23 56 26.9	+3.9
	comp=Z,2.8nm,0.9s,baz=150,slow=10,SNR=4.6						
	comp=Z,2.8nm,0.9s						
SONM	Songino Array	27.24	57	P	P	23 57 03.7	-2.2
	comp=Z,0.6nm,0.6s,baz=254,slow=8.1,SNR=5.5						
	comp=Z,0.6nm,0.6s						
PZH	PanZhiHua	27.61	105	P	P	23 57 12.3	+2.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,5.4s						
FINES	FINESS Array B	36.94	325	P	P	23 58 31.0	+0.5
	comp=Z,1.9nm,0.8s,baz=96,slow=14,SNR=1.5						
	comp=Z,1.9nm,0.8s						
FINES	FINESS Array B	36.94	325	P	P	23 58 29.3	-1.2
ARCES	ARCESS Array B	40.39	337	P	P	23 58 59.0	-0.4
	comp=Z,7.2nm,1.1s,baz=117,slow=9.4,SNR=2.0						
	comp=Z,7.2nm,1.1s						
HEH	HeiHe	41.13	54	P	P	23 59 04.5	-1.2
HEH				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NOA	NORSAR Array B	43.89	322	P	P	23 59 29.2	+1.1
	comp=Z,1.1nm,0.8s,baz=93,slow=7.8,SNR=4.4						
	comp=Z,1.1nm,0.8s						
KLR	Kul'dur	44.04	55	P	P	23 59 26.9	-2.5
	comp=Z,1.1nm,0.5s,baz=284,slow=8.0,SNR=6.1						
	comp=Z,1.1nm,0.5s						
ESDC	Sonseca Array	57.49	298	P	P	00 01 11.7	+0.6
	comp=Z,0.4nm,0.7s,baz=61,slow=6.8,SNR=4.8						
	comp=Z,0.4nm,0.7s						
TOA0	Torodi Ar. Sit	66.34	269	P	P	00 02 10.4	-0.4
TOA0				IAmb	IAmb	00 02 14.3	
	comp=Z,1.7nm,0.8s						
TORD	Torodi Ar. Bea	66.34	269	P	P	00 02 10.8	-0.1
	comp=Z,1.5nm,0.7s,baz=41,slow=5.8,SNR=13						
	comp=Z,1.5nm,0.7s						
TORD	Torodi Ar. Bea	66.34	269	P	P	00 02 10.8	-0.1
TORD				IAmb	IAmb	00 02 14.2	
	comp=Z,1.5nm,0.8s						
IMAR	Indian Mountai	70.97	18	P	P	00 02 38.3	-0.7
INK	Inuvik	72.75	10	P	P	00 02 49.6	0.0
	comp=Z,2.9nm,1.1s,baz=356,slow=7.3,SNR=5.8						
	comp=Z,2.9nm,1.1s						
INK	Inuvik	72.75	10	P	P	00 02 49.7	+0.1
C36M	Paulatuk	72.76	6	P	P	00 02 50.9	+1.3
C36M				IAmb	IAmb	00 02 52.8	
	comp=Z,2.0nm,0.7s						
ILAR	Eielson Array	73.59	16	P	P	00 02 54.6	-0.1
	comp=Z,0.4nm,0.9s,baz=304,slow=4.0,SNR=4.3						
	comp=Z,0.4nm,0.9s						
GENI	Genyem	74.65	106	P	P	00 03 07.4	+5.8
	comp=Z,96nm,1.6s,comp=Z,8μm						
YKA	Yellowknife Ar	80.15	3	P	P	00 03 31.1	-0.5
	comp=Z,1.4nm,0.9s,baz=350,slow=5.2,SNR=17						
	comp=Z,1.4nm,0.9s						
WRA	Warramunga Arr	82.05	123	P	P	00 03 39.1	-3.2
	comp=Z,0.7nm,0.8s,baz=324,slow=5.1,SNR=6.4						
	comp=Z,0.7nm,0.8s						

WEL 29 00:02:16.1±1.1,**37°S**±6°×**17°9E**±°,**h12**^{km},**M3.1**/12,
ML3.5/14,**MLv3.1**/12,**Error ellipse: s-maj=0.0km
s-min=0.0km az=94.5,confirmed,Off east coast of
North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.79	234	P	Pg	00 02 30.9	-0.4
PKGZ	Pakihiroa	1.13	226	P	Pb	00 02 37.2	-0.5
PKGZ				S	Sg	00 02 52.6	-0.1
PUZ	Puketiti	1.18	214	P	Pb	00 02 38.3	-0.2

PUZ				S	Sb	00 02 53.7	0.0
HAZ	Te Kaha	1.24	238	P	Pn	00 02 37.8	-1.4
HAZ				S	Sg	00 02 56.3	+0.3
TWGZ	Tauwhareparae	1.40	219	P	Pn	00 02 41.7	+0.2
RUGZ	Raukumara Rang	1.43	232	P	Pn	00 02 42.0	+0.1
CNGZ	Carnagh Statio	1.55	207	P	Pn	00 02 43.9	+0.4
TKGZ	Te Karaka	1.67	216	P	Pn	00 02 44.8	-0.3
MWZ	Matawai	1.75	225	P	Pn	00 02 46.5	+0.1
RIGZ	Rimuhau	1.92	213	P	Pn	00 02 48.3	-0.3
RAGZ	Rawiri	1.93	223	P	Pn	00 02 49.2	+0.4
URZ	Urewera	1.96	233	P	Pn	00 02 49.4	+0.3
KNZ	Kokohu	2.23	210	P	Pn	00 02 51.7	-1.1
MHGZ	Mahia Peninsul	2.26	204	P	Pn	00 02 52.9	-0.3
RTZ	Ruatahuna	2.26	227	P	Pn	00 02 53.5	+0.1
MTHZ	Maungataniwha	2.50	225	P	Pn	00 02 56.8	+0.2
MTHZ				S	Sn	00 03 26.6	-0.5
NMHZ	Naumai	2.69	222	P	Pn	00 02 59.7	+0.4
KUZ	Kuaotunu	2.73	276	P	Pn	00 02 58.3	-1.4
BKZ	Black Stump Fm	2.91	224	P	Pn	00 03 01.7	-0.6
TOZ	Tahuroa Road	2.94	256	P	Pn	00 03 02.2	-0.3
MCHZ	McNeill Hill	3.01	218	P	Pn	00 03 02.7	-0.9
GRZ	Great Barrier	3.05	285	P	Pn	00 03 04.3	+0.2
KWHZ	Kaweka Forest	3.14	221	P	Pn	00 03 04.3	-1.1
KAHZ	Kahuranaki	3.21	212	P	Pn	00 03 04.5	-1.9
TMVZ	Te Maari	3.35	232	P	Pn	00 03 07.9	-0.5
ETVZ	East Tongariro	3.36	232	P	Pn	00 03 08.0	-0.5
NTVZ	North Tongarir	3.36	233	P	Pn	00 03 08.1	-0.4
BHHZ	Black Hill Sta	3.38	224	P	Pn	00 03 08.3	-0.4
OTVZ	Oturere	3.41	232	P	Pn	00 03 08.7	-0.4
SNVZ	South Ngauruho	3.43	232	P	Pn	00 03 09.1	-0.5
NGZ	Ngauruhoe	3.45	232	P	Pn	00 03 09.3	-0.5
WNVZ	Wahianoa	3.54	230	P	Pn	00 03 10.3	-0.7
MTVZ	Mangateitei	3.66	230	P	Pn	00 03 11.9	-0.6
TSZ	Takapari Road	3.85	219	P	Pn	00 03 13.7	-1.4
WCZ	Waipu Caves	4.00	285	P	Pn	00 03 17.1	-0.1
OUZ	Omahuta	4.83	291	P	Pn	00 03 29.3	+0.7
CTZ	Chatham Island	7.39	155	P	Pn	00 04 01.9	-1.8

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*IDC **29** 00:08:54.0±1.2, 16°.38N×11°.70W, h0km, mb3.7/5, mbtmp3.9/8, ML4.0/3, Error ellipse: s-maj=29.9km s-min=26.2km az=100.0*

ISC 29 00:08:53.9±0.7**, 16°.15N**±0°.09×**11°.61W**±0°.07**, h10km, n10, σ2s.43**/13**, mb3.4**/5**, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBTS	Babate	4.97	253	Pn	Pn	00 10 09.1	+0.4
	5.0nm,0.3s,baz=328,slow=23,SNR=8.9						
BBTS				Sn	Sn	00 11 03.2	-3.0
	3.7nm,0.3s,baz=145,slow=23,SNR=7.1						
BBTS				Lg	Lg	00 11 26.7	
	5.2nm,0.3s,baz=308,slow=23,SNR=2.1						
	23nm,0.5s						
DBIC	Dimbokro	11.51	144	Pn	Pn	00 11 42.0	+3.5
	1.2nm,0.3s,baz=327,slow=14,SNR=19						
DBIC				Sn	Sn	00 13 45.1	-2.1
	1.2nm,0.3s,baz=52,slow=21,SNR=11						
DBIC				Lg	Lg	00 15 01.8	
	2.5nm,0.3s,baz=248,slow=16,SNR=4.6						
	10.0nm,0.7s						
TORD	Torodi Ar. Bea	13.22	101	Pn	Pn	00 12 03.8	+1.9
	0.6nm,0.3s,baz=287,slow=13,SNR=38						
TORD				Sn	Sn	00 14 23.7	-5.4
	0.3nm,0.3s,baz=282,slow=23,SNR=6.3						
TORD				Lg	Lg	00 15 52.9	
	baz=285,slow=23						
	1.6nm,0.4s						
ESDC	Sonseca Array	24.38	14	P	P	00 14 12.4	0.0
	0.7nm,0.7s,baz=201,slow=9.6,SNR=8.7						
	0.7nm,0.7s						
KEST	Kesra	27.02	40	P	P	00 14 36.6	+0.2
	3.7nm,0.9s,baz=258,slow=7.0,SNR=2.8						
	3.7nm,0.9s						
GERES	GERESS Array B	38.61	27	P	P	00 16 17.0	-0.4
	0.3nm,0.5s,baz=210,slow=7.7,SNR=4.2						
	0.3nm,0.5s						
FINES	FINESS Array B	52.57	22	P	P	00 18 07.3	-0.1
	0.9nm,0.6s,baz=215,slow=6.6,SNR=6.2						
	0.9nm,0.6s						
YKA	Yellowknife Ar	81.69	333	P	P	00 21 12.6	+0.2
	0.3nm,0.8s,baz=63,slow=6.1,SNR=4.5						
	0.3nm,0.8s						
ASAR	Alice Springs	146.79	109	PKPbc	PKiKP	00 28 39.4	-0.5
	0.8nm,0.7s,baz=268,slow=1.7,SNR=7.9						
WRA	Warramunga Arr	147.44	102	PKPbc	PKPab	00 28 41.2	+0.2
	0.5nm,0.7s,baz=284,slow=1.5,SNR=2.5						

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*SJA **29** 00:19:37.1±1.2, 19°.61S×68°.96W, h130km±12km, ML3.8, MW3.8, Hypocentre not reviewed by the ISC*

*IDC **29** 00:19:38.1±0.9, 19°.61S×68°.59W, h126km±9km, mb3.9/8, mbtmp4.3/12, MS3.4/2, Error ellipse: s-maj=22.0km s-min=8.5km az=99.0*

*NEIC **29** 00:19:38.0±1.5, 19°.56S±0°.04×68°.88W±0°.08, h128km±2km, mb4.4/21, ML4.0(GUC), Error ellipse: s-maj=11.3km s-min=5.9km az=88.0*

*GUC **29** 00:19:38.8±0.5, 19°.54S×68°.86W, h127km±2km, ML4.0*

*VAO **29** 00:19:39.2±0.4, 19°.33S×68°.77W, h130km, mb4.2*

ISC 29 00:19:37.3±0.6**, 19°.55S**±0°.03×**68°.85W**±0°.06**, h128**km±6km**, n126, σ1s.29**/141**, mb4.5**/13**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.65	206		Pn	00 19 58.5	+0.9
PB08				Sn	Sn	00 20 13.4	+0.6
PB08	IPOC Station P	0.65	206	eP	Pn	00 19 58.6	+1.1
PB08				i S	Sn	00 20 13.9	+1.0
PB08				IAML		00 20 14.6	
	comp=N,5µm,0.3s						
PB08	IPOC Station P	0.65	206	i P		00 19 57.0	
PB08				IAML		00 20 14.7	
	comp=Z,2µm,0.8s						
PB11	IPOC Station P	0.78	255	Pn	Pn	00 19 58.6	+0.3
PB11				Sn	Sn	00 20 14.5	+0.4
PB11	IPOC Station P	0.78	255	eP	Pn	00 19 58.9	+0.6
PB11				i S	Sn	00 20 14.8	+0.6
PB11				IAML		00 20 15.8	
	comp=E,6µm,0.3s						
PB11	IPOC Station P	0.78	255	i P		00 19 58.0	
PB11				IAML		00 20 18.2	
	comp=Z,1µm,0.3s						
MNMC	Minye Minye	0.82	301	Pn	Pn	00 19 59.3	+0.6
MNMC				Sn	Sn	00 20 15.2	+0.4
MNMC	Minye Minye	0.82	301	eP	Pn	00 19 59.6	+0.9
MNMC				i S	Sn	00 20 15.8	+0.9
MNMC				IAML		00 20 16.8	
	comp=N,9µm,0.4s						
PB16	IPOC Station P	1.36	333	Pn	Pn	00 20 05.4	+1.0
PB16				Sn	Sn	00 20 25.9	+1.1
PB16	IPOC Station P	1.36	333	eP	Pn	00 20 05.9	+1.6
PB16				i S	Sn	00 20 26.6	+1.8
TA02	Huaiquique	1.40	239	Pn	Pn	00 20 04.5	+0.4
TA02				Sn	Sn	00 20 24.2	-0.3
TA02	Huaiquique	1.40	239	eP	Pn	00 20 04.7	+0.6
TA02				i S	Sn	00 20 24.4	-0.1
TA02				IAML		00 20 27.2	
	comp=N,3µm,0.4s						
TA02	Huaiquique	1.40	239	i P		00 20 04.0	
TA02				IAML		00 20 26.1	
	comp=Z,885nm,0.3s						
PB01	IPOC Station P	1.60	202	Pn	Pn	00 20 07.2	+0.8
PB01				Sn	Sn	00 20 29.0	+0.3
PB01	IPOC Station P	1.60	202	eP	Pn	00 20 07.4	+1.0
PB01				i S	Sn	00 20 29.2	+0.5
PB01				IAML		00 20 30.9	
	comp=N,2µm,0.4s						
PB01	IPOC Station P	1.60	202	i P		00 20 06.0	
PB01				IAML		00 20 30.5	
	comp=Z,758nm,0.3s						
TA01	Diego Aracena	1.60	231	Pn	Pn	00 20 06.7	+0.3
TA01	Diego Aracena	1.60	231	eP	Pn	00 20 06.7	+0.3
TA01				i S	Sn	00 20 28.6	0.0
TA01				IAML		00 20 34.5	
	comp=N,966nm,0.4s						
TA01	Diego Aracena	1.60	231	i P		00 20 06.0	
TA01				IAML		00 20 33.9	
	comp=Z,441nm,0.7s						
PB12	IPOC Station P	1.68	304	Pn	Pn	00 20 07.8	+0.3
PB12	IPOC Station P	1.68	304	eP	Pn	00 20 07.7	+0.3
PB12				i S	Sn	00 20 29.7	-0.7
AP01	Chacalluta	1.84	310	Pn	Pn	00 20 09.8	+0.6
AP01	Chacalluta	1.84	310	eP	Pn	00 20 09.8	+0.6
AP01				i S	Sn	00 20 34.1	+0.6
AP01	Chacalluta	1.84	310	i P		00 20 09.0	
AP01				IAML		00 20 42.2	
	comp=Z,869nm,0.2s						
PB02	IPOC Station P	2.01	209	Pn	Pn	00 20 12.3	+0.9
PB02	IPOC Station P	2.01	209	eP	Pn	00 20 12.0	+0.6
PB02				i S	Sn	00 20 38.2	+0.7
PB02				IAML		00 20 48.0	
	comp=N,1µm,0.2s						
PB02	IPOC Station P	2.01	209	i P		00 20 12.0	
PB02				IAML		00 20 51.2	
	comp=Z,1µm,0.3s						
PB18	Visviri	2.04	343	Pn	Pn	00 20 14.4	+2.1
PB09	IPOC Station P	2.26	189	Pn	Pn	00 20 15.4	+0.8
PB09	IPOC Station P	2.26	189	eP	Pn	00 20 15.8	+1.3
PB09				i S	Sn	00 20 44.4	+1.3
PB09	IPOC Station P	2.26	189	i P		00 20 15.0	
PB09				IAML		00 20 49.2	
	comp=Z,469nm,0.4s						
PB07	IPOC Station P	2.37	204	Pn	Pn	00 20 16.3	+0.4
PB07	IPOC Station P	2.37	204	eP	Pn	00 20 16.8	+0.9
PB07				i S	Sn	00 20 45.7	+0.1
PB07				IAML		00 20 55.3	
	comp=N,640nm,0.4s						
PB07	IPOC Station P	2.37	204	i P		00 20 16.0	
PB07				IAML		00 20 55.6	
	comp=Z,554nm,0.4s						
PB03	IPOC Station P	2.62	199	Pn	Pn	00 20 19.7	+0.5
PB03	IPOC Station P	2.62	199	eP	Pn	00 20 19.6	+0.5
PB03				i S	Sn	00 20 50.9	-0.4
PB03				IAML		00 21 02.9	
	comp=E,377nm,0.6s						
PB03	IPOC Station P	2.62	199	i P		00 20 19.0	
PB03				IAML		00 20 57.0	
	comp=Z,340nm,0.9s						
PB04	IPOC Station P	3.02	203	Pn	Pn	00 20 24.6	+0.3
PB04	IPOC Station P	3.02	203	eP	Pn	00 20 25.0	+0.7
PB04				i S	Sn	00 21 00.4	-0.1
PB04	IPOC Station P	3.02	203	i P		00 20 24.0	
PB04				IAML		00 21 15.2	
	comp=Z,298nm,0.6s						
LVC	Limon Verde	3.04	181	P	Pn	00 20 26.2	+1.5
	comp=Z,110nm,0.7s,baz=20,slow=12,SNR=56						
LVC				S	Sn	00 21 00.7	-0.6
	comp=Z,82nm,0.4s,baz=355,slow=9.8,SNR=8.2						
LVC	Limon Verde	3.04	181	Pn	Pn	00 20 26.0	+1.2
LVC	Limon Verde	3.04	181	i P		00 20 25.0	
LVC				IAML		00 21 11.8	
	comp=Z,153nm,0.6s						
PB06	IPOC Station P	3.21	192	i P		00 20 27.0	
PB06				IAML		00 21 12.4	
	comp=Z,231nm,0.6s						
LPAZ	La Paz	3.32	12	P	Pn	00 20 30.6	+2.0
	comp=Z,32nm,0.4s,baz=161,slow=3.0,SNR=207						
LPAZ				S	Sn	00 21 09.7	+1.5
	comp=Z,18nm,0.6s,baz=288,slow=10,SNR=1.3						
LPAZ	La Paz	3.32	12	i P		00 20 31.0	
PB15	IPOC Station P	3.68	189	Pn	Pn	00 20 33.6	+0.6
PB15	IPOC Station P	3.68	189	i P		00 20 33.0	
PB15				IAML		00 21 20.7	
	comp=Z,630nm,0.4s						
YJA	Yavi	4.07	130	i P		00 20 40.0	
YJA				IAML		00 21 32.1	
	comp=Z,4.4nm,1.6s						
PB10	IPOC Station P	4.25	202	Pn	Pn	00 20 39.4	-0.9
PB10	IPOC Station P	4.25	202	i P		00 20 39.0	
PB10				IAML		00 21 45.8	
	comp=Z,99nm,0.7s						
HJA	Humahuaca	4.85	139	i P		00 20 51.0	
HJA				IAML		00 21 50.5	
	comp=Z,13nm,0.4s						
PB14	IPOC Station P	5.25	196	Pn	Pn	00 20 52.7	-1.3
PB14	IPOC Station P	5.25	196	i P		00 20 53.0	
PB14				IAML		00 22 08.2	
	comp=Z,85nm,0.5s						
GO02	Mina Guanaco	5.62	187	Pn	Pn	00 20 58.2	-0.8
AC01	Pan de Azucar	6.76	193	Pn	Pn	00 21 11.7	-2.4
GO03	Copiap	8.10	189	Pn	Pn	00 21 29.5	-2.7
BBSD	Serra de San D	8.17	75	eP	Pn	00 21 31.0	-2.2
SIV	San Ignacio	8.22	66	P	Pn	00 21 31.3	-2.5
	comp=Z,50nm,0.5s,baz=254,slow=11,SNR=272						
AC04	Llanos de Chal	8.85	193	Pn	Pn	00 21 37.2	-5.0
AC05	El Transito	9.33	188	Pn	Pn	00 21 45.9	-2.9
LCO	Las Campanas	9.56	190	Pn	Pn	00 21 48.0	-4.0
ETMB	Extrema	10.01	15	Pn	Pn	00 21 54.5	-3.5
ETMB	Extrema	10.01	15	eP	Pn	00 21 55.9	-2.0
PTLB	Pontes e Lacer	10.13	68	Pn	Pn	00 21 55.5	-4.0
PTLB	Pontes e Lacer	10.13	68	eP	Pn	00 21 57.1	-2.4
VILB	Vilhena	10.59	53	Pn	Pn	00 22 03.5	-2.1
VILB	Vilhena	10.59	53	eP	Pn	00 22 03.6	-2.1
GO04	Tololo Observa	10.72	189	Pn	Pn	00 22 04.0	-3.6
CO03	El Pedregal	11.36	188	Pn	Pn	00 22 11.1	-4.8
CO02	Combarbal	11.76	189	Pn	Pn	00 22 16.4	-4.8
SAML	Samuel	11.89	28	Pn	Pn	00 22 21.9	-1.0
SAML	Samuel	11.89	28	eP	Pn	00 22 20.4	-2.5
CFA	Coronel Fontan	12.01	177	P	Pn	00 22 24.7	+0.3
	comp=Z,1.0nm,0.4s,baz=333,slow=13,SNR=1.5						
AQDB	Aquidauana	12.40	96	eP	Pn	00 22 28.0	-1.6
CPUP	Villa Florida	12.57	125	eP	Pn	00 22 32.5	+0.7
SALV	Santo Antonio	13.05	76	eP	Pn	00 22 37.5	-0.5
AMBA	Amambai (Brazi	13.35	107	eP	Pn	00 22 43.5	+1.5
PP1B	Ponte de Pedra	13.39	84	eP	Pn	00 22 41.4	-1.1
MT02	Curacav	13.80	188	Pn	Pn	00 22 46.6	-1.0
BO02	Sierra Bellavi	15.28	186	Pn	Pn	00 23 02.3	-4.0
BO02				IAmb	IAmb	00 23 12.4	
	comp=Z,7.7nm,0.7s						
FRBT	Francisco Belt	15.90	117	eP	P	00 23 15.8	+0.6
PTGB	Pitanga	16.38	111	eP	P	00 23 22.1	+1.7
RODS	Rosario do Sul	16.38	134	eP	P	00 23 22.0	+1.6
PCMB	Pacaembu	16.60	100	eP	P	00 23 23.9	+1.0
ARAG	Araguaiana, MT	16.69	79	eP	P	00 23 23.9	+0.1
ALGR	Alto Alegre (B	17.11	126	eP	Pn	00 23 29.6	+0.9
ITAB	Concordia	17.14	120	P	Pn	00 23 29.0	-0.1
ITAB				IAmb	IAmb	00 23 39.0	
	comp=Z,33nm,1.3s						
ITAB	Concordia	17.14	120	eP	Pn	00 23 30.4	+1.3
ITRB	Iturama	17.43	94	eP	Pn	00 23 32.8	+0.1
CPSB	Cacapava Do Su	17.64	131	eP	Pn	00 23 35.6	+0.5
NPGB	Novo Progresso	18.07	48	eP	P	00 23 37.8	-1.3
MACA	Manacapuru-AM	18.14	27	P	P	00 23 38.6	-1.2
MACA				IAmb	IAmb	00 23 40.3	
	comp=Z,22nm,0.5s						
MACA	Manacapuru-AM	18.14	27	eP	P	00 23 38.7	-1.2
FRTB	Fartura	18.34	105	eP	Pn	00 23 42.5	-1.1
SNDB	Serra Nova Dou	18.49	69	eP	Pn	00 23 43.9	-1.5
CNLB	Canela	19.03	124	eP	P	00 23 50.0	+0.5
BB19B	Bebedouro	19.12	98	eP	P	00 23 50.4	-0.2
TRQA	Tornquist	19.38	163	P	P	00 23 54.4	+1.2
SGCB	S£o Gabriel d	19.39	5	eP	P	00 23 53.0	-0.5
IPMB	Ipameri, GO	19.61	89	eP	P	00 23 55.7	-0.2
ITTB	Itaituba	19.79	42	eP	P	00 23 56.8	-1.0
GO06	Curarrehue	20.09	186	P	P	00 24 01.2	+0.3
RCLB	Rio Claro- Sao	20.11	102	eP	P	00 24 01.4	+0.1
BDFB	Brasilia	20.24	82	P	P	00 24 01.6	-1.2
	comp=Z,2.3nm,0.4s,baz=256,slow=11,SNR=8.2						
	comp=Z,2.3nm,0.4s						
BDFB	Brasilia	20.24	82	P	P	00 24 01.8	-1.0
BDFB	Brasilia	20.24	82	eP	P	00 24 02.4	-0.3
PLCA	Paso Flores	21.16	184	P	P	00 24 13.2	+0.8
	comp=Z,8.9nm,0.9s,baz=4.1,slow=11,SNR=19						
	comp=Z,8.9nm,0.9s						
PLCA	Paso Flores	21.16	184	P	P	00 24 13.0	+0.6
PLCA				IAmb	IAmb	00 24 17.3	
	comp=Z,15nm,1.0s						
PLCA	Paso Flores	21.16	184	eP	P	00 24 16.4	+4.0
PMNB	Patos De Minas	21.21	91	eP	P	00 24 12.3	-0.8
LL04	Puerto Octay	21.50	187	P	P	00 24 17.1	+1.1
LL04				IAmb	IAmb	00 24 19.3	
	comp=Z,6.1nm,0.7s						
MALB	Monte Alegre	22.66	41	eP	P	00 24 26.2	-1.8
PRPB	Parauapebas	22.80	57	eP	P	00 24 27.8	-1.6
SMTB	Santa Maria do	23.16	66	eP	P	00 24 32.0	-0.8
BOAV	Boa Vista	23.30	21	P	P	00 24 33.0	-1.0
BOAV	Boa Vista	23.30	21	eP	P	00 24 33.2	-0.8
GO07	Milladeo Hill,	23.84	189	P	P	00 24 39.6	+1.0
JANB	Januaria	23.84	83	eP	P	00 24 37.9	-1.2
DIAM	Diamantina, MG	23.85	91	eP	P	00 24 39.1	-0.1
SDBA	SAO DESIDERIO	24.08	76	eP	P	00 24 41.2	0.0
AY01	Puyuhuapi	25.00	186	P	P	00 24 49.6	+0.5
AY01				IAmb	IAmb	00 24 50.8	
	comp=Z,6.0nm,0.7s						
MCPB	Macapa, AP	25.20	43	eP	P	00 24 51.7	+0.5
RUSC	La Rusia	25.63	350	P	P	00 24 56.1	+0.5
RUSC				IAmb	IAmb	00 24 57.5	
	comp=Z,9.9nm,0.6s						
BAUV	El Baul	28.33	2	P	P	00 25 18.6	-0.7
BAUV				IAmb	IAmb	00 25 19.6	
	comp=Z,8.2nm,0.8s						
PCRV	Puerto La Cruz	29.83	8	P	P	00 25 33.0	+0.3
	comp=Z,14nm,1.0s,baz=300,slow=6.0,SNR=2.1						
	comp=Z,14nm,1.0s						
TOSP	Speyside	31.73	16	P	P	00 25 49.0	-0.3
MLPR	Magueyes Islan	37.33	3	P	P	00 26 36.6	-0.9
CELP	Cerrillos	37.46	4	P	P	00 26 37.9	-0.6
SJG	San Juan	37.53	4	LR	LR	00 41 52.2	
	comp=Z,22nm,19.1s,baz=104,slow=36						
MTP	Monte Pirata	37.56	5	P	P	00 26 37.2	-2.2
MTP				IAmb	IAmb	00 26 47.5	
	comp=Z,9.0nm,1.0s						
TKL	Tuckaleechee C	56.70	345	LR	LR	00 55 55.4	
	comp=Z,70nm,21.8s,baz=101,slow=38						
SNAA	Sanae	64.09	161	P	P	00 29 57.4	-0.1
SNAA				IAmb	IAmb	00 30 01.6	
	comp=Z,13nm,1.4s						
DBIC	Dimbokro	68.14	74	P	P	00 30 23.4	-0.8
	comp=Z,8.3nm,0.6s,baz=247,slow=5.9,SNR=14						
	comp=Z,8.3nm,0.6s						
DBIC	Dimbokro	68.14	74	P	P	00 30 23.6	-0.6
QSPA	South Pole Qui	70.63	180	P	P	00 30 41.1	+2.4
PDAR	Pinedale Array	72.46	330	P	P	00 30 51.3	+1.2
	comp=Z,0.3nm,0.7s,baz=119,slow=9.4,SNR=2.8						
	comp=Z,0.3nm,0.7s						
TORD	Torodi Ar. Bea	76.66	71	P	P	00 31 14.4	-0.3
	comp=Z,8.5nm,0.4s,baz=253,slow=5.5,SNR=22						
	comp=Z,8.5nm,0.4s						
ESDC	Sonseca Array	84.42	45	P	P	00 31 56.7	+1.0
	comp=Z,0.3nm,0.8s,baz=235,slow=4.5,SNR=2.3						
	comp=Z,0.3nm,0.8s						
YKA	Yellowknife Ar	89.38	341	P	P	00 32 20.4	+1.3
	comp=Z,1.6nm,0.8s,baz=135,slow=4.9,SNR=34						
	comp=Z,1.6nm,0.8s						
ASAR	Alice Springs	131.65	208	PKP	PKiKP	00 38 37.0	+0.1
	comp=Z,0.4nm,0.5s,baz=131,slow=1.5,SNR=6.9						
WRA	Warramunga Arr	134.64	211	PKP	PKiKP	00 38 42.8	-0.2
	comp=Z,0.6nm,0.4s,baz=151,slow=1.9,SNR=15						
MKAR	Makanchi Array	144.02	34	PKP	PKPdf	00 38 57.3	-0.5
	comp=Z,0.2nm,0.7s,baz=338,slow=1.6,SNR=2.3						
SONM	Songino Array	151.53	7	PKPbc	PKiKP	00 39 17.9	+0.9
	comp=Z,0.9nm,0.3s,baz=296,slow=1.0,SNR=11						
PZH	PanZhiHua	168.92	50	PKP	PKPdf	00 39 29.0	-1.0

IDC 29 00:48:32.8±4.3**, 6°.19S**×**130°.27E, h113**km±55km**, mb3.4**/1**, mbtmp3.6**/4**, Error ellipse: s-maj=108.1km s-min=24.1km az=80.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.38	11	P	Pn	00 49 51.0	+0.1
	12nm,0.3s,baz=222,slow=23,SNR=25						
SIJI				S	Sn	00 50 46.6	-5.0
	5.4nm,0.3s,baz=239,slow=23,SNR=1.7						
WRA	Warramunga Arr	14.23	164	P	Pn	00 51 48.1	-1.2
	0.4nm,0.8s,baz=344,slow=11,SNR=11						
WRA				S	Sn	00 54 16.6	-10
	1.0nm,0.5s,baz=357,slow=23,SNR=6.7						
ASAR	Alice Springs	17.72	169	P	Pn	00 52 32.7	+0.1
	1.0nm,0.7s,baz=346,slow=9.6,SNR=8.3						
ASAR				S	S	00 55 42.7	-7.6
	0.4nm,0.7s,baz=353,slow=29,SNR=1.2						
MKAR	Makanchi Array	67.70	327	P	P	00 59 18.0	0.0
	0.5nm,0.6s,baz=117,slow=8.2,SNR=8.7						
	0.5nm,0.6s						

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*NEIC **29** 01:21:35.6±2.2, 31°.74S±0°.08×178°.06W±0°.05, h10km±2km, mb4.2/8, Error ellipse: s-maj=12.9km s-min=7.5km az=175.0*

*IDC **29** 01:21:35.0±1.6, 31°.63S×178°.14W, h0km, mb4.2/4, mbtmp4.2/5, ML3.3/1, MS3.2/1, Error ellipse: s-maj=38.9km s-min=35.0km az=58.0*

ISC 29 01:21:35.5±1.2**, 31°.70S**±0°.08×**178°.2W**±0°.2**, h10km, n26, σ1s.24**/23**, mb4.4**/7**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.45	5	Sn	Sn	01 22 46.4	+0.8
	54nm,0.3s,baz=290,slow=23,SNR=1.6						
RAO	Raoul Island	2.45	5	Pn	Pn	01 22 15.0	-0.5
URZ	Urewera	7.60	209	Pn	Pn	01 23 28.3	+2.0
	0.5nm,0.3s,baz=24,slow=19,SNR=1.1						
URZ				Sn	Sn	01 24 51.5	-1.0
	0.7nm,0.3s,baz=243,slow=21,SNR=1.3						
	12nm,1.1s						
RTZ	Ruatahuna	7.96	209		Pn	01 23 29.8	-1.5
BKZ	Black Stump Fm	8.63	209	Pn	Pn	01 23 39.4	-1.0
MRZ	Mangatainoka R	10.27	208	Pn	Pn	01 24 01.0	-1.9
MSVF	Nonsavu	14.32	345	Pn	Pn	01 24 56.6	-1.9
DZM	Mont Dzumac	16.73	301	LR	LR	01 29 59.8	
	comp=Z,82nm,21.6s,baz=216,slow=30						
CTA	Charters Tower	33.89	281	P	P	01 28 21.6	+2.9
	5.5nm,0.7s,baz=112,slow=11,SNR=1.9						
	5.5nm,0.7s						
CTAO	Charters Tower	33.89	281	P	P	01 28 19.2	+0.6
AS31	Alice Springs	42.91	268	P	P	01 29 34.5	-0.1
AS31				IAmb	IAmb	01 29 36.4	
	comp=Z,1.2nm,1.0s						
ASAR	Alice Springs	42.91	268	P	P	01 29 35.2	+0.6
	comp=Z,1.2nm,0.4s,baz=106,slow=7.4,SNR=22						
	comp=Z,1.2nm,0.4s						
ASAR	Alice Springs	42.91	268	P	P	01 29 34.8	+0.1
WB2	Warramunga Arr	44.01	274	P	P	01 29 43.4	-0.1
WB2				IAmb	IAmb	01 29 44.7	
	comp=Z,3.8nm,0.6s						
WRA	Warramunga Arr	44.02	274	P	P	01 29 44.1	+0.6
	comp=Z,2.7nm,0.5s,baz=113,slow=7.8,SNR=30						
	comp=Z,2.7nm,0.5s						
WRA	Warramunga Arr	44.02	274	P	P	01 29 42.7	-0.9
WB0	Warramunga Arr	44.05	274	P	P	01 29 43.2	-0.6
WB0				IAmb	IAmb	01 29 45.2	
	comp=Z,5.8nm,0.7s						
KNRA	Kununurra	50.67	275	P	P	01 30 35.9	+0.6
FITZ	Fitzroy Crossi	52.23	271	P	P	01 30 47.6	+0.6
QSPA	South Pole Qui	58.41	180	P	P	01 31 32.6	+1.5
	comp=Z,1.3nm,0.9s,baz=301,slow=11,SNR=2.0						
	comp=Z,1.3nm,0.9s						
QSPA	South Pole Qui	58.41	180	P	P	01 31 31.2	+0.1
QSPA				IAmb	IAmb	01 31 42.1	
	comp=Z,1.4nm,0.7s						
H03N3	Juan Fernandez	80.07	123	T	T	03 02 42.9	
	baz=241,slow=72,SNR=9.0						
H03N2	Juan Fernandez	80.07	123	T	T	03 02 42.7	
	baz=241,slow=72,SNR=6.0						
H03N1	Juan Fernandez	80.08	123	T	T	03 02 49.6	
	baz=241,slow=72,SNR=18						
FINES	FINESS Array B	146.31	339	PKPbc	PKPbc	01 41 16.4	+0.7
	comp=Z,1.4nm,0.5s,baz=48,slow=3.5,SNR=9.2						
HFS	Hagfors	150.49	348	PKPbc	PKPbc	01 41 27.0	+0.3
	comp=Z,1.6nm,0.7s,baz=29,slow=3.3,SNR=2.9						

IDC 29 01:25:05.9±5.7**, 1°.85N**×**99°.52E, h0**km**, mb4.0**/4**, mbtmp4.0**/4**, Error ellipse: s-maj=298.0km s-min=25.9km az=53.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	40.45	124	P	P	01 32 46.4	-0.1
	1.7nm,0.4s,baz=304,slow=9.0,SNR=10.0						
	1.7nm,0.4s						
MKAR	Makanchi Array	47.22	344	P	P	01 33 41.3	+0.6
	1.1nm,0.3s,baz=158,slow=8.6,SNR=29						
	1.1nm,0.3s						
ZALV	Zalesovo Beam	53.32	349	P	P	01 34 26.6	-0.2
	1.5nm,0.7s,baz=173,slow=6.0,SNR=4.0						
	1.5nm,0.7s						
BVAR	Borovoye Array	56.43	339	P	P	01 34 48.1	-1.2
	0.5nm,0.5s,baz=141,slow=9.3,SNR=2.7						
	0.5nm,0.5s						

IDC 29 01:26:36.8±8.8**, 0°.61N**×**98°.45E, h0**km**, mb3.8**/4**, mbtmp3.8**/4**, Error ellipse: s-maj=443.3km s-min=25.1km az=55.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	27.16	252	T	T	01 59 33.6	
	baz=73,slow=74,SNR=9.7						
H08S3	Diego Garcia H	27.16	252	T	T	01 59 37.9	

	baz=73,slow=74,SNR=13						
H08S1	**Diego Carcia H**	**27.18**	**252**	T	T	01 59 32.1	
	baz=73,slow=74,SNR=23						
H01W3	**Cape Leeuwin H**	**38.24**	**159**	T	T	02 14 31.5	
	baz=333						
H01W2	**Cape Leeuwin H**	**38.25**	**159**	T	T	02 14 32.1	
	baz=333						
H01W1	**Cape Leeuwin H**	**38.26**	**159**	T	T	02 14 34.2	
	baz=333						
WRA	**Warramunga Arr**	**40.66**	**122**	P	P	01 34 18.3	-0.9
	0.6nm,0.7s,baz=300,slow=8.5,SNR=1.5						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**42.05**	**127**	P	P	01 34 31.2	+0.6
	0.7nm,0.8s,baz=287,slow=6.5,SNR=2.0						
	0.7nm,0.8s						
MKAR	**Makanchi Array**	**48.12**	**345**	P	P	01 35 18.4	-0.1
	1.3nm,0.6s,baz=154,slow=7.9,SNR=19						
	1.3nm,0.6s						
ZALV	**Zalesovo Beam**	**54.34**	**350**	P	P	01 36 05.0	0.0
	1.1nm,0.4s,baz=163,slow=8.6,SNR=4.6						
	1.1nm,0.4s						

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*IDC **29** 01:28:40.6±1.9, 8°.16S×121°.37E, h221^{km}±20^{km}, mb3.3/4, mbtmp4.0/8, Error ellipse: s-maj=50.0km s-min=12.5km az=58.0*

ISC 29 01:28:38.5±1.0, 8°.3S±0°.1×121°.4E±0°.2, h200^{km}, n9, σ2^{s}.69/10, mb3.7/4, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**3.67**	**333**	P	**Pn**	**01 29 37.2**	**+0.9**
	34nm,0.6s,baz=137,slow=11,SNR=21						
SIJI	**Sorong**	**12.31**	**54**	P	**Pn**	**01 31 28.2**	**+0.8**
	7.9nm,0.6s,baz=235,slow=7.7,SNR=3.9						
WRA	**Warramunga Arr**	**17.04**	**134**	P	**P**	**01 32 25.6**	**+1.6**
	1.0nm,0.4s,baz=304,slow=10,SNR=27						
WRA				S	**S**	**01 35 25.8**	**-5.5**
	0.3nm,0.4s,baz=312,slow=23,SNR=1.7						
ASAR	**Alice Springs**	**19.40**	**143**	P	**P**	**01 32 52.0**	**+2.4**
	9.0nm,0.8s,baz=337,slow=12,SNR=25						
STKA	**Stephens Creek**	**30.03**	**144**	P	**P**	**01 34 30.8**	**+1.9**
	0.9nm,0.3s,baz=334,slow=8.4,SNR=4.0						
	0.9nm,0.3s						
SONM	**Songino Array**	**57.47**	**348**	P	**P**	**01 38 05.5**	**-1.2**
	0.3nm,0.4s,baz=158,slow=8.3,SNR=2.4						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**64.97**	**331**	P	**P**	**01 38 56.6**	**-0.4**
	0.2nm,0.4s,baz=145,slow=7.8,SNR=4.8						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**69.28**	**338**	P	**P**	**01 39 22.1**	**-1.8**
	1.0nm,0.3s,baz=151,slow=5.5,SNR=5.2						
	1.0nm,0.3s						
TORD	**Torodi Ar. Bea**	**120.67**	**280**	PKP	**PKPdf**	**01 47 06.4**	**-1.2**
	0.3nm,0.6s,baz=86,slow=0.9,SNR=1.9						

NNC 29 01:33:18.0±7.1, 37°.72N×72°.28E, h0^{km}, mb3.6, mpv3.2, 3C-1D, Error ellipse: s-maj=49.0km s-min=35.4km az=6.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**4.54**	**13**	⇑Pg	Pg	01 34 43.4	-1.6
	0.3nm,0.5s						
AML				⇑Lg	Lg	01 35 37.7	
	1.8nm,0.7s						
IUG	**Iuzhnay**	**4.75**	**339**	Pg	Pb	01 34 43.1	+0.9
	12nm,0.6s						
IUG				Lg	Lg	01 35 53.6	
	22nm,0.6s						
MRKS	**Merke**	**5.07**	**8**	Pg	Pg	01 34 51.8	-3.4
	6.7nm,0.3s						
MRKS				Lg	Lg	01 36 08.1	
	5.8nm,0.6s						
KK31	**Karatay Array**	**5.54**	**346**	⇓Pn	Pn	01 34 43.8	+2.0
	1.0nm,0.5s,baz=109,slow=39,SNR=9.6						
KK31				⇑Sn	Sn	01 35 46.9	+0.6
	1.3nm,0.5s						
SGDS	**Sogindy**	**6.00**	**17**	Pg	Pb	01 35 04.0	+0.5
	0.5nm,0.3s						
SGDS				Lg	Lg	01 36 28.7	
	0.9nm,0.2s						
KOTS	**Kotyrbulak**	**6.63**	**32**	Pg	Pb	01 35 18.3	+4.1
	1.3nm,0.6s						
KOTS				Lg	Lg	01 36 53.2	
	6.1nm,0.5s						
KTBS	**Karatobe**	**6.86**	**28**	Pg	Pb	01 35 22.8	+4.7
	0.6nm,0.6s						
KTBS				Lg	Lg	01 37 00.8	
	2.8nm,0.5s						

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*IDC **29** 01:57:47.3±2.0, 5°.90S×130°.38E, h0^{km}, mb3.9/1, mbtmp3.9/3, ML3.8/2, Error ellipse: s-maj=93.2km s-min=30.3km az=70.0*

*NEIC **29** 01:58:03.4±1.4, 6°.51S±0°.10×129°.67E±0°.05, h141^{km}±13^{km}, mb4.2/9, Error ellipse: s-maj=15.0km s-min=5.5km az=161.0*

ISC 29 01:58:02.9±0.9, 6°.57S±0°.08×129°.71E±0°.10, h150^{km}, n23, σ1^{s}.37/24, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.12**	**132**	Pn	**Pn**	**01 58 41.0**	**+1.6**
FAKI	**Fak Fak**	**4.42**	**35**	Pn	**Pn**	**01 59 07.7**	**-1.1**
SOEI	**Soe**	**6.25**	**239**	Pn	**Pn**	**01 59 31.8**	**-1.3**
MTN	**Manton Dam**	**6.39**	**167**	Pn	**Pn**	**01 59 37.0**	**+2.1**
KNRA	**Kununurra**	**9.10**	**186**	Pn	**Pn**	**02 00 10.9**	**-0.1**
FITZ	**Fitzroy Crossi**	**12.13**	**199**	Pn	**Pn**	**02 00 51.2**	**+0.4**
WB0	**Warramunga Arr**	**13.89**	**161**	Pn	**Pn**	**02 01 12.3**	**-1.1**
WRA	**Warramunga Arr**	**14.04**	**162**	Pn	**Pn**	**02 01 14.3**	**-1.1**
	0.3nm,0.3s,baz=345,slow=11,SNR=17						
WRA				Sn	Sn	02 03 40.7	-10
	1.2nm,0.3s,baz=330,slow=23,SNR=11						
	1.1nm,0.8s						
WRA	**Warramunga Arr**	**14.04**	**162**	Pn	**Pn**	**02 01 15.1**	**-0.3**
WB2	**Warramunga Arr**	**14.04**	**162**	Pn	**Pn**	**02 01 11.7**	**-3.7**
COEN	**Coen**	**15.14**	**120**	Pn	**Pn**	**02 01 28.9**	**-0.4**
COEN				IAmb	IAmb	02 01 32.5	
	comp=Z,12nm,1.1s						
MBWA	**Marble Bar**	**17.43**	**213**	P	**Pn**	**02 01 57.0**	**0.0**
MBWA				IAmb	IAmb	02 02 21.5	
	comp=Z,18nm,1.2s						
AS31	**Alice Springs**	**17.47**	**167**	P	**Pn**	**02 01 57.7**	**+0.1**
ASAR	**Alice Springs**	**17.47**	**167**	P	**Pn**	**02 01 58.8**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=346,slow=9.6,SNR=32						
ASAR				S	**S**	**02 05 08.1**	**-2.8**
	comp=Z,0.5nm,0.6s,baz=341,slow=12,SNR=2.0						
	comp=Z,3.1nm,0.6s						
ASAR	**Alice Springs**	**17.47**	**167**	P	**Pn**	**02 01 57.7**	**+0.1**
PMG	**Port Moresby**	**17.51**	**100**	P	**Pn**	**02 01 57.9**	**-0.1**
PMG				IAmb	IAmb	02 02 27.3	
	comp=Z,21nm,1.4s						
PSA00	**Pilbara Seismi**	**17.70**	**212**	P	**P**	**02 01 58.9**	**-0.1**
PSA00				IAmb	IAmb	02 02 24.8	
	comp=Z,40nm,1.5s						
CTAO	**Charters Tower**	**20.94**	**132**	P	**P**	**02 02 33.7**	**-0.4**
BBOO	**Buckleboo**	**26.77**	**168**	P	**P**	**02 03 29.9**	**+1.1**
STKA	**Stephens Creek**	**27.52**	**158**	P	**P**	**02 03 36.2**	**+0.7**
STKA				IAmb	IAmb	02 03 41.8	
	comp=Z,1.9nm,1.1s						
MK31	**Makanchi Array**	**67.71**	**327**	P	**P**	**02 08 44.6**	**+0.6**
MKAR	**Makanchi Array**	**67.71**	**327**	P	**P**	**02 08 45.5**	**+1.4**
	comp=Z,0.6nm,0.5s,baz=117,slow=8.2,SNR=9.7						
	comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	**67.71**	**327**	P	**P**	**02 08 44.8**	**+0.7**

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*IDC **29** 02:23:50.8±2.5, 37°.21N×72°.58E, h0^{km}, mb3.5/2, mbtmp3.4/7, ML3.3/4, MS3.5/2, Error ellipse: s-maj=45.3km s-min=23.1km az=132.0*

*NNC **29** 02:24:01.2±5.1, 38°.09N×72°.34E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=39.6km s-min=31.9km az=145.0*

ISC 29 02:23:59.5±2.0, 38°.0N±0°.1×72°.21E±0°.10, h10^{km}, n16, σ2^{s}.98/16, mb3.5/3, 5C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**4.25**	**15**	⇓Pg	**Pb**	**02 25 16.7**	**+2.1**
	0.8nm,0.5s						
AML				⇑Lg	Lg	02 26 10.8	
	3.2nm,0.7s						
AAK	**Ala-Archa**	**4.92**	**20**	Pn	Pn	02 25 19.1	+5.4
	0.8nm,0.3s,baz=195,slow=12,SNR=4.7						
AAK				Pg	**Pg**	**02 25 31.9**	**-1.9**
	2.0nm,0.3s,baz=201,slow=10.0,SNR=15						
AAK				Sn	**Sb**	**02 26 23.7**	**-1.5**
	0.4nm,0.3s,baz=351,slow=22,SNR=2.0						
AAK				Lg	Lg	02 26 41.8	
	0.5nm,0.3s,baz=355,slow=21,SNR=1.8						
	1.0nm,0.3s						
KK31	**Karatay Array**	**5.23**	**346**	⇑Pn	**Pn**	**02 25 20.8**	**+3.0**
	1.1nm,0.3s,baz=182,slow=15,SNR=36						
KK31				Pg	**Pg**	**02 25 37.1**	**-2.6**
	5.8nm,0.6s,baz=168,slow=18,SNR=6.1						
KK31				⇓Sn	**Sn**	**02 26 23.2**	**+5.0**
	4.2nm,0.5s						
KK31				⇓Lg	Lg	02 26 45.2	
	5.2nm,0.5s,baz=160,slow=29,SNR=4.4						
TKM2	**Tokmak 2**	**5.53**	**27**	⇑Pg	**Pg**	**02 25 42.8**	**-2.6**
	5.1nm,0.7s						
TKM2				⇑Lg	Lg	02 26 50.8	
	2.3nm,0.6s						
GEYT	**Alibeck**	**11.12**	**274**	Pn	Pn	02 26 32.0	-6.6
	0.5nm,0.3s,baz=91,slow=9.1,SNR=2.3						
GEYT				Sn	Sn	02 28 34.6	-8.5
	0.4nm,0.3s,baz=225,slow=32,SNR=1.7						
MKAR	**Makanchi Array**	**11.49**	**37**	Pn	**Pn**	**02 26 44.4**	**+0.8**
	baz=219,slow=11,SNR=2.0						
	0.1nm,0.4s						
AB31	**Akbulak array**	**14.29**	**326**	P	**Pn**	**02 27 19.6**	**-2.2**
	0.4nm,0.5s,baz=130,slow=14,SNR=19						
BVAR	**Borovoye Array**	**15.05**	**356**	Pn	**Pn**	**02 27 33.1**	**+1.0**
	0.3nm,0.6s,baz=159,slow=9.4,SNR=1.5						
AKTO	**Aktyubinsk**	**16.00**	**325**	Pn	**Pn**	**02 27 45.6**	**+1.1**
	0.5nm,0.3s,baz=130,slow=9.2,SNR=11						
AKTO				Sn	**Sn**	**02 30 35.9**	**-6.1**
	0.1nm,0.3s,baz=350,slow=7.5,SNR=2.1						
	1.4nm,0.4s						
AKTO	**Aktyubinsk**	**16.00**	**325**	⇑P	**Pn**	**02 27 47.4**	**+2.9**
	3.4nm,1.0s						
ZALV	**Zalesovo Beam**	**18.13**	**25**	P	**Pn**	**02 28 11.5**	**+0.3**
	0.4nm,0.3s,baz=228,slow=14,SNR=2.3						
	1.0nm,0.4s						
BELG	**Belogornoye**	**22.35**	**318**	P	**P**	**02 28 58.0**	**+0.6**
	2.5nm,0.5s,baz=163,slow=11,SNR=2.2						
	2.5nm,0.5s						
IDI	**Anoyia**	**37.74**	**281**	LR	LR	02 51 46.3	
	comp=Z,18nm,18.4s,baz=282,slow=44						
TGY	**Tagaytay City**	**49.16**	**105**	LR	LR	02 56 22.7	
	comp=Z,146nm,20.7s,baz=186,slow=40						
TORD	**Torodi Ar. Bea**	**66.72**	**269**	P	P	02 34 45.4	-5.7
	0.4nm,1.0s,baz=41,slow=5.5,SNR=1.7						
YKA	**Yellowknife Ar**	**79.67**	**3**	P	**P**	**02 36 04.7**	**-2.1**
	0.1nm,0.4s,baz=346,slow=5.3,SNR=1.9						
	0.1nm,0.4s						

IDC 29 02:27:40.5±3.5, 7°.36S×156°.76E, h0^{km}, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=96.7km s-min=36.4km az=111.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.08**	**238**	P	P	02 33 07.3	+0.3
	2.1nm,0.8s,baz=63,slow=9.5,SNR=11						
	2.1nm,0.8s						
ASAR	**Alice Springs**	**27.28**	**231**	P	P	02 33 26.6	-0.3
	0.9nm,0.8s,baz=69,slow=8.3,SNR=6.1						
	0.9nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**27.49**	**21**	T	T	03 02 02.4	
	baz=201,slow=76,SNR=89						
H11S2	**WAKE ISLAND Hy**	**27.49**	**21**	T	T	03 02 02.6	
	baz=201,slow=76,SNR=86						
H11S1	**WAKE ISLAND Hy**	**27.51**	**21**	T	T	03 02 04.0	
	baz=201,slow=76,SNR=41						
H11N1	**WAKE ISLAND Hy**	**28.69**	**20**	T	T	03 03 37.1	
	baz=201,slow=74						
H11N3	**WAKE ISLAND Hy**	**28.70**	**20**	T	T	03 03 43.0	
	baz=201,slow=74						
H11N2	**WAKE ISLAND Hy**	**28.71**	**20**	T	T	03 03 47.8	
	baz=201						
CMAR	**Chiang Mai Arr**	**62.52**	**295**	P	P	02 38 06.3	-0.3
	1.3nm,0.3s,baz=130,slow=6.1,SNR=5.0						
	1.3nm,0.3s						
MKAR	**Makanchi Array**	**84.83**	**318**	P	P	02 40 17.9	+0.7
	0.9nm,0.7s,baz=104,slow=6.4,SNR=9.7						
	0.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**154.81**	**285**	PKPbc	PKPbc	02 47 44.3	-0.7
	0.3nm,0.9s,baz=81,slow=3.1,SNR=1.6						

WEL 29 02:33:49.3, 38°.9S±0°.9×17°6E±°, h8^{km}±1^{km}, M3.3/38, ML3.6/38, MLv3.3/38, Error ellipse: s-maj=0.0km s-min=0.0km az=80.2, confirmed, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KATZ	**Kakaramea**	**0.04**	**159**	P	Pg	02 33 51.5	+0.4
KATZ				S	Sg	02 33 52.7	+0.4
RATZ	**Rangitukua**	**0.10**	**46**	P	Pg	02 33 52.3	+0.5
RITZ	**Rihia Road**	**0.15**	**106**	P	Pg	02 33 53.2	+0.7
RITZ				S	Sg	02 33 55.9	+1.3
KRVZ	**Karewarewa**	**0.16**	**190**	P	Pg	02 33 53.7	+0.9
KRVZ				S	Sg	02 33 56.0	+0.9
NTVZ	**North Tongarir**	**0.16**	**180**	P	Pg	02 33 53.7	+0.9
NTVZ				S	Sg	02 33 56.2	+1.1
TMVZ	**Te Maari**	**0.18**	**173**	P	Pg	02 33 54.1	+1.0
WTVZ	**West Tongariro**	**0.19**	**201**	P	Pg	02 33 54.3	+1.0
WTVZ				S	Sg	02 33 57.6	+1.6
ETVZ	**East Tongariro**	**0.20**	**172**	P	Pg	02 33 54.5	+1.0
ETVZ				S	Sg	02 33 57.9	+1.7
NNVZ	**North Ngauruho**	**0.20**	**194**	P	Pg	02 33 54.5	+1.0
OTVZ	**Oturere**	**0.23**	**182**	P	Pg	02 33 54.9	+1.0
TWVZ	**Taurewa**	**0.23**	**234**	P	Pg	02 33 54.9	+1.0
TWVZ				S	Sg	02 33 58.5	+1.4
WATZ	**Wairara**	**0.23**	**11**	P	Pg	02 33 54.7	+0.7
WATZ				S	Sg	02 33 58.5	+1.4
NGZ	**Ngauruhoe**	**0.24**	**194**	P	Pg	02 33 55.2	+1.0
NGZ				S	Sg	02 33 58.9	+1.3
SNVZ	**South Ngauruho**	**0.25**	**187**	P	Pg	02 33 55.5	+1.1
TUVZ	**Tukino**	**0.33**	**183**	P	Pb	02 33 57.0	-0.5
FWVZ	**Far West T-bar**	**0.33**	**197**	P	Pg	02 33 56.8	+0.8
DRZ	**Dome Shelter**	**0.35**	**195**	P	Pb	02 33 57.2	-0.8
WHTZ	**Whakaora**	**0.35**	**39**	P	Pb	02 33 57.7	-0.1
WHVZ	**Whangaehu Hut**	**0.35**	**191**	P	Pb	02 33 57.2	-0.8
TRVZ	**Turoa**	**0.37**	**196**	P	Pg	02 33 57.5	+0.8
WNVZ	**Wahianoa**	**0.39**	**189**	P	Pb	02 33 58.0	-0.6
PKVZ	**Pokaka**	**0.43**	**216**	P	Pb	02 33 58.7	-0.6
KUTZ	**Kaahu Road**	**0.46**	**14**	P	Pg	02 33 59.0	+0.7
MOVZ	**Moawhango**	**0.47**	**173**	P	Pg	02 33 59.2	+0.7
MTVZ	**Mangateitei**	**0.47**	**200**	P	Pg	02 33 59.2	+0.7
WPRZ	**Whakapapatarin**	**0.56**	**42**	P	Pb	02 34 01.4	-0.1
MRHZ	**Matea Rd**	**0.59**	**80**	P	Pg	02 34 00.9	+0.2
TLZ	**Tolley Road**	**0.62**	**350**	P	Pg	02 34 01.3	0.0
BHHZ	**Black Hill Sta**	**0.63**	**152**	P	Pg	02 34 02.0	+0.6
ALRZ	**Allen Road**	**0.64**	**54**	P	Pg	02 34 02.2	+0.5
BKZ	**Black Stump Fm**	**0.68**	**110**	P	Pg	02 34 02.8	+0.5
PRRZ	**Plateau Road**	**0.71**	**52**	P	Pb	02 34 03.6	-0.4
HRRZ	**Handcock Road**	**0.72**	**41**	P	Pb	02 34 04.5	+0.3
VRZ	**Vera Road**	**0.74**	**255**	P	Pb	02 34 04.4	-0.1
KWHZ	**Kaweka Forest**	**0.76**	**130**	P	Pb	02 34 04.8	0.0
HSRZ	**Hossack Road**	**0.77**	**36**	P	Pb	02 34 05.5	+0.6
HIZ	**Hauiti**	**0.77**	**303**	P	Pb	02 34 04.9	-0.1
UTU	**Utuhina**	**0.86**	**28**	P	Pb	02 34 07.0	+0.5
HLRZ	**Highlands Stat**	**0.86**	**38**	P	Pn	02 34 10.1	+2.2
NMHZ	**Naumai**	**0.89**	**101**	P	Pb	02 34 07.7	+0.5
MTHZ	**Maungataniwha**	**0.91**	**85**	P	Pb	02 34 07.2	-0.2
MCHZ	**McNeill Hill**	**0.94**	**123**	P	Pn	02 34 09.3	+0.5
WAZ	**Wanganui**	**0.98**	**213**	P	Pb	02 34 08.6	+0.1
KARZ	**Kaharoa**	**1.02**	**26**	P	Pn	02 34 12.2	+2.3
PNHZ	**Pukenui**	**1.05**	**158**	P	Pn	02 34 10.3	-0.1
MHEZ	**Mangahewa**	**1.06**	**262**	P	Pn	02 34 11.6	+1.0
RTZ	**Ruatahuna**	**1.07**	**73**	P	Pb	02 34 10.0	-0.1
ARHZ	**Aropaoanui**	**1.08**	**108**	P	Pn	02 34 11.9	+1.2
RAHZ	**Arahi**	**1.10**	**89**	P	Pn	02 34 11.3	+0.3
KMRZ	**Kaimai**	**1.11**	**11**	P	Pb	02 34 11.0	+0.2
LREZ	**Lake Rotokare**	**1.12**	**242**	P	Pn	02 34 12.1	+0.8
TSZ	**Takapari Road**	**1.14**	**169**	P	Pn	02 34 11.9	+0.3
TOZ	**Tahuroa Road**	**1.21**	**353**	P	Pb	02 34 11.8	-0.7
WHHZ	**Waihua**	**1.22**	**97**	P	Pg	02 34 14.4	+1.6
KAHZ	**Kahuranaki**	**1.26**	**133**	P	Pg	02 34 15.4	+1.8
WPHZ	**Waipukurau**	**1.27**	**153**	P	Pg	02 34 15.1	+1.4
NEZ	**North Egmont**	**1.27**	**254**	P	Pg	02 34 14.7	+1.0
TGRZ	**Tauranga**	**1.29**	**21**	P	Pn	02 34 13.4	-0.3
OHWZ	**Ohakea**	**1.30**	**192**	P	Pg	02 34 15.7	+1.5
CKHZ	**Cape Kidnapper**	**1.30**	**124**	P	Pg	02 34 16.5	+2.2
SNGZ	**Shannon Statio**	**1.31**	**84**	P	Pg	02 34 15.2	+0.8
URZ	**Urewera**	**1.31**	**59**	P	Pn	02 34 13.9	0.0
PKE	**Pukeiti**	**1.34**	**258**	P	Pg	02 34 15.5	+0.4
KHEZ	**Kahui Hut**	**1.34**	**254**	P	Pg	02 34 15.7	+0.7
DVHZ	**Dannevirke**	**1.41**	**165**	P	Pg	02 34 17.4	+1.1
PXZ	**Pawanui**	**1.43**	**140**	P	Pg	02 34 18.4	+1.7
RAGZ	**Rawiri**	**1.43**	**73**	P	Pg	02 34 16.8	0.0
NBEZ	**Newall Road No**	**1.45**	**256**	P	Pg	02 34 17.6	+0.6
POWZ	**Post Office Ro**	**1.45**	**177**	P	Pg	02 34 17.7	+0.5
NMEZ	**Namu Road**	**1.48**	**251**	P	Pg	02 34 18.0	+0.4
WHRZ	**Whale Island**	**1.49**	**44**	P	Pg	02 34 17.8	0.0
PRHZ	**Porangahau**	**1.52**	**151**	P	Pg	02 34 19.9	+1.4
KNZ	**Kokohu**	**1.56**	**94**	P	Pg	02 34 20.5	+1.3
MWZ	**Matawai**	**1.57**	**68**	P	Pg	02 34 19.0	-0.4
PRWZ	**Pori Road**	**1.63**	**172**	P	Pg	02 34 21.7	+1.1
RIGZ	**Rimuhau**	**1.65**	**83**	P	Pg	02 34 23.0	+2.2
MRZ	**Mangatainoka R**	**1.72**	**182**	P	Pg	02 34 22.2	-0.1
MHGZ	**Mahia Peninsul**	**1.75**	**98**	P	Pg	02 34 25.8	+2.9
BFZ	**Birch Farm**	**1.80**	**166**	P	Pg	02 34 23.4	-0.3
RUGZ	**Raukumara Rang**	**1.85**	**59**	P	Pb	02 34 22.8	-0.6
OGWZ	**Otaki Gorge**	**1.92**	**192**	P	Pb	02 34 25.2	+0.6
TWGZ	**Tauwhareparae**	**1.96**	**68**	P	Pg	02 34 27.0	+0.1
HOWZ	**Holdsworth Sta**	**1.96**	**184**	P	Pb	02 34 25.7	+0.4
KIW	**Kapiti Island**	**2.01**	**197**	P	Pb	02 34 26.4	+0.3
CPWZ	**Castlepoint**	**2.01**	**169**	P	Pg	02 34 30.8	+2.9
AWAZ	**Awhitu Peninsu**	**2.04**	**336**	P	Pb	02 34 25.3	-1.3
ETAZ	**East Tamaki Re**	**2.07**	**343**	P	Pn	02 34 24.9	+0.6
PKGZ	**Pakihiroa**	**2.16**	**62**	P	Pb	02 34 28.8	+0.1
TMWZ	**Te Maipa**	**2.17**	**176**	P	Pb	02 34 29.3	+0.4
KUZ	**Kuaotunu**	**2.19**	**1**	P	Pb	02 34 29.3	+0.2
PUZ	**Puketiti**	**2.20**	**68**	P	Pg	02 34 32.3	+0.8
CAW	**Cannon Point**	**2.22**	**192**	P	Pb	02 34 30.0	+0.4
MTW	**Mount Morrison**	**2.22**	**183**	P	Pg	02 34 31.0	-0.9
MBAZ	**Motutapu North**	**2.25**	**344**	P	Pn	02 34 27.3	+0.5
DUWZ	**D'Urville Isla**	**2.30**	**215**	P	Pb	02 34 29.8	-1.2
PAWZ	**Paruwai Farm**	**2.45**	**184**	P	Pg	02 34 38.0	+1.7
TRWZ	**Traveller**	**2.46**	**180**	P	Pb	02 34 33.4	-0.3
TCW	**Tory Channel**	**2.51**	**205**	P	Pb	02 34 33.7	-0.9
PLWZ	**Palliser**	**2.65**	**187**	P	Pb	02 34 36.2	-0.8
GRZ	**Great Barrier**	**2.69**	**356**	P	Pg	02 34 39.4	-1.4
TUWZ	**Tuamarina**	**2.82**	**208**	P	Pb	02 34 37.6	-2.3
NNZ	**Nelson**	**2.88**	**217**	P	Pb	02 34 40.2	-0.7
TKNZ	**Takaka Hill**	**2.96**	**224**	P	Pb	02 34 40.6	-1.6
QRZ	**Quartz Range**	**3.07**	**231**	P	Pn	02 34 39.4	+1.3
BSWZ	**Blackbirch Sta**	**3.10**	**206**	P	Pb	02 34 45.7	+1.1
WCZ	**Waipu Caves**	**3.18**	**340**	P	Pn	02 34 41.1	+1.5
MRNZ	**Matariki Terra**	**3.32**	**221**	P	Pn	02 34 44.9	+3.2
THZ	**Tophouse**	**3.53**	**216**	P	Pb	02 34 50.4	-1.6
KHZ	**Kahutara**	**3.84**	**204**	P	Pn	02 34 49.1	+0.5
DSZ	**Denniston Nort**	**4.08**	**225**	P	Pn	02 34 54.0	+2.0
LTZ	**Lake Taylor**	**4.63**	**213**	P	Pn	02 35 03.8	+4.2
INZ	**Inchbonnie**	**4.96**	**219**	P	Pn	02 35 07.9	+3.8
GCSZ	**Gaunt Creek Bo**	**5.95**	**221**	P	Pn	02 35 25.1	+7.3
JCZ	**Jackson Bay**	**7.28**	**223**	P	Pn	02 35 41.6	+5.6

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*IDC **29** 02:37:34.1±1.6, 7°.20S×156°.57E, h0^{km}, mb4.1/5, mbtmp4.1/5, MS3.4/1, Error ellipse: s-maj=48.2km s-min=30.7km az=113.0*

ISC 29 02:37:40.1±1.7, 7°.2S±0°.3×156°.4E±0°.4, h35^{km}, n14, σ0^{s}.80/9, mb4.1/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.87**	**237**	P	**P**	**02 43 00.7**	**+0.9**
	5.0nm,0.8s,baz=63,slow=9.4,SNR=28						
	5.0nm,0.8s						
ASAR	**Alice Springs**	**27.11**	**230**	P	**P**	**02 43 19.8**	**-0.2**
	1.4nm,0.7s,baz=63,slow=8.7,SNR=13						
	1.4nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**27.48**	**21**	T	T	03 11 51.9	
	baz=201,slow=76,SNR=321						
H11S2	**WAKE ISLAND Hy**	**27.48**	**22**	T	T	03 11 55.3	
	baz=201,slow=76,SNR=250						
H11S1	**WAKE ISLAND Hy**	**27.50**	**22**	T	T	03 11 57.4	
	baz=201,slow=76,SNR=193						
STKA	**Stephens Creek**	**28.16**	**207**	LR	LR	02 53 10.0	
	comp=Z,80nm,20.6s,baz=207,slow=33						
H11N1	**WAKE ISLAND Hy**	**28.68**	**21**	T	T	03 13 27.3	
	baz=201,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**28.69**	**21**	T	T	03 13 32.0	
	baz=201,slow=76,SNR=22						
H11N2	**WAKE ISLAND Hy**	**28.70**	**21**	T	T	03 13 26.5	
	baz=201,slow=76,SNR=12						
CMAR	**Chiang Mai Arr**	**62.16**	**295**	P	**P**	**02 47 58.2**	**-0.2**
	2.1nm,0.8s,baz=108,slow=4.8,SNR=8.2						
	2.1nm,0.8s						
SONM	**Songino Array**	**70.29**	**327**	P	**P**	**02 48 50.6**	**+0.4**
	0.4nm,0.4s,baz=108,slow=4.7,SNR=2.2						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**84.51**	**318**	P	**P**	**02 50 09.9**	**+0.3**
	2.6nm,0.8s,baz=98,slow=6.4,SNR=21						
	2.6nm,0.8s						
BDFB	**Brasilia**	**146.81**	**133**	PKPbc	**PKPdf**	**02 57 18.5**	**+0.5**
	1.2nm,0.7s,baz=282,slow=2.8,SNR=3.1						
TORD	**Torodi Ar. Bea**	**154.45**	**285**	PKP	**PKPdf**	**02 57 29.8**	**+0.1**
	0.2nm,0.7s,baz=91,slow=2.1,SNR=1.2						
TORD				PKPbc	**PKPbc**	**02 57 37.0**	**-1.0**
	1.0nm,0.9s,baz=85,slow=1.9,SNR=4.9						
TORD				PKPab	**PKPab**	**02 57 51.4**	**-1.1**
	1.3nm,1.2s,baz=83,slow=5.0,SNR=3.0						

IDC 29 02:38:22.8±3.5, 7°.27S×156°.73E, h0^{km}, mb4.2/4, mbtmp4.2/4, MS3.6/2, Error ellipse: s-maj=96.9km s-min=38.2km az=110.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.84**	**124**	LR	LR	02 40 31.5	
	comp=Z,2µm,19.0s,baz=326,slow=34						
DZM	**Mont Dzumac**	**17.45**	**149**	LR	LR	02 47 19.5	
	comp=Z,73nm,20.5s,baz=235,slow=31						
WRA	**Warramunga Arr**	**25.10**	**238**	P	P	02 43 49.6	+0.1
	3.5nm,0.8s,baz=62,slow=9.6,SNR=6.3						
	3.5nm,0.8s						
ASAR	**Alice Springs**	**27.31**	**231**	P	P	02 44 09.0	-0.5
	1.0nm,0.7s,baz=60,slow=8.3,SNR=4.9						
	1.0nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**27.42**	**21**	T	T	03 12 46.5	
	baz=201						
H11S2	**WAKE ISLAND Hy**	**27.42**	**21**	T	T	03 12 46.5	
	baz=201						
H11S1	**WAKE ISLAND Hy**	**27.43**	**21**	T	T	03 12 46.5	
	baz=201						
H11N1	**WAKE ISLAND Hy**	**28.62**	**20**	T	T	03 14 15.8	
	baz=201						
H11N3	**WAKE ISLAND Hy**	**28.63**	**20**	T	T	03 14 15.8	
	baz=201						
H11N2	**WAKE ISLAND Hy**	**28.63**	**20**	T	T	03 14 15.8	
	baz=201						
CMAR	**Chiang Mai Arr**	**62.45**	**295**	P	P	02 48 48.9	+0.5
	2.5nm,0.3s,baz=127,slow=6.3,SNR=5.4						
	2.5nm,0.3s						
MKAR	**Makanchi Array**	**84.75**	**318**	P	P	02 50 59.2	+0.2
	1.7nm,0.9s,baz=101,slow=6.3,SNR=6.0						
	1.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**154.75**	**285**	PKPbc	PKPbc	02 58 26.4	-0.7
	0.5nm,0.9s,baz=83,slow=1.4,SNR=2.5						

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*DDA **29** 02:39:07.9±0.0, 36°.90N×26°.33E, h7^{km}±4^{km}, ML2.2*

*ATH **29** 02:39:09.6, 36°.93N×26°.38E, h12^{km}±4^{km}, ML2.5/2, Error ellipse: s-maj=4.8km s-min=1.3km az=62.0*

*THE **29** 02:39:09.8, 36°.93N×26°.41E, h10^{km}±1^{km}, ML2.3/3, Error ellipse: s-maj=1.8km s-min=0.9km az=49.0*

*ISK **29** 02:39:11.3, 36°.95N×26°.62E, h20^{km}, ML2.2/10*

ISC 29 02:39:09.4±1.1, 36°.92N±0°.02×26°.41E±0°.03, h14^{km}±9^{km}, n34, σ0^{s}.71/55, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOSK	**Kos Island**	**0.49**	**110**	P	**Pg**	**02 39 19.1**	**0.0**
KOSK				S	**Sb**	**02 39 27.1**	**+0.3**
	358nm,0.4s						
KOSK	**Kos Island**	**0.49**	**110**	Pg	**Pg**	**02 39 18.9**	**-0.1**
KOSK	**Kos Island**	**0.49**	**110**	P	**Pg**	**02 39 19.0**	**-0.1**
KOSK				S	**Sb**	**02 39 26.9**	**+0.2**
KOSK				AML	AML	02 39 30.7	
	comp=E,2023µm,0.4s						
KOSK				AML	AML	02 39 32.4	
	comp=N,2182µm,0.4s						
NISR	**Nisiros**	**0.66**	**117**	P	**Pb**	**02 39 23.1**	**+0.5**
NISR				S	**Sb**	**02 39 31.9**	**+0.3**
	comp=N,455nm,0.3s						
BODT	**Bodrum**	**0.74**	**78**	Pg	**Pg**	**02 39 23.3**	**-0.5**

BDRM	Kayabasi	0.84	80	P	Pg	02 39 25.2	-0.6
BDRM				S	Sb	02 39 38.2	+1.1
BDRM				*i* AML	AML	02 39 42.0	
	comp=N,82nm,0.3s						
DDIM	Aydin, Didim	0.86	51	P	Pg	02 39 25.5	-0.6
DDIM				S	Sn	02 39 39.8	+0.3
DDIM				*i* AML	AML	02 39 41.0	
	comp=N,115nm,0.5s						
DDIM				*i* AML	AML	02 39 41.0	
	comp=N,103nm,0.8s						
SMG	Samos	0.86	23	P	Pg	02 39 25.3	-0.8
SMG				S	Sb	02 39 38.2	+0.6
	comp=N,212nm,0.2s						
SMG	Samos	0.86	23	P	Pg	02 39 25.1	-1.0
SMG				S	Sb	02 39 38.0	+0.4
SMG				AML	AML	02 39 40.8	
	comp=E,451µm,0.3s						
SMG				AML	AML	02 39 41.0	
	comp=N,401µm,0.3s						
THR8	Santorini-Mono	0.90	236	P	Pg	02 39 26.4	-0.5
SANT	Santorini	0.94	235	P	Pg	02 39 27.0	-0.5
THR3	Thira Island,	0.95	238	P	Pg	02 39 27.0	-0.9
DAT	Datca	0.96	101	P	Pg	02 39 27.9	-0.1
DAT				S	Sn	02 39 42.0	-0.1
DAT	Datca	0.96	101	Pg	Pg	02 39 27.7	-0.3
DAT	Datca	0.96	101	P	Pg	02 39 27.9	-0.1
DAT				S	Sn	02 39 43.8	+1.7
DAT				*i* AML	AML	02 39 44.0	
	comp=N,41nm,0.2s						
DAT				*i* AML	AML	02 39 44.0	
	comp=N,46nm,0.2s						
THR6	Thira Island,	0.98	236	P	Pb	02 39 28.4	+0.1
THR6	Thira Island,	0.98	236	P	Pb	02 39 28.3	+0.1
THR5	Thira Island,	0.99	240	P	Pb	02 39 28.4	+0.1
GCAM	G?zelcaml?	1.02	40	Pg	Pg	02 39 29.4	+0.2
GCAM				Sg	Sg	02 39 42.5	-0.1
GCAM	G?zelcaml?	1.02	40	P	Pb	02 39 28.6	-0.3
GCAM				S	Sn	02 39 43.5	0.0
GCAM				*i* AML	AML	02 39 46.0	
	comp=N,91nm,0.6s						
GCAM				*i* AML	AML	02 39 46.0	
	comp=N,92nm,0.4s						
MLSB	Milas	1.16	71	Pg	Pb	02 39 30.2	-1.1
MLSB				Sg	Sb	02 39 44.7	-1.5
DGB	zmir	1.20	18	P	Pn	02 39 30.9	-0.8
DGB				S	Sn	02 39 48.1	+0.4
DGB				*i* AML	AML	02 39 50.0	
	comp=N,28nm,0.7s						
DGB				*i* AML	AML	02 39 50.0	
	comp=N,61nm,0.3s						
ZEYE	Izmir, Urla-Ze	1.32	3	P	Pn	02 39 33.6	+0.1
ZEYE				S	Sg	02 39 52.4	+0.3
ZEYE				*i* AML	AML	02 39 53.0	
	comp=N,48nm,0.3s						
ZEYE				*i* AML	AML	02 39 55.0	
	comp=N,54nm,0.5s						
AYDN	Tasoluk	1.39	57	P	Pn	02 39 34.0	-0.5
AYDN				S	Sg	02 39 55.4	+1.2
AYDN				*i* AML	AML	02 39 59.0	
	comp=N,20nm,0.4s						
AYDN				*i* AML	AML	02 40 01.0	
	comp=N,26nm,0.4s						
URLA	Izmir	1.45	6	P	Pg	02 39 37.3	0.0
URLA				S	Sg	02 39 57.2	+1.1
URLA				*i* AML	AML	02 39 59.0	
	comp=N,28nm,0.6s						
URLA				*i* AML	AML	02 40 00.0	
	comp=N,41nm,0.8s						
TURN	Turunc	1.48	95	Pn	Pn	02 39 35.3	-0.3
TURN				Sn	Sn	02 39 52.3	-2.5
TURN	Turunc	1.48	95	P	Pn	02 39 35.1	-0.5
TURN				S	Sb	02 39 56.3	+0.9
TURN				*i* AML	AML	02 40 02.0	
	comp=N,30nm,0.4s						
TURN				*i* AML	AML	02 40 02.0	
	comp=N,20nm,0.6s						
KARP	Karpathos	1.50	156	P	Pn	02 39 35.8	-0.1
KARP				S	Sn	02 39 55.2	-0.1
KARP	Karpathos	1.50	156	P	Pn	02 39 35.7	-0.2
YER	Yerkesik	1.52	81	Pn	Pn	02 39 36.4	+0.2
BLCB	Balcova	1.55	19	Pn	Pn	02 39 37.6	+1.0
BLCB				Sn	Sn	02 39 56.6	+0.1
ARG	Arkhangelos	1.55	116	P	Pn	02 39 36.3	-0.3
ARG				S	Sn	02 39 57.0	+0.5
ARG	Arkhangelos	1.55	116	Pn	Pn	02 39 35.9	-0.7
DALY	Dalyan (Mula)	1.81	92	Pn	Pn	02 39 39.8	-0.3

ISK ***29*** *02:44:06.8, 37°.49N×26°.70E, h21^{km}, ML2.9/14*
DDA ***29*** *02:44:06.8±0.0, 37°.47N×26°.68E, h7^{km}±1^{km}, ML2.7*
ATH ***29*** *02:44:07.5, 37°.51N×26°.71E, h17^{km}±3^{km}, ML3.0/4, Error ellipse: s-maj=4.6km s-min=0.9km az=65.0*
THE ***29*** *02:44:07.8, 37°.49N×26°.74E, h14^{km}±1^{km}, ML3.0/3, Error ellipse: s-maj=2.0km s-min=0.6km az=73.0*
ISC 29 02:44:07.2±0.9**, 37°.49N**±0°.02×**26°.70E**±0°.03**, h16**^{km}±7^{km}**, n39,** σ0^s**40**/61**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.25	27	P	Pg	02 44 12.6	-0.1
SMG				S	Sg	02 44 16.7	+0.2
	7µm,0.4s						
SMG	Samos	0.25	27	P	Pg	02 44 12.4	-0.3
SMG				S	Sg	02 44 16.2	-0.3
SMG				AML	AML	02 44 17.1	
	comp=E,14198µm,0.3s						
SMG				AML	AML	02 44 17.1	
	comp=N,13391µm,0.4s						
DDIM	Aydin, Didim	0.43	94	P	Pg	02 44 16.1	+0.1
DDIM				S	Sb	02 44 22.9	+0.2
GCAM	G?zelcaml?	0.48	64	Pg	Pg	02 44 16.8	0.0
GCAM	G?zelcaml?	0.48	64	P	Pg	02 44 16.8	0.0
GCAM				*i* AML	AML	02 44 24.0	
	comp=N,1µm,0.4s						
GCAM				*i* AML	AML	02 44 24.0	
	comp=N,690nm,0.2s						
GCAM				S	Sb	02 44 24.2	+0.2
DGB	zmir	0.58	15	P	Pg	02 44 18.6	-0.1
DGB				S	Sb	02 44 27.4	+0.3
DGB				*i* AML	AML	02 44 30.0	
	comp=N,397nm,0.8s						
DGB				*i* AML	AML	02 44 31.0	
	comp=N,196nm,0.3s						
BODT	Bodrum	0.65	131	Pg	Pg	02 44 19.7	-0.3
BODT				Sg	Sb	02 44 29.2	+0.2
BDRM	Kayabasi	0.73	125	P	Pb	02 44 21.0	-0.6
BDRM				S	Sg	02 44 32.4	+1.2
BDRM				*i* AML	AML	02 44 33.0	
	comp=N,185nm,0.5s						
ZEYE	Izmir, Urla-Ze	0.76	349	P	Pb	02 44 22.0	-0.1
ZEYE				S	Sg	02 44 33.2	+1.0
ZEYE				*i* AML	AML	02 44 34.0	
	comp=N,678nm,0.3s						
ZEYE				*i* AML	AML	02 44 35.0	
	comp=N,679nm,0.3s						
KOSK	Kos Island	0.77	163	P	Pg	02 44 22.5	+0.3
KOSK				S	Sg	02 44 32.9	+0.5
	comp=N,1µm,0.4s						
KOSK	Kos Island	0.77	163	Pg	Pg	02 44 22.5	+0.3
KOSK				Sg	Sg	02 44 32.8	+0.4
KOSK	Kos Island	0.77	163	P	Pb	02 44 22.3	+0.1
KOSK				S	Sb	02 44 32.6	+0.3
KOSK				AML	AML	02 44 37.5	
	comp=E,8844µm,0.5s						
KOSK				AML	AML	02 44 38.0	
	comp=N,6858µm,0.4s						
URLA	Izmir	0.87	355	Pg	Pb	02 44 24.2	+0.1
URLA	Izmir	0.87	355	P	Pb	02 44 24.1	+0.1
URLA				S	Sn	02 44 37.7	+0.5
URLA				*i* AML	AML	02 44 39.0	
	comp=N,515nm,0.5s						
URLA				*i* AML	AML	02 44 39.0	
	comp=N,375nm,0.3s						
MLSB	Milas	0.88	102	Pg	Pn	02 44 25.0	0.0
AMGA	Amorgos Island	0.92	225	P	Pb	02 44 24.6	-0.1
BLCB	Balcova	0.94	17	P	Pb	02 44 25.2	+0.1
BLCB				S	Sg	02 44 37.6	-0.1
BLCB	Balcova	0.94	17	Pg	Pb	02 44 25.1	0.0
BLCB				Sg	Sn	02 44 38.4	-0.3
NISR	Nisiros	0.94	158	P	Pg	02 44 25.6	+0.2
NISR				S	Sg	02 44 38.1	+0.3
NISR	Nisiros	0.94	158	P	Pg	02 44 25.7	+0.2
NISR				AML	AML	02 44 41.4	
	comp=E,1171µm,0.2s						
NISR				AML	AML	02 44 44.4	
	comp=N,552µm,0.3s						
AYDN	Tasoluk	0.96	79	P	Pb	02 44 25.5	+0.1
AYDN				S	Sn	02 44 39.0	-0.3
AYDN				*i* AML	AML	02 44 41.0	
	comp=N,193nm,0.3s						
AYDN				*i* AML	AML	02 44 42.0	
	comp=N,273nm,0.3s						
CHOS	Chios island	1.03	331	P	Pb	02 44 26.4	-0.3
CHOS				S	Sn	02 44 41.5	+0.3
	comp=N,500nm,0.7s						
CHOS	Chios island	1.03	331	Pg	Pb	02 44 26.9	+0.2
CHOS				Sg	Sg	02 44 40.7	0.0
CHOS	Chios island	1.03	331	P	Pb	02 44 26.2	-0.5
CHOS				S	Sb	02 44 39.5	-0.5
CHOS				AML	AML	02 44 42.2	
	comp=N,912µm,0.7s						
CHOS				AML	AML	02 44 42.7	
	comp=E,1099µm,0.7s						
DAT	Datca	1.04	137	P	Pb	02 44 26.3	-0.5
DAT				S	Sg	02 44 41.0	+0.1
DAT	Datca	1.04	137	Pg	Pb	02 44 26.3	-0.5
DAT	Datca	1.04	137	P	Pb	02 44 26.6	-0.2
DAT				*i* AML	AML	02 44 45.0	
	comp=E,171nm,0.2s						
DAT				*i* AML	AML	02 44 46.0	
	comp=E,171nm,0.3s						
YER	Yerkesik	1.31	105	Pn	Pb	02 44 31.3	-0.2
TURN	Turunc	1.43	119	Pn	Pn	02 44 32.3	-0.1
THR8	Santorini-Mono	1.46	222	P	Pn	02 44 32.0	-0.8
SANT	Santorini	1.49	222	Pn	Pn	02 44 33.9	+0.5
THR3	Thira Island,	1.50	224	P	Pb	02 44 34.5	-0.1
THR6	Thira Island,	1.54	223	P	Pn	02 44 33.8	-0.1
DALY	Dalyan (Mula)	1.70	113	Pn	Pn	02 44 36.9	+0.7
ARG	Arkhangelos	1.71	137	P	Pn	02 44 36.2	-0.1
ARG				S	Sn	02 44 56.9	-1.0
ARG	Arkhangelos	1.71	137	Pn	Pn	02 44 36.3	-0.1
ARG	Arkhangelos	1.71	137	P	Pn	02 44 36.1	-0.3
KARP	Karpathos	1.97	169	Pn	Pn	02 44 39.6	-0.4
KARP				Sn	Sn	02 45 04.1	-0.3
APMY	Acipayam-Deniz	2.07	90	Pn	Pn	02 44 41.2	-0.2

NOU ***29*** *02:55:29.7, 28°.37S×136°.06E, h0^{km}, MLv4.2/10, South Australia*
IDC ***29*** *02:55:29.5±2.9, 28°.20S×136°.13E, h0^{km}, mbtmp3.8/4, ML3.8/4, Error ellipse: s-maj=42.4km s-min=19.9km az=53.0*
AUST ***29*** *02:55:30.2±0.6, 28°.28S×136°.08E, h10^{km}, Error ellipse: s-maj=9.0km s-min=6.4km az=51.0*
ISC 29 02:55:29.3±0.8**, 28°.28S**±0°.05×**136°.17E**±0°.05**, h10**^{km}**, n29,** σ**2^{s}36**/42**, 2C, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OOD	Oodnadatta	0.64	319	⇑P	Pg	02 55 42.1	+0.2
	baz=0.6,SNR=48						
OOD				S	Sg	02 55 49.9	-0.3
	baz=0.6						
OOD	Oodnadatta	0.64	319	P	Pg	02 55 42.0	+0.2
MULG	Mulgathing	2.71	222	P	Pn	02 56 11.5	-1.5
	baz=2.7,SNR=7.8						
MULG				S	Sn	02 56 48.1	+2.2
	baz=2.7						
MULG	Mulgathing	2.71	222	P	Pn	02 56 11.5	-1.5
LCRK	Leigh Creek	2.80	141	P	Pn	02 56 16.2	+1.9
	baz=2.9,SNR=5.6						
LCRK				S	Sn	02 56 52.6	+4.4
	baz=2.9						
LCRK	Leigh Creek	2.80	141	P	Pn	02 56 16.1	+1.9
INKA	Innaminka	4.08	83	P	Pn	02 56 35.0	+3.2
	baz=4.2,SNR=13						
INKA				S	Sn	02 57 21.9	+2.1
	baz=4.2						
INKA	Innaminka	4.08	83	P	Pn	02 56 35.2	+3.3
BBOO	Buckleboo	4.51	181	⇑P	Pn	02 56 37.3	-0.5
	baz=4.5						
BBOO				S	Sn	02 57 27.2	-3.2
	baz=4.5						
BBOO	Buckleboo	4.51	181	P	Pn	02 56 37.1	-0.7
ASAR	Alice Springs	5.03	336	Pn	Pn	02 56 46.1	+1.2
	2.1nm,0.3s,baz=158,slow=12,SNR=57						
ASAR				Pg	Pb	02 57 01.3	+3.9
	1.3nm,0.3s,baz=156,slow=16,SNR=11						
ASAR				Sn	Sn	02 57 42.0	-1.1
	4.5nm,0.3s,baz=155,slow=22,SNR=13						
ASAR				Lg	Lg	02 58 05.6	
	1.9nm,0.3s,baz=160,slow=26,SNR=2.5						
	2.4nm,0.3s						
ASPA	Alice Springs	5.03	336	P	Pn	02 56 46.6	+1.7
	baz=5.0						
ASPA				S	Sn	02 57 41.8	-1.3
	baz=5.0						
HTT	Hallett	5.65	156	P	Pn	02 56 54.9	+1.4
	baz=5.7						
HTT	Hallett	5.65	156	P	Pn	02 56 54.8	+1.4
STKA	Stephens Creek	5.91	129	Pn	Pn	02 56 58.8	+1.7
	1.5nm,0.3s,baz=308,slow=10,SNR=16						
STKA				Sn	Sn	02 58 04.3	-0.5
	4.5nm,0.3s,baz=261,slow=8.3,SNR=9.2						
STKA				Lg	Lg	02 58 34.8	
	2.7nm,0.3s,baz=274,slow=22,SNR=1.8						
	2.9nm,0.3s						
STKA	Stephens Creek	5.91	129	P	Pn	02 56 58.6	+1.6
	baz=6.0,SNR=8.7						
STKA	Stephens Creek	5.91	129	P	Pn	02 56 58.7	+1.7
QLP	Quilpie	7.37	79	P	Pn	02 57 20.1	+3.1
	baz=7.4,SNR=4.8						
QLP	Quilpie	7.37	79	P	Pn	02 57 19.9	+2.9
FORT	Forrest	7.49	249	P	Pn	02 57 16.0	-2.7
	baz=7.4						
FORT	Forrest	7.49	249	P	Pn	02 57 19.9	+1.3
	54nm,0.9s						
WRKA	Warakurna	7.75	293	P	Pn	02 57 22.3	+0.1
	baz=7.7						
QIS	Mount Isa	8.30	23	P	Pn	02 57 32.1	+2.2
	baz=8.4,SNR=4.0						
WB2	Warramunga Arr	8.46	348	P	Pn	02 57 32.9	+0.8
	baz=8.5						
WB2				S	Sn	02 59 05.7	-2.1
	baz=8.5						
WRA	Warramunga Arr	8.47	348	Pn	Pn	02 57 32.7	+0.5
	1.6nm,0.3s,baz=171,slow=13,SNR=127						
WRA				Sn	Sn	02 59 04.4	-3.4
	1.1nm,0.3s,baz=169,slow=25,SNR=8.4						
WRA				Lg	Lg	02 59 52.8	
	0.5nm,0.3s,baz=170,slow=26,SNR=1.8						
	2.6nm,0.3s						
CMSA	Cobar Meteorol	8.88	114	P	Pn	02 57 39.0	+1.3
	baz=8.9,SNR=12						
CMSA				S	Sn	02 59 13.8	-4.1
	baz=8.9						
CMSA	Cobar Meteorol	8.88	114	P	Pn	02 57 39.2	+1.5
RMQ	Roma	11.33	84	P	Pn	02 58 12.6	+1.2
	baz=11						
CTA	Charters Tower	12.29	51	Pn	Pn	02 58 25.3	+0.8
	0.2nm,0.3s,baz=213,slow=16,SNR=1.4						
CTA				Sn	Sn	03 00 35.6	-6.1
	0.1nm,0.3s,baz=188,slow=17,SNR=1.3						
	3.2nm,0.7s						

WEL 29 03:11:53.6±0.3**, 39°S**±2°×**17°6E**±°**, h5**^{km}**, M2.6**/18**, ML3.6**/26**, MLv2.6**/18**, Error ellipse: s-maj=0.0km s-min=0.0km az=119.8, confirmed, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATZ	Rangitukua	0.09	55	P	Pg	03 11 55.5	0.0
RATZ				S	Sg	03 11 58.2	+1.3
RITZ	Rihia Road	0.15	113	P	Pg	03 11 56.9	+0.2
RITZ				S	Sg	03 11 59.5	+0.8
RITZ	Rihia Road	0.15	113	P	Pg	03 11 50.9	-5.7
KRVZ	Karewarewa	0.18	189	P	Pg	03 11 57.5	+0.3
KRVZ				S	Sg	03 11 59.9	+0.3
KRVZ	Karewarewa	0.18	189	P	Pg	03 11 50.5	-6.7
TMVZ	Te Maari	0.20	174	P	Pg	03 11 57.9	+0.3
TMVZ				S	Sg	03 12 00.8	+0.6
WTVZ	West Tongariro	0.21	199	P	Pg	03 11 58.1	+0.4
WTVZ				S	Sg	03 12 01.1	+0.5
WTVZ	West Tongariro	0.21	199	P	Pg	03 11 52.1	-5.6
WATZ	Wairara	0.21	11	S	Sg	03 12 02.3	+1.7
ETVZ	East Tongariro	0.22	174	P	Pg	03 11 57.6	-0.3
ETVZ				S	Sg	03 12 01.3	+0.5
NNVZ	North Ngauruho	0.22	193	S	Sg	03 12 01.5	+0.6
NNVZ	North Ngauruho	0.22	193	P	Pg	03 11 52.5	-5.5
TWVZ	Taurewa	0.24	231	P	Pg	03 11 58.7	+0.4
TWVZ				S	Sg	03 12 02.0	+0.5
OTVZ	Oturere	0.25	183	P	Pg	03 11 59.1	+0.6
OTVZ	Oturere	0.25	183	P	Pg	03 11 52.8	-5.7
NGZ	Ngauruhoe	0.27	193	P	Pg	03 11 59.0	+0.2
NGZ				S	Sg	03 12 02.4	0.0
NGZ	Ngauruhoe	0.27	193	P	Pg	03 11 53.1	-5.8
SNVZ	South Ngauruho	0.27	186	P	Pg	03 11 53.3	-5.6
SNVZ	South Ngauruho	0.27	186	P	Pg	03 11 59.3	+0.4
SNVZ				S	Sg	03 12 03.2	+0.7
COVZ	Chateau Observ	0.30	201	P	Pg	03 11 59.1	-0.4
COVZ				S	Sg	03 12 03.9	+0.4
FWVZ	Far West T-bar	0.35	196	P	Pg	03 11 58.9	-1.6
FWVZ	Far West T-bar	0.35	196	P	Pg	03 12 00.5	0.0
FWVZ				S	Sg	03 12 05.3	+0.1
TUVZ	Tukino	0.35	183	P	Pg	03 11 53.9	-6.5
DRZ	Dome Shelter	0.37	194	P	Pg	03 12 00.5	-0.4
WHVZ	Whangaehu Hut	0.37	191	P	Pg	03 11 59.8	-1.0
TRVZ	Turoa	0.40	195	P	Pg	03 11 57.8	-3.5
WNVZ	Wahianoa	0.41	189	P	Pg	03 11 55.9	-5.7
KUTZ	Kaahu Road	0.44	15	P	Pg	03 12 01.8	-0.3
KUTZ	Kaahu Road	0.44	15	P	Pg	03 12 01.8	-0.3
PKVZ	Pokaka	0.45	215	P	Pg	03 11 57.9	-4.4
MOVZ	Moawhango	0.49	173	P	Pg	03 12 02.9	-0.2
MTVZ	Mangateitei	0.49	199	P	Pg	03 11 59.3	-3.8
WPRZ	Whakapapatarin	0.55	44	P	Pb	03 12 05.1	-0.6
WPRZ				S	Sg	03 12 11.3	+0.1
TLZ	Tolley Road	0.60	349	P	Pg	03 11 59.1	-5.9
ALRZ	Allen Road	0.63	56	P	Pg	03 12 05.7	0.0
BHHZ	Black Hill Sta	0.65	153	P	Pg	03 12 05.6	-0.4
BKZ	Black Stump Fm	0.68	112	P	Pg	03 12 00.6	-6.1
HRRZ	Handcock Road	0.71	42	S	Sg	03 12 15.3	-1.1
VRZ	Vera Road	0.75	254	P	Pg	03 12 08.3	+0.4
HIZ	Hauiti	0.76	302	P	Pg	03 12 02.9	-5.3
KWHZ	Kaweka Forest	0.77	131	P	Pg	03 12 03.0	-5.4
UTU	Utuhina	0.84	29	S	Sg	03 12 20.3	-0.4
NMHZ	Naumai	0.90	102	P	Pb	03 12 11.6	-0.1
NMHZ	Naumai	0.90	102	P	Pb	03 12 11.7	0.0
NMHZ				S	Sg	03 12 22.2	-0.2
NGRZ	Ngongotaha	0.91	26	P	Pg	03 12 09.7	-1.3
MTHZ	Maungataniwha	0.91	86	P	Pg	03 12 11.3	+0.3
MCHZ	McNeill Hill	0.95	124	P	Pn	03 12 13.2	-0.4
OMRZ	Omania	0.97	34	P	Pg	03 12 11.2	-1.1
WAZ	Wanganui	0.99	213	P	Pg	03 12 12.4	-0.2
KARZ	Kaharoa	1.00	27	S	Sg	03 12 26.0	+0.3
RTZ	Ruatahuna	1.06	74	P	Pg	03 12 13.4	-0.5
MHEZ	Mangahewa	1.07	261	P	Pn	03 12 15.2	0.0
MHEZ				S	Sn	03 12 30.2	-0.3
PNHZ	Pukenui	1.07	158	P	Pg	03 12 14.2	+0.1
ARHZ	Aropaoanui	1.08	109	P	Pg	03 12 14.2	-0.2
KMRZ	Kaimai	1.09	11	P	Pn	03 12 15.4	-0.1
RAHZ	Arahi	1.10	90	P	Pb	03 12 15.2	+0.2
RAHZ	Arahi	1.10	90	P	Pg	03 12 14.8	+0.2
LREZ	Lake Rotokare	1.13	241	P	Pb	03 12 15.8	+0.2
TSZ	Takapari Road	1.16	169	P	Pn	03 12 16.6	0.0
TSZ	Takapari Road	1.16	169	P	Pb	03 12 16.3	+0.1
DREZ	Durham Road	1.18	256	P	Pg	03 12 16.1	-0.1
TOZ	Tahuroa Road	1.19	353	P	Pg	03 12 10.8	-5.7
WHHZ	Waihua	1.22	98	P	Pn	03 12 20.5	+3.2
WHHZ	Waihua	1.22	98	P	Pg	03 12 16.2	-0.8
KAHZ	Kahuranaki	1.28	134	P	Pb	03 12 19.2	+1.1
WPHZ	Waipukurau	1.29	153	P	Pb	03 12 19.1	+0.8
CKHZ	Cape Kidnapper	1.31	125	P	Pg	03 12 20.5	+1.7
PKE	Pukeiti	1.35	258	P	Pg	03 12 19.9	+0.5
KHEZ	Kahui Hut	1.35	253	P	Pg	03 12 20.0	+0.5
DVHZ	Dannevirke	1.43	165	P	Pg	03 12 21.3	+0.2
PXZ	Pawanui	1.44	141	P	Pg	03 12 22.2	+1.0
PXZ	Pawanui	1.44	141	P	Pg	03 12 22.1	+0.9
POWZ	Post Office Ro	1.47	177	P	Pb	03 12 21.5	0.0
NMEZ	Namu Road	1.49	250	P	Pn	03 12 20.9	0.0
PRHZ	Porangahau	1.54	152	P	Pg	03 12 23.9	+0.9
PRHZ	Porangahau	1.54	152	P	Pn	03 12 20.0	-1.7
MWZ	Matawai	1.56	69	P	Pg	03 12 23.5	0.0
RIGZ	Rimuhau	1.64	83	P	Pg	03 12 27.1	+2.1
MRZ	Mangatainoka R	1.74	183	P	Pb	03 12 26.5	+0.4
BFZ	Birch Farm	1.82	166	P	Pg	03 12 28.7	+0.3
WIZ	White Island	1.83	41	P	Pn	03 12 22.7	-3.0
WSRZ	White Island S	1.83	41	P	Pn	03 12 23.1	-2.6
RUGZ	Raukumara Rang	1.83	59	P	Pb	03 12 27.6	-0.1
OGWZ	Otaki Gorge	1.94	192	P	Pb	03 12 29.1	-0.2
OGWZ	Otaki Gorge	1.94	192	P	Pn	03 12 27.3	+0.1
HOWZ	Holdsworth Sta	1.98	184	P	Pg	03 12 31.0	-0.6
HOWZ	Holdsworth Sta	1.98	184	P	Pb	03 12 30.6	+0.5
AWAZ	Awhitu Peninsu	2.02	336	P	Pg	03 12 41.6	+9.2
AWAZ	Awhitu Peninsu	2.02	336	P	Pb	03 12 30.3	-0.5
ETAZ	East Tamaki Re	2.05	343	P	Pg	03 12 42.2	+9.4
ETAZ	East Tamaki Re	2.05	343	P	Pn	03 12 28.9	+0.2
WIAZ	Waiheke Island	2.16	348	P	Pg	03 12 43.9	+8.9
WTAZ	Waiatarua	2.17	336	P	Pg	03 12 44.3	+9.2
KUZ	Kuaotunu	2.17	1	P	Pn	03 12 29.9	-0.4
TMWZ	Te Maipa	2.19	176	P	Pg	03 12 35.6	0.0
CAW	Cannon Point	2.24	192	P	Pb	03 12 34.4	0.0
MTW	Mount Morrison	2.24	183	P	Pg	03 12 35.9	-0.7
RVAZ	Riverhead Bore	2.31	338	P	Pg	03 12 46.8	+8.9
TCW	Tory Channel	2.53	205	P	Pb	03 12 38.5	-1.0
TCW	Tory Channel	2.53	205	P	Pn	03 12 35.7	+0.4
TUWZ	Tuamarina	2.84	207	P	Pb	03 12 44.9	+0.1
BSWZ	Blackbirch Sta	3.12	206	P	Pb	03 12 50.6	+1.1
WCZ	Waipu Caves	3.16	340	P	Pg	03 12 58.9	+4.9
MRNZ	Matariki Terra	3.34	221	P	Pb	03 12 52.7	-0.6
THZ	Tophouse	3.54	216	P	Pb	03 12 57.7	+0.8

WEL 29 03:12:05.9±0.9**, 39°S**±5°×**17°6E**±°**, h3**^{km}±4^{km}**, M3.5**/6**, MLv3.5**/6**, Error ellipse: s-maj=0.0km s-min=0.0km az=136.9, confirmed, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KATZ	Kakaramea	0.06	171	P	Pg	03 12 07.7	+0.5
RATZ	Rangitukua	0.09	54	P	Pg	03 12 08.3	+0.7
RITZ	Rihia Road	0.15	113	S	Sg	03 12 11.8	+1.0
KRVZ	Karewarewa	0.18	190	S	Sg	03 12 12.3	+0.5
NTVZ	North Tongarir	0.18	182	P	Pg	03 12 09.9	+0.5
NTVZ				S	Sg	03 12 12.5	+0.6
TMVZ	Te Maari	0.20	175	P	Pg	03 12 10.2	+0.4
TMVZ				S	Sg	03 12 13.0	+0.6
WTVZ	West Tongariro	0.21	200	S	Sg	03 12 13.1	+0.3
WATZ	Wairara	0.21	11	P	Pg	03 12 10.8	+0.8
ETVZ	East Tongariro	0.22	174	P	Pg	03 12 10.5	+0.4
ETVZ				S	Sg	03 12 14.0	+0.9
NNVZ	North Ngauruho	0.22	194	S	Sg	03 12 13.1	+0.1
TWVZ	Taurewa	0.24	231	P	Pg	03 12 11.0	+0.4
OTVZ	Oturere	0.24	183	S	Sg	03 12 14.2	+0.3
NGZ	Ngauruhoe	0.27	194	S	Sg	03 12 14.5	0.0
WPRZ	Whakapapatarin	0.55	43	P	Pg	03 12 17.1	+0.7
MRHZ	Matea Rd	0.58	82	P	Pg	03 12 16.8	-0.2
MRHZ				S	Sg	03 12 24.4	-0.1
ALRZ	Allen Road	0.63	56	P	Pg	03 12 18.2	+0.3
BHHZ	Black Hill Sta	0.64	153	S	Sg	03 12 18.7	-7.8
GRRZ	Galatos Road	0.66	31	P	Pn	03 12 21.3	-0.9
PRRZ	Plateau Road	0.70	53	P	Pg	03 12 19.7	+0.5
HRRZ	Handcock Road	0.71	42	P	Pb	03 12 20.4	-0.4
HSRZ	Hossack Road	0.75	36	P	Pn	03 12 23.4	+0.1
UTU	Utuhina	0.84	29	P	Pb	03 12 23.1	-0.1
HLRZ	Highlands Stat	0.85	38	P	Pn	03 12 25.4	+0.6
NGRZ	Ngongotaha	0.91	26	P	Pb	03 12 24.2	-0.1
OMRZ	Omania	0.97	34	P	Pn	03 12 26.9	+0.4
KARZ	Kaharoa	1.00	26	P	Pn	03 12 28.5	+1.7
MHEZ	Mangahewa	1.07	261	P	Pn	03 12 28.0	+0.2
KMRZ	Kaimai	1.09	11	P	Pb	03 12 27.6	+0.2
DREZ	Durham Road	1.19	256	P	Pn	03 12 31.0	+1.6
TGRZ	Tauranga	1.27	21	P	Pb	03 12 30.5	0.0
NMEZ	Namu Road	1.49	250	P	Pg	03 12 34.3	-0.1
MWZ	Matawai	1.56	69	P	Pb	03 12 35.5	+0.1
RUGZ	Raukumara Rang	1.83	59	P	Pb	03 12 40.2	+0.1
HAZ	Te Kaha	2.02	56	P	Pb	03 12 42.7	-0.5
KUZ	Kuaotunu	2.17	1	P	Pb	03 12 45.7	0.0
GRZ	Great Barrier	2.67	356	P	Pb	03 12 55.2	+0.9

NOU ***29*** *03:17:49.5, 38°.60S×176°.40E, h0^{km}, MLv3.3/6, North Island, New Zealand*
WEL ***29*** *03:17:56.8, 39°S±1°×17°6E±°, h6^{km}±2^{km}, M2.5/6, ML2.8/6, MLv2.5/6, Error ellipse: s-maj=0.0km s-min=0.0km az=65.6, confirmed*
ISC 29 03:17:56.1±0.9**, 38°.86S**±0°.03×**175°.73E**±0°.03**, h13**^{km}±6^{km}**,**

n33,σ1^{s}68/31,North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATZ	Rangitukua	0.04	101	P	Pg	03 17 59.5	+0.9
KATZ	Kakaramea	0.12	192	P	Pg	03 17 58.9	-0.6
KATZ				S	Sg	03 18 00.1	-1.8
WATZ	Wairara	0.15	2	P	Pb	03 18 02.0	+1.2
WATZ				S	Sg	03 18 05.7	+3.3
RITZ	Rihia Road	0.16	138	P	Pg	03 18 00.5	+0.6
RITZ				S	Sg	03 18 03.2	+0.6
NTVZ	North Tongarir	0.24	189	P	Pg	03 18 01.0	-0.3
NTVZ				S	Sg	03 18 03.7	-1.2
TMVZ	Te Maari	0.26	184	P	Pg	03 18 01.4	-0.2
TMVZ				S	Sg	03 18 04.4	-0.9
WPRZ	Whakapapatarin	0.48	45	P	Pb	03 18 05.7	-0.7
MRHZ	Matea Rd	0.54	87	P	Pb	03 18 07.5	+0.1
TLZ	Tolley Road	0.55	344	P	Pb	03 18 08.5	+1.0
GRRZ	Galatos Road	0.59	31	P	Pg	03 18 06.0	-1.6
BKZ	Black Stump Fm	0.67	117	P	Pb	03 18 10.2	+0.5
HIZ	Hauiti	0.76	297	P	Pn	03 18 12.4	-0.1
HIZ	Hauiti	0.76	297	P	Pb	03 18 12.2	+1.0
UTU	Utuhina	0.78	28	P	Pg	03 18 04.1	-7.0
KWHZ	Kaweka Forest	0.78	136	P	Pb	03 18 12.1	+0.6
MTHZ	Maungataniwha	0.87	90	P	Pg	03 18 07.3	-5.6
NMHZ	Naumai	0.88	106	P	Pg	03 18 13.0	0.0
MCHZ	McNeill Hill	0.95	128	P	Pn	03 18 16.7	+1.5
RAHZ	Arahi	1.06	93	P	Pg	03 18 10.1	-6.5
ARHZ	Aropaoanui	1.07	113	P	Pg	03 18 16.6	-0.1
PNHZ	Pukenui	1.11	161	P	Pg	03 18 17.7	+0.2
TOZ	Tahuroa Road	1.14	351	P	Pb	03 18 14.5	-3.1
WHHZ	Waihua	1.20	101	P	Pb	03 18 14.7	-3.9
URZ	Urewera	1.24	62	P	Pn	03 18 01.1	-18
KAHZ	Kahuranaki	1.29	137	P	Pg	03 18 24.0	+3.1
WPHZ	Waipukurau	1.32	156	P	Pg	03 18 22.7	+1.1
KHEZ	Kahui Hut	1.40	251	P	Pg	03 18 23.5	+0.5
PXZ	Pawanui	1.46	143	P	Pg	03 18 26.9	+2.7
KNZ	Kokohu	1.53	97	P	Pn	03 18 17.2	-5.8
PRHZ	Porangahau	1.57	154	P	Pg	03 18 27.8	+1.6
BFZ	Birch Farm	1.86	168	P	Pn	03 18 25.9	-1.8
KUZ	Kuaotunu	2.11	360	P	Pn	03 18 23.6	-7.4
MXZ	Matakaoa Point	2.41	58	P	Pn	03 18 22.5	-13

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*BJI **29** 03:30:21.3±0.0, 2°.34N×126°.12E, h122^{km}, mb5.2/76, mB5.1/51*

*MAN **29** 03:30:23.4, 2°.64N×126°.00E, h109^{km}, mb6.0, ML5.1, MS5.6*

*KLM **29** 03:30:25, 3°.01N×126°.33E, h116^{km}, mb5.5*

*IDC **29** 03:30:25.1±1.1, 2°.77N×125°.88E, h107^{km}±9^{km}, mb4.9/51, mbtmp5.3/54, MS3.8/11, Error ellipse: s-maj=9.6km s-min=5.9km az=67.0*

*MOS **29** 03:30:25.6±0.9, 2°.80N×125°.94E, h128^{km}, mb5.4/59, Error ellipse: s-maj=7.6km s-min=4.2km az=117.4*

*DJA **29** 03:30:26.2±0.2, 3°N±2°×12°6E±°, h116^{km}±1^{km}, M5.4/99, mb5.5/99, mB5.8/59, MLv5.7/19, Mw5.2/103, Mw(mB)5.4/59, MwMwp5.3/5, Mwp5.5/5*

*NEIC **29** 03:30:26.4±1.5, 2°.79N±0°.06×125°.98E±0°.06, h112^{km}±4^{km}, mb5.3/226, Mww5.2/12, Error ellipse: s-maj=9.5km s-min=8.1km az=56.0*

*NEIC **29** 03:30:26.7, 2°.80N×125°.98E, h120^{km}*

*NEIC **29** 03:30:26.7, 2°.90N×126°.08E, h120^{km}, Moment Tensor Solution. Duration: 1^{s}1.0 Moment tensor: Scale 10^{16} Nm; M_{rr}-1.87; $M_{\theta\theta}$-0.84; $M_{\phi\phi}$2.71; $M_{r\theta}$-1.12; $M_{\theta\phi}$-1.19; $M_{\phi r}$6.46; Fault plane solution: $M_0$7.01000×10^{16} NP1: ϕ_s170.41000°, δ79.84000°, λ-85.70000°. NP2: ϕ_s327.32000°, δ11.03000°, λ-112.71000°. Principal axes: T 7.5811, Plg35.0000°, Azm257.0000°; N -1.1414, Plg4.0000°, Azm350.0000°; P -6.4398, Plg55.0000°, Azm86.0000°;*

*GCMT **29** 03:30:27.4±0.2, 2°.84N±0°.01×126°.01E±0°.01, h118^{km}±1^{km}, MW5.2/87, Moment Tensor Solution. s82,c106; s87,c137; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.14±.24; $M_{\theta\theta}$-0.91±.28; $M_{\phi\phi}$3.05±.30; $M_{r\theta}$-0.31±.17; $M_{\theta\phi}$-3.62±.26; $M_{\phi r}$8.02±.18; Best double couple: $M_0$9.14100×10^{16} NP1: ϕ_s179.00000°, δ81.00000°, λ-68.00000°. NP2: ϕ_s289.00000°, δ24.00000°, λ-158.00000°. Principal axes: T 9.8030, Plg33.0000°, Azm250.0000°; N -1.3270, Plg22.0000°, Azm355.0000°; P -8.4790, Plg49.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 03:30:26.8±0.3**, 2°.78N**±0°.03×**125°.95E**±0°.04**, h123**^{km}±2^{km}**, h124**^{km}**:pP-P, n1045, σ1^{s}29**/1116**, mb5.3**/243**, 52C-32D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	0.99	335	P	Pn	03 30 48.7	-0.3
SGSI				S	Sn	03 31 05.7	-0.2
TNTI	Ternate	2.45	145	Pn	Pn	03 31 04.3	-1.7
TNTI	Ternate	2.45	145	P	Pn	03 31 04.7	-1.3
TNTI	Ternate	2.45	145	P	Pn	03 31 04.3	-1.7
GSPH	General Santos	3.43	343	⇓*i*P	Pn	03 31 18.2	-0.8
GSPH				*i* S	Sn	03 31 58.4	-1.0
GTOI	Gorontalo	3.63	234	P	Pn	03 31 23.1	+1.6
LBMI	Labuha	3.73	155	P	Pn	03 31 21.4	-1.5
SKMP	Bagumbayan, Su	3.97	339	⇑*e*P	Pn	03 31 26.0	0.0
SKMP				*e*S	Sn	03 32 10.8	-1.1
MATI	Mati	4.15	4	⇓*e*P	Pn	03 31 26.6	-1.8
MATI				*e*S	Sn	03 32 18.1	+1.9
DAV	Davao City (W)	4.28	355	P	Pn	03 31 28.4	-1.7
	550nm,0.4s,baz=4.3,slow=2.8,SNR=5.3						
DAV				S	Sn	03 32 16.6	-2.8
	1μm,0.6s,baz=62,slow=11,SNR=5.4						
DAV				LR	LR	03 33 20.3	
	comp=Z,1μm,20.3s,baz=98,slow=41						
DAV	Davao City (W)	4.28	355	Pn	Pn	03 31 29.7	-0.4
DAV	Davao City (W)	4.28	355	P	Pn	03 31 30.1	0.0
KCP	Kidapawan	4.29	349	⇓*i*P	Pn	03 31 30.5	+0.1
KCP				*i* S	Sn	03 32 20.5	+0.9
MRSI	Marisa	4.62	240	P	Pn	03 31 36.8	+2.2
CTBH	Cotabato--PC H	4.73	339	⇑*i*P	Pn	03 31 36.6	+0.5
CTBH				*i* S	Sn	03 32 31.9	+1.9
SANI	Sanana	4.80	180	P	Pn	03 31 34.4	-2.7
LUWI	Luwuk	4.95	220		Pn	03 31 39.8	+0.7
LUWI	Luwuk	4.95	220	P	Pn	03 31 41.8	+2.7
LUWI	Luwuk	4.95	220	P	Pn	03 31 39.8	+0.7
	4μm,1.2s,36μm15nm						
BIPH	Bislig	5.38	4	⇓*e*P	Pn	03 31 43.9	-1.0
BIPH				*e*S	Sn	03 32 43.4	-2.5
TOLI2	Tolitoli	5.42	252	Pn	Pn	03 31 46.7	+1.2
TOLI2	Tolitoli	5.42	252	P	Pn	03 31 47.0	+1.5
PAGZ	Pagadian	5.65	333	⇓*e*P	Pn	03 31 47.9	-0.6
PAGZ				*e*S	Sn	03 32 52.7	+0.5
ZCP	Zamboanga City	5.65	317	⇑*e*P	Pn	03 31 49.6	+1.1
ZCP				*e*S	Sn	03 32 52.1	-0.2
CGP	Cagayan de Oro	5.77	348	⇓*e*P	Pn	03 31 49.9	-0.3
CGP				*e*S	Sn	03 33 01.6	+6.3
NLAI	Namlea	6.09	169	P	Pn	03 31 52.9	-1.6
	880nm,0.7s,37μm7.2nm						
BUTP	Butuan	6.16	357	⇓*e*P	Pn	03 31 56.8	+1.4
BUTP				*e*S	Sn	03 33 14.8	+10
SIJI	Sorong	6.43	124	P	Pn	03 31 57.6	-1.5
	25nm,0.4s,baz=314,slow=9.5,SNR=19						
SIJI				S	Sn	03 33 11.2	-0.1
	86nm,0.8s,baz=157,slow=20,SNR=1.6						
SIJI				LR	LR	03 34 18.8	
	comp=Z,2μm,18.1s,baz=292,slow=36						
MPSI	Mapaga	6.52	248	P	Pn	03 32 01.9	+1.6
	320nm,1.0s,4μm2.4nm						
MSAI	Masohi	6.77	154	P	Pn	03 32 02.3	-1.4
	99nm,0.9s,2μm0.4nm						
AAI	Ambon	6.80	161	P	Pn	03 32 02.9	-1.2
	2μm,0.5s,36μm9.8nm						
GLSP	General Luna,	6.96	1	⇑*e*P	Pn	03 32 05.8	-0.5
GLSP				*e*S	Sn	03 33 20.1	-3.9
SCPH	Surigao	6.97	356	*e*P	Pn	03 32 06.0	-0.4
SCPH				*e*S	Sn	03 33 26.4	+2.1
TBP	Tagbilaran	7.17	343	*e*P	Pn	03 32 09.1	0.0
TBP				*i* S	Sn	03 33 40.8	+12
MSLP	Maasin	7.39	352	⇑*e*P	Pn	03 32 10.5	-1.5
MSLP				*e*S	Sn	03 33 36.7	+2.4
LLP	Lapu-Lapu	7.74	345	*e*P	Pn	03 32 17.4	+0.6
LLP				*e*S	Sn	03 33 46.1	+3.2
MYLDM	Lahad Datu	7.80	288	Pn	Pn	03 32 18.9	+1.3
FAKI	Fak Fak	8.47	132	Pn	Pn	03 32 25.1	-1.4
FAKI	Fak Fak	8.47	132	P	Pn	03 32 26.0	-0.6
FAKI	Fak Fak	8.47	132	P	Pn	03 32 25.2	-1.4
	214nm,1.5s,3μm						
SPSI	Sidrap Palu	9.11	223	P	Pn	03 32 36.4	+1.1
	171nm,0.8s,2μm						
RKPI	Ransiki, Papua	9.26	117	P	Pn	03 32 35.2	-2.2
	408nm,0.9s,7μm						
RCP	Roxas	9.28	340	⇓*i*P	Pn	03 32 39.7	+2.1
SMKI	Samarinda	9.31	250	P	Pn	03 32 40.2	+2.2
	586nm,0.8s,14μm						
SPMM	Sapulut	9.66	282	P	Pn	03 32 48.0	+5.3
BKB	Balikpapan	9.90	246	P	Pn	03 32 48.3	+2.4
KAPI	Kappang	9.91	219	P	Pn	03 32 44.0	-2.1
	22nm,0.4s,baz=22,slow=10.0,SNR=20						
KAPI				LR	LR	03 37 11.7	
	comp=Z,525nm,20.1s,baz=32,slow=41						
KAPI	Kappang	9.91	219	P	Pn	03 32 47.4	+1.3
KAPI	Kappang	9.91	219	*c i*P	Pn	03 32 45.0	-1.1
BKSI	Bulukumba	9.93	216	P	Pn	03 32 46.5	+0.1
	125nm,0.8s,1μm						
KKM	Kota Kinabalu	10.23	289	Pn	Pn	03 32 50.6	+0.1
KKM	Kota Kinabalu	10.23	289	P	Pn	03 32 53.5	+3.0
	244nm,1.0s						
BSSI	Bau Bau, Buton	10.41	212	P	Pn	03 32 53.7	+0.9
	265nm,0.5s,3μm						
KBKI	Kotabaru	11.49	238	P	Pn	03 33 07.3	0.0
	1μm,0.5s,65μm						
MTKI	Muara Teweh, K	11.65	252	P	Pn	03 33 11.1	+1.7
	293nm,1.0s						
MMRI	Maumere	11.93	198	P	Pn	03 33 14.6	+1.6
MMRI	Maumere	11.93	198	P	Pn	03 33 12.9	-0.1
	417nm,0.9s,5μm						
TGY	Tagaytay City	12.29	337	LR	LR	03 39 02.1	
	comp=Z,553nm,18.5s,baz=166,slow=42						
SOEI	Soe	12.56	188	Pn	Pn	03 33 21.5	+0.1
SOEI	Soe	12.56	188	P	Pn	03 33 23.4	+2.0
SOEI	Soe	12.56	188	P	Pn	03 33 21.8	+0.4
	191nm,0.8s						
BBKI	Banjar Baru	12.72	241	P	Pn	03 33 25.7	+2.4
	667nm,1.5s,8μm						
SMPI	Sarmi	13.61	110	P	Pn	03 33 33.4	-1.4
	134nm,1.2s,8μm						
SBUM	Sibu	13.72	269	Pn	Pn	03 33 36.9	+0.6
SBUM	Sibu	13.72	269	P	P	03 33 40.0	-0.7
BASI	Baing, Sumba	13.98	202	P	Pn	03 33 39.3	-0.3
	504nm,1.2s,7μm						
PLAI	Plampang	14.12	215	P	Pn	03 33 43.2	+1.8
PLAI	Plampang	14.12	215	P	Pn	03 33 42.4	+1.0
	1μm,0.8s,11μm						
GENI	Genyem	15.18	110	P	Pn	03 33 55.4	+0.6
GENI	Genyem	15.18	110	P	Pn	03 33 53.5	-1.3
	876nm,1.0s,8μm						
KSM	Kuching	15.69	266		Pn	03 34 01.6	+0.5
KSM	Kuching	15.69	266	P	P	03 34 04.0	+1.4
KSM	Kuching	15.69	266	P	P	03 34 05.0	+2.4
ABJI	Asem Bagus	15.72	228	P	P	03 34 03.4	+0.5
	195nm,1.1s,5μm						
IGBI	Denpasar	15.77	223	P	P	03 34 03.5	0.0
	951nm,0.8s,9μm						
BLJI	Banyuglugur	16.16	230	P	P	03 34 08.2	+0.4
	315nm,0.8s						
JAGI	Jajag, Banyuwa	16.23	226		Pn	03 34 07.8	0.0
JAGI	Jajag, Banyuwa	16.23	226	P	P	03 34 09.6	+1.0
JAGI	Jajag, Banyuwa	16.23	226	P	P	03 34 08.8	+0.2
	695nm,0.8s,6μm						
MTN	Manton Dam	16.35	162	P	Pn	03 34 06.2	-3.1
	baz=16,SNR=35						
MTN	Manton Dam	16.35	162		Pn	03 34 06.0	-3.3
GRJI	Gresik	16.54	234	P	P	03 34 13.0	+1.0
	251nm,0.8s,3μm						
GMJI	Gumukmas	16.62	229	P	P	03 34 14.0	+1.1
	441nm,1.1s,4μm						
KDU	Kakadu	16.68	157	P	Pn	03 34 09.8	-3.4
	baz=17,SNR=178						
TBJI	Tambak Boyo	17.00	236	P	Pn	03 34 17.7	+0.5
	474nm,1.1s,5μm						
UWJI	Ujung Watu	17.55	239	P	P	03 34 22.9	-0.2
	220nm,1.0s						
NGJI	Ngawi	17.63	235	P	Pn	03 34 25.0	+0.2
	360nm,1.0s						
PWJI	Pagerwojo	17.73	233	P	P	03 34 24.7	-0.4
	253nm,0.8s						
SMRI	Semarang	18.30	238	P	P	03 34 29.6	-1.9
SMRI	Semarang	18.30	238	P	Pn	03 34 33.0	+0.1
SMRI	Semarang	18.30	238	P	P	03 34 31.6	+0.2
	288nm,0.9s						
KNRA	Kununurra	18.55	171	P	P	03 34 33.5	-0.6
	baz=19,SNR=37						
KNRA	Kununurra	18.55	171	P	P	03 34 32.7	-1.3
KNRA	Kununurra	18.55	171	P	P	03 34 34.6	+0.6
UGM	Wanagama	18.70	235	P	P	03 34 36.3	+0.5
	294nm,1.7s						
YOGI	Yogyakarta	18.83	236	P	P	03 34 37.3	+0.1
	279nm,0.8s						
DLV	T Lat	19.55	299	P	Pn	03 34 47.3	-0.4
	155nm,1.1s						
KPJI	Karang Pucung	19.73	239	P	P	03 34 46.5	-0.5
	180nm,0.7s						
JCJI	Jatiwangi	19.91	242	P	Pn	03 34 51.9	+0.2
	262nm,0.5s,12μm						
CMJI	Cimerak	20.37	239	P	P	03 34 52.6	-1.2
	176nm,1.0s						
TWG	Pinlang	20.48	347	P	P	03 34 51.0	-3.9
FITZ	Fitzroy Crossi	20.75	181	P	P	03 34 57.0	-0.8
FITZ	Fitzroy Crossi	20.75	181	P	P	03 34 57.7	-0.1
BBJI	Bungbulang	20.90	241	P	P	03 35 00.2	+0.5
YULB	Yu-li	20.98	348	P	P	03 34 56.9	-3.4
TPUB	Ta-pu	21.04	346	P	P	03 34 57.4	-3.6
TPUB	Ta-pu	21.04	346	P	P	03 35 01.1	+0.1
CNJI	Cibinong	21.29	242	P	P	03 35 04.2	+0.5
	254nm,0.9s,2μm						
SSLB	Suanglung	21.44	347	P	P	03 35 03.7	-1.5
SSLB	Suanglung	21.44	347	P	P	03 35 04.5	-0.7
GUMO	Guam	21.56	59	P	P	03 35 07.0	+0.4
	316nm,0.8s,baz=196,slow=10,SNR=13						
	316nm,0.8s						
GUMO	Guam	21.56	59	P	P	03 35 05.5	-1.1
GUMO	Guam	21.56	59	P	P	03 35 08.0	+1.4
SKJI	Sukabumi	21.66	243	P	P	03 35 09.5	+1.8
	480nm,0.8s,3μm						
SBJI	Serang	21.68	246	P	P	03 35 10.8	+2.9
	978nm,1.2s,10μm121μm						
MYKOM	Kota Tinggi	22.10	268	P	P	03 35 11.9	-0.4
MYKOM	Kota Tinggi	22.10	268	P	P	03 35 13.0	+0.7
YHNB	Yeheng	22.21	349	P	P	03 35 11.9	-1.5
YHNB	Yeheng	22.21	349	P	P	03 35 14.7	+1.4
BTDF	Bukit Timah Da	22.21	267	P	P	03 35 15.2	+1.8
BLSI	Bandar Lampung	22.21	249	P	P	03 35 15.2	+1.8
	779nm,0.9s,9μm						
CGJI	Cibinong	22.27	245	P	P	03 35 14.4	+0.4
	745nm,1.3s,8μm						
KLI	Kotabumi	22.40	250	P	P	03 35 17.1	+1.8
	878nm,0.9s,9μm						
QIZ	Qiongzhong	22.57	317	P	P	03 35 17.5	+0.6
QIZ				pP	pP	03 35 39.5	+0.3
QIZ				S	S	03 39 18.0	+2.6
QIZ				sS	sS	03 39 57.0	+1.1
QIZ				pmax	pmax		
	comp=Z,93nm,0.6s						
QIZ				pmax	pmax		
	comp=Z,280nm,3.9s						
QIZ	Qiongzhong	22.57	317	P	P	03 35 16.5	-0.4
QIZ	Qiongzhong	22.57	317	P	P	03 35 17.3	+0.4
KASI	Kota Agung	22.96	249	P	P	03 35 21.8	+1.0
	570nm,1.0s,5μm						
LWLI	Liwa	23.20	251	P	P	03 35 24.2	+1.0
	588nm,0.9s,16μm						
LWLI				pP	pP	03 35 44.6	-1.8
	588nm,0.9s,16μm						
COEN	Coen	23.84	135	P	P	03 35 27.5	-1.3
	baz=24,SNR=6.2						
COEN	Coen	23.84	135	P	P	03 35 26.7	-2.1
COEN	Coen	23.84	135	P	P	03 35 29.4	+0.6
WB0	Warramunga Arr	23.89	160	P	P	03 35 28.4	-0.9
JOW	Kunigami	24.02	5	P	P	03 35 30.3	0.0
	76nm,0.6s,baz=192,slow=11,SNR=29						
	76nm,0.6s						
JOW	Kunigami	24.02	5	P	P	03 35 30.9	+0.6
JOW	Kunigami	24.02	5	P	P	03 35 32.1	+1.8
WRAB	Tennant Creek	24.03	160	P	P	03 35 29.8	-0.7
WRAB	Tennant Creek	24.03	160	P	P	03 35 29.8	-0.7
WRAB	Tennant Creek	24.03	160	*i* P	P	03 35 29.4	-1.1
WRAB				pmax	pmax		
	comp=Z,338nm,1.0s						
WRA	Warramunga Arr	24.04	160	P	P	03 35 29.4	-1.2
	comp=Z,238nm,0.9s,baz=333,slow=11,SNR=550						
WRA				S	S	03 39 35.4	-3.6
	comp=Z,12nm,1.1s,baz=333,slow=17,SNR=5.7						
WRA				ScP	ScP	03 42 37.2	+0.6
	comp=Z,15nm,0.9s,baz=340,slow=3.3,SNR=10						
	comp=Z,238nm,0.9s						
WB2	Warramunga Arr	24.04	160	P	P	03 35 29.3	-1.3
	baz=24						
WB2	Warramunga Arr	24.04	160	P	P	03 35 30.0	-0.6
MNAI	Manna	24.05	253	P	P	03 35 30.7	-0.1
MNAI	Manna	24.05	253	P	P	03 35 32.3	+1.6
	comp=Z,319nm,1.1s,comp=Z,6μm						
XMI	Christmas Isla	24.07	237	P	P	03 35 33.0	+2.0
KSI	Kapahiang	24.20	255	P	P	03 35 33.6	+1.4
PMG	Port Moresby	24.36	120	P	P	03 35 33.9	+0.4
	comp=Z,19nm,0.4s,baz=318,slow=7.2,SNR=8.1						
	comp=Z,19nm,0.4s						
PMG	Port Moresby	24.36	120	P	P	03 35 32.8	-0.7
PMG	Port Moresby	24.36	120	P	P	03 35 35.4	+1.9
PMG	Port Moresby	24.36	120	P	P	03 35 35.2	+1.7
MASI	Maura Aman, Be	24.42	256	P	P	03 35 35.5	+1.4
	comp=Z,398nm,0.7s,comp=Z,3μm						
MASI				pP	pP	03 35 59.6	+0.6
	comp=Z,398nm,0.7s,comp=Z,3μm						
MBWA	Marble Bar	24.56	194	P	P	03 35 35.6	+0.4
MBWA	Marble Bar	24.56	194	P	P	03 35 36.1	+0.9
MBWA	Marble Bar	24.56	194	P	P	03 35 35.8	+0.5
SDSI	Sungai Dareh	24.79	262	P	P	03 35 38.2	+0.7
	comp=Z,25nm,0.6s						
PSA00	Pilbara Seismi	24.93	194	P	P	03 35 39.3	+0.7
PSA00				IAmb	IAmb	03 35 40.3	
	comp=Z,173nm,1.1s						
PSA00	Pilbara Seismi	24.93	194	P	P	03 35 38.7	+0.1
PSA00				IAmb	IAmb	03 35 40.2	
	comp=Z,86nm,1.1s						
PSA00	Pilbara Seismi	24.93	194	P	P	03 35 39.3	+0.7
IPM	Ipoh	24.93	275	P	P	03 35 38.6	-0.2
IPM				IAmb	IAmb	03 36 10.9	
	comp=Z,125nm,1.1s						
IPM	Ipoh	24.93	275	P	P	03 35 39.9	+1.2
IPM	Ipoh	24.93	275	P	P	03 35 40.0	+1.2
BKNI	Bangkinang	25.02	265	P	P	03 35 39.8	+0.2
BKNI				IAmb	IAmb	03 35 42.3	
	comp=Z,174nm,1.1s						
BKNI	Bangkinang	25.02	265	P	P	03 35 41.6	+2.0
	comp=Z,145nm,1.1s						
BKNI	Bangkinang	25.02	265	P	P	03 35 40.9	+1.3
	comp=Z,143nm,1.1s,comp=Z,4μm						
BKNI				pP	pP	03 36 05.0	-0.7
	comp=Z,143nm,1.1s,comp=Z,4μm						
KULM	Kulim	25.36	276	P	P	03 35 43.1	+0.4
KULM				IAmb	IAmb	03 36 15.9	
	comp=Z,185nm,1.4s						
PDSI	Padang	25.74	262	P	P	03 35 46.5	+0.3
	comp=Z,46nm,0.9s						
QIS	Mount Isa	26.78	151	P	P	03 35 54.9	-0.6
	baz=27,SNR=42						
QIS	Mount Isa	26.78	151	P	P	03 35 54.8	-0.6
SRIT	Nakonsritamara	26.84	284	P	P	03 35 55.9	-0.1
SRIT					pP	03 36 22.8	+1.1
SRIT				IAmb	IAmb	03 36 31.7	
	comp=Z,67nm,1.1s						
SRIT	Nakonsritamara	26.84	284	P	P	03 35 57.2	+1.3
	comp=Z,45nm,0.9s						
NAYO	Nakonayok	26.88	297	P	P	03 35 57.8	+1.5
SURA	Surathani	26.92	285	P	P	03 35 57.4	+0.7
KRVT	Keravat (AS076	26.99	105	P	P	03 35 58.1	+0.8
	comp=Z,163nm,0.8s,baz=161,slow=6.4,SNR=5.2						
KRVT				LR	LR	03 46 04.2	
	comp=Z,404nm,19.5s,baz=14,slow=35						
	comp=Z,163nm,0.8s						
PSI	Prapat	26.99	271	P	P	03 35 59.2	+1.7
PSI	Prapat	26.99	271	P	P	03 35 58.6	+1.1
PSI				pmax	pmax		
	comp=Z,62nm,1.0s						
RPSI	Rantau Prapat	27.00	270	P	P	03 35 58.6	+1.2
RPSI				IAmb	IAmb	03 35 59.1	
	comp=Z,62nm,1.0s						
RABL	Rabaul	27.09	105	P	P	03 35 58.4	+0.1
RABL	Rabaul	27.09	105	P	P	03 35 58.7	+0.4
AS31	Alice Springs	27.40	164	P	P	03 36 00.2	-0.7
AS31				IAmb	IAmb	03 36 05.1	
	comp=Z,19nm,0.3s						
ASAR	Alice Springs	27.41	164	P	P	03 36 00.3	-0.6
	comp=Z,14nm,0.4s,baz=347,slow=7.6,SNR=170						
ASAR				PcP	PcP	03 39 17.5	+0.6
	comp=Z,3.5nm,0.8s,baz=339,slow=2.1,SNR=2.8						
ASAR				S	S	03 40 32.4	+0.1
	comp=Z,5.9nm,1.0s,baz=348,slow=24,SNR=3.3						
ASAR				ScP	ScP	03 42 47.4	+1.1
	comp=Z,4.0nm,0.7s,baz=358,slow=3.0,SNR=5.3						
	comp=Z,14nm,0.4s						
ASAR	Alice Springs	27.41	164	P	P	03 36 00.6	-0.4
AS01	Alice Springs	27.42	164	P	P	03 36 00.7	-0.3
	comp=Z,54nm,0.9s						
MTSU	Mount Surprise	27.56	140	P	P	03 36 02.7	+0.3
	baz=28,SNR=7.6						
MTSU	Mount Surprise	27.56	140	P	P	03 36 03.1	+0.7
GIRL	Giralia	27.74	204	P	P	03 36 05.4	+1.6
WRKA	Warakurna	27.75	175	P	P	03 36 03.9	0.0
	baz=28,SNR=14						
WRKA	Warakurna	27.75	175	P	P	03 36 04.7	+0.7
JCJ	Chichijima	28.75	31	P	P	03 36 11.7	-1.1
	comp=Z,194nm,0.8s,baz=249,slow=5.6,SNR=6.1						
	comp=Z,194nm,0.8s						
JCJ	Chichijima	28.75	31	P	P	03 36 11.4	-1.3
JCJ	Chichijima	28.75	31	P	P	03 36 13.3	+0.5
JSU	Suzuyama	28.89	8	P	P	03 36 13.8	-0.2
PHRA	Phrae	29.64	304	P	P	03 36 21.2	+0.4
WHN	Wuhan	29.72	340	⇓P	P	03 36 24.3	+3.0
WHN				sP	sP	03 37 05.0	+2.7
WHN				pmax	pmax		
	comp=Z,56nm,0.8s						
NJ2	Nanjing	29.87	348	⇓P	P	03 36 24.8	+2.1
NJ2				pP	pP	03 36 49.5	+0.2
NJ2				sP	sP	03 37 01.3	-2.2
NJ2				pmax	pmax		
	comp=Z,21nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,190nm,3.5s						
GYA	Guiyang	29.95	324	*e*P	P	03 36 25.0	+1.4
GYA				pP	pP	03 36 55.8	+5.6
GYA				S	S	03 41 17.8	+5.4
GYA				ScP	ScP	03 42 55.5	+1.2
GYA				pmax	pmax		
	comp=Z,16nm,1.2s						
GYA				LR	LR		
	comp=Z,270nm,7.7s						
CTA	Charters Tower	30.23	140	P	P	03 36 25.3	-0.7
	comp=Z,20nm,1.0s,baz=338,slow=11,SNR=5.6						
CTA				LR	LR	03 50 59.1	
	comp=Z,90nm,20.5s,baz=261,slow=41						
	comp=Z,20nm,1.0s						
CTA	Charters Tower	30.23	140	P	P	03 36 25.6	-0.4
	baz=30						
CTAO	Charters Tower	30.23	140	P	P	03 36 25.6	-0.4
CTAO				IAmb	IAmb	03 36 27.5	
	comp=Z,47nm,1.1s						
CTAO	Charters Tower	30.23	140	P	P	03 36 25.6	-0.4
CTAO				pmax	pmax		
	comp=Z,47nm,1.2s						
JNU	Nakatsue	30.54	8	P	P	03 36 28.5	-0.1
	comp=Z,52nm,0.8s,baz=228,slow=2.3,SNR=31						
	comp=Z,52nm,0.8s						
JNU	Nakatsue	30.54	8	P	P	03 36 28.9	+0.3
JNU				IAmb	IAmb	03 36 29.8	
	comp=Z,56nm,0.8s						
JNU	Nakatsue	30.54	8	P	P	03 36 29.5	+0.9
CM31	Chiang Mai Arr	30.70	302	P	P	03 36 30.5	+0.3
CM31				IAmb	IAmb	03 36 33.1	
	comp=Z,51nm,0.9s						
CMAR	Chiang Mai Arr	30.70	302	P	P	03 36 30.9	+0.7
	comp=Z,41nm,0.9s,baz=116,slow=7.0,SNR=77						
CMAR				ScP	ScP	03 42 57.8	+0.9
	comp=Z,1.5nm,0.3s,baz=146,slow=2.1,SNR=10						
	comp=Z,41nm,0.9s						
CHTO	Chiang Mai	30.86	303	P	P	03 36 32.1	+0.5
CHTO	Chiang Mai	30.86	303	P	P	03 36 32.1	+0.5
CHTO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ENH	Enshi	31.48	332	P	P	03 36 36.7	-0.2
ENH				IAmb	IAmb	03 36 37.8	
	comp=Z,49nm,0.8s						
ENH	Enshi	31.48	332	P	P	03 36 37.4	+0.5
ENH	Enshi	31.48	332	P	P	03 36 35.9	-1.1
ENH				pP	pP	03 37 02.1	-1.8

KMI	Kunming	31.52	317	⇑P	P	03 36 38.8	+1.3
KMI				pP	pwP	03 37 05.5	-0.5
KMI				sP	sP	03 37 18.3	+0.3
KMI				S	S	03 41 36.5	-0.7
KMI				sS	sS	03 42 25.0	+1.9
KMI				pmax	pmax		
	comp=Z,51nm,0.7s						
KMI				LR	LR		
	comp=Z,840nm,20.2s						
KMI				LR	LR		
	comp=Z,700nm,20.7s						
KMI				LR	LR		
	comp=Z,380nm,23.8s						
KMI	Kunming	31.52	317	P	P	03 36 37.6	+0.1
KMI				pP	pwP	03 37 06.2	+0.2
JMN	Monobe	31.67	13	P	P	03 36 38.7	+0.1
JMN				IAmb	IAmb	03 36 40.5	
	comp=Z,59nm,0.8s						
JMN	Monobe	31.67	13	P	P	03 36 39.6	+1.1
	comp=Z,87nm,0.9s						
OOD	Oodnadatta	31.81	163	P	P	03 36 40.2	+0.4
	comp=Z,48nm,1.2s						
JHS	Saijyo	32.74	11	P	P	03 36 48.4	+0.5
JHS				IAmb	IAmb	03 36 51.0	
	comp=Z,41nm,0.6s						
JHS	Saijyo	32.74	11	P	P	03 36 49.4	+1.5
MORW	Morawa	33.06	196	P	P	03 36 51.0	+0.3
	baz=33,SNR=15						
MORW	Morawa	33.06	196	P	P	03 36 50.3	-0.5
MORW				IAmb	IAmb	03 36 52.1	
	comp=Z,69nm,0.9s						
MORW	Morawa	33.06	196	P	P	03 36 51.4	+0.7
	comp=Z,82nm,0.9s						
PZH	PanZhiHua	33.10	318	⇑P	P	03 36 51.3	+0.1
PZH				pP	pP	03 37 16.5	-1.3
PZH				S	S	03 41 58.0	-3.5
PZH				ScP	ScP	03 43 06.0	+1.0
PZH				ScS	ScS	03 47 06.3	+0.4
PZH				pmax	pmax		
	comp=Z,70nm,0.9s						
PZH				pmax	pmax		
	comp=Z,140nm,3.6s						
PZH				LR	LR		
	comp=Z,580nm,20.4s						
PZH				LR	LR		
	comp=Z,550nm,19.6s						
PZH				LR	LR		
	comp=Z,300nm,29.4s						
FORT	Forrest	33.43	177	P	P	03 36 54.1	+0.3
	baz=34,SNR=32						
FORT	Forrest	33.43	177	P	P	03 36 54.2	+0.3
FORT	Forrest	33.43	177	P	P	03 36 54.6	+0.7
INKA	Innaminka	33.52	156	P	P	03 36 55.7	+1.0
INU	Inuyama	33.99	16	P	P	03 36 58.3	-0.4
INU				IAmb	IAmb	03 37 00.1	
	comp=Z,68nm,0.9s						
INU	Inuyama	33.99	16	P	P	03 36 59.5	+0.8
INU	Inuyama	33.99	16	P	P	03 36 58.3	-0.4
INU				pP	pwP	03 37 30.1	+0.9
LYN	LuoYang	34.01	340	eP	P	03 36 58.8	-0.1
LYN				pP	pP	03 37 26.5	+0.4
LYN				sP	sP	03 37 41.5	+1.2
LYN				S	S	03 42 14.0	-1.2
LYN				pmax	pmax		
	comp=Z,14nm,1.7s						
QLP	Quilpie	34.12	150	P	P	03 36 59.3	-0.6
	baz=34,SNR=4.0						
QLP	Quilpie	34.12	150	P	P	03 36 59.7	-0.2
KMBL	Kambalda	34.18	186	P	P	03 37 00.9	+0.6
	baz=34,SNR=21						
KMBL	Kambalda	34.18	186	P	P	03 37 01.2	+0.8
JGF	Kuroka	34.33	17	P	P	03 37 00.7	-1.0
JGF				IAmb	IAmb	03 37 03.2	
	comp=Z,55nm,0.7s						
JGF	Kuroka	34.33	17	P	P	03 37 02.0	+0.3
BLDU	Ballidu	34.36	194	P	P	03 37 02.3	+0.3
	baz=34,SNR=25						
BLDU	Ballidu	34.36	194	P	P	03 37 02.5	+0.6
INCN	Inchon	34.54	1	P	P	03 37 05.3	+1.9
KSAR	Wonju Array Be	34.54	3	P	P	03 37 04.0	+0.6
KSAR	Wonju Array Be	34.54	3	P	P	03 37 04.0	+0.6
KSRS	Korea Array	34.55	3	P	P	03 37 04.3	+0.8
	comp=Z,17nm,0.6s,baz=180,slow=9.8,SNR=84						
KSRS				PcP	PcP	03 39 36.6	+1.0
	comp=Z,3.6nm,0.6s,baz=188,slow=2.6,SNR=6.2						
	comp=Z,17nm,0.6s						
KS19	Wonju Array Si	34.60	3	P	P	03 37 03.9	0.0
KS19				IAmb	IAmb	03 37 06.5	
	comp=Z,20nm,0.7s						
MND	Mandalay	34.72	306	P	P	03 37 05.0	-0.1
XAN	Xi'an	34.92	335	⇓P	P	03 37 06.8	0.0
XAN				pP	pP	03 37 39.0	+5.0
XAN				sP	sP	03 37 51.3	+3.1
XAN				S	S	03 42 24.5	-4.9
XAN				ScP	ScP	03 43 12.5	+1.3
XAN				pmax	pmax		
	comp=Z,43nm,1.0s						
CD2	Chengdu	34.96	325	P	P	03 37 06.8	-0.4
CD2				pmax	pmax		
	comp=Z,40nm,1.3s						
CD2				pmax	pmax		
	comp=Z,130nm,6.5s						
CD2				LR	LR		
	comp=Z,240nm,12.8s						
CD2				LR	LR		
	comp=Z,370nm,9.6s						
CD2				LR	LR		
	comp=Z,160nm,16.2s						
LCRK	Leigh Creek	35.06	161	P	P	03 37 08.4	+0.5
	comp=Z,161nm,1.1s						
KLBR	Kellerberrin	35.06	192	P	P	03 37 08.5	+0.5
	baz=35,SNR=9.9						
KLBR	Kellerberrin	35.06	192	P	P	03 37 08.5	+0.5
RK1H	Rockhampton Ha	35.33	139	P	P	03 37 10.7	+0.3
	comp=Z,72nm,1.0s						
MAJO	Matsushiro	35.45	17	P	P	03 37 10.8	-0.5
MAJO				IAmb	IAmb	03 37 11.6	
	comp=Z,51nm,0.7s						
MAJO	Matsushiro	35.45	17	P	P	03 37 10.6	-0.7
MAJO	Matsushiro	35.45	17	i P	P	03 37 09.3	-2.0
MAJO				pmax	pmax		
	comp=Z,48nm,0.7s						
MAJO	Matsushiro	35.45	17	P	P	03 37 09.8	-1.5
MAJO				pP	pwP	03 37 41.6	+0.2
MJAR	Matsushiro Arr	35.45	17	P	P	03 37 10.5	-0.8
	comp=Z,33nm,0.8s,baz=198,slow=9.0,SNR=80						
MJAR				LR	LR	03 49 51.7	
	comp=Z,85nm,20.8s,baz=202,slow=33						
	comp=Z,33nm,0.8s						
MJB9	Matsu-Tunnel	35.45	17	P	P	03 37 10.6	-0.7
MJB9				IAmb	IAmb	03 37 11.6	
	comp=Z,50nm,0.7s						
MUN	Mundaring	35.78	194	P	P	03 37 14.7	+0.5
	baz=36,SNR=7.1						
HNS	HongShan	35.97	345	⇓P	P	03 37 15.5	-0.1
HNS				pmax	pmax		
	comp=Z,38nm,1.1s						
HNR	Honiara	35.98	110	P	P	03 37 14.8	-1.3
	comp=Z,5µm,0.8s,baz=193,slow=3.2,SNR=9.8						
HNR	Honiara	35.98	110	P	P	03 37 16.6	+0.5
HNR	Honiara	35.98	110	P	P	03 37 14.5	-1.5
DL2	Dalian	36.17	354	eP	P	03 37 18.0	+0.7
DL2				pmax	pmax		
	comp=Z,31nm,0.7s						
NWAO	Narrogin (SRO)	36.46	192	P	P	03 37 20.0	+0.1
	comp=Z,19nm,0.4s,baz=35,slow=6.1,SNR=24						
NWAO				LR	LR	03 52 14.2	
	comp=Z,123nm,21.3s,baz=312,slow=36						
	comp=Z,19nm,0.4s						
NWAO	Narrogin (SRO)	36.46	192	P	P	03 37 20.5	+0.6
	baz=37,SNR=16						
NWAO				P	P	03 37 20.5	+0.6
	baz=37,SNR=16						
NWAO	Narrogin (SRO)	36.46	192	P	P	03 37 20.5	+0.6
NWAO				IAmb	IAmb	03 37 21.5	
	comp=Z,57nm,0.9s						
NWAO	Narrogin (SRO)	36.46	192	P	P	03 37 20.9	+1.0
NWAO				IAmb	IAmb	03 37 21.5	
	comp=Z,178nm,0.9s						
NWAO	Narrogin (SRO)	36.46	192	P	P	03 37 21.5	+1.6
NWAO	Narrogin (SRO)	36.46	192	P	P	03 37 21.7	+1.8
NWAO	Narrogin (SRO)	36.46	192	P	P	03 37 20.9	+1.0
NWAO				pmax	pmax		
	comp=Z,178nm,0.9s						
RMQ	Roma	36.50	144	P	P	03 37 19.6	-0.8
	baz=37,SNR=8.1						
RMQ	Roma	36.50	144	P	P	03 37 20.1	-0.3
BBOO	Buckleboo	36.67	166	P	P	03 37 21.4	-0.3
	baz=37,SNR=30						
BBOO	Buckleboo	36.67	166	P	P	03 37 21.5	-0.1
BBOO				IAmb	IAmb	03 37 22.4	
	comp=Z,53nm,0.8s						
BBOO	Buckleboo	36.67	166	P	P	03 37 22.0	+0.3
JSD	Sado	36.86	16	P	P	03 37 22.7	-0.4
JSD	Sado	36.86	16	P	P	03 37 23.0	-0.2
EIDS	Eidsvold	37.10	140	P	P	03 37 24.8	-0.7
	baz=37,SNR=6.4						
EIDS	Eidsvold	37.10	140	P	P	03 37 24.6	-0.9
EIDS	Eidsvold	37.10	140	P	P	03 37 25.0	-0.5
WHYH	Whyalla	37.28	164	P	P	03 37 26.8	0.0
	comp=Z,69nm,0.8s						
JMM	Marumori	37.48	19	P	P	03 37 28.9	+0.5
JMM	Marumori	37.48	19	P	P	03 37 29.3	+0.9
STKA	Stephens Creek	37.53	158	P	P	03 37 28.6	-0.4
	comp=Z,30nm,0.4s,baz=340,slow=7.9,SNR=59						
STKA				LR	LR	03 54 10.2	
	comp=Z,174nm,18.2s,baz=330,slow=38						
	comp=Z,30nm,0.4s						
STKA	Stephens Creek	37.53	158	P	P	03 37 29.0	0.0
	baz=38,SNR=46						
STKA	Stephens Creek	37.53	158	P	P	03 37 29.0	0.0
STKA	Stephens Creek	37.53	158	P	P	03 37 29.3	+0.3
STKA	Stephens Creek	37.53	158	P	P	03 37 29.0	0.0
STKA				pmax	pmax		
	comp=Z,21nm,1.0s						
HTT	Hallett	38.04	162	P	P	03 37 33.6	+0.3
	baz=38,SNR=7.8						
HTT	Hallett	38.04	162	P	P	03 37 33.9	+0.6
BJT	Baijiatuau	38.12	348	P	P	03 37 33.5	-0.3
BJT				IAmb	IAmb	03 38 23.2	
	comp=Z,34nm,0.9s						
BJT	Baijiatuau	38.12	348	P	P	03 37 35.0	+1.2
BJT	Baijiatuau	38.12	348	P	P	03 37 33.5	-0.3
BJT				pmax	pmax		
	comp=Z,34nm,0.9s						
BJI	Beijing	38.13	348	P	P	03 37 33.5	-0.4
BJI				S	S	03 43 15.5	-2.4
BJI				ScS	ScS	03 47 33.5	+0.9
BJI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
RKGY	Rocky Gully	38.14	192	P	P	03 37 35.1	+1.1
	baz=38,SNR=5.9						
BRDH	Bariadhala	38.69	304	P	P	03 37 38.4	-0.5
	comp=Z,89nm,0.3s,baz=90,slow=4.9,SNR=4.5						
	comp=Z,89nm,0.3s						
SNY	Shenyang	38.93	357	⇑P	P	03 37 41.0	+0.5
SNY				pP	pP	03 38 09.3	+1.4
SNY				S	S	03 43 27.3	-2.5
SNY				pmax	pmax		
	comp=Z,55nm,0.7s						
SNY				pmax	pmax		
	comp=Z,230nm,4.9s						
SNY				LR	LR		
	comp=Z,220nm,5.5s						
SNY				LR	LR		
	comp=Z,160nm,5.2s						
SNY				LR	LR		
	comp=Z,220nm,5.9s						
LZH	Lanzhou	38.94	331	⇑P	P	03 37 41.5	+0.6
LZH				pP	pP	03 38 08.5	+0.1
LZH				sP	sP	03 38 17.8	-4.7
LZH				S	S	03 43 27.5	-3.0
LZH				pmax	pmax		
	comp=Z,100nm,1.2s						
LZH				pmax	pmax		
	comp=Z,280nm,4.5s						
LZH				LR	LR		
	comp=Z,550nm,16.5s						
LZH				LR	LR		
	comp=Z,500nm,17.8s						
LZH				LR	LR		
	comp=Z,320nm,20.0s						
CMSA	Cobar Meteorol	38.95	153	P	P	03 37 41.2	+0.3
	baz=39,SNR=21						
CMSA	Cobar Meteorol	38.95	153	P	P	03 37 41.4	+0.5
SHL	Shillong	39.82	308	P	P	03 37 48.1	-0.4
SHL					PcP	03 39 52.9	+0.6
SHL	Shillong	39.82	308	P	P	03 37 48.1	-0.4
SHL						03 39 52.9	
SHL				pmax	pmax		
	comp=Z,106nm,0.6s						
SHL	Shillong	39.82	308	P	P	03 37 48.2	-0.4
	SNR=21						
HHC	Hu-ho-hao-te	40.06	343	eP	P	03 37 50.5	+0.4
HHC				pP	pP	03 38 16.3	-1.5
HHC				S	S	03 43 41.0	-6.0
HHC				pmax	pmax		
	comp=Z,38nm,1.1s						
HHC				pmax	pmax		
	comp=Z,160nm,6.7s						
JTM	Tenmabayashi	40.22	18	P	P	03 37 52.0	+0.7
JTM	Tenmabayashi	40.22	18	P	P	03 37 52.8	+1.5
BTO	Baotou	40.31	341	eP	P	03 37 52.8	+0.6
BTO				pP	pP	03 38 21.8	+1.9
BTO				sP	sP	03 38 36.5	+2.7
BTO				S	S	03 43 52.3	+1.5
BTO				sS	sS	03 44 42.5	+4.7
BTO				SS	SS	03 46 52.0	-2.5
BTO				ScS	ScS	03 47 43.0	-2.7
BTO				pmax	pmax		
	comp=Z,21nm,0.6s						
BTO				pmax	pmax		
	comp=Z,360nm,6.2s						
BTO				LR	LR		
	comp=Z,460nm,5.9s						
BTO				LR	LR		
	comp=Z,440nm,5.8s						
BTO				LR	LR		
	comp=Z,620nm,13.9s						
GC1S	Gold Coast 1 S	40.61	141	P	P	03 37 56.1	+1.5
CN2	Changchun	40.85	359	eP	P	03 37 55.5	-0.9
CN2				epP	pP	03 38 20.5	-3.0
CN2				eS	S	03 43 59.0	+0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				LR	LR		
	comp=Z,180nm,16.0s						
CN2				LR	LR		
	comp=Z,260nm,16.0s						
CN2				LR	LR		
	comp=Z,270nm,18.0s						
AUDCS	Dubbo College	40.93	150	P	P	03 37 57.7	+0.5
ARMA	Armidale	41.12	145	P	P	03 37 59.9	+0.9
	baz=41,SNR=48						
ARMA	Armidale	41.12	145	P	P	03 37 59.6	+0.6
ARMA	Armidale	41.12	145	P	P	03 37 59.8	+0.9
AUPHS	Peel High Scho	41.22	147	P	P	03 38 00.3	+0.6
	comp=Z,36nm,1.3s						
USA0B	Ussuriysk Arra	41.59	7	P	P	03 38 03.1	+0.7
USA0B				IAmb	IAmb	03 38 04.0	
	comp=Z,28nm,0.7s						
USA0B	Ussuriysk Arra	41.59	7	P	P	03 38 03.1	+0.7
USA0B				pmax	pmax		
	comp=Z,28nm,0.7s						
USRK	Ussuriysk Ar.	41.59	7	P	P	03 38 02.6	+0.2
	comp=Z,29nm,0.6s,baz=192,slow=5.8,SNR=66						
	comp=Z,29nm,0.6s						
USRK	Ussuriysk Ar.	41.59	7	P	P	03 38 03.3	+0.9
USRK	Ussuriysk Ar.	41.59	7	P	P	03 38 03.3	+0.9
MDJ	Mudanjiang	41.79	4	P	P	03 38 04.8	+0.8
MDJ				pP	pP	03 38 29.8	-1.2
MDJ				sP	sP	03 38 44.3	-0.3
MDJ				PcP	PcP	03 39 57.8	-0.2
MDJ				PcS	PcS	03 43 49.5	0.0
MDJ				S	S	03 44 15.0	+2.8
MDJ				pmax	pmax		
	comp=Z,61nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,160nm,6.9s						
MDJ	Mudanjiang	41.79	4	P	P	03 38 04.6	+0.6
MDJ				IAmb	IAmb	03 38 06.1	
	comp=Z,39nm,0.7s						
MDJ					pP	03 38 29.4	-1.6
MDJ	Mudanjiang	41.79	4	P	P	03 38 05.2	+1.2
XLT	XiLinHaoTe	41.87	349	eP	P	03 38 05.0	+0.1
XLT				S	S	03 44 13.5	-0.2
XLT				pmax	pmax		
	comp=Z,40nm,1.1s						
XLT				pmax	pmax		
	comp=Z,100nm,3.9s						
XLT				LR	LR		
	comp=Z,290nm,16.7s						
XLT				LR	LR		
	comp=Z,130nm,12.5s						
ERM	Erimo	42.00	19	P	P	03 38 06.4	+0.6
ERM				IAmb	IAmb	03 38 49.5	
	comp=Z,34nm,1.0s						
ERM	Erimo	42.00	19	ceP	P	03 38 07.1	+1.3
ERM				pmax	pmax		
	comp=Z,32nm,1.0s						
ARPS	Mount Arapiles	42.04	161	P	P	03 38 06.9	+0.7
	baz=42,SNR=8.8						
ARPS	Mount Arapiles	42.04	161	P	P	03 38 07.5	+1.3
LSA	Lhasa	42.49	313	P	P	03 38 11.5	+0.9
LSA				pmax	pmax		
	comp=Z,58nm,0.6s						
LSA	Lhasa	42.49	313	P	P	03 38 11.0	+0.4
LSA				IAmb	IAmb	03 38 13.7	
	comp=Z,44nm,0.6s						
LSA	Lhasa	42.49	313	P	P	03 38 11.0	+0.4
LSA				pmax	pmax		
	comp=Z,44nm,0.6s						
LSA	Lhasa	42.49	313	P	P	03 38 11.9	+1.3
YNG	Young	42.50	152	P	P	03 38 10.6	+0.6
BNX	BinXian	42.80	1	⇑P	P	03 38 12.5	+0.2
BNX				pmax	pmax		
	comp=Z,14nm,0.8s						
BNX				pmax	pmax		
	comp=Z,26nm,4.0s						
H11S3	WAKE ISLAND Hy	42.83	66	T	T	04 25 06.0	
	baz=253,slow=75,SNR=14						
H11S1	WAKE ISLAND Hy	42.84	66	T	T	04 25 28.5	
	baz=253,slow=75,SNR=19						
H11S2	WAKE ISLAND Hy	42.84	66	T	T	04 25 28.5	
	baz=253,slow=75,SNR=44						
MGCD	Mangrove Creek	42.97	148	P	P	03 38 13.5	-0.3
	baz=43,SNR=5.4						
MGCD	Mangrove Creek	42.97	148	P	P	03 38 14.4	+0.6
TEY	Ternei	43.12	11	⇑eP	P	03 38 15.7	+1.0
TEY				pmax	pmax		
	comp=Z,90nm,0.7s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.6s						
TEY				pmax	pmax		
	comp=N,50nm,0.7s						
H11N1	WAKE ISLAND Hy	43.37	64	T	T	04 24 42.6	
	baz=254,slow=75,SNR=6.7						
H11N2	WAKE ISLAND Hy	43.38	64	T	T	04 24 46.4	
	baz=254,slow=75,SNR=9.4						
H11N3	WAKE ISLAND Hy	43.38	64	T	T	04 24 43.8	
	baz=254,slow=75,SNR=8.2						
GTA	Gaotai	43.52	330	⇓P	P	03 38 18.8	+0.5
GTA				PcP	PcP	03 40 05.0	+0.9
GTA				ScS	ScS	03 48 05.3	-0.1
GTA				pmax	pmax		
	comp=N,30nm,1.0s						
GTA				LR	LR		
	comp=N,260nm,18.5s						
GTA				LR	LR		
	comp=N,230nm,18.9s						
GTA				LR	LR		
	comp=N,190nm,20.4s						
CAN	Canberra	43.62	152	P	P	03 38 19.0	-0.1
CAN				IAmb	IAmb	03 38 21.4	
	comp=Z,75nm,1.0s						
CAN	Canberra	43.62	152	P	P	03 38 20.0	+0.9
CAN	Canberra	43.62	152	P	P	03 38 19.0	-0.1
CAN				pmax	pmax		
	comp=Z,75nm,1.0s						
CAN	Canberra	43.62	152	P	P	03 38 19.7	+0.6
CAN				pP	pP	03 38 48.6	+1.8
ASAJ	Asahikawa	43.72	17	P	P	03 38 21.0	+1.4
	comp=Z,64nm,0.6s,baz=226,slow=9.7,SNR=69						
ASAJ				LR	LR	03 58 20.6	
	comp=Z,72nm,19.5s,baz=150,slow=38						
	comp=Z,64nm,0.6s						
ASAJ	Asahikawa	43.72	17	P	P	03 38 20.3	+0.6
ASAJ				pmax	pmax		
	comp=Z,80nm,0.8s						
JKA	Kamikawa-asahi	43.72	17	P	P	03 38 20.2	+0.6
JKA				IAmb	IAmb	03 38 21.9	
	comp=Z,80nm,0.8s						
CNB	Canberra Magne	43.79	152	P	P	03 38 22.1	+1.7
	comp=Z,39nm,1.3s						
GOMU	GeErMu	43.96	323	P	P	03 38 22.8	+0.7
GOMU				SS	SS	03 47 57.0	-10
GOMU				pmax	pmax		
	comp=Z,23nm,1.4s						
GOMU				pmax	pmax		
	comp=Z,150nm,5.4s						
GOMU				LR	LR		
	comp=Z,150nm,12.2s						
GOMU				LR	LR		
	comp=Z,90nm,12.2s						
GOMU				LR	LR		
	comp=Z,150nm,12.9s						
TAPN	Taplejung	43.96	308	eP	P	03 38 22.4	+0.2
	comp=Z,105nm,0.6s						
TOO	Toolangi	44.05	158	P	P	03 38 24.0	+1.5
	baz=44,SNR=4.6						
TOO	Toolangi	44.05	158	P	P	03 38 23.8	+1.3
TOO				IAmb	IAmb	03 38 25.1	
	comp=Z,75nm,1.4s						
TOO	Toolangi	44.05	158	P	P	03 38 23.8	+1.3
TOO	Toolangi	44.05	158	P	P	03 38 23.8	+1.3
TOO				pmax	pmax		
	comp=Z,75nm,1.4s						
KOUNC	Koumac, New Ca	44.16	123	P	P	03 38 23.7	+0.2
KOUNC				IAmb	IAmb	03 38 25.2	
	comp=Z,58nm,1.0s						
KOUNC	Koumac, New Ca	44.16	123	P	P	03 38 24.4	+0.9
	comp=Z,82nm,1.5s						
RAMN	Ramite	44.67	306	eP	P	03 38 27.6	-0.2
PALK	Pallekele	45.28	277	P	P	03 38 32.0	-0.6
	comp=Z,16nm,0.7s,baz=182,slow=7.3,SNR=13						
PALK				PcP	PcP	03 40 11.9	+1.3
	comp=Z,8.9nm,0.8s,baz=172,slow=1.6,SNR=3.8						
	comp=Z,16nm,0.7s						
PALK	Pallekele	45.28	277	P	P	03 38 32.1	-0.4
PALK	Pallekele	45.28	277	P	P	03 38 32.2	-0.4
PALK				pmax	pmax		
	comp=Z,27nm,1.0s						
PALK	Pallekele	45.28	277	P	P	03 38 28.2	-4.4
JIRN	Jiri	45.31	307	eP	P	03 38 32.9	-0.1
GUN	Gumba	45.66	307	eP	P	03 38 35.5	-0.3
	comp=Z,233nm,0.6s						
PKI	Pulchoki	45.89	307	eP	P	03 38 36.8	-0.8
PKIN	Phulchoki	45.91	307	eP	P	03 38 36.7	-0.9
	comp=Z,44nm,0.4s						
DMN	Daman	46.15	306	eP	P	03 38 39.2	-0.3
	comp=Z,234nm,0.9s						
YSS	Yuzh-Sakhalins	46.36	16	P	P	03 38 40.5	0.0
YSS				IAmb	IAmb	03 38 41.8	
	comp=Z,53nm,0.5s						
YSS	Yuzh-Sakhalins	46.36	16	P	P	03 38 41.5	+1.0
YSS	Yuzh-Sakhalins	46.36	16	ceP	P	03 38 40.7	+0.2
YSS				pmax	pmax		
	comp=Z,49nm,0.8s						
YSS	Yuzh-Sakhalins	46.36	16	P	P	03 38 40.5	0.0
LHI	Lord Howe Isla	46.41	140	P	P	03 38 40.3	-0.9
	baz=46,SNR=3.3						
LHI	Lord Howe Isla	46.41	140	P	P	03 38 41.3	+0.2
LHI				IAmb	IAmb	03 38 42.3	
	comp=Z,36nm,0.9s						
LHI	Lord Howe Isla	46.41	140	P	P	03 38 42.1	+0.9
	comp=Z,53nm,1.8s						
NOUC	Port Laguerre	46.54	124	P	P	03 38 43.1	+0.8
NOUC	Port Laguerre	46.54	124	P	P	03 38 41.1	-1.1
KLR	Kul'dur	46.54	5	P	P	03 38 42.0	+0.2
	comp=Z,22nm,0.5s,baz=194,slow=5.6,SNR=111						
	comp=Z,22nm,0.5s						
KLR	Kul'dur	46.54	5	ceP	P	03 38 41.4	-0.5
KLR				pmax	pmax		
	comp=Z,30nm,1.0s						
HIA	Hailar	46.62	354	P	P	03 38 43.5	+1.0
HIA	Hailar	46.62	354	i P	P	03 38 41.7	-0.8
HIA				pmax	pmax		
	comp=Z,15nm,0.8s						
DZM	Mont Dzumac	46.64	124	LR	LR	03 57 56.2	
	comp=Z,135nm,21.5s,baz=19,slow=35						
DZM	Mont Dzumac	46.64	124	P	P	03 38 43.0	-0.2
DZM				IAmb	IAmb	03 38 45.1	
	comp=Z,122nm,1.2s						
DZM	Mont Dzumac	46.64	124	P	P	03 38 44.4	+1.2
DZM	Mont Dzumac	46.64	124	P	P	03 38 42.7	-0.5
DZM				pP	pP	03 39 08.1	-2.9

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GKN    Gorkha            46.70 307 eP     P     03 38 43.1 -0.5
LIFNC  LIFOU             46.74 122  P     P     03 38 43.7 -0.1
LIFNC  LIFOU             46.74 122  P     P     03 38 45.4 +1.5
       comp=Z,432nm,1.2s
ONTNC  Ouen Toro         46.75 124  P     P     03 38 42.8 -1.1
ONTNC                               IAmb  IAmb  03 38 45.5
       comp=Z,102nm,1.2s
ONTNC  Ouen Toro         46.75 124  P     P     03 38 44.8 +0.9
       comp=Z,81nm,1.4s
YATNC  Mamie plateau,    47.00 124  P     P     03 38 47.1 +1.2
       comp=Z,168nm,1.4s
OUENC  Ouen Island, N    47.12 124  P     P     03 38 46.5 -0.3
OUENC                               IAmb  IAmb  03 38 49.0
       comp=Z,100nm,1.4s
OUENC  Ouen Island, N    47.12 124  P     P     03 38 48.2 +1.4
       comp=Z,62nm,1.7s
HEH    HeiHe             47.32   1  P     P     03 38 47.8 -0.1
HEH                                 pP    pP    03 39 13.5 -2.2
HEH                                 S     S     03 45 28.5 -3.5
HEH                                 pmax  pmax
       comp=Z,61nm,0.7s
HEH                                 pmax  pmax
       comp=Z,110nm,3.8s
DANN   Dangsing          47.54 307 eP     P     03 38 50.0 -0.4
       comp=Z,379nm,0.7s
PINNC  Pines Island,     47.71 124  P     P     03 38 51.6 +0.3
PINNC  Pines Island,     47.71 124  P     P     03 38 53.1 +1.8
       comp=Z,113nm,1.3s
ULN    Ulaanbaatar       47.78 343  P     P     03 38 51.6 -0.1
ULN    Ulaanbaatar       47.78 343ceP     P     03 38 50.6 -1.1
ULN                                 pmax  pmax
       comp=Z,30nm,1.0s
ULN    Ulaanbaatar       47.78 343  P     P     03 38 50.8 -0.9
ULN                                 pP    pP    03 39 25.1 +4.9
ULN                                 sP    sP    03 39 35.1 +1.0
SONM   Songino Array     47.95 342  P     P     03 38 52.8 -0.2
       comp=Z,25nm,1.0s,baz=162,slow=9.2,SNR=54
SONM                                PcP   PcP   03 40 20.1 +0.7
       comp=Z,7.9nm,0.7s,baz=166,slow=5.3,SNR=4.3
SONM                                ScP   ScP   03 44 02.9 +0.4
       comp=Z,1.8nm,0.8s,baz=193,slow=5.9,SNR=3.7
       comp=Z,25nm,1.0s
SONM   Songino Array     47.95 342  P     P     03 38 53.0  0.0
SONM   Songino Array     47.95 342  P     P     03 38 53.0  0.0
SONM                                pmax  pmax
       comp=Z,25nm,1.0s
PYUN   Piuthan           48.06 306 eP     P     03 38 54.3  0.0
UGL    Uglegorsk         48.14  14 eP     P     03 38 53.7 -0.5
UGL                                 pmax  pmax
       comp=Z,110nm,0.6s
GRNR   Gornyy            48.63   9⇑iP     P     03 38 58.9 +0.9
GRNR                                pmax  pmax
       comp=E,3.0nm,0.7s
GRNR                                pmax  pmax
       comp=N,10.0nm,1.2s
GRNR                                pmax  pmax
       comp=Z,20nm,1.0s
GRNR                                MLR   MLR
       comp=E,570nm,12.0s
GRNR                                MLR   MLR
       comp=N,230nm,16.0s
GRNR                                MLR   MLR
       comp=Z,120nm,15.0s
HYB    Hyderabad         48.71 291⇑eP     P     03 38 58.7 -0.5
HYB                                 IVmB_BB     03 38 59.9
       comp=Z,781nm,1.0s
PCHI   Peechi            49.81 281⇓eP     P     03 39 07.5 -0.1
TYV    Tymovskoe         49.94  14 eP     P     03 39 08.7 +0.8
TYV                                eS     S     03 46 12.5 +3.6
TYV                                 pmax  pmax
       comp=Z,16nm,0.7s
TYV                                 pmax  pmax
       comp=Z,100nm,2.6s
TYV                                 smax  smax
       comp=N,200nm,4.5s
TYV                                 smax  smax
       comp=E,300nm,4.5s
ZEA    Zeya              50.80   1 eP     P     03 39 14.6 +0.2
ZEA                                e                  03 39 56.4
ZEA                                 pmax  pmax
       comp=N,10.0nm,0.5s
ZEA                                 pmax  pmax
       comp=Z,10.0nm,0.5s
ZAK    Zakamensk         51.17 342 eP     P     03 39 16.5 -0.8
ZAK                                 pmax  pmax
       comp=Z,7.0nm,1.1s
NFK    Norfolk Island    51.19 131  P     P     03 39 18.5 +0.8
       baz=51
NFK    Norfolk Island    51.19 131  P     P     03 39 19.0 +1.3
MNCI   Minicoy           52.89 278  P     P     03 39 30.5 -0.1
NDI    New Delhi         53.00 304 eP     P     03 39 31.0 -0.1
MOY    Mondy             53.01 341 eP     P     03 39 32.5 +1.6
MOY                                 pmax  pmax
       comp=Z,27nm,1.1s
WMQ    Urumqi            53.06 326 ⇓P     P     03 39 32.3 +0.9
WMQ                                 sP    sP    03 40 13.0 -1.1
WMQ                                 pmax  pmax
       comp=Z,74nm,0.9s
WMQ                                 pmax  pmax
       comp=Z,150nm,5.3s
WMQ                                 LR    LR
       comp=Z,410nm,14.7s
WMQ                                 LR    LR
       comp=Z,320nm,14.7s
WMQ                                 LR    LR
       comp=Z,200nm,21.7s
FUNA   Funafuti          54.26 102  P     P     03 39 40.6  0.0
FUNA   Funafuti          54.26 102  P     P     03 39 41.4 +0.8
H08S2  Diego Garcia H    54.33 259  P     P     03 39 39.5 -1.2
       baz=232
DGAR   Diego Garcia      54.33 259ceP     P     03 39 41.8 +0.7
DGAR                                pmax  pmax
       comp=Z,83nm,1.7s
H08S3  Diego Garcia H    54.33 259  P     P     03 39 40.5 -0.3
       baz=232,slow=74
H08S1  Diego Carcia H    54.35 259  P     P     03 39 41.3 +0.4
       baz=232,slow=74
MSVF   Nonsavu           55.24 114  P     P     03 39 47.0 -0.6
MSVF   Nonsavu           55.24 114  P     P     03 39 48.3 +0.7
MSVF   Nonsavu           55.24 114  P     P     03 39 47.0 -0.6
MSVF                                pmax  pmax
       comp=Z,74nm,1.1s
BOD    Bodaibo           55.69 352 eP     P     03 39 50.4 +0.3
BOD                                 pmax  pmax
       comp=Z,17nm,0.8s
PEA0B  Petropavlovsk-    56.60  22  P     P     03 39 57.2 +0.6
PEA0B                               IAmb  IAmb  03 39 58.7
       comp=Z,28nm,0.7s
PEA0B  Petropavlovsk-    56.60  22  P     P     03 39 57.2 +0.6
PEA0B                               pmax  pmax
       comp=Z,28nm,0.7s
PETK   Petropavlovsk-    56.60  22  P     P     03 39 56.6  0.0
       comp=Z,26nm,0.7s,baz=204,slow=11,SNR=40
       comp=Z,26nm,0.7s
PETK   Petropavlovsk-    56.60  22  P     P     03 39 56.8 +0.2
ZSN    Zaisan            56.88 328 eP     P     03 39 59.2 +0.4
       baz=328
ZSN                                eS     S     03 47 44.3 +1.3
       baz=328
ZSN    Zaisan            56.88 328 eP     P     03 39 59.1 +0.4
ZSN                                eS     S     03 47 44.2 +1.3
DGZ    Jazzator, Alta    57.04 331 i P    P     03 39 59.7 -0.3
DGZ                                 pmax  pmax
       comp=Z,9.0nm,0.7s
SHLS   Shalkode          57.58 321 eP     P     03 40 02.4 -1.6
       comp=Z,41nm,0.8s,baz=321
SHLS   Shalkode          57.58 321 eP     P     03 40 02.3 -1.6
SHLS                                pmax  pmax
       comp=Z,41nm,0.8s
UZB    Uzynbulak         57.85 321 eP     P     03 40 06.0 +0.2
       comp=Z,28nm,0.7s,baz=321
UZB    Uzynbulak         57.85 321 eP     P     03 40 06.0 +0.2
UZB                                 pmax  pmax
       comp=Z,28nm,0.7s
MK31   Makanchi Array    57.89 326  P     P     03 40 05.6 -0.3
MK31                                IAmb  IAmb  03 40 07.7
       comp=Z,34nm,0.8s
MK31   Makanchi Array    57.89 326  P     P     03 40 05.6 -0.3
MK31                                pmax  pmax
       comp=Z,34nm,0.8s
MKAR   Makanchi Array    57.89 326  P     P     03 40 05.6 -0.3
       comp=Z,37nm,0.6s,baz=122,slow=7.9,SNR=290
MKAR                                ScP   ScP   03 44 45.2 -0.5
       comp=Z,5.9nm,0.8s,baz=118,slow=4.3,SNR=6.7
MKAR                                S     S     03 47 54.0 -2.2
       comp=Z,1.6nm,0.9s,baz=121,slow=14,SNR=3.1
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       comp=Z,37nm,0.6s
MKAR   Makanchi Array    57.89 326  P     P     03 40 05.9  0.0
NIL    Nilore            57.89 308  P     P     03 40 05.6 -0.5
NIL    Nilore            57.89 308  P     P     03 40 05.6 -0.5
NIL                                 pmax  pmax
       comp=Z,80nm,0.9s
TARG   Taragay, Kyrgy    57.94 319  P     P     03 40 06.5 -0.2
TARG                                IAmb  IAmb  03 40 16.7
       comp=Z,32nm,0.6s
TARG   Taragay, Kyrgy    57.94 319  P     P     03 40 06.6 -0.2
TARG                                pmax  pmax
       comp=Z,32nm,0.6s
SATY   Saty              58.20 320 eP     P     03 40 08.4 +0.1
       comp=Z,52nm,0.7s,baz=320
SATY   Saty              58.20 320 eP     P     03 40 08.3 +0.1
SATY                                pmax  pmax
       comp=Z,52nm,0.7s
KPKS   Kokpek            58.23 321 eP     P     03 40 08.5 +0.1
       comp=Z,40nm,0.6s,baz=321
KPKS   Kokpek            58.23 321 eP     P     03 40 08.4 +0.1
KPKS                                pmax  pmax
       comp=Z,40nm,0.6s
ZHN    Zhinishke         58.24 321 eP     P     03 40 08.3 -0.2
       comp=Z,16nm,0.5s,baz=321
ZHN    Zhinishke         58.24 321 eP     P     03 40 08.2 -0.2
ZHN                                 pmax  pmax
       comp=Z,16nm,0.5s
KDJ    Kajisay           58.54 319  P     P     03 40 11.0 +0.3
KDJ    Kajisay           58.54 319  P     P     03 40 11.0 +0.3
KDJ                                 pmax  pmax
       comp=Z,72nm,0.6s
MDOK   Medeo             59.12 320 eP     P     03 40 14.4 -0.3
       baz=320
MDOK   Medeo             59.12 320 eP     P     03 40 14.3 -0.3
TNSS   Tian-Shan         59.12 320 eP     P     03 40 15.2 +0.2
       baz=320
TNSS   Tian-Shan         59.12 320 eP     P     03 40 15.1 +0.2
YAK    Yakutsk           59.18   2  P     P     03 40 14.8 +0.4
       comp=Z,44nm,0.6s,baz=201,slow=1.1,SNR=18
       comp=Z,44nm,0.6s
YAK    Yakutsk           59.18   2  P     P     03 40 14.8 +0.4
YAK    Yakutsk           59.18   2 eP     P     03 40 14.9 +0.5
YAK                                e                  03 40 59.2
YAK                                e                  03 42 36.5
YAK                                ePPP   PPP   03 43 49.9
YAK                                eS     S     03 48 12.6 +0.5
YAK                                e                  03 49 46.7
YAK                                eSS    SS    03 52 09.5 +1.0
YAK                                 pmax  pmax
       comp=Z,97nm,1.0s
YAK                                 pmax  pmax
       comp=N,21nm,1.0s
YAK                                 pmax  pmax
       comp=E,5.0nm,1.1s
YAK                                 pmax  pmax
       comp=Z,367nm,6.9s
YAK                                 pmax  pmax
       comp=N,64nm,4.3s
YAK                                 pmax  pmax
       comp=E,119nm,4.6s
YAK                                 smax  smax
       comp=N,158nm,2.4s
YAK                                 smax  smax
       comp=E,106nm,2.9s
YAK    Yakutsk           59.18   2  P     P     03 40 14.5 +0.1
YAK                                 pP    pP    03 40 43.1 -0.3
ULHL   Ulahol            59.21 319  P     P     03 40 15.9 +0.6
       SNR=48
AAA    Alma-Ata          59.23 320 eP     P     03 40 15.8 +0.5
       baz=320
AAA    Alma-Ata          59.23 320 eP     P     03 40 15.8 +0.5
CHKK   Chushkaly         59.49 321 eP     P     03 40 16.2 -0.8
       baz=321
CHKK   Chushkaly         59.49 321 eP     P     03 40 16.2 -0.8
MA2    Magadan           59.81  14  P     P     03 40 19.1 +0.4
       comp=E,29nm,0.7s,baz=195,slow=6.8,SNR=22
       comp=E,29nm,0.7s
MA2    Magadan           59.81  14  P     P     03 40 19.2 +0.4
MA2                                 IAmb  IAmb  03 40 21.2
       comp=Z,39nm,0.8s
MA2    Magadan           59.81  14  P     P     03 40 20.3 +1.5
MA2    Magadan           59.81  14ceP     P     03 40 19.7 +0.9
MA2                                 pmax  pmax
       comp=Z,40nm,0.7s
KUU    Kurty             59.92 320 eP     P     03 40 19.8 -0.1
       baz=320
KUU    Kurty             59.92 320 eP     P     03 40 19.8 -0.1
TKM2   Tokmak 2          59.94 319  P     P     03 40 20.4  0.0
       SNR=27
KBK    Karagaybulak      60.25 319  P     P     03 40 23.9 +1.5
       SNR=15
UCH    Uchtor            60.35 318  P     P     03 40 24.0 +0.5
       SNR=86
DCZ    Deep Cove         60.35 148  P     P     03 40 23.1 +0.3
DCZ                                 IAmb  IAmb  03 40 24.5
       comp=Z,32nm,1.0s
JCZ    Jackson Bay       60.36 146  P     P     03 40 24.8 +1.8
CHMS   Chumysh           60.53 319  P     P     03 40 24.3 +0.1
       SNR=7.4
AAK    Ala-Archa         60.54 318  P     P     03 40 25.7 +1.3
       SNR=12
AAK    Ala-Archa         60.54 318  P     P     03 40 24.4 +0.1
       comp=Z,14nm,0.7s,baz=135,slow=6.4,SNR=24
       comp=Z,14nm,0.7s
AAK    Ala-Archa         60.54 318  P     P     03 40 24.7 +0.3
AAK                                 IAmb  IAmb  03 40 27.0
       comp=Z,20nm,0.9s
AAK    Ala-Archa         60.54 318ceP     P     03 40 24.2 -0.2
AAK                                 pmax  pmax
       comp=Z,48nm,1.7s
AAK    Ala-Archa         60.54 318  P     P     03 40 23.2 -1.2
AAK                                 pP    pP    03 40 51.1 -3.0
SGDS   Sogindy           60.81 319 eP     P     03 40 25.8 -0.4
       baz=319
SGDS   Sogindy           60.81 319 eP     P     03 40 25.7 -0.4
AML    Almayashu         60.86 318  P     P     03 40 27.1 +0.3
       SNR=80
EKS2   Erkin-Say         61.03 318  P     P     03 40 28.4 +0.7
       SNR=36
WHZ    Wether Hill Ro    61.05 148  P     P     03 40 27.7 +0.2
WHZ                                 IAmb  IAmb  03 40 28.6
       comp=Z,20nm,0.9s
ZAA0   Zalesovo Array    61.08 334  P     P     03 40 27.2 -0.4
ZALV   Zalesovo Beam     61.08 334  P     P     03 40 26.8 -0.8
       comp=Z,10nm,0.7s,baz=115,slow=7.0,SNR=28
ZALV                                S     S     03 48 37.4 +0.6
       comp=Z,0.7nm,0.5s,baz=108,slow=13,SNR=3.7
       comp=Z,10nm,0.7s
SEM    Semipalatinsk     61.09 328 eP     P     03 40 27.6 -0.5
       baz=328
SEM    Semipalatinsk     61.09 328 eP     P     03 40 27.5 -0.5
INZ    Inchbonnie        61.09 143  P     P     03 40 27.9 +0.1
INZ                                 IAmb  IAmb  03 40 30.5
       comp=Z,19nm,0.9s
LBZ    Lake Benmore      61.34 145  P     P     03 40 29.8 +0.3
THZ    Tophouse          61.44 142  P     P     03 40 30.4 +0.1
THZ                                 IAmb  IAmb  03 40 30.9
       comp=Z,31nm,0.8s
RPZ    Rata Peaks        61.44 144  P     P     03 40 30.5 +0.2
RPZ                                 IAmb  IAmb  03 40 31.6
       comp=Z,32nm,0.9s
BTLS   Baital            61.91 321 eP     P     03 40 32.7 -0.6
       baz=321
BTLS   Baital            61.91 321 eP     P     03 40 32.7 -0.6
GAR    Garm              62.00 313  P     P     03 40 34.3 +0.1
BTK    Batken            62.02 315  P     P     03 40 34.4 +0.1
BTK                                 IAmb  IAmb  03 40 35.7
       comp=Z,48nm,1.1s
BTK    Batken            62.02 315  P     P     03 40 34.4 +0.1
BTK                                 pmax  pmax
       comp=Z,48nm,1.1s
KURBB  Kurchatov Arra    62.12 328  P     P     03 40 34.1 -0.5
       comp=Z,57nm,0.7s,baz=127,slow=6.3,SNR=247
       comp=Z,57nm,0.7s
KURK   Kurchatov         62.12 328  P     P     03 40 34.3 -0.3
KURK   Kurchatov         62.12 328  P     P     03 40 34.3 -0.3
KURK                                pmax  pmax
       comp=Z,107nm,0.7s
KURK   Kurchatov         62.12 328  P     P     03 40 33.8 -0.8
GVZ    Greta Valley S    62.19 143  P     P     03 40 35.5 +0.3
KHZ    Kahutara          62.19 142  IAmb  IAmb  03 40 35.2
       comp=Z,28nm,1.0s
MQZ    McQueen's Vall    62.38 143  IAmb  IAmb  03 40 38.1
       comp=Z,29nm,1.0s
BKZ    Black Stump Fm    62.41 137  IAmb  IAmb  03 40 37.6
       comp=Z,44nm,1.0s
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BKZ    Black Stump Fm    62.41 137  P     P     03 40 37.1 +0.3
RTZ    Ruatahuna         62.47 137  IAmb  IAmb  03 40 37.9
       comp=Z,54nm,0.8s
SEY    Seymchan          63.13  13  P     P     03 40 42.2 +1.2
       comp=Z,12nm,0.9s,baz=216,slow=6.4,SNR=22
       comp=Z,12nm,0.9s
IUG    Iuzhnay           63.36 316 eP     P     03 40 43.1  0.0
       comp=Z,39nm,0.9s,baz=316
IUG    Iuzhnay           63.36 316 eP     P     03 40 43.1  0.0
IUG                                 pmax  pmax
       comp=Z,39nm,0.9s
KK31   Karatay Array     63.40 318  IAmb  IAmb  03 40 45.1
       comp=Z,32nm,0.8s
KKAR   Karatay Array     63.40 318  P     P     03 40 42.8 -0.5
KKAR   Karatay Array     63.40 318  IAmb  IAmb  03 40 45.1
       comp=Z,32nm,0.8s
KKAR   Karatay Array     63.40 318  P     P     03 40 42.8 -0.5
CHM    Chimkent          63.72 316 eP     P     03 40 45.3 -0.2
       baz=316
CHM    Chimkent          63.72 316 eP     P     03 40 45.2 -0.2
AFI    Afiamalu          63.91 107  P     P     03 40 47.1 -0.1
AFI    Afiamalu          63.91 107  P     P     03 40 47.1 -0.1
AFI                                 pmax  pmax
       comp=Z,120nm,1.3s
BRZS   Berezniki         65.01 325 eP     P     03 40 53.3 -0.5
       baz=325
BRZS   Berezniki         65.01 325 eP     P     03 40 53.2 -0.5
JLN    Jalan Bani Buh    67.25 293  P     P     03 41 09.0 +0.5
BVAR   Borovoye Array    67.69 327  P     P     03 41 10.5 -0.2
       comp=Z,13nm,0.5s,baz=135,slow=8.3,SNR=44
BVAR                                S     S     03 49 55.2 -3.0
       comp=Z,3.8nm,1.1s,baz=121,slow=14,SNR=3.8
       comp=Z,13nm,0.5s
WBK    Wadi Bani Khal    67.71 293  P     P     03 41 11.9 +0.5
BRVK   Borovoye          67.76 327  P     P     03 41 11.3 +0.1
BRVK                                IAmb  IAmb  03 41 13.8
       comp=Z,28nm,1.0s
BRVK   Borovoye          67.76 327ceP     P     03 41 09.4 -1.7
BRVK                                pmax  pmax
       comp=Z,39nm,1.3s
WSAR   Wadi Sarin        68.09 294  P     P     03 41 12.8 -1.0
       comp=Z,6.3nm,0.9s,baz=118,slow=4.8,SNR=4.0
       comp=Z,6.3nm,0.9s
MHTO   MHTO              68.47 291  P     P     03 41 14.9 -1.2
       SNR=7.0
JMDO   Jabal Madar       68.48 293  P     P     03 41 15.3 -0.9
BIDO   Bidbid            68.58 294  P     P     03 41 15.7 -1.1
SMDO   Samad             68.60 294  P     P     03 41 15.8 -1.3
DQM    DQM               68.77 290  P     P     03 41 19.0 +0.9
       SNR=5.4
TIXI   Tiksi             68.80   1  P     P     03 41 16.7 -0.5
       comp=Z,21nm,0.4s,baz=270,slow=24,SNR=14
TIXI                                S     S     03 50 08.5 -2.1
       comp=Z,1.2nm,0.3s,baz=90,slow=24,SNR=6.0
       comp=Z,21nm,0.4s
TIXI   Tiksi             68.80   1  P     P     03 41 16.8 -0.3
TIXI                                IAmb  IAmb  03 41 18.0
       comp=Z,24nm,0.7s
TIXI   Tiksi             68.80   1ceP     P     03 41 16.4 -0.8
TIXI                                pmax  pmax
       comp=Z,45nm,1.7s
HOQ    Hoqain            69.33 294  P     P     03 41 20.1 -1.4
BSY    Bisya             69.35 293  P     P     03 41 19.7 -1.9
ARQ    Araqi             70.03 294  P     P     03 41 24.6 -1.2
SOHO   SOHO              70.10 295  P     P     03 41 25.6 -0.5
SHAO   Shalim            70.44 288  P     P     03 41 27.2 -1.2
UOSS   Minazif           70.48 295  P     P     03 41 28.3 -0.1
BANOM  Banah             70.50 296  P     P     03 41 28.7  0.0
MASF   Masafi            70.57 296  P     P     03 41 29.4 +0.4
ASHO   Ashiyiah          70.59 295  P     P     03 41 29.4 +0.2
BILL   Bilibino          70.67  15  P     P     03 41 29.5 +0.8
BILL   Bilibino          70.67  15⇓iP     P     03 41 29.3 +0.6
BILL                                pmax  pmax
       comp=Z,4.0nm,1.0s
ALNE   Al Ain            70.80 294  P     P     03 41 31.2 +0.8
       SNR=8.8
GEYT   Alibeck           70.88 309  P     P     03 41 30.6 -0.1
       comp=Z,12nm,0.7s,baz=134,slow=4.3,SNR=16
       comp=Z,12nm,0.7s
FAQ    Al Faqa, Dubai    71.01 295  P     P     03 41 32.2 +0.5
UMQ    Umm Al-Quwin      71.03 296  P     P     03 41 31.6 -0.2
DMTO   DMTO              71.06 288  P     P     03 41 31.5 -0.6
NRIK   Noril'sk          71.16 347  P     P     03 41 31.7 +0.1
       comp=Z,34nm,0.6s,baz=122,slow=5.9,SNR=34
NRIK                                S     S     03 50 38.5 +0.1
       comp=Z,2.1nm,0.3s,baz=216,slow=23,SNR=23
       comp=Z,34nm,0.6s
NRIK   Noril'sk          71.16 347  IAmb  IAmb  03 41 33.1
       comp=Z,34nm,0.7s
NRIK   Noril'sk          71.16 347ceP     P     03 41 31.8 +0.1
NRIK                                pmax  pmax
       comp=Z,28nm,0.6s
UMZA   Um Al Zommool     71.22 293  P     P     03 41 32.2 -0.8
ASUD   Al Ashush, Dub    71.24 295  P     P     03 41 32.9 -0.2
WHFO   Wadi Hawf         72.20 288  P     P     03 41 37.1 -1.8
WHFO                                P     P     03 41 39.0  0.0
       SNR=6.6
MZWR   Madinat Zayed     72.48 294  P     P     03 41 39.8 -0.6
ABTO   Aybut             72.62 287  P     P     03 41 40.3 -1.2
MZR    Muzera            72.79 293  P     P     03 41 42.4  0.0
       SNR=5.8
NIKH   Nikolski High     73.03  35  P     P     03 41 43.6 +0.4
       baz=251
AKTO   Aktyubinsk        73.92 322  P     P     03 41 48.2 -0.2
       comp=Z,18nm,0.6s,baz=103,slow=8.0,SNR=64
       comp=Z,18nm,0.6s
SVE    Sverdlovsk        74.36 329 eP     P     03 41 50.8  0.0
SVE                                eS     S     03 51 13.6 -1.5
SVE                                 pmax  pmax
       comp=Z,47nm,0.6s
UNV    Unalaska Valle    74.64  35  P     P     03 41 52.8 +0.4
UNV                                 IAmb  IAmb  03 42 00.1
       comp=Z,39nm,0.8s
UNV    Unalaska Valle    74.64  35  P     P     03 41 53.2 +0.7
       baz=253
AKUT   Akutan            75.14  34  P     P     03 41 57.1 +1.8
ARU    Arti              75.32 328  P     P     03 41 55.9 -0.5
       comp=Z,38nm,0.6s,baz=98,slow=3.8,SNR=54
       comp=Z,38nm,0.6s
ARU    Arti              75.32 328  P     P     03 41 57.2 +0.8
ARU                                 IAmb  IAmb  03 41 58.4
       comp=Z,33nm,0.6s
ARU    Arti              75.32 328c iP    P     03 41 55.2 -1.2
ARU                                 *PP   pP    03 42 24.4 -2.7
ARU                                             03 44 41.5
ARU                                 S     S     03 51 25.8  0.0
ARU                                 SS    SS    03 56 15.0 -3.2
ARU                                 pmax  pmax
       comp=Z,30nm,0.6s
FALS   False Pass        76.65  34  P     P     03 42 05.2 +1.3
FALS   False Pass        76.65  34  P     P     03 42 04.7 +0.8
       baz=256
S12K   Black Hills       77.61  33  P     P     03 42 09.5 +0.1
       baz=256
TNA    Tin City          77.76  23  P     P     03 42 11.0 +1.1
       baz=249
MLH    Mauna Loa         78.39  71  P     P     03 42 16.4 +1.7
SDPT   Sand Point        78.41  34  P     P     03 42 14.2 +0.6
       baz=258
ANM    Nome              78.44  24  P     P     03 42 14.9 +1.2
       baz=252,SNR=10.0
AKT    Akhty             79.34 312 eP     P     03 42 19.3  0.0
AKT                                e                  03 42 26.8
AKT                                e*PP   pP    03 42 49.6 -0.7
AKT                                 pmax  pmax
       comp=Z,16nm,0.6s
MAK    Makhachkala       79.65 313 eP     P     03 42 20.6 -0.1
MAK                                e                  03 45 17.3
MAK                                eS     S     03 52 13.7 +0.7
MAK                                 pmax  pmax
       comp=Z,285nm,1.2s
SEKA   Sheki             79.71 311  P     P     03 42 20.8 -0.4
CHGN   Chignik           79.74  33  P     P     03 42 22.0 +1.1
       baz=260
MNGR   Mingechevir, A    79.76 311  P     P     03 42 21.4  0.0
RAYN   Ar Rayn           80.14 293  P     P     03 42 23.4 -0.5
RAYN                                IAmb  IAmb  03 42 25.6
       comp=Z,41nm,0.9s
RAYN   Ar Rayn           80.14 293  P     P     03 42 23.4 -0.5
RAYN                                pmax  pmax
       comp=Z,41nm,1.0s
ABPO   Ambohimpanom      80.26 250  P     P     03 42 24.6 -0.1
ABPO                                IAmb  IAmb  03 42 26.3
       comp=Z,55nm,0.8s
ABPO   Ambohimpanom      80.26 250  P     P     03 42 24.6 -0.1
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ABPO				pmax	pmax		
	comp=Z,55nm,0.8s						
N16K	Nishlik Lake	80.35	29	P	P	03 42 26.0	+1.8
	baz=258						
RDOG	Red Dog Mine	80.44	21	IAmb	IAmb	03 42 27.2	
	comp=Z,74nm,1.8s						
RDOG	Red Dog Mine	80.44	21	P	P	03 42 26.1	+1.6
	baz=253						
P16K	Nushagak River	80.46	31	P	P	03 42 26.1	+1.4
	baz=259,SNR=9.5						
O16K	Kokwok River B	80.52	30	P	P	03 42 26.3	+1.3
	baz=259						
KIRV	Kirov	80.63	329	P	P	03 42 25.5	-0.1
	comp=Z,40nm,0.7s,baz=142,slow=2.0,SNR=10						
	comp=Z,40nm,0.7s						
KIRV	Kirov	80.63	329	*ce*P	P	03 42 24.2	-1.4
BELG	Belogornoye	80.68	323	P	P	03 42 25.1	-1.0
	comp=Z,73nm,1.0s,baz=118,slow=1.4,SNR=13						
	comp=Z,73nm,1.0s						
BELG	Belogornoye	80.68	323	*i* P	P	03 42 25.2	-0.8
BELG				pmax	pmax		
	comp=Z,15nm,1.1s						
NAX	Nakhchivan	80.85	309	P	P	03 42 27.2	-0.2
GROC	Groznyy	80.92	313	*e*P	P	03 42 30.7	+3.1
GROC				*e*S	S	03 52 33.1	+6.8
GROC				*e**SS	sS	03 53 27.2	+9.5
VOI	Vohitsoka	80.99	247	P	P	03 42 28.5	0.0
VOI	Vohitsoka	80.99	247	P	P	03 42 28.5	0.0
O17K	Koliganek Bris	81.05	30	P	P	03 42 29.3	+1.5
	baz=260,SNR=7.6						
R17K	Ugashik Creek	81.06	32	P	P	03 42 28.4	+0.5
	baz=261						
Q16K	King Salmon	81.08	31	P	P	03 42 28.5	+0.4
	baz=261						
P17K	Kvichak River	81.28	31	P	P	03 42 29.6	+0.5
	baz=261						
Q17K	Contact Creek	81.42	32	P	P	03 42 30.1	0.0
	baz=261,SNR=7.5						
GNI	Garni	81.49	310	P	P	03 42 30.7	-0.1
	comp=Z,3.0nm,0.6s,baz=2.5,slow=3.3,SNR=6.1						
	comp=Z,3.0nm,0.6s						
GNI	Garni	81.49	310	P	P	03 42 31.1	+0.2
GNI	Garni	81.49	310	*ce*P	P	03 42 31.7	+0.8
GNI				pmax	pmax		
	comp=Z,29nm,1.7s						
P18K	Big Mountain,	81.92	30	P	P	03 42 33.0	+0.4
	baz=262						
Q18K	Katmai Hardscr	81.93	31	P	P	03 42 32.9	+0.2
	baz=262						
O18K	Koktuh Hills	82.00	30	IAmb	IAmb	03 42 35.5	
	comp=Z,97nm,1.8s						
O18K	Koktuh Hills	82.00	30	P	P	03 42 34.6	+1.7
	baz=262,SNR=6.4						
SVW2	Sparrevohn	82.00	29	P	P	03 42 34.1	+1.2
GCSA	Galena City Sc	82.03	25	P	P	03 42 34.5	+1.6
	baz=260						
TTA	Tatalina	82.09	27	P	P	03 42 34.5	+1.1
TTA	Tatalina	82.09	27	P	P	03 42 35.1	+1.7
	baz=261,SNR=16						
O19K	Port Alsworth	82.49	30	P	P	03 42 36.9	+1.5
	baz=262						
N19K	Bonanza Creek	82.49	29	IAmb	IAmb	03 42 38.7	
	comp=Z,44nm,0.9s						
N19K	Bonanza Creek	82.49	29	P	P	03 42 37.4	+1.8
	baz=262						
L19K	White Mountain	82.51	28	P	P	03 42 37.5	+2.0
	baz=262						
VNDA	Vanda	82.59	173	P	P	03 42 36.0	+0.4
	comp=Z,4.0nm,0.7s,baz=316,slow=7.1,SNR=16						
	comp=Z,4.0nm,0.7s						
VNDA	Vanda	82.59	173	P	P	03 42 36.3	+0.7
VNDA	Vanda	82.59	173	P	P	03 42 36.3	+0.7
VNDA				pmax	pmax		
	comp=Z,38nm,1.7s						
MAW	Mawson	82.60	200	P	P	03 42 35.7	-0.1
	comp=Z,12nm,0.9s,baz=14,slow=5.5,SNR=4.9						
	comp=Z,12nm,0.9s						
MAW	Mawson	82.60	200	P	P	03 42 36.5	+0.7
	baz=83						
OHAK	Old Harbor	82.67	33	P	P	03 42 37.7	+1.3
	baz=264						
M19K	Big River Lodg	82.69	28	P	P	03 42 38.4	+2.0
	baz=262,SNR=7.7						
ATD	Arta Tunnel	82.70	281	IAmb	IAmb	03 42 40.9	
	comp=Z,42nm,1.0s						
GEVA	Gevas	82.70	308	IAmb	IAmb	03 42 40.4	
	comp=Z,66nm,0.9s						
P19K	Oil Pt	82.97	30	P	P	03 42 39.6	+1.6
	baz=263						
L20K	Farewell, AK	83.00	27	P	P	03 42 40.0	+1.9
	baz=262						
K20K	Telida	83.03	27	IAmb	IAmb	03 42 41.3	
	comp=Z,31nm,1.0s						
K20K	Telida	83.03	27	P	P	03 42 40.2	+2.0
	baz=262,SNR=27						
KBZ	Khabaz	83.06	314	P	P	03 42 38.5	-0.2
	comp=Z,17nm,1.1s,baz=102,slow=3.5,SNR=12						
	comp=Z,17nm,1.1s						
KBZ	Khabaz	83.06	314	*ce*P	P	03 42 38.6	-0.1
KBZ				pmax	pmax		
	comp=Z,19nm,1.0s						
KDAK	Kodiak Island	83.10	32	P	P	03 42 39.6	+1.0
KDAK				IAmb	IAmb	03 42 41.7	
	comp=Z,51nm,1.1s						
KDAK	Kodiak Island	83.10	32	P	P	03 42 39.6	+1.0
KDAK				pmax	pmax		
	comp=Z,51nm,1.1s						
KDAK	Kodiak Island	83.10	32	P	P	03 42 39.9	+1.3
	baz=264						
NEY	Neytrino	83.17	313	*i* P	P	03 42 40.0	+0.5
NEY				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KVAR	Kislovodsk Arr	83.22	314	P	P	03 42 41.5	+1.8
	comp=Z,6.3nm,0.7s,baz=76,slow=4.2,SNR=2.6						
	comp=Z,6.3nm,0.7s						
KIV	Kislovodsk	83.23	314	P	P	03 42 40.1	+0.3
KIV	Kislovodsk	83.23	314	*e*P	P	03 42 40.5	+0.8
KIV				pmax	pmax		
	comp=Z,20nm,1.1s						
SHA1	Shidzhatmaz	83.24	314	*i* P	P	03 42 36.6	-3.4
M20K	Styx River	83.27	28	IAmb	IAmb	03 42 42.4	
	comp=Z,40nm,0.9s						
M20K	Styx River	83.27	28	P	P	03 42 41.4	+1.8
	baz=263						
Q20K	Shuyak Island	83.28	31	P	P	03 42 41.6	+2.0
	baz=264						
O20K	Slope Mountain	83.32	30	P	P	03 42 40.2	+0.4
	baz=264						
A21K	Barrow	83.36	18	IAmb	IAmb	03 42 42.8	
	comp=Z,37nm,0.7s						
A21K	Barrow	83.36	18	P	P	03 42 41.5	+1.8
	baz=259,SNR=21						
GURO	Guroymak-BITLI	83.52	308	IAmb	IAmb	03 42 44.6	
	comp=Z,37nm,0.8s						
SPCR	Spurr Chakacha	83.64	29	P	P	03 42 42.2	+0.7
	baz=264,SNR=8.0						
G21K	Allakaket	83.69	23	P	P	03 42 43.0	+1.6
	baz=262,SNR=41						
HOM	Homer	83.77	30	P	P	03 42 42.8	+0.8
	baz=265						
F21K	Alatna River	83.79	23	P	P	03 42 43.3	+1.3
	baz=262						
PPLA	Purkeypile	83.82	27	IAmb	IAmb	03 43 14.6	
	comp=Z,51nm,1.4s						
PPLA	Purkeypile	83.82	27	P	P	03 42 43.6	+1.2
	baz=264						
H21K	Melozitna Rive	83.86	24	IAmb	IAmb	03 42 45.3	
	comp=Z,33nm,1.1s						
H21K	Melozitna Rive	83.86	24	P	P	03 42 44.3	+1.9
	baz=263,SNR=27						
CHUM	Lake Minchumin	83.87	26	P	P	03 42 44.2	+1.8
	baz=264,SNR=9.3						
CAST	Castle Rocks	83.92	27	P	P	03 42 43.8	+1.1
	baz=264,SNR=9.5						
CNPM	China Poot	83.97	31	IAmb	IAmb	03 42 44.7	
	comp=Z,60nm,0.9s						
SKT	Skwentna	84.04	28	P	P	03 42 43.6	+0.2
	baz=265,SNR=8.4						
CAPN	Captain Cook N	84.11	29	P	P	03 42 45.4	+1.7
	baz=265						
I21K	Tanana	84.15	25	IAmb	IAmb	03 43 18.0	
	comp=Z,30nm,0.9s						
I21K	Tanana	84.15	25	P	P	03 42 45.7	+1.8
	baz=264						
BRLK	Bradley Lake	84.16	30	IAmb	IAmb	03 42 45.5	
	comp=Z,68nm,1.0s						
VRH	Novokhopyorsk	84.22	321	*e*P	P	03 42 43.2	-1.3
VRH				pmax	pmax		
	comp=Z,64nm,0.7s						
BRSE	Bradley Lake S	84.23	30	P	P	03 42 45.1	+0.7
	baz=266,SNR=12						
F22K	John River	84.33	23	P	P	03 42 46.8	+2.0
	baz=264,SNR=49						
SUA	Susitna One	84.36	29	IAmb	IAmb	03 42 46.5	
	comp=Z,43nm,0.8s						
SUA	Susitna One	84.36	29	P	P	03 42 45.4	+0.3
	baz=265,SNR=18						
BPAW	Bear Paw Mtn.	84.48	26	P	P	03 42 46.7	+1.1
	baz=265,SNR=9.3						
MLY	Manley	84.66	25	P	P	03 42 47.6	+1.1
	baz=265,SNR=21						
TRF	Thorofare Moun	84.73	27	P	P	03 42 47.6	+0.6
	baz=266						
O22K	Cooper Landing	84.79	30	IAmb	IAmb	03 42 52.7	
	comp=Z,49nm,0.7s						
O22K	Cooper Landing	84.79	30	P	P	03 42 47.9	+0.8
	baz=266,SNR=7.2						
RC01	Rabbit Creek A	84.83	29	IAmb	IAmb	03 42 48.7	
	comp=Z,31nm,0.9s						
RC01	Rabbit Creek A	84.83	29	P	P	03 42 47.9	+0.6
	baz=266,SNR=14						
D23K	Nanushuk River	85.03	21	P	P	03 42 50.5	+2.3
	baz=265						
COLD	Coldfoot	85.06	23	IAmb	IAmb	03 42 51.3	
	comp=Z,21nm,0.7s						
COLD	Coldfoot	85.06	23	P	P	03 42 50.0	+1.6
	baz=265						
G23K	Bananza Creek	85.09	23	P	P	03 42 50.2	+1.6
	baz=266						
PMR	Palmer	85.15	29	P	P	03 42 50.2	+1.3
PMR	Palmer	85.15	29	P	P	03 42 49.3	+0.4
	baz=267,SNR=7.6						
GHO	Glory Hole Cre	85.25	28	P	P	03 42 50.2	+0.6
I23K	Minto, Yukon-K	85.25	25	P	P	03 42 50.1	+0.7
I23K				IAmb	IAmb	03 43 34.7	
	comp=Z,87nm,1.8s						
I23K	Minto, Yukon-K	85.25	25	P	P	03 42 50.3	+1.0
	baz=266,SNR=19						
NEA2	Nenana	85.34	26	P	P	03 42 51.5	+1.7
	baz=267,SNR=5.4						
E23K	Chandalar	85.35	22	P	P	03 42 51.5	+1.6
	baz=266						
MCK	McKinley	85.35	26	IAmb	IAmb	03 43 33.4	
	comp=Z,34nm,1.3s						
MCK	McKinley	85.35	26	P	P	03 42 50.9	+0.9
	baz=267,SNR=6.9						
SOC	Sochi	85.37	313	*e*P	P	03 42 49.2	-1.2
SOC				*e*		03 46 12.4	
SOC				*e*PPP	PPP	03 48 00.7	
SOC				*e*S	SKSac	03 53 02.3	-1.9
SOC				*e*SS	SS	03 58 43.6	-5.1
SOC				*e*SSS	SSS	04 02 18.9	
SOC				pmax	pmax		
	comp=Z,43nm,0.9s						
KNK	Knik Glacier	85.46	29	P	P	03 42 51.2	+0.7
KNK				IAmb	IAmb	03 42 52.6	
	comp=Z,38nm,0.8s						
KNK	Knik Glacier	85.46	29	P	P	03 42 51.7	+1.2
	baz=267,SNR=8.2						
PWL	Port Wells	85.50	29	P	P	03 42 51.5	+0.8
PWL				IAmb	IAmb	03 42 53.2	
	comp=Z,60nm,1.1s						
PWL	Port Wells	85.50	29	P	P	03 42 51.6	+0.9
	baz=268,SNR=7.8						
SML	Sawmill	85.54	28	P	P	03 42 51.5	+0.5
SML				IAmb	IAmb	03 42 52.8	
	comp=Z,29nm,0.8s						
SML	Sawmill	85.54	28	P	P	03 42 51.7	+0.8
	baz=268,SNR=6.4						
VORD	Divnogorie	85.75	321	*e*P	P	03 42 51.2	-0.9
VORD				pmax	pmax		
	comp=Z,70nm,0.8s						
WRH	Wood River Hil	85.76	26	IAmb	IAmb	03 43 36.0	
	comp=Z,32nm,1.5s						
E24K	Your Creek	85.78	22	P	P	03 42 53.2	+1.2
	baz=267,SNR=19						
C24K	Franklin Bluff	85.79	20	P	P	03 42 53.0	+1.1
	baz=267						
VORR	Voronezh	85.81	321	*e*P	P	03 42 52.3	-0.1
VORR				pmax	pmax		
	comp=Z,124nm,0.6s						
M23K	Glacier View	85.82	28	P	P	03 42 52.8	+0.5
	baz=268,SNR=11						
VSR	Storozhevoye	85.83	321	*e*P	P	03 42 51.9	-0.6
VSR				pmax	pmax		
	comp=Z,80nm,0.8s						
KLMR	Klimovskoe	85.85	331	*e*P	P	03 42 50.4	-2.0
KLMR				*e*P	P	03 42 50.4	-2.0
KLMR				*e*P	P	03 42 50.4	-2.0
KLMR				AMP		03 42 55.8	
	comp=Z,104nm,1.2s						
KLMR				*e*pP	pP	03 43 18.5	-5.0
KLMR				S	SKSac	03 53 04.0	-2.5
KLMR				S	SKSac	03 53 04.0	-2.5
KLMR	Klimovskoe	85.85	331	*e*P	P	03 42 50.4	-2.0
KLMR				*e**PP	pP	03 43 18.5	-5.0
KLMR				S	SKSac	03 53 03.9	-2.5
KLMR				pmax	pmax		
	comp=Z,104nm,1.2s						
CCB	Clear Creek Bu	85.89	26	IAmb	IAmb	03 43 36.4	
	comp=Z,41nm,1.7s						
H24K	Noodor Dome	85.91	24	P	P	03 42 53.8	+1.1
	baz=268,SNR=10						
P23K	Montague Islan	85.93	30	P	P	03 42 54.1	+1.3
	baz=268						
F24K	Squaw Lake	85.98	23	P	P	03 42 54.4	+1.5
	baz=268						
LPSR	Galich'ya Gora	86.00	322	*e*P	P	03 42 53.0	-0.3
LPSR				pmax	pmax		
	comp=Z,110nm,0.9s						
SCM	Sheep Creek Mo	86.01	28	P	P	03 42 54.4	+1.1
	baz=268						
POKR	Poker Plat Res	86.07	25	P	P	03 42 54.7	+1.3
	baz=268						
G24K	Hadweenzic Riv	86.10	23	P	P	03 42 54.9	+1.4
	baz=268						
HDA	Harding Lake	86.25	26	P	P	03 42 53.3	-1.1
HDA	Harding Lake	86.25	26	P	P	03 42 53.5	-0.8
	baz=269,SNR=6.4						
IL31		86.29	25	P	P	03 42 53.5	-0.9
ILAR	Eielson Array	86.29	25	P	P	03 42 53.3	-1.2
	comp=Z,1.8nm,0.6s,baz=240,slow=4.9,SNR=38						
	comp=Z,1.8nm,0.6s						
M24K	Tolsona, Glenn	86.56	28	P	P	03 42 56.9	+0.9
	baz=269						
D25K	Kavik River	86.59	21	P	P	03 42 56.8	+0.8
	baz=269						
G25K	Bearman Lake	86.65	23	P	P	03 42 57.7	+1.5
	baz=269						
KLU	Klutina	86.68	29	P	P	03 42 57.9	+1.3
	baz=270						
DIV	Divide	86.75	29	IAmb	IAmb	03 43 44.2	
	comp=Z,31nm,0.9s						
K24K	Donnelly Dome	86.76	26	P	P	03 42 57.0	+0.1
	baz=270						
MOS	Moscow	86.78	326	*e*P	P	03 42 55.2	-1.8
MOS				*e**PP	pP	03 43 25.4	-3.1
MOS				*e*S	S	03 53 21.3	-3.0
MOS				pmax	pmax		
	comp=Z,85nm,0.8s						
F25K	Christian Rive	86.84	23	P	P	03 42 58.6	+1.4
	baz=270						
E25K	Arctic Village	86.87	22	P	P	03 42 58.7	+1.4
	baz=270,SNR=32						
PAX	Paxson	86.89	27	P	P	03 42 58.1	+0.5
	baz=270						
ANN	Anapa	87.01	315	*e*P	P	03 42 53.3	-5.1
ANN				*e**PP	pP	03 43 25.6	-4.4
ANN				*e*S	SKSac	03 53 07.5	-6.8
ANN				pmax	pmax		
	comp=Z,196nm,0.8s						
HARP	HAARP	87.04	28	P	P	03 42 59.3	+1.1
	baz=270						
C26K	Camden Bay	87.11	20	P	P	03 43 00.1	+1.7
	baz=270						
RIDG	Independent Ri	87.17	26	P	P	03 42 59.2	+0.3
	baz=270,SNR=5.5						
N25K	Chitina, Valde	87.31	29	P	P	03 43 00.7	+1.0
	baz=271						
OBN	Obninsk	87.39	325	P	P	03 42 59.2	-0.8
	comp=Z,9.9nm,0.6s,baz=112,slow=3.7,SNR=16						
	comp=Z,9.9nm,0.6s						
OBN	Obninsk	87.39	325	P	P	03 42 59.6	-0.3
OBN	Obninsk	87.39	325	⇑*e*P	P	03 42 59.4	-0.6
OBN				*i*		03 46 21.2	
OBN				*e*S	SKSac	03 53 14.5	-1.6
OBN				*e*SS	SS	03 59 19.4	+1.9
OBN				pmax	pmax		
	comp=Z,150nm,1.7s						
F26K	Sheenjek River	87.41	22	P	P	03 43 01.2	+1.3
	baz=271						
C27K	Jago River	87.53	21	P	P	03 43 01.9	+1.4
	baz=271						
SCRK	Sand Creek	87.55	26	P	P	03 43 01.5	+0.7
	baz=271						
G26K	Porcupine Rive	87.57	23	P	P	03 43 01.9	+1.3
	baz=271						
GLB	Gilahina Butte	87.69	29	IAmb	IAmb	03 43 04.4	
	comp=Z,46nm,1.7s						
MENT	Mentasta	87.69	27	P	P	03 43 02.4	+1.0
TOKA	Tokat	87.82	310	IAmb	IAmb	03 43 05.3	
	comp=Z,29nm,0.9s						
L26K	Log Cabin Wild	87.86	27	P	P	03 43 03.0	+0.8
	baz=272,SNR=5.3						
I26K	Coal Creek Min	87.87	25	P	P	03 43 03.1	+1.0
	baz=272						
KIBK	Kibwezi	88.02	268	P	P	03 43 05.1	+1.0
	SNR=29						
M26K	Nabesna, AK	88.05	28	P	P	03 43 03.7	+0.6
	baz=272						
E27K	Coleen River	88.36	22	P	P	03 43 05.3	+0.9
	baz=273						
K27K	Chicken	88.39	26	P	P	03 43 06.1	+1.5
	baz=273						
G27K	Doyon Strip	88.41	23	P	P	03 43 05.9	+1.2
	baz=273						
APA	Apatity	88.43	337	⇓*i*P	P	03 43 10.9	+6.2
APA				*i* *PP	sP	03 43 44.0	-5.0
APA				pmax	pmax		
	comp=Z,11nm,1.1s						
APA				MLR	MLR		
	comp=Z,4µm,15.0s						
H27K	Steamboat Moun	88.50	24	P	P	03 43 06.3	+1.2
	baz=273						
I27K	Kandik River	88.50	25	P	P	03 43 06.2	+1.0
	baz=273,SNR=12						
L27K	Beaver Creek,	88.55	27	P	P	03 43 06.5	+1.1
	baz=273,SNR=9.4						
M27K	Edge Creek, AK	88.57	28	P	P	03 43 06.7	+1.0
	baz=273						
EGAK	Eagle	88.74	25	P	P	03 43 07.3	+1.0
	baz=274						
KMBO	Kilima Mbogo	88.75	269	P	P	03 43 06.5	-1.2
	comp=Z,0.5nm,0.9s,baz=61,slow=23,SNR=25						
KMBO	Kilima Mbogo	88.75	269	P	P	03 43 07.5	-0.2
KMBO	Kilima Mbogo	88.75	269	P	P	03 43 07.5	-0.2
KMBO				pmax	pmax		
	comp=Z,72nm,1.1s						
KMBO	Kilima Mbogo	88.75	269	P	P	03 43 08.6	+0.9
BVCY	Beaver Creek	89.04	28	P	P	03 43 08.7	+0.9
	baz=274						
SIM	Simferopol'	89.36	315	*ce*P	P	03 43 09.5	0.0
SIM				pmax	pmax		
	comp=Z,52nm,0.8s						
SIM				pmax	pmax		
	comp=Z,450nm,1.1s						
SIM				pmax	pmax		
	comp=Z,2µm,15.5s						
O28M	Mount Upton	89.48	29	P	P	03 43 11.3	+1.1
	baz=275						
EIL	Elat	89.51	300	P	P	03 43 10.6	0.0
	comp=Z,20nm,0.8s,baz=117,slow=1.7,SNR=14						
	comp=Z,20nm,0.8s						
DAWY	Dawson	89.56	26	P	P	03 43 11.1	+0.9
	baz=275,SNR=5.0						
YUK8	Steele Glacier	89.65	29	P	P	03 43 12.1	+1.2
	baz=275						
ILGA	Ilgaz	89.88	311	IAmb	IAmb	03 43 13.2	
	comp=Z,41nm,0.8s						
I29M	Ogilvie Camp,	89.89	25	P	P	03 43 13.1	+1.4
	baz=276						
BR131	Keskin Array S	90.02	310	IAmb	IAmb	03 43 15.7	
	comp=Z,15nm,0.8s						
BR131	Keskin Array S	90.02	310	*i* P	P	03 43 12.3	-0.7
BRTR	Keskin Array B	90.02	310	P	P	03 43 12.1	-0.9
	comp=Z,9.1nm,0.8s,baz=112,slow=5.7,SNR=18						
BRTR				PP	PP	03 46 48.0	+0.4
	comp=Z,2.6nm,0.8s,baz=152,slow=6.6,SNR=6.7						
	comp=Z,9.1nm,0.8s						
J29M	Klondike Camp	90.03	26	P	P	03 43 13.6	+1.3
	baz=276						
M29M	Somme Creek	90.15	28	P	P	03 43 14.0	+1.0
	baz=276						
YUK4	Talbot Arm	90.18	29	P	P	03 43 14.6	+1.3
	baz=276						
L29M	L29M	90.23	27	P	P	03 43 14.9	+1.6
	baz=276						
O29M	Mount Kennedy	90.33	30	P	P	03 43 14.9	+1.0
	baz=276						
YUK6	Outpost Mounta	90.36	29	P	P	03 43 15.2	+1.1
	baz=276						
K29M	Barlow Dome	90.41	26	P	P	03 43 15.3	+1.0
	baz=277						
EPYK	Eagle Plains	90.42	24	P	P	03 43 14.4	+0.3
	baz=278,SNR=7.3						
LODK	Lodwar	90.42	273	P	P	03 43 15.8	+0.5
G30M	tAoh Zraii Nji	90.53	23	P	P	03 43 14.6	0.0
	baz=278						
CSS	Mathiatis	90.57	305	IAmb	IAmb	03 43 16.2	
	comp=Z,28nm,0.9s						
HYT	Haines Junctio	90.79	29	P	P	03 43 16.6	+0.6
HYT	Haines Junctio	90.79	29	P	P	03 43 17.2	+1.2
	baz=277						
M30M	Minto, Yukon	90.90	27	P	P	03 43 17.7	+1.3
	baz=278						
N30M	Aishikik Lake	90.91	28	P	P	03 43 17.6	+1.1
	baz=277						
ARA0	ARCESS Array S	91.06	340	*e*P	P	03 43 16.5	-0.4
ARCES	ARCESS Array B	91.06	340	P	P	03 43 16.4	-0.5
	comp=Z,11nm,0.7s,baz=89,slow=6.2,SNR=34						
	comp=Z,11nm,0.7s						
P30M	Million Dollar	91.15	30	P	P	03 43 19.0	+1.4
	baz=278						
MAYO	Mayo, Yukon	91.16	26	IAmb	IAmb	03 44 22.4	
	comp=Z,14nm,0.8s						
MAYO	Mayo, Yukon	91.16	26	P	P	03 43 18.7	+1.2
	baz=278						
SPA0	Spitsbergen Ar	91.25	349	*e*P	P	03 43 17.8	0.0
SPA0				IAmb	IAmb	03 43 23.5	
	comp=Z,28nm,1.0s						
INK	Inuvik	91.32	21	P	P	03 43 17.7	-0.5
	comp=Z,4.2nm,0.8s,baz=267,slow=4.4,SNR=20						
	comp=Z,4.2nm,0.8s						
INK	Inuvik	91.32	21	P	P	03 43 18.4	+0.2
	baz=281,SNR=9.3						
F31M	Tsiigehtchic	91.40	22	P	P	03 43 18.6	+0.1
	baz=281,SNR=11						
HAMF	Hammerfest	91.45	341	*e*P	P	03 43 17.9	-0.8
O30N	Mendenhall	91.48	29	P	P	03 43 20.4	+1.3
	baz=278						
N31M	Braeburn, Yuko	91.53	28	IAmb	IAmb	03 43 21.6	
	comp=Z,23nm,1.1s						
N31M	Braeburn, Yuko	91.53	28	P	P	03 43 20.7	+1.4
	baz=279						
PLBC	Pleasant Camp	91.53	30	P	P	03 43 20.5	+1.2
	baz=278						
S31K	Pelican	91.81	32	P	P	03 43 21.8	+1.2
	baz=278						
KTK1	Kautokeino	91.96	339	*e*P	P	03 43 20.9	-0.2
SKAG	Skagway	92.06	30	IAmb	IAmb	03 43 24.1	
	comp=Z,16nm,1.0s						
SKAG	Skagway	92.06	30	P	P	03 43 23.4	+1.7
SKAG	Skagway	92.06	30	P	P	03 43 23.3	+1.6
	baz=279						
AKASG	Malin Array Be	92.13	321	P	P	03 43 21.3	-1.0
	comp=Z,10.0nm,0.8s,baz=66,slow=4.1,SNR=36						
	comp=Z,10.0nm,0.8s						
AKASG	Malin Array Be	92.13	321	IAmb	IAmb	03 43 22.6	
	comp=Z,17nm,1.1s						
AKASG	Malin Array Be	92.13	321	*i* P	P	03 43 21.2	-1.0
AKASG				pmax	pmax		
	comp=Z,12nm,0.7s						
AKBB	Malin Array Si	92.13	321	IAmb	IAmb	03 43 22.4	
	comp=Z,21nm,1.1s						
AKBB	Malin Array Si	92.13	321	*ce*P	P	03 43 20.9	-1.4
FIA1	FINESS Array S	92.29	332	IAmb	IAmb	03 43 25.8	
	comp=Z,18nm,1.0s						
FINES	FINESS Array B	92.30	332	P	P	03 43 22.0	-0.8
	comp=Z,6.0nm,0.5s,baz=60,slow=4.7,SNR=20						
	comp=Z,6.0nm,0.5s						
MNK	Minsk	92.44	325	*i* P	P	03 43 21.7	-1.9
	comp=E,2.0nm,1.1s						
MNK				*i* P	P	03 43 21.7	-1.9

	comp=N,21nm,0.8s						
MNK				*i* P	P	03 43 21.7	-1.9
	comp=Z,18nm,1.1s,baz=82						
MNK				*i* pP	pP	03 43 53.5	-1.9
MNK				*i* PP	PP	03 47 03.5	-2.6
MNK				*i* PPP	PPP	03 49 02.9	
MNK				*i* S	SKSac	03 53 43.3	-2.3
MNK				*i* sS	pS	03 54 39.7	-18
MNK				*i* SS	SS	04 00 29.4	-1.2
MNK				*i* SSS	SSS	04 04 11.6	
MNK	Minsk	92.44	325	*i* P	P	03 43 21.7	-1.9
MNK				*i* *PP	pP	03 43 53.5	-1.9
MNK				*i*		03 47 03.4	
MNK				*i* S	SKSac	03 53 43.3	-2.3
MNK				*i* SS	SS	04 00 29.4	-1.2
MNK				*i* SSS	SSS	04 04 11.5	
MNK				pmax	pmax		
	comp=N,21nm,0.8s						
MNK				pmax	pmax		
	comp=Z,18nm,1.0s						
MNK				pmax	pmax		
	comp=E,2.0nm,1.0s						
BORA	Eskisehir	92.46	310	IAmb	IAmb	03 43 24.2	
	comp=Z,15nm,1.0s						
VSU	Vasula	92.47	329	*e*P	P	03 43 22.8	-0.9
FARO	Faro, Yukon	92.54	27	IAmb	IAmb	03 43 25.6	
	comp=Z,18nm,0.7s						
FARO	Faro, Yukon	92.54	27	P	P	03 43 25.1	+1.1
	baz=281,SNR=20						
JIS	Juneau Island	92.73	31	IAmb	IAmb	03 43 27.4	
	comp=Z,23nm,1.3s						
JIS	Juneau Island	92.73	31	P	P	03 43 26.9	+2.0
S32K	Killisnoo	92.77	32	P	P	03 43 25.2	+0.1
	baz=280						
JETT	Jettan, Norway	92.80	340	*e*P	P	03 43 24.6	-0.5
P32M	Atlin	92.85	30	P	P	03 43 26.4	+1.0
	baz=280						
N32M	Quiet Lake	92.87	28	P	P	03 43 26.8	+1.3
	baz=281						
NACGM	Naroch	93.01	325	*e*P	P	03 43 26.2	0.0
	comp=Z,18nm,0.8s,baz=81						
SORM	Soroca	93.02	318	⇑P	P	03 43 25.5	-0.9
SORM	Soroca	93.02	318	P	P	03 43 25.5	-0.9
TLCR		93.08	315	⇑P	P	03 43 26.3	-0.5
TLCR		93.08	315	P	P	03 43 26.3	-0.5
A36M	Sachs Harbour	93.12	17	P	P	03 43 27.0	+0.7
	baz=289						
P33M	Teslin, Yukon	93.18	29	P	P	03 43 28.1	+1.0
	baz=281						
MEF	Metsahovi	93.33	331	*e*P	P	03 43 26.7	-0.9
TPGR	Topolog	93.40	315	⇓P	P	03 43 28.0	-0.3
MMPY	Sheldon Lake,	93.41	27	P	P	03 43 29.3	+1.2
	baz=283,SNR=7.0						
TIRR	Tirgusor	93.45	315	⇓P	P	03 43 27.9	-0.7
TIRR	Tirgusor	93.45	315	IAmb	IAmb	03 43 28.9	
	comp=Z,24nm,0.9s						
TIRR	Tirgusor	93.45	315	P	P	03 43 27.8	-0.7
VLDR	Vladesti	93.50	316	⇓P	P	03 43 29.0	+0.2
CFR	Carcaliu	93.55	315	⇑P	P	03 43 28.3	-0.6
CFR	Carcaliu	93.55	315	P	P	03 43 28.3	-0.6
VASR	Vaslui	93.60	317	⇑P	P	03 43 28.6	-0.5
Q32M	Nakina River	93.70	31	P	P	03 43 30.7	+1.1
	baz=282						
HARR	Harsova	93.76	315	⇑P	P	03 43 29.9	0.0
HARR	Harsova	93.76	315	P	P	03 43 29.9	0.0
U33K	Whale Pass	93.79	33	P	P	03 43 31.2	+1.4
	baz=281						
NOR	Nord	93.96	355	*i* P	P	03 43 27.5	-2.7
MANT	Manisa	94.07	309	IAmb	IAmb	03 43 32.0	
	comp=Z,21nm,1.0s						
PANC	Panciu	94.15	316	⇑P	P	03 43 32.4	+0.7
WRAK	Wrangell Islan	94.16	33	IAmb	IAmb	03 43 33.7	
	comp=Z,24nm,0.9s						
WRAK	Wrangell Islan	94.16	33	P	P	03 43 32.8	+1.3
	baz=281,SNR=6.2						
ODBI	Odobesti	94.23	316	⇑P	P	03 43 33.6	+1.6
GRER		94.34	316	⇓P	P	03 43 32.2	-0.3
C36M	Paulatuk	94.36	20	IAmb	IAmb	03 43 33.1	
	comp=Z,8.4nm,0.8s						
C36M	Paulatuk	94.36	20	P	P	03 43 32.3	+0.1
	baz=290						
TESR	Tescani	94.40	317	⇑P	P	03 43 32.8	0.0
RAF	Rauma	94.42	332	*e*P	P	03 43 31.6	-0.9
VRI	Vrincioaia	94.44	316	⇑P	P	03 43 33.4	+0.3
VRI	Vrincioaia	94.44	316	P	P	03 43 33.4	+0.3
PABE	Paberze	94.49	326	*e*P	P	03 43 32.8	-0.2
PLOR	Plostina	94.50	316	⇓P	P	03 43 33.3	-0.1
PLOR	Plostina	94.50	316	P	P	03 43 33.2	-0.1
S34M	Telegraph Cree	94.50	31	P	P	03 43 34.4	+1.4
	baz=282,SNR=5.9						
H02S1	DAWSON INLET T	94.71	36	T	T	05 28 05.1	
	SNR=57						
COVR	Voineasa-Covas	94.80	316	⇑P	P	03 43 34.2	-0.5
DLBC	Dease Lake	94.95	31	IAmb	IAmb	03 43 37.6	
	comp=Z,14nm,1.1s						
DLBC	Dease Lake	94.95	31	P	P	03 43 36.6	+1.4
	baz=283,SNR=5.5						
MLR	Muntele Rosu	95.04	316	⇑P	P	03 43 35.7	-0.3
MLR	Muntele Rosu	95.04	316	IAmb	IAmb	03 43 36.8	
	comp=Z,19nm,0.8s						
MLR	Muntele Rosu	95.04	316	P	P	03 43 35.6	-0.3
STEI	Steigen	95.10	339	*e*P	P	03 43 34.6	-0.9
WTLY	Watson Lake, Y	95.16	29	P	P	03 43 37.5	+1.4
	baz=285,SNR=16						
T35M	Bob Quinn	95.17	32	P	P	03 43 37.8	+1.6
	baz=283						
BURAR	Bucovina Array	95.19	318	⇓P	P	03 43 36.9	+0.4
BURAR	Bucovina Array	95.19	318	P	P	03 43 36.9	+0.4
MBAR	Mbarara	95.23	270	P	P	03 43 37.3	-0.3
MBAR				IAmb	IAmb	03 43 38.4	
	comp=Z,13nm,0.8s						
MBAR	Mbarara	95.23	270	*i* P	P	03 43 37.0	-0.6
MBAR				pmax	pmax		
	comp=Z,12nm,0.9s						
MBAR	Mbarara	95.23	270	P	P	03 43 37.8	+0.2
SUW	Suwalki	95.24	325	*e*P	P	03 43 36.1	-0.4
SUW	Suwalki	95.24	325	*e*P	P	03 43 35.2	-1.3
FAUS	Fauske	95.27	339	*e*P	P	03 43 35.2	-1.1
DOPR	Dopca	95.35	316	⇓P	P	03 43 37.1	-0.1
VOIR		95.67	316	⇓P	P	03 43 38.3	-0.5
VOIR		95.67	316	P	P	03 43 38.2	-0.5
ARCR	ARCALIA	95.86	318	⇑P	P	03 43 40.1	+0.6
ARR	Arges	95.97	316	⇑P	P	03 43 40.0	-0.2
RDO	Rodhopi	96.01	312	IAmb	IAmb	03 43 40.1	
	comp=Z,10nm,1.0s						
MOR8	Moi Rana	96.01	338	*e*P	P	03 43 37.8	-2.0
CJR	Cluj-Napoca	96.43	317	⇑P	P	03 43 43.1	+0.8
CJR	Cluj-Napoca	96.43	317	P	P	03 43 43.0	+0.8
CBBR	Cluj-Babes-Bol	96.46	317	⇓P	P	03 43 42.2	0.0
ELIB	Princess Elisa	96.53	198	*d*P	P	03 43 42.9	+0.8
LOT	Lotru	96.55	316	⇓P	P	03 43 43.3	+0.5
LIRD	Liard River Hi	96.66	29	P	P	03 43 44.2	+1.3
	baz=287						
WRGLY	Wrigley	96.67	25	P	P	03 43 44.0	+1.2
	baz=290						
MARR	Marisel-Cluj	96.77	317	⇑P	P	03 43 43.8	0.0
TRPA	Tarpa	96.86	319	⇓P	P	03 43 43.9	0.0
DRGR		97.02	318	⇑P	P	03 43 44.8	0.0
DRGR		97.02	318	P	P	03 43 44.8	0.0
STHS	Stebnicka Huta	97.42	320	*e*P	Pdif	03 43 48.5	+1.9
STHS	Stebnicka Huta	97.42	320	*e*PDIFF	Pdif	03 43 48.5	+1.9
KOTAN	Kotaneelee Air	97.43	28	P	Pdif	03 43 47.1	+0.8
	baz=289						
NSS	Namsos	97.59	337	*e*P	P	03 43 45.3	-1.6
HERR	Herculane	97.60	316	⇑P	P	03 43 47.2	-0.3
SURR	Surduc	97.63	317	⇓P	P	03 43 47.5	0.0
SIRR	Siria	97.84	317	⇑P	P	03 43 48.5	0.0
BZS	Buzias	98.00	317	⇓P	P	03 43 48.5	-0.8
BZS	Buzias	98.00	317	P	P	03 43 48.4	-0.8
NIE	Niedzica	98.02	321	*e*P	Pdif	03 43 50.6	+1.4
DAG	Danmarks Havn	98.08	352	*i* P	P	03 43 45.4	-3.5
MDVR	Moldovita	98.11	316	⇑P	P	03 43 49.8	0.0
OJC	Ojcow	98.14	321	*e*P	Pdif	03 43 49.9	+0.1
OJC	Ojcow	98.14	321	IAmb	IAmb	03 43 53.2	
	comp=Z,10nm,1.0s						
LSZ	Lusaka	98.21	255	P	P	03 43 50.6	-0.3
LSZ	Lusaka	98.21	255	P	P	03 43 50.6	-0.3
LSZ				pmax	pmax		
	comp=Z,17nm,0.8s						
VYHS	Vyhne	99.18	320	*e*P	Pdif	03 43 54.7	+0.3
VYHS	Vyhne	99.18	320	*e*PDIFF	Pdif	03 43 54.7	+0.3
NC602	NORSAR Array S	99.26	333	*e*P	Pdif	03 43 53.0	-1.4
NB2	NORSAR Subarra	99.28	333	P	Pdif	03 43 53.1	-1.5
	comp=Z,4.9nm,0.8s,baz=68,slow=4.6						
NB2	NORSAR Subarra	99.28	333	P	Pdif	03 43 53.1	-1.5
	baz=68,slow=4.6						
NOA	NORSAR Array B	99.28	333	P	Pdif	03 43 53.4	-1.2
	comp=Z,4.0nm,0.8s,baz=68,slow=4.5,SNR=15						
	comp=Z,4.0nm,0.8s						
BSD	Bornholm Skovb	99.59	327	*e*P	Pdif	03 43 54.5	-1.5
MORC	Moravsky Berou	99.66	321	⇓P	Pdif	03 43 57.7	+1.1
MORC	Moravsky Berou	99.66	321	*e*P	Pdif	03 43 57.8	+1.2
MORC	Moravsky Berou	99.66	321	P	Pdif	03 43 57.6	+1.1
DOMB	Dombas	99.81	335	*e*P	Pdif	03 43 56.2	-0.7
JAVC	Velka Javorina	99.83	320	*e*P	Pdif	03 43 58.8	+1.4
NEEM	North Greenlan	99.86	359	*i* P	Pdif	03 43 52.4	-4.8
MORH	Mrgy, Hungar	99.88	318	⇑P	Pdif	03 43 56.8	-0.8
OSL	Oslo	99.94	332	*e*P	Pdif	03 43 56.6	-0.9
DBG	Daneborg	100.34	351	*i* P	Pdif	03 43 55.4	-3.6
VRAC	Vranov	100.39	321	⇑P	Pdif	03 44 00.0	+0.2
VRAC	Vranov	100.39	321	*e*P	Pdif	03 44 00.2	+0.4
VRAC	Vranov	100.39	321	P	Pdif	03 44 00.0	+0.2
KRUC	Moravsky	100.58	321	*e*P	Pdif	03 44 01.1	+0.5
KONO	Kongsberg	100.58	332	*e*P	Pdif	03 43 59.2	-1.1
YKA	Yellowknife Ar	100.68	24	P	Pdif	03 44 01.2	+0.5
	comp=Z,1.6nm,0.7s,baz=298,slow=4.4,SNR=38						
YKA				PKiKP	PKiKP	03 48 26.4	+0.2
	comp=Z,0.3nm,0.6s,baz=295,slow=1.4,SNR=9.3						
BOSA	Boshof	100.72	242	P	Pdif	03 44 04.4	+2.6
	comp=Z,3.7nm,1.1s,baz=346,slow=6.7,SNR=2.2						
CONA	Conrad Observa	101.25	320	*e*PP	PP	03 48 15.8	+1.8
	comp=Z,6.1nm,1.2s						
BRG	Berggiesshubel	101.53	323	*e*P	Pdif	03 44 06.3	+1.5
BRG				Amp		03 44 07.0	
	comp=Z,7.1nm,0.9s						
BRG	Berggiesshubel	101.53	323	*e*P	Pdif	03 44 06.3	+1.5
BRG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CLL	Collm	101.94	324	*e*PP	PP	03 48 19.0	0.0
CLL				*e*(sPP)		03 48 55.0	
SOKA	Soboth	102.16	319	*e*Pdiff	Pdif	03 44 07.5	-0.3
	comp=Z,4.0nm,1.2s						
SOKA				*e*PP	PP	03 48 23.3	+2.4
	comp=Z,5.1nm,1.3s						
MOA	Molln	102.30	320	*e*Pdiff	Pdif	03 44 08.3	-0.1
	comp=Z,7.8nm,1.1s						
MOA				*e*PP	PP	03 48 24.6	+2.8
	comp=Z,4.3nm,1.0s						
GERES	GERESS Array B	102.34	321	P	Pdif	03 44 08.6	+0.1
	comp=Z,1.5nm,0.9s,baz=72,slow=4.3,SNR=11						
GERES				PP	PP	03 48 23.3	+1.2
	comp=Z,1.7nm,0.9s,baz=77,slow=6.0,SNR=8.8						
OBKA	Obir	102.53	319	*e*Pdiff	Pdif	03 44 09.7	+0.2
	comp=Z,3.7nm,0.9s						
OBKA				*e*PP	PP	03 48 23.5	-0.2
	comp=Z,5.0nm,1.4s						
KBA	Koelnbreinsper	103.13	320	*e*Pdiff	Pdif	03 44 12.3	0.0
	comp=Z,4.0nm,1.1s						
ABTA	Abfaltersbach	103.78	319	*e*Pdiff	Pdif	03 44 14.4	-0.7
	comp=Z,4.2nm,1.4s						
WTTA	Wattenberg	104.17	320	*e*Pdiff	Pdif	03 44 17.3	+0.4
	comp=Z,6.1nm,0.7s						
WTTA				PP	PP	03 48 38.9	+2.9
	comp=Z,7.0nm,1.1s						
SQTA	Sankt Quirin	104.46	320	*e*Pdiff	Pdif	03 44 18.5	+0.4
	comp=Z,7.5nm,1.2s						
SQTA				*e*PP	PP	03 48 40.2	+2.2
	comp=Z,4.0nm,0.7s						
MOTA	Moosalm	104.48	320	*e*Pdiff	Pdif	03 44 18.5	+0.3
	comp=Z,5.5nm,1.1s						
MOTA				*e*PP	PP	03 48 40.6	+2.4
	comp=Z,7.6nm,1.0s						
RETA	Reutte	104.65	321	*e*PP	PP	03 48 41.5	+2.1
	comp=Z,6.8nm,1.0s						
NVAR	Mina Array Bea	108.12	48	Pdiff	Pdif	03 44 36.0	+1.3
	comp=Z,0.4nm,0.7s,baz=293,slow=4.7,SNR=4.1						
NVAR				PKiKP	PKiKP	03 48 41.5	+0.6
	comp=Z,0.5nm,0.6s,baz=258,slow=2.7,SNR=4.9						
NVAR				PP	PP	03 49 05.3	0.0
	comp=Z,1.9nm,1.0s,baz=279,slow=7.3,SNR=5.7						
NVAR				PKKP	PKKPdf	04 00 07.2	-0.4
	comp=Z,0.9nm,0.7s,baz=126,slow=6.1,SNR=3.9						
HLID	Hailey	109.02	42	P	PKiKP	03 48 43.6	+1.2
	baz=293						
KEST	Kesra	109.63	309	PP	PP	03 49 15.5	-0.7
	comp=Z,5.5nm,0.7s,baz=336,slow=1.9,SNR=8.7						
BOZ	Bozeman (W)	109.98	39	P	PKiKP	03 48 45.0	+0.9
	baz=296						
EGMT	Eagleton	110.00	36	P	PKiKP	03 48 45.0	+1.1
	baz=299						
R11B	Troy Canyon, C	110.15	47	P	PKiKP	03 48 46.7	+2.0
	baz=291						
PFO	Pinyon Flats O	111.07	52	P	PKiKP	03 48 46.1	-0.4
	baz=288						
TPFO	Pinon Flats	111.08	52	P	PKiKP	03 48 46.0	-0.5
	baz=288						
PDAR	Pinedale Array	112.58	41	Pdiff	Pdif	03 44 59.2	+4.7
	comp=Z,0.1nm,0.5s,baz=235,slow=3.2,SNR=1.8						
PDAR				PKiKP	PKiKP	03 48 50.0	+0.8
	comp=Z,0.6nm,0.5s,baz=94,slow=0.8,SNR=8.3						
PDAR				PKKPab	PKKPab	03 59 46.5	-1.3
	comp=Z,1.2nm,0.7s,baz=130,slow=7.1,SNR=4.1						
LAO	LASA Array	112.75	36	P	PKiKP	03 48 50.5	+1.3
	baz=301						
WUAZ	Wupatki	114.33	49	P	PKiKP	03 48 53.7	+1.0
	baz=293						
K22A	Casper	114.60	40	P	PKPdf	03 48 53.7	+0.7
	baz=300						
O20A	White River Ci	114.65	43	P	PKPdf	03 48 54.5	+1.3
	baz=297						
RSSD	Black Hills	115.41	38		PKiKP	03 48 54.5	-0.1
RSSD	Black Hills	115.41	38	PKIKP	PKiKP	03 48 54.5	-0.1
RSSD	Black Hills	115.41	38	P	PKPdf	03 48 54.9	+0.3
	baz=302						
N23A	Red Feather La	115.84	42	P	PKPdf	03 48 56.2	+0.6
	baz=299						
TUC	Tucson	116.00	52	P	PKiKP	03 48 56.6	+0.7
	baz=292						
ISCO	Idaho Springs	116.59	42	P	PKiKP	03 48 58.1	+1.0
	baz=299						
S22A	4UR Ranch, Cre	116.72	45	P	PKiKP	03 48 58.7	+1.3
	baz=297						
ESDC	Sonseca Array	117.64	318	PKP	PKiKP	03 48 59.3	+0.5
	comp=Z,0.4nm,0.9s,baz=76,slow=5.4,SNR=2.1						
ESDC				PP	PP	03 50 12.3	-0.3
	comp=Z,2.9nm,0.9s,baz=52,slow=6.6,SNR=11						
SDCO	Great Sand Dun	117.65	44	P	PKiKP	03 49 00.4	+1.1
	baz=298						
ANMO	Albuquerque	118.23	48	PKPdf	PKiKP	03 49 00.7	+0.4
ANMO	Albuquerque	118.23	48	PKIKP	PKiKP	03 49 00.7	+0.4
ANMO	Albuquerque	118.23	48	P	PKiKP	03 49 01.3	+0.9
	baz=296						
121A	Cookes Peak, D	118.25	51	P	PKiKP	03 49 01.6	+1.3
	baz=294						
T25A	Trinidad	118.70	45	P	PKiKP	03 49 02.5	+1.3
	baz=299,SNR=6.8						
ECSD	EROS Data Cent	120.00	34	PKPdf	PKiKP	03 49 03.4	+0.1
ECSD	EROS Data Cent	120.00	34	P	PKiKP	03 49 03.4	+0.1
	baz=309						
MNTX	Cornudas Mount	120.45	51	P	PKiKP	03 49 05.6	+1.1
	baz=295						
BGNE	Belgrade	120.52	37	P	PKPdf	03 49 04.1	-0.2
	baz=306						
CBKS	Cedar Bluff	121.00	41	P	PKiKP	03 49 05.8	+0.4
	baz=304						
SPMN	Marine on St.	121.09	31	P	PKiKP	03 49 06.1	+0.7
	baz=313						
MSTX	Muleshoe	121.39	47	P	PKiKP	03 49 07.0	+0.6
	baz=298						
SCHQ	Schefferville	121.62	9	PKP	PKiKP	03 49 06.5	+0.4
	comp=Z,2.5nm,0.4s,baz=323,slow=1.2,SNR=21						
AMTX	Amarillo	121.73	46	P	PKiKP	03 49 07.8	+0.8
	baz=300						
TOA0	Torodi Ar. Sit	122.47	287		PKPdf	03 49 08.4	-0.2
TORD	Torodi Ar. Bea	122.47	287	PKP	PKPdf	03 49 08.7	+0.1
	comp=Z,4.7nm,0.7s,baz=56,slow=2.0,SNR=21						
TORD				PKKP	PKKPdf	03 59 40.4	+0.3
	comp=Z,26nm,0.3s,baz=275,slow=3.4,SNR=17						
TXAR	Lajitas Array	122.79	52	PKP	PKiKP	03 49 09.9	+0.7
	comp=Z,1.7nm,0.7s,baz=250,slow=0.3,SNR=20						
TXAR	Lajitas Array	122.79	52	PKIKP	PKiKP	03 49 10.0	+0.7
KSU1	Kansas State U	122.83	39	P	PKiKP	03 49 09.1	+0.2
	baz=307,SNR=6.4						
SCIA	State Center	123.09	34	P	PKiKP	03 49 09.8	+0.4
	baz=311						
WMOK	Wichita Mounta	123.85	44	P	PKiKP	03 49 11.2	+0.1
	baz=302						
JFWS	Jewell Farm	124.02	32	P	PKPdf	03 49 10.7	-0.2
	baz=315,SNR=6.2						
E46A	Sault Ste Mari	124.24	25	PKPdf	PKiKP	03 49 11.7	+0.2
OK030	Cody Creek RV	124.56	42		PKPdf	03 49 12.2	+0.1
TUL1	Leonard	125.23	41	P	PKiKP	03 49 14.1	+0.3
	baz=306						
JCT	Junction City	125.27	49	P	PKiKP	03 49 14.6	+0.6
	baz=299,SNR=11						
U38A	Gravette	125.84	40	PKPdf	PKiKP	03 49 14.8	-0.2
HDIL	Hopedale	126.18	33	P	PKiKP	03 49 16.0	+0.5
	baz=314						
833A	Chaparral WMA,	126.60	51	P	PKiKP	03 49 17.5	+0.8
	baz=298						
CCM	Cathedral Cave	126.77	37	PKPdf	PKPdf	03 49 16.5	+0.2
CCM	Cathedral Cave	126.77	37	PKIKP	PKPdf	03 49 16.5	+0.2
CCM	Cathedral Cave	126.77	37	P	PKiKP	03 49 16.9	+0.1
	baz=311						
SFIN	Lafayette	127.48	32	P	PKiKP	03 49 18.8	+0.7
	baz=317						
MIAR	Mount Ida	127.50	41	P	PKiKP	03 49 18.9	+0.5
	baz=307,SNR=15						
O48B	Farmland	128.57	30	P	PKPdf	03 49 19.8	+0.1
	baz=319						
WCI	Wyandotte Cave	129.47	33		PKPdf	03 49 21.1	-0.3
WCI	Wyandotte Cave	129.47	33	PKIKP	PKPdf	03 49 21.1	-0.3
WCI	Wyandotte Cave	129.47	33	P	PKiKP	03 49 22.1	-0.1
	baz=316						
ACSO	Alum Creek Sta	129.66	29	P	PKiKP	03 49 22.7	+0.1
	baz=321						
DBIC	Dimbokro	130.00	281	PKP	PKiKP	03 49 23.8	-0.1
	comp=Z,3.5nm,0.9s,baz=166,slow=3.7,SNR=4.2						
DBIC				SKPbc	SKPab	03 52 33.5	-0.9
	comp=Z,23nm,1.0s,baz=88,slow=4.6,SNR=13						
OXF	Oxford	130.20	39	P	PKiKP	03 49 23.5	-0.3
	baz=311						
P52A	Corning	130.54	29	P	PKiKP	03 49 24.8	+0.5
	baz=322						
BINY	Binghamton	131.01	22	P	PKiKP	03 49 25.3	+0.1
	baz=330						
TZTN	Tazewell	132.19	32	P	PKiKP	03 49 27.5	-0.2
	baz=318						
LRAL	Lakeview Retre	132.68	38	P	PKiKP	03 49 28.8	0.0
	baz=312						
BLA	Blacksburg	133.27	29	P	PKiKP	03 49 29.6	-0.4
	baz=323						
CBN	Corbin Frederi	133.86	26	P	PKPdf	03 49 30.3	+0.6
	baz=327						
KMSC	Kings Mountain	134.42	32	P	PKiKP	03 49 32.2	-0.1
	baz=320						
CMIG	Matias Romero	135.13	62	PKP	PKPdf	03 49 33.0	+0.3
	comp=Z,0.9nm,0.5s,baz=316,slow=6.4,SNR=6.4						
TIGA	Tifton	135.87	37	P	PKiKP	03 49 35.4	+0.1
	baz=315						
PLCA	Paso Flores	139.38	161	PKhKP	PKPpre	03 49 32.1	
	comp=Z,1.7nm,0.8s,baz=197,slow=6.0,SNR=3.3						
PLCA				SKPbc	SKiKP	03 53 06.0	-1.3
	comp=Z,7.0nm,0.9s,baz=210,slow=4.3,SNR=13						
TRQA	Tornquist	144.15	169	PKPdf	PKPbc	03 49 47.6	+0.8
TRQA	Tornquist	144.15	169	PKIKP	PKPbc	03 49 47.6	+0.7
PEL	Peldehue	146.01	155	PKPab	PKPab	03 49 53.5	0.0
PEL	Peldehue	146.01	155	PKP2	PKPab	03 49 53.6	0.0
JTS	Las Juntas de	146.60	67	PKPbc	PKPdf	03 49 53.9	+0.5
	comp=Z,34nm,0.9s,baz=329,slow=2.6,SNR=18						
PRVC	Isla de Provid	148.50	59	PKPbc	PKPbc	03 49 59.7	-0.4
LCO	Las Campanas	149.48	150		PKPbc	03 50 01.6	-1.0
LCO	Las Campanas	149.48	150	PKP2	PKPbc	03 50 01.6	-1.0
SDDR	Presa de Saban	152.52	37		PKiKP	03 50 10.7	+0.8
PB14	IPOC Station P	153.16	145		PKPbc	03 50 10.9	-0.3
ATAH	Atahualpa	155.37	101	PKP	PKPdf	03 50 07.5	+0.2
	comp=Z,4.2nm,0.8s,baz=144,slow=0.8,SNR=3.0						
ATAH				PKPbc	PKPab	03 50 18.9	-14
	comp=Z,7.6nm,0.8s,baz=210,slow=4.4,SNR=4.7						
ATAH				PKPab	pPKPdf	03 50 34.5	-5.5
	comp=Z,23nm,0.8s,baz=223,slow=4.3,SNR=10						
SJG	San Juan	156.06	29	PKPbc	PKPdf	03 50 16.8	+9.3
	comp=Z,2.5nm,0.5s,baz=202,slow=22,SNR=1.9						
SJG				PKPab	PKPab	03 50 34.9	-0.3
	comp=Z,7.4nm,0.7s,baz=70,slow=2.3,SNR=5.3						
CPUP	Villa Florida	156.37	173	PKP	PKPdf	03 50 08.7	+0.9
	comp=Z,1.6nm,0.9s,baz=40,slow=5.0,SNR=2.4						
CPUP				PKPab	PKPab	03 50 36.6	+0.2
	comp=Z,5.7nm,1.0s,baz=167,slow=5.0,SNR=4.7						
ROSC	El Rosal	158.38	70	PKPab	PKPab	03 50 48.3	+2.1
	comp=Z,40nm,0.7s,baz=139,slow=4.2,SNR=18						
SDV	Santo Domingo	159.81	55	PKP	PKPdf	03 50 12.0	-0.5
	comp=Z,1.7nm,0.3s,baz=120,slow=2.3,SNR=4.1						
SDV				PKPab	PKPab	03 50 52.9	+0.9
	comp=Z,9.6nm,0.6s,baz=296,slow=2.2,SNR=9.8						
LPAZ	La Paz	160.71	135	PKP	PKPdf	03 50 14.6	+0.7
	comp=Z,3.4nm,1.0s,baz=16,slow=2.8,SNR=7.7						
LPAZ				PKPab	PKPab	03 50 57.5	+1.2
	comp=Z,5.4nm,0.8s,baz=171,slow=2.0,SNR=12						
LPAZ	La Paz	160.71	135	*e*P	PKPdf	03 50 15.1	+1.2
SIV	San Ignacio	165.16	153	PKP	PKPdf	03 50 17.8	+0.3
	comp=Z,1.4nm,0.8s,baz=151,slow=4.3,SNR=4.9						
SIV				PKPab	PKPab	03 51 15.6	+0.6
	comp=Z,8.4nm,0.8s,baz=200,slow=4.4,SNR=18						
BDFB	Brasilia	165.91	205	PKPab	PKPab	03 51 18.5	+0.2
	comp=Z,4.7nm,0.9s,baz=102,slow=7.0,SNR=4.7						
SAML	Samuel	169.04	124	*e*P	PKPdf	03 50 21.2	+0.8
MDP	Montagnes des	172.05	350	PKPab	PKPab	03 51 44.8	-0.5
	comp=Z,16nm,1.0s,baz=129,slow=6.1,SNR=1.8						

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*UPA **29** 03:37:01.4±1.1, 7°.72N×82°.14W, h3km±4km, MW4.1*
*UCR **29** 03:37:16.1±1.9, 8°.29N×82°.86W, h6km±9km, MW3.8*
ISC 29 03:36:59.9±1.4, **7°.65N**±0°.06×**82°.13W**±0°.03, **h7**km±11km,
n53, σ1s.22/72, **3C, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
REME3	Remedios, Chir	0.64	28	⇑*i*P	Pn	03 37 14.2	-1.2
REME3				*e*S	Sb	03 37 23.9	+1.2
NANC3	Nancito, Chiri	0.71	34	⇑*i*P	Pn	03 37 14.9	-1.4
NANC3				*e*S	Sb	03 37 24.8	+0.2
LOCO3	Loma Colorada,	0.80	340	*e*P	Pn	03 37 16.8	-0.8
PTPM	Petroterminale	0.92	307	⇑*i*P	Pn	03 37 18.6	-0.6
PTPM				*e*S	Sn	03 37 32.1	-0.7
LESP3	La Esperanza,	0.99	319	*e*P	Pn	03 37 19.4	-0.8
PSOM3	Paja de Sombre	1.04	350	*e*P	Pn	03 37 20.4	-0.6
PSOM3				*e*S	Sn	03 37 35.0	-0.8
PTAR3	Potrerillos Ar	1.09	341	*e*P	Pn	03 37 21.7	-0.1
PTAR3				*e*S	Sn	03 37 36.5	-0.7
BCO2	Palmira	1.13	340	*e*P	Pn	03 37 22.1	-0.2
BCO2				*e*S	Sn	03 37 39.4	+1.2
LNBQ3	Los Naranjos,	1.17	345	*e*P	Pg	03 37 22.6	+0.2
CDITO	Canoas	1.17	321	*e*P	Pg	03 37 22.2	-0.1
CDITO	Canoas	1.17	321	*e*P	Pg	03 37 22.1	-0.3
STIA3	Santiago, Vera	1.23	69	*e*P	Pg	03 37 23.9	+0.4
STIA3				*e*S	Sg	03 37 41.6	+2.0
BC3P	Paso Ancho	1.25	338	*e*P	Pg	03 37 24.2	+0.4
BC3P				*e*S	Sn	03 37 42.0	+0.8
BRU2	Volcan	1.26	334	*e*P	Pg	03 37 24.2	+0.1
BRU2				*e*S	Sn	03 37 42.6	+1.1
BRU2	Volcan	1.26	334	*e*P	Pg	03 37 23.8	-0.3
SFRA3	San Francisco,	1.29	63	*e*P	Pg	03 37 25.0	+0.3
SFRA3				*e*S	Sg	03 37 42.6	+1.1
MLIR3	Monte Lirio, C	1.32	329	*e*P	Pg	03 37 25.6	+0.3
SAFE3	Santa Fe, Vera	1.35	51	*e*P	Pg	03 37 25.8	-0.1
SAFE3				*e*S	Sb	03 37 43.9	+0.7
EDAD	Golfito	1.42	314	*e*P	Pb	03 37 25.5	-1.3
EDSV	San Vito	1.43	324	*e*P	Pg	03 37 28.5	+1.3
PESE3	Pese, Herrera	1.53	80	*e*P	Pb	03 37 28.6	0.0
CRIS3	El Cristo, Coc	1.62	68	*e*P	Pb	03 37 29.8	-0.3
POTG	Potrero Grande	1.70	325	*e*P	Pb	03 37 30.6	-1.0
EDP2	Potrero Grande	1.70	323	*e*P	Pg	03 37 31.2	-1.3
CNI2	El Empalme, Bo	1.79	349	*e*P	Pb	03 37 31.3	-1.8
CNI2				*e*S	Sn	03 37 53.7	-0.6
EDPN	Palmar Norte	1.84	315	*e*P	Pb	03 37 32.8	-1.1
AZU	Azuero	1.85	86	*e*P	Pb	03 37 33.8	-0.3
AZU				*e*S	Sb	03 37 57.8	+0.4
EDBA	Buenos Aires	1.88	323	*e*P	Pg	03 37 34.7	-1.2
PNME	Penonome	1.97	65	*e*P	Pb	03 37 35.7	-0.4
PNME				*e*S	Sg	03 38 04.5	+1.3
SRBA	San Rafael, Bu	1.98	322	*e*P	Pb	03 37 35.3	-1.1
PCRI3	Pocri, Los San	2.00	90	*e*P	Pg	03 37 37.2	-1.0
PCRI3				*e*S	Sg	03 38 04.8	+0.6
BRIBI	Bribri	2.08	340	*e*P	Pb	03 37 37.9	-0.2
PEZE	Perez Zeledon,	2.30	318	*e*P	Pb	03 37 41.0	-0.8
EDDO	Dominical	2.34	313	*e*P	Pg	03 37 44.1	-0.6
BUS1	Rivas	2.47	320	*e*P	Pb	03 37 43.5	-1.5
CDM	Cerro de Muert	2.48	320	*e*P	Pb	03 37 43.1	-2.0
LLNJ	Naranjito	2.66	313	*e*P	Pb	03 37 45.5	-2.3
RIMA	Rio Macho	2.71	321	*e*P	Pb	03 37 46.8	-2.0
BCIP	Isla Barro Col	2.73	56	*e*P	Pb	03 37 47.5	-1.5
BCIP				*e*S	Sb	03 38 23.7	+1.0
RVSTA	Santa Teresita	2.75	327	*e*P	Pb	03 37 49.1	-0.4
ARRA3	Arraijan, Pana	2.78	62	*e*P	Pb	03 37 48.3	-1.6

ARRA3				eS	Sg	03 38 27.6	-1.6
ABE2	**San Pablo**	**2.79**	**317**	eP	**Pb**	**03 37 48.2**	**-2.0**
LCOCO	**El Coco**	**2.79**	**330**	eP	**Pb**	**03 37 49.3**	**-0.9**
GAMB1	**Gamboa**	**2.81**	**59**	eP	**Pb**	**03 37 48.8**	**-1.6**
RAFA	**San Farael, Vo**	**2.83**	**324**	eP	**Pb**	**03 37 49.2**	**-1.8**
RVLA	**Villa Bonita**	**2.83**	**330**	eP	**Pb**	**03 37 49.8**	**-1.0**
VTLO	**VTLO**	**2.85**	**327**	eP	**Pb**	**03 37 49.5**	**-1.8**
OCM	**Ochomogo**	**2.87**	**321**	eP	**Pb**	**03 37 48.9**	**-2.6**
HDC	**Heredia**	**3.04**	**320**	eP	**Pb**	**03 37 54.6**	**+0.1**
HDC				eS	**Sg**	**03 38 38.9**	**+1.1**
JACO	**JACO, Garabito**	**3.20**	**309**	eP	**Pn**	**03 37 51.6**	**+1.0**
JTS	**Las Juntas de**	**3.82**	**313**	eP	**Pb**	**03 38 06.0**	**-1.8**
JTS				eS	**Sb**	**03 38 56.8**	**+2.5**
JTS	**Las Juntas de**	**3.82**	**313**	eP	**Pn**	**03 38 01.7**	**+2.4**
SAJU	**San Juanillo,**	**4.27**	**304**	eP	**Pn**	**03 38 06.4**	**+1.0**

WEL 29 03:47:49.7±1.4,**39°S**±9°×**17°6E**±°,**h4**^{km}±6^{km},**M1.2**/9, **ML4.2**/1,**MLv1.2**/9,**Error ellipse: s-maj=0.0km s-min=0.0km az=138.4,confirmed,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KATZ	**Kakaramea**	**0.06**	**168**	P	Pg	03 47 51.6	+0.4
KATZ				S	Sg	03 47 52.6	+0.4
RATZ	**Rangitukua**	**0.09**	**56**	P	Pg	03 47 52.0	+0.5
RITZ	**Rihia Road**	**0.15**	**114**	P	Pg	03 47 53.1	+0.4
RITZ				S	Sg	03 47 55.7	+1.0
NTVZ	**North Tongarir**	**0.18**	**181**	P	Pg	03 47 53.7	+0.4
NTVZ				S	Sg	03 47 56.5	+0.8
TMVZ	**Te Maari**	**0.20**	**174**	P	Pg	03 47 54.3	+0.6
TMVZ				S	Sg	03 47 57.2	+0.9
WTVZ	**West Tongariro**	**0.21**	**199**	P	Pg	03 47 56.5	+2.6
WTVZ				S	Sg	03 47 57.6	+0.9
ETVZ	**East Tongariro**	**0.22**	**174**	P	Pg	03 47 57.5	+3.4
NNVZ	**North Ngauruho**	**0.22**	**193**	P	Pg	03 47 57.4	+3.4
NGZ	**Ngauruhoe**	**0.27**	**193**	P	Pb	03 47 58.8	+1.7

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*IDC **29** 03:47:55.0±0.9,5°.84S×153°.47E,h0^{km},mb3.8/8, mbtmp3.8/9,ML3.7/1,MS3.6/1,Error ellipse: s-maj=30.0km s-min=20.3km az=82.0*

ISC 29 03:48:00.2±0.8,**5°.74S**±0°.09×**153°.5E**±0°.1,**h35**^{km}**,n12,** σ**1**^{s}**.04**/14,**mb3.7**/7,**New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.06**	**314**	Pn	**Pn**	**03 48 31.2**	**-1.1**
	26nm,0.3s,baz=344,slow=2.3,SNR=20						
KRVT				Sn	**Sn**	**03 48 56.6**	**-0.2**
	64nm,0.3s,baz=44,slow=22,SNR=8.2						
	141nm,0.5s						
PMG	**Port Moresby**	**7.28**	**240**	Sn	**Sn**	**03 51 07.2**	**+1.6**
	5.6nm,0.3s,baz=204,slow=23,SNR=6.3						
DZM	**Mont Dzumac**	**20.49**	**144**	P	**P**	**03 52 34.3**	**-1.0**
	1.7nm,0.6s,baz=218,slow=22,SNR=1.6						
	1.7nm,0.6s						
WRA	**Warramunga Arr**	**23.39**	**231**	P	**P**	**03 53 04.3**	**-1.7**
	1.3nm,0.7s,baz=54,slow=10,SNR=11						
WRA				PcP	**PcP**	**03 56 52.3**	**+0.1**
	0.5nm,0.8s,baz=54,slow=2.9,SNR=2.7						
	1.3nm,0.7s						
ASAR	**Alice Springs**	**25.96**	**225**	P	**P**	**03 53 29.1**	**-0.5**
	0.8nm,0.5s,baz=59,slow=8.7,SNR=10						
ASAR				LR	LR	04 04 08.0	
	comp=Z,131nm,18.5s,baz=218,slow=38						
	0.8nm,0.5s						
KLR	**Kul'dur**	**57.95**	**343**	P	**P**	**03 57 49.2**	**+0.3**
	1.3nm,0.8s,baz=134,slow=9.7,SNR=4.8						
	1.3nm,0.8s						
MKAR	**Makanchi Array**	**81.50**	**319**	P	**P**	**04 00 15.1**	**+1.0**
	0.5nm,0.6s,baz=104,slow=6.2,SNR=6.6						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**82.33**	**326**	P	**P**	**04 00 18.7**	**+0.5**
	0.7nm,0.4s,baz=104,slow=6.1,SNR=3.0						
	0.7nm,0.4s						
ILAR	**Eielson Array**	**82.76**	**22**	P	**P**	**04 00 21.7**	**+1.5**
	0.4nm,1.0s,baz=251,slow=5.3,SNR=1.9						
	0.4nm,1.0s						
QSPA	**South Pole Qui**	**84.22**	**180**	P	**P**	**04 00 27.7**	**-0.3**
	1.7nm,0.7s,baz=167,slow=0.1,SNR=8.3						
	1.7nm,0.7s						
BDFB	**Brasilia**	**149.90**	**135**	PKPbc	**PKPbc**	**04 07 47.7**	**-0.2**
	1.5nm,0.4s,baz=174,slow=1.4,SNR=4.2						
TORD	**Torodi Ar. Bea**	**151.27**	**287**	PKPbc	**PKiKP**	**04 07 51.3**	**-0.2**
	1.0nm,0.4s,baz=58,slow=2.2,SNR=9.6						

WEL 29 03:48:14.4,38°.9S±0°.9×**17°6E**±°,**h9**^{km}±1^{km},**M3.4**/29, **ML3.7**/29,**MLv3.4**/29,**Error ellipse: s-maj=0.0km s-min=0.0km az=78.2,confirmed,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KATZ	**Kakaramea**	**0.05**	**170**	P	Pg	03 48 16.8	+0.4
KATZ				S	Sg	03 48 18.2	+0.3
RATZ	**Rangitukua**	**0.09**	**48**	P	Pg	03 48 17.3	+0.4
RITZ	**Rihia Road**	**0.14**	**110**	P	Pg	03 48 18.3	+0.7
RITZ				S	Sg	03 48 21.1	+1.2
KRVZ	**Karewarewa**	**0.17**	**191**	P	Pg	03 48 19.0	+0.9
KRVZ				S	Sg	03 48 21.7	+1.0
NTVZ	**North Tongarir**	**0.17**	**182**	P	Pg	03 48 19.0	+0.9
NTVZ				S	Sg	03 48 21.8	+1.1
TMVZ	**Te Maari**	**0.19**	**175**	P	Pg	03 48 19.4	+1.0
TMVZ				S	Sg	03 48 22.5	+1.3
WTVZ	**West Tongariro**	**0.20**	**201**	P	Pg	03 48 19.5	+0.9
WTVZ				S	Sg	03 48 23.0	+1.5
ETVZ	**East Tongariro**	**0.21**	**174**	P	Pg	03 48 19.8	+1.0
ETVZ				S	Sg	03 48 23.4	+1.6
NNVZ	**North Ngauruho**	**0.21**	**195**	P	Pg	03 48 19.8	+0.9
WATZ	**Wairara**	**0.22**	**10**	P	Pg	03 48 19.8	+0.8
WATZ				S	Sg	03 48 23.4	+1.3
OTVZ	**Oturere**	**0.23**	**184**	P	Pg	03 48 20.3	+1.0
OTVZ				S	Sg	03 48 24.0	+1.5
TWVZ	**Taurewa**	**0.24**	**233**	P	Pg	03 48 20.2	+0.9
TWVZ				S	Sg	03 48 23.8	+1.2
NGZ	**Ngauruhoe**	**0.26**	**195**	P	Pb	03 48 20.6	-0.7
NGZ				S	Sg	03 48 24.1	+1.0
SNVZ	**South Ngauruho**	**0.26**	**188**	P	Pb	03 48 20.8	-0.5
SNVZ				S	Sb	03 48 24.7	-1.3
WHTZ	**Whakaora**	**0.34**	**39**	P	Pg	03 48 20.9	-0.3
TUVZ	**Tukino**	**0.34**	**184**	P	Pb	03 48 22.4	-0.3
FWVZ	**Far West T-bar**	**0.34**	**197**	P	Pb	03 48 22.1	-0.7
DRZ	**Dome Shelter**	**0.36**	**195**	P	Pb	03 48 22.6	-0.6
WHVZ	**Whangaehu Hut**	**0.36**	**192**	P	Pb	03 48 22.5	-0.6
TRVZ	**Turoa**	**0.38**	**196**	P	Pb	03 48 22.8	-0.7
WNVZ	**Wahianoa**	**0.40**	**190**	P	Pb	03 48 23.3	-0.5
PKVZ	**Pokaka**	**0.45**	**216**	P	Pb	03 48 23.9	-0.5
KUTZ	**Kaahu Road**	**0.45**	**14**	P	Pb	03 48 24.0	-0.5
MOVZ	**Moawhango**	**0.48**	**174**	P	Pb	03 48 24.5	-0.6
MTVZ	**Mangateitei**	**0.48**	**200**	P	Pb	03 48 24.5	-0.6
WPRZ	**Whakapapatarin**	**0.55**	**43**	P	Pb	03 48 26.2	-0.1
MRHZ	**Matea Rd**	**0.58**	**81**	P	Pg	03 48 25.8	+0.2
TLZ	**Tolley Road**	**0.61**	**349**	P	Pg	03 48 26.3	+0.2
ALRZ	**Allen Road**	**0.63**	**55**	P	Pg	03 48 27.0	+0.4
BHHZ	**Black Hill Sta**	**0.63**	**152**	P	Pb	03 48 27.2	-0.4
GRRZ	**Galatos Road**	**0.67**	**30**	P	Pn	03 48 29.7	-0.3
BKZ	**Black Stump Fm**	**0.67**	**111**	P	Pg	03 48 27.6	+0.2
PRRZ	**Plateau Road**	**0.70**	**52**	P	Pb	03 48 28.5	-0.2
HRRZ	**Handcock Road**	**0.71**	**41**	P	Pb	03 48 29.5	+0.5
VRZ	**Vera Road**	**0.75**	**255**	P	Pb	03 48 29.6	+0.1
HSRZ	**Hossack Road**	**0.76**	**36**	P	Pn	03 48 30.6	-0.7
KWHZ	**Kaweka Forest**	**0.76**	**131**	P	Pb	03 48 30.0	+0.2
HIZ	**Hauiti**	**0.77**	**302**	P	Pb	03 48 30.1	+0.1
UTU	**Utuhina**	**0.85**	**28**	P	Pn	03 48 31.9	-0.6
HLRZ	**Highlands Stat**	**0.85**	**38**	P	Pn	03 48 32.9	+0.3
NMHZ	**Naumai**	**0.89**	**101**	P	Pn	03 48 32.7	-0.4
MTHZ	**Maungataniwha**	**0.91**	**86**	P	Pb	03 48 32.3	0.0
NGRZ	**Ngongotaha**	**0.92**	**26**	P	Pn	03 48 33.1	-0.3
MCHZ	**McNeill Hill**	**0.94**	**124**	P	Pn	03 48 34.4	+0.7
TARZ	**Mount Tarawera**	**0.94**	**43**	P	Pn	03 48 34.4	+0.5
OMRZ	**Omania**	**0.98**	**34**	P	Pb	03 48 33.8	+0.3
WAZ	**Wanganui**	**0.99**	**213**	P	Pb	03 48 33.8	+0.1
KARZ	**Kaharoa**	**1.01**	**26**	P	Pn	03 48 38.4	+3.7
PNHZ	**Pukenui**	**1.06**	**158**	P	Pn	03 48 35.6	+0.1
MHEZ	**Mangahewa**	**1.07**	**262**	P	Pn	03 48 36.8	+1.3
ARHZ	**Aropaoanui**	**1.07**	**109**	P	Pn	03 48 37.0	+1.4
RAHZ	**Arahi**	**1.09**	**90**	P	Pn	03 48 36.4	+0.5
KMRZ	**Kaimai**	**1.10**	**11**	P	Pn	03 48 36.9	+1.0
LREZ	**Lake Rotokare**	**1.13**	**242**	P	Pn	03 48 37.5	+1.2
DREZ	**Durham Road**	**1.18**	**257**	P	Pg	03 48 38.2	+1.1
TOZ	**Tahuroa Road**	**1.20**	**353**	P	Pb	03 48 36.8	-0.5
WHHZ	**Waihua**	**1.22**	**97**	P	Pg	03 48 39.4	+1.7
KAHZ	**Kahuranaki**	**1.27**	**133**	P	Pg	03 48 40.7	+2.0
WPHZ	**Waipukurau**	**1.28**	**153**	P	Pg	03 48 40.4	+1.5
TGRZ	**Tauranga**	**1.28**	**21**	P	Pg	03 48 39.9	+1.0
NEZ	**North Egmont**	**1.28**	**254**	P	Pg	03 48 39.9	+0.9
SNGZ	**Shannon Statio**	**1.30**	**84**	P	Pg	03 48 40.3	+0.9
URZ	**Urewera**	**1.30**	**60**	P	Pn	03 48 38.5	-0.2
CKHZ	**Cape Kidnapper**	**1.30**	**124**	P	Pg	03 48 41.6	+2.2
PKE	**Pukeiti**	**1.35**	**258**	P	Pg	03 48 40.7	+0.5
KHEZ	**Kahui Hut**	**1.35**	**254**	P	Pg	03 48 41.0	+0.7
DVHZ	**Dannevirke**	**1.42**	**165**	P	Pg	03 48 42.7	+1.1
RAGZ	**Rawiri**	**1.42**	**73**	P	Pg	03 48 43.0	+1.3
PXZ	**Pawanui**	**1.43**	**141**	P	Pg	03 48 43.4	+1.5
NBEZ	**Newall Road No**	**1.45**	**256**	P	Pg	03 48 42.8	+0.5
POWZ	**Post Office Ro**	**1.46**	**177**	P	Pg	03 48 43.1	+0.7
NMEZ	**Namu Road**	**1.48**	**250**	P	Pg	03 48 43.3	+0.4
PRHZ	**Porangahau**	**1.52**	**151**	P	Pg	03 48 45.1	+1.4
KNZ	**Kokohu**	**1.55**	**94**	P	Pg	03 48 45.1	+1.0
MWZ	**Matawai**	**1.56**	**68**	P	Pb	03 48 43.4	0.0
PRWZ	**Pori Road**	**1.64**	**172**	P	Pg	03 48 47.3	+1.4
RIGZ	**Rimuhau**	**1.64**	**83**	P	Pg	03 48 46.7	+0.9
MRZ	**Mangatainoka R**	**1.73**	**183**	P	Pg	03 48 47.4	-0.2
MHGZ	**Mahia Peninsul**	**1.75**	**98**	P	Pg	03 48 50.8	+2.9
TKGZ	**Te Karaka**	**1.76**	**75**	P	Pg	03 48 50.1	+2.0
BFZ	**Birch Farm**	**1.80**	**166**	P	Pg	03 48 49.9	+1.0
WIZ	**White Island**	**1.83**	**41**	P	Pg	03 48 51.5	+2.0
RUGZ	**Raukumara Rang**	**1.84**	**59**	P	Pb	03 48 48.2	0.0
TIWZ	**Tintock**	**1.85**	**175**	P	Pg	03 48 51.0	+1.1
OGWZ	**Otaki Gorge**	**1.93**	**192**	P	Pb	03 48 50.3	+0.6
TWGZ	**Tauwhareparae**	**1.95**	**68**	P	Pg	03 48 53.4	+1.7
HOWZ	**Holdsworth Sta**	**1.97**	**184**	P	Pg	03 48 51.7	-0.5
CPWZ	**Castlepoint**	**2.02**	**169**	P	Pg	03 48 56.0	+3.0
KIW	**Kapiti Island**	**2.02**	**197**	P	Pb	03 48 51.3	0.0
HAZ	**Te Kaha**	**2.02**	**55**	P	Pb	03 48 50.6	-0.7
CNGZ	**Carnagh Statio**	**2.02**	**78**	P	Pg	03 48 57.0	+3.9
AWAZ	**Awhitu Peninsu**	**2.04**	**336**	P	Pb	03 48 50.7	-0.8
ETAZ	**East Tamaki Re**	**2.06**	**343**	P	Pn	03 48 50.1	+0.9
PKGZ	**Pakihiroa**	**2.15**	**62**	P	Pg	03 48 54.9	-0.7
WIAZ	**Waiheke Island**	**2.18**	**348**	P	Pb	03 48 52.8	-1.1
WTAZ	**Waiatarua**	**2.18**	**336**	P	Pb	03 48 52.9	-1.0
KUZ	**Kuaotunu**	**2.18**	**1**	P	Pb	03 48 53.7	-0.3
TMWZ	**Te Maipa**	**2.18**	**176**	P	Pg	03 48 56.3	+0.1
PUZ	**Puketiti**	**2.19**	**68**	P	Pg	03 48 56.0	-0.4
CAW	**Cannon Point**	**2.23**	**192**	P	Pb	03 48 54.7	-0.1
MTW	**Mount Morrison**	**2.23**	**184**	P	Pg	03 48 56.4	-0.8
MBAZ	**Motutapu North**	**2.24**	**344**	P	Pn	03 48 52.3	+0.7
DUWZ	**D'Urville Isla**	**2.31**	**215**	P	Pb	03 48 55.0	-1.2
ABAZ	**Army Bay**	**2.42**	**344**	P	Pn	03 48 55.2	+1.1
PAWZ	**Paruwai Farm**	**2.46**	**185**	P	Pg	03 49 03.3	+1.8
TRWZ	**Traveller**	**2.47**	**180**	P	Pg	03 49 02.1	+0.4
TCW	**Tory Channel**	**2.52**	**205**	P	Pb	03 48 58.9	-0.9
PLWZ	**Palliser**	**2.66**	**187**	P	Pb	03 49 03.6	+1.4
GRZ	**Great Barrier**	**2.68**	**356**	P	Pb	03 49 03.5	+1.0
TUWZ	**Tuamarina**	**2.83**	**208**	P	Pb	03 49 02.7	-2.4
NNZ	**Nelson**	**2.89**	**217**	P	Pb	03 49 04.2	-1.9
TKNZ	**Takaka Hill**	**2.97**	**224**	P	Pb	03 49 05.3	-2.1
QRZ	**Quartz Range**	**3.08**	**231**	P	Pn	03 49 04.4	+1.3
BSWZ	**Blackbirch Sta**	**3.11**	**206**	P	Pb	03 49 10.7	+0.9
WCZ	**Waipu Caves**	**3.17**	**340**	P	Pn	03 49 06.4	+2.0
MRNZ	**Matariki Terra**	**3.33**	**221**	P	Pn	03 49 10.0	+3.3
THZ	**Tophouse**	**3.54**	**216**	P	Pn	03 49 13.3	+3.8
KHZ	**Kahutara**	**3.85**	**204**	P	Pn	03 49 15.0	+1.3
DSZ	**Denniston Nort**	**4.09**	**225**	P	Pn	03 49 19.2	+2.1
LTZ	**Lake Taylor**	**4.64**	**213**	P	Pb	03 49 31.0	-4.9
INZ	**Inchbonnie**	**4.97**	**219**	P	Pn	03 49 34.0	+4.8
TMZ	**Timaru**	**6.48**	**211**	P	Pn	03 49 53.1	+3.2
JCZ	**Jackson Bay**	**7.29**	**223**	P	Pn	03 50 03.0	+1.8

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*IDC **29** 03:48:59.1±0.5,5°.32N×82°.61W,h0^{km},mb4.8/20, mbtmp4.9/26,ML4.0/5,MS4.6/13,Error ellipse: s-maj=18.6km s-min=10.7km az=57.0*

*UPA **29** 03:48:59.1±3.3,5°.39N×82°.76W,h0^{km}±46^{km},MW4.6*

*UCR **29** 03:49:00.5±1.7,5°.48N×82°.56W,h5^{km},MW5.0, mb5.3(NEIC)*

*NEIC **29** 03:49:01.5±2.0,5°.36N±0°.05×82°.59W±0°.03,h10^{km}±1^{km}, mb5.2/558,Mwb5.5/16,Mww5.3/42,Error ellipse: s-maj=10.6km s-min=3.5km az=29.0,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.52; $M_{\theta\theta}$-0.00; $M_{\phi\phi}$-0.51; $M_{r\theta}$-0.03; $M_{\theta\phi}$1.90; $M_{\phi r}$0.09; Fault plane solution: $M_0$1.97000×10^{17} NP1:ϕ_s183.82000°, δ89.98000°,λ-177.26000°. NP2:ϕ_s93.82000°,δ87.26000°, λ-0.02000°. Principal axes: T 1.6607, Plg2.0000°, Azm319.0000°; N 0.5175, Plg87.0000°, Azm184.0000°; P -2.1782, Plg2.0000°, Azm49.0000°;*

*SNET **29** 03:49:02.0±2.3,5°.31N×82°.59W,h10^{km}±999^{km},ML5.3*

*NEIC **29** 03:49:02.7,5°.30N×82°.58W,h14^{km},Moment Tensor Solution. Duration: 2^{s}.3 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.09; $M_{\theta\theta}$0.11; $M_{\phi\phi}$-0.02; $M_{r\theta}$0.24; $M_{\theta\phi}$1.04; $M_{\phi r}$-0.10; Fault plane solution: $M_0$1.08000×10^{17} NP1: ϕ_s270.96000°,δ84.20000°,λ-13.49000°. NP2:ϕ_s2.35000°, δ76.58000°,λ-174.03000°. Principal axes: T 1.1001, Plg5.0000°, Azm317.0000°; N -0.0415, Plg75.0000°, Azm68.0000°; P -1.0586, Plg14.0000°, Azm226.0000°;*

*NEIC **29** 03:49:02.7,5°.33N×82°.56W,h10^{km}*

*NEIC **29** 03:49:02.7,5°.30N×82°.48W,h14^{km}*

*GCMT **29** 03:49:04.5±0.2,5°.28N±0°.01×82°.68W±0°.01,h22^{km}±1^{km}, MW5.4/83,Moment Tensor Solution. s66,c111; s83,c148; Duration: 1^{s}.2 Moment tensor: Scale 10^{17}Nm; M_{rr}0.11±.03; $M_{\theta\theta}$0.10±.03; $M_{\phi\phi}$-0.20±.03; $M_{r\theta}$0.24±.04; $M_{\theta\phi}$1.36±.03; $M_{\phi r}$0.04±.05; Best double couple: $M_0$1.39100×10^{17} NP1:ϕ_s93.00000°,δ87.00000°, λ10.00000°. NP2:ϕ_s3.00000°,δ80.00000°,λ177.00000°. Principal axes: T 1.3490, Plg9.0000°, Azm319.0000°; N 0.0830, Plg79.0000°, Azm111.0000°; P -1.4320, Plg5.0000°, Azm228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 03:49:01.5±0.3,**5°.33N**±0°.04×**82°.62W**±0°.04,**h15**^{km}**,n1127,** σ**1**^{s}**.34**/961,**mb5.2**/286,**MS4.5**/8,**4C-1D,South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAPC	**Malpelo**	**1.66**	**142**	eP	Pn	03 49 25.6	-4.5
PTPM	**Petroterminale**	**2.87**	**355**	eP	**Pn**	**03 49 44.1**	**-2.6**
PTPM				eS	**Sn**	**03 50 17.9**	**-3.2**
REME3	**Remedios, Chir**	**2.98**	**15**	eP	**Pn**	**03 49 46.5**	**-1.8**
NANC3	**Nancito, Chiri**	**3.02**	**17**	eP	**Pn**	**03 49 47.4**	**-1.5**
LESP3	**La Esperanza,**	**3.06**	**357**	eP	**Pn**	**03 49 47.3**	**-2.1**
STIA3	**Santiago, Vera**	**3.20**	**31**	eP	**Pn**	**03 49 52.8**	**+1.5**
CDITO	**Canoas**	**3.23**	**356**	Pn	**Pn**	**03 49 49.5**	**-2.2**
CDITO	**Canoas**	**3.23**	**356**	eP	**Pn**	**03 49 49.6**	**-2.2**
JIME	**Puerto Jimenez**	**3.27**	**348**	eP	**Pn**	**03 49 50.0**	**-2.1**
SFRA3	**San Francisco,**	**3.33**	**29**	eP	**Pn**	**03 49 51.6**	**-1.5**
PTAR3	**Potrerillos Ar**	**3.35**	**2**	eP	**Pn**	**03 49 51.5**	**-1.9**
PTAR3				eS	**Sn**	**03 50 31.6**	**-1.4**
EDAD	**Golfito**	**3.35**	**351**	eP	**Pn**	**03 49 50.5**	**-2.9**
PSOM3	**Paja de Sombre**	**3.35**	**5**	eP	**Pn**	**03 49 51.6**	**-1.8**
BCO2	**Palmira**	**3.37**	**2**	eP	**Pn**	**03 49 51.9**	**-1.9**
BCO2				eS	**Sn**	**03 50 32.5**	**-1.2**
AZU	**Azuero**	**3.38**	**43**	⇓iP	**Pn**	**03 49 52.5**	**-1.3**
AZU				eS	**Sn**	**03 50 32.7**	**-1.0**
AZU	**Azuero**	**3.38**	**43**	eP	**Pn**	**03 49 51.9**	**-1.9**
PCRI3	**Pocri, Los San**	**3.40**	**47**	eP	**Pn**	**03 49 52.6**	**-1.4**
BRU2	**Volcan**	**3.44**	**359**	Pn	**Pn**	**03 49 52.2**	**-2.6**
BRU2	**Volcan**	**3.44**	**359**	⇑iP	**Pn**	**03 49 53.1**	**-1.7**
BRU2				eS	**Sn**	**03 50 33.6**	**-1.9**
BRU2	**Volcan**	**3.44**	**359**	eP	**Pn**	**03 49 52.3**	**-2.5**
BRU2				eS	**Sn**	**03 50 32.4**	**-3.1**
LNBQ3	**Los Naranjos,**	**3.45**	**3**	eP	**Pn**	**03 49 52.7**	**-2.1**
LNBQ3				eS	**Sn**	**03 50 33.6**	**-1.9**
MLIR3	**Monte Lirio, C**	**3.45**	**357**	eP	**Pn**	**03 49 53.6**	**-1.2**
MLIR3				eS	**Sn**	**03 50 37.0**	**+1.5**
PLAN	**Los Planes de**	**3.48**	**342**	eP	**Pn**	**03 49 51.9**	**-3.4**
EDSV	**San Vito**	**3.49**	**354**	eP	**Pn**	**03 49 54.1**	**-1.3**
SAFE3	**Santa Fe, Vera**	**3.52**	**26**	eP	**Pn**	**03 49 55.4**	**-0.3**
SAFE3				eS	**Sn**	**03 50 37.3**	**+0.2**
CRIS3	**El Cristo, Coc**	**3.52**	**34**	eP	**Pn**	**03 49 54.6**	**-1.1**
CRIS3				eS	**Sn**	**03 50 39.1**	**+1.9**
EDPN	**Palmar Norte**	**3.71**	**347**	eP	**Pn**	**03 49 56.0**	**-2.2**
EDPN				eS	**Sn**	**03 50 40.1**	**-1.5**
EDP2	**Potrero Grande**	**3.71**	**351**	eP	**Pn**	**03 49 57.1**	**-1.1**
POTG	**Potrero Grande**	**3.73**	**352**	eP	**Pn**	**03 49 56.6**	**-2.1**
EDBA	**Buenos Aires**	**3.87**	**350**	eP	**Pn**	**03 49 59.8**	**-0.7**
SRBA	**San Rafael, Bu**	**3.95**	**349**	Pn	**Pn**	**03 49 59.4**	**-2.3**
SRBA	**San Rafael, Bu**	**3.95**	**349**	eP	**Pn**	**03 49 59.4**	**-2.3**
CNI2	**El Empalme, Bo**	**4.07**	**2**	eP	**Pn**	**03 50 02.7**	**-0.6**
CNI2				eS	**Sn**	**03 50 53.1**	**+2.4**
EDDO	**Dominical**	**4.09**	**343**	eP	**Pn**	**03 50 01.5**	**-2.0**
EDDO				eS	**Sn**	**03 50 49.3**	**-1.9**
ZELE	**Perez Zeledon**	**4.16**	**345**	eP	**Pn**	**03 50 03.0**	**-1.6**
PEZE	**Perez Zeledon,**	**4.16**	**345**	eP	**Pn**	**03 50 01.9**	**-2.7**
RGM0	**Gandoca**	**4.24**	**0**		**Pn**	**03 50 06.0**	**+0.5**
RGM0	**Gandoca**	**4.24**	**0**	eP	**Pn**	**03 50 05.5**	**0.0**
BUS1	**Rivas**	**4.34**	**345**	eP	**Pn**	**03 50 05.3**	**-2.1**
CDM	**Cerro de Muert**	**4.35**	**345**	eP	**Pn**	**03 50 05.4**	**-2.1**
SVQ2	**Quepos**	**4.36**	**339**	eP	**Pn**	**03 50 05.1**	**-2.1**
LLNJ	**Naranjito**	**4.37**	**340**	eP	**Pn**	**03 50 05.4**	**-2.0**
RITA	**Parrita**	**4.50**	**338**	eP	**Pn**	**03 50 07.5**	**-1.6**
ABE2	**San Pablo**	**4.58**	**342**	eP	**Pn**	**03 50 08.8**	**-1.6**
ABE2				eS	**Sn**	**03 51 00.6**	**-2.9**
RIMA	**Rio Macho**	**4.58**	**344**	Pn	**Pn**	**03 50 08.7**	**-1.8**
LCR2	**La Lucha 2**	**4.59**	**343**	eP	**Pn**	**03 50 09.0**	**-1.7**
ARRA3	**Arraijan, Pana**	**4.66**	**39**	eP	**Pn**	**03 50 12.4**	**+1.0**
FLAM	**Flamenco Islan**	**4.70**	**40**	eP	**Pn**	**03 50 14.0**	**+2.2**
FLAM				eS	**Sn**	**03 51 09.4**	**+3.2**
BCIP	**Isla Barro Col**	**4.71**	**36**	Pn	**Pn**	**03 50 12.1**	**+0.1**
BCIP	**Isla Barro Col**	**4.71**	**36**	eP	**Pn**	**03 50 12.1**	**+0.1**
OCM	**Ochomogo**	**4.73**	**344**	eP	**Pn**	**03 50 10.8**	**-1.7**
RVSTA	**Santa Teresita**	**4.73**	**348**	eP	**Pn**	**03 50 11.9**	**-0.5**
GAMB1	**Gamboa**	**4.75**	**37**	eP	**Pn**	**03 50 13.3**	**+0.8**
RAFA	**San Farael, Vo**	**4.75**	**346**	eP	**Pn**	**03 50 11.4**	**-1.5**
VTCV	**VTCV, Calle Va**	**4.75**	**347**	eP	**Pn**	**03 50 11.3**	**-1.5**
JACO	**JACO, Garabito**	**4.76**	**335**	Pn	**Pn**	**03 50 10.4**	**-2.3**
JACO	**JACO, Garabito**	**4.76**	**335**	eP	**Pn**	**03 50 10.1**	**-2.6**
CVTV	**Tajo**	**4.78**	**347**	eP	**Pn**	**03 50 11.7**	**-1.7**
VIRE	**VIRE**	**4.78**	**345**	eP	**Pn**	**03 50 12.0**	**-1.3**
VICA	**Volcano Irazu**	**4.78**	**345**	eP	**Pn**	**03 50 11.9**	**-1.5**
CVTQ	**Turrialba Volc**	**4.78**	**346**	eP	**Pn**	**03 50 12.2**	**-1.3**
VTRT	**Volcan Turrial**	**4.79**	**346**	eP	**Pn**	**03 50 11.9**	**-1.5**
CVTR	**Volcan Turrial**	**4.80**	**346**		**Pn**	**03 50 13.8**	**+0.2**
BATAN	**Batan**	**4.80**	**351**		**Pn**	**03 50 12.9**	**-0.4**
BATAN	**Batan**	**4.80**	**351**	⇑iP	**Pn**	**03 50 12.4**	**-0.8**
LCOCO	**El Coco**	**4.82**	**349**	eP	**Pn**	**03 50 13.7**	**+0.2**
IRES	**Siquirres**	**4.82**	**350**	eP	**Pn**	**03 50 13.7**	**+0.1**
SANTA	**Santa Ana**	**4.83**	**341**	eP	**Pn**	**03 50 12.4**	**-1.4**
CVIMO	**Finca Echandi**	**4.85**	**344**	eP	**Pn**	**03 50 12.8**	**-1.4**
RVLA	**Villa Bonita**	**4.85**	**349**	eP	**Pn**	**03 50 13.7**	**-0.2**
DOMI	**Santo Domingo**	**4.85**	**343**	eP	**Pn**	**03 50 14.3**	**+0.2**
BELE	**Belen**	**4.87**	**341**	eP	**Pn**	**03 50 12.8**	**-1.7**
HDC	**Heredia**	**4.87**	**342**		**Pn**	**03 50 13.6**	**-0.8**
HDC	**Heredia**	**4.87**	**342**	eP	**Pn**	**03 50 13.2**	**-1.3**
HDC				eS	**Sn**	**03 51 10.2**	**-0.5**
HDC	**Heredia**	**4.87**	**342**	eP	**Pn**	**03 50 12.9**	**-1.5**
TCS1	**Tacares**	**4.97**	**341**	eP	**Pn**	**03 50 13.5**	**-2.2**
LAFE	**Finca La Fe, P**	**5.00**	**333**	eP	**Pn**	**03 50 13.4**	**-2.6**
GR1C	**Gorgona, Isla**	**5.01**	**117**	eP	**Pn**	**03 50 13.8**	**-2.3**
VPTE	**Poasito**	**5.06**	**342**	eP	**Pn**	**03 50 15.7**	**-1.4**
SRA1	**San Ramn**	**5.07**	**339**	eP	**Pn**	**03 50 15.4**	**-1.8**
POA5	**Crater Von Fra**	**5.10**	**342**	eP	**Pn**	**03 50 16.1**	**-1.6**
PTAC	**Punta Ardita,**	**5.11**	**69**	eP	**Pn**	**03 50 18.4**	**+0.8**
TUMC	**Tumaco**	**5.22**	**132**	Pn	**Pn**	**03 50 17.4**	**-1.6**
TUMC	**Tumaco**	**5.22**	**132**	eP	**Pn**	**03 50 17.1**	**-1.9**
CPMI	**Catarata Coope**	**5.22**	**341**	eP	**Pn**	**03 50 17.4**	**-1.9**
PIZC	**Pizarro, Choco**	**5.25**	**94**	eP	**Pn**	**03 50 19.7**	**+0.2**
TRT1	**Tortuguero**	**5.34**	**349**	eP	**Pn**	**03 50 18.9**	**-1.9**
SOCE	**Pocosol**	**5.40**	**339**	eP	**Pn**	**03 50 20.2**	**-1.4**
MALC	**Bahia Malaga**	**5.43**	**104**	eP	**Pn**	**03 50 22.1**	**+0.2**
JTS	**Las Juntas de**	**5.45**	**335**	Pn	**Pn**	**03 50 20.0**	**-2.2**
	167nm,0.3s,baz=84,slow=8.9,SNR=203						
JTS				Sn	**Sn**	**03 51 22.2**	**-2.5**
	38nm,0.3s,baz=122,slow=22,SNR=20						
JTS	**Las Juntas de**	**5.45**	**335**	Pn	**Pn**	**03 50 20.6**	**-1.6**
JTS	**Las Juntas de**	**5.45**	**335**	eP	**Pn**	**03 50 20.1**	**-2.2**
JTS	**Las Juntas de**	**5.45**	**335**	eP	**Pn**	**03 50 20.0**	**-2.2**
CASO	**Castillo**	**5.49**	**338**	eP	**Pn**	**03 50 22.2**	**-0.7**
FORC	**Fortuna**	**5.50**	**338**	eP	**Pn**	**03 50 22.4**	**-0.5**
DUNO	**Dulce Nombre,**	**5.51**	**329**		**Pn**	**03 50 21.0**	**-2.1**
CEDE	**Laguna Cedeo**	**5.53**	**338**	⇑iP	**Pn**	**03 50 21.8**	**-1.6**
CEDE				eS	**Sn**	**03 51 27.4**	**+0.7**
TABAC	**Tabacon**	**5.56**	**338**	eP	**Pn**	**03 50 23.3**	**-0.6**
COVE	**Coope Vega, Sa**	**5.64**	**342**		**Pn**	**03 50 24.4**	**-0.5**
ORTG	**Ortega, Santa**	**5.74**	**331**	Pn	**Pn**	**03 50 24.2**	**-2.0**
ACAL	**Aguas Claras**	**5.79**	**336**	eP	**Pn**	**03 50 26.0**	**-1.0**
PTEN	**Parque Tenorio**	**5.84**	**337**	⇑iP	**Pn**	**03 50 26.3**	**-1.4**
PTEN				eS	**Sn**	**03 51 35.4**	**+0.8**
MOTZ	**Rio Naranjo**	**5.85**	**336**	eP	**Pn**	**03 50 27.4**	**-0.5**
CUI	**Cuipilapa**	**5.86**	**335**	eP	**Pn**	**03 50 26.3**	**-1.7**
COLC	**Colonia**	**5.89**	**334**	eP	**Pn**	**03 50 27.3**	**-1.0**
HORNC	**Hornillas**	**5.92**	**335**	eP	**Pn**	**03 50 27.8**	**-0.9**
VERA	**Finca Concepci**	**5.92**	**338**	eP	**Pn**	**03 50 27.5**	**-1.3**
GUAB	**Guayabo de Bag**	**5.94**	**334**	eP	**Pn**	**03 50 28.4**	**-0.6**
LIM1	**Limonal**	**5.94**	**334**	eP	**Pn**	**03 50 29.5**	**+0.5**
MESS	**Mesas**	**5.95**	**335**	eP	**Pn**	**03 50 27.1**	**-2.1**
CANAL	**Canalete**	**5.98**	**336**	eP	**Pn**	**03 50 28.8**	**-0.7**
CLARA	**Aguas Claras**	**5.98**	**335**	eP	**Pn**	**03 50 28.1**	**-1.5**
VMAR	**Armenia, Volca**	**5.98**	**336**	eP	**Pn**	**03 50 28.7**	**-0.9**
GPS2	**Hotel Rincn d**	**6.03**	**334**	eP	**Pn**	**03 50 29.9**	**-0.4**
GP14	**Hacienda Santa**	**6.03**	**334**	eP	**Pn**	**03 50 29.8**	**-0.5**
GPS3	**Bodega del ICE**	**6.04**	**333**	eP	**Pn**	**03 50 30.0**	**-0.4**
GPS1	**Guardaparques**	**6.05**	**334**	eP	**Pn**	**03 50 31.3**	**+0.7**
LAPC	**Finca la Perla**	**6.08**	**333**	eP	**Pn**	**03 50 29.9**	**-1.1**
VORI	**VORI**	**6.09**	**334**	eP	**Pn**	**03 50 29.5**	**-1.7**
BUEV	**Buena Vista**	**6.10**	**333**	eP	**Pn**	**03 50 30.3**	**-0.9**
GBS3	**Finca Las Img**	**6.10**	**333**	eP	**Pn**	**03 50 30.4**	**-0.8**
HZTE	**Horizontes, Gu**	**6.11**	**331**	Pn	**Pn**	**03 50 30.8**	**-0.5**
GB1A	**Borinquen Arri**	**6.11**	**333**	eP	**Pn**	**03 50 31.5**	**0.0**
BUAI	**Buenos Aires**	**6.13**	**334**	eP	**Pn**	**03 50 28.5**	**-3.1**
BBAC	**Balboa, Cauca**	**6.29**	**121**	eP	**Pn**	**03 50 31.9**	**-2.1**
PAC1	**Pacto, Paraso**	**6.32**	**143**	eP	**Pn**	**03 50 32.5**	**-1.8**
YOTC	**Yotoco, Valle**	**6.39**	**102**	eP	**Pn**	**03 50 34.8**	**-0.6**
CMBC	**Cumbal**	**6.47**	**132**	eP	**Pn**	**03 50 36.0**	**-0.8**
APAC	**Apartado, Choc**	**6.52**	**67**	eP	**Pn**	**03 50 40.3**	**+3.3**
CUSE	**Cuicocha Este**	**6.53**	**140**	eP	**Pn**	**03 50 35.8**	**-1.7**
POPC	**Popayan, Colom**	**6.54**	**115**	eP	**Pn**	**03 50 36.9**	**-0.6**
OTAV	**Otavalo**	**6.55**	**140**	Pn	**Pn**	**03 50 36.2**	**-1.5**
OTAV	**Otavalo**	**6.55**	**140**	eP	**Pn**	**03 50 35.7**	**-2.1**
DBBC	**Dabeiba**	**6.59**	**75**	eP	**Pn**	**03 50 40.1**	**+2.1**
CBOC	**Ciudad Bolivar**	**6.60**	**85**	eP	**Pn**	**03 50 38.2**	**0.0**
TULM	**Tulcn-Chalpat**	**6.65**	**133**		**Pn**	**03 50 38.7**	**-0.5**
TULM	**Tulcn-Chalpat**	**6.65**	**133**	eP	**Pn**	**03 50 38.7**	**-0.5**
GCUF	**Volcan Galeras**	**6.66**	**128**	eP	**Pn**	**03 50 38.7**	**-0.6**
IMBA	**Imbabura, San**	**6.68**	**139**		**Pn**	**03 50 39.7**	**+0.1**
PULU	**Pululahua**	**6.69**	**142**		**Pn**	**03 50 38.7**	**-0.9**
CRUC	**La Cruz**	**6.78**	**123**	eP	**Pn**	**03 50 41.3**	**+0.5**
BONI	**La Bonita**	**7.02**	**133**	eP	**Pn**	**03 50 45.1**	**+1.0**
ESPN	**Las Esperanzas**	**7.02**	**346**		**Pn**	**03 50 43.1**	**-0.8**
ACON	**Acoyapa**	**7.06**	**339**	Pn	**Pn**	**03 50 43.2**	**-1.2**
ACON	**Acoyapa**	**7.06**	**339**	eP	**Pn**	**03 50 43.0**	**-1.4**
HELC	**Santa Helena**	**7.11**	**83**	Pn	**Pn**	**03 50 47.3**	**+1.9**
HELC	**Santa Helena**	**7.11**	**83**	eP	**Pn**	**03 50 46.5**	**+1.1**
LCBC	**Los crdobas,**	**7.13**	**60**	eP	**Pn**	**03 50 49.7**	**+4.4**
ANIL	**Santa Ana**	**7.24**	**96**	eP	**Pn**	**03 50 48.7**	**+1.6**
SLOR	**San Lorenzo -**	**7.29**	**145**	Pn	**Pn**	**03 50 48.8**	**+0.8**
ORTC	**Ortega, Tolima**	**7.48**	**101**	eP	**Pn**	**03 50 52.0**	**+1.8**
BETC	**Betania**	**7.63**	**110**	eP	**Pn**	**03 50 54.8**	**+2.6**
BOAB	**BOACO BROADBAN**	**7.69**	**337**	Pn	**Pn**	**03 50 52.4**	**-0.6**
NORC	**Norcasia**	**7.72**	**88**	eP	**Pn**	**03 50 56.6**	**+3.1**
CHSH	**Refugio Sur-Vo**	**7.74**	**151**	Pn	**Pn**	**03 50 55.1**	**+0.8**
PORT	**Chimborazo Vol**	**7.76**	**150**	Pn	**Pn**	**03 50 55.2**	**+0.6**
GARC	**Garzon, Huila**	**7.76**	**113**	eP	**Pn**	**03 50 55.4**	**+1.1**
PRAC	**Prado**	**7.88**	**101**	Pn	**Pn**	**03 50 56.1**	**+0.5**
FLOC	**Florencia**	**7.89**	**118**	eP	**Pn**	**03 50 56.6**	**+0.8**
ZARC	**Zaragoza, Cauc**	**8.01**	**74**	eP	**Pn**	**03 50 59.5**	**+2.1**
CNGN	**Cerro Negro**	**8.19**	**331**		**Pn**	**03 51 01.6**	**+1.7**
PTBC	**PUERTO BERRIO,**	**8.21**	**81**	eP	**Pn**	**03 51 02.4**	**+2.2**
MATN	**Matagalpa**	**8.23**	**337**		**Pn**	**03 51 00.7**	**+0.2**
ROSC	**El Rosal**	**8.28**	**93**	Pn	**Pn**	**03 51 05.2**	**+3.7**
	31nm,0.3s,baz=8.0,slow=4.7,SNR=24						
ROSC				Sn	Sn	03 52 20.2	-15
	13nm,0.3s,baz=356,slow=21,SNR=1.2						
ROSC	**El Rosal**	**8.28**	**93**	Pn	**Pn**	**03 51 01.9**	**+0.4**
ROSC	**El Rosal**	**8.28**	**93**	eP	**Pn**	**03 51 05.3**	**+3.7**
SPBC	**San Pablo de B**	**8.52**	**87**	eP	**Pn**	**03 51 07.3**	**+2.8**
CRIN	**San Cristobal**	**8.53**	**329**		**Pn**	**03 51 05.3**	**+0.7**
SJCC	**San Jacinto, C**	**8.66**	**58**	eP	**Pn**	**03 51 08.6**	**+2.2**
CHIC	**Chingaza**	**8.88**	**94**	eP	**Pn**	**03 51 12.7**	**+2.9**
VILC	**Villavicencio,**	**8.98**	**97**	eP	**Pn**	**03 51 14.1**	**+3.2**
BRRC	**Barranca, Sant**	**9.03**	**78**	eP	**Pn**	**03 51 14.9**	**+3.5**
MACC	**Macarena, Meta**	**9.31**	**110**	eP	**Pn**	**03 51 16.0**	**+0.7**
ARGC	**Ariguani, Magd**	**9.44**	**61**	eP	**Pn**	**03 51 19.9**	**+2.8**
BARC	**Barichara**	**9.47**	**82**	eP	**Pn**	**03 51 20.7**	**+3.0**
LCND	**La Caada**	**9.48**	**327**	eP	**Pn**	**03 51 19.8**	**+2.2**
RUSC	**La Rusia**	**9.51**	**86**	Pn	**Pn**	**03 51 20.3**	**+1.9**
RUSC	**La Rusia**	**9.51**	**86**	eP	**Pn**	**03 51 20.7**	**+2.3**
PAYG	**Puerto Ayora**	**9.70**	**232**	Pn	**Pn**	**03 51 22.9**	**+2.2**

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TGUH  Tegucigalpa,Un   9.81 332  Pn    Pn    03 51 21.9 -0.3
LL1C  La Loma 1 Cana   9.91  64  eP    Pn    03 51 26.3 +2.7
COEB  Comit de Eme     9.99 325  eP    Pn    03 51 27.6 +2.9
PAMC  Pamplona, Colo  10.06  78  eP    Pn    03 51 29.7 +3.7
PQSS  Presa 15 de Se  10.11 325  eP    Pn    03 51 25.4 -0.8
TECO  Alcaldia de Te  10.17 324  eP    Pn    03 51 29.6 +2.5
SCLA  Alcaldia de Sa  10.27 325  eP    Pn    03 51 31.4 +2.9
GUVC  San Jose del G  10.35 105  eP    Pn    03 51 30.0 +0.5
SJTE  Alcalda de S    10.37 323  eP    Pn    03 51 32.0 +2.2
PAVA  Las Pavas       10.40 324  eP    Pn    03 51 33.2 +2.9
SNET  Serv Nac Est T  10.56 322        Pn    03 51 33.5 +1.0
JAYA  Jayaque - finc  10.67 321  eP    Pn    03 51 36.8 +2.8
CEVE  Cerro Verde     10.91 321  eP    Pn    03 51 40.2 +2.8
CRJC  Cerrejon, Guaj  11.17  59  eP    Pn    03 51 42.2 +1.3
ESQI  Esquipulas      11.31 325        Pn    03 51 44.3 +1.5
URIC  Uribia, Colomb  12.27  58        Pn    03 51 56.5 +0.7
SDV   Santo Domingo   12.41  73  Pn    Pn    03 51 58.7 +0.8
      2.1nm,0.3s,baz=242,slow=8.0,SNR=73
SDV                              Sn    Sn    03 54 12.8 -3.3
      0.9nm,0.3s,baz=231,slow=19,SNR=1.9
SDV                              LR    LR    03 56 37.5
      comp=Z,2µm,19.6s,baz=246,slow=37
      105nm,0.8s
SDV   Santo Domingo   12.41  73  Pn    Pn    03 51 59.5 +1.6
SDV   Santo Domingo   12.41  73  eP    Pn    03 51 59.6 +1.7
ATAH  Atahualpa       13.08 161  Pn    Pn    03 52 07.1 -0.1
      2.2nm,0.3s,baz=344,slow=11,SNR=18
ATAH                             LR    LR    03 56 43.7
      comp=Z,7µm,19.9s,baz=337,slow=36
      52nm,0.8s
PETF  Flores          13.53 329        Pn    03 52 16.4 +3.4
CCIG  Comitan         14.34 320  Pn    Pn    03 52 25.8 +1.4
BAUV  El Baul         14.90  75  Pn    Pn    03 52 30.3 -1.6
HATO  Hato, Curacao   15.12  62        Pn    03 52 33.1 -1.6
TEIG  Tepich          15.80 340  Pn    Pn    03 52 43.8 +0.3
TBTG  Tabatinga, AM   15.83 126        Pn    03 52 41.6 -2.4
TBTG  Tabatinga, AM   15.83 126  eP    Pn    03 52 41.9 -2.1
GTBY  Guantanamo Bay  16.25  26  Pn    Pn    03 52 48.4 -0.9
CZSB  Cruzeiro do Su  16.31 143  Pn    Pn    03 52 48.5 -1.7
CZSB                             IAmb  IAmb  03 52 51.1
      comp=Z,318nm,1.2s
CZSB  Cruzeiro do Su  16.31 143  eP    Pn    03 52 48.9 -1.3
SGCB  S£o Gabriel d   16.48 109  eP    Pn    03 52 50.4 -2.0
PAPH  Port-au-Prince  16.54  37  Pn    Pn    03 52 53.0 -0.1
CMIG  Matias Romero   16.76 315  Pn    Pn    03 52 54.0 -1.9
      comp=Z,0.1nm,0.3s,baz=131,slow=8.9,SNR=18
CMIG                             LR    LR    03 58 26.0
      comp=Z,2µm,19.6s,baz=130,slow=34
      comp=Z,16nm,1.1s
SOR   Soroa           17.37 359  P     Pn    03 53 04.0 +0.5
SDDR  Presa de Saban  17.50  38        Pn    03 53 05.2 -0.1
SDDR                             IAmb  IAmb  03 53 09.9
      comp=Z,242nm,1.5s
NNA   Nana            18.14 162  P     Pn    03 53 12.4 -0.7
      comp=Z,2.2nm,0.3s,baz=335,slow=9.2,SNR=27
NNA                              LR    LR    03 59 36.7
      comp=Z,1µm,19.2s,baz=318,slow=35
      comp=Z,148nm,1.0s
NNA   Nana            18.14 162  Pn    Pn    03 53 12.0 -1.0
NNA                              IAmb  IAmb  03 53 17.2
      comp=Z,196nm,1.1s
SC01  Santiago de lo  18.18  39        Pn    03 53 12.7 -0.9
PCRV  Puerto La Cruz  18.45  74  P     Pn    03 53 17.4 +0.4
      comp=Z,1.1nm,0.3s,baz=108,slow=3.6,SNR=7.7
PCRV                             LR    LR    04 01 58.9
      comp=Z,2µm,20.0s,slow=42
      comp=Z,117nm,1.2s
PCDR  Punta Cana, DR  19.10  45        P     03 53 21.6 -2.4
CRPR  Cabo Rojo, PR   19.71  49  P     P     03 53 29.9 -0.7
CRPR                             IAmb  IAmb  03 53 34.7
      comp=Z,120nm,1.1s
MLPR  Magueyes Islan  19.74  49        P     03 53 31.2 +0.3
MLPR                             IAmb  IAmb  03 53 35.8
      comp=Z,110nm,0.9s
TLIG  Tlapa           19.78 309  P     P     03 53 32.0 +0.6
PRSN  Puerto Rico Se  19.82  48  P     P     03 53 32.0 +0.3
PRSN                             IAmb  IAmb  03 53 35.3
      comp=Z,274nm,1.4s
AGPR  Aguadilla, PR   20.00  48        P     03 53 32.5 -1.2
TEFE  Tefe            20.00 116  eP    P     03 53 34.0 +0.3
OBIP  Obispado Ponce  20.11  50  P     P     03 53 34.3 -0.7
OBIP                             IAmb  IAmb  03 53 37.7
      comp=Z,128nm,0.9s
CELP  Cerrillos       20.15  50        P     03 53 35.5 +0.1
CELP                             IAmb  IAmb  03 53 49.1
      comp=Z,159nm,1.1s
UUPR  Utuado, UPR, P  20.15  49  P     P     03 53 36.2 +0.7
AOPR  Arecibo Observ  20.19  49  P     P     03 53 36.4 +0.6
EMPR  Esperanza - Ma  20.43  49  P     P     03 53 38.4  0.0
SJG   San Juan        20.50  50  P     P     03 53 40.2 +1.0
      comp=Z,186nm,1.0s,baz=252,slow=5.3,SNR=72
SJG                              LR    LR    04 00 31.4
      comp=Z,770nm,21.5s,baz=231,slow=34
      comp=Z,186nm,1.0s
SJG   San Juan        20.50  50  P     P     03 53 39.6 +0.4
GCPR  Guaynabo City   20.67  50  P     P     03 53 41.6 +0.6
HUMP  Col San Antoni  20.75  51  P     P     03 53 42.5 +0.6
CBYP  Canovanas       20.82  50  P     P     03 53 43.1 +0.4
MTP   Monte Pirata    20.96  51  P     P     03 53 44.5 +0.4
CUPR  Culebra, Puert  21.29  51  P     P     03 53 48.3 +0.6
CUPR                             IAmb  IAmb  03 53 52.7
      comp=Z,87nm,0.9s
CDVI  St. Croix       21.38  53  P     P     03 53 49.9 +1.2
CDVI  St. Croix       21.38  53  eP    P     03 53 46.2 -2.5
TRN   Trinidad (W)    21.66  75  eP    P     03 53 42.7 -9.1
GRGR  Grenville       21.79  71  eP    P     03 54 00.4 +7.3
GRHS  Sauteurs        21.82  70  eP    P     03 53 56.4 +2.9
GCMP  Grenada, Carri  22.10  70  eP    P     03 53 57.8 +1.3
GCMP  Grenada, Carri  22.10  70  eS    S     03 58 03.3 +3.4
ETMB  Extrema         22.22 133  P     P     03 53 57.3 -0.4
ETMB  Extrema         22.22 133  eP    P     03 53 57.2 -0.5
BOAV  Boa Vista       22.24  97  P     P     03 53 58.1 +0.1
BOAV                             IAmb  IAmb  03 54 11.2
      comp=Z,92nm,1.5s
BOAV  Boa Vista       22.24  97  eP    P     03 53 58.6 +0.6
SVB   Belmont         22.50  68  P     P     03 54 01.2 +0.5
SVB   Belmont         22.50  68  eP    P     03 53 56.8 -4.0
SABA  Saba            22.55  56  eP    P     03 53 58.2 -3.1
DWPF  Disney Wildern  22.69   3  P     P     03 54 03.7 +1.2
DWPF                             IAmb  IAmb  03 54 06.9
      comp=Z,175nm,1.4s
DWPF  Disney Wildern  22.69   3  P     P     03 54 02.9 +0.3
      baz=183
DWPF  Disney Wildern  22.69   3  P     P     03 54 05.3 +2.7
      baz=183,SNR=7.9
SMRT  St. Maarten     22.90  55  P     P     03 54 05.6 +0.6
MLYT  Lee's Yard      23.00  59  eP    P     03 53 55.8  -10
SLBI  Saint Lucia, B  23.00  66  eP    P     03 54 05.1 -1.0
BIM   Bigot           23.09  65  P     P     03 54 07.7 +0.7
BIM   Bigot           23.09  65  eP    P     03 54 07.7 +0.7
FDF   Fort de France  23.09  65  P     P     03 54 06.4 -0.7
FDF   Fort de France  23.09  65  eP    P     03 54 11.8 +4.8
FDF   Fort de France  23.09  65  eS    S     03 58 23.4 +5.4
GDHS  Morne Mazeau,   23.16  60  P     P     03 54 08.4 +0.6
GDHS                             IAmb  IAmb  03 54 11.2
      comp=Z,146nm,1.3s
CBE   Ff, Capester    23.21  61  P     P     03 54 08.6 +0.4
CBE   Ff, Capester    23.21  61  eP    P     03 53 59.0 -9.2
MPOM  Morne Pois Mar  23.25  65  P     P     03 54 09.0 +0.5
MPOM  Morne Pois Mar  23.25  65  eP    P     03 54 03.3 -5.3
ILAM  Ilet Lapin Mar  23.36  65  eP    P     03 54 13.5 +3.9
MAGL  Barre de l’ile  23.45  62  eP    P     03 54 10.9 +0.3
MACA  Manacapuru-AM   23.48 111  P     P     03 54 10.1 -0.8
MACA  Manacapuru-AM   23.48 111  eP    P     03 54 10.6 -0.3
ABD   La Joyeuse, An  23.49  60  eP    P     03 54 08.8 -2.2
ANBD  Bethesda, Anti  23.51  59  eP    P     03 53 58.4  -13
ANWB  Willy Bob       23.78  57  eP    P     03 54 11.3 -2.5
656A  Willston        23.91   0  P     P     03 54 14.2 -0.7
656A                             IAmb  IAmb  03 54 37.3
      comp=Z,62nm,1.2s
656A  Willston        23.91   0  P     P     03 54 16.2 +1.3
      baz=180
SAML  Samuel          24.01 126  P     P     03 54 15.1 -0.9
SAML  Samuel          24.01 126  eP    P     03 54 14.8 -1.2
BBGH  Gun Hill        24.03  70  eP    P     03 54 15.3 -0.9
553A  Crawfordville   24.79 356  P     P     03 54 23.8 +0.9
553A                             IAmb  IAmb  03 54 26.7
      comp=Z,76nm,1.1s
553A  Crawfordville   24.79 356  P     P     03 54 24.3 +1.4
      baz=176,SNR=8.8
456A  Hilliard        25.27   1  P     P     03 54 27.6 +0.3
456A                             IAmb  IAmb  03 54 32.2
      comp=Z,97nm,1.2s
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451A  Vernon          25.33 354  P     P     03 54 29.4 +1.6
451A  Vernon          25.33 354  P     P     03 54 29.7 +2.0
      baz=173,SNR=6.4
LPAZ  La Paz          25.82 147  P     P     03 54 33.4 +0.3
      comp=Z,15nm,0.8s,baz=346,slow=6.5,SNR=19
LPAZ                             LR    LR    04 05 51.5
      comp=Z,4µm,20.1s,baz=306,slow=39
      comp=Z,15nm,0.8s
LPAZ  La Paz          25.82 147  P     P     03 54 33.3 +0.3
LPAZ                             IAmb  IAmb  03 54 46.2
      comp=Z,50nm,1.2s
ZAIG  Zacatecas       25.92 314  P     P     03 54 34.7 +1.1
ZAIG                             IAmb  IAmb  03 54 40.0
      comp=Z,55nm,1.4s
TIGA  Tifton          25.99 358  P     P     03 54 33.9 +0.1
TIGA                             IAmb  IAmb  03 54 35.8
      comp=Z,60nm,1.4s
TIGA  Tifton          25.99 358  P     P     03 54 34.5 +0.7
      baz=178
TIGA  Tifton          25.99 358  P     P     03 54 34.6 +0.7
      baz=178
352A  Blakely         26.11 356  P     P     03 54 35.9 +0.9
352A                             IAmb  IAmb  03 54 37.0
      comp=Z,81nm,1.1s
352A  Blakely         26.11 356  P     P     03 54 35.8 +0.9
      baz=175,SNR=9.4
PB18  Visviri         26.21 151  P     P     03 54 37.1 +0.6
255A  Hazlehurst      26.46   0  P     P     03 54 38.6 +0.5
255A                             IAmb  IAmb  03 54 45.2
      comp=Z,128nm,1.7s
255A  Hazlehurst      26.46   0  P     P     03 54 39.1 +1.1
      baz=180
PB12  IPOC Station P  26.70 153  P     P     03 54 40.8 +0.4
346A  Big Creek Wild  26.71 347  P     P     03 54 41.2 +0.9
346A                             IAmb  IAmb  03 54 44.0
      comp=Z,51nm,1.1s
250A  Grady           26.73 353  P     P     03 54 41.3 +0.7
250A  Grady           26.73 353  P     P     03 54 41.7 +1.1
      baz=172,SNR=30
PB16  IPOC Station P  26.84 151  P     P     03 54 42.7 +0.5
PB16                             IAmb  IAmb  03 55 13.4
      comp=Z,48nm,1.1s
344A  Westbrook Farm  27.08 345  P     P     03 54 44.5 +0.9
344A  Westbrook Farm  27.08 345  P     P     03 54 45.2 +1.6
      baz=162,SNR=19
154A  Montrose        27.15 359  P     P     03 54 45.1 +0.9
154A                             IAmb  IAmb  03 54 50.7
      comp=Z,68nm,1.1s
154A  Montrose        27.15 359  P     P     03 54 45.4 +1.2
      baz=179
152A  Waverly Hall    27.27 356  P     P     03 54 46.4 +1.1
152A                             IAmb  IAmb  03 54 47.2
      comp=Z,72nm,1.4s
152A  Waverly Hall    27.27 356  P     P     03 54 46.3 +0.9
      baz=175,SNR=12
342A  Flagon Creek P  27.47 342  P     P     03 54 47.4 +0.3
342A                             IAmb  IAmb  03 54 49.1
      comp=Z,47nm,1.2s
342B  Flagon Creek P  27.47 342  P     P     03 54 48.3 +1.2
      baz=159
MNMC  Minye Minye     27.48 153  P     P     03 54 48.7 +1.0
HKT   Hockley         27.48 335  P     P     03 54 48.3 +1.1
HKT                              IAmb  IAmb  03 55 10.5
      comp=Z,109nm,2.0s
NHSC  New Hope        27.73   4  P     P     03 54 51.7 +2.2
      baz=185
VBMS  Vicksburg       27.75 346  P     P     03 54 49.9 +0.2
      baz=163
146A  Union           27.83 348  P     P     03 54 51.4 +1.1
146A  Union           27.83 348  P     P     03 54 51.6 +1.2
      baz=166,SNR=11
833A  Chaparral WMA,  27.87 327  P     P     03 54 51.7 +0.9
833A  Chaparral WMA,  27.87 327  P     P     03 54 51.0 +0.2
      baz=142,SNR=6.7
833A  Chaparral WMA,  27.87 327  P     P     03 54 52.0 +1.2
      baz=142,SNR=6.7
LRAL  Lakeview Retre  27.87 352  P     P     03 54 51.5 +0.9
LRAL                             IAmb  IAmb  03 54 52.5
      comp=Z,38nm,0.9s
LRAL  Lakeview Retre  27.87 352  P     P     03 54 51.0 +0.3
      baz=171,SNR=20
LRAL  Lakeview Retre  27.87 352  P     P     03 54 51.6 +0.9
      baz=171,SNR=20
Z51A  Franklin        27.95 355  P     P     03 54 52.0 +0.5
Z51A                             IAmb  IAmb  03 54 53.3
      comp=Z,38nm,1.1s
Z51A  Franklin        27.95 355  P     P     03 54 52.3 +0.9
      baz=174,SNR=7.6
PB11  IPOC Station P  28.00 153  P     P     03 54 53.0 +0.7
Z47A  Carrollton      28.19 350  P     P     03 54 54.1 +0.5
Z47A  Carrollton      28.19 350  P     P     03 54 54.3 +0.8
      baz=168,SNR=22
Y52A  Lilburn         28.43 357  P     P     03 54 56.5 +0.8
Y52A                             IAmb  IAmb  03 54 57.5
      comp=Z,46nm,1.4s
Y52A  Lilburn         28.43 357  P     P     03 54 56.5 +0.8
      baz=177,SNR=5.1
Y52A                             P     P     03 54 56.5 +0.8
      baz=177,SNR=5.1
ITTB  Itaituba        28.53 109  eP    P     03 54 57.0 +0.1
PB08  IPOC Station P  28.56 153  P     P     03 54 57.0 -0.5
PB08                             IAmb  IAmb  03 55 25.0
      comp=Z,80nm,1.6s
Y49A  Blount Mountai  28.61 353  P     P     03 54 57.5 +0.2
Y49A  Blount Mountai  28.61 353  P     P     03 54 57.8 +0.5
      baz=172,SNR=7.7
NATX  Nacogdoches     28.61 338  P     P     03 54 58.1 +0.7
      baz=154
VILB  Vilhena         28.74 129  P     P     03 54 58.8  0.0
VILB  Vilhena         28.74 129  eP    P     03 54 59.0 +0.2
HODGE Hodges          28.76   1  P     P     03 54 59.5 +0.9
HODGE                            IAmb  IAmb  03 55 00.5
      comp=Z,54nm,1.5s
HODGE Hodges          28.76   1  P     P     03 54 59.5 +0.9
      baz=181,SNR=8.5
JSC   Jenkinsville    28.84   2  IAmb  IAmb  03 55 01.4
      comp=Z,60nm,1.6s
435B  Jarrell         28.97 333  IAmb  IAmb  03 55 04.7
      comp=Z,61nm,1.3s
435B  Jarrell         28.97 333  P     P     03 55 01.4 +0.8
      baz=148
Y45A  Yeager Farm, C  29.11 348  P     P     03 55 02.9 +1.1
      baz=166,SNR=18
X51A  Calhoun         29.17 356  IAmb  IAmb  03 55 03.9
      comp=Z,92nm,1.8s
X51A  Calhoun         29.17 356  P     P     03 55 02.8 +0.5
      baz=175
X51A                             P     P     03 55 02.8 +0.5
      baz=175
FPAL  Fort Paine      29.20 355  IAmb  IAmb  03 55 03.9
      comp=Z,36nm,1.1s
MALB  Monte Alegre    29.21 103  eP    P     03 55 03.7 +0.8
BIRD  Birdtown, Kers  29.24   4  IAmb  IAmb  03 55 04.9
      comp=Z,58nm,1.7s
X48A  Hartselle       29.27 353  P     P     03 55 03.5 +0.4
      baz=171,SNR=14
BG3   Lake Jocassee   29.52 359  IAmb  IAmb  03 55 07.5
      comp=Z,38nm,1.3s
CASEE Lake Jocassee   29.52 359  P     P     03 55 06.8 +1.4
      baz=179,SNR=8.4
W52A  Murphy          29.64 358  P     P     03 55 07.5 +1.0
      baz=177,SNR=5.6
KMSC  Kings Mountain  29.69   2  P     P     03 55 07.8 +0.8
      baz=182,SNR=5.4
KMSC  Kings Mountain  29.69   2  P     P     03 55 08.1 +1.2
      baz=182,SNR=5.4
OXF   Oxford          29.71 349  P     P     03 55 06.3 -0.8
      baz=166,SNR=17
OXF   Oxford          29.71 349  P     P     03 55 06.8 -0.3
      baz=166,SNR=17
W57A  Gilead          29.78   4  P     P     03 55 08.5 +0.8
      baz=185
W57A                             P     P     03 55 08.5 +0.8
      baz=185
JCT   Junction City   29.80 329  P     P     03 55 08.6 +0.7
      baz=144
W50A  Signal Mountai  29.83 356  IAmb  IAmb  03 55 09.7
      comp=Z,51nm,1.4s
W50A  Signal Mountai  29.83 356  P     P     03 55 08.8 +0.6
      baz=175,SNR=11
MDP   Montagnes des   29.85  89  LR    LR    04 07 26.3
      comp=Z,1µm,18.5s,baz=276,slow=37
NPGB  Novo Progresso  29.85 114  eP    P     03 55 07.9 -0.8
WLAR  White Oak Lake  29.86 342  IAmb  IAmb  03 55 10.0
      comp=Z,23nm,0.9s
SWET  Sewanee         29.90 355  IAmb  IAmb  03 55 10.0
      comp=Z,50nm,1.2s
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PLAL  Pickwick Lake   29.94 351  IAmb  IAmb  03 55 09.9
      comp=Z,43nm,1.2s
WHTX  Lake Whitney,   29.94 334  P     P     03 55 09.2  0.0
      baz=149
PB09  IPOC Station P  29.98 155  IAmb  IAmb  03 55 52.2
      comp=Z,35nm,1.1s
PB03  IPOC Station P  29.98 156  IAmb  IAmb  03 55 53.5
      comp=Z,69nm,1.2s
CPCT  Cooper Cave     30.03 357  IAmb  IAmb  03 55 11.9
      comp=Z,33nm,1.2s
SIV   San Ignacio     30.06 135  P     P     03 55 10.5 +0.1
      comp=Z,28nm,1.0s,baz=297,slow=9.3,SNR=41
SIV                              LR    LR    04 07 20.7
      comp=Z,3µm,19.8s,baz=314,slow=37
      comp=Z,28nm,1.0s
Z38A  Mt. Pleasant    30.08 339  IAmb  IAmb  03 55 12.0
      comp=Z,40nm,0.9s
CNNC  Cliffs of the   30.09   8  P     P     03 55 10.5 +0.2
      baz=189
V53A  Saluda          30.20 360  IAmb  IAmb  03 55 13.4
      comp=Z,55nm,1.8s
TKL   Tuckaleechee C  30.20 358  LR    LR    04 08 11.1
      comp=Z,483nm,19.1s,baz=180,slow=38
TKL   Tuckaleechee C  30.20 358  P     P     03 55 12.2 +0.7
      baz=178,SNR=5.7
FW13  Cleburne        30.24 335  IAmb  IAmb  03 55 13.3
      comp=Z,36nm,0.9s
W45A  Hickory Valley  30.30 349  P     P     03 55 12.2 -0.1
      baz=167,SNR=18
V51A  Loudon          30.37 357  IAmb  IAmb  03 55 14.8
      comp=Z,40nm,1.1s
V51A  Loudon          30.37 357  P     P     03 55 13.8 +0.9
      baz=176,SNR=10
V52A  Sevierville     30.38 358  IAmb  IAmb  03 55 14.8
      comp=Z,78nm,1.6s
V52A  Sevierville     30.38 358  P     P     03 55 13.1 +0.1
      baz=178,SNR=7.1
V55A  Taylorsville    30.41   2  P     P     03 55 14.4 +1.1
      baz=183
V55A                             P     P     03 55 14.4 +1.1
      baz=183
V58A  Windy Hill, Pi  30.49   6  IAmb  IAmb  03 55 15.6
      comp=Z,99nm,1.8s
V58A  Windy Hill, Pi  30.49   6  P     P     03 55 14.9 +0.9
      baz=187,SNR=7.8
V58A                             P     P     03 55 14.9 +0.9
      baz=187,SNR=7.8
V48A  Smith Brothers  30.51 353  P     P     03 55 14.5 +0.3
      baz=172
UALR  University of   30.65 344  IAmb  IAmb  03 55 16.3
      comp=Z,34nm,1.0s
H06E1 SOCORRO T-PHAS30.67 298    T     T     04 27 24.5
      SNR=51
FW07  Weatherford     30.70 334  IAmb  IAmb  03 55 17.2
      comp=Z,33nm,1.0s
HPIG                  30.73 317  P     P     03 55 16.4 -0.2
PDRB  Porto dos Gac   30.77 123  eP    P     03 55 16.2 -0.5
MIAR  Mount Ida       30.79 342  P     P     03 55 16.3 -0.3
      baz=158,SNR=9.2
MIAR  Mount Ida       30.79 342  P     P     03 55 16.9 +0.2
      baz=158,SNR=9.2
CLTN  Cedars of Leba  30.81 354  IAmb  IAmb  03 55 18.1
      comp=Z,47nm,1.2s
FW06  Azle            30.83 335  IAmb  IAmb  03 55 18.7
      comp=Z,51nm,0.9s
LVC   Limon Verde     30.84 155  P     P     03 55 18.3 +0.7
LVC                              IAmb  IAmb  03 56 03.6
      comp=Z,82nm,1.6s
U56A  King            30.94   4  IAmb  IAmb  03 55 20.2
      comp=Z,81nm,1.6s
U56A  King            30.94   4  P     P     03 55 19.3 +1.4
      baz=184,SNR=5.6
U56A                             P     P     03 55 19.3 +1.4
      baz=184,SNR=5.6
Z35A  Perchaven, San  31.02 336  IAmb  IAmb  03 55 20.3
      comp=Z,43nm,0.8s
Z35A  Perchaven, San  31.02 336  P     P     03 55 20.1 +1.4
      baz=151
WVT   Waverly         31.03 352  P     P     03 55 18.1 -0.6
WVT                              IAmb  IAmb  03 55 19.1
      comp=Z,37nm,0.8s
U54A  Nelsons Funny   31.05   1  IAmb  IAmb  03 55 20.8
      comp=Z,51nm,1.4s
TZTN  Tazewell        31.08 359  IAmb  IAmb  03 55 20.9
      comp=Z,44nm,1.3s
TZTN  Tazewell        31.08 359  P     P     03 55 19.6 +0.4
      baz=178,SNR=6.8
TZTN  Tazewell        31.08 359  P     P     03 55 20.1 +0.9
      baz=178,SNR=6.8
TX31  Lajitas Ar. Si  31.09 323  IAmb  IAmb  03 55 21.6
      comp=Z,50nm,1.5s
TX31  Lajitas Ar. Si  31.09 323  P     P     03 55 21.1 +1.6
      baz=136,SNR=6.3
TXAR  Lajitas Array   31.09 323  P     P     03 55 20.0 +0.6
      comp=Z,8.8nm,1.3s,baz=146,slow=7.1,SNR=13
TXAR                             PcP   PcP   03 58 14.6 -0.4
      comp=Z,1.6nm,1.0s,baz=142,slow=4.6,SNR=4.5
TXAR                             LR    LR    04 07 55.7
      comp=Z,392nm,20.2s,baz=128,slow=37
      comp=Z,8.8nm,1.3s
PTLB  Pontes e Lacer  31.10 132  IAmb  IAmb  03 55 22.5
      comp=Z,40nm,1.1s
PTLB  Pontes e Lacer  31.10 132  eP    P     03 55 19.4 -0.2
WHAR  Wooly Hollow    31.12 345  IAmb  IAmb  03 55 20.4
      comp=Z,41nm,1.0s
U49A  Red Boiling Sp  31.17 355  IAmb  IAmb  03 55 21.4
      comp=Z,64nm,1.2s
U49A  Red Boiling Sp  31.17 355  P     P     03 55 20.2 +0.3
      baz=174,SNR=17
CLDB  Colider         31.18 121  eP    P     03 55 20.2 -0.1
U59A  Littleton       31.19   8  IAmb  IAmb  03 55 22.2
      comp=Z,34nm,1.4s
U59A  Littleton       31.19   8  P     P     03 55 21.2 +1.0
      baz=189
U59A                             P     P     03 55 21.2 +1.0
      baz=189
BBSD  Serra de San D  31.20 136  eP    P     03 55 20.5  0.0
ABTX  Abilene, Hawle  31.47 332  P     P     03 55 22.5 -0.2
      baz=146
LCAR  Lake Charles    31.59 347  P     P     03 55 23.5 -0.1
      baz=164,SNR=37
T50A  Nancy           31.61 357  IAmb  IAmb  03 55 25.1
      comp=Z,44nm,1.4s
T50A  Nancy           31.61 357  P     P     03 55 24.1 +0.3
      baz=176
T50A                             P     P     03 55 24.1 +0.3
      baz=176
FCAR  Ozark Folk Cen  31.65 345  IAmb  IAmb  03 55 24.7
      comp=Z,36nm,1.0s
T57A  Hurt            31.67   5  IAmb  IAmb  03 55 26.9
      comp=Z,27nm,1.2s
T57A  Hurt            31.67   5  P     P     03 55 25.3 +0.9
      baz=186,SNR=6.3
T57A                             P     P     03 55 25.3 +0.9
      baz=186,SNR=6.3
T47A  Sharon Grove    31.78 353  P     P     03 55 25.3  0.0
      baz=171,SNR=24
BLA   Blacksburg      31.80   3  IAmb  IAmb  03 55 27.6
      comp=Z,79nm,1.8s
BLA   Blacksburg      31.80   3  P     P     03 55 25.4 -0.1
      baz=184,SNR=5.1
BLA   Blacksburg      31.80   3  P     P     03 55 27.0 +1.4
      baz=184,SNR=5.1
T59A  Double "B" Far  31.84   8  IAmb  IAmb  03 55 27.9
      comp=Z,30nm,1.4s
T59A  Double "B" Far  31.84   8  P     P     03 55 27.2 +1.4
      baz=190
T59A                             P     P     03 55 27.2 +1.4
      baz=190
WTFS  Witchita Falls  31.90 335  IAmb  IAmb  03 55 27.8
      comp=Z,58nm,1.3s
T45B  Paducah         32.02 351  P     P     03 55 27.8 +0.4
      baz=169,SNR=8.2
PB14  IPOC Station P  32.06 159  IAmb  IAmb  03 55 30.3
      comp=Z,30nm,1.0s
S51A  Beattyville     32.17 359  IAmb  IAmb  03 55 30.3
      comp=Z,47nm,1.2s
S51A  Beattyville     32.17 359  P     P     03 55 29.1 +0.4
      baz=178,SNR=8.8
S51A                             P     P     03 55 29.1 +0.4
      baz=178,SNR=8.8
U40A  Yellville       32.28 344  P     P     03 55 29.9 +0.2
      baz=161,SNR=14
U40A                             P     P     03 55 29.9 +0.2
      baz=161,SNR=14
W35A  Tecumseh        32.47 338  IAmb  IAmb  03 55 32.7
      comp=Z,66nm,1.5s
T42A  Van Buren       32.49 347  P     P     03 55 31.1 -0.5
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	baz=164						
ODSA	Odessa	32.53	327	IAmb	IAmb	03 55 34.9	
	comp=Z,27nm,1.1s						
POST	Post	32.73	330	IAmb	IAmb	03 55 35.5	
	comp=Z,22nm,1.0s						
TUL1	Leonard	32.76	340		P	03 55 32.9	-1.1
TUL1				IAmb	IAmb	03 55 34.9	
	comp=Z,80nm,1.7s						
TUL1	Leonard	32.76	340	P	P	03 55 32.8	-1.1
	baz=155,SNR=5.8						
TUL1	Leonard	32.76	340	P	P	03 55 33.9	-0.1
	baz=155,SNR=5.8						
S44A	Carbondale	32.78	350	P	P	03 55 33.7	-0.3
	baz=168,SNR=31						
U38A	Gravette	32.79	342	IAmb	IAmb	03 55 36.5	
	comp=Z,28nm,1.4s						
U38A	Gravette	32.79	342	P	P	03 55 34.0	-0.2
	baz=158,SNR=8.7						
R50A	Paris	32.84	358	P	P	03 55 35.0	+0.4
	baz=177,SNR=12						
R50A				P	P	03 55 35.0	+0.4
	baz=177,SNR=12						
GO02	Mina Guanaco	32.85	158	IAmb	IAmb	03 55 37.6	
	comp=Z,36nm,1.1s						
WMOK	Wichita Mounta	32.87	335	P	P	03 55 34.3	-0.6
	baz=149						
R49A	Shelbyville	32.90	356	P	P	03 55 35.0	-0.1
	baz=175,SNR=21						
R49A				P	P	03 55 35.0	-0.1
	baz=175,SNR=21						
WCI	Wyandotte Cave	32.92	355	P	P	03 55 34.7	-0.6
WCI	Wyandotte Cave	32.92	355	P	P	03 55 34.7	-0.6
	baz=173						
WCI	Wyandotte Cave	32.92	355	P	P	03 55 35.5	+0.1
	baz=173,SNR=15						
DEOK	Depew	32.95	339	IAmb	IAmb	03 55 36.0	
	comp=Z,54nm,1.4s						
OK031	S. Brethren Rd	33.17	339	IAmb	IAmb	03 55 37.9	
	comp=Z,45nm,1.2s						
OK052	Battle Ridge R	33.19	339	IAmb	IAmb	03 55 38.1	
	comp=Z,44nm,1.2s						
FVM	French Village	33.27	349	P	P	03 55 38.0	-0.5
	baz=166,SNR=24						
Q52A	Bidwell	33.48	0	P	P	03 55 40.8	+0.6
	baz=181,SNR=7.5						
Q52A				P	P	03 55 40.8	+0.6
	baz=181,SNR=7.5						
CCM	Cathedral Cave	33.51	348	P	P	03 55 39.8	-0.8
CCM	Cathedral Cave	33.51	348	P	P	03 55 39.7	-0.8
	baz=164						
CCM	Cathedral Cave	33.51	348	P	P	03 55 40.3	-0.2
	baz=164,SNR=49						
Q54A	Coxs Mills	33.54	3	IAmb	IAmb	03 55 42.4	
	comp=Z,68nm,1.6s						
Q54A	Coxs Mills	33.54	3	P	P	03 55 41.5	+0.7
	baz=183,SNR=6.4						
Q54A				P	P	03 55 41.5	+0.7
	baz=183,SNR=6.4						
OLIL	Olney	33.62	352	P	P	03 55 41.4	0.0
	baz=170,SNR=27						
S39A	Bolivar	33.66	345	IAmb	IAmb	03 55 42.4	
	comp=Z,43nm,1.0s						
S39A	Bolivar	33.66	345	P	P	03 55 41.5	-0.3
	baz=160,SNR=32						
Q56A	Snyder Ridge,	33.70	5	IAmb	IAmb	03 55 45.5	
	comp=Z,59nm,1.6s						
Q56A	Snyder Ridge,	33.70	5	P	P	03 55 43.6	+1.4
	baz=186,SNR=6.4						
Q56A				P	P	03 55 43.6	+1.4
	baz=186,SNR=6.4						
MNTX	Cornudas Mount	33.81	324	P	P	03 55 43.7	+0.5
	baz=136,SNR=26						
MNTX	Cornudas Mount	33.81	324	P	P	03 55 44.4	+1.2
	baz=136,SNR=26						
SLM	Saint Louis	33.87	349	P	P	03 55 43.8	+0.2
	baz=166,SNR=6.1						
Q44A	Meyer Farm, Va	33.92	351	P	P	03 55 43.8	-0.2
	baz=168,SNR=12						
R40A	Maddies Statio	33.97	346	IAmb	IAmb	03 55 45.6	
	comp=Z,31nm,1.1s						
R40A	Maddies Statio	33.97	346	P	P	03 55 43.8	-0.6
	baz=163,SNR=18						
SALV	Santo Antonio	33.99	129	*e*P	P	03 55 44.7	-0.2
P51A	Williamsport	34.00	359	IAmb	IAmb	03 55 45.9	
	comp=Z,54nm,1.5s						
P53A	Whipple	34.02	2	P	P	03 55 45.8	+0.9
	baz=182,SNR=7.3						
P53A				P	P	03 55 45.8	+0.9
	baz=182,SNR=7.3						
P48A	Milroy	34.07	356	P	P	03 55 44.8	-0.5
	baz=175,SNR=16						
P48A				P	P	03 55 44.8	-0.5
	baz=175,SNR=16						
MSTX	Muleshoe	34.09	329	P	P	03 55 46.2	+0.4
	baz=142						
MSTX	Muleshoe	34.09	329	P	P	03 55 46.4	+0.7
	baz=142						
P49A	Miami Univ. Ec	34.11	357	P	P	03 55 44.9	-0.8
	baz=176,SNR=6.2						
P49A	Miami Univ. Ec	34.11	357	P	P	03 55 45.2	-0.4
	baz=176,SNR=6.2						
P52A	Corning	34.16	1	IAmb	IAmb	03 55 47.5	
	comp=Z,80nm,1.7s						
P52A	Corning	34.16	1	P	P	03 55 46.0	-0.1
	baz=181						
P57A	Homestead Farm	34.26	6	IAmb	IAmb	03 55 49.6	
	comp=Z,62nm,1.5s						
P57A	Homestead Farm	34.26	6	P	P	03 55 49.0	+2.0
	baz=188,SNR=9.3						
P57A				P	P	03 55 49.0	+2.0
	baz=188,SNR=9.3						
MCWV	Mont Chateau	34.27	4	P	P	03 55 47.2	+0.1
	baz=185						
AMTX	Amarillo	34.29	332	P	P	03 55 47.7	+0.2
	baz=145						
U32A	Winter Ranch,	34.37	336	P	P	03 55 48.3	+0.3
	baz=150,SNR=5.9						
P46A	Rosedale	34.39	354	IAmb	IAmb	03 55 48.4	
	comp=Z,54nm,1.1s						
P46A	Rosedale	34.39	354	P	P	03 55 47.6	-0.5
	baz=172						
AC06	Mina Casimiro	34.59	161	P	P	03 55 49.7	-0.3
O52A	Adamsville	34.64	1	IAmb	IAmb	03 55 56.7	
	comp=Z,30nm,1.3s						
O52A	Adamsville	34.64	1	P	P	03 55 51.1	+0.8
	baz=181						
O52A				P	P	03 55 51.1	+0.8
	baz=181						
PRPB	Parauapebas	34.68	109	*e*P	P	03 55 50.7	-0.3
P43A	Skaggs, Pawnee	34.72	351	P	P	03 55 51.1	+0.1
	baz=168,SNR=23						
O49A	Covington	34.74	358	IAmb	IAmb	03 55 51.8	
	comp=Z,76nm,1.5s						
O49A	Covington	34.74	358	P	P	03 55 50.8	-0.4
	baz=177,SNR=6.8						
O49A				P	P	03 55 50.8	-0.4
	baz=177,SNR=6.8						
ACSO	Alum Creek Sta	34.75	360	P	P	03 55 50.6	-0.6
	baz=179,SNR=8.1						
ACSO	Alum Creek Sta	34.75	360	P	P	03 55 51.4	+0.1
	baz=179,SNR=8.1						
O54A	Avella	34.76	3	P	P	03 55 51.8	+0.5
	baz=184						
O54A				P	P	03 55 51.8	+0.5
	baz=184						
O53A	New Philadelph	34.79	2	IAmb	IAmb	03 55 53.0	
	comp=Z,50nm,1.5s						
O53A	New Philadelph	34.79	2	P	P	03 55 51.3	-0.3
	baz=182						
O48B	Farmland	34.85	357	P	P	03 55 51.0	-1.1
	baz=176,SNR=21						
O48B	Farmland	34.85	357	P	P	03 55 51.5	-0.6
	baz=176,SNR=21						
MVL	Millersville	34.98	8	IAmb	IAmb	03 55 56.3	
	comp=Z,29nm,1.2s						
O44A	Mansfield	35.07	352	P	P	03 55 53.4	-0.5
	baz=170,SNR=13						
P40A	Paris	35.10	347	P	P	03 55 53.9	-0.4
	baz=164,SNR=8.1						
SFIN	Lafayette	35.13	354	IAmb	IAmb	03 55 54.5	
	comp=Z,57nm,1.1s						
SFIN	Lafayette	35.13	354	P	P	03 55 53.3	-1.2
	baz=172,SNR=12						
SFIN	Lafayette	35.13	354	P	P	03 55 53.5	-0.9
	baz=172,SNR=12						
PAGS	Pennsylvania G	35.15	8	IAmb	IAmb	03 56 09.2	
	comp=Z,44nm,1.3s						
SSPA	Standing Stone	35.41	6	P	P	03 55 55.6	-1.4
SSPA	Standing Stone	35.41	6	P	P	03 55 55.5	-1.4
	baz=188						
N49A	Columbus Grove	35.47	358	IAmb	IAmb	03 55 58.1	
	comp=Z,64nm,1.8s						
N49A	Columbus Grove	35.47	358	P	P	03 55 56.8	-0.6
	baz=177						
N49A				P	P	03 55 56.8	-0.6
	baz=177						
N47A	Urbana	35.51	356	IAmb	IAmb	03 55 57.7	
	comp=Z,35nm,1.1s						
N47A	Urbana	35.51	356	P	P	03 55 56.4	-1.3
	baz=175,SNR=7.2						
N47A				P	P	03 55 56.4	-1.3
	baz=175,SNR=7.2						
P38A	Dawn	35.54	345	IAmb	IAmb	03 55 58.5	
	comp=Z,31nm,1.1s						
P38A	Dawn	35.54	345	P	P	03 55 57.6	-0.5
	baz=161,SNR=7.8						
SNDB	Serra Nova Dou	35.58	119	*e*P	P	03 55 58.0	-0.7
HDIL	Hopedale	35.58	351	P	P	03 55 57.3	-1.1
	baz=168,SNR=18						
HDIL	Hopedale	35.58	351	P	P	03 55 58.0	-0.4
	baz=168,SNR=18						
PP1B	Ponte de Pedra	35.63	130	*e*P	P	03 55 59.3	+0.2
N58A	Sunbury	35.75	8	P	P	03 56 01.2	+1.4
	baz=190						
N58A				P	P	03 56 01.2	+1.4
	baz=190						
121A	Cookes Peak, D	35.84	322	IAmb	IAmb	03 56 05.2	
	comp=Z,64nm,1.2s						
121A	Cookes Peak, D	35.84	322	P	P	03 56 03.4	+2.5
	baz=134,SNR=26						
121A	Cookes Peak, D	35.84	322	P	P	03 56 03.7	+2.7
	baz=134,SNR=26						
KSU1	Kansas State U	35.93	341	IAmb	IAmb	03 56 02.2	
	comp=Z,77nm,1.5s						
KSU1	Kansas State U	35.93	341	P	P	03 56 00.9	-0.5
	baz=156,SNR=6.9						
KSU1	Kansas State U	35.93	341	P	P	03 56 01.6	+0.2
	baz=156,SNR=6.9						
BRNJ	Basking Ridge	35.94	10	P	P	03 56 03.5	+2.1
	baz=194						
AC05	El Transito	35.99	161	P	P	03 56 02.2	+0.1
AC05				IAmb	IAmb	03 56 06.2	
	comp=Z,50nm,1.2s						
N41A	Harden Midland	35.99	349	P	P	03 56 01.0	-0.9
	baz=166,SNR=17						
M53A	WI Miller and	36.00	2	P	P	03 56 01.7	-0.2
	baz=183						
319A	Douglas	36.01	319	IAmb	IAmb	03 56 06.2	
	comp=Z,84nm,1.7s						
LCO	Las Campanas	36.02	162	P	P	03 56 02.5	0.0
R32A	Long Quarter,	36.04	338	P	P	03 56 03.2	+0.8
	baz=152,SNR=13						
M55A	Ridgway	36.15	5	IAmb	IAmb	03 56 05.7	
	comp=Z,49nm,1.4s						
M57A	Sunshine Farm,	36.19	7	IAmb	IAmb	03 56 05.8	
	comp=Z,44nm,1.2s						
M57A	Sunshine Farm,	36.19	7	P	P	03 56 04.8	+1.2
	baz=189,SNR=6.7						
M57A				P	P	03 56 04.8	+1.2
	baz=189,SNR=6.7						
M44A	Midewin, Midew	36.23	353	P	P	03 56 03.1	-0.8
	baz=171						
Y22A	Socorro	36.34	325	P	P	03 56 08.0	+2.8
	baz=136,SNR=39						
PAL	Palisades	36.37	11	P	P	03 56 08.3	+3.1
	baz=195						
Y22D	IRIS PASSCAL I	36.42	325	IAmb	IAmb	03 56 12.9	
	comp=Z,72nm,1.1s						
Y22D	IRIS PASSCAL I	36.42	325	P	P	03 56 08.2	+2.3
	baz=136						
Y22F	Passcal Instru	36.42	325	P	P	03 56 08.4	+2.6
	baz=136						
L48A	N Adams	36.50	358	IAmb	IAmb	03 56 57.5	
	comp=Z,75nm,1.8s						
N38A	Joes South For	36.57	346	P	P	03 56 06.8	0.0
	baz=162,SNR=25						
KSPA	Keystone Colle	36.59	9	IAmb	IAmb	03 56 09.9	
	comp=Z,40nm,1.2s						
KSPA	Keystone Colle	36.59	9	P	P	03 56 08.3	+1.3
	baz=191,SNR=6.1						
ERPA	Erie	36.71	3	P	P	03 56 11.3	+3.3
	baz=184						
CBKS	Cedar Bluff	36.77	337	IAmb	IAmb	03 56 10.4	
	comp=Z,60nm,1.1s						
CBKS	Cedar Bluff	36.77	337	P	P	03 56 09.0	+0.3
	baz=151,SNR=5.6						
CBKS	Cedar Bluff	36.77	337	P	P	03 56 10.4	+1.8
	baz=151,SNR=5.6						
ANMO	Albuquerque	36.79	326	P	P	03 56 09.3	+0.2
ANMO				IAmb	IAmb	03 56 12.6	
	comp=Z,55nm,1.2s						
ANMO	Albuquerque	36.79	326	P	P	03 56 11.3	+2.1
	baz=138						
ANMO	Albuquerque	36.79	326	P	P	03 56 11.2	+2.1
	baz=138,SNR=56						
AQDB	Aquidauana	36.84	135	IAmb	IAmb	03 56 10.0	
	comp=Z,48nm,0.8s						
AQDB	Aquidauana	36.84	135	*e*P	P	03 56 08.8	-0.5
L56A	Greenwood	36.93	6	IAmb	IAmb	03 56 11.5	
	comp=Z,45nm,1.4s						
ARAG	Araguaiana, MT	36.98	125	*e*P	P	03 56 09.5	-1.1
L42A	Oliver, Polo	37.06	351	P	P	03 56 10.1	-0.9
	baz=168,SNR=11						
GO04	Tololo Observa	37.07	163	IAmb	IAmb	03 56 15.4	
	comp=Z,44nm,1.1s						
WVNY	West Valley, N	37.09	5	IAmb	IAmb	03 56 32.9	
	comp=Z,44nm,1.4s						
BINY	Binghamton	37.19	8	IAmb	IAmb	03 56 14.2	
	comp=Z,59nm,1.4s						
BINY	Binghamton	37.19	8	P	P	03 56 12.8	+0.7
	baz=191						
CO06	Fray Jorge	37.31	164	IAmb	IAmb	03 56 17.1	
	comp=Z,60nm,1.3s						
L40A	Anamosa	37.37	349	P	P	03 56 12.8	-0.9
	baz=166,SNR=26						
T25A	Trinidad	37.41	331	IAmb	IAmb	03 56 17.9	
	comp=Z,60nm,1.3s						
T25A	Trinidad	37.41	331	P	P	03 56 16.1	+1.8
	baz=143,SNR=31						
MMNY	Mt. Morris Dam	37.48	6	IAmb	IAmb	03 56 15.8	
	comp=Z,47nm,1.3s						
K43A	Burlington	37.56	353	IAmb	IAmb	03 56 15.4	
	comp=Z,84nm,1.2s						
TUC	Tucson	37.59	319	P	P	03 56 16.0	+0.3
TUC	Tucson	37.59	319	P	P	03 56 17.6	+1.8
	baz=130						
SCIA	State Center	37.63	347	IAmb	IAmb	03 56 16.3	
	comp=Z,59nm,1.0s						
SCIA	State Center	37.63	347	P	P	03 56 14.9	-0.9
	baz=162,SNR=9.6						
SCIA	State Center	37.63	347	P	P	03 56 15.4	-0.4
	baz=162,SNR=9.6						
K57A	Scipio Center	37.64	7	IAmb	IAmb	03 56 29.7	
	comp=Z,46nm,1.4s						
SMTB	Santa Maria do	37.66	112	*e*P	P	03 56 16.5	-0.1
N33B	J Bar K, Exete	37.69	341	P	P	03 56 17.3	+0.9
	baz=155,SNR=5.6						
CO03	El Pedregal	37.73	163	IAmb	IAmb	03 56 20.9	
	comp=Z,42nm,1.1s						
J47A	Sunmer	37.80	357	IAmb	IAmb	03 56 18.1	
	comp=Z,57nm,1.4s						
C2SB	Chapadao do Su	37.88	130	*e*P	P	03 56 18.8	+0.6
JFWS	Jewell Farm	38.04	351	IAmb	IAmb	03 56 19.2	
	comp=Z,87nm,1.4s						
JFWS	Jewell Farm	38.04	351	P	P	03 56 18.1	-1.2
	baz=168,SNR=13						
JFWS	Jewell Farm	38.04	351	P	P	03 56 18.6	-0.7
	baz=168,SNR=13						
KSCO	Kaye Shedlock’	38.12	334	IAmb	IAmb	03 56 22.7	
	comp=Z,71nm,1.1s						
KSCO	Kaye Shedlock’	38.12	334	P	P	03 56 21.1	+1.0
	baz=146,SNR=5.8						
J56A	Wolcott	38.13	7	P	P	03 56 19.9	-0.1
	baz=189,SNR=5.0						
J56A				P	P	03 56 19.9	-0.1
	baz=189,SNR=5.0						
ESFA	Espinillo Form	38.17	143	*e*P	P	03 56 20.5	-0.1
K38A	Parkersburg	38.24	348	IAmb	IAmb	03 56 21.0	
	comp=Z,39nm,0.8s						
K38A	Parkersburg	38.24	348	P	P	03 56 20.2	-0.8
	baz=164						
J57A	Williamstown	38.38	8	P	P	03 56 22.4	+0.3
	baz=191						
J57A				P	P	03 56 22.4	+0.3
	baz=191						
SDCO	Great Sand Dun	38.42	330	IAmb	IAmb	03 56 26.4	
	comp=Z,62nm,1.1s						
SDCO	Great Sand Dun	38.42	330	P	P	03 56 25.1	+2.2
	baz=142,SNR=69						
J58A	Remsen	38.43	9	IAmb	IAmb	03 56 26.4	
	comp=Z,40nm,1.2s						
J58A	Remsen	38.43	9	P	P	03 56 23.5	+0.9
	baz=192,SNR=9.0						
J58A				P	P	03 56 23.5	+0.9
	baz=192,SNR=9.0						
BGNE	Belgrade	38.52	341	P	P	03 56 23.1	-0.3
	baz=155						
J59A	Piesco	38.65	9	P	P	03 56 25.2	+0.7
	baz=193,SNR=6.0						
J59A				P	P	03 56 25.2	+0.7
	baz=193,SNR=6.0						
H03N2	Juan Fernandez	38.71	175	T	T	04 37 24.7	
	baz=354,slow=76,SNR=12						
H03N1	Juan Fernandez	38.72	175	T	T	04 37 26.0	
	baz=354,slow=76,SNR=18						
ACCN	Adirondack Com	38.72	10	P	P	03 56 26.6	+1.7
	baz=194						
214A	Organ Pipe Nat	38.72	317	IAmb	IAmb	03 56 28.7	
	comp=Z,48nm,1.1s						
214A	Organ Pipe Nat	38.72	317	P	P	03 56 27.1	+1.8
	baz=127,SNR=17						
H03N3	Juan Fernandez	38.73	175	T	T	04 37 23.5	
	baz=354,slow=76,SNR=16						
W18A	Petrified Fore	38.80	323	IAmb	IAmb	03 56 29.9	
	comp=Z,81nm,1.1s						
W18A	Petrified Fore	38.80	323	P	P	03 56 28.2	+2.2
	baz=134,SNR=26						
I42A	Draeger Farm,	38.80	353	P	P	03 56 24.9	-0.8
	baz=170,SNR=24						
AMBA	Amambai (Brazi	38.96	137	*e*P	P	03 56 26.7	-0.6
WCNY	West Carthage	38.98	8	P	P	03 56 27.5	+0.3
	baz=191,SNR=5.9						
I40A	Norwalk	39.05	351	IAmb	IAmb	03 56 28.3	
	comp=Z,64nm,1.4s						
I40A	Norwalk	39.05	351	P	P	03 56 26.8	-1.0
	baz=167,SNR=7.0						
S22A	4UR Ranch, Cre	39.09	329	P	P	03 56 30.4	+1.9
	baz=140,SNR=40						
VA06	Catapilco	39.19	165	IAmb	IAmb	03 56 44.4	
	comp=Z,54nm,1.2s						
Q24A	Divide	39.21	332	P	P	03 56 31.1	+1.5
	baz=143,SNR=10						
H43A	Windswept, Lux	39.25	354	IAmb	IAmb	03 56 29.9	
	comp=Z,83nm,1.1s						
H43A	Windswept, Lux	39.25	354	P	P	03 56 28.5	-0.9
	baz=172,SNR=19						
HNH	Hanover	39.29	12	IAmb	IAmb	03 57 51.7	
	comp=Z,97nm,2.0s						
ROSB	Rosrio	39.31	101	*e*P	P	03 56 30.2	-0.2
OGNE	Ogallala	39.50	337	P	P	03 56 32.8	+1.0
	baz=149,SNR=14						
OGNE	Ogallala	39.50	337	P	P	03 56 33.6	+1.9
	baz=149,SNR=14						
VA01	Torpederas	39.54	165	IAmb	IAmb	03 56 41.9	
	comp=Z,42nm,1.0s						
MVCO	Mesa Verde	39.58	327	IAmb	IAmb	03 56 35.9	
	comp=Z,73nm,1.1s						
MVCO	Mesa Verde	39.58	327	P	P	03 56 34.0	+1.4
	baz=137,SNR=9.7						
VA03	San Esteban	39.58	164	IAmb	IAmb	03 56 36.5	
	comp=Z,50nm,1.1s						
G45A	Suttons Bay	39.65	357	IAmb	IAmb	03 56 33.4	
	comp=Z,51nm,1.1s						
ROC1	El Roble	39.65	165	IAmb	IAmb	03 56 37.1	
	comp=Z,70nm,1.2s						
I37B	Waseca	39.68	348	P	P	03 56 31.6	-1.5
	baz=163,SNR=8.1						
LONY	Lake Ozonia	39.77	9	P	P	03 56 33.9	+0.2
	baz=192						
VT1	Waterbury	39.80	11	P	P	03 56 36.0	+1.9
	baz=195,SNR=7.7						
113A	Mohawk Valley,	39.85	317	IAmb	IAmb	03 56 38.0	
	comp=Z,58nm,1.2s						
CPUP	Villa Florida	39.89	143	P	P	03 56 34.0	-0.9
	comp=Z,9.1nm,0.8s,baz=329,slow=8.6,SNR=17						
CPUP				LR	LR	04 13 57.9	
	comp=Z,683nm,18.9s,baz=325,slow=38						
	comp=Z,9.1nm,0.8s						
CPUP	Villa Florida	39.89	143	*e*P	P	03 56 33.9	-1.1
PEL	Peldehue	39.90	164	IAmb	IAmb	03 56 55.8	
	comp=Z,76nm,1.6s						
BMNY	Brushton-Moira	39.99	9	P	P	03 56 35.9	+0.3
	baz=193,SNR=11						
WUAZ	Wupatki	40.05	322	P	P	03 56 37.6	+1.1
WUAZ	Wupatki	40.05	322	P	P	03 56 38.3	+1.9
	baz=132,SNR=18						
ISCO	Idaho Springs	40.10	332	P	P	03 56 36.8	-0.2
ISCO	Idaho Springs	40.10	332	P	P	03 56 38.7	+1.8
	baz=143,SNR=20						
ISCO	Idaho Springs	40.10	332	P	P	03 56 39.2	+2.2
	baz=143,SNR=20						
BDFB	Brasilia	40.10	122	LR	LR	04 13 08.4	
	comp=Z,950nm,21.1s,baz=299,slow=36						
BDFB	Brasilia	40.10	122	*e*P	P	03 56 36.8	-0.2
MT05	Renca	40.12	164	P	P	03 56 36.6	-0.3
MT05				IAmb	IAmb	03 56 40.5	
	comp=Z,75nm,1.2s						
FRNY	Flat Rock	40.14	10	P	P	03 56 37.6	+0.8
BRIGG	Briggsdale	40.15	334	IAmb	IAmb	03 56 40.3	
	comp=Z,129nm,1.5s						
ECSD	EROS Data Cent	40.19	344	P	P	03 56 36.4	-0.9
ECSD	EROS Data Cent	40.19	344	P	P	03 56 36.2	-1.1
	baz=158,SNR=18						
MT03	Universidad Ad	40.28	164	IAmb	IAmb	03 56 41.3	
	comp=Z,115nm,1.7s						
ITRB	Iturama	40.32	129	*e*P	P	03 56 38.2	-0.5
G40A	Rib Lake	40.33	352	P	P	03 56 37.1	-1.4
	baz=168,SNR=17						
MT08	Bocatoma Ro	40.37	164	IAmb	IAmb	03 56 43.8	
	comp=Z,88nm,1.3s						
PV15	Paradox Valley	40.40	328	IAmb	IAmb	03 56 42.9	
	comp=Z,78nm,1.2s						
MT09	Talagante	40.42	165	IAmb	IAmb	03 56 43.0	
	comp=Z,54nm,1.1s						
PV13	Radium Mtn., P	40.44	328	IAmb	IAmb	03 56 43.0	
	comp=Z,68nm,1.0s						
PV07	Paradox Valley	40.56	328	IAmb	IAmb	03 56 44.0	
	comp=Z,60nm,1.2s						
PV11	David Mesa, Pa	40.57	328	IAmb	IAmb	03 56 43.9	
	comp=Z,102nm,1.3s						
MT13	San Alfonso	40.58	164	P	P	03 56 40.9	+0.2
MT13				IAmb	IAmb	03 56 52.7	
	comp=Z,34nm,1.0s						
MCR1	Marechal Candi	40.64	138	*e*P	P	03 56 40.7	-0.5
LMEL	Las Melosas	40.70	164	IAmb	IAmb	03 56 45.9	
	comp=Z,55nm,1.4s						
SPMN	Marine on St.	40.72	349	IAmb	IAmb	03 56 41.2	
	comp=Z,48nm,1.0s						
SPMN	Marine on St.	40.72	349	P	P	03 56 40.1	-1.5
	baz=164,SNR=18						
SPMN	Marine on St.	40.72	349	P	P	03 56 40.6	-1.1
	baz=164,SNR=18						
GLA	Glamis	40.74	317	IAmb	IAmb	03 56 45.4	
	comp=Z,45nm,1.1s						
GLA	Glamis	40.74	317	P	P	03 56 43.8	+1.7
	baz=126,SNR=12						
PCMB	Pacaembu	40.76	132	*e*P	P	03 56 41.1	-1.2
MNTQ	Montreal, Queb	40.78	10	P	P	03 56 41.2	-0.8
ESJX	Sierra Juarez	40.93	315	P	P	03 56 43.2	-0.6
BLYC	Blythe	40.95	318	P	P	03 56 43.4	-0.3
BO01	Tunca	40.98	165	P	P	03 56 44.0	+0.1
BO01				IAmb	IAmb	03 56 47.4	
	comp=Z,61nm,1.4s						
PDMCI	Parker Dam,Lak	41.03	319	P	P	03 56 46.4	+2.0
	baz=128,SNR=6.2						
E43A	Lone Tree Farm	41.07	355	IAmb	IAmb	03 56 44.7	
	comp=Z,54nm,1.4s						
E43A	Lone Tree Farm	41.07	355	P	P	03 56 43.5	-1.0
	baz=173,SNR=11						
IPMB	Ipameri, GO	41.10	125	*e*P	P	03 56 44.0	-1.2
G62A	West of Eustis	41.11	13	IAmb	IAmb	03 56 48.3	
	comp=Z,45nm,1.2s						
G62A	West of Eustis	41.11	13	P	P	03 56 47.1	+2.2
	baz=198,SNR=7.2						
G62A				P	P	03 56 47.1	+2.2
	baz=198,SNR=7.2						
N23A	Red Feather La	41.12	333	P	P	03 56 46.7	+1.3
	baz=143,SNR=16						
TRQ	Mont Tremblant	41.34	8	P	P	03 56 46.1	-0.7
SWSC	Sam W. Stewart	41.35	316	P	P	03 56 48.7	+1.7
	baz=124,SNR=6.5						
RMX	La Rumorosa	41.35	315	P	P	03 56 45.7	-1.5
GO05	Huala	41.37	167	IAmb	IAmb	03 56 50.1	

	comp=Z,43nm,1.2s						
IKP	In-Ko-Pah, Jac	41.40	315	P	P	03 56 49.7	+2.2
	baz=124						
SDBA	SAO DESIDERIO	41.43	115	*e*P	P	03 56 47.5	-0.4
PKME	Peaks-Kenny Pk	41.45	14	P	P	03 56 49.7	+2.1
	baz=200						
F36A	Milaca	41.48	348	P	P	03 56 46.3	-1.6
	baz=164,SNR=19						
SUSD	Miller	41.51	342	IAmb	IAmb	03 56 48.5	
	comp=Z,55nm,1.1s						
SUSD	Miller	41.51	342	P	P	03 56 47.2	-1.0
	baz=155,SNR=5.7						
SUSD	Miller	41.51	342	P	P	03 56 47.6	-0.6
	baz=155,SNR=5.7						
BC3	Big Chuckawall	41.52	317	P	P	03 56 50.4	+1.8
	baz=126,SNR=12						
IRM	Iron Mountain	41.60	318	P	P	03 56 50.9	+1.7
	baz=126,SNR=14						
NEE2	Needles Airpor	41.62	319	P	P	03 56 51.1	+1.9
	baz=127						
O20A	White River Ci	41.62	330	P	P	03 56 51.5	+2.1
	baz=140,SNR=12						
MECA	Mercedes	41.68	147	*e*P	P	03 56 50.1	+0.4
MONP2	Monument Peak	41.76	315	P	P	03 56 51.3	+0.6
	baz=124						
D41A	Chassel	41.89	354	IAmb	IAmb	03 56 51.8	
	comp=Z,43nm,1.2s						
D41A	Chassel	41.89	354	P	P	03 56 50.9	-0.3
	baz=171,SNR=6.5						
PKCU	Pink Cliffs	41.90	324	IAmb	IAmb	03 56 55.7	
	comp=Z,71nm,1.1s						
AZCA	Azaras, Argent	41.99	144	*e*P	P	03 56 51.9	-0.4
SRU	San Rafael Swe	42.05	327	IAmb	IAmb	03 56 55.8	
	comp=Z,63nm,1.2s						
F33A	5 Mile Ranch,	42.07	346	IAmb	IAmb	03 56 52.5	
	comp=Z,74nm,1.5s						
F33A	5 Mile Ranch,	42.07	346	P	P	03 56 51.6	-1.1
	baz=159,SNR=20						
BELC	Belle Mtn. Jos	42.09	317	P	P	03 56 55.1	+1.9
	baz=125,SNR=11						
PTGB	Pitanga	42.14	136	*e*P	P	03 56 52.6	-1.1
TPFO	Pinon Flats	42.17	316	P	P	03 56 55.4	+1.4
	baz=124,SNR=10						
PFO	Pinyon Flats O	42.18	316	P	P	03 56 54.6	+0.6
	comp=Z,18nm,1.1s,baz=103,slow=6.9,SNR=9.2						
	comp=Z,18nm,1.1s						
PFO	Pinyon Flats O	42.18	316	P	P	03 56 53.7	-0.3
PFO	Pinyon Flats O	42.18	316	P	P	03 56 55.5	+1.5
	baz=124,SNR=9.0						
ML02	Panimavida	42.20	166	IAmb	IAmb	03 56 57.0	
	comp=Z,88nm,1.3s						
109C	Camp Elliot, M	42.23	315	IAmb	IAmb	03 56 57.3	
	comp=Z,56nm,1.1s						
109C	Camp Elliot, M	42.23	315	P	P	03 56 55.9	+1.7
	baz=123						
FRBT	Francisco Belt	42.31	139	*e*P	P	03 56 53.7	-1.3
GMRC	Granite Mounta	42.32	318	P	P	03 56 56.8	+1.8
	baz=126,SNR=11						
RWWY	Rawlins	42.33	332	IAmb	IAmb	03 56 57.3	
	comp=Z,67nm,1.1s						
V12A	Nelson	42.36	320	IAmb	IAmb	03 56 58.6	
	comp=Z,41nm,1.0s						
BB19B	Bebedouro	42.51	129	*e*P	P	03 56 56.1	-0.6
MVU	Marysvale	42.56	325	IAmb	IAmb	03 57 00.5	
	comp=Z,86nm,1.1s						
RDMU	Red Mountain	42.62	329	IAmb	IAmb	03 57 00.2	
	comp=Z,48nm,1.2s						
MURC	Murrieta	42.69	316	P	P	03 56 59.6	+1.6
	baz=124,SNR=7.5						
CRSM	Crissiumal (Br	42.74	141	*e*P	P	03 56 57.2	-1.2
K22A	Casper	42.79	334	IAmb	IAmb	03 57 01.6	
	comp=Z,50nm,1.2s						
K22A	Casper	42.79	334	P	P	03 57 00.1	+1.2
	baz=144,SNR=21						
K22A	Casper	42.79	334	P	P	03 57 00.7	+1.9
	baz=144,SNR=21						
HEC	Hector,Ludlow	42.79	318	P	P	03 57 00.8	+1.9
	baz=126						
ITQB	Itaqui	42.82	146	P	P	03 56 58.9	0.0
ITQB	Itaqui	42.82	146	*e*P	P	03 56 59.0	0.0
PMNB	Patos De Minas	42.83	125	*e*P	P	03 56 58.6	-0.8
BBRC	Big Bear Solar	42.87	317	P	P	03 57 02.0	+2.3
	baz=124						
TUQ	Turquoise Moun	42.88	319	P	P	03 57 01.6	+1.9
	baz=127						
RSSD	Black Hills	42.98	337	P	P	03 57 00.9	+0.5
RSSD				IAmb	IAmb	03 57 03.3	
	comp=Z,105nm,1.5s						
RSSD	Black Hills	42.98	337	P	P	03 57 02.1	+1.7
	baz=148						
RSSD	Black Hills	42.98	337	P	P	03 57 02.6	+2.2
	baz=148,SNR=37						
JANB	Januaria	43.03	119	*e*P	P	03 57 00.3	-0.7
EYMN	Ely	43.14	351	P	P	03 56 59.8	-1.6
	baz=167,SNR=7.2						
EYMN	Ely	43.14	351	P	P	03 57 00.4	-1.0
	baz=167,SNR=7.2						
BSUT	Blindstream Ca	43.21	328	IAmb	IAmb	03 57 05.6	
	comp=Z,57nm,1.4s						
RRX	Edison Barstow	43.27	317	P	P	03 57 04.4	+1.8
	baz=125						
BFSC	Mount Baldy Ra	43.36	316	P	P	03 57 05.3	+1.7
	baz=124						
GSC	Goldstone, Bar	43.38	318	IAmb	IAmb	03 57 07.0	
	comp=Z,40nm,1.2s						
GSC	Goldstone, Bar	43.38	318	P	P	03 57 05.4	+1.7
	baz=126,SNR=9.2						
SHOC	Shoshone, Teco	43.38	319	P	P	03 57 05.3	+1.7
	baz=127,SNR=10						
CIS	Catalina Islan	43.44	315	P	P	03 57 05.7	+1.6
	baz=122						
JLU	Jordanelle	43.62	328	IAmb	IAmb	03 57 08.6	
	comp=Z,51nm,1.6s						
PASC	Pasadena Art C	43.69	316	IAmb	IAmb	03 57 09.2	
	comp=Z,53nm,1.3s						
ITAB	Concordia	43.78	139	P	P	03 57 06.1	-0.7
ITAB				IAmb	IAmb	03 57 06.9	
	comp=Z,38nm,0.8s						
ITAB	Concordia	43.78	139	*e*P	P	03 57 05.9	-0.9
QSM	Queen of Sheba	43.81	319	IAmb	IAmb	03 57 10.0	
	comp=Z,32nm,1.1s						
DECC	Green Verdugo	43.83	316	P	P	03 57 08.8	+1.5
	baz=123						
CTU	Camp Tracy	43.84	328	IAmb	IAmb	03 57 10.2	
	comp=Z,33nm,1.2s						
EDW2	Edwards Air Fo	43.94	317	P	P	03 57 09.3	+1.2
	baz=124,SNR=9.9						
E28A	Huff	43.96	342	P	P	03 57 08.5	+0.4
	baz=154,SNR=8.1						
TPNV	Topopah Spring	44.00	320	P	P	03 57 10.5	+1.8
	baz=128,SNR=14						
RCLB	Rio Claro- Sao	44.03	130	*e*P	P	03 57 08.4	-0.6
DUG	Dugway, Tooele	44.07	326	P	P	03 57 10.9	+1.7
	baz=134,SNR=10						
LRMC	Laurel Mtn Rad	44.07	318	P	P	03 57 10.9	+1.7
	baz=125,SNR=16						
FURC	Furnace Creek,	44.10	319	P	P	03 57 11.2	+1.9
	baz=126,SNR=13						
S11A	Rachel	44.11	321	IAmb	IAmb	03 57 13.3	
	comp=Z,36nm,1.1s						
CCAC	Calif City Air	44.11	317	IAmb	IAmb	03 57 12.7	
	comp=Z,64nm,1.1s						
RODS	Rosario do Sul	44.14	145	*e*P	P	03 57 09.3	-0.4
BW06	Boulder Array	44.27	331	P	P	03 57 11.8	+0.9
	baz=140,SNR=21						
PDAR	Pinedale Array	44.27	331	P	P	03 57 10.9	0.0
	comp=Z,8.0nm,0.9s,baz=134,slow=10,SNR=54						
PDAR				PcP	PcP	03 58 55.4	+0.2
	comp=Z,1.7nm,1.0s,baz=131,slow=4.2,SNR=3.0						
	comp=Z,8.0nm,0.9s						
MPMC	Manual Prospec	44.27	318	P	P	03 57 12.4	+1.5
	baz=125,SNR=9.6						
AGMN	Agassiz Nation	44.28	347	P	P	03 57 09.6	-1.0
	baz=161,SNR=12						
AGMN	Agassiz Nation	44.28	347	P	P	03 57 10.1	-0.5
	baz=161,SNR=12						
ALGR	Alto Alegre (B	44.30	142	*e*P	P	03 57 09.7	-1.4
HWUT	Hardware Ranch	44.40	329	IAmb	IAmb	03 57 14.3	
	comp=Z,48nm,1.1s						
Q12A	Willow Creek R	44.44	324	IAmb	IAmb	03 57 15.3	
	comp=Z,26nm,1.1s						
R11B	Troy Canyon, C	44.45	322	P	P	03 57 14.4	+2.0
	baz=129,SNR=23						
SPUT	South Promonto	44.65	328	IAmb	IAmb	03 57 16.6	
	comp=Z,56nm,1.3s						
ARVC	Arvin	44.65	316	P	P	03 57 15.6	+1.8
	baz=123,SNR=6.6						
BGU	Big Grassy Mou	44.69	327	IAmb	IAmb	03 57 16.9	
	comp=Z,41nm,1.2s						
ISA	Isabella, Lake	44.71	317	IAmb	IAmb	03 57 17.4	
	comp=Z,39nm,1.4s						
ISA	Isabella, Lake	44.71	317	P	P	03 57 16.1	+1.8
	baz=124						
GRAC	Grapevine Rang	44.74	320	IAmb	IAmb	03 57 18.0	
	comp=Z,56nm,1.1s						
GRAC	Grapevine Rang	44.74	320	P	P	03 57 16.4	+1.9
	baz=126,SNR=13						
VAO	Valinhos	44.79	130	*e*P	P	03 57 14.5	-0.6
MDND	Maddock	44.80	344	P	P	03 57 14.6	-0.1
	baz=156						
CWC	Cottonwood Cre	44.88	318	P	P	03 57 16.7	+0.9
	baz=125						
SBC	Santa Barbara	44.90	315	P	P	03 57 17.5	+1.8
	baz=122						
DIAM	Diamantina, MG	45.01	122	*e*P	P	03 57 16.2	-0.8
AHID	Auburn Hatcher	45.01	330	IAmb	IAmb	03 57 19.0	
	comp=Z,44nm,1.5s						
LCH	Last Change Ra	45.06	320	IAmb	IAmb	03 58 21.3	
	comp=Z,16nm,0.7s						
HVU	Hansel Valley	45.16	328	IAmb	IAmb	03 57 20.4	
	comp=Z,50nm,1.7s						
CPSB	Cacapava Do Su	45.20	144	*e*P	P	03 57 17.7	-0.4
PKM	Mcpherson Peak	45.20	316	P	P	03 57 19.9	+1.5
	baz=122,SNR=6.6						
VES	Vestal, Richgr	45.22	317	P	P	03 57 20.2	+1.9
	baz=124,SNR=15						
PET01	Itanhaem-SP	45.30	132	*e*P	P	03 57 17.6	-1.4
DSP	Deep Springs	45.35	320	IAmb	IAmb	03 57 22.6	
	comp=Z,31nm,1.3s						
TPAW	Teton Pass	45.48	331	IAmb	IAmb	03 57 27.3	
	comp=Z,47nm,1.1s						
SMMC	Simmler	45.56	316	P	P	03 57 23.1	+2.1
	baz=122,SNR=6.5						
Q09A	Carvers	45.73	322	IAmb	IAmb	03 57 25.5	
	comp=Z,25nm,0.9s						
FLWY	Flagg Ranch	45.81	332	IAmb	IAmb	03 57 25.8	
	comp=Z,49nm,1.2s						
GO06	Curarrehue	45.86	168	IAmb	IAmb	03 57 26.4	
	comp=Z,20nm,1.1s						
RLMT	Red Lodge	45.96	334	IAmb	IAmb	03 57 26.4	
	comp=Z,31nm,1.1s						
RLMT	Red Lodge	45.96	334	P	P	03 57 24.4	+0.2
	baz=142,SNR=23						
LAO	LASA Array	45.97	337	P	P	03 57 24.8	+0.7
	baz=146,SNR=26						
LAO	LASA Array	45.97	337	P	P	03 57 25.2	+1.1
	baz=146,SNR=26						
H17A	Grant Village	45.99	332	P	P	03 57 26.6	+2.1
	baz=140,SNR=9.3						
PARB	Paraibuna	46.00	130	*e*P	P	03 57 24.4	-0.3
YMP	Mirror Lake Pl	46.06	333	IAmb	IAmb	03 57 58.1	
	comp=Z,28nm,1.4s						
MLAC	Mammoth, Mammo	46.06	319	P	P	03 57 26.8	+1.6
	baz=125						
NV11	Mina Array Sit	46.09	321	IAmb	IAmb	03 57 28.5	
	comp=Z,35nm,1.1s						
PLTB	Pedras Altas	46.10	145	P	P	03 57 24.8	-0.5
PLTB				IAmb	IAmb	03 57 28.1	
	comp=Z,42nm,1.1s						
PLTB	Pedras Altas	46.10	145	*e*P	P	03 57 24.9	-0.4
ULM	Lac du Bonnet	46.14	348	P	P	03 57 23.9	-1.3
	comp=Z,11nm,0.7s,baz=159,slow=7.9,SNR=17						
	comp=Z,11nm,0.7s						
ULM	Lac du Bonnet	46.14	348	IAmb	IAmb	03 57 25.1	
	comp=Z,25nm,1.1s						
OMMB	Old Mammoth Mi	46.16	319	IAmb	IAmb	03 57 29.0	
	comp=Z,47nm,1.2s						
NVAR	Mina Array Bea	46.19	321	P	P	03 57 27.3	+1.1
	comp=Z,23nm,0.9s,baz=132,slow=7.4,SNR=117						
NVAR				PcP	PcP	03 59 02.0	+0.1
	comp=Z,1.3nm,0.8s,baz=118,slow=5.2,SNR=2.0						
	comp=Z,23nm,0.9s						
KVN	Kaiserville	46.43	321	IAmb	IAmb	03 57 30.6	
	comp=Z,17nm,1.0s						
DGMT	Dagmar	46.76	340	P	P	03 57 31.2	+1.0
	baz=150,SNR=18						
DGMT	Dagmar	46.76	340	P	P	03 57 31.8	+1.5
	baz=150,SNR=18						
WAKR	Walker	46.95	320	IAmb	IAmb	03 57 35.2	
	comp=Z,25nm,0.9s						
LL04	Puerto Octay	46.96	169	IAmb	IAmb	03 57 34.5	
	comp=Z,29nm,1.1s						
YERR	Yerington	47.11	321	IAmb	IAmb	03 57 36.0	
	comp=Z,18nm,0.8s						
PLCA	Paso Flores	47.16	167	P	P	03 57 33.2	-0.3
	comp=Z,21nm,1.1s,baz=336,slow=8.5,SNR=30						
	comp=Z,21nm,1.1s						
PLCA	Paso Flores	47.16	167	*e*P	P	03 57 33.7	+0.2
TRQA	Tornquist	47.24	158	P	P	03 57 33.4	-0.7
HLID	Hailey	47.27	329	IAmb	IAmb	03 57 37.0	
	comp=Z,43nm,1.9s						
HLID	Hailey	47.27	329	P	P	03 57 35.6	+1.1
	baz=134,SNR=11						
BOZ	Bozeman (W)	47.38	332	P	P	03 57 36.5	+1.2
	baz=139,SNR=52						
PAHR	Pah Rah Range	47.62	321	IAmb	IAmb	03 57 40.2	
	comp=Z,56nm,1.9s						
DLMT	Dillon	47.66	332	IAmb	IAmb	03 57 41.7	
	comp=Z,23nm,1.2s						
MFID	Camas Ranch	47.91	327	IAmb	IAmb	03 57 42.1	
	comp=Z,30nm,1.3s						
EGMT	Eagleton	48.45	336	P	P	03 57 44.5	+1.0
	baz=143,SNR=17						
ORV	Oroville	48.87	320	IAmb	IAmb	03 57 49.8	
	comp=Z,33nm,1.1s						
LL02	Futaleuf	49.27	170	IAmb	IAmb	03 57 52.8	
	comp=Z,28nm,1.1s						
MSO	Missoula	49.38	332	IAmb	IAmb	03 57 52.7	
	comp=Z,30nm,1.2s						
MSO	Missoula	49.38	332	P	P	03 57 51.1	+0.5
	baz=137,SNR=14						
G08A	Pilot Rock	50.84	327	IAmb	IAmb	03 58 04.1	
	comp=Z,44nm,1.6s						
SCHQ	Schefferville	50.98	12	P	P	03 58 02.2	-0.3
	comp=Z,17nm,1.0s,baz=180,slow=5.6,SNR=9.8						
	comp=Z,17nm,1.0s						
COYC	Coyhaique	51.54	171	IAmb	IAmb	03 58 10.0	
	comp=Z,28nm,1.2s						
FFC	Flin Flon	51.68	346	P	P	03 58 07.4	-0.3
G06A	Carlson Farm,	51.72	326	IAmb	IAmb	03 58 11.3	
	comp=Z,55nm,1.4s						
NEW	Newport	51.91	331	P	P	03 58 10.0	+0.3
	baz=134						
HOOD	Mount Hood Mea	52.33	326	IAmb	IAmb	03 58 15.9	
	comp=Z,46nm,1.1s						
FCC	Fort Churchill	54.03	353	IAmb	IAmb	03 58 25.8	
	comp=Z,28nm,1.3s						
YKA	Yellowknife Ar	61.72	344	P	P	03 59 19.2	+0.3
	comp=Z,18nm,1.0s,baz=137,slow=7.1,SNR=156						
	comp=Z,18nm,1.0s						
KOTAN	Kotaneelee Air	63.03	338	P	P	03 59 28.6	+0.8
	baz=132,SNR=13						
LIRD	Liard River Hi	63.33	337	P	P	03 59 30.0	+0.2
	baz=130,SNR=9.0						
T35M	Bob Quinn	63.60	333	P	P	03 59 33.7	+2.0
	baz=125,SNR=6.1						
CRAG	Craig	64.12	331	P	P	03 59 36.1	+1.0
	baz=121						
WRAK	Wrangell Islan	64.25	332	P	P	03 59 36.7	+0.8
	baz=122						
DLBC	Dease Lake	64.35	335	P	P	03 59 37.3	+0.7
DLBC	Dease Lake	64.35	335	P	P	03 59 37.8	+1.2
	baz=126,SNR=11						
U33K	Whale Pass	64.46	331	P	P	03 59 38.4	+1.2
	baz=122						
S34M	Telegraph Cree	64.53	334	P	P	03 59 39.1	+1.4
	baz=124,SNR=6.9						
WTLY	Watson Lake, Y	64.84	336	IAmb	IAmb	03 59 42.0	
	comp=Z,27nm,1.2s						
WTLY	Watson Lake, Y	64.84	336	P	P	03 59 40.7	+0.9
	baz=128,SNR=12						
WRGLY	Wrigley	64.95	341	P	P	03 59 41.0	+0.7
	baz=134,SNR=9.1						
Q32M	Nakina River	65.61	334	P	P	03 59 45.4	+0.4
	baz=124						
S32K	Killisnoo	65.85	332	P	P	03 59 47.6	+1.4
	baz=121						
DY2G	Dye2	66.02	15	*e*P	P	03 59 44.5	-3.0
JIS	Juneau Island	66.18	333	IAmb	IAmb	03 59 51.0	
	comp=Z,22nm,1.1s						
R32K	Eaglecrest	66.24	333	P	P	03 59 50.1	+1.3
	baz=121						
P33M	Teslin, Yukon	66.53	335	IAmb	IAmb	03 59 53.2	
	comp=Z,28nm,1.4s						
P33M	Teslin, Yukon	66.53	335	P	P	03 59 52.0	+1.2
	baz=124,SNR=7.4						
BESE	Bessie Mountai	66.55	333	P	P	03 59 50.8	-0.1
P32M	Atlin	66.58	334	P	P	03 59 51.9	+0.9
	baz=122						
S31K	Pelican	66.86	332	P	P	03 59 54.4	+1.7
	baz=119						
N32M	Quiet Lake	67.17	336	P	P	03 59 55.6	+0.9
	baz=124						
SKAG	Skagway	67.21	334	P	P	03 59 56.3	+1.4
	baz=121						
MMPY	Sheldon Lake,	67.30	338	P	P	03 59 56.7	+1.2
	baz=126,SNR=7.6						
ISOG	Isortoq, Green	67.43	18	*i* P	P	03 59 54.5	-1.7
FARO	Faro, Yukon	67.87	337	P	P	03 59 60.0	+0.8
	baz=124,SNR=5.2						
ANGG	Ammassalik, Gr	67.89	18	*i* P	P	03 59 59.5	+0.4
O30N	Mendenhall	68.21	335	P	P	04 00 02.3	+1.0
	baz=120,SNR=6.4						
P30M	Million Dollar	68.25	334	P	P	04 00 03.3	+1.7
	baz=119						
M31M	Drury Creek, Y	68.26	337	P	P	04 00 02.8	+1.2
	baz=123,SNR=5.1						
N31M	Braeburn, Yuko	68.44	336	IAmb	IAmb	04 00 05.2	
	comp=Z,29nm,1.2s						
N31M	Braeburn, Yuko	68.44	336	P	P	04 00 04.0	+1.3
	baz=121,SNR=5.2						
HYT	Haines Junctio	68.83	335	P	P	04 00 05.3	0.0
HYT				IAmb	IAmb	04 00 08.4	
	comp=Z,34nm,1.4s						
HYT	Haines Junctio	68.83	335	P	P	04 00 06.3	+1.0
	baz=119,SNR=5.3						
N30M	Aishikik Lake	68.97	335	P	P	04 00 07.5	+1.4
	baz=120,SNR=6.3						
O29M	Mount Kennedy	69.05	334	P	P	04 00 07.9	+1.2
	baz=118						
PNL	Peninsula	69.12	333	P	P	04 00 08.6	+1.6
	baz=117						
YUK6	Outpost Mounta	69.26	334	P	P	04 00 09.5	+1.4
	baz=118						
M30M	Minto, Yukon	69.41	336	IAmb	IAmb	04 00 11.2	
	comp=Z,29nm,1.2s						
M30M	Minto, Yukon	69.41	336	P	P	04 00 10.4	+1.6
	baz=120,SNR=14						
C36M	Paulatuk	69.45	345	P	P	04 00 08.4	-0.4
	baz=135						
YUK4	Talbot Arm	69.57	335	P	P	04 00 11.2	+1.2
	baz=118,SNR=7.4						
ICESG	Greenland Ices	69.66	15	*e*P	P	04 00 09.1	-1.4
PINM	Pinnacle	69.70	333	P	P	04 00 12.2	+1.6
	baz=116						
PPT	Papeete	69.87	249	P	P	04 00 13.1	+0.7
	comp=Z,25nm,0.6s,baz=86,slow=22,SNR=2.1						
	comp=Z,25nm,0.6s						
O28M	Mount Upton	69.97	334	P	P	04 00 13.8	+1.2
	baz=116						
M29M	Somme Creek	70.02	336	P	P	04 00 14.1	+1.5
	baz=119						
YUK8	Steele Glacier	70.02	334	P	P	04 00 14.0	+1.1
	baz=117						
L29M	L29M	70.21	337	P	P	04 00 15.0	+1.3
	baz=119						
K29M	Barlow Dome	70.34	337	P	P	04 00 15.7	+1.1
	baz=120						
YUK3	Moose Creek	70.54	335	P	P	04 00 17.2	+1.3
	baz=117,SNR=8.2						
BARN	Barnard Glacie	70.75	334	IAmb	IAmb	04 00 20.1	
	comp=Z,41nm,1.3s						
F31M	Tsiigehtchic	70.96	341	P	P	04 00 19.4	+1.4
	baz=125,SNR=14						
BVCY	Beaver Creek	71.00	335	P	P	04 00 19.5	+1.1
	baz=116,SNR=5.7						
DAWY	Dawson	71.17	337	IAmb	IAmb	04 00 21.5	
	comp=Z,17nm,1.2s						
DAWY	Dawson	71.17	337	P	P	04 00 20.4	+0.9
	baz=118,SNR=12						
EPYK	Eagle Plains	71.35	340	IAmb	IAmb	04 01 22.8	
	comp=Z,42nm,1.6s						
EPYK	Eagle Plains	71.35	340	P	P	04 00 21.7	+1.1
	baz=122,SNR=5.2						
INK	Inuvik	71.39	342	IAmb	IAmb	04 00 23.2	
	comp=Z,34nm,1.3s						
INK	Inuvik	71.39	342	P	P	04 00 22.1	+1.4
	baz=125,SNR=20						
I29M	Ogilvie Camp,	71.39	339	P	P	04 00 21.5	+0.7
	baz=120,SNR=18						
M27K	Edge Creek, AK	71.40	335	IAmb	IAmb	04 00 23.9	
	comp=Z,26nm,1.3s						
M27K	Edge Creek, AK	71.40	335	P	P	04 00 22.1	+1.0
	baz=115,SNR=6.4						
MCARA	McCarthy VSAT	71.48	334	IAmb	IAmb	04 00 24.4	
	comp=Z,33nm,1.0s						
MCARA	McCarthy VSAT	71.48	334	P	P	04 00 22.8	+1.4
	baz=114,SNR=7.9						
G30M	tAoh Zraii Nji	71.51	341	P	P	04 00 22.4	+0.9
	baz=122						
A36M	Sachs Harbour	71.60	347	P	P	04 00 21.9	0.0
	baz=135,SNR=43						
VRDI	Verde Repeater	71.61	334	IAmb	IAmb	04 00 24.9	
	comp=Z,35nm,1.3s						
L27K	Beaver Creek,	71.68	336	IAmb	IAmb	04 00 25.4	
	comp=Z,34nm,1.1s						
L27K	Beaver Creek,	71.68	336	P	P	04 00 24.1	+1.5
	baz=116						
GLB	Gilahina Butte	71.85	334	IAmb	IAmb	04 00 27.0	
	comp=Z,26nm,1.2s						
M26K	Nabesna, AK	71.89	335	P	P	04 00 24.9	+1.0
	baz=114,SNR=5.8						
EGAK	Eagle	72.18	337	IAmb	IAmb	04 00 27.7	
	comp=Z,17nm,1.1s						
EGAK	Eagle	72.18	337	P	P	04 00 26.9	+1.4
	baz=117,SNR=11						
K27K	Chicken	72.20	337	P	P	04 00 27.0	+1.3
	baz=116						
N25K	Chitina, Valde	72.26	334	IAmb	IAmb	04 00 29.0	
	comp=Z,47nm,1.4s						
N25K	Chitina, Valde	72.26	334	P	P	04 00 27.3	+1.1
	baz=113,SNR=7.4						
L26K	Log Cabin Wild	72.30	335	IAmb	IAmb	04 00 28.9	
	comp=Z,17nm,1.1s						
L26K	Log Cabin Wild	72.30	335	P	P	04 00 27.4	+1.2
	baz=114,SNR=11						
SUMG	Summit	72.35	13	*i* P	P	04 00 24.4	-2.5
SUMG				IAmb	IAmb	04 00 29.8	
	comp=Z,45nm,1.2s						
EYAK	Cordova Ski Ar	72.39	332	P	P	04 00 27.8	+1.0
	baz=111						
I27K	Kandik River	72.73	338	P	P	04 00 30.1	+1.3
	baz=117						
KLU	Klutina	72.81	333	IAmb	IAmb	04 00 31.2	
	comp=Z,35nm,1.3s						
KLU	Klutina	72.81	333	P	P	04 00 30.4	+0.9
	baz=111,SNR=5.5						
HARP	HAARP	72.81	334	P	P	04 00 30.4	+1.0
	baz=112						
DOT	Dot Lake	72.84	336	IAmb	IAmb	04 00 31.9	
	comp=Z,30nm,1.2s						
SCRK	Sand Creek	72.95	336	IAmb	IAmb	04 00 32.8	
	comp=Z,19nm,1.2s						
SCRK	Sand Creek	72.95	336	P	P	04 00 31.7	+1.4
	baz=114,SNR=9.7						
H27K	Steamboat Moun	72.98	339	P	P	04 00 31.1	+0.8
	baz=117,SNR=16						
M24K	Tolsona, Glenn	73.15	334	P	P	04 00 32.1	+0.7
	baz=111						
PAX	Paxson	73.16	335	IAmb	IAmb	04 00 33.5	
	comp=Z,21nm,1.3s						
PAX	Paxson	73.16	335	P	P	04 00 31.8	+0.3
	baz=112,SNR=8.3						
I26K	Coal Creek Min	73.17	338	IAmb	IAmb	04 00 34.4	
	comp=Z,37nm,1.4s						
I26K	Coal Creek Min	73.17	338	P	P	04 00 32.4	+1.0
	baz=115						
RIDG	Independent Ri	73.20	336	IAmb	IAmb	04 00 34.1	
	comp=Z,26nm,1.1s						
RIDG	Independent Ri	73.20	336	P	P	04 00 32.8	+1.1
	baz=113,SNR=10						
G27K	Doyon Strip	73.29	339	P	P	04 00 32.8	+0.7
	baz=117,SNR=12						
SCM	Sheep Creek Mo	73.56	333	IAmb	IAmb	04 00 35.9	
	comp=Z,34nm,1.1s						
SCM	Sheep Creek Mo	73.56	333	P	P	04 00 34.6	+0.7
	baz=110,SNR=6.4						
K24K	Donnelly Dome	73.61	336	P	P	04 00 34.7	+0.7
	baz=112,SNR=8.9						
PWL	Port Wells	73.69	332	P	P	04 00 35.2	+0.6
	baz=109						
M23K	Glacier View	73.72	333	P	P	04 00 35.2	+0.4
	baz=110,SNR=10						
E27K	Coleen River	73.90	341	P	P	04 00 36.3	+0.6

	baz=117,SNR=14						
KNK	**Knik Glacier**	**73.92**	**333**	P	**P**	**04 00 36.8**	**+0.9**
	baz=109,SNR=10						
SML	**Sawmill**	**74.00**	**333**	IAmb	IAmb	04 00 39.0	
	comp=Z,35nm,1.0s						
SML	**Sawmill**	**74.00**	**333**	P	**P**	**04 00 36.9**	**+0.5**
	baz=109,SNR=10						
NEEM	**North Greenlan**	**74.00**	**7**	*i* P	**P**	**04 00 35.5**	**-1.0**
NEEM				IAmb	IAmb	04 00 37.2	
	comp=Z,43nm,1.2s						
PTEO	**Sao Teotonio**	**74.01**	**53**	*e*P	**P**	**04 00 37.0**	**+0.1**
MORF	**Marmelete**	**74.04**	**53**	IAmb	IAmb	04 00 41.1	
	comp=Z,28nm,1.0s						
MORF	**Marmelete**	**74.04**	**53**	*e*P	**P**	**04 00 38.3**	**+1.2**
MORF				A	A	04 00 41.8	
	comp=Z,49nm,1.7s						
MORF	**Marmelete**	**74.04**	**53**	*e*P	**P**	**04 00 38.8**	**+1.7**
MORF				IAmb	IAmb	04 00 41.4	
	comp=Z,42nm,1.2s						
G26K	**Porcupine Rive**	**74.11**	**339**	P	**P**	**04 00 37.2**	**+0.4**
	baz=115						
PRP	**Porcupine Dome**	**74.17**	**337**	IAmb	IAmb	04 00 39.6	
	comp=Z,32nm,1.4s						
PRP	**Porcupine Dome**	**74.17**	**337**	P	**P**	**04 00 37.8**	**+0.4**
	baz=113,SNR=13						
PNCL	**Nicolau / Gran**	**74.22**	**52**	*e*P	**P**	**04 00 39.4**	**+1.3**
PNCL				A	A	04 00 46.4	
	comp=Z,42nm,1.7s						
O22K	**Cooper Landing**	**74.22**	**332**	P	**P**	**04 00 38.1**	**+0.5**
	baz=108						
GHO	**Glory Hole Cre**	**74.25**	**333**	IAmb	IAmb	04 00 39.8	
	comp=Z,37nm,1.1s						
PMR	**Palmer**	**74.29**	**333**	P	**P**	**04 00 38.7**	**+0.7**
	baz=108						
HDA	**Harding Lake**	**74.31**	**336**	IAmb	IAmb	04 00 39.9	
	comp=Z,34nm,1.1s						
HDA	**Harding Lake**	**74.31**	**336**	P	**P**	**04 00 38.6**	**+0.5**
	baz=111,SNR=20						
RC01	**Rabbit Creek A**	**74.41**	**332**	IAmb	IAmb	04 00 40.7	
	comp=Z,34nm,1.3s						
RC01	**Rabbit Creek A**	**74.41**	**332**	P	**P**	**04 00 39.1**	**+0.3**
	baz=108						
IL31		**74.42**	**336**	IAmb	IAmb	04 00 40.5	
	comp=Z,27nm,1.3s						
ILAR	**Eielson Array**	**74.42**	**336**	P	**P**	**04 00 39.0**	**+0.3**
	comp=Z,8.8nm,1.0s,baz=119,slow=3.8,SNR=51						
ILAR				PP	**PP**	**04 03 24.9**	**-0.1**
	comp=Z,1.2nm,1.1s,baz=114,slow=4.8,SNR=4.2						
	comp=Z,8.8nm,1.0s						
MESJ	**Messejana**	**74.43**	**52**	*e*P	**P**	**04 00 40.5**	**+1.1**
MESJ				A	A	04 00 42.0	
	comp=Z,23nm,1.2s						
MESJ	**Messejana**	**74.43**	**52**	*e*P	**P**	**04 00 41.0**	**+1.6**
MESJ				IAmb	IAmb	04 00 42.1	
	comp=Z,21nm,1.4s						
PCAS	**Casmilo, Conde**	**74.44**	**50**	*e*P	**P**	**04 00 40.6**	**+1.2**
PCAS				A	A	04 00 42.7	
	comp=Z,48nm,1.9s						
BRSE	**Bradley Lake S**	**74.49**	**331**	P	**P**	**04 00 40.0**	**+0.7**
	baz=106						
COI	**Coimbra**	**74.52**	**50**	*e*P	**P**	**04 00 41.3**	**+1.5**
COI				A	A	04 00 44.1	
	comp=Z,68nm,1.4s						
F26K	**Sheenjek River**	**74.55**	**340**	P	**P**	**04 00 40.1**	**+0.7**
	baz=115						
PMTG	**Montargil**	**74.55**	**51**	*e*P	**P**	**04 00 40.9**	**+0.9**
PMTG				A	A	04 00 47.9	
	comp=Z,30nm,2.3s						
PCVE	**Castro Verde**	**74.56**	**53**	*e*P	**P**	**04 00 41.5**	**+1.4**
BMAR	**Burnt Mountain**	**74.59**	**339**	P	**P**	**04 00 40.5**	**+0.8**
PBDV	**Barranco-do-Ve**	**74.61**	**53**	*e*P	**P**	**04 00 41.8**	**+1.4**
FIS	**Fire Island**	**74.65**	**332**	P	**P**	**04 00 39.3**	**-0.8**
EUNU	**Eureka**	**74.72**	**359**	P	**P**	**04 00 39.9**	**-0.4**
RND	**Reindeer**	**74.75**	**335**	P	**P**	**04 00 40.3**	**-0.5**
RND				IAmb	IAmb	04 00 43.1	
	comp=Z,40nm,1.1s						
POKR	**Poker Plat Res**	**74.76**	**337**	P	**P**	**04 00 40.9**	**+0.2**
POKR	**Poker Plat Res**	**74.76**	**337**	P	**P**	**04 00 41.4**	**+0.7**
	baz=111						
PVAQ	**Vaqueiros**	**74.79**	**53**	*e*P	**P**	**04 00 41.8**	**+0.4**
WRH	**Wood River Hil**	**74.80**	**336**	P	**P**	**04 00 40.8**	**-0.1**
COLA	**College**	**74.84**	**336**	P	**P**	**04 00 41.7**	**+0.5**
	baz=110						
TCOL	**CIGO, UAF Yank**	**74.84**	**336**	P	**P**	**04 00 41.4**	**+0.3**
	baz=110						
G25K	**Bearman Lake**	**74.87**	**338**	P	**P**	**04 00 43.1**	**+1.9**
	baz=113						
MCK	**McKinley**	**74.89**	**335**	P	**P**	**04 00 41.7**	**+0.1**
MCK				IAmb	IAmb	04 00 44.6	
	comp=Z,26nm,1.1s						
MCK	**McKinley**	**74.89**	**335**	P	**P**	**04 00 42.5**	**+1.0**
	baz=109,SNR=12						
PVIS	**Viseu**	**74.97**	**49**	*e*P	**P**	**04 00 42.9**	**+0.4**
SUA	**Susitna One**	**74.99**	**333**	P	**P**	**04 00 42.0**	**-0.3**
SUA				IAmb	IAmb	04 00 44.2	
	comp=Z,16nm,1.0s						
SUA	**Susitna One**	**74.99**	**333**	P	**P**	**04 00 43.2**	**+1.0**
	baz=107,SNR=7.3						
Q20K	**Shuyak Island**	**75.00**	**329**	P	**P**	**04 00 43.9**	**+1.7**
	baz=105						
MDM	**Murphy Dome**	**75.02**	**336**	P	**P**	**04 00 42.4**	**+0.2**
PESTR	**Estremoz**	**75.02**	**51**	P	**P**	**04 00 41.8**	**-1.0**
PESTR	**Estremoz**	**75.02**	**51**	*e*P	**P**	**04 00 42.8**	**0.0**
PESTR				A	A	04 00 46.8	
	comp=Z,40nm,1.3s						
F25K	**Christian Rive**	**75.03**	**339**	P	**P**	**04 00 43.4**	**+1.1**
	baz=113						
CUT	**Chulitna**	**75.05**	**334**	P	**P**	**04 00 43.2**	**+0.8**
CUT	**Chulitna**	**75.05**	**334**	P	**P**	**04 00 43.2**	**+0.8**
	baz=108,SNR=8.9						
POLO	**Lamas de Olo**	**75.11**	**49**	*e*P	**P**	**04 00 45.7**	**+2.3**
OHAK	**Old Harbor**	**75.13**	**328**	P	**P**	**04 00 44.7**	**+1.8**
	baz=104						
H24K	**Noodor Dome**	**75.19**	**337**	P	**P**	**04 00 43.0**	**-0.3**
H24K				IAmb	IAmb	04 00 45.6	
	comp=Z,42nm,1.3s						
H24K	**Noodor Dome**	**75.19**	**337**	P	**P**	**04 00 44.3**	**+1.1**
	baz=111						
PCBR	**Castelo Branco**	**75.20**	**50**	*e*P	**P**	**04 00 44.1**	**+0.4**
E25K	**Arctic Village**	**75.21**	**340**	P	**P**	**04 00 44.7**	**+1.4**
	baz=114,SNR=20						
PMRV	**Marv??o**	**75.23**	**51**	*e*P	**P**	**04 00 44.3**	**+0.3**
C27K	**Jago River**	**75.23**	**342**	P	**P**	**04 00 44.3**	**+1.0**
	baz=116						
NEA2	**Nenana**	**75.24**	**336**	P	**P**	**04 00 43.1**	**-0.4**
NEA2				IAmb	IAmb	04 00 45.2	
	comp=Z,20nm,1.2s						
NEA2	**Nenana**	**75.24**	**336**	P	**P**	**04 00 44.2**	**+0.8**
	baz=109,SNR=9.1						
BWN	**Browne**	**75.26**	**335**	P	**P**	**04 00 43.1**	**-0.5**
G24K	**Hadweenzic Riv**	**75.35**	**338**	P	**P**	**04 00 45.3**	**+1.2**
	baz=111						
TRF	**Thorofare Moun**	**75.38**	**335**	P	**P**	**04 00 43.8**	**-0.7**
TRF				IAmb	IAmb	04 00 46.3	
	comp=Z,29nm,1.2s						
TRF	**Thorofare Moun**	**75.38**	**335**	P	**P**	**04 00 44.5**	**0.0**
	baz=108,SNR=8.2						
PBAR	**Barrancos**	**75.39**	**52**	*e*P	**P**	**04 00 45.5**	**+0.6**
PBAR				A	A	04 00 49.2	
	comp=Z,27nm,1.1s						
SCO	**Scoresbysund**	**75.48**	**18**	*e*P	**P**	**04 00 42.0**	**-2.7**
O20K	**Slope Mountain**	**75.49**	**331**	P	**P**	**04 00 45.4**	**+0.3**
	baz=105						
SKT	**Skwentna**	**75.49**	**333**	P	**P**	**04 00 45.2**	**+0.2**
SKT	**Skwentna**	**75.49**	**333**	P	**P**	**04 00 45.3**	**+0.2**
	baz=106,SNR=15						
SPU	**Mount Spurr**	**75.51**	**332**	P	**P**	**04 00 45.6**	**+0.4**
I23K	**Minto, Yukon-K**	**75.54**	**336**	P	**P**	**04 00 45.4**	**+0.3**
I23K	**Minto, Yukon-K**	**75.54**	**336**	P	**P**	**04 00 46.0**	**+0.8**
	baz=109,SNR=13						
SPCR	**Spurr Chakacha**	**75.59**	**332**	P	**P**	**04 00 46.0**	**+0.3**
	baz=106						
RSO	**Redoubt South**	**75.65**	**331**	P	**P**	**04 00 46.6**	**+0.5**
KTH	**Kantishna Hill**	**75.68**	**335**	P	**P**	**04 00 46.6**	**+0.5**
KTH				IAmb	IAmb	04 00 48.2	
	comp=Z,26nm,1.0s						
Q19K	**Cape Douglas,**	**75.71**	**330**	P	**P**	**04 00 47.2**	**+0.9**
	baz=104						
ILSW	**Iliamna Southw**	**75.72**	**331**	P	**P**	**04 00 46.9**	**+0.4**
ILSW				IAmb	IAmb	04 00 48.5	
	comp=Z,27nm,1.1s						
C26K	**Camden Bay**	**75.73**	**342**	P	**P**	**04 00 47.6**	**+1.4**
	baz=114						
F24K	**Squaw Lake**	**75.80**	**339**	P	**P**	**04 00 48.1**	**+1.4**
	baz=111						
H23K	**Yukon River**	**75.83**	**337**	P	**P**	**04 00 47.1**	**+0.2**
BPAW	**Bear Paw Mtn.**	**75.87**	**335**	P	**P**	**04 00 47.2**	**0.0**
BPAW				IAmb	IAmb	04 00 48.8	
	comp=Z,39nm,1.2s						
BPAW	**Bear Paw Mtn.**	**75.87**	**335**	P	**P**	**04 00 47.3**	**+0.2**
	baz=107,SNR=19						
D25K	**Kavik River**	**75.96**	**341**	P	**P**	**04 00 48.7**	**+1.1**
	baz=113						
PPLA	**Purkeypile**	**76.04**	**334**	P	**P**	**04 00 48.6**	**+0.3**
PPLA	**Purkeypile**	**76.04**	**334**	P	**P**	**04 00 48.2**	**-0.1**
	baz=106,SNR=10						
MLY	**Manley**	**76.05**	**336**	P	**P**	**04 00 48.6**	**+0.4**
MLY				IAmb	IAmb	04 00 50.1	
	comp=Z,31nm,1.4s						
MLY	**Manley**	**76.05**	**336**	P	**P**	**04 00 48.5**	**+0.3**
	baz=108,SNR=14						
CAST	**Castle Rocks**	**76.14**	**334**	P	**P**	**04 00 48.9**	**+0.2**
CAST				IAmb	IAmb	04 00 50.0	
	comp=Z,27nm,1.2s						
CAST	**Castle Rocks**	**76.14**	**334**	P	**P**	**04 00 48.7**	**0.0**
	baz=106,SNR=15						
M20K	**Styx River**	**76.20**	**333**	P	**P**	**04 00 49.5**	**+0.3**
M20K				IAmb	IAmb	04 00 50.6	
	comp=Z,24nm,1.1s						
M20K	**Styx River**	**76.20**	**333**	P	**P**	**04 00 49.4**	**+0.3**
	baz=105						
E24K	**Your Creek**	**76.21**	**339**	P	**P**	**04 00 49.0**	**-0.1**
	baz=111						
G23K	**Bananza Creek**	**76.31**	**338**	P	**P**	**04 00 50.4**	**+0.8**
	baz=109,SNR=16						
Q18K	**Katmai Hardscr**	**76.34**	**329**	P	**P**	**04 00 51.0**	**+1.0**
	baz=102						
O19K	**Port Alsworth**	**76.34**	**331**	P	**P**	**04 00 50.6**	**+0.8**
O19K				IAmb	IAmb	04 00 51.0	
	comp=Z,35nm,1.4s						
O19K	**Port Alsworth**	**76.34**	**331**	P	**P**	**04 00 49.6**	**-0.3**
	baz=103						
CHUM	**Lake Minchumin**	**76.37**	**335**	P	**P**	**04 00 50.7**	**+0.7**
	baz=106,SNR=5.5						
COLD	**Coldfoot**	**76.54**	**338**	P	**P**	**04 00 50.9**	**0.0**
COLD				IAmb	IAmb	04 00 53.9	
	comp=Z,21nm,1.1s						
COLD	**Coldfoot**	**76.54**	**338**	P	**P**	**04 00 52.2**	**+1.4**
	baz=109						
N19K	**Bonanza Creek**	**76.57**	**331**	P	**P**	**04 00 50.8**	**-0.5**
N19K				IAmb	IAmb	04 00 52.6	
	comp=Z,19nm,1.1s						
N19K	**Bonanza Creek**	**76.57**	**331**	P	**P**	**04 00 52.2**	**+0.9**
	baz=103,SNR=6.0						
I21K	**Tanana**	**76.60**	**336**	P	**P**	**04 00 51.9**	**+0.7**
I21K				IAmb	IAmb	04 00 53.0	
	comp=Z,32nm,1.2s						
I21K	**Tanana**	**76.60**	**336**	P	**P**	**04 00 51.8**	**+0.6**
	baz=107						
E23K	**Chandalar**	**76.60**	**339**	P	**P**	**04 00 52.4**	**+1.1**
	baz=110,SNR=25						
P18K	**Big Mountain,**	**76.61**	**330**	P	**P**	**04 00 51.2**	**-0.3**
	baz=102						
L20K	**Farewell, AK**	**76.69**	**333**	P	**P**	**04 00 51.7**	**-0.1**
	baz=104						
O18K	**Koktuh Hills**	**76.70**	**330**	P	**P**	**04 00 52.6**	**+0.7**
O18K				IAmb	IAmb	04 00 53.4	
	comp=Z,28nm,1.1s						
O18K	**Koktuh Hills**	**76.70**	**330**	P	**P**	**04 00 52.1**	**+0.2**
	baz=102,SNR=6.8						
Q17K	**Contact Creek**	**76.71**	**329**	P	**P**	**04 00 52.5**	**+0.4**
	baz=102,SNR=5.7						
M19K	**Big River Lodg**	**76.78**	**332**	P	**P**	**04 00 52.9**	**+0.5**
M19K				IAmb	IAmb	04 00 53.4	
	comp=Z,41nm,1.7s						
M19K	**Big River Lodg**	**76.78**	**332**	P	**P**	**04 00 52.3**	**0.0**
	baz=104						
R17K	**Ugashik Creek**	**76.85**	**328**	P	**P**	**04 00 53.5**	**+0.7**
	baz=101						
C24K	**Franklin Bluff**	**76.87**	**341**	P	**P**	**04 00 53.8**	**+1.2**
	baz=111						
K20K	**Telida**	**76.99**	**334**	P	**P**	**04 00 53.9**	**+0.4**
K20K				IAmb	IAmb	04 00 55.1	
	comp=Z,36nm,1.2s						
K20K	**Telida**	**76.99**	**334**	P	**P**	**04 00 53.9**	**+0.4**
	baz=104,SNR=21						
L19K	**White Mountain**	**77.06**	**333**	P	**P**	**04 00 54.3**	**+0.4**
L19K	**White Mountain**	**77.06**	**333**	P	**P**	**04 00 54.5**	**+0.5**
	baz=103						
H21K	**Melozitna Rive**	**77.06**	**336**	P	**P**	**04 00 53.8**	**0.0**
H21K	**Melozitna Rive**	**77.06**	**336**	P	**P**	**04 00 53.9**	**0.0**
	baz=106						
SVW2	**Sparrevohn**	**77.15**	**332**	P	**P**	**04 00 54.2**	**-0.3**
SVW2				IAmb	IAmb	04 00 55.5	
	comp=Z,22nm,1.2s						
P17K	**Kvichak River**	**77.18**	**330**	P	**P**	**04 00 54.9**	**+0.4**
	baz=101						
Q16K	**King Salmon**	**77.19**	**329**	P	**P**	**04 00 55.2**	**+0.6**
	baz=101						
D23K	**Nanushuk River**	**77.27**	**340**	P	**P**	**04 00 56.1**	**+1.1**
	baz=109,SNR=14						
DBIC	**Dimbokro**	**77.28**	**84**	P	**P**	**04 00 55.9**	**-0.1**
	comp=Z,5.0nm,0.8s,baz=292,slow=5.3,SNR=6.2						
	comp=Z,5.0nm,0.8s						
F22K	**John River**	**77.35**	**338**	P	**P**	**04 00 56.8**	**+1.3**
	baz=107						
IMAR	**Indian Mountai**	**77.53**	**337**	P	**P**	**04 00 56.4**	**0.0**
G21K	**Allakaket**	**77.58**	**337**	P	**P**	**04 00 57.5**	**+0.8**
	baz=106						
O17K	**Koliganek Bris**	**77.62**	**330**	P	**P**	**04 00 57.5**	**+0.5**
	baz=101,SNR=13						
CHGN	**Chignik**	**77.72**	**326**	P	**P**	**04 00 57.9**	**+0.3**
	baz=99						
TTA	**Tatalina**	**77.75**	**333**	P	**P**	**04 00 58.3**	**+0.5**
TTA				IAmb	IAmb	04 00 59.0	
	comp=Z,23nm,1.2s						
TTA	**Tatalina**	**77.75**	**333**	P	**P**	**04 00 58.1**	**+0.3**
	baz=102,SNR=12						
F21K	**Alatna River**	**77.76**	**338**	P	**P**	**04 00 58.7**	**+0.9**
	baz=106						
ESDC	**Sonseca Array**	**77.89**	**51**	P	**P**	**04 00 59.2**	**+0.1**
	comp=Z,6.4nm,1.0s,baz=272,slow=5.8,SNR=20						
	comp=Z,6.4nm,1.0s						
ESDC	**Sonseca Array**	**77.89**	**51**	P	**P**	**04 00 58.5**	**-0.5**
ESBB	**Sonseca Array**	**77.89**	**51**	P	**P**	**04 00 59.1**	**0.0**
ESBB				IAmb	IAmb	04 01 03.3	
	comp=Z,22nm,1.4s						
P16K	**Nushagak River**	**77.94**	**329**	P	**P**	**04 00 59.3**	**+0.5**
	baz=100,SNR=6.6						
O16K	**Kokwok River B**	**78.08**	**330**	P	**P**	**04 00 59.5**	**-0.1**
	baz=100						
GCSA	**Galena City Sc**	**78.51**	**335**	P	**P**	**04 01 02.4**	**+0.5**
	baz=102						
N16K	**Nishlik Lake**	**78.57**	**331**	P	**P**	**04 01 02.9**	**+0.6**
	baz=99						
DAG	**Danmarks Havn**	**79.02**	**12**	*i* P	**P**	**04 01 00.3**	**-4.2**
DAG				IAmb	IAmb	04 01 06.1	
	comp=Z,11nm,1.2s						
S12K	**Black Hills**	**79.67**	**326**	P	**P**	**04 01 08.4**	**-0.1**
	baz=96						
A21K	**Barrow**	**79.88**	**342**	P	**P**	**04 01 09.4**	**+0.2**
	baz=104						
FALS	**False Pass**	**80.37**	**325**	P	**P**	**04 01 12.0**	**-0.1**
	baz=94						
NOR	**Nord**	**81.32**	**8**	*i* P	**P**	**04 01 14.2**	**-2.6**
RDOG	**Red Dog Mine**	**81.45**	**338**	P	**P**	**04 01 17.7**	**-0.1**
RDOG				IAmb	IAmb	04 01 19.7	
	comp=Z,18nm,1.1s						
RDOG	**Red Dog Mine**	**81.45**	**338**	P	**P**	**04 01 18.5**	**+0.7**
	baz=97						
ANM	**Nome**	**82.10**	**334**	P	**P**	**04 01 21.5**	**+0.2**
ANM	**Nome**	**82.10**	**334**	P	**P**	**04 01 21.5**	**+0.2**
	baz=94,SNR=10						
TNA	**Tin City**	**83.24**	**335**	P	**P**	**04 01 27.9**	**+0.8**
TNA	**Tin City**	**83.24**	**335**	P	**P**	**04 01 28.1**	**+1.0**
	baz=92,SNR=6.7						
TOA0	**Torodi Ar. Sit**	**83.28**	**77**	P	**P**	**04 01 26.6**	**-1.8**
TOA0				IAmb	IAmb	04 01 59.0	
	comp=Z,18nm,1.4s						
TORD	**Torodi Ar. Bea**	**83.28**	**77**	P	**P**	**04 01 28.7**	**+0.3**
	comp=Z,6.1nm,0.2s,baz=282,slow=5.4,SNR=14						
	comp=Z,6.1nm,0.2s						
TAM	**Tamanrasset**	**86.26**	**68**	P	**P**	**04 01 43.9**	**+0.4**
BELA	**Belgrano 2**	**87.09**	**171**	P	**P**	**04 01 47.2**	**+1.0**
BELA				IAmb	IAmb	04 01 49.2	
	comp=Z,27nm,1.5s						
NB2	**NORSAR Subarra**	**87.24**	**29**	P	**P**	**04 01 49.5**	**+2.2**
	comp=Z,76nm,2.5s,baz=272,slow=5.1						
NB2	**NORSAR Subarra**	**87.24**	**29**	P	**P**	**04 01 49.5**	**+2.2**
	baz=272,slow=5.1						
NOA	**NORSAR Array B**	**87.24**	**29**	P	**P**	**04 01 47.4**	**0.0**
	comp=Z,2.5nm,1.0s,baz=275,slow=4.6,SNR=2.4						
	comp=Z,2.5nm,1.0s						
CLL	**Collm**	**89.39**	**39**	*e*P	**P**	**04 01 59.0**	**+1.3**
GERES	**GERESS Array B**	**90.18**	**41**	P	**P**	**04 02 00.8**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=276,slow=2.4,SNR=6.3						
	comp=Z,0.9nm,0.8s						
BILL	**Bilibino**	**92.83**	**339**	P	**P**	**04 02 14.4**	**+1.0**
BILL				IAmb	IAmb	04 02 15.7	
	comp=Z,21nm,1.3s						
QSPA	**South Pole Qui**	**95.34**	**180**	P	**P**	**04 02 24.3**	**-0.7**
	comp=Z,3.6nm,0.9s,baz=137,slow=3.7,SNR=6.5						
	comp=Z,3.6nm,0.9s						
QSPA	**South Pole Qui**	**95.34**	**180**	P	**P**	**04 02 25.6**	**+0.6**
H11N3	**WAKE ISLAND Hy**	**107.28**	**292**	T	T	06 03 15.3	
	baz=79,slow=75,SNR=37						
H11N2	**WAKE ISLAND Hy**	**107.29**	**292**	T	T	06 03 18.4	
	baz=79,slow=75,SNR=38						
H11N1	**WAKE ISLAND Hy**	**107.30**	**292**	T	T	06 03 22.3	
	baz=79,slow=75,SNR=35						
H11S2	**WAKE ISLAND Hy**	**107.73**	**291**	T	T	06 03 54.6	
	baz=77,slow=75,SNR=5.7						
H11S1	**WAKE ISLAND Hy**	**107.73**	**291**	T	T	06 03 53.5	
	baz=77,slow=75,SNR=7.1						
H11S3	**WAKE ISLAND Hy**	**107.75**	**291**	T	T	06 03 55.8	
	baz=77,slow=75,SNR=9.5						
ZAA0	**Zalesovo Array**	**120.01**	**9**		**PKPdf**	**04 07 49.2**	**-2.4**
ZALV	**Zalesovo Beam**	**120.01**	**9**	PKP	**PKPdf**	**04 07 49.7**	**-1.9**
	comp=Z,4.6nm,1.1s,baz=354,slow=3.0,SNR=8.1						
MKAR	**Makanchi Array**	**126.41**	**13**	PKP	**PKPdf**	**04 08 03.5**	**-0.6**
	comp=Z,1.6nm,0.9s,baz=317,slow=1.8,SNR=11						
MKAR				PP	**PP**	**04 09 58.9**	**+0.6**
	comp=Z,0.8nm,1.0s,baz=276,slow=3.5,SNR=3.5						
SONM	**Songino Array**	**126.47**	**352**	PKP	**PKPdf**	**04 08 04.4**	**0.0**
	comp=Z,2.2nm,0.9s,baz=169,slow=1.5,SNR=9.6						
SONM				PP	**PP**	**04 09 58.6**	**-0.1**
	comp=Z,2.1nm,1.2s,baz=2.8,slow=5.9,SNR=2.3						
KSRS	**Korea Array**	**128.80**	**329**	PKP	**PKPdf**	**04 08 08.9**	**0.0**
	comp=Z,2.4nm,0.9s,baz=37,slow=1.2,SNR=8.7						
KSAR	**Wonju Array Be**	**128.83**	**329**	PKPdf	**PKPdf**	**04 08 07.7**	**-1.3**
WMQ	**Urumqi**	**130.30**	**9**	*e*P	**PKiKP**	**04 08 14.0**	**+1.4**
HHC	**Hu-ho-hao-te**	**132.24**	**345**	*e*P	**PKPdf**	**04 08 13.5**	**-2.0**
BTO	**Baotou**	**132.84**	**347**	*e*PKP	**PKPdf**	**04 08 12.5**	**-4.2**
BTO				PP	**PP**	**04 10 39.8**	**-0.5**
NJ2	**Nanjing**	**137.57**	**333**	*e*P	**PKiKP**	**04 08 27.0**	**-0.5**
NJ2				pP	**pPKPdf**	**04 08 29.5**	**-0.3**
NJ2				sP	**sPKPdf**	**04 08 31.0**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
XAN	**Xi'an**	**139.35**	**345**	PKP	**PKiKP**	**04 08 32.0**	**+0.8**
ASAR	**Alice Springs**	**140.40**	**239**	PKhKP	PKPpre	04 08 21.2	
	comp=Z,0.9nm,0.8s,baz=129,slow=4.5,SNR=5.1						
ASAR				PKP	**PKPdf**	**04 08 29.9**	**-1.2**
	comp=Z,1.2nm,0.8s,baz=124,slow=2.6,SNR=6.9						
WRA	**Warramunga Arr**	**141.24**	**245**	PKhKP	PKPpre	04 08 26.4	
	comp=Z,0.9nm,0.8s,baz=97,slow=3.6,SNR=7.5						
CD2	**Chengdu**	**143.46**	**351**	PKP	PKPab	04 08 33.3	+0.8
H01W1	**Cape Leeuwin H**	**146.74**	**206**	T	T	06 53 23.0	
	baz=149,slow=77,SNR=3.6						
H01W2	**Cape Leeuwin H**	**146.75**	**206**	T	T	06 53 23.3	
	baz=149,slow=77,SNR=2.5						
H01W3	**Cape Leeuwin H**	**146.76**	**206**	T	T	06 53 26.3	
	baz=149,slow=77,SNR=3.4						
PZH	**PanZhiHua**	**148.08**	**353**	PKPbc	**PKPbc**	**04 08 48.0**	**+0.4**
SHL	**Shillong**	**148.83**	**10**		**PKPdf**	**04 08 44.9**	**-0.8**
CMAR	**Chiang Mai Arr**	**156.32**	**356**	PKP	**PKPdf**	**04 08 56.9**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=279,slow=2.0,SNR=9.7						
CMAR				PKPbc	**sPKPdf**	**04 09 05.6**	**+3.3**
	comp=Z,1.4nm,0.4s,baz=313,slow=2.2,SNR=7.4						
CMAR				PKPab	**PKPab**	**04 09 23.9**	**-0.7**
	comp=Z,1.9nm,0.3s,baz=347,slow=5.4,SNR=8.4						

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*IDC **29** 04:09:21.0±0.3, 56°.89N×162°.77E, h0^{km}, mb5.8/41, mbtmp5.9/45, ML5.6/4, MS6.4/89, Error ellipse: s-maj=10.4km s-min=8.4km az=2.0*

*BJI **29** 04:09:21.0±0.0, 56°.88N×162°.82E, h20^{km}, mb6.2/64, mB6.5/82, Ms7.1/98, Ms7 7.1/87*

*KRSC **29** 04:09:22.3±1.6, 56°.97N×163°.22E, h43^{km}±18^{km}, Mc7.2, Ml6.8*

*MOS **29** 04:09:24.5±0.9, 57°.04N×162°.84E, h31^{km}, mb6.6/110, MS6.8/85, Error ellipse: s-maj=5.9km s-min=3.0km az=80.2*

*NEIC **29** 04:09:24.2±1.5, 56°.94N±0°.06×162°.8E±0°.1, h17^{km}±1^{km}, mb6.5/1025, Ms_20 6.6/394, Mwb6.4/120, Mww6.6/63, Error ellipse: s-maj=10.7km s-min=10.0km az=18.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}4.42; $M_{\theta\theta}$-0.13; $M_{\phi\phi}$-4.29; $M_{r\theta}$-0.79; $M_{\theta\phi}$-1.64; $M_{\phi r}$-1.49; Fault plane solution: $M_0$4.95000×10^{18} NP1: ϕ_s202.46000°, δ54.96000°, λ93.98000°. NP2: ϕ_s15.56000°, δ35.24000°, λ84.35000°. Principal axes: T 4.7230, Plg80.0000°, Azm128.0000°; N 0.4278, Plg3.0000°, Azm20.0000°; P -5.1508, Plg10.0000°, Azm290.0000°;*

*NEIC **29** 04:09:24.2, 56°.94N×162°.72E, h18^{km}*

*NEIC **29** 04:09:24.2, 56°.94N×162°.72E, h24^{km}*

*NEIC **29** 04:09:24.2, 57°.04N×162°.90E, h24^{km}, Moment Tensor Solution. Duration: 9^{s}5 Moment tensor: Scale 10^{18}Nm; M_{rr}8.99; $M_{\theta\theta}$-1.87; $M_{\phi\phi}$-7.12; $M_{r\theta}$0.61; $M_{\theta\phi}$-3.44; $M_{\phi r}$1.78; Fault plane solution: $M_0$9.10000×10^{18} NP1: ϕ_s24.83000°, δ50.92000°, λ88.16000°. NP2: ϕ_s207.75000°, δ39.11000°, λ92.26000°. Principal axes: T 9.1931, Plg84.0000°, Azm282.0000°; N -0.1772, Plg1.0000°, Azm26.0000°; P -9.0159, Plg6.0000°, Azm116.0000°;*

*BGR **29** 04:09:28.5, 57°.04N×162°.62E, h27^{km}±2^{km}, mb6.2, mB_BB6.9, Ms6.6*

*GCMT **29** 04:09:30.2±0.0, 57°.00N×163°.15E, h17^{km}, MW6.6/172, Moment Tensor Solution. s172,c454; s172,c808; Duration: 4^{s}9 Moment tensor: Scale 10^{19}Nm; M_{rr}0.93±.00; $M_{\theta\theta}$-0.17±.00; $M_{\phi\phi}$-0.77±.00; $M_{r\theta}$-0.21±.01; $M_{\theta\phi}$-0.45±.00; $M_{\phi r}$-0.09±.01; Best double couple: $M_0$1.00000×10^{19} NP1: ϕ_s217.00000°, δ51.00000°, λ102.00000°. NP2: ϕ_s19.00000°, δ41.00000°, λ76.00000°. Principal axes: T 0.9730, Plg79.0000°, Azm180.0000°; N 0.0530, Plg9.0000°, Azm30.0000°; P -1.0270, Plg5.0000°, Azm299.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 29 04:09:23.8±0.2, **56°.85N**±0°.02×**162°.74E**±0°.02, **h18**^{km}, **h18**^{km}**:pP-P, n3191,** σ**1^{s}80**/3611, **mb6.5**/752, **MS6.6**/373, **457C-98D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBG	**Krutoberegovo**	**0.60**	**182**	PN	**Pn**	**04 09 37.3**	**0.0**
KBG				S	**Sn**	**04 09 47.9**	**+1.4**
KBG	**Krutoberegovo**	**0.60**	**182**	*e*P	**Pn**	**04 09 37.3**	**0.0**
KBG				*e*S	**Sn**	**04 09 47.9**	**+1.4**
KBTR	**Krutoberegovo**	**0.65**	**176**	PN	**Pn**	**04 09 38.1**	**+0.1**
KBTR	**Krutoberegovo**	**0.65**	**176**	*e*P	**Pn**	**04 09 38.1**	**+0.1**
SMKR	**Semkarok**	**0.75**	**249**	PN	**Pn**	**04 09 40.3**	**+0.7**
SMKR	**Semkarok**	**0.75**	**249**	*e*P	**Pn**	**04 09 40.3**	**+0.7**
SRKR	**Sorokina**	**0.89**	**258**	PN	**Pn**	**04 09 42.4**	**+1.0**
SRKR	**Sorokina**	**0.89**	**258**	*e*P	**Pn**	**04 09 42.4**	**+1.0**
KLY	**Klyuchi**	**1.28**	**246**	PN	**Pb**	**04 09 47.1**	**-0.2**
KLY	**Klyuchi**	**1.28**	**246**	*e*P	**Pb**	**04 09 47.1**	**-0.2**
CIRR	**Tsirk**	**1.33**	**237**	PN	**Pg**	**04 09 50.3**	**+0.8**
CIRR	**Tsirk**	**1.33**	**237**	*e*P	**Pg**	**04 09 50.3**	**+0.8**
LGNR	**Loginova**	**1.38**	**237**	PN	**Pg**	**04 09 51.5**	**+1.1**
LGNR	**Loginova**	**1.38**	**237**	*e*P	**Pg**	**04 09 51.5**	**+1.1**
BZGR	**Bezymyannyi-Gr**	**1.46**	**232**	PN	**Pg**	**04 09 52.3**	**+0.4**
BZGR				S	**Sg**	**04 10 13.9**	**+2.9**
BZGR	**Bezymyannyi-Gr**	**1.46**	**232**	*e*P	**Pg**	**04 09 52.3**	**+0.4**
BZGR				*e*S	**Sg**	**04 10 13.9**	**+2.9**
BZWR	**Bezymyannyi-We**	**1.54**	**235**	PN	**Pg**	**04 09 53.1**	**-0.3**
BZWR	**Bezymyannyi-We**	**1.54**	**235**	*e*P	**Pg**	**04 09 53.1**	**-0.3**
BZP	**Bezymyannyi-Pe**	**1.55**	**233**	*e*P	**Pg**	**04 09 53.2**	**-0.4**
BZMR	**Bezymyannaya**	**1.56**	**235**	PN	**Pg**	**04 09 53.5**	**-0.3**
BZMR	**Bezymyannaya**	**1.56**	**235**	*e*P	**Pg**	**04 09 53.5**	**-0.3**
KIRR	**Kirishev**	**1.61**	**237**	PN	**Pb**	**04 09 53.9**	**+0.9**
KIRR	**Kirishev**	**1.61**	**237**	*e*P	**Pb**	**04 09 53.9**	**+0.9**
KPT	**Kopyto**	**1.66**	**239**	PN	**Pg**	**04 09 54.8**	**-0.9**
KPT	**Kopyto**	**1.66**	**239**	*e*P	**Pg**	**04 09 54.8**	**-0.9**
SRDR	**Sredinnyy**	**1.76**	**253**	PN	**Pb**	**04 09 55.7**	**+0.2**
SRDR	**Sredinnyy**	**1.76**	**253**	*e*P	**Pb**	**04 09 55.7**	**+0.2**
KMNR	**Kamenistaya**	**1.78**	**233**	PN	**Pb**	**04 09 56.6**	**+0.8**
KMNR	**Kamenistaya**	**1.78**	**233**	*e*P	**Pb**	**04 09 56.6**	**+0.8**
KOZ	**Kozyrevsk**	**1.78**	**245**	PN	**Pg**	**04 09 57.2**	**-0.9**
KOZ				S	**Sg**	**04 10 24.2**	**+3.0**
KOZ	**Kozyrevsk**	**1.78**	**245**	*e*P	**Pg**	**04 09 57.1**	**-0.9**
KOZ				*e*S	**Sg**	**04 10 24.2**	**+3.0**
TUMD	**Tumrok D**	**2.11**	**219**	*e*P	**Pb**	**04 10 02.2**	**+0.7**

TUMD				*e*S	**Sg**	**04 10 32.1**	**+0.4**
TUMR	**Tumrok**	**2.15**	**224**	PN	**Pb**	**04 10 02.2**	**+0.1**
TUMR				S	**Sg**	**04 10 32.1**	**-0.7**
TUMR	**Tumrok**	**2.15**	**224**	*e*P	**Pb**	**04 10 03.0**	**+0.9**
MKZ	**Mys Kozlova**	**2.37**	**194**	PN	**Pb**	**04 10 03.9**	**-2.0**
MKZ	**Mys Kozlova**	**2.37**	**194**	*e*P	**Pb**	**04 10 03.9**	**-2.0**
TIGL	**Tigil**	**2.39**	**294**	*e*P	**Pn**	**04 10 03.5**	**+1.5**
TIGL				*e*S	**Sb**	**04 10 36.7**	**+1.4**
OSSR	**Ossora**	**2.41**	**4**	PN	**Pn**	**04 09 59.5**	**-2.7**
OSSR	**Ossora**	**2.41**	**4**	*e*P	**Pn**	**04 09 59.5**	**-2.7**
ESO	**Esso**	**2.43**	**249**	PN	**Pb**	**04 10 07.3**	**+0.3**
ESO				S	**Sg**	**04 10 42.6**	**+0.6**
ESO	**Esso**	**2.43**	**249**	*e*P	**Pb**	**04 10 07.3**	**+0.3**
ESO				*e*S	**Sg**	**04 10 42.6**	**+0.6**
BKI	**Bering**	**2.45**	**131**	PN	**Pn**	**04 10 01.8**	**-1.0**
BKI				S	**Sn**	**04 10 32.0**	**-0.2**
BKI	**Bering**	**2.45**	**131**	*e*P	**Pn**	**04 10 01.8**	**-1.0**
BKI				*e*S	**Sn**	**04 10 32.0**	**-0.2**
PALN	**Palana**	**2.69**	**328**	PN	**Pn**	**04 10 06.2**	**+0.2**
PALN	**Palana**	**2.69**	**328**	*e*P	**Pn**	**04 10 06.2**	**+0.2**
KII	**Karymskiy**	**3.39**	**215**	PN	**Pn**	**04 10 17.0**	**+1.2**
KII	**Karymskiy**	**3.39**	**215**	*e*P	**Pn**	**04 10 17.0**	**+1.2**
TILK	**Tilichiki**	**4.02**	**25**	PN	**Pn**	**04 10 22.5**	**-1.7**
TILK	**Tilichiki**	**4.02**	**25**	*e*P	**Pn**	**04 10 22.5**	**-1.7**
SPN	**Mys Shipunski**	**4.08**	**204**	PN	**Pn**	**04 10 27.2**	**+2.1**
SPN	**Mys Shipunski**	**4.08**	**204**	*e*P	**Pn**	**04 10 27.2**	**+2.1**
SPN				*e*S	**Sn**	**04 11 14.7**	**+2.4**
NLC	**Nalytchevo**	**4.18**	**209**	PN	Pb	04 10 31.7	-4.9
NLC				S	**Sb**	**04 11 22.2**	**-4.4**
NLC	**Nalytchevo**	**4.18**	**209**	*e*P	Pb	04 10 31.7	-4.9
NLC				*e*S	**Sb**	**04 11 22.2**	**-4.4**
GNL	**Ganaly**	**4.19**	**223**	PN	**Pn**	**04 10 30.8**	**+4.0**
GNL	**Ganaly**	**4.19**	**223**	*e*P	**Pn**	**04 10 30.8**	**+4.0**
KRX	**Arik**	**4.22**	**216**	PN	**Pn**	**04 10 31.7**	**+4.5**
KRX	**Arik**	**4.22**	**216**	*e*P	**Pn**	**04 10 31.7**	**+4.5**
KRER	**Koryakskii**	**4.23**	**215**	PN	Pn	04 10 32.3	+4.8
KRER	**Koryakskii**	**4.23**	**215**	*e*P	Pn	04 10 32.3	+4.8
SMAR	**Somma**	**4.25**	**214**	PN	**Pn**	**04 10 32.1**	**+4.4**
SMAR	**Somma**	**4.25**	**214**	*e*P	**Pn**	**04 10 32.1**	**+4.4**
AVH	**Avacha**	**4.27**	**214**	PN	**Pn**	**04 10 32.5**	**+4.6**
AVH	**Avacha**	**4.27**	**214**	*e*P	**Pn**	**04 10 32.5**	**+4.6**
KOK	**Koryaka**	**4.28**	**215**	PN	**Pn**	**04 10 32.4**	**+4.4**
KOK	**Koryaka**	**4.28**	**215**	*e*P	**Pn**	**04 10 32.4**	**+4.4**
UGLR	**Uglovaya**	**4.29**	**213**	PN	**Pn**	**04 10 32.6**	**+4.4**
UGLR	**Uglovaya**	**4.29**	**213**	*e*P	**Pn**	**04 10 32.6**	**+4.4**
DALK	**Dalny**	**4.47**	**213**	PN	**Pn**	**04 10 34.6**	**+4.1**
DALK	**Dalny**	**4.47**	**213**	*e*P	**Pn**	**04 10 34.6**	**+4.1**
INSR	**Institute**	**4.48**	**214**	*e*P	**Pn**	**04 10 35.2**	**+4.5**
PET	**Petropavlovsk**	**4.50**	**213**		**Pn**	**04 10 35.1**	**+4.1**
PET	**Petropavlovsk**	**4.50**	**213**	P	Pn	04 10 36.3	+5.3
PET	**Petropavlovsk**	**4.50**	**213**	⇑P	**Pn**	**04 10 34.9**	**+3.9**
PET	**Petropavlovsk**	**4.50**	**213**	PN	**Pn**	**04 10 35.1**	**+4.1**
PET				S	**Sb**	**04 11 32.8**	**-3.3**
PET	**Petropavlovsk**	**4.50**	**213**	*e*P	**Pn**	**04 10 35.1**	**+4.1**
PET				*e*S	**Sb**	**04 11 32.8**	**-3.3**
I44RU	**PETROPAVLOVSK-**	**4.74**	**220**	Pn	Pn	04 10 39.6	+5.3
	baz=57,slow=22						
I44RU				I	I	04 22 20.0	
	baz=42,slow=335,SNR=1.0						
PEA0B	**Petropavlovsk-**	**4.75**	**220**	Pn	**Pn**	**04 10 38.5**	**+4.2**
PEA0B	**Petropavlovsk-**	**4.75**	**220**	*ce*PN	**Pn**	**04 10 38.8**	**+4.5**
PETK	**Petropavlovsk-**	**4.75**	**220**	Pn	**Pn**	**04 10 37.2**	**+2.9**
	68nm,0.3s,baz=61,slow=12,SNR=198						
PETK				Lg	Lg	04 11 53.5	
	59nm,0.3s,baz=38,slow=7.5,SNR=1.3						
PETK				LR	LR	04 12 52.9	
	comp=Z,395µm,18.5s,baz=99,slow=44						
KRMR	**Karymshinskiy**	**4.83**	**215**	PN	**Pn**	**04 10 39.9**	**+4.4**
KRMR				S	**Sn**	**04 11 38.1**	**+7.2**
KRMR	**Karymshinskiy**	**4.83**	**215**	*e*P	**Pn**	**04 10 39.9**	**+4.4**
KRMR				*e*S	**Sn**	**04 11 38.1**	**+7.2**
RUS	**Russkaya**	**5.07**	**211**	PN	**Pn**	**04 10 41.9**	**+3.2**
RUS	**Russkaya**	**5.07**	**211**	*e*P	**Pn**	**04 10 41.9**	**+3.2**
APC	**Apacha**	**5.09**	**222**	PN	**Pn**	**04 10 43.7**	**+4.7**
APC	**Apacha**	**5.09**	**222**	*e*P	**Pn**	**04 10 43.7**	**+4.7**
GRL	**Gorelyy**	**5.09**	**214**	PN	**Pn**	**04 10 43.9**	**+4.8**
GRL	**Gorelyy**	**5.09**	**214**	*e*P	**Pn**	**04 10 43.9**	**+4.8**
MTVR	**Mutnovka**	**5.12**	**213**	PN	**Pn**	**04 10 43.8**	**+4.3**
MTVR	**Mutnovka**	**5.12**	**213**	*e*P	**Pn**	**04 10 43.8**	**+4.3**
KDTR	**Khodutka, Kamc**	**5.74**	**210**	PN	**Pn**	**04 10 50.8**	**+2.8**
KDTR	**Khodutka, Kamc**	**5.74**	**210**	*e*P	**Pn**	**04 10 50.8**	**+2.8**
KDTR				*e*S	**Sn**	**04 11 59.1**	**+5.8**
PAU	**Pauzhetka**	**6.42**	**215**	PN	Pn	04 11 02.7	+5.4
PAU	**Pauzhetka**	**6.42**	**215**	*e*P	Pn	04 11 02.7	+5.4
MA2	**Magadan**	**6.89**	**298**	Pn	**Pn**	**04 11 05.2**	**+1.5**
	12nm,0.3s,baz=100,slow=11,SNR=56						
MA2				Sn	**Sn**	**04 12 25.1**	**+3.6**
	37nm,0.3s,baz=168,slow=15,SNR=4.1						
	166nm,0.8s						
MA2	**Magadan**	**6.89**	**298**	Pn	**Pn**	**04 11 04.7**	**+1.0**
MA2	**Magadan**	**6.89**	**298**	P	**Pn**	**04 11 06.5**	**+2.8**
MA2	**Magadan**	**6.89**	**298**	⇓P	**Pn**	**04 11 05.0**	**+1.3**
MA2	**Magadan**	**6.89**	**298**	PN	**Pn**	**04 11 04.7**	**+1.0**
SKR	**Severo-Kuril's**	**7.32**	**215**	*e*PN	Pn	04 11 14.6	+5.0
SKR				pmax	pmax		
	comp=Z,1µm,0.8s						
SKR				MLR	MLR		
	comp=Z,289µm,16.0s						
SKR				MLR	MLR		
	comp=N,523µm,17.0s						
SKR				MLR	MLR		
	comp=E,793µm,18.0s						
SKR	**Severo-Kuril's**	**7.32**	**215**	*e*P	**Pn**	**04 11 12.8**	**+3.2**
SHEM	**Shemya Is, Ala**	**7.75**	**117**	Pn	**Pn**	**04 11 16.3**	**+0.8**
	comp=E,440nm,0.3s,baz=12,slow=6.2,SNR=104						
SHEM				Sn	**Sn**	**04 12 42.5**	**-0.2**
	baz=336,slow=20						
	comp=E,1µm,0.4s						
SMY	**Shemya**	**7.75**	**117**	Pn	**Pn**	**04 11 16.2**	**+0.7**
SMY	**Shemya**	**7.75**	**117**	P	**Pn**	**04 11 17.6**	**+2.1**
SMY	**Shemya**	**7.75**	**117**	⇓P	**Pn**	**04 11 13.8**	**-1.8**
SMY	**Shemya**	**7.75**	**117**	PN	**Pn**	**04 11 16.2**	**+0.7**
SEY	**Seymchan**	**8.01**	**324**	Pn	**Pn**	**04 11 19.6**	**+0.5**
	comp=E,7.3nm,0.3s,baz=134,slow=13,SNR=31						
SEY				Sn	**Sn**	**04 12 54.4**	**+5.4**
	comp=E,13nm,0.3s,baz=157,slow=18,SNR=2.1						
SEY				LR	LR	04 14 42.1	
	comp=E,659µm,19.0s,baz=124,slow=40						
SEY	**Seymchan**	**8.01**	**324**	*ce*PN	**Pn**	**04 11 20.5**	**+1.4**
SEY				pmax	pmax		
	comp=Z,150nm,1.7s						
BILL	**Bilibino**	**11.34**	**7**	Pn	**Pn**	**04 12 03.9**	**-0.7**
BILL	**Bilibino**	**11.34**	**7**	*de*PN	**Pn**	**04 12 07.0**	**+2.4**
BILL				*i* SS	**SnSn**	**04 14 23.1**	**+0.9**
BILL				pmax	pmax		
	comp=Z,233nm,2.5s						
BILL				MLR	MLR		
	comp=Z,694µm,14.0s						
OKH	**Okha**	**11.78**	**262**	*d* *i*PN	Pn	04 12 20.4	+10
OKH				pmax	pmax		
	comp=Z,17µm,10.2s						
OKH				MLR	MLR		
	comp=Z,318µm,14.0s						
OKH				MLR	MLR		
	comp=E,355µm,14.0s						
OKH				MLR	MLR		
	comp=N,115µm,13.0s						
ADK	**Adak**	**12.96**	**104**	Pn	**Pn**	**04 12 25.2**	**-1.6**
ADK	**Adak**	**12.96**	**104**	P	**Pn**	**04 12 28.7**	**+1.9**
ADK	**Adak**	**12.96**	**104**	PN	**Pn**	**04 12 25.2**	**-1.6**
NKL	**Nikolayevsk**	**13.18**	**263**	*e*PN	**Pn**	**04 12 29.2**	**-0.5**
NKL				pmax	pmax		
	comp=E,728nm,0.7s						
NKL				pmax	pmax		
	comp=N,1µm,0.8s						
NKL				pmax	pmax		
	comp=Z,5µm,0.9s						
NKL				MLR	MLR		
	comp=E,664µm,13.0s						
NKL				MLR	MLR		
	comp=N,138µm,12.0s						
NKL				MLR	MLR		
	comp=Z,989µm,14.0s						
GSTR	**Great Sitkin T**	**13.19**	**102**		**Pn**	**04 12 29.6**	**-0.4**
TYV	**Tymovskoe**	**13.26**	**252**	*e*PN	**P**	**04 12 37.2**	**-3.4**
TYV				*e*S	S	04 15 10.2	-12
TYV				pmax	pmax		
	comp=Z,17µm,3.4s						
TYV				pmax	pmax		
	comp=Z,659nm,1.1s						
TYV				smax	smax		
	comp=N,130nm,2.0s						
TYV				smax	smax		
	comp=E,131nm,2.0s						
TYV				smax	smax		
	comp=N,22µm,7.0s						
TYV				smax	smax		
	comp=E,6µm,7.0s						
TYV				MLR	MLR		
	comp=Z,311µm,18.0s						
TYV	**Tymovskoe**	**13.26**	**252**	*e*P	**P**	**04 12 36.6**	**-4.0**
UGL	**Uglegorsk**	**14.65**	**247**	*c* *i*P	**P**	**04 12 54.8**	**-1.2**
UGL				*e*S	**Sn**	**04 15 33.2**	**+1.8**
UGL				pmax	pmax		
	comp=Z,67µm,6.0s						
UGL				pmax	pmax		
	comp=N,38µm,6.5s						
UGL				pmax	pmax		
	comp=E,50µm,5.0s						
UGL				pmax	pmax		
	comp=Z,3µm,1.3s						
UGL				smax	smax		
	comp=E,42µm,5.5s						
UGL				smax	smax		
	comp=N,52µm,7.0s						
UGL				MLR	MLR		
	comp=Z,276µm,16.0s						
UGL				MLR	MLR		
	comp=N,266µm,15.0s						
UGL				MLR	MLR		
	comp=E,250µm,15.0s						
SPIA	**Saint Paul Isl**	**14.68**	**77**	Pn	**Pn**	**04 12 50.1**	**-0.1**
SPIA	**Saint Paul Isl**	**14.68**	**77**	P	**Pn**	**04 12 51.7**	**+1.5**
	baz=280,SNR=22						
KUR	**Kuril'sk**	**14.89**	**225**	*e*P	**Pn**	**04 12 50.9**	**-2.2**
KUR				S	**Sn**	**04 15 35.4**	**-1.9**
KUR				pmax	pmax		
	comp=Z,27µm,8.5s						
KUR				pmax	pmax		
	comp=Z,463nm,1.0s						
KUR				pmax	pmax		
	comp=N,233nm,1.1s						
KUR				pmax	pmax		
	comp=E,159nm,0.8s						
KUR				MLR	MLR		
	comp=N,295µm,16.0s						
KUR				MLR	MLR		
	comp=E,387µm,16.0s						
KUR				MLR	MLR		
	comp=Z,412µm,16.0s						
YSS	**Yuzh-Sakhalins**	**15.76**	**240**	⇑P	**P**	**04 13 08.2**	**-0.2**
YSS	**Yuzh-Sakhalins**	**15.76**	**240**	α *i*P	**P**	**04 13 08.5**	**+0.1**
YSS				*e*S	**Sn**	**04 16 04.4**	**+5.8**
YSS				pmax	pmax		
	comp=Z,1µm,1.2s						
YSS				pmax	pmax		
	comp=N,960nm,1.3s						
YSS				pmax	pmax		
	comp=E,1µm,1.2s						
YSS				pmax	pmax		
	comp=Z,27µm,5.8s						
YSS				pmax	pmax		
	comp=N,17µm,5.7s						
YSS				pmax	pmax		
	comp=E,16µm,4.2s						
YSS				smax	smax		
	comp=N,24µm,8.2s						
YSS				smax	smax		
	comp=E,19µm,10.3s						
YSS				MLR	MLR		
	comp=Z,165µm,17.0s						
CLES	**Cleveland East**	**16.21**	**93**	P	**Pn**	**04 13 08.9**	**-1.5**
CLES				IAmb	IAmb	04 13 17.8	
	comp=Z,7µm,1.6s						
TNA	**Tin City**	**16.45**	**46**	P	**Pn**	**04 13 11.6**	**-1.6**
TNA	**Tin City**	**16.45**	**46**	⇑P	**Pn**	**04 13 13.8**	**+0.6**
TNA	**Tin City**	**16.45**	**46**	P	**Pn**	**04 13 14.0**	**+0.8**
	baz=252,SNR=513						
TNA				S	**S**	**04 16 24.3**	**-2.5**
	baz=252						
GRNR	**Gornyy**	**16.63**	**260**	⇑*i*P	**P**	**04 13 19.7**	**+1.7**
GRNR				*e*S	**S**	**04 16 29.9**	**-1.0**
GRNR				pmax	pmax		
	comp=E,70nm,0.9s						
GRNR				pmax	pmax		
	comp=N,60nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,110nm,0.9s						
GRNR				smax	smax		
	comp=N,30nm,1.0s						
GRNR				MLR	MLR		
	comp=Z,159µm,17.0s						
YUK	**Yuzh-Kuril'sk**	**16.68**	**227**	*d* *i*P	**Pn**	**04 13 16.0**	**-0.3**
YUK				*i* S	**Sn**	**04 16 20.1**	**-0.7**
YUK				pmax	pmax		
	comp=Z,2µm,0.7s						
YUK				pmax	pmax		
	comp=N,444nm,0.5s						
YUK				pmax	pmax		
	comp=E,486nm,0.5s						
YUK				pmax	pmax		
	comp=Z,3µm,2.6s						
YUK				MLR	MLR		
	comp=Z,305µm,15.0s						
YUK				MLR	MLR		
	comp=N,54µm,12.0s						
NIKH	**Nikolski High**	**16.72**	**91**	P	**Pn**	**04 13 15.6**	**-1.2**
NIKH	**Nikolski High**	**16.72**	**91**	P	**P**	**04 13 18.7**	**-0.3**
NIKH	**Nikolski High**	**16.72**	**91**	P	**Pn**	**04 13 17.0**	**+0.2**
	baz=295						
NIKH				S	**Sn**	**04 16 25.5**	**+3.6**
	baz=295						
ANM	**Nome**	**17.23**	**50**	P	**P**	**04 13 24.4**	**-0.2**
	baz=258,SNR=540						
ANM				S	**Sn**	**04 16 36.4**	**+2.3**
	baz=258						
JWK2	**Keihoku**	**17.38**	**237**	P	**P**	**04 13 28.6**	**+2.4**
YAK	**Yakutsk**	**17.45**	**301**	P	**P**	**04 13 27.1**	**+0.1**
	comp=N,0.5nm,0.3s,baz=96,slow=4.0,SNR=37						
YAK				S	**S**	**04 16 43.5**	**-3.9**
	comp=N,16nm,0.3s,baz=135,slow=4.1,SNR=1.3						
	comp=N,264nm,0.8s						
YAK	**Yakutsk**	**17.45**	**301**	P	**P**	**04 13 26.9**	**0.0**
YAK	**Yakutsk**	**17.45**	**301**	⇑P	**Pn**	**04 13 26.1**	**+0.2**
YAK	**Yakutsk**	**17.45**	**301**	*e*P	**P**	**04 13 27.0**	**0.0**
YAK				*e*S	**Sn**	**04 16 39.3**	**-0.1**
YAK				pmax	pmax		
	comp=N,177nm,2.0s						
YAK				pmax	pmax		
	comp=Z,1µm,0.9s						
YAK				pmax	pmax		
	comp=E,2µm,1.5s						
YAK				pmax	pmax		
	comp=Z,3µm,1.5s						
YAK				pmax	pmax		
	comp=N,2µm,2.1s						
YAK				pmax	pmax		
	comp=E,7µm,2.8s						
YAK				smax	smax		
	comp=N,12µm,7.7s						
YAK				smax	smax		
	comp=E,10µm,8.1s						
YAK				MLR	MLR		
	comp=E,48µm,16.0s						
YAK				MLR	MLR		
	comp=Z,470µm,18.0s						
UNV	**Unalaska Valle**	**17.66**	**87**	P	**P**	**04 13 29.7**	**+0.3**
UNV	**Unalaska Valle**	**17.66**	**87**	P	**Pn**	**04 13 28.2**	**-0.3**
	baz=293,SNR=36						
UNV				S	**Sn**	**04 16 46.2**	**+1.6**
	baz=293						
JMP	**Maruseppu**	**17.74**	**232**	P	**P**	**04 13 30.2**	**-0.1**
AKUT	**Akutan**	**17.96**	**85**	P	**Pn**	**04 13 32.2**	**0.0**
AKUT	**Akutan**	**17.96**	**85**	P	**P**	**04 13 34.8**	**+2.2**
AKUT	**Akutan**	**17.96**	**85**	⇑P	**P**	**04 13 33.1**	**+0.5**
ASAJ	**Asahikawa**	**17.99**	**233**	P	**P**	**04 13 34.2**	**+1.2**
	comp=Z,21nm,0.3s,baz=46,slow=7.8,SNR=196						
ASAJ				S	**Sn**	**04 16 54.4**	**+1.8**
	comp=Z,62nm,1.0s,baz=306,slow=25,SNR=1.4						
ASAJ				PcP	**PcP**	**04 18 07.7**	**+0.7**
	comp=Z,43nm,0.8s,baz=311,slow=19,SNR=2.3						
ASAJ				LR	LR	04 21 36.9	
	comp=Z,209µm,19.0s,baz=46,slow=41						
	comp=Z,2µm,0.8s						
ASAJ	**Asahikawa**	**17.99**	**233**	P	**P**	**04 13 33.7**	**+0.6**
FALS	**False Pass**	**18.99**	**82**	P	**Pn**	**04 13 44.5**	**-0.1**
FALS	**False Pass**	**18.99**	**82**	P	**Pn**	**04 13 44.6**	**-0.1**
	baz=290						
FALS				S	**Sn**	**04 17 15.2**	**-1.4**
	baz=290						
RDOG	**Red Dog Mine**	**19.13**	**40**	P	**P**	**04 13 45.5**	**+0.1**
RDOG	**Red Dog Mine**	**19.13**	**40**	P	**Pn**	**04 13 46.3**	**0.0**
	baz=251,SNR=159						
RDOG				S	**S**	**04 17 21.6**	**+0.3**
	baz=251						
S12K	**Black Hills**	**19.45**	**79**	P	**Pn**	**04 13 49.8**	**-0.4**
	baz=288,SNR=50						
S12K				S	**S**	**04 17 29.9**	**+2.1**
	baz=288						
ERM	**Erimo**	**19.46**	**229**	P	**P**	**04 13 47.3**	**-1.8**
ERM	**Erimo**	**19.46**	**229**	P	**Pn**	**04 13 50.0**	**-0.4**
ERM	**Erimo**	**19.46**	**229**	⇑P	**P**	**04 13 45.6**	**-3.6**
ERM	**Erimo**	**19.46**	**229**	P	**P**	**04 13 47.3**	**-1.8**
ERM				pmax	pmax		
	comp=Z,825nm,0.8s						
JEM	**Erimo**	**19.46**	**229**	P	**Pn**	**04 13 50.1**	**-0.3**
KLR	**Kul'dur**	**20.00**	**261**	P	**Pn**	**04 13 56.0**	**-0.8**
	comp=Z,115nm,0.9s,baz=58,slow=10.0,SNR=172						
KLR				S	**Sn**	**04 17 40.2**	**-0.8**
	comp=Z,10nm,0.7s,baz=80,slow=20,SNR=0.8						
KLR				PcP	**PcP**	**04 18 10.6**	**+0.1**
	comp=Z,35nm,1.0s,baz=45,slow=5.7,SNR=2.8						
KLR				LR	LR	04 22 42.6	
	comp=Z,206µm,18.5s,baz=60,slow=40						
KLR				P3KPbc		04 48 06.0	
	comp=Z,0.4nm,0.4s,baz=83,slow=6.7,SNR=1.8						
	comp=Z,115nm,0.9s						
TEY	**Ternei**	**20.13**	**245**	*e*P	**P**	**04 13 56.8**	**+0.3**
TEY				*e*		04 17 41.9	
TEY				pmax	pmax		
	comp=E,2µm,13.4s						
TEY				pmax	pmax		
	comp=N,2µm,14.7s						
N16K	**Nishlik Lake**	**20.14**	**64**	P	Pn	04 13 57.9	-0.5
	baz=277,SNR=852						
N16K				S	Sn	04 17 43.4	-0.8
	baz=277						
JSH	**Shimam**	**20.29**	**235**	P	**P**	**04 13 58.7**	**+0.5**
ZEA	**Zeya**	**20.30**	**276**	*de*P	**P**	**04 13 59.2**	**+0.9**
ZEA				*e*		04 14 23.7	
ZEA				*e*S	S	04 17 32.3	-13
ZEA				*e*		04 18 05.4	
ZEA				pmax	pmax		
	comp=E,12µm,3.6s						
ZEA				pmax	pmax		
	comp=N,3µm,2.4s						
ZEA				pmax	pmax		
	comp=Z,15µm,4.2s						
ZEA				pmax	pmax		
	comp=E,530nm,0.9s						
ZEA				pmax	pmax		
	comp=N,440nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,2µm,1.0s						
ZEA				smax	smax		
	comp=N,25µm,7.0s						
ZEA				MLR	MLR		
	comp=E,270µm,13.0s						
ZEA				MLR	MLR		
	comp=N,100µm,14.0s						
ZEA				MLR	MLR		
	comp=Z,340µm,13.0s						
SDPT	**Sand Point**	**20.41**	**79**	P	**P**	**04 13 58.5**	**-0.9**
SDPT	**Sand Point**	**20.41**	**79**	P	**P**	**04 13 59.3**	**-0.2**
SDPT	**Sand Point**	**20.41**	**79**	P	**P**	**04 13 57.8**	**-1.6**
	baz=290,SNR=12						
SDPT				S	Sn	04 17 51.7	+0.8
	baz=290						
TIXI	**Tiksi**	**20.44**	**330**	P	**P**	**04 13 55.8**	**-3.9**
	comp=Z,618nm,0.9s,baz=90,slow=22,SNR=28						
TIXI				LR	LR	04 22 37.7	
	comp=Z,244µm,19.2s,baz=90,slow=39						
TIXI				P3KPbc		04 48 03.3	
	comp=Z,0.7nm,0.3s,baz=90,slow=23,SNR=1.2						
TIXI	**Tiksi**	**20.44**	**330**	P	Pn	04 14 00.8	-1.1
TIXI				IAMs_20	IAMs_20	04 22 26.9	
	comp=Z,315µm,19.0s						
TIXI	**Tiksi**	**20.44**	**330**	*ce*P	**P**	**04 14 00.6**	**+1.0**
TIXI				pmax	pmax		
	comp=Z,2µm,1.7s						
TIXI				MLR	MLR		
	comp=Z,420µm,16.0s						
O16K	**Kokwok River B**	**20.60**	**66**	P	**P**	**04 14 01.8**	**+0.4**
	baz=280						
O16K				S	Sn	04 17 55.5	+0.3
	baz=280						
P16K	**Nushagak River**	**20.75**	**67**	P	**P**	**04 14 03.9**	**+0.8**
	baz=281,SNR=306						
P16K				S	Sn	04 17 57.2	-1.7
	baz=281						
GCSA	**Galena City Sc**	**20.88**	**51**	P	**P**	**04 14 05.2**	**+0.8**
	baz=267						
GCSA				S	**S**	**04 17 59.0**	**+2.9**
	baz=267						
O17K	**Koliganek Bris**	**21.07**	**65**	P	**P**	**04 14 07.1**	**+0.6**
	baz=280,SNR=386						
O17K				S	**S**	**04 18 01.3**	**+1.3**
	baz=280						
CHGN	**Chignik**	**21.21**	**75**	P	**P**	**04 14 07.9**	**-0.2**
CHGN	**Chignik**	**21.21**	**75**	P	**P**	**04 14 07.3**	**-0.7**
	baz=288,SNR=14						
CHGN				S	**S**	**04 18 03.8**	**+0.9**
	baz=288						
TTA	**Tatalina**	**21.25**	**56**	P	**P**	**04 14 08.6**	**0.0**
TTA				IAmb	IAmb	04 14 22.4	
	comp=Z,2µm,1.2s						
TTA	**Tatalina**	**21.25**	**56**	P	**P**	**04 14 09.4**	**+0.8**
TTA	**Tatalina**	**21.25**	**56**	⇑P	**P**	**04 14 09.5**	**+0.8**
TTA	**Tatalina**	**21.25**	**56**	P	**P**	**04 14 08.6**	**0.0**
TTA				pmax	pmax		
	comp=Z,2µm,1.2s						
TTA	**Tatalina**	**21.25**	**56**	P	**P**	**04 14 09.8**	**+1.2**
	baz=272,SNR=473						
TTA				S	Sn	04 18 08.1	-3.1
	baz=272						
R16K	**Pilot Point**	**21.30**	**71**	P	**P**	**04 14 09.5**	**+0.5**
	baz=285						
R16K				S	**S**	**04 18 08.1**	**+3.6**
	baz=285						
JTM	**Tenmabayashi**	**21.35**	**230**	P	**P**	**04 14 09.2**	**-0.5**
JTM	**Tenmabayashi**	**21.35**	**230**	P	**P**	**04 14 09.7**	**0.0**
JTM	**Tenmabayashi**	**21.35**	**230**	⇑P	**P**	**04 14 09.4**	**-0.3**
P17K	**Kvichak River**	**21.50**	**67**	P	**P**	**04 14 12.1**	**+1.0**
	baz=282						
P17K				S	**S**	**04 18 12.3**	**+3.8**
	baz=282						
Q16K	**King Salmon**	**21.50**	**68**	P	**P**	**04 14 12.0**	**+0.8**
	baz=283,SNR=123						
Q16K				S	**S**	**04 18 11.7**	**+3.1**
	baz=283						
SVW2	**Sparrevohn**	**21.61**	**61**	P	**P**	**04 14 12.8**	**+0.4**
SVW2	**Sparrevohn**	**21.61**	**61**	P	**P**	**04 14 13.2**	**+0.8**
HEH	**HeiHe**	**21.81**	**267**	P	**P**	**04 14 13.5**	**-1.1**
HEH				pP	**pP**	**04 14 19.8**	**-0.1**
HEH				S	**S**	**04 18 13.0**	**-1.8**
HEH				sS	Sn	04 18 25.3	+0.7
HEH				pmax	pmax		
	comp=Z,550nm,1.0s						
HEH				pmax	pmax		
	comp=Z,15µm,4.5s						
HEH				LR	LR		
	comp=Z,182µm,17.0s						
HEH				LR	LR		
	comp=Z,170µm,16.6s						
HEH				LR	LR		
	comp=Z,630µm,14.3s						
L19K	**White Mountain**	**21.84**	**58**	P	**P**	**04 14 15.2**	**+0.4**
L19K				IAmb	IAmb	04 14 31.4	
	comp=Z,3µm,1.4s						
L19K	**White Mountain**	**21.84**	**58**	P	**P**	**04 14 15.5**	**+0.7**
	baz=275,SNR=490						
L19K				S	**S**	**04 18 17.9**	**+2.7**
	baz=275						
R17K	**Ugashik Creek**	**21.89**	**71**	P	**P**	**04 14 16.0**	**+0.6**
	baz=286,SNR=133						
R17K				S	**S**	**04 18 18.7**	**+2.5**
	baz=286						
O18K	**Koktuh Hills**	**21.99**	**65**	P	**P**	**04 14 16.5**	**0.0**
O18K	**Koktuh Hills**	**21.99**	**65**	P	**P**	**04 14 17.0**	**+0.6**
	baz=281,SNR=170						
O18K				S	**S**	**04 18 21.0**	**+2.9**
	baz=281						
Q17K	**Contact Creek**	**21.99**	**69**	P	**P**	**04 14 16.9**	**+0.4**
	baz=284,SNR=95						
Q17K				S	**S**	**04 18 19.7**	**+1.4**
	baz=284						
P18K	**Big Mountain,**	**22.07**	**66**	P	**P**	**04 14 17.4**	**+0.1**

P18K	**Big Mountain,**	**22.07**	**66**	P	**P**	**04 14 17.6**	**+0.3**
	baz=282,SNR=267						
P18K				S	**S**	**04 18 24.0**	**+4.3**
	baz=282						
M19K	**Big River Lodg**	**22.08**	**59**	P	**P**	**04 14 17.9**	**+0.5**
M19K	**Big River Lodg**	**22.08**	**59**	P	**P**	**04 14 18.6**	**+1.2**
	baz=276						
M19K				S	**S**	**04 18 22.6**	**+2.8**
	baz=276						
K20K	**Telida**	**22.11**	**55**	P	**P**	**04 14 18.2**	**+0.4**
K20K	**Telida**	**22.11**	**55**	P	**P**	**04 14 18.1**	**+0.4**
	baz=273,SNR=833						
K20K				S	**S**	**04 18 24.3**	**+3.9**
	baz=273						
N19K	**Bonanza Creek**	**22.18**	**62**	P	**P**	**04 14 19.2**	**+0.6**
N19K				IAMs_20	IAMs_20	04 23 40.0	
	comp=Z,189µm,18.0s						
N19K	**Bonanza Creek**	**22.18**	**62**	P	**P**	**04 14 19.0**	**+0.4**
	baz=279						
N19K				S	**S**	**04 18 26.5**	**+4.7**
	baz=279						
IMAR	**Indian Mountai**	**22.26**	**48**	P	**P**	**04 14 19.5**	**+0.2**
L20K	**Farewell, AK**	**22.26**	**57**	P	**P**	**04 14 19.4**	**0.0**
	baz=275,SNR=302						
L20K				S	**S**	**04 18 26.6**	**+3.4**
	baz=275						
A21K	**Barrow**	**22.28**	**34**	P	**P**	**04 14 18.9**	**-0.5**
A21K				IAmb	IAmb	04 14 34.7	
	comp=Z,2µm,1.1s						
A21K				IAMs_20	IAMs_20	04 24 01.9	
	comp=Z,161µm,18.0s						
A21K	**Barrow**	**22.28**	**34**	P	**P**	**04 14 18.8**	**-0.6**
	baz=251,SNR=115						
A21K				S	**S**	**04 18 23.1**	**-0.2**
	baz=251						
Q18K	**Katmai Hardscr**	**22.35**	**68**	P	**P**	**04 14 20.2**	**-0.2**
	baz=284,SNR=126						
Q18K				S	**S**	**04 18 27.0**	**+2.0**
	baz=284						
JOM	**Ohasama**	**22.36**	**228**	P	**P**	**04 14 20.2**	**-0.3**
O19K	**Port Alsworth**	**22.37**	**63**	P	**P**	**04 14 20.6**	**+0.1**
O19K				IAmb	IAmb	04 14 37.8	
	comp=Z,3µm,1.8s						
O19K				IAMs_20	IAMs_20	04 23 26.2	
	comp=Z,147µm,18.0s						
O19K	**Port Alsworth**	**22.37**	**63**	P	**P**	**04 14 20.8**	**+0.4**
	baz=281,SNR=144						
O19K				S	**S**	**04 18 28.5**	**+3.4**
	baz=281						
G21K	**Allakaket**	**22.39**	**47**	P	**P**	**04 14 21.8**	**+1.0**
	baz=266						
G21K				S	**S**	**04 18 27.9**	**+2.3**
	baz=266						
F21K	**Alatna River**	**22.47**	**45**	P	**P**	**04 14 21.6**	**+0.1**
	baz=264,SNR=1000						
F21K				S	**S**	**04 18 27.9**	**+1.0**
	baz=264						
H21K	**Melozitna Rive**	**22.64**	**49**	P	**P**	**04 14 23.4**	**+0.1**
H21K				IAmb	IAmb	04 14 45.7	
	comp=Z,2µm,1.5s						
H21K	**Melozitna Rive**	**22.64**	**49**	P	**P**	**04 14 23.7**	**+0.3**
	baz=269						
H21K				S	**S**	**04 18 30.5**	**+0.4**
	baz=269						
M20K	**Styx River**	**22.68**	**59**	P	**P**	**04 14 24.6**	**+0.7**
M20K				IAmb	IAmb	04 14 29.1	
	comp=Z,2µm,1.2s						
M20K				IAMs_20	IAMs_20	04 24 03.0	
	comp=Z,133µm,18.0s						
M20K	**Styx River**	**22.68**	**59**	P	**P**	**04 14 24.7**	**+0.8**
	baz=277						
M20K				S	**S**	**04 18 31.8**	**+0.8**
	baz=277						
CHUM	**Lake Minchumin**	**22.87**	**54**	P	**P**	**04 14 26.4**	**+0.7**
	baz=273,SNR=456						
CHUM				S	**S**	**04 18 37.9**	**+3.8**
	baz=273						
Q19K	**Cape Douglas,**	**22.97**	**66**	P	**P**	**04 14 26.4**	**-0.5**
Q19K				IAmb	IAmb	04 14 39.6	
	comp=Z,1µm,0.8s						
Q19K				IAMs_20	IAMs_20	04 23 15.0	
	comp=Z,151µm,20.0s						
Q19K	**Cape Douglas,**	**22.97**	**66**	P	**P**	**04 14 26.3**	**-0.5**
	baz=284,SNR=46						
Q19K				S	**S**	**04 18 35.7**	**-0.3**
	baz=284						
I21K	**Tanana**	**22.97**	**50**	P	**P**	**04 14 27.2**	**+0.4**
I21K				IAmb	IAmb	04 14 39.0	
	comp=Z,2µm,1.2s						
I21K	**Tanana**	**22.97**	**50**	P	**P**	**04 14 27.5**	**+0.7**
	baz=270						
I21K				S	**S**	**04 18 39.0**	**+3.1**
	baz=270						
ILSW	**Iliamna Southw**	**22.99**	**64**	P	**P**	**04 14 26.8**	**-0.4**
ILSW				IAmb	IAmb	04 14 43.6	
	comp=Z,3µm,1.6s						
F22K	**John River**	**23.00**	**44**	P	**P**	**04 14 27.7**	**+0.6**
	baz=265						
F22K				S	**S**	**04 18 36.4**	**0.0**
	baz=265						
PPLA	**Purkeypile**	**23.00**	**56**	P	**P**	**04 14 27.8**	**+0.5**
PPLA	**Purkeypile**	**23.00**	**56**	P	**P**	**04 14 28.1**	**+0.8**
	baz=276,SNR=185						
PPLA				S	**S**	**04 18 39.4**	**+2.6**
	baz=276						
CAST	**Castle Rocks**	**23.00**	**55**	P	**P**	**04 14 28.0**	**+0.8**
CAST				IAmb	IAmb	04 14 38.2	
	comp=Z,4µm,1.8s						
CAST	**Castle Rocks**	**23.00**	**55**	P	**P**	**04 14 27.6**	**+0.4**
	baz=275,SNR=245						
CAST				S	**S**	**04 18 38.6**	**+2.1**
	baz=275						
P19K	**Oil Pt**	**23.01**	**65**	P	**P**	**04 14 28.1**	**+0.8**
P19K				IAmb	IAmb	04 14 41.6	
	comp=Z,3µm,1.4s						
P19K				IAMs_20	IAMs_20	04 23 37.1	
	comp=Z,188µm,18.0s						
P19K	**Oil Pt**	**23.01**	**65**	P	**P**	**04 14 28.1**	**+0.8**
	baz=283						
P19K				S	**S**	**04 18 37.5**	**+0.8**
	baz=283						
USA0B	**Ussuriysk Arra**	**23.06**	**250**	P	**P**	**04 14 26.3**	**-1.6**
USA0B	**Ussuriysk Arra**	**23.06**	**250**	P	**P**	**04 14 26.3**	**-1.6**
USA0B				pmax	pmax		
	comp=Z,861nm,1.2s						
USRK	**Ussuriysk Ar.**	**23.06**	**250**	P	**P**	**04 14 26.3**	**-1.6**
	comp=Z,68nm,0.7s,baz=63,slow=8.8,SNR=52						
USRK				PcP	**PcP**	**04 18 17.6**	**+1.1**
	comp=Z,31nm,0.9s,baz=8.5,slow=2.9,SNR=4.9						
USRK				LR	LR	04 24 26.0	
	comp=Z,206µm,18.5s,baz=42,slow=39						
USRK				P3KPbc		04 47 56.4	
	comp=Z,1.4nm,0.9s,baz=352,slow=9.0,SNR=3.0						
	comp=Z,68nm,0.7s						
I45RU	**USSURIYSK INFR**	**23.07**	**250**	I	I	06 13 20.0	
	baz=53,slow=326,SNR=1.1						
RSO	**Redoubt South**	**23.08**	**62**	P	**P**	**04 14 28.5**	**+0.3**
SPCR	**Spurr Chakacha**	**23.21**	**60**	P	**P**	**04 14 29.8**	**+0.4**
	baz=280,SNR=274						
SPCR				S	**S**	**04 18 41.7**	**+1.5**
	baz=280						
O20K	**Slope Mountain**	**23.22**	**63**	P	**P**	**04 14 30.1**	**+0.6**
	baz=282,SNR=70						
O20K				S	**S**	**04 18 41.8**	**+1.5**
	baz=282						
SPU	**Mount Spurr**	**23.29**	**60**	P	**P**	**04 14 30.6**	**+0.4**
SKT	**Skwentna**	**23.41**	**58**	P	**P**	**04 14 31.9**	**+0.6**
SKT				IAmb	IAmb	04 14 34.9	
	comp=Z,1µm,1.0s						
SKT	**Skwentna**	**23.41**	**58**	P	**P**	**04 14 31.7**	**+0.4**
	baz=278,SNR=564						
SKT				S	**S**	**04 18 45.9**	**+2.5**
	baz=278						
BPAW	**Bear Paw Mtn.**	**23.44**	**53**	P	**P**	**04 14 32.0**	**+0.5**
BPAW				IAMs_20	IAMs_20	04 25 13.0	
	comp=Z,132µm,18.0s						
BPAW	**Bear Paw Mtn.**	**23.44**	**53**	P	**P**	**04 14 31.8**	**+0.2**
	baz=274,SNR=662						
BPAW				S	**S**	**04 18 44.6**	**+0.9**
	baz=274						
MLY	**Manley**	**23.50**	**51**	P	**P**	**04 14 32.6**	**+0.4**
MLY	**Manley**	**23.50**	**51**	P	**P**	**04 14 32.5**	**+0.3**
	baz=272,SNR=813						
MLY				S	**S**	**04 18 47.4**	**+2.6**
	baz=272						
KTH	**Kantishna Hill**	**23.51**	**54**	P	**P**	**04 14 32.6**	**+0.2**
KTH				IAmb	IAmb	04 14 38.4	
	comp=Z,3µm,1.4s						
OHAK	**Old Harbor**	**23.62**	**70**	P	**P**	**04 14 31.9**	**-1.4**
OHAK	**Old Harbor**	**23.62**	**70**	P	**P**	**04 14 32.9**	**-0.4**
OHAK	**Old Harbor**	**23.62**	**70**	P	**P**	**04 14 31.5**	**-1.8**
	baz=288,SNR=15						
OHAK				S	**S**	**04 18 42.6**	**-4.0**
	baz=288						
Q20K	**Shuyak Island**	**23.68**	**67**	P	**P**	**04 14 33.1**	**-0.8**
	baz=285,SNR=76						
Q20K				S	**S**	**04 18 45.3**	**-2.3**
	baz=285						
D23K	**Nanushuk River**	**23.71**	**41**	P	**P**	**04 14 34.5**	**+0.3**
	baz=263						
D23K				S	**S**	**04 18 48.8**	**+0.8**
	baz=263						
COLD	**Coldfoot**	**23.74**	**45**	P	**P**	**04 14 34.4**	**-0.1**
COLD	**Coldfoot**	**23.74**	**45**	P	**P**	**04 14 34.3**	**-0.1**
	baz=267						
COLD				S	**S**	**04 18 49.1**	**+0.6**
	baz=267						
JYA	**Atsumi**	**23.76**	**230**	P	**P**	**04 14 35.2**	**+0.4**
G23K	**Bananza Creek**	**23.79**	**46**	P	**P**	**04 14 34.9**	**-0.1**
	baz=269						
G23K				S	**S**	**04 18 51.1**	**+1.7**
	baz=269						
HOM	**Homer**	**23.80**	**64**	P	**P**	**04 14 34.5**	**-0.6**
HOM				IAmb	IAmb	04 14 48.8	
	comp=Z,2µm,0.9s						
HOM	**Homer**	**23.80**	**64**	P	**P**	**04 14 34.0**	**-1.0**
	baz=284,SNR=26						
HOM				S	**S**	**04 18 51.3**	**+1.9**
	baz=284						
CAPN	**Captain Cook N**	**23.80**	**61**	P	**P**	**04 14 35.7**	**+0.7**
CAPN				IAmb	IAmb	04 14 47.1	
	comp=Z,2µm,1.0s						
CAPN	**Captain Cook N**	**23.80**	**61**	P	**P**	**04 14 35.8**	**+0.8**
	baz=281,SNR=49						
CAPN				S	**S**	**04 18 53.5**	**+4.1**
	baz=281						
TRF	**Thorofare Moun**	**23.80**	**54**	P	**P**	**04 14 35.4**	**+0.1**
TRF	**Thorofare Moun**	**23.80**	**54**	P	**P**	**04 14 35.4**	**+0.1**
	baz=276,SNR=716						
TRF				S	**S**	**04 18 52.0**	**+2.1**
	baz=276						
KDAK	**Kodiak Island**	**23.81**	**69**	P	**P**	**04 14 33.5**	**-1.8**
	comp=Z,135nm,0.9s,baz=299,slow=5.6,SNR=72						
KDAK				PcP	**PcP**	**04 18 19.3**	**+1.4**
	comp=Z,61nm,1.0s,baz=277,slow=3.2,SNR=3.5						
KDAK				S	**S**	**04 18 48.7**	**-1.0**
	comp=Z,45nm,1.0s,baz=137,slow=19,SNR=1.6						
KDAK				LR	LR	04 24 12.3	
	comp=Z,172µm,18.0s,baz=295,slow=38						
	comp=Z,135nm,0.9s						
KDAK	**Kodiak Island**	**23.81**	**69**	P	**P**	**04 14 33.4**	**-1.8**
KDAK				IAmb	IAmb	04 15 00.6	
	comp=Z,3µm,2.0s						
KDAK	**Kodiak Island**	**23.81**	**69**	IAMs_20	IAMs_20	04 23 43.5	
	comp=Z,175µm,18.0s						
KDAK	**Kodiak Island**	**23.81**	**69**	⇑P	**P**	**04 14 33.4**	**-1.8**
KDAK	**Kodiak Island**	**23.81**	**69**	*c i*P	**P**	**04 14 33.2**	**-2.0**
KDAK				pmax	pmax		
	comp=Z,2µm,2.1s						
KDAK				MLR	MLR		
	comp=Z,232µm,17.0s						
KDAK	**Kodiak Island**	**23.81**	**69**	P	**P**	**04 14 33.9**	**-1.3**
	baz=287						
KDAK				S	**S**	**04 18 48.1**	**-1.6**
	baz=287						
SUA	**Susitna One**	**23.86**	**59**	P	**P**	**04 14 35.7**	**-0.1**
SUA				IAmb	IAmb	04 14 39.5	
	comp=Z,2µm,0.9s						
SUA	**Susitna One**	**23.86**	**59**	P	**P**	**04 14 35.4**	**-0.4**
	baz=280,SNR=1000						
SUA				S	**S**	**04 18 52.6**	**+1.9**
	baz=280						
JMM	**Marumori**	**23.93**	**227**	P	**P**	**04 14 35.6**	**-0.9**
JMM	**Marumori**	**23.93**	**227**	P	**P**	**04 14 36.8**	**+0.3**
JMM	**Marumori**	**23.93**	**227**	P	**P**	**04 14 36.6**	**+0.1**
CUT	**Chulitna**	**23.94**	**57**	P	**P**	**04 14 35.8**	**-0.5**
CUT	**Chulitna**	**23.94**	**57**	P	**P**	**04 14 35.9**	**-0.4**
	baz=278,SNR=161						
CUT				S	**S**	**04 18 52.6**	**+0.9**
	baz=278						
H23K	**Yukon River**	**23.98**	**49**	P	**P**	**04 14 37.5**	**+0.7**
H23K				IAmb	IAmb	04 14 46.6	
	comp=Z,3µm,1.1s						
E23K	**Chandalar**	**24.01**	**43**	P	**P**	**04 14 37.4**	**+0.2**
	baz=266						
E23K				S	**S**	**04 18 54.6**	**+1.6**
	baz=266						
MDJ	**Mudanjiang**	**24.03**	**254**	P	**P**	**04 14 35.0**	**-2.3**
MDJ				PP	**PnPn**	**04 15 06.0**	**-0.1**
MDJ				PcP	**PcP**	**04 18 15.0**	**-3.5**
MDJ				S	**S**	**04 18 53.8**	**+0.5**
MDJ				sS	sS	04 19 06.0	+4.7
MDJ				ScS	**ScS**	**04 25 40.3**	**-2.4**
MDJ				pmax	pmax		
	comp=Z,130nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,10µm,6.5s						
MDJ				LR	LR		
	comp=Z,158µm,15.4s						
MDJ				LR	LR		
	comp=Z,150µm,15.8s						
MDJ				LR	LR		
	comp=Z,358µm,13.8s						
MDJ	**Mudanjiang**	**24.03**	**254**	P	**P**	**04 14 35.7**	**-1.6**
MDJ				IAMs_20	IAMs_20	04 24 55.6	
	comp=Z,225µm,20.0s						
CNPM	**China Poot**	**24.03**	**64**	P	**P**	**04 14 36.0**	**-1.3**
CNPM				IAmb	IAmb	04 14 42.2	
	comp=Z,1µm,1.3s						
I23K	**Minto, Yukon-K**	**24.08**	**50**	P	**P**	**04 14 38.0**	**+0.4**
I23K				IAmb	IAmb	04 14 46.2	
	comp=Z,3µm,1.2s						
I23K	**Minto, Yukon-K**	**24.08**	**50**	P	**P**	**04 14 37.7**	**+0.1**
	baz=273,SNR=1000						
I23K				S	**S**	**04 18 56.6**	**+2.7**
	baz=273						
BWN	**Browne**	**24.10**	**53**	P	**P**	**04 14 38.5**	**+0.7**
BWN				IAMs_20	IAMs_20	04 24 56.4	
	comp=Z,132µm,18.0s						
BRLK	**Bradley Lake**	**24.14**	**64**	P	**P**	**04 14 36.7**	**-1.6**
FIS	**Fire Island**	**24.17**	**60**	P	**P**	**04 14 38.1**	**-0.4**
BRSE	**Bradley Lake S**	**24.22**	**64**	P	**P**	**04 14 38.0**	**-1.0**
	baz=284,SNR=88						
BRSE				S	**S**	**04 18 58.8**	**+2.5**
	baz=284						
NEA2	**Nenana**	**24.24**	**52**	P	**P**	**04 14 38.9**	**-0.3**
NEA2				IAMs_20	IAMs_20	04 25 31.1	
	comp=Z,143µm,18.0s						
NEA2	**Nenana**	**24.24**	**52**	P	**P**	**04 14 38.5**	**-0.7**
	baz=274,SNR=432						
NEA2				S	**S**	**04 19 00.2**	**+3.7**
	baz=274						
MCK	**McKinley**	**24.38**	**54**	P	**P**	**04 14 40.1**	**-0.3**
MCK				IAmb	IAmb	04 14 44.7	
	comp=Z,2µm,1.2s						
MCK	**McKinley**	**24.38**	**54**	P	**P**	**04 14 40.1**	**-0.3**
MCK				pmax	pmax		
	comp=Z,2µm,1.2s						
MCK	**McKinley**	**24.38**	**54**	P	**P**	**04 14 40.1**	**-0.3**
	baz=276,SNR=965						
MCK				S	**S**	**04 18 57.2**	**-1.6**
	baz=276						
RC01	**Rabbit Creek A**	**24.41**	**60**	P	**P**	**04 14 39.5**	**-1.3**
RC01	**Rabbit Creek A**	**24.41**	**60**	P	**P**	**04 14 40.1**	**-0.7**
	baz=282,SNR=64						
RC01				S	**S**	**04 18 58.3**	**-1.0**
	baz=282						
E24K	**Your Creek**	**24.44**	**43**	P	**P**	**04 14 41.0**	**0.0**
	baz=267						
E24K				S	**S**	**04 19 00.5**	**+0.8**
	baz=267						
RND	**Reindeer**	**24.45**	**54**	P	**P**	**04 14 40.5**	**-0.7**
RND	**Reindeer**	**24.45**	**54**	P	**P**	**04 14 40.5**	**-0.7**
RND				pmax	pmax		
	comp=Z,544nm,1.0s						
RND				MLR	MLR		
	comp=Z,97µm,18.0s						
BNX	**BinXian**	**24.45**	**258**	⇑P	**P**	**04 14 40.5**	**-0.7**
BNX				pP	**pP**	**04 14 46.5**	**-0.4**
BNX				sP	**sP**	**04 14 49.0**	**-0.1**
BNX				PP	**PnPn**	**04 15 17.0**	**+5.1**
BNX				S	**S**	**04 19 00.0**	**-0.2**
BNX				sS	**sS**	**04 19 10.0**	**+1.5**
BNX				pmax	pmax		
	comp=Z,420nm,1.6s						
BNX				pmax	pmax		
	comp=Z,10µm,4.7s						
BNX				LR	LR		
	comp=Z,96µm,20.1s						
BNX				LR	LR		
	comp=Z,166µm,14.0s						
BNX				LR	LR		
	comp=Z,150µm,15.2s						
C24K	**Franklin Bluff**	**24.50**	**39**	P	**P**	**04 14 41.1**	**-0.4**
	baz=263,SNR=878						
C24K				S	**S**	**04 19 00.4**	**-0.2**
	baz=263						
O22K	**Cooper Landing**	**24.55**	**62**	P	**P**	**04 14 41.0**	**-0.9**
O22K				IAMs_20	IAMs_20	04 24 58.6	
	comp=Z,155µm,18.0s						
O22K	**Cooper Landing**	**24.55**	**62**	P	**P**	**04 14 41.2**	**-0.8**
	baz=283,SNR=68						
O22K				S	**S**	**04 18 57.5**	**-4.0**
	baz=283						
MDM	**Murphy Dome**	**24.57**	**51**	P	**P**	**04 14 42.0**	**-0.2**
PMR	**Palmer**	**24.60**	**59**	P	**P**	**04 14 41.3**	**-1.1**
PMR	**Palmer**	**24.60**	**59**	P	**P**	**04 14 42.4**	**0.0**
PMR	**Palmer**	**24.60**	**59**	P	**P**	**04 14 41.3**	**-1.1**
PMR				pmax	pmax		
	comp=Z,329nm,0.9s						
PMR	**Palmer**	**24.60**	**59**	P	**P**	**04 14 40.6**	**-1.8**
	baz=281,SNR=100						
PMR				S	**S**	**04 19 02.1**	**-0.2**
	baz=281						
F24K	**Squaw Lake**	**24.65**	**44**	P	**P**	**04 14 42.5**	**-0.3**
	baz=269,SNR=406						
F24K				S	**S**	**04 19 03.8**	**+0.7**
	baz=269						
GHO	**Glory Hole Cre**	**24.67**	**58**	P	**P**	**04 14 42.2**	**-0.9**
H24K	**Noodor Dome**	**24.67**	**48**	P	**P**	**04 14 43.5**	**+0.4**
H24K	**Noodor Dome**	**24.67**	**48**	P	**P**	**04 14 43.6**	**+0.5**
	baz=273						
H24K				S	**S**	**04 19 05.4**	**+2.0**
	baz=273						
WRH	**Wood River Hil**	**24.67**	**52**	P	**P**	**04 14 43.2**	**+0.1**
WRH				IAMs_20	IAMs_20	04 25 45.5	
	comp=Z,147µm,18.0s						
TCOL	**CIGO, UAF Yank**	**24.73**	**51**	P	**P**	**04 14 43.4**	**-0.2**
TCOL				IAmb	IAmb	04 14 55.7	
	comp=Z,2µm,1.1s						
TCOL	**CIGO, UAF Yank**	**24.73**	**51**	P	**P**	**04 14 43.6**	**0.0**
	baz=275,SNR=227						
TCOL				S	**S**	**04 19 06.1**	**+1.7**
	baz=275						
I53US	**FAIRBANKS INFR**	**24.73**	**51**	I	I	06 33 20.0	
	baz=279,slow=334,SNR=2.2						
COLA	**College**	**24.74**	**51**	P	**P**	**04 14 43.7**	**+0.1**
COLA				IAmb	IAmb	04 14 55.7	
	comp=Z,2µm,1.1s						
COLA	**College**	**24.74**	**51**	P	**P**	**04 14 43.5**	**-0.1**
COLA	**College**	**24.74**	**51**	⇑P	**P**	**04 14 43.4**	**-0.3**
COLA	**College**	**24.74**	**51**	*c i*P	**P**	**04 14 43.2**	**-0.4**
COLA				pmax	pmax		
	comp=Z,2µm,1.1s						
COLA				MLR	MLR		
	comp=Z,103µm,17.0s						
COLA	**College**	**24.74**	**51**	P	**P**	**04 14 43.3**	**-0.3**
	baz=275						
COLA				S	**S**	**04 19 11.0**	**+6.6**
	baz=275						
CCB	**Clear Creek Bu**	**24.78**	**51**	P	**P**	**04 14 44.0**	**0.0**
G24K	**Hadweenzic Riv**	**24.80**	**46**	P	**P**	**04 14 44.8**	**+0.5**
	baz=271						
G24K				S	**S**	**04 19 06.7**	**+1.1**
	baz=271						
JSD	**Sado**	**24.84**	**231**	P	**P**	**04 14 44.3**	**-0.5**
JSD	**Sado**	**24.84**	**231**	P	**P**	**04 14 44.8**	**0.0**
JSD	**Sado**	**24.84**	**231**	P	**P**	**04 14 44.4**	**-0.4**
POKR	**Poker Plat Res**	**24.90**	**50**	P	**P**	**04 14 44.6**	**-0.5**
POKR				IAmb	IAmb	04 14 57.5	
	comp=Z,1µm,0.9s						
POKR	**Poker Plat Res**	**24.90**	**50**	P	**P**	**04 14 45.0**	**-0.1**
	baz=274,SNR=396						
POKR				S	**S**	**04 19 08.2**	**+1.2**
	baz=274						
SML	**Sawmill**	**24.94**	**58**	P	**P**	**04 14 44.5**	**-1.1**
SML				IAmb	IAmb	04 14 58.8	
	comp=Z,2µm,0.8s						
SML	**Sawmill**	**24.94**	**58**	P	**P**	**04 14 44.9**	**-0.6**
	baz=281,SNR=283						
SML				S	**S**	**04 19 07.3**	**-0.6**
	baz=281						
KNK	**Knik Glacier**	**24.95**	**59**	P	**P**	**04 14 45.2**	**-0.4**
KNK				IAmb	IAmb	04 15 00.0	
	comp=Z,974nm,0.8s						
KNK	**Knik Glacier**	**24.95**	**59**	P	**P**	**04 14 45.1**	**-0.6**
	baz=282,SNR=215						
KNK				S	**S**	**04 19 07.5**	**-0.6**
	baz=282						
PWL	**Port Wells**	**25.13**	**60**	P	**P**	**04 14 46.6**	**-0.7**
PWL				IAMs_20	IAMs_20	04 25 36.0	
	comp=Z,179µm,18.0s						
PWL	**Port Wells**	**25.13**	**60**	P	**P**	**04 14 46.6**	**-0.7**
	baz=283,SNR=382						
PWL				S	**S**	**04 19 09.1**	**-1.8**
	baz=283						
IL31		**25.16**	**51**	P	**P**	**04 14 47.1**	**-0.3**
IL31				IAmb	IAmb	04 14 59.8	
	comp=Z,1µm,0.8s						
ILAR	**Eielson Array**	**25.16**	**51**	P	**P**	**04 14 46.8**	**-0.7**
	comp=Z,384nm,0.8s,baz=264,slow=8.5,SNR=646						
ILAR				PcP	**PcP**	**04 18 20.4**	**-0.3**
	comp=Z,31nm,1.1s,baz=267,slow=2.5,SNR=3.0						
ILAR				S	**S**	**04 19 14.4**	**+3.1**
	comp=Z,5.1nm,0.9s,baz=270,slow=14,SNR=1.0						
ILAR				LR	LR	04 24 49.1	
	comp=Z,62µm,19.6s,baz=276,slow=37						
ILAR				P3KPbc		04 47 47.1	
	comp=Z,4.2nm,0.8s,baz=101,slow=3.6,SNR=35						
	comp=Z,384nm,0.8s						
ILAR	**Eielson Array**	**25.16**	**51**	P	**P**	**04 14 47.1**	**-0.3**
HDA	**Harding Lake**	**25.17**	**52**	P	**P**	**04 14 46.8**	**-0.7**
HDA				IAmb	IAmb	04 15 14.6	
	comp=Z,900nm,1.0s						
HDA				IAMs_20	IAMs_20	04 26 08.7	
	comp=Z,148µm,18.0s						
HDA	**Harding Lake**	**25.17**	**52**	P	**P**	**04 14 46.6**	**-1.0**
	baz=276,SNR=288						
HDA				S	**S**	**04 19 10.0**	**-1.4**
	baz=276						
HDA				S	**S**	**04 19 10.0**	**-1.4**
	baz=276						
M23K	**Glacier View**	**25.22**	**58**	P	**P**	**04 14 47.8**	**-0.3**
	baz=281,SNR=453						
M23K				S	**S**	**04 19 13.4**	**+1.0**
	baz=281						
D25K	**Kavik River**	**25.28**	**40**	P	**P**	**04 14 48.6**	**0.0**
	baz=266						
D25K				S	**S**	**04 19 11.6**	**-1.6**
	baz=266						
G25K	**Bearman Lake**	**25.35**	**46**	P	**P**	**04 14 49.7**	**+0.6**
	baz=272						
G25K				S	**S**	**04 19 17.2**	**+3.1**
	baz=272						
SCM	**Sheep Creek Mo**	**25.40**	**58**	P	**P**	**04 14 49.9**	**+0.1**
SCM	**Sheep Creek Mo**	**25.40**	**58**	P	**P**	**04 14 49.9**	**+0.1**
SCM				pmax	pmax		
	comp=Z,3µm,1.0s						
SCM				MLR	MLR		
	comp=Z,76µm,18.0s						
SCM	**Sheep Creek Mo**	**25.40**	**58**	P	**P**	**04 14 50.0**	**+0.2**
	baz=282,SNR=551						
SCM				S	**S**	**04 19 15.7**	**+0.4**
	baz=282						
F25K	**Christian Rive**	**25.51**	**44**	P	**P**	**04 14 51.2**	**+0.5**
	baz=271						
F25K				S	**S**	**04 19 19.4**	**+2.5**
	baz=271						
E25K	**Arctic Village**	**25.54**	**43**	P	**P**	**04 14 51.1**	**+0.3**
	baz=270,SNR=1000						
E25K				S	**S**	**04 19 18.2**	**+1.0**
	baz=270						
PRP	**Porcupine Dome**	**25.66**	**49**	P	**P**	**04 14 52.4**	**+0.2**
PRP				IAmb	IAmb	04 14 55.8	
	comp=Z,1µm,1.1s						
PRP	**Porcupine Dome**	**25.66**	**49**	P	**P**	**04 14 52.1**	**-0.1**
	baz=275,SNR=1000						
PRP				S	**S**	**04 19 20.8**	**+1.3**
	baz=275						
FYU	**Fort Yukon**	**25.70**	**47**	P	**P**	**04 14 52.9**	**+0.5**

K24K	**Donnelly Dome**	**25.76**	**53**	P	**P**	**04 14 51.6**	**-1.4**
	baz=279,SNR=166						
K24K				S	**S**	**04 19 21.7**	**+0.9**
	baz=279						
P23K	**Montague Islan**	**25.79**	**62**	P	**P**	**04 14 52.8**	**-0.4**
	baz=285,SNR=62						
P23K				S	**S**	**04 19 21.4**	**+0.1**
	baz=285						
C26K	**Camden Bay**	**25.83**	**39**	P	**P**	**04 14 53.8**	**+0.3**
	baz=267						
C26K				S	**S**	**04 19 23.6**	**+1.9**
	baz=267						
BOD	**Bodaibo**	**25.88**	**293**	⇓*i*P	**P**	**04 14 54.5**	**+0.5**
BOD				pmax	pmax		
	comp=Z,3µm,1.5s						
M24K	**Tolsona, Glenn**	**25.88**	**57**	P	**P**	**04 14 54.7**	**+0.6**
M24K	**Tolsona, Glenn**	**25.88**	**57**	P	**P**	**04 14 54.2**	**+0.1**
	baz=282,SNR=185						
M24K				S	**S**	**04 19 24.2**	**+1.4**
	baz=282						
BMAR	**Burnt Mountain**	**25.92**	**45**	P	**P**	**04 14 54.9**	**+0.5**
PAX	**Paxson**	**26.03**	**55**	P	**P**	**04 14 54.8**	**-0.7**
PAX				IAmb	IAmb	04 15 24.8	
	comp=Z,973nm,1.1s						
PAX	**Paxson**	**26.03**	**55**	P	**P**	**04 14 54.8**	**-0.7**
PAX				pmax	pmax		
	comp=Z,973nm,1.1s						
PAX	**Paxson**	**26.03**	**55**	P	**P**	**04 14 54.4**	**-1.1**
	baz=281,SNR=290						
PAX				S	**S**	**04 19 24.8**	**-0.5**
	baz=281						
F26K	**Sheenjek River**	**26.08**	**44**	P	**P**	**04 14 56.5**	**+0.7**
	baz=272						
F26K				S	**S**	**04 19 25.2**	**-0.6**
	baz=272						
MJB9	**Matsu-Tunnel**	**26.12**	**229**	P	**P**	**04 14 56.7**	**+0.2**
MAJO	**Matsushiro**	**26.13**	**229**	P	**P**	**04 14 56.7**	**+0.2**
MAJO	**Matsushiro**	**26.13**	**229**	IAMs_20	IAMs_20	04 26 00.7	
	comp=Z,194µm,20.0s						
MAJO	**Matsushiro**	**26.13**	**229**	P	**P**	**04 14 58.3**	**+1.8**
MAJO	**Matsushiro**	**26.13**	**229***c*	*i*P	**P**	**04 14 55.2**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,405nm,1.0s						
MAJO				MLR	MLR		
	comp=Z,180µm,19.0s						
MAT	**Matsushiro**	**26.13**	**229**	P	**P**	**04 14 56.1**	**-0.3**
MJAR	**Matsushiro Arr**	**26.13**	**229**	P	**P**	**04 14 56.1**	**-0.4**
	comp=Z,114nm,0.9s,baz=24,slow=8.0,SNR=87						
MJAR				PcP	**PcP**	**04 18 24.2**	**+0.8**
	comp=Z,29nm,1.0s,baz=343,slow=1.8,SNR=4.4						
MJAR				ScP	**ScP**	**04 22 03.6**	**+1.8**
	comp=Z,1.1nm,0.3s,baz=50,slow=0.4,SNR=3.4						
MJAR				LR	LR	04 26 12.3	
	comp=Z,209µm,20.3s,baz=26,slow=39						
MJAR				P3KPbc		04 47 44.8	
	comp=Z,1.9nm,0.6s,baz=198,slow=5.7,SNR=5.4						
	comp=Z,114nm,0.9s						
KLU	**Klutina**	**26.13**	**58**	P	**P**	**04 14 56.3**	**-0.1**
KLU				IAmb	IAmb	04 15 08.9	
	comp=Z,1µm,1.0s						
KLU	**Klutina**	**26.13**	**58**	P	**P**	**04 14 56.3**	**-0.1**
	baz=283,SNR=198						
KLU				S	**S**	**04 19 27.9**	**+1.1**
	baz=283						
RIDG	**Independent Ri**	**26.18**	**53**	P	**P**	**04 14 55.5**	**-1.3**
RIDG				IAmb	IAmb	04 15 15.8	
	comp=Z,984nm,1.0s						
RIDG	**Independent Ri**	**26.18**	**53**	P	**P**	**04 14 55.4**	**-1.3**
	baz=280,SNR=364						
RIDG				S	**S**	**04 19 25.5**	**-2.0**
	baz=280						
C27K	**Jago River**	**26.23**	**40**	P	**P**	**04 14 57.2**	**0.0**
	baz=268,SNR=643						
C27K				S	**S**	**04 19 25.9**	**-2.3**
	baz=268						
G26K	**Porcupine Rive**	**26.25**	**46**	P	**P**	**04 14 57.9**	**+0.6**
	baz=274						
G26K				S	**S**	**04 19 31.7**	**+3.3**
	baz=274						
DIV	**Divide**	**26.28**	**59**	P	**P**	**04 14 57.5**	**-0.3**
HARP	**HAARP**	**26.29**	**56**	P	**P**	**04 14 57.5**	**-0.2**
	baz=282,SNR=64						
HARP				S	**S**	**04 19 29.3**	**+0.2**
	baz=282						
JRY	**Ryogami san**	**26.29**	**228**	P	**P**	**04 14 57.4**	**-0.6**
EYAK	**Cordova Ski Ar**	**26.44**	**60**	P	**P**	**04 14 58.9**	**-0.2**
EYAK	**Cordova Ski Ar**	**26.44**	**60**	P	**P**	**04 14 59.2**	**+0.1**
EYAK	**Cordova Ski Ar**	**26.44**	**60**	P	**P**	**04 14 58.8**	**-0.2**
	baz=285,SNR=52						
EYAK				S	**S**	**04 19 32.2**	**+0.7**
	baz=285						
Q23K	**Middleton Isla**	**26.46**	**63**	P	**P**	**04 14 59.3**	**0.0**
Q23K				IAmb	IAmb	04 15 12.5	
	comp=Z,1µm,0.8s						
Q23K	**Middleton Isla**	**26.46**	**63**	P	**P**	**04 14 59.2**	**0.0**
	baz=287,SNR=7.4						
MID	**Middleton Isla**	**26.46**	**63**	P	**P**	**04 14 59.3**	**+0.1**
MID				IAmb	IAmb	04 15 12.5	
	comp=Z,1µm,0.8s						
MID	**Middleton Isla**	**26.46**	**63**	P	**P**	**04 14 59.4**	**+0.1**
MID	**Middleton Isla**	**26.46**	**63**	P	**P**	**04 14 59.3**	**+0.1**
MID				pmax	pmax		
	comp=Z,1µm,0.8s						
SCRK	**Sand Creek**	**26.51**	**52**	P	**P**	**04 14 58.8**	**-1.1**
SCRK				IAmb	IAmb	04 15 01.4	
	comp=Z,956nm,0.9s						
SCRK	**Sand Creek**	**26.51**	**52**	P	**P**	**04 14 58.4**	**-1.5**
	baz=280,SNR=1000						
SCRK				S	**S**	**04 19 31.3**	**-1.6**
	baz=280						
DOT	**Dot Lake**	**26.54**	**53**	P	**P**	**04 14 58.7**	**-1.3**
HIA	**Hailar**	**26.55**	**272**	P	**P**	**04 14 59.5**	**-0.8**
HIA	**Hailar**	**26.55**	**272**	IAMs_20	IAMs_20	04 26 54.5	
	comp=Z,172µm,18.0s						
HIA	**Hailar**	**26.55**	**272***c*	*i*P	**P**	**04 14 58.8**	**-1.5**
HIA				pmax	pmax		
	comp=Z,117nm,1.0s						
HIA				MLR	MLR		
	comp=Z,154µm,16.0s						
I26K	**Coal Creek Min**	**26.67**	**49**	P	**P**	**04 14 59.5**	**-1.6**
I26K	**Coal Creek Min**	**26.67**	**49**	P	**P**	**04 14 59.4**	**-1.7**
	baz=278						
I26K				S	**S**	**04 19 36.9**	**+1.8**
	baz=278						
N25K	**Chitina, Valde**	**26.72**	**58**	P	**P**	**04 15 01.9**	**+0.2**
N25K	**Chitina, Valde**	**26.72**	**58**	P	**P**	**04 15 01.9**	**+0.2**
	baz=284,SNR=135						
N25K				S	**S**	**04 19 37.5**	**+1.4**
	baz=284						
JGN	**Niukaw**	**26.77**	**230**	P	**P**	**04 15 01.9**	**-0.5**
CN2	**Changchun**	**26.78**	**257**	*e*P	**P**	**04 14 57.0**	**-5.3**
CN2				*e*sP	pP	04 15 03.8	-4.1
CN2				*e*PP	**PnPn**	**04 15 40.8**	**-2.9**
CN2				*e*S	**S**	**04 19 29.0**	**-8.1**
CN2				*e*sS	pS	04 19 36.0	-7.7
CN2				pmax	pmax		
	comp=Z,20nm,1.7s						
CN2				pmax	pmax		
	comp=Z,3µm,8.0s						
CN2				LR	LR		
	comp=N,128µm,20.0s						
CN2				LR	LR		
	comp=E,112µm,20.0s						
CN2				LR	LR		
	comp=Z,166µm,21.0s						
MENT	**Mentasta**	**26.82**	**55**	P	**P**	**04 15 02.3**	**-0.3**
L26K	**Log Cabin Wild**	**26.97**	**54**	P	**P**	**04 15 03.5**	**-0.4**
L26K				IAMs_20	IAMs_20	04 26 07.4	
	comp=Z,142µm,20.0s						
L26K	**Log Cabin Wild**	**26.97**	**54**	P	**P**	**04 15 03.3**	**-0.6**
	baz=282,SNR=129						
L26K				S	**S**	**04 19 36.9**	**-3.1**
	baz=282						
E27K	**Coleen River**	**27.02**	**43**	P	**P**	**04 15 04.3**	**0.0**
	baz=273						
E27K				S	**S**	**04 19 42.8**	**+2.2**
	baz=273						
G27K	**Doyon Strip**	**27.10**	**46**	P	**P**	**04 15 05.5**	**+0.4**
	baz=276,SNR=663						
G27K				S	**S**	**04 19 44.3**	**+2.3**
	baz=276						
GLB	**Gilahina Butte**	**27.12**	**58**	P	**P**	**04 15 05.8**	**+0.5**
H27K	**Steamboat Moun**	**27.22**	**47**	P	**P**	**04 15 07.0**	**+0.9**
	baz=277						
H27K				S	**S**	**04 19 46.1**	**+2.2**
	baz=277						

I27K	**Kandik River**	**27.27**	**48**	P	**P**	**04 15 06.3**	**-0.2**
	baz=278						
I27K				S	**S**	**04 19 44.4**	**-0.3**
	baz=278						
M26K	**Nabesna, AK**	**27.27**	**56**	P	**P**	**04 15 07.5**	**+0.9**
M26K				IAmb	IAmb	04 15 31.0	
	comp=Z,2µm,1.2s						
M26K				IAMs_20	IAMs_20	04 25 57.2	
	comp=Z,114µm,20.0s						
M26K	**Nabesna, AK**	**27.27**	**56**	P	**P**	**04 15 07.2**	**+0.6**
	baz=283,SNR=588						
M26K				S	**S**	**04 19 45.9**	**+1.2**
	baz=283						
JGF	**Kuroka**	**27.29**	**230**	P	**P**	**04 15 07.2**	**+0.2**
JGF	**Kuroka**	**27.29**	**230**	P	**P**	**04 15 07.6**	**+0.6**
JGF	**Kuroka**	**27.29**	**230**	P	**P**	**04 15 07.3**	**+0.3**
K27K	**Chicken**	**27.33**	**52**	P	**P**	**04 15 06.9**	**-0.2**
K27K				IAmb	IAmb	04 15 09.6	
	comp=Z,849nm,1.1s						
K27K				IAMs_20	IAMs_20	04 27 26.9	
	comp=Z,105µm,18.0s						
K27K	**Chicken**	**27.33**	**52**	P	**P**	**04 15 07.0**	**-0.1**
	baz=281						
K27K				S	**S**	**04 19 45.0**	**-0.6**
	baz=281						
VRDI	**Verde Repeater**	**27.35**	**58**	P	**P**	**04 15 07.8**	**+0.3**
MCARA	**McCarthy VSAT**	**27.50**	**58**	P	**P**	**04 15 09.4**	**+0.7**
MCARA				IAmb	IAmb	04 15 13.8	
	comp=Z,1µm,1.1s						
MCARA	**McCarthy VSAT**	**27.50**	**58**	P	**P**	**04 15 09.5**	**+0.8**
	baz=285,SNR=263						
MCARA				S	**S**	**04 19 48.7**	**+0.4**
	baz=285						
EGAK	**Eagle**	**27.59**	**50**	P	**P**	**04 15 08.6**	**-0.7**
EGAK				IAmb	IAmb	04 15 11.6	
	comp=Z,1µm,1.1s						
EGAK	**Eagle**	**27.59**	**50**	⇓P	**P**	**04 15 07.9**	**-1.5**
EGAK	**Eagle**	**27.59**	**50**	P	**P**	**04 15 08.2**	**-1.1**
	baz=280,SNR=844						
EGAK				S	**S**	**04 19 48.7**	**-0.9**
	baz=280						
L27K	**Beaver Creek,**	**27.64**	**54**	P	**P**	**04 15 10.5**	**+0.6**
L27K				IAmb	IAmb	04 15 13.8	
	comp=Z,859nm,1.1s						
L27K				IAMs_20	IAMs_20	04 27 06.1	
	comp=Z,128µm,18.0s						
L27K	**Beaver Creek,**	**27.64**	**54**	P	**P**	**04 15 10.7**	**+0.7**
	baz=283						
L27K				S	**S**	**04 19 50.6**	**+0.1**
	baz=283						
INU	**Inuyama**	**27.64**	**230**	P	**P**	**04 15 09.6**	**-0.5**
INU				IAMs_20	IAMs_20	04 26 49.2	
	comp=Z,134µm,20.0s						
INU	**Inuyama**	**27.64**	**230**	P	**P**	**04 15 13.0**	**+2.9**
BCAR	**Beaver Creek A**	**27.66**	**54**	P	**P**	**04 15 10.7**	**+0.6**
M27K	**Edge Creek, AK**	**27.78**	**55**	P	**P**	**04 15 12.4**	**+1.1**
M27K				IAmb	IAmb	04 15 34.1	
	comp=Z,1µm,1.1s						
M27K				IAMs_20	IAMs_20	04 26 22.9	
	comp=Z,106µm,20.0s						
M27K	**Edge Creek, AK**	**27.78**	**55**	P	**P**	**04 15 12.2**	**+0.9**
	baz=284,SNR=474						
M27K				S	**S**	**04 19 52.6**	**-0.4**
	baz=284						
BARN	**Barnard Glacie**	**28.23**	**58**	P	**P**	**04 15 16.1**	**+0.7**
BARN				IAmb	IAmb	04 15 23.6	
	comp=Z,787nm,0.9s						
BVCY	**Beaver Creek**	**28.23**	**55**	P	**P**	**04 15 15.8**	**+0.6**
	baz=285,SNR=240						
BVCY				S	**S**	**04 20 00.1**	**+0.3**
	baz=285						
DAWY	**Dawson**	**28.48**	**51**	P	**P**	**04 15 17.4**	**0.0**
DAWY	**Dawson**	**28.48**	**51**	⇑P	**P**	**04 15 16.7**	**-0.7**
DAWY	**Dawson**	**28.48**	**51**	P	**P**	**04 15 16.9**	**-0.5**
	baz=283,SNR=135						
DAWY				S	**S**	**04 20 03.0**	**-0.8**
	baz=283						
CIT	**Chita**	**28.50**	**281**	*e*P	**P**	**04 15 18.2**	**+0.5**
CIT				*e*		04 16 31.1	
CIT				*e*		04 18 30.2	
CIT				*e*		04 26 02.5	
CIT				pmax	pmax		
	comp=Z,2µm,2.9s						
YUK3	**Moose Creek**	**28.58**	**56**	P	**P**	**04 15 18.7**	**+0.2**
	baz=286,SNR=91						
YUK3				S	**S**	**04 20 05.3**	**-0.3**
	baz=286						
JIE	**Ise**	**28.60**	**229**	P	**P**	**04 15 18.8**	**+0.2**
I29M	**Ogilvie Camp,**	**28.67**	**48**	P	**P**	**04 15 19.3**	**+0.3**
I29M				IAmb	IAmb	04 15 22.5	
	comp=Z,937nm,1.1s						
I29M	**Ogilvie Camp,**	**28.67**	**48**	P	**P**	**04 15 18.9**	**-0.2**
	baz=281,SNR=634						
I29M				S	**S**	**04 20 06.7**	**+0.1**
	baz=281						
J29M	**Klondike Camp**	**28.90**	**50**	P	**P**	**04 15 20.9**	**-0.3**
J29M	**Klondike Camp**	**28.90**	**50**	P	**P**	**04 15 20.8**	**-0.4**
	baz=283,SNR=60						
J29M				S	**S**	**04 20 09.5**	**-0.8**
	baz=283						
O28M	**Mount Upton**	**29.00**	**58**	P	**P**	**04 15 23.0**	**+0.7**
	baz=288						
O28M				S	**S**	**04 20 13.3**	**+0.9**
	baz=288						
YUK8	**Steele Glacier**	**29.04**	**57**	P	**P**	**04 15 22.6**	**-0.1**
	baz=288,SNR=104						
YUK8				S	**S**	**04 20 13.7**	**+0.7**
	baz=288						
EPYK	**Eagle Plains**	**29.12**	**46**	P	**P**	**04 15 23.4**	**+0.3**
EPYK	**Eagle Plains**	**29.12**	**46**	P	**P**	**04 15 23.1**	**0.0**
	baz=281,SNR=307						
EPYK				S	**S**	**04 20 12.8**	**-0.9**
	baz=281						
SNY	**Shenyang**	**29.13**	**256**	⇑P	**P**	**04 15 21.0**	**-2.3**
SNY				S	**S**	**04 20 17.0**	**+2.8**
SNY				pmax	pmax		
	comp=Z,6µm,11.7s						
SNY				LR	LR		
	comp=Z,266µm,17.0s						
SNY				LR	LR		
	comp=Z,117µm,13.4s						
SNY				LR	LR		
	comp=Z,299µm,14.3s						
PINM	**Pinnacle**	**29.19**	**60**	P	**P**	**04 15 24.6**	**+0.9**
	baz=289,SNR=67						
PINM				S	**S**	**04 20 15.7**	**+0.8**
	baz=289						
G30M	**tAoh Zraii Nji**	**29.20**	**45**	P	**P**	**04 15 23.6**	**-0.2**
	baz=280						
G30M				S	**S**	**04 20 22.7**	**+7.7**
	baz=280						
JAD	**Aida**	**29.22**	**234**	P	**P**	**04 15 24.3**	**+0.1**
L29M	**L29M**	**29.26**	**53**	P	**P**	**04 15 25.0**	**+0.7**
	baz=285						
L29M				S	**S**	**04 20 16.3**	**+0.2**
	baz=285						
M29M	**Somme Creek**	**29.30**	**54**	P	**P**	**04 15 25.3**	**+0.6**
	baz=286,SNR=350						
M29M				S	**S**	**04 20 17.3**	**+0.6**
	baz=286						
K29M	**Barlow Dome**	**29.34**	**51**	P	**P**	**04 15 24.8**	**-0.3**
	baz=285,SNR=161						
K29M				S	**S**	**04 20 17.6**	**+0.3**
	baz=285						
BCPM	**Bancas Point**	**29.53**	**60**	P	**P**	**04 15 26.5**	**-0.2**
BCPM				IAmb	IAmb	04 15 39.8	
	comp=Z,722nm,0.8s						
YUK4	**Talbot Arm**	**29.54**	**57**	P	**P**	**04 15 27.4**	**+0.4**
	baz=288,SNR=118						
JHS	**Saijyo**	**29.64**	**235**	P	**P**	**04 15 26.6**	**-1.3**
JHS	**Saijyo**	**29.64**	**235**	P	**P**	**04 15 28.3**	**+0.4**
JHS	**Saijyo**	**29.64**	**235**	⇑P	**P**	**04 15 26.9**	**-1.0**
PNL	**Peninsula**	**29.74**	**60**	P	**P**	**04 15 28.8**	**+0.2**
PNL	**Peninsula**	**29.74**	**60**	P	**P**	**04 15 28.6**	**+0.1**
	baz=290,SNR=53						
PNL				S	**S**	**04 20 24.1**	**+0.6**
	baz=290						
YUK6	**Outpost Mounta**	**29.80**	**57**	P	**P**	**04 15 29.7**	**+0.4**
	baz=289,SNR=96						
YUK6				S	**S**	**04 20 25.3**	**+0.5**
	baz=289						
SUJ	**Sinuiju**	**29.88**	**252**	P	**P**	**04 15 27.8**	**-2.2**
SUJ				S	**S**	**04 20 24.3**	**-1.7**
SUJ				AmB			
	comp=Z,768nm,1.7s						
SUJ				AMS	AMS		

	comp=Z,219µm,20.0s						
O29M	**Mount Kennedy**	**29.91**	**59**	P	**P**	**04 15 30.8**	**+0.6**
	baz=290						
O29M				S	**S**	**04 20 27.0**	**+0.6**
	baz=290						
INK	**Inuvik**	**29.99**	**42**	P	**P**	**04 15 30.4**	**-0.2**
	comp=Z,236nm,0.9s,baz=288,slow=6.9,SNR=270						
INK				PcP	**PcP**	**04 18 32.7**	**+0.4**
	comp=Z,97nm,1.0s,baz=301,slow=4.9,SNR=3.6						
INK				LR	LR	04 29 26.3	
	comp=Z,65µm,18.6s,baz=292,slow=40						
INK				P3KPbc		04 47 26.5	
	comp=Z,2.1nm,0.8s,baz=76,slow=7.2,SNR=8.1						
	comp=Z,236nm,0.9s						
INK	**Inuvik**	**29.99**	**42**	P	**P**	**04 15 31.2**	**+0.5**
INK				IAmb	IAmb	04 15 44.4	
	comp=Z,1µm,1.2s						
INK	**Inuvik**	**29.99**	**42**	⇑P	**P**	**04 15 30.6**	**0.0**
INK	**Inuvik**	**29.99**	**42**	P	**P**	**04 15 31.2**	**+0.5**
INK				pmax	pmax		
	comp=Z,1µm,1.3s						
INK	**Inuvik**	**29.99**	**42**	P	**P**	**04 15 30.7**	**0.0**
	baz=280,SNR=322						
INK				S	**S**	**04 20 26.8**	**-0.4**
	baz=280						
M30M	**Minto, Yukon**	**30.00**	**54**	IAmb	IAmb	04 15 41.9	
	comp=Z,1µm,1.9s						
M30M	**Minto, Yukon**	**30.00**	**54**	P	**P**	**04 15 31.6**	**+0.8**
	baz=287,SNR=141						
M30M				S	**S**	**04 20 31.3**	**+3.6**
	baz=287						
PYAG	**Pyongyang**	**30.00**	**250**	P	**P**	**04 15 29.2**	**-1.9**
PYAG				S	**S**	**04 20 26.8**	**-1.2**
PYAG				AmB			
	comp=Z,1µm,2.0s						
PYAG				AMS	AMS		
	comp=Z,132µm,14.1s						
F31M	**Tsiigehtchic**	**30.07**	**44**	P	**P**	**04 15 31.8**	**+0.5**
	baz=281,SNR=198						
F31M				S	**S**	**04 20 27.5**	**-0.9**
	baz=281						
MAYO	**Mayo, Yukon**	**30.10**	**51**	P	**P**	**04 15 32.1**	**+0.4**
	baz=286,SNR=45						
MAYO				S	**S**	**04 20 28.6**	**-0.5**
	baz=286						
KSRS	**Korea Array**	**30.13**	**245**	P	**P**	**04 15 31.1**	**-1.0**
	comp=Z,38nm,0.8s,baz=35,slow=9.0,SNR=117						
KSRS				PcP	**PcP**	**04 18 34.3**	**+1.1**
	comp=Z,37nm,0.9s,baz=14,slow=2.4,SNR=7.9						
KSRS				S	**S**	**04 20 37.5**	**+7.6**
	comp=Z,0.5nm,0.4s,baz=354,slow=36,SNR=0.9						
KSRS				ScP	**ScP**	**04 22 16.1**	**+2.0**
	comp=Z,11nm,1.2s,baz=34,slow=3.5,SNR=4.1						
KSRS				LR	LR	04 28 58.0	
	comp=Z,80µm,19.0s,baz=40,slow=39						
	comp=Z,38nm,0.8s						
KSAR	**Wonju Array Be**	**30.16**	**245**	P	**P**	**04 15 31.0**	**-1.4**
KSAR	**Wonju Array Be**	**30.16**	**245**	P	**P**	**04 15 31.0**	**-1.4**
N30M	**Aishikik Lake**	**30.21**	**56**	P	**P**	**04 15 33.2**	**+0.4**
	baz=289						
N30M				S	**S**	**04 20 33.2**	**+2.2**
	baz=289						
HYT	**Haines Junctio**	**30.23**	**57**	IAmb	IAmb	04 15 37.2	
	comp=Z,862nm,1.1s						
HYT	**Haines Junctio**	**30.23**	**57**	P	**P**	**04 15 33.8**	**+0.8**
	baz=290,SNR=422						
HYT				S	**S**	**04 20 32.6**	**+1.2**
	baz=290						
JMN	**Monobe**	**30.37**	**233**	P	**P**	**04 15 36.9**	**+2.5**
JMN	**Monobe**	**30.37**	**233**	P	**P**	**04 15 35.0**	**+0.6**
JMN	**Monobe**	**30.37**	**233**	⇑P	**P**	**04 15 33.8**	**-0.6**
P30M	**Million Dollar**	**30.73**	**58**	P	**P**	**04 15 38.2**	**+0.9**
	baz=291						
P30M				S	**S**	**04 20 39.8**	**+0.8**
	baz=291						
HJU	**Haeju**	**30.78**	**248**	P	**P**	**04 15 36.0**	**-2.0**
HJU				S	**S**	**04 20 38.0**	**-2.1**
HJU				AmB			
	comp=Z,2µm,4.0s						
HJU				AMS	AMS		
	comp=Z,80µm,18.5s						
N31M	**Braeburn, Yuko**	**30.80**	**55**	IAmb	IAmb	04 15 46.9	
	comp=Z,1µm,1.9s						
N31M				IAMs_20	IAMs_20	04 28 16.6	
	comp=Z,108µm,19.0s						
N31M	**Braeburn, Yuko**	**30.80**	**55**	P	**P**	**04 15 39.0**	**+1.1**
	baz=290,SNR=78						
N31M				S	**S**	**04 20 42.5**	**+2.4**
	baz=290						
O30N	**Mendenhall**	**30.90**	**57**	P	**P**	**04 15 39.6**	**+0.7**
	baz=291,SNR=114						
O30N				S	**S**	**04 20 42.0**	**+0.3**
	baz=291						
M31M	**Drury Creek, Y**	**31.18**	**54**	IAmb	IAmb	04 15 45.1	
	comp=Z,644nm,1.0s						
M31M				IAMs_20	IAMs_20	04 28 56.6	
	comp=Z,110µm,19.0s						
M31M	**Drury Creek, Y**	**31.18**	**54**	P	**P**	**04 15 42.4**	**+1.1**
	baz=289,SNR=429						
M31M				S	**S**	**04 20 48.0**	**+1.9**
	baz=289						
TJN	**Taejon**	**31.25**	**244**	IAmb	IAmb	04 16 06.2	
	comp=Z,873nm,1.4s						
PLBC	**Pleasant Camp**	**31.25**	**59**	P	**P**	**04 15 42.8**	**+0.9**
	baz=292,SNR=30						
PLBC				S	**S**	**04 20 49.4**	**+2.3**
	baz=292						
FARO	**Faro, Yukon**	**31.63**	**53**	IAmb	IAmb	04 16 02.5	
	comp=Z,626nm,1.1s						
FARO	**Faro, Yukon**	**31.63**	**53**	P	**P**	**04 15 46.3**	**+1.0**
	baz=290,SNR=390						
FARO				S	**S**	**04 20 55.5**	**+2.3**
	baz=290						
SKAG	**Skagway**	**31.74**	**59**	IAmb	IAmb	04 15 51.0	
	comp=Z,798nm,1.2s						
SKAG	**Skagway**	**31.74**	**59**	P	**P**	**04 15 47.9**	**+1.7**
SKAG	**Skagway**	**31.74**	**59**	⇑P	**P**	**04 15 47.5**	**+1.4**
SKAG	**Skagway**	**31.74**	**59**	P	**P**	**04 15 47.5**	**+1.4**
	baz=293,SNR=100						
SKAG				S	**S**	**04 20 59.8**	**+5.1**
	baz=293						
JTU	**Tsushima**	**31.75**	**240**	P	**P**	**04 15 46.6**	**+0.1**
JTU	**Tsushima**	**31.75**	**240**	⇑P	**P**	**04 15 45.3**	**-1.2**
XLT	**XiLinHaoTe**	**31.80**	**266**	⇑*i*P	**P**	**04 15 46.3**	**-0.7**
XLT				sP	sP	04 15 56.8	+1.9
XLT				PcP	**PcP**	**04 18 39.0**	**+1.4**
XLT				S	**S**	**04 20 53.8**	**-2.4**
XLT				pmax	pmax		
	comp=Z,92nm,0.9s						
XLT				pmax	pmax		
	comp=Z,6µm,7.2s						
XLT				LR	LR		
	comp=Z,297µm,12.7s						
XLT				LR	LR		
	comp=Z,425µm,13.6s						
S31K	**Pelican**	**31.91**	**62**	P	**P**	**04 15 49.2**	**+1.5**
	baz=295,SNR=13						
S31K				S	**S**	**04 20 59.5**	**+2.0**
	baz=295						
R31K	**City Hall, Gus**	**31.96**	**61**	P	**P**	**04 15 49.1**	**+1.0**
	baz=294						
R31K				S	**S**	**04 21 03.9**	**+5.7**
	baz=294						
A36M	**Sachs Harbour**	**32.12**	**34**	P	**P**	**04 15 49.9**	**+0.5**
A36M				IAMs_20	IAMs_20	04 30 60.0	
	comp=Z,82µm,20.0s						
A36M	**Sachs Harbour**	**32.12**	**34**	P	**P**	**04 15 49.8**	**+0.4**
	baz=281,SNR=892						
A36M				S	**S**	**04 21 01.7**	**+1.2**
	baz=281						
N32M	**Quiet Lake**	**32.13**	**55**	P	**P**	**04 15 50.2**	**+0.5**
	baz=292,SNR=151						
N32M				S	**S**	**04 21 03.4**	**+2.4**
	baz=292						
JNU	**Nakatsue**	**32.23**	**236**	P	**P**	**04 15 50.4**	**-0.3**
JNU	**Nakatsue**	**32.23**	**236**	⇑P	**P**	**04 15 49.6**	**-1.1**
DL2	**Dalian**	**32.27**	**254**	⇑*i*P	**P**	**04 15 48.8**	**-2.2**
DL2				PcP	**PcP**	**04 18 40.0**	**+1.2**
DL2				S	**S**	**04 20 59.5**	**-3.8**
DL2				sS	**pS**	**04 21 10.5**	**+0.5**
DL2				pmax	pmax		
	comp=Z,100nm,1.0s						
DL2				pmax	pmax		
	comp=Z,3µm,10.5s						
DL2				LR	LR		
	comp=Z,166µm,15.2s						
DL2				LR	LR		

	comp=Z,190µm,14.1s						
DL2				LR	LR		
	comp=Z,280µm,15.2s						
BESE	**Bessie Mountai**	**32.32**	**60**	IAmb	IAmb	04 16 05.0	
	comp=Z,584nm,1.0s						
MMPY	**Sheldon Lake,**	**32.41**	**52**	P	**P**	**04 15 53.2**	**+1.2**
	baz=291,SNR=317						
MMPY				S	**S**	**04 21 07.9**	**+2.6**
	baz=291						
P32M	**Atlin**	**32.45**	**58**	P	**P**	**04 15 53.5**	**+1.1**
	baz=294,SNR=66						
P32M				S	**S**	**04 21 06.9**	**+1.0**
	baz=294						
R32K	**Eaglecrest**	**32.61**	**61**	P	**P**	**04 15 55.1**	**+1.3**
	baz=295,SNR=186						
R32K				S	**S**	**04 21 14.7**	**+6.4**
	baz=295						
P33M	**Teslin, Yukon**	**32.61**	**57**	IAMs_20	IAMs_20	04 29 54.6	
	comp=Z,98µm,19.0s						
P33M	**Teslin, Yukon**	**32.61**	**57**	P	**P**	**04 15 54.9**	**+0.9**
	baz=293,SNR=195						
P33M				S	**S**	**04 21 13.2**	**+4.7**
	baz=293						
JIS	**Juneau Island**	**32.67**	**61**	IAmb	IAmb	04 15 58.6	
	comp=Z,893nm,1.0s						
JIS	**Juneau Island**	**32.67**	**61**	P	**P**	**04 15 55.5**	**+1.2**
SIT	**Sitka**	**32.75**	**63**	IAmb	IAmb	04 15 59.5	
	comp=Z,790nm,0.9s						
SIT	**Sitka**	**32.75**	**63**	P	**P**	**04 15 56.5**	**+1.5**
SIT	**Sitka**	**32.75**	**63**	P	**P**	**04 15 56.5**	**+1.5**
	baz=296,SNR=63						
SIT				S	**S**	**04 21 15.9**	**+5.5**
	baz=296						
S32K	**Killisnoo**	**32.93**	**62**	P	**P**	**04 15 58.0**	**+1.4**
	baz=296,SNR=79						
S32K				S	**S**	**04 21 17.5**	**+4.3**
	baz=296						
C36M	**Paulatuk**	**33.11**	**38**	IAmb	IAmb	04 16 00.8	
	comp=Z,813nm,0.8s						
C36M	**Paulatuk**	**33.11**	**38**	P	**P**	**04 15 58.0**	**-0.1**
	baz=286,SNR=1000						
C36M				S	**S**	**04 21 17.4**	**+1.5**
	baz=286						
JCJ	**Chichijima**	**33.16**	**215**	LR	LR	04 30 23.0	
	comp=Z,23µm,21.1s,baz=8.0,slow=38						
JCJ	**Chichijima**	**33.16**	**215**	P	**P**	**04 15 58.0**	**-1.0**
JCJ				IAmb	IAmb	04 16 08.5	
	comp=Z,720nm,0.8s						
JCJ	**Chichijima**	**33.16**	**215**	P	**P**	**04 16 01.0**	**+2.1**
JCJ	**Chichijima**	**33.16**	**215**	⇑P	**P**	**04 15 59.8**	**+0.8**
IRK	**Irkutsk**	**33.32**	**287**	*e*P	**P**	**04 16 00.0**	**-0.1**
IRK				pmax	pmax		
	comp=Z,2µm,3.0s						
Q32M	**Nakina River**	**33.38**	**59**	P	**P**	**04 16 02.3**	**+1.5**
	baz=295						
Q32M				S	**S**	**04 21 22.8**	**+2.1**
	baz=295						
JSU	**Suzuyama**	**33.78**	**235**	⇑P	**P**	**04 16 02.3**	**-2.0**
NRIK	**Noril'sk**	**33.80**	**322**	P	**P**	**04 16 04.0**	**0.0**
	comp=Z,159nm,1.1s,baz=76,slow=8.5,SNR=118						
NRIK				PcP	**PcP**	**04 18 43.2**	**+0.6**
	comp=Z,60nm,0.7s,baz=24,slow=7.8,SNR=1.7						
NRIK				S	**S**	**04 21 24.1**	**-2.4**
	comp=Z,18nm,1.0s,baz=69,slow=15,SNR=0.6						
NRIK				LR	LR	04 29 59.4	
	comp=Z,81µm,21.5s,baz=74,slow=37						
NRIK				P3KPbc		04 47 10.4	
	comp=Z,1.5nm,0.3s,baz=279,slow=2.9,SNR=2.5						
	comp=Z,159nm,1.1s						
NRIK	**Noril'sk**	**33.80**	**322**	P	**P**	**04 16 04.1**	**0.0**
NRIK				IAmb	IAmb	04 16 12.9	
	comp=Z,917nm,1.4s						
NRIK	**Noril'sk**	**33.80**	**322**	P	**P**	**04 16 04.1**	**0.0**
NRIK				pmax	pmax		
	comp=Z,917nm,1.5s						
T33K	**Petersburg**	**34.02**	**62**	P	**P**	**04 16 07.9**	**+1.9**
	baz=298,SNR=15						
T33K				S	**S**	**04 21 34.7**	**+4.6**
	baz=298						
U33K	**Whale Pass**	**34.26**	**64**	P	**P**	**04 16 10.1**	**+1.9**
	baz=299,SNR=22						
U33K				S	**S**	**04 21 38.3**	**+4.4**
	baz=299						
ULN	**Ulaanbaatar**	**34.28**	**279**	P	**P**	**04 16 08.7**	**0.0**
ULN	**Ulaanbaatar**	**34.28**	**279**	⇑P	**P**	**04 16 08.7**	**0.0**
ULN	**Ulaanbaatar**	**34.28**	**279**	P	**P**	**04 16 08.7**	**0.0**
ULN				pmax	pmax		
	comp=Z,248nm,1.3s						
ULN				MLR	MLR		
	comp=Z,322µm,18.0s						
BJI	**Beijing**	**34.37**	**261**	P	**P**	**04 16 09.0**	**-0.3**
BJI				pP	**pP**	**04 16 15.8**	**+0.8**
BJI				sP	**sP**	**04 16 19.8**	**+2.5**
BJI				PP	**PP**	**04 17 28.5**	**+1.4**
BJI				sS	**sS**	**04 21 46.5**	**+2.1**
BJI				pmax	pmax		
	comp=Z,43nm,0.8s						
BJI				pmax	pmax		
	comp=Z,2µm,8.5s						
BJI				LR	LR		
	comp=Z,181µm,15.5s						
S34M	**Telegraph Cree**	**34.38**	**60**	P	**P**	**04 16 10.8**	**+1.5**
	baz=297,SNR=167						
S34M				S	**S**	**04 21 40.6**	**+4.8**
	baz=297						
WTLY	**Watson Lake, Y**	**34.49**	**55**	P	**P**	**04 16 11.1**	**+0.9**
	baz=296,SNR=358						
WTLY				S	**S**	**04 21 41.4**	**+4.0**
	baz=296						
WRAK	**Wrangell Islan**	**34.50**	**63**	IAMs_20	IAMs_20	04 31 00.7	
	comp=Z,87µm,18.0s						
WRAK	**Wrangell Islan**	**34.50**	**63**	IAmb	IAmb	04 16 14.8	
	comp=Z,541nm,0.9s						
WRAK	**Wrangell Islan**	**34.50**	**63**	⇑P	**P**	**04 16 12.0**	**+1.8**
WRAK	**Wrangell Islan**	**34.50**	**63**	P	**P**	**04 16 12.2**	**+2.0**
	baz=299,SNR=111						
WRAK				S	**S**	**04 21 45.9**	**+8.4**
	baz=299						
CRAG	**Craig**	**34.58**	**65**	P	**P**	**04 16 13.0**	**+2.1**
CRAG	**Craig**	**34.58**	**65**	⇑P	**P**	**04 16 12.9**	**+1.9**
CRAG	**Craig**	**34.58**	**65**	P	**P**	**04 16 12.6**	**+1.6**
	baz=300,SNR=20						
CRAG				S	**S**	**04 21 46.0**	**+7.2**
	baz=300						
SONM	**Songino Array**	**34.66**	**280**	P	**P**	**04 16 12.2**	**+0.3**
	comp=Z,33nm,0.8s,baz=58,slow=8.3,SNR=94						
SONM				PcP	**PcP**	**04 18 46.3**	**+0.6**
	comp=Z,41nm,0.8s,baz=51,slow=0.8,SNR=7.0						
SONM				S	**S**	**04 21 35.0**	**-5.5**
	comp=Z,6.0nm,1.0s,baz=315,slow=5.7,SNR=2.3						
SONM				ScP	**ScP**	**04 22 32.2**	**+2.5**
	comp=Z,18nm,1.2s,baz=75,slow=6.3,SNR=3.6						
SONM				LR	LR	04 31 44.0	
	comp=Z,271µm,18.4s,baz=55,slow=39						
SONM				P3KPbc		04 47 07.1	
	comp=Z,1.3nm,0.8s,baz=207,slow=1.0,SNR=4.1						
SONM				P3KP		04 48 35.3	
	comp=Z,1.9nm,1.0s,baz=222,slow=2.0,SNR=4.4						
	comp=Z,33nm,0.8s						
SONM	**Songino Array**	**34.66**	**280**	P	**P**	**04 16 12.3**	**+0.3**
SONM	**Songino Array**	**34.66**	**280**	P	**P**	**04 16 12.3**	**+0.4**
SONM				pmax	pmax		
	comp=Z,498nm,1.7s						
DLBC	**Dease Lake**	**34.66**	**59**	LR	LR	04 30 45.0	
	comp=Z,88µm,19.3s,baz=300,slow=37						
DLBC	**Dease Lake**	**34.66**	**59**	IAmb	IAmb	04 16 16.5	
	comp=Z,590nm,0.9s						
DLBC	**Dease Lake**	**34.66**	**59**	P	**P**	**04 16 13.7**	**+1.9**
	baz=297,SNR=421						
DLBC				S	**S**	**04 21 41.6**	**+1.3**
	baz=297						
ZAK	**Zakamensk**	**34.86**	**285**	*e*P	**P**	**04 16 13.1**	**-0.5**
ZAK				*e*		04 18 45.9	
ZAK				pmax	pmax		
	comp=Z,176nm,1.4s						
T35M	**Bob Quinn**	**35.24**	**61**	P	**P**	**04 16 19.2**	**+2.5**
	baz=299,SNR=378						
T35M				S	**S**	**04 21 49.5**	**+0.3**
	baz=299						
MOY	**Mondy**	**35.34**	**288**	*e*P	**P**	**04 16 18.3**	**+0.5**
MOY				*e*		04 17 45.5	
MOY				pmax	pmax		
	comp=Z,1µm,2.3s						
V35K	**Ketchikan**	**35.39**	**64**	P	**P**	**04 16 19.6**	**+1.7**
	baz=300,SNR=62						
V35K				S	**S**	**04 21 55.8**	**+4.4**
	baz=300						
WRGLY	**Wrigley**	**35.47**	**49**	P	**P**	**04 16 19.3**	**+0.7**
	baz=295,SNR=184						
WRGLY				S	**S**	**04 21 56.1**	**+3.8**
	baz=295						
LIRD	**Liard River Hi**	**36.02**	**55**	P	**P**	**04 16 24.5**	**+1.2**
	baz=298,SNR=296						
LIRD				S	**S**	**04 22 02.4**	**+1.4**
	baz=298						
H02S1	**DAWSON INLET T**	**36.07**	**68**	P	**P**	**04 16 24.7**	**+0.9**
	SNR=68						
HHC	**Hu-ho-hao-te**	**36.32**	**266**	*e*P	**P**	**04 16 26.0**	**-0.3**
HHC				S	**S**	**04 22 04.5**	**-1.7**
HHC				pmax	pmax		
	comp=Z,200nm,1.1s						
HHC				pmax	pmax		
	comp=Z,10µm,4.4s						
HHC				LR	LR		
	comp=Z,352µm,14.6s						
HHC				LR	LR		
	comp=Z,490µm,13.1s						
KOTAN	**Kotaneelee Air**	**36.60**	**53**	P	**P**	**04 16 29.5**	**+1.2**
	baz=298,SNR=163						
KOTAN				S	**S**	**04 22 12.9**	**+3.1**
	baz=298						
TIA	**Tai'an**	**36.66**	**255**	*e*P	**P**	**04 16 28.8**	**-0.2**
TIA				S	**S**	**04 22 08.5**	**-2.6**
TIA				LR	LR		
	comp=Z,74µm,13.7s						
TIA				LR	LR		
	comp=Z,194µm,14.7s						
TIA				LR	LR		
	comp=Z,196µm,16.2s						
FLDN	**Fort Liard**	**36.80**	**53**	P	**P**	**04 16 31.4**	**+1.4**
	baz=298,SNR=21						
FLDN				S	**S**	**04 22 16.0**	**+3.2**
	baz=298						
JAM	**Amami Oshima**	**36.80**	**234**	P	**P**	**04 16 30.2**	**-0.1**
HNS	**HongShan**	**37.07**	**259**	⇑P	**P**	**04 16 31.0**	**-1.5**
HNS				PP	**PnPn**	**04 18 03.0**	**+5.8**
HNS				S	**S**	**04 22 23.0**	**+5.7**
HNS				SS	**SnSn**	**04 24 48.0**	**-3.4**
HNS				pmax	pmax		
	comp=Z,68nm,1.7s						
HNS				LR	LR		
	comp=Z,313µm,13.7s						
HNS				LR	LR		
	comp=Z,139µm,15.9s						
HNS				LR	LR		
	comp=Z,369µm,14.7s						
H11N2	**WAKE ISLAND Hy**	**37.20**	**174**	P	**P**	**04 16 34.7**	**+1.2**
	baz=287,slow=7.5,SNR=12						
H11N2				T	T	04 55 42.4	
	baz=357						
H11N3	**WAKE ISLAND Hy**	**37.21**	**174**	P	**P**	**04 16 34.8**	**+1.2**
	baz=287,slow=7.5,SNR=20						
H11N3				T	T	04 55 30.6	
	baz=357						
H11N1	**WAKE ISLAND Hy**	**37.21**	**174**	P	**P**	**04 16 34.8**	**+1.2**
	baz=287,slow=7.5,SNR=9.6						
H11N1				T	T	04 55 39.2	
	baz=357						
BTO	**Baotou**	**37.34**	**267**	⇑*i*P	**P**	**04 16 35.3**	**+0.4**
BTO				pP	**sP**	**04 16 45.5**	**+2.6**
BTO				PcP	**PcP**	**04 18 48.3**	**-5.4**
BTO				S	**S**	**04 22 23.0**	**+1.4**
BTO				sS	**sS**	**04 22 34.5**	**+4.1**
BTO				ScP	**ScP**	**04 22 41.0**	**+1.4**
BTO				SS	**SnSn**	**04 24 51.0**	**-6.9**
BTO				pmax	pmax		
	comp=Z,2µm,1.0s						
BTO				LR	LR		
	comp=Z,404µm,16.1s						
BTO				LR	LR		
	comp=Z,286µm,17.1s						
BTO				LR	LR		
	comp=Z,400µm,19.4s						
WAKE	**Wake Island**	**37.63**	**174**	P	**P**	**04 16 38.5**	**+1.2**
WAKE				IAmb	IAmb	04 16 48.3	
	comp=Z,1µm,1.4s						
WAKE	**Wake Island**	**37.63**	**174**	⇑P	**P**	**04 16 38.8**	**+1.4**
EUNU	**Eureka**	**37.92**	**15**	IAmb	IAmb	04 16 42.5	
	comp=Z,640nm,0.9s						
EUNU	**Eureka**	**37.92**	**15**	⇑P	**P**	**04 16 39.3**	**0.0**
TIY	**Taiyuan**	**38.07**	**262**	⇑P	**P**	**04 16 41.5**	**+0.4**
TIY				S	**S**	**04 22 31.8**	**-0.9**
TIY				pmax	pmax		
	comp=Z,54nm,1.4s						
TIY				pmax	pmax		
	comp=Z,4µm,4.5s						
TIY				LR	LR		
	comp=Z,130µm,15.7s						
TIY				LR	LR		
	comp=Z,118µm,13.7s						
TIY				LR	LR		
	comp=Z,173µm,13.5s						
JMZ	**Minamidaito 2**	**38.37**	**229**	IAmb	IAmb	04 17 11.6	
	comp=Z,1µm,1.4s						
JMZ	**Minamidaito 2**	**38.37**	**229**	P	**P**	**04 16 43.1**	**-0.5**
JMZ	**Minamidaito 2**	**38.37**	**229**	⇓P	**P**	**04 16 48.4**	**+4.8**
H11S1	**WAKE ISLAND Hy**	**38.40**	**174**	P	**P**	**04 16 44.6**	**+0.9**
H11S1				T	T	04 57 08.7	
	baz=4.9,slow=79,SNR=349						
H11S3	**WAKE ISLAND Hy**	**38.41**	**174**	P	**P**	**04 16 44.7**	**+0.9**
H11S3				T	T	04 57 16.0	
	baz=4.9,slow=79,SNR=142						
H11S2	**WAKE ISLAND Hy**	**38.42**	**174**	P	**P**	**04 16 44.7**	**+0.9**
H11S2				T	T	04 57 13.6	
	baz=4.9,slow=79,SNR=368						
SSE	**Sheshan**	**38.55**	**246**	P	**P**	**04 16 43.0**	**-2.0**
SSE				sP	**sP**	**04 16 53.8**	**+0.8**
SSE				PP	**PP**	**04 18 12.3**	**-0.9**
SSE				PcP	**PcP**	**04 18 52.8**	**-4.6**
SSE				pmax	pmax		
	comp=Z,40nm,0.8s						
SSE				pmax	pmax		
	comp=Z,1µm,11.5s						
JOW	**Kunigami**	**38.75**	**234**	P	**P**	**04 16 46.7**	**-0.1**
JOW	**Kunigami**	**38.75**	**234**	P	**P**	**04 16 46.0**	**-0.8**
JOW	**Kunigami**	**38.75**	**234**	⇑P	**P**	**04 16 45.4**	**-1.5**
BBB	**Bella Bella**	**38.84**	**67**	LR	LR	04 32 04.8	
	comp=Z,39µm,18.6s,baz=330,slow=35						
NJ2	**Nanjing**	**38.97**	**249**	⇑*i*P	**P**	**04 16 45.5**	**-3.0**
NJ2				pP	**pP**	**04 16 52.8**	**-1.5**
NJ2				sP	**sP**	**04 16 56.5**	**0.0**
NJ2				S	**S**	**04 22 46.8**	**+0.6**
NJ2				sS	**sS**	**04 22 59.0**	**+4.4**
NJ2				ScS	**ScS**	**04 26 49.8**	**-7.1**
NJ2				pmax	pmax		
	comp=Z,4µm,8.4s						
NJ2				LR	LR		
	comp=Z,140µm,18.0s						
NJ2				LR	LR		
	comp=Z,159µm,14.7s						
NJ2				LR	LR		
	comp=Z,198µm,14.7s						
RES	**Resolute Bay**	**39.26**	**24**	LR	LR	04 34 50.6	
	comp=Z,39µm,19.8s,baz=304,slow=39						
RES	**Resolute Bay**	**39.26**	**24**	P	**P**	**04 16 50.4**	**-0.1**
RES	**Resolute Bay**	**39.26**	**24**	⇑P	**P**	**04 16 50.1**	**-0.4**
RES	**Resolute Bay**	**39.26**	**24**	P	**P**	**04 16 50.4**	**-0.1**
RES				pmax	pmax		
	comp=Z,373nm,1.1s						
YKA	**Yellowknife Ar**	**39.40**	**47**	P	**P**	**04 16 51.8**	**0.0**
	comp=Z,199nm,0.8s,baz=300,slow=7.9,SNR=515						
YKA				PcP	**PcP**	**04 19 00.4**	**+0.8**
	comp=Z,17nm,0.8s,baz=310,slow=3.7,SNR=3.3						
YKA				LR	LR	04 36 04.5	
	comp=Z,44µm,18.9s,baz=298,slow=41						
YKA				P3KPbc		04 46 45.6	
	comp=Z,0.4nm,0.9s,baz=106,slow=4.1,SNR=3.7						
YKA				P3KP		04 48 23.4	
	comp=Z,0.4nm,0.9s,baz=53,slow=2.7,SNR=3.8						
	comp=Z,199nm,0.8s						
YKA	**Yellowknife Ar**	**39.40**	**47**	*i* P	**P**	**04 16 51.7**	**-0.2**
YKA				pmax	pmax		
	comp=Z,203nm,0.8s						
LYN	**LuoYang**	**40.40**	**258**	⇑P	**P**	**04 16 59.3**	**-1.2**
LYN				sP	sP	04 17 08.0	-0.5
LYN				PP	**PnPn**	**04 18 42.5**	**+5.3**
LYN				ScP	**ScP**	**04 22 54.5**	**+3.2**
LYN				S	**S**	**04 23 06.8**	**-0.8**
LYN				SS	**SS**	**04 26 03.3**	**-3.3**
LYN				pmax	pmax		
	comp=Z,63nm,1.4s						
LYN				pmax	pmax		
	comp=Z,4µm,9.8s						
LYN				LR	LR		
	comp=Z,159µm,20.8s						
LYN				LR	LR		
	comp=Z,128µm,19.8s						
LYN				LR	LR		
	comp=Z,107µm,17.7s						
NOR	**Nord**	**41.78**	**360**	⇑P	**P**	**04 17 10.5**	**-0.8**
NOR	**Nord**	**41.78**	**360**	*i* P	**P**	**04 17 09.9**	**-1.4**
NOR				⇑*i*P	**P**	**04 17 10.4**	**-0.8**
NOR				IAmb	IAmb	04 17 19.2	
	comp=Z,579nm,1.5s						
NOR				IAmb	IAmb	04 17 19.2	
	comp=Z,579nm,1.5s						
ZALV	**Zalesovo Beam**	**42.11**	**300**	P	**P**	**04 17 13.7**	**-0.6**
	comp=Z,26nm,0.8s,baz=62,slow=6.9,SNR=92						
ZALV				PP	**PP**	**04 18 55.1**	**+3.6**
	comp=Z,20nm,0.8s,baz=44,slow=21,SNR=2.4						
ZALV				PcP	**PcP**	**04 19 07.9**	**-0.5**
	comp=Z,61nm,0.6s,baz=54,slow=2.3,SNR=12						
ZALV				LR	LR	04 35 10.3	
	comp=Z,24µm,21.9s,baz=27,slow=37						
ZALV				P3KP		04 48 25.4	
	comp=Z,0.5nm,0.4s,baz=209,slow=1.5,SNR=1.7						
ZALV				P4KPbc		04 55 15.5	
	comp=Z,3.4nm,0.9s,baz=49,slow=4.5,SNR=9.5						
	comp=Z,26nm,0.8s						
WHN	**Wuhan**	**42.50**	**253**	⇑P	**P**	**04 17 15.0**	**-2.7**
WHN				PcP	**PcP**	**04 19 08.8**	**-1.4**
WHN				S	**S**	**04 23 37.8**	**-1.0**
WHN				pmax	pmax		
	comp=Z,910nm,2.3s						
WHN				LR	LR		
	comp=Z,198µm,18.7s						
WHN				LR	LR		
	comp=Z,394µm,15.5s						
WHN				LR	LR		
	comp=Z,453µm,17.4s						
XAN	**Xi'an**	**42.70**	**261**	⇑P	**P**	**04 17 17.8**	**-1.6**
XAN				pP	sP	04 17 27.5	+0.1
XAN				PP	**PP**	**04 19 01.0**	**+2.6**
XAN				PcP	**PcP**	**04 19 09.3**	**-1.6**
XAN				ScP	**ScP**	**04 23 03.3**	**+2.8**
XAN				S	**S**	**04 23 41.5**	**-0.4**
XAN				sS	sS	04 23 55.5	+4.5
XAN				pmax	pmax		
	comp=Z,5µm,9.5s						
XAN				LR	LR		
	comp=Z,231µm,14.9s						
XAN				LR	LR		
	comp=Z,124µm,13.7s						
XAN				LR	LR		
	comp=Z,236µm,14.0s						
LLLB	**Lillooet**	**42.91**	**65**	IAmb	IAmb	04 17 31.2	
	comp=Z,978nm,1.2s						
TULEG	**Thule**	**42.92**	**16**	⇑P	**P**	**04 17 20.0**	**-0.6**
TULEG	**Thule**	**42.92**	**16**	*i* P	**P**	**04 17 19.8**	**-0.8**
TULEG				⇑*i*P	**P**	**04 17 19.9**	**-0.6**
TULEG				IAmb	IAmb	04 17 22.6	
	comp=Z,827nm,1.4s						
TULEG				IAmb	IAmb	04 17 22.6	
	comp=Z,827nm,1.4s						
BRLDA	**Berland Lookou**	**42.92**	**58**	IAmb	IAmb	04 17 24.6	
	comp=Z,1µm,1.0s						
C03A	**Quillayute Air**	**43.24**	**70**	IAmb	IAmb	04 17 27.4	
	comp=Z,877nm,1.2s						
KBS	**Kingsbay**	**43.36**	**352**	P	**P**	**04 17 24.5**	**+0.4**
KBS	**Kingsbay**	**43.36**	**352**	IAMs_20	IAMs_20	04 34 30.9	
	comp=Z,55µm,20.0s						
KBS	**Kingsbay**	**43.36**	**352**	⇑P	**P**	**04 17 24.5**	**+0.4**
KBS	**Kingsbay**	**43.36**	**352***c*	*e*P	**P**	**04 17 24.6**	**+0.5**
KBS				pmax	pmax		
	comp=Z,390nm,1.3s						
KBS				MLR	MLR		
	comp=Z,56µm,20.0s						
KBS	**Kingsbay**	**43.36**	**352**	*i* P	**P**	**04 17 21.9**	**-2.2**
KBS				⇑*i*P	**P**	**04 17 24.5**	**+0.4**
KBS	**Kingsbay**	**43.36**	**352**	*e*P	**P**	**04 17 25.6**	**+1.5**
KBS				IVmBBB		04 17 33.2	
	comp=Z,11µm,3.9s						
KBS				*e*S	**S**	**04 23 51.2**	**+0.9**
KBS				*e*ScS	**ScS**	**04 27 25.6**	**+3.6**
KBS				IVMs_BB	IVMs_BB	04 35 49.0	
	comp=Z,19µm,18.3s						
DGZ	**Jazzator, Alta**	**43.45**	**294***c*	*i*P	**P**	**04 17 25.8**	**+0.4**
DGZ				pmax	pmax		
	comp=Z,781nm,1.6s						
DGZ				MLR	MLR		
	comp=Z,114µm,15.0s						
TATO	**Taipei**	**43.47**	**240**	IAMs_20	IAMs_20	04 37 59.8	
	comp=Z,64µm,20.0s						
SPA0	**Spitsbergen Ar**	**43.67**	**350**	*e*P	**P**	**04 17 26.7**	**0.0**
SPA0				IVmB_BB		04 17 35.0	
	comp=Z,22µm,1.4s						
SPA0				*e*S	**S**	**04 23 55.6**	**+0.5**
SPA0				*e*ScS	**ScS**	**04 27 27.3**	**+3.1**
SPITS	**Spitsbergen Ar**	**43.67**	**350**	LR	LR	04 35 34.8	
	comp=Z,75µm,19.2s,baz=356,slow=36						
GTA	**Gaotai**	**43.78**	**274**	⇑P	**P**	**04 17 28.3**	**+0.2**
GTA				pP	pP	04 17 34.3	+0.4
GTA				sP	sP	04 17 39.5	+3.3
GTA				PP	**PcP**	**04 19 14.8**	**+0.3**
GTA				PcS	**PcS**	**04 23 10.5**	**+3.0**
GTA				S	**S**	**04 23 54.8**	**-2.9**
GTA				sS	sS	04 24 10.0	+2.9
GTA				ScS	**ScS**	**04 27 25.8**	**-0.4**
GTA				pmax	pmax		
	comp=Z,220nm,1.5s						
GTA				pmax	pmax		
	comp=Z,9µm,8.4s						
GTA				LR	LR		
	comp=Z,196µm,14.5s						
GTA				LR	LR		
	comp=Z,288µm,14.9s						
YHNB	**Yeheng**	**43.79**	**240**	IAMs_20	IAMs_20	04 38 19.2	
	comp=Z,63µm,20.0s						
LZH	**Lanzhou**	**43.96**	**268**	⇑P	**P**	**04 17 30.0**	**+0.3**
LZH				sP	sP	04 17 40.8	+3.1
LZH				PP	**PcP**	**04 19 17.0**	**+1.8**
LZH				S	**S**	**04 23 54.8**	**-5.6**
LZH				sS	sS	04 24 14.3	+5.0
LZH				SS	**SS**	**04 27 12.5**	**-4.4**
LZH				pmax	pmax		
	comp=Z,1µm,1.7s						
LZH				pmax	pmax		
	comp=Z,11µm,4.8s						
LZH				LR	LR		
	comp=Z,262µm,16.8s						
LZH				LR	LR		
	comp=Z,269µm,17.5s						
LZH				LR	LR		
	comp=Z,361µm,18.4s						
NLWA	**Neilton Lookou**	**43.96**	**70**	IAMs_20	IAMs_20	04 35 13.6	
	comp=Z,86µm,18.0s						
NLWA	**Neilton Lookou**	**43.96**	**70**	⇑P	**P**	**04 17 30.8**	**+1.4**
NACB	**Ninganchiao**	**44.10**	**240**	IAMs_20	IAMs_20	04 35 52.6	
	comp=Z,78µm,22.0s						
WISH	**Wishkah**	**44.19**	**70**	IAmb	IAmb	04 17 41.9	
	comp=Z,945nm,1.1s						
HOPEN	**Hopen**	**44.21**	**347**	*e*P	**P**	**04 17 30.8**	**-0.2**
HOPEN				IVmB_BB		04 17 37.2	
	comp=Z,10µm,3.6s						
HOPEN				*e*S	**S**	**04 24 02.2**	**-0.6**
HOPEN				IVMs_BB	IVMs_BB	04 37 26.0	
	comp=Z,37µm,17.5s						
NEEM	**North Greenlan**	**44.32**	**10**	⇑P	**P**	**04 17 31.7**	**-0.5**
NEEM	**North Greenlan**	**44.32**	**10**	*i* P	**P**	**04 17 31.1**	**-1.0**
NEEM				⇑*i*P	**pP**	**04 17 32.0**	**-6.0**
NEEM				IAmb	IAmb	04 17 34.6	
	comp=Z,1µm,1.0s						
NEEM				IAmb	IAmb	04 17 40.2	
	comp=Z,3µm,1.3s						
RADR	**Rader Ridge**	**44.63**	**71**	IAmb	IAmb	04 17 46.3	
	comp=Z,565nm,1.1s						
SSLB	**Suanglung**	**44.74**	**240**	IAMs_20	IAMs_20	04 36 24.4	
	comp=Z,80µm,20.0s						
SSLB	**Suanglung**	**44.74**	**240**	P	**P**	**04 17 37.1**	**+1.3**
HSPB	**Hornsund (broa**	**44.82**	**350**	*e*P	**P**	**04 17 35.9**	**+0.1**
HSPB				*e*S	S	04 23 59.4	-12
HSPB				*e*L	L	04 36 09.6	
	comp=Z,82µm,19.2s						
YULB	**Yu-li**	**44.91**	**239**	P	**P**	**04 17 37.6**	**+0.4**
YULB				IAMs_20	IAMs_20	04 35 51.0	
	comp=Z,48µm,20.0s						
YULB	**Yu-li**	**44.91**	**239**	P	**P**	**04 17 38.8**	**+1.6**
D05A	**Enumclaw**	**45.06**	**69**	IAmb	IAmb	04 17 42.5	

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                comp=Z,847nm,1.0s
CNSH  ChangSha          45.13 252 ⇑P        P         04 17 34.8  -4.1
CNSH                               PP       PcP       04 19 20.0  +0.9
CNSH                               S        S         04 24 09.5  -7.7
CNSH                               SS       ScS       04 27 27.0  -7.7
CNSH                               pmax     pmax
                comp=Z,4µm,10.6s
CNSH                               LR       LR
                comp=Z,103µm,17.6s
CNSH                               LR       LR
                comp=Z,80µm,14.0s
CNSH                               LR       LR
                comp=Z,138µm,16.4s
F04D  Rainier, OR       45.27  71  IAmb     IAmb      04 17 43.6
                comp=Z,442nm,0.8s
GUMO  Guam              45.29 205  LR       LR        04 34 30.3
                comp=Z,23µm,21.1s,baz=32,slow=33
ENH   Enshi             45.30 257  IAMs_20  IAMs_20   04 37 02.4
                comp=Z,60µm,20.0s
TPUB  Ta-pu             45.31 240  IAMs_20  IAMs_20   04 38 01.4
                comp=Z,86µm,19.0s
OPA   Opana             45.36 124  IAmb     IAmb      04 17 46.2
                comp=Z,989nm,1.1s
LON   Longmire          45.44  69  IAmb     IAmb      04 17 55.6
                comp=Z,788nm,1.6s
HEBO  Mount Hebo        45.47  72  IAmb     IAmb      04 17 51.6
                comp=Z,865nm,1.1s
TWG   Pinlang           45.51 239  P        P         04 17 42.3  +0.4
TWG                                IAMs_20  IAMs_20   04 37 10.7
                comp=Z,49µm,20.0s
KIP   Kipapa            45.58 124  P        P         04 17 43.6  +1.1
KIP   Kipapa            45.58 124  P        P         04 17 44.6  +2.0
KIP   Kipapa            45.58 124  P        P         04 17 44.5  +2.0
KIP   Kipapa            45.58 124ceP        P         04 17 44.7  +2.2
KIP                                pmax     pmax
                comp=Z,2µm,1.7s
B08A  Colville Reser    45.63  66  IAmb     IAmb      04 17 46.1
                comp=Z,554nm,0.9s
F04A  Amboy             45.67  70  IAmb     IAmb      04 17 46.5
                comp=Z,479nm,0.9s
LTY   Liberty           45.69  68  IAmb     IAmb      04 17 48.3
                comp=Z,691nm,1.3s
COR   Corvallis         46.13  72  P        P         04 17 47.7  +1.1
COR                                IAmb     IAmb      04 17 58.1
                comp=Z,763nm,1.1s
COR   Corvallis         46.13  72  IAMs_20  IAMs_20   04 37 22.0
                comp=Z,44µm,18.0s
COR   Corvallis         46.13  72 ⇑P        P         04 17 48.1  +1.5
COR   Corvallis         46.13  72  P        P         04 17 47.7  +1.1
COR                                pmax     pmax
                comp=Z,763nm,1.2s
COR                                MLR      MLR
                comp=Z,44µm,18.0s
I02E  Swisshome, OR     46.17  73  IAmb     IAmb      04 17 52.7
                comp=Z,549nm,1.2s
KULLO Kullorsuaq        46.17  14 i P       P         04 17 46.1  -0.4
KULLO                              IAmb     IAmb      04 17 55.3
                comp=Z,2µm,0.9s
ZSN   Zaisan            46.21 293 eP        P         04 17 47.3   0.0
                comp=Z,992nm,3.0s,baz=293
ZSN                               eS        S         04 24 32.4  -0.1
                baz=293
ZSN   Zaisan            46.21 293 eP        P         04 17 47.2   0.0
ZSN                               eS        S         04 24 32.4  -0.1
ZSN                                pmax     pmax
                comp=Z,992nm,3.0s
C09A  Chrisman Ranch    46.53  66  IAmb     IAmb      04 17 58.4
                comp=Z,978nm,1.4s
BUCK  Buck Mountain     46.56  72  IAmb     IAmb      04 17 54.4
                comp=Z,374nm,0.9s
DAG   Danmarks Havn     46.63   0 ⇑P        P         04 17 49.5  -0.7
DAG   Danmarks Havn     46.63   0 i P       P         04 17 49.0  -1.2
DAG                               i P       pP        04 17 49.7  -6.3
DAG                                IAmb     IAmb      04 17 58.1
                comp=Z,1µm,1.4s
H04A  Detroit Lake      46.64  71  IAmb     IAmb      04 18 01.4
                comp=Z,506nm,1.3s
BJO1  Bjornoya          46.71 347 eP        P         04 17 50.2  -0.5
BJO1                               IVmB_BB            04 17 57.0
                comp=Z,13µm,3.2s
BJO1                              eS        S         04 24 38.3  -0.6
BJO1                              eSS       SS        04 28 09.6  +5.1
BJO1                               IVMs_BB IVMs_BB    04 38 46.9
                comp=Z,20µm,15.4s
KHLH  Kahului Airpor    46.77 123  IAmb     IAmb      04 17 57.4
                comp=Z,993nm,1.3s
J01E  Myrtle Point      46.77  74  IAmb     IAmb      04 18 03.3
                comp=Z,625nm,0.9s
NEW   Newport           46.80  65  LR       LR        04 37 05.5
                comp=Z,47µm,18.4s,baz=302,slow=36
NEW   Newport           46.80  65  IAMs_20  IAMs_20   04 38 36.3
                comp=Z,69µm,18.0s
NEW   Newport           46.80  65 ⇑P        P         04 17 51.9   0.0
NEW   Newport           46.80  65  P        P         04 17 52.2  +0.4
                baz=312,SNR=176
NEW                                S        S         04 24 43.6  +2.6
                baz=312
HAWA  Hanford           46.85  68  IAmb     IAmb      04 17 57.4
                comp=Z,551nm,1.4s
HAWA                               IAMs_20  IAMs_20   04 36 10.8
                comp=Z,68µm,18.0s
HAWA  Hanford           46.85  68 ⇓P        P         04 17 52.3  +0.1
F07A  Phinny Hill Vi    46.98  69  IAmb     IAmb      04 18 01.7
                comp=Z,559nm,0.7s
E08A  Dider Farm, El    47.02  68  IAmb     IAmb      04 17 56.7
                comp=Z,421nm,1.0s
KURK  Kurchatov         47.10 300  P        P         04 17 53.9  -0.2
KURK  Kurchatov         47.10 300c iP       P         04 17 53.6  -0.5
KURK                               pmax     pmax
                comp=Z,843nm,1.2s
KURK                               MLR      MLR
                comp=Z,250µm,15.0s
DBO   Dodson Butte      47.17  74  IAmb     IAmb      04 18 08.9
                comp=Z,457nm,1.2s
KURBB Kurchatov Arra    47.20 300  LR       LR        04 37 58.8
                comp=Z,27µm,19.7s,baz=62,slow=36
WMQ   Urumqi            47.23 288 ⇑P        P         04 17 56.0  +0.7
WMQ                                sP       sP        04 18 06.8  +3.4
WMQ                                PP       PP        04 19 49.5  +3.5
WMQ                                PcS      PcS       04 23 21.0  -0.5
WMQ                                S        S         04 24 47.5  +0.3
WMQ                                pmax     pmax
                comp=Z,560nm,1.5s
WMQ                                pmax     pmax
                comp=Z,13µm,3.9s
WMQ                                LR       LR
                comp=Z,63µm,17.3s
WMQ                                LR       LR
                comp=Z,89µm,15.1s
WMQ                                LR       LR
                comp=Z,64µm,17.3s
I05D  Terrebonne, OR    47.32  71  IAmb     IAmb      04 18 06.8
                comp=Z,553nm,1.3s
HUMO  Hull Mountain     47.67  74  IAmb     IAmb      04 19 38.7
                comp=Z,522nm,1.4s
HUMO                               IAMs_20  IAMs_20   04 37 37.2
                comp=Z,53µm,18.0s
HUMO  Hull Mountain     47.67  74 ⇑P        P         04 18 00.1  +1.3
WALA  Waterton Lakes    47.84  62 ⇑P        P         04 18 00.0   0.0
HPAH  Hawaii Prepara    47.85 123  IAmb     IAmb      04 18 11.7
                comp=Z,864nm,1.1s
CD2   Chengdu           47.90 263  P        P         04 17 59.5  -1.2
CD2                                PP       PP        04 19 47.3  -5.2
CD2                                PcS      PcS       04 23 24.0  -0.7
CD2                                S        S         04 24 55.5  -1.5
CD2                                ScS      ScS       04 27 50.5  -2.4
CD2                                pmax     pmax
                comp=Z,230nm,0.8s
CD2                                pmax     pmax
                comp=Z,8µm,11.8s
CD2                                LR       LR
                comp=Z,73µm,13.2s
CD2                                LR       LR
                comp=Z,51µm,12.8s
CD2                                LR       LR
                comp=Z,146µm,13.7s
PINE  Pine Mountain     47.91  71  IAmb     IAmb      04 18 04.8
                comp=Z,647nm,0.9s
UPNV  Upernavik         47.91  15 i P       P         04 17 59.3  -0.8
UPNV                               IAmb     IAmb      04 18 07.9
                comp=Z,1µm,1.2s
MK31  Makanchi Array    47.95 294c iP       P         04 18 00.0  -0.9
MKAR  Makanchi Array    47.95 294  P        P         04 18 00.1  -0.8
                comp=Z,40nm,0.7s,baz=46,slow=6.6,SNR=138
MKAR                               PcP      PcP       04 19 29.1  +0.3
                comp=Z,28nm,0.8s,baz=318,slow=1.6,SNR=1.7
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MKAR                               PP       PP        04 19 52.9  +0.3
                comp=Z,22nm,1.0s,baz=316,slow=15,SNR=1.6
MKAR                               S        S         04 24 51.5  -5.9
                comp=Z,2.0nm,0.8s,baz=79,slow=12,SNR=0.9
MKAR                               LR       LR        04 39 16.4
                comp=Z,86µm,18.5s,baz=52,slow=37
MKAR                               P3KP               04 48 11.1
                comp=Z,0.6nm,0.9s,baz=274,slow=2.2,SNR=2.0
MKAR                               P4KPbc             04 55 40.3
                comp=Z,1.2nm,0.8s,baz=53,slow=4.4,SNR=8.1
                comp=Z,40nm,0.7s
KHLU  Kahalu`u          48.14 123  IAmb     IAmb      04 18 13.9
                comp=Z,736nm,1.2s
POHA  Pohakuloa         48.17 123  P        P         04 18 04.2  +1.2
POHA                               IAmb     IAmb      04 18 13.3
                comp=Z,844nm,1.1s
POHA  Pohakuloa         48.17 123 ⇓P        P         04 18 05.4  +2.4
K04D  Chiloquin, OR     48.30  73  IAmb     IAmb      04 18 11.7
                comp=Z,982nm,1.3s
JCC   Jacoby Creek,     48.36  76  IAmb     IAmb      04 18 10.0
                comp=Z,833nm,1.5s
YBH   Yreka Blue Hor    48.42  75  LR       LR        04 36 54.8
                comp=Z,20µm,18.4s,baz=316,slow=34
KHMM  Horse Mountain    48.48  76  IAmb     IAmb      04 18 11.4
                comp=Z,874nm,1.2s
KMPM  Mount Pierce      48.60  77  IAmb     IAmb      04 18 19.3
                comp=Z,494nm,1.1s
KKO   Keanakako`i       48.60 123  IAmb     IAmb      04 18 20.6
                comp=Z,736nm,0.9s
PUH   Pauahi            48.65 123  IAmb     IAmb      04 18 09.7
                comp=Z,762nm,1.0s
K05A  Summer Lake       48.67  72  IAmb     IAmb      04 18 18.2
                comp=Z,493nm,1.0s
NPOC  North of Pu‘u     48.68 122  P        P         04 18 07.7  +0.9
NPOC                               IAmb     IAmb      04 18 11.9
                comp=Z,754nm,0.9s
STCH  Steam Cracks      48.68 123  IAmb     IAmb      04 18 09.8
                comp=Z,607nm,0.9s
JCUZ  Jacuzzi           48.69 122  IAmb     IAmb      04 18 09.9
                comp=Z,676nm,0.9s
GULI  GuiLin            48.81 252 ⇑P        P         04 18 12.8  +5.2
GULI                               LR       LR
                comp=Z,51µm,16.3s
GULI                               LR       LR
                comp=Z,93µm,15.2s
GULI                               LR       LR
                comp=Z,160µm,15.7s
GOMU  GeErMu            48.83 275 eP        P         04 18 07.0  -1.2
GOMU                               pP       pP        04 18 13.0  -1.0
GOMU                               sP       sP        04 18 14.5  -1.7
GOMU                               PP       PP        04 20 01.5  +0.3
GOMU                               pmax     pmax
                comp=Z,50nm,0.8s
GOMU                               pmax     pmax
                comp=Z,6µm,4.6s
GOMU                               LR       LR
                comp=Z,227µm,16.1s
GOMU                               LR       LR
                comp=Z,150µm,15.7s
GOMU                               LR       LR
                comp=Z,230µm,15.4s
KMRM  Mail Ridge        48.96  77  IAmb     IAmb      04 18 20.7
                comp=Z,381nm,0.8s
VADS  Vadso             49.00 341 eP        P         04 18 07.6  -0.9
VADS                               IVmBBB             04 18 16.1
                comp=Z,6µm,2.3s
VADS                              eS        S         04 25 11.5  +0.1
VADS                              eScS      ScS       04 27 59.0  +0.1
VADS                               IVMs_BB IVMs_BB    04 45 37.8
                comp=Z,32µm,15.2s
BMO   Blue Mountains    49.04  68 ⇑P        P         04 18 09.8  +0.5
GZH   Guangzhou         49.08 248  P        P         04 18 03.3  -6.4
GZH                                PP       PP        04 19 57.3  -5.9
GZH                                S        S         04 25 03.8   -10
GZH                                LR       LR
                comp=Z,30µm,14.7s
GZH                                LR       LR
                comp=Z,40µm,14.3s
DBG   Daneborg          49.10   1 i P       P         04 18 07.9  -1.4
DBG                                IAmb     IAmb      04 18 16.9
                comp=Z,525nm,1.2s
BVAR  Borovoye Array    49.29 307  LR       LR        04 41 05.1
                comp=Z,123µm,18.7s,baz=41,slow=39
BVAR                               P3KP               04 48 05.2
                comp=Z,0.6nm,0.5s,baz=180,slow=2.9,SNR=2.6
BRVK  Borovoye          49.31 307  P        P         04 18 11.0  -0.1
BRVK  Borovoye          49.31 307ceP        P         04 18 10.9  -0.3
BRVK                               pmax     pmax
                comp=Z,170nm,1.7s
BRVK                               MLR      MLR
                comp=Z,168µm,15.0s
HKPS  Hong Kong Po S    49.35 246  IAMs_20  IAMs_20   04 39 03.4
                comp=Z,62µm,20.0s
MSO   Missoula          49.35  64  IAmb     IAmb      04 18 19.2
                comp=Z,602nm,1.1s
MSO                                IAMs_20  IAMs_20   04 38 05.1
                comp=Z,50µm,20.0s
MSO   Missoula          49.35  64 ⇑P        P         04 18 12.2  +0.4
MSO   Missoula          49.35  64  P        P         04 18 12.1  +0.4
                baz=314,SNR=176
MSO                                S        S         04 25 17.4  +0.2
                baz=314
FFC   Flin Flon         49.36  50  P        P         04 18 11.5   0.0
FFC                                IAmb     IAmb      04 18 14.4
                comp=Z,522nm,1.2s
FFC   Flin Flon         49.36  50  IAMs_20  IAMs_20   04 41 34.4
                comp=Z,42µm,18.0s
FFC   Flin Flon         49.36  50 ⇑P        P         04 18 11.2  -0.3
FFC   Flin Flon         49.36  50  P        P         04 18 11.5   0.0
FFC                                pmax     pmax
                comp=Z,522nm,1.2s
FFC                                MLR      MLR
                comp=Z,42µm,18.0s
NUUG  Nuugaatsiaq       49.43  14 i P       P         04 18 10.4  -1.4
J08A  Circle Bar Ran    49.49  70  IAmb     IAmb      04 18 23.9
                comp=Z,392nm,0.9s
HAMF  Hammerfest        49.51 343 eP        P         04 18 12.4   0.0
HAMF                               IVmB_BB            04 18 17.4
                comp=Z,12µm,4.3s
HAMF                              eS        S         04 25 15.2  -3.3
HAMF                              eSS       SS        04 28 54.6  +5.0
HAMF                               IVMs_BB IVMs_BB    04 41 14.2
                comp=Z,28µm,20.0s
PLID  Pearl Lake        49.54  67  IAmb     IAmb      04 18 22.6
                comp=Z,1µm,1.8s
PLID                               IAMs_20  IAMs_20   04 40 07.2
                comp=Z,64µm,19.0s
MOD   Modoc Plateau     49.57  73  IAmb     IAmb      04 18 23.4
                comp=Z,426nm,0.9s
MOD                                IAMs_20  IAMs_20   04 37 47.0
                comp=Z,40µm,18.0s
CVP   Callao Caves      49.59 235⇓eP        P         04 18 12.9  -0.8
FCC   Fort Churchill    49.62  42  IAmb     IAmb      04 18 15.9
                comp=Z,524nm,1.0s
APYP  Conner            49.72 236⇑eP        P         04 18 12.2  -2.4
KEV   Kevo              49.73 341  P        P         04 18 14.4  +0.3
KEV                                IAMs_20  IAMs_20   04 42 19.3
                comp=Z,40µm,18.0s
KEV   Kevo              49.73 341 ⇑P        P         04 18 14.3  +0.3
KEV   Kevo              49.73 341  P        P         04 18 14.4  +0.3
KEV                                pmax     pmax
                comp=Z,745nm,2.0s
KEV                                MLR      MLR
                comp=Z,40µm,18.0s
LVZ   Lovozero          49.82 337  P        P         04 18 14.0  -0.9
LVZ                                IAMs_20  IAMs_20   04 41 17.9
                comp=Z,68µm,20.0s
LVZ   Lovozero          49.82 337 ⇑P        P         04 18 15.0  +0.1
LVZ   Lovozero          49.82 337ceP        P         04 18 14.6  -0.3
LVZ                                pmax     pmax
                comp=Z,257nm,1.7s
LVZ                                MLR      MLR
                comp=Z,74µm,21.0s
GYA   Guiyang           49.83 257 ⇑P        P         04 18 14.3  -1.3
GYA                                sP       sP        04 18 27.8  +4.2
GYA                                S        S         04 25 19.5  -4.8
GYA                                pmax     pmax
                comp=Z,150nm,1.6s
GYA                                pmax     pmax
                comp=Z,4µm,7.7s
GYA                                LR       LR
                comp=Z,86µm,21.0s
GYA                                LR       LR
                comp=Z,88µm,16.4s
GYA                                LR       LR
                comp=Z,161µm,18.0s
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PALP  Palanan           49.88 234⇓eP        P         04 18 17.7  +1.8
PATS  Pohnpei           50.01 186  P        P         04 18 18.3  +1.5
SUMG  Summit            50.02   8 ⇑P        P         04 18 16.7  -0.1
SUMG  Summit            50.02   8 i P       P         04 18 15.7  -1.1
SUMG                              i P       pP        04 18 16.8  -5.8
SUMG                               IAmb     IAmb      04 18 26.0
                comp=Z,2µm,1.3s
WVOR  Wild Horse Val    50.06  71  IAmb     IAmb      04 18 30.8
                comp=Z,408nm,1.0s
WVOR                               IAMs_20  IAMs_20   04 39 12.2
                comp=Z,47µm,19.0s
WVOR  Wild Horse Val    50.06  71 ⇑P        P         04 18 17.9  +0.7
ARA0  ARCESS Array S    50.18 342 eP        P         04 18 15.9  -1.7
ARA0                               IVmB_BB            04 18 24.0
                comp=Z,9µm,2.4s
ARA0                              eS        S         04 25 26.1  -2.0
ARA0                              eScS      ScS       04 28 04.2  -2.8
ARA0                               IVMs_BB IVMs_BB    04 46 38.5
                comp=Z,18µm,15.0s
ARCES ARCESS Array B    50.18 342  P        P         04 18 16.7  -0.9
                comp=Z,87nm,0.9s,baz=32,slow=5.0,SNR=34
ARCES                              PcP      PcP       04 19 36.4  -0.1
                comp=Z,62nm,0.8s,baz=28,slow=5.5,SNR=6.8
ARCES                              S        S         04 25 23.2  -4.9
                comp=Z,4.4nm,0.9s,baz=72,slow=5.2,SNR=1.5
                comp=Z,87nm,0.9s
ARCES ARCESS Array B    50.18 342  IAmb     IAmb      04 18 25.4
                comp=Z,954nm,1.6s
APA   Apatity           50.36 337⇓iP        P         04 18 16.5  -2.4
APA                               i                   04 19 39.0
APA                               i                   04 20 19.0
APA                               i S       S         04 25 25.0  -5.5
APA                               i                   04 28 12.0
APA                                pmax     pmax
                comp=Z,79nm,0.7s
BRZS  Berezniki         50.38 303⇑iP        P         04 18 18.8  -0.6
                comp=Z,872nm,2.9s,baz=303
BRZS                              eS        S         04 25 30.4  -0.9
                baz=303
BRZS                              i S       S         04 25 30.7  -0.5
                baz=303
BRZS  Berezniki         50.38 303c iP       P         04 18 18.7  -0.6
BRZS                              eS        S         04 25 30.3  -0.9
BRZS                               pmax     pmax
                comp=Z,872nm,2.9s
EGMT  Eagleton          50.55  60  IAmb     IAmb      04 18 29.1
                comp=Z,632nm,0.8s
EGMT  Eagleton          50.55  60 ⇑P        P         04 18 20.8   0.0
EGMT  Eagleton          50.55  60  P        P         04 18 20.8   0.0
                baz=315,SNR=311
EGMT                               S        S         04 25 34.2  +0.4
                baz=315
SAMP  Sagada Mountai    50.55 236⇑eP        P         04 18 19.6  -1.4
SVE   Sverdlovsk        50.61 316d iP       P         04 18 21.8  +0.9
SVE                               e                   04 20 21.5
SVE                               eS        S         04 25 36.4  +2.2
SVE                                pmax     pmax
                comp=Z,925nm,1.6s
SVE                                pmax     pmax
                comp=Z,7µm,13.4s
SVE                                MLR      MLR
                comp=N,132µm,16.0s
SVE                                MLR      MLR
                comp=Z,219µm,16.0s
SVE                                MLR      MLR
                comp=E,125µm,15.0s
MFID  Camas Ranch       50.81  68  IAMs_20  IAMs_20   04 40 55.9
                comp=Z,55µm,18.0s
PLTX  Planet X, Gerl    50.86  73  IAmb     IAmb      04 18 34.5
                comp=Z,442nm,0.8s
MCCM  Marconi Confer    50.90  78 ⇑P        P         04 18 24.8  +1.4
JETT  Jettan, Norway    50.99 344 eP        P         04 18 24.7  +1.0
JETT                               IVmBBB             04 18 31.7
                comp=Z,10µm,1.3s
JETT                              eS        S         04 25 40.7  +1.4
JETT                              eSS       SS        04 29 14.4  +1.1
JETT                               IVMs_BB IVMs_BB    04 46 46.0
                comp=Z,24µm,16.3s
KTK1  Kautokeino        51.03 342 eP        P         04 18 23.7  -0.2
KTK1                               IVmBBB             04 18 32.3
                comp=Z,10µm,1.6s
KTK1                              eS        S         04 25 38.8  -0.9
KTK1                              eSS       SS        04 29 17.2  +3.3
KTK1                               IVMs_BB IVMs_BB    04 42 58.3
                comp=Z,24µm,18.2s
DLMT  Dillon            51.05  65  IAmb     IAmb      04 18 34.1
                comp=Z,585nm,0.8s
DLMT                               IAMs_20  IAMs_20   04 41 04.0
                comp=Z,37µm,18.0s
TRO   Tromso            51.14 345 eP        P         04 18 24.2  -0.5
TRO                                IVmBBB             04 18 32.6
                comp=Z,9µm,1.9s
TRO                               eS        S         04 25 40.4  -0.8
BOZ   Bozeman (W)       51.36  64  IAMs_20  IAMs_20   04 40 48.1
                comp=Z,34µm,18.0s
BOZ   Bozeman (W)       51.36  64 ⇑P        P         04 18 27.1  +0.2
BOZ   Bozeman (W)       51.36  64  P        P         04 18 27.6  +0.7
                baz=316,SNR=329
BOZ                                S        S         04 25 46.8  +1.5
                baz=316
HLID  Hailey            51.42  67 ⇑P        P         04 18 27.8  +0.3
HLID  Hailey            51.42  67  P        P         04 18 28.2  +0.7
                baz=316,SNR=342
HLID                               S        S         04 25 49.5  +3.2
                baz=316
BALP  Baler             51.43 234⇓eP        P         04 18 27.6   0.0
MPK   Martis Peak       51.59  75  IAmb     IAmb      04 18 39.0
                comp=Z,897nm,1.2s
BOLP  Bolinao           51.62 236⇑eP        P         04 18 28.4  -0.5
ARU   Arti              51.68 317  S        S         04 25 48.2  -0.9
                comp=Z,2.2nm,0.3s,baz=34,slow=23,SNR=1.2
ARU                                LR       LR        04 43 55.4
                comp=Z,145µm,19.4s,baz=34,slow=40
ARU   Arti              51.68 317  P        P         04 18 29.0   0.0
ARU                                IAmb     IAmb      04 18 37.6
                comp=Z,502nm,1.0s
ARU   Arti              51.68 317ceP        P         04 18 29.0   0.0
ARU                                pmax     pmax
                comp=Z,454nm,1.3s
ARU                                MLR      MLR
                comp=Z,166µm,16.0s
EMB   Emerald Bay       51.78  75  IAmb     IAmb      04 18 41.5
                comp=Z,429nm,0.9s
ILULI Ilulissat         51.86  15  IAmb     IAmb      04 18 40.6
                comp=Z,358nm,0.7s
ILULI Ilulissat         51.86  15 i P       P         04 18 29.1  -1.0
ILULI                              IAmb     IAmb      04 18 37.4
                comp=Z,699nm,1.2s
SHLS  Shalkode          51.94 293⇑iP        P         04 18 29.7  -1.6
                baz=292
SHLS  Shalkode          51.94 293c iP       P         04 18 29.7  -1.6
KPKS  Kokpek            52.11 293⇑iP        P         04 18 32.5   0.0
                comp=Z,809nm,2.6s,baz=293
KPKS                              eS        S         04 25 56.0  +0.4
                baz=293
KPKS  Kokpek            52.11 293c iP       P         04 18 32.5   0.0
KPKS                              eS        S         04 25 55.9  +0.4
KPKS                               pmax     pmax
                comp=Z,809nm,2.6s
SCZP  Santa Cruz        52.15 236⇑eP        P         04 18 32.9   0.0
UZB   Uzynbulak         52.17 293⇑iP        P         04 18 32.8  -0.2
                comp=Z,664nm,2.5s,baz=293
UZB                               eS        S         04 25 56.5   0.0
                baz=293
UZB   Uzynbulak         52.17 293c iP       P         04 18 32.8  -0.2
UZB                               eS        S         04 25 56.4   0.0
UZB                                pmax     pmax
                comp=Z,664nm,2.5s
PVCP  Virac             52.22 230⇑eP        P         04 18 34.3  +0.9
JCNP  Jose Panganiba    52.22 232⇓eP        P         04 18 33.5  +0.1
JMIC  Jan Mayen         52.30 356  LR       LR        04 39 55.2
                comp=Z,17µm,20.7s,baz=3.5,slow=35
JMIC  Jan Mayen         52.30 356 eP        P         04 18 34.1  +0.7
JMIC                               IVmB_BB            04 18 40.9
                comp=Z,19µm,3.9s
JMIC                              eS        S         04 25 55.4  -1.8
YMR   Madison River     52.35  64  IAmb     IAmb      04 18 46.2
                comp=Z,476nm,0.9s
SCSP  San Jose Seism    52.43 231⇓eP        P         04 18 35.7  +0.7
PZH   PanZhiHua         52.45 261  P        P         04 18 35.3  +0.1
PZH                                sP       sP        04 18 43.5  +0.2
PZH                                PP       PP        04 20 37.5  +3.6
PZH                                ScP      ScP       04 23 45.0  +3.3
PZH                                S        S         04 25 56.0  -4.5
PZH                                sS       sS        04 26 10.5  +0.7
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PZH                                ScS      ScS      04 28 25.3 +1.1
PZH                                pmax     pmax
      comp=Z,460nm,0.9s
PZH                                pmax     pmax
      comp=Z,6µm,11.6s
PZH                                LR       LR
      comp=Z,84µm,21.1s
PZH                                LR       LR
      comp=Z,102µm,20.1s
PZH                                LR       LR
      comp=Z,149µm,14.9s
ZHN   Zhinishke        52.45 293⇑iP       P        04 18 35.1  0.0
      comp=Z,694nm,2.7s,baz=293
ZHN   Zhinishke        52.45 293c iP      P        04 18 35.1  0.0
ZHN                                pmax     pmax
      comp=Z,694nm,2.7s
SATY  Saty             52.54 293⇑iP       P        04 18 36.0 +0.1
      comp=Z,1µm,2.9s,baz=293
SATY                              eS        S        04 26 02.5 +0.9
      baz=293
SATY  Saty             52.54 293c iP      P        04 18 35.9 +0.1
SATY                              eS        S        04 26 02.4 +0.9
SATY                               pmax     pmax
      comp=Z,1µm,2.9s
QVP   Quezon City--P   52.67 234⇓eP       P        04 18 37.9 +1.2
GQP   Guinayangan      52.67 232⇑iP       P        04 18 36.9 +0.2
CHKK  Chushkaly        52.68 295 eP       P        04 18 35.1 -1.5
      baz=295
CHKK  Chushkaly        52.68 295 eP       P        04 18 35.9 -0.7
SAO   San Andreas Ge   52.69  78  IAMs_20 IAMs_20  04 38 51.3
      comp=Z,34µm,19.0s
SAO   San Andreas Ge   52.69  78 ⇑P       P        04 18 37.8 +1.0
YMP   Mirror Lake Pl   52.70  63  IAmb    IAmb     04 18 47.1
      comp=Z,1µm,1.3s
LKWY  Lake             52.71  64  IAmb    IAmb     04 18 49.5
      comp=Z,818nm,1.0s
LKWY                              IAMs_20 IAMs_20  04 42 37.8
      comp=Z,67µm,18.0s
LKWY  Lake             52.71  64 ⇑P       P        04 18 39.0 +1.9
H17A  Grant Village    52.74  64  IAmb    IAmb     04 18 43.0
      comp=Z,594nm,1.0s
H17A  Grant Village    52.74  64  P       P        04 18 39.5 +2.1
      baz=317,SNR=617
H17A                              S       S        04 26 09.1 +4.6
      baz=317
DGMT  Dagmar           52.83  57  IAmb    IAmb     04 18 40.8
      comp=Z,586nm,1.1s
DGMT  Dagmar           52.83  57 ⇑P       P        04 18 37.9 +0.2
DGMT  Dagmar           52.83  57  P       P        04 18 38.0 +0.3
      baz=317,SNR=179
DGMT                              S       S        04 26 06.7 +1.6
      baz=317
DGMT  Dagmar           52.83  57  P       P        04 18 38.1 +0.3
      baz=317,SNR=179
DGMT                              S       S        04 26 07.3 +2.2
      baz=317
RLMT  Red Lodge        52.86  63  IAmb    IAmb     04 18 42.1
      comp=Z,826nm,1.0s
RLMT                              IAMs_20 IAMs_20  04 42 11.7
      comp=Z,66µm,18.0s
RLMT  Red Lodge        52.86  63 ⇑P       P        04 18 39.1 +1.0
RLMT  Red Lodge        52.86  63  P       P        04 18 39.2 +1.0
      baz=317,SNR=955
RLMT                              S       S        04 26 08.5 +2.5
      baz=317
LQP   Lukban           52.88 233⇑eP       P        04 18 38.5 -0.1
FLWY  Flagg Ranch      52.91  64  IAmb    IAmb     04 18 57.6
      comp=Z,827nm,1.1s
FLWY                              IAMs_20 IAMs_20  04 42 25.2
      comp=Z,34µm,18.0s
SCO   Scoresbysund     52.92   2  P       P        04 18 38.2 +0.2
SCO                               IAMs_20 IAMs_20  04 40 34.1
      comp=Z,41µm,20.0s
SCO   Scoresbysund     52.92   2 ⇑P       P        04 18 38.1 +0.2
SCO   Scoresbysund     52.92   2  P       P        04 18 38.2 +0.2
SCO                               pmax    pmax
      comp=Z,2µm,2.0s
SCO                               MLR     MLR
      comp=Z,41µm,20.0s
SCO   Scoresbysund     52.92   2 i P      P        04 18 38.0  0.0
SCO                               IAmb    IAmb     04 18 46.8
      comp=Z,2µm,2.0s
IMW   Indian Meadow    52.92  65  IAmb    IAmb     04 18 44.6
      comp=Z,774nm,1.2s
KUU   Kurty            52.97 295⇑iP       P        04 18 38.0 -0.9
      baz=295
KUU                              eS       S        04 26 06.7 -0.5
      baz=295
KUU                               LR      LR       04 41 31.6
      comp=Z,56µm,10.8s,baz=295
KUU   Kurty            52.97 295c iP      P        04 18 37.9 -0.9
KUU                              eS       S        04 26 06.6 -0.5
KUU                               MLR     MLR
      comp=Z,56µm,11.0s
CNP   Catarman         52.98 229⇓eP       P        04 18 40.5 +1.4
KMI   Kunming          53.00 259 ⇑P       P        04 18 38.5 -1.0
KMI                               PP      PP       04 20 41.0 +1.9
KMI                               S       S        04 26 05.0 -3.3
KMI                               pmax    pmax
      comp=Z,240nm,1.2s
KMI                               pmax    pmax
      comp=Z,6µm,10.7s
KMI                               LR      LR
      comp=Z,96µm,20.3s
KMI                               LR      LR
      comp=Z,78µm,20.1s
KMI                               LR      LR
      comp=Z,146µm,14.5s
ELK   Elko             53.04  70  LR      LR       04 40 31.9
      comp=Z,29µm,18.1s,baz=320,slow=35
ELK   Elko             53.04  70 ⇑P       P        04 18 40.7 +1.1
BBGB  Big Mountain B   53.05  78  IAmb    IAmb     04 18 45.9
      comp=Z,1µm,1.2s
FXWY  Fox Creek        53.07  65  IAmb    IAmb     04 18 49.2
      comp=Z,401nm,0.8s
NVAR  Mina Array Bea   53.14  74  P       P        04 18 41.6 +1.3
      comp=Z,229nm,1.0s,baz=298,slow=5.6,SNR=334
NVAR                              S       S        04 26 13.3 +3.4
      comp=Z,0.8nm,0.8s,baz=289,slow=5.6,SNR=2.3
NVAR                              LR      LR       04 40 43.9
      comp=Z,30µm,18.1s,baz=318,slow=35
NVAR                              P3KP             04 48 04.8
      comp=Z,0.5nm,0.8s,baz=170,slow=2.7,SNR=1.6
NVAR                              P4KPbc           04 56 02.5
      comp=Z,0.2nm,0.6s,baz=297,slow=4.0,SNR=4.1
      comp=Z,229nm,1.0s
MDOK  Medeo            53.15 294 i P      P        04 18 40.2 -0.2
      baz=294
MDOK                             eS       S        04 26 09.7 -0.2
      baz=294
MDOK                              LR      LR       04 41 26.1
      comp=Z,55µm,11.7s,baz=294
MDOK  Medeo            53.15 294 i P      P        04 18 40.1 -0.2
MDOK                             eS       S        04 26 09.6 -0.2
MDOK                              MLR     MLR
      comp=Z,55µm,12.0s
TGY   Tagaytay City    53.16 234⇑eP       P        04 18 43.2 +2.7
LHV   Little Huntoon   53.16  75  IAmb    IAmb     04 18 55.0
      comp=Z,644nm,1.2s
AAA   Alma-Ata         53.18 294 eP       P        04 18 40.8 +0.4
      baz=294
AAA                               LR      LR       04 41 35.2
      comp=Z,69µm,13.0s,baz=294
AAA   Alma-Ata         53.18 294 eP       P        04 18 40.8 +0.4
AAA                               MLR     MLR
      comp=Z,69µm,13.0s
LAO   LASA Array       53.18  59 ⇑P       P        04 18 40.5 +0.1
LAO   LASA Array       53.18  59  P       P        04 18 41.3 +0.9
      baz=317,SNR=667
LAO                               S       S        04 26 15.0 +5.0
      baz=317
LAO   LASA Array       53.18  59  P       P        04 18 41.3 +0.9
      baz=317,SNR=667
TPAW  Teton Pass       53.22  65  IAmb    IAmb     04 18 47.5
      comp=Z,566nm,1.0s
STEI  Steigen          53.24 345 eP       P        04 18 39.5 -0.8
STEI                              IVmBBB           04 18 48.6
      comp=Z,8µm,4.8s
STEI                             eS       S        04 26 11.6 +1.6
STEI                             eScS     ScS      04 28 31.3 +3.2
STEI                             eSS      SKiKP    04 29 53.6 -2.2
BTLS  Baital           53.26 298⇑iP       P        04 18 40.4 -0.5
      comp=Z,894nm,2.5s,baz=298
BTLS                             eS       S        04 26 11.2 +0.1
      baz=298
BTLS  Baital           53.26 298c iP      P        04 18 40.4 -0.5
BTLS                             eS       S        04 26 11.1 +0.1
BTLS                              pmax    pmax
      comp=Z,894nm,2.5s
LOF   Lofoten          53.28 346 eP       P        04 18 40.7 +0.1
LOF                               IVmBBB           04 18 48.2
      comp=Z,10µm,3.0s
LOF                              eS       S        04 26 08.7 -1.8
LOF                               IVMs_BB IVMs_BB  04 49 07.2
      comp=Z,13µm,16.1s
KIRV  Kirov            53.28 323  S       S        04 26 08.3 -2.5
      comp=Z,6.6nm,0.5s,baz=18,slow=14,SNR=1.5
KIRV                              LR      LR       04 43 19.1
      comp=Z,75µm,20.9s,baz=32,slow=38
KIRV  Kirov            53.28 323ceP       P        04 18 40.9 +0.1
TNSS  Tian-Shan        53.29 294 i P      P        04 18 41.5 -0.2
      baz=294
TNSS  Tian-Shan        53.29 294 i P      P        04 18 41.4 -0.2
ICESG Greenland Ices   53.31  10 ⇑P       P        04 18 40.8 -0.6
ICESG Greenland Ices   53.31  10 i P      P        04 18 39.6 -1.7
ICESG                             IAmb    IAmb     04 18 49.0
      comp=Z,1µm,1.3s
BOAC  Boac             53.33 233⇓eP       P        04 18 42.8 +1.2
Q09A  Carvers          53.43  73  IAmb    IAmb     04 18 52.3
      comp=Z,668nm,0.9s
FRB   Frobisher Bay    53.44  26  LR      LR       04 43 56.3
      comp=Z,30µm,19.1s,baz=317,slow=39
FRB   Frobisher Bay    53.44  26 ⇑P       P        04 18 39.1 -2.8
MLAC  Mammoth, Mammo   53.45  76  P       P        04 18 44.9 +2.3
      baz=318,SNR=32
MLAC                              S       S        04 26 17.5 +3.4
      baz=318
PMPB  Monarch Peak     53.45  78  IAmb    IAmb     04 19 02.0
      comp=Z,578nm,1.1s
HVU   Hansel Valley    53.55  68  IAmb    IAmb     04 18 48.9
      comp=Z,532nm,1.3s
AHID  Auburn Hatcher   53.67  66  IAmb    IAmb     04 18 54.0
      comp=Z,540nm,1.3s
AHID                              IAMs_20 IAMs_20  04 43 49.4
      comp=Z,37µm,18.0s
AHID  Auburn Hatcher   53.67  66 ⇑P       P        04 18 44.8 +0.6
FAUS  Fauske           53.74 345 eP       P        04 18 43.0 -1.1
FAUS                              IVmBBB           04 18 52.0
      comp=Z,9µm,2.3s
FAUS                             eS       S        04 26 16.2 -0.6
FAUS                             eScS     ScS      04 28 32.8 +1.1
FAUS                             eSS      SS       04 30 01.2 +4.5
FAUS                              IVMs_BB IVMs_BB  04 42 29.1
      comp=Z,16µm,16.5s
LUBP  Lubang           53.79 234⇑eP       P        04 18 43.3 -1.7
KDJ   Kajisay          53.84 293  IAmb    IAmb     04 18 54.2
      comp=Z,640nm,1.3s
SFJD  Kangerlussuaq    53.98  16  LR      LR       04 45 16.7
      comp=Z,52µm,18.0s,baz=346,slow=40
SFJD  Kangerlussuaq    53.98  16  P       P        04 18 44.9 -1.0
SFJD                              IAmb    IAmb     04 18 53.4
      comp=Z,913nm,1.4s
SFJD  Kangerlussuaq    53.98  16 ⇑P       P        04 18 44.8 -1.0
SFJD  Kangerlussuaq    53.98  16  P       P        04 18 44.9 -1.0
SFJD                              pmax    pmax
      comp=Z,913nm,1.4s
SFJD                              MLR     MLR
      comp=Z,68µm,18.0s
SFJD  Kangerlussuaq    53.98  16 i P      P        04 18 43.6 -2.2
SFJD                              IAmb    IAmb     04 18 53.1
      comp=Z,988nm,1.4s
TKM2  Tokmak 2         54.05 295  P       P        04 18 47.0  0.0
      SNR=66
DSP   Deep Springs     54.10  75  IAmb    IAmb     04 18 59.3
      comp=Z,662nm,1.3s
VOG   Valley Oaks Go   54.13  77  P       P        04 18 50.0 +2.7
      baz=319,SNR=9.4
VOG                               S       S        04 26 26.8 +3.9
      baz=319
SGDS  Sogindy          54.14 296⇑iP       P        04 18 47.7 +0.2
      comp=Z,1µm,2.6s,baz=296
SGDS                             eS       S        04 26 23.7 +0.6
      baz=296
SGDS  Sogindy          54.14 296c iP      P        04 18 47.6 +0.2
SGDS                             eS       S        04 26 23.6 +0.5
SGDS                              pmax    pmax
      comp=Z,1µm,2.6s
TIN   Tinemaha, Big    54.20  76  P       P        04 18 50.3 +2.3
      baz=318,SNR=25
TIN                               S       S        04 26 28.0 +3.9
      baz=318
ULHL  Ulahol           54.23 294  P       P        04 18 48.3  0.0
      SNR=346
OTRP  Odiongan         54.23 232⇓eP       P        04 18 49.3 +1.1
QIZ   Qiongzhong       54.25 248  P       P        04 18 48.3 -0.1
QIZ                               pP      pP       04 18 54.5 +0.2
QIZ                               S       S        04 26 25.8 +1.0
QIZ                               ScS     ScS      04 28 36.3 -0.4
QIZ                               pmax    pmax
      comp=Z,7µm,7.5s
QIZ                               LR      LR
      comp=Z,104µm,13.7s
QIZ                               LR      LR
      comp=Z,30µm,10.8s
QIZ                               LR      LR
      comp=Z,121µm,14.7s
HWUT  Hardware Ranch   54.29  67  IAmb    IAmb     04 18 58.2
      comp=Z,343nm,0.8s
HWUT                              IAMs_20 IAMs_20  04 41 34.8
      comp=Z,61µm,18.0s
HWUT  Hardware Ranch   54.29  67 ⇑P       P        04 18 49.7 +1.0
OCLP  Ormoc            54.31 228⇑eP       P        04 18 50.2 +1.4
USP   Ospenovka        54.34 296  P       P        04 18 49.2 +0.3
      SNR=226
LCH   Last Change Ra   54.37  75  IAmb    IAmb     04 18 59.9
      comp=Z,559nm,1.2s
CHMS  Chumysh          54.41 296  P       P        04 18 49.6 +0.2
      SNR=81
BW06  Boulder Array    54.44  65  IAmb    IAmb     04 18 58.8
      comp=Z,287nm,0.8s
BW06                              IAMs_20 IAMs_20  04 42 57.7
      comp=Z,42µm,18.0s
BW06  Boulder Array    54.44  65 ⇑P       P        04 18 50.1 +0.3
BW06  Boulder Array    54.44  65  P       P        04 18 50.5 +0.7
      baz=318,SNR=447
BW06                              S       S        04 26 28.6 +1.2
      baz=318
PDAR  Pinedale Array   54.44  65  P       P        04 18 50.4 +0.5
      comp=Z,282nm,1.0s,baz=323,slow=2.3,SNR=400
PDAR                              S       S        04 26 27.0 -0.4
      comp=Z,0.6nm,0.9s,baz=254,slow=27,SNR=1.6
PDAR                              LR      LR       04 42 19.4
      comp=Z,34µm,18.1s,baz=340,slow=36
PDAR                              PKPPKP           04 49 01.6
      comp=Z,0.7nm,0.7s,baz=48,slow=1.3,SNR=2.6
      comp=Z,282nm,1.0s
KLMR  Klimovskoe       54.46 330⇑iP       P        04 18 49.1 -0.3
KLMR                            ⇓iP       P        04 18 49.1 -0.3
KLMR                            ⇓iP       P        04 18 49.1 -0.3
KLMR                              AMP              04 18 56.8
      comp=Z,7µm,4.6s
KLMR                              AMP              04 18 57.9
      comp=Z,681nm,1.6s
KLMR                              PP      PP       04 20 49.9 -1.2
KLMR                             ePPP     PPP      04 21 59.1
KLMR                              S       S        04 26 25.5 -1.3
KLMR                              S       S        04 26 25.5 -1.3
KLMR                              SS      SS       04 30 41.8  +34
KLMR                              SS      SS       04 30 41.8  +34
KLMR                              LQ      LQ       04 37 28.2
KLMR                              LQ      LQ       04 37 28.2
KLMR                              LR      LR       04 39 23.0
KLMR                              AMP              04 45 58.2
      comp=Z,64µm,13.8s
KLMR  Klimovskoe       54.46 330c iP      P        04 18 49.1 -0.3
KLMR                                               04 20 49.8
KLMR                             ePPP     PPP      04 21 59.0
KLMR                              S       S        04 26 25.4 -1.3
KLMR                              pmax    pmax
      comp=Z,7µm,4.6s
KLMR                              pmax    pmax
      comp=Z,681nm,1.6s
KLMR                              MLR     MLR
      comp=Z,64µm,14.0s
Q12A  Willow Creek R   54.51  71  IAmb    IAmb     04 18 59.8
      comp=Z,649nm,1.4s
SJMP  San Jose         54.53 233⇓eP       P        04 18 51.5 +1.1
SMMC  Simmler          54.55  78  P       P        04 18 52.0 +1.5
      baz=319,SNR=52
SMMC                              S       S        04 26 32.1 +3.3
      baz=319
KBK   Karagaybulak     54.57 295  P       P        04 18 50.6 -0.1
      SNR=145
FRU1  Bishkek          54.61 296  IAmb    IAmb     04 19 00.1
      comp=Z,964nm,1.2s
R11B  Troy Canyon, C   54.63  73  P       P        04 18 52.1 +0.9
      baz=318,SNR=308
R11B                              S       S        04 26 32.4 +2.4
      baz=318
RCP   Roxas            54.63 231⇑iP       P        04 18 51.9 +0.6
VES   Vestal, Richgr   54.65  77  P       P        04 18 52.0 +0.9
      baz=319,SNR=63
VES                               S       S        04 26 32.0 +2.1
      baz=319
DUG   Dugway, Tooele   54.70  69 ⇑P       P        04 18 52.6 +1.0
DUG   Dugway, Tooele   54.70  69  P       P        04 18 52.7 +1.1
      baz=318,SNR=302
DUG                               S       S        04 26 32.8 +2.0
      baz=318
GRAC  Grapevine Rang   54.70  75  P       P        04 18 54.8 +3.2
      baz=319,SNR=152
GRAC                              S       S        04 26 34.4 +3.7
      baz=319
CWC   Cottonwood Cre   54.73  76  P       P        04 18 53.7 +1.7
      baz=319
CWC                               S       S        04 26 35.5 +4.0
      baz=319
SPR3  Spring Creek 3   54.80  71  IAmb    IAmb     04 19 07.5
      comp=Z,752nm,1.1s
AAK   Ala-Archa        54.81 296  P       P        04 18 52.8 +0.3
      SNR=138
AAK   Ala-Archa        54.81 296  S       S        04 26 28.4 -3.9
      comp=Z,4.2nm,0.9s,baz=13,slow=15,SNR=1.3
AAK                               LR      LR       04 42 48.8
      comp=Z,28µm,19.1s,baz=28,slow=37
AAK   Ala-Archa        54.81 296  P       P        04 18 52.6 +0.2
AAK                               IAmb    IAmb     04 19 01.4
      comp=Z,807nm,1.2s
AAK   Ala-Archa        54.81 296  IAMs_20 IAMs_20  04 46 10.2
      comp=Z,38µm,18.0s
AAK   Ala-Archa        54.81 296 ⇑P       P        04 18 52.6 +0.2
AAK   Ala-Archa        54.81 296ceP       P        04 18 52.6 +0.2
AAK                               pmax    pmax
      comp=Z,730nm,1.7s
AAK                               MLR     MLR
      comp=Z,45µm,15.0s
AAK   Ala-Archa        54.81 296 i P      P        04 18 52.8 +0.3
      SNR=156
SOEG  Soedalen         54.82   6 i P      P        04 18 50.9 -1.0
GLSP  General Luna,    54.85 226⇓eP       P        04 18 52.1 -0.6
CTU   Camp Tracy       54.87  68  IAmb    IAmb     04 19 02.1
      comp=Z,554nm,1.2s
PKM   Mcpherson Peak   54.97  78  P       P        04 18 55.8 +2.0
      baz=319,SNR=61
PKM                               S       S        04 26 38.7 +4.0
      baz=319
MOR8  Moi Rana         55.00 345 eP       P        04 18 52.6 -0.6
MOR8                              IVmBBB           04 18 59.9
      comp=Z,7µm,1.6s
MOR8                             eS       S        04 26 29.8 -4.1
MOR8                             eSS      SS       04 30 13.9 -2.7
MOR8                              IVMs_BB IVMs_BB  04 50 13.1
      comp=Z,23µm,14.5s
MSLP  Maasin           55.04 228⇓eP       P        04 18 53.9 -0.3
STOK  Stokkvaagen      55.04 346 eP       P        04 18 57.4 +3.9
STOK                             eS       S        04 26 34.0 -0.4
DY2G  Dye2             55.08  14 ⇑P       P        04 18 52.9 -1.3
DY2G                             ⇓p       pP       04 18 58.7 -1.3
DY2G  Dye2             55.08  14 i P      P        04 18 52.2 -1.9
DY2G                              IAmb    IAmb     04 19 01.9
      comp=Z,1µm,1.2s
UCH   Uchtor           55.10 295  P       P        04 18 55.1 +0.2
      SNR=171
ISA   Isabella, Lake   55.11  77  P       P        04 18 55.1 +0.5
      baz=319,SNR=69
ISA                               S       S        04 26 37.5 +1.2
      baz=319
EKS2  Erkin-Say        55.15 296  P       P        04 18 55.2 +0.4
      SNR=185
ULM   Lac du Bonnet    55.17  50  P       P        04 18 54.3 -0.5
      comp=Z,279nm,1.0s,baz=319,slow=7.9,SNR=126
ULM                               S       S        04 26 36.8 +0.2
      comp=Z,4.7nm,0.7s,baz=346,slow=11,SNR=1.6
ULM                               LR      LR       04 44 57.5
      comp=Z,47µm,18.2s,baz=328,slow=39
      comp=Z,279nm,1.0s
ULM   Lac du Bonnet    55.17  50  IAmb    IAmb     04 19 06.1
      comp=Z,766nm,1.3s
ULM   Lac du Bonnet    55.17  50 ⇑P       P        04 18 54.9 +0.2
LLP   Lapu-Lapu        55.24 229⇑eP       P        04 18 55.3 -0.3
WCT   Wildcat Mounta   55.24  75  P       P        04 18 56.6 +1.1
NLU   North Lily Min   55.25  69  IAmb    IAmb     04 19 05.2
      comp=Z,489nm,1.2s
ARVC  Arvin            55.32  78  P       P        04 18 56.7 +0.7
      baz=319,SNR=28
ARVC                              S       S        04 26 41.9 +2.9
      baz=319
TPNV  Topopah Spring   55.33  74  IAmb    IAmb     04 19 11.5
      comp=Z,612nm,1.0s
TPNV  Topopah Spring   55.33  74 ⇑P       P        04 18 57.3 +1.1
TPNV  Topopah Spring   55.33  74  P       P        04 18 57.5 +1.2
      baz=319,SNR=261
TPNV                              S       S        04 26 42.5 +3.1
      baz=319
MPMC  Manual Prospec   55.34  76  P       P        04 18 57.8 +1.4
      baz=319,SNR=239
MPMC                              S       S        04 26 37.7 -1.9
      baz=319
BUSP  Coron            55.34 234⇓eP       P        04 18 56.7 +0.4
FURC  Furnace Creek,   55.36  75  P       P        04 18 57.9 +1.6
      baz=319,SNR=243
FURC                              S       S        04 26 41.4 +2.0
      baz=319
SBC   Santa Barbara    55.36  79  P       P        04 18 57.9 +1.6
      baz=320,SNR=8.2
SBC                               S       S        04 26 43.0 +3.4
      baz=320
MDND  Maddock          55.37  54  P       P        04 18 56.9 +0.7
      baz=319,SNR=112
MDND                              S       S        04 26 40.0 +0.7
      baz=319
MDND  Maddock          55.37  54  P       P        04 18 57.2 +1.1
      baz=319,SNR=112
TNCH  TengChong        55.37 263 ⇑P       P        04 18 57.0 +0.3
TNCH                              PcP     PcP      04 19 57.0  0.0
TNCH                              PP      PP       04 21 01.3 +1.0
TNCH                              S       S        04 26 33.8 -6.4
TNCH                              SS      SS       04 30 26.8 +2.3
TNCH                              pmax    pmax
      comp=Z,270nm,0.4s
TNCH                              pmax    pmax
      comp=Z,6µm,9.1s
TNCH                              LR      LR
      comp=Z,38µm,19.8s
TNCH                              LR      LR
      comp=Z,41µm,20.4s
TNCH                              LR      LR
      comp=Z,78µm,18.6s
BSUT  Blindstream Ca   55.49  67  IAmb    IAmb     04 19 02.0
      comp=Z,575nm,1.1s
GUIM  Jordan           55.54 230⇑eP       P        04 18 58.0 +0.3
AML   Almayashu        55.58 296  P       P        04 18 58.7 +0.4
      SNR=173
PRN   Pahroc Range     55.61  73  IAmb    IAmb     04 19 12.5
      comp=Z,476nm,0.9s
PRN   Pahroc Range     55.61  73 ⇑P       P        04 18 59.7 +1.4
LRMC  Laurel Mtn Rad   55.67  76  P       P        04 18 59.9 +1.2
      baz=319,SNR=138
LRMC                              S       S        04 26 47.2 +3.3
      baz=319
GWY   Greenwater Val   55.68  75  IAmb    IAmb     04 19 12.8
      comp=Z,423nm,1.0s
QSM   Queen of Sheba   55.74  75  IAmb    IAmb     04 19 09.5
      comp=Z,775nm,1.4s
SCZ2  Santa Cruz Isl   55.74  79  P       P        04 19 00.3 +1.2
      baz=320,SNR=7.4
SCZ2                              S       S        04 26 48.5 +3.8
      baz=320
LSA   Lhasa            55.75 273  P       P        04 19 00.3 +0.6
LSA                               S       S        04 26 45.0 -0.8
LSA                               pmax    pmax
      comp=Z,190nm,1.3s
LSA                               LR      LR
      comp=Z,63µm,19.6s
LSA                               LR      LR
      comp=Z,36µm,17.1s
LSA                               LR      LR
      comp=Z,31µm,23.5s
LSA   Lhasa            55.75 273  IAMs_20 IAMs_20  04 44 12.4
      comp=Z,44µm,20.0s
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LSA	**Lhasa**	**55.75**	**273**	P	**P**	**04 18 59.8**	**+0.1**
OSI	**Osito Audit: C**	**55.77**	**78**	P	**P**	**04 19 00.6**	**+1.3**
	baz=320,SNR=20						
OSI				S	**S**	**04 26 47.9**	**+2.9**
	baz=320						
BUTP	**Butuan**	**55.80**	**226**	⇑*e*P	**P**	**04 19 00.7**	**+1.1**
E28A	**Huff**	**55.83**	**56**	P	**P**	**04 19 00.5**	**+1.0**
	baz=319,SNR=307						
E28A				S	**S**	**04 26 50.1**	**+4.5**
	baz=319						
TBP	**Tagbilaran**	**55.85**	**228**	⇑*e*P	**P**	**04 18 59.5**	**-0.5**
TARA	**Tarawa**	**55.93**	**168**	P	**P**	**04 19 01.6**	**+1.1**
EDW2	**Edwards Air Fo**	**55.95**	**77**	P	**P**	**04 19 01.9**	**+1.3**
	baz=320,SNR=171						
EDW2				S	**S**	**04 26 50.0**	**+2.4**
	baz=320						
ZIRO	**ZIRO**	**55.96**	**269**	*e*P	P	04 18 56.0	-4.9
CUYO	**Cuyo Island**	**56.01**	**232**	⇑*e*P	**P**	**04 19 01.6**	**+0.5**
K22A	**Casper**	**56.02**	**63**	IAmb	IAmb	04 19 10.7	
	comp=Z,622nm,1.1s						
K22A	**Casper**	**56.02**	**63**	P	**P**	**04 19 01.6**	**+0.5**
	baz=319,SNR=264						
K22A				S	**S**	**04 26 49.9**	**+1.4**
	baz=319						
K22A	**Casper**	**56.02**	**63**	P	**P**	**04 19 01.6**	**+0.5**
	baz=319,SNR=264						
K22A				S	**S**	**04 26 46.5**	**-2.0**
	baz=319						
RDMU	**Red Mountain**	**56.07**	**67**	IAmb	IAmb	04 19 12.9	
	comp=Z,915nm,1.4s						
TCRU	**Three Creeks R**	**56.07**	**70**	IAmb	IAmb	04 19 13.8	
	comp=Z,955nm,1.5s						
SHOC	**Shoshone, Teco**	**56.10**	**75**	P	**P**	**04 19 02.7**	**+1.0**
	baz=319,SNR=47						
SHOC				S	**S**	**04 26 54.5**	**+5.0**
	baz=319						
RSSD	**Black Hills**	**56.12**	**60**	P	**P**	**04 19 02.4**	**+0.5**
RSSD				IAmb	IAmb	04 19 10.7	
	comp=Z,532nm,0.7s						
RSSD	**Black Hills**	**56.12**	**60**	⇑P	**P**	**04 19 02.2**	**+0.3**
RSSD	**Black Hills**	**56.12**	**60**	P	**P**	**04 19 02.4**	**+0.5**
RSSD				pmax	pmax		
	comp=Z,532nm,0.7s						
RSSD				MLR	MLR		
	comp=Z,72µm,18.0s						
RSSD	**Black Hills**	**56.12**	**60**	P	**P**	**04 19 02.0**	**+0.1**
	baz=319						
RSSD				S	**S**	**04 26 49.8**	**-0.1**
	baz=319						
RSSD	**Black Hills**	**56.12**	**60**	P	**P**	**04 19 02.6**	**+0.7**
	baz=319,SNR=503						
RSSD				S	**S**	**04 26 46.2**	**-3.7**
	baz=319						
DZA	**Taraz**	**56.17**	**298**	*e*P	**P**	**04 19 01.9**	**-0.2**
	baz=298						
DZA	**Taraz**	**56.17**	**298**	*e*P	**P**	**04 19 01.8**	**-0.3**
TMUT	**Trail Mountain**	**56.19**	**69**	IAmb	IAmb	04 19 06.7	
	comp=Z,440nm,1.0s						
BIPH	**Bislig**	**56.22**	**225**	⇓*i*P	**P**	**04 19 01.6**	**-1.0**
CNOP	**Candoni, Negro**	**56.23**	**230**	⇑*e*P	**P**	**04 19 00.8**	**-1.9**
DECC	**Green Verdugo**	**56.25**	**78**	P	**P**	**04 19 03.6**	**+0.9**
	baz=320,SNR=24						
DECC				S	**S**	**04 26 56.4**	**+4.9**
	baz=320						
GSC	**Goldstone, Bar**	**56.27**	**76**	IAmb	IAmb	04 19 16.4	
	comp=Z,508nm,1.1s						
GSC	**Goldstone, Bar**	**56.27**	**76**	P	**P**	**04 19 04.3**	**+1.4**
	baz=320,SNR=190						
GSC				S	**S**	**04 26 56.4**	**+4.6**
	baz=320						
ITAN	**ITANAGAR**	**56.33**	**269**	*e*P	**P**	**04 19 03.4**	**0.0**
ITAN				IAmb	IAmb	04 19 16.6	
	comp=Z,1µm,1.5s						
JORH	**JORHAT**	**56.35**	**268**	*e*P	**P**	**04 19 02.4**	**-1.1**
SNCC	**San Nicolas Is**	**56.37**	**80**	P	**P**	**04 19 04.8**	**+1.2**
	baz=320						
SNCC				S	**S**	**04 26 55.9**	**+2.9**
	baz=320						
CCUT	**Cedar City**	**56.39**	**72**	IAmb	IAmb	04 19 10.1	
	comp=Z,569nm,1.6s						
ENPP	**El Nido**	**56.39**	**234**	⇑*e*P	**P**	**04 19 03.7**	**-0.2**
KSH	**Kashi**	**56.39**	**292**	P	**P**	**04 19 07.5**	**+3.7**
KSH				pP	sP	04 19 13.3	+1.4
KSH				sP	pP	04 19 20.5	+11
KSH				PP	**PP**	**04 21 15.0**	**+6.0**
KSH				PcS	**PcS**	**04 24 04.5**	**+3.1**
KSH				S	**S**	**04 27 00.8**	**+7.4**
KSH				sS	sS	04 27 10.5	+7.5
KSH				ScS	**ScS**	**04 28 53.0**	**+1.1**
KSH				pmax	pmax		
	comp=Z,580nm,1.3s						
KSH				pmax	pmax		
	comp=Z,10µm,7.4s						
KSH				LR	LR		
	comp=Z,58µm,18.6s						
KSH				LR	LR		
	comp=Z,99µm,15.1s						
KSH				LR	LR		
	comp=Z,150µm,13.1s						
RWWY	**Rawlins**	**56.40**	**64**	IAmb	IAmb	04 19 11.7	
	comp=Z,488nm,1.1s						
KK31	**Karatay Array**	**56.41**	**299**	IAmb	IAmb	04 19 12.4	
	comp=Z,629nm,1.2s						
KKAR	**Karatay Array**	**56.41**	**299**	IAmb	IAmb	04 19 12.4	
	comp=Z,629nm,1.2s						
KKAR	**Karatay Array**	**56.41**	**299**	⇑P	**P**	**04 19 03.4**	**-0.4**
AKTO	**Aktyubinsk**	**56.42**	**312**	LR	LR	04 44 26.9	
	comp=Z,47µm,21.4s,baz=20,slow=37						
AKTO				P4KPbc		04 56 14.9	
	comp=Z,1.4nm,1.0s,baz=130,slow=10,SNR=2.7						
NUUK	**Nuuk**	**56.44**	**17**	*i* P	**P**	**04 19 00.9**	**-2.7**
NUUK				IAmb	IAmb	04 19 11.2	
	comp=Z,788nm,1.4s						
Q16A	**Castle Valley**	**56.49**	**69**	IAmb	IAmb	04 19 14.4	
	comp=Z,438nm,0.9s						
RRX	**Edison Barstow**	**56.49**	**76**	P	**P**	**04 19 06.0**	**+1.5**
	baz=320						
RRX				S	**S**	**04 26 58.7**	**+4.1**
	baz=320						
SZCU	**Shurtz Canyon**	**56.50**	**71**	IAmb	IAmb	04 19 14.3	
	comp=Z,939nm,1.6s						
ABKAR	**Akbulak array**	**56.53**	**310**	IAmb	IAmb	04 19 13.1	
	comp=Z,609nm,1.6s						
ABKAR	**Akbulak array**	**56.53**	**310**	⇑P	**P**	**04 19 04.0**	**-0.4**
MOKO	**MOKOCHONG**	**56.54**	**268**	*e*P	**P**	**04 19 05.2**	**+0.2**
BFSC	**Mount Baldy Ra**	**56.62**	**77**	P	**P**	**04 19 06.5**	**+1.0**
	baz=320,SNR=42						
BFSC				S	**S**	**04 26 57.6**	**+1.0**
	baz=320						
CGP	**Cagayan de Oro**	**56.63**	**227**	⇓*e*P	**P**	**04 19 05.5**	**0.0**
TUQ	**Turquoise Moun**	**56.64**	**75**	P	**P**	**04 19 06.9**	**+1.3**
	baz=320,SNR=84						
TUQ				S	**S**	**04 26 59.7**	**+2.9**
	baz=320						
AGMN	**Agassiz Nation**	**56.66**	**52**	IAmb	IAmb	04 19 14.8	
	comp=Z,1µm,1.8s						
AGMN				IAMs_20	IAMs_20	04 45 09.7	
	comp=Z,32µm,19.0s						
AGMN	**Agassiz Nation**	**56.66**	**52**	⇑P	**P**	**04 19 05.2**	**-0.2**
AGMN	**Agassiz Nation**	**56.66**	**52**	P	**P**	**04 19 05.7**	**+0.2**
	baz=320,SNR=190						
AGMN				S	**S**	**04 26 57.7**	**+1.2**
	baz=320						
AGMN	**Agassiz Nation**	**56.66**	**52**	P	**P**	**04 19 05.6**	**+0.2**
	baz=320,SNR=190						
AGMN				S	**S**	**04 26 57.6**	**+1.0**
	baz=320						
FMP	**Fort Macarthur**	**56.68**	**78**	P	**P**	**04 19 06.7**	**+1.0**
	baz=320						
FMP				S	**S**	**04 27 00.2**	**+3.1**
	baz=320						
ISOG	**Isortoq, Green**	**56.82**	**11**	⇑P	**P**	**04 19 04.8**	**-1.4**
ISOG	**Isortoq, Green**	**56.82**	**11**	*i* P	**P**	**04 19 04.2**	**-2.0**
ISOG				IAmb	IAmb	04 19 13.1	
	comp=Z,758nm,1.2s						
CIS	**Catalina Islan**	**56.85**	**79**	P	**P**	**04 19 08.2**	**+1.2**
	baz=320,SNR=12						
CIS				S	**S**	**04 27 04.2**	**+4.8**
	baz=320						
LCMT	**Little Creek M**	**56.86**	**72**	IAmb	IAmb	04 19 17.9	
	comp=Z,574nm,1.4s						
HEC	**Hector,Ludlow**	**56.88**	**76**	P	**P**	**04 19 08.7**	**+1.5**
	baz=320,SNR=103						
HEC				S	**S**	**04 27 05.0**	**+5.1**
	baz=320						
ANGG	**Ammassalik, Gr**	**56.88**	**10**	IAmb	IAmb	04 19 15.8	
	comp=Z,339nm,0.9s						
ANGG	**Ammassalik, Gr**	**56.88**	**10**	⇑P	**P**	**04 19 05.3**	**-1.3**
ANGG	**Ammassalik, Gr**	**56.88**	**10**	*i* P	**P**	**04 19 05.1**	**-1.6**
ANGG				IAmb	IAmb	04 19 13.6	
	comp=Z,676nm,1.3s						
NSS	**Namsos**	**56.90**	**345**	*e*P	**P**	**04 19 07.7**	**+0.9**
NSS				IVmBBB		04 19 14.9	
	comp=Z,7µm,2.3s						
NSS				*e*S	**S**	**04 26 59.6**	**+0.5**
NSS				*e*SS	**SS**	**04 30 49.1**	**+2.6**
NSS				IVMs_BB	IVMs_BB	04 50 23.5	
	comp=Z,18µm,14.2s						
V12A	**Nelson**	**56.99**	**74**	IAmb	IAmb	04 19 18.8	
	comp=Z,1µm,1.8s						
BBRC	**Big Bear Solar**	**57.00**	**77**	P	**P**	**04 19 09.4**	**+1.1**
	baz=320,SNR=37						
BBRC				S	**S**	**04 27 04.5**	**+2.7**
	baz=320						
PKCU	**Pink Cliffs**	**57.02**	**71**	IAmb	IAmb	04 19 13.3	
	comp=Z,583nm,1.4s						
D32A	**Dogwood Acres,**	**57.05**	**53**	IAmb	IAmb	04 19 11.2	
	comp=Z,919nm,1.2s						
D32B	**Dogwood Acres,**	**57.05**	**53**	P	**P**	**04 19 08.5**	**+0.3**
	baz=320,SNR=39						
D32B				S	**S**	**04 27 03.3**	**+1.6**
	baz=320						
O20A	**White River Ci**	**57.06**	**66**	P	**P**	**04 19 09.7**	**+1.0**
	baz=319,SNR=470						
O20A				S	**S**	**04 27 03.8**	**+1.4**
	baz=319						
KNB	**Kanab**	**57.07**	**72**	IAmb	IAmb	04 19 20.8	
	comp=Z,1µm,1.5s						
KOHI	**KOHIMA**	**57.24**	**267**	*e*P	**P**	**04 19 10.4**	**+0.4**
KOHI				IAmb	IAmb	04 19 30.2	
	comp=Z,746nm,1.1s						
TEZP	**TEZPUR**	**57.25**	**269**	*e*P	**P**	**04 19 09.0**	**-0.8**
FIA1	**FINESS Array S**	**57.26**	**337**	IAmb	IAmb	04 19 17.5	
	comp=Z,809nm,1.4s						
FINES	**FINESS Array B**	**57.26**	**337**	P	**P**	**04 19 08.8**	**-0.6**
	comp=Z,148nm,1.0s,baz=32,slow=7.6,SNR=106						
FINES				LR	LR	04 46 06.9	
	comp=Z,58µm,21.9s,baz=28,slow=38						
	comp=Z,148nm,1.0s						
GMRC	**Granite Mounta**	**57.27**	**75**	P	**P**	**04 19 11.4**	**+1.3**
	baz=320,SNR=170						
GMRC				S	**S**	**04 27 10.6**	**+5.4**
	baz=320						
MURC	**Murrieta**	**57.36**	**78**	P	**P**	**04 19 11.7**	**+1.1**
	baz=320,SNR=51						
MURC				S	**S**	**04 27 11.3**	**+5.2**
	baz=320						
IUG	**Iuzhnay**	**57.36**	**298**	⇑*i*P	**P**	**04 19 10.8**	**+0.1**
	comp=Z,931nm,2.3s,baz=298						
IUG	**Iuzhnay**	**57.36**	**298**	*c i*P	**P**	**04 19 10.7**	**+0.1**
IUG				pmax	pmax		
	comp=Z,931nm,2.3s						
CHM	**Chimkent**	**57.44**	**299**	*e*P	**P**	**04 19 11.6**	**+0.5**
	baz=298						
CHM				LR	LR	04 44 08.8	
	comp=Z,45µm,11.9s,baz=298						
CHM	**Chimkent**	**57.44**	**299**	*e*P	**P**	**04 19 11.5**	**+0.5**
CHM				MLR	MLR		
	comp=Z,45µm,12.0s						
B35A	**Bob, Littlefor**	**57.53**	**50**	P	**P**	**04 19 11.4**	**-0.1**
	baz=321,SNR=123						
B35A				S	**S**	**04 27 05.4**	**-2.5**
	baz=321						
DAV	**Davao City (W)**	**57.54**	**225**	LR	LR	04 45 12.7	
	comp=Z,12µm,18.2s,baz=37,slow=37						
N23A	**Red Feather La**	**57.63**	**64**	IAmb	IAmb	04 19 16.5	
	comp=Z,626nm,1.1s						
N23A	**Red Feather La**	**57.63**	**64**	P	**P**	**04 19 13.5**	**+0.8**
	baz=320,SNR=466						
N23A				S	**S**	**04 27 09.9**	**-0.1**
	baz=320						
BELC	**Belle Mtn. Jos**	**57.69**	**76**	P	**P**	**04 19 14.1**	**+1.0**
	baz=320,SNR=57						
BELC				S	**S**	**04 27 13.6**	**+2.9**
	baz=320						
PAGZ	**Pagadian**	**57.71**	**228**	⇑*e*P	**P**	**04 19 12.2**	**-1.0**
PFO	**Pinyon Flats O**	**57.74**	**77**	LR	LR	04 42 13.7	
	comp=Z,39µm,19.0s,baz=300,slow=34						
PFO	**Pinyon Flats O**	**57.74**	**77**	P	**P**	**04 19 14.0**	**+0.6**
PFO	**Pinyon Flats O**	**57.74**	**77**	IAMs_20	IAMs_20	04 42 09.7	
	comp=Z,40µm,19.0s						
PFO	**Pinyon Flats O**	**57.74**	**77**	*c i*P	**P**	**04 19 14.2**	**+0.8**
PFO				pmax	pmax		
	comp=Z,686nm,2.3s						
PFO	**Pinyon Flats O**	**57.74**	**77**	P	**P**	**04 19 14.6**	**+1.2**
	baz=320,SNR=60						
PFO				S	**S**	**04 27 14.7**	**+3.4**
	baz=320						
TPFO	**Pinon Flats**	**57.75**	**77**	P	**P**	**04 19 14.1**	**+0.6**
	baz=320,SNR=77						
TPFO				S	**S**	**04 27 14.1**	**+2.6**
	baz=320						
PUL	**Pulkovo**	**57.78**	**334**	*ce*P	**P**	**04 19 13.3**	**+0.2**
PUL				pmax	pmax		
	comp=Z,550nm,1.7s						
PUL				MLR	MLR		
	comp=Z,87µm,16.0s						
KCP	**Kidapawan**	**57.79**	**226**	⇑*i*P	**P**	**04 19 15.1**	**+1.3**
NEE2	**Needles Airpor**	**57.84**	**75**	P	**P**	**04 19 15.2**	**+1.3**
	baz=320						
NEE2				S	**S**	**04 27 15.3**	**+3.0**
	baz=320						
CTBH	**Cotabato--PC H**	**57.93**	**227**	⇑*e*P	**P**	**04 19 16.0**	**+1.3**
PV23	**Carpenter Ridg**	**57.95**	**68**	IAmb	IAmb	04 19 25.2	
	comp=Z,702nm,1.1s						
109C	**Camp Elliot, M**	**57.95**	**78**	P	**P**	**04 19 15.7**	**+1.0**
	baz=320,SNR=17						
109C				S	**S**	**04 27 18.3**	**+4.5**
	baz=320						
IRM	**Iron Mountain**	**58.03**	**76**	P	**P**	**04 19 16.7**	**+1.4**
	baz=320,SNR=225						
IRM				S	**S**	**04 27 16.6**	**+1.8**
	baz=320						
IMP	**Imphal**	**58.03**	**267**	*e*P	**P**	**04 19 15.4**	**0.0**
IMP				IAmb	IAmb	04 19 26.8	
	comp=Z,274nm,0.9s						
PV11	**David Mesa, Pa**	**58.13**	**68**	IAmb	IAmb	04 19 26.4	
	comp=Z,698nm,0.9s						
PV07	**Paradox Valley**	**58.14**	**68**	IAmb	IAmb	04 19 26.4	
	comp=Z,635nm,1.1s						
GUWA	**GUWAHATI**	**58.19**	**270**	*e*P	**P**	**04 19 15.3**	**-1.1**
GUWA				IAmb	IAmb	04 19 24.1	
	comp=Z,230nm,1.0s						
CRAI	**Chiangrai**	**58.23**	**258**	P	**P**	**04 19 16.5**	**-0.4**
BC3	**Big Chuckawall**	**58.25**	**76**	P	**P**	**04 19 17.9**	**+1.0**
	baz=320,SNR=57						
BC3				S	**S**	**04 27 21.8**	**+3.8**
	baz=320						
SUSD	**Miller**	**58.25**	**56**	IAmb	IAmb	04 19 25.7	
	comp=Z,432nm,0.7s						
SUSD	**Miller**	**58.25**	**56**	P	**P**	**04 19 16.6**	**-0.1**
	baz=320,SNR=47						
SUSD				S	**S**	**04 27 23.2**	**+5.7**
	baz=320						
SUSD	**Miller**	**58.25**	**56**	P	**P**	**04 19 16.8**	**+0.1**
	baz=320,SNR=47						
MONP2	**Monument Peak**	**58.31**	**77**	P	**P**	**04 19 18.3**	**+0.7**
	baz=321,SNR=29						
MONP2				S	**S**	**04 27 23.0**	**+4.0**
	baz=321						
TAS	**Tashkent**	**58.35**	**298**	IAmb	IAmb	04 19 28.4	
	comp=Z,590nm,1.0s						
TBLU	**Trondheim**	**58.35**	**346**	*e*P	**P**	**04 19 15.5**	**-1.6**
TBLU				IVmB_BB		04 19 21.8	
	comp=Z,11µm,4.5s						
TBLU				*e*ScP	**ScP**	**04 24 07.4**	**+0.5**
TBLU				*e*S	**S**	**04 27 15.3**	**-2.9**
TBLU				*e*SS	**SS**	**04 31 08.1**	**-1.2**
F33A	**5 Mile Ranch,**	**58.37**	**54**	IAmb	IAmb	04 19 27.0	
	comp=Z,1µm,1.4s						
F33A	**5 Mile Ranch,**	**58.37**	**54**	P	**P**	**04 19 17.9**	**+0.4**
	baz=321,SNR=365						
F33A				S	**S**	**04 27 17.0**	**-1.9**
	baz=321						
DDMP	**Don Marcelino,**	**58.38**	**225**	⇓*e*P	**P**	**04 19 16.8**	**-1.0**
SMCO	**Snowmass**	**58.42**	**66**	IAmb	IAmb	04 19 22.4	
	comp=Z,552nm,1.2s						
SMCO	**Snowmass**	**58.42**	**66**	⇑P	**P**	**04 19 19.3**	**+0.8**
PDMCI	**Parker Dam,Lak**	**58.45**	**75**	P	**P**	**04 19 19.5**	**+1.3**
	baz=320,SNR=80						
PDMCI				S	**S**	**04 27 23.1**	**+2.8**
	baz=320						
SKMP	**Bagumbayan, Su**	**58.45**	**226**	⇑*e*P	**P**	**04 19 19.0**	**+0.6**
RAF	**Rauma**	**58.53**	**339**	*e*P	**P**	**04 19 18.2**	**-0.2**
BTK	**Batken**	**58.57**	**296**	IAmb	IAmb	04 19 34.6	
	comp=Z,627nm,1.0s						
SHL	**Shillong**	**58.58**	**269**	IAmb	IAmb	04 19 48.9	
	comp=Z,1µm,1.9s						
SHL	**Shillong**	**58.58**	**269**	*e*P	P	04 19 14.0	-5.4
SHL				*e*P	**P**	**04 19 18.6**	**-0.9**
SHL				*e*S	**S**	**04 27 24.0**	**+1.5**
SWSC	**Sam W. Stewart**	**58.61**	**77**	P	**P**	**04 19 20.4**	**+1.1**
	baz=321,SNR=36						
SWSC				S	**S**	**04 27 25.7**	**+3.4**
	baz=321						
ISCO	**Idaho Springs**	**58.63**	**64**	IAmb	IAmb	04 19 30.4	
	comp=Z,892nm,1.4s						
ISCO				IAMs_20	IAMs_20	04 44 39.5	
	comp=Z,55µm,19.0s						
ISCO	**Idaho Springs**	**58.63**	**64**	⇑P	**P**	**04 19 21.1**	**+1.3**
ISCO	**Idaho Springs**	**58.63**	**64**	P	**P**	**04 19 21.2**	**+1.5**
	baz=320,SNR=604						
ISCO				S	**S**	**04 27 22.6**	**-0.6**
	baz=320						
ISCO	**Idaho Springs**	**58.63**	**64**	P	**P**	**04 19 21.2**	**+1.5**
	baz=320,SNR=604						
ISCO				S	**S**	**04 27 21.3**	**-1.8**
	baz=320						
BRIGG	**Briggsdale**	**58.67**	**63**	IAmb	IAmb	04 19 24.0	
	comp=Z,767nm,1.2s						
IKP	**In-Ko-Pah, Jac**	**58.67**	**77**	P	**P**	**04 19 21.1**	**+1.3**
	baz=321,SNR=30						
IKP				S	**S**	**04 27 26.9**	**+3.5**
	baz=321						
BLYC	**Blythe**	**58.67**	**75**	IAmb	IAmb	04 19 31.4	
	comp=Z,442nm,1.2s						
BORG	**Borgarnes**	**58.69**	**2**	LR	LR	04 45 14.8	
	comp=Z,13µm,19.1s,baz=4.1,slow=37						
BORG	**Borgarnes**	**58.69**	**2**	P	**P**	**04 19 19.7**	**+0.3**
BORG				IAmb	IAmb	04 19 29.3	
	comp=Z,618nm,1.4s						
BORG	**Borgarnes**	**58.69**	**2**	⇑P	**P**	**04 19 20.7**	**+1.4**
BORG	**Borgarnes**	**58.69**	**2**	P	**P**	**04 19 19.7**	**+0.3**
BORG				pmax	pmax		
	comp=Z,618nm,1.4s						
SILR	**SILCHAR**	**58.70**	**268**	*e*P	**P**	**04 19 20.4**	**+0.4**
MEF	**Metsahovi**	**58.73**	**337**	*e*P	**P**	**04 19 19.9**	**+0.2**
EYMN	**Ely**	**58.79**	**49**	IAMs_20	IAMs_20	04 46 09.7	
	comp=Z,38µm,19.0s						
EYMN	**Ely**	**58.79**	**49**	IAmb	IAmb	04 19 23.2	
	comp=Z,757nm,1.2s						
EYMN	**Ely**	**58.79**	**49**	⇑P	**P**	**04 19 20.2**	**-0.2**
EYMN	**Ely**	**58.79**	**49**	P	**P**	**04 19 20.4**	**+0.1**
	baz=322,SNR=148						
EYMN				S	**S**	**04 27 27.4**	**+3.1**
	baz=322						
EYMN	**Ely**	**58.79**	**49**	P	**P**	**04 19 20.4**	**+0.1**
	baz=322,SNR=148						
EYMN				S	**S**	**04 27 27.6**	**+3.2**
	baz=322						
BELG	**Belogornoye**	**58.84**	**320**	P	**P**	**04 19 20.5**	**-0.2**
	comp=Z,957nm,1.1s,baz=8.7,slow=4.0,SNR=86						
BELG				S	**S**	**04 27 23.0**	**-1.8**
	comp=Z,11nm,0.7s,baz=0.0,slow=20,SNR=1.5						
BELG				LR	LR	04 47 09.5	
	comp=Z,72µm,18.6s,baz=36,slow=39						
BELG				PKPPKP	P'P'df	04 48 52.8	-9.5
	comp=Z,5.3nm,0.7s,baz=21,slow=6.0,SNR=1.6						
	comp=Z,957nm,1.1s						
BELG	**Belogornoye**	**58.84**	**320**	*c i*P	**P**	**04 19 20.6**	**0.0**
BELG				pmax	pmax		
	comp=Z,352nm,1.2s						
BELG				MLR	MLR		
	comp=Z,8µm,14.0s						
WUAZ	**Wupatki**	**58.97**	**72**	IAMs_20	IAMs_20	04 44 17.2	
	comp=Z,31µm,18.0s						
WUAZ	**Wupatki**	**58.97**	**72**	⇑P	**P**	**04 19 23.6**	**+1.5**
WUAZ	**Wupatki**	**58.97**	**72**	P	**P**	**04 19 23.3**	**+1.3**
	baz=320,SNR=135						
WUAZ				S	**S**	**04 27 30.9**	**+3.5**
	baz=320						
GTK	**Tadong**	**59.00**	**273**	*e*P	**P**	**04 19 22.1**	**-0.2**
GTK				IAmb	IAmb	04 19 38.4	
	comp=Z,280nm,1.0s						
GLA	**Glamis**	**59.05**	**76**	IAmb	IAmb	04 19 34.0	
	comp=Z,414nm,1.1s						
GLA	**Glamis**	**59.05**	**76**	P	**P**	**04 19 24.0**	**+1.6**
	baz=321,SNR=82						
GLA				S	**S**	**04 27 32.3**	**+4.1**
	baz=321						
MVCO	**Mesa Verde**	**59.16**	**68**	IAmb	IAmb	04 19 32.7	
	comp=Z,529nm,1.5s						
MVCO	**Mesa Verde**	**59.16**	**68**	⇑P	**P**	**04 19 24.4**	**+1.0**
MVCO	**Mesa Verde**	**59.16**	**68**	P	**P**	**04 19 24.4**	**+1.0**
	baz=320,SNR=22						
MVCO				S	**S**	**04 27 29.3**	**-0.6**
	baz=320						
BATP	**Bataraza**	**59.25**	**234**	⇑*e*P	**P**	**04 19 25.1**	**+1.2**
CPBX	**Cerro Prieto**	**59.28**	**77**	IAmb	IAmb	04 19 46.7	
	comp=Z,864nm,1.6s						
MOS	**Moscow**	**59.31**	**327**	*e*P	**P**	**04 19 20.3**	**-3.5**
MOS				*e*		04 20 17.5	
MOS				*e*		04 21 39.3	
MOS				*e*PPP	PPP	04 23 04.8	
MOS				*e*S	**S**	**04 27 28.6**	**-2.2**
MOS				*e*		04 29 14.3	
MOS				*e*SS	**SS**	**04 31 30.5**	**+5.9**
MOS				pmax	pmax		
	comp=N,6µm,3.8s						
MOS				pmax	pmax		
	comp=E,3µm,3.8s						
MOS				pmax	pmax		
	comp=Z,8µm,3.8s						
MOS				pmax	pmax		
	comp=Z,1µm,1.8s						
MOS				pmax	pmax		
	comp=N,631nm,1.6s						
MOS				smax	smax		
	comp=N,5µm,6.0s						
MOS				smax	smax		
	comp=E,6µm,6.0s						
MOS				MLR	MLR		
	comp=Z,60µm,17.0s						
MOS				MLR	MLR		
	comp=N,59µm,16.0s						
MOS				MLR	MLR		
	comp=E,42µm,17.0s						
MOL	**Molde**	**59.36**	**347**	*e*P	**P**	**04 19 20.8**	**-3.3**
MOL				IVmBBB		04 19 32.3	
	comp=Z,7µm,1.9s						
MOL				*e*S	**S**	**04 27 31.9**	**+0.6**
MOL				IVMs_BB	IVMs_BB	04 44 43.1	
	comp=Z,9µm,21.3s						
TAPN	**Taplejung**	**59.47**	**274**	*e*P	**P**	**04 19 25.2**	**-0.5**
OGNE	**Ogallala**	**59.49**	**61**	⇑P	**P**	**04 19 26.2**	**+0.7**
OGNE	**Ogallala**	**59.49**	**61**	P	**P**	**04 19 26.3**	**+0.8**
	baz=321,SNR=78						
OGNE				S	**S**	**04 27 36.2**	**+2.3**
	baz=321						
OGNE	**Ogallala**	**59.49**	**61**	P	**P**	**04 19 26.4**	**+0.8**
	baz=321,SNR=78						
Q24A	**Divide**	**59.50**	**65**	IAmb	IAmb	04 19 35.4	
	comp=Z,468nm,1.4s						
Q24A	**Divide**	**59.50**	**65**	P	**P**	**04 19 26.9**	**+1.1**
	baz=321,SNR=67						
Q24A				S	**S**	**04 27 37.1**	**+2.6**
	baz=321						
F36A	**Milaca**	**59.56**	**52**	P	**P**	**04 19 25.6**	**-0.2**
	baz=322,SNR=85						
F36A				S	**S**	**04 27 35.0**	**+0.5**
	baz=322						
S22A	**4UR Ranch, Cre**	**59.59**	**67**	IAmb	IAmb	04 19 35.1	
	comp=Z,1µm,1.7s						
S22A	**4UR Ranch, Cre**	**59.59**	**67**	P	**P**	**04 19 28.0**	**+1.5**
	baz=321,SNR=338						
S22A				S	**S**	**04 27 36.4**	**+0.7**
	baz=321						
S22A				S	S	04 27 38.5	+2.9
	baz=321						
DOMB	**Dombas**	**59.67**	**346**	⇑*i*P	**P**	**04 19 25.8**	**-0.6**
K31A	**O'Neill**	**59.75**	**58**	IAmb	IAmb	04 19 53.4	
	comp=Z,545nm,0.9s						
K31A	**O'Neill**	**59.75**	**58**	P	**P**	**04 19 27.4**	**+0.3**
	baz=321,SNR=26						
X16A	**Lo Mia Camp, P**	**59.78**	**73**	IAmb	IAmb	04 19 37.8	
	comp=Z,438nm,1.4s						
VSU	**Vasula**	**59.79**	**335**	⇑P	**P**	**04 19 27.1**	**0.0**
VSU	**Vasula**	**59.79**	**335**	*c i*P	**P**	**04 19 26.9**	**-0.2**
VSU				pmax	pmax		
	comp=Z,1µm,1.0s						
VSU				MLR	MLR		

	comp=Z,128µm,15.0s						
VSU	**Vasula**	**59.79**	**335**	*e*P	**P**	**04 19 27.1**	**0.0**
IVI	**Ivigtut**	**59.80**	**17**	IAmb	IAmb	04 19 29.1	
	comp=Z,436nm,0.9s						
IVI	**Ivigtut**	**59.80**	**17**	⇑P	**P**	**04 19 26.1**	**-1.1**
IVI	**Ivigtut**	**59.80**	**17**	*i* P	**P**	**04 19 26.1**	**-1.1**
IVI				IAmb	IAmb	04 19 34.7	
	comp=Z,635nm,1.1s						
AKN	**Aaknes**	**59.81**	**347**	*e*P	**P**	**04 19 26.8**	**-0.4**
AKN				IVmBBB		04 19 41.3	
	comp=Z,8µm,2.3s						
AKN				*e*S	**S**	**04 27 35.8**	**-1.3**
AKN				IVMs_BB	IVMs_BB	04 52 16.3	
	comp=Z,16µm,13.9s						
E38A	**The Farm, Brul**	**59.82**	**50**	P	**P**	**04 19 27.2**	**-0.3**
	baz=322,SNR=53						
E38A				S	**S**	**04 27 33.7**	**-4.0**
	baz=322						
113A	**Mohawk Valley,**	**59.83**	**76**	IAmb	IAmb	04 19 37.2	
	comp=Z,376nm,1.2s						
ECSD	**EROS Data Cent**	**59.86**	**55**	IAMs_20	IAMs_20	04 46 26.6	
	comp=Z,44µm,18.0s						
ECSD	**EROS Data Cent**	**59.86**	**55**	⇑P	**P**	**04 19 27.5**	**-0.4**
ECSD	**EROS Data Cent**	**59.86**	**55**	P	**P**	**04 19 27.7**	**-0.1**
	baz=322,SNR=216						
ECSD				S	**S**	**04 27 40.7**	**+2.3**
	baz=322						
ECSD	**EROS Data Cent**	**59.86**	**55**	P	**P**	**04 19 27.8**	**-0.1**
	baz=322,SNR=216						
GUN	**Gumba**	**60.03**	**276**	*e*P	**P**	**04 19 29.0**	**-0.6**
	comp=Z,2µm,1.1s						
JIRN	**Jiri**	**60.06**	**275**	*e*P	**P**	**04 19 29.4**	**-0.5**
W18A	**Petrified Fore**	**60.13**	**71**	IAmb	IAmb	04 19 40.1	
	comp=Z,508nm,1.3s						
W18A	**Petrified Fore**	**60.13**	**71**	P	**P**	**04 19 31.7**	**+1.6**
	baz=321,SNR=117						
W18A				S	**S**	**04 27 43.1**	**+0.7**
	baz=321						
NC303	**NORSAR Array S**	**60.14**	**344**	IAmb	IAmb	04 19 37.6	
	comp=Z,618nm,1.1s						
OBN	**Obninsk**	**60.16**	**328**	⇑P	**P**	**04 19 30.0**	**+0.3**
OBN	**Obninsk**	**60.16**	**328**	P	**P**	**04 19 29.5**	**-0.2**
	comp=Z,83nm,1.2s,baz=30,slow=3.9,SNR=14						
OBN				S	**S**	**04 27 40.6**	**-1.1**
	comp=Z,4.4nm,0.4s,baz=58,slow=13,SNR=2.2						
OBN				LR	LR	04 49 21.3	
	comp=Z,13µm,18.4s,baz=23,slow=40						
OBN	**Obninsk**	**60.16**	**328**	P	**P**	**04 19 29.2**	**-0.4**
OBN				IAMs_20	IAMs_20	04 49 07.6	
	comp=Z,49µm,18.0s						
OBN	**Obninsk**	**60.16**	**328**	⇑P	**P**	**04 19 29.4**	**-0.2**
OBN	**Obninsk**	**60.16**	**328**	*ce*P	**P**	**04 19 29.3**	**-0.4**
OBN				*i*		04 19 36.3	
OBN				*e*		04 20 15.3	
OBN				*e*		04 21 42.9	
OBN				*i* S	**S**	**04 27 36.7**	**-5.0**
OBN				*e*SS	**SS**	**04 31 39.7**	**+1.8**
OBN				pmax	pmax		
	comp=Z,1µm,1.7s						
OBN				MLR	MLR		
	comp=Z,46µm,18.0s						
CHTO	**Chiang Mai**	**60.16**	**258**	P	**P**	**04 19 29.6**	**-0.6**
CHTO	**Chiang Mai**	**60.16**	**258**	P	**P**	**04 19 29.6**	**-0.6**
MTSE	**Matsula**	**60.22**	**337**	*e*P	**P**	**04 19 30.6**	**+0.6**
SDCO	**Great Sand Dun**	**60.26**	**66**	⇑P	**P**	**04 19 32.1**	**+1.1**
SDCO	**Great Sand Dun**	**60.26**	**66**	P	**P**	**04 19 32.2**	**+1.2**
	baz=321,SNR=288						
SDCO				S	**S**	**04 27 47.4**	**+3.1**
	baz=321						
SDCO	**Great Sand Dun**	**60.26**	**66**	P	**P**	**04 19 32.4**	**+1.3**
	baz=321,SNR=288						
SDCO				S	**S**	**04 27 45.6**	**+1.3**
	baz=321						
NRS	**Narsarsuaq**	**60.27**	**15**	IAmb	IAmb	04 19 37.5	
	comp=Z,503nm,1.1s						
NRS				IAMs_20	IAMs_20	04 49 17.3	
	comp=Z,52µm,18.0s						
NRS	**Narsarsuaq**	**60.27**	**15**	⇓P	**P**	**04 19 29.9**	**-0.4**
NRS	**Narsarsuaq**	**60.27**	**15**	*i* P	**P**	**04 19 27.4**	**-2.9**
NRS				IAmb	IAmb	04 19 37.3	
	comp=Z,528nm,1.1s						
NB2	**NORSAR Subarra**	**60.34**	**345**	P	**P**	**04 19 30.4**	**-0.5**
	comp=Z,1µm,1.2s,baz=18,slow=6.9						
NB2				P3KP		04 48 34.5	
	comp=Z,438nm,2.5s,baz=155,slow=3.3						
NB2	**NORSAR Subarra**	**60.34**	**345**	P	**P**	**04 19 30.4**	**-0.5**
	baz=18,slow=6.9						
NOA	**NORSAR Array B**	**60.34**	**345**	P	**P**	**04 19 30.2**	**-0.7**
	comp=Z,292nm,0.9s,baz=18,slow=6.9,SNR=304						
NOA				LR	LR	04 47 15.1	
	comp=Z,30µm,19.1s,baz=25,slow=38						
NOA				PKPPKP		04 48 48.9	
	comp=Z,9.1nm,1.1s,baz=165,slow=3.2,SNR=6.0						
	comp=Z,292nm,0.9s						
SPMN	**Marine on St.**	**60.38**	**52**	IAmb	IAmb	04 19 34.1	
	comp=Z,545nm,1.2s						
SPMN	**Marine on St.**	**60.38**	**52**	P	**P**	**04 19 31.3**	**-0.1**
	baz=322,SNR=132						
SPMN				S	**S**	**04 27 45.6**	**+0.7**
	baz=322						
SPMN	**Marine on St.**	**60.38**	**52**	P	**P**	**04 19 31.4**	**0.0**
	baz=322,SNR=132						
SPMN				S	**S**	**04 27 46.7**	**+1.8**
	baz=322						
RAMN	**Ramite**	**60.39**	**275**	*e*P	**P**	**04 19 31.2**	**-0.8**
SAIH	**SAIHA**	**60.42**	**266**	*e*P	**P**	**04 19 31.4**	**-0.7**
SAIH				IAmb	IAmb	04 19 51.9	
	comp=Z,460nm,0.9s						
CM31	**Chiang Mai Arr**	**60.45**	**258**	P	**P**	**04 19 32.5**	**+0.4**
CMAR	**Chiang Mai Arr**	**60.45**	**258**	P	**P**	**04 19 32.0**	**-0.2**
	comp=Z,38nm,0.8s,baz=20,slow=7.6,SNR=182						
CMAR				S	**S**	**04 27 46.1**	**-0.4**
	comp=Z,1.2nm,0.3s,baz=0.0,slow=4.6,SNR=1.3						
CMAR				PKPPKP		04 48 51.6	
	comp=Z,2.6nm,0.9s,baz=242,slow=3.5,SNR=6.2						
CMAR				LR	LR	04 49 07.1	
	comp=Z,81µm,18.1s,baz=35,slow=40						
	comp=Z,38nm,0.8s						
CMAR	**Chiang Mai Arr**	**60.45**	**258**	*i* P	**P**	**04 19 32.0**	**-0.2**
CMAR				pmax	pmax		
	comp=Z,41nm,0.8s						
PKI	**Pulchoki**	**60.55**	**276**	*e*P	**P**	**04 19 32.5**	**-0.7**
	comp=Z,2µm,1.3s						
PKIN	**Phulchoki**	**60.55**	**276**	*e*P	**P**	**04 19 32.4**	**-0.7**
	comp=Z,1µm,1.1s						
NC602	**NORSAR Array S**	**60.58**	**344**	*e*P	**P**	**04 19 31.9**	**-0.5**
NC602				IVmB_BB		04 19 38.4	
	comp=Z,8µm,4.0s						
NC602				*e*S	**S**	**04 27 46.8**	**-0.3**
NC602				*e*SS	**SS**	**04 31 47.7**	**+3.4**
NC602				IVMs_BB	IVMs_BB	04 52 04.6	
	comp=Z,25µm,15.0s						
FOO	**Floro**	**60.60**	**348**	*e*P	**P**	**04 19 31.0**	**-1.6**
FOO				IVmBBB		04 19 40.8	
	comp=Z,9µm,3.4s						
FOO				*e*S	**S**	**04 27 48.1**	**+0.8**
FOO				*e*SS	**SS**	**04 31 47.5**	**+2.9**
FOO				IVMs_BB	IVMs_BB	04 43 46.5	
	comp=Z,11µm,25.0s						
GKN	**Gorkha**	**60.63**	**277**	*e*P	**P**	**04 19 32.9**	**-0.7**
	comp=Z,1µm,1.2s						
DMN	**Daman**	**60.69**	**276**	*e*P	**P**	**04 19 33.7**	**-0.3**
D41A	**Chassel**	**60.70**	**48**	P	**P**	**04 19 33.1**	**-0.4**
	baz=324,SNR=151						
KSCO	**Kaye Shedlock’**	**60.70**	**63**	P	**P**	**04 19 34.8**	**+1.0**
	baz=321,SNR=88						
KSCO				S	**S**	**04 27 53.8**	**+4.2**
	baz=321						
KSCO	**Kaye Shedlock’**	**60.70**	**63**	P	**P**	**04 19 34.9**	**+1.0**
	baz=321,SNR=88						
HFS	**Hagfors**	**60.82**	**343**	LR	LR	04 46 48.0	
	comp=Z,47µm,22.0s,baz=26,slow=37						
DANN	**Dangsing**	**60.84**	**278**	*e*P	**P**	**04 19 34.7**	**-0.4**
	comp=Z,435nm,0.8s						
HYA	**Hoyanger**	**60.89**	**347**	*e*P	**P**	**04 19 34.7**	**+0.1**
HYA				IVmB_BB		04 19 41.9	
	comp=Z,8µm,1.6s						
HYA				*e*S	**S**	**04 27 51.0**	**+0.1**
PIX	**Pinacate**	**60.93**	**76**	IAmb	IAmb	04 19 46.7	
	comp=Z,857nm,2.0s						
214A	**Organ Pipe Nat**	**60.97**	**75**	IAmb	IAmb	04 19 46.0	
	comp=Z,322nm,1.1s						
214A	**Organ Pipe Nat**	**60.97**	**75**	P	**P**	**04 19 37.1**	**+1.5**
	baz=322,SNR=144						
214A				S	**S**	**04 27 56.2**	**+3.3**
	baz=322						
BGNE	**Belgrade**	**60.98**	**58**	P	**P**	**04 19 35.7**	**+0.2**
	baz=322,SNR=155						
BGNE				S	**S**	**04 27 53.4**	**+0.6**
	baz=322						
BGNE	**Belgrade**	**60.98**	**58**	P	**P**	**04 19 35.8**	**+0.2**
	baz=322,SNR=155						
BRDH	**Bariadhala**	**61.01**	**267**	LR	LR	04 50 16.2	
	comp=Z,62µm,18.5s,baz=178,slow=40						
I37B	**Waseca**	**61.08**	**53**	P	**P**	**04 19 36.6**	**+0.5**
	baz=323,SNR=324						
I37B				S	**S**	**04 27 50.3**	**-3.6**
	baz=323						
SKAR	**Skarslia**	**61.09**	**346**	*e*P	**P**	**04 19 36.6**	**+0.6**
SKAR				IVmB_BB		04 19 42.7	
	comp=Z,10µm,3.3s						
SKAR				*e*S	**S**	**04 27 54.0**	**+0.3**
SKAR				IVMs_BB	IVMs_BB	04 51 23.4	
	comp=Z,17µm,13.8s						
KAPO	**Kapuskasing**	**61.12**	**43**	⇑P	**P**	**04 19 35.1**	**-1.2**
SUE	**Sulen**	**61.16**	**348**	*e*P	**P**	**04 19 35.8**	**-0.7**
SUE				IVmB_BB		04 19 43.3	
	comp=Z,11µm,3.1s						
SUE				*e*S	**S**	**04 27 56.5**	**+2.1**
COWI	**Conover**	**61.23**	**49**	IAMs_20	IAMs_20	04 48 35.4	
	comp=Z,40µm,19.0s						
COWI	**Conover**	**61.23**	**49**	⇑P	**P**	**04 19 36.6**	**-0.6**
COWI	**Conover**	**61.23**	**49**	P	**P**	**04 19 36.6**	**-0.6**
	baz=324						
COWI				S	**S**	**04 27 53.4**	**-2.5**
	baz=324						
T25A	**Trinidad**	**61.28**	**66**	IAmb	IAmb	04 19 44.5	
	comp=Z,956nm,1.8s						
T25A	**Trinidad**	**61.28**	**66**	P	**P**	**04 19 38.7**	**+0.8**
	baz=322,SNR=173						
T25A				S	**S**	**04 28 00.9**	**+3.7**
	baz=322						
L34A	**Svendsen Farm,**	**61.36**	**57**	P	**P**	**04 19 37.9**	**-0.2**
	baz=322,SNR=76						
G40A	**Rib Lake**	**61.45**	**50**	IAmb	IAmb	04 19 47.7	
	comp=Z,1µm,1.9s						
G40A	**Rib Lake**	**61.45**	**50**	P	**P**	**04 19 38.4**	**-0.3**
	baz=323,SNR=121						
PYUN	**Piuthan**	**61.46**	**278**	*e*P	**P**	**04 19 38.5**	**-0.7**
	comp=Z,2µm,1.2s						
OSL	**Oslo**	**61.47**	**344**	*e*P	**P**	**04 19 38.3**	**-0.2**
OSL				IVmB_BB		04 19 44.4	
	comp=Z,11µm,4.6s						
OSL				*e*S	**S**	**04 27 56.9**	**-1.4**
OSL				IVMs_BB	IVMs_BB	04 53 22.7	
	comp=Z,25µm,13.5s						
SLIT	**Slitere, Latvi**	**61.55**	**337**	⇑P	**P**	**04 19 38.6**	**-0.4**
SLIT	**Slitere, Latvi**	**61.55**	**337**	*e*P	**P**	**04 19 38.7**	**-0.4**
LPSR	**Galich'ya Gora**	**61.60**	**325**	*e*P	**P**	**04 19 39.1**	**-0.4**
LPSR				*i* PPP	PPP	04 23 25.1	
LPSR				*e*S	**S**	**04 28 01.0**	**+0.8**
LPSR				pmax	pmax		
	comp=Z,570nm,0.9s						
LPSR				pmax	pmax		
	comp=Z,570nm,0.9s						
LPSR				smax	smax		
	comp=N,4µm,9.0s						
SCHQ	**Schefferville**	**61.61**	**30**	P	**P**	**04 19 38.2**	**-1.4**
	comp=N,205nm,0.9s,baz=348,slow=7.3,SNR=168						
SCHQ				S	**S**	**04 27 56.5**	**-4.0**
	comp=N,8.4nm,1.0s,baz=260,slow=13,SNR=1.7						
SCHQ				PKPPKP		04 48 42.8	
	comp=N,9.0nm,0.9s,baz=208,slow=3.8,SNR=8.8						
SCHQ				LR	LR	04 50 56.2	
	comp=N,28µm,18.1s,baz=330,slow=40						
	comp=N,205nm,0.9s						
SCHQ	**Schefferville**	**61.61**	**30**	IAmb	IAmb	04 19 50.1	
	comp=Z,330nm,0.8s						
SCHQ	**Schefferville**	**61.61**	**30**	⇓P	**P**	**04 19 38.7**	**-0.9**
ASK	**Askoy**	**61.67**	**348**	*e*P	**P**	**04 19 39.5**	**-0.4**
ASK				*e*S	**S**	**04 28 02.0**	**+1.1**
BER	**Bergen**	**61.75**	**347**	*e*P	**P**	**04 19 40.6**	**+0.2**
BER				IVmBBB		04 19 49.0	
	comp=Z,8µm,1.6s						
BER				*e*S	**S**	**04 28 02.6**	**+0.6**
BER				*e*SS	**SS**	**04 32 06.4**	**+3.8**
BER				IVMs_BB	IVMs_BB	04 44 44.4	
	comp=Z,11µm,19.4s						
TUC	**Tucson**	**61.76**	**74**	P	**P**	**04 19 42.1**	**+1.1**
TUC				IAmb	IAmb	04 19 50.7	
	comp=Z,527nm,1.6s						
TUC	**Tucson**	**61.76**	**74**	⇑P	**P**	**04 19 42.2**	**+1.1**
TUC	**Tucson**	**61.76**	**74**	P	**P**	**04 19 42.1**	**+1.1**
TUC				pmax	pmax		
	comp=Z,527nm,1.7s						
TUC	**Tucson**	**61.76**	**74**	P	**P**	**04 19 42.6**	**+1.5**
	baz=322						
TUC				S	**S**	**04 28 07.4**	**+4.3**
	baz=322						
N33B	**J Bar K, Exete**	**61.83**	**58**	P	**P**	**04 19 41.1**	**-0.2**
	baz=322,SNR=18						
N33B				S	**S**	**04 28 02.5**	**-1.1**
	baz=322						
VRH	**Novokhopyorsk**	**61.88**	**322**	*e*P	**P**	**04 19 40.6**	**-0.8**
VRH				*e*PPP	PPP	04 23 23.5	
VRH				*e*S	**S**	**04 28 02.3**	**-1.5**
VRH				*e*SSS	SSS	04 34 50.7	
VRH				pmax	pmax		
	comp=Z,4µm,3.1s						
VRH				pmax	pmax		
	comp=Z,470nm,0.8s						
VRH				smax	smax		
	comp=E,870nm,6.5s						
VRH				MLR	MLR		
	comp=Z,110µm,16.0s						
E43A	**Lone Tree Farm**	**61.89**	**47**	P	**P**	**04 19 40.6**	**-1.0**
	baz=324,SNR=120						
E43A				S	**S**	**04 28 02.4**	**-1.7**
	baz=324						
KONO	**Kongsberg**	**61.91**	**345**	P	**P**	**04 19 41.5**	**0.0**
KONO	**Kongsberg**	**61.91**	**345**	*ce*P	**P**	**04 19 41.7**	**+0.2**
KONO				pmax	pmax		
	comp=Z,432nm,1.3s						
KONO	**Kongsberg**	**61.91**	**345**	*e*P	**P**	**04 19 40.3**	**-1.2**
KONO				IVmBBB		04 19 50.0	
	comp=Z,8µm,3.2s						
KONO				*e*S	**S**	**04 28 04.8**	**+0.9**
KONO				*e*SS	**SS**	**04 32 07.3**	**+2.3**
F42A	**Maple Grove Fa**	**61.92**	**49**	IAmb	IAmb	04 19 50.8	
	comp=Z,807nm,1.4s						
F42A	**Maple Grove Fa**	**61.92**	**49**	P	**P**	**04 19 41.5**	**-0.3**
	baz=324,SNR=47						
ANMO	**Albuquerque**	**61.95**	**69**	LR	LR	04 46 48.2	
	comp=Z,31µm,18.7s,baz=61,slow=36						
ANMO	**Albuquerque**	**61.95**	**69**	P	**P**	**04 19 43.5**	**+1.0**
ANMO				IAmb	IAmb	04 19 51.9	
	comp=Z,416nm,1.4s						
ANMO	**Albuquerque**	**61.95**	**69**	IAMs_20	IAMs_20	04 46 36.9	
	comp=Z,31µm,18.0s						
ANMO	**Albuquerque**	**61.95**	**69**	⇑P	**P**	**04 19 43.2**	**+0.7**
ANMO	**Albuquerque**	**61.95**	**69**	*ce*P	**P**	**04 19 43.3**	**+0.8**
ANMO				pmax	pmax		
	comp=Z,240nm,1.3s						
ANMO				MLR	MLR		
	comp=Z,30µm,18.0s						
ANMO	**Albuquerque**	**61.95**	**69**	P	**P**	**04 19 44.1**	**+1.6**
	baz=322						
ANMO				S	**S**	**04 28 08.5**	**+2.8**
	baz=322						
ANMO	**Albuquerque**	**61.95**	**69**	P	**P**	**04 19 43.7**	**+1.3**
	baz=322,SNR=346						
ODD1	**Odda**	**62.05**	**347**	*e*P	**P**	**04 19 40.3**	**-2.2**
ODD1				IVmBBB		04 19 50.9	
	comp=Z,8µm,1.9s						
ODD1				*e*S	**S**	**04 28 04.6**	**-1.3**
ODD1				*e*SS	**SS**	**04 32 08.6**	**+1.1**
ODD1				IVMs_BB	IVMs_BB	04 46 49.1	
	comp=Z,11µm,19.1s						
MYLDM	**Lahad Datu**	**62.17**	**232**	IAmb	IAmb	04 20 22.8	
	comp=Z,883nm,1.8s						
SMLA	**Simla**	**62.22**	**285**	*e*P	**P**	**04 19 43.0**	**-0.9**
SMLA				IAmb	IAmb	04 19 52.4	
	comp=Z,827nm,1.1s						
CBKS	**Cedar Bluff**	**62.26**	**61**	⇑P	**P**	**04 19 44.3**	**+0.1**
CBKS	**Cedar Bluff**	**62.26**	**61**	P	**P**	**04 19 44.1**	**-0.2**
	baz=322,SNR=81						
CBKS				S	**S**	**04 28 11.2**	**+2.0**
	baz=322						
CBKS	**Cedar Bluff**	**62.26**	**61**	P	**P**	**04 19 44.4**	**+0.1**
	baz=322,SNR=81						
STRU	**Stroemstad**	**62.26**	**344**	*i* P	**P**	**04 19 43.7**	**-0.1**
NIL	**Nilore**	**62.30**	**290**	P	**P**	**04 19 44.6**	**+0.1**
NIL	**Nilore**	**62.30**	**290**	P	**P**	**04 19 44.6**	**+0.1**
NIL				pmax	pmax		
	comp=Z,1µm,1.2s						
NIL				MLR	MLR		
	comp=Z,111µm,18.0s						
VORR	**Voronezh**	**62.30**	**324**	*e*P	**P**	**04 19 42.2**	**-2.1**
VORR				*e*		04 22 02.1	
VORR				*e*S	**S**	**04 28 07.5**	**-1.6**
VORR				*e*SS	**SS**	**04 32 16.7**	**+5.1**
VORR				*e*SSS	SSS	04 34 47.5	
VORR				pmax	pmax		
	comp=Z,3µm,2.2s						
VORR				pmax	pmax		
	comp=Z,720nm,1.6s						
VORR				smax	smax		
	comp=N,540nm,5.3s						
VORR				MLR	MLR		
	comp=Z,108µm,13.0s						
DDI	**Dehra Dun**	**62.37**	**284**	*e*P	**P**	**04 19 44.6**	**-0.5**
DDI				IAmb	IAmb	04 19 53.6	
	comp=Z,567nm,0.8s						
I40A	**Norwalk**	**62.38**	**51**	IAmb	IAmb	04 19 53.7	
	comp=Z,372nm,1.1s						
I40A	**Norwalk**	**62.38**	**51**	P	**P**	**04 19 44.5**	**-0.5**
	baz=324,SNR=62						
Y22D	**IRIS PASSCAL I**	**62.40**	**69**	IAMs_20	IAMs_20	04 47 30.7	
	comp=Z,51µm,19.0s						
Y22D	**IRIS PASSCAL I**	**62.40**	**69**	P	**P**	**04 19 47.6**	**+2.2**
	baz=322,SNR=27						
Y22D				S	**S**	**04 28 14.1**	**+2.9**
	baz=322						
Y22D	**IRIS PASSCAL I**	**62.40**	**69**	P	**P**	**04 19 47.4**	**+2.0**
	baz=322,SNR=27						
Y22F	**Passcal Instru**	**62.40**	**69**	P	**P**	**04 19 47.6**	**+2.2**
	baz=322,SNR=28						
Y22F				S	S	04 28 20.3	+9.1
	baz=322						
KKM	**Kota Kinabalu**	**62.40**	**235**	IAmb	IAmb	04 19 52.3	
	comp=Z,669nm,1.8s						
KKM	**Kota Kinabalu**	**62.40**	**235**	P	**P**	**04 19 47.1**	**+1.6**
K38A	**Parkersburg**	**62.44**	**54**	IAmb	IAmb	04 19 53.3	
	comp=Z,384nm,1.1s						
K38A	**Parkersburg**	**62.44**	**54**	P	**P**	**04 19 44.9**	**-0.5**
	baz=323,SNR=60						
Y22A	**Socorro**	**62.48**	**70**	P	**P**	**04 19 47.6**	**+1.6**
	baz=322						
BLS5	**Blasjo**	**62.55**	**347**	*e*P	**P**	**04 19 46.1**	**+0.2**
BLS5				IVmBBB		04 19 54.3	
	comp=Z,7µm,2.0s						
BLS5				*e*S	**S**	**04 28 12.0**	**-0.2**
BLS5				*e*SS	**SS**	**04 32 20.4**	**+5.2**
BLS5				IVMs_BB	IVMs_BB	04 52 19.7	
	comp=Z,17µm,15.2s						
N35A	**Tabor**	**62.57**	**57**	P	**P**	**04 19 46.8**	**+0.5**
	baz=323						
N35A				S	**S**	**04 28 09.7**	**-3.2**
	baz=323						
NAYO	**Nakonayok**	**62.61**	**253**	P	**P**	**04 19 47.1**	**+0.3**
TNTI	**Ternate**	**62.67**	**221**	⇑P	**P**	**04 19 47.2**	**+0.1**
VSVD	**Vaisvydziai**	**62.69**	**335**	*e*P	**P**	**04 19 47.6**	**+0.8**
VSR	**Storozhevoye**	**62.71**	**324**	*e*P	**P**	**04 19 46.8**	**-0.2**
VSR				*e*		04 22 04.5	
VSR				*e*PPP	PPP	04 23 32.5	
VSR				*e*S	**S**	**04 28 12.2**	**-2.0**
VSR				pmax	pmax		
	comp=Z,3µm,1.7s						
VSR				pmax	pmax		
	comp=Z,950nm,1.2s						
VSR				smax	smax		
	comp=E,4µm,9.8s						
VSR				MLR	MLR		
	comp=Z,172µm,15.0s						
SCIA	**State Center**	**62.84**	**54**	IAMs_20	IAMs_20	04 47 59.2	
	comp=Z,36µm,18.0s						
SCIA	**State Center**	**62.84**	**54**	⇓P	**P**	**04 19 47.3**	**-0.7**
SCIA	**State Center**	**62.84**	**54**	P	**P**	**04 19 48.1**	**+0.1**
	baz=323,SNR=140						
SCIA				S	**S**	**04 28 17.8**	**+1.6**
	baz=323						
SCIA	**State Center**	**62.84**	**54**	P	**P**	**04 19 48.0**	**+0.1**
	baz=323,SNR=140						
SCIA				S	**S**	**04 28 13.0**	**-3.1**
	baz=323						
SIJI	**Sorong**	**62.88**	**216**	S	**S**	**04 28 17.6**	**+0.4**
	comp=Z,5.9nm,0.6s,baz=307,slow=20,SNR=11						
SIJI				LR	LR	04 45 29.6	
	comp=Z,14µm,21.6s,baz=28,slow=34						
VORD	**Divnogorie**	**62.88**	**324**	*e*P	**P**	**04 19 47.5**	**-0.6**
VORD				*e*S	**S**	**04 28 13.4**	**-3.0**
VORD				pmax	pmax		
	comp=Z,410nm,0.9s						
VORD				pmax	pmax		
	comp=Z,610nm,1.1s						
VORD				smax	smax		
	comp=N,870nm,5.2s						
VORD				MLR	MLR		
	comp=Z,101µm,14.0s						
E46A	**Sault Ste Mari**	**62.97**	**46**	IAmb	IAmb	04 19 50.1	
	comp=Z,358nm,1.1s						
E46A	**Sault Ste Mari**	**62.97**	**46**	P	**P**	**04 19 47.4**	**-1.3**
	baz=326,SNR=112						
NACGM	**Naroch**	**62.99**	**333**	⇑*i*P	**P**	**04 19 49.1**	**+0.2**
	comp=E,10µm,1.2s						
R32A	**Long Quarter,**	**63.06**	**61**	IAmb	IAmb	04 19 59.5	
	comp=Z,862nm,1.6s						
R32A	**Long Quarter,**	**63.06**	**61**	P	**P**	**04 19 49.1**	**-0.5**
	baz=323,SNR=49						
R32A				S	**S**	**04 28 15.3**	**-3.8**
	baz=323						
MNK	**Minsk**	**63.08**	**332**	*i* P	**P**	**04 19 49.3**	**-0.1**
	comp=E,37nm,1.3s						
MNK				*i* P	**P**	**04 19 49.3**	**-0.1**
MNK				*i* P	**P**	**04 19 49.3**	**-0.1**
	comp=Z,501nm,0.9s,baz=26						
MNK				*i* PP	**PP**	**04 22 07.3**	**-0.3**
MNK				*i* PPP	PPP	04 23 35.7	
MNK				*i* S	**S**	**04 28 18.2**	**-0.6**
MNK				*i* SS	**SS**	**04 32 25.7**	**+2.0**
MNK				*i* SSS	SSS	04 35 21.7	
MNK				*i* LQ	LQ	04 42 45.9	
MNK				*i* LR	LR	04 46 47.5	
MNK				*i* LRM	MLR	04 50 34.3	
	comp=Z,118µm,17.9s						
MNK				*i* LRM	MLR	04 50 36.8	
	comp=N,50µm,12.2s						
MNK				*i* LRM	MLR	04 50 45.1	
	comp=E,7µm,17.9s						
MNK	**Minsk**	**63.08**	**332**	*i* P	**P**	**04 19 49.3**	**-0.1**
MNK				*i*		04 22 13.0	
MNK				*i* PPP	PPP	04 23 35.7	
MNK				*i* S	**S**	**04 28 18.2**	**-0.6**
MNK				*i* SS	**SS**	**04 32 25.6**	**+2.0**
MNK				pmax	pmax		
	comp=E,37nm,1.3s						
MNK				pmax	pmax		
	comp=Z,501nm,0.9s						
MNK				MLR	MLR		
	comp=Z,118µm,18.0s						
MNK				MLR	MLR		
	comp=N,50µm,12.0s						
MNK				MLR	MLR		
	comp=E,7µm,18.0s						
PBUR	**Paburge**	**63.10**	**337**	*e*P	**P**	**04 19 49.9**	**+0.4**
I42A	**Draeger Farm,**	**63.11**	**50**	IAmb	IAmb	04 19 57.8	
	comp=Z,280nm,0.9s						
I42A	**Draeger Farm,**	**63.11**	**50**	P	**P**	**04 19 49.3**	**-0.5**
	baz=324,SNR=126						
I42A				S	**S**	**04 28 19.2**	**-0.3**
	baz=324						
H43A	**Windswept, Lux**	**63.12**	**49**	P	**P**	**04 19 49.6**	**-0.3**
	baz=325,SNR=256						
H43A				S	**S**	**04 28 18.9**	**-0.7**
	baz=325						
PABE	**Paberze**	**63.12**	**335**	*e*P	**P**	**04 19 50.2**	**+0.6**
TJOU	**Tjoern**	**63.15**	**343**	*i* P	**P**	**04 19 49.1**	**-0.6**
121A	**Cookes Peak, D**	**63.16**	**71**	IAmb	IAmb	04 20 02.6	
	comp=Z,578nm,1.1s						
121A	**Cookes Peak, D**	**63.16**	**71**	P	**P**	**04 19 52.2**	**+1.7**
	baz=322,SNR=169						
121A				S	**S**	**04 28 19.7**	**-1.2**
	baz=322						
121A	**Cookes Peak, D**	**63.16**	**71**	P	**P**	**04 19 52.1**	**+1.6**
	baz=322,SNR=169						
121A				S	**S**	**04 28 15.9**	**-4.9**
	baz=322						
XMAS	**Kiritimati**	**63.17**	**134**	P	**P**	**04 19 51.4**	**+1.0**
XMAS				IAmb	IAmb	04 20 04.3	

	comp=Z,499nm,1.1s						
BOK	Bokaro	63.28	273	eP	P	04 19 50.7	-0.4
BOK				IAmb	IAmb	04 20 01.5	
	comp=Z,327nm,1.4s						
319A	Douglas	63.29	73	IAmb	IAmb	04 20 01.9	
	comp=Z,599nm,1.1s						
JFWS	Jewell Farm	63.33	52	IAmb	IAmb	04 19 59.3	
	comp=Z,560nm,1.6s						
JFWS	Jewell Farm	63.33	52	⇑P	P	04 19 50.0	-1.2
JFWS	Jewell Farm	63.33	52	P	P	04 19 50.2	-1.0
	baz=324,SNR=45						
JFWS				S	S	04 28 20.6	-1.8
	baz=324						
JFWS	Jewell Farm	63.33	52	P	P	04 19 50.1	-1.2
	baz=324,SNR=45						
JFWS				S	S	04 28 19.6	-2.8
	baz=324						
BORU	Boraas	63.35	342	i P	P	04 19 50.5	-0.6
HOMB	Homborsund	63.39	345	i P	P	04 19 50.9	-0.4
HOMB	Homborsund	63.39	345	eP	P	04 19 50.1	-1.2
HOMB				IVmBBB		04 19 59.8	
	comp=Z,6µm,3.2s						
HOMB				ePP	PP	04 22 11.5	+1.3
HOMB				eS	S	04 28 22.3	-0.3
HOMB				eSS	SS	04 32 29.9	+1.7
SPMM	Sapulut	63.48	234	P	P	04 19 53.0	+0.4
SNART	Snartemo	63.50	346	i P	P	04 19 52.3	+0.2
SNART	Snartemo	63.50	346	eP	P	04 19 51.9	-0.2
SNART				IVmBBB		04 20 00.9	
	comp=Z,23µm,3.6s						
SNART				eS	S	04 28 23.7	-0.3
G45A	Suttons Bay	63.52	47	IAmb	IAmb	04 20 02.8	
	comp=Z,480nm,0.8s						
G45A	Suttons Bay	63.52	47	P	P	04 19 51.8	-0.7
	baz=325,SNR=147						
G45A				P	P	04 19 51.8	-0.7
	baz=325,SNR=147						
G45A				S	S	04 28 24.8	+0.1
	baz=325						
G45A				S	S	04 28 24.8	+0.1
	baz=325						
KSU1	Kansas State U	63.52	59	IAmb	IAmb	04 20 00.2	
	comp=Z,461nm,0.8s						
KSU1	Kansas State U	63.52	59	⇑P	P	04 19 52.0	-0.6
KSU1	Kansas State U	63.52	59	P	P	04 19 51.8	-0.8
	baz=323,SNR=105						
KSU1				S	S	04 28 24.6	-0.2
	baz=323						
KSU1	Kansas State U	63.52	59	P	P	04 19 51.9	-0.6
	baz=323,SNR=105						
L40A	Anamosa	63.59	53	IAmb	IAmb	04 19 54.7	
	comp=Z,362nm,1.1s						
L40A	Anamosa	63.59	53	P	P	04 19 52.1	-0.9
	baz=324,SNR=114						
ONAU	Onsala	63.72	343	i P	P	04 19 52.2	-1.3
N38A	Joes South For	63.72	55	P	P	04 19 53.5	-0.3
	baz=324,SNR=83						
N38A				S	S	04 28 27.7	+0.5
	baz=324						
FABU	Falkenberg	63.96	342	i P	P	04 19 54.2	-1.0
BLEU	Blekinge	64.08	340	i P	P	04 19 54.9	-1.0
I45A	Fountain	64.11	48	IAmb	IAmb	04 19 58.3	
	comp=Z,553nm,0.9s						
I45A	Fountain	64.11	48	P	P	04 19 56.3	-0.1
	baz=325,SNR=18						
I45A				P	P	04 19 56.3	-0.1
	baz=325,SNR=18						
NDI	New Delhi	64.11	283	eP	P	04 19 56.0	-0.6
GLMI	Grayling	64.11	47	⇑P	P	04 19 55.7	-0.7
GLMI	Grayling	64.11	47	P	P	04 19 55.8	-0.7
	baz=326,SNR=117						
GLMI				S	S	04 28 29.0	-3.0
	baz=326						
GLMI	Grayling	64.11	47	P	P	04 19 55.9	-0.5
	baz=326,SNR=117						
GLMI				S	S	04 28 31.7	-0.3
	baz=326						
HSIG		64.26	76	IAmb	IAmb	04 20 08.0	
	comp=Z,908nm,1.5s						
HSIG		64.26	76	⇑P	P	04 19 58.4	+0.8
DEL	Delary	64.27	341	i P	P	04 19 56.7	-0.5
KAN12	Harper NE Stat	64.30	61	IAmb	IAmb	04 20 05.2	
	comp=Z,329nm,1.2s						
L42A	Oliver, Polo	64.32	52	IAmb	IAmb	04 20 04.9	
	comp=Z,497nm,1.2s						
L42A	Oliver, Polo	64.32	52	P	P	04 19 56.7	-1.1
	baz=325,SNR=56						
L42A				S	S	04 28 33.4	-1.2
	baz=325						
K43A	Burlington	64.32	51	IAmb	IAmb	04 20 05.3	
	comp=Z,301nm,0.9s						
K43A	Burlington	64.32	51	P	P	04 19 56.9	-0.9
	baz=325,SNR=40						
NOKA	Waynoka	64.38	62	IAmb	IAmb	04 20 06.1	
	comp=Z,306nm,0.9s						
AMTX	Amarillo	64.42	65	IAmb	IAmb	04 20 07.2	
	comp=Z,378nm,1.1s						
AMTX				IAMs_20	IAMs_20	04 47 52.8	
	comp=Z,40µm,19.0s						
AMTX	Amarillo	64.42	65	⇑P	P	04 19 59.0	+0.3
AMTX	Amarillo	64.42	65	P	P	04 19 59.5	+0.9
	baz=323						
AMTX				S	S	04 28 35.4	-0.8
	baz=323						
AMTX	Amarillo	64.42	65	P	P	04 19 59.0	+0.3
	baz=323,SNR=27						
EPT	El Paso	64.42	71	IAMs_20	IAMs_20	04 49 10.1	
	comp=Z,32µm,18.0s						
KIDD	KIDD Seismic O	64.42	71	P	P	04 19 59.9	+1.1
	baz=323,SNR=47						
GOET	G??ttrup	64.48	344	i P	P	04 19 58.9	+0.4
GOET				i P	pP	04 19 59.2	-5.3
GOET				IAmb	IAmb	04 20 01.0	
	comp=Z,363nm,1.0s						
FAKI	Fak Fak	64.50	214	IAmb	IAmb	04 20 02.5	
	comp=Z,517nm,1.0s						
FAKI	Fak Fak	64.50	214	P	P	04 19 59.5	+0.3
P38A	Dawn	64.53	56	IAmb	IAmb	04 20 07.2	
	comp=Z,561nm,1.1s						
P38A	Dawn	64.53	56	P	P	04 19 58.8	-0.3
	baz=324,SNR=170						
P38A				S	S	04 28 35.0	-2.2
	baz=324						
KAN01	Argonia South	64.53	61	IAmb	IAmb	04 20 06.7	
	comp=Z,246nm,0.7s						
U32A	Winter Ranch,	64.55	62	IAmb	IAmb	04 20 07.4	
	comp=Z,278nm,0.8s						
U32A	Winter Ranch,	64.55	62	P	P	04 19 59.1	-0.3
	baz=323,SNR=40						
OK032	Salt Plains WL	64.59	61	IAmb	IAmb	04 20 07.3	
	comp=Z,836nm,1.7s						
ELIS	Ellis County	64.59	63	IAmb	IAmb	04 20 02.6	
	comp=Z,498nm,1.2s						
OK038	West end E0370	64.59	62	IAmb	IAmb	04 20 07.7	
	comp=Z,363nm,0.9s						
MSTX	Muleshoe	64.59	67	IAmb	IAmb	04 20 03.0	
	comp=Z,526nm,1.1s						
MSTX	Muleshoe	64.59	67	P	P	04 20 00.1	+0.3
	baz=323,SNR=220						
MSTX				S	S	04 28 37.9	-0.6
	baz=323						
MSTX	Muleshoe	64.59	67	P	P	04 20 00.2	+0.4
	baz=323,SNR=220						
KAN17	Caldwell West	64.61	61	IAmb	IAmb	04 20 06.1	
	comp=Z,971nm,1.7s						
SUW	Suwalki	64.67	335	i P	P	04 19 59.7	-0.2
SUW				eS	S	04 28 40.4	+1.7
SUW				eSS	SS	04 33 11.4	+23
SUW				eL	L	04 49 29.9	
	comp=Z,63µm,22.1s						
SUW	Suwalki	64.67	335	⇑P	P	04 20 00.5	+0.6
SUW	Suwalki	64.67	335	eP	P	04 20 00.3	+0.4
KLNR	Kaliningrad	64.79	337	i P	P	04 19 59.5	-1.1
KLNR				pmax	pmax		
	comp=Z,870nm,1.0s						
BJUU	Bjuv	64.79	342	i P	P	04 20 00.7	+0.1
N41A	Harden Midland	64.85	54	P	P	04 20 00.7	-0.6
	baz=325,SNR=66						
TOLI2	Tolitoli	64.88	228	P	P	04 20 01.2	-0.5
TOLI2				IAmb	IAmb	04 20 02.7	
	comp=Z,342nm,0.8s						
TOLI2	Tolitoli	64.88	228	P	P	04 20 00.9	-0.8
SRIG	Santa Rosalia	64.92	78	IAmb	IAmb	04 20 04.8	
	comp=Z,363nm,1.1s						
SRIG	Santa Rosalia	64.92	78	⇑P	P	04 20 03.0	+1.1
L44A	Lake County Fo	64.93	51	IAmb	IAmb	04 20 09.4	
	comp=Z,506nm,1.1s						
L44A	Lake County Fo	64.93	51	P	P	04 20 01.2	-0.5
	baz=325,SNR=21						
L44A				S	S	04 28 40.8	-1.3
	baz=325						
L44A	Lake County Fo	64.93	51	P	P	04 20 01.1	-0.6
	baz=325,SNR=21						
CROK	Carrier	64.94	61	IAmb	IAmb	04 20 10.5	
	comp=Z,696nm,1.5s						
LINV	Loch Inver, As	64.94	353	eP	P	04 20 01.5	0.0
MUD	Monsted U'grnd	65.05	344	⇑P	P	04 20 02.4	+0.2
MUD	Monsted U'grnd	65.05	344	i P	P	04 20 02.2	0.0
MUD				i P	pP	04 20 03.0	-5.3
MUD				IAmb	IAmb	04 20 05.2	
	comp=Z,629nm,1.5s						
LEWI	Lewis, Hebride	65.05	354	eP	P	04 20 01.8	-0.5
MNTX	Cornudas Mount	65.06	70	⇑P	P	04 20 03.9	+1.1
MNTX	Cornudas Mount	65.06	70	P	P	04 20 04.0	+1.1
	baz=323,SNR=971						
MNTX				S	S	04 28 43.2	-0.9
	baz=323						
MNTX	Cornudas Mount	65.06	70	P	P	04 20 04.2	+1.3
	baz=323,SNR=971						
BLOK	Blackwell	65.10	61	IAmb	IAmb	04 20 12.4	
	comp=Z,659nm,1.8s						
LUNU	Lund	65.14	341	i P	P	04 20 03.1	+0.3
COP	Copenhagen	65.27	342	i P	P	04 20 03.6	-0.1
COP				i P	pP	04 20 04.2	-5.5
COP				IAmb	IAmb	04 20 05.2	
	comp=Z,393nm,1.0s						
P40A	Paris	65.28	55	IAmb	IAmb	04 20 12.1	
	comp=Z,464nm,1.1s						
P40A	Paris	65.28	55	P	P	04 20 03.7	-0.3
	baz=324,SNR=99						
P40A				S	S	04 28 46.5	+0.1
	baz=324						
T35B	Sooner Cattle	65.31	60	P	P	04 20 03.6	-0.7
	baz=324,SNR=40						
J47A	Sunmer	65.34	48	P	P	04 20 04.2	-0.2
	baz=326,SNR=128						
J47A				P	P	04 20 04.2	-0.2
	baz=326,SNR=128						
BSD	Bornholm Skovb	65.37	340	⇑P	P	04 20 03.8	-0.6
BSD	Bornholm Skovb	65.37	340	eP	P	04 20 04.1	-0.3
BSD	Bornholm Skovb	65.37	340	i P	P	04 20 03.5	-0.8
BSD				i P	P	04 20 04.0	-0.3
BSD				IAmb	IAmb	04 20 06.0	
	comp=Z,260nm,1.1s						
M44A	Midewin, Midew	65.52	51	IAmb	IAmb	04 20 07.4	
	comp=Z,308nm,1.1s						
M44A	Midewin, Midew	65.52	51	P	P	04 20 04.8	-0.8
	baz=325,SNR=32						
M44A				S	S	04 28 47.9	-1.6
	baz=325						
I49A	Point Hope	65.56	46	P	P	04 20 05.1	-0.7
	baz=327,SNR=73						
I49A				P	P	04 20 05.1	-0.7
	baz=327,SNR=73						
LLD	Lille Linde	65.64	342	i P	P	04 20 06.0	-0.1
LLD				i P	pP	04 20 06.8	-5.3
LLD				IAmb	IAmb	04 20 08.6	
	comp=Z,387nm,1.0s						
HDIL	Hopedale	65.66	53	IAMs_20	IAMs_20	04 50 13.9	
	comp=Z,47µm,18.0s						
HDIL	Hopedale	65.66	53	⇑P	P	04 20 05.7	-0.9
HDIL	Hopedale	65.66	53	P	P	04 20 06.1	-0.4
	baz=325,SNR=115						
HDIL				S	S	04 28 47.8	-3.4
	baz=325						
HDIL	Hopedale	65.66	53	P	P	04 20 05.8	-0.7
	baz=325,SNR=115						
L46A	Eue Claire	65.75	50	P	P	04 20 06.4	-0.7
	baz=326,SNR=25						
L46A				P	P	04 20 06.4	-0.7
	baz=326,SNR=25						
OK029	Liberty Lake	65.76	61	IAmb	IAmb	04 20 17.2	
	comp=Z,612nm,1.5s						
OK029				IAMs_20	IAMs_20	04 51 24.8	
	comp=Z,45µm,20.0s						
SANI	Sanana	65.78	221	P	P	04 20 07.0	-0.5
SANI	Sanana	65.78	221	⇑P	P	04 20 06.9	-0.7
OK052	Battle Ridge R	65.92	61	IAmb	IAmb	04 20 17.0	
	comp=Z,888nm,1.7s						
SSRD	Sdr. Stenderup	65.92	344	i P	P	04 20 08.4	+0.5
SSRD				i P	pP	04 20 08.8	-5.1
SSRD				IAmb	IAmb	04 20 10.3	
	comp=Z,393nm,1.1s						
SSRD				IAMs_20	IAMs_20	04 54 12.6	
	comp=Z,35µm,15.6s						
SSRD				IVMs_BB	IVMs_BB	04 55 42.5	
	comp=Z,15µm,13.0s						
OK031	S. Brethren Rd	65.93	61	IAmb	IAmb	04 20 16.2	
	comp=Z,523nm,1.3s						
POST	Post	65.95	66	IAmb	IAmb	04 20 17.3	
	comp=Z,473nm,1.0s						
WMOK	Wichita Mounta	65.97	63	IAMs_20	IAMs_20	04 49 10.5	
	comp=Z,43µm,20.0s						
WMOK	Wichita Mounta	65.97	63	IAmb	IAmb	04 20 17.4	
	comp=Z,543nm,0.9s						
WMOK	Wichita Mounta	65.97	63	P	P	04 20 09.1	+0.4
	baz=324						
WMOK				S	S	04 28 54.7	-0.4
	baz=324						
WMOK	Wichita Mounta	65.97	63	P	P	04 20 09.0	+0.4
	baz=324						
WMOK				S	S	04 28 57.9	+2.9
	baz=324						
LUWI	Luwuk	66.06	225	IAmb	IAmb	04 20 26.6	
	comp=Z,328nm,0.9s						
HNR	Honiara	66.09	183	LR	LR	04 45 11.3	
	comp=Z,326µm,20.9s,baz=0.0,slow=32						
HNR	Honiara	66.09	183	IAMs_20	IAMs_20	04 44 49.4	
	comp=Z,29µm,20.0s						
AKASG	Malin Array Be	66.15	330	P	P	04 20 08.6	-0.9
	comp=Z,106nm,0.8s,baz=28,slow=6.2,SNR=311						
AKASG				S	S	04 28 55.7	-1.1
	comp=Z,0.6nm,0.3s,baz=15,slow=16,SNR=2.0						
AKASG				LR	LR	04 52 31.1	
	comp=Z,85µm,18.3s,baz=21,slow=39						
	comp=Z,106nm,0.8s						
AKASG	Malin Array Be	66.15	330	i P	P	04 20 09.0	-0.5
AKASG				pmax	pmax		
	comp=Z,108nm,0.8s						
AKBB	Malin Array Si	66.15	330	ceP	P	04 20 08.9	-0.6
AKBB				pmax	pmax		
	comp=Z,421nm,1.1s						
AKBB				MLR	MLR		
	comp=Z,107µm,16.0s						
ODSA	Odessa	66.18	68	IAmb	IAmb	04 20 13.2	
	comp=Z,391nm,1.1s						
R40A	Maddies Statio	66.18	56	IAmb	IAmb	04 20 17.7	
	comp=Z,550nm,0.9s						
R40A	Maddies Statio	66.18	56	P	P	04 20 09.4	-0.5
	baz=325,SNR=330						
R40A				S	S	04 28 56.6	-1.0
	baz=325						
S39A	Bolivar	66.18	57	IAmb	IAmb	04 20 11.7	
	comp=Z,450nm,1.2s						
S39A	Bolivar	66.18	57	P	P	04 20 08.9	-1.1
	baz=324,SNR=225						
S39A				S	S	04 28 56.1	-1.5
	baz=324						
ICQ	Pointe Anglais	66.19	33	⇑P	P	04 20 08.9	-0.8
RGN	Rugen	66.20	341	IAMs_20	IAMs_20	04 50 29.0	
	comp=Z,45µm,20.0s						
RGN	Rugen	66.20	341	⇑P	P	04 20 10.4	+0.6
RGN	Rugen	66.20	341	eP	P	04 20 10.3	+0.6
	comp=Z,774nm,1.0s,baz=16,slow=6.1						
RGN				epP	sP	04 20 17.6	-0.3
SADO	Sadowa	66.29	43	LR	LR	04 52 04.4	
	comp=Z,44µm,18.5s,baz=345,slow=39						
SADO	Sadowa	66.29	43	⇑P	P	04 20 08.6	-1.9
GEYT	Alibeck	66.31	303	P	P	04 20 11.2	+0.4
	comp=Z,230nm,0.8s,baz=0.0,slow=3.0,SNR=252						
GEYT				S	S	04 28 57.6	-1.6
	comp=Z,1.1nm,0.4s,baz=55,slow=22,SNR=1.4						
GEYT				LR	LR	04 52 34.3	
	comp=Z,160µm,18.4s,baz=42,slow=39						
	comp=Z,230nm,0.8s						
GEYT	Alibeck	66.31	303	IAmb	IAmb	04 20 13.2	
	comp=Z,459nm,1.0s						
GYA0B	ALIBECK ARRAY	66.31	303	IAmb	IAmb	04 20 13.2	
	comp=Z,448nm,1.1s						
P43A	Skaggs, Pawnee	66.31	53	IAmb	IAmb	04 20 12.8	
	comp=Z,644nm,1.1s						
P43A	Skaggs, Pawnee	66.31	53	P	P	04 20 10.0	-0.7
	baz=325,SNR=141						
O44A	Mansfield	66.35	52	IAmb	IAmb	04 20 18.4	
	comp=Z,355nm,1.1s						
O44A	Mansfield	66.35	52	P	P	04 20 10.1	-0.9
	baz=326,SNR=72						
TUL1	Leonard	66.47	60	P	P	04 20 11.6	-0.3
	baz=324,SNR=103						
TUL1				S	S	04 29 00.4	-0.7
	baz=324						
TUL1	Leonard	66.47	60	P	P	04 20 11.5	-0.3
	baz=324,SNR=103						
X34A	Smith Ranch, M	66.54	63	IAmb	IAmb	04 20 20.1	
	comp=Z,524nm,1.2s						
FUNA	Funafuti	66.54	162	P	P	04 20 13.5	+1.1
FUNA				IAmb	IAmb	04 20 14.6	
	comp=Z,542nm,1.5s						
L48A	N Adams	66.58	49	IAmb	IAmb	04 20 14.1	
	comp=Z,596nm,1.1s						
L48A	N Adams	66.58	49	P	P	04 20 12.0	-0.5
	baz=327,SNR=166						
L48A				P	P	04 20 12.0	-0.5
	baz=327,SNR=166						
AAM	Ann Arbor	66.60	48	⇑P	P	04 20 12.2	-0.3
AAM	Ann Arbor	66.60	48	P	P	04 20 12.3	-0.3
	baz=327,SNR=62						
AAM				S	S	04 29 00.0	-2.5
	baz=327						
AAM	Ann Arbor	66.60	48	P	P	04 20 12.2	-0.3
	baz=327,SNR=62						
AAM				S	S	04 29 04.9	+2.4
	baz=327						
K50A	Casco	66.62	47	IAmb	IAmb	04 20 20.2	
	comp=Z,463nm,1.1s						
K50A	Casco	66.62	47	P	P	04 20 11.9	-0.7
	baz=327,SNR=22						
K50A				P	P	04 20 11.9	-0.7
	baz=327,SNR=22						
RLO	Rose Lookout	66.62	59	IAmb	IAmb	04 20 20.7	
	comp=Z,755nm,1.7s						
GOF	Gofitskoye	66.64	318	⇑eP	P	04 20 12.9	+0.2
GOF				eS	S	04 29 05.5	+2.6
GOF				pmax	pmax		
	comp=Z,319nm,1.0s						
GOF				smax	smax		
	comp=E,134nm,1.6s						
GKP	Gorka Klasztor	66.66	338	i P	P	04 20 12.8	0.0
GKP				ePP	PP	04 22 37.6	-1.3
GKP				eS	S	04 29 05.8	+2.9
GKP				eSS	SS	04 33 26.9	+7.6
GKP				eL	L	04 53 11.0	
	comp=E,82µm,18.3s						
GKP	Gorka Klasztor	66.66	338	eP	P	04 20 13.6	+0.9
U38A	Gravette	66.70	59	IAmb	IAmb	04 20 21.9	
	comp=Z,949nm,1.6s						
U38A	Gravette	66.70	59	P	P	04 20 12.7	-0.6
	baz=324,SNR=157						
U38A				S	S	04 29 02.9	-1.1
	baz=324						
MAK	Makhachkala	66.71	314	d iP	P	04 20 13.9	+0.7
MAK				e		04 22 44.8	
MAK				ePPP	PPP	04 24 22.6	
MAK				eS	S	04 29 06.6	+2.9
MAK				eSS	SS	04 33 26.6	+6.1
MAK				pmax	pmax		
	comp=Z,9µm,3.9s						
MAK				pmax	pmax		
	comp=Z,686nm,1.6s						
MAK				MLR	MLR		
	comp=E,42µm,16.0s						
MAK				MLR	MLR		
	comp=N,174µm,16.0s						
MAK				MLR	MLR		
	comp=Z,97µm,14.0s						
TRQ	Mont Tremblant	66.71	39	P	P	04 20 12.4	-0.9
BNDI	Bandanaira	66.75	216	⇑P	P	04 20 14.3	+0.6
SFIN	Lafayette	66.76	51	IAmb	IAmb	04 20 19.7	
	comp=Z,413nm,1.5s						
SFIN	Lafayette	66.76	51	P	P	04 20 12.7	-1.0
	baz=326,SNR=49						
SFIN				S	S	04 29 02.0	-2.5
	baz=326						
SFIN	Lafayette	66.76	51	P	P	04 20 12.6	-1.0
	baz=326,SNR=49						
SFIN				S	S	04 29 02.8	-1.7
	baz=326						
SLM	Saint Louis	66.82	55	IAmb	IAmb	04 20 21.8	
	comp=Z,391nm,0.9s						
SLM	Saint Louis	66.82	55	P	P	04 20 13.4	-0.5
	baz=325,SNR=32						
LAWE	Loch Awe, Argy	66.83	353	eP	P	04 20 13.2	-0.6
CCM	Cathedral Cave	66.84	56	P	P	04 20 13.6	-0.5
CCM	Cathedral Cave	66.84	56	⇑P	P	04 20 13.3	-0.8
CCM	Cathedral Cave	66.84	56	P	P	04 20 13.6	-0.5
CCM				pmax	pmax		
	comp=Z,817nm,1.3s						
CCM				MLR	MLR		
	comp=Z,54µm,18.0s						
CCM	Cathedral Cave	66.84	56	P	P	04 20 13.3	-0.8
	baz=325						
CCM				S	S	04 29 04.7	-0.8
	baz=325						
CCM	Cathedral Cave	66.84	56	P	P	04 20 13.6	-0.5
	baz=325,SNR=260						
CCM				S	S	04 29 05.6	+0.1
	baz=325						
WTFS	Witchita Falls	66.90	64	IAmb	IAmb	04 20 23.7	
	comp=Z,826nm,1.3s						
N47A	Urbana	66.94	50	P	P	04 20 13.4	-1.3
	baz=326,SNR=53						
N47A				P	P	04 20 13.4	-1.3
	baz=326,SNR=53						
N47A				S	S	04 29 05.6	-1.0
	baz=326						
N47A				S	S	04 29 05.6	-1.0
	baz=326						
LMQ	La Malbaie	66.98	36	IAmb	IAmb	04 20 22.6	
	comp=Z,563nm,1.1s						
JBP	Jabalpur	67.01	277	⇓eP	P	04 20 14.2	-1.2
JBP				IAmb	IAmb	04 20 24.6	
	comp=Z,5µm,3.0s						
HHAR	Hobbs	67.04	59	IAmb	IAmb	04 20 23.1	
	comp=Z,446nm,1.0s						
DELO	Deloro Mine	67.08	42	IAmb	IAmb	04 20 22.6	
	comp=Z,345nm,1.2s						
Q44A	Meyer Farm, Va	67.14	54	IAmb	IAmb	04 20 18.1	
	comp=Z,706nm,1.4s						
Q44A	Meyer Farm, Va	67.14	54	P	P	04 20 15.2	-0.8
	baz=326,SNR=94						
GROC	Groznyy	67.17	315	eP	P	04 20 16.9	+0.7
GROC				e		04 20 44.8	
GROC				eS	S	04 29 11.4	+2.0
PGBU	Glenifferbraes	67.22	352	eP	P	04 20 15.8	-0.4
PGBU				IAmb	IAmb	04 20 19.3	
	comp=Z,842nm,1.1s						
ABTX	Abilene, Hawle	67.24	65	P	P	04 20 16.9	+0.2
	baz=324,SNR=198						
ABTX				S	S	04 29 11.4	+0.9
	baz=324						
ABTX	Abilene, Hawle	67.24	65	P	P	04 20 17.1	+0.3
	baz=324,SNR=198						
BEL	Belsk	67.24	336	i P	P	04 20 17.3	+0.9
BEL				eS	S	04 29 12.2	+2.2
BEL				eSS	SS	04 33 38.6	+10
BEL				eL	L	04 53 02.1	
	comp=Z,87µm,17.3s						
BEL	Belsk	67.24	336	⇑P	P	04 20 17.4	+1.0
PMG	Port Moresby	67.27	197	S	S	04 29 10.3	-0.6
	comp=Z,5.4nm,0.4s,baz=324,slow=13,SNR=1.3						
PMG				LR	LR	04 45 42.8	
	comp=Z,10µm,21.1s,baz=356,slow=32						
PMG	Port Moresby	67.27	197	P	P	04 20 17.5	+0.5
PMG				IAmb	IAmb	04 20 27.8	
	comp=Z,387nm,1.1s						
PMG	Port Moresby	67.27	197	⇑P	P	04 20 18.0	+1.0
PMG	Port Moresby	67.27	197	ceP	P	04 20 18.4	+1.5
PMG				pmax	pmax		
	comp=Z,808nm,2.5s						
PMG				MLR	MLR		
	comp=Z,15µm,19.0s						
FVM	French Village	67.27	55	IAmb	IAmb	04 20 19.2	
	comp=Z,497nm,1.0s						
FVM	French Village	67.27	55	P	P	04 20 16.5	-0.4
	baz=325,SNR=256						
BSEG	Bad Segeberg	67.30	343	eP	P	04 20 17.0	+0.3
	comp=Z,439nm,1.7s,baz=16,slow=6.1						
BSEG				epP	sP	04 20 24.9	-0.1
P46A	Rosedale	67.34	52	P	P	04 20 16.5	-0.8
	baz=326						
SBUM	Sibu	67.39	237	IAmb	IAmb	04 20 20.2	

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      comp=Z,307nm,0.9s
SBUM                           IAMs_20  IAMs_20  04 50 08.1
      comp=Z,28µm,21.0s
SBUM  Sibu             67.39 237  P        P        04 20 19.0 +1.2
HLG   Helgoland        67.44 344 eP        P        04 20 17.8 +0.2
      comp=Z,397nm,1.1s,baz=16,slow=6.1
U40A  Yellville        67.49  58  P        P        04 20 17.5 -0.8
      baz=325,SNR=263
U40A                              P        P        04 20 17.5 -0.8
      baz=325,SNR=263
N49A  Columbus Grove   67.54  49  P        P        04 20 17.8 -0.7
      baz=327,SNR=198
N49A                              P        P        04 20 17.8 -0.7
      baz=327,SNR=198
N49A                              S        S        04 29 09.7 -4.1
      baz=327
N49A                              S        S        04 29 09.7 -4.1
      baz=327
EKA   Eskdalemuir Ar   67.59 351  LR       LR       04 48 40.5
      comp=Z,18µm,18.6s,baz=15,slow=35
M50A  Fremont          67.60  48  IAmb     IAmb     04 20 26.4
      comp=Z,306nm,0.9s
M50A  Fremont          67.60  48  P        P        04 20 18.1 -0.8
      baz=327,SNR=30
M50A                              P        P        04 20 18.1 -0.8
      baz=327,SNR=30
ESK   Eskdalemuir      67.61 351 eP        P        04 20 18.6 -0.1
ESK   Eskdalemuir      67.61 351  P        P        04 20 18.6 -0.1
ESK                               IAmb     IAmb     04 20 27.3
      comp=Z,784nm,1.4s
ESK   Eskdalemuir      67.61 351  IAMs_20  IAMs_20  04 49 52.8
      comp=Z,23µm,18.0s
ESK   Eskdalemuir      67.61 351 ⥣P        P        04 20 18.6 -0.1
ESK   Eskdalemuir      67.61 351  P        P        04 20 18.6 -0.1
ESK                               pmax     pmax
      comp=Z,785nm,1.4s
ESK                               MLR      MLR
      comp=Z,23µm,18.0s
MNTQ  Montreal, Queb   67.67  39  IAmb     IAmb     04 20 26.6
      comp=Z,459nm,0.9s
FW03  Perrin-Whitt E   67.68  64  IAmb     IAmb     04 20 28.6
      comp=Z,1µm,1.5s
OLIL  Olney            67.69  53  IAmb     IAmb     04 20 27.9
      comp=Z,510nm,1.1s
OLIL  Olney            67.69  53  P        P        04 20 18.8 -0.7
      baz=326,SNR=100
O48B  Farmland         67.69  50  P        P        04 20 18.1 -1.4
      baz=327,SNR=209
O48B                              S        S        04 29 12.9 -2.7
      baz=327
O48B  Farmland         67.69  50  P        P        04 20 18.3 -1.2
      baz=327,SNR=209
O48B                              S        S        04 29 13.1 -2.6
      baz=327
KVAR  Kislovodsk Arr   67.71 317  P        P        04 20 20.5 +0.8
      comp=Z,98nm,1.3s,baz=0.0,slow=20,SNR=7.5
KVAR                              S        S        04 29 13.6 -2.5
      comp=Z,4.4nm,0.6s,baz=348,slow=21,SNR=1.1
KVAR                              LR       LR       04 54 02.3
      comp=Z,43µm,18.7s,baz=271,slow=40
      comp=Z,98nm,1.3s
KIV   Kislovodsk       67.71 318 ⥣P        P        04 20 19.1 -0.6
KIV   Kislovodsk       67.71 318 i P       P        04 20 19.8 +0.1
KIV   Kislovodsk       67.71 318  P        P        04 20 20.2 +0.5
KIV                               IAMs_20  IAMs_20  04 53 35.8
      comp=Z,49µm,20.0s
KIV   Kislovodsk       67.71 318 ⥣P        P        04 20 20.2 +0.5
KIV   Kislovodsk       67.71 318 eP        P        04 20 20.3 +0.5
KIV                              e                  04 22 47.8
KIV                              ePPP      PPP      04 24 28.5
KIV                              eS        S        04 29 17.9 +1.8
KIV                              eSS       SS       04 33 38.2 +1.9
KIV                               pmax     pmax
      comp=Z,1µm,3.4s
KIV                               pmax     pmax
      comp=Z,144nm,1.1s
KIV   Kislovodsk       67.71 318 i P       P        04 20 20.2 +0.5
      SNR=16
X37A  Clayton          67.74  61  IAmb     IAmb     04 20 28.5
      comp=Z,472nm,1.1s
X37A  Clayton          67.74  61  P        P        04 20 20.0 +0.2
      baz=325,SNR=126
X37A                              S        S        04 29 16.8 +0.4
      baz=325
D62A  Allapoint, All   67.80  35  IAmb     IAmb     04 20 27.9
      comp=Z,344nm,0.9s
D62A  Allapoint, All   67.80  35  P        P        04 20 19.6 -0.5
      baz=332,SNR=87
D62A                              P        P        04 20 19.6 -0.5
      baz=332,SNR=87
PECO  Prince Edward    67.81  42  IAmb     IAmb     04 20 27.2
      comp=Z,403nm,1.0s
KBZ   Khabaz           67.83 317  P        P        04 20 21.1 +0.8
      comp=Z,155nm,1.1s,baz=34,slow=4.9,SNR=95
KBZ                               S        S        04 29 15.4 -1.8
      comp=Z,1.5nm,0.9s,baz=19,slow=18,SNR=1.1
KBZ                               PKPPKP   P'P'df   04 48 39.7 -7.4
      comp=Z,6.6nm,1.0s,baz=181,slow=12,SNR=5.2
KBZ                               LR       LR       04 54 44.3
      comp=Z,74µm,18.4s,baz=10.0,slow=40
      comp=Z,155nm,1.1s
TX31  Lajitas Ar. Si   67.84  70  P        P        04 20 21.8 +1.1
      baz=324,SNR=1000
TX31                              S        S        04 29 21.9 +3.9
      baz=324
TXAR  Lajitas Array    67.84  70  P        P        04 20 21.5 +0.8
      comp=Z,512nm,0.9s,baz=308,slow=4.3,SNR=526
TXAR                              S        S        04 29 17.4 -0.6
      comp=Z,1.6nm,1.0s,baz=42,slow=2.0,SNR=1.7
TXAR                              LR       LR       04 47 14.2
      comp=Z,15µm,21.6s,baz=331,slow=34
TXAR                              P4KPbc            04 57 02.5
      baz=320,slow=3.5,SNR=1.0
Z35A  Perchaven, San   67.85  63  IAmb     IAmb     04 20 28.6
      comp=Z,590nm,1.1s
Z35A  Perchaven, San   67.85  63  P        P        04 20 20.3 -0.3
      baz=324,SNR=40
AKT   Akhty            67.86 313 eP        P        04 20 20.8 +0.1
AKT                              e                  04 20 44.9
AKT                              e                  04 22 47.1
AKT                              eS        S        04 29 19.4 +1.4
AKT                              e                  04 30 15.0
AKT                               pmax     pmax
      comp=Z,581nm,1.2s
NEWG  New Galloway     67.89 352 eP        P        04 20 19.6 -0.9
NEWG                              IAmb     IAmb     04 20 22.2
      comp=Z,236nm,1.0s
SHA1  Shidzhatmaz      67.91 317c iP       P        04 20 21.2 +0.1
BMNY  Brushton-Moira   67.93  40  P        P        04 20 19.5 -1.4
      baz=330,SNR=166
BMNY                              S        S        04 29 18.4  0.0
      baz=330
FW06  Azle             67.99  63  IAmb     IAmb     04 20 29.8
      comp=Z,821nm,1.6s
BLO   Bloomington      68.01  52  IAmb     IAmb     04 20 28.9
      comp=Z,389nm,1.0s
S44A  Carbondale       68.03  54  IAmb     IAmb     04 20 29.6
      comp=Z,406nm,0.8s
S44A  Carbondale       68.03  54  P        P        04 20 21.0 -0.7
      baz=326,SNR=90
DGPR  DIGLIPUR         68.04 260 eP        P        04 20 21.5 -0.4
DGPR                              IAmb     IAmb     04 20 34.1
      comp=Z,621nm,1.6s
E62A  Clayton Lake     68.06  36  P        P        04 20 21.1 -0.6
      baz=332
E62A                              P        P        04 20 21.1 -0.6
      baz=332
E62A                              S        S        04 29 17.0 -2.9
      baz=332
E62A                              S        S        04 29 17.0 -2.9
      baz=332
J55A  Hilton           68.07  43  IAmb     IAmb     04 20 31.7
      comp=Z,306nm,0.9s
J55A  Hilton           68.07  43  P        P        04 20 20.5 -1.3
      baz=329,SNR=45
J55A                              P        P        04 20 20.5 -1.3
      baz=329,SNR=45
J55A                              S        S        04 29 16.9 -3.3
      baz=329
J55A                              S        S        04 29 16.9 -3.3
      baz=329
O49A  Covington        68.09  50  P        P        04 20 21.4 -0.6
      baz=327,SNR=103
O49A                              P        P        04 20 21.4 -0.6
      baz=327,SNR=103
O49A                              S        S        04 29 19.0 -1.5
      baz=327
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O49A                              S        S        04 29 19.0 -1.5
      baz=327
RUE   Ruedersdorf      68.09 340 eP        P        04 20 22.2 +0.5
RUE   Ruedersdorf      68.09 340 eP        P        04 20 21.9 +0.1
      comp=Z,318nm,1.1s,baz=16,slow=6.1
RUE                              epP       sP       04 20 29.3 -0.7
LONY  Lake Ozonia      68.09  40  IAmb     IAmb     04 20 23.2
      comp=Z,310nm,1.1s
LONY                              IAMs_20  IAMs_20  04 55 12.8
      comp=Z,37µm,18.0s
LONY  Lake Ozonia      68.09  40  P        P        04 20 20.0 -1.9
      baz=330
LONY                              S        S        04 29 15.3 -5.2
      baz=330
FW07  Weatherford      68.09  64  IAmb     IAmb     04 20 31.3
      comp=Z,882nm,1.6s
M52A  Chesterland      68.17  47  P        P        04 20 21.9 -0.6
      baz=328,SNR=50
M52A                              P        P        04 20 21.9 -0.6
      baz=328,SNR=50
GAL1  Galloway         68.17 352 eP        P        04 20 21.9 -0.3
ERPA  Erie             68.22  45  IAMs_20  IAMs_20  04 53 14.1
      comp=Z,35µm,18.0s
ERPA  Erie             68.22  45 ⥣P        P        04 20 21.8 -1.0
ERPA  Erie             68.22  45  P        P        04 20 21.9 -0.8
      baz=328,SNR=221
ERPA                              S        S        04 29 19.1 -2.8
      baz=328
ERPA  Erie             68.22  45  P        P        04 20 22.0 -0.8
      baz=328,SNR=221
ERPA                              S        S        04 29 22.2 +0.2
      baz=328
P48A  Milroy           68.24  51  P        P        04 20 21.7 -1.2
      baz=327,SNR=143
P48A                              P        P        04 20 21.7 -1.2
      baz=327,SNR=143
P48A                              S        S        04 29 19.4 -2.8
      baz=327
P48A                              S        S        04 29 19.4 -2.8
      baz=327
FRNY  Flat Rock        68.26  40  P        P        04 20 21.5 -1.5
      baz=331,SNR=55
PBMO  Poplar Bluff     68.26  56  IAmb     IAmb     04 20 31.2
      comp=Z,453nm,0.9s
PBMO  Poplar Bluff     68.26  56  P        P        04 20 22.7 -0.4
      baz=326,SNR=16
WCNY  West Carthage    68.26  41  P        P        04 20 21.5 -1.5
      baz=330,SNR=71
WCNY                              S        S        04 29 18.0 -4.4
      baz=330
GDLE  Glaisdale, N Y   68.28 350 eP        P        04 20 22.4 -0.6
N51A  Ashland          68.28  48  P        P        04 20 22.3 -0.9
      baz=328,SNR=96
N51A                              P        P        04 20 22.3 -0.9
      baz=328,SNR=96
N51A                              S        S        04 29 22.0 -0.8
      baz=328
N51A                              S        S        04 29 22.0 -0.8
      baz=328
SEKA  Sheki            68.31 313  P        P        04 20 21.6 -1.8
NEY   Neytrino         68.31 317c iP       P        04 20 23.5  0.0
NEY                               pmax     pmax
      comp=Z,116nm,1.8s
KESW  Keswick, Cumbr   68.32 351 eP        P        04 20 23.1 -0.1
KESW                              IAmb     IAmb     04 20 25.9
      comp=Z,925nm,1.1s
LVV   L'vov            68.33 333 eP        P        04 20 23.6 +0.2
LVV                              e                  04 22 56.4
LVV                              eS        S        04 29 19.6 -3.5
LVV                              ePS       PnS      04 29 54.1 +7.0
LVV                               pmax     pmax
      comp=Z,1µm,1.4s
LVV                               MLR      MLR
      comp=E,62µm,16.0s
LVV                               MLR      MLR
      comp=N,63µm,17.0s
LVV                               MLR      MLR
      comp=Z,82µm,17.0s
BHPL  Bhopal           68.34 279 eP        P        04 20 22.6 -1.2
BHPL                              IAmb     IAmb     04 20 32.2
      comp=Z,746nm,1.5s
J56A  Wolcott          68.42  43  IAmb     IAmb     04 20 25.1
      comp=Z,335nm,1.0s
J56A  Wolcott          68.42  43  P        P        04 20 22.4 -1.6
      baz=330,SNR=61
J56A                              P        P        04 20 22.4 -1.6
      baz=330,SNR=61
J56A                              S        S        04 29 20.7 -3.6
      baz=330
J56A                              S        S        04 29 20.7 -3.6
      baz=330
P49A  Miami Univ. Ec   68.47  50  P        P        04 20 23.2 -1.2
      baz=327,SNR=202
P49A                              S        S        04 29 23.4 -1.7
      baz=327
P49A  Miami Univ. Ec   68.47  50  P        P        04 20 23.4 -1.0
      baz=327,SNR=202
PQI   Presque Isle     68.49  35  IAMs_20  IAMs_20  04 52 22.3
      comp=Z,33µm,20.0s
LCAR  Lake Charles     68.51  57  IAmb     IAmb     04 20 32.4
      comp=Z,739nm,1.6s
LCAR  Lake Charles     68.51  57  P        P        04 20 23.9 -0.8
      baz=326,SNR=63
WVNY  West Valley, N   68.51  44  P        P        04 20 23.6 -1.0
      baz=329,SNR=216
M53A  WI Miller and    68.52  46  IAMs_20  IAMs_20  04 51 48.2
      comp=Z,32µm,20.0s
M53A  WI Miller and    68.52  46  P        P        04 20 24.2 -0.5
      baz=328,SNR=137
M53A                              S        S        04 29 23.6 -2.0
      baz=328
FW13  Cleburne         68.55  64  IAmb     IAmb     04 20 33.2
      comp=Z,348nm,1.1s
F62A  Pittston Farm,   68.55  37  IAmb     IAmb     04 20 27.0
      comp=Z,497nm,1.1s
F62A  Pittston Farm,   68.55  37  P        P        04 20 24.3 -0.5
      baz=332,SNR=89
F62A                              P        P        04 20 24.3 -0.5
      baz=332,SNR=89
ALLY  Alegheny Colle   68.56  46  P        P        04 20 24.2 -0.7
      baz=328,SNR=156
E63A  Oxbow            68.59  35  P        P        04 20 23.8 -1.2
      baz=333,SNR=38
E63A                              P        P        04 20 23.8 -1.2
      baz=333,SNR=38
E63A                              S        S        04 29 23.6 -2.7
      baz=333
E63A                              S        S        04 29 23.6 -2.7
      baz=333
ONI   Oni              68.60 316 i P       P        04 20 26.2 +1.0
ONI   Oni              68.60 316  IAmb     IAmb     04 20 40.9
      comp=Z,1µm,1.9s
RETH  Rethem/Aller,    68.61 343 eP        P        04 20 25.1 +0.1
      comp=Z,234nm,1.2s,baz=16,slow=6.1
ACSO  Alum Creek Sta   68.61  49 ⥣P        P        04 20 24.4 -0.9
ACSO  Alum Creek Sta   68.61  49  P        P        04 20 24.4 -0.9
      baz=328,SNR=160
ACSO                              S        S        04 29 25.5 -1.2
      baz=328
ACSO  Alum Creek Sta   68.61  49  P        P        04 20 24.6 -0.7
      baz=328,SNR=160
ACSO                              S        S        04 29 25.4 -1.4
      baz=328
J57A  Williamstown     68.63  42  IAmb     IAmb     04 20 26.6
      comp=Z,424nm,1.1s
J57A  Williamstown     68.63  42  P        P        04 20 23.8 -1.5
      baz=330,SNR=110
J57A                              P        P        04 20 23.8 -1.5
      baz=330,SNR=110
J57A                              S        S        04 29 22.4 -4.3
      baz=330
J57A                              S        S        04 29 22.4 -4.3
      baz=330
MIAR  Mount Ida        68.63  59 ⥣P        P        04 20 25.4 -0.1
MIAR  Mount Ida        68.63  59  P        P        04 20 25.5 +0.1
      baz=325,SNR=328
MIAR                              S        S        04 29 27.2 +0.1
      baz=325
MIAR  Mount Ida        68.63  59  P        P        04 20 25.6 +0.2
      baz=325,SNR=328
MIAR                              S        S        04 29 28.5 +1.4
      baz=325
FW14  Alvarado         68.63  63  IAmb     IAmb     04 20 33.7
      comp=Z,562nm,1.3s
BKB   Balikpapan       68.64 230  IAmb     IAmb     04 20 28.5
      comp=Z,536nm,0.9s
BKB   Balikpapan       68.64 230 ⥣P        P        04 20 26.0 +0.4
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FLTG  Flechtingen      68.69 342 ⥣P        P        04 20 25.1 -0.4
FLTG  Flechtingen      68.69 342 eP        P        04 20 25.2 -0.4
      comp=Z,129nm,1.1s,baz=16,slow=6.1
FLTG                             epP       sP       04 20 32.7 -1.0
FW16  Waxahatchie      68.71  63  IAmb     IAmb     04 20 35.1
      comp=Z,616nm,1.3s
SORM  Soroca           68.72 329 ⥣P        P        04 20 25.6 -0.2
SORM  Soroca           68.72 329  P        P        04 20 25.5 -0.2
MNGR  Mingechevir, A   68.72 313  P        P        04 20 24.6 -1.3
NRDL  Niedersach Rie   68.72 342 eP        P        04 20 25.6 -0.1
      comp=Z,126nm,1.1s,baz=16,slow=6.1
NRDL                             epP       sP       04 20 33.3 -0.5
HPIG                   68.72  73  IAmb     IAmb     04 20 41.2
      comp=Z,743nm,1.5s
HPIG                   68.72  73 ⥣P        P        04 20 27.1 +0.7
NCB   Newcomb          68.78  40  IAmb     IAmb     04 20 36.5
      comp=Z,301nm,1.1s
NCB   Newcomb          68.78  40  P        P        04 20 25.3 -1.0
      baz=330,SNR=69
HPK   Haverah Park     68.81 350 eP        P        04 20 26.3  0.0
WHTX  Lake Whitney,    68.83  64  IAmb     IAmb     04 20 35.1
      comp=Z,486nm,1.2s
WHTX  Lake Whitney,    68.83  64  P        P        04 20 26.8  0.0
      baz=325,SNR=26
WHTX                              S        S        04 29 29.9 +0.4
      baz=325
WHTX  Lake Whitney,    68.83  64  P        P        04 20 26.6 -0.1
      baz=325,SNR=26
WHTX                              S        S        04 29 27.5 -2.0
      baz=325
ANN   Anapa            68.86 321 eP        P        04 20 23.8 -2.9
ANN                              i *PP     pP       04 20 31.4 -1.3
ANN                              i                  04 20 45.0
ANN                              e                  04 22 55.2
ANN                              i S       S        04 29 24.8 -4.6
ANN                               pmax     pmax
      comp=Z,867nm,1.6s
ANN                               MLR      MLR
      comp=N,51µm,14.0s
ANN                               MLR      MLR
      comp=E,26µm,15.0s
ANN                               MLR      MLR
      comp=Z,66µm,15.0s
T45B  Paducah          68.86  54  P        P        04 20 26.4 -0.5
      baz=326,SNR=16
T45B                              S        S        04 29 29.7  0.0
      baz=326
WIM   Isle of Man      68.88 352 eP        P        04 20 26.1 -0.6
JCT   Junction City    68.89  67  IAMs_20  IAMs_20  04 53 08.3
      comp=Z,33µm,18.0s
JCT   Junction City    68.89  67 ⥣P        P        04 20 27.1 -0.1
JCT   Junction City    68.89  67  P        P        04 20 27.5 +0.3
      baz=324,SNR=126
JCT                               S        S        04 29 30.8 +0.4
      baz=324
JCT   Junction City    68.89  67  P        P        04 20 27.4 +0.2
      baz=324,SNR=126
JCT                               S        S        04 29 30.1 -0.2
      baz=324
WCI   Wyandotte Cave   68.89  52  P        P        04 20 26.2 -0.8
WCI                               IAmb     IAmb     04 20 34.8
      comp=Z,377nm,0.9s
WCI   Wyandotte Cave   68.89  52  IAMs_20  IAMs_20  04 54 45.3
      comp=Z,28µm,18.0s
WCI   Wyandotte Cave   68.89  52 ⥣P        P        04 20 26.0 -1.0
WCI   Wyandotte Cave   68.89  52  P        P        04 20 26.2 -0.8
WCI                               pmax     pmax
      comp=Z,377nm,0.9s
WCI                               MLR      MLR
      comp=Z,28µm,18.0s
WCI   Wyandotte Cave   68.89  52  P        P        04 20 26.5 -0.6
      baz=327
WCI                               S        S        04 29 29.0 -1.0
      baz=327
WCI   Wyandotte Cave   68.89  52  P        P        04 20 26.3 -0.8
      baz=327,SNR=105
J58A  Remsen           68.93  42  IAmb     IAmb     04 20 28.6
      comp=Z,424nm,1.1s
J58A  Remsen           68.93  42  P        P        04 20 25.9 -1.4
      baz=330,SNR=124
J58A                              P        P        04 20 25.9 -1.4
      baz=330,SNR=124
G62A  West of Eustis   68.97  37  IAmb     IAmb     04 20 29.9
      comp=Z,556nm,1.2s
G62A  West of Eustis   68.97  37  P        P        04 20 27.1 -0.3
      baz=332,SNR=71
G62A                              P        P        04 20 27.1 -0.3
      baz=332,SNR=71
G62A                              S        S        04 29 28.5 -2.3
      baz=332
G62A                              S        S        04 29 28.5 -2.3
      baz=332
ASSE  Asse, Remlinge   68.98 342 eP        P        04 20 27.5 +0.2
      comp=Z,162nm,1.2s,baz=16,slow=6.1
OJC   Ojcow            68.98 336 i P       P        04 20 28.1 +0.8
OJC                              eS        S        04 29 34.6 +3.9
OJC                              eSS       SS       04 34 11.9 +17
OJC                              eL        L        04 54 15.9
      comp=Z,98µm,17.1s
OJC   Ojcow            68.98 336 ⥣P        P        04 20 28.0 +0.6
VT1   Waterbury        68.99  39  IAmb     IAmb     04 20 38.3
      comp=Z,372nm,1.1s
VT1   Waterbury        68.99  39  P        P        04 20 27.6  0.0
      baz=331,SNR=37
N53A  Lisbon           69.00  47  IAmb     IAmb     04 20 29.6
      comp=Z,647nm,1.1s
N53A  Lisbon           69.00  47  P        P        04 20 26.8 -0.8
      baz=328,SNR=107
N53A                              P        P        04 20 26.8 -0.8
      baz=328,SNR=107
N53A                              S        S        04 29 28.1 -3.1
      baz=328
N53A                              S        S        04 29 28.1 -3.1
      baz=328
Z38A  Mt. Pleasant     69.00  61  P        P        04 20 27.9 +0.2
      baz=325,SNR=86
Z38A                              S        S        04 29 32.0 +0.5
      baz=325
K57A  Scipio Center    69.02  43  IAmb     IAmb     04 20 29.0
      comp=Z,325nm,1.1s
K57A  Scipio Center    69.02  43  P        P        04 20 26.2 -1.6
      baz=330,SNR=53
X40A  Basin Creek Fa   69.03  59  P        P        04 20 27.7 -0.2
      baz=325,SNR=323
X40A                              P        P        04 20 27.7 -0.2
      baz=325,SNR=323
SLBS  Sierra La Lagu   69.06  79  P        P        04 20 29.6 +1.2
SLBS                              IAmb     IAmb     04 20 39.1
      comp=Z,742nm,1.2s
F64A  Sherman          69.11  36  IAmb     IAmb     04 20 35.8
      comp=Z,429nm,1.2s
F64A  Sherman          69.11  36  P        P        04 20 27.4 -0.8
      baz=333,SNR=66
F64A                              P        P        04 20 27.4 -0.8
      baz=333,SNR=66
F64A                              S        S        04 29 29.6 -2.8
      baz=333
F64A                              S        S        04 29 29.6 -2.8
      baz=333
DRLN  Deer Lake        69.11  27  IAmb     IAmb     04 20 35.6
      comp=Z,581nm,1.6s
SOC   Sochi            69.12 319 eP        P        04 20 27.1 -1.2
SOC                              e                  04 22 58.1
SOC                              ePPP      PPP      04 24 35.4
SOC                              eS        S        04 29 31.6 -1.0
SOC                              eSS       SS       04 33 57.7  0.0
SOC                               pmax     pmax
      comp=Z,450nm,1.5s
SOC                               MLR      MLR
      comp=Z,58µm,18.0s
J59A  Piesco           69.12  41  IAmb     IAmb     04 20 35.4
      comp=Z,339nm,1.1s
J59A  Piesco           69.12  41  P        P        04 20 26.9 -1.5
      baz=330,SNR=75
J59A                              P        P        04 20 26.9 -1.5
      baz=330,SNR=75
J59A                              S        S        04 29 30.1 -2.7
      baz=330
J59A                              S        S        04 29 30.1 -2.7
      baz=330
GANJ  Ganja            69.14 313  P        P        04 20 27.1 -1.5
KSM   Kuching          69.14 238  P        P        04 20 29.0 +0.2
L56A  Greenwood        69.14  44  P        P        04 20 27.5 -1.1
      baz=329,SNR=161
L56A                              P        P        04 20 27.5 -1.1
      baz=329,SNR=161
KSP   Ksiaz            69.15 338 i P       P        04 20 28.7 +0.3
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KSP				eS	S	04 29 35.6	+2.8
KSP				eSS	SS	04 34 15.0	+17
KSP				eL	L	04 54 47.5	
	comp=Z,83µm,18.1s						
KSP	Ksiaz	69.15	338	⇑P	P	04 20 28.7	+0.3
HBAR	Harrisburg	69.16	57	P	P	04 20 29.8	+1.1
	baz=326,SNR=26						
O52A	Adamsville	69.18	48	P	P	04 20 27.8	-1.0
	baz=328,SNR=195						
O52A				P	P	04 20 27.8	-1.0
	baz=328,SNR=195						
O52A				S	S	04 29 31.3	-2.1
	baz=328						
O52A				S	S	04 29 31.3	-2.1
	baz=328						
LMK	Market Rasen	69.18	349	eP	P	04 20 27.9	-0.7
P51A	Williamsport	69.21	49	IAmb	IAmb	04 20 36.3	
	comp=Z,393nm,0.8s						
P51A	Williamsport	69.21	49	P	P	04 20 28.0	-1.0
	baz=328,SNR=71						
P51A				P	P	04 20 28.0	-1.0
	baz=328,SNR=71						
P51A				S	S	04 29 31.0	-2.8
	baz=328						
P51A				S	S	04 29 31.0	-2.8
	baz=328						
MCVT	Middlebury Col	69.23	40	P	P	04 20 28.1	-0.9
	baz=331,SNR=23						
LNXT	Lenox	69.24	56	P	P	04 20 31.0	+1.8
	baz=326,SNR=20						
M55A	Ridgway	69.25	45	P	P	04 20 28.4	-0.9
	baz=329,SNR=235						
M55A				P	P	04 20 28.4	-0.9
	baz=329,SNR=235						
M55A				S	S	04 29 32.3	-2.0
	baz=329						
M55A				S	S	04 29 32.3	-2.0
	baz=329						
IBBN	Ibbenburen	69.28	344	⇑P	P	04 20 29.4	+0.2
IBBN	Ibbenburen	69.28	344	eP	P	04 20 29.4	+0.2
	comp=Z,326nm,1.1s,baz=16,slow=6.1						
CLZ	Clausthal	69.31	342	eP	P	04 20 29.2	-0.2
	comp=Z,334nm,1.2s,baz=16,slow=6.1						
O53A	New Philadelph	69.32	47	IAmb	IAmb	04 20 37.1	
	comp=Z,531nm,0.9s						
O53A				IAMs_20	IAMs_20	04 53 43.0	
	comp=Z,32µm,21.0s						
O53A	New Philadelph	69.32	47	P	P	04 20 28.7	-1.0
	baz=328,SNR=111						
O53A				S	S	04 29 32.4	-2.7
	baz=328						
H62A	Milan	69.32	38	P	P	04 20 29.3	-0.3
	baz=332,SNR=124						
H62A				P	P	04 20 29.3	-0.3
	baz=332,SNR=124						
H62A				S	S	04 29 34.5	-0.5
	baz=332						
H62A				S	S	04 29 34.5	-0.5
	baz=332						
R49A	Shelbyville	69.32	51	IAmb	IAmb	04 20 38.5	
	comp=Z,866nm,1.6s						
R49A	Shelbyville	69.32	51	P	P	04 20 29.2	-0.5
	baz=327,SNR=144						
R49A				P	P	04 20 29.2	-0.5
	baz=327,SNR=144						
R49A				S	S	04 29 33.6	-1.6
	baz=327						
R49A				S	S	04 29 33.6	-1.6
	baz=327						
PKME	Peaks-Kenny Pk	69.33	37	IAMs_20	IAMs_20	04 54 53.0	
	comp=Z,40µm,18.0s						
PKME	Peaks-Kenny Pk	69.33	37	P	P	04 20 29.5	-0.1
	baz=332,SNR=45						
PKME				S	S	04 29 32.7	-2.4
	baz=332						
PKME	Peaks-Kenny Pk	69.33	37	P	P	04 20 29.1	-0.5
	baz=332,SNR=45						
PKME				S	S	04 29 37.7	+2.6
	baz=332						
CLL	Collm	69.35	340	IAmb	IAmb	04 20 39.0	
	comp=Z,995nm,1.6s						
CLL	Collm	69.35	340	⇑iP	P	04 20 29.3	-0.4
	comp=Z,294nm,1.2s						
CLL				ePmax		04 20 30.0	
CLL				ePlp		04 20 32.0	
	comp=Z,5µm,17.9s						
CLL				i pP	sP	04 20 37.1	-0.8
	comp=Z,1µm,1.7s						
CLL				ePcP	PcP	04 20 52.0	-1.1
CLL				ePP	PP	04 23 01.0	-1.3
CLL				i pPP		04 23 07.5	
CLL				ePPP	PPP	04 24 44.0	
CLL				ex	x	04 25 47.0	
CLL				ex	x	04 29 14.0	
CLL				eS	S	04 29 33.0	-2.1
CLL				ePS		04 30 03.0	
CLL				ePPS	PPS	04 30 13.0	
CLL				eSKSac	ScS	04 30 36.0	+6.6
CLL				ex	x	04 33 30.0	
CLL				eSS	SS	04 34 07.0	+6.1
CLL				eSSS	SSS	04 37 18.0	
CLL				eSSSS		04 38 36.0	
CLL				i PKPPKPdf	P'P'df	04 48 38.1	-7.4
	comp=Z,396nm,2.8s						
CLL				AMS	AMS	04 54 00.0	
	comp=Z,54µm,19.1s						
CLL				AMS	AMS	04 57 00.0	
CLL	Collm	69.35	340	⇑iP	P	04 20 29.3	-0.4
CLL				i *PP	sP	04 20 37.1	-0.8
CLL				eS	S	04 29 33.0	-2.1
CLL				pmax	pmax		
	comp=Z,294nm,1.2s						
CLL				MLR	MLR		
	comp=Z,54µm,19.1s						
CLL	Collm	69.35	340	eP	P	04 20 29.4	-0.3
	comp=Z,294nm,1.2s,baz=16,slow=6.1						
LBNH	Lisbon	69.35	39	IAmb	IAmb	04 20 38.1	
	comp=Z,639nm,1.1s						
LBNH	Lisbon	69.35	39	P	P	04 20 29.6	-0.2
	baz=332,SNR=103						
LBNH				S	S	04 29 32.0	-3.4
	baz=332						
LBNH	Lisbon	69.35	39	P	P	04 20 29.6	-0.2
	baz=332,SNR=103						
LBNH				S	S	04 29 34.5	-0.9
	baz=332						
LBWR	Ladybower, Pea	69.37	350	eP	P	04 20 29.6	-0.2
LBWR				IAmb	IAmb	04 20 32.2	
	comp=Z,607nm,1.0s						
STHS	Stebnicka Huta	69.39	334	eP	P	04 20 30.8	+0.8
STHS				pmax	pmax		
	comp=Z,275nm,1.1s						
STHS	Stebnicka Huta	69.39	334	eP	P	04 20 30.8	+0.8
PBA	Port Blair	69.40	260	IAmb	IAmb	04 20 59.5	
	comp=Z,937nm,1.6s						
OSTC	Ostas	69.44	338	eP	P	04 20 30.9	+0.6
OSTC				eS	S	04 29 39.2	+3.0
OSTC				AMS	AMS	04 55 40.0	
	comp=Z,80µm,16.4s						
OSTC	Ostas	69.44	338	eP	P	04 20 30.9	+0.6
OSTC				eS	S	04 29 39.2	+3.0
OSTC				MLR	MLR		
	comp=Z,80µm,16.4s						
CHVC	Chvalec	69.44	338	eP	P	04 20 30.7	+0.4
CHVC				AMS	AMS	04 55 40.0	
	comp=Z,88µm,16.1s						
CHVC	Chvalec	69.44	338	eP	P	04 20 30.7	+0.4
CHVC				MLR	MLR		
	comp=Z,88µm,16.1s						
RAC	Raciborz	69.46	336	eP	P	04 20 31.5	+1.1
RAC				eS	S	04 29 37.2	+0.7
RAC				AMS	AMS	04 53 47.4	
	comp=Z,44nm,18.7s						
RAC	Raciborz	69.46	336	eP	P	04 20 31.5	+1.1
RAC				eS	S	04 29 37.2	+0.7
RAC				MLR	MLR		
	comp=Z,44µm,18.7s						
P52A	Corning	69.47	48	IAmb	IAmb	04 20 39.5	
	comp=Z,330nm,0.9s						
P52A	Corning	69.47	48	P	P	04 20 29.3	-1.3
	baz=328,SNR=68						
P52A				S	S	04 29 33.8	-3.1
	baz=328						
ACCN	Adirondack Com	69.49	40	IAmb	IAmb	04 20 32.4	
	comp=Z,625nm,1.6s						
ACCN	Adirondack Com	69.49	40	P	P	04 20 29.7	-1.0
	baz=331,SNR=72						
UPC	Upice	69.53	338	eP	P	04 20 31.4	+0.6
UPC				AMS	AMS	04 55 40.0	
	comp=Z,93µm,16.1s						
UPC	Upice	69.53	338	eP	P	04 20 31.4	+0.6
UPC				MLR	MLR		
	comp=Z,93µm,16.1s						
T47A	Sharon Grove	69.57	53	P	P	04 20 31.0	-0.2
	baz=327,SNR=258						
T47A				S	S	04 29 36.7	-1.4
	baz=327						
VIS	Vishakhapatnam	69.58	271	eP	P	04 20 31.4	-0.1
BRG	Berggiesshubel	69.59	340	i P	P	04 20 31.1	0.0
BRG				Amp		04 20 33.5	
	comp=Z,135nm,1.1s						
BRG	Berggiesshubel	69.59	340	P	P	04 20 38.9	+7.7
BRG				Amp		04 20 40.6	
	comp=Z,235nm,1.2s						
BRG				⇑PP	PcP	04 20 56.4	+2.3
BRG				Amp		04 20 57.4	
	comp=Z,54nm,1.0s						
BRG	Berggiesshubel	69.59	340	i P	P	04 20 31.1	0.0
BRG						04 20 38.8	
BRG						04 20 56.4	
BRG				S	S	04 29 42.0	+4.1
BRG				pmax	pmax		
	comp=Z,135nm,1.1s						
BRG	Berggiesshubel	69.59	340	eP	P	04 20 31.1	0.0
	comp=Z,135nm,1.1s,baz=16,slow=6.1						
AKH	Akhalkalaki	69.59	316	i P	P	04 20 32.4	+0.8
WME	Myndd Eilian	69.60	352	eP	P	04 20 30.5	-0.7
DPC	Dobruska-Polom	69.61	338	eP	P	04 20 32.1	+0.7
DPC				epP	pP	04 20 38.1	+0.7
DPC				eS	S	04 29 38.8	+0.5
DPC				AMS	AMS	04 55 00.0	
	comp=Z,71µm,16.6s						
DPC	Dobruska-Polom	69.61	338	eP	P	04 20 32.1	+0.7
DPC				e		04 20 38.1	
DPC				eS	S	04 29 38.8	+0.5
DPC				MLR	MLR		
	comp=Z,71µm,16.6s						
NIE	Niedzica	69.61	335	i P	P	04 20 33.0	+1.6
NIE				eS	S	04 29 42.6	+4.3
NIE				eL	L	04 53 30.1	
	comp=Z,25µm,19.6s						
WPS	Cemaes, Angles	69.61	352	eP	P	04 20 30.7	-0.5
WPS				IAmb	IAmb	04 20 33.6	
	comp=Z,177nm,1.0s						
KIS	Kishinev	69.62	328	⇓P	P	04 20 32.3	+0.9
KIS	Kishinev	69.62	328	⇑iP	P	04 20 31.0	-0.4
	comp=Z,640nm,1.2s						
KIS	Kishinev	69.62	328	ePP	PP	04 23 00.0	-4.7
KIS	Kishinev	69.62	328	c iP	P	04 20 31.0	-0.4
KIS				eS	S	04 29 36.0	-2.3
KIS				pmax	pmax		
	comp=Z,640nm,1.2s						
KIS				smax	smax		
	comp=N,3µm,13.5s						
KIS				MLR	MLR		
	comp=N,17µm,14.0s						
KIS				MLR	MLR		
	comp=E,24µm,14.0s						
KIS				MLR	MLR		
	comp=Z,31µm,14.0s						
237A	Washetta, Mont	69.63	63	IAmb	IAmb	04 20 39.9	
	comp=Z,640nm,1.5s						
237A	Washetta, Mont	69.63	63	P	P	04 20 31.6	-0.1
	baz=325,SNR=14						
FBE	Freiberg	69.66	340	eP	P	04 20 31.3	-0.2
	comp=Z,281nm,1.3s,baz=16,slow=6.1						
GTTG	Gottingen	69.66	342	eP	P	04 20 31.6	0.0
	comp=Z,102nm,1.0s,baz=16,slow=6.1						
NEUB	Neuenburg	69.67	341	eP	P	04 20 31.6	-0.1
	comp=Z,148nm,1.2s,baz=16,slow=6.1						
BINY	Binghamton	69.68	43	IAmb	IAmb	04 20 41.9	
	comp=Z,370nm,1.1s						
BINY				IAMs_20	IAMs_20	04 53 33.5	
	comp=Z,26µm,18.0s						
BINY	Binghamton	69.68	43	P	P	04 20 30.8	-1.0
	baz=330,SNR=56						
BINY				S	S	04 29 34.1	-5.2
	baz=330						
BINY	Binghamton	69.68	43	P	P	04 20 30.6	-1.3
	baz=330,SNR=56						
BINY				S	S	04 29 40.8	+1.5
	baz=330						
MILM	Milestii Mici	69.69	328	⇑iP	P	04 20 29.0	-2.8
	comp=Z,1µm,1.2s						
MILM	Milestii Mici	69.69	328	ePP	PP	04 22 58.0	-7.3
MILM	Milestii Mici	69.69	328	ceP	P	04 20 29.0	-2.8
MILM				e		04 20 49.0	
MILM				eS	S	04 29 29.0	-10
MILM				pmax	pmax		
	comp=Z,1µm,1.2s						
MILM				smax	smax		
	comp=E,4µm,5.6s						
MILM				MLR	MLR		
	comp=E,27µm,14.0s						
MILM				MLR	MLR		
	comp=Z,76µm,14.0s						
MILM				MLR	MLR		
	comp=N,51µm,13.0s						
R50A	Paris	69.69	51	IAmb	IAmb	04 20 40.0	
	comp=Z,424nm,0.9s						
R50A	Paris	69.69	51	P	P	04 20 31.5	-0.5
	baz=328,SNR=159						
R50A				P	P	04 20 31.5	-0.5
	baz=328,SNR=159						
HNH	Hanover	69.70	39	P	P	04 20 31.6	-0.3
	baz=331,SNR=38						
OKC	Ostrava-Krasne	69.70	336	eP	P	04 20 32.7	+0.8
OKC				eS	S	04 29 40.3	+1.0
OKC				AMS	AMS	04 56 00.0	
	comp=Z,65µm,14.2s						
OKC	Ostrava-Krasne	69.70	336	eP	P	04 20 32.7	+0.8
OKC				eS	S	04 29 40.3	+1.0
OKC				MLR	MLR		
	comp=Z,65µm,14.2s						
O54A	Avella	69.71	47	IAmb	IAmb	04 20 39.7	
	comp=Z,495nm,1.0s						
O54A	Avella	69.71	47	P	P	04 20 31.3	-0.8
	baz=329,SNR=103						
O54A				P	P	04 20 31.3	-0.8
	baz=329,SNR=103						
O54A				S	S	04 29 37.8	-1.9
	baz=329						
O54A				S	S	04 29 37.8	-1.9
	baz=329						
WLF1	Llynfaes	69.71	352	eP	P	04 20 32.1	+0.2
STNC	Stoke	69.72	350	eP	P	04 20 31.7	-0.2
435B	Jarrell	69.75	65	IAmb	IAmb	04 20 41.8	
	comp=Z,936nm,1.4s						
435B	Jarrell	69.75	65	P	P	04 20 33.1	+0.7
	baz=325						
435B				S	S	04 29 41.2	+0.7
	baz=325						
435B	Jarrell	69.75	65	P	P	04 20 32.7	+0.2
	baz=325,SNR=43						
YRC	Rhoscolyn	69.77	352	eP	P	04 20 30.9	-1.2
LKRN	Lenkeran, Azer	69.77	310	P	P	04 20 31.2	-1.2
KRLC	Kraliky	69.78	337	eP	P	04 20 33.0	+0.6
KRLC				epP	sP	04 20 40.2	-0.4
KRLC				eS	S	04 29 42.0	+1.7
KRLC				AMS	AMS	04 56 30.0	
	comp=Z,55µm,14.5s						
KRLC	Kraliky	69.78	337	eP	P	04 20 33.0	+0.6
KRLC				e		04 20 40.2	
KRLC				eS	S	04 29 42.0	+1.7
KRLC				MLR	MLR		
	comp=Z,55µm,14.5s						
PVCC	Panska Ves	69.80	339	eP	P	04 20 33.8	+1.4
PVCC				eS	S	04 29 43.9	+3.5
PVCC				AMS	AMS	04 57 30.0	
	comp=Z,48µm,13.9s						
PVCC	Panska Ves	69.80	339	eP	P	04 20 33.8	+1.4
PVCC				eS	S	04 29 43.9	+3.5
PVCC				MLR	MLR		
	comp=Z,48µm,13.9s						
IAS	Iasi	69.80	329	⇑P	P	04 20 33.2	+0.6
IAS	Iasi	69.80	329	P	P	04 20 33.1	+0.6
WACR	West Acre	69.80	349	eP	P	04 20 31.6	-0.7
WACR				IAmb	IAmb	04 20 35.2	
	comp=Z,713nm,1.0s						
WVL	Waterville	69.83	37	IAmb	IAmb	04 20 41.6	
	comp=Z,735nm,1.6s						
WVL				IAMs_20	IAMs_20	04 55 52.9	
	comp=Z,31µm,18.0s						
WVL	Waterville	69.83	37	P	P	04 20 32.2	-0.5
	baz=332,SNR=39						
YLL	Llanberis	69.84	352	eP	P	04 20 31.6	-1.1
I62A	Tamworth	69.88	39	P	P	04 20 32.8	-0.2
	baz=332,SNR=54						
I62A				P	P	04 20 32.8	-0.2
	baz=332,SNR=54						
I62A				S	S	04 29 40.8	-0.8
	baz=332						
I62A				S	S	04 29 40.8	-0.8
	baz=332						
MORC	Moravsky Berou	69.89	337	⇑P	P	04 20 33.0	-0.1
MORC	Moravsky Berou	69.89	337	⇑iP	P	04 20 33.5	+0.4
MORC				eS	S	04 29 43.5	+1.8
MORC				ePKPPKP	P'P'df	04 48 35.9	-8.7
MORC	Moravsky Berou	69.89	337	⇑P	P	04 20 33.5	+0.4
MORC	Moravsky Berou	69.89	337	P	P	04 20 33.0	-0.1
P53A	Whipple	69.89	48	IAmb	IAmb	04 20 42.4	
	comp=Z,444nm,1.1s						
P53A	Whipple	69.89	48	P	P	04 20 32.3	-1.0
	baz=328,SNR=73						
P53A				P	P	04 20 32.3	-1.0
	baz=328,SNR=73						
P53A				S	S	04 29 38.4	-3.5
	baz=328						
P53A				S	S	04 29 38.4	-3.5
	baz=328						
DSB	Dublin	69.90	353	IAmb	IAmb	04 20 41.6	
	comp=Z,743nm,1.3s						
DSB	Dublin	69.90	353	⇑P	P	04 20 33.0	-0.1
J61A	Chester	69.92	40	P	P	04 20 32.7	-0.6
	baz=331,SNR=42						
J61A				P	P	04 20 32.7	-0.6
	baz=331,SNR=42						
J61A				S	S	04 29 40.3	-1.8
	baz=331						
J61A				S	S	04 29 40.3	-1.8
	baz=331						
G65A	Princeton	69.95	35	IAmb	IAmb	04 20 41.4	
	comp=Z,394nm,1.0s						
G65A	Princeton	69.95	35	P	P	04 20 32.9	-0.6
	baz=333,SNR=55						
G65A				P	P	04 20 32.9	-0.6
	baz=333,SNR=55						
G65A				S	S	04 29 40.0	-2.2
	baz=333						
G65A				S	S	04 29 40.0	-2.2
	baz=333						
WVT	Waverly	69.97	54	P	P	04 20 33.5	-0.2
WVT				IAmb	IAmb	04 20 42.8	
	comp=Z,633nm,1.1s						
WVT	Waverly	69.97	54	IAMs_20	IAMs_20	04 52 13.7	
	comp=Z,32µm,18.0s						
WVT	Waverly	69.97	54	P	P	04 20 33.5	-0.2
WVT				pmax	pmax		
	comp=Z,633nm,1.1s						
WVT				MLR	MLR		
	comp=Z,32µm,18.0s						
I63A	Otisfield	69.98	38	IAmb	IAmb	04 20 42.2	
	comp=Z,667nm,1.1s						
I63A	Otisfield	69.98	38	P	P	04 20 33.7	+0.1
	baz=332,SNR=74						
I63A				P	P	04 20 33.7	+0.1
	baz=332,SNR=74						
Q52A	Bidwell	69.98	49	IAmb	IAmb	04 20 35.5	
	comp=Z,770nm,1.2s						
Q52A	Bidwell	69.98	49	P	P	04 20 32.8	-1.0
	baz=328,SNR=104						
Q52A				P	P	04 20 32.8	-1.0
	baz=328,SNR=104						
Q52A				S	S	04 29 39.5	-3.4
	baz=328						
Q52A				S	S	04 29 39.5	-3.4
	baz=328						
M57A	Sunshine Farm,	69.99	44	IAmb	IAmb	04 20 43.9	
	comp=Z,453nm,0.8s						
M57A	Sunshine Farm,	69.99	44	P	P	04 20 32.7	-1.1
	baz=330,SNR=113						
M57A				P	P	04 20 32.7	-1.1
	baz=330,SNR=113						
M57A				S	S	04 29 39.6	-3.3
	baz=330						
M57A				S	S	04 29 39.6	-3.3
	baz=330						
CCAR	Cane Creek	69.99	59	P	P	04 20 34.8	+0.9
	baz=326,SNR=60						
BUR08	Bucovina Ar. S	70.03	331	IAmb	IAmb	04 20 42.9	
	comp=Z,1µm,2.0s						
L59A	Walton	70.03	42	IAmb	IAmb	04 20 44.2	
	comp=Z,543nm,1.1s						
L59A	Walton	70.03	42	P	P	04 20 32.9	-1.2
	baz=330,SNR=87						
L59A				P	P	04 20 32.9	-1.2
	baz=330,SNR=87						
L59A				S	S	04 29 40.9	-2.6
	baz=330						
L59A				S	S	04 29 40.9	-2.6
	baz=330						
Z41A	Richland Creek	70.05	60	P	P	04 20 34.0	-0.2
	baz=326,SNR=70						
Z41A				P	P	04 20 34.0	-0.2
	baz=326,SNR=70						
BURAR	Bucovina Array	70.05	331	⇓P	P	04 20 33.9	-0.3
BURAR	Bucovina Array	70.05	331	P	P	04 20 33.9	-0.3
LANS	Liptovska Anna	70.05	335	eP	P	04 20 36.0	+1.9
LANS				pmax	pmax		
	comp=Z,320nm,1.1s						
LANS	Liptovska Anna	70.05	335	eP	P	04 20 36.0	+1.9
FFD	Franklin Falls	70.12	39	IAmb	IAmb	04 20 42.8	
	comp=Z,480nm,1.3s						
FFD				IAMs_20	IAMs_20	04 54 35.7	
	comp=Z,41µm,19.0s						
FFD	Franklin Falls	70.12	39	P	P	04 20 34.4	-0.1
	baz=332,SNR=26						
W45A	Hickory Valley	70.16	56	P	P	04 20 35.2	+0.3
	baz=326,SNR=229						
GNI	Garni	70.19	314	P	P	04 20 35.6	+0.4
	comp=Z,410nm,1.2s,baz=2.6,slow=2.4,SNR=99						
GNI				S	S	04 29 44.3	-1.3
	comp=Z,4.9nm,0.5s,baz=293,slow=8.6,SNR=1.7						
GNI				LR	LR	04 55 52.7	
	comp=Z,131µm,19.8s,baz=32,slow=40						
	comp=Z,410nm,1.2s						
GNI	Garni	70.19	314	i P	P	04 20 36.6	+1.4
GNI	Garni	70.19	314	P	P	04 20 35.3	+0.1
GNI	Garni	70.19	314	⇑P	P	04 20 36.4	+1.2
GNI	Garni	70.19	314	ceP	P	04 20 36.6	+1.4
GNI				pmax	pmax		
	comp=Z,817nm,1.7s						
GNI				MLR	MLR		
	comp=Z,118µm,19.0s						
GNI	Garni	70.19	314	P	P	04 20 36.4	+1.2
BUG	Bochum--Univer	70.19	344	eP	P	04 20 35.0	+0.1
	comp=Z,225nm,1.1s,baz=16,slow=6.1						
MAUC	Maruska	70.22	336	eP	P	04 20 35.9	+0.8
MAUC				eS	S	04 29 48.8	+3.3
MAUC				AMS	AMS	04 56 20.0	
	comp=Z,104µm,14.2s						
VASR	Vaslui	70.23	329	⇑P	P	04 20 35.1	0.0
MOX	Moxa	70.24	341	eP	P	04 20 35.3	+0.2
	comp=Z,154nm,1.1s,baz=16,slow=6.1						
MOX				eL	L	04 54 31.3	
	comp=Z,33µm,21.7s						
KASTN	Kahler Asten	70.25	343	eP	P	04 20 35.3	+0.1
	comp=Z,140nm,1.1s,baz=16,slow=6.1						
GGN	Saint George	70.25	35	IAmb	IAmb	04 20 43.0	
	comp=Z,346nm,1.0s						
TRPA	Tarpa	70.27	333	⇓P	P	04 20 35.7	+0.4
PLN	Plauen	70.30	341	eP	P	04 20 35.6	+0.1
	comp=Z,156nm,1.1s,baz=16,slow=6.1						
SSPA	Standing Stone	70.30	45	P	P	04 20 34.6	-1.1
SSPA				IAmb	IAmb	04 20 43.1	
	comp=Z,444nm,1.0s						
SSPA	Standing Stone	70.30	45	IAMs_20	IAMs_20	04 52 27.2	
	comp=Z,35µm,20.0s						
SSPA	Standing Stone	70.30	45	P	P	04 20 34.6	-1.1
	baz=330						
SSPA				S	S	04 29 41.4	-5.2
	baz=330						
SSPA	Standing Stone	70.30	45	P	P	04 20 34.6	-1.1
	baz=330,SNR=109						
WERD	Werda	70.31	340	eP	P	04 20 35.7	+0.1
	comp=Z,227nm,1.2s,baz=16,slow=6.1						
TANN	Tannenbergstha	70.31	340	eP	P	04 20 35.8	+0.1
	comp=Z,367nm,1.8s,baz=16,slow=6.1						
KSPA	Keystone Colle	70.31	43	P	P	04 20 34.4	-1.4

	baz=330,SNR=59						
PRU	**Pruhonice**	70.32	339	*e*P	P	04 20 36.2	+0.6
PRU				*e*x	x	04 20 43.2	
PRU				*e*S	S	04 29 47.0	+0.5
PRU				AMS	AMS	04 55 30.0	
	comp=Z,60µm,17.1s						
PRU	**Pruhonice**	70.32	339	*e*P	P	04 20 36.2	+0.6
PRU				*e*		04 20 43.2	
PRU				*e*S	S	04 29 47.0	+0.5
PRU				MLR	MLR		
	comp=Z,60µm,17.1s						
GOPC	**GO Pecny, Ondr**	70.34	339	*e*P	P	04 20 36.2	+0.4
GOPC				*e*S	S	04 29 49.3	+2.5
GOPC				AMS	AMS	04 55 40.0	
	comp=Z,60µm,16.7s						
GOPC	**GO Pecny, Ondr**	70.34	339	*e*P	P	04 20 36.2	+0.4
GOPC				*e*S	S	04 29 49.3	+2.5
GOPC				MLR	MLR		
	comp=Z,60µm,16.7s						
HLM1	**Long Mynd**	70.35	351	*e*P	P	04 20 35.6	-0.2
MCWV	**Mont Chateau**	70.37	47	IAmb	IAmb	04 20 44.0	
	comp=Z,398nm,1.1s						
MCWV				IAMs_20	IAMs_20	04 55 21.8	
	comp=Z,33µm,19.0s						
MCWV	**Mont Chateau**	70.37	47	P	P	04 20 35.4	-0.7
	baz=329,SNR=56						
MCWV				S	S	04 29 42.7	-4.7
	baz=329						
MCWV	**Mont Chateau**	70.37	47	P	P	04 20 35.5	-0.7
	baz=329,SNR=56						
MCWV				S	S	04 29 44.8	-2.7
	baz=329						
GUNZ	**Gunzen**	70.38	340	*e*P	P	04 20 36.3	+0.2
	comp=Z,209nm,1.2s,baz=16,slow=6.1						
NATX	**Nacogdoches**	70.39	62	P	P	04 20 37.0	+0.7
	baz=326,SNR=61						
NATX				S	S	04 29 45.8	-2.0
	baz=326						
NATX	**Nacogdoches**	70.39	62	P	P	04 20 37.0	+0.7
	baz=326,SNR=61						
EMMW	**East Machias**	70.42	36	IAmb	IAmb	04 20 44.1	
	comp=Z,345nm,1.0s						
EMMW	**East Machias**	70.42	36	P	P	04 20 36.3	0.0
	baz=334,SNR=46						
KARS	**Kars**	70.43	315	*i* P	P	04 20 37.9	+1.3
KECS	**Kecovo**	70.44	334	*e*P	P	04 20 38.4	+2.0
KECS				pmax	pmax		
	comp=Z,190nm,1.0s						
KECS	**Kecovo**	70.44	334	*e*P	P	04 20 38.4	+2.0
WERN	**Wernitzgruen**	70.45	340	*e*P	P	04 20 36.8	+0.3
	comp=Z,197nm,1.0s,baz=16,slow=6.1						
BMR	**Baia Mare**	70.45	332	⇑P	P	04 20 37.2	+0.7
NKC	**Novy Kostel**	70.48	340	*e*P	P	04 20 37.0	+0.3
NKC				AMS	AMS	04 58 10.0	
	comp=Z,54µm,13.3s						
NKC	**Novy Kostel**	70.48	340	*e*P	P	04 20 37.0	+0.3
NKC				MLR	MLR		
	comp=Z,54µm,13.3s						
TASB	**TASBURUN-IGDIR**	70.53	314	*i* P	P	04 20 38.2	+1.0
T50A	**Nancy**	70.53	52	IAmb	IAmb	04 20 45.8	
	comp=Z,815nm,1.5s						
T50A	**Nancy**	70.53	52	P	P	04 20 36.6	-0.5
	baz=328						
T50A				P	P	04 20 36.6	-0.5
	baz=328						
T50A				S	S	04 29 48.2	-1.3
	baz=328						
T50A				S	S	04 29 48.2	-1.3
	baz=328						
VRAC	**Vranov**	70.54	337	⇓P	P	04 20 36.9	-0.1
VRAC	**Vranov**	70.54	337	P	P	04 20 36.4	-0.6
	comp=Z,143nm,0.8s,baz=19,slow=6.7,SNR=142						
VRAC				S	S	04 29 48.8	-0.4
	comp=Z,0.9nm,0.3s,baz=49,slow=2.2,SNR=1.6						
VRAC				LR	LR	04 55 03.6	
	comp=Z,32µm,18.7s,baz=19,slow=39						
	comp=Z,143nm,0.8s						
VRAC	**Vranov**	70.54	337	⇑*i*P	P	04 20 37.8	+0.8
VRAC				*e*S	S	04 29 50.3	+1.1
VRAC				*e*PKPPKP	P'P'df	04 48 32.1	-11
VRAC	**Vranov**	70.54	337	P	P	04 20 36.9	-0.1
S51A	**Beattyville**	70.54	50	IAmb	IAmb	04 20 45.1	
	comp=Z,381nm,1.1s						
S51A	**Beattyville**	70.54	50	P	P	04 20 36.5	-0.7
	baz=328,SNR=95						
S51A				P	P	04 20 36.5	-0.7
	baz=328,SNR=95						
Q54A	**Coxs Mills**	70.55	48	IAmb	IAmb	04 20 45.8	
	comp=Z,587nm,1.3s						
Q54A	**Coxs Mills**	70.55	48	P	P	04 20 36.6	-0.6
	baz=329,SNR=111						
Q54A				P	P	04 20 36.6	-0.6
	baz=329,SNR=111						
U49A	**Red Boiling Sp**	70.55	53	IAmb	IAmb	04 20 46.0	
	comp=Z,501nm,1.1s						
U49A	**Red Boiling Sp**	70.55	53	P	P	04 20 36.8	-0.5
	baz=327,SNR=171						
U49A				S	S	04 29 46.4	-3.2
	baz=327						
KULM	**Kulim**	70.58	249	IAMs_20	IAMs_20	04 55 22.8	
	comp=Z,38µm,19.0s						
KULM	**Kulim**	70.58	249	P	P	04 20 38.0	+0.3
N58A	**Sunbury**	70.58	44	IAmb	IAmb	04 20 45.2	
	comp=Z,588nm,1.1s						
N58A	**Sunbury**	70.58	44	P	P	04 20 36.1	-1.3
	baz=330,SNR=102						
N58A				P	P	04 20 36.1	-1.3
	baz=330,SNR=102						
OXF	**Oxford**	70.59	56	P	P	04 20 37.5	0.0
	baz=326,SNR=483						
OXF				S	S	04 29 49.5	-0.7
	baz=326						
OXF	**Oxford**	70.59	56	P	P	04 20 37.6	0.0
	baz=326,SNR=483						
OXF				S	S	04 29 50.8	+0.6
	baz=326						
BIR	**Birlad**	70.62	329	⇑P	P	04 20 38.7	+1.1
BIR	**Birlad**	70.62	329	P	P	04 20 38.6	+1.1
K62A	**Royalston**	70.63	40	IAmb	IAmb	04 20 46.4	
	comp=Z,589nm,1.6s						
K62A	**Royalston**	70.63	40	P	P	04 20 37.1	-0.6
	baz=332,SNR=30						
K62A				P	P	04 20 37.1	-0.6
	baz=332,SNR=30						
K62A				S	S	04 29 47.8	-2.5
	baz=332						
K62A				S	S	04 29 47.8	-2.5
	baz=332						
R53A	**Hurricane**	70.64	49	P	P	04 20 37.4	-0.4
	baz=328,SNR=207						
R53A				P	P	04 20 37.4	-0.4
	baz=328,SNR=207						
R53A				S	S	04 29 49.5	-1.2
	baz=328						
R53A				S	S	04 29 49.5	-1.2
	baz=328						
L61B	**Northampton**	70.66	40	IAMs_20	IAMs_20	04 51 31.0	
	comp=Z,36µm,22.0s						
L61B	**Northampton**	70.66	40	P	P	04 20 36.8	-1.1
	baz=332,SNR=27						
L61B				S	S	04 29 45.2	-5.5
	baz=332						
L61B	**Northampton**	70.66	40	P	P	04 20 36.8	-1.1
	baz=332,SNR=27						
CLTN	**Cedars of Leba**	70.66	53	IAmb	IAmb	04 20 46.1	
	comp=Z,422nm,0.8s						
TESR	**Tescani**	70.67	330	⇓P	P	04 20 37.6	-0.3
NAX	**Nakhchivan**	70.72	313	P	P	04 20 37.0	-1.4
UNH	**University of**	70.73	39	P	P	04 20 37.8	-0.4
	baz=332,SNR=72						
UNH				S	S	04 29 50.7	-0.7
	baz=332						
JAVC	**Velka Javorina**	70.73	336	⇑*i*P	P	04 20 40.0	+1.7
JAVC				*e*S	S	04 29 52.3	+0.8
JAVC				*e*PKPPKP	P'P'df	04 48 32.0	-11
V48A	**Smith Brothers**	70.74	54	IAmb	IAmb	04 20 47.2	
	comp=Z,742nm,1.3s						
V48A	**Smith Brothers**	70.74	54	P	P	04 20 38.2	-0.3
	baz=327,SNR=197						
V48A				S	S	04 29 49.5	-2.4
	baz=327						
NPNY	**Mohonk Preserv**	70.74	42	P	P	04 20 37.0	-1.3
	baz=331,SNR=60						
SENK	**Senkaya-Erzuru**	70.76	316	*i* P	P	04 20 39.8	+1.0
ARCR	**ARCALIA**	70.77	331	⇑P	P	04 20 39.3	+0.8
MANZ	**Manzenberg**	70.78	340	*e*P	P	04 20 38.5	0.0
	comp=Z,30nm,1.1s,baz=16,slow=6.1						
MANZ				*e*pP	sP	04 20 46.3	-0.5
TREC	**Trest**	70.78	338	*e*P	P	04 20 39.0	+0.5
TREC				AMS	AMS	04 56 30.0	
	comp=Z,76µm,16.4s						
TREC	**Trest**	70.78	338	*e*P	P	04 20 39.0	+0.5
TREC				MLR	MLR		
	comp=Z,76µm,16.4s						
PLAL	**Pickwick Lake**	70.81	55	IAmb	IAmb	04 20 47.0	
	comp=Z,579nm,0.9s						
PLAL				IAMs_20	IAMs_20	04 52 46.0	
	comp=Z,22µm,18.0s						
VYHS	**Vyhne**	70.81	335	*e*P	P	04 20 39.6	+0.9
VYHS				pmax	pmax		
	comp=Z,463nm,1.6s						
VYHS	**Vyhne**	70.81	335	*e*P	P	04 20 39.6	+0.9
KRUC	**Moravsky**	70.82	337	⇑*i*P	P	04 20 39.4	+0.7
KRUC				*e*S	S	04 29 54.9	+2.6
KRUC				*e*PKPPKP	P'P'df	04 48 31.9	-11
833A	**Chaparral WMA,**	70.84	68	IAmb	IAmb	04 20 48.4	
	comp=Z,483nm,1.0s						
833A	**Chaparral WMA,**	70.84	68	P	P	04 20 40.0	+0.7
	baz=325,SNR=93						
833A				S	S	04 29 51.4	-1.9
	baz=325						
833A	**Chaparral WMA,**	70.84	68	P	P	04 20 39.9	+0.7
	baz=325,SNR=93						
833A				S	S	04 29 56.8	+3.6
	baz=325						
JRMM	**Jerantut**	70.85	247	P	P	04 20 39.0	-0.3
KAPI	**Kappang**	70.87	226	S	S	04 29 54.3	+0.7
	comp=Z,3.8nm,0.3s,baz=1.2,slow=24,SNR=1.6						
KAPI	**Kappang**	70.87	226	P	P	04 20 39.4	0.0
KAPI				IAmb	IAmb	04 20 50.9	
	comp=Z,483nm,1.5s						
KAPI	**Kappang**	70.87	226	P	P	04 20 39.4	0.0
KAPI				pmax	pmax		
	comp=Z,483nm,1.5s						
KAPI				MLR	MLR		
	comp=Z,14µm,20.0s						
GHRR		70.87	329	⇓P	P	04 20 40.2	+1.1
VLDR	**Vladesti**	70.88	328	⇓P	P	04 20 39.0	-0.1
MCH1	**Michaelchurch**	70.88	351	*e*P	P	04 20 38.0	-1.0
MCH1				IAmb	IAmb	04 20 41.3	
	comp=Z,437nm,1.0s						
MCH1	**Michaelchurch**	70.88	351	⇑P	P	04 20 38.8	-0.2
CHOM	**Cayeli-Rize**	70.90	317	*i* P	P	04 20 39.4	0.0
ROTZ	**Rotzenmuhle**	70.98	340	*e*P	P	04 20 40.0	+0.3
	comp=Z,45nm,1.2s,baz=16,slow=6.1						
ROTZ				*e*pP	sP	04 20 47.5	-0.4
HRV	**Adam Dziewonsk**	71.00	39	P	P	04 20 39.5	-0.4
HRV				IAmb	IAmb	04 20 42.3	
	comp=Z,525nm,1.3s						
HRV	**Adam Dziewonsk**	71.00	39	IAMs_20	IAMs_20	04 54 51.4	
	comp=Z,31µm,18.0s						
HRV	**Adam Dziewonsk**	71.00	39	P	P	04 20 39.5	-0.4
HRV				pmax	pmax		
	comp=Z,525nm,1.3s						
HRV				MLR	MLR		
	comp=Z,32µm,18.0s						
HRV	**Adam Dziewonsk**	71.00	39	P	P	04 20 39.4	-0.4
	baz=332						
HRV				S	S	04 29 54.1	-0.7
	baz=332						
HRV	**Adam Dziewonsk**	71.00	39	P	P	04 20 39.6	-0.4
	baz=332,SNR=34						
MONM	**Monmouth**	71.02	351	*e*P	P	04 20 39.6	-0.3
MONM				IAmb	IAmb	04 20 41.8	
	comp=Z,426nm,1.0s						
STRD	**Stroud**	71.02	350	*e*P	P	04 20 39.5	-0.4
STRD				IAmb	IAmb	04 20 42.4	
	comp=Z,2µm,1.7s						
BEBN	**Eben Emael**	71.05	345	*d*P	P	04 20 40.3	+0.3
	comp=Z,103nm,1.1s						
SCTR	**Scanteiesti**	71.06	328	⇓P	P	04 20 40.8	+0.6
RSBS	**Rosebush, Pemb**	71.07	352	*e*P	P	04 20 39.2	-0.9
Y45A	**Yeager Farm, C**	71.07	57	P	P	04 20 41.0	+0.5
	baz=327,SNR=343						
Y45A				S	S	04 29 58.2	+2.5
	baz=327						
IPM	**Ipoh**	71.08	248	IAMs_20	IAMs_20	04 54 39.1	
	comp=Z,39µm,18.0s						
IPM	**Ipoh**	71.08	248	P	P	04 20 40.4	-0.3
IPM	**Ipoh**	71.08	248	P	P	04 20 40.0	-0.7
MESR	**Meseseni**	71.08	332	⇑P	P	04 20 41.4	+1.1
BRNY	**Black Rk. Fore**	71.09	42	P	P	04 20 39.1	-1.3
	baz=331,SNR=40						
AHRW	**Bad Neuenahr-A**	71.10	344	*e*P	P	04 20 40.3	-0.1
	baz=16,slow=6.1						
PSZ	**Piszkesteto**	71.11	335	⇓P	P	04 20 41.4	+0.8
PSZ	**Piszkesteto**	71.11	335	IAMs_20	IAMs_20	04 53 07.9	
	comp=Z,28µm,21.0s						
PSZ	**Piszkesteto**	71.11	335	⇑P	P	04 20 41.5	+0.8
PSZ	**Piszkesteto**	71.11	335	P	P	04 20 41.3	+0.8
TATR	**Tatarca**	71.11	328	⇓P	P	04 20 41.4	+0.9
SMOL	**Smolenice**	71.11	336	*e*P	P	04 20 42.3	+1.8
SMOL				pmax	pmax		
	comp=Z,150nm,1.2s						
PANC	**Panciu**	71.12	329	⇓P	P	04 20 41.4	+0.8
ODNJ	**Ogdensburg**	71.16	42	P	P	04 20 39.4	-1.5
	baz=331,SNR=40						
Q56A	**Snyder Ridge,**	71.16	47	IAmb	IAmb	04 20 49.7	
	comp=Z,690nm,1.6s						
Q56A	**Snyder Ridge,**	71.16	47	P	P	04 20 40.2	-0.8
	baz=329,SNR=46						
Q56A				P	P	04 20 40.2	-0.8
	baz=329,SNR=46						
GIUM	**Giurgiulesti**	71.17	328	⇑P	P	04 20 41.4	+0.5
143A	**Socs Landing,**	71.17	59	P	P	04 20 41.8	+0.7
	baz=326,SNR=122						
143A				S	S	04 29 57.8	+1.0
	baz=326						
OLDB	**Oldbury-Upon-S**	71.17	350	*e*P	P	04 20 39.6	-1.2
MEM	**Membach**	71.19	345	*d*P	P	04 20 40.2	-0.7
	comp=Z,278nm,1.0s						
TNS	**Taunus Mts**	71.19	343	*e*P	P	04 20 40.9	-0.1
	comp=Z,92nm,1.0s,baz=16,slow=6.1						
BTNL	**Ternell**	71.19	344	*d*P	P	04 20 40.8	-0.2
	comp=Z,229nm,1.0s						
WES	**Weston**	71.19	39	IAmb	IAmb	04 20 49.8	
	comp=Z,458nm,1.2s						
WES	**Weston**	71.19	39	P	P	04 20 40.8	-0.3
	baz=332,SNR=41						
SLCR	**Slobozia Conac**	71.20	328	⇓P	P	04 20 41.7	+0.6
735A	**Kenedy**	71.21	66	IAmb	IAmb	04 20 51.6	
	comp=Z,568nm,1.2s						
735A	**Kenedy**	71.21	66	P	P	04 20 41.6	+0.2
	baz=325						
TUDR		71.22	328	⇓P	P	04 20 41.7	+0.5
GRA1	**Grafenberg Arr**	71.23	341	IAmb	IAmb	04 20 50.4	
	comp=Z,1µm,1.6s						
GRA1				IAMs_20	IAMs_20	04 55 54.8	
	comp=Z,36µm,19.0s						
GRF	**Grafenberg Arr**	71.23	341	*e*P	P	04 20 41.7	+0.5
	comp=Z,276nm,1.1s,baz=16,slow=6.1						
GRF				*e*pP	sP	04 20 49.4	-0.1
GRF				*e*L	L	04 55 44.8	
	comp=Z,37µm,20.6s						
GRFO	**Grafenberg**	71.23	341	P	P	04 20 41.3	+0.1
GRFO				IAmb	IAmb	04 20 50.4	
	comp=Z,866nm,1.5s						
GRFO				IAMs_20	IAMs_20	04 55 44.8	
	comp=Z,37µm,20.0s						
GRFO	**Grafenberg**	71.23	341	P	P	04 20 41.3	+0.1
GRFO				pmax	pmax		
	comp=Z,866nm,1.5s						
GRFO				MLR	MLR		
	comp=Z,37µm,20.0s						
TGMR	**Targu Mures**	71.24	331	⇑P	P	04 20 42.3	+1.0
IZVR	**Izvoarele**	71.24	328	⇓P	P	04 20 41.7	+0.4
TRNY	**Table Rock, Ra**	71.24	42	IAmb	IAmb	04 20 49.2	
	comp=Z,542nm,1.5s						
VRI	**Vrincioaia**	71.24	329	⇑P	P	04 20 41.4	0.0
VRI	**Vrincioaia**	71.24	329	*i* P	P	04 20 41.8	+0.4
VRI	**Vrincioaia**	71.24	329	P	P	04 20 41.3	0.0
P57A	**Homestead Farm**	71.25	45	P	P	04 20 40.4	-1.0
	baz=330,SNR=56						
P57A				P	P	04 20 40.4	-1.0
	baz=330,SNR=56						
P57A				S	S	04 29 55.5	-2.2
	baz=330						
P57A				S	S	04 29 55.5	-2.2
	baz=330						
SWN1	**Swindon**	71.25	350	*e*P	P	04 20 41.0	-0.3
SWN1				IAmb	IAmb	04 20 43.5	
	comp=Z,1µm,1.1s						
TLCR		71.26	327	⇑P	P	04 20 42.3	+0.8
TLCR		71.26	327	P	P	04 20 42.2	+0.8
SCHL	**Schela**	71.26	328	⇑P	P	04 20 41.1	-0.3
CBBR	**Cluj-Babes-Bol**	71.27	332	⇑P	P	04 20 41.6	0.0
MODS	**Modra-Piesok**	71.28	336	*e*P	P	04 20 43.1	+1.6
MODS				pmax	pmax		
	comp=Z,553nm,1.1s						
MODS	**Modra-Piesok**	71.28	336	*e*P	P	04 20 43.1	+1.6
BSTI	**Sart Tilman**	71.28	345	*d*P	P	04 20 41.0	-0.4
	comp=Z,53nm,1.4s						
PLOR	**Plostina**	71.28	329	⇓P	P	04 20 41.7	0.0
PLOR				⇑P	pP	04 20 42.0	-5.7
PLOR	**Plostina**	71.28	329	P	P	04 20 41.6	0.0
BCX	**Boston College**	71.29	39	IAmb	IAmb	04 20 49.5	
	comp=Z,332nm,1.1s						
BCX				IAMs_20	IAMs_20	04 54 51.7	
	comp=Z,40µm,20.0s						
LUPA	**Lehigh Univers**	71.29	43	IAmb	IAmb	04 20 48.9	
	comp=Z,386nm,1.0s						
OZUR		71.30	330	⇑P	P	04 20 42.6	+0.9
ELSH	**Elham, Standar**	71.30	348	*e*P	P	04 20 41.0	-0.5
HKT	**Hockley**	71.30	64	P	P	04 20 42.1	+0.3
HKT	**Hockley**	71.30	64	P	P	04 20 42.1	+0.3
HKT				pmax	pmax		
	comp=Z,1µm,1.9s						
HKT				MLR	MLR		
	comp=Z,59µm,19.0s						
HKT	**Hockley**	71.30	64	P	P	04 20 42.3	+0.5
	baz=326						
CJR	**Cluj-Napoca**	71.31	332	⇑P	P	04 20 42.3	+0.4
CJR	**Cluj-Napoca**	71.31	332	P	P	04 20 42.2	+0.4
KHC	**Kasperske Hory**	71.32	339	IAmb	IAmb	04 20 51.2	
	comp=Z,799nm,1.6s						
KHC	**Kasperske Hory**	71.32	339	*e*P	P	04 20 42.4	+0.5
KHC				*e*pP	pP	04 20 48.6	+0.7
KHC				*e*S	S	04 29 59.0	+0.7
KHC				AMS	AMS	04 56 20.0	
	comp=Z,66µm,16.3s						
KHC	**Kasperske Hory**	71.32	339	⇑P	P	04 20 42.3	+0.5
KHC	**Kasperske Hory**	71.32	339	*e*P	P	04 20 42.4	+0.5
KHC				*e*		04 20 48.6	
KHC				*e*S	S	04 29 59.0	+0.7
KHC				MLR	MLR		
	comp=Z,66µm,16.3s						
S54A	**Dingess, Beckl**	71.36	49	IAmb	IAmb	04 20 50.0	
	comp=Z,394nm,0.9s						
S54A	**Dingess, Beckl**	71.36	49	P	P	04 20 41.6	-0.7
	baz=329,SNR=26						
S54A				P	P	04 20 41.6	-0.7
	baz=329,SNR=26						
KTUT	**Trabzon**	71.36	318	⇑P	P	04 20 42.0	-0.1
KTUT	**Trabzon**	71.36	318	*i* P	P	04 20 42.0	-0.1
AGRB	**Hanur-Agry**	71.37	315	*i* P	P	04 20 43.6	+1.2
UCCT	**U. Connecticut**	71.40	40	IAmb	IAmb	04 20 43.3	
	comp=Z,414nm,1.2s						
COVR	**Voineasa-Covas**	71.41	330	⇑P	P	04 20 42.9	+0.5
VAL	**Valentia**	71.42	355	⇑P	P	04 20 42.2	0.0
BORR	**Bors**	71.42	333	⇑P	P	04 20 43.5	+1.1
R55A	**Marlinton**	71.44	48	IAmb	IAmb	04 20 51.4	
	comp=Z,557nm,1.1s						
R55A	**Marlinton**	71.44	48	P	P	04 20 42.1	-0.6
	baz=329,SNR=116						
R55A				P	P	04 20 42.1	-0.6
	baz=329,SNR=116						
R55A				S	S	04 29 59.9	-0.1
	baz=329						
R55A				S	S	04 29 59.9	-0.1
	baz=329						
BHOU	**Houvegnez**	71.44	345	*d*P	P	04 20 40.9	-1.6
	comp=Z,107nm,1.8s						
BHOU				*d*x	x	04 20 50.4	
KOPR	**Koprukoy-ERZUR**	71.44	316	*i* P	P	04 20 44.2	+1.3
CFR	**Carcaliu**	71.47	328	⇓P	P	04 20 42.6	-0.1
CFR	**Carcaliu**	71.47	328	P	P	04 20 42.5	-0.1
DRGR		71.47	332	⇑P	P	04 20 43.2	+0.4
DRGR		71.47	332	*i* P	P	04 20 43.2	+0.4
DRGR		71.47	332	P	P	04 20 43.1	+0.4
MARR	**Marisel-Cluj**	71.47	332	⇓P	P	04 20 42.9	0.0
BCLA	**Clavier**	71.47	345	*d*P	P	04 20 42.5	-0.1
	comp=Z,90nm,1.3s						
CKRC	**Cesky Krumlov**	71.48	339	*e*P	P	04 20 43.0	+0.3
CKRC				*e*S	S	04 30 00.2	+0.1
CKRC				AMS	AMS	04 57 00.0	
	comp=Z,71µm,16.6s						
CKRC	**Cesky Krumlov**	71.48	339	*e*P	P	04 20 43.0	+0.3
CKRC				*e*S	S	04 30 00.2	+0.1
CKRC				MLR	MLR		
	comp=Z,71µm,16.6s						
PAL	**Palisades**	71.48	42	IAmb	IAmb	04 20 50.6	
	comp=Z,669nm,1.2s						
PAL				IAMs_20	IAMs_20	04 57 34.9	
	comp=Z,21µm,18.0s						
PAL	**Palisades**	71.48	42	P	P	04 20 41.6	-1.2
	baz=331,SNR=61						
PAL				S	S	04 29 55.7	-4.5
	baz=331						
PAL	**Palisades**	71.48	42	P	P	04 20 41.7	-1.2
	baz=331,SNR=61						
PAL				S	S	04 29 57.4	-2.8
	baz=331						
ZST	**Bratislava**	71.48	337	*e*P	P	04 20 44.7	+2.0
ZST				pmax	pmax		
	comp=Z,752nm,1.2s						
ZST	**Bratislava**	71.48	337	*e*P	P	04 20 44.7	+2.0
TZTN	**Tazewell**	71.49	51	IAmb	IAmb	04 20 54.0	
	comp=Z,545nm,1.1s						
TZTN				IAMs_20	IAMs_20	04 54 08.6	
	comp=Z,40µm,18.0s						
TZTN	**Tazewell**	71.49	51	P	P	04 20 42.9	-0.1
	baz=328,SNR=59						
TZTN				S	S	04 29 56.0	-4.5
	baz=328						
TZTN	**Tazewell**	71.49	51	P	P	04 20 42.7	-0.2
	baz=328,SNR=59						
BRNJ	**Basking Ridge**	71.52	42	P	P	04 20 41.9	-1.2
	baz=331,SNR=20						
DOPR	**Dopca**	71.52	330	⇓P	P	04 20 43.8	+0.7
SNF	**Seneffe**	71.53	346	*d*P	P	04 20 42.6	-0.3
	comp=Z,86nm,1.0s						
BRYW	**Bryant College**	71.53	40	IAMs_20	IAMs_20	04 55 07.0	
	comp=Z,32µm,19.0s						
BISRR	**Bisoca**	71.54	329	⇑P	P	04 20 44.1	+0.8
BGES	**Gesves**	71.54	345	*d*P	P	04 20 43.0	0.0
	comp=Z,91nm,1.3s						
WSPT	**Westport, CT**	71.55	41	IAMs_20	IAMs_20	04 54 43.6	
	comp=Z,35µm,18.0s						
YLE	**Yale**	71.56	41	IAMs_20	IAMs_20	04 54 46.0	
	comp=Z,38µm,18.0s						
SWET	**Sewanee**	71.57	54	IAmb	IAmb	04 20 51.1	
	comp=Z,520nm,0.9s						
GEC2	**GERESS Array S**	71.57	339	IAmb	IAmb	04 20 52.3	
	comp=Z,724nm,1.6s						
GEC2	**GERESS Array S**	71.57	339	*e*P	P	04 20 43.6	+0.2
	comp=Z,160nm,1.1s,baz=16,slow=6.1						
GEC2				*e*pP	pP	04 20 50.5	+1.1
GERES	**GERESS Array B**	71.57	339	P	P	04 20 43.6	+0.2
	comp=Z,57nm,1.0s,baz=32,slow=4.6,SNR=98						
GERES				S	S	04 30 01.0	-0.4
	comp=Z,0.2nm,0.3s,baz=57,slow=3.6,SNR=1.7						
GERES				LR	LR	04 56 46.8	
	comp=Z,64µm,18.2s,baz=18,slow=40						
	comp=Z,57nm,1.0s						
SRO	**Srobarova**	71.58	336	*e*P	P	04 20 45.9	+2.6
SRO				pmax	pmax		
	comp=Z,183nm,1.0s						
SRO	**Srobarova**	71.58	336	*e*P	P	04 20 45.9	+2.6
GBN	**Guysborough**	71.58	31	IAmb	IAmb	04 20 51.8	
	comp=Z,552nm,1.1s						
BSZH	**Besenyszg**	71.60	334	⇑P	P	04 20 44.7	+1.2
FOR	**Fordham**	71.61	42	P	P	04 20 42.5	-1.1
	baz=331,SNR=29						
GRER		71.62	329	⇑P	P	04 20 44.9	+1.2
CPNY	**Central Park**	71.65	42	IAmb	IAmb	04 20 45.5	
	comp=Z,445nm,1.1s						
BMRD	**Maredsous**	71.67	345	*d*P	P	04 20 43.5	-0.3
	comp=Z,114nm,1.2s						
TPGR	**Topolog**	71.68	328	⇓P	P	04 20 44.1	+0.1
N62A	**Caumsett State**	71.71	42	IAmb	IAmb	04 20 45.5	
	comp=Z,431nm,1.4s						
N62A	**Caumsett State**	71.71	42	P	P	04 20 43.0	-1.2
	baz=331,SNR=8.9						
N62A				P	P	04 20 43.0	-1.2
	baz=331,SNR=8.9						
X48A	**Hartselle**	71.72	55	IAmb	IAmb	04 20 52.9	
	comp=Z,980nm,1.4s						
X48A	**Hartselle**	71.72	55	P	P	04 20 43.7	-0.7
	baz=327,SNR=193						

X48A				S	S	04 30 02.1	-1.1
	baz=327						
PANJ	Princeton	71.74	43	P	P	04 20 43.1	-1.2
	baz=331,SNR=34						
PANJ				S	S	04 29 59.1	-4.1
	baz=331						
TUPA	Temple Univers	71.74	43	P	P	04 20 42.9	-1.5
	baz=331,SNR=48						
BAYT	Aydıntepe-Bayb	71.74	317	*i* P	P	04 20 45.3	+0.6
RCHB	Rochefort	71.74	345	*d*P	P	04 20 43.8	-0.4
	comp=Z,81nm,1.3s						
L64A	Middleborough	71.76	39	IAmb	IAmb	04 20 46.8	
	comp=Z,647nm,1.4s						
L64A	Middleborough	71.76	39	P	P	04 20 43.8	-0.6
	baz=332,SNR=41						
L64A				P	P	04 20 43.8	-0.6
	baz=332,SNR=41						
SDMD	Soldier's Deli	71.77	45	P	P	04 20 43.3	-1.3
	baz=330,SNR=95						
V51A	Loudon	71.77	52	IAmb	IAmb	04 20 53.3	
	comp=Z,815nm,1.2s						
V51A	Loudon	71.77	52	P	P	04 20 44.2	-0.5
	baz=328,SNR=188						
V51A				S	S	04 30 02.5	-1.3
	baz=328						
M63A	Gales Ferry	71.80	40	IAmb	IAmb	04 20 46.5	
	comp=Z,534nm,1.2s						
M63A	Gales Ferry	71.80	40	P	P	04 20 43.8	-1.0
	baz=332,SNR=30						
M63A				P	P	04 20 43.8	-1.0
	baz=332,SNR=30						
M63A				S	S	04 30 00.4	-3.6
	baz=332						
M63A				S	S	04 30 00.4	-3.6
	baz=332						
MLR	Muntele Rosu	71.81	330	⇓P	P	04 20 46.1	+1.2
MLR	Muntele Rosu	71.81	330	P	P	04 20 45.2	+0.3
	comp=Z,204nm,1.1s,baz=3.7,slow=5.9,SNR=103						
MLR				S	S	04 30 07.3	+3.1
	comp=Z,1.2nm,0.4s,baz=358,slow=16,SNR=1.4						
MLR				LR	LR	04 55 51.0	
	comp=Z,82µm,19.4s,baz=22,slow=39						
	comp=Z,204nm,1.1s						
MLR	Muntele Rosu	71.81	330	*i* P	P	04 20 45.4	+0.5
342B	Flagon Creek P	71.83	60	P	P	04 20 45.9	+0.8
	baz=326,SNR=82						
W50A	Signal Mountai	71.86	53	IAmb	IAmb	04 20 53.1	
	comp=Z,382nm,0.9s						
W50A	Signal Mountai	71.86	53	P	P	04 20 44.7	-0.6
	baz=328,SNR=147						
W50A				S	S	04 30 01.1	-3.8
	baz=328						
GEDE	Greenville	71.88	44	P	P	04 20 43.8	-1.5
	baz=331,SNR=19						
DOU	Dourbes	71.89	345	*d*P	P	04 20 44.5	-0.6
	comp=Z,81nm,1.2s						
MLAZ	Malazgirt-MUS	71.91	315	*i* P	P	04 20 47.1	+1.4
441A	DeRidder	71.93	61	P	P	04 20 46.9	+1.2
	baz=326,SNR=33						
KOPT	Kop Dagi	71.94	317	IAmb	IAmb	04 21 01.9	
	comp=Z,424nm,1.0s						
MYKOM	Kota Tinggi	71.97	244	IAMs_20	IAMs_20	04 58 40.9	
	comp=Z,29µm,18.0s						
MYKOM	Kota Tinggi	71.97	244	P	P	04 20 51.0	+5.0
HARR	Harsova	71.97	328	⇓P	P	04 20 45.8	+0.1
HARR	Harsova	71.97	328	P	P	04 20 45.8	+0.1
ISR	Istrita	71.98	329	⇑P	P	04 20 46.1	+0.3
ISR	Istrita	71.98	329	P	P	04 20 46.1	+0.3
VBMS	Vicksburg	71.99	59	P	P	04 20 46.8	+0.8
	baz=327,SNR=41						
VBMS				S	S	04 30 02.2	-4.1
	baz=327						
VBMS	Vicksburg	71.99	59	P	P	04 20 46.8	+0.8
	baz=327,SNR=41						
CPCT	Cooper Cave	71.99	52	IAmb	IAmb	04 20 54.6	
	comp=Z,520nm,1.2s						
HTL	Hartland	72.00	352	*e*P	P	04 20 45.6	-0.1
CONA	Conrad Observa	72.00	337	*e*pP	P	04 20 46.9	+0.9
	comp=Z,299nm,1.1s,SNR=156						
TIRR	Tirgusor	72.04	327	⇓P	P	04 20 46.2	+0.1
TIRR	Tirgusor	72.04	327	*i* P	P	04 20 46.3	+0.1
TIRR	Tirgusor	72.04	327	⇑P	P	04 20 46.2	+0.1
TIRR	Tirgusor	72.04	327	P	P	04 20 46.2	+0.1
PGOR	Pogoanele	72.05	329	⇓P	P	04 20 45.6	-0.5
VANB	Van	72.06	314	*i* P	P	04 20 47.9	+1.4
V52A	Sevierville	72.06	51	IAmb	IAmb	04 20 48.9	
	comp=Z,652nm,1.4s						
V52A	Sevierville	72.06	51	P	P	04 20 46.1	-0.3
	baz=328,SNR=171						
V52A				S	S	04 30 03.7	-3.5
	baz=328						
TLBR	Topalu	72.07	328	⇑P	P	04 20 47.3	+1.0
WLF	Walferdange	72.09	344	IAmb	IAmb	04 20 55.2	
	comp=Z,556nm,1.6s						
WLF	Walferdange	72.09	344	⇑P	P	04 20 46.3	-0.1
WLF	Walferdange	72.09	344	*d*P	P	04 20 45.3	-1.1
	comp=Z,82nm,1.2s						
WLF	Walferdange	72.09	344	*e*P	P	04 20 46.5	+0.2
	comp=Z,243nm,1.6s,baz=16,slow=6.1						
WLF				*e*pP	sP	04 20 54.0	-0.6
VOIR		72.10	330	⇓P	P	04 20 47.0	+0.4
VOIR		72.10	330	P	P	04 20 47.0	+0.4
RONA	Rosalia, Austr	72.13	337	*i* pP	P	04 20 47.8	+1.1
	comp=Z,265nm,1.1s,SNR=65						
TKL	Tuckaleechee C	72.14	52	LR	LR	04 54 33.6	
	comp=Z,28µm,18.2s,baz=332,slow=38						
TKL	Tuckaleechee C	72.14	52	IAmb	IAmb	04 20 55.5	
	comp=Z,468nm,1.2s						
TKL	Tuckaleechee C	72.14	52	P	P	04 20 46.3	-0.6
	baz=328,SNR=99						
TKL				S	S	04 30 03.2	-4.8
	baz=328						
M65A	Busby, Falmout	72.16	39	P	P	04 20 46.0	-0.9
	baz=332						
M65A				S	S	04 30 04.4	-3.6
	baz=332						
SECR		72.19	329	⇑P	P	04 20 47.0	0.0
AMRR	Amara	72.22	328	⇑P	P	04 20 47.3	+0.1
AMRR	Amara	72.22	328	P	P	04 20 47.3	+0.1
SIRR	Siria	72.22	333	⇑P	P	04 20 47.9	+0.7
BLA	Blacksburg	72.23	48	IAmb	IAmb	04 20 55.2	
	comp=Z,477nm,1.0s						
BLA	Blacksburg	72.23	48	⇑P	P	04 20 46.6	-0.9
BLA	Blacksburg	72.23	48	P	P	04 20 46.9	-0.6
	baz=329,SNR=94						
BLA				S	S	04 30 06.8	-2.4
	baz=329						
BLA	Blacksburg	72.23	48	P	P	04 20 46.9	-0.6
	baz=329,SNR=94						
BLA				S	S	04 30 11.5	+2.3
	baz=329						
U54A	Nelsons Funny	72.24	50	P	P	04 20 47.2	-0.3
U54A	Nelsons Funny	72.24	50	P	P	04 20 47.3	-0.3
	baz=329,SNR=84						
U54A				P	P	04 20 47.3	-0.3
	baz=329,SNR=84						
KVTX	Kingsville	72.24	67	P	P	04 20 48.2	+0.6
KVTX	Kingsville	72.24	67	P	P	04 20 49.4	+1.9
	baz=326,SNR=7.0						
DEV	Deva	72.26	332	⇓P	P	04 20 47.6	+0.2
DEV	Deva	72.26	332	P	P	04 20 47.6	+0.2
ARR	Arges	72.28	330	⇑P	P	04 20 48.9	+1.2
FPAL	Fort Paine	72.28	54	IAmb	IAmb	04 20 55.7	
	comp=Z,573nm,0.9s						
MTUR	Matau	72.29	330	⇓P	P	04 20 48.7	+0.9
MTUR	Matau	72.29	330	P	P	04 20 48.7	+0.9
MFTR	Murfatlar	72.30	327	⇑P	P	04 20 48.5	+0.9
Z47A	Carrollton	72.30	56	P	P	04 20 47.6	-0.2
	baz=327,SNR=267						
146A	Union	72.32	57	P	P	04 20 48.8	+0.8
	baz=327,SNR=419						
146A				S	S	04 30 13.2	+3.1
	baz=327						
P61A	Hammonton	72.32	43	IAmb	IAmb	04 20 56.4	
	comp=Z,1µm,1.7s						
VRTB	Varto-Mus	72.32	316	*i* P	P	04 20 49.1	+1.0
EFOR	EFORIE	72.32	327	⇑P	P	04 20 48.8	+1.0
S57A	Dark Hollow, R	72.36	47	IAmb	IAmb	04 20 56.9	
	comp=Z,837nm,1.3s						
S57A	Dark Hollow, R	72.36	47	P	P	04 20 47.7	-0.4
	baz=330,SNR=159						
S57A				P	P	04 20 47.7	-0.4
	baz=330,SNR=159						
AMBH	Ambrzfalva	72.38	333	⇑P	P	04 20 49.1	+1.0
DIKM	Dikmen	72.38	321	⇑P	P	04 20 49.1	+0.9
DIKM	Dikmen	72.38	321	*i* P	P	04 20 49.3	+1.1
H06N1	SOCORRO T-PHAS	72.40	82	P	P	04 20 49.6	+0.9
COEN	Coen	72.41	200	IAmb	IAmb	04 21 04.0	
	comp=Z,540nm,1.1s						
COEN	Coen	72.41	200	P	P	04 20 49.6	+1.1
MOA	Molln	72.41	338	*e*pP	P	04 20 48.7	+0.4
	comp=Z,162nm,1.2s,SNR=67						
GEVA	Gevas	72.43	314	P	P	04 20 49.4	+0.5
LOT	Lotru	72.44	331	⇓P	P	04 20 49.1	+0.4
LOT	Lotru	72.44	331	*i* P	P	04 20 48.0	-0.7
HYB	Hyderabad	72.44	275	*e*P	P	04 20 47.8	-1.2
HYB	Hyderabad	72.44	275	⇑*e*P	P	04 20 47.8	-1.2
HYB				IVmB_BB		04 20 54.6	
	comp=Z,4µm,5.4s						
HYB				*e*PP	PP	04 23 33.8	+4.0
HYB				*e*S	S	04 30 07.7	-4.2
HYB				IVMs_BB	IVMs_BB	04 55 15.5	
	comp=Z,25µm,15.7s						
AKDM	Akdamar-Van	72.45	314	*i* P	P	04 20 49.7	+0.8
SULR		72.47	329	⇑P	P	04 20 48.2	-0.4
STU	Stuttgart	72.47	342	P	P	04 20 48.7	0.0
STU				IAMs_20	IAMs_20	04 55 19.6	
	comp=Z,34µm,20.0s						
STU	Stuttgart	72.47	342	P	P	04 20 48.7	0.0
STU				pmax	pmax		
	comp=Z,590nm,1.8s						
STU				MLR	MLR		
	comp=Z,34µm,20.0s						
STU	Stuttgart	72.47	342	*e*P	P	04 20 48.2	-0.5
	comp=Z,478nm,1.5s,baz=16,slow=6.1						
STU				*e*pP	sP	04 20 56.0	-0.9
LEHL	Lehliu	72.49	329	⇓P	P	04 20 49.4	+0.6
H06E1	SOCORRO T-PHAS	72.50	82	P	P	04 20 50.2	+0.9
Y49A	Blount Mountai	72.50	55	IAmb	IAmb	04 20 57.0	
	comp=Z,571nm,1.0s						
Y49A	Blount Mountai	72.50	55	P	P	04 20 48.6	-0.5
	baz=328,SNR=240						
Y49A				S	S	04 30 10.4	-1.9
	baz=328						
H06S1	SOCORRO T	72.52	83	P	P	04 20 51.2	+1.9
	SNR=31						
344A	Westbrook Farm	72.52	59	P	P	04 20 50.3	+1.0
	baz=327,SNR=131						
BZK	Bozkurt	72.53	322	*i* P	P	04 20 45.9	-3.1
BZK	Bozkurt	72.53	322	⇑P	P	04 20 46.0	-3.1
ICOR	Ion Corvin	72.53	328	⇓P	P	04 20 49.7	+0.6
V53A	Saluda	72.54	51	IAmb	IAmb	04 20 58.4	
	comp=Z,1µm,1.8s						
V53A	Saluda	72.54	51	P	P	04 20 48.9	-0.5
	baz=329,SNR=115						
V53A				P	P	04 20 48.9	-0.5
	baz=329,SNR=115						
LHMI	Lhok Sumawe	72.55	252	IAMs_20	IAMs_20	04 57 31.8	
	comp=Z,38µm,20.0s						
W52A	Murphy	72.55	52	P	P	04 20 49.2	-0.2
W52A				IAmb	IAmb	04 20 58.2	
	comp=Z,878nm,1.3s						
W52A	Murphy	72.55	52	P	P	04 20 48.9	-0.5
	baz=328,SNR=171						
W52A				S	S	04 30 12.0	-0.8
	baz=328						
MANR	Mangalia	72.57	327	⇑P	P	04 20 49.4	+0.1
SURR	Surduc	72.58	332	⇑P	P	04 20 49.1	-0.3
X51A	Calhoun	72.59	53	IAmb	IAmb	04 20 58.3	
	comp=Z,964nm,1.4s						
X51A	Calhoun	72.59	53	P	P	04 20 49.2	-0.4
	baz=328,SNR=109						
X51A				P	P	04 20 49.2	-0.4
	baz=328,SNR=109						
X51A				S	S	04 30 10.9	-2.3
	baz=328						
X51A				S	S	04 30 10.9	-2.3
	baz=328						
CBN	Corbin Frederi	72.60	46	IAmb	IAmb	04 20 58.2	
	comp=Z,487nm,1.1s						
CBN	Corbin Frederi	72.60	46	⇑P	P	04 20 48.9	-0.7
CBN	Corbin Frederi	72.60	46	P	P	04 20 48.8	-0.7
	baz=330,SNR=34						
CBN				S	S	04 30 09.3	-3.8
	baz=330						
CBN	Corbin Frederi	72.60	46	P	P	04 20 48.9	-0.7
	baz=330,SNR=34						
R58B	Mineral	72.61	46	IAmb	IAmb	04 20 58.4	
	comp=Z,2µm,1.9s						
R58B	Mineral	72.61	46	P	P	04 20 49.0	-0.6
	baz=330,SNR=80						
R58B				P	P	04 20 49.0	-0.6
	baz=330,SNR=80						
R58B				S	S	04 30 10.4	-3.0
	baz=330						
R58B				S	S	04 30 10.4	-3.0
	baz=330						
KVT	Kavak	72.61	321	*i* P	P	04 20 50.8	+1.1
GURO	Guroymak-BITLI	72.63	315	*i* P	P	04 20 50.9	+0.9
GURO	Guroymak-BITLI	72.63	315	P	P	04 20 50.9	+0.9
RASA	Rasa	72.64	328	⇓P	P	04 20 50.6	+0.9
FUR	Furstenfeldbru	72.69	340	*e*P	P	04 20 50.0	+0.1
	comp=Z,389nm,1.6s,baz=16,slow=6.1						
FUR				*e*pP	sP	04 20 57.7	-0.6
BIOA	Bad Ischl, Aus	72.69	339	*e*pP	P	04 20 50.4	+0.4
	comp=Z,115nm,1.6s,SNR=40						
ARSA	Arzberg	72.72	337	*e*pP	P	04 20 50.9	+0.7
	comp=Z,179nm,1.5s,SNR=64						
ARSA	Arzberg	72.72	337	⇑P	P	04 20 51.1	+0.8
BNGB	Bingl	72.76	316	*i* P	P	04 20 51.7	+1.0
RSDY	Resadiye-TOKAT	72.77	319	*i* P	P	04 20 51.4	+0.8
RJOB	Jochberg	72.81	339	*e*P	P	04 20 51.3	+0.5
	comp=Z,144nm,0.9s,baz=16,slow=6.1						
PSN	Preselentsi	72.82	327	P	P	04 20 51.7	+0.9
BZS	Buzias	72.84	333	⇓P	P	04 20 50.6	-0.3
BZS	Buzias	72.84	333	*i* P	P	04 20 51.1	+0.2
BZS	Buzias	72.84	333	P	P	04 20 50.6	-0.3
T57A	Hurt	72.89	48	P	P	04 20 50.5	-0.8
	baz=330,SNR=68						
T57A				P	P	04 20 50.5	-0.8
	baz=330,SNR=68						
T57A				S	S	04 30 13.0	-3.6
	baz=330						
T57A				S	S	04 30 13.0	-3.6
	baz=330						
LRAL	Lakeview Retre	72.93	56	IAmb	IAmb	04 20 59.2	
	comp=Z,425nm,0.8s						
LRAL	Lakeview Retre	72.93	56	⇑P	P	04 20 50.5	-1.1
LRAL	Lakeview Retre	72.93	56	P	P	04 20 50.8	-0.9
	baz=328,SNR=204						
LRAL				S	S	04 30 14.5	-2.6
	baz=328						
LRAL	Lakeview Retre	72.93	56	P	P	04 20 50.9	-0.7
	baz=328,SNR=204						
LRAL				S	S	04 30 15.6	-1.5
	baz=328						
HUMR	Humele	72.96	330	⇑P	P	04 20 50.9	-0.7
U56A	King	72.99	49	IAmb	IAmb	04 21 00.8	
	comp=Z,1µm,1.5s						
U56A	King	72.99	49	P	P	04 20 51.5	-0.5
	baz=329,SNR=73						
U56A				P	P	04 20 51.5	-0.5
	baz=329,SNR=73						
U56A				S	S	04 30 16.3	-1.4
	baz=329						
U56A				S	S	04 30 16.3	-1.4
	baz=329						
KALB	Balgarevo	73.00	327	⇑P	P	04 20 51.8	-0.1
MORH	Mrgy, Hungar	73.00	335	⇑P	P	04 20 51.5	-0.3
BFO	Black Forest	73.04	342	P	P	04 20 52.1	0.0
BFO				IAMs_20	IAMs_20	04 55 59.3	
	comp=Z,29µm,20.0s						
BFO	Black Forest	73.04	342	P	P	04 20 52.1	0.0
BFO				pmax	pmax		
	comp=Z,336nm,1.3s						
BFO				MLR	MLR		
	comp=Z,29µm,20.0s						
V55A	Taylorsville	73.06	50	P	P	04 20 51.9	-0.5
	baz=329,SNR=71						
V55A				P	P	04 20 51.9	-0.5
	baz=329,SNR=71						
V55A				S	S	04 30 16.9	-1.7
	baz=329						
V55A				S	S	04 30 16.9	-1.7
	baz=329						
BG3	Lake Jocassee	73.07	51	IAmb	IAmb	04 21 01.4	
	comp=Z,996nm,1.3s						
CASEE	Lake Jocassee	73.07	51	P	P	04 20 52.1	-0.3
	baz=329,SNR=188						
TOKT	Tokat	73.11	320	*i* P	P	04 20 53.7	+1.0
CUKT	Cukurca	73.13	313	*i* P	P	04 20 53.4	+0.4
TOKA	Tokat	73.13	320	IAmb	IAmb	04 21 02.5	
	comp=Z,602nm,1.5s						
346A	Big Creek Wild	73.17	58	P	P	04 20 54.0	+0.9
	baz=327,SNR=70						
BANR	Banloc	73.18	333	⇑P	P	04 20 53.3	+0.4
MMRI	Maumere	73.24	222	IAmb	IAmb	04 21 09.4	
	comp=Z,916nm,1.2s						
COPA	Copaceanca	73.26	329	⇑P	P	04 20 53.0	-0.4
R61A	Willards	73.28	44	IAmb	IAmb	04 21 04.6	
	comp=Z,827nm,1.1s						
R61A	Willards	73.28	44	P	P	04 20 53.3	-0.3
	baz=331						
R61A				P	P	04 20 53.3	-0.3
	baz=331						
SVAN	Silvan-Diyarba	73.30	315	*i* P	P	04 20 54.8	+1.0
SVSK	Karacayir	73.31	319	*i* P	P	04 20 54.9	+1.2
SRE	Strehaia	73.32	331	⇑P	P	04 20 54.2	+0.4
SRE	Strehaia	73.32	331	P	P	04 20 54.1	+0.4
HERR	Herculane	73.32	332	⇓P	P	04 20 53.3	-0.5
KOGS	Kog	73.33	337	⇑*i*P	P	04 20 54.0	+0.2
KOGS				*e*PP	PP	04 23 37.0	+0.6
KOGS				*e*S	S	04 30 21.9	+0.7
KOGS				IAMs_20	IAMs_20	04 58 46.7	
	comp=Z,33µm,13.3s						
KBA	Koelnbreinsper	73.33	339	*i* pP	P	04 20 55.0	+0.9
	comp=Z,334nm,1.5s,SNR=164						
KBA	Koelnbreinsper	73.33	339	⇑P	P	04 20 54.9	+0.9
ECH	Echery	73.34	343	IAMs_20	IAMs_20	04 55 49.7	
	comp=Z,28µm,20.0s						
ECH	Echery	73.34	343	⇑P	P	04 20 53.4	-0.5
UBR	Ueberruh	73.36	341	*e*P	P	04 20 54.3	+0.2
	comp=Z,182nm,1.1s,baz=16,slow=6.1						
UBR				*e*pP	sP	04 21 01.5	-0.8
SOKA	Soboth	73.37	337	*e*pP	P	04 20 54.5	+0.3
	comp=Z,166nm,1.1s,SNR=94						
RAZG	Razgrad	73.41	328	⇓P	P	04 20 54.2	-0.2
WATA	Walderalm	73.43	340	*e*pP	P	04 20 54.9	+0.4
	comp=Z,234nm,1.2s,SNR=71						
RETA	Reutte	73.43	341	*i* pP	P	04 20 54.6	+0.1
	comp=Z,105nm,1.1s,SNR=42						
WTTA	Wattenberg	73.49	340	*e*pP	P	04 20 55.5	+0.5
	comp=Z,274nm,1.2s,SNR=84						
PRD	Provadia	73.49	328	P	P	04 20 55.7	+1.0
MOTA	Moosalm	73.51	340	*i* pP	P	04 20 55.1	+0.1
	comp=Z,176nm,1.5s,SNR=80						
Z51A	Franklin	73.51	54	IAmb	IAmb	04 21 03.5	
	comp=Z,986nm,1.3s						
Z51A	Franklin	73.51	54	P	P	04 20 54.3	-0.8
	baz=328,SNR=124						
Y52A	Lilburn	73.53	53	IAmb	IAmb	04 21 03.4	
	comp=Z,491nm,1.0s						
Y52A	Lilburn	73.53	53	P	P	04 20 54.9	-0.3
	baz=328,SNR=127						
Y52A				P	P	04 20 54.9	-0.3
	baz=328,SNR=127						
SOEI	Soe	73.54	220	IAmb	IAmb	04 21 28.7	
	comp=Z,790nm,1.2s						
ARPR	Arapgir-MALATY	73.55	318	*i* P	P	04 20 56.4	+1.0
JSA	Saint Aubin	73.58	350	⇑P	P	04 20 54.8	-0.4
MDVR	Moldovita	73.60	332	⇑P	P	04 20 55.1	-0.4
T59A	Double "B" Far	73.60	46	IAmb	IAmb	04 21 04.3	
	comp=Z,954nm,1.8s						
T59A	Double "B" Far	73.60	46	P	P	04 20 55.0	-0.5
	baz=330,SNR=54						
T59A				P	P	04 20 55.0	-0.5
	baz=330,SNR=54						
T59A				S	SKiKP	04 30 22.9	-1.3
	baz=330						
T59A				S	SKiKP	04 30 22.9	-1.3
	baz=330						
VLAD	Vladila	73.61	330	⇓P	P	04 20 55.1	-0.4
SQTA	Sankt Quirin	73.61	340	*i* pP	P	04 20 55.9	+0.3
	comp=Z,291nm,1.1s,SNR=104						
KMSC	Kings Mountain	73.62	50	P	P	04 20 55.0	-0.6
	baz=329,SNR=134						
KMSC				S	SKiKP	04 30 21.0	-3.2
	baz=329						
KMSC	Kings Mountain	73.62	50	P	P	04 20 55.1	-0.6
	baz=329,SNR=134						
AFI	Afiamalu	73.62	154	LR	LR	04 49 56.4	
	comp=Z,17µm,19.4s,baz=347,slow=33						
AFI	Afiamalu	73.62	154	P	P	04 20 55.9	+0.1
AFI	Afiamalu	73.62	154	P	P	04 20 55.9	+0.1
AFI				pmax	pmax		
	comp=Z,241nm,0.9s						
OBKA	Obir	73.63	338	*i* pP	P	04 20 56.4	+0.7
	comp=Z,460nm,0.9s,SNR=231						
OBKA	Obir	73.63	338	⇑*i*P	P	04 20 56.0	+0.3
RPSI	Rantau Prapat	73.67	249	IAMs_20	IAMs_20	04 57 28.9	
	comp=Z,36µm,18.0s						
PAULI	Pauline	73.69	51	IAmb	IAmb	04 21 04.6	
	comp=Z,1µm,2.0s						
PAULI	Pauline	73.69	51	P	P	04 20 55.5	-0.6
	baz=329,SNR=72						
KDU	Kakadu	73.70	211	P	P	04 20 56.7	+0.5
KDU	Kakadu	73.70	211	⇑P	P	04 20 56.7	+0.5
MYKA	Terra Mystica	73.70	338	*e*pP	P	04 20 56.4	+0.3
	comp=Z,196nm,1.5s,SNR=55						
FRGS	Fruska Gora	73.72	334	⇑P	P	04 20 56.9	+0.7
FRGS	Fruska Gora	73.72	334	⇑*i*P	P	04 20 56.3	+0.2
S61A	Accomac	73.72	45	P	P	04 20 55.7	-0.5
	baz=331						
S61A				P	P	04 20 55.7	-0.5
	baz=331						
ZAIG	Zacatecas	73.73	73	IAmb	IAmb	04 21 07.4	
	comp=Z,774nm,1.2s						
ZAIG	Zacatecas	73.73	73	⇑P	P	04 20 57.9	+1.0
PUNG	Punghina	73.75	331	⇑P	P	04 20 56.0	-0.2
T60A	Surry	73.78	46	P	P	04 20 56.1	-0.5
	baz=331,SNR=75						
T60A				P	P	04 20 56.1	-0.5
	baz=331,SNR=75						
DAVA	Damuels	73.79	341	*e*pP	P	04 20 56.7	0.0
	comp=Z,71nm,1.3s,SNR=35						
DAVA	Damuels	73.79	341	⇑P	P	04 20 56.7	0.0
ABTA	Abfaltersbach	73.81	339	*e*pP	P	04 20 57.1	+0.3
	comp=Z,292nm,1.1s,SNR=117						
SZH	Strazhica	73.85	329	P	P	04 20 56.8	-0.1
CANT	Cankiri	73.87	322	*i* P	P	04 20 58.6	+1.4
DYBB	Diyarbakir	73.87	316	*i* P	P	04 20 58.1	+0.9
FETA	Feichten	73.89	340	*i* pP	P	04 20 57.6	+0.3
	comp=Z,208nm,1.1s,SNR=88						
PRED	Cave del Predi	73.90	338	IAmb	IAmb	04 21 07.0	
	comp=Z,805nm,1.7s						
CORM	Corum	73.91	321	*i* P	P	04 20 58.9	+1.4
KDZE	Karadeniz Ereo	73.95	324	⇑P	P	04 20 58.1	+0.5
KDZE	Karadeniz Ereo	73.95	324	*i* P	P	04 20 57.5	-0.1
PTCC	Patocco-Chiusa	73.98	338	⇑P	P	04 20 57.4	-0.3
V58A	Windy Hill, Pi	73.98	48	P	P	04 20 57.6	-0.2
	baz=330,SNR=146						
V58A				P	P	04 20 57.6	-0.2
	baz=330,SNR=146						
V58A				S	S	04 30 27.1	-1.9
	baz=330						
V58A				S	S	04 30 27.1	-1.9
	baz=330						
HODGE	Hodges	74.00	51	IAmb	IAmb	04 21 06.0	
	comp=Z,426nm,0.9s						
HODGE	Hodges	74.00	51	P	P	04 20 57.3	-0.6
	baz=329,SNR=200						
U59A	Littleton	74.04	47	P	P	04 20 57.8	-0.3
	baz=330,SNR=82						
U59A				P	P	04 20 57.8	-0.3
	baz=330,SNR=82						
U59A				S	S	04 30 28.5	-1.0
	baz=330						
U59A				S	S	04 30 28.5	-1.0
	baz=330						
PVL	Pavlikeni	74.07	329	P	P	04 20 58.9	+0.7
LJU	Ljubljana	74.08	338	⇑*i*P	P	04 20 58.3	+0.1
LJU				*e*PP	PP	04 23 44.7	+1.8
LJU				*e*		04 25 32.6	
LJU				*e*S	S	04 30 27.7	-2.0
LJU				*e*		04 35 33.3	
LJU				*e*		04 39 13.8	
LJU				IAMs_20	IAMs_20	04 58 47.0	
	comp=Z,25µm,13.5s						
CRES	Cresnjev	74.09	337	⇑*i*P	P	04 20 58.6	+0.3
POO	Poona	74.10	279	*e*P	P	04 20 57.6	-1.1
250A	Grady	74.15	56	P	P	04 20 58.5	-0.4
	baz=328,SNR=95						
YOZ	Yozgat	74.15	320	*i* P	P	04 20 59.5	+0.6
W57A	Gilead	74.17	49	IAmb	IAmb	04 21 06.8	
	comp=Z,395nm,0.8s						
W57A	Gilead	74.17	49	P	P	04 20 58.4	-0.5
	baz=330,SNR=92						
W57A				P	P	04 20 58.4	-0.5

	baz=330,SNR=92						
CLF	Chambon-Foret	74.23	347	IAmb	IAmb	04 21 08.9	
	comp=Z,912nm,1.4s						
CLF				IAMs_20	IAMs_20	04 57 54.1	
	comp=Z,27µm,20.0s						
CLF	Chambon-Foret	74.23	347	⇑P	P	04 20 58.0	-1.0
MTN	Manton Dam	74.23	212	IAmb	IAmb	04 21 01.3	
	comp=Z,483nm,0.8s						
MTN	Manton Dam	74.23	212	P	P	04 20 59.6	+0.3
MTN	Manton Dam	74.23	212	⇑P	P	04 20 59.6	+0.3
CIMO	Cimolais	74.25	339	IAmb	IAmb	04 21 17.6	
	comp=Z,118nm,1.1s						
152A	Waverly Hall	74.26	54	IAmb	IAmb	04 21 10.0	
	comp=Z,476nm,1.1s						
152A	Waverly Hall	74.26	54	P	P	04 20 58.8	-0.7
	baz=328,SNR=164						
DAVOX	Davos/Dischmat	74.28	341	P	P	04 20 59.7	+0.1
	comp=Z,70nm,0.8s,baz=4.6,slow=5.7,SNR=76						
DAVOX				S	S	04 30 30.9	-1.5
	comp=Z,0.5nm,0.3s,baz=29,slow=22,SNR=1.1						
DAVOX				LR	LR	04 57 18.2	
	comp=Z,50µm,19.8s,baz=24,slow=39						
	comp=Z,70nm,0.8s						
A052A	Srbac	74.32	335	⇑*i*P	P	04 20 59.4	-0.2
DARE	Darende-Malaty	74.32	318	*i* P	P	04 21 00.9	+1.0
SABO	M.te Sabotino	74.33	338	IAmb	IAmb	04 21 09.2	
	comp=Z,1µm,2.0s						
TEKS	Tekeris	74.36	334	⇑*i*P	P	04 20 59.9	0.0
FUORN	Ofenpass-Fuorn	74.36	341	IAmb	IAmb	04 21 09.7	
	comp=Z,749nm,1.9s						
FUORN				IAMs_20	IAMs_20	04 55 19.7	
	comp=Z,31µm,21.0s						
MPEP	Malo Peshtene	74.39	330	P	P	04 20 59.9	-0.1
JSC	Jenkinsville	74.39	51	P	P	04 20 59.5	-0.7
	baz=329,SNR=92						
CEY	Cerknica	74.39	338	⇑*i*P	P	04 20 59.8	-0.3
BIRD	Birdtown, Kers	74.41	50	IAmb	IAmb	04 21 08.3	
	comp=Z,360nm,0.9s						
BIRD	Birdtown, Kers	74.41	50	P	P	04 20 59.9	-0.4
	baz=330,SNR=69						
BOJS	Bojanci	74.44	337	⇑*i*P	P	04 21 00.4	+0.1
BOJS	Bojanci	74.44	337	⇑*i*P	P	04 21 00.3	0.0
BRAL	Brewton	74.47	57	⇑P	P	04 21 01.6	+0.8
BRAL	Brewton	74.47	57	P	P	04 21 01.3	+0.6
	baz=328,SNR=23						
BRAL				S	S	04 30 36.8	+2.3
	baz=328						
BRAL	Brewton	74.47	57	P	P	04 21 01.5	+0.8
	baz=328						
DOB	Doboj	74.53	335	*e*P	P	04 20 58.9	-1.9
A051A	Mrakovica	74.54	336	⇑*i*P	P	04 21 00.8	-0.2
PRIJ	Prijedor	74.62	336	*e*P	P	04 21 11.0	+10
BKNI	Bangkinang	74.63	246	IAmb	IAmb	04 21 03.7	
	comp=Z,390nm,1.0s						
BKNI				IAMs_20	IAMs_20	04 59 00.3	
	comp=Z,32µm,18.0s						
BRTR	Keskin Array B	74.65	322	P	P	04 21 02.2	+0.4
	comp=Z,54nm,0.9s,baz=42,slow=2.1,SNR=109						
BRTR				PP	PP	04 23 50.8	+2.8
	comp=Z,17nm,1.0s,baz=37,slow=4.9,SNR=3.9						
BRTR				LR	LR	04 56 00.4	
	comp=Z,27µm,20.6s,baz=40,slow=38						
	comp=Z,54nm,0.9s						
SKDS	Skadanscina	74.66	338	⇑*i*P	P	04 21 01.1	-0.5
BNN	Bunyan	74.66	320	*i* P	P	04 21 02.4	+0.5
BOVS	Bovan	74.67	332	⇑P	P	04 21 01.0	-0.6
TUE	Stuetta	74.67	341	IAmb	IAmb	04 21 11.0	
	comp=Z,1µm,1.8s						
DIVS	Divibare	74.67	333	⇑P	P	04 21 01.6	-0.2
DIVS	Divibare	74.67	333	⇑*i*P	P	04 21 01.7	-0.1
SILT	Sile	74.67	325	*i* P	P	04 21 02.2	+0.5
BLY	Banja Luka	74.73	335	⇑P	P	04 21 01.9	-0.1
BLY	Banja Luka	74.73	335	⇑*i*P	P	04 21 01.8	-0.1
KLYT	Kilyos	74.77	326	*i* P	P	04 21 02.4	+0.1
MDUB	Mudurnu	74.80	324	*i* P	P	04 21 03.2	+0.6
MDUB	Mudurnu	74.80	324	⇑P	P	04 21 03.1	+0.5
CTYL	Yalikoy Yolu	74.80	326	*i* P	P	04 21 02.6	+0.2
ANTO	Ankara	74.81	322	⇑P	P	04 21 03.7	+1.1
ANTO	Ankara	74.81	322	*i* P	P	04 21 03.5	+0.8
ANTO	Ankara	74.81	322	P	P	04 21 03.5	+0.8
ANTO				IAmb	IAmb	04 21 12.2	
	comp=Z,773nm,1.4s						
ANTO	Ankara	74.81	322	IAMs_20	IAMs_20	04 57 30.6	
	comp=Z,40µm,21.0s						
ANTO	Ankara	74.81	322	⇑P	P	04 21 03.4	+0.8
ANTO	Ankara	74.81	322	P	P	04 21 03.5	+0.8
ANTO				pmax	pmax		
	comp=Z,773nm,1.4s						
ANTO				MLR	MLR		
	comp=Z,40µm,21.0s						
URFA	Urfa	74.82	317	*i* P	P	04 21 03.8	+1.0
SAUV	Serdivan-Sakar	74.83	324	*i* P	P	04 21 03.1	+0.5
BR231	Keskin MP Arra	74.84	322	IAmb	IAmb	04 21 12.4	
	comp=Z,697nm,1.4s						
SARI	SarD1z-Kayseri	74.85	319	*i* P	P	04 21 03.9	+0.8
BGKT	Bogazkoy	74.92	326	*i* P	P	04 21 03.4	+0.3
EDRB	Edirne	74.92	327	*i* P	P	04 21 03.5	+0.3
HAPS	Han Pijesak,Bl	74.94	334	⇑*i*P	P	04 21 03.8	+0.4
ISK	Istanbul-Kandi	74.94	326	*i* P	P	04 21 03.3	+0.1
KAVV	Kandilli-Istan	74.94	326	*i* P	P	04 21 03.2	0.0
KAMT	Kaman	74.95	321	*i* P	P	04 21 03.9	+0.4
CTKS	Kestanelik-??a	74.95	326	*i* P	P	04 21 03.6	+0.3
X58A	Rowland	74.96	49	P	P	04 21 03.3	-0.1
	baz=330,SNR=96						
X58A				P	P	04 21 03.3	-0.1
	baz=330,SNR=96						
X58A				S	S	04 30 38.4	-1.4
	baz=330						
X58A				S	S	04 30 38.4	-1.4
	baz=330						
CNNC	Cliffs of the	74.96	48	IAMs_20	IAMs_20	04 55 08.4	
	comp=Z,19µm,18.0s						
CNNC	Cliffs of the	74.96	48	⇑P	P	04 21 03.3	-0.2
CNNC	Cliffs of the	74.96	48	P	P	04 21 03.0	-0.4
	baz=330,SNR=59						
CNNC				S	S	04 30 37.3	-2.6
	baz=330						
CNNC	Cliffs of the	74.96	48	P	P	04 21 03.5	0.0
	baz=330,SNR=59						
CNNC				S	S	04 30 39.2	-0.7
	baz=330						
HRT	Hereke	74.97	325	*i* P	P	04 21 03.9	+0.4
Y57A	Sumter	74.98	50	IAmb	IAmb	04 21 11.4	
	comp=Z,304nm,0.8s						
Y57A	Sumter	74.98	50	P	P	04 21 03.0	-0.6
	baz=330,SNR=31						
Y57A				P	P	04 21 03.0	-0.6
	baz=330,SNR=31						
V61A	Roper	75.01	46	P	P	04 21 03.6	-0.1
	baz=331,SNR=42						
V61A				P	P	04 21 03.6	-0.1
	baz=331,SNR=42						
PGB	Panagyurishte	75.01	330	P	P	04 21 04.5	+0.7
154A	Montrose	75.02	53	P	P	04 21 03.6	-0.2
	baz=329,SNR=131						
BBLS	Lazići	75.03	333	⇑*i*P	P	04 21 04.3	+0.4
SLVT	Silivri	75.05	326	*i* P	P	04 21 04.6	+0.7
GULT	Gulveren	75.05	324	*i* P	P	04 21 04.6	+0.6
MGRS	Mrkonjic Grad	75.06	335	⇑*i*P	P	04 21 05.8	+1.8
MDRS	Chennai	75.07	271	*e*P	P	04 21 04.8	+0.4
MDRS				IAmb	IAmb	04 21 29.7	
	comp=Z,233nm,1.4s						
DIM	Dimitrovgrad	75.09	328	P	P	04 21 05.0	+0.9
AFSR	Afar-Bala (An	75.10	322	*i* P	P	04 21 04.9	+0.6
PLAI	Plampang	75.12	226	P	P	04 21 03.0	-1.5
A050A	Klekovaca	75.13	336	⇑*i*P	P	04 21 04.6	+0.2
352A	Blakely	75.17	55	IAmb	IAmb	04 21 12.9	
	comp=Z,575nm,0.9s						
352A	Blakely	75.17	55	P	P	04 21 04.5	-0.3
	baz=328,SNR=49						
VTS	Vitosha	75.21	330	⇑P	P	04 21 19.6	+15
VTS	Vitosha	75.21	330	P	P	04 21 05.2	+0.2
PLD	Plovdiv	75.28	329	*i* P	P	04 21 05.6	+0.4
PLD	Plovdiv	75.28	329	P	P	04 21 05.5	+0.4
SALO	Salr	75.28	340	IAmb	IAmb	04 21 13.6	
	comp=Z,1µm,1.9s						
SALO	Salr	75.28	340	⇑P	P	04 21 04.8	-0.4
CRLT	Corlu	75.28	326	*i* P	P	04 21 06.1	+0.8
YLV	Yalova	75.29	325	*i* P	P	04 21 05.7	+0.3
ADVT	Abdulvahap	75.30	325	*i* P	P	04 21 05.5	+0.2
YAYX	Yaylak	75.30	321	*i* P	P	04 21 05.5	0.0
TEOL	Teolo	75.31	339	IAmb	IAmb	04 21 14.2	
	comp=Z,656nm,0.9s						
SERE	Sereflikochisa	75.38	321	*i* P	P	04 21 06.5	+0.5
SRKY	Kupres RS	75.38	335	⇑*i*P	P	04 21 06.6	+0.7
Y58A	Scranton	75.38	50	P	P	04 21 05.7	-0.2
	baz=330,SNR=53						
Y58A				P	P	04 21 05.7	-0.2
	baz=330,SNR=53						
Y58A				S	S	04 30 43.1	-1.5
	baz=330						
Y58A				S	S	04 30 43.1	-1.5
	baz=330						
MSVF	Nonsavu	75.40	165	S	S	04 30 44.3	-0.7
	comp=Z,2.8nm,0.8s,baz=297,slow=22,SNR=1.6						
MSVF				LR	LR	04 50 07.1	
	comp=Z,12µm,19.3s,baz=347,slow=32						
MSVF	Nonsavu	75.40	165	P	P	04 21 08.2	+2.1
MSVF	Nonsavu	75.40	165	P	P	04 21 08.1	+2.0
MSVF	Nonsavu	75.40	165	⇑P	P	04 21 08.4	+2.3
MSVF	Nonsavu	75.40	165	P	P	04 21 08.2	+2.1
MSVF				pmax	pmax		
	comp=Z,336nm,1.4s						
ARMT	Armutlu	75.45	325	*i* P	P	04 21 06.1	-0.2
SJES	Sjenica	75.46	333	⇑*i*P	P	04 21 06.9	+0.5
GEMT	Gemlik	75.47	325	*i* P	P	04 21 06.6	+0.3
CAVI	Cavuskoy	75.47	325	*i* P	P	04 21 06.9	+0.5
KMRS	Kahramanmaras	75.48	318	*i* P	P	04 21 07.2	+0.7
KULU	Kulu	75.48	322	*i* P	P	04 21 07.5	+0.9
KDZ	Kurdzhali	75.49	328	*i* P	P	04 21 07.3	+0.8
KDZ	Kurdzhali	75.49	328	P	P	04 21 07.3	+0.8
451A	Vernon	75.53	56	P	P	04 21 07.5	+0.7
	baz=328,SNR=73						
PLE	Pljevlja	75.54	333	⇑*i*P	P	04 21 07.2	+0.4
SVRH	Sivrihisar-ESK	75.61	323	*i* P	P	04 21 07.4	+0.1
UKOP	Uzunkopru-Edir	75.62	327	*i* P	P	04 21 07.9	+0.8
RZN	Rozhen	75.66	329	P	P	04 21 08.0	+0.4
GAZ	Gaziantep	75.66	318	*i* P	P	04 21 08.6	+1.0
GAZ	Gaziantep	75.66	318	IAmb	IAmb	04 21 17.2	
	comp=Z,632nm,1.2s						
GAZ	Gaziantep	75.66	318	⇑P	P	04 21 08.6	+1.0
GULA	Gulagac	75.68	321	*i* P	P	04 21 08.3	+0.6
UPM	Unac-Piva	75.78	334	⇑*i*P	P	04 21 09.0	+0.7
UPM	Unac-Piva	75.78	334	⇑*i*P	P	04 21 07.8	-0.5
TIGA	Tifton	75.81	54	P	P	04 21 08.1	-0.3
	baz=329,SNR=134						
TIGA				S	S	04 30 47.8	-1.5
	baz=329						
TIGA	Tifton	75.81	54	P	P	04 21 08.5	+0.1
	baz=329,SNR=134						
CIFT	Cifteler, Eski	75.84	323	*i* P	P	04 21 08.7	+0.1
IVA	Berane	75.84	333	⇑*i*P	P	04 21 08.7	+0.1
NHSC	New Hope	75.86	50	⇑P	P	04 21 08.6	-0.1
NHSC	New Hope	75.86	50	P	P	04 21 08.6	-0.1
	baz=330,SNR=90						
NHSC				S	S	04 30 46.8	-3.1
	baz=330						
NHSC	New Hope	75.86	50	P	P	04 21 08.7	0.0
	baz=330,SNR=90						
RKY	Sarkoy-Tekirda	75.86	327	*i* P	P	04 21 09.1	+0.5
255A	Hazlehurst	75.88	53	P	P	04 21 08.9	+0.1
	baz=329,SNR=171						
KCTX	Karacabey (Bur	75.88	326	*i* P	P	04 21 09.1	+0.4
KOZT	Kozan	75.89	319	*i* P	P	04 21 09.3	+0.5
Y60A	Bolivia	75.90	48	P	P	04 21 08.6	-0.3
	baz=330,SNR=21						
Y60A				P	P	04 21 08.6	-0.3
	baz=330,SNR=21						
RDO	Rodhopi	75.92	328	P	P	04 21 09.4	+0.5
RDO	Rodhopi	75.92	328	*i* P	P	04 21 09.5	+0.5
RDO	Rodhopi	75.92	328	IAmb	IAmb	04 21 19.1	
	comp=Z,1µm,1.5s						
RDO	Rodhopi	75.92	328	⇑P	P	04 21 09.4	+0.5
CHBY	Cihanbeyli	75.93	322	*i* P	P	04 21 09.4	+0.2
KKB	Krupnik	75.95	330	P	P	04 21 09.8	+0.7
KOME	Kolasin	75.96	333	⇑*i*P	P	04 21 08.7	-0.5
ALN	Alexandroupoli	76.00	328	*i* P	P	04 21 09.6	+0.3
ALN	Alexandroupoli	76.00	328	IAmb	IAmb	04 21 18.4	
	comp=Z,811nm,1.3s						
ALN	Alexandroupoli	76.00	328	⇑P	P	04 21 09.4	0.0
CSU	Charleston Sou	76.00	50	P	P	04 21 09.1	-0.4
KIZT	Kizilcal	76.01	323	*i* P	P	04 21 09.8	+0.2
MMB	Musomiste	76.03	330	P	P	04 21 10.3	+0.7
SULT	Sultanhani-AKS	76.06	321	*i* P	P	04 21 10.3	+0.4
ERIK	Erikli-Kesan	76.07	327	*i* P	P	04 21 10.2	+0.5
PVY	Plav	76.09	333	⇑*i*P	P	04 21 09.3	-0.7
ENEZ	Enez	76.12	327	*i* P	P	04 21 10.3	+0.3
PRMA	PARMA	76.14	340	P	P	04 21 10.7	+0.6
BRY	Bratogost	76.15	334	⇑*i*P	P	04 21 09.8	-0.6
BRY	Bratogost	76.15	334	⇑*i*P	P	04 21 09.8	-0.6
NKME	Niksic	76.18	333	⇑*i*P	P	04 21 09.9	-0.5
NVR	Nevrokopi	76.21	329	P	P	04 21 12.1	+1.5
MONC	Moncucco Torin	76.27	342	⇑P	P	04 21 10.9	+0.1
LPK	Lapseki	76.27	327	*i* P	P	04 21 11.6	+0.7
BCI	Bajram Curri	76.28	332	*i* P	P	04 21 12.3	+1.3
TVSB	Tavsanli	76.28	325	*i* P	P	04 21 11.4	+0.3
MTSU	Mount Surprise	76.28	198	P	P	04 21 12.3	+1.2
SKO	Skopje	76.29	331	⇑*i*P	P	04 21 11.4	+0.4
GELI	Tayfur-Gelibol	76.33	327	*i* P	P	04 21 11.6	+0.4
CEYT	Ceyhan	76.34	319	*i* P	P	04 21 12.4	+1.1
STIP	Stip	76.35	331	⇑*i*P	P	04 21 10.5	-0.8
KAVA	Kavala	76.35	329	P	P	04 21 11.7	+0.3
YESY	Yesilyurt	76.36	321	*i* P	P	04 21 12.0	+0.4
KARA	Karaisali	76.36	319	*i* P	P	04 21 12.3	+0.8
TREB	Trebinje	76.37	334	*e*P	P	04 21 09.9	-1.6
STON	Ston	76.38	334	⇑*i*P	P	04 21 09.5	-2.0
CEME	Cevo	76.39	333	⇑*i*P	P	04 21 11.3	-0.4
PDG	Podgorica	76.42	333	⇑P	P	04 21 11.1	-0.5
PDG	Podgorica	76.42	333	P	P	04 21 11.8	+0.1
PDG	Podgorica	76.42	333	⇑P	P	04 21 11.4	-0.2
PDG	Podgorica	76.42	333	⇑*i*P	P	04 21 11.5	-0.2
LADK	Ladik-KONYA	76.46	322	*i* P	P	04 21 12.3	+0.1
257A	Skidaway Islan	76.47	52	P	P	04 21 12.2	+0.1
	baz=330						
553A	Crawfordville	76.49	55	P	P	04 21 12.8	+0.5
	baz=329,SNR=70						
BNI	Bardonecchia	76.50	343	IAMs_20	IAMs_20	04 56 27.2	
	comp=Z,38µm,21.0s						
BNI	Bardonecchia	76.50	343	⇑P	P	04 21 12.7	+0.4
SRS	Serrai	76.50	329	*e*P	P	04 21 12.5	+0.3
SMTH	Samothraki Isl	76.55	328	P	P	04 21 12.2	-0.3
HCY	Herceg Novi	76.59	334	⇑*i*P	P	04 21 11.8	-0.9
HCY	Herceg Novi	76.59	334	⇑*i*P	P	04 21 12.0	-0.7
BALB	Balikesir	76.60	326	*i* P	P	04 21 13.0	+0.2
BALB	Balikesir	76.60	326	IAmb	IAmb	04 21 21.6	
	comp=Z,761nm,1.2s						
SSB	Saint Sauveur	76.61	344	IAMs_20	IAMs_20	04 58 44.0	
	comp=Z,21µm,19.0s						
SSB	Saint Sauveur	76.61	344	⇑P	P	04 21 12.7	-0.2
COMU	Canakkale	76.61	327	*i* P	P	04 21 13.1	+0.2
BUM	Brajici-Budva	76.63	333	⇑*i*P	P	04 21 12.6	-0.4
KNT	Kendrikon	76.65	330	P	P	04 21 12.7	-0.4
KNT	Kendrikon	76.65	330	*i* P	P	04 21 12.9	-0.2
THAS	Thassos island	76.66	328	P	P	04 21 13.2	+0.1
GEDZ	Gediz	76.67	324	*i* P	P	04 21 13.7	+0.4
KOKK	Kokkinochori,	76.67	329	P	P	04 21 13.2	+0.1
DRME	Dracevica, Mon	76.67	333	⇑*i*P	P	04 21 13.1	0.0
DRME	Dracevica, Mon	76.67	333	⇑*i*P	P	04 21 13.3	+0.2
KONT	Konya--Tatoy	76.69	322	*i* P	P	04 21 13.5	+0.1
GADA	Gvkgeada	76.70	327	*i* P	P	04 21 13.2	-0.1
MSSA	Maissana	76.72	341	P	P	04 21 12.9	-0.6
MSSA				IAmb	IAmb	04 21 21.9	
	comp=Z,788nm,1.5s						
SHUT	Suhut-Afyon	76.74	323	*i* P	P	04 21 14.2	+0.4
SIMA	Simav-Kutahya	76.77	325	*i* P	P	04 21 13.8	-0.1
PHP	Peshkopia	76.82	332	P	P	04 21 13.8	-0.3
PHP	Peshkopia	76.82	332	*i* P	P	04 21 13.9	-0.2
SOH	Sokhos	76.84	330	P	P	04 21 14.3	+0.1
ULC	Ulcinj	76.86	333	⇑*i*P	P	04 21 14.2	-0.1
EZN	Ezine	76.91	327	*i* P	P	04 21 14.5	0.0
BOZC	Bozcaada	76.97	327	*i* P	P	04 21 14.7	-0.2
GRG	Griva	76.98	330	P	P	04 21 15.6	+0.6
GRG	Griva	76.98	330	*i* P	P	04 21 15.5	+0.6
MOIG	Morelia	77.00	74	P	P	04 21 16.6	+1.0
MOIG	Morelia	77.00	74	⇑P	P	04 21 16.8	+1.2
MOIG				⇓P	pP	04 21 17.7	-4.0
MOIG				⇓sP	sP	04 21 25.2	+1.3
SHME	Shamm	77.07	298	*i* P	P	04 21 15.0	-0.7
	SNR=172						
BANOM	Banah	77.10	298	*i* P	P	04 21 15.2	-0.7
	SNR=287						
456A	Hilliard	77.11	53	P	P	04 21 16.3	+0.5
	baz=330,SNR=62						
KOUNC	Koumac, New Ca	77.11	179	IAmb	IAmb	04 21 19.7	
	comp=Z,1µm,1.6s						
KOUNC				IAMs_20	IAMs_20	05 02 07.9	
	comp=Z,32µm,19.0s						
KOUNC	Koumac, New Ca	77.11	179	⇑P	P	04 21 17.7	+2.0
OUR	Ouranopolis	77.12	329	P	P	04 21 15.6	-0.1
OUR	Ouranopolis	77.12	329	*i* P	P	04 21 15.5	-0.1
MURB	Monte Urbino	77.16	338	IAmb	IAmb	04 21 20.5	
	comp=Z,688nm,1.0s						
OSSC	Osservatorio P	77.16	339	IAmb	IAmb	04 21 24.7	
	comp=Z,649nm,1.4s						
LIA	Limnos Island	77.18	328	P	P	04 21 15.9	-0.1
LIA	Limnos Island	77.18	328	*e*P	P	04 21 16.4	+0.4
GUMA	Gualdo di Mace	77.18	338	IAmb	IAmb	04 21 30.4	
	comp=Z,2µm,1.6s						
OHR	Ohrid	77.26	331	⇑*i*P	P	04 21 17.0	+0.5
TIR	Tirane	77.28	332	⇑P	P	04 21 16.5	-0.1
TIR	Tirane	77.28	332	P	P	04 21 16.7	+0.1
TIR	Tirane	77.28	332	*e*P	P	04 21 16.2	-0.4
TIR	Tirane	77.28	332	*i* P	P	04 21 16.3	-0.4
TIR	Tirane	77.28	332	⇑P	P	04 21 16.9	+0.3
TIR	Tirane	77.28	332	P	P	04 21 16.5	-0.1
UGM	Wanagama	77.34	233	P	P	04 21 17.1	-0.1
SEYD	Seydisehir-KON	77.35	322	*i* P	P	04 21 17.3	+0.1
KIZK	Mersin	77.39	320	*i* P	P	04 21 17.1	-0.1
KULA	Kula-Manisa	77.39	325	*i* P	P	04 21 17.5	+0.2
ISP	Isparta	77.41	323	*i* P	P	04 21 17.2	-0.3
FNA	Florina	77.42	331	*i* P	P	04 21 16.9	-0.6
DKL	Dikili	77.42	326	*i* P	P	04 21 16.9	-0.5
MANT	Manisa	77.44	325	IAmb	IAmb	04 21 26.4	
	comp=Z,1µm,1.7s						
PRK	Paraskevi	77.45	327	P	P	04 21 17.5	-0.1
HDMB	Hadim	77.53	321	*i* P	P	04 21 18.5	+0.2
SILI	Silifke-Mersin	77.56	320	*i* P	P	04 21 17.9	-0.3
SUTC	Sutluce-Ispart	77.57	323	*i* P	P	04 21 18.3	-0.1
MGAB	Montegabbione	77.58	338	⇑P	P	04 21 18.1	-0.2
SIGR	SIGRI	77.61	327	*i* P	P	04 21 19.9	+1.5
KNRA	Kununurra	77.62	213	P	P	04 21 19.2	+0.7
KNRA				IAmb	IAmb	04 21 20.6	
	comp=Z,428nm,1.0s						
KNRA	Kununurra	77.62	213	P	P	04 21 18.8	+0.2
MDH	Madha	77.62	297	*i* P	P	04 21 17.5	-1.2
	SNR=87						
MSFE	Esma-Masafi	77.64	297	*i* P	P	04 21 18.2	-0.7
	SNR=89						
MNAI	Manna	77.73	242	IAMs_20	IAMs_20	04 55 50.8	
	comp=Z,22µm,21.0s						
UMQ	Umm Al-Quwin	77.74	298	*i* P	P	04 21 19.7	+0.3
	SNR=140						
LIT	Litokhoron	77.75	330	P	P	04 21 19.3	0.0
KZN	Kozani	77.76	330	P	P	04 21 20.1	+0.7
IKL	Isikli	77.76	320	*i* P	P	04 21 18.7	-0.7
CESX	Cesi	77.77	338	IAmb	IAmb	04 21 29.3	
	comp=Z,972nm,1.7s						
RUSF	Rustrel	77.77	343	⇑P	P	04 21 22.9	+3.5
AQU	L'Aquila	77.84	337	P	P	04 21 20.6	+0.8
AQU				IAmb	IAmb	04 21 34.2	
	comp=Z,810nm,1.3s						
AQU	L'Aquila	77.84	337	⇑P	P	04 21 20.7	+0.9
AQU	L'Aquila	77.84	337	P	P	04 21 20.6	+0.8
AQU				pmax	pmax		
	comp=Z,810nm,1.3s						
AQU				MLR	MLR		
	comp=Z,43µm,19.0s						
AKKU	Akkuyu-Mersin	77.88	320	*i* P	P	04 21 19.4	-0.6
CTA	Charters Tower	77.89	196	S	S	04 31 09.8	-2.2
	comp=Z,8.4nm,0.9s,baz=289,slow=10,SNR=2.3						
CTAO	Charters Tower	77.89	196	P	P	04 21 20.0	-0.1
CTAO				IAmb	IAmb	04 21 30.5	
	comp=Z,417nm,1.0s						
CTAO	Charters Tower	77.89	196	P	P	04 21 20.8	+0.8
CTAO	Charters Tower	77.89	196	P	P	04 21 20.0	-0.1
CTAO				pmax	pmax		
	comp=Z,417nm,1.0s						
SGRT	San Giovanni R	77.90	335	P	P	04 21 20.1	0.0
SGRT				IAmb	IAmb	04 21 28.6	
	comp=Z,963nm,1.7s						
CASP	Castiglione de	77.94	339	P	P	04 21 20.1	-0.2
CASP				IAmb	IAmb	04 21 28.8	
	comp=Z,625nm,1.6s						
UOSS	Minazif	77.97	297	P	P	04 21 20.0	-0.7
UOSS				IAmb	IAmb	04 21 35.0	
	comp=Z,540nm,0.8s						
UOSS	Minazif	77.97	297	IAMs_20	IAMs_20	04 59 18.1	
	comp=Z,26µm,20.0s						
UOSS	Minazif	77.97	297	*i* P	P	04 21 19.8	-0.9
	SNR=267						
BLCB	Balcova	78.01	326	*i* P	P	04 21 20.4	-0.3
656A	Willston	78.04	54	P	P	04 21 21.7	+0.7
	baz=330,SNR=110						
TEKE	Tekeli-Mersin	78.05	320	*i* P	P	04 21 20.2	-0.8
INTR	Introdacqua	78.06	337	P	P	04 21 21.2	+0.1
HATD	Hatta, Dubai	78.10	297	*i* P	P	04 21 20.9	-0.6
	SNR=160						
APMY	Acipayam-Deniz	78.13	324	*i* P	P	04 21 21.8	+0.3
URLA	Izmir	78.17	326	*i* P	P	04 21 21.1	-0.5
WSAR	Wadi Sarin	78.19	294	S	S	04 31 11.5	-4.1
	comp=Z,1.9nm,0.7s,baz=140,slow=13,SNR=1.4						
WSAR				LR	LR	05 00 47.8	
	comp=Z,24µm,20.1s,baz=89,slow=40						
NAZ	Nazwa, Dubai	78.19	298	*i* P	P	04 21 21.3	-0.7
	SNR=118						
VLO	Vlora	78.21	332	P	P	04 21 22.0	+0.3
VLO	Vlora	78.21	332	P	P	04 21 22.2	+0.5
VLO	Vlora	78.21	332	*i* P	P	04 21 22.1	+0.5
VLO	Vlora	78.21	332	P	P	04 21 22.2	+0.5
VLO				pmax	pmax		
	comp=Z,2µm,1.8s						
KORT	Korkueli	78.22	323	*i* P	P	04 21 21.4	-0.7
LSK	Leskovik	78.22	331	P	P	04 21 22.4	+0.5
LSK	Leskovik	78.22	331	*i* P	P	04 21 22.1	+0.2
EREN	Erenkoy	78.23	319	*i* P	P	04 21 21.9	0.0
BBJI	Bungbulang	78.23	236	P	P	04 21 21.7	-0.5
XOR	Xorichti	78.24	329	*e*P	P	04 21 21.5	-0.5
GAZI	Gazipasa	78.25	321	*i* P	P	04 21 20.5	-1.6
ASHO	Ashiyiah	78.26	297	*i* P	P	04 21 21.6	-0.7
	SNR=240						
NEO	Neokhori	78.29	329	P	P	04 21 21.7	-0.6
CHOS	Chios island	78.31	327	P	P	04 21 22.1	-0.4
CHOS	Chios island	78.31	327	*i* P	P	04 21 22.5	0.0
UNM	Universidad Na	78.34	73	IAMs_20	IAMs_20	04 58 41.9	
	comp=Z,30µm,20.0s						
BEIL	Beino	78.38	317	*e*P	P	04 21 22.9	0.0
THL	Klokotos Trika	78.39	330	P	P	04 21 21.4	-1.3
FAQ	Al Faqa, Dubai	78.43	298	*i* P	P	04 21 22.4	-0.8
	SNR=88						
MRVN	Minervino Murg	78.45	335	⇑P	P	04 21 23.2	0.0
SOHO	SOHO	78.48	296	*i* P	P	04 21 22.5	-1.1
	SNR=151						
GCAM	G?zelcaml?	78.58	325	*i* P	P	04 21 23.5	-0.3
ELL	Elmali	78.59	323	*i* P	P	04 21 23.9	-0.2
ELL	Elmali	78.59	323	P	P	04 21 24.0	-0.1
ELL	Elmali	78.59	323	⇑P	P	04 21 23.4	-0.7
ELL	Elmali	78.59	323	P	P	04 21 24.0	-0.1
ELL				pmax	pmax		
	comp=Z,2µm,1.5s						
JAN	Janina	78.61	331	P	P	04 21 24.8	+0.7
CAME	Cameli-Denizli	78.61	324	*i* P	P	04 21 23.7	-0.6
SRN	Sarande	78.63	332	P	P	04 21 22.9	-1.2
SRN	Sarande	78.63	332	*i* P	P	04 21 22.7	-1.3
ASUD	Al Ashush, Dub	78.66	298	*i* P	P	04 21 24.1	-0.4
	SNR=119						
DZM	Mont Dzumac	78.68	176	*e*P	P	04 21 24.6	+0.2
	comp=Z,2µm,1.6s						
DZM				*e*S	S	04 31 21.4	+0.9
	comp=Z,9µm,25.6s						
DZM	Mont Dzumac	78.68	176	*e*LR	LR	04 45 53.0	
	comp=Z,22µm,22.6s						
DZM	Mont Dzumac	78.68	176	S	S	04 31 20.5	0.0
	comp=Z,4.3nm,1.0s,baz=315,slow=13,SNR=2.0						
DZM				LR	LR	04 50 25.8	
	comp=Z,11µm,21.7s,baz=5.0,slow=31						
DZM	Mont Dzumac	78.68	176	P	P	04 21 27.1	+2.7
DZM				IAmb	IAmb	04 21 30.4	
	comp=Z,915nm,1.4s						
DZM	Mont Dzumac	78.68	176	⇑P	P	04 21 26.9	+2.4
LFK	Lefkose	78.68	320	*i* P	P	04 21 23.9	-0.6
YATNC	Mamie plateau,	78.68	176	P	P	04 21 26.4	+2.0
SMG	Samos	78.70	326	P	P	04 21 23.7	-0.8
HWQ	Hawqa	78.70	317	*e*P	P	04 21 24.1	-0.6
NOUC	Port Laguerre	78.70	177	P	P	04 21 26.7	+2.2
MATE	Matera	78.72	334	⇑P	P	04 21 24.8	+0.2
MATE	Matera	78.72	334	*e*P	P	04 21 25.0	+0.4
MATE	Matera	78.72	334	⇑P	P	04 21 24.8	+0.2
MALK	Mahakanadarawa	78.76	268	⇑P	P	04 21 24.1	-1.1
YER	Yerkesik	78.77	324	P	P	04 21 25.1	+0.1
YER	Yerkesik	78.77	324	*i* P	P	04 21 25.4	+0.4
MLSB	Milas	78.78	325	*i* P	P	04 21 25.3	+0.3

AGG	Agios Georgios	78.80	330	*i* P	P	04 21 24.0	-1.2
AGG	Agios Georgios	78.80	330	⇑P	P	04 21 23.9	-1.2
KEK	Kerkira	78.84	332	P	P	04 21 26.1	+0.8
KEK	Kerkira	78.84	332	*e*P	P	04 21 26.4	+1.1
KEK	Kerkira	78.84	332	IAmb	IAmb	04 21 34.7	
	comp=Z,1µm,1.9s						
KEK	Kerkira	78.84	332	⇑P	P	04 21 26.0	+0.8
SCTE	Santa Cesarea	78.84	333	P	P	04 21 25.8	+0.5
SCTE				IAmb	IAmb	04 21 33.8	
	comp=Z,318nm,0.8s						
PAOL	Paolisi	78.85	336	IAmb	IAmb	04 21 34.1	
	comp=Z,661nm,1.6s						
MAKR	Makrakomi, Fth	78.87	330	P	P	04 21 24.4	-1.1
IGT	Igoumenitsa	78.87	331	*i* P	P	04 21 25.1	-0.3
AJN	Ajban	78.88	298	*i* P	P	04 21 24.8	-0.9
	SNR=25						
EREA	Eretria	78.91	328	P	P	04 21 25.2	-0.5
ONTNC	Ouen Toro	78.91	176	P	P	04 21 28.0	+2.4
ONTNC				IAmb	IAmb	04 21 29.9	
	comp=Z,1µm,1.7s						
ONTNC	Ouen Toro	78.91	176	⇑P	P	04 21 27.8	+2.2
ATAL	Atalanti	78.92	329	P	P	04 21 24.3	-1.4
ALNE	Al Ain	78.94	297	*i* P	P	04 21 25.5	-0.5
	SNR=38						
ALNE				P	P	04 21 25.7	-0.4
DALY	Dalyan (Mula)	78.94	324	*i* P	P	04 21 25.8	0.0
AXAR	Agios Charalam	78.95	329	P	P	04 21 24.6	-1.3
FETY	Fethiye	78.97	324	*i* P	P	04 21 25.6	-0.5
OUENC	Ouen Island, N	79.04	176	P	P	04 21 28.5	+2.2
OUENC				IAmb	IAmb	04 21 32.3	
	comp=Z,834nm,1.4s						
OUENC	Ouen Island, N	79.04	176	P	P	04 21 28.7	+2.4
CSS	Mathiatis	79.04	320	*i* P	P	04 21 26.2	-0.3
CSS	Mathiatis	79.04	320	⇑P	P	04 21 26.1	-0.4
NIUE	Niue	79.04	154	P	P	04 21 27.1	+0.7
NIUE	Niue	79.04	154	⇑P	P	04 21 35.2	+8.8
EVR	Evrytania	79.05	330	P	P	04 21 27.0	+0.5
LEF	Lefka	79.05	320	*i* P	P	04 21 25.8	-0.7
TURN	Turunc	79.11	324	*i* P	P	04 21 26.7	-0.1
BHL	Bhannes	79.14	318	*e*P	P	04 21 27.1	0.0
BODT	Bodrum	79.14	325	*i* P	P	04 21 26.3	-0.7
AKAS	Kas	79.16	323	*i* P	P	04 21 26.4	-0.9
AKAS	Kas	79.16	323	P	P	04 21 26.3	-0.9
AKAS				IAmb	IAmb	04 21 41.1	
	comp=Z,602nm,1.5s						
PINNC	Pines Island,	79.25	176	IAmb	IAmb	04 21 42.5	
	comp=Z,677nm,1.6s						
PTL	Penteli	79.27	328	P	P	04 21 27.7	0.0
PCHI	Peechi	79.30	273	⇑*e*P	P	04 21 26.9	-1.2
ANX	Ano Chora	79.32	330	P	P	04 21 27.3	-0.7
VILL	Villia	79.33	329	P	P	04 21 26.9	-1.1
DQRL	Deir Qamar	79.35	317	*e*P	P	04 21 28.2	-0.1
DAT	Datca	79.36	325	P	P	04 21 27.0	-1.3
DAT	Datca	79.36	325	*i* P	P	04 21 27.3	-1.0
ATHU	Athens Univers	79.37	328	P	P	04 21 27.4	-0.8
ATH	Athens Observa	79.39	328	P	P	04 21 27.4	-0.9
PVO	Paravola	79.40	330	P	P	04 21 27.5	-0.9
RCY	Rachaya	79.44	317	*e*P	P	04 21 28.5	-0.3
TSLK	Tsoukalades, L	79.45	331	P	P	04 21 28.7	+0.1
SERG	Sergoula	79.45	330	P	P	04 21 27.4	-1.3
QRWL	Qaraoun	79.45	317	*e*P	P	04 21 29.1	+0.3
VLY	Voula,Athens	79.48	328	P	P	04 21 27.4	-1.4
LKD2	Lefkada island	79.48	331	*e*P	P	04 21 28.8	0.0
TRIZ	Trizonia	79.49	330	P	P	04 21 27.8	-1.0
KOSK	Kos Island	79.53	325	P	P	04 21 27.9	-1.1
KOSK	Kos Island	79.53	325	*i* P	P	04 21 28.0	-1.1
QIS	Mount Isa	79.53	202	P	P	04 21 29.0	-0.1
NYDR	Nydri-Lefkada	79.54	331	P	P	04 21 28.6	-0.5
CUC	Castrocucco	79.56	335	P	P	04 21 28.7	-0.6
LOUT	Loutraki	79.59	329	P	P	04 21 27.6	-1.8
PALK	Pallekele	79.60	267	LR	LR	05 00 42.9	
	comp=Z,20µm,21.4s,baz=155,slow=39						
PALK	Pallekele	79.60	267	P	P	04 21 28.9	-0.9
PALK				IAMs_20	IAMs_20	05 00 41.5	
	comp=Z,27µm,21.0s						
PALK	Pallekele	79.60	267	P	P	04 21 28.9	-0.9
PALK				pmax	pmax		
	comp=Z,157nm,1.3s						
PALK				MLR	MLR		
	comp=Z,27µm,21.0s						
NISR	Nisiros	79.61	325	P	P	04 21 28.6	-0.9
DWPF	Disney Wildern	79.61	54	P	P	04 21 29.1	-0.6
DWPF	Disney Wildern	79.61	54	IAMs_20	IAMs_20	05 00 18.1	
	comp=Z,24µm,20.0s						
DWPF	Disney Wildern	79.61	54	⇑P	P	04 21 30.3	+0.7
DWPF	Disney Wildern	79.61	54	P	P	04 21 30.4	+0.7
	baz=330						
DWPF				S	S	04 31 29.5	-1.1
	baz=330						
DWPF	Disney Wildern	79.61	54	P	P	04 21 30.3	+0.7
	baz=330,SNR=26						
EJON	La Jonquera	79.62	345	P	P	04 21 29.7	+0.1
THAL	Thalero	79.63	329	P	P	04 21 28.3	-1.3
LAKA	Lakka	79.63	330	P	P	04 21 28.5	-1.2
EVGI	Lefkada island	79.64	331	P	P	04 21 29.2	-0.4
ARG	Arkhangelos	79.66	324	P	P	04 21 29.3	-0.5
ARG	Arkhangelos	79.66	324	*i* P	P	04 21 29.0	-0.8
ARG	Arkhangelos	79.66	324	P	P	04 21 29.6	-0.2
ARG	Arkhangelos	79.66	324	⇑P	P	04 21 29.0	-0.8
ARG	Arkhangelos	79.66	324	P	P	04 21 29.6	-0.2
ARG				pmax	pmax		
	comp=Z,2µm,1.7s						
FSK	Fiskardo	79.81	331	P	P	04 21 30.0	-0.6
GUR	Goura	79.81	329	P	P	04 21 29.5	-1.2
EPID	Epidavros	79.89	328	P	P	04 21 29.1	-2.0
RLS	Riolos of Patr	79.94	330	P	P	04 21 31.4	+0.1
WB0	Warramunga Arr	79.96	207	P	P	04 21 31.2	-0.2
DRO	Drossia	79.97	330	P	P	04 21 31.5	0.0
MMAI	Mount Meron Ar	80.03	317	P	P	04 21 31.9	-0.1
	comp=Z,162nm,1.1s,baz=42,slow=6.7,SNR=134						
MMAI				S	S	04 31 34.9	-0.2
	comp=Z,0.9nm,0.4s,baz=25,slow=4.8,SNR=1.3						
MMAI				LR	LR	05 03 08.7	
	comp=Z,43µm,18.2s,baz=88,slow=40						
	comp=Z,162nm,1.1s						
KEF4	Livadi, Kephal	80.04	331	P	P	04 21 30.5	-1.3
DMLN	Damoulianata-K	80.07	331	P	P	04 21 31.3	-0.7
VLS	Valsamata	80.07	331	P	P	04 21 30.5	-1.5
KRND	KRANIDI	80.10	328	P	P	04 21 30.4	-1.7
TIP	Timpagrande	80.11	334	⇑P	P	04 21 32.9	+0.6
TIP	Timpagrande	80.11	334	P	P	04 21 32.8	+0.6
TIP				IAmb	IAmb	04 21 41.5	
	comp=Z,1µm,1.6s						
TIP	Timpagrande	80.11	334	⇑P	P	04 21 32.6	+0.4
WRAB	Tennant Creek	80.13	207	P	P	04 21 33.0	+0.7
WRAB				IAmb	IAmb	04 21 42.7	
	comp=Z,568nm,1.4s						
WRAB	Tennant Creek	80.13	207	P	P	04 21 32.5	+0.2
WRAB	Tennant Creek	80.13	207	*ce*P	P	04 21 32.7	+0.4
WRAB				pmax	pmax		
	comp=Z,568nm,1.7s						
TLIG	Tlapa	80.13	73	P	P	04 21 34.3	+1.6
TLIG				IAmb	IAmb	04 21 43.2	
	comp=Z,914nm,1.4s						
TLIG	Tlapa	80.13	73	⇑P	P	04 21 34.5	+1.8
TLIG				⇑P	P	04 21 34.6	+1.8
PSDA	Pessada-Kefalo	80.13	331	P	P	04 21 31.9	-0.4
WB2	Warramunga Arr	80.14	207	P	P	04 21 33.1	+0.7
WB2				IAmb	IAmb	04 21 42.8	
	comp=Z,582nm,1.3s						
WRA	Warramunga Arr	80.14	207	P	P	04 21 32.4	+0.1
	comp=Z,120nm,0.8s,baz=17,slow=5.6,SNR=202						
WRA				PP	PP	04 24 26.5	-8.6
	comp=Z,4.4nm,0.8s,baz=33,slow=6.2,SNR=2.8						
WRA				S	S	04 31 34.8	-1.2
	comp=Z,0.8nm,0.5s,baz=34,slow=16,SNR=0.4						
WRA				PKKPbc	PKKPbc	04 40 14.6	-0.2
	comp=Z,2.8nm,0.8s,baz=214,slow=2.2,SNR=9.4						
WRA				PKPPKP	P'P'df	04 48 22.1	+7.5
	comp=Z,5.4nm,1.1s,baz=185,slow=2.2,SNR=6.5						
WRA				LR	LR	04 56 16.6	
	comp=Z,8µm,21.9s,baz=0.5,slow=35						
	comp=Z,120nm,0.8s						
WRA	Warramunga Arr	80.14	207	P	P	04 21 32.0	-0.4
WRA	Warramunga Arr	80.14	207	P	P	04 21 32.0	-0.4
WRA				pmax	pmax		
	comp=Z,65nm,1.5s						
ASF	Jabal al Asfar	80.22	316	P	P	04 21 32.8	-0.2
	comp=Z,126nm,1.0s,baz=27,slow=1.7,SNR=138						
ASF				LR	LR	05 03 00.4	
	comp=Z,57µm,18.4s,baz=20,slow=40						
	comp=Z,126nm,1.0s						
SANT	Santorini	80.35	326	⇑P	P	04 21 33.7	+0.1
SANT	Santorini	80.35	326	P	P	04 21 30.2	-3.4
SANT	Santorini	80.35	326	*i* P	P	04 21 30.4	-3.2
SANT	Santorini	80.35	326	P	P	04 21 32.1	-1.5
SANT				IAMs_20	IAMs_20	05 00 27.8	
	comp=Z,24µm,20.0s						
MHLO	Agia Marina, M	80.38	327	P	P	04 21 31.4	-2.3
TAOE	Nuku Hiva Isla	80.38	123	*e*P	P	04 21 32.7	-1.3
	comp=Z,604nm,1.3s						
TAOE	Nuku Hiva Isla	80.38	123	*e*PP	PP	04 24 37.2	0.0
	comp=Z,3µm,25.6s						
TAOE				*e*S	S	04 31 33.2	-5.8
	comp=Z,9µm,28.8s						
TAOE	Nuku Hiva Isla	80.38	123	*e*LR	LR	04 46 23.9	
	comp=Z,64µm,32.0s						
LTHK	Lithakia	80.44	330	P	P	04 21 33.2	-0.8
MMLI	Mount Malkishu	80.54	317	*i* P	P	04 21 35.2	+0.5
KARP	Karpathos	80.58	325	P	P	04 21 32.8	-2.0
KARP	Karpathos	80.58	325	*i* P	P	04 21 32.9	-1.9
KARP	Karpathos	80.58	325	P	P	04 21 33.9	-0.9
KARP				IAmb	IAmb	04 21 43.0	
	comp=Z,1µm,1.9s						
KARP	Karpathos	80.58	325	⇑P	P	04 21 32.0	-2.8
HALK	Hakmana	80.59	267	⇑P	P	04 21 34.4	-0.7
RK1H	Rockhampton Ha	80.59	191	P	P	04 21 36.1	+1.4
TRD	Trivandrum	80.63	271	*e*P	P	04 21 35.8	+0.5
ITM	Ithomi	80.64	329	P	P	04 21 33.9	-1.2
ITM	Ithomi	80.64	329	*i* P	P	04 21 33.8	-1.3
ITM	Ithomi	80.64	329	⇑P	P	04 21 34.0	-1.1
ITM				⇓P	PcP	04 21 42.3	+0.4
VLI	Veliai	80.78	328	P	P	04 21 33.3	-2.5
FITZ	Fitzroy Crossi	80.87	216	P	P	04 21 36.9	+0.6
FITZ	Fitzroy Crossi	80.87	216	P	P	04 21 36.3	0.0
FITZ	Fitzroy Crossi	80.87	216	⇑P	P	04 21 36.6	+0.4
MZR	Muzera	80.93	298	*i* P	P	04 21 36.3	-0.6
	SNR=193						
PYL	PYLOS	80.95	329	P	P	04 21 35.3	-1.5
UJAP	Al Uja	80.96	317	*i* P	P	04 21 37.3	+0.5
060A	Indiantown	81.02	54	IAmb	IAmb	04 21 46.6	
	comp=Z,1µm,1.4s						
060A	Indiantown	81.02	54	P	P	04 21 38.1	+0.9
	baz=330						
STIA	Sitia Lasithi	81.24	325	P	P	04 21 36.9	-1.4
PGAV	Gavieira, Arco	81.26	353	⇑*e*P	P	04 21 38.6	+0.2
PGAV				A	A	04 21 49.0	
	comp=Z,531nm,1.5s						
PGAV	Gavieira, Arco	81.26	353	*e*PP	PP	04 24 45.5	+2.4
PGAV				*e*S	S	04 31 49.7	+2.0
PGAV				*e*LQ	LQ	04 40 48.7	
PGAV				A	A	05 00 19.4	
	comp=Z,20µm,18.0s						
ZKR	Zakros	81.28	325	P	P	04 21 37.3	-1.2
ZKR	Zakros	81.28	325	*i* P	P	04 21 37.4	-1.1
PBRG	Braganca	81.31	352	⇑*e*P	P	04 21 38.6	0.0
PBRG				A	A	04 21 49.0	
	comp=Z,438nm,1.8s						
PBRG	Braganca	81.31	352	*e*PP	PP	04 24 49.8	+6.4
PBRG				*e*S	S	04 31 48.2	+0.1
PBRG	Braganca	81.31	352	A	A	05 06 24.5	
	comp=Z,17µm,20.0s						
PCAB	Cabril	81.50	353	⇑*e*P	P	04 21 39.5	-0.1
PCAB				A	A	04 21 49.9	
	comp=Z,440nm,1.6s						
PCAB	Cabril	81.50	353	*e*PP	PP	04 24 48.6	+3.6
FRMA	Ierapetra Chan	81.52	326	P	P	04 21 38.5	-1.3
IDI	Anoyia	81.53	326	P	P	04 21 37.6	-2.3
	comp=Z,44nm,1.0s,baz=11,slow=10,SNR=15						
IDI				PP	PP	04 24 44.1	-1.4
	comp=Z,18nm,0.9s,baz=345,slow=5.8,SNR=2.9						
IDI				S	S	04 31 44.3	-6.4
	comp=Z,3.3nm,0.7s,baz=286,slow=23,SNR=0.9						
IDI				LR	LR	05 01 26.7	
	comp=Z,17µm,19.0s,baz=22,slow=38						
IDI	Anoyia	81.53	326	*i* P	P	04 21 37.6	-2.3
IDI	Anoyia	81.53	326	P	P	04 21 38.0	-1.9
IDI				IAMs_20	IAMs_20	05 01 14.9	
	comp=Z,19µm,19.0s						
IDI	Anoyia	81.53	326	⇑P	P	04 21 37.6	-2.3
PRNS	Prines Rethymn	81.58	327	P	P	04 21 38.2	-1.9
RODP	Rodopos	81.62	327	P	P	04 21 39.1	-1.2
IMMV	Iera Moni Meta	81.64	327	*i* P	P	04 21 38.4	-2.0
TMBK	Timbaki Herakl	81.77	326	P	P	04 21 40.6	-0.5
061Z	Ochoppi	81.78	55	P	P	04 21 42.2	+0.9
061Z	Ochoppi	81.78	55	P	P	04 21 42.4	+1.1
	baz=330,SNR=20						
POLO	Lamas de Olo	81.81	353	⇑*e*P	P	04 21 41.5	+0.1
POLO				A	A	04 21 51.1	
	comp=Z,200nm,1.4s						
POLO	Lamas de Olo	81.81	353	*e*PP	PP	04 24 50.6	+2.9
POLO				*e*S	S	04 31 55.9	+2.4
POLO				A	A	05 00 45.9	
	comp=Z,9µm,18.0s						
PVRL	Vila Real	81.91	353	⇑*e*P	P	04 21 42.0	+0.2
PVRL	Vila Real	81.91	353	*e*PP	PP	04 24 49.8	+1.4
MAHO	Mahon	81.92	343	IAmb	IAmb	04 21 51.2	
	comp=Z,851nm,1.6s						
MAHO				IAMs_20	IAMs_20	05 04 06.5	
	comp=Z,17µm,18.0s						
MAHO	Mahon	81.92	343	⇑P	P	04 21 42.5	+0.8
MAHO	Mahon	81.92	343	P	P	04 21 42.5	+0.8
MVO	Moncorvo	81.97	352	⇑*i*P	P	04 21 42.2	0.0
MVO				A	A	04 21 51.8	
	comp=Z,487nm,1.5s						
MVO	Moncorvo	81.97	352	*e*S	S	04 31 54.9	-0.1
MVO				A	A	05 03 28.7	
	comp=Z,24µm,18.0s						
PTO	Porto	82.10	353	*e*P	P	04 21 43.4	+0.7
GVDS	Gavdos	82.18	327	P	P	04 21 42.3	-1.0
GVDS	Gavdos	82.18	327	*i* P	P	04 21 42.3	-1.0
GVD	Gavdhos	82.19	327	P	P	04 21 42.2	-1.1
GVD	Gavdhos	82.19	327	*i* P	P	04 21 42.2	-1.1
ETOS	Mallorca	82.26	345	P	P	04 21 44.2	+0.6
ETOS				S	S	04 31 59.1	+1.2
VAE	Valguarnera	82.28	335	P	P	04 21 45.5	+1.6
	comp=Z,19nm,0.9s,baz=69,slow=17,SNR=2.5						
VAE				LR	LR	05 02 01.7	
	comp=Z,26µm,18.7s,baz=22,slow=38						
	comp=Z,19nm,0.9s						
CMIG	Matias Romero	82.44	70	LR	LR	04 57 25.7	
	comp=Z,9µm,19.6s,baz=320,slow=35						
CLTB	Caltabellotta	82.46	336	IAmb	IAmb	04 22 19.0	
	comp=Z,547nm,1.5s						
CLTB	Caltabellotta	82.46	336	⇑P	P	04 21 43.6	-1.2
PVIS	Viseu	82.48	353	*e*P	P	04 21 45.0	+0.2
PVIS				A	A	04 21 53.8	
	comp=Z,394nm,1.2s						
UCM	Universidad Co	82.48	349	P	P	04 21 44.8	-0.1
BBSR	BB Station	82.48	39	P	P	04 21 45.0	+0.1
BBSR				IAmb	IAmb	04 21 53.2	
	comp=Z,336nm,0.8s						
BBSR	BB Station	82.48	39	IAMs_20	IAMs_20	05 00 13.9	
	comp=Z,20µm,21.0s						
BBSR	BB Station	82.48	39	⇑P	P	04 21 44.9	0.0
BBSR	BB Station	82.48	39	P	P	04 21 44.8	0.0
	baz=336,SNR=16						
PMOR	Pomariorio Ree	82.48	132	*e*P	P	04 21 42.9	-2.0
	comp=Z,656nm,1.3s						
PMOR	Pomariorio Ree	82.48	132	*e*T	T	05 52 09.5	
	comp=Z,43nm,0.2s						
EIDS	Eidsvold	82.49	191	P	P	04 21 46.0	+1.3
EIDS				IAmb	IAmb	04 21 56.0	
	comp=Z,483nm,1.4s						
EIDS	Eidsvold	82.49	191	P	P	04 21 46.1	+1.3
MTE	Manteigas	82.77	353	IAmb	IAmb	04 21 55.2	
	comp=Z,356nm,1.2s						
MTE				IAMs_20	IAMs_20	05 05 32.9	
	comp=Z,28µm,19.0s						
MTE	Manteigas	82.77	353	⇑P	P	04 21 46.5	+0.1
MTE	Manteigas	82.77	353	⇑*e*P	P	04 21 46.1	-0.2
MTE	Manteigas	82.77	353	*e*S	S	04 32 03.4	+0.2
MTE				A	A	05 06 08.3	
	comp=Z,25µm,18.0s						
VAH	Vaihoa	82.80	132	*e*P	P	04 21 45.9	-0.6
	comp=Z,287nm,1.1s						
ECHE	Chera	82.94	347	P	P	04 21 46.7	-0.5
ECHE				S	S	04 32 05.8	+0.9
MNCI	Minicoy	82.96	274	P	P	04 21 46.5	-1.1
MNCI				IAmb	IAmb	04 22 20.9	
	comp=Z,577nm,1.4s						
MNCI	Minicoy	82.96	274	⇑P	P	04 21 46.7	-0.8
COI	Coimbra	83.02	353	P	P	04 21 47.8	+0.3
COI				IAMs_20	IAMs_20	04 58 40.5	
	comp=Z,27µm,19.0s						
COI	Coimbra	83.02	353	⇑P	P	04 21 47.9	+0.3
COI	Coimbra	83.02	353	P	P	04 21 47.8	+0.3
COI				pmax	pmax		
	comp=Z,220nm,0.9s						
COI				MLR	MLR		
	comp=Z,27µm,19.0s						
COI	Coimbra	83.02	353	*e*P	P	04 21 48.1	+0.6
COI				A	A	04 21 58.3	
	comp=Z,580nm,1.4s						
COI	Coimbra	83.02	353	*e*S	S	04 32 04.7	-0.9
TEIG	Tepich	83.14	63	P	P	04 21 48.6	+0.2
TEIG				IAmb	IAmb	04 21 57.7	
	comp=Z,494nm,1.2s						
TEIG	Tepich	83.14	63	⇑P	P	04 21 48.3	-0.1
PCAS	Casmilo, Conde	83.18	353	⇑*i*P	P	04 21 48.9	+0.5
PCAS				A	A	04 21 58.3	
	comp=Z,576nm,1.9s						
PCAS	Casmilo, Conde	83.18	353	*e*PP	PP	04 25 01.7	+2.9
PCAS				*e*S	S	04 32 05.5	-1.7
PCAS				*e*SS	SS	04 37 32.6	+2.6
PCAS				A	A	04 59 09.6	
	comp=Z,21µm,18.0s						
ESBB	Sonseca Array	83.18	350	P	P	04 21 49.0	+0.5
ESBB				IAmb	IAmb	04 21 57.5	
	comp=Z,336nm,1.2s						
ESDC	Sonseca Array	83.18	350	P	P	04 21 48.3	-0.2
	comp=Z,140nm,0.9s,baz=1.6,slow=4.8,SNR=225						
ESDC				S	S	04 32 05.7	-1.7
	comp=Z,0.4nm,0.8s,baz=77,slow=3.3,SNR=1.7						
ESDC				PKKPbc	PKKPbc	04 40 08.7	+2.2
	comp=Z,0.7nm,0.7s,baz=196,slow=1.5,SNR=5.3						
ESDC				PKPPKP		04 48 07.5	
	comp=Z,7.3nm,1.3s,baz=172,slow=1.5,SNR=6.9						
	comp=Z,140nm,0.9s						
ESDC	Sonseca Array	83.18	350	P	P	04 21 48.9	+0.4
EIL	Elat	83.19	316	P	P	04 21 48.2	-0.4
	comp=Z,119nm,1.1s,baz=17,slow=4.6,SNR=49						
EIL				S	S	04 32 06.1	-1.6
	comp=Z,2.8nm,0.6s,baz=77,slow=13,SNR=1.7						
EIL				LR	LR	05 04 45.6	
	comp=Z,45µm,18.1s,baz=26,slow=40						
	comp=Z,119nm,1.1s						
EIBI	Ibiza	83.20	346	P	P	04 21 48.7	+0.2
PCBR	Castelo Branco	83.32	352	⇑*e*P	P	04 21 49.3	+0.2
PCBR				A	A	04 21 59.7	
	comp=Z,534nm,2.0s						
PAB	San Pablo	83.35	350	P	P	04 21 49.8	+0.4
PAB				IAmb	IAmb	04 21 58.3	
	comp=Z,510nm,1.6s						
PAB	San Pablo	83.35	350	IAMs_20	IAMs_20	05 06 03.3	
	comp=Z,21µm,19.0s						
PAB	San Pablo	83.35	350	⇑P	P	04 21 49.5	+0.1
PAB	San Pablo	83.35	350	P	P	04 21 49.8	+0.4
PAB				pmax	pmax		
	comp=Z,510nm,1.6s						
H07S1	FLORES T-PHASE	83.41	11	P	P	04 21 52.1	+2.5
H07S1	FLORES T-PHASE	83.41	11	*e*P	P	04 21 50.2	+0.6
	comp=Z,1µm,1.4s						
SOR	Soroa	83.47	58	P	P	04 21 50.6	+0.4
SOR				IAmb	IAmb	04 22 02.1	
	comp=Z,395nm,1.2s						
SOR	Soroa	83.47	58	P	P	04 21 50.6	+0.4
SOR				pmax	pmax		
	comp=Z,395nm,1.2s						
PMRV	Marv??o	83.72	352	⇑*e*P	P	04 21 51.2	0.0
PMRV				A	A	04 22 01.7	
	comp=Z,449nm,1.9s						
PMRV	Marv??o	83.72	352	*e*S	S	04 32 22.6	+10
PMRV				*e*SS	SS	04 37 41.7	+3.6
PMRV				A	A	05 05 42.4	
	comp=Z,16µm,20.0s						
AS01	Alice Springs	83.80	206	P	P	04 21 52.3	+0.7
AS31	Alice Springs	83.82	206	P	P	04 21 52.2	+0.5
ASAR	Alice Springs	83.82	206	P	P	04 21 52.5	+0.8
	comp=Z,101nm,0.8s,baz=16,slow=4.8,SNR=402						
ASAR				S	S	04 32 12.4	-1.3
	comp=Z,1.6nm,0.6s,baz=11,slow=12,SNR=0.7						
ASAR				PKKPbc	PKKPbc	04 40 05.3	-1.2
	comp=Z,2.6nm,0.8s,baz=168,slow=2.0,SNR=7.2						
ASAR				PKPPKP		04 48 14.7	
	comp=Z,3.9nm,1.0s,baz=186,slow=2.2,SNR=8.0						
ASAR				LR	LR	04 58 31.8	
	comp=Z,10µm,20.9s,baz=15,slow=35						
	comp=Z,101nm,0.8s						
ASAR	Alice Springs	83.82	206	P	P	04 21 52.8	+1.1
TAMR	Tamra	83.83	339	⇑P	P	04 21 52.2	+0.4
RMQ	Roma	83.85	193	P	P	04 21 53.6	+1.9
RAR	Rarotonga	83.91	145	LR	LR	04 52 47.4	
	comp=Z,5µm,20.0s,baz=336,slow=31						
RAR	Rarotonga	83.91	145	P	P	04 21 53.2	+1.1
RAR				IAmb	IAmb	04 21 56.7	
	comp=Z,406nm,1.4s						
RAR	Rarotonga	83.91	145	P	P	04 21 53.2	+1.1
RAR				pmax	pmax		
	comp=Z,406nm,1.5s						
ETOB	Tobarra	83.94	348	P	P	04 21 52.9	+0.5
SHAO	Shalim	84.08	294	*i* P	P	04 21 52.7	-0.7
	SNR=153						
PMTG	Montargil	84.14	353	⇑*i*P	P	04 21 52.9	-0.4
PMTG				A	A	04 22 02.7	
	comp=Z,549nm,1.7s						
PMTG	Montargil	84.14	353	*e*S	S	04 32 16.5	-0.4
PMTG				*e*SS	SS	04 37 48.8	+4.6
PPT	Papeete	84.14	135	P	P	04 21 53.2	-0.2
	comp=Z,146nm,1.1s,baz=47,slow=3.6,SNR=17						
PPT				LR	LR	04 55 40.1	
	comp=Z,7µm,18.4s,baz=316,slow=33						
	comp=Z,146nm,1.1s						
PPT2	Papeete2	84.16	135	*e*P	P	04 21 51.4	-2.2
	comp=Z,492nm,1.2s						
PPT2	Papeete2	84.16	135	*e*PP	PP	04 25 07.8	-0.4
	comp=Z,2µm,24.2s						
PPT2	Papeete2	84.16	135	*e*SS	SS	04 37 38.6	-8.5
	comp=Z,13µm,27.2s						
PPT2				*e*LR	LR	04 47 09.0	
	comp=Z,79µm,36.0s						
PPT2	Papeete2	84.16	135	*e*T	T	05 54 04.9	
	comp=Z,9.0nm,0.2s						
PPTF	Pamatai, Papee	84.16	135	P	P	04 21 54.3	+0.7
PPTF				IAmb	IAmb	04 22 07.1	
	comp=Z,414nm,1.0s						
PPTF	Pamatai, Papee	84.16	135	⇑P	P	04 21 55.5	+1.9
RAYN	Ar Rayn	84.22	305	P	P	04 21 53.8	-0.2
RAYN	Ar Rayn	84.22	305	IAMs_20	IAMs_20	05 06 34.6	
	comp=Z,24µm,18.0s						
RAYN	Ar Rayn	84.22	305	P	P	04 21 53.8	-0.2
RAYN				pmax	pmax		
	comp=Z,1µm,1.5s						
RAYN	Ar Rayn	84.22	305	*i* P	P	04 21 53.6	-0.4
	SNR=344						
TIAR	Tiarei	84.22	135	*e*P	P	04 21 55.1	+1.3
	comp=Z,27nm,0.8s						
PESTR	Estremoz	84.29	352	P	P	04 21 54.3	+0.2
PESTR				IAmb	IAmb	04 22 02.8	
	comp=Z,348nm,1.4s						
PESTR	Estremoz	84.29	352	⇑P	P	04 21 53.9	-0.2
PESTR				⇑P	PcP	04 21 54.1	-3.7
PESTR	Estremoz	84.29	352	⇑*i*P	P	04 21 54.0	-0.2
PESTR				A	A	04 22 03.7	
	comp=Z,633nm,1.6s						
PESTR	Estremoz	84.29	352	*e*S	S	04 32 18.0	-0.6
PESTR				*e*SS	SS	04 37 50.7	+4.1
PESTR				A	A	05 06 30.2	
	comp=Z,20µm,18.0s						
PMAFR	Mafra	84.32	354	⇑*i*P	P	04 21 54.4	+0.2
PMAFR				A	A	04 22 04.7	
	comp=Z,1µm,1.8s						
PMAFR	Mafra	84.32	354	*e*S	S	04 32 19.8	+1.0
PMAFR				*e*SS	SS	04 37 52.9	+6.0
PMAFR				A	A	05 07 01.8	
	comp=Z,24µm,18.0s						
ROSA	Rosais	84.34	9	*e*P	P	04 21 59.6	+5.2
	comp=Z,1µm,1.6s						
PSBA	Serra de Santa	84.36	8	*e*P	P	04 21 53.1	-1.4
	comp=Z,838nm,1.9s						
PAGU	Agualva, Azore	84.37	8	*e*P	P	04 21 58.5	+4.0
	comp=Z,538nm,1.8s						
CALA	Caldeira	84.44	9	*e*P	P	04 21 58.2	+3.3
	comp=Z,703nm,1.1s						
PMAN	Manadas	84.44	9	*e*P	P	04 21 53.4	-1.4
	comp=Z,1µm,1.4s						
PSCM	Serra do Cume	84.44	8	*e*P	P	04 21 54.5	-0.4
	comp=Z,490nm,2.3s						
TVO	Taravao	84.46	135	*e*P	P	04 21 57.4	+2.3
	comp=Z,126nm,1.0s						
CAEH	'Ain El Ouahch	84.52	341	P	P	04 21 55.6	+0.3
CCIG	Comitan	84.54	69	P	P	04 21 57.4	+1.5
PICO	Pico	84.54	9	*e*P	P	04 22 00.4	+4.9

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            comp=Z,843nm,2.0s
LIS    Lisbon            84.55 354  eP       P        04 21 55.4  0.0
LIS                                 ePP      PP       04 25 10.9 +1.0
LIS                                 eS       S        04 32 17.4 -3.6
LIS                                 eSS      SS       04 37 53.1 +2.9
LIS                                  IAMs_20 IAMs_20  05 06 49.1
            comp=Z,36µm,24.4s
CMAH   Djebel Manchou    84.56 340   P       P        04 21 55.5 -0.1
QLP    Quilpie           84.57 197   P       P        04 21 56.7 +1.3
PID    Ribeirinha        84.62   9  eP       P        04 21 58.9 +3.1
            comp=Z,686nm,1.6s
CKFL   Kef-Lekhel        84.91 341   P       P        04 21 57.8 +0.4
DFRA   Djebel Bou Aff    84.92 341   P       P        04 21 58.9 +1.4
CART   Cartagena         84.92 347   P       P        04 21 57.2  0.0
CART                                 IAMs_20 IAMs_20  05 01 36.9
            comp=Z,23µm,19.0s
CART   Cartagena         84.92 347 ⇑P        P        04 21 57.1 -0.1
PBAR   Barrancos         84.94 352⇑iP        P        04 21 57.8 +0.4
PBAR                                 A       A        04 22 07.1
            comp=Z,976nm,1.5s
PBAR   Barrancos         84.94 352  eS       S        04 32 24.9 -0.1
PBAR                                eSS      SS       04 38 04.3 +8.2
PBAR                                 A       A        05 08 26.2
            comp=Z,24µm,18.0s
MEH    Mehetia           85.01 134  eP       P        04 21 58.8 +1.0
            comp=Z,231nm,1.4s
KEST   Kesra             85.06 339   P       P        04 21 58.0 -0.1
            comp=Z,135nm,1.1s,baz=83,slow=0.4,SNR=63
KEST                                 S       S        04 32 25.4 -1.0
            comp=Z,5.4nm,1.2s,baz=6.7,slow=23,SNR=1.5
KEST                                 LR      LR       05 05 13.3
            comp=Z,25µm,19.4s,baz=318,slow=39
            comp=Z,135nm,1.1s
KEST   Kesra             85.06 339   P       P        04 21 57.8 -0.3
KEST                                 IAmb    IAmb     04 22 07.3
            comp=Z,785nm,1.5s
CASM   Ain Smara         85.09 341   P       P        04 21 58.6 +0.4
PNCL   Nicolau / Gran    85.11 353  eP       P        04 21 58.4 +0.2
PNCL                                 A       A        04 22 08.0
            comp=Z,461nm,1.9s
PNCL   Nicolau / Gran    85.11 353  eS       S        04 32 22.7 -3.9
PNCL                                eSS      SS       04 38 04.4 +5.8
PNCL                                 A       A        05 09 09.9
            comp=Z,18µm,16.0s
PBEJ   Beja              85.15 353⇑eP        P        04 21 58.6 +0.2
PBEJ                                 A       A        04 22 08.2
            comp=Z,666nm,1.6s
PETF   Flores            85.15  66   P       P        04 21 59.9 +1.1
PETF                                 IAmb    IAmb     04 22 08.5
            comp=Z,412nm,1.1s
SET    Setif             85.34 342   P       P        04 22 02.0 +2.5
MESJ   Messejana         85.36 353   P       P        04 21 59.3 -0.2
MESJ   Messejana         85.36 353   P       P        04 21 59.3 -0.2
MESJ                                 pmax    pmax
            comp=Z,1µm,2.0s
MESJ   Messejana         85.36 353  eP       P        04 21 59.9 +0.4
MESJ                                 A       A        04 22 10.2
            comp=Z,495nm,1.9s
MESJ   Messejana         85.36 353  eP       P        04 21 59.5  0.0
MESJ                                ePP      PP       04 25 17.6 +1.0
MESJ                                eS       S        04 32 22.7 -6.4
MESJ                                eSS      SS       04 38 05.2 +2.9
MESJ                                 IAMs_20 IAMs_20  05 02 34.0
            comp=Z,24µm,17.7s
PCALD  Caldeiras da R    85.45   7  eP       P        04 21 59.4 -0.6
            comp=Z,606nm,2.0s
CMLA   Cha da Macela     85.49   7   IAMs_20 IAMs_20  04 59 10.0
            comp=Z,18µm,19.0s
CMLA   Cha da Macela     85.49   7  eP       P        04 22 01.7 +1.6
            comp=Z,559nm,1.7s
PGRON  Lagoa das Cont    85.49   6  eP       P        04 22 01.1 +0.9
            comp=Z,845nm,1.7s
BART   Pico Bartolome    85.49   6  eP       P        04 21 59.3 -1.0
            comp=Z,920nm,1.7s
PDA    Ponta Delgada     85.49   7  eP       P        04 21 59.6 -0.5
            comp=Z,1µm,1.8s
CKHR   Kef el Ahmar      85.50 342   P       P        04 21 59.9 -0.5
PCVE   Castro Verde      85.55 353⇑iP        P        04 22 00.9 +0.4
PCVE                                 A       A        04 22 10.4
            comp=Z,741nm,1.6s
PCVE   Castro Verde      85.55 353  eS       S        04 32 28.3 -2.8
PCVE                                eSS      SS       04 38 14.1 +9.0
PCVE                                 A       A        05 03 14.1
            comp=Z,24µm,20.0s
PTEO   Sao Teotonio      85.69 353⇑eP        P        04 22 01.3 +0.2
PTEO                                 A       A        04 22 10.8
            comp=Z,588nm,1.9s
MBWA   Marble Bar        85.69 220   P       P        04 22 00.8 -0.3
MBWA                                 IAmb    IAmb     04 22 02.1
            comp=Z,312nm,0.8s
MBWA   Marble Bar        85.69 220   P       P        04 22 00.4 -0.7
MBWA   Marble Bar        85.69 220 ⇑P        P        04 22 00.7 -0.5
PVAQ   Vaqueiros         85.76 352   P       P        04 22 01.9 +0.4
PVAQ                                 IAmb    IAmb     04 22 10.7
            comp=Z,371nm,1.3s
PVAQ   Vaqueiros         85.76 352   P       P        04 22 02.0 +0.6
PVAQ   Vaqueiros         85.76 352⇑iP        P        04 22 02.1 +0.6
PVAQ                                 A       A        04 22 11.6
            comp=Z,822nm,1.7s
PVAQ   Vaqueiros         85.76 352  eS       S        04 32 29.6 -3.5
PVAQ                                eSS      SS       04 38 16.8 +8.7
PVAQ                                 A       A        05 07 24.0
            comp=Z,22µm,20.0s
MORF   Marmelete         85.92 353   P       P        04 22 02.4  0.0
MORF                                 IAmb    IAmb     04 22 11.4
            comp=Z,713nm,1.3s
MORF   Marmelete         85.92 353   P       P        04 22 02.4  0.0
MORF                                 pmax    pmax
            comp=Z,713nm,1.3s
MORF   Marmelete         85.92 353⇑iP        P        04 22 02.6 +0.2
MORF                                 A       A        04 22 12.2
            comp=Z,898nm,1.7s
MORF   Marmelete         85.92 353  eS       S        04 32 36.1 +1.3
MORF                                eSS      SS       04 38 19.6 +9.0
MORF                                 A       A        05 04 05.5
            comp=Z,24µm,20.0s
MORF   Marmelete         85.92 353  eP       P        04 22 02.2 -0.1
MORF                                ePP      PP       04 25 22.1 +0.9
MORF                                eSKSac   SKSac    04 32 26.2 -0.8
MORF                                eSS      SS       04 38 13.7 +3.0
MORF                                 IAMs_20 IAMs_20  05 03 49.0
            comp=Z,39µm,28.2s
PBDV   Barranco-do-Ve    85.93 353⇑iP        P        04 22 03.3 +0.9
PBDV                                 A       A        04 22 12.7
            comp=Z,829nm,1.7s
PBDV   Barranco-do-Ve    85.93 353  eS       S        04 32 30.9 -4.0
PBDV                                eSS      SS       04 38 18.6 +7.8
PBDV                                 A       A        05 09 33.5
            comp=Z,27µm,18.0s
PSA00  Pilbara Seismi    86.03 219   P       P        04 22 02.4 -0.5
PSA00  Pilbara Seismi    86.03 219   P       P        04 22 02.4 -0.5
PSA00                                IAmb    IAmb     04 22 03.8
            comp=Z,254nm,0.9s
PSA00  Pilbara Seismi    86.03 219   P       P        04 22 02.3 -0.5
PFVI   Vila Bisbo        86.10 353   P       P        04 22 03.2  0.0
PFVI                                 IAmb    IAmb     04 22 12.2
            comp=Z,693nm,1.3s
PFVI   Vila Bisbo        86.10 353   P       P        04 22 03.6 +0.4
PFVI   Vila Bisbo        86.10 353⇑iP        P        04 22 03.5 +0.4
PFVI                                 A       A        04 22 13.0
            comp=Z,768nm,1.6s
PFVI   Vila Bisbo        86.10 353  eS       S        04 32 34.8 -1.6
PFVI                                eSS      SS       04 38 18.2 +5.0
PFVI                                 A       A        05 06 16.3
            comp=Z,22µm,18.0s
RTAL   Retalhuleu        86.24  69   P       P        04 22 03.0 -1.2
PSMN   Pico do Norte,    86.27   6  eP       P        04 22 01.8 -2.2
            comp=Z,575nm,1.9s
PSMA   Santa Maria       86.28   6  eP       P        04 22 03.6 -0.4
            comp=Z,723nm,1.6s
INKA   Innaminka         86.30 199   P       P        04 22 05.3 +1.4
SFS    San Fernando      86.57 351   P       P        04 22 06.5 +1.0
SFS    San Fernando      86.57 351   P       P        04 22 06.5 +1.0
SFS                                  pmax    pmax
            comp=Z,2µm,1.4s
WRKA   Warakurna         86.60 211   P       P        04 22 05.6  0.0
WRKA   Warakurna         86.60 211 ⇑P        P        04 22 05.8 +0.3
WRKA                               ⇑P        P        04 22 05.9 +0.3
USTO   Oran              86.69 346   P       P        04 22 15.0 +8.9
RAO    Raoul Island      87.32 163   LR      LR       04 56 11.2
            comp=Z,11µm,20.2s,baz=0.0,slow=32
RAO    Raoul Island      87.32 163   P       P        04 22 09.5 +0.6
OOD    Oodnadatta        87.37 204   P       P        04 22 10.0 +0.8
ESQI   Esquipulas        87.41  67   P       P        04 22 10.3 +0.3
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ARMA   Armidale          87.44 190   P       P        04 22 10.9 +1.3
ARMA   Armidale          87.44 190   P       P        04 22 11.4 +1.8
ARMA   Armidale          87.44 190 ⇑P        P        04 22 11.8 +2.2
GOG    Mont Gurugu       87.49 348   P       P        04 22 10.1  0.0
PALE   Palemas           87.59 349   P       P        04 22 10.0 -0.6
TAF    Taforalt          87.83 348   P       P        04 22 13.0 +1.3
CHEFC  Chefchaouen       87.84 350   P       P        04 22 12.0 +0.2
TATN   Tataouine         87.85 337 ⇑P        P        04 22 09.7 -2.2
LHI    Lord Howe Isla    88.08 183   P       P        04 22 14.0 +1.6
LHI                                  IAmb    IAmb     04 22 15.4
            comp=Z,309nm,1.2s
AKLM   AKL               88.29 349   P       P        04 22 14.0 +0.1
JBK    JBK               88.32 348   P       P        04 22 15.0 +0.8
TGUH   Tegucigalpa,Un    88.88  66   P       P        04 22 17.3 +0.3
TGUH   Tegucigalpa,Un    88.88  66 ⇑P        P        04 22 18.1 +1.1
TGUH                               ⇓P        PcP      04 22 18.8 +0.2
TGUH                               ⇓sP       sP       04 22 26.1 +0.7
GIRL   Giralia           89.06 224   P       P        04 22 18.1 +0.8
GIRL                                 IAmb    IAmb     04 22 23.8
            comp=Z,356nm,1.2s
GIRL   Giralia           89.06 224   P       P        04 22 17.6 +0.3
LCRM   LCR               89.20 350   P       P        04 22 19.0 +0.6
CMSA   Cobar Meteorol    89.22 195   P       P        04 22 19.3 +1.4
LCRK   Leigh Creek       89.41 201   P       P        04 22 19.9 +1.1
TBI    Tubuai            89.43 137  eP       P        04 22 21.2 +2.2
            comp=Z,707nm,1.4s
TBI    Tubuai            89.43 137  ePP      PP       04 25 50.6 -0.1
            comp=Z,10µm,27.0s
TBI                                 eS       S        04 33 07.0 -1.1
            comp=Z,57µm,28.8s
TBI                                 eSS      SS       04 39 03.5 -0.7
            comp=Z,55µm,26.8s
TBI    Tubuai            89.43 137  eLR      LR       04 50 29.1
            comp=Z,134µm,39.8s
TBI    Tubuai            89.43 137  eT       T        06 00 42.5
            comp=Z,8.7nm,0.2s
KAAM   Kaadhehdhoo       89.45 270   IAMs_20 IAMs_20  05 05 37.7
            comp=Z,22µm,20.0s
TDRA   Tendrara          89.53 347   P       P        04 22 21.0 +1.0
GTBY   Guantanamo Bay    89.54  53   P       P        04 22 19.4 -0.5
GTBY                                 IAmb    IAmb     04 22 28.9
            comp=Z,430nm,1.2s
GTBY   Guantanamo Bay    89.54  53 ⇑P        P        04 22 20.2 +0.3
GTBY                               ⇓P        PcP      04 22 21.1 -0.1
GTBY                               ⇓sP       sP       04 22 28.6 +0.3
ZHG    ZHG               89.60 351   P       P        04 22 21.0 +0.9
AVE    Averroes          89.81 352   P       P        04 22 21.1 +0.1
AVE                                  IAmb    IAmb     04 22 29.9
            comp=Z,498nm,1.2s
AVE                                  IAMs_20 IAMs_20  05 10 28.4
            comp=Z,19µm,20.0s
AVE    Averroes          89.81 352   P       P        04 22 21.4 +0.4
AVE    Averroes          89.81 352 ⇑P        P        04 22 21.2 +0.2
GRTK   Grand Turk        89.83  49   P       P        04 22 21.6 +0.4
GRTK   Grand Turk        89.83  49 ⇑P        P        04 22 21.9 +0.8
BBJ    Bamboo Saint A    89.93  55  i P      P        04 22 22.7 +0.9
MTDJ   Mount Denham      89.95  56   P       P        04 22 22.2 +0.3
MTDJ   Mount Denham      89.95  56 ⇑P        P        04 22 22.5 +0.5
MTDJ                               ⇓P        PcP      04 22 23.1 -0.2
MTDJ                               ⇓P        pP       04 22 28.7 +0.6
MTDJ                               ⇓sP       sP       04 22 30.3  0.0
MDT    Midelt            90.04 349   LR      LR       05 05 03.3
            comp=Z,7µm,20.4s,baz=40,slow=37
MDT    Midelt            90.04 349   P       P        04 22 22.4 +0.2
BNJ    Bonny Gate        90.13  55  i P      P        04 22 24.0 +1.3
MULG   Mulgathing        90.14 205   P       P        04 22 22.5 +0.3
MCJ    Malvern           90.14  56  i P      P        04 22 23.8 +0.9
STKA   Stephens Creek    90.19 198   P       P        04 22 23.3 +0.9
            comp=Z,72nm,0.9s,baz=336,slow=5.9,SNR=62
STKA                                 S       SKKSac   04 33 02.4 -3.2
            comp=Z,1.9nm,0.7s,baz=328,slow=18,SNR=1.4
STKA                                 PKPPKP           04 47 59.1
            comp=Z,4.7nm,0.8s,baz=316,slow=8.7,SNR=4.5
STKA                                 LR      LR       05 01 58.2
            comp=Z,5µm,19.3s,baz=351,slow=35
            comp=Z,72nm,0.9s
STKA   Stephens Creek    90.19 198   P       P        04 22 24.0 +1.6
STKA   Stephens Creek    90.19 198   P       P        04 22 23.7 +1.3
STKA   Stephens Creek    90.19 198   P       P        04 22 24.0 +1.6
STKA                                 pmax    pmax
            comp=Z,312nm,2.0s
MGCD   Mangrove Creek    90.25 190   P       P        04 22 25.1 +2.4
FIGM   Figuig            90.33 346   P       P        04 22 24.0 +0.4
STH    Stony Hill        90.41  55  i P      P        04 22 25.1 +1.1
PMPST  Porto Santo, M    90.42 359  eP       P        04 22 23.5 -0.3
PMPST                                A       A        04 22 32.9
            comp=Z,352nm,1.5s
PMPST  Porto Santo, M    90.42 359  eSKSac   SKSac    04 32 57.8 +3.7
PMPST                               eSS      SS       04 39 20.1 +4.0
PMPST                                A       A        05 02 40.8
            comp=Z,15µm,20.0s
PMPS   Porto Santo       90.44 359  eP       P        04 22 24.5 +0.6
PMPS                                 A       A        04 22 33.6
            comp=Z,375nm,1.7s
HOJ    Hope              90.50  55  i P      P        04 22 25.3 +0.9
MATN   Matagalpa         90.52  65   P       P        04 22 24.8 +0.1
SRHM   Skhour des Reh    90.67 352   P       P        04 22 27.0 +1.9
PMOZ   Porto Moniz, M    90.67 360   P       P        04 22 24.4 -0.7
PMOZ   Porto Moniz, M    90.67 360  eP       P        04 22 25.1 -0.1
PMOZ                                 A       A        04 22 34.5
            comp=Z,333nm,1.5s
PMOZ   Porto Moniz, M    90.67 360  eSKSac   SKKSac   04 33 04.4 -5.8
PMOZ                                 A       A        05 03 09.3
            comp=Z,14µm,20.0s
PMAR   Madeira           90.77 360  eP       P        04 22 25.7  0.0
PMAR                                 A       A        04 22 35.2
            comp=Z,593nm,1.4s
PMAR   Madeira           90.77 360  eSKSac   SKKSac   04 33 05.0 -6.1
PMAR                                eS       ScS      04 33 23.8 -0.8
PMAR                                 A       A        05 03 28.5
            comp=Z,13µm,18.0s
FUL    Funchal           90.85 360  eP       P        04 22 26.2 +0.4
FUL                                  A       A        04 22 28.0
            comp=Z,321nm,1.3s
BOAB   BOACO BROADBAN91.06  65   P       P        04 22 26.7 -0.3
BOAB   BOACO BROADBAN91.06  65 ⇑P        P        04 22 26.4 -0.6
BOAB                               ⇑P        PcP      04 22 26.9 -1.2
BOAB                               ⇑P        pP       04 22 31.7 -1.5
GOLM   Goulmima          91.17 350   P       P        04 22 29.0 +1.4
ARF    Arif              91.37 349   P       P        04 22 29.0 +0.6
ACON   Acoyapa           91.72  65   P       P        04 22 29.8 -0.3
ACON                                 IAmb    IAmb     04 22 39.1
            comp=Z,438nm,1.3s
ACON   Acoyapa           91.72  65  eP       P        04 22 29.5 -0.5
SC01   Santiago de lo    91.85  49   P       P        04 22 30.8 +0.1
OUK    Oukaimeden        91.92 352   P       P        04 22 32.0 +0.7
ESPN   Las Esperanzas    91.95  64   P       P        04 22 31.2  0.0
ESPN   Las Esperanzas    91.95  64  eP       P        04 22 31.2  0.0
PAPH   Port-au-Prince    92.00  51   P       P        04 22 31.8 +0.5
SDDR   Presa de Saban    92.02  50   P       P        04 22 32.2 +0.7
SDDR                                 IAmb    IAmb     04 22 40.5
            comp=Z,165nm,0.9s
SDDR                                 IAMs_20 IAMs_20  05 11 20.2
            comp=Z,25µm,18.0s
SDDR   Presa de Saban    92.02  50 ⇑P        P        04 22 32.0 +0.5
SDDR                               ⇑P        PcP      04 22 32.1 -0.2
SDDR                               ⇑P        sP       04 22 38.9 -1.0
SDDR                               ⇓sP       pP       04 22 39.0 +1.4
FORT   Forrest           92.10 209   P       P        04 22 31.1 -0.2
FORT                                 IAmb    IAmb     04 22 54.8
            comp=Z,142nm,0.8s
FORT   Forrest           92.10 209   P       P        04 22 31.6 +0.3
OUZM   OUZ               92.13 351   P       P        04 22 33.0 +1.0
BBOO   Buckleboo         92.14 202   P       P        04 22 31.6 +0.2
BBOO                                 IAmb    IAmb     04 22 37.6
            comp=Z,304nm,1.4s
BBOO   Buckleboo         92.14 202   P       P        04 22 31.8 +0.4
TZRR   Tazzarine         92.14 350   P       P        04 22 33.0 +1.0
HTT    Hallett           92.17 200   P       P        04 22 32.9 +1.2
OUZ    Omahuta           92.18 171   IAMs_20 IAMs_20  05 03 59.0
            comp=Z,21µm,18.0s
OUZ    Omahuta           92.18 171   P       P        04 22 34.5 +3.0
PRVC   Isla de Provid    92.37  61   P       P        04 22 33.5 +0.4
PRVC   Isla de Provid    92.37  61  eP       P        04 22 33.4 +0.4
CAN    Canberra          92.55 191   P       P        04 22 34.8 +1.4
CAN                                  IAMs_20 IAMs_20  05 06 24.9
            comp=Z,18µm,19.0s
CAN    Canberra          92.55 191 ⇑P        P        04 22 34.8 +1.4
CAN                                ⇓P        PcP      04 22 35.4 +1.3
CAN    Canberra          92.55 191   P       P        04 22 34.8 +1.4
CAN                                  pmax    pmax
            comp=Z,171nm,1.8s
CAN                                  MLR     MLR
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            comp=Z,18µm,19.0s
HZTE   Horizontes, Gu    92.58  66  eP       P        04 22 32.2 -1.8
BUEV   Buena Vista       92.60  66  eP       P        04 22 33.3 -1.0
VORI   VORI              92.61  66  eP       P        04 22 32.7 -1.8
TTIG   Tnine Tigouga,    92.62 352   P       P        04 22 35.0 +0.7
VRLE   La Escondida,     92.63  66  eP       P        04 22 32.5 -2.0
VMAR   Armenia, Volca    92.73  66  eP       P        04 22 32.3 -2.5
ZGR    Zagora            92.81 350   P       P        04 22 36.0 +0.9
CUI    Cuipilapa         92.84  66  eP       P        04 22 33.3 -2.1
HATIL  Hatillo           92.88  66  eP       P        04 22 34.6 -0.9
ORTG   Ortega, Santa     92.94  66   P       P        04 22 36.2 +0.4
ORTG   Ortega, Santa     92.94  66  eP       P        04 22 34.2 -1.6
SDD    Santo Domingo     93.06  49   P       P        04 22 36.0 -0.2
SAJU   San Juanillo,     93.07  67  eP       P        04 22 35.6 -0.7
JUD3   Juan Diaz 3       93.07  66  eP       P        04 22 34.7 -1.8
NICO   Nicoya            93.15  66  eP       P        04 22 36.5 -0.2
COVE   Coope Vega, Sa    93.17  65   P       P        04 22 35.9 -0.9
COVE   Coope Vega, Sa    93.17  65  eP       P        04 22 34.5 -2.3
DUNO   Dulce Nombre,     93.17  66   P       P        04 22 36.2 -0.7
DUNO   Dulce Nombre,     93.17  66  eP       P        04 22 36.1 -0.7
NARJA  Naranjal          93.24  66  eP       P        04 22 38.9 +1.7
CMARA  Lajas Hojancha    93.26  66  eP       P        04 22 36.1 -1.2
JTS    Las Juntas de     93.26  66   LR      LR       05 09 38.9
            comp=Z,13µm,18.3s,baz=322,slow=39
JTS    Las Juntas de     93.26  66   P       P        04 22 35.8 -1.4
JTS    Las Juntas de     93.26  66   P       P        04 22 35.8 -1.4
JTS                                  pmax    pmax
            comp=Z,126nm,2.0s
JTS    Las Juntas de     93.26  66  eP       P        04 22 35.0 -2.2
POPE   POPE, Guanacas    93.30  66  eP       P        04 22 35.9 -1.5
INDI   Punta indio, G    93.35  66  eP       P        04 22 37.0 -0.6
NYURE  Nandayure         93.36  66  eP       P        04 22 36.8 -0.9
TRT1   Tortuguero        93.62  65  eP       P        04 22 38.6 -0.3
PCDR   Punta Cana, DR    93.64  48   P       P        04 22 38.3 -0.5
PCDR                                 IAmb    IAmb     04 22 43.3
            comp=Z,402nm,1.4s
LAFE   Finca La Fe, P    93.69  66  eP       P        04 22 37.9 -1.3
POA5   Crater Von Fra    93.69  65  eP       P        04 22 37.9 -1.7
CRPO   Crater poas       93.70  65  eP       P        04 22 38.4 -1.2
VPTE   Poasito           93.74  65  eP       P        04 22 38.0 -1.8
RIFO   Rio Frio, Sara    93.75  65  eP       P        04 22 38.0 -1.5
CBL1   Cabuya            93.79  66  eP       P        04 22 39.1 -0.5
HDC    Heredia           93.93  65 ⇑P        P        04 22 39.3 -1.2
HDC    Heredia           93.93  65  eP       P        04 22 38.9 -1.5
JACO   JACO, Garabito    93.94  66   P       P        04 22 40.8 +0.4
JACO   JACO, Garabito    93.94  66  eP       P        04 22 38.4 -1.9
CVIMO  Finca Echandi     93.99  65  eP       P        04 22 38.3 -2.5
VICA   Volcano Irazu     94.08  65  eP       P        04 22 40.3 -1.2
HAYA   Volcan Irazu      94.08  65  eP       P        04 22 40.1 -1.4
VTLO   VTLO              94.08  65  eP       P        04 22 40.4 -0.9
ICR3   Volcano Irazu     94.09  65  eP       P        04 22 40.8 -0.8
OCM    Ochomogo          94.09  65  eP       P        04 22 39.9 -1.5
RAFA   San Farael, Vo    94.11  65  eP       P        04 22 41.4 -0.2
VTCV   VTCV, Calle Va    94.14  65  eP       P        04 22 40.8 -0.7
AGPR   Aguadilla, PR     94.19  47   P       P        04 22 41.9 +0.5
LCR2   La Lucha 2        94.20  65  eP       P        04 22 39.5 -2.3
BATAN  Batan             94.21  65  eP       P        04 22 40.8 -0.8
MORW   Morawa            94.25 220   P       P        04 22 40.7 -0.6
MORW   Morawa            94.25 220   P       P        04 22 40.7 -0.6
PRSN   Puerto Rico Se    94.40  47   P       P        04 22 42.8 +0.4
PRSN                                 IAmb    IAmb     04 22 51.8
            comp=Z,220nm,1.2s
MRVA   Moravia de Chi    94.41  65  eP       P        04 22 41.7 -1.0
EMPR   Esperanza - Ma    94.41  46   P       P        04 22 43.2 +0.8
EMPR                                 IAmb    IAmb     04 22 52.1
            comp=Z,437nm,1.3s
AOPR   Arecibo Observ    94.44  46   P       P        04 22 43.0 +0.4
AOPR                                 IAmb    IAmb     04 22 54.2
            comp=Z,174nm,1.0s
CDM    Cerro de Muert    94.49  65  eP       P        04 22 42.0 -1.5
BUS1   Rivas             94.49  65  eP       P        04 22 42.2 -1.3
UUPR   Utuado, UPR, P    94.54  46   P       P        04 22 42.8 -0.2
CRPR   Cabo Rojo, PR     94.61  47   P       P        04 22 43.4  0.0
CRPR                                 IAmb    IAmb     04 22 52.7
            comp=Z,218nm,1.2s
MLPR   Magueyes Islan    94.67  47   P       P        04 22 43.0 -0.6
PEZE   Perez Zeledon,    94.67  65  eP       P        04 22 43.7 -0.1
GCPR   Guaynabo City     94.74  46   P       P        04 22 43.8 -0.2
GCPR                                 IAmb    IAmb     04 22 53.0
            comp=Z,280nm,1.1s
CELP   Cerrillos         94.76  46   P       P        04 22 44.2 +0.2
OBIP   Obispado Ponce    94.78  46   P       P        04 22 43.4 -0.7
OBIP                                 IAmb    IAmb     04 22 51.6
            comp=Z,150nm,0.9s
TOZ    Tahuroa Road      94.84 170   P       P        04 22 45.3 +1.6
CBYP   Canovanas         94.86  46   P       P        04 22 44.0 -0.6
CBYP                                 IAmb    IAmb     04 22 53.5
            comp=Z,343nm,1.8s
SJG    San Juan          94.89  46   LR      LR       05 09 36.0
            comp=Z,12µm,19.3s,baz=322,slow=38
SJG    San Juan          94.89  46   P       P        04 22 44.5 -0.1
SJG                                  IAmb    IAmb     04 22 54.0
            comp=Z,214nm,1.2s
SJG    San Juan          94.89  46   IAMs_20 IAMs_20  05 11 45.6
            comp=Z,17µm,19.0s
SJG    San Juan          94.89  46   P       P        04 22 44.5 -0.1
SJG                                  pmax    pmax
            comp=Z,214nm,1.2s
SRBA   San Rafael, Bu    94.96  65   P       P        04 22 45.2  0.0
SRBA   San Rafael, Bu    94.96  65  eP       P        04 22 44.2 -1.0
MXZ    Matakaoa Point    94.97 168   IAMs_20 IAMs_20  05 05 36.0
            comp=Z,14µm,19.0s
HUMP   Col San Antoni    94.98  46   P       P        04 22 45.0 -0.1
HUMP                                 IAmb    IAmb     04 22 56.3
            comp=Z,290nm,1.5s
CUPR   Culebra, Puert    95.06  45   P       P        04 22 44.4 -1.0
MTP    Monte Pirata      95.14  45   P       P        04 22 46.1 +0.3
MTP                                  IAmb    IAmb     04 22 55.1
            comp=Z,350nm,1.2s
MACI   Morro de la Ar    95.23 359   P       P        04 22 46.6 +0.3
MACI                                 IAmb    IAmb     04 22 48.6
            comp=Z,206nm,1.0s
POTG   Potrero Grande    95.24  65  eP       P        04 22 46.1 -0.3
PLAN   Los Planes de     95.28  66  eP       P        04 22 46.4 -0.1
URZ    Urewera           95.53 169   LR      LR       05 06 22.9
            comp=Z,6µm,18.1s,baz=84,slow=36
CTCR   Cotoan            95.55  65  eP       P        04 22 48.2 +0.2
HIZ    Hauiti            95.55 170   IAMs_20 IAMs_20  05 01 43.4
            comp=Z,13µm,19.0s
BRU2   Volcan            95.67  65  eP       P        04 22 48.0 -0.5
CDVI   St. Croix         95.76  45   P       P        04 22 48.7 +0.1
CDVI                                 IAmb    IAmb     04 22 57.4
            comp=Z,316nm,1.6s
CDITO  Canoas            95.77  65  eP       P        04 22 48.7 -0.1
CCOL   Caracol de Cor    95.86  65  eP       P        04 22 50.1 +0.9
RTZ    Ruatahuna         95.86 169   P       P        04 22 51.6 +3.1
ATD    Arta Tunnel       95.88 301   LR      LR       05 12 33.5
            comp=Z,2µm,18.1s,baz=22,slow=40
ATD    Arta Tunnel       95.88 301   P       P        04 22 50.1 +0.8
KLBR   Kellerberrin      95.97 217   P       P        04 22 48.6 -0.5
SMRT   St. Maarten       96.14  43   IAMs_20 IAMs_20  05 07 43.2
            comp=Z,27µm,20.0s
SABA   Saba              96.47  44   IAMs_20 IAMs_20  05 07 45.0
            comp=Z,25µm,20.0s
SABA   Saba              96.47  44  e        P        04 23 04.4  +13
SEUS   St. Eustatius     96.68  43   IAMs_20 IAMs_20  05 08 05.7
            comp=Z,15µm,21.0s
BCIP   Isla Barro Col    96.75  62   IAMs_20 IAMs_20  05 14 59.2
            comp=Z,13µm,18.0s
BCIP   Isla Barro Col    96.75  62  eP       P        04 22 52.2 -1.0
MRKH   Merkhyat          96.77 312  i P      P        04 22 53.4 +0.1
MRKH                                i S      PP       04 26 49.4 +1.8
ANWB   Willy Bob         96.97  42   IAMs_20 IAMs_20  05 06 38.2
            comp=Z,16µm,22.0s
ANWB   Willy Bob         96.97  42  e        P        04 23 00.4 +6.3
JAWL   J.Aulia           97.15 312  i P      Pdif     04 22 55.1  0.0
JAWL                                e                 04 23 11.4
            baz=338,slow=18
JAWL                                i S      PP       04 26 50.4  0.0
NWAO   Narrogin (SRO)    97.37 217   LR      LR       05 15 05.8
            comp=Z,6µm,18.1s,baz=1.5,slow=40
NWAO   Narrogin (SRO)    97.37 217   P       Pdif     04 22 56.2 +0.7
ANBD   Bethesda, Anti    97.55  43  e        Pdif     04 23 00.4 +3.6
MLYT   Lee's Yard        97.69  43  e        P        04 22 56.4 -1.0
AZU    Azuero            97.73  63  eP       P        04 22 56.3 -1.3
DESE   Dese              97.73 304  eP       Pdif     04 22 59.3 +1.2
DESE                                eS       PP       04 26 54.6 -0.8
NNZ    Nelson            98.11 172   IAMs_20 IAMs_20  05 02 00.2
            comp=Z,15µm,20.0s
ABD    La Joyeuse, An    98.17  43   IAMs_20 IAMs_20  05 10 45.1
            comp=Z,14µm,20.0s
ABD    La Joyeuse, An    98.17  43  e        Pdif     04 23 00.4 +0.8
URIC   Uribia, Colomb    98.18  54   IAmb    IAmb     04 23 11.3
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	comp=Z,179nm,1.3s						
URIC	Uribia, Colomb	98.18	54	*e*P	P	04 22 59.6	0.0
GDHS	Morne Mazeau,	98.25	43	IAMs_20	IAMs_20	05 10 51.3	
	comp=Z,15µm,20.0s						
SNZO	South Karori	98.32	171	IAMs_20	IAMs_20	05 10 30.5	
	comp=Z,19µm,19.0s						
SJCC	San Jacinto, C	98.32	58	*e*P	Pdif	04 23 00.7	+0.3
TAM	Tamanrasset	98.37	339	IAMs_20	IAMs_20	05 14 30.2	
	comp=Z,20µm,20.0s						
CRJC	Cerrejon, Guaj	98.39	55	*e*P	P	04 23 00.3	-0.3
BHW	Baring Head	98.43	171	IAMs_20	IAMs_20	05 10 33.5	
	comp=Z,18µm,19.0s						
CBE	Ff, Capester	98.50	43	*e*	Pdif	04 23 04.4	+3.3
DSZ	Denniston Nort	98.53	173	IAMs_20	IAMs_20	05 10 17.1	
	comp=Z,17µm,19.0s						
THZ	Tophouse	98.62	172	IAMs_20	IAMs_20	05 09 16.6	
	comp=Z,12µm,19.0s						
MAGL	Barre de l’ile	98.73	43	IAMs_20	IAMs_20	05 14 32.9	
	comp=Z,17µm,18.0s						
ARGC	Ariguani, Magd	98.79	57	*e*P	P	04 23 01.9	-0.4
ANKE	Ethiopia-Afar	99.02	303	*e*P	Pdif	04 23 05.0	+1.1
ANKE				*e*S	PP	04 26 58.3	-7.2
HATO	Hato, Curacao	99.08	51	IAMs_20	IAMs_20	05 11 55.8	
	comp=Z,16µm,20.0s						
PTCN	Pitcairn Islan	99.13	122	IAMs_20	IAMs_20	05 01 11.2	
	comp=Z,21µm,20.0s						
KHZ	Kahutara	99.32	172	IAMs_20	IAMs_20	05 10 37.1	
	comp=Z,15µm,18.0s						
LL1C	La Loma 1 Cana	99.38	56	*e*P	Pdif	04 23 04.8	-0.2
APAC	Apartado, Choc	99.41	60	*e*P	Pdif	04 23 05.2	+0.1
INZ	Inchbonnie	99.48	174	IAMs_20	IAMs_20	05 07 31.3	
	comp=Z,20µm,19.0s						
LTZ	Lake Taylor	99.59	173	IAMs_20	IAMs_20	05 13 02.3	
	comp=Z,18µm,19.0s						
SVN	Savane Anatole	99.79	43	IAMs_20	IAMs_20	05 15 27.0	
	comp=Z,17µm,18.0s						
GVZ	Greta Valley S	99.83	172	IAMs_20	IAMs_20	05 02 24.6	
	comp=Z,12µm,19.0s						
FDF	Fort de France	99.89	43	IAMs_20	IAMs_20	05 15 37.8	
	comp=Z,16µm,18.0s						
FDF	Fort de France	99.89	43	*e*	Pdif	04 23 04.4	-2.9
ILAM	Ilet Lapin Mar	99.96	43	IAMs_20	IAMs_20	05 09 48.5	
	comp=Z,17µm,21.0s						
ILAM	Ilet Lapin Mar	99.96	43	*e*	Pdif	04 23 20.3	+13
AAE	Adis Abeba	99.96	304	*e*P	Pdif	04 23 09.5	+1.5
AAE				*e*S	PP	04 27 13.0	+0.5
AAE				IAMs_20	IAMs_20	04 42 22.5	
	comp=N,66µm,39.0s						
UREC	San Jos de Ur	100.04	59	*e*P	Pdif	04 23 06.8	-1.1
FURI	Furi	100.12	304	*e*P	Pdif	04 23 10.4	+1.7
FURI				*e*S	PP	04 27 17.0	+3.3
FURI				IAMs_20	IAMs_20	04 42 45.2	
	comp=N,22µm,46.1s						
BIM	Bigot	100.12	43	IAMs_20	IAMs_20	05 15 17.9	
	comp=Z,22µm,19.0s						
BIM	Bigot	100.12	43	*e*	Pdif	04 23 20.3	+12
MPOM	Morne Pois Mar	100.27	43	IAMs_20	IAMs_20	05 10 06.6	
	comp=Z,18µm,21.0s						
MPOM	Morne Pois Mar	100.27	43	*e*	Pdif	04 23 16.4	+7.5
MAPC	Malpelo	100.33	66	*e*P	Pdif	04 23 09.4	+0.2
RPZ	Rata Peaks	100.44	174	P	Pdif	04 23 10.5	+1.6
	comp=Z,11nm,0.8s,baz=340,slow=9.6,SNR=3.2						
RPZ	Rata Peaks	100.44	174	IAMs_20	IAMs_20	05 14 02.8	
	comp=Z,14µm,18.0s						
ZARC	Zaragoza, Cauc	100.58	58	*e*P	Pdif	04 23 09.1	-1.3
MCLT	Moule a Chique	100.91	43	*e*	Pdif	04 23 24.3	+13
LBZ	Lake Benmore	101.06	175	IAMs_20	IAMs_20	05 07 53.2	
	comp=Z,21µm,20.0s						
SDV	Santo Domingo	101.28	54	IAMs_20	IAMs_20	05 13 28.6	
	comp=Z,17µm,20.0s						
HELC	Santa Helena	101.40	60	*e*P	Pdif	04 23 13.3	-1.2
BRRC	Barranca, Sant	101.45	58	*e*P	Pdif	04 23 13.1	-1.1
CBOC	Ciudad Bolivar	101.46	60	*e*P	Pdif	04 23 13.1	-1.4
CTZ	Chatham Island	101.71	165	IAMs_20	IAMs_20	05 13 23.4	
	comp=Z,11µm,19.0s						
ODZ	Otahua Downs	101.75	174	IAMs_20	IAMs_20	05 09 43.2	
	comp=Z,14µm,19.0s						
GCMP	Grenada, Carri	101.85	44	*e*	Pdif	04 23 31.9	+16
GCMP	Grenada, Carri	101.85	44	*e*	PKiKP	04 27 24.8	-14
BBGH	Gun Hill	101.95	42	*e*	Pdif	04 23 23.7	+7.3
BBGH	Gun Hill	101.95	42	*e*	PKiKP	04 27 27.5	-12
MLZ	Mavora Lakes	101.95	176	IAMs_20	IAMs_20	05 05 05.7	
	comp=Z,14µm,21.0s						
GRGR	Grenville	102.08	44	IAMs_20	IAMs_20	05 13 53.9	
	comp=Z,19µm,20.0s						
GRGR	Grenville	102.08	44	*e*	PKiKP	04 27 31.5	-7.9
PLMC	San Jos del P	102.17	61	*e*P	Pdif	04 23 15.8	-1.7
NORC	Norcasia	102.26	59	*e*P	Pdif	04 23 17.4	-0.5
BAUV	El Baul	102.36	52	*e*	Pdif	04 23 25.5	+7.3
BAUV	El Baul	102.36	52	*e*	PKiKP	04 27 51.4	+12
DILA	Dilla	102.47	303	*e*P	Pdif	04 23 20.4	+1.4
DILA				*e*S	PP	04 27 31.7	+0.4
WHZ	Wether Hill Ro	102.47	176	IAMs_20	IAMs_20	05 14 12.4	
	comp=Z,12µm,19.0s						
SPBC	San Pablo de B	102.56	59	*e*P	Pdif	04 23 18.1	-1.2
PYZ	Puysegur Point	102.70	177	IAMs_20	IAMs_20	05 13 12.6	
	comp=Z,14µm,19.0s						
RUSC	La Rusia	102.81	58	*e*P	Pdif	04 23 19.4	-1.4
YOTC	Yotoco, Valle	102.94	61	*e*P	Pdif	04 23 19.7	-1.2
ANIL	Santa Ana	102.95	60	*e*P	Pdif	04 23 20.9	-0.4
ROSC	El Rosal	103.16	59	Pdiff	Pdif	04 23 22.0	-0.3
	comp=Z,3.7nm,0.4s,baz=26,slow=4.9,SNR=4.0						
ROSC				PP	PP	04 27 38.5	+1.7
	comp=Z,43nm,1.0s,baz=66,slow=23,SNR=6.1						
ROSC	El Rosal	103.16	59	*e*P	Pdif	04 23 22.5	+0.2
TOSP	Speyside	103.28	44	*e*	Pdif	04 23 20.3	-2.0
JAMC	Jamundi, Valle	103.44	62	*e*P	Pdif	04 23 23.5	+0.1
ORTC	Ortega, Tolima	103.53	60	*e*P	Pdif	04 23 21.6	-1.9
TRN	Trinidad (W)	103.54	45	*e*	Pdif	04 23 24.3	+0.9
CHIC	Chingaza	103.62	59	*e*P	Pdif	04 23 20.6	-3.7
TUMC	Tumaco	103.64	65	*e*P	Pdif	04 23 24.9	+0.9
POPC	Popayan, Colom	104.03	62	*e*P	Pdif	04 23 25.5	-0.5
BBAC	Balboa, Cauca	104.20	63	*e*P	Pdif	04 23 26.3	-0.4
PTGC	Puerto Gaitan,	104.74	58	*e*P	Pdif	04 23 26.8	-2.1
GCUF	Volcan Galeras	104.84	64	*e*P	Pdif	04 23 30.6	+0.8
GARC	Garzon, Huila	104.91	62	*e*P	Pdif	04 23 30.2	+0.3
OTAV	Otavalo	105.14	65	*e*P	Pdif	04 23 31.2	0.0
FLOC	Florencia	105.36	62	*e*P	Pdif	04 23 32.0	+0.4
BONI	La Bonita	105.42	64	*e*P	Pdif	04 23 31.8	-0.4
TORD	Torodi Ar. Bea	108.50	341	Pdiff	Pdif	04 23 43.5	-2.1
	comp=Z,15nm,0.4s,baz=57,slow=5.5,SNR=3.6						
TORD				PKiKP	PKiKP	04 27 51.6	+0.4
	comp=Z,4.6nm,0.9s,baz=360,slow=1.8,SNR=1.4						
TORD				PP	PP	04 28 13.3	-1.8
	comp=Z,60nm,1.1s,baz=12,slow=6.7,SNR=13						
TORD				PKKPbc	PKKPbc	04 38 59.6	+1.2
	comp=Z,6.2nm,0.9s,baz=128,slow=2.4,SNR=2.8						
KMBO	Kilima Mbogo	109.59	300	Pdiff	Pdif	04 23 50.4	-0.3
	comp=Z,0.1nm,0.4s,baz=12,slow=23,SNR=3.4						
KMBO				PP	PP	04 28 09.5	-14
	comp=Z,0.1nm,0.5s,baz=0.7,slow=23,SNR=3.0						
ROCAM	Rodrigues Isla	111.41	267	IAMs_20	IAMs_20	05 16 29.0	
	comp=Z,19µm,18.0s						
ATAH	Atahualpa	111.48	69	PKiKP	PKiKP	04 27 57.8	+0.5
	comp=Z,3.7nm,0.8s,baz=354,slow=16,SNR=1.5						
ATAH				PP	PP	04 28 35.2	-2.8
	comp=Z,10nm,0.9s,baz=47,slow=5.1,SNR=3.0						
MDP	Montagnes des	111.86	38	PP	PP	04 28 36.1	-3.6
	comp=Z,42nm,1.1s,baz=345,slow=10,SNR=4.0						
DBIC	Dimbokro	115.88	346	PKP	PKPdf	04 28 04.7	-0.6
	comp=Z,24nm,1.1s,baz=42,slow=0.9,SNR=11						
DBIC				PP	PP	04 28 56.9	-11
	comp=Z,5.8nm,1.0s,baz=27,slow=3.2,SNR=0.8						
DBIC				PKKPbc	PKKPbc	04 38 35.2	+1.2
	comp=Z,3.3nm,0.8s,baz=252,slow=4.9,SNR=2.5						
DBIC	Dimbokro	115.88	346		PKPdf	04 28 05.2	0.0
DBIC	Dimbokro	115.88	346	PKIKP	PKPdf	04 28 05.2	0.0
NNA	Nana	116.39	70	PKP	PKPdf	04 28 05.8	-0.4
	comp=Z,2.8nm,0.3s,baz=279,slow=7.6,SNR=2.3						
NNA				PP	PP	04 29 09.7	-2.7
	comp=Z,2.9nm,0.3s,baz=67,slow=19,SNR=1.3						
RER	Riviere de l’E	116.73	272	IAMs_20	IAMs_20	05 21 30.9	
	comp=Z,12µm,18.0s						
ABPO	Ambohimpanom	119.64	281	PKPdf	PKPdf	04 28 11.2	-1.2
ABPO	Ambohimpanom	119.64	281	PKIKP	PKPdf	04 28 11.2	-1.2
ABPO				MLR	MLR		
	comp=Z,32µm,18.0s						
SAML	Samuel	120.44	55	PKPdf	PKPdf	04 28 12.8	-1.2
SAML	Samuel	120.44	55	PKIKP	PKPdf	04 28 12.8	-1.2
VOI	Vohitsoka	122.22	279	PKPdf	PKPdf	04 28 17.1	-0.2
VOI	Vohitsoka	122.22	279	PKP	PKiKP	04 28 17.7	+0.3
LPAZ	La Paz	124.46	65	PKP	PKPdf	04 28 21.8	-0.5
	comp=Z,15nm,0.9s,baz=357,slow=4.9,SNR=23						
LPAZ				PP	PP	04 30 07.2	-1.1
	comp=Z,22nm,0.9s,baz=329,slow=9.0,SNR=6.2						
LPAZ				PKKPab	PKKPab	04 38 14.7	+9.3
	comp=Z,2.2nm,0.7s,baz=212,slow=7.0,SNR=5.9						
LSZ	Lusaka	126.21	302	PKIKP	PKPdf	04 28 24.9	-0.2
RCBR	Riachuelo	127.02	23	IAMs_20	IAMs_20	05 22 43.6	
	comp=Z,12µm,19.0s						
RCBR	Riachuelo	127.02	23	*e*P	PKPdf	04 28 25.7	-0.9
SIV	San Ignacio	127.59	57	PKP	PKPdf	04 28 27.2	-0.4
	comp=Z,69nm,0.9s,baz=324,slow=1.2,SNR=63						
SIV				PP	PP	04 30 23.7	-4.7
	comp=Z,43nm,1.1s,baz=305,slow=6.5,SNR=3.0						
CASY	Casey	128.90	204		PKiKP	04 28 28.9	-0.3
LVC	Limon Verde	129.37	70	PKP	PKPdf	04 28 30.4	-0.8
	comp=Z,64nm,1.2s,baz=289,slow=2.3,SNR=23						
LVC				PP	PP	04 30 41.7	+1.1
	comp=Z,12nm,1.0s,baz=22,slow=4.7,SNR=2.1						
LVC	Limon Verde	129.37	70	*e*P	PKPdf	04 28 29.0	-2.2
ASCN	Ascension	131.15	356		PKPdf	04 28 34.6	+0.2
ASCN				IAMs_20	IAMs_20	05 33 52.8	
	comp=Z,8µm,19.0s						
ARAG	Araguaiana, MT	131.34	47	*e*P	PKPdf	04 28 31.3	-3.4
MUSN	Musina, Limpop	131.40	295	*i* P	PKPdf	04 28 33.9	-0.8
MOPA	Mopani	131.66	293	*i* P	PKPdf	04 28 33.7	-1.4
H03N2	Juan Fernandez	132.55	88	PKP	PKiKP	04 28 37.1	-0.1
	baz=156,slow=16,SNR=3.5						
H03N1	Juan Fernandez	132.56	88	PKP	PKiKP	04 28 37.5	+0.3
	baz=156,slow=16,SNR=4.1						
H03N3	Juan Fernandez	132.57	88	PKP	PKiKP	04 28 37.4	+0.1
	baz=156,slow=16,SNR=4.8						
BDFB	Brasilia	132.74	42	PKhKP	PKPpre	04 28 26.1	
	comp=Z,2.5nm,0.8s,baz=65,slow=26,SNR=4.3						
BDFB				PKP	PKPdf	04 28 37.8	+0.3
	comp=Z,45nm,1.0s,baz=3.2,slow=4.3,SNR=33						
BDFB				PP	PP	04 31 04.3	+2.5
	comp=Z,16nm,1.0s,baz=303,slow=8.3,SNR=3.2						
VA04	Juan Fernndez	132.76	88	PKPdf	PKiKP	04 28 37.6	-0.4
LCO	Las Campanas	133.61	76		PKPpre	04 28 28.9	
LCO	Las Campanas	133.61	76	PKHKP	PKPpre	04 28 28.9	
VNDA	Vanda	134.11	180	PKhKP	PKPpre	04 28 26.1	
	comp=Z,3.7nm,1.0s,baz=8.5,slow=2.3,SNR=12						
VNDA				PKP	PKiKP	04 28 39.9	+0.5
	comp=Z,12nm,0.9s,baz=321,slow=4.2,SNR=11						
VNDA				PP	PP	04 31 10.7	+0.4
	comp=Z,12nm,1.1s,baz=342,slow=9.0,SNR=4.9						
TSUM	Tsumeb	134.37	311		PKPpre	04 28 33.4	
LBTB	Lobatse	135.79	298	*i* P	PKPdf	04 28 37.8	-5.2
DIAM	Diamantina, MG	136.73	38	*e*P	PKPdf	04 28 41.8	-3.2
PEL	Peldehue	136.83	80	IAMs_20	IAMs_20	05 34 12.0	
	comp=Z,7µm,19.0s						
CFA	Coronel Fontan	136.96	76	PKhKP	PKPpre	04 28 33.3	
	comp=Z,2.3nm,0.5s,baz=312,slow=3.3,SNR=6.3						
CFA				PKP	PKPdf	04 28 45.4	+0.5
	comp=Z,47nm,1.0s,baz=285,slow=2.9,SNR=16						
CFA				PP	PP	04 31 29.7	+0.9
	comp=Z,24nm,1.1s,baz=340,slow=5.2,SNR=5.0						
BB19B	Bebedouro	137.49	46	*e*P	PKPdf	04 28 42.9	-3.3
CRZF	Crozet Islands	137.64	254	IAMs_20	IAMs_20	05 30 12.4	
	comp=Z,12µm,20.0s						
ABR01	Abrolhos, BA	137.98	31	*e*P	PKPdf	04 28 45.6	-1.4
MCR1	Marechal Candi	138.16	55	*e*P	PKPdf	04 28 43.1	-4.1
CPUP	Villa Florida	138.24	60	PKhKP	PKPpre	04 28 36.9	
	comp=Z,12nm,1.0s,baz=318,slow=4.5,SNR=7.5						
CPUP				PKP	PKPdf	04 28 47.7	+0.4
	comp=Z,54nm,1.0s,baz=7.4,slow=3.2,SNR=20						
CPUP				PP	PP	04 31 32.0	-4.4
	comp=Z,6.4nm,0.8s,baz=272,slow=14,SNR=6.8						
SHEL	Horse Pasture	138.26	343	IAMs_20	IAMs_20	05 33 21.3	
	comp=Z,9µm,20.0s						
SCCA	San Cayetano,	138.64	63	*e*P	PKPdf	04 28 46.5	-1.5
BOSA	Boshof	138.95	295	PKhKP	PKPpre	04 28 38.6	
	comp=Z,11nm,0.8s,baz=21,slow=2.1,SNR=12						
BOSA				PKP	PKiKP	04 28 50.8	-0.1
	comp=Z,23nm,0.6s,baz=27,slow=2.1,SNR=15						
BOSA	Boshof	138.95	295	*i* P	PKPdf	04 28 41.6	-7.1
SPB	Sao Paulo	140.19	46	*e*P	PKPdf	04 28 48.1	-2.9
MECA	Mercedes	140.30	64	*e*P	PKPdf	04 28 49.3	-1.7
VAS01	Vassouras-RJ	140.50	40	*e*P	PKPdf	04 28 50.0	-1.5
PARB	Paraibuna	140.67	44	*e*P	PKPdf	04 28 50.8	-1.2
DUB01	Friburgo-RJ	140.68	38	*e*P	PKPdf	04 28 50.5	-1.4
TIJ01	Guaruva-PR	141.10	49	*e*P	PKPdf	04 28 50.3	-2.4
PLCA	Paso Flores	142.44	88	PKhKP	PKPpre	04 28 50.3	
	comp=Z,27nm,1.2s,baz=293,slow=4.3,SNR=29						
PLCA				PKP	PKPdf	04 28 56.0	+1.5
	comp=Z,95nm,1.1s,baz=315,slow=3.2,SNR=57						
RODS	Rosario do Sul	142.62	61	*e*P	PKPdf	04 28 51.5	-3.6
CPSB	Cacapava Do Su	143.50	59	*e*P	PKPbc	04 28 54.0	0.0
CNLB	Canela	143.77	55	*e*P	PKPbc	04 28 54.8	-0.1
MAW	Mawson	143.89	220	PKP	PKPbc	04 28 54.8	+0.9
	comp=Z,47nm,0.9s,baz=82,slow=2.6,SNR=23						
SUR	Sutherland	144.22	297	PKP	PKPbc	04 28 57.0	+0.6
	comp=Z,186nm,1.1s,baz=23,slow=3.2,SNR=30						
SUR	Sutherland	144.22	297	PKPdf	PKPdf	04 28 57.4	-0.7
PLTB	Pedras Altas	144.55	61	*e*P	PKPab	04 28 55.6	-1.4
COYC	Coyhaique	144.79	95	IAMs_20	IAMs_20	05 25 19.0	
	comp=Z,11µm,19.0s						
LPA	La Plata	144.93	69	PKP	PKPab	04 28 51.4	-6.8
LPA				PKIKP	PKiKP	04 29 03.4	+0.6
LPA				PP	PP	04 32 17.5	+0.2
LPA				pPP		04 32 28.0	
LPA				SKIKP		04 32 34.4	
LPA				PKIKS		04 32 41.5	
LPA				PPP	PPP	04 35 30.7	
LPA				SKIKS		04 35 49.3	
LPA				SDIFF		04 40 54.8	
LPA				PPS	PPS	04 44 55.1	
LPA				SS	SS	04 51 02.8	-2.6
LPA				SSS	SSS	04 56 42.7	
TRQA	Tornquist	145.19	77		PKPbc	04 28 58.9	-0.2
TRQA	Tornquist	145.19	77	PKIKP	PKPbc	04 28 58.9	-0.2
QSPA	South Pole Qui	146.61	180	PKPbc	PKPbc	04 29 02.1	-0.4
	comp=Z,656nm,0.8s,baz=342,slow=0.4,SNR=646						
QSPA	South Pole Qui	146.61	180		PKPdf	04 29 00.4	-0.6
QSPA	South Pole Qui	146.61	180	IAMs_20	IAMs_20	05 40 01.2	
	comp=Z,8µm,21.0s						
USHA	Ushuaia	151.74	108	PKPbc	PKPbc	04 29 15.4	-0.3
	comp=Z,165nm,1.0s,baz=318,slow=1.8,SNR=13						
EFI	East Falkland	155.89	95	PKPdf	PKPdf	04 29 13.6	-1.8
EFI	East Falkland	155.89	95	PKIKP	PKPdf	04 29 13.6	-1.8
PMSA	Palmer Station	156.37	129	PP	PP	04 33 18.4	-4.4
	comp=Z,51nm,1.0s,baz=237,slow=9.1,SNR=2.1						
PMSA	Palmer Station	156.37	129	IAMs_20	IAMs_20	05 34 19.7	
	comp=Z,10µm,19.0s						
PMSA	Palmer Station	156.37	129	*e*P	PKPdf	04 29 13.6	-2.0
ELIB	Princess Elisa	157.51	212	*d*PKPdf	PKPdf	04 29 16.4	-0.7
ELIB				*d*PKP	PKPab	04 29 48.2	-1.0
TROLL	Troll, Antarti	162.72	201	PKPab	PKPab	04 30 11.6	-0.3
TROLL	Troll, Antarti	162.72	201	PKPdf	PKPdf	04 29 22.4	-0.5
TROLL	Troll, Antarti	162.72	201	PP	PP	04 33 58.3	+1.2
SNAA	Sanae	163.94	197	PKPab	PKPab	04 30 16.6	-0.5
SNAA	Sanae	163.94	197	PKPdf	PKPdf	04 29 23.1	-1.0
SNAA	Sanae	163.94	197	PP	PP	04 34 05.5	+2.0
SNAA	Sanae	163.94	197	PKP	PKPdf	04 29 22.9	-1.1
	comp=Z,6.1nm,0.8s,baz=222,slow=1.9,SNR=11						
SNAA				PKPab	PKPab	04 30 16.6	-0.5
	comp=Z,35nm,1.0s,baz=166,slow=3.2,SNR=9.6						
SNAA				PP	PP	04 34 01.0	-2.5
	comp=Z,17nm,1.2s,baz=176,slow=14,SNR=2.1						
SNAA	Sanae	163.94	197		PKPdf	04 29 23.1	-1.0
VNA3	Neumayer Olymp	165.20	190	PKPab	PKPab	04 30 21.5	-1.1
VNA3	Neumayer Olymp	165.20	190	PKPdf	PKPdf	04 29 23.8	-1.2
VNA2	Neumayer--Watz	165.26	193	PKPab	PKPab	04 30 23.3	+0.4
	baz=167,slow=4.0						
VNA2	Neumayer--Watz	165.26	193	PKPdf	PKPdf	04 29 24.1	-1.0
	baz=4.0,slow=1.0						
VNA1	Neumayer--Stat	165.62	192	PKPab	PKPab	04 30 24.7	+0.3
VNA1	Neumayer--Stat	165.62	192	PKPdf	PKPdf	04 29 25.4	+0.1

HLW 29 04:19:31.0,30°.26N×31°.98E,h0^{km}±7^{km},Md1.7,Egypt

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOT	Kottamia	0.36	202	P	Pg	04 19 39.0	+1.1
	baz=202						
GLL	Jalalah	0.72	199	P	Pg	04 19 45.6	+0.7
	baz=200						
HSAF	As Saff	0.74	210	P	Pg	04 19 45.5	+0.2
	baz=211						
ZAF	Zafarana	1.09	153	P	Pg	04 19 52.2	+0.2
	baz=153						
HMYD	Mayadein	1.13	246	P	Pg	04 19 52.8	+0.1
	baz=246						
HNAT	Natroun	1.34	242	P	Pg	04 19 56.8	0.0
	baz=243						
NBNS	Bani Suef	1.74	200	P	Pn	04 20 02.2	-0.3
	baz=201						
RYAN	Fayoum	1.89	232	P	Pn	04 20 03.8	-0.8
	baz=233						

KRSC 29 04:22:11.4±1.3,56°.90N×163°.24E,h43^{km}±16^{km},Ml4.1,
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBG	Krutoberegovo	0.71	205	*e*P	Pn	04 22 24.8	-0.2
KBG				*e*S	Sn	04 22 35.7	+1.0
KBTR	Krutoberegovo	0.73	199	*e*P	Pn	04 22 25.6	+0.4
KBTR				*e*S	Sn	04 22 36.8	+1.6
SMKR	Semkarok	1.02	253	*e*P	Pn	04 22 29.1	-0.3
SRKR	Sorokina	1.17	259	*e*P	Pn	04 22 30.9	-0.4
SRKR				*e*S	Sn	04 22 46.0	0.0
KLY	Klyuchi	1.54	249	*e*P	Pn	04 22 35.7	-0.8
KLY				*e*S	Sn	04 22 54.1	-1.1
BZGR	Bezymyannyi-Gr	1.71	237	*e*P	Pn	04 22 40.5	+1.7
BZWR	Bezymyannyi-We	1.79	240	*e*P	Pn	04 22 41.6	+1.7
BZWR				*e*S	Sn	04 23 05.0	+3.6
BZP	Bezymyannyi-Pe	1.80	238	*e*P	Pn	04 22 41.6	+1.5
BZP				*e*S	Sn	04 23 04.2	+2.6
BZMR	Bezymyannaya	1.81	239	*e*P	Pn	04 22 41.5	+1.4
BZMR				*e*S	Sn	04 23 04.2	+2.3
KIRR	Kirishev	1.87	241	*e*P	Pn	04 22 42.6	+1.6
KIRR				*e*S	Sn	04 23 06.0	+2.6
KPT	Kopyto	1.92	242	*e*P	Pn	04 22 43.7	+2.0
KPT				*e*S	Sn	04 23 07.9	+3.3
KMNR	Kamenistaya	2.02	237	*e*P	Pn	04 22 45.9	+2.8
KMNR				*e*S	Sn	04 23 12.3	+5.1
SRDR	Sredinnyy	2.03	255	*e*P	Pn	04 22 44.5	+1.3
SRDR				*e*S	Sn	04 23 10.2	+2.9
KOZ	Kozyrevsk	2.05	247	*e*P	Pn	04 22 45.8	+2.5
KOZ				*e*S	Sn	04 23 12.3	+4.6
BKI	Bering	2.29	137	*e*P	Pn	04 22 49.5	+2.9
BKI				*e*S	Sn	04 23 18.5	+5.0
TUMD	Tumrok D	2.33	224	*e*P	Pn	04 22 49.8	+2.6
OSSR	Ossora	2.36	358	*e*S	Sn	04 23 18.1	+2.7
TUMR	Tumrok	2.37	228	*e*P	Pn	04 22 51.4	+3.5
MKZ	Mys Kozlova	2.50	201	*e*P	Pn	04 22 52.6	+3.1
MKZ				*e*S	Sn	04 23 23.2	+4.6
TIGL	Tigil	2.63	291	*e*P	Pn	04 22 54.1	+2.8
TIGL				*e*S	Sn	04 23 26.3	+4.5
ESO	Esso	2.70	251	*e*P	Pn	04 22 56.8	+4.5
PALN	Palana	2.81	323	*e*P	Pn	04 22 57.6	+4.0
PALN				*e*S	Sn	04 23 31.9	+5.7
SPN	Mys Shipunski	4.23	207	*e*P	Pn	04 23 16.6	+3.3
SPN				*e*S	Sn	04 24 03.6	+2.2
GNL	Ganaly	4.41	226	*e*P	Pn	04 23 19.5	+3.6
KRX	Arik	4.42	219	*e*P	Pn	04 23 21.2	+5.3
SMAR	Somma	4.44	217	*e*P	Pn	04 23 20.3	+3.9
UGLR	Uglovaya	4.48	216	*e*P	Pn	04 23 21.0	+4.1
GRL	Gorelyy	5.28	217	*e*P	Pn	04 23 33.1	+5.3
MTVR	Mutnovka	5.30	216	*e*P	Pn	04 23 32.3	+4.1

DJA ***29*** *04:26:15.1±1.4,1°S±12°×13°9E±1°0,h10*^{km}*,M4.9/7,*
mb5.0/4,mB5.7/5,MLv4.6/7,Mw(mB)5.2/5,MwMwp5.7/3,
Mwp5.8/3

IDC ***29*** *04:26:25.1±0.9,2°.63S×139°.07E,h0*^{km}*,mb4.2/11,*
mbtmp4.2/13,ML3.8/1,Error ellipse: s-maj=34.6km
s-min=13.0km az=88.0

NEIC ***29*** *04:26:31.7±1.9,2°.5S±0°.1×138°.8E±0°.2,h37*^{km}*±10*^{km}*,*
mb4.2/13,Error ellipse: s-maj=24.3km s-min=16.2km
az=68.0

ISC 29 04:26:27.1±0.6,2°.58S±0°.06×138°.89E±0°.07,h10^{km},n35,
σ1^{s}.23/35,mb4.3/13,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.62	343	P	Pg	04 26 39.5	+0.5
GENI	Genyem	1.28	90	P	Pn	04 26 50.7	-0.3
RKPI	Ransiki, Papua	4.83	283	P	Pn	04 27 32.6	-7.2
	135nm,0.8s,11µm0.6nm						
FAKI	Fak Fak	6.64	267		Pn	04 28 03.6	-1.2
FAKI	Fak Fak	6.64	267	P	Pn	04 28 03.4	-1.4
	23nm,0.7s,2µm0.1nm						
MTN	Manton Dam	12.76	217		Pn	04 29 30.2	+1.5
SOEI	Soe	16.18	243	P	P	04 30 19.1	+1.1
SOEI	Soe	16.18	243	P	P	04 30 17.9	-0.2
KNRA	Kununurra	16.39	217		P	04 30 21.5	+1.2
KNRA				IAmb	IAmb	04 30 27.0	
	comp=Z,14nm,0.7s						
WB0	Warramunga Arr	17.63	194	Pn	P	04 30 32.8	-1.2
WB0				IAmb	IAmb	04 31 09.2	
	comp=Z,14nm,1.1s						
WRAB	Tennant Creek	17.80	194	P	P	04 30 39.0	+3.1
WRAB				IAmb	IAmb	04 30 52.9	
	comp=Z,13nm,0.9s						
WB2	Warramunga Arr	17.81	194	P	P	04 30 36.8	+0.8
WB2				IAmb	IAmb	04 30 49.4	
	comp=Z,9.8nm,0.7s						
WRA	Warramunga Arr	17.82	194	P	P	04 30 34.5	-1.6
	comp=Z,0.3nm,0.3s,baz=12,slow=12,SNR=8.0						
WRA				S	Sn	04 33 54.5	+0.4
	comp=Z,1.7nm,0.8s,baz=16,slow=24,SNR=2.6						
	comp=Z,5.0nm,0.8s						
WRA	Warramunga Arr	17.82	194	P	P	04 30 37.6	+1.5
TOLI2	Tolitoli	18.47	281	P	P	04 30 42.8	-0.5
TOLI2				IAmb	IAmb	04 30 55.7	
	comp=Z,14nm,1.1s						
CTA	Charters Tower	18.83	158	P	Pn	04 30 46.9	-0.8
	comp=Z,5.6nm,0.9s,baz=350,slow=11,SNR=1.5						
FITZ	Fitzroy Crossi	20.16	219	P	Pn	04 31 03.0	-0.6
AS31	Alice Springs	21.50	193	P	P	04 31 18.1	+1.8
ASAR	Alice Springs	21.51	193	P	P	04 31 16.5	+0.2
	comp=Z,4.8nm,0.8s,baz=22,slow=10,SNR=13						
ASAR				S	S	04 35 13.0	-2.0
	comp=Z,0.8nm,0.8s,baz=18,slow=27,SNR=2.2						
	comp=Z,4.8nm,0.8s						
ASAR	Alice Springs	21.51	193	P	P	04 31 17.0	+0.7
EIDS	Eidsvold	25.52	154	P	P	04 31 57.1	+1.1
EIDS				IAmb	IAmb	04 32 04.2	
	comp=Z,28nm,1.5s						
MBWA	Marble Bar	26.25	224	P	P	04 32 02.6	0.0
MJAR	Matsushiro Arr	38.93	359	P	P	04 33 52.7	-0.5
	comp=Z,0.8nm,0.5s,baz=121,slow=4.1,SNR=1.3						
	comp=Z,0.8nm,0.5s						
CMAR	Chiang Mai Arr	44.53	300	P	P	04 34 40.9	+1.5
	comp=Z,1.2nm,0.3s,baz=119,slow=6.2,SNR=5.3						
	comp=Z,1.2nm,0.3s						
RPZ	Rata Peaks	49.91	150	P	P	04 35 18.9	-2.0
	comp=Z,1.7nm,0.4s,baz=234,slow=14,SNR=1.6						
	comp=Z,1.7nm,0.4s						
SONM	Songino Array	57.68	335	P	P	04 36 17.6	-0.3
	comp=Z,0.5nm,0.5s,baz=134,slow=4.2,SNR=2.5						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	69.80	322	P	P	04 37 38.6	+0.8
	comp=Z,3.6nm,0.7s,baz=114,slow=8.1,SNR=22						
	comp=Z,3.6nm,0.7s						
MKAR	Makanchi Array	69.80	322	P	P	04 37 36.7	-1.1
NIL	Nilore	71.39	307	P	P	04 37 46.4	-1.4
ZALV	Zalesovo Beam	71.92	330	P	P	04 37 50.5	+0.1
	comp=Z,1.2nm,0.6s,baz=116,slow=6.6,SNR=4.5						
	comp=Z,1.2nm,0.6s						
KURBB	Kurchatov Arra	73.73	325	P	P	04 38 01.4	+0.1
	comp=Z,2.1nm,0.8s,baz=116,slow=5.3,SNR=12						
	comp=Z,2.1nm,0.8s						
BVAR	Borovoye Array	79.31	325	P	P	04 38 33.9	+1.0
	comp=Z,3.8nm,0.6s,baz=111,slow=6.9,SNR=14						
	comp=Z,3.8nm,0.6s						
BRVK	Borovoye	79.38	325	P	P	04 38 33.9	+0.6
BRVK				IAmb	IAmb	04 38 35.2	
	comp=Z,8.7nm,1.1s						
GEYT	Alibeck	84.30	308	P	P	04 39 00.7	+1.1
	comp=Z,1.8nm,0.5s,baz=112,slow=2.3,SNR=1.7						
	comp=Z,1.8nm,0.5s						
ILAR	Eielson Array	85.65	24	P	P	04 39 05.4	-0.4
	comp=Z,0.5nm,0.8s,baz=249,slow=2.9,SNR=4.3						
	comp=Z,0.5nm,0.8s						

KRSC 29 04:27:23.9±1.2,56°.93N×163°.25E,h16^{km}±14^{km},Ml3.9,
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBG	Krutoberegovo	0.74	204	*e*P	Pg	04 27 38.4	0.0
KBG				*e*S	Sb	04 27 48.7	+0.5
KBTR	Krutoberegovo	0.76	198	*e*P	Pg	04 27 39.2	+0.4
KBTR				*e*S	Sn	04 27 50.1	-0.9
SMKR	Semkarok	1.04	251	*e*P	Pb	04 27 42.7	-0.8
SMKR				*e*S	Sb	04 27 56.8	-0.2

SRKR	Sorokina	1.18	257	eP	Pn	04 27 45.1	-0.6
SRKR				eS	Sb	04 27 59.8	-1.1
KLY	Klyuchi	1.56	248	eP	Pn	04 27 49.6	-1.4
KLY				eS	Sn	04 28 08.1	-2.7
CIRR	Tsirk	1.61	241	eS	Sb	04 28 13.8	+0.5
BZGR	Bezymyannyi-Gr	1.73	236	eP	Pn	04 27 54.2	+0.9
BZGR				eS	Sn	04 28 15.9	+0.8
BZWR	Bezymyannyi-We	1.81	239	eP	Pn	04 27 55.4	+0.9
BZWR				eS	Sb	04 28 18.6	-0.5
BZP	Bezymyannyi-Pe	1.82	237	eP	Pn	04 27 55.4	+0.7
BZP				eS	Sn	04 28 18.1	+0.8
BZMR	Bezymyannaya	1.83	238	eP	Pn	04 27 55.6	+0.8
BZMR				eS	Sb	04 28 18.7	-1.0
KIRR	Kirishev	1.89	240	eP	Pn	04 27 56.6	+1.0
KIRR				eS	Sn	04 28 20.1	+1.1
KPT	Kopyto	1.94	241	eS	Sb	04 28 21.8	-1.0
SRDR	Sredinnyy	2.05	254	eP	Pb	04 27 59.2	-1.4
SRDR				eS	Sn	04 28 23.8	+0.9
KMNR	Kamenistaya	2.05	236	eP	Pb	04 27 59.7	-1.1
KMNR				eS	Sb	04 28 26.5	+0.5
KOZ	Kozyrevsk	2.07	246	eP	Pb	04 27 59.6	-1.4
KOZ				eS	Sb	04 28 26.5	+0.1
BKI	Bering	2.31	137	eP	Pb	04 28 03.2	-1.9
BKI				eS	Sb	04 28 31.3	-1.9
TUMD	Tumrok D	2.36	224	eP	Pb	04 28 04.0	-2.0
TUMR	Tumrok	2.40	228	eP	Pb	04 28 05.4	-1.3
MKZ	Mys Kozlova	2.53	200	eP	Pn	04 28 06.0	+1.8
MKZ				eS	Sb	04 28 37.2	-2.5
TIGL	Tigil	2.62	291	eP	Pn	04 28 06.5	+1.1
TIGL				eS	Sn	04 28 39.2	+2.4
ESO	Esso	2.72	250	eP	Pb	04 28 11.8	-0.4
PALN	Palana	2.78	322	eP	Pb	04 28 12.3	-0.9
KRX	Arik	4.45	218	eP	Pn	04 28 35.1	+4.4
UGLR	Uglovaya	4.51	216	eP	Pn	04 28 35.1	+3.5
MTVR	Mutnovka	5.34	216	eP	Pn	04 28 47.4	+4.5

KRSC 29 04:32:28.4±1.1, 57°.04N×163°.25E, h40^{km}±15^{km}, Ml4.2, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBG	Krutoberegovo	0.84	201	eP	Pn	04 32 44.3	+0.5
KBG				eS	Sn	04 32 55.8	+0.9
KBTR	Krutoberegovo	0.87	196	eP	Pn	04 32 45.0	+0.9
KBTR				eS	Sn	04 32 57.1	+1.5
SMKR	Semkarok	1.08	246	eP	Pn	04 32 47.5	+0.4
SMKR				eS	Sn	04 33 01.3	+0.3
SRKR	Sorokina	1.21	252	eP	Pn	04 32 49.2	+0.4
SRKR				eS	Sn	04 33 04.6	+0.5
KLY	Klyuchi	1.61	244	eP	Pn	04 32 54.2	-0.1
KLY				eS	Sn	04 33 13.3	-0.5
BZGR	Bezymyannyi-Gr	1.80	233	eP	Pn	04 32 59.1	+2.2
BZWR	Bezymyannyi-We	1.87	236	eP	Pn	04 32 60.0	+2.0
BZWR				eS	Sn	04 33 23.7	+3.2
BZP	Bezymyannyi-Pe	1.88	234	eP	Pn	04 33 00.5	+2.3
KIRR	Kirishev	1.95	237	eP	Pn	04 33 00.7	+1.6
KIRR				eS	Sn	04 33 25.1	+2.8
SRDR	Sredinnyy	2.08	251	eP	Pn	04 33 02.5	+1.7
SRDR				eS	Sn	04 33 27.3	+1.8
KMNR	Kamenistaya	2.11	234	eP	Pn	04 33 04.1	+2.8
KMNR				eS	Sn	04 33 30.8	+4.4
KOZ	Kozyrevsk	2.11	244	eP	Pn	04 33 03.6	+2.4
KOZ				eS	Sn	04 33 30.2	+3.9
OSSR	Ossora	2.22	357	eP	Pn	04 33 04.6	+1.9
BKI	Bering	2.39	139	eP	Pn	04 33 07.8	+2.9
BKI				eS	Sn	04 33 37.1	+4.2
TUMD	Tumrok D	2.44	222	eP	Pn	04 33 09.1	+3.4
TUMR	Tumrok	2.47	226	eP	Pn	04 33 09.9	+3.6
TIGL	Tigil	2.58	288	eP	Pn	04 33 11.0	+3.4
TIGL				eS	Sn	04 33 41.8	+4.0
MKZ	Mys Kozlova	2.63	200	eP	Pn	04 33 12.5	+4.2
PALN	Palana	2.70	321	eP	Pn	04 33 13.5	+4.3
ESO	Esso	2.76	248	eP	Pn	04 33 14.5	+4.3
KII	Karymskiy	3.71	217	eP	Pn	04 33 26.2	+3.0
SPN	Mys Shipunski	4.36	207	eP	Pn	04 33 34.0	+1.9
GNL	Ganaly	4.52	224	eP	Pn	04 33 38.2	+3.9
KRX	Arik	4.53	217	eP	Pn	04 33 38.6	+4.1
KRER	Koryakskii	4.55	216	eP	Pn	04 33 39.3	+4.4
KOK	Koryaka	4.59	217	eP	Pn	04 33 39.9	+4.5
UGLR	Uglovaya	4.60	215	eP	Pn	04 33 39.8	+4.3
MTVR	Mutnovka	5.43	215	eP	Pn	04 33 52.1	+5.2

*IDC **29** 04:34:57.2±0.4, 56°.90N×162°.80E, h0^{km}, mb4.5/40, mbtmp4.6/44, ML4.6/3, Error ellipse: s-maj=12.5km s-min=8.6km az=179.0*
*BJI **29** 04:34:57.0±0.0, 56°.98N×162°.58E, h6^{km}, mb4.8/29*
*NEIC **29** 04:34:59.9±2.5, 56°.82N±0°.08×163°.0E±0°.1, h10^{km}±1^{km}, mb5.0/279, Error ellipse: s-maj=14.3km s-min=10.0km az=350.0*
*KRSC **29** 04:34:59.0±1.2, 56°.91N×163°.21E, h44^{km}±16^{km}, Ml5.2*
*MOS **29** 04:35:01.3±1.0, 56°.96N×162°.95E, h39^{km}, mb5.0/34, Error ellipse: s-maj=7.4km s-min=3.3km az=73.2*

ISC 29 04:34:59.4±0.5, 56°.93N±0°.03×162°.84E±0°.03, h13^{km}±2^{km}, h13^{km}:pP-P, n835, σ1^{s}23/815, mb5.0/204, 30C-11D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBG	Krutoberegovo	0.68	187	PN	Pb	04 35 13.0	-0.1
KBG				S	Sn	04 35 23.6	-1.5
KBG	Krutoberegovo	0.68	187	eP	Pb	04 35 13.0	-0.1
KBG				eS	Sn	04 35 23.6	-1.5
KBTR	Krutoberegovo	0.72	181	PN	Pb	04 35 13.7	-0.1
KBTR	Krutoberegovo	0.72	181	eP	Pb	04 35 13.7	-0.1
SMKR	Semkarok	0.83	246	PN	Pb	04 35 16.6	+0.9
SMKR	Semkarok	0.83	246	eP	Pb	04 35 16.6	+0.9
SRKR	Sorokina	0.96	254	PN	Pb	04 35 18.7	+0.8
SRKR	Sorokina	0.96	254	eP	Pb	04 35 18.7	+0.8
BDR	Baidarnaya	0.97	249	PN	Pn	04 35 19.1	+0.3
BDR	Baidarnaya	0.97	249	eP	Pn	04 35 19.1	+0.3
KLY	Klyuchi	1.36	244	PN	Pn	04 35 23.5	-0.5
KLY	Klyuchi	1.36	244	eP	Pn	04 35 23.5	-0.5
CIRR	Tsirk	1.42	236	PN	Pb	04 35 26.5	+0.7
CIRR	Tsirk	1.42	236	eP	Pb	04 35 26.5	+0.7
LGNR	Loginova	1.47	235	PN	Pg	04 35 27.5	-0.1
LGNR	Loginova	1.47	235	eP	Pg	04 35 27.5	-0.1
BZGR	Bezymyannyi-Gr	1.55	231	PN	Pb	04 35 28.4	+0.4
BZGR	Bezymyannyi-Gr	1.55	231	eP	Pb	04 35 28.4	+0.4
BZWR	Bezymyannyi-We	1.62	234	PN	Pb	04 35 29.6	+0.3
BZWR	Bezymyannyi-We	1.62	234	eP	Pb	04 35 29.6	+0.3
BZP	Bezymyannyi-Pe	1.64	232	eP	Pb	04 35 29.4	-0.1
BZMR	Bezymyannaya	1.65	234	PN	Pb	04 35 29.8	+0.2
BZMR	Bezymyannaya	1.65	234	eP	Pb	04 35 29.8	+0.2
KIRR	Kirishev	1.70	236	PN	Pb	04 35 30.6	0.0
KIRR				S	Sg	04 35 54.5	+0.4
KIRR	Kirishev	1.70	236	eP	Pb	04 35 30.6	0.0
KIRR				eS	Sg	04 35 54.5	+0.4
KPT	Kopyto	1.75	237	PN	Pb	04 35 31.3	0.0
KPT	Kopyto	1.75	237	eP	Pb	04 35 31.3	0.0
SRDR	Sredinnyy	1.83	252	PN	Pn	04 35 32.1	+1.5
SRDR	Sredinnyy	1.83	252	eP	Pn	04 35 32.1	+1.5
KMNR	Kamenistaya	1.87	232	PN	Pb	04 35 33.4	0.0
KMNR	Kamenistaya	1.87	232	eP	Pb	04 35 33.4	0.0
TUMD	Tumrok D	2.21	219	eP	Pb	04 35 37.7	-1.5
TUMR	Tumrok	2.24	224	PN	Pn	04 35 37.7	+1.5
TUMR	Tumrok	2.24	224	eP	Pb	04 35 39.0	-0.7
OSSR	Ossora	2.33	3	PN	Pn	04 35 35.8	-1.5
OSSR	Ossora	2.33	3	eP	Pn	04 35 35.8	-1.5
TIGL	Tigil	2.41	292	eP	Pb	04 35 42.0	-0.5
MKZ	Mys Kozlova	2.46	195	PN	Pn	04 35 40.3	+1.1
MKZ	Mys Kozlova	2.46	195	eP	Pn	04 35 40.3	+1.1
BKI	Bering	2.46	133	PN	Pn	04 35 38.0	-1.2
BKI				S	Sn	04 36 06.1	-3.0
BKI	Bering	2.46	133	eP	Pn	04 35 38.0	-1.2
BKI				eS	Sn	04 36 06.1	-3.0
ESO	Esso	2.51	248	PN	Pb	04 35 44.6	+0.3
ESO	Esso	2.51	248	eP	Pb	04 35 44.6	+0.3
PALN	Palana	2.65	326	PN	Pb	04 35 46.3	-0.3
PALN	Palana	2.65	326	eP	Pb	04 35 46.3	-0.3
KII	Karymskiy	3.49	215	PN	Pn	04 35 56.1	+2.8
KII	Karymskiy	3.49	215	eP	Pn	04 35 56.1	+2.8
TILK	Tilichiki	3.92	25	PN	Pn	04 35 59.9	+0.7
TILK	Tilichiki	3.92	25	eP	Pn	04 35 59.9	+0.7
SPN	Mys Shipunski	4.17	204	PN	Pn	04 36 03.4	+0.7
SPN	Mys Shipunski	4.17	204	eP	Pn	04 36 03.4	+0.7
NLC	Nalytchevo	4.27	210	PN	Pn	04 36 07.4	+3.4
NLC	Nalytchevo	4.27	210	eP	Pn	04 36 07.4	+3.4
GNL	Ganaly	4.29	223	PN	Pn	04 36 07.1	+2.8
GNL	Ganaly	4.29	223	eP	Pn	04 36 07.1	+2.8
KRX	Arik	4.31	216	PN	Pn	04 36 08.2	+3.5
KRX	Arik	4.31	216	eP	Pn	04 36 08.2	+3.5
KRER	Koryakskii	4.33	215	PN	Pn	04 36 08.2	+3.2
KRER	Koryakskii	4.33	215	eP	Pn	04 36 08.2	+3.2
SMAR	Somma	4.35	214	PN	Pn	04 36 08.2	+2.9
SMAR	Somma	4.35	214	eP	Pn	04 36 08.2	+2.9
AVH	Avacha	4.37	214	PN	Pn	04 36 09.0	+3.6
AVH	Avacha	4.37	214	eP	Pn	04 36 09.0	+3.6
KOK	Koryaka	4.38	215	PN	Pn	04 36 09.1	+3.6
KOK	Koryaka	4.38	215	eP	Pn	04 36 09.1	+3.6
UGLR	Uglovaya	4.39	213	PN	Pn	04 36 08.5	+2.8
UGLR	Uglovaya	4.39	213	eP	Pn	04 36 08.5	+2.8
DALK	Dalny	4.56	213	PN	Pn	04 36 10.5	+2.5
DALK	Dalny	4.56	213	eP	Pn	04 36 10.5	+2.5
PET	Petropavlovsk	4.60	213		Pn	04 36 11.2	+2.7
PET				Sn	Sn	04 37 04.0	+2.2
PET	Petropavlovsk	4.60	213	ePN	Pn	04 36 11.2	+2.7
PET				eS	Sn	04 37 05.4	+3.7
PET				pmax	pmax		
	comp=Z,436nm,0.6s						
PET				smax	smax		
	comp=N,647nm,0.7s						
PET				smax	smax		
	comp=E,425nm,0.6s						
PET	Petropavlovsk	4.60	213	eP	Pn	04 36 11.4	+2.9
PEA0B	Petropavlovsk-	4.84	220	Pn	Pn	04 36 14.4	+2.6
PEA0B	Petropavlovsk-	4.84	220	cePN	Pn	04 36 14.3	+2.4
PETK	Petropavlovsk-	4.84	220	Pn	Pn	04 36 13.5	+1.6
	comp=E,12nm,0.3s,baz=65,slow=15,SNR=46						
PETK				Sn	Sb	04 37 17.3	-4.8
	baz=216,slow=42						
PETK	Petropavlovsk-	4.84	220	Pn	Pn	04 36 14.2	+2.3
PETK	Petropavlovsk-	4.84	220	PN	Pn	04 36 14.2	+2.3
KRMR	Karymshinskiy	4.93	215	PN	Pn	04 36 15.8	+2.7
KRMR	Karymshinskiy	4.93	215	eP	Pn	04 36 15.8	+2.7
RUS	Russkaya	5.16	211	PN	Pn	04 36 18.4	+2.2
RUS	Russkaya	5.16	211	eP	Pn	04 36 18.4	+2.2
APC	Apacha	5.18	222	PN	Pn	04 36 19.7	+3.2
APC	Apacha	5.18	222	eP	Pn	04 36 19.7	+3.2
GRL	Gorelyy	5.18	214	PN	Pn	04 36 20.7	+4.0
GRL	Gorelyy	5.18	214	eP	Pn	04 36 20.7	+4.0
MTVR	Mutnovka	5.21	213	PN	Pn	04 36 20.1	+3.0
MTVR	Mutnovka	5.21	213	eP	Pn	04 36 20.1	+3.0
KMSK	Kamenskaya	5.81	16	PN	Pn	04 36 26.5	+1.4
KMSK	Kamenskaya	5.81	16	eP	Pn	04 36 26.5	+1.4
KDTR	Khodutka, Kamc	5.84	210	PN	Pn	04 36 26.9	+1.4
KDTR	Khodutka, Kamc	5.84	210	eP	Pn	04 36 26.9	+1.4
PAU	Pauzhetka	6.52	215	PN	Pn	04 36 38.7	+3.9
PAU	Pauzhetka	6.52	215	eP	Pn	04 36 38.7	+3.9
MA2	Magadan	6.90	298	Pn	Pn	04 36 42.1	+2.0
	comp=E,0.9nm,0.3s,baz=114,slow=17,SNR=1.9						
MA2				Sn	Sn	04 37 57.2	-1.2
	comp=E,0.8nm,0.3s,baz=156,slow=21,SNR=1.6						
	comp=E,3.4nm,0.3s						
MA2	Magadan	6.90	298	Pn	Pn	04 36 45.1	+5.0
SKR	Severo-Kuril's	7.42	215	ePN	Pn	04 36 50.4	+3.2
SKR				pmax	pmax		
	comp=Z,69nm,0.5s						
SKR				MLR	MLR		
	comp=N,17μm,11.0s						
SKR				MLR	MLR		
	comp=Z,11μm,11.0s						
SKR				MLR	MLR		
	comp=E,16μm,12.0s						
SHEM	Shemya Is, Ala	7.74	118	Pn	Pn	04 36 51.0	-0.6
	comp=E,6.1nm,0.3s,baz=14,slow=5.4,SNR=1.9						
SHEM				Sn	Sn	04 38 19.3	+0.3
	comp=E,2.9nm,0.3s,baz=258,slow=20,SNR=2.3						
	comp=E,48nm,0.7s						
SEY	Seymchan	7.98	323	Pn	Pn	04 36 58.3	+3.4
	baz=158,slow=5.2,SNR=1.9						
SEY				Sn	Sn	04 38 27.1	+2.2
	comp=E,0.4nm,0.3s,baz=0.9,slow=22,SNR=1.7						
SEY	Seymchan	7.98	323	i PN	Pn	04 36 57.3	+2.4
BILL	Bilibino	11.26	7	i PN	Pn	04 37 40.0	+0.3
BILL				pmax	pmax		
	comp=Z,2.0nm,1.4s						
YSS	Yuzh-Sakhalins	15.85	239	ceP	P	04 38 44.5	-1.2
YSS				pmax	pmax		
	comp=Z,39nm,0.8s						
TNA	Tin City	16.35	46		P	04 38 53.1	+2.0
TNA	Tin City	16.35	46	P	P	04 38 52.5	+1.3
	baz=252,SNR=19						
GRNR	Gornyy	16.70	260	⇑iP	P	04 38 55.8	+0.7
GRNR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,9μm,14.0s						
GRNR				MLR	MLR		
	comp=N,7μm,15.0s						
GRNR				MLR	MLR		
	comp=Z,16μm,14.0s						
ANM	Nome	17.14	51		P	04 39 00.4	+0.5
ANM	Nome	17.14	51	P	P	04 39 00.4	+0.5
ANM				pmax	pmax		
	comp=Z,18nm,1.1s						
ANM	Nome	17.14	51	P	P	04 39 01.7	+1.8
	baz=258,SNR=12						
YAK	Yakutsk	17.46	301	P	Pn	04 39 03.5	+1.3
	comp=Z,15nm,0.4s,baz=86,slow=8.6,SNR=1.0						
YAK	Yakutsk	17.46	301	eP	P	04 39 03.9	+0.5
YAK				pmax	pmax		
	comp=Z,38nm,1.1s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,16nm,1.6s						
JKA	Kamikawa-asahi	18.08	233	P	P	04 39 11.8	+1.4
JKA				IAmb	IAmb	04 39 13.4	
	comp=Z,90nm,0.9s						
ASAJ	Asahikawa	18.08	233	P	P	04 39 11.0	+0.6
	comp=Z,5.3nm,0.3s,baz=59,slow=7.1,SNR=47						
	comp=Z,71nm,0.8s						
ASAJ	Asahikawa	18.08	233	P	P	04 39 11.8	+1.4
ASAJ				pmax	pmax		
	comp=Z,90nm,0.9s						
RDOG	Red Dog Mine	19.03	40	P	Pn	04 39 22.2	+0.8
	baz=251						
S12K	Black Hills	19.38	79	P	Pn	04 39 28.1	+2.4
	baz=288						
JEM	Erimo	19.55	229	P	P	04 39 26.4	-0.1
ERM	Erimo	19.55	229	P	P	04 39 26.3	-0.2
ERM				IAmb	IAmb	04 39 32.0	
	comp=Z,94nm,0.6s						
ERM	Erimo	19.55	229	P	P	04 39 26.4	-0.1
ERM	Erimo	19.55	229	ceP	Pn	04 39 27.6	-0.2
ERM				pmax	pmax		
	comp=Z,86nm,0.7s						
N16K	Nishlik Lake	20.05	64	P	Pn	04 39 34.5	+0.8
	baz=276						
KLR	Kul'dur	20.06	261	P	P	04 39 32.3	+0.2
	comp=Z,4.7nm,0.8s,baz=52,slow=12,SNR=7.7						
	comp=Z,4.7nm,0.8s						
KLR	Kul'dur	20.06	261	ceP	P	04 39 32.6	+0.5
KLR				pmax	pmax		
	comp=Z,12nm,1.1s						
ZEA	Zeya	20.35	276	eP	Pn	04 39 37.3	+0.1
ZEA				pmax	pmax		
	comp=E,20nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.2s						
TIXI	Tiksi	20.40	329	P	P	04 39 37.1	+1.5
	comp=Z,23nm,0.8s,baz=90,slow=23,SNR=23						
	comp=Z,23nm,0.8s						
TIXI	Tiksi	20.40	329	P	P	04 39 36.5	+1.0
TIXI	Tiksi	20.40	329	ceP	Pn	04 39 37.6	-0.1
TIXI				pmax	pmax		
	comp=Z,27nm,0.7s						
O16K	Kokwok River B	20.52	66	P	Pn	04 39 39.9	+0.8
	baz=279						
P16K	Nushagak River	20.67	68	P	Pn	04 39 41.6	+0.7
	baz=281						
GCSA	Galena City Sc	20.79	51	P	Pn	04 39 42.1	-0.2
	baz=267						
O17K	Koliganek Bris	20.98	65	P	Pn	04 39 43.5	-1.1
	baz=280						
TTA	Tatalina	21.16	56	P	P	04 39 43.8	-0.2
TTA	Tatalina	21.16	56	P	P	04 39 43.8	-0.2
TTA				pmax	pmax		
	comp=Z,61nm,1.4s						
TTA	Tatalina	21.16	56	P	P	04 39 45.5	+1.5
	baz=272,SNR=9.9						
JTM	Tenmabayashi	21.44	230	P	P	04 39 45.9	-1.1
L19K	White Mountain	21.75	58	P	P	04 39 55.7	+5.5
L19K	White Mountain	21.75	58	P	P	04 39 52.3	+2.1
	baz=275						
HEH	HeiHe	21.87	267	P	P	04 39 50.0	-1.6
HEH				pmax	pmax		
	comp=Z,13nm,0.8s						
O18K	Koktuh Hills	21.91	65	P	P	04 39 53.7	+1.8
O18K	Koktuh Hills	21.91	65	P	P	04 39 54.5	+2.5
	baz=280						
M19K	Big River Lodg	22.00	59	P	P	04 39 56.2	+3.4
M19K	Big River Lodg	22.00	59	P	P	04 39 55.0	+2.1
	baz=276						
K20K	Telida	22.02	55	P	P	04 39 54.3	+1.1
K20K	Telida	22.02	55	P	P	04 39 55.1	+1.9
	baz=273,SNR=22						
N19K	Bonanza Creek	22.10	62	P	P	04 39 57.4	+3.3
IMAR	Indian Mountai	22.17	48	P	P	04 39 56.0	+1.3
L20K	Farewell, AK	22.18	58	P	P	04 39 55.7	+0.9
	baz=275						
A21K	Barrow	22.18	34	P	P	04 39 55.8	+1.0
A21K				IAmb	IAmb	04 40 01.6	
	comp=Z,43nm,1.0s						
Q18K	Katmai Hardscr	22.27	68	P	P	04 39 57.1	+1.2
	baz=284						
G21K	Allakaket	22.30	47	P	P	04 39 57.1	+1.0
	baz=265						
F21K	Alatna River	22.37	45	P	P	04 39 58.0	+1.1
	baz=264						
H21K	Melozitna Rive	22.54	49	P	P	04 39 59.9	+1.2
	baz=268						
M20K	Styx River	22.59	59	P	P	04 40 00.7	+1.4
	baz=277						
CHUM	Lake Minchumin	22.78	54	P	P	04 40 01.9	+0.8
	baz=273,SNR=5.6						
I21K	Tanana	22.88	50	P	P	04 40 03.0	+0.7
	baz=270,SNR=18						
F22K	John River	22.90	44	P	P	04 40 03.7	+1.2
	baz=264,SNR=16						
PPLA	Purkeypile	22.91	56	P	P	04 40 03.6	+0.8
PPLA				IAmb	IAmb	04 40 13.8	
	comp=Z,55nm,1.3s						
PPLA	Purkeypile	22.91	56	P	P	04 40 03.9	+1.1
	baz=275,SNR=7.3						
CAST	Castle Rocks	22.91	55	P	P	04 40 03.4	+0.8
CAST				IAmb	IAmb	04 40 10.6	
	comp=Z,82nm,1.9s						
CAST	Castle Rocks	22.91	55	P	P	04 40 03.5	+0.8
	baz=274,SNR=5.4						
RSO	Redoubt South	23.00	63	P	P	04 40 07.5	+3.8
SPCR	Spurr Chakacha	23.13	61	P	P	04 40 04.7	-0.2
	baz=279						
O20K	Slope Mountain	23.14	63	P	P	04 40 05.8	+0.8
	baz=282						
USA0B	Ussuriysk Arra	23.14	250	i P	P	04 40 05.2	+0.1
USRK	Ussuriysk Ar.	23.14	250	P	P	04 40 03.8	-1.2
	comp=Z,5.4nm,0.6s,baz=61,slow=15,SNR=4.4						
	comp=Z,5.4nm,0.6s						
SPU	Mount Spurr	23.20	61	P	P	04 40 06.8	+1.2
SKT	Skwentna	23.33	58	P	P	04 40 07.9	+1.0
	baz=278,SNR=5.1						
BPAW	Bear Paw Mtn.	23.35	53	P	P	04 40 07.9	+0.8
BPAW				IAmb	IAmb	04 40 15.7	
	comp=Z,101nm,1.8s						
BPAW	Bear Paw Mtn.	23.35	53	P	P	04 40 07.6	+0.5
	baz=274,SNR=13						
MLY	Manley	23.41	51	P	P	04 40 09.0	+1.3
MLY				IAmb	IAmb	04 40 15.5	
	comp=Z,88nm,1.7s						
MLY	Manley	23.41	51	P	P	04 40 07.9	+0.2
	baz=272,SNR=26						
KTH	Kantishna Hill	23.42	54	P	P	04 40 08.7	+0.9
KTH				IAmb	IAmb	04 40 13.9	
	comp=Z,46nm,1.2s						
D23K	Nanushuk River	23.62	41	P	P	04 40 10.1	+0.4
	baz=262						
COLD	Coldfoot	23.65	45	P	P	04 40 10.3	+0.4
	baz=267						
G23K	Bananza Creek	23.70	46	P	P	04 40 10.4	-0.1
	baz=268						
TRF	Thorofare Moun	23.71	55	P	P	04 40 11.9	+1.1
TRF				IAmb	IAmb	04 40 19.2	
	comp=Z,78nm,1.0s						
TRF	Thorofare Moun	23.71	55	P	P	04 40 11.1	+0.3
	baz=276,SNR=29						
KDAK	Kodiak Island	23.73	69	P	P	04 40 10.0	-0.8
	comp=Z,4.1nm,0.7s,baz=24,slow=14,SNR=1.6						
	comp=Z,4.1nm,0.7s						
KDAK	Kodiak Island	23.73	69	P	P	04 40 10.0	-0.8
SUA	Susitna One	23.78	60	IAmb	IAmb	04 40 17.5	
	comp=Z,38nm,0.9s						
SUA	Susitna One	23.78	60	P	P	04 40 11.8	+0.4
	baz=280,SNR=20						
CUT	Chulitna	23.85	57	P	P	04 40 12.8	+0.9
	baz=278						
H23K	Yukon River	23.89	49	IAmb	IAmb	04 40 19.3	
	comp=Z,51nm,1.1s						
E23K	Chandalar	23.92	43	P	P	04 40 13.2	+0.5
	baz=266						
I23K	Minto, Yukon-K	23.99	50	IAmb	IAmb	04 40 20.3	
	comp=Z,58nm,1.2s						
I23K	Minto, Yukon-K	23.99	50	P	P	04 40 13.8	+0.6
	baz=272,SNR=27						
BWN	Browne	24.01	53	IAmb	IAmb	04 40 20.9	
	comp=Z,80nm,1.1s						
JMM	Marumori	24.03	227	P	P	04 40 10.8	-3.0
FIS	Fire Island	24.09	60	IAmb	IAmb	04 40 38.7	
	comp=Z,154nm,1.8s						
MDJ	Mudanjiang	24.10	254	P	P	04 40 14.0	-0.4
NEA2	Nenana	24.15	52	IAmb	IAmb	04 40 23.0	
	comp=Z,27nm,0.9s						
NEA2	Nenana	24.15	52	P	P	04 40 16.1	+1.4
	baz=274						
MCK	McKinley	24.29	54	IAmb	IAmb	04 40 22.7	
	comp=Z,41nm,1.0s						
MCK	McKinley	24.29	54	P	P	04 40 16.7	+0.7
	baz=276,SNR=22						
RC01	Rabbit Creek A	24.33	60	P	P	04 40 16.7	+0.3
	baz=281						
E24K	Your Creek	24.34	43	P	P	04 40 17.4	+0.8
	baz=267,SNR=30						
C24K	Franklin Bluff	24.41	39	P	P	04 40 17.9	+0.8
	baz=263,SNR=16						
MDM	Murphy Dome	24.48	51	IAmb	IAmb	04 40 26.4	
	comp=Z,27nm,1.0s						
F24K	Squaw Lake	24.55	45	P	P	04 40 19.0	+0.6
	baz=268						
H24K	Noodor Dome	24.57	49	IAmb	IAmb	04 40 25.6	
	comp=Z,37nm,1.3s						
H24K	Noodor Dome	24.57	49	P	P	04 40 19.8	+1.1
	baz=272						
WRH	Wood River Hil	24.58	52	IAmb	IAmb	04 40 25.2	
	comp=Z,51nm,0.9s						
TCOL	CIGO, UAF Yank	24.64	51	IAmb	IAmb	04 40 26.3	
	comp=Z,36nm,0.9s						
TCOL	CIGO, UAF Yank	24.64	51	P	P	04 40 20.2	+1.0
	baz=274						
COLA	College	24.65	51	P	P	04 40 19.8	+0.5
COLA				IAmb	IAmb	04 40 26.3	
	comp=Z,43nm,1.0s						
COLA	College	24.65	51	i P	P	04 40 18.8	-0.4
COLA				pmax	pmax		
	comp=Z,34nm,1.0s						
COLA	College	24.65	51	P	P	04 40 19.9	+0.7
	baz=274						
CCB	Clear Creek Bu	24.69	51	P	P	04 40 19.9	+0.4
CCB				IAmb	IAmb	04 40 26.1	
	comp=Z,52nm,0.9s						
G24K	Hadweenzic Riv	24.71	47	P	P	04 40 20.9	+1.1
	baz=271						
POKR	Poker Plat Res	24.80	50	P	P	04 40 21.1	+0.4
POKR	Poker Plat Res	24.80	50	P	P	04 40 21.8	+1.1
	baz=274						
SML	Sawmill	24.85	58	P	P	04 40 21.6	+0.5
SML				IAmb	IAmb	04 40 31.2	
	comp=Z,20nm,0.8s						
SML	Sawmill	24.85	58	P	P	04 40 21.0	-0.2
	baz=281						
KNK	Knik Glacier	24.87	59	P	P	04 40 20.9	-0.4
KNK				IAmb	IAmb	04 40 28.7	
	comp=Z,26nm,0.8s						
KNK	Knik Glacier	24.87	59	P	P	04 40 21.8	+0.4
	baz=281						
PWL	Port Wells	25.04	60	P	P	04 40 22.3	-0.6
PWL				IAmb	IAmb	04 40 27.1	
	comp=Z,34nm,0.8s						
PWL	Port Wells	25.04	60	P	P	04 40 23.0	+0.1
	baz=283						

IL31		**25.07**	**51**	P	**P**	**04 40 23.6**	**+0.6**
IL31				IAmb	IAmb	04 40 29.7	
	comp=Z,29nm,0.8s						
ILAR	**Eielson Array**	**25.07**	**51**	P	**P**	**04 40 22.5**	**-0.5**
	comp=Z,7.9nm,0.7s,baz=256,slow=6.3,SNR=45						
ILAR				PcP	**PcP**	**04 43 55.9**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=208,slow=2.0,SNR=1.6						
	comp=Z,7.9nm,0.7s						
HDA	**Harding Lake**	**25.08**	**52**	P	**P**	**04 40 22.8**	**-0.4**
	baz=276						
M23K	**Glacier View**	**25.13**	**58**	P	**P**	**04 40 23.4**	**-0.4**
	baz=281,SNR=12						
D25K	**Kavik River**	**25.19**	**40**	P	**P**	**04 40 24.2**	**0.0**
	baz=266,SNR=28						
G25K	**Bearman Lake**	**25.25**	**46**	P	**P**	**04 40 24.7**	**0.0**
	baz=272						
SCM	**Sheep Creek Mo**	**25.31**	**58**	IAmb	IAmb	04 40 34.1	
	comp=Z,59nm,0.8s						
SCM	**Sheep Creek Mo**	**25.31**	**58**	P	**P**	**04 40 26.0**	**+0.6**
	baz=281						
F25K	**Christian Rive**	**25.41**	**44**	P	**P**	**04 40 26.6**	**+0.3**
	baz=270						
E25K	**Arctic Village**	**25.44**	**43**	P	**P**	**04 40 26.8**	**+0.4**
	baz=269,SNR=27						
PRP	**Porcupine Dome**	**25.57**	**49**	IAmb	IAmb	04 40 33.5	
	comp=Z,27nm,1.0s						
PRP	**Porcupine Dome**	**25.57**	**49**	P	**P**	**04 40 28.1**	**+0.3**
	baz=275,SNR=17						
FYU	**Fort Yukon**	**25.61**	**47**	IAmb	IAmb	04 40 37.6	
	comp=Z,62nm,1.3s						
K24K	**Donnelly Dome**	**25.67**	**53**	P	**P**	**04 40 28.6**	**0.0**
	baz=278						
C26K	**Camden Bay**	**25.74**	**39**	P	**P**	**04 40 30.1**	**+1.1**
	baz=266,SNR=64						
M24K	**Tolsona, Glenn**	**25.79**	**57**	P	**P**	**04 40 30.5**	**+0.8**
	baz=282						
BOD	**Bodaibo**	**25.90**	**293**	*e*P	**P**	**04 40 31.1**	**+0.5**
BOD				pmax	pmax		
	comp=Z,56nm,1.4s						
PAX	**Paxson**	**25.94**	**55**	P	**P**	**04 40 32.2**	**+1.0**
	baz=280						
F26K	**Sheenjek River**	**25.98**	**44**	P	**P**	**04 40 32.2**	**+0.8**
	baz=272						
KLU	**Klutina**	**26.04**	**58**	IAmb	IAmb	04 40 41.4	
	comp=Z,30nm,1.1s						
KLU	**Klutina**	**26.04**	**58**	P	**P**	**04 40 32.6**	**+0.6**
	baz=283						
RIDG	**Independent Ri**	**26.09**	**53**	P	**P**	**04 40 32.0**	**-0.4**
	baz=279,SNR=7.5						
C27K	**Jago River**	**26.14**	**40**	P	**P**	**04 40 33.3**	**+0.6**
	baz=268						
G26K	**Porcupine Rive**	**26.16**	**46**	P	**P**	**04 40 33.8**	**+0.9**
	baz=273						
MJB9	**Matsu-Tunnel**	**26.22**	**229**	P	**P**	**04 40 34.1**	**+0.3**
MAJO	**Matsushiro**	**26.22**	**229**	P	**P**	**04 40 34.0**	**+0.3**
MAJO	**Matsushiro**	**26.22**	**229**	*i* P	**P**	**04 40 32.8**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,15nm,0.9s						
MJAR	**Matsushiro Arr**	**26.22**	**229**	P	**P**	**04 40 32.9**	**-0.8**
	comp=Z,12nm,0.9s,baz=23,slow=8.4,SNR=18						
	comp=Z,12nm,0.9s						
SCRK	**Sand Creek**	**26.42**	**53**	IAmb	IAmb	04 40 39.6	
	comp=Z,23nm,0.9s						
SCRK	**Sand Creek**	**26.42**	**53**	P	**P**	**04 40 35.1**	**-0.4**
	baz=279,SNR=16						
I26K	**Coal Creek Min**	**26.58**	**49**	P	**P**	**04 40 37.2**	**+0.4**
	baz=277						
N25K	**Chitina, Valde**	**26.63**	**58**	P	**P**	**04 40 37.9**	**+0.6**
	baz=284						
L26K	**Log Cabin Wild**	**26.88**	**54**	P	**P**	**04 40 40.0**	**+0.4**
	baz=282						
E27K	**Coleen River**	**26.93**	**43**	P	**P**	**04 40 40.3**	**+0.4**
	baz=273						
G27K	**Doyon Strip**	**27.01**	**46**	P	**P**	**04 40 41.4**	**+0.8**
	baz=276						
H27K	**Steamboat Moun**	**27.13**	**47**	P	**P**	**04 40 42.5**	**+0.8**
	baz=277						
I27K	**Kandik River**	**27.17**	**49**	P	**P**	**04 40 42.0**	**-0.1**
	baz=278						
M26K	**Nabesna, AK**	**27.18**	**56**	IAmb	IAmb	04 40 50.6	
	comp=Z,27nm,1.1s						
M26K	**Nabesna, AK**	**27.18**	**56**	P	**P**	**04 40 42.8**	**+0.6**
	baz=283						
K27K	**Chicken**	**27.24**	**52**	IAmb	IAmb	04 40 48.4	
	comp=Z,26nm,1.2s						
K27K	**Chicken**	**27.24**	**52**	P	**P**	**04 40 42.4**	**-0.4**
	baz=281						
EGAK	**Eagle**	**27.50**	**50**	IAmb	IAmb	04 40 49.3	
	comp=Z,21nm,0.8s						
EGAK	**Eagle**	**27.50**	**50**	P	**P**	**04 40 44.6**	**-0.4**
	baz=280,SNR=14						
L27K	**Beaver Creek,**	**27.55**	**54**	IAmb	IAmb	04 40 53.7	
	comp=Z,21nm,1.1s						
L27K	**Beaver Creek,**	**27.55**	**54**	P	**P**	**04 40 45.5**	**-0.1**
	baz=283						
M27K	**Edge Creek, AK**	**27.69**	**56**	IAmb	IAmb	04 40 57.5	
	comp=Z,25nm,1.1s						
M27K	**Edge Creek, AK**	**27.69**	**56**	P	**P**	**04 40 47.1**	**+0.2**
	baz=284						
BVCY	**Beaver Creek**	**28.14**	**55**	P	**P**	**04 40 51.0**	**+0.2**
	baz=284						
DAWY	**Dawson**	**28.39**	**51**	P	**P**	**04 40 53.1**	**+0.1**
	baz=282						
YUK3	**Moose Creek**	**28.49**	**56**	P	**P**	**04 40 54.1**	**-0.1**
	baz=286						
I29M	**Ogilvie Camp,**	**28.58**	**49**	IAmb	IAmb	04 41 00.7	
	comp=Z,39nm,1.3s						
I29M	**Ogilvie Camp,**	**28.58**	**49**	P	**P**	**04 40 54.6**	**0.0**
	baz=281,SNR=14						
O28M	**Mount Upton**	**28.91**	**58**	P	**P**	**04 40 57.2**	**-0.8**
	baz=288						
YUK8	**Steele Glacier**	**28.95**	**57**	P	**P**	**04 40 58.2**	**-0.1**
	baz=287						
EPYK	**Eagle Plains**	**29.02**	**46**	P	**P**	**04 40 58.5**	**-0.2**
	baz=280						
G30M	**tAoh Zraii Nji**	**29.11**	**45**	P	**P**	**04 40 59.6**	**+0.3**
	baz=280						
L29M	**L29M**	**29.17**	**53**	P	**P**	**04 41 00.5**	**+0.5**
	baz=285,SNR=9.0						
M29M	**Somme Creek**	**29.21**	**55**	P	**P**	**04 41 01.0**	**+0.7**
	baz=286						
K29M	**Barlow Dome**	**29.25**	**52**	P	**P**	**04 41 00.7**	**0.0**
	baz=284						
YUK4	**Talbot Arm**	**29.45**	**57**	P	**P**	**04 41 02.9**	**+0.3**
	baz=288						
PNL	**Peninsula**	**29.65**	**60**	P	**P**	**04 41 04.5**	**+0.3**
	baz=290						
INK	**Inuvik**	**29.90**	**42**	P	**P**	**04 41 05.8**	**-0.4**
	comp=Z,3.5nm,0.8s,baz=281,slow=6.9,SNR=7.8						
INK				PcP	**PcP**	**04 44 08.5**	**-0.1**
	comp=Z,2.0nm,0.9s,baz=295,slow=4.8,SNR=3.2						
	comp=Z,3.5nm,0.8s						
INK	**Inuvik**	**29.90**	**42**	IAmb	IAmb	04 41 13.8	
	comp=Z,30nm,1.5s						
INK	**Inuvik**	**29.90**	**42**	P	**P**	**04 41 06.5**	**+0.3**
	baz=280						
M30M	**Minto, Yukon**	**29.91**	**54**	P	**P**	**04 41 06.8**	**+0.3**
	baz=287						
F31M	**Tsiigehtchic**	**29.98**	**44**	P	**P**	**04 41 07.4**	**+0.4**
	baz=281						
MAYO	**Mayo, Yukon**	**30.01**	**52**	P	**P**	**04 41 07.4**	**+0.1**
	baz=286						
N30M	**Aishikik Lake**	**30.12**	**56**	P	**P**	**04 41 08.7**	**+0.3**
	baz=289						
HYT	**Haines Junctio**	**30.14**	**57**	IAmb	IAmb	04 41 14.7	
	comp=Z,20nm,1.0s						
HYT	**Haines Junctio**	**30.14**	**57**	P	**P**	**04 41 09.3**	**+0.6**
	baz=289,SNR=5.9						
KSRS	**Korea Array**	**30.21**	**245**	P	**P**	**04 41 07.4**	**-1.9**
	comp=Z,3.2nm,0.7s,baz=34,slow=8.6,SNR=9.2						
KSRS				PcP	**PcP**	**04 44 10.2**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=52,slow=1.5,SNR=6.1						
	comp=Z,3.2nm,0.7s						
N31M	**Braeburn, Yuko**	**30.71**	**56**	P	**P**	**04 41 14.4**	**+0.9**
	baz=289						
O30N	**Mendenhall**	**30.81**	**57**	P	**P**	**04 41 15.7**	**+1.2**
	baz=290						
M31M	**Drury Creek, Y**	**31.09**	**54**	IAmb	IAmb	04 41 23.4	
	comp=Z,19nm,1.0s						
M31M	**Drury Creek, Y**	**31.09**	**54**	P	**P**	**04 41 17.9**	**+1.0**
	baz=289,SNR=10						
FARO	**Faro, Yukon**	**31.54**	**53**	IAmb	IAmb	04 41 27.1	
	comp=Z,15nm,1.1s						
FARO	**Faro, Yukon**	**31.54**	**53**	P	**P**	**04 41 21.5**	**+0.6**
	baz=290,SNR=8.7						
A36M	**Sachs Harbour**	**32.03**	**34**	P	**P**	**04 41 26.5**	**+1.5**
A36M				IAmb	IAmb	04 41 31.4	
	comp=Z,33nm,0.9s						
A36M	**Sachs Harbour**	**32.03**	**34**	P	**P**	**04 41 25.7**	**+0.7**
	baz=280,SNR=22						
N32M	**Quiet Lake**	**32.04**	**55**	P	**P**	**04 41 26.0**	**+0.6**
	baz=292						
MMPY	**Sheldon Lake,**	**32.32**	**52**	P	**P**	**04 41 28.5**	**+0.8**
	baz=290						
P33M	**Teslin, Yukon**	**32.52**	**57**	P	**P**	**04 41 30.6**	**+1.0**
	baz=293						
S32K	**Killisnoo**	**32.84**	**62**	P	**P**	**04 41 32.6**	**+0.4**
	baz=296						
C36M	**Paulatuk**	**33.02**	**39**	P	**P**	**04 41 34.3**	**+0.6**
C36M				IAmb	IAmb	04 41 39.1	
	comp=Z,27nm,0.8s						
C36M	**Paulatuk**	**33.02**	**39**	P	**P**	**04 41 34.4**	**+0.8**
	baz=286,SNR=25						
Q32M	**Nakina River**	**33.30**	**59**	P	**P**	**04 41 37.2**	**+0.7**
	baz=295						
NRIK	**Noril'sk**	**33.77**	**322**	P	**P**	**04 41 39.6**	**-0.6**
	comp=Z,4.4nm,0.9s,baz=82,slow=9.9,SNR=3.7						
NRIK				PcP	**PcP**	**04 44 19.5**	**+0.5**
	comp=Z,4.3nm,0.7s,baz=106,slow=3.1,SNR=4.1						
	comp=Z,4.4nm,0.9s						
NRIK	**Noril'sk**	**33.77**	**322**	*ce*P	**P**	**04 41 40.4**	**+0.2**
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
S34M	**Telegraph Cree**	**34.30**	**60**	P	**P**	**04 41 46.1**	**+1.1**
	baz=297						
WTLY	**Watson Lake, Y**	**34.40**	**55**	P	**P**	**04 41 47.1**	**+1.2**
	baz=295						
DLBC	**Dease Lake**	**34.58**	**59**	IAmb	IAmb	04 41 56.2	
	comp=Z,18nm,1.1s						
DLBC	**Dease Lake**	**34.58**	**59**	P	**P**	**04 41 48.7**	**+1.2**
	baz=297						
SONM	**Songino Array**	**34.70**	**279**	P	**P**	**04 41 48.5**	**-0.2**
	comp=Z,1.8nm,0.5s,baz=55,slow=10,SNR=8.1						
SONM				PcP	**PcP**	**04 44 22.2**	**-0.1**
	comp=Z,2.8nm,0.8s,baz=20,slow=0.8,SNR=7.2						
	comp=Z,1.8nm,0.5s						
T35M	**Bob Quinn**	**35.16**	**61**	P	**P**	**04 41 54.1**	**+1.7**
	baz=299						
LIRD	**Liard River Hi**	**35.93**	**56**	P	**P**	**04 42 00.4**	**+1.4**
	baz=298						
HHC	**Hu-ho-hao-te**	**36.38**	**266**	*e*P	**P**	**04 42 04.8**	**+1.6**
KOTAN	**Kotaneelee Air**	**36.51**	**54**	P	**P**	**04 42 05.1**	**+1.2**
	baz=298						
BTO	**Baotou**	**37.40**	**267**	*e*P	**P**	**04 42 12.5**	**+0.7**
BTO				pP	**sP**	**04 42 17.0**	**-0.5**
BTO				PP	**PnPn**	**04 43 40.0**	**+2.4**
BTO				S	**S**	**04 48 01.0**	**+1.5**
BTO				SS	**SnSn**	**04 50 28.0**	**-8.0**
BTO				ScS	**ScS**	**04 52 27.5**	**+2.4**
BTO				pmax	pmax		
	comp=Z,120nm,0.8s						
EUNU	**Eureka**	**37.83**	**15**	IAmb	IAmb	04 42 21.1	
	comp=Z,14nm,0.8s						
NJ2	**Nanjing**	**39.05**	**249**	*e*P	**P**	**04 42 25.0**	**-0.6**
NJ2				pP	**pP**	**04 42 28.5**	**-1.2**
NJ2				sP	**sP**	**04 42 29.5**	**-1.8**
NJ2				pmax	pmax		
	comp=Z,60nm,0.8s						
YKA	**Yellowknife Ar**	**39.31**	**47**	P	**P**	**04 42 27.6**	**+0.1**
	comp=Z,7.9nm,0.7s,baz=299,slow=7.8,SNR=55						
YKA				PcP	**PcP**	**04 44 36.0**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=303,slow=4.0,SNR=0.8						
	comp=Z,7.9nm,0.7s						
YKA	**Yellowknife Ar**	**39.31**	**47**	*ce*P	**P**	**04 42 28.1**	**+0.6**
YKA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ZALV	**Zalesovo Beam**	**42.11**	**300**	P	**P**	**04 42 50.1**	**-0.6**
	comp=Z,1.9nm,0.7s,baz=52,slow=7.7,SNR=6.7						
ZALV				PcP	**PcP**	**04 44 44.7**	**-0.3**
	comp=Z,7.9nm,0.7s,baz=32,slow=3.9,SNR=15						
	comp=Z,1.9nm,0.7s						
DGZ	**Jazzator, Alta**	**43.47**	**294**	*i* P	**P**	**04 43 02.2**	**+0.2**
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GTA	**Gaotai**	**43.83**	**274**	*e*P	**P**	**04 43 05.3**	**+0.3**
GTA				pP	sP	04 43 10.3	-0.3
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LZH	**Lanzhou**	**44.02**	**268**	⇓P	**P**	**04 43 07.5**	**+0.9**
LZH				pP	sP	04 43 13.5	+1.3
LZH				sP	pP	04 43 16.3	+5.6
LZH				pmax	pmax		
	comp=Z,73nm,0.9s						
NEEM	**North Greenlan**	**44.23**	**10**	*i* P	**P**	**04 43 07.3**	**-0.7**
EDM	**Edmonton**	**45.27**	**57**	P	**P**	**04 43 17.5**	**+1.3**
EDM				IAmb	IAmb	04 43 22.6	
	comp=Z,39nm,1.0s						
EDM	**Edmonton**	**45.27**	**57**	P	**P**	**04 43 17.5**	**+1.3**
EDM				pmax	pmax		
	comp=Z,39nm,1.0s						
B08A	**Colville Reser**	**45.55**	**66**	P	**P**	**04 43 20.2**	**+1.7**
KULLO	**Kullorsuaq**	**46.09**	**14**	*i* P	**P**	**04 43 21.4**	**-0.9**
DAG	**Danmarks Havn**	**46.56**	**0**	*i* P	**P**	**04 43 25.0**	**-1.0**
NEW	**Newport**	**46.72**	**65**	P	P	04 43 32.4	+4.8
NEW				IAmb	IAmb	04 43 35.5	
	comp=Z,12nm,1.1s						
NEW	**Newport**	**46.72**	**65**	P	P	04 43 32.4	+4.7
NEW				pmax	pmax		
	comp=Z,12nm,1.2s						
NEW	**Newport**	**46.72**	**65**	P	**P**	**04 43 27.2**	**-0.5**
	baz=312						
KURK	**Kurchatov**	**47.10**	**300**	P	**P**	**04 43 30.5**	**-0.1**
KURK	**Kurchatov**	**47.10**	**300**	P	**P**	**04 43 30.5**	**-0.1**
KURK				pmax	pmax		
	comp=Z,30nm,1.0s						
KURK	**Kurchatov**	**47.10**	**300**	P	**P**	**04 43 30.4**	**-0.2**
KURBB	**Kurchatov Arra**	**47.21**	**300**	P	**P**	**04 43 31.0**	**-0.4**
	comp=Z,12nm,0.7s,baz=53,slow=7.9,SNR=74						
KURBB				PcP	**PcP**	**04 45 02.1**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=43,slow=3.4,SNR=4.8						
	comp=Z,12nm,0.7s						
WMQ	**Urumqi**	**47.25**	**288**	*e*P	**P**	**04 43 34.8**	**+2.8**
WALA	**Waterton Lakes**	**47.75**	**62**	IAmb	IAmb	04 43 41.5	
	comp=Z,18nm,0.8s						
UPNV	**Upernavik**	**47.82**	**15**	*i* P	**P**	**04 43 35.4**	**-0.5**
CD2	**Chengdu**	**47.97**	**263**	P	**P**	**04 43 37.5**	**-0.1**
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
MK31	**Makanchi Array**	**47.97**	**294**	P	**P**	**04 43 36.9**	**-0.6**
MK31	**Makanchi Array**	**47.97**	**294**	P	**P**	**04 43 36.9**	**-0.6**
MK31				pmax	pmax		
	comp=Z,13nm,1.7s						
MKAR	**Makanchi Array**	**47.97**	**294**	P	**P**	**04 43 36.4**	**-1.1**
	comp=Z,1.9nm,0.6s,baz=50,slow=6.2,SNR=15						
MKAR				PcP	**PcP**	**04 45 04.6**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=58,slow=4.6,SNR=3.8						
	comp=Z,1.9nm,0.6s						
DBG	**Daneborg**	**49.02**	**1**	*i* P	**P**	**04 43 42.4**	**-2.8**
FFC	**Flin Flon**	**49.27**	**50**	P	**P**	**04 43 48.0**	**+0.8**
FFC	**Flin Flon**	**49.27**	**50**	P	**P**	**04 43 48.0**	**+0.8**
FFC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MSO	**Missoula**	**49.27**	**64**	P	**P**	**04 43 47.4**	**-0.1**
	baz=314						
BVAR	**Borovoye Array**	**49.28**	**307**	P	**P**	**04 43 47.2**	**-0.3**
	comp=Z,4.2nm,0.7s,baz=64,slow=6.8,SNR=13						
BVAR				PcP	**PcP**	**04 45 09.2**	**-0.8**
	comp=Z,2.5nm,0.6s,baz=60,slow=3.1,SNR=4.7						
	comp=Z,4.2nm,0.7s						
BRVK	**Borovoye**	**49.31**	**307**	*ce*P	**P**	**04 43 46.7**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,56nm,2.5s						
MOD	**Modoc Plateau**	**49.49**	**73**	IAmb	IAmb	04 43 57.7	
	comp=Z,19nm,1.3s						
FCC	**Fort Churchill**	**49.52**	**42**	IAmb	IAmb	04 43 54.3	
	comp=Z,15nm,0.8s						
SUMG	**Summit**	**49.94**	**8**	*i* P	**P**	**04 43 52.0**	**-0.6**
WVOR	**Wild Horse Val**	**49.98**	**71**	IAmb	IAmb	04 44 00.6	
	comp=Z,14nm,1.2s						
EGMT	**Eagleton**	**50.46**	**60**	IAmb	IAmb	04 44 03.5	
	comp=Z,20nm,0.9s						
EGMT	**Eagleton**	**50.46**	**60**	P	**P**	**04 43 56.9**	**+0.3**
	baz=315,SNR=10						
BOZ	**Bozeman (W)**	**51.28**	**64**	P	**P**	**04 44 03.5**	**+0.7**
	baz=316,SNR=8.2						
HLID	**Hailey**	**51.34**	**67**	P	**P**	**04 44 03.9**	**+0.5**
	baz=316						
ARU	**Arti**	**51.66**	**317**	P	**P**	**04 44 05.3**	**0.0**
	comp=Z,9.0nm,0.2s,baz=19,slow=4.0,SNR=9.6						
	comp=Z,9.0nm,0.2s						
ARU	**Arti**	**51.66**	**317**	*c i*P	**P**	**04 44 06.1**	**+0.8**
ARU				S	**S**	**04 51 24.9**	**-0.9**
ARU				SS	**SS**	**04 54 54.2**	**-7.2**
YMR	**Madison River**	**52.27**	**64**	IAmb	IAmb	04 44 18.6	
	comp=Z,13nm,1.0s						
LKWY	**Lake**	**52.62**	**64**	IAmb	IAmb	04 44 20.6	
	comp=Z,15nm,0.8s						
H17A	**Grant Village**	**52.66**	**64**	IAmb	IAmb	04 44 20.7	
	comp=Z,16nm,1.0s						
H17A	**Grant Village**	**52.66**	**64**	P	**P**	**04 44 15.7**	**+2.4**
	baz=316,SNR=14						
DGMT	**Dagmar**	**52.74**	**57**	IAmb	IAmb	04 44 19.1	
	comp=Z,21nm,0.9s						
DGMT	**Dagmar**	**52.74**	**57**	P	**P**	**04 44 14.4**	**+0.9**
	baz=316						
DGMT	**Dagmar**	**52.74**	**57**	P	**P**	**04 44 14.0**	**+0.5**
	baz=316						
RLMT	**Red Lodge**	**52.77**	**63**	IAmb	IAmb	04 44 20.3	
	comp=Z,21nm,0.9s						
RLMT	**Red Lodge**	**52.77**	**63**	P	**P**	**04 44 15.5**	**+1.4**
	baz=316,SNR=22						
FLWY	**Flagg Ranch**	**52.83**	**65**	IAmb	IAmb	04 44 31.5	
	comp=Z,15nm,0.9s						
IMW	**Indian Meadow**	**52.84**	**65**	IAmb	IAmb	04 44 21.8	
	comp=Z,18nm,1.3s						
NVAR	**Mina Array Bea**	**53.06**	**75**	P	**P**	**04 44 17.1**	**+0.8**
	comp=Z,4.1nm,0.9s,baz=293,slow=7.3,SNR=10						
	comp=Z,4.1nm,0.9s						
LAO	**LASA Array**	**53.10**	**59**	IAmb	IAmb	04 44 24.6	
	comp=Z,29nm,0.9s						
LAO	**LASA Array**	**53.10**	**59**	P	**P**	**04 44 17.5**	**+1.3**
	baz=317,SNR=16						
ICESG	**Greenland Ices**	**53.22**	**10**	*i* P	**P**	**04 44 15.2**	**-1.9**
KDJ	**Kajisay**	**53.86**	**293**	IAmb	IAmb	04 45 24.6	
	comp=Z,24nm,1.9s						
HWUT	**Hardware Ranch**	**54.21**	**67**	IAmb	IAmb	04 44 30.8	
	comp=Z,7.9nm,0.8s						
ULHL	**Ulahol**	**54.24**	**294**	P	**P**	**04 44 25.2**	**+0.3**
	SNR=6.3						
LCH	**Last Change Ra**	**54.30**	**75**	IAmb	IAmb	04 44 42.4	
	comp=Z,9.9nm,0.8s						
BW06	**Boulder Array**	**54.36**	**65**	P	**P**	**04 44 26.6**	**+1.0**
	baz=318,SNR=15						
PDAR	**Pinedale Array**	**54.36**	**65**	P	**P**	**04 44 26.4**	**+0.7**
	comp=Z,6.5nm,0.7s,baz=326,slow=3.0,SNR=37						
	comp=Z,6.5nm,0.7s						
USP	**Ospenovka**	**54.36**	**296**	P	**P**	**04 44 25.8**	**+0.4**
	SNR=7.2						
R11B	**Troy Canyon, C**	**54.55**	**73**	P	**P**	**04 44 27.8**	**+0.7**
	baz=318						
VES	**Vestal, Richgr**	**54.58**	**77**	P	**P**	**04 44 27.9**	**+0.8**
	baz=319						
DUG	**Dugway, Tooele**	**54.62**	**69**	P	**P**	**04 44 28.5**	**+1.0**
	baz=318						
CWC	**Cottonwood Cre**	**54.66**	**76**	P	**P**	**04 44 28.1**	**+0.1**
	baz=319						
SPR3	**Spring Creek 3**	**54.72**	**71**	IAmb	IAmb	04 44 38.7	
	comp=Z,20nm,1.1s						
SOEG	**Soedalen**	**54.73**	**6**	*i* P	**P**	**04 44 27.2**	**-0.5**
AAK	**Ala-Archa**	**54.82**	**296**	P	**P**	**04 44 29.7**	**+0.7**
	SNR=6.4						
AAK	**Ala-Archa**	**54.82**	**296**	P	**P**	**04 44 29.5**	**+0.4**
	comp=Z,13nm,0.9s,baz=37,slow=18,SNR=7.7						
	comp=Z,13nm,0.9s						
AAK	**Ala-Archa**	**54.82**	**296**	P	**P**	**04 44 32.1**	**+3.1**
AAK				IAmb	IAmb	04 44 36.6	
	comp=Z,26nm,1.2s						
AAK	**Ala-Archa**	**54.82**	**296**	*ce*P	**P**	**04 44 28.1**	**-0.9**
AAK				pmax	pmax		
	comp=Z,35nm,1.7s						
AAK	**Ala-Archa**	**54.82**	**296**	P	**P**	**04 44 29.4**	**+0.4**
AAK	**Ala-Archa**	**54.82**	**296**	P	**P**	**04 44 29.4**	**+0.4**
DY2G	**Dye2**	**54.99**	**14**	*i* P	**P**	**04 44 28.1**	**-1.8**
S11A	**Rachel**	**54.99**	**73**	IAmb	IAmb	04 44 54.6	
	comp=Z,23nm,1.4s						
ULM	**Lac du Bonnet**	**55.08**	**50**	P	**P**	**04 44 30.6**	**+0.1**
	comp=Z,6.8nm,0.7s,baz=310,slow=8.0,SNR=5.6						
	comp=Z,6.8nm,0.7s						
EKS2	**Erkin-Say**	**55.16**	**296**	P	**P**	**04 44 32.0**	**+0.6**
	SNR=6.3						
TPNV	**Topopah Spring**	**55.25**	**74**	IAmb	IAmb	04 44 40.9	
	comp=Z,12nm,0.9s						
TPNV	**Topopah Spring**	**55.25**	**74**	P	**P**	**04 44 33.3**	**+1.2**
	baz=319						
MPMC	**Manual Prospec**	**55.26**	**76**	P	**P**	**04 44 33.7**	**+1.4**
	baz=319						
FURC	**Furnace Creek,**	**55.29**	**75**	P	**P**	**04 44 33.9**	**+1.7**
	baz=319						
SBC	**Santa Barbara**	**55.30**	**79**	P	**P**	**04 44 33.4**	**+1.1**
	baz=319						
BSUT	**Blindstream Ca**	**55.41**	**68**	IAmb	IAmb	04 44 42.5	
	comp=Z,18nm,1.2s						
TNCH	**TengChong**	**55.43**	**263**	P	**P**	**04 44 33.5**	**-0.1**
TNCH				pmax	pmax		
	comp=Z,24µm,14.1s						
PRN	**Pahroc Range**	**55.54**	**73**	IAmb	IAmb	04 44 40.8	
	comp=Z,11nm,0.9s						
AML	**Almayashu**	**55.60**	**296**	P	**P**	**04 44 35.9**	**+1.1**
	SNR=5.5						
LRMC	**Laurel Mtn Rad**	**55.60**	**77**	P	**P**	**04 44 35.6**	**+1.0**
	baz=319						
GWY	**Greenwater Val**	**55.60**	**75**	IAmb	IAmb	04 44 43.3	
	comp=Z,17nm,1.2s						
QSM	**Queen of Sheba**	**55.66**	**76**	IAmb	IAmb	04 44 37.7	
	comp=Z,15nm,1.5s						
SCZ2	**Santa Cruz Isl**	**55.67**	**79**	P	**P**	**04 44 36.8**	**+1.7**
	baz=320						
E28A	**Huff**	**55.74**	**56**	P	**P**	**04 44 36.9**	**+1.5**
	baz=319,SNR=11						
EDW2	**Edwards Air Fo**	**55.88**	**77**	P	**P**	**04 44 38.5**	**+1.8**
	baz=319						
K22A	**Casper**	**55.94**	**63**	P	**P**	**04 44 37.9**	**+0.9**
	baz=318						
K22A	**Casper**	**55.94**	**63**	P	**P**	**04 44 37.0**	**0.0**
	baz=318						
RDMU	**Red Mountain**	**55.98**	**67**	IAmb	IAmb	04 44 43.4	
	comp=Z,11nm,1.1s						
RSSD	**Black Hills**	**56.03**	**60**	P	**P**	**04 44 38.6**	**+0.8**
RSSD				IAmb	IAmb	04 44 43.5	
	comp=Z,15nm,0.8s						
RSSD	**Black Hills**	**56.03**	**60**	P	**P**	**04 44 38.6**	**+0.8**
RSSD				pmax	pmax		
	comp=Z,15nm,0.8s						
RSSD	**Black Hills**	**56.03**	**60**	P	**P**	**04 44 38.7**	**+1.0**
	baz=319						
RSSD	**Black Hills**	**56.03**	**60**	P	**P**	**04 44 38.7**	**+1.0**
	baz=319,SNR=14						
TMUT	**Trail Mountain**	**56.11**	**69**	IAmb	IAmb	04 44 44.9	
	comp=Z,11nm,0.8s						
GSC	**Goldstone, Bar**	**56.20**	**76**	IAmb	IAmb	04 44 47.5	
	comp=Z,15nm,1.2s						
GSC	**Goldstone, Bar**	**56.20**	**76**	P	**P**	**04 44 40.2**	**+1.3**
	baz=319						
P18A	**Preston Nutter**	**56.35**	**68**	IAmb	IAmb	04 44 46.8	
	comp=Z,14nm,1.2s						
AKTO	**Aktyubinsk**	**56.41**	**312**	P	**P**	**04 44 39.9**	**-0.1**
	comp=Z,2.5nm,0.7s,baz=46,slow=9.9,SNR=5.7						
AKTO				PcP	**PcP**	**04 45 36.9**	**-0.1**
	comp=Z,3.5nm,0.7s,baz=353,slow=2.7,SNR=5.3						
	comp=Z,2.5nm,0.7s						
Q16A	**Castle Valley**	**56.41**	**69**	IAmb	IAmb	04 44 47.5	
	comp=Z,8.7nm,0.8s						
KK31	**Karatay Array**	**56.42**	**299**	IAmb	IAmb	04 44 45.6	
	comp=Z,22nm,1.5s						
KKAR	**Karatay Array**	**56.42**	**299**	IAmb	IAmb	04 44 45.6	
	comp=Z,22nm,1.5s						
BFSC	**Mount Baldy Ra**	**56.55**	**77**	P	**P**	**04 44 42.6**	**+1.1**
	baz=320						
TUQ	**Turquoise Moun**	**56.57**	**75**	P	**P**	**04 44 42.7**	**+1.1**
	baz=320						
AGMN	**Agassiz Nation**	**56.57**	**52**	IAmb	IAmb	04 44 47.2	
	comp=Z,52nm,1.9s						
AGMN	**Agassiz Nation**	**56.57**	**52**	P	**P**	**04 44 42.1**	**+0.9**
	baz=320						
AGMN	**Agassiz Nation**	**56.57**	**52**	P	**P**	**04 44 41.9**	**+0.7**
	baz=320						
SRU	**San Rafael Swe**	**56.60**	**68**	IAmb	IAmb	04 44 48.3	
	comp=Z,18nm,0.8s						
O20A	**White River Ci**	**56.98**	**66**	IAmb	IAmb	04 44 50.6	
	comp=Z,22nm,0.8s						
O20A	**White River Ci**	**56.98**	**66**	P	**P**	**04 44 45.9**	**+1.4**
	baz=319,SNR=16						
FINES	**FINESS Array B**	**57.21**	**337**	P	**P**	**04 44 45.0**	**-0.5**
	comp=Z,4.7nm,0.9s,baz=32,slow=7.5,SNR=5.9						
	comp=Z,4.7nm,0.9s						
FINES	**FINESS Array B**	**57.21**	**337**	*i* P	**P**	**04 44 44.2**	**-1.4**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
B35A	**Bob, Littlefor**	**57.44**	**50**	P	**P**	**04 44 47.8**	**+0.4**
	baz=321						
N23A	**Red Feather La**	**57.55**	**64**	IAmb	IAmb	04 44 54.8	
	comp=Z,13nm,1.0s						

N23A	Red Feather La	57.55	64	P	P	04 44 49.6	+1.0
	baz=319						
IRM	Iron Mountain	57.95	76	P	P	04 44 52.2	+1.0
	baz=320						
PV11	David Mesa, Pa	58.05	68	IAmb	IAmb	04 44 58.4	
	comp=Z,17nm,1.0s						
PV07	Paradox Valley	58.06	68	IAmb	IAmb	04 44 58.3	
	comp=Z,11nm,1.0s						
PV13	Radium Mtn., P	58.19	68	IAmb	IAmb	04 44 59.3	
	comp=Z,11nm,1.0s						
PV15	Paradox Valley	58.22	68	IAmb	IAmb	04 45 01.8	
	comp=Z,12nm,0.9s						
F33A	5 Mile Ranch,	58.28	54	IAmb	IAmb	04 44 58.9	
	comp=Z,16nm,0.9s						
F33A	5 Mile Ranch,	58.28	54	P	P	04 44 54.2	+0.9
	baz=321						
ISCO	Idaho Springs	58.54	65	IAmb	IAmb	04 45 02.4	
	comp=Z,10nm,1.1s						
ISCO	Idaho Springs	58.54	65	P	P	04 44 56.8	+1.2
	baz=320,SNR=12						
ISCO	Idaho Springs	58.54	65	P	P	04 44 57.6	+2.0
	baz=320,SNR=12						
EYMN	Ely	58.69	49	IAmb	IAmb	04 45 01.4	
	comp=Z,13nm,0.7s						
EYMN	Ely	58.69	49	P	P	04 44 56.3	0.0
	baz=322						
EYMN	Ely	58.69	49	P	P	04 44 56.2	0.0
	baz=322						
BELG	Belogornoye	58.82	320	P	P	04 44 56.9	0.0
	comp=Z,21nm,0.9s,baz=79,slow=6.3,SNR=5.7						
	comp=Z,21nm,0.9s						
BELG	Belogornoye	58.82	320	*i* P	P	04 44 57.3	+0.4
BELG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WUAZ	Wupatki	58.90	72	P	P	04 44 59.3	+1.3
	baz=320						
OGNE	Ogallala	59.41	61	P	P	04 45 01.7	+0.3
	baz=321						
OGNE	Ogallala	59.41	61	P	P	04 45 02.3	+0.9
	baz=321						
S22A	4UR Ranch, Cre	59.51	67	IAmb	IAmb	04 45 09.1	
	comp=Z,5.9nm,0.8s						
S22A	4UR Ranch, Cre	59.51	67	P	P	04 45 03.5	+1.2
	baz=320,SNR=8.4						
TAPN	Taplejung	59.52	274	*e*P	P	04 45 00.8	-1.7
E38A	The Farm, Brul	59.73	50	P	P	04 45 03.6	+0.3
	baz=322						
ECSD	EROS Data Cent	59.77	56	IAmb	IAmb	04 45 10.8	
	comp=Z,32nm,1.8s						
ECSD	EROS Data Cent	59.77	56	P	P	04 45 03.8	+0.1
	baz=321						
ECSD	EROS Data Cent	59.77	56	P	P	04 45 03.1	-0.6
	baz=321						
PHRA	Phrae	59.80	257	P	P	04 45 04.3	+0.2
GUN	Gumba	60.08	276	*e*P	P	04 45 05.9	-0.5
NC204	NORSAR Array S	60.11	345	P	P	04 45 06.3	+0.5
OBN	Obninsk	60.12	328	*e*P	P	04 45 06.2	+0.3
OBN				pmax	pmax		
	comp=Z,14nm,1.3s						
SDCO	Great Sand Dun	60.18	66	P	P	04 45 08.1	+1.1
	baz=321						
SDCO	Great Sand Dun	60.18	66	P	P	04 45 07.6	+0.7
	baz=321						
NB2	NORSAR Subarra	60.27	345	P	P	04 45 06.8	-0.1
	comp=Z,23nm,1.1s,baz=18,slow=6.9						
NB2	NORSAR Subarra	60.27	345	P	P	04 45 06.8	-0.1
	baz=18,slow=6.9						
NOA	NORSAR Array B	60.27	345	P	P	04 45 06.4	-0.5
	comp=Z,6.1nm,0.9s,baz=18,slow=6.9,SNR=18						
	comp=Z,6.1nm,0.9s						
SPMN	Marine on St.	60.29	52	P	P	04 45 07.7	+0.5
	baz=322						
SPMN	Marine on St.	60.29	52	P	P	04 45 07.4	+0.2
	baz=322						
RAMN	Ramite	60.44	275	*e*P	P	04 45 07.3	-1.5
	comp=Z,9.5nm,0.4s						
CHGR	Chuyangaron	60.48	296	P	P	04 45 08.9	+0.1
CHGR	Chuyangaron	60.48	296	P	P	04 45 08.9	+0.1
CHGR				pmax	pmax		
	comp=Z,43nm,0.8s						
CMAR	Chiang Mai Arr	60.52	258	P	P	04 45 08.6	-0.5
	comp=Z,2.6nm,0.8s,baz=16,slow=7.0,SNR=16						
	comp=Z,2.6nm,0.8s						
CMAR	Chiang Mai Arr	60.52	258	*ce*P	P	04 45 09.0	-0.1
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PKI	Pulchoki	60.60	276	*e*P	P	04 45 09.6	-0.4
PKIN	Phulchoki	60.60	276	*e*P	P	04 45 09.3	-0.6
D41A	Chassel	60.60	48	P	P	04 45 09.6	+0.2
	baz=323						
DANN	Dangsing	60.88	278	*e*P	P	04 45 12.0	+0.1
	comp=Z,19nm,0.6s						
BGNE	Belgrade	60.89	58	P	P	04 45 12.0	+0.6
	baz=322						
BGNE	Belgrade	60.89	58	P	P	04 45 12.4	+1.0
	baz=322						
I37A	Lemond, Waseca	60.98	53	IAmb	IAmb	04 45 17.8	
	comp=Z,14nm,0.8s						
I37B	Waseca	60.98	53	P	P	04 45 12.7	+0.7
	baz=322						
COWI	Conover	61.14	49	P	P	04 45 13.0	-0.1
	baz=323						
L34A	Svendsen Farm,	61.27	57	P	P	04 45 14.5	+0.5
	baz=322						
PYUN	Piuthan	61.50	278	*e*P	P	04 45 14.9	-1.0
	comp=Z,23nm,0.8s						
SCHQ	Schefferville	61.52	30	P	P	04 45 14.7	-0.7
	comp=Z,11nm,0.8s,baz=356,slow=8.1,SNR=13						
	comp=Z,11nm,0.8s						
SCHQ	Schefferville	61.52	30	P	P	04 45 15.4	-0.1
SCHQ				IAmb	IAmb	04 45 20.5	
	comp=Z,10nm,0.8s						
TUC	Tucson	61.69	74	P	P	04 45 18.4	+1.4
	baz=322						
KONO	Kongsberg	61.84	345	*ce*P	P	04 45 16.7	-0.8
KONO				pmax	pmax		
	comp=Z,32nm,2.5s						
ANMO	Albuquerque	61.88	69	P	P	04 45 19.6	+1.2
ANMO	Albuquerque	61.88	69	*ce*P	P	04 45 18.5	+0.1
ANMO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ANMO	Albuquerque	61.88	69	P	P	04 45 19.5	+1.2
	baz=322						
ANMO	Albuquerque	61.88	69	P	P	04 45 19.6	+1.2
	baz=322,SNR=8.1						
CBKS	Cedar Bluff	62.17	61	P	P	04 45 20.1	-0.1
	baz=322						
NIL	Nilore	62.32	290	P	P	04 45 21.5	+0.3
NIL	Nilore	62.32	290	P	P	04 45 21.5	+0.3
NIL				pmax	pmax		
	comp=Z,33nm,1.3s						
Y22A	Socorro	62.40	70	P	P	04 45 23.3	+1.4
	baz=322						
N35A	Tabor	62.48	57	P	P	04 45 22.8	+0.7
	baz=323						
SCIA	State Center	62.75	55	P	P	04 45 23.7	-0.2
	baz=323						
SCIA	State Center	62.75	55	P	P	04 45 24.4	+0.5
	baz=323						
NACGM	Naroch	62.95	333	*e*P	P	04 45 25.9	+0.9
	comp=N,866nm,1.0s						
I42A	Draeger Farm,	63.02	50	P	P	04 45 24.6	-1.0
	baz=324						
H43A	Windswept, Lux	63.03	49	P	P	04 45 25.4	-0.3
	baz=324						
MNK	Minsk	63.04	332	*i* P	P	04 45 23.5	-2.1
	comp=E,3.0nm,1.1s						
MNK				*i* P	P	04 45 23.5	-2.1
	comp=N,27nm,0.9s						
MNK				*i* P	P	04 45 23.5	-2.1
	comp=Z,22nm,0.9s,baz=26						
MNK				*i* PP	PP	04 47 41.2	-2.4
MNK				*i* PPP	PPP	04 49 07.8	
MNK				*i* S	S	04 53 52.0	-3.4
MNK				*i* SS	SS	04 57 58.4	-1.6
MNK				*i* SSS	SSS	05 00 54.5	
MNK				*i* LQ	LQ	05 07 49.5	
MNK				*i* LR	LR	05 12 22.8	
MNK				*i* LRM	MLR	05 15 31.0	
	comp=Z,7µm,14.8s						
MNK				*i* LRM	MLR	05 15 50.0	
	comp=E,2µm,17.4s						
MNK				*i* LRM	MLR	05 16 04.8	
	comp=N,8µm,15.5s						
MNK	Minsk	63.04	332	*i* P	P	04 45 23.5	-2.1
MNK				*i*		04 47 41.2	
MNK				*i* S	S	04 53 51.9	-3.4
MNK				*i* SS	SS	04 57 58.3	-1.6
MNK				pmax	pmax		
	comp=N,27nm,0.9s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.1s						
MNK				pmax	pmax		
	comp=Z,22nm,0.9s						
MNK				MLR	MLR		
	comp=Z,7µm,15.0s						
MNK				MLR	MLR		
	comp=E,2µm,17.0s						
MNK				MLR	MLR		
	comp=N,8µm,15.0s						
PABE	Paberze	63.07	335		pP	04 45 30.9	+0.9
121A	Cookes Peak, D	63.08	71	P	P	04 45 27.5	+1.0
	baz=322						
121A	Cookes Peak, D	63.08	71	P	P	04 45 28.2	+1.7
	baz=322						
KSU1	Kansas State U	63.43	59	IAmb	IAmb	04 45 35.1	
	comp=Z,14nm,0.9s						
KSU1	Kansas State U	63.43	59	P	P	04 45 28.0	-0.4
	baz=323						
KSU1	Kansas State U	63.43	59	P	P	04 45 28.3	-0.2
	baz=323						
N38A	Joes South For	63.63	55	IAmb	IAmb	04 45 34.5	
	comp=Z,9.0nm,0.8s						
N38A	Joes South For	63.63	55	P	P	04 45 29.6	-0.1
	baz=324						
GLMI	Grayling	64.02	47	P	P	04 45 31.5	-0.8
	baz=326						
P38A	Dawn	64.44	56	IAmb	IAmb	04 45 40.0	
	comp=Z,14nm,0.9s						
P38A	Dawn	64.44	56	P	P	04 45 34.9	-0.2
	baz=324						
MSTX	Muleshoe	64.51	67	P	P	04 45 35.9	+0.1
	baz=323						
MSTX	Muleshoe	64.51	67	P	P	04 45 35.7	-0.1
	baz=323						
TOLI2	Tolitoli	64.97	228	P	P	04 45 37.7	-1.1
MNTX	Cornudas Mount	64.98	70	P	P	04 45 40.4	+1.6
	baz=323,SNR=20						
P40A	Paris	65.19	55	IAmb	IAmb	04 45 44.8	
	comp=Z,12nm,0.9s						
P40A	Paris	65.19	55	P	P	04 45 39.8	-0.1
	baz=324						
J47A	Sunmer	65.25	48	P	P	04 45 40.7	+0.4
	baz=326						
J47A				P	P	04 45 40.7	+0.4
	baz=326						
BSD	Bornholm Skovb	65.31	340	*e*P	P	04 45 38.7	-1.8
I49A	Point Hope	65.47	46	P	P	04 45 41.3	-0.4
	baz=327						
I49A				P	P	04 45 41.3	-0.4
	baz=327						
HDIL	Hopedale	65.57	53	P	P	04 45 41.9	-0.5
	baz=325						
HDIL	Hopedale	65.57	53	P	P	04 45 41.9	-0.5
	baz=325						
WMOK	Wichita Mounta	65.88	63	P	P	04 45 44.2	-0.3
	baz=324						
WMOK	Wichita Mounta	65.88	63	P	P	04 45 44.4	-0.2
	baz=324						
R40A	Maddies Statio	66.09	56	IAmb	IAmb	04 45 50.5	
	comp=Z,15nm,0.8s						
R40A	Maddies Statio	66.09	56	P	P	04 45 45.9	+0.1
	baz=325,SNR=7.6						
S39A	Bolivar	66.10	57	IAmb	IAmb	04 45 49.9	
	comp=Z,7.1nm,0.8s						
S39A	Bolivar	66.10	57	P	P	04 45 45.0	-0.8
	baz=324						
AKASG	Malin Array Be	66.11	330	P	P	04 45 45.3	-0.4
	comp=Z,4.7nm,0.7s,baz=27,slow=6.2,SNR=24						
	comp=Z,4.7nm,0.7s						
AKASG	Malin Array Be	66.11	330	IAmb	IAmb	04 45 51.7	
	comp=Z,17nm,1.9s						
AKASG	Malin Array Be	66.11	330	*ce*P	P	04 45 45.7	0.0
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
P43A	Skaggs, Pawnee	66.22	54	P	P	04 45 46.3	-0.3
	baz=325						
GEYT	Alibeck	66.31	303	P	P	04 45 47.2	-0.1
	comp=Z,14nm,0.8s,baz=346,slow=3.1,SNR=19						
	comp=Z,14nm,0.8s						
L48A	N Adams	66.49	49	IAmb	IAmb	04 45 53.0	
	comp=Z,14nm,0.8s						
L48A	N Adams	66.49	49	P	P	04 45 48.1	-0.2
	baz=326						
L48A				P	P	04 45 48.1	-0.2
	baz=326						
U38A	Gravette	66.62	59	P	P	04 45 48.7	-0.5
	baz=324						
TRQ	Mont Tremblant	66.62	40	P	P	04 45 48.8	-0.3
TRQ				IAmb	IAmb	04 45 53.5	
	comp=Z,22nm,1.0s						
CCM	Cathedral Cave	66.75	56	P	P	04 45 49.6	-0.5
	baz=325						
CCM	Cathedral Cave	66.75	56	P	P	04 45 50.0	0.0
	baz=325						
HHAR	Hobbs	66.95	59	IAmb	IAmb	04 45 55.8	
	comp=Z,14nm,0.9s						
ABTX	Abilene, Hawle	67.15	65	P	P	04 45 53.4	+0.7
ABTX				IAmb	IAmb	04 45 58.1	
	comp=Z,13nm,0.8s						
ABTX	Abilene, Hawle	67.15	65	P	P	04 45 52.6	-0.1
	baz=324,SNR=5.7						
ABTX	Abilene, Hawle	67.15	65	P	P	04 45 53.5	+0.7
	baz=324,SNR=5.7						
FVM	French Village	67.18	55	IAmb	IAmb	04 45 57.5	
	comp=Z,16nm,0.9s						
FVM	French Village	67.18	55	P	P	04 45 53.0	+0.2
	baz=325,SNR=6.9						
P46A	Rosedale	67.25	52	P	P	04 45 53.1	-0.1
	baz=326						
U40A	Yellville	67.40	58	P	P	04 45 54.2	0.0
	baz=325,SNR=6.4						
U40A				P	P	04 45 54.2	0.0
	baz=325,SNR=6.4						
N49A	Columbus Grove	67.44	49	IAmb	IAmb	04 45 59.4	
	comp=Z,16nm,0.9s						
N49A	Columbus Grove	67.44	49	P	P	04 45 54.4	+0.1
	baz=327						
N49A				P	P	04 45 54.4	+0.1
	baz=327						
SBUM	Sibu	67.48	237	P	P	04 45 54.4	-0.5
MNTQ	Montreal, Queb	67.57	39	P	P	04 45 55.1	0.0
MNTQ				IAmb	IAmb	04 45 59.8	
	comp=Z,18nm,0.9s						
O48B	Farmland	67.59	50	P	P	04 45 54.8	-0.6
	baz=327						
O48B	Farmland	67.59	50	P	P	04 45 55.1	-0.3
	baz=327						
OLIL	Olney	67.59	53	P	P	04 45 55.3	0.0
	baz=326						
X37A	Clayton	67.65	61	P	P	04 45 55.9	+0.1
	baz=324						
KVAR	Kislovodsk Arr	67.69	318	P	P	04 45 57.4	+1.4
	comp=Z,2.1nm,0.4s,baz=85,slow=16,SNR=1.5						
	comp=Z,2.1nm,0.4s						
KIV	Kislovodsk	67.69	318	*e*P	P	04 45 55.9	-0.1
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
D62A	Allapoint, All	67.71	36	P	P	04 45 56.0	0.0
	baz=332						
D62A				P	P	04 45 56.0	0.0
	baz=332						
TX31	Lajitas Ar. Si	67.76	70	P	P	04 45 57.9	+1.2
	baz=324,SNR=26						
TX32	Lajitas Array	67.76	70	IAmb	IAmb	04 46 02.9	
	comp=Z,14nm,0.9s						
TXAR	Lajitas Array	67.76	70	P	P	04 45 57.5	+0.9
	comp=Z,9.0nm,0.8s,baz=295,slow=4.4,SNR=72						
	comp=Z,9.0nm,0.8s						
KBZ	Khabaz	67.81	317	P	P	04 45 57.4	+0.8
	comp=Z,5.8nm,0.8s,baz=102,slow=2.4,SNR=9.6						
	comp=Z,5.8nm,0.8s						
KBZ	Khabaz	67.81	317	*ce*P	P	04 45 57.6	+1.0
KBZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BMNY	Brushton-Moira	67.83	40	P	P	04 45 55.7	-1.1
	baz=330						
SHA1	Shidzhatmaz	67.89	317	*i* P	P	04 45 58.3	+0.8
SIUC	Southern Illin	67.94	54	IAmb	IAmb	04 46 02.3	
	comp=Z,15nm,0.8s						
S44A	Carbondale	67.94	55	IAmb	IAmb	04 46 02.3	
	comp=Z,11nm,0.8s						
S44A	Carbondale	67.94	55	P	P	04 45 57.3	-0.3
	baz=326						
E62A	Clayton Lake	67.96	36	P	P	04 45 57.4	-0.2
	baz=332						
E62A				P	P	04 45 57.4	-0.2
	baz=332						
O49A	Covington	68.00	50	P	P	04 45 57.7	-0.2
	baz=327						
O49A				P	P	04 45 57.7	-0.2
	baz=327						
LONY	Lake Ozonia	68.00	40	P	P	04 45 56.5	-1.3
	baz=330						
FCAR	Ozark Folk Cen	68.12	58	IAmb	IAmb	04 46 03.2	
	comp=Z,18nm,1.2s						
ERPA	Erie	68.12	46	P	P	04 45 57.8	-0.9
	baz=328						
ERPA	Erie	68.12	46	P	P	04 45 57.5	-1.1
	baz=328						
P48A	Milroy	68.14	51	IAmb	IAmb	04 46 02.9	
	comp=Z,17nm,1.0s						
P48A	Milroy	68.14	51	P	P	04 45 58.0	-0.8
	baz=327						
P48A				P	P	04 45 58.0	-0.8
	baz=327						
FRNY	Flat Rock	68.16	40	P	P	04 45 58.0	-0.8
	baz=330						
PBMO	Poplar Bluff	68.17	56	P	P	04 45 59.2	+0.2
	baz=326						
N51A	Ashland	68.19	48	P	P	04 45 58.7	-0.4
	baz=328						
N51A				P	P	04 45 58.7	-0.4
	baz=328						
J56A	Wolcott	68.33	43	P	P	04 45 58.2	-1.7
	baz=329						
J56A				P	P	04 45 58.2	-1.7
	baz=329						
P49A	Miami Univ. Ec	68.38	50	IAmb	IAmb	04 46 05.1	
	comp=Z,22nm,1.1s						
P49A	Miami Univ. Ec	68.38	50	P	P	04 45 59.3	-1.0
	baz=327						
P49A	Miami Univ. Ec	68.38	50	P	P	04 45 59.5	-0.8
	baz=327						
WVNY	West Valley, N	68.42	44	P	P	04 46 00.1	-0.4
	baz=329						
LCAR	Lake Charles	68.42	57	P	P	04 46 00.5	-0.1
	baz=326						
M53A	WI Miller and	68.43	46	P	P	04 45 59.7	-0.9
	baz=328						
F62A	Pittston Farm,	68.46	37	P	P	04 46 00.4	-0.3
	baz=332						
F62A				P	P	04 46 00.4	-0.3
	baz=332						
ALLY	Alegheny Colle	68.46	46	P	P	04 45 59.9	-0.9
	baz=328						
E63A	Oxbow	68.49	35	P	P	04 45 60.0	-0.9
	baz=333						
E63A				P	P	04 45 60.0	-0.9
	baz=333						
ACSO	Alum Creek Sta	68.52	49	P	P	04 46 00.8	-0.4
	baz=327						
ACSO	Alum Creek Sta	68.52	49	P	P	04 46 01.1	-0.1
	baz=327						
J57A	Williamstown	68.53	42	P	P	04 46 00.5	-0.7
	baz=330						
J57A				P	P	04 46 00.5	-0.7
	baz=330						
MIAR	Mount Ida	68.54	60	IAmb	IAmb	04 46 07.5	
	comp=Z,28nm,1.4s						
MIAR	Mount Ida	68.54	60	P	P	04 46 01.6	+0.3
	baz=325,SNR=7.9						
MIAR	Mount Ida	68.54	60	P	P	04 46 02.2	+0.8
	baz=325,SNR=7.9						
SORM	Soroca	68.68	329	⇓P	P	04 46 02.0	0.0
SORM	Soroca	68.68	329	⇓P	P	04 46 02.0	0.0
NCB	Newcomb	68.69	41	P	P	04 46 01.4	-0.8
	baz=330						
WCI	Wyandotte Cave	68.80	52	P	P	04 46 02.9	0.0
WCI				IAmb	IAmb	04 46 07.5	
	comp=Z,15nm,0.9s						
WCI	Wyandotte Cave	68.80	52	P	P	04 46 02.9	0.0
WCI				pmax	pmax		
	comp=Z,15nm,1.0s						
WCI	Wyandotte Cave	68.80	52	P	P	04 46 02.2	-0.7
	baz=327						
WCI	Wyandotte Cave	68.80	52	P	P	04 46 02.6	-0.3
	baz=327						
JCT	Junction City	68.81	67	P	P	04 46 03.4	+0.3
	baz=324						
JCT	Junction City	68.81	67	P	P	04 46 02.9	-0.3
	baz=324						
J58A	Remsen	68.83	42	P	P	04 46 02.1	-1.0
	baz=330						
J58A				P	P	04 46 02.1	-1.0
	baz=330						
G62A	West of Eustis	68.87	37	P	P	04 46 03.5	+0.3
	baz=332						
G62A				P	P	04 46 03.5	+0.3
	baz=332						
N53A	Lisbon	68.90	47	P	P	04 46 03.5	0.0
	baz=328						
N53A				P	P	04 46 03.5	0.0
	baz=328						
F64A	Sherman	69.01	36	P	P	04 46 03.9	-0.2
	baz=333						
F64A				P	P	04 46 03.9	-0.2
	baz=333						
J59A	Piesco	69.03	41	P	P	04 46 03.3	-1.0
	baz=330						
J59A				P	P	04 46 03.3	-1.0
	baz=330						
L56A	Greenwood	69.05	44	P	P	04 46 04.0	-0.5
	baz=329						
L56A				P	P	04 46 04.0	-0.5
	baz=329						
PAMR	Moraine State	69.08	46	P	P	04 46 03.9	-0.8
	baz=328						
O52A	Adamsville	69.09	48	P	P	04 46 04.1	-0.6
	baz=328						
O52A				P	P	04 46 04.1	-0.6
	baz=328						
P51A	Williamsport	69.12	49	P	P	04 46 04.6	-0.3
	baz=328						
P51A				P	P	04 46 04.6	-0.3
	baz=328						
M55A	Ridgway	69.16	45	P	P	04 46 04.6	-0.6
	baz=329						
M55A				P	P	04 46 04.6	-0.6
	baz=329						
O53A	New Philadelph	69.22	47	P	P	04 46 05.2	-0.4
	baz=328						
H62A	Milan	69.23	38	P	P	04 46 05.5	0.0
	baz=332						
H62A				P	P	04 46 05.5	0.0
	baz=332						
R49A	Shelbyville	69.23	51	IAmb	IAmb	04 48 35.9	
	comp=Z,26nm,1.4s						
R49A	Shelbyville	69.23	51	P	P	04 46 05.2	-0.4
	baz=327						
R49A				P	P	04 46 05.2	-0.4
	baz=327						
PKME	Peaks-Kenny Pk	69.24	37	P	P	04 46 05.2	-0.3
	baz=332						
LBNH	Lisbon	69.26	39	IAmb	IAmb	04 46 11.0	
	comp=Z,16nm,0.9s						
LBNH	Lisbon	69.26	39	P	P	04 46 05.4	-0.3
	baz=331						
LBNH	Lisbon	69.26	39	P	P	04 46 05.8	+0.1
	baz=331						
CLL	Collm	69.30	340	*e*P	P	04 46 06.0	+0.2
CLL				*e*pP	pP	04 46 10.0	0.0
CLL	Collm	69.30	340	*e*P	P	04 46 06.0	+0.2
P52A	Corning	69.37	48	P	P	04 46 06.1	-0.4
	baz=328						
CHVC	Chvalec	69.39	338	*e*P	P	04 46 07.1	+0.7
CHVC	Chvalec	69.39	338	*e*P	P	04 46 07.1	+0.7
ACCN	Adirondack Com	69.40	41	P	P	04 46 06.1	-0.4
	baz=331						
PSDB	Penn State Uni	69.45	45	P	P	04 46 06.4	-0.5
	baz=329						
T47A	Sharon Grove	69.48	53	IAmb	IAmb	04 46 12.7	
	comp=Z,23nm,1.0s						
T47A	Sharon Grove	69.48	53	P	P	04 46 07.6	+0.4
	baz=327,SNR=10						
UPAO	U. Pittsburgh	69.50	46	P	P	04 46 06.9	-0.3
	baz=329						
BRG	Berggiesshubel	69.54	340	*e*P	P	04 46 07.9	+0.5
BRG				Amp		04 46 08.6	
	comp=Z,3.8nm,0.9s						
BRG	Berggiesshubel	69.54	340	*e*P	P	04 46 07.8	+0.5
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						

DPC	Dobruska-Polom	69.56	338	eP	P	04 46 08.8	+1.3
DPC				epP	sP	04 46 13.4	+0.1
DPC	Dobruska-Polom	69.56	338	eP	P	04 46 08.8	+1.3
BINY	Binghamton	69.58	43	P	P	04 46 06.8	-0.9
	baz=330						
R50A	Paris	69.60	51	IAmb	IAmb	04 46 12.7	
	comp=Z,9.9nm,0.9s						
R50A	Paris	69.60	51	P	P	04 46 07.6	-0.3
	baz=327						
R50A				P	P	04 46 07.6	-0.3
	baz=327						
O54A	Avella	69.62	47	P	P	04 46 07.6	-0.4
	baz=328						
O54A				P	P	04 46 07.6	-0.4
	baz=328						
KRLC	Kraliky	69.72	337	eP	P	04 46 09.2	+0.7
KRLC				epP	sP	04 46 13.8	-0.5
KRLC	Kraliky	69.72	337	eP	P	04 46 09.2	+0.7
MORC	Moravsky Berou	69.84	337	⇑P	P	04 46 10.3	+1.0
MORC	Moravsky Berou	69.84	337	IAmb	IAmb	04 48 39.0	
	comp=Z,29nm,1.5s						
MORC	Moravsky Berou	69.84	337	eP	P	04 46 10.3	+1.0
MORC	Moravsky Berou	69.84	337	⇑P	P	04 46 10.3	+1.0
G65A	Princeton	69.85	35	P	P	04 46 09.3	0.0
	baz=333						
G65A				P	P	04 46 09.3	0.0
	baz=333						
I63A	Otisfield	69.88	38	P	P	04 46 10.0	+0.5
	baz=332						
I63A				P	P	04 46 10.0	+0.5
	baz=332						
Q52A	Bidwell	69.89	49	P	P	04 46 09.0	-0.7
	baz=328						
Q52A				P	P	04 46 09.0	-0.7
	baz=328						
M57A	Sunshine Farm,	69.90	44	P	P	04 46 08.9	-0.8
	baz=330						
M57A				P	P	04 46 08.9	-0.8
	baz=330						
L59A	Walton	69.94	42	P	P	04 46 09.3	-0.6
	baz=330						
L59A				P	P	04 46 09.3	-0.6
	baz=330						
BURAR	Bucovina Array	70.01	331	⇑P	P	04 46 11.0	+0.6
BURAR	Bucovina Array	70.01	331	⇑P	P	04 46 11.0	+0.6
W45A	Hickory Valley	70.07	56	P	P	04 46 11.3	+0.4
	baz=326						
MAUC	Maruska	70.17	337	eP	P	04 46 14.2	+2.9
GNI	Garni	70.17	314	P	P	04 46 11.7	+0.1
	comp=Z,1.9nm,0.4s,baz=39,slow=14,SNR=1.7						
	comp=Z,1.9nm,0.4s						
GNI	Garni	70.17	314	iP	P	04 46 12.2	+0.6
GNI				pmax	pmax		
	comp=Z,18nm,1.2s						
TRPA	Tarpa	70.22	333	⇓P	P	04 46 13.2	+1.6
PABK	Blue Knob Stat	70.26	46	P	P	04 46 11.2	-0.7
	baz=329						
MCWV	Mont Chateau	70.28	47	P	P	04 46 11.7	-0.4
	baz=329						
MCWV	Mont Chateau	70.28	47	P	P	04 46 11.5	-0.5
	baz=329						
NATX	Nacogdoches	70.30	62	P	P	04 46 12.2	-0.1
	baz=325						
T50A	Nancy	70.44	52	P	P	04 46 12.7	-0.4
	baz=327						
T50A				P	P	04 46 12.7	-0.4
	baz=327						
S51A	Beattyville	70.45	51	P	P	04 46 13.5	+0.3
	baz=328						
S51A				P	P	04 46 13.5	+0.3
	baz=328						
Q54A	Coxs Mills	70.45	48	P	P	04 46 12.6	-0.5
	baz=328						
Q54A				P	P	04 46 12.6	-0.5
	baz=328						
U49A	Red Boiling Sp	70.46	53	P	P	04 46 12.7	-0.5
	baz=327						
N58A	Sunbury	70.48	44	P	P	04 46 12.5	-0.7
	baz=330						
N58A				P	P	04 46 12.5	-0.7
	baz=330						
VRAC	Vranov	70.49	337	⇑P	P	04 46 14.6	+1.4
VRAC	Vranov	70.49	337	eP	P	04 46 14.3	+1.1
VRAC	Vranov	70.49	337	⇑P	P	04 46 14.6	+1.4
OXF	Oxford	70.51	57	P	P	04 46 14.2	+0.7
	baz=326,SNR=12						
R53A	Hurricane	70.55	49	P	P	04 46 13.7	0.0
	baz=328,SNR=8.8						
R53A				P	P	04 46 13.7	0.0
	baz=328,SNR=8.8						
UNH	University of	70.63	39	P	P	04 46 14.3	+0.2
	baz=332						
V48A	Smith Brothers	70.65	54	P	P	04 46 14.3	-0.1
	baz=327						
JAVC	Velka Javorina	70.68	336	eP	P	04 46 15.0	+0.6
PLAL	Pickwick Lake	70.72	55	IAmb	IAmb	04 46 19.7	
	comp=Z,16nm,0.8s						
833A	Chaparral WMA,	70.76	68	P	P	04 46 15.6	+0.4
	baz=325						
KRUC	Moravsky	70.77	337	eP	P	04 46 15.6	+0.7
Y45A	Yeager Farm, C	70.98	57	P	P	04 46 16.8	+0.4
	baz=326,SNR=7.6						
VRI	Vrincioaia	71.20	329	⇑P	P	04 46 24.8	+7.2
VRI	Vrincioaia	71.20	329	⇑P	P	04 46 24.8	+7.2
KHC	Kasperske Hory	71.27	339	eP	P	04 46 19.0	+1.0
KHC				ex	x	04 46 23.9	
KHC	Kasperske Hory	71.27	339	iP	P	04 46 17.0	-1.0
KHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
R55A	Marlinton	71.34	48	P	P	04 46 18.4	-0.2
	baz=329						
R55A				P	P	04 46 18.4	-0.2
	baz=329						
PAL	Palisades	71.39	42	P	P	04 46 17.4	-1.3
	baz=331						
TZTN	Tazewell	71.40	51	P	P	04 46 18.6	-0.3
	baz=328						
TZTN	Tazewell	71.40	51	P	P	04 46 18.8	-0.1
	baz=328						
CFR	Carcaliu	71.43	328	⇑P	P	04 46 20.1	+1.2
CFR	Carcaliu	71.43	328	⇑P	P	04 46 20.1	+1.2
SWET	Sewanee	71.48	54	IAmb	IAmb	04 46 23.9	
	comp=Z,12nm,0.8s						
GERES	GERESS Array B	71.52	339	P	P	04 46 19.5	0.0
	comp=Z,1.7nm,0.8s,baz=38,slow=6.8,SNR=8.3						
	comp=Z,1.7nm,0.8s						
X48A	Hartselle	71.63	55	IAmb	IAmb	04 46 25.0	
	comp=Z,14nm,1.1s						
X48A	Hartselle	71.63	55	P	P	04 46 19.9	-0.4
	baz=327						
TPGR	Topolog	71.64	328	⇓P	P	04 46 21.3	+1.0
PANJ	Princeton	71.64	43	P	P	04 46 19.6	-0.7
	baz=331						
L64A	Middleborough	71.66	39	P	P	04 46 20.3	-0.1
	baz=332						
L64A				P	P	04 46 20.3	-0.1
	baz=332						
V51A	Loudon	71.68	52	P	P	04 46 20.4	-0.2
	baz=328						
MLR	Muntele Rosu	71.77	330	⇑P	P	04 46 23.3	+2.1
MLR	Muntele Rosu	71.77	330	P	P	04 46 23.3	+2.1
MLR	Muntele Rosu	71.77	330	P	P	04 46 23.3	+2.1
MLR				pmax	pmax		
	comp=Z,55nm,1.7s						
W50A	Signal Mountai	71.77	53	P	P	04 46 20.8	-0.4
	baz=328						
CONA	Conrad Observa	71.95	337	epP	P	04 46 23.6	+1.4
	comp=Z,4.8nm,1.0s						
V52A	Sevierville	71.97	52	P	P	04 46 22.2	-0.1
	baz=328						
TKL	Tuckaleechee C	72.05	52	P	P	04 46 22.8	-0.1
	baz=328						
VOIR		72.06	330	⇓P	P	04 46 24.4	+1.6
VOIR		72.06	330	⇓P	P	04 46 24.4	+1.6
RONA	Rosalia, Austr	72.08	337	epP	P	04 46 24.4	+1.5
	comp=Z,7.7nm,1.3s						
BLA	Blacksburg	72.14	49	P	P	04 46 22.1	-1.3
	baz=329						
BLA	Blacksburg	72.14	49	P	P	04 46 23.5	+0.1
	baz=329						
U54A	Nelsons Funny	72.15	50	P	P	04 46 23.5	0.0
	baz=329						
U54A				P	P	04 46 23.5	0.0
	baz=329						
Z47A	Carrollton	72.21	56	P	P	04 46 24.0	+0.2
	baz=327						
146A	Union	72.23	57	P	P	04 46 25.5	+1.6
	baz=327,SNR=10						
S57A	Dark Hollow, R	72.26	47	IAmb	IAmb	04 46 29.6	
	comp=Z,15nm,0.9s						
S57A	Dark Hollow, R	72.26	47	P	P	04 46 24.0	-0.1
	baz=330						
S57A				P	P	04 46 24.0	-0.1
	baz=330						
Y49A	Blount Mountai	72.41	55	IAmb	IAmb	04 46 29.7	
	comp=Z,14nm,0.8s						
Y49A	Blount Mountai	72.41	55	P	P	04 46 25.5	+0.5
	baz=327,SNR=8.5						
GEVA	Gevas	72.42	314	P	P	04 46 27.2	+2.0
344A	Westbrook Farm	72.44	59	P	P	04 46 26.5	+1.4
	baz=326						
V53A	Saluda	72.45	51	IAmb	IAmb	04 46 30.9	
	comp=Z,39nm,1.7s						
V53A	Saluda	72.45	51	P	P	04 46 24.6	-0.7
	baz=328						
V53A				P	P	04 46 24.6	-0.7
	baz=328						
W52A	Murphy	72.46	52	IAmb	IAmb	04 46 30.7	
	comp=Z,18nm,1.1s						
W52A	Murphy	72.46	52	P	P	04 46 24.7	-0.7
	baz=328						
X51A	Calhoun	72.50	53	P	P	04 46 25.3	-0.2
	baz=328						
X51A				P	P	04 46 25.3	-0.2
	baz=328						
R58B	Mineral	72.52	46	P	P	04 46 25.4	-0.2
	baz=330						
R58B				P	P	04 46 25.4	-0.2
	baz=330						
ARSA	Arzberg	72.67	337	epP	P	04 46 27.9	+1.6
	comp=Z,3.8nm,0.6s						
BZS	Buzias	72.80	333	⇓P	P	04 46 28.0	+0.9
BZS	Buzias	72.80	333	⇓P	P	04 46 28.0	+0.9
T57A	Hurt	72.80	48	P	P	04 46 26.7	-0.5
	baz=330						
T57A				P	P	04 46 26.7	-0.5
	baz=330						
LRAL	Lakeview Retre	72.84	56	IAmb	IAmb	04 46 31.9	
	comp=Z,15nm,0.8s						
LRAL	Lakeview Retre	72.84	56	P	P	04 46 27.1	-0.5
	baz=327,SNR=10						
V55A	Taylorsville	72.97	50	P	P	04 46 29.0	+0.6
	baz=329						
V55A				P	P	04 46 29.0	+0.6
	baz=329						
BG3	Lake Jocassee	72.98	52	IAmb	IAmb	04 46 33.9	
	comp=Z,15nm,1.0s						
CASEE	Lake Jocassee	72.98	52	P	P	04 46 28.3	-0.1
	baz=328						
HERR	Herculane	73.28	332	⇑P	P	04 46 30.9	+0.9
KBA	Koelnbreinsper	73.28	339	epP	P	04 46 31.5	+1.3
	comp=Z,7.1nm,1.0s						
SOKA	Soboth	73.32	337	epP	P	04 46 31.3	+1.0
	comp=Z,3.0nm,0.9s						
Z51A	Franklin	73.42	54	IAmb	IAmb	04 46 35.5	
	comp=Z,14nm,0.8s						
Z51A	Franklin	73.42	54	P	P	04 46 30.6	-0.4
	baz=328						
WTTA	Wattenberg	73.43	340	eP	P	04 46 30.9	-0.2
	comp=Z,3.7nm,0.6s						
Y52A	Lilburn	73.44	53	P	P	04 46 30.8	-0.4
	baz=328						
Y52A				P	P	04 46 30.8	-0.4
	baz=328						
MOTA	Moosalm	73.45	340	epP	P	04 46 31.7	+0.5
	comp=Z,1.9nm,0.6s						
KMSC	Kings Mountain	73.53	50	P	P	04 46 31.1	-0.6
	baz=329						
KMSC	Kings Mountain	73.53	50	P	P	04 46 31.3	-0.4
	baz=329						
SQTA	Sankt Quirin	73.55	340	epP	P	04 46 32.7	+1.0
	comp=Z,4.8nm,0.9s						
OBKA	Obir	73.58	338	epP	P	04 46 33.3	+1.4
	comp=Z,13nm,0.8s						
FRGS	Fruska Gora	73.67	334	⇓P	P	04 46 33.8	+1.4
T60A	Surry	73.68	46	P	P	04 46 32.8	+0.4
	baz=330						
T60A				P	P	04 46 32.8	+0.4
	baz=330						
ABTA	Abfaltersbach	73.76	339	i pP	P	04 46 33.7	+0.8
	comp=Z,3.2nm,0.7s						
FETA	Feichten	73.83	341	epP	P	04 46 34.4	+0.9
	comp=Z,5.0nm,0.9s						
V58A	Windy Hill, Pi	73.89	48	P	P	04 46 33.1	-0.6
	baz=330						
V58A				P	P	04 46 33.1	-0.6
	baz=330						
HODGE	Hodges	73.91	51	IAmb	IAmb	04 46 38.7	
	comp=Z,13nm,0.8s						
HODGE	Hodges	73.91	51	P	P	04 46 33.9	0.0
	baz=329,SNR=8.8						
U59A	Littleton	73.94	47	P	P	04 46 33.8	-0.3
	baz=330						
U59A				P	P	04 46 33.8	-0.3
	baz=330						
250A	Grady	74.06	56	P	P	04 46 34.8	0.0
	baz=328						
W57A	Gilead	74.08	49	IAmb	IAmb	04 46 40.1	
	comp=Z,21nm,1.1s						
W57A	Gilead	74.08	49	P	P	04 46 34.6	-0.2
	baz=330						
W57A				P	P	04 46 34.6	-0.2
	baz=330						
152A	Waverly Hall	74.17	54	IAmb	IAmb	04 46 39.9	
	comp=Z,14nm,0.9s						
152A	Waverly Hall	74.17	54	P	P	04 46 35.1	-0.3
	baz=328						
JSC	Jenkinsville	74.30	51	P	P	04 46 35.6	-0.5
	baz=329						
BIRD	Birdtown, Kers	74.32	50	P	P	04 46 35.7	-0.6
	baz=329						
BRAL	Brewton	74.38	57	P	P	04 46 37.4	+0.8
	baz=328						
BRAL	Brewton	74.38	57	P	P	04 46 37.5	+0.9
	baz=328						
BRTR	Keskin Array B	74.62	322	P	P	04 46 37.7	-0.5
	comp=Z,1.9nm,0.8s,baz=83,slow=2.6,SNR=7.6						
	comp=Z,1.9nm,0.8s						
BRTR	Keskin Array B	74.62	322	ceP	P	04 46 38.7	+0.5
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
X58A	Rowland	74.87	49	P	P	04 46 39.2	-0.2
	baz=330						
X58A				P	P	04 46 39.2	-0.2
	baz=330						
CNNC	Cliffs of the	74.87	48	P	P	04 46 38.7	-0.7
	baz=330						
CNNC	Cliffs of the	74.87	48	P	P	04 46 39.6	+0.2
	baz=330						
154A	Montrose	74.93	53	P	P	04 46 40.2	+0.5
	baz=329						
352A	Blakely	75.08	55	IAmb	IAmb	04 46 45.7	
	comp=Z,25nm,1.0s						
352A	Blakely	75.08	55	P	P	04 46 40.8	0.0
	baz=328						
451A	Vernon	75.45	56	P	P	04 46 43.5	+0.7
	baz=328						
TIGA	Tifton	75.72	54	P	P	04 46 43.9	-0.4
	baz=329						
TIGA	Tifton	75.72	54	P	P	04 46 44.5	+0.1
	baz=329						
NHSC	New Hope	75.76	51	P	P	04 46 44.6	0.0
	baz=330						
NHSC	New Hope	75.76	51	P	P	04 46 44.7	+0.1
	baz=330						
255A	Hazlehurst	75.79	53	P	P	04 46 45.7	+0.9
	baz=329						
RDO	Rodhopi	75.88	328	P	P	04 46 46.9	+1.7
553A	Crawfordville	76.40	55	P	P	04 46 48.8	+0.5
	baz=329						
456A	Hilliard	77.02	53	P	P	04 46 52.3	+0.6
	baz=329						
MURB	Monte Urbino	77.10	338	IAmb	IAmb	04 46 59.9	
	comp=Z,21nm,0.9s						
656A	Willston	77.95	54	P	P	04 46 57.8	+0.8
	baz=329						
NAZ	Nazwa, Dubai	78.21	298	iP	P	04 46 58.4	-0.1
	SNR=6.4						
NAZ	Nazwa, Dubai	78.21	298	P	P	04 46 57.3	-1.2
	SNR=5.8						
WSAR	Wadi Sarin	78.21	294	P	P	04 46 58.3	-0.3
	comp=Z,6.2nm,0.7s,baz=34,slow=3.6,SNR=7.9						
	comp=Z,6.2nm,0.7s						
FAQ	Al Faqa, Dubai	78.44	298	P	P	04 46 59.5	-0.3
SOHO	SOHO	78.50	297	iP	P	04 46 59.4	-0.6
	SNR=17						
SOHO	SOHO	78.50	297	P	P	04 46 58.9	-1.2
SOHO				P	P	04 46 58.9	-1.2
WBK	Wadi Bani Khal	78.57	294	P	P	04 47 00.8	+0.3
WBK				P	P	04 47 00.8	+0.3
HOQ	Hoqain	78.58	296	P	P	04 47 00.6	0.0
HOQ				P	P	04 47 00.6	0.0
SMDO	Samad	78.65	295	P	P	04 47 01.1	0.0
SMDO				P	P	04 47 01.1	0.0
ASUD	Al Ashush, Dub	78.67	298	P	P	04 47 01.2	+0.1
ASUD	Al Ashush, Dub	78.67	298	P	P	04 47 01.0	-0.1
	SNR=5.1						
JLN	Jalan Bani Buh	78.73	293	P	P	04 47 01.6	+0.2
JLN				P	P	04 47 01.6	+0.2
DZM	Mont Dzumac	78.75	177	P	P	04 47 02.0	+0.6
	comp=Z,4.3nm,1.0s,baz=328,slow=11,SNR=3.1						
	comp=Z,4.3nm,1.0s						
ALNE	Al Ain	78.95	297	P	P	04 47 02.3	-0.3
	SNR=6.8						
ARQ	Araqi	79.17	296	P	P	04 47 03.7	-0.2
	SNR=6.6						
ARQ				P	P	04 47 03.7	-0.2
	SNR=6.6						
JMDO	Jabal Madar	79.20	294	P	P	04 47 04.1	+0.1
	SNR=9.3						
BSY	Bisya	79.34	295	P	P	04 47 04.7	-0.1
	SNR=9.4						
BSY				P	P	04 47 04.7	-0.1
	SNR=9.4						
DWPF	Disney Wildern	79.52	54	P	P	04 47 06.5	+0.8
	baz=330						
ASF	Jabal al Asfar	80.20	316	P	P	04 47 09.2	-0.2
	comp=Z,5.3nm,0.9s,baz=64,slow=8.0,SNR=7.2						
	comp=Z,5.3nm,0.9s						
WRAB	Tennant Creek	80.22	207	ceP	P	04 47 07.2	-2.1
WRAB				pmax	pmax		
	comp=Z,26nm,1.7s						
WRA	Warramunga Arr	80.23	207	P	P	04 47 08.7	-0.7
	comp=Z,5.0nm,0.6s,baz=16,slow=5.5,SNR=48						
	comp=Z,5.0nm,0.6s						
MHTO	MHTO	80.43	294	P	P	04 47 10.8	+0.2
	SNR=9.3						
MZR	Muzera	80.94	298	iP	P	04 47 12.9	-0.5
	SNR=12						
MZR	Muzera	80.94	298	P	P	04 47 12.9	-0.5
	SNR=7.6						
MZR				P	P	04 47 12.9	-0.5
	SNR=7.6						
ESDC	Sonseca Array	83.11	350	P	P	04 47 24.7	+0.1
	comp=Z,3.4nm,0.9s,baz=6.8,slow=4.9,SNR=21						
	comp=Z,3.4nm,0.9s						
ASAR	Alice Springs	83.91	206	P	P	04 47 28.6	-0.1
	comp=Z,6.4nm,0.6s,baz=15,slow=4.9,SNR=62						
	comp=Z,6.4nm,0.6s						
RAYN	Ar Rayn	84.22	305	P	P	04 47 30.3	-0.2
RAYN	Ar Rayn	84.22	305	P	P	04 47 30.3	-0.2
RAYN				pmax	pmax		
	comp=Z,26nm,1.3s						
RAYN	Ar Rayn	84.22	305	iP	P	04 47 30.4	-0.2
	SNR=12						
DOK	Doka	84.34	296	P	P	04 47 30.5	-0.6
DOK				P	P	04 47 30.5	-0.6
DMTO	DMTO	84.70	294	P	P	04 47 32.1	-0.8
DMTO				P	P	04 47 32.1	-0.8
WHFO	Wadi Hawf	85.11	295	P	P	04 47 34.4	-0.7
	SNR=11						
WHFO				P	P	04 47 34.4	-0.7
	SNR=11						
MBWA	Marble Bar	85.79	220	P	P	04 47 37.1	-1.0
ABTO	Aybut	85.83	296	P	P	04 47 37.4	-1.2
PSA00	Pilbara Seismi	86.13	220	IAmb	IAmb	04 48 18.9	
	comp=Z,27nm,1.5s						
LPAZ	La Paz	124.38	65	PKP	PKiKP	04 53 59.5	+0.5
	comp=Z,1.4nm,1.0s,baz=270,slow=6.1,SNR=2.1						
VILB	Vilhena	125.23	55		PKiKP	04 54 00.4	+0.4
PTLB	Pontes e Lacer	127.91	55	PKPdf	PKiKP	04 54 05.4	+0.2
PLCA	Paso Flores	142.38	88	PKP	PKPdf	04 54 31.7	+0.8
	comp=Z,2.3nm,0.9s,baz=352,slow=0.8,SNR=2.9						
COYC	Coyhaique	144.74	95	PKPdf	PKPbc	04 54 34.2	+0.4
TRQA	Tornquist	145.12	77		PKPab	04 54 35.5	+0.1
TRQA	Tornquist	145.12	77	PKIKP	PKPab	04 54 35.5	+0.1
QSPA	South Pole Qui	146.69	180		PKPbc	04 54 38.8	-0.5
ELIB	Princess Elisa	157.61	212	dPKP	PKPab	04 55 25.7	-0.5

IDC ***29*** *04:49:42.4±1.3, 56.°83N×162.°56E, h0^{km}, mb3.3/7, mbtmp3.3/7, Error ellipse: s-maj=43.5km s-min=25.1km az=163.0*

KRSC ***29*** *04:49:44.9±1.5, 56.°91N×163.°18E, h40^{km}±16^{km}, Ml4.2*

MOS ***29*** *04:49:47.3±1.6, 56.°93N×163.°00E, h44^{km}, mb3.8/1, Error ellipse: s-maj=14.1km s-min=4.9km az=66.1*

ISC 29 04:49:43.7±1.3**, 57.°01N**±0.°03×**163.°03E**±0.°03**, h6**^{km}±8^{km}**, n79,** σ**1.^{s}52**/113**, mb3.3**/7**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBG	Krutoberegovo	0.78	193	PN	Pg	04 49 58.5	-0.1
KBG				S	Sg	04 50 09.6	+0.9
KBG	Krutoberegovo	0.78	193	eP	Pg	04 49 58.5	-0.1
KBG				eS	Sg	04 50 09.6	+0.9
KBTR	Krutoberegovo	0.81	188	PN	Pg	04 49 59.4	+0.1
KBTR				S	Sg	04 50 10.3	+0.5
KBTR	Krutoberegovo	0.81	188	eP	Pg	04 49 59.4	+0.1
KBTR				eS	Sg	04 50 10.3	+0.5
SMKR	Semkarok	0.96	244	PN	Pg	04 50 02.0	-0.1
SMKR				S	Sg	04 50 15.2	+0.7
SMKR	Semkarok	0.96	244	eP	Pg	04 50 02.0	-0.1
SMKR				eS	Sg	04 50 15.2	+0.7
SRKR	Sorokina	1.08	251	PN	Pg	04 50 04.1	-0.4
SRKR				S	Sg	04 50 17.9	-0.6
SRKR	Sorokina	1.08	251	eP	Pg	04 50 04.1	-0.4
SRKR				eS	Sg	04 50 17.9	-0.6
KLY	Klyuchi	1.49	243	PN	Pn	04 50 08.8	-2.1
KLY				S	Sn	04 50 26.6	-4.1
KLY	Klyuchi	1.49	243	eP	Pn	04 50 08.8	-2.1
KLY				eS	Sn	04 50 26.6	-4.1
CIRR	Tsirk	1.55	236	PN	Pn	04 50 12.1	+0.1
CIRR				S	Sn	04 50 32.4	0.0
CIRR	Tsirk	1.55	236	eP	Pn	04 50 12.1	+0.1
CIRR				eS	Sn	04 50 32.4	0.0
LGNR	Loginova	1.59	235	PN	Pn	04 50 12.9	+0.2
LGNR				S	Sn	04 50 33.3	-0.5
LGNR	Loginova	1.59	235	eP	Pn	04 50 12.9	+0.2
LGNR				eS	Sn	04 50 33.3	-0.5
BZGR	Bezymyannyi-Gr	1.68	231	PN	Pn	04 50 13.8	+0.1
BZGR				S	Sn	04 50 35.2	-0.5
BZGR	Bezymyannyi-Gr	1.68	231	eP	Pn	04 50 13.8	+0.1
BZGR				eS	Sn	04 50 35.2	-0.5
BZWR	Bezymyannyi-We	1.75	234	PN	Pn	04 50 14.7	-0.1
BZWR				S	Sn	04 50 37.0	-0.5
BZWR	Bezymyannyi-We	1.75	234	eP	Pn	04 50 14.7	-0.1
BZWR				eS	Sn	04 50 37.0	-0.5
BZP	Bezymyannyi-Pe	1.77	232	eP	Pn	04 50 14.9	-0.1
BZP				eS	Sn	04 50 37.0	-0.9
BZMR	Bezymyannaya	1.77	234	PN	Pn	04 50 15.3	+0.2
BZMR				S	Sn	04 50 38.2	+0.2
BZMR	Bezymyannaya	1.77	234	eP	Pn	04 50 15.3	+0.2
BZMR				eS	Sn	04 50 38.2	+0.2
KIRR	Kirishev	1.83	236	PN	Pn	04 50 15.8	0.0
KIRR				S	Sn	04 50 39.1	-0.3
KIRR	Kirishev	1.83	236	eP	Pn	04 50 15.8	0.0
KIRR				eS	Sn	04 50 39.1	-0.3
KPT	Kopyto	1.88	237	PN	Pn	04 50 16.6	+0.2
KPT				S	Sn	04 50 41.1	+0.7
KPT	Kopyto	1.88	237	eP	Pn	04 50 16.6	+0.2
KPT				eS	Sn	04 50 41.1	+0.7
SRDR	Sredinnyy	1.96	251	PN	Pn	04 50 17.8	+0.3
SRDR				S	Sn	04 50 42.0	-0.3
SRDR	Sredinnyy	1.96	251	eP	Pn	04 50 17.8	+0.3
SRDR				eS	Sn	04 50 42.0	-0.3
KOZ	Kozyrevsk	1.99	243	PN	Pn	04 50 18.9	+1.0
KOZ				S	Sb	04 50 44.8	-0.6
KOZ	Kozyrevsk	1.99	243	eP	Pn	04 50 18.9	+1.0
KOZ				eS	Sb	04 50 44.8	-0.6
KMNR	Kamenistaya	2.00	232	PN	Pn	04 50 19.0	+0.9
KMNR				S	Sn	04 50 44.3	+0.8
KMNR	Kamenistaya	2.00	232	eP	Pn	04 50 19.0	+0.9
KMNR				eS	Sn	04 50 44.3	+0.8
OSSR	Ossora	2.25	0	PN	Pb	04 50 22.3	-2.4
OSSR	Ossora	2.25	0	eP	Pb	04 50 22.3	-2.4
TUMD	Tumrok D	2.33	220	eP	Pn	04 50 24.1	+1.4

TUMR	Tumrok	2.37	224	PN	Pb	04 50 25.0	-1.8
TUMR	Tumrok	2.37	224	eP	Pb	04 50 25.0	-1.8
BKI	Bering	2.45	136	PN	Pn	04 50 23.8	-0.4
BKI				S	Sn	04 50 52.6	-1.8
BKI	Bering	2.45	136	eP	Pn	04 50 23.8	-0.4
BKI				eS	Sn	04 50 52.6	-1.8
TIGL	Tigil	2.48	290	eP	Pb	04 50 27.3	-1.2
TIGL				eS	Sb	04 50 59.7	+0.4
MKZ	Mys Kozlova	2.57	197	PN	Pn	04 50 25.6	-0.2
MKZ				S	Sn	04 50 56.9	-0.4
MKZ	Mys Kozlova	2.57	197	eP	Pn	04 50 25.6	-0.2
MKZ				eS	Sn	04 50 56.9	-0.4
ESO	Esso	2.64	247	PN	Pb	04 50 30.0	-1.3
ESO	Esso	2.64	247	eP	Pb	04 50 30.0	-1.3
PALN	Palana	2.64	323	PN	Pb	04 50 31.5	+0.1
PALN	Palana	2.64	323	eP	Pb	04 50 31.5	+0.1
SPN	Mys Shipunski	4.29	205	PN	Pn	04 50 49.3	-0.1
SPN	Mys Shipunski	4.29	205	eP	Pn	04 50 49.3	-0.1
SPN				eS	Sn	04 51 35.7	-3.9
GNL	Ganaly	4.41	223	PN	Pn	04 50 52.8	+1.5
GNL	Ganaly	4.41	223	eP	Pn	04 50 52.8	+1.5
KRX	Arik	4.44	216	PN	Pn	04 50 54.2	+2.5
KRX	Arik	4.44	216	eP	Pn	04 50 54.2	+2.5
SMAR	Somma	4.47	215	PN	Pn	04 50 54.0	+1.8
SMAR	Somma	4.47	215	eP	Pn	04 50 54.0	+1.8
AVH	Avacha	4.49	215	PN	Pn	04 50 54.7	+2.4
AVH	Avacha	4.49	215	eP	Pn	04 50 54.7	+2.4
KOK	Koryaka	4.50	216	PN	Pn	04 50 55.6	+3.1
KOK	Koryaka	4.50	216	eP	Pn	04 50 55.6	+3.1
UGLR	Uglovaya	4.51	214	PN	Pn	04 50 55.1	+2.5
UGLR	Uglovaya	4.51	214	eP	Pn	04 50 55.1	+2.5
DALK	Dalny	4.69	213	PN	Pn	04 50 56.3	+1.4
DALK	Dalny	4.69	213	eP	Pn	04 50 56.3	+1.4
PETK	Petropavlovsk-	4.97	220	Pn	Pn	04 50 57.3	-1.5
	0.6nm,0.3s,baz=72,slow=11,SNR=6.5						
KRMR	Karymshinskiy	5.05	216	PN	Pn	04 51 03.3	+3.4
KRMR	Karymshinskiy	5.05	216	eP	Pn	04 51 03.3	+3.4
APC	Apacha	5.31	222	PN	Pn	04 51 05.7	+2.2
APC	Apacha	5.31	222	eP	Pn	04 51 05.7	+2.2
MTVR	Mutnovka	5.33	214	PN	Pn	04 51 06.6	+2.6
MTVR	Mutnovka	5.33	214	eP	Pn	04 51 06.6	+2.6
ILAR	Eielson Array	24.94	51	P	P	04 55 11.2	+3.9
	0.5nm,0.8s,baz=257,slow=8.3,SNR=15						
	0.5nm,0.8s						
H11N2	WAKE ISLAND Hy	37.34	174	T	T	05 35 45.5	
	baz=357,slow=76,SNR=29						
H11N3	WAKE ISLAND Hy	37.35	174	T	T	05 35 56.9	
	baz=357,slow=76,SNR=23						
H11N1	WAKE ISLAND Hy	37.35	174	T	T	05 35 47.9	
	baz=357,slow=76,SNR=28						
YKA	Yellowknife Ar	39.18	47	P	P	04 57 13.3	+1.4
	0.2nm,0.5s,baz=299,slow=8.2,SNR=3.8						
	0.2nm,0.5s						
MKAR	Makanchi Array	48.03	294	P	P	04 58 22.6	-0.8
	0.1nm,0.4s,baz=62,slow=7.3,SNR=1.8						
	0.1nm,0.4s						
PDAR	Pinedale Array	54.23	65	P	P	04 59 10.5	+0.3
	0.2nm,0.8s,baz=343,slow=2.8,SNR=1.9						
	0.2nm,0.8s						
AKASG	Malin Array Be	66.09	330	P	P	05 00 30.0	-1.1
	0.3nm,0.5s,baz=62,slow=14,SNR=4.0						
	0.3nm,0.5s						
AKASG	Malin Array Be	66.09	330	P	P	05 00 30.0	-1.1
TXAR	Lajitas Array	67.64	70	P	P	05 00 43.3	+1.8
	0.3nm,0.7s,baz=317,slow=3.7,SNR=3.5						
	0.3nm,0.7s						
WRA	Warramunga Arr	80.35	207	P	P	05 01 53.8	-1.7
	0.2nm,0.6s,baz=20,slow=6.2,SNR=2.0						
	0.2nm,0.6s						

IDC 29 04:52:53.5±1.2**,19°.43N**×**144°.41E,h0km,mb3.7**/4**, mbtmp3.7**/4**,Error ellipse: s-maj=78.8km s-min=29.1km az=109.0,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	40.36	195	P	P	05 00 33.2	0.0
	0.5nm,0.4s,baz=17,slow=8.6,SNR=11						
	0.5nm,0.4s						
YKA	Yellowknife Ar	77.91	28	P	P	05 04 54.4	+1.3
	0.2nm,0.6s,baz=287,slow=5.2,SNR=6.5						
	0.2nm,0.6s						
NVAR	Mina Array Bea	83.64	52	P	P	05 05 23.5	-1.1
	0.5nm,0.7s,baz=270,slow=6.5,SNR=5.6						
	0.5nm,0.7s						
FINES	FINESS Array B	85.71	335	P	P	05 05 33.3	-0.9
	1.1nm,0.8s,baz=73,slow=4.8,SNR=1.6						
	1.1nm,0.8s						

IDC 29 04:53:37.1±5.7**,7°.03S**×**156°.13E,h0km,mb4.0**/3**, mbtmp4.0**/3**,Error ellipse: s-maj=147.6km s-min=47.7km az=109.0,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.73	237	P	P	04 59 00.5	0.0
	1.8nm,1.0s,baz=62,slow=9.6,SNR=9.2						
	1.8nm,1.0s						
CMAR	Chiang Mai Arr	61.82	295	P	P	05 03 58.7	+0.3
	1.2nm,0.3s,baz=119,slow=5.2,SNR=1.9						
	1.2nm,0.3s						
MKAR	Makanchi Array	84.17	318	P	P	05 06 10.2	-0.2
	1.0nm,0.8s,baz=104,slow=5.7,SNR=6.5						
	1.0nm,0.8s						

IDC 29 05:11:34.5±4.9**,2°.36S**×**139°.72E,h0km,mb3.6**/2**, mbtmp3.7**/3**,ML3.7**/1**,Error ellipse: s-maj=192.4km s-min=27.8km az=88.0,Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.25	196	P	Pn	05 15 47.7	-1.8
	0.3nm,0.3s,baz=18,slow=12,SNR=7.7						
	1.3nm,0.5s						
ASAR	Alice Springs	21.92	194	P	P	05 16 30.6	+0.9
	1.2nm,0.4s,baz=21,slow=9.4,SNR=18						
	1.2nm,0.4s						
MKAR	Makanchi Array	70.13	322	P	P	05 22 48.9	0.0
	0.5nm,0.6s,baz=119,slow=8.4,SNR=8.9						
	0.5nm,0.6s						

IDC ***29*** *05:17:49.8±1.5,22°.85S×69°.01W,h86km±9km,mbtmp3.8/4, Error ellipse: s-maj=43.9km s-min=23.6km az=108.0*
GUC ***29*** *05:17:50.3±0.9,22°.90S×69°.04W,h90km±4km,ML3.8*
ISC 29 05:17:49.8±0.8**,22°.90S**±0°.04×**68°.93W**±0°.06**,h92**km±8km**, n19,**σ1ˢ.**88**/34**,1C,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.29	4	P	Pn	05 18 04.5	+0.6
	2μm,0.3s,baz=209,slow=3.4,SNR=5903						
LVC				S	Sn	05 18 14.5	+0.2
	1μm,0.3s,baz=236,slow=20,SNR=67						
LVC	Limon Verde	0.29	4	eP	Pn	05 18 04.5	+0.6
LVC				eS	Sn	05 18 14.9	+0.6
LVC				IAML		05 18 15.3	
	comp=Z,12μm,0.2s						
PB15	IPOC Station P	0.58	239	eP	Pn	05 18 06.2	+0.6
PB15				i S	Sn	05 18 17.8	+0.3
PB09	IPOC Station P	1.14	345	eP	Pn	05 18 12.8	+1.3
PB09				i S	Sn	05 18 28.8	+1.2
PB09				IAML		05 18 30.1	
	comp=N,2μm,0.5s						
PB04	IPOC Station P	1.26	297	eP	Pn	05 18 12.7	-0.2
PB04				i S	Sn	05 18 29.8	-0.5
PB04				IAML		05 18 31.8	
	comp=N,3μm,0.2s						
PB07	IPOC Station P	1.47	323	eP	Pn	05 18 15.8	+0.4
PB07				i S	Sn	05 18 34.8	0.0
PB07				IAML		05 18 37.2	
	comp=E,3μm,0.4s						
PB10	IPOC Station P	1.61	248	eP	Pn	05 18 16.7	-0.4
PB10				i S	Sn	05 18 37.1	-0.7
PB10				IAML		05 18 43.0	
	comp=E,748nm,0.3s						
PB02	IPOC Station P	1.81	330	eP	Pn	05 18 20.1	+0.3
PB02				i S	Sn	05 18 42.7	+0.2
PB02				IAML		05 18 45.5	
	comp=E,3μm,0.3s						
PB01	IPOC Station P	1.92	344	eP	Pn	05 18 22.0	+0.8
PB01				i S	Sn	05 18 46.0	+0.9
PB01				IAML		05 18 49.4	
	comp=N,1μm,0.2s						
PB14	IPOC Station P	2.18	218⥣	eP	Pn	05 18 26.2	+1.4
PB14				eS	Sn	05 18 51.9	+0.5
PB14				IAML		05 18 59.8	
	comp=N,245nm,0.3s						
GO02	Mina Guanaco	2.33	195	eP	Pn	05 18 28.0	+1.3
GO02				eS	Sn	05 18 56.4	+1.5
GO02				IAML		05 19 05.9	
	comp=E,419nm,0.3s						
TA01	Diego Aracena	2.60	333	i S	Sn	05 19 01.3	+0.3
PB08	IPOC Station P	2.76	356	eP	Pn	05 18 33.7	+1.2
PB08				eS	Sn	05 19 05.5	+0.2
PB08				IAML		05 19 15.6	
	comp=E,277nm,0.3s						
LPAZ	La Paz	6.62	7	P	Pn	05 19 27.2	+2.0
	comp=E,0.7nm,0.3s,baz=191,slow=5.2,SNR=2.5						
CFA	Coronel Fontan	8.69	176	P	Pn	05 19 51.9	-0.8
	comp=E,2.0nm,0.3s,baz=358,slow=10,SNR=14						
CFA				S	Sn	05 21 24.9	-4.1
	comp=E,1.3nm,0.3s,baz=177,slow=18,SNR=1.5						
SIV	San Ignacio	10.11	49	P	Pn	05 20 11.6	-0.5
	comp=E,1.6nm,0.4s,baz=231,slow=12,SNR=19						
SIV				S	Sn	05 21 56.1	-7.7
	comp=E,0.8nm,0.6s,baz=243,slow=13,SNR=1.9						
CPUP	Villa Florida	11.09	110	P	Pn	05 20 28.4	+3.0
	comp=E,3.0nm,0.8s,baz=283,slow=12,SNR=6.9						
PLCA	Paso Flores	17.83	184	P	Pn	05 21 51.5	-0.5
	comp=E,1.4nm,0.9s,baz=4.2,slow=9.6,SNR=3.4						
TORD	Torodi Ar. Bea	77.85	70	P	P	05 29 38.5	+0.6
	comp=E,11nm,0.3s,baz=258,slow=5.3,SNR=7.2						
TORD				pP	pP	05 30 03.1	+0.5
	comp=E,1.6nm,0.3s,baz=256,slow=6.0,SNR=1.2						

IDC 29 05:20:56.8±3.7**,4°.70S**×**145°.34E,h0km,mb3.4**/3**, mbtmp3.5**/4**,ML3.6**/1**,Error ellipse: s-maj=92.6km s-min=31.5km az=94.0,Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.56	214	P	P	05 25 13.9	-1.4
	0.2nm,0.3s,baz=33,slow=11,SNR=14						
	1.0nm,0.7s						
ASAR	Alice Springs	21.85	209	P	P	05 25 50.1	-1.1
	0.4nm,0.6s,baz=29,slow=14,SNR=2.5						
	0.4nm,0.6s						
CMAR	Chiang Mai Arr	51.19	298	P	P	05 30 02.8	+0.5
	0.8nm,0.3s,baz=116,slow=5.8,SNR=6.0						
	0.8nm,0.3s						
MKAR	Makanchi Array	75.45	321	P	P	05 32 43.4	+0.6
	0.1nm,0.4s,baz=99,slow=9.2,SNR=2.3						
	0.1nm,0.4s						

IDC ***29*** *05:25:47.2±0.8,56°.92N×162°.69E,h0km,mb3.7/13, mbtmp3.8/14,ML3.9/1,Error ellipse: s-maj=28.2km s-min=17.3km az=138.0*
KRSC ***29*** *05:25:47.8±1.3,56°.93N×163°.24E,h23km±14km,Ml4.5*
MOS ***29*** *05:25:50.3±1.4,56°.96N×163°.06E,h30km,mb4.1/1,Error ellipse: s-maj=13.5km s-min=4.4km az=68.3*
ISC 29 05:25:48.8±1.4**,56°.94N**±0°.04×**163°.05E**±0°.04**,h8**km±9km**, n89,**σ1ˢ.**57**/101**,mb3.7**/12**,Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBG	Krutoberegovo	0.72	196	PN	Pg	05 26 02.3	-0.2
KBG				S	Sg	05 26 12.1	+0.3
KBG	Krutoberegovo	0.72	196	eP	Pg	05 26 02.3	-0.2
KBG				eS	Sg	05 26 12.1	+0.3
KBTR	Krutoberegovo	0.75	190	PN	Pg	05 26 03.2	0.0
KBTR				S	Sg	05 26 13.5	+0.7
KBTR	Krutoberegovo	0.75	190	eP	Pg	05 26 03.2	0.0
KBTR				eS	Sg	05 26 13.5	+0.7
SMKR	Semkarok	0.94	248	PN	Pg	05 26 05.9	-1.0
SMKR	Semkarok	0.94	248	eP	Pg	05 26 05.9	-1.0
SRKR	Sorokina	1.08	255	PN	Pg	05 26 08.2	-1.3
SRKR	Sorokina	1.08	255	eP	Pg	05 26 08.2	-1.3
KLY	Klyuchi	1.47	246	PN	Pn	05 26 12.9	-2.6
KLY				S	Sn	05 26 31.3	-3.6
KLY	Klyuchi	1.47	246	eP	Pn	05 26 12.9	-2.6
KLY				eS	Sn	05 26 31.3	-3.6
CIRR	Tsirk	1.52	238	PN	Pn	05 26 15.9	-0.5
CIRR				S	Sn	05 26 37.1	+0.6
CIRR	Tsirk	1.52	238	eP	Pn	05 26 15.9	-0.5
CIRR				eS	Sn	05 26 37.1	+0.6
LGNR	Loginova	1.57	238	eS	Sn	05 26 38.3	+0.5
BZGR	Bezymyannyi-Gr	1.65	233	PN	Pn	05 26 17.9	-0.2
BZGR	Bezymyannyi-Gr	1.65	233	eP	Pn	05 26 17.9	-0.2
BZWR	Bezymyannyi-We	1.73	236	PN	Pn	05 26 18.9	-0.3
BZWR	Bezymyannyi-We	1.73	236	eP	Pn	05 26 18.9	-0.3
BZP	Bezymyannyi-Pe	1.74	235	eP	Pn	05 26 19.1	-0.3
BZMR	Bezymyannaya	1.75	236	PN	Pn	05 26 19.4	-0.1
BZMR	Bezymyannaya	1.75	236	eP	Pn	05 26 19.4	-0.1
KIRR	Kirishev	1.80	238	PN	Pn	05 26 20.0	-0.3
KIRR				S	Sn	05 26 43.6	+0.2
KIRR	Kirishev	1.80	238	eP	Pn	05 26 20.0	-0.3
KIRR				eS	Sn	05 26 43.6	+0.2
KPT	Kopyto	1.85	239	PN	Pn	05 26 20.6	-0.3
KPT				S	Sn	05 26 45.8	+1.3
KPT	Kopyto	1.85	239	eP	Pn	05 26 20.6	-0.3
KPT				eS	Sn	05 26 45.8	+1.3
SRDR	Sredinnyy	1.95	253	PN	Pn	05 26 21.9	-0.3
SRDR	Sredinnyy	1.95	253	eP	Pn	05 26 21.9	-0.3
KMNR	Kamenistaya	1.97	234	PN	Pn	05 26 23.2	+0.7
KMNR	Kamenistaya	1.97	234	eP	Pn	05 26 23.2	+0.7
TUMD	Tumrok D	2.29	222	eP	Pn	05 26 27.7	+0.8
OSSR	Ossora	2.31	0	PN	Pn	05 26 26.4	-0.7
OSSR	Ossora	2.31	0	eP	Pn	05 26 26.4	-0.7
TUMR	Tumrok	2.33	226	PN	Pn	05 26 27.7	+0.2
TUMR	Tumrok	2.33	226	eP	Pn	05 26 28.5	+1.0
BKI	Bering	2.39	136	PN	Pn	05 26 27.5	-0.7
BKI				S	Sn	05 26 56.4	-1.2
BKI	Bering	2.39	136	eP	Pn	05 26 27.5	-0.7
BKI				eS	Sn	05 26 56.4	-1.2
MKZ	Mys Kozlova	2.51	198	PN	Pn	05 26 29.6	-0.2
MKZ	Mys Kozlova	2.51	198	eP	Pn	05 26 29.6	-0.2
TIGL	Tigil	2.51	291	eP	Pn	05 26 31.8	+1.9
ESO	Esso	2.62	249	PN	Pn	05 26 33.7	+2.3
ESO	Esso	2.62	249	eP	Pn	05 26 33.7	+2.3
PALN	Palana	2.71	324	PN	Pn	05 26 35.1	+2.6
PALN	Palana	2.71	324	eP	Pn	05 26 35.1	+2.6
SPN	Mys Shipunski	4.23	206	PN	Pn	05 26 53.1	-0.4
SPN	Mys Shipunski	4.23	206	eP	Pn	05 26 53.1	-0.4
NLC	Nalytchevo	4.34	211	PN	Pn	05 26 57.4	+2.5
NLC	Nalytchevo	4.34	211	eP	Pn	05 26 57.4	+2.5
GNL	Ganaly	4.37	224	PN	Pn	05 26 57.2	+1.6
GNL	Ganaly	4.37	224	eP	Pn	05 26 57.2	+1.6
KRX	Arik	4.39	217	PN	Pn	05 26 58.5	+2.7
KRX	Arik	4.39	217	eP	Pn	05 26 58.5	+2.7
KRER	Koryakskii	4.40	216	PN	Pn	05 26 58.6	+2.5
KRER	Koryakskii	4.40	216	eP	Pn	05 26 58.6	+2.5
SMAR	Somma	4.42	215	PN	Pn	05 26 57.8	+1.5
SMAR	Somma	4.42	215	eP	Pn	05 26 57.8	+1.5
AVH	Avacha	4.44	216	PN	Pn	05 26 58.9	+2.5
AVH	Avacha	4.44	216	eP	Pn	05 26 58.9	+2.5
KOK	Koryaka	4.45	217	PN	Pn	05 26 59.1	+2.5
KOK	Koryaka	4.45	217	eP	Pn	05 26 59.1	+2.5
UGLR	Uglovaya	4.46	215	PN	Pn	05 26 58.7	+2.0
UGLR	Uglovaya	4.46	215	eP	Pn	05 26 58.7	+2.0
DALK	Dalny	4.64	214	PN	Pn	05 27 00.2	+1.2
DALK	Dalny	4.64	214	eP	Pn	05 27 00.2	+1.2
PET	Petropavlovsk	4.67	215	ePN	Pn	05 27 00.7	+1.2
PET				eS	Sn	05 27 54.9	+1.0
PET				smax	smax		
	comp=N,95nm,0.8s						
PET				smax	smax		
	comp=E,42nm,0.9s						
PETK	Petropavlovsk-	4.92	221	Pn	Pn	05 27 03.8	+0.8
	comp=E,1.5nm,0.3s,baz=61,slow=17,SNR=8.2						
KRMR	Karymshinskiy	5.01	217	PN	Pn	05 27 06.7	+2.6
KRMR	Karymshinskiy	5.01	217	eP	Pn	05 27 06.7	+2.6
GRL	Gorelyy	5.26	215	PN	Pn	05 27 10.9	+3.2
GRL	Gorelyy	5.26	215	eP	Pn	05 27 10.9	+3.2
MTVR	Mutnovka	5.29	214	PN	Pn	05 27 10.3	+2.2
MTVR	Mutnovka	5.29	214	eP	Pn	05 27 10.3	+2.2
KDTR	Khodutka, Kamc	5.91	212	PN	Pn	05 27 17.1	+0.6
KDTR	Khodutka, Kamc	5.91	212	eP	Pn	05 27 17.1	+0.6
ASAJ	Asahikawa	18.18	234	P	Pn	05 29 59.9	-1.4
	comp=E,0.7nm,0.3s,baz=304,slow=11,SNR=4.5						
	comp=E,4.8nm,0.5s						
TIXI	Tiksi	20.45	329	P	P	05 30 25.7	-0.5
	comp=E,2.4nm,0.4s,baz=270,slow=23,SNR=4.5						
	comp=E,2.4nm,0.4s						
ILAR	Eielson Array	24.97	51	P	P	05 31 13.0	+0.6
	comp=E,0.4nm,0.5s,baz=267,slow=8.1,SNR=5.4						
	comp=E,0.4nm,0.5s						
INK	Inuvik	29.81	42	P	P	05 31 56.2	+0.5
	comp=E,0.5nm,0.7s,baz=325,slow=2.8,SNR=3.6						
	comp=E,0.5nm,0.7s						
H11N2	WAKE ISLAND Hy	37.27	174	T	T	06 11 58.6	
	baz=358						
H11N3	WAKE ISLAND Hy	37.28	174	T	T	06 12 02.7	
	baz=358						
H11N1	WAKE ISLAND Hy	37.28	174	T	T	06 12 03.0	
	baz=358						
RES	Resolute Bay	39.11	24	P	P	05 33 17.0	+1.2
	comp=E,0.9nm,0.7s,baz=345,slow=9.3,SNR=2.0						
	comp=E,0.9nm,0.7s						
YKA	Yellowknife Ar	39.22	47	P	P	05 33 18.6	+1.7
	comp=E,1.1nm,0.7s,baz=299,slow=8.0,SNR=8.2						
	comp=E,1.1nm,0.7s						
MKAR	Makanchi Array	48.07	294	P	P	05 34 26.8	-1.6
	comp=E,0.2nm,0.5s,baz=50,slow=7.5,SNR=2.5						
	comp=E,0.2nm,0.5s						
FRB	Frobisher Bay	53.29	26	P	P	05 35 06.5	-0.9
	comp=E,0.7nm,0.5s,baz=354,slow=6.3,SNR=4.9						
	comp=E,0.7nm,0.5s						
PDAR	Pinedale Array	54.25	65	P	P	05 35 15.4	+0.3
	comp=E,0.2nm,0.5s,baz=271,slow=4.4,SNR=2.2						
	comp=E,0.2nm,0.5s						
SCHQ	Schefferville	61.45	30	P	P	05 36 05.1	-0.1
	comp=E,1.3nm,0.7s,baz=4.3,slow=7.0,SNR=3.7						
	comp=E,1.3nm,0.7s						
AKASG	Malin Array Be	66.16	330	P	P	05 36 35.1	-1.2
	comp=E,0.4nm,0.5s,baz=31,slow=7.3,SNR=2.3						
	comp=E,0.4nm,0.5s						
TXAR	Lajitas Array	67.65	70	P	P	05 36 48.4	+2.2
	comp=E,1.1nm,0.8s,baz=281,slow=4.5,SNR=7.7						
	comp=E,1.1nm,0.8s						
WRA	Warramunga Arr	80.30	207	P	P	05 37 58.0	-2.0
	comp=E,0.5nm,0.6s,baz=11,slow=5.7,SNR=6.4						
	comp=E,0.5nm,0.6s						
ASAR	Alice Springs	83.97	207	P	P	05 38 18.8	-0.5
	comp=E,0.7nm,0.6s,baz=18,slow=4.9,SNR=8.5						
	comp=E,0.7nm,0.6s						

IDC ***29*** *05:27:44.9±0.4,56°.84N×162°.71E,h0km,mb5.0/35, mbtmp5.0/39,ML4.7/4,MS4.8/2,Error ellipse: s-maj=11.5km s-min=9.0km az=150.0*
KRSC ***29*** *05:27:45.6±1.3,56°.88N×163°.24E,h42km±15km,Mc6.2, Ml5.5*
NEIC ***29*** *05:27:45.8±1.9,56°.84N±0°.07×162°.8E±0°.1,h10km±1km, mb5.4/631,Error ellipse: s-maj=11.8km s-min=10.5km az=183.0*
BJI ***29*** *05:27:47.3±0.0,57°.01N×162°.35E,h21km,mb5.0/48, mB5.7/8,Ms5.3/6,Ms7 5.3/6*
MOS ***29*** *05:27:48.8±1.0,56°.90N×162°.84E,h42km,mb5.4/66, MS4.5/5,Error ellipse: s-maj=5.9km s-min=3.1km az=79.4*
BGR ***29*** *05:27:48.6,57°.80N×161°.98E,h14km±1km,mb4.9*
ISC 29 05:27:48.1±0.4**,56°.79N**±0°.03×**162°.88E**±0°.03**,h26**km±2km**, h25km:pP-P,n1371,**σ1ˢ.**39**/1216**,mb5.3**/445**,MS5.2**/5**, 41C-34D,Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBG	Krutoberegovo	0.54	190	PN	Pb	05 27 59.0	0.0
KBG				S	Sn	05 28 09.5	+1.1
KBG	Krutoberegovo	0.54	190	eP	Pb	05 27 59.0	0.0
KBG				eS	Sn	05 28 09.5	+1.1
KBTR	Krutoberegovo	0.58	183	PN	Pb	05 27 59.7	0.0
KBTR	Krutoberegovo	0.58	183	eP	Pb	05 27 59.7	0.0
SMKR	Semkarok	0.81	256	PN	Pb	05 28 02.9	-0.6
SMKR	Semkarok	0.81	256	eP	Pb	05 28 02.9	-0.6
SRKR	Sorokina	0.95	263	PN	Pb	05 28 05.3	-0.7
SRKR	Sorokina	0.95	263	eP	Pb	05 28 05.3	-0.7
KLY	Klyuchi	1.32	250	PN	Pn	05 28 09.6	-1.3
KLY	Klyuchi	1.32	250	eP	Pn	05 28 09.6	-1.3
CIRR	Tsirk	1.36	241	PN	Pb	05 28 12.8	-0.2
CIRR	Tsirk	1.36	241	eP	Pb	05 28 12.8	-0.2
LGNR	Loginova	1.41	241	PN	Pb	05 28 14.0	+0.2
LGNR	Loginova	1.41	241	eP	Pb	05 28 14.0	+0.2
BZGR	Bezymyannyi-Gr	1.48	236	PN	Pb	05 28 14.6	-0.4
BZGR				S	Sb	05 28 37.9	+4.5
BZGR	Bezymyannyi-Gr	1.48	236	eP	Pb	05 28 14.6	-0.4
BZGR				eS	Sb	05 28 37.9	+4.5
BZWR	Bezymyannyi-We	1.56	239	PN	Pb	05 28 15.7	-0.7
BZWR	Bezymyannyi-We	1.56	239	eP	Pb	05 28 15.7	-0.7
BZP	Bezymyannyi-Pe	1.57	237	eP	Pb	05 28 15.9	-0.7
BZMR	Bezymyannaya	1.58	238	PN	Pb	05 28 16.1	-0.6
BZMR	Bezymyannaya	1.58	238	eP	Pb	05 28 16.1	-0.6
KIRR	Kirishev	1.64	240	PN	Pb	05 28 16.7	-1.0
KIRR	Kirishev	1.64	240	eP	Pb	05 28 16.7	-1.0
KPT	Kopyto	1.69	242	PN	Pb	05 28 17.8	-0.8
KPT	Kopyto	1.69	242	eP	Pb	05 28 17.8	-0.8
KMNR	Kamenistaya	1.80	236	PN	Pb	05 28 20.0	-0.4
KMNR	Kamenistaya	1.80	236	eP	Pb	05 28 20.0	-0.4
SRDR	Sredinnyy	1.81	256	PN	Pb	05 28 19.1	-1.5
SRDR	Sredinnyy	1.81	256	eP	Pb	05 28 19.1	-1.5
KOZ	Kozyrevsk	1.82	248	PN	Pb	05 28 20.0	-0.8
KOZ				S	Sb	05 28 46.1	+2.9
KOZ	Kozyrevsk	1.82	248	eP	Pb	05 28 20.0	-0.8
KOZ				eS	Sb	05 28 46.1	+2.9
TUMD	Tumrok D	2.12	222	eP	Pb	05 28 24.3	-1.4
TUMR	Tumrok	2.15	227	PN	Pb	05 28 24.3	-2.1
TUMR	Tumrok	2.15	227	eP	Pb	05 28 25.8	-0.6
MKZ	Mys Kozlova	2.33	197	PN	Pb	05 28 26.6	-2.7
MKZ	Mys Kozlova	2.33	197	eP	Pb	05 28 26.6	-2.7
BKI	Bering	2.35	131	PN	Pn	05 28 24.4	-0.6
BKI				S	Sn	05 28 53.1	+0.1
BKI	Bering	2.35	131	eP	Pn	05 28 24.4	-0.6
BKI				eS	Sn	05 28 53.1	+0.1
ESO	Esso	2.48	251	PN	Pb	05 28 31.1	-0.8
ESO				S	Sb	05 29 04.2	+2.1
ESO	Esso	2.48	251	eP	Pb	05 28 31.1	-0.8
ESO				eS	Sb	05 29 04.2	+2.1
TIGL	Tigil	2.49	295	eP	Pn	05 28 28.3	+1.4
TIGL				eS	Sb	05 29 01.0	-1.1
PALN	Palana	2.78	327	PN	Pn	05 28 31.2	+0.3
PALN	Palana	2.78	327	eP	Pn	05 28 31.2	+0.3
KII	Karymskiy	3.38	217	PN	Pn	05 28 42.2	+3.0
KII	Karymskiy	3.38	217	eP	Pn	05 28 42.2	+3.0
TILK	Tilichiki	4.04	24	PN	Pn	05 28 48.1	-0.1
TILK	Tilichiki	4.04	24	eP	Pn	05 28 48.1	-0.1
SPN	Mys Shipunski	4.05	205	PN	Pn	05 28 49.9	+1.6
SPN				S	Sn	05 29 38.1	+3.2
SPN	Mys Shipunski	4.05	205	eP	Pn	05 28 49.9	+1.6
SPN				eS	Sn	05 29 38.1	+3.2
NLC	Nalytchevo	4.16	211	PN	Pn	05 28 53.9	+4.1
NLC				S	Sb	05 29 43.7	-6.5
NLC	Nalytchevo	4.16	211	eP	Pn	05 28 53.9	+4.1
NLC				eS	Sb	05 29 43.7	-6.5
GNL	Ganaly	4.20	224	PN	Pn	05 28 54.0	+3.5
GNL	Ganaly	4.20	224	eP	Pn	05 28 54.0	+3.5
KRX	Arik	4.21	217	PN	Pn	05 28 54.9	+4.2
KRX	Arik	4.21	217	eP	Pn	05 28 54.9	+4.2
KRER	Koryakskii	4.22	216	PN	Pn	05 28 54.9	+4.0
KRER	Koryakskii	4.22	216	eP	Pn	05 28 54.9	+4.0
SMAR	Somma	4.24	215	PN	Pn	05 28 54.6	+3.4
SMAR	Somma	4.24	215	eP	Pn	05 28 54.6	+3.4
AVH	Avacha	4.26	216	PN	Pn	05 28 55.3	+4.0
AVH	Avacha	4.26	216	eP	Pn	05 28 55.3	+4.0
KOK	Koryaka	4.27	217	PN	Pn	05 28 55.6	+4.1
KOK	Koryaka	4.27	217	eP	Pn	05 28 55.6	+4.1
UGLR	Uglovaya	4.28	215	PN	Pn	05 28 55.1	+3.5
UGLR	Uglovaya	4.28	215	eP	Pn	05 28 55.1	+3.5
DALK	Dalny	4.46	214	PN	Pn	05 28 57.0	+3.1
DALK				S	Sb	05 29 51.2	-7.5
DALK	Dalny	4.46	214	eP	Pn	05 28 57.0	+3.1
DALK				eS	Sb	05 29 51.2	-7.5
INSR	Institute	4.47	215	eP	Pn	05 28 57.5	+3.4
PET	Petropavlovsk	4.49	215		Pn	05 28 57.7	+3.3
PET	Petropavlovsk	4.49	215	ePN	Pn	05 28 57.5	+3.1
PET				eS	Sn	05 29 51.4	+5.6
PET				pmax	pmax		
	comp=Z,926nm,1.0s						
PET				smax	smax		
	comp=N,2μm,0.8s						
PET				smax	smax		
	comp=E,984nm,0.8s						
PET				MLR	MLR		
	comp=Z,12μm,12.0s						

PET				MLR	MLR		
	comp=Z,13µm,9.0s						
PET	Petropavlovsk	4.49	215	*e*P	Pn	05 28 57.7	+3.3
PEA0B	Petropavlovsk-	4.75	221	Pn	Pn	05 29 01.3	+3.4
PEA0B	Petropavlovsk-	4.75	221	*i* PN	Pn	05 29 01.1	+3.2
PETK	Petropavlovsk-	4.75	221	Pn	Pn	05 29 00.9	+3.0
	comp=Z,12nm,0.3s,baz=57,slow=16,SNR=51						
PETK	Petropavlovsk-	4.75	221	Pn	Pn	05 29 01.0	+3.1
PETK	Petropavlovsk-	4.75	221	PN	Pn	05 29 01.0	+3.1
KRMR	Karymshinskiy	4.83	217	PN	Pn	05 29 02.4	+3.4
KRMR	Karymshinskiy	4.83	217	*e*P	Pn	05 29 02.4	+3.4
RUS	Russkaya	5.05	212	PN	Pn	05 29 05.2	+3.2
RUS				S	Sn	05 30 03.7	+4.2
RUS	Russkaya	5.05	212	*e*P	Pn	05 29 05.2	+3.2
RUS				*e*S	Sn	05 30 03.7	+4.2
GRL	Gorelyy	5.08	215	PN	Pn	05 29 07.5	+4.9
GRL	Gorelyy	5.08	215	*e*P	Pn	05 29 07.5	+4.9
APC	Apacha	5.09	223	PN	Pn	05 29 06.4	+3.8
APC	Apacha	5.09	223	*e*P	Pn	05 29 06.4	+3.8
MTVR	Mutnovka	5.11	214	PN	Pn	05 29 07.0	+4.0
MTVR	Mutnovka	5.11	214	*e*P	Pn	05 29 07.0	+4.0
KDTR	Khodutka, Kamc	5.73	211	PN	Pn	05 29 13.9	+2.6
KDTR	Khodutka, Kamc	5.73	211	*e*P	Pn	05 29 13.9	+2.6
KMSK	Kamenskaya	5.94	15	PN	Pn	05 29 13.0	-1.2
KMSK	Kamenskaya	5.94	15	*e*P	Pn	05 29 13.0	-1.2
PAU	Pauzhetka	6.41	216	PN	Pn	05 29 25.7	+4.9
PAU	Pauzhetka	6.41	216	*e*P	Pn	05 29 25.7	+4.9
MA2	Magadan	6.99	299	Pn	Pn	05 29 31.9	+3.3
	comp=Z,1.2nm,0.3s,baz=101,slow=12,SNR=10						
MA2	Magadan	6.99	299	Pn	Pn	05 29 31.3	+2.6
MA2	Magadan	6.99	299	*ce*PN	Pn	05 29 29.6	+1.0
MA2				pmax	pmax		
	comp=Z,168nm,2.5s						
SKR	Severo-Kuril's	7.31	216	*e*PN	Pn	05 29 36.1	+3.0
SKR				*e*S	Sn	05 31 06.1	+11
SKR				pmax	pmax		
	comp=Z,101nm,0.6s						
SKR				pmax	pmax		
	comp=Z,800nm,2.4s						
SKR				smax	smax		
	comp=N,121nm,0.7s						
SKR				smax	smax		
	comp=E,128nm,0.9s						
SKR				MLR	MLR		
	comp=Z,4µm,10.0s						
SKR				MLR	MLR		
	comp=N,2µm,11.0s						
SKR				MLR	MLR		
	comp=E,4µm,15.0s						
SHEM	Shemya Is, Ala	7.66	117	Pn	Pn	05 29 40.1	+2.3
	comp=E,17nm,0.3s,baz=286,slow=2.6,SNR=13						
SHEM				Sn	Sn	05 31 02.5	-1.1
	comp=E,0.9nm,0.3s,baz=272,slow=18,SNR=2.8						
SHEM				LR	LR	05 32 01.7	
	comp=E,4µm,19.2s,baz=304,slow=33						
	comp=E,55nm,0.5s						
SMY	Shemya	7.66	117	Pn	Pn	05 29 40.1	+2.3
SMY	Shemya	7.66	117	PN	Pn	05 29 40.1	+2.3
SEY	Seymchan	8.11	324	Pn	Pn	05 29 43.5	-0.4
	comp=E,0.2nm,0.3s,baz=175,slow=23,SNR=2.0						
BILL	Bilibino	11.40	6	Pn	Pn	05 30 30.1	+1.1
BILL	Bilibino	11.40	6	*e*PN	Pn	05 30 27.1	-1.9
BILL				MLR	MLR		
	comp=Z,4µm,13.0s						
ADK	Adak	12.88	104	Pn	Pn	05 30 53.6	+4.4
ADK	Adak	12.88	104	PN	Pn	05 30 53.6	+4.4
TYV	Tymovskoe	13.31	252	*e*PN	P	05 31 00.4	-4.2
TYV				*e*S	Sn	05 33 30.8	+8.6
TYV				pmax	pmax		
	comp=Z,200nm,2.3s						
TYV				pmax	pmax		
	comp=Z,59nm,1.2s						
TYV				smax	smax		
	comp=E,2µm,6.8s						
UGL	Uglegorsk	14.69	247	*e*P	P	05 31 19.4	-0.5
UGL				pmax	pmax		
	comp=Z,110nm,1.2s						
YSS	Yuzh-Sakhalins	15.80	240	P	P	05 31 31.3	-0.9
YSS	Yuzh-Sakhalins	15.80	240	*ce*P	P	05 31 30.8	-1.4
YSS				pmax	pmax		
	comp=Z,158nm,1.3s						
TNA	Tin City	16.44	46	P	P	05 31 38.2	-0.9
TNA	Tin City	16.44	46	P	P	05 31 38.2	-0.9
	baz=252,SNR=37						
NIKH	Nikolski High	16.65	91		P	05 31 41.5	-0.1
NIKH	Nikolski High	16.65	91	P	P	05 31 40.9	-0.6
	baz=295						
GRNR	Gornyy	16.69	260	⇑*i*P	P	05 31 42.9	+0.8
GRNR				*e*S	S	05 34 49.6	-5.5
GRNR				pmax	pmax		
	comp=N,10.0nm,1.0s						
GRNR				pmax	pmax		
	comp=E,6.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GRNR				smax	smax		
	comp=E,2.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,2µm,15.0s						
GRNR				MLR	MLR		
	comp=N,4µm,14.0s						
GRNR				MLR	MLR		
	comp=Z,4µm,15.0s						
ANM	Nome	17.22	50	P	P	05 31 48.3	+0.5
ANM	Nome	17.22	50	P	P	05 31 48.3	+0.5
ANM				pmax	pmax		
	comp=Z,116nm,1.5s						
ANM	Nome	17.22	50	P	P	05 31 48.6	+0.8
	baz=258,SNR=28						
YAK	Yakutsk	17.55	301	P	Pn	05 31 49.8	-0.8
	comp=Z,0.3nm,0.3s,baz=271,slow=1.1,SNR=8.7						
	comp=Z,11nm,0.4s						
YAK	Yakutsk	17.55	301	Pn	Pn	05 31 48.8	-1.8
YAK	Yakutsk	17.55	301	*e*P	Pn	05 31 50.9	+0.3
YAK				*e*S	Sn	05 35 05.3	+0.3
YAK				pmax	pmax		
	comp=Z,99nm,1.4s						
YAK				pmax	pmax		
	comp=N,12nm,1.4s						
YAK				pmax	pmax		
	comp=E,61nm,1.6s						
YAK				pmax	pmax		
	comp=Z,3µm,15.3s						
YAK				pmax	pmax		
	comp=N,2µm,12.3s						
YAK				pmax	pmax		
	comp=E,1µm,12.8s						
YAK				smax	smax		
	comp=N,1µm,12.3s						
YAK				MLR	MLR		
	comp=Z,4µm,21.0s						
YAK				MLR	MLR		
	comp=N,4µm,19.0s						
UNV	Unalaska Valle	17.59	87	P	P	05 31 54.3	+2.3
	baz=292						
JKA	Kamikawa-asahi	18.01	234	P	P	05 31 56.8	+0.1
ASAJ	Asahikawa	18.01	234	P	P	05 31 57.6	+0.9
	comp=N,4.2nm,0.3s,baz=47,slow=6.9,SNR=75						
	comp=N,156nm,0.9s						
RDOG	Red Dog Mine	19.13	40	P	Pn	05 32 09.7	-0.1
RDOG	Red Dog Mine	19.13	40	P	Pn	05 32 10.8	+1.1
	baz=251,SNR=10.0						
S12K	Black Hills	19.39	78	P	Pn	05 32 14.6	+1.6
	baz=288						
ERM	Erimo	19.47	229	P	P	05 32 11.9	-0.8
ERM				IAmb	IAmb	05 32 18.5	
	comp=Z,145nm,0.6s						
ERM	Erimo	19.47	229	P	P	05 32 11.9	-0.8
ERM				pmax	pmax		
	comp=Z,145nm,0.6s						
KLR	Kul'dur	20.06	261	P	P	05 32 19.4	+0.3
	comp=Z,0.3nm,0.3s,baz=51,slow=12,SNR=16						
KLR				PcP	PcP	05 36 34.4	+0.7
	comp=Z,2.1nm,0.8s,baz=94,slow=6.2,SNR=4.5						
	comp=Z,9.6nm,0.8s						
KLR	Kul'dur	20.06	261	*ce*P	P	05 32 19.1	0.0
KLR				pmax	pmax		
	comp=Z,33nm,1.7s						
N16K	Nishlik Lake	20.10	63	P	P	05 32 19.9	+0.5
	baz=277,SNR=24						
TEY	Ternei	20.17	246	*e*P	P	05 32 18.7	-1.6
SDPT	Sand Point	20.35	79	P	P	05 32 21.9	-0.3
	baz=290						
ZEA	Zeya	20.39	277	*e*P	P	05 32 23.5	+0.9
ZEA				pmax	pmax		
	comp=Z,90nm,1.5s						
TIXI	Tiksi	20.54	330	P	P	05 32 24.9	+0.8
	comp=Z,71nm,0.9s,baz=90,slow=23,SNR=69						
	comp=Z,71nm,0.9s						
TIXI	Tiksi	20.54	330	P	P	05 32 24.8	+0.8
TIXI				IAmb	IAmb	05 32 29.8	
	comp=Z,179nm,1.2s						
TIXI	Tiksi	20.54	330	*ce*P	P	05 32 24.7	+0.6
TIXI				pmax	pmax		
	comp=Z,243nm,1.7s						
O16K	Kokwok River B	20.55	66	P	P	05 32 24.6	+0.2
	baz=280						
P16K	Nushagak River	20.70	67	P	P	05 32 26.3	+0.3
	baz=281,SNR=7.3						
GCSA	Galena City Sc	20.86	51	P	P	05 32 28.7	+1.1
	baz=267						
O17K	Koliganek Bris	21.02	65	P	P	05 32 31.1	+1.6
	baz=280,SNR=12						
TTA	Tatalina	21.23	56	P	P	05 32 32.9	+1.2
TTA				IAmb	IAmb	05 32 39.7	
	comp=Z,288nm,1.8s						
TTA	Tatalina	21.23	56	P	P	05 32 32.9	+1.2
TTA				pmax	pmax		
	comp=Z,288nm,1.8s						
TTA	Tatalina	21.23	56	P	P	05 32 33.4	+1.7
	baz=272,SNR=56						
Q16K	King Salmon	21.46	68	P	P	05 32 34.4	+0.3
	baz=283						
P17K	Kvichak River	21.46	66	P	P	05 32 34.6	+0.5
	baz=282						
SVW2	Sparrevohn	21.58	61	P	P	05 32 34.4	-1.1
L19K	White Mountain	21.81	58	P	P	05 32 39.8	+1.9
	baz=275						
R17K	Ugashik Creek	21.84	71	P	P	05 32 38.6	+0.3
	baz=286,SNR=8.0						
HEH	HeiHe	21.89	268	P	P	05 32 37.0	-1.8
HEH				pP	sP	05 32 47.0	-2.1
HEH				S	S	05 36 34.8	-4.3
HEH				pmax	pmax		
	comp=Z,71nm,1.2s						
HEH				LR	LR		
	comp=Z,4µm,13.5s						
HEH				LR	LR		
	comp=Z,3µm,14.3s						
HEH				LR	LR		
	comp=Z,8µm,14.6s						
Q17K	Contact Creek	21.95	69	P	P	05 32 39.6	+0.1
	baz=284						
O18K	Koktuh Hills	21.95	64	P	P	05 32 39.1	-0.3
O18K	Koktuh Hills	21.95	64	P	P	05 32 39.5	+0.1
	baz=281,SNR=9.8						
P18K	Big Mountain,	22.03	66	P	P	05 32 41.7	+1.4
	baz=282,SNR=7.5						
M19K	Big River Lodg	22.05	59	P	P	05 32 41.8	+1.3
	baz=276						
K20K	Telida	22.09	55	P	P	05 32 42.0	+1.1
	baz=273,SNR=35						
N19K	Bonanza Creek	22.15	62	P	P	05 32 43.0	+1.4
	baz=279						
L20K	Farewell, AK	22.23	57	P	P	05 32 42.1	-0.4
	baz=275,SNR=27						
IMAR	Indian Mountai	22.25	48	P	P	05 32 42.4	-0.2
IMAR					PcP	05 36 37.6	-0.1
A21K	Barrow	22.29	33	P	P	05 32 41.1	-1.8
A21K				IAmb	IAmb	05 33 02.1	
	comp=Z,122nm,1.1s						
A21K	Barrow	22.29	33	P	P	05 32 42.9	0.0
	baz=251,SNR=20						
Q18K	Katmai Hardscr	22.30	67	P	P	05 32 42.7	-0.6
	baz=284						
O19K	Port Alsworth	22.33	63	P	P	05 32 43.2	-0.2
	baz=280,SNR=7.6						
G21K	Allakaket	22.38	47	P	P	05 32 45.2	+1.2
	baz=266,SNR=45						
F21K	Alatna River	22.46	45	P	P	05 32 45.4	+0.5
	baz=264						
H21K	Melozitna Rive	22.62	49	P	P	05 32 47.2	+0.6
	baz=268						
M20K	Styx River	22.65	59	P	P	05 32 47.6	+0.7
	baz=277						
CHUM	Lake Minchumin	22.85	53	P	P	05 32 49.6	+0.7
	baz=273,SNR=34						
Q19K	Cape Douglas,	22.93	66	P	P	05 32 50.2	+0.3
	baz=284						
ILSW	Iliamna Southw	22.95	64	P	P	05 32 50.3	+0.1
I21K	Tanana	22.96	50	IAmb	IAmb	05 32 53.5	
	comp=Z,131nm,1.4s						
I21K	Tanana	22.96	50	P	P	05 32 50.4	+0.4
	baz=270						
P19K	Oil Pt	22.97	64	P	P	05 32 50.9	+0.6
	baz=282						
PPLA	Purkeypile	22.97	56	P	P	05 32 51.4	+1.0
PPLA	Purkeypile	22.97	56	P	P	05 32 51.0	+0.6
	baz=276,SNR=22						
CAST	Castle Rocks	22.98	55	P	P	05 32 50.3	0.0
CAST				IAmb	IAmb	05 32 52.8	
	comp=Z,229nm,2.0s						
CAST	Castle Rocks	22.98	55	P	P	05 32 50.5	+0.1
	baz=274,SNR=29						
USRK	Ussuriysk Ar.	23.11	250	P	P	05 32 49.5	-2.3
	comp=Z,6.4nm,0.6s,baz=56,slow=10,SNR=12						
	comp=Z,6.4nm,0.6s						
SPCR	Spurr Chakacha	23.18	60	P	P	05 32 53.0	+0.5
	baz=280,SNR=10.0						
O20K	Slope Mountain	23.18	63	P	P	05 32 51.3	-1.2
	baz=282						
SKT	Skwentna	23.38	58	P	P	05 32 55.5	+1.1
	baz=278,SNR=25						
BPAW	Bear Paw Mtn.	23.42	53	IAmb	IAmb	05 33 00.5	
	comp=Z,248nm,1.6s						
BPAW	Bear Paw Mtn.	23.42	53	P	P	05 32 55.7	+1.0
	baz=274,SNR=66						
MLY	Manley	23.49	50	IAmb	IAmb	05 32 57.9	
	comp=Z,362nm,2.0s						
MLY	Manley	23.49	50	P	P	05 32 56.2	+0.8
	baz=272,SNR=84						
KTH	Kantishna Hill	23.49	54	IAmb	IAmb	05 33 01.5	
	comp=Z,208nm,1.4s						
OHAK	Old Harbor	23.57	70	P	P	05 32 56.9	+0.7
	baz=288						
Q20K	Shuyak Island	23.64	67	P	P	05 32 55.9	-1.0
	baz=285						
D23K	Nanushuk River	23.71	41	P	P	05 32 56.6	-0.9
	baz=263						
COLD	Coldfoot	23.73	45	P	P	05 32 57.9	+0.1
COLD	Coldfoot	23.73	45	P	P	05 32 57.8	+0.1
	baz=267						
HOM	Homer	23.76	64	IAmb	IAmb	05 33 25.6	
	comp=Z,145nm,1.0s						
KDAK	Kodiak Island	23.77	69	P	P	05 32 58.5	+0.4
	comp=Z,13nm,1.0s,baz=324,slow=7.2,SNR=5.1						
	comp=Z,13nm,1.0s						
KDAK	Kodiak Island	23.77	69	P	P	05 32 56.5	-1.6
	baz=287						
TRF	Thorofare Moun	23.78	54	IAmb	IAmb	05 33 04.4	
	comp=Z,138nm,1.0s						
TRF	Thorofare Moun	23.78	54	P	P	05 32 58.4	0.0
	baz=276,SNR=72						
G23K	Bananza Creek	23.78	46	P	P	05 32 58.0	-0.3
	baz=269						
SUA	Susitna One	23.83	59	IAmb	IAmb	05 33 00.9	
	comp=Z,72nm,1.0s						
SUA	Susitna One	23.83	59	P	P	05 32 58.1	-0.8
	baz=280,SNR=33						
CUT	Chulitna	23.91	57	IAmb	IAmb	05 33 05.2	
	comp=Z,84nm,0.9s						
CUT	Chulitna	23.91	57	P	P	05 32 58.6	-0.8
	baz=278						
JMM	Marumori	23.95	227	P	P	05 32 58.9	-1.1
H23K	Yukon River	23.97	48	IAmb	IAmb	05 33 08.7	
	comp=Z,115nm,1.1s						
CNPM	China Poot	23.99	64	P	P	05 33 01.0	+0.8
CNPM				IAmb	IAmb	05 33 08.0	
	comp=Z,196nm,1.6s						
E23K	Chandalar	24.01	43	P	P	05 33 00.7	+0.3
	baz=266						
I23K	Minto, Yukon-K	24.07	50	IAmb	IAmb	05 33 09.4	
	comp=Z,181nm,1.2s						
I23K	Minto, Yukon-K	24.07	50	P	P	05 33 00.0	-0.8
	baz=273,SNR=86						
MDJ	Mudanjiang	24.08	254	P	P	05 33 00.0	-1.2
MDJ				pP	sP	05 33 11.8	0.0
MDJ				sP	pP	05 33 16.5	+7.8
MDJ				S	S	05 37 13.8	-3.1
MDJ				PcS	PcS	05 40 20.3	-1.1
MDJ				LR	LR		
	comp=Z,4µm,14.9s						
MDJ				LR	LR		
	comp=Z,4µm,16.5s						
MDJ				LR	LR		
	comp=Z,9µm,16.3s						
BRSE	Bradley Lake S	24.18	63	P	P	05 33 02.7	+0.7
	baz=284						
NEA2	Nenana	24.22	51	P	P	05 33 02.2	-0.1
	baz=274,SNR=34						
MCK	McKinley	24.35	54	IAmb	IAmb	05 33 06.7	
	comp=Z,101nm,1.2s						
MCK	McKinley	24.35	54	P	P	05 33 03.0	-0.6
	baz=276,SNR=44						
RC01	Rabbit Creek A	24.38	60	P	P	05 33 02.8	-1.0
	baz=282						
E24K	Your Creek	24.43	43	P	P	05 33 04.8	+0.5
	baz=267						
C24K	Franklin Bluff	24.51	39	P	P	05 33 04.1	-0.7
	baz=263						
O22K	Cooper Landing	24.51	61	IAmb	IAmb	05 33 23.9	
	comp=Z,72nm,0.9s						
O22K	Cooper Landing	24.51	61	P	P	05 33 03.7	-1.3
	baz=283						
BNX	BinXian	24.51	258	⇓P	P	05 33 04.5	-0.6
BNX				pmax	pmax		
	comp=Z,33nm,1.1s						
BNX				pmax	pmax		
	comp=Z,2µm,12.0s						
PMR	Palmer	24.57	59	P	P	05 33 05.9	+0.4
PMR	Palmer	24.57	59	P	P	05 33 05.9	+0.4
PMR				pmax	pmax		
	comp=Z,14nm,1.0s						
PMR	Palmer	24.57	59	P	P	05 33 05.2	-0.3
	baz=281						
F24K	Squaw Lake	24.64	44	P	P	05 33 06.2	+0.1
	baz=269						
WRH	Wood River Hil	24.65	52	IAmb	IAmb	05 33 09.1	
	comp=Z,140nm,1.0s						
H24K	Noodor Dome	24.65	48	P	P	05 33 06.5	+0.2
H24K				IAmb	IAmb	05 33 14.8	
	comp=Z,113nm,1.3s						
H24K	Noodor Dome	24.65	48	P	P	05 33 07.2	+0.9
	baz=272						
TCOL	CIGO, UAF Yank	24.72	51	IAmb	IAmb	05 33 10.3	
	comp=Z,78nm,1.0s						
TCOL	CIGO, UAF Yank	24.72	51	P	P	05 33 06.2	-0.6
	baz=275,SNR=19						
COLA	College	24.72	51	P	P	05 33 07.5	+0.7
COLA				IAmb	IAmb	05 33 10.3	
	comp=Z,71nm,0.9s						
COLA	College	24.72	51	*c i*P	P	05 33 06.8	0.0
COLA				pmax	pmax		
	comp=Z,96nm,1.2s						
COLA	College	24.72	51	P	P	05 33 07.1	+0.3
	baz=275						
CCB	Clear Creek Bu	24.76	51	IAmb	IAmb	05 33 13.7	
	comp=Z,124nm,1.0s						
G24K	Hadweenzic Riv	24.80	46	P	P	05 33 08.4	+0.9
	baz=271,SNR=82						
POKR	Poker Plat Res	24.88	50	IAmb	IAmb	05 33 31.4	
	comp=Z,94nm,1.2s						
POKR	Poker Plat Res	24.88	50	P	P	05 33 08.0	-0.3
	baz=274,SNR=11						
SML	Sawmill	24.91	58	P	P	05 33 07.8	-0.8
	baz=281,SNR=14						
KNK	Knik Glacier	24.92	59	IAmb	IAmb	05 33 14.4	
	comp=Z,85nm,1.2s						
KNK	Knik Glacier	24.92	59	P	P	05 33 08.3	-0.5
	baz=282,SNR=9.4						
PWL	Port Wells	25.10	60	IAmb	IAmb	05 33 26.8	
	comp=Z,127nm,1.0s						
PWL	Port Wells	25.10	60	P	P	05 33 08.7	-1.6
	baz=283,SNR=14						
IL31		25.14	51	P	P	05 33 10.5	-0.1
IL31				IAmb	IAmb	05 33 17.1	
	comp=Z,62nm,0.9s						
ILAR	Eielson Array	25.14	51	P	P	05 33 10.7	0.0
	comp=Z,24nm,0.8s,baz=263,slow=7.6,SNR=80						
ILAR				PcP	PcP	05 36 43.2	-0.7
	comp=Z,1.9nm,0.9s,baz=264,slow=4.1,SNR=4.6						
	comp=Z,24nm,0.8s						
HDA	Harding Lake	25.15	52	P	P	05 33 09.9	-0.9
	baz=276,SNR=25						
M23K	Glacier View	25.19	58	P	P	05 33 10.1	-1.1
	baz=281,SNR=21						
D25K	Kavik River	25.28	40	P	P	05 33 11.2	-0.8
	baz=266,SNR=165						
G25K	Bearman Lake	25.34	46	P	P	05 33 10.3	-2.1
	baz=272						
SCM	Sheep Creek Mo	25.37	58	P	P	05 33 12.3	-0.6
	baz=282,SNR=26						
F25K	Christian Rive	25.50	44	P	P	05 33 11.7	-2.2
	baz=271						
E25K	Arctic Village	25.53	43	P	P	05 33 14.3	+0.1
	baz=270,SNR=65						
PRP	Porcupine Dome	25.65	49	IAmb	IAmb	05 33 17.3	
	comp=Z,86nm,1.1s						
PRP	Porcupine Dome	25.65	49	P	P	05 33 15.2	-0.2
	baz=275,SNR=76						
FYU	Fort Yukon	25.69	47	IAmb	IAmb	05 33 22.8	
	comp=Z,159nm,1.2s						
K24K	Donnelly Dome	25.74	53	P	P	05 33 16.5	+0.4
	baz=279,SNR=14						
P23K	Montague Islan	25.75	62	P	P	05 33 16.1	-0.1
	baz=285						
C26K	Camden Bay	25.83	39	P	P	05 33 17.0	+0.1
	baz=267,SNR=347						
M24K	Tolsona, Glenn	25.85	57	IAmb	IAmb	05 33 34.9	
	comp=Z,105nm,1.0s						
M24K	Tolsona, Glenn	25.85	57	P	P	05 33 17.8	+0.6
	baz=282,SNR=11						
BMAR	Burnt Mountain	25.91	45	P	P	05 33 17.8	+0.1
BOD	Bodaibo	25.97	293	*e*P	P	05 33 18.0	-0.2
BOD				pmax	pmax		
	comp=Z,171nm,1.8s						
PAX	Paxson	26.01	55	P	P	05 33 17.1	-1.5
	baz=280,SNR=20						
F26K	Sheenjek River	26.07	44	P	P	05 33 18.6	-0.5
	baz=272						
KLU	Klutina	26.10	58	P	P	05 33 19.1	-0.3
	baz=283,SNR=7.7						
MJB9	Matsu-Tunnel	26.14	230	P	P	05 33 19.2	-0.7
MAJO	Matsushiro	26.14	230	P	P	05 33 19.5	-0.5
MAJO	Matsushiro	26.14	230	*i* P	P	05 33 19.8	-0.2
MAJO				pmax	pmax		
	comp=Z,38nm,1.0s						
MJAR	Matsushiro Arr	26.14	230	P	P	05 33 20.4	+0.4
	comp=Z,28nm,1.0s,baz=19,slow=8.5,SNR=41						
MJAR				PcP	PcP	05 36 46.4	-0.2
	comp=Z,2.6nm,0.7s,baz=34,slow=1.7,SNR=5.4						
	comp=Z,28nm,1.0s						
RIDG	Independent Ri	26.16	53	IAmb	IAmb	05 33 21.0	
	comp=Z,90nm,1.2s						
RIDG	Independent Ri	26.16	53	P	P	05 33 18.1	-1.8
	baz=279,SNR=23						
C27K	Jago River	26.24	39	P	P	05 33 20.3	-0.2
	baz=268						
G26K	Porcupine Rive	26.25	46	P	P	05 33 21.1	+0.5
	baz=274						
HARP	HAARP	26.26	56	P	P	05 33 20.0	-0.9
	baz=282						
SCRK	Sand Creek	26.49	52	IAmb	IAmb	05 33 23.5	
	comp=Z,78nm,1.0s						
SCRK	Sand Creek	26.49	52	P	P	05 33 21.4	-1.7
	baz=280,SNR=64						
DOT	Dot Lake	26.52	53	P	P	05 33 21.5	-1.6
HIA	Hailar	26.63	272	*i* P	P	05 33 24.1	-0.2
HIA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
I26K	Coal Creek Min	26.66	49	P	P	05 33 24.3	-0.1
	baz=278						
N25K	Chitina, Valde	26.69	58	P	P	05 33 24.7	0.0
	baz=284,SNR=6.9						
CN2	Changchun	26.84	257	*e*P	P	05 33 23.3	-2.8
L26K	Log Cabin Wild	26.95	54	P	P	05 33 25.8	-1.2
	baz=282						
E27K	Coleen River	27.02	43	P	P	05 33 27.4	-0.2
	baz=273						
G27K	Doyon Strip	27.09	46	P	P	05 33 27.8	-0.5
	baz=276						
H27K	Steamboat Moun	27.21	47	P	P	05 33 29.5	+0.1
	baz=277						
M26K	Nabesna, AK	27.24	56	IAmb	IAmb	05 33 32.2	
	comp=Z,86nm,1.2s						
M26K	Nabesna, AK	27.24	56	P	P	05 33 29.9	+0.2
	baz=283						
I27K	Kandik River	27.25	48	P	P	05 33 29.7	-0.1
	baz=278						
JGF	Kuroka	27.30	230	P	P	05 33 28.6	-1.9
K27K	Chicken	27.31	52	IAmb	IAmb	05 33 35.2	

	comp=Z,74nm,1.1s						
K27K	Chicken	27.31	52	P	P	05 33 29.0	-1.2
	baz=281						
VRDI	Verde Repeater	27.32	58	P	P	05 33 31.0	+0.4
MCARA	McCarthy VSAT	27.48	58	P	P	05 33 32.7	+0.9
MCARA				IAmb	IAmb	05 33 51.1	
	comp=Z,97nm,1.2s						
MCARA	McCarthy VSAT	27.48	58	P	P	05 33 32.7	+0.9
	baz=285,SNR=10						
EGAK	Eagle	27.57	50	P	P	05 33 31.3	-1.3
EGAK				IAmb	IAmb	05 33 33.1	
	comp=Z,60nm,0.9s						
EGAK	Eagle	27.57	50	P	P	05 33 31.0	-1.6
	baz=280,SNR=44						
L27K	Beaver Creek,	27.62	54	IAmb	IAmb	05 33 35.2	
	comp=Z,71nm,1.2s						
L27K	Beaver Creek,	27.62	54	P	P	05 33 33.0	-0.1
	baz=283						
BCAR	Beaver Creek A	27.64	54	P	P	05 33 34.0	+0.8
M27K	Edge Creek, AK	27.76	55	IAmb	IAmb	05 33 50.8	
	comp=Z,65nm,1.1s						
M27K	Edge Creek, AK	27.76	55	P	P	05 33 34.5	+0.1
	baz=284						
BVCY	Beaver Creek	28.20	55	P	P	05 33 37.6	-0.7
	baz=285,SNR=8.8						
DAWY	Dawson	28.46	51	P	P	05 33 39.9	-0.7
DAWY	Dawson	28.46	51	P	P	05 33 40.8	+0.2
	baz=283,SNR=17						
YUK3	Moose Creek	28.55	56	P	P	05 33 41.3	-0.3
	baz=286,SNR=7.1						
I29M	Ogilvie Camp,	28.66	48	IAmb	IAmb	05 33 44.0	
	comp=Z,86nm,1.2s						
I29M	Ogilvie Camp,	28.66	48	P	P	05 33 42.1	-0.2
	baz=281,SNR=52						
J29M	Klondike Camp	28.88	50	P	P	05 33 42.9	-1.4
	baz=283						
O28M	Mount Upton	28.97	58	P	P	05 33 45.0	-0.4
	baz=288						
YUK8	Steele Glacier	29.01	57	P	P	05 33 45.1	-0.6
	baz=287						
EPYK	Eagle Plains	29.11	46	P	P	05 33 47.0	+0.7
	baz=281,SNR=19						
PCA	Pinnacle	29.15	59	IAmb	IAmb	05 33 59.0	
	comp=Z,44nm,1.0s						
PINM	Pinnacle	29.16	59	P	P	05 33 43.5	-3.3
	baz=289						
G30M	tAoh Zraii Nji	29.20	45	P	P	05 33 45.9	-1.2
	baz=280						
L29M	L29M	29.24	53	P	P	05 33 47.3	-0.2
	baz=285						
M29M	Somme Creek	29.27	54	P	P	05 33 47.6	-0.2
	baz=286						
K29M	Barlow Dome	29.32	51	P	P	05 33 48.8	+0.5
	baz=284						
BCPM	Bancas Point	29.50	60	IAmb	IAmb	05 34 06.2	
	comp=Z,124nm,1.5s						
YUK4	Talbot Arm	29.51	57	P	P	05 33 49.9	-0.2
	baz=288,SNR=5.8						
PNL	Peninsula	29.70	60	P	P	05 33 51.8	+0.2
	baz=290						
YUK6	Outpost Mounta	29.77	57	P	P	05 33 51.8	-0.6
	baz=289						
O29M	Mount Kennedy	29.88	59	P	P	05 33 52.2	-1.1
	baz=290						
M30M	Minto, Yukon	29.98	54	P	P	05 33 54.1	+0.1
	baz=287,SNR=8.5						
INK	Inuvik	29.99	42	P	P	05 33 54.7	+0.7
	comp=Z,34nm,0.9s,baz=282,slow=7.4,SNR=66						
INK				PcP	PcP	05 36 55.4	-0.1
	comp=Z,8.7nm,1.1s,baz=323,slow=5.6,SNR=6.4						
	comp=Z,34nm,0.9s						
INK	Inuvik	29.99	42	IAmb	IAmb	05 33 59.1	
	comp=Z,51nm,1.1s						
INK	Inuvik	29.99	42	P	P	05 33 54.9	+0.9
	baz=280,SNR=49						
F31M	Tsiigehtchic	30.07	44	P	P	05 33 55.0	+0.4
	baz=281,SNR=38						
KS19	Wonju Array Si	30.16	245	P	P	05 33 53.7	-2.1
KSRS	Korea Array	30.17	245	P	P	05 33 54.6	-1.3
	comp=Z,7.2nm,0.7s,baz=34,slow=9.3,SNR=27						
KSRS				PcP	PcP	05 36 57.0	+0.6
	comp=Z,1.4nm,0.5s,baz=9.6,slow=2.8,SNR=6.0						
	comp=Z,7.2nm,0.7s						
N30M	Aishikik Lake	30.19	56	P	P	05 33 56.3	+0.5
	baz=289						
HYT	Haines Junctio	30.20	57	P	P	05 33 56.5	+0.4
	baz=290,SNR=24						
P30M	Million Dollar	30.70	58	P	P	05 34 01.8	+1.4
	baz=291						
N31M	Braeburn, Yuko	30.77	55	IAmb	IAmb	05 34 08.8	
	comp=Z,91nm,1.9s						
N31M	Braeburn, Yuko	30.77	55	P	P	05 34 02.4	+1.4
	baz=290						
O30N	Mendenhall	30.87	57	P	P	05 34 03.7	+1.8
	baz=290,SNR=7.7						
M31M	Drury Creek, Y	31.16	54	IAmb	IAmb	05 34 07.2	
	comp=Z,44nm,1.1s						
M31M	Drury Creek, Y	31.16	54	P	P	05 34 06.0	+1.5
	baz=289,SNR=28						
PLBC	Pleasant Camp	31.22	59	P	P	05 34 05.2	+0.2
	baz=292						
FARO	Faro, Yukon	31.61	53	IAmb	IAmb	05 34 11.0	
	comp=Z,42nm,1.2s						
FARO	Faro, Yukon	31.61	53	P	P	05 34 09.3	+0.9
	baz=290,SNR=24						
SKAG	Skagway	31.71	59	IAmb	IAmb	05 34 12.3	
	comp=Z,46nm,1.2s						
SKAG	Skagway	31.71	59	P	P	05 34 10.9	+1.7
	baz=293,SNR=9.6						
N32M	Quiet Lake	32.11	55	P	P	05 34 13.4	+0.6
	baz=292						
A36M	Sachs Harbour	32.13	34	P	P	05 34 13.3	+0.5
A36M	Sachs Harbour	32.13	34	P	P	05 34 13.5	+0.7
	baz=281,SNR=106						
BESE	Bessie Mountai	32.29	60	IAmb	IAmb	05 34 17.8	
	comp=Z,74nm,1.5s						
MMPY	Sheldon Lake,	32.39	52	P	P	05 34 17.0	+1.7
	baz=291,SNR=27						
P32M	Atlin	32.41	58	P	P	05 34 16.9	+1.4
	baz=294						
R32K	Eaglecrest	32.57	61	P	P	05 34 17.6	+0.8
	baz=295,SNR=7.2						
P33M	Teslin, Yukon	32.59	57	P	P	05 34 17.6	+0.6
	baz=293,SNR=9.7						
JIS	Juneau Island	32.64	61	IAmb	IAmb	05 34 21.1	
	comp=Z,84nm,1.4s						
SIT	Sitka	32.71	63	P	P	05 34 17.4	-0.6
	baz=296						
S32K	Killisnoo	32.89	62	P	P	05 34 20.9	+1.3
	baz=296						
C36M	Paulatuk	33.12	38	P	P	05 34 21.9	+0.5
C36M	Paulatuk	33.12	38	P	P	05 34 21.6	+0.2
	baz=286,SNR=109						
Q32M	Nakina River	33.35	59	P	P	05 34 24.0	+0.1
	baz=295						
IRK	Irkutsk	33.41	288	eP	P	05 34 24.5	+0.2
IRK				pmax	pmax		
	comp=Z,45nm,1.9s						
NRIK	Noril'sk	33.89	322	P	P	05 34 28.5	+0.3
	comp=Z,11nm,0.9s,baz=82,slow=9.1,SNR=16						
NRIK				PcP	PcP	05 37 06.6	+0.6
	comp=Z,7.0nm,0.6s,baz=97,slow=4.2,SNR=4.3						
	comp=Z,11nm,0.9s						
NRIK	Noril'sk	33.89	322	P	P	05 34 27.9	-0.3
NRIK	Noril'sk	33.89	322	ceP	P	05 34 27.4	-0.8
NRIK				pmax	pmax		
	comp=Z,31nm,1.3s						
S34M	Telegraph Cree	34.35	60	P	P	05 34 33.2	+1.0
	baz=297,SNR=10						
ULN	Ulaanbaatar	34.37	279	P	P	05 34 31.4	-1.4
ULN	Ulaanbaatar	34.37	279	ceP	P	05 34 32.5	-0.3
ULN				pmax	pmax		
	comp=Z,9.0nm,1.7s						
WRAK	Wrangell Islan	34.46	63	P	P	05 34 34.6	+1.3
	baz=299,SNR=5.1						
WTLY	Watson Lake, Y	34.46	55	IAmb	IAmb	05 34 35.9	
	comp=Z,37nm,1.1s						
WTLY	Watson Lake, Y	34.46	55	P	P	05 34 34.9	+1.7
	baz=296,SNR=21						
CRAG	Craig	34.54	65	P	P	05 34 35.3	+1.4
	baz=300						
DLBC	Dease Lake	34.63	58	P	P	05 34 37.4	+2.6
	comp=Z,20nm,0.9s,baz=290,slow=10,SNR=32						
	comp=Z,20nm,0.9s						
DLBC	Dease Lake	34.63	58	IAmb	IAmb	05 34 42.0	
	comp=Z,38nm,1.1s						
DLBC	Dease Lake	34.63	58	P	P	05 34 36.2	+1.4
	baz=297,SNR=17						
SONM	Songino Array	34.74	280	P	P	05 34 35.9	0.0
	comp=Z,3.1nm,0.5s,baz=60,slow=8.0,SNR=19						
SONM				PcP	PcP	05 37 09.7	+0.6
	comp=Z,3.7nm,0.8s,baz=52,slow=2.6,SNR=7.2						
	comp=Z,3.1nm,0.5s						
SONM	Songino Array	34.74	280	P	P	05 34 35.2	-0.8
SONM				PcP	PcP	05 37 09.7	+0.6
ZAK	Zakamensk	34.95	285	eP	P	05 34 36.9	-0.8
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
T35M	Bob Quinn	35.21	61	P	P	05 34 41.2	+1.5
	baz=299,SNR=16						
V35K	Ketchikan	35.35	64	P	P	05 34 42.3	+1.3
	baz=300						
MOY	Mondy	35.44	289	eP	P	05 34 42.5	+0.6
MOY				pmax	pmax		
	comp=Z,27nm,1.9s						
WRGLY	Wrigley	35.46	49	P	P	05 34 43.3	+1.5
	baz=295						
LIRD	Liard River Hi	36.00	55	P	P	05 34 47.2	+0.8
	baz=298,SNR=19						
HHC	Hu-ho-hao-te	36.40	266	eP	P	05 34 51.3	+1.1
HHC				pmax	pmax		
	comp=Z,26nm,0.9s						
KOTAN	Kotaneelee Air	36.58	53	P	P	05 34 52.7	+1.3
	baz=298,SNR=14						
H11N2	WAKE ISLAND Hy	37.12	174	T	T	06 13 57.6	
	baz=357,slow=76						
HNS	HongShan	37.13	259	⇓P	P	05 35 05.5	+9.2
HNS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
H11N3	WAKE ISLAND Hy	37.14	174	T	T	06 13 59.4	
	baz=357,slow=76						
H11N1	WAKE ISLAND Hy	37.14	174	T	T	06 13 51.7	
	baz=357,slow=76,SNR=68						
BTO	Baotou	37.41	267	eP	P	05 34 58.8	0.0
BTO				pP	sP	05 35 11.3	+1.7
BTO				S	S	05 40 44.0	-1.4
BTO				sS	ScP	05 41 01.8	-0.5
BTO				SS	SnSn	05 43 12.0	-11
BTO				LR	LR		
	comp=Z,8μm,12.5s						
BTO				LR	LR		
	comp=Z,7μm,16.9s						
BTO				LR	LR		
	comp=Z,5μm,12.1s						
EUNU	Eureka	37.96	15	IAmb	IAmb	05 35 04.8	
	comp=Z,62nm,0.8s						
NJ2	Nanjing	39.02	250	eP	P	05 35 10.5	-1.8
NJ2				pP	sP	05 35 24.0	+0.9
NJ2				sP	pP	05 35 28.5	+8.5
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,910nm,11.8s						
RES	Resolute Bay	39.29	24	P	P	05 35 14.4	+0.3
	comp=Z,28nm,1.0s,baz=306,slow=8.7,SNR=72						
RES				PcP	PcP	05 37 23.7	+1.5
	comp=Z,12nm,1.1s,baz=304,slow=1.6,SNR=5.1						
	comp=Z,28nm,1.0s						
YKA	Yellowknife Ar	39.39	46	P	P	05 35 15.5	+0.4
	comp=Z,16nm,0.7s,baz=300,slow=7.9,SNR=169						
YKA				PcP	PcP	05 37 23.3	+0.6
	comp=Z,1.2nm,0.8s,baz=307,slow=3.5,SNR=3.9						
	comp=Z,16nm,0.7s						
LYN	LuoYang	40.46	259	eP	P	05 35 25.5	+1.2
ZALV	Zalesovo Beam	42.20	301	PcP	PcP	05 37 31.7	-0.3
	comp=Z,14nm,0.6s,baz=33,slow=3.4,SNR=15						
XAN	Xi'an	42.77	261	P	P	05 35 43.8	+0.5
BRLDA	Berland Lookou	42.90	58	IAmb	IAmb	05 35 46.6	
	comp=Z,66nm,1.0s						
TULEG	Thule	42.96	16	i P	P	05 35 42.7	-1.5
TULEG				IAmb	IAmb	05 35 48.6	
	comp=Z,32nm,0.9s						
KBS	Kingsbay	43.43	352	ceP	P	05 35 46.2	-1.8
KBS				pmax	pmax		
	comp=Z,30nm,1.3s						
KBS	Kingsbay	43.43	352	i P	P	05 35 47.8	-0.2
DGZ	Jazzator, Alta	43.55	294	c iP	P	05 35 49.5	0.0
DGZ				pmax	pmax		
	comp=Z,47nm,1.8s						
SPITS	Spitsbergen Ar	43.75	351	P	P	05 35 50.9	+0.3
	comp=Z,55nm,0.9s,baz=66,slow=6.5,SNR=19						
SPITS				PcP	PcP	05 37 36.1	-0.7
	comp=Z,19nm,0.9s,baz=70,slow=4.7,SNR=3.1						
	comp=Z,55nm,0.9s						
SPB2	Spitsbergen Ar	43.75	351	P	P	05 35 50.5	-0.1
SPB2				IAmb	IAmb	05 35 51.7	
	comp=Z,70nm,0.9s						
GTA	Gaotai	43.86	275	⇑P	P	05 35 52.0	-0.1
GTA				sP	sP	05 36 05.3	+2.4
GTA				PcP	PcP	05 37 39.3	+1.3
GTA				pmax	pmax		
	comp=Z,25nm,0.8s						
LZH	Lanzhou	44.03	268	⇓P	P	05 35 54.0	+0.5
LZH				pP	sP	05 36 04.8	+0.4
LZH				pmax	pmax		
	comp=Z,140nm,1.2s						
NEEM	North Greenlan	44.37	10	i P	P	05 35 54.7	-1.2
NEEM				IAmb	IAmb	05 36 00.7	
	comp=Z,136nm,1.0s						
E03A	Lebam	44.62	70	IAmb	IAmb	05 36 01.6	
	comp=Z,87nm,1.1s						
D05A	Enumclaw	45.01	69	IAmb	IAmb	05 36 04.3	
	comp=Z,53nm,1.1s						
B08A	Colville Reser	45.59	66	IAmb	IAmb	05 36 08.0	
	comp=Z,39nm,1.1s						
LTY	Liberty	45.64	68	IAmb	IAmb	05 36 08.5	
	comp=Z,51nm,1.4s						
KULLO	Kullorsuaq	46.22	14	i P	P	05 36 08.2	-2.0
KULLO				IAmb	IAmb	05 36 15.1	
	comp=Z,121nm,0.9s						
ZSN	Zaisan	46.31	293	eP	P	05 36 10.8	-0.6
	baz=293						
ZSN	Zaisan	46.31	293	eP	P	05 36 10.7	-0.6
C09A	Chrisman Ranch	46.49	66	IAmb	IAmb	05 36 14.8	
	comp=Z,41nm,1.2s						
H04A	Detroit Lake	46.59	71	P	P	05 36 15.1	+1.5
H04A				IAmb	IAmb	05 36 16.8	
	comp=Z,47nm,1.4s						
DAG	Danmarks Havn	46.70	0	i P	P	05 36 11.4	-2.5
DAG				IAmb	IAmb	05 36 14.7	
	comp=Z,29nm,1.0s						
NEW	Newport	46.76	65	IAmb	IAmb	05 36 16.9	
	comp=Z,39nm,1.2s						
NEW	Newport	46.76	65	P	P	05 36 14.9	0.0
	baz=312,SNR=9.8						
HAWA	Hanford	46.80	68	IAmb	IAmb	05 36 17.5	
	comp=Z,52nm,1.4s						
F07A	Phinny Hill Vi	46.94	69	IAmb	IAmb	05 36 18.8	
	comp=Z,45nm,1.0s						
KURK	Kurchatov	47.20	300	P	P	05 36 17.2	-0.9
KURK	Kurchatov	47.20	300	ceP	P	05 36 17.7	-0.4
KURK				pmax	pmax		
	comp=Z,210nm,1.7s						
KURK	Kurchatov	47.20	300	P	P	05 36 17.8	-0.4
I05D	Terrebonne, OR	47.27	71	IAmb	IAmb	05 36 21.6	
	comp=Z,58nm,1.5s						
WMQ	Urumqi	47.32	288	eP	P	05 36 19.8	+0.5
WMQ				PcP	PcP	05 37 50.3	+0.4
WMQ				PP	PP	05 38 12.8	+2.5
WMQ				pmax	pmax		
	comp=Z,42nm,1.3s						
E09A	Wood Farm, Sta	47.42	67	IAmb	IAmb	05 36 22.1	
	comp=Z,51nm,1.1s						
J04A	Umpqua Nationa	47.62	73	IAmb	IAmb	05 36 24.8	
	comp=Z,58nm,1.1s						
PINE	Pine Mountain	47.85	72	IAmb	IAmb	05 36 26.6	
	comp=Z,50nm,1.1s						
UPNV	Upernavik	47.95	15	i P	P	05 36 22.4	-1.4
CD2	Chengdu	47.97	263	P	P	05 36 24.3	-0.2
CD2				pP	sP	05 36 36.0	+0.6
CD2				sP	pP	05 36 40.8	+8.5
CD2				pmax	pmax		
	comp=Z,30nm,0.7s						
MK31	Makanchi Array	48.05	294	c iP	P	05 36 23.8	-1.1
MKAR	Makanchi Array	48.05	294	P	P	05 36 24.0	-0.9
	comp=Z,5.0nm,0.8s,baz=53,slow=6.8,SNR=24						
	comp=Z,5.0nm,0.8s						
MAKZ	Makanchi	48.20	295	P	P	05 36 24.6	-1.4
MAKZ	Makanchi	48.20	295	P	P	05 36 24.6	-1.4
MAKZ				pmax	pmax		
	comp=Z,14nm,1.1s						
YBH	Yreka Blue Hor	48.36	75	LR	LR	05 54 55.6	
	comp=Z,2μm,20.1s,baz=8.5,slow=34						
KHMM	Horse Mountain	48.42	76	IAmb	IAmb	05 36 31.4	
	comp=Z,58nm,1.3s						
K05A	Summer Lake	48.62	73	IAmb	IAmb	05 36 37.8	
	comp=Z,42nm,1.2s						
GOMU	GeErMu	48.91	275	P	P	05 36 31.3	-0.8
GOMU				pP	pP	05 36 35.3	-4.6
GOMU				pmax	pmax		
	comp=Z,11nm,0.9s						
BMO	Blue Mountains	48.99	68	IAmb	IAmb	05 36 34.6	
	comp=Z,33nm,1.2s						
DBG	Daneborg	49.16	1	i P	P	05 36 30.4	-2.7
DBG				IAmb	IAmb	05 36 36.8	
	comp=Z,19nm,0.9s						
MSO	Missoula	49.31	64	IAmb	IAmb	05 36 41.2	
	comp=Z,38nm,1.2s						
MSO	Missoula	49.31	64	P	P	05 36 34.9	+0.2
	baz=314,SNR=18						
FFC	Flin Flon	49.34	50	P	P	05 36 35.2	+0.5
FFC				IAmb	IAmb	05 36 40.1	
	comp=Z,40nm,1.2s						
FFC	Flin Flon	49.34	50	P	P	05 36 35.2	+0.5
FFC				pmax	pmax		
	comp=Z,40nm,1.2s						
BRVK	Borovoye	49.41	307	P	P	05 36 34.9	-0.3
BRVK	Borovoye	49.41	307	ceP	P	05 36 34.6	-0.6
BRVK				pmax	pmax		
	comp=Z,31nm,1.7s						
BRVK	Borovoye	49.41	307	P	P	05 36 33.5	-1.7
MOD	Modoc Plateau	49.51	73	IAmb	IAmb	05 36 39.1	
	comp=Z,47nm,1.2s						
FCC	Fort Churchill	49.61	42	IAmb	IAmb	05 36 41.8	
	comp=Z,34nm,0.8s						
SUMG	Summit	50.08	8	i P	P	05 36 38.3	-2.2
SUMG				IAmb	IAmb	05 36 42.4	
	comp=Z,52nm,1.0s						
ARCES	ARCESS Array B	50.27	342	PcP	PcP	05 38 00.0	0.0
	comp=Z,11nm,0.8s,baz=32,slow=4.8,SNR=8.0						
BRZS	Berezniki	50.48	303	⇑iP	P	05 36 42.5	-0.9
	comp=Z,24nm,1.6s,baz=303						
BRZS	Berezniki	50.48	303	c iP	P	05 36 42.5	-0.9
BRZS				pmax	pmax		
	comp=Z,24nm,1.6s						
EGMT	Eagleton	50.52	60	IAmb	IAmb	05 36 45.5	
	comp=Z,41nm,1.0s						
EGMT	Eagleton	50.52	60	P	P	05 36 43.9	+0.1
	baz=315,SNR=21						
SVE	Sverdlovsk	50.70	316	eP	P	05 36 45.8	+0.8
SVE				pmax	pmax		
	comp=Z,45nm,1.5s						
DLMT	Dillon	51.01	65	IAmb	IAmb	05 36 50.5	
	comp=Z,58nm,1.4s						
BOZ	Bozeman (W)	51.32	64	P	P	05 36 50.7	+0.7
	baz=316,SNR=22						
HLID	Hailey	51.38	67	P	P	05 36 51.0	+0.5
	baz=316,SNR=16						
ARU	Arti	51.78	317	P	P	05 36 52.5	-0.6
ARU				IAmb	IAmb	05 36 54.0	
	comp=Z,47nm,1.2s						
ARU	Arti	51.78	317	c iP	P	05 36 52.8	-0.2
ARU				S	S	05 44 13.0	-0.1
ARU				SS	SS	05 47 43.9	-5.1
ARU				pmax	pmax		
	comp=Z,50nm,1.3s						
ILULI	Ilulissat	51.90	15	i P	P	05 36 51.3	-2.4
ILULI				IAmb	IAmb	05 36 57.7	
	comp=Z,37nm,0.8s						
SHLS	Shalkode	52.03	293	eP	P	05 36 53.4	-1.9
	comp=Z,21nm,0.6s,baz=292						
SHLS	Shalkode	52.03	293	eP	P	05 36 53.3	-2.0
SHLS				pmax	pmax		
	comp=Z,21nm,0.6s						
KPKS	Kokpek	52.20	294	eP	P	05 36 56.1	-0.4
	comp=Z,14nm,1.1s,baz=293						
KPKS	Kokpek	52.20	294	eP	P	05 36 56.1	-0.4
KPKS				pmax	pmax		
	comp=Z,14nm,1.1s						
UZB	Uzynbulak	52.26	293	eP	P	05 36 56.5	-0.6
	baz=293						
UZB	Uzynbulak	52.26	293	eP	P	05 36 56.4	-0.6
YMR	Madison River	52.31	64	IAmb	IAmb	05 37 00.1	
	comp=Z,38nm,1.1s						
YNR	Norris Junctio	52.42	64	IAmb	IAmb	05 37 02.1	
	comp=Z,61nm,1.5s						
PZH	PanZhiHua	52.51	262	P	P	05 36 58.5	-0.5
PZH				pmax	pmax		
	comp=Z,20nm,0.9s						
ZHN	Zhinishke	52.54	293	eP	P	05 36 58.7	-0.4
	baz=293						
ZHN	Zhinishke	52.54	293	eP	P	05 36 58.6	-0.4
SATY	Saty	52.64	293	eP	P	05 36 59.5	-0.3
	comp=Z,21nm,1.3s,baz=293						
H17A	Grant Village	52.70	64	IAmb	IAmb	05 37 04.4	
	comp=Z,42nm,1.1s						
H17A	Grant Village	52.70	64	P	P	05 37 02.2	+1.8
	baz=317,SNR=27						
DGMT	Dagmar	52.80	57	IAmb	IAmb	05 37 02.8	
	comp=Z,58nm,1.2s						
DGMT	Dagmar	52.80	57	P	P	05 37 00.0	-0.8
	baz=317,SNR=8.6						
DGMT	Dagmar	52.80	57	P	P	05 37 01.6	+0.7
	baz=317,SNR=8.6						
RLMT	Red Lodge	52.82	63	IAmb	IAmb	05 37 04.0	
	comp=Z,58nm,1.1s						
RLMT	Red Lodge	52.82	63	P	P	05 37 01.8	+0.6
	baz=317,SNR=45						
FLWY	Flagg Ranch	52.87	64	IAmb	IAmb	05 37 19.8	
	comp=Z,72nm,1.3s						
IMW	Indian Meadow	52.88	65	IAmb	IAmb	05 37 05.5	
	comp=Z,39nm,1.1s						
SCO	Scoresbysund	52.98	2	P	P	05 37 01.6	-0.1
SCO				IAmb	IAmb	05 37 07.4	
	comp=Z,74nm,2.0s						
SCO	Scoresbysund	52.98	2	P	P	05 37 01.6	-0.1
SCO				pmax	pmax		
	comp=Z,74nm,2.0s						
SCO	Scoresbysund	52.98	2	i P	P	05 37 01.2	-0.5
SCO				IAmb	IAmb	05 37 03.3	
	comp=Z,109nm,2.2s						
KUU	Kurty	53.07	295	eP	P	05 37 01.5	-1.4
	comp=Z,23nm,1.1s,baz=295						
KUU	Kurty	53.07	295	eP	P	05 37 01.4	-1.4
KUU				pmax	pmax		
	comp=Z,23nm,1.1s						
NVAR	Mina Array Bea	53.08	75	P	P	05 37 05.5	+2.3
	comp=Z,10nm,1.0s,baz=299,slow=7.3,SNR=46						
	comp=Z,10nm,1.0s						
LHV	Little Huntoon	53.11	75	IAmb	IAmb	05 37 06.9	
	comp=Z,42nm,1.3s						
LAO	LASA Array	53.15	59	IAmb	IAmb	05 37 06.0	
	comp=Z,64nm,1.0s						
LAO	LASA Array	53.15	59	P	P	05 37 03.8	+0.4
	baz=317,SNR=31						
LAO	LASA Array	53.15	59	P	P	05 37 05.0	+1.6
	baz=317,SNR=31						
MDOK	Medeo	53.24	294	eP	P	05 37 03.8	-0.5
	baz=294						
MDOK	Medeo	53.24	294	eP	P	05 37 03.8	-0.5
ICESG	Greenland Ices	53.36	10	i P	P	05 37 03.2	-1.7
ICESG				IAmb	IAmb	05 37 05.9	
	comp=Z,39nm,0.9s						
BTLS	Baital	53.36	298	eP	P	05 37 03.6	-1.3
	comp=Z,25nm,1.4s,baz=298						
BTLS	Baital	53.36	298	eP	P	05 37 03.6	-1.3
BTLS				pmax	pmax		
	comp=Z,25nm,1.4s						
Q09A	Carvers	53.38	73	IAmb	IAmb	05 37 08.7	
	comp=Z,42nm,1.1s						
KIRV	Kirov	53.38	323	ceP	P	05 37 04.9	+0.1
TNSS	Tian-Shan	53.39	294	eP	P	05 37 05.1	-0.5
	baz=294						
TNSS	Tian-Shan	53.39	294	eP	P	05 37 05.1	-0.5
MLAC	Mammoth, Mammo	53.39	76	P	P	05 37 06.2	+0.7
	baz=318						
SFJD	Kangerlussuaq	54.02	16	P	P	05 37 08.4	-1.0
SFJD				IAmb	IAmb	05 37 13.7	
	comp=Z,65nm,1.6s						
SFJD	Kangerlussuaq	54.02	16	P	P	05 37 08.4	-1.0
SFJD				pmax	pmax		
	comp=Z,65nm,1.6s						
TIN	Tinemaha, Big	54.14	76	P	P	05 37 13.2	+2.4
	baz=318						
TKM2	Tokmak 2	54.15	295	P	P	05 37 10.8	-0.2
	SNR=10						
SGDS	Sogindy	54.24	296	eP	P	05 37 11.3	-0.1
	comp=Z,16nm,1.2s,baz=296						
SGDS	Sogindy	54.24	296	eP	P	05 37 11.3	-0.1
SGDS				pmax	pmax		
	comp=Z,16nm,1.2s						

HWUT	Hardware Ranch	54.24	67	IAmb	IAmb	05 37 14.6	
	comp=Z,34nm,1.1s						
LCH	Last Change Ra	54.32	75	IAmb	IAmb	05 37 15.7	
	comp=Z,38nm,1.3s						
ULHL	Ulahol	54.32	294	P	P	05 37 12.6	+0.3
	SNR=30						
BW06	Boulder Array	54.40	65	IAmb	IAmb	05 37 15.3	
	comp=Z,40nm,1.2s						
BW06	Boulder Array	54.40	65	P	P	05 37 13.5	+0.6
	baz=318,SNR=34						
PD31	Pinedale Array	54.40	65	IAmb	IAmb	05 37 15.3	
	comp=Z,33nm,1.2s						
PDAR	Pinedale Array	54.40	65	P	P	05 37 14.1	+1.3
	comp=Z,14nm,0.9s,baz=323,slow=3.1,SNR=81						
	comp=Z,14nm,0.9s						
USP	Ospenovka	54.44	296	P	P	05 37 12.6	-0.2
	SNR=24						
Q12A	Willow Creek R	54.46	72	IAmb	IAmb	05 37 20.2	
	comp=Z,46nm,1.4s						
CHMS	Chumysh	54.51	296	P	P	05 37 13.5	+0.1
	SNR=6.4						
KLMR	Klimovskoe	54.55	330	eP	P	05 37 11.6	-1.8
KLMR				AMP		05 37 18.3	
	comp=Z,60nm,1.9s						
KLMR	Klimovskoe	54.55	330	eP	P	05 37 11.6	-1.8
KLMR				pmax	pmax		
	comp=Z,60nm,1.9s						
R11B	Troy Canyon, C	54.58	73	P	P	05 37 15.7	+1.5
	baz=318,SNR=23						
VES	Vestal, Richgr	54.59	77	P	P	05 37 16.5	+2.5
	baz=319,SNR=5.4						
GRAC	Grapevine Rang	54.64	75	IAmb	IAmb	05 37 18.2	
	comp=Z,54nm,1.4s						
GRAC	Grapevine Rang	54.64	75	P	P	05 37 17.1	+2.7
	baz=319,SNR=8.3						
DUG	Dugway, Tooele	54.65	69	P	P	05 37 16.5	+1.9
	baz=318,SNR=16						
KBK	Karagaybulak	54.66	295	P	P	05 37 15.2	+0.5
	SNR=14						
CWC	Cottonwood Cre	54.68	76	P	P	05 37 17.0	+2.2
	baz=319						
SPR3	Spring Creek 3	54.75	71	IAmb	IAmb	05 37 20.1	
	comp=Z,83nm,1.3s						
AAK	Ala-Archa	54.90	296	P	P	05 37 16.4	+0.1
	SNR=26						
AAK	Ala-Archa	54.90	296	P	P	05 37 16.2	-0.2
AAK				IAmb	IAmb	05 37 17.6	
	comp=Z,49nm,1.0s						
AAK	Ala-Archa	54.90	296	ceP	P	05 37 16.2	-0.2
AAK				pmax	pmax		
	comp=Z,92nm,1.7s						
AAK	Ala-Archa	54.90	296	i P	P	05 37 16.5	+0.1
	SNR=31						
AAK	Ala-Archa	54.90	296	P	P	05 37 16.9	+0.5
PKM	Mcpherson Peak	54.91	79	P	P	05 37 18.9	+2.3
	baz=319						
ISA	Isabella, Lake	55.05	77	P	P	05 37 19.5	+2.1
	baz=319						
DY2G	Dye2	55.12	14	i P	P	05 37 15.2	-2.5
DY2G				IAmb	IAmb	05 37 17.9	
	comp=Z,40nm,0.9s						
ULM	Lac du Bonnet	55.16	50	P	P	05 37 18.7	+0.8
	comp=Z,20nm,0.9s,baz=318,slow=8.3,SNR=19						
	comp=Z,20nm,0.9s						
ULM	Lac du Bonnet	55.16	50	IAmb	IAmb	05 37 19.9	
	comp=Z,40nm,1.1s						
UCH	Uchtor	55.20	295	P	P	05 37 18.9	+0.1
	SNR=21						
NLU	North Lily Min	55.21	69	IAmb	IAmb	05 37 21.6	
	comp=Z,36nm,1.3s						
EKS2	Erkin-Say	55.24	296	P	P	05 37 19.1	+0.3
	SNR=27						
ARVC	Arvin	55.26	78	P	P	05 37 20.5	+1.7
	baz=319						
TPNV	Topopah Spring	55.27	74	IAmb	IAmb	05 37 22.4	
	comp=Z,35nm,1.1s						
TPNV	Topopah Spring	55.27	74	P	P	05 37 20.1	+1.0
	baz=319,SNR=17						
MPMC	Manual Prospec	55.28	76	P	P	05 37 21.6	+2.4
	baz=319,SNR=13						
FURC	Furnace Creek,	55.31	75	P	P	05 37 22.0	+2.9
	baz=319,SNR=12						
MDND	Maddock	55.34	54	P	P	05 37 19.4	+0.1
	baz=319,SNR=7.8						
MDND	Maddock	55.34	54	P	P	05 37 20.9	+1.6
	baz=319,SNR=7.8						
TNCH	TengChong	55.44	263	P	P	05 37 21.3	+0.8
TNCH				pP	pP	05 37 25.0	-3.4
TNCH				pmax	pmax		
	comp=Z,32nm,0.6s						
BSUT	Blindstream Ca	55.44	67	IAmb	IAmb	05 37 28.2	
	comp=Z,63nm,1.3s						
PRN	Pahroc Range	55.56	73	IAmb	IAmb	05 37 24.5	
	comp=Z,54nm,1.3s						
LRMC	Laurel Mtn Rad	55.61	76	P	P	05 37 22.7	+1.1
	baz=319,SNR=14						
GWY	Greenwater Val	55.62	75	IAmb	IAmb	05 37 24.8	
	comp=Z,39nm,1.2s						
AML	Almayashu	55.68	296	P	P	05 37 22.5	+0.2
	SNR=23						
QSM	Queen of Sheba	55.68	75	IAmb	IAmb	05 37 25.9	
	comp=Z,45nm,1.2s						
E28A	Huff	55.81	56	P	P	05 37 24.6	+1.9
	baz=319,SNR=20						
EDW2	Edwards Air Fo	55.90	77	P	P	05 37 24.8	+1.3
	baz=320,SNR=10						
K22A	Casper	55.98	63	IAmb	IAmb	05 37 26.5	
	comp=Z,46nm,1.2s						
K22A	Casper	55.98	63	P	P	05 37 24.5	+0.4
	baz=319,SNR=14						
K22A	Casper	55.98	63	P	P	05 37 25.4	+1.2
	baz=319,SNR=14						
RDMU	Red Mountain	56.02	67	IAmb	IAmb	05 37 28.4	
	comp=Z,95nm,1.6s						
SHOC	Shoshone, Teco	56.05	75	P	P	05 37 25.8	+1.2
	baz=319						
RSSD	Black Hills	56.09	60	P	P	05 37 25.5	+0.6
RSSD				IAmb	IAmb	05 37 27.1	
	comp=Z,47nm,1.1s						
RSSD	Black Hills	56.09	60	P	P	05 37 25.5	+0.6
RSSD				pmax	pmax		
	comp=Z,47nm,1.1s						
RSSD	Black Hills	56.09	60	P	P	05 37 25.2	+0.2
	baz=319						
RSSD	Black Hills	56.09	60	P	P	05 37 25.9	+1.0
	baz=319,SNR=28						
TMUT	Trail Mountain	56.14	69	IAmb	IAmb	05 37 28.6	
	comp=Z,33nm,1.1s						
DECC	Green Verdugo	56.19	78	P	P	05 37 26.9	+1.3
	baz=320						
GSC	Goldstone, Bar	56.21	76	IAmb	IAmb	05 37 29.0	
	comp=Z,28nm,1.1s						
GSC	Goldstone, Bar	56.21	76	P	P	05 37 26.7	+0.9
	baz=320,SNR=15						
P17A	Butcher Ranch,	56.25	68	IAmb	IAmb	05 37 29.2	
	comp=Z,68nm,1.7s						
CCUT	Cedar City	56.34	72	IAmb	IAmb	05 37 30.2	
	comp=Z,40nm,1.5s						
P18A	Preston Nutter	56.39	68	IAmb	IAmb	05 37 30.5	
	comp=Z,42nm,1.3s						
Q16A	Castle Valley	56.45	69	IAmb	IAmb	05 37 30.8	
	comp=Z,32nm,1.2s						
KK31	Karatay Array	56.51	299	IAmb	IAmb	05 37 28.5	
	comp=Z,50nm,0.9s						
KKAR	Karatay Array	56.51	299	IAmb	IAmb	05 37 28.5	
	comp=Z,50nm,0.9s						
BFSC	Mount Baldy Ra	56.56	77	P	P	05 37 29.7	+1.3
	baz=320						
TUQ	Turquoise Moun	56.58	75	P	P	05 37 29.6	+1.1
	baz=320,SNR=12						
FMP	Fort Macarthur	56.62	78	P	P	05 37 30.5	+1.9
	baz=320						
SRU	San Rafael Swe	56.63	68	IAmb	IAmb	05 37 32.0	
	comp=Z,67nm,1.2s						
AGMN	Agassiz Nation	56.65	52	IAmb	IAmb	05 37 30.4	
	comp=Z,36nm,1.2s						
AGMN	Agassiz Nation	56.65	52	P	P	05 37 29.4	+0.8
	baz=320,SNR=12						
CIS	Catalina Islan	56.79	79	P	P	05 37 31.5	+1.7
	baz=320						
HEC	Hector,Ludlow	56.82	76	P	P	05 37 31.3	+1.2
	baz=320,SNR=14						
ISOG	Isortoq, Green	56.87	11	i P	P	05 37 27.8	-2.0
ISOG				IAmb	IAmb	05 37 30.1	
	comp=Z,30nm,1.0s						
ANGG	Ammassalik, Gr	56.93	10	IAmb	IAmb	05 37 30.4	
	comp=Z,34nm,1.0s						
ANGG	Ammassalik, Gr	56.93	10	i P	P	05 37 28.4	-1.9
ANGG				IAmb	IAmb	05 37 30.6	
	comp=Z,27nm,0.9s						
BBRC	Big Bear Solar	56.94	77	P	P	05 37 32.8	+1.6
	baz=320						
PKCU	Pink Cliffs	56.97	71	IAmb	IAmb	05 37 35.3	
	comp=Z,48nm,1.4s						
O20A	White River Ci	57.02	66	IAmb	IAmb	05 37 34.4	
	comp=Z,73nm,1.2s						
O20A	White River Ci	57.02	66	P	P	05 37 32.0	+0.4
	baz=319,SNR=30						
KNB	Kanab	57.02	72	IAmb	IAmb	05 37 35.3	
	comp=Z,52nm,1.5s						
D32A	Dogwood Acres,	57.03	53	IAmb	IAmb	05 37 33.2	
	comp=Z,69nm,1.1s						
GMRC	Granite Mounta	57.22	76	P	P	05 37 35.1	+2.1
	baz=320,SNR=15						
MURC	Murrieta	57.30	78	P	P	05 37 35.4	+1.9
	baz=320						
FIA1	FINESS Array S	57.35	337	P	P	05 37 33.0	-0.3
FIA1				IAmb	IAmb	05 37 37.8	
	comp=Z,46nm,1.4s						
FINES	FINESS Array B	57.35	337	P	P	05 37 33.1	-0.2
	comp=Z,15nm,0.9s,baz=45,slow=8.4,SNR=19						
FINES				PcP	PcP	05 38 26.2	-0.9
	comp=Z,9.3nm,1.0s,baz=20,slow=6.1,SNR=4.0						
	comp=Z,15nm,0.9s						
FINES	FINESS Array B	57.35	337	P	P	05 37 33.0	-0.4
IUG	Iuzhnay	57.46	298	eP	P	05 37 34.6	0.0
	baz=298						
IUG	Iuzhnay	57.46	298	eP	P	05 37 34.6	0.0
B35A	Bob, Littlefor	57.51	50	IAmb	IAmb	05 37 36.4	
	comp=Z,92nm,1.9s						
B35A	Bob, Littlefor	57.51	50	P	P	05 37 34.8	+0.1
	baz=321,SNR=10						
N23A	Red Feather La	57.59	64	IAmb	IAmb	05 37 39.0	
	comp=Z,36nm,1.1s						
N23A	Red Feather La	57.59	64	P	P	05 37 36.3	+0.6
	baz=320,SNR=21						
BELC	Belle Mtn. Jos	57.63	76	P	P	05 37 38.0	+2.0
	baz=320						
PFO	Pinyon Flats O	57.68	77	P	P	05 37 37.0	+0.7
PFO	Pinyon Flats O	57.68	77	P	P	05 37 37.0	+0.7
PFO				pmax	pmax		
	comp=Z,17nm,1.3s						
PFO	Pinyon Flats O	57.68	77	P	P	05 37 37.2	+0.9
	baz=320						
TPFO	Pinon Flats	57.69	77	P	P	05 37 37.3	+0.9
	baz=320						
109C	Camp Elliot, M	57.89	78	P	P	05 37 39.1	+1.5
	baz=320						
PV23	Carpenter Ridg	57.90	68	IAmb	IAmb	05 37 40.9	
	comp=Z,69nm,1.3s						
PV10	Paradox Valley	57.95	68	IAmb	IAmb	05 37 41.6	
	comp=Z,84nm,1.3s						
IRM	Iron Mountain	57.97	76	P	P	05 37 39.4	+1.3
	baz=320,SNR=19						
PV07	Paradox Valley	58.10	68	IAmb	IAmb	05 37 42.1	
	comp=Z,55nm,1.3s						
BC3	Big Chuckawall	58.19	76	P	P	05 37 40.4	+0.6
	baz=320						
PV13	Radium Mtn., P	58.22	68	IAmb	IAmb	05 37 43.1	
	comp=Z,65nm,1.3s						
MONP2	Monument Peak	58.26	78	P	P	05 37 41.2	+0.8
	baz=321						
PV15	Paradox Valley	58.26	68	IAmb	IAmb	05 37 43.2	
	comp=Z,47nm,1.2s						
CRAI	Chiangrai	58.29	258	P	P	05 37 40.3	-0.3
F33A	5 Mile Ranch,	58.35	54	IAmb	IAmb	05 37 42.6	
	comp=Z,58nm,1.2s						
F33A	5 Mile Ranch,	58.35	54	P	P	05 37 41.8	+1.2
	baz=321,SNR=9.8						
SMCO	Snowmass	58.38	66	IAmb	IAmb	05 37 44.3	
	comp=Z,30nm,1.1s						
PDMCI	Parker Dam,Lak	58.39	75	P	P	05 37 41.5	+0.4
	baz=320						
SWSC	Sam W. Stewart	58.55	77	P	P	05 37 42.1	-0.1
	baz=321						
ISCO	Idaho Springs	58.59	64	IAmb	IAmb	05 37 46.1	
	comp=Z,38nm,1.2s						
ISCO	Idaho Springs	58.59	64	P	P	05 37 43.6	+0.9
	baz=320,SNR=34						
ISCO	Idaho Springs	58.59	64	P	P	05 37 45.0	+2.3
	baz=320,SNR=34						
IKP	In-Ko-Pah, Jac	58.61	77	P	P	05 37 42.2	-0.5
	baz=321						
BLYC	Blythe	58.61	75	IAmb	IAmb	05 37 45.9	
	comp=Z,36nm,1.2s						
RAF	Rauma	58.62	339	eP	P	05 37 42.2	0.0
BRIGG	Briggsdale	58.63	63	IAmb	IAmb	05 37 45.9	
	comp=Z,60nm,1.2s						
EYMN	Ely	58.77	49	IAmb	IAmb	05 37 45.2	
	comp=Z,63nm,1.2s						
EYMN	Ely	58.77	49	P	P	05 37 43.5	-0.1
	baz=322,SNR=17						
EYMN	Ely	58.77	49	P	P	05 37 43.9	+0.4
	baz=322,SNR=17						
MEF	Metsahovi	58.82	337	eP	P	05 37 43.8	+0.2
WUAZ	Wupatki	58.92	72	IAmb	IAmb	05 37 48.5	
	comp=Z,34nm,1.4s						
WUAZ	Wupatki	58.92	72	P	P	05 37 45.9	+1.0
	baz=320,SNR=8.1						
BELG	Belogornoye	58.94	320	c iP	P	05 37 44.8	+0.2
BELG				pmax	pmax		
	comp=Z,20nm,1.3s						
GLA	Glamis	58.99	76	P	P	05 37 48.0	+2.7
	baz=321						
MVCO	Mesa Verde	59.11	68	P	P	05 37 48.1	+1.7
	baz=320						
ESJX	Sierra Juarez	59.19	78	IAmb	IAmb	05 37 50.1	
	comp=Z,30nm,1.3s						
MOS	Moscow	59.41	328	eP	P	05 37 46.7	-1.1
MOS				e		05 38 01.9	
MOS				pmax	pmax		
	comp=Z,47nm,0.7s						
Q24A	Divide	59.46	65	IAmb	IAmb	05 37 57.1	
	comp=Z,54nm,1.8s						
Q24A	Divide	59.46	65	P	P	05 37 50.0	+1.2
	baz=321						
OGNE	Ogallala	59.46	61	P	P	05 37 48.7	+0.2
	baz=321						
F36A	Milaca	59.54	52	P	P	05 37 49.2	+0.3
	baz=322,SNR=6.2						
S22A	4UR Ranch, Cre	59.55	67	IAmb	IAmb	05 37 52.9	
	comp=Z,36nm,1.4s						
S22A	4UR Ranch, Cre	59.55	67	P	P	05 37 51.6	+2.2
	baz=321,SNR=22						
K31A	O'Neill	59.72	58	IAmb	IAmb	05 37 52.1	
	comp=Z,43nm,0.9s						
PHRA	Phrae	59.79	257	P	P	05 37 51.0	+0.1
ECSD	EROS Data Cent	59.84	56	P	P	05 37 50.8	-0.2
	baz=322,SNR=20						
ECSD	EROS Data Cent	59.84	56	P	P	05 37 51.5	+0.6
	baz=322,SNR=20						
IVI	Ivigtut	59.84	17	P	P	05 37 50.0	-0.7
IVI	Ivigtut	59.84	17	i P	P	05 37 49.1	-1.6
VSU	Vasula	59.88	335	eP	P	05 37 51.4	+0.4
W18A	Petrified Fore	60.08	71	P	P	05 37 53.9	+0.9
	baz=321						
GUN	Gumba	60.11	276	eP	P	05 37 52.2	-1.3
	comp=Z,41nm,0.8s						
JIRN	Jiri	60.14	276	eP	P	05 37 52.5	-1.2
NC303	NORSAR Array S	60.22	345	P	P	05 37 53.0	-0.3
NC303				IAmb	IAmb	05 37 54.1	
	comp=Z,42nm,1.0s						
CHTO	Chiang Mai	60.22	259	P	P	05 37 53.0	-0.9
CHTO	Chiang Mai	60.22	259	P	P	05 37 53.0	-0.9
SDCO	Great Sand Dun	60.22	66	P	P	05 37 56.0	+1.9
	baz=321,SNR=19						
OBN	Obninsk	60.25	328	⇓iP	P	05 37 53.6	0.0
OBN				e		05 40 05.4	
OBN				pmax	pmax		
	comp=Z,83nm,1.7s						
NC204	NORSAR Array S	60.26	345	P	P	05 37 53.4	-0.3
MTSE	Matsula	60.31	337	eP	P	05 37 54.3	+0.4
SPMN	Marine on St.	60.36	52	IAmb	IAmb	05 37 56.1	
	comp=Z,35nm,1.1s						
SPMN	Marine on St.	60.36	52	P	P	05 37 54.2	-0.3
	baz=322,SNR=9.2						
SPMN	Marine on St.	60.36	52	P	P	05 37 55.4	+0.9
	baz=322,SNR=9.2						
NB2	NORSAR Subarra	60.42	345	P	P	05 37 54.0	-0.7
	comp=Z,10nm,0.8s,baz=17,slow=6.9						
NOA	NORSAR Array B	60.42	345	P	P	05 37 54.3	-0.4
	comp=Z,22nm,0.9s,baz=18,slow=6.8,SNR=49						
	comp=Z,22nm,0.9s						
RAMN	Ramite	60.47	275	eP	P	05 37 54.4	-1.4
	comp=Z,64nm,1.0s						
CMAR	Chiang Mai Arr	60.51	258	P	P	05 37 55.9	0.0
	comp=Z,5.1nm,0.7s,baz=20,slow=7.5,SNR=37						
	comp=Z,5.1nm,0.7s						
CMAR	Chiang Mai Arr	60.51	258	P	P	05 37 55.3	-0.6
CMAR	Chiang Mai Arr	60.51	258	P	P	05 37 55.3	-0.6
CHGR	Chuyangaron	60.56	296	P	P	05 37 55.6	-0.5
CHGR	Chuyangaron	60.56	296	P	P	05 37 55.6	-0.5
CHGR				pmax	pmax		
	comp=Z,157nm,1.2s						
PKI	Pulchoki	60.63	276	eP	P	05 37 55.9	-1.1
PKIN	Phulchoki	60.64	276	eP	P	05 37 55.7	-1.3
KSCO	Kaye Shedlock’	60.67	63	P	P	05 37 57.3	+0.5
	baz=321,SNR=8.0						
KSCO	Kaye Shedlock’	60.67	63	P	P	05 37 58.5	+1.6
	baz=321,SNR=8.0						
D41A	Chassel	60.68	48	P	P	05 37 57.0	+0.4
	baz=324,SNR=7.6						
GKN	Gorkha	60.72	277	eP	P	05 37 56.1	-1.3
DMN	Daman	60.77	276	eP	P	05 37 57.3	-0.6
214A	Organ Pipe Nat	60.91	75	IAmb	IAmb	05 38 01.7	
	comp=Z,30nm,1.1s						
214A	Organ Pipe Nat	60.91	75	P	P	05 37 59.8	+1.3
	baz=322,SNR=11						
DANN	Dangsing	60.92	278	eP	P	05 37 58.0	-0.9
	comp=Z,49nm,0.8s						
BGNE	Belgrade	60.95	58	P	P	05 37 59.1	+0.5
	baz=322,SNR=5.7						
BGNE	Belgrade	60.95	58	P	P	05 38 00.1	+1.5
	baz=322,SNR=5.7						
I37B	Waseca	61.05	53	P	P	05 38 00.3	+1.1
	baz=323,SNR=17						
COWI	Conover	61.22	49	IAmb	IAmb	05 38 01.5	
	comp=Z,35nm,1.4s						
T25A	Trinidad	61.24	66	IAmb	IAmb	05 38 09.7	
	comp=Z,28nm,1.2s						
T25A	Trinidad	61.24	66	P	P	05 38 01.3	+0.4
	baz=321,SNR=13						
L34A	Svendsen Farm,	61.33	57	P	P	05 38 01.7	+0.6
	baz=322,SNR=5.6						
G40A	Rib Lake	61.44	50	P	P	05 38 02.3	+0.5
	baz=323,SNR=8.4						
PYUN	Piuthan	61.54	278	eP	P	05 38 01.8	-1.2
	comp=Z,105nm,1.2s						
SCHQ	Schefferville	61.63	30	P	P	05 38 02.6	-0.4
	comp=Z,28nm,0.8s,baz=352,slow=7.5,SNR=33						
	comp=Z,28nm,0.8s						
SCHQ	Schefferville	61.63	30	P	P	05 38 02.6	-0.4
SCHQ				IAmb	IAmb	05 38 07.4	
	comp=Z,36nm,0.8s						
SLIT	Slitere, Latvi	61.63	337	eP	P	05 38 03.0	+0.1
LPSR	Galich'ya Gora	61.69	325	eP	P	05 38 02.6	-0.8
LPSR				pmax	pmax		
	comp=Z,50nm,1.1s						
TUC	Tucson	61.71	74	P	P	05 38 04.7	+0.7
TUC	Tucson	61.71	74	P	P	05 38 04.7	+0.7
TUC				pmax	pmax		
	comp=Z,16nm,1.3s						
TUC	Tucson	61.71	74	P	P	05 38 05.4	+1.5
	baz=322						
SMPI	Sarmi	61.77	208	P	P	05 38 05.0	+0.7
	comp=Z,42nm,1.0s						
E43A	Lone Tree Farm	61.88	47	IAmb	IAmb	05 38 05.5	
	comp=Z,19nm,1.0s						
E43A	Lone Tree Farm	61.88	47	P	P	05 38 04.0	-0.7
	baz=324,SNR=6.5						
ANMO	Albuquerque	61.91	69	P	P	05 38 06.3	+0.9
ANMO	Albuquerque	61.91	69	ceP	P	05 38 02.7	-2.7
ANMO				pmax	pmax		
	comp=Z,23nm,1.7s						
ANMO	Albuquerque	61.91	69	P	P	05 38 06.0	+0.6
	baz=322						
ANMO	Albuquerque	61.91	69	P	P	05 38 07.3	+1.9
	baz=322,SNR=14						
F42A	Maple Grove Fa	61.91	49	IAmb	IAmb	05 38 10.3	
	comp=Z,41nm,1.1s						
F42A	Maple Grove Fa	61.91	49	P	P	05 38 05.3	+0.3
	baz=324						
VRH	Novokhopyorsk	61.97	322	eP	P	05 38 05.2	-0.1
VRH				pmax	pmax		
	comp=Z,30nm,1.0s						
KONO	Kongsberg	61.99	345	P	P	05 38 04.7	-0.6
KONO				IAmb	IAmb	05 38 06.3	
	comp=Z,33nm,1.1s						
KONO	Kongsberg	61.99	345	ceP	P	05 38 04.3	-1.0
KONO				pmax	pmax		
	comp=Z,49nm,1.7s						
CBKS	Cedar Bluff	62.23	61	P	P	05 38 07.7	+0.4
	baz=322						
Y22D	IRIS PASSCAL I	62.35	70	P	P	05 38 08.4	+0.1
	baz=322						
Y22F	Passcal Instru	62.35	70	P	P	05 38 08.4	+0.1
	baz=322						
I40A	Norwalk	62.36	51	IAmb	IAmb	05 38 09.4	
	comp=Z,32nm,1.1s						
I40A	Norwalk	62.36	51	P	P	05 38 08.6	+0.5
	baz=324,SNR=5.5						
NIL	Nilore	62.39	290	P	P	05 38 07.9	-0.5
NIL	Nilore	62.39	290	P	P	05 38 07.9	-0.5
NIL				pmax	pmax		
	comp=Z,30nm,0.6s						
VORR	Voronezh	62.40	324	eP	P	05 38 07.8	-0.4
VORR				pmax	pmax		
	comp=Z,35nm,1.4s						
K38A	Parkersburg	62.42	54	IAmb	IAmb	05 38 09.6	
	comp=Z,20nm,0.9s						
K38A	Parkersburg	62.42	54	P	P	05 38 08.9	+0.4
	baz=323						
Y22A	Socorro	62.43	70	P	P	05 38 11.4	+2.5
	baz=322,SNR=14						
N35A	Tabor	62.54	57	P	P	05 38 10.6	+1.3
	baz=323,SNR=15						
RKPI	Ransiki, Papua	62.57	213	P	P	05 38 09.5	-0.2
	comp=Z,78nm,0.5s						
VSR	Storozhevoye	62.80	324	eP	P	05 38 09.9	-1.0
VSR				pmax	pmax		
	comp=Z,60nm,1.2s						
SCIA	State Center	62.81	55	P	P	05 38 12.2	+1.1
	baz=323,SNR=10						
E46A	Sault Ste Mari	62.96	46	IAmb	IAmb	05 38 15.9	
	comp=Z,28nm,0.9s						
E46A	Sault Ste Mari	62.96	46	P	P	05 38 11.4	-0.6
	baz=326,SNR=7.4						
VORD	Divnogorie	62.98	324	eP	P	05 38 10.9	-1.1
VORD				pmax	pmax		
	comp=Z,40nm,1.4s						
R32A	Long Quarter,	63.03	61	IAmb	IAmb	05 38 13.9	
	comp=Z,35nm,1.4s						
NACGM	Naroch	63.09	333	eP	P	05 38 13.3	+0.6
	comp=E,1µm,1.1s						
I42A	Draeger Farm,	63.09	50	IAmb	IAmb	05 38 14.1	
	comp=Z,20nm,0.8s						
I42A	Draeger Farm,	63.09	50	P	P	05 38 13.2	+0.2
	baz=324,SNR=8.9						
H43A	Windswept, Lux	63.10	49	P	P	05 38 13.2	+0.2
	baz=325,SNR=20						
121A	Cookes Peak, D	63.11	71	IAmb	IAmb	05 38 17.0	
	comp=Z,36nm,1.1s						
121A	Cookes Peak, D	63.11	71	P	P	05 38 15.3	+1.9
	baz=322,SNR=11						
121A	Cookes Peak, D	63.11	71	P	P	05 38 16.0	+2.6
	baz=322,SNR=11						
MNK	Minsk	63.17	332	i P	P	05 38 14.7	+1.5
	comp=E,3.0nm,1.1s						
MNK				i P	P	05 38 14.7	+1.5
	comp=N,42nm,0.8s						
MNK				i P	P	05 38 14.7	+1.5
	comp=Z,56nm,0.8s,baz=26						
MNK				i PP	PP	05 40 33.8	+2.1
MNK				i PPP	PPP	05 42 02.4	
MNK				i S	S	05 46 43.0	+0.4
MNK				i SS	SS	05 50 48.1	+0.3
MNK				i SSS	SSS	05 53 44.8	
MNK				i LQ	LQ	06 01 16.4	
MNK				i LR	LR	06 06 05.7	
MNK				i LRM	MLR	06 09 59.0	
	comp=N,863nm,11.6s						
MNK				i LRM	MLR	06 10 05.4	
	comp=E,144nm,16.1s						
MNK				i LRM	MLR	06 10 09.9	
	comp=Z,1µm,14.8s						
MNK	Minsk	63.17	332	i P	P	05 38 14.7	+1.5
MNK				i		05 40 33.8	
MNK				i PPP	PPP	05 42 02.4	
MNK				i S	S	05 46 43.0	+0.4
MNK				i SS	SS	05 50 48.0	+0.3
MNK				pmax	pmax		
	comp=E,3.0nm,1.1s						

MNK				pmax	pmax		
	comp=Z,56nm,0.8s						
MNK				pmax	pmax		
	comp=N,42nm,0.8s						
MNK				MLR	MLR		
	comp=N,863nm,12.0s						
MNK				MLR	MLR		
	comp=E,144nm,16.0s						
MNK				MLR	MLR		
	comp=Z,1µm,15.0s						
PBUR	Paburge	63.19	337	*e*P	P	05 38 13.7	+0.3
PABE	Paberze	63.21	335	*e*P	P	05 38 14.2	+0.7
319A	Douglas	63.23	73	IAmb	IAmb	05 38 17.5	
	comp=Z,43nm,1.2s						
JFWS	Jewell Farm	63.31	52	IAmb	IAmb	05 38 18.8	
	comp=Z,28nm,1.4s						
JFWS	Jewell Farm	63.31	52	P	P	05 38 13.6	-0.8
	baz=324						
KSU1	Kansas State U	63.49	59	IAmb	IAmb	05 38 16.5	
	comp=Z,27nm,0.9s						
KSU1	Kansas State U	63.49	59	P	P	05 38 14.1	-1.5
	baz=323,SNR=7.8						
KSU1	Kansas State U	63.49	59	P	P	05 38 15.8	+0.1
	baz=323,SNR=7.8						
G45A	Suttons Bay	63.51	47	P	P	05 38 15.0	-0.6
	baz=325,SNR=10						
G45A				P	P	05 38 15.0	-0.6
	baz=325,SNR=10						
L40A	Anamosa	63.57	53	IAmb	IAmb	05 38 16.8	
	comp=Z,25nm,0.9s						
L40A	Anamosa	63.57	53	P	P	05 38 15.9	-0.2
	baz=324,SNR=7.1						
N38A	Joes South For	63.70	55	IAmb	IAmb	05 38 18.3	
	comp=Z,38nm,1.2s						
I45A	Fountain	64.09	49	P	P	05 38 19.8	+0.3
	baz=325						
I45A				P	P	05 38 19.8	+0.3
	baz=325						
GLMI	Grayling	64.10	47	P	P	05 38 19.7	+0.1
	baz=326,SNR=11						
HSIG		64.20	76	IAmb	IAmb	05 38 23.5	
	comp=Z,39nm,1.2s						
AMTX	Amarillo	64.37	65	IAmb	IAmb	05 40 19.7	
	comp=Z,12nm,0.7s						
AMTX	Amarillo	64.37	65	P	P	05 38 22.3	+0.6
	baz=323						
GTOI	Gorontalo	64.44	225	P	P	05 38 20.6	-1.4
	comp=Z,9.4nm,1.4s						
GTOI				pP	sP	05 38 31.1	-2.1
	comp=Z,9.4nm,1.4s						
FAKI	Fak Fak	64.49	214	P	P	05 38 21.9	-0.5
	comp=Z,67nm,1.1s						
P38A	Dawn	64.50	56	IAmb	IAmb	05 38 23.6	
	comp=Z,44nm,1.1s						
P38A	Dawn	64.50	56	P	P	05 38 22.5	+0.3
	baz=324,SNR=13						
MSTX	Muleshoe	64.55	67	IAmb	IAmb	05 38 24.9	
	comp=Z,34nm,1.1s						
MSTX	Muleshoe	64.55	67	P	P	05 38 22.6	-0.2
	baz=323,SNR=9.2						
MSTX	Muleshoe	64.55	67	P	P	05 38 24.1	+1.3
	baz=323,SNR=9.2						
ELIS	Ellis County	64.56	63	IAmb	IAmb	05 38 24.4	
	comp=Z,53nm,1.3s						
SUW	Suwalki	64.77	335	*e*P	P	05 38 23.4	-0.3
SUW	Suwalki	64.77	335	*e*P	P	05 38 23.8	+0.1
N41A	Harden Midland	64.83	54	P	P	05 38 24.5	+0.1
	baz=324,SNR=8.7						
TOLI2	Tolitoli	64.89	228	P	P	05 38 24.4	-0.6
L44A	Lake County Fo	64.91	51	P	P	05 38 24.4	-0.5
	baz=325						
MRSI	Marisa	65.00	226	P	P	05 38 24.4	-1.3
	comp=Z,77nm,1.0s						
MRSI				pP	sP	05 38 36.2	-0.7
	comp=Z,77nm,1.0s						
MNTX	Cornudas Mount	65.02	70	P	P	05 38 26.3	+0.6
	baz=323,SNR=62						
MNTX	Cornudas Mount	65.02	70	P	P	05 38 27.8	+2.1
	baz=323,SNR=62						
P40A	Paris	65.25	55	IAmb	IAmb	05 38 28.5	
	comp=Z,38nm,1.1s						
P40A	Paris	65.25	55	P	P	05 38 27.4	+0.3
	baz=324,SNR=16						
J47A	Sunmer	65.33	48	P	P	05 38 27.5	-0.1
	baz=326,SNR=7.7						
J47A				P	P	05 38 27.5	-0.1
	baz=326,SNR=7.7						
BSD	Bornholm Skovb	65.46	340	*e*P	P	05 38 28.4	+0.3
I49A	Point Hope	65.56	46	P	P	05 38 28.8	-0.2
	baz=327,SNR=8.4						
I49A				P	P	05 38 28.8	-0.2
	baz=327,SNR=8.4						
HDIL	Hopedale	65.64	53	P	P	05 38 29.2	-0.5
	baz=325,SNR=9.2						
HDIL	Hopedale	65.64	53	P	P	05 38 29.7	0.0
	baz=325,SNR=9.2						
L46A	Eue Claire	65.73	50	IAmb	IAmb	05 38 35.0	
	comp=Z,34nm,1.1s						
QUOK	Quay	65.78	61	IAmb	IAmb	05 38 47.2	
	comp=Z,14nm,0.7s						
SANI	Sanana	65.78	221	P	P	05 38 28.5	-2.3
	comp=Z,46nm,1.0s						
SANI				pP	sP	05 38 42.1	+0.2
	comp=Z,46nm,1.0s						
OK052	Battle Ridge R	65.88	61	IAmb	IAmb	05 38 36.4	
	comp=Z,22nm,1.1s						
OK031	S. Brethren Rd	65.90	61	IAmb	IAmb	05 40 39.5	
	comp=Z,18nm,0.5s						
POST	Post	65.91	66	IAmb	IAmb	05 38 33.7	
	comp=Z,34nm,1.1s						
WMOK	Wichita Mounta	65.93	63	P	P	05 38 32.0	+0.4
	baz=324,SNR=23						
OK030	Cody Creek RV	65.94	61	IAmb	IAmb	05 38 36.9	
	comp=Z,34nm,1.2s						
MPSI	Mapaga	65.95	228	P	P	05 38 30.7	-1.2
	comp=Z,39nm,1.0s						
MPSI				pP	sP	05 38 43.1	+0.1
	comp=Z,39nm,1.0s						
LUWI	Luwuk	66.06	225	P	P	05 38 31.2	-1.4
	comp=Z,78nm,1.1s,comp=Z,5µm						
LUWI				pP	sP	05 38 42.7	-1.0
	comp=Z,78nm,1.1s,comp=Z,5µm						
ODSA	Odessa	66.13	68	IAmb	IAmb	05 38 35.2	
	comp=Z,22nm,0.9s						
DEOK	Depew	66.15	61	IAmb	IAmb	05 38 34.5	
	comp=Z,47nm,1.4s						
R40A	Maddies Statio	66.16	56	IAmb	IAmb	05 38 34.1	
	comp=Z,43nm,1.0s						
R40A	Maddies Statio	66.16	56	P	P	05 38 32.8	-0.2
	baz=325,SNR=21						
S39A	Bolivar	66.16	57	IAmb	IAmb	05 38 33.6	
	comp=Z,49nm,1.4s						
S39A	Bolivar	66.16	57	P	P	05 38 32.3	-0.7
	baz=324,SNR=17						
FNO	Franklin	66.18	62	IAmb	IAmb	05 38 35.1	
	comp=Z,50nm,1.4s						
AKASG	Malin Array Be	66.25	330	P	P	05 38 33.0	-0.3
	comp=Z,14nm,0.8s,baz=27,slow=6.1,SNR=57						
	comp=Z,14nm,0.8s						
AKASG	Malin Array Be	66.25	330	IAmb	IAmb	05 38 38.4	
	comp=Z,48nm,1.8s						
AKBB	Malin Array Si	66.25	330	IAmb	IAmb	05 38 34.1	
	comp=Z,46nm,1.2s						
AKBB	Malin Array Si	66.25	330	*ce*P	P	05 38 31.2	-2.2
AKBB				pmax	pmax		
	comp=Z,47nm,1.3s						
SADO	Sadowa	66.29	43	P	P	05 38 32.4	-1.3
	comp=Z,7.1nm,0.8s,baz=322,slow=8.2,SNR=5.3						
P43A	Skaggs, Pawnee	66.29	54	P	P	05 38 33.8	0.0
	baz=325,SNR=10						
LATQ	La Tuque	66.32	38	IAmb	IAmb	05 38 38.5	
	comp=Z,36nm,0.8s						
O44A	Mansfield	66.33	52	IAmb	IAmb	05 38 34.7	
	comp=Z,27nm,1.0s						
O44A	Mansfield	66.33	52	P	P	05 38 34.0	-0.1
	baz=326,SNR=5.8						
GEYT	Alibeck	66.41	303	P	P	05 38 35.6	+0.9
	comp=Z,50nm,0.7s,baz=354,slow=3.0,SNR=81						
	comp=Z,50nm,0.7s						
TUL1	Leonard	66.43	60	P	P	05 38 35.4	+0.6
	baz=324,SNR=11						
TUL1	Leonard	66.43	60	P	P	05 38 35.4	+0.6
	baz=324,SNR=11						
NLAI	Namlea	66.49	220	P	P	05 38 35.4	+0.1
	comp=Z,26nm,0.7s						
W35A	Tecumseh	66.52	62	IAmb	IAmb	05 38 37.2	
	comp=Z,58nm,1.4s						
AAI	Ambon	66.53	218	P	P	05 38 36.4	+0.8
	comp=Z,90nm,0.6s						
L48A	N Adams	66.57	49	P	P	05 38 35.7	+0.1
	baz=327,SNR=15						
L48A				P	P	05 38 35.7	+0.1
	baz=327,SNR=15						
AAM	Ann Arbor	66.59	48	P	P	05 38 35.4	-0.3
	baz=327,SNR=5.0						
AAM	Ann Arbor	66.59	48	P	P	05 38 36.4	+0.7
	baz=327,SNR=5.0						
U38A	Gravette	66.67	59	IAmb	IAmb	05 38 37.5	
	comp=Z,58nm,1.6s						
U38A	Gravette	66.67	59	P	P	05 38 36.2	-0.2
	baz=324,SNR=8.8						
SFIN	Lafayette	66.74	51	P	P	05 38 35.9	-0.8
	baz=326						
SFIN	Lafayette	66.74	51	P	P	05 38 36.5	-0.2
	baz=326						
CCM	Cathedral Cave	66.81	56	P	P	05 38 37.0	-0.2
CCM				IAmb	IAmb	05 38 38.4	
	comp=Z,56nm,1.4s						
CCM	Cathedral Cave	66.81	56	P	P	05 38 37.0	-0.2
CCM				pmax	pmax		
	comp=Z,56nm,1.4s						
CCM	Cathedral Cave	66.81	56	P	P	05 38 36.5	-0.7
	baz=325						
CCM	Cathedral Cave	66.81	56	P	P	05 38 37.2	0.0
	baz=325,SNR=19						
WTFS	Witchita Falls	66.86	64	IAmb	IAmb	05 38 39.3	
	comp=Z,45nm,1.3s						
N47A	Urbana	66.92	50	IAmb	IAmb	05 38 38.3	
	comp=Z,62nm,1.4s						
N47A	Urbana	66.92	50	P	P	05 38 37.1	-0.8
	baz=326						
N47A				P	P	05 38 37.1	-0.8
	baz=326						
LMQ	La Malbaie	66.99	36	P	P	05 38 37.8	-0.4
LMQ				IAmb	IAmb	05 38 42.8	
	comp=Z,44nm,1.0s						
DELO	Deloro Mine	67.07	43	IAmb	IAmb	05 38 38.9	
	comp=Z,34nm,1.1s						
Q44A	Meyer Farm, Va	67.12	54	P	P	05 38 39.1	0.0
	baz=326,SNR=5.8						
ABTX	Abilene, Hawle	67.20	65	P	P	05 38 40.1	+0.4
	baz=324						
FVM	French Village	67.24	55	P	P	05 38 40.2	+0.2
	baz=325,SNR=22						
P46A	Rosedale	67.32	52	P	P	05 38 40.5	+0.1
	baz=326,SNR=5.3						
BEL	Belsk	67.33	336	*e*P	P	05 38 41.3	+1.1
SBUM	Sibu	67.42	237	P	P	05 38 41.6	+0.4
U40A	Yellville	67.46	58	P	P	05 38 41.7	+0.3
	baz=325,SNR=18						
U40A				P	P	05 38 41.7	+0.3
	baz=325,SNR=18						
N49A	Columbus Grove	67.52	49	P	P	05 38 41.5	-0.1
	baz=327,SNR=10						
N49A				P	P	05 38 41.5	-0.1
	baz=327,SNR=10						
EKA	Eskdalemuir Ar	67.66	351	P	P	05 38 42.7	+0.4
	comp=Z,16nm,0.8s,baz=20,slow=5.7,SNR=38						
	comp=Z,16nm,0.8s						
OLIL	Olney	67.66	53	P	P	05 38 42.5	-0.1
	baz=326,SNR=6.5						
MNTQ	Montreal, Queb	67.67	39	IAmb	IAmb	05 38 42.9	
	comp=Z,36nm,0.9s						
O48B	Farmland	67.67	50	P	P	05 38 41.2	-1.4
	baz=327,SNR=16						
O48B	Farmland	67.67	50	P	P	05 38 42.0	-0.6
	baz=327,SNR=16						
X37A	Clayton	67.70	61	IAmb	IAmb	05 38 44.8	
	comp=Z,22nm,1.1s						
X37A	Clayton	67.70	61	P	P	05 38 43.7	+0.8
	baz=325,SNR=9.3						
T42A	Van Buren	67.72	56	P	P	05 38 42.9	0.0
	baz=325						
TX31	Lajitas Ar. Si	67.79	70	P	P	05 38 45.2	+1.6
	baz=324,SNR=77						
TXAR	Lajitas Array	67.79	70	P	P	05 38 45.1	+1.5
	comp=Z,32nm,0.9s,baz=297,slow=4.6,SNR=194						
	comp=Z,32nm,0.9s						
PECO	Prince Edward	67.80	42	IAmb	IAmb	05 38 43.5	
	comp=Z,31nm,1.0s						
D62A	Allapoint, All	67.81	36	IAmb	IAmb	05 38 48.1	
	comp=Z,28nm,0.8s						
D62A	Allapoint, All	67.81	36	P	P	05 38 43.3	-0.1
	baz=332,SNR=9.7						
D62A				P	P	05 38 43.3	-0.1
	baz=332,SNR=9.7						
KIV	Kislovodsk	67.81	318	⇑P	P	05 38 45.0	+1.5
KIV	Kislovodsk	67.81	318	*e*P	P	05 38 42.7	-0.9
KIV				pmax	pmax		
	comp=Z,19nm,1.1s						
BMNY	Brushton-Moira	67.93	40	P	P	05 38 43.3	-0.8
	baz=330,SNR=12						
KBZ	Khabaz	67.93	317	P	P	05 38 45.3	+1.2
	comp=Z,23nm,1.1s,baz=74,slow=2.2,SNR=20						
	comp=Z,23nm,1.1s						
KBZ	Khabaz	67.93	317	*ce*P	P	05 38 44.3	+0.2
KBZ				pmax	pmax		
	comp=Z,29nm,1.0s						
AKT	Akhty	67.96	313	*e*P	P	05 38 44.7	+0.1
AKT				*e*		05 39 11.2	
AKT				pmax	pmax		
	comp=Z,52nm,1.5s						
SIUC	Southern Illin	68.01	54	IAmb	IAmb	05 38 45.8	
	comp=Z,39nm,1.0s						
S44A	Carbondale	68.01	55	IAmb	IAmb	05 38 45.9	
	comp=Z,35nm,0.9s						
S44A	Carbondale	68.01	55	P	P	05 38 44.8	+0.1
	baz=326,SNR=13						
SHA1	Shidzhatmaz	68.01	318	*i* P	P	05 38 44.7	-0.3
FW07	Weatherford	68.05	64	IAmb	IAmb	05 38 50.7	
	comp=Z,30nm,1.1s						
E62A	Clayton Lake	68.07	36	P	P	05 38 44.7	-0.3
	baz=332						
E62A				P	P	05 38 44.7	-0.3
	baz=332						
J55A	Hilton	68.07	43	IAmb	IAmb	05 38 45.3	
	comp=Z,30nm,1.0s						
O49A	Covington	68.07	50	P	P	05 38 45.1	0.0
	baz=327,SNR=12						
O49A				P	P	05 38 45.1	0.0
	baz=327,SNR=12						
LONY	Lake Ozonia	68.09	40	IAmb	IAmb	05 38 49.0	
	comp=Z,32nm,1.1s						
LONY	Lake Ozonia	68.09	40	P	P	05 38 44.0	-1.2
	baz=330						
CGM3	Cape Girardeau	68.15	55	IAmb	IAmb	05 38 50.6	
	comp=Z,34nm,1.5s						
ERPA	Erie	68.21	45	P	P	05 38 44.7	-1.2
	baz=328,SNR=12						
ERPA	Erie	68.21	45	P	P	05 38 45.6	-0.3
	baz=328,SNR=12						
P48A	Milroy	68.22	51	IAmb	IAmb	05 38 50.3	
	comp=Z,34nm,0.9s						
P48A	Milroy	68.22	51	P	P	05 38 45.5	-0.5
	baz=327,SNR=11						
P48A				P	P	05 38 45.5	-0.5
	baz=327,SNR=11						
FRNY	Flat Rock	68.26	40	P	P	05 38 45.2	-1.0
	baz=331						
WCNY	West Carthage	68.26	42	P	P	05 38 45.5	-0.8
	baz=330,SNR=5.9						
N51A	Ashland	68.27	48	P	P	05 38 46.0	-0.3
	baz=328,SNR=8.7						
N51A				P	P	05 38 46.0	-0.3
	baz=328,SNR=8.7						
ZKTA	Zakatala	68.27	314	P	P	05 38 46.9	+0.5
J56A	Wolcott	68.42	43	IAmb	IAmb	05 38 51.0	
	comp=Z,25nm,0.9s						
LVV	L'vov	68.42	333	*e*P	P	05 38 47.4	+0.2
P49A	Miami Univ. Ec	68.46	50	P	P	05 38 46.2	-1.4
	baz=327,SNR=15						
P49A	Miami Univ. Ec	68.46	50	P	P	05 38 47.3	-0.3
	baz=327,SNR=15						
LCAR	Lake Charles	68.48	57	P	P	05 38 47.7	0.0
	baz=326,SNR=6.3						
WVNY	West Valley, N	68.50	44	P	P	05 38 47.2	-0.6
	baz=329,SNR=13						
M53A	WI Miller and	68.51	46	P	P	05 38 47.3	-0.6
	baz=328,SNR=20						
ALLY	Alegheny Colle	68.55	46	P	P	05 38 47.9	-0.2
	baz=328,SNR=7.7						
F62A	Pittston Farm,	68.56	37	P	P	05 38 48.0	-0.1
	baz=332,SNR=10.0						
F62A				P	P	05 38 48.0	-0.1
	baz=332,SNR=10.0						
MIAR	Mount Ida	68.59	60	P	P	05 38 48.5	0.0
	baz=325,SNR=21						
MIAR	Mount Ida	68.59	60	P	P	05 38 49.4	+0.9
	baz=325,SNR=21						
ACSO	Alum Creek Sta	68.60	49	P	P	05 38 47.3	-1.2
	baz=328,SNR=12						
ACSO	Alum Creek Sta	68.60	49	P	P	05 38 48.5	+0.1
	baz=328,SNR=12						
J57A	Williamstown	68.62	42	IAmb	IAmb	05 38 52.5	
	comp=Z,24nm,1.0s						
J57A	Williamstown	68.62	42	P	P	05 38 47.8	-0.7
	baz=330,SNR=8.4						
J57A				P	P	05 38 47.8	-0.7
	baz=330,SNR=8.4						
HPIG		68.67	73	IAmb	IAmb	05 38 53.0	
	comp=Z,40nm,1.4s						
ONI	Oni	68.69	316	IAmb	IAmb	05 38 55.2	
	comp=Z,27nm,1.2s						
NCB	Newcomb	68.78	41	IAmb	IAmb	05 38 53.8	
	comp=Z,17nm,0.9s						
WHTX	Lake Whitney,	68.79	64	P	P	05 38 50.4	+0.6
	baz=325						
SORM	Soroca	68.81	329	⇑P	P	05 38 49.3	-0.3
SORM	Soroca	68.81	329	P	P	05 38 49.3	-0.3
JCT	Junction City	68.84	67	P	P	05 38 50.1	-0.1
	baz=324,SNR=9.4						
JCT	Junction City	68.84	67	P	P	05 38 51.5	+1.3
	baz=324,SNR=9.4						
WCI	Wyandotte Cave	68.87	52	P	P	05 38 49.3	-0.8
WCI				IAmb	IAmb	05 38 51.1	
	comp=Z,33nm,0.9s						
WCI	Wyandotte Cave	68.87	52	P	P	05 38 49.3	-0.8
WCI				pmax	pmax		
	comp=Z,33nm,0.9s						
WCI	Wyandotte Cave	68.87	52	P	P	05 38 48.8	-1.3
	baz=327						
WCI	Wyandotte Cave	68.87	52	P	P	05 38 50.5	+0.3
	baz=327,SNR=9.3						
J58A	Remsen	68.93	42	P	P	05 38 49.2	-1.3
	baz=330,SNR=10						
J58A				P	P	05 38 49.2	-1.3
	baz=330,SNR=10						
G62A	West of Eustis	68.97	37	IAmb	IAmb	05 38 52.1	
	comp=Z,43nm,1.1s						
G62A	West of Eustis	68.97	37	P	P	05 38 50.5	-0.2
	baz=332,SNR=7.4						
G62A				P	P	05 38 50.5	-0.2
	baz=332,SNR=7.4						
Z38A	Mt. Pleasant	68.97	61	P	P	05 38 51.4	+0.6
	baz=325,SNR=7.3						
N53A	Lisbon	68.99	47	IAmb	IAmb	05 38 51.6	
	comp=Z,40nm,0.9s						
N53A	Lisbon	68.99	47	P	P	05 38 50.5	-0.4
	baz=328,SNR=9.3						
N53A				P	P	05 38 50.5	-0.4
	baz=328,SNR=9.3						
UALR	University of	68.99	59	IAmb	IAmb	05 38 56.3	
	comp=Z,35nm,1.2s						
X40A	Basin Creek Fa	68.99	59	P	P	05 38 52.1	+1.1
	baz=325,SNR=15						
X40A				P	P	05 38 52.1	+1.1
	baz=325,SNR=15						
K57A	Scipio Center	69.02	43	IAmb	IAmb	05 38 54.8	
	comp=Z,32nm,1.1s						
OJC	Ojcow	69.07	336	*e*P	P	05 38 51.9	+0.8
F64A	Sherman	69.11	36	P	P	05 38 49.8	-1.7
F64A				IAmb	IAmb	05 38 56.0	
	comp=Z,40nm,1.2s						
J59A	Piesco	69.12	41	IAmb	IAmb	05 38 56.2	
	comp=Z,26nm,1.1s						
J59A	Piesco	69.12	41	P	P	05 38 50.6	-1.1
	baz=330,SNR=6.9						
J59A				P	P	05 38 50.6	-1.1
	baz=330,SNR=6.9						
L56A	Greenwood	69.13	44	P	P	05 38 50.8	-1.0
	baz=329,SNR=12						
L56A				P	P	05 38 50.8	-1.0
	baz=329,SNR=12						
O52A	Adamsville	69.17	48	P	P	05 38 51.7	-0.3
	baz=328,SNR=14						
O52A				P	P	05 38 51.7	-0.3
	baz=328,SNR=14						
P51A	Williamsport	69.20	49	IAmb	IAmb	05 38 56.4	
	comp=Z,32nm,0.8s						
P51A	Williamsport	69.20	49	P	P	05 38 51.6	-0.5
	baz=328,SNR=8.3						
P51A				P	P	05 38 51.6	-0.5
	baz=328,SNR=8.3						
GANJ	Ganja	69.23	313	P	P	05 38 52.8	+0.4
KSP	Ksiaz	69.24	338	*e*P	P	05 38 52.7	+0.4
M55A	Ridgway	69.24	45	P	P	05 38 51.9	-0.5
	baz=329,SNR=20						
M55A				P	P	05 38 51.9	-0.5
	baz=329,SNR=20						
R49A	Shelbyville	69.30	51	IAmb	IAmb	05 38 54.0	
	comp=Z,26nm,1.1s						
R49A	Shelbyville	69.30	51	P	P	05 38 53.0	+0.1
	baz=327,SNR=8.6						
R49A				P	P	05 38 53.0	+0.1
	baz=327,SNR=8.6						
O53A	New Philadelph	69.31	47	IAmb	IAmb	05 38 57.2	
	comp=Z,38nm,0.8s						
O53A	New Philadelph	69.31	47	P	P	05 38 51.4	-1.5
	baz=328,SNR=10						
H62A	Milan	69.33	38	P	P	05 38 53.0	+0.2
	baz=332,SNR=9.7						
H62A				P	P	05 38 53.0	+0.2
	baz=332,SNR=9.7						
PKME	Peaks-Kenny Pk	69.34	37	P	P	05 38 51.8	-1.1
	baz=332,SNR=7.5						
PKME	Peaks-Kenny Pk	69.34	37	P	P	05 38 53.4	+0.5
	baz=332,SNR=7.5						
LBNH	Lisbon	69.36	39	IAmb	IAmb	05 38 54.5	
	comp=Z,41nm,1.1s						
LBNH	Lisbon	69.36	39	P	P	05 38 51.7	-1.4
	baz=332,SNR=7.5						
LBNH	Lisbon	69.36	39	P	P	05 38 53.8	+0.7
	baz=332,SNR=7.5						
IBBN	Ibbenburen	69.36	344	*e*P	P	05 38 53.3	+0.4
	comp=Z,20nm,0.9s,baz=16,slow=6.2						
CLZ	Clausthal	69.39	342	*e*P	P	05 38 53.4	+0.1
	comp=Z,16nm,1.0s,baz=16,slow=6.2						
CLL	Collm	69.44	340	*i* P	P	05 38 53.5	0.0
	comp=Z,22nm,1.1s						
CLL				*i* pP	pP	05 38 56.9	-4.6
	comp=Z,50nm,1.5s						
CLL				*e*x	x	05 39 06.0	
CLL				*i* x	x	05 39 11.5	
CLL				*e*PP	PP	05 41 27.0	+0.7
CLL	Collm	69.44	340	*i* P	P	05 38 53.5	0.0
CLL				pmax	pmax		
	comp=Z,22nm,1.1s						
CLL	Collm	69.44	340	*e*P	P	05 38 53.4	0.0
	comp=Z,10.0nm,0.9s,baz=16,slow=6.2						
P52A	Corning	69.45	48	IAmb	IAmb	05 38 57.9	
	comp=Z,25nm,0.8s						
P52A	Corning	69.45	48	P	P	05 38 52.3	-1.4
	baz=328,SNR=7.0						
STHS	Stebnicka Huta	69.48	334	*e*P	P	05 38 53.4	-0.4
STHS				pmax	pmax		
	comp=Z,22nm,0.9s						
STHS	Stebnicka Huta	69.48	334	*e*P	P	05 38 53.4	-0.4
ACCN	Adirondack Com	69.49	41	IAmb	IAmb	05 38 58.4	
	comp=Z,24nm,1.0s						
ACCN	Adirondack Com	69.49	41	P	P	05 38 53.6	-0.3
	baz=331,SNR=7.0						
CHVC	Chvalec	69.53	338	*e*P	P	05 38 54.5	+0.4
CHVC	Chvalec	69.53	338	*e*P	P	05 38 54.5	+0.4
T47A	Sharon Grove	69.55	53	P	P	05 38 55.0	+0.6
	baz=327,SNR=20						
BINY	Binghamton	69.67	43	P	P	05 38 54.1	-1.0
	baz=330						
R50A	Paris	69.67	51	IAmb	IAmb	05 39 00.1	
	comp=Z,33nm,0.9s						
R50A	Paris	69.67	51	P	P	05 38 55.4	+0.3
	baz=328,SNR=15						
R50A				P	P	05 38 55.4	+0.3
	baz=328,SNR=15						
BRG	Berggiesshubel	69.68	340	*i* P	P	05 38 55.0	+0.1
BRG				Amp		05 39 00.1	
	comp=Z,14nm,1.0s						
BRG	Berggiesshubel	69.68	340	*i* P	P	05 38 55.0	+0.1
BRG				pmax	pmax		
	comp=Z,14nm,1.0s						
BRG	Berggiesshubel	69.68	340	*e*P	P	05 38 55.1	+0.1
	comp=Z,6.1nm,0.9s,baz=16,slow=6.2						
DPC	Dobruska-Polom	69.70	338	*e*P	P	05 38 56.0	+0.8
DPC				*e*pP	pP	05 38 59.9	-3.4

DPC	Dobruska-Polom	69.70	338	eP	P	05 38 56.0	+0.8
O54A	Avella	69.70	47	IAmb	IAmb	05 38 59.9	
	comp=Z,27nm,0.9s						
O54A	Avella	69.70	47	P	P	05 38 55.3	0.0
	baz=329,SNR=8.3						
O54A				P	P	05 38 55.3	0.0
	baz=329,SNR=8.3						
NIE	Niedzica	69.70	335	eP	P	05 38 56.8	+1.7
435B	Jarrell	69.71	65	IAmb	IAmb	05 38 57.4	
	comp=Z,62nm,1.5s						
435B	Jarrell	69.71	65	P	P	05 38 55.1	-0.4
	baz=325						
FBE	Freiberg	69.74	340	eP	P	05 38 55.7	+0.4
	comp=Z,11nm,1.0s,baz=16,slow=6.2						
MILM	Milestii Mici	69.78	328	eP	P	05 38 54.0	-1.6
	comp=Z,210nm,1.6s						
MILM	Milestii Mici	69.78	328	eP	P	05 38 54.0	-1.6
MILM				pmax	pmax		
	comp=Z,210nm,1.6s						
OKC	Ostrava-Krasne	69.80	337	eP	P	05 38 56.1	+0.4
OKC	Ostrava-Krasne	69.80	337	eP	P	05 38 56.1	+0.4
KRLC	Kraliky	69.86	337	eP	P	05 38 56.7	+0.5
KRLC	Kraliky	69.86	337	eP	P	05 38 57.4	+1.2
LKRN	Lenkeran, Azer	69.87	310	P	P	05 38 56.5	+0.2
P53A	Whipple	69.88	48	IAmb	IAmb	05 38 57.1	
	comp=Z,31nm,1.1s						
P53A	Whipple	69.88	48	P	P	05 38 56.1	-0.2
	baz=328,SNR=6.9						
P53A				P	P	05 38 56.1	-0.2
	baz=328,SNR=6.9						
SIM	Simferopol'	69.93	324	eP	P	05 38 57.7	+1.1
SIM						05 39 17.0	
SIM				pmax	pmax		
	comp=Z,39nm,1.0s						
WVT	Waverly	69.94	54	P	P	05 38 56.8	0.0
WVT	Waverly	69.94	54	P	P	05 38 56.8	0.0
WVT				pmax	pmax		
	comp=Z,65nm,1.3s						
G65A	Princeton	69.96	35	IAmb	IAmb	05 39 01.1	
	comp=Z,30nm,0.9s						
Q52A	Bidwell	69.97	49	IAmb	IAmb	05 39 01.3	
	comp=Z,49nm,1.1s						
Q52A	Bidwell	69.97	49	P	P	05 38 56.7	-0.2
	baz=328,SNR=6.9						
Q52A				P	P	05 38 56.7	-0.2
	baz=328,SNR=6.9						
I63A	Otisfield	69.98	38	P	P	05 38 57.8	+0.9
	baz=332,SNR=6.3						
I63A				P	P	05 38 57.8	+0.9
	baz=332,SNR=6.3						
MORC	Moravsky Berou	69.98	337	⇓P	P	05 38 56.9	0.0
MORC	Moravsky Berou	69.98	337	IAmb	IAmb	05 38 58.8	
	comp=Z,26nm,1.0s						
MORC	Moravsky Berou	69.98	337	eP	P	05 38 57.1	+0.2
MORC	Moravsky Berou	69.98	337	P	P	05 38 57.3	+0.4
M57A	Sunshine Farm,	69.98	44	IAmb	IAmb	05 39 01.2	
	comp=Z,38nm,0.8s						
M57A	Sunshine Farm,	69.98	44	P	P	05 38 56.2	-0.8
	baz=330,SNR=10						
M57A				P	P	05 38 56.2	-0.8
	baz=330,SNR=10						
L59A	Walton	70.03	42	IAmb	IAmb	05 39 01.5	
	comp=Z,51nm,1.1s						
L59A	Walton	70.03	42	P	P	05 38 56.5	-0.8
	baz=330,SNR=6.1						
L59A				P	P	05 38 56.5	-0.8
	baz=330,SNR=6.1						
W45A	Hickory Valley	70.14	56	P	P	05 38 59.0	+1.0
	baz=326,SNR=19						
LANS	Liptovska Anna	70.14	335	eP	P	05 38 59.6	+1.7
LANS				pmax	pmax		
	comp=Z,27nm,0.9s						
LANS	Liptovska Anna	70.14	335	eP	P	05 38 59.6	+1.7
BURAR	Bucovina Array	70.15	331	⇑P	P	05 38 57.5	-0.5
BURAR	Bucovina Array	70.15	331	P	P	05 38 57.5	-0.5
BUR01	Bucovina Ar. S	70.15	331	⇑P	P	05 38 58.1	+0.1
GGN	Saint George	70.26	35	IAmb	IAmb	05 39 02.8	
	comp=Z,34nm,0.9s						
BUG	Bochum--Univer	70.28	344	eP	P	05 38 59.4	+0.8
	comp=Z,8.3nm,0.8s,baz=16,slow=6.2						
GNI	Garni	70.29	314	P	P	05 39 00.3	+1.3
GNI				IAmb	IAmb	05 39 14.4	
	comp=Z,25nm,0.9s						
GNI	Garni	70.29	314	ceP	P	05 39 01.0	+1.9
GNI				pmax	pmax		
	comp=Z,57nm,1.7s						
GNI	Garni	70.29	314	P	P	05 39 00.7	+1.6
SSPA	Standing Stone	70.30	45	P	P	05 38 57.5	-1.4
SSPA				IAmb	IAmb	05 39 03.2	
	comp=Z,37nm,1.1s						
SSPA	Standing Stone	70.30	45	P	P	05 38 57.4	-1.5
	baz=330						
SSPA	Standing Stone	70.30	45	P	P	05 38 58.5	-0.4
	baz=330,SNR=12						
MAUC	Maruska	70.31	337	eP	P	05 38 59.8	+0.9
KSPA	Keystone Colle	70.31	43	IAmb	IAmb	05 38 59.1	
	comp=Z,34nm,1.1s						
MOX	Moxa	70.33	341	eP	P	05 38 59.2	+0.3
	comp=Z,8.0nm,0.9s,baz=16,slow=6.2						
KASTN	Kahler Asten	70.33	343	eP	P	05 38 60.0	+1.0
	comp=Z,6.4nm,1.0s,baz=16,slow=6.2						
KASTN				epP	pP	05 39 03.7	-3.4
NATX	Nacogdoches	70.35	62	P	P	05 38 58.9	-0.4
	baz=326,SNR=6.3						
NATX	Nacogdoches	70.35	62	P	P	05 39 00.7	+1.4
	baz=326,SNR=6.3						
MCWV	Mont Chateau	70.36	47	P	P	05 38 59.3	0.0
	baz=329						
TRPA	Tarpa	70.36	333	⇑P	P	05 39 00.2	+1.0
WERD	Werda	70.39	341	eP	P	05 38 60.0	+0.6
	comp=Z,11nm,0.9s,baz=16,slow=6.2						
WERD				epP	pP	05 39 03.9	-3.5
TANN	Tannenbergstha	70.39	340	eP	P	05 39 00.0	+0.6
	comp=Z,11nm,1.2s,baz=16,slow=6.2						
PRU	Pruhonice	70.40	339	eP	P	05 39 00.1	+0.7
PRU				epP	pP	05 39 04.0	-3.5
PRU	Pruhonice	70.40	339	eP	P	05 39 00.1	+0.7
GOPC	GO Pecny, Ondr	70.43	339	eP	P	05 39 00.2	+0.6
GOPC	GO Pecny, Ondr	70.43	339	eP	P	05 39 00.2	+0.6
GUNZ	Gunzen	70.47	340	eP	P	05 39 00.6	+0.8
	comp=Z,8.2nm,1.0s,baz=16,slow=6.2						
GUNZ				epP	pP	05 39 04.5	-3.4
T50A	Nancy	70.51	52	IAmb	IAmb	05 39 01.4	
	comp=Z,36nm,1.1s						
T50A	Nancy	70.51	52	P	P	05 39 00.1	-0.2
	baz=328						
T50A				P	P	05 39 00.1	-0.2
	baz=328						
S51A	Beattyville	70.53	51	IAmb	IAmb	05 39 05.2	
	comp=Z,22nm,0.9s						
S51A	Beattyville	70.53	51	P	P	05 39 00.2	-0.1
	baz=328,SNR=7.4						
S51A				P	P	05 39 00.2	-0.1
	baz=328,SNR=7.4						
U49A	Red Boiling Sp	70.53	53	IAmb	IAmb	05 39 01.6	
	comp=Z,30nm,1.1s						
U49A	Red Boiling Sp	70.53	53	P	P	05 39 00.5	+0.1
	baz=327,SNR=12						
WERN	Wernitzgruen	70.53	340	eP	P	05 39 00.9	+0.7
	comp=Z,9.8nm,0.8s,baz=16,slow=6.2						
WERN				epP	pP	05 39 05.0	-3.4
Q54A	Coxs Mills	70.54	48	IAmb	IAmb	05 39 05.1	
	comp=Z,25nm,1.0s						
Q54A	Coxs Mills	70.54	48	P	P	05 39 00.2	-0.2
	baz=329,SNR=8.5						
Q54A				P	P	05 39 00.2	-0.2
	baz=329,SNR=8.5						
OXF	Oxford	70.57	57	P	P	05 39 00.6	0.0
	baz=326,SNR=22						
OXF	Oxford	70.57	57	P	P	05 39 01.7	+1.1
	baz=326,SNR=22						
NKC	Novy Kostel	70.57	340	eP	P	05 39 00.7	+0.2
NKC	Novy Kostel	70.57	340	eP	P	05 39 00.7	+0.2
N58A	Sunbury	70.57	44	IAmb	IAmb	05 39 00.8	
	comp=Z,32nm,1.0s						
N58A	Sunbury	70.57	44	P	P	05 38 59.5	-1.0
	baz=330,SNR=8.7						
N58A				P	P	05 38 59.5	-1.0
	baz=330,SNR=8.7						
VRAC	Vranov	70.63	337	⇑P	P	05 39 01.9	+1.0
VRAC	Vranov	70.63	337	eP	P	05 39 01.2	+0.4
VRAC	Vranov	70.63	337	P	P	05 39 01.8	+1.0
R53A	Hurricane	70.63	49	P	P	05 39 01.2	+0.2
	baz=328,SNR=15						
R53A				P	P	05 39 01.2	+0.2
	baz=328,SNR=15						
CLTN	Cedars of Leba	70.64	53	IAmb	IAmb	05 39 06.2	
	comp=Z,37nm,0.9s						
L61B	Northampton	70.66	40	P	P	05 39 02.1	+1.0
	baz=331						
V48A	Smith Brothers	70.72	54	IAmb	IAmb	05 39 02.8	
	comp=Z,30nm,1.1s						
V48A	Smith Brothers	70.72	54	P	P	05 39 01.6	0.0
	baz=327,SNR=14						
TESR	Tescani	70.77	330	⇓P	P	05 39 02.2	+0.5
833A	Chaparral WMA,	70.80	68	IAmb	IAmb	05 39 04.6	
	comp=Z,41nm,1.1s						
833A	Chaparral WMA,	70.80	68	P	P	05 39 02.8	+0.6
	baz=325,SNR=6.4						
833A	Chaparral WMA,	70.80	68	P	P	05 39 03.6	+1.5
	baz=325,SNR=6.4						
JAVC	Velka Javorina	70.82	336	eP	P	05 39 03.1	+1.0
MANZ	Manzenberg	70.87	341	eP	P	05 39 02.7	+0.4
	comp=Z,1.8nm,0.9s,baz=16,slow=6.2						
MANZ				epP	pP	05 39 07.1	-3.3
KRUC	Moravsky	70.91	337	eP	P	05 39 02.8	+0.3
VYHS	Vyhne	70.91	336	eP	P	05 39 03.5	+1.0
VYHS				pmax	pmax		
	comp=Z,22nm,1.1s						
VYHS	Vyhne	70.91	336	eP	P	05 39 03.5	+1.0
HRV	Adam Dziewonsk	71.01	40	P	P	05 39 03.3	+0.1
HRV	Adam Dziewonsk	71.01	40	P	P	05 39 01.9	-1.3
	baz=332						
Y45A	Yeager Farm, C	71.04	57	P	P	05 39 04.6	+1.1
	baz=327,SNR=32						
ROTZ	Rotzenmuhle	71.06	340	eP	P	05 39 04.1	+0.7
	comp=Z,1.9nm,1.0s,baz=16,slow=6.2						
ROTZ				epP	pP	05 39 08.1	-3.4
143A	Socs Landing,	71.14	59	P	P	05 39 05.7	+1.6
	baz=326,SNR=13						
PSZ	Piszkesteto	71.20	335	⇓P	P	05 39 05.9	+1.5
PSZ	Piszkesteto	71.20	335	P	P	05 39 05.9	+1.5
HKT	Hockley	71.26	64	P	P	05 39 05.5	+0.6
HKT	Hockley	71.26	64	i P	P	05 39 04.0	-0.8
HKT				pmax	pmax		
	comp=Z,31nm,1.5s						
MEM	Membach	71.27	345	dP	P	05 39 04.6	0.0
	comp=Z,25nm,0.9s						
TNS	Taunus Mts	71.27	343	eP	P	05 39 05.4	+0.6
	comp=Z,5.3nm,0.8s,baz=16,slow=6.2						
BTNL	Ternell	71.28	345	dP	P	05 39 05.0	+0.2
	comp=Z,22nm,1.0s						
LUPA	Lehigh Univers	71.29	43	IAmb	IAmb	05 39 05.3	
	comp=Z,33nm,1.0s						
GRF	Grafenberg Arr	71.31	341	eP	P	05 39 05.6	+0.7
	comp=Z,9.8nm,0.8s,baz=16,slow=6.2						
GRFO	Grafenberg	71.31	341	P	P	05 39 05.1	+0.2
GRFO				IAmb	IAmb	05 39 10.6	
	comp=Z,62nm,1.4s						
GRFO	Grafenberg	71.31	341	P	P	05 39 05.1	+0.2
GRFO				pmax	pmax		
	comp=Z,62nm,1.4s						
VRI	Vrincioaia	71.34	329	⇓P	P	05 39 05.7	+0.5
VRI	Vrincioaia	71.34	329	P	P	05 39 05.7	+0.5
S54A	Dingess, Beckl	71.35	49	IAmb	IAmb	05 39 06.3	
	comp=Z,23nm,0.8s						
BSTI	Sart Tilman	71.36	345	dP	P	05 39 05.9	+0.7
MODS	Modra-Piesok	71.37	337	eP	P	05 39 06.9	+1.6
MODS				pmax	pmax		
	comp=Z,81nm,1.3s						
MODS	Modra-Piesok	71.37	337	eP	P	05 39 06.9	+1.6
PLOR	Plostina	71.37	329	⇓P	P	05 39 06.1	+0.7
PLOR	Plostina	71.37	329	P	P	05 39 06.1	+0.7
OZUR		71.39	330	⇓P	P	05 39 06.8	+1.3
KHC	Kasperske Hory	71.41	339	eP	P	05 39 06.4	+0.8
KHC				ex	x	05 39 09.7	
KHC	Kasperske Hory	71.41	339	i P	P	05 39 05.9	+0.3
KHC				pmax	pmax		
	comp=Z,52nm,1.4s						
R55A	Marlinton	71.42	48	IAmb	IAmb	05 39 10.8	
	comp=Z,64nm,1.3s						
R55A	Marlinton	71.42	48	P	P	05 39 05.8	-0.1
	baz=329,SNR=8.6						
R55A				P	P	05 39 05.8	-0.1
	baz=329,SNR=8.6						
TZTN	Tazewell	71.47	51	IAmb	IAmb	05 39 11.3	
	comp=Z,24nm,0.9s						
TZTN	Tazewell	71.47	51	P	P	05 39 05.9	-0.2
	baz=328,SNR=6.9						
TZTN	Tazewell	71.47	51	P	P	05 39 06.5	+0.4
	baz=328,SNR=6.9						
PAL	Palisades	71.48	42	IAmb	IAmb	05 39 06.3	
	comp=Z,35nm,0.9s						
PAL	Palisades	71.48	42	P	P	05 39 03.9	-2.1
	baz=331						
COVR	Voineasa-Covas	71.50	330	⇑P	P	05 39 07.5	+1.3
BHOU	Houvegnez	71.52	345	dP	P	05 39 06.8	+0.6
SWET	Sewanee	71.55	54	IAmb	IAmb	05 39 11.2	
	comp=Z,36nm,0.9s						
BCLA	Clavier	71.56	345	dP	P	05 39 06.8	+0.4
BCLA				dPcP	PcP	05 39 25.4	-0.2
DRGR		71.56	332	⇑P	P	05 39 07.2	+0.6
DRGR		71.56	332	P	P	05 39 07.0	+0.4
CFR	Carcaliu	71.56	328	⇑P	P	05 39 06.2	-0.3
CFR	Carcaliu	71.56	328	P	P	05 39 06.2	-0.3
MARR	Marisel-Cluj	71.56	332	⇓P	P	05 39 07.4	+0.7
DOPR	Dopca	71.61	330	⇓P	P	05 39 08.1	+1.2
BGES	Gesves	71.62	345	dP	P	05 39 06.1	-0.7
CPNY	Central Park	71.65	42	IAmb	IAmb	05 39 11.2	
	comp=Z,42nm,0.9s						
GEC2	GERESS Array S	71.66	339	eP	P	05 39 07.8	+0.6
	comp=Z,5.6nm,0.8s,baz=16,slow=6.2						
GERES	GERESS Array B	71.66	339	P	P	05 39 07.6	+0.4
	comp=Z,4.5nm,0.8s,baz=35,slow=4.9,SNR=30						
	comp=Z,4.5nm,0.8s						
X48A	Hartselle	71.69	55	IAmb	IAmb	05 39 12.3	
	comp=Z,37nm,1.1s						
X48A	Hartselle	71.69	55	P	P	05 39 07.5	0.0
	baz=327,SNR=12						
PANJ	Princeton	71.73	43	P	P	05 39 07.1	-0.5
	baz=331						
BMRD	Maredsous	71.75	345	dP	P	05 39 07.8	+0.3
V51A	Loudon	71.75	52	IAmb	IAmb	05 39 12.8	
	comp=Z,51nm,1.2s						
V51A	Loudon	71.75	52	P	P	05 39 07.9	+0.1
	baz=328,SNR=13						
SDMD	Soldier's Deli	71.76	45	P	P	05 39 07.5	-0.3
	baz=330,SNR=7.0						
L64A	Middleborough	71.76	39	P	P	05 39 08.0	+0.3
	baz=332						
L64A				P	P	05 39 08.0	+0.3
	baz=332						
TPGR	Topolog	71.77	328	⇑P	P	05 39 08.3	+0.5
342B	Flagon Creek P	71.80	61	P	P	05 39 09.4	+1.2
	baz=326,SNR=6.5						
RCHB	Rochefort	71.83	345	dP	P	05 39 07.9	-0.1
W50A	Signal Mountai	71.84	53	IAmb	IAmb	05 39 13.3	
	comp=Z,31nm,0.9s						
W50A	Signal Mountai	71.84	53	P	P	05 39 08.4	0.0
	baz=328,SNR=11						
MLR	Muntele Rosu	71.90	330	⇑P	P	05 39 10.0	+1.2
MLR	Muntele Rosu	71.90	330	IAmb	IAmb	05 39 15.4	
	comp=Z,52nm,1.3s						
MLR	Muntele Rosu	71.90	330	P	P	05 39 09.9	+1.2
VBMS	Vicksburg	71.95	59	P	P	05 39 09.1	+0.1
	baz=327						
DOU	Dourbes	71.97	345	dP	P	05 39 08.7	-0.2
CPCT	Cooper Cave	71.97	52	IAmb	IAmb	05 39 10.2	
	comp=Z,35nm,1.1s						
KOPT	Kop Dagi	72.03	317	IAmb	IAmb	05 39 12.4	
	comp=Z,32nm,1.1s						
V52A	Sevierville	72.04	52	IAmb	IAmb	05 39 10.8	
	comp=Z,32nm,1.1s						
V52A	Sevierville	72.04	52	P	P	05 39 09.7	+0.1
	baz=328,SNR=8.5						
HARR	Harsova	72.07	328	⇓P	P	05 39 10.0	+0.5
HARR	Harsova	72.07	328	P	P	05 39 10.0	+0.5
ISR	Istrita	72.07	329	⇓P	P	05 39 11.2	+1.5
ISR	Istrita	72.07	329	P	P	05 39 11.1	+1.5
CONA	Conrad Observa	72.09	337	eP	P	05 39 10.9	+1.1
	comp=Z,27nm,1.4s,SNR=12						
TKL	Tuckaleechee C	72.12	52	IAmb	IAmb	05 39 15.0	
	comp=Z,30nm,1.1s						
TKL	Tuckaleechee C	72.12	52	P	P	05 39 10.0	0.0
	baz=328,SNR=10						
TIRR	Tirgusor	72.14	328	⇓P	P	05 39 10.5	+0.6
TIRR	Tirgusor	72.14	328	P	P	05 39 10.5	+0.6
WLF	Walferdange	72.17	344	dP	P	05 39 11.2	+1.1
VOIR		72.20	330	⇓P	P	05 39 11.8	+1.4
VOIR		72.20	330	P	P	05 39 11.8	+1.4
BLA	Blacksburg	72.22	49	IAmb	IAmb	05 39 15.5	
	comp=Z,40nm,1.1s						
BLA	Blacksburg	72.22	49	P	P	05 39 09.5	-1.2
	baz=329,SNR=8.7						
BLA	Blacksburg	72.22	49	P	P	05 39 10.7	+0.1
	baz=329,SNR=8.7						
RONA	Rosalia, Austr	72.22	337	eP	P	05 39 11.7	+1.2
	comp=Z,16nm,1.1s,SNR=7.9						
U54A	Nelsons Funny	72.22	50	IAmb	IAmb	05 39 12.0	
	comp=Z,46nm,1.3s						
U54A	Nelsons Funny	72.22	50	P	P	05 39 11.2	+0.4
	baz=329,SNR=5.4						
U54A				P	P	05 39 11.2	+0.4
	baz=329,SNR=5.4						
FPAL	Fort Paine	72.26	54	IAmb	IAmb	05 39 15.8	
	comp=Z,49nm,1.0s						
Z47A	Carrollton	72.28	56	P	P	05 39 11.4	+0.4
	baz=327,SNR=19						
146A	Union	72.29	57	P	P	05 39 12.6	+1.5
	baz=327,SNR=20						
SIRR	Siria	72.31	333	⇓P	P	05 39 12.1	+1.1
S57A	Dark Hollow, R	72.34	47	IAmb	IAmb	05 39 16.4	
	comp=Z,46nm,1.0s						
S57A	Dark Hollow, R	72.34	47	P	P	05 39 11.7	+0.4
	baz=330,SNR=12						
S57A				P	P	05 39 11.7	+0.4
	baz=330,SNR=12						
ARR	Arges	72.37	330	⇑P	P	05 39 12.8	+1.3
Y49A	Blount Mountai	72.47	55	IAmb	IAmb	05 39 13.3	
	comp=Z,44nm,1.0s						
Y49A	Blount Mountai	72.47	55	P	P	05 39 12.3	+0.1
	baz=328,SNR=17						
344A	Westbrook Farm	72.49	59	P	P	05 39 14.3	+2.0
	baz=327,SNR=8.9						
MOA	Molln	72.50	338	eP	P	05 39 12.5	+0.4
	comp=Z,10nm,1.1s						
V53A	Saluda	72.53	51	IAmb	IAmb	05 39 13.8	
	comp=Z,25nm,1.1s						
V53A	Saluda	72.53	51	P	P	05 39 12.9	+0.4
	baz=328,SNR=9.2						
V53A				P	P	05 39 12.9	+0.4
	baz=328,SNR=9.2						
W52A	Murphy	72.53	52	IAmb	IAmb	05 39 13.8	
	comp=Z,38nm,1.0s						
W52A	Murphy	72.53	52	P	P	05 39 12.7	+0.1
	baz=328,SNR=11						
X51A	Calhoun	72.57	53	IAmb	IAmb	05 39 17.8	
	comp=Z,46nm,1.1s						
X51A	Calhoun	72.57	53	P	P	05 39 13.0	+0.2
	baz=328,SNR=8.2						
X51A				P	P	05 39 13.0	+0.2
	baz=328,SNR=8.2						
CBN	Corbin Frederi	72.59	46	IAmb	IAmb	05 39 13.8	
	comp=Z,60nm,1.4s						
CBN	Corbin Frederi	72.59	46	P	P	05 39 11.9	-0.8
	baz=330						
R58B	Mineral	72.60	46	IAmb	IAmb	05 39 17.8	
	comp=Z,28nm,1.1s						
R58B	Mineral	72.60	46	P	P	05 39 12.9	+0.1
	baz=330,SNR=7.3						
R58B				P	P	05 39 12.9	+0.1
	baz=330,SNR=7.3						
BIOA	Bad Ischl, Aus	72.78	339	eP	P	05 39 14.3	+0.5
	comp=Z,9.6nm,1.1s						
ARSA	Arzberg	72.81	337	eP	P	05 39 15.1	+1.1
	comp=Z,14nm,1.0s,SNR=6.0						
T57A	Hurt	72.88	48	IAmb	IAmb	05 39 15.3	
	comp=Z,21nm,0.9s						
T57A	Hurt	72.88	48	P	P	05 39 14.4	-0.2
	baz=330,SNR=6.1						
T57A				P	P	05 39 14.4	-0.2
	baz=330,SNR=6.1						
RJOB	Jochberg	72.90	339	eP	P	05 39 15.3	+0.8
	comp=Z,13nm,0.8s,baz=16,slow=6.2						
LRAL	Lakeview Retre	72.90	56	IAmb	IAmb	05 39 15.5	
	comp=Z,27nm,0.8s						
LRAL	Lakeview Retre	72.90	56	P	P	05 39 12.9	-1.8
	baz=328,SNR=18						
LRAL	Lakeview Retre	72.90	56	P	P	05 39 14.7	0.0
	baz=328,SNR=18						
BZS	Buzias	72.93	333	⇑P	P	05 39 14.9	+0.2
BZS	Buzias	72.93	333	P	P	05 39 14.9	+0.2
U56A	King	72.97	49	IAmb	IAmb	05 39 16.4	
	comp=Z,34nm,1.1s						
U56A	King	72.97	49	P	P	05 39 15.4	+0.3
	baz=329,SNR=5.4						
U56A				P	P	05 39 15.4	+0.3
	baz=329,SNR=5.4						
CASEE	Lake Jocassee	73.05	52	P	P	05 39 16.0	+0.4
	baz=329,SNR=12						
V55A	Taylorsville	73.05	50	IAmb	IAmb	05 39 20.6	
	comp=Z,32nm,1.1s						
BG3	Lake Jocassee	73.05	52	IAmb	IAmb	05 39 20.8	
	comp=Z,51nm,1.1s						
MORH	Mrgy, Hungar	73.09	335	⇑P	P	05 39 15.9	+0.3
BFO	Black Forest	73.13	343	P	P	05 39 15.3	-0.5
BFO	Black Forest	73.13	343	P	P	05 39 15.4	-0.5
BFO				pmax	pmax		
	comp=Z,16nm,1.2s						
346A	Big Creek Wild	73.14	58	P	P	05 39 17.9	+1.8
	baz=327,SNR=6.2						
HERR	Herculane	73.41	332	⇓P	P	05 39 17.6	0.0
KBA	Koelnbreinsper	73.42	339	eP	P	05 39 19.0	+1.2
	comp=Z,29nm,1.1s,SNR=22						
UBR	Ueberruh	73.45	341	eP	P	05 39 18.5	+0.6
	comp=Z,7.1nm,0.9s,baz=16,slow=6.2						
SOKA	Soboth	73.46	338	i P	P	05 39 18.8	+0.9
	comp=Z,10nm,0.9s,SNR=8.8						
PERS	Pernice	73.48	337	i P	P	05 39 18.6	+0.6
Z51A	Franklin	73.48	54	IAmb	IAmb	05 39 19.1	
	comp=Z,47nm,1.1s						
Z51A	Franklin	73.48	54	P	P	05 39 18.1	-0.1
	baz=328,SNR=10						
Y52A	Lilburn	73.51	53	IAmb	IAmb	05 39 19.7	
	comp=Z,30nm,1.0s						
Y52A	Lilburn	73.51	53	P	P	05 39 18.6	+0.3
	baz=328,SNR=8.7						
Y52A				P	P	05 39 18.6	+0.3
	baz=328,SNR=8.7						
WATA	Walderalm	73.52	340	i P	P	05 39 18.9	+0.6
	comp=Z,16nm,1.1s						
RETA	Reutte	73.52	341	i P	P	05 39 18.9	+0.6
	comp=Z,7.7nm,0.9s						
SOEI	Soe	73.54	220	IAmb	IAmb	05 39 32.6	
	comp=Z,49nm,0.9s						
WTTA	Wattenberg	73.57	340	i P	P	05 39 19.4	+0.7
	comp=Z,17nm,1.0s,SNR=7.4						
MOTA	Moosalm	73.59	340	i P	P	05 39 19.1	+0.3
	comp=Z,13nm,1.0s						
KMSC	Kings Mountain	73.60	50	IAmb	IAmb	05 39 23.6	
	comp=Z,39nm,0.9s						
KMSC	Kings Mountain	73.60	50	P	P	05 39 19.3	+0.4
	baz=329,SNR=11						
KMSC	Kings Mountain	73.60	50	P	P	05 39 18.8	-0.1
	baz=329,SNR=11						
PSI	Prapat	73.63	249	P	P	05 39 18.1	-1.2
PSI				pmax	pmax		
	comp=Z,11nm,0.9s						
PAULI	Pauline	73.67	51	IAmb	IAmb	05 39 24.0	
	comp=Z,32nm,1.2s						
ZAIG	Zacatecas	73.68	73	IAmb	IAmb	05 39 23.6	
	comp=Z,43nm,1.3s						
MDVR	Moldovita	73.69	332	⇓P	P	05 39 19.6	+0.3
SQTA	Sankt Quirin	73.69	340	eP	P	05 39 20.0	+0.7
	comp=Z,20nm,1.0s,SNR=5.6						
OBKA	Obir	73.72	338	i P	P	05 39 20.4	+0.9
	comp=Z,41nm,0.8s,SNR=20						
RPSI	Rantau Prapat	73.72	249	P	P	05 39 18.1	-1.6
FRGS	Fruska Gora	73.81	334	⇓P	P	05 39 20.9	+1.0
ABTA	Abfaltersbach	73.90	339	eP	P	05 39 20.9	+0.4
	comp=Z,24nm,1.0s,SNR=11						
V58A	Windy Hill, Pi	73.97	48	IAmb	IAmb	05 39 22.2	
	comp=Z,50nm,1.1s						
V58A	Windy Hill, Pi	73.97	48	P	P	05 39 21.2	+0.3
	baz=330,SNR=10						
V58A				P	P	05 39 21.2	+0.3
	baz=330,SNR=10						
FETA	Feichten	73.97	341	i P	P	05 39 21.7	+0.7
	comp=Z,18nm,1.0s,SNR=8.5						
HODGE	Hodges	73.99	51	IAmb	IAmb	05 39 26.1	
	comp=Z,32nm,0.9s						
HODGE	Hodges	73.99	51	P	P	05 39 21.4	+0.3
	baz=329,SNR=14						
U59A	Littleton	74.03	47	P	P	05 39 21.9	+0.6
	baz=330,SNR=5.3						
U59A				P	P	05 39 21.9	+0.6
	baz=330,SNR=5.3						
250A	Grady	74.12	56	P	P	05 39 22.0	+0.1
	baz=328,SNR=6.9						
W57A	Gilead	74.16	49	IAmb	IAmb	05 39 26.9	

	comp=Z,38nm,0.9s						
W57A	**Gilead**	**74.16**	**49**	P	**P**	**05 39 22.1**	**+0.1**
	baz=330,SNR=9.3						
W57A				P	**P**	**05 39 22.1**	**+0.1**
	baz=330,SNR=9.3						
ROBS	**Robic**	**74.19**	**338**	*i* P	**P**	**05 39 21.9**	**-0.2**
MTN	**Manton Dam**	**74.22**	**212**	P	**P**	**05 39 23.0**	**+0.5**
152A	**Waverly Hall**	**74.24**	**54**	IAmb	IAmb	05 39 27.4	
	comp=Z,38nm,1.0s						
152A	**Waverly Hall**	**74.24**	**54**	P	**P**	**05 39 22.4**	**-0.1**
	baz=328,SNR=15						
JSC	**Jenkinsville**	**74.37**	**51**	IAmb	IAmb	05 39 28.1	
	comp=Z,27nm,1.0s						
JSC	**Jenkinsville**	**74.37**	**51**	P	**P**	**05 39 23.7**	**+0.4**
	baz=329,SNR=7.8						
BIRD	**Birdtown, Kers**	**74.40**	**50**	IAmb	IAmb	05 39 28.4	
	comp=Z,37nm,1.1s						
BIRD	**Birdtown, Kers**	**74.40**	**50**	P	**P**	**05 39 23.8**	**+0.3**
	baz=330,SNR=9.3						
BRAL	**Brewton**	**74.44**	**57**	P	**P**	**05 39 24.1**	**+0.4**
	baz=328,SNR=5.8						
BRAL	**Brewton**	**74.44**	**57**	P	**P**	**05 39 25.6**	**+1.9**
	baz=328,SNR=5.8						
BOJS	**Bojanci**	**74.53**	**337**	*i* P	**P**	**05 39 24.2**	**+0.1**
BR131	**Keskin Array S**	**74.75**	**322**	IAmb	IAmb	05 39 27.3	
	comp=Z,78nm,1.8s						
BRTR	**Keskin Array B**	**74.75**	**322**	P	**P**	**05 39 26.1**	**+0.5**
	comp=Z,5.8nm,0.8s,baz=58,slow=3.1,SNR=16						
	comp=Z,5.8nm,0.8s						
BOVS	**Bovan**	**74.76**	**332**	⇓P	**P**	**05 39 25.2**	**-0.3**
ANTO	**Ankara**	**74.91**	**322**	P	**P**	**05 39 26.1**	**-0.3**
ANTO				IAmb	IAmb	05 39 28.6	
	comp=Z,35nm,1.1s						
ANTO	**Ankara**	**74.91**	**322**	P	**P**	**05 39 26.1**	**-0.3**
ANTO				pmax	pmax		
	comp=Z,35nm,1.1s						
X58A	**Rowland**	**74.94**	**49**	P	**P**	**05 39 26.9**	**+0.3**
	baz=330,SNR=6.8						
X58A				P	**P**	**05 39 26.9**	**+0.3**
	baz=330,SNR=6.8						
CNNC	**Cliffs of the**	**74.95**	**48**	P	**P**	**05 39 26.2**	**-0.5**
	baz=330,SNR=8.2						
CNNC	**Cliffs of the**	**74.95**	**48**	P	**P**	**05 39 27.6**	**+1.0**
	baz=330,SNR=8.2						
Y57A	**Sumter**	**74.97**	**50**	P	**P**	**05 39 26.8**	**+0.1**
	baz=330						
Y57A				P	**P**	**05 39 26.8**	**+0.1**
	baz=330						
352A	**Blakely**	**75.15**	**55**	P	**P**	**05 39 28.0**	**+0.1**
	baz=328,SNR=10.0						
BORA	**Eskisehir**	**75.67**	**324**	IAmb	IAmb	05 39 36.3	
	comp=Z,55nm,1.6s						
GAZ	**Gaziantep**	**75.76**	**318**	IAmb	IAmb	05 39 33.5	
	comp=Z,34nm,0.9s						
TIGA	**Tifton**	**75.78**	**54**	P	**P**	**05 39 31.8**	**+0.3**
	baz=329,SNR=16						
TIGA	**Tifton**	**75.78**	**54**	P	**P**	**05 39 32.2**	**+0.7**
	baz=329,SNR=16						
NHSC	**New Hope**	**75.84**	**51**	P	**P**	**05 39 31.7**	**0.0**
	baz=330						
255A	**Hazlehurst**	**75.86**	**53**	P	**P**	**05 39 32.9**	**+1.0**
	baz=329,SNR=11						
RDO	**Rodhopi**	**76.02**	**328**	IAmb	IAmb	05 39 34.6	
	comp=Z,52nm,1.2s						
ALN	**Alexandroupoli**	**76.10**	**328**	IAmb	IAmb	05 39 34.8	
	comp=Z,44nm,1.2s						
STIP	**Stip**	**76.44**	**331**	*i* P	**P**	**05 39 34.6**	**-0.5**
PDG	**Podgorica**	**76.51**	**333**	⇓P	**P**	**05 39 35.9**	**+0.5**
SHME	**Shamm**	**77.17**	**298**	*i* P	**P**	**05 39 39.1**	**-0.3**
	SNR=26						
SHME	**Shamm**	**77.17**	**298**	P	**P**	**05 39 38.6**	**-0.8**
	SNR=16						
BANOM	**Banah**	**77.20**	**298**	*i* P	**P**	**05 39 39.4**	**-0.2**
	SNR=53						
BANOM	**Banah**	**77.20**	**298**	P	**P**	**05 39 39.6**	**0.0**
	SNR=37						
GUMA	**Gualdo di Mace**	**77.27**	**338**	IAmb	IAmb	05 39 41.8	
	comp=Z,38nm,1.0s						
OHR	**Ohrid**	**77.36**	**332**	⇑*i*P	**P**	**05 39 40.8**	**+0.5**
MANT	**Manisa**	**77.54**	**325**	IAmb	IAmb	05 39 42.8	
	comp=Z,18nm,0.8s						
KNRA	**Kununurra**	**77.61**	**214**	IAmb	IAmb	05 39 43.3	
	comp=Z,39nm,0.9s						
MDH	**Madha**	**77.72**	**297**	*i* P	**P**	**05 39 41.8**	**-0.8**
	SNR=11						
MDH	**Madha**	**77.72**	**297**	P	**P**	**05 39 42.0**	**-0.5**
	SNR=15						
MASF	**Masafi**	**77.73**	**298**	P	**P**	**05 39 42.5**	**-0.1**
	SNR=13						
MSFE	**Esma-Masafi**	**77.74**	**298**	*i* P	**P**	**05 39 42.3**	**-0.4**
	SNR=8.1						
CAMP	**Campotosto**	**77.76**	**337**	IAmb	IAmb	05 39 44.9	
	comp=Z,46nm,1.0s						
UMQ	**Umm Al-Quwin**	**77.84**	**298**	*i* P	**P**	**05 39 43.8**	**+0.7**
	SNR=11						
UMQ	**Umm Al-Quwin**	**77.84**	**298**	P	**P**	**05 39 44.6**	**+1.4**
	SNR=12						
CTA	**Charters Tower**	**77.85**	**196**	P	**P**	**05 39 44.5**	**+1.5**
	comp=Z,35nm,1.0s,baz=0.3,slow=8.0,SNR=14						
	comp=Z,35nm,1.0s						
CTAO	**Charters Tower**	**77.85**	**196**	P	**P**	**05 39 42.8**	**-0.2**
CTAO				IAmb	IAmb	05 39 45.0	
	comp=Z,41nm,1.0s						
CTAO	**Charters Tower**	**77.85**	**196**	P	**P**	**05 39 42.8**	**-0.2**
CTAO				pmax	pmax		
	comp=Z,41nm,1.0s						
UOSS	**Minazif**	**78.06**	**297**	P	**P**	**05 39 42.7**	**-1.7**
UOSS	**Minazif**	**78.06**	**297**	*i* P	**P**	**05 39 43.7**	**-0.7**
	SNR=14						
UOSS	**Minazif**	**78.06**	**297**	P	**P**	**05 39 43.8**	**-0.6**
HATD	**Hatta, Dubai**	**78.20**	**297**	*i* P	**P**	**05 39 44.7**	**-0.5**
	SNR=13						
HATD	**Hatta, Dubai**	**78.20**	**297**	P	**P**	**05 39 45.0**	**-0.2**
	SNR=24						
SQUM	**Sultan Qaboos**	**78.23**	**295**	P	**P**	**05 39 46.1**	**+0.8**
SQUM				P	**P**	**05 39 46.1**	**+0.8**
NAZ	**Nazwa, Dubai**	**78.29**	**298**	*i* P	**P**	**05 39 45.4**	**-0.4**
	SNR=10						
NAZ	**Nazwa, Dubai**	**78.29**	**298**	P	**P**	**05 39 45.3**	**-0.4**
	SNR=15						
BIDO	**Bidbid**	**78.31**	**295**	P	**P**	**05 39 47.1**	**+1.3**
	SNR=6.3						
ASHO	**Ashiyiah**	**78.35**	**297**	*i* P	**P**	**05 39 45.4**	**-0.7**
	SNR=20						
ASHO	**Ashiyiah**	**78.35**	**297**	P	**P**	**05 39 45.9**	**-0.2**
	SNR=28						
FAQ	**Al Faqa, Dubai**	**78.53**	**298**	*i* P	**P**	**05 39 46.0**	**-1.0**
	SNR=6.3						
FAQ	**Al Faqa, Dubai**	**78.53**	**298**	P	**P**	**05 39 47.0**	**0.0**
	SNR=12						
SOHO	**SOHO**	**78.58**	**297**	*i* P	**P**	**05 39 46.6**	**-0.7**
	SNR=17						
SOHO	**SOHO**	**78.58**	**297**	P	**P**	**05 39 46.5**	**-0.7**
DZM	**Mont Dzumac**	**78.61**	**177**	P	**P**	**05 39 49.6**	**+2.3**
	comp=Z,36nm,1.3s,baz=33,slow=6.1,SNR=12						
	comp=Z,36nm,1.3s						
DZM	**Mont Dzumac**	**78.61**	**177**	IAmb	IAmb	05 39 52.1	
	comp=Z,77nm,1.5s						
WBK	**Wadi Bani Khal**	**78.64**	**294**	P	**P**	**05 39 48.7**	**+1.0**
	SNR=9.5						
HOQ	**Hoqain**	**78.66**	**296**	P	**P**	**05 39 47.6**	**-0.2**
	SNR=15						
SMDO	**Samad**	**78.73**	**295**	P	**P**	**05 39 49.0**	**+0.8**
	SNR=12						
ASUD	**Al Ashush, Dub**	**78.76**	**298**	*i* P	**P**	**05 39 47.9**	**-0.4**
	SNR=15						
ASUD	**Al Ashush, Dub**	**78.76**	**298**	P	**P**	**05 39 48.0**	**-0.2**
	SNR=12						
JLN	**Jalan Bani Buh**	**78.80**	**293**	P	**P**	**05 39 49.3**	**+0.8**
	SNR=10						
AJN	**Ajban**	**78.98**	**298**	*i* P	**P**	**05 39 49.1**	**-0.3**
	SNR=12						
AJN	**Ajban**	**78.98**	**298**	P	**P**	**05 39 48.8**	**-0.6**
	SNR=14						
ALNE	**Al Ain**	**79.03**	**297**	*i* P	**P**	**05 39 49.3**	**-0.5**
	SNR=6.0						
ALNE	**Al Ain**	**79.03**	**297**	P	**P**	**05 39 49.6**	**-0.2**
	SNR=28						
CSS	**Mathiatis**	**79.14**	**320**	IAmb	IAmb	05 39 55.2	
	comp=Z,39nm,1.2s						
ARQ	**Araqi**	**79.26**	**296**	P	**P**	**05 39 51.3**	**+0.2**
	SNR=24						
JMDO	**Jabal Madar**	**79.28**	**294**	P	**P**	**05 39 51.2**	**0.0**
	SNR=27						
BSY	**Bisya**	**79.42**	**295**	P	**P**	**05 39 51.7**	**-0.2**
	SNR=22						
DWPF	**Disney Wildern**	**79.59**	**54**	P	**P**	**05 39 50.7**	**-2.0**
DWPF				IAmb	IAmb	05 39 55.1	
	comp=Z,46nm,1.1s						
DWPF	**Disney Wildern**	**79.59**	**54**	P	**P**	**05 39 52.7**	**-0.1**
	baz=330						
ARG	**Arkhangelos**	**79.76**	**324**	IAmb	IAmb	05 39 58.1	
	comp=Z,67nm,1.2s						
WB0	**Warramunga Arr**	**79.93**	**207**	IAmb	IAmb	05 39 56.1	
	comp=Z,69nm,1.4s						
WRAB	**Tennant Creek**	**80.10**	**207**	P	**P**	**05 39 54.8**	**-0.6**
WRAB				IAmb	IAmb	05 39 57.1	
	comp=Z,73nm,1.5s						
WRAB	**Tennant Creek**	**80.10**	**207**	*ce*P	**P**	**05 39 54.9**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,59nm,1.7s						
WB2	**Warramunga Arr**	**80.11**	**207**	IAmb	IAmb	05 39 57.2	
	comp=Z,77nm,1.5s						
WRA	**Warramunga Arr**	**80.11**	**207**	P	**P**	**05 39 56.0**	**+0.5**
	comp=Z,10nm,0.7s,baz=17,slow=5.6,SNR=71						
	comp=Z,10nm,0.7s						
WRA	**Warramunga Arr**	**80.11**	**207**	P	**P**	**05 39 56.0**	**+0.5**
TIP	**Timpagrande**	**80.20**	**334**	IAmb	IAmb	05 40 01.9	
	comp=Z,73nm,1.4s						
MHTO	**MHTO**	**80.51**	**294**	P	**P**	**05 39 57.5**	**-0.3**
	SNR=31						
ITM	**Ithomi**	**80.73**	**329**	IAmb	IAmb	05 39 59.1	
	comp=Z,42nm,1.1s						
MZR	**Muzera**	**81.03**	**298**	*i* P	**P**	**05 40 00.3**	**-0.2**
	SNR=23						
MZR	**Muzera**	**81.03**	**298**	P	**P**	**05 39 60.0**	**-0.6**
	SNR=25						
DQM	**DQM**	**81.61**	**293**	P	**P**	**05 40 03.8**	**+0.1**
	SNR=6.1						
POLO	**Lamas de Olo**	**81.89**	**353**	*e*P	**P**	**05 40 05.8**	**+0.8**
MVO	**Moncorvo**	**82.04**	**352**	*e*P	**P**	**05 40 06.1**	**+0.3**
MVO	**Moncorvo**	**82.04**	**352**	*e*PcP	**PcP**	**05 40 10.1**	**-1.1**
MTE	**Manteigas**	**82.84**	**353**	*e*P	**P**	**05 40 10.4**	**+0.5**
MTE	**Manteigas**	**82.84**	**353**	*e*PcP	**PcP**	**05 40 15.3**	**+0.6**
PCAS	**Casmilo, Conde**	**83.25**	**353**	*e*P	**P**	**05 40 12.2**	**+0.2**
PCAS	**Casmilo, Conde**	**83.25**	**353**	*e*PcP	**PcP**	**05 40 16.3**	**-0.2**
PCAS				*e*pP	**sP**	**05 40 25.7**	**+2.5**
PCAS				*e*sP	pP	05 40 31.0	+11
ESDC	**Sonseca Array**	**83.26**	**350**	P	**P**	**05 40 12.7**	**+0.5**
	comp=Z,12nm,0.9s,baz=1.5,slow=5.4,SNR=65						
	comp=Z,12nm,0.9s						
ASAR	**Alice Springs**	**83.79**	**207**	P	**P**	**05 40 15.8**	**+1.0**
	comp=Z,11nm,0.6s,baz=15,slow=4.9,SNR=108						
	comp=Z,11nm,0.6s						
PMRV	**Marv??o**	**83.80**	**352**	*e*P	**P**	**05 40 13.3**	**-1.5**
SHAO	**Shalim**	**84.18**	**294**	P	**P**	**05 40 16.6**	**-0.4**
PMTG	**Montargil**	**84.21**	**353**	*e*P	**P**	**05 40 17.1**	**+0.2**
RAYN	**Ar Rayn**	**84.31**	**305**	P	**P**	**05 40 17.2**	**-0.5**
RAYN	**Ar Rayn**	**84.31**	**305**	P	**P**	**05 40 17.2**	**-0.5**
RAYN				pmax	pmax		
	comp=Z,77nm,0.9s						
RAYN	**Ar Rayn**	**84.31**	**305**	*i* P	**P**	**05 40 18.0**	**+0.2**
	SNR=18						
PESTR	**Estremoz**	**84.37**	**353**	*e*P	**P**	**05 40 17.8**	**+0.1**
DOK	**Doka**	**84.42**	**296**	P	**P**	**05 40 17.8**	**-0.5**
	SNR=18						
CCIG	**Comitan**	**84.49**	**69**	IAmb	IAmb	05 40 22.3	
	comp=Z,37nm,1.2s						
DMTO	**DMTO**	**84.78**	**294**	P	**P**	**05 40 19.2**	**-0.9**
CART	**Cartagena**	**85.00**	**347**	IAmb	IAmb	05 40 22.3	
	comp=Z,32nm,0.9s						
PBAR	**Barrancos**	**85.02**	**352**	*e*P	**P**	**05 40 21.0**	**0.0**
PBAR	**Barrancos**	**85.02**	**352**	*e*PcP	**PcP**	**05 40 24.9**	**+0.7**
PBAR				A	A	05 40 26.7	
	comp=Z,63nm,1.1s						
KEST	**Kesra**	**85.14**	**339**	P	**P**	**05 40 22.4**	**+0.6**
	comp=Z,14nm,1.0s,baz=313,slow=5.3,SNR=7.0						
	comp=Z,14nm,1.0s						
KEST	**Kesra**	**85.14**	**339**	IAmb	IAmb	05 40 27.5	
	comp=Z,32nm,1.1s						
PNCL	**Nicolau / Gran**	**85.18**	**353**	*e*P	**P**	**05 40 22.1**	**+0.3**
PNCL				A	A	05 40 23.5	
	comp=Z,27nm,1.6s						
PNCL	**Nicolau / Gran**	**85.18**	**353**	*e*PcP	**PcP**	**05 40 25.6**	**+0.6**
WHFO	**Wadi Hawf**	**85.19**	**295**	P	**P**	**05 40 21.4**	**-0.8**
	SNR=27						
RBK	**Rabkut**	**85.33**	**295**	P	**P**	**05 40 22.0**	**-0.9**
	SNR=9.6						
MESJ	**Messejana**	**85.43**	**353**	*e*P	**P**	**05 40 23.3**	**+0.2**
MESJ				IAmb	IAmb	05 40 28.2	
	comp=Z,16nm,1.2s						
PCVE	**Castro Verde**	**85.63**	**353**	*e*P	**P**	**05 40 24.4**	**+0.3**
PCVE	**Castro Verde**	**85.63**	**353**	*e*PcP	**PcP**	**05 40 28.1**	**+1.2**
PCVE				A	A	05 40 30.5	
	comp=Z,53nm,1.5s						
PCVE				*e*pP	**sP**	**05 40 37.9**	**+2.6**
MBWA	**Marble Bar**	**85.69**	**220**	P	**P**	**05 40 23.5**	**-0.8**
PVAQ	**Vaqueiros**	**85.83**	**353**	*e*P	**P**	**05 40 25.5**	**+0.4**
PVAQ	**Vaqueiros**	**85.83**	**353**	*e*PcP	**PcP**	**05 40 29.3**	**+1.5**
PVAQ				A	A	05 40 30.4	
	comp=Z,33nm,1.1s						
ABTO	**Aybut**	**85.91**	**296**	P	**P**	**05 40 25.0**	**-0.8**
	SNR=14						
MORF	**Marmelete**	**85.99**	**353**	*e*P	**P**	**05 40 26.2**	**+0.3**
MORF				A	A	05 40 28.0	
	comp=Z,28nm,1.2s						
MORF	**Marmelete**	**85.99**	**353**	*e*PcP	**PcP**	**05 40 29.9**	**+1.3**
MORF	**Marmelete**	**85.99**	**353**	*e*P	**P**	**05 40 26.0**	**+0.1**
MORF				IAmb	IAmb	05 40 27.4	
	comp=Z,39nm,1.2s						
PBDV	**Barranco-do-Ve**	**86.01**	**353**	*e*P	**P**	**05 40 26.7**	**+0.7**
PSA00	**Pilbara Seismi**	**86.03**	**220**	IAmb	IAmb	05 40 26.6	
	comp=Z,42nm,1.0s						
PSA00	**Pilbara Seismi**	**86.03**	**220**	IAmb	IAmb	05 40 26.6	
	comp=Z,27nm,0.9s						
PFVI	**Vila Bisbo**	**86.18**	**353**	*e*P	**P**	**05 40 26.9**	**+0.1**
ARMA	**Armidale**	**87.39**	**190**	P	**P**	**05 40 33.7**	**+1.2**
STKA	**Stephens Creek**	**90.15**	**198**	P	**P**	**05 40 47.0**	**+1.6**
	comp=Z,18nm,1.1s,baz=6.7,slow=8.6,SNR=6.9						
	comp=Z,18nm,1.1s						
STKA	**Stephens Creek**	**90.15**	**198**	P	**P**	**05 40 46.2**	**+0.8**
STKA	**Stephens Creek**	**90.15**	**198**	P	**P**	**05 40 46.2**	**+0.8**
STKA				pmax	pmax		
	comp=Z,14nm,1.6s						
LPAZ	**La Paz**	**124.42**	**65**	PKP	**PKPdf**	**05 46 45.0**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=28,slow=8.8,SNR=4.5						
VILB	**Vilhena**	**125.30**	**55**		**PKPdf**	**05 46 44.8**	**-1.6**
VILB	**Vilhena**	**125.30**	**55**	*e*P	**PKiKP**	**05 46 47.4**	**+0.6**
SMTB	**Santa Maria do**	**126.62**	**39**	*e*P	**PKPdf**	**05 46 48.3**	**-0.7**
PTLB	**Pontes e Lacer**	**127.97**	**55**	PKPdf	**PKPdf**	**05 46 50.2**	**-1.2**
PTLB	**Pontes e Lacer**	**127.97**	**55**	*e*P	**PKiKP**	**05 46 52.3**	**+0.3**
SALV	**Santo Antonio**	**129.89**	**51**	*e*P	**PKiKP**	**05 46 56.1**	**+0.2**
ARAG	**Araguaiana, MT**	**131.33**	**47**	*e*P	**PKiKP**	**05 46 59.0**	**+0.2**
BDFB	**Brasilia**	**132.74**	**42**	PKP	**PKiKP**	**05 47 02.8**	**+1.0**
	comp=Z,2.6nm,0.8s,baz=9.6,slow=7.3,SNR=3.7						
AC05	**El Transito**	**133.64**	**76**		**PKPdf**	**05 47 02.4**	**+0.4**
AMBA	**Amambai (Brazi**	**136.38**	**55**	*e*P	**PKiKP**	**05 47 08.1**	**-0.8**
CPUP	**Villa Florida**	**138.20**	**60**	PKP	**PKPdf**	**05 47 10.5**	**+0.1**
	comp=Z,3.8nm,1.0s,baz=352,slow=2.0,SNR=4.0						
BOSA	**Boshof**	**139.05**	**295**	PKhKP	PKPpre	05 47 05.3	
	comp=Z,4.6nm,1.0s,baz=10,slow=0.9,SNR=4.1						
CRSM	**Crissiumal (Br**	**140.74**	**57**	*e*P	**PKPdf**	**05 47 15.7**	**+0.7**
PLCA	**Paso Flores**	**142.36**	**88**	PKhKP	PKPpre	05 47 13.2	
	comp=Z,1.6nm,0.8s,baz=357,slow=3.3,SNR=3.8						
PLCA	**Paso Flores**	**142.36**	**88**		**PKPdf**	**05 47 14.6**	**-3.0**
PLCA	**Paso Flores**	**142.36**	**88**	PKIKP	**PKPdf**	**05 47 14.6**	**-3.0**
PLCA	**Paso Flores**	**142.36**	**88**	*e*P	**PKiKP**	**05 47 19.2**	**-1.5**
AY01	**Puyuhuapi**	**143.67**	**94**		PKPbc	05 47 17.9	+0.7
MAW	**Mawson**	**143.89**	**220**	PKhKP	PKPpre	05 47 18.8	
	comp=Z,9.1nm,0.9s,baz=165,slow=2.6,SNR=5.5						
MAW	**Mawson**	**143.89**	**220**	PKPdf	**PKPdf**	**05 47 18.3**	**-0.9**
MAW	**Mawson**	**143.89**	**220**	PKIKP	**PKPdf**	**05 47 18.3**	**-0.9**
SUR	**Sutherland**	**144.32**	**297**	PKPdf	**PKPdf**	**05 47 21.2**	**-0.3**
TRQA	**Tornquist**	**145.13**	**77**		**PKPdf**	**05 47 22.4**	**-0.1**
TRQA	**Tornquist**	**145.13**	**77**	PKIKP	**PKPdf**	**05 47 22.4**	**-0.1**
QSPA	**South Pole Qui**	**146.54**	**180**		**PKPbc**	**05 47 25.6**	**0.0**
GO09	**Cerro Castillo**	**147.87**	**104**		**PKiKP**	**05 47 31.1**	**-0.4**
ELIB	**Princess Elisa**	**157.50**	**212**	*d*PKP	**PKPab**	**05 48 12.6**	**+0.3**
TROLL	**Troll, Antarti**	**162.69**	**201**	PKPab	**PKPab**	**05 48 35.2**	**+0.3**

SOME ***29*** *05:36:53.7, 43.°25N×78.°45E, h20km*

NNC 29 05:36:55.5±1.2**, 43.°24N×78.°50E, h0**km**, mpv2.0, Error ellipse: s-maj=12.5km s-min=6.3km az=121.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SATY	**Saty**	**0.19**	**201**	P	Pg	05 36 59.0	-0.2
	2.6nm,0.1s						
SATY				S	Sg	05 37 02.7	+1.1
	19nm,0.1s						
SATY	**Saty**	**0.19**	**201**	*e*P	Pg	05 36 59.0	-0.2
	2.8nm,0.0s						
SATY				*e*S	Sg	05 37 02.7	+1.1
	19nm,0.0s						
KPKS	**Kokpek**	**0.26**	**31**	P	Pg	05 36 59.9	-0.7
	0.3nm,0.1s						
KPKS				S	Sg	05 37 04.2	+0.3
	2.0nm,0.1s						
KPKS	**Kokpek**	**0.26**	**31**	*e*P	Pg	05 36 59.9	-0.7
	0.3nm,0.1s						
KPKS				*e*S	Sg	05 37 04.2	+0.3
	3.5nm,0.1s						
UZB	**Uzynbulak**	**0.39**	**103**	P	Pg	05 37 02.6	-0.4
	1.8nm,0.1s						
UZB				S	Sg	05 37 09.1	+1.1
	0.6nm,0.1s						
UZB	**Uzynbulak**	**0.39**	**103**	*e*P	Pg	05 37 02.6	-0.4
	2.0nm,0.1s						
UZB				*e*S	Sg	05 37 09.1	+1.1
	0.6nm,0.1s						

IDC ***29*** *05:39:11.4±1.1, 56.°94N×162.°73E, h0km, mb3.4/6, mbtmp3.4/7, ML2.3/1, Error ellipse: s-maj=50.2km s-min=22.1km az=143.0*

KRSC ***29*** *05:39:11.7±1.4, 56.°91N×163.°23E, h22km±16km, Ml4.3*

MOS ***29*** *05:39:14.8±0.8, 56.°90N×163.°08E, h32km, mb3.9/1, Error ellipse: s-maj=16.2km s-min=5.1km az=63.1*

ISC 29 05:39:11.6±1.5**, 56.°94N**±0.°03×**163.°07E**±0.°04**, h0**km±10km**, n75,** σ1.°s **43**/106**, mb3.4**/6**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KBG	**Krutoberegovo**	**0.72**	**197**	PN	**Pg**	**05 39 25.7**	**+0.4**
KBG				S	**Sb**	**05 39 36.5**	**-0.7**
KBG	**Krutoberegovo**	**0.72**	**197**	*e*P	**Pg**	**05 39 25.7**	**+0.4**
KBG				*e*S	**Sb**	**05 39 36.5**	**-0.7**
KBTR	**Krutoberegovo**	**0.75**	**191**	PN	**Pg**	**05 39 26.4**	**+0.5**
KBTR				S	**Sb**	**05 39 37.3**	**-0.8**
KBTR	**Krutoberegovo**	**0.75**	**191**	*e*P	**Pg**	**05 39 26.4**	**+0.5**
KBTR				*e*S	**Sb**	**05 39 37.3**	**-0.8**
SMKR	**Semkarok**	**0.95**	**249**	PN	**Pg**	**05 39 30.1**	**+0.3**
SMKR	**Semkarok**	**0.95**	**249**	*e*P	**Pg**	**05 39 30.1**	**+0.3**
SRKR	**Sorokina**	**1.09**	**255**	PN	**Pg**	**05 39 32.1**	**-0.3**
SRKR				S	**Sg**	**05 39 46.4**	**0.0**
SRKR	**Sorokina**	**1.09**	**255**	*e*P	**Pg**	**05 39 32.1**	**-0.3**
SRKR				*e*S	**Sg**	**05 39 46.4**	**0.0**
KLY	**Klyuchi**	**1.48**	**246**	PN	**Pn**	**05 39 36.7**	**-2.6**
KLY				S	**Sn**	**05 39 55.1**	**-4.2**
KLY	**Klyuchi**	**1.48**	**246**	*e*P	**Pn**	**05 39 36.7**	**-2.6**
KLY				*e*S	**Sn**	**05 39 55.1**	**-4.2**
CIRR	**Tsirk**	**1.53**	**238**	PN	**Pn**	**05 39 40.0**	**-0.2**
CIRR				S	**Sn**	**05 40 00.6**	**-0.3**
CIRR	**Tsirk**	**1.53**	**238**	*e*P	**Pn**	**05 39 40.0**	**-0.2**
CIRR				*e*S	**Sn**	**05 40 00.6**	**-0.3**
LGNR	**Loginova**	**1.57**	**238**	PN	**Pn**	**05 39 40.5**	**-0.5**
LGNR				S	**Sn**	**05 40 01.2**	**-1.0**
LGNR	**Loginova**	**1.57**	**238**	*e*P	**Pn**	**05 39 40.5**	**-0.5**
LGNR				*e*S	**Sn**	**05 40 01.2**	**-1.0**
BZGR	**Bezymyannyi-Gr**	**1.66**	**234**	PN	**Pn**	**05 39 41.3**	**-0.6**
BZGR				S	**Sn**	**05 40 03.6**	**-0.3**
BZGR	**Bezymyannyi-Gr**	**1.66**	**234**	*e*P	**Pn**	**05 39 41.3**	**-0.6**
BZGR				*e*S	**Sn**	**05 40 03.6**	**-0.3**
BZWR	**Bezymyannyi-We**	**1.73**	**237**	PN	**Pn**	**05 39 42.4**	**-0.6**
BZWR				S	**Sn**	**05 40 05.9**	**0.0**
BZWR	**Bezymyannyi-We**	**1.73**	**237**	*e*P	**Pn**	**05 39 42.4**	**-0.6**
BZWR				*e*S	**Sn**	**05 40 05.9**	**0.0**
BZP	**Bezymyannyi-Pe**	**1.74**	**235**	*e*P	**Pn**	**05 39 42.5**	**-0.7**
BZP				*e*S	**Sn**	**05 40 06.6**	**+0.5**
BZMR	**Bezymyannaya**	**1.75**	**236**	PN	**Pn**	**05 39 42.8**	**-0.5**
BZMR				S	**Sn**	**05 40 06.8**	**+0.5**
BZMR	**Bezymyannaya**	**1.75**	**236**	*e*P	**Pn**	**05 39 42.8**	**-0.5**
BZMR				*e*S	**Sn**	**05 40 06.8**	**+0.5**
KIRR	**Kirishev**	**1.81**	**238**	PN	**Pn**	**05 39 43.5**	**-0.6**
KIRR				S	**Sn**	**05 40 07.0**	**-0.7**
KIRR	**Kirishev**	**1.81**	**238**	*e*P	**Pn**	**05 39 43.5**	**-0.6**
KIRR				*e*S	**Sn**	**05 40 07.0**	**-0.7**
KPT	**Kopyto**	**1.86**	**239**	PN	**Pn**	**05 39 44.5**	**-0.2**
KPT				S	**Sn**	**05 40 08.8**	**-0.1**
KPT	**Kopyto**	**1.86**	**239**	*e*P	**Pn**	**05 39 44.5**	**-0.2**
KPT				*e*S	**Sn**	**05 40 08.8**	**-0.1**
SRDR	**Sredinnyy**	**1.96**	**253**	PN	**Pn**	**05 39 46.0**	**0.0**
SRDR				S	**Sn**	**05 40 10.6**	**-0.6**
SRDR	**Sredinnyy**	**1.96**	**253**	*e*P	**Pn**	**05 39 46.0**	**0.0**
SRDR				*e*S	**Sn**	**05 40 10.6**	**-0.6**
KMNR	**Kamenistaya**	**1.97**	**234**	PN	**Pn**	**05 39 46.7**	**+0.4**
KMNR				S	**Sb**	**05 40 13.4**	**-0.2**
KMNR	**Kamenistaya**	**1.97**	**234**	*e*P	**Pn**	**05 39 46.7**	**+0.4**
KMNR				*e*S	**Sb**	**05 40 13.4**	**-0.2**
KOZ	**Kozyrevsk**	**1.98**	**245**	PN	**Pn**	**05 39 46.5**	**+0.2**
KOZ				S	**Sn**	**05 40 13.0**	**+1.2**
KOZ	**Kozyrevsk**	**1.98**	**245**	*e*P	**Pn**	**05 39 46.5**	**+0.2**
KOZ				*e*S	**Sn**	**05 40 13.0**	**+1.2**
TUMD	**Tumrok D**	**2.30**	**222**	*e*P	**Pn**	**05 39 51.3**	**+0.6**
OSSR	**Ossora**	**2.32**	**360**	PN	**Pn**	**05 39 50.4**	**-0.5**
OSSR	**Ossora**	**2.32**	**360**	*e*P	**Pn**	**05 39 50.4**	**-0.5**
TUMR	**Tumrok**	**2.33**	**226**	PN	**Pn**	**05 39 52.4**	**+1.2**
TUMR	**Tumrok**	**2.33**	**226**	*e*P	**Pn**	**05 39 52.4**	**+1.2**
BKI	**Bering**	**2.38**	**136**	*e*S	**Sn**	**05 40 19.8**	**-1.8**
MKZ	**Mys Kozlova**	**2.51**	**198**	PN	**Pn**	**05 39 53.7**	**+0.2**
MKZ				S	**Sn**	**05 40 24.5**	**-0.2**
MKZ	**Mys Kozlova**	**2.51**	**198**	*e*P	**Pn**	**05 39 53.7**	**+0.2**
MKZ				*e*S	**Sn**	**05 40 24.5**	**-0.2**
TIGL	**Tigil**	**2.52**	**291**	*e*P	**Pn**	**05 39 55.3**	**+1.6**
TIGL				*e*S	**Sn**	**05 40 28.0**	**+2.8**
ESO	**Esso**	**2.63**	**249**	PN	**Pn**	**05 39 57.2**	**+1.9**
ESO				S	**Sn**	**05 40 30.8**	**+2.9**
ESO	**Esso**	**2.63**	**249**	*e*P	**Pn**	**05 39 57.2**	**+1.9**
ESO				*e*S	**Sn**	**05 40 30.8**	**+2.9**
PALN	**Palana**	**2.71**	**324**	PN	**Pb**	**05 39 59.8**	**-1.1**
PALN	**Palana**	**2.71**	**324**	*e*P	**Pb**	**05 39 59.8**	**-1.1**
SPN	**Mys Shipunski**	**4.23**	**206**	*e*S	**Sn**	**05 41 04.2**	**-3.0**
NLC	**Nalytchevo**	**4.34**	**211**	*e*S	**Sn**	**05 41 10.2**	**+0.3**
GNL	**Ganaly**	**4.38**	**224**	PN	**Pn**	**05 40 20.9**	**+1.6**
GNL	**Ganaly**	**4.38**	**224**	*e*P	**Pn**	**05 40 20.9**	**+1.6**
KRX	**Arik**	**4.39**	**217**	PN	**Pn**	**05 40 22.2**	**+2.6**
KRX	**Arik**	**4.39**	**217**	*e*P	**Pn**	**05 40 22.2**	**+2.6**
KRER	**Koryakskii**	**4.41**	**216**	PN	**Pn**	**05 40 22.0**	**+2.2**
KRER	**Koryakskii**	**4.41**	**216**	*e*P	**Pn**	**05 40 22.0**	**+2.2**
SMAR	**Somma**	**4.43**	**215**	PN	**Pn**	**05 40 21.7**	**+1.6**
SMAR	**Somma**	**4.43**	**215**	*e*P	**Pn**	**05 40 21.7**	**+1.6**
AVH	**Avacha**	**4.45**	**216**	PN	**Pn**	**05 40 22.2**	**+2.0**
AVH	**Avacha**	**4.45**	**216**	*e*P	**Pn**	**05 40 22.2**	**+2.0**
KOK	**Koryaka**	**4.46**	**217**	PN	**Pn**	**05 40 22.6**	**+2.2**
KOK	**Koryaka**	**4.46**	**217**	*e*P	**Pn**	**05 40 22.6**	**+2.2**
UGLR	**Uglovaya**	**4.46**	**215**	PN	**Pn**	**05 40 22.4**	**+1.9**
UGLR	**Uglovaya**	**4.46**	**215**	*e*P	**Pn**	**05 40 22.4**	**+1.9**
PETK	**Petropavlovsk-**	**4.93**	**221**	Pn	**Pn**	**05 40 26.0**	**-0.8**
	0.6nm,0.3s,baz=67,slow=15,SNR=3.6						
	1.4nm,0.4s						
GRL	**Gorelyy**	**5.26**	**215**	PN	**Pn**	**05 40 34.1**	**+2.6**
GRL	**Gorelyy**	**5.26**	**215**	*e*P	**Pn**	**05 40 34.1**	**+2.6**
MTVR	**Mutnovka**	**5.29**	**214**	PN	**Pn**	**05 40 33.8**	**+1.9**
MTVR	**Mutnovka**	**5.29**	**214**	*e*P	**Pn**	**05 40 33.8**	**+1.9**
ILAR	**Eielson Array**	**24.96**	**51**	P	**P**	**05 44 37.1**	**+0.9**
	0.4nm,0.7s,baz=264,slow=8.5,SNR=9.0						
	0.4nm,0.7s						
INK	**Inuvik**	**29.81**	**42**	P	**P**	**05 45 20.4**	**+0.8**
	0.8nm,1.0s,baz=284,slow=3.8,SNR=3.7						
	0.8nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**37.26**	**174**	T	T	06 25 22.4	
	baz=357,slow=76,SNR=8.7						
H11N3	**WAKE ISLAND Hy**	**37.28**	**174**	T	T	06 25 25.3	
	baz=357,slow=76,SNR=5.9						
H11N1	**WAKE ISLAND Hy**	**37.28**	**174**	T	T	06 25 28.9	
	baz=357,slow=76,SNR=7.0						
YKA	**Yellowknife Ar**	**39.21**	**47**	P	**P**	**05 46 42.1**	**+1.2**
	0.4nm,0.7s,baz=301,slow=7.8,SNR=4.6						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**48.08**	**294**	P	**P**	**05 47 51.0**	**-1.5**
	0.1nm,0.3s,baz=48,slow=6.8,SNR=2.1						
	0.1nm,0.3s						
TXAR	**Lajitas Array**	**67.64**	**71**	P	**P**	**05 50 11.7**	**+1.5**
	0.4nm,0.8s,baz=284,slow=3.6,SNR=5.5						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**83.98**	**207**	P	**P**	**05 51 42.0**	**-1.3**
	0.4nm,0.6s,baz=12,slow=5.0,SNR=2.2						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**83.98**	**207**	P	**P**	**05 51 42.0**	**-1.3**

IDC ***29*** *05:40:09.0±0.7, 10.°72S×161.°34E, h0km, mb4.6/19,* *mbtmp4.5/20, ML3.8/1, Error ellipse: s-maj=20.7km s-min=14.7km az=92.0*

NEIC ***29*** *05:40:14.2±2.1, 10°.73S±0°.09×161°.4E±0°.1, h33^{km}±6^{km}, mb4.9/63, Error ellipse: s-maj=18.9km s-min=10.1km az=56.0*

NOU ***29*** *05:40:14.2, 10°.53S×161°.57E, h54^{km}, mb4.9/20, Solomon Islands*

ISC 29 05:40:15.4±0.6**, 10°.79S**±0°.05×**161°.35E**±0°.08**, h42**^{km}±5^{km}**, h42**^{km}**:pP-P, n255,** σ1^{s}.**12**/236**, mb4.8**/61**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.93	314	Pn	Pn	05 40 43.9	-1.8
	2µm,0.3s,baz=42,slow=3.7,SNR=16						
HNR				Sn	Sn	05 41 08.6	-0.2
	4µm,0.3s,baz=192,slow=18,SNR=6.2						
HNR	Honiara	1.93	314	Pn	Pn	05 40 44.0	-1.8
HNR						05 40 44.8	
HNR	Honiara	1.93	314	P	Pn	05 40 44.6	-1.2
KOUNC	Koumac, New Ca	10.11	164	Pn	Pn	05 42 36.3	-1.8
LIFNC	LIFOU	11.43	151	Pn	Pn	05 42 52.7	-3.5
NOUC	Port Laguerre	12.21	158	P	Pn	05 43 08.3	+1.5
DZM	Mont Dzumac	12.23	157	Pn	Pn	05 43 06.3	-1.0
	0.5nm,0.3s,baz=19,slow=5.8,SNR=33						
	19nm,1.0s						
DZM	Mont Dzumac	12.23	157	Pn	Pn	05 43 05.2	-2.0
DZM	Mont Dzumac	12.23	157	P	Pn	05 43 07.9	+0.6
OUENC	Ouen Island, N	12.70	156	Pn	Pn	05 43 12.3	-1.2
CTA	Charters Tower	17.22	236	P	P	05 44 15.9	+1.7
	22nm,0.7s,baz=62,slow=12,SNR=16						
CTAO	Charters Tower	17.22	236		P	05 44 15.1	+0.9
EIDS	Eidsvold	17.46	212	P	Pn	05 44 16.2	+0.3
EIDS	Eidsvold	17.46	212	P	P	05 44 18.6	+1.8
MTSU	Mount Surprise	18.02	244	P	Pn	05 44 25.0	+2.0
RMQ	Roma	19.62	216	P	Pn	05 44 42.9	+0.7
ARMA	Armidale	21.52	203	P	P	05 45 01.2	0.0
ARMA	Armidale	21.52	203	P	P	05 45 01.7	+0.6
AULRC	Lightning Ridg	22.36	212	P	P	05 45 11.5	+1.5
AUPHS	Peel High Scho	22.42	204	P	P	05 45 10.5	-0.2
QLP	Quilpie	22.53	223	P	P	05 45 12.5	+0.6
	42nm,1.5s						
QIS	Mount Isa	23.05	242	P	P	05 45 17.5	+0.1
SMPI	Sarmi	24.11	290	P	P	05 45 27.2	-0.3
AUDCS	Dubbo College	24.35	207	P	P	05 45 30.1	+0.5
CMSA	Cobar Meteorol	25.23	213	P	P	05 45 37.9	+0.4
INKA	Innaminka	25.67	226	P	P	05 45 42.7	+1.1
YNG	Young	26.23	205	P	P	05 45 47.6	+1.0
WB0	Warramunga Arr	27.45	248	P	P	05 45 57.5	-0.3
WB0				IAmb	IAmb	05 45 58.3	
	comp=Z,20nm,0.8s						
WRAB	Tennant Creek	27.54	247	P	P	05 45 58.3	-0.2
WB2	Warramunga Arr	27.54	247	P	P	05 45 57.3	-1.2
WRA	Warramunga Arr	27.55	247	P	P	05 45 58.3	-0.3
	comp=Z,14nm,1.0s,baz=75,slow=9.5,SNR=33						
	comp=Z,14nm,1.0s						
WRA	Warramunga Arr	27.55	247	P	P	05 45 57.0	-1.6
STKA	Stephens Creek	27.81	218	P	P	05 46 00.9	+0.1
	comp=Z,3.2nm,0.7s,baz=56,slow=11,SNR=6.7						
	comp=Z,3.2nm,0.7s						
STKA	Stephens Creek	27.81	218	P	P	05 45 58.6	-2.2
ASAR	Alice Springs	29.10	240	P	P	05 46 11.3	-1.1
	comp=Z,5.3nm,0.9s,baz=71,slow=9.7,SNR=31						
	comp=Z,5.3nm,0.9s						
H11S2	WAKE ISLAND Hy	29.57	10	T	T	06 17 14.9	
	baz=189,slow=76,SNR=20						
H11S3	WAKE ISLAND Hy	29.57	10	T	T	06 17 14.7	
	baz=189,slow=76,SNR=33						
H11S1	WAKE ISLAND Hy	29.59	10	T	T	06 17 14.0	
	baz=189,slow=76,SNR=13						
TOO	Toolangi	30.24	206	P	P	05 46 22.3	-0.1
H11N1	WAKE ISLAND Hy	30.80	10	T	T	06 18 37.0	
	baz=188						
H11N3	WAKE ISLAND Hy	30.81	10	T	T	06 18 47.0	
	baz=188						
H11N2	WAKE ISLAND Hy	30.82	10	T	T	06 18 38.0	
	baz=188						
PTPS	Port Pirie	30.92	220	P	P	05 46 29.6	+1.2
BKZ	Black Stump Fm	31.32	157	P	P	05 46 31.6	-0.3
BKZ				IAmb	IAmb	05 46 38.0	
	comp=Z,27nm,1.3s						
BBOO	Buckleboo	31.96	223	P	P	05 46 36.9	-0.6
KNRA	Kununurra	32.07	258	P	P	05 46 38.6	0.0
KNRA	Kununurra	32.07	258	P	P	05 46 38.6	0.0
	comp=Z,79nm,0.8s						
MRZ	Mangatainoka R	32.30	160	P	P	05 46 40.3	-0.1
MRZ				IAmb	IAmb	05 47 17.7	
	comp=Z,34nm,1.3s						
FITZ	Fitzroy Crossi	35.28	254	P	P	05 47 05.4	-1.3
SANI	Sanana	36.16	281	P	P	05 47 13.9	-0.3
PSA00	Pilbara Seismi	41.15	250	P	P	05 47 55.0	-1.0
PSA00				IAmb	IAmb	05 47 57.2	
	comp=Z,29nm,1.6s						
MBWA	Marble Bar	41.20	250	P	P	05 47 55.9	-0.5
MBWA				IAmb	IAmb	05 47 57.1	
	comp=Z,20nm,0.9s						
MBWA	Marble Bar	41.20	250	P	P	05 47 55.1	-1.4
MBWA				x	x	05 47 59.8	
MBWA				pP	pP	05 48 09.3	+3.0
NWAO	Narrogin (SRO)	46.06	234	P	P	05 48 34.5	-0.9
NWAO				pP	pP	05 48 43.8	-1.9
INU	Inuyama	51.34	334	P	P	05 49 15.1	-0.7
INU				IAmb	IAmb	05 49 20.0	
	comp=Z,18nm,1.0s						
INU	Inuyama	51.34	334	P	P	05 49 15.6	-0.2
INU				pP	pP	05 49 30.3	+3.7
JMN	Monobe	51.41	331	P	P	05 49 15.9	-0.4
MJAR	Matsushiro Arr	51.88	336	P	P	05 49 18.4	-1.4
	comp=Z,2.5nm,0.7s,baz=172,slow=8.4,SNR=6.9						
	comp=Z,2.5nm,0.7s						
KSRS	Korea Array	57.32	329	P	P	05 49 58.8	-0.4
	comp=Z,2.8nm,0.8s,baz=143,slow=7.7,SNR=10						
	comp=Z,2.8nm,0.8s						
KSAR	Wonju Array Be	57.33	329	P	P	05 49 59.5	+0.2
DRV	Dumont d’Urvil	57.65	190	P	P	05 49 59.4	-1.7
DRV				sP	pP	05 50 13.7	+2.2
NJ2	Nanjing	58.87	318	*e*P	P	05 50 10.3	+0.1
NJ2				pP	pP	05 50 19.5	-1.3
NJ2				sP	pwP	05 50 24.3	-2.6
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,1µm,11.8s						
USRK	Ussuriysk Ar.	60.87	336	P	P	05 50 23.6	-0.1
	comp=Z,15nm,1.0s,baz=156,slow=8.0,SNR=19						
	comp=Z,15nm,1.0s						
USRK	Ussuriysk Ar.	60.87	336	P	P	05 50 23.8	+0.1
MDJ	Mudanjiang	62.19	335	P	P	05 50 33.5	+0.9
MDJ				pP	pP	05 50 46.3	+2.5
MDJ				sP	pwP	05 50 50.8	+2.7
MDJ				ScP	ScP	05 55 10.8	-0.3
MDJ				PcS	PcS	05 55 17.3	+1.9
MDJ				S	S	05 58 59.5	+4.2
MDJ				pmax	pmax		
	comp=Z,12nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,1µm,9.7s						
MDJ				LR	LR		
	comp=N,700nm,15.1s						
MDJ				LR	LR		
	comp=E,770nm,12.8s						
MDJ				LR	LR		
	comp=Z,2µm,15.1s						
CN2	Changchun	63.38	332	*e*P	P	05 50 40.5	-0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PETK	Petropavlovsk-	63.72	358	P	P	05 50 41.8	-0.9
	comp=Z,4.0nm,0.8s,baz=172,slow=11,SNR=4.8						
	comp=Z,4.0nm,0.8s						
KLR	Kul'dur	65.19	339	P	P	05 50 51.8	-0.5
	comp=Z,4.0nm,0.9s,baz=142,slow=1.8,SNR=9.5						
	comp=Z,4.0nm,0.9s						
VNDA	Vanda	66.72	180	P	P	05 51 02.1	+0.3
	comp=Z,3.6nm,0.9s,baz=339,slow=5.5,SNR=8.0						
	comp=Z,3.6nm,0.9s						
VNDA	Vanda	66.72	180	P	P	05 51 00.8	-0.9
CRAI	Chiangrai	67.43	297	P	P	05 51 06.4	-0.9
HEH	HeiHe	67.62	337	P	P	05 51 07.5	-0.3
HEH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CMAR	Chiang Mai Arr	68.07	295	P	P	05 51 10.6	-0.7
	comp=Z,1.9nm,0.6s,baz=130,slow=5.0,SNR=9.6						
	comp=Z,1.9nm,0.6s						
XLT	XiLinHaoTe	68.20	326	*e*P	P	05 51 13.0	+1.3
XLT				pmax	pmax		
	comp=Z,24nm,0.8s						
XLT				pmax	pmax		
	comp=Z,2µm,11.7s						
NIKH	Nikolski High	68.44	19	P	P	05 51 13.0	+0.2
	baz=212						
PZH	PanZhiHua	68.72	304	P	P	05 51 14.3	-1.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC	Hu-ho-hao-te	68.89	322	*e*P	P	05 51 18.3	+2.1
HHC				pmax	pmax		
	comp=Z,19nm,0.7s						
BTO	Baotou	69.70	321	*e*P	P	05 51 24.3	+3.1
BTO				pmax	pmax		
	comp=Z,29nm,0.7s						
BTO				pmax	pmax		
	comp=Z,12µm,15.5s						
TNCH	TengChong	70.80	301	P	P	05 51 30.3	+2.0
TNCH				pmax	pmax		
	comp=Z,100nm,0.4s						
SDPT	Sand Point	73.23	22	P	P	05 51 42.5	+0.5
	baz=219						
ULN	Ulaanbaatar	75.60	326	P	P	05 51 56.0	-0.1
GTA	Gaotai	75.81	315	*e*P	P	05 51 58.8	+1.3
GTA				pP	PcP	05 52 03.3	-6.6
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SONM	Songino Array	75.95	325	P	P	05 51 57.8	-0.3
	comp=Z,8.1nm,0.7s,baz=140,slow=5.3,SNR=36						
	comp=Z,8.1nm,0.7s						
SONM	Songino Array	75.95	325	P	P	05 51 57.2	-0.9
SONM				IAmb	IAmb	05 52 00.5	
	comp=Z,7.3nm,0.7s						
R17K	Ugashik Creek	76.45	22	P	P	05 52 00.7	+0.1
	baz=223						
P16K	Nushagak River	76.92	20	P	P	05 52 03.0	-0.2
	baz=221						
Q17K	Contact Creek	77.09	22	P	P	05 52 04.2	-0.1
	baz=223						
Q16K	King Salmon	77.12	21	P	P	05 52 05.1	+0.8
	baz=222						
O16K	Kokwok River B	77.32	20	P	P	05 52 04.9	-0.4
	baz=221						
P17K	Kvichak River	77.58	21	P	P	05 52 07.1	+0.3
	baz=222						
Q18K	Katmai Hardscr	77.69	22	P	P	05 52 07.1	-0.5
	baz=224						
N16K	Nishlik Lake	77.77	19	P	P	05 52 08.4	+0.4
	baz=220						
O17K	Koliganek Bris	77.79	20	P	P	05 52 07.8	-0.2
	baz=222						
P18K	Big Mountain,	78.15	21	P	P	05 52 08.0	-2.1
P18K				IAmb	IAmb	05 52 11.1	
	comp=Z,21nm,1.1s						
P18K	Big Mountain,	78.15	21	P	P	05 52 09.7	-0.4
	baz=224						
Q19K	Cape Douglas,	78.39	22	P	P	05 52 11.1	-0.3
	baz=225						
O18K	Koktuh Hills	78.49	21	P	P	05 52 11.7	-0.3
	baz=224						
BILL	Bilibino	78.70	2	P	P	05 52 11.7	-1.2
BILL				IAmb	IAmb	05 52 14.5	
	comp=Z,17nm,1.1s						
P19K	Oil Pt	79.05	22	P	P	05 52 14.8	-0.2
	baz=225						
ANM	Nome	79.22	14	P	P	05 52 16.4	+0.6
	baz=213						
SVW2	Sparrevohn	79.27	20	P	P	05 52 15.9	-0.3
N19K	Bonanza Creek	79.44	20	P	P	05 52 17.2	+0.1
	baz=224						
TNA	Tin City	79.50	12	P	P	05 52 17.8	+0.5
	baz=211						
O20K	Slope Mountain	79.57	22	P	P	05 52 18.0	+0.1
	baz=226						
HOM	Homer	79.64	22	P	P	05 52 18.3	+0.1
	baz=227						
BRSE	Bradley Lake S	80.03	22	P	P	05 52 19.8	-0.5
	baz=228						
M19K	Big River Lodg	80.25	20	IAmb	IAmb	05 52 23.5	
	comp=Z,16nm,0.8s						
M19K	Big River Lodg	80.25	20	P	P	05 52 21.9	+0.4
	baz=224						
L19K	White Mountain	80.30	19	IAmb	IAmb	05 52 24.6	
	comp=Z,16nm,1.1s						
L19K	White Mountain	80.30	19	P	P	05 52 22.0	+0.2
	baz=224						
TTA	Tatalina	80.49	18	P	P	05 52 22.1	-0.7
TTA	Tatalina	80.49	18	P	P	05 52 23.5	+0.7
	baz=222,SNR=7.3						
M20K	Styx River	80.66	20	P	P	05 52 24.4	+0.6
	baz=225						
L20K	Farewell, AK	80.83	19	P	P	05 52 25.1	+0.5
	baz=224						
SUA	Susitna One	81.19	21	P	P	05 52 27.3	+0.6
	baz=228						
K20K	Telida	81.40	19	IAmb	IAmb	05 52 29.9	
	comp=Z,16nm,1.3s						
K20K	Telida	81.40	19	P	P	05 52 28.0	+0.4
	baz=224,SNR=7.0						
GCSA	Galena City Sc	81.58	17	P	P	05 52 29.4	+0.9
	baz=221						
PMR	Palmer	81.86	22	P	P	05 52 30.1	+0.1
	baz=229						
CAST	Castle Rocks	82.08	19	IAmb	IAmb	05 52 32.1	
	comp=Z,12nm,0.9s						
CAST	Castle Rocks	82.08	19	P	P	05 52 31.3	+0.1
	baz=226,SNR=9.4						
SML	Sawmill	82.28	22	P	P	05 52 32.9	+0.6
	baz=230						
CHUM	Lake Minchumin	82.33	19	P	P	05 52 33.0	+0.6
	baz=226,SNR=5.4						
TRF	Thorofare Moun	82.69	20	P	P	05 52 34.4	-0.1
	baz=228						
BPAW	Bear Paw Mtn.	82.91	19	P	P	05 52 35.2	-0.3
	baz=227						
KLU	Klutina	82.98	23	P	P	05 52 35.9	-0.1
	baz=232						
M24K	Tolsona, Glenn	83.26	22	P	P	05 52 37.6	+0.2
	baz=232						
MAW	Mawson	83.32	202	P	P	05 52 37.7	+0.1
	comp=Z,9.9nm,1.0s,baz=123,slow=5.9,SNR=3.9						
	comp=Z,9.9nm,1.0s						
MCK	McKinley	83.33	20	P	P	05 52 35.8	-1.9
MCK	McKinley	83.33	20	P	P	05 52 37.4	-0.3
	baz=229,SNR=9.7						
I21K	Tanana	83.34	18	P	P	05 52 38.1	+0.5
	baz=226,SNR=8.4						
IMAR	Indian Mountai	83.39	17	P	P	05 52 37.6	-0.3
H21K	Melozitna Rive	83.43	17	IAmb	IAmb	05 52 39.7	
	comp=Z,8.7nm,1.1s						
H21K	Melozitna Rive	83.43	17	P	P	05 52 39.0	+0.9
	baz=225,SNR=6.1						
MLY	Manley	83.62	18	P	P	05 52 39.6	+0.5
	baz=227,SNR=7.3						
G21K	Allakaket	83.84	17	P	P	05 52 40.1	-0.1
	baz=224						
NEA2	Nenana	83.86	19	P	P	05 52 40.0	-0.3
	baz=229,SNR=6.3						
I23K	Minto, Yukon-K	84.13	19	P	P	05 52 41.8	+0.1
	baz=228						
F21K	Alatna River	84.35	16	P	P	05 52 43.3	+0.4
	baz=224						
MDM	Murphy Dome	84.37	19	IAmb	IAmb	05 52 43.3	
	comp=Z,6.9nm,1.0s						
PINM	Pinnacle	84.43	25	P	P	05 52 43.8	+0.4
	baz=237						
TCOL	CIGO, UAF Yank	84.43	19	IAmb	IAmb	05 52 43.5	
	comp=Z,16nm,1.1s						
TCOL	CIGO, UAF Yank	84.43	19	P	P	05 52 42.6	-0.6
	baz=230						
COLA	College	84.44	19	P	P	05 52 42.9	-0.4
	baz=230						
HDA	Harding Lake	84.44	20	IAmb	IAmb	05 52 44.0	
	comp=Z,9.0nm,1.0s						
HDA	Harding Lake	84.44	20	P	P	05 52 43.5	+0.2
	baz=231,SNR=8.4						
K24K	Donnelly Dome	84.46	21	P	P	05 52 43.7	+0.2
	baz=232						
H23K	Yukon River	84.53	18	IAmb	IAmb	05 52 45.1	
	comp=Z,8.7nm,1.0s						
M26K	Nabesna, AK	84.63	23	P	P	05 52 44.5	+0.1
	baz=234						
IL31		84.69	20	IAmb	IAmb	05 52 44.9	
	comp=Z,13nm,1.5s						
ILAR	Eielson Array	84.69	20	P	P	05 52 43.6	-1.0
	comp=Z,3.1nm,0.9s,baz=255,slow=4.7,SNR=21						
	comp=Z,3.1nm,0.9s						
ILAR	Eielson Array	84.69	20	P	P	05 52 42.8	-1.8
POKR	Poker Plat Res	84.73	19	P	P	05 52 44.8	0.0
	baz=230						
RIDG	Independent Ri	84.75	21	P	P	05 52 45.8	+0.8
	baz=233						
O28M	Mount Upton	84.83	25	P	P	05 52 45.8	+0.1
	baz=237						
L26K	Log Cabin Wild	84.86	22	P	P	05 52 45.7	+0.2
	baz=234						
DOT	Dot Lake	84.97	21	P	P	05 52 45.6	-0.4
DOT				IAmb	IAmb	05 52 47.4	
	comp=Z,7.1nm,0.9s						
G23K	Bananza Creek	84.98	17	P	P	05 52 46.7	+0.7
	baz=228						
M27K	Edge Creek, AK	85.03	23	P	P	05 52 47.5	+1.0
	baz=236						
TIXI	Tiksi	85.06	350	P	P	05 52 45.7	-0.6
	comp=Z,1.4nm,0.2s,baz=270,slow=23,SNR=3.6						
	comp=Z,1.4nm,0.2s						
SCRK	Sand Creek	85.20	21	P	P	05 52 47.7	+0.4
	baz=234,SNR=5.0						
YUK3	Moose Creek	85.26	24	P	P	05 52 48.7	+0.9
	baz=237						
COLD	Coldfoot	85.28	17	P	P	05 52 48.3	+0.9
	baz=228						
YUK8	Steele Glacier	85.28	25	P	P	05 52 48.5	+0.6
	baz=238						
L27K	Beaver Creek,	85.45	22	P	P	05 52 48.7	+0.2
	baz=236						
BVCY	Beaver Creek	85.46	23	P	P	05 52 49.3	+0.8
	baz=236						
BCAR	Beaver Creek A	85.47	22	P	P	05 52 49.0	+0.4
G24K	Hadweenzic Riv	85.73	18	P	P	05 52 50.6	+0.8
	baz=230						
YUK4	Talbot Arm	85.77	25	P	P	05 52 51.5	+1.2
	baz=239						
WMQ	Urumqi	85.88	316	*e*P	P	05 52 52.0	+0.9
K27K	Chicken	85.91	22	P	P	05 52 52.6	+1.9
	baz=235						
HYT	Haines Junctio	85.98	25	P	P	05 52 52.0	+0.8
	baz=240						
E23K	Chandalar	86.00	17	P	P	05 52 52.1	+1.0
	baz=228						
F24K	Squaw Lake	86.14	17	P	P	05 52 53.1	+1.4
	baz=230						
G25K	Bearman Lake	86.20	18	P	P	05 52 53.2	+1.2
	baz=231						
I26K	Coal Creek Min	86.27	20	IAmb	IAmb	05 52 55.0	
	comp=Z,14nm,1.4s						
I26K	Coal Creek Min	86.27	20	P	P	05 52 53.2	+0.8
	baz=234						
WRAK	Wrangell Islan	86.29	31	P	P	05 52 52.9	+0.3
	baz=244						
D23K	Nanushuk River	86.33	16	P	P	05 52 53.0	+0.4
	baz=227						
E24K	Your Creek	86.33	17	P	P	05 52 53.2	+0.4
	baz=229						
M29M	Somme Creek	86.42	24	P	P	05 52 54.2	+0.9
	baz=239						
O30N	Mendenhall	86.55	26	P	P	05 52 54.5	+0.5
	baz=241						
A21K	Barrow	86.61	12	P	P	05 52 54.9	+1.0
	baz=221						
EGAK	Eagle	86.66	21	P	P	05 52 55.7	+1.4
	baz=236,SNR=6.1						
F25K	Christian Rive	86.86	18	P	P	05 52 56.3	+1.0
	baz=232						
L29M	L29M	86.89	23	P	P	05 52 56.5	+0.9
	baz=239,SNR=5.9						
DAWY	Dawson	86.92	22	P	P	05 52 55.5	-0.2
DAWY				IAmb	IAmb	05 52 58.4	
	comp=Z,12nm,1.1s						
DAWY	Dawson	86.92	22	P	P	05 52 57.2	+1.5
	baz=238,SNR=10.0						
I27K	Kandik River	86.97	20	P	P	05 52 56.8	+0.9
	baz=236						
N31M	Braeburn, Yuko	87.03	25	P	P	05 52 57.6	+1.4
	baz=241						
G26K	Porcupine Rive	87.04	19	P	P	05 52 57.7	+1.6
	baz=234						
M30M	Minto, Yukon	87.15	24	P	P	05 52 57.5	+0.7
	baz=240						
E25K	Arctic Village	87.20	17	P	P	05 52 58.2	+1.2
	baz=232						
H27K	Steamboat Moun	87.36	20	P	P	05 52 58.9	+1.1
	baz=236						
C24K	Franklin Bluff	87.36	15	P	P	05 52 58.8	+1.2
	baz=229						
Q32M	Nakina River	87.43	28	P	P	05 52 59.0	+0.6
	baz=244						
K29M	Barlow Dome	87.51	23	P	P	05 52 59.7	+1.1
	baz=239						
S34M	Telegraph Cree	87.52	30	P	P	05 52 59.4	+0.7
	baz=245						
G27K	Doyon Strip	87.64	19	P	P	05 53 00.1	+1.0
	baz=236						
D25K	Kavik River	87.73	16	P	P	05 53 00.3	+0.8
	baz=231						
I29M	Ogilvie Camp,	88.00	21	P	P	05 53 01.6	+0.8
	baz=239						
E27K	Coleen River	88.44	18	P	P	05 53 04.4	+1.5
	baz=236						
C26K	Camden Bay	88.50	16	P	P	05 53 05.2	+2.2
	baz=232						
EDW2	Edwards Air Fo	88.56	54	P	P	05 53 05.1	+0.9
	baz=256						
C27K	Jago River	88.66	17	P	P	05 53 05.5	+1.7
	baz=234						
BFSC	Mount Baldy Ra	88.67	55	P	P	05 53 05.0	+0.1
	baz=256						
LRMC	Laurel Mtn Rad	88.95	54	P	P	05 53 07.4	+1.3
	baz=256						
EPYK	Eagle Plains	89.08	21	P	P	05 53 07.3	+1.4
	baz=240						
DSP	Deep Springs	89.18	52	IAmb	IAmb	05 53 09.3	
	comp=Z,6.8nm,1.0s						
NVAR	Mina Array Bea	89.18	51	P	P	05 53 08.5	+1.2
	comp=Z,2.0nm,0.7s,baz=235,slow=6.3,SNR=15						
	comp=Z,2.0nm,0.7s						
NVAR	Mina Array Bea	89.18	51	P	P	05 53 07.2	-0.1
MPMC	Manual Prospec	89.24	53	P	P	05 53 08.3	+0.8
	baz=256						
MONP2	Monument Peak	89.36	56	P	P	05 53 09.2	+1.0
	baz=257						
G30M	tAoh Zraii Nji	89.55	20	P	P	05 53 09.4	+1.3
	baz=240						
GRAC	Grapevine Rang	89.56	52	P	P	05 53 09.7	+0.9
	baz=256						
GSC	Goldstone, Bar	89.60	54	P	P	05 53 10.3	+1.1
	baz=256						
FURC	Furnace Creek,	89.83	53	P	P	05 53 11.2	+1.2
	baz=256						
HEC	Hector,Ludlow	89.87	55	P	P	05 53 11.3	+0.9
	baz=257						
SWSC	Sam W. Stewart	89.88	57	P	P	05 53 11.9	+1.5
	baz=257						
GWY	Greenwater Val	89.91	53	IAmb	IAmb	05 53 13.1	
	comp=Z,7.5nm,1.3s						
BELC	Belle Mtn. Jos	89.95	55	P	P	05 53 11.8	+0.9
	baz=257,SNR=5.3						
WCT	Wildcat Mounta	90.09	53	IAmb	IAmb	05 53 13.5	
	comp=Z,6.3nm,1.1s						
SHOC	Shoshone, Teco	90.16	54	P	P	05 53 12.9	+1.2
	baz=257						
J08A	Circle Bar Ran	90.29	46	IAmb	IAmb	05 53 14.9	
	comp=Z,8.1nm,1.1s						
BC3	Big Chuckawall	90.32	56	P	P	05 53 13.6	+1.0
	baz=257						
TUQ	Turquoise Moun	90.33	54	P	P	05 53 13.2	+0.6
	baz=257						
GMRC	Granite Mounta	90.40	55	P	P	05 53 13.5	+0.6
	baz=257						
MK31	Makanchi Array	90.40	318	P	P	05 53 09.5	-3.1
MKAR	Makanchi Array	90.40	318	P	P	05 53 10.4	-2.1
	comp=Z,2.0nm,0.7s,baz=91,slow=6.8,SNR=22						
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	90.40	318	P	P	05 53 10.3	-2.3
TPNV	Topopah Spring	90.42	53	IAmb	IAmb	05 53 15.1	
	comp=Z,7.2nm,1.1s						
TPNV	Topopah Spring	90.42	53	P	P	05 53 14.3	+1.3
	baz=257						
IRM	Iron Mountain	90.68	55	P	P	05 53 14.6	+0.4
	baz=257						
INK	Inuvik	91.09	20	P	P	05 53 16.5	+1.4
	baz=243						
SHPR	Sheep Range	91.17	53		P	05 53 16.0	-0.5
R11B	Troy Canyon, C	91.24	51	P	P	05 53 18.1	+1.2
	baz=257,SNR=9.2						
PDMCI	Parker Dam,Lak	91.52	56	P	P	05 53 19.4	+1.4

	baz=258						
Q12A	**Willow Creek R**	**91.97**	**51**	IAmb	IAmb	05 53 23.1	
	comp=Z,7.6nm,1.1s						
ELK	**Elko**	**92.02**	**49**	IAmb	IAmb	05 53 23.2	
	comp=Z,3.9nm,1.1s						
SPR3	**Spring Creek 3**	**92.34**	**51**	P	**P**	**05 53 20.9**	**-1.1**
SPR3				IAmb	IAmb	05 53 24.9	
	comp=Z,8.7nm,1.4s						
NEW	**Newport**	**92.39**	**41**	P	**P**	**05 53 22.3**	**+0.6**
	baz=256						
LCMT	**Little Creek M**	**92.78**	**53**		pwP	05 53 33.9	-2.3
HLID	**Hailey**	**93.21**	**46**		**P**	**05 53 24.0**	**-1.9**
HLID				IAmb	IAmb	05 53 28.8	
	comp=Z,5.8nm,1.2s						
HLID	**Hailey**	**93.21**	**46**	P	**P**	**05 53 26.8**	**+0.9**
	baz=258,SNR=5.3						
KURBB	**Kurchatov Arra**	**93.73**	**321**	P	**P**	**05 53 25.4**	**-2.4**
	comp=Z,1.4nm,0.7s,baz=109,slow=3.3,SNR=19						
	comp=Z,1.4nm,0.7s						
C36M	**Paulatuk**	**94.66**	**20**	IAmb	IAmb	05 53 33.0	
	comp=Z,6.9nm,1.2s						
C36M	**Paulatuk**	**94.66**	**20**	P	**P**	**05 53 32.6**	**+1.0**
	baz=252						
A36M	**Sachs Harbour**	**95.13**	**17**	P	**P**	**05 53 34.7**	**+1.0**
	baz=251						
BOZ	**Bozeman (W)**	**95.54**	**45**	P	**P**	**05 53 37.1**	**+0.7**
	baz=260						
YKA	**Yellowknife Ar**	**96.74**	**28**	P	**P**	**05 53 40.3**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=254,slow=4.8,SNR=15						
	comp=Z,0.9nm,0.8s						
EGMT	**Eagleton**	**97.19**	**43**	P	Pdif	05 53 44.5	+0.7
	baz=262						
ANMO	**Albuquerque**	**97.87**	**56**	P	Pdif	05 53 47.6	+0.3
	baz=262						
BVAR	**Borovoye Array**	**99.10**	**322**	P	**Pdif**	**05 53 50.7**	**-1.4**
	comp=Z,1.1nm,0.8s,baz=104,slow=4.6,SNR=3.5						
	comp=Z,1.1nm,0.8s						
ESDC	**Sonseca Array**	**148.41**	**338**	PKPbc	**PKPbc**	**05 59 56.2**	**-1.7**
	comp=Z,0.1nm,0.4s,baz=332,slow=1.9,SNR=2.6						
TORD	**Torodi Ar. Bea**	**159.96**	**279**	PKPab	**PKPab**	**06 00 52.2**	**+1.4**
	comp=Z,1.0nm,0.9s,baz=71,slow=3.2,SNR=3.9						

KRSC 29 05:51:16.5±1.7**, 48°.60N**×**156°.38E, h30**^{km}±25^{km}**, Ml3.8, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.09**	**355**	*e*S	Sn	05 52 15.0	+0.7
PAU	**Pauzhetka**	**2.88**	**5**	*e*P	Pb	05 52 04.7	-2.5
PAU				*e*S	Sb	05 52 38.5	-3.5
KDTR	**Khodutka, Kamc**	**3.39**	**18**	*e*P	Pn	05 52 11.2	+3.9
KDTR				*e*S	Sn	05 52 51.2	+4.8
MTVR	**Mutnovka**	**4.05**	**16**	*e*P	Pn	05 52 20.5	+3.9
MTVR				*e*S	Sn	05 53 08.7	+5.7
RUS	**Russkaya**	**4.07**	**19**	*e*S	Sn	05 53 08.7	+5.5
GRL	**Gorelyy**	**4.10**	**15**	*e*P	Pn	05 52 21.2	+4.1
GRL				*e*S	Sn	05 53 10.1	+6.0
UGLR	**Uglovaya**	**4.86**	**18**	*e*P	Pn	05 52 31.5	+3.9
AVH	**Avacha**	**4.90**	**17**	*e*P	Pn	05 52 34.1	+6.0
KOK	**Koryaka**	**4.91**	**16**	*e*P	Pn	05 52 33.4	+5.2
SMAR	**Somma**	**4.91**	**17**	*e*P	Pn	05 52 31.9	+3.5
KRER	**Koryakskii**	**4.94**	**17**	*e*P	Pn	05 52 33.1	+4.3
KRX	**Arik**	**4.97**	**16**	*e*P	Pn	05 52 33.8	+4.7
SPN	**Mys Shipunski**	**5.06**	**26**	*e*P	Pn	05 52 34.6	+4.4
GNL	**Ganaly**	**5.19**	**10**	*e*P	Pn	05 52 36.2	+4.0

IDC ***29*** *05:59:07.2±0.9, 56°.89N×162°.68E, h0^{km}, mb3.8/11, mbtmp3.8/11, Error ellipse: s-maj=29.8km s-min=18.4km az=166.0*

KRSC ***29*** *05:59:08.4±1.1, 57°.00N×163°.14E, h29^{km}±13^{km}, Ml4.5*

MOS ***29*** *05:59:09.7±0.8, 57°.03N×163°.04E, h23^{km}, mb4.1/4, Error ellipse: s-maj=13.6km s-min=4.2km az=68.9*

ISC 29 05:59:09.6±1.3**, 56°.98N**±0°.04×**162°.97E**±0°.04**, h13**^{km}±8^{km}**, n97, σ1^s.80**/104**, mb3.7**/12**, 3C-3D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBG	**Krutoberegovo**	**0.74**	**191**	PN	**Pg**	**05 59 23.5**	**-0.5**
KBG				S	**Sg**	**05 59 34.2**	**+0.5**
KBG	**Krutoberegovo**	**0.74**	**191**	*e*P	**Pg**	**05 59 23.5**	**-0.5**
KBG				*e*S	**Sg**	**05 59 34.2**	**+0.5**
KBTR	**Krutoberegovo**	**0.78**	**186**	PN	**Pg**	**05 59 24.5**	**-0.2**
KBTR				S	**Sn**	**05 59 35.8**	**-2.0**
KBTR	**Krutoberegovo**	**0.78**	**186**	*e*P	**Pg**	**05 59 24.5**	**-0.2**
KBTR				*e*S	**Sn**	**05 59 35.8**	**-2.0**
SMKR	**Semkarok**	**0.92**	**245**	PN	**Pb**	**05 59 26.6**	**-0.8**
SMKR				S	**Sg**	**05 59 40.0**	**+0.7**
SMKR	**Semkarok**	**0.92**	**245**	*e*P	**Pb**	**05 59 26.6**	**-0.8**
SMKR				*e*S	**Sg**	**05 59 40.0**	**+0.7**
SRKR	**Sorokina**	**1.04**	**252**	PN	**Pb**	**05 59 28.5**	**-1.0**
SRKR				S	**Sb**	**05 59 42.9**	**-0.2**
SRKR	**Sorokina**	**1.04**	**252**	*e*P	**Pb**	**05 59 28.5**	**-1.0**
SRKR				*e*S	**Sb**	**05 59 42.9**	**-0.2**
KLY	**Klyuchi**	**1.44**	**243**	PN	**Pn**	**05 59 33.3**	**-2.1**
KLY				S	**Sn**	**05 59 51.3**	**-2.9**
KLY	**Klyuchi**	**1.44**	**243**	*e*P	**Pn**	**05 59 33.3**	**-2.1**
KLY				*e*S	**Sn**	**05 59 51.3**	**-2.9**
CIRR	**Tsirk**	**1.50**	**236**	PN	**Pb**	**05 59 36.6**	**-0.8**
CIRR	**Tsirk**	**1.50**	**236**	*e*P	**Pb**	**05 59 36.6**	**-0.8**
BZGR	**Bezymyannyi-Gr**	**1.64**	**231**	PN	**Pb**	**05 59 38.2**	**-1.5**
BZGR				S	**Sb**	**06 00 00.3**	**+0.1**
BZGR	**Bezymyannyi-Gr**	**1.64**	**231**	*e*P	**Pb**	**05 59 38.2**	**-1.5**
BZGR				*e*S	**Sb**	**06 00 00.3**	**+0.1**
BZWR	**Bezymyannyi-We**	**1.71**	**234**	PN	**Pn**	**05 59 39.3**	**+0.1**
BZWR	**Bezymyannyi-We**	**1.71**	**234**	*e*P	**Pn**	**05 59 39.3**	**+0.1**
BZP	**Bezymyannyi-Pe**	**1.72**	**233**	*e*P	**Pb**	**05 59 39.8**	**-1.4**
BZMR	**Bezymyannaya**	**1.73**	**234**	PN	**Pb**	**05 59 39.7**	**-1.6**
BZMR	**Bezymyannaya**	**1.73**	**234**	*e*P	**Pb**	**05 59 39.7**	**-1.6**
KIRR	**Kirishev**	**1.78**	**236**	PN	**Pn**	**05 59 40.3**	**0.0**
KIRR				S	**Sb**	**06 00 04.1**	**-0.4**
KIRR	**Kirishev**	**1.78**	**236**	*e*P	**Pn**	**05 59 40.3**	**0.0**
KIRR				*e*S	**Sb**	**06 00 04.1**	**-0.4**
KPT	**Kopyto**	**1.83**	**237**	PN	**Pn**	**05 59 41.1**	**+0.3**
KPT				S	**Sb**	**06 00 05.0**	**-0.8**
KPT	**Kopyto**	**1.83**	**237**	*e*P	**Pn**	**05 59 41.1**	**+0.3**
KPT				*e*S	**Sb**	**06 00 05.0**	**-0.8**
SRDR	**Sredinnyy**	**1.91**	**251**	PN	**Pn**	**05 59 42.1**	**+0.1**
SRDR	**Sredinnyy**	**1.91**	**251**	*e*P	**Pn**	**05 59 42.1**	**+0.1**
KMNR	**Kamenistaya**	**1.95**	**232**	PN	**Pb**	**05 59 43.3**	**-1.8**
KMNR	**Kamenistaya**	**1.95**	**232**	*e*P	**Pb**	**05 59 43.3**	**-1.8**
OSSR	**Ossora**	**2.28**	**1**	PN	**Pn**	**05 59 46.0**	**-0.8**
OSSR	**Ossora**	**2.28**	**1**	*e*P	**Pn**	**05 59 46.0**	**-0.8**
TUMD	**Tumrok D**	**2.29**	**220**	*e*P	**Pb**	**05 59 48.6**	**-2.2**
TUMR	**Tumrok**	**2.32**	**224**	PN	**Pb**	**05 59 49.4**	**-1.9**
TUMR	**Tumrok**	**2.32**	**224**	*e*P	**Pb**	**05 59 49.4**	**-1.9**
BKI	**Bering**	**2.45**	**135**	PN	**Pn**	**05 59 48.2**	**-1.0**
BKI				S	**Sn**	**06 00 17.2**	**-1.8**
BKI	**Bering**	**2.45**	**135**	*e*P	**Pn**	**05 59 48.2**	**-1.0**
BKI				*e*S	**Sn**	**06 00 17.2**	**-1.8**
TIGL	**Tigil**	**2.46**	**290**	*e*P	**Pb**	**05 59 51.4**	**-2.1**
MKZ	**Mys Kozlova**	**2.53**	**197**	PN	**Pn**	**05 59 50.1**	**-0.2**
MKZ	**Mys Kozlova**	**2.53**	**197**	*e*P	**Pn**	**05 59 50.1**	**-0.2**
ESO	**Esso**	**2.59**	**248**	PN	**Pb**	**05 59 53.2**	**-2.8**
ESO	**Esso**	**2.59**	**248**	*e*P	**Pb**	**05 59 53.2**	**-2.8**
PALN	**Palana**	**2.65**	**324**	PN	**Pn**	**05 59 52.3**	**+0.3**
PALN	**Palana**	**2.65**	**324**	*e*P	**Pn**	**05 59 52.3**	**+0.3**
KII	**Karymskiy**	**3.56**	**216**	PN	**Pn**	**06 00 06.5**	**+1.9**
KII	**Karymskiy**	**3.56**	**216**	*e*P	**Pn**	**06 00 06.5**	**+1.9**
TILK	**Tilichiki**	**3.85**	**24**	PN	**Pn**	**06 00 09.3**	**+0.9**
TILK	**Tilichiki**	**3.85**	**24**	*e*P	**Pn**	**06 00 09.3**	**+0.9**
SPN	**Mys Shipunski**	**4.24**	**205**	PN	**Pn**	**06 00 13.3**	**-0.6**
SPN	**Mys Shipunski**	**4.24**	**205**	*e*P	**Pn**	**06 00 13.3**	**-0.6**
NLC	**Nalytchevo**	**4.35**	**210**	PN	**Pn**	**06 00 18.5**	**+3.2**
NLC	**Nalytchevo**	**4.35**	**210**	*e*P	**Pn**	**06 00 18.5**	**+3.2**
GNL	**Ganaly**	**4.37**	**223**	PN	**Pn**	**06 00 17.3**	**+1.6**
GNL	**Ganaly**	**4.37**	**223**	*e*P	**Pn**	**06 00 17.3**	**+1.6**
KRX	**Arik**	**4.39**	**216**	PN	**Pn**	**06 00 18.9**	**+2.8**
KRX	**Arik**	**4.39**	**216**	*e*P	**Pn**	**06 00 18.9**	**+2.8**
KRER	**Koryakskii**	**4.41**	**215**	PN	**Pn**	**06 00 19.0**	**+2.7**
KRER	**Koryakskii**	**4.41**	**215**	*e*P	**Pn**	**06 00 19.0**	**+2.7**
SMAR	**Somma**	**4.43**	**214**	PN	**Pn**	**06 00 18.7**	**+2.1**
SMAR	**Somma**	**4.43**	**214**	*e*P	**Pn**	**06 00 18.7**	**+2.1**
AVH	**Avacha**	**4.45**	**215**	PN	**Pn**	**06 00 19.3**	**+2.6**
AVH	**Avacha**	**4.45**	**215**	*e*P	**Pn**	**06 00 19.3**	**+2.6**
KOK	**Koryaka**	**4.45**	**216**	PN	**Pn**	**06 00 19.7**	**+2.8**
KOK	**Koryaka**	**4.45**	**216**	*e*P	**Pn**	**06 00 19.7**	**+2.8**
UGLR	**Uglovaya**	**4.47**	**214**	PN	**Pn**	**06 00 19.3**	**+2.2**
UGLR	**Uglovaya**	**4.47**	**214**	*e*P	**Pn**	**06 00 19.3**	**+2.2**
DALK	**Dalny**	**4.64**	**213**	PN	**Pn**	**06 00 21.1**	**+1.8**
DALK	**Dalny**	**4.64**	**213**	*e*P	**Pn**	**06 00 21.1**	**+1.8**
PET	**Petropavlovsk**	**4.68**	**214**	⇑*e*PN	**Pn**	**06 00 22.2**	**+2.4**
PEA0B	**Petropavlovsk-**	**4.92**	**220**	⇑*e*PN	**Pn**	**06 00 25.7**	**+2.5**
PETK	**Petropavlovsk-**	**4.92**	**220**	Pn	**Pn**	**06 00 24.7**	**+1.5**
	1.2nm,0.3s,baz=58,slow=17,SNR=9.6						
KRMR	**Karymshinskiy**	**5.01**	**216**	PN	**Pn**	**06 00 28.0**	**+3.6**
KRMR	**Karymshinskiy**	**5.01**	**216**	*e*P	**Pn**	**06 00 28.0**	**+3.6**
GRL	**Gorelyy**	**5.26**	**215**	PN	Pn	06 00 32.8	+4.8
GRL	**Gorelyy**	**5.26**	**215**	*e*P	Pn	06 00 32.8	+4.8
MTVR	**Mutnovka**	**5.29**	**214**	PN	**Pn**	**06 00 30.7**	**+2.3**
MTVR	**Mutnovka**	**5.29**	**214**	*e*P	**Pn**	**06 00 30.7**	**+2.3**
SKR	**Severo-Kuril's**	**7.50**	**216**	⇓*e*PN	**Pn**	**06 01 00.8**	**+2.3**
TIXI	**Tiksi**	**20.39**	**329**	P	Pn	06 03 45.8	-2.0
	1.7nm,0.3s,baz=90,slow=23,SNR=4.8						
	1.7nm,0.3s						
TIXI	**Tiksi**	**20.39**	**329**	⇑*i*P	Pn	06 03 47.2	-0.6
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HEH	**HeiHe**	**21.94**	**267**	P	**P**	**06 04 08.0**	**+5.4**
ILAR	**Eielson Array**	**24.98**	**51**	P	**P**	**06 04 33.2**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=261,slow=7.3,SNR=19						
	comp=Z,1.6nm,0.8s						
INK	**Inuvik**	**29.82**	**42**	P	**P**	**06 05 16.5**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=301,slow=6.7,SNR=4.6						
	comp=Z,0.5nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**37.31**	**174**	T	T	06 45 22.8	
	baz=358,slow=76,SNR=119						
H11N3	**WAKE ISLAND Hy**	**37.33**	**174**	T	T	06 45 25.5	
	baz=358,slow=76,SNR=69						
H11N1	**WAKE ISLAND Hy**	**37.33**	**174**	T	T	06 45 25.2	
	baz=358,slow=76,SNR=75						
H11S1	**WAKE ISLAND Hy**	**38.51**	**174**	T	T	06 47 06.5	
	baz=352,SNR=8.7						
H11S3	**WAKE ISLAND Hy**	**38.53**	**174**	T	T	06 47 06.9	
	baz=352,SNR=7.4						
H11S2	**WAKE ISLAND Hy**	**38.53**	**174**	T	T	06 46 58.2	
	baz=352,SNR=7.7						
YKA	**Yellowknife Ar**	**39.23**	**47**	P	**P**	**06 06 37.6**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=300,slow=8.0,SNR=11						
	comp=Z,0.6nm,0.6s						
DGZ	**Jazzator, Alta**	**43.51**	**294**	⇓*e*P	**P**	**06 07 12.1**	**-0.5**
DGZ				pmax	pmax		
	comp=Z,7.0nm,2.8s						
KURK	**Kurchatov**	**47.14**	**300**	⇓*e*P	**P**	**06 07 39.6**	**-1.5**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURBB	**Kurchatov Arra**	**47.24**	**300**	P	**P**	**06 07 40.9**	**-1.0**
	comp=Z,1.9nm,0.2s,baz=54,slow=7.9,SNR=7.1						
	comp=Z,1.9nm,0.2s						
MKAR	**Makanchi Array**	**48.01**	**294**	P	**P**	**06 07 46.5**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=43,slow=5.7,SNR=4.1						
	comp=Z,0.2nm,0.4s						
ARU	**Arti**	**51.67**	**317**	P	P	06 08 09.2	-6.4
NVAR	**Mina Array Bea**	**52.99**	**75**	P	**P**	**06 08 27.9**	**+2.0**
	comp=Z,0.8nm,0.8s,baz=296,slow=6.7,SNR=5.2						
	comp=Z,0.8nm,0.8s						
PDAR	**Pinedale Array**	**54.27**	**65**	P	**P**	**06 08 36.5**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=331,slow=2.4,SNR=8.1						
	comp=Z,0.8nm,0.7s						
TXAR	**Lajitas Array**	**67.68**	**70**	P	**P**	**06 10 07.2**	**+0.8**
	comp=Z,1.4nm,0.8s,baz=288,slow=4.2,SNR=16						
	comp=Z,1.4nm,0.8s						
WRA	**Warramunga Arr**	**80.31**	**207**	P	**P**	**06 11 18.2**	**-1.8**
	comp=Z,0.6nm,1.0s,baz=10.0,slow=6.0,SNR=1.8						
	comp=Z,0.6nm,1.0s						
ASAR	**Alice Springs**	**83.99**	**207**	P	**P**	**06 11 38.6**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=14,slow=4.3,SNR=2.0						
	comp=Z,0.2nm,0.6s						

RHSSO ***29*** *06:17:52.1±0.2, 44°.65N×16°.63E, h3^{km}±1^{km}, ML2.6/14*

VIE ***29*** *06:17:57.0, 44°.98N×16°.42E, h8^{km}, mb2.3/5, ml2.1/5   89 km SE of Karlovac*

ISC 29 06:17:51.5±0.9**, 44°.65N**±0°.02×**16°.67E**±0°.02**, h9**^{km}±8^{km}**, n46, σ0^s.99**/82**, 7C-2D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
A050A	**Klekovaca**	**0.20**	**210**	⇓*i*Pg	**Pg**	**06 17 55.2**	**-0.4**
A050A				*e*Sg	**Sg**	**06 17 58.8**	**+0.4**
PRIJ	**Prijedor**	**0.33**	**6**	⇑*i*Pg	**Pg**	**06 17 57.7**	**-0.2**
PRIJ				*e*Sg	**Sg**	**06 18 03.1**	**+0.8**
MGRS	**Mrkonjic Grad**	**0.38**	**128**	⇓*i*Pg	**Pg**	**06 17 59.1**	**+0.2**
MGRS				*e*Sg	**Sg**	**06 18 04.9**	**+1.0**
BLY	**Banja Luka**	**0.38**	**75**	⇑*i*Pg	**Pg**	**06 17 58.7**	**-0.2**
BLY				*e*Sg	**Sg**	**06 18 04.7**	**+0.8**
A051A	**Mrakovica**	**0.40**	**25**	⇑*i*Pg	**Pg**	**06 18 00.0**	**+0.7**
A051A				*e*Sg	**Sg**	**06 18 05.4**	**+0.8**
UDBI	**Udbina**	**0.66**	**260**	*i* Pg	**Pg**	**06 18 04.1**	**-0.1**
UDBI				Sg	**Sg**	**06 18 12.7**	**-0.1**
KIJV	**Kijevo**	**0.67**	**196**	*e*Pg	**Pg**	**06 18 04.5**	**0.0**
KIJV				Sg	**Sg**	**06 18 13.1**	**-0.1**
SRKY	**Kupres RS**	**0.68**	**148**	⇑*i*Pg	**Pg**	**06 18 04.8**	**+0.2**
SRKY				*e*Sg	**Sb**	**06 18 14.3**	**-0.8**
A052A	**Srbac**	**0.75**	**53**	⇑*i*Pg	**Pg**	**06 18 05.9**	**0.0**
A052A				*e*Sg	**Sb**	**06 18 17.6**	**+0.6**
PLIT	**Plitvice**	**0.78**	**287**	*i* Pg	**Pg**	**06 18 06.0**	**-0.5**
PLIT				Sg	**Sg**	**06 18 15.1**	**-1.5**
MOSL	**Moslavina**	**0.96**	**4**	*e*Pg	**Pb**	**06 18 10.3**	**-0.1**
MOSL				Sg	**Sb**	**06 18 22.0**	**-1.2**
DOB	**Doboj**	**1.02**	**85**	*e*Pg	**Pb**	**06 18 10.3**	**-1.0**
DOB				*e*Sg	**Sg**	**06 18 24.9**	**+0.5**
MORI	**Morici**	**1.05**	**222**	*e*Pg	**Pb**	**06 18 11.4**	**-0.3**
MORI				Sg	**Sg**	**06 18 25.6**	**+0.5**
RICI	**Ricice**	**1.20**	**164**	*e*Pg	**Pg**	**06 18 14.7**	**+0.1**
VIRC	**Vir**	**1.21**	**253**	*e*Pg	**Pn**	**06 18 14.1**	**-0.4**
VIRC				Sg	**Sb**	**06 18 29.8**	**-0.4**
ZIRJ	**Zirje**	**1.24**	**217**	*e*Pg	**Pb**	**06 18 14.9**	**-0.1**
ZIRJ				Sg	**Sg**	**06 18 32.7**	**+1.3**
OZLJ	**Ozalj**	**1.29**	**319**	*e*Pg	**Pn**	**06 18 15.0**	**-0.5**
OZLJ				Sg	**Sb**	**06 18 30.8**	**-1.6**
NVLJ	**Novalja**	**1.29**	**267**	*e*Pg	**Pg**	**06 18 15.9**	**-0.2**
NVLJ				Sg	**Sg**	**06 18 33.0**	**+0.1**
BOJS	**Bojanci**	**1.32**	**311**	⇑*i*Pg	**Pn**	**06 18 15.0**	**-1.0**
BOJS				*e*Sg	**Sn**	**06 18 33.4**	**-0.3**
DUGI	**Dugi Otok**	**1.33**	**241**	Sn	**Sg**	**06 18 36.8**	**+2.6**
PTJ	**Puntijarka**	**1.35**	**339**	*e*Pg	**Pb**	**06 18 16.7**	**-0.2**
PTJ				Sg	**Sb**	**06 18 34.2**	**-0.2**
RABC	**Rab**	**1.35**	**275**	*e*Pn	**Pg**	**06 18 17.8**	**+0.4**
RABC				Sn	**Sg**	**06 18 37.2**	**+2.3**
MAKA	**Makarska**	**1.39**	**169**	Sg	**Sg**	**06 18 37.6**	**+1.5**
CRES	**Cresnjev**	**1.45**	**324**	⇑*i*Pg	**Pn**	**06 18 17.7**	**-0.2**
CRES				*e*Sg	**Sg**	**06 18 38.2**	**0.0**
LOBO	**Lobor**	**1.56**	**344**	*e*Pg	**Pb**	**06 18 19.7**	**-0.8**
LOBO				Sg	**Sn**	**06 18 39.4**	**-0.4**
HAPS	**Han Pijesak,Bl**	**1.73**	**108**	*e*Pn	**Pb**	**06 18 23.2**	**-0.2**
HAPS				*e*Sn	**Sg**	**06 18 46.5**	**-0.6**
SMRN	**Sveta Marina**	**1.83**	**283**	*e*Pn	**Pb**	**06 18 25.0**	**0.0**
LSTV	**Lastovo**	**1.89**	**175**	*e*Pn	**Pg**	**06 18 26.7**	**-0.9**
LSTV				Sn	**Sg**	**06 18 52.6**	**+0.5**
CEY	**Cerknica**	**1.92**	**305**	*e*Pn	**Pn**	**06 18 25.1**	**+0.7**
CEY				*e*Sn	**Sb**	**06 18 49.5**	**-1.3**
STON	**Ston**	**1.93**	**157**	*e*Pn	**Pg**	**06 18 27.6**	**-0.8**
STON				Sn	**Sg**	**06 18 53.2**	**-0.2**
STON	**Ston**	**1.93**	**157**	*e*Pn	**Pb**	**06 18 26.2**	**-0.5**
STON				*e*Sn	**Sb**	**06 18 51.1**	**+0.2**
SKDS	**Skadanscina**	**2.08**	**296**	*e*Pn	**Pn**	**06 18 27.2**	**+0.6**
SKDS				*e*Sn	**Sn**	**06 18 53.0**	**+0.4**
BBLS	**Lazići**	**2.12**	**111**	*e*Pn	**Pb**	**06 18 28.8**	**-1.2**
BBLS				*e*Sn	**Sb**	**06 18 56.0**	**-0.4**
UPM	**Unac-Piva**	**2.17**	**131**	*e*Pn	**Pb**	**06 18 29.8**	**-1.2**
UPM				*e*Sn	**Sb**	**06 18 57.4**	**-0.6**
BRY	**Bratogost**	**2.21**	**142**	*e*Pn	**Pb**	**06 18 30.5**	**-1.2**
BRY				*e*Sn	**Sb**	**06 18 57.6**	**-1.6**
TREB	**Trebinje**	**2.29**	**147**	*e*Pn	**Pb**	**06 18 31.5**	**-1.3**
TREB				*e*Sn	**Sb**	**06 18 59.2**	**-2.0**
FRGS	**Fruska Gora**	**2.29**	**76**	*e*Sn	**Sb**	**06 18 59.8**	**-1.5**
SOKA	**Soboth**	**2.33**	**331**	*e*Pn	**Pn**	**06 18 30.6**	**+0.6**
	3.1nm,0.2s						
OBKA	**Obir**	**2.38**	**322**	Pn	**Pn**	**06 18 32.1**	**+1.4**
	1.1nm,0.2s						
OBKA	**Obir**	**2.38**	**322**	*e*Pn	**Pn**	**06 18 31.7**	**+1.0**
OBKA				*e*Sn	**Sn**	**06 19 01.0**	**+0.9**
DIVS	**Divibare**	**2.44**	**102**	*e*Pn	**Pb**	**06 18 33.5**	**-2.1**
DIVS				*e*Sn	**Sb**	**06 19 04.1**	**-1.8**
ARSA	**Arzberg**	**2.72**	**343**	*e*Pn	**Pn**	**06 18 35.9**	**+0.6**
	7.7nm,0.3s,SNR=4.7						
SJES	**Sjenica**	**2.76**	**119**	*e*Pn	**Pn**	**06 18 37.6**	**+1.6**
SJES				*e*Sn	**Sn**	**06 19 11.2**	**+1.7**
RONA	**Rosalia, Austr**	**3.06**	**355**	*e*Pn	**Pn**	**06 18 41.1**	**+1.1**
	5.8nm,0.1s,SNR=10.0						
DRME	**Dracevica, Mon**	**3.07**	**142**	*e*Pn	**Pn**	**06 18 41.4**	**+1.3**
DRME				*e*Sn	**Sn**	**06 19 18.4**	**+1.5**
CONA	**Conrad Observa**	**3.33**	**351**	*e*Pn	**Pn**	**06 18 44.7**	**+1.0**
	4.1nm,0.3s,SNR=7.5						

IDC ***29*** *06:29:27.9±0.5, 39°.87N×29°.75W, h0^{km}, mb4.1/28, mbtmp4.1/29, ML5.1/1, MS4.9/61, Error ellipse: s-maj=15.3km s-min=10.2km az=176.0*

NEIC ***29*** *06:29:28.7±2.4, 39°.70N±0°.10×29°.5W±0°.1, h10^{km}±1^{km}, mb5.1/155, Mww5.4/12, Error ellipse: s-maj=17.6km s-min=12.9km az=206.0*

GCMT ***29*** *06:29:30.7±0.2, 40°.06N±0°.03×29°.61W±0°.02, h14^{km}±1^{km}, MW5.4/110, Moment Tensor Solution.   s28,c34; s110,c178;   Duration: 1^s.2   Moment tensor: Scale 10^{17} Nm; M_{rr}-1.37±.10; $M_{\theta\theta}$0.23±.06; $M_{\phi\phi}$1.14±.06; $M_{r\theta}$0.01±.18; $M_{\theta\phi}$0.33±.03; $M_{\phi r}$-0.53±.12;   Best double couple: $M_0$1.41100×10^{17} NP1:ϕ_s11.00000°, δ56.00000°, λ-97.00000°.   NP2:ϕ_s204.00000°, δ35.00000°, λ-80.00000°.   Principal axes: T 1.3400, Plg11.0000°, Azm106.0000°; N 0.1430, Plg6.0000°, Azm15.0000°; P -1.4820, Plg78.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IGIL ***29*** *06:29:31.4, 39°.74N×29°.36W, h10^{km}, Mb4.7*

SVSA ***29*** *06:29:31.0±0.9, 39°.99N×29°.51W, h10^{km}, ML4.2(INMG), Error ellipse: s-maj=5.2km s-min=3.2km az=49.0*

NEIC ***29*** *06:29:34.1, 40°.38N×29°.80W, h12^{km}, Moment Tensor Solution.   Duration: 2^s.6   Moment tensor: Scale 10^{17}Nm; M_{rr}-1.23; $M_{\theta\theta}$0.35; $M_{\phi\phi}$0.87; $M_{r\theta}$0.57; $M_{\theta\phi}$0.12; $M_{\phi r}$0.66;   Fault plane solution: $M_0$1.36000×10^{17} NP1: ϕ_s209.04000°, δ64.53000°, λ-80.73000°.   NP2:ϕ_s8.27000°, δ27.00000°, λ-108.68000°.   Principal axes: T 1.1648, Plg19.0000°, Azm292.0000°; N 0.3919, Plg8.0000°, Azm25.0000°; P -1.5567, Plg69.0000°, Azm138.0000°;*

MOS ***29*** *06:29:34.8±1.0, 39°.96N×29°.60W, h10^{km}, mb5.1/55, MS4.9/7 Error ellipse: s-maj=8.9km s-min=5.2km az=47.2*

NEIC ***29*** *06:29:34.1, 40°.18N×29°.14W, h10^{km}*

ISC 29 06:29:29.7±0.3**, 39°.73N**±0°.05×**29°.60W**±0°.04**, h14**^{km}**, n476, σ1^s.37**/413**, mb5.0**/146**, MS5.0**/77**, 35C-11D, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H07N1	**FLORES T-PHASE**	**1.17**	**269**	Pn	**Pn**	**06 29 49.4**	**-2.2**
H07N1	**FLORES T-PHASE**	**1.17**	**269**	*e*P	**Pn**	**06 29 50.1**	**-1.6**
H07S1	**FLORES T-PHASE**	**1.29**	**255**	Pn	**Pn**	**06 29 51.2**	**-2.1**
H07S1	**FLORES T-PHASE**	**1.29**	**255**	*e*P	**Pn**	**06 29 52.8**	**-0.5**
CALA	**Caldeira**	**1.34**	**148**	*e*P	**Pn**	**06 29 52.2**	**-1.9**
CALA				*e*S	**Sb**	**06 30 09.9**	**-1.8**
CALA				A	A	06 30 16.7	
	3µm,0.7s						
PRIB2	**Ribeirinha**	**1.37**	**146**	*e*S	**Sn**	**06 30 10.9**	**-1.4**
PRIB2				A	A	06 30 12.1	
	819nm,0.4s						
PFCBR	**Castelo Branco**	**1.39**	**150**	*e*S	**Sn**	**06 30 12.4**	**-0.3**
PFCBR				A	A	06 30 13.3	
	309nm,0.6s						
ROSA	**Rosais**	**1.46**	**133**	Pn	**Pn**	**06 29 53.8**	**-1.8**
ROSA	**Rosais**	**1.46**	**133**	*e*P	**Pn**	**06 29 54.4**	**-1.2**
PICO	**Pico**	**1.53**	**143**	*e*P	**Pn**	**06 29 56.4**	**-0.2**
PICO				*e*S	**Sn**	**06 30 15.2**	**-1.1**
PICO				A	A	06 30 28.8	
	966nm,0.6s						
PCAN	**Candelaria**	**1.53**	**145**	*e*P	**Pn**	**06 29 56.5**	**-0.1**
PCAN				*e*S	**Sn**	**06 30 15.2**	**-1.2**
PCAN				A	A	06 30 19.6	
	1µm,0.6s						
PMAN	**Manadas**	**1.61**	**132**	*e*P	**Pn**	**06 29 56.7**	**-0.9**
PPNO	**Prainha do Nor**	**1.63**	**140**	*e*P	**Pn**	**06 29 57.8**	**-0.2**
PID	**Ribeirinha**	**1.73**	**138**	*e*P	**Pn**	**06 29 59.0**	**-0.3**
PSBA	**Serra de Santa**	**2.01**	**118**	*e*P	**Pn**	**06 30 01.0**	**-2.2**
PAGU	**Agualva, Azore**	**2.11**	**116**	*e*P	**Pn**	**06 30 02.7**	**-1.8**
ADH	**Angra Heroismo**	**2.13**	**119**	*e*P	**Pn**	**06 30 03.0**	**-1.8**
PSCM	**Serra do Cume**	**2.19**	**117**	*e*P	**Pn**	**06 30 03.9**	**-1.7**
PDA	**Ponta Delgada**	**3.66**	**121**	*e*P	**Pn**	**06 30 24.7**	**-1.1**
PCALD	**Caldeiras da R**	**3.75**	**120**	*e*P	**Pn**	**06 30 25.7**	**-1.4**
PGRON	**Lagoa das Cont**	**3.84**	**119**	*e*P	**Pn**	**06 30 27.1**	**-1.3**
BART	**Pico Bartolome**	**3.98**	**118**	*e*P	**Pn**	**06 30 30.2**	**-0.1**
PSMN	**Pico do Norte,**	**4.48**	**126**	*e*P	**Pn**	**06 30 36.2**	**-1.0**
PMOZ	**Porto Moniz, M**	**12.14**	**121**	A	A	06 36 16.1	
	6µm,20.0s						
PMAR	**Madeira**	**12.39**	**120**	*e*P	**Pn**	**06 32 27.4**	**+1.6**
PMAR				A	A	06 32 48.8	
	158nm,1.6s						
PMAFR	**Mafra**	**15.74**	**86**	*e*P	**Pn**	**06 33 11.2**	**+0.3**
PMAFR				A	A	06 37 59.3	
	6µm,20.0s						
LIS	**Lisbon**	**15.88**	**87**	*e*P	**Pn**	**06 33 12.9**	**+0.2**
LIS				A	A	06 33 33.7	
	173nm,1.6s						
LIS	**Lisbon**	**15.88**	**87**	*e*P	**Pn**	**06 33 12.6**	**-0.1**
LIS				IAmb	IAmb	06 33 14.9	
	comp=Z,40nm,0.4s						
PCAS	**Casmilo, Conde**	**16.20**	**82**	*e*P	**Pn**	**06 33 15.8**	**-1.0**
PCAS				A	A	06 33 27.1	
	comp=Z,87nm,1.6s						
PCAS				A	A	06 38 25.1	
	comp=Z,6µm,20.0s						
COI	**Coimbra**	**16.25**	**82**	Pn	**Pn**	**06 33 13.9**	**-3.6**
COI	**Coimbra**	**16.25**	**82**	P	**Pn**	**06 33 13.9**	**-3.6**
COI				pmax	pmax		
	comp=Z,39nm,1.2s						
PGAV	**Gavieira, Arco**	**16.29**	**75**	*e*P	**Pn**	**06 33 17.5**	**-0.6**
PGAV				A	A	06 33 35.8	
	comp=Z,74nm,1.9s						
PGAV				A	A	06 38 15.5	
	comp=Z,5µm,20.0s						
PTEO	**Sao Teotonio**	**16.46**	**91**	*e*P	**Pn**	**06 33 19.5**	**-0.6**
PTEO				A	A	06 33 30.8	
	comp=Z,132nm,1.6s						
PCAB	**Cabril**	**16.47**	**76**	*e*P	**Pn**	**06 33 20.9**	**+0.6**
PNCL	**Nicolau / Gran**	**16.48**	**89**	*e*P	**Pn**	**06 33 19.8**	**-0.6**
PNCL				A	A	06 33 28.5	
	comp=Z,74nm,1.6s						
PNCL				A	A	06 38 22.2	
	comp=Z,5µm,20.0s						
PFVI	**Vila Bisbo**	**16.48**	**92**	Pn	**Pn**	**06 33 17.3**	**-3.1**
PFVI	**Vila Bisbo**	**16.48**	**92**	*e*P	**Pn**	**06 33 19.1**	**-1.3**
PFVI				A	A	06 33 34.6	
	comp=Z,124nm,1.7s						
PFVI				A	A	06 38 34.0	
	comp=Z,5µm,18.0s						
PMTG	**Montargil**	**16.54**	**85**	A	A	06 27 40.7	
	comp=Z,994nm,18.0s						
PMTG	**Montargil**	**16.54**	**85**	*e*P	**Pn**	**06 33 20.1**	**-1.0**
PMTG				A	A	06 33 39.1	
	comp=Z,103nm,2.0s						
MORF	**Marmelete**	**16.57**	**92**		**Pn**	**06 33 19.1**	**-2.5**
MORF	**Marmelete**	**16.57**	**92**	P	**Pn**	**06 33 19.1**	**-2.5**
MORF				pmax	pmax		
	comp=Z,44nm,1.5s						
MORF	**Marmelete**	**16.57**	**92**	*e*P	**Pn**	**06 33 21.5**	**-0.1**
MORF				A	A	06 33 35.6	
	comp=Z,75nm,1.3s						
MORF				A	A	06 38 35.7	
	comp=Z,5µm,20.0s						
MORF	**Marmelete**	**16.57**	**92**	*e*P	**Pn**	**06 33 21.6**	**0.0**
MORF				IAmb	IAmb	06 33 30.0	
	comp=Z,49nm,1.3s						
PVIS	**Viseu**	**16.61**	**80**	*e*P	**Pn**	**06 33 21.2**	**-0.9**
PVIS				A	A	06 33 43.3	
	comp=Z,75nm,2.1s						
POLO	**Lamas de Olo**	**16.65**	**77**	*e*P	**Pn**	**06 33 22.3**	**-0.4**
POLO				A	A	06 38 37.1	
	comp=Z,3µm,18.0s						
MESJ	**Messejana**	**16.78**	**90**		**Pn**	**06 33 22.8**	**-1.4**
MESJ	**Messejana**	**16.78**	**90**	P	**Pn**	**06 33 22.8**	**-1.4**
MESJ				pmax	pmax		
	comp=Z,77nm,1.7s						
MESJ	**Messejana**	**16.78**	**90**	*e*P	**Pn**	**06 33 24.2**	**0.0**
MESJ				A	A	06 33 32.2	
	comp=Z,93nm,1.7s						
MESJ	**Messejana**	**16.78**	**90**	*e*P	**Pn**	**06 33 24.0**	**-0.1**
MESJ				IAmb	IAmb	06 33 31.7	
	comp=Z,67nm,1.6s						
MTE	**Manteigas**	**16.90**	**81**	Pn	**Pn**	**06 33 23.6**	**-2.1**
MTE	**Manteigas**	**16.90**	**81**	*e*P	**Pn**	**06 33 24.6**	**-1.1**
MTE				A	A	06 33 40.4	
	comp=Z,73nm,1.4s						
MTE				A	A	06 38 45.5	
	comp=Z,5µm,20.0s						

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PCVE  Castro Verde      16.96  90 eP    Pn    06 33 27.1 +0.6
PCVE                              A     A     06 33 43.7
      comp=Z,60nm,2.0s
PCVE                              A     A     06 38 38.0
      comp=Z,5µm,20.0s
PCBR  Castelo Branco    17.00  83 eP    Pn    06 33 26.4 -0.6
PCBR                              A     A     06 33 44.6
      comp=Z,74nm,1.7s
PBEJ  Beja              17.01  89 eP    Pn    06 33 27.0 -0.1
PBEJ                              A     A     06 33 40.1
      comp=Z,51nm,1.8s
PESTR Estremoz          17.06  86       Pn    06 33 26.7 -1.0
PESTR Estremoz          17.06  86 eP    P     06 33 28.9 -0.6
PESTR                             A     A     06 33 45.3
      comp=Z,61nm,1.6s
PESTR                             A     A     06 38 53.4
      comp=Z,5µm,18.0s
PMRV  Marv??o           17.12  84 eP    Pn    06 33 28.8 +0.3
PMRV                              A     A     06 33 46.7
      comp=Z,64nm,1.9s
PMRV                              A     A     06 38 54.9
      comp=Z,5µm,20.0s
PBDV  Barranco-do-Ve    17.14  91 eP    P     06 33 29.5 -0.9
PBDV                              A     A     06 33 41.5
      comp=Z,130nm,1.8s
PBDV                              A     A     06 38 53.5
      comp=Z,6µm,20.0s
PVAQ  Vaqueiros         17.27  91       Pn    06 33 29.3 -1.0
PVAQ  Vaqueiros         17.27  91 eP    Pn    06 33 30.7 +0.4
PVAQ                              A     A     06 33 43.6
      comp=Z,55nm,2.1s
PVAQ                              A     A     06 38 57.4
      comp=Z,4µm,18.0s
PBRG  Braganca          17.43  76 eP    Pn    06 33 32.3 -0.1
PBRG                              A     A     06 33 52.6
      comp=Z,47nm,1.9s
PBRG                              A     A     06 39 02.3
      comp=Z,5µm,20.0s
PBAR  Barrancos         17.61  88 eP    P     06 33 35.4 -0.2
PBAR                              A     A     06 33 41.1
      comp=Z,55nm,1.7s
PBAR                              A     A     06 38 58.0
      comp=Z,6µm,20.0s
AVE   Averroes          18.93 103 P     P     06 33 47.5 -2.6
PAB   San Pablo         19.44  82 P     P     06 33 55.1 -0.6
PAB   San Pablo         19.44  82 P     P     06 33 55.1 -0.6
PAB                               pmax  pmax
      comp=Z,52nm,1.9s
ESDC  Sonseca Array     19.71  82 P     Pn    06 33 59.3 -0.9
      comp=Z,1.1nm,0.3s,baz=280,slow=11,SNR=12
      comp=Z,2.8nm,0.4s
ESDC  Sonseca Array     19.71  82 P     P     06 33 58.8 +0.1
ESBB  Sonseca Array     19.71  82 P     P     06 33 57.9 -0.8
MDT   Midelt            21.26 101 P     P     06 34 18.2 +2.6
      comp=Z,3.1nm,0.9s,baz=339,slow=12,SNR=6.4
      comp=Z,3.1nm,0.9s
MDT   Midelt            21.26 101 P     P     06 34 18.6 +3.0
GOG   Mont Gurugu       21.56  94 P     P     06 34 22.0 +3.2
DRLN  Deer Lake         21.96 305 P     P     06 34 22.6 -0.2
TAF   Taforalt          22.14  94 P     P     06 34 30.0 +4.9
ARF   Arif              22.19 104 P     P     06 34 33.0 +7.4
JBK   JBK               22.20  96 P     P     06 34 29.0 +3.2
CART  Cartagena         22.40  86 P     P     06 34 21.9 -5.8
CART                              IAmb  IAmb  06 34 38.1
      comp=Z,113nm,2.0s
ESK   Eskdalemuir       23.48  40 P     P     06 34 36.5 -2.2
ESK                               IAmb  IAmb  06 34 44.9
      comp=Z,150nm,1.9s
ESK   Eskdalemuir       23.48  40 P     P     06 34 36.5 -2.2
ESK                               pmax  pmax
      comp=Z,150nm,2.0s
EKA   Eskdalemuir Ar    23.51  40 P     P     06 34 39.0  0.0
      comp=Z,8.1nm,0.9s,baz=234,slow=8.5,SNR=12
      comp=Z,8.1nm,0.9s
EKA   Eskdalemuir Ar    23.51  40 P     P     06 34 39.0  0.0
GBN   Guysborough       24.08 294 P     P     06 34 44.8 +0.3
GBN                               IAmb  IAmb  06 34 56.5
      comp=Z,41nm,1.0s
BORG  Borgarnes         25.52   8 LR    LR    06 41 00.5
      comp=Z,374nm,21.1s,baz=184,slow=27
LMN   Caledonia Moun    26.40 295 P     P     06 35 03.8 -1.8
LMN                               IAmb  IAmb  06 35 19.5
      comp=Z,44nm,1.4s
BNI   Bardonecchia      27.16  67 P     P     06 35 11.6 -1.1
BNI   Bardonecchia      27.16  67 P     P     06 35 11.6 -1.1
BNI                               pmax  pmax
      comp=Z,30nm,1.3s
BATG  Bathurst New B    27.31 298 P     P     06 35 14.6 +0.8
BATG                              IAmb  IAmb  06 35 19.7
      comp=Z,86nm,1.9s
ECH   Echery            27.56  60 P     P     06 35 15.2 -0.9
ECH   Echery            27.56  60 P     P     06 35 15.2 -0.9
ECH                               pmax  pmax
      comp=Z,26nm,1.5s
SENIN Lac Senin/Sane    27.59  64 P     P     06 35 15.9 -0.6
BFO   Black Forest      28.35  60 P     P     06 35 23.7 +0.6
BFO                               IAmb  IAmb  06 35 36.1
      comp=Z,49nm,1.8s
BFO   Black Forest      28.35  60 P     P     06 35 23.7 +0.6
BFO                               pmax  pmax
      comp=Z,49nm,1.8s
SCHQ  Schefferville     29.02 314 P     P     06 35 28.0 -1.0
      comp=Z,1.3nm,0.6s,baz=135,slow=7.1,SNR=5.0
SCHQ                              LR    LR    06 45 47.7
      comp=Z,1µm,20.0s,baz=120,slow=34
      comp=Z,1.3nm,0.6s
DAVOX Davos/Dischmat    29.36  63 P     P     06 35 33.6 +1.2
      comp=Z,1.8nm,0.7s,baz=264,slow=17,SNR=2.5
DAVOX                             LR    LR    06 45 25.4
      comp=Z,2µm,19.4s,baz=258,slow=33
      comp=Z,1.8nm,0.7s
ZCCA  Zocca             30.27  68 P     P     06 35 40.7 +0.5
ZCCA                              IAmb  IAmb  06 35 48.7
      comp=Z,57nm,1.7s
KEST  Kesra             30.89  85 LR    LR    06 46 33.0
      comp=Z,2µm,20.1s,baz=224,slow=33
NKC   Novy Kostel       31.16  56 eP    P     06 35 49.7 +1.8
NKC                               AMS   AMS   06 47 20.0
      comp=Z,4µm,15.7s
NKC   Novy Kostel       31.16  56 eP    P     06 35 49.7 +1.8
NKC                               MLR   MLR
      comp=Z,4µm,15.7s
CLUD  Cludinico         31.44  64 P     P     06 35 51.1 +0.6
CLL   Collm             31.58  54 eP    P     06 35 53.0 +1.4
CLL   Collm             31.58  54 eP    P     06 35 53.0 +1.4
ILULI Ilulissat         31.70 346 P     P     06 35 50.3 -2.1
ILULI                             IAmb  IAmb  06 36 02.7
      comp=Z,55nm,1.7s
ILULI Ilulissat         31.70 346 P     P     06 35 50.3 -2.1
ILULI                             pmax  pmax
      comp=Z,55nm,1.7s
KHC   Kasperske Hory    31.85  58 eP    P     06 35 53.0 -1.1
KHC                               AMS   AMS   06 48 20.0
      comp=Z,2µm,17.3s
KHC   Kasperske Hory    31.85  58⇑eP    P     06 35 55.8 +1.7
KHC                               pmax  pmax
      comp=Z,28nm,1.7s
PRED  Cave del Predi    31.92  63 P     P     06 35 53.3 -1.5
PRED                              IAmb  IAmb  06 36 01.2
      comp=Z,26nm,1.6s
GERES GERESS Array B    31.93  59 P     P     06 35 53.7 -1.1
      comp=Z,0.3nm,0.2s,baz=285,slow=6.8,SNR=3.7
GERES                             LR    LR    06 48 20.6
      comp=Z,1µm,18.5s,baz=234,slow=35
      comp=Z,0.3nm,0.2s
BRG   Berggiesshubel    32.15  55 eP    P     06 36 02.4 +5.8
BRG                               Amp         06 36 04.5
      comp=Z,19nm,1.8s
BRG   Berggiesshubel    32.15  55 eP    P     06 36 02.3 +5.7
BRG                               pmax  pmax
      comp=Z,19nm,1.8s
CKRC  Cesky Krumlov     32.33  59 AMS   AMS   06 48 50.0
      comp=Z,2µm,16.9s
PRU   Pruhonice         32.49  57 AMS   AMS   06 48 40.0
      comp=Z,3µm,15.1s
PVCC  Panska Ves        32.53  56 AMS   AMS   06 47 30.0
      comp=Z,3µm,17.0s
GOPC  GO Pecny, Ondr    32.65  57 AMS   AMS   06 48 50.0
      comp=Z,3µm,15.7s
NB2   NORSAR Subarra    32.84  36 P     P     06 36 03.0 +0.4
      comp=Z,93nm,2.5s,baz=249,slow=9.3
NB2   NORSAR Subarra    32.84  36 P     P     06 36 03.0 +0.4
      baz=249,slow=9.3
NOA   NORSAR Array B    32.84  36 P     P     06 36 03.7 +1.1
      comp=Z,1.1nm,0.8s,baz=249,slow=9.6,SNR=4.4
NOA                               LR    LR    06 47 27.9
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      comp=Z,1µm,19.7s,baz=245,slow=33
      comp=Z,1.1nm,0.8s
NOA   NORSAR Array B    32.84  36 P     P     06 36 03.8 +1.1
JMIC  Jan Mayen         33.15  12 LR    LR    06 46 09.4
      comp=Z,1µm,19.4s,baz=193,slow=30
FRB   Frobisher Bay     33.18 329 P     P     06 36 05.2 -0.3
      comp=Z,2.4nm,0.5s,baz=115,slow=11,SNR=7.2
FRB                               LR    LR    06 47 31.6
      comp=Z,1µm,18.0s,baz=143,slow=33
      comp=Z,2.4nm,0.5s
SUMG  Summit            33.22 355 i P   P     06 36 05.0 -1.2
UPC   Upice             33.45  56 AMS   AMS   06 49 20.0
      comp=Z,4µm,16.2s
CHVC  Chvalec           33.48  56 eP    P     06 36 09.9 +1.6
CHVC                              AMS   AMS   06 48 40.0
      comp=Z,3µm,15.8s
CHVC  Chvalec           33.48  56 eP    P     06 36 09.9 +1.6
CHVC                              MLR   MLR
      comp=Z,3µm,15.8s
OSTC  Ostas             33.58  56 AMS   AMS   06 49 20.0
      comp=Z,3µm,15.7s
DPC   Dobruska-Polom    33.65  56 eP    P     06 36 10.9 +1.1
DPC                               AMS   AMS   06 48 50.0
      comp=Z,3µm,17.9s
DPC   Dobruska-Polom    33.65  56 eP    P     06 36 10.9 +1.1
DPC                               MLR   MLR
      comp=Z,3µm,17.9s
HFS   Hagfors           33.69  38 LR    LR    06 48 05.4
      comp=Z,2µm,20.4s,baz=238,slow=33
KRUC  Moravsky          33.70  58 eP    P     06 36 10.2  0.0
VRAC  Vranov            33.83  58 LR    LR    06 47 58.9
      comp=Z,2µm,20.3s,baz=258,slow=33
VRAC  Vranov            33.83  58 eP    P     06 36 12.5 +1.2
KRLC  Kraliky           33.94  57 eP    P     06 36 14.1 +1.8
KRLC                              AMS   AMS   06 48 30.0
      comp=Z,2µm,15.8s
KRLC  Kraliky           33.94  57 eP    P     06 36 14.1 +1.8
KRLC                              MLR   MLR
      comp=Z,2µm,15.8s
VAE   Valguarnera       34.21  79 LR    LR    06 49 49.5
      comp=Z,5µm,18.1s,baz=357,slow=36
MODS  Modra-Piesok      34.32  60 eP    P     06 36 18.4 +2.8
MODS                              pmax  pmax
      comp=Z,26nm,1.3s
MODS  Modra-Piesok      34.32  60 eP    P     06 36 18.4 +2.8
MORC  Moravsky Berou    34.44  57 ⇑P    P     06 36 18.2 +1.5
MORC  Moravsky Berou    34.44  57 eP    P     06 36 16.4 -0.2
MORC  Moravsky Berou    34.44  57 P     P     06 36 18.1 +1.5
JAVC  Velka Javorina    34.55  59 eP    P     06 36 17.3 -0.4
OKC   Ostrava-Krasne    34.83  57 AMS   AMS   06 48 30.0
      comp=Z,1µm,14.9s
K57A  Scipio Center     35.06 290 P     P     06 36 21.7 -0.4
K57A                              IAmb  IAmb  06 36 28.4
      comp=Z,60nm,1.6s
MORH  Mrgy, Hungar      35.44  63 ⇑P    P     06 36 26.0 +0.8
OJC   Ojcow             35.88  56 eP    P     06 36 30.0 +1.0
OJC   Ojcow             35.88  56 P     P     06 36 28.7 -0.3
OJC   Ojcow             35.88  56 P     P     06 36 28.7 -0.3
OJC                               pmax  pmax
      comp=Z,17nm,1.0s
SADO  Sadowa            36.56 295 LR    LR    06 50 24.2
      comp=Z,4µm,20.1s,baz=116,slow=34
DIVS  Divibare          36.71  67 P     P     06 36 36.9 +0.6
DAG   Danmarks Havn     37.45   4 i P   P     06 36 43.0 +0.9
SIRR  Siria             37.51  63 ⇑P    P     06 36 43.4 +0.5
BZS   Buzias            37.58  64 ⇑P    P     06 36 44.5 +0.9
BZS   Buzias            37.58  64 P     P     06 36 44.4 +0.9
MDVR  Moldovita         37.80  65 ⇑P    P     06 36 46.1 +0.6
TRPA  Tarpa             37.84  60 ⇓P    P     06 36 46.0 +0.3
SURR  Surduc            37.91  63 ⇓P    P     06 36 46.2 -0.1
BOVS  Bovan             38.02  67 ⇑P    P     06 36 47.5 +0.3
DRGR                    38.14  62 ⇑P    P     06 36 48.6 +0.2
DRGR                    38.14  62 P     P     06 36 48.6 +0.2
SJG   San Juan          38.19 246 LR    LR    06 51 59.8
      comp=Z,802nm,18.3s,baz=92,slow=35
TOA0  Torodi Ar. Sit    38.20 125 P     P     06 36 46.5 -2.5
TOA0                              IAmb  IAmb  06 36 57.0
      comp=Z,45nm,1.4s
TORD  Torodi Ar. Bea    38.20 125 P     P     06 36 50.2 +1.1
      comp=Z,134nm,0.4s,baz=312,slow=8.3,SNR=8.6
TORD                              LR    LR    06 52 03.6
      comp=Z,3µm,18.1s,baz=312,slow=35
PABE  Paberze           38.36  48 eP    P     06 36 48.2 -1.7
MARR  Marisel-Cluj      38.44  62 ⇓P    P     06 36 51.8 +0.9
MTSE  Matsula           38.47  42 eP    P     06 36 51.1 +0.3
LVV   L'vov             38.63  57 eP    P     06 36 55.4 +3.1
MEF   Metsahovi         38.93  40 eP    P     06 36 54.5 -0.2
LOT   Lotru             39.10  64 ⇓P    P     06 36 56.5 +0.1
BUR08 Bucovina Ar. S    39.68  60 P     P     06 37 00.9 -0.4
BUR08                             IAmb  IAmb  06 37 09.2
      comp=Z,66nm,1.9s
BURAR Bucovina Array    39.70  60 ⇑P    P     06 37 02.6 +1.1
BURAR Bucovina Array    39.70  60 P     P     06 37 00.1 -1.4
BURAR Bucovina Array    39.70  60 P     P     06 37 02.5 +1.1
ARR   Arges             39.71  64 ⇑P    P     06 37 01.9 +0.3
DBIC  Dimbokro          39.72 139 P     P     06 37 03.9 +2.2
      comp=Z,5.2nm,0.8s,baz=336,slow=6.9,SNR=7.3
DBIC                              LR    LR    06 51 59.1
      comp=Z,2µm,18.2s,baz=326,slow=34
      comp=Z,5.2nm,0.8s
DBIC  Dimbokro          39.72 139 P     P     06 37 04.7 +2.9
FINES FINESS Array B    39.89  38 P     P     06 37 01.8 -1.0
      comp=Z,5.0nm,0.8s,baz=256,slow=5.7,SNR=12
FINES                             LR    LR    06 51 57.6
      comp=Z,2µm,20.2s,baz=244,slow=34
      comp=Z,5.0nm,0.8s
FINES FINESS Array B    39.89  38 P     P     06 37 01.7 -1.0
NACGM Naroch            39.98  48 eP    P     06 37 04.3 +0.8
      comp=Z,16nm,0.9s,baz=272
VSU   Vasula            39.98  43⇑eP    P     06 37 04.9 +1.4
VSU                               pmax  pmax
      comp=Z,162nm,2.7s
VSU   Vasula            39.98  43 eP    P     06 37 04.6 +1.1
VOIR                    39.98  63 ⇑P    P     06 37 04.1 +0.3
VOIR                    39.98  63 P     P     06 37 04.1 +0.3
DOPR  Dopca             40.11  62 ⇑P    P     06 37 05.2 +0.4
MDP   Montagnes des     40.26 217 LR    LR    06 50 54.3
      comp=Z,708nm,19.5s,baz=14,slow=32
OZUR                    40.36  62 ⇑P    P     06 37 07.4 +0.6
MLR   Muntele Rosu      40.59  63 ⇑P    P     06 37 09.4 +0.5
MLR   Muntele Rosu      40.59  63 LR    LR    06 51 42.7
      comp=Z,1µm,19.4s,baz=239,slow=33
MLR   Muntele Rosu      40.59  63 IAmb  IAmb  06 37 20.2
      comp=Z,75nm,1.5s
MLR   Muntele Rosu      40.59  63 P     P     06 37 09.4 +0.5
MNK   Minsk             40.63  49 i P   P     06 37 08.6 -0.4
      comp=E,3.0nm,1.2s
MNK                               i P   P     06 37 08.6 -0.4
      comp=N,20nm,0.9s
MNK                               i P   P     06 37 08.6 -0.4
      comp=Z,16nm,0.9s,baz=273
MNK                               i PP  PP    06 38 42.6 +0.2
MNK                               i PPP PPP   06 39 08.0
MNK                               i S   S     06 43 19.5 +1.4
MNK                               i SS  SS    06 46 19.4 +1.5
MNK                               i SSS SSS   06 46 43.5
MNK                               i LQ  LQ    06 50 09.2
MNK                               i LR  LR    06 52 25.9
MNK                               i LRM MLR   06 56 10.2
      comp=N,640nm,20.0s
MNK                               i LRM MLR   06 56 17.9
      comp=Z,1µm,18.7s
MNK                               i LRM MLR   06 56 31.4
      comp=E,63nm,10.3s
MNK   Minsk             40.63  49 i P   P     06 37 08.5 -0.4
MNK                               i           06 38 42.5
MNK                               i PPP PPP   06 39 08.0
MNK                               i S   S     06 43 19.4 +1.4
MNK                               i SSS SSS   06 46 43.5
MNK                               pmax  pmax
      comp=N,20nm,0.9s
MNK                               pmax  pmax
      comp=E,3.0nm,1.2s
MNK                               pmax  pmax
      comp=Z,16nm,0.9s
MNK                               MLR   MLR
      comp=N,640nm,20.0s
MNK                               MLR   MLR
      comp=Z,1µm,19.0s
MNK                               MLR   MLR
      comp=E,63nm,10.0s
PLOR  Plostina          41.00  62 ⇑P    P     06 37 12.6 +0.5
PLOR  Plostina          41.00  62 P     P     06 37 12.6 +0.5
VRI   Vrincioaia        41.05  62 ⇑P    P     06 37 13.1 +0.5
VRI   Vrincioaia        41.05  62 P     P     06 37 13.0 +0.5
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ISR   Istrita           41.08  63 ⇑P    P     06 37 13.4 +0.5
ISR   Istrita           41.08  63 P     P     06 37 13.4 +0.5
ARCES ARCESS Array B    41.31  26 P     P     06 37 14.0 -0.4
      comp=E,11nm,1.0s,baz=248,slow=6.7,SNR=4.8
ARCES                             LR    LR    06 51 08.5
      comp=E,1µm,21.8s,baz=238,slow=32
      comp=E,11nm,1.0s
ARCES ARCESS Array B    41.31  26 P     P     06 37 14.0 -0.4
RDO   Rodhopi           41.39  70 P     P     06 37 15.1 -0.2
AKASG Malin Array Be    41.83  55 P     P     06 37 18.8 -0.1
      comp=E,5.7nm,0.7s,baz=275,slow=8.1,SNR=27
AKASG                             LR    LR    06 54 12.2
      comp=E,2µm,18.6s,baz=273,slow=36
      comp=E,5.7nm,0.7s
AKASG Malin Array Be    41.83  55 i P   P     06 37 18.7 -0.1
AKASG                             pmax  pmax
      comp=Z,5.0nm,0.7s
AKBB  Malin Array Si    41.83  55 P     P     06 37 17.9 -0.8
AKBB                              IAmb  IAmb  06 37 27.3
      comp=Z,83nm,1.8s
AKBB  Malin Array Si    41.83  55⇓eP    P     06 37 18.3 -0.5
AKBB                              pmax  pmax
      comp=Z,52nm,1.9s
HARR  Harsova           42.14  64 ⇑P    P     06 37 21.6 +0.2
HARR  Harsova           42.14  64 P     P     06 37 21.6 +0.2
CFR   Carcaliu          42.17  63 ⇑P    P     06 37 21.8 +0.1
CFR   Carcaliu          42.17  63 P     P     06 37 21.7 +0.1
TPGR  Topolog           42.44  63 ⇑P    P     06 37 23.8 -0.1
TKL   Tuckaleechee C    42.52 282 LR    LR    06 53 32.3
      comp=Z,2µm,19.3s,baz=98,slow=34
TIRR  Tirgusor          42.53  64 ⇓P    P     06 37 25.1 +0.4
TIRR  Tirgusor          42.53  64 P     P     06 37 23.2 -1.4
TIRR  Tirgusor          42.53  64 P     P     06 37 23.2 -1.4
TIRR                              pmax  pmax
      comp=Z,87nm,1.4s
SPITS Spitsbergen Ar    42.82  13 LR    LR    06 50 36.2
      comp=Z,645nm,20.7s,baz=170,slow=30
IDI   Anoyia            42.90  78 LR    LR    06 53 53.5
      comp=Z,2µm,21.6s,baz=282,slow=34
FCC   Fort Churchill    44.24 318 P     P     06 37 38.4 +0.2
FCC                               IAmb  IAmb  06 37 47.4
      comp=Z,58nm,1.8s
FCC   Fort Churchill    44.24 318 P     P     06 37 38.4 +0.2
FCC                               pmax  pmax
      comp=Z,58nm,1.8s
EYMN  Ely               44.31 302 P     P     06 37 40.4 +1.4
EYMN                              IAmb  IAmb  06 37 44.5
      comp=Z,50nm,1.9s
352A  Blakely           45.12 277 P     P     06 37 44.3 -1.3
352A                              IAmb  IAmb  06 37 54.3
      comp=Z,36nm,1.4s
WVT   Waverly           45.38 285 P     P     06 37 47.8 +0.2
WVT   Waverly           45.38 285 P     P     06 37 47.8 +0.2
WVT                               pmax  pmax
      comp=Z,13nm,1.3s
OBN   Obninsk           45.57  47 LR    LR    06 57 05.5
      comp=Z,266nm,19.2s,baz=250,slow=36
OBN   Obninsk           45.57  47 P     P     06 37 48.7 -0.1
OBN   Obninsk           45.57  47⇑eP    P     06 37 49.2 +0.4
OBN                               pmax  pmax
      comp=Z,107nm,1.4s
OBN                               MLR   MLR
      comp=Z,1µm,18.0s
RES   Resolute Bay      45.62 340 P     P     06 37 48.0 -1.0
      comp=Z,1.0nm,0.7s,baz=111,slow=8.2,SNR=8.0
RES                               PcP   PcP   06 39 27.1 +0.1
      comp=Z,1.9nm,0.9s,baz=111,slow=1.2,SNR=5.4
      comp=Z,1.0nm,0.7s
RES   Resolute Bay      45.62 340 P     P     06 37 48.4 -0.7
RES                               IAmb  IAmb  06 37 55.1
      comp=Z,34nm,2.0s
B35A  Bob, Littlefor    45.67 303 IAmb  IAmb  06 37 55.3
      comp=Z,27nm,1.4s
PLAL  Pickwick Lake     46.02 283 P     P     06 37 50.4 -2.3
PLAL                              IAmb  IAmb  06 38 05.6
      comp=Z,32nm,1.6s
MOS   Moscow            46.06  46 eP    P     06 37 52.1 -0.6
MOS                               e           06 39 41.0
MOS                               pmax  pmax
      comp=Z,35nm,0.9s
MOS                               MLR   MLR
      comp=Z,1µm,17.0s
F36A  Milaca            46.19 300 P     P     06 37 53.4 -0.5
F36A                              IAmb  IAmb  06 38 01.7
      comp=Z,43nm,1.8s
CGM3  Cape Girardeau    46.28 287 P     P     06 37 53.4 -1.3
KLMR  Klimovskoe        46.40  39 eP    P     06 37 53.8 -1.5
KLMR                              AMP         06 38 01.8
      comp=Z,68nm,1.6s
KLMR                              ePcP  PcP   06 39 26.3 -3.6
KLMR  Klimovskoe        46.40  39 eP    P     06 37 53.7 -1.5
KLMR                              e           06 39 26.3
KLMR                              pmax  pmax
      comp=Z,68nm,1.6s
ULM   Lac du Bonnet     46.58 306 P     P     06 37 55.9 -1.0
      comp=Z,0.7nm,0.3s,baz=135,slow=7.1,SNR=1.2
ULM                               LR    LR    06 56 32.2
      comp=Z,3µm,18.9s,baz=99,slow=35
      comp=Z,0.7nm,0.3s
ULM   Lac du Bonnet     46.58 306 P     P     06 37 54.6 -2.3
ULM                               IAmb  IAmb  06 38 06.6
      comp=Z,38nm,1.9s
ULM   Lac du Bonnet     46.58 306 P     P     06 37 54.6 -2.3
ULM                               pmax  pmax
      comp=Z,38nm,1.9s
K38A  Parkersburg       46.64 295 P     P     06 37 55.0 -2.5
I37A  Lemond, Waseca    46.65 297 P     P     06 37 55.7 -1.9
I37A                              IAmb  IAmb  06 38 44.3
      comp=Z,45nm,1.6s
AGMN  Agassiz Nation    47.06 303 P     P     06 37 58.7 -2.0
AGMN                              IAmb  IAmb  06 38 06.7
      comp=Z,27nm,1.6s
CCM   Cathedral Cave    47.16 289 P     P     06 38 00.9 -0.7
CCM                               IAmb  IAmb  06 38 13.8
      comp=Z,24nm,1.6s
CCM   Cathedral Cave    47.16 289 P     P     06 38 00.9 -0.7
CCM                               pmax  pmax
      comp=Z,24nm,1.7s
P40A  Paris             47.20 291 P     P     06 38 00.8 -1.0
P40A                              IAmb  IAmb  06 38 07.7
      comp=Z,19nm,1.2s
LPSR  Galich'ya Gora    47.42  50 eP    P     06 38 03.1 -0.3
LPSR                              pmax  pmax
      comp=Z,40nm,1.8s
T42A  Van Buren         47.44 287 IAmb  IAmb  06 38 33.1
      comp=Z,43nm,1.9s
BR131 Keskin Array S    47.70  69⇓iP    P     06 38 07.7 +1.7
BRTR  Keskin Array B    47.70  69 P     P     06 38 06.7 +0.7
      comp=Z,2.6nm,0.8s,baz=270,slow=6.2,SNR=5.6
BRTR                              LR    LR    06 56 25.5
      comp=Z,1µm,20.3s,baz=263,slow=34
      comp=Z,2.6nm,0.8s
BRTR  Keskin Array B    47.70  69 i P   P     06 38 08.6 +2.6
BRTR                              pmax  pmax
      comp=Z,3.0nm,0.8s
SDV   Santo Domingo     47.74 241 LR    LR    06 56 42.2
      comp=Z,968nm,18.7s,baz=62,slow=34
VORR  Voronezh          47.80  52 eP    P     06 38 06.1 -0.3
VORR                              pmax  pmax
      comp=Z,130nm,1.9s
R40A  Maddies Statio    47.82 289 IAmb  IAmb  06 38 12.5
      comp=Z,22nm,1.4s
LCAR  Lake Charles      47.87 286 P     P     06 38 04.6 -2.5
LCAR                              IAmb  IAmb  06 38 13.6
      comp=Z,30nm,1.7s
VORD  Divnogorie        48.03  53 eP    P     06 38 06.3 -1.8
VORD                              pmax  pmax
      comp=Z,8.0nm,0.6s
ANN   Anapa             48.60  61 eP    P     06 38 08.3 -4.4
ANN                               eS    S     06 45 08.2 -5.7
ANN                               pmax  pmax
      comp=Z,68nm,0.9s
ECSD  EROS Data Cent    48.94 298 P     P     06 38 15.6 +0.2
      baz=70
L34A  Svendsen Farm,    49.39 295 P     P     06 38 18.1 -0.7
VRH   Novokhopyorsk     49.44  52 eP    P     06 38 18.8 -0.2
VRH                               pmax  pmax
      comp=Z,60nm,1.7s
Z41A  Richland Creek    50.30 284 P     P     06 38 24.1 -1.6
MIAR  Mount Ida         50.31 285 P     P     06 38 25.6 -0.2
MIAR                              IAmb  IAmb  06 38 38.2
      comp=Z,28nm,1.5s
MIAR  Mount Ida         50.31 285 P     P     06 38 25.6 -0.2
MIAR                              pmax  pmax
      comp=Z,28nm,1.5s
E28A  Huff              50.71 303 P     P     06 38 28.2 -0.6
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BGNE	Belgrade	50.83	295	P	P	06 38 28.7	-1.0
KIRV	Kirov	51.74	41	LR	LR	07 01 14.8	
	comp=Z,1µm,18.6s,baz=265,slow=37						
KIRV	Kirov	51.74	41⇑	eP	P	06 38 35.7	-0.5
MMAI	Mount Meron Ar	51.76	76	LR	LR	07 02 37.6	
	comp=Z,695nm,18.2s,baz=311,slow=38						
OK033	Mehan	52.14	289	P	P	06 38 38.4	-1.2
OK033				IAmb	IAmb	06 38 46.8	
	comp=Z,54nm,1.8s						
DGMT	Dagmar	52.30	306	P	P	06 38 39.8	-0.9
BELG	Belogornoye	52.59	49	LR	LR	07 00 13.1	
	comp=Z,949nm,21.2s,baz=287,slow=35						
BELG	Belogornoye	52.59	49⇑	iP	P	06 38 43.3	+0.7
BELG				pmax	pmax		
	comp=Z,13nm,1.3s						
KBZ	Khabaz	52.65	60	P	P	06 38 44.8	+1.6
	comp=Z,5.3nm,1.0s,baz=235,slow=3.0,SNR=6.1						
	comp=Z,5.3nm,1.0s						
KBZ	Khabaz	52.65	60c	iP	P	06 38 45.6	+2.4
KBZ				pmax	pmax		
	comp=Z,39nm,1.8s						
ROSC	El Rosal	53.17	241	LR	LR	06 58 15.5	
	comp=Z,2µm,21.4s,baz=61,slow=32						
NCK	Nalchik	53.21	60⇓	eP	P	06 38 49.1	+1.7
NCK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ONI	Oni	53.47	62	P	P	06 38 50.8	+1.4
ONI	Oni	53.47	62	P	P	06 38 50.8	+1.4
ONI				pmax	pmax		
	comp=Z,71nm,2.0s						
YKA	Yellowknife Ar	53.49	325	P	P	06 38 49.2	+0.1
	comp=Z,0.7nm,0.7s,baz=70,slow=7.7,SNR=9.8						
YKA				PcP	PcP	06 39 55.0	-0.9
	comp=Z,0.4nm,0.6s,baz=74,slow=4.7,SNR=8.1						
YKA				LR	LR	06 59 03.8	
	comp=Z,1µm,19.6s,baz=121,slow=33						
	comp=Z,0.7nm,0.7s						
ZEI	Tsey	53.70	61	eP	P	06 38 51.3	+0.1
ZEI				pmax	pmax		
	comp=Z,35nm,1.8s						
LAO	LASA Array	54.23	304	P	P	06 38 57.1	+2.2
	baz=67						
A36M	Sachs Harbour	54.45	338	P	P	06 38 55.7	-0.3
A36M	Sachs Harbour	54.45	338	P	P	06 38 55.6	-0.4
	baz=70						
GNI	Garni	55.36	64⇑	eP	P	06 39 01.7	-1.6
GNI				pmax	pmax		
	comp=Z,54nm,1.8s						
EDM	Edmonton	56.00	314	P	P	06 39 08.0	+0.4
EDM	Edmonton	56.00	314	P	P	06 39 08.0	+0.4
EDM				pmax	pmax		
	comp=Z,55nm,1.6s						
K22A	Casper	56.05	300	P	P	06 39 10.2	+1.9
	baz=64						
AMTX	Amarillo	56.12	290	P	P	06 39 11.3	+2.5
	baz=62						
ISCO	Idaho Springs	56.67	297	P	P	06 39 13.4	+0.5
ISCO	Idaho Springs	56.67	297	P	P	06 39 13.4	+0.5
ISCO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
RLMT	Red Lodge	56.80	304	P	P	06 39 18.5	+4.9
	baz=65						
JCT	Junction City	56.85	284	P	P	06 39 15.3	+1.3
JCT				IAmb	IAmb	06 39 29.4	
	comp=Z,18nm,1.3s						
JCT	Junction City	56.85	284	P	P	06 39 15.3	+1.3
JCT				pmax	pmax		
	comp=Z,18nm,1.3s						
RWWY	Rawlins	56.92	299	P	P	06 39 13.5	-1.1
JTS	Las Juntas de	57.01	255	LR	LR	06 59 08.4	
	comp=Z,1µm,21.9s,baz=73,slow=31						
ARU	Arti	57.11	41	LR	LR	07 01 31.2	
	comp=Z,789nm,21.8s,baz=250,slow=34						
ARU	Arti	57.11	41	P	P	06 39 15.0	-0.3
ARU	Arti	57.11	41c	iP	P	06 39 15.9	+0.6
ARU						06 40 09.4	
ARU						06 41 17.8	
ARU				S	S	06 47 12.8	+3.1
ARU				SS	SS	06 50 58.4	+0.6
ARU				pmax	pmax		
	comp=Z,34nm,1.6s						
MSTX	Muleshoe	57.34	289	P	P	06 39 16.7	-0.8
MSTX				IAmb	IAmb	06 39 25.2	
	comp=Z,26nm,1.4s						
SDCO	Great Sand Dun	57.52	294	P	P	06 39 19.1	+0.2
YMP	Mirror Lake Pl	57.54	304	IAmb	IAmb	06 39 25.1	
	comp=Z,23nm,1.1s						
BDFB	Brasilia	57.70	201	P	P	06 39 22.6	+2.6
	comp=Z,3.0nm,0.7s,baz=55,slow=8.3,SNR=4.7						
BDFB				LR	LR	07 01 29.7	
	comp=Z,1µm,18.8s,baz=2.3,slow=33						
	comp=Z,3.0nm,0.7s						
BRLDA	Berland Lookou	57.87	316	P	P	06 39 20.8	0.0
SMCO	Snowmass	57.89	296	P	P	06 39 19.8	-1.8
H17A	Grant Village	57.96	303	P	P	06 39 21.5	-0.3
PD31	Pinedale Array	58.01	301	P	P	06 39 21.2	-1.0
PDAR	Pinedale Array	58.01	301	P	P	06 39 21.2	-1.0
	comp=Z,3.8nm,0.8s,baz=65,slow=7.1,SNR=19						
PDAR				LR	LR	07 04 25.2	
	comp=Z,2µm,18.2s,baz=106,slow=36						
	comp=Z,3.8nm,0.8s						
PDAR	Pinedale Array	58.01	301	P	P	06 39 21.2	-1.0
BW06	Boulder Array	58.01	301	P	P	06 39 21.7	-0.5
	baz=63						
YMR	Madison River	58.09	304	P	P	06 39 23.1	+0.4
BOZ	Bozeman (W)	58.10	305	P	P	06 39 22.8	+0.1
	baz=64						
INK	Inuvik	58.53	335	P	P	06 39 23.2	-1.9
	comp=Z,1.2nm,0.9s,baz=60,slow=5.1,SNR=5.8						
INK				LR	LR	07 02 24.7	
	comp=Z,1µm,19.1s,baz=91,slow=34						
	comp=Z,1.2nm,0.9s						
INK	Inuvik	58.53	335	P	P	06 39 24.7	-0.4
INK				IAmb	IAmb	06 39 32.2	
	comp=Z,32nm,1.9s						
INK	Inuvik	58.53	335	P	P	06 39 24.7	-0.4
INK				pmax	pmax		
	comp=Z,32nm,1.9s						
INK	Inuvik	58.53	335	P	P	06 39 24.5	-0.6
	baz=61						
TPAW	Teton Pass	58.60	303	IAmb	IAmb	06 39 32.3	
	comp=Z,22nm,1.6s						
DLMT	Dillon	58.82	305	IAmb	IAmb	06 39 36.7	
	comp=Z,34nm,1.4s						
F31M	Tsiigehtchic	59.03	334	P	P	06 39 28.8	+0.2
	baz=60						
MCMT	McKenzie Canyo	59.22	305	P	P	06 39 30.6	0.0
AKTO	Aktyubinsk	59.34	48	LR	LR	07 04 18.0	
	comp=Z,1µm,20.9s,baz=255,slow=35						
GDL2	Guadalupe Moun	59.37	288	P	P	06 39 31.4	-0.3
ANMO	Albuquerque	59.53	292	LR	LR	07 04 05.0	
	comp=Z,1µm,19.6s,baz=172,slow=35						
ANMO	Albuquerque	59.53	292	P	P	06 39 35.4	+2.5
ANMO				IAmb	IAmb	06 39 42.2	
	comp=Z,21nm,1.9s						
ANMO	Albuquerque	59.53	292	P	P	06 39 35.4	+2.5
ANMO				pmax	pmax		
	comp=Z,21nm,2.0s						
JLU	Jordanelle	60.27	300	P	P	06 39 38.0	+0.1
JLU				IAmb	IAmb	06 39 46.1	
	comp=Z,46nm,2.0s						
NEW	Newport	60.27	310	LR	LR	07 05 10.7	
	comp=Z,2µm,18.1s,baz=107,slow=36						
NEW	Newport	60.27	310	P	P	06 39 37.3	-0.2
NEW	Newport	60.27	310	P	P	06 39 37.3	-0.2
NEW				pmax	pmax		
	comp=Z,46nm,1.5s						
TXAR	Lajitas Array	60.32	285	P	P	06 39 37.9	-0.3
	comp=Z,2.1nm,0.8s,baz=72,slow=8.0,SNR=12						
TXAR				LR	LR	07 04 13.8	
	comp=Z,1µm,19.4s,baz=98,slow=35						
	comp=Z,2.1nm,0.8s						
TX31	Lajitas Ar. Si	60.32	285	P	P	06 39 38.4	+0.2
P17A	Butcher Ranch,	60.33	298	IAmb	IAmb	06 39 46.6	
	comp=Z,32nm,1.8s						
CMIG	Matias Romero	60.37	268	LR	LR	07 02 42.3	
	comp=Z,1µm,21.1s,baz=52,slow=33						
EPYK	Eagle Plains	60.59	334	P	P	06 39 40.5	+1.1
	baz=57						
WTLY	Watson Lake, Y	60.70	325	P	P	06 39 39.5	-0.7
WTLY				IAmb	IAmb	06 39 49.4	
	comp=Z,17nm,1.7s						
HLID	Hailey	60.80	304	P	P	06 39 42.2	+0.8
	baz=61						
C27K	Jago River	60.92	339	P	P	06 39 42.2	+0.6
	baz=53						
ABKAR	Akbulak array	60.99	49	P	P	06 39 41.2	-1.1
ABKAR	Akbulak array	60.99	49	IAmb	IAmb	06 39 49.8	
	comp=Z,21nm,1.4s						
C26K	Camden Bay	61.08	339	P	P	06 39 42.9	+0.3
	baz=52						
E27K	Coleen River	61.15	337	P	P	06 39 43.9	+0.7
	baz=54						
BGU	Big Grassy Mou	61.16	301	IAmb	IAmb	06 39 49.8	
	comp=Z,16nm,1.3s						
I29M	Ogilvie Camp,	61.69	333	IAmb	IAmb	06 39 59.4	
	comp=Z,22nm,1.4s						
I29M	Ogilvie Camp,	61.69	333	P	P	06 39 47.5	+0.6
	baz=56						
CZSB	Cruzeiro do Su	61.77	230	P	P	06 39 45.0	-3.0
CZSB				IAmb	IAmb	06 39 56.0	
	comp=Z,14nm,1.0s						
MVU	Marysvale	61.80	298	P	P	06 39 49.0	+0.6
D25K	Kavik River	61.85	339	P	P	06 39 48.5	+0.6
	baz=51						
NRIK	Noril'sk	61.95	21	P	P	06 39 50.2	+1.7
	comp=Z,1.8nm,0.5s,baz=286,slow=7.4,SNR=6.9						
	comp=Z,1.8nm,0.5s						
NRIK	Noril'sk	61.95	21	P	P	06 39 48.8	+0.3
NRIK				IAmb	IAmb	06 39 56.4	
	comp=Z,13nm,1.2s						
NRIK	Noril'sk	61.95	21⇑	iP	P	06 39 49.9	+1.4
NRIK				pmax	pmax		
	comp=Z,12nm,1.2s						
G27K	Doyon Strip	61.97	335	P	P	06 39 48.8	+0.1
	baz=54						
C24K	Franklin Bluff	62.23	340	P	P	06 39 51.2	+0.8
	baz=49						
H27K	Steamboat Moun	62.27	335	P	P	06 39 50.6	-0.2
	baz=54						
E25K	Arctic Village	62.38	338	P	P	06 39 52.0	+0.5
	baz=51						
DUN6	Lazy B Ranch	62.63	291	P	P	06 39 56.8	+3.0
M30M	Minto, Yukon	62.70	330	IAmb	IAmb	06 40 03.1	
	comp=Z,23nm,1.6s						
ELK	Elko	62.71	302	LR	LR	07 07 35.0	
	comp=Z,2µm,18.1s,baz=116,slow=37						
SIV	San Ignacio	62.72	214	LR	LR	07 04 54.6	
	comp=Z,475nm,18.2s,baz=50,slow=34						
WUAZ	Wupatki	62.73	295	P	P	06 39 57.8	+3.3
WUAZ				IAmb	IAmb	06 40 01.9	
	comp=Z,14nm,1.2s						
TLIG	Tlapa	62.94	271	P	P	06 39 58.9	+2.8
A21K	Barrow	63.06	343	P	P	06 39 54.5	-1.3
A21K				IAmb	IAmb	06 40 02.1	
	comp=Z,13nm,1.1s						
E24K	Your Creek	63.25	338	P	P	06 39 58.2	+0.9
	baz=49						
D23K	Nanushuk River	63.26	340	P	P	06 39 58.3	+1.0
	baz=47						
Q12A	Willow Creek R	63.30	300	P	P	06 39 59.2	+1.0
Q12A				IAmb	IAmb	06 40 09.4	
	comp=Z,12nm,1.0s						
X16A	Lo Mia Camp, P	63.34	294	P	P	06 40 00.5	+1.8
G24K	Hadweenzic Riv	63.85	337	P	P	06 40 02.9	+1.7
	baz=49						
PRP	Porcupine Dome	64.01	335	P	P	06 40 02.8	+0.3
PRP				IAmb	IAmb	06 40 28.4	
	comp=Z,22nm,1.6s						
PRP	Porcupine Dome	64.01	335	P	P	06 40 03.2	+0.7
	baz=50						
RAYN	Ar Rayn	64.24	80	P	P	06 40 04.1	-0.4
RAYN				IAmb	IAmb	06 40 12.2	
	comp=Z,22nm,1.8s						
RAYN	Ar Rayn	64.24	80	P	P	06 40 04.1	-0.4
RAYN				pmax	pmax		
	comp=Z,22nm,1.8s						
S11A	Rachel	64.64	299	P	P	06 40 08.0	+0.9
F22K	John River	64.67	339	P	P	06 40 07.2	+0.6
	baz=46						
BRVK	Borovoye	64.68	41	P	P	06 40 06.2	-0.7
BRVK				IAmb	IAmb	06 40 14.3	
	comp=Z,24nm,1.5s						
BRVK	Borovoye	64.68	41⇑	iP	P	06 40 07.6	+0.7
BRVK				pmax	pmax		
	comp=Z,18nm,1.5s						
W13A	Hualapai Mount	64.70	296	P	P	06 40 06.7	-0.8
BVAR	Borovoye Array	64.75	41	LR	LR	07 07 43.4	
	comp=Z,1µm,18.4s,baz=284,slow=36						
ATAH	Atahualpa	64.81	236	LR	LR	07 06 14.1	
	comp=Z,881nm,21.3s,baz=19,slow=34						
SHPR	Sheep Range	64.84	297	P	P	06 40 08.6	+0.2
SHPR				IAmb	IAmb	06 40 17.2	
	comp=Z,16nm,1.8s						
ILAR	Eielson Array	64.93	335	P	P	06 40 07.7	-0.6
	comp=Z,0.3nm,0.8s,baz=18,slow=3.4,SNR=4.3						
	comp=Z,0.3nm,0.8s						
V12A	Nelson	65.04	297	P	P	06 40 12.2	+2.6
V12A				IAmb	IAmb	06 40 16.5	
	comp=Z,22nm,1.6s						
H23K	Yukon River	65.06	337	IAmb	IAmb	06 40 17.9	
	comp=Z,35nm,2.0s						
F21K	Alatna River	65.23	339	P	P	06 40 11.3	+1.0
	baz=44						
TPNV	Topopah Spring	65.35	298	P	P	06 40 13.8	+2.1
TPNV	Topopah Spring	65.35	298	P	P	06 40 13.8	+2.1
TPNV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MOD	Modoc Plateau	65.38	305	IAmb	IAmb	06 40 18.7	
	comp=Z,11nm,1.0s						
I23K	Minto, Yukon-K	65.47	336	IAmb	IAmb	06 40 23.0	
	comp=Z,25nm,1.7s						
GEYT	Alibeck	65.55	60	P	P	06 40 13.4	+0.6
	comp=Z,1.4nm,0.5s,baz=316,slow=8.3,SNR=3.6						
	comp=Z,1.4nm,0.5s						
MZP	Montezuma Peak	65.71	300	P	P	06 40 13.4	-0.7
NEA2	Nenana	65.75	336	IAmb	IAmb	06 40 23.0	
	comp=Z,15nm,1.4s						
NV11	Mina Array Sit	65.84	301	P	P	06 40 15.2	+0.4
NV11				IAmb	IAmb	06 40 27.1	
	comp=Z,24nm,1.8s						
NVAR	Mina Array Bea	65.94	301	P	P	06 40 14.6	-1.0
	comp=Z,0.4nm,0.7s,baz=52,slow=51,SNR=2.5						
NVAR				LR	LR	07 09 20.1	
	comp=Z,2µm,18.8s,baz=108,slow=36						
	comp=Z,0.4nm,0.7s						
NVAR	Mina Array Bea	65.94	301	P	P	06 40 15.4	-0.1
PAHR	Pah Rah Range	65.96	302	P	P	06 40 13.9	-1.7
PAHR				IAmb	IAmb	06 40 23.9	
	comp=Z,27nm,1.7s						
GWY	Greenwater Val	66.04	298	P	P	06 40 14.9	-1.2
GWY				IAmb	IAmb	06 40 25.2	
	comp=Z,15nm,1.2s						
H21K	Melozitna Rive	66.15	338	IAmb	IAmb	06 40 17.3	
	comp=Z,27nm,1.9s						
LHV	Little Huntoon	66.16	301	P	P	06 40 15.4	-1.3
IMAR	Indian Mountai	66.19	338	P	P	06 40 15.7	-0.7
DSP	Deep Springs	66.28	300	P	P	06 40 21.5	+4.0
DSP				IAmb	IAmb	06 40 23.4	
	comp=Z,39nm,2.0s						
QSM	Queen of Sheba	66.29	298	IAmb	IAmb	06 40 26.8	
	comp=Z,35nm,1.8s						
GSC	Goldstone, Bar	66.61	297	P	P	06 40 20.4	+0.7
GSC				IAmb	IAmb	06 40 27.0	
	comp=Z,30nm,1.6s						
GSC	Goldstone, Bar	66.61	297	P	P	06 40 20.4	+0.7
GSC				pmax	pmax		
	comp=Z,30nm,1.7s						
BPAW	Bear Paw Mtn.	66.70	336	P	P	06 40 22.3	+2.5
OMMB	Old Mammoth Mi	66.84	300	P	P	06 40 22.8	+1.3
YBH	Yreka Blue Hor	66.99	306	LR	LR	07 08 41.2	
	comp=Z,1µm,19.9s,baz=108,slow=35						
PFO	Pinyon Flats O	67.29	295	LR	LR	07 10 04.1	
	comp=Z,1µm,19.3s,baz=96,slow=36						
NNA	Nana	67.61	231	LR	LR	07 07 02.5	
	comp=Z,413nm,20.5s,baz=22,slow=33						
BRZS	Berezniki	67.65	43	eP	P	06 40 26.0	0.0
	comp=Z,14nm,2.0s,baz=43						
BRZS	Berezniki	67.65	43	eP	P	06 40 26.0	0.0
BRZS				pmax	pmax		
	comp=Z,14nm,2.0s						
TIXI	Tiksi	67.88	7	P	P	06 40 26.4	-0.6
TIXI				IAmb	IAmb	06 40 28.9	
	comp=Z,21nm,1.5s						
TIXI	Tiksi	67.88	7⇑	eP	P	06 40 27.9	+0.9
TIXI				pmax	pmax		
	comp=Z,17nm,1.7s						
MBAR	Mbarara	67.98	110	LR	LR	07 09 33.6	
	comp=Z,1µm,18.5s,baz=283,slow=35						
LPIG	La Paz	68.14	284	LR	LR	07 10 04.5	
	comp=Z,873nm,19.8s,baz=91,slow=36						
TNA	Tin City	70.17	343	P	P	06 40 40.1	-1.2
KURK	Kurchatov	70.24	40	P	P	06 40 42.0	0.0
KURK				IAmb	IAmb	06 40 48.9	
	comp=Z,24nm,1.4s						
KURK	Kurchatov	70.24	40c	iP	P	06 40 42.5	+0.5
KURK				pmax	pmax		
	comp=Z,20nm,1.5s						
KURBB	Kurchatov Arra	70.25	40	LR	LR	07 11 09.7	
	comp=Z,801nm,19.2s,baz=217,slow=36						
ANM	Nome	70.39	341	P	P	06 40 43.5	+0.7
ANM	Nome	70.39	341	P	P	06 40 43.5	+0.7
ANM				pmax	pmax		
	comp=Z,12nm,1.6s						
KK31	Karatay Array	70.47	50	IAmb	IAmb	06 40 51.0	
	comp=Z,13nm,1.3s						
KKAR	Karatay Array	70.47	50	IAmb	IAmb	06 40 51.0	
	comp=Z,13nm,1.3s						
IUG	Iuzhnay	70.75	51	eP	P	06 40 46.4	+0.9
ZAA0	Zalesovo Array	71.03	35	P	P	06 40 47.5	+0.7
ZAA0				IAmb	IAmb	06 40 53.6	
	comp=Z,22nm,1.2s						
ZALV	Zalesovo Beam	71.03	35	P	P	06 40 46.4	-0.4
	comp=Z,1.6nm,0.7s,baz=120,slow=24,SNR=3.2						
ZALV				LR	LR	07 10 37.3	
	comp=Z,1µm,19.4s,baz=268,slow=35						
	comp=Z,1.6nm,0.7s						
ZALV	Zalesovo Beam	71.03	35	P	P	06 40 45.9	-0.9
ZALV	Zalesovo Beam	71.03	35	P	P	06 40 45.9	-0.9
BTLS	Baital	71.34	47	eP	P	06 40 49.4	+0.5
	comp=Z,15nm,2.2s,baz=47						
BTLS	Baital	71.34	47	eP	P	06 40 49.4	+0.5
BTLS				pmax	pmax		
	comp=Z,15nm,2.2s						
UOSS	Minazif	71.44	73	P	P	06 40 49.1	-0.8
UOSS				IAmb	IAmb	06 40 55.4	
	comp=Z,31nm,1.4s						
BILL	Bilibino	71.89	354	P	P	06 40 51.3	-0.5
BILL				IAmb	IAmb	06 40 54.3	
	comp=Z,31nm,1.7s						
BILL	Bilibino	71.89	354⇓	iP	P	06 40 51.8	0.0
BILL				pmax	pmax		
	comp=Z,20nm,1.7s						
SGDS	Sogindy	72.65	48	eP	P	06 40 57.3	+0.4
	comp=Z,11nm,1.7s,baz=48						
SGDS	Sogindy	72.65	48	eP	P	06 40 57.2	+0.4
SGDS				pmax	pmax		
	comp=Z,11nm,1.7s						
AAK	Ala-Archa	73.08	48	LR	LR	07 14 40.5	
	comp=Z,936nm,19.2s,baz=306,slow=37						
AAK	Ala-Archa	73.08	48⇓	iP	P	06 41 01.3	+1.8
TSUM	Tsumeb	73.31	134	LR	LR	07 11 35.5	
	comp=Z,1µm,19.7s,baz=331,slow=34						
KUU	Kurty	73.34	47	eP	P	06 41 01.3	+0.4
	baz=46						
KUU	Kurty	73.34	47	eP	P	06 41 01.2	+0.4
MDOK	Medeo	74.20	47	eP	P	06 41 06.3	+0.2
	baz=47						
MDOK	Medeo	74.20	47	eP	P	06 41 06.3	+0.2
MAKZ	Makanchi	74.46	42	P	P	06 41 07.4	0.0
MAKZ				IAmb	IAmb	06 41 14.5	
	comp=Z,20nm,1.4s						
MAKZ	Makanchi	74.46	42	P	P	06 41 07.4	0.0
MAKZ				pmax	pmax		
	comp=Z,20nm,1.4s						
KIBK	Kibwezi	74.50	106	P	P	06 41 09.3	+1.2
KIBK				IAmb	IAmb	06 41 18.0	
	comp=Z,24nm,1.7s						
MK31	Makanchi Array	74.63	41	P	P	06 41 08.2	-0.1
MK31	Makanchi Array	74.63	41	P	P	06 41 08.3	-0.1
MK31				pmax	pmax		
	comp=Z,12nm,1.3s						
MKAR	Makanchi Array	74.63	41	P	P	06 41 08.0	-0.4
	comp=Z,3.1nm,0.8s,baz=316,slow=5.3,SNR=24						
MKAR				LR	LR	07 14 38.6	
	comp=Z,710nm,19.0s,baz=304,slow=36						
	comp=Z,3.1nm,0.8s						
MKAR	Makanchi Array	74.63	41	P	P	06 41 08.1	-0.3
MKAR	Makanchi Array	74.63	41	i P	P	06 41 08.8	+0.4
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KPKS	Kokpek	74.92	46	eP	P	06 41 10.8	+0.5
	comp=Z,37nm,2.0s,baz=46						
KPKS	Kokpek	74.92	46	eP	P	06 41 10.7	+0.5
KPKS				pmax	pmax		
	comp=Z,37nm,2.0s						
SATY	Saty	75.03	46	eP	P	06 41 11.1	+0.2
	comp=Z,20nm,1.6s,baz=46						
SATY	Saty	75.03	46	eP	P	06 41 11.1	+0.2
SATY				pmax	pmax		
	comp=Z,21nm,1.6s						
DGZ	Jazzator, Alta	75.13	37d	eP	P	06 41 12.2	+0.8
DGZ				pmax	pmax		
	comp=Z,30nm,1.6s						
UZB	Uzynbulak	75.31	46	eP	P	06 41 12.9	+0.4
	baz=46						
UZB	Uzynbulak	75.31	46	eP	P	06 41 12.9	+0.4
SHLS	Shalkode	75.55	46	eP	P	06 41 16.1	+2.2
	baz=45						
SHLS	Shalkode	75.55	46	eP	P	06 41 16.0	+2.2
KSH	Kashi	75.92	50	P	P	06 41 17.8	+1.8
KSH				pmax	pmax		
	comp=Z,13nm,1.3s						
KSH				LR	LR		
	comp=N,930nm,17.2s						
KSH				LR	LR		
	comp=E,1µm,20.6s						
KSH				LR	LR		
	comp=Z,1µm,22.7s						
YAK	Yakutsk	77.21	10⇑	eP	P	06 41 21.9	-0.8
YAK				pmax	pmax		
	comp=Z,15nm,0.5s						
SEY	Seymchan	77.67	359	P	P	06 41 25.1	-0.2
	comp=Z,0.6nm,0.3s,baz=20,slow=15,SNR=4.7						
	comp=Z,0.6nm,0.3s						
SEY	Seymchan	77.67	359⇑	eP	P	06 41 25.8	+0.5
SEY				pmax	pmax		
	comp=Z,12nm,1.8s						
MOY	Mondy	79.31	29	eP	P	06 41 34.6	-0.1
MOY				pmax	pmax		
	comp=Z,34nm,2.1s						
WMQ	Urumqi	79.44	41	eP	P	06 41 41.5	+6.0
WMQ				sP	PcP	06 41 45.3	+1.7
WMQ				PcP	sP	06 41 48.3	+7.0
WMQ				pmax	pmax		
	comp=Z,19nm,1.1s						
WMQ				LR	LR		
	comp=N,1µm,17.3s						
WMQ				LR	LR		
	comp=E,1µm,17.3s						
WMQ				LR	LR		
	comp=Z,700nm,17.3s						
ZAK	Zakamensk	81.19	28	eP	P	06 41 41.3	-3.6
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.8s						
LBTB	Lobatse	82.44	131	LR	LR	07 17 06.2	
	comp=Z,678nm,19.4s,baz=314,slow=35						
SONM	Songino Array	84.45	28	P	P	06 42 01.0	-0.9
	comp=Z,1.6nm,0.9s,baz=299,slow=3.4,SNR=11						
	comp=Z,1.6nm,0.9s						
SONM	Songino Array	84.45	28	IAmb	IAmb	06 42 03.6	
	comp=Z,26nm,1.7s						
SONM	Songino Array	84.45	28	P	P	06 42 01.0	-0.9
ULN	Ulaanbaatar	84.66	28	P	P	06 42 03.5	+0.5
ULN				IAmb	IAmb	06 42 05.0	
	comp=Z,22nm,1.3s						
ULN	Ulaanbaatar	84.66	28	P	P	06 42 03.5	+0.5
ULN				pmax	pmax		
	comp=Z,22nm,1.3s						
ZEA	Zeya	84.79	14	i P	P	06 42 04.3	+1.0
BOSA	Boshof	85.01	134	LR	LR	07 16 53.6	
	comp=Z,1µm,20.6s,baz=300,slow=33						
SUR	Sutherland	85.61	139	LR	LR	07 16 50.2	
	comp=Z,338nm,20.7s,baz=310,slow=33						
GTA	Gaotai	88.67	37	eP	P	06 42 23.0	+0.3
GTA				pP	sP	06 42 28.8	+0.5
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KLR	Kul'dur	89.90	12⇑	eP	P	06 42 27.1	-1.0
KLR				pmax	pmax		
	comp=Z,17nm,5.0s						
BTO	Baotou	91.98	30	eP	P	06 42 57.8	+20
BTO				pmax	pmax		
	comp=Z,57nm,0.6s						
BTO				pmax	pmax		
	comp=Z,660nm,5.7s						
HHC	Hu-ho-hao-te	92.34	28	eP	P	06 42 42.0	+2.2
HHC				pmax	pmax		

	comp=Z,34nm,0.9s						
BJI	**Beijing**	94.68	26	P	P	06 42 50.3	0.0
BJI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HNS	**HongShan**	96.53	28	⇑P	P	06 42 53.0	-5.8
HNS				pmax	pmax		
	comp=Z,21nm,0.8s						
RPN	**Rapa Nui**	99.57	243	LR	LR	07 23 00.9	
	comp=Z,126nm,19.6s,baz=76,slow=32						
PZH	**PanZhiHua**	100.02	43	P	Pdif	06 43 16.5	+1.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2	**Nanjing**	102.82	27	*e*P	Pdif	06 43 28.3	+1.3
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
PSA00	**Pilbara Seismi**	148.31	64		PKPbc	06 49 16.1	+0.3
WRA	**Warramunga Arr**	155.93	40	PKPab	PKPab	06 49 50.9	+0.2
	comp=Z,1.2nm,0.9s,baz=334,slow=4.7,SNR=4.8						
ASAR	**Alice Springs**	158.76	46	PKPab	PKPab	06 50 03.4	+0.5
	comp=Z,0.5nm,0.5s,baz=320,slow=3.7,SNR=6.5						

KRSC 29 06:32:38.6±1.2, 56°.92N×163°.19E, h22^{km}±18^{km}, Ml3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBG	**Krutoberegovo**	0.72	202	*e*P	Pb	06 32 52.6	+0.3
KBG				*e*S	Sn	06 33 03.1	-0.5
KBTR	**Krutoberegovo**	0.74	196	*e*P	Pn	06 32 53.3	-0.4
KBTR				*e*S	Sn	06 33 04.3	0.0
SMKR	**Semkarok**	1.00	251	*e*P	Pb	06 32 56.7	-0.6
SMKR				*e*S	Sb	06 33 10.5	+0.4
SRKR	**Sorokina**	1.14	257	*e*P	Pn	06 32 58.6	-0.7
SRKR				*e*S	Sb	06 33 13.3	-0.7
KLY	**Klyuchi**	1.53	248	*e*P	Pn	06 33 03.4	-1.1
KLY				*e*S	Sn	06 33 21.5	-2.2
BZWR	**Bezymyannyi-We**	1.77	239	*e*P	Pn	06 33 09.2	+1.2
BZWR				*e*S	Sb	06 33 32.5	+0.2
BZP	**Bezymyannyi-Pe**	1.79	237	*e*P	Pn	06 33 09.1	+0.9
BZMR	**Bezymyannaya**	1.79	238	*e*P	Pn	06 33 09.5	+1.2
BZMR				*e*S	Sb	06 33 33.4	+0.6
KIRR	**Kirishev**	1.85	240	*e*P	Pn	06 33 10.3	+1.1
KIRR				*e*S	Sb	06 33 34.0	-0.5
KPT	**Kopyto**	1.90	241	*e*P	Pb	06 33 11.5	-1.1
KPT				*e*S	Sb	06 33 36.1	+0.2
SRDR	**Sredinnyy**	2.01	254	*e*P	Pn	06 33 12.4	+1.2
SRDR				*e*S	Sn	06 33 37.0	+1.3
KMNR	**Kamenistaya**	2.01	236	*e*P	Pb	06 33 13.6	-0.9
KMNR				*e*S	Sb	06 33 39.5	+0.4
KOZ	**Kozyrevsk**	2.03	246	*e*P	Pb	06 33 13.5	-1.2
KOZ				*e*S	Sb	06 33 39.4	-0.1
BKI	**Bering**	2.32	137	*e*P	Pb	06 33 18.4	-1.3
BKI				*e*S	Sb	06 33 46.7	-1.1
OSSR	**Ossora**	2.34	358	*e*P	Pn	06 33 17.2	+1.5
OSSR				*e*S	Sb	06 33 48.2	-0.2
TUMR	**Tumrok**	2.36	227	*e*P	Pb	06 33 18.6	-1.9
MKZ	**Mys Kozlova**	2.51	200	*e*P	Pn	06 33 20.3	+2.4
MKZ				*e*S	Sb	06 33 51.8	-1.4
TIGL	**Tigil**	2.59	291	*e*P	Pb	06 33 22.3	-1.9
TIGL				*e*S	Sb	06 33 54.3	-1.3
ESO	**Esso**	2.68	250	*e*P	Pb	06 33 24.0	-1.8
KII	**Karymskiy**	3.59	218	*e*P	Pn	06 33 35.7	+2.8
SPN	**Mys Shipunski**	4.24	207	*e*P	Pn	06 33 44.4	+2.7
SPN				*e*S	Sn	06 34 31.7	+1.2
GNL	**Ganaly**	4.41	225	*e*P	Pn	06 33 47.4	+3.2
KRX	**Arik**	4.42	218	*e*P	Pn	06 33 48.5	+4.1
SMAR	**Somma**	4.45	216	*e*P	Pn	06 33 48.0	+3.2
MTVR	**Mutnovka**	5.31	215	*e*P	Pn	06 34 00.9	+4.3

DDA ***29*** *06:34:20.4±0.0, 39°.55N×26°.06E, h8^{km}±1^{km}, ML1.1*

ISK 29 06:34:19.8, 39°.54N×26°.05E, h4^{km}, ML1.9/6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	**Canakkale, Ayv**	0.07	117	P	Pg	06 34 19.1	-2.3
KOCA				S	Sg	06 34 24.4	+1.9
GPNR	**Gulpinar-Canak**	0.10	142	Pg	Pg	06 34 22.4	+0.6
GPNR				Sg	Sg	06 34 24.3	+1.1
BOZC	**Bozcaada**	0.31	0	Pg	Pg	06 34 26.6	+0.9
BOZC				Sg	Sg	06 34 31.3	+1.5
BOZC	**Bozcaada**	0.31	0	P	Pg	06 34 26.4	+0.7
BOZC				S	Sg	06 34 31.1	+1.3
BOZC				*i* AML	AML	06 34 35.0	
	comp=E,59nm,1.0s						
BOZC				*i* AML	AML	06 34 40.0	
	comp=N,45nm,1.1s						
EZN	**Ezine**	0.36	36	Pg	Pg	06 34 27.7	+1.0
EZN				Sg	Sb	06 34 33.2	-1.5
SIGR	**SIGRI**	0.36	205	Pg	Pg	06 34 27.7	+1.0
SIGR				Sg	Sb	06 34 33.1	-1.6
BAYC	**CANAKKALE_Bayr**	0.43	62	P	Pg	06 34 28.8	+0.7
BAYC				S	Sg	06 34 34.9	+1.0
BAYC				*i* AML	AML	06 34 35.0	
	comp=E,12nm,0.1s						
BAYC				*i* AML	AML	06 34 38.0	
	comp=N,14nm,0.4s						
COMU	**Canakkale**	0.65	30	Pg	Pb	06 34 33.3	-0.4
COMU				Sg	Sb	06 34 42.8	-0.4
GELI	**Tayfur-Gelibol**	0.92	20	Pg	Pg	06 34 37.5	0.0
GELI				Sg	Sb	06 34 51.3	+0.4
CHOS	**Chios island**	1.15	180	Pn	Pb	06 34 42.2	0.0

IDC ***29*** *06:35:14.8±0.4, 39°.87N×29°.74W, h0^{km}, mb4.5/36, mbtmp4.5/37, ML3.9/1, MS4.7/1, Error ellipse: s-maj=13.0km s-min=9.0km az=173.0*

BJI ***29*** *06:35:14.0±0.0, 39°.90N×29°.60W, h10^{km}, mb5.2/41, mB5.8/13, Ms5.4/13, Ms7 5.2/13*

MOS ***29*** *06:35:14.7±0.9, 39°.89N×29°.66W, h10^{km}, mb5.3/77, MS4.6/7, Error ellipse: s-maj=7.8km s-min=4.4km az=48.7*

IGIL ***29*** *06:35:16.5, 39°.93N×29°.64W, h10^{km}, Mb5.1*

NEIC ***29*** *06:35:16.8±2.0, 39°.90N±0°.09×29°.7W±0°.1, h10^{km}±1^{km}, mb5.3/449, Error ellipse: s-maj=16.2km s-min=13.8km az=332.0*

SVSA ***29*** *06:35:18.1±1.6, 39°.95N×29°.52W, h10^{km}, ML4.1(INMG), Error ellipse: s-maj=8.6km s-min=3.8km az=21.0*

BGR ***29*** *06:35:36.4, 41°.45N×27°.59W, h10^{km}, mb5.1*

ISC 29 06:35:16.6±0.7, 39°.83N±0°.04×29°.60W±0°.03, h11^{km}±3^{km}, n962, σ1^{s}.20/825, mb5.3/323, MS4.7/14, 40C-32D, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H07N1	**FLORES T-PHASE**	1.18	264	Pn	Pb	06 35 35.9	-3.1
H07N1	**FLORES T-PHASE**	1.18	264	*e*P	Pb	06 35 37.3	-1.7
H07N1				*e*S	Sb	06 35 52.1	-2.2
H07N1				A	A	06 35 57.2	
	2μm,0.4s						
H07S1	**FLORES T-PHASE**	1.32	251	Pn	Pn	06 35 37.8	-3.2
H07S1	**FLORES T-PHASE**	1.32	251	*e*P	Pn	06 35 39.4	-1.6
H07S1				*e*S	Sb	06 35 55.2	-3.2
H07S1				A	A	06 35 56.6	
	674nm,0.3s						
CALA	**Caldeira**	1.43	150	*e*P	Pn	06 35 38.8	-3.7
CALA				*e*S	Sn	06 35 56.4	-4.9
CALA				A	A	06 36 02.5	
	1μm,0.6s						
SRBC	**Serra Branca**	1.44	123	*e*P	Pn	06 35 39.8	-2.9
SRBC				*e*S	Sn	06 35 56.6	-5.0
SRBC				A	A	06 36 00.1	
	4μm,0.3s						
PRIB2	**Ribeirinha**	1.45	148	*e*S	Sn	06 35 57.7	-4.1
PRIB2				A	A	06 36 00.5	
	416nm,0.3s						
PFCBR	**Castelo Branco**	1.48	152	*e*P	Pg	06 35 54.6	+10
HOR	**Horta**	1.50	150	*e*P	Pn	06 35 41.1	-2.4
HOR				*e*S	Sn	06 35 59.0	-4.0
HOR				A	A	06 36 01.6	
	277nm,0.2s						
ROSA	**Rosais**	1.53	136	Pn	Pn	06 35 42.1	-1.8
PICO	**Pico**	1.61	145	*e*P	Pn	06 35 42.2	-2.8
PICO				*e*S	Sn	06 36 00.9	-4.9
PICO				A	A	06 36 06.0	
	447nm,0.3s						
PCAN	**Candelaria**	1.61	147	*e*P	Pn	06 35 42.6	-2.5
PSBA	**Serra de Santa**	2.06	120	*e*P	Pn	06 35 48.1	-3.1
PAGU	**Agualva, Azore**	2.15	119	*e*P	Pn	06 35 49.5	-2.9
ADH	**Angra Heroismo**	2.18	122	*e*P	Pn	06 35 48.6	-4.2
PSCM	**Serra do Cume**	2.23	120	*e*P	Pn	06 35 50.7	-2.8
PSCM				*e*S	Sn	06 36 15.5	-5.6
PSCM				A	A	06 36 19.8	
	290nm,0.4s						
CMLA	**Cha da Macela**	3.79	122	*e*P	Pn	06 36 12.6	-2.4
CMLA				*e*S	Sn	06 36 54.1	-5.5
PMAFR	**Mafra**	15.73	87	P	Pn	06 38 58.2	0.0
LIS	**Lisbon**	15.88	87	*e*P	Pn	06 38 59.8	-0.2
LIS				A	A	06 39 04.3	
	179nm,1.2s						
PCAS	**Casmilo, Conde**	16.19	82	*e*P	Pn	06 39 05.3	+1.3
PCAS				A	A	06 39 13.8	
	120nm,1.5s						
COI	**Coimbra**	16.24	82	P	Pn	06 39 04.5	-0.1
COI	**Coimbra**	16.24	82	P	Pn	06 39 04.5	-0.1
COI				pmax	pmax		
	comp=Z,108nm,1.3s						
PGAV	**Gavieira, Arco**	16.27	76	*e*P	Pn	06 39 04.9	-0.2
PGAV				A	A	06 39 22.7	
	comp=Z,74nm,1.9s						
PTEO	**Sao Teotonio**	16.46	91	*e*P	Pn	06 39 06.6	-0.8
PTEO				A	A	06 39 15.1	
	comp=Z,175nm,1.7s						
PNCL	**Nicolau / Gran**	16.48	89	P	Pn	06 39 06.8	-0.9
PNCL	**Nicolau / Gran**	16.48	89	*e*P	Pn	06 39 07.3	-0.3
PNCL				A	A	06 39 15.3	
	comp=Z,119nm,1.6s						
PFVI	**Vila Bisbo**	16.49	93	P	Pn	06 39 07.6	-0.2
PFVI	**Vila Bisbo**	16.49	93	P	P	06 39 11.7	+1.3
PFVI	**Vila Bisbo**	16.49	93	*e*P	P	06 39 12.0	+1.6
PFVI				A	A	06 39 14.6	
	comp=Z,155nm,1.7s						
EOSO	**Osorio**	16.51	131	P	P	06 39 13.3	+2.5
PMTG	**Montargil**	16.53	86	*e*P	Pn	06 39 07.5	-0.8
PMTG				A	A	06 39 15.5	
	comp=Z,154nm,1.6s						
MORF	**Marmelete**	16.57	92	P	Pn	06 39 07.7	-1.2
MORF	**Marmelete**	16.57	92	P	Pn	06 39 07.7	-1.2
MORF				pmax	pmax		
	comp=Z,128nm,1.5s						
MORF	**Marmelete**	16.57	92	*e*P	Pn	06 39 09.7	+0.7
MORF				A	A	06 39 23.0	
	comp=Z,117nm,1.8s						
MORF	**Marmelete**	16.57	92	*e*P	Pn	06 39 09.5	+0.6
MORF				IAmb	IAmb	06 39 14.3	
	comp=Z,238nm,1.8s						
MESJ	**Messejana**	16.77	90	P	Pn	06 39 10.9	-0.6
MESJ	**Messejana**	16.77	90	P	Pn	06 39 10.9	-0.6
MESJ				pmax	pmax		
	comp=Z,258nm,1.8s						
MESJ	**Messejana**	16.77	90	*e*P	P	06 39 13.1	-0.6
MESJ				A	A	06 39 18.8	
	comp=Z,167nm,1.7s						
MESJ	**Messejana**	16.77	90	*e*P	Pn	06 39 11.8	+0.3
MESJ				IAmb	IAmb	06 39 17.7	
	comp=Z,366nm,2.0s						
EVO	**Evora**	16.79	88	P	Pn	06 39 11.4	-0.2
MTE	**Manteigas**	16.88	81	P	Pn	06 39 12.5	-0.3
PCVE	**Castro Verde**	16.96	91	P	Pn	06 39 14.2	+0.4
PCVE	**Castro Verde**	16.96	91	*e*P	Pn	06 39 13.4	-0.4
PCVE				A	A	06 39 21.1	
	comp=Z,121nm,1.8s						
PCBR	**Castelo Branco**	16.99	83	*e*P	P	06 39 15.8	-0.2
PCBR				A	A	06 39 19.7	
	comp=Z,104nm,1.7s						
PBEJ	**Beja**	17.00	89	*e*P	P	06 39 17.2	+1.0
PBEJ				A	A	06 39 27.5	
	comp=Z,111nm,1.9s						
PESTR	**Estremoz**	17.05	86	P	Pn	06 39 15.6	+0.7
PESTR	**Estremoz**	17.05	86	P	P	06 39 16.6	-0.1
PESTR	**Estremoz**	17.05	86	P	P	06 39 16.9	+0.2
PESTR	**Estremoz**	17.05	86	*e*P	P	06 39 16.6	-0.1
PESTR				A	A	06 39 20.4	
	comp=Z,90nm,1.7s						
PMRV	**Marv??o**	17.11	84	*e*P	P	06 39 16.7	-0.7
PMRV				A	A	06 39 20.7	
	comp=Z,90nm,1.8s						
PBDV	**Barranco-do-Ve**	17.14	92	*e*P	Pn	06 39 16.0	-0.1
PBDV				A	A	06 39 22.5	
	comp=Z,193nm,1.8s						
PVAQ	**Vaqueiros**	17.27	91	P	Pn	06 39 17.2	-0.4
PVAQ	**Vaqueiros**	17.27	91	P	Pn	06 39 17.9	+0.2
PVAQ	**Vaqueiros**	17.27	91	*e*P	Pn	06 39 18.3	+0.6
PVAQ				A	A	06 39 24.6	
	comp=Z,78nm,1.6s						
EGRO	**El Granado**	17.42	91	P	P	06 39 20.3	-0.5
EBAD	**Badajoz**	17.51	86	P	P	06 39 23.1	+1.2
PBAR	**Barrancos**	17.61	88	P	P	06 39 23.9	+1.0
PBAR	**Barrancos**	17.61	88	*e*P	P	06 39 23.2	+0.3
PBAR				A	A	06 39 26.9	
	comp=Z,87nm,1.8s						
EMIN	**Mina Concepcio**	17.98	89	P	P	06 39 28.9	+1.9
ESPR	**Espera**	18.84	91	P	Pn	06 39 38.5	+1.4
ECAB	**El Cabril**	18.88	88	P	Pn	06 39 39.1	+1.6
AVE	**Averroes**	18.95	103	P	Pn	06 39 38.2	-0.2
PAB	**San Pablo**	19.42	83		Pn	06 39 45.2	+1.1
PAB	**San Pablo**	19.42	83	P	Pn	06 39 45.2	+1.1
PAB				pmax	pmax		
	comp=Z,83nm,1.7s						
ZHG	**ZHG**	19.47	102	P	Pn	06 39 48.0	+3.3
ESDC	**Sonseca Array**	19.70	82	P	P	06 39 46.1	+0.3
	comp=Z,0.1nm,0.3s,baz=288,slow=8.1,SNR=16						
	comp=Z,5.7nm,0.9s						
ESDC	**Sonseca Array**	19.70	82	P	Pn	06 39 47.0	-0.4
ESBB	**Sonseca Array**	19.70	82	P	Pn	06 39 47.0	-0.4
LCRM	**LCR**	20.72	99	P	Pn	06 40 01.0	+1.5
PALE	**Palemas**	20.84	95	P	Pn	06 40 01.0	+0.3
AKLM	**AKL**	21.15	96	P	P	06 40 04.0	+2.3
MDT	**Midelt**	21.28	101	P	P	06 40 04.8	+1.7
	comp=Z,5.6nm,1.0s,baz=290,slow=9.9,SNR=9.2						
	comp=Z,5.6nm,1.0s						
GOG	**Mont Gurugu**	21.56	94	P	P	06 40 08.0	+1.9
DRLN	**Deer Lake**	21.90	305	P	P	06 40 08.0	-1.6
DRLN				IAmb	IAmb	06 40 15.7	
	comp=Z,191nm,1.5s						
TAF	**Taforalt**	22.15	94	P	P	06 40 16.0	+3.5
JBK	**JBK**	22.21	96	P	P	06 40 15.0	+1.8
ARF	**Arif**	22.21	104	P	P	06 40 19.0	+5.8
TDRA	**Tendrara**	23.14	98	P	P	06 40 25.2	+2.2
ESK	**Eskdalemuir**	23.40	40	P	P	06 40 24.1	-1.1
ESK				IAmb	IAmb	06 40 26.2	
	comp=Z,94nm,1.4s						
ESK	**Eskdalemuir**	23.40	40	P	P	06 40 24.1	-1.1
ESK				pmax	pmax		
	comp=Z,94nm,1.4s						
EKA	**Eskdalemuir Ar**	23.43	40	P	P	06 40 25.5	0.0
	comp=Z,30nm,1.1s,baz=240,slow=6.7,SNR=28						
	comp=Z,30nm,1.1s						
NRS	**Narsarsuaq**	23.48	341	P	P	06 40 26.4	+0.4
NRS	**Narsarsuaq**	23.48	341	P	P	06 40 26.4	+0.4
NRS				pmax	pmax		
	comp=Z,255nm,1.7s						
GBN	**Guysborough**	24.04	294	P	P	06 40 29.9	-1.6
GBN				IAmb	IAmb	06 40 44.9	
	comp=Z,120nm,1.2s						
FIGM	**Figuig**	24.11	100	P	P	06 40 36.0	+3.5
CLF	**Chambon-Foret**	24.23	60	P	P	06 40 32.3	-0.9
CLF				IAmb	IAmb	06 40 36.0	
	comp=Z,199nm,1.7s						
SSB	**Saint Sauveur**	25.61	66	P	P	06 40 45.9	+0.1
SSB				IAmb	IAmb	06 40 50.0	
	comp=Z,101nm,1.9s						
SSB	**Saint Sauveur**	25.61	66	P	P	06 40 45.9	+0.1
SSB				pmax	pmax		
	comp=Z,101nm,1.9s						
SNF	**Seneffe**	25.95	54	*d*P	P	06 40 49.3	+0.5
DOU	**Dourbes**	26.07	55	*d*P	P	06 40 49.5	-0.5
BMRD	**Maredsous**	26.22	55	*d*P	P	06 40 50.8	-0.5
LMN	**Caledonia Moun**	26.36	295	P	P	06 40 52.5	-0.2
LMN				IAmb	IAmb	06 41 06.5	
	comp=Z,72nm,1.4s						
BGES	**Gesves**	26.43	55	*d*P	P	06 40 52.7	-0.5
	comp=Z,13nm,1.3s						
RCHB	**Rochefort**	26.48	55	*d*P	P	06 40 53.2	-0.5
BCLA	**Clavier**	26.57	55	*d*P	P	06 40 53.9	-0.6
WLF	**Walferdange**	27.00	57	*d*P	P	06 40 58.2	-0.2
BHOU	**Houvegnez**	27.01	55	*d*P	P	06 40 58.4	0.0
MEM	**Membach**	27.05	55	*d*P	P	06 41 01.9	+3.2
BNI	**Bardonecchia**	27.12	67	IAmb	IAmb	06 41 05.9	
	comp=Z,98nm,1.6s						
BTNL	**Ternell**	27.12	55	*d*P	P	06 40 58.9	-0.6
BATG	**Bathurst New B**	27.26	298	P	P	06 41 00.8	+0.1
BATG				IAmb	IAmb	06 41 06.0	
	comp=Z,84nm,1.7s						
SENIN	**Lac Senin/Sane**	27.54	64	IAmb	IAmb	06 41 05.3	
	comp=Z,79nm,1.4s						
BFO	**Black Forest**	28.30	60	P	P	06 41 08.3	-1.7
BFO	**Black Forest**	28.30	60	P	P	06 41 08.3	-1.7
BFO				pmax	pmax		
	comp=Z,52nm,1.5s						
DY2G	**Dye2**	28.30	346	*e*P	P	06 41 09.8	-0.3
DY2G				IAmb	IAmb	06 41 11.9	
	comp=Z,188nm,1.8s						
SCHQ	**Schefferville**	28.95	314	P	P	06 41 16.0	+0.3
	comp=Z,0.9nm,0.5s,baz=172,slow=5.2,SNR=4.4						
	comp=Z,0.9nm,0.5s						
DAVA	**Damuels**	29.32	62	*e*P	P	06 41 19.9	+0.6
	comp=Z,6.6nm,0.8s						
DAVOX	**Davos/Dischmat**	29.32	63	P	P	06 41 19.2	-0.1
	comp=Z,3.4nm,0.9s,baz=206,slow=18,SNR=5.2						
	comp=Z,3.4nm,0.9s						
PKME	**Peaks-Kenny Pk**	29.52	294	P	P	06 41 21.4	+0.5
	baz=86						
SFJD	**Kangerlussuaq**	29.64	343	P	P	06 41 19.6	-2.0
	comp=Z,2.6nm,0.9s,baz=109,slow=9.5,SNR=4.4						
SFJD				LR	LR	06 50 37.3	
	comp=Z,1μm,18.3s,baz=162,slow=31						
	comp=Z,2.6nm,0.9s						
ICESG	**Greenland Ices**	29.81	353	*i* P	P	06 41 21.4	-2.2
ICESG				IAmb	IAmb	06 41 24.1	
	comp=Z,96nm,1.5s						
MOTA	**Moosalm**	30.15	62	*e*P	P	06 41 26.4	-0.2
	comp=Z,23nm,1.5s,SNR=5.3						
LMQ	**La Malbaie**	30.16	298	P	P	06 41 25.2	-1.3
LMQ				IAmb	IAmb	06 41 33.0	
	comp=Z,96nm,1.7s						
SQTA	**Sankt Quirin**	30.22	62	*e*P	P	06 41 27.4	+0.2
	comp=Z,15nm,1.1s						
ZCCA	**Zocca**	30.23	68	IAmb	IAmb	06 41 32.2	
	comp=Z,72nm,1.3s						
GRF	**Grafenberg Arr**	30.28	57	*e*P	P	06 41 28.0	+0.4
	comp=Z,41nm,1.3s,baz=266,slow=8.9						
WATA	**Walderalm**	30.47	62	*e*P	P	06 41 29.4	-0.1
	comp=Z,17nm,1.4s						
WTTA	**Wattenberg**	30.51	62	*e*P	P	06 41 30.1	+0.3
	comp=Z,30nm,1.5s,SNR=7.8						
OSSC	**Osservatorio P**	30.51	70	IAmb	IAmb	06 41 34.1	
	comp=Z,61nm,1.7s						
KEST	**Kesra**	30.89	85	P	P	06 41 32.1	-1.0
	comp=Z,3.3nm,0.6s,baz=230,slow=7.7,SNR=7.4						
	comp=Z,3.3nm,0.6s						
KEST	**Kesra**	30.89	85	P	P	06 41 33.0	-0.1
KEST				IAmb	IAmb	06 41 35.5	
	comp=Z,93nm,1.8s						
SCO	**Scoresbysund**	30.98	5	P	P	06 41 33.3	-0.1
SCO	**Scoresbysund**	30.98	5	P	P	06 41 33.3	-0.1
SCO				pmax	pmax		
	comp=Z,38nm,1.4s						
SCO	**Scoresbysund**	30.98	5	*i* P	P	06 41 32.0	-1.5
SCO				IAmb	IAmb	06 41 35.1	
	comp=Z,41nm,1.4s						
CIMO	**Cimolais**	31.10	64	IAmb	IAmb	06 42 14.4	
	comp=Z,18nm,1.6s						
NKC	**Novy Kostel**	31.10	56	*e*P	P	06 41 35.1	+0.3
NKC	**Novy Kostel**	31.10	56	*e*P	P	06 41 35.1	+0.3
ABTA	**Abfaltersbach**	31.13	63	*e*P	P	06 41 34.9	-0.3
	comp=Z,23nm,1.4s,SNR=7.3						
HRV	**Adam Dziewonsk**	31.47	289	P	P	06 41 38.5	+0.4
	baz=80						
LBNH	**Lisbon**	31.49	292	P	P	06 41 38.2	0.0
	baz=83						
KONO	**Kongsberg**	31.50	38	P	P	06 41 38.4	+0.2
KONO				IAmb	IAmb	06 41 40.5	
	comp=Z,106nm,1.7s						
KONO	**Kongsberg**	31.50	38*c*	*i*P	P	06 41 38.6	+0.4
KONO				pmax	pmax		
	comp=Z,62nm,1.7s						
CLL	**Collm**	31.52	54	*e*P	P	06 41 38.0	-0.5
	comp=Z,93nm,2.6s						
CLL				AMS	AMS	06 51 00.0	
	comp=Z,900nm,20.8s						
CLL	**Collm**	31.52	54	*e*P	P	06 41 38.0	-0.5
CLL				pmax	pmax		
	comp=Z,93nm,2.6s						
CLL				MLR	MLR		
	comp=Z,900nm,20.8s						
ILULI	**Ilulissat**	31.60	346	P	P	06 41 37.4	-1.6
ILULI				IAmb	IAmb	06 41 39.4	
	comp=Z,51nm,1.2s						
ILULI	**Ilulissat**	31.60	346	P	P	06 41 37.4	-1.6
ILULI				pmax	pmax		
	comp=Z,51nm,1.2s						
CESX	**Cesi**	31.61	71	IAmb	IAmb	06 41 40.8	
	comp=Z,61nm,1.6s						
KBA	**Koelnbreinsper**	31.68	62	*e*P	P	06 41 40.4	+0.2
	comp=Z,58nm,1.2s,SNR=33						
KHC	**Kasperske Hory**	31.80	59	*e*P	P	06 41 40.9	-0.1
KHC				AMS	AMS	06 56 10.0	
	comp=Z,1μm,16.5s						
KHC	**Kasperske Hory**	31.80	59	*de*P	P	06 41 40.8	-0.2
KHC				pmax	pmax		
	comp=Z,47nm,1.4s						
BIOA	**Bad Ischl, Aus**	31.86	61	*e*P	P	06 41 41.8	+0.3
	comp=Z,59nm,1.6s,SNR=13						
GERES	**GERESS Array B**	31.88	59	P	P	06 41 40.4	-1.4
	comp=Z,0.6nm,0.6s,baz=263,slow=12,SNR=9.2						
	comp=Z,0.6nm,0.6s						
MYKA	**Terra Mystica**	31.91	63	*e*P	P	06 41 41.7	-0.3
	comp=Z,12nm,1.1s,SNR=6.3						
CADS	**Cadrg**	32.00	64	*i* P	P	06 41 42.8	0.0
CADS				*i*		06 41 44.1	
	comp=Z,9.8nm,1.4s						
BRG	**Berggiesshubel**	32.09	55	*i* P	P	06 41 43.6	+0.2
BRG				Amp		06 41 45.5	
	comp=Z,22nm,1.6s						
BRG				Amp		06 47 26.0	
	comp=N,0.7nm,14.9s						
BRG				Amp		06 47 30.0	
	comp=Z,2.9nm,16.5s						
BRG				Amp		06 47 35.0	
	comp=E,1.5nm,19.3s						
BRG				Amp		06 53 41.0	
	comp=N,0.5nm,15.7s						
BRG				Amp		06 53 45.0	
	comp=Z,1.5nm,16.8s						
BRG				Amp		06 53 49.0	
	comp=E,1.5nm,17.3s						
BRG	**Berggiesshubel**	32.09	55	*i* P	P	06 41 43.6	+0.2
BRG				pmax	pmax		
	comp=Z,22nm,1.6s						
BRG				MLR	MLR		
	comp=N,513nm,15.7s						
BRG				MLR	MLR		
	comp=Z,2μm,16.8s						
BRG				MLR	MLR		
	comp=E,1μm,17.3s						
CAMP	**Campotosto**	32.23	71	IAmb	IAmb	06 41 53.9	
	comp=Z,43nm,1.3s						
MOA	**Molln**	32.27	61	*e*P	P	06 41 45.3	+0.1
	comp=Z,38nm,1.4s,SNR=15						
MOZS	**Mozjanca**	32.49	64	*e*P	P	06 41 47.0	0.0
OBKA	**Obir**	32.54	63	*e*P	P	06 41 47.2	-0.5
	comp=Z,19nm,1.1s,SNR=6.9						
NB2	**NORSAR Subarra**	32.76	36	P	P	06 41 49.3	0.0
	comp=Z,97nm,2.0s,baz=249,slow=9.3						
NB2	**NORSAR Subarra**	32.76	36	P	P	06 41 49.3	0.0
	baz=249,slow=9.3						
NOA	**NORSAR Array B**	32.76	36	P	P	06 41 49.8	+0.5
	comp=Z,8.2nm,1.1s,baz=249,slow=9.3,SNR=6.6						
	comp=Z,8.2nm,1.1s						
SOKA	**Soboth**	32.86	63	*e*P	P	06 41 49.5	-0.9
	comp=Z,13nm,1.4s,SNR=5.4						
NC303	**NORSAR Array S**	32.90	36	IAmb	IAmb	06 41 52.1	
	comp=Z,67nm,1.3s						
FRB	**Frobisher Bay**	33.10	329	P	P	06 41 51.0	-1.1
	comp=Z,5.4nm,1.1s,baz=118,slow=8.8,SNR=8.1						
	comp=Z,5.4nm,1.1s						
SUMG	**Summit**	33.12	355	*i* P	P	06 41 50.0	-2.7
SUMG				IAmb	IAmb	06 41 53.2	
	comp=Z,33nm,1.2s						
TRQ	**Mont Tremblant**	33.12	296	IAmb	IAmb	06 41 57.8	
	comp=Z,58nm,1.8s						
ARSA	**Arzberg**	33.16	62	*e*P	P	06 41 51.7	-1.2
	comp=Z,15nm,1.1s,SNR=5.7						
CRES	**Cresnjev**	33.23	65	*i* P	P	06 41 53.7	+0.2
CLTB	**Caltabellotta**	33.26	80	P	P	06 41 53.4	-0.5
LONY	**Lake Ozonia**	33.33	293	P	P	06 41 53.7	-0.7
	baz=82						
CONA	**Conrad Observa**	33.34	61	*e*P	P	06 41 54.5	-0.1
	comp=Z,16nm,1.9s,SNR=6.4						
UPC	**Upice**	33.39	56	*e*P	P	06 41 54.9	0.0
UPC	**Upice**	33.39	56	*e*P	P	06 41 54.9	0.0

CHVC	Chvalec	33.42	56	eP	P	06 41 55.2	0.0
CHVC	Chvalec	33.42	56	eP	P	06 41 55.2	0.0
PAL	Palisades	33.48	287	P	P	06 41 55.0	-0.7
	baz=77						
DPC	Dobruska-Polom	33.59	56	eP	P	06 41 57.0	+0.3
DPC	Dobruska-Polom	33.59	56	eP	P	06 41 57.0	+0.3
KRUC	Moravsky	33.65	59	eP	P	06 41 56.8	-0.4
VRAC	Vranov	33.77	58	eP	P	06 41 58.1	-0.1
KRLC	Kraliky	33.88	57	eP	P	06 41 59.8	+0.6
KRLC	Kraliky	33.88	57	eP	P	06 41 59.8	+0.6
TAM	Tamanrasset	34.21	109	P	P	06 42 04.0	+1.5
TAM	Tamanrasset	34.21	109	P	P	06 42 04.0	+1.5
TAM				pmax	pmax		
	comp=Z,42nm,2.0s						
MODS	Modra-Piesok	34.27	60	eP	P	06 42 02.1	-0.4
MODS				pmax	pmax		
	comp=Z,90nm,1.6s						
MODS	Modra-Piesok	34.27	60	eP	P	06 42 02.1	-0.4
MORC	Moravsky Berou	34.38	57	eP	P	06 42 03.6	+0.1
JAVC	Velka Javorina	34.50	59	eP	P	06 42 05.1	+0.5
CUC	Castrocucco	34.55	75	IAmb	IAmb	06 42 06.7	
	comp=Z,69nm,1.5s						
PECO	Prince Edward	35.14	293	IAmb	IAmb	06 42 16.6	
	comp=Z,62nm,1.8s						
MORH	Mrgy, Hungar	35.39	63	⇑P	P	06 42 12.4	+0.2
OJC	Ojcow	35.82	56	eP	P	06 42 16.0	+0.1
OJC	Ojcow	35.82	56	IAmb	IAmb	06 42 17.5	
	comp=Z,58nm,1.3s						
PSZ	Piszkesteto	36.05	60	⇑P	P	06 42 18.4	+0.4
PSZ	Piszkesteto	36.05	60	P	P	06 42 18.3	+0.4
NIE	Niedzica	36.19	58	eP	P	06 42 20.3	+1.2
FRGS	Fruska Gora	36.36	65	⇑P	P	06 42 20.3	-0.3
SSPA	Standing Stone	36.51	287	P	P	06 42 21.2	-0.7
	baz=75						
CBN	Corbin Frederi	36.81	283	P	P	06 42 24.2	-0.2
	baz=72						
KULLO	Kullorsuaq	37.13	348	i P	P	06 42 25.0	-1.7
KULLO				IAmb	IAmb	06 42 26.9	
	comp=Z,24nm,1.1s						
DAG	Danmarks Havn	37.35	4	i P	P	06 42 27.6	-1.0
DAG				IAmb	IAmb	06 42 29.6	
	comp=Z,53nm,1.5s						
SIRR	Siria	37.46	63	⇑P	P	06 42 30.4	+0.5
SLIT	Slitere, Latvi	37.49	44	eP	P	06 42 29.7	-0.3
BZS	Buzias	37.53	64	⇑P	P	06 42 31.5	+0.9
BZS	Buzias	37.53	64	P	P	06 42 31.9	+1.4
RAF	Rauma	37.69	38	eP	P	06 42 30.9	-0.7
MDVR	Moldovita	37.75	65	⇑P	P	06 42 32.8	+0.3
SUW	Suwalki	37.82	50	eP	P	06 42 33.3	+0.4
SURR	Surduc	37.86	64	⇑P	P	06 42 33.4	+0.1
BOVS	Bovan	37.98	67	⇑P	P	06 42 34.4	0.0
DRGR		38.09	62	⇑P	P	06 42 35.3	0.0
DRGR		38.09	62	P	P	06 42 35.3	0.0
MCWV	Mont Chateau	38.22	286	P	P	06 42 35.6	-0.8
	baz=73						
HERR	Herculane	38.23	65	⇑P	P	06 42 36.7	+0.3
TOA0	Torodi Ar. Sit	38.26	125	P	P	06 42 37.1	+0.1
TOA0				IAmb	IAmb	06 42 40.0	
	comp=Z,152nm,1.9s						
TORD	Torodi Ar. Bea	38.26	125	P	P	06 42 37.2	+0.2
	comp=Z,12nm,0.4s,baz=317,slow=8.4,SNR=4.2						
	comp=Z,12nm,0.4s						
PABE	Paberze	38.30	48	P	P	06 42 36.1	-0.7
PABE	Paberze	38.30	48	eP	P	06 42 37.1	+0.3
M53A	WI Miller and	38.34	289	P	P	06 42 36.9	-0.4
	baz=75						
MARR	Marisel-Cluj	38.39	62	⇑P	P	06 42 37.5	-0.4
MTSE	Matsula	38.40	42	eP	P	06 42 37.3	-0.3
LVV	L'vov	38.57	57	eP	P	06 42 38.8	-0.4
NEEM	North Greenlan	38.80	353	i P	P	06 42 39.6	-1.6
MEF	Metsahovi	38.85	40	eP	P	06 42 40.9	-0.5
O53A	New Philadelph	39.05	288	IAmb	IAmb	06 42 51.6	
	comp=Z,144nm,1.9s						
O53A	New Philadelph	39.05	288	P	P	06 42 43.1	-0.3
	baz=73						
LOT	Lotru	39.05	64	⇑P	P	06 42 41.5	-2.0
BLA	Blacksburg	39.42	283	P	P	06 42 47.0	+0.5
	baz=70						
BURAR	Bucovina Array	39.65	60	⇑P	P	06 42 49.1	+0.7
BURAR	Bucovina Array	39.65	60	P	P	06 42 49.1	+0.7
ARR	Arges	39.67	64	⇑P	P	06 42 49.3	+0.8
DBIC	Dimbokro	39.80	139	P	P	06 42 51.6	+1.9
	comp=Z,13nm,0.9s,baz=340,slow=9.8,SNR=9.9						
	comp=Z,13nm,0.9s						
DBIC	Dimbokro	39.80	139	P	P	06 42 50.9	+1.1
DBIC	Dimbokro	39.80	139	P	P	06 42 50.9	+1.1
DBIC				pmax	pmax		
	comp=Z,50nm,1.3s						
FINES	FINESS Array B	39.81	38	P	P	06 42 49.7	+0.3
	comp=Z,13nm,0.9s,baz=250,slow=5.5,SNR=21						
	comp=Z,13nm,0.9s						
FINES	FINESS Array B	39.81	38	P	P	06 42 48.6	-0.8
VSU	Vasula	39.91	43	deP	P	06 42 49.7	-0.5
VSU				pmax	pmax		
	comp=Z,113nm,1.2s						
P52A	Corning	39.91	287	IAmb	IAmb	06 42 58.4	
	comp=Z,100nm,1.9s						
P52A	Corning	39.91	287	P	P	06 42 50.5	0.0
	baz=72						
NACGM	Naroch	39.91	49	eP	P	06 42 50.2	-0.2
	comp=Z,29nm,0.8s,baz=272						
VOIR		39.94	63	⇑P	P	06 42 51.5	+0.6
VOIR		39.94	63	P	P	06 42 51.4	+0.6
DOPR	Dopca	40.06	63	⇑P	P	06 42 52.3	+0.6
GLMI	Grayling	40.33	296	P	P	06 42 53.7	-0.3
	baz=77						
ACSO	Alum Creek Sta	40.35	288	P	P	06 42 53.8	-0.4
	baz=72						
TULEG	Thule	40.54	347	P	P	06 42 54.6	-0.7
MLR	Muntele Rosu	40.54	63	⇑P	P	06 42 56.2	+0.3
MLR	Muntele Rosu	40.54	63	IAmb	IAmb	06 43 00.3	
	comp=Z,133nm,1.8s						
MLR	Muntele Rosu	40.54	63	P	P	06 42 56.5	+0.6
MNK	Minsk	40.57	49	i P	P	06 42 55.2	-0.6
	comp=E,5.0nm,0.8s						
MNK				i P	P	06 42 55.2	-0.6
	comp=N,24nm,0.8s						
MNK				i P	P	06 42 55.2	-0.6
	comp=Z,34nm,1.1s,baz=273						
MNK				i PP	PP	06 44 28.6	-0.4
MNK				i PPP	PPP	06 44 54.0	
MNK				i S	S	06 49 05.0	+0.3
MNK				i SS	SS	06 52 06.5	+2.3
MNK				i SSS	SSS	06 52 30.1	
MNK				i LQ	LQ	06 56 44.2	
MNK				i LR	LR	06 59 19.2	
MNK				i LRM	MLR	07 01 37.0	
	comp=E,71nm,19.4s						
MNK				i LRM	MLR	07 01 38.7	
	comp=N,429nm,20.6s						
MNK				i LRM	MLR	07 01 59.3	
	comp=Z,370nm,14.2s						
MNK	Minsk	40.57	49	i P	P	06 42 55.1	-0.6
MNK				i		06 44 28.6	
MNK				i PPP	PPP	06 44 53.9	
MNK				i S	S	06 49 05.0	+0.3
MNK				i SS	SS	06 52 06.5	+2.3
MNK				i SSS	SSS	06 52 30.0	
MNK				pmax	pmax		
	comp=E,5.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,34nm,1.1s						
MNK				pmax	pmax		
	comp=N,24nm,0.8s						
MNK				MLR	MLR		
	comp=E,71nm,19.0s						
MNK				MLR	MLR		
	comp=N,429nm,21.0s						
MNK				MLR	MLR		
	comp=Z,370nm,14.0s						
COVR	Voineasa-Covas	40.65	63	⇑P	P	06 42 57.9	+1.3
NHSC	New Hope	40.78	277	P	P	06 42 58.0	+0.2
	baz=65						
TESR	Tescani	40.81	61	⇑P	P	06 42 57.9	-0.1
KMSC	Kings Mountain	40.85	280	P	P	06 42 58.1	-0.3
	baz=67						
PLOR	Plostina	40.95	62	⇑P	P	06 42 59.1	0.0
PLOR	Plostina	40.95	62	P	P	06 42 59.1	0.0
VRI	Vrincioaia	41.00	62	⇑P	P	06 42 59.9	+0.4
VRI	Vrincioaia	41.00	62	P	P	06 42 59.9	+0.4
ISR	Istrita	41.04	64	⇑P	P	06 42 59.9	0.0
ISR	Istrita	41.04	64	P	P	06 42 59.8	0.0
BISRR	Bisoca	41.06	63	⇑P	P	06 43 00.9	+0.9
ARCES	ARCESS Array B	41.22	26	P	P	06 42 59.2	-1.8
	comp=Z,12nm,1.0s,baz=12,slow=6.6,SNR=6.0						
	comp=Z,12nm,1.0s						
VASR	Vaslui	41.56	61	⇑P	P	06 43 04.8	+0.8
AKASG	Malin Array Be	41.77	55	P	P	06 43 05.4	-0.3
	comp=Z,11nm,0.9s,baz=274,slow=8.1,SNR=41						
	comp=Z,11nm,0.9s						
AKBB	Malin Array Si	41.77	55	P	P	06 43 04.5	-1.2
AKBB				IAmb	IAmb	06 43 06.3	
	comp=Z,60nm,1.3s						
AKBB	Malin Array Si	41.77	55	⇓eP	P	06 43 05.0	-0.7
AKBB				pmax	pmax		
	comp=Z,52nm,1.3s						
PUL	Pulkovo	41.79	41	⇑eP	P	06 43 06.4	+0.6
ALN	Alexandroupoli	41.80	70	IAmb	IAmb	06 43 08.2	
	comp=Z,62nm,1.3s						
P49A	Miami Univ. Ec	41.84	288	P	P	06 43 06.3	-0.2
	baz=71						
O48B	Farmland	41.93	289	P	P	06 43 07.2	0.0
	baz=72						
TZTN	Tazewell	42.00	283	P	P	06 43 07.7	-0.1
	baz=68						
HARR	Harsova	42.10	64	⇑P	P	06 43 07.7	-0.8
HARR	Harsova	42.10	64	P	P	06 43 07.7	-0.8
CFR	Carcaliu	42.12	63	⇑P	P	06 43 07.6	-1.0
CFR	Carcaliu	42.12	63	P	P	06 43 07.6	-1.0
MILM	Milestii Mici	42.18	60	eP	P	06 43 05.0	-4.1
MILM				eL	L	07 00 30.0	
MILM				LRM	MLR	07 02 34.0	
	comp=Z,1µm,16.0s						
MILM	Milestii Mici	42.18	60	eP	P	06 43 05.0	-4.1
MILM				MLR	MLR		
	comp=Z,1µm,16.0s						
TIRR	Tirgusor	42.49	64	⇑P	P	06 43 11.1	-0.6
TIRR	Tirgusor	42.49	64	P	P	06 43 10.2	-1.4
TIRR	Tirgusor	42.49	64	P	P	06 43 11.0	-0.6
TKL	Tuckaleechee C	42.50	282	P	P	06 43 10.1	-1.7
	comp=Z,4.3nm,1.1s,baz=64,slow=7.7,SNR=5.0						
	comp=Z,4.3nm,1.1s						
D41A	Chassel	42.52	300	IAmb	IAmb	06 43 17.7	
	comp=Z,60nm,1.4s						
IDI	Anoyia	42.88	78	PcP	PcP	06 45 06.1	+0.2
	comp=Z,18nm,1.0s,baz=271,slow=3.8,SNR=4.9						
SANT	Santorini	42.89	76	IAmb	IAmb	06 43 17.2	
	comp=Z,138nm,1.6s						
BLO	Bloomington	43.28	288	IAmb	IAmb	06 43 20.9	
	comp=Z,86nm,1.8s						
SFIN	Lafayette	43.30	290	P	P	06 43 18.4	+0.1
	baz=71						
L44A	Lake County Fo	43.33	293	P	P	06 43 18.0	-0.6
	baz=72						
Y52A	Lilburn	43.42	280	P	P	06 43 17.5	-1.9
WCI	Wyandotte Cave	43.44	287	P	P	06 43 19.4	-0.1
	baz=69						
APA	Apatity	43.68	30	⇓iP	P	06 43 24.5	+3.5
APA				MLR	MLR		
	comp=Z,2.0nm,13.0s						
W50A	Signal Mountai	43.83	282	IAmb	IAmb	06 43 30.8	
	comp=Z,106nm,1.9s						
LVZ	Lovozero	44.18	29	⇑eP	P	06 43 25.6	+0.5
LVZ				pmax	pmax		
	comp=Z,66nm,1.1s						
EYMN	Ely	44.26	302	P	P	06 43 25.3	-0.7
	baz=76						
SWET	Sewanee	44.29	283	IAmb	IAmb	06 43 29.2	
	comp=Z,68nm,1.7s						
O44A	Mansfield	44.36	290	IAmb	IAmb	06 43 35.3	
	comp=Z,53nm,1.5s						
MANT	Manisa	44.42	72	IAmb	IAmb	06 43 29.5	
	comp=Z,48nm,1.2s						
152A	Waverly Hall	44.43	279	IAmb	IAmb	06 43 30.9	
	comp=Z,66nm,2.0s						
ROSB	Rosrio	44.56	201	eP	P	06 43 29.6	+1.0
OLIL	Olney	44.58	288	IAmb	IAmb	06 43 37.0	
	comp=Z,52nm,1.4s						
I40A	Norwalk	44.72	296	IAmb	IAmb	06 43 36.3	
	comp=Z,62nm,1.6s						
JFWS	Jewell Farm	44.76	295	P	P	06 43 29.5	-0.5
	baz=72						
HDIL	Hopedale	44.83	291	P	P	06 43 30.2	-0.3
	baz=70						
MCPB	Macapa, AP	44.95	213	eP	P	06 43 33.4	+1.6
352A	Blakely	45.11	277	P	P	06 43 32.4	-0.5
352A				IAmb	IAmb	06 43 35.7	
	comp=Z,57nm,1.4s						
Y49A	Blount Mountai	45.21	281	P	P	06 43 35.3	+1.6
	baz=65						
TMAB	Tom-Au,PA,Br	45.29	206	eP	P	06 43 36.3	+1.9
P43A	Skaggs, Pawnee	45.30	290	IAmb	IAmb	06 43 41.8	
	comp=Z,117nm,2.0s						
WVT	Waverly	45.35	285	P	P	06 43 34.0	-0.8
WVT				IAmb	IAmb	06 43 37.4	
	comp=Z,75nm,1.9s						
WVT	Waverly	45.35	285	P	P	06 43 34.0	-0.8
WVT				pmax	pmax		
	comp=Z,75nm,1.9s						
EUNU	Eureka	45.45	348	P	P	06 43 34.7	-0.4
EUNU				IAmb	IAmb	06 43 36.0	
	comp=Z,43nm,1.5s						
OBN	Obninsk	45.50	47	⇓iP	P	06 43 36.1	+0.4
OBN				pmax	pmax		
	comp=Z,146nm,1.7s						
OBN				MLR	MLR		
	comp=Z,793nm,17.0s						
RES	Resolute Bay	45.53	340	P	P	06 43 35.6	-0.1
	comp=Z,1.5nm,0.8s,baz=117,slow=5.6,SNR=7.8						
RES				PcP	PcP	06 45 14.2	+0.1
	comp=Z,4.6nm,0.9s,baz=88,slow=3.2,SNR=12						
	comp=Z,1.5nm,0.8s						
RES	Resolute Bay	45.53	340	P	P	06 43 34.5	-1.2
RES	Resolute Bay	45.53	340	P	P	06 43 34.5	-1.2
RES				pmax	pmax		
	comp=Z,11nm,1.1s						
B35A	Bob, Littlefor	45.62	303	IAmb	IAmb	06 43 38.6	
	comp=Z,56nm,1.5s						
B35A	Bob, Littlefor	45.62	303	P	P	06 43 36.6	-0.2
	baz=76,SNR=9.6						
L40A	Anamosa	45.70	294	IAmb	IAmb	06 43 43.3	
	comp=Z,32nm,1.2s						
SIUC	Southern Illin	45.77	287	IAmb	IAmb	06 43 45.8	
	comp=Z,77nm,1.6s						
RCBR	Riachuelo	45.80	189	eP	P	06 43 40.4	+1.9
S44A	Carbondale	45.81	287	IAmb	IAmb	06 43 41.0	
	comp=Z,75nm,1.7s						
S44A	Carbondale	45.81	287	P	P	06 43 39.6	+1.2
	baz=68						
SPMN	Marine on St.	45.84	298	P	P	06 43 37.4	-1.2
	baz=73						
N41A	Harden Midland	45.89	292	P	P	06 43 40.5	+1.5
	baz=70,SNR=7.1						
250A	Grady	45.91	279	P	P	06 43 40.6	+1.3
	baz=63						
MOS	Moscow	45.99	46	eP	P	06 43 37.8	-1.8
MOS				e		06 45 15.0	
MOS				e		06 45 25.2	
MOS				pmax	pmax		
	comp=Z,103nm,1.5s						
MOS				MLR	MLR		
	comp=Z,2µm,18.0s						
PLAL	Pickwick Lake	45.99	283	IAmb	IAmb	06 43 46.6	
	comp=Z,55nm,1.7s						
LRAL	Lakeview Retre	46.00	280	P	P	06 43 39.9	0.0
	baz=64						
BAUV	El Baul	46.02	239	P	P	06 43 39.6	-0.6
F36A	Milaca	46.14	299	IAmb	IAmb	06 43 47.1	
	comp=Z,44nm,1.6s						
F36A	Milaca	46.14	299	P	P	06 43 41.8	+0.9
	baz=73,SNR=8.3						
CGM3	Cape Girardeau	46.26	287	IAmb	IAmb	06 43 49.0	
	comp=Z,60nm,1.7s						
SIM	Simferopol'	46.26	62	eP	P	06 43 49.9	+8.0
SIM				pmax	pmax		
	comp=Z,21nm,0.6s						
KLMR	Klimovskoe	46.32	39	eP	P	06 43 38.9	-3.2
KLMR				AMP		06 43 43.1	
	comp=Z,71nm,1.3s						
KLMR				ePcP	PcP	06 45 15.7	-1.4
KLMR	Klimovskoe	46.32	39	eP	P	06 43 38.8	-3.3
KLMR				e		06 45 15.7	
KLMR				pmax	pmax		
	comp=Z,71nm,1.3s						
ULM	Lac du Bonnet	46.52	306	P	P	06 43 44.3	+0.5
	comp=Z,2.7nm,0.9s,baz=86,slow=7.9,SNR=6.0						
	comp=Z,2.7nm,0.9s						
ULM	Lac du Bonnet	46.52	306	IAmb	IAmb	06 43 49.2	
	comp=Z,65nm,1.9s						
FVM	French Village	46.56	288	IAmb	IAmb	06 43 57.9	
	comp=Z,75nm,1.9s						
FVM	French Village	46.56	288	P	P	06 43 45.2	+0.9
	baz=68						
K38A	Parkersburg	46.60	295	IAmb	IAmb	06 43 46.1	
	comp=Z,56nm,1.3s						
K38A	Parkersburg	46.60	295	P	P	06 43 45.8	+1.2
	baz=71						
I37B	Waseca	46.60	297	P	P	06 43 45.5	+0.9
	baz=72,SNR=7.2						
BOAV	Boa Vista	46.64	225	eP	P	06 43 45.6	+0.5
Z47A	Carrollton	46.74	281	P	P	06 43 47.2	+1.4
	baz=64,SNR=5.8						
W45A	Hickory Valley	46.75	284	P	P	06 43 47.4	+1.5
	baz=65,SNR=6.3						
AGMN	Agassiz Nation	47.01	303	IAmb	IAmb	06 43 49.2	
	comp=Z,34nm,1.4s						
AGMN	Agassiz Nation	47.01	303	P	P	06 43 47.0	-0.7
	baz=74,SNR=5.8						
AGMN	Agassiz Nation	47.01	303	P	P	06 43 49.3	+1.6
	baz=74,SNR=5.8						
CCM	Cathedral Cave	47.13	289	P	P	06 43 47.0	-1.8
CCM				IAmb	IAmb	06 43 50.9	
	comp=Z,75nm,1.9s						
CCM	Cathedral Cave	47.13	289	P	P	06 43 47.0	-1.8
CCM				pmax	pmax		
	comp=Z,75nm,1.9s						
CCM	Cathedral Cave	47.13	289	P	P	06 43 48.3	-0.5
	baz=67						
CCM	Cathedral Cave	47.13	289	P	P	06 43 48.2	-0.6
	baz=67,SNR=6.2						
SCIA	State Center	47.16	294	P	P	06 43 48.2	-0.8
	baz=70						
P40A	Paris	47.16	291	IAmb	IAmb	06 43 56.9	
	comp=Z,26nm,1.1s						
P40A	Paris	47.16	291	P	P	06 43 48.4	-0.6
	baz=68,SNR=8.4						
OXF	Oxford	47.19	283	P	P	06 43 48.7	-0.6
	baz=65,SNR=7.2						
OXF	Oxford	47.19	283	P	P	06 43 51.7	+2.5
	baz=65,SNR=7.2						
MALB	Monte Alegre	47.24	215	eP	P	06 43 51.6	+1.9
LPSR	Galich'ya Gora	47.35	51	eP	P	06 43 49.5	-0.8
LPSR				pmax	pmax		
	comp=Z,80nm,1.4s						
T42A	Van Buren	47.42	287	IAmb	IAmb	06 43 52.8	
	comp=Z,70nm,1.8s						
T42A	Van Buren	47.42	287	P	P	06 43 51.5	+0.5
	baz=66						
N38A	Joes South For	47.56	293	IAmb	IAmb	06 43 60.0	
	comp=Z,26nm,1.1s						
Y45A	Yeager Farm, C	47.56	283	P	P	06 43 53.3	+1.1
	baz=64,SNR=12						
BR131	Keskin Array S	47.66	69	c iP	P	06 43 53.9	+0.8
BRTR	Keskin Array B	47.66	69	P	P	06 43 53.5	+0.4
	comp=Z,4.8nm,1.0s,baz=294,slow=6.6,SNR=12						
BRTR				PcP	PcP	06 45 22.9	+0.4
	comp=Z,2.5nm,0.9s,baz=232,slow=6.1,SNR=5.3						
	comp=Z,4.8nm,1.0s						
BRTR	Keskin Array B	47.66	69	P	P	06 43 52.5	-0.6
VORR	Voronezh	47.74	52	eP	P	06 43 53.9	+0.6
VORR				pmax	pmax		
	comp=Z,20nm,0.6s						
SDV	Santo Domingo	47.79	241	eP	P	06 43 57.0	+2.7
R40A	Maddies Statio	47.79	289	P	P	06 43 54.6	+0.8
	baz=67,SNR=14						
VSR	Storozhevoye	47.83	52	eP	P	06 43 53.1	-0.9
VSR				pmax	pmax		
	comp=Z,50nm,2.1s						
LCAR	Lake Charles	47.85	286	IAmb	IAmb	06 43 60.0	
	comp=Z,43nm,1.7s						
VORD	Divnogorie	47.97	53	eP	P	06 43 54.3	-0.7
VORD				pmax	pmax		
	comp=Z,100nm,2.0s						
P38A	Dawn	48.20	291	IAmb	IAmb	06 43 59.1	
	comp=Z,48nm,1.4s						
P38A	Dawn	48.20	291	P	P	06 43 57.7	+0.7
	baz=68,SNR=8.2						
ANN	Anapa	48.55	61	eP	P	06 43 56.5	-3.2
ANN				e*PP	pP	06 44 00.8	-1.9
ANN				e		06 45 50.8	
ANN				eS	S	06 50 56.6	-4.3
ANN				eSS	SS	06 54 31.2	+0.7
ANN				eSSS	SSS	06 55 40.0	
ANN				pmax	pmax		
	comp=Z,67nm,1.0s						
FCAR	Ozark Folk Cen	48.64	286	IAmb	IAmb	06 44 02.0	
	comp=Z,47nm,1.9s						
S39A	Bolivar	48.79	289	IAmb	IAmb	06 44 07.4	
	comp=Z,54nm,1.4s						
S39A	Bolivar	48.79	289	P	P	06 44 02.2	+0.6
	baz=66,SNR=14						
ECSD	EROS Data Cent	48.89	298	IAmb	IAmb	06 44 04.3	
	comp=Z,51nm,1.4s						
ECSD	EROS Data Cent	48.89	298	P	P	06 44 01.6	-0.8
	baz=70,SNR=26						
ECSD	EROS Data Cent	48.89	298	P	P	06 44 02.0	-0.3
	baz=70,SNR=26						
U40A	Yellville	48.98	287	P	P	06 44 04.0	+0.8
	baz=65,SNR=11						
U40A				P	P	06 44 04.0	+0.8
	baz=65,SNR=11						
WHAR	Wooly Hollow	49.01	286	IAmb	IAmb	06 44 05.0	
	comp=Z,48nm,1.8s						
FFC	Flin Flon	49.09	313	P	P	06 44 02.9	-0.8
FFC				IAmb	IAmb	06 44 11.3	
	comp=Z,39nm,1.6s						
FFC	Flin Flon	49.09	313	P	P	06 44 02.9	-0.8
FFC				pmax	pmax		
	comp=Z,39nm,1.6s						
CCAR	Cane Creek	49.21	284	P	P	06 44 03.6	-1.3
VRH	Novokhopyorsk	49.38	52	eP	P	06 44 04.6	-1.3
VRH				pmax	pmax		
	comp=Z,130nm,1.9s						
PRPB	Parauapebas	49.43	207	eP	P	06 44 07.3	+0.6
143A	Socs Landing,	49.47	282	IAmb	IAmb	06 44 12.7	
	comp=Z,37nm,1.1s						
MDND	Maddock	49.54	304	P	P	06 44 06.6	-0.6
	baz=72						
HHAR	Hobbs	49.81	288	IAmb	IAmb	06 44 13.5	
	comp=Z,83nm,2.0s						
U38A	Gravette	50.07	288	IAmb	IAmb	06 44 15.2	
	comp=Z,51nm,1.9s						
U38A	Gravette	50.07	288	P	P	06 44 11.2	-0.3
	baz=65						
ITTB	Itaituba	50.13	215	eP	P	06 44 11.1	-0.9
SUSD	Miller	50.23	299	P	P	06 44 11.9	-0.7
	baz=69						
Z41A	Richland Creek	50.27	283	P	P	06 44 14.8	+1.8
	baz=63,SNR=5.4						
Z41A				P	P	06 44 14.8	+1.8
	baz=63,SNR=5.4						
MIAR	Mount Ida	50.28	285	IAmb	IAmb	06 44 15.2	
	comp=Z,92nm,1.8s						
MIAR	Mount Ida	50.28	285	P	P	06 44 12.5	-0.5
	baz=64,SNR=11						
MIAR	Mount Ida	50.28	285	P	P	06 44 14.0	+0.9
	baz=64,SNR=11						
WLAR	White Oak Lake	50.31	284	IAmb	IAmb	06 44 14.3	
	comp=Z,55nm,1.4s						
SOC	Sochi	50.51	62	eP	P	06 44 09.8	-4.9
SOC				e		06 46 07.4	
SOC				ePPP	PPP	06 47 05.8	
SOC				eS	S	06 51 21.0	-7.4
SOC				eSS	SS	06 55 03.3	+1.3
SOC				MLR	MLR		
	comp=Z,335nm,17.0s						
KSU1	Kansas State U	50.60	292	IAmb	IAmb	06 44 16.9	
	comp=Z,96nm,1.7s						
KSU1	Kansas State U	50.60	292	P	P	06 44 14.2	-1.2
	baz=66						
E28A	Huff	50.66	302	P	P	06 44 15.8	0.0
	baz=70,SNR=7.7						
K31A	O'Neill	50.75	297	IAmb	IAmb	06 44 17.7	
	comp=Z,78nm,1.4s						
K31A	O'Neill	50.75	297	P	P	06 44 15.9	-0.6
	baz=68,SNR=6.4						
BGNE	Belgrade	50.79	295	P	P	06 44 15.7	-1.2
	baz=67,SNR=9.5						
BGNE	Belgrade	50.79	295	P	P	06 44 16.7	-0.1
	baz=67,SNR=9.5						
SMTB	Santa Maria do	51.23	203	eP	P	06 44 22.1	+1.7
TUL1	Leonard	51.33	288	P	P	06 44 19.3	-1.6
	baz=64,SNR=6.1						
TUL1	Leonard	51.33	288	P	P	06 44 20.5	-0.4
	baz=64,SNR=6.1						
T35A	Sooner Cattle	51.42	289	IAmb	IAmb	06 44 22.8	
	comp=Z,39nm,1.2s						
X37A	Clayton	51.59	286	IAmb	IAmb	06 44 30.3	

	comp=Z,62nm,1.6s						
X37A	Clayton	51.59	286	P	P	06 44 22.4	-0.5
	baz=63,SNR=6.4						
KIRV	Kirov	51.66	41	*c* *i*P	P	06 44 23.0	0.0
OK051	E0350 and S346	51.83	289	IAmb	IAmb	06 44 29.3	
	comp=Z,73nm,1.6s						
DEOK	Depew	51.87	288	IAmb	IAmb	06 44 26.1	
	comp=Z,46nm,1.5s						
QUOK	Quay	51.88	289	IAmb	IAmb	06 44 26.3	
	comp=Z,75nm,1.4s						
OK048	Pawnee Station	51.95	289	IAmb	IAmb	06 44 27.1	
	comp=Z,74nm,1.5s						
OK052	Battle Ridge R	52.03	288	IAmb	IAmb	06 44 31.5	
	comp=Z,94nm,1.7s						
OK030	Cody Creek RV	52.05	288	IAmb	IAmb	06 44 31.7	
	comp=Z,77nm,1.7s						
OK031	S. Brethren Rd	52.08	288	IAmb	IAmb	06 44 27.9	
	comp=Z,46nm,1.4s						
OK033	Mehan	52.11	289	IAmb	IAmb	06 44 28.2	
	comp=Z,71nm,1.4s						
DGMT	Dagmar	52.24	306	IAmb	IAmb	06 44 30.3	
	comp=Z,93nm,1.6s						
DGMT	Dagmar	52.24	306	P	P	06 44 27.1	-0.5
	baz=70,SNR=8.5						
DGMT	Dagmar	52.24	306	P	P	06 44 28.1	+0.4
	baz=70,SNR=8.5						
NATX	Nacogdoches	52.36	283	P	P	06 44 28.9	+0.3
	baz=62						
NPGB	Novo Progresso	52.36	213	*e*P	P	06 44 28.9	+0.1
R32A	Long Quarter,	52.38	292	IAmb	IAmb	06 44 33.9	
	comp=Z,67nm,1.6s						
R32A	Long Quarter,	52.38	292	P	P	06 44 28.5	-0.2
	baz=65						
KIV	Kislovodsk	52.38	60	*e*P	P	06 44 30.2	+1.5
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SGCB	S£o Gabriel d	52.40	230	*e*P	P	06 44 30.2	+1.1
W35A	Tecumseh	52.45	288	IAmb	IAmb	06 44 34.7	
	comp=Z,88nm,1.7s						
BELG	Belogornoye	52.52	49	*d* *i*P	P	06 44 29.4	-0.1
BELG				pmax	pmax		
	comp=Z,19nm,1.3s						
KBZ	Khabaz	52.60	60	P	P	06 44 32.3	+2.1
	comp=Z,18nm,1.2s,baz=300,slow=8.7,SNR=13						
KBZ				PcP	PcP	06 45 41.2	+0.9
	comp=Z,6.6nm,0.9s,baz=309,slow=1.1,SNR=3.9						
	comp=Z,18nm,1.2s						
KBZ	Khabaz	52.60	60	*d* *i*P	P	06 44 31.8	+1.5
KBZ				pmax	pmax		
	comp=Z,49nm,1.5s						
NEY	Neytrino	52.67	61	⇑*e*P	P	06 44 34.2	+3.2
NEY				pmax	pmax		
	comp=Z,8.0nm,1.3s						
FNO	Franklin	52.79	288	IAmb	IAmb	06 44 36.5	
	comp=Z,70nm,1.8s						
CBKS	Cedar Bluff	52.94	293	P	P	06 44 31.5	-1.5
	baz=65						
NOKA	Waynoka	53.30	290	IAmb	IAmb	06 46 20.6	
	comp=Z,26nm,0.7s						
YKA	Yellowknife Ar	53.41	325	P	P	06 44 35.8	-0.2
	comp=Z,1.9nm,0.9s,baz=72,slow=7.0,SNR=20						
YKA				PcP	PcP	06 45 42.3	-0.7
	comp=Z,3.3nm,1.1s,baz=76,slow=4.3,SNR=9.6						
	comp=Z,1.9nm,0.9s						
ONI	Oni	53.42	62	IAmb	IAmb	06 44 39.0	
	comp=Z,104nm,2.0s						
ZEI	Tsey	53.65	61	*e*P	P	06 44 36.0	-2.3
ZEI				pmax	pmax		
	comp=Z,24nm,1.0s						
OGNE	Ogallala	53.66	296	P	P	06 44 37.2	-1.1
	baz=66						
RSSD	Black Hills	53.74	301	P	P	06 44 37.4	-1.6
RSSD	Black Hills	53.74	301	P	P	06 44 37.4	-1.6
RSSD				pmax	pmax		
	comp=Z,23nm,1.6s						
RSSD	Black Hills	53.74	301	P	P	06 44 38.1	-0.9
	baz=67						
TEFE	Tefe	53.80	225	*e*P	P	06 44 40.5	+1.1
SDBA	SAO DESIDERIO	53.88	199	*e*P	P	06 44 40.5	+0.5
WMOK	Wichita Mounta	54.04	288	P	P	06 44 40.6	-0.4
	baz=62						
HKT	Hockley	54.11	281	⇓*i*P	P	06 44 40.5	-1.0
HKT				pmax	pmax		
	comp=Z,34nm,1.9s						
LAO	LASA Array	54.17	304	P	P	06 44 41.5	-0.4
	baz=67,SNR=16						
LAO	LASA Array	54.17	304	P	P	06 44 42.5	+0.6
	baz=67,SNR=16						
WTFS	Witchita Falls	54.25	287		P	06 44 42.4	-0.2
WTFS				IAmb	IAmb	06 44 50.1	
	comp=Z,89nm,1.8s						
A36M	Sachs Harbour	54.36	338	IAmb	IAmb	06 44 48.9	
	comp=Z,70nm,1.9s						
A36M	Sachs Harbour	54.36	338	P	P	06 44 42.5	-0.2
	baz=70,SNR=9.3						
GROC	Groznyy	54.75	60	*e*P	P	06 44 47.2	+1.2
GROC				*e*S	S	06 52 28.5	+2.2
C36M	Paulatuk	54.89	334	P	P	06 44 45.5	-1.1
	baz=70						
KSCO	Kaye Shedlock’	54.90	294	IAmb	IAmb	06 44 48.9	
	comp=Z,42nm,1.4s						
KSCO	Kaye Shedlock’	54.90	294	P	P	06 44 46.4	-1.0
	baz=64						
GEVA	Gevas	54.94	67	IAmb	IAmb	06 44 50.1	
	comp=Z,39nm,1.5s						
435B	Jarrell	55.02	283	P	P	06 44 48.4	+0.2
	baz=60						
GNI	Garni	55.32	64	P	P	06 44 51.2	+0.8
GNI				IAmb	IAmb	06 44 52.9	
	comp=Z,52nm,1.3s						
GNI	Garni	55.32	64	P	P	06 44 51.2	+0.8
GNI				pmax	pmax		
	comp=Z,52nm,1.3s						
GNI	Garni	55.32	64	P	P	06 44 51.0	+0.6
GNI	Garni	55.32	64	P	P	06 44 50.8	+0.4
ESPN	Las Esperanzas	55.32	256	IAmb	IAmb	06 44 53.9	
	comp=Z,59nm,1.4s						
SNDB	Serra Nova Dou	55.34	206	*e*P	P	06 44 51.4	+0.8
ABTX	Abilene, Hawle	55.66	286	IAmb	IAmb	06 44 57.4	
	comp=Z,36nm,1.4s						
ABTX	Abilene, Hawle	55.66	286	P	P	06 44 52.5	-0.3
	baz=61						
EGMT	Eagleton	55.86	307	P	P	06 44 53.7	-0.4
	baz=66,SNR=13						
K22A	Casper	56.00	300	IAmb	IAmb	06 44 56.3	
	comp=Z,72nm,1.6s						
K22A	Casper	56.00	300	P	P	06 44 54.5	-0.8
	baz=65,SNR=13						
K22A	Casper	56.00	300	P	P	06 44 54.8	-0.5
	baz=65,SNR=13						
CLDB	Colider	56.00	212	*e*P	P	06 44 56.8	+1.5
AMTX	Amarillo	56.08	290	IAmb	IAmb	06 44 57.5	
	comp=Z,52nm,1.4s						
AMTX	Amarillo	56.08	290	P	P	06 44 55.4	-0.5
	baz=62						
AMTX	Amarillo	56.08	290	P	P	06 44 57.9	+2.0
	baz=62,SNR=7.6						
ACON	Acoyapa	56.12	256	IAmb	IAmb	06 44 59.1	
	comp=Z,53nm,1.5s						
JANB	Januaria	56.30	197	*e*P	P	06 44 57.8	+0.4
COVE	Coope Vega, Sa	56.35	255	IAmb	IAmb	06 45 01.1	
	comp=Z,46nm,1.3s						
N23A	Red Feather La	56.37	298	P	P	06 44 57.8	-0.3
	baz=64,SNR=25						
ISCO	Idaho Springs	56.62	296	IAmb	IAmb	06 45 01.7	
	comp=Z,38nm,1.6s						
ISCO	Idaho Springs	56.62	296	P	P	06 44 59.8	-0.1
	baz=63,SNR=16						
PETF	Flores	56.63	264	IAmb	IAmb	06 45 12.2	
	comp=Z,28nm,1.1s						
Q24A	Divide	56.68	295	IAmb	IAmb	06 45 01.7	
	comp=Z,44nm,1.5s						
Q24A	Divide	56.68	295	P	P	06 44 60.0	-0.4
	baz=63,SNR=6.3						
RLMT	Red Lodge	56.75	304	IAmb	IAmb	06 45 06.2	
	comp=Z,50nm,1.3s						
RLMT	Red Lodge	56.75	304	P	P	06 45 00.4	-0.2
	baz=65,SNR=26						
POST	Post	56.82	288	IAmb	IAmb	06 45 07.8	
	comp=Z,66nm,1.8s						
JCT	Junction City	56.83	284	IAmb	IAmb	06 45 06.1	
	comp=Z,66nm,1.6s						
JCT	Junction City	56.83	284	P	P	06 45 01.1	-0.1
	baz=60,SNR=7.8						
RWWY	Rawlins	56.88	299	IAmb	IAmb	06 45 03.2	
	comp=Z,76nm,1.8s						
GUA01	Guaratinga, BA	56.92	192	*e*P	P	06 45 03.4	+1.7
WRGLY	Wrigley	56.95	327	P	P	06 45 00.7	-0.7
	baz=66,SNR=9.0						
T25A	Trinidad	56.99	293	IAmb	IAmb	06 45 05.5	
	comp=Z,39nm,1.3s						
T25A	Trinidad	56.99	293	P	P	06 45 02.6	+0.1
	baz=62,SNR=17						
ARU	Arti	57.03	41	P	P	06 45 01.8	-0.4
ARU				IAmb	IAmb	06 45 03.4	
	comp=Z,53nm,1.2s						
ARU	Arti	57.03	41	*d* *i*P	P	06 45 01.9	-0.3
ARU				pmax	pmax		
	comp=Z,78nm,1.7s						
JTS	Las Juntas de	57.04	255	*d* *i*P	P	06 45 02.7	-0.1
JTS				pmax	pmax		
	comp=Z,17nm,1.9s						
PDRB	Porto dos Gac	57.05	212	*e*P	P	06 45 03.2	+0.5
MSTX	Muleshoe	57.31	289	IAmb	IAmb	06 45 06.4	
	comp=Z,49nm,1.4s						
MSTX	Muleshoe	57.31	289	P	P	06 45 05.5	+0.9
	baz=61,SNR=9.5						
MSTX	Muleshoe	57.31	289	P	P	06 45 04.3	-0.4
	baz=61,SNR=9.5						
TBTG	Tabatinga, AM	57.36	230	*e*P	P	06 45 05.5	+0.5
SDCO	Great Sand Dun	57.48	294	P	P	06 45 06.2	+0.1
	baz=62,SNR=10						
833A	Chaparral WMA,	57.62	282	P	P	06 45 06.5	-0.2
	baz=58						
SAML	Samuel	57.64	220	P	P	06 45 06.7	-0.2
SAML	Samuel	57.64	220	P	P	06 45 06.7	-0.2
SAML				pmax	pmax		
	comp=Z,18nm,1.5s						
SAML	Samuel	57.64	220	*e*P	P	06 45 07.0	+0.1
BDFB	Brasilia	57.79	201	P	P	06 45 09.0	+0.9
	comp=Z,9.9nm,1.0s,baz=1.6,slow=8.7,SNR=8.9						
	comp=Z,9.9nm,1.0s						
BDFB	Brasilia	57.79	201	P	P	06 45 08.6	+0.6
BDFB				IAmb	IAmb	06 45 11.1	
	comp=Z,46nm,1.5s						
BDFB	Brasilia	57.79	201	P	P	06 45 09.0	+0.9
BDFB	Brasilia	57.79	201	*e*P	P	06 45 08.1	0.0
SMCO	Snowmass	57.84	296	IAmb	IAmb	06 45 16.3	
	comp=Z,52nm,1.9s						
H17A	Grant Village	57.90	303	IAmb	IAmb	06 45 36.3	
	comp=Z,57nm,1.9s						
H17A	Grant Village	57.90	303	P	P	06 45 08.8	-0.1
	baz=64,SNR=5.5						
SVE	Sverdlovsk	57.92	40	*e*P	P	06 45 08.8	+0.4
SVE				pmax	pmax		
	comp=Z,51nm,1.6s						
PD31	Pinedale Array	57.96	301	IAmb	IAmb	06 45 13.6	
	comp=Z,44nm,1.4s						
PDAR	Pinedale Array	57.96	301	P	P	06 45 07.8	-1.4
	comp=Z,8.2nm,1.0s,baz=69,slow=8.1,SNR=31						
	comp=Z,8.2nm,1.0s						
BW06	Boulder Array	57.96	301	IAmb	IAmb	06 45 10.5	
	comp=Z,44nm,1.4s						
BW06	Boulder Array	57.96	301	P	P	06 45 08.1	-1.2
	baz=63,SNR=26						
BOZ	Bozeman (W)	58.05	305	IAmb	IAmb	06 45 16.8	
	comp=Z,90nm,2.0s						
BOZ	Bozeman (W)	58.05	305	P	P	06 45 09.4	-0.3
	baz=64,SNR=17						
FLWY	Flagg Ranch	58.12	303	IAmb	IAmb	06 45 27.6	
	comp=Z,33nm,1.2s						
O20A	White River Ci	58.27	298	P	P	06 45 11.6	+0.1
	baz=62,SNR=12						
MOOW	Moose Ponds	58.30	303	IAmb	IAmb	06 45 13.6	
	comp=Z,35nm,1.4s						
S22A	4UR Ranch, Cre	58.41	295	P	P	06 45 12.8	+0.2
	baz=62,SNR=11						
INK	Inuvik	58.45	335	P	P	06 45 10.4	-1.5
	comp=Z,4.8nm,1.1s,baz=58,slow=11,SNR=13						
INK				PcP	PcP	06 46 02.6	+0.2
	comp=Z,3.9nm,1.0s,baz=52,slow=8.8,SNR=5.4						
	comp=Z,4.8nm,1.1s						
INK	Inuvik	58.45	335	IAmb	IAmb	06 45 12.7	
	comp=Z,63nm,1.9s						
INK	Inuvik	58.45	335	P	P	06 45 10.8	-1.1
	baz=61,SNR=14						
KOTAN	Kotaneelee Air	58.51	324	P	P	06 45 12.3	-0.2
	baz=64,SNR=6.4						
FXWY	Fox Creek	58.53	303	IAmb	IAmb	06 45 14.5	
	comp=Z,37nm,1.6s						
TPAW	Teton Pass	58.55	302	IAmb	IAmb	06 45 18.6	
	comp=Z,39nm,1.4s						
F31M	Tsiigehtchic	58.94	334	P	P	06 45 14.8	-0.6
	baz=61,SNR=24						
MSO	Missoula	58.94	307	IAmb	IAmb	06 45 17.9	
	comp=Z,59nm,1.6s						
MSO	Missoula	58.94	307	P	P	06 45 15.6	-0.3
	baz=63,SNR=8.7						
ARAG	Araguaiana, MT	59.00	205	*e*P	P	06 45 17.8	+1.4
SJMB	Sao Joao De Ma	59.22	193	*e*P	P	06 45 19.3	+1.5
DIAM	Diamantina, MG	59.30	196	*e*P	P	06 45 19.8	+1.3
OTAV	Otavalo	59.38	241	P	P	06 45 20.6	+0.9
OTAV	Otavalo	59.38	241	P	P	06 45 20.6	+0.9
OTAV				pmax	pmax		
	comp=Z,29nm,1.8s						
OTAV	Otavalo	59.38	241	*e*P	P	06 45 20.0	+0.3
ANMO	Albuquerque	59.49	292	P	P	06 45 20.3	+0.3
ANMO	Albuquerque	59.49	292	*c* *i*P	P	06 45 20.5	+0.5
ANMO				pmax	pmax		
	comp=Z,16nm,1.7s						
ANMO	Albuquerque	59.49	292	P	P	06 45 20.9	+0.9
	baz=60						
ANMO	Albuquerque	59.49	292	P	P	06 45 20.9	+0.9
	baz=60,SNR=10						
VILB	Vilhena	59.73	215	IAmb	IAmb	06 45 24.2	
	comp=Z,40nm,1.5s						
VILB	Vilhena	59.73	215	*e*P	P	06 45 22.9	+1.5
LIRD	Liard River Hi	59.76	324	P	P	06 45 21.2	0.0
	baz=62						
BSUT	Blindstream Ca	59.79	299	IAmb	IAmb	06 45 33.8	
	comp=Z,48nm,1.4s						
MVCO	Mesa Verde	59.83	295	P	P	06 45 23.0	+0.6
	baz=61,SNR=6.5						
P18A	Preston Nutter	59.87	298	IAmb	IAmb	06 45 29.1	
	comp=Z,37nm,1.5s						
ETMB	Extrema	59.93	223	*e*P	P	06 45 22.9	0.0
G30M	tAoh Zraii Nji	60.01	334	P	P	06 45 22.4	-0.4
	baz=58						
IPMB	Ipameri, GO	60.08	201	*e*P	P	06 45 24.5	+0.7
PMNB	Patos De Minas	60.15	198	*e*P	P	06 45 25.6	+1.2
NEW	Newport	60.21	310	P	P	06 45 24.2	-0.3
	baz=62,SNR=14						
JLU	Jordanelle	60.22	300	IAmb	IAmb	06 45 33.4	
	comp=Z,45nm,1.5s						
Y22D	IRIS PASSCAL I	60.26	291	P	P	06 45 24.2	-1.0
	baz=60						
Y22F	Passcal Instru	60.26	291	P	P	06 45 23.9	-1.3
	baz=60						
TX31	Lajitas Ar. Si	60.30	285	P	P	06 45 24.9	-0.6
	baz=58,SNR=16						
TX32	Lajitas Array	60.30	285	P	P	06 45 24.8	-0.7
TXAR	Lajitas Array	60.30	285	P	P	06 45 25.0	-0.4
	comp=Z,4.8nm,1.0s,baz=70,slow=6.9,SNR=28						
	comp=Z,4.8nm,1.0s						
TXAR	Lajitas Array	60.30	285	P	P	06 45 24.9	-0.6
MNTX	Cornudas Mount	60.34	288	P	P	06 45 25.2	-0.5
	baz=59,SNR=6.6						
Y22A	Socorro	60.36	291	P	P	06 45 26.7	+0.7
	baz=60,SNR=10						
CTU	Camp Tracy	60.38	300	IAmb	IAmb	06 45 38.4	
	comp=Z,48nm,1.9s						
MMPY	Sheldon Lake,	60.42	329	P	P	06 45 25.2	-0.5
	baz=60,SNR=7.4						
EPYK	Eagle Plains	60.50	334	P	P	06 45 25.8	-0.4
	baz=58,SNR=11						
HVU	Hansel Valley	60.53	301	IAmb	IAmb	06 45 39.1	
	comp=Z,55nm,1.5s						
SALV	Santo Antonio	60.55	209	*e*P	P	06 45 27.8	+0.8
WTLY	Watson Lake, Y	60.62	325	IAmb	IAmb	06 45 34.8	
	comp=Z,37nm,1.5s						
WTLY	Watson Lake, Y	60.62	325	P	P	06 45 27.2	+0.1
	baz=61,SNR=11						
TMUT	Trail Mountain	60.69	298	IAmb	IAmb	06 45 36.9	
	comp=Z,43nm,1.3s						
HLID	Hailey	60.75	304	IAmb	IAmb	06 45 34.3	
	comp=Z,43nm,1.8s						
HLID	Hailey	60.75	304	P	P	06 45 28.3	-0.2
	baz=61,SNR=13						
C27K	Jago River	60.83	339	P	P	06 45 27.9	-0.5
	baz=54						
ABKAR	Akbulak array	60.92	49	IAmb	IAmb	06 45 31.1	
	comp=Z,28nm,1.4s						
NLU	North Lily Min	60.95	299	IAmb	IAmb	06 45 35.5	
	comp=Z,50nm,1.7s						
C26K	Camden Bay	60.99	339	P	P	06 45 29.4	-0.1
	baz=53,SNR=12						
E27K	Coleen River	61.06	337	P	P	06 45 29.8	-0.2
	baz=55						
BGU	Big Grassy Mou	61.11	301	IAmb	IAmb	06 45 36.2	
	comp=Z,60nm,1.6s						
DUG	Dugway, Tooele	61.33	300	P	P	06 45 32.4	0.0
	baz=60,SNR=24						
FARO	Faro, Yukon	61.45	329	P	P	06 45 32.4	-0.4
	baz=58						
PTLB	Pontes e Lacer	61.50	213	P	P	06 45 33.4	0.0
PTLB	Pontes e Lacer	61.50	213	*e*P	P	06 45 34.3	+0.8
I29M	Ogilvie Camp,	61.60	333	IAmb	IAmb	06 45 38.8	
	comp=Z,38nm,1.5s						
I29M	Ogilvie Camp,	61.60	333	P	P	06 45 33.4	-0.2
	baz=56,SNR=10						
121A	Cookes Peak, D	61.66	290	P	P	06 45 35.4	+0.5
	baz=59						
MAYO	Mayo, Yukon	61.70	331	P	P	06 45 33.5	-0.8
	baz=57						
W18A	Petrified Fore	61.74	294	P	P	06 45 35.5	+0.2
	baz=59						
D25K	Kavik River	61.76	339	P	P	06 45 34.5	-0.2
	baz=51,SNR=19						
PP1B	Ponte de Pedra	61.81	208	*e*P	P	06 45 36.5	+0.9
CZSB	Cruzeiro do Su	61.84	230	*e*P	P	06 45 35.3	-0.6
NRIK	Noril'sk	61.86	21	P	P	06 45 37.0	+1.7
	comp=Z,15nm,1.1s,baz=298,slow=4.7,SNR=18						
	comp=Z,15nm,1.1s						
NRIK	Noril'sk	61.86	21	IAmb	IAmb	06 45 37.8	
	comp=Z,31nm,1.2s						
NRIK	Noril'sk	61.86	21	*d* *i*P	P	06 45 36.2	+0.9
NRIK				pmax	pmax		
	comp=Z,35nm,1.3s						
M31M	Drury Creek, Y	61.88	329	P	P	06 45 35.5	-0.1
	baz=58						
G27K	Doyon Strip	61.88	335	P	P	06 45 35.5	-0.1
	baz=54						
N32M	Quiet Lake	61.91	328	P	P	06 45 35.6	-0.3
	baz=58						
BMO	Blue Mountains	61.94	306	IAmb	IAmb	06 45 41.0	
	comp=Z,21nm,1.2s						
DLBC	Dease Lake	62.01	324	P	P	06 45 36.8	+0.2
	baz=59,SNR=6.7						
F26K	Sheenjek River	62.13	337	P	P	06 45 37.6	+0.4
	baz=52						
C24K	Franklin Bluff	62.14	340	P	P	06 45 36.8	-0.3
	baz=50						
K29M	Barlow Dome	62.17	332	P	P	06 45 37.4	-0.2
	baz=56						
H27K	Steamboat Moun	62.18	335	P	P	06 45 37.4	-0.2
	baz=54						
X18A	Snowflake	62.19	293	IAmb	IAmb	06 45 40.9	
	comp=Z,23nm,1.4s						
E25K	Arctic Village	62.28	338	P	P	06 45 38.3	+0.1
	baz=51,SNR=17						
P33M	Teslin, Yukon	62.30	327	IAmb	IAmb	06 45 41.0	
	comp=Z,32nm,1.9s						
P33M	Teslin, Yukon	62.30	327	P	P	06 45 38.2	-0.3
	baz=58						
ITRB	Iturama	62.31	202	*e*P	P	06 45 40.1	+1.2
G26K	Porcupine Rive	62.47	336	P	P	06 45 39.4	0.0
	baz=52						
I27K	Kandik River	62.59	334	P	P	06 45 39.6	-0.7
	baz=53						
M30M	Minto, Yukon	62.61	330	IAmb	IAmb	06 45 42.6	
	comp=Z,34nm,1.5s						
M30M	Minto, Yukon	62.61	330	P	P	06 45 41.0	+0.5
	baz=56,SNR=10						
F25K	Christian Rive	62.64	337	P	P	06 45 40.6	0.0
	baz=51						
WUAZ	Wupatki	62.69	295	P	P	06 45 42.2	+0.5
	baz=59,SNR=8.6						
DAWY	Dawson	62.72	332	IAmb	IAmb	06 45 42.9	
	comp=Z,28nm,1.6s						
DAWY	Dawson	62.72	332	P	P	06 45 41.5	+0.2
	baz=54,SNR=7.2						
DUB01	Friburgo-RJ	62.73	193	*e*P	P	06 45 40.4	-1.3
G08A	Pilot Rock	62.74	307	IAmb	IAmb	06 45 48.8	
	comp=Z,35nm,1.6s						
S34M	Telegraph Cree	62.79	324	P	P	06 45 42.0	+0.3
	baz=58						
L29M	L29M	62.81	331	P	P	06 45 42.4	+0.6
	baz=55,SNR=8.0						
N31M	Braeburn, Yuko	62.82	329	IAmb	IAmb	06 45 43.7	
	comp=Z,42nm,1.6s						
N31M	Braeburn, Yuko	62.82	329	P	P	06 45 42.0	+0.1
	baz=56						
T35M	Bob Quinn	62.88	323	P	P	06 45 42.6	+0.2
	baz=58						
EGAK	Eagle	62.92	333	IAmb	IAmb	06 45 43.8	
	comp=Z,40nm,2.0s						
EGAK	Eagle	62.92	333	P	P	06 45 42.4	-0.1
	baz=53						
KNB	Kanab	62.92	297	IAmb	IAmb	06 45 44.2	
	comp=Z,41nm,1.6s						
TLIG	Tlapa	62.94	271	P	P	06 45 42.8	-0.6
A21K	Barrow	62.96	343	P	P	06 45 43.0	+0.3
	baz=44,SNR=7.6						
P32M	Atlin	63.02	326	P	P	06 45 43.6	+0.3
	baz=57						
ZAIG	Zacatecas	63.02	278	P	P	06 45 43.3	-0.8
ZAIG				IAmb	IAmb	06 45 47.3	
	comp=Z,48nm,1.7s						
BB19B	Bebedouro	63.10	200	*e*P	P	06 45 45.8	+1.6
VAS01	Vassouras-RJ	63.12	194	*e*P	P	06 45 45.9	+1.7
E24K	Your Creek	63.16	338	P	P	06 45 44.3	+0.2
	baz=49,SNR=23						
D23K	Nanushuk River	63.17	340	P	P	06 45 44.7	+0.6
	baz=48						
Q12A	Willow Creek R	63.25	300	IAmb	IAmb	06 45 58.3	
	comp=Z,32nm,1.1s						
I26K	Coal Creek Min	63.28	334	IAmb	IAmb	06 45 49.6	
	comp=Z,28nm,1.5s						
I26K	Coal Creek Min	63.28	334	P	P	06 45 45.0	+0.2
	baz=52,SNR=6.9						
X16A	Lo Mia Camp, P	63.30	294	IAmb	IAmb	06 45 49.0	
	comp=Z,24nm,1.4s						
G25K	Bearman Lake	63.30	337	P	P	06 45 45.2	+0.2
	baz=50						
M29M	Somme Creek	63.32	330	P	P	06 45 45.4	+0.1
	baz=54						
F24K	Squaw Lake	63.35	338	P	P	06 45 45.6	+0.2
	baz=49						
O30N	Mendenhall	63.35	328	P	P	06 45 45.4	-0.1
	baz=56						
319A	Douglas	63.35	290	IAmb	IAmb	06 45 55.7	
	comp=Z,42nm,1.4s						
N30M	Aishikik Lake	63.36	329	P	P	06 45 45.7	+0.2
	baz=55						
E23K	Chandalar	63.49	339	P	P	06 45 46.4	+0.1
	baz=48						
BBSD	Serra de San D	63.67	213	*e*P	P	06 45 48.9	+0.9
K27K	Chicken	63.69	333	IAmb	IAmb	06 45 49.6	
	comp=Z,29nm,1.6s						
K27K	Chicken	63.69	333	P	P	06 45 47.8	+0.2
	baz=52						
G24K	Hadweenzic Riv	63.76	337	P	P	06 45 48.8	+0.7
	baz=49						
SKAG	Skagway	63.77	327	P	P	06 45 49.0	+0.9
	baz=56						
HYT	Haines Junctio	63.89	329	IAmb	IAmb	06 46 27.8	
	comp=Z,30nm,1.5s						
HYT	Haines Junctio	63.89	329	P	P	06 45 49.5	+0.4
	baz=55						
PRP	Porcupine Dome	63.92	335	IAmb	IAmb	06 45 51.2	
	comp=Z,34nm,1.5s						
PRP	Porcupine Dome	63.92	335	P	P	06 45 49.6	+0.3
	baz=50,SNR=9.2						
TUC	Tucson	63.94	291	P	P	06 45 50.3	+0.4
TUC	Tucson	63.94	291	P	P	06 45 50.3	+0.4
TUC				pmax	pmax		
	comp=Z,19nm,1.4s						
TUC	Tucson	63.94	291	P	P	06 45 50.9	+1.1
	baz=58						
YUK4	Talbot Arm	64.03	330	P	P	06 45 49.0	-1.2
	baz=54						
R11B	Troy Canyon, C	64.11	299	P	P	06 45 51.0	-0.1
	baz=58,SNR=13						
BMN	Battle Mountai	64.12	302	IAmb	IAmb	06 45 52.8	
	comp=Z,32nm,1.6s						
RCLB	Rio Claro- Sao	64.15	198	*e*P	P	06 45 53.4	+2.3
YUK6	Outpost Mounta	64.16	329	P	P	06 45 50.7	-0.3
	baz=54,SNR=6.4						
COLD	Coldfoot	64.21	338	IAmb	IAmb	06 45 52.9	
	comp=Z,34nm,1.4s						
COLD	Coldfoot	64.21	338	P	P	06 45 51.5	+0.5
	baz=47						

RAYN	Ar Rayn	64.22	80	P	P	06 45 51.4	-0.4
RAYN	Ar Rayn	64.22	80	P	P	06 45 51.4	-0.4
RAYN				pmax	pmax		
	comp=Z,19nm,1.4s						
RAYN	Ar Rayn	64.22	80	*i* P	P	06 45 51.3	-0.4
	SNR=7.4						
RAYN	Ar Rayn	64.22	80	P	P	06 45 52.8	+1.0
BVCY	Beaver Creek	64.24	331	P	P	06 45 51.5	+0.2
	baz=53						
PCMB	Pacaembu	64.38	202	*e*P	P	06 45 53.6	+1.0
SCRK	Sand Creek	64.39	334	IAmb	IAmb	06 45 54.2	
	comp=Z,45nm,1.9s						
SCRK	Sand Creek	64.39	334	P	P	06 45 52.1	-0.2
	baz=51						
V35K	Ketchikan	64.41	322	P	P	06 45 52.4	0.0
	baz=56						
H24K	Noodor Dome	64.45	336	P	P	06 45 52.5	-0.1
	baz=49						
YUK3	Moose Creek	64.47	331	P	P	06 45 53.3	+0.2
	baz=53						
YUK8	Steele Glacier	64.51	330	P	P	06 45 54.0	+0.7
	baz=53						
G23K	Bananza Creek	64.51	338	P	P	06 45 53.4	+0.4
	baz=47						
VAO	Valinhos	64.57	198	*e*P	P	06 45 55.6	+1.7
S32K	Killisnoo	64.58	325	P	P	06 45 54.6	+1.2
	baz=55						
PARB	Paraibuna	64.59	196	*e*P	P	06 45 55.0	+0.9
BRVK	Borovoye	64.60	41	P	P	06 45 53.2	-0.5
BRVK				IAmb	IAmb	06 45 55.5	
	comp=Z,23nm,1.2s						
BRVK	Borovoye	64.60	41	*d i*P	P	06 45 53.9	+0.1
BRVK				pmax	pmax		
	comp=Z,28nm,1.4s						
BRVK	Borovoye	64.60	41	P	P	06 45 53.6	-0.2
DOT	Dot Lake	64.62	333	IAmb	IAmb	06 45 54.7	
	comp=Z,29nm,1.6s						
O29M	Mount Kennedy	64.62	329	P	P	06 45 54.6	+0.6
	baz=54						
M27K	Edge Creek, AK	64.65	331	IAmb	IAmb	06 46 01.6	
	comp=Z,53nm,1.8s						
M27K	Edge Creek, AK	64.65	331	P	P	06 45 54.4	+0.3
	baz=52						
U33K	Whale Pass	64.68	323	P	P	06 45 54.7	+0.6
	baz=56						
AQDB	Aquidauana	64.75	207	P	P	06 45 55.1	+0.1
AQDB				IAmb	IAmb	06 45 57.8	
	comp=Z,27nm,1.5s						
AQDB	Aquidauana	64.75	207	*e*P	P	06 45 56.0	+1.0
L26K	Log Cabin Wild	64.76	333	P	P	06 45 54.9	+0.2
	baz=51						
POKR	Poker Plat Res	64.79	336	IAmb	IAmb	06 45 59.9	
	comp=Z,40nm,1.6s						
POKR	Poker Plat Res	64.79	336	P	P	06 45 55.0	+0.2
	baz=49						
RIDG	Independent Ri	64.83	334	IAmb	IAmb	06 45 57.2	
	comp=Z,50nm,1.8s						
RIDG	Independent Ri	64.83	334	P	P	06 45 55.3	+0.1
	baz=50						
ILAR	Eielson Array	64.84	335	P	P	06 45 54.6	-0.6
	comp=Z,2.5nm,1.2s,baz=43,slow=4.5,SNR=12						
	comp=Z,2.5nm,1.2s						
ILAR	Eielson Array	64.84	335	P	P	06 45 53.7	-1.5
H23K	Yukon River	64.97	337	IAmb	IAmb	06 45 58.1	
	comp=Z,32nm,1.5s						
V12A	Nelson	64.99	297	IAmb	IAmb	06 45 59.0	
	comp=Z,26nm,1.4s						
M26K	Nabesna, AK	65.03	332	P	P	06 45 57.2	+0.7
	baz=51						
COLA	College	65.09	336	*d i*P	P	06 45 57.4	+0.7
COLA				pmax	pmax		
	comp=Z,25nm,1.9s						
HDA	Harding Lake	65.10	335	P	P	06 45 56.7	-0.2
	baz=49,SNR=5.6						
K24K	Donnelly Dome	65.11	334	P	P	06 45 57.2	+0.2
	baz=50						
F21K	Alatna River	65.14	339	P	P	06 45 57.2	+0.2
	baz=45						
MDM	Murphy Dome	65.15	336	IAmb	IAmb	06 45 58.7	
	comp=Z,23nm,1.4s						
J05D	Fort Rock, OR	65.18	306	P	P	06 45 58.1	+0.2
CCB	Clear Creek Bu	65.22	335	IAmb	IAmb	06 45 58.1	
	comp=Z,26nm,1.5s						
PDMCI	Parker Dam,Lak	65.26	295	P	P	06 45 58.3	0.0
	baz=57						
TPNV	Topopah Spring	65.30	298	IAmb	IAmb	06 46 22.6	
	comp=Z,30nm,1.4s						
TPNV	Topopah Spring	65.30	298	P	P	06 45 59.2	+0.4
	baz=58,SNR=6.5						
I23K	Minto, Yukon-K	65.38	336	IAmb	IAmb	06 46 00.4	
	comp=Z,32nm,1.4s						
I23K	Minto, Yukon-K	65.38	336	P	P	06 45 58.7	+0.2
	baz=47,SNR=11						
KVN	Kaiserville	65.42	301	IAmb	IAmb	06 46 04.6	
	comp=Z,35nm,1.3s						
WRH	Wood River Hil	65.43	335	IAmb	IAmb	06 46 00.3	
	comp=Z,48nm,1.6s						
GEYT	Alibeck	65.50	60	P	P	06 46 00.4	+0.5
	comp=Z,2.8nm,0.3s,baz=284,slow=8.8,SNR=10						
	comp=Z,2.8nm,0.3s						
GEYT	Alibeck	65.50	60	IAmb	IAmb	06 46 01.9	
	comp=Z,42nm,1.5s						
PAX	Paxson	65.55	333	IAmb	IAmb	06 46 01.6	
	comp=Z,29nm,1.6s						
PAX	Paxson	65.55	333	P	P	06 45 59.9	+0.1
	baz=50						
214A	Organ Pipe Nat	65.58	292	IAmb	IAmb	06 46 13.3	
	comp=Z,29nm,1.5s						
214A	Organ Pipe Nat	65.58	292	P	P	06 46 01.5	+0.9
	baz=57						
G21K	Allakaket	65.65	339	P	P	06 46 00.2	-0.2
	baz=44						
MZP	Montezuma Peak	65.66	300	IAmb	IAmb	06 46 02.7	
	comp=Z,42nm,1.7s						
NEA2	Nenana	65.66	336	IAmb	IAmb	06 46 01.9	
	comp=Z,57nm,1.8s						
NEA2	Nenana	65.66	336	P	P	06 46 00.2	-0.3
	baz=47,SNR=6.1						
113A	Mohawk Valley,	65.82	293	IAmb	IAmb	06 46 15.6	
	comp=Z,37nm,1.5s						
MLY	Manley	65.88	337	P	P	06 46 02.4	+0.5
	baz=46,SNR=10						
NVAR	Mina Array Bea	65.89	301	P	P	06 46 02.4	-0.2
	comp=Z,2.4nm,1.0s,baz=67,slow=4.7,SNR=15						
	comp=Z,2.4nm,1.0s						
TUQ	Turquoise Moun	65.89	297	P	P	06 46 03.4	+0.9
	baz=57						
PAHR	Pah Rah Range	65.91	302	IAmb	IAmb	06 46 15.3	
	comp=Z,44nm,1.6s						
FURC	Furnace Creek,	65.97	298	P	P	06 46 03.7	+0.9
	baz=57,SNR=5.4						
GWY	Greenwater Val	65.99	298	IAmb	IAmb	06 46 16.5	
	comp=Z,51nm,1.6s						
IRM	Iron Mountain	66.04	295	P	P	06 46 04.3	+0.8
	baz=57,SNR=6.6						
GMRC	Granite Mounta	66.06	296	P	P	06 46 04.0	+0.3
	baz=57,SNR=6.2						
H21K	Melozitna Rive	66.06	338	P	P	06 46 02.8	-0.2
	baz=45,SNR=6.0						
LCH	Last Change Ra	66.09	299	IAmb	IAmb	06 46 09.4	
	comp=Z,44nm,1.4s						
IMAR	Indian Mountai	66.10	338	P	P	06 46 03.0	-0.2
LHV	Little Huntoon	66.11	301	IAmb	IAmb	06 46 06.3	
	comp=Z,49nm,1.5s						
I21K	Tanana	66.16	337	IAmb	IAmb	06 46 06.7	
	comp=Z,54nm,1.8s						
I21K	Tanana	66.16	337	P	P	06 46 03.8	+0.2
	baz=45,SNR=9.0						
MCK	McKinley	66.21	335	IAmb	IAmb	06 46 23.7	
	comp=Z,47nm,1.8s						
MCK	McKinley	66.21	335	P	P	06 46 03.8	-0.2
	baz=47						
DSP	Deep Springs	66.23	300	IAmb	IAmb	06 46 11.4	
	comp=Z,42nm,1.7s						
QSM	Queen of Sheba	66.25	298	IAmb	IAmb	06 46 14.2	
	comp=Z,27nm,1.2s						
M24K	Tolsona, Glenn	66.36	333	P	P	06 46 05.0	-0.1
	baz=49						
GLA	Glamis	66.42	294	P	P	06 46 06.3	+0.4
	baz=57						
BC3	Big Chuckawall	66.53	295	P	P	06 46 07.3	+0.7
	baz=57						
GSC	Goldstone, Bar	66.56	297	IAmb	IAmb	06 46 09.3	
	comp=Z,46nm,1.6s						
GSC	Goldstone, Bar	66.56	297	P	P	06 46 07.9	+1.1
	baz=57,SNR=5.5						
BPAW	Bear Paw Mtn.	66.61	336	P	P	06 46 05.1	-1.5
BPAW	Bear Paw Mtn.	66.61	336	P	P	06 46 06.2	-0.4
	baz=46,SNR=7.7						
MPMC	Manual Prospec	66.62	298	P	P	06 46 08.0	+0.7
	baz=57,SNR=18						
KLU	Klutina	66.68	332	P	P	06 46 07.0	-0.2
	baz=49						
BELC	Belle Mtn. Jos	66.72	295	P	P	06 46 08.6	+0.7
	baz=56,SNR=6.8						
AMBA	Amambai (Brazi	66.78	205	*e*P	P	06 46 08.9	+0.8
OMMB	Old Mammoth Mi	66.79	300	IAmb	IAmb	06 46 14.6	
	comp=Z,38nm,1.5s						
CWC	Cottonwood Cre	66.81	299	P	P	06 46 08.8	+0.2
	baz=57						
MDPB	Devils Postpil	66.83	300	IAmb	IAmb	06 46 21.9	
	comp=Z,36nm,1.5s						
TRF	Thorofare Moun	66.84	335	IAmb	IAmb	06 46 09.5	
	comp=Z,37nm,1.5s						
TRF	Thorofare Moun	66.84	335	P	P	06 46 07.8	-0.5
	baz=46,SNR=5.3						
RDOG	Red Dog Mine	66.88	343	P	P	06 46 08.4	+0.2
	baz=38,SNR=6.7						
SCM	Sheep Creek Mo	66.95	333	P	P	06 46 08.7	-0.1
	baz=48						
KTH	Kantishna Hill	66.97	335	IAmb	IAmb	06 46 10.0	
	comp=Z,53nm,1.6s						
LRMC	Laurel Mtn Rad	67.07	298	P	P	06 46 10.4	+0.3
	baz=56						
SWSC	Sam W. Stewart	67.16	294	P	P	06 46 11.0	+0.5
	baz=56						
PMD	Palm Desert	67.17	295	IAmb	IAmb	06 46 13.2	
	comp=Z,52nm,1.6s						
CHUM	Lake Minchumin	67.18	336	P	P	06 46 10.2	+0.1
	baz=45,SNR=8.1						
PFO	Pinyon Flats O	67.25	295	P	P	06 46 10.9	-0.4
PFO				IAmb	IAmb	06 46 20.9	
	comp=Z,20nm,1.2s						
PFO	Pinyon Flats O	67.25	295	⇑*i*P	P	06 46 12.3	+1.0
PFO				pmax	pmax		
	comp=Z,59nm,2.3s						
PFO	Pinyon Flats O	67.25	295	P	P	06 46 11.9	+0.6
	baz=56						
TPFO	Pinon Flats	67.25	295	P	P	06 46 12.3	+1.0
	baz=56						
SML	Sawmill	67.32	333	P	P	06 46 11.6	+0.4
	baz=47						
YUH	Yuha Desert	67.41	294	IAmb	IAmb	06 46 19.9	
	comp=Z,41nm,1.6s						
CAST	Castle Rocks	67.44	336	IAmb	IAmb	06 46 12.6	
	comp=Z,31nm,1.7s						
CAST	Castle Rocks	67.44	336	P	P	06 46 11.4	-0.4
	baz=45,SNR=5.7						
ISA	Isabella, Lake	67.50	298	P	P	06 46 13.7	+0.9
	baz=56						
IKP	In-Ko-Pah, Jac	67.54	294	P	P	06 46 13.8	+0.7
	baz=56,SNR=5.2						
CUT	Chulitna	67.56	334	P	P	06 46 12.8	+0.2
	baz=46						
BRZS	Berezniki	67.57	43	*e*P	P	06 46 12.6	-0.4
	comp=Z,24nm,2.0s,baz=43						
BRZS	Berezniki	67.57	43	*e*P	P	06 46 12.5	-0.4
BRZS				pmax	pmax		
	comp=Z,24nm,2.0s						
EDW2	Edwards Air Fo	67.61	297	P	P	06 46 14.2	+0.8
	baz=56						
MONP2	Monument Peak	67.62	295	P	P	06 46 13.8	0.0
	baz=56						
KNK	Knik Glacier	67.63	333	P	P	06 46 13.3	+0.2
	baz=47						
PMR	Palmer	67.74	333	P	P	06 46 14.3	+0.5
	baz=46						
MURC	Murrieta	67.77	296	P	P	06 46 15.1	+0.6
	baz=56						
TIXI	Tiksi	67.78	7	P	P	06 46 14.0	+0.2
TIXI	Tiksi	67.78	7	⇑*i*P	P	06 46 14.6	+0.8
TIXI				pmax	pmax		
	comp=Z,33nm,1.2s						
PPLA	Purkeypile	67.84	335	P	P	06 46 14.0	-0.5
	baz=44						
ELS	Elsinore Mount	67.90	296	IAmb	IAmb	06 46 18.3	
	comp=Z,28nm,1.4s						
GCSA	Galena City Sc	67.90	338	P	P	06 46 14.7	0.0
	baz=41						
MBAR	Mbarara	68.01	110	⇑*i*P	P	06 46 18.0	+1.7
MBAR				pmax	pmax		
	comp=Z,18nm,2.3s						
109C	Camp Elliot, M	68.10	295	P	P	06 46 17.2	+0.7
	baz=56						
K20K	Telida	68.10	336	P	P	06 46 15.7	-0.4
	baz=43						
SKT	Skwentna	68.28	334	P	P	06 46 17.2	0.0
	baz=45,SNR=8.4						
RC01	Rabbit Creek A	68.30	333	P	P	06 46 17.6	+0.3
	baz=46						
SUA	Susitna One	68.39	334	P	P	06 46 18.3	+0.3
	baz=45						
L20K	Farewell, AK	68.69	336	P	P	06 46 18.7	-1.0
	baz=43						
PB16	IPOC Station P	68.80	221	IAmb	IAmb	06 46 23.5	
	comp=Z,28nm,1.5s						
PKM	Mcpherson Peak	68.84	298	P	P	06 46 21.5	+0.1
	baz=55						
M20K	Styx River	68.88	335	P	P	06 46 20.0	-1.0
	baz=43						
TTA	Tatalina	69.01	337	P	P	06 46 22.2	+0.4
TTA				IAmb	IAmb	06 46 47.1	
	comp=Z,50nm,2.0s						
TTA	Tatalina	69.01	337	P	P	06 46 22.2	+0.4
TTA				pmax	pmax		
	comp=Z,50nm,2.0s						
TTA	Tatalina	69.01	337	P	P	06 46 21.7	-0.2
	baz=42						
FRBT	Francisco Belt	69.03	203	*e*P	P	06 46 23.0	+0.8
SPCR	Spurr Chakacha	69.07	334	P	P	06 46 21.6	-0.6
	baz=44						
L19K	White Mountain	69.21	336	P	P	06 46 23.3	+0.2
	baz=42						
M19K	Big River Lodg	69.27	335	IAmb	IAmb	06 46 25.6	
	comp=Z,57nm,2.0s						
M19K	Big River Lodg	69.27	335	P	P	06 46 22.6	-0.8
	baz=42						
BRSE	Bradley Lake S	69.61	332	P	P	06 46 25.8	+0.3
	baz=45						
ESFA	Espinillo Form	69.86	208	*e*P	P	06 46 28.6	+1.3
ITAB	Concordia	69.95	201	*e*P	P	06 46 29.1	+1.4
TNA	Tin City	70.07	343	IAmb	IAmb	06 46 30.4	
	comp=Z,36nm,1.4s						
TNA	Tin City	70.07	343	P	P	06 46 28.6	+0.4
	baz=33,SNR=14						
KURK	Kurchatov	70.16	40	P	P	06 46 29.0	0.0
KURK				IAmb	IAmb	06 46 30.2	
	comp=Z,38nm,1.4s						
KURK	Kurchatov	70.16	40	*d i*P	P	06 46 28.5	-0.5
KURK				pmax	pmax		
	comp=Z,42nm,1.7s						
KURK	Kurchatov	70.16	40	P	P	06 46 28.9	0.0
ANM	Nome	70.30	341	P	P	06 46 30.0	+0.4
	baz=35,SNR=11						
CHM	Chimkent	70.33	51	*e*P	P	06 46 30.1	-0.1
	baz=51						
CHM	Chimkent	70.33	51	*e*P	P	06 46 30.1	-0.1
KK31	Karatay Array	70.41	50	P	P	06 46 30.5	-0.2
KK31				IAmb	IAmb	06 46 32.2	
	comp=Z,22nm,1.1s						
KK31	Karatay Array	70.41	50	P	P	06 46 30.5	-0.2
KK31				pmax	pmax		
	comp=Z,22nm,1.2s						
KKAR	Karatay Array	70.41	50	P	P	06 46 30.8	+0.1
KKAR				IAmb	IAmb	06 46 32.2	
	comp=Z,22nm,1.1s						
KKAR	Karatay Array	70.41	50	P	P	06 46 30.8	+0.1
KKAR				pmax	pmax		
	comp=Z,22nm,1.2s						
O19K	Port Alsworth	70.52	334	P	P	06 46 30.7	-0.3
	baz=42						
MZR	Muzera	70.53	76	*i* P	P	06 46 31.1	-0.6
	SNR=5.5						
IUG	Iuzhnay	70.69	51	*e*P	P	06 46 32.3	-0.2
	comp=Z,59nm,1.7s,baz=51						
IUG	Iuzhnay	70.69	51	*e*P	P	06 46 32.3	-0.2
IUG				pmax	pmax		
	comp=Z,59nm,1.7s						
CPUP	Villa Florida	70.72	206	P	P	06 46 31.8	-0.7
	comp=Z,2.3nm,0.9s,baz=82,slow=4.0,SNR=3.3						
	comp=Z,2.3nm,0.9s						
CPUP	Villa Florida	70.72	206	*e*P	P	06 46 33.4	+0.9
SHME	Shamm	70.73	72	P	P	06 46 31.5	-1.3
CRSM	Crissiumal (Br	70.74	203	*e*P	P	06 46 33.6	+0.9
BANOM	Banah	70.92	72	*i* P	P	06 46 33.0	-1.0
	SNR=6.3						
BANOM	Banah	70.92	72	P	P	06 46 35.0	+0.9
	SNR=5.3						
ZAA0	Zalesovo Array	70.95	35	P	P	06 46 33.7	-0.1
ZAA0				IAmb	IAmb	06 46 34.9	
	comp=Z,31nm,1.3s						
ZALV	Zalesovo Beam	70.95	35	P	P	06 46 33.9	+0.1
	comp=Z,10nm,1.0s,baz=302,slow=8.5,SNR=22						
ZALV				PP	PP	06 49 09.6	-0.8
	comp=Z,0.6nm,0.4s,baz=306,slow=12,SNR=4.8						
	comp=Z,10nm,1.0s						
ZALV	Zalesovo Beam	70.95	35	P	P	06 46 33.7	0.0
NAZ	Nazwa, Dubai	70.99	73	P	P	06 46 33.5	-1.0
O18K	Koktuh Hills	71.07	334	P	P	06 46 35.0	+0.6
	baz=41						
MSFE	Esma-Masafi	71.14	72	*i* P	P	06 46 34.2	-1.2
	SNR=5.7						
BTLS	Baital	71.27	47	*e*P	P	06 46 36.3	+0.5
	baz=47						
BTLS	Baital	71.27	47	*e*P	P	06 46 36.3	+0.5
MDH	Madha	71.28	72	*i* P	P	06 46 34.9	-1.3
	SNR=6.9						
MDH	Madha	71.28	72	P	P	06 46 37.0	+0.8
	SNR=5.2						
UOSS	Minazif	71.41	73	P	P	06 46 36.5	-0.6
UOSS				IAmb	IAmb	06 46 37.4	
	comp=Z,26nm,1.2s						
UOSS	Minazif	71.41	73	*i* P	P	06 46 35.5	-1.6
	SNR=7.3						
HATD	Hatta, Dubai	71.43	73	*i* P	P	06 46 35.8	-1.4
	SNR=7.8						
HATD	Hatta, Dubai	71.43	73	P	P	06 46 38.1	+0.9
	SNR=8.3						
ASHO	Ashiyiah	71.46	73	*i* P	P	06 46 36.3	-1.1
	SNR=6.1						
ASHO	Ashiyiah	71.46	73	P	P	06 46 37.7	+0.4
	SNR=7.0						
N16K	Nishlik Lake	71.74	336	P	P	06 46 39.7	+1.3
	baz=39,SNR=5.9						
O17K	Koliganek Bris	71.75	335	P	P	06 46 38.6	+0.1
	baz=40						
BILL	Bilibino	71.79	354	P	P	06 46 37.7	-0.9
BILL				IAmb	IAmb	06 46 40.9	
	comp=Z,60nm,1.7s						
BILL	Bilibino	71.79	354	*ce*P	P	06 46 39.0	+0.4
BILL				*e*		06 49 17.2	
BILL				pmax	pmax		
	comp=Z,38nm,1.7s						
TICA	Tres Isletas	71.86	209	*e*P	P	06 46 40.7	+1.3
SOHO	SOHO	72.13	73	*i* P	P	06 46 40.5	-0.8
	SNR=6.3						
LVC	Limon Verde	72.14	218	*e*P	P	06 46 43.3	+1.6
O16K	Kokwok River B	72.21	335	P	P	06 46 41.3	+0.1
	baz=39						
BTK	Batken	72.42	52	IAmb	IAmb	06 46 44.7	
	comp=Z,51nm,1.6s						
SGDS	Sogindy	72.58	48	*e*P	P	06 46 43.8	-0.1
	baz=48						
SGDS	Sogindy	72.58	48	*e*P	P	06 46 43.7	-0.1
EKS2	Erkin-Say	72.58	49	P	P	06 46 45.6	+1.7
	SNR=13						
AML	Almayashu	72.86	49	P	P	06 46 46.6	+0.7
	SNR=24						
CHMS	Chumysh	72.93	48	P	P	06 46 47.1	+1.2
	SNR=5.8						
AAK	Ala-Archa	73.01	48	P	P	06 46 47.2	+0.7
AAK				IAmb	IAmb	06 46 48.9	
	comp=Z,68nm,2.0s						
AAK	Ala-Archa	73.01	48	*d i*P	P	06 46 47.5	+1.0
AAK				pmax	pmax		
	comp=Z,28nm,1.7s						
AAK	Ala-Archa	73.01	48	*i* P	P	06 46 47.8	+1.2
	SNR=5.6						
HOQ	Hoqain	73.03	73	P	P	06 46 48.0	+1.2
	SNR=5.6						
KMBO	Kilima Mbogo	73.13	106	P	P	06 46 49.3	+1.6
KMBO	Kilima Mbogo	73.13	106	P	P	06 46 49.3	+1.6
KMBO				pmax	pmax		
	comp=Z,23nm,1.8s						
KMBO	Kilima Mbogo	73.13	106	P	P	06 46 49.7	+2.1
R17K	Ugashik Creek	73.15	333	P	P	06 46 46.7	-0.1
	baz=40						
KUU	Kurty	73.27	47	*e*P	P	06 46 48.2	+0.3
	comp=Z,29nm,1.7s,baz=46						
KUU	Kurty	73.27	47	*e*P	P	06 46 48.1	+0.3
KUU				pmax	pmax		
	comp=Z,29nm,1.7s						
UCH	Uchtor	73.28	49	P	P	06 46 50.5	+2.0
	SNR=26						
CPSB	Cacapava Do Su	73.31	201	*e*P	P	06 46 49.1	+1.1
DRK	Karamyk	73.37	52	IAmb	IAmb	06 46 46.2	
	comp=Z,39nm,1.2s						
BSY	Bisya	73.44	74	P	P	06 46 50.2	+1.0
TKM2	Tokmak 2	73.47	48	P	P	06 46 50.6	+1.3
	SNR=9.2						
DOK	Doka	73.61	79	P	P	06 46 51.0	+0.8
	SNR=5.8						
CHKK	Chushkaly	73.66	46	*e*P	P	06 46 50.2	+0.1
	baz=46						
CHKK	Chushkaly	73.66	46	*e*P	P	06 46 50.2	+0.1
BIDO	Bidbid	73.67	73	P	P	06 46 51.0	+0.5
	SNR=7.6						
ABTO	Aybut	73.73	81	P	P	06 46 53.0	+1.9
	SNR=6.2						
WHFO	Wadi Hawf	73.75	80	P	P	06 46 53.0	+1.8
	SNR=6.7						
RODS	Rosario do Sul	73.76	203	*e*P	P	06 46 52.0	+1.4
SMDO	Samad	73.89	73	P	P	06 46 53.0	+1.1
	SNR=6.1						
AAA	Alma-Ata	74.03	47	*e*P	P	06 46 53.3	+0.8
	baz=47						
AAA	Alma-Ata	74.03	47	*e*P	P	06 46 53.2	+0.8
MDOK	Medeo	74.13	47	*e*P	P	06 46 53.9	+0.7
	baz=47						
MDOK	Medeo	74.13	47	*e*P	P	06 46 53.8	+0.7
TNSS	Tian-Shan	74.16	47	*e*P	P	06 46 53.8	+0.2
	baz=47						
TNSS	Tian-Shan	74.16	47	*e*P	P	06 46 53.7	+0.2
ULHL	Ulahol	74.26	48	P	P	06 46 55.3	+1.3
	SNR=8.7						
RBK	Rabkut	74.33	80	P	P	06 46 56.0	+1.5
	SNR=5.4						
JMDO	Jabal Madar	74.34	74	P	P	06 46 56.0	+1.5
	SNR=6.3						
MAKZ	Makanchi	74.39	42	P	P	06 46 54.4	0.0
MAKZ				IAmb	IAmb	06 46 55.7	
	comp=Z,31nm,1.3s						
MAKZ	Makanchi	74.39	42	P	P	06 46 54.4	0.0
MAKZ				pmax	pmax		
	comp=Z,31nm,1.3s						
KIBK	Kibwezi	74.53	106	P	P	06 46 56.5	+0.8
KIBK				IAmb	IAmb	06 47 00.3	
	comp=Z,46nm,1.9s						
KIBK	Kibwezi	74.53	106	P	P	06 46 58.7	+3.0
	SNR=7.1						
MK31	Makanchi Array	74.56	41	*de*P	P	06 46 55.3	-0.1
MKAR	Makanchi Array	74.56	41	P	P	06 46 55.6	+0.3
	comp=Z,12nm,1.0s,baz=316,slow=5.1,SNR=54						
	comp=Z,12nm,1.0s						
MKAR	Makanchi Array	74.56	41	P	P	06 46 54.4	-1.0
MKAR	Makanchi Array	74.56	41	P	P	06 46 54.4	-1.0
PLTB	Pedras Altas	74.63	201	*e*P	P	06 46 56.9	+1.2
KBL	Kabul	74.66	58	P	P	06 46 55.3	-1.1
KBL	Kabul	74.66	58	P	P	06 46 55.3	-1.1
KBL				pmax	pmax		
	comp=Z,25nm,1.4s						
KPKS	Kokpek	74.85	46	*e*P	P	06 46 57.6	+0.4
	comp=Z,45nm,1.8s,baz=46						
KPKS	Kokpek	74.85	46	*e*P	P	06 46 57.6	+0.4
KPKS				pmax	pmax		
	comp=Z,45nm,1.8s						
SATY	Saty	74.96	46	*e*P	P	06 46 58.2	+0.3
	comp=Z,28nm,1.8s,baz=46						
SATY	Saty	74.96	46	*e*P	P	06 46 58.1	+0.3
SATY				pmax	pmax		
	comp=Z,28nm,1.8s						
DGZ	Jazzator, Alta	75.05	37	*de*P	P	06 46 59.1	+0.8
DGZ				pmax	pmax		
	comp=Z,42nm,1.3s						
MHTO	MHTO	75.07	75	P	P	06 46 59.3	+0.6
	SNR=14						
UZB	Uzynbulak	75.24	46	*e*P	P	06 46 59.7	+0.1
	baz=46						
UZB	Uzynbulak	75.24	46	*e*P	P	06 46 59.6	+0.1
ZSN	Zaisan	75.40	40	*e*P	P	06 47 00.8	+0.5
	comp=Z,36nm,2.1s,baz=40						

ZSN	Zaisan	75.40	40	eP	P	06 47 00.7	+0.5
ZSN				pmax	pmax		
	comp=Z,36nm,2.1s						
JLN	Jalan Bani Buh	75.44	73	P	P	06 47 00.9	+0.1
	SNR=7.0						
SHLS	Shalkode	75.48	46	eP	P	06 47 02.9	+2.0
	comp=Z,37nm,1.2s,baz=45						
SHLS	Shalkode	75.48	46	eP	P	06 47 02.8	+2.0
SHLS				pmax	pmax		
	comp=Z,37nm,1.2s						
KSH	Kashi	75.85	50	P	P	06 47 05.3	+2.2
KSH				pP	pwP	06 47 09.0	+0.7
KSH				sP	sP	06 47 11.8	+4.4
KSH				PcP	PcP	06 47 16.8	+1.2
KSH				PP	PP	06 49 51.0	-1.7
KSH				pmax	pmax		
	comp=Z,52nm,1.1s						
KSH				LR	LR		
	comp=Z,800nm,17.9s						
KSH				LR	LR		
	comp=Z,780nm,17.2s						
KSH				LR	LR		
	comp=Z,930nm,17.2s						
GO03	Copiap	77.01	216	IAmb	IAmb	06 47 12.6	
	comp=Z,45nm,1.6s						
YAK	Yakutsk	77.11	10	P	P	06 47 09.4	-0.1
	comp=Z,6.9nm,0.3s,baz=326,slow=14,SNR=6.0						
	comp=Z,6.9nm,0.3s						
YAK	Yakutsk	77.11	10	eP	P	06 47 09.5	-0.1
YAK				e*PP	PcP	06 47 19.6	-0.8
YAK				ePPP	PPP	06 51 52.3	
YAK				eS	S	06 56 56.5	-1.6
YAK				e*SS	SKKSac	06 57 22.3	-0.1
YAK				eSSS	SSS	07 05 09.3	
YAK				pmax	pmax		
	comp=Z,45nm,1.8s						
YAK				pmax	pmax		
	comp=N,23nm,1.8s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.6s						
YAK				pmax	pmax		
	comp=Z,409nm,7.8s						
YAK				pmax	pmax		
	comp=N,92nm,6.9s						
YAK				pmax	pmax		
	comp=E,164nm,6.6s						
YAK				smax	smax		
	comp=N,163nm,7.2s						
YAK				smax	smax		
	comp=E,141nm,6.0s						
SEY	Seymchan	77.57	359	P	P	06 47 11.5	-0.7
	comp=E,6.3nm,1.1s,baz=337,slow=5.1,SNR=12						
	comp=E,6.3nm,1.1s						
SEY	Seymchan	77.57	359⇑	iP	P	06 47 12.6	+0.4
SEY				pmax	pmax		
	comp=Z,27nm,1.7s						
NIL	Nilore	77.94	56	P	P	06 47 15.1	+0.3
NIL				IAmb	IAmb	06 47 16.2	
	comp=Z,28nm,1.0s						
NIL	Nilore	77.94	56	P	P	06 47 15.1	+0.3
NIL				pmax	pmax		
	comp=Z,28nm,1.0s						
LCO	Las Campanas	78.44	216	P	P	06 47 18.0	+0.4
LCO				IAmb	IAmb	06 47 20.9	
	comp=Z,36nm,1.4s						
LCO	Las Campanas	78.44	216	P	P	06 47 18.0	+0.4
LCO				pmax	pmax		
	comp=Z,36nm,1.4s						
MOY	Mondy	79.22	29	eP	P	06 47 22.5	+0.8
MOY				pmax	pmax		
	comp=Z,79nm,2.0s						
WMQ	Urumqi	79.36	41	eP	P	06 47 23.3	+0.8
WMQ				pmax	pmax		
	comp=Z,23nm,0.9s						
ZON	Zonda	79.73	213	IAmb	IAmb	06 47 31.0	
	comp=Z,47nm,1.8s						
CO02	Combarbal	80.44	215	IAmb	IAmb	06 47 31.3	
	comp=Z,51nm,1.4s						
MA2	Magadan	80.95	360d	eP	P	06 47 30.6	-0.1
MA2				pmax	pmax		
	comp=Z,40nm,1.7s						
ZAK	Zakamensk	81.11	28	eP	P	06 47 31.4	-0.4
ZAK				pmax	pmax		
	comp=Z,15nm,1.7s						
MT08	Bocatoma Ro	81.94	213	IAmb	IAmb	06 47 54.9	
	comp=Z,26nm,1.6s						
MT03	Universidad Ad	82.19	214	IAmb	IAmb	06 47 54.5	
	comp=Z,51nm,1.4s						
SONM	Songino Array	84.36	28	P	P	06 47 49.3	+0.5
	comp=Z,8.9nm,1.2s,baz=312,slow=3.0,SNR=29						
	comp=Z,8.9nm,1.2s						
ULN	Ulaanbaatar	84.57	28	P	P	06 47 49.6	-0.3
ULN	Ulaanbaatar	84.57	28d	iP	P	06 47 50.1	+0.1
ULN				pmax	pmax		
	comp=Z,68nm,1.7s						
ULN	Ulaanbaatar	84.57	28	P	P	06 47 49.3	-0.6
ZEA	Zeya	84.69	14	eP	P	06 47 50.9	+0.7
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
PLCA	Paso Flores	88.44	210	P	P	06 48 08.3	-0.2
	comp=Z,1.7nm,1.1s,baz=15,slow=16,SNR=2.2						
	comp=Z,1.7nm,1.1s						
PLCA	Paso Flores	88.44	210	eP	P	06 48 09.2	+0.7
GTA	Gaotai	88.59	37 ⇑	P	P	06 48 09.8	+0.1
GTA				sP	pwP	06 48 23.3	+8.3
GTA				PP	PP	06 51 37.3	0.0
GTA				pmax	pmax		
	comp=Z,11nm,1.5s						
GOMU	GeErMu	88.68	42	P	P	06 48 12.0	+1.5
GOMU				pP	sP	06 48 15.0	+0.3
GOMU				sP	pwP	06 48 16.3	+0.5
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.5s						
GOMU				LR	LR		
	comp=Z,320nm,13.1s						
GOMU				LR	LR		
	comp=Z,320nm,15.4s						
GOMU				LR	LR		
	comp=Z,720nm,15.7s						
KLR	Kul'dur	89.80	12d	iP	P	06 48 13.4	-1.7
KLR				pmax	pmax		
	comp=Z,14nm,1.8s						
XLT	XiLinHaoTe	91.08	24⇓	iP	P	06 48 23.0	+1.7
XLT				pP	pwP	06 48 27.8	+0.8
XLT				PP	PP	06 52 01.3	+4.5
XLT				S	S	06 59 16.3	-2.7
XLT				pmax	pmax		
	comp=Z,15nm,0.9s						
XLT				pmax	pmax		
	comp=Z,460nm,11.6s						
XLT				LR	LR		
	comp=Z,63nm,17.4s						
XLT				LR	LR		
	comp=Z,410nm,17.2s						
XLT				LR	LR		
	comp=Z,850nm,17.4s						
BTO	Baotou	91.89	30	eP	P	06 48 24.5	-0.6
BTO				pP	sP	06 48 29.5	+0.3
BTO				sP	pwP	06 48 31.8	+1.0
BTO				PP	PP	06 52 06.3	+3.0
BTO				S	S	06 59 26.3	-0.2
BTO				SS	SS	07 05 32.5	-0.4
BTO				pmax	pmax		
	comp=Z,65nm,1.2s						
BTO				pmax	pmax		
	comp=Z,310nm,3.9s						
BTO				LR	LR		
	comp=Z,2µm,15.5s						
BTO				LR	LR		
	comp=Z,2µm,16.5s						
BTO				LR	LR		
	comp=Z,4µm,19.5s						
HHC	Hu-ho-hao-te	92.26	28	eP	P	06 48 25.5	-1.3
HHC				pmax	pmax		
	comp=Z,23nm,0.8s						
HHC				pmax	pmax		
	comp=Z,490nm,5.7s						
LZH	Lanzhou	93.14	36	eP	P	06 48 31.8	+0.8
LZH				pP	pwP	06 48 36.3	0.0
LZH				sP	sP	06 48 38.5	+3.3
LZH				pmax	pmax		
	comp=Z,24nm,1.7s						
CN2	Changchun	93.76	18	P	P	06 48 33.0	-0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
USA0B	Ussuriysk Arra	94.72	13d	eP	P	06 48 36.8	-1.1
USRK	Ussuriysk Ar.	94.72	13	P	P	06 48 37.0	-0.8
	comp=Z,3.5nm,0.9s,baz=321,slow=2.7,SNR=7.6						
	comp=Z,3.5nm,0.9s						
PZH	PanZhiHua	99.94	43	P	Pdif	06 49 02.8	+0.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2	Nanjing	102.73	27	eP	Pdif	06 49 12.8	-1.3
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
QSPA	South Pole Qui	129.71	180		PKPdf	06 54 24.8	0.0
VNDA	Vanda	141.89	184	PKhKP	PKPpre	06 54 43.2	
	comp=Z,3.6nm,1.1s,baz=162,slow=3.3,SNR=4.2						
VNDA				PKKPbc		07 02 49.4	
	comp=Z,0.7nm,0.3s,baz=70,slow=0.8,SNR=11						
VNDA	Vanda	141.89	184	PKPdf	PKPdf	06 54 44.2	-2.8
VNDA	Vanda	141.89	184	PKIKP	PKPdf	06 54 44.2	-2.8
CASY	Casey	145.34	153		PKPab	06 54 53.9	+0.5
MBWA	Marble Bar	147.91	64	PKPbc	PKPbc	06 55 02.8	+0.7
PSA00	Pilbara Seismi	148.26	64		PKPbc	06 55 01.7	-1.4
WRA	Warramunga Arr	155.85	40	PKP	PKPdf	06 55 11.4	+0.3
	comp=Z,0.9nm,1.1s,baz=270,slow=0.7,SNR=4.7						
WRA				PKPab	PKPab	06 55 37.4	-0.4
	comp=Z,2.9nm,0.9s,baz=342,slow=4.1,SNR=8.6						
WRA	Warramunga Arr	155.85	40		PKPdf	06 55 10.7	-0.4
ASAR	Alice Springs	158.69	46	PKP	PKPdf	06 55 14.4	-0.2
	comp=Z,1.2nm,1.0s,baz=329,slow=1.5,SNR=5.6						
ASAR				PKPab	PKPab	06 55 50.0	+0.1
	comp=Z,2.6nm,0.9s,baz=327,slow=4.7,SNR=11						
ASAR	Alice Springs	158.69	46	PKPdf	PKPdf	06 55 14.1	-0.5
ASAR					PKPab	06 55 49.7	-0.3

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*IDC **29** 06:39:46.8±1.2, 39°.91N×29°.67W, h0km, mb3.6/5, mbtmp3.6/6, ML4.1/1, Error ellipse: s-maj=43.8km s-min=21.2km az=14.0*

ISC 29 06:39:48.4±1.2**, 39°.9N**±0°.3×**29°.6W**±0°.1**, h11**km**, n7,** σ**0ˢ.93**/7**,** **mb3.7**/6**, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	Sonseca Array	19.71	82	P	Pn	06 44 19.9	+0.6
	0.1nm,0.3s,baz=285,slow=10,SNR=6.8						
	2.0nm,0.9s						
TORD	Torodi Ar. Bea	38.32	125	P	P	06 47 09.2	0.0
	1.1nm,0.8s,baz=306,slow=7.3,SNR=6.0						
AKASG	Malin Array Be	41.75	55	P	P	06 47 36.9	-0.5
	0.2nm,0.3s,baz=272,slow=8.1,SNR=5.1						
	0.2nm,0.3s						
YKA	Yellowknife Ar	53.34	325	P	P	06 49 08.2	+1.0
	0.6nm,1.1s,baz=68,slow=6.7,SNR=3.3						
	0.6nm,1.1s						
PDAR	Pinedale Array	57.91	301	P	P	06 49 39.5	-1.2
	0.9nm,0.8s,baz=64,slow=8.4,SNR=5.8						
	0.9nm,0.8s						
TXAR	Lajitas Array	60.26	285	P	P	06 49 57.6	+0.5
	0.8nm,0.9s,baz=111,slow=6.9,SNR=4.7						
	0.8nm,0.9s						
MKAR	Makanchi Array	74.52	41	P	P	06 51 26.8	-0.2
	1.0nm,0.9s,baz=324,slow=6.0,SNR=5.7						
	1.0nm,0.9s						

IDC 29 06:43:29.4±3.0**, 40°.98N×29°.96W, h0**km**, mb3.5**/3**, mbtmp3.5**/4**, ML4.6**/1**, Error ellipse: s-maj=138.4km s-min=28.0km az=1.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	Sonseca Array	19.84	85	P	P	06 48 02.2	+0.4
	0.4nm,0.3s,baz=283,slow=14,SNR=12						
	0.7nm,0.3s						
PDAR	Pinedale Array	57.13	300	P	P	06 53 18.5	+0.5
	1.0nm,0.9s,baz=64,slow=6.8,SNR=6.6						
	1.0nm,0.9s						
TXAR	Lajitas Array	59.74	284	P	P	06 53 35.6	-0.6
	0.4nm,0.8s,baz=44,slow=7.8,SNR=3.9						
	0.4nm,0.8s						
MKAR	Makanchi Array	73.88	41	P	P	06 55 05.7	-0.3
	0.1nm,0.6s,baz=321,slow=6.1,SNR=2.1						
	0.1nm,0.6s						

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*WEL **29** 06:45:47.4, 42°S±3°×17°4E±°, h29km±7km, M3.0/20, ML3.1/20, MLv3.0/20, Error ellipse: s-maj=0.0km s-min=0.0km az=80.5, confirmed*

*NOU **29** 06:45:49.7, 42°.29S×173°.28E, h3km, MLv3.6/10, South Island, New Zealand*

ISC 29 06:45:48.1±1.0**, 42°.14S**±0°.03×**173°.70E**±0°.03**, h24**km±10km**, n62,** σ**1ˢ.11**/73**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	Kahutara	0.30	203	P	Pb	06 45 54.7	-0.3
KHZ	Kahutara	0.30	203	P	Pb	06 45 54.7	-0.3
KHZ				S	Sb	06 45 59.7	0.0
BSWZ	Blackbirch Sta	0.45	17	P	Pb	06 45 56.9	-0.5
CMWZ	Cape Campbell	0.55	44	P	Pn	06 45 59.7	-0.8
THZ	Tophouse	0.70	302	P	Pn	06 46 01.4	-1.3
THZ				S	Sn	06 46 10.6	-2.1
TUWZ	Tuamarina	0.74	14	P	Pn	06 46 02.1	-0.9
TUWZ				S	Sn	06 46 12.2	-1.2
NNZ	Nelson	0.96	345	P	Pn	06 46 05.6	-0.4
NNZ				S	Sn	06 46 17.9	-1.0
GVZ	Greta Valley S	0.96	211	P	Pn	06 46 06.7	+0.6
GVZ				S	Sn	06 46 20.8	+1.8
MRNZ	Matariki Terra	1.02	316	P	Pn	06 46 07.2	+0.2
MRNZ				S	Sn	06 46 20.7	+0.1
TCW	Tory Channel	1.03	25	P	Pb	06 46 07.0	-0.2
TCW				S	Sn	06 46 21.4	+0.7
WEL	Wellington	1.17	43	P	Pb	06 46 09.6	-0.2
WEL				S	Sb	06 46 25.6	+1.1
LTZ	Lake Taylor	1.23	238	P	Pb	06 46 10.5	-0.2
LTZ				S	Sb	06 46 27.2	+0.9
TKNZ	Takaka Hill	1.24	333	P	Pb	06 46 10.9	0.0
AMCZ	Amberley	1.29	216	P	Pb	06 46 10.9	-0.8
PLWZ	Palliser	1.30	64	P	Pn	06 46 10.5	-0.3
DUWZ	D'Urville Isla	1.35	7	P	Pb	06 46 12.5	-0.3
CAW	Cannon Point	1.46	45	P	Pn	06 46 13.1	+0.2
CAW				S	Sn	06 46 31.8	+0.5
DSZ	Denniston Nort	1.47	285	P	Pb	06 46 15.3	+0.5
DSZ				S	Sb	06 46 35.1	+2.1
PAWZ	Paruwai Farm	1.50	60	P	Pn	06 46 13.2	-0.4
KIW	Kapiti Island	1.57	36	P	Pb	06 46 15.1	-1.4
QRZ	Quartz Range	1.58	326	P	Pb	06 46 16.7	0.0
QRZ	Quartz Range	1.58	326	P	Pb	06 46 16.5	-0.2
MTW	Mount Morrison	1.67	55	P	Pn	06 46 15.5	-0.4
OXZ	Oxford	1.70	225	P	Pn	06 46 15.8	-0.5
OGWZ	Otaki Gorge	1.73	40	P	Pn	06 46 16.8	+0.2
MQZ	McQueen's Vall	1.74	206	P	Pn	06 46 15.7	-1.1
INZ	Inchbonnie	1.77	250	P	Pb	06 46 18.1	-1.7
AKCZ	Akaroa Harbour	1.82	198	P	Pn	06 46 17.6	-0.4
HOWZ	Holdsworth Sta	1.85	48	P	Pn	06 46 17.8	-0.5
TMWZ	Te Maipa	1.94	59	P	Pn	06 46 18.8	-0.8
RACZ	Rakaia	1.95	215	P	Pn	06 46 19.0	-0.7
MRZ	Mangatainoka R	2.05	44	P	Pn	06 46 20.7	-0.3
MHCZ	Mount Hutt	2.09	228	P	Pn	06 46 21.1	-0.6
WACZ	Wakanui South	2.26	217	P	Pn	06 46 23.3	-0.6
PRWZ	Pori Road	2.33	48	P	Pb	06 46 30.8	+1.4
WVZ	Waitaha Valley	2.38	246	P	Pn	06 46 26.6	+1.0
BFZ	Birch Farm	2.41	54	P	Pb	06 46 34.3	+3.5
RPZ	Rata Peaks	2.50	230	P	Pn	06 46 27.2	-0.1
RPZ	Rata Peaks	2.50	230	P	Pn	06 46 26.9	-0.4
WAZ	Wanganui	2.58	23	P	Pb	06 46 31.0	-2.6
ARCZ	Arundel	2.58	225	P	Pn	06 46 27.9	-0.5
GCSZ	Gaunt Creek Bo	2.75	244	P	Pn	06 46 32.0	+1.3
KHEZ	Kahui Hut	2.86	5	P	Pb	06 46 39.8	+1.4
PRHZ	Porangahau	2.90	51	P	Pn	06 46 30.3	-2.6
TMZ	Timaru	2.98	220	P	Pn	06 46 33.3	-0.6
VRZ	Vera Road	3.12	15	P	Pb	06 46 41.7	-1.2
WNVZ	Wahianoa	3.16	28	P	Pn	06 46 38.5	+2.0
FOZ	Fox Glacier	3.17	243	P	Pn	06 46 37.6	+1.0
OTVZ	Oturere	3.33	27	P	Pn	06 46 40.1	+1.2
LBZ	Lake Benmore	3.41	228	P	Pn	06 46 39.8	0.0
ODZ	Otahua Downs	3.65	216	P	Pn	06 46 41.4	-1.7
ODZ	Otahua Downs	3.65	216	P	Pn	06 46 42.1	-1.0
BKZ	Black Stump Fm	3.66	36	P	Pb	06 46 50.9	-1.1
HIZ	Hauiti	3.73	14	P	Pb	06 46 51.5	-1.8
HIZ	Hauiti	3.73	14	P	Pn	06 46 44.6	+0.4
JCZ	Jackson Bay	4.08	240	P	Pn	06 46 48.9	-0.2
JCZ	Jackson Bay	4.08	240	P	Pn	06 46 50.1	+1.0
EAZ	Earnscleugh	4.43	224	P	Pn	06 46 53.6	-0.3
TUZ	Tuapeka	4.81	216	P	Pn	06 46 58.5	-0.4
SYZ	Scrubby Hill	5.47	215	P	Pn	06 47 08.1	0.0
SYZ	Scrubby Hill	5.47	215	P	Pn	06 47 07.7	-0.5
APZ	The Paps	6.22	219	P	Pn	06 47 17.1	-1.2

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*IDC **29** 06:46:36.9±1.3, 39°.81N×29°.60W, h0km, mb3.5/6, mbtmp3.5/7, ML4.0/1, MS4.3/2, Error ellipse: s-maj=39.8km s-min=21.8km az=8.0*

ISC 29 06:46:38.5±1.1**, 39°.8N**±0°.2×**29°.6W**±0°.1**, h11**km**, n10,** σ**0ˢ.82**/8**, mb3.5**/7**, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	Sonseca Array	19.67	82	P	Pn	06 51 09.6	+0.6
	0.1nm,0.3s,baz=292,slow=12,SNR=4.8						
	1.1nm,0.9s						
MDT	Midelt	21.25	101	LR	LR	06 57 49.1	
	comp=Z,778nm,18.5s,baz=180,slow=32						
EKA	Eskdalemuir Ar	23.43	40	P	P	06 51 47.8	+0.3
	1.4nm,0.8s,baz=267,slow=28,SNR=2.4						
	1.4nm,0.8s						
TORD	Torodi Ar. Bea	38.22	125	P	P	06 53 58.5	-0.1
	1.0nm,0.9s,baz=312,slow=5.6,SNR=4.0						
MDP	Montagnes des	40.34	217	LR	LR	07 07 23.3	
	comp=Z,452nm,19.0s,baz=134,slow=31						
AKASG	Malin Array Be	41.76	55	P	P	06 54 26.4	-1.2
	0.3nm,0.3s,baz=275,slow=7.8,SNR=5.3						
	0.3nm,0.3s						
YKA	Yellowknife Ar	53.44	325	P	P	06 55 58.5	+0.4
	0.4nm,1.0s,baz=71,slow=6.7,SNR=2.9						
	0.4nm,1.0s						
PDAR	Pinedale Array	58.00	301	P	P	06 56 30.6	-0.8
	0.6nm,0.9s,baz=66,slow=7.3,SNR=5.1						
	0.6nm,0.9s						
TXAR	Lajitas Array	60.33	285	P	P	06 56 48.1	+0.5
	0.2nm,0.6s,baz=76,slow=7.5,SNR=2.8						
	0.2nm,0.6s						
MKAR	Makanchi Array	74.56	41	P	P	06 58 17.9	+0.6
	1.2nm,0.9s,baz=315,slow=4.2,SNR=8.5						
	1.2nm,0.9s						

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*IDC **29** 06:49:30.6±1.4, 39°.94N×29°.58W, h0km, mb3.7/4, mbtmp3.7/4, MS4.5/2, Error ellipse: s-maj=48.5km s-min=26.6km az=10.0*

ISC 29 06:49:32.4±1.2**, 39°.9N**±0°.3×**29°.6W**±0°.1**, h11**km**, n8,** σ**0ˢ.77**/6**, mb3.7**/5**, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	Sonseca Array	19.71	82	P	Pn	06 54 04.3	+1.0
	1.5nm,0.9s,baz=284,slow=9.4,SNR=7.2						
NOA	NORSAR Array B	32.71	36	LR	LR	07 08 33.8	
	comp=Z,334nm,19.8s,baz=205,slow=35						
TORD	Torodi Ar. Bea	38.33	125	P	P	06 56 53.0	-0.3
	0.3nm,0.5s,baz=327,slow=10,SNR=4.0						
AKASG	Malin Array Be	41.74	55	P	P	06 57 20.5	-0.8
	0.9nm,0.6s,baz=277,slow=7.4,SNR=5.0						
	0.9nm,0.6s						
PDAR	Pinedale Array	57.90	301	P	P	06 59 24.5	-0.1
	0.5nm,0.8s,baz=61,slow=9.3,SNR=4.2						
	0.5nm,0.8s						
TXAR	Lajitas Array	60.25	285	P	P	06 59 41.2	+0.3
	0.6nm,1.0s,baz=97,slow=4.6,SNR=3.2						
	0.6nm,1.0s						
BBB	Bella Bella	64.30	317	LR	LR	07 26 30.8	
	comp=Z,882nm,20.4s,baz=212,slow=34						
MKAR	Makanchi Array	74.52	41	P	P	07 01 11.1	+0.2
	0.9nm,0.9s,baz=322,slow=3.7,SNR=5.2						
	0.9nm,0.9s						

NOU 29 06:53:12.7, 16°.00S×167°.53E, h0km**, MLv3.8**/4**, Vanuatu Islands, Vanuatu Islands**

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*IDC **29** 07:02:52.4±1.3, 39°.99N×29°.58W, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=50.1km s-min=28.6km az=20.0*

ISC 29 07:02:53.2±1.1**, 39°.6N**±0°.3×**29°.6W**±0°.2**, h10**km**, n7,** σ**2ˢ.25**/7**, mb3.6**/5**, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGU	Agualva, Azore	2.07	114	eP	Pn	07 03 25.7	-2.4
ESDC	Sonseca Array	19.73	82	P	Pn	07 07 26.8	+2.3
	1.4nm,1.0s,baz=282,slow=10,SNR=4.0						
TORD	Torodi Ar. Bea	38.16	125	P	P	07 10 14.9	+2.0
	112nm,0.3s,baz=319,slow=6.5,SNR=5.1						
PDAR	Pinedale Array	58.05	301	P	P	07 12 45.4	-1.3
	0.6nm,0.9s,baz=82,slow=7.4,SNR=3.3						
	0.6nm,0.9s						
TXAR	Lajitas Array	60.34	285	P	P	07 13 03.6	+1.1
	0.2nm,0.6s,baz=52,slow=7.3,SNR=2.8						
	0.2nm,0.6s						
ZALV	Zalesovo Beam	71.10	35	P	P	07 14 11.6	+0.1
	0.4nm,0.3s,baz=316,slow=4.0,SNR=2.6						
	0.4nm,0.3s						
MKAR	Makanchi Array	74.70	41	P	P	07 14 31.5	-1.5
	0.7nm,1.0s,baz=323,slow=5.4,SNR=3.7						
	0.7nm,1.0s						

DJA 29 07:04:45.8±0.3**, 1°S**±3°×**12°0E**±°**, h10**km**, M4.2**/11**, mb4.9**/2**, MLv3.8**/11**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPSI	Mapaga	1.72	357	P	Pn	07 05 15.5	-0.3
SPSI	Sidrap Palu	2.57	185	P	Pn	07 05 26.2	-1.3
MRSI	Marisa	2.68	46	P	Pn	07 05 29.0	-0.1
LUWI	Luwuk	2.79	83	P	Pn	07 05 30.9	+0.3
GTOI	Gorontalo	3.62	56	P	Pn	07 05 41.0	-1.0
BKSI	Bulukumba	3.91	178	P	Pn	07 05 45.9	0.0
SGSI	Sangihe	7.48	48	P	Pn	07 06 34.5	-0.6

GUC 29 07:10:42.4±0.6**, 38°.64S×75°.04W, h15**km±7km**, ML3.8, 2C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LR02	Universidad Au	1.82	131⇑	eP	Pn	07 11 12.4	-0.7
LR02				i S	Sn	07 11 35.1	-0.8
LR02				IAML		07 11 36.5	
	comp=E,1µm,0.3s						
LR03	Panguipulli	2.32	116	eP	Pn	07 11 20.5	+0.4
LR03				eS	Sn	07 11 49.0	+0.7
LR03				IAML		07 11 52.9	
	comp=E,648nm,0.8s						
CCSP	San Pedro de C	2.35	41	eP	Pn	07 11 14.9	-5.6
LR05	Currie	2.84	125	eP	Pn	07 11 27.9	+0.7
LR05				i S	Sn	07 12 02.0	+0.9
LR05				IAML		07 12 06.2	
	comp=E,398nm,0.8s						
GO06	Curarrehue	2.93	110⇑	eP	Pn	07 11 28.9	+0.3
GO06				i S	Sn	07 12 04.4	+0.8
LL04	Puerto Octay	3.05	139	eP	Pn	07 11 29.9	-0.1
LL04				i S	Sn	07 12 04.8	-1.4
LL04				IAML		07 12 08.7	
	comp=N,243nm,0.2s						
BO01	Tunca	5.30	38	eP	Pn	07 11 55.5	-5.5
BO01				i S	Sn	07 12 54.0	-7.7
FCH	Farellones	6.55	37	eP	Pn	07 12 12.5	-6.0
FCH				i S	Sn	07 13 23.6	-9.4

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*KRSC **29** 07:14:24.3±1.3, 56°.97N×163°.31E, h22km±16km, Ml4.0*

*IDC **29** 07:14:24.1±1.0, 57°.00N×162°.64E, h0km, mb3.5/8, mbtmp3.5/9, ML2.3/1, Error ellipse: s-maj=45.5km s-min=19.4km az=144.0*

ISC 29 07:14:25.0±1.5**, 57°.00N**±0°.04×**163°.12E**±0°.04**, h3**km±10km**, n45,** σ**1ˢ.44**/62**, mb3.5**/8**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBG	Krutoberegovo	0.78	197	eP	Pg	07 14 39.7	-0.2
KBG				eS	Sg	07 14 50.8	+0.9
KBTR	Krutoberegovo	0.81	192	eP	Pg	07 14 40.4	-0.1
KBTR				eS	Sg	07 14 52.0	+1.1
SMKR	Semkarok	1.00	246	eP	Pb	07 14 43.9	-1.0
SMKR				eS	Sb	07 14 57.7	-0.8
SRKR	Sorokina	1.13	253	eP	Pn	07 14 45.7	-2.0
SRKR				eS	Sb	07 15 00.9	-1.2
KLY	Klyuchi	1.52	244	eP	Pn	07 14 50.6	-2.5

KLY				*e*S	Sn	07 15 09.3	-4.0
BZGR	Bezymyannyi-Gr	1.71	233	*e*P	Pn	07 14 55.3	-0.4
BZGR				*e*S	Sn	07 15 17.8	-0.3
BZWR	Bezymyannyi-We	1.79	236	*e*P	Pn	07 14 56.4	-0.4
BZWR				*e*S	Sn	07 15 19.6	-0.4
BZP	Bezymyannyi-Pe	1.80	234	*e*P	Pn	07 14 56.5	-0.4
BZP				*e*S	Sn	07 15 19.7	-0.6
BZMR	Bezymyannaya	1.81	235	*e*P	Pn	07 14 56.8	-0.2
BZMR				*e*S	Sn	07 15 20.4	-0.1
KIRR	Kirishev	1.86	237	*e*P	Pn	07 14 57.4	-0.4
KIRR				*e*S	Sn	07 15 21.6	-0.3
KPT	Kopyto	1.91	238	*e*P	Pn	07 14 58.1	-0.3
KPT				*e*S	Sn	07 15 22.8	-0.1
SRDR	Sredinnyy	2.00	251	*e*P	Pn	07 14 59.2	-0.4
SRDR				*e*S	Sn	07 15 24.9	-0.3
KMNR	Kamenistaya	2.03	233	*e*P	Pn	07 15 00.6	+0.5
KMNR				*e*S	Sn	07 15 26.6	+0.7
KOZ	Kozyrevsk	2.03	244	*e*P	Pn	07 15 00.3	+0.3
KOZ				*e*S	Sb	07 15 27.7	-0.4
OSSR	Ossora	2.26	359	*e*P	Pn	07 15 02.3	-0.8
TUMD	Tumrok D	2.36	221	*e*P	Pn	07 15 04.9	+0.4
TUMR	Tumrok	2.39	225	*e*P	Pn	07 15 06.2	+1.1
TUMR				*e*S	Sn	07 15 36.8	+1.9
BKI	Bering	2.41	137	*e*P	Pn	07 15 04.4	-0.7
BKI				*e*S	Sn	07 15 32.9	-2.1
TIGL	Tigil	2.53	290	*e*P	Pn	07 15 08.5	+1.6
TIGL				*e*S	Sn	07 15 40.0	+1.9
MKZ	Mys Kozlova	2.57	198	*e*P	Pn	07 15 07.1	-0.3
MKZ				*e*S	Sn	07 15 39.5	+0.4
ESO	Esso	2.68	248	*e*P	Pn	07 15 11.3	+2.3
ESO				*e*S	Sn	07 15 44.8	+3.0
PALN	Palana	2.68	323	*e*P	Pb	07 15 12.0	-1.5
KII	Karymskiy	3.63	217	*e*P	Pn	07 15 22.3	+0.3
SPN	Mys Shipunski	4.29	206	*e*P	Pn	07 15 31.1	0.0
SPN				*e*S	Sn	07 16 19.8	-1.8
GNL	Ganaly	4.44	224	*e*P	Pn	07 15 34.2	+1.0
KRX	Arik	4.46	217	*e*P	Pn	07 15 35.3	+1.9
KRER	Koryakskii	4.47	216	*e*P	Pn	07 15 35.3	+1.6
SMAR	Somma	4.49	215	*e*P	Pn	07 15 35.2	+1.2
AVH	Avacha	4.51	216	*e*P	Pn	07 15 35.9	+1.8
KOK	Koryaka	4.52	217	*e*P	Pn	07 15 36.0	+1.7
UGLR	Uglovaya	4.53	215	*e*P	Pn	07 15 35.8	+1.4
PETK	Petropavlovsk- 0.6nm,0.3s,baz=62,slow=14,SNR=5.4 1.7nm,0.5s	4.99	221	Pn	Pn	07 15 39.9	-0.7
GRL	Gorelyy	5.33	215	*e*P	Pn	07 15 47.8	+2.5
MTVR	Mutnovka	5.35	214	*e*P	Pn	07 15 47.5	+1.8
ILAR	Eielson Array 0.8nm,0.7s,baz=262,slow=7.4,SNR=12 0.8nm,0.7s	24.91	51	P	P	07 19 49.5	+0.8
H11N2	WAKE ISLAND Hy baz=357,slow=76,SNR=17	37.32	174	T	T	08 00 35.0	
H11N3	WAKE ISLAND Hy baz=357,slow=76,SNR=15	37.33	174	T	T	08 00 28.2	
H11N1	WAKE ISLAND Hy baz=357,slow=76,SNR=19	37.34	174	T	T	08 00 30.0	
YKA	Yellowknife Ar 0.4nm,0.7s,baz=299,slow=7.8,SNR=8.1 0.4nm,0.7s	39.16	47	P	P	07 21 54.5	+1.2
MKAR	Makanchi Array 0.1nm,0.4s,baz=54,slow=4.9,SNR=2.1 0.1nm,0.4s	48.08	294	P	P	07 23 03.4	-2.0
NVAR	Mina Array Bea 0.4nm,0.8s,baz=322,slow=6.8,SNR=1.8 0.4nm,0.8s	52.90	75	P	P	07 23 44.8	+2.6
PDAR	Pinedale Array 0.5nm,0.6s,baz=334,slow=2.1,SNR=6.8 0.5nm,0.6s	54.19	65	P	P	07 23 53.5	+1.9
TXAR	Lajitas Array 0.7nm,0.7s,baz=293,slow=2.9,SNR=9.6 0.7nm,0.7s	67.60	71	P	P	07 25 23.6	+0.8
WRA	Warramunga Arr 0.3nm,0.6s,baz=16,slow=5.6,SNR=1.5 0.3nm,0.6s	80.36	207	P	P	07 26 35.6	-1.6
ASAR	Alice Springs 0.3nm,0.5s,baz=19,slow=4.2,SNR=2.4 0.3nm,0.5s	84.04	207	P	P	07 26 55.0	-1.5

IDC ***29*** *07:20:05.2±1.9, 15°.90S×174°.03W, h83^{km}±17^{km}, mb3.9/11, mbtmp4.3/12, Error ellipse: s-maj=27.7km s-min=12.0km az=131.0*

NEIC ***29*** *07:20:08.7±2.3, 16°.10S±0°.07×173°.75W±0°.09, h110^{km}±4^{km}, mb4.5/23, Error ellipse: s-maj=12.5km s-min=9.6km az=73.0*

ISC 29 07:20:07.2±0.5, 16°.07S±0°.06×173°.77W±0°.07, h100^{km}, n51, σ1^{s}.14/47, mb4.3/20, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu 370nm,0.5s,baz=26,slow=1.1,SNR=123	2.88	42	P	Pn	07 20 51.6	+0.1
AFI	886nm,0.3s,baz=295,slow=23,SNR=24			S	Sn	07 21 24.6	-1.0
AFI	Afiamalu	2.88	42	Pn	Pn	07 20 53.2	+1.7
AFI				Sn	Sn	07 21 24.7	-0.9
NIUE	Niue	4.73	130	Pn	Pn	07 21 17.4	+1.2
NIUE				Sn	Sn	07 22 07.7	-2.2
MSVF	Nonsavu 74nm,0.8s,baz=89,slow=10,SNR=42	8.01	257	P	Pn	07 22 07.9	+7.0
MSVF	Nonsavu	8.01	257	Pn	Pn	07 22 02.7	+1.8
OUENC	Ouen Island, N	19.36	248	P	P	07 24 25.4	+0.3
DZM	Mont Dzumac	19.63	249	P	P	07 24 29.1	+1.1
DZM	comp=Z,26nm,0.9s			IAmb	IAmb	07 24 34.7	
ONTNC	Ouen Toro	19.68	249	P	P	07 24 29.4	+0.9
ONTNC	comp=Z,35nm,0.8s			IAmb	IAmb	07 24 35.4	
URZ	Urewera comp=Z,6.1nm,0.3s,baz=9.9,slow=1.7,SNR=11 comp=Z,6.1nm,0.3s	23.52	198	P	P	07 25 08.1	-0.2
BFZ	Birch Farm	26.01	198	P	P	07 25 31.1	+0.3
TUWZ	Tuamarina	27.41	200	P	P	07 25 44.7	+1.3
H11S2	WAKE ISLAND Hy baz=146,slow=75,SNR=13	39.36	330	T	T	08 08 40.3	
H11S3	WAKE ISLAND Hy baz=146,slow=75,SNR=11	39.37	330	T	T	08 08 44.1	
H11S1	WAKE ISLAND Hy baz=146,slow=75,SNR=8.9	39.38	330	T	T	08 08 40.3	
H11N3	WAKE ISLAND Hy baz=150	40.32	331	T	T	08 10 37.6	
H11N1	WAKE ISLAND Hy baz=150	40.33	331	T	T	08 09 57.9	
H11N2	WAKE ISLAND Hy baz=150	40.34	331	T	T	08 10 30.3	
STKA	Stephens Creek comp=Z,1.6nm,0.6s,baz=97,slow=7.3,SNR=4.2 comp=Z,1.6nm,0.6s	43.40	240	P	P	07 27 59.0	-1.1
STKA	Stephens Creek	43.40	240	P	P	07 27 58.9	-1.1
WB0	Warramunga Arr	49.31	258	P	P	07 28 44.8	-1.8
WB0	comp=Z,9.2nm,1.4s			IAmb	IAmb	07 29 10.3	
WB2	Warramunga Arr	49.34	257	P	P	07 28 45.5	-1.3
WB2	comp=Z,15nm,1.5s			IAmb	IAmb	07 29 03.6	
WRA	Warramunga Arr comp=Z,1.4nm,0.7s,baz=90,slow=7.0,SNR=11 comp=Z,1.4nm,0.7s	49.35	257	P	P	07 28 44.5	-2.4
AS31	Alice Springs	49.57	252	P	P	07 28 46.7	-1.9
ASAR	Alice Springs comp=Z,6.8nm,0.8s,baz=88,slow=8.1,SNR=41 comp=Z,6.8nm,0.8s	49.57	252	P	P	07 28 46.6	-1.9
ASAR	Alice Springs	49.57	252	P	P	07 28 46.4	-2.1
FORT	Forrest	54.80	243	P	P	07 29 25.6	-1.5
KNRA	Kununurra	55.12	262	P	P	07 29 29.4	-0.2
VNDA	Vanda comp=Z,2.9nm,0.8s,baz=4.2,slow=6.9,SNR=8.7 comp=Z,2.9nm,0.8s	62.68	186	P	P	07 30 22.4	+1.5
VNDA	Vanda	62.68	186	P	P	07 30 21.7	+0.9
PSA00	Pilbara Seismi	62.68	254	P	P	07 30 20.4	-1.5
QSPA	South Pole Qui comp=Z,3.7nm,1.0s,baz=14,slow=2.0,SNR=9.0 comp=Z,3.7nm,1.0s	73.98	180	P	P	07 31 32.2	+0.5
QSPA	South Pole Qui	73.98	180	P	P	07 31 31.8	+0.1
QSPA	comp=Z,6.6nm,1.2s			IAmb	IAmb	07 31 44.1	
NVAR	Mina Array Bea comp=Z,2.5nm,0.9s,baz=228,slow=9.5,SNR=14 comp=Z,2.5nm,0.9s	75.06	42	P	P	07 31 38.2	-0.3
TXAR	Lajitas Array comp=Z,2.7nm,1.0s,baz=219,slow=7.4,SNR=19 comp=Z,2.7nm,1.0s	81.28	56	P	P	07 32 13.8	+1.0
BPAW	Bear Paw Mtn.	81.83	10	P	P	07 32 13.9	-0.9
MCK	McKinley	81.84	11	P	P	07 32 15.0	0.0
MCK	comp=Z,8.9nm,0.9s			IAmb	IAmb	07 32 16.0	
SNOW	Snow King Moun	82.58	41	P	P	07 32 20.4	+0.8
SNOW	comp=Z,4.9nm,0.8s			IAmb	IAmb	07 32 21.0	
IMW	Indian Meadow	82.69	40	P	P	07 32 21.0	+0.8
IMW	comp=Z,4.1nm,0.8s			IAmb	IAmb	07 32 21.6	
BW06	Boulder Array	83.00	42	P	P	07 32 21.9	+0.1
BW06	comp=Z,4.2nm,0.9s			IAmb	IAmb	07 32 22.5	
PD31	Pinedale Array	83.00	42	P	P	07 32 21.8	0.0
PD31	comp=Z,3.8nm,0.9s			IAmb	IAmb	07 32 22.5	
PDAR	Pinedale Array comp=Z,3.4nm,0.8s,baz=209,slow=3.2,SNR=32 comp=Z,3.4nm,0.8s	83.00	42	P	P	07 32 21.7	0.0
SCRK	Sand Creek	83.04	13	P	P	07 32 21.0	-0.3
SCRK	comp=Z,8.0nm,1.5s			IAmb	IAmb	07 32 28.8	
MDM	Murphy Dome	83.09	11	P	P	07 32 21.2	-0.2
MDM	comp=Z,4.3nm,1.0s			IAmb	IAmb	07 32 21.9	
BOZ	Bozeman (W)	83.13	39	P	P	07 32 22.9	+0.7
H17A	Grant Village	83.16	40	P	P	07 32 23.4	+0.9
H17A	comp=Z,4.0nm,0.7s			IAmb	IAmb	07 32 24.9	
ILAR	Eielson Array comp=Z,0.8nm,0.6s,baz=234,slow=6.6,SNR=19 comp=Z,0.8nm,0.6s	83.17	11	P	P	07 32 21.2	-0.6
IMAR	Indian Mountai	83.18	8	P	P	07 32 22.0	+0.2
YKA	Yellowknife Ar comp=Z,0.5nm,0.9s,baz=237,slow=4.3,SNR=7.7 comp=Z,0.5nm,0.9s	90.85	23	P	P	07 32 58.5	-0.6
ARCES	ARCESS Array B comp=Z,3.5nm,0.9s,baz=33,slow=2.9,SNR=8.0	125.22	352	PKP	PKPdf	07 38 55.1	-0.5
FINES	FINESS Array B comp=Z,1.0nm,0.7s,baz=325,slow=2.2,SNR=1.8	132.52	347	PKP	PKPdf	07 39 09.6	0.0
GERES	GERESS Array B comp=Z,0.8nm,0.7s,baz=28,slow=4.4,SNR=5.8	146.75	351	PKPbc	PKPdf	07 39 37.1	+1.2

NNC 29 07:40:07.2±3.6, 53°.72N×90°.57E, h0^{km}, mb3.8, mpv3.5, 3C-7D, Error ellipse: s-maj=28.4km s-min=22.7km az=33.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array 3.0nm,0.8s	3.41	276	⇓Pg	Pb	07 41 08.6	+0.1
ZAA0	16nm,1.1s			⇓Lg	Lg	07 41 57.7	
KURK	Kurchatov 2.1nm,0.7s	7.93	253	⇓Pn	Pn	07 42 06.2	+2.6
KURK	11nm,0.9s			⇑Sn	Sn	07 43 34.2	+0.2
KURK	50nm,1.0s			⇑Lg	Lg	07 44 22.7	
KURBB	Kurchatov Arra 3.3nm,0.5s	8.02	252	⇓Pn	Pn	07 42 04.4	-0.5
KURBB	29nm,0.8s			⇑Sn	Sn	07 43 35.9	-0.4
KURBB	72nm,1.0s			⇓Lg	Lg	07 44 25.4	
MK31	Makanchi Array 1.7nm,0.7s,baz=35,slow=14,SNR=13	8.72	221	Pn	Pn	07 42 14.4	-0.2
MK31	2.1nm,0.7s,baz=40,slow=24,SNR=4.4			⇓Sn	Sn	07 43 55.0	+1.4
MK31	17nm,0.9s,baz=46,slow=31,SNR=5.5			⇓Lg	Lg	07 44 46.7	

BUL 29 07:42:43.3±1.1, 25°.69S×29°.93E, h1^{km}±12^{km}, MD3.7, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOPA	Mopani	2.54	32	*i* P	Pn	07 43 23.0	-2.8
MOPA				*i* S	Sn	07 43 54.5	-2.9
MOPA	Mopani	2.54	32	*i* P	Pn	07 43 22.9	-2.8
MOPA				*i* S	Sn	07 43 53.2	-4.2
MUSN	Musina, Limpop	3.38	359	*i* P	Pn	07 43 31.8	-5.6
MUSN				*i* S	Sn	07 44 08.2	-10
MUSN	Musina, Limpop	3.38	359	*i* P	Pn	07 43 37.4	0.0
MUSN				*i* S	Sn	07 44 15.4	-2.8
LBTB	Lobatse	3.97	279	*i* P	Pn	07 43 34.1	-11
LBTB				*i* S	Sn	07 44 15.2	-18
LBTB	Lobatse	3.97	279	*i* P	Pn	07 43 45.7	+0.1
LBTB				*i* S	Sn	07 44 30.0	-2.9
BOSA	Boshof	5.08	234	*i* P	Pn	07 43 53.4	-7.4
BOSA				*i* S	Sn	07 44 45.4	-15
BOSA	Boshof	5.08	234	*i* P	Pn	07 43 59.4	-1.4
BOSA				*i* S	Sn	07 44 56.2	-4.1

KRNET ***29*** *07:55:42.6±0.1, 43°.31N×77°.51E, h20^{km}, mb2.3*

NNC ***29*** *07:55:42.3±0.3, 43°.35N×77°.53E, h0^{km}, mb2.1, mpv3.0, Error ellipse: s-maj=4.1km s-min=1.5km az=179.0*

SOME ***29*** *07:55:43.0, 43°.30N×77°.43E, h10^{km}*

ISC 29 07:55:41.5±1.0, 43°.31N±0°.03×77°.53E±0°.02, h18^{km}±3^{km}, n42, σ0^{s}.69/84, 12C-14D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOTS	Kotyrbulak 25nm,0.1s	0.31	255	P	Pb	07 55 49.3	+0.7
KOTS	79nm,0.2s			S	Sb	07 55 54.2	+0.7
KOTS	Kotyrbulak baz=55	0.31	255	*e*P	Pb	07 55 49.3	+0.7
KOTS	baz=55			*e*S	Sb	07 55 54.1	+0.7
KOTS	Kotyrbulak 25nm,0.1s	0.31	255	*e*P	Pb	07 55 49.3	+0.7
KOTS	79nm,0.2s			*e*S	Sb	07 55 54.2	+0.7
MDOK	Medeo 2.5nm,0.3s	0.38	247	⇓P	Pb	07 55 50.1	+0.3
MDOK	11nm,0.2s			Pg	Pb	07 55 50.4	+0.5
MDOK	11nm,0.3s			⇓S	Sg	07 55 55.4	+0.4
MDOK	35nm,0.2s			Lg	Lg	07 55 55.6	
MDOK	Medeo baz=46	0.38	247	*e*P	Pb	07 55 50.4	+0.5
MDOK	baz=46			*e*S	Sg	07 55 55.6	+0.6
MDOK	Medeo 11nm,0.2s	0.38	247	*e*P	Pb	07 55 50.4	+0.5
MDOK	35nm,0.2s			*e*S	Sg	07 55 55.6	+0.6
KURS	Kuram baz=70	0.50	69	*e*P	Pn	07 55 53.0	-0.8
KURS	baz=70			*e*S	Sn	07 56 00.2	-1.8
KURS	Kuram 1.3nm,0.0s	0.50	69	*e*P	Pn	07 55 53.0	-0.8
KURS	1.7nm,0.0s			*e*S	Sn	07 56 00.3	-1.8
TNSS	Tian-Shan 6.9nm,0.1s	0.51	237	P	Pb	07 55 52.5	+0.4
TNSS	11nm,0.1s			S	Sb	07 55 59.5	+0.2
TNSS	Tian-Shan baz=37	0.51	237	*e*P	Pb	07 55 52.5	+0.4
TNSS	baz=37			*e*S	Sb	07 55 59.5	+0.2
TNSS	Tian-Shan 6.9nm,0.1s	0.51	237	*e*P	Pb	07 55 52.5	+0.4
TNSS	11nm,0.1s			*e*S	Sb	07 55 59.5	+0.2
ANVS	Anan'yevo baz=67	0.54	169	⇓*i*P	Pb	07 55 53.4	+0.9
ANVS	baz=67			⇓*i*S	Sb	07 56 00.7	+0.7
CHKK	Chushkaly baz=26	0.67	324	*e*P	Pg	07 55 55.0	+0.3
CHKK	baz=26			*e*S	Sg	07 56 03.7	+0.1
CHKK	Chushkaly 2.4nm,0.1s	0.67	324	*e*P	Pg	07 55 55.0	+0.3
CHKK	33nm,0.0s			*e*S	Sg	07 56 03.7	+0.1
ZHN	Zhinishke 2.2nm,0.0s	0.68	102	P	Pn	07 55 55.7	-0.6
ZHN	29nm,0.2s			S	Sg	07 56 05.1	+1.0
ZHN	Zhinishke baz=2.0	0.68	102	*e*P	Pn	07 55 55.7	-0.6
ZHN	baz=2.0			*e*S	Sg	07 56 05.1	+1.0
ZHN	Zhinishke 2.2nm,0.0s	0.68	102	*e*P	Pn	07 55 55.7	-0.6
ZHN	29nm,0.2s			*e*S	Sg	07 56 05.1	+1.0
SATY	Saty 12nm,0.1s	0.69	111	P	Pn	07 55 56.5	-0.1
SATY	68nm,0.1s			S	Sn	07 56 06.3	-0.5
SATY	Saty 12nm,0.1s	0.69	111	*e*P	Pn	07 55 56.5	-0.1
SATY	68nm,0.1s			*e*S	Sn	07 56 06.3	-0.5
IZV	Izvestkoviy baz=47	0.72	248	*e*P	Pg	07 55 56.2	+0.4
IZV	baz=47			*e*S	Sg	07 56 05.8	+0.4
IZV	Izvestkoviy 2.7nm,0.0s	0.72	248	*e*P	Pg	07 55 56.2	+0.4
IZV	15nm,0.0s			*e*S	Sg	07 56 05.8	+0.4
KTBS	Karatobe	0.73	303	P	Pg	07 55 56.4	+0.4
KTBS	24nm,0.2s			S	Sg	07 56 06.1	+0.4
KTBS	Karatobe	0.73	303	*e*P	Pg	07 55 56.4	+0.4
KTBS	24nm,0.2s			*e*S	Sg	07 56 06.1	+0.4
MTBS	Maitube baz=57	0.82	257	*e*P	Pn	07 55 58.2	-0.1
MTBS	baz=57			*e*S	Sg	07 56 09.3	+0.8
MTBS	Maitube 3.3nm,0.0s	0.82	257	*e*P	Pn	07 55 58.2	-0.1
MTBS	6.5nm,0.0s			*e*S	Sg	07 56 09.3	+0.8
PRZ	Przheval'sk baz=41	1.05	142	⇓*i*P	Pg	07 56 01.8	-0.1
PRZ	baz=41			⇓*i*S	Sg	07 56 15.9	+0.2
UZB	Uzynbulak 6.7nm,0.1s	1.11	98	P	Pg	07 56 03.7	+0.7
UZB	7.0nm,0.1s			S	Sg	07 56 18.6	+1.2
UZB	Uzynbulak baz=98	1.11	98	*e*P	Pg	07 56 03.7	+0.7
UZB	baz=98			*e*S	Sg	07 56 18.7	+1.2
UZB	Uzynbulak 6.7nm,0.1s	1.11	98	*e*P	Pg	07 56 03.7	+0.7
UZB	7.0nm,0.1s			*e*S	Sg	07 56 18.6	+1.2
KST	Kastek baz=57	1.18	257	*e*P	Pg	07 56 04.3	0.0
KST	baz=57			*e*S	Sn	07 56 19.6	+0.8
KST	Kastek 2.8nm,0.1s	1.18	257	*e*P	Pg	07 56 04.2	0.0
KST	3.7nm,0.2s			*e*S	Sn	07 56 19.6	+0.8
KDJ	Kajisay baz=91	1.21	192	⇓*i*P	Pg	07 56 05.0	0.0
KDJ	baz=91			⇓*i*S	Sg	07 56 21.0	+0.2
ULHL	Ulahol baz=22	1.43	222	⇑*i*P	Pg	07 56 08.8	-0.3
ULHL	baz=22			⇑*i*S	Sg	07 56 27.5	-0.2
TKM2	Tokmak 2 0.8nm,0.3s	1.47	255	⇑P	Pb	07 56 09.3	+0.9
TKM2	3.3nm,0.3s			⇑S	Sg	07 56 28.9	-0.1
TKM2	Tokmak 2 baz=55	1.47	255	⇓*i*P	Pg	07 56 09.4	-0.4
TKM2	baz=55			⇓*i*S	Sg	07 56 28.8	-0.2
TARG	Taragay, Kyrgy baz=72	1.60	172	⇑*i*P	Pg	07 56 11.9	-0.4
TARG	baz=72			⇑*i*S	Sg	07 56 32.6	-0.6
DJR	Jarkent 0.6nm,0.1s	1.93	57	*e*Pg	Pg	07 56 18.3	-0.3
DJR	3.5nm,0.3s			*e*Lg	Lg	07 56 43.6	
KBK	Karagaybulak baz=52	2.00	252	⇑*i*P	Pb	07 56 17.9	+0.4
KBK	baz=52			⇑*i*S	Sb	07 56 42.7	+0.5
CHMS	Chumysh baz=62	2.06	262	⇑*i*P	Pb	07 56 18.7	+0.4
CHMS	baz=62			⇑*i*S	Sb	07 56 43.8	+0.3
USP	Ospenovka baz=70	2.21	270	⇓*i*P	Pb	07 56 20.8	-0.2
USP	baz=70			⇓*i*S	Sb	07 56 47.5	-0.5
AAK	Ala-Archa baz=54	2.33	254	⇑*i*P	Pb	07 56 22.4	-0.6
AAK	baz=54			⇑*i*S	Sb	07 56 50.4	-1.0
UCH	Uchtor baz=45	2.47	245	⇓*i*P	Pb	07 56 24.4	-1.2
UCH	baz=45			⇓*i*S	Sb	07 56 53.9	-2.0

NEIC ***29*** *08:16:02.9±0.8, 18°.67N±0°.09×145°.7E±0°.2, h241^{km}±5^{km}, mb4.1/20, Error ellipse: s-maj=26.2km s-min=12.8km az=93.0*

IDC ***29*** *08:16:04.5±6.2, 18°.68N×145°.55E, h262^{km}±62^{km}, mb3.3/12, mbtmp3.9/13, Error ellipse: s-maj=24.9km s-min=13.1km az=86.0*

ISC 29 08:16:03.2±0.7, 18°.66N±0°.08×145°.6E±0°.1, h250^{km}, n39, σ0^{s}.70/39, mb3.9/21, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	5.08	188	Pn	Pn	08 17 19.7	-0.5
JCJ	Chichijima	8.95	340	Pn	Pn	08 18 08.1	-0.5
JMZ	Minamidaito 2	15.06	301	P	Pn	08 19 24.2	+0.1
JOW	Kunigami	17.89	300	P	P	08 19 56.1	+1.4
JGF	Kuroka	18.37	338	P	P	08 19 59.6	-0.2
JGF	comp=Z,10nm,1.3s			IAmb	IAmb	08 20 11.4	
MJAR	Matsushiro Arr comp=Z,0.7nm,0.4s,baz=167,slow=10,SNR=2.7	18.95	342	P	P	08 20 07.0	+0.9
JMM	Marumori	19.59	349	P	P	08 20 12.6	-0.2
KSRS	Korea Array comp=Z,0.4nm,0.3s,baz=134,slow=9.7,SNR=2.4 comp=Z,0.4nm,0.3s	24.27	324	P	P	08 20 56.5	-1.3
KNRA	Kununurra	37.92	207	P	P	08 22 57.4	+0.5
KNRA	comp=Z,14nm,1.1s			IAmb	IAmb	08 23 10.5	
WB0	Warramunga Arr	39.73	197	P	P	08 23 11.9	0.0
WB0	comp=Z,7.1nm,1.2s			IAmb	IAmb	08 23 12.7	
WRA	Warramunga Arr comp=Z,1.5nm,0.3s,baz=12,slow=8.3,SNR=39 comp=Z,1.5nm,0.3s	39.91	197	P	P	08 23 13.3	-0.1
WRA	Warramunga Arr	39.91	197	P	P	08 23 12.3	-1.1
FITZ	Fitzroy Crossi	41.44	209	P	P	08 23 26.2	+0.3
SONM	Songino Array comp=Z,0.5nm,0.4s,baz=144,slow=10,SNR=4.1 comp=Z,0.5nm,0.4s	43.09	321	P	P	08 23 38.7	-0.3
AS31	Alice Springs	43.58	196	P	P	08 23 43.2	+0.2
ASAR	Alice Springs comp=Z,0.2nm,0.3s,baz=13,slow=6.9,SNR=9.5 comp=Z,0.2nm,0.3s	43.58	196	P	P	08 23 43.4	+0.3
ASAR	Alice Springs	43.58	196	P	P	08 23 42.5	-0.5
MBWA	Marble Bar	46.97	214	P	P	08 24 09.9	+0.4
MBWA	comp=Z,38nm,1.4s			IAmb	IAmb	08 24 51.6	
GIRL	Giralia	51.21	218	P	P	08 24 41.9	+0.4
ZALV	Zalesovo Beam comp=Z,0.8nm,0.4s,baz=108,slow=6.4,SNR=2.9 comp=Z,0.8nm,0.4s	57.97	323	P	P	08 25 29.6	0.0
MKAR	Makanchi Array comp=Z,0.9nm,0.5s,baz=92,slow=7.3,SNR=14 comp=Z,0.9nm,0.5s	58.40	314	P	P	08 25 33.4	+0.6
MKAR	Makanchi Array	58.40	314	P	P	08 25 33.2	+0.5
KURBB	Kurchatov Arra comp=Z,1.1nm,0.3s,baz=96,slow=7.5,SNR=12 comp=Z,1.1nm,0.3s	61.26	318	P	P	08 25 52.1	+0.1
IMAR	Indian Mountai	61.31	24	P	P	08 25 52.9	+0.8

H21K	Melozitna Rive	61.57	25	P	P	08 25 54.0	+0.1
H21K				IAmb	IAmb	08 26 19.6	
	comp=Z,4.2nm,1.5s						
RC01	Rabbit Creek A	61.65	30	P	P	08 25 54.0	-0.5
RC01				IAmb	IAmb	08 26 04.6	
	comp=Z,14nm,1.3s						
BPAW	Bear Paw Mtn.	61.85	26	P	P	08 25 56.0	+0.2
BPAW				IAmb	IAmb	08 25 58.0	
	comp=Z,8.0nm,1.4s						
SML	Sawmill	62.47	29	P	P	08 25 59.6	-0.4
BOOM	Boomskoye usch	62.73	309	P	P	08 26 03.6	+1.4
NEA2	Nenana	62.78	26	P	P	08 26 02.2	+0.3
I23K	Minto, Yukon-K	62.80	26	P	P	08 26 02.5	+0.5
I23K				IAmb	IAmb	08 26 04.6	
	comp=Z,3.9nm,1.4s						
ILAR	Eielson Array	63.74	26	P	P	08 26 07.2	-1.0
	comp=Z,0.3nm,0.5s,baz=254,slow=6.1,SNR=5.2						
	comp=Z,0.3nm,0.5s						
BMAR	Burnt Mountain	65.20	24	P	P	08 26 18.8	+1.1
INK	Inuvik	69.46	23	P	P	08 26 44.6	+0.5
	comp=Z,0.8nm,0.7s,baz=270,slow=5.5,SNR=4.2						
	comp=Z,0.8nm,0.7s						
C36M	Paulatuk	72.83	22	P	P	08 27 04.2	-0.1
C36M				IAmb	IAmb	08 27 09.9	
	comp=Z,3.7nm,1.3s						
ABKAR	Akbulak array	73.28	317	P	P	08 27 06.9	-0.5
ABKAR				IAmb	IAmb	08 27 07.9	
	comp=Z,1.4nm,0.6s						
YKA	Yellowknife Ar	78.08	28	P	P	08 27 34.3	+0.1
	comp=Z,0.5nm,0.7s,baz=289,slow=5.5,SNR=7.4						
	comp=Z,0.5nm,0.7s						
NVAR	Mina Array Bea	83.27	52	P	P	08 28 03.6	+1.1
	comp=Z,0.7nm,0.7s,baz=273,slow=5.3,SNR=6.0						
	comp=Z,0.7nm,0.7s						
FINES	FINESS Array B	86.87	335	P	P	08 28 18.1	-1.4
	comp=Z,0.8nm,0.3s,baz=63,slow=5.1,SNR=11						
	comp=Z,0.8nm,0.3s						

*MOS **29** 08:20:12.2±0.9, 0°.13N×123°.18E, h161^{km}, mb4.9/44, Error ellipse: s-maj=9.1km s-min=5.1km az=108.3*
*NEIC **29** 08:20:12.1±2.0, 0°.05N±0°.07×123°.37E±0°.07, h138^{km}±4^{km}, mb5.0/157, Error ellipse: s-maj=9.9km s-min=9.3km az=222.0*
*IDC **29** 08:20:13.3±1.1, 0°.06N×123°.27E, h155^{km}±9^{km}, mb4.5/35, mbtmp4.9/37, MS3.6/5, Error ellipse: s-maj=10.6km s-min=6.6km az=80.0*
*DJA **29** 08:20:13.2±0.1, 0°S±2°×12°3E±°, h146^{km}±2^{km}, M5.0/51, mb5.0/51, mB5.4/19, MLv5.3/23, Mw4.7/74, Mw(mB)4.8/19*
ISC 29 08:20:13.2±0.3**, 0°.00N**±0°.03×**123°.30E**±0°.04**, h155**^{km}±2^{km}**, h156**^{km}**:pP-P, n956,** σ1^{s}23/998**, mb4.9**/169**, 31C-19D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	Gorontalo	0.69	335	P	Pn	08 20 37.4	+1.1
GTOI				S	Sn	08 20 55.2	+1.3
LUWI	Luwuk	1.16	207		Pn	08 20 38.6	-1.4
LUWI	Luwuk	1.16	207	P	Pn	08 20 38.6	-1.4
LUWI				S	Sn	08 20 57.2	-3.2
MRSI	Marisa	1.44	289	P	Pn	08 20 42.0	-0.5
MRSI				S	Sn	08 21 03.0	-2.0
TOLI2	Tolitoli	2.75	294	Pn	Pn	08 20 57.7	0.0
TOLI2	Tolitoli	2.75	294	P	Pn	08 20 58.3	+0.7
SANI	Sanana	3.38	127	P	Pn	08 21 02.6	-3.0
SANI	Sanana	3.38	127	P	Pn	08 21 02.4	-3.2
MPSI	Mapaga	3.42	276	P	Pn	08 21 06.7	+0.6
TNTI	Ternate	4.14	79		Pn	08 21 13.7	-1.7
TNTI	Ternate	4.14	79	P	Pn	08 21 13.9	-1.6
TNTI	Ternate	4.14	79	P	Pn	08 21 13.8	-1.7
LBMI	Labuha	4.25	99	P	Pn	08 21 14.6	-2.3
SGSI	Sangihe	4.29	31	P	Pn	08 21 18.4	+1.0
NLAI	Namlea	4.98	130	P	Pn	08 21 25.7	-0.8
SPSI	Sidrap Palu	5.29	222	P	Pn	08 21 30.9	+0.3
	327nm,0.6s,5µm2.9nm						
KAPI	Kappang	6.11	215	P	Pn	08 21 43.2	+1.6
	49nm,0.4s,baz=13,slow=7.2,SNR=37						
KAPI				S	Sn	08 22 52.1	+1.4
	236nm,0.6s,baz=52,slow=22,SNR=12						
KAPI				LR	LR	08 24 39.1	
	comp=Z,496nm,19.1s,baz=60,slow=43						
KAPI	Kappang	6.11	215	Pn	Pn	08 21 42.8	+1.2
KAPI	Kappang	6.11	215	P	Pn	08 21 43.2	+1.6
KAPI	Kappang	6.11	215	*d i*P	Pn	08 21 41.8	+0.3
AAI	Ambon	6.11	127	P	Pn	08 21 41.4	-0.2
	790nm,0.9s,7µm2.8nm						
BKSI	Bulukumba	6.17	211	P	Pn	08 21 42.8	+0.6
	134nm,0.7s,2µm1.2nm						
GSPH	General Santos	6.26	15	⇑*i*P	Pn	08 21 47.0	+3.3
BKB	Balikpapan	6.52	259		Pn	08 21 49.5	+2.5
BKB	Balikpapan	6.52	259	P	Pn	08 21 50.0	+3.0
BKB	Balikpapan	6.52	259	P	Pn	08 21 48.6	+1.6
	348nm,0.8s,2.5nm						
MSAI	Masohi	6.54	121	P	Pn	08 21 46.0	-1.2
	44nm,0.7s,1µm0.4nm						
SKMP	Bagumbayan, Su	6.59	11	⇓*e*P	Pn	08 21 48.9	+1.0
BSSI	Bau Bau, Buton	6.72	205	P	Pn	08 21 50.2	+0.6
	610nm,0.7s,6µm2.0nm						
ZCP	Zamboanga City	6.99	350	⇑*e*P	Pn	08 21 57.3	+4.1
MYLDM	Lahad Datu	7.03	317	Pn	Pn	08 21 56.9	+3.2
KCP	Kidapawan	7.19	14	⇓*i*P	Pn	08 21 59.0	+3.1
CTBH	Cotabato--PC H	7.23	7	⇓*e*P	Pn	08 21 59.0	+2.6
DAV	Davao City (W)	7.38	18	P	Pn	08 22 03.2	+4.7
	227nm,0.3s,baz=145,slow=2.0,SNR=7.5						
PAGZ	Pagadian	7.79	1	⇓*e*P	Pn	08 22 05.8	+1.9
BNDI	Bandanaira	7.99	124	P	Pn	08 22 06.6	+0.1
BNDI	Bandanaira	7.99	124	P	Pn	08 22 05.4	-1.1
	606nm,0.8s,10µm2.1nm						
SIJI	Sorong	8.02	96	P	Pn	08 22 06.5	-0.4
	43nm,0.8s,baz=282,slow=8.9,SNR=14						
SIJI				S	Sn	08 23 37.3	+0.9
	31nm,0.6s,baz=221,slow=23,SNR=1.7						
CGP	Cagayan de Oro	8.51	9	⇓*e*P	Pn	08 22 20.9	+7.4
BBKI	Banjar Baru	9.12	248	P	Pn	08 22 23.3	+1.6
	80nm,0.5s,7µm						
KKM	Kota Kinabalu	9.27	310	Pn	Pn	08 22 26.0	+2.3
KKM	Kota Kinabalu	9.27	310	P	Pn	08 22 27.6	+3.9
FAKI	Fak Fak	9.41	108	Pn	Pn	08 22 22.8	-2.6
FAKI	Fak Fak	9.41	108	P	Pn	08 22 23.3	-2.1
FAKI	Fak Fak	9.41	108	P	Pn	08 22 23.4	-2.0
	54nm,0.9s,1µm						
TBP	Tagbilaran	9.64	3	*e*P	Pn	08 22 31.5	+3.0
SOEI	Soe	9.74	174	Pn	Pn	08 22 32.6	+2.7
SOEI	Soe	9.74	174	P	Pn	08 22 32.5	+2.6
SOEI	Soe	9.74	174	P	Pn	08 22 32.2	+2.3
	238nm,1.1s,3µm						
GLSP	General Luna,	10.12	16	⇓*e*P	Pn	08 22 37.6	+2.8
PLAI	Plampang	10.35	212	P	Pn	08 22 40.0	+2.1
PLAI	Plampang	10.35	212	P	Pn	08 22 39.6	+1.7
	127nm,1.4s,2µm						
BASI	Baing, Sumba	10.51	195	P	Pn	08 22 40.9	+1.0
	227nm,1.1s						
GUIM	Jordan	10.58	356	⇑*e*P	Pn	08 22 44.1	+3.3
CUYO	Cuyo Island	11.01	348	⇑*e*P	P	08 22 53.6	-1.3
SBUM	Sibu	11.34	282		P	08 22 56.5	-2.0
OTRP	Odiongan	12.34	354	⇑*e*P	P	08 23 12.9	+3.3
SJMP	San Jose	12.56	350	⇑*e*P	P	08 23 09.6	-2.5
GMJI	Gumukmas	12.81	230	P	Pn	08 23 10.7	+0.9
	80nm,1.0s						
KSM	Kuching	13.07	276		P	08 23 18.2	+0.5
KSM	Kuching	13.07	276	P	P	08 23 16.9	-0.8
PVCP	Virac	13.53	4	⇑*e*P	P	08 23 24.7	+1.9
PWJI	Pagerwojo	13.96	235	P	Pn	08 23 25.6	+1.1
	72nm,0.7s						
LUBP	Lubang	13.97	348	⇑*e*P	P	08 23 29.9	+2.2
LQP	Lukban	14.13	353	⇑*e*P	Pn	08 23 25.3	-1.5
TGY	Tagaytay City	14.20	351	P	P	08 23 33.6	+3.3
	264nm,0.5s,baz=162,slow=3.4,SNR=5.8						
JCNP	Jose Panganiba	14.21	358	⇓*e*P	P	08 23 33.1	+2.8
MACP	Maragondon, Ca	14.40	350	⇓*e*P	P	08 23 35.8	+3.3
MTN	Manton Dam	14.94	149	P	Pn	08 23 35.7	-1.1
	baz=15,SNR=29						
MTN	Manton Dam	14.94	149	Pn	Pn	08 23 36.1	-0.7
MTN	Manton Dam	14.94	149	P	Pn	08 23 35.7	-1.1
KDU	Kakadu	15.55	145	P	Pn	08 23 43.5	-0.7
	baz=16,SNR=13						
KDU	Kakadu	15.55	145	P	Pn	08 23 43.6	-0.7
SCZP	Santa Cruz	16.02	348	⇓*e*P	P	08 23 52.5	+2.1
KPJI	Karang Pucung	16.07	243	P	P	08 23 52.7	+1.6
	101nm,0.8s						
KNRA	Kununurra	16.49	161	P	Pn	08 23 55.8	+0.1
	baz=17,SNR=31						
KNRA	Kununurra	16.49	161		P	08 23 55.2	-0.4
KNRA	Kununurra	16.49	161	P	Pn	08 23 56.9	+1.2
CMJI	Cimerak	16.70	242	P	Pn	08 24 00.2	+1.8
	82nm,1.0s						
BBJI	Bungbulang	17.28	244	P	Pn	08 24 08.7	+3.4
CBJI	Citeko	17.61	248	P	Pn	08 24 09.0	-0.2
	222nm,0.8s						
CNJI	Cibinong	17.68	245	P	Pn	08 24 10.5	+0.4
	22nm,0.7s						
FITZ	Fitzroy Crossi	18.13	173	P	P	08 24 13.1	-0.6
FITZ	Fitzroy Crossi	18.13	173	P	P	08 24 13.9	+0.2
PMBI	Palembang	18.74	261	P	Pn	08 24 22.3	-0.3
CGJI	Cibinong	18.75	249	P	P	08 24 21.5	+1.0
	55nm,0.9s,7µm						
BLSI	Bandar Lampung	18.80	253	P	Pn	08 24 25.1	+1.8
	158nm,0.4s,8µm						
DLV	T Lat	18.89	309	P	Pn	08 24 26.0	+1.5
MYKOM	Kota Tinggi	19.52	275	P	P	08 24 27.9	-1.0
KASI	Kota Agung	19.56	253	P	P	08 24 30.3	+1.1
	63nm,0.5s						
BTDF	Bukit Timah Da	19.57	274	P	Pn	08 24 32.5	+0.2
JMBI	JAMBI	19.72	265	P	Pn	08 24 33.5	-0.6
	117nm,0.4s						
MNAI	Manna	20.78	258	P	P	08 24 42.0	-0.3
MASI	Maura Aman, Be	21.28	261	P	P	08 24 47.3	-0.4
	95nm,1.0s						
MBWA	Marble Bar	21.32	189	P	P	08 24 47.5	-0.5
MBWA	Marble Bar	21.32	189	P	P	08 24 49.6	+1.6
PSA00	Pilbara Seismi	21.71	189	P	P	08 24 52.4	+0.3
PSA00	Pilbara Seismi	21.71	189	P	P	08 24 51.7	-0.4
SDSI	Sungai Dareh	21.89	268	P	P	08 24 54.4	+0.3
	26nm,0.6s						
WB0	Warramunga Arr	22.46	152	P	P	08 24 58.4	-1.2
WB0				IAmb	IAmb	08 25 07.6	
	comp=Z,46nm,0.8s						
WRAB	Tennant Creek	22.58	152	P	P	08 24 59.1	-1.6
WRAB				IAmb	IAmb	08 25 01.9	
	comp=Z,64nm,1.2s						
WRAB	Tennant Creek	22.58	152	P	P	08 25 00.2	-0.5
WRAB	Tennant Creek	22.58	152	*c i*P	P	08 25 00.3	-0.5
WRAB				pmax	pmax		
	comp=Z,62nm,1.3s						
WRA	Warramunga Arr	22.58	152	P	P	08 25 00.4	-0.4
	comp=Z,26nm,0.8s,baz=330,slow=10,SNR=161						
WRA				S	S	08 28 53.5	-3.2
	comp=Z,6.8nm,0.8s,baz=334,slow=16,SNR=5.3						
WRA				ScP	ScP	08 32 11.7	-0.3
	comp=Z,2.2nm,0.8s,baz=330,slow=2.8,SNR=5.5						
WRA				PKiKP	PKiKP	08 36 32.5	-1.6
	comp=Z,0.6nm,0.6s,baz=297,slow=1.5,SNR=8.5						
	comp=Z,26nm,0.8s						
WB2	Warramunga Arr	22.59	152	IAmb	IAmb	08 25 01.9	
	comp=Z,68nm,1.2s						
IPM	Ipoh	22.69	282	P	P	08 25 02.8	+1.0
IPM				IAmb	IAmb	08 25 05.2	
	comp=Z,100nm,0.8s						
IPM	Ipoh	22.69	282	P	P	08 25 04.0	+2.1
TWGBT	Beinan	22.78	355	P	P	08 25 05.3	+2.7
TWG	Pinlang	22.78	355	IAmb	IAmb	08 25 11.3	
	comp=Z,35nm,0.6s						
PDSI	Padang	22.85	268	P	P	08 25 03.0	-0.4
	comp=Z,79nm,1.0s						
QIZ	Qiongzhong	23.06	326	P	P	08 25 07.5	+2.3
QIZ				pP	pP	08 25 34.0	+0.2
QIZ				S	S	08 29 06.5	+2.1
QIZ				pmax	pmax		
	comp=Z,76nm,1.0s						
QIZ	Qiongzhong	23.06	326	IAmb	IAmb	08 25 08.1	
	comp=Z,60nm,0.9s						
QIZ	Qiongzhong	23.06	326	P	P	08 25 07.5	+2.3
KULM	Kulim	23.22	283	P	P	08 25 07.0	+0.3
KULM				IAmb	IAmb	08 25 09.5	
	comp=Z,82nm,1.0s						
TPUB	Ta-pu	23.30	354	P	P	08 25 08.0	+0.6
TPUB				IAmb	IAmb	08 25 10.6	
	comp=Z,89nm,1.0s						
TPUB	Ta-pu	23.30	354	P	P	08 25 09.4	+2.0
YULB	Yu-li	23.33	355	P	P	08 25 06.4	-1.2
YULB				IAmb	IAmb	08 25 14.1	
	comp=Z,96nm,1.7s						
YULB	Yu-li	23.33	355	P	P	08 25 09.5	+1.9
SSLB	Suanglung	23.75	355	IAmb	IAmb	08 25 15.1	
	comp=Z,51nm,0.8s						
SSLB	Suanglung	23.75	355	P	P	08 25 12.4	+0.9
COEN	Coen	24.08	126	P	P	08 25 14.7	+0.2
	baz=24,SNR=4.2						
COEN	Coen	24.08	126	P	P	08 25 15.3	+0.8
RPSI	Rantau Prapat	24.51	276	P	P	08 25 18.3	-0.2
PSI	Prapat	24.52	277	P	P	08 25 19.8	+1.1
PSI	Prapat	24.52	277	P	P	08 25 18.3	-0.4
PSI				pmax	pmax		
	comp=Z,13nm,0.9s						
YHNB	Yeheng	24.59	356	P	P	08 25 17.7	-1.4
YHNB				IAmb	IAmb	08 25 24.6	
	comp=Z,32nm,0.8s						
YHNB	Yeheng	24.59	356	P	P	08 25 20.6	+1.5
SRIT	Nakonsritamara	25.10	290	IAmb	IAmb	08 25 29.7	
	comp=Z,72nm,1.4s						
SRIT	Nakonsritamara	25.10	290	P	P	08 25 27.7	+3.9
SURA	Surathani	25.26	292	P	P	08 25 29.5	+4.2
WRKA	Warakurna	25.36	169	P	P	08 25 26.3	+0.3
	baz=26,SNR=15						
WRKA	Warakurna	25.36	169	P	P	08 25 26.9	+0.8
ASAR	Alice Springs	25.68	157	P	P	08 25 30.4	+1.4
	comp=Z,4.2nm,0.6s,baz=344,slow=15,SNR=34						
ASAR				PcP	PcP	08 28 55.8	+0.3
	comp=Z,7.8nm,0.7s,baz=348,slow=2.1,SNR=13						
ASAR				S	S	08 29 44.7	-1.5
	comp=Z,2.2nm,0.9s,baz=334,slow=19,SNR=3.8						
ASAR				ScP	ScP	08 32 20.9	+0.4
	comp=Z,1.7nm,0.7s,baz=331,slow=2.5,SNR=7.1						
	comp=Z,4.2nm,0.6s						
ASAR	Alice Springs	25.68	157		PcP	08 28 55.5	0.0
AS01	Alice Springs	25.70	157	P	P	08 25 30.5	+1.3
QIS	Mount Isa	25.92	143	P	P	08 25 31.9	+0.7
	baz=26,SNR=20						
QIS	Mount Isa	25.92	143	P	P	08 25 31.8	+0.6
NAYO	Nakonayok	25.98	304	P	P	08 25 36.9	+5.1
JOW	Kunigami	27.10	10	P	P	08 25 43.6	+2.0
	comp=Z,17nm,0.5s,baz=156,slow=6.1,SNR=12						
JOW				LR	LR	08 35 55.0	
	comp=Z,127nm,21.4s,baz=356,slow=35						
MTSU	Mount Surprise	27.42	132	P	P	08 25 45.6	+1.0
	baz=28,SNR=3.8						
PHRA	Phrae	29.18	310		PcP	08 29 04.8	+0.8
CM31	Chiang Mai Arr	30.15	309	IAmb	IAmb	08 26 12.9	
	comp=Z,32nm,0.8s						
CMAR	Chiang Mai Arr	30.15	309	P	P	08 26 10.1	+1.3
	comp=Z,24nm,0.7s,baz=135,slow=7.4,SNR=76						
CMAR				PcP	PcP	08 29 07.6	+1.1
	comp=Z,6.9nm,0.7s,baz=168,slow=1.9,SNR=17						
CMAR				ScP	ScP	08 32 34.6	+0.3
	comp=Z,4.2nm,0.3s,baz=170,slow=2.0,SNR=5.4						
CMAR				LR	LR	08 39 09.7	
	comp=Z,31nm,21.4s,baz=135,slow=38						
	comp=Z,24nm,0.7s						
CHTO	Chiang Mai	30.35	309	P	P	08 26 11.6	+1.0
CHTO	Chiang Mai	30.35	309	P	P	08 26 11.6	+1.0
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GYA	Guiyang	30.80	330	⇑*i*P	P	08 26 18.3	+3.7
GYA				pmax	pmax		
	comp=Z,34nm,0.6s						
FORT	Forrest	30.95	172	P	P	08 26 15.8	+0.2
	baz=31,SNR=9.0						
FORT	Forrest	30.95	172	P	P	08 26 15.4	-0.2
FORT				IAmb	IAmb	08 26 16.9	
	comp=Z,46nm,0.8s						
WHN	Wuhan	31.54	345	P	P	08 26 24.8	+4.0
NJ2	Nanjing	32.15	353	*e*P	P	08 26 27.3	+1.1
NJ2				pP	pP	08 26 58.3	-0.7
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,320nm,7.6s						
INKA	Innaminka	32.27	150	P	P	08 26 29.3	+2.0
JCJ	Chichijima	32.49	32	P	P	08 26 27.8	-1.4
	comp=Z,115nm,0.6s,baz=308,slow=21,SNR=5.0						
	comp=Z,115nm,0.6s						
JCJ	Chichijima	32.49	32	P	P	08 26 27.6	-1.5
ENH	Enshi	32.85	338	P	P	08 26 34.8	+2.5
QLP	Quilpie	33.24	144	P	P	08 26 36.7	+0.9
PZH	PanZhiHua	33.55	323	P	P	08 26 41.0	+2.5
PZH				pmax	pmax		
	comp=Z,20nm,0.6s						
PZH				pmax	pmax		
	comp=Z,120nm,7.8s						
JNU	Nakatsue	33.71	12	P	P	08 26 38.7	-1.0
	comp=Z,5.0nm,0.6s,baz=323,slow=5.1,SNR=5.7						
	comp=Z,5.0nm,0.6s						
MND	Mandalay	34.36	311	P	P	08 26 48.1	+2.6
JMN	Monobe	34.99	15	IAmb	IAmb	08 26 52.0	
	comp=Z,33nm,0.7s						
JMN	Monobe	34.99	15	P	P	08 26 51.5	+0.7
LYN	LuoYang	35.83	345	⇓P	P	08 26 59.0	+1.1
LYN				sP	sP	08 27 50.0	+0.9
LYN				pmax	pmax		
	comp=Z,28nm,0.7s						
CD2	Chengdu	35.90	331	P	P	08 27 00.0	+1.4
CD2				pmax	pmax		
	comp=Z,60nm,1.1s						
JHS	Saijyo	36.01	14	IAmb	IAmb	08 27 05.5	
	comp=Z,47nm,1.3s						
JHS	Saijyo	36.01	14	P	P	08 27 02.5	+3.1
STKA	Stephens Creek	36.12	153	P	P	08 27 00.6	+0.2
	comp=Z,6.1nm,0.4s,baz=334,slow=8.3,SNR=19						
STKA				PcP	PcP	08 29 23.1	+0.1
	comp=Z,5.8nm,0.5s,baz=355,slow=3.6,SNR=7.5						
STKA				ScP	ScP	08 32 55.3	+0.4
	comp=Z,4.4nm,0.8s,baz=294,slow=5.8,SNR=3.8						
STKA				LR	LR	08 42 55.0	
	comp=Z,340nm,18.6s,baz=209,slow=38						
	comp=Z,6.1nm,0.4s						
STKA	Stephens Creek	36.12	153	P	P	08 27 01.1	+0.7
	baz=36,SNR=18						
STKA	Stephens Creek	36.12	153	P	P	08 27 00.4	0.0
STKA	Stephens Creek	36.12	153	P	P	08 27 01.4	+0.9
HTT	Hallett	36.36	158	P	P	08 27 03.7	+1.2
	baz=37,SNR=11						
XAN	Xi'an	36.45	340	⇓P	P	08 27 04.5	+1.3
XAN				pP	pP	08 27 36.5	-0.1
XAN				pmax	pmax		
	comp=Z,35nm,0.8s						
SAIH	SAIHA	37.02	309	*e*P	P	08 27 09.6	+1.3
INU	Inuyama	37.42	19	P	P	08 27 11.0	-0.4
INU				IAmb	IAmb	08 27 12.1	
	comp=Z,53nm,1.2s						
INU	Inuyama	37.42	19	P	P	08 27 11.6	+0.2
INU	Inuyama	37.42	19	P	P	08 27 09.9	-1.5
INU				pP	pP	08 27 40.2	-4.6
KSRS	Korea Array	37.51	6	P	P	08 27 11.9	-0.2
	comp=Z,6.3nm,0.6s,baz=180,slow=9.2,SNR=21						
KSRS				PcP	PcP	08 29 27.2	+0.2
	comp=Z,2.5nm,0.6s,baz=180,slow=2.8,SNR=7.3						
KSRS				ScP	ScP	08 32 58.8	-1.1
	comp=Z,1.0nm,0.6s,baz=198,slow=3.8,SNR=4.2						
	comp=Z,6.3nm,0.6s						
AULRC	Lightning Ridg	37.57	143	P	P	08 27 13.9	+1.2
IMP	Imphal	37.63	313	*e*P	P	08 27 14.7	+1.3
IMP				IAmb	IAmb	08 27 15.7	
	comp=Z,41nm,0.6s						
HNR	Honiara	37.67	105	P	P	08 27 13.5	-0.3
	comp=Z,2µm,0.7s,baz=74,slow=4.3,SNR=5.8						
HNR	Honiara	37.67	105	P	P	08 27 12.9	-0.8
JGF	Kuroka	37.76	19	P	P	08 27 12.8	-1.4
JGF				IAmb	IAmb	08 27 14.9	
	comp=Z,17nm,0.7s						
JGF	Kuroka	37.76	19	P	P	08 27 14.4	+0.1
CMSA	Cobar Meteorol	37.87	148	P	P	08 27 16.2	+1.1
	baz=38,SNR=17						
CMSA	Cobar Meteorol	37.87	148	P	P	08 27 16.6	+1.4
KOHI	KOHIMA	38.05	314	*e*P	P	08 27 17.6	+0.6
KOHI				IAmb	IAmb	08 27 19.8	
	comp=Z,56nm,0.8s						
MOKO	MOKOCHONG	38.13	316	*e*P	P	08 27 19.2	+1.6
MOKO				IAmb	IAmb	08 27 21.2	
	comp=Z,82nm,0.6s						
MAJO	Matsushiro	38.90	19	P	P	08 27 21.7	-2.0
MAJO				IAmb	IAmb	08 27 23.6	
	comp=Z,30nm,0.8s						
MAJO	Matsushiro	38.90	19	P	P	08 27 23.3	-0.5
MAJO	Matsushiro	38.90	19	*c i*P	P	08 27 22.8	-1.0
MAJO				pmax	pmax		
	comp=Z,36nm,0.9s						
MAJO	Matsushiro	38.90	19	P	P	08 27 21.9	-1.8
MAJO				sP	sP	08 28 11.2	-4.0
MJAR	Matsushiro Arr	38.90	19	P	P	08 27 22.6	-1.1
	comp=Z,23nm,0.7s,baz=190,slow=9.2,SNR=58						
MJAR				PcP	PcP	08 29 31.7	+0.2
	comp=Z,3.9nm,0.8s,baz=199,slow=4.4,SNR=6.8						
MJAR				ScP	ScP	08 33 04.3	-1.0
	comp=Z,3.0nm,0.7s,baz=176,slow=5.0,SNR=6.4						
	comp=Z,23nm,0.7s						
MJB9	Matsu-Tunnel	38.90	19	IAmb	IAmb	08 27 23.6	
	comp=Z,30nm,0.8s						
AUDCS	Dubbo College	40.00	146	P	P	08 27 34.1	+1.1
LZH	Lanzhou	40.20	335	*e*P	P	08 27 37.0	+2.3
LZH				pmax	pmax		
	comp=Z,36nm,1.0s						
BJI	Beijing	40.38	352	P	P	08 27 36.5	+0.7
BJI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ARPS	Mount Arapiles	40.42	157	P	P	08 27 37.4	+1.1
	baz=41,SNR=8.0						
ARPS	Mount Arapiles	40.42	157	P	P	08 27 38.2	+1.9
ARMA	Armidale	40.51	141	P	P	08 27 39.0	+1.7
	baz=41,SNR=20						
ARMA	Armidale	40.51	141	P	P	08 27 37.7	+0.4
ARMA				IAmb	IAmb	08 27 39.4	
	comp=Z,19nm,0.7s						
ARMA	Armidale	40.51	141	P	P	08 27 39.2	+1.9
JMM	Marumori	40.99	21	P	P	08 27 41.6	+0.7
JMM	Marumori	40.99	21	P	P	08 27 41.8	+0.9
YNG	Young	41.44	148	P	P	08 27 46.4	+1.7
HHC	Hu-ho-hao-te	42.03	347	*e*P	P	08 27 52.5	+3.0
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,170nm,8.9s						
BTO	Baotou	42.18	345	*e*P	P	08 27 45.3	-5.4
BTO				pP	pP	08 28 20.3	-4.7
BTO				sP	sP	08 28 39.0	-3.5
BTO				PP	PP	08 29 22.8	-8.9
BTO				S	S	08 33 48.0	-11
BTO				sS	sS	08 34 51.5	-6.1
BTO				SS	SS	08 37 00.5	-13
BTO				pmax	pmax		
	comp=Z,28nm,0.8s						
BTO				pmax	pmax		
	comp=Z,580nm,4.5s						
BTO				LR	LR		
	comp=N,560nm,8.9s						
BTO				LR	LR		
	comp=E,270nm,5.0s						
BTO				LR	LR		
	comp=Z,390nm,9.7s						
CAN	Canberra	42.54	148	P	P	08 27 54.3	+0.7
CAN				IAmb	IAmb	08 27 56.1	
	comp=Z,21nm,0.6s						
CAN	Canberra	42.54	148	P	P	08 27 54.5	+0.9
CAN	Canberra	42.54	148	P	P	08 27 54.3	+0.7
CAN				pmax	pmax		
	comp=Z,21nm,0.6s						
CAN	Canberra	42.54	148	P	P	08 27 54.5	+0.9
CAN				pP	pP	08 28 27.8	+0.2
LSA	Lhasa	42.55	317	P	P	08 27 56.5	+2.2
LSA				pmax	pmax		
	comp=Z,45nm,0.5s						
LSA	Lhasa	42.55	317	P	P	08 27 56.2	+1.9
LSA				IAmb	IAmb	08 27 58.4	
	comp=Z,32nm,0.6s						
LSA	Lhasa	42.55	317	P	P	08 27 56.2	+1.9
LSA				pmax	pmax		
	comp=Z,33nm,0.6s						
LSA	Lhasa	42.55	317	P	P	08 27 56.5	+2.2
PALK	Pallekele	43.09	281	P	P	08 27 57.6	-0.7
	comp=Z,4.1nm,0.6s,baz=198,slow=9.8,SNR=5.6						
PALK				PcP	PcP	08 29 46.5	+0.9
	comp=Z,10nm,0.7s,baz=202,slow=1.9,SNR=8.1						
	comp=Z,4.1nm,0.6s						
TAPN	Taplejung	43.67	311	*e*P	P	08 28 04.4	+1.3
	comp=Z,142nm,0.8s						
RAMN	Ramite	44.30	310	*e*P	P	08 28 09.7	+1.6
	comp=Z,196nm,0.6s						
USA0B	Ussuriysk Arra	44.68	9	*c i*P	P	08 28 10.4	-0.1
USRK	Ussuriysk Ar.	44.68	9	P	P	08 28 10.4	-0.1
	comp=Z,13nm,0.8s,baz=189,slow=7.7,SNR=21						
USRK				PcP	PcP	08 29 50.5	+0.1
	comp=Z,2.1nm,0.6s,baz=162,slow=5.0,SNR=2.0						
	comp=Z,13nm,0.8s						
GOMU	GeErMu	44.69	327	P	P	08 28 14.0	+2.8
GOMU				pmax	pmax		

	comp=Z,48nm,4.1s						
GTA	**Gaotai**	**44.72**	**334**	⇓P	**P**	**08 28 13.3**	**+2.2**
GTA				pP	pP	08 28 47.0	+1.3
GTA				sP	sP	08 29 04.8	+1.6
GTA				PcP	**PcP**	**08 29 51.5**	**+0.7**
GTA				pmax	pmax		
	comp=Z,41nm,1.2s						
MDJ	**Mudanjiang**	**44.77**	**6**	P	**P**	**08 28 11.3**	**0.0**
MDJ				PcS	**PcS**	**08 33 47.5**	**+3.2**
MDJ				S	**S**	**08 34 40.5**	**+4.0**
MDJ				SS	**SS**	**08 37 58.3**	**-3.0**
MDJ				pmax	pmax		
	comp=Z,27nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,130nm,4.0s						
MDJ	**Mudanjiang**	**44.77**	**6**	IAmb	IAmb	08 28 12.6	
	comp=Z,18nm,0.7s						
MDJ	**Mudanjiang**	**44.77**	**6**	P	**P**	**08 28 11.4**	**+0.1**
JIRN	**Jiri**	**44.98**	**311**	*e*P	**P**	**08 28 14.8**	**+1.2**
	comp=Z,236nm,0.7s						
KOUNC	**Koumac, New Ca**	**44.98**	**120**	P	**P**	**08 28 13.1**	**-0.2**
GUN	**Gumba**	**45.34**	**311**	*e*P	**P**	**08 28 17.6**	**+1.1**
	comp=Z,339nm,0.8s						
ERM	**Erimo**	**45.50**	**21**	P	**P**	**08 28 17.4**	**+0.4**
ERM				IAmb	IAmb	08 29 30.2	
	comp=Z,34nm,1.0s						
ERM	**Erimo**	**45.50**	**21**	P	**P**	**08 28 17.4**	**+0.4**
ERM				pmax	pmax		
	comp=Z,34nm,1.0s						
PKI	**Pulchoki**	**45.52**	**310**	*e*P	**P**	**08 28 19.1**	**+1.2**
PKIN	**Phulchoki**	**45.54**	**310**	*e*P	**P**	**08 28 19.0**	**+1.1**
	comp=Z,84nm,0.6s						
BNX	**BinXian**	**45.69**	**4**	⇑P	**P**	**08 28 19.0**	**+0.5**
BNX				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BNX				pmax	pmax		
	comp=Z,180nm,5.8s						
DMN	**Daman**	**45.77**	**310**	*e*P	**P**	**08 28 20.7**	**+0.9**
LHI	**Lord Howe Isla**	**46.14**	**136**	P	**P**	**08 28 23.1**	**+0.9**
	baz=46,SNR=3.6						
GKN	**Gorkha**	**46.33**	**310**	*e*P	**P**	**08 28 25.3**	**+1.3**
ASAJ	**Asahikawa**	**47.17**	**19**	P	**P**	**08 28 30.1**	**+0.1**
	comp=Z,31nm,0.7s,baz=230,slow=12,SNR=38						
	comp=Z,31nm,0.7s						
ASAJ	**Asahikawa**	**47.17**	**19**	P	**P**	**08 28 29.8**	**-0.2**
ASAJ				pmax	pmax		
	comp=Z,39nm,0.8s						
JKA	**Kamikawa-asahi**	**47.17**	**19**	P	**P**	**08 28 29.8**	**-0.2**
JKA				IAmb	IAmb	08 28 31.5	
	comp=Z,39nm,0.8s						
DANN	**Dangsing**	**47.17**	**310**	*e*P	**P**	**08 28 31.5**	**+0.8**
	comp=Z,392nm,0.7s						
NOUC	**Port Laguerre**	**47.30**	**121**	P	**P**	**08 28 32.5**	**+1.1**
NOUC	**Port Laguerre**	**47.30**	**121**	P	**P**	**08 28 31.6**	**+0.2**
NOUC				pP	**pP**	**08 29 06.3**	**+1.1**
NOUC				sP	**sP**	**08 29 23.7**	**+1.5**
HYB	**Hyderabad**	**47.30**	**294**	*e*P	**P**	**08 28 31.1**	**-0.5**
DZM	**Mont Dzumac**	**47.41**	**120**	P	**P**	**08 28 33.2**	**+0.8**
	comp=Z,16nm,0.8s,baz=273,slow=7.4,SNR=13						
	comp=Z,16nm,0.8s						
DZM	**Mont Dzumac**	**47.41**	**120**	P	**P**	**08 28 31.1**	**-1.3**
DZM				IAmb	IAmb	08 28 34.4	
	comp=Z,20nm,0.9s						
DZM	**Mont Dzumac**	**47.41**	**120**	P	**P**	**08 28 33.9**	**+1.5**
DZM	**Mont Dzumac**	**47.41**	**120**	P	**P**	**08 28 32.9**	**+0.5**
PYUN	**Piuthan**	**47.65**	**309**	*e*P	**P**	**08 28 36.0**	**+1.7**
	comp=Z,414nm,0.6s						
YATNC	**Mamie plateau,**	**47.79**	**120**	P	**P**	**08 28 37.5**	**+2.3**
PCHI	**Peechi**	**47.83**	**284**	⇑*e*P	**P**	**08 28 34.6**	**-1.1**
KLR	**Kul'dur**	**49.58**	**7**	P	**P**	**08 28 47.7**	**-0.7**
	comp=Z,6.6nm,0.6s,baz=217,slow=4.6,SNR=19						
KLR				PcP	**PcP**	**08 30 07.4**	**-0.3**
	comp=Z,1.5nm,0.6s,baz=153,slow=1.5,SNR=3.7						
	comp=Z,6.6nm,0.6s						
KLR	**Kul'dur**	**49.58**	**7**	⇑*i*P	**P**	**08 28 47.6**	**-0.7**
KLR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ULN	**Ulaanbaatar**	**49.72**	**346**	P	**P**	**08 28 48.9**	**-0.8**
ULN				IAmb	IAmb	08 28 51.7	
	comp=Z,19nm,0.6s						
ULN	**Ulaanbaatar**	**49.72**	**346**	*c i*P	**P**	**08 28 49.2**	**-0.5**
ULN				pmax	pmax		
	comp=Z,16nm,0.6s						
ULN	**Ulaanbaatar**	**49.72**	**346**	P	**P**	**08 28 49.4**	**-0.3**
YSS	**Yuzh-Sakhalins**	**49.76**	**17**	P	**P**	**08 28 48.2**	**-1.6**
YSS	**Yuzh-Sakhalins**	**49.76**	**17**	P	**P**	**08 28 50.0**	**+0.2**
YSS	**Yuzh-Sakhalins**	**49.76**	**17**	⇓*i*P	**P**	**08 28 49.8**	**0.0**
YSS				pmax	pmax		
	comp=Z,61nm,1.7s						
YSS	**Yuzh-Sakhalins**	**49.76**	**17**	P	**P**	**08 28 49.3**	**-0.5**
YSS				pP	**pP**	**08 29 27.3**	**+2.2**
SONM	**Songino Array**	**49.86**	**345**	P	**P**	**08 28 50.7**	**0.0**
	comp=Z,20nm,0.7s,baz=161,slow=9.1,SNR=68						
SONM				PcP	**PcP**	**08 30 08.5**	**-0.5**
	comp=Z,5.5nm,0.6s,baz=176,slow=3.7,SNR=7.4						
	comp=Z,20nm,0.7s						
SONM	**Songino Array**	**49.86**	**345**	IAmb	IAmb	08 28 52.6	
	comp=Z,17nm,0.7s						
HEH	**HeiHe**	**50.19**	**3**	P	**P**	**08 28 52.0**	**-0.9**
HEH				PcP	**PcP**	**08 30 06.8**	**-3.1**
HEH				S	**S**	**08 36 00.0**	**+7.2**
HEH				SS	**SS**	**08 39 30.0**	**+1.6**
HEH				pmax	pmax		
	comp=Z,43nm,0.8s						
HEH				pmax	pmax		
	comp=Z,220nm,4.7s						
UGL	**Uglegorsk**	**51.49**	**16**	*e*P	**P**	**08 29 02.8**	**+0.1**
UGL				pmax	pmax		
	comp=Z,90nm,0.8s						
GRNR	**Gornyy**	**51.80**	**11**	⇓*i*P	**P**	**08 29 05.1**	**+0.1**
GRNR				pmax	pmax		
	comp=Z,30nm,0.8s						
GRNR				MLR	MLR		
	comp=N,100nm,16.0s						
GRNR				MLR	MLR		
	comp=E,120nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,140nm,17.0s						
ZAK	**Zakamensk**	**53.02**	**344**	*e*P	**P**	**08 29 13.4**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TYV	**Tymovskoe**	**53.28**	**15**	*e*P	**P**	**08 29 16.5**	**+0.7**
TYV				pmax	pmax		
	comp=Z,15nm,0.9s						
TYV				pmax	pmax		
	comp=Z,300nm,6.2s						
ZEA	**Zeya**	**53.65**	**3**	*e*P	**P**	**08 29 18.3**	**-0.2**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WMQ	**Urumqi**	**53.95**	**329**	*e*P	**P**	**08 29 21.5**	**+0.5**
WMQ				PcP	**PcP**	**08 30 25.8**	**+1.5**
WMQ				pmax	pmax		
	comp=Z,24nm,0.9s						
MOY	**Mondy**	**54.81**	**343**	*e*P	**P**	**08 29 27.1**	**0.0**
MOY				pmax	pmax		
	comp=Z,19nm,1.5s						
MSVF	**Nonsavu**	**56.63**	**111**	P	**P**	**08 29 42.2**	**+1.6**
	comp=Z,11nm,0.9s,baz=262,slow=12,SNR=4.9						
	comp=Z,11nm,0.9s						
NIL	**Nilore**	**57.61**	**311**	P	**P**	**08 29 47.4**	**+0.2**
NIL	**Nilore**	**57.61**	**311**	P	**P**	**08 29 47.4**	**+0.2**
NIL				pmax	pmax		
	comp=Z,29nm,0.7s						
NIL	**Nilore**	**57.61**	**311**	P	**P**	**08 29 46.1**	**-1.1**
NIL				pP	**pP**	**08 30 24.0**	**+0.5**
ZSN	**Zaisan**	**57.88**	**330**	*e*P	**P**	**08 29 47.3**	**-1.6**
	baz=330						
ZSN	**Zaisan**	**57.88**	**330**	*e*P	**P**	**08 29 47.2**	**-1.6**
BOD	**Bodaibo**	**58.12**	**354**	*i* P	**P**	**08 29 49.4**	**-0.8**
BOD				pmax	pmax		
	comp=Z,18nm,1.1s						
SHLS	**Shalkode**	**58.14**	**323**	*e*P	**P**	**08 29 47.8**	**-3.0**
	comp=Z,9.7nm,0.9s,baz=324						
SHLS	**Shalkode**	**58.14**	**323**	*e*P	**P**	**08 29 47.8**	**-3.0**
SHLS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DGZ	**Jazzator, Alta**	**58.25**	**333**	⇑*i*P	**P**	**08 29 51.4**	**-0.1**
DGZ				pmax	pmax		
	comp=Z,11nm,0.8s						
TARG	**Taragay, Kyrgy**	**58.35**	**321**	IAmb	IAmb	08 30 03.9	
	comp=Z,9.6nm,0.8s						
KSH	**Kashi**	**58.37**	**318**	P	**P**	**08 29 53.5**	**+0.9**
KSH				pmax	pmax		
	comp=Z,12nm,0.8s						
SATY	**Saty**	**58.72**	**323**	*e*P	**P**	**08 29 53.7**	**-1.2**
	comp=Z,11nm,0.6s,baz=323						
SATY	**Saty**	**58.72**	**323**	*e*P	**P**	**08 29 53.6**	**-1.2**
SATY				pmax	pmax		
	comp=Z,11nm,0.6s						
MK31	**Makanchi Array**	**58.77**	**328**	P	**P**	**08 29 54.7**	**-0.3**
MK31	**Makanchi Array**	**58.77**	**328**	P	**P**	**08 29 54.7**	**-0.3**
MK31				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MKAR	**Makanchi Array**	**58.77**	**328**	P	**P**	**08 29 54.8**	**-0.2**
	comp=Z,7.5nm,0.6s,baz=121,slow=8.8,SNR=120						
MKAR				PcP	**PcP**	**08 30 42.2**	**-0.8**
	comp=Z,7.8nm,0.6s,baz=123,slow=8.8,SNR=10.0						
MKAR				ScP	**ScP**	**08 34 27.3**	**-1.7**
	comp=Z,0.6nm,0.6s,baz=132,slow=4.6,SNR=4.4						
MKAR				LR	LR	08 55 05.0	
	comp=Z,57nm,21.3s,baz=120,slow=36						
	comp=Z,7.5nm,0.6s						
KPKS	**Kokpek**	**58.78**	**323**	*e*P	**P**	**08 29 54.4**	**-0.9**
	comp=Z,6.7nm,0.5s,baz=323						
KPKS	**Kokpek**	**58.78**	**323**	*e*P	**P**	**08 29 54.3**	**-0.9**
KPKS				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MAKZ	**Makanchi**	**58.94**	**328**	P	**P**	**08 29 55.4**	**-0.8**
MAKZ				IAmb	IAmb	08 29 57.2	
	comp=Z,39nm,1.6s						
MAKZ	**Makanchi**	**58.94**	**328**	P	**P**	**08 29 55.4**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,39nm,1.6s						
MAKZ	**Makanchi**	**58.94**	**328**	P	**P**	**08 29 54.6**	**-1.6**
MAKZ				pP	**pP**	**08 30 32.1**	**-0.6**
MAKZ				sP	**PcP**	**08 30 42.5**	**-1.2**
KDJ	**Kajisay**	**58.96**	**321**	IAmb	IAmb	08 29 59.7	
	comp=Z,10nm,0.8s						
TNSS	**Tian-Shan**	**59.59**	**322**	*e*P	**P**	**08 30 00.4**	**-0.9**
	baz=322						
TNSS	**Tian-Shan**	**59.59**	**322**	*e*P	**P**	**08 30 00.3**	**-0.9**
MDOK	**Medeo**	**59.60**	**322**	*e*P	**P**	**08 29 59.5**	**-1.5**
	baz=322						
MDOK	**Medeo**	**59.60**	**322**	*e*P	**P**	**08 29 59.5**	**-1.5**
JCZ	**Jackson Bay**	**59.65**	**143**	P	**P**	**08 30 02.6**	**+1.4**
CHKK	**Chushkaly**	**60.02**	**323**	*e*P	**P**	**08 30 02.2**	**-1.4**
	baz=323						
CHKK	**Chushkaly**	**60.02**	**323**	*e*P	**P**	**08 30 02.1**	**-1.5**
PEA0B	**Petropavlovsk-**	**60.17**	**23**	P	**P**	**08 30 05.0**	**+0.6**
PEA0B	**Petropavlovsk-**	**60.17**	**23**	P	**P**	**08 30 05.0**	**+0.6**
PEA0B				pmax	pmax		
	comp=Z,76nm,1.4s						
PETK	**Petropavlovsk-**	**60.17**	**23**	P	**P**	**08 30 05.2**	**+0.8**
	comp=Z,11nm,0.6s,baz=217,slow=3.8,SNR=13						
	comp=Z,11nm,0.6s						
PETK	**Petropavlovsk-**	**60.17**	**23**	P	**P**	**08 30 04.2**	**-0.2**
WHZ	**Wether Hill Ro**	**60.21**	**146**	P	**P**	**08 30 04.8**	**-0.1**
TKM2	**Tokmak 2**	**60.37**	**321**	P	**P**	**08 30 06.4**	**+0.1**
	SNR=12						
KUU	**Kurty**	**60.43**	**323**	*e*P	**P**	**08 30 05.2**	**-1.2**
	baz=323						
KUU	**Kurty**	**60.43**	**323**	*e*P	**P**	**08 30 05.2**	**-1.2**
PET	**Petropavlovsk**	**60.48**	**24**	⇑*i*P	**P**	**08 30 07.1**	**+0.6**
PET				pmax	pmax		
	comp=Z,110nm,2.5s						
LBZ	**Lake Benmore**	**60.66**	**143**	P	**P**	**08 30 09.1**	**+1.1**
LBZ				IAmb	IAmb	08 30 10.0	
	comp=Z,20nm,1.0s						
UCH	**Uchtor**	**60.70**	**320**	P	**P**	**08 30 09.4**	**+0.6**
	SNR=9.5						
RPZ	**Rata Peaks**	**60.83**	**142**	P	**P**	**08 30 09.8**	**+0.6**
	comp=Z,52nm,0.9s,baz=260,slow=1.5,SNR=26						
	comp=Z,52nm,0.9s						
RPZ	**Rata Peaks**	**60.83**	**142**	P	**P**	**08 30 09.5**	**+0.4**
AAK	**Ala-Archa**	**60.92**	**321**	P	**P**	**08 30 10.3**	**+0.3**
AAK	**Ala-Archa**	**60.92**	**321**	*c i*P	**P**	**08 30 10.2**	**+0.3**
AAK				pmax	pmax		
	comp=Z,24nm,2.5s						
AAK	**Ala-Archa**	**60.92**	**321**	P	**P**	**08 30 09.9**	**0.0**
AML	**Almayashu**	**61.18**	**320**	P	**P**	**08 30 12.3**	**+0.3**
	SNR=13						
USP	**Ospenovka**	**61.24**	**321**	P	**P**	**08 30 12.0**	**0.0**
	SNR=12						
SGDS	**Sogindy**	**61.25**	**321**	*e*P	**P**	**08 30 10.8**	**-1.3**
	baz=321						
SGDS	**Sogindy**	**61.25**	**321**	*e*P	**P**	**08 30 10.7**	**-1.3**
EKS2	**Erkin-Say**	**61.39**	**320**	P	**P**	**08 30 13.5**	**+0.4**
	SNR=5.9						
GAR	**Garm**	**62.02**	**315**	P	**P**	**08 30 16.7**	**-0.7**
YAK	**Yakutsk**	**62.06**	**3**	P	**P**	**08 30 17.0**	**+0.1**
	comp=Z,26nm,0.4s,baz=22,slow=0.2,SNR=16						
	comp=Z,26nm,0.4s						
YAK	**Yakutsk**	**62.06**	**3**	P	**P**	**08 30 16.8**	**-0.2**
YAK	**Yakutsk**	**62.06**	**3**	*e*P	**P**	**08 30 16.7**	**-0.2**
YAK				*e*		08 30 58.8	
YAK				*e*		08 32 37.0	
YAK				*e*S	**S**	**08 38 29.1**	**-0.1**
YAK				*e*SSS	SSS	08 45 14.7	
YAK				pmax	pmax		
	comp=Z,95nm,1.0s						
YAK				pmax	pmax		
	comp=N,29nm,1.4s						
YAK				pmax	pmax		
	comp=E,11nm,1.4s						
YAK				pmax	pmax		
	comp=Z,260nm,5.8s						
YAK				pmax	pmax		
	comp=N,134nm,6.2s						
YAK				pmax	pmax		
	comp=E,82nm,5.0s						
YAK				smax	smax		
	comp=E,121nm,6.2s						
YAK				smax	smax		
	comp=N,59nm,4.6s						
YAK	**Yakutsk**	**62.06**	**3**	P	**P**	**08 30 16.0**	**-1.0**
BHW	**Baring Head**	**62.13**	**138**	P	**P**	**08 30 17.7**	**-0.1**
BTK	**Batken**	**62.13**	**316**	P	**P**	**08 30 17.7**	**-0.3**
BTK	**Batken**	**62.13**	**316**	P	**P**	**08 30 17.7**	**-0.3**
BTK				pmax	pmax		
	comp=Z,13nm,1.2s						
BKZ	**Black Stump Fm**	**62.24**	**135**	IAmb	IAmb	08 30 20.7	
	comp=Z,22nm,0.6s						
URZ	**Urewera**	**62.30**	**134**	P	**P**	**08 30 18.9**	**-0.1**
	comp=Z,13nm,0.6s,baz=346,slow=6.0,SNR=9.3						
	comp=Z,13nm,0.6s						
RTZ	**Ruatahuna**	**62.36**	**135**	P	**P**	**08 30 20.4**	**+0.8**
BTLS	**Baital**	**62.43**	**323**	*e*P	**P**	**08 30 18.2**	**-1.6**
	baz=323						
BTLS	**Baital**	**62.43**	**323**	*e*P	**P**	**08 30 18.2**	**-1.6**
ZAA0	**Zalesovo Array**	**62.43**	**335**	IAmb	IAmb	08 30 20.3	
	comp=Z,8.3nm,0.7s						
ZALV	**Zalesovo Beam**	**62.43**	**335**	P	**P**	**08 30 18.5**	**-1.1**
	comp=Z,5.6nm,0.4s,baz=122,slow=5.4,SNR=16						
ZALV				PcP	**pP**	**08 30 55.7**	**-0.8**
	comp=Z,2.0nm,0.4s,baz=119,slow=5.1,SNR=4.5						
	comp=Z,5.6nm,0.4s						
PLWZ	**Palliser**	**62.46**	**138**	P	**P**	**08 30 20.1**	**0.0**
CHGR	**Chuyangaron**	**62.70**	**314**	IAmb	IAmb	08 30 22.0	
	comp=Z,32nm,1.1s						
KURK	**Kurchatov**	**63.12**	**330**	P	**P**	**08 30 23.8**	**-0.5**
KURK				IAmb	IAmb	08 30 24.5	
	comp=Z,21nm,0.7s						
KURK	**Kurchatov**	**63.12**	**330**	*c i*P	**P**	**08 30 23.4**	**-0.8**
KURK				pmax	pmax		
	comp=Z,16nm,0.6s						
KURK	**Kurchatov**	**63.12**	**330**	P	**P**	**08 30 22.8**	**-1.5**
KURK				pP	**pP**	**08 31 00.8**	**-0.3**
KURK				sP	**sP**	**08 31 18.2**	**+0.2**
MA2	**Magadan**	**63.15**	**15**	P	**P**	**08 30 25.0**	**+0.7**
	comp=Z,43nm,0.9s,baz=206,slow=5.7,SNR=19						
MA2				PcP	**pP**	**08 31 01.2**	**-0.2**
	comp=Z,6.0nm,0.6s,baz=177,slow=6.2,SNR=4.0						
	comp=Z,43nm,0.9s						
MA2	**Magadan**	**63.15**	**15**	P	**P**	**08 30 23.9**	**-0.4**
MA2	**Magadan**	**63.15**	**15**	*c i*P	**P**	**08 30 24.8**	**+0.5**
MA2				pmax	pmax		
	comp=Z,92nm,1.3s						
MA2	**Magadan**	**63.15**	**15**	P	**P**	**08 30 24.2**	**-0.1**
MA2				pP	**PcP**	**08 31 00.7**	**+0.3**
IUG	**Iuzhnay**	**63.59**	**318**	*e*P	**P**	**08 30 26.3**	**-1.4**
	comp=Z,7.9nm,0.6s,baz=318						
IUG	**Iuzhnay**	**63.59**	**318**	*e*P	**P**	**08 30 26.3**	**-1.4**
IUG				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KK31	**Karatay Array**	**63.70**	**319**	P	**P**	**08 30 27.6**	**-0.7**
KK31	**Karatay Array**	**63.70**	**319**	P	**P**	**08 30 27.6**	**-0.7**
KK31				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KKAR	**Karatay Array**	**63.70**	**319**	P	**P**	**08 30 27.4**	**-0.9**
KKAR	**Karatay Array**	**63.70**	**319**	IAmb	IAmb	08 30 28.7	
	comp=Z,7.3nm,1.0s						
KKAR	**Karatay Array**	**63.70**	**319**	P	**P**	**08 30 27.4**	**-0.9**
BRZS	**Berezniki**	**65.82**	**327**	*e*P	**P**	**08 30 40.0**	**-1.8**
	baz=327						
BRZS	**Berezniki**	**65.82**	**327**	*e*P	**P**	**08 30 40.0**	**-1.8**
SEY	**Seymchan**	**66.43**	**14**	P	**P**	**08 30 45.9**	**+0.5**
	comp=Z,20nm,1.0s,baz=217,slow=4.6,SNR=23						
	comp=Z,20nm,1.0s						
SEY	**Seymchan**	**66.43**	**14**	⇑*e*P	**P**	**08 30 46.1**	**+0.7**
SEY				pmax	pmax		
	comp=Z,50nm,1.7s						
BRVK	**Borovoye**	**68.71**	**329**	P	**P**	**08 30 58.9**	**-1.0**
BRVK	**Borovoye**	**68.71**	**329**	P	**P**	**08 30 58.9**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRVK	**Borovoye**	**68.71**	**329**	P	**P**	**08 30 57.4**	**-2.5**
BRVK				pP	**pP**	**08 31 37.0**	**-0.4**
SOHO	**SOHO**	**68.87**	**296**	*i* P	**P**	**08 30 59.0**	**-2.5**
	SNR=14						
MDH	**Madha**	**69.28**	**297**	P	**P**	**08 31 02.2**	**-1.8**
UOSS	**Minazif**	**69.31**	**297**	P	**P**	**08 31 03.6**	**-0.7**
UOSS	**Minazif**	**69.31**	**297**	P	**P**	**08 31 03.3**	**-0.9**
UOSS	**Minazif**	**69.31**	**297**	P	**P**	**08 31 02.7**	**-1.5**
UOSS				pP	**pwP**	**08 31 42.3**	**-1.0**
HATD	**Hatta, Dubai**	**69.35**	**296**	*i* P	**P**	**08 31 04.3**	**-0.2**
	SNR=8.0						
ASHO	**Ashiyiah**	**69.39**	**296**	*i* P	**P**	**08 31 04.6**	**-0.2**
	SNR=18						
BANOM	**Banah**	**69.39**	**298**	*i* P	**P**	**08 31 04.8**	**0.0**
	SNR=7.6						
SHME	**Shamm**	**69.56**	**298**	*i* P	**P**	**08 31 05.7**	**0.0**
	SNR=7.4						
ALNE	**Al Ain**	**69.56**	**296**	P	**P**	**08 31 06.0**	**+0.1**
ASUD	**Al Ashush, Dub**	**70.04**	**296**	*i* P	**P**	**08 31 07.6**	**-1.1**
	SNR=8.6						
AJN	**Ajban**	**70.33**	**296**	*i* P	**P**	**08 31 10.0**	**-0.5**
	SNR=6.2						
TIXI	**Tiksi**	**71.62**	**2**	P	**P**	**08 31 16.4**	**-0.8**
TIXI				IAmb	IAmb	08 31 17.1	
	comp=Z,34nm,0.9s						
TIXI	**Tiksi**	**71.62**	**2**	*ce*P	**P**	**08 31 16.1**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,46nm,1.0s						
TIXI	**Tiksi**	**71.62**	**2**	P	**P**	**08 31 14.8**	**-2.5**
KIWB	**Kanaga Island**	**71.68**	**34**	P	**P**	**08 31 16.4**	**-1.7**
ADK	**Adak**	**71.95**	**34**	P	**P**	**08 31 18.8**	**-0.8**
ADK	**Adak**	**71.95**	**34**	P	**P**	**08 31 18.8**	**-0.8**
ADK				pmax	pmax		
	comp=Z,172nm,1.9s						
NRIK	**Noril'sk**	**73.26**	**347**	P	**P**	**08 31 26.3**	**-0.7**
	comp=Z,14nm,0.7s,baz=135,slow=6.4,SNR=22						
	comp=Z,14nm,0.7s						
NRIK	**Noril'sk**	**73.26**	**347**	IAmb	IAmb	08 31 27.3	
	comp=Z,14nm,0.8s						
NRIK	**Noril'sk**	**73.26**	**347**	*c i*P	**P**	**08 31 26.2**	**-0.8**
NRIK				pmax	pmax		
	comp=Z,14nm,0.7s						
BILL	**Bilibino**	**74.02**	**15**	P	**P**	**08 31 30.9**	**-0.6**
BILL	**Bilibino**	**74.02**	**15**	⇑*i*P	**P**	**08 31 31.5**	**0.0**
BILL				*e*		08 34 20.9	
BILL				pmax	pmax		
	comp=Z,11nm,1.3s						
SVE	**Sverdlovsk**	**75.37**	**330**	*e*P	**P**	**08 31 38.7**	**-0.8**
SVE				pmax	pmax		
	comp=Z,19nm,0.8s						
ARU	**Arti**	**76.28**	**329**	P	**P**	**08 31 43.1**	**-1.6**
ARU				IAmb	IAmb	08 31 43.9	
	comp=Z,14nm,0.7s						
ARU	**Arti**	**76.28**	**329**	*c i*P	**P**	**08 31 43.0**	**-1.7**
ARU				pmax	pmax		
	comp=Z,22nm,1.7s						
NIKH	**Nikolski High**	**76.82**	**35**	P	**P**	**08 31 47.6**	**-0.1**
	baz=252						
ABPO	**Ambohimpanom**	**76.83**	**251**	P	**P**	**08 31 49.3**	**+0.5**
ABPO				IAmb	IAmb	08 32 46.1	
	comp=Z,54nm,2.0s						
ABPO	**Ambohimpanom**	**76.83**	**251**	P	**P**	**08 31 49.3**	**+0.5**
ABPO				pmax	pmax		
	comp=Z,54nm,2.0s						
SPIA	**Saint Paul Isl**	**77.43**	**31**	P	**P**	**08 31 51.5**	**+0.4**
	baz=250						
VOI	**Vohitsoka**	**77.48**	**248**	P	**P**	**08 31 51.7**	**-0.6**
VOI				IAmb	IAmb	08 31 56.2	
	comp=Z,16nm,0.7s						
VOI	**Vohitsoka**	**77.48**	**248**	P	**P**	**08 31 55.8**	**+3.5**
UNV	**Unalaska Valle**	**78.42**	**35**	IAmb	IAmb	08 31 57.5	
	comp=Z,28nm,1.0s						
UNV	**Unalaska Valle**	**78.42**	**35**	P	**P**	**08 31 56.8**	**+0.2**
	baz=254						
RAYN	**Ar Rayn**	**78.81**	**294**	P	**P**	**08 31 57.9**	**-1.5**
RAYN	**Ar Rayn**	**78.81**	**294**	P	**P**	**08 31 57.9**	**-1.5**
RAYN				pmax	pmax		
	comp=Z,19nm,1.0s						
RAYN	**Ar Rayn**	**78.81**	**294**	*i* P	**P**	**08 31 58.0**	**-1.5**
	SNR=14						
MAW	**Mawson**	**79.10**	**200**	P	**P**	**08 32 00.6**	**+0.6**
	comp=Z,12nm,0.9s,baz=70,slow=8.2,SNR=6.6						
	comp=Z,12nm,0.9s						
MAW	**Mawson**	**79.10**	**200**	P	**P**	**08 32 01.0**	**+1.0**
MAW	**Mawson**	**79.10**	**200**	P	**P**	**08 32 01.0**	**+1.0**
MAW				pmax	pmax		
	comp=Z,12nm,1.7s						
AKT	**Akhty**	**79.20**	**312**	*e*P	**P**	**08 32 00.9**	**-0.5**
AKT				*e*		08 32 08.6	
AKT				pmax	pmax		
	comp=Z,20nm,1.2s						
VNDA	**Vanda**	**80.21**	**172**	P	**P**	**08 32 06.2**	**+0.3**
	comp=Z,7.5nm,0.8s,baz=312,slow=6.3,SNR=24						
	comp=Z,7.5nm,0.8s						
VNDA	**Vanda**	**80.21**	**172**	P	**P**	**08 32 06.4**	**+0.5**
VNDA	**Vanda**	**80.21**	**172**	P	**P**	**08 32 06.4**	**+0.5**
VNDA				pmax	pmax		
	comp=Z,11nm,0.9s						
FALS	**False Pass**	**80.42**	**34**	P	**P**	**08 32 07.5**	**+0.1**
	baz=256						
GNI	**Garni**	**81.25**	**311**	⇑*e*P	**P**	**08 32 11.9**	**-0.5**
GNI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BELG	**Belogornoye**	**81.28**	**323**	⇑*i*P	**P**	**08 32 10.5**	**-1.5**
BELG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TNA	**Tin City**	**81.34**	**23**	P	**P**	**08 32 12.6**	**+0.5**
	baz=250,SNR=8.9						
S12K	**Black Hills**	**81.38**	**34**	P	**P**	**08 32 12.2**	**-0.3**
	baz=257						
KIRV	**Kirov**	**81.64**	**329**	*ce*P	**P**	**08 32 12.2**	**-1.5**
ANM	**Nome**	**82.05**	**24**	P	**P**	**08 32 16.8**	**+0.9**
	baz=253,SNR=19						
SDPT	**Sand Point**	**82.18**	**34**	P	**P**	**08 32 16.5**	**-0.1**
	baz=258						
GEVA	**Gevas**	**82.33**	**309**	IAmb	IAmb	08 32 19.6	
	comp=Z,22nm,0.8s						
KBZ	**Khabaz**	**83.05**	**314**	P	**P**	**08 32 20.7**	**-0.8**
	comp=Z,4.9nm,0.9s,baz=253,slow=2.0,SNR=6.9						
	comp=Z,4.9nm,0.9s						
KBZ	**Khabaz**	**83.05**	**314**	⇓*e*P	**P**	**08 32 20.6**	**-0.8**
KBZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KIV	**Kislovodsk**	**83.23**	**314**	*e*P	**P**	**08 32 20.9**	**-1.6**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CHGN	**Chignik**	**83.50**	**33**	P	**P**	**08 32 23.4**	**0.0**
	baz=260						
RDOG	**Red Dog Mine**	**83.98**	**21**	P	**P**	**08 32 27.0**	**+1.3**
	baz=255,SNR=21						
N16K	**Nishlik Lake**	**84.06**	**29**	P	**P**	**08 32 28.0**	**+1.7**
	baz=259						
R16K	**Pilot Point**	**84.17**	**32**	P	**P**	**08 32 26.9**	**+0.1**
	baz=261						
P16K	**Nushagak River**	**84.19**	**31**	P	**P**	**08 32 27.6**	**+0.7**
	baz=260,SNR=18						
O16K	**Kokwok River B**	**84.23**	**30**	P	**P**	**08 32 28.1**	**+0.9**
	baz=260						
O17K	**Koliganek Bris**	**84.76**	**30**	P	**P**	**08 32 30.4**	**+0.6**
	baz=261,SNR=8.9						
R17K	**Ugashik Creek**	**84.81**	**32**	P	**P**	**08 32 30.0**	**-0.1**
	baz=262						
Q16K	**King Salmon**	**84.82**	**31**	P	**P**	**08 32 29.8**	**-0.2**
	baz=261						
P17K	**Kvichak River**	**85.00**	**31**	P	**P**	**08 32 30.9**	**-0.1**
	baz=262						
Q17K	**Contact Creek**	**85.16**	**32**	P	**P**	**08 32 31.3**	**-0.7**
	baz=262,SNR=13						
P18K	**Big Mountain,**	**85.65**	**30**	P	**P**	**08 32 33.8**	**-0.4**
	baz=263						
GCSA	**Galena City Sc**	**85.65**	**25**	P	**P**	**08 32 34.5**	**+0.4**
	baz=261,SNR=19						

Q18K	Katmai Hardscr	85.67	31	P	P	08 32 33.5	-1.0
	baz=263						
O18K	Koktuh Hills	85.72	30	P	P	08 32 34.7	+0.2
	baz=263						
TTA	Tatalina	85.75	27	P	P	08 32 35.0	+0.2
TTA	Tatalina	85.75	27	P	P	08 32 35.0	+0.2
TTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TTA	Tatalina	85.75	27	P	P	08 32 35.6	+0.8
	baz=262,SNR=7.2						
KMBO	Kilima Mbogo	86.05	269	P	P	08 32 37.2	-0.3
KMBO	Kilima Mbogo	86.05	269	P	P	08 32 37.2	-0.3
KMBO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
L19K	White Mountain	86.18	28	IAmb	IAmb	08 32 39.0	
	comp=Z,24nm,1.5s						
L19K	White Mountain	86.18	28	P	P	08 32 36.9	+0.1
	baz=263,SNR=7.4						
N19K	Bonanza Creek	86.19	29	IAmb	IAmb	08 32 38.5	
	comp=Z,14nm,0.9s						
N19K	Bonanza Creek	86.19	29	P	P	08 32 37.3	+0.3
	baz=263						
O19K	Port Alsworth	86.20	30	P	P	08 32 37.3	+0.5
	baz=263						
M19K	Big River Lodg	86.37	28	P	P	08 32 38.5	+0.7
M19K	Big River Lodg	86.37	28	P	P	08 32 38.4	+0.7
	baz=263						
OHAK	Old Harbor	86.42	33	P	P	08 32 39.1	+1.1
	baz=264						
L20K	Farewell, AK	86.67	27	P	P	08 32 39.9	+0.7
	baz=264						
K20K	Telida	86.68	27	P	P	08 32 39.8	+0.6
	baz=263,SNR=6.3						
A21K	Barrow	86.82	19	P	P	08 32 41.0	+1.3
	baz=260,SNR=6.0						
KDAK	Kodiak Island	86.85	32	P	P	08 32 40.1	0.0
	comp=Z,12nm,0.7s,baz=246,slow=5.9,SNR=9.6						
	comp=Z,12nm,0.7s						
KDAK	Kodiak Island	86.85	32	P	P	08 32 40.7	+0.6
	baz=265						
GAZ	Gaziantep	86.87	307	IAmb	IAmb	08 32 41.9	
	comp=Z,33nm,1.4s						
KLMR	Klimovskoe	86.96	331	epP	pP	08 33 19.8	+0.3
KLMR	Klimovskoe	86.96	331	eP	P	08 32 37.6	-2.9
KLMR				e*PP	pP	08 33 19.7	+0.3
KLMR				pmax	pmax		
	comp=Z,18nm,0.5s						
KLMR	Klimovskoe	86.96	331	eP	P	08 32 37.6	-2.9
KLMR	Klimovskoe	86.96	331	AMP		08 32 40.2	
	comp=Z,18nm,0.5s						
M20K	Styx River	86.96	28	P	P	08 32 41.2	+0.6
	baz=264						
ANN	Anapa	87.06	315	eP	P	08 32 37.1	-4.3
ANN				e*PP	pP	08 33 17.9	-2.1
ANN				ePPP	PPP	08 37 58.4	
ANN				eS	SKSac	08 42 47.6	-6.5
ANN				eSS	SS	08 48 46.2	-7.9
ANN				pmax	pmax		
	comp=Z,96nm,1.6s						
IMAR	Indian Mountai	87.12	24	P	P	08 32 41.7	+0.4
G21K	Allakaket	87.28	23	P	P	08 32 42.7	+0.7
	baz=264						
SPCR	Spurr Chakacha	87.33	29	P	P	08 32 42.6	+0.1
	baz=265						
F21K	Alatna River	87.36	23	P	P	08 32 42.6	+0.2
	baz=264						
H21K	Melozitna Rive	87.47	24	IAmb	IAmb	08 32 44.5	
	comp=Z,24nm,1.4s						
H21K	Melozitna Rive	87.47	24	P	P	08 32 43.4	+0.4
	baz=264						
PPLA	Purkeypile	87.49	27	P	P	08 32 43.4	+0.2
	baz=265						
CHUM	Lake Minchumin	87.52	26	P	P	08 32 43.6	+0.5
	baz=265,SNR=5.9						
CAST	Castle Rocks	87.58	27	P	P	08 32 43.4	-0.1
	baz=265,SNR=7.1						
SKT	Skwentna	87.72	28	IAmb	IAmb	08 32 43.9	
	comp=Z,18nm,1.4s						
SKT	Skwentna	87.72	28	P	P	08 32 43.7	-0.5
	baz=266						
I21K	Tanana	87.77	25	P	P	08 32 44.6	+0.2
	baz=265						
F22K	John River	87.89	23	P	P	08 32 45.9	+1.0
	baz=265						
BRSE	Bradley Lake S	87.95	30	P	P	08 32 45.6	+0.2
	baz=266						
SUA	Susitna One	88.06	29	IAmb	IAmb	08 32 46.0	
	comp=Z,9.1nm,0.8s						
SUA	Susitna One	88.06	29	P	P	08 32 45.9	-0.1
	baz=266						
E22K	Anaktuvuk Pass	88.08	22	P	P	08 32 46.0	+0.2
	baz=265						
BPAW	Bear Paw Mtn.	88.12	26	P	P	08 32 46.2	+0.1
BPAW	Bear Paw Mtn.	88.12	26	P	P	08 32 45.8	-0.2
	baz=266,SNR=6.7						
OBN	Obninsk	88.12	325⇓	eP	P	08 32 44.9	-1.3
OBN				eS	SKSac	08 42 49.3	-11
OBN				pmax	pmax		
	comp=Z,11nm,0.5s						
MLY	Manley	88.29	25	IAmb	IAmb	08 32 48.5	
	comp=Z,11nm,1.1s						
MLY	Manley	88.29	25	P	P	08 32 46.7	-0.2
	baz=266,SNR=15						
CUT	Chulitna	88.34	28	P	P	08 32 46.7	-0.3
	baz=267						
TRF	Thorofare Moun	88.39	27	P	P	08 32 47.1	-0.5
	baz=267						
RC01	Rabbit Creek A	88.52	29	P	P	08 32 47.8	-0.2
	baz=267						
D23K	Nanushuk River	88.56	21	P	P	08 32 48.2	+0.1
	baz=266						
COLD	Coldfoot	88.64	23	IAmb	IAmb	08 32 50.0	
	comp=Z,8.6nm,0.8s						
COLD	Coldfoot	88.64	23	P	P	08 32 48.8	+0.4
	baz=267						
G23K	Bananza Creek	88.68	23	P	P	08 32 49.1	+0.5
	baz=267						
H23K	Yukon River	88.83	24	IAmb	IAmb	08 32 50.8	
	comp=Z,11nm,0.8s						
H23K	Yukon River	88.83	24	P	P	08 32 50.1	+0.7
	baz=267						
PMR	Palmer	88.84	29	P	P	08 32 49.4	0.0
	baz=268						
I23K	Minto, Yukon-K	88.88	25	P	P	08 32 49.7	+0.1
	baz=268,SNR=14						
E23K	Chandalar	88.90	22	P	P	08 32 50.2	+0.4
	baz=267						
NEA2	Nenana	88.98	26	IAmb	IAmb	08 32 51.8	
	comp=Z,27nm,1.6s						
NEA2	Nenana	88.98	26	P	P	08 32 49.3	-0.8
	baz=268,SNR=5.4						
MCK	McKinley	89.00	26	IAmb	IAmb	08 32 50.4	
	comp=Z,10nm,0.8s						
MCK	McKinley	89.00	26	P	P	08 32 49.3	-1.0
	baz=268,SNR=6.3						
KNK	Knik Glacier	89.15	29	IAmb	IAmb	08 32 51.8	
	comp=Z,16nm,1.0s						
KNK	Knik Glacier	89.15	29	P	P	08 32 51.1	+0.1
	baz=268						
SML	Sawmill	89.22	28	P	P	08 32 51.0	-0.4
	baz=268						
C24K	Franklin Bluff	89.30	20	P	P	08 32 51.6	+0.2
	baz=268						
E24K	Your Creek	89.33	22	P	P	08 32 52.0	+0.2
	baz=268						
WRH	Wood River Hil	89.40	26	IAmb	IAmb	08 32 52.1	
	comp=Z,29nm,1.6s						
COLA	College	89.51	25⇑	eP	P	08 32 55.4	+2.9
COLA				pmax	pmax		
	comp=Z,11nm,1.9s						
M23K	Glacier View	89.51	28	P	P	08 32 52.2	-0.5
	baz=269						
H24K	Noodor Dome	89.51	24	IAmb	IAmb	08 32 55.1	
	comp=Z,21nm,1.5s						
H24K	Noodor Dome	89.51	24	P	P	08 32 52.7	+0.1
	baz=269						
F24K	Squaw Lake	89.54	23	P	P	08 32 52.7	0.0
	baz=269						
P23K	Montague Islan	89.65	30	P	P	08 32 53.5	+0.2
	baz=269						
G24K	Hadweenzic Riv	89.69	23	P	P	08 32 53.5	+0.1
	baz=269						
SCM	Sheep Creek Mo	89.70	28	P	P	08 32 53.5	-0.1
	baz=269						
BRTR	Keskin Array B	89.73	310	P	P	08 32 52.6	-1.7
	comp=Z,1.9nm,0.9s,baz=133,slow=5.2,SNR=4.6						
	comp=Z,1.9nm,0.9s						
HDA	Harding Lake	89.89	26	P	P	08 32 53.1	-1.3
	baz=270						
IL31		89.92	25	P	P	08 32 53.6	-0.8
IL31				IAmb	IAmb	08 35 44.3	
	comp=Z,15nm,1.6s						
ILAR	Eielson Array	89.92	25	P	P	08 32 52.9	-1.6
	comp=Z,1.8nm,0.5s,baz=243,slow=5.3,SNR=36						
ILAR				PKKPbc	PKKPdf	08 50 25.4	+1.9
	comp=Z,0.8nm,0.7s,baz=112,slow=2.0,SNR=10						
	comp=Z,1.8nm,0.5s						
QSPA	South Pole Qui	89.94	180	P	P	08 32 54.3	-0.4
	comp=Z,7.0nm,0.8s,baz=155,slow=1.5,SNR=41						
	comp=Z,7.0nm,0.8s						
QSPA	South Pole Qui	89.94	180	P	P	08 32 55.4	+0.8
QSPA				IAmb	IAmb	08 32 56.2	
	comp=Z,19nm,1.4s						
D25K	Kavik River	90.11	21	P	P	08 32 55.6	+0.3
	baz=270						
G25K	Bearman Lake	90.24	23	P	P	08 32 56.6	+0.8
	baz=270						
M24K	Tolsona, Glenn	90.25	28	P	P	08 32 56.5	+0.4
	baz=270						
KLU	Klutina	90.37	29	P	P	08 32 56.7	0.0
	baz=271						
F25K	Christian Rive	90.40	23	P	P	08 32 57.2	+0.4
	baz=271						
K24K	Donnelly Dome	90.41	26	P	P	08 32 56.7	-0.1
	baz=271						
E25K	Arctic Village	90.42	22	P	P	08 32 57.4	+0.6
	baz=271						
EYAK	Cordova Ski Ar	90.47	30	P	P	08 32 57.2	+0.1
	baz=271						
PRP	Porcupine Dome	90.49	25	P	P	08 32 57.3	0.0
	baz=271						
PAX	Paxson	90.56	27	IAmb	IAmb	08 33 00.3	
	comp=Z,21nm,1.4s						
PAX	Paxson	90.56	27	P	P	08 32 57.7	+0.1
	baz=271						
FYU	Fort Yukon	90.59	24	IAmb	IAmb	08 32 59.4	
	comp=Z,38nm,1.7s						
C26K	Camden Bay	90.62	20	P	P	08 32 58.6	+1.0
	baz=272						
HARP	HAARP	90.72	28	P	P	08 32 58.6	+0.3
	baz=271						
BMAR	Burnt Mountain	90.82	23	P	P	08 32 59.6	+1.0
RIDG	Independent Ri	90.82	26	P	P	08 32 58.5	-0.3
RIDG	Independent Ri	90.82	26	P	P	08 32 58.0	-0.7
	baz=272						
F26K	Sheenjek River	90.97	22	P	P	08 32 59.9	+0.5
	baz=272						
N25K	Chitina, Valde	91.00	29	P	P	08 33 00.2	+0.5
N25K				IAmb	IAmb	08 33 01.1	
	comp=Z,14nm,1.0s						
N25K	Chitina, Valde	91.00	29	P	P	08 32 59.7	0.0
	baz=272						
C27K	Jago River	91.05	20	P	P	08 33 00.1	+0.5
	baz=273						
G26K	Porcupine Rive	91.15	23	P	P	08 33 00.8	+0.7
	baz=273						
SCRK	Sand Creek	91.20	26	IAmb	IAmb	08 33 01.7	
	comp=Z,20nm,1.8s						
SCRK	Sand Creek	91.20	26	P	P	08 33 00.9	+0.3
	baz=272						
MENT	Mentasta	91.36	27	IAmb	IAmb	08 33 09.1	
	comp=Z,17nm,1.5s						
GLB	Gilahina Butte	91.39	29	IAmb	IAmb	08 33 02.6	
	comp=Z,32nm,1.4s						
I26K	Coal Creek Min	91.49	25	IAmb	IAmb	08 33 03.4	
	comp=Z,12nm,1.0s						
I26K	Coal Creek Min	91.49	25	P	P	08 33 01.6	-0.2
	baz=273						
L26K	Log Cabin Wild	91.53	27	P	P	08 33 02.2	+0.2
	baz=273						
M26K	Nabesna, AK	91.72	28	P	P	08 33 03.3	+0.3
	baz=273						
MCARA	McCarthy VSAT	91.77	29	P	P	08 33 03.6	+0.5
	baz=273						
E27K	Coleen River	91.90	22	P	P	08 33 03.6	0.0
	baz=275						
G27K	Doyon Strip	92.00	23	P	P	08 33 04.7	+0.6
	baz=275						
K27K	Chicken	92.03	26	IAmb	IAmb	08 33 06.7	
	comp=Z,15nm,1.1s						
K27K	Chicken	92.03	26	P	P	08 33 04.5	+0.2
	baz=274						
H27K	Steamboat Moun	92.09	24	P	P	08 33 05.3	+0.7
	baz=275						
I27K	Kandik River	92.11	24	P	P	08 33 05.6	+0.9
	baz=274						
L27K	Beaver Creek,	92.22	27	IAmb	IAmb	08 33 07.1	
	comp=Z,32nm,1.6s						
L27K	Beaver Creek,	92.22	27	P	P	08 33 05.8	+0.6
	baz=274						
BCAR	Beaver Creek A	92.23	27	P	P	08 33 05.9	+0.6
M27K	Edge Creek, AK	92.25	28	P	P	08 33 05.3	-0.2
	baz=274						
EGAK	Eagle	92.37	25	IAmb	IAmb	08 33 06.9	
	comp=Z,9.1nm,1.2s						
EGAK	Eagle	92.37	25	P	P	08 33 06.2	+0.4
	baz=275,SNR=5.8						
AKASG	Malin Array Be	92.59	321	P	P	08 33 05.0	-2.1
	comp=Z,1.6nm,0.5s,baz=64,slow=4.4,SNR=14						
	comp=Z,1.6nm,0.5s						
AKASG	Malin Array Be	92.59	321	i P	P	08 33 04.6	-2.5
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKBB	Malin Array Si	92.59	321⇓	eP	P	08 33 05.0	-2.1
AKBB				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BVCY	Beaver Creek	92.71	28	P	P	08 33 07.9	+0.3
	baz=275						
ARCES	ARCESS Array B	92.73	340	P	P	08 33 05.6	-1.8
	comp=Z,5.6nm,0.8s,baz=31,slow=2.8,SNR=10						
	comp=Z,5.6nm,0.8s						
YUK3	Moose Creek	92.96	28	P	P	08 33 09.5	+0.6
	baz=275						
MNK	Minsk	93.15	324	i LRM	MLR	09 16 25.7	
	comp=N,490nm,18.1s						
MNK	Minsk	93.15	324	i P	P	08 33 06.3	-3.3
MNK				i *PP	pP	08 33 46.3	-2.2
MNK				i		08 36 51.2	
MNK				i PPP	PPP	08 38 52.0	
MNK				i S	SKSac	08 43 24.6	-4.4
MNK				i SS	SS	08 50 17.2	-4.4
MNK				i SSS	SSS	08 53 59.0	
MNK				pmax	pmax		
	comp=Z,22nm,0.9s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,16nm,0.8s						
MNK				MLR	MLR		
	comp=Z,63nm,11.0s						
MNK				MLR	MLR		
	comp=E,85nm,15.0s						
MNK				MLR	MLR		
	comp=N,490nm,18.0s						
MNK	Minsk	93.15	324	i P	P	08 33 06.3	-3.3
	comp=E,3.0nm,0.9s						
MNK	Minsk	93.15	324	i P	P	08 33 06.3	-3.3
	comp=N,16nm,0.8s						
MNK	Minsk	93.15	324	i P	P	08 33 06.3	-3.3
	comp=Z,22nm,0.9s,baz=86						
MNK	Minsk	93.15	324	i pP	pP	08 33 46.4	-2.2
MNK	Minsk	93.15	324	i PP	PP	08 36 51.2	-3.7
MNK	Minsk	93.15	324	i PPP	PPP	08 38 52.1	
MNK	Minsk	93.15	324	i S	SKSac	08 43 24.7	-4.4
MNK	Minsk	93.15	324	i SS	SS	08 50 17.2	-4.3
MNK	Minsk	93.15	324	i SSS	SSS	08 53 59.0	
MNK	Minsk	93.15	324	i LRM	MLR	09 15 53.9	
	comp=Z,63nm,11.2s						
MNK	Minsk	93.15	324	i LRM	MLR	09 15 58.2	
	comp=E,85nm,15.5s						
O28M	Mount Upton	93.19	29	P	P	08 33 10.5	+0.4
	baz=276						
DAWY	Dawson	93.21	26	P	P	08 33 10.3	+0.5
DAWY				IAmb	IAmb	08 33 11.7	
	comp=Z,17nm,1.2s						
DAWY	Dawson	93.21	26	P	P	08 33 10.1	+0.3
	baz=276,SNR=11						
PINM	Pinnacle	93.22	30	P	P	08 33 10.6	+0.7
	baz=276						
YUK8	Steele Glacier	93.34	29	P	P	08 33 11.1	+0.3
	baz=276						
SPITS	Spitsbergen Ar	93.44	349	P	P	08 33 09.5	-1.0
SPITS				pmax	pmax		
	comp=Z,41nm,0.8s						
VSU	Vasula	93.44	328⇓	eP	P	08 33 08.2	-2.6
VSU				pmax	pmax		
	comp=Z,46nm,1.0s						
FINES	FINESS Array B	93.46	331	P	P	08 33 08.5	-2.4
	comp=Z,1.6nm,0.6s,baz=62,slow=4.5,SNR=12						
I29M	Ogilvie Camp,	93.51	25	IAmb	IAmb	08 33 12.2	
	comp=Z,17nm,1.0s						
I29M	Ogilvie Camp,	93.51	25	P	P	08 33 11.3	+0.2
	baz=278,SNR=16						
J29M	Klondike Camp	93.67	25	IAmb	IAmb	08 33 13.7	
	comp=Z,12nm,0.8s						
J29M	Klondike Camp	93.67	25	P	P	08 33 12.6	+0.6
	baz=278,SNR=6.1						
PNL	Peninsula	93.70	30	P	P	08 33 12.5	+0.5
	baz=276						
NACGM	Naroch	93.75	325	eP	P	08 33 11.5	-0.9
	comp=Z,18nm,0.8s,baz=85						
M29M	Somme Creek	93.82	27	P	P	08 33 13.8	+1.1
	baz=277						
YUK4	Talbot Arm	93.87	29	P	P	08 33 13.7	+0.7
	baz=277						
L29M	L29M	93.89	27	P	P	08 33 13.8	+0.9
	baz=278						
EPYK	Eagle Plains	94.00	23	P	P	08 33 13.6	+0.3
	baz=279						
O29M	Mount Kennedy	94.03	30	P	P	08 33 14.5	+0.8
	baz=277						
K29M	Barlow Dome	94.05	26	P	P	08 33 14.4	+0.7
	baz=278						
YUK6	Outpost Mounta	94.06	29	P	P	08 33 14.7	+0.7
	baz=277						
G30M	tAoh Zraii Nji	94.10	23	P	P	08 33 13.1	-0.7
	baz=280						
HYT	Haines Junctio	94.49	29	P	P	08 33 16.5	+0.7
	baz=278,SNR=5.9						
M30M	Minto, Yukon	94.57	27	P	P	08 33 17.1	+1.0
	baz=279,SNR=9.3						
N30M	Aishikik Lake	94.60	28	P	P	08 33 17.1	+0.9
	baz=278						
MAYO	Mayo, Yukon	94.81	26	P	P	08 33 17.5	+0.4
	baz=280,SNR=6.0						
P30M	Million Dollar	94.86	30	P	P	08 33 17.8	+0.4
	baz=278						
INK	Inuvik	94.86	21	P	P	08 33 16.4	-0.8
	comp=Z,3.6nm,0.7s,baz=302,slow=3.5,SNR=26						
INK				PKiKP	PKiKP	08 37 58.6	+0.4
	comp=Z,0.9nm,0.8s,baz=273,slow=1.6,SNR=6.2						
	comp=Z,3.6nm,0.7s						
INK	Inuvik	94.86	21	IAmb	IAmb	08 33 17.6	
	comp=Z,16nm,1.4s						
INK	Inuvik	94.86	21	P	P	08 33 16.7	-0.4
	baz=282,SNR=7.1						
LSZ	Lusaka	94.93	255	P	P	08 33 18.1	-0.7
LSZ	Lusaka	94.93	255	P	P	08 33 18.1	-0.7
LSZ				pmax	pmax		
	comp=Z,30nm,0.8s						
F31M	Tsiigehtchic	94.96	22	P	P	08 33 17.1	-0.5
	baz=282,SNR=11						
O30N	Mendenhall	95.18	29	P	P	08 33 19.1	+0.2
	baz=279						
N31M	Braeburn, Yuko	95.22	28	P	P	08 33 19.3	+0.3
	baz=280,SNR=7.8						
PLBC	Pleasant Camp	95.26	30	P	P	08 33 19.7	+0.6
	baz=279						
BURAR	Bucovina Array	95.45	318	P	P	08 33 18.9	-1.6
BURAR				IAmb	IAmb	08 33 21.1	
	comp=Z,6.4nm,0.9s						
M31M	Drury Creek, Y	95.73	27	P	P	08 33 21.4	+0.1
	baz=281,SNR=5.8						
SKAG	Skagway	95.78	30	P	P	08 33 22.2	+0.7
	baz=280,SNR=6.0						
FARO	Faro, Yukon	96.21	27	P	P	08 33 24.0	+0.5
	baz=282,SNR=18						
R32K	Eaglecrest	96.40	31	P	P	08 33 24.5	+0.1
	baz=280						
A36M	Sachs Harbour	96.53	17	P	P	08 33 24.2	-0.5
	baz=290						
N32M	Quiet Lake	96.56	28	P	P	08 33 25.5	+0.3
	baz=282						
P32M	Atlin	96.56	30	P	P	08 33 25.4	+0.2
	baz=281						
P33M	Teslin, Yukon	96.88	29	IAmb	IAmb	08 33 28.0	
	comp=Z,8.1nm,0.9s						
P33M	Teslin, Yukon	96.88	29	P	P	08 33 26.9	+0.3
	baz=282,SNR=5.1						
MMPY	Sheldon Lake,	97.07	27	P	Pdif	08 33 27.9	+0.5
	baz=284,SNR=8.7						
Q32M	Nakina River	97.42	30	P	P	08 33 29.1	-0.2
	baz=282						
C36M	Paulatuk	97.84	19	P	Pdif	08 33 30.8	+0.1
	baz=291						
DLBC	Dease Lake	98.68	31	P	Pdif	08 33 35.4	+0.7
	comp=Z,1.7nm,0.7s,baz=297,slow=6.0,SNR=6.6						
	comp=Z,1.7nm,0.7s						
WTLY	Watson Lake, Y	98.86	29	P	Pdif	08 33 36.0	+0.5
	baz=286						
LIRD	Liard River Hi	100.37	29	P	Pdif	08 33 42.6	+0.4
	baz=288						
DAG	Danmarks Havn	100.45	352	i P	Pdif	08 33 40.0	-2.1
NB2	NORSAR Subarra	100.54	333	P	Pdif	08 33 40.2	-2.7
	comp=Z,1.6nm,0.7s,baz=73,slow=4.6						
NOA	NORSAR Array B	100.54	333	P	Pdif	08 33 40.6	-2.3
	comp=Z,0.9nm,0.7s,baz=73,slow=4.6,SNR=4.5						
RES	Resolute Bay	102.05	10	P	Pdif	08 33 48.6	-0.7
	comp=Z,1.4nm,0.9s,baz=298,slow=4.6,SNR=5.7						
YKA	Yellowknife Ar	104.28	24	Pdiff	Pdif	08 33 59.7	+0.3
	comp=Z,0.4nm,0.8s,baz=296,slow=4.5,SNR=8.1						
YKA				PKiKP	PKiKP	08 38 15.1	-0.2
	comp=Z,0.5nm,0.5s,baz=296,slow=1.8,SNR=17						
YKA				PKKPbc	PKKPbc	08 49 45.3	-3.8
	comp=Z,1.2nm,0.7s,baz=115,slow=2.6,SNR=24						
KEST	Kesra	109.28	308	PKKPbc	PKKPbc	08 49 28.6	-4.2
	comp=Z,3.1nm,0.5s,baz=55,slow=1.8,SNR=4.2						
MSO	Missoula	111.81	38	P	PKiKP	08 38 30.2	+0.2
	baz=295						
NVAR	Mina Array Bea	111.93	48	PKiKP	PKiKP	08 38 31.9	+1.3
	comp=Z,2.2nm,0.7s,baz=257,slow=1.9,SNR=22						
NVAR				PKKPbc	PKKPbc	08 49 23.4	-1.1
	comp=Z,0.5nm,0.8s,baz=138,slow=6.2,SNR=4.1						
CWC	Cottonwood Cre	112.72	50	P	PKiKP	08 38 32.4	+0.3
	baz=288						
HLID	Hailey	112.85	42	P	PKiKP	08 38 33.2	+1.0
	baz=294						
GRAC	Grapevine Rang	113.09	49	P	PKiKP	08 38 33.6	+1.0
	baz=289						
EDW2	Edwards Air Fo	113.26	52	P	PKiKP	08 38 34.3	+1.3
	baz=287						
MPMC	Manual Prospec	113.29	50	P	PKiKP	08 38 34.4	+1.1
	baz=288						
BOZ	Bozeman (W)	113.79	39	P	PKiKP	08 38 34.4	+0.5
	baz=297						
EGMT	Eagleton	113.80	36	P	PKiKP	08 38 33.7	0.0
	baz=299						
TPNV	Topopah Spring	113.95	49	P	PKiKP	08 38 34.6	+0.1
	baz=289						
R11B	Troy Canyon, C	113.97	47	P	PKiKP	08 38 35.0	+0.5
	baz=290,SNR=6.9						
GSC	Goldstone, Bar	114.06	51	P	PKiKP	08 38 35.3	+0.7
	baz=288						
MURC	Murrieta	114.27	53	P	PKiKP	08 38 35.8	+0.8
	baz=287						
TUQ	Turquoise Moun	114.70	51	P	PKiKP	08 38 35.7	-0.2
	baz=289						
PFO	Pinyon Flats O	114.85	53	P	PKPdf	08 38 37.3	+1.0
	baz=288						
TPFO	Pinon Flats	114.86	53	P	PKPdf	08 38 37.3	+1.0
	baz=288						
H17A	Grant Village	115.00	40	P	PKPdf	08 38 38.2	+1.8
	baz=297						
BELC	Belle Mtn. Jos	115.10	52	P	PKPdf	08 38 38.1	+1.3
	baz=288						
MONP2	Monument Peak	115.10	53	P	PKPdf	08 38 37.6	+0.8
	baz=288						
GMRC	Granite Mounta	115.11	51	P	PKPdf	08 38 38.7	+1.9
	baz=289,SNR=5.9						
DUG	Dugway, Tooele	115.28	45		PKPdf	08 38 37.5	+0.6
DUG	Dugway, Tooele	115.28	45	PKIKP	PKPdf	08 38 37.5	+0.6
DUG	Dugway, Tooele	115.28	45	P	PKPdf	08 38 37.1	+0.2
	baz=293,SNR=11						
RLMT	Red Lodge	115.49	39	P	PKPdf	08 38 38.1	+0.8
	baz=298						
SWSC	Sam W. Stewart	115.58	53	P	PKiKP	08 38 38.5	+1.1
	baz=288						
IRM	Iron Mountain	115.72	52	P	PKiKP	08 38 38.3	+0.6
	baz=289						
BW06	Boulder Array	116.40	41	P	PKPdf	08 38 39.1	0.0
	baz=297						
PD31	Pinedale Array	116.40	41		PKiKP	08 38 39.2	+0.1

PDAR	**Pinedale Array**	**116.40**	**41**	PKP	**PKiKP**	**08 38 39.3**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=136,slow=1.2,SNR=18						
PDAR				PKKPbc	**PKKPbc**	**08 49 06.0**	**-3.5**
	comp=Z,1.8nm,0.7s,baz=130,slow=4.4,SNR=5.3						
PDAR	**Pinedale Array**	**116.40**	**41**		**PKPdf**	**08 38 38.8**	**-0.3**
PDMCI	**Parker Dam,Lak**	**116.46**	**51**	P	**PKiKP**	**08 38 39.5**	**+0.4**
	baz=290						
LAO	**LASA Array**	**116.54**	**36**	P	**PKiKP**	**08 38 39.9**	**+0.8**
	baz=302						
LAO	**LASA Array**	**116.54**	**36**	P	**PKiKP**	**08 38 39.6**	**+0.5**
	baz=302						
BSUT	**Blindstream Ca**	**116.57**	**44**	PKPdf	**PKiKP**	**08 38 40.4**	**+0.7**
DGMT	**Dagmar**	**116.72**	**33**	P	**PKiKP**	**08 38 40.2**	**+0.9**
	baz=304						
DGMT	**Dagmar**	**116.72**	**33**	P	**PKiKP**	**08 38 39.6**	**+0.3**
	baz=304						
WUAZ	**Wupatki**	**118.15**	**49**	P	**PKiKP**	**08 38 43.5**	**+0.9**
	baz=292,SNR=8.0						
214A	**Organ Pipe Nat**	**118.29**	**53**	P	**PKiKP**	**08 38 43.5**	**+0.7**
	baz=290						
K22A	**Casper**	**118.42**	**40**	P	**PKPdf**	**08 38 42.9**	**0.0**
	baz=300,SNR=7.5						
K22A	**Casper**	**118.42**	**40**	P	**PKPdf**	**08 38 42.9**	**0.0**
	baz=300						
O20A	**White River Ci**	**118.48**	**43**	P	**PKiKP**	**08 38 44.1**	**+1.0**
	baz=297,SNR=19						
RSSD	**Black Hills**	**119.21**	**37**	PKPdf	**PKPdf**	**08 38 44.1**	**-0.4**
RSSD	**Black Hills**	**119.21**	**37**	PKIKP	**PKPdf**	**08 38 44.1**	**-0.4**
RSSD	**Black Hills**	**119.21**	**37**	P	**PKPdf**	**08 38 43.9**	**-0.5**
	baz=303						
RSSD	**Black Hills**	**119.21**	**37**	P	**PKPdf**	**08 38 44.3**	**-0.2**
	baz=303						
W18A	**Petrified Fore**	**119.53**	**49**	P	**PKiKP**	**08 38 46.4**	**+1.1**
	baz=293,SNR=8.0						
MDND	**Maddock**	**119.56**	**32**	P	**PKPdf**	**08 38 44.5**	**-0.2**
	baz=308,SNR=8.0						
MDND	**Maddock**	**119.56**	**32**	P	**PKiKP**	**08 38 45.0**	**+0.2**
	baz=308						
MVCO	**Mesa Verde**	**119.59**	**46**	P	**PKiKP**	**08 38 46.4**	**+0.9**
	baz=295,SNR=5.1						
N23A	**Red Feather La**	**119.66**	**41**	P	**PKiKP**	**08 38 45.9**	**+0.4**
	baz=299						
E28A	**Huff**	**119.75**	**33**	P	**PKPdf**	**08 38 45.1**	**-0.1**
	baz=307						
TUC	**Tucson**	**119.78**	**52**	P	**PKiKP**	**08 38 46.3**	**+0.5**
	baz=291						
ULM	**Lac du Bonnet**	**119.84**	**28**	PKP	**PKPdf**	**08 38 44.6**	**-0.5**
	comp=Z,12nm,0.7s,baz=310,slow=2.1,SNR=20						
ISCO	**Idaho Springs**	**120.42**	**42**	P	**PKiKP**	**08 38 47.7**	**+0.6**
	baz=299						
ISCO	**Idaho Springs**	**120.42**	**42**	P	**PKiKP**	**08 38 47.6**	**+0.5**
	baz=299,SNR=11						
S22A	**4UR Ranch, Cre**	**120.54**	**45**	P	**PKiKP**	**08 38 48.0**	**+0.6**
	baz=297,SNR=10						
TOA0	**Torodi Ar. Sit**	**120.69**	**285**	PKPdf	**PKPdf**	**08 38 46.7**	**-1.0**
TORD	**Torodi Ar. Bea**	**120.69**	**285**	PKP	**PKPdf**	**08 38 47.5**	**-0.3**
	comp=Z,3.8nm,0.6s,baz=53,slow=2.0,SNR=14						
Q24A	**Divide**	**121.14**	**43**	P	**PKPdf**	**08 38 48.4**	**0.0**
	baz=299						
AGMN	**Agassiz Nation**	**121.18**	**30**	P	**PKPdf**	**08 38 47.4**	**-0.4**
	baz=312						
AGMN	**Agassiz Nation**	**121.18**	**30**	P	**PKPdf**	**08 38 46.8**	**-1.0**
	baz=312						
D32B	**Dogwood Acres,**	**121.37**	**31**	P	**PKPdf**	**08 38 48.0**	**-0.2**
	baz=311						
SDCO	**Great Sand Dun**	**121.48**	**44**	P	**PKiKP**	**08 38 49.5**	**+0.3**
	baz=298,SNR=9.7						
SDCO	**Great Sand Dun**	**121.48**	**44**	P	**PKiKP**	**08 38 49.7**	**+0.5**
	baz=298						
SUSD	**Miller**	**122.02**	**35**	P	**PKPdf**	**08 38 49.0**	**-0.5**
	baz=308						
SUSD	**Miller**	**122.02**	**35**	P	**PKPdf**	**08 38 49.2**	**-0.4**
	baz=308						
121A	**Cookes Peak, D**	**122.05**	**51**	P	**PKiKP**	**08 38 51.2**	**+0.8**
	baz=293,SNR=5.3						
121A	**Cookes Peak, D**	**122.05**	**51**	P	**PKiKP**	**08 38 51.2**	**+0.8**
	baz=293						
ANMO	**Albuquerque**	**122.05**	**48**	P	**PKiKP**	**08 38 51.0**	**+0.7**
	baz=296						
ANMO	**Albuquerque**	**122.05**	**48**	P	**PKiKP**	**08 38 50.9**	**+0.6**
	baz=296,SNR=21						
Y22A	**Socorro**	**122.10**	**49**	P	**PKiKP**	**08 38 50.6**	**+0.2**
	baz=295						
B35A	**Bob, Littlefor**	**122.17**	**28**	P	**PKPdf**	**08 38 49.4**	**-0.3**
	baz=315						
T25A	**Trinidad**	**122.53**	**45**	P	**PKiKP**	**08 38 51.4**	**+0.2**
	baz=299,SNR=11						
F33A	**5 Mile Ranch,**	**122.59**	**32**	P	**PKPdf**	**08 38 50.4**	**-0.2**
	baz=311						
KSCO	**Kaye Shedlock’**	**122.81**	**42**	P	**PKPdf**	**08 38 51.4**	**0.0**
	baz=301						
KSCO	**Kaye Shedlock’**	**122.81**	**42**	P	**PKPdf**	**08 38 51.4**	**0.0**
	baz=301						
K31A	**O'Neill**	**123.23**	**36**	P	**PKPdf**	**08 38 51.8**	**-0.2**
	baz=307						
EYMN	**Ely**	**123.51**	**27**	P	**PKPdf**	**08 38 51.8**	**-0.5**
	baz=317						
EYMN	**Ely**	**123.51**	**27**	P	**PKPdf**	**08 38 52.1**	**-0.2**
	baz=317						
ECSD	**EROS Data Cent**	**123.78**	**34**	P	**PKPdf**	**08 38 52.8**	**-0.2**
	baz=310,SNR=20						
ECSD	**EROS Data Cent**	**123.78**	**34**	P	**PKPdf**	**08 38 52.6**	**-0.4**
	baz=310						
F36A	**Milaca**	**124.01**	**30**	P	**PKPdf**	**08 38 53.2**	**-0.1**
	baz=314						
MNTX	**Cornudas Mount**	**124.25**	**51**	P	**PKiKP**	**08 38 54.8**	**+0.3**
	baz=295						
MNTX	**Cornudas Mount**	**124.25**	**51**	P	**PKiKP**	**08 38 54.7**	**+0.2**
	baz=295						
BGNE	**Belgrade**	**124.32**	**37**	P	**PKPdf**	**08 38 53.3**	**-0.8**
	baz=307,SNR=13						
BGNE	**Belgrade**	**124.32**	**37**	P	**PKPdf**	**08 38 53.9**	**-0.2**
	baz=307						
SCHQ	**Schefferville**	**124.72**	**7**	PKP	**PKPdf**	**08 38 54.6**	**+0.2**
	comp=Z,5.4nm,0.6s,baz=22,slow=3.5,SNR=18						
SCHQ	**Schefferville**	**124.72**	**7**		**PKPdf**	**08 38 54.4**	**0.0**
SPMN	**Marine on St.**	**124.82**	**30**	P	**PKPdf**	**08 38 55.0**	**+0.2**
	baz=314,SNR=5.9						
SPMN	**Marine on St.**	**124.82**	**30**	P	**PKPdf**	**08 38 54.8**	**-0.1**
	baz=314						
CBKS	**Cedar Bluff**	**124.82**	**40**	P	**PKPdf**	**08 38 55.3**	**+0.2**
	baz=304						
CBKS	**Cedar Bluff**	**124.82**	**40**	P	**PKPdf**	**08 38 55.4**	**+0.2**
	baz=304						
L34A	**Svendsen Farm,**	**125.03**	**36**	P	**PKPdf**	**08 38 55.4**	**0.0**
	baz=309						
N33B	**J Bar K, Exete**	**125.14**	**37**	P	**PKPdf**	**08 38 55.1**	**-0.6**
	baz=307						
MSTX	**Muleshoe**	**125.21**	**47**	P	**PKPdf**	**08 38 56.1**	**0.0**
	baz=298,SNR=7.4						
MSTX	**Muleshoe**	**125.21**	**47**	P	**PKiKP**	**08 38 56.8**	**+0.3**
	baz=298,SNR=7.4						
I37B	**Waseca**	**125.34**	**32**	P	**PKPdf**	**08 38 56.2**	**+0.3**
	baz=313						
D41A	**Chassel**	**125.49**	**26**	P	**PKiKP**	**08 38 56.4**	**-0.1**
	baz=320						
AMTX	**Amarillo**	**125.56**	**46**	P	**PKPdf**	**08 38 56.7**	**0.0**
	baz=300						
AMTX	**Amarillo**	**125.56**	**46**	P	**PKiKP**	**08 38 58.0**	**+0.8**
	baz=300						
R32A	**Long Quarter,**	**125.70**	**40**	P	**PKiKP**	**08 38 57.6**	**+0.3**
	baz=304,SNR=10						
COWI	**Conover**	**125.96**	**27**	P	**PKPdf**	**08 38 57.1**	**+0.1**
	baz=318						
G40A	**Rib Lake**	**126.08**	**29**	P	**PKiKP**	**08 38 57.7**	**0.0**
	baz=317						
N35A	**Tabor**	**126.15**	**36**	P	**PKPdf**	**08 38 57.7**	**+0.2**
	baz=309						
TX31	**Lajitas Ar. Si**	**126.58**	**53**	P	**PKiKP**	**08 38 59.8**	**+0.5**
	baz=294						
TXAR	**Lajitas Array**	**126.58**	**53**	PKP	**PKiKP**	**08 38 59.6**	**+0.3**
	comp=Z,2.3nm,0.7s,baz=228,slow=1.2,SNR=25						
K38A	**Parkersburg**	**126.61**	**33**	P	**PKPdf**	**08 38 58.4**	**0.0**
	baz=313						
KSU1	**Kansas State U**	**126.64**	**38**	P	**PKPdf**	**08 38 58.4**	**-0.1**
	baz=307						
KSU1	**Kansas State U**	**126.64**	**38**	P	**PKiKP**	**08 38 59.0**	**0.0**
	baz=307,SNR=11						
U32A	**Winter Ranch,**	**126.65**	**43**	P	**PKiKP**	**08 38 59.5**	**+0.3**
	baz=303						
F42A	**Maple Grove Fa**	**126.68**	**27**	P	**PKPdf**	**08 38 58.6**	**+0.2**
	baz=319						
E43A	**Lone Tree Farm**	**126.71**	**26**	P	**PKPdf**	**08 38 58.6**	**+0.2**
	baz=321						
SCIA	**State Center**	**126.86**	**34**	P	**PKPdf**	**08 38 59.2**	**+0.3**
	baz=312						
SCIA	**State Center**	**126.86**	**34**	P	**PKiKP**	**08 38 59.4**	**0.0**
	baz=312						
I40A	**Norwalk**	**126.87**	**30**	P	**PKPdf**	**08 38 58.4**	**-0.4**
	baz=316						
WMOK	**Wichita Mounta**	**127.68**	**44**	P	**PKiKP**	**08 39 01.2**	**-0.1**
	baz=302,SNR=7.8						
WMOK	**Wichita Mounta**	**127.68**	**44**	P	**PKiKP**	**08 39 01.4**	**+0.1**
	baz=302,SNR=7.8						
I42A	**Draeger Farm,**	**127.71**	**29**	P	**PKPdf**	**08 39 00.1**	**-0.3**
	baz=318						
JFWS	**Jewell Farm**	**127.75**	**31**	P	**PKPdf**	**08 38 59.7**	**-0.9**
	baz=316						
JFWS	**Jewell Farm**	**127.75**	**31**	P	**PKPdf**	**08 39 00.1**	**-0.4**
	baz=316						
H43A	**Windswept, Lux**	**127.82**	**28**	P	**PKPdf**	**08 39 00.7**	**0.0**
	baz=319						
L40A	**Anamosa**	**127.84**	**32**	P	**PKPdf**	**08 39 00.4**	**-0.4**
	baz=314						
E46A	**Sault Ste Mari**	**127.85**	**24**	P	**PKPdf**	**08 39 00.9**	**+0.2**
	baz=324						
DBIC	**Dimbokro**	**127.85**	**278**	PKP	**PKPdf**	**08 39 01.3**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=195,slow=4.8,SNR=5.4						
T35B	**Sooner Cattle**	**128.00**	**41**	P	**PKiKP**	**08 39 01.8**	**0.0**
	baz=306						
ABTX	**Abilene, Hawle**	**128.15**	**47**	P	**PKiKP**	**08 39 02.1**	**-0.2**
	baz=300						
ABTX	**Abilene, Hawle**	**128.15**	**47**	P	**PKiKP**	**08 39 02.7**	**+0.4**
	baz=300						
P38A	**Dawn**	**128.18**	**36**	P	**PKPdf**	**08 39 01.7**	**+0.2**
	baz=310,SNR=8.6						
G45A	**Suttons Bay**	**128.34**	**26**	P	**PKPdf**	**08 39 01.6**	**0.0**
	baz=322						
G45A				P	**PKPdf**	**08 39 01.6**	**0.0**
	baz=322						
L42A	**Oliver, Polo**	**128.71**	**31**	P	**PKPdf**	**08 39 02.2**	**-0.2**
	baz=316						
K43A	**Burlington**	**128.87**	**30**	P	**PKPdf**	**08 39 02.9**	**+0.2**
	baz=318						
GLMI	**Grayling**	**128.96**	**25**	P	**PKPdf**	**08 39 03.2**	**+0.4**
	baz=323						
GLMI	**Grayling**	**128.96**	**25**	P	**PKiKP**	**08 39 03.5**	**0.0**
	baz=323						
N41A	**Harden Midland**	**128.98**	**33**	P	**PKPdf**	**08 39 02.6**	**-0.4**
	baz=314						
TUL1	**Leonard**	**129.06**	**41**	P	**PKPdf**	**08 39 03.5**	**+0.2**
	baz=306						
TUL1	**Leonard**	**129.06**	**41**	P	**PKiKP**	**08 39 04.4**	**+0.5**
	baz=306						
JCT	**Junction City**	**129.07**	**49**	PKPdf	**PKPdf**	**08 39 02.7**	**-0.8**
JCT	**Junction City**	**129.07**	**49**	PKIKP	**PKPdf**	**08 39 02.7**	**-0.8**
JCT	**Junction City**	**129.07**	**49**	P	**PKPdf**	**08 39 03.5**	**0.0**
	baz=298						
JCT	**Junction City**	**129.07**	**49**	P	**PKiKP**	**08 39 04.0**	**-0.2**
	baz=298						
P40A	**Paris**	**129.11**	**35**	P	**PKPdf**	**08 39 03.4**	**+0.2**
	baz=312,SNR=8.5						
L44A	**Lake County Fo**	**129.47**	**30**	P	**PKPdf**	**08 39 04.1**	**+0.2**
	baz=318						
L44A	**Lake County Fo**	**129.47**	**30**	P	**PKPdf**	**08 39 04.2**	**+0.4**
	baz=318						
Z35A	**Perchaven, San**	**129.50**	**45**	P	**PKiKP**	**08 39 05.1**	**+0.2**
	baz=303						
S39A	**Bolivar**	**129.54**	**38**	P	**PKPdf**	**08 39 04.2**	**+0.1**
	baz=309						
U38A	**Gravette**	**129.65**	**40**	PKPdf	**PKPdf**	**08 39 04.3**	**-0.1**
U38A	**Gravette**	**129.65**	**40**	P	**PKPdf**	**08 39 04.2**	**-0.1**
	baz=308						
R40A	**Maddies Statio**	**129.80**	**37**	P	**PKPdf**	**08 39 04.6**	**0.0**
	baz=311,SNR=20						
HDIL	**Hopedale**	**129.94**	**32**	P	**PKPdf**	**08 39 04.7**	**-0.1**
	baz=315,SNR=6.9						
M44A	**Midewin, Midew**	**129.99**	**31**	P	**PKiKP**	**08 39 05.4**	**-0.3**
	baz=317						
WHTX	**Lake Whitney,**	**130.07**	**46**	P	**PKiKP**	**08 39 07.0**	**+0.9**
	baz=302						
X37A	**Clayton**	**130.10**	**42**	P	**PKiKP**	**08 39 06.0**	**-0.1**
	baz=305						
J47A	**Sunmer**	**130.13**	**27**	P	**PKPdf**	**08 39 05.0**	**0.0**
	baz=322						
J47A				P	**PKPdf**	**08 39 05.0**	**0.0**
	baz=322						
833A	**Chaparral WMA,**	**130.39**	**52**	P	**PKiKP**	**08 39 06.8**	**0.0**
	baz=297						
833A	**Chaparral WMA,**	**130.39**	**52**	P	**PKiKP**	**08 39 07.4**	**+0.5**
	baz=297						
I49A	**Point Hope**	**130.43**	**25**	P	**PKPdf**	**08 39 05.8**	**+0.2**
	baz=325						
I49A				P	**PKPdf**	**08 39 05.8**	**+0.2**
	baz=325						
P43A	**Skaggs, Pawnee**	**130.46**	**33**	P	**PKPdf**	**08 39 06.1**	**+0.3**
	baz=315,SNR=5.5						
CCM	**Cathedral Cave**	**130.56**	**36**	PKPdf	**PKPdf**	**08 39 06.2**	**+0.2**
CCM	**Cathedral Cave**	**130.56**	**36**	PKIKP	**PKPdf**	**08 39 06.2**	**+0.2**
CCM	**Cathedral Cave**	**130.56**	**36**	P	**PKiKP**	**08 39 06.6**	**-0.3**
	baz=312						
CCM	**Cathedral Cave**	**130.56**	**36**	P	**PKiKP**	**08 39 06.6**	**-0.3**
	baz=312,SNR=11						
435B	**Jarrell**	**130.59**	**48**	P	**PKiKP**	**08 39 07.4**	**+0.2**
	baz=300						
O44A	**Mansfield**	**130.66**	**32**	P	**PKPdf**	**08 39 06.6**	**+0.4**
	baz=316						
FVM	**French Village**	**131.09**	**36**	P	**PKPdf**	**08 39 07.3**	**+0.3**
	baz=313						
Z38A	**Mt. Pleasant**	**131.12**	**44**	P	**PKiKP**	**08 39 09.0**	**+0.8**
	baz=305						
SFIN	**Lafayette**	**131.22**	**31**	P	**PKiKP**	**08 39 07.9**	**-0.2**
	baz=318						
SFIN	**Lafayette**	**131.22**	**31**	P	**PKiKP**	**08 39 07.8**	**-0.4**
	baz=318						
237A	**Washetta, Mont**	**131.25**	**45**	P	**PKiKP**	**08 39 08.8**	**+0.4**
	baz=303						
Q44A	**Meyer Farm, Va**	**131.25**	**34**	P	**PKPdf**	**08 39 07.8**	**+0.4**
	baz=315						
MIAR	**Mount Ida**	**131.32**	**41**	P	**PKPdf**	**08 39 08.1**	**+0.5**
	baz=307						
MIAR	**Mount Ida**	**131.32**	**41**	P	**PKiKP**	**08 39 08.3**	**-0.3**
	baz=307,SNR=16						
L48A	**N Adams**	**131.32**	**28**	P	**PKPdf**	**08 39 07.4**	**0.0**
	baz=322						
L48A				P	**PKPdf**	**08 39 07.4**	**0.0**
	baz=322						
AAM	**Ann Arbor**	**131.40**	**27**	P	**PKiKP**	**08 39 08.3**	**-0.2**
	baz=323						
K50A	**Casco**	**131.47**	**25**	P	**PKPdf**	**08 39 07.1**	**-0.5**
	baz=324						
K50A				P	**PKPdf**	**08 39 07.1**	**-0.5**
	baz=324						
N47A	**Urbana**	**131.54**	**29**	P	**PKPdf**	**08 39 07.9**	**+0.1**
	baz=320						
N47A				P	**PKPdf**	**08 39 07.9**	**+0.1**
	baz=320						
P46A	**Rosedale**	**131.72**	**32**	P	**PKPdf**	**08 39 08.0**	**-0.2**
	baz=317						
OLIL	**Olney**	**131.88**	**33**	P	**PKiKP**	**08 39 09.4**	**-0.1**
	baz=316						
PBMO	**Poplar Bluff**	**131.89**	**37**	P	**PKPdf**	**08 39 09.1**	**+0.5**
	baz=312						
LCAR	**Lake Charles**	**131.92**	**38**	P	**PKPdf**	**08 39 08.6**	**0.0**
	baz=311,SNR=7.8						
NATX	**Nacogdoches**	**132.19**	**45**	P	**PKiKP**	**08 39 10.2**	**-0.2**
	baz=304						
NATX	**Nacogdoches**	**132.19**	**45**	P	**PKiKP**	**08 39 10.5**	**+0.1**
	baz=304						
N49A	**Columbus Grove**	**132.24**	**28**	P	**PKPdf**	**08 39 09.2**	**+0.1**
	baz=321,SNR=5.7						
N49A				P	**PKPdf**	**08 39 09.2**	**+0.1**
	baz=321,SNR=5.7						
O48B	**Farmland**	**132.28**	**30**	P	**PKPdf**	**08 39 09.6**	**+0.4**
	baz=320						
O48B	**Farmland**	**132.28**	**30**	P	**PKPdf**	**08 39 09.6**	**+0.4**
	baz=320						
M50A	**Fremont**	**132.39**	**27**	P	**PKPdf**	**08 39 09.5**	**+0.1**
	baz=323						
M50A				P	**PKPdf**	**08 39 09.5**	**+0.1**
	baz=323						
BMNY	**Brushton-Moira**	**132.64**	**17**	P	**PKPdf**	**08 39 10.1**	**+0.3**
	baz=335,SNR=5.5						
PECO	**Prince Edward**	**132.66**	**20**		PKPpre	08 38 58.8	
O49A	**Covington**	**132.74**	**29**	P	**PKPdf**	**08 39 10.1**	**0.0**
	baz=321,SNR=9.4						
O49A				P	**PKPdf**	**08 39 10.1**	**0.0**
	baz=321,SNR=9.4						
P48A	**Milroy**	**132.75**	**30**	P	**PKPdf**	**08 39 10.3**	**+0.1**
	baz=319						
P48A				P	**PKPdf**	**08 39 10.3**	**+0.1**
	baz=319						
LONY	**Lake Ozonia**	**132.81**	**17**	P	**PKPdf**	**08 39 10.5**	**+0.3**
	baz=335						
F62A	**Pittston Farm,**	**132.82**	**13**	P	**PKiKP**	**08 39 10.8**	**-0.4**
	baz=342						
F62A				P	**PKiKP**	**08 39 10.8**	**-0.4**
	baz=342						
J55A	**Hilton**	**132.95**	**21**	P	**PKPdf**	**08 39 10.3**	**-0.1**
	baz=330						
J55A				P	**PKPdf**	**08 39 10.3**	**-0.1**
	baz=330						
P49A	**Miami Univ. Ec**	**133.06**	**30**	P	**PKPdf**	**08 39 10.9**	**+0.2**
	baz=320						
P49A	**Miami Univ. Ec**	**133.06**	**30**	P	**PKiKP**	**08 39 11.5**	**-0.4**
	baz=320						
WCNY	**West Carthage**	**133.06**	**19**	P	**PKPdf**	**08 39 11.1**	**+0.5**
	baz=334						
N51A	**Ashland**	**133.08**	**27**	P	**PKPdf**	**08 39 11.3**	**+0.6**
	baz=324						
N51A				P	**PKPdf**	**08 39 11.3**	**+0.6**
	baz=324						
ERPA	**Erie**	**133.11**	**24**	P	**PKPdf**	**08 39 10.9**	**+0.1**
	baz=327						
ERPA	**Erie**	**133.11**	**24**	P	**PKiKP**	**08 39 11.6**	**-0.3**
	baz=327						
F64A	**Sherman**	**133.19**	**11**	P	**PKiKP**	**08 39 11.6**	**-0.4**
	baz=344						
F64A				P	**PKiKP**	**08 39 11.6**	**-0.4**
	baz=344						
WCI	**Wyandotte Cave**	**133.22**	**32**	P	**PKPdf**	**08 39 11.2**	**+0.2**
	baz=317						
WCI	**Wyandotte Cave**	**133.22**	**32**	P	**PKiKP**	**08 39 12.3**	**0.0**
	baz=317						
J56A	**Wolcott**	**133.28**	**20**	P	**PKiKP**	**08 39 11.8**	**-0.4**
	baz=332						
J56A				P	**PKiKP**	**08 39 11.8**	**-0.4**
	baz=332						
ACSO	**Alum Creek Sta**	**133.35**	**28**	P	**PKPdf**	**08 39 11.6**	**+0.3**
	baz=322						
ACSO	**Alum Creek Sta**	**133.35**	**28**	P	**PKPdf**	**08 39 11.5**	**+0.3**
	baz=322						
M53A	**WI Miller and**	**133.39**	**25**	P	**PKPdf**	**08 39 11.9**	**+0.6**
	baz=326						
WVNY	**West Valley, N**	**133.41**	**22**	P	**PKPdf**	**08 39 11.1**	**-0.2**
	baz=329						
ALLY	**Alegheny Colle**	**133.44**	**24**	P	**PKPdf**	**08 39 12.0**	**+0.6**
	baz=327						
J57A	**Williamstown**	**133.46**	**19**	P	**PKPdf**	**08 39 11.8**	**+0.5**
	baz=333						
J57A				P	**PKPdf**	**08 39 11.8**	**+0.5**
	baz=333						
NCB	**Newcomb**	**133.51**	**17**	P	**PKiKP**	**08 39 12.4**	**-0.4**
	baz=335						
PKME	**Peaks-Kenny Pk**	**133.57**	**12**	P	**PKiKP**	**08 39 12.5**	**-0.2**
	baz=342						
T47A	**Sharon Grove**	**133.68**	**34**	P	**PKiKP**	**08 39 12.9**	**-0.3**
	baz=316						
W45A	**Hickory Valley**	**133.72**	**38**	P	**PKPdf**	**08 39 12.1**	**0.0**
	baz=312						
J58A	**Remsen**	**133.73**	**19**	P	**PKPdf**	**08 39 11.8**	**-0.1**
	baz=334,SNR=7.2						
J58A				P	**PKPdf**	**08 39 11.8**	**-0.1**
	baz=334,SNR=7.2						
R49A	**Shelbyville**	**133.76**	**31**	P	**PKPdf**	**08 39 12.7**	**+0.6**
	baz=319						
R49A				P	**PKPdf**	**08 39 12.7**	**+0.6**
	baz=319						
N53A	**Lisbon**	**133.84**	**25**	P	**PKPdf**	**08 39 12.0**	**-0.1**
	baz=325						
N53A				P	**PKPdf**	**08 39 12.0**	**-0.1**
	baz=325						
WVT	**Waverly**	**133.87**	**35**		**PKPdf**	**08 39 12.2**	**-0.1**
WVT	**Waverly**	**133.87**	**35**	PKIKP	**PKPdf**	**08 39 12.2**	**-0.1**
K57A	**Scipio Center**	**133.88**	**20**	P	**PKPdf**	**08 39 12.3**	**+0.1**
	baz=332						
MCVT	**Middlebury Col**	**133.88**	**16**	P	**PKiKP**	**08 39 13.1**	**-0.4**
	baz=337						
J59A	**Piesco**	**133.88**	**18**	P	**PKPdf**	**08 39 12.5**	**+0.3**
	baz=335,SNR=6.6						
J59A				P	**PKPdf**	**08 39 12.5**	**+0.3**
	baz=335,SNR=6.6						
LBNH	**Lisbon**	**133.91**	**15**	P	**PKiKP**	**08 39 13.1**	**-0.5**
	baz=339						
O52A	**Adamsville**	**133.97**	**27**	P	**PKPdf**	**08 39 12.3**	**-0.2**
	baz=324						
O52A				P	**PKPdf**	**08 39 12.3**	**-0.2**
	baz=324						
G65A	**Princeton**	**133.97**	**11**	P	**PKPdf**	**08 39 12.8**	**+0.5**
	baz=345						
G65A				P	**PKPdf**	**08 39 12.8**	**+0.5**
	baz=345						
OXF	**Oxford**	**134.01**	**38**	P	**PKPdf**	**08 39 13.0**	**+0.3**
	baz=311						
OXF	**Oxford**	**134.01**	**38**	P	**PKPdf**	**08 39 12.5**	**-0.2**
	baz=311						
L56A	**Greenwood**	**134.03**	**22**	P	**PKPdf**	**08 39 12.4**	**-0.1**
	baz=330,SNR=6.1						
L56A				P	**PKPdf**	**08 39 12.4**	**-0.1**
	baz=330,SNR=6.1						
PAMR	**Moraine State**	**134.05**	**25**	P	**PKPdf**	**08 39 12.4**	**-0.1**
	baz=326						
O53A	**New Philadelph**	**134.14**	**26**	P	**PKPdf**	**08 39 13.2**	**+0.4**
	baz=325						
M55A	**Ridgway**	**134.14**	**23**	P	**PKPdf**	**08 39 12.4**	**-0.3**
	baz=328,SNR=5.4						
M55A				P	**PKPdf**	**08 39 12.4**	**-0.3**
	baz=328,SNR=5.4						
R50A	**Paris**	**134.21**	**31**	P	**PKPdf**	**08 39 13.3**	**+0.4**
	baz=320						
R50A				P	**PKPdf**	**08 39 13.3**	**+0.4**
	baz=320						
ACCN	**Adirondack Com**	**134.21**	**17**	P	**PKiKP**	**08 39 13.7**	**-0.5**
	baz=336						
P52A	**Corning**	**134.22**	**28**	P	**PKPdf**	**08 39 13.1**	**+0.2**
	baz=323						
Y45A	**Yeager Farm, C**	**134.35**	**39**	P	**PKPdf**	**08 39 13.4**	**+0.1**
	baz=311						
PSDB	**Penn State Uni**	**134.44**	**23**	P	**PKPdf**	**08 39 13.4**	**+0.1**
	baz=328						
UPAO	**U. Pittsburgh**	**134.46**	**25**	P	**PKiKP**	**08 39 14.3**	**-0.5**
	baz=326						
BINY	**Binghamton**	**134.53**	**20**	P	**PKPdf**	**08 39 13.9**	**+0.4**
	baz=332						
BINY	**Binghamton**	**134.53**	**20**	P	**PKPdf**	**08 39 13.7**	**+0.3**
	baz=332,SNR=6.2						
O54A	**Avella**	**134.56**	**26**	P	**PKPdf**	**08 39 13.7**	**+0.2**
	baz=326,SNR=6.0						
O54A				P	**PKPdf**	**08 39 13.7**	**+0.2**
	baz=326,SNR=6.0						
J61A	**Chester**	**134.57**	**16**	P	**PKiKP**	**08 39 14.8**	**0.0**
	baz=337						
J61A				P	**PKiKP**	**08 39 14.8**	**0.0**
	baz=337						
HCNY	**Howe Caverns**	**134.61**	**18**	P	**PKPdf**	**08 39 13.7**	**+0.2**
	baz=335						
P53A	**Whipple**	**134.68**	**27**	P	**PKPdf**	**08 39 13.8**	**0.0**
	baz=324,SNR=7.1						
P53A				P	**PKPdf**	**08 39 13.8**	**0.0**
	baz=324,SNR=7.1						
Q52A	**Bidwell**	**134.69**	**28**	P	**PKPdf**	**08 39 14.3**	**+0.5**
	baz=323						
Q52A				P	**PKPdf**	**08 39 14.3**	**+0.5**
	baz=323						
V48A	**Smith Brothers**	**134.72**	**35**	P	**PKPdf**	**08 39 14.2**	**+0.2**
	baz=315						
U49A	**Red Boiling Sp**	**134.75**	**33**	P	**PKPdf**	**08 39 14.3**	**+0.3**
	baz=317,SNR=5.3						
VBMS	**Vicksburg**	**134.77**	**42**	P	**PKPdf**	**08 39 14.8**	**+0.7**
	baz=308						
L59A	**Walton**	**134.86**	**19**	P	**PKPdf**	**08 39 14.9**	**+0.8**
	baz=334						
L59A				P	**PKPdf**	**08 39 14.9**	**+0.8**
	baz=334						
M57A	**Sunshine Farm,**	**134.88**	**22**	P	**PKPdf**	**08 39 14.3**	**+0.2**
	baz=330						
M57A				P	**PKPdf**	**08 39 14.3**	**+0.2**
	baz=330						
T50A	**Nancy**	**134.89**	**32**	P	**PKiKP**	**08 39 15.2**	**-0.5**
	baz=318						
T50A				P	**PKiKP**	**08 39 15.2**	**-0.5**
	baz=318						
S51A	**Beattyville**	**135.07**	**31**	P	**PKPdf**	**08 39 14.7**	**+0.2**
	baz=320,SNR=6.5						
S51A				P	**PKPdf**	**08 39 14.7**	**+0.2**
	baz=320,SNR=6.5						
344A	**Westbrook Farm**	**135.09**	**43**	P	**PKiKP**	**08 39 16.0**	**-0.3**
	baz=308						
KSPA	**Keystone Colle**	**135.18**	**20**	P	**PKPdf**	**08 39 14.6**	**0.0**
	baz=332						
SSPA	**Standing Stone**	**135.20**	**23**	PKPdf	**PKPdf**	**08 39 14.8**	**+0.1**
SSPA	**Standing Stone**	**135.20**	**23**	P	**PKPdf**	**08 39 15.0**	**+0.3**
	baz=329						
SSPA	**Standing Stone**	**135.20**	**23**	P	**PKPdf**	**08 39 14.8**	**+0.1**

	baz=329,SNR=8.2						
MCWV	Mont Chateau	135.22	26	P	PKPdf	08 39 15.5	+0.7
	baz=326						
MCWV	Mont Chateau	135.22	26	P	PKPdf	08 39 14.9	+0.1
	baz=326						
Q54A	Coxs Mills	135.34	27	P	PKPdf	08 39 15.1	+0.1
	baz=324,SNR=6.5						
Q54A				P	PKPdf	08 39 15.1	+0.1
	baz=324,SNR=6.5						
R53A	Hurricane	135.34	29	P	PKPdf	08 39 15.7	+0.7
	baz=323						
R53A				P	PKPdf	08 39 15.7	+0.7
	baz=323						
L61B	Northampton	135.36	17	P	PKiKP	08 39 16.0	-0.5
	baz=337						
N58A	Sunbury	135.47	22	P	PKPdf	08 39 15.0	-0.2
	baz=331,SNR=7.3						
N58A				P	PKPdf	08 39 15.0	-0.2
	baz=331,SNR=7.3						
X48A	Hartselle	135.49	37	P	PKPdf	08 39 16.1	+0.7
	baz=314						
NPNY	Mohonk Preserv	135.54	19	P	PKiKP	08 39 16.7	-0.2
	baz=335						
Z47A	Carrollton	135.72	39	P	PKiKP	08 39 16.9	-0.6
	baz=312						
BRNY	Black Rk. Fore	135.89	19	P	PKiKP	08 39 17.0	-0.6
	baz=335						
TZTN	Tazewell	135.93	32	P	PKiKP	08 39 17.4	-0.5
	baz=320						
TZTN	Tazewell	135.93	32	P	PKiKP	08 39 17.6	-0.3
	baz=320						
W50A	Signal Mountai	135.97	34	P	PKPdf	08 39 17.2	+0.9
	baz=316						
ODNJ	Ogdensburg	136.00	20	P	PKiKP	08 39 17.3	-0.6
	baz=334						
Q56A	Snyder Ridge,	136.02	25	P	PKiKP	08 39 17.3	-0.7
	baz=327						
Q56A				P	PKiKP	08 39 17.3	-0.7
	baz=327						
V51A	Loudon	136.06	33	P	PKiKP	08 39 17.7	-0.4
	baz=318						
S54A	Dingess, Beckl	136.07	28	P	PKiKP	08 39 17.8	-0.3
	baz=323						
S54A				P	PKiKP	08 39 17.8	-0.3
	baz=323						
P57A	Homestead Farm	136.13	24	P	PKiKP	08 39 17.5	-0.6
	baz=328						
P57A				P	PKiKP	08 39 17.5	-0.6
	baz=328						
Y49A	Blount Mountai	136.28	37	P	PKiKP	08 39 18.3	-0.4
	baz=314						
PAL	Palisades	136.30	19	P	PKPdf	08 39 17.6	+0.9
	baz=335						
PAL	Palisades	136.30	19	P	PKiKP	08 39 18.0	-0.4
	baz=335						
V52A	Sevierville	136.44	32	P	PKiKP	08 39 18.5	-0.4
	baz=319						
TKL	Tuckaleechee C	136.48	33	P	PKiKP	08 39 18.7	-0.3
	baz=319						
LRAL	Lakeview Retre	136.49	38	P	PKiKP	08 39 18.7	-0.4
	baz=313						
PANJ	Princeton	136.60	20	P	PKPdf	08 39 17.8	+0.5
	baz=333						
BLA	Blacksburg	136.96	28	P	PKiKP	08 39 19.7	-0.3
	baz=324						
CASEE	Lake Jocassee	137.43	32	P	PKiKP	08 39 20.9	-0.1
	baz=319						
R58B	Mineral	137.48	25	P	PKiKP	08 39 20.1	-0.8
	baz=328						
R58B				P	PKiKP	08 39 20.1	-0.8
	baz=328						
CBN	Corbin Frederi	137.48	24	P	PKiKP	08 39 20.1	-0.8
	baz=328						
CBN	Corbin Frederi	137.48	24	P	PKiKP	08 39 20.5	-0.5
	baz=328						
Y52A	Lilburn	137.65	35	P	PKiKP	08 39 21.1	-0.3
	baz=317						
Y52A				P	PKiKP	08 39 21.1	-0.3
	baz=317						
V55A	Taylorsville	137.66	30	P	PKiKP	08 39 20.9	-0.5
	baz=322						
V55A				P	PKiKP	08 39 20.9	-0.5
	baz=322						
250A	Grady	137.66	39	P	PKPdf	08 39 19.9	+0.4
	baz=313						
U56A	King	137.68	29	P	PKiKP	08 39 20.8	-0.6
	baz=323						
U56A				P	PKiKP	08 39 20.8	-0.6
	baz=323						
BRAL	Brewton	137.71	40	P	PKiKP	08 39 20.9	-0.7
	baz=311						
BRAL	Brewton	137.71	40	P	PKPdf	08 39 20.6	+1.0
	baz=311						
152A	Waverly Hall	138.12	36	P	PKPdf	08 39 21.3	+0.9
	baz=315						
PAULI	Pauline	138.15	32	P	PKiKP	08 39 21.9	-0.5
	baz=320						
KMSC	Kings Mountain	138.16	31	P	PKiKP	08 39 22.5	+0.1
	baz=321						
KMSC	Kings Mountain	138.16	31	P	PKPdf	08 39 20.9	+0.5
	baz=321						
HODGE	Hodges	138.37	33	P	PKiKP	08 39 22.6	-0.3
	baz=320						
T59A	Double "B" Far	138.45	25	P	PKiKP	08 39 22.6	-0.4
	baz=328						
T59A				P	PKiKP	08 39 22.6	-0.4
	baz=328						
V58A	Windy Hill, Pi	138.72	28	P	PKiKP	08 39 22.9	-0.7
	baz=325						
V58A				P	PKiKP	08 39 22.9	-0.7
	baz=325						
W57A	Gilead	138.82	29	P	PKiKP	08 39 23.1	-0.6
	baz=323						
W57A				P	PKiKP	08 39 23.1	-0.6
	baz=323						
HAW	Hawthorne Fire	139.38	33	P	PKiKP	08 39 24.0	-0.9
	baz=320						
TIGA	Tifton	139.67	37	P	PKiKP	08 39 25.1	-0.5
	baz=316						
NHSC	New Hope	140.34	32	P	PKiKP	08 39 26.6	-0.3
	baz=321						
PETF	Flores	143.26	61		PKPbc	08 39 27.2	-0.3
LMEL	Las Melosas	144.03	161		PKPbc	08 39 29.6	+0.2
MT13	San Alfonso	144.09	161		PKPbc	08 39 30.2	+0.6
MT02	Curacav	144.24	159		PKPab	08 39 29.7	+0.2
MT05	Renca	144.26	160	PKPdf	PKPab	08 39 29.4	-0.2
CO03	El Pedregal	146.58	158		PKPdf	08 39 36.4	+0.8
TGUH	Tegucigalpa,Un	146.67	64		PKPdf	08 39 36.5	+0.4
HDC	Heredia	150.97	69	*e*P	PKPdf	08 39 43.2	+0.1
CPUP	Villa Florida	153.82	179	PKPbc	PKiKP	08 39 55.4	+0.5
	comp=Z,3.6nm,0.6s,baz=199,slow=2.1,SNR=10.0						
CPUP				PKPab	PKPab	08 40 08.3	+0.2
	comp=Z,6.3nm,0.9s,baz=171,slow=4.5,SNR=6.8						
TULM	Tulcn-Chalpat	158.90	88	*e*P	PKPdf	08 39 56.0	+1.6
SJCC	San Jacinto, C	159.15	61	*e*P	PKPdf	08 39 55.0	+0.9
BBAC	Balboa, Cauca	159.36	84	*e*P	PKPdf	08 39 55.0	+0.4
JAMC	Jamundi, Valle	159.79	81	*e*P	PKPdf	08 39 55.6	+0.6
PLMC	San Jos del P	159.84	76	*e*P	PKPdf	08 39 55.8	+0.8
CBOC	Ciudad Bolivar	159.86	73	*e*P	PKPdf	08 39 55.3	+0.2
POPC	Popayan, Colom	159.87	83	*e*P	PKPdf	08 39 54.8	-0.4
ZARC	Zaragoza, Cauc	160.43	67	*e*P	PKPdf	08 39 55.6	+0.1
PTBC	PUERTO BERRIO,	161.13	70	*e*P	PKPdf	08 39 55.8	-0.5
SPBC	San Pablo de B	161.77	72	*e*P	PKPdf	08 39 57.0	0.0
BDFB	Brasilia	162.25	209	PKP	PKPdf	08 39 57.9	+0.5
	comp=Z,5.2nm,1.0s,baz=122,slow=6.4,SNR=4.0						
BDFB				PKPab	PKPab	08 40 45.8	+0.8
	comp=Z,5.0nm,0.7s,baz=202,slow=3.3,SNR=6.4						
CHIC	Chingaza	162.38	75	*e*P	PKPdf	08 39 58.0	-0.1
PAMC	Pamplona, Colo	162.46	65	*e*P	PKPdf	08 39 58.2	+0.1
RUSC	La Rusia	162.63	70	*e*P	PKPdf	08 39 58.0	-0.4
MACC	Macarena, Meta	162.73	83	*e*P	PKPdf	08 39 58.1	+0.2
PTGC	Puerto Gaitan,	164.03	75	*e*P	PKPdf	08 39 57.9	-1.2
BOAV	Boa Vista	175.50	58	*e*P	PKPdf	08 40 05.0	-0.8

TRN ***29*** *08:24:12.3, 10°.90N×62°.20W, h76^{km}, MD2.8*
FUNV ***29*** *08:24:13.1, 10°.90N×62°.24W, h30^{km}, MW3.1*
ISC 29 08:24:09.6±1.6**, 10°.81N**±0°.07×**62°.24W**±0°.05**, h99**^{km}±16^{km}**,**
n11, σ**1^{s}.66**/20**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.83	101	*e*P	Pn	08 24 29.8	+1.7
TRN				*e*S	Sn	08 24 41.1	-1.0
CRUV	Carupano	0.99	262	*e*P	Pn	08 24 30.8	+1.0
CRUV				*e*S	Sn	08 24 43.2	-1.8
GRGR	Grenville	1.43	23	*e*P	Pn	08 24 35.4	+0.5
GRGR				*e*S	Sn	08 24 52.9	-1.2
GRHS	Sauteurs	1.52	23	*e*P	Pn	08 24 36.5	+0.5
GRHS				*e*S	Sn	08 24 54.3	-1.7
TOSP	Speyside	1.74	74	*e*P	Pn	08 24 39.8	+1.1
TOSP				*e*S	Sn	08 25 00.5	-0.5
GCMP	Grenada, Carri	1.84	25	*e*P	Pn	08 24 41.2	+1.1
GCMP				*e*S	Sn	08 25 02.4	-1.0
PCRV	Puerto La Cruz	2.44	255	*e*P	Pn	08 24 50.7	+2.7
PCRV				*e*S	Sn	08 25 17.4	+0.1
CACV	CAICARA DEL OR	5.33	233	*e*P	Pn	08 25 24.2	-2.6
CACV				*e*S	Sn	08 26 17.3	-10
BENV	Beln	5.34	261	*e*P	Pn	08 25 29.1	+2.1
BENV				*e*S	Sn	08 26 25.8	-1.6
BAUV	El Baul	6.01	253	*e*P	Pn	08 25 37.3	+1.2
BAUV				*e*S	Sn	08 26 41.5	-2.1
BAUV	El Baul	6.01	253	*e*S	Sn	08 26 44.2	+0.7

IDC ***29*** *08:26:34.5±1.2, 56°.55N×162°.80E, h0^{km}, mb3.5/6, mbtmp3.5/6, Error ellipse: s-maj=45.6km s-min=23.8km az=170.0*
KRSC ***29*** *08:26:35.3±1.2, 56°.97N×163°.32E, h20^{km}±15^{km}, Ml4.2*
MOS ***29*** *08:26:38.7±0.7, 56°.93N×163°.14E, h30^{km}, mb3.8/1, Error ellipse: s-maj=16.8km s-min=5.6km az=64.8*
ISC 29 08:26:36.3±1.6**, 56°.98N**±0°.04×**163°.15E**±0°.04**, h5**^{km}±10^{km}**,**
n65, σ**1^{s}.32**/85**, mb3.7**/6**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBG	Krutoberegovo	0.77	199	PN	Pg	08 26 50.5	-0.4
KBG	Krutoberegovo	0.77	199	*e*P	Pg	08 26 50.5	-0.4
KBTR	Krutoberegovo	0.79	193	PN	Pg	08 26 51.3	-0.2
KBTR				S	Sg	08 27 02.1	+0.4
KBTR	Krutoberegovo	0.79	193	*e*P	Pg	08 26 51.3	-0.2
KBTR				*e*S	Sg	08 27 02.1	+0.4
SMKR	Semkarok	1.01	247	PN	Pg	08 26 55.2	-0.4
SMKR	Semkarok	1.01	247	*e*P	Pg	08 26 55.2	-0.4
SRKR	Sorokina	1.14	254	PN	Pg	08 26 57.2	-0.8
SRKR	Sorokina	1.14	254	*e*P	Pg	08 26 57.2	-0.8
KLY	Klyuchi	1.53	245	PN	Pn	08 27 01.9	-2.3
KLY				S	Sn	08 27 20.5	-3.9
KLY	Klyuchi	1.53	245	*e*P	Pn	08 27 01.9	-2.3
KLY				*e*S	Sn	08 27 20.5	-3.9
CIRR	Tsirk	1.58	238	PN	Pn	08 27 04.5	-0.6
CIRR				S	Sn	08 27 26.2	+0.2
CIRR	Tsirk	1.58	238	*e*P	Pn	08 27 04.5	-0.6
CIRR				*e*S	Sn	08 27 26.2	+0.2
LGNR	Loginova	1.63	238	*e*S	Sn	08 27 27.1	-0.2
BZGR	Bezymyannyi-Gr	1.71	234	PN	Pn	08 27 06.6	-0.3
BZGR				S	Sn	08 27 29.8	+0.7
BZGR	Bezymyannyi-Gr	1.71	234	*e*P	Pn	08 27 06.6	-0.3
BZGR				*e*S	Sn	08 27 29.8	+0.7
BZWR	Bezymyannyi-We	1.79	236	PN	Pn	08 27 07.6	-0.3
BZWR				S	Sn	08 27 31.6	+0.5
BZWR	Bezymyannyi-We	1.79	236	*e*P	Pn	08 27 07.6	-0.3
BZWR				*e*S	Sn	08 27 31.6	+0.5
BZP	Bezymyannyi-Pe	1.80	235	*e*P	Pn	08 27 07.6	-0.5
BZP				*e*S	Sn	08 27 32.0	+0.7
BZMR	Bezymyannaya	1.81	236	PN	Pn	08 27 08.1	-0.1
BZMR				S	Sn	08 27 32.3	+0.8
BZMR	Bezymyannaya	1.81	236	*e*P	Pn	08 27 08.1	-0.1
BZMR				*e*S	Sn	08 27 32.3	+0.8
KIRR	Kirishev	1.86	238	PN	Pn	08 27 08.7	-0.3
KIRR				S	Sn	08 27 32.5	-0.4
KIRR	Kirishev	1.86	238	*e*P	Pn	08 27 08.7	-0.3
KIRR				*e*S	Sn	08 27 32.5	-0.4
KPT	Kopyto	1.91	239	PN	Pn	08 27 09.4	-0.2
KPT				S	Sn	08 27 35.0	+1.0
KPT	Kopyto	1.91	239	*e*P	Pn	08 27 09.4	-0.2
KPT				*e*S	Sn	08 27 35.0	+1.0
SRDR	Sredinnyy	2.01	252	PN	Pn	08 27 10.9	+0.1
SRDR				S	Sn	08 27 36.3	0.0
SRDR	Sredinnyy	2.01	252	*e*P	Pn	08 27 10.9	+0.1
SRDR				*e*S	Sn	08 27 36.3	0.0
KMNR	Kamenistaya	2.03	234	PN	Pn	08 27 12.0	+0.8
KMNR				S	Sb	08 27 39.0	-0.2
KMNR	Kamenistaya	2.03	234	*e*P	Pn	08 27 12.0	+0.8
KMNR				*e*S	Sb	08 27 39.0	-0.2
OSSR	Ossora	2.28	359	PN	Pn	08 27 14.7	+0.2
OSSR	Ossora	2.28	359	*e*P	Pn	08 27 14.7	+0.2
TUMD	Tumrok D	2.35	222	*e*P	Pn	08 27 16.4	+0.9
BKI	Bering	2.38	137	PN	Pn	08 27 15.3	-0.6
BKI				S	Sn	08 27 43.5	-1.9
BKI	Bering	2.38	137	*e*P	Pn	08 27 15.3	-0.6
BKI				*e*S	Sn	08 27 43.5	-1.9
TUMR	Tumrok	2.39	226	PN	Pn	08 27 16.4	+0.3
TUMR	Tumrok	2.39	226	*e*P	Pn	08 27 17.5	+1.4
MKZ	Mys Kozlova	2.56	199	PN	Pn	08 27 17.7	-0.6
MKZ	Mys Kozlova	2.56	199	*e*P	Pn	08 27 17.7	-0.6
GNL	Ganaly	4.43	224	PN	Pn	08 27 45.2	+1.0
GNL	Ganaly	4.43	224	*e*P	Pn	08 27 45.2	+1.0
KRX	Arik	4.45	217	PN	Pn	08 27 46.6	+2.1
KRX	Arik	4.45	217	*e*P	Pn	08 27 46.6	+2.1
KRER	Koryakskii	4.46	216	PN	Pn	08 27 47.1	+2.4
KRER	Koryakskii	4.46	216	*e*P	Pn	08 27 47.1	+2.4
SMAR	Somma	4.48	216	PN	Pn	08 27 46.4	+1.4
SMAR	Somma	4.48	216	*e*P	Pn	08 27 46.4	+1.4
KOK	Koryaka	4.51	217	PN	Pn	08 27 47.1	+1.9
KOK	Koryaka	4.51	217	*e*P	Pn	08 27 47.1	+1.9
UGLR	Uglovaya	4.52	215	PN	Pn	08 27 46.2	+0.8
UGLR	Uglovaya	4.52	215	*e*P	Pn	08 27 46.2	+0.8
DALK	Dalny	4.69	214	PN	Pn	08 27 46.8	-0.9
DALK	Dalny	4.69	214	*e*P	Pn	08 27 46.8	-0.9
GRL	Gorelyy	5.32	216	PN	Pn	08 27 58.9	+2.5
GRL	Gorelyy	5.32	216	*e*P	Pn	08 27 58.9	+2.5
MTVR	Mutnovka	5.34	215	PN	Pn	08 27 58.3	+1.6
MTVR	Mutnovka	5.34	215	*e*P	Pn	08 27 58.3	+1.6
ILAR	Eielson Array	24.91	51	P	P	08 32 01.8	+2.0
	0.6nm,0.7s,baz=266,slow=8.7,SNR=9.8						
	0.6nm,0.7s						
H11N2	WAKE ISLAND Hy	37.30	174	T	T	09 12 37.2	
	baz=357,slow=76,SNR=56						
H11N3	WAKE ISLAND Hy	37.31	174	T	T	09 12 48.8	
	baz=357,slow=76,SNR=47						
H11N1	WAKE ISLAND Hy	37.31	174	T	T	09 12 41.7	
	baz=357,slow=76,SNR=53						
KURK	Kurchatov	47.23	300	P	P	08 35 10.0	+0.3
KURBB	Kurchatov Arra	47.33	300	P	P	08 35 10.0	-0.5
	1.1nm,0.6s,baz=53,slow=7.8,SNR=6.3						
	1.1nm,0.6s						
MKAR	Makanchi Array	48.10	294	P	P	08 35 15.6	-1.0
	0.2nm,0.4s,baz=53,slow=6.8,SNR=1.7						
	0.2nm,0.4s						
PDAR	Pinedale Array	54.19	65	P	P	08 36 04.5	+1.8
	0.3nm,0.7s,baz=343,slow=4.6,SNR=3.6						
	0.3nm,0.7s						
TXAR	Lajitas Array	67.59	71	P	P	08 37 35.5	+1.7
	0.5nm,0.8s,baz=316,slow=6.9,SNR=5.1						
	0.5nm,0.8s						
ASAR	Alice Springs	84.03	207	P	P	08 39 03.9	-3.6
	0.4nm,0.6s,baz=13,slow=8.1,SNR=4.6						
	0.4nm,0.6s						

HEL 29 08:30:57.0±0.2**, 62°.12N×25°.65E, h0**^{km}**, ML1.2,**
Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAF	Kangasniemi	0.31	91	PG	Pg	08 31 02.1	-0.8
KAF				SG	Sg	08 31 04.9	-2.0
KEF	Keuruu	0.37	278	PG	Pg	08 31 03.4	-0.7
KEF				SG	Sg	08 31 08.7	-0.1
FIA0	FINESS Array S	0.71	163	PG	Pg	08 31 08.8	-1.7
FIA0				MSG		08 31 19.1	
	comp=Z,1.9nm,0.2s						
FIA0				SG	Sg	08 31 19.6	0.0
PVF	Pernaja	1.58	176	PN	Pn	08 31 25.2	-1.0
	baz=353						
PVF				MSG		08 31 44.4	
	comp=Z,1.5nm,0.2s						
RUF	Ruokolahti	1.72	112	PG	Pn	08 31 28.0	-0.1
RUF				MSG		08 31 48.3	
	comp=Z,1.0nm,0.2s						
VJF	Virojoki	1.83	149	MSG		08 31 51.7	
	comp=Z,1.4nm,0.2s						
VJF				SN	Sn	08 31 54.0	+0.5
MEF	Metsahovi	2.00	198	MSG		08 31 56.6	
	comp=Z,1.6nm,0.2s						
MEF				SG	Sb	08 31 58.7	-0.9
RAF	Rauma	2.16	241	PG	Pn	08 31 35.3	+1.1
RAF				MSG		08 32 01.0	
	comp=Z,2.5nm,0.2s						
RAF				SG	Sb	08 32 03.8	-0.3
OUF	Merijarvi	2.30	350	PG	Pb	08 31 37.8	-1.5
OUF				MSG		08 32 04.9	
	comp=Z,0.6nm,0.2s						
OUF				SG	Sb	08 32 07.9	-0.2
OBF8	Ulkokalla	2.44	337	MSG		08 32 09.0	
	comp=Z,0.9nm,0.2s						
OBF8				SG	Sb	08 32 11.8	-0.3
JOF	Joensuu	2.75	70	PB	Pb	08 31 44.7	-2.2
	baz=252						
JOF				SB	Sb	08 32 19.6	-1.5
RMF	Romuvaara	2.87	41	MSG		08 32 21.2	
	comp=Z,0.7nm,0.2s						
RMF				SG	Sb	08 32 24.1	-0.4
MSF	Maaselka	4.09	20	SG	Sb	08 33 01.0	+1.3
RNF	Rovaniemi	4.51	2	SB	Sb	08 33 07.1	-4.7
ERTU	Ertsjaerv	4.70	343	SB	Sb	08 33 15.6	-1.7

IDC ***29*** *08:38:53.0±1.1, 12°.24N×143°.85E, h0^{km}, mb3.5/6, mbtmp3.5/6, Error ellipse: s-maj=47.7km s-min=19.0km az=117.0*
ISC 29 08:38:56.9±1.0**, 12°.2N**±0°.2×**143°.9E**±0°.3**, h26**^{km}**, n10,**
σ**0^{s}.93**/8**, mb3.5**/6**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.63	33	Pn	Pn	08 39 24.4	+0.4
	100nm,0.3s,baz=31,slow=5.3,SNR=43						
GUMO				Sn	Sb	08 39 46.0	-0.5
	98nm,0.3s,baz=204,slow=22,SNR=12						
H11S3	WAKE ISLAND Hy	22.79	71	T	T	09 07 45.5	
	baz=258						
H11S1	WAKE ISLAND Hy	22.80	71	T	T	09 07 45.5	
	baz=258						
H11S2	WAKE ISLAND Hy	22.80	71	T	T	09 07 43.9	
	baz=258,SNR=3.9						
WRA	Warramunga Arr	33.33	197	P	P	08 45 32.3	-0.6
	0.4nm,0.7s,baz=16,slow=9.4,SNR=2.3						
	0.4nm,0.7s						
ASAR	Alice Springs	36.99	195	P	P	08 46 04.9	+0.4
	0.2nm,0.7s,baz=16,slow=11,SNR=1.8						
	0.2nm,0.7s						
MKAR	Makanchi Array	61.85	317	P	P	08 49 14.8	+0.8
	0.2nm,0.5s,baz=103,slow=8.4,SNR=2.9						
	0.2nm,0.5s						
ILAR	Eielson Array	70.18	25	P	P	08 50 07.0	-0.1
	0.4nm,0.8s,baz=239,slow=5.8,SNR=4.0						
	0.4nm,0.8s						
YKA	Yellowknife Ar	84.48	27	P	P	08 51 28.0	+0.7
	0.1nm,0.5s,baz=284,slow=4.9,SNR=5.0						
	0.1nm,0.5s						
FINES	FINESS Array B	92.01	335	P	P	08 52 01.9	-1.4
	0.6nm,0.4s,baz=49,slow=5.8,SNR=6.9						
	0.6nm,0.4s						

IDC ***29*** *08:42:53.4±2.0, 13°.06S×168°.81E, h0^{km}, mb3.6/4, mbtmp3.8/5, ML4.2/1, Error ellipse: s-maj=66.3km s-min=30.7km az=124.0*
NOU ***29*** *08:43:18.1, 14°.22S×167°.28E, h124^{km}, MLv4.8/11, Vanuatu Islands*
ISC 29 08:42:56.0±1.6**, 13°.0S**±0°.2×**168°.5E**±0°.2**, h10**^{km}**, n10,**
σ**1^{s}.47**/10**, mb3.5**/4**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIFNC	LIFOU	7.87	188	P	Pn	08 44 51.3	+0.8
KOUNC	Koumac, New Ca	8.55	207	P	Pn	08 44 57.5	-2.4
YATNC	Mamie plateau,	9.18	189	P	Pn	08 45 08.2	-0.3
DZM	Mont Dzumac	9.27	192	Pn	Pn	08 45 08.9	-1.0
	2.7nm,0.3s,baz=312,slow=7.8,SNR=46						
DZM				Sn	Sn	08 46 34.5	-20
	7.4nm,0.3s,baz=129,slow=21,SNR=9.3						
	18nm,0.3s						
ONTNC	Ouen Toro	9.50	191	P	Pn	08 45 12.3	-0.6
OUENC	Ouen Island, N	9.54	189	P	Pn	08 45 13.5	0.0
STKA	Stephens Creek	31.03	228	P	P	08 49 13.8	-0.3
	1.6nm,0.4s,baz=53,slow=9.1,SNR=11						
	1.6nm,0.4s						
WRA	Warramunga Arr	33.41	253	P	P	08 49 37.5	+2.3
	0.3nm,0.7s,baz=86,slow=8.9,SNR=1.8						
	0.3nm,0.7s						
ASAR	Alice Springs	34.41	247	P	P	08 49 45.0	+1.1
	0.3nm,0.5s,baz=75,slow=9.2,SNR=6.8						
	0.3nm,0.5s						
ILAR	Eielson Array	84.49	18	P	P	08 55 27.8	-1.0
	0.2nm,0.5s,baz=233,slow=5.5,SNR=4.3						
	0.2nm,0.5s						

IDC ***29*** *08:47:27.1±1.4, 16°.75N×85°.89W, h0^{km}, mb3.9/7, mbtmp4.0/10, ML4.0/3, MS3.5/11, Error ellipse: s-maj=28.7km s-min=23.9km az=82.0*
NEIC ***29*** *08:47:28.9±1.9, 16°.80N±0°.06×85°.96W±0°.06, h10^{km}±2^{km}, mb4.4/65, Error ellipse: s-maj=10.8km s-min=10.2km az=156.0*
INET ***29*** *08:47:31.8±0.9, 16°.79N×86°.01W, h32^{km}±999^{km}, ML4.5*
SNET ***29*** *08:47:31.5±1.3, 16°.88N×86°.17W, h35^{km}±142^{km}, ML3.8*
ISC 29 08:47:30.5±0.6**, 16°.78N**±0°.05×**85°.96W**±0°.05**, h29**^{km}**, n124,**
σ**1^{s}.51**/96**, mb4.3**/14**, MS3.5**/6**, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGUH	Tegucigalpa,Un	2.99	205	Pn	Pn	08 48 16.8	+0.7
TGUH	Tegucigalpa,Un	2.99	205	*e*P	Pn	08 48 16.8	+0.7
TGUH				*e*S	Sn	08 48 51.9	+0.8
TGUH	Tegucigalpa,Un	2.99	205	*e*P	Pn	08 48 16.7	+0.6
FAGO	Alcalda de S	3.70	214	*e*P	Pn	08 48 25.9	+0.1
FAGO				IAML		08 49 28.5	
	comp=Z,127nm,0.5s						
PETF	Flores	3.74	273		Pn	08 48 26.1	-0.2
PETF	Flores	3.74	273	*e*P	Pn	08 48 26.3	0.0
MATN	Matagalpa	3.83	179		Pn	08 48 27.9	+0.2
MATN	Matagalpa	3.83	179	*e*P	Pn	08 48 27.6	0.0
P5NO	Presa 5 de nov	3.87	224	*e*P	Pn	08 48 28.5	+0.4
CNCH	Conchagua	3.93	208	*e*P	Pn	08 48 29.2	+0.3
ESQI	Esquipulas	3.93	236		Pn	08 48 29.8	+0.7
ESQI	Esquipulas	3.93	236	*e*P	Pn	08 48 29.6	+0.5
ESQI				*e*S	Sn	08 49 14.0	-0.4
PQSS	Presa 15 de Se	4.02	219	*e*P	Pn	08 48 30.4	+0.3
SCLA	Alcaldia de Sa	4.06	221	*e*P	Pn	08 48 31.7	+0.9
TEIG	Tepich	4.07	328	Pn	Pn	08 48 30.7	-0.1
TEIG	Tepich	4.07	328	*e*P	Pn	08 48 30.6	-0.2
COEB	Comit de Eme	4.10	218	*e*P	Pn	08 48 32.0	+0.6
COEB				IAML		08 49 39.1	
	comp=Z,162nm,0.5s						
CRIN	San Cristobal	4.19	195		Pn	08 48 33.5	+0.8
CRIN	San Cristobal	4.19	195	*e*P	Pn	08 48 33.4	+0.8
SJTE	Alcalda de S	4.31	223	*e*P	Pn	08 48 34.9	+0.7
CNGN	Cerro Negro	4.32	190		Pn	08 48 35.1	+0.8
BOAB	BOACO BROADBAN	4.32	176	Pn	Pn	08 48 34.4	+0.2
BOAB	BOACO BROADBAN	4.32	176	*e*P	Pn	08 48 34.5	+0.2
HUEN		4.42	183	*e*P	Pn	08 48 36.7	+1.0
JAYA	Jayaque - finc	4.58	228	*e*P	Pn	08 48 38.5	+0.5
MGAN	Managua	4.62	183	*e*P	Pn	08 48 35.8	-2.6
ESPN	Las Esperanzas	4.84	160		Pn	08 48 42.3	+0.9
ACON	Acoyapa	4.85	171		Pn	08 48 41.4	-0.1
ACON	Acoyapa	4.85	171	*e*P	Pn	08 48 41.5	-0.1
FSCY	Frank Sound, G	5.20	60	*e*P	Pn	08 48 34.4	-12
FSCY				*e*S	Sn	08 49 27.3	-18
HUEH	Huehuetenango	5.52	255		Pn	08 48 51.3	+0.3
HUEH	Huehuetenango	5.52	255	*e*P	Pn	08 48 51.4	+0.4
HUEH				*e*S	Sn	08 49 52.5	-1.2
PRVC	Isla de Provid	5.59	127	Pn	Pn	08 48 50.3	-1.4
CCIG	Comitan	5.94	266	Pn	Pn	08 48 57.2	+0.5
JTS	Las Juntas de	6.53	171	Pn	Pn	08 49 05.4	+0.7
	comp=Z,2.1nm,0.3s,baz=3.3,slow=12,SNR=12						
JTS				Sn	Sn	08 50 17.4	-0.8
	comp=Z,3.0nm,0.3s,baz=321,slow=22,SNR=7.5						
JTS				Lg	Lg	08 50 44.9	
	comp=Z,3.3nm,0.3s,baz=195,slow=15,SNR=5.5						
	comp=Z,5.7nm,0.4s						
JTS	Las Juntas de	6.53	171	Pn	Pn	08 49 05.2	+0.5
SOR	Soroa	6.59	24	Pn	Pn	08 49 04.9	-0.7
SOR	Soroa	6.59	24	*e*P	Pn	08 49 05.8	+0.2
MGV	Manicaragua	7.74	46	*e*P	Pn	08 49 18.7	-2.6
MGV				*e*S	Sn	08 50 37.9	-10
MTDJ	Mount Denham	8.17	79	Pn	Pn	08 49 26.8	-0.5
MTDJ	Mount Denham	8.17	79	*e*P	Pn	08 49 24.9	-2.4
CMIG	Matias Romero	8.54	273	Pn	Pn	08 49 31.3	-1.1

	comp=Z,1.4nm,0.3s,baz=124,slow=10.0,SNR=17						
CMIG				Sn	Sn	08 51 10.1	+2.3
	comp=Z,2.6nm,0.3s,baz=220,slow=20,SNR=4.7						
CMIG				LR	LR	08 53 09.4	
	comp=Z,528nm,20.1s,baz=112,slow=40						
	comp=Z,2.6nm,0.3s						
CCCC	Cccc	8.91	59	*e*P	Pn	08 49 41.7	+4.4
LMGC	Las Mercedes	9.11	68	*e*P	Pn	08 49 39.3	-0.8
BCIP	Isla Barro Col	9.64	141	Pn	Pn	08 49 45.8	-1.5
061Z	Ochoppi	10.19	27	Pn	Pn	08 49 53.5	-1.3
HLGC	Holguin	10.23	65	*e*P	Pn	08 49 56.9	+1.5
RCC	Rio Carpintero	10.26	70	*e*P	Pn	08 49 54.6	-1.2
GTBY	Guantanamo Bay	10.77	71	*e*P	Pn	08 50 01.7	-1.1
060A	Indiantown	11.45	26		Pn	08 50 12.4	+0.3
DWPF	Disney Wildern	12.02	20		Pn	08 50 20.2	+0.2
553A	Crawfordville	13.42	6	Pn	Pn	08 50 37.0	-2.0
456A	Hilliard	14.34	14		Pn	08 50 49.3	-2.2
URIC	Uribia, Colomb	14.45	109	Pn	Pn	08 50 51.0	-2.2
352A	Blakely	14.66	4		Pn	08 50 53.7	-2.3
250A	Grady	15.13	359		Pn	08 51 01.0	-1.3
255A	Hazlehurst	15.41	11		Pn	08 51 04.7	-1.2
HBVL	Hebbronville	15.60	313	Pn	Pn	08 51 07.6	-0.8
HBVL				IAmb	IAmb	08 51 32.8	
	comp=Z,23nm,1.1s						
146A	Union	16.03	351	Pn	Pn	08 51 13.7	-0.3
LRAL	Lakeview Retre	16.21	357	Pn	Pn	08 51 16.4	+0.2
LRAL				IAmb	IAmb	08 51 30.3	
	comp=Z,10.0nm,0.5s						
Z47A	Carrollton	16.46	354	IAmb	IAmb	08 51 30.9	
	comp=Z,17nm,0.7s						
ROSC	El Rosal	16.47	135	LR	LR	08 57 47.0	
	comp=Z,111nm,21.4s,baz=58,slow=38						
Z51A	Franklin	16.48	2	IAmb	IAmb	08 51 23.1	
	comp=Z,31nm,0.8s						
SDV	Santo Domingo	16.87	116	LR	LR	08 59 07.5	
	comp=Z,82nm,20.9s,baz=268,slow=42						
833A	Chaparral WMA,	16.89	315		Pn	08 51 23.6	-1.3
Y49A	Blount Mountai	17.01	359	P	Pn	08 51 26.9	+0.6
Y52A	Lilburn	17.09	5	P	Pn	08 51 28.2	+0.8
435B	Jarrell	17.51	325	P	P	08 51 35.3	+1.8
HNDO	Hondo	17.61	318	Pn	Pn	08 51 32.1	-1.8
HNDO				IAmb	IAmb	08 51 37.9	
	comp=Z,58nm,0.4s						
X48A	Hartselle	17.62	357	P	P	08 51 36.2	+1.5
HODGE	Hodges	17.69	10	P	Pn	08 51 33.6	-1.2
OXF	Oxford	17.92	351	IAmb	IAmb	08 51 42.7	
	comp=Z,23nm,0.9s						
JSC	Jenkinsville	17.93	13	IAmb	IAmb	08 51 40.8	
	comp=Z,14nm,0.4s						
PLAL	Pickwick Lake	18.22	354	P	P	08 51 42.5	+1.1
W52A	Murphy	18.33	5	IAmb	IAmb	08 51 46.7	
	comp=Z,15nm,0.8s						
BG3	Lake Jocassee	18.34	8	IAmb	IAmb	08 51 47.4	
	comp=Z,27nm,1.3s						
W50A	Signal Mountai	18.35	2	IAmb	IAmb	08 51 48.1	
	comp=Z,12nm,0.5s						
SWET	Sewanee	18.36	0	P	P	08 51 43.3	+0.4
JCT	Junction City	18.59	320	P	Pn	08 51 46.4	+0.4
JCT				IAmb	IAmb	08 52 12.9	
	comp=Z,18nm,0.6s						
FW13	Cleburne	18.66	328	IAmb	IAmb	08 52 02.1	
	comp=Z,28nm,0.6s						
X58A	Rowland	18.67	17	IAmb	IAmb	08 51 59.7	
	comp=Z,18nm,0.7s						
KMSC	Kings Mountain	18.75	12	IAmb	IAmb	08 51 59.9	
	comp=Z,14nm,0.8s						
V48A	Smith Brothers	18.90	358	IAmb	IAmb	08 51 55.4	
	comp=Z,14nm,0.5s						
TKL	Tuckaleechee C	18.90	6	P	Pn	08 51 50.9	+1.3
	comp=Z,0.7nm,0.3s,baz=173,slow=13,SNR=9.9						
TKL				S	Sn	08 55 06.1	-14
	comp=Z,8.8nm,0.7s,baz=81,slow=3.7,SNR=7.9						
TKL				LR	LR	08 59 29.7	
	comp=Z,139nm,18.3s,baz=218,slow=38						
	comp=Z,12nm,0.7s						
TKL	Tuckaleechee C	18.90	6	IAmb	IAmb	08 51 53.4	
	comp=Z,21nm,1.1s						
SJG	San Juan	18.95	83	LR	LR	08 58 25.8	
	comp=Z,151nm,20.9s,baz=256,slow=35						
V51A	Loudon	19.00	4	IAmb	IAmb	08 51 53.5	
	comp=Z,15nm,0.8s						
V53A	Saluda	19.02	8	IAmb	IAmb	08 52 05.8	
	comp=Z,16nm,0.9s						
WVT	Waverly	19.34	355	P	P	08 51 54.5	+0.9
FW03	Perrin-Whitt E	19.53	328	IAmb	IAmb	08 51 59.6	
	comp=Z,35nm,0.7s						
U54A	Nelsons Funny	20.00	10	IAmb	IAmb	08 52 05.3	
	comp=Z,12nm,0.8s						
ABTX	Abilene, Hawle	20.05	324	IAmb	IAmb	08 52 13.1	
	comp=Z,27nm,1.1s						
T47A	Sharon Grove	20.15	357	IAmb	IAmb	08 52 12.1	
	comp=Z,19nm,0.7s						
TXAR	Lajitas Array	20.49	311	P	Pn	08 52 08.7	0.0
	comp=Z,9.8nm,0.8s,baz=133,slow=10,SNR=93						
TXAR				S	S	08 55 45.6	-8.8
	comp=Z,0.4nm,0.3s,baz=115,slow=21,SNR=5.3						
	comp=Z,9.8nm,0.8s						
TXAR	Lajitas Array	20.49	311	P	P	08 52 06.5	+0.1
TX31	Lajitas Ar. Si	20.49	311	P	P	08 52 07.7	+1.3
TX32	Lajitas Array	20.49	311	IAmb	IAmb	08 52 09.5	
	comp=Z,11nm,0.8s						
S51A	Beattyville	20.88	5	P	P	08 52 10.7	+0.3
S51A				IAmb	IAmb	08 52 15.9	
	comp=Z,17nm,1.0s						
T57A	Hurt	20.99	15	P	P	08 52 13.3	+1.8
T57A				IAmb	IAmb	08 52 14.4	
	comp=Z,16nm,1.1s						
WMOK	Wichita Mounta	21.25	330	P	P	08 52 15.3	+0.9
WCI	Wyandotte Cave	21.37	359	P	P	08 52 15.8	+0.3
WCI				IAmb	IAmb	08 52 17.7	
	comp=Z,13nm,0.7s						
ODSA	Odessa	21.43	318	P	P	08 52 16.4	0.0
ODSA				IAmb	IAmb	08 52 18.4	
	comp=Z,20nm,0.6s						
POST	Post	21.43	322	P	P	08 52 16.7	+0.2
POST				IAmb	IAmb	08 52 22.6	
	comp=Z,30nm,0.8s						
R50A	Paris	21.47	4	P	P	08 52 18.2	+1.5
S57A	Dark Hollow, R	21.79	15	IAmb	IAmb	08 52 32.9	
	comp=Z,17nm,0.9s						
MSTX	Muleshoe	22.82	322	IAmb	IAmb	08 53 15.1	
	comp=Z,12nm,0.7s						
CPRX	Cap Rock	22.86	318	P	P	08 52 33.3	+1.5
LPIG	La Paz	23.92	292	LR	LR	09 01 44.3	
	comp=Z,217nm,18.1s,baz=36,slow=36						
ATAH	Atahualpa	24.92	162	LR	LR	09 01 41.9	
	comp=Z,170nm,18.3s,baz=339,slow=34						
121A	Cookes Peak, D	25.20	312	IAmb	IAmb	08 53 22.4	
	comp=Z,4.6nm,0.7s						
ANMO	Albuquerque	25.74	319	P	P	08 53 00.6	+1.8
	comp=Z,3.0nm,1.0s,baz=236,slow=10.0,SNR=13						
	comp=Z,3.0nm,1.0s						
ANMO	Albuquerque	25.74	319	P	P	08 52 59.0	+0.2
W18A	Petrified Fore	27.99	315	IAmb	IAmb	08 53 40.8	
	comp=Z,7.4nm,0.8s						
SADO	Sadowa	28.49	10	LR	LR	09 04 50.2	
	comp=Z,102nm,18.8s,baz=302,slow=37						
PDAR	Pinedale Array	32.80	327	P	P	08 54 02.8	+1.2
	comp=Z,0.4nm,0.8s,baz=135,slow=13,SNR=2.8						
PDAR				LR	LR	09 09 24.0	
	comp=Z,82nm,18.5s,baz=168,slow=40						
	comp=Z,0.4nm,0.8s						
TPNV	Topopah Spring	33.44	313	IAmb	IAmb	08 54 10.8	
	comp=Z,5.6nm,1.1s						
MDP	Montagnes des	34.65	106	LR	LR	09 08 13.7	
	comp=Z,74nm,21.8s,baz=308,slow=36						
NV11	Mina Array Sit	35.48	314	P	P	08 54 25.1	+0.3
NV11				IAmb	IAmb	08 54 27.9	
	comp=Z,13nm,1.5s						
NVAR	Mina Array Bea	35.58	314	P	P	08 54 28.4	+2.7
	comp=Z,2.8nm,0.8s,baz=119,slow=9.9,SNR=19						
	comp=Z,2.8nm,0.8s						
NVAR	Mina Array Bea	35.58	314	P	P	08 54 26.4	+0.6
KVN	Kaiserville	35.74	315	IAmb	IAmb	08 54 30.1	
	comp=Z,3.7nm,0.9s						
SCHQ	Schefferville	40.74	17	P	P	08 55 09.2	+0.5
	comp=Z,3.4nm,0.7s,baz=232,slow=13,SNR=6.3						
SCHQ				LR	LR	09 12 33.3	
	comp=Z,100nm,19.2s,baz=217,slow=37						
	comp=Z,3.4nm,0.7s						
YKA	Yellowknife Ar	49.87	343	P	P	08 56 20.7	-0.2
	comp=Z,0.8nm,0.9s,baz=142,slow=7.8,SNR=15						
	comp=Z,0.8nm,0.9s						
ILAR	Eielson Array	62.69	335	P	P	08 57 53.5	+1.2
	comp=Z,0.5nm,0.7s,baz=127,slow=6.0,SNR=7.7						
	comp=Z,0.5nm,0.7s						

KLM ***29*** *08:54:53, 2.°18S×128.°67E, h10^{km}, mb5.4*

IDC ***29*** *08:54:55.1±0.4, 2.°28S×127.°94E, h0^{km}, mb4.8/32, mbtmp4.8/33, ML4.9/1, MS4.4/46, Error ellipse: s-maj=17.8km s-min=10.0km az=73.0*

MOS ***29*** *08:54:55.1±0.9, 2.°27S×128.°00E, h17^{km}, mb5.1/27, MS4.5/4, Error ellipse: s-maj=12.1km s-min=5.2km az=113.2*

NEIC ***29*** *08:54:57.2±2.9, 2.°13S±0.°06×128.°04E±0.°07, h10^{km}±1^{km}, mb4.9/81, Error ellipse: s-maj=12.1km s-min=8.5km az=238.0*

DJA ***29*** *08:54:58.1±0.3, 2°S±2°×12°8E±°, h16^{km}±2^{km}, M5.3/70, mb5.3/70, mB5.8/42, MLv5.3/19, Mw5.1/864, Mw(mB)5.3/42, MwMwp4.9/11, Mwp5.2/11*

BJI ***29*** *08:54:59.8±0.0, 2.°10S×128.°10E, h30^{km}, mb5.1/69, mB5.2/49, Ms4.7/56, Ms7 4.5/56*

GCMT ***29*** *08:55:00.2±0.2, 2.°15S±0.°01×127.°97E±0.°01, h13^{km}±1km, MW5.2/120, Moment Tensor Solution. s39,c46; s120,c172; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.02±.18; M$_{\theta\theta}$4.81±.19; M$_{\phi\phi}$-4.84±.19; M$_{r\theta}$2.94±.54; M$_{\theta\phi}$3.82±.15; M$_{\phi r}$1.69±.45; Best double couple: M$_0$6.92600×10^{16} NP1:φ$_s$24.00000°, δ78.00000°, λ158.00000°. NP2:φ$_s$119.00000°, δ68.00000°, λ13.00000°. Principal axes: T 7.6090, Plg24.0000°, Azm340.0000°; N -1.3710, Plg65.0000°, Azm177.0000°; P -6.2430, Plg7.0000°, Azm73.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 08:54:59.6±0.3**, 2.°28S**±0.°03×**128.°05E**±0.°04**, h32^{km}, n423,** σ**1^{s}64**/430**, mb5.0**/104**, MS4.5**/72**, 22C-25D, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLAI	Namlea	1.35	225	P	Pn	08 55 21.1	-1.1
MSAI	Masohi	1.37	140	P	Pb	08 55 25.2	+0.4
AAI	Ambon	1.40	174	P	Pb	08 55 24.7	-0.6
LBMI	Labuha	1.72	341	P	Pn	08 55 26.1	-1.3
SANI	Sanana	2.08	276	P	Pn	08 55 29.0	-3.3
SANI	Sanana	2.08	276	P	Pn	08 55 28.5	-3.8
BNDI	Bandanaira	2.89	140	P	Pn	08 55 45.9	+2.4
BNDI	Bandanaira	2.89	140	P	Pn	08 55 45.4	+1.9
TNTI	Ternate	3.11	347	Pn	Pn	08 55 46.2	-0.3
TNTI	Ternate	3.11	347	P	Pn	08 55 47.4	+0.9
TNTI	Ternate	3.11	347	P	Pn	08 55 46.2	-0.3
SIJI	Sorong	3.50	66	Pn	Pn	08 55 51.5	-0.5
	100nm,0.3s,baz=264,slow=7.9,SNR=126						
SIJI				Sn	Sn	08 56 31.6	-0.8
	146nm,0.3s,baz=40,slow=23,SNR=14						
SIJI				LR	LR	08 58 01.1	
	comp=Z,16µm,20.4s,baz=272,slow=52						
	433nm,0.5s						
FAKI	Fak Fak	4.24	99	Pn	Pn	08 56 01.5	-0.5
FAKI	Fak Fak	4.24	99	P	Pn	08 56 02.2	+0.1
FAKI	Fak Fak	4.24	99	P	Pn	08 56 01.3	-0.8
LUWI	Luwuk	5.42	283		Pn	08 56 16.4	-1.9
LUWI	Luwuk	5.42	283	P	Pn	08 56 16.3	-2.0
	471nm,0.7s,6µm8µm5.7nm						
RKPI	Ransiki, Papua	6.17	83	P	Pn	08 56 28.1	-0.5
	392nm,0.6s,17µm6µm4.3nm						
SAUI	Saumlaki	6.52	150	Pn	Pn	08 56 37.1	+3.6
SAUI	Saumlaki	6.52	150	P	Pn	08 56 36.8	+3.4
	2µm,1.1s,14µm4.5nm						
MRSI	Marisa	6.70	294	P	Pn	08 56 34.9	-0.9
	247nm,0.5s,4µm3.4nm						
TOLI2	Tolitoli	8.01	295	Pn	Pn	08 56 52.4	-1.5
TOLI2	Tolitoli	8.01	295	P	Pn	08 56 52.6	-1.3
SRPI	Serui, Papua	8.19	87	P	Pn	08 56 55.9	-0.5
	112nm,0.5s						
SOEI	Soe	8.32	207		Pn	08 57 00.6	+2.3
SOEI	Soe	8.32	207	P	Pn	08 57 01.2	+2.9
	244nm,1.6s,7µm						
SPSI	Sidrap Palu	8.44	258	P	Pn	08 57 00.4	+0.6
	177nm,0.6s,4µm5µm						
BSSI	Bau Bau, Buton	8.46	243	P	Pn	08 57 01.1	+1.0
	146nm,0.6s,3µm4µm						
BKSI	Bulukumba	8.47	249	P	Pn	08 57 02.7	+2.5
	421nm,1.1s,8µm4µm						
MPSI	Mapaga	8.56	288	P	Pn	08 56 59.9	-1.5
	133nm,0.8s,1µm3µm						
MMRI	Maumere	8.56	222	P	Pn	08 57 03.2	+1.7
	127nm,1.0s,3µm4µm						
KAPI	Kappang	8.72	252	Pn	Pn	08 57 05.9	+2.3
	38nm,0.3s,baz=95,slow=6.1,SNR=151						
KAPI				Sn	Sn	08 58 41.5	+0.6
	2.2nm,0.3s,baz=260,slow=23,SNR=1.0						
KAPI				LR	LR	09 01 07.0	
	comp=Z,3µm,20.7s,baz=76,slow=43						
KAPI	Kappang	8.72	252	Pn	Pn	08 57 04.2	+0.6
KAPI	Kappang	8.72	252	*d i*P	Pn	08 57 06.5	+2.9
SKMP	Bagumbayan, Su	9.42	338	⇑*e*P	Pn	08 57 12.9	-0.3
KCP	Kidapawan	9.69	342	⇑*i*P	Pn	08 57 18.1	+1.1
CTBH	Cotabato--PC H	10.18	338	⇑*e*P	Pn	08 57 25.0	+1.4
SMPI	Sarmi	10.65	89	P	Pn	08 57 29.7	-0.4
	88nm,1.1s						
MTN	Manton Dam	10.93	164	P	Pn	08 57 32.7	-1.2
	baz=11,SNR=9.1						
MTN	Manton Dam	10.93	164	Pn	Pn	08 57 33.8	-0.1
MTN	Manton Dam	10.93	164	P	Pn	08 57 35.4	+1.5
SMKI	Samarinda	10.99	279	P	Pn	08 57 35.0	+0.2
	275nm,0.6s						
PAGZ	Pagadian	11.09	335	⇓*e*P	Pn	08 57 35.9	-0.2
KDU	Kakadu	11.23	157	P	Pn	08 57 37.8	-0.1
	baz=11,SNR=5.8						
MYLDM	Lahad Datu	12.08	308	Pn	Pn	08 57 49.8	+0.1
GENI	Genyem	12.11	92	P	Pn	08 57 50.6	+0.5
	245nm,1.3s,4µm						
PLAI	Plampang	12.12	237	P	Pn	08 57 49.3	-0.9
PLAI	Plampang	12.12	237	P	Pn	08 57 51.5	+1.3
	124nm,0.9s,2µm						
TBP	Tagbilaran	12.60	341	*e*P	P	08 58 07.8	-0.1
BBKI	Banjar Baru	13.25	265	P	Pn	08 58 06.4	+0.7
	146nm,1.3s,11µm						
KNRA	Kununurra	13.33	177	P	Pn	08 58 06.6	-0.1
	baz=13,SNR=17						
KNRA	Kununurra	13.33	177	Pn	Pn	08 58 06.7	0.0
KNRA	Kununurra	13.33	177	P	Pn	08 58 06.1	-0.6
SPMM	Sapulut	13.50	301	P	Pn	08 58 08.0	-1.1
IGBI	Denpasar	14.39	243	P	Pn	08 58 21.8	+0.6
	133nm,1.4s,3µm						
KKM	Kota Kinabalu	14.43	305	Pn	Pn	08 58 20.0	-1.9
ABJI	Asem Bagus	14.81	248	P	Pn	08 58 27.8	+0.9
	356nm,1.2s,5µm						
JAGI	Jajag, Banyuwa	15.14	246	Pn	Pn	08 58 32.2	+0.9
JAGI	Jajag, Banyuwa	15.14	246	P	Pn	08 58 33.5	+2.2
JAGI	Jajag, Banyuwa	15.14	246	P	Pn	08 58 32.7	+1.4
	257nm,1.2s,4µm						
BLJI	Banyuglugur	15.39	249	P	P	08 58 37.4	-1.5
	372nm,1.3s						
GMJI	Gumukmas	15.71	247	P	Pn	08 58 39.5	+0.7
	216nm,2.1s,4µm						
BWJI	Bawean	15.76	257	P	P	08 58 45.0	+2.0
	318nm,1.8s						
FITZ	Fitzroy Crossi	15.90	188	Pn	Pn	08 58 41.7	+0.6
GRJI	Gresik	16.19	253	P	P	08 58 49.5	+1.7
	223nm,0.9s,4µm						
PVCP	Virac	16.24	346	⇑*e*P	P	08 58 47.9	-0.5
SBUM	Sibu	16.51	286	Pn	Pn	08 58 47.8	-1.2
TBJI	Tambak Boyo	16.77	254	P	P	08 58 53.9	-0.3
	266nm,1.5s,6µm						
PWJI	Pagerwojo	17.15	250	P	P	08 58 59.2	+0.7
	121nm,1.9s,5µm						
NGJI	Ngawi	17.28	252	P	P	08 59 03.4	+3.5
	302nm,1.3s,8µm						
JCNP	Jose Panganiba	17.30	342	⇑*e*P	Pn	08 58 57.9	-1.0
LQP	Lukban	17.52	339	⇑*e*P	Pn	08 58 57.4	-4.4
UWJI	Ujung Watu	17.54	256	P	P	08 59 05.1	+2.3
	155nm,1.1s						
LUBP	Lubang	17.70	334	⇓*e*P	Pn	08 59 02.4	-1.3
MACP	Maragondon, Ca	17.97	336	⇑*e*P	Pn	08 59 02.7	-4.5
SMRI	Semarang	18.18	254	P	P	08 59 10.9	+1.1
SMRI	Semarang	18.18	254	P	P	08 59 11.1	+1.3
	295nm,1.1s						
QVP	Quezon City--P	18.19	338	⇓*e*P	Pn	08 59 09.6	-0.2
UGM	Wanagama	18.33	252	P	P	08 59 10.8	-0.7
UGM	Wanagama	18.33	252	P	Pn	08 59 13.5	+1.9
	277nm,1.8s						
WB0	Warramunga Arr	18.45	161	P	P	08 59 11.0	-1.8
WB0				IAmb	IAmb	08 59 37.8	
	comp=Z,124nm,1.1s						
WRAB	Tennant Creek	18.59	161	P	P	08 59 12.7	-1.6
WRAB	Tennant Creek	18.59	161	*de*P	P	08 59 13.9	-0.4
WRAB				pmax	pmax		
	comp=Z,46nm,1.1s						
WRA	Warramunga Arr	18.60	161	P	P	08 59 11.9	-2.5
	comp=Z,12nm,0.5s,baz=340,slow=12,SNR=129						
WRA				S	Sn	09 02 39.2	-2.8
	comp=Z,3.2nm,0.4s,baz=334,slow=21,SNR=2.3						
WRA				LR	LR	09 07 56.6	
	comp=Z,2µm,18.6s,baz=332,slow=42						
WRA	Warramunga Arr	18.60	161	P	P	08 59 12.8	-1.6
WRA	Warramunga Arr	18.60	161	*i* P	P	08 59 12.1	-2.3
WRA				pmax	pmax		
	comp=Z,12nm,0.5s						
COEN	Coen	18.92	129	P	P	08 59 17.4	-0.5
	baz=19,SNR=11						
COEN	Coen	18.92	129		P	08 59 17.9	0.0
KPJI	Karang Pucung	19.70	255	P	Pn	08 59 29.6	+1.5
	comp=Z,363nm,1.3s,comp=Z,5µmcomp=Z,67µm						
BOLP	Bolinao	20.21	337	⇓*e*P	P	08 59 30.5	-1.6
PMG	Port Moresby	20.27	111	P	Pn	08 59 37.0	+2.1
	comp=Z,29nm,0.8s,baz=308,slow=11,SNR=6.8						
PMG	Port Moresby	20.27	111	*de*P	Pn	08 59 36.6	+1.7
PMG				pmax	pmax		
	comp=Z,40nm,1.0s						
CMJI	Cimerak	20.27	254	P	P	08 59 33.5	+0.7
	comp=Z,263nm,1.7s,comp=Z,5µm						
MBWA	Marble Bar	20.44	203	P	P	08 59 33.0	-1.5
MBWA	Marble Bar	20.44	203	P	P	08 59 33.1	-1.5
SAMP	Sagada Mountai	20.49	340	⇑*e*P	P	08 59 34.8	-0.3
PSA00	Pilbara Seismi	20.77	202	P	P	08 59 36.5	-1.6
PSA00	Pilbara Seismi	20.77	202	P	P	08 59 36.0	-2.1
PSA00				IAmb	IAmb	08 59 52.3	
	comp=Z,63nm,1.1s						
PSA00	Pilbara Seismi	20.77	202	P	P	08 59 36.5	-1.6
CVP	Callao Caves	20.79	343	⇓*e*P	P	08 59 37.1	-1.2
BBJI	Bungbulang	20.96	255	P	P	08 59 39.8	-0.5
APYP	Conner	21.11	342	⇑*e*P	P	08 59 41.3	-0.4
SGCP	Gonzaga	21.23	344	⇓*e*P	P	08 59 42.3	-0.8
QIS	Mount Isa	21.38	149	P	P	08 59 44.2	-0.5
	baz=22,SNR=25						
QIS	Mount Isa	21.38	149	P	P	08 59 44.7	0.0
CNJI	Cibinong	21.43	256	P	P	08 59 46.0	+0.7
	comp=Z,126nm,1.3s,comp=Z,2µm						
AS31	Alice Springs	22.00	166	P	P	08 59 50.6	-0.8
ASAR	Alice Springs	22.00	166	P	P	08 59 50.4	-1.0
	comp=Z,22nm,0.3s,baz=346,slow=12,SNR=224						
ASAR				S	S	09 03 48.3	-4.3
	comp=Z,22nm,0.9s,baz=345,slow=20,SNR=11						
	comp=Z,22nm,0.3s						
ASAR	Alice Springs	22.00	166	P	P	08 59 51.0	-0.4
AS01	Alice Springs	22.01	165	P	P	08 59 50.6	-0.9
MTSU	Mount Surprise	22.42	136	P	P	08 59 55.8	-0.1
	baz=23,SNR=20						
MTSU	Mount Surprise	22.42	136	P	P	08 59 56.2	+0.3
WRKA	Warakurna	22.62	179	P	P	08 59 56.9	-1.1
	baz=23,SNR=46						
WRKA	Warakurna	22.62	179	P	P	08 59 57.4	-0.6
CGJI	Cibinong	22.70	258	P	P	08 59 59.5	+0.6
	comp=Z,70nm,1.6s,comp=Z,2µm						
GUMO	Guam	22.95	46	LR	LR	09 09 04.7	
	comp=Z,1µm,18.6s,baz=222,slow=37						
KLI	Kotabumi	23.29	263	P	P	09 00 07.7	+2.8
	comp=Z,566nm,1.4s,comp=Z,10µm						
KASI	Kota Agung	23.72	261	P	P	09 00 09.8	+0.7
	comp=Z,95nm,1.2s,comp=Z,2µm						
LWLI	Liwa	24.10	263	P	P	09 00 14.7	+1.9
	comp=Z,200nm,0.6s						
GIRL	Giralia	24.28	212	P	P	09 00 13.5	-0.7
	baz=24,SNR=6.8						
GIRL	Giralia	24.28	212	P	P	09 00 13.3	-0.9
JMBI	JAMBI	24.41	271	P	P	09 00 18.2	+2.7
	comp=Z,120nm,0.5s						
TV1H	Townsville Har	24.92	134	P	P	09 00 21.8	+1.7
CTA	Charters Tower	25.09	136	P	P	09 00 22.6	+1.0
	comp=Z,13nm,0.7s,baz=316,slow=10.0,SNR=14						
CTA				LR	LR	09 12 25.6	
	comp=Z,1µm,21.1s,baz=327,slow=42						
	comp=Z,13nm,0.7s						
CTAO	Charters Tower	25.09	136	P	P	09 00 21.9	+0.3
CTAO	Charters Tower	25.09	136	P	P	09 00 22.8	+1.2
CTAO	Charters Tower	25.09	136	P	P	09 00 21.9	+0.3
MNAI	Manna	25.14	265	P	P	09 00 23.7	+1.6
	comp=Z,303nm,1.9s,comp=Z,7µm						
KSI	Kapahiang	25.46	266	P	P	09 00 26.6	+1.5
	comp=Z,210nm,2.0s,comp=Z,25µm						
MASI	Maura Aman, Be	25.80	268	P	P	09 00 29.7	+1.5
	comp=Z,451nm,2.1s,comp=Z,8µm						
JRMM	Jerantut	26.29	283	P	P	09 00 34.0	+1.5
YULB	Yu-li	26.35	346	P	P	09 00 30.8	-2.2
YULB				IAmb	IAmb	09 00 51.6	
	comp=Z,24nm,0.8s						
YULB	Yu-li	26.35	346	P	P	09 00 32.9	-0.1
OOD	Oodnadatta	26.40	165	P	P	09 00 34.2	+0.8
TPUB	Ta-pu	26.43	345	P	P	09 00 31.0	-2.8
SDSI	Sungai Dareh	26.65	272	P	P	09 00 37.0	+1.2
	comp=Z,33nm,1.0s						
SSLB	Suanglung	26.82	345	P	P	09 00 37.9	+0.7
YOJ	Yonaguni jima	27.03	350	P	P	09 00 38.5	-0.6
BKNI	Bangkinang	27.13	275	P	P	09 00 41.7	+1.5
	comp=Z,80nm,0.9s,comp=Z,3µm						
YHNB	Yeheng	27.56	347	P	P	09 00 41.2	-2.7
YHNB	Yeheng	27.56	347	P	P	09 00 43.4	-0.6
PDSI	Padang	27.61	272	P	P	09 00 45.1	+0.6
	comp=Z,44nm,0.7s,comp=Z,6µm						
QIZ	Qiongzhong	27.73	321	P	P	09 00 45.8	+0.3
QIZ				PP	PnPn	09 01 30.8	-1.3
QIZ				S	S	09 05 28.0	+1.9
QIZ				sS	sS	09 05 38.5	-1.1
QIZ				pmax	pmax		
	comp=Z,410nm,6.3s						
QIZ				LR	LR		
	comp=Z,910nm,18.3s						
QIZ				LR	LR		
	comp=Z,610nm,12.8s						
QIZ				LR	LR		
	comp=Z,890nm,23.9s						
IPM	Ipoh	27.83	284	P	P	09 00 47.1	+0.7
IPM	Ipoh	27.83	284	P	P	09 00 48.0	+1.6
FORT	Forrest	28.34	180	P	P	09 00 50.6	-0.1
	baz=28,SNR=9.9						
FORT	Forrest	28.34	180	P	P	09 00 50.7	-0.1
KULM	Kulim	28.39	285	P	P	09 00 50.2	-1.2
MULG	Mulgathing	28.43	169	P	P	09 00 52.1	+0.6
JOW	Kunigami	28.94	0	P	P	09 00 56.3	+0.1
	comp=Z,32nm,0.7s,baz=185,slow=8.4,SNR=11						
JOW				LR	LR	09 11 33.0	
	comp=Z,1µm,19.9s,baz=176,slow=34						
	comp=Z,32nm,0.7s						
JOW	Kunigami	28.94	0	P	P	09 00 55.0	-1.1
MORW	Morawa	28.99	202	P	P	09 00 56.3	-0.3
KMBL	Kambalda	29.51	191	P	P	09 01 00.4	-0.8
RPSI	Rantau Prapat	29.54	279	P	P	09 01 02.0	+0.4
PSI	Prapat	29.55	280	P	P	09 01 02.0	+0.1
BLDU	Ballidu	30.16	200	P	P	09 01 06.8	-0.1
RK1H	Rockhampton Ha	30.21	136	P	P	09 01 08.8	+1.3
GSI	Gunungsitoli	30.68	276	P	P	09 01 11.1	-0.6
	comp=Z,56nm,0.6s						
KLBR	Kellerberrin	30.73	197	P	P	09 01 11.3	-0.6
	baz=31,SNR=4.0						
KLBR	Kellerberrin	30.73	197	P	P	09 01 11.3	-0.6
RMQ	Roma	31.21	142	P	P	09 01 15.7	-0.6
	baz=31,SNR=5.4						
BBOO	Buckleboo	31.29	167	P	P	09 01 17.7	+0.9
	comp=Z,36nm,1.2s						
MUN	Mundaring	31.58	199	P	P	09 01 18.9	-0.5
	baz=32,SNR=3.4						
MUN	Mundaring	31.58	199	P	P	09 01 19.1	-0.3
STKA	Stephens Creek	32.09	158	P	P	09 01 23.3	-0.6
	comp=Z,4.6nm,0.4s,baz=335,slow=9.0,SNR=21						
STKA				LR	LR	09 15 36.4	
	comp=Z,2µm,20.5s,baz=331,slow=39						
	comp=Z,4.6nm,0.4s						
STKA	Stephens Creek	32.09	158	P	P	09 01 23.1	-0.7
	baz=32,SNR=17						
STKA	Stephens Creek	32.09	158	P	P	09 01 22.4	-1.5
STKA	Stephens Creek	32.09	158	P	P	09 01 23.4	-0.5
STKA	Stephens Creek	32.09	158	⇓*e*P	P	09 01 24.3	+0.4
NWAO	Narrogin (SRO)	32.13	197	P	P	09 01 23.5	-0.8
	comp=Z,8.4nm,0.7s,baz=345,slow=17,SNR=2.2						
NWAO				LR	LR	09 14 54.4	
	comp=Z,881nm,20.9s,baz=40,slow=37						
	comp=Z,8.4nm,0.7s						
NWAO	Narrogin (SRO)	32.13	197	P	P	09 01 24.0	-0.3
	baz=32,SNR=4.3						
NWAO				P	P	09 01 24.0	-0.3
	baz=32,SNR=4.3						

NWAO	Narrogin (SRO)	32.13	197	P	P	09 01 24.6	+0.3
JCJ	Chichijima	32.23	24	LR	LR	09 14 34.4	
	comp=Z,724nm,19.0s,baz=240,slow=36						
HNR	Honiara	32.49	104	LR	LR	09 16 51.5	
	comp=Z,5µm,19.7s,baz=272,slow=40						
HTT	Hallett	32.62	163	P	P	09 01 29.6	+1.0
	baz=33,SNR=6.8						
HTT	Hallett	32.62	163	P	P	09 01 30.7	+2.1
CMSA	Cobar Meteorol	33.52	152	P	P	09 01 36.1	-0.4
	baz=34,SNR=7.5						
CMSA	Cobar Meteorol	33.52	152	P	P	09 01 36.3	-0.2
WHN	Wuhan	35.16	339	⇓P	P	09 01 51.5	+0.9
WHN				S	S	09 07 26.0	+4.2
WHN				pmax	pmax		
	comp=Z,140nm,0.9s						
WHN				LR	LR		
	comp=Z,2µm,19.6s						
NJ2	Nanjing	35.24	346	*e*P	P	09 01 52.3	+1.0
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,620nm,5.6s						
CMAR	Chiang Mai Arr	35.29	307	P	P	09 01 52.4	+0.4
	comp=Z,6.1nm,0.7s,baz=134,slow=7.4,SNR=28						
CMAR				LR	LR	09 17 03.8	
	comp=Z,519nm,21.8s,baz=120,slow=38						
	comp=Z,6.1nm,0.7s						
JNU	Nakatsue	35.31	4	P	P	09 01 51.4	-0.6
	comp=Z,13nm,1.0s,baz=235,slow=4.9,SNR=7.6						
	comp=Z,13nm,1.0s						
CHTO	Chiang Mai	35.48	307	P	P	09 01 53.4	-0.2
CHTO	Chiang Mai	35.48	307	P	P	09 01 53.4	-0.2
ARMA	Armidale	35.80	144	P	P	09 01 57.2	+0.8
	baz=36,SNR=5.4						
ARMA	Armidale	35.80	144	P	P	09 01 57.0	+0.6
JMN	Monobe	36.23	8	P	P	09 01 59.7	-0.2
ARPS	Mount Arapiles	36.60	161	P	P	09 02 03.3	+0.3
	baz=37,SNR=7.0						
ARPS	Mount Arapiles	36.60	161	P	P	09 02 03.2	+0.3
KMI	Kunming	36.67	320	⇑P	P	09 02 04.8	+0.9
KMI				S	S	09 07 50.8	+5.3
KMI				pmax	pmax		
	comp=Z,26nm,1.3s						
KMI				LR	LR		
	comp=Z,460nm,21.1s						
KMI				LR	LR		
	comp=Z,580nm,23.2s						
KMI				LR	LR		
	comp=Z,940nm,22.8s						
YNG	Young	37.08	151	P	P	09 02 07.8	+0.7
JHS	Saijyo	37.39	7	P	P	09 02 11.1	+1.5
MGCD	Mangrove Creek	37.60	147	P	P	09 02 12.2	+0.8
BRAT	Ballarat	38.01	159	P	P	09 02 15.7	+0.8
CAN	Canberra	38.20	152	P	P	09 02 15.2	-1.4
CAN				IAmb	IAmb	09 02 28.2	
	comp=Z,24nm,0.8s						
CAN	Canberra	38.20	152	P	P	09 02 15.2	-1.4
PZH	PanZhiHua	38.27	320	P	P	09 02 17.5	+0.1
PZH				pmax	pmax		
	comp=Z,20nm,1.2s						
PZH				pmax	pmax		
	comp=Z,220nm,5.3s						
PZH				LR	LR		
	comp=Z,510nm,19.1s						
PZH				LR	LR		
	comp=Z,420nm,20.1s						
PZH				LR	LR		
	comp=Z,720nm,21.1s						
INU	Inuyama	38.36	12	P	P	09 02 16.2	-1.7
INU	Inuyama	38.36	12	P	P	09 02 18.2	+0.4
CNB	Canberra Magne	38.37	151	P	P	09 02 18.6	+0.6
TOO	Toolangi	38.60	158	P	P	09 02 20.1	+0.2
	baz=39,SNR=4.1						
TOO	Toolangi	38.60	158	P	P	09 02 21.7	+1.8
JGF	Kuroka	38.68	12	IAmb	IAmb	09 02 35.7	
	comp=Z,45nm,1.5s						
JGF	Kuroka	38.68	12	P	P	09 02 21.3	+0.8
LYN	LuoYang	39.46	340	⇓P	P	09 02 26.5	-0.5
LYN				S	S	09 08 27.0	0.0
LYN				sS	pS	09 08 37.5	+0.5
LYN				pmax	pmax		
	comp=Z,51nm,0.8s						
LYN				pmax	pmax		
	comp=Z,140nm,4.1s						
LYN				LR	LR		
	comp=Z,440nm,28.8s						
LYN				LR	LR		
	comp=Z,390nm,22.6s						
LYN				LR	LR		
	comp=Z,360nm,19.2s						
TNCH	TengChong	39.46	315	*e*P	P	09 02 30.5	+3.1
TNCH				pmax	pmax		
	comp=Z,360nm,3.9s						
KSRS	Korea Array	39.53	360	P	P	09 02 27.9	+0.3
	comp=Z,10nm,0.7s,baz=176,slow=9.4,SNR=55						
KSRS				LR	LR	09 23 20.6	
	comp=Z,365nm,18.3s,baz=185,slow=43						
	comp=Z,10nm,0.7s						
TIA	Tai'an	39.63	346	*e*P	P	09 02 27.0	-1.4
TIA				pmax	pmax		
	comp=Z,21nm,0.7s						
TIA				LR	LR		
	comp=Z,390nm,17.2s						
TIA				LR	LR		
	comp=Z,270nm,21.6s						
TIA				LR	LR		
	comp=Z,540nm,16.7s						
MAJO	Matsushiro	39.77	13	P	P	09 02 27.9	-1.7
MAJO				IAmb	IAmb	09 02 45.0	
	comp=Z,23nm,0.8s						
MAJO	Matsushiro	39.77	13	P	P	09 02 29.3	-0.3
MAJO	Matsushiro	39.77	13	*d i*P	P	09 02 29.1	-0.5
MAJO				pmax	pmax		
	comp=Z,34nm,1.1s						
MJAR	Matsushiro Arr	39.77	13	P	P	09 02 28.8	-0.8
	comp=Z,7.0nm,0.7s,baz=189,slow=9.0,SNR=17						
	comp=Z,7.0nm,0.7s						
MJB9	Matsu-Tunnel	39.77	13	IAmb	IAmb	09 02 45.0	
	comp=Z,22nm,0.8s						
CD2	Chengdu	40.31	327	P	P	09 02 34.5	+0.2
CD2				S	S	09 08 44.5	+4.5
CD2				pmax	pmax		
	comp=Z,20nm,1.4s						
CD2				pmax	pmax		
	comp=Z,180nm,5.5s						
CD2				LR	LR		
	comp=Z,300nm,12.9s						
CD2				LR	LR		
	comp=Z,250nm,10.6s						
CD2				LR	LR		
	comp=Z,670nm,18.7s						
XAN	Xi'an	40.37	335	⇓P	P	09 02 33.8	-0.9
XAN				pP	pP	09 02 44.0	+1.0
XAN				S	S	09 08 41.0	+0.2
XAN				pmax	pmax		
	comp=Z,28nm,1.0s						
XAN				LR	LR		
	comp=Z,480nm,18.1s						
XAN				LR	LR		
	comp=Z,450nm,18.7s						
XAN				LR	LR		
	comp=Z,660nm,17.8s						
HNS	HongShan	41.38	344	⇑P	P	09 02 41.5	-1.3
HNS				S	S	09 08 53.5	-2.1
HNS				pmax	pmax		
	comp=Z,40nm,0.9s						
HNS				LR	LR		
	comp=Z,580nm,22.6s						
HNS				LR	LR		
	comp=Z,510nm,20.4s						
JMM	Marumori	41.65	15	P	P	09 02 44.2	-0.9
JMM	Marumori	41.65	15	P	P	09 02 45.9	+0.8
DZM	Mont Dzumac	42.16	121	*e*LR	LR	09 14 31.9	
	comp=Z,971nm,22.8s						
DZM	Mont Dzumac	42.16	121	P	P	09 02 51.2	+1.5
TIY	Taiyuan	42.34	342	⇓P	P	09 02 50.8	-0.1
TIY				S	S	09 09 18.3	+8.2
TIY				pmax	pmax		
	comp=Z,47nm,0.6s						
TIY				LR	LR		
	comp=Z,340nm,13.5s						
TIY				LR	LR		
	comp=Z,350nm,12.9s						
TIY				LR	LR		
	comp=Z,400nm,17.7s						
BRDH	Bariadhala	43.32	307	LR	LR	09 23 26.3	
	comp=Z,532nm,21.0s,baz=3.0,slow=40						
BJT	Baijiatuau	43.48	347	P	P	09 02 58.6	-1.4
BJT	Baijiatuau	43.48	347	P	P	09 02 58.6	-1.4
BJI	Beijing	43.50	347	P	P	09 02 58.5	-1.6
BJI				S	S	09 09 28.5	+1.7
BJI				pmax	pmax		
	comp=Z,17nm,0.7s						
BJI				LR	LR		
	comp=Z,160nm,17.3s						
BJI				LR	LR		
	comp=Z,160nm,20.2s						
SNY	Shenyang	44.09	355	⇑P	P	09 03 03.5	-1.3
SNY				S	S	09 09 36.8	+1.5
SNY				pmax	pmax		
	comp=Z,63nm,0.8s						
SNY				pmax	pmax		
	comp=Z,190nm,3.5s						
SNY				LR	LR		
	comp=Z,680nm,16.3s						
SNY				LR	LR		
	comp=Z,610nm,15.1s						
SNY				LR	LR		
	comp=Z,900nm,17.5s						
LZH	Lanzhou	44.36	332	*e*P	P	09 03 07.8	+0.5
LZH				pP	pP	09 03 12.8	-2.8
LZH				sP	sP	09 03 17.5	-1.4
LZH				S	S	09 09 47.5	+7.7
LZH				pmax	pmax		
	comp=Z,45nm,1.1s						
LZH				pmax	pmax		
	comp=Z,220nm,4.3s						
LZH				LR	LR		
	comp=Z,890nm,17.8s						
LZH				LR	LR		
	comp=Z,910nm,17.5s						
LZH				LR	LR		
	comp=Z,810nm,18.7s						
SHL	Shillong	44.63	311	P	P	09 03 09.5	-0.2
SHL	Shillong	44.63	311	P	P	09 03 09.5	-0.2
VLA	Vladivostok	45.33	4	*de*P	P	09 03 13.3	-1.3
VLA				pmax	pmax		
	comp=Z,91nm,2.0s						
HHC	Hu-ho-hao-te	45.49	342	*e*P	P	09 03 14.0	-2.1
HHC				S	S	09 10 03.3	+7.4
HHC				pmax	pmax		
	comp=Z,31nm,0.8s						
HHC				pmax	pmax		
	comp=Z,340nm,4.5s						
BTO	Baotou	45.75	341	*e*P	P	09 03 20.0	+1.8
BTO				pP	sP	09 03 29.8	-0.1
BTO				sP	pwP	09 03 33.8	+2.3
BTO				PP	PP	09 05 01.0	-4.8
BTO				S	S	09 10 03.0	+3.3
BTO				sS	sS	09 10 18.8	+5.2
BTO				SS	ScS	09 13 13.5	+1.3
BTO				pmax	pmax		
	comp=Z,31nm,0.5s						
BTO				pmax	pmax		
	comp=Z,820nm,4.6s						
BTO				LR	LR		
	comp=Z,1µm,16.6s						
BTO				LR	LR		
	comp=Z,1µm,14.3s						
BTO				LR	LR		
	comp=Z,2µm,17.1s						
CN2	Changchun	45.93	357	P	P	09 03 20.0	+0.6
CN2				S	S	09 10 01.5	-0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=Z,800nm,18.0s						
CN2				LR	LR		
	comp=Z,500nm,18.0s						
CN2				LR	LR		
	comp=Z,600nm,18.0s						
USA0B	Ussuriysk Arra	46.41	4	P	P	09 03 23.5	+0.3
USA0B	Ussuriysk Arra	46.41	4	*d i*P	P	09 03 23.8	+0.7
USRK	Ussuriysk Ar.	46.41	4	P	P	09 03 24.0	+0.9
	comp=Z,21nm,0.6s,baz=182,slow=7.0,SNR=39						
USRK				LR	LR	09 22 06.6	
	comp=Z,389nm,21.5s,baz=171,slow=35						
	comp=Z,21nm,0.6s						
USRK	Ussuriysk Ar.	46.41	4	P	P	09 03 22.8	-0.4
MDJ	Mudanjiang	46.71	2	P	P	09 03 26.3	+0.8
MDJ				PcP	PcP	09 04 59.5	+0.8
MDJ				S	S	09 10 16.5	+3.4
MDJ				pmax	pmax		
	comp=Z,32nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,170nm,4.2s						
MDJ				LR	LR		
	comp=Z,600nm,16.5s						
MDJ				LR	LR		
	comp=Z,400nm,11.4s						
MDJ				LR	LR		
	comp=Z,880nm,18.4s						
XLT	XiLinHaoTe	47.21	348	*e*P	P	09 03 28.5	-1.1
XLT				S	S	09 10 20.8	+0.3
XLT				pmax	pmax		
	comp=Z,40nm,0.8s						
XLT				pmax	pmax		
	comp=Z,140nm,5.3s						
XLT				LR	LR		
	comp=Z,530nm,19.4s						
XLT				LR	LR		
	comp=Z,280nm,17.0s						
LSA	Lhasa	47.49	315	P	P	09 03 33.0	+0.5
LSA				pmax	pmax		
	comp=Z,42nm,0.7s						
LSA	Lhasa	47.49	315	P	P	09 03 32.9	+0.5
LSA	Lhasa	47.49	315	P	P	09 03 32.9	+0.5
TEY	Ternei	47.72	8	*e*P	P	09 03 33.2	-0.2
BNX	BinXian	47.82	359	⇑P	P	09 03 34.0	-0.1
BNX				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BNX				pmax	pmax		
	comp=Z,74nm,3.6s						
ASAJ	Asahikawa	47.99	14	P	P	09 03 36.7	+1.2
	comp=Z,5.0nm,0.7s,baz=203,slow=10,SNR=6.0						
ASAJ				LR	LR	09 24 00.0	
	comp=Z,731nm,21.6s,baz=206,slow=36						
	comp=Z,5.0nm,0.7s						
PALK	Pallekele	48.19	282	P	P	09 03 37.7	+0.1
	comp=Z,6.9nm,0.6s,baz=197,slow=9.3,SNR=10						
	comp=Z,6.9nm,0.6s						
TAPN	Taplejung	48.75	310	*e*P	P	09 03 41.7	-0.4
	comp=Z,26nm,0.7s						
GTA	Gaotai	48.93	331	*e*P	P	09 03 42.3	-0.7
GTA				sP	pP	09 03 52.8	+1.3
GTA				pmax	pmax		
	comp=Z,31nm,1.0s						
GTA				LR	LR		
	comp=Z,340nm,21.8s						
GTA				LR	LR		
	comp=Z,330nm,20.0s						
GTA				LR	LR		
	comp=Z,550nm,22.5s						
GOMU	GeErMu	49.25	324	P	P	09 03 45.8	0.0
GOMU				S	S	09 10 42.0	-8.2
GOMU				pmax	pmax		
	comp=Z,86nm,3.6s						
GOMU				LR	LR		
	comp=Z,340nm,20.0s						
GOMU				LR	LR		
	comp=Z,370nm,20.4s						
GOMU				LR	LR		
	comp=Z,260nm,20.4s						
RAMN	Ramite	49.41	309	*e*P	P	09 03 46.8	-0.2
	comp=Z,48nm,0.6s						
JIRN	Jiri	50.07	309	*e*P	P	09 03 51.6	-0.6
GUN	Gumba	50.44	310	*e*P	P	09 03 54.4	-0.6
	comp=Z,48nm,0.7s						
PKI	Pulchoki	50.63	309	*e*P	P	09 03 55.6	-0.8
YSS	Yuzh-Sakhalins	50.71	13	*e*P	P	09 03 47.0	-9.2
YSS				MLR	MLR		
	comp=N,400nm,17.0s						
YSS				MLR	MLR		
	comp=Z,500nm,17.0s						
MSVF	Nonsavu	51.38	111	LR	LR	09 25 48.6	
	comp=Z,678nm,21.1s,baz=308,slow=36						
KLR	Kul'dur	51.41	3	P	P	09 04 01.6	+0.2
	comp=Z,7.8nm,0.8s,baz=206,slow=4.8,SNR=25						
	comp=Z,7.8nm,0.8s						
KLR	Kul'dur	51.41	3	*c i*P	P	09 04 00.7	-0.7
KLR				pmax	pmax		
	comp=Z,25nm,1.3s						
DANN	Dangsing	52.29	309	*e*P	P	09 04 07.8	-1.0
	comp=Z,70nm,0.7s						
HEH	HeiHe	52.33	359	P	P	09 04 07.0	-1.3
HEH				S	S	09 11 26.0	-5.6
HEH				pmax	pmax		
	comp=Z,31nm,1.2s						
HEH				pmax	pmax		
	comp=Z,240nm,4.4s						
HEH				LR	LR		
	comp=Z,280nm,17.4s						
HEH				LR	LR		
	comp=Z,600nm,17.7s						
HEH				LR	LR		
	comp=Z,690nm,18.4s						
PYUN	Piuthan	52.77	308	*e*P	P	09 04 11.7	-0.6
	comp=Z,52nm,0.9s						
PCHI	Peechi	53.01	285	*e*P	P	09 04 14.5	+0.5
PCHI				*e*S	S	09 11 44.5	+2.5
ULN	Ulaanbaatar	53.21	342	P	P	09 04 14.2	-0.9
ULN	Ulaanbaatar	53.21	342	*c i*P	P	09 04 14.3	-0.7
ULN				pmax	pmax		
	comp=Z,63nm,1.7s						
GRNR	Gornyy	53.33	7	*e*P	P	09 04 13.7	-2.0
GRNR				MLR	MLR		
	comp=N,190nm,17.0s						
GRNR				MLR	MLR		
	comp=E,260nm,17.0s						
GRNR				MLR	MLR		
	comp=Z,440nm,16.0s						
SONM	Songino Array	53.38	342	P	P	09 04 15.6	-0.7
	comp=Z,12nm,0.8s,baz=151,slow=9.1,SNR=56						
	comp=Z,12nm,0.8s						
SONM	Songino Array	53.38	342	P	P	09 04 14.8	-1.5
SONM				IAmb	IAmb	09 04 17.2	
	comp=Z,17nm,0.9s						
JCZ	Jackson Bay	55.03	145	P	P	09 04 28.6	+0.2
QRZ	Quartz Range	55.47	140	P	P	09 04 32.9	+1.4
ZEA	Zeya	55.82	359	*e*P	P	09 04 33.5	-0.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEA				MLR	MLR		
	comp=N,300nm,20.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,15.0s						
LBZ	Lake Benmore	56.02	145	P	P	09 04 37.8	+2.4
RPZ	Rata Peaks	56.14	143	P	P	09 04 37.5	+1.2
	comp=Z,7.3nm,0.6s,baz=263,slow=3.3,SNR=6.1						
RPZ				LR	LR	09 29 18.1	
	comp=Z,940nm,21.6s,baz=306,slow=37						
	comp=Z,7.3nm,0.6s						
RPZ	Rata Peaks	56.14	143	P	P	09 04 37.5	+1.2
RPZ	Rata Peaks	56.14	143	P	P	09 04 37.8	+1.5
ZAK	Zakamensk	56.60	341	*e*P	P	09 04 38.3	-1.2
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
WNVZ	Wahianoa	56.76	137	P	P	09 04 43.8	+2.9
BHHZ	Black Hill Sta	57.16	137	P	P	09 04 44.4	+0.8
BKZ	Black Stump Fm	57.30	136	P	P	09 04 45.6	+1.0
BKZ	Black Stump Fm	57.30	136	P	P	09 04 45.4	+0.8
URZ	Urewera	57.33	135	P	P	09 04 45.1	+0.4
	comp=Z,10nm,0.6s,baz=333,slow=6.4,SNR=6.3						
URZ				LR	LR	09 32 13.3	
	comp=Z,809nm,18.4s,baz=26,slow=39						
	comp=Z,10nm,0.6s						
URZ	Urewera	57.33	135	P	P	09 04 46.2	+1.4
URZ	Urewera	57.33	135	P	P	09 04 46.1	+1.4
MRZ	Mangatainoka R	57.39	138	P	P	09 04 44.8	-0.4
NMHZ	Naumai	57.49	136	P	P	09 04 47.5	+1.5
MCHZ	McNeill Hill	57.57	136	P	P	09 04 48.0	+1.5
MWZ	Matawai	57.65	135	P	P	09 04 48.1	+1.0
SNGZ	Shannon Statio	57.72	136	P	P	09 04 50.7	+3.1
BFZ	Birch Farm	57.84	138	P	P	09 04 50.4	+2.0
	comp=Z,42nm,2.1s						
BFZ	Birch Farm	57.84	138	P	P	09 04 49.0	+0.6
KAHZ	Kahuranaki	57.85	137	P	P	09 04 50.6	+2.1
TKGZ	Te Karaka	57.93	135	P	P	09 04 50.8	+1.8
RIGZ	Rimuhau	57.98	135	P	P	09 04 51.6	+2.2
PUZ	Puketiti	58.06	134	P	P	09 04 51.8	+1.8
CNGZ	Carnagh Statio	58.20	135	P	P	09 04 52.9	+2.0
WMQ	Urumqi	58.41	327	*e*P	P	09 04 52.3	0.0
WMQ				pmax	pmax		
	comp=Z,52nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,200nm,3.9s						
WMQ				LR	LR		
	comp=Z,530nm,18.1s						
WMQ				LR	LR		
	comp=Z,400nm,19.5s						
WMQ				LR	LR		
	comp=Z,610nm,23.5s						
MOY	Mondy	58.45	341	*e*P	P	09 04 51.4	-1.1
MOY				pmax	pmax		
	comp=Z,34nm,2.3s						
AFI	Afiamalu	60.52	105	LR	LR	09 33 16.5	
	comp=Z,200nm,18.1s,baz=294,slow=38						
PETK	Petropavlovsk-	60.53	20	P	P	09 05 08.0	+1.3
	comp=Z,3.6nm,0.7s,baz=197,slow=5.2,SNR=9.8						
PETK				LR	LR	09 31 57.5	
	comp=Z,176nm,19.8s,baz=201,slow=37						
	comp=Z,3.6nm,0.7s						
PETK	Petropavlovsk-	60.53	20	P	P	09 05 08.0	+1.3
BOD	Bodaibo	60.96	351	*e*P	P	09 05 08.8	-0.7
BOD				pmax	pmax		
	comp=Z,34nm,1.6s						
ZSN	Zaisan	62.26	328	*e*P	P	09 05 18.4	-0.1
	baz=328						
ZSN	Zaisan	62.26	328	*e*P	P	09 05 18.4	-0.1
DGZ	Jazzator, Alta	62.46	332	*c i*P	P	09 05 18.9	-1.1
DGZ				pmax	pmax		
	comp=Z,18nm,1.2s						
NIL	Nilore	62.70	310	P	P	09 05 20.9	-0.9
NIL	Nilore	62.70	310	P	P	09 05 20.9	-0.9
SHLS	Shalkode	62.83	322	*e*P	P	09 05 20.8	-1.8
	comp=Z,12nm,0.9s,baz=322						
SHLS	Shalkode	62.83	322	*e*P	P	09 05 20.7	-1.8
SHLS				pmax	pmax		
	comp=Z,12nm,0.9s						
UZB	Uzynbulak	63.09	322	*e*P	P	09 05 24.1	-0.2
	baz=322						
UZB	Uzynbulak	63.09	322	*e*P	P	09 05 24.1	-0.2
TARG	Taragay, Kyrgy	63.12	320	P	P	09 05 24.0	-0.9
TARG	Taragay, Kyrgy	63.12	320	P	P	09 05 24.0	-0.9
MK31	Makanchi Array	63.24	327	*c i*P	P	09 05 24.0	-1.1
MKAR	Makanchi Array	63.24	327	P	P	09 05 24.4	-0.6
	comp=Z,15nm,0.7s,baz=124,slow=8.1,SNR=120						
MKAR				LR	LR	09 34 34.9	
	comp=Z,354nm,21.8s,baz=124,slow=38						
	comp=Z,15nm,0.7s						
KSH	Kashi	63.26	317	P	P	09 05 26.8	+1.3
KSH				PcP	PcP	09 06 06.5	+3.9
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KSH				LR	LR		
	comp=Z,490nm,17.2s						
KSH				LR	LR		
	comp=Z,400nm,21.3s						
KSH				LR	LR		
	comp=Z,340nm,19.2s						
MAKZ	Makanchi	63.42	326	P	P	09 05 25.1	-1.2
MAKZ	Makanchi	63.42	326	P	P	09 05 25.1	-1.2
MAKZ				pmax	pmax		
	comp=Z,12nm,0.8s						
SATY	Saty	63.43	321	*e*P	P	09 05 26.1	-0.4
	comp=Z,14nm,0.9s,baz=321						
SATY	Saty	63.43	321	*e*P	P	09 05 26.1	-0.4
SATY				pmax	pmax		
	comp=Z,14nm,0.9s						
KPKS	Kokpek	63.47	322	*e*P	P	09 05 26.0	-0.8
	comp=Z,7.9nm,0.7s,baz=322						
KPKS	Kokpek	63.47	322	*e*P	P	09 05 26.0	-0.8
KPKS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
YAK	Yakutsk	64.15	1	P	P	09 05 31.3	+0.6
	comp=Z,24nm,0.7s,baz=189,slow=1.4,SNR=5.0						
YAK				LR	LR	09 34 34.6	
	comp=Z,194nm,19.6s,baz=182,slow=37						
	comp=Z,24nm,0.7s						
YAK	Yakutsk	64.15	1	P	P	09 05 32.7	+2.0
YAK	Yakutsk	64.15	1	*d i*P	P	09 05 31.2	+0.6
YAK				pmax	pmax		
	comp=Z,40nm,0.7s						
NRN	Naryn	64.15	319	IAmb	IAmb	09 05 44.5	
	comp=Z,9.6nm,0.8s						
MA2	Magadan	64.21	13	P	P	09 05 32.8	+1.6

	comp=Z,7.5nm,0.7s,baz=177,slow=10,SNR=4.5						
MA2				LR	LR	09 33 48.5	
	comp=Z,100nm,19.4s,baz=206,slow=36						
	comp=Z,7.5nm,0.7s						
MA2	**Magadan**	**64.21**	**13**	P	**P**	**09 05 32.0**	**+0.8**
MA2	**Magadan**	**64.21**	**13**	⇓*i*P	**P**	**09 05 32.3**	**+1.1**
MA2				pmax	pmax		
	comp=Z,28nm,1.7s						
MDOK	**Medeo**	**64.33**	**321**	*e*P	**P**	**09 05 32.0**	**-0.5**
	baz=321						
MDOK	**Medeo**	**64.33**	**321**	*e*P	**P**	**09 05 32.0**	**-0.5**
TNSS	**Tian-Shan**	**64.33**	**321**	*e*P	**P**	**09 05 32.5**	**-0.4**
	baz=321						
TNSS	**Tian-Shan**	**64.33**	**321**	*e*P	**P**	**09 05 32.4**	**-0.4**
BOOM	**Boomskoye usch**	**64.71**	**320**	IAmb	IAmb	09 05 47.0	
	comp=Z,13nm,1.1s						
CHKK	**Chushkaly**	**64.72**	**322**	*e*P	**P**	**09 05 33.6**	**-1.3**
	baz=322						
CHKK	**Chushkaly**	**64.72**	**322**	*e*P	**P**	**09 05 33.6**	**-1.3**
KUU	**Kurty**	**65.15**	**321**	*e*P	**P**	**09 05 37.0**	**-0.7**
	baz=321						
KUU	**Kurty**	**65.15**	**321**	*e*P	**P**	**09 05 36.9**	**-0.7**
AAK	**Ala-Archa**	**65.71**	**319**	P	**P**	**09 05 42.2**	**+0.7**
	comp=Z,1.5nm,0.3s,baz=146,slow=7.5,SNR=5.3						
AAK				LR	LR	09 38 11.9	
	comp=Z,186nm,21.3s,baz=106,slow=40						
	comp=Z,1.5nm,0.3s						
SGDS	**Sogindy**	**66.01**	**320**	*e*P	**P**	**09 05 42.3**	**-1.0**
	baz=320						
SGDS	**Sogindy**	**66.01**	**320**	*e*P	**P**	**09 05 42.3**	**-1.0**
ZALV	**Zalesovo Beam**	**66.52**	**334**	P	**P**	**09 05 45.2**	**-1.0**
	comp=Z,3.1nm,0.7s,baz=110,slow=4.7,SNR=15						
ZALV				LR	LR	09 39 33.0	
	comp=Z,174nm,18.1s,baz=122,slow=40						
	comp=Z,3.1nm,0.7s						
ZALV	**Zalesovo Beam**	**66.52**	**334**	*i* P	**P**	**09 05 44.5**	**-1.7**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BTLS	**Baital**	**67.14**	**322**	*e*P	**P**	**09 05 49.8**	**-0.6**
	baz=322						
BTLS	**Baital**	**67.14**	**322**	*e*P	**P**	**09 05 49.8**	**-0.6**
KURBB	**Kurchatov Arra**	**67.50**	**328**	P	**P**	**09 05 52.1**	**-0.4**
	comp=Z,12nm,0.6s,baz=127,slow=6.0,SNR=60						
	comp=Z,12nm,0.6s						
KURK	**Kurchatov**	**67.50**	**328**	P	**P**	**09 05 51.7**	**-0.8**
KURK	**Kurchatov**	**67.50**	**328**	*c i*P	**P**	**09 05 51.0**	**-1.5**
KURK				pmax	pmax		
	comp=Z,23nm,0.7s						
SEY	**Seymchan**	**67.58**	**12**	P	**P**	**09 05 54.0**	**+1.2**
	comp=Z,5.6nm,1.0s,baz=210,slow=8.0,SNR=9.2						
	comp=Z,5.6nm,1.0s						
SEY	**Seymchan**	**67.58**	**12**	*ce*P	**P**	**09 05 54.8**	**+2.0**
SEY				pmax	pmax		
	comp=Z,16nm,1.7s						
KK31	**Karatay Array**	**68.54**	**318**	P	**P**	**09 05 60.0**	**+0.7**
KK31	**Karatay Array**	**68.54**	**318**	P	**P**	**09 06 00.0**	**+0.7**
KK31				pmax	pmax		
	comp=Z,12nm,0.9s						
KKAR	**Karatay Array**	**68.54**	**318**	P	**P**	**09 05 57.8**	**-1.5**
KKAR	**Karatay Array**	**68.54**	**318**	P	**P**	**09 05 57.8**	**-1.5**
BRZS	**Berezniki**	**70.35**	**326**	*e*P	**P**	**09 06 09.9**	**-0.4**
	baz=326						
BRZS	**Berezniki**	**70.35**	**326**	*e*P	**P**	**09 06 09.9**	**-0.4**
WSAR	**Wadi Sarin**	**72.09**	**295**	LR	LR	09 41 12.7	
	comp=Z,140nm,20.5s,baz=112,slow=39						
RAR	**Rarotonga**	**72.56**	**111**	LR	LR	09 37 38.0	
	comp=Z,87nm,20.9s,baz=244,slow=35						
BRVK	**Borovoye**	**73.13**	**328**	P	**P**	**09 06 26.2**	**-0.8**
BRVK	**Borovoye**	**73.13**	**328**	*c i*P	**P**	**09 06 25.7**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,13nm,1.3s						
TIXI	**Tiksi**	**73.80**	**0**	P	**P**	**09 06 30.0**	**-0.5**
	comp=Z,7.6nm,0.5s,baz=90,slow=24,SNR=20						
	comp=Z,7.6nm,0.5s						
TIXI	**Tiksi**	**73.80**	**0**	P	**P**	**09 06 29.8**	**-0.7**
TIXI				IAmb	IAmb	09 06 44.4	
	comp=Z,11nm,0.7s						
TIXI	**Tiksi**	**73.80**	**0**	⇓*i*P	**P**	**09 06 29.9**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BILL	**Bilibino**	**75.01**	**14**	⇓*e*P	**P**	**09 06 37.4**	**-0.2**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.6s						
GEYT	**Alibeck**	**75.71**	**310**	P	**P**	**09 06 42.2**	**-0.1**
	comp=Z,2.2nm,0.6s,baz=156,slow=3.9,SNR=1.8						
GEYT				LR	LR	09 45 32.2	
	comp=Z,115nm,20.8s,baz=107,slow=40						
	comp=Z,2.2nm,0.6s						
NRIK	**Noril'sk**	**76.54**	**346**	P	**P**	**09 06 46.4**	**0.0**
	comp=Z,4.3nm,0.6s,baz=145,slow=4.7,SNR=9.9						
	comp=Z,4.3nm,0.6s						
NRIK	**Noril'sk**	**76.54**	**346**	*ce*P	**P**	**09 06 46.2**	**-0.1**
NRIK				pmax	pmax		
	comp=Z,30nm,1.8s						
VNDA	**Vanda**	**77.34**	**173**	P	**P**	**09 06 51.1**	**+0.4**
	comp=Z,2.2nm,0.9s,baz=349,slow=5.8,SNR=7.5						
VNDA				LR	LR	09 41 52.1	
	comp=Z,556nm,18.2s,baz=346,slow=36						
	comp=Z,2.2nm,0.9s						
VNDA	**Vanda**	**77.34**	**173**	P	**P**	**09 06 54.0**	**+3.3**
VNDA				IAmb	IAmb	09 07 20.9	
	comp=Z,17nm,1.1s						
ABKAR	**Akbulak array**	**77.63**	**322**	P	**P**	**09 06 51.6**	**-1.2**
MAW	**Mawson**	**78.62**	**201**	LR	LR	09 38 13.0	
	comp=Z,322nm,21.9s,baz=61,slow=33						
AKTO	**Aktyubinsk**	**79.18**	**322**	P	**P**	**09 07 00.9**	**-0.5**
	comp=Z,6.0nm,0.7s,baz=108,slow=6.9,SNR=21						
AKTO				LR	LR	09 46 28.9	
	comp=Z,123nm,19.6s,baz=75,slow=39						
	comp=Z,6.0nm,0.7s						
ARU	**Arti**	**80.70**	**328**	P	**P**	**09 07 08.6**	**-0.9**
	comp=Z,6.0nm,0.2s,baz=339,slow=3.3,SNR=4.5						
	comp=Z,6.0nm,0.2s						
ARU	**Arti**	**80.70**	**328**	*d i*P	**P**	**09 07 08.4**	**-1.1**
ARU				S	**S**	**09 17 15.2**	**+0.4**
ARU				SS	**SS**	**09 22 26.6**	**-1.7**
ARU				pmax	pmax		
	comp=Z,18nm,2.3s						
PPT	**Papeete**	**82.04**	**107**	LR	LR	09 44 03.5	
	comp=Z,156nm,18.8s,baz=256,slow=36						
TBI	**Tubuai**	**82.20**	**113**	*e*LR	LR	09 33 04.3	
	comp=Z,6µm,22.5s						
TBI				*e*LR	LR	09 33 04.3	
	comp=Z,2µm,27.8s						
RAYN	**Ar Rayn**	**84.08**	**294**	P	**P**	**09 07 26.6**	**-1.3**
RAYN				IAmb	IAmb	09 07 41.5	
	comp=Z,5.9nm,0.9s						
RAYN	**Ar Rayn**	**84.08**	**294**	P	**P**	**09 07 26.6**	**-1.3**
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BELG	**Belogornoye**	**85.95**	**323**	⇓*e*P	**P**	**09 07 36.2**	**-0.4**
BELG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KIRV	**Kirov**	**86.02**	**329**	*de*P	**P**	**09 07 36.0**	**-0.8**
KDAK	**Kodiak Island**	**86.25**	**32**	LR	LR	09 41 59.8	
	comp=Z,382nm,21.3s,baz=260,slow=33						
NCK	**Nalchik**	**87.53**	**314**	⇓*e*P	**P**	**09 07 43.1**	**-1.5**
NCK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KBZ	**Khabaz**	**88.06**	**314**	LR	LR	09 51 40.7	
	comp=Z,92nm,19.9s,baz=85,slow=39						
NEY	**Neytrino**	**88.14**	**313**	⇑*e*P	**P**	**09 07 47.8**	**+0.1**
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KIV	**Kislovodsk**	**88.23**	**314**	*e*P	**P**	**09 07 44.8**	**-3.2**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
I23K	**Minto, Yukon-K**	**88.93**	**25**	IAmb	IAmb	09 08 08.7	
	comp=Z,6.0nm,0.9s						
KIBK	**Kibwezi**	**89.92**	**268**	P	**P**	**09 07 57.7**	**+1.1**
KIBK				IAmb	IAmb	09 08 14.2	
	comp=Z,11nm,1.3s						
ILAR	**Eielson Array**	**89.93**	**25**	P	**P**	**09 07 54.3**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=253,slow=4.4,SNR=5.4						
ILAR				LR	LR	09 46 39.8	
	comp=Z,174nm,19.1s,baz=261,slow=34						
	comp=Z,0.4nm,0.6s						
KMBO	**Kilima Mbogo**	**90.76**	**269**	P	**P**	**09 08 01.3**	**+0.6**
KMBO				IAmb	IAmb	09 08 28.8	
	comp=Z,7.1nm,1.4s						
KMBO	**Kilima Mbogo**	**90.76**	**269**	P	**P**	**09 08 01.3**	**+0.6**
KMBO				pmax	pmax		
	comp=Z,7.0nm,1.4s						
TAOE	**Nuku Hiva Isla**	**91.43**	**99**	*e*LR	LR	09 37 20.0	
	comp=Z,464nm,24.7s						
K27K	**Chicken**	**91.98**	**26**	IAmb	IAmb	09 08 20.9	
	comp=Z,8.8nm,1.1s						
OBN	**Obninsk**	**92.71**	**325**	LR	LR	09 53 40.0	
	comp=Z,51nm,20.8s,baz=45,slow=38						
MMAI	**Mount Meron Ar**	**93.45**	**303**	LR	LR	09 57 35.9	
	comp=Z,105nm,19.4s,baz=166,slow=40						
EIL	**Elat**	**93.81**	**299**	LR	LR	09 56 28.0	
	comp=Z,88nm,19.4s,baz=61,slow=39						
BRTR	**Keskin Array B**	**94.85**	**309**	LR	LR	09 57 22.7	
	comp=Z,185nm,21.8s,baz=94,slow=40						
INK	**Inuvik**	**95.23**	**22**	P	**P**	**09 08 19.4**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=308,slow=4.6,SNR=8.4						
INK				LR	LR	09 49 39.8	
	comp=Z,130nm,21.7s,baz=246,slow=34						
	comp=Z,0.6nm,0.5s						
ARCES	**ARCESS Array B**	**96.51**	**340**	LR	LR	09 58 48.3	
	comp=Z,186nm,18.0s,baz=78,slow=40						
SPITS	**Spitsbergen Ar**	**96.59**	**349**	LR	LR	09 55 52.8	
	comp=Z,231nm,21.1s,baz=20,slow=38						
MBAR	**Mbarara**	**97.28**	**269**	LR	LR	09 48 10.7	
	comp=Z,177nm,21.9s,baz=92,slow=33						
MNK	**Minsk**	**97.76**	**325**	*i* P	**P**	**09 08 30.4**	**-1.1**
	comp=E,4.0nm,1.0s						
MNK				*i* P	**P**	**09 08 30.4**	**-1.1**
	comp=N,40nm,1.2s						
MNK				*i* P	**P**	**09 08 30.4**	**-1.1**
	comp=Z,6.0nm,0.8s,baz=83						
MNK				*i* PP	**PP**	**09 12 28.4**	**-1.3**
MNK				*i* PPP	PPP	09 14 33.9	
MNK				*i* S	**SKSac**	**09 19 06.7**	**-0.1**
MNK				*i* SS	**SS**	**09 26 37.0**	**+1.2**
MNK				*i* SSS	SSS	09 30 23.3	
MNK				*i* LQ	LQ	09 46 42.0	
MNK				*i* LR	LR	09 51 30.8	
MNK				*i* LRM	MLR	09 53 32.8	
	comp=E,63nm,15.9s						
MNK				*i* LRM	MLR	09 53 34.8	
	comp=N,480nm,18.5s						
MNK				*i* LRM	MLR	09 54 31.0	
	comp=Z,206nm,19.2s						
MNK	**Minsk**	**97.76**	**325**	*i* P	**P**	**09 08 30.4**	**-1.1**
MNK				*i*		09 12 28.4	
MNK				*i* PPP	PPP	09 14 33.8	
MNK				*i* S	**SKSac**	**09 19 06.6**	**-0.1**
MNK				*i* SS	**SS**	**09 26 37.0**	**+1.2**
MNK				*i* SSS	SSS	09 30 23.3	
MNK				pmax	pmax		
	comp=N,40nm,1.2s						
MNK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,4.0nm,1.0s						
MNK				MLR	MLR		
	comp=E,63nm,16.0s						
MNK				MLR	MLR		
	comp=N,480nm,19.0s						
MNK				MLR	MLR		
	comp=Z,206nm,19.0s						
DLBC	**Dease Lake**	**98.17**	**31**	LR	LR	09 53 16.4	
	comp=Z,148nm,18.9s,baz=290,slow=36						
NACGM	**Naroch**	**98.34**	**325**	*e*P	**P**	**09 08 30.3**	**-3.9**
	comp=Z,7.0nm,0.7s,baz=82						
LSZ	**Lusaka**	**98.91**	**254**	LR	LR	09 52 55.1	
	comp=Z,105nm,18.1s,baz=124,slow=35						
SNAA	**Sanae**	**99.76**	**194**	LR	LR	09 53 10.6	
	comp=Z,240nm,19.3s,baz=106,slow=35						
YKA	**Yellowknife Ar**	**104.36**	**25**	Pdiff	**Pdif**	**09 09 04.5**	**+3.7**
	comp=Z,0.2nm,0.9s,baz=302,slow=4.8,SNR=2.9						
NOA	**NORSAR Array B**	**104.72**	**333**	Pdiff	**Pdif**	**09 09 00.7**	**-1.8**
	comp=Z,0.4nm,0.7s,baz=63,slow=4.7,SNR=1.4						
CLL	**Collm**	**107.24**	**323**	*e*PP	**PP**	**09 13 41.0**	**+0.2**
PDAR	**Pinedale Array**	**114.89**	**43**	PKiKP	PKPdf	09 13 39.4	+1.6
	comp=Z,0.2nm,0.5s,baz=207,slow=1.3,SNR=2.2						
ECSD	**EROS Data Cent**	**122.84**	**37**	PKPdf	**PKiKP**	**09 13 53.2**	**+0.2**
TXAR	**Lajitas Array**	**124.04**	**56**	PKP	**PKiKP**	**09 13 57.0**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=62,slow=0.5,SNR=6.4						
KAN09	**Caldwell North**	**125.57**	**45**		PKPpre	09 13 47.9	
TOA0	**Torodi Ar. Sit**	**125.87**	**285**	PKPdf	**PKiKP**	**09 14 00.4**	**+0.6**
S39A	**Bolivar**	**128.24**	**42**		**PKPdf**	**09 14 03.5**	**+0.2**
L48A	**N Adams**	**130.93**	**32**		**PKiKP**	**09 14 09.5**	**+0.3**
DBIC	**Dimbokro**	**132.87**	**277**	PKP	**PKiKP**	**09 14 14.1**	**+0.2**
	comp=Z,2.2nm,0.6s,baz=354,slow=3.2,SNR=4.0						
PLCA	**Paso Flores**	**133.94**	**160**	PKP	**PKiKP**	**09 14 16.8**	**+1.3**
	comp=Z,1.4nm,0.8s,baz=189,slow=7.6,SNR=4.7						
TKL	**Tuckaleechee C**	**135.59**	**38**	PKP	**PKiKP**	**09 14 20.1**	**+1.2**
	comp=Z,1.5nm,0.5s,baz=140,slow=8.2,SNR=6.4						
AC05	**El Transito**	**144.41**	**152**	PKPdf	**PKPdf**	**09 14 33.3**	**-0.3**
MATN	**Matagalpa**	**144.75**	**71**		**PKPdf**	**09 14 34.6**	**+0.2**
JTS	**Las Juntas de**	**146.27**	**75**	PKPbc	**PKiKP**	**09 14 40.4**	**-0.9**
	comp=Z,5.7nm,0.8s,baz=251,slow=3.0,SNR=5.5						
GO02	**Mina Guanaco**	**147.80**	**149**		**PKPab**	**09 14 44.9**	**-0.1**
CPUP	**Villa Florida**	**151.08**	**170**	PKPbc	**PKiKP**	**09 14 51.4**	**+0.5**
	comp=Z,8.0nm,1.0s,baz=199,slow=2.4,SNR=13						
CPUP	**Villa Florida**	**151.08**	**170**	PKPdf	**PKPdf**	**09 14 43.4**	**-1.1**
CPUP					**PKiKP**	**09 14 51.0**	**+0.1**
PB16	**IPOC Station P**	**153.19**	**141**		**PKPab**	**09 15 06.8**	**-0.8**

IDC 29 09:11:26.5±2.0**, 5°.30S**×**128°.34E, h0**^{km}**, mb3.6**/1**,
mbtmp3.3**/3**, ML3.1**/2**, Error ellipse: s-maj=201.7km
s-min=31.5km az=72.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.68**	**159**	Pn	P	09 15 11.2	-2.1
	0.1nm,0.3s,baz=341,slow=13,SNR=1.6						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**19.03**	**164**	P	P	09 15 49.4	-0.9
	0.1nm,0.3s,baz=346,slow=12,SNR=5.1						
	0.5nm,0.6s						
SONM	**Songino Array**	**56.32**	**342**	P	P	09 21 09.2	0.0
	0.5nm,0.6s,baz=166,slow=7.4,SNR=2.8						
	0.5nm,0.6s						

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*IDC **29** 09:12:32.7±1.4, 10°.95N×68°.88W, h0^{km}, mb3.2/3,
mbtmp3.7/7, ML3.5/4, Error ellipse: s-maj=26.3km
s-min=21.3km az=132.0*

*FUNV **29** 09:12:35.4, 10°.87N×68°.96W, h13^{km}, MW3.8*

ISC 29 09:12:34.9±1.3**, 10°.87N**±0°.04×**68°.93W**±0°.03**, h19**^{km}±3^{km}**,
n37, σ1**^{s}**26**/51**, mb3.3**/3**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JACV	**Jacura**	**0.24**	**24**	*e*P	**Pb**	**09 12 41.0**	**+0.5**
JACV				*e*S	**Sg**	**09 12 44.5**	**0.0**
MAPV	**Macapo**	**1.13**	**156**	*e*P	**Pb**	**09 12 55.8**	**-0.2**
MAPV				*e*S	**Sb**	**09 13 11.6**	**+1.4**
CURV	**Curarigua**	**1.32**	**230**	*e*P	**Pn**	**09 12 57.8**	**-0.7**
CURV				*e*S	**Sb**	**09 13 16.5**	**+0.6**
BENV	**Beln**	**1.59**	**124**	*e*P	**Pb**	**09 13 03.6**	**-0.2**
BENV				*e*S	**Sn**	**09 13 23.8**	**+1.5**
CARV	**Caracas**	**2.00**	**100**	*e*P	**Pn**	**09 13 09.0**	**+1.1**
CARV				*e*S	**Sb**	**09 13 34.5**	**-0.9**
BAUV	**El Baul**	**2.10**	**155**	*e*P	**Pn**	**09 13 09.8**	**+0.6**
BAUV				*e*S	**Sn**	**09 13 35.0**	**+0.1**
FUNV	**FUNVISIS**	**2.12**	**101**	*e*P	**Pb**	**09 13 11.6**	**-1.2**
FUNV				*e*S	**Sn**	**09 13 35.6**	**+0.2**
SDV	**Santo Domingo**	**2.59**	**221**	Pn	**Pn**	**09 13 17.8**	**+1.8**
	31nm,0.3s,baz=38,slow=14,SNR=25						
SDV				Sn	**Sn**	**09 13 50.0**	**+2.9**
	21nm,0.3s,baz=307,slow=23,SNR=8.3						
	65nm,0.5s						
MERV	**Las Mercedes**	**3.05**	**122**	*e*P	**Pn**	**09 13 23.0**	**+0.8**
MERV				*e*S	**Sn**	**09 13 58.2**	**-0.1**
URIC	**Uribia, Colomb**	**3.12**	**286**	*e*P	**Pn**	**09 13 22.2**	**-0.9**
MCQV	**Machiques**	**3.64**	**257**	*e*P	**Pn**	**09 13 29.9**	**-0.3**
MCQV				*e*S	**Sn**	**09 14 10.1**	**-2.7**
CRJC	**Cerrejon, Guaj**	**3.88**	**273**	*e*P	**Pn**	**09 13 33.6**	**-0.1**
CACV	**CAICARA DEL OR**	**4.04**	**144**	*e*P	Pn	09 13 40.8	+5.0
CACV				*e*S	**Sb**	**09 14 30.3**	**-3.8**
PCRV	**Puerto La Cruz**	**4.28**	**99**	Pn	**Pn**	**09 13 40.0**	**+0.8**
	8.5nm,0.3s,baz=252,slow=19,SNR=26						
PCRV				Sn	**Sn**	**09 14 30.1**	**+1.5**
	0.5nm,0.3s,baz=229,slow=22,SNR=1.5						
	28nm,0.4s						
PCRV	**Puerto La Cruz**	**4.28**	**99**	*e*P	**Pn**	**09 13 40.2**	**+1.0**
PCRV				*e*S	**Sn**	**09 14 27.9**	**-0.7**
CAPV	**Capacho**	**4.48**	**228**	*e*P	**Pn**	**09 13 42.5**	**+0.4**
CAPV				*e*S	**Sn**	**09 14 31.1**	**-2.6**
PRGV	**PARIAGUAN**	**4.71**	**116**	*e*P	**Pn**	**09 13 45.2**	**+0.1**
PRGV				*e*S	**Sn**	**09 14 37.0**	**-2.3**
PAMC	**Pamplona, Colo**	**5.11**	**227**	*e*P	**Pn**	**09 13 51.2**	**+0.2**
SMRC	**Santa Marta, M**	**5.21**	**274**	*e*P	**Pn**	**09 13 52.1**	**+0.3**
ARGC	**Ariguani, Magd**	**5.33**	**260**	*e*P	**Pn**	**09 13 53.2**	**-0.3**
BARC	**Barichara**	**5.98**	**225**	*e*P	**Pn**	**09 14 04.3**	**+1.7**
BRRC	**Barranca, Sant**	**6.02**	**232**	*e*P	**Pn**	**09 14 03.7**	**+0.6**
SJCC	**San Jacinto, C**	**6.22**	**262**	*e*P	**Pn**	**09 14 05.9**	**0.0**
RUSC	**La Rusia**	**6.43**	**220**	*e*P	**Pn**	**09 14 09.6**	**+0.5**
ZARC	**Zaragoza, Cauc**	**6.75**	**241**	*e*P	**Pn**	**09 14 12.5**	**-0.5**
PTBC	**PUERTO BERRIO,**	**6.95**	**232**	*e*P	**Pn**	**09 14 15.1**	**-0.8**
UREC	**San Jos de Ur**	**7.21**	**245**	*e*P	**Pn**	**09 14 19.9**	**+0.4**
SPBC	**San Pablo de B**	**7.26**	**225**	*e*P	**Pn**	**09 14 20.8**	**+0.6**
SJG	**San Juan**	**7.69**	**20**	Pn	**Pn**	**09 14 25.8**	**-0.1**
	4.8nm,0.3s,baz=327,slow=16,SNR=3.9						
SJG				Sn	Sn	09 15 43.3	-9.3
	4.3nm,0.3s,baz=321,slow=21,SNR=2.0						
	14nm,0.2s						
CHIC	**Chingaza**	**7.81**	**218**	*e*P	**Pn**	**09 14 28.6**	**+0.6**
HELC	**Santa Helena**	**8.01**	**235**	*e*P	**Pn**	**09 14 30.7**	**0.0**
ROSC	**El Rosal**	**8.02**	**222**	Pn	**Pn**	**09 14 32.9**	**+1.9**
	2.3nm,0.3s,baz=48,slow=22,SNR=2.2						
	5.6nm,0.3s						
CBOC	**Ciudad Bolivar**	**8.59**	**235**	*e*P	**Pn**	**09 14 39.0**	**+0.5**
ORTC	**Ortega, Tolima**	**9.33**	**223**	*e*P	**Pn**	**09 14 48.0**	**-0.5**
TXAR	**Lajitas Array**	**37.23**	**305**	P	**P**	**09 19 46.3**	**+0.7**
	0.3nm,0.6s,baz=123,slow=9.8,SNR=2.8						
	0.3nm,0.6s						
PDAR	**Pinedale Array**	**47.49**	**319**	P	**P**	**09 21 10.6**	**+1.5**
	0.1nm,0.5s,baz=108,slow=8.6,SNR=1.9						
	0.1nm,0.5s						
YKA	**Yellowknife Ar**	**61.01**	**338**	P	**P**	**09 22 46.3**	**-0.7**
	0.2nm,0.7s,baz=118,slow=7.2,SNR=6.3						
	0.2nm,0.7s						

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*BJI **29** 09:23:04.2±0.0, 11°.55N×143°.46E, h10^{km}, mb4.8/51,
mB5.1/21, Ms4.3/15, Ms7 4.3/16*

*IDC **29** 09:23:08.9±0.4, 12°.07N×143°.03E, h0^{km}, mb4.7/31,
mbtmp4.7/33, ML4.7/2, MS4.0/27, Error ellipse:
s-maj=15.7km s-min=9.7km az=82.0*

*DJA **29** 09:23:10.5±2.1, 12°N±4°×14°3E±°, h11^{km}±14^{km}, M5.1/19,
mB6.0/4, mb4.9/19, MLv5.1/1, Mw(mB)5.6/4*

*MOS **29** 09:23:10.1±0.9, 11°.99N×143°.02E, h21^{km}, mb5.0/33, Error
ellipse: s-maj=10.7km s-min=5.5km az=105.3*

*NEIC **29** 09:23:11.1±1.3, 12°.03N±0°.07×143°.01E±0°.09, h10^{km}±1^{km},
mb5.2/132, Error ellipse: s-maj=16.0km s-min=11.0km
az=254.0*

ISC 29 09:23:10.5±0.6**, 11°.97N**±0°.04×**143°.05E**±0°.05**, h11**^{km}±3^{km}**,
h11**^{km}**:pP-P, n480, σ0**^{s}**99**/472**, mb5.0**/140**, MS4.1**/32**,
12C-14D, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.40**	**48**	Pn	**Pn**	**09 23 50.8**	**+1.1**
	549nm,0.3s,baz=166,slow=0.3,SNR=105						
GUMO				Sn	**Sn**	**09 24 20.2**	**+1.1**
	411nm,0.3s,baz=42,slow=20,SNR=13						
	2µm,0.4s						
GUMO	**Guam**	**2.40**	**48**		**Pn**	**09 23 50.7**	**+0.9**
SMPI	**Sarmi**	**14.52**	**198**	P	**Pn**	**09 26 34.7**	**-1.5**
	69nm,1.1s,3µm						
GENI	**Genyem**	**14.75**	**191**	P	**Pn**	**09 26 37.0**	**-2.3**
	57nm,1.1s						
JCJ	**Chichijima**	**15.07**	**357**	LR	LR	09 31 36.1	
	comp=Z,492nm,19.6s,baz=135,slow=34						
PATS	**Pohnpei**	**15.89**	**107**		**Pn**	**09 26 54.1**	**-0.3**
PATS				IAmb	IAmb	09 26 55.7	
	comp=Z,446nm,1.9s						
RKPI	**Ransiki, Papua**	**16.03**	**214**	P	**Pn**	**09 26 55.0**	**-1.2**
	comp=Z,27nm,0.8s						
SIJI	**Sorong**	**17.31**	**223**	P	**P**	**09 27 13.8**	**0.0**
	comp=Z,0.8nm,0.3s,baz=18,slow=13,SNR=5.3						
SIJI				LR	LR	09 33 27.7	
	comp=Z,354nm,18.9s,baz=40,slow=36						
	comp=Z,3.2nm,0.3s						
DAV	**Davao City (W)**	**17.90**	**256**	LR	LR	09 35 06.8	
	comp=Z,303nm,18.1s,baz=77,slow=40						
FAKI	**Fak Fak**	**18.28**	**217**	P	**P**	**09 27 24.6**	**+0.1**
FAKI	**Fak Fak**	**18.28**	**217**	P	**Pn**	**09 27 22.7**	**-1.7**
	comp=Z,31nm,1.1s						
LBMI	**Labuha**	**19.88**	**232**	P	**P**	**09 27 41.8**	**-0.4**
	comp=Z,46nm,1.0s						
JOW	**Kunigami**	**20.29**	**319**	P	Pn	09 27 48.1	-0.4
	comp=Z,44nm,0.5s,baz=146,slow=9.7,SNR=28						
JOW				LR	LR	09 34 19.1	
	comp=Z,380nm,20.1s,baz=127,slow=33						
JOW	**Kunigami**	**20.29**	**319**		**P**	**09 27 46.0**	**-0.5**
JOW				IAmb	IAmb	09 27 50.1	
	comp=Z,147nm,1.3s						
PMG	**Port Moresby**	**21.62**	**169**	P	**P**	**09 28 03.5**	**+2.6**
	comp=Z,18nm,0.9s,baz=293,slow=13,SNR=4.6						
PMG				LR	LR	09 35 41.3	
	comp=Z,46nm,19.2s,baz=316,slow=35						
	comp=Z,18nm,0.9s						
PMG	**Port Moresby**	**21.62**	**169**	P	**P**	**09 28 01.3**	**+0.4**
PMG	**Port Moresby**	**21.62**	**169**	*ce*P	**P**	**09 28 01.2**	**+0.3**
TGY	**Tagaytay City**	**21.65**	**278**	P	**P**	**09 28 02.5**	**+1.2**
	comp=Z,132nm,0.3s,baz=151,slow=10,SNR=1.8						
JSU	**Suzuyama**	**22.66**	**331**	P	**P**	**09 28 12.0**	**+0.1**
JSU				IAmb	IAmb	09 28 14.4	
	comp=Z,47nm,0.8s						
YOJ	**Yonaguni jima**	**22.70**	**306**	P	**P**	**09 28 10.2**	**-2.2**
YOJ				IAmb	IAmb	09 28 15.3	
	comp=Z,75nm,1.0s						
YOJ	**Yonaguni jima**	**22.70**	**306**	P	**P**	**09 28 10.2**	**-2.2**
YOJ				pmax	pmax		
	comp=Z,75nm,1.0s						
GTOI	**Gorontalo**	**22.85**	**242**	P	**P**	**09 28 14.6**	**+0.5**
	comp=Z,16nm,0.8s						
JMN	**Monobe**	**23.23**	**340**	P	**P**	**09 28 17.4**	**-0.5**
YULB	**Yu-li**	**23.60**	**302**	P	**P**	**09 28 21.7**	**0.0**
H11S3	**WAKE ISLAND Hy**	**23.70**	**71**	T	T	09 53 04.5	
	baz=252						
NACB	**Ninganchiao**	**23.70**	**304**	P	**P**	**09 28 21.7**	**-0.9**
H11S1	**WAKE ISLAND Hy**	**23.71**	**71**	T	T	09 53 11.2	
	baz=252						
H11S2	**WAKE ISLAND Hy**	**23.71**	**71**	T	T	09 53 02.3	
	baz=252						
JNU	**Nakatsue**	**23.83**	**334**	P	**P**	**09 28 23.1**	**-0.7**
	comp=Z,33nm,0.8s,baz=173,slow=4.7,SNR=21						
JNU				LR	LR	09 36 21.6	
	comp=Z,323nm,19.6s,baz=176,slow=33						
	comp=Z,33nm,0.8s						
JNU	**Nakatsue**	**23.83**	**334**	P	**P**	**09 28 22.8**	**-1.0**
JNU				IAmb	IAmb	09 28 26.2	
	comp=Z,42nm,0.9s						
MRSI	**Marisa**	**23.86**	**243**	P	**P**	**09 28 24.8**	**+0.6**
	comp=Z,47nm,1.1s						
LUWI	**Luwuk**	**23.93**	**239**	P	**P**	**09 28 24.3**	**-0.6**
LUWI	**Luwuk**	**23.93**	**239**	P	**P**	**09 28 24.6**	**-0.4**
	comp=Z,114nm,0.8s						
SSLB	**Suanglung**	**24.05**	**302**	P	**P**	**09 28 25.5**	**-0.6**
SSLB				IAmb	IAmb	09 28 39.5	
	comp=Z,54nm,0.7s						
JGF	**Kuroka**	**24.09**	**349**	P	**P**	**09 28 25.8**	**-0.5**
YHNB	**Yeheng**	**24.10**	**305**	P	**P**	**09 28 25.8**	**-0.8**
YHNB				IAmb	IAmb	09 28 43.0	
	comp=Z,43nm,1.1s						
H11N1	**WAKE ISLAND Hy**	**24.17**	**68**	T	T	09 53 34.1	
	baz=255,slow=75,SNR=30						
H11N2	**WAKE ISLAND Hy**	**24.18**	**68**	T	T	09 53 36.5	
	baz=255,slow=75,SNR=29						
H11N3	**WAKE ISLAND Hy**	**24.19**	**68**	T	T	09 53 36.1	
	baz=255,slow=75,SNR=17						
MJAR	**Matsushiro Arr**	**24.85**	**351**	P	**P**	**09 28 31.8**	**-1.4**
	comp=Z,3.9nm,0.6s,baz=183,slow=8.9,SNR=12						
MJAR				PcP	**PcP**	**09 32 08.8**	**-0.5**
	comp=Z,3.8nm,0.7s,baz=165,slow=3.5,SNR=6.8						
MJAR				LR	LR	09 37 38.0	
	comp=Z,373nm,19.2s,baz=154,slow=35						
	comp=Z,3.9nm,0.6s						
MAJO	**Matsushiro**	**24.86**	**351**	P	**P**	**09 28 31.4**	**-1.8**
MAJO	**Matsushiro**	**24.86**	**351**	⇓*e*P	**P**	**09 28 31.3**	**-1.9**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MJB9	**Matsu-Tunnel**	**24.86**	**351**	P	**P**	**09 28 31.6**	**-1.7**
JTU	**Tsushima**	**25.66**	**333**	P	**P**	**09 28 40.0**	**-0.5**
MPSI	**Mapaga**	**25.72**	**245**	P	**P**	**09 28 40.9**	**-0.4**
	comp=Z,16nm,0.9s						
COEN	**Coen**	**25.76**	**180**	P	**P**	**09 28 41.3**	**-0.2**
JSD	**Sado**	**26.31**	**351**	P	**P**	**09 28 45.3**	**-1.0**
HNR	**Honiara**	**27.09**	**141**	P	**P**	**09 28 54.7**	**+1.1**
	comp=Z,265nm,0.3s,baz=248,slow=5.4,SNR=2.3						
MTN	**Manton Dam**	**27.34**	**206**	P	**P**	**09 28 55.7**	**-0.1**
TJN	**Taejon**	**28.12**	**332**	⇑*i*P	**P**	**09 29 03.0**	**+0.4**
KAPI	**Kappang**	**28.66**	**235**	LR	LR	09 39 17.1	
	comp=Z,96nm,21.2s,baz=74,slow=34						
JTM	**Tenmabayashi**	**28.76**	**357**	P	**P**	**09 29 07.8**	**-0.4**
KSRS	**Korea Array**	**28.78**	**334**	P	**P**	**09 29 07.2**	**-1.2**
	comp=Z,2.2nm,0.5s,baz=149,slow=10.0,SNR=12						
KSRS				PcP	**PcP**	**09 32 18.9**	**+0.4**

	comp=Z,1.8nm,0.7s,baz=165,slow=2.5,SNR=7.1						
KSRS				LR	LR	09 39 52.8	
	comp=Z,139nm,18.4s,baz=155,slow=35						
	comp=Z,2.2nm,0.5s						
KSAR	**Wonju Array Be**	**28.78**	**334**	P	**P**	**09 29 06.9**	**-1.6**
KSAR	**Wonju Array Be**	**28.78**	**334**	P	**P**	**09 29 06.9**	**-1.6**
NJ2	**Nanjing**	**29.92**	**316**	*e*P	**P**	**09 29 20.8**	**+2.1**
NJ2				sP	**pwP**	**09 29 25.3**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,150nm,5.7s						
SBUM	**Sibu**	**31.98**	**255**	P	**P**	**09 29 36.2**	**-0.9**
CTA	**Charters Tower**	**32.01**	**174**	P	**P**	**09 29 37.6**	**+0.3**
	comp=Z,13nm,0.9s,baz=5.2,slow=10,SNR=5.8						
CTA				LR	LR	09 43 05.5	
	comp=Z,121nm,18.9s,baz=316,slow=37						
	comp=Z,13nm,0.9s						
CTAO	**Charters Tower**	**32.01**	**174**	P	**P**	**09 29 37.5**	**+0.3**
CTAO	**Charters Tower**	**32.01**	**174**	P	**P**	**09 29 37.5**	**+0.3**
CTAO				pmax	pmax		
	comp=Z,86nm,1.7s						
JKA	**Kamikawa-asahi**	**32.04**	**359**	P	**P**	**09 29 36.5**	**-0.7**
ASAJ	**Asahikawa**	**32.04**	**359**	P	**P**	**09 29 36.6**	**-0.6**
	comp=Z,4.6nm,0.9s,baz=243,slow=9.0,SNR=5.3						
	comp=Z,4.6nm,0.9s						
ASAJ	**Asahikawa**	**32.04**	**359**	P	**P**	**09 29 36.5**	**-0.7**
ASAJ				pmax	pmax		
	comp=Z,102nm,2.0s						
WB0	**Warramunga Arr**	**32.67**	**195**	P	**P**	**09 29 43.3**	**+0.3**
QIZ	**Qiongzhong**	**32.72**	**287**	P	**P**	**09 29 45.0**	**+1.4**
QIZ				sP	**pwP**	**09 29 49.5**	**-0.6**
QIZ				S	**S**	**09 35 04.5**	**+4.2**
QIZ				LR	LR		
	comp=Z,330nm,10.2s						
QIZ				LR	LR		
	comp=Z,250nm,14.9s						
QIZ				LR	LR		
	comp=Z,380nm,14.2s						
WRAB	**Tennant Creek**	**32.84**	**195**	P	**P**	**09 29 44.9**	**+0.4**
WRAB	**Tennant Creek**	**32.84**	**195**	⇑*i*P	**P**	**09 29 44.3**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,25nm,1.7s						
WB2	**Warramunga Arr**	**32.85**	**195**	P	**P**	**09 29 45.0**	**+0.4**
WB2				IAmb	IAmb	09 29 45.8	
	comp=Z,22nm,1.1s						
WRA	**Warramunga Arr**	**32.85**	**195**	P	**P**	**09 29 44.8**	**+0.2**
	comp=Z,12nm,0.9s,baz=18,slow=9.5,SNR=45						
WRA				PcP	**PcP**	**09 32 30.4**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=357,slow=2.6,SNR=2.0						
WRA				LR	LR	09 43 30.3	
	comp=Z,238nm,18.6s,baz=28,slow=37						
	comp=Z,12nm,0.9s						
WRA	**Warramunga Arr**	**32.85**	**195**	P	**P**	**09 29 44.6**	**0.0**
WRA	**Warramunga Arr**	**32.85**	**195**	*i* P	**P**	**09 29 44.7**	**+0.2**
WRA				pmax	pmax		
	comp=Z,12nm,0.9s						
USA0B	**Ussuriysk Arra**	**33.50**	**346**	P	**P**	**09 29 50.0**	**0.0**
USA0B	**Ussuriysk Arra**	**33.50**	**346**	*c i*P	**P**	**09 29 50.3**	**+0.3**
USRK	**Ussuriysk Ar.**	**33.50**	**346**	P	**P**	**09 29 49.8**	**-0.2**
	comp=Z,9.8nm,0.7s,baz=176,slow=8.6,SNR=18						
	comp=Z,9.8nm,0.7s						
USRK	**Ussuriysk Ar.**	**33.50**	**346**	P	**P**	**09 29 50.0**	**0.0**
USRK	**Ussuriysk Ar.**	**33.50**	**346**	P	**P**	**09 29 50.0**	**0.0**
LYN	**LuoYang**	**35.74**	**314**	*e*P	**P**	**09 30 09.3**	**-0.3**
LYN				pmax	pmax		
	comp=Z,17nm,0.6s						
LYN				LR	LR		
	comp=Z,260nm,23.7s						
LYN				LR	LR		
	comp=Z,280nm,20.8s						
LYN				LR	LR		
	comp=Z,340nm,20.0s						
HNS	**HongShan**	**35.86**	**320**	⇑P	**P**	**09 30 10.8**	**+0.3**
HNS				pmax	pmax		
	comp=Z,21nm,1.1s						
ENH	**Enshi**	**36.03**	**306**	P	**P**	**09 30 11.6**	**-0.6**
ENH				IAmb	IAmb	09 30 13.9	
	comp=Z,47nm,1.3s						
BNX	**BinXian**	**36.20**	**341**	⇓P	**P**	**09 30 14.0**	**+0.7**
BNX				pmax	pmax		
	comp=Z,11nm,0.5s						
BNX				pmax	pmax		
	comp=Z,380nm,11.9s						
AS31	**Alice Springs**	**36.53**	**194**	P	**P**	**09 30 16.4**	**0.0**
ASAR	**Alice Springs**	**36.53**	**194**	P	**P**	**09 30 16.6**	**+0.2**
	comp=Z,3.5nm,0.6s,baz=25,slow=11,SNR=55						
ASAR				PcP	**PcP**	**09 32 41.1**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=34,slow=2.7,SNR=5.6						
ASAR				LR	LR	09 46 00.5	
	comp=Z,372nm,18.1s,baz=14,slow=38						
	comp=Z,3.5nm,0.6s						
ASAR	**Alice Springs**	**36.53**	**194**	P	**P**	**09 30 16.0**	**-0.4**
BJT	**Baijiatuau**	**36.66**	**324**	P	**P**	**09 30 16.4**	**-0.9**
BJT	**Baijiatuau**	**36.66**	**324**	P	**P**	**09 30 16.4**	**-0.9**
BJT				pmax	pmax		
	comp=Z,12nm,0.6s						
BJI	**Beijing**	**36.67**	**324**	P	**P**	**09 30 17.3**	**-0.1**
BJI				pP	**sP**	**09 30 21.5**	**+1.2**
BJI				sP	**pwP**	**09 30 24.5**	**-0.1**
BJI				PcP	**PcP**	**09 32 42.0**	**+1.8**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BJI				LR	LR		
	comp=Z,160nm,19.8s						
BJI				LR	LR		
	comp=Z,160nm,19.0s						
XAN	**Xi'an**	**38.06**	**311**	P	**P**	**09 30 28.5**	**-0.9**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KLR	**Kul'dur**	**38.31**	**348**	P	**P**	**09 30 30.9**	**-0.4**
	comp=Z,11nm,0.9s,baz=153,slow=6.6,SNR=27						
KLR				PcP	**PcP**	**09 32 46.1**	**+1.0**
	comp=Z,2.8nm,0.7s,baz=211,slow=0.9,SNR=3.6						
KLR				LR	LR	09 44 37.6	
	comp=Z,258nm,21.9s,baz=196,slow=34						
	comp=Z,11nm,0.9s						
XLT	**XiLinHaoTe**	**39.40**	**329**	⇓*i*P	**P**	**09 30 40.8**	**+0.3**
XLT				pP	pwP	09 30 44.8	-2.9
XLT				S	**S**	**09 36 50.3**	**+8.2**
XLT				pmax	pmax		
	comp=Z,25nm,0.5s						
XLT				pmax	pmax		
	comp=Z,390nm,5.2s						
XLT				LR	LR		
	comp=Z,280nm,20.5s						
XLT				LR	LR		
	comp=Z,370nm,15.8s						
HHC	**Hu-ho-hao-te**	**39.89**	**322**	*e*P	**P**	**09 30 47.0**	**+2.3**
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,310nm,6.2s						
HEH	**HeiHe**	**40.28**	**344**	P	**P**	**09 30 47.3**	**-0.3**
HEH				pP	**sP**	**09 30 50.8**	**+0.3**
HEH				S	**S**	**09 36 54.5**	**-0.5**
HEH				sS	sS	09 37 05.5	+7.1
HEH				SS	**SS**	**09 39 54.0**	**+0.6**
HEH				pmax	pmax		
	comp=Z,32nm,0.8s						
HEH				pmax	pmax		
	comp=Z,230nm,5.7s						
HEH				LR	LR		
	comp=Z,190nm,15.9s						
HEH				LR	LR		
	comp=Z,230nm,14.1s						
HEH				LR	LR		
	comp=Z,390nm,15.0s						
CD2	**Chengdu**	**40.87**	**304**	P	**P**	**09 30 52.8**	**-0.1**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
DZM	**Mont Dzumac**	**40.88**	**146**	P	**P**	**09 30 53.8**	**+0.8**
	comp=Z,14nm,0.6s,baz=332,slow=5.7,SNR=23						
DZM				LR	LR	09 43 54.6	
	comp=Z,164nm,21.0s,baz=252,slow=30						
	comp=Z,14nm,0.6s						
DZM	**Mont Dzumac**	**40.88**	**146**	P	**P**	**09 30 53.8**	**+0.8**
DZM				IAmb	IAmb	09 30 59.4	
	comp=Z,32nm,1.0s						
PZH	**PanZhiHua**	**41.40**	**297**	P	**P**	**09 30 58.3**	**+0.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,140nm,9.0s						
IPM	**Ipoh**	**42.21**	**263**	P	**P**	**09 31 04.4**	**+0.4**
KULM	**Kulim**	**42.40**	**265**	P	**P**	**09 31 05.0**	**-0.7**
PETK	**Petropavlovsk-**	**42.68**	**13**	P	**P**	**09 31 06.7**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=199,slow=7.5,SNR=1.3						
PETK				PcP	**PcP**	**09 32 59.0**	**-0.1**
	comp=Z,3.7nm,0.9s,baz=172,slow=5.5,SNR=5.8						
	comp=Z,1.0nm,0.7s						
LZH	**Lanzhou**	**42.69**	**311**	*e*P	**P**	**09 31 09.0**	**+1.1**
LZH				pP	pwP	09 31 13.8	-0.6
LZH				sP	sP	09 31 19.0	+7.9
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
LZH				LR	LR		
	comp=Z,270nm,17.8s						
LZH				LR	LR		
	comp=Z,490nm,17.1s						
LZH				LR	LR		
	comp=Z,510nm,15.5s						
PET	**Petropavlovsk**	**42.82**	**14**	P	**P**	**09 31 08.3**	**-0.1**
PET				IAmb	IAmb	09 32 38.7	
	comp=Z,43nm,1.2s						
SRIT	**Nakonsritamara**	**42.85**	**270**	P	**P**	**09 31 08.5**	**-0.8**
SRIT				IAmb	IAmb	09 31 12.0	
	comp=Z,52nm,1.1s						
CM31	**Chiang Mai Arr**	**42.97**	**284**	P	**P**	**09 31 10.5**	**+0.4**
CMAR	**Chiang Mai Arr**	**42.97**	**284**	P	**P**	**09 31 11.3**	**+1.2**
	comp=Z,4.6nm,0.7s,baz=85,slow=6.4,SNR=19						
CMAR				PcP	**PcP**	**09 33 01.6**	**+0.9**
	comp=Z,2.6nm,0.2s,baz=89,slow=2.3,SNR=5.1						
CMAR				LR	LR	09 48 30.0	
	comp=Z,129nm,19.9s,baz=105,slow=35						
	comp=Z,4.6nm,0.7s						
CMAR	**Chiang Mai Arr**	**42.97**	**284**	P	**P**	**09 31 09.6**	**-0.6**
CMAR	**Chiang Mai Arr**	**42.97**	**284**	*i* P	**P**	**09 31 11.3**	**+1.2**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ZEA	**Zeya**	**43.52**	**346**	*e*P	**P**	**09 31 14.4**	**+0.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
STKA	**Stephens Creek**	**43.62**	**182**	P	**P**	**09 31 14.6**	**-0.5**
	comp=Z,2.4nm,0.4s,baz=360,slow=9.3,SNR=5.1						
STKA				LR	LR	09 53 19.8	
	comp=Z,158nm,18.4s,baz=215,slow=41						
	comp=Z,2.4nm,0.4s						
STKA	**Stephens Creek**	**43.62**	**182**	⇓*e*P	**P**	**09 31 13.1**	**-2.0**
TNCH	**TengChong**	**43.99**	**294**	*e*P	**P**	**09 31 17.3**	**-1.2**
TNCH				pmax	pmax		
	comp=Z,210nm,4.4s						
BBOO	**Buckleboo**	**45.02**	**188**	P	**P**	**09 31 26.1**	**-0.2**
MSVF	**Nonsavu**	**45.44**	**130**	LR	LR	09 50 36.9	
	comp=Z,211nm,18.3s,baz=349,slow=36						
ULN	**Ulaanbaatar**	**46.73**	**327**	*c i*P	**P**	**09 31 40.0**	**+0.1**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GTA	**Gaotai**	**46.96**	**313**	*e*P	**P**	**09 31 42.0**	**+0.2**
GTA				pP	pwP	09 31 47.8	-0.5
GTA				PcP	**PcP**	**09 33 15.5**	**+1.2**
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GTA				LR	LR		
	comp=Z,130nm,20.0s						
GTA				LR	LR		
	comp=Z,150nm,19.6s						
GTA				LR	LR		
	comp=Z,220nm,22.2s						
SONM	**Songino Array**	**47.07**	**327**	P	**P**	**09 31 42.4**	**-0.1**
	comp=Z,2.1nm,0.5s,baz=148,slow=7.8,SNR=11						
SONM				PcP	**PcP**	**09 33 14.5**	**0.0**
	comp=Z,2.8nm,0.8s,baz=136,slow=3.5,SNR=6.5						
SONM				LR	LR	09 51 48.0	
	comp=Z,258nm,19.3s,baz=136,slow=37						
	comp=Z,2.1nm,0.5s						
SONM	**Songino Array**	**47.07**	**327**	P	**P**	**09 31 42.2**	**-0.3**
MA2	**Magadan**	**47.87**	**5**	⇓*e*P	**P**	**09 31 48.2**	**-0.2**
MA2				pmax	pmax		
	comp=Z,47nm,4.7s						
GOMU	**GeErMu**	**49.59**	**308**	P	**P**	**09 32 03.5**	**+1.1**
GOMU				sP	pwP	09 32 08.3	-0.7
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ZAK	**Zakamensk**	**50.23**	**328**	*e*P	**P**	**09 32 06.5**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,14nm,1.1s						
YAK	**Yakutsk**	**50.91**	**352**	P	**P**	**09 32 10.9**	**-0.7**
	comp=Z,11nm,0.3s,baz=350,slow=2.9,SNR=7.4						
	comp=Z,11nm,0.3s						
YAK	**Yakutsk**	**50.91**	**352**	*e*P	**P**	**09 32 11.2**	**-0.3**
YAK				*e**PP	**pwP**	**09 32 19.7**	**+0.8**
YAK				*e*		09 33 27.4	
YAK				*e*S	**S**	**09 39 28.7**	**+0.9**
YAK				*e**SS	sS	09 39 47.5	+16
YAK				*e*SS	**SS**	**09 42 53.8**	**-8.8**
YAK				*e*SSS	SSS	09 44 29.1	
YAK				pmax	pmax		
	comp=Z,55nm,1.0s						
YAK				pmax	pmax		
	comp=N,16nm,1.2s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,316nm,5.4s						
YAK				pmax	pmax		
	comp=N,85nm,5.9s						
YAK				pmax	pmax		
	comp=E,106nm,6.3s						
YAK				smax	smax		
	comp=E,109nm,6.8s						
YAK				smax	smax		
	comp=N,49nm,5.2s						
SEY	**Seymchan**	**51.32**	**5**	*d i*P	**P**	**09 32 14.9**	**+0.3**
SEY				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MOY	**Mondy**	**52.15**	**328**	*e*P	**P**	**09 32 21.0**	**-0.2**
MOY				pmax	pmax		
	comp=Z,13nm,1.0s						
TAPN	**Taplejung**	**53.91**	**295**	*e*P	**P**	**09 32 34.2**	**-0.6**
RAMN	**Ramite**	**54.86**	**295**	*e*P	**P**	**09 32 40.6**	**-1.1**
	comp=Z,4.1nm,0.3s						
JIRN	**Jiri**	**55.28**	**295**	*e*P	**P**	**09 32 44.4**	**-0.4**
	comp=Z,7.6nm,0.4s						
GUN	**Gumba**	**55.57**	**296**	*e*P	**P**	**09 32 46.9**	**0.0**
GKN	**Gorkha**	**56.67**	**296**	*e*P	**P**	**09 32 54.6**	**0.0**
	comp=Z,13nm,0.4s						
WMQ	**Urumqi**	**56.99**	**315**	*e*P	**P**	**09 32 56.5**	**0.0**
WMQ				pP	pwP	09 33 04.0	+0.9
WMQ				PcP	**PcP**	**09 33 54.3**	**+2.7**
WMQ				pmax	pmax		
	comp=Z,22nm,1.1s						
WMQ				LR	LR		
	comp=Z,300nm,18.7s						
SPIA	**Saint Paul Isl**	**57.43**	**28**	P	**P**	**09 32 59.6**	**+0.4**
SPIA	**Saint Paul Isl**	**57.43**	**28**	P	**P**	**09 32 59.0**	**-0.2**
	baz=238						
DANN	**Dangsing**	**57.47**	**296**	*e*P	**P**	**09 33 00.0**	**-0.4**
	comp=Z,13nm,0.5s						
UNV	**Unalaska Valle**	**57.64**	**33**	P	**P**	**09 33 00.5**	**-0.3**
UNV				IAmb	IAmb	09 33 54.3	
	comp=Z,34nm,1.3s						
UNV	**Unalaska Valle**	**57.64**	**33**	P	**P**	**09 33 01.1**	**+0.4**
	baz=243						
BILL	**Bilibino**	**58.05**	**10**	⇓*i*P	**P**	**09 33 04.1**	**+0.7**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PYUN	**Piuthan**	**58.13**	**296**	*e*P	**P**	**09 33 04.6**	**-0.4**
AKUT	**Akutan**	**58.16**	**33**	P	**P**	**09 33 04.5**	**+0.2**
DGZ	**Jazzator, Alta**	**58.97**	**321**	⇓*i*P	**P**	**09 33 11.1**	**+0.7**
DGZ				pmax	pmax		
	comp=Z,10.0nm,1.2s						
TIXI	**Tiksi**	**60.27**	**355**	P	**P**	**09 33 17.3**	**-1.5**
	comp=Z,1.8nm,0.3s,baz=270,slow=24,SNR=12						
	comp=Z,1.8nm,0.3s						
TIXI	**Tiksi**	**60.27**	**355**	P	**P**	**09 33 17.2**	**-1.5**
TIXI	**Tiksi**	**60.27**	**355**	P	**P**	**09 33 17.2**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
S12K	**Black Hills**	**60.76**	**32**	P	**P**	**09 33 22.1**	**-0.2**
	baz=247						
RPZ	**Rata Peaks**	**61.01**	**157**	LR	LR	09 57 00.8	
	comp=Z,120nm,20.5s,baz=288,slow=33						
MK31	**Makanchi Array**	**61.44**	**317**	P	**P**	**09 33 27.9**	**+0.7**
MK31	**Makanchi Array**	**61.44**	**317**	P	**P**	**09 33 27.9**	**+0.7**
MK31				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MKAR	**Makanchi Array**	**61.44**	**317**	P	**P**	**09 33 27.1**	**-0.1**
	comp=Z,64nm,1.4s,baz=97,slow=8.7,SNR=36						
	comp=Z,64nm,1.4s						
MKAR	**Makanchi Array**	**61.44**	**317**	P	**P**	**09 33 26.4**	**-0.7**
MAKZ	**Makanchi**	**61.65**	**317**	P	**P**	**09 33 28.6**	**0.0**
MAKZ	**Makanchi**	**61.65**	**317**	P	**P**	**09 33 28.6**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ZAA0	**Zalesovo Array**	**61.92**	**325**	P	**P**	**09 33 29.8**	**-0.5**
ZALV	**Zalesovo Beam**	**61.92**	**325**	P	**P**	**09 33 29.3**	**-0.9**
	comp=Z,2.7nm,0.4s,baz=108,slow=7.1,SNR=9.9						
ZALV				PcP	**PcP**	**09 34 09.9**	**-1.0**
	comp=Z,3.9nm,0.7s,baz=139,slow=3.5,SNR=6.2						
ZALV				LR	LR	10 00 39.8	
	comp=Z,142nm,19.7s,baz=116,slow=36						
	comp=Z,2.7nm,0.4s						
ZALV	**Zalesovo Beam**	**61.92**	**325**	P	**P**	**09 33 29.8**	**-0.5**
ZALV	**Zalesovo Beam**	**61.92**	**325**	*i* P	**P**	**09 33 29.7**	**-0.5**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s						
CHGN	**Chignik**	**62.88**	**32**	P	**P**	**09 33 36.7**	**+0.1**
	baz=250						
TNA	**Tin City**	**62.98**	**21**	P	**P**	**09 33 37.2**	**+0.1**
	baz=236,SNR=6.6						
ANM	**Nome**	**63.35**	**22**	P	**P**	**09 33 39.8**	**+0.2**
ANM				IAmb	IAmb	09 33 40.9	
	comp=Z,8.3nm,0.8s						
ANM	**Nome**	**63.35**	**22**	P	**P**	**09 33 39.8**	**+0.2**
ANM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ANM	**Nome**	**63.35**	**22**	P	**P**	**09 33 40.0**	**+0.4**
	baz=239,SNR=11						
R16K	**Pilot Point**	**63.76**	**31**	P	**P**	**09 33 42.3**	**-0.1**
	baz=250						
P16K	**Nushagak River**	**64.07**	**30**	P	**P**	**09 33 44.5**	**+0.1**
	baz=249						
KDJ	**Kajisay**	**64.20**	**311**	IAmb	IAmb	09 33 47.0	
	comp=Z,7.2nm,0.7s						
O16K	**Kokwok River B**	**64.23**	**29**	P	**P**	**09 33 45.5**	**+0.1**
	baz=248						
N16K	**Nishlik Lake**	**64.24**	**28**	P	**P**	**09 33 45.9**	**+0.3**
	baz=247						
R17K	**Ugashik Creek**	**64.38**	**31**	P	**P**	**09 33 46.4**	**-0.1**
	baz=251						
Q16K	**King Salmon**	**64.59**	**30**	P	**P**	**09 33 47.5**	**-0.3**
	baz=250						
KURK	**Kurchatov**	**64.69**	**321**	P	**P**	**09 33 48.4**	**-0.2**
KURK				IAmb	IAmb	09 33 49.9	
	comp=Z,18nm,0.9s						
KURK	**Kurchatov**	**64.69**	**321**	*c i*P	**P**	**09 33 48.1**	**-0.5**
KURK				pmax	pmax		
	comp=Z,22nm,1.0s						
O17K	**Koliganek Bris**	**64.76**	**29**	P	**P**	**09 33 49.0**	**+0.1**
	baz=249						
KSH	**Kashi**	**64.83**	**308**	P	**P**	**09 33 52.8**	**+2.9**
KSH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
Q17K	**Contact Creek**	**64.84**	**31**	P	**P**	**09 33 49.0**	**-0.6**
	baz=251						
P17K	**Kvichak River**	**64.88**	**30**	P	**P**	**09 33 49.6**	**-0.1**
	baz=250						
Q18K	**Katmai Hardscr**	**65.40**	**30**	P	**P**	**09 33 52.7**	**-0.5**
	baz=252						
P18K	**Big Mountain,**	**65.53**	**30**	P	**P**	**09 33 53.7**	**-0.3**
	baz=251						
O18K	**Koktuh Hills**	**65.69**	**29**	P	**P**	**09 33 55.3**	**+0.4**
O18K	**Koktuh Hills**	**65.69**	**29**	P	**P**	**09 33 55.5**	**+0.5**
	baz=251						
SVW2	**Sparrevohn**	**65.93**	**28**	P	**P**	**09 33 56.5**	**0.0**
SVW2				IAmb	IAmb	09 33 58.6	
	comp=Z,36nm,1.4s						
RDOG	**Red Dog Mine**	**65.99**	**19**	P	**P**	**09 33 57.5**	**+0.7**
RDOG				IAmb	IAmb	09 33 59.5	
	comp=Z,13nm,0.6s						
RDOG	**Red Dog Mine**	**65.99**	**19**	P	**P**	**09 33 57.8**	**+1.0**
	baz=240						
Q19K	**Cape Douglas,**	**66.16**	**30**	P	**P**	**09 33 57.9**	**-0.2**
	baz=253						
O19K	**Port Alsworth**	**66.22**	**29**	P	**P**	**09 33 58.6**	**+0.3**
	baz=252,SNR=5.8						
AAK	**Ala-Archa**	**66.23**	**311**	LR	LR	10 04 55.3	
	comp=Z,197nm,18.9s,baz=94,slow=38						
AAK	**Ala-Archa**	**66.23**	**311**	*d i*P	**P**	**09 33 59.1**	**+0.1**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
N19K	**Bonanza Creek**	**66.34**	**28**	IAmb	IAmb	09 34 00.8	
	comp=Z,18nm,0.8s						
N19K	**Bonanza Creek**	**66.34**	**28**	P	**P**	**09 33 59.5**	**+0.2**
	baz=251						
KDAK	**Kodiak Island**	**66.37**	**32**	P	**P**	**09 34 00.0**	**+0.6**
	baz=254						
P19K	**Oil Pt**	**66.58**	**30**	P	**P**	**09 34 00.1**	**-0.6**
	baz=253						
L19K	**White Mountain**	**66.62**	**27**	IAmb	IAmb	09 34 02.4	
	comp=Z,18nm,0.8s						
L19K	**White Mountain**	**66.62**	**27**	P	**P**	**09 34 01.3**	**+0.3**
	baz=250,SNR=14						
Q20K	**Shuyak Island**	**66.69**	**31**	P	**P**	**09 34 01.5**	**+0.1**
	baz=254						
GCSA	**Galena City Sc**	**66.70**	**24**	P	**P**	**09 34 01.1**	**-0.2**
	baz=248,SNR=5.6						
NIL	**Nilore**	**66.70**	**302**	P	**P**	**09 34 02.0**	**0.0**
NIL	**Nilore**	**66.70**	**302**	P	**P**	**09 34 02.0**	**0.0**
NIL				pmax	pmax		
	comp=Z,18nm,0.7s						
M19K	**Big River Lodg**	**66.73**	**27**	IAmb	IAmb	09 34 03.2	
	comp=Z,11nm,0.7s						
M19K	**Big River Lodg**	**66.73**	**27**	P	**P**	**09 34 02.2**	**+0.6**
	baz=251						
O20K	**Slope Mountain**	**67.00**	**29**	P	**P**	**09 34 03.5**	**+0.1**
	baz=253						
NRIK	**Noril'sk**	**67.09**	**341**	P	**P**	**09 34 02.6**	**-1.1**
	comp=Z,6.8nm,0.6s,baz=115,slow=9.0,SNR=10						
	comp=Z,6.8nm,0.6s						
NRIK	**Noril'sk**	**67.09**	**341**	P	**P**	**09 34 03.3**	**-0.5**
NRIK				IAmb	IAmb	09 34 04.8	
	comp=Z,7.4nm,0.7s						
NRIK	**Noril'sk**	**67.09**	**341**	*ce*P	**P**	**09 34 03.2**	**-0.5**
NRIK				pmax	pmax		
	comp=Z,17nm,1.4s						
L20K	**Farewell, AK**	**67.15**	**27**	P	**P**	**09 34 04.6**	**+0.2**
	baz=251,SNR=7.4						
M20K	**Styx River**	**67.29**	**27**	IAmb	IAmb	09 34 08.5	
	comp=Z,21nm,0.8s						
M20K	**Styx River**	**67.29**	**27**	P	**P**	**09 34 06.1**	**+0.8**
	baz=252						
K20K	**Telida**	**67.35**	**26**	IAmb	IAmb	09 34 07.3	
	comp=Z,17nm,0.9s						
K20K	**Telida**	**67.35**	**26**	P	**P**	**09 34 06.4**	**+0.8**
	baz=251,SNR=12						
SPCR	**Spurr Chakacha**	**67.51**	**28**	P	**P**	**09 34 06.6**	**-0.1**
	baz=253						
CNPM	**China Poot**	**67.52**	**30**	P	**P**	**09 34 06.2**	**-0.5**
BRLK	**Bradley Lake**	**67.75**	**30**	P	**P**	**09 34 07.3**	**-0.9**
BRSE	**Bradley Lake S**	**67.82**	**30**	P	**P**	**09 34 08.8**	**+0.2**
	baz=255,SNR=5.6						
CAPN	**Captain Cook N**	**67.89**	**29**	P	**P**	**09 34 09.1**	**+0.2**
	baz=254						
PPLA	**Purkeypile**	**68.02**	**27**	P	**P**	**09 34 09.5**	**-0.4**
PPLA				IAmb	IAmb	09 34 11.0	
	comp=Z,14nm,0.7s						
PPLA	**Purkeypile**	**68.02**	**27**	P	**P**	**09 34 09.9**	**-0.1**
	baz=253,SNR=6.1						
SKT	**Skwentna**	**68.05**	**28**	P	**P**	**09 34 09.1**	**-0.9**
SKT				IAmb	IAmb	09 34 10.6	
	comp=Z,21nm,0.9s						
SKT	**Skwentna**	**68.05**	**28**	P	**P**	**09 34 09.2**	**-0.8**
	baz=254,SNR=12						
CAST	**Castle Rocks**	**68.22**	**26**	P	**P**	**09 34 11.1**	**0.0**
CAST	**Castle Rocks**	**68.22**	**26**	P	**P**	**09 34 11.1**	**0.0**
	baz=253,SNR=24						
SUA	**Susitna One**	**68.26**	**28**	P	**P**	**09 34 10.7**	**-0.7**
SUA				IAmb	IAmb	09 34 12.0	
	comp=Z,21nm,0.9s						
SUA	**Susitna One**	**68.26**	**28**	P	**P**	**09 34 10.8**	**-0.7**
	baz=255,SNR=9.8						
CHUM	**Lake Minchumin**	**68.27**	**26**	P	**P**	**09 34 11.5**	**+0.2**
	baz=252,SNR=11						
IMAR	**Indian Mountai**	**68.37**	**23**	P	**P**	**09 34 11.9**	**0.0**
FIS	**Fire Island**	**68.43**	**29**	P	**P**	**09 34 12.6**	**+0.3**
O22K	**Cooper Landing**	**68.49**	**29**	P	**P**	**09 34 12.1**	**-0.6**
O22K	**Cooper Landing**	**68.49**	**29**	P	**P**	**09 34 12.4**	**-0.3**
	baz=256,SNR=10						
H21K	**Melozitna Rive**	**68.63**	**24**	IAmb	IAmb	09 34 15.1	
	comp=Z,9.5nm,0.8s						
H21K	**Melozitna Rive**	**68.63**	**24**	P	**P**	**09 34 14.0**	**+0.5**
	baz=251						
RC01	**Rabbit Creek A**	**68.64**	**29**	P	**P**	**09 34 12.9**	**-0.8**
RC01	**Rabbit Creek A**	**68.64**	**29**	P	**P**	**09 34 12.9**	**-0.8**
	baz=256,SNR=18						
G21K	**Allakaket**	**68.65**	**23**	P	**P**	**09 34 14.0**	**+0.3**
	baz=250,SNR=10						

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CUT   Chulitna          68.73  27  P      P      09 34 13.4 -0.8
CUT   Chulitna          68.73  27  P      P      09 34 13.3 -0.9
      baz=255,SNR=5.5
KTH   Kantishna Hill    68.76  26  P      P      09 34 14.8 +0.3
I21K  Tanana            68.80  24  IAmb   IAmb   09 34 16.8
      comp=Z,19nm,1.1s
I21K  Tanana            68.80  24  P      P      09 34 14.9 +0.3
      baz=252
BPAW  Bear Paw Mtn.     68.89  25  P      P      09 34 15.0 -0.2
BPAW                               IAmb   IAmb   09 34 16.2
      comp=Z,21nm,0.8s
BPAW  Bear Paw Mtn.     68.89  25  P      P      09 34 15.0 -0.2
      baz=253,SNR=20
F21K  Alatna River      68.90  22  P      P      09 34 15.3 +0.1
      baz=250,SNR=12
TRF   Thorofare Moun    69.00  26  P      P      09 34 15.3 -0.8
TRF                                IAmb   IAmb   09 34 16.3
      comp=Z,17nm,0.8s
TRF   Thorofare Moun    69.00  26  P      P      09 34 15.3 -0.8
      baz=254,SNR=10
PMR   Palmer            69.05  28  P      P      09 34 15.5 -0.7
PMR   Palmer            69.05  28  P      P      09 34 15.5 -0.7
PMR                                pmax   pmax
      comp=Z,30nm,0.6s
PMR   Palmer            69.05  28  P      P      09 34 15.5 -0.7
      baz=256,SNR=11
KKAR  Karatay Array     69.19 312  P      P      09 34 17.9 +0.4
KKAR  Karatay Array     69.19 312  P      P      09 34 17.9 +0.4
PWL   Port Wells        69.25  29  P      P      09 34 17.4 -0.1
PWL   Port Wells        69.25  29  P      P      09 34 17.1 -0.4
      baz=257,SNR=14
MLY   Manley            69.26  25  P      P      09 34 17.6 +0.1
MLY   Manley            69.26  25  P      P      09 34 17.6 +0.1
      baz=253,SNR=18
KNK   Knik Glacier      69.32  29  P      P      09 34 18.0 +0.1
      baz=257
A21K  Barrow            69.44  17  P      P      09 34 18.4  0.0
      baz=245
SML   Sawmill           69.47  28  P      P      09 34 18.4 -0.5
SML   Sawmill           69.47  28  P      P      09 34 18.4 -0.5
      baz=257,SNR=12
F22K  John River        69.47  22  P      P      09 34 19.6 +0.8
      baz=251
P23K  Montague Islan    69.51  30  P      P      09 34 19.2 +0.1
      baz=258
BWN   Browne            69.55  26  P      P      09 34 18.9 -0.4
MCK   McKinley          69.66  26  P      P      09 34 19.6 -0.4
MCK                                IAmb   IAmb   09 34 20.9
      comp=Z,14nm,0.9s
MCK   McKinley          69.66  26  P      P      09 34 19.6 -0.4
MCK                                pmax   pmax
      comp=Z,14nm,0.9s
MCK   McKinley          69.66  26  P      P      09 34 19.3 -0.8
      baz=255,SNR=8.5
M23K  Glacier View      69.74  28  P      P      09 34 20.4 -0.2
      baz=257,SNR=7.1
E22K  Anaktuvuk Pass    69.81  21  P      P      09 34 21.4 +0.5
      baz=251
NEA2  Nenana            69.83  25  P      P      09 34 21.3 +0.3
NEA2  Nenana            69.83  25  P      P      09 34 21.3 +0.3
      baz=255
I23K  Minto, Yukon-K    69.86  25  P      P      09 34 22.0 +0.9
I23K                               IAmb   IAmb   09 34 22.5
      comp=Z,18nm,0.9s
I23K  Minto, Yukon-K    69.86  25  P      P      09 34 21.6 +0.4
      baz=254,SNR=17
SCM   Sheep Creek Mo    69.94  28  P      P      09 34 21.7 -0.1
SCM   Sheep Creek Mo    69.94  28  P      P      09 34 21.7 -0.1
SCM                                pmax   pmax
      comp=Z,52nm,1.0s
SCM   Sheep Creek Mo    69.94  28  P      P      09 34 21.6 -0.1
      baz=258,SNR=7.4
H23K  Yukon River       69.97  24  IAmb   IAmb   09 34 23.4
      comp=Z,12nm,0.8s
G23K  Bananza Creek     70.03  23  P      P      09 34 22.9 +0.6
      baz=253
BVAR  Borovoye Array    70.10 322  LR     LR     10 07 27.0
      comp=Z,264nm,18.0s,baz=104,slow=38
COLD  Coldfoot          70.11  22  IAmb   IAmb   09 34 25.0
      comp=Z,32nm,1.2s
COLD  Coldfoot          70.11  22  P      P      09 34 23.4 +0.7
      baz=253
BRVK  Borovoye          70.17 322  P      P      09 34 23.4  0.0
BRVK                               IAmb   IAmb   09 34 24.2
      comp=Z,15nm,1.1s
BRVK  Borovoye          70.17 322c iP     P      09 34 22.9 -0.4
BRVK                               pmax   pmax
      comp=Z,14nm,1.0s
WRH   Wood River Hil    70.21  25  P      P      09 34 22.5 -0.8
WRH                                IAmb   IAmb   09 34 24.4
      comp=Z,22nm,1.0s
MDM   Murphy Dome       70.27  25  P      P      09 34 24.6 +0.9
MDM                                IAmb   IAmb   09 34 25.5
      comp=Z,13nm,0.8s
TCOL  CIGO, UAF Yank    70.40  25  P      P      09 34 24.0 -0.5
      baz=256
COLA  College           70.41  25⇑iP     P      09 34 23.8 -0.7
COLA                               pmax   pmax
      comp=Z,9.0nm,0.9s
COLA  College           70.41  25  P      P      09 34 24.0 -0.4
      baz=256
EYAK  Cordova Ski Ar    70.43  30  P      P      09 34 24.5 -0.2
      baz=260
D23K  Nanushuk River    70.47  21  P      P      09 34 25.3 +0.4
      baz=252
KLU   Klutina           70.52  29  P      P      09 34 25.4  0.0
KLU   Klutina           70.52  29  P      P      09 34 25.4  0.0
      baz=259,SNR=8.8
DIV   Divide            70.53  29  P      P      09 34 25.1 -0.3
M24K  Tolsona, Glenn    70.53  28  P      P      09 34 25.8 +0.4
      baz=259
E23K  Chandalar         70.57  22  P      P      09 34 26.3 +0.7
      baz=253
H24K  Noodor Dome       70.63  24  IAmb   IAmb   09 34 28.0
      comp=Z,18nm,1.0s
H24K  Noodor Dome       70.63  24  P      P      09 34 26.1 +0.1
      baz=256
POKR  Poker Plat Res    70.64  25  P      P      09 34 24.9 -1.0
      baz=256
HDA   Harding Lake      70.67  26  P      P      09 34 24.8 -1.4
HDA                                IAmb   IAmb   09 34 25.9
      comp=Z,14nm,0.8s
HDA   Harding Lake      70.67  26  P      P      09 34 25.1 -1.1
      baz=257,SNR=12
IL31                    70.78  25  P      P      09 34 25.6 -1.1
IL31                               IAmb   IAmb   09 34 26.4
      comp=Z,12nm,0.7s
ILAR  Eielson Array     70.78  25  P      P      09 34 25.3 -1.5
      comp=Z,9.4nm,0.7s,baz=248,slow=6.1,SNR=97
ILAR                               LR     LR     10 02 04.0
      comp=Z,124nm,21.4s,baz=246,slow=33
      comp=Z,9.4nm,0.7s
ILAR  Eielson Array     70.78  25  P      P      09 34 25.5 -1.3
ILAR  Eielson Array     70.78  25  P      P      09 34 25.5 -1.3
E24K  Your Creek        70.98  22  P      P      09 34 28.2 +0.2
      baz=254
G24K  Hadweenzic Riv    71.00  23  P      P      09 34 27.9 -0.3
      baz=256
PAX   Paxson            71.02  27  P      P      09 34 28.0 -0.4
PAX                                IAmb   IAmb   09 34 29.3
      comp=Z,17nm,0.6s
PAX   Paxson            71.02  27  P      P      09 34 28.0 -0.4
PAX                                pmax   pmax
      comp=Z,17nm,0.6s
PAX   Paxson            71.02  27  P      P      09 34 28.2 -0.2
      baz=259,SNR=13
K24K  Donnelly Dome     71.05  26  P      P      09 34 28.1 -0.4
      baz=258,SNR=15
HARP  HAARP             71.05  28  P      P      09 34 28.7 +0.2
      baz=259,SNR=13
F24K  Squaw Lake        71.05  22  P      P      09 34 29.1 +0.6
      baz=255,SNR=20
N25K  Chitina, Valde    71.17  29  P      P      09 34 29.7 +0.3
      baz=260
C24K  Franklin Bluff    71.36  20  P      P      09 34 30.5 +0.3
      baz=254
RIDG  Independent Ri    71.44  27  P      P      09 34 30.5 -0.4
      baz=259,SNR=12
PRP   Porcupine Dome    71.51  25  P      P      09 34 30.1 -1.2
      baz=258
G25K  Bearman Lake      71.55  23  P      P      09 34 31.6 +0.2
      baz=257
VRDI  Verde Repeater    71.65  29  P      P      09 34 31.9 -0.5
VRDI                               IAmb   IAmb   09 34 33.3
      comp=Z,21nm,0.7s
DOT   Dot Lake          71.77  27  P      P      09 34 32.5 -0.3
SCRK  Sand Creek        71.86  26  P      P      09 34 33.3 -0.2
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SCRK                               IAmb   IAmb   09 34 34.2
      comp=Z,11nm,0.9s
SCRK  Sand Creek        71.86  26  P      P      09 34 33.4 -0.2
      baz=260,SNR=12
MCARA McCarthy VSAT     71.88  29  P      P      09 34 33.6 +0.1
      baz=262,SNR=6.6
F25K  Christian Rive    71.91  22  P      P      09 34 34.1 +0.5
      baz=257
L26K  Log Cabin Wild    71.98  27  P      P      09 34 33.9 -0.3
L26K                               IAmb   IAmb   09 34 35.3
      comp=Z,18nm,0.8s
L26K  Log Cabin Wild    71.98  27  P      P      09 34 34.3 +0.1
      baz=261,SNR=15
M26K  Nabesna, AK       72.04  28  IAmb   IAmb   09 35 46.6
      comp=Z,37nm,1.9s
M26K  Nabesna, AK       72.04  28  P      P      09 34 35.0 +0.5
      baz=261
D25K  Kavik River       72.05  21  P      P      09 34 34.8 +0.3
      baz=256
E25K  Arctic Village    72.05  22  P      P      09 34 35.1 +0.6
      baz=257,SNR=11
I26K  Coal Creek Min    72.44  25  P      P      09 34 36.4 -0.4
      baz=260
G26K  Porcupine Rive    72.48  23  P      P      09 34 37.5 +0.5
      baz=259
BARN  Barnard Glacie    72.49  30  IAmb   IAmb   09 34 38.8
      comp=Z,26nm,1.2s
F26K  Sheenjek River    72.49  22  P      P      09 34 37.7 +0.6
      baz=259
M27K  Edge Creek, AK    72.55  28  IAmb   IAmb   09 34 39.0
      comp=Z,11nm,0.8s
M27K  Edge Creek, AK    72.55  28  P      P      09 34 37.2 -0.5
      baz=262
L27K  Beaver Creek,     72.67  27  IAmb   IAmb   09 34 39.5
      comp=Z,11nm,0.8s
L27K  Beaver Creek,     72.67  27  P      P      09 34 38.1 -0.2
      baz=262
C26K  Camden Bay        72.69  20  P      P      09 34 38.7 +0.5
      baz=257
K27K  Chicken           72.70  26  IAmb   IAmb   09 34 40.6
      comp=Z,15nm,1.0s
K27K  Chicken           72.70  26  P      P      09 34 38.7 +0.3
      baz=262
BVCY  Beaver Creek      73.03  28  P      P      09 34 40.6 +0.2
      baz=263,SNR=5.9
C27K  Jago River        73.03  21  P      P      09 34 40.6 +0.3
      baz=258
PINM  Pinnacle          73.07  31  P      P      09 34 40.2 -0.6
      baz=265
I27K  Kandik River      73.12  25  P      P      09 34 41.0 +0.1
      baz=262
YUK3  Moose Creek       73.14  29  P      P      09 34 41.9 +0.6
      baz=264,SNR=13
O28M  Mount Upton       73.17  30  P      P      09 34 41.2 -0.4
      baz=264
EGAK  Eagle             73.20  26  P      P      09 34 41.8 +0.5
      baz=262,SNR=7.1
H27K  Steamboat Moun    73.25  24  P      P      09 34 42.0 +0.3
      baz=262
G27K  Doyon Strip       73.29  24  P      P      09 34 42.3 +0.4
      baz=261
YUK8  Steele Glacier    73.43  29  P      P      09 34 43.2 +0.2
      baz=265,SNR=6.6
PNL   Peninsula         73.47  31  P      P      09 34 43.6 +0.6
      baz=265
E27K  Coleen River      73.53  22  P      P      09 34 44.0 +0.7
      baz=261
DAWY  Dawson            73.87  27  P      P      09 34 45.2 -0.1
DAWY                               IAmb   IAmb   09 34 47.5
      comp=Z,23nm,1.1s
DAWY  Dawson            73.87  27  P      P      09 34 45.7 +0.3
      baz=264,SNR=18
O29M  Mount Kennedy     73.93  31  P      P      09 34 46.2 +0.4
      baz=266
YUK4  Talbot Arm        73.97  29  P      P      09 34 47.2 +1.0
      baz=266,SNR=8.9
YUK6  Outpost Mounta    74.08  30  P      P      09 34 47.4 +0.5
      baz=266
M29M  Somme Creek       74.14  28  P      P      09 34 47.9 +0.9
      baz=266,SNR=16
L29M  L29M              74.35  28  P      P      09 34 48.7 +0.6
      baz=266
J29M  Klondike Camp     74.42  26  P      P      09 34 49.3 +0.7
      baz=265,SNR=6.6
I29M  Ogilvie Camp,     74.46  25  P      P      09 34 49.0 +0.3
      baz=265,SNR=7.0
HYT   Haines Junctio    74.49  30  P      P      09 34 49.9 +0.8
HYT                                IAmb   IAmb   09 34 51.1
      comp=Z,26nm,0.9s
HYT   Haines Junctio    74.49  30  P      P      09 34 49.5 +0.4
      baz=267,SNR=9.8
K29M  Barlow Dome       74.68  27  P      P      09 34 50.5 +0.4
      baz=266,SNR=25
P30M  Million Dollar    74.72  31  P      P      09 34 51.1 +0.7
      baz=267
N30M  Aishikik Lake     74.72  29  P      P      09 34 50.9 +0.5
      baz=267
M30M  Minto, Yukon      74.92  28  P      P      09 34 51.8 +0.3
M30M                               IAmb   IAmb   09 34 53.2
      comp=Z,13nm,0.8s
M30M  Minto, Yukon      74.92  28  P      P      09 34 52.1 +0.6
      baz=267,SNR=12
PLBC  Pleasant Camp     75.00  31  P      P      09 34 52.7 +0.8
      baz=268,SNR=9.0
S31K  Pelican           75.02  33  P      P      09 34 52.9 +0.9
      baz=269
O30N  Mendenhall        75.18  30  P      P      09 34 53.4 +0.4
      baz=268
EPYK  Eagle Plains      75.20  24  P      P      09 34 53.3 +0.3
      baz=266,SNR=6.3
N31M  Braeburn, Yuko    75.35  29  P      P      09 34 54.9 +0.9
N31M                               IAmb   IAmb   09 34 55.9
      comp=Z,23nm,1.1s
N31M  Braeburn, Yuko    75.35  29  P      P      09 34 54.6 +0.6
      baz=268,SNR=6.3
MAYO  Mayo, Yukon       75.39  27  P      P      09 34 54.9 +0.8
MAYO  Mayo, Yukon       75.39  27  P      P      09 34 54.9 +0.8
      baz=267,SNR=14
G30M  tAoh Zraii Nji    75.44  24  P      P      09 34 54.5 +0.1
      baz=266
SIT   Sitka             75.50  34  P      P      09 34 55.2 +0.4
      baz=270
SKAG  Skagway           75.52  31  P      P      09 34 55.5 +0.6
SKAG                               IAmb   IAmb   09 35 01.2
      comp=Z,18nm,1.1s
SKAG  Skagway           75.52  31  P      P      09 34 55.6 +0.6
      baz=269
BESE  Bessie Mountai    75.76  32  P      P      09 34 57.1 +0.7
BESE                               IAmb   IAmb   09 34 58.3
      comp=Z,18nm,0.9s
S32K  Killisnoo         75.90  34  P      P      09 34 57.4 +0.2
      baz=270
R32K  Eaglecrest        75.93  33  P      P      09 34 57.7 +0.4
      baz=270,SNR=6.2
M31M  Drury Creek, Y    76.03  29  P      P      09 34 58.1 +0.3
M31M                               IAmb   IAmb   09 34 59.2
      comp=Z,11nm,0.8s
M31M  Drury Creek, Y    76.03  29  P      P      09 34 58.0 +0.2
      baz=269,SNR=8.6
P32M  Atlin             76.35  31  P      P      09 34 60.0 +0.3
      baz=270,SNR=8.1
F31M  Tsiigehtchic      76.42  23  P      P      09 34 59.7 -0.2
      baz=268
FARO  Faro, Yukon       76.52  29  P      P      09 35 00.9 +0.3
FARO  Faro, Yukon       76.52  29  P      P      09 35 00.9 +0.3
      baz=270,SNR=5.3
INK   Inuvik            76.53  22  P      P      09 35 00.4  0.0
      baz=268
ABKAR Akbulak array     76.55 318  P      P      09 34 59.8 -1.3
N32M  Quiet Lake        76.65  30  P      P      09 35 01.7 +0.3
      baz=271
U33K  Whale Pass        76.72  35  P      P      09 35 02.5 +0.7
      baz=272
P33M  Teslin, Yukon     76.79  31  P      P      09 35 02.5 +0.2
P33M  Teslin, Yukon     76.79  31  P      P      09 35 02.6 +0.3
      baz=271,SNR=8.4
T33K  Petersburg        76.80  34  P      P      09 35 02.6 +0.4
      baz=272
ARU   Arti              77.08 325  P      P      09 35 02.7 -1.2
      comp=Z,4.1nm,0.5s,baz=104,slow=4.2,SNR=8.2
      comp=Z,4.1nm,0.5s
ARU   Arti              77.08 325d iP     P      09 35 02.9 -1.0
ARU                                              09 35 10.9
ARU                                S      S      09 44 54.2 +1.5
ARU                                SS     SS     09 49 47.0 -2.6
ARU                                pmax   pmax
      comp=Z,7.0nm,0.7s
Q32M  Nakina River      77.10  32  P      P      09 35 04.7 +0.5
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      baz=272
WRAK  Wrangell Islan    77.15  35  P      P      09 35 04.4 +0.2
      baz=272
MMPY  Sheldon Lake,     77.48  28  P      P      09 35 06.7 +0.6
      baz=272,SNR=5.3
AKTO  Aktyubinsk        77.73 319  P      P      09 35 06.3 -1.3
      comp=Z,1.9nm,0.5s,baz=85,slow=7.7,SNR=6.6
      comp=Z,1.9nm,0.5s
S34M  Telegraph Cree    77.74  33  P      P      09 35 08.0 +0.5
      baz=273,SNR=6.0
T35M  Bob Quinn         78.27  34  P      P      09 35 10.9 +0.4
      baz=274
DLBC  Dease Lake        78.30  32  P      P      09 35 11.7 +1.0
DLBC                               IAmb   IAmb   09 35 12.7
      comp=Z,13nm,0.8s
DLBC  Dease Lake        78.30  32  P      P      09 35 11.3 +0.6
      baz=274,SNR=7.3
GEYT  Alibeck           78.79 307  P      P      09 35 13.8 -0.1
      comp=Z,2.8nm,0.7s,baz=219,slow=1.9,SNR=4.8
GEYT                               LR     LR     10 13 08.7
      comp=Z,137nm,20.3s,baz=75,slow=38
      comp=Z,2.8nm,0.7s
WTLY  Watson Lake, Y    78.81  31  P      P      09 35 14.0 +0.5
WTLY                               IAmb   IAmb   09 35 15.3
      comp=Z,23nm,0.9s
WTLY  Watson Lake, Y    78.81  31  P      P      09 35 14.1 +0.7
      baz=274,SNR=18
A36M  Sachs Harbour     79.24  18  P      P      09 35 15.2 -0.2
A36M                               IAmb   IAmb   09 35 16.3
      comp=Z,11nm,0.8s
A36M  Sachs Harbour     79.24  18  P      P      09 35 15.1 -0.4
      baz=275
C36M  Paulatuk          79.91  21  P      P      09 35 18.6 -0.6
      baz=277
LIRD  Liard River Hi    80.23  31  P      P      09 35 21.5 +0.3
      baz=277,SNR=9.3
WRGLY Wrigley           80.98  27  P      P      09 35 25.4 +0.3
      baz=279
KOTAN Kotaneelee Air    81.16  30  P      P      09 35 26.2 +0.1
      baz=279,SNR=9.1
KIRV  Kirov             81.78 328  LR     LR     10 12 56.1
      comp=Z,110nm,21.4s,baz=90,slow=37
KIRV  Kirov             81.78 328deP      P      09 35 30.1 +0.7
BELG  Belogornoye       83.91 322  P      P      09 35 40.4 -0.2
      comp=Z,8.9nm,0.5s,baz=78,slow=1.2,SNR=6.8
BELG                               LR     LR     10 13 55.0
      comp=Z,151nm,21.2s,baz=134,slow=36
      comp=Z,8.9nm,0.5s
EUNU  Eureka            84.70   8  P      P      09 35 44.7 +0.5
EUNU                               IAmb   IAmb   09 35 45.6
      comp=Z,14nm,0.8s
YKA   Yellowknife Ar    85.10  27  P      P      09 35 46.4 -0.1
      comp=Z,5.5nm,0.8s,baz=286,slow=5.1,SNR=91
      comp=Z,5.5nm,0.8s
LTY   Liberty           85.53  43  P      P      09 35 49.4 +0.4
LTY                                IAmb   IAmb   09 35 50.6
      comp=Z,8.8nm,0.8s
BRLDA Berland Lookou    85.93  36  P      P      09 35 50.8 -0.1
NOR   Nord              86.06 357 i P     P      09 35 49.4 -1.5
KLMR  Klimovskoe        86.13 332 eP      P      09 35 48.6 -3.0
KLMR                               AMP           09 35 52.5
      comp=Z,25nm,1.4s
KLMR  Klimovskoe        86.13 332 eP      P      09 35 48.6 -3.0
KLMR                               pmax   pmax
      comp=Z,25nm,1.4s
B08A  Colville Reser    86.16  41  P      P      09 35 52.5 +0.4
B08A                               IAmb   IAmb   09 35 53.7
      comp=Z,19nm,0.8s
NEW   Newport           87.61  41  P      P      09 35 59.3 +0.1
      baz=285
ARCES ARCESS Array B    88.07 342  P      P      09 35 59.9 -1.0
      comp=Z,3.7nm,0.4s,baz=46,slow=3.5,SNR=36
      comp=Z,3.7nm,0.4s
NCK   Nalchik           88.61 314⇑eP      P      09 36 04.6 +0.6
NCK                                pmax   pmax
      comp=Z,10.0nm,0.6s
PKM   Mcpherson Peak    89.00  55  P      P      09 36 06.4 +0.1
      baz=284
KBZ   Khabaz            89.03 314⇓eP      P      09 36 04.5 -1.4
KBZ                                pmax   pmax
      comp=Z,9.0nm,2.3s
NEY   Neytrino          89.29 314⇓eP      P      09 36 09.1 +1.7
NEY                                pmax   pmax
      comp=Z,2.0nm,1.0s
NVAR  Mina Array Bea    89.31  51  P      P      09 36 08.7 +1.1
      comp=Z,7.5nm,0.7s,baz=268,slow=5.4,SNR=66
      comp=Z,7.5nm,0.7s
NVAR  Mina Array Bea    89.31  51  P      P      09 36 08.2 +0.5
VES   Vestal, Richgr    89.35  54  P      P      09 36 07.7 +0.2
      baz=284
OBN   Obninsk           89.48 327⇓eP      P      09 36 06.5 -1.2
OBN                                pmax   pmax
      comp=Z,12nm,0.6s
TULEG Thule             89.68   7 eP      P      09 36 00.5 -7.8
TULEG                              IAmb   IAmb   09 36 08.4
      comp=Z,10.0nm,0.8s
CWC   Cottonwood Cre    89.99  53  P      P      09 36 10.6 -0.2
      baz=285
NEEM  North Greenlan    90.38   3 eP      P      09 36 10.1 -1.9
NEEM                               IAmb   IAmb   09 36 13.5
      comp=Z,6.0nm,0.6s
EDW2  Edwards Air Fo    90.45  54  P      P      09 36 13.2 +0.3
      baz=285
MPMC  Manual Prospec    90.55  53  P      P      09 36 13.8 +0.3
      baz=285,SNR=8.2
HLID  Hailey            90.74  45  P      P      09 36 13.9 -0.3
      baz=287
DAG   Danmarks Havn     90.77 356 i P     P      09 36 11.1 -2.3
DAG                                IAmb   IAmb   09 36 13.1
      comp=Z,8.6nm,0.9s
BFSC  Mount Baldy Ra    90.89  55  P      P      09 36 15.0  0.0
      baz=285
FURC  Furnace Creek,    90.93  53  P      P      09 36 15.9 +1.0
      baz=286
TPNV  Topopah Spring    91.27  52  P      P      09 36 17.5 +0.7
TPNV                               IAmb   IAmb   09 36 18.9
      comp=Z,5.5nm,0.8s
TPNV  Topopah Spring    91.27  52  P      P      09 36 17.5 +0.7
TPNV                               pmax   pmax
      comp=Z,6.0nm,0.8s
TPNV  Topopah Spring    91.27  52  P      P      09 36 17.2 +0.4
      baz=286,SNR=6.2
GSC   Goldstone, Bar    91.28  54  P      P      09 36 17.5 +0.8
      baz=286,SNR=6.4
R11B  Troy Canyon, C    91.39  50  P      P      09 36 17.5 +0.2
      baz=286
MURC  Murrieta          91.42  55  P      P      09 36 17.8 +0.4
      baz=285
109C  Camp Elliot, M    91.68  56  P      P      09 36 18.9 +0.4
      baz=285
FINES FINESS Array B    91.87 335  P      P      09 36 16.6 -2.1
      comp=Z,7.8nm,0.7s,baz=58,slow=5.0,SNR=24
      comp=Z,7.8nm,0.7s
FINES FINESS Array B    91.87 335 i P     P      09 36 17.1 -1.6
FINES                              pmax   pmax
      comp=Z,8.0nm,0.7s
TUQ   Turquoise Moun    91.94  53  P      P      09 36 20.6 +0.8
      baz=286
BOZ   Bozeman (W)       91.99  43  P      P      09 36 20.3 +0.4
      baz=289
PFO   Pinyon Flats O    92.01  55  P      P      09 36 20.8 +0.6
      baz=286
TPFO  Pinon Flats       92.02  55  P      P      09 36 20.7 +0.4
      baz=286
MONP2 Monument Peak     92.24  56  P      P      09 36 22.2 +0.8
      baz=286,SNR=6.2
BELC  Belle Mtn. Jos    92.28  55  P      P      09 36 22.2 +0.7
      baz=286,SNR=5.2
GMRC  Granite Mounta    92.33  54  P      P      09 36 22.8 +1.1
      baz=286,SNR=5.9
EGMT  Eagleton          92.38  40  P      P      09 36 22.5 +1.0
      baz=291
IKP   In-Ko-Pah, Jac    92.56  56  P      P      09 36 23.6 +0.9
      baz=286
SWSC  Sam W. Stewart    92.73  56  P      P      09 36 23.9 +0.5
      baz=286
BC3   Big Chuckawall    92.81  55  P      P      09 36 24.8 +0.9
      baz=286
DUG   Dugway, Tooele    92.90  48  P      P      09 36 24.8 +0.6
      baz=288
IRM   Iron Mountain     92.91  54  P      P      09 36 25.0 +0.7
      baz=287
VSU   Vasula            93.02 332⇑eP      P      09 36 22.6 -1.5
VSU                                pmax   pmax
      comp=Z,30nm,0.8s
H17A  Grant Village     93.10  44  P      P      09 36 26.7 +1.5
      baz=290,SNR=6.8
FLWY  Flagg Ranch       93.12  44  P      P      09 36 25.7 +0.5
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MOOW	Moose Ponds	93.20	44	P	P	09 36 26.1	+0.4
MOOW				IAmb	IAmb	09 37 57.0	
	comp=Z,13nm,1.9s						
DBG	Daneborg	93.26	356	iP	P	09 36 23.4	-1.5
DBG				IAmb	IAmb	09 36 25.2	
	comp=Z,3.0nm,0.9s						
PDMCI	Parker Dam,Lak	93.67	54	P	P	09 36 28.5	+0.8
	baz=287						
RLMT	Red Lodge	93.72	43	P	P	09 36 28.2	+0.2
	baz=291						
BW06	Boulder Array	94.36	45	P	P	09 36 31.0	+0.1
	baz=291						
PDAR	Pinedale Array	94.36	45	P	P	09 36 30.8	-0.2
	comp=Z,0.4nm,0.6s,baz=206,slow=2.6,SNR=4.9						
	comp=Z,0.4nm,0.6s						
LAO	LASA Array	95.10	40	P	P	09 36 34.5	+0.5
	baz=293						
AKASG	Malin Array Be	95.30	324	LR	LR	10 21 39.4	
	comp=Z,166nm,19.2s,baz=58,slow=37						
214A	Organ Pipe Nat	95.43	56	P	P	09 36 36.5	+0.6
	baz=288						
WUAZ	Wupatki	95.46	52	P	P	09 36 36.2	+0.1
	baz=289						
DGMT	Dagmar	95.63	38	P	P	09 36 36.6	+0.2
	baz=295						
FCC	Fort Churchill	95.79	26	P	P	09 36 36.4	-0.4
FCC	Fort Churchill	95.79	26	P	P	09 36 36.4	-0.4
FCC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TUC	Tucson	96.95	55	P	P	09 36 42.5	-0.3
	baz=289						
NB2	NORSAR Subarra	97.91	339	P	P	09 36 44.1	-2.4
	comp=Z,3.1nm,0.8s,baz=49,slow=4.6						
NOA	NORSAR Array B	97.91	339	P	P	09 36 44.1	-2.4
	comp=Z,1.2nm,0.6s,baz=45,slow=5.7,SNR=7.4						
	comp=Z,1.2nm,0.6s						
MNTX	Cornudas Mount	101.47	54	P	Pdif	09 37 03.2	+0.2
	baz=292						
LRAL	Lakeview Retre	114.58	45	P	PKPdf	09 41 51.7	+0.2
	baz=305						
TZTN	Tazewell	114.79	40	P	PKPdf	09 41 52.1	+0.3
	baz=309						
PKME	Peaks-Kenny Pk	115.97	25	P	PKPdf	09 41 53.7	-0.1
	baz=324						
BLA	Blacksburg	116.29	38	P	PKiKP	09 41 54.2	-0.5
	baz=312						
L61B	Northampton	116.70	29	P	PKiKP	09 41 55.4	+0.1
	baz=320						
CFA	Coronel Fontan	145.18	129	PKPbc	PKPdf	09 42 48.8	-0.2
	comp=Z,3.2nm,0.4s,baz=263,slow=4.3,SNR=4.1						

*UPP **29** 09:28:53.9±0.0, 67°.82N×20°.21E, h0^{km}, ML2.5, Confirmed Induced event*

*HEL **29** 09:28:54.1±0.5, 67°.82N×20°.12E, h0^{km}, ML1.0, Explosion*

ISC 29 09:28:53.6±0.8**, 67°.80N**±0°.03×**20°.26E**±0°.03**, h0^{km}, n21, σ0^{s}60**/32**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATU	Laukkuluspa	0.26	277	P	Pg	09 28 58.4	-0.1
RATU				S	Sg	09 29 02.1	+0.4
KOVU	Salmi	0.43	355	P	Pg	09 29 01.6	-0.3
KOVU				S	Sg	09 29 07.0	-0.4
NIKU	Nikkaluokta	0.47	279	P	Pg	09 29 02.6	0.0
DUNU	Dundret	0.69	170	P	Pg	09 29 07.0	+0.3
LANU	Lannavaara	0.70	68	P	Pg	09 29 07.5	+0.5
LANU	Lannavaara	0.70	68	PG	Pg	09 29 07.1	+0.1
LANU				SB	Sg	09 29 17.1	+1.0
MASU	Masugnsbyn	0.75	116	P	Pb	09 29 08.7	-0.8
SALU	Saltoluokta	0.79	239	P	Pg	09 29 08.9	+0.1
KIF	Kilpisjarvi	1.23	9	PN	Pb	09 29 17.6	-0.1
KIF				MSG		09 29 31.9	
	comp=Z,1.6nm,0.2s						
KIF				SB	Sb	09 29 33.5	-0.6
PAJU	Pajala	1.35	124	P	Pg	09 29 19.0	-0.4
PAJU	Pajala	1.35	124	PG	Pg	09 29 18.9	-0.5
PAJU				SG	Sb	09 29 37.3	-0.2
HEF	Hetta	1.42	63	PG	Pn	09 29 20.3	-0.3
HEF				MSG		09 29 37.6	
	comp=Z,1.1nm,0.2s						
HEF				SG	Sb	09 29 39.4	-0.1
ERTU	Ertsjaerv	1.46	148	P	Pn	09 29 21.2	0.0
ERTU	Ertsjaerv	1.46	148	PG	Pg	09 29 21.4	-0.1
ERTU				SN	Sn	09 29 41.9	+0.9
KLF	Kolari	1.53	110	PG	Pn	09 29 22.2	+0.1
KLF				MSG		09 29 41.8	
	comp=Z,0.8nm,0.2s						
KLF				SN	Sn	09 29 43.8	+1.0
KTK1	Kautokeino	1.65	41	PN	Pb	09 29 24.7	-0.1
KTK1				SN	Sg	09 29 46.6	+0.2
HARU	Harads	1.66	170	P	Pn	09 29 24.4	+0.4
KALU	Kalix	2.30	146	PB	Pb	09 29 34.9	-1.0
KALU				SG	Sg	09 30 07.7	+0.3
TOF	Tornio	2.35	135	PB	Pb	09 29 35.7	-1.1
TOF				MSG		09 30 05.4	
	comp=Z,0.4nm,0.2s						
SGF	Sodankyl	2.43	96	SG	Sg	09 30 11.5	+0.1
RNF	Rovaniemi	2.54	115	PB	Pb	09 29 38.7	-1.3
RNF				SB	Sb	09 30 12.7	+1.0

*IDC **29** 09:33:38.8±4.3, 54°.94N×166°.08E, h0^{km}, mb3.1/2, mbtmp3.0/3, ML2.0/1, Error ellipse: s-maj=229.8km s-min=31.9km az=153.0*

*KRSC **29** 09:33:40.6±0.7, 57°.08N×163°.23E, h26^{km}±11^{km}, Ml3.7*

ISC 29 09:33:39.7±1.5**, 57°.15N**±0°.04×**163°.12E**±0°.04**, h1^{km}**±11^{km}**, n30, σ1^{s}42**/42**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBG	Krutoberegovo	0.92	194	eP	Pb	09 33 57.3	-1.0
KBG				eS	Sg	09 34 09.1	-0.1
KBTR	Krutoberegovo	0.95	190	eP	Pb	09 33 57.7	-1.2
KBTR				eS	Sg	09 34 09.8	-0.4
SMKR	Semkarok	1.07	239	eP	Pg	09 34 00.6	+0.5
SMKR				eS	Sg	09 34 14.5	+0.7
SRKR	Sorokina	1.18	246	eP	Pg	09 34 02.2	0.0
SRKR				eS	Sg	09 34 17.5	+0.1
KLY	Klyuchi	1.59	239	eP	Pn	09 34 07.1	-1.9
KLY				eS	Sn	09 34 25.8	-4.4
CIRR	Tsirk	1.67	233	eP	Pn	09 34 10.2	+0.2
CIRR				eS	Sn	09 34 31.2	-0.9
BZGR	Bezymyannyi-Gr	1.80	229	eP	Pn	09 34 12.2	+0.2
BZWR	Bezymyannyi-We	1.87	232	eP	Pn	09 34 13.2	+0.2
BZWR				eS	Sn	09 34 36.4	-0.8
BZP	Bezymyannyi-Pe	1.89	230	eP	Pn	09 34 12.9	-0.3
BZMR	Bezymyannaya	1.89	231	eP	Pn	09 34 12.9	-0.3
KIRR	Kirishev	1.95	233	eP	Pn	09 34 13.8	-0.1
KIRR				eS	Sn	09 34 38.1	-1.0
KPT	Kopyto	1.99	235	eP	Pn	09 34 14.5	0.0
SRDR	Sredinnyy	2.05	248	eP	Pn	09 34 15.5	+0.2
SRDR				eS	Sn	09 34 40.6	-0.9
KOZ	Kozyrevsk	2.10	240	eP	Pn	09 34 16.7	+0.8
KOZ				eS	Sn	09 34 42.6	0.0
OSSR	Ossora	2.11	359	eP	Pb	09 34 17.6	-1.1
KMNR	Kamenistaya	2.12	230	eP	Pn	09 34 17.0	+0.7
KMNR				eS	Sn	09 34 43.4	+0.2
TIGL	Tigil	2.48	286	eP	Pb	09 34 23.4	-1.6
TUMR	Tumrok	2.50	223	eP	Pn	09 34 22.8	+1.3
BKI	Bering	2.52	139	eP	Pn	09 34 21.4	-0.2
BKI				eS	Sn	09 34 50.2	-2.7
PALN	Palana	2.57	321	eP	Pb	09 34 24.7	-1.7
MKZ	Mys Kozlova	2.71	197	eP	Pn	09 34 23.6	-0.7
GNL	Ganaly	4.54	223	eP	Pn	09 34 51.3	+1.7
KRX	Arik	4.57	216	eP	Pn	09 34 52.6	+2.6
KRER	Koryakskii	4.59	215	eP	Pn	09 34 52.4	+2.1
SMAR	Somma	4.61	214	eP	Pn	09 34 52.0	+1.4
AVH	Avacha	4.63	215	eP	Pn	09 34 52.6	+1.9
UGLR	Uglovaya	4.65	214	eP	Pn	09 34 52.8	+1.8
PETK	Petropavlovsk-	5.10	220	Pn	Pn	09 34 58.7	+1.5
	0.3nm,0.3s,baz=65,slow=16,SNR=7.1						
	1.4nm,0.7s						
ILAR	Eielson Array	24.82	51	P	P	09 39 03.3	+0.4
	0.3nm,0.6s,baz=263,slow=8.3,SNR=5.0						
	0.3nm,0.6s						
YKA	Yellowknife Ar	39.06	47	P	P	09 41 09.7	+2.2
	0.2nm,0.7s,baz=296,slow=7.5,SNR=3.6						
	0.2nm,0.7s						

*IDC **29** 09:34:21.9±1.3, 0°.67S×19°.80W, h0^{km}, mb4.2/11, mbtmp4.3/12, ML4.6/1, MS3.9/4, Error ellipse: s-maj=39.6km s-min=28.9km az=146.0*

*NEIC **29** 09:34:26.4±0.9, 0°.52S±0°.09×19°.47W±0°.10, h10^{km}±1^{km}, mb4.7/36, Error ellipse: s-maj=17.0km s-min=14.7km az=243.0*

ISC 29 09:34:25.4±0.5**, 0°.51S**±0°.09×**19°.50W**±0°.08**, h10^{km}, n62, σ0^{s}73**/54**, mb4.7**/26**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	ASCENSION HYDR	8.82	146	T	T	09 45 45.0	
	baz=321,slow=74,SNR=64						
H10N3	ASCENSION HYDR	8.83	146	T	T	09 45 49.1	
	baz=321,slow=74,SNR=40						
H10N1	ASCENSION HYDR	8.84	146	T	T	09 45 46.4	
	baz=321,slow=74,SNR=85						
ASCN	Ascension	8.98	145	Pn	Pn	09 36 35.2	-0.1
H10S3	ASCENSION HYDR	9.67	150	T	T	09 46 44.0	
	baz=325,slow=74,SNR=60						
H10S2	ASCENSION HYDR	9.69	150	T	T	09 46 46.9	
	baz=255,slow=74,SNR=40						
BBTS	Babate	15.35	11	LR	LR	09 42 57.1	
	comp=Z,193nm,18.2s,baz=220,slow=33						
SACV	Santiago Islan	15.90	345	Pn	Pn	09 38 10.1	+0.5
SACV				IAmb	IAmb	09 38 49.3	
	comp=Z,110nm,1.4s						
DBIC	Dimbokro	16.26	64	Pn	P	09 38 16.3	-0.8
	comp=Z,2.1nm,0.3s,baz=258,slow=14,SNR=22						
DBIC				LR	LR	09 43 44.6	
	comp=Z,155nm,18.1s,baz=258,slow=34						
	comp=Z,5.5nm,0.4s						
DBIC	Dimbokro	16.26	64		Pn	09 38 13.6	-0.5
SHEL	Horse Pasture	20.49	139	P	P	09 39 03.6	-0.2
TOA0	Torodi Ar. Sit	25.01	56	P	P	09 39 50.2	+0.4
TOA0				IAmb	IAmb	09 39 53.3	
	comp=Z,14nm,0.8s						
TORD	Torodi Ar. Bea	25.01	56	P	P	09 39 50.6	+0.8
	comp=Z,8.6nm,0.5s,baz=242,slow=12,SNR=8.3						
	comp=Z,8.6nm,0.5s						
TORD	Torodi Ar. Bea	25.01	56	P	P	09 39 50.1	+0.3
TORD				IAmb	IAmb	09 39 53.2	
	comp=Z,12nm,0.8s						
PMOZ	Porto Moniz, M	33.22	4	P	P	09 41 03.3	+0.5
TAM	Tamanrasset	33.61	45	P	P	09 41 06.9	+0.5
TAM				IAmb	IAmb	09 41 09.5	
	comp=Z,8.4nm,0.9s						
MDT	Midelt	36.00	22	P	P	09 41 28.2	+1.3
	comp=Z,4.1nm,0.8s,baz=241,slow=12,SNR=6.9						
	comp=Z,4.1nm,0.8s						
PVAQ	Vaqueiros	39.27	15	P	P	09 41 54.4	+0.1
CART	Cartagena	41.58	22	P	P	09 42 12.9	-0.6
CART				IAmb	IAmb	09 42 14.8	
	comp=Z,13nm,0.8s						
ESDC	Sonseca Array	42.44	18	P	P	09 42 20.8	+0.2
	comp=Z,3.3nm,1.0s,baz=206,slow=7.9,SNR=14						
	comp=Z,3.3nm,1.0s						
ESDC	Sonseca Array	42.44	18	P	P	09 42 21.0	+0.5
SAML	Samuel	44.29	258	P	P	09 42 36.0	+0.1
KEST	Kesra	44.97	34	LR	LR	10 02 53.9	
	comp=Z,308nm,18.8s,baz=100,slow=38						
ETMB	Extrema	47.38	257	P	P	09 42 59.9	-0.4
CELP	Cerrillos	49.83	294	P	P	09 43 18.1	-1.0
CELP				IAmb	IAmb	09 43 40.6	
	comp=Z,12nm,1.1s						
LBTB	Lobatse	49.90	123	P	P	09 43 19.8	+0.2
AOPR	Arecibo Observ	50.07	295	P	P	09 43 20.4	-0.5
TIP	Timpagrande	51.59	36	P	P	09 43 32.5	+0.3
CESX	Cesi	51.71	30	P	P	09 43 34.1	+1.2
CESX				IAmb	IAmb	09 43 34.6	
	comp=Z,8.9nm,1.0s						
AUA1	Aruba	51.75	286	P	P	09 43 34.2	+0.6
AUA1				IAmb	IAmb	09 43 41.0	
	comp=Z,251nm,1.1s						
NRCA	Norcia	52.15	30	P	P	09 43 36.1	-0.1
ZCCA	Zocca	52.25	27	P	P	09 43 37.4	+0.4
ZCCA				IAmb	IAmb	09 43 39.3	
	comp=Z,14nm,1.1s						
FDMO	Fiordimonte	52.28	30	P	P	09 43 37.7	+0.5
FDMO				IAmb	IAmb	09 43 39.1	
	comp=Z,7.9nm,0.7s						
RUSC	La Rusia	53.87	278	P	P	09 43 50.9	+1.0
RUSC				IAmb	IAmb	09 43 53.9	
	comp=Z,14nm,1.5s						
CLUD	Cludinico	54.73	27	P	P	09 43 55.3	+0.2
CLUD				IAmb	IAmb	09 43 56.4	
	comp=Z,7.5nm,0.9s						
PRED	Cave del Predi	55.03	27	P	P	09 43 57.6	+0.3
DIVS	Divibare	56.64	33	P	P	09 44 08.9	0.0
DIVS				IAmb	IAmb	09 44 10.5	
	comp=Z,6.2nm,1.2s						
GERES	GERESS Array B	56.90	26	P	P	09 44 10.5	-0.1
	comp=Z,1.5nm,0.7s,baz=225,slow=7.4,SNR=9.7						
	comp=Z,1.5nm,0.7s						
GERES	GERESS Array B	56.90	26	P	P	09 44 10.1	-0.5
LMEL	Las Melosas	57.87	230	P	P	09 44 19.0	+1.1
LMEL				IAmb	IAmb	09 44 19.9	
	comp=Z,14nm,1.4s						
DJES	Djerdap	58.40	34	P	P	09 44 21.9	+0.6
MLR	Muntele Rosu	60.84	35	P	P	09 44 38.2	+0.1
MLR				IAmb	IAmb	09 44 39.4	
	comp=Z,6.0nm,1.1s						
MDUB	Mudurnu	61.48	42	P	P	09 44 42.3	-0.3
BURAR	Bucovina Array	61.69	33	P	P	09 44 44.3	+0.4
BRTR	Keskin Array B	62.80	44	P	P	09 44 52.1	+0.5
	comp=Z,2.0nm,0.7s,baz=235,slow=5.9,SNR=4.0						
	comp=Z,2.0nm,0.7s						
AKASG	Malin Array Be	65.62	32	P	P	09 45 08.8	-0.8
	comp=Z,2.4nm,0.7s,baz=236,slow=7.0,SNR=11						
	comp=Z,2.4nm,0.7s						
NB2	NORSAR Subarra	65.75	16	P	P	09 45 10.0	-0.3
	comp=Z,16nm,1.7s,baz=214,slow=6.5						
NOA	NORSAR Array B	65.75	16	P	P	09 45 09.8	-0.5
	comp=Z,1.1nm,0.7s,baz=213,slow=6.5,SNR=3.6						
	comp=Z,1.1nm,0.7s						
GURO	Guroymak-BITLI	68.39	48	P	P	09 45 28.0	+0.3
GURO				IAmb	IAmb	09 45 29.5	
	comp=Z,6.5nm,0.9s						
ONI	Oni	70.74	44	P	P	09 45 42.2	+0.2
ONI				IAmb	IAmb	09 45 43.7	
	comp=Z,8.7nm,1.0s						
KBZ	Khabaz	70.74	43	P	P	09 45 42.1	+0.2
	comp=Z,7.1nm,0.9s,baz=276,slow=6.1,SNR=9.5						
	comp=Z,7.1nm,0.9s						
FINES	FINESS Array B	70.81	21	P	P	09 45 41.7	-0.3
	comp=Z,1.6nm,0.6s,baz=200,slow=6.8,SNR=5.1						
	comp=Z,1.6nm,0.6s						
UOSS	Minazif	77.26	64	P	P	09 46 20.1	-0.4
UOSS				IAmb	IAmb	09 46 21.7	
	comp=Z,8.8nm,0.9s						
ABKAR	Akbulak array	83.49	40	P	P	09 46 53.6	+0.1
TXAR	Lajitas Array	85.16	299	P	P	09 46 59.7	-2.8
	comp=Z,0.7nm,0.7s,baz=116,slow=6.3,SNR=5.2						
	comp=Z,0.7nm,0.7s						
TX31	Lajitas Ar. Si	85.16	299	P	P	09 47 02.8	+0.3
TX32	Lajitas Array	85.16	299	P	P	09 47 03.4	+0.8
QSPA	South Pole Qui	89.57	180	LR	LR	10 21 28.3	
	comp=Z,131nm,20.0s,baz=356,slow=32						
GAR	Garm	90.17	51	P	P	09 47 26.8	+0.2
YKA	Yellowknife Ar	92.81	332	P	P	09 47 35.9	-2.1
	comp=Z,0.6nm,0.8s,baz=92,slow=5.1,SNR=13						
	comp=Z,0.6nm,0.8s						
ASAR	Alice Springs	144.72	135	PKP	PKPab	09 54 02.1	-0.1
	comp=Z,11nm,0.7s,baz=226,slow=2.6,SNR=128						
WRA	Warramunga Arr	147.28	130	PKPbc	PKPdf	09 54 08.0	+0.1
	comp=Z,1.6nm,0.9s,baz=236,slow=2.6,SNR=7.1						

*IDC **29** 09:34:34.0±1.4, 57°.11N×162°.91E, h0^{km}, mb3.3/4, mbtmp3.3/5, ML2.1/1, Error ellipse: s-maj=54.8km s-min=25.5km az=140.0*

*KRSC **29** 09:34:34.5±1.2, 56°.96N×163°.42E, h20^{km}±14^{km}, Ml4.3*

*MOS **29** 09:34:36.9±0.5, 56°.95N×163°.34E, h28^{km}, mb3.9/1, Error ellipse: s-maj=18.8km s-min=6.1km az=59.8*

ISC 29 09:34:35.1±1.7**, 56°.97N**±0°.05×**163°.29E**±0°.04**, h11^{km}**±11^{km}**, n54, σ1^{s}54**/84**, mb3.2**/4**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBG	Krutoberegovo	0.79	205	PN	Pg	09 34 50.3	0.0
KBG				S	Sb	09 35 01.3	-0.2
KBG	Krutoberegovo	0.79	205	eP	Pg	09 34 50.3	0.0
KBG				eS	Sb	09 35 01.3	-0.2
KBTR	Krutoberegovo	0.81	199	PN	Pg	09 34 50.7	0.0
KBTR				S	Sb	09 35 01.9	-0.2
KBTR	Krutoberegovo	0.81	199	eP	Pg	09 34 50.7	0.0
KBTR				eS	Sb	09 35 01.9	-0.2
SMKR	Semkarok	1.08	250	PN	Pb	09 34 55.3	-0.5
SMKR				S	Sb	09 35 09.9	0.0
SMKR	Semkarok	1.08	250	eP	Pb	09 34 55.3	-0.5
SMKR				eS	Sb	09 35 09.9	0.0
SRKR	Sorokina	1.21	256	PN	Pn	09 34 56.7	-1.3
SRKR				S	Sb	09 35 12.4	-1.3
SRKR	Sorokina	1.21	256	eP	Pn	09 34 56.7	-1.3
SRKR				eS	Sb	09 35 12.4	-1.3
KLY	Klyuchi	1.60	247	PN	Pn	09 35 01.7	-1.6
KLY				S	Sn	09 35 21.0	-2.9
KLY	Klyuchi	1.60	247	eP	Pn	09 35 01.7	-1.6
KLY				eS	Sn	09 35 21.0	-2.9
CIRR	Tsirk	1.65	240	PN	Pn	09 35 04.9	+0.7
CIRR				S	Sb	09 35 26.1	-0.4
CIRR	Tsirk	1.65	240	eP	Pn	09 35 04.9	+0.7
CIRR				eS	Sb	09 35 26.1	-0.4
BZGR	Bezymyannyi-Gr	1.77	235	PN	Pn	09 35 06.6	+0.8
BZGR				S	Sb	09 35 29.4	-0.5
BZGR	Bezymyannyi-Gr	1.77	235	eP	Pn	09 35 06.6	+0.8
BZGR				eS	Sb	09 35 29.4	-0.5
BZWR	Bezymyannyi-We	1.85	238	PN	Pn	09 35 07.6	+0.7
BZWR				S	Sn	09 35 31.0	+0.6
BZWR	Bezymyannyi-We	1.85	238	eP	Pn	09 35 07.6	+0.7
BZWR				eS	Sn	09 35 31.0	+0.6
BZP	Bezymyannyi-Pe	1.86	236	eP	Pn	09 35 08.0	+1.0
BZP				eS	Sb	09 35 32.0	-0.5
BZMR	Bezymyannaya	1.87	237	PN	Pn	09 35 08.3	+1.1
BZMR				S	Sb	09 35 32.8	0.0
BZMR	Bezymyannaya	1.87	237	eP	Pn	09 35 08.3	+1.1
BZMR				eS	Sb	09 35 32.8	0.0
KIRR	Kirishev	1.93	239	PN	Pn	09 35 08.6	+0.6
KIRR				S	Sn	09 35 33.3	+1.0
KIRR	Kirishev	1.93	239	eP	Pn	09 35 08.6	+0.6
KIRR				eS	Sn	09 35 33.3	+1.0
KPT	Kopyto	1.98	241	PN	Pn	09 35 09.9	+1.3
KPT				S	Sb	09 35 35.3	-0.5
KPT	Kopyto	1.98	241	eP	Pn	09 35 09.9	+1.3
KPT				eS	Sb	09 35 35.3	-0.5
SRDR	Sredinnyy	2.08	253	PN	Pn	09 35 10.5	+0.5
SRDR				S	Sn	09 35 36.3	+0.4
SRDR	Sredinnyy	2.08	253	eP	Pn	09 35 10.5	+0.5
SRDR				eS	Sn	09 35 36.3	+0.4
KMNR	Kamenistaya	2.09	236	PN	Pn	09 35 11.0	+0.8
KMNR				S	Sb	09 35 37.6	-1.5
KMNR	Kamenistaya	2.09	236	eP	Pn	09 35 11.0	+0.8
KMNR				eS	Sb	09 35 37.6	-1.5
KOZ	Kozyrevsk	2.10	246	PN	Pn	09 35 11.2	+0.9
KOZ				S	Sn	09 35 37.8	+1.3
KOZ	Kozyrevsk	2.10	246	eP	Pn	09 35 11.2	+0.9
KOZ				eS	Sn	09 35 37.8	+1.3
BKI	Bering	2.32	139	PN	Pn	09 35 12.9	-0.4
BKI				S	Sn	09 35 40.6	-1.1
BKI	Bering	2.32	139	eP	Pn	09 35 12.9	-0.4
BKI				eS	Sn	09 35 40.6	-1.1
TUMR	Tumrok	2.44	227	PN	Pn	09 35 16.8	+1.8
TUMR	Tumrok	2.44	227	eP	Pn	09 35 16.8	+1.8
MKZ	Mys Kozlova	2.58	201	PN	Pn	09 35 17.8	+1.1
MKZ	Mys Kozlova	2.58	201	eP	Pn	09 35 17.8	+1.1
TIGL	Tigil	2.63	290	eP	Pn	09 35 19.9	+2.5
TIGL				eS	Sb	09 35 53.0	-1.4
KRER	Koryakskii	4.50	217	PN	Pn	09 35 45.6	+2.2
KRER	Koryakskii	4.50	217	eP	Pn	09 35 45.6	+2.2
SMAR	Somma	4.52	217	PN	Pn	09 35 45.4	+1.7
SMAR	Somma	4.52	217	eP	Pn	09 35 45.4	+1.7
AVH	Avacha	4.54	217	PN	Pn	09 35 46.6	+2.8
AVH	Avacha	4.54	217	eP	Pn	09 35 46.6	+2.8
KOK	Koryaka	4.55	218	PN	Pn	09 35 47.0	+3.0
KOK	Koryaka	4.55	218	eP	Pn	09 35 47.0	+3.0
PETK	Petropavlovsk-	5.03	222	Pn	Pn	09 35 52.2	+1.7
	0.4nm,0.3s,baz=56,slow=14,SNR=1.8						
PETK				Sn	Sb	09 36 57.0	-6.5
	baz=23,slow=35						
	1.5nm,0.6s						
MTVR	Mutnovka	5.38	215	PN	Pn	09 35 57.9	+2.5
MTVR	Mutnovka	5.38	215	eP	Pn	09 35 57.9	+2.5
ILAR	Eielson Array	24.85	51	P	P	09 39 58.1	+1.0
	0.5nm,0.9s,baz=264,slow=8.5,SNR=3.3						
	0.5nm,0.9s						
H11N2	WAKE ISLAND Hy	37.28	174	T	T	10 20 36.5	
	baz=357,slow=76,SNR=59						
H11N3	WAKE ISLAND Hy	37.30	174	T	T	10 20 43.7	
	baz=357,slow=76,SNR=41						
H11N1	WAKE ISLAND Hy	37.30	174	T	T	10 20 38.0	
	baz=357,slow=76,SNR=53						
YKA	Yellowknife Ar	39.10	47	P	P	09 42 03.5	+1.6
	0.2nm,0.6s,baz=299,slow=7.8,SNR=3.4						
	0.2nm,0.6s						
MKAR	Makanchi Array	48.18	294	P	P	09 43 13.4	-1.8
	0.1nm,0.4s,baz=51,slow=7.8,SNR=2.3						
	0.1nm,0.4s						
ASAR	Alice Springs	84.06	207	P	P	09 47 05.6	+0.1
	0.6nm,0.7s,baz=20,slow=6.0,SNR=3.5						
	0.6nm,0.7s						

*SCB **29** 09:39:33.8±1.3, 20°.50S×68°.09W, h167^{km}±14^{km}, ML3.8/3, MW3.6, Error ellipse: s-maj=7.6km s-min=5.0km az=1.0*

*IDC **29** 09:39:33.2±1.4, 20°.65S×67°.80W, h177^{km}±17^{km}, mb3.7/3, mbtmp4.1/6, Error ellipse: s-maj=29.1km s-min=21.1km az=136.0*

*SJA **29** 09:39:34.0±2.0, 20°.36S×67°.86W, h100^{km}, ML3.8, MW3.6, Hypocentre not reviewed by the ISC*

*GUC **29** 09:39:34.5±0.6, 20°.46S×68°.08W, h171^{km}±5^{km}, ML3.9*

ISC 29 09:39:32.9±0.9**, 20°.50S**±0°.04×**68°.09W**±0°.07**, h176^{km}**±8^{km}**, n40, σ1^{s}58**/60**, mb3.9**/3**, 7C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	1.06	289	⇓iP	Pn	09 40 01.7	+0.7
PB08				i S	Sn	09 40 22.7	0.0
PB08	IPOC Station P	1.06	289	Pg	Pn	09 40 01.8	+0.7
PB08	IPOC Station P	1.06	289	eP		09 40 01.5	
PB08				eS		09 40 23.6	
GO01	Chusmiza	1.32	308	⇓iP	Pn	09 40 03.8	+0.3
GO01				i S	Sn	09 40 26.5	-0.5
GO01				IAML		09 40 36.2	
GO01	Chusmiza	1.32	308	eP		09 40 04.1	
GO01				eS		09 40 26.8	
PB01	IPOC Station P	1.41	247	⇑eP	Pn	09 40 04.4	+0.6
PB01				i S	Sn	09 40 27.6	-0.1
PB01				IAML		09 40 28.4	
	comp=N,2μm,0.1s						
PB01	IPOC Station P	1.41	247	Pg	Pn	09 40 04.6	+0.8
PB01				Sg	Sn	09 40 27.8	+0.1
PB01				IAML		09 40 28.5	
	comp=N,601nm,0.2s						
PB01	IPOC Station P	1.41	247	eP		09 40 04.3	
PB01				eS		09 40 27.8	
PB01				IAML		09 40 29.2	
	comp=Z,758nm,0.1s						
PB11	IPOC Station P	1.64	296	⇑iP	Pn	09 40 06.2	+0.1
PB11				i S	Sn	09 40 30.8	-0.9
PB11				IAML		09 40 34.2	
	comp=N,1μm,0.3s						
PB11	IPOC Station P	1.64	296	eP		09 40 06.3	
PB11				eS		09 40 31.1	
PB11				IAML		09 40 35.1	
	comp=Z,442nm,0.2s						
PB09	IPOC Station P	1.68	220	eP	Pn	09 40 08.3	+1.8
PB09				i S	Sn	09 40 33.9	+1.3
PB09				IAML		09 40 36.0	
	comp=N,362nm,0.7s						
PB09	IPOC Station P	1.68	220	Pg	Pn	09 40 08.3	+1.8
PB09	IPOC Station P	1.68	220	eP		09 40 08.2	
PB09				eS		09 40 34.5	
PB09				IAML		09 40 38.2	
	comp=Z,388nm,0.3s						
PB02	IPOC Station P	1.87	244	⇑eP	Pn	09 40 09.1	+0.7
PB02				i S	Sn	09 40 35.6	-0.3
PB02				IAML		09 40 37.1	
	comp=N,916nm,0.1s						
PB02	IPOC Station P	1.87	244	Pg	Pn	09 40 09.4	+1.0
PB02				Sg	Sn	09 40 35.9	-0.1
PB02				IAML		09 40 37.9	
	comp=N,545nm,0.2s						
PB02	IPOC Station P	1.87	244	eP		09 40 09.2	
PB02				eS		09 40 36.0	
PB02				IAML		09 40 37.6	
	comp=Z,1μm,0.3s						

TA02	Huaiquique	1.93	276	eP	Pn	09 40 09.2	+0.4
TA02				i S	Sn	09 40 35.8	-0.9
TA02	Huaiquique	1.93	276	Pg	Pn	09 40 09.3	+0.4
TA02	Huaiquique	1.93	276	eP		09 40 09.4	
TA02				eS		09 40 35.8	
TA02				IAML		09 40 37.8	
	comp=Z,973nm,0.1s						
TA01	Diego Aracena	1.96	268	⇑iP	Pn	09 40 09.3	+0.1
TA01				i S	Sn	09 40 35.5	-1.9
TA01				IAML		09 40 37.1	
	comp=E,497nm,0.4s						
TA01	Diego Aracena	1.96	268	Pg	Pn	09 40 09.4	+0.1
TA01	Diego Aracena	1.96	268	eP		09 40 09.4	
TA01				eS		09 40 36.6	
TA01				IAML		09 40 39.5	
	comp=Z,223nm,0.3s						
MNMC	Minye Minye	1.96	314	⇑iP	Pn	09 40 10.1	+0.5
MNMC				i S	Sn	09 40 37.8	-0.2
MNMC				IAML		09 40 40.6	
	comp=N,769nm,0.3s						
MNMCX	Minye Minye	1.96	314	eP		09 40 10.3	
MNMCX				eS		09 40 38.5	
MNMCX				IAML		09 40 39.7	
	comp=Z,385nm,0.2s						
PB07	IPOC Station P	2.07	234	eP	Pn	09 40 11.6	+0.9
PB07				i S	Sn	09 40 39.6	-0.4
PB07				IAML		09 40 41.7	
	comp=E,437nm,0.5s						
PB07	IPOC Station P	2.07	234	Pg	Pn	09 40 11.9	+1.2
PB07				Sg	Sn	09 40 39.9	-0.1
PB07				IAML		09 40 44.7	
	comp=E,368nm,0.5s						
PB07	IPOC Station P	2.07	234	eP		09 40 11.5	
PB07				eS		09 40 40.6	
PB07				IAML		09 40 43.1	
	comp=Z,374nm,0.1s						
LVC	Limon Verde	2.23	200	P	Pn	09 40 14.3	+1.6
	comp=Z,46nm,0.4s,baz=5.7,slow=7.3,SNR=151						
LVC				S	Sn	09 40 43.7	+0.1
	comp=Z,44nm,0.3s,baz=153,slow=19,SNR=11						
LVC	Limon Verde	2.23	200	eP	Pn	09 40 14.1	+1.4
LVC				i S	Sn	09 40 44.4	+0.8
LVC	Limon Verde	2.23	200	Pg	Pn	09 40 14.2	+1.6
LVC	Limon Verde	2.23	200	eP		09 40 14.1	
LVC				eS		09 40 45.3	
PB16	IPOC Station P	2.53	328	eP	Pn	09 40 17.5	+1.1
PB16				i S	Sn	09 40 50.3	+0.2
PB16	IPOC Station P	2.53	328	eP		09 40 17.6	
PB16				eS		09 40 46.2	
PB06	IPOC Station P	2.59	212	Pg	Pn	09 40 17.8	+1.2
PB06	IPOC Station P	2.59	212	eP		09 40 17.8	
PB06				eS		09 40 51.9	
PB06				IAML		09 40 54.4	
	comp=Z,347nm,0.1s						
PB04	IPOC Station P	2.65	226	eP	Pn	09 40 18.3	+1.0
PB04				i S	Sn	09 40 50.9	-1.0
PB04				IAML		09 40 55.4	
	comp=N,547nm,0.3s						
PB04	IPOC Station P	2.65	226	Pg	Pn	09 40 18.5	+1.2
PB04	IPOC Station P	2.65	226	eP		09 40 18.3	
PB04				eS		09 40 51.7	
PB04				IAML		09 40 54.0	
	comp=Z,397nm,0.1s						
PB12	IPOC Station P	2.82	311	eP	Pn	09 40 18.3	-1.0
PB12				i S	Sn	09 40 52.2	-3.2
PB12				IAML		09 40 58.8	
	comp=E,144nm,0.5s						
PB12	IPOC Station P	2.82	311	eP		09 40 18.3	
PB12				eS		09 40 53.0	
YJA	Yavi	2.93	125	Pg	Pn	09 40 22.0	+1.1
YJA	Yavi	2.93	125	eP		09 40 22.7	
YJA				eS		09 41 01.0	
PB15	IPOC Station P	2.98	205	eP	Pn	09 40 22.8	+1.4
PB15				i S	Sn	09 40 59.5	+0.3
PB15	IPOC Station P	2.98	205	eP		09 40 23.2	
PB15				eS		09 41 00.9	
PB15				eS		09 41 01.0	
AP01	Chacalluta	3.00	315	eP		09 40 15.3	
AP01				IAML		09 41 02.2	
	comp=Z,188nm,0.2s						
SOET	ToroToro	3.20	43	Pg	Pn	09 40 24.4	+0.1
SOEJ	Jacaque	3.51	358	Pg	Pn	09 40 29.9	+1.7
BBOE	La Paz, Chanca	3.67	2	Pg	Pn	09 40 31.9	+1.6
HJA	Humahuaca	3.67	138	eP		09 40 32.1	
HJA				eS		09 41 12.9	
PB10	IPOC Station P	3.77	217	⇑eP	Pn	09 40 31.4	+0.4
PB10	IPOC Station P	3.77	217	eP		09 40 31.4	
PB10				eS		09 41 14.0	
PB10				IAML		09 41 19.3	
	comp=Z,48nm,0.5s						
BBOD	La Paz, Gloria	3.87	353	Pg	Pn	09 40 34.2	+1.4
GO02	Mina Guanaco	4.84	196	⇑eP	Pn	09 40 45.5	+0.5
GO02				eS	Sn	09 41 41.6	0.0
GO02	Mina Guanaco	4.84	196	Pg	Pn	09 40 45.8	+0.8
GO02	Mina Guanaco	4.84	196	eP		09 40 45.8	
GO02				eS		09 41 42.1	
GO02				IAML		09 41 44.6	
	comp=Z,122nm,0.1s						
SIV	San Ignacio	8.04	57	P	Pn	09 41 23.6	-3.3
	comp=Z,12nm,0.4s,baz=250,slow=9.3,SNR=101						
CFA	Coronel Fontan	11.06	181	P	Pn	09 42 02.8	-3.6
	comp=Z,1.0nm,0.4s,baz=304,slow=18,SNR=1.7						
CFA				S	Sn	09 44 01.6	-7.5
	comp=Z,1.2nm,0.3s,baz=155,slow=16,SNR=1.3						
TXAR	Lajitas Array	60.26	324	P	P	09 49 24.4	+1.4
	comp=Z,0.2nm,0.4s,baz=148,slow=8.6,SNR=4.8						
	comp=Z,0.2nm,0.4s						
TORD	Torodi Ar. Bea	76.30	70	P	P	09 51 02.9	0.0
	comp=Z,4.1nm,0.3s,baz=256,slow=5.3,SNR=6.2						
	comp=Z,4.1nm,0.3s						
YKA	Yellowknife Ar	90.50	340	P	P	09 52 15.4	+1.1
	comp=Z,1.0nm,0.8s,baz=135,slow=4.6,SNR=19						
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	144.38	36	PKP	PKPbc	09 58 48.5	+1.5
	comp=Z,0.3nm,0.5s,baz=312,slow=2.3,SNR=2.4						

IDC 29 09:40:25.9±2.6**,6°.00S×130°.75E,h0**^{km}**,mb3.4**/1,
mbtmp3.3/3**,ML3.4**/2**,Error ellipse: s-maj=145.1km**
s-min=33.5km az=71.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.29	166	Pn	Pn	09 43 49.5	-0.2
	0.2nm,0.3s,baz=350,slow=13,SNR=14						
WRA				Sn	Sn	09 46 12.8	-16
	0.3nm,0.3s,baz=344,slow=23,SNR=2.9						
	0.2nm,0.3s						
ASAR	Alice Springs	17.82	171	P	Pn	09 44 35.5	0.0
	0.1nm,0.3s,baz=347,slow=11,SNR=4.6						
ASAR				S	Sn	09 47 40.8	-14
	0.3nm,0.5s,baz=325,slow=16,SNR=1.9						
	0.2nm,0.3s						
MKAR	Makanchi Array	67.81	326	P	P	09 51 25.9	+0.1
	0.2nm,0.5s,baz=126,slow=7.4,SNR=2.7						
	0.2nm,0.5s						

NOU ***29*** *09:41:49.2, 42°.34S×173°.86E, h16*^{km}*, MLv4.0/11, South Island, New Zealand*
WEL ***29*** *09:41:49.7±0.4, 42°S±2°×17°4E±°, h7*^{km}*±4*^{km}*, M3.5/13, ML3.7/13, MLv3.5/13, Error ellipse: s-maj=0.0km s-min=0.0km az=112.8, confirmed*
ISC 29 09:41:47.1±1.4**,42°.23S**±0°.03×**173°.81E**±0°.03**,h2**^{km}±12^{km}**,**
n96,σ**1**^{s}**18**/104**,South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.27	227	P	Pb	09 41 56.0	+1.3
KHZ	Kahutara	0.27	227	P	Pb	09 41 55.9	+1.3
KHZ				S	Sb	09 42 00.4	+0.6
BSWZ	Blackbirch Sta	0.52	6	P	Pb	09 41 59.0	+0.2
BSWZ				S	Sb	09 42 05.8	-1.0
CMWZ	Cape Campbell	0.57	32	P	Pn	09 42 01.7	-0.5
TUWZ	Tuamarina	0.81	7	P	Pb	09 42 04.3	+0.5
TUWZ				S	Sb	09 42 15.0	-0.1
THZ	Tophouse	0.82	304	P	Pg	09 42 03.3	+0.5
THZ				S	Sg	09 42 12.7	-0.7
GVZ	Greta Valley S	0.93	218	P	Pn	09 42 08.1	+0.9
GVZ				S	Sn	09 42 22.4	+1.3
NNZ	Nelson	1.06	342	P	Pg	09 42 07.8	+0.4
NNZ				S	Sg	09 42 18.8	-2.3
TCW	Tory Channel	1.08	19	P	Pb	09 42 09.1	+0.7
SNZO	South Karori	1.14	36	P	Pn	09 42 11.1	+1.2
MRNZ	Matariki Terra	1.14	316	P	Pg	09 42 09.2	+0.3
WEL	Wellington	1.19	38	P	Pn	09 42 11.7	+1.1
WEL				S	Sn	09 42 27.9	+0.6
LTZ	Lake Taylor	1.26	244	P	Pn	09 42 11.9	+0.1
PLWZ	Palliser	1.27	59	P	Pg	09 42 12.6	+1.3
AMCZ	Amberley	1.27	222	P	Pg	09 42 12.5	+1.0
TKNZ	Takaka Hill	1.35	332	P	Pn	09 42 12.9	-0.1
DUWZ	D'Urville Isla	1.43	3	P	Pb	09 42 14.4	0.0
DUWZ				S	Sn	09 42 33.3	0.0
CAW	Cannon Point	1.47	40	P	Pb	09 42 15.3	+0.3
PAWZ	Paruwai Farm	1.48	56	P	Pn	09 42 15.2	+0.5
DSZ	Denniston Nort	1.57	287	P	Pb	09 42 16.9	0.0
KIW	Kapiti Island	1.60	31	P	Pb	09 42 17.4	+0.1
TRWZ	Traveller	1.63	60	P	Pn	09 42 17.1	+0.3
MTW	Mount Morrison	1.66	50	P	Pn	09 42 17.6	+0.4
QRZ	Quartz Range	1.70	325	P	Pb	09 42 18.7	-0.3
QRZ	Quartz Range	1.70	325	P	Pb	09 42 18.6	-0.5
MQZ	McQueen's Vall	1.70	209	P	Pn	09 42 17.3	-0.4
OXZ	Oxford	1.70	229	P	Pn	09 42 17.4	-0.4
OGWZ	Otaki Gorge	1.74	36	P	Pn	09 42 19.1	+0.8
AKCZ	Akaroa Harbour	1.77	202	P	Pn	09 42 18.9	+0.2
INZ	Inchbonnie	1.82	253	P	Pn	09 42 19.9	+0.5
HOWZ	Holdsworth Sta	1.85	44	P	Pn	09 42 20.1	+0.3
TMWZ	Te Maipa	1.92	55	P	Pn	09 42 20.9	+0.1
RACZ	Rakaia	1.93	219	P	Pn	09 42 20.5	-0.4
MRZ	Mangatainoka R	2.06	41	P	Pn	09 42 23.0	+0.4
MHCZ	Mount Hutt	2.10	231	P	Pn	09 42 22.8	-0.5
TIWZ	Tintock	2.13	48	P	Pn	09 42 23.6	0.0
WACZ	Wakanui South	2.24	219	P	Pn	09 42 24.8	-0.3
OHWZ	Ohakea	2.32	30	P	Pn	09 42 28.2	+2.0
PRWZ	Pori Road	2.33	45	P	Pn	09 42 26.5	+0.1
POWZ	Post Office Ro	2.36	39	P	Pn	09 42 26.9	+0.2
BFZ	Birch Farm	2.40	51	P	Pn	09 42 27.1	-0.2
BFZ	Birch Farm	2.40	51	P	Pn	09 42 26.9	-0.4
WVZ	Waitaha Valley	2.42	249	P	Pn	09 42 28.1	+0.5
RPZ	Rata Peaks	2.51	233	P	Pn	09 42 28.9	0.0
RPZ	Rata Peaks	2.51	233	P	Pn	09 42 28.3	-0.5
ARCZ	Arundel	2.58	227	P	Pn	09 42 29.5	-0.3
DVHZ	Dannevirke	2.62	43	P	Pn	09 42 29.9	-0.5
WAZ	Wanganui	2.63	20	P	Pb	09 42 33.3	-1.5
TSZ	Takapari Road	2.71	38	P	Pn	09 42 31.7	0.0
GCSZ	Gaunt Creek Bo	2.78	246	P	Pn	09 42 33.2	+0.6
LREZ	Lake Rotokare	2.80	9	P	Pb	09 42 38.6	+0.8
NMEZ	Namu Road	2.81	1	P	Pb	09 42 39.7	+1.7
PNHZ	Pukenui	2.94	39	P	Pn	09 42 34.4	-0.3
KHEZ	Kahui Hut	2.94	3	P	Pn	09 42 37.6	+2.8
KHEZ	Kahui Hut	2.94	3	P	Pb	09 42 39.6	-0.6
NBEZ	Newall Road No	2.96	1	P	Pb	09 42 39.1	-1.3
NEZ	North Egmont	2.96	4	P	Pb	09 42 41.0	+0.4
TMZ	Timaru	2.97	223	P	Pn	09 42 34.9	-0.3
PKE	Pukeiti	3.04	3	P	Pb	09 42 39.7	-2.1
DREZ	Durham Road	3.05	6	P	Pb	09 42 43.3	+1.2
MTVZ	Mangateitei	3.11	24	P	Pn	09 42 39.2	+2.0
PKVZ	Pokaka	3.16	22	P	Pn	09 42 39.7	+1.9
MOVZ	Moawhango	3.18	28	P	Pn	09 42 39.1	+0.9
VRZ	Vera Road	3.19	13	P	Pn	09 42 40.7	+2.6
WNVZ	Wahianoa	3.20	26	P	Pn	09 42 40.0	+1.5
FOZ	Fox Glacier	3.21	245	P	Pn	09 42 38.9	+0.4
TRVZ	Turoa	3.21	25	P	Pn	09 42 40.3	+1.6
BHHZ	Black Hill Sta	3.23	33	P	Pn	09 42 39.1	+0.3
TUVZ	Tukino	3.27	26	P	Pn	09 42 41.1	+1.6
NGZ	Ngauruhoe	3.34	25	P	Pn	09 42 42.0	+1.6
NNVZ	North Ngauruho	3.39	25	P	Pn	09 42 42.5	+1.5
ETVZ	East Tongariro	3.41	26	P	Pn	09 42 43.0	+1.7
LBZ	Lake Benmore	3.41	230	P	Pn	09 42 41.0	-0.2
TMVZ	Te Maari	3.43	25	P	Pn	09 42 43.2	+1.6
KWHZ	Kaweka Forest	3.43	36	P	Pn	09 42 41.2	-0.4
NTVZ	North Tongarir	3.44	25	P	Pb	09 42 48.5	-0.2
RITZ	Rihia Road	3.60	26	P	Pn	09 42 47.2	+3.2
ODZ	Otahua Downs	3.63	218	P	Pn	09 42 43.6	-0.7
ODZ	Otahua Downs	3.63	218	P	Pn	09 42 43.7	-0.5
BKZ	Black Stump Fm	3.68	35	P	Pn	09 42 44.2	-0.8
HIZ	Hauiti	3.80	12	P	Pn	09 42 50.3	+3.7
JCZ	Jackson Bay	4.11	242	P	Pn	09 42 50.4	-0.6
JCZ	Jackson Bay	4.11	242	P	Pn	09 42 50.6	-0.3
TLZ	Tolley Road	4.11	19	P	Pb	09 42 57.5	-2.7
HHSZ	Highcliff Hill	4.33	211	P	Pn	09 42 53.5	-0.3
EAZ	Earnscleugh	4.43	226	P	Pn	09 42 54.8	-0.5
TOZ	Tahuroa Road	4.68	17	P	Pb	09 43 04.8	-4.9
TUZ	Tuapeka	4.79	218	P	Pn	09 42 60.0	-0.2
MLZ	Mavora Lakes	5.18	231	P	Pn	09 43 04.9	-0.6
SYZ	Scrubby Hill	5.45	216	P	Pn	09 43 09.4	+0.1
SYZ	Scrubby Hill	5.45	216	P	Pn	09 43 09.1	-0.1
WHZ	Wether Hill Ro	5.59	227	P	Pn	09 43 09.8	-1.4
DCZ	Deep Cove	5.80	234	P	Pn	09 43 14.3	+0.3
APZ	The Paps	6.20	220	P	Pn	09 43 19.0	-0.6
APZ				S	Sn	09 44 28.1	-3.0
OUZ	Omahuta	7.00	359	P	Pn	09 43 33.6	+3.0
CTZ	Chatham Island	7.18	105	P	Pn	09 43 32.9	-0.1
	47nm,1.2s						

NOU ***29*** *09:53:59.5, 42°.68S×173°.56E, h2*^{km}*, MLv4.2/13, South Island, New Zealand*
WEL ***29*** *09:54:00.9, 43°S±4°×17°3E±°, h5*^{km}*±9*^{km}*, M4.0/11, ML4.2/11, MLv4.0/11, Error ellipse: s-maj=0.0km s-min=0.0km az=81.1, confirmed*
ISC 29 09:53:59.2±1.2**,42°.65S**±0°.03×**173°.58E**±0°.04**,h9**^{km}±10^{km}**,**
n130,σ**1**^{s}**27**/137**,South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.24	352	P	Pg	09 54 04.9	+0.9
KHZ	Kahutara	0.24	352	P	Pg	09 54 04.9	+0.9
KHZ				S	Sg	09 54 07.5	+0.3
GVZ	Greta Valley S	0.51	232	P	Pn	09 54 12.7	-0.1
GVZ				S	Sb	09 54 20.9	+3.0
AMCZ	Amberley	0.86	232	P	Pn	09 54 18.3	+0.8
BSWZ	Blackbirch Sta	0.96	13	P	Pb	09 54 18.7	+0.7
BSWZ				S	Sb	09 54 32.6	+1.7
LTZ	Lake Taylor	0.97	262	P	Pb	09 54 18.7	+0.4
LTZ				S	Sb	09 54 30.4	-0.9
CMWZ	Cape Campbell	1.02	28	P	Pn	09 54 20.9	+1.3
THZ	Tophouse	1.02	330	P	Pg	09 54 17.9	-0.9
TUWZ	Tuamarina	1.25	13	P	Pg	09 54 23.5	+0.3
TUWZ				S	Sb	09 54 39.8	+0.6
MQZ	McQueen's Vall	1.25	212	P	Pg	09 54 23.4	+0.1
AKCZ	Akaroa Harbour	1.32	202	P	Pn	09 54 25.2	+1.3
OXZ	Oxford	1.32	239	P	Pg	09 54 23.9	-0.6
OXZ				S	Sg	09 54 41.1	-0.6
MRNZ	Matariki Terra	1.39	334	P	Pg	09 54 24.6	-1.3
MRNZ				S	Sg	09 54 42.2	-1.8
NNZ	Nelson	1.44	354	P	Pn	09 54 25.6	+0.2
NNZ				S	Sb	09 54 44.6	0.0
RACZ	Rakaia	1.51	224	P	Pn	09 54 26.9	+0.5
TCW	Tory Channel	1.53	20	P	Pn	09 54 27.0	+0.3
INZ	Inchbonnie	1.58	267	P	Pn	09 54 27.2	-0.1
SNZO	South Karori	1.58	32	P	Pn	09 54 28.1	+0.7
DSZ	Denniston Nort	1.60	304	P	Pn	09 54 27.2	-0.5
WEL	Wellington	1.63	33	P	Pn	09 54 28.8	+0.7
PLWZ	Palliser	1.65	50	P	Pn	09 54 28.9	+0.5
TKNZ	Takaka Hill	1.68	344	P	Pn	09 54 29.3	+0.5
MHCZ	Mount Hutt	1.72	238	P	Pn	09 54 29.4	+0.1
WACZ	Wakanui South	1.81	224	P	Pn	09 54 31.2	+0.6
DUWZ	D'Urville Isla	1.86	8	P	Pn	09 54 31.8	+0.4
PAWZ	Paruwai Farm	1.87	48	P	Pn	09 54 31.7	+0.2
CAW	Cannon Point	1.90	36	P	Pn	09 54 32.2	+0.4
QRZ	Quartz Range	1.99	336	P	Pn	09 54 33.8	+0.8
QRZ	Quartz Range	1.99	336	P	Pn	09 54 33.5	+0.5
TRWZ	Traveller	2.01	52	P	Pn	09 54 33.6	+0.3
KIW	Kapiti Island	2.05	30	P	Pn	09 54 34.5	+0.7
MTW	Mount Morrison	2.07	45	P	Pn	09 54 34.2	+0.1
RPZ	Rata Peaks	2.13	239	P	Pn	09 54 35.4	+0.4
RPZ	Rata Peaks	2.13	239	P	Pn	09 54 35.0	0.0
WVZ	Waitaha Valley	2.13	258	P	Pn	09 54 35.3	+0.3
ARCZ	Arundel	2.18	233	P	Pn	09 54 35.8	+0.1
OGWZ	Otaki Gorge	2.19	34	P	Pn	09 54 36.0	+0.3
HOWZ	Holdsworth Sta	2.27	40	P	Pn	09 54 37.2	+0.2
TMWZ	Te Maipa	2.31	49	P	Pn	09 54 37.5	-0.1
GCSZ	Gaunt Creek Bo	2.48	253	P	Pn	09 54 40.8	+1.0
MRZ	Mangatainoka R	2.49	38	P	Pn	09 54 39.8	-0.1
TIWZ	Tintock	2.55	43	P	Pn	09 54 40.6	-0.1
TMZ	Timaru	2.55	226	P	Pn	09 54 41.2	+0.4
PRWZ	Pori Road	2.76	41	P	Pn	09 54 43.6	+0.1
POWZ	Post Office Ro	2.79	37	P	Pn	09 54 44.1	0.0
BFZ	Birch Farm	2.80	46	P	Pn	09 54 44.1	-0.1
BFZ	Birch Farm	2.80	46	P	Pn	09 54 43.8	-0.5
FOZ	Fox Glacier	2.90	251	P	Pn	09 54 46.3	+0.8
LBZ	Lake Benmore	3.02	234	P	Pn	09 54 48.0	+0.8
DVHZ	Dannevirke	3.05	40	P	Pn	09 54 46.8	-0.8
WAZ	Wanganui	3.08	21	P	Pn	09 54 50.1	+2.0
TSZ	Takapari Road	3.15	35	P	Pn	09 54 48.8	-0.2
ODZ	Otahua Downs	3.20	221	P	Pn	09 54 50.0	+0.3
ODZ	Otahua Downs	3.20	221	P	Pn	09 54 50.0	+0.3
NMEZ	Namu Road	3.24	4	P	Pn	09 54 53.3	+3.0
LREZ	Lake Rotokare	3.25	11	P	Pn	09 54 52.9	+2.6
PRHZ	Porangahau	3.31	45	P	Pn	09 54 51.0	-0.2
WPHZ	Waipukurau	3.36	41	P	Pn	09 54 52.7	+0.7
KHEZ	Kahui Hut	3.37	6	P	Pn	09 54 54.7	+2.6
KHEZ	Kahui Hut	3.37	6	P	Pn	09 54 54.5	+2.4
PNHZ	Pukenui	3.37	37	P	Pn	09 54 51.7	-0.4
NBEZ	Newall Road No	3.39	4	P	Pn	09 54 54.8	+2.6
NEZ	North Egmont	3.40	7	P	Pn	09 54 55.0	+2.5
PKE	Pukeiti	3.47	5	P	Pn	09 54 55.4	+2.0
DREZ	Durham Road	3.49	8	P	Pn	09 54 56.6	+2.9
MTVZ	Mangateitei	3.56	24	P	Pn	09 54 56.3	+1.6
PXZ	Pawanui	3.60	44	P	Pn	09 54 54.8	-0.4
PKVZ	Pokaka	3.61	22	P	Pn	09 54 56.9	+1.5
MHEZ	Mangahewa	3.62	9	P	Pb	09 55 00.6	-2.6
MOVZ	Moawhango	3.63	28	P	Pn	09 54 56.2	+0.5
VRZ	Vera Road	3.63	15	P	Pn	09 54 57.6	+1.9
WNVZ	Wahianoa	3.65	25	P	Pn	09 54 57.1	+1.0
TRVZ	Turoa	3.66	25	P	Pn	09 54 57.4	+1.1
BHHZ	Black Hill Sta	3.67	32	P	Pn	09 54 56.6	+0.3
WHVZ	Whangaehu Hut	3.69	25	P	Pn	09 54 58.2	+1.5
FWVZ	Far West T-bar	3.71	24	P	Pn	09 54 58.6	+1.8
TUVZ	Tukino	3.73	26	P	Pn	09 54 58.2	+1.1
JCZ	Jackson Bay	3.77	246	P	Pn	09 54 57.7	0.0
JCZ	Jackson Bay	3.77	246	P	Pn	09 54 57.9	+0.2
KAHZ	Kahuranaki	3.78	42	P	Pn	09 54 57.1	-0.6
NGZ	Ngauruhoe	3.79	24	P	Pn	09 54 59.5	+1.5
OTVZ	Oturere	3.83	25	P	Pn	09 55 00.0	+1.6
NNVZ	North Ngauruho	3.84	24	P	Pn	09 54 59.7	+1.1
TWVZ	Taurewa	3.84	22	P	Pn	09 54 59.4	+0.8
WTVZ	West Tongariro	3.85	24	P	Pn	09 54 59.6	+0.9
ETVZ	East Tongariro	3.86	25	P	Pn	09 55 00.1	+1.2
KWHZ	Kaweka Forest	3.87	35	P	Pn	09 54 58.5	-0.6
HHSZ	Highcliff Hill	3.88	213	P	Pn	09 55 00.7	+1.7
KRVZ	Karewarewa	3.88	24	P	Pn	09 55 03.2	+4.0
TMVZ	Te Maari	3.88	25	P	Pn	09 55 00.3	+1.1
NTVZ	North Tongarir	3.89	25	P	Pn	09 55 01.2	+2.0
WKZ	Wanaka	3.96	235	P	Pn	09 54 59.6	-0.5
MCHZ	McNeill Hill	3.98	37	P	Pn	09 55 00.5	+0.2
EAZ	Earnscleugh	4.02	229	P	Pn	09 55 01.4	+0.4
BKZ	Black Stump Fm	4.12	33	P	Pn	09 55 02.1	-0.3
RATZ	Rangitukua	4.13	24	P	Pb	09 55 09.4	-2.7
HIZ	Hauiti	4.25	14	P	Pn	09 55 06.0	+1.9
HIZ	Hauiti	4.25	14	P	Pn	09 55 05.6	+1.6
ARHZ	Aropaoanui	4.26	39	P	Pn	09 55 05.5	+1.3
NMHZ	Naumai	4.31	36	P	Pn	09 55 07.2	+2.2
TUZ	Tuapeka	4.35	219	P	Pn	09 55 06.7	+1.2
KNZ	Kokohu	4.77	42	P	Pn	09 55 11.9	+0.7
MLZ	Mavora Lakes	4.79	234	P	Pn	09 55 11.7	+0.3
MHGZ	Mahia Peninsul	4.79	45	P	Pn	09 55 11.4	-0.1
TARZ	Mount Tarawera	4.94	28	P	Pn	09 55 20.1	+6.4
SYZ	Scrubby Hill	5.01	218	P	Pn	09 55 15.9	+1.3
SYZ	Scrubby Hill	5.01	218	P	Pn	09 55 15.9	+1.3
TOZ	Tahuroa Road	5.13	17	P	Pn	09 55 16.8	+0.6
URZ	Urewera	5.15	33	P	Pn	09 55 15.7	-0.8
WHZ	Wether Hill Ro	5.18	229	P	Pn	09 55 17.4	+0.5
MWZ	Matawai	5.26	36	P	Pn	09 55 17.1	-0.9
DCZ	Deep Cove	5.42	237	P	Pn	09 55 19.1	-1.0
CNGZ	Carnagh Statio	5.45	42	P	Pn	09 55 21.2	+0.5
TWGZ	Tauwhareparae	5.59	38	P	Pn	09 55 22.5	-0.1
RUGZ	Raukumara Rang	5.63	35	P	Pn	09 55 23.4	+0.2
AWAZ	Awhitu Peninsu	5.64	9	P	Pn	09 55 24.7	+1.5
WTAZ	Waiatarua	5.76	8	P	Pn	09 55 26.8	+1.9
APZ	The Paps	5.77	222	P	Pn	09 55 25.6	+0.5
ETAZ	East Tamaki Re	5.78	11	P	Pn	09 55 26.4	+1.2
PUZ	Puketiti	5.80	40	P	Pn	09 55 25.8	+0.3
HAZ	Te Kaha	5.85	35	P	Pn	09 55 25.4	-0.7
PKGZ	Pakihiroa	5.87	37	P	Pn	09 55 27.1	+0.6
RVAZ	Riverhead Bore	5.92	8	P	Pn	09 55 28.6	+1.5
MBAZ	Motutapu North	5.96	10	P	Pn	09 55 28.9	+1.3
WIAZ	Waiheke Island	5.97	12	P	Pn	09 55 29.1	+1.4
KUZ	Kuaotunu	6.12	16	P	Pn	09 55 30.7	+0.8
CTZ	Chatham Island	7.25	102	P	Pn	09 55 47.1	+1.9
CTZ	Chatham Island	7.25	102	P	Pn	09 55 46.3	+1.1
OUZ	Omahuta	7.42	0	P	Pn	09 55 49.9	+2.2
OUZ	Omahuta	7.42	0	P	Pn	09 55 50.5	+2.8

SOME ***29*** *09:54:31.3, 41°.77N×81°.50E, h10*^{km}
NNC ***29*** *09:54:31.7±2.4, 42°.16N×81°.75E, h0*^{km}*, mb3.5, mpv3.2, Error ellipse: s-maj=19.2km s-min=12.0km az=164.0*
ISC 29 09:54:30.6±3.2**,42°.0N**±0°.2×**81°.7E**±0°.1**,h16**^{km}**,n18,**
σ**1**^{s}**54**/21**,2C-2D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	2.01	306	eP	Pn	09 55 05.4	+1.5
	25nm,0.2s						
SHLS				eS	Sb	09 55 30.2	-1.3
	49nm,0.4s						
UZB	Uzynbulak	2.27	301	Pg	Pg	09 55 13.8	-0.5
	9.6nm,0.3s						
UZB				Lg	Lg	09 55 44.6	
	28nm,0.4s						
UZB	Uzynbulak	2.27	301	ePg	Pg	09 55 13.8	-0.5
	9.6nm,0.3s						
UZB				eLg	Lg	09 55 44.6	
	28nm,0.4s						
SATY	Saty	2.64	295	Pg	Pg	09 55 20.6	-0.7
	6.7nm,0.3s						
SATY				Lg	Lg	09 55 56.2	
	27nm,0.2s						
SATY	Saty	2.64	295	ePg	Pg	09 55 20.6	-0.7
	6.7nm,0.3s						
SATY				eLg	Lg	09 55 56.2	
	27nm,0.2s						
KPKS	Kokpek	2.65	305	Pg	Pb	09 55 17.5	-0.2
	13nm,0.2s						
KPKS				Lg	Lg	09 55 51.2	
	18nm,0.2s						
KPKS	Kokpek	2.65	305	ePg	Pg	09 55 20.3	-1.1
	6.5nm,0.0s						
KPKS				eLg	Lg	09 55 55.3	
	24nm,0.1s						
ZHN	Zhinishke	2.67	297	Pg	Pg	09 55 21.1	-0.5
	4.1nm,0.1s						
ZHN				Lg	Lg	09 55 57.2	
	39nm,0.2s						
ZHN	Zhinishke	2.67	297	ePg	Pg	09 55 21.1	-0.5
	4.1nm,0.1s						
ZHN				eLg	Lg	09 55 57.2	
	39nm,0.2s						
DJR	Jarkent	2.71	330	Pg	Pb	09 55 20.1	+1.4
	3.0nm,0.3s						
DJR				Lg	Lg	09 55 55.2	
	3.2nm,0.3s						
DJR	Jarkent	2.71	330	ePg	Pg	09 55 21.9	-0.6
	2.0nm,0.0s						
DJR				eLg	Lg	09 55 58.0	
	8.4nm,0.2s						
KOTS	Kotyrbulak	3.59	292	Pg	Pb	09 55 35.9	+2.1
	2.9nm,0.3s						
KOTS				Lg	Lg	09 56 22.2	
	5.2nm,0.4s						
KOTS	Kotyrbulak	3.59	292	ePg	Pb	09 55 35.9	+2.1
	2.9nm,0.3s						
KOTS				eLg	Lg	09 56 22.2	
	5.2nm,0.4s						
TNSS	Tian-Shan	3.65	288	Pg	Pg	09 55 38.0	-2.5
	2.7nm,0.5s						
TNSS				Lg	Lg	09 56 25.9	
	3.5nm,0.3s						
TNSS	Tian-Shan	3.65	288	ePg	Pg	09 55 38.0	-2.5
	2.7nm,0.5s						
TNSS				eLg	Lg	09 56 25.9	
	3.5nm,0.3s						
KTBS	Karatobe	4.05	297	Pg	Pg	09 55 45.9	-2.3
	1.1nm,0.3s						
KTBS				Lg	Lg	09 56 39.5	
	8.9nm,0.3s						
KTBS	Karatobe	4.05	297	ePg	Pg	09 55 45.9	-2.3
	1.1nm,0.3s						
KTBS				eLg	Lg	09 56 39.5	
	8.9nm,0.3s						
MK31	Makanchi Array	4.81	5	⇑Pn	Pn	09 55 41.8	-0.6
	0.1nm,0.2s,baz=220,slow=7.9,SNR=7.8						
MK31				⇑Pg	Pb	09 55 54.9	+0.4

	0.3nm,0.3s,baz=172,slow=16,SNR=5.5						
MK31	0.9nm,0.5s,baz=109,slow=31,SNR=3.6			⇓Sn	Sn	09 56 38.9	+1.1
MK31	1.0nm,0.5s,baz=181,slow=28,SNR=3.9			⇓Lg	Lg	09 57 01.1	

IDC 29 09:56:06.3±1.5,**0°.11N**×**121°.14E**,**h0**^{km},**mb3.7**/4,**mbtmp3.7**/4,**Error ellipse: s-maj=162.4km s-min=25.4km az=61.0,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.5nm,0.6s,baz=324,slow=11,SNR=9.3 0.5nm,0.6s	23.75	148	P	P	10 01 20.7	+0.1
SONM	Songino Array 0.4nm,0.4s,baz=159,slow=8.8,SNR=3.2 0.4nm,0.4s	49.24	347	P	P	10 04 57.4	+0.7
MKAR	Makanchi Array 0.4nm,0.4s,baz=126,slow=7.3,SNR=9.8 0.4nm,0.4s	57.56	329	P	P	10 05 58.3	+0.5
ZALV	Zalesovo Beam 0.9nm,0.4s,baz=148,slow=6.8,SNR=3.8 0.9nm,0.4s	61.46	337	P	P	10 06 23.1	-1.5

IDC 29 09:58:02.5±6.0,**12°.87N**×**143°.02E**,**h138**^{km}±86^{km},**mb3.3**/3,**mbtmp3.7**/3,**Error ellipse: s-maj=104.5km s-min=26.7km az=84.0,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam 43nm,0.3s,baz=278,slow=3.2,SNR=11	1.94	68	P	Pn	09 58 36.9	+0.7
GUMO	156nm,0.3s,baz=156,slow=23,SNR=14			S	Sn	09 59 02.4	+0.3
WRA	Warramunga Arr 1.5nm,0.6s,baz=16,slow=9.4,SNR=19 1.5nm,0.6s	33.70	195	P	P	10 04 30.4	-0.4
ASAR	Alice Springs 0.5nm,0.6s,baz=20,slow=12,SNR=12 0.5nm,0.6s	37.39	194	P	P	10 05 02.3	+0.1
MKAR	Makanchi Array 0.4nm,0.8s,baz=90,slow=10,SNR=2.4 0.4nm,0.8s	60.76	317	P	P	10 07 59.8	0.0

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*IDC **29** 10:01:16.0±2.2,56°.89N×162°.95E,h0^{km},mb3.6/5,mbtmp3.5/5,Error ellipse: s-maj=140.8km s-min=29.2km az=133.0*

*KRSC **29** 10:01:17.6±0.9,57°.04N×163°.24E,h47^{km}±14^{km},Ml4.3*

ISC 29 10:01:17.6±3.2,**57°.03N**±0°.04×**163°.11E**±0°.04,**h6**^{km}±21^{km},**n31**,σ**1^{s}.27**/38,**mb3.6**/5,**Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBG	Krutoberegovo	0.80	196	*e*P	Pb	10 01 33.5	-0.4
KBG				*e*S	Sb	10 01 46.0	+0.9
KBTR	Krutoberegovo	0.83	191	*e*P	Pb	10 01 34.4	-0.1
KBTR				*e*S	Sb	10 01 47.0	+1.0
SMKR	Semkarok	1.01	244	*e*P	Pb	10 01 36.7	-0.7
SRKR	Sorokina	1.13	252	*e*P	Pn	10 01 38.4	-1.6
SRKR				*e*S	Sb	10 01 53.5	-1.0
KLY	Klyuchi	1.53	243	*e*P	Pn	10 01 42.9	-2.5
KLY				*e*S	Sn	10 02 02.0	-3.7
LGNR	Loginova	1.64	236	*e*P	Pn	10 01 47.5	+0.3
BZWR	Bezymyannyi-We	1.80	235	*e*P	Pn	10 01 48.9	-0.3
BZWR				*e*S	Sb	10 02 13.9	+0.1
BZP	Bezymyannyi-Pe	1.81	233	*e*P	Pn	10 01 49.5	0.0
BZMR	Bezymyannaya	1.82	234	*e*P	Pn	10 01 49.3	-0.2
KIRR	Kirishev	1.87	236	*e*P	Pn	10 01 49.6	-0.7
KIRR				*e*S	Sn	10 02 14.4	+0.1
KPT	Kopyto	1.92	238	*e*P	Pn	10 01 51.1	+0.3
SRDR	Sredinnyy	2.00	251	*e*P	Pn	10 01 51.7	-0.2
SRDR				*e*S	Sn	10 02 17.3	0.0
KOZ	Kozyrevsk	2.04	243	*e*P	Pn	10 01 52.3	-0.1
KOZ				*e*S	Sn	10 02 19.2	+1.0
KMNR	Kamenistaya	2.04	233	*e*P	Pn	10 01 53.5	+1.0
OSSR	Ossora	2.23	359	*e*P	Pn	10 01 53.6	-1.4
TUMD	Tumrok D	2.38	221	*e*P	Pn	10 01 58.5	+1.5
TUMR	Tumrok	2.41	225	*e*P	Pn	10 01 58.7	+1.1
BKI	Bering	2.43	138	*e*P	Pn	10 01 57.8	+0.1
BKI				*e*S	Sn	10 02 26.5	-1.3
TIGL	Tigil	2.51	289	*e*P	Pn	10 02 00.1	+1.2
TIGL				*e*S	Sn	10 02 31.6	+1.8
MKZ	Mys Kozlova	2.59	198	*e*S	Sn	10 02 32.1	+0.3
PALN	Palana	2.66	322	*e*P	Pn	10 02 02.3	+1.4
ESO	Esso	2.68	248	*e*P	Pn	10 02 04.2	+2.9
NLC	Nalytchevo	4.43	211	*e*S	Sn	10 03 17.0	+0.1
ILAR	Eielson Array 0.9nm,0.7s,baz=262,slow=8.7,SNR=13 0.9nm,0.7s	24.90	51	P	P	10 06 40.8	0.0
H11N2	WAKE ISLAND Hy baz=357,slow=76,SNR=46	37.35	174	T	T	10 47 32.6	
H11N3	WAKE ISLAND Hy baz=357,slow=76,SNR=44	37.36	174	T	T	10 47 21.6	
H11N1	WAKE ISLAND Hy baz=357,slow=76,SNR=56	37.36	174	T	T	10 47 33.9	
YKA	Yellowknife Ar 0.3nm,0.6s,baz=299,slow=7.8,SNR=9.0 0.3nm,0.6s	39.14	47	P	P	10 08 45.7	+0.3
PDAR	Pinedale Array 0.4nm,0.6s,baz=296,slow=4.9,SNR=4.0 0.4nm,0.6s	54.19	65	P	P	10 10 44.7	+0.9
TXAR	Lajitas Array 0.6nm,0.7s,baz=316,slow=5.0,SNR=5.7 0.6nm,0.7s	67.59	71	P	P	10 12 15.5	+0.5
ASAR	Alice Springs 0.2nm,0.4s,baz=8.9,slow=4.9,SNR=6.6 0.2nm,0.4s	84.06	207	P	P	10 13 47.2	-1.6

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*NOU **29** 10:12:45.8,38°.72S×178°.96E,h97^{km},MLv3.5/5,Off E. Coast of N. Island, N.Z.*

*WEL **29** 10:12:50.0±1.0,39°S±5°×17°9E±°,h27^{km}±7^{km},M3.3/17,ML3.6/17,MLv3.3/17,Error ellipse: s-maj=0.0km s-min=0.0km az=106.7,confirmed*

ISC 29 10:12:44.5±2.1,**38°.74S**±0°.04×**178°.80E**±0°.09,**h13**^{km}±13^{km},**n79**,σ**1^{s}.13**/84,**Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNGZ	Carnagh Statio	0.53	299	P	Pn	10 12 59.3	+1.5
PUZ	Puketiti	0.80	327	P	Pn	10 13 02.2	+0.8
TKGZ	Te Karaka	0.81	292	P	Pn	10 13 02.8	+1.2
TKGZ				S	Sn	10 13 12.3	-1.1
MHGZ	Mahia Peninsul	0.81	239	P	Pn	10 13 04.4	+2.7
RIGZ	Rimuhau	0.81	272	P	Pn	10 13 03.5	+1.8
TWGZ	Tauwhareparae	0.86	311	P	Pn	10 13 03.5	+1.2
TWGZ				S	Sn	10 13 13.8	-1.0
KNZ	Kokohu	0.93	252	P	Pn	10 13 05.3	+2.1
PKGZ	Pakihiroa	1.03	326	P	Pn	10 13 05.9	+1.2
PKGZ				S	Sb	10 13 17.7	+0.1
MWZ	Matawai	1.08	292	P	Pn	10 13 06.5	+1.1
MWZ				S	Sb	10 13 18.2	-0.9
RAGZ	Rawiri	1.11	282	P	Pn	10 13 07.4	+1.5
RAGZ				S	Sb	10 13 20.0	-0.2
SNGZ	Shannon Statio	1.15	268	P	Pn	10 13 08.2	+1.9
SNGZ				S	Sn	10 13 21.5	-0.4
RUGZ	Raukumara Rang	1.18	311	P	Pn	10 13 07.5	+0.7
MXZ	Matakaoa Point	1.24	341	P	Pn	10 13 09.2	+1.7
MXZ	Matakaoa Point	1.24	341	P	Pn	10 13 09.3	+1.7
WHHZ	Waihua	1.27	254	P	Pn	10 13 10.3	+2.4
HAZ	Te Kaha	1.27	320	P	Pn	10 13 08.8	+0.9
RAHZ	Arahi	1.35	262	P	Pn	10 13 11.3	+2.2
URZ	Urewera	1.41	289	P	Pb	10 13 11.7	+1.0
URZ	Urewera	1.41	289	P	Pb	10 13 11.3	+0.6
ARHZ	Aropaoanui	1.50	249	P	Pg	10 13 13.6	+0.3
MTHZ	Maungataniwha	1.54	265	P	Pg	10 13 13.7	-0.4
NMHZ	Naumai	1.60	257	P	Pg	10 13 14.9	-0.3
MUGZ	Murupara	1.61	279	P	Pg	10 13 15.0	-0.6
CKHZ	Cape Kidnapper	1.62	235	P	Pg	10 13 15.3	-0.4
EDRZ	Edgecumbe	1.74	291	P	Pb	10 13 16.3	0.0
WIZ	White Island	1.76	313	P	Pn	10 13 16.0	+1.3
MCHZ	McNeill Hill	1.78	246	P	Pb	10 13 17.2	+0.2
KAHZ	Kahuranaki	1.83	234	P	Pb	10 13 18.0	+0.1
BKZ	Black Stump Fm	1.85	256	P	Pb	10 13 18.5	+0.2
BKZ	Black Stump Fm	1.85	256	P	Pb	10 13 18.1	-0.2
MRHZ	Matea Rd	1.87	266	P	Pn	10 13 17.1	+0.9
TARZ	Mount Tarawera	1.87	285	P	Pb	10 13 18.6	-0.1
PRRZ	Plateau Road	1.90	277	P	Pb	10 13 19.0	-0.1
ALRZ	Allen Road	1.94	275	P	Pb	10 13 19.2	-0.5
KWHZ	Kaweka Forest	1.97	249	P	Pb	10 13 19.8	-0.5
PXZ	Pawanui	1.98	229	P	Pn	10 13 19.4	+1.7
HLRZ	Highlands Stat	1.98	284	P	Pb	10 13 20.2	-0.3
HRRZ	Handcock Road	2.01	279	P	Pb	10 13 20.8	-0.1
OMRZ	Omania	2.01	288	P	Pn	10 13 19.8	+1.6
KARZ	Kaharoa	2.14	289	P	Pn	10 13 21.3	+1.4
TGRZ	Tauranga	2.24	296	P	Pn	10 13 22.2	+0.8
WPHZ	Waipukurau	2.26	233	P	Pn	10 13 23.5	+1.9
BHHZ	Black Hill Sta	2.26	250	P	Pn	10 13 23.7	+2.0
PRHZ	Porangahau	2.27	227	P	Pn	10 13 23.3	+1.6
PNHZ	Pukenui	2.33	239	P	Pn	10 13 24.4	+1.8
DVHZ	Dannevirke	2.56	232	P	Pn	10 13 27.2	+1.4
TSZ	Takapari Road	2.56	238	P	Pn	10 13 27.3	+1.5
BFZ	Birch Farm	2.76	225	P	Pn	10 13 29.4	+0.9
BFZ	Birch Farm	2.76	225	P	Pn	10 13 29.3	+0.7
TOZ	Tahuroa Road	2.79	290	P	Pn	10 13 29.8	+1.0
PRWZ	Pori Road	2.84	229	P	Pn	10 13 31.2	+1.6
POWZ	Post Office Ro	2.87	234	P	Pn	10 13 31.6	+1.7
TIWZ	Tintock	3.03	227	P	Pn	10 13 33.2	+1.0
MRZ	Mangatainoka R	3.14	231	P	Pn	10 13 34.8	+1.1
KUZ	Kuaotunu	3.15	308	P	Pn	10 13 34.6	+0.7
KUZ	Kuaotunu	3.15	308	P	Pn	10 13 35.1	+1.2
TMWZ	Te Maipa	3.25	223	P	Pn	10 13 35.5	+0.2
HOWZ	Holdsworth Sta	3.32	229	P	Pn	10 13 36.8	+0.6
OGWZ	Otaki Gorge	3.48	232	P	Pn	10 13 39.1	+0.7
MTW	Mount Morrison	3.50	225	P	Pn	10 13 38.8	+0.1
ETAZ	East Tamaki Re	3.55	299	P	Pn	10 13 40.6	+1.3
TRWZ	Traveller	3.57	221	P	Pn	10 13 39.2	-0.4
GRZ	Great Barrier	3.64	312	P	Pn	10 13 41.2	+0.6
MBAZ	Motutapu North	3.67	301	P	Pn	10 13 42.5	+1.6
KIW	Kapiti Island	3.67	234	P	Pn	10 13 41.9	+0.9
AWAZ	Awhitu Peninsu	3.69	296	P	Pn	10 13 42.6	+1.4
PAWZ	Paruwai Farm	3.70	223	P	Pn	10 13 41.1	-0.2
CAW	Cannon Point	3.72	229	P	Pn	10 13 42.0	+0.4
TCW	Tory Channel	4.26	233	P	Pn	10 13 49.3	+0.2
DUWZ	D'Urville Isla	4.29	240	P	Pn	10 13 49.9	+0.4
TUWZ	Tuamarina	4.59	233	P	Pn	10 13 53.3	-0.4
BSWZ	Blackbirch Sta	4.80	230	P	Pn	10 13 56.1	-0.4
NNZ	Nelson	4.84	238	P	Pn	10 13 57.5	+0.5
QRZ	Quartz Range	5.26	245	P	Pn	10 14 02.3	-0.5
MRNZ	Matariki Terra	5.34	238	P	Pn	10 14 04.3	+0.4
THZ	Tophouse	5.43	234	P	Pn	10 14 05.0	-0.2
CTZ	Chatham Island	6.07	147	P	Pn	10 14 20.0	+6.2
GVZ	Greta Valley S	6.08	224	P	Pn	10 14 14.1	+0.1
DSZ	Denniston Nort	6.14	239	P	Pn	10 14 14.3	-0.6

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*TAP **29** 10:26:20.4,24°.92N×122°.67E,h123^{km},ML2.9,D*

*JMA **29** 10:26:22.2±0.3,25°N±3°×122°.7E±0°.9,h114^{km},MV1.5/8,NW OFF ISHIGAKIJIMA IS*

ISC 29 10:26:21.5±2.0,**24°.83N**±0°.07×**122°.68E**±0°.04,**h120**^{km}±11^{km},**n55**,σ**0^{s}.84**/90,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.45	147	P	Pn	10 26 39.1	0.0
YOJ	Yonaguni jima	0.47	140	*e*P	Pn	10 26 39.2	0.0
YOJ				*e*S	Sn	10 26 51.8	-0.8
YOJ	Yonaguni jima baz=152	0.47	140	P	Pn	10 26 39.2	0.0
YOJ	baz=152			S	Sn	10 26 53.4	+0.9
EOS3	EOS3 baz=218	0.63	212	P	Pn	10 26 41.1	+1.0
EOS3	baz=218			S	Sn	10 26 55.8	+1.7
TWB1	Santiao Chiao baz=276	0.65	286	P	Pn	10 26 40.2	-0.2
EOS4	EOS4 baz=207	0.78	205	P	Pn	10 26 41.9	+0.9
EOS4	baz=207			S	Sn	10 26 56.9	+1.1
SXI1	Grass Mountain baz=292	0.78	290	P	Pn	10 26 41.0	-0.5
TWC	Suao baz=244	0.79	254	P	Pn	10 26 41.2	-0.3
TIPB	Shuangxi baz=270	0.79	281	P	Pn	10 26 41.3	-0.2
TIPB	baz=270			S	Sn	10 26 56.3	-0.4
EWUT	Wuta baz=235	0.90	245	P	Pn	10 26 42.8	+0.2
EWUT	baz=235			S	Sn	10 26 58.3	-0.1
ENA	Nanau baz=234	0.94	245	P	Pn	10 26 42.7	-0.2
ENA	baz=234			*i* S	Sn	10 26 59.4	+0.4
FUSB	Fushanzhiwuyua baz=254	0.99	266	P	Pn	10 26 43.3	-0.2
FUSB	baz=254			S	Sn	10 26 59.3	-0.8
ENTT	Nioudou baz=261	1.03	260	*i* P	Pn	10 26 43.0	-0.7
NWLT	Wulai baz=269	1.07	268	P	Pn	10 26 43.7	-0.5
NWLT	baz=269			S	Sn	10 27 01.2	-0.2
IRIF	Iriomote-Funau	1.07	117	*e*P	Pn	10 26 43.9	-0.3
LATG	Datong baz=243	1.09	255	P	Pn	10 26 44.8	+0.4
LATG	baz=243			S	Sn	10 27 02.3	+0.5
ETL	Fush Village baz=231	1.17	236	S	Sn	10 27 02.8	-0.4
NACB	Ninganchiao baz=227	1.18	237	P	Pn	10 26 44.7	-0.6
NACB	baz=227			S	Sn	10 27 03.1	-0.3
YHNB	Yeheng baz=264	1.20	263	P	Pn	10 26 45.7	+0.1
YHNB	baz=264			S	Sn	10 27 03.3	-0.5
NSK	Sanguang baz=264	1.21	263	*i* P	Pn	10 26 45.5	-0.2
NSK	baz=264			*i* S	Sn	10 27 03.7	-0.4
TWD	Chiawan baz=225	1.24	233	S	Sn	10 27 03.9	-0.5
NNSB	Datong baz=241	1.25	252	P	Pn	10 26 46.4	+0.3
NNSB	baz=241			S	Sn	10 27 04.4	-0.4
NNS	Nan Shan baz=241	1.25	252	S	Sn	10 27 04.4	-0.6
ETLH	Xiulin Townshi baz=230	1.25	241	P	Pn	10 26 45.6	-0.6
ETLH	baz=230			S	Sn	10 27 04.2	-0.7
JKRS	Kuro-shima	1.35	116	*e*S	Sn	10 27 07.2	+0.7
JIJ	Ishigaki jima	1.41	109	*e*P	Pn	10 26 48.0	+0.2
JIJ				*e*S	Sn	10 27 07.2	-0.7
FUSS	Fushou baz=238	1.43	246	P	Pn	10 26 48.5	+0.2
FUSS	baz=238			S	Sn	10 27 07.9	-0.8
NFF	Wufeng Townshi baz=253	1.43	263	P	Pn	10 26 48.1	-0.1
NFF	baz=253			S	Sn	10 27 07.6	-0.8
WHF	Hehuan Shan baz=233	1.46	243	*i* P	Pn	10 26 49.1	+0.2
WHF	baz=233			*i* S	Sn	10 27 08.9	-0.6
TWT	Tachien baz=238	1.48	248	*i* P	Pn	10 26 49.9	+1.1
TWT	baz=238			*i* S	Sn	10 27 10.4	+0.7
JISG	Ishigakijimahi	1.50	99	*e*P	Pn	10 26 49.1	+0.2
ESL	Shilin baz=233	1.52	229	S	Sn	10 27 08.9	-1.2
LIOB	Emei baz=260	1.52	264	P	Pn	10 26 49.7	+0.6
LIOB	baz=260			S	Sn	10 27 09.7	-0.5
NSTT	Nanjuang baz=259	1.54	263	*i* S	Sn	10 27 09.5	-1.0
CHGB	Renai baz=232	1.57	241	P	Pn	10 26 50.0	0.0
CHGB	baz=232			S	Sn	10 27 11.2	-0.4
EGFH	Guangfu baz=217	1.62	225	S	Sn	10 27 10.9	-1.4
OWD	Renai baz=230	1.62	238	P	Pn	10 26 50.7	+0.3
OWD	baz=230			S	Sn	10 27 11.6	-0.9
WUSB	Renai baz=232	1.65	240	P	Pn	10 26 51.0	+0.2
WUSB	baz=232			S	Sn	10 27 12.9	-0.1
WHP	Taichung City baz=248	1.67	251	P	Pn	10 26 51.4	+0.5
HGSD	Ruisui baz=218	1.75	221	P	Pn	10 26 51.5	-0.4
HGSD	baz=218			S	Sn	10 27 14.7	-0.5
VWDT	VWDT baz=226	1.76	233	P	Pn	10 26 52.2	+0.2
VWDT	baz=226			S	Sn	10 27 15.2	-0.1
WCS	Beigang Elemen baz=237	1.78	245	S	Sn	10 27 16.0	+0.3
EHY	Hungye baz=216	1.81	224	*i* P	Pn	10 26 52.7	+0.2
EHY	baz=216			S	Sn	10 27 14.5	-1.8
SMLT	Sun Moon Lake baz=233	1.88	240	P	Pn	10 26 54.8	+1.3
SMLT	baz=233			S	Sn	10 27 19.0	+1.1
SSLB	Suanglung baz=231	1.88	237	P	Pn	10 26 54.6	+1.1
SSLB	baz=231			S	Sn	10 27 19.7	+1.7
TYC	Yuchr baz=235	1.90	241	*i* P	Pn	10 26 54.9	+1.2
TYC	baz=235			*i* S	Sn	10 27 19.8	+1.6
YULB	Yu-li baz=226	1.91	222	P	Pn	10 26 52.9	-0.9
YULB	baz=226			S	Sn	10 27 16.8	-1.6
WHYT	Xinyi Township baz=229	2.01	236	P	Pn	10 26 56.2	+1.1
WHYT	baz=229			S	Sn	10 27 22.3	+1.5
WJS	Zhushan baz=238	2.04	241	S	Sn	10 27 23.7	+2.3
FULB	Fuli baz=212	2.06	218	P	Pn	10 26 54.4	-1.3
FULB	baz=212			S	Sn	10 27 21.8	0.0
EHD	Haiduan baz=225	2.15	219	P	Pn	10 26 55.3	-1.4
ALS	Alishan baz=225	2.16	233	P	Pn	10 26 58.2	+1.0
CHN5	Tsauling baz=243	2.20	237	P	Pn	10 26 58.9	+1.4
CHN5	baz=243			*i* S	Sn	10 27 25.5	+0.4
ELDTW	Lidau baz=219	2.23	223	P	Pn	10 26 57.6	-0.3
EDH	Donghe baz=209	2.23	215	P	Pn	10 26 57.5	-0.4
EDH	baz=209			S	Sn	10 27 24.1	-1.6

TAP 29 10:27:08.0,23°.15N×120°.63E,h8^{km},ML1.6,1C,A,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGST	Jiashian baz=209	0.08	215	*i* P	Pg	10 27 10.1	0.0
SGST	baz=209			*i* S	Sg	10 27 12.1	+0.5
WTP	Ta-pu baz=355	0.10	351	⇑*i*P	Pg	10 27 11.3	+0.9
WTP	baz=355			*i* S	Sg	10 27 13.7	+1.5
CHN1	Nanshi baz=292	0.10	293	*i* P	Pg	10 27 11.2	+0.8
CHN1	baz=292			*i* S	Sg	10 27 13.8	+1.6
STYT	Tauyuan baz=82	0.12	81	P	Pg	10 27 12.1	+1.4
STYT	baz=82			*e*S	Sg	10 27 14.1	+1.5
STYH	Taoyuan baz=76	0.14	79	P	Pg	10 27 12.2	+1.3
STYH	baz=76			S	Sg	10 27 15.1	+2.2
SNST	Tainan City baz=300	0.14	301	P	Pg	10 27 13.3	+2.2
SLGT	Liugui baz=174	0.15	175	P	Pg	10 27 13.1	+1.9
TPUB	Ta-pu baz=359	0.15	360	P	Pg	10 27 12.4	+1.1
TPUB	baz=359			S	Sg	10 27 15.3	+1.7
TWK	Hsinying baz=314	0.18	313	*i* P	Pg	10 27 12.6	+0.8
TWK	baz=314			*i* S	Sg	10 27 15.6	+1.4
CHN4	Tsaushan baz=350	0.21	350	*i* P	Pg	10 27 13.3	+1.1
CHN4	baz=350			*i* S	Sg	10 27 17.2	+2.1
WCKO	Fanlu baz=355	0.29	355	P	Pb	10 27 15.0	-0.5
WCKO	baz=355			S	Sb	10 27 19.8	-0.7
ELDTW	Lidau baz=83	0.36	83	P	Pb	10 27 16.0	-0.6
ELDTW	baz=83			*i* S	Sb	10 27 22.5	0.0
ALS	Alishan baz=24	0.40	24	*i* P	Pb	10 27 16.9	-0.6
ALS	baz=24			*i* S	Sb	10 27 23.8	0.0
SSD	Sandimen baz=178	0.40	180	*i* P	Pb	10 27 17.0	-0.2
SSD	baz=178			*i* S	Sb	10 27 24.0	+0.6
CHN5	Tsauling baz=5.0	0.45	5	*i* P	Pb	10 27 18.1	-0.1
CHN5	baz=5.0			*i* S	Sb	10 27 26.2	+1.1
YUS	Yu-Shan baz=41	0.45	41	P	Pb	10 27 18.4	-0.1
TSCK	Chigu Township baz=270	0.50	270	S	Sb	10 27 27.8	+1.3
TWG	Pinlang baz=128	0.52	128	*i* P	Pb	10 27 20.0	+0.7
TWG	baz=128			*i* S	Sb	10 27 28.4	+1.4
TWGBT	Beinan baz=128	0.53	128	P	Pb	10 27 19.9	+0.5
TWGBT	baz=128			S	Sb	10 27 28.4	+1.2
EHD	Haiduan baz=89	0.53	89	P	Pb	10 27 19.0	-0.5
EHD	baz=89			S	Sb	10 27 27.4	+0.1
MASBT	Mashibuluo baz=179	0.53	180	P	Pb	10 27 19.7	+0.2
MASBT	baz=179			S	Sb	10 27 27.2	-0.1
FULB	Fuli baz=85	0.61	85	P	Pb	10 27 20.8	-0.1
FULB	baz=85			S	Sb	10 27 30.6	+0.9

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*NOU **29** 10:33:42.1,33°.91S×179°.09W,h311^{km},MLv4.7/8,South of Kermadec Islands*

*WEL **29** 10:34:00.5±0.7,35°S±5°×18°0E±°,h151^{km}±18^{km},M4.4/25,mB5.0/4,ML4.8/22,MLv4.5/25,Mw(mB)4.3/4,Error ellipse: s-maj=0.0km s-min=0.0km az=110.8,confirmed*

*IDC **29** 10:34:01.2±4.6,34°.53S×179°.08E,h170^{km}±33^{km},mb3.8/3,mbtmp4.3/5,Error ellipse: s-maj=48.0km s-min=18.2km az=53.0*

ISC 29 10:33:58.4±0.8,**34°.57S**±0°.06×**179°.75E**±0°.09,**h150**^{km},**n93**,σ**1^{s}.99**/105,**mb4.0**/3,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.20	201	P	Pn	10 34 51.5	+3.2
MXZ	Matakaoa Point	3.20	201	P	Pn	10 34 51.3	+3.0
MXZ				S	Sn	10 35 29.2	+2.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**3.55**	**206**	P	**Pn**	**10 34 55.2**	**+2.4**
HAZ				S	**Sn**	**10 35 38.9**	**+3.9**
PKGZ	**Pakihiroa**	**3.57**	**202**	P	**Pn**	**10 34 56.1**	**+3.0**
PKGZ				S	**Sn**	**10 35 38.2**	**+2.6**
PUZ	**Puketiti**	**3.69**	**199**	P	**Pn**	**10 34 57.4**	**+2.7**
PUZ				S	**Sn**	**10 35 40.6**	**+2.3**
RUGZ	**Raukumara Rang**	**3.77**	**206**	P	**Pn**	**10 34 58.1**	**+2.3**
RUGZ				S	**Sn**	**10 35 42.0**	**+1.6**
TWGZ	**Tauwhareparae**	**3.87**	**201**	P	**Pn**	**10 34 59.8**	**+2.8**
TWGZ				S	**Sn**	**10 35 44.8**	**+2.4**
GRZ	**Great Barrier**	**3.88**	**243**	P	**Pn**	**10 34 58.9**	**+1.8**
KUZ	**Kuaotunu**	**3.93**	**235**	P	**Pn**	**10 35 00.1**	**+2.4**
KUZ	**Kuaotunu**	**3.93**	**235**	P	**Pn**	**10 34 59.8**	**+2.1**
CNGZ	**Carnagh Statio**	**4.09**	**197**	P	**Pn**	**10 35 02.6**	**+2.7**
TKGZ	**Te Karaka**	**4.15**	**201**	P	**Pn**	**10 35 02.6**	**+2.1**
TKGZ				S	**Sn**	**10 35 49.9**	**+1.0**
MWZ	**Matawai**	**4.16**	**205**	P	**Pn**	**10 35 02.8**	**+2.1**
MWZ				S	**Sn**	**10 35 49.3**	**+0.1**
URZ	**Urewera**	**4.25**	**209**	P	**Pn**	**10 35 03.4**	**+1.6**
	24nm,0.3s,baz=343,slow=5.0,SNR=35						
URZ				S	**Sn**	**10 35 50.2**	**-1.0**
	69nm,0.4s,baz=329,slow=2.7,SNR=14						
URZ	**Urewera**	**4.25**	**209**	P	**Pn**	**10 35 03.6**	**+1.8**
URZ	**Urewera**	**4.25**	**209**	P	**Pn**	**10 35 03.4**	**+1.6**
URZ				S	**Sn**	**10 35 51.1**	**-0.1**
RAGZ	**Rawiri**	**4.34**	**205**	P	**Pn**	**10 35 06.7**	**+3.6**
RAGZ				S	**Sn**	**10 35 54.9**	**+1.4**
WIAZ	**Waiheke Island**	**4.36**	**238**	P	**Pn**	**10 35 06.0**	**+2.6**
KARZ	**Kaharoa**	**4.45**	**218**	P	**Pn**	**10 35 06.0**	**+1.4**
OMRZ	**Omania**	**4.46**	**217**	P	**Pn**	**10 35 08.3**	**+3.7**
MUGZ	**Murupara**	**4.57**	**211**	P	**Pn**	**10 35 08.5**	**+2.4**
MUGZ				S	**Sn**	**10 35 59.8**	**+0.8**
SNGZ	**Shannon Statio**	**4.62**	**204**	P	**Pn**	**10 35 08.3**	**+1.5**
SNGZ				S	**Sn**	**10 35 59.6**	**-0.6**
TOZ	**Tahuroa Road**	**4.66**	**226**	P	**Pn**	**10 35 10.2**	**+2.9**
HRRZ	**Handcock Road**	**4.72**	**215**	P	**Pn**	**10 35 11.5**	**+3.4**
KNZ	**Kokohu**	**4.74**	**200**	P	**Pn**	**10 35 09.1**	**+0.8**
PRRZ	**Plateau Road**	**4.76**	**214**	P	**Pn**	**10 35 09.8**	**+1.3**
MHGZ	**Mahia Peninsul**	**4.80**	**197**	P	**Pn**	**10 35 10.7**	**+1.5**
WTAZ	**Waiatarua**	**4.82**	**239**	P	**Pn**	**10 35 12.2**	**+2.8**
ALRZ	**Allen Road**	**4.83**	**214**	P	**Pn**	**10 35 11.0**	**+1.4**
RAHZ	**Arahi**	**4.83**	**205**	P	**Pn**	**10 35 10.6**	**+1.1**
MTHZ	**Maungataniwha**	**4.87**	**208**	P	**Pn**	**10 35 11.5**	**+1.4**
WPRZ	**Whakapapatarin**	**4.88**	**215**	P	**Pn**	**10 35 12.1**	**+1.9**
WHHZ	**Waihua**	**4.92**	**203**	P	**Pn**	**10 35 11.5**	**+0.7**
MRHZ	**Matea Rd**	**5.02**	**211**	P	**Pn**	**10 35 12.6**	**+0.5**
NMHZ	**Naumai**	**5.09**	**207**	P	**Pn**	**10 35 13.6**	**+0.6**
OUZ	**Omahuta**	**5.10**	**261**	P	**Pn**	**10 35 13.9**	**+0.8**
OUZ	**Omahuta**	**5.10**	**261**	P	**Pn**	**10 35 13.9**	**+0.8**
ARHZ	**Aropaoanui**	**5.17**	**204**	P	**Pn**	**10 35 14.2**	**+0.2**
BKZ	**Black Stump Fm**	**5.27**	**209**	P	**Pn**	**10 35 15.3**	**-0.1**
RITZ	**Rihia Road**	**5.39**	**214**	P	**Pn**	**10 35 17.7**	**+0.8**
MCHZ	**McNeill Hill**	**5.44**	**206**	P	**Pn**	**10 35 17.6**	**0.0**
CKHZ	**Cape Kidnapper**	**5.50**	**202**	P	**Pn**	**10 35 18.8**	**+0.3**
KWHZ	**Kaweka Forest**	**5.52**	**208**	P	**Pn**	**10 35 18.4**	**-0.4**
HIZ	**Hauiti**	**5.56**	**224**	P	**Pn**	**10 35 21.2**	**+2.0**
HIZ	**Hauiti**	**5.56**	**224**	P	**Pn**	**10 35 21.4**	**+2.2**
TMVZ	**Te Maari**	**5.57**	**214**	P	**Pn**	**10 35 19.7**	**+0.2**
ETVZ	**East Tongariro**	**5.58**	**214**	P	**Pn**	**10 35 19.5**	**-0.1**
KRVZ	**Karewarewa**	**5.58**	**215**	P	**Pn**	**10 35 20.5**	**+0.8**
WTVZ	**West Tongariro**	**5.63**	**215**	P	**Pn**	**10 35 20.2**	**0.0**
NNVZ	**North Ngauruho**	**5.63**	**215**	P	**Pn**	**10 35 20.8**	**+0.5**
OTVZ	**Oturere**	**5.63**	**214**	P	**Pn**	**10 35 21.5**	**+1.3**
GLKZ	**Green Lake**	**5.66**	**21**	S	**Sn**	**10 36 26.3**	**+1.6**
SNVZ	**South Ngauruho**	**5.66**	**214**	P	**Pn**	**10 35 20.4**	**-0.2**
TWVZ	**Taurewa**	**5.66**	**216**	P	**Pn**	**10 35 21.8**	**+1.2**
RAO	**Raoul Island**	**5.67**	**21**	S	**Sn**	**10 36 27.8**	**+2.9**
	187nm,0.3s,baz=235,slow=22,SNR=3.3						
NGZ	**Ngauruhoe**	**5.67**	**215**	P	**Pn**	**10 35 20.7**	**-0.1**
KAHZ	**Kahuranaki**	**5.69**	**203**	P	**Pn**	**10 35 20.6**	**-0.4**
TUVZ	**Tukino**	**5.72**	**214**	P	**Pn**	**10 35 21.6**	**+0.2**
BHHZ	**Black Hill Sta**	**5.72**	**210**	P	**Pn**	**10 35 20.5**	**-0.9**
FWVZ	**Far West T-bar**	**5.75**	**214**	P	**Pn**	**10 35 22.3**	**+0.3**
MOVZ	**Moawhango**	**5.79**	**212**	P	**Pn**	**10 35 21.3**	**-1.0**
TRVZ	**Turoa**	**5.79**	**214**	P	**Pn**	**10 35 22.8**	**+0.3**
WNVZ	**Wahianoa**	**5.79**	**214**	P	**Pn**	**10 35 22.0**	**-0.4**
PXZ	**Pawanui**	**5.91**	**202**	P	**Pn**	**10 35 22.4**	**-1.5**
PNHZ	**Pukenui**	**6.03**	**207**	P	**Pn**	**10 35 23.9**	**-1.6**
WPHZ	**Waipukurau**	**6.08**	**205**	P	**Pn**	**10 35 25.8**	**-0.3**
PRHZ	**Porangahau**	**6.20**	**203**	P	**Pn**	**10 35 26.5**	**-1.2**
TSZ	**Takapari Road**	**6.25**	**208**	P	**Pn**	**10 35 26.5**	**-1.9**
DVHZ	**Dannevirke**	**6.38**	**205**	P	**Pn**	**10 35 28.0**	**-2.2**
WAZ	**Wanganui**	**6.42**	**215**	P	**Pn**	**10 35 29.4**	**-1.3**
NEZ	**North Egmont**	**6.51**	**222**	P	**Pn**	**10 35 33.5**	**+1.5**
PKE	**Pukeiti**	**6.52**	**223**	P	**Pn**	**10 35 33.6**	**+1.6**
POWZ	**Post Office Ro**	**6.61**	**207**	P	**Pn**	**10 35 31.6**	**-1.6**
PRWZ	**Pori Road**	**6.68**	**206**	P	**Pn**	**10 35 32.9**	**-1.2**
BFZ	**Birch Farm**	**6.70**	**203**	P	**Pn**	**10 35 31.9**	**-2.5**
BFZ	**Birch Farm**	**6.70**	**203**	P	**Pn**	**10 35 32.4**	**-1.9**
TIWZ	**Tintock**	**6.91**	**205**	P	**Pn**	**10 35 34.7**	**-2.4**
MRZ	**Mangatainoka R**	**6.92**	**207**	P	**Pn**	**10 35 34.0**	**-3.3**
HOWZ	**Holdsworth Sta**	**7.15**	**207**	P	**Pn**	**10 35 37.0**	**-3.3**
TMWZ	**Te Maipa**	**7.20**	**204**	P	**Pn**	**10 35 38.4**	**-2.6**
OGWZ	**Otaki Gorge**	**7.21**	**209**	P	**Pn**	**10 35 38.0**	**-3.2**
KIW	**Kapiti Island**	**7.35**	**210**	P	**Pn**	**10 35 39.6**	**-3.5**
MTW	**Mount Morrison**	**7.38**	**206**	P	**Pn**	**10 35 40.1**	**-3.3**
CAW	**Cannon Point**	**7.50**	**208**	P	**Pn**	**10 35 41.3**	**-3.7**
KHZ	**Kahutara**	**9.21**	**210**	P	Pn	10 36 03.2	-4.7
RPZ	**Rata Peaks**	**11.34**	**214**	S	Sn	10 38 27.4	-14
	9.9nm,0.4s,baz=138,slow=22,SNR=13						
DZM	**Mont Dzumac**	**17.07**	**313**	P	**P**	**10 37 46.3**	**-1.4**
	2.6nm,0.6s,baz=143,slow=17,SNR=6.1						
ASAR	**Alice Springs**	**41.19**	**273**	P	**P**	**10 41 24.8**	**-3.6**
	2.6nm,0.7s,baz=114,slow=7.8,SNR=42 2.6nm,0.7s						
WRA	**Warramunga Arr**	**42.56**	**278**	P	**P**	**10 41 35.8**	**-3.8**
	1.4nm,0.3s,baz=118,slow=7.6,SNR=50 1.4nm,0.3s						
QSPA	**South Pole Qui**	**55.55**	**180**	P	**P**	**10 43 20.0**	**+2.1**
	2.7nm,0.6s,baz=27,slow=1.4,SNR=33 2.7nm,0.6s						
FINES	**FINESS Array B**	**148.29**	**336**	PKPbc	**PKPdf**	**10 53 23.8**	**+1.3**
	1.2nm,0.8s,baz=29,slow=3.2,SNR=1.9						
DBIC	**Dimbokro**	**151.91**	**170**	PKPbc	**PKPbc**	**10 53 36.1**	**0.0**
	2.0nm,0.5s,baz=183,slow=2.3,SNR=4.7						
TORD	**Torodi Ar. Bea**	**158.59**	**185**	PKP	**PKPdf**	**10 53 37.8**	**-0.8**
	1.2nm,1.1s,baz=174,slow=4.3,SNR=4.0						
TORD				PKPab	**PKPab**	**10 54 13.1**	**-1.1**
	0.7nm,0.5s,baz=172,slow=3.4,SNR=4.1						

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*IDC **29** 10:38:23.2±2.5, 6°.24S×130°.84E, h0^{km}, mb3.5/1, mbtmp3.8/3, ML4.2/2, MS2.9/1, Error ellipse: s-maj=145.0km s-min=31.9km az=71.0*

ISC 29 10:38:31.9±0.9**, 6°.19S**±0°.07×**131°.5E**±0°.1**, h100^{km}, n18, σ3ˢ.26**/19**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.79**	**186**	P	**Pn**	**10 39 03.5**	**+1.6**
BNDI	**Bandanaira**	**2.29**	**316**	P	**Pn**	**10 39 06.5**	**-1.8**
FAKI	**Fak Fak**	**3.33**	**13**	P	**Pn**	**10 39 20.2**	**-2.0**
KDU	**Kakadu**	**6.53**	**172**	P	**Pn**	**10 40 05.5**	**+0.1**
MTN	**Manton Dam**	**6.62**	**183**	P	**Pn**	**10 40 07.3**	**+0.6**
SANI	**Sanana**	**6.87**	**307**	P	**Pn**	**10 40 09.2**	**-0.8**
KNRA	**Kununurra**	**9.80**	**196**	P	**Pn**	**10 40 49.7**	**-0.3**
COEN	**Coen**	**13.84**	**125**	P	**Pn**	**10 41 46.0**	**+2.1**
WRA	**Warramunga Arr**	**13.95**	**169**	Pn	**Pn**	**10 41 41.9**	**-3.4**
	1.2nm,0.3s,baz=349,slow=13,SNR=16						
WRA				Sn	**Sn**	**10 44 10.4**	**-8.5**
	1.9nm,0.3s,baz=344,slow=22,SNR=12 2.2nm,0.5s						
QIS	**Mount Isa**	**16.30**	**152**	P	**P**	**10 42 17.4**	**+1.2**
MTSU	**Mount Surprise**	**17.24**	**135**	P	**P**	**10 42 29.1**	**+2.5**
ASAR	**Alice Springs**	**17.53**	**173**	P	**Pn**	**10 42 31.0**	**+0.9**
	0.6nm,0.3s,baz=350,slow=11,SNR=30						
ASAR				S	**Sn**	**10 45 38.5**	**-6.9**
	3.5nm,0.8s,baz=352,slow=25,SNR=7.9 1.8nm,0.5s						
AS01	**Alice Springs**	**17.54**	**173**	P	**Pn**	**10 42 31.2**	**+1.1**
MBWA	**Marble Bar**	**18.75**	**216**	P	**Pn**	**10 42 44.9**	**+0.3**
WRKA	**Warakurna**	**18.99**	**189**	P	**Pn**	**10 42 47.9**	**+0.3**
OOD	**Oodnadatta**	**21.85**	**170**	P	**P**	**10 43 19.6**	**+3.1**
KSRS	**Korea Array**	**43.55**	**356**	LR	LR	11 03 30.4	
	comp=Z,17nm,21.7s,baz=160,slow=35						
MKAR	**Makanchi Array**	**68.38**	**326**	P	**P**	**10 49 24.7**	**+1.9**
	0.3nm,0.5s,baz=116,slow=6.5,SNR=4.9 0.3nm,0.5s						

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*IDC **29** 10:53:04.8±10.0, 21°.97S×175°.51W, h119^{km}±83^{km}, mb3.6/5, mbtmp4.0/7, ML5.5/1, MS3.4/2, Error ellipse: s-maj=128.0km s-min=22.5km az=150.0*

ISC 29 10:53:02.4±1.3**, 22°.1S**±0°.3×**175°.4W**±0°.1**, h100^{km}, n16, σ0ˢ.81**/8**, mb3.8**/5**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.55**	**304**	P	**Pn**	**10 54 49.9**	**0.0**
	2.5nm,0.3s,baz=126,slow=15,SNR=26 40nm,0.9s						
RAR	**Rarotonga**	**14.53**	**89**	LR	LR	11 00 11.6	
	comp=Z,127nm,21.6s,baz=204,slow=29						
DZM	**Mont Dzumac**	**16.86**	**267**	P	**Pn**	**10 56 53.6**	**+1.1**
	2.0nm,0.7s,baz=83,slow=19,SNR=1.3						
ASAR	**Alice Springs**	**46.57**	**258**	P	**P**	**11 01 20.3**	**-0.2**
	2.2nm,0.6s,baz=94,slow=8.0,SNR=15 2.2nm,0.6s						
WRA	**Warramunga Arr**	**46.83**	**263**	P	**P**	**11 01 21.4**	**-1.2**
	1.6nm,0.8s,baz=100,slow=8.5,SNR=11 1.6nm,0.8s						
NVAR	**Mina Array Bea**	**80.52**	**42**	P	**P**	**11 05 04.0**	**+0.2**
	0.7nm,0.6s,baz=223,slow=8.6,SNR=8.0 0.7nm,0.6s						
H03S2	**Juan Fernandez**	**83.08**	**124**	T	T	12 37 03.4	
	baz=247,slow=74,SNR=6.9						
H03S1	**Juan Fernandez**	**83.09**	**124**	T	T	12 37 04.0	
	baz=247,slow=74,SNR=10.0						
H03S3	**Juan Fernandez**	**83.09**	**124**	T	T	12 37 02.7	
	baz=247,slow=74,SNR=7.6						
H03N2	**Juan Fernandez**	**83.22**	**123**	T	T	12 37 09.4	
	baz=238,slow=74						
H03N3	**Juan Fernandez**	**83.22**	**123**	T	T	12 37 11.7	
	baz=238,slow=74						
H03N1	**Juan Fernandez**	**83.23**	**123**	T	T	12 37 08.6	
	baz=238,slow=74						
KLR	**Kul'dur**	**85.14**	**328**	LR	LR	11 39 08.1	
	comp=Z,27nm,20.1s,baz=356,slow=32						
TXAR	**Lajitas Array**	**85.86**	**56**	P	**P**	**11 05 32.0**	**+0.6**
	0.8nm,0.9s,baz=224,slow=7.0,SNR=4.8 0.8nm,0.9s						
YKA	**Yellowknife Ar**	**96.93**	**24**	P	**P**	**11 06 21.5**	**-0.5**
	0.3nm,0.9s,baz=239,slow=4.4,SNR=5.5 0.3nm,0.9s						
AKASG	**Malin Array Be**	**145.56**	**332**	PKPbc	**PKPdf**	**11 12 28.5**	**-0.2**
	0.2nm,0.3s,baz=32,slow=4.2,SNR=1.9						

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*IDC **29** 10:56:32.5±6.8, 36°.11N×71°.30E, h79^{km}±48^{km}, mb3.5/4, mbtmp3.7/8, ML3.4/4, Error ellipse: s-maj=69.6km s-min=32.4km az=158.0*

*NNC **29** 10:56:43.8±9.2, 36°.98N×71°.29E, h156^{km}±145^{km}, mb2.8, mpv3.5, Error ellipse: s-maj=84.0km s-min=69.8km az=0.0*

ISC 29 10:56:35.9±0.8**, 36°.44N**±0°.07×**71°.34E**±0°.09**, h100^{km}, n27, σ1ˢ.97**/31**, mb3.7**/4**, 3C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.97**	**17**	P	**Pn**	**10 58 04.0**	**+1.9**
	SNR=69						
AML	**Almayashu**	**5.97**	**17**	⇓P	**Pn**	**10 58 03.8**	**+1.7**
	0.4nm,0.3s						
AML				⇑S	**Sn**	**10 59 08.7**	**-0.6**
	5.8nm,0.7s						
UCH	**Uchtor**	**6.28**	**22**	P	**Pn**	**10 58 08.4**	**+2.0**
	SNR=15						
EKS2	**Erkin-Say**	**6.50**	**16**	P	**Pn**	**10 58 11.2**	**+2.3**
	SNR=9.3						
AAK	**Ala-Archa**	**6.65**	**20**	P	**Pn**	**10 58 13.6**	**+2.5**
	SNR=11						
AAK	**Ala-Archa**	**6.65**	**20**	P	**Pn**	**10 58 13.3**	**+2.1**
	5.6nm,0.3s,baz=201,slow=8.6,SNR=44						
AAK				S	**Sn**	**10 59 25.3**	**-0.3**
	5.0nm,0.5s,baz=300,slow=22,SNR=5.5 12nm,0.3s						
KK31	**Karatay Array**	**6.69**	**355**	P	**Pn**	**10 58 12.2**	**+0.7**
	1.9nm,0.3s,baz=183,slow=13,SNR=72						
KK31				S	**Sn**	**10 59 22.9**	**-3.3**
	4.1nm,0.3s,baz=187,slow=23,SNR=9.3						
CHMS	**Chumysh**	**7.06**	**21**	P	**Pn**	**10 58 18.8**	**+2.3**
	SNR=6.5						
USP	**Ospenovka**	**7.24**	**19**	P	**Pn**	**10 58 21.3**	**+2.3**
	SNR=6.5						
TKM2	**Tokmak 2**	**7.26**	**26**	P	**Pn**	**10 58 21.4**	**+2.0**
	SNR=10						
TKM2	**Tokmak 2**	**7.26**	**26**	⇑P	**Pn**	**10 58 21.6**	**+2.2**
	5.1nm,0.5s						
TKM2				⇓S	**Sn**	**10 59 35.0**	**-5.3**
	0.7nm,0.4s						
PYUN	**Piuthan**	**12.88**	**127**	eP	**Pn**	**10 59 34.3**	**-1.1**
	11nm,0.4s						
MKAR	**Makanchi Array**	**13.18**	**35**	P	**Pn**	**10 59 40.3**	**+1.3**
	baz=230,slow=13,SNR=2.5 0.3nm,0.8s						
DANN	**Dangsing**	**13.22**	**124**	eP	**Pn**	**10 59 39.4**	**-0.5**
	14nm,0.5s						
PKIN	**Phulchoki**	**14.82**	**123**	eP	**P**	**11 00 02.6**	**-1.3**
	9.8nm,0.4s						
PKI	**Pulchoki**	**14.84**	**123**	eP	**P**	**11 00 02.9**	**-1.2**
	3.8nm,0.3s						
GUN	**Gumba**	**14.95**	**121**	eP	**P**	**11 00 07.4**	**+2.0**
	11nm,0.4s						
KURBB	**Kurchatov Arra**	**15.10**	**18**	P	**Pn**	**11 00 04.9**	**+1.3**
	baz=208,slow=11,SNR=5.3 0.5nm,0.6s						
AB31	**Akbulak array**	**15.28**	**331**	⇓P	**Pn**	**11 00 04.2**	**-1.7**
	1.6nm,0.6s,baz=152,slow=12,SNR=31						
AKTO	**Aktyubinsk**	**16.98**	**330**	P	**Pn**	**11 00 26.4**	**-0.6**
	0.2nm,0.3s,baz=145,slow=11,SNR=6.3						
AKTO				S	Sn	11 03 24.1	-11
	0.3nm,0.4s,baz=245,slow=19,SNR=1.4 2.4nm,0.6s						
AKTO	**Aktyubinsk**	**16.98**	**330**	⇑P	**Pn**	**11 00 27.2**	**+0.2**
	1.9nm,0.8s						
ZALV	**Zalesovo Beam**	**19.86**	**24**	P	**P**	**11 00 59.1**	**+0.3**
	1.4nm,0.3s,baz=209,slow=10,SNR=5.9 1.4nm,0.3s						
AKASG	**Malin Array Be**	**33.20**	**309**	P	**P**	**11 03 03.2**	**+0.3**
	1.2nm,0.6s,baz=106,slow=9.0,SNR=7.9 1.2nm,0.6s						
NB2	**NORSAR Subarra**	**44.60**	**323**	P	**P**	**11 04 39.1**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=99,slow=7.9						
NOA	**NORSAR Array B**	**44.60**	**323**	P	**P**	**11 04 38.8**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=103,slow=7.5,SNR=4.6 comp=Z,1.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**65.99**	**269**	P	**P**	**11 07 10.2**	**-1.7**
	comp=Z,0.5nm,0.5s,baz=43,slow=5.8,SNR=4.8						
YKA	**Yellowknife Ar**	**81.30**	**3**	P	**P**	**11 08 41.7**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=348,slow=5.2,SNR=9.1 comp=Z,0.3nm,0.6s						

MAN 29 11:09:05.0, 8°.74N×126°.50E, h27^{km}, mb4.2, ML3.0, MS2.7, 4C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.57**	**194**	⇑iP	Pn	11 09 16.9	-0.4
BIPH				i S	Sn	11 09 25.1	-0.7
BUTP	**Butuan**	**0.90**	**285**	⇓eP	Pn	11 09 20.0	-1.9
BUTP				eS	Sb	11 09 32.3	-1.3
GLSP	**General Luna,**	**1.10**	**340**	⇑eP	Pn	11 09 22.4	-2.3
GLSP				eS	Sn	11 09 35.1	-4.0
CGP	**Cagayan de Oro**	**1.81**	**261**	⇑eP	Pn	11 09 35.3	+0.9
CGP				eS	Sn	11 09 54.8	-1.7
RCP	**Roxas**	**4.64**	**307**	⇑iP	Pn	11 10 16.4	+3.0
SCSP	**San Jose Seism**	**5.70**	**329**	⇓eP	Pn	11 10 29.1	+1.3

JMA 29 11:15:28.2±0.2**, 25°N**±1°×**14°1E**±°**, h168^{km}, MV4.5**/12**, IOTO ISLANDS REGION, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**2.43**	**29**	P	Pn	11 16 09.7	+0.3
JHH2				eS	Sn	11 16 41.8	+0.3
CBIJ	**Chichi jima**	**2.85**	**25**	P	Pn	11 16 14.9	+0.5
CBIJ				eS	Sn	11 16 50.6	+0.2
BSO1	**Boso 1**	**10.12**	**1**	eP	Pn	11 17 49.8	+0.9
BSO3	**Boso 3**	**10.27**	**358**	eP	Pn	11 17 51.8	+0.7
JAG	**Ashikaga**	**11.95**	**355**	P	Pn	11 18 13.0	-0.2
JHO	**Hitachi**	**12.07**	**359**	eP	Pn	11 18 14.7	-0.2
JHO				eS	Sn	11 20 24.8	-3.9

IDC 29 11:37:60.0±1.9**, 4°.65N×127°.57E, h0^{km}, mb3.6**/4**, mbtmp3.6**/5**, ML3.3**/1**, Error ellipse: s-maj=91.1km s-min=20.8km az=58.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.61**	**146**	Pn	Pn	11 39 37.9	-0.6
	0.7nm,0.3s,baz=229,slow=20,SNR=1.3						
SIJI				Sn	Sn	11 40 47.0	-7.5
	1.1nm,0.3s,baz=255,slow=20,SNR=2.1 2.4nm,0.3s						
WRA	**Warramunga Arr**	**25.32**	**165**	P	P	11 43 28.5	-0.1
	0.7nm,0.7s,baz=343,slow=10,SNR=14 0.7nm,0.7s						
ASAR	**Alice Springs**	**28.81**	**168**	P	P	11 44 00.2	+0.2
	0.3nm,0.4s,baz=353,slow=8.0,SNR=10.0 0.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**31.16**	**298**	P	P	11 44 21.6	+0.7
	0.4nm,0.4s,baz=102,slow=7.2,SNR=4.1 0.4nm,0.4s						
MKAR	**Makanchi Array**	**57.29**	**325**	P	P	11 47 49.0	-0.6
	0.2nm,0.4s,baz=113,slow=7.2,SNR=4.9 0.2nm,0.4s						

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*DJA **29** 12:24:52.2±0.2, 6°S±3°×12°8E±°, h390^{km}±5^{km}, M4.0/14, mb4.1/12, mB4.7/7, MLv4.2/14, Mw(mB)3.9/7*

*NEIC **29** 12:24:52.2±0.8, 6°.13S±0°.05×127°.98E±0°.10, h389^{km}±11^{km}, mb4.2/10, Error ellipse: s-maj=14.2km s-min=7.6km az=92.0*

*IDC **29** 12:24:54.4±2.1, 6°.10S×128°.43E, h410^{km}±27^{km}, mb3.2/5, mbtmp4.2/8, Error ellipse: s-maj=32.8km s-min=14.4km az=74.0*

ISC 29 12:24:52.6±0.6**, 6°.07S**±0°.06×**128°.10E**±0°.07**, h400^{km}, n50, σ1ˢ.30**/50**, mb3.7**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.37**	**50**	P	**Pn**	**12 25 50.0**	**-1.0**
AAI	**Ambon**	**2.37**	**2**	P	**Pn**	**12 25 50.5**	**-0.6**
MSAI	**Masohi**	**2.83**	**17**	P	**Pn**	**12 25 53.3**	**-1.2**
NLAI	**Namlea**	**2.99**	**341**	P	**Pn**	**12 25 56.2**	**+0.5**
SAUI	**Saumlaki**	**3.70**	**121**		**Pn**	**12 26 01.6**	**-0.3**
SAUI	**Saumlaki**	**3.70**	**121**	P	**Pn**	**12 26 01.8**	**-0.1**
SAUI	**Saumlaki**	**3.70**	**121**	P	**Pn**	**12 26 01.6**	**-0.3**
SANI	**Sanana**	**4.52**	**332**	P	**Pn**	**12 26 08.2**	**-1.5**
SANI	**Sanana**	**4.52**	**332**	P	**Pn**	**12 26 08.1**	**-1.6**
FAKI	**Fak Fak**	**5.19**	**53**	Pn	**Pn**	**12 26 16.7**	**+0.1**
FAKI	**Fak Fak**	**5.19**	**53**	P	**Pn**	**12 26 16.7**	**+0.1**
	62nm,0.8s,1µm0.2nm						
SOEI	**Soe**	**5.27**	**226**	Pn	**Pn**	**12 26 14.9**	**-2.6**
SOEI	**Soe**	**5.27**	**226**	P	**Pn**	**12 26 15.8**	**-1.8**
SOEI	**Soe**	**5.27**	**226**	P	**Pn**	**12 26 15.4**	**-2.2**
	96nm,0.5s,2µm0.5nm						
LBMI	**Labuha**	**5.43**	**354**	P	**Pn**	**12 26 18.8**	**-0.4**
	42nm,0.9s,1µm0.3nm						
SIJI	**Sorong**	**6.06**	**32**	P	**Pn**	**12 26 25.9**	**0.0**
	5.6nm,0.3s,baz=313,slow=10.0,SNR=5.4						
SIJI				S	**S**	**12 27 37.6**	**-4.4**
	18nm,0.2s,baz=191,slow=23,SNR=12						
LUWI	**Luwuk**	**7.29**	**313**	Pn	**Pn**	**12 26 39.0**	**-0.7**
LUWI	**Luwuk**	**7.29**	**313**	P	**Pn**	**12 26 37.8**	**-1.8**
	30nm,0.6s,0.1nm						
MTN	**Manton Dam**	**7.36**	**156**	Pn	**Pn**	**12 26 39.8**	**-0.5**
MTN	**Manton Dam**	**7.36**	**156**	P	**Pn**	**12 26 40.0**	**-0.4**
RKPI	**Ransiki, Papua**	**7.57**	**53**	P	**P**	**12 26 42.9**	**-0.4**
	39nm,0.6s,2µm0.3nm						
KDU	**Kakadu**	**7.86**	**147**	P	**P**	**12 26 45.9**	**-0.5**
KNRA	**Kununurra**	**9.57**	**176**		**P**	**12 27 04.4**	**-1.0**
TOLI2	**Tolitoli**	**10.21**	**314**		**P**	**12 27 12.2**	**-0.4**
TOLI2	**Tolitoli**	**10.21**	**314**	P	**Pn**	**12 27 12.9**	**-0.2**
MPSI	**Mapaga**	**10.37**	**308**	P	**Pn**	**12 27 14.4**	**-0.6**
	11nm,0.8s						
FITZ	**Fitzroy Crossi**	**12.19**	**191**	P	**P**	**12 27 33.3**	**-1.1**
WB0	**Warramunga Arr**	**14.93**	**156**	P	**P**	**12 28 03.9**	**-0.4**
WRAB	**Tennant Creek**	**15.06**	**157**	P	**P**	**12 28 05.4**	**-0.4**
WRA	**Warramunga Arr**	**15.06**	**157**	P	**P**	**12 28 05.5**	**-0.3**
	11nm,0.3s,baz=335,slow=11,SNR=164						
WRA	**Warramunga Arr**	**15.06**	**157**	P	**P**	**12 28 04.1**	**-1.7**
WB2	**Warramunga Arr**	**15.07**	**157**	P	**P**	**12 28 05.3**	**-0.6**
COEN	**Coen**	**16.78**	**119**	P	**P**	**12 28 24.5**	**+0.2**
COEN				IAmb	IAmb	12 28 57.4	
	comp=Z,8.9nm,0.7s						
KKM	**Kota Kinabalu**	**16.90**	**315**	P	**P**	**12 28 24.5**	**-1.2**
KKM				IAmb	IAmb	12 28 38.2	
	comp=Z,15nm,0.8s						
AS31	**Alice Springs**	**18.36**	**163**	P	**P**	**12 28 39.8**	**-1.2**
AS31				IAmb	IAmb	12 28 41.4	
	comp=Z,7.0nm,0.5s						
ASAR	**Alice Springs**	**18.36**	**163**	P	**P**	**12 28 40.8**	**-0.3**
	comp=Z,18nm,0.4s,baz=343,slow=12,SNR=320						
ASAR	**Alice Springs**	**18.36**	**163**	P	**P**	**12 28 40.5**	**-0.5**
STKA	**Stephens Creek**	**28.61**	**155**	P	**P**	**12 30 14.6**	**+0.5**
	comp=Z,4.2nm,1.0s,baz=333,slow=9.1,SNR=5.1 comp=Z,4.2nm,1.0s						
STKA	**Stephens Creek**	**28.61**	**155**	P	**P**	**12 30 14.5**	**+0.4**
STKA				IAmb	IAmb	12 30 40.8	
	comp=Z,4.2nm,1.4s						
RPSI	**Rantau Prapat**	**30.41**	**286**	P	**P**	**12 30 29.4**	**-0.7**
RPSI				IAmb	IAmb	12 30 33.2	
	comp=Z,6.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**37.70**	**311**	P	**P**	**12 31 35.8**	**+3.8**
	comp=Z,1.3nm,0.7s,baz=143,slow=7.1,SNR=9.6 comp=Z,1.3nm,0.7s						
PETK	**Petropavlovsk-**	**64.06**	**19**	P	**P**	**12 34 45.9**	**+0.7**
	comp=Z,2.9nm,1.0s,baz=200,slow=5.6,SNR=9.1 comp=Z,2.9nm,1.0s						
PETK	**Petropavlovsk-**	**64.06**	**19**	P	**P**	**12 34 46.6**	**+1.5**
MK31	**Makanchi Array**	**66.43**	**327**	P	**P**	**12 35 00.0**	**-0.3**
MKAR	**Makanchi Array**	**66.43**	**327**	P	**P**	**12 35 01.5**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=118,slow=8.1,SNR=5.1 comp=Z,0.2nm,0.3s						
MKAR	**Makanchi Array**	**66.43**	**327**	P	**P**	**12 35 00.3**	**-0.1**
QSPA	**South Pole Qui**	**83.90**	**180**	P	**P**	**12 36 38.3**	**-0.3**
	comp=Z,1.5nm,1.0s,baz=256,slow=4.2,SNR=1.5 comp=Z,1.5nm,1.0s						
K20K	**Telida**	**89.96**	**26**	IAmb	IAmb	12 37 09.4	
	comp=Z,5.1nm,0.8s						
BMAR	**Burnt Mountain**	**94.53**	**23**	P	**P**	**12 37 29.4**	**+1.0**
BCAR	**Beaver Creek A**	**95.42**	**27**	P	**P**	**12 37 33.7**	**+1.2**

IDC 29 12:25:48.7±5.9**, 4°.89S×133°.07E, h0^{km}, mb3.6**/1**, mbtmp3.6**/3**, MS2.8**/1**, Error ellipse: s-maj=363.1km s-min=31.6km az=76.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.38**	**336**	LR	LR	12 28 58.7	
	comp=Z,103nm,18.9s,baz=238,slow=43						
WRA	**Warramunga Arr**	**15.01**	**175**	Pn	Pn	12 29 23.8	+1.5
	1.2nm,0.6s,baz=355,slow=12,SNR=4.6						
ASAR	**Alice Springs**	**18.68**	**178**	P	P	12 30 08.0	-0.7
	0.6nm,0.4s,baz=358,slow=13,SNR=1.7						
MKAR	**Makanchi Array**	**68.20**	**325**	P	P	12 36 51.2	0.0
	0.3nm,0.5s,baz=114,slow=7.3,SNR=14 0.3nm,0.5s						

IDC 29 12:35:38.1±2.9**, 20°.75S×179°.44E, h0^{km}, mb3.5**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=284.7km s-min=35.4km az=162.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.12**	**257**	P	P	12 43 31.1	-1.3
	0.3nm,0.7s,baz=90,slow=7.7,SNR=7.4 0.3nm,0.7s						
WRA	**Warramunga Arr**	**42.19**	**263**	P	P	12 43 33.8	+0.8
	0.5nm,0.3s,baz=97,slow=6.6,SNR=18 0.5nm,0.3s						
TXAR	**Lajitas Array**	**89.22**	**58**	P	P	12 48 36.5	+0.1
	0.2nm,0.7s,baz=198,slow=5.7,SNR=3.6 0.2nm,0.7s						

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*IDC **29** 12:44:35.0±0.5, 28°.63S×176°.59W, h0^{km}, mb4.4/13, mbtmp4.4/14, ML4.7/1, MS4.2/37, Error ellipse: s-maj=20.2km s-min=14.9km az=144.0*

*NEIC **29** 12:44:41.1±1.2, 28°.63S±0°.10×176°.76W±0°.05, h35^{km}±1^{km}, mb4.8/58, Error ellipse: s-maj=16.7km s-min=7.8km az=169.0*

ISC 29 12:44:40.2±0.4**, 28°.81S**±0°.06×**176°.60W**±0°.06**, h36^{km}, n133, σ2ˢ.34**/98**, mb4.8**/41**, MS4.2**/36**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.23**	**249**	Pn	**Pn**	**12 45 02.4**	**+1.5**

	621nm,0.3s,baz=82,slow=9.1,SNR=30						
RAO				Sn	Sn	12 45 18.8	+2.5
	2µm,0.3s,baz=98,slow=23,SNR=8.5						
RAO	Raoul Island	1.23	249		Pn	12 45 02.1	+1.2
GLKZ	Green Lake	1.24	249	P	Pn	12 45 02.4	+1.4
GLKZ				S	Sn	12 45 21.4	+4.9
RIZ	Raoul Island	1.24	249	P	Pn	12 45 02.0	+1.1
RIZ				S	Sn	12 45 20.5	+4.0
MXZ	Matakaoa Point	9.71	205	P	Pn	12 47 00.3	+3.0
MXZ				S	Sn	12 48 39.8	-5.2
HAZ	Te Kaha	10.08	206	P	Pn	12 46 56.6	-5.7
HAZ				S	Sn	12 48 50.7	-3.4
PKGZ	Pakihiroa	10.08	205	P	Pn	12 46 56.6	-5.8
PKGZ				S	Sn	12 48 49.0	-5.3
TWGZ	Tauwhareparae	10.37	204	P	Pn	12 46 59.4	-7.0
TWGZ				S	Sn	12 48 56.8	-4.6
URZ	Urewera	10.78	207	Pn	Pn	12 47 06.4	-5.5
	0.7nm,0.3s,baz=57,slow=14,SNR=1.4						
URZ				Sn	Sn	12 49 05.4	-5.8
	2.5nm,0.3s,baz=77,slow=22,SNR=7.0						
NIUE	Niue	11.45	34	Pn	Pn	12 47 17.3	-3.9
MSVF	Nonsavu	12.07	335	Pn	Pn	12 47 26.9	-2.9
	0.2nm,0.3s,baz=119,slow=19,SNR=3.4						
MSVF				LR	LR	12 51 27.8	
	comp=Z,970nm,20.6s,baz=163,slow=35						
	3.0nm,0.7s						
MSVF	Nonsavu	12.07	335	Pn	Pn	12 47 27.1	-2.8
DUWZ	D'Urville Isla	14.26	211	P	Pn	12 47 55.7	-3.8
DUWZ				S	Sn	12 50 26.1	-10
NNZ	Nelson	14.84	211	P	Pn	12 48 03.2	-4.1
NNZ				S	Sn	12 50 38.0	-12
QRZ	Quartz Range	14.93	214	P	Pn	12 48 06.4	-2.1
QRZ				S	Sn	12 50 41.8	-11
THZ	Tophouse	15.48	211	P	Pn	12 48 12.3	-3.6
AFI	Afiamalu	15.49	18	Pn	Pn	12 48 08.4	-7.7
	1.6nm,0.3s,baz=148,slow=18,SNR=2.4						
AFI				Sn	Sn	12 50 48.5	-18
	0.7nm,0.3s,baz=250,slow=23,SNR=1.2						
AFI				LR	LR	12 55 09.9	
	comp=Z,224nm,19.5s,baz=190,slow=42						
DZM	Mont Dzumac	16.71	290	*e*P	P	12 48 37.6	+3.9
	63nm,1.6s						
DZM				*e*LR	LR	12 52 23.9	
	comp=Z,2µm,23.4s						
DZM	Mont Dzumac	16.71	290	Pn	P	12 48 33.5	-0.2
	0.1nm,0.3s,baz=178,slow=14,SNR=1.9						
DZM				LR	LR	12 53 58.2	
	comp=Z,2µm,18.0s,baz=112,slow=34						
AMCZ	Amberley	16.74	208	P	Pn	12 48 30.3	-1.6
INZ	Inchbonnie	16.91	212	P	Pn	12 48 30.8	-3.2
RAR	Rarotonga	17.02	67	LR	LR	12 53 36.0	
	comp=Z,464nm,20.5s,baz=236,slow=32						
WVZ	Waitaha Valley	17.51	212	P	Pn	12 48 40.1	-1.2
RPZ	Rata Peaks	17.86	210	P	Pn	12 48 40.6	-5.2
	3.4nm,0.4s,baz=329,slow=5.9,SNR=3.5						
RPZ				S	Sn	12 51 47.4	-16
	4.5nm,0.5s,baz=19,slow=20,SNR=2.0						
RPZ	Rata Peaks	17.86	210	P	Pn	12 48 44.5	-1.3
GCSZ	Gaunt Creek Bo	17.89	213	P	Pn	12 48 44.0	-2.0
ARCZ	Arundel	18.00	210	P	Pn	12 48 44.6	-2.8
TBI	Tubuai	24.95	84	*e*P	P	12 50 04.5	+4.3
	163nm,22.5s						
TBI				*e*LR	LR	12 56 05.2	
	comp=Z,10µm,22.8s						
TBI				*e*LR	LR	12 56 05.5	
	comp=Z,2µm,25.0s						
PPT2	Papeete2	27.17	72	*e*LR	LR	12 56 58.7	
	comp=Z,480nm,23.5s						
PPT	Papeete	27.18	72	LR	LR	12 58 27.2	
	comp=Z,218nm,19.5s,baz=243,slow=31						
ARMA	Armidale	27.62	259	P	P	12 50 23.8	-0.7
HNR	Honiara	29.26	307	LR	LR	12 59 36.6	
	comp=Z,3µm,21.1s,baz=182,slow=31						
CAN	Canberra	29.76	249	P	P	12 50 43.4	-0.1
MCQ	Macquarie Isla	31.19	208	P	P	12 50 55.6	-0.1
CTA	Charters Tower	34.80	276	LR	LR	13 04 46.4	
	comp=Z,1µm,18.2s,baz=96,slow=35						
CTAO	Charters Tower	34.80	276	P	P	12 51 26.4	-1.2
STKA	Stephens Creek	36.05	255	P	P	12 51 38.2	-0.1
	1.4nm,0.4s,baz=97,slow=16,SNR=4.8						
STKA				LR	LR	13 05 29.0	
	comp=Z,618nm,18.3s,baz=138,slow=35						
	1.4nm,0.4s						
STKA	Stephens Creek	36.05	255	P	P	12 51 38.6	+0.3
TAOE	Nuku Hiva Isla	39.57	67	*e*LR	LR	13 02 39.8	
	comp=Z,304nm,23.8s						
AS31	Alice Springs	44.44	265	P	P	12 52 47.6	-0.3
ASAR	Alice Springs	44.44	265	P	P	12 52 47.1	-0.8
	2.7nm,0.7s,baz=95,slow=6.9,SNR=26						
ASAR				PcP	PP	12 54 31.9	0.0
	1.0nm,0.6s,baz=110,slow=4.5,SNR=2.8						
ASAR				ScP	ScP	12 58 26.7	+6.1
	1.5nm,1.1s,baz=97,slow=3.8,SNR=3.0						
ASAR				LR	LR	13 11 01.9	
	comp=Z,858nm,18.0s,baz=142,slow=36						
	2.7nm,0.7s						
ASAR	Alice Springs	44.44	265	P	P	12 52 47.0	-1.0
WB2	Warramunga Arr	45.28	270	P	P	12 52 53.2	-1.4
WB2				IAmb	IAmb	12 53 04.7	
	comp=Z,9.9nm,0.9s						
WRAB	Tennant Creek	45.28	270	P	P	12 52 53.2	-1.4
WRAB				IAmb	IAmb	12 52 58.3	
	comp=Z,20nm,1.4s						
WRA	Warramunga Arr	45.29	270	P	P	12 52 53.6	-1.1
	comp=Z,5.8nm,1.0s,baz=109,slow=8.0,SNR=36						
WRA				PcP	PcP	12 54 34.6	+0.5
	comp=Z,4.6nm,1.0s,baz=104,slow=3.3,SNR=7.2						
WRA				ScP	ScP	12 58 28.8	+4.7
	comp=Z,0.5nm,0.9s,baz=104,slow=3.8,SNR=2.0						
WRA				LR	LR	13 09 46.9	
	comp=Z,326nm,19.4s,baz=138,slow=33						
	comp=Z,5.8nm,1.0s						
WRA	Warramunga Arr	45.29	270	P	P	12 52 54.0	-0.6
WB0	Warramunga Arr	45.30	270	P	P	12 52 54.2	-0.6
WB0				IAmb	IAmb	12 52 56.3	
	comp=Z,16nm,1.4s						
DRV	Dumont d'Urvil	46.07	202	P	P	12 52 56.8	-3.3
DRV				pP	pP	12 53 11.5	+1.9
DRV				sP	pwP	12 53 15.6	+1.0
FORT	Forrest	47.65	253	P	P	12 53 11.7	-1.4
SBA	Scott Base	49.71	185	P	P	12 53 30.5	+2.4
VNDA	Vanda	49.79	186	LR	LR	13 15 15.3	
	comp=Z,115nm,18.4s,baz=360,slow=37						
VNDA	Vanda	49.79	186	P	P	12 53 32.0	+3.2
VNDA	Vanda	49.79	186	P	P	12 53 31.4	+2.5
MTN	Manton Dam	50.97	277	P	P	12 53 37.7	-0.9
KNRA	Kununurra	51.83	272	P	P	12 53 43.4	-1.6
KNRA				IAmb	IAmb	12 54 07.7	
	comp=Z,11nm,1.1s						
FITZ	Fitzroy Crossi	53.61	268	P	P	12 53 55.8	-2.4
CCD	Concordia, Ant	54.81	196	P	P	12 54 07.6	+1.0
GUMO	Guam	56.25	313	LR	LR	13 16 48.6	
	comp=Z,130nm,18.1s,baz=98,slow=34						
SIJI	Sorong	56.92	290	LR	LR	13 17 34.0	
	comp=Z,188nm,19.0s,baz=95,slow=35						
CASY	Casey	57.11	207	P	P	12 54 23.9	+1.3
CASY	Casey	57.11	207	P	P	12 54 23.2	+0.6
CASY				pP	sP	12 54 34.4	-1.7
MORW	Morawa	58.16	252	P	P	12 54 29.4	-1.3
RPN	Rapa Nui	58.69	106	LR	LR	13 13 40.1	
	comp=Z,99nm,20.4s,baz=242,slow=30						
QSPA	South Pole Qui	61.29	180	P	P	12 54 53.9	+2.1
	comp=Z,21nm,1.0s,baz=22,slow=1.5,SNR=45						
QSPA				LR	LR	13 16 03.2	
	comp=Z,118nm,21.2s,baz=20,slow=31						
	comp=Z,21nm,1.0s						
QSPA	South Pole Qui	61.29	180	P	P	12 54 54.4	+2.6
QSPA	South Pole Qui	61.29	180	P	P	12 54 52.4	+0.6
QSPA				pP	sP	12 55 04.6	0.0
KAPI	Kappang	64.55	279	LR	LR	13 23 32.0	
	comp=Z,122nm,18.1s,baz=140,slow=36						
BELA	Belgrano 2	71.19	172	P	P	12 55 56.2	+1.3
BELA				IAmb	IAmb	12 55 57.1	
	comp=Z,15nm,1.5s						
MAW	Mawson	74.21	200	P	P	12 56 14.8	+2.0
	comp=Z,18nm,0.9s,baz=111,slow=7.2,SNR=6.9						
MAW				LR	LR	13 28 08.4	
	comp=Z,152nm,18.5s,baz=121,slow=35						
	comp=Z,18nm,0.9s						
MAW	Mawson	74.21	200	P	P	12 56 13.6	+0.7
SBUM	Sibu	74.78	281	P	P	12 56 15.2	-1.9
MJAR	Matsushiro Arr	77.65	324	P	P	12 56 32.4	-0.5
	comp=Z,1.7nm,0.6s,baz=169,slow=5.8,SNR=5.9						
	comp=Z,1.7nm,0.6s						
SNAA	Sanae	79.70	178	LR	LR	13 30 22.4	
	comp=Z,100nm,19.2s,baz=190,slow=34						
SHEM	Shemya Is, Ala	81.60	354	LR	LR	13 25 30.3	
	comp=Z,87nm,21.6s,baz=109,slow=30						
ASAJ	Asahikawa	81.61	332	LR	LR	13 26 32.0	
	comp=Z,181nm,20.4s,baz=164,slow=31						
LPIG	La Paz	82.66	58	LR	LR	13 27 46.2	
	comp=Z,102nm,18.4s,baz=223,slow=31						
PLCA	Paso Flores	82.69	133	P	P	12 57 00.5	+0.2
	comp=Z,5.4nm,1.0s,baz=239,slow=4.3,SNR=8.4						
PLCA				LR	LR	13 29 14.7	
	comp=Z,66nm,18.2s,baz=209,slow=32						
	comp=Z,5.4nm,1.0s						
PLCA	Paso Flores	82.69	133	P	P	12 57 02.2	+1.9
PLCA				IAmb	IAmb	12 57 03.5	
	comp=Z,9.3nm,1.1s						
PFO	Pinyon Flats O	84.24	47	LR	LR	13 29 40.1	
	comp=Z,164nm,18.2s,baz=240,slow=32						
PEA0B	Petropavlovsk-	84.60	345	P	P	12 57 10.3	+1.0
PETK	Petropavlovsk-	84.60	345	P	P	12 57 09.1	-0.3
	comp=Z,1.4nm,0.8s,baz=91,slow=8.9,SNR=5.1						
	comp=Z,1.4nm,0.8s						
PETK	Petropavlovsk-	84.60	345	P	P	12 57 09.4	0.0
GSC	Goldstone, Bar	85.11	45	P	P	12 57 13.9	+1.4
GSC				IAmb	IAmb	12 57 15.3	
	comp=Z,8.5nm,1.1s						
113A	Mohawk Valley,	85.45	49	P	P	12 57 15.8	+1.7
113A				IAmb	IAmb	12 57 17.2	
	comp=Z,6.9nm,1.2s						
214A	Organ Pipe Nat	85.59	50	P	P	12 57 16.3	+1.3
214A				IAmb	IAmb	12 57 18.0	
	comp=Z,14nm,1.5s						
WAKR	Walker	85.64	41	IAmb	IAmb	12 57 18.1	
	comp=Z,8.4nm,1.2s						
DSP	Deep Springs	85.75	43	IAmb	IAmb	12 57 18.9	
	comp=Z,6.5nm,1.2s						
GWY	Greenwater Val	85.76	45	IAmb	IAmb	12 57 18.3	
	comp=Z,3.8nm,0.7s						
MT01	Popeta	85.83	126	P	P	12 57 17.6	+1.3
YBH	Yreka Blue Hor	86.04	37	LR	LR	13 33 41.4	
	comp=Z,72nm,18.3s,baz=231,slow=34						
NVAR	Mina Array Bea	86.25	42	P	P	12 57 19.0	+0.7
	comp=Z,4.3nm,1.0s,baz=222,slow=8.1,SNR=18						
NVAR				LR	LR	13 31 54.0	
	comp=Z,205nm,18.2s,baz=215,slow=33						
	comp=Z,4.3nm,1.0s						
NV11	Mina Array Sit	86.34	42	IAmb	IAmb	12 57 21.1	
	comp=Z,8.6nm,1.3s						
TPNV	Topopah Spring	86.51	44	IAmb	IAmb	12 57 22.4	
	comp=Z,5.6nm,1.1s						
USRK	Ussuriysk Ar.	86.53	326	P	P	12 57 19.7	+0.5
	comp=Z,0.6nm,0.5s,baz=96,slow=5.8,SNR=1.8						
	comp=Z,0.6nm,0.5s						
KVN	Kaiserville	86.78	42	IAmb	IAmb	12 57 22.6	
	comp=Z,7.4nm,1.4s						
SHPR	Sheep Range	86.90	45	P	P	12 57 21.8	+0.3
319A	Douglas	87.65	52	IAmb	IAmb	12 57 28.2	
	comp=Z,6.2nm,1.0s						
BMN	Battle Mountai	88.20	41	IAmb	IAmb	12 57 29.9	
	comp=Z,6.3nm,1.3s						
LCMT	Little Creek M	88.42	46	IAmb	IAmb	12 57 31.8	
	comp=Z,7.3nm,1.3s						
KNB	Kanab	88.69	46	IAmb	IAmb	12 57 33.2	
	comp=Z,7.3nm,1.1s						
WUAZ	Wupatki	88.70	48	IAmb	IAmb	12 57 33.3	
	comp=Z,5.6nm,1.0s						
ELK	Elko	89.55	42	LR	LR	13 33 31.3	
	comp=Z,186nm,18.1s,baz=226,slow=33						
MTPU	Mount Pierson	89.72	45	IAmb	IAmb	12 57 38.8	
	comp=Z,5.8nm,1.0s						
KLR	Kul'dur	90.30	329	LR	LR	13 34 29.0	
	comp=Z,110nm,19.4s,baz=152,slow=33						
TX32	Lajitas Array	90.50	57	IAmb	IAmb	12 57 41.4	
	comp=Z,7.4nm,1.4s						
TXAR	Lajitas Array	90.50	57	P	P	12 57 38.7	+0.1
	comp=Z,2.5nm,1.1s,baz=205,slow=5.4,SNR=12						
TXAR				LR	LR	13 32 14.9	
	comp=Z,103nm,18.4s,baz=224,slow=32						
	comp=Z,2.5nm,1.1s						
TMUT	Trail Mountain	91.08	45	IAmb	IAmb	12 57 44.9	
	comp=Z,5.6nm,1.2s						
CMIG	Matias Romero	91.10	71	LR	LR	13 28 23.7	
	comp=Z,29nm,20.5s,baz=192,slow=29						
BBB	Bella Bella	91.13	27	LR	LR	13 32 25.9	
	comp=Z,75nm,18.4s,baz=236,slow=32						
SRU	San Rafael Swe	91.40	45	IAmb	IAmb	12 57 45.6	
	comp=Z,7.7nm,1.3s						
ANMO	Albuquerque	91.64	51	LR	LR	13 34 38.1	
	comp=Z,87nm,18.3s,baz=331,slow=33						
ANMO	Albuquerque	91.64	51	P	P	12 57 43.9	+0.1
HVU	Hansel Valley	91.65	42	IAmb	IAmb	12 57 46.7	
	comp=Z,5.4nm,1.2s						
HLID	Hailey	91.81	40	IAmb	IAmb	12 57 47.0	
	comp=Z,7.1nm,1.4s						
PLID	Pearl Lake	91.91	38	P	P	12 57 45.5	+0.6
PLID				IAmb	IAmb	12 57 46.9	
	comp=Z,7.4nm,1.2s						
BSUT	Blindstream Ca	92.10	44	IAmb	IAmb	12 57 49.2	
	comp=Z,5.3nm,1.3s						
NEW	Newport	93.38	35	LR	LR	13 36 17.0	
	comp=Z,160nm,18.1s,baz=224,slow=33						
LVC	Limon Verde	93.62	118	LR	LR	13 30 22.8	
	comp=Z,80nm,21.7s,baz=204,slow=29						
ATAH	Atahualpa	93.73	100	LR	LR	13 30 28.2	
	comp=Z,98nm,21.3s,baz=226,slow=29						
PDAR	Pinedale Array	94.15	43	P	P	12 57 54.4	-1.0
	comp=Z,0.9nm,1.0s,baz=132,slow=2.2,SNR=4.8						
PDAR				LR	LR	13 36 04.7	
	comp=Z,100nm,18.1s,baz=228,slow=33						
	comp=Z,0.9nm,1.0s						
ILAR	Eielson Array	96.12	12	P	P	12 58 03.1	-0.3
	comp=Z,0.4nm,0.6s,baz=212,slow=3.2,SNR=1.7						
	comp=Z,0.4nm,0.6s						
JTS	Las Juntas de	96.31	82	LR	LR	13 31 20.8	
	comp=Z,74nm,20.7s,baz=271,slow=29						
LPAZ	La Paz	97.66	113	LR	LR	13 35 40.5	
	comp=Z,27nm,18.2s,baz=206,slow=31						
RSSD	Black Hills	98.24	44	P	Pdif	12 58 14.2	+0.4
RSSD				IAmb	IAmb	12 58 16.0	
	comp=Z,3.1nm,0.9s						
MKAR	Makanchi Array	117.68	310	PKP	PKiKP	13 03 21.9	-0.4
	comp=Z,0.4nm,0.6s,baz=198,slow=1.2,SNR=5.6						
FRB	Frobisher Bay	123.39	30	PKP	PKPdf	13 03 31.8	-0.9
	comp=Z,1.6nm,0.7s,baz=279,slow=5.1,SNR=5.8						
FINES	FINESS Array B	144.05	342	PKP	PKPbc	13 04 09.2	-0.1
	comp=Z,2.4nm,0.6s,baz=48,slow=2.8,SNR=7.1						
NB2	NORSAR Subarra	147.35	353	PKP	PKPbc	13 04 19.2	-0.2
	comp=Z,1.3nm,0.6s,baz=10,slow=3.2						
NOA	NORSAR Array B	147.35	353	PKPbc	PKPbc	13 04 18.9	-0.5
	comp=Z,1.5nm,0.6s,baz=13,slow=4.5,SNR=5.7						
HFS	Hagfors	147.91	350	PKPbc	PKPbc	13 04 19.8	-1.1
	comp=Z,3.0nm,0.6s,baz=46,slow=4.3,SNR=11						
AKASG	Malin Array Be	150.73	325	PKPbc	PKiKP	13 04 28.4	-0.5
	comp=Z,3.4nm,0.6s,baz=36,slow=2.4,SNR=16						
MMAI	Mount Meron Ar	152.28	287	PKPbc	PKiKP	13 04 33.6	+0.8
	comp=Z,1.7nm,0.4s,baz=63,slow=7.6,SNR=5.6						
TORD	Torodi Ar. Bea	164.33	174	PKP	PKPdf	13 04 41.1	+0.5
	comp=Z,8.3nm,0.3s,baz=113,slow=1.4,SNR=4.9						
TORD				PKPab	PKPab	13 05 34.3	-0.3
	comp=Z,3.1nm,1.0s,baz=189,slow=3.7,SNR=7.7						

DNK ***29*** *12:49:41.1±1.7, 56°.21N×12°.14E, h0km, ML2.3, Explosion*
UPP ***29*** *12:49:42.8±0.2, 56°.27N×12°.34E, h0km, ML2.8, Suspected explosion*
BER ***29*** *12:49:43.4±1.2, 56°.26N×12°.29E, h0km, ML1.5, ML2.8(UPP), Suspected explosion*
IDC ***29*** *12:49:45.2±2.8, 56°.38N×12°.38E, h0km, mbtmp3.3/4, ML2.3/4, Error ellipse: s-maj=30.8km s-min=20.3km az=61.0*
ISC 29 12:49:40.1±0.9**, 56°.23N**±0°.04×**12°.28E**±0°.04**, h0**km**, n57, σ1ˢ16**/92**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJUU	Bjuv	0.44	110	P	Pb	12 49 51.1	+0.4
BJUU				S	Sb	12 49 57.4	-0.6
BJUU	Bjuv	0.44	110	*i* P	Pb	12 49 50.7	0.0
BJUU				P	Pb	12 49 51.1	+0.4
BJUU				P	Pb	12 49 51.1	+0.4
BJUU				S	Sb	12 49 57.4	-0.6
BJUU				S	Sb	12 49 57.4	-0.6
BJUU	Bjuv	0.44	110	P	Pb	12 49 51.1	+0.4
BJUU				S	Sb	12 49 57.4	-0.6
FABU	Falkenberg	0.82	17	P	Pg	12 49 57.2	+1.5
FABU				S	Sg	12 50 07.0	+0.7
FABU	Falkenberg	0.82	17	*i* P	Pg	12 49 57.0	+1.2
FABU				P	Pg	12 49 57.2	+1.5
FABU				P	Pg	12 49 57.2	+1.5
FABU				S	Sg	12 50 07.0	+0.7
FABU				S	Sg	12 50 07.0	+0.7
FABU	Falkenberg	0.82	17	P	Pg	12 49 57.2	+1.5
FABU				S	Sg	12 50 07.0	+0.7
LUNU	Lund	0.89	132	P	Pb	12 49 59.4	+1.1
LUNU	Lund	0.89	132	*i* P	Pb	12 49 59.0	+0.7
LUNU				P	Pb	12 49 59.4	+1.1
LUNU				P	Pb	12 49 59.4	+1.1
LUNU	Lund	0.89	132	P	Pb	12 49 59.4	+1.1
DEL	Delary	0.92	74	P	Pb	12 49 59.0	+0.1
DEL	Delary	0.92	74	*i* P	Pb	12 49 59.0	+0.1
DEL				P	Pb	12 49 59.0	+0.1
DEL	Delary	0.92	74	P	Pb	12 49 59.0	+0.1
ONAU	Onsala	1.19	351	P	Pg	12 50 04.1	+1.2
ONAU				S	Sg	12 50 19.2	+0.9
ONAU	Onsala	1.19	351	P	Pg	12 50 04.1	+1.2
ONAU				P	Pg	12 50 04.1	+1.2
ONAU				*i* P	Pg	12 50 04.1	+1.2
ONAU				S	Sg	12 50 19.2	+0.9
ONAU				S	Sg	12 50 19.2	+0.9
ONAU				*e*S	Sg	12 50 19.3	+0.9
ONAU	Onsala	1.19	351	P	Pg	12 50 04.1	+1.2
ONAU				S	Sg	12 50 19.2	+0.9
GNOU	Gnosjoe	1.34	37	P	Pg	12 50 06.5	+0.7
GNOU	Gnosjoe	1.34	37	P	Pg	12 50 06.5	+0.7
GNOU				P	Pg	12 50 06.5	+0.7
GNOU	Gnosjoe	1.34	37	P	Pg	12 50 06.5	+0.7
BORU	Boraas	1.44	11	P	Pn	12 50 08.2	+0.8
BORU	Boraas	1.44	11	P	Pn	12 50 08.2	+0.8
BORU				P	Pn	12 50 08.2	+0.8
BORU				*i* P	Pg	12 50 08.4	+0.8
BORU	Boraas	1.44	11	P	Pn	12 50 08.2	+0.8
VXJU	Vaexsjoe	1.63	64	P	Pb	12 50 11.7	+0.7
VXJU	Vaexsjoe	1.63	64	P	Pb	12 50 11.7	+0.7
VXJU				P	Pb	12 50 11.7	+0.7
VXJU	Vaexsjoe	1.63	64	P	Pb	12 50 11.7	+0.7
TJOU	Tjoern	1.85	349	*i* P	Pb	12 50 15.0	+0.3
TJOU				*i* S	Sb	12 50 39.8	+1.5
BSD	Bornholm Skovb	1.86	126	*e*P	Pn	12 50 14.5	+1.3
BSD				*e*S	Sb	12 50 38.6	-0.1
BSD				IAML		12 50 44.0	
	comp=Z,12nm,0.7s						
BLEU	Blekinge	1.98	86	*i* P	Pb	12 50 16.6	-0.2
STRU	Stroemstad	2.88	349	*e*P	Pn	12 50 29.4	+2.3
STRU	Stroemstad	2.88	349	*e*P	Pn	12 50 29.4	+2.3
HOMB	Homborsund	2.90	317	*e*P	Pn	12 50 28.2	+0.8
HOMB				*e*S	Sn	12 51 01.4	-1.5
HOMB				IAML		12 51 03.4	
	comp=Z,3.3nm,0.2s						
HOMB	Homborsund	2.90	317	*e*P	Pn	12 50 28.2	+0.8
HOMB				*e*S	Sn	12 51 01.4	-1.5
HOMB				IAML		12 51 03.4	
	comp=Z,3.3nm,0.2s						
SNART	Snartemo	3.47	310	*e*P	Pn	12 50 35.8	+0.5
SNART				*e*S	Sn	12 51 14.7	-2.4
SNART				IAML		12 51 21.6	
	comp=Z,3.9nm,0.9s						
SNART	Snartemo	3.47	310	*e*P	Pn	12 50 35.8	+0.5
SNART				*e*S	Sn	12 51 14.7	-2.4
SNART				IAML		12 51 21.6	
	comp=Z,3.9nm,0.9s						
HFS	Hagfors	3.99	10	Pn	Pn	12 50 43.9	+1.4
	comp=Z,0.4nm,0.3s,baz=188,slow=13,SNR=20						
HFS				Pg	Pb	12 50 50.5	-0.7
	comp=Z,0.7nm,0.3s,baz=192,slow=16,SNR=10						
HFS				Lg	Lg	12 51 46.3	
	comp=Z,0.6nm,0.3s,baz=189,slow=27,SNR=3.4						
	comp=Z,0.9nm,0.2s						
BLS5	Blasjo	4.47	318	*e*P	Pn	12 50 50.4	+1.4
BLS5				*e*S	Sn	12 51 39.4	-2.2
BLS5				IAML		12 52 06.3	
	comp=Z,1.9nm,1.0s						
BLS5	Blasjo	4.47	318	*e*P	Pn	12 50 50.4	+1.4
BLS5				*e*S	Sn	12 51 39.4	-2.2
BLS5				IAML		12 52 06.3	
	comp=Z,1.9nm,1.0s						
NC602	NORSAR Array S	4.54	355	*e*P	Pn	12 50 51.2	+1.2
NC602	NORSAR Array S	4.54	355	*e*P	Pn	12 50 51.2	+1.2
NAO01	NORSAR Array S	4.69	352	*e*P	Pn	12 50 53.2	+1.2
NAO01	NORSAR Array S	4.69	352	*e*P	Pn	12 50 53.2	+1.2
ODD1	Odda	4.76	323	*e*P	Pn	12 50 54.3	+1.3
ODD1	Odda	4.76	323	*e*P	Pn	12 50 54.3	+1.3
KMY	Karmoy	4.81	311	*e*P	Pn	12 50 54.8	+1.1
KMY	Karmoy	4.81	311	*e*P	Pn	12 50 54.8	+1.1
NOA	NORSAR Array B	4.86	354	Pn	Pn	12 50 55.0	+0.6
	baz=176,slow=15,SNR=17						
NOA				Lg	Lg	12 52 14.0	
	comp=Z,0.1nm,0.3s,baz=184,slow=16,SNR=4.3						
	comp=Z,0.3nm,0.3s						
NB201	NORSAR Array S	4.87	354	*e*P	Pn	12 50 55.5	+1.0
NB201	NORSAR Array S	4.87	354	*e*P	Pn	12 50 55.5	+1.0
NBO00	NORSAR Array S	4.88	351	*e*P	Pn	12 50 55.6	+0.9
NBO00	NORSAR Array S	4.88	351	*e*P	Pn	12 50 55.6	+0.9
SKAR	Skarslia	4.93	337	*e*P	Pn	12 50 56.7	+1.3
SKAR	Skarslia	4.93	337	*e*P	Pn	12 50 56.7	+1.3
NC303	NORSAR Array S	5.04	355	*e*P	Pn	12 50 58.0	+1.2
NC303	NORSAR Array S	5.04	355	*e*P	Pn	12 50 58.0	+1.2
NC204	NORSAR Array S	5.13	352	*e*P	Pn	12 50 59.3	+1.2
NC204	NORSAR Array S	5.13	352	*e*P	Pn	12 50 59.3	+1.2
FINES	FINESS Array B	8.86	48	Pn	Pn	12 51 48.7	-0.4
	comp=Z,0.1nm,0.3s,baz=247,slow=13,SNR=6.1						
	comp=Z,0.4nm,0.4s						
ARCES	ARCESS Array B	14.60	19	Pn	Pn	12 53 04.8	-2.8
	baz=208,slow=13,SNR=6.4						
	comp=Z,5.4nm,1.1s						

IDC ***29*** *13:04:17.1±0.9, 12°.01S×165°.45E, h0km, mb4.1/12, mbtmp4.2/14, ML5.1/2, MS3.6/3, Error ellipse: s-maj=30.4km s-min=19.2km az=147.0*
NEIC ***29*** *13:04:22.3±1.3, 11°.93S±0°.09×165°.40E±0°.09, h30km±6km, mb4.7/27, Error ellipse: s-maj=18.1km s-min=3.8km az=225.0*
ISC 29 13:04:22.7±0.6**, 11°.96S**±0°.08×**165°.33E**±0°.10**, h35**km**, n53, σ0ˢ95**/52**, mb4.5**/25**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.86	295	Pn	Pn	13 05 45.5	-1.6
	133nm,0.3s,baz=184,slow=19,SNR=2.8						
	351nm,0.3s						
HNR	Honiara	5.86	295	Pn	Pn	13 05 47.3	+0.3
KOUNC	Koumac, New Ca	8.60	187		Pn	13 06 23.9	-0.8
DZM	Mont Dzumac	10.11	174	Pn	Pn	13 06 44.5	-1.0
	5.5nm,0.3s,baz=299,slow=19,SNR=95						
DZM				LR	LR	13 09 59.4	
	comp=Z,216nm,19.6s,baz=26,slow=34						
	16nm,0.4s						
DZM	Mont Dzumac	10.11	174		Pn	13 06 44.0	-1.5
ONTNC	Ouen Toro	10.35	174	Pn	Pn	13 06 47.7	-1.0
OUENC	Ouen Island, N	10.50	172	Pn	Pn	13 06 51.7	+0.9
PINNC	Pines Island,	10.78	169	Pn	Pn	13 06 54.1	-0.5
CTA	Charters Tower	20.02	244	P	Pn	13 08 53.9	-0.7
	5.3nm,0.8s,baz=45,slow=8.6,SNR=2.3						
CTA				LR	LR	13 16 28.7	
	comp=Z,165nm,18.6s,baz=248,slow=36						
	5.3nm,0.8s						
CTAO	Charters Tower	20.02	244	P	P	13 08 52.9	+0.2
CTAO				IAmb	IAmb	13 09 32.0	
	comp=Z,59nm,1.4s						
BKZ	Black Stump Fm	28.85	162	P	P	13 10 19.3	+1.3
BKZ				IAmb	IAmb	13 10 31.1	
	comp=Z,35nm,1.5s						
TUWZ	Tuamarina	30.31	167	P	P	13 10 31.4	+0.7
WB0	Warramunga Arr	30.71	251	P	P	13 10 34.2	-0.4
WB0				IAmb	IAmb	13 11 06.2	
	comp=Z,15nm,1.4s						
WRA	Warramunga Arr	30.79	251	P	P	13 10 35.0	-0.3
	comp=Z,1.4nm,0.5s,baz=81,slow=8.7,SNR=32						
	comp=Z,1.4nm,0.5s						
WRA	Warramunga Arr	30.79	251	P	P	13 10 34.2	-1.1
LTZ	Lake Taylor	31.29	170	P	P	13 10 41.6	+2.1
LTZ				IAmb	IAmb	13 11 00.7	
	comp=Z,6.7nm,0.9s						
ASAR	Alice Springs	32.02	244	P	P	13 10 45.1	-1.1
	comp=Z,1.7nm,0.8s,baz=68,slow=9.3,SNR=19						
	comp=Z,1.7nm,0.8s						
RPZ	Rata Peaks	32.02	172	LR	LR	13 22 13.0	
	comp=Z,105nm,19.1s,baz=258,slow=34						
KNRA	Kununurra	35.67	260	P	P	13 11 17.9	0.0
FITZ	Fitzroy Crossi	38.75	256	P	P	13 11 43.9	-0.1

USRK	Ussuriysk Ar.	63.58	334	P	P	13 14 51.1	+1.2
	comp=Z,1.3nm,0.6s,baz=103,slow=4.7,SNR=2.4						
	comp=Z,1.3nm,0.6s						
CMAR	Chiang Mai Arr	72.10	294	P	P	13 15 45.7	+1.6
	comp=Z,1.8nm,0.8s,baz=118,slow=4.1,SNR=9.1						
	comp=Z,1.8nm,0.8s						
CHGN	Chignik	74.40	20	P	P	13 15 53.6	-3.1
P18K	Big Mountain,	77.89	19	P	P	13 16 15.8	-0.9
P18K				IAmb	IAmb	13 16 26.4	
	comp=Z,8.3nm,1.1s						
QSPA	South Pole Qui	78.05	180	P	P	13 16 17.7	0.0
QSPA				IAmb	IAmb	13 16 19.0	
	comp=Z,17nm,1.5s						
Q19K	Cape Douglas,	78.06	20	P	P	13 16 16.6	-1.0
ULN	Ulaanbaatar	78.80	324	P	P	13 16 22.4	+0.3
SONM	Songino Array	79.16	324	P	P	13 16 25.3	+1.3
	comp=Z,1.1nm,0.9s,baz=145,slow=5.3,SNR=4.5						
	comp=Z,1.1nm,0.9s						
M19K	Big River Lodg	80.09	18	P	P	13 16 28.6	-0.1
M19K				IAmb	IAmb	13 16 33.0	
	comp=Z,8.2nm,1.3s						
L19K	White Mountain	80.17	18	P	P	13 16 30.0	+0.9
KNK	Knik Glacier	81.66	21	P	P	13 16 37.4	+0.3
CAST	Castle Rocks	81.94	18	P	P	13 16 37.8	-0.7
CAST				IAmb	IAmb	13 16 40.7	
	comp=Z,6.4nm,0.9s						
TRF	Thorofare Moun	82.51	18	P	P	13 16 40.9	-0.8
TRF				IAmb	IAmb	13 16 43.2	
	comp=Z,4.3nm,0.9s						
M24K	Tolsona, Glenn	82.92	21	P	P	13 16 44.1	+0.4
N25K	Chitina, Valde	83.15	22	P	P	13 16 45.0	+0.1
N25K				IAmb	IAmb	13 16 45.9	
	comp=Z,4.8nm,0.7s						
VRDI	Verde Repeater	83.32	22	P	P	13 16 45.6	-0.3
IMAR	Indian Mountai	83.41	16	P	P	13 16 46.3	+0.3
MLY	Manley	83.53	17	P	P	13 16 47.7	+1.0
WRH	Wood River Hil	83.92	18	P	P	13 16 49.1	+0.5
WRH				IAmb	IAmb	13 16 49.7	
	comp=Z,3.7nm,0.8s						
CCB	Clear Creek Bu	84.14	18	P	P	13 16 50.1	+0.4
IL31		84.51	19	P	P	13 16 51.2	-0.4
IL31				IAmb	IAmb	13 16 53.4	
	comp=Z,9.1nm,1.4s						
ILAR	Eielson Array	84.51	19	P	P	13 16 51.1	-0.5
	comp=Z,1.1nm,0.6s,baz=250,slow=5.4,SNR=23						
	comp=Z,1.1nm,0.6s						
ILAR	Eielson Array	84.51	19	P	P	13 16 51.7	+0.1
SCRK	Sand Creek	84.91	20	P	P	13 16 54.3	+0.4
SCRK				IAmb	IAmb	13 16 55.1	
	comp=Z,4.8nm,1.0s						
BCAR	Beaver Creek A	85.09	21	P	P	13 16 55.2	+0.5
EGAK	Eagle	86.37	20	P	P	13 17 01.3	+0.4
EGAK				IAmb	IAmb	13 17 02.5	
	comp=Z,3.6nm,0.7s						
NVAR	Mina Array Bea	86.92	50	P	P	13 17 04.1	-0.4
	comp=Z,0.5nm,0.7s,baz=228,slow=9.7,SNR=5.6						
	comp=Z,0.5nm,0.7s						
MK31	Makanchi Array	93.91	317	P	P	13 17 36.7	-0.1
MK31				IAmb	IAmb	13 17 38.2	
	comp=Z,1.6nm,0.9s						
MKAR	Makanchi Array	93.91	317	P	P	13 17 37.3	+0.5
	comp=Z,1.6nm,0.8s,baz=98,slow=6.0,SNR=17						
	comp=Z,1.6nm,0.8s						
MKAR	Makanchi Array	93.91	317	P	P	13 17 37.1	+0.3
PDAR	Pinedale Array	94.47	47	P	P	13 17 39.4	-0.3
	comp=Z,0.2nm,0.5s,baz=263,slow=4.5,SNR=3.0						
	comp=Z,0.2nm,0.5s						
YKA	Yellowknife Ar	95.97	27	P	P	13 17 44.4	-1.4
	comp=Z,0.4nm,0.7s,baz=252,slow=4.5,SNR=7.9						
	comp=Z,0.4nm,0.7s						
TXAR	Lajitas Array	96.62	62	P	P	13 17 49.2	-0.5
	comp=Z,0.2nm,0.7s,baz=264,slow=2.5,SNR=2.5						
	comp=Z,0.2nm,0.7s						

KRSC ***29*** *13:25:17.2±1.0, 56.°96N×163.°16E, h34^{km}±12^{km}, Ml3.9*
IDC ***29*** *13:25:18.4±2.1, 56.°30N×164.°10E, h0^{km}, mb3.4/3, mbtmp3.3/4, ML2.1/1, Error ellipse: s-maj=156.4km s-min=33.0km az=144.0*
ISC 29 13:25:16.9±2.0, **56.°83N**±0.°06×**162.°96E**±0.°05, **h4**^{km}±13^{km}, **n24**, σ**0^{s}.83**/28, **mb3.5**/3, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBG	Krutoberegovo	0.59	194	eP	Pn	13 25 31.5	-0.5
KBG				eS	Sn	13 25 41.9	-0.2
KBTR	Krutoberegovo	0.63	187	eP	Pn	13 25 32.4	-0.1
KBTR				eS	Sn	13 25 43.4	+0.4
SMKR	Semkarok	0.86	254	eP	Pn	13 25 35.4	-0.4
SMKR				eS	Sn	13 25 49.2	+0.5
SRKR	Sorokina	1.00	260	eP	Pn	13 25 37.0	-0.6
SRKR				eS	Sn	13 25 51.8	-0.4
KLY	Klyuchi	1.38	249	eP	Pn	13 25 41.8	-0.9
KLY				eS	Sb	13 26 00.4	-0.6
BZGR	Bezymyannyi-Gr	1.54	235	eP	Pg	13 25 46.9	+0.5
BZP	Bezymyannyi-Pe	1.63	237	eP	Pg	13 25 48.1	+0.1
BZMR	Bezymyannaya	1.64	238	eP	Pg	13 25 48.1	-0.1
KIRR	Kirishev	1.70	240	eP	Pb	13 25 49.1	+0.4
KPT	Kopyto	1.75	241	eP	Pb	13 25 49.4	-0.1
KMNR	Kamenistaya	1.86	236	eP	Pb	13 25 51.4	-0.1
KMNR				eS	Sg	13 26 16.1	-0.5
SRDR	Sredinnyy	1.86	255	eP	Pb	13 25 50.8	-0.7
TUMD	Tumrok D	2.17	222	eP	Pb	13 25 56.5	-0.2
TUMR	Tumrok	2.21	227	eP	Pb	13 25 57.4	-0.1
BKI	Bering	2.35	133	eP	Pn	13 25 56.4	+0.3
BKI				eS	Sn	13 26 24.7	-0.7
TIGL	Tigil	2.51	294	eP	Pn	13 25 59.6	+1.4
ESO	Esso	2.54	251	eP	Pb	13 26 02.5	-0.4
PETK	Petropavlovsk-	4.80	221	Pn	Pn	13 26 33.0	+3.1
	0.4nm,0.3s,baz=54,slow=16,SNR=2.2						
	1.1nm,0.5s						
ILAR	Eielson Array	25.08	51	P	P	13 30 42.4	+0.4
	0.4nm,0.7s,baz=266,slow=9.3,SNR=5.3						
	0.4nm,0.7s						
H11N2	WAKE ISLAND Hy	37.16	174	T	T	14 11 31.8	
	baz=358						
H11N3	WAKE ISLAND Hy	37.18	174	T	T	14 11 33.1	
	baz=358						
H11N1	WAKE ISLAND Hy	37.18	174	T	T	14 11 34.9	
	baz=358						
PDAR	Pinedale Array	54.34	65	P	P	13 34 44.0	-0.4
	0.3nm,0.7s,baz=53,slow=0.5,SNR=4.0						
	0.3nm,0.7s						
TXAR	Lajitas Array	67.73	70	P	P	13 36 15.4	0.0
	0.6nm,0.8s,baz=293,slow=4.7,SNR=7.0						
	0.6nm,0.8s						

KRSC ***29*** *13:26:21.7±1.3, 57.°02N×163.°52E, h16^{km}±15^{km}, Ml4.3*
IDC ***29*** *13:26:22.9±1.3, 57.°18N×163.°04E, h0^{km}, mb3.3/6, mbtmp3.3/7, ML2.1/1, Error ellipse: s-maj=36.6km s-min=21.0km az=160.0*
ISC 29 13:26:23.3±0.7, **57.°04N**±0.°05×**163.°29E**±0.°05, **h10**^{km}, **n41**, σ**1^{s}.53**/44, **mb3.2**/5, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBG	Krutoberegovo	0.85	203	eP	Pg	13 26 38.6	-1.1
KBG				eS	Sg	13 26 49.8	-1.0
KBTR	Krutoberegovo	0.88	198	eP	Pg	13 26 39.0	-1.2
KBTR				eS	Sg	13 26 50.8	-0.8
SMKR	Semkarok	1.10	246	eP	Pb	13 26 43.7	-0.8
SMKR				eS	Sb	13 26 58.9	-0.1
SRKR	Sorokina	1.23	252	eP	Pn	13 26 45.3	-1.3
KLY	Klyuchi	1.63	244	eP	Pn	13 26 50.0	-2.0
KLY				eS	Sn	13 27 10.0	-3.1
CIRR	Tsirk	1.69	238	eP	Pn	13 26 53.3	+0.4
LGNR	Loginova	1.73	237	eP	Pn	13 26 54.0	+0.3
LGNR				eS	Sn	13 27 17.1	+1.2
BZGR	Bezymyannyi-Gr	1.82	234	eP	Pn	13 26 55.1	+0.4
BZGR				eS	Sb	13 27 19.5	+0.1
BZWR	Bezymyannyi-We	1.89	236	eP	Pn	13 26 55.9	+0.2
BZWR				eS	Sn	13 27 21.4	+1.7
BZP	Bezymyannyi-Pe	1.90	235	eP	Pn	13 26 56.3	+0.4
BZMR	Bezymyannaya	1.91	236	eP	Pn	13 26 56.6	+0.6
KIRR	Kirishev	1.97	237	eP	Pn	13 26 57.3	+0.5
KPT	Kopyto	2.02	239	eP	Pn	13 26 57.9	+0.5
SRDR	Sredinnyy	2.10	251	eP	Pn	13 26 58.7	+0.1
KMNR	Kamenistaya	2.13	234	eP	Pb	13 27 00.5	-1.5
KMNR				eS	Sb	13 27 28.1	-0.5
OSSR	Ossora	2.22	357	eP	Pn	13 27 00.4	+0.4
BKI	Bering	2.38	140	eP	Pn	13 27 01.2	-1.1
BKI				eS	Sn	13 27 29.3	-2.1
TUMD	Tumrok D	2.46	222	eP	Pn	13 27 04.8	+1.4
TUMR	Tumrok	2.49	226	eP	Pn	13 27 05.0	+1.0
ESO	Esso	2.78	248	eP	Pb	13 27 11.3	-1.8
NLC	Nalytchevo	4.49	212	eS	Sn	13 28 25.3	+1.7
GNL	Ganaly	4.54	225	eP	Pn	13 27 32.9	+0.9
KRX	Arik	4.55	218	eP	Pn	13 27 34.7	+2.4
KRER	Koryakskii	4.56	217	eP	Pn	13 27 35.2	+2.7
SMAR	Somma	4.58	216	eP	Pn	13 27 34.5	+1.8
AVH	Avacha	4.60	216	eP	Pn	13 27 37.0	+4.2
UGLR	Uglovaya	4.62	216	eP	Pn	13 27 35.7	+2.5
DALK	Dalny	4.79	215	eP	Pn	13 27 36.5	+1.0
PETK	Petropavlovsk-	5.09	222	Pn	Pn	13 27 40.6	+1.1
	0.3nm,0.3s,baz=69,slow=15,SNR=2.0						
PETK				Sn	Sn	13 28 42.2	+3.9
	baz=77,slow=28						
	1.8nm,0.7s						
TIXI	Tiksi	20.43	329	P	P	13 30 59.7	-0.5
	1.6nm,0.3s,baz=180,slow=20,SNR=4.3						
	1.6nm,0.3s						
ILAR	Eielson Array	24.80	51	P	P	13 31 46.9	+1.9
	0.3nm,0.6s,baz=258,slow=8.0,SNR=4.8						
	0.3nm,0.6s						
SONM	Songino Array	34.92	280	P	P	13 33 15.0	0.0
	0.1nm,0.3s,baz=69,slow=9.4,SNR=2.0						
	0.1nm,0.3s						
H11N2	WAKE ISLAND Hy	37.35	174	T	T	14 12 26.7	
	baz=358,slow=76,SNR=55						
H11N3	WAKE ISLAND Hy	37.37	174	T	T	14 12 28.4	
	baz=358,slow=76,SNR=32						
H11N1	WAKE ISLAND Hy	37.37	174	T	T	14 12 28.3	
	baz=358,slow=76,SNR=54						
H11S1	WAKE ISLAND Hy	38.56	175	T	T	14 13 55.9	
	baz=360						
H11S3	WAKE ISLAND Hy	38.57	175	T	T	14 13 59.4	
	baz=360						
H11S2	WAKE ISLAND Hy	38.58	175	T	T	14 13 60.0	
	baz=360						
MKAR	Makanchi Array	48.15	294	P	P	13 35 02.1	-1.1
	0.2nm,0.5s,baz=59,slow=7.2,SNR=4.9						
	0.2nm,0.5s						
PDAR	Pinedale Array	54.09	65	P	P	13 35 48.4	+0.3
	0.1nm,0.5s,baz=4.4,slow=4.7,SNR=1.5						
	0.1nm,0.5s						
TXAR	Lajitas Array	67.49	71	P	P	13 37 21.8	+2.4
	0.2nm,0.7s,baz=284,slow=3.6,SNR=2.6						
	0.2nm,0.7s						

KRNET ***29*** *13:30:00.6±0.1, 39.°70N×70.°17E, h19^{km}, mb2.9*
ISU ***29*** *13:30:00.8, 39.°64N×70.°29E, h28^{km}*
SOME ***29*** *13:30:03.8, 39.°95N×70.°13E, h5^{km}*
NNC ***29*** *13:30:08.5±8.6, 40.°04N×70.°11E, h0^{km}, mb2.7, mpv2.4, Error ellipse: s-maj=61.7km s-min=39.2km az=25.0*
ISC 29 13:30:00.8±1.3, **39.°62N**±0.°03×**70.°23E**±0.°03, **h3**^{km}±11^{km}, **n20**, σ**1^{s}.29**/31, **9C-13D**, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	Garm	0.62	174	⇓eP	Pb	13 30 14.2	-0.1
	baz=70						
GAR				⇓eS	Sb	13 30 24.1	+0.6
	baz=70						
BTK	Batken	0.63	46	⇓eP	Pg	13 30 12.2	-0.7
	baz=54						
BTK				⇓eS	Sg	13 30 20.9	-0.2
	baz=54						
BTK	Batken	0.63	46	P	Pg	13 30 12.2	-0.7
BTK				S	Sg	13 30 20.9	-0.2
CHMI	Chimion	1.19	56	P	Sn	13 30 39.2	-1.8
DRK	Karamyk	1.22	96	⇓iP	Pn	13 30 24.6	-0.4
	baz=99						
DRK				⇓iS	Sn	13 30 41.8	-0.4
	baz=99						
CHGR	Chuyangaron	1.27	221	⇓eP	Pg	13 30 24.7	-0.5
	baz=17						
CHGR				⇓iS	Sb	13 30 42.4	+0.2
	baz=17						
FRG	Fergana	1.41	57	P	Sn	13 30 47.7	+1.2
YBZ	Yangibazar	1.75	344	P	Sn	13 30 53.8	-1.2
CHMG	Chimgan	1.94	355	P	Sn	13 31 01.2	+1.5
KRSA	Karasay	1.98	285	P	Pb	13 30 38.1	+0.6
KRSA				S	Pn	13 30 33.8	-1.4
KRSA				S	Sg	13 31 06.1	+1.7
CHRV	Charvak	2.03	354	P	Sn	13 31 03.0	+1.1
TRKS	Terek-Say	2.03	20	⇑eP	Pn	13 30 35.5	-0.6
	baz=23						
TRKS				⇑eS	Sn	13 31 00.8	-1.2
	baz=23						
OHH	Osh	2.16	64	⇑eP	Pn	13 30 38.9	+1.2
	baz=67						
OHH				⇑eS	Sb	13 31 06.9	-0.8
	baz=67						
IUG	Iuzhnay	2.53	357	ePg	Pb	13 30 45.5	-1.4
	22nm,0.3s						
IUG				eLg	Lg	13 31 14.3	
	32nm,0.1s						
MNAS	Manas	3.34	30	⇑eP	Pn	13 30 54.8	+0.8
	baz=32						
MNAS				⇑eS	Sn	13 31 33.9	-0.4
	baz=32						
KK31	Karatay Array	3.49	3	⇓Pg	Pb	13 31 03.2	0.0
	0.5nm,0.3s,baz=186,slow=17,SNR=12						
KK31				⇑Lg	Lg	13 31 47.9	
	1.3nm,0.2s,baz=191,slow=28,SNR=9.9						
AML	Almayashu	3.63	45	⇓Pg	Pg	13 31 13.2	+2.9
	0.1nm,0.4s						
AML				⇑Lg	Lg	13 31 56.8	
	0.7nm,0.6s						
AML	Almayashu	3.63	45	⇓eP	Pn	13 30 59.4	+1.1
	baz=47						
AML				⇓eS	Sn	13 31 41.8	0.0
	baz=47						
MRKS	Merke	3.85	35	ePg	Pb	13 31 11.2	+1.7
	4.6nm,0.4s						
MRKS				eLg	Lg	13 31 59.1	
	8.6nm,0.4s						
TKM2	Tokmak 2	5.22	49	⇓Pg	Pg	13 31 37.8	-3.0
	0.8nm,0.5s						
TKM2				⇑Lg	Lg	13 32 45.8	
	1.3nm,0.6s						

DJA ***29*** *13:31:19.7±1.7, 2°S±10°×13°9E±°, h16^{km}±8^{km}, M4.1/4, MLv4.1/4*
IDC ***29*** *13:31:27.5±4.3, 2.°68S×139.°43E, h75^{km}±34^{km}, mb3.2/4, mbtmp3.5/5, Error ellipse: s-maj=67.1km s-min=24.8km az=89.0*
ISC 29 13:31:24.2±0.9, **2.°44S**±0.°10×**138.°95E**±0.°06, **h35**^{km}, **n8**, σ**3^{s}.24**/12, **mb3.5**/4, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.50	332	P	Pn	13 31 33.3	-1.5
SMPI				S	Sn	13 31 43.2	+1.0
GENI	Genyem	1.23	97	P	Pn	13 31 44.5	-0.4
GENI				S	Sn	13 32 04.5	+4.2
SRPI	Serui, Papua	2.76	282	P	Pn	13 32 06.5	+0.6
SRPI				S	Sn	13 32 42.0	+3.9
WRA	Warramunga Arr	17.97	194	P	P	13 35 29.3	-2.4
	0.9nm,0.8s,baz=19,slow=12,SNR=13						
WRA				ScP	ScP	13 43 32.1	-6.7
	0.5nm,0.8s,baz=32,slow=3.2,SNR=2.2						
ASAR	Alice Springs	21.66	193	P	P	13 36 11.1	-0.8
	2.4nm,0.8s,baz=19,slow=9.1,SNR=17						
	2.4nm,0.8s						
MKAR	Makanchi Array	69.72	322	P	P	13 42 32.5	+1.9
	0.4nm,0.6s,baz=108,slow=6.6,SNR=6.8						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	73.64	325	P	P	13 42 55.7	+1.6
	0.1nm,0.3s,baz=108,slow=5.9,SNR=3.1						
	0.1nm,0.3s						
ILAR	Eielson Array	85.49	24	P	P	13 43 57.7	-0.5
	0.1nm,0.6s,baz=270,slow=3.6,SNR=1.4						
	0.1nm,0.6s						

IDC 29 13:40:33.0±2.3, **2.°01N**×**127.°33E**, **h0**^{km}, **mb3.2**/3, **mbtmp3.2**/3, **Error ellipse: s-maj=187.1km s-min=26.9km az=67.0**, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.88	163	P	P	13 45 37.7	-0.7
	0.2nm,0.3s,baz=342,slow=11,SNR=6.3						
	0.2nm,0.3s						
ASAR	Alice Springs	26.32	166	P	P	13 46 11.3	+0.7
	0.3nm,0.8s,baz=340,slow=10.0,SNR=1.7						
	0.3nm,0.8s						
MKAR	Makanchi Array	59.30	326	P	P	13 50 36.6	-0.1
	0.2nm,0.4s,baz=114,slow=7.5,SNR=5.3						
	0.2nm,0.4s						

IDC ***29*** *13:48:18.6±2.3, 9.°66S×117.°86E, h0^{km}, mb3.3/2, mbtmp3.5/4, ML3.8/2, Error ellipse: s-maj=69.9km s-min=27.0km az=58.0*
DJA ***29*** *13:48:27.1±0.5, 9°S±6°×11°8E±°, h53^{km}±15^{km}, M4.5/14, mb4.4/7, mB5.4/2, MLv4.5/14, Mw(mB)4.8/2*
ISC 29 13:48:26.0±1.1, **9.°4S**±0.°1×**118.°09E**±0.°06, **h50**^{km}, **n17**, σ**1^{s}.18**/20, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	0.68	333	P	Pn	13 48 40.8	+1.3
IGBI	Denpasar	2.97	282	P	Pn	13 49 10.7	+0.1
IGBI				S	Sn	13 49 45.8	+0.7
JAGI	Jajag, Banyuwa	4.01	284	P	Pn	13 49 24.7	-0.2
JAGI				S	Sn	13 50 10.4	-0.2
BSSI	Bau Bau, Buton	4.05	36	P	Pn	13 49 26.2	+0.8
ABJI	Asem Bagus	4.15	293	P	Pn	13 49 27.6	+0.8
MMRI	Maumere	4.17	79	P	Pn	13 49 29.5	+2.3
BKSI	Bulukumba	4.56	26	P	Pn	13 49 33.4	+1.0
KAPI	Kappang	4.69	21	Pn	Pn	13 49 35.1	+0.8
	4.7nm,0.3s,baz=188,slow=9.3,SNR=3.9						
KAPI				Sn	Sn	13 50 25.7	-1.8
	35nm,0.3s,baz=98,slow=23,SNR=23						
	11nm,0.3s						
GMJI	Gumukmas	4.73	284	P	Pn	13 49 34.4	-0.4
BLJI	Banyuglugur	4.75	290	P	Pn	13 49 36.1	+1.0
SPSI	Sidrap Palu	5.69	17	P	Pn	13 49 49.1	+1.2
	18nm,0.5s,2µm0.1nm						
GRJI	Gresik	6.09	294	P	Pn	13 49 52.7	-0.8
	64nm,0.5s,0.4nm						
SOEI	Soe	6.10	93	P	Pn	13 49 55.3	+1.6
	34nm,0.8s,0.3nm						
PWJI	Pagerwojo	6.37	282	P	Pn	13 49 57.2	-0.1
	29nm,1.2s,0.3nm						
WRA	Warramunga Arr	18.85	125	P	P	13 52 40.2	-1.9
	0.2nm,0.3s,baz=302,slow=14,SNR=20						
WRA				S	Sn	13 55 57.2	-16
	0.2nm,0.4s,baz=296,slow=21,SNR=1.7						
	0.7nm,0.6s						
ASAR	Alice Springs	20.70	135	P	P	13 53 01.4	-0.9
	1.2nm,0.5s,baz=310,slow=10,SNR=25						
	1.2nm,0.5s						
MKAR	Makanchi Array	64.44	334	P	P	13 58 57.4	+0.2
	0.1nm,0.4s,baz=134,slow=6.2,SNR=1.7						
	0.1nm,0.4s						

ISK ***29*** *13:48:42.9, 37.°95N×27.°88E, h5^{km}, ML3.5/52*
DDA ***29*** *13:48:43.2±0.0, 38.°01N×27.°92E, h7^{km}±2^{km}, MW3.5*
ATH ***29*** *13:48:44.3, 37.°97N×27.°88E, h8^{km}±2^{km}, ML3.4/7, Error ellipse: s-maj=2.6km s-min=1.0km az=244.0*
THE ***29*** *13:48:44.6, 37.°98N×27.°95E, h31^{km}±18^{km}, ML3.5/4, Error ellipse: s-maj=18.1km s-min=0.5km az=251.0*
ISC 29 13:48:43.3±1.0, **37.°99N**±0.°02×**27.°93E**±0.°02, **h12**^{km}±9^{km}, **n100**, σ**1^{s}.10**/131, **10C-3D**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCAM	G?zelcaml?	0.62	243	Pg	Pg	13 48 54.8	-0.6
GCAM				Sg	Sg	13 49 03.2	-0.4
MLSB	Milas	0.70	190	Pg	Pg	13 48 56.6	-0.3
MANT	Manisa	0.70	44	SPECP		13 48 56.0	
MANT				P	Pg	13 48 56.7	-0.3
MANT				S	Sb	13 49 07.3	-0.1
MANT				*i* AML	AML	13 49 11.0	
	comp=N,3µm,0.4s						
GOMA	Golmarmara-Man	0.72	359	Pg	Pb	13 48 58.2	+0.4
GOMA				Sg	Sn	13 49 10.1	-0.1
DDIM	Aydin, Didim	0.76	226	SPECP		13 48 57.0	
DDIM				P	Pg	13 48 57.1	-0.9
DDIM				S	Sb	13 49 09.8	+1.1
DDIM				*i* AML	AML	13 49 14.0	
	comp=N,3µm,0.8s						
KULA	Kula-Manisa	0.78	47	P	Pb	13 48 58.2	-0.6
KULA	Kula-Manisa	0.78	47	Pg	Pn	13 48 59.8	-0.3
BLCB	Balcova	0.81	300	P	Pb	13 48 59.3	+0.1
BLCB				S	Sb	13 49 10.5	+0.4
BLCB	Balcova	0.81	300	Pg	Pb	13 48 59.3	+0.1
BLCB				Sg	Sb	13 49 10.2	+0.1
DGB	zmir	0.83	275	SPECP		13 48 59.0	
DGB				P	Pg	13 48 59.2	-0.2
DGB				S	Sb	13 49 11.6	+0.8
DGB				*i* AML	AML	13 49 14.0	
	comp=N,669nm,0.5s						
YER	Yerkesik	0.89	162	P	Pb	13 49 00.2	-0.5
YER				S	Sb	13 49 11.8	-0.8
YER	Yerkesik	0.89	162	Pg	Pb	13 49 00.4	-0.3
AKS	Akhisar	0.90	354	Pg	Pb	13 49 01.1	+0.3
SMG	Samos	0.91	253	P	Pg	13 49 00.2	-0.7
SMG				S	Sg	13 49 12.8	0.0
	4µm,0.3s						
SMG	Samos	0.91	253	P	Pg	13 49 00.2	-0.7
SMG				S	Sg	13 49 12.8	0.0
SMG				AML	AML	13 49 18.2	
	comp=N,9483µm,0.3s						
SMG				AML	AML	13 49 18.8	
	comp=E,5843µm,0.3s						
TAVA	DENIZLI_Tavas	0.94	123	SPECP		13 49 01.0	
TAVA				P	Pn	13 49 01.3	-1.0
TAVA				S	Sn	13 49 14.6	-1.0
TAVA				*i* AML	AML	13 49 16.0	
	comp=E,232nm,1.0s						
DNIZ	Denizli-Tavas-	0.95	112	SPECP		13 49 01.0	
DNIZ				P	Pn	13 49 01.9	-0.5
DNIZ				S	Sn	13 49 15.4	-0.5
DNIZ				*i* AML	AML	13 49 21.0	
	comp=E,1µm,0.6s						
BODT	Bodrum	1.05	208	Pg	Pn	13 49 03.7	-0.1
BODT				Sg	Sn	13 49 17.9	-0.4
URLA	Izmir	1.12	290	Pn	Pn	13 49 05.1	+0.3
URLA				Sn	Sn	13 49 20.8	+0.7
USAK	Uak-Merkez	1.12	49	SPECP	Pb	13 49 04.0	-0.6
USAK				P	Pb	13 49 04.0	-0.6
USAK				S	Sn	13 49 19.7	-0.5
USAK				*i* AML	AML	13 49 23.0	
	comp=E,373nm,0.9s						
ZEYE	Izmir, Urla-Ze	1.16	283	SPECP		13 49 05.0	
ZEYE				P	Pb	13 49 05.2	0.0
ZEYE				S	Sg	13 49 20.7	+0.1
ZEYE				*i* AML	AML	13 49 25.0	
	comp=E,1µm,0.4s						
ZEDA	zmir-Bergama	1.19	326	SPECP		13 49 05.0	
ZEDA				P	Pg	13 49 05.9	-0.2
ZEDA				S	Sg	13 49 21.8	+0.2
APMY	Acipayam-Deniz	1.20	115	Pn	Pg	13 49 06.5	+0.1
TURN	Turunc	1.23	168	Pn	Pg	13 49 07.2	+0.2
TURN				Sn	Sn	13 49 24.9	+2.1
DAT	Datca	1.29	193	Pn	Pg	13 49 08.2	+0.2
DALY	Dalyan (Mula)	1.30	154	Pn	Pg	13 49 08.4	+0.1
DKL	Dikili	1.35	324	Pn	Pg	13 49 10.2	+1.0
KARB	zmir-Karabur	1.38	300	SPECP		13 49 08.0	
KARB				P	Pn	13 49 08.3	0.0
KARB				S	Sg	13 49 28.0	+0.4
KARB				*i* AML	AML	13 49 31.0	
	comp=E,534nm,0.7s						
SMAA	Simav-Kutahya	1.38	36	Pn	Pg	13 49 11.1	+1.2
STEP	BALIKESIR_Sava	1.40	353	SPECP		13 49 08.0	
STEP				P	Pn	13 49 08.7	+0.1
STEP				S	Sg	13 49 28.5	+0.1
STEP				*i* AML	AML	13 49 30.0	
	comp=E,2µm,0.5s						
KOSK	Kos Island	1.45	212	Pn	Pg	13 49 11.4	+0.3
KOSK	Kos Island	1.45	212	P	Pb	13 49 09.6	-0.6
CAME	Cameli-Denizli	1.51	133	Pn	Pg	13 49 12.3	+0.1
NISR	Nisiros	1.52	205	P	Pn	13 49 10.0	-0.2
CHOS	Chios island	1.53	286	P	Pn	13 49 10.8	+0.3
CHOS				S	Sn	13 49 29.1	-1.3
	comp=E,835nm,0.5s						
CHOS	Chios island	1.53	286	Pn	Pg	13 49 12.6	-0.1
CHOS	Chios island	1.53	286	P	Pn	13 49 10.8	+0.3
CHOS				S	Sn	13 49 29.8	-0.6
CHOS				AML	AML	13 49 36.3	
	comp=E,1857µm,0.3s						
CHOS				AML	AML	13 49 40.9	
	comp=N,1392µm,0.3s						

GEDZ	Gediz	1.57	47	Pn	Pg	13 49 14.0	+0.6
FETY	Fethiye	1.63	145	Pn	Pg	13 49 13.7	-0.9
BALB	Balikesir	1.65	359	Pn	Pg	13 49 15.7	+0.7
BUHA	Balikesir, Bur	1.65	336	SPECP		13 49 12.0	
BUHA				P	Pn	13 49 12.3	+0.2
BUHA				S	Sb	13 49 35.0	+0.5
BUHA				i AML	AML	13 49 40.0	
	comp=N,476nm,0.9s						
BASM	Basmaki-Afyon	1.67	92	Pn	Pg	13 49 15.3	-0.1
DST	Dursunbey	1.70	18	Pn	Pg	13 49 15.5	-0.5
ARG	Arkhangelos	1.77	175	Pn	Pg	13 49 16.2	-1.1
ARG	Arkhangelos	1.77	175	P	Pb	13 49 14.8	-0.9
ARG				S	Sn	13 49 36.3	+0.1
ARG				AML	AML	13 49 47.9	
	comp=N,1397µm,1.2s						
ARG				AML	AML	13 49 50.0	
	comp=E,1066µm,0.4s						
PRK	Paraskevi	1.81	315	P	Pn	13 49 13.9	-0.3
PRK				S	Sn	13 49 34.4	-2.7
	comp=E,3µm,0.7s						
PRK	Paraskevi	1.81	315	P	Pn	13 49 14.9	+0.7
PRK				S	Sn	13 49 36.8	-0.3
PRK				AML	AML	13 49 45.7	
	comp=N,3341µm,0.7s						
PRK				AML	AML	13 49 46.9	
	comp=E,6830µm,0.7s						
TVSB	Tavsanli	1.89	39	Pn	Pg	13 49 19.1	-0.4
PSRA	Psara	1.95	287	P	Pn	13 49 16.9	+0.9
ELL	Elmali	2.00	128	Pn	Pb	13 49 19.9	+0.2
GPNR	Gulpinar-Canak	2.03	317	Pn	Pb	13 49 20.2	+0.1
SIGR	SIGRI	2.04	308	P	Pn	13 49 17.2	-0.1
SIGR				S	Sn	13 49 40.1	-2.6
	comp=E,422nm,0.4s						
SIGR	SIGRI	2.04	308	Pn	Pb	13 49 19.9	-0.3
SIGR	SIGRI	2.04	308	P	Pn	13 49 17.9	+0.6
SIGR				S	Sn	13 49 42.2	-0.5
SIGR				AML	AML	13 49 54.6	
	comp=N,940µm,0.4s						
SIGR				AML	AML	13 49 56.8	
	comp=E,752µm,0.4s						
ISP	Isparta	2.05	94	P	Pb	13 49 19.3	-1.3
APE	Apeiranthos	2.12	245	⇑P	Pg	13 49 23.0	-0.9
APE				⇑S	Sg	13 49 52.4	+1.1
APE	Apeiranthos	2.12	245	Pn	Pb	13 49 20.4	-1.2
APE	Apeiranthos	2.12	245	P	Pn	13 49 18.8	+0.3
CANM	Can-anakkale	2.14	342	Pn	Pb	13 49 21.3	-0.6
SHUT	Suhut-Afyon	2.14	74	Pn	Pb	13 49 22.3	+0.3
KORT	Korkueli	2.16	116	Pn	Pb	13 49 22.2	-0.2
AKAS	Kas	2.20	142	Pn	Pb	13 49 22.2	-0.9
EZN	Ezine	2.23	326	Pn	Pb	13 49 22.8	-0.6
KCTX	Karacabey (Bur	2.30	8	Pn	Pb	13 49 24.1	-0.6
EDC	Edincik	2.36	359	Pn	Pn	13 49 22.9	+1.1
BOZC	Bozcaada	2.36	322	Pn	Pb	13 49 24.2	-1.6
COMU	Canakkale	2.40	332	Pn	Pb	13 49 24.8	-1.5
SUTC	Sutluce-Ispart	2.48	101	Pn	Pb	13 49 27.6	-0.3
MDNY	Mudanya-Bursa	2.49	17	Pn	Pb	13 49 26.9	-1.0
KARP	Karpathos	2.51	195	Pn	Pn	13 49 25.6	+1.7
KARP	Karpathos	2.51	195	P	Pn	13 49 23.9	0.0
KARP				S	Sn	13 49 54.1	-0.4
KARP				AML	AML	13 50 02.3	
	comp=E,422µm,0.8s						
KARP				AML	AML	13 50 07.4	
	comp=N,430µm,0.6s						
SANT	Santorini	2.55	232	⇑P	Pb	13 49 28.8	-0.2
SANT				⇑S	Sg	13 50 07.7	+2.5
SANT	Santorini	2.55	232	Pn	Pn	13 49 26.4	+1.9
LPK	Lapseki	2.55	339	Pn	Pn	13 49 26.1	+1.7
GEMT	Gemlik	2.63	21	Pn	Pb	13 49 29.1	-1.3
GELI	Tayfur-Gelibol	2.66	335	Pn	Pb	13 49 28.6	-2.2
CAVI	Cavuskoy	2.67	33	Pn	Pb	13 49 29.5	-1.4
ARMT	Armutlu	2.67	15	Pn	Pb	13 49 29.6	-1.5
GADA	Gvkgeada	2.71	325	Pn	Pn	13 49 28.4	+1.8
RKY	Sarkoy-Tekirda	2.76	348	Pn	Pb	13 49 30.7	-1.9
CIFT	Cifteler, Eski	2.81	60	Pn	Pb	13 49 31.5	-1.9
YLV	Yalova	2.81	23	Pn	Pb	13 49 31.5	-1.9
ADVT	Abdulvahap	2.82	29	Pn	Pb	13 49 31.4	-2.1
LIA	Limnos Island	2.87	313	P	Pn	13 49 29.7	+0.9
LIA				S	Sn	13 50 02.5	-0.7
LIA				AML	AML	13 50 21.6	
	comp=N,1279µm,0.6s						
LIA				AML	AML	13 50 25.8	
	comp=E,907µm,0.6s						
ERIK	Erikli-Kesan	2.90	338	Pn	Pb	13 49 32.5	-2.4
SMTH	Samothraki Isl	3.10	324	P	Pn	13 49 32.8	+0.7
ZKR	Zakros	3.18	206	P	Pn	13 49 34.8	+1.7
ALN	Alexandroupoli	3.25	334	P	Pn	13 49 35.0	+0.9
IDI	Anoyia	3.64	223	⇓P	Pn	13 49 39.7	+0.3
RDO	Rodhopi	3.66	330	P	Pn	13 49 40.6	+1.0
VAY	Valandovo	5.31	310	i Pn	Pn	13 50 03.1	+0.8
STIP	Stip	5.77	312	i Pn	Pn	13 50 09.3	+0.6
VTS	Vitosha	5.86	324	⇓P	Pb	13 50 26.5	+1.1
TIRR	Tirgusor	6.48	3	⇑P	Pn	13 50 22.5	+4.2
DIKM	Dikmen	6.72	55	⇑P	Pb	13 50 45.3	+5.3
ISR	Istrita	7.20	352	⇑P	Pn	13 50 30.4	+2.0
MLR	Muntele Rosu	7.64	349	⇑P	Pn	13 50 35.6	+1.1
PLOR	Plostina	7.92	353	⇑P	Pn	13 50 39.5	+1.3
VRI	Vrincioaia	7.92	354	⇓P	Pn	13 50 40.5	+2.3
MDVR	Moldovita	8.24	327	⇑P	Pn	13 50 39.4	-3.2

VAO ***29*** *13:51:33.4±0.7, 25°.51S×69°.18W, h10^{km}, mb4.1*
NEIC ***29*** *13:52:15.9±1.5, 23°.40S±0°.07×66°.7W±0°.1, h205^{km}±12^{km}, mb4.4/7, Error ellipse: s-maj=17.2km s-min=10.5km az=100.0*
SJA ***29*** *13:52:16.0±0.8, 23°.28S×66°.77W, h219^{km}±5^{km}, ML4.0, MW3.9, Hypocentre not reviewed by the ISC*
IDC ***29*** *13:52:16.1±0.9, 23°.29S×66°.71W, h202^{km}±11^{km}, mb3.2/3, mbtmp4.0/9, Error ellipse: s-maj=16.2km s-min=12.7km az=117.0*
GUC ***29*** *13:52:17.9±0.7, 23°.20S×67°.18W, h233^{km}±9^{km}, ML4.6*
ISC 29 13:52:15.3±0.6, **23°.40S**±0°.04×**66°.72W**±0°.06, **h201^{km}, n71, σ1^{s}.44**/93, **mb4.2**/7, **8C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HJA	Humahuaca	1.22	81	eP		13 52 50.5	
HJA				eS		13 53 16.1	
YJA	Yavi	1.65	43	eP		13 52 54.0	
YJA				eS		13 53 21.3	
SLA	San Lorenzo	1.72	140	eP		13 52 55.4	
SLA				eS		13 53 24.4	
LVC	Limon Verde	2.17	291	P	Pn	13 52 58.2	+2.2
	120nm,0.4s,baz=160,slow=5.3,SNR=272						
LVC				S	S	13 53 28.0	+1.0
	122nm,0.4s,baz=285,slow=22,SNR=58						
LVC	Limon Verde	2.17	291		Pn	13 52 57.8	+1.8
LVC	Limon Verde	2.17	291	⇑eP	Pn	13 52 58.0	+1.9
LVC				eS	S	13 53 28.2	+1.2
LVC				IAML		13 53 29.9	
	comp=Z,1µm,0.5s						
LVC	Limon Verde	2.17	291	eP		13 52 58.2	
LVC				eS		13 53 29.0	
PB15	IPOC Station P	2.54	274		Pn	13 53 01.6	+1.7
PB15	IPOC Station P	2.54	274	⇑iP	Pn	13 53 01.9	+2.0
PB15				eS	S	13 53 35.8	+1.8
PB15	IPOC Station P	2.54	274	eP		13 53 01.9	
PB15				eS		13 53 35.1	
PB06	IPOC Station P	2.72	284	eP		13 53 03.7	
PB06				eS		13 53 38.6	
PB06				IAML		13 53 43.9	
	comp=Z,372nm,0.2s						
PB09	IPOC Station P	2.83	304		Pn	13 53 04.2	+1.0
PB09	IPOC Station P	2.83	304	eP	Pn	13 53 04.5	+1.4
PB09				eS	S	13 53 39.7	-0.1
PB09				IAML		13 53 42.9	
	comp=N,294nm,0.4s						
PB09	IPOC Station P	2.83	304	eP		13 53 04.4	
PB09				IAML		13 53 44.4	
	comp=Z,214nm,0.2s						
PB03	IPOC Station P	3.11	295		Pn	13 53 07.8	+1.3
PB03	IPOC Station P	3.11	295	⇑iP	Pn	13 53 07.7	+1.3
PB03				eS	S	13 53 45.2	-0.5
PB03				IAML		13 53 46.4	
	comp=E,1µm,0.2s						
GO02	Mina Guanaco	3.16	236		Pn	13 53 09.0	+1.9
GO02	Mina Guanaco	3.16	236	⇑iP	Pn	13 53 09.2	+2.0
GO02				eS	S	13 53 49.2	+2.2
GO02	Mina Guanaco	3.16	236	eP		13 53 09.2	
GO02				eS		13 53 49.6	
PB04	IPOC Station P	3.34	288	Pn	Pn	13 53 09.6	+0.4
PB04	IPOC Station P	3.34	288	⇑iP	Pn	13 53 10.3	+1.1
PB04				eS	S	13 53 50.3	-0.4
PB04	IPOC Station P	3.34	288	eP		13 53 10.4	
PB04				eS		13 53 50.6	
PB07	IPOC Station P	3.37	299		Pn	13 53 10.1	+0.5
PB07	IPOC Station P	3.37	299	⇑eP	Pn	13 53 10.4	+0.8
PB07				eS	S	13 53 50.1	-1.3
PB07				IAML		13 53 51.1	
	comp=N,2µm,0.4s						
PB07				IAML		13 53 52.4	
	comp=E,2µm,0.4s						
PB07	IPOC Station P	3.37	299	eP		13 53 10.7	
PB07				eS		13 53 50.5	
PB01	IPOC Station P	3.48	312		Pn	13 53 11.7	+0.9
PB01	IPOC Station P	3.48	312	⇑iP	Pn	13 53 11.5	+0.7
PB01				eS	S	13 53 53.8	+0.2
PB01	IPOC Station P	3.48	312	eP		13 53 11.7	
PB01				eS		13 53 52.9	
PB01				IAML		13 53 55.3	
	comp=Z,327nm,0.1s						
PB10	IPOC Station P	3.53	267		Pn	13 53 12.2	+0.9
PB10	IPOC Station P	3.53	267	⇑iP	Pn	13 53 12.6	+1.3
PB10				eS	S	13 53 53.9	-0.6
PB10	IPOC Station P	3.53	267	eP		13 53 12.3	
PB10				IAML		13 54 00.1	
	comp=Z,135nm,0.4s						
PB14	IPOC Station P	3.59	249		Pn	13 53 13.4	+1.1
PB14	IPOC Station P	3.59	249	eP	Pn	13 53 13.6	+1.2
PB14				eS	S	13 53 56.4	0.0
PB02	IPOC Station P	3.60	304		Pn	13 53 13.0	+0.8
PB02	IPOC Station P	3.60	304	eP	Pn	13 53 13.1	+0.8
PB02				eS	S	13 53 54.6	-1.7
PB02	IPOC Station P	3.60	304	eP		13 53 12.9	
PB02				eS		13 53 55.2	
PB08	IPOC Station P	3.95	325		Pn	13 53 18.8	+1.8
PB08	IPOC Station P	3.95	325	eP	Pn	13 53 18.8	+1.8
PB08				eS	S	13 54 05.4	+0.7
TA01	Diego Aracena	4.28	311		Pn	13 53 21.1	+0.6
TA01	Diego Aracena	4.28	311	eP	Pn	13 53 21.2	+0.7
TA01				eS	S	13 54 08.6	-2.7
GO01	Chusmiza	4.37	328		Pn	13 53 23.8	+1.5
GO01	Chusmiza	4.37	328	eP	Pn	13 53 23.6	+1.3
GO01				eS	S	13 54 14.6	+0.4
AC01	Pan de Azucar	4.47	231		Pn	13 53 23.2	+0.3
AC01	Pan de Azucar	4.47	231	i P	Pn	13 53 23.2	+0.3
AC01				i S	S	13 54 14.4	-1.3
PB11	IPOC Station P	4.54	322	Pn	Pn	13 53 24.1	+0.1
PB11	IPOC Station P	4.54	322	eP	Pn	13 53 24.4	+0.4
PB11				eS	S	13 54 15.3	-2.3
MNMC	Minye Minye	5.02	327		Pn	13 53 30.8	+0.4
MNMC	Minye Minye	5.02	327	eP	Pn	13 53 30.6	+0.3
MNMC				eS	S	13 54 27.7	-1.3
AC06	Mina Casimiro	5.14	219		Pn	13 53 31.3	-0.1
GO03	Copiap	5.25	217		Pn	13 53 33.0	0.0
PB16	IPOC Station P	5.67	332		Pn	13 53 39.2	+0.3
PB16	IPOC Station P	5.67	332	eP	Pn	13 53 39.7	+0.8
PB16				eS	S	13 54 43.1	-1.4
PB12	IPOC Station P	5.83	324		Pn	13 53 39.2	-1.3
AC04	Llanos de Chal	6.19	218	Pn	Pn	13 53 43.8	-1.2
AC04	Llanos de Chal	6.19	218	eP	Pn	13 53 44.0	-1.0
AC04				eS	S	13 54 53.2	-2.6
AC05	El Transito	6.29	210	Pn	Pn	13 53 47.0	+0.6
LCO	Las Campanas	6.64	212	Pn	Pn	13 53 50.0	-1.0
LPAZ	La Paz	7.20	349	P	Pn	13 53 59.5	+0.7
	comp=Z,2.6nm,0.3s,baz=154,slow=7.0,SNR=22						
LPAZ				S	S	13 55 17.9	-2.8
	comp=Z,1.7nm,0.4s,baz=141,slow=19,SNR=4.4						
LPAZ	La Paz	7.20	349	Pn	Pn	13 53 58.7	-0.1
CO01	Juntas del Tor	7.22	204		Pn	13 53 59.5	+1.0
GO04	Tololo Observa	7.67	208	Pn	Pn	13 54 03.9	-0.6
CFA	Coronel Fontan	8.29	189	P	Pn	13 54 13.3	+1.0
	comp=Z,3.1nm,0.4s,baz=9.0,slow=20,SNR=7.2						
CFA				S	S	13 55 40.2	-5.4
	comp=Z,9.7nm,0.2s,baz=50,slow=17,SNR=15						
SIV	San Ignacio	9.08	37	P	Pn	13 54 21.9	-0.8
	comp=Z,6.3nm,0.5s,baz=212,slow=12,SNR=27						
PTLB	Pontes e Lacer	10.66	43	Pn	Pn	13 54 42.5	-0.5
MT13	San Alfonso	10.77	196	Pn	Pn	13 54 47.2	+2.7
ETMB	Extrema	13.51	2	eP	Pn	13 55 16.7	-2.6
TRQA	Tornquist	15.16	166	P	Pn	13 55 38.9	-0.5
PLCA	Paso Flores	17.58	190	P	Pn	13 56 08.3	-0.1
	comp=Z,1.1nm,0.5s,baz=11,slow=10,SNR=16						
LL04	Puerto Octay	18.11	194	P	P	13 56 12.6	+0.6
LL04				IAmb	IAmb	13 56 14.2	
	comp=Z,9.8nm,0.6s						
BDFB	Brasilia	19.23	70	P	P	13 56 25.5	+0.9
	comp=Z,16nm,0.7s,baz=249,slow=9.8,SNR=19						
BDFB	Brasilia	19.23	70	P	P	13 56 25.2	+0.6
VAS01	Vassouras-RJ	21.48	92	eP	P	13 56 44.0	-4.3
AY01	Puyuhuapi	21.53	192	P	P	13 56 48.6	+0.1
AY01				IAmb	IAmb	13 56 49.9	
	comp=Z,7.4nm,0.6s						
MALB	Monte Alegre	24.58	31	eP	P	13 57 18.8	+1.8
GUA01	Guaratinga, BA	26.15	80	eP	P	13 57 31.0	-0.2
BOAV	Boa Vista	26.34	14	P	P	13 57 32.4	-0.4
BOAV				IAmb	IAmb	13 57 34.8	
	comp=Z,9.1nm,1.4s						
SNAA	Sanae	59.83	161	P	P	14 01 59.4	+0.2
SNAA				IAmb	IAmb	14 02 17.9	
	comp=Z,16nm,1.5s						
TXAR	Lajitas Array	63.34	324	P	P	14 02 23.0	-0.3
	comp=Z,0.1nm,0.6s,baz=130,slow=8.4,SNR=2.0 comp=Z,0.1nm,0.6s						
QSPA	South Pole Qui	66.80	180	P	P	14 02 47.1	+2.0
	comp=Z,2.8nm,0.5s,baz=197,slow=0.8,SNR=6.7 comp=Z,2.8nm,0.5s						
QSPA	South Pole Qui	66.80	180	P	P	14 02 46.4	+1.3
QSPA				IAmb	IAmb	14 03 05.6	
	comp=Z,7.1nm,1.3s						
TORD	Torodi Ar. Bea	76.11	69	P	P	14 03 40.8	-0.5
	comp=Z,1.3nm,0.4s,baz=255,slow=6.3,SNR=7.5						
NVAR	Mina Array Bea	78.23	321	P	P	14 03 54.3	+1.3
	comp=Z,0.1nm,0.3s,baz=101,slow=3.8,SNR=2.3 comp=Z,0.1nm,0.3s						
WRA	Warramunga Arr	132.28	207	PKP	PKPdf	14 11 06.5	+0.4
	comp=Z,0.3nm,0.5s,baz=152,slow=1.9,SNR=5.8						
MKAR	Makanchi Array	145.90	39	PKPbc	PKPbc	14 11 30.8	-0.2
	comp=Z,1.1nm,0.7s,baz=325,slow=1.9,SNR=10						

IDC ***29*** *13:52:11.9±1.1, 2°.28S×128°.03E, h0^{km}, mb3.6/4, mbtmp3.8/7, ML3.9/2, MS3.5/4, Error ellipse: s-maj=25.8km s-min=21.5km az=57.0*
DJA ***29*** *13:52:15.0±0.6, 2°S±2°×12°8E±°, h15^{km}±6^{km}, M4.1/17, mb4.4/5, mB5.7/1, MLv4.0/17, Mw(mB)5.2/1*
ISC 29 13:52:16.6±0.8, **2°.21S**±0°.04×**127°.93E**±0°.05, **h35^{km}, n19, σ2^{s}.59**/24, **mb3.7**/4, **Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	Namlea	1.31	219	P	Pn	13 52 38.4	-0.1
NLAI				S	Sn	13 52 56.6	+1.8
AAI	Ambon	1.49	170	P	Pn	13 52 42.4	+1.5
AAI				S	Sn	13 53 01.9	+2.8
MSAI	Masohi	1.50	138	P	Pn	13 52 42.8	+1.7
MSAI				S	Sn	13 53 04.0	+4.5
LBMI	Labuha	1.62	345	P	Pn	13 52 43.4	+0.6
LBMI				S	Sn	13 53 04.3	+1.8
SANI	Sanana	1.95	275	P	Pn	13 52 45.4	-1.8
TNTI	Ternate	3.02	349	P	Pn	13 53 01.8	-0.2
BNDI	Bandanaira	3.02	139	P	Pn	13 53 03.3	+1.2
SIJI	Sorong	3.59	68	Pn	Pn	13 53 09.6	-0.4
	18nm,0.3s,baz=65,slow=20,SNR=69						
SIJI				Sn	Sn	13 53 49.9	-1.3
	23nm,0.3s,baz=54,slow=24,SNR=20						
SIJI				LR	LR	13 55 07.5	
	comp=Z,302nm,21.4s,baz=260,slow=50 42nm,0.3s						
FAKI	Fak Fak	4.37	99	P	Pn	13 53 20.5	-0.1
LUWI	Luwuk	5.29	283	P	Pn	13 53 33.3	+0.1
	48nm,0.9s,6µm0.3nm						
RKPI	Ransiki, Papua	6.28	84	P	Pn	13 53 47.3	+0.4
	30nm,0.9s,0.3nm						
KAPI	Kappang	8.62	251	Pn	Pn	13 54 19.3	+0.3
	14nm,0.5s,baz=22,slow=17,SNR=1.1						
KAPI				LR	LR	13 57 27.2	
	comp=Z,142nm,20.2s,baz=85,slow=36						
WRA	Warramunga Arr	18.70	161	P	P	13 56 30.5	-1.7
	0.3nm,0.3s,baz=340,slow=12,SNR=7.8						
WRA				S	Sn	13 59 54.5	-6.6
	0.5nm,0.7s,baz=335,slow=22,SNR=2.1 0.9nm,0.5s						
ASAR	Alice Springs	22.10	165	P	P	13 57 07.8	-1.2
	2.2nm,0.4s,baz=345,slow=12,SNR=23						
ASAR				S	S	14 01 04.5	-6.3
	0.7nm,0.9s,baz=343,slow=21,SNR=4.5 2.2nm,0.4s						
STKA	Stephens Creek	32.20	158	LR	LR	14 11 47.0	
	comp=Z,299nm,19.1s,baz=197,slow=37						
CMAR	Chiang Mai Arr	35.15	307	P	P	13 59 09.7	+2.3
	0.3nm,0.7s,baz=124,slow=8.9,SNR=1.8 0.3nm,0.7s						
SONM	Songino Array	53.28	342	P	P	14 01 33.1	+1.0
	0.5nm,0.6s,baz=155,slow=7.9,SNR=2.8 0.5nm,0.6s						
MKAR	Makanchi Array	63.12	327	P	P	14 02 41.8	+0.9
	0.5nm,0.6s,baz=122,slow=7.8,SNR=7.7 0.5nm,0.6s						
WSAR	Wadi Sarin	71.95	295	LR	LR	14 38 32.5	
	comp=Z,36nm,18.9s,baz=206,slow=39						

IDC 29 13:58:01.7±2.9, **4°.09S**×**136°.24E, h0^{km}, mb3.2**/1, **mbtmp3.4**/4, **ML3.3**/3, **Error ellipse: s-maj=78.5km s-min=27.2km az=66.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.91	303	Pn	Pn	13 59 31.7	+1.2
	1.5nm,0.3s,baz=242,slow=23,SNR=9.3						
SIJI				Sn	Sn	14 00 37.4	-1.7
	0.5nm,0.3s,baz=343,slow=19,SNR=2.2 3.3nm,0.3s						
WRA	Warramunga Arr	15.87	187	Pn	Pn	14 01 46.2	-0.4
	0.1nm,0.3s,baz=11,slow=12,SNR=1.5						
WRA				Sn	Sn	14 04 31.7	-12
	0.1nm,0.3s,baz=4.2,slow=23,SNR=1.8 0.3nm,0.7s						
ASAR	Alice Springs	19.60	186	P	P	14 02 31.8	+0.1
	0.3nm,0.3s,baz=9.3,slow=11,SNR=22 0.8nm,0.5s						
MKAR	Makanchi Array	69.40	324	P	P	14 09 11.5	-0.1
	0.1nm,0.4s,baz=126,slow=6.9,SNR=2.4 0.1nm,0.4s						

IDC 29 14:14:06.7±5.0, **19°.53N**×**143°.95E, h0^{km}, mb3.7**/5, **mbtmp3.7**/5, **Error ellipse: s-maj=140.9km s-min=48.2km az=8.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	22.68	325	P	P	14 19 09.9	+0.1
	0.7nm,0.7s,baz=142,slow=8.2,SNR=3.5 0.7nm,0.7s						
MKAR	Makanchi Array	56.70	314	P	P	14 23 52.6	+0.6
	0.3nm,0.5s,baz=99,slow=7.7,SNR=4.2 0.3nm,0.5s						
KURBB	Kurchatov Arra	59.60	318	P	P	14 24 11.6	-0.7
	1.0nm,0.6s,baz=92,slow=7.5,SNR=9.8 1.0nm,0.6s						
BVAR	Borovoye Array	64.78	320	P	P	14 24 47.2	+0.1
	1.2nm,0.4s,baz=97,slow=7.1,SNR=9.6 1.2nm,0.4s						
YKA	Yellowknife Ar	78.03	28	P	P	14 26 07.0	+0.1
	0.3nm,0.4s,baz=290,slow=5.5,SNR=5.0 0.3nm,0.4s						

SOME ***29*** *14:16:11.6, 40°.12N×71°.37E, h5^{km}*
KRNET ***29*** *14:16:12.7±0.1, 40°.11N×71°.09E, h30^{km}, mb2.5*
NNC ***29*** *14:16:14.6±14.0, 39°.82N×71°.80E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=118.2km s-min=68.8km az=179.0*
ISU ***29*** *14:16:15.2, 40°.05N×71°.29E, h15^{km}*
ISC 29 14:16:12.8±1.1, **40°.04N**±0°.03×**71°.22E**±0°.03, **h10^{km}**±8^{km}, **n24, σ1^{s}.53**/39, **19C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	Batken	0.31	273	⇑eP	Pg	14 16 19.3	+0.2
	baz=55						
BTK				⇑eS	Sg	14 16 24.0	+0.7
	baz=55						
CHMI	Chimion	0.32	45	P	Pg	14 16 18.8	-0.4
CHMI				S	Sg	14 16 23.5	0.0
FRG	Fergana	0.54	52	P	Pg	14 16 21.9	-1.4
FRG				S	Sg	14 16 29.5	-1.0
DRK	Karamyk	0.72	142	⇑iP	Pb	14 16 28.3	+0.7
	baz=39						
DRK				⇑iS	Sn	14 16 40.5	-0.1
	baz=39						
ANR	Andizhan	1.12	50	P	Sn	14 16 50.6	+0.4
KSNS	Kasansay	1.14	11	P	Sn	14 16 52.9	+2.3
GAR	Garm	1.26	214	⇑eP	Pn	14 16 35.8	-0.8
	baz=8.0						
GAR				⇑eS	Sb	14 16 52.6	-0.4
	baz=8.0						
OHH	Osh	1.29	68	⇑eP	Pb	14 16 37.2	0.0
	baz=72						
OHH				⇑eS	Sg	14 16 55.3	+1.1
	baz=72						
TRKS	Terek-Say	1.49	358	⇑eP	Pn	14 16 37.2	-2.6
	baz=3.0						
TRKS				⇑eS	Sn	14 16 55.2	-4.2
	baz=3.0						
CHMG	Chimgan	1.76	329	P	Pb	14 16 44.5	-0.9
CHMG				S	Sb	14 17 08.5	+0.8
ARK	Arkit	1.84	17	⇑eP	Pn	14 16 44.0	-0.6
	baz=21						
ARK				⇑eS	Sn	14 17 06.7	-1.4
	baz=21						
CHRV	Charvak	1.86	329	P	Sn	14 17 12.1	+3.5
KUMR	Kumaryk	1.91	309	P	Sb	14 17 13.7	+1.9
CHGR	Chuyangaron	2.12	230	⇓eP	Pn	14 16 47.7	-0.7
	baz=27						
CHGR				⇓eS	Sn	14 17 13.4	-1.4
	baz=27						
IUG	Iuzhnay	2.29	337	ePg	Pb	14 16 54.0	-0.3
	8.0nm,0.1s						
IUG				eLg	Lg	14 17 24.8	
	77nm,0.2s						
MNAS	Manas	2.62	21	⇑eP	Pn	14 16 55.0	-0.4
	baz=24						
MNAS				⇑eS	Sn	14 17 25.5	-2.0
	baz=24						
AML	Almayashu	2.80	41	⇓Pn	Pn	14 16 57.9	-0.2
	0.2nm,0.5s						
AML				⇓Sn	Sb	14 17 38.8	+1.1
	1.6nm,0.7s						
AML	Almayashu	2.80	41	⇓eP	Pn	14 16 58.1	0.0
	baz=43						
AML				⇓eS	Sn	14 17 31.2	-0.9
	baz=43						
ARLS	Aral	2.97	51	⇑iP	Pn	14 17 00.4	+0.2
	baz=54						
ARLS				⇑iS	Sn	14 17 35.3	-0.6
	baz=54						
MRKS	Merke	3.09	29	ePg	Pb	14 17 06.6	-1.4
	3.0nm,0.3s						
MRKS				eLg	Lg	14 17 47.3	
	12nm,0.3s						
KK31	Karatay Array	3.10	350	Pn	Pb	14 17 08.6	+0.5
	1.9nm,0.5s,baz=162,slow=17,SNR=15						
KK31				⇑Sn	Sb	14 17 49.1	+3.1
	0.8nm,0.2s,baz=152,slow=29						
TKM2	Tokmak 2	4.36	47	⇑Pn	Pn	14 17 19.6	+0.2
	1.5nm,0.3s						
TKM2				⇑Lg	Lg	14 18 26.9	
	3.0nm,0.7s						
KST	Kastek	4.65	48	ePg	Pb	14 17 35.3	+0.7
	1.0nm,0.3s						
KST				eLg	Lg	14 18 35.3	
	3.7nm,0.5s						
KTBS	Karatobe	5.48	46	ePg	Pb	14 17 50.7	+2.1
	0.2nm,0.2s						
KTBS				eLg	Lg	14 19 01.5	
	4.2nm,0.5s						

IDC 29 14:16:54.4±3.1, **5°.67S**×**152°.16E, h0^{km}, mb2.9**/2, **mbtmp3.2**/3, **ML1.5**/1, **Error ellipse: s-maj=134.8km s-min=41.9km az=131.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.19	233	Pn	Pn	14 18 28.6	+1.4
	0.7nm,0.3s,baz=198,slow=22,SNR=2.2						
PMG				Sn	Sn	14 19 37.9	-0.9
	0.7nm,0.3s,baz=227,slow=18,SNR=1.9 4.4nm,0.4s						
WRA	Warramunga Arr	22.39	229	P	P	14 21 55.6	+0.9
	0.3nm,0.9s,baz=55,slow=11,SNR=1.6						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	0.3nm,0.9s						
ASAR	**Alice Springs**	**25.08**	**223**	P	P	14 22 20.2	-0.8
	0.2nm,0.6s,baz=55,slow=9.4,SNR=5.0						
	0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**149.96**	**286**	PKPbc	PKPbc	14 36 47.5	-0.5
	0.3nm,0.7s,baz=79,slow=2.9,SNR=2.1						

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*IDC **29** 14:33:35.8±2.1,18°.31N×106°.54W,h0^{km},mb3.5/6,mbtmp3.5/8,ML3.4/2,MS4.0/32,Error ellipse: s-maj=62.1km s-min=23.3km az=53.0*

*MEX **29** 14:33:38.9±0.7,18°.58N×106°.26W,h15^{km},MD4.4*

*NEIC **29** 14:33:39.2±2.6,18°.37N±0°.10×106°.08W±0°.07,h10^{km}±2^{km},mb4.3/21,Md4.4/25(MEX),Error ellipse: s-maj=19.0km s-min=7.0km az=210.0*

*GCMT **29** 14:33:41.2±0.6,18°.67N±0°.02×106°.28W±0°.03,h21^{km}±1^{km},MW4.8/92,Moment Tensor Solution. s13,c13; s92,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.42±.12; M$_{\theta\theta}$-0.91±.10; M$_{\phi\phi}$1.33±.12; M$_{r\theta}$0.41±.19; M$_{\theta\phi}$-1.78±.09; M$_{\phi r}$0.86±.19; Best double couple: M$_0$2.33100×10^{16} NP1:ϕ_s194.00000°,δ82.00000°,λ-26.00000°. NP2: ϕ_s288.00000°,δ65.00000°,λ-171.00000°. Principal axes: T 2.4260, Plg11.0000°, Azm243.0000°; N -0.1890, Plg63.0000°, Azm357.0000°; P -2.2360, Plg24.0000°, Azm148.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 14:33:39.6±1.0,18°.54N±0°.07×106°.06W±0°.07,h10^{km},n102,σ1^{s}.87/85,mb3.9/9,MS3.9/30,Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	**Chamela**	**1.35**	**45**	*e*P	Pn	14 34 01.1	-3.5
CJM				*e*S	**Sn**	**14 34 18.9**	**-3.7**
CIHU	**Emiliano Zapat**	**1.44**	**60**	*e*P	**Pn**	**14 34 02.6**	**-3.2**
CIHU				*e*S	**Sn**	**14 34 21.8**	**-3.1**
CDAR	**Ciudad de Arme**	**1.98**	**78**	*i* P	**Pn**	**14 34 10.6**	**-2.6**
CDAR				*e*S	**Sn**	**14 34 36.0**	**-2.1**
R15V		**2.06**	**72**		**Pn**	**14 34 12.2**	**-2.2**
R15V		**2.06**	**72**	*e*P	**Pn**	**14 34 12.2**	**-2.2**
R15V				*e*S	**Sn**	**14 34 38.3**	**-1.9**
COIG	**Colima**	**2.33**	**74**	*i* P	**Pn**	**14 34 16.3**	**-1.9**
COIG				*i* S	**Sn**	**14 34 46.5**	**-0.4**
MNGA	**Volcan de Coli**	**2.48**	**68**	*e*P	**Pn**	**14 34 19.5**	**-0.9**
MNGA				*e*S	**Sn**	**14 34 50.2**	**-0.7**
SOMAC	**Volcano de Col**	**2.50**	**67**	*e*P	**Pn**	**14 34 19.7**	**-1.0**
SOMAC				*e*S	**Sn**	**14 34 50.6**	**-0.8**
EZ5V		**2.50**	**68**		**Pn**	**14 34 19.6**	**-1.1**
EZ5V		**2.50**	**68**	*e*P	**Pn**	**14 34 19.6**	**-1.1**
EZ5V				*e*S	**Sn**	**14 34 50.6**	**-0.8**
INCO	**Volcan de Coli**	**2.52**	**67**	*e*P	**Pn**	**14 34 19.6**	**-1.5**
INCO				*e*S	**Sn**	**14 34 50.4**	**-1.6**
JUBC	**Volcan de Coli**	**2.54**	**67**	*e*P	**Pn**	**14 34 19.9**	**-1.3**
JUBC				*e*S	**Sn**	**14 34 51.5**	**-1.0**
MMIG	**Aquila**	**2.59**	**95**		**Pn**	**14 34 20.4**	**-1.2**
MMIG					**Sn**	**14 34 50.7**	**-2.4**
MMIG	**Aquila**	**2.59**	**95**	*e*P	**Pn**	**14 34 20.4**	**-1.2**
MMIG				*e*S	**Sn**	**14 34 50.7**	**-2.4**
ANIG	**Ahuacatlan**	**2.89**	**30**		**Pn**	**14 34 24.0**	**-1.8**
ANIG	**Ahuacatlan**	**2.89**	**30**	*e*P	**Pn**	**14 34 23.8**	**-2.0**
ANIG				*e*S	**Sn**	**14 34 58.8**	**-1.9**
ZIIG	**Zihuatanejo**	**4.47**	**101**	*e*P	**Pn**	**14 34 47.2**	**-0.2**
ZIIG				*e*S	**Sn**	**14 35 38.3**	**-1.2**
H06E1	**SOCORRO T-PHAS**	**4.62**	**274**	T	T	14 39 09.3	
	SNR=81						
MAIG	**Mazatlaan**	**4.63**	**356**	*e*P	Pn	14 34 45.0	-4.7
MAIG				*e*S	Sn	14 35 36.2	-7.4
H06S1	**SOCORRO T**	**4.65**	**273**	T	T	14 39 10.2	
	SNR=27						
MOIG	**Morelia**	**4.74**	**75**		**Pn**	**14 34 53.3**	**+1.8**
AAIG	**Aguscalientes**	**4.85**	**45**	*e*P	**Pn**	**14 34 53.3**	**+0.3**
AAIG				*e*S	**Sn**	**14 35 49.4**	**+0.1**
ZAIG	**Zacatecas**	**5.33**	**37**		**Pn**	**14 35 02.1**	**+2.6**
ARIG	**Puente Sto Nin**	**5.43**	**92**	*e*P	**Pn**	**14 35 01.4**	**+0.7**
ARIG				*e*S	**Sn**	**14 36 05.0**	**+1.7**
JRQG	**Juriquilla Cam**	**5.71**	**67**	*e*	**Sb**	**14 36 28.4**	**+0.3**
MEIG	**Mezcala**	**6.15**	**95**	*e*P	**Pn**	**14 35 11.7**	**+1.0**
MEIG				*e*S	**Sn**	**14 36 19.4**	**-1.8**
PLIG	**Platanillo**	**6.22**	**90**	*e*P	**Pn**	**14 35 13.5**	**+1.9**
PLIG				*e*S	**Sn**	**14 36 21.3**	**-1.7**
LPIG	**La Paz**	**6.80**	**325**	LR	LR	14 37 16.9	
	comp=Z,3μm,18.6s,baz=171,slow=33						
TLIG	**Tlapa**	**7.19**	**97**		**Pn**	**14 35 24.4**	**-0.7**
HPIG		**8.36**	**2**	Pn	**Pn**	**14 35 42.9**	**+1.7**
CMIG	**Matias Romero**	**10.74**	**96**	Pn	**Pn**	**14 36 18.0**	**+4.4**
	0.6nm,0.3s,baz=292,slow=7.8,SNR=6.1						
CMIG				LR	LR	14 39 54.8	
	comp=Z,438nm,19.6s,baz=298,slow=34						
	2.0nm,0.4s						
TX31	**Lajitas Ar. Si**	**10.96**	**11**		**Pn**	**14 36 18.5**	**+1.8**
TX32	**Lajitas Array**	**10.96**	**11**		**Pn**	**14 36 18.0**	**+1.4**
TXAR	**Lajitas Array**	**10.96**	**11**	Pn	**Pn**	**14 36 19.9**	**+3.2**
	baz=202,slow=14,SNR=5.7						
TXAR				LR	LR	14 40 29.0	
	comp=Z,690nm,19.0s,baz=190,slow=37						
	0.6nm,0.8s						
TXAR	**Lajitas Array**	**10.96**	**11**	Pn	**Pn**	**14 36 18.5**	**+1.8**
HSIG		**11.35**	**338**	Pn	**Pn**	**14 36 22.5**	**+0.6**
833A	**Chaparral WMA,**	**11.49**	**31**	Pn	**Pn**	**14 36 28.0**	**+4.1**
425A	**Indio Mountain**	**12.23**	**4**	Pn	**Pn**	**14 36 37.0**	**+2.9**
319A	**Douglas**	**13.11**	**348**	Pn	**Pn**	**14 36 47.3**	**+1.2**
OZNA	**Ozona**	**13.11**	**19**	Pn	**Pn**	**14 36 48.4**	**+2.3**
JCT	**Junction City**	**13.17**	**24**	Pn	**Pn**	**14 36 49.0**	**+2.1**
CCIG	**Comitan**	**13.48**	**97**	Pn	**Pn**	**14 36 52.6**	**+1.5**
GDL2	**Guadalupe Moun**	**13.69**	**6**	Pn	**Pn**	**14 36 57.4**	**+3.4**
CLNB	**Carlsbad**	**13.80**	**8**	Pn	**Pn**	**14 36 56.0**	**+0.5**
121A	**Cookes Peak, D**	**14.02**	**354**	Pn	**Pn**	**14 37 00.7**	**+2.2**
TUC	**Tucson**	**14.36**	**344**	Pn	**Pn**	**14 37 03.3**	**+0.3**
POST	**Post**	**15.03**	**15**		**Pn**	**14 37 14.6**	**+2.4**
POST				IAmb	IAmb	14 37 53.5	
	comp=Z,23nm,1.2s						
WHTX	**Lake Whitney,**	**15.48**	**28**	Pn	**Pn**	**14 37 18.5**	**+0.5**
WHTX				IAmb	IAmb	14 37 45.2	
	comp=Z,14nm,0.9s						
PETF	**Flores**	**15.51**	**93**	Pn	**Pn**	**14 37 18.5**	**-0.1**
PETF				IAmb	IAmb	14 37 34.6	
	comp=Z,18nm,0.8s						
BNM	**Barren Site**	**15.55**	**358**	Pn	**Pn**	**14 37 18.9**	**-0.4**
MSTX	**Muleshoe**	**15.64**	**10**		**Pn**	**14 37 21.5**	**+1.2**
ANMO	**Albuquerque**	**16.34**	**359**	LR	LR	14 43 37.5	
	comp=Z,499nm,20.7s,baz=276,slow=36						
NATX	**Nacogdoches**	**16.70**	**36**		**Pn**	**14 37 35.1**	**+1.3**
Z35A	**Perchaven, San**	**16.71**	**26**	P	**Pn**	**14 37 36.5**	**+2.7**
Z35A				IAmb	IAmb	14 37 38.6	
	comp=Z,24nm,0.9s						
WUAZ	**Wupatki**	**17.55**	**345**	P	**Pn**	**14 37 45.7**	**+1.1**
PFO	**Pinyon Flats O**	**17.66**	**330**	LR	LR	14 43 39.9	
	comp=Z,457nm,18.1s,baz=180,slow=34						
Z38A	**Mt. Pleasant**	**17.70**	**32**	P	**Pn**	**14 37 47.5**	**+1.3**
X37A	**Clayton**	**18.60**	**29**	P	**P**	**14 37 57.9**	**+0.8**
X37A				IAmb	IAmb	14 38 06.6	
	comp=Z,42nm,1.4s						
DEOK	**Depew**	**19.20**	**24**	P	**Pn**	**14 38 07.2**	**+2.6**
PV11	**David Mesa, Pa**	**19.84**	**353**	P	**P**	**14 38 12.1**	**+1.3**
T35A	**Sooner Cattle**	**20.14**	**23**	P	**P**	**14 38 14.8**	**+0.9**
T35A				IAmb	IAmb	14 38 27.2	
	comp=Z,24nm,1.3s						
HHAR	**Hobbs**	**20.65**	**29**	P	**P**	**14 38 19.8**	**+0.3**
HHAR				IAmb	IAmb	14 38 32.2	
	comp=Z,26nm,1.3s						
Q16A	**Castle Valley**	**20.78**	**349**	P	**P**	**14 38 20.8**	**-0.4**
Q16A				IAmb	IAmb	14 38 40.2	
	comp=Z,16nm,1.4s						
TMUT	**Trail Mountain**	**21.16**	**349**	P	**P**	**14 38 25.5**	**+0.2**
LCAR	**Lake Charles**	**21.86**	**34**	P	**P**	**14 38 36.1**	**+3.6**
LCAR				IAmb	IAmb	14 38 38.4	
	comp=Z,20nm,1.4s						
S39A	**Bolivar**	**22.09**	**28**	P	**P**	**14 38 37.6**	**+2.5**
S39A				IAmb	IAmb	14 38 45.2	
	comp=Z,13nm,1.1s						
DUG	**Dugway, Tooele**	**22.35**	**346**	P	**P**	**14 38 37.8**	**-0.1**
DUG				IAmb	IAmb	14 38 59.1	
	comp=Z,11nm,1.4s						
NVAR	**Mina Array Bea**	**22.51**	**334**	P	**P**	**14 38 38.3**	**-1.4**
	comp=Z,1.8nm,1.1s,baz=151,slow=8.8,SNR=7.2						
NVAR				LR	LR	14 46 11.0	
	comp=Z,328nm,21.4s,baz=174,slow=34						
	comp=Z,1.8nm,1.1s						
ELK	**Elko**	**23.49**	**342**	P	**P**	**14 38 47.6**	**-2.3**
	comp=Z,0.4nm,0.5s,baz=173,slow=10,SNR=1.9						
ELK				LR	LR	14 47 10.4	
	comp=Z,384nm,19.7s,baz=172,slow=34						
	comp=Z,0.4nm,0.5s						
PDAR	**Pinedale Array**	**24.33**	**354**	P	**P**	**14 38 56.5**	**-1.4**
	comp=Z,0.6nm,0.9s,baz=170,slow=7.3,SNR=3.8						
PDAR				LR	LR	14 48 19.8	
	comp=Z,344nm,18.1s,baz=182,slow=36						
	comp=Z,0.6nm,0.9s						
BG3	**Lake Jocassee**	**26.26**	**47**	P	**P**	**14 39 16.3**	**+1.2**
YBH	**Yreka Blue Hor**	**27.13**	**332**	LR	LR	14 49 42.8	
	comp=Z,320nm,18.9s,baz=158,slow=36						
NEW	**Newport**	**30.98**	**346**	LR	LR	14 51 42.0	
	comp=Z,208nm,18.5s,baz=166,slow=35						
ULM	**Lac du Bonnet**	**32.67**	**12**	LR	LR	14 53 58.9	
	comp=Z,457nm,18.3s,baz=322,slow=37						
SADO	**Sadowa**	**34.47**	**35**	LR	LR	14 55 25.6	
	comp=Z,261nm,18.1s,baz=293,slow=38						
SDV	**Santo Domingo**	**35.66**	**101**	LR	LR	14 56 07.3	
	comp=Z,69nm,20.4s,baz=282,slow=38						
ATAH	**Atahualpa**	**37.36**	**131**	LR	LR	14 52 58.8	
	comp=Z,292nm,21.6s,baz=313,slow=31						
BBB	**Bella Bella**	**37.77**	**338**	LR	LR	14 56 36.4	
	comp=Z,142nm,18.6s,baz=186,slow=36						
SJG	**San Juan**	**37.83**	**84**	LR	LR	14 57 20.6	
	comp=Z,97nm,21.9s,baz=294,slow=37						
NNA	**Nana**	**41.84**	**134**	LR	LR	14 55 15.4	
	comp=Z,146nm,20.3s,baz=309,slow=31						
TAOE	**Nuku Hiva Isla**	**43.27**	**234**	*e*LR	LR	14 53 16.5	
	comp=Z,424nm,26.2s						
DLBC	**Dease Lake**	**43.55**	**342**	LR	LR	15 00 22.1	
	comp=Z,339nm,18.6s,baz=144,slow=37						
YKA	**Yellowknife Ar**	**44.31**	**354**	P	**P**	**14 41 48.5**	**-1.0**
	comp=Z,0.3nm,0.9s,baz=168,slow=8.1,SNR=3.2						
YKA				LR	LR	15 00 48.9	
	comp=Z,230nm,18.4s,baz=124,slow=37						
	comp=Z,0.3nm,0.9s						
LPAZ	**La Paz**	**50.91**	**130**	P	**P**	**14 42 40.9**	**-1.2**
	comp=Z,1.6nm,1.0s,baz=333,slow=9.0,SNR=3.8						
LPAZ				LR	LR	15 01 21.6	
	comp=Z,117nm,18.9s,baz=308,slow=33						
	comp=Z,1.6nm,1.0s						
FRB	**Frobisher Bay**	**51.84**	**20**	LR	LR	15 05 11.7	
	comp=Z,250nm,19.5s,baz=200,slow=36						
KDAK	**Kodiak Island**	**51.93**	**330**	LR	LR	15 01 06.0	
	comp=Z,88nm,20.4s,baz=164,slow=32						
INK	**Inuvik**	**52.67**	**348**	LR	LR	15 06 22.0	
	comp=Z,186nm,18.3s,baz=236,slow=37						
ILAR	**Eielson Array**	**53.61**	**340**	P	**P**	**14 42 59.5**	**-1.3**
	comp=Z,2.0nm,1.3s,baz=137,slow=8.1,SNR=3.4						
	comp=Z,2.0nm,1.3s						
MDP	**Montagnes des**	**53.76**	**97**	LR	LR	15 07 37.3	
	comp=Z,65nm,18.1s,baz=156,slow=38						
LVC	**Limon Verde**	**54.69**	**137**	LR	LR	15 02 34.7	
	comp=Z,105nm,18.7s,baz=278,slow=32						
PPT	**Papeete**	**55.84**	**233**	LR	LR	14 59 05.2	
	comp=Z,87nm,21.0s,baz=54,slow=28						
SIV	**San Ignacio**	**56.02**	**125**	LR	LR	15 04 44.4	
	comp=Z,148nm,18.6s,baz=326,slow=33						
H03N2	**Juan Fernandez**	**57.81**	**153**	T	T	15 46 08.9	
	baz=331,slow=77,SNR=7.3						
H03N1	**Juan Fernandez**	**57.83**	**153**	T	T	15 46 09.6	
	baz=331,slow=77,SNR=11						
H03N3	**Juan Fernandez**	**57.83**	**153**	T	T	15 46 07.7	
	baz=331,slow=77,SNR=8.1						
TBI	**Tubuai**	**59.41**	**227**	*e*LR	LR	15 00 45.0	
	comp=Z,5μm,24.5s						
TBI				*e*LR	LR	15 00 45.0	
	comp=Z,2μm,27.2s						
SFJD	**Kangerlussuaq**	**59.85**	**22**	LR	LR	15 12 14.9	
	comp=Z,90nm,19.0s,baz=239,slow=38						
CFA	**Coronel Fontan**	**61.67**	**144**	LR	LR	15 06 24.7	
	comp=Z,62nm,18.6s,baz=272,slow=32						
CPUP	**Villa Florida**	**65.03**	**132**	LR	LR	15 10 30.5	
	comp=Z,85nm,19.0s,baz=248,slow=34						
RAR	**Rarotonga**	**65.78**	**236**	LR	LR	15 05 29.6	
	comp=Z,169nm,21.1s,baz=146,slow=29						
PLCA	**Paso Flores**	**67.58**	**151**	LR	LR	15 07 06.1	
	comp=Z,212nm,21.1s,baz=314,slow=30						
DZM	**Mont Dzumac**	**94.57**	**248**	*e*LR	LR	15 17 01.3	
	comp=Z,318nm,27.7s						

IDC 29 14:51:44.6±1.2,12°.12N×144°.44E,h0^{km},mb3.3/4,mbtmp3.3/4,MS3.5/1,Error ellipse: s-maj=65.6km s-min=17.2km az=105.0,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.52**	**16**	Pn	Pb	14 52 13.4	-0.2
	32nm,0.3s,baz=151,slow=2.8,SNR=13						
GUMO				Sn	Sn	14 52 34.1	+0.5
	28nm,0.3s,baz=4.2,slow=24,SNR=14						
H11S3	**WAKE ISLAND Hy**	**22.36**	**71**	T	T	15 20 37.8	
	baz=252,slow=74,SNR=5.4						
H11S1	**WAKE ISLAND Hy**	**22.38**	**71**	T	T	15 20 34.7	
	baz=252						
H11S2	**WAKE ISLAND Hy**	**22.38**	**71**	T	T	15 20 36.3	
	baz=252,slow=74,SNR=4.8						
H11N1	**WAKE ISLAND Hy**	**22.86**	**68**	T	T	15 21 07.7	
	baz=255,slow=75,SNR=16						
H11N2	**WAKE ISLAND Hy**	**22.87**	**68**	T	T	15 21 07.1	
	baz=255,slow=75,SNR=11						
H11N3	**WAKE ISLAND Hy**	**22.88**	**68**	T	T	15 21 07.7	
	baz=255,slow=75,SNR=11						
WRA	**Warramunga Arr**	**33.38**	**197**	P	P	14 58 24.9	-0.1
	0.7nm,0.6s,baz=20,slow=9.5,SNR=9.3						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**37.03**	**196**	P	P	14 58 56.3	-0.1
	0.2nm,0.6s,baz=15,slow=14,SNR=7.0						
	0.2nm,0.6s						
PETK	**Petropavlovsk-**	**42.24**	**12**	LR	LR	15 14 46.4	
	comp=Z,59nm,21.6s,baz=102,slow=33						
MKAR	**Makanchi Array**	**62.25**	**317**	P	P	15 02 09.0	+0.5
	0.1nm,0.5s,baz=108,slow=7.7,SNR=2.1						
	0.1nm,0.5s						
ILAR	**Eielson Array**	**70.06**	**25**	P	P	15 02 57.7	-0.6
	0.3nm,0.9s,baz=276,slow=4.4,SNR=2.2						
	0.3nm,0.9s						

KRSC 29 14:59:49.9±1.0,56°.97N×163°.21E,h22^{km}±13^{km},Ml3.6,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBG	**Krutoberegovo**	**0.77**	**201**	*e*P	Pb	15 00 04.5	-0.1
KBG				*e*S	Sn	15 00 15.5	-0.7
KBTR	**Krutoberegovo**	**0.79**	**196**	*e*P	Pb	15 00 05.3	+0.3
KBTR				*e*S	Sn	15 00 17.2	+0.3
SMKR	**Semkarok**	**1.03**	**249**	*e*P	Pn	15 00 08.6	-0.5
SRKR	**Sorokina**	**1.17**	**255**	*e*P	Pn	15 00 10.2	-0.7
KLY	**Klyuchi**	**1.56**	**246**	*e*P	Pn	15 00 15.1	-1.1
KLY				*e*S	Sn	15 00 33.0	-2.7
CIRR	**Tsirk**	**1.61**	**239**	*e*P	Pb	15 00 18.2	-0.8
CIRR				*e*S	Sb	15 00 38.8	-0.1
LGNR	**Loginova**	**1.65**	**239**	*e*P	Pb	15 00 19.4	-0.4
LGNR				*e*S	Sb	15 00 40.7	+0.3
BZGR	**Bezymyannyi-Gr**	**1.73**	**235**	*e*P	Pb	15 00 20.1	-1.0
BZGR				*e*S	Sb	15 00 42.4	-0.1
BZWR	**Bezymyannyi-We**	**1.81**	**237**	*e*P	Pn	15 00 21.1	+1.2
BZWR				*e*S	Sb	15 00 43.8	-1.0
BZP	**Bezymyannyi-Pe**	**1.82**	**236**	*e*P	Pn	15 00 21.3	+1.3
BZP				*e*S	Sb	15 00 44.1	-1.0
BZMR	**Bezymyannaya**	**1.83**	**237**	*e*P	Pb	15 00 21.6	-1.2
BZMR				*e*S	Sb	15 00 44.9	-0.4
KIRR	**Kirishev**	**1.89**	**239**	*e*P	Pn	15 00 22.3	+1.3
KIRR				*e*S	Sb	15 00 45.6	-1.3
KPT	**Kopyto**	**1.94**	**240**	*e*P	Pn	15 00 22.9	+1.3
KPT				*e*S	Sb	15 00 47.3	-1.0
SRDR	**Sredinnyy**	**2.04**	**253**	*e*P	Pn	15 00 23.9	+1.0
KMNR	**Kamenistaya**	**2.05**	**235**	*e*P	Pb	15 00 25.3	-1.2
OSSR	**Ossora**	**2.29**	**358**	*e*P	Pn	15 00 28.2	+2.0
BKI	**Bering**	**2.35**	**138**	*e*P	Pb	15 00 29.7	-1.8
BKI				*e*S	Sb	15 00 58.4	-1.7
TUMD	**Tumrok D**	**2.37**	**223**	*e*P	Pb	15 00 30.1	-1.8
TUMR	**Tumrok**	**2.41**	**227**	*e*P	Pb	15 00 31.3	-1.3
TIGL	**Tigil**	**2.58**	**290**	*e*P	Pb	15 00 33.1	-2.4
ESO	**Esso**	**2.71**	**249**	*e*P	Pb	15 00 36.1	-1.6
PALN	**Palana**	**2.74**	**322**	*e*P	Pb	15 00 36.9	-1.2
KII	**Karymskiy**	**3.63**	**218**	*e*P	Pn	15 00 47.3	+2.5
KRX	**Arik**	**4.46**	**218**	*e*P	Pn	15 01 00.8	+4.5
SMAR	**Somma**	**4.49**	**216**	*e*P	Pn	15 01 00.2	+3.4
AVH	**Avacha**	**4.51**	**216**	*e*P	Pn	15 01 01.1	+4.2
UGLR	**Uglovaya**	**4.53**	**216**	*e*P	Pn	15 01 00.3	+3.1
MTVR	**Mutnovka**	**5.36**	**215**	*e*P	Pn	15 01 14.0	+5.5

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*NEIC **29** 15:03:20.7±1.4,22°.92S±0°.10×175°.4W±0°.1,h28^{km}±8^{km},mb4.4/13,Error ellipse: s-maj=18.9km s-min=12.0km az=124.0*

*IDC **29** 15:03:26.7±4.9,23°.26S×175°.61W,h60^{km}±41^{km},mb3.8/10,mbtmp4.1/11,ML5.7/1,MS3.5/2,Error ellipse: s-maj=39.2km s-min=19.4km az=144.0*

ISC 29 15:03:19.8±0.5,23°.12S±0°.07×175°.37W±0°.08,h10^{km},n43,σ2^{s}.31/41,mb4.2/14,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**6.48**	**53**	Pn	**Pn**	**15 04 52.7**	**-2.7**
RAO	**Raoul Island**	**6.52**	**200**	Pn	**Pn**	**15 04 56.8**	**+0.9**
MSVF	**Nonsavu**	**8.17**	**310**	P	**Pn**	**15 05 21.9**	**+3.3**
	3.3nm,0.3s,baz=160,slow=10,SNR=25						
MSVF				LR	LR	15 08 02.3	
	comp=Z,362nm,19.7s,baz=356,slow=34						
	20nm,0.6s						
AFI	**Afiamalu**	**9.77**	**21**	P	**Pn**	**15 05 37.5**	**-3.1**
	12nm,0.4s,baz=282,slow=9.1,SNR=7.2						
AFI				S	Sn	15 07 16.3	-14
	14nm,0.4s,baz=229,slow=20,SNR=2.0						
AFI	**Afiamalu**	**9.77**	**21**	Pn	**Pn**	**15 05 36.5**	**-4.1**
RAR	**Rarotonga**	**14.58**	**86**	P	**Pn**	**15 06 46.4**	**+0.2**
	12nm,0.5s,baz=264,slow=9.9,SNR=10						
RAR				S	Sn	15 09 15.3	-13
	11nm,0.6s,baz=107,slow=16,SNR=1.1						
RAR	**Rarotonga**	**14.58**	**86**	Pn	**Pn**	**15 06 44.9**	**-1.4**
URZ	**Urewera**	**16.41**	**201**	P	**Pn**	**15 07 13.0**	**+2.7**
	4.6nm,0.4s,baz=47,slow=1.3,SNR=10						
URZ				S	**Sn**	**15 10 07.0**	**-5.3**
	7.0nm,0.8s,baz=240,slow=17,SNR=1.4						
RTZ	**Ruatahuna**	**16.77**	**201**	Pn	**Pn**	**15 07 15.1**	**+0.1**
DZM	**Mont Dzumac**	**16.83**	**270**	P	**P**	**15 07 18.6**	**+0.7**
	2.2nm,0.7s,baz=75,slow=20,SNR=1.4						
BKZ	**Black Stump Fm**	**17.43**	**202**	Pn	**Pn**	**15 07 22.5**	**-0.7**
BKZ				IAmb	IAmb	15 07 41.9	
	comp=Z,21nm,1.3s						
BFZ	**Birch Farm**	**18.89**	**200**	P	**P**	**15 07 38.5**	**-1.9**
BFZ				IAmb	IAmb	15 07 43.6	
	comp=Z,27nm,1.1s						
TUWZ	**Tuamarina**	**20.34**	**204**	P	**P**	**15 07 55.6**	**-0.7**
OXZ	**Oxford**	**22.69**	**204**	P	**P**	**15 08 20.0**	**-1.5**
OXZ				IAmb	IAmb	15 08 38.3	
	comp=Z,14nm,1.3s						
RPZ	**Rata Peaks**	**23.40**	**205**	P	**P**	**15 08 27.9**	**-1.0**
	comp=Z,4.7nm,0.8s,baz=350,slow=11,SNR=2.3						
	comp=Z,4.7nm,0.8s						
PPT	**Papeete**	**24.79**	**82**	LR	LR	15 18 22.2	
	comp=Z,109nm,18.2s,baz=268,slow=36						
WHZ	**Wether Hill Ro**	**26.45**	**207**	P	**P**	**15 08 59.4**	**+2.5**
WHZ				IAmb	IAmb	15 09 03.5	
	comp=Z,9.9nm,0.9s						
CTA	**Charters Tower**	**35.74**	**267**	P	**P**	**15 10 18.5**	**-0.6**
	comp=Z,4.2nm,0.6s,baz=95,slow=9.0,SNR=10						
	comp=Z,4.2nm,0.6s						
CTAO	**Charters Tower**	**35.74**	**267**	P	**P**	**15 10 17.3**	**-1.8**
STKA	**Stephens Creek**	**38.95**	**247**	P	**P**	**15 10 45.6**	**-0.6**
	comp=Z,1.6nm,0.5s,baz=100,slow=13,SNR=4.5						
	comp=Z,1.6nm,0.5s						
AS31	**Alice Springs**	**46.35**	**259**	P	**P**	**15 11 44.4**	**-2.1**
AS31				IAmb	IAmb	15 12 00.4	
	comp=Z,2.3nm,1.2s						
ASAR	**Alice Springs**	**46.35**	**259**	P	**P**	**15 11 45.1**	**-1.4**
	comp=Z,0.8nm,0.4s,baz=98,slow=6.7,SNR=21						
	comp=Z,0.8nm,0.4s						
ASAR	**Alice Springs**	**46.35**	**259**	P	**P**	**15 11 45.2**	**-1.3**
WB2	**Warramunga Arr**	**46.70**	**264**	P	**P**	**15 11 46.2**	**-3.0**
WB2				IAmb	IAmb	15 11 52.3	
	comp=Z,13nm,1.4s						
WB0	**Warramunga Arr**	**46.70**	**264**	P	**P**	**15 11 47.2**	**-2.1**
WB0				IAmb	IAmb	15 12 00.3	
	comp=Z,4.8nm,0.8s						
WRA	**Warramunga Arr**	**46.71**	**264**	P	**P**	**15 11 47.3**	**-2.0**
	comp=Z,1.4nm,0.6s,baz=92,slow=8.4,SNR=32						
	comp=Z,1.4nm,0.6s						
WRA	**Warramunga Arr**	**46.71**	**264**	P	**P**	**15 11 46.8**	**-2.5**
KNRA	**Kununurra**	**52.95**	**267**	P	**P**	**15 12 33.1**	**-3.7**
FITZ	**Fitzroy Crossi**	**55.13**	**263**	P	**P**	**15 12 50.0**	**-2.7**
SBA	**Scott Base**	**55.45**	**185**	P	**P**	**15 12 54.8**	**+0.7**
QSPA	**South Pole Qui**	**66.97**	**180**	P	**P**	**15 14 12.1**	**-0.4**
NVAR	**Mina Array Bea**	**81.29**	**42**	P	**P**	**15 15 38.7**	**+2.0**
	comp=Z,1.8nm,0.9s,baz=221,slow=7.8,SNR=8.8						
	comp=Z,1.8nm,0.9s						
TROLL	**Troll, Antarti**	**85.11**	**179**	P	**P**	**15 15 59.6**	**+3.8**
VNA3	**Neumayer Olymp**	**85.37**	**175**	P	**P**	**15 16 00.1**	**+3.1**
VNA2	**Neumayer--Watz**	**85.83**	**176**	P	**P**	**15 16 03.2**	**+3.9**
	baz=204,slow=27						
TXAR	**Lajitas Array**	**86.44**	**56**	P	**P**	**15 16 04.7**	**+1.6**
	comp=Z,1.4nm,0.9s,baz=212,slow=8.5,SNR=10						
	comp=Z,1.4nm,0.9s						
PDAR	**Pinedale Array**	**89.22**	**42**	P	**P**	**15 16 17.0**	**+0.8**
	comp=Z,0.7nm,0.9s,baz=224,slow=4.1,SNR=4.9						
	comp=Z,0.7nm,0.9s						
ILAR	**Eielson Array**	**90.34**	**12**	P	**P**	**15 16 20.5**	**-0.1**
	comp=Z,0.6nm,0.9s,baz=239,slow=5.1,SNR=6.0						
	comp=Z,0.6nm,0.9s						
YKA	**Yellowknife Ar**	**97.88**	**24**	P	Pdif	15 16 55.9	+0.6
	comp=Z,0.2nm,0.6s,baz=241,slow=4.4,SNR=3.8						
	comp=Z,0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**114.05**	**320**	PKiKP	**PKiKP**	**15 21 58.8**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=112,slow=1.6,SNR=2.5						
MKAR	**Makanchi Array**	**114.76**	**312**	PKP	PKPdf	15 22 00.0	-0.6
	comp=Z,0.4nm,0.8s,baz=131,slow=1.4,SNR=3.1						
AKASG	**Malin Array Be**	**146.47**	**331**	PKPbc	**PKPdf**	**15 23 00.3**	**+0.6**
	comp=Z,1.1nm,0.5s,baz=36,slow=4.1,SNR=8.3						
BRTR	**Keskin Array B**	**150.39**	**311**	PKPbc	**PKPbc**	**15 23 12.1**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=130,slow=3.5,SNR=4.1						

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*ECX **29** 15:15:22.8±0.6,25°.77N×110°.10W,h13^{km}±13^{km},ML5.4,Fault plane solution: NP1:ϕ_s48.00000°,δ58.00000°,λ-22.00000°.*

*NEIC **29** 15:15:23.5±1.7,25°.71N±0°.04×110°.02W±0°.03,h17^{km}±1^{km},mb5.1/127,Ms_20 5.3/281,Mwb5.6/26,Mww5.7/33,Md5.5/7(MEX),Error ellipse: s-maj=7.9km s-min=2.9km az=216.0,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.69; M$_{\theta\theta}$-3.10; M$_{\phi\phi}$2.41; M$_{r\theta}$-0.29; M$_{\theta\phi}$0.31; M$_{\phi r}$-0.39; Fault plane solution: M$_0$2.88000×10^{17} NP1:ϕ_s137.75000°,δ78.23000°,λ173.96000°. NP2: ϕ_s228.99000°,δ84.08000°,λ11.83000°. Principal axes: T 2.5221, Plg13.0000°, Azm94.0000°; N 0.6189, Plg77.0000°, Azm255.0000°; P -3.1409, Plg4.0000°, Azm3.0000°;*

*IDC **29** 15:15:23.3±0.5,25°.69N×110°.06W,h0^{km},mb4.6/30,mbtmp4.5/35,ML4.0/5,MS5.1/74 Error ellipse: s-maj=17.8km s-min=9.7km az=66.0*

*MEX **29** 15:15:24.9±0.7,25°.78N×110°.10W,h13^{km}±9^{km},MD5.5*

*NEIC **29** 15:15:25.5,25°.84N×109°.94W,h10^{km}*

*BJI **29** 15:15:25.3±0.0,25°.73N×110°.11W,h7^{km},mb4.9/11,mB5.6/14,Ms5.6/20,Ms7 5.4/20*

*NEIC **29** 15:15:26.8,25°.49N×109°.93W,h22^{km},Moment Tensor Solution. Duration: 4^{s}.2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.14; M$_{\theta\theta}$-3.64; M$_{\phi\phi}$3.78; M$_{r\theta}$0.23; M$_{\theta\phi}$-0.81; M$_{\phi r}$0.22; Fault plane solution: M$_0$3.81000×10^{17} NP1: ϕ_s218.80000°,δ89.09000°,λ-4.75000°. NP2:ϕ_s308.88000°,δ85.25000°,λ-179.09000°. Principal axes: T 3.8803, Plg3.0000°, Azm264.0000°; N -0.1307, Plg85.0000°, Azm28.0000°; P -3.7496, Plg4.0000°, Azm174.0000°;*

*NEIC **29** 15:15:26.8,25°.99N×110°.04W,h22^{km}*

*GCMT **29** 15:15:27.5±0.1,25°.88N±0°.01×110°.09W±0°.01,h22^{km},MW5.6/156,Moment Tensor Solution. s132,c211; s156,c305; Duration: 1^{s}.6 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.01±.04; M$_{\theta\theta}$-3.47±.04; M$_{\phi\phi}$3.46±.04; M$_{r\theta}$-0.17±.07; M$_{\theta\phi}$-0.85±.03; M$_{\phi r}$0.24±.07; Best double couple: M$_0$3.58000×10^{17} NP1:ϕ_s308.00000°,δ89.00000°,λ176.00000°. NP2:ϕ_s38.00000°,δ86.00000°,λ1.00000°. Principal axes: T 3.5810, Plg4.0000°, Azm263.0000°; N -0.0030, Plg85.0000°, Azm110.0000°; P -3.5780, Plg2.0000°, Azm353.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **29** 15:15:28.1±1.3,26°.06N×109°.71W,h29^{km},mb5.4/31,MS5.3/11 Error ellipse: s-maj=9.2km s-min=5.5km az=99.7*

ISC 29 15:15:23.9±0.6,25°.74N±0°.03×110°.06W±0°.03,h8^{km}±3^{km},n890,σ2^{s}.14/736,mb5.1/95,MS5.3/214,17C-28D,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSIG	Topolobambo	0.93	98		Pg	15 15 40.1	-1.6
TSIG					Sg	15 15 52.1	-1.7
TSIG	Topolobambo	0.93	98	⇑iP	Pg	15 15 40.1	-1.6
TSIG				eS	Sg	15 15 52.2	-1.6
TSIG	Topolobambo	0.93	98	⇑iP	Pg	15 15 40.1	-1.6
TSIG				iS	Sg	15 15 52.1	-1.7
NE77	Loreto B.C.S	1.21	283	⇑iP	Pb	15 15 43.4	-3.7
NE77				eS	Sb	15 15 58.0	-4.8
NE77				IAML		15 16 01.9	
	comp=N,85µm,0.3s						
NE80	Navojoa	1.38	32	⇓eP	Pn	15 15 46.7	-2.8
NE80				IAML		15 16 07.0	
	comp=E,43µm,0.5s						
NE80				e		15 16 07.0	
SNIRB	San Nicol¡s	1.56	301	⇑iP	Pn	15 15 48.2	-3.8
SNIRB				IAML		15 16 15.1	
	comp=N,55µm,0.8s						
SNIRB				IAML		15 16 25.9	
	comp=E,60µm,1.7s						
LPIG	La Paz	1.65	188	Pg	Pn	15 15 51.2	-2.0
	comp=E,242nm,0.3s,baz=273,slow=0.4,SNR=157						
LPIG				Lg	Lg	15 16 08.3	
	comp=E,572nm,0.3s,baz=193,slow=10.0,SNR=6.6						
LPIG	La Paz	1.65	188		Pn	15 15 51.1	-2.1
LPIG					Sn	15 16 10.2	-4.3
LPIG	La Paz	1.65	188	⇓iP	Pn	15 15 51.2	-2.0
LPIG	La Paz	1.65	188	⇓iP	Pn	15 15 51.1	-2.0
LPIG				iS	Sn	15 16 10.2	-4.3
CSIG	Choix	1.86	54		Pn	15 15 53.3	-2.8
CSIG					Sb	15 16 20.7	-0.9
CSIG	Choix	1.86	54	eP	Pn	15 15 53.3	-2.8
CSIG				eS	Sn	15 16 15.3	-4.5
SLBS	Sierra La Lagu	2.05	177	Pn	Pn	15 15 56.5	-2.2
SLBS	Sierra La Lagu	2.05	177	⇓eP	Pn	15 15 57.0	-1.8
SLBS	Sierra La Lagu	2.05	177	eP	Pn	15 15 56.7	-2.0
SLBS				eS	Sn	15 16 25.1	+0.5
GUYB	Guaymas	2.27	341	⇓iP	Pn	15 15 58.5	-3.2
GUYB				IAML		15 16 56.7	
	comp=N,13µm,1.2s						
GUYB	Guaymas	2.27	341	eP	Pn	15 15 58.1	-3.6
GUYB				eS	Sn	15 16 22.9	-6.9
SRIG	Santa Rosalia	2.51	309	Pn	Pn	15 16 01.2	-3.9
SRIG	Santa Rosalia	2.51	309	⇑eP	Pn	15 16 01.8	-3.3
SRIG	Santa Rosalia	2.51	309	eP	Pn	15 16 00.9	-4.1
SRIG				eS	Sn	15 16 30.3	-5.6
SSIG	Sanalona	2.79	109	eP	Pn	15 16 06.2	-2.7
SSIG				eS	Sn	15 16 41.7	-1.1
NOVRB	El Novillo Son	3.21	6	⇓iP	Pn	15 16 12.3	-2.3
NOVRB				IAML		15 17 12.3	
	comp=N,13µm,0.5s						
HSIG		3.36	347	Pn	Pn	15 16 14.2	-2.5
HSIG		3.36	347	⇓eP	Pn	15 16 14.5	-2.3
HSIG		3.36	347	eP	Pn	15 16 14.5	-2.3
HSIG				eS	Sn	15 16 56.8	-0.1
HPIG		4.11	72	Pn	Pn	15 16 25.2	-2.1
HPIG		4.11	72	eP	Pn	15 16 25.8	-1.5
HPIG				eS	Sn	15 17 14.0	-1.7
MAIG	Mazatlaan	4.17	127	eP	Pn	15 16 27.3	-0.6
MAIG				eS	Sn	15 17 14.9	-1.9
PDIG	Papasquiaro	4.27	98	eP	Pn	15 16 27.6	-1.9
PDIG				eS	Sn	15 17 18.3	-1.3
BAHB	Baha de los	4.46	316	eP	Pn	15 16 33.7	+1.8
BAHB				eS	Sn	15 17 25.9	+2.0
NZIG	Nacozari, Sono	4.64	5	eP	Pn	15 16 32.6	-1.8
NZIG				eS	Sn	15 17 26.2	-2.3
CGIG		4.96	21	eP	Pn	15 16 37.5	-1.4
CGIG				eS	Sn	15 17 35.0	-1.5
LAPR	La Primavera	5.15	338	⇓eP	Pn	15 16 40.1	-1.2
LAPR	La Primavera	5.15	338	eP	Pn	15 16 38.1	-3.1
LAPR				eS	Sn	15 17 34.5	-6.4
319A	Douglas	5.66	7		Pn	15 16 46.6	-1.8
PIX	Pinacate	6.52	333	Pn	Pn	15 16 57.7	-2.5
TUC	Tucson	6.58	355	Pn	Pn	15 16 59.7	-1.3
TUC	Tucson	6.58	355	P	Pn	15 16 59.7	-1.3
TUC	Tucson	6.58	355	eP	Pn	15 17 01.0	0.0
TUC				eS	Sn	15 18 21.0	+4.7
TUC	Tucson	6.58	355	P	Pn	15 16 60.0	-1.1
	baz=174						
214A	Organ Pipe Nat	6.65	339		Pn	15 17 00.5	-1.4
214A	Organ Pipe Nat	6.65	339	P	Pn	15 17 00.4	-1.5
	baz=158,SNR=42						
TX31	Lajitas Ar. Si	6.71	56	Pn	Pn	15 17 00.3	-2.5
TX31	Lajitas Ar. Si	6.71	56	P	Pn	15 17 00.3	-2.5
	baz=239,SNR=47						
TX32	Lajitas Array	6.71	56	Pn	Pn	15 17 00.3	-2.5
TXAR	Lajitas Array	6.71	56	Pn	Pn	15 17 00.7	-2.1
	comp=N,5.2nm,0.3s,baz=233,slow=14,SNR=187						
TXAR				Pg	Pb	15 17 26.1	+5.2
	comp=N,6.1nm,0.3s,baz=236,slow=16,SNR=7.5						
TXAR				Lg	Lg	15 18 55.7	
	comp=N,45nm,0.3s,baz=92,slow=33,SNR=7.9						
TXAR				LR	LR	15 19 52.0	
	comp=N,22µm,21.1s,baz=236,slow=40						
TXAR	Lajitas Array	6.71	56	Pn	Pn	15 17 00.1	-2.7
TXAR	Lajitas Array	6.71	56	P	Pn	15 17 00.1	-2.7
425A	Indio Mountain	6.73	40	Pn	Pn	15 17 02.3	-0.8
SFX	San Felipe	6.76	322	Pn	Pn	15 17 03.0	-0.4
SFX	San Felipe	6.76	322	eP	Pn	15 17 04.7	+1.2
SFX				eS	Sn	15 18 13.1	-7.5
DUN6	Lazy B Ranch	6.84	7		Pn	15 17 03.1	-1.6
ANIG	Ahuacatlan	6.90	131	eP	Pn	15 17 05.8	+0.3
ANIG				eS	Sn	15 18 27.3	+3.1
121A	Cookes Peak, D	7.05	16		Pn	15 17 05.6	-2.0
121A	Cookes Peak, D	7.05	16	P	Pn	15 17 06.6	-1.1
	baz=197,SNR=141						
121A	Cookes Peak, D	7.05	16	P	Pn	15 17 06.5	-1.1
	baz=197,SNR=141						
SPIG	San Pedro Mart	7.12	319	⇑eP	Pn	15 17 11.6	+2.9
SPIG				eS	Sn	15 18 26.8	-3.0
MNTX	Cornudas Mount	7.21	34	Pn	Pn	15 17 08.7	-1.0
MNTX	Cornudas Mount	7.21	34	P	Pn	15 17 08.7	-1.0
	baz=215,SNR=25						
MNTX	Cornudas Mount	7.21	34	P	Pn	15 17 09.6	-0.1
	baz=215,SNR=25						
ALPN	Alpine	7.31	49	Pn	Pn	15 17 09.7	-1.5
ZAIG	Zacatecas	7.45	112	Pn	Pn	15 17 11.7	-1.5
ZAIG	Zacatecas	7.45	112	eP	Pn	15 17 14.2	+1.1
ZAIG				eS	Sn	15 18 39.9	+1.9
VTX	Valle De La Tr	7.55	319	Pn	Pn	15 17 15.0	+0.6
113A	Mohawk Valley,	7.72	336		Pn	15 17 15.5	-1.1
CJM	Chamela	7.75	142	eP	Pn	15 17 15.1	-1.9
CJM				eS	Sn	15 18 39.3	-5.7
PECS	Pecos	7.81	43	Pn	Pn	15 17 15.3	-2.7
MCIG	Muzquiz	7.95	73	eP	Pn	15 17 18.2	-1.6
MCIG				eS	Sn	15 18 55.6	+5.7
MBIG	Mexicali	8.02	327	eP	Pn	15 17 15.9	-4.8
MBIG				eP	Pn	15 17 19.6	-1.1
MBIG				eS	Sn	15 18 46.7	-4.9
MBIG				eS	Sn	15 18 53.0	+1.4
ESJX	Sierra Juarez	8.10	322	Pn	Pn	15 17 20.9	-1.2
GDL2	Guadalupe Moun	8.14	36	Pn	Pn	15 17 22.3	-0.2
SAND	Sanderson	8.18	57	Pn	Pn	15 17 21.5	-1.5
GLA	Glamis	8.39	331	Pn	Pn	15 17 26.0	+0.2
GLA	Glamis	8.39	331	P	Pn	15 17 26.0	+0.2
GLA	Glamis	8.39	331	P	Pn	15 17 25.4	-0.4
	baz=149						
CLNB	Carlsbad	8.45	38	Pn	Pn	15 17 26.0	-0.8
Y14A	Wickenburg	8.56	343	Pn	Pn	15 17 24.8	-3.4
YUH	Yuha Desert	8.58	325		Pn	15 17 27.7	-0.7
Y22A	Socorro	8.60	17	P	Pn	15 17 28.9	+0.1
	baz=199,SNR=50						
CRNM	Carthage	8.68	19	Pn	Pn	15 17 28.2	-1.7
IKP	In-Ko-Pah, Jac	8.68	324	P	Pn	15 17 32.0	+2.1
	baz=141,SNR=12						
X16A	Lo Mia Camp, P	8.73	352	Pn	Pn	15 17 29.6	-1.1
CBX	Cerro Bola	8.73	320	Pn	Pn	15 17 28.6	-2.1
CBX	Cerro Bola	8.73	320	eP	Pn	15 17 32.0	+1.3
CBX				eS	Sn	15 19 02.0	-7.5
Y22D	IRIS PASSCAL I	8.74	17		Pn	15 17 28.8	-1.9
Y22D	IRIS PASSCAL I	8.74	17	P	Pn	15 17 30.2	-0.5
	baz=199						
Y22F	Passcal Instru	8.74	17	P	Pn	15 17 30.5	-0.2
	baz=199						
SWSC	Sam W. Stewart	8.75	326	P	Pn	15 17 32.3	+1.5
	baz=144,SNR=6.8						
X18A	Snowflake	8.76	1		Pn	15 17 30.2	-0.8
LENM	Lemitar	8.81	17		Pn	15 17 28.3	-3.4
MNIG	Monterrey	8.81	89	eP	Pn	15 17 34.1	+2.4
MNIG				eS	Sn	15 19 04.8	-6.5
TJIG	Tijuana	8.83	321	eP	Pn	15 17 35.6	+3.8
TJIG				eS	Sn	15 19 08.7	-2.8
BLYC	Blythe	8.88	335	Pn	Pn	15 17 31.7	-0.8
BNM	Barren Site	8.89	19	Pn	Pn	15 17 30.0	-2.9
TKX	Tecate	8.89	321	Pn	Pn	15 17 32.0	-0.8
BAR	Barrett	9.01	322	Pn	Pn	15 17 34.3	-0.1
MONP2	Monument Peak	9.03	324	P	Pn	15 17 37.4	+2.5
	baz=140,SNR=14						
BC3	Big Chuckawall	9.18	331	P	Pn	15 17 36.1	-0.6
	baz=148,SNR=48						
PDMCI	Parker Dam,Lak	9.24	338	P	Pn	15 17 37.6	+0.2
	baz=156,SNR=24						
W18A	Petrified Fore	9.35	2	P	Pn	15 17 38.8	-0.3
	baz=182,SNR=13						
109C	Camp Elliot, M	9.41	321	P	Pn	15 17 41.3	+1.5
	baz=138						
IRM	Iron Mountain	9.48	333	P	Pn	15 17 42.2	+1.4
	baz=151,SNR=39						
PMD	Palm Desert	9.61	327	Pn	Pn	15 17 41.6	-0.9
TPFO	Pinon Flats	9.61	326	P	Pn	15 17 44.3	+1.6
	baz=143,SNR=26						
PFO	Pinyon Flats O	9.62	326	Pn	Pn	15 17 47.0	+4.2
	comp=N,0.4nm,0.3s,baz=133,slow=14,SNR=19						
PFO				Lg	Lg	15 20 32.2	
	comp=N,0.5nm,0.3s,baz=246,slow=22,SNR=1.7						
PFO				LR	LR	15 20 45.7	
	comp=N,8µm,21.3s,baz=162,slow=33						
PFO	Pinyon Flats O	9.62	326	⇓eP	Pn	15 17 47.4	+4.6
PFO	Pinyon Flats O	9.62	326	P	Pn	15 17 44.5	+1.7
	baz=143,SNR=24						
MMIG	Aquila	9.68	139	eP	Pn	15 17 39.3	-4.3
MMIG				eS	Sn	15 19 35.6	+3.1
ANMO	Albuquerque	9.69	18	Pn	Pn	15 17 45.2	+1.5
	comp=N,0.6nm,0.3s,baz=292,slow=12,SNR=39						
ANMO				Lg	Lg	15 20 21.7	
	comp=N,5.0nm,0.3s,baz=252,slow=19,SNR=3.2						
ANMO				LR	LR	15 22 02.7	
	comp=N,11µm,20.8s,baz=286,slow=41						
	comp=N,10nm,0.8s						
ANMO	Albuquerque	9.69	18	Pn	Pn	15 17 42.4	-1.4
ANMO	Albuquerque	9.69	18	d iP	Pn	15 17 46.2	+2.4
ANMO				pmax	pmax		
	comp=Z,129nm,2.5s						
ANMO	Albuquerque	9.69	18	P	Pn	15 17 44.8	+1.0
	baz=199						
BELC	Belle Mtn. Jos	9.71	329	P	Pn	15 17 45.8	+1.7
	baz=146,SNR=10.0						
WUAZ	Wupatki	9.81	354	P	Pn	15 17 46.5	+1.1
	baz=173,SNR=32						
NEE2	Needles Airpor	9.82	337	P	Pn	15 17 47.5	+2.0
	baz=155						
833A	Chaparral WMA,	9.85	72		Pn	15 17 44.2	-1.7
833A	Chaparral WMA,	9.85	72	P	Pn	15 17 46.8	+0.9
	baz=257						
RPIG	Rio Verde	9.99	111	eS	Sn	15 19 37.6	-2.6
MURC	Murrieta	9.99	323	P	Pn	15 17 47.6	-0.2
	baz=140,SNR=8.5						
MOIG	Morelia	10.16	125	eP	Pn	15 17 44.8	-5.6
MOIG				eS	Sn	15 19 44.9	+0.1
JCT	Junction City	10.21	60	Pn	Pn	15 17 49.4	-1.4
JCT	Junction City	10.21	60	P	Pn	15 17 49.4	-1.4
JCT	Junction City	10.21	60	P	Pn	15 17 50.1	-0.7
	baz=245,SNR=7.4						
JCT	Junction City	10.21	60	P	Pn	15 17 51.7	+0.9
	baz=245,SNR=7.4						
GMRC	Granite Mounta	10.23	333	P	Pn	15 17 51.2	+0.1
	baz=150,SNR=28						
GTIG	Gomez Farias	10.27	103	eP	Pn	15 17 53.5	+1.8
GTIG				eS	Sn	15 19 46.5	-0.5
MSTX	Muleshoe	10.35	36	Pn	Pn	15 17 50.1	-2.7
MSTX	Muleshoe	10.35	36	P	Pn	15 17 51.7	-1.1
	baz=219,SNR=12						
BBRC	Big Bear Solar	10.37	327	P	Pn	15 17 53.8	+0.7
	baz=143,SNR=12						
CIS	Catalina Islan	10.54	318	P	Pn	15 17 56.1	+0.8
	baz=134						
HEC	Hector,Ludlow	10.56	331	P	Pn	15 17 56.2	+0.6
	baz=148,SNR=18						
FMP	Fort Macarthur	10.69	320	P	Pn	15 17 57.6	+0.3
	baz=136						
BFSC	Mount Baldy Ra	10.73	324	P	Pn	15 17 59.7	+1.7
	baz=140,SNR=12						
RRX	Edison Barstow	10.90	328	P	Pn	15 18 00.2	0.0
	baz=145						
TUQ	Turquoise Moun	10.90	334	P	Pn	15 18 02.2	+1.8
	baz=151,SNR=46						
PASC	Pasadena Art C	10.96	322		Pn	15 18 01.6	+0.5
DECC	Green Verdugo	11.11	322	P	Pn	15 18 04.8	+1.8
	baz=138						
SNCC	San Nicolas Is	11.13	314	Pn	Pn	15 18 00.2	-3.2
SNCC	San Nicolas Is	11.13	314	P	Pn	15 18 03.8	+0.5
	baz=130						
GSC	Goldstone, Bar	11.16	330	P	Pn	15 18 04.1	+0.2
	baz=147,SNR=23						
ZIIG	Zihuatanejo	11.37	134	eS	Sn	15 20 08.6	-5.3
ABTX	Abilene, Hawle	11.39	51	P	Pn	15 18 06.8	-0.1
	baz=235						
EDW2	Edwards Air Fo	11.40	325	P	Pn	15 18 08.9	+1.8
	baz=141,SNR=23						
SHOC	Shoshone, Teco	11.45	334	P	Pn	15 18 09.0	+1.3
	baz=150						
DEIG	Demacu	11.50	116	eP	Pn	15 18 03.6	-5.0
DEIG				eS	Sn	15 20 14.6	-2.9
MVCO	Mesa Verde	11.51	6	P	Pn	15 18 10.5	+1.7
	baz=187,SNR=43						
OSI	Osito Audit: C	11.59	322	P	Pn	15 18 11.3	+1.6
	baz=138,SNR=8.7						
AMTX	Amarillo	11.63	36	P	Pn	15 18 11.1	+0.8
	baz=220						
ARIG	Puente Sto Nin	11.66	128	eP	Pn	15 18 13.7	+2.9
ARIG				eS	Sn	15 20 17.6	-3.7
SCZ2	Santa Cruz Isl	11.69	317	P	Pn	15 18 13.1	+2.1
	baz=132						
LRMC	Laurel Mtn Rad	11.71	328	P	Pn	15 18 14.8	+3.3
	baz=144,SNR=75						
ARVC	Arvin	12.03	323	P	Pn	15 18 19.2	+3.6
	baz=139,SNR=20						
SBC	Santa Barbara	12.04	318	P	Pn	15 18 19.0	+3.2
	baz=134						
435B	Jarrell	12.08	63	P	Pn	15 18 18.6	+2.2
	baz=248						
MPMC	Manual Prospec	12.10	330	P	Pn	15 18 20.3	+3.5
	baz=146,SNR=60						
FURC	Furnace Creek,	12.18	333	P	Pn	15 18 21.0	+3.4
	baz=150,SNR=14						
PLIG	Platanillo	12.21	125	eP	Pn	15 18 23.1	+4.8
PLIG				eS	Sn	15 20 30.6	-4.1
ISA	Isabella, Lake	12.25	326	P	Pn	15 18 22.6	+3.8
	baz=142,SNR=38						
YAIG	Yautepec	12.26	122	eP	Pn	15 18 25.3	+6.3
YAIG				eS	Sn	15 20 41.6	+5.7
S22A	4UR Ranch, Cre	12.28	12	P	Pn	15 18 22.5	+3.1
	baz=194,SNR=22						
T25A	Trinidad	12.34	22	P	Pn	15 18 22.2	+2.1
	baz=204,SNR=7.5						
TPNV	Topopah Spring	12.36	336	P	Pn	15 18 24.9	+4.6
	baz=153,SNR=100						
PKM	Mcpherson Peak	12.41	320	P	Pn	15 18 25.0	+4.0
	baz=135,SNR=26						
MEIG	Mezcala	12.42	127	eP	Pn	15 18 29.2	+8.1
MEIG				eS	Sn	15 20 41.3	+1.5
CAIG	El Cayaco	12.56	132	eS	Sn	15 20 36.9	-6.2
SDCO	Great Sand Dun	12.58	17	P	Pn	15 18 26.3	+2.8
	baz=199,SNR=31						
SDCO	Great Sand Dun	12.58	17	P	Pn	15 18 26.8	+3.3
	baz=199,SNR=31						
WHTX	Lake Whitney,	12.67	58	P	Pn	15 18 26.2	+1.7
	baz=244						
CWC	Cottonwood Cre	12.68	329	P	Pn	15 18 26.5	+1.7
	baz=145						
VES	Vestal, Richgr	12.70	325	P	Pn	15 18 28.6	+3.8
	baz=140,SNR=19						
SMMC	Simmler	12.81	320	P	Pn	15 18 28.3	+1.8
	baz=136,SNR=26						
GRAC	Grapevine Rang	12.84	333	P	Pn	15 18 30.9	+4.2
	baz=149,SNR=32						
WTFS	Witchita Falls	12.85	49	Pn	Pn	15 18 23.6	-3.3
DAIG	Los Arroyos	13.00	130	eP	Pn	15 18 32.3	+3.3
DAIG				eS	Sn	15 20 52.4	-1.6
VOG	Valley Oaks Go	13.23	325	P	Pn	15 18 35.1	+3.1
	baz=140						
WMOK	Wichita Mounta	13.23	45	P	Pn	15 18 34.2	+2.1
	baz=230,SNR=27						
WMOK	Wichita Mounta	13.23	45	P	Pn	15 18 31.5	-0.6
	baz=230,SNR=27						
TIN	Tinemaha, Big	13.26	330	P	Pn	15 18 36.2	+3.7
	baz=146						
HKT	Hockley	13.26	68	⇑eP	Pn	15 18 36.0	+3.5
R11B	Troy Canyon, C	13.41	341	P	Pn	15 18 38.4	+3.6
	baz=158,SNR=100						
TLIG	Tlapa	13.42	125	Pn	Pn	15 18 32.6	-2.2
TLIG	Tlapa	13.42	125	eP	P	15 18 40.3	-4.1
TLIG				eS	Sn	15 21 00.4	-4.0
FTIG	Fresnillo de T	13.53	123	eP	Pn	15 18 31.4	-5.0
FTIG				eS	Sn	15 21 07.3	+0.2
Q24A	Divide	13.82	16	P	Pn	15 18 42.2	+1.9
	baz=199						
TPIG	Tehuac#an	13.83	119	eP	P	15 18 48.8	-0.2
MLAC	Mammoth, Mammo	14.00	330	P	P	15 18 47.6	-3.4
	baz=145,SNR=14						
U32A	Winter Ranch,	14.21	39	Pn	Pn	15 18 43.8	-1.7
U32A	Winter Ranch,	14.21	39	P	Pn	15 18 47.6	+2.1
	baz=224						
TXIG	Tlaxiaco	14.21	124	eP	Pn	15 18 49.5	+3.7
TXIG				eS	Sn	15 21 23.1	-0.8
TOIG	Toxpalan	14.25	120	eP	Pn	15 18 46.5	+0.3
TOIG				eS	Sn	15 21 17.7	-6.8
O20A	White River Ci	14.43	6	P	Pn	15 18 50.7	+2.0
	baz=186,SNR=26						
NVAR	Mina Array Bea	14.44	333	Pn	P	15 18 52.6	-3.2
	comp=Z,0.1nm,0.3s,baz=154,slow=14,SNR=49						
NVAR				Lg	Lg	15 23 02.5	
	baz=181,slow=30,SNR=2.6						
NVAR				LR	LR	15 23 49.5	
	comp=Z,5µm,20.0s,baz=152,slow=35						
	comp=Z,11nm,1.0s						
PNIG	Pinotepa	14.50	128	eP	P	15 18 55.3	-1.0
ISCO	Idaho Springs	14.51	14	P	Pn	15 18 52.3	+2.5
	baz=196,SNR=21						
ISCO	Idaho Springs	14.51	14	P	Pn	15 18 51.9	+2.1
	baz=196,SNR=21						
DUG	Dugway, Tooele	14.60	352	P	Pn	15 18 53.9	+3.0
	baz=170,SNR=25						
YOIG	Yosondua	14.62	125	eP	Pn	15 18 54.4	+3.0
KSCO	Kaye Shedlock’	14.63	23	P	Pn	15 18 52.9	+1.4
	baz=207						
SAO	San Andreas Ge	14.67	321		P	15 18 55.0	-3.1
SAO	San Andreas Ge	14.67	321	P	P	15 18 55.0	-3.1
NATX	Nacogdoches	14.77	63	P	P	15 18 56.4	-2.8
	baz=250						
CTU	Camp Tracy	14.98	355	IAmb	IAmb	15 19 00.3	
	comp=Z,96nm,1.7s						
WAKR	Walker	14.99	330	IAmb	IAmb	15 19 02.0	
	comp=Z,158nm,1.3s						
CMB	Columbia Colle	15.06	327	IAmb	IAmb	15 19 01.3	
	comp=Z,89nm,1.4s						
BGU	Big Grassy Mou	15.35	351		Pn	15 18 59.8	-1.2
X37A	Clayton	15.45	52	P	P	15 19 04.7	-2.0
	baz=239,SNR=21						
PEIG	Puerto Escondi	15.46	126	eP	P	15 19 08.2	+1.2
N23A	Red Feather La	15.49	12	P	Pn	15 19 05.1	+2.0
	baz=194						
ELK	Elko	15.57	345	Pn	P	15 19 06.5	-1.9
	comp=Z,0.1nm,0.3s,baz=167,slow=11,SNR=42						
ELK				Lg	Lg	15 23 32.6	
	comp=Z,0.1nm,0.3s,baz=200,slow=11,SNR=3.0						
ELK				LR	LR	15 25 10.0	
	comp=Z,18µm,18.3s,baz=174,slow=38						
	comp=Z,28nm,1.0s						
ELK	Elko	15.57	345	IAmb	IAmb	15 19 08.8	
	comp=Z,124nm,1.5s						
ELK	Elko	15.57	345	P	P	15 19 06.5	-1.9
SPUT	South Promonto	15.65	353	IAmb	IAmb	15 19 09.5	
	comp=Z,205nm,1.9s						
CBKS	Cedar Bluff	15.67	31	P	P	15 19 07.9	-1.3
	baz=216,SNR=8.9						
CBKS	Cedar Bluff	15.67	31	P	P	15 19 08.5	-0.8
	baz=216,SNR=8.9						
EMB	Emerald Bay	15.67	330	IAmb	IAmb	15 19 10.6	
	comp=Z,189nm,1.3s						
BMN	Battle Mountai	15.82	340	IAmb	IAmb	15 19 11.8	
	comp=Z,268nm,2.0s						
R32A	Long Quarter,	15.87	34	P	Pn	15 19 09.1	+1.5
	baz=220,SNR=10						
HWUT	Hardware Ranch	15.88	356	IAmb	IAmb	15 19 12.2	
	comp=Z,249nm,1.5s						
TUL1	Leonard	15.88	47	P	Pn	15 19 08.1	+0.3
	baz=234						
PAHR	Pah Rah Range	15.97	333	IAmb	IAmb	15 19 14.4	
	comp=Z,279nm,1.5s						
T35A	Sooner Cattle	16.04	43	Pn	Pn	15 19 07.7	-2.2
T35B	Sooner Cattle	16.04	43	P	Pn	15 19 09.6	-0.3
	baz=230,SNR=12						
RWWY	Rawlins	16.08	8	IAmb	IAmb	15 19 15.7	
	comp=Z,196nm,1.7s						
HVU	Hansel Valley	16.16	353	IAmb	IAmb	15 19 16.1	
	comp=Z,210nm,2.0s						
HUIG	Huatulco	16.37	125	eP	P	15 19 19.8	+2.7
CMIG	Matias Romero	16.53	118	eP	P	15 19 19.4	+0.5
OGNE	Ogallala	16.57	22	P	Pn	15 19 16.9	+0.2
	baz=206,SNR=7.2						
OGNE	Ogallala	16.57	22	P	P	15 19 18.8	-0.4
	baz=206,SNR=7.2						
MIAR	Mount Ida	16.72	54	P	Pn	15 19 19.6	+1.1
	baz=242,SNR=15						
MIAR	Mount Ida	16.72	54	P	P	15 19 21.4	+0.5
	baz=242,SNR=15						
ORV	Oroville	16.79	328		Pn	15 19 20.1	+0.7
ORV	Oroville	16.79	328	P	Pn	15 19 20.1	+0.7
ORV				pmax	pmax		
	comp=Z,141nm,1.8s						
BW06	Boulder Array	16.99	1	P	Pn	15 19 22.5	+0.3
	baz=181,SNR=74						
PD31	Pinedale Array	16.99	1	IAmb	IAmb	15 19 26.4	
	comp=Z,486nm,1.9s						
PDAR	Pinedale Array	16.99	1	P	P	15 19 23.2	-0.8
	comp=Z,0.6nm,0.3s,baz=172,slow=12,SNR=68						
PDAR				Lg	Lg	15 24 14.3	
	comp=Z,0.3nm,0.3s,baz=152,slow=29,SNR=3.9						
PDAR				LR	LR	15 26 14.7	
	comp=Z,19µm,18.4s,baz=189,slow=38						
	comp=Z,12nm,0.8s						
PDAR	Pinedale Array	16.99	1	P	Pn	15 19 21.9	-0.2
AHID	Auburn Hatcher	17.00	357	IAmb	IAmb	15 19 24.7	
	comp=Z,214nm,1.9s						
K22A	Casper	17.12	9	P	P	15 19 25.1	-0.2
	baz=191,SNR=38						
K22A	Casper	17.12	9	P	P	15 19 24.7	-0.7
	baz=191,SNR=38						
U38A	Gravette	17.12	48	P	P	15 19 24.6	-0.7
	baz=236						
KSU1	Kansas State U	17.47	37		Pn	15 19 27.3	-0.7
KSU1				IAmb	IAmb	15 19 36.1	
	comp=Z,180nm,1.4s						
KSU1	Kansas State U	17.47	37	P	P	15 19 29.2	0.0
	baz=224,SNR=8.3						
143A	Socs Landing,	17.68	63		Pn	15 19 29.4	-1.2
SNOW	Snow King Moun	17.69	358	IAmb	IAmb	15 19 36.8	
	comp=Z,211nm,1.5s						
TPAW	Teton Pass	17.72	358	IAmb	IAmb	15 19 37.9	
	comp=Z,174nm,1.8s						
FXWY	Fox Creek	17.87	358	IAmb	IAmb	15 19 37.4	
	comp=Z,156nm,1.7s						
WHAR	Wooly Hollow	18.00	54		Pn	15 19 32.3	-2.3
U40A	Yellville	18.12	50	P	Pn	15 19 36.0	+0.1
	baz=239,SNR=24						
U40A				P	Pn	15 19 36.0	+0.1
	baz=239,SNR=24						
HLID	Hailey	18.13	350	P	P	15 19 39.1	+2.5
	baz=167,SNR=29						
VBMS	Vicksburg	18.26	65	P	P	15 19 39.2	+1.3
	baz=254						
N33B	J Bar K, Exete	18.27	32	P	P	15 19 38.1	+0.2
	baz=219						
BGNE	Belgrade	18.48	29	P	P	15 19 39.9	-0.3
	baz=216						
S39A	Bolivar	18.53	46	P	Pn	15 19 41.4	+0.4
	baz=235,SNR=27						
H17A	Grant Village	18.62	359	P	Pn	15 19 44.2	+1.9
	baz=178,SNR=16						
PCIG		18.63	119	eP	P	15 19 38.0	-4.0
SCIG	Sabancuy	18.70	107	eP	Pn	15 19 47.7	+4.6
RSSD	Black Hills	18.98	13	P	P	15 19 44.0	-2.0
RSSD	Black Hills	18.98	13	P	P	15 19 44.0	-2.0
RSSD				pmax	pmax		
	comp=Z,22nm,0.9s						
RSSD	Black Hills	18.98	13	P	Pn	15 19 46.2	-0.4
	baz=197						
YBH	Yreka Blue Hor	19.07	330	P	Pn	15 19 48.2	+0.5
	comp=Z,0.2nm,0.3s,baz=106,slow=6.0,SNR=5.8						
YBH				LR	LR	15 26 38.4	
	comp=Z,4µm,19.5s,baz=167,slow=35						
	comp=Z,4.8nm,0.9s						
YBH	Yreka Blue Hor	19.07	330	P	Pn	15 19 48.2	+0.5

K05A	Summer Lake	19.14	335	P	P	15 19 46.2	-1.5
K05A				IAmb	IAmb	15 19 58.4	
	comp=Z,119nm,1.2s						
CCIG	Comitan	19.17	116	*e*P	Pn	15 19 49.1	0.0
LCAR	Lake Charles	19.18	53	P	Pn	15 19 50.1	+1.3
	baz=243,SNR=11						
RLMT	Red Lodge	19.35	2	P	Pn	15 19 51.3	+0.3
	baz=182,SNR=26						
R40A	Maddies Statio	19.55	46	IAmb	IAmb	15 20 02.2	
	comp=Z,119nm,1.0s						
R40A	Maddies Statio	19.55	46	P	P	15 19 52.2	+0.1
	baz=235,SNR=41						
T42A	Van Buren	19.68	51	P	Pn	15 19 54.2	-0.6
	baz=240						
BOZ	Bozeman (W)	19.85	357	P	Pn	15 19 58.1	+1.1
	baz=176,SNR=43						
OXF	Oxford	19.86	59	P	Pn	15 19 56.5	-0.5
	baz=249						
BMO	Blue Mountains	19.95	345	P	P	15 19 54.7	-1.7
BMO	Blue Mountains	19.95	345	P	P	15 19 54.7	-1.7
BMO				pmax	pmax		
	comp=Z,378nm,2.0s						
J04A	Umpqua Nationa	20.05	334	P	P	15 19 55.8	-1.9
J04A				IAmb	IAmb	15 20 09.5	
	comp=Z,182nm,1.0s						
CCM	Cathedral Cave	20.10	48	P	P	15 19 55.3	-2.7
CCM	Cathedral Cave	20.10	48	IAMs_20	IAMs_20	15 27 56.5	
	comp=Z,14µm,19.0s						
CCM	Cathedral Cave	20.10	48	P	P	15 19 55.3	-2.7
CCM				pmax	pmax		
	comp=Z,64nm,1.3s						
CCM				MLR	MLR		
	comp=Z,14µm,19.0s						
CCM	Cathedral Cave	20.10	48	P	P	15 19 58.4	+0.4
	baz=238						
CCM	Cathedral Cave	20.10	48	P	Pn	15 19 59.5	-0.3
	baz=238,SNR=17						
LRM	Limekiln Ridge	20.13	355	P	P	15 19 56.1	-2.5
P40A	Paris	20.42	43	IAmb	IAmb	15 20 11.8	
	comp=Z,245nm,1.7s						
P40A	Paris	20.42	43	P	P	15 20 02.2	+0.7
	baz=233,SNR=13						
N38A	Joes South For	20.52	39	P	Pn	15 20 04.3	-0.4
	baz=228						
FVM	French Village	20.61	49	P	P	15 20 01.7	-1.9
FVM				IAmb	IAmb	15 20 12.5	
	comp=Z,50nm,1.0s						
FVM	French Village	20.61	49	P	P	15 20 01.7	-1.9
FVM				pmax	pmax		
	comp=Z,51nm,1.0s						
FVM	French Village	20.61	49	P	Pn	15 20 05.4	-0.5
	baz=239,SNR=12						
SUSD	Miller	20.71	23	P	P	15 20 05.4	+0.7
	baz=209						
PETF	Flores	20.73	111	P	P	15 20 02.5	-2.6
PETF				IAmb	IAmb	15 20 13.3	
	comp=Z,96nm,1.3s						
G08A	Pilot Rock	20.78	342	P	P	15 20 04.5	-1.0
G08A				IAmb	IAmb	15 20 14.6	
	comp=Z,95nm,1.1s						
BRAL	Brewton	20.92	70	P	Pn	15 20 09.0	-0.5
	baz=261						
HRY	Holter Researc	20.98	357	Pn	P	15 20 08.0	+0.4
ECSD	EROS Data Cent	21.03	28	P	P	15 20 06.8	-1.3
ECSD				IAmb	IAmb	15 20 20.6	
	comp=Z,55nm,0.9s						
ECSD	EROS Data Cent	21.03	28	IAMs_20	IAMs_20	15 28 01.8	
	comp=Z,17µm,18.0s						
ECSD	EROS Data Cent	21.03	28	P	P	15 20 09.0	+0.9
	baz=216,SNR=27						
ECSD	EROS Data Cent	21.03	28	P	P	15 20 08.8	+0.7
	baz=216,SNR=27						
PLAL	Pickwick Lake	21.05	59	P	P	15 20 05.0	-3.4
PLAL				IAmb	IAmb	15 20 23.5	
	comp=Z,144nm,1.5s						
PLAL				IAMs_20	IAMs_20	15 29 09.9	
	comp=Z,16µm,18.0s						
LAO	LASA Array	21.13	7	P	P	15 20 06.5	-2.6
LAO				IAmb	IAmb	15 20 23.4	
	comp=Z,177nm,1.2s						
LAO	LASA Array	21.13	7	P	P	15 20 10.0	+0.8
	baz=190,SNR=30						
LAO	LASA Array	21.13	7	P	P	15 20 10.2	+1.0
	baz=190,SNR=30						
MSO	Missoula	21.27	353	P	P	15 20 09.5	-1.3
MSO				IAmb	IAmb	15 20 21.4	
	comp=Z,123nm,1.4s						
MSO				IAMs_20	IAMs_20	15 28 31.8	
	comp=Z,9µm,19.0s						
MSO	Missoula	21.27	353	P	P	15 20 12.5	+1.7
	baz=170,SNR=31						
S44A	Carbondale	21.28	51	P	P	15 20 11.8	+1.0
	baz=242,SNR=37						
SCIA	State Center	21.28	37	P	P	15 20 12.5	+1.7
	baz=226,SNR=8.7						
LRAL	Lakeview Retre	21.34	65	IAMs_20	IAMs_20	15 28 55.5	
	comp=Z,14µm,21.0s						
LRAL	Lakeview Retre	21.34	65	P	P	15 20 13.7	+2.2
	baz=256,SNR=5.9						
COR	Corvallis	21.65	334	IAMs_20	IAMs_20	15 29 37.4	
	comp=Z,10µm,18.0s						
N41A	Harden Midland	21.86	42	P	P	15 20 15.0	-2.0
N41A				IAmb	IAmb	15 20 26.9	
	comp=Z,131nm,0.9s						
N41A	Harden Midland	21.86	42	P	P	15 20 19.9	+3.0
	baz=233						
Q44A	Meyer Farm, Va	22.03	48	P	P	15 20 21.2	+2.3
	baz=240						
E28A	Huff	22.09	17	P	P	15 20 20.1	+0.6
	baz=203						
EGMT	Eagleton	22.24	1	P	P	15 20 22.0	+0.8
	baz=181,SNR=16						
V48A	Smith Brothers	22.27	58	P	P	15 20 22.8	+1.3
	baz=250						
D08A	Wollman Farm,	22.41	344	IAmb	IAmb	15 20 31.8	
	comp=Z,64nm,1.0s						
L40A	Anamosa	22.49	39	P	P	15 20 25.8	+2.0
	baz=229,SNR=18						
HDIL	Hopedale	22.73	44	P	P	15 20 28.4	+2.1
	baz=236,SNR=7.5						
CLTN	Cedars of Leba	22.77	57	IAmb	IAmb	15 20 41.2	
	comp=Z,48nm,0.9s						
FPAL	Fort Paine	22.84	62	P	P	15 20 25.9	-1.8
FPAL				IAmb	IAmb	15 20 42.6	
	comp=Z,50nm,1.0s						
F33A	5 Mile Ranch,	22.89	25	IAmb	IAmb	15 20 45.8	
	comp=Z,32nm,0.9s						
F33A	5 Mile Ranch,	22.89	25	P	P	15 20 27.9	-0.1
	baz=213						
553A	Crawfordville	23.04	73	P	P	15 20 30.3	+0.7
	baz=265						
152A	Waverly Hall	23.14	67	IAmb	IAmb	15 20 41.6	
	comp=Z,40nm,0.8s						
DGMT	Dagmar	23.15	10	IAMs_20	IAMs_20	15 29 57.2	
	comp=Z,12µm,18.0s						
DGMT	Dagmar	23.15	10	P	P	15 20 31.2	+0.5
	baz=193						
DGMT	Dagmar	23.15	10	P	P	15 20 32.2	+1.5
	baz=193						
NEW	Newport	23.16	348	P	P	15 20 31.3	+0.5
	comp=Z,13nm,0.7s,baz=165,slow=11,SNR=23						
NEW				Lg	Lg	15 27 39.4	
	comp=Z,0.2nm,0.3s,baz=234,slow=16,SNR=3.1						
NEW				LR	LR	15 29 51.1	
	comp=Z,9µm,18.2s,baz=172,slow=37						
	comp=Z,13nm,0.7s						
NEW	Newport	23.16	348	IAMs_20	IAMs_20	15 29 48.8	
	comp=Z,8µm,19.0s						
NEW	Newport	23.16	348	IAmb	IAmb	15 20 43.9	
	comp=Z,69nm,1.2s						
NEW	Newport	23.16	348	P	P	15 20 31.3	+0.5
NEW	Newport	23.16	348	P	P	15 20 30.8	+0.1
	baz=164,SNR=19						
W50A	Signal Mountai	23.27	60	P	P	15 20 32.8	+0.8
	baz=253						
U49A	Red Boiling Sp	23.33	57	IAmb	IAmb	15 20 54.5	
	comp=Z,73nm,1.3s						
L42A	Oliver, Polo	23.35	41	IAmb	IAmb	15 20 54.8	
	comp=Z,62nm,0.8s						
MDND	Maddock	23.56	18	IAmb	IAmb	15 20 57.0	
	comp=Z,77nm,0.8s						
MDND	Maddock	23.56	18	P	P	15 20 34.3	-0.4
	baz=204						
MDND	Maddock	23.56	18	P	P	15 20 35.1	+0.3
	baz=204						
JFWS	Jewell Farm	23.59	38	P	P	15 20 33.6	-1.5
JFWS	Jewell Farm	23.59	38	P	P	15 20 33.6	-1.5
JFWS				pmax	pmax		
	comp=Z,249nm,2.0s						
JFWS				MLR	MLR		
	comp=Z,6µm,20.0s						
JFWS	Jewell Farm	23.59	38	P	P	15 20 35.6	+0.5
	baz=230						
WCI	Wyandotte Cave	23.61	52	P	P	15 20 33.4	-2.0
WCI				IAmb	IAmb	15 20 52.1	
	comp=Z,105nm,1.4s						
WCI	Wyandotte Cave	23.61	52	IAMs_20	IAMs_20	15 30 13.9	
	comp=Z,14µm,18.0s						
WCI	Wyandotte Cave	23.61	52	P	P	15 20 33.4	-2.0
WCI				pmax	pmax		
	comp=Z,105nm,1.4s						
WCI				MLR	MLR		
	comp=Z,14µm,18.0s						
WCI	Wyandotte Cave	23.61	52	P	P	15 20 35.5	+0.1
	baz=245						
SPMN	Marine on St.	23.89	31	P	P	15 20 39.7	+1.7
	baz=221						
TIGA	Tifton	23.89	70	P	P	15 20 37.2	-1.0
	baz=263						
F36A	Milaca	24.05	29	P	P	15 20 41.0	+1.5
	baz=219,SNR=8.5						
SFIN	Lafayette	24.06	47	P	P	15 20 41.4	+1.9
	baz=240,SNR=10						
SFIN	Lafayette	24.06	47	P	P	15 20 42.9	+3.3
	baz=240,SNR=10						
V51A	Loudon	24.19	59	P	P	15 20 42.3	+1.3
	baz=252						
TGUH	Tegucigalpa,Un	24.33	114	IAMs_20	IAMs_20	15 29 26.6	
	comp=Z,8µm,21.0s						
L44A	Lake County Fo	24.51	42	IAMs_20	IAMs_20	15 30 44.7	
	comp=Z,16µm,21.0s						
L44A	Lake County Fo	24.51	42	P	P	15 20 44.3	+0.5
	baz=235						
K43A	Burlington	24.57	41	P	P	15 20 41.8	-2.5
K43A				IAmb	IAmb	15 20 55.7	
	comp=Z,33nm,0.8s						
TKL	Tuckaleechee C	24.60	60	P	P	15 20 48.0	+3.4
	comp=Z,23nm,0.9s,baz=202,slow=8.5,SNR=11						
TKL				Lg	Lg	15 28 25.2	
	comp=Z,0.2nm,0.3s,baz=126,slow=7.1,SNR=1.2						
TKL				LR	LR	15 30 52.9	
	comp=Z,9µm,18.6s,baz=253,slow=38						
656A	Willston	24.64	75	P	P	15 20 46.5	+1.4
	baz=268						
TZTN	Tazewell	25.04	58	P	P	15 20 50.2	+1.6
	baz=252						
AGMN	Agassiz Nation	25.12	23	IAmb	IAmb	15 21 00.1	
	comp=Z,32nm,0.8s						
AGMN	Agassiz Nation	25.12	23	P	P	15 20 50.5	+1.3
	baz=211,SNR=18						
AGMN	Agassiz Nation	25.12	23	P	P	15 20 49.9	+0.7
	baz=211,SNR=18						
G40A	Rib Lake	25.19	34	P	P	15 20 51.6	+1.7
	baz=226,SNR=9.0						
P49A	Miami Univ. Ec	25.28	51	IAMs_20	IAMs_20	15 30 57.0	
	comp=Z,10µm,20.0s						
P49A	Miami Univ. Ec	25.28	51	P	P	15 20 51.3	+0.5
	baz=244,SNR=6.5						
O48B	Farmland	25.30	49	P	P	15 20 52.4	+1.5
	baz=242,SNR=11						
O48B	Farmland	25.30	49	P	P	15 20 52.6	+1.7
	baz=242,SNR=11						
B35A	Bob, Littlefor	25.96	25	P	P	15 20 54.5	-2.3
COWI	Conover	26.31	34	IAMs_20	IAMs_20	15 31 00.4	
	comp=Z,6µm,18.0s						
KMSC	Kings Mountain	26.40	62	P	P	15 21 02.7	+1.7
	baz=257						
BOAB	BOACO BROADBAN	26.51	115	IAMs_20	IAMs_20	15 31 39.4	
	comp=Z,10µm,19.0s						
EYMN	Ely	26.55	29	IAMs_20	IAMs_20	15 30 45.8	
	comp=Z,7µm,22.0s						
EYMN	Ely	26.55	29	P	P	15 21 03.0	+0.9
	baz=220						
ACSO	Alum Creek Sta	26.79	51	IAMs_20	IAMs_20	15 32 01.8	
	comp=Z,11µm,18.0s						
ACSO	Alum Creek Sta	26.79	51	P	P	15 21 05.8	+1.4
	baz=245						
ULM	Lac du Bonnet	26.81	20	P	P	15 21 05.5	+1.1
	comp=Z,4.6nm,0.5s,baz=215,slow=9.8,SNR=8.5						
ULM				Lg	Lg	15 29 26.4	
	comp=Z,0.2nm,0.3s,baz=287,slow=21,SNR=3.4						
ULM				LR	LR	15 31 04.0	
	comp=Z,4µm,18.1s,baz=208,slow=35						
	comp=Z,4.6nm,0.5s						
ULM	Lac du Bonnet	26.81	20	P	P	15 21 05.5	+1.1
P52A	Corning	27.15	52	IAMs_20	IAMs_20	15 32 29.4	
	comp=Z,8µm,21.0s						
P52A	Corning	27.15	52	P	P	15 21 09.7	+2.0
	baz=248						
BLA	Blacksburg	27.63	58	IAMs_20	IAMs_20	15 31 40.1	
	comp=Z,5µm,19.0s						
BLA	Blacksburg	27.63	58	P	P	15 21 13.5	+1.5
	baz=254						
JTS	Las Juntas de	28.31	118	P	P	15 21 23.4	+5.1
	comp=Z,3.8nm,0.3s,baz=220,slow=14,SNR=4.3						
JTS				LR	LR	15 34 04.3	
	comp=Z,4µm,18.6s,baz=306,slow=40						
JTS	Las Juntas de	28.31	118	*c i*P	P	15 21 22.2	+3.9
JTS				pmax	pmax		
	comp=Z,25nm,1.3s						
MCWV	Mont Chateau	28.81	54	IAMs_20	IAMs_20	15 33 17.3	
	comp=Z,10µm,18.0s						
MCWV	Mont Chateau	28.81	54	P	P	15 21 23.8	+1.3
	baz=250						
BRLDA	Berland Lookou	28.84	351	IAmb	IAmb	15 21 35.0	
	comp=Z,34nm,1.0s						
M53A	WI Miller and	28.88	50	IAMs_20	IAMs_20	15 33 10.2	
	comp=Z,11µm,19.0s						
M53A	WI Miller and	28.88	50	P	P	15 21 23.6	+0.6
	baz=246						
CNNC	Cliffs of the	29.18	63	IAMs_20	IAMs_20	15 33 58.2	
	comp=Z,10µm,19.0s						
FFC	Flin Flon	29.56	10	P	P	15 21 26.9	-2.1
FFC	Flin Flon	29.56	10	IAMs_20	IAMs_20	15 33 22.8	
	comp=Z,7µm,21.0s						
FFC	Flin Flon	29.56	10	P	P	15 21 26.9	-2.1
FFC				pmax	pmax		
	comp=Z,24nm,1.3s						
FFC				MLR	MLR		
	comp=Z,7µm,21.0s						
ERPA	Erie	29.62	49	IAMs_20	IAMs_20	15 32 41.8	
	comp=Z,10µm,19.0s						
ERPA	Erie	29.62	49	P	P	15 21 30.8	+1.2
	baz=246						
BBB	Bella Bella	29.74	337	LR	LR	15 33 03.2	
	comp=Z,5µm,20.3s,baz=164,slow=36						
CBN	Corbin Frederi	30.22	58	IAMs_20	IAMs_20	15 33 22.7	
	comp=Z,4µm,18.0s						
SSPA	Standing Stone	30.55	53	IAMs_20	IAMs_20	15 34 11.4	
	comp=Z,8µm,18.0s						
SSPA	Standing Stone	30.55	53	P	P	15 21 38.4	+0.5
	baz=251						
MTDJ	Mount Denham	31.01	97	IAMs_20	IAMs_20	15 34 58.6	
	comp=Z,4µm,21.0s						
SADO	Sadowa	31.31	45	P	P	15 21 45.8	+1.2
	comp=Z,5.3nm,0.9s,baz=234,slow=7.4,SNR=3.7						
SADO				LR	LR	15 35 39.8	
	comp=Z,2µm,19.7s,baz=257,slow=39						
	comp=Z,5.3nm,0.9s						
BINY	Binghamton	32.41	51	IAMs_20	IAMs_20	15 35 19.8	
	comp=Z,9µm,19.0s						
BINY	Binghamton	32.41	51	P	P	15 21 53.6	-0.7
	baz=250						
BCIP	Isla Barro Col	33.08	114	IAMs_20	IAMs_20	15 35 58.6	
	comp=Z,4µm,19.0s						
WSPT	Westport, CT	34.00	54	IAMs_20	IAMs_20	15 35 34.9	
	comp=Z,7µm,18.0s						
CRAG	Craig	34.15	337	P	P	15 22 08.9	-0.3
	baz=141						
LONY	Lake Ozonia	34.22	47	IAMs_20	IAMs_20	15 35 25.6	
	comp=Z,8µm,18.0s						
YLE	Yale	34.33	54	IAMs_20	IAMs_20	15 36 53.8	
	comp=Z,7µm,18.0s						
T35M	Bob Quinn	34.42	340	P	P	15 22 11.9	+0.3
	baz=147						
WRAK	Wrangell Islan	34.63	338	P	P	15 22 13.4	+0.1
	baz=143						
L61B	Northampton	34.82	52	IAMs_20	IAMs_20	15 34 55.5	
	comp=Z,6µm,18.0s						
FCC	Fort Churchill	34.86	15	IAmb	IAmb	15 22 37.7	
	comp=Z,45nm,1.1s						
VT1	Waterbury	35.35	49	IAMs_20	IAMs_20	15 36 09.4	
	comp=Z,8µm,19.0s						
LIRD	Liard River Hi	35.47	346	P	P	15 22 20.9	+0.3
	baz=155						
S34M	Telegraph Cree	35.47	341	P	P	15 22 21.3	+0.7
	baz=146						
DLBC	Dease Lake	35.59	342	P	P	15 22 23.0	+1.3
	comp=Z,6.7nm,0.8s,baz=154,slow=6.1,SNR=9.8						
DLBC				LR	LR	15 36 30.3	
	comp=Z,8µm,19.2s,baz=155,slow=36						
	comp=Z,6.7nm,0.8s						
DLBC	Dease Lake	35.59	342	P	P	15 22 23.0	+1.3
	baz=148						
HRV	Adam Dziewonsk	35.63	52	IAMs_20	IAMs_20	15 37 19.0	
	comp=Z,7µm,21.0s						
KOTAN	Kotaneelee Air	35.71	348	P	P	15 22 23.5	+0.9
	baz=158,SNR=15						
WES	Weston	35.77	52	IAMs_20	IAMs_20	15 35 25.7	
	comp=Z,4µm,18.0s						
GRTK	Grand Turk	35.82	88	IAMs_20	IAMs_20	15 38 29.5	
	comp=Z,5µm,22.0s						
BCX	Boston College	35.87	53	IAMs_20	IAMs_20	15 38 03.0	
	comp=Z,6µm,18.0s						
M65A	Busby, Falmout	36.06	54	IAMs_20	IAMs_20	15 38 07.2	
	comp=Z,5µm,20.0s						
Q32M	Nakina River	36.67	341	P	P	15 22 32.7	+1.6
	baz=145						
WTLY	Watson Lake, Y	36.72	344	P	P	15 22 32.0	+0.7
	baz=151,SNR=8.3						
JIS	Juneau Island	36.78	339	IAMs_20	IAMs_20	15 37 19.4	
	comp=Z,4µm,18.0s						
YKA	Yellowknife Ar	36.87	356	P	P	15 22 32.8	+0.3
	comp=Z,3.2nm,0.8s,baz=176,slow=8.3,SNR=36						
YKA				PcP	PcP	15 24 56.0	+1.9
	comp=Z,0.9nm,1.0s,baz=162,slow=3.3,SNR=2.1						
YKA				LR	LR	15 38 07.3	
	comp=Z,9µm,19.6s,baz=186,slow=37						
	comp=Z,3.2nm,0.8s						
YKA	Yellowknife Ar	36.87	356	P	P	15 22 32.8	+0.3
YKA						15 24 56.0	
UREC	San Jos de Ur	37.41	112	*e*P	P	15 22 38.1	+0.3
WVL	Waterville	37.53	50	IAMs_20	IAMs_20	15 37 18.1	
	comp=Z,6µm,18.0s						
P32M	Atlin	37.62	340	P	P	15 22 39.7	+0.7
	baz=144						
P33M	Teslin, Yukon	37.86	342	IAMs_20	IAMs_20	15 39 02.7	
	comp=Z,5µm,18.0s						
P33M	Teslin, Yukon	37.86	342	P	P	15 22 41.8	+0.7
	baz=145						
PKME	Peaks-Kenny Pk	37.98	49	P	P	15 22 42.8	+0.7
	baz=253						
SKAG	Skagway	38.01	339	P	P	15 22 42.5	+0.2
	baz=141						
CBOC	Ciudad Bolivar	38.06	115	*e*P	P	15 22 52.1	+8.7
ZARC	Zaragoza, Cauc	38.12	112	*e*P	P	15 22 42.6	-1.1
HELC	Santa Helena	38.27	115	*e*P	P	15 22 53.8	+8.4
PLBC	Pleasant Camp	38.35	339	P	P	15 22 44.2	-0.9
	baz=140						
PLMC	San Jos del P	38.40	117	*e*P	P	15 22 53.8	+7.7
WRGLY	Wrigley	38.52	350	P	P	15 22 46.4	-0.1
	baz=160						
N32M	Quiet Lake	38.71	342	P	P	15 22 48.7	+0.4
	baz=146						
YOTC	Yotoco, Valle	38.90	118	*e*P	P	15 22 50.9	+0.5
PTBC	PUERTO BERRIO,	38.97	113	*e*P	P	15 22 50.4	-0.5
P30M	Million Dollar	39.05	339	P	P	15 22 53.2	+2.1
	baz=140						
NORC	Norcasia	39.17	115	*e*P	P	15 22 59.0	+6.4
PQI	Presque Isle	39.24	47	IAMs_20	IAMs_20	15 36 55.5	
	comp=Z,4µm,22.0s						
O30N	Mendenhall	39.28	340	P	P	15 22 53.4	+0.5
	baz=141						
BRRC	Barranca, Sant	39.28	112	*e*P	P	15 23 00.3	+6.9
BBAC	Balboa, Cauca	39.40	121	*e*P	P	15 22 55.1	+0.4
POPC	Popayan, Colom	39.52	120	*e*P	P	15 22 55.0	-0.8
PNL	Peninsula	39.54	337	P	P	15 22 56.0	+0.9
	baz=136						
OTAV	Otavalo	39.65	125	P	P	15 22 53.9	-3.2
OTAV				IAmb	IAmb	15 23 07.3	
	comp=Z,45nm,1.4s						
OTAV	Otavalo	39.65	125	P	P	15 22 53.9	-3.2
OTAV				pmax	pmax		
	comp=Z,45nm,1.5s						
OTAV	Otavalo	39.65	125	*e*P	P	15 22 57.6	+0.5
FARO	Faro, Yukon	39.68	343	P	P	15 22 57.5	+1.2
	baz=146						
O29M	Mount Kennedy	39.72	338	P	P	15 22 58.0	+1.3
	baz=138						
N31M	Braeburn, Yuko	39.75	341	IAMs_20	IAMs_20	15 40 11.6	
	comp=Z,5µm,21.0s						
N31M	Braeburn, Yuko	39.75	341	P	P	15 22 57.3	+0.5
	baz=142						
HYT	Haines Junctio	39.76	339	P	P	15 22 57.5	+0.4
	baz=140						
SPBC	San Pablo de B	39.77	114	*e*P	P	15 23 00.1	+2.4
ORTC	Ortega, Tolima	39.82	117	*e*P	P	15 23 05.5	+7.5
BCPM	Bancas Point	39.83	337	P	P	15 22 54.5	-3.0
BCPM				IAMs_20	IAMs_20	15 40 00.1	
	comp=Z,2µm,18.0s						
M31M	Drury Creek, Y	39.93	342	IAMs_20	IAMs_20	15 38 54.5	
	comp=Z,4µm,20.0s						
M31M	Drury Creek, Y	39.93	342	P	P	15 22 59.7	+1.3
	baz=145						
BARC	Barichara	40.00	112	*e*P	P	15 23 00.4	+0.7
PAMC	Pamplona, Colo	40.01	111	*e*P	P	15 23 00.5	+0.4
ROSC	El Rosal	40.03	115	P	P	15 23 02.0	+1.9
	comp=Z,7.1nm,0.4s,baz=288,slow=20,SNR=1.1						
ROSC				LR	LR	15 41 44.0	
	comp=Z,3µm,18.6s,baz=335,slow=40						
	comp=Z,7.1nm,0.4s						
ROSC	El Rosal	40.03	115	P	P	15 23 02.1	+1.9
N30M	Aishikik Lake	40.12	340	P	P	15 23 00.8	+0.8
	baz=140						
YUK6	Outpost Mounta	40.13	339	P	P	15 23 00.7	+0.5
	baz=138						
BONI	La Bonita	40.20	124	*e*P	P	15 23 09.7	+8.3
PRAC	Prado	40.22	117	*e*P	P	15 23 07.5	+6.1
RUSC	La Rusia	40.46	113	P	P	15 23 00.8	-3.0
RUSC	La Rusia	40.46	113	*e*P	P	15 23 03.6	-0.2
YUK4	Talbot Arm	40.52	339	P	P	15 23 04.0	+0.6
	baz=139						
PORT	Chimborazo Vol	40.57	127	P	P	15 23 01.8	-3.0
PORT				IAmb	IAmb	15 23 23.2	
	comp=Z,39nm,1.2s						
O28M	Mount Upton	40.61	338	P	P	15 23 04.7	+0.4
	baz=136						
CHIC	Chingaza	40.63	115	*e*P	P	15 23 04.2	-0.9
YUK8	Steele Glacier	40.84	339	P	P	15 23 06.3	+0.1
	baz=137,SNR=6.0						
M30M	Minto, Yukon	40.91	341	IAMs_20	IAMs_20	15 40 56.2	
	comp=Z,5µm,18.0s						
M30M	Minto, Yukon	40.91	341	P	P	15 23 06.4	0.0
	baz=142						
FLOC	Florencia	40.91	120	*e*P	P	15 23 11.9	+4.9
SDV	Santo Domingo	41.00	107	P	P	15 23 07.9	-0.1
	comp=Z,12nm,0.8s,baz=313,slow=4.8,SNR=14						
SDV				LR	LR	15 41 41.9	
	comp=Z,3µm,19.4s,baz=300,slow=38						
	comp=Z,12nm,0.8s						
SDV	Santo Domingo	41.00	107	P	P	15 23 04.8	-3.2
SDV				IAmb	IAmb	15 23 16.6	
	comp=Z,23nm,0.8s						
SDV				IAMs_20	IAMs_20	15 41 10.9	
	comp=Z,3µm,19.0s						
SJG	San Juan	41.28	92	P	P	15 23 10.0	0.0
	comp=Z,12nm,0.3s,baz=286,slow=3.1,SNR=5.1						
SJG				LR	LR	15 41 29.4	
	comp=Z,2µm,21.9s,baz=304,slow=38						
	comp=Z,12nm,0.3s						
SJG	San Juan	41.28	92	P	P	15 23 10.0	0.0
M29M	Somme Creek	41.30	340	P	P	15 23 10.1	+0.4
	baz=140						
YUK3	Moose Creek	41.43	339	P	P	15 23 10.7	-0.2
	baz=136,SNR=5.3						
L29M	L29M	41.71	341	P	P	15 23 12.9	-0.1
	baz=140						
BVCY	Beaver Creek	42.02	339	P	P	15 23 15.7	+0.1
	baz=136						
MCARA	McCarthy VSAT	42.02	337	IAMs_20	IAMs_20	15 41 26.2	
	comp=Z,2µm,19.0s						
MCARA	McCarthy VSAT	42.02	337	P	P	15 23 16.3	+0.7
	baz=133						
K29M	Barlow Dome	42.11	342	P	P	15 23 18.3	+2.0
	baz=142						
POHA	Pohakuloa	42.20	272	IAMs_20	IAMs_20	15 35 21.4	
	comp=Z,6µm,21.0s						
MLOA	Mauna Loa Obse	42.31	271	P	P	15 23 16.2	-2.7
M27K	Edge Creek, AK	42.31	339	IAMs_20	IAMs_20	15 39 55.7	
	comp=Z,3µm,20.0s						
M27K	Edge Creek, AK	42.31	339	P	P	15 23 18.5	+0.4
	baz=135						

EYAK	**Cordova Ski Ar**	**42.48**	**335**	P	**P**	**15 23 19.6**	**+0.3**
	baz=129						
M26K	**Nabesna, AK**	**42.72**	**338**	IAMs_20	IAMs_20	15 43 16.3	
	comp=Z,3µm,19.0s						
M26K	**Nabesna, AK**	**42.72**	**338**	P	**P**	**15 23 22.0**	**+0.7**
	baz=134						
N25K	**Chitina, Valde**	**42.73**	**336**	P	**P**	**15 23 21.5**	**+0.1**
	baz=131						
J29M	**Klondike Camp**	**42.78**	**342**	IAMs_20	IAMs_20	15 41 15.6	
	comp=Z,4µm,18.0s						
J29M	**Klondike Camp**	**42.78**	**342**	P	**P**	**15 23 21.7**	**0.0**
	baz=141						
L27K	**Beaver Creek,**	**42.80**	**339**	IAMs_20	IAMs_20	15 41 31.5	
	comp=Z,4µm,19.0s						
L27K	**Beaver Creek,**	**42.80**	**339**	P	**P**	**15 23 22.8**	**+0.9**
	baz=136						
P23K	**Montague Islan**	**42.80**	**333**	P	**P**	**15 23 23.2**	**+1.4**
	baz=126						
DAWY	**Dawson**	**42.80**	**342**	P	**P**	**15 23 20.6**	**-1.3**
DAWY				IAmb	IAmb	15 23 30.8	
	comp=Z,40nm,1.1s						
DAWY	**Dawson**	**42.80**	**342**	P	**P**	**15 23 23.2**	**+1.2**
	baz=139,SNR=27						
SCHQ	**Schefferville**	**42.90**	**36**	P	**P**	**15 23 23.7**	**+0.9**
	comp=Z,12nm,0.9s,baz=243,slow=6.1,SNR=16						
SCHQ				LR	LR	15 41 46.1	
	comp=Z,4µm,19.5s,baz=248,slow=37						
	comp=Z,12nm,0.9s						
SCHQ	**Schefferville**	**42.90**	**36**	P	**P**	**15 23 19.3**	**-3.5**
SCHQ				IAmb	IAmb	15 23 33.7	
	comp=Z,24nm,0.9s						
KLU	**Klutina**	**43.15**	**336**	P	**P**	**15 23 27.8**	**+3.0**
	baz=129						
L26K	**Log Cabin Wild**	**43.27**	**339**	IAMs_20	IAMs_20	15 40 39.9	
	comp=Z,3µm,20.0s						
L26K	**Log Cabin Wild**	**43.27**	**339**	P	**P**	**15 23 27.7**	**+2.0**
	baz=134						
HARP	**HAARP**	**43.46**	**337**	P	**P**	**15 23 27.7**	**+0.5**
	baz=131						
I29M	**Ogilvie Camp,**	**43.51**	**343**	IAMs_20	IAMs_20	15 41 42.1	
	comp=Z,3µm,20.0s						
I29M	**Ogilvie Camp,**	**43.51**	**343**	P	**P**	**15 23 29.0**	**+1.3**
	baz=142						
K27K	**Chicken**	**43.57**	**340**	P	**P**	**15 23 26.6**	**-1.5**
K27K				IAmb	IAmb	15 23 57.1	
	comp=Z,24nm,1.0s						
K27K				IAMs_20	IAMs_20	15 42 32.9	
	comp=Z,4µm,21.0s						
M24K	**Tolsona, Glenn**	**43.63**	**336**	IAMs_20	IAMs_20	15 42 59.7	
	comp=Z,2µm,20.0s						
M24K	**Tolsona, Glenn**	**43.63**	**336**	P	**P**	**15 23 29.5**	**+0.9**
	baz=130						
PWL	**Port Wells**	**43.68**	**334**	P	**P**	**15 23 30.0**	**+0.9**
	baz=126						
EGAK	**Eagle**	**43.85**	**341**	IAMs_20	IAMs_20	15 42 31.0	
	comp=Z,3µm,20.0s						
EGAK	**Eagle**	**43.85**	**341**	P	**P**	**15 23 31.1**	**+0.8**
	baz=138,SNR=5.9						
KDAK	**Kodiak Island**	**43.88**	**329**	P	**P**	**15 23 33.0**	**+2.4**
	comp=Z,5.6nm,0.7s,baz=102,slow=6.9,SNR=1.5						
KDAK				LR	LR	15 40 16.5	
	comp=Z,2µm,18.2s,baz=147,slow=34						
	comp=Z,5.6nm,0.7s						
KDAK	**Kodiak Island**	**43.88**	**329⇑**	*e*P	**P**	**15 23 34.3**	**+3.7**
KDAK				pmax	pmax		
	comp=Z,192nm,1.9s						
KDAK	**Kodiak Island**	**43.88**	**329**	P	**P**	**15 23 32.1**	**+1.5**
	baz=118						
SCM	**Sheep Creek Mo**	**43.88**	**336**	P	**P**	**15 23 30.2**	**-0.5**
	baz=128						
EPYK	**Eagle Plains**	**43.93**	**345**	IAMs_20	IAMs_20	15 43 00.1	
	comp=Z,5µm,20.0s						
EPYK	**Eagle Plains**	**43.93**	**345**	P	**P**	**15 23 32.5**	**+1.5**
	baz=144,SNR=12						
PAX	**Paxson**	**43.94**	**338**	P	**P**	**15 23 32.4**	**+1.2**
	baz=131						
OHAK	**Old Harbor**	**43.95**	**328**	P	**P**	**15 23 31.6**	**+0.4**
	baz=117						
M23K	**Glacier View**	**44.01**	**335**	P	**P**	**15 23 32.6**	**+0.9**
	baz=128						
BRSE	**Bradley Lake S**	**44.05**	**332**	P	**P**	**15 23 33.6**	**+1.6**
	baz=122						
KNK	**Knik Glacier**	**44.06**	**335**	P	**P**	**15 23 32.9**	**+0.8**
	baz=126						
SABA	**Saba**	**44.06**	**91**	IAMs_20	IAMs_20	15 45 27.8	
	comp=Z,3µm,21.0s						
SCRK	**Sand Creek**	**44.13**	**339**	IAMs_20	IAMs_20	15 42 02.7	
	comp=Z,4µm,20.0s						
SCRK	**Sand Creek**	**44.13**	**339**	P	**P**	**15 23 34.1**	**+1.3**
	baz=134						
F31M	**Tsiigehtchic**	**44.18**	**347**	P	**P**	**15 23 34.5**	**+1.6**
	baz=149,SNR=21						
SML	**Sawmill**	**44.24**	**335**	P	**P**	**15 23 34.0**	**+0.4**
	baz=127						
RIDG	**Independent Ri**	**44.25**	**339**	IAMs_20	IAMs_20	15 41 05.8	
	comp=Z,4µm,20.0s						
RIDG	**Independent Ri**	**44.25**	**339**	P	**P**	**15 23 33.9**	**+0.3**
	baz=132						
G30M	**tAoh Zraii Nji**	**44.32**	**346**	P	**P**	**15 23 33.6**	**-0.5**
	baz=145						
RC01	**Rabbit Creek A**	**44.37**	**334**	P	**P**	**15 23 35.1**	**+0.5**
	baz=125						
C36M	**Paulatuk**	**44.41**	**353**	P	**P**	**15 23 34.2**	**-0.6**
	baz=162						
PMR	**Palmer**	**44.42**	**334**	P	**P**	**15 23 36.4**	**+1.5**
	baz=126						
I27K	**Kandik River**	**44.59**	**342**	P	**P**	**15 23 37.9**	**+1.6**
	baz=138						
K24K	**Donnelly Dome**	**44.60**	**338**	P	**P**	**15 23 37.3**	**+0.9**
	baz=131,SNR=13						
I26K	**Coal Creek Min**	**44.82**	**341**	IAMs_20	IAMs_20	15 42 18.5	
	comp=Z,4µm,18.0s						
I26K	**Coal Creek Min**	**44.82**	**341**	P	**P**	**15 23 39.3**	**+1.3**
	baz=136						
INK	**Inuvik**	**44.88**	**348**	P	**P**	**15 23 39.6**	**+1.2**
	comp=Z,10.0nm,0.9s,baz=153,slow=9.7,SNR=9.1						
INK				LR	LR	15 42 34.1	
	comp=Z,5µm,18.3s,baz=146,slow=36						
	comp=Z,10.0nm,0.9s						
INK	**Inuvik**	**44.88**	**348**	P	**P**	**15 23 37.7**	**-0.7**
INK				IAmb	IAmb	15 23 49.8	
	comp=Z,41nm,1.2s						
INK	**Inuvik**	**44.88**	**348**	P	**P**	**15 23 39.7**	**+1.2**
INK	**Inuvik**	**44.88**	**348**	P	**P**	**15 23 39.6**	**+1.2**
	baz=149						
ATAH	**Atahualpa**	**44.89**	**132**	P	**P**	**15 23 40.3**	**+0.7**
	comp=Z,3.5nm,0.3s,baz=20,slow=9.1,SNR=3.7						
ATAH				LR	LR	15 40 47.8	
	comp=Z,1µm,18.9s,baz=326,slow=34						
	comp=Z,3.5nm,0.3s						
SUA	**Susitna One**	**44.99**	**334**	P	**P**	**15 23 40.0**	**+0.4**
	baz=124,SNR=7.1						
O20K	**Slope Mountain**	**45.03**	**331**	P	**P**	**15 23 40.8**	**+0.9**
	baz=120						
H27K	**Steamboat Moun**	**45.04**	**343**	P	**P**	**15 23 41.1**	**+1.3**
	baz=138						
P19K	**Oil Pt**	**45.08**	**331**	P	**P**	**15 23 41.7**	**+1.4**
	baz=119						
TAOE	**Nuku Hiva Isla**	**45.16**	**224**	*e*S	**S**	**15 30 26.3**	**+4.7**
	comp=Z,116nm,22.0s						
TAOE				*e*LR	LR	15 36 26.0	
	comp=Z,3µm,24.6s						
CUT	**Chulitna**	**45.34**	**335**	P	**P**	**15 23 41.6**	**-0.6**
	baz=125						
HDA	**Harding Lake**	**45.38**	**339**	IAMs_20	IAMs_20	15 41 35.9	
	comp=Z,3µm,19.0s						
HDA	**Harding Lake**	**45.38**	**339**	P	**P**	**15 23 43.2**	**+0.6**
	baz=130						
RND	**Reindeer**	**45.41**	**337**	IAMs_20	IAMs_20	15 42 32.7	
	comp=Z,2µm,18.0s						
Q18K	**Katmai Hardscr**	**45.42**	**329**	P	**P**	**15 23 43.7**	**+0.6**
	baz=117						
SPCR	**Spurr Chakacha**	**45.44**	**333**	P	**P**	**15 23 43.6**	**+0.5**
	baz=122						
G27K	**Doyon Strip**	**45.51**	**343**	P	**P**	**15 23 44.0**	**+0.4**
	baz=138						
SKT	**Skwentna**	**45.59**	**334**	IAMs_20	IAMs_20	15 44 10.5	
	comp=Z,2µm,18.0s						
SKT	**Skwentna**	**45.59**	**334**	P	**P**	**15 23 41.9**	**-2.3**
	baz=123,SNR=6.5						
IL31		**45.60**	**339**	P	**P**	**15 23 43.4**	**-0.8**
ILAR	**Eielson Array**	**45.60**	**339**	P	**P**	**15 23 45.8**	**+1.5**
	comp=Z,5.4nm,0.8s,baz=153,slow=6.6,SNR=43						
	comp=Z,5.4nm,0.8s						
ILAR	**Eielson Array**	**45.60**	**339**	P	**P**	**15 23 45.8**	**+1.5**
MCK	**McKinley**	**45.63**	**337**	P	**P**	**15 23 45.2**	**+0.6**
	baz=128						
R17K	**Ugashik Creek**	**45.65**	**327**	P	**P**	**15 23 45.2**	**+0.4**
	baz=114						
PCRV	**Puerto La Cruz**	**45.65**	**101**	LR	LR	15 46 04.8	
	comp=Z,1µm,18.1s,slow=40						
Q17K	**Contact Creek**	**45.67**	**328**	P	**P**	**15 23 46.1**	**+1.1**
	baz=115						
PRP	**Porcupine Dome**	**45.67**	**340**	IAMs_20	IAMs_20	15 41 53.4	
	comp=Z,3µm,21.0s						
PRP	**Porcupine Dome**	**45.67**	**340**	P	**P**	**15 23 45.6**	**+0.6**
	baz=133,SNR=17						
CCB	**Clear Creek Bu**	**45.82**	**338**	IAmb	IAmb	15 23 55.2	
	comp=Z,32nm,1.4s						
CCB				IAMs_20	IAMs_20	15 43 06.4	
	comp=Z,2µm,18.0s						
O19K	**Port Alsworth**	**45.83**	**331**	P	**P**	**15 23 47.0**	**+0.9**
	baz=119,SNR=5.1						
P18K	**Big Mountain,**	**45.86**	**330**	P	**P**	**15 23 46.9**	**+0.5**
	baz=117						
TRF	**Thorofare Moun**	**45.95**	**336**	P	**P**	**15 23 48.7**	**+1.4**
	baz=126,SNR=18						
COLA	**College**	**45.98**	**339**	P	**P**	**15 23 44.7**	**-2.6**
COLA				IAmb	IAmb	15 23 58.2	
	comp=Z,46nm,1.2s						
COLA	**College**	**45.98**	**339**	IAMs_20	IAMs_20	15 43 24.8	
	comp=Z,3µm,19.0s						
COLA	**College**	**45.98**	**339*c***	*i*P	**P**	**15 23 49.3**	**+2.0**
COLA				pmax	pmax		
	comp=Z,52nm,1.4s						
COLA	**College**	**45.98**	**339**	P	**P**	**15 23 48.5**	**+1.2**
	baz=130						
TCOL	**CIGO, UAF Yank**	**45.99**	**339**	P	**P**	**15 23 44.6**	**-2.7**
TCOL				IAmb	IAmb	15 23 58.2	
	comp=Z,46nm,1.2s						
TCOL				IAMs_20	IAMs_20	15 43 24.8	
	comp=Z,3µm,19.0s						
TCOL	**CIGO, UAF Yank**	**45.99**	**339**	P	**P**	**15 23 48.4**	**+1.1**
	baz=130						
POKR	**Poker Plat Res**	**46.01**	**339**	IAMs_20	IAMs_20	15 42 59.2	
	comp=Z,4µm,18.0s						
POKR	**Poker Plat Res**	**46.01**	**339**	P	**P**	**15 23 47.2**	**-0.3**
	baz=130,SNR=17						
ABD	**La Joyeuse, An**	**46.02**	**92**	IAMs_20	IAMs_20	15 44 39.8	
	comp=Z,2µm,21.0s						
CBE	**Ff, Capester**	**46.05**	**92**	IAMs_20	IAMs_20	15 45 04.6	
	comp=Z,2µm,20.0s						
O18K	**Koktuh Hills**	**46.06**	**330**	IAMs_20	IAMs_20	15 42 05.4	
	comp=Z,2µm,18.0s						
O18K	**Koktuh Hills**	**46.06**	**330**	P	**P**	**15 23 49.1**	**+1.1**
	baz=117						
BWN	**Browne**	**46.09**	**337**	IAMs_20	IAMs_20	15 41 51.1	
	comp=Z,2µm,18.0s						
M20K	**Styx River**	**46.17**	**333**	P	**P**	**15 23 49.3**	**+0.4**
	baz=121						
G26K	**Porcupine Rive**	**46.18**	**342**	P	**P**	**15 23 51.0**	**+2.2**
	baz=136						
N19K	**Bonanza Creek**	**46.20**	**332**	P	**P**	**15 23 49.5**	**+0.4**
	baz=119						
R16K	**Pilot Point**	**46.20**	**327**	P	**P**	**15 23 49.1**	**0.0**
	baz=113						
Q16K	**King Salmon**	**46.21**	**328**	P	**P**	**15 23 51.1**	**+1.9**
	baz=115						
NEA2	**Nenana**	**46.21**	**338**	IAMs_20	IAMs_20	15 45 36.8	
	comp=Z,3µm,18.0s						
NEA2	**Nenana**	**46.21**	**338**	P	**P**	**15 23 50.3**	**+1.1**
	baz=128,SNR=23						
KTH	**Kantishna Hill**	**46.24**	**336**	IAMs_20	IAMs_20	15 44 19.7	
	comp=Z,2µm,19.0s						
FYU	**Fort Yukon**	**46.31**	**341**	IAMs_20	IAMs_20	15 44 29.1	
	comp=Z,4µm,18.0s						
PPLA	**Purkeypile**	**46.34**	**335**	P	**P**	**15 23 51.8**	**+1.5**
	baz=123,SNR=24						
MAGL	**Barre de l’ile**	**46.39**	**92**	IAMs_20	IAMs_20	15 44 16.5	
	comp=Z,2µm,20.0s						
E27K	**Coleen River**	**46.53**	**344**	P	**P**	**15 23 53.2**	**+1.6**
	baz=140						
BPAW	**Bear Paw Mtn.**	**46.58**	**337**	P	**P**	**15 23 53.5**	**+1.4**
	baz=126,SNR=26						
FRB	**Frobisher Bay**	**46.59**	**24**	LR	LR	15 41 28.3	
	comp=Z,2µm,21.8s,baz=234,slow=34						
CAST	**Castle Rocks**	**46.59**	**336**	P	**P**	**15 23 53.8**	**+1.6**
	baz=124,SNR=5.1						
H24K	**Noodor Dome**	**46.62**	**340**	P	**P**	**15 23 54.4**	**+2.0**
	baz=130						
I23K	**Minto, Yukon-K**	**46.65**	**338**	IAMs_20	IAMs_20	15 43 41.5	
	comp=Z,3µm,18.0s						
I23K	**Minto, Yukon-K**	**46.65**	**338**	P	**P**	**15 23 53.1**	**+0.5**
	baz=128,SNR=12						
M19K	**Big River Lodg**	**46.70**	**333**	P	**P**	**15 23 55.0**	**+2.0**
	baz=120,SNR=7.0						
G25K	**Bearman Lake**	**46.70**	**341**	P	**P**	**15 23 54.5**	**+1.6**
	baz=133						
BMAR	**Burnt Mountain**	**46.74**	**343**	P	**P**	**15 23 52.3**	**-1.0**
L20K	**Farewell, AK**	**46.78**	**334**	P	**P**	**15 23 54.8**	**+1.1**
	baz=121						
F26K	**Sheenjek River**	**46.82**	**343**	P	**P**	**15 23 55.8**	**+1.9**
	baz=136						
O17K	**Koliganek Bris**	**46.88**	**330**	P	**P**	**15 23 54.9**	**+0.5**
	baz=115,SNR=32						
CHUM	**Lake Minchumin**	**46.94**	**336**	P	**P**	**15 23 55.7**	**+0.9**
	baz=124						
SDPT	**Sand Point**	**46.94**	**323**	P	**P**	**15 23 56.3**	**+1.4**
	baz=108						
P16K	**Nushagak River**	**46.99**	**328**	P	**P**	**15 23 56.0**	**+0.8**
	baz=114,SNR=9.2						
L19K	**White Mountain**	**47.02**	**333**	P	**P**	**15 23 56.5**	**+1.0**
	baz=120						
MLY	**Manley**	**47.05**	**338**	P	**P**	**15 23 56.1**	**+0.3**
	baz=127,SNR=37						
A36M	**Sachs Harbour**	**47.05**	**354**	P	**P**	**15 23 56.3**	**+0.7**
	baz=161						
G24K	**Hadweenzic Riv**	**47.06**	**341**	P	**P**	**15 23 56.6**	**+0.8**
	baz=132						
H23K	**Yukon River**	**47.14**	**339**	IAMs_20	IAMs_20	15 44 16.2	
	comp=Z,3µm,18.0s						
H23K	**Yukon River**	**47.14**	**339**	P	**P**	**15 23 57.9**	**+1.6**
	baz=128						
F25K	**Christian Rive**	**47.15**	**342**	P	**P**	**15 23 58.0**	**+1.5**
	baz=134						
O16K	**Kokwok River B**	**47.26**	**329**	P	**P**	**15 23 58.4**	**+1.0**
	baz=114						
MPOM	**Morne Pois Mar**	**47.31**	**94**	IAMs_20	IAMs_20	15 46 35.9	
	comp=Z,2µm,20.0s						
K20K	**Telida**	**47.31**	**335**	P	**P**	**15 23 58.8**	**+1.0**
	baz=122,SNR=26						
GRGR	**Grenville**	**47.48**	**97**	IAMs_20	IAMs_20	15 45 48.1	
	comp=Z,3µm,20.0s						
E25K	**Arctic Village**	**47.50**	**343**	P	**P**	**15 24 01.0**	**+1.8**
	baz=135,SNR=31						
I21K	**Tanana**	**47.56**	**338**	IAMs_20	IAMs_20	15 43 21.5	
	comp=Z,3µm,20.0s						
I21K	**Tanana**	**47.56**	**338**	P	**P**	**15 24 01.2**	**+1.6**
	baz=125,SNR=36						
F24K	**Squaw Lake**	**47.73**	**341**	P	**P**	**15 24 03.1**	**+2.1**
	baz=132						
G23K	**Bananza Creek**	**47.84**	**340**	P	**P**	**15 24 02.1**	**+0.2**
	baz=129						
S12K	**Black Hills**	**47.91**	**323**	P	**P**	**15 24 03.8**	**+1.4**
	baz=107						
N16K	**Nishlik Lake**	**47.93**	**330**	P	**P**	**15 24 03.2**	**+0.6**
	baz=114,SNR=17						
H21K	**Melozitna Rive**	**48.12**	**338**	IAMs_20	IAMs_20	15 46 47.2	
	comp=Z,3µm,19.0s						
H21K	**Melozitna Rive**	**48.12**	**338**	P	**P**	**15 24 05.5**	**+1.5**
	baz=125,SNR=47						
C27K	**Jago River**	**48.13**	**345**	P	**P**	**15 24 05.6**	**+1.6**
	baz=138						
COLD	**Coldfoot**	**48.22**	**340**	P	**P**	**15 24 06.4**	**+1.6**
	baz=129						
E24K	**Your Creek**	**48.27**	**342**	P	**P**	**15 24 05.2**	**0.0**
	baz=131						
FALS	**False Pass**	**48.42**	**322**	P	**P**	**15 24 07.3**	**+0.8**
	baz=105						
D25K	**Kavik River**	**48.56**	**344**	P	**P**	**15 24 09.2**	**+1.8**
	baz=135						
E23K	**Chandalar**	**48.58**	**341**	P	**P**	**15 24 08.3**	**+0.7**
	baz=130						
IMAR	**Indian Mountai**	**48.62**	**338**	P	**P**	**15 24 07.3**	**-0.5**
G21K	**Allakaket**	**48.84**	**339**	P	**P**	**15 24 10.3**	**+0.8**
	baz=124						
BBGH	**Gun Hill**	**48.97**	**95**	IAMs_20	IAMs_20	15 47 21.3	
	comp=Z,5µm,21.0s						
F22K	**John River**	**49.00**	**340**	P	**P**	**15 24 12.8**	**+2.0**
	baz=127						
GCSA	**Galena City Sc**	**49.09**	**336**	P	**P**	**15 24 12.1**	**+0.7**
	baz=120,SNR=15						
F21K	**Alatna River**	**49.24**	**339**	P	**P**	**15 24 13.2**	**+0.6**
	baz=125						
CZSB	**Cruzeiro do Su**	**49.24**	**127**	P	**P**	**15 24 10.2**	**-3.1**
E22K	**Anaktuvuk Pass**	**49.27**	**341**	P	**P**	**15 24 13.3**	**+0.5**
	baz=128,SNR=25						
C24K	**Franklin Bluff**	**49.43**	**343**	P	**P**	**15 24 15.6**	**+1.7**
	baz=132						
D23K	**Nanushuk River**	**49.46**	**342**	P	**P**	**15 24 15.8**	**+1.6**
	baz=129						
NNA	**Nana**	**49.52**	**135**	LR	LR	15 40 46.5	
	comp=Z,756nm,21.2s,baz=338,slow=31						
RES	**Resolute Bay**	**49.63**	**5**	P	**P**	**15 24 15.3**	**-0.1**
	comp=Z,3.1nm,0.7s,baz=216,slow=10,SNR=11						
	comp=Z,3.1nm,0.7s						
RES	**Resolute Bay**	**49.63**	**5**	P	**P**	**15 24 12.9**	**-2.4**
RES				IAmb	IAmb	15 24 46.9	
	comp=Z,18nm,1.1s						
RES	**Resolute Bay**	**49.63**	**5**	P	**P**	**15 24 15.3**	**-0.1**
UNV	**Unalaska Valle**	**49.96**	**320**	P	**P**	**15 24 16.8**	**-1.5**
UNV	**Unalaska Valle**	**49.96**	**320**	P	**P**	**15 24 19.0**	**+0.8**
	baz=101						
NIKH	**Nikolski High**	**51.20**	**318**	P	**P**	**15 24 28.7**	**+1.0**
	baz=98						
ANM	**Nome**	**52.32**	**333**	IAMs_20	IAMs_20	15 46 38.7	
	comp=Z,2µm,20.0s						
ANM	**Nome**	**52.32**	**333**	P	**P**	**15 24 36.0**	**+0.2**
	baz=110,SNR=39						
A21K	**Barrow**	**52.51**	**343**	IAMs_20	IAMs_20	15 49 42.7	
	comp=Z,2µm,18.0s						
A21K	**Barrow**	**52.51**	**343**	P	**P**	**15 24 36.9**	**-0.1**
	baz=124						
RPN	**Rapa Nui**	**52.57**	**179**	LR	LR	15 41 45.0	
	comp=Z,2µm,20.5s,baz=9.0,slow=30						
RDOG	**Red Dog Mine**	**52.77**	**338**	IAMs_20	IAMs_20	15 48 08.2	
	comp=Z,2µm,18.0s						
RDOG	**Red Dog Mine**	**52.77**	**338**	P	**P**	**15 24 39.5**	**+0.4**
	baz=116,SNR=56						
BOAV	**Boa Vista**	**52.93**	**108**	P	**P**	**15 24 38.0**	**-3.0**
BOAV				IAmb	IAmb	15 24 53.8	
	comp=Z,70nm,1.7s						
BOAV	**Boa Vista**	**52.93**	**108**	*e*P	**P**	**15 24 40.0**	**-1.0**
TNA	**Tin City**	**53.68**	**334**	P	**P**	**15 24 46.7**	**+0.9**
	baz=109,SNR=15						
TULEG	**Thule**	**54.63**	**11**	P	**P**	**15 24 50.3**	**-2.3**
TULEG				IAmb	IAmb	15 25 11.9	
	comp=Z,42nm,1.5s						
SFJD	**Kangerlussuaq**	**54.73**	**24**	LR	LR	15 48 01.1	
	comp=Z,4µm,18.4s,baz=246,slow=36						
SFJD	**Kangerlussuaq**	**54.73**	**24**	P	**P**	**15 24 51.6**	**-1.8**
SFJD	**Kangerlussuaq**	**54.73**	**24**	P	**P**	**15 24 51.6**	**-1.8**
SFJD				pmax	pmax		
	comp=Z,109nm,1.9s						
SFJD	**Kangerlussuaq**	**54.73**	**24**	*i*P	**P**	**15 24 54.3**	**+0.9**
ILULI	**Ilulissat**	**55.28**	**22**	IAMs_20	IAMs_20	15 50 25.6	
	comp=Z,2µm,19.0s						
EUNU	**Eureka**	**55.32**	**5**	IAmb	IAmb	15 25 09.2	
	comp=Z,48nm,1.6s						
NRS	**Narsarsuaq**	**55.59**	**32**	IAMs_20	IAMs_20	15 48 24.9	
	comp=Z,3µm,19.0s						
DY2G	**Dye2**	**56.25**	**26**	*i*P	**P**	**15 25 02.8**	**-2.0**
DY2G				IAmb	IAmb	15 25 19.8	
	comp=Z,85nm,1.3s						
PPT	**Papeete**	**57.72**	**226**	LR	LR	15 44 13.1	
	comp=Z,1µm,18.4s,baz=40,slow=30						
PPT2	**Papeete2**	**57.73**	**226**	*e*LR	LR	15 42 15.9	
	comp=Z,4µm,25.0s						
LPAZ	**La Paz**	**58.40**	**131**	P	**P**	**15 25 21.4**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=317,slow=6.4,SNR=1.7						
LPAZ				LR	LR	15 48 00.3	
	comp=Z,914nm,21.2s,baz=327,slow=34						
	comp=Z,0.5nm,0.4s						
LPAZ	**La Paz**	**58.40**	**131**	P	**P**	**15 25 21.5**	**+0.5**
NEEM	**North Greenlan**	**58.46**	**13**	*i*P	**P**	**15 25 19.6**	**-0.6**
NEEM				IAmb	IAmb	15 25 42.2	
	comp=Z,51nm,1.1s						
MDP	**Montagnes des**	**58.53**	**100**	LR	LR	15 51 30.4	
	comp=Z,1µm,21.6s,baz=290,slow=37						
PB16	**IPOC Station P**	**58.94**	**134**	P	**P**	**15 25 20.1**	**-4.6**
PB16				IAmb	IAmb	15 25 32.9	
	comp=Z,18nm,1.3s						
ISOG	**Isortoq, Green**	**59.04**	**27**	*i*P	**P**	**15 25 22.9**	**-1.1**
ISOG				IAmb	IAmb	15 25 28.9	
	comp=Z,27nm,1.1s						
ICESG	**Greenland Ices**	**59.22**	**23**	*i*P	**P**	**15 25 24.4**	**-1.3**
ANGG	**Ammassalik, Gr**	**59.60**	**27**	IAMs_20	IAMs_20	15 48 19.7	
	comp=Z,3µm,18.0s						
ANGG	**Ammassalik, Gr**	**59.60**	**27**	*i*P	**P**	**15 25 28.2**	**+0.4**
SUMG	**Summit**	**60.16**	**19**	*i*P	**P**	**15 25 31.6**	**-0.6**
SUMG				IAmb	IAmb	15 25 42.2	
	comp=Z,29nm,1.0s						
TBI	**Tubuai**	**61.95**	**221**	*e*LR	LR	15 44 07.2	
	comp=Z,6µm,28.0s						
TBI				*e*LR	LR	15 44 10.6	
	comp=Z,17µm,24.2s						
SIV	**San Ignacio**	**63.19**	**126**	LR	LR	15 51 25.0	
	comp=Z,1µm,21.9s,baz=330,slow=34						
BILL	**Bilibino**	**64.05**	**335**	P	**P**	**15 25 56.2**	**-1.7**
BILL	**Bilibino**	**64.05**	**335*d***	*i*P	**P**	**15 25 59.5**	**+1.6**
BILL				*e*		15 28 19.0	
BILL				*i* SS	SS	15 38 47.1	+4.7
BILL				pmax	pmax		
	comp=Z,50nm,2.5s						
BILL				MLR	MLR		
	comp=Z,1µm,15.0s						
PTLB	**Pontes e Lacer**	**64.28**	**124**	P	**P**	**15 25 57.0**	**-3.1**
PTLB				IAmb	IAmb	15 26 11.4	
	comp=Z,24nm,1.4s						
NOR	**Nord**	**65.20**	**9**	*i*P	**P**	**15 26 05.0**	**-0.2**
NOR				IAmb	IAmb	15 26 09.9	
	comp=Z,20nm,1.4s						
SCO	**Scoresbysund**	**65.36**	**22**	*i*P	**P**	**15 26 06.8**	**+0.5**
SCO				IAmb	IAmb	15 26 13.9	
	comp=Z,15nm,1.1s						
DBG	**Daneborg**	**65.40**	**17**	*i*P	**P**	**15 26 07.3**	**+0.7**
DAG	**Danmarks Havn**	**65.47**	**15**	*i*P	**P**	**15 26 05.6**	**-1.4**
DAG				IAmb	IAmb	15 26 16.6	
	comp=Z,20nm,0.9s						
H03N2	**Juan Fernandez**	**65.88**	**152**	T	T	16 37 51.7	
	baz=331,slow=78,SNR=193						
H03N1	**Juan Fernandez**	**65.89**	**152**	T	T	16 37 58.2	
	baz=331,slow=78,SNR=310						
H03N3	**Juan Fernandez**	**65.89**	**152**	T	T	16 37 52.7	
	baz=331,slow=78,SNR=192						
BORG	**Borgarnes**	**66.50**	**28**	LR	LR	15 56 02.8	
	comp=Z,1µm,18.6s,baz=282,slow=37						
RAR	**Rarotonga**	**67.13**	**231**	LR	LR	15 49 06.4	
	comp=Z,2µm,18.3s,baz=48,slow=30						
PET	**Petropavlovsk**	**70.61**	**320**	P	**P**	**15 26 37.5**	**-2.1**
PET	**Petropavlovsk**	**70.61**	**320**	*e*P	**P**	**15 26 38.9**	**-0.8**
PET				*e*S	**S**	**15 35 50.7**	**-2.9**
PET				pmax	pmax		
	comp=Z,900nm,6.8s						
PET				pmax	pmax		
	comp=Z,600nm,7.5s						
PET				pmax	pmax		
	comp=Z,76nm,1.4s						
SEY	**Seymchan**	**70.74**	**331**	P	**P**	**15 26 41.7**	**+1.4**
	comp=Z,9.5nm,1.0s,baz=100,slow=7.2,SNR=8.8						
	comp=Z,9.5nm,1.0s						
SEY	**Seymchan**	**70.74**	**331⇑**	*e*P	**P**	**15 26 41.9**	**+1.6**
SEY				pmax	pmax		
	comp=Z,27nm,1.3s						
PEA0B	**Petropavlovsk-**	**71.14**	**320*c***	*e*P	**P**	**15 26 44.4**	**+1.5**
PETK	**Petropavlovsk-**	**71.14**	**320**	P	**P**	**15 26 43.7**	**+0.8**
	comp=Z,16nm,1.0s,baz=75,slow=7.8,SNR=12						
PETK				LR	LR	15 54 42.9	
	comp=Z,218nm,20.5s,baz=75,slow=33						
	comp=Z,16nm,1.0s						
PETK	**Petropavlovsk-**	**71.14**	**320**	P	**P**	**15 26 43.7**	**+0.8**
SPITS	**Spitsbergen Ar**	**71.81**	**10**	LR	LR	15 59 18.1	
	comp=Z,6µm,18.2s,baz=281,slow=37						
AFI	**Afiamalu**	**71.84**	**244**	LR	LR	15 50 29.4	
	comp=Z,2µm,20.6s,baz=54,slow=29						
CPUP	**Villa Florida**	**72.56**	**132**	P	**P**	**15 26 52.1**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=344,slow=7.7,SNR=3.3						
	comp=Z,1.0nm,0.5s						
CPUP	**Villa Florida**	**72.56**	**132**	P	**P**	**15 26 48.6**	**-3.1**
CPUP				IAmb	IAmb	15 27 03.4	
	comp=Z,9.8nm,0.9s						
CPUP	**Villa Florida**	**72.56**	**132**	P	**P**	**15 26 48.7**	**-3.1**
CPUP				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MA2	**Magadan**	**72.63**	**328**	P	**P**	**15 26 52.5**	**+0.8**
	comp=Z,12nm,1.1s,baz=124,slow=9.2,SNR=3.1						
	comp=Z,12nm,1.1s						
MA2	**Magadan**	**72.63**	**328**	P	**P**	**15 26 50.3**	**-1.4**
MA2	**Magadan**	**72.63**	**328⇑**	*e*P	**P**	**15 26 51.3**	**-0.4**
MA2				pmax	pmax		
	comp=Z,32nm,1.3s						
BDFB	**Brasilia**	**73.04**	**117**	P	**P**	**15 26 56.3**	**+1.3**
	comp=Z,1.0nm,0.3s,baz=48,slow=14,SNR=1.9						

BDFB				LR	LR	16 01 54.2	
	comp=Z,1µm,18.8s,baz=305,slow=38						
	comp=Z,1.0nm,0.3s						
BDFB	**Brasilia**	**73.04**	**117**	P	**P**	**15 26 56.3**	**+1.3**
TIXI	**Tiksi**	**74.80**	**344**	LR	LR	16 02 59.0	
	comp=Z,1µm,20.1s,baz=179,slow=38						
TIXI	**Tiksi**	**74.80**	**344**	P	**P**	**15 27 01.9**	**-2.3**
TIXI				IAmb	IAmb	15 27 13.5	
	comp=Z,19nm,0.9s						
TIXI				IAMs_20	IAMs_20	16 02 47.9	
	comp=Z,1µm,20.0s						
TIXI	**Tiksi**	**74.80**	**344**⇓	*e*P	**P**	**15 27 04.8**	**+0.6**
TIXI				pmax	pmax		
	comp=Z,28nm,1.1s						
PLCA	**Paso Flores**	**75.64**	**150**	P	**P**	**15 27 10.5**	**+1.0**
	comp=Z,3.1nm,0.8s,baz=308,slow=6.4,SNR=7.8						
PLCA				LR	LR	15 54 01.5	
	comp=Z,1µm,18.3s,baz=334,slow=31						
	comp=Z,3.1nm,0.8s						
PLCA	**Paso Flores**	**75.64**	**150**	P	**P**	**15 27 08.8**	**-0.7**
PLCA				IAmb	IAmb	15 27 56.4	
	comp=Z,17nm,1.1s						
PLCA	**Paso Flores**	**75.64**	**150**	P	**P**	**15 27 08.8**	**-0.7**
PLCA				pmax	pmax		
	comp=Z,17nm,1.2s						
LL02	**Futaleuf**	**77.07**	**152**	P	**P**	**15 27 14.2**	**-3.2**
LL02				IAmb	IAmb	15 27 45.2	
	comp=Z,21nm,1.1s						
SPB	**Sao Paulo**	**77.96**	**124**	IAMs_20	IAMs_20	16 06 14.5	
	comp=Z,1µm,20.0s						
EKA	**Eskdalemuir Ar**	**78.19**	**34**	LR	LR	15 59 55.7	
	comp=Z,2µm,19.9s,baz=296,slow=34						
RCBR	**Riachuelo**	**78.38**	**102**	IAMs_20	IAMs_20	16 02 28.3	
	comp=Z,1µm,22.0s						
ARCES	**ARCESS Array B**	**79.75**	**14**	P	**P**	**15 27 33.1**	**+1.0**
	comp=Z,12nm,1.1s,baz=336,slow=5.3,SNR=5.1						
ARCES				LR	LR	16 03 18.0	
	comp=Z,2µm,22.0s,baz=324,slow=36						
	comp=Z,12nm,1.1s						
ARCES	**ARCESS Array B**	**79.75**	**14**	P	**P**	**15 27 33.1**	**+1.0**
YAK	**Yakutsk**	**80.41**	**336**	LR	LR	16 04 39.4	
	comp=Z,583nm,20.1s,baz=44,slow=37						
YAK	**Yakutsk**	**80.41**	**336**	P	**P**	**15 27 33.8**	**-1.9**
YAK	**Yakutsk**	**80.41**	**336**	*e*P	**P**	**15 27 39.1**	**+3.4**
YAK				*e**PP	**PcP**	**15 27 48.9**	**+6.1**
YAK				*e*S	**S**	**15 37 44.8**	**+3.0**
YAK				*e*SS	**SS**	**15 42 54.3**	**+1.9**
YAK				pmax	pmax		
	comp=Z,38nm,1.4s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,18nm,1.9s						
YAK				pmax	pmax		
	comp=Z,72nm,4.3s						
YAK				pmax	pmax		
	comp=N,128nm,4.7s						
YAK				pmax	pmax		
	comp=E,20nm,3.4s						
YAK				smax	smax		
	comp=E,218nm,5.9s						
YAK				smax	smax		
	comp=N,156nm,5.8s						
TYV	**Tymovskoe**	**80.55**	**322**	*e*P	**P**	**15 27 37.0**	**+0.3**
TYV				*e*S	**S**	**15 37 44.1**	**+0.4**
TYV				pmax	pmax		
	comp=Z,200nm,5.3s						
TYV				pmax	pmax		
	comp=Z,33nm,1.5s						
TYV				smax	smax		
	comp=N,300nm,6.3s						
TYV				smax	smax		
	comp=E,400nm,6.3s						
PGAV	**Gavieira, Arco**	**81.35**	**48**	*e*LR	LR	15 55 26.8	
PGAV				A	A	16 03 00.9	
	comp=E,3µm,18.0s						
NB2	**NORSAR Subarra**	**81.40**	**25**	P	**P**	**15 27 44.1**	**+3.0**
	comp=Z,5.4nm,0.9s,baz=308,slow=5.3						
NOA	**NORSAR Array B**	**81.40**	**25**	P	**P**	**15 27 42.3**	**+1.2**
	comp=Z,1.2nm,0.8s,baz=308,slow=5.2,SNR=4.8						
NOA				LR	LR	16 02 17.3	
	comp=Z,1µm,21.9s,baz=295,slow=34						
	comp=Z,1.2nm,0.8s						
NOA	**NORSAR Array B**	**81.40**	**25**	P	**P**	**15 27 42.3**	**+1.2**
MSVF	**Nonsavu**	**82.16**	**246**	LR	LR	15 58 16.8	
	comp=Z,3µm,18.0s,baz=44,slow=31						
PVIS	**Viseu**	**82.17**	**49**	*e*P	**P**	**15 27 49.7**	**+4.1**
PVIS				A	A	15 28 14.8	
	comp=Z,51nm,1.8s						
YSS	**Yuzh-Sakhalins**	**82.41**	**319**	P	**P**	**15 27 44.3**	**-2.4**
YSS	**Yuzh-Sakhalins**	**82.41**	**319**	*e*P	**P**	**15 27 47.7**	**+1.1**
YSS				*e*		15 30 58.9	
YSS				*e*S	**S**	**15 38 03.8**	**+0.7**
YSS				pmax	pmax		
	comp=Z,200nm,3.2s						
YSS				pmax	pmax		
	comp=Z,40nm,1.1s						
MVO	**Moncorvo**	**82.55**	**48**	*e*P	**P**	**15 27 51.1**	**+3.5**
MVO				A	A	15 28 06.8	
	comp=Z,46nm,1.8s						
MVO	**Moncorvo**	**82.55**	**48**	*e*LR	LR	15 56 25.1	
MVO				A	A	16 03 57.1	
	comp=Z,3µm,16.0s						
MTE	**Manteigas**	**82.55**	**49**	*e*P	**P**	**15 27 49.1**	**+1.5**
MTE				A	A	15 27 58.5	
	comp=Z,40nm,1.5s						
MTE	**Manteigas**	**82.55**	**49**	*e*LR	LR	15 56 31.4	
MTE				A	A	15 59 35.4	
	comp=Z,2µm,20.0s						
PMTG	**Montargil**	**82.69**	**50**	*e*P	**P**	**15 27 51.2**	**+2.9**
PMTG				A	A	15 28 12.4	
	comp=Z,37nm,1.5s						
PCBR	**Castelo Branco**	**82.85**	**49**	*e*P	**P**	**15 27 50.1**	**+1.0**
PCBR				A	A	15 28 17.2	
	comp=Z,41nm,1.9s						
HFS	**Hagfors**	**82.92**	**25**	LR	LR	16 05 30.5	
	comp=Z,937nm,18.1s,baz=302,slow=36						
PTEO	**Sao Teotonio**	**83.03**	**52**	*e*P	**P**	**15 27 49.9**	**-0.2**
PTEO				A	A	15 28 20.6	
	comp=Z,77nm,1.6s						
APA	**Apatity**	**83.06**	**13**⇓	*i*P	P	15 27 57.3	+7.7
APA				*i*		15 31 02.8	
APA				*i* PS	**PnS**	**15 39 10.0**	**+11**
APA				pmax	pmax		
	comp=Z,12nm,1.0s						
APA				MLR	MLR		
	comp=Z,3µm,15.0s						
PMRV	**Marv??o**	**83.10**	**50**	*e*P	**P**	**15 27 51.7**	**+1.2**
PMRV				A	A	15 28 13.8	
	comp=Z,47nm,1.5s						
PMRV	**Marv??o**	**83.10**	**50**	*e*LR	LR	15 56 51.3	
PMRV				A	A	16 00 31.7	
	comp=Z,2µm,20.0s						
MESJ	**Messejana**	**83.26**	**51**	*e*P	**P**	**15 27 52.4**	**+1.1**
MESJ	**Messejana**	**83.26**	**51**	*e*P	**P**	**15 27 54.9**	**+3.6**
MESJ				A	A	15 28 14.5	
	comp=Z,44nm,1.7s						
MESJ	**Messejana**	**83.26**	**51**	*e*P	**P**	**15 27 52.4**	**+1.1**
MESJ				IAMs_20	IAMs_20	16 01 34.4	
	comp=Z,5µm,27.5s						
PVAQ	**Vaqueiros**	**83.81**	**51**	*e*LR	LR	15 56 38.0	
PVAQ				A	A	16 02 09.1	
	comp=Z,3µm,18.0s						
JKA	**Kamikawa-asahi**	**83.92**	**316**	P	**P**	**15 27 51.4**	**-3.1**
ASAJ	**Asahikawa**	**83.92**	**316**	LR	LR	15 59 41.3	
	comp=Z,480nm,21.9s,baz=53,slow=32						
ASAJ	**Asahikawa**	**83.92**	**316**	P	**P**	**15 27 51.4**	**-3.1**
ASAJ				pmax	pmax		
	comp=Z,42nm,1.0s						
PBAR	**Barrancos**	**83.93**	**51**	*e*P	**P**	**15 27 57.7**	**+3.0**
PBAR				A	A	15 28 24.0	
	comp=Z,36nm,1.5s						
GRNR	**Gornyy**	**83.97**	**324**⇑	*i*P	**P**	**15 27 57.1**	**+2.4**
GRNR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GRNR				MLR	MLR		
	comp=E,320nm,14.0s						
GRNR				MLR	MLR		
	comp=N,190nm,17.0s						
GRNR				MLR	MLR		
	comp=Z,470nm,17.0s						
NRIK	**Noril'sk**	**84.33**	**354**	P	**P**	**15 28 00.4**	**+4.2**
	comp=Z,7.7nm,0.7s,baz=6.4,slow=4.9,SNR=9.9						
NRIK				LR	LR	16 06 17.0	
	comp=Z,2µm,21.2s,baz=24,slow=36						
NRIK	**Noril'sk**	**84.33**	**354***d*	*i*P	**P**	**15 27 59.2**	**+3.1**
NRIK				pmax	pmax		
	comp=Z,16nm,1.0s						
ERM	**Erimo**	**84.61**	**314***d*	*e*P	**P**	**15 28 00.8**	**+2.7**
ERM				pmax	pmax		
	comp=Z,125nm,1.2s						
BMRD	**Maredsous**	**84.92**	**36**	*d*P	**P**	**15 27 58.7**	**-0.7**
BMRD				*d*x	x	15 28 19.2	
DOU	**Dourbes**	**84.94**	**36**	*d*x	x	15 28 09.8	
RAO	**Raoul Island**	**85.01**	**234**	LR	LR	16 00 50.1	
	comp=Z,862nm,18.2s,baz=81,slow=32						
BGES	**Gesves**	**85.04**	**36**	*d*x	x	15 28 09.1	
BCLA	**Clavier**	**85.13**	**35**	*d*P	**P**	**15 28 02.2**	**+1.7**
BSTI	**Sart Tilman**	**85.17**	**35**	*d*P	**P**	**15 28 00.7**	**0.0**
RCHB	**Rochefort**	**85.24**	**36**	*d*P	**P**	**15 28 01.6**	**+0.6**
RCHB				*d*x	x	15 28 19.7	
ESDC	**Sonseca Array**	**85.31**	**48**	P	**P**	**15 28 02.7**	**+1.0**
	comp=Z,1.5nm,0.9s,baz=301,slow=5.3,SNR=8.1						
ESDC				LR	LR	16 05 16.4	
	comp=Z,3µm,18.1s,baz=293,slow=35						
	comp=Z,1.5nm,0.9s						
MEM	**Membach**	**85.39**	**35**	*d*x	x	15 28 21.2	
BHOU	**Houvegnez**	**85.53**	**35**	*d*x	x	15 28 09.2	
FINES	**FINESS Array B**	**86.19**	**19**	P	**P**	**15 28 06.2**	**+0.6**
	comp=Z,6.9nm,1.1s,baz=332,slow=2.6,SNR=9.7						
FINES				LR	LR	16 06 20.9	
	comp=Z,2µm,19.6s,baz=319,slow=36						
	comp=Z,6.9nm,1.1s						
FINES	**FINESS Array B**	**86.19**	**19**	P	**P**	**15 28 06.2**	**+0.6**
RGN	**Rugen**	**86.45**	**29**	IAMs_20	IAMs_20	16 11 35.5	
	comp=Z,2µm,20.0s						
MBO	**M'Bour**	**86.59**	**76**	IAMs_20	IAMs_20	16 05 12.8	
	comp=Z,2µm,21.0s						
ZEA	**Zeya**	**86.67**	**330**	*e*P	**P**	**15 28 11.0**	**+2.9**
ZEA				*e*S	**S**	**15 38 41.8**	**-3.6**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.7s						
ZEA				smax	smax		
	comp=N,400nm,16.5s						
BBTS	**Babate**	**86.85**	**75**	LR	LR	16 07 14.5	
	comp=N,1µm,18.2s,baz=266,slow=36						
KLR	**Kul'dur**	**87.31**	**325**	LR	LR	16 05 28.4	
	comp=N,241nm,20.1s,baz=44,slow=34						
KLR	**Kul'dur**	**87.31**	**325**⇑	*e*P	**P**	**15 28 12.0**	**+0.7**
KLR				pmax	pmax		
	comp=Z,13nm,2.0s						
SSB	**Saint Sauveur**	**87.66**	**40**	IAMs_20	IAMs_20	16 02 17.2	
	comp=Z,2µm,20.0s						
MDT	**Midelt**	**88.24**	**54**	LR	LR	16 05 11.7	
	comp=Z,828nm,21.8s,baz=340,slow=34						
CLL	**Collm**	**88.43**	**32**	IAMs_20	IAMs_20	16 07 20.1	
	comp=Z,2µm,18.0s						
CLL	**Collm**	**88.43**	**32**	*e*P	**P**	**15 28 16.0**	**-0.6**
CLL				*e*pP	**sP**	**15 28 20.0**	**+0.8**
CLL				*e*S	**S**	**15 38 56.0**	**-6.4**
CLL				*e*PS	**PS**	**15 40 06.0**	**0.0**
CLL				*e*SS	**SS**	**15 44 48.0**	**-3.1**
CLL				*e*SSS	SSS	15 48 24.0	
CLL				*e*SSSS		15 51 30.0	
CLL				AMS	AMS	16 06 00.0	
	comp=Z,2µm,18.5s						
CLL	**Collm**	**88.43**	**32**	*e*P	**P**	**15 28 16.0**	**-0.6**
CLL				*e*S	**S**	**15 38 56.0**	**-6.4**
CLL				MLR	MLR		
	comp=Z,2µm,18.5s						
HEH	**HeiHe**	**88.86**	**327**	P	**P**	**15 28 22.0**	**+3.3**
HEH				pP	**pwP**	**15 28 24.8**	**+1.9**
HEH				PP	**PP**	**15 31 49.5**	**+2.3**
HEH				SKS	**SKSac**	**15 38 50.5**	**+2.0**
HEH				S	**S**	**15 39 07.8**	**+1.3**
HEH				SS	**SS**	**15 45 03.5**	**+6.1**
HEH				pmax	pmax		
	comp=Z,10.0nm,2.0s						
HEH				pmax	pmax		
	comp=Z,230nm,4.6s						
HEH				LR	LR		
	comp=Z,940nm,16.5s						
HEH				LR	LR		
	comp=Z,970nm,16.9s						
HEH				LR	LR		
	comp=Z,2µm,17.0s						
BRG	**Berggiesshubel**	**89.16**	**32**	*e*P	P	15 28 28.6	+8.6
BRG				Amp		15 28 29.4	
	comp=Z,5.1nm,1.0s						
BRG				Amp		16 07 30.0	
	comp=Z,2.5nm,18.3s						
BRG				Amp		16 07 33.0	
	comp=N,1.4nm,17.5s						
BRG				Amp		16 07 42.0	
	comp=E,1.5nm,14.1s						
BRG	**Berggiesshubel**	**89.16**	**32**	*e*P	P	15 28 28.6	+8.6
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRG				MLR	MLR		
	comp=Z,2µm,18.3s						
BRG				MLR	MLR		
	comp=N,1µm,17.5s						
BRG				MLR	MLR		
	comp=E,2µm,14.1s						
USA0B	**Ussuriysk Arra**	**90.23**	**321***d*	*i*P	**P**	**15 28 28.0**	**+2.8**
USRK	**Ussuriysk Ar.**	**90.23**	**321**	P	**P**	**15 28 25.9**	**+0.7**
	comp=E,1.9nm,0.7s,baz=55,slow=11,SNR=2.1						
	comp=E,1.9nm,0.7s						
USRK	**Ussuriysk Ar.**	**90.23**	**321**	P	**P**	**15 28 22.8**	**-2.4**
USRK	**Ussuriysk Ar.**	**90.23**	**321**	P	**P**	**15 28 25.9**	**+0.7**
KLMR	**Klimovskoe**	**90.23**	**14**	*e*P	**P**	**15 28 25.4**	**+0.6**
KLMR				*e*P	**P**	**15 28 25.4**	**+0.6**
KLMR				*e*P	**P**	**15 28 25.4**	**+0.6**
KLMR				AMP		15 28 32.9	
	comp=Z,26nm,1.7s						
KLMR				S	**SKSac**	**15 38 56.2**	**+0.1**
KLMR				S	**SKSac**	**15 38 56.2**	**+0.1**
KLMR				LQ	LQ	15 58 42.2	
KLMR				LQ	LQ	15 58 42.2	
KLMR				LR	LR	16 03 56.3	
KLMR				AMP		16 09 25.3	
	comp=Z,2µm,16.6s						
KLMR	**Klimovskoe**	**90.23**	**14**	*e*P	**P**	**15 28 25.4**	**+0.6**
KLMR				S	**SKSac**	**15 38 56.2**	**+0.1**
KLMR				pmax	pmax		
	comp=Z,26nm,1.7s						
KLMR				MLR	MLR		
	comp=Z,2µm,17.0s						
GERES	**GERESS Array B**	**90.39**	**33**	LR	LR	16 09 00.7	
	comp=Z,1µm,19.2s,baz=304,slow=36						
MAHO	**Mahon**	**90.56**	**45**	IAMs_20	IAMs_20	16 03 55.3	
	comp=Z,2µm,22.0s						
MJAR	**Matsushiro Arr**	**90.74**	**312**	P	P	15 28 33.3	+5.5
	comp=Z,5.4nm,0.7s,baz=53,slow=4.9,SNR=14						
MJAR				LR	LR	16 03 46.7	
	comp=Z,878nm,20.3s,baz=65,slow=32						
MAJO	**Matsushiro**	**90.74**	**312***d*	*e*P	**P**	**15 28 30.3**	**+2.5**
MAJO				pmax	pmax		
	comp=Z,25nm,0.9s						
VRAC	**Vranov**	**91.48**	**32**	LR	LR	16 09 10.9	
	comp=Z,2µm,18.9s,baz=306,slow=35						
NACGM	**Naroch**	**91.57**	**23**	*e*P	**P**	**15 28 31.9**	**+0.7**
	comp=Z,17nm,1.3s,baz=322						
MNK	**Minsk**	**92.27**	**23**	*i* P	**P**	**15 28 33.9**	**-0.6**
	comp=E,2.0nm,1.0s						
MNK				*i* P	**P**	**15 28 33.9**	**-0.6**
	comp=N,33nm,1.0s						
MNK				*i* P	**P**	**15 28 33.9**	**-0.6**
	comp=Z,8.0nm,1.0s,baz=323						
MNK				*i* PP	**PP**	**15 32 12.9**	**-1.1**
MNK				*i* PPP	PPP	15 34 11.6	
MNK				*i* S	**SKSac**	**15 39 06.6**	**-1.5**
MNK				*i* SS	**SS**	**15 45 48.2**	**+1.9**
MNK				*i* SSS	SSS	15 49 25.1	
MNK				*i* LQ	LQ	16 03 30.9	
MNK				*i* LR	LR	16 09 09.0	
MNK				*i* LRM	MLR	16 13 13.6	
	comp=E,143nm,19.7s						
MNK				*i* LRM	MLR	16 13 14.9	
	comp=N,1µm,20.4s						
MNK				*i* LRM	MLR	16 13 15.6	
	comp=Z,2µm,15.8s						
MNK	**Minsk**	**92.27**	**23**	*i* P	**P**	**15 28 33.8**	**-0.6**
MNK				*i*		15 32 12.9	
MNK				*i* PPP	PPP	15 34 11.5	
MNK				*i* S	**SKSac**	**15 39 06.5**	**-1.5**
MNK				*i* SS	**SS**	**15 45 48.2**	**+1.9**
MNK				*i* SSS	SSS	15 49 25.1	
MNK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MNK				pmax	pmax		
	comp=E,2.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,33nm,1.0s						
MNK				MLR	MLR		
	comp=E,143nm,20.0s						
MNK				MLR	MLR		
	comp=N,1µm,20.0s						
MNK				MLR	MLR		
	comp=Z,2µm,16.0s						
JCJ	**Chichijima**	**92.84**	**302**	LR	LR	16 02 08.2	
	comp=Z,594nm,21.6s,baz=100,slow=30						
URZ	**Urewera**	**93.26**	**229**	LR	LR	16 01 59.1	
	comp=Z,1µm,20.6s,baz=146,slow=30						
DZM	**Mont Dzumac**	**93.82**	**247**	*e*LR	LR	15 58 57.7	
	comp=Z,3µm,24.5s						
DZM	**Mont Dzumac**	**93.82**	**247**	LR	LR	16 03 07.4	
	comp=Z,1µm,19.6s,baz=74,slow=30						
CN2	**Changchun**	**94.12**	**323**	P	P	15 28 51.0	+7.8
CN2				S	**S**	**15 39 55.0**	**+0.5**
CN2				SS	**SS**	**15 46 15.8**	**+2.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=Z,500nm,17.0s						
CN2				LR	LR		
	comp=Z,400nm,17.0s						
CN2				LR	LR		
	comp=Z,600nm,18.0s						
KIRV	**Kirov**	**94.27**	**11**	LR	LR	16 12 32.6	
	comp=Z,2µm,21.9s,baz=346,slow=36						
OBN	**Obninsk**	**94.54**	**18**	LR	LR	16 12 14.3	
	comp=Z,531nm,19.2s,baz=333,slow=36						
AKASG	**Malin Array Be**	**95.81**	**25**	P	**P**	**15 28 52.4**	**+1.6**
	comp=Z,0.2nm,0.2s,baz=303,slow=3.2,SNR=4.2						
AKASG				LR	LR	16 11 08.0	
	comp=Z,680nm,21.4s,baz=318,slow=35						
	comp=Z,0.2nm,0.2s						
AKASG	**Malin Array Be**	**95.81**	**25**	*i* P	**P**	**15 28 54.7**	**+3.9**
AKBB	**Malin Array Si**	**95.81**	**25**⇓	*e*P	**P**	**15 28 55.2**	**+4.4**
AKBB				pmax	pmax		
	comp=Z,21nm,2.8s						
KEST	**Kesra**	**96.26**	**45**	LR	LR	16 12 07.4	
	comp=Z,2µm,19.1s,baz=270,slow=35						
SNZO	**South Karori**	**96.37**	**227**	IAMs_20	IAMs_20	16 04 09.7	
	comp=Z,1µm,20.0s						
KSRS	**Korea Array**	**96.84**	**317**	P	**P**	**15 28 58.1**	**+2.4**
	comp=Z,0.7nm,0.7s,baz=52,slow=5.4,SNR=2.6						
KSRS				LR	LR	16 06 27.7	
	comp=Z,300nm,21.6s,baz=30,slow=32						
	comp=Z,0.7nm,0.7s						
KSRS	**Korea Array**	**96.84**	**317**	P	**P**	**15 28 58.1**	**+2.4**
PMSA	**Palmer Station**	**97.00**	**162**	LR	LR	16 02 42.0	
	comp=Z,619nm,18.8s,baz=322,slow=29						
GUMO	**Guam**	**97.31**	**289**	LR	LR	16 04 04.0	
	comp=Z,1µm,21.5s,baz=80,slow=30						
ARU	**Arti**	**97.59**	**6**	LR	LR	16 16 31.2	
	comp=Z,2µm,19.9s,baz=342,slow=38						
ARU	**Arti**	**97.59**	**6***c*	*i*P	Pdif	15 28 59.4	+0.7
ARU						15 32 56.2	
ARU				S	**SKSac**	**15 39 36.6**	**+0.2**
ARU				SP	**SP**	**15 41 43.7**	**-1.3**
ARU				SS	**SS**	**15 46 55.0**	**-6.4**
ARU				pmax	pmax		
	comp=Z,35nm,5.0s						
JNU	**Nakatsue**	**97.63**	**312**	LR	LR	16 05 57.6	
	comp=Z,358nm,21.2s,baz=57,slow=31						
MOY	**Mondy**	**98.24**	**341**	*e*P	Pdif	15 29 05.0	+3.1
MOY				pmax	pmax		
	comp=Z,14nm,2.1s						
VAE	**Valguarnera**	**98.30**	**42**	LR	LR	16 14 37.1	
	comp=Z,1µm,18.5s,baz=10,slow=36						
MLR	**Muntele Rosu**	**98.59**	**30**	LR	LR	16 14 03.0	
	comp=Z,2µm,19.9s,baz=318,slow=36						
CEL	**Celeste**	**98.65**	**40**	IAMs_20	IAMs_20	16 15 23.1	
	comp=Z,1µm,18.0s						
XLT	**XiLinHaoTe**	**98.82**	**328**	*e*P	P	15 28 55.3	-9.3
XLT				pP	PcP	15 29 00.5	-4.1
XLT	**XiLinHaoTe**	**98.82**	**328**	sS	S	15 40 34.0	-1.1
XLT	**XiLinHaoTe**	**98.82**	**328**	SS	SS	15 47 23.8	+3.9
XLT				pmax	pmax		
	comp=Z,5.0nm,1.0s						
XLT				pmax	pmax		
	comp=Z,130nm,5.7s						
XLT				LR	LR		
	comp=N,39nm,18.2s						
XLT				LR	LR		
	comp=E,620nm,17.4s						
XLT				LR	LR		
	comp=Z,530nm,14.6s						
ULN	**Ulaanbaatar**	**99.50**	**336**	IAMs_20	IAMs_20	16 14 01.6	
	comp=Z,1µm,22.0s						
ULN	**Ulaanbaatar**	**99.50**	**336**⇑	*e*P	**Pdif**	**15 29 08.5**	**+0.8**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
ZALV	**Zalesovo Beam**	**99.61**	**351**	P	**Pdif**	**15 29 09.0**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=348,slow=6.1,SNR=2.2						
ZALV				PP	**PP**	**15 33 11.6**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=356,slow=9.0,SNR=2.2						
ZALV				LR	LR	16 20 51.9	
	comp=Z,587nm,18.1s,baz=8.0,slow=39						
	comp=Z,0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**99.61**	**351**	P	**Pdif**	**15 29 09.0**	**+1.2**
SONM	**Songino Array**	**99.76**	**336**	P	**Pdif**	**15 29 10.5**	**+1.7**
	comp=Z,0.5nm,0.7s,baz=27,slow=2.5,SNR=4.6						
SONM				PP	**PP**	**15 33 12.8**	**+0.5**
	comp=Z,0.6nm,1.0s,baz=35,slow=5.3,SNR=1.7						
SONM				LR	LR	16 15 55.4	
	comp=Z,1µm,21.9s,baz=28,slow=36						
	comp=Z,0.5nm,0.7s						
SONM	**Songino Array**	**99.76**	**336**	P	**Pdif**	**15 29 10.5**	**+1.7**
BELG	**Belogornoye**	**99.78**	**14**	LR	LR	16 15 39.4	
	comp=Z,1µm,19.2s,baz=338,slow=36						
RPZ	**Rata Peaks**	**99.87**	**226**	LR	LR	16 07 35.2	
	comp=Z,892nm,18.6s,baz=49,slow=31						
TAM	**Tamanrasset**	**101.13**	**58**	IAMs_20	IAMs_20	16 10 31.0	
	comp=Z,2µm,21.0s						
BJT	**Baijiatuau**	**101.69**	**326**	IAMs_20	IAMs_20	16 20 23.9	
	comp=Z,595nm,19.0s						
SANT	**Santorini**	**105.32**	**36**	IAMs_20	IAMs_20	16 17 57.4	
	comp=Z,1µm,18.0s						
IDI	**Anoyia**	**105.83**	**37**	IAMs_20	IAMs_20	16 21 10.9	
	comp=Z,644nm,20.0s						
ANTO	**Ankara**	**106.11**	**29**	IAMs_20	IAMs_20	16 21 52.7	
	comp=Z,1µm,18.0s						
KIV	**Kislovodsk**	**106.28**	**20**	IAMs_20	IAMs_20	16 17 07.7	
	comp=Z,948nm,19.0s						
MKAR	**Makanchi Array**	**106.95**	**351**	PKiKP	**PKiKP**	**15 33 50.6**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=11,slow=3.7,SNR=1.8						
MAKZ	**Makanchi**	**106.98**	**351**	IAMs_20	IAMs_20	16 27 26.1	
	comp=Z,1µm,19.0s						
MAK	**Makhachkala**	**108.58**	**17**	*i* P	**Pdif**	**15 29 39.7**	**-8.2**
MAK				*e*		15 34 18.1	
MAK				*e*SS	SS	15 49 29.6	-3.7
MAK				pmax	pmax		
	comp=Z,207nm,1.3s						
YHNB	**Yeheng**	**109.41**	**311**	IAMs_20	IAMs_20	16 29 44.8	
	comp=Z,478nm,19.0s						
NACB	**Ninganchiao**	**109.58**	**311**	IAMs_20	IAMs_20	16 25 03.6	
	comp=Z,488nm,18.0s						
CSS	**Mathiatis**	**110.38**	**32**	IAMs_20	IAMs_20	16 28 31.9	
	comp=Z,661nm,20.0s						
LZH	**Lanzhou**	**110.67**	**331**	*e*PKP	**PKiKP**	**15 33 56.0**	**-1.8**
LZH				LR	LR		
	comp=Z,890nm,19.7s						
LZH				LR	LR		
	comp=Z,930nm,17.5s						
LZH				LR	LR		
	comp=Z,1µm,18.1s						
ENH	**Enshi**	**112.65**	**323**	IAMs_20	IAMs_20	16 29 51.3	
	comp=Z,667nm,19.0s						
GHAJ	**Ghor Haditha**	**114.45**	**32**	IAMs_20	IAMs_20	16 24 56.7	
	comp=Z,571nm,18.0s						
QSPA	**South Pole Qui**	**115.61**	**180**	IAMs_20	IAMs_20	16 18 21.7	
	comp=Z,821nm,18.0s						
TNTI	**Ternate**	**118.67**	**286**	IAMs_20	IAMs_20	16 15 48.4	
	comp=Z,648nm,20.0s						
PZH	**PanZhiHua**	**119.68**	**327**	PKP	**PKiKP**	**15 34 15.3**	**0.0**
PZH				PP	**PP**	**15 35 37.5**	**+0.7**
PZH				SS	SS	15 52 05.0	+4.1
PZH				AMB	AMB		
	comp=Z,90nm,5.5s						
PZH				LR	LR		
	comp=Z,370nm,16.5s						
PZH				LR	LR		
	comp=Z,510nm,18.0s						
PZH				LR	LR		
	comp=Z,580nm,16.1s						

WRAB	**Tennant Creek**	**120.86**	**261**		**PKPdf**	**15 34 14.8**	**-2.6**
WRAB	**Tennant Creek**	**120.86**	**261**	PKIKP	**PKPdf**	**15 34 14.8**	**-2.6**
WB2	**Warramunga Arr**	**120.86**	**261**	PKPdf	**PKPdf**	**15 34 12.6**	**-4.8**
WRA	**Warramunga Arr**	**120.87**	**261**	PKP	**PKPdf**	**15 34 17.2**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=68,slow=2.1,SNR=8.6						
WRA	**Warramunga Arr**	**120.87**	**261**	PKIKP	**PKPdf**	**15 34 17.2**	**-0.3**
QIZ	**Qiongzhong**	**120.97**	**315**	PKP	**PKiKP**	**15 34 18.0**	**+0.1**
QIZ				PP	**PP**	**15 35 48.0**	**+2.1**
QIZ				SS	SS	15 52 21.0	+3.0
QIZ				LR	LR		
	comp=Z,790nm,15.9s						
QIZ				LR	LR		
	comp=Z,510nm,14.3s						
QIZ				LR	LR		
	comp=Z,440nm,17.5s						
QIZ	**Qiongzhong**	**120.97**	**315**	IAMs_20	IAMs_20	16 21 44.4	
	comp=Z,504nm,21.0s						
LSA	**Lhasa**	**121.24**	**338**	IAMs_20	IAMs_20	16 30 01.9	
	comp=Z,742nm,20.0s						
ASAR	**Alice Springs**	**122.38**	**257**	PKP	**PKPdf**	**15 34 19.6**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=82,slow=2.2,SNR=9.0						
ASAR				PKKPbc	**PKKPab**	**15 44 17.5**	**+2.4**
	comp=Z,0.5nm,0.9s,baz=264,slow=3.7,SNR=2.6						
ASAR	**Alice Springs**	**122.38**	**257**	PKPdf	**PKPdf**	**15 34 18.4**	**-1.9**
ASAR	**Alice Springs**	**122.38**	**257**	PKIKP	**PKPdf**	**15 34 18.4**	**-1.9**
LUWI	**Luwuk**	**123.55**	**287**	IAMs_20	IAMs_20	16 17 37.6	
	comp=Z,488nm,22.0s						
KKM	**Kota Kinabalu**	**125.09**	**299**	IAMs_20	IAMs_20	16 20 43.7	
	comp=Z,651nm,22.0s						
RAYN	**Ar Rayn**	**125.61**	**28**	IAMs_20	IAMs_20	16 31 48.0	
	comp=Z,849nm,19.0s						
CMAR	**Chiang Mai Arr**	**127.80**	**324**	PKP	**PKiKP**	**15 34 31.9**	**+0.5**
	comp=Z,1.8nm,0.9s,baz=331,slow=1.5,SNR=6.1						
CMAR	**Chiang Mai Arr**	**127.80**	**324**	PKIKP	**PKiKP**	**15 34 31.9**	**+0.5**
UOSS	**Minazif**	**127.89**	**16**	IAMs_20	IAMs_20	16 37 13.8	
	comp=Z,665nm,20.0s						
SBUM	**Sibu**	**130.42**	**298**	IAMs_20	IAMs_20	16 21 34.9	
	comp=Z,393nm,21.0s						
TSUM	**Tsumeb**	**131.43**	**93**	IAMs_20	IAMs_20	16 30 03.3	
	comp=Z,768nm,20.0s						
WIN	**Windhoek**	**131.94**	**98**	IAMs_20	IAMs_20	16 27 14.1	
	comp=Z,737nm,21.0s						
ATD	**Arta Tunnel**	**134.52**	**39**	IAMs_20	IAMs_20	16 35 02.9	
	comp=Z,573nm,21.0s						
KULM	**Kulim**	**137.11**	**312**	IAMs_20	IAMs_20	16 47 21.7	
	comp=Z,468nm,20.0s						
MYKOM	**Kota Tinggi**	**137.29**	**305**	IAMs_20	IAMs_20	16 49 23.5	
	comp=Z,546nm,19.0s						
IPM	**Ipoh**	**137.44**	**310**	IAMs_20	IAMs_20	16 47 39.7	
	comp=Z,607nm,20.0s						
LSZ	**Lusaka**	**139.68**	**83**	IAMs_20	IAMs_20	16 42 48.7	
	comp=Z,720nm,19.0s						
BOSA	**Boshof**	**140.31**	**104**	PKP	**PKPdf**	**15 34 53.8**	**-0.3**
	comp=Z,3.5nm,1.0s,baz=297,slow=2.5,SNR=3.6						
BOSA	**Boshof**	**140.31**	**104**	PKIKP	**PKPdf**	**15 34 53.8**	**-0.3**
BKNI	**Bangkinang**	**140.34**	**306**	IAMs_20	IAMs_20	16 26 21.2	
	comp=Z,464nm,21.0s						
KIBK	**Kibwezi**	**141.50**	**58**	IAMs_20	IAMs_20	16 37 12.0	
	comp=Z,763nm,19.0s						
PCHI	**Peechi**	**143.41**	**349**	*e*P	**PKiKP**	**15 35 07.3**	**+4.1**
PCHI				*e*x	x	15 47 04.1	
PALK	**Pallekele**	**145.56**	**341**	IAMs_20	IAMs_20	16 50 49.6	
	comp=Z,597nm,18.0s						

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*IDC **29** 15:35:46.6±0.6, 40°.83S×44°.23E, h0^{km}, mb3.9/10, mbtmp3.9/11, ML3.4/1, Error ellipse: s-maj=26.6km s-min=19.5km az=33.0*

*NEIC **29** 15:35:48.5±1.1, 40°.9S±0°.2×44°.0E±0°.2, h10^{km}±1^{km}, mb4.4/15, Error ellipse: s-maj=27.6km s-min=18.2km az=20.0*

ISC 29 15:35:48.0±0.6,**40°.9S**±0°.1×**44°.1E**±0°.1,**h10**^{km},**n33**, σ**0^{s}54**/30,**mb4.1**/13,**Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRHM	**Grahamstown, E**	**16.03**	**293**	Pn	**Pn**	**15 39 34.6**	**+1.1**
GRHM				IAmb	IAmb	15 39 59.2	
	comp=Z,66nm,1.4s						
SOE	**Somerset East**	**16.91**	**293**		**P**	**15 39 46.8**	**-0.1**
SOE				IAmb	IAmb	15 39 59.4	
	comp=Z,28nm,1.2s						
BOSA	**Boshof**	**19.68**	**302**	P	**Pn**	**15 40 19.8**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=90,slow=14,SNR=2.5						
	comp=Z,4.2nm,1.1s						
BOSA	**Boshof**	**19.68**	**302**	P	**P**	**15 40 16.8**	**-0.6**
SUR	**Sutherland**	**20.48**	**287**	P	Pn	15 40 27.6	-0.7
	comp=Z,5.6nm,1.0s,baz=124,slow=18,SNR=1.8						
	comp=Z,5.6nm,1.0s						
SUR	**Sutherland**	**20.48**	**287**	P	**P**	**15 40 26.1**	**0.0**
SUR				IAmb	IAmb	15 40 43.4	
	comp=Z,17nm,1.2s						
LBTB	**Lobatse**	**22.09**	**310**	P	**P**	**15 40 44.2**	**+0.8**
	comp=Z,2.7nm,0.8s,baz=154,slow=11,SNR=3.4						
	comp=Z,2.7nm,0.8s						
LBTB	**Lobatse**	**22.09**	**310**	P	**P**	**15 40 43.2**	**-0.2**
LBTB				IAmb	IAmb	15 40 50.0	
	comp=Z,22nm,1.4s						
TSUM	**Tsumeb**	**31.30**	**306**	P	**P**	**15 42 08.7**	**+0.1**
TSUM				IAmb	IAmb	15 42 09.9	
	comp=Z,6.7nm,1.3s						
DGAR	**Diego Garcia**	**41.80**	**45**	P	**P**	**15 43 38.5**	**+0.6**
QSPA	**South Pole Qui**	**49.34**	**180**	P	**P**	**15 44 37.5**	**+0.3**
	comp=Z,5.3nm,1.0s,baz=257,slow=4.3,SNR=6.6						
	comp=Z,5.3nm,1.0s						
QSPA	**South Pole Qui**	**49.34**	**180**	P	**P**	**15 44 37.6**	**+0.3**
SHEL	**Horse Pasture**	**49.57**	**285**	P	**P**	**15 44 38.0**	**-1.4**
H01W2	**Cape Leeuwin H**	**54.26**	**108**	T	T	16 43 42.2	
	baz=243,slow=75,SNR=4.6						
H01W3	**Cape Leeuwin H**	**54.27**	**108**	T	T	16 43 43.5	
	baz=243,slow=75,SNR=4.5						
H01W1	**Cape Leeuwin H**	**54.28**	**108**	T	T	16 43 42.7	
	baz=243,slow=75,SNR=4.4						
TOA0	**Torodi Ar. Sit**	**66.53**	**314**	P	**P**	**15 46 38.1**	**-0.1**
TOA0				IAmb	IAmb	15 46 44.0	
	comp=Z,2.0nm,0.8s						
ASAR	**Alice Springs**	**74.78**	**108**	P	**P**	**15 47 28.6**	**0.0**
	comp=Z,0.3nm,0.6s,baz=232,slow=5.5,SNR=12						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**74.78**	**108**	P	**P**	**15 47 28.0**	**-0.6**
AS31	**Alice Springs**	**74.78**	**108**	P	**P**	**15 47 27.9**	**-0.7**
AS31				IAmb	IAmb	15 47 54.4	
	comp=Z,2.1nm,1.2s						
STKA	**Stephens Creek**	**75.03**	**119**	P	**P**	**15 47 30.0**	**+0.1**
WRA	**Warramunga Arr**	**77.41**	**105**	P	**P**	**15 47 43.8**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=224,slow=5.2,SNR=12						
	comp=Z,0.7nm,0.6s						
WRA	**Warramunga Arr**	**77.41**	**105**	P	**P**	**15 47 43.1**	**-0.5**
WB0	**Warramunga Arr**	**77.56**	**105**	P	**P**	**15 47 44.4**	**0.0**
WB0				IAmb	IAmb	15 48 11.7	
	comp=Z,6.8nm,1.3s						
CMAR	**Chiang Mai Arr**	**77.91**	**53**	P	**P**	**15 47 46.4**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=225,slow=6.2,SNR=5.5						
	comp=Z,0.5nm,0.4s						
PLCA	**Paso Flores**	**79.44**	**225**	P	**P**	**15 47 55.2**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=127,slow=3.8,SNR=6.3						
	comp=Z,1.4nm,0.7s						
PLCA	**Paso Flores**	**79.44**	**225**	P	**P**	**15 47 54.6**	**0.0**
BRTR	**Keskin Array B**	**80.77**	**352**	P	**P**	**15 48 01.3**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=186,slow=6.1,SNR=5.9						
	comp=Z,1.6nm,0.8s						
AKASG	**Malin Array Be**	**92.11**	**351**	P	**P**	**15 48 57.1**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=191,slow=4.4,SNR=1.3						
	comp=Z,0.1nm,0.3s						
MKAR	**Makanchi Array**	**93.67**	**25**	P	**P**	**15 49 03.7**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=216,slow=5.2,SNR=4.1						
	comp=Z,0.3nm,0.6s						
ULM	**Lac du Bonnet**	**150.76**	**302**	PKPbc	**PKPbc**	**15 55 39.6**	**-0.3**
	comp=Z,4.5nm,0.5s,baz=139,slow=2.1,SNR=6.7						
TXAR	**Lajitas Array**	**151.39**	**257**	PKPbc	**PKPbc**	**15 55 42.5**	**+0.3**
	comp=Z,2.3nm,0.8s,baz=143,slow=5.3,SNR=6.4						
YKA	**Yellowknife Ar**	**154.87**	**337**	PKPbc	**PKPbc**	**15 55 48.4**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=33,slow=1.8,SNR=3.6						
YKA				PKPab	**PKPab**	**15 56 03.5**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=37,slow=4.6,SNR=7.2						

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*TUL **29** 15:37:40.7±1.0, 36°.82N±0°.02×97°.61W±0°.02, h3^{km}±5^{km}, ML4.6, mb4.1/22(NEIC), mb_Lg4.3/132(NEIC), ML4.3/58(NEIC), Mwr4.1/22(NEIC), Error ellipse: s-maj=2.8km s-min=1.8km az=224.0*

*IDC **29** 15:37:40.6±0.6, 36°.93N×97°.60W, h0^{km}, mb4.1/5, mbtmp3.9/14, ML3.7/9, MS4.1/1, Error ellipse: s-maj=10.0km s-min=7.6km az=154.0*

*NEIC **29** 15:37:41.8±1.2, 36°.83N±0°.02×97°.61W±0°.02, h6^{km}±6^{km}, Error ellipse: s-maj=3.1km s-min=2.2km az=210.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.44; $M_{\theta\theta}$1.78; $M_{\phi\phi}$-1.34; $M_{r\theta}$0.69; $M_{\theta\phi}$-0.10; $M_{\phi r}$0.05; Fault plane solution: $M_0$1.75000×10^{15} NP1:ϕ_s46.24000°, δ82.56000°, λ165.07000°. NP2:ϕ_s138.22000°, δ75.20000°, λ7.70000°. Principal axes: T 1.9767, Plg16.0000°, Azm1.0000°; N -0.6303, Plg73.0000°, Azm200.0000°; P -1.3463, Plg5.0000°, Azm93.0000°;*

*ANF **29** 15:37:41.4±1.4, 36°.87N×97°.62W, h12^{km}±10^{km}, ML5.3/13 Error ellipse: s-maj=2.8km s-min=2.5km az=80.0*

*NEIC **29** 15:37:41.5, 36°.81N×97°.62W, h2^{km}*

ISC 29 15:37:41.1±0.8,**36°.85N**±0°.02×**97°.58W**±0°.02,**h14**^{km}±5^{km}, **n350**,σ**1^{s}37**/362,**mb4.1**/15,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN13	**South Haven SW**	**0.18**	**26**		**Pg**	**15 37 45.9**	**+0.5**
KAN13				Sg	**Sg**	**15 37 49.2**	**+0.9**
KAN13				IAML		15 37 49.5	
	comp=N,67µm,0.3s						
KAN13				IAML		15 37 49.6	
	comp=E,96µm,0.3s						
GC02	**Grant County #**	**0.22**	**271**		**Pg**	**15 37 45.2**	**-0.8**
GC02				Sg	**Sg**	**15 37 48.2**	**-1.2**
KAN17	**Caldwell West**	**0.24**	**323**		**Pg**	**15 37 46.4**	**0.0**
KAN17				Sg	**Sg**	**15 37 50.3**	**+0.3**
KAN17				IAML		15 37 50.6	
	comp=N,49µm,0.6s						
KAN17				IAML		15 37 50.6	
	comp=E,52µm,0.4s						
KAN09	**Caldwell North**	**0.29**	**354**		**Pg**	**15 37 47.6**	**+0.4**
KAN09				Sg	**Sb**	**15 37 52.2**	**-0.6**
BLOK	**Blackwell**	**0.31**	**106**		**Pg**	**15 37 47.5**	**+0.1**
KAN14	**Manchester OK**	**0.33**	**290**		**Pg**	**15 37 47.4**	**-0.4**
KAN14				Sg	**Sg**	**15 37 51.5**	**-0.8**
KAN14				IAML		15 37 52.0	
	comp=N,47µm,0.5s						
KAN01	**Argonia South**	**0.34**	**335**		**Pg**	**15 37 48.3**	**+0.3**
KAN01				IAML		15 37 53.8	
	comp=E,27µm,0.6s						
KAN05	**Bluff City Nor**	**0.35**	**318**		**Pg**	**15 37 48.2**	**0.0**
KAN05				Sg	**Sg**	**15 37 53.1**	**+0.1**
KAN05				IAML		15 37 55.3	
	comp=E,51µm,0.5s						
KAN05				IAML		15 37 55.6	
	comp=N,33µm,0.5s						
KS20	**Mayfield South**	**0.38**	**3**		**Pg**	**15 37 49.4**	**+0.6**
KS21	**Milan North St**	**0.44**	**351**		**Pg**	**15 37 50.3**	**+0.4**
KAN06	**Argonia West S**	**0.46**	**331**		**Pg**	**15 37 50.5**	**+0.3**
KAN06				IAML		15 37 57.4	
	comp=E,17µm,0.5s						
CROK	**Carrier**	**0.47**	**224**		**Pg**	**15 37 49.5**	**-1.0**
KAN08	**Anthony NE Sta**	**0.49**	**321**		**Pg**	**15 37 50.9**	**+0.1**
KAN08				IAML		15 38 00.2	
	comp=N,27µm,0.7s						
OK032	**Salt Plains WL**	**0.51**	**265**		**Pg**	**15 37 50.2**	**-0.9**
OK032				IAML		15 37 52.8	
	comp=N,19µm,0.2s						
OK032				IAML		15 38 00.1	
	comp=N,20µm,0.2s						
KAN12	**Harper NE Stat**	**0.56**	**323**		**Pg**	**15 37 52.2**	**+0.1**
OK048	**Pawnee Station**	**0.67**	**130**		**Pg**	**15 37 53.8**	**-0.3**
OK048				IAML		15 38 05.1	
	comp=N,16µm,0.9s						
OK051	**E0350 and S346**	**0.69**	**120**		**Pg**	**15 37 54.4**	**-0.1**
OK051				IAML		15 38 04.0	
	comp=N,14µm,0.4s						
OK051				IAML		15 38 08.3	
	comp=N,10µm,0.2s						
T35A	**Sooner Cattle**	**0.86**	**85**	Pg	**Pg**	**15 37 57.7**	**0.0**
T35B	**Sooner Cattle**	**0.86**	**85**	P	**Pg**	**15 37 57.7**	**0.0**
	baz=264,SNR=1000						
T35B				S	**Sb**	**15 38 09.7**	**+0.5**
	baz=264						
OK035	**E0210 Rd and N**	**0.92**	**262**	Pg	**Pg**	**15 37 57.5**	**-1.3**
OK035				IAML		15 38 20.0	
	comp=N,12µm,0.6s						
OK035				IAML		15 38 20.1	
	comp=N,11µm,0.3s						
OK033	**Mehan**	**0.95**	**147**	Pg	**Pb**	**15 37 58.7**	**-0.7**
OK033				IAML		15 38 13.8	
	comp=N,12µm,0.7s						
OK033				IAML		15 38 13.8	
	comp=N,10µm,0.7s						
QUOK	**Quay**	**0.97**	**134**		**Pb**	**15 37 59.3**	**-0.4**
QUOK				IAML		15 38 15.9	
	comp=N,8µm,0.8s						
QUOK				IAML		15 38 18.1	
	comp=E,7µm,0.2s						
OK038	**West end E0370**	**1.00**	**249**	Pg	**Pb**	**15 37 59.0**	**-1.3**
OK052	**Battle Ridge R**	**1.06**	**143**	Pg	**Pb**	**15 38 00.6**	**-0.6**
OK052				IAML		15 38 16.9	
	comp=E,11µm,0.6s						
OK052				IAML		15 38 18.6	
	comp=E,11µm,0.8s						
OK031	**S. Brethren Rd**	**1.07**	**146**		**Pb**	**15 38 00.9**	**-0.5**
OK031				IAML		15 38 16.4	
	comp=E,6µm,0.1s						
OK031				IAML		15 38 21.1	
	comp=E,11µm,0.7s						
NOKA	**Waynoka**	**1.11**	**259**		**Pb**	**15 38 00.9**	**-1.1**
NOKA				IAML		15 38 28.4	
	comp=N,13µm,0.4s						
OK030	**Cody Creek RV**	**1.12**	**145**		**Pb**	**15 38 01.9**	**-0.4**
U32A	**Winter Ranch,**	**1.24**	**248**	Pg	**Pn**	**15 38 03.2**	**-0.8**
U32A				IAML		15 38 25.7	
	comp=E,10µm,0.6s						
U32A	**Winter Ranch,**	**1.24**	**248**	P	**Pn**	**15 38 03.1**	**-0.8**
	baz=68,SNR=448						
U32A				S	**Sb**	**15 38 19.7**	**-0.3**
	baz=68						
DEOK	**Depew**	**1.33**	**139**		**Pn**	**15 38 05.4**	**+0.1**
OKCSW	**OKLAHOMA CITY**	**1.44**	**175**		**Pn**	**15 38 07.0**	**+0.2**
CSTR	**Hydro, Custer**	**1.50**	**217**		**Pn**	**15 38 07.5**	**-0.1**
FNO	**Franklin**	**1.59**	**175**	Pg	**Pn**	**15 38 09.5**	**+0.6**
ELIS	**Ellis County**	**1.68**	**243**		**Pn**	**15 38 10.7**	**+0.6**
TUL1	**Leonard**	**1.72**	**122**	Pn	**Pn**	**15 38 11.9**	**+1.3**
TUL1				IAmb_Lg		15 38 37.3	
	comp=Z,2µm,0.9s						
TUL1	**Leonard**	**1.72**	**122**	P	**Pb**	**15 38 12.0**	**-0.4**
	baz=302						
TUL1				S	**Sb**	**15 38 35.5**	**+1.6**
	baz=302						
TUL1	**Leonard**	**1.72**	**122**	P	**Pb**	**15 38 12.1**	**-0.4**
	baz=302,SNR=179						
TUL1				S	**Sb**	**15 38 35.5**	**+1.6**
	baz=302						
W35A	**Tecumseh**	**1.79**	**161**	Pn	**Pn**	**15 38 12.3**	**+0.8**
R32A	**Long Quarter,**	**1.81**	**331**	Pn	**Pb**	**15 38 13.2**	**-0.8**
R32A	**Long Quarter,**	**1.81**	**331**	P	**Pb**	**15 38 13.8**	**-0.2**
	baz=151,SNR=128						
R32A				S	**Sg**	**15 38 38.1**	**-1.2**
	baz=151						
RLO	**Rose Lookout**	**2.17**	**108**	Pn	**Pn**	**15 38 18.0**	**+1.2**
RLO				IAmb_Lg		15 38 55.4	
	comp=Z,760nm,0.7s						
X34A	**Smith Ranch, M**	**2.25**	**185**		**Pn**	**15 38 18.6**	**+0.7**
WMOK	**Wichita Mounta**	**2.32**	**205**	Pn	**Pn**	**15 38 19.4**	**+0.5**
WMOK	**Wichita Mounta**	**2.32**	**205**	P	**Pn**	**15 38 19.6**	**+0.7**
	baz=24						
WMOK				S	**Sn**	**15 38 49.3**	**+2.0**
	baz=24						
WMOK	**Wichita Mounta**	**2.32**	**205**	P	**Pn**	**15 38 19.4**	**+0.5**
	baz=24,SNR=698						
WMOK				S	**Sb**	**15 38 49.8**	**-1.5**
	baz=24						
KSU1	**Kansas State U**	**2.38**	**19**	Pn	**Pn**	**15 38 21.5**	**+1.9**
KSU1				IAmb_Lg		15 38 59.7	
	comp=Z,820nm,0.8s						
KSU1	**Kansas State U**	**2.38**	**19**	P	**Pn**	**15 38 21.8**	**+2.1**
	baz=199,SNR=255						
KSU1				S	**Sb**	**15 38 52.2**	**-0.6**
	baz=199						
KSU1	**Kansas State U**	**2.38**	**19**	P	**Pn**	**15 38 21.8**	**+2.1**
	baz=199,SNR=77						
U38A	**Gravette**	**2.60**	**98**	Pn	**Pn**	**15 38 24.6**	**+1.9**
U38A				IAmb_Lg		15 39 05.0	
	comp=Z,909nm,0.8s						
U38A	**Gravette**	**2.60**	**98**	P	**Pn**	**15 38 24.8**	**+2.0**
	baz=279,SNR=154						
U38A				S	**Sb**	**15 38 57.5**	**-1.9**
	baz=279						
CBKS	**Cedar Bluff**	**2.60**	**320**	Pn	**Pn**	**15 38 24.0**	**+1.2**
CBKS	**Cedar Bluff**	**2.60**	**320**	P	**Pn**	**15 38 24.2**	**+1.5**
	baz=139,SNR=47						
CBKS				Sb	**Sg**	**15 39 02.0**	**-2.7**
	baz=139						
CBKS	**Cedar Bluff**	**2.60**	**320**	P	**Pn**	**15 38 24.3**	**+1.5**
	baz=139,SNR=22						
LOOK	**Love County**	**2.87**	**173**	Pn	**Pn**	**15 38 27.1**	**+0.8**
X37A	**Clayton**	**2.88**	**141**	Pn	**Pn**	**15 38 27.9**	**+1.4**
X37A	**Clayton**	**2.88**	**141**	P	**Pn**	**15 38 28.4**	**+1.8**
	baz=321,SNR=29						
HHAR	**Hobbs**	**2.98**	**100**	Pn	**Pn**	**15 38 29.7**	**+1.7**
HHAR				IAmb_Lg		15 39 23.6	
	comp=Z,1µm,1.1s						
WTFS	**Witchita Falls**	**3.16**	**193**	Pn	**Pn**	**15 38 31.1**	**+0.7**
WTFS				IAmb_Lg		15 39 26.1	
	comp=Z,179nm,0.7s						
S39A	**Bolivar**	**3.50**	**75**	Pn	**Pn**	**15 38 36.3**	**+1.2**
S39A				IAmb_Lg		15 39 38.3	
	comp=Z,1µm,1.0s						
S39A	**Bolivar**	**3.50**	**75**	P	**Pn**	**15 38 36.6**	**+1.5**
	baz=257,SNR=100						
Z35A	**Perchaven, San**	**3.52**	**176**	Pn	**Pn**	**15 38 36.4**	**+1.1**
Z35A	**Perchaven, San**	**3.52**	**176**	P	**Pn**	**15 38 36.6**	**+1.2**
	baz=355						
Z35A				S	**Sn**	**15 39 19.9**	**+3.1**
	baz=355						
FW03	**Perrin-Whitt E**	**3.82**	**186**	IAmb_Lg		15 39 51.1	
	comp=Z,349nm,0.8s						
U40A	**Yellville**	**3.83**	**96**	P	**Pn**	**15 38 41.6**	**+1.9**
	baz=278,SNR=58						
U40A				P	**Pn**	**15 38 41.6**	**+1.9**
	baz=278,SNR=58						
AMTX	**Amarillo**	**3.86**	**241**	P	**Pn**	**15 38 40.9**	**+0.8**
	baz=58						
AMTX				S	**Sn**	**15 39 26.8**	**+1.4**
	baz=58						
AMTX	**Amarillo**	**3.86**	**241**	S	**Sn**	**15 39 28.6**	**+3.1**
	baz=58						
FW06	**Azle**	**3.87**	**180**	Pn	**Pn**	**15 38 40.9**	**+0.8**
FW06				IAmb_Lg		15 39 53.6	
	comp=Z,359nm,0.9s						
N33B	**J Bar K, Exete**	**3.88**	**1**	P	**Pn**	**15 38 41.5**	**+1.1**
	baz=182						
N33A	**J Bar K, Exete**	**3.89**	**1**	Pn	**Pn**	**15 38 41.3**	**+0.9**
MIAR	**Mount Ida**	**3.99**	**124**	Pn	**Pn**	**15 38 42.6**	**+0.8**
MIAR				IAmb_Lg		15 39 49.8	
	comp=Z,1µm,0.8s						
MIAR	**Mount Ida**	**3.99**	**124**	P	**Pn**	**15 38 43.0**	**+1.3**
	baz=306						
MIAR				Sb	**Sg**	**15 39 44.9**	**-4.2**
	baz=306						
MIAR	**Mount Ida**	**3.99**	**124**	P	**Pn**	**15 38 43.2**	**+1.5**
	baz=306,SNR=43						
MIAR				S	**Sn**	**15 39 31.0**	**+2.7**
	baz=306						
APMT	**Aspermont**	**4.09**	**211**	Pn	**Pn**	**15 38 43.8**	**+0.6**
APMT				IAmb_Lg		15 39 53.8	
	comp=Z,268nm,0.8s						
FW07	**Weatherford**	**4.14**	**182**	Pn	**Pn**	**15 38 44.6**	**+0.7**
FW07				IAmb_Lg		15 39 59.3	
	comp=Z,392nm,0.8s						
Z38A	**Mt. Pleasant**	**4.16**	**149**	Pn	**Pn**	**15 38 45.4**	**+1.2**
DKNS	**Dickens**	**4.19**	**222**	Pn	**Pn**	**15 38 45.3**	**+0.6**
DKNS				IAmb_Lg		15 39 55.3	
	comp=Z,1µm,1.1s						
P38A	**Dawn**	**4.22**	**48**	Pn	**Pn**	**15 38 46.6**	**+1.6**
P38A				IAmb_Lg		15 39 58.8	
	comp=Z,678nm,0.7s						
P38A	**Dawn**	**4.22**	**48**	P	**Pn**	**15 38 47.1**	**+2.0**
	baz=230,SNR=57						
N35A	**Tabor**	**4.28**	**20**	Pn	**Pn**	**15 38 47.1**	**+1.2**
N35A	**Tabor**	**4.28**	**20**	P	**Pn**	**15 38 48.3**	**+2.4**
	baz=201						
FW16	**Waxahatchie**	**4.39**	**172**	IAmb_Lg		15 40 09.4	
	comp=Z,812nm,1.0s						
FW14	**Alvarado**	**4.45**	**176**	Pn	**Pn**	**15 38 48.3**	**+0.2**
FW14				IAmb_Lg		15 40 07.7	
	comp=Z,702nm,1.0s						
R40A	**Maddies Statio**	**4.46**	**70**	Pn	**Pn**	**15 38 49.6**	**+1.4**
R40A				IAmb_Lg		15 40 06.4	
	comp=Z,696nm,1.1s						
R40A	**Maddies Statio**	**4.46**	**70**	P	**Pn**	**15 38 50.0**	**+1.8**
	baz=252,SNR=13						
FW13	**Cleburne**	**4.49**	**178**	Pn	**Pn**	**15 38 49.5**	**+0.8**
FW13				IAmb_Lg		15 40 09.9	
	comp=Z,634nm,1.1s						
FCAR	**Ozark Folk Cen**	**4.50**	**101**	Pn	**Pn**	**15 38 49.7**	**+0.8**
FCAR				IAmb_Lg		15 40 01.8	
	comp=Z,782nm,1.0s						
X40A	**Basin Creek Fa**	**4.53**	**120**	Pn	**Pn**	**15 38 50.5**	**+1.4**
X40A	**Basin Creek Fa**	**4.53**	**120**	P	**Pn**	**15 38 51.0**	**+1.8**
	baz=302,SNR=11						
X40A				P	**Pn**	**15 38 51.0**	**+1.8**
	baz=302,SNR=11						
KSCO	**Kaye Shedlock’**	**4.54**	**300**	Pn	**Pn**	**15 38 50.7**	**+1.3**
KSCO	**Kaye Shedlock’**	**4.54**	**300**	P	**Pn**	**15 38 50.6**	**+1.1**
	baz=118,SNR=11						
ABTX	**Abilene, Hawle**	**4.54**	**203**	Pn	**Pn**	**15 38 49.9**	**+0.4**
ABTX	**Abilene, Hawle**	**4.54**	**203**	P	**Pn**	**15 38 49.9**	**+0.4**
	baz=21						
ABTX				Sb	**Sb**	**15 39 57.9**	**+2.6**
	baz=21						
ABTX	**Abilene, Hawle**	**4.54**	**203**	P	**Pn**	**15 38 50.1**	**+0.6**
	baz=21,SNR=19						
WHAR	**Wooly Hollow**	**4.56**	**108**	Pn	**Pn**	**15 38 51.0**	**+1.4**
WHAR				IAmb_Lg		15 40 12.7	
	comp=Z,725nm,0.9s						
BGNE	**Belgrade**	**4.58**	**355**	Pn	**Pn**	**15 38 50.8**	**+0.9**
BGNE				IAmb_Lg		15 40 19.4	
	comp=Z,842nm,0.8s						
BGNE	**Belgrade**	**4.58**	**355**	P	**Pn**	**15 38 51.1**	**+1.3**
	baz=175,SNR=17						
BGNE	**Belgrade**	**4.58**	**355**	P	**Pn**	**15 38 51.5**	**+1.6**
	baz=175,SNR=22						
UALR	**University of**	**4.73**	**114**	Pn	**Pn**	**15 38 53.2**	**+1.2**
WLAR	**White Oak Lake**	**4.83**	**129**	Pn	**Pn**	**15 38 54.3**	**+1.0**
WLAR				IAmb_Lg		15 40 19.2	
	comp=Z,688nm,0.8s						
WHTX	**Lake Whitney,**	**4.85**	**179**	Pn	**Pn**	**15 38 53.9**	**+0.4**
WHTX	**Lake Whitney,**	**4.85**	**179**	P	**Pn**	**15 38 54.2**	**+0.6**
	baz=358						
WHTX				Sb	**Sb**	**15 40 08.9**	**+5.0**
	baz=358						
WHTX	**Lake Whitney,**	**4.85**	**179**	P	**Pn**	**15 38 54.4**	**+0.8**
	baz=358,SNR=55						
POST	**Post**	**4.96**	**222**	Pn	**Pn**	**15 38 55.6**	**+0.4**
POST				IAmb_Lg		15 40 25.1	
	comp=Z,741nm,1.2s						
237A	**Washetta, Mont**	**5.05**	**163**	Pn	**Pn**	**15 38 56.4**	**0.0**
237A				IAmb_Lg		15 40 33.5	
	comp=Z,542nm,0.9s						
237A	**Washetta, Mont**	**5.05**	**163**	P	**Pn**	**15 38 57.0**	**+0.7**
	baz=343,SNR=14						
P40A	**Paris**	**5.11**	**57**	Pn	**Pn**	**15 38 58.6**	**+1.3**
P40A				IAmb_Lg		15 40 28.9	
	comp=Z,696nm,0.9s						
MSTX	**Muleshoe**	**5.12**	**237**	Pn	**Pn**	**15 38 57.9**	**+0.4**
MSTX				IAmb_Lg		15 40 34.1	
	comp=Z,697nm,1.1s						
MSTX	**Muleshoe**	**5.12**	**237**	P	**Pn**	**15 38 57.7**	**+0.3**
	baz=54						
MSTX				Sb	**Sb**	**15 40 16.6**	**+4.7**
	baz=54						
CCM	**Cathedral Cave**	**5.18**	**75**	Pn	**Pn**	**15 38 59.3**	**+1.1**
CCM	**Cathedral Cave**	**5.18**	**75**	P	**Pn**	**15 38 59.4**	**+1.3**
	baz=258						
CCM	**Cathedral Cave**	**5.18**	**75**	P	**Pn**	**15 38 59.5**	**+1.3**
	baz=258,SNR=24						
L34A	**Svendsen Farm,**	**5.20**	**10**	Pn	**Pn**	**15 38 59.4**	**+1.0**
L34A				IAmb_Lg		15 40 37.7	
	comp=Z,570nm,0.8s						
N38A	**Joes South For**	**5.20**	**39**	Pn	**Pn**	**15 38 59.3**	**+0.9**
N38A				IAmb_Lg		15 40 39.2	
	comp=Z,746nm,0.7s						
N38A	**Joes South For**	**5.20**	**39**	P	**Pn**	**15 38 59.5**	**+1.1**
	baz=222						
LCAR	**Lake Charles**	**5.24**	**97**	Pn	**Pn**	**15 38 59.4**	**+0.4**
LCAR				IAmb_Lg		15 40 34.6	
	comp=Z,474nm,1.0s						
Z41A	**Richland Creek**	**5.31**	**131**	Pn	**Pn**	**15 38 60.0**	**0.0**
OGNE	**Ogallala**	**5.37**	**321**	Pn	**Pn**	**15 39 02.4**	**+1.6**
OGNE	**Ogallala**	**5.37**	**321**	P	**Pn**	**15 39 02.4**	**+1.6**
	baz=139,SNR=18						
OGNE	**Ogallala**	**5.37**	**321**	P	**Pn**	**15 39 03.2**	**+2.4**
	baz=139,SNR=18						
T25A	**Trinidad**	**5.48**	**275**	Pn	**Pn**	**15 39 02.8**	**+0.3**
T25A				IAmb_Lg		15 40 35.7	

	comp=Z,573nm,0.7s						
T25A	Trinidad	5.48	275	P	Pn	15 39 03.1	+0.6
	baz=91,SNR=14						
CCAR	Cane Creek	5.57	120	IAmb_Lg		15 40 42.5	
	comp=Z,528nm,0.8s						
NATX	Nacogdoches	5.62	154	Pn	Pn	15 39 03.6	-0.6
NATX				IAmb_Lg		15 40 53.9	
	comp=Z,664nm,0.8s						
NATX	Nacogdoches	5.62	154	P	Pn	15 39 04.4	+0.2
	baz=335						
BRDY	Brady	5.67	192	Pn	Pn	15 39 04.2	-0.8
BRDY				IAmb_Lg		15 40 53.7	
	comp=Z,274nm,0.8s						
SGCY	Sterling City	5.73	212	IAmb_Lg		15 40 51.9	
	comp=Z,538nm,0.9s						
PBMO	Poplar Bluff	5.74	89	Pn	Pn	15 39 07.3	+1.5
PBMO				IAmb_Lg		15 40 45.2	
	comp=Z,449nm,0.9s						
HBAR	Harrisburg	5.75	101	IAmb_Lg		15 40 52.7	
	comp=Z,676nm,0.8s						
FVM	French Village	5.81	77	Pn	Pn	15 39 07.7	+0.9
FVM				IAmb_Lg		15 40 48.6	
	comp=Z,577nm,1.1s						
FVM	French Village	5.81	77	P	Pn	15 39 08.2	+1.4
	baz=261,SNR=19						
K31A	O'Neill	5.84	351	Pn	Pn	15 39 08.1	+0.9
K31A	O'Neill	5.84	351	P	Pn	15 39 09.2	+2.0
	baz=171,SNR=13						
435B	Jarrell	6.05	180	Pn	Pn	15 39 09.6	-0.5
435B				IAmb_Lg		15 41 00.6	
	comp=Z,472nm,0.8s						
435B	Jarrell	6.05	180	P	Pn	15 39 10.3	+0.1
	baz=360						
435B	Jarrell	6.05	180	P	Pn	15 39 10.4	+0.3
	baz=360						
SCIA	State Center	6.08	32	Pn	Pn	15 39 11.8	+1.3
SCIA	State Center	6.08	32	P	Pn	15 39 12.2	+1.7
	baz=215,SNR=9.3						
SCIA				S	Sn	15 40 21.3	+1.5
	baz=215						
SCIA	State Center	6.08	32	P	Pn	15 39 12.9	+2.4
	baz=215,SNR=7.2						
SCIA				S	Sn	15 40 21.6	+1.7
	baz=215						
SLM	Saint Louis	6.09	71	IAmb_Lg		15 40 56.6	
	comp=Z,490nm,0.8s						
ODSA	Odessa	6.25	222	Pn	Pn	15 39 13.9	+1.0
ODSA				IAmb_Lg		15 40 59.3	
	comp=Z,138nm,0.9s						
Q24A	Divide	6.35	292	Pn	Pn	15 39 14.8	+0.3
Q24A				IAmb_Lg		15 41 10.7	
	comp=Z,270nm,0.8s						
Q24A	Divide	6.35	292	P	Pn	15 39 15.1	+0.6
	baz=108,SNR=13						
Q24A				S	Sn	15 40 26.2	-0.7
	baz=108						
CGM3	Cape Girardeau	6.35	84	IAmb_Lg		15 41 01.1	
	comp=Z,505nm,1.1s						
PVMO	Portageville	6.35	92	IAmb_Lg		15 41 14.2	
	comp=Z,425nm,0.8s						
SDCO	Great Sand Dun	6.38	280	Pn	Pn	15 39 15.7	+0.8
SDCO	Great Sand Dun	6.38	280	P	Pn	15 39 16.0	+1.1
	baz=96,SNR=27						
SDCO	Great Sand Dun	6.38	280	P	Pn	15 39 16.2	+1.3
	baz=96,SNR=22						
CPRX	Cap Rock	6.42	235	Pn	Pn	15 39 14.8	-0.5
MET	Memphis--Engin	6.43	103	IAmb_Lg		15 41 15.3	
	comp=Z,490nm,0.9s						
BRIGG	Briggsdale	6.45	307	Pn	Pn	15 39 17.3	+1.5
N41A	Harden Midland	6.51	52	Pn	Pn	15 39 16.9	+0.5
143A	Socs Landing,	6.55	127	IAmb_Lg		15 41 24.8	
	comp=Z,555nm,0.9s						
LNXT	Lenox	6.56	94	Pn	Pn	15 39 17.0	-0.1
LNXT				IAmb_Lg		15 41 14.4	
	comp=Z,615nm,0.8s						
OZNA	Ozona	6.61	208	Pn	Pn	15 39 17.6	-0.2
OZNA				IAmb_Lg		15 41 14.6	
	comp=Z,326nm,0.9s						
JCT	Junction City	6.62	197	Pn	Pn	15 39 17.5	-0.4
JCT	Junction City	6.62	197	P	Pn	15 39 17.6	-0.4
	baz=16						
JCT	Junction City	6.62	197	P	Pn	15 39 17.6	-0.4
	baz=16,SNR=11						
S44A	Carbondale	6.69	80	IAmb_Lg		15 41 12.7	
	comp=Z,605nm,0.9s						
HALT	Halls	6.71	96	IAmb_Lg		15 41 23.4	
	comp=Z,345nm,0.7s						
HICK	Hickman	6.72	90	Pn	Pn	15 39 20.6	+1.3
SIUC	Southern Illin	6.72	80	Pn	Pn	15 39 20.3	+0.9
K38A	Parkersburg	6.87	31	Pn	Pn	15 39 22.1	+0.7
ECSD	EROS Data Cent	6.92	6	Pn	Pn	15 39 22.3	+0.3
ECSD	EROS Data Cent	6.92	6	P	Pn	15 39 22.3	+0.3
	baz=187,SNR=34						
ECSD				S	Sn	15 40 41.2	+0.6
	baz=187						
ECSD	EROS Data Cent	6.92	6	P	Pn	15 39 22.4	+0.3
	baz=187,SNR=23						
CLNB	Carlsbad	6.92	230	Pn	Pn	15 39 21.5	-0.6
P43A	Skaggs, Pawnee	6.93	64	Pn	Pn	15 39 23.3	+1.1
P43A				IAmb_Lg		15 41 30.2	
	comp=Z,482nm,0.8s						
ISCO	Idaho Springs	6.97	297	Pn	Pn	15 39 23.7	+0.6
ISCO				IAmb_Lg		15 41 24.7	
	comp=Z,362nm,0.8s						
ISCO	Idaho Springs	6.97	297	P	Pn	15 39 23.8	+0.8
	baz=113,SNR=58						
ISCO	Idaho Springs	6.97	297	P	Pn	15 39 24.0	+1.0
	baz=113,SNR=28						
W45A	Hickory Valley	7.01	101	IAmb_Lg		15 41 31.4	
	comp=Z,379nm,0.9s						
UTMT	University of	7.03	92	IAmb_Lg		15 41 42.5	
	comp=Z,488nm,0.8s						
HKT	Hockley	7.03	168	Pn	Pn	15 39 23.6	0.0
OXF	Oxford	7.05	107	Pn	Pn	15 39 23.3	-0.5
OXF				IAmb_Lg		15 41 30.1	
	comp=Z,322nm,0.9s						
OXF	Oxford	7.05	107	P	Pn	15 39 23.8	0.0
	baz=291,SNR=8.5						
OXF				S	Sn	15 40 43.6	-0.1
	baz=291						
Q44A	Meyer Farm, Va	7.08	71	Pn	Pn	15 39 24.7	+0.5
441A	DeRidder	7.09	148	IAmb_Lg		15 41 40.1	
	comp=Z,292nm,1.2s						
T45A	Paducah	7.16	86	IAmb_Lg		15 41 46.8	
	comp=Z,384nm,0.7s						
L40A	Anamosa	7.16	41	Pn	Pn	15 39 26.4	+1.0
L40A	Anamosa	7.16	41	P	Pn	15 39 26.8	+1.4
	baz=225,SNR=18						
Y45A	Yeager Farm, C	7.21	112	IAmb_Lg		15 41 36.9	
	comp=Z,274nm,0.8s						
GDL2	Guadalupe Moun	7.27	232	Pn	Pn	15 39 27.3	+0.3
S22A	4UR Ranch, Cre	7.43	280	Pn	Pn	15 39 29.5	+0.2
S22A	4UR Ranch, Cre	7.43	280	P	Pn	15 39 28.8	-0.5
	baz=94						
VBMS	Vicksburg	7.43	126	IAmb_Lg		15 41 55.3	
	comp=Z,326nm,1.1s						
HNDO	Hondo	7.44	192	Pn	Pn	15 39 28.1	-1.1
HNDO				IAmb_Lg		15 41 53.1	
	comp=Z,386nm,1.0s						
ANMO	Albuquerque	7.45	258	Pn	Pn	15 39 31.9	+2.4
	comp=Z,0.3nm,0.3s,baz=188,slow=13,SNR=3.8						
ANMO				Pg	Pg	15 39 57.0	-6.7
	comp=Z,5.3nm,0.3s,baz=168,slow=17,SNR=16						
ANMO				Lg	Lg	15 41 37.0	
	comp=Z,15nm,0.3s,baz=84,slow=16,SNR=8.0						
	comp=Z,1.9nm,0.7s						
ANMO	Albuquerque	7.45	258	P	Pn	15 39 29.5	0.0
	baz=73						
PECS	Pecos	7.55	225	IAmb_Lg		15 41 54.3	
	comp=Z,225nm,0.7s						
PHWY	Pilot Hill	7.57	308	Pn	Pn	15 39 30.7	-0.6
PHWY				IAmb_Lg		15 41 41.2	
	comp=Z,306nm,0.9s						
SUSD	Miller	7.66	353	Pn	Pn	15 39 32.3	+0.1
SUSD				IAmb_Lg		15 41 54.4	
	comp=Z,349nm,0.8s						
SUSD	Miller	7.66	353	P	Pn	15 39 33.0	+0.8
	baz=172						
N23A	Red Feather La	7.67	304	Pn	Pn	15 39 32.9	+0.2
N23A	Red Feather La	7.67	304	P	Pn	15 39 34.3	+1.6
	baz=120,SNR=18						
OLIL	Olney	7.74	73	Pn	Pn	15 39 33.3	0.0
SMCO	Snowmass	7.77	290	Pn	Pn	15 39 33.5	-0.6
344A	Westbrook Farm	7.82	131	IAmb_Lg		15 42 08.2	
	comp=Z,241nm,1.2s						
I37A	Lemond, Waseca	7.83	23	Pn	Pn	15 39 33.1	-1.5
I37A				IAmb_Lg		15 41 56.6	
	comp=Z,460nm,1.1s						
SAND	Sanderson	7.85	210	Pn	Pn	15 39 34.6	-0.3
SAND				IAmb_Lg		15 41 58.6	
	comp=Z,295nm,0.9s						
BNM	Barren Site	7.85	253	Pn	Pn	15 39 32.9	-2.3
735A	Kenedy	7.97	181	Pn	Pn	15 39 34.5	-2.0
735A				IAmb_Lg		15 42 09.1	
	comp=Z,215nm,0.8s						
L42A	Oliver, Polo	8.00	48	Pn	Pn	15 39 35.9	-1.0
L42A				IAmb_Lg		15 42 03.3	
	comp=Z,438nm,0.7s						
Y22D	IRIS PASSCAL I	8.11	253	Pn	Pn	15 39 37.7	-0.8
ALPN	Alpine	8.20	220	Pn	Pn	15 39 38.8	-0.9
MNTX	Cornudas Mount	8.25	234	P	Pn	15 39 40.3	0.0
	baz=49,SNR=5.8						
MNTX	Cornudas Mount	8.25	234	P	Pn	15 39 40.7	+0.4
	baz=49						
JFWS	Jewell Farm	8.27	41	Pn	Pn	15 39 39.9	-0.7
JFWS				IAmb_Lg		15 42 15.1	
	comp=Z,348nm,0.7s						
JFWS	Jewell Farm	8.27	41	P	Pn	15 39 41.5	+0.9
	baz=225,SNR=12						
JFWS	Jewell Farm	8.27	41	P	Pn	15 39 41.6	+0.9
	baz=225,SNR=14						
T47A	Sharon Grove	8.39	86	Pn	Pn	15 39 41.8	-0.5
Z47A	Carrollton	8.61	112	Pn	Pn	15 39 46.5	+1.3
P46A	Rosedale	8.62	68	Pn	Pn	15 39 46.5	+1.1
833A	Chaparral WMA,	8.64	191	Pn	Pn	15 39 45.5	-0.2
833A	Chaparral WMA,	8.64	191	P	Pn	15 39 46.5	+0.8
	baz=9.6						
MVCO	Mesa Verde	8.74	276	P	Pn	15 39 47.9	+0.6
	baz=89						
RSSD	Black Hills	8.77	328	Pn	Pn	15 39 48.1	+0.5
RSSD				IAmb_Lg		15 42 20.8	
	comp=Z,229nm,0.9s						
RSSD	Black Hills	8.77	328	P	Pn	15 39 48.9	+1.3
	baz=144						
RSSD	Black Hills	8.77	328	P	Pn	15 39 49.3	+1.7
	baz=144,SNR=8.4						
I40A	Norwalk	8.81	35	Pn	Pn	15 39 48.0	0.0
I40A				IAmb_Lg		15 42 22.5	
	comp=Z,237nm,0.9s						
RWWY	Rawlins	8.89	306	Pn	Pn	15 39 48.7	-0.7
RWWY				IAmb_Lg		15 42 44.0	
	comp=Z,309nm,0.9s						
SFIN	Lafayette	8.93	64	P	Pn	15 39 50.9	+1.3
	baz=250						
O20A	White River Ci	8.98	295	P	Pn	15 39 51.9	+1.4
	baz=108						
K22A	Casper	9.00	313	Pn	Pn	15 39 51.3	+0.5
K22A				IAmb_Lg		15 42 49.5	
	comp=Z,362nm,0.8s						
K22A	Casper	9.00	313	P	Pn	15 39 51.3	+0.5
	baz=128,SNR=10						
K22A	Casper	9.00	313	P	Pn	15 39 51.8	+1.1
	baz=128						
BLO	Bloomington	9.03	72	Pn	Pn	15 39 49.8	-1.2
F33A	5 Mile Ranch,	9.04	6	Pn	Pn	15 39 50.3	-0.8
F33A				IAmb_Lg		15 42 30.1	
	comp=Z,209nm,1.2s						
TX31	Lajitas Ar. Si	9.06	216	Pn	Pn	15 39 51.3	-0.3
TX31	Lajitas Ar. Si	9.06	216	P	Pn	15 39 51.6	0.0
	baz=32,SNR=6.3						
TX32	Lajitas Array	9.06	216	Pn	Pn	15 39 49.9	-1.7
TXAR	Lajitas Array	9.06	216	Pn	Pn	15 39 51.6	0.0
	comp=Z,1.4nm,0.3s,baz=38,slow=11,SNR=24						
TXAR				Pg		15 40 22.7	
	comp=Z,3.2nm,0.3s,baz=31,slow=15,SNR=9.5						
TXAR				Sn	Sn	15 41 31.7	-1.8
	comp=Z,4.4nm,0.3s,baz=29,slow=16,SNR=3.8						
TXAR				Lg	Lg	15 42 22.9	
	comp=Z,5.9nm,0.3s,baz=45,slow=29,SNR=3.1						
	comp=Z,2.7nm,0.4s						
TXAR	Lajitas Array	9.06	216	Pn	Pn	15 39 51.4	-0.2
WCI	Wyandotte Cave	9.07	78	Pn	Pn	15 39 51.5	0.0
WCI	Wyandotte Cave	9.07	78	P	Pn	15 39 52.3	+0.7
	baz=264						
CLTN	Cedars of Leba	9.09	91	Pn	Pn	15 39 50.9	-1.0
SPMN	Marine on St.	9.11	22	Pn	Pn	15 39 51.4	-0.7
SPMN				IAmb_Lg		15 42 43.6	
	comp=Z,177nm,1.1s						
SPMN	Marine on St.	9.11	22	P	Pn	15 39 52.0	0.0
	baz=205						
PV23	Carpenter Ridg	9.21	283	Pn	Pn	15 39 53.7	0.0
K43A	Burlington	9.21	48	Pn	Pn	15 39 54.4	+0.9
121A	Cookes Peak, D	9.44	246	P	Pn	15 39 56.0	-0.8
	baz=60						
LRAL	Lakeview Retre	9.48	111	P	Pn	15 39 57.4	+0.2
	baz=296						
U49A	Red Boiling Sp	9.49	88	Pn	Pn	15 39 58.9	+1.7
F36A	Milaca	9.51	17	Pn	Pn	15 39 56.8	-0.7
I42A	Draeger Farm,	9.65	41	Pn	Pn	15 39 59.7	+0.3
I42A				IAmb_Lg		15 42 46.2	
	comp=Z,199nm,0.8s						
P48A	Milroy	9.92	71	Pn	Pn	15 40 03.1	-0.1
E28A	Huff	9.99	348	Pn	Pn	15 40 03.4	-0.8
W18A	Petrified Fore	10.00	264	Pn	Pn	15 40 03.0	-1.5
FPAL	Fort Paine	10.00	100	Pn	Pn	15 40 04.7	+0.3
G40A	Rib Lake	10.09	31	Pn	Pn	15 40 05.6	+0.1
T50A	Nancy	10.20	85	Pn	Pn	15 40 08.6	+1.5
O48B	Farmland	10.31	67	P	Pn	15 40 08.5	0.0
	baz=254						
P18A	Preston Nutter	10.34	289	Pn	Pn	15 40 09.7	+0.4
P49A	Miami Univ. Ec	10.47	71	P	Pn	15 40 11.5	+0.7
	baz=259						
X51A	Calhoun	10.59	99	Pn	Pn	15 40 11.9	-0.5
R50A	Paris	10.62	78	Pn	Pn	15 40 12.7	-0.1
CPCT	Cooper Cave	10.65	94	Pn	Pn	15 40 13.6	+0.4
V51A	Loudon	10.72	92	Pn	Pn	15 40 15.3	+1.1
V51A	Loudon	10.72	92	P	Pn	15 40 16.4	+2.1
	baz=279						
E38A	The Farm, Brul	10.73	23	Pn	Pn	15 40 13.2	-1.1
BW06	Boulder Array	10.94	306	Pn	Pn	15 40 17.6	+0.2
PD31	Pinedale Array	10.94	306	Pn	Pn	15 40 18.1	+0.7
PDAR	Pinedale Array	10.94	306	Pn	Pn	15 40 17.9	+0.5
	comp=Z,0.6nm,0.3s,baz=117,slow=14,SNR=14						
PDAR				Pg		15 41 01.6	
	comp=Z,1.2nm,0.3s,baz=108,slow=19,SNR=6.0						
PDAR				Lg	Lg	15 43 19.7	
	comp=Z,2.0nm,0.3s,baz=97,slow=26,SNR=2.4						
	comp=Z,1.1nm,0.3s						
PDAR	Pinedale Array	10.94	306	Pn	Pn	15 40 17.8	+0.4
MDND	Maddock	11.09	353	P	Pn	15 40 17.5	-1.8
	baz=172						
S51A	Beattyville	11.18	82	Pn	Pn	15 40 20.6	+0.1
COWI	Conover	11.20	32	Pn	Pn	15 40 20.1	-0.6
N49A	Columbus Grove	11.21	65	Pn	Pn	15 40 20.9	+0.1
TKL	Tuckaleechee C	11.21	92	Pn	Pn	15 40 21.5	+0.6
	comp=Z,1.5nm,0.3s,baz=231,slow=10.0,SNR=10						
TKL				Sn	Sn	15 42 25.7	-0.3
	comp=Z,0.9nm,0.3s,baz=78,slow=16,SNR=1.7						
TKL				Lg	Lg	15 43 27.7	
	comp=Z,1.8nm,0.3s,baz=174,slow=17,SNR=7.4						
	comp=Z,4.5nm,0.4s						
TKL	Tuckaleechee C	11.21	92	P	Pn	15 40 21.9	+1.0
	baz=280						
TZTN	Tazewell	11.27	87	Pn	Pn	15 40 21.4	-0.4
F42A	Maple Grove Fa	11.38	36	Pn	Pn	15 40 24.1	+0.9
AGMN	Agassiz Nation	11.51	6	Pn	Pn	15 40 22.8	-2.2
AGMN	Agassiz Nation	11.51	6	P	Pn	15 40 22.4	-2.5
	baz=187						
LAO	LASA Array	11.75	329	Pn	Pn	15 40 27.8	-0.5
LAO	LASA Array	11.75	329	P	Pn	15 40 26.4	-1.9
	baz=144						
HWUT	Hardware Ranch	11.84	298	Pn	Pn	15 40 29.7	+0.1
B35A	Bob, Littlefor	11.85	13	Pn	Pn	15 40 27.8	-1.8
ACSO	Alum Creek Sta	11.92	69	Pn	Pn	15 40 30.6	0.0
EYMN	Ely	11.96	20	Pn	Pn	15 40 29.2	-1.9
EYMN	Ely	11.96	20	P	Pn	15 40 29.0	-2.1
	baz=204						
EYMN	Ely	11.96	20	P	Pn	15 40 29.2	-1.9
	baz=204						
BG3	Lake Jocassee	12.02	95	Pn	Pn	15 40 31.5	-0.5
RLMT	Red Lodge	12.09	317	Pn	Pn	15 40 32.8	-0.2
RLMT	Red Lodge	12.09	317	P	Pn	15 40 32.3	-0.7
	baz=129						
M50A	Fremont	12.17	64	Pn	Pn	15 40 32.6	-1.3
MOOW	Moose Ponds	12.18	309	Pn	Pn	15 40 33.4	-0.9
D41A	Chassel	12.20	30	Pn	Pn	15 40 32.2	-2.2
E43A	Lone Tree Farm	12.37	36	Pn	Pn	15 40 34.0	-2.7
IMW	Indian Meadow	12.38	309	Pn	Pn	15 40 35.5	-1.5
P52A	Corning	12.46	72	P	Pn	15 40 37.6	-0.4
	baz=262						
R53A	Hurricane	12.49	78	P	Pn	15 40 40.5	+2.1
	baz=268						
R53A				P	Pn	15 40 40.5	+2.1
	baz=268						
N51A	Ashland	12.52	66	Pn	Pn	15 40 37.4	-1.4
DGMT	Dagmar	12.59	339	Pn	Pn	15 40 39.0	-0.7
DGMT	Dagmar	12.59	339	P	Pn	15 40 38.4	-1.3
	baz=155						
DGMT	Dagmar	12.59	339	P	Pn	15 40 39.0	-0.7
	baz=155						
GLMI	Grayling	12.63	47	Pn	Pn	15 40 39.4	-0.9
GLMI	Grayling	12.63	47	P	Pn	15 40 38.8	-1.5
	baz=235						
U54A	Nelsons Funny	12.66	87	Pn	Pn	15 40 40.6	-0.2
GCMT	Greycliff	12.73	318	Pn	Pn	15 40 41.5	-0.3
S54A	Dingess, Beckl	12.99	81	Pn	Pn	15 40 45.5	+0.3
V55A	Taylorsville	13.23	89	Pn	Pn	15 40 48.4	-0.2
O53A	New Philadelph	13.25	70	P	Pn	15 40 49.7	+0.9
	baz=260						
KMSC	Kings Mountain	13.27	93	P	Pn	15 40 49.0	0.0
	baz=282						
ULM	Lac du Bonnet	13.45	5	Pn	Pn	15 40 47.1	-4.3
	comp=Z,1.1nm,0.3s,baz=188,slow=13,SNR=5.5						
ULM				Sn	Sn	15 43 09.1	-12
	comp=Z,0.7nm,0.3s,baz=76,slow=20,SNR=1.9						
ULM				Lg	Lg	15 44 30.8	
	comp=Z,1.3nm,0.3s,baz=286,slow=11,SNR=3.4						
	comp=Z,3.6nm,0.6s						
JSC	Jenkinsville	13.53	96	Pn	Pn	15 40 52.2	-0.4
N53A	Lisbon	13.64	68	Pn	Pn	15 40 52.0	-2.0
E46A	Sault Ste Mari	13.73	42	Pn	Pn	15 40 52.4	-2.9
R55A	Marlinton	13.93	79	Pn	Pn	15 40 55.6	-2.4
ELK	Elko	14.31	291	Pn	Pn	15 41 05.7	+2.3
	comp=Z,0.1nm,0.3s,baz=173,slow=17,SNR=2.0						
	comp=Z,0.6nm,0.6s						
EGMT	Eagleton	14.32	325	Pn	Pn	15 41 02.3	-1.1
EGMT	Eagleton	14.32	325	P	Pn	15 41 02.3	-1.1
	baz=137						
T57A	Hurt	14.66	84	Pn	Pn	15 41 08.1	0.0
Q56A	Snyder Ridge,	14.68	76	Pn	Pn	15 41 06.3	-2.0
S57A	Dark Hollow, R	14.86	81	Pn	Pn	15 41 10.9	+0.2
M55A	Ridgway	15.30	67	Pn	Pn	15 41 14.7	-1.9
SSPA	Standing Stone	15.82	70	Pn	Pn	15 41 20.3	-3.0
SSPA				IAmb	IAmb	15 41 27.7	
	comp=Z,21nm,1.3s						
SADO	Sadowa	16.02	55	Pn	Pn	15 41 23.6	-2.3
	comp=Z,0.5nm,0.3s,baz=270,slow=5.1,SNR=1.8						
SADO				Sn	Sn	15 44 14.0	-9.3
	comp=Z,0.9nm,0.3s,baz=180,slow=6.8,SNR=2.4						
SADO				Lg	Lg	15 45 55.8	
	comp=Z,0.7nm,0.3s,baz=158,slow=21,SNR=2.5						
	comp=Z,1.9nm,0.5s						
NVAR	Mina Array Bea	16.49	282	Pn	P	15 41 34.0	-0.8
	comp=Z,0.1nm,0.3s,baz=90,slow=10,SNR=5.7						
	comp=Z,1.0nm,0.8s						
MVL	Millersville	16.93	73	Pn	Pn	15 41 37.4	-0.1
MVL				IAmb	IAmb	15 41 44.6	
	comp=Z,14nm,1.2s						
PECO	Prince Edward	17.18	59		Pn	15 41 41.6	+1.0
KSPA	Keystone Colle	17.54	68	Pn	Pn	15 41 43.5	-1.5
FFC	Flin Flon	18.13	352	Pn	Pn	15 41 50.9	-1.4
YBH	Yreka Blue Hor	20.02	292	P	P	15 42 14.3	+0.8
	comp=Z,0.1nm,0.3s,baz=130,slow=7.9,SNR=3.9						
	comp=Z,5.4nm,1.0s						
BRLDA	Berland Lookou	22.02	328	P	P	15 42 36.2	+1.2
FCC	Fort Churchill	22.05	5	P	P	15 42 35.4	+0.4
FCC				IAmb	IAmb	15 42 40.0	
	comp=Z,11nm,1.5s						
SCHQ	Schefferville	27.64	40	P	P	15 43 29.2	+1.1
	comp=Z,2.5nm,1.0s,baz=234,slow=11,SNR=2.3						
	comp=Z,2.5nm,1.0s						
YKA	Yellowknife Ar	27.75	343	P	P	15 43 29.9	+0.9
	comp=Z,0.8nm,1.0s,baz=143,slow=8.9,SNR=8.8						
YKA				Lg	Lg	15 52 13.9	
	baz=145,slow=27,SNR=3.6						
	comp=Z,0.8nm,1.0s						
SDV	Santo Domingo	37.04	132	LR	LR	16 02 02.0	
	comp=Z,245nm,19.2s,baz=18,slow=39						
BCAR	Beaver Creek A	37.49	329	P	P	15 44 55.4	+1.4
I26K	Coal Creek Min	38.95	331	P	P	15 45 08.2	+2.0
I26K				IAmb	IAmb	15 45 08.5	
	comp=Z,4.0nm,1.1s						
IL31		40.21	330	P	P	15 45 18.2	+1.5
IL31				IAmb	IAmb	15 45 19.6	
	comp=Z,3.7nm,0.8s						
ILAR	Eielson Array	40.21	330	P	P	15 45 18.8	+2.0
	comp=Z,2.5nm,0.7s,baz=108,slow=6.9,SNR=33						
	comp=Z,2.5nm,0.7s						
ILAR	Eielson Array	40.21	330	P	P	15 45 17.7	+0.9
BMAR	Burnt Mountain	40.36	334	P	P	15 45 19.9	+1.9
CCB	Clear Creek Bu	40.55	329	P	P	15 45 20.8	+1.2
CCB				IAmb	IAmb	15 45 22.2	
	comp=Z,3.0nm,0.9s						
WRH	Wood River Hil	40.61	329	P	P	15 45 22.2	+2.2
TRF	Thorofare Moun	41.25	327	P	P	15 45 27.0	+1.4
KTH	Kantishna Hill	41.55	327	P	P	15 45 30.0	+2.1
KTH				IAmb	IAmb	15 45 31.5	
	comp=Z,11nm,1.5s						
BPAW	Bear Paw Mtn.	41.72	328	P	P	15 45 30.8	+1.6
PPLA	Purkeypile	41.96	326	P	P	15 45 32.3	+0.9
CAST	Castle Rocks	42.03	327	P	P	15 45 33.2	+1.4
CAST				IAmb	IAmb	15 45 34.8	
	comp=Z,3.8nm,1.0s						
M20K	Styx River	42.20	324	P	P	15 45 34.7	+1.5
M20K				IAmb	IAmb	15 45 53.1	
	comp=Z,9.4nm,1.4s						
I21K	Tanana	42.41	329	P	P	15 45 36.4	+1.6
H21K	Melozitna Rive	42.86	330	P	P	15 45 39.1	+0.7
H21K				IAmb	IAmb	15 45 40.7	
	comp=Z,2.5nm,0.9s						
K20K	Telida	42.89	326	P	P	15 45 39.9	+1.1
K20K				IAmb	IAmb	15 45 41.4	
	comp=Z,3.3nm,1.2s						
IMAR	Indian Mountai	43.31	330	P	P	15 45 43.4	+1.3
ARCES	ARCESS Array B	66.11	19	P	P	15 48 28.2	+0.9
	comp=Z,3.1nm,0.7s,baz=316,slow=3.3,SNR=5.1						
	comp=Z,3.1nm,0.7s						
FINES	FINESS Array B	71.94	25	P	P	15 49 05.2	+1.6
	comp=Z,3.3nm,1.1s,baz=327,slow=6.9,SNR=2.5						
	comp=Z,3.3nm,1.1s						
FINES	FINESS Array B	71.94	25	P	P	15 49 04.7	+1.1
HHC	Hu-ho-hao-te	98.19	338	*e*P	Pdif	15 51 19.5	+1.6
HHC				pmax	pmax		
	comp=Z,26nm,0.8s						
HHC				pmax	pmax		
	comp=Z,200nm,5.3s						

DJA 29 15:42:58.9±0.3**, 1°N**±4°×**12°5E**±°**, h68**^{km}±7^{km}**, M3.6**/12**, mb3.9**/4**, mB4.8**/1**, MLv3.5**/12**, Mw(mB)4.1**/1**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.02	99	P	Pn	15 43 30.0	-0.8
TNTI				S	Sn	15 43 55.7	+0.6
GTOI	Gorontalo	2.40	259	P	Pn	15 43 37.8	+1.8
GTOI				S	Sn	15 44 07.8	+3.5
SGSI	Sangihe	2.58	4	P	Pn	15 43 38.7	+0.2
LBMI	Labuha	2.74	129	P	Pn	15 43 41.1	+0.6
SANI	Sanana	3.18	169	P	Pn	15 43 46.6	0.0
LUWI	Luwuk	3.35	231	P	Pn	15 43 48.3	-0.6
MRSI	Marisa	3.48	260	P	Pn	15 43 50.5	-0.2
NLAI	Namlea	4.63	158	P	Pn	15 44 06.5	0.0
AAI	Ambon	5.52	149	P	Pn	15 44 19.0	+0.4
	21nm,0.9s,0.2nm						
MSAI	Masohi	5.66	141	P	Pn	15 44 20.4	-0.1

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*ECX **29** 15:50:40.2±0.4, 25°78N×110°17W, h15^{km}±11^{km}, MD3.3, ML3.6*

*MEX **29** 15:50:44.5±1.0, 25°67N×110°01W, h10^{km}, MD4.0*

ISC 29 15:50:38.3±1.5**, 25°80N**±0°04×**110°16W**±0°04**, h3**^{km}±12^{km}**, n15, σ1^{s}49**/21**, 3C-1D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSIG	Topolobambo	1.03	101	⇑*e*P	Pg	15 50 58.1	0.0
TSIG				*e*S	Sb	15 51 12.1	-0.7
TSIG				⇓*e*		15 51 13.6	
TSIG				IAML		15 51 13.6	
	comp=N,2μm,0.7s						
TSIG				IAML		15 51 13.8	
	comp=E,2μm,0.2s						
TSIG				*e*		15 51 13.8	
TSIG	Topolobambo	1.03	101	*i* P	Pg	15 50 58.0	-0.1

TSIG				*e*S	**Sg**	**15 51 10.6**	**-0.9**
NE77	**Loreto B.C.S**	**1.10**	**282**	*e*P	**Pg**	**15 50 59.5**	**0.0**
NE77				⇑*e*		15 51 17.7	
NE77				IAML		15 51 17.7	
	comp=N,846nm,0.3s						
NE80	**Navojoa**	**1.39**	**37**	*e*P	**Pn**	**15 51 03.9**	**-0.7**
NE80				*e*S	**Sb**	**15 51 23.1**	**0.0**
NE80				IAML		15 51 24.9	
	comp=E,1µm,0.1s						
NE80				⇑*e*		15 51 24.9	
SNIRB	**San Nicol¡s**	**1.45**	**301**	*e*P	**Pn**	**15 51 04.5**	**-0.9**
CSIG	**Choix**	**1.91**	**57**	*e*P	**Pb**	**15 51 13.6**	**-0.2**
CSIG				*e*S	**Sn**	**15 51 36.4**	**+0.1**
SLBS	**Sierra La Lagu**	**2.11**	**175**	*e*P	**Pn**	**15 51 15.4**	**+0.7**
SLBS	**Sierra La Lagu**	**2.11**	**175**	*e*P	**Pn**	**15 51 15.2**	**+0.6**
SLBS				*e*S	**Sn**	**15 51 40.9**	**-0.6**
GUYB	**Guaymas**	**2.19**	**343**	*e*	**Pn**	**15 51 14.2**	**-1.3**
SSIG	**Sanalona**	**2.90**	**109**	*e*P	**Pn**	**15 51 26.9**	**+1.5**
SSIG				*e*S	**Sn**	**15 51 57.6**	**-3.3**
NOVRB	**El Novillo Son**	**3.16**	**8**	*e*P	**Pn**	**15 51 30.4**	**+1.3**
HSIG		**3.28**	**348**	*e*	**Sb**	**15 52 20.8**	**+3.2**
HPIG		**4.19**	**73**	*e*	**Sb**	**15 52 45.4**	**+1.5**
PDIG	**Papasquiaro**	**4.38**	**99**	*e*	**Sb**	**15 52 51.4**	**+2.1**
NZIG	**Nacozari, Sono**	**4.59**	**7**	*e*	**Sb**	**15 52 56.1**	**+0.7**

DJA 29 15:50:48.4±0.5**, 9°S**±8°×**11°8E**±°**, h133**^{km}±6^{km}**, M3.9**/8**, mb4.1**/1**, MLv3.8**/8**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.09**	**182**	P	Pn	15 51 07.3	+0.8
PLAI				S	Sn	15 51 20.9	+0.8
IGBI	**Denpasar**	**2.60**	**268**	P	Pn	15 51 30.5	+0.5
IGBI				S	Sn	15 52 03.2	+1.1
JAGI	**Jajag, Banyuwa**	**3.60**	**274**	P	Pn	15 51 42.2	-0.7
BSSI	**Bau Bau, Buton**	**3.73**	**46**	P	Pn	15 51 45.0	+0.4
BKSI	**Bulukumba**	**4.12**	**35**	P	Pn	15 51 49.7	-0.1
BLJI	**Banyuglugur**	**4.26**	**283**	P	Pn	15 51 51.8	+0.1
GMJI	**Gumukmas**	**4.31**	**276**	P	Pn	15 51 52.3	-0.1
MMRI	**Maumere**	**4.41**	**89**	P	Pn	15 51 53.4	-0.3
SOEI	**Soe**	**6.48**	**99**	P	Pn	15 52 21.5	-0.1

SCB 29 16:07:54.0±1.4**, 20°.00S**×**66°.99W, h237**^{km}±17^{km}**, ML3.7**/4**, MW2.8, Error ellipse: s-maj=8.0km s-min=5.3km az=2.0, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**2.04**	**266**	Pg	Pn	16 08 37.2	+1.1
GO01	**Chusmiza**	**2.10**	**279**	Pg	Pn	16 08 37.8	+1.0
SOET	**ToroToro**	**2.18**	**31**	Pg	Pn	16 08 37.3	-0.3
PB01	**IPOC Station P**	**2.56**	**246**	Pg	Pn	16 08 41.9	+0.9
PB01				Sg	S	16 09 17.5	-0.4
PB01				IAML		16 09 19.7	
	113nm,0.2s						
YJA	**Yavi**	**2.57**	**148**	Pg	Pn	16 08 42.1	+0.6
PB09	**IPOC Station P**	**2.76**	**229**	Pg	Pn	16 08 44.4	+1.2
TA02	**Huaiquique**	**2.96**	**264**	Pg	Pn	16 08 45.1	-0.1
PB02	**IPOC Station P**	**3.02**	**244**	Pg	Pn	16 08 47.2	+1.2
PB02				Sg	S	16 09 25.9	-1.0
PB02				IAML		16 09 26.7	
	238nm,0.3s						
TA01	**Diego Aracena**	**3.04**	**259**	Pg	Pn	16 08 46.3	+0.1
LVC	**Limon Verde**	**3.15**	**214**	Pg	Pn	16 08 48.9	+1.1
PB07	**IPOC Station P**	**3.21**	**237**	Pg	Pn	16 08 49.1	+1.0
PB07				Sg	S	16 09 29.5	-1.3
PB07				IAML		16 09 30.6	
	83nm,0.2s						
PB03	**IPOC Station P**	**3.29**	**231**	Pg	Pn	16 08 50.0	+0.9
PB06	**IPOC Station P**	**3.61**	**221**	Pg	Pn	16 08 53.7	+0.9
PB04	**IPOC Station P**	**3.75**	**231**	Pg	Pn	16 08 55.2	+0.8
PB04				Sg	S	16 09 40.4	-1.8
PB04				IAML		16 09 44.1	
	67nm,0.4s						
GO02	**Mina Guanaco**	**5.67**	**205**	Pg	Pn	16 09 18.0	0.0

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*THE **29** 16:08:17.4, 39°.57N×26°.04E, h9^{km}±2^{km}, ML2.3/8, Error ellipse: s-maj=2.6km s-min=0.5km az=120.0*
*ATH **29** 16:08:17.5, 39°.58N×26°.07E, h7^{km}±2^{km}, ML2.3/6, Error ellipse: s-maj=2.7km s-min=0.9km az=252.0*
*DDA **29** 16:08:17.1±0.0, 39°.55N×26°.05E, h10^{km}, ML2.3*
*ISK **29** 16:08:17.4, 39°.59N×26°.06E, h14^{km}, ML2.5/16*
ISC 29 16:08:17.2±0.8**, 39°.57N**±0°.01×**26°.04E**±0°.02**, h12**^{km}±6^{km}**, n51, σ0^{s}.70**/88**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.10**	**132**	P	**Pg**	**16 08 19.8**	**-0.2**
KOCA				S	**Sg**	**16 08 21.6**	**-0.5**
BOZC	**Bozcaada**	**0.27**	**1**	Pg	**Pg**	**16 08 23.1**	**+0.2**
BOZC				Sg	**Sg**	**16 08 27.3**	**+0.6**
BOZC	**Bozcaada**	**0.27**	**1**	P	**Pg**	**16 08 23.1**	**+0.2**
BOZC				P	**Pg**	**16 08 23.2**	**+0.2**
BOZC				*i* AML	AML	16 08 27.0	
	comp=E,537nm,0.3s						
BOZC				*i* AML	AML	16 08 27.0	
	comp=E,584nm,0.2s						
BOZC				*i* AML	AML	16 08 27.0	
	comp=N,585nm,0.3s						
BOZC				*i* AML	AML	16 08 27.0	
	comp=N,510nm,0.3s						
BOZC				S	**Sg**	**16 08 27.3**	**+0.6**
BOZC				S	**Sb**	**16 08 27.4**	**-1.3**
EZN	**Ezine**	**0.34**	**40**	P	**Pg**	**16 08 24.2**	**+0.1**
EZN				S	**Sb**	**16 08 29.4**	**-1.2**
	768nm,0.1s						
EZN	**Ezine**	**0.34**	**40**	Pg	**Pg**	**16 08 24.2**	**+0.1**
EZN				Sg	**Sg**	**16 08 29.1**	**+0.5**
PRK	**Paraskevi**	**0.37**	**151**	P	**Pg**	**16 08 24.7**	**+0.1**
PRK				S	**Sg**	**16 08 29.6**	**+0.1**
	1µm,0.2s						
PRK	**Paraskevi**	**0.37**	**151**	P	**Pg**	**16 08 24.7**	**+0.1**
PRK				S	**Sg**	**16 08 29.6**	**+0.1**
PRK				AML	AML	16 08 30.5	
	comp=N,2036µm,0.2s						
PRK				AML	AML	16 08 30.6	
	comp=E,2930µm,0.2s						
SIGR	**SIGRI**	**0.38**	**202**	P	**Pg**	**16 08 25.5**	**+0.6**
SIGR				S	**Sg**	**16 08 31.0**	**+1.0**
	comp=E,598nm,0.3s						
SIGR	**SIGRI**	**0.38**	**202**	Pg	**Pb**	**16 08 26.2**	**+0.2**
SIGR	**SIGRI**	**0.38**	**202**	P	**Pg**	**16 08 25.5**	**+0.6**
SIGR				S	**Sg**	**16 08 31.0**	**+1.0**
SIGR				AML	AML	16 08 31.9	
	comp=E,1178µm,0.2s						
SIGR				AML	AML	16 08 32.5	
	comp=N,1207µm,0.4s						
BAYC	**CANAKKALE_Bayr**	**0.42**	**66**	P	**Pg**	**16 08 25.4**	**-0.3**
BAYC				S	**Sg**	**16 08 31.6**	**+0.3**
ECEA	**Canakkale, Ece**	**0.49**	**12**	P	**Pg**	**16 08 27.0**	**+0.2**
ECEA				S	**Sb**	**16 08 34.2**	**-0.7**
ECEA				*i* AML	AML	16 08 35.0	
	comp=N,260nm,0.5s						
ECEA				*i* AML	AML	16 08 35.0	
	comp=N,348nm,0.5s						
AYVA	**Ayvalik**	**0.56**	**117**	P	**Pb**	**16 08 29.0**	**0.0**
AYVA				S	**Sb**	**16 08 38.3**	**+1.3**
AYVA				*i* AML	AML	16 08 41.0	
	comp=N,162nm,0.7s						
COMU	**Canakkale**	**0.63**	**32**	Pg	**Pg**	**16 08 29.6**	**+0.2**
GOKA	**anakkale-Gk**	**0.63**	**350**	P	**Pb**	**16 08 30.4**	**+0.2**
GOKA				S	**Sg**	**16 08 38.4**	**+0.5**
GOKA				*i* AML	AML	16 08 39.0	
	comp=N,168nm,0.2s						
GOKA				*i* AML	AML	16 08 39.0	
	comp=N,167nm,0.5s						
GADA	**Gvkgeada**	**0.63**	**350**	Pg	**Pg**	**16 08 29.4**	**-0.2**
LIA	**Limnos Island**	**0.74**	**297**	P	**Pg**	**16 08 31.5**	**-0.1**
LIA				S	**Sb**	**16 08 42.3**	**+0.1**
	comp=N,302nm,0.3s						
LIA	**Limnos Island**	**0.74**	**297**	P	**Pg**	**16 08 31.5**	**-0.1**
LIA				S	**Sb**	**16 08 42.3**	**+0.1**
LIA				AML	AML	16 08 44.8	
	comp=E,990µm,0.3s						
LIA				AML	AML	16 08 45.5	
	comp=N,817µm,0.3s						
BUHA	**Balikesir, Bur**	**0.80**	**94**	P	**Pn**	**16 08 34.1**	**-0.3**
BUHA				S	**Sb**	**16 08 43.8**	**-0.1**
DKL	**Dikili**	**0.83**	**126**	Pg	**Pn**	**16 08 34.6**	**-0.2**
GELI	**Tayfur-Gelibol**	**0.89**	**22**	Pg	**Pb**	**16 08 34.6**	**-0.1**
GELI				Sg	**Sb**	**16 08 47.3**	**+0.7**
CANM	**Can-anakkale**	**0.90**	**60**	Pg	**Pg**	**16 08 34.2**	**-0.3**
CANM				Sg	**Sb**	**16 08 47.0**	**+0.4**
KARB	**zmir-Karabur**	**0.95**	**162**	P	**Pg**	**16 08 35.4**	**-0.1**
KARB				S	**Sg**	**16 08 48.4**	**+0.5**
KARB				*i* AML	AML	16 08 50.0	
	comp=N,85nm,0.2s						
KARB				*i* AML	AML	16 08 50.0	
	comp=N,116nm,0.6s						
LPK	**Lapseki**	**0.97**	**34**	Pg	**Pg**	**16 08 35.4**	**-0.6**
SMTH	**Samothraki Isl**	**0.98**	**337**	P	**Pg**	**16 08 36.0**	**-0.3**
SMTH				S	**Sg**	**16 08 48.9**	**-0.2**
	comp=N,75nm,0.2s						
SMTH	**Samothraki Isl**	**0.98**	**337**	P	**Pg**	**16 08 36.0**	**-0.3**
SMTH				S	**Sg**	**16 08 48.9**	**-0.2**
SMTH				AML	AML	16 08 51.1	
	comp=N,149µm,0.3s						
SMTH				AML	AML	16 08 52.8	
	comp=E,147µm,0.2s						
CAVK	**Edirne/Enez-Ca**	**1.13**	**5**	P	**Pg**	**16 08 38.9**	**0.0**
CAVK				S	**Sb**	**16 08 52.1**	**-1.2**
CAVK				*i* AML	AML	16 08 55.0	
	comp=E,72nm,0.5s						
CAVK				*i* AML	AML	16 09 02.0	
	comp=E,85nm,0.7s						
ERIK	**Erikli-Kesan**	**1.16**	**18**	Pn	**Pb**	**16 08 38.9**	**-0.3**
ERIK				Sn	**Sn**	**16 08 54.9**	**-0.2**
ENEZ	**Enez**	**1.17**	**4**	P	**Pb**	**16 08 39.5**	**+0.1**
ENEZ				S	**Sn**	**16 08 55.7**	**+0.3**
	comp=E,182nm,0.5s						
ENEZ	**Enez**	**1.17**	**4**	Pn	**Pg**	**16 08 39.7**	**-0.1**
CHOS	**Chios island**	**1.18**	**180**	P	**Pb**	**16 08 39.1**	**-0.5**
CHOS				S	**Sn**	**16 08 56.3**	**+0.7**
	comp=E,145nm,0.2s						
CHOS	**Chios island**	**1.18**	**180**	Pn	**Pb**	**16 08 39.8**	**+0.2**
CHOS	**Chios island**	**1.18**	**180**	P	**Pb**	**16 08 39.1**	**-0.5**
CHOS				S	**Sn**	**16 08 56.3**	**+0.7**
CHOS				AML	AML	16 08 58.5	
	comp=N,233µm,0.3s						
CHOS				AML	AML	16 09 00.2	
	comp=E,352µm,0.2s						
BALY	**Balya**	**1.23**	**81**	P	**Pn**	**16 08 39.7**	**-0.6**
BALY				S	**Sb**	**16 08 56.3**	**+0.1**
BALY				*i* AML	AML	16 08 58.0	
	comp=E,52nm,0.4s						
KRBG	**Karabiga-Canak**	**1.27**	**49**	Pn	**Pn**	**16 08 40.8**	**0.0**
KRBG				Sn	**Sn**	**16 08 57.9**	**+0.1**
URLA	**Izmir**	**1.28**	**160**	Pn	**Pn**	**16 08 40.4**	**-0.6**
URLA	**Izmir**	**1.28**	**160**	P	**Pn**	**16 08 40.3**	**-0.7**
URLA				S	**Sb**	**16 08 54.6**	**-3.1**
URLA				*i* AML	AML	16 08 58.0	
	comp=E,42nm,0.9s						
URLA				*i* AML	AML	16 09 00.0	
	comp=E,47nm,1.1s						
STEP	**BALIKESIR_Sava**	**1.31**	**98**	P	**Pb**	**16 08 41.9**	**+0.1**
STEP				S	**Sg**	**16 09 02.7**	**+3.2**
ALN	**Alexandroupoli**	**1.33**	**0**	P	**Pn**	**16 08 41.8**	**+0.2**
ALN				S	**Sb**	**16 08 59.0**	**-0.1**
	comp=E,60nm,0.4s						
ALN	**Alexandroupoli**	**1.33**	**0**	Pn	**Pn**	**16 08 41.6**	**0.0**
ALN	**Alexandroupoli**	**1.33**	**0**	P	**Pn**	**16 08 41.8**	**+0.2**
ALN				S	**Sb**	**16 08 59.0**	**-0.1**
ALN				AML	AML	16 09 01.1	
	comp=E,144µm,0.3s						
ALN				AML	AML	16 09 01.2	
	comp=N,102µm,0.5s						
KNL	**Balıkesir**	**1.34**	**58**	P	**Pn**	**16 08 41.8**	**0.0**
KNL				S	**Sn**	**16 08 59.6**	**+0.1**
KNL				*i* AML	AML	16 09 02.0	
	comp=N,80nm,0.6s						
KNL				*i* AML	AML	16 09 03.0	
	comp=N,75nm,0.6s						
KESN	**Edirne-Kesan**	**1.35**	**21**	P	**Pn**	**16 08 42.0**	**-0.2**
KESN				S	**Sb**	**16 08 58.7**	**-1.3**
KESN				*i* AML	AML	16 09 03.0	
	comp=N,84nm,0.3s						
KESN				*i* AML	AML	16 09 04.0	
	comp=N,85nm,0.3s						
ZEYE	**Izmir, Urla-Ze**	**1.37**	**165**	P	**Pn**	**16 08 41.7**	**-0.5**
ZEYE				S	**Sb**	**16 08 58.8**	**-1.6**
RKY	**Sarkoy-Tekirda**	**1.42**	**37**	Pn	**Pn**	**16 08 43.0**	**+0.1**
RDO	**Rodhopi**	**1.62**	**346**	P	**Pn**	**16 08 45.9**	**+0.2**
RDO	**Rodhopi**	**1.62**	**346**	Pn	**Pn**	**16 08 45.9**	**+0.2**
RDO	**Rodhopi**	**1.62**	**346**	P	**Pn**	**16 08 45.9**	**+0.2**
BAND	**Balkesir-Ban**	**1.77**	**63**	P	Pn	16 08 39.9	-7.7
BAND				S	**Sb**	**16 09 11.3**	**-0.4**
BAND				*i* AML	AML	16 09 15.0	
	comp=N,25nm,0.3s						
BAND				*i* AML	AML	16 09 15.0	
	comp=N,33nm,0.3s						
SMG	**Samos**	**1.96**	**161**	P	**Pn**	**16 08 50.1**	**-0.2**
SMG	**Samos**	**1.96**	**161**	P	**Pn**	**16 08 50.1**	**-0.2**

DJA 29 16:18:09.3±1.1**, 3°S**±9°×**12°8E**±°**, h10**^{km}**, M2.0**/4**, MLv2.0**/4**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.47**	**99**	P	Pb	16 18 19.3	-0.5
AAI	**Ambon**	**0.49**	**213**	P	Pb	16 18 19.8	-0.3
AAI				S	Sb	16 18 27.1	-0.2
WRA	**Warramunga Arr**	**17.54**	**161**	P	P	16 22 17.3	+2.1
	baz=15,slow=12,SNR=2.0						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**20.95**	**166**	P	Pn	16 22 57.9	+2.8
	0.4nm,0.9s,baz=16,slow=9.7,SNR=5.6						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**64.29**	**327**	P	P	16 29 16.0	+31
	0.2nm,0.6s,baz=118,slow=8.3,SNR=2.6						
	0.2nm,0.6s						

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*IDC **29** 16:33:59.6±0.8, 22°.46N×121°.36E, h0^{km}, mb4.0/18, mbtmp4.1/19, ML3.7/1, MS3.7/1, Error ellipse: s-maj=21.3km s-min=16.1km az=66.0*
*JMA **29** 16:34:01.4±0.8, 23°N±3°×12°1E±°, h0^{km}, MV4.4/15, TAIWAN REGION*
*NIED **29** 16:34:01.4, 22°.73N×121°.15E, h0^{km}, MW4.3, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.99; $M_{\theta\theta}$2.72; $M_{\phi\phi}$-1.73; $M_{r\theta}$1.05; $M_{\theta\phi}$-2.07; $M_{\phi r}$-0.55; Fault plane solution: $M_0$3.19000×10^{15} NP1: ϕ_s157.00000°, δ84.00000°, λ14.00000°. NP2: ϕ_s65.00000°, δ76.00000°, λ174.00000°.*
*BJI **29** 16:34:01.0±0.0, 22°.51N×121°.07E, h6^{km}, mb4.2/38, mB4.8/16, ML4.2/6, Ms4.0/12, Ms7 4.0/10*
*TAP **29** 16:34:02.8, 22°.52N×121°.02E, h17^{km}, ML4.5, B*
*ASIES **29** 16:34:02.4, 22°.52N×121°.04E, h16^{km}, MW4.2*
*NEIC **29** 16:34:02.7±1.4, 22°.54N±0°.06×121°.16E±0°.06, h21^{km}±5^{km}, mb4.5/33, Error ellipse: s-maj=9.0km s-min=7.7km az=214.0*
ISC 29 16:34:02.1±0.8**, 22°.51N**±0°.02×**121°.14E**±0°.02**, h15**^{km}±5^{km}**, n256, σ1^{s}.24**/342**, mb4.4**/39**, 57C-24D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECL	**Taimali**	**0.19**	**298**	⇑*i*P	**Pg**	**16 34 06.4**	**-0.2**
	baz=326						
ECL				*i* S	**Sg**	**16 34 08.8**	**-0.8**
	baz=326						
TTN	**Taitung**	**0.25**	**2**	⇑*i*P	**Pb**	**16 34 09.8**	**+1.5**
	baz=30						
TTN				*e*S	**Sb**	**16 34 14.5**	**+2.1**
	baz=30						
TAW	**Tawu**	**0.27**	**236**	⇑*i*P	**Pg**	**16 34 07.8**	**-0.1**
	baz=213						
TAW				*i* S	**Sg**	**16 34 11.3**	**-0.4**
	baz=213						
TAWH	**Dawu Township**	**0.28**	**234**	⇑*i*P	**Pg**	**16 34 08.1**	**0.0**
	baz=214						
TAWH				S	**Sg**	**16 34 11.8**	**-0.4**
	baz=214						
EAST	**Anshuo**	**0.29**	**245**	⇑*i*P	**Pg**	**16 34 08.0**	**-0.3**
	baz=227						
EAST				*i* S	**Sg**	**16 34 11.5**	**-1.0**
	baz=227						
TWGBT	**Beinan**	**0.31**	**350**	P	**Pb**	**16 34 09.5**	**0.0**
TWGBT	**Beinan**	**0.31**	**350**	⇑*i*P	**Pb**	**16 34 09.3**	**-0.1**
	baz=4.0						
TWGBT				*i* S	**Sb**	**16 34 13.9**	**-0.6**
	baz=4.0						
TWG	**Pinlang**	**0.32**	**349**	Pg	**Pg**	**16 34 09.2**	**+0.4**
TWG				Sg	**Sg**	**16 34 13.4**	**+0.1**
TWG	**Pinlang**	**0.32**	**349**	⇑*i*P	**Pb**	**16 34 09.3**	**-0.2**
	baz=3.0						
TWG				*i* S	**Sb**	**16 34 14.0**	**-0.5**
	baz=3.0						
LDUT	**Ludao**	**0.35**	**62**	⇑*i*P	**Pn**	**16 34 12.0**	**-0.7**
	baz=70						
LDUT				S	**Sn**	**16 34 18.7**	**-0.8**
	baz=70						
LONT	**Longtian**	**0.40**	**359**	⇑*i*P	**Pb**	**16 34 10.9**	**0.0**
	baz=18						
LONT				*e*S	**Sb**	**16 34 16.7**	**-0.1**
	baz=18						
SLIU	**Shizi**	**0.42**	**227**	⇑*i*P	**Pg**	**16 34 10.4**	**-0.2**
	baz=212						
SLIU				S	**Sg**	**16 34 16.3**	**-0.1**
	baz=212						
MASBT	**Mashibuluo**	**0.48**	**283**	⇓*i*P	**Pg**	**16 34 10.7**	**-0.9**
	baz=280						
MASBT				*i* S	**Sg**	**16 34 15.8**	**-2.3**
	baz=280						
EDH	**Donghe**	**0.49**	**18**	⇑*i*P	**Pb**	**16 34 13.0**	**+0.6**
	baz=34						
EDH				*e*S	**Sb**	**16 34 19.9**	**+0.4**
	baz=34						
TSMG	**Majia**	**0.49**	**294**	⇓*i*P	**Pg**	**16 34 11.1**	**-0.8**
	baz=299						
TSMG				S	**Sg**	**16 34 16.8**	**-1.8**
	baz=299						
SCZT	**Fangliau**	**0.50**	**254**	⇓*i*P	**Pg**	**16 34 11.2**	**-0.7**
	baz=250						
SCZT				*i* S	**Sg**	**16 34 16.8**	**-1.8**
	baz=250						
SSD	**Sandimen**	**0.52**	**297**	⇓*i*P	**Pg**	**16 34 11.6**	**-0.9**
	baz=303						
SSD				*i* S	**Sg**	**16 34 17.1**	**-2.4**
	baz=303						
SMST	**Manzhou Townsh**	**0.56**	**210**	⇑*i*P	**Pg**	**16 34 13.1**	**0.0**
	baz=186						
SMST				*i* S	**Sg**	**16 34 20.5**	**0.0**
	baz=186						
LAY	**Lan-yu**	**0.60**	**140**	*e*P	**Pb**	**16 34 14.8**	**+0.4**
	baz=133						
HEN	**Hengchun**	**0.62**	**217**	⇑*i*P	**Pg**	**16 34 14.6**	**+0.3**
	baz=197						
HEN				*e*S	**Sg**	**16 34 22.9**	**+0.3**
	baz=197						
CHKT	**Chengkung**	**0.63**	**20**	⇑*i*P	**Pb**	**16 34 15.0**	**+0.2**
	baz=19						
CHKT				S	**Sn**	**16 34 24.6**	**-1.7**
	baz=19						
SGLT	**Jiouru**	**0.64**	**290**	⇓*i*P	**Pg**	**16 34 14.5**	**0.0**
	baz=293						
SGLT				S	**Sg**	**16 34 23.0**	**+0.1**
	baz=293						
TWKBT	**Hengchun**	**0.64**	**208**	⇑*i*P	**Pg**	**16 34 14.6**	**0.0**
	baz=189						
TWKBT				*e*S	**Sg**	**16 34 24.0**	**+0.9**
	baz=189						
TWK1	**Hengchun**	**0.64**	**209**	⇑*i*P	**Pg**	**16 34 14.6**	**0.0**
	baz=189						
TWK1				*e*S	**Sg**	**16 34 23.3**	**+0.2**
	baz=189						
TSEB	**Hengchuen, Pin**	**0.64**	**200**	⇓*e*P	**Pg**	**16 34 15.2**	**+0.6**
	baz=183						
TSEB				*e*S	**Sb**	**16 34 24.9**	**+1.1**
	baz=183						
EHD	**Haiduan**	**0.64**	**6**	⇑*i*P	**Pg**	**16 34 14.3**	**-0.4**
	baz=18						
EHD				*e*S	**Sg**	**16 34 22.8**	**-0.5**
	baz=18						
LYUB	**Lan-yu**	**0.65**	**140**	⇓*i*P	**Pg**	**16 34 14.2**	**-0.7**
	baz=123						
SLGT	**Liugui**	**0.66**	**317**	⇓*i*P	**Pg**	**16 34 15.4**	**+0.3**
	baz=325						
SLGT				*e*S	**Sg**	**16 34 23.3**	**-0.6**
	baz=325						
ELDTW	**Lidau**	**0.69**	**351**	⇑*i*P	**Pg**	**16 34 15.2**	**-0.4**
	baz=11						
SCST	**Cishan**	**0.70**	**303**	⇓*i*P	**Pg**	**16 34 16.1**	**+0.2**
	baz=310						
SCST				*e*S	**Sg**	**16 34 25.6**	**+0.5**
	baz=310						
FULB	**Fuli**	**0.70**	**12**	⇑*i*P	**Pg**	**16 34 15.9**	**0.0**
	baz=23						
FULB				*e*S	**Sb**	**16 34 26.5**	**+0.8**
	baz=23						
TWM1	**Shoushan**	**0.73**	**296**	⇓*i*P	**Pg**	**16 34 16.9**	**+0.5**
	baz=299						
TWM1				*e*S	**Sn**	**16 34 28.1**	**-0.7**
	baz=299						
STYH	**Taoyuan**	**0.74**	**333**	⇑*i*P	**Pg**	**16 34 16.7**	**+0.2**
	baz=345						
STYH				*e*S	**Sg**	**16 34 25.9**	**-0.4**
	baz=345						
SGST	**Jiashian**	**0.77**	**318**	⇓*i*P	**Pg**	**16 34 16.3**	**-0.7**
	baz=326						
SGST				*e*S	**Sg**	**16 34 27.4**	**+0.3**
	baz=326						
KAU	**Kaohsiung**	**0.77**	**275**	⇓*e*P	**Pn**	**16 34 18.7**	**+0.3**
	baz=271						
KAU				*e*S	**Sb**	**16 34 27.6**	**+0.2**
	baz=271						
EYUL	**Yuli**	**0.85**	**11**	⇑*e*P	**Pb**	**16 34 17.7**	**-1.0**
	baz=32						
CHN1	**Nanshi**	**0.88**	**320**	⇓P	**Pn**	**16 34 19.9**	**-0.1**
	baz=327						
CHN1				S	**Sn**	**16 34 32.2**	**-0.3**
	baz=327						
WTP	**Ta-pu**	**0.88**	**327**	⇑*i*P	**Pg**	**16 34 19.8**	**+0.6**
	baz=334						
WTP				S	**Sg**	**16 34 31.4**	**+0.7**
	baz=334						
YULB	**Yu-li**	**0.89**	**10**		**Pb**	**16 34 17.5**	**-1.9**
YULB	**Yu-li**	**0.89**	**10**	P	**Pb**	**16 34 17.9**	**-1.5**
YULB	**Yu-li**	**0.89**	**10**	⇑*i*P	**Pb**	**16 34 17.6**	**-1.8**
	baz=29						
CHN3	**Shinhua**	**0.91**	**309**	*e*P	**Pn**	**16 34 21.5**	**+1.1**
	baz=327						
CHN3				*e*S	**Sn**	**16 34 34.5**	**+1.2**
	baz=327						
TPUB	**Ta-pu**	**0.92**	**330**		**Pg**	**16 34 20.1**	**+0.2**
TPUB					**Sg**	**16 34 32.3**	**+0.3**
TPUB	**Ta-pu**	**0.92**	**330**	P	**Pn**	**16 34 20.7**	**+0.2**
TPUB	**Ta-pu**	**0.92**	**330**	⇑*i*P	**Pn**	**16 34 20.5**	**-0.1**
	baz=348						
TPUB				S	**Sg**	**16 34 32.6**	**+0.6**
	baz=348						
TWK	**Hsinying**	**0.96**	**322**	⇑*i*P	**Pg**	**16 34 21.2**	**+0.4**
	baz=329						
TWK				*e*S	**Sn**	**16 34 35.1**	**+0.4**
	baz=329						
CHN4	**Tsaushan**	**0.98**	**329**	⇑*i*P	**Pn**	**16 34 21.5**	**+0.2**
	baz=349						
CHN4				*e*S	**Sn**	**16 34 35.4**	**+0.4**
	baz=349						
TAI1	**Yung-k'ang**	**0.99**	**303**	*e*P	**Pg**	**16 34 21.8**	**+0.4**
	baz=307						
YUS	**Yu-Shan**	**0.99**	**350**	⇑*i*P	**Pb**	**16 34 20.7**	**-0.7**
	baz=10.0						
YUS				*e*S	**Sg**	**16 34 34.6**	**+0.1**
	baz=10.0						
SSHA	**Shanhua**	**1.00**	**309**	⇓P	**Pg**	**16 34 22.6**	**+1.0**
	baz=314						
SSHA				S	**Sn**	**16 34 37.2**	**+1.6**
	baz=314						
EHY	**Hungye**	**1.01**	**10**	⇑*e*P	**Pb**	**16 34 19.2**	**-2.1**
	baz=29						
EHY				*e*S	**Sb**	**16 34 33.6**	**-0.8**
	baz=29						
HGSD	**Ruisui**	**1.02**	**15**	⇑*e*P	**Pb**	**16 34 20.4**	**-1.0**
	baz=40						
ALS	**Alishan**	**1.04**	**343**	⇑*i*P	**Pb**	**16 34 22.0**	**-0.1**
	baz=2.0						
ALS				S	**Sb**	**16 34 35.9**	**+0.1**
	baz=2.0						
WCKO	**Fanlu**	**1.05**	**332**	⇑*e*P	**Pb**	**16 34 21.2**	**-0.8**
	baz=351						
WCKO				S	**Sn**	**16 34 36.6**	**-0.2**
	baz=351						
SCLT	**Jiali**	**1.09**	**308**	⇓*i*P	**Pn**	**16 34 23.2**	**+0.3**
	baz=313						
SCLT				*e*S	**Sg**	**16 34 38.7**	**+1.2**
	baz=313						
ICHU	**Yijhu**	**1.16**	**317**	⇓P	**Pb**	**16 34 24.3**	**+0.4**
	baz=325						
ICHU				*e*S	**Sg**	**16 34 41.5**	**+1.8**
	baz=325						
TSCK	**Chigu Township**	**1.16**	**304**	⇓*e*P	**Pn**	**16 34 23.8**	**0.0**

	baz=308						
TSCK				*e*S	Sb	16 34 39.1	+0.4
	baz=308						
CHN5	**Tsauling**	1.17	339	⇑*e*P	Pg	16 34 24.5	-0.1
	baz=358						
CHY	**Chiayi**	1.19	327	⇑*e*P	Pg	16 34 24.9	-0.1
	baz=334						
CHY				*e*S	Sg	16 34 42.4	+1.9
	baz=334						
EGFH	**Guangfu**	1.19	13	*e*P	Pn	16 34 22.2	-2.0
	baz=34						
CHN2	**Minshiung**	1.19	329	⇑*e*P	Pg	16 34 25.4	+0.3
	baz=337						
CHN2				*e*S	Sg	16 34 42.1	+1.5
	baz=337						
CHN8	**Yiju**	1.19	315	⇓*i*P	Pn	16 34 24.5	+0.2
	baz=321						
CHN8				*e*S	Sg	16 34 40.8	+0.1
	baz=321						
WHYT	**Xinyi Township**	1.21	348	⇑*i*P	Pb	16 34 25.1	+0.3
	baz=3.0						
WHYT				*e*S	Sg	16 34 41.5	+0.2
	baz=3.0						
VWDT	**VWDT**	1.24	0	⇑*i*P	Pn	16 34 24.1	-0.8
	baz=13						
SSLB	**Suanglung**	1.29	353	Pn	Pn	16 34 25.2	-0.4
SSLB	**Suanglung**	1.29	353	P	Pb	16 34 25.9	-0.2
SSLB	**Suanglung**	1.29	353	⇑*i*P	Pn	16 34 25.4	-0.2
	baz=10.0						
WDLH	**Douliu**	1.30	335	⇑P	Pg	16 34 27.2	0.0
	baz=325						
WDLH				*e*S	Sg	16 34 45.8	+1.7
	baz=325						
WSL	**Shuilin Townsh**	1.31	321	⇓P	Pb	16 34 26.5	0.0
	baz=328						
WSL				*e*S	Sn	16 34 43.2	0.0
	baz=328						
ESL	**Shilin**	1.33	12	*e*P	Pn	16 34 24.0	-2.2
	baz=32						
WJS	**Zhushan**	1.36	344	⇑P	Pg	16 34 28.5	+0.2
	baz=356						
WJS				S	Sg	16 34 47.1	+1.0
	baz=356						
WTK	**Tuku**	1.36	330	⇑*e*P	Pb	16 34 27.7	+0.4
	baz=320						
WTK				*e*S	Sg	16 34 46.4	+0.3
	baz=320						
SMLT	**Sun Moon Lake**	1.39	351	⇑P	Pb	16 34 27.8	-0.1
	baz=18						
SMLT				*e*S	Sg	16 34 47.7	+0.8
	baz=18						
WSF	**Szhu**	1.41	323	*e*P	Pn	16 34 27.6	+0.4
	baz=331						
WSF				*e*S	Sb	16 34 46.2	+0.4
	baz=331						
TYC	**Yuchr**	1.42	350	⇑P	Pg	16 34 29.1	-0.3
	baz=18						
TYC				S	Sg	16 34 48.1	+0.3
	baz=18						
WNT	**Mingjian**	1.43	343	⇑*i*P	Pg	16 34 29.2	-0.4
	baz=356						
WNT				*e*S	Sg	16 34 49.7	+1.6
	baz=356						
OWD	**Renai**	1.44	1	*e*P	Pn	16 34 27.3	-0.5
	baz=11						
WUSB	**Renai**	1.48	359	⇑*e*P	Pn	16 34 27.9	-0.4
	baz=17						
HWA	**Hwalien**	1.53	16	*e*P	Pn	16 34 27.6	-1.3
	baz=26						
CHGB	**Renai**	1.55	1	⇑*e*P	Pn	16 34 28.9	-0.5
	baz=17						
WDGT	**Dungji**	1.55	299	⇓*i*P	Pn	16 34 28.2	-1.0
	baz=302						
WDGT				*e*S	Sn	16 34 47.9	-1.3
	baz=302						
WRL	**Guolierlin Hig**	1.55	333	⇑*i*P	Pn	16 34 29.9	+0.6
	baz=324						
WRL				*e*S	Sb	16 34 50.3	+0.2
	baz=324						
WCS	**Beigang Elemen**	1.56	352	⇑P	Pb	16 34 30.9	+0.3
	baz=11						
WCS				*e*S	Sg	16 34 51.8	-0.6
	baz=11						
WTCT	**Ta-ch'eng**	1.56	330	*e*P	Pn	16 34 30.1	+0.7
	baz=320						
WTCT				*e*S	Sb	16 34 51.0	+0.6
	baz=320						
TWD	**Chiawan**	1.62	15	*e*P	Pn	16 34 29.4	-0.8
	baz=38						
WHF	**Hehuan Shan**	1.64	4	⇓*e*P	Pn	16 34 30.0	-0.8
	baz=28						
WCHH	**Zhanghua**	1.65	341	⇑P	Pb	16 34 32.2	-0.1
	baz=335						
WCHH				*e*S	Sb	16 34 53.0	+0.1
	baz=335						
TCU	**Taichung**	1.69	346	⇑P	Pb	16 34 33.1	+0.2
	baz=358						
TCU				*e*S	Sg	16 34 55.4	-1.1
	baz=358						
ETL	**Fush Village**	1.71	15	*e*P	Pn	16 34 29.8	-1.6
	baz=37						
NACB	**Ninganchiao**	1.71	14	Pn	Pn	16 34 29.4	-2.0
NACB	**Ninganchiao**	1.71	14	P	Pn	16 34 29.9	-1.5
NACB	**Ninganchiao**	1.71	14	*e*P	Pn	16 34 29.1	-2.4
	baz=34						
ETLH	**Xiulin Townshi**	1.72	11	*e*P	Pn	16 34 29.9	-1.8
	baz=35						
ETLH				*e*S	Sb	16 34 54.5	-0.5
	baz=35						
VCHM	**Qimei**	1.72	294	P	Pn	16 34 30.4	-1.2
	baz=296						
VCHM				*e*S	Sn	16 34 50.4	-2.9
	baz=296						
FUSS	**Fushou**	1.74	3	*e*P	Pn	16 34 31.9	-0.1
	baz=15						
FUSS				*e*S	Sg	16 34 56.8	-1.3
	baz=15						
TDCB	**Techi**	1.74	1	⇑*e*P	Pn	16 34 32.1	+0.1
	baz=18						
TDCB				*e*S	Sg	16 34 57.5	-0.7
	baz=18						
TWT	**Tachien**	1.74	1	*e*P	Pn	16 34 32.3	+0.3
	baz=12						
PHUB	**P'eng-hu**	1.75	305	⇓P	Pn	16 34 30.9	-1.1
	baz=309						
PHUB				S	Sn	16 34 50.9	-3.2
	baz=309						
WHP	**Taichung City**	1.77	354	*e*P	Pb	16 34 34.2	-0.2
	baz=11						
WHP				*e*S	Sg	16 34 59.2	0.0
	baz=11						
PNG	**Penghu**	1.80	306	⇓*i*P	Pn	16 34 31.7	-0.9
	baz=310						
PNG				*e*S	Sn	16 34 52.3	-2.9
	baz=310						
TWQ1	**Liyutan**	1.86	350	⇑*i*P	Pb	16 34 35.6	-0.3
	baz=20						
TWQ1				*e*S	Sg	16 35 00.6	-1.6
	baz=20						
WDJ	**Dajia District**	1.89	346	⇑*i*P	Pb	16 34 35.9	-0.4
	baz=359						
WDJ				*e*S	Sg	16 35 01.6	-1.4
	baz=359						
NNSB	**Datong**	1.93	7	*e*P	Pn	16 34 33.8	-0.7
	baz=32						
NNSB				*e*S	Sb	16 35 02.0	+1.0
	baz=32						
NSY	**Sanyi**	1.93	350	⇑*i*P	Pb	16 34 36.6	-0.5
	baz=21						
NSY				*e*S	Sg	16 35 04.0	-0.3
	baz=21						
NNS	**Nan Shan**	1.94	6	*e*P	Pn	16 34 34.0	-0.6
	baz=33						
NNS				*e*S	Sb	16 35 01.3	0.0
	baz=33						
ENA	**Nanau**	1.99	16	*e*P	Pn	16 34 33.6	-1.7
	baz=36						
EWUT	**Wuta**	2.02	17	*e*P	Pn	16 34 35.8	+0.2
	baz=39						
EWUT				*e*S	Sb	16 35 02.5	-0.9
	baz=39						
NMLH	**Miaoli**	2.05	351	*e*P	Pb	16 34 38.1	-0.9
	baz=21						
NMLH				*e*S	Sg	16 35 06.5	-1.5
	baz=21						
LATG	**Datong**	2.05	10	*e*P	Pn	16 34 35.1	-1.1
	baz=35						
NFF	**Wufeng Townshi**	2.12	360	*i* P	Pn	16 34 38.6	+1.5
	baz=14						
NFF				*e*S	Sn	16 35 04.0	+0.9
	baz=14						
NSTT	**Nanjuang**	2.12	357	*e*P	Pn	16 34 38.5	+1.5
	baz=11						
NSTT				*e*S	Sb	16 35 07.0	+0.6
	baz=11						
LIOB	**Emei**	2.13	357	*e*P	Pb	16 34 39.1	-1.4
	baz=12						
LIOB				*e*S	Sb	16 35 06.4	-0.4
	baz=12						
ENTT	**Nioudou**	2.16	10	*e*P	Pn	16 34 36.8	-0.8
	baz=35						
YHNB	**Yeheng**	2.17	6	Pn	Pn	16 34 37.8	0.0
YHNB	**Yeheng**	2.17	6	P	Pn	16 34 38.5	+0.8
YHNB	**Yeheng**	2.17	6	*e*P	Pn	16 34 37.6	-0.2
	baz=18						
YHNB				*e*S	Sb	16 35 07.9	+0.2
	baz=18						
NSK	**Sanguang**	2.17	5	*e*P	Pn	16 34 38.1	+0.3
	baz=1.0						
NDS	**Dongshan**	2.18	14	*e*P	Pb	16 34 40.4	-1.0
	baz=36						
TWC	**Suao**	2.19	17	*e*P	Pn	16 34 38.6	+0.6
	baz=37						
SBCB	**Hsinchu**	2.28	357	*e*P	Pb	16 34 41.3	-1.6
	baz=10.0						
FUSB	**Fushanzhiwuyua**	2.28	10	*e*P	Pn	16 34 39.3	-0.1
	baz=35						
FUSB				*e*S	Sb	16 35 10.4	-0.7
	baz=35						
NWLT	**Wulai**	2.29	8	*e*P	Pn	16 34 39.4	+0.1
	baz=35						
HSN	**Hsinchu**	2.29	356	*e*P	Pb	16 34 42.3	-0.8
	baz=11						
EGS		2.44	17	*e*P	Pn	16 34 40.5	-1.0
	baz=36						
NCUH	**Zhongli**	2.45	1	*e*P	Pb	16 34 43.9	-2.0
	baz=15						
NCU	**National Centr**	2.45	1	*e*P	Pn	16 34 43.5	+1.8
	baz=15						
NHDH	**Xindian Distri**	2.47	8	*e*P	Pn	16 34 42.7	+0.9
	baz=5.0						
TATO	**Taipei**	2.48	7	Pn	Pn	16 34 41.9	-0.1
TATO	**Taipei**	2.48	7	P	Pn	16 34 43.1	+1.1
TWA	**Mucha**	2.50	9	*e*P	Pn	16 34 42.6	+0.4
	baz=34						
TIPB	**Shuangxi**	2.53	14	*e*P	Pn	16 34 43.3	+0.6
	baz=36						
TAP	**Taipei**	2.54	8	*e*P	Pb	16 34 45.5	-2.0
	baz=5.0						
JYNG	**Yonagunijimaku**	2.55	40	P	Pn	16 34 43.3	+0.3
JYNG				*e*S	Sn	16 35 13.5	-0.3
YOJ	**Yonaguni jima**	2.60	41	Pn	Pn	16 34 43.6	0.0
YOJ	**Yonaguni jima**	2.60	41	P	Pn	16 34 44.2	+0.6
YOJ	**Yonaguni jima**	2.60	41	P	Pn	16 34 44.1	+0.6
YOJ				S	Sn	16 35 14.7	-0.2
YOJ	**Yonaguni jima**	2.60	41	⇑*i*P	Pn	16 34 44.1	+0.6
	baz=45						
YOJ				S	Sn	16 35 15.2	+0.3
	baz=45						
TWB1	**Santiao Chiao**	2.61	17	*e*P	Pn	16 34 44.8	+1.0
	baz=36						
YM01	**YM01**	2.66	9	*e*P	Pn	16 34 44.2	-0.3
	baz=36						
NTST	**Danshui**	2.66	6	*e*P	Pn	16 34 46.9	+2.4
	baz=3.0						
ANP	**Anpu**	2.69	7	*e*P	Pn	16 34 45.8	+0.8
	baz=35						
TWY	**Chenhua**	2.79	9	*e*P	Pn	16 34 48.3	+2.1
	baz=35						
HATJ	**Hateruma jima**	2.90	57	P	Pn	16 34 48.2	+0.4
HATJ				S	Sn	16 35 21.5	-0.8
VWUC	**VWUC**	2.92	328	*i* P	Pn	16 34 47.6	-0.4
	baz=336						
IRIF	**Iriomote-Funau**	3.00	52	P	Pn	16 34 49.7	+0.6
IRIF				*e*S	Sn	16 35 24.7	-0.1
KNM	**Kinmen**	3.13	308	*e*P	Pn	16 34 51.3	+0.4
	baz=309						
PTMZ	**Houxiangcun**	3.13	324	⇑P	Pn	16 34 50.5	-0.3
	baz=331						
JKRS	**Kuro-shima**	3.15	56	P	Pn	16 34 51.8	+0.6
JKRS				*e*S	Sn	16 35 29.2	+0.6
KNMB	**Chin-men Tao**	3.19	308		Pn	16 34 50.4	-1.3
KNMB	**Chin-men Tao**	3.19	308	*e*P	Pn	16 34 50.8	-0.9
	baz=312						
JIJ	**Ishigaki jima**	3.32	56	P	Pn	16 34 53.6	0.0
JIJ				S	Sn	16 35 32.3	-0.6
ZPLA	**Ao Xicun**	3.42	295	*e*P	Pn	16 34 53.6	-1.3
	baz=297						
JISG	**Ishigakijimahi**	3.57	54	P	Pn	16 34 56.7	-0.4
JISG				*e*S	Sn	16 35 38.3	-0.8
DSXP	**Dongshan**	3.62	290	*e*P	Pn	16 34 56.6	-1.0
	baz=291						
AXDP	**Jialang**	3.75	310	*e*P	Pn	16 34 58.9	-0.6
	baz=314						
MATB	**Ma-tsu**	3.79	344	*e*P	Pn	16 35 00.0	0.0
	baz=358						
JTJ	**Tarama**	3.90	56	P	Pn	16 35 02.4	+0.8
JTJ				*e*S	Sn	16 35 46.9	-0.2
MHZQ	**Yeshan**	4.06	332	*i* P	Pn	16 35 04.2	+0.5
	baz=343						
JIRB	**Irabujima**	4.36	57	P	Pn	16 35 08.1	+0.2
JIRB				*e*S	Sn	16 35 58.2	-0.3
JMJ2	**Miyako jima3**	4.44	59	P	Pn	16 35 09.0	0.0
JMJ2				S	Sn	16 36 00.3	-0.1
JMJ	**Miyako jima 2**	4.45	58	P	Pn	16 35 09.9	+0.8
JIKM	**Ikemajima**	4.47	57	P	Pn	16 35 10.0	+0.6
JIKM				*e*S	Sn	16 36 01.5	+0.3
XPSS	**Dashiqiu**	4.49	349	*e*P	Pn	16 35 09.8	+0.2
	baz=8.0						
JOGS	**Gusukube**	4.51	59	P	Pn	16 35 10.7	+0.7
SXFK	**Yanhouchang**	5.01	321	*e*P	Pn	16 35 16.5	-0.4
	baz=327						
HKPS	**Hong Kong Po S**	6.48	269	Pn	Pn	16 35 36.1	-0.8
JOW	**Kunigami**	7.79	55	Pn	Pn	16 35 53.3	-1.7
	2.7nm,0.3s,baz=169,slow=14,SNR=16						
JOW				Sn	Sn	16 37 18.0	-5.0
	0.7nm,0.3s,baz=252,slow=29,SNR=1.3						
	6.9nm,0.3s						
JOW	**Kunigami**	7.79	55	Pn	Pn	16 35 52.6	-2.3
CNSH	**ChangSha**	9.33	309	⇓P	Pn	16 36 11.3	-4.7
CNSH				S	Sn	16 37 53.0	-7.7
CNSH				smax	smax		
	comp=N,71nm,1.3s						
CNSH				smax	smax		
	comp=E,78nm,1.1s						
NJ2	**Nanjing**	9.72	348	*e*P	Pn	16 36 21.3	-0.2
NJ2				pmax	pmax		
	comp=E,180nm,4.9s						
NJ2				LR	LR		
	comp=E,940nm,11.4s						
NJ2				LR	LR		
	comp=E,510nm,9.0s						
NJ2				LR	LR		
	comp=E,850nm,12.3s						
WHN	**Wuhan**	10.05	324	*e*P	Pn	16 36 26.8	+0.9
JNU	**Nakatsue**	13.63	37	LR	LR	16 42 36.5	
	comp=E,311nm,19.3s,baz=347,slow=38						
LYN	**LuoYang**	14.20	330	*e*P	Pn	16 37 25.5	+2.7
LYN				sP	P	16 37 31.8	+1.6
LYN				LR	LR		
	comp=E,430nm,15.5s						
LYN				LR	LR		
	comp=E,260nm,14.9s						
HNS	**HongShan**	15.85	341	⇑P	P	16 37 47.5	-0.9
HNS				pmax	pmax		
	comp=E,18nm,1.3s						
KSRS	**Korea Array**	16.01	20	Pn	P	16 37 49.1	-1.1
	comp=E,0.3nm,0.3s,baz=202,slow=13,SNR=9.5						
BJI	**Beijing**	17.98	348	P	P	16 38 13.0	+1.0
BJI				pmax	pmax		
	comp=E,7.0nm,0.9s						
PZH	**PanZhiHua**	18.09	287	P	P	16 38 15.0	+1.5
PZH				pmax	pmax		
	comp=E,10.0nm,0.6s						
JGF	**Kuroka**	19.23	44	P	P	16 38 25.7	-0.2
HHC	**Hu-ho-hao-te**	20.00	338	*e*P	P	16 38 33.8	-0.4
HHC				pmax	pmax		
	comp=E,76nm,0.8s						
BTO	**Baotou**	20.35	335	*e*P	Pn	16 38 43.0	+2.9
BTO				pmax	pmax		
	comp=Z,49nm,0.6s						
BTO				pmax	pmax		
	comp=Z,620nm,5.5s						
BTO	**Baotou**	20.35	335	*e*P	Pn	16 38 42.8	+2.7
BTO				pP	sP	16 38 46.0	+2.0
BTO				sP	pP	16 38 50.3	+8.2
BTO				PP	PnPn	16 39 03.5	+8.4
BTO				pmax	pmax		
	comp=Z,52nm,0.8s						
BTO				pmax	pmax		
	comp=Z,610nm,5.2s						
BTO				LR	LR		
	comp=Z,2μm,14.3s						
BTO				LR	LR		
	comp=Z,710nm,16.5s						
BTO				LR	LR		
	comp=Z,640nm,5.8s						
MAJO	**Matsushiro**	20.36	43	P	P	16 38 36.9	-1.2
MJAR	**Matsushiro Arr**	20.36	43	P	Pn	16 38 40.2	-0.1
	comp=Z,3.7nm,0.7s,baz=229,slow=9.4,SNR=9.8						
TNCH	**TengChong**	20.85	281	*e*P	Pn	16 38 45.5	-0.7
TNCH				pmax	pmax		
	comp=Z,10.0nm,2.3s						
TNCH				pmax	pmax		
	comp=Z,140nm,4.0s						
CMAR	**Chiang Mai Arr**	21.17	263	P	P	16 38 50.5	+3.4
	comp=Z,1.7nm,0.9s,baz=62,slow=8.2,SNR=12						
	comp=Z,1.7nm,0.9s						
CMAR	**Chiang Mai Arr**	21.17	263	P	P	16 38 47.8	+0.7
XLT	**XiLinHaoTe**	21.74	350	⇑*i*P	P	16 38 55.0	+1.9
XLT				sP	sP	16 39 04.0	+5.0
XLT				S	S	16 42 52.0	-1.2
XLT				sS	Sn	16 43 04.5	+1.9
XLT				pmax	pmax		
	comp=Z,7.0nm,1.2s						
XLT				pmax	pmax		
	comp=Z,190nm,6.4s						
XLT				LR	LR		
	comp=Z,31nm,16.7s						
XLT				LR	LR		
	comp=Z,250nm,14.7s						
XLT				LR	LR		
	comp=Z,320nm,15.0s						
JMM	**Marumori**	22.80	43	P	P	16 39 03.5	-0.9
JMM				IAmb	IAmb	16 39 17.3	
	comp=Z,32nm,1.4s						
USRK	**Ussuriysk Ar.**	23.42	20	P	P	16 39 10.9	+0.3
	comp=Z,1.2nm,0.6s,baz=198,slow=7.4,SNR=6.7						
	comp=Z,1.2nm,0.6s						
USRK	**Ussuriysk Ar.**	23.42	20	P	P	16 39 09.5	-1.1
GTA	**Gaotai**	24.77	318	*e*P	P	16 39 24.0	+0.6
GTA				pP	sP	16 39 31.5	+2.0
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GOMU	**GeErMu**	26.59	307	P	P	16 39 42.5	+2.2
GOMU				pP	pP	16 39 45.8	+1.2
GOMU				sP	sP	16 39 46.8	+0.3
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,65nm,4.9s						
ULN	**Ulaanbaatar**	27.71	339	P	P	16 39 48.8	-1.1
ULN				IAmb	IAmb	16 39 52.6	
	comp=Z,8.4nm,1.1s						
ASAJ	**Asahikawa**	27.88	34	P	P	16 39 51.5	+0.1
	comp=Z,1.8nm,0.6s,baz=246,slow=10.0,SNR=2.3						
	comp=Z,1.8nm,0.6s						
JKA	**Kamikawa-asahi**	27.89	34	P	P	16 39 49.1	-2.3
SONM	**Songino Array**	27.90	339	P	P	16 39 52.7	+1.1
	comp=Z,3.3nm,0.8s,baz=156,slow=10.0,SNR=16						
	comp=Z,3.3nm,0.8s						
SONM	**Songino Array**	27.90	339	P	P	16 39 51.1	-0.5
HEH	**HeiHe**	28.13	9	*e*P	P	16 39 59.5	+6.0
WMQ	**Urumqi**	34.80	316	*e*P	P	16 40 54.3	+2.0
WMQ				pP	sP	16 41 00.5	+2.1
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
MTN	**Manton Dam**	36.47	163	P	P	16 41 05.9	-0.9
KNRA	**Kununurra**	38.68	168	P	P	16 41 23.4	-2.0
MK31	**Makanchi Array**	39.52	317	P	P	16 41 33.1	+0.8
MKAR	**Makanchi Array**	39.52	317	P	P	16 41 33.5	+1.2
	comp=Z,3.9nm,0.8s,baz=111,slow=10,SNR=37						
	comp=Z,3.9nm,0.8s						
MKAR	**Makanchi Array**	39.52	317	P	P	16 41 32.4	0.0
MAKZ	**Makanchi**	39.72	317	P	P	16 41 34.1	0.0
MAKZ				IAmb	IAmb	16 41 36.3	
	comp=Z,9.6nm,1.1s						
KDJ	**Kajisay**	41.45	309	P	P	16 41 46.5	-2.1
ZAA0	**Zalesovo Array**	41.63	328	P	P	16 41 49.5	-0.1
ZAA0				IAmb	IAmb	16 41 51.7	
	comp=Z,14nm,1.2s						
ZALV	**Zalesovo Beam**	41.63	328	P	P	16 41 50.4	+0.8
	comp=Z,3.0nm,0.3s,baz=111,slow=8.1,SNR=27						
	comp=Z,3.0nm,0.3s						
ZALV	**Zalesovo Beam**	41.63	328	P	P	16 41 49.6	0.0
KSH	**Kashi**	41.79	305	P	P	16 41 56.0	+4.7
KSH				pmax	pmax		
	comp=Z,4.0nm,0.5s						
H11N1	**WAKE ISLAND Hy**	42.65	85	T	T	17 27 27.8	
	baz=282,slow=75,SNR=67						
H11N2	**WAKE ISLAND Hy**	42.65	85	T	T	17 27 28.4	
	baz=282,slow=75,SNR=152						
H11N3	**WAKE ISLAND Hy**	42.67	85	T	T	17 27 29.7	
	baz=282,slow=75,SNR=92						
H11S3	**WAKE ISLAND Hy**	42.73	87	T	T	17 27 35.4	
	baz=284,slow=75,SNR=259						
H11S1	**WAKE ISLAND Hy**	42.74	87	T	T	17 27 35.9	
	baz=284,slow=75,SNR=128						
H11S2	**WAKE ISLAND Hy**	42.75	87	T	T	17 27 36.5	
	baz=284,slow=75,SNR=113						
KURK	**Kurchatov**	43.36	321	P	P	16 42 03.1	-0.5
KURK				IAmb	IAmb	16 42 05.8	
	comp=Z,19nm,1.4s						
KURBB	**Kurchatov Arra**	43.37	321	P	P	16 42 04.9	+1.1
	comp=Z,5.7nm,1.0s,baz=122,slow=7.5,SNR=23						
	comp=Z,5.7nm,1.0s						
AAK	**Ala-Archa**	43.50	309	P	P	16 42 07.0	+1.8
	comp=Z,0.6nm,0.4s,baz=38,slow=11,SNR=5.1						
	comp=Z,0.6nm,0.4s						
WB0	**Warramunga Arr**	43.97	162	P	P	16 42 08.1	-0.8
WB0				IAmb	IAmb	16 42 39.3	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	44.12	162	P	P	16 42 08.8	-1.3
	comp=Z,1.7nm,0.8s,baz=345,slow=8.8,SNR=11						
	comp=Z,1.7nm,0.8s						
WRA	**Warramunga Arr**	44.12	162	P	P	16 42 07.7	-2.4
WB2	**Warramunga Arr**	44.12	162	P	P	16 42 09.3	-0.8
WB2				IAmb	IAmb	16 42 28.4	
	comp=Z,6.7nm,1.1s						
GAR	**Garm**	46.07	303	P	P	16 42 25.8	+0.1
KK31	**Karatay Array**	46.46	309	P	P	16 42 27.5	-1.1
KK31				IAmb	IAmb	16 42 31.4	
	comp=Z,4.9nm,1.1s						
KKAR	**Karatay Array**	46.46	309	P	P	16 42 27.5	-1.1
AS31	**Alice Springs**	47.55	164	P	P	16 42 36.1	-1.1
ASAR	**Alice Springs**	47.55	164	P	P	16 42 36.2	-0.9
	comp=Z,0.4nm,0.4s,baz=342,slow=6.8,SNR=25						
	comp=Z,0.4nm,0.4s						
BRVK	**Borovoye**	49.02	322	P	P	16 42 46.9	-1.4
BRVK				IAmb	IAmb	16 42 50.6	
	comp=Z,5.4nm,0.9s						
TIXI	**Tiksi**	49.36	3	P	P	16 42 49.2	-1.3
NRIK	**Noril'sk**	51.01	345	P	P	16 43 03.4	+0.3
	comp=Z,2.7nm,0.5s,baz=136,slow=7.9,SNR=7.4						
	comp=Z,2.7nm,0.5s						
NRIK	**Noril'sk**	51.01	345	P	P	16 43 02.0	-1.1
NRIK				IAmb	IAmb	16 43 03.9	
	comp=Z,5.6nm,0.9s						
ABKAR	**Akbulak array**	54.59	315	P	P	16 43 29.0	-0.8
ABKAR				IAmb	IAmb	16 43 38.1	
	comp=Z,4.7nm,1.4s						
GEYT	**Alibeck**	55.62	301	P	P	16 43 39.6	+2.0
	comp=Z,2.5nm,0.8s,baz=105,slow=1.7,SNR=5.2						
	comp=Z,2.5nm,0.8s						
ARU	**Arti**	56.42	324	P	P	16 43 42.2	-0.7
KBZ	**Khabaz**	66.50	309	P	P	16 44 53.1	+1.9
	comp=Z,2.6nm,0.9s,baz=68,slow=11,SNR=4.9						
	comp=Z,2.6nm,0.9s						
IMAR	**Indian Mountai**	67.70	26	P	P	16 44 56.9	-1.7
K20K	**Telida**	67.82	29	P	P	16 44 58.2	-1.2
K20K				IAmb	IAmb	16 45 40.6	
	comp=Z,6.0nm,1.5s						
H21K	**Melozitna Rive**	68.12	26	P	P	16 45 00.4	-0.8
H21K				IAmb	IAmb	16 45 33.4	
	comp=Z,5.1nm,1.4s						
I21K	**Tanana**	68.52	27	P	P	16 45 03.4	-0.2
I21K				IAmb	IAmb	16 45 44.6	
	comp=Z,4.4nm,1.2s						
CAST	**Castle Rocks**	68.70	29	P	P	16 45 03.4	-1.5
BPAW	**Bear Paw Mtn.**	69.08	28	P	P	16 45 07.3	0.0

BPAW				IAmb	IAmb	16 45 49.4	
	comp=Z,2.9nm,1.1s						
H23K	**Yukon River**	**69.43**	**26**	P	**P**	**16 45 09.6**	**+0.2**
H23K				IAmb	IAmb	16 45 51.8	
	comp=Z,4.6nm,1.4s						
BMAR	**Burnt Mountain**	**71.07**	**24**	P	**P**	**16 45 19.5**	**+0.1**
FIA1	**FINESS Array S**	**72.86**	**330**	P	**P**	**16 45 29.3**	**-0.9**
FINES	**FINESS Array B**	**72.87**	**330**	P	**P**	**16 45 30.4**	**+0.2**
	comp=Z,2.5nm,0.7s,baz=106,slow=6.8,SNR=7.9						
	comp=Z,2.5nm,0.7s						
FINES	**FINESS Array B**	**72.87**	**330**	P	**P**	**16 45 29.0**	**-1.2**
BCAR	**Beaver Creek A**	**73.33**	**28**	P	**P**	**16 45 31.7**	**-1.3**
AKASG	**Malin Array Be**	**74.09**	**319**	P	**P**	**16 45 37.7**	**0.0**
	comp=Z,0.1nm,0.2s,baz=53,slow=4.8,SNR=6.9						
	comp=Z,0.1nm,0.2s						
CSS	**Mathiatis**	**75.75**	**302**	P	**P**	**16 45 46.6**	**-0.9**
CSS				IAmb	IAmb	16 45 50.7	
	comp=Z,5.3nm,0.9s						
NC405	**NORSAR Array S**	**79.43**	**332**	P	**P**	**16 46 06.5**	**-1.1**
NB2	**NORSAR Subarra**	**79.68**	**332**	P	**P**	**16 46 08.6**	**-0.4**
	comp=Z,2.8nm,0.9s,baz=62,slow=5.6						
NOA	**NORSAR Array B**	**79.68**	**332**	P	**P**	**16 46 08.8**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=57,slow=5.4,SNR=5.1						
	comp=Z,1.0nm,0.7s						
CLL	**Collm**	**83.36**	**323**	*e*P	**P**	**16 46 29.0**	**+0.4**
GERES	**GERESS Array B**	**84.11**	**321**	P	**P**	**16 46 32.9**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=64,slow=18,SNR=3.6						
	comp=Z,0.4nm,0.6s						
YKA	**Yellowknife Ar**	**84.53**	**23**	P	**P**	**16 46 34.0**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=312,slow=5.1,SNR=8.9						
	comp=Z,0.4nm,0.6s						

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*NEIC **29** 16:34:22.5±1.8, 32°.00N±0°.03×116°.92W±0°.03, h9^{km}±4^{km}, Error ellipse: s-maj=4.7km s-min=2.7km az=208.0*
*ANF **29** 16:34:23.0±0.6, 32°.06N×116°.88W, h7^{km}±1^{km}, ML3.0/19, Error ellipse: s-maj=3.4km s-min=2.0km az=29.0*
*ECX **29** 16:34:23.9±0.7, 32°.02N×116°.91W, h10^{km}±8^{km}, MD2.8, ML3.2, Fault plane solution: NP1:φs118.00000°, δ58.00000°, λ-170.00000°.*
*PAS **29** 16:34:23.4±1.9, 32°.03N±0°.03×116°.91W±0°.02, h10^{km}±5^{km}, ML3.2/199, ML2.9/32(NEIC), Error ellipse: s-maj=4.8km s-min=2.4km az=206.0*
*MEX **29** 16:34:24.8±0.6, 32°.12N×116°.97W, h10^{km}, MD3.1*
ISC 29 16:34:22.0±1.0, **32°.03N**±0°.02×**116°.98W**±0°.03, **h16**^{km}±7^{km}, **n110,** σ1^{s}**17**/154, **10C-9D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCX	**Cicese**	**0.31**	**120**	Pg	**Pg**	**16 34 28.5**	**0.0**
CCX					**Sg**	**16 34 32.3**	**-0.7**
CCX				IAML		16 34 32.9	
	comp=N,3μm,0.4s						
CCX				IAML		16 34 33.1	
	comp=E,4μm,0.3s						
CCX	**Cicese**	**0.31**	**120**	*e*P	**Pg**	**16 34 28.6**	**0.0**
CCX				*e*S	**Sg**	**16 34 32.5**	**-0.5**
CCX				IAML		16 34 33.0	
	comp=N,4μm,0.3s						
CCX				⇑*e*		16 34 33.1	
CCX				IAML		16 34 33.1	
	comp=E,5μm,0.2s						
CBX	**Cerro Bola**	**0.39**	**43**	Pg	**Pb**	**16 34 30.5**	**-0.2**
CBX					**Sg**	**16 34 35.6**	**0.0**
CBX				IAML		16 34 36.4	
	comp=E,2μm,0.3s						
CBX				IAML		16 34 37.3	
	comp=N,2μm,0.4s						
CBX	**Cerro Bola**	**0.39**	**43**	⇑*e*P	**Pb**	**16 34 30.6**	**-0.1**
CBX				*e*S	**Sg**	**16 34 35.9**	**+0.3**
CBX				IAML		16 34 37.4	
	comp=N,2μm,0.4s						
CBX				⇓*e*		16 34 37.4	
CBX	**Cerro Bola**	**0.39**	**43**	*e*P	**Pb**	**16 34 30.3**	**-0.4**
CBX				*e*S	**Sg**	**16 34 35.4**	**-0.1**
TJIG	**Tijuana**	**0.48**	**32**	⇑*i*P	**Pb**	**16 34 32.2**	**+0.1**
TJIG				*e*S	**Sg**	**16 34 38.1**	**-0.1**
TJIG				IAML		16 34 38.6	
	comp=N,3μm,0.3s						
TJIG				⇑*e*		16 34 38.6	
TJIG	**Tijuana**	**0.48**	**32**	*i* P	**Pb**	**16 34 32.2**	**+0.1**
TJIG				*i* S	**Sg**	**16 34 38.3**	**+0.2**
OLP	**Otay Lakes Par**	**0.58**	**4**		**Pn**	**16 34 34.4**	**-1.2**
OLP					**Sb**	**16 34 42.1**	**+0.2**
OLP	**Otay Lakes Par**	**0.58**	**4**	⇓*i*P	**Pn**	**16 34 34.4**	**-1.2**
OLP				*i* S	**Sb**	**16 34 42.0**	**+0.2**
OLP				⇓*e*		16 34 42.8	
OLP				IAML		16 34 42.8	
	comp=N,2μm,0.1s						
DUZA	**Dulzura**	**0.60**	**17**		**Pb**	**16 34 34.6**	**+0.3**
DUZA					**Sb**	**16 34 42.4**	**-0.1**
TKX	**Tecate**	**0.63**	**30**	Pg	**Pg**	**16 34 33.9**	**-0.5**
TKX				Sg	**Sg**	**16 34 42.6**	**-0.1**
BAR	**Barrett**	**0.70**	**22**		**Sg**	**16 34 44.9**	**-0.2**
BAR	**Barrett**	**0.70**	**22**	Pg	**Pb**	**16 34 35.9**	**0.0**
BAR	**Barrett**	**0.70**	**22**	IAML		16 34 45.4	
	comp=E,3μm,0.2s						
BAR				IAML		16 34 45.5	
	comp=N,2μm,0.2s						
BAR	**Barrett**	**0.70**	**22**	⇓*i*P	**Pb**	**16 34 36.1**	**+0.2**
BAR				*e*S	**Sg**	**16 34 45.0**	**-0.2**
SDRC	**San Diego Road**	**0.71**	**3**		**Pn**	**16 34 36.6**	**-0.7**
SDRC					**Sb**	**16 34 45.8**	**+0.3**
SDRC	**San Diego Road**	**0.71**	**3**	⇓*i*P	**Pn**	**16 34 36.6**	**-0.7**
SDRC				*e*S	**Sb**	**16 34 45.7**	**+0.2**
SDRC				⇓*e*		16 34 46.2	
SDRC				IAML		16 34 46.2	
	comp=E,1μm,0.4s						
SDMC	**San Diego Miss**	**0.77**	**350**		**Pn**	**16 34 38.3**	**+0.1**
MTRP	**Mission Trails**	**0.79**	**355**		**Pn**	**16 34 38.0**	**-0.6**
109C	**Camp Elliot, M**	**0.87**	**353**	Pg	**Pn**	**16 34 39.2**	**-0.4**
109C	**Camp Elliot, M**	**0.87**	**353**	P	**Pn**	**16 34 39.3**	**-0.2**
	baz=169,SNR=12						
109C				S	**Sn**	**16 34 51.0**	**-0.9**
	baz=169						
CPE	**Camp Elliot**	**0.87**	**353**		**Pn**	**16 34 39.3**	**-0.3**
CPE					**Sn**	**16 34 51.0**	**-0.9**
EML	**El Monte Cty P**	**0.87**	**7**		**Sb**	**16 34 50.3**	**+0.1**
EML	**El Monte Cty P**	**0.87**	**7**	⇓*e*P	**Pn**	**16 34 39.0**	**-0.6**
EML				*e*S	**Sb**	**16 34 50.3**	**+0.1**
ESJX	**Sierra Juarez**	**0.88**	**91**	Pg	**Pg**	**16 34 38.7**	**-0.4**
ESJX				IAML		16 34 49.8	
	comp=N,422nm,0.2s						
ESJX				IAML		16 34 50.0	
	comp=E,470nm,0.1s						
SJX	**San Joaquin**	**0.91**	**107**	⇑*i*P	**Pb**	**16 34 38.7**	**-0.6**
SJX				*e*S	**Sb**	**16 34 49.4**	**-1.8**
SJX				IAML		16 34 50.0	
	comp=E,643nm,0.2s						
SJX				⇓*e*		16 34 50.0	
RMX	**La Rumorosa**	**0.96**	**53**	Pg	**Pb**	**16 34 40.0**	**-0.3**
RMX				Sg	**Sb**	**16 34 52.0**	**-0.8**
RMX				IAML		16 34 52.9	
	comp=N,293nm,0.4s						
RMX				IAML		16 34 53.2	
	comp=E,281nm,0.2s						
RMX	**La Rumorosa**	**0.96**	**53**	⇑*e*P	**Pg**	**16 34 40.3**	**-0.2**
RMX				*e*S	**Sb**	**16 34 52.2**	**-0.6**
IKP	**In-Ko-Pah, Jac**	**0.96**	**50**		**Pb**	**16 34 40.3**	**-0.2**
IKP	**In-Ko-Pah, Jac**	**0.96**	**50**	⇑*e*P	**Pb**	**16 34 40.3**	**-0.2**
IKP				*e*S	**Sb**	**16 34 52.6**	**-0.4**
IKP	**In-Ko-Pah, Jac**	**0.96**	**50**	P	**Pb**	**16 34 40.3**	**-0.2**
	baz=228,SNR=24						
IKP				S	**Sb**	**16 34 52.6**	**-0.4**
	baz=228						
DPP	**Dos Picos Cty**	**0.97**	**2**		**Pn**	**16 34 40.9**	**-0.1**
DPP					**Sn**	**16 34 53.6**	**-0.9**
MONP2	**Monument Peak**	**0.98**	**29**		**Pg**	**16 34 40.9**	**-0.3**
MONP2					**Sb**	**16 34 53.4**	**-0.2**
MONP2	**Monument Peak**	**0.98**	**29**	*e*P	**Pg**	**16 34 40.9**	**-0.3**
MONP2				*e*S	**Sg**	**16 34 53.6**	**-0.4**
MONP2				IAML		16 34 54.0	
	comp=E,496nm,0.3s						
MONP2				*e*		16 34 54.0	
MONP2	**Monument Peak**	**0.98**	**29**	P	**Pg**	**16 34 40.7**	**-0.4**
	baz=206,SNR=16						
MONP2				S	**Sb**	**16 34 53.5**	**-0.2**
	baz=206						
YUH	**Yuha Desert**	**1.09**	**55**	Pg	**Pb**	**16 34 42.3**	**-0.2**
YUH				IAML		16 34 56.7	
	comp=N,257nm,0.5s						
YUH2	**Yuha Desert**	**1.09**	**55**	⇑*e*P	**Pn**	**16 34 42.5**	**-0.1**
JUEM	**Julian Eagle M**	**1.10**	**17**		**Sg**	**16 34 57.3**	**-0.4**
GORC	**Green Oak Ranc**	**1.14**	**349**		**Pg**	**16 34 44.5**	**+0.4**
VTX	**Valle De La Tr**	**1.20**	**122**		**Pn**	**16 34 43.6**	**-0.6**
VTX				IAML		16 35 00.2	
	comp=E,304nm,0.1s						
VTX				IAML		16 35 00.4	
	comp=N,228nm,0.2s						
VTX	**Valle De La Tr**	**1.20**	**122**	*e*P	**Pn**	**16 34 43.6**	**-0.6**
VTX				*e*S	**Sb**	**16 34 59.1**	**-0.6**
VTX				IAML		16 35 00.3	
	comp=E,408nm,0.1s						
VTX				⇑*e*		16 35 00.3	
MATG	**Mataguay Scout**	**1.20**	**13**		**Sn**	**16 35 00.1**	**-0.3**
MATG	**Mataguay Scout**	**1.20**	**13**	⇓*e*P	**Pg**	**16 34 44.6**	**-0.7**
CRR	**Carrizo Plain**	**1.21**	**45**		**Pg**	**16 34 45.0**	**-0.4**
CRR					**Sg**	**16 35 00.9**	**-0.3**
SGL	**Mount Signal**	**1.23**	**59**		**Pg**	**16 34 45.3**	**-0.5**
WESC	**Westside Schoo**	**1.28**	**55**		**Sg**	**16 35 04.2**	**+0.6**
SLH	**Sleepy Hollow**	**1.31**	**28**		**Pg**	**16 34 47.1**	**-0.2**
SLH	**Sleepy Hollow**	**1.31**	**28**	*e*P	**Pg**	**16 34 47.0**	**-0.4**
PLM	**Palomar**	**1.33**	**4**		**Pg**	**16 34 46.8**	**-0.9**
PLM					**Sn**	**16 35 03.7**	**+0.1**
COK2	**Cook Ranch 2**	**1.34**	**52**		**Pg**	**16 34 47.8**	**0.0**
COK2					**Sg**	**16 35 05.8**	**+0.5**
SWSC	**Sam W. Stewart**	**1.35**	**47**		**Sg**	**16 35 05.5**	**-0.2**
SWSC	**Sam W. Stewart**	**1.35**	**47**	⇑*e*P	**Pg**	**16 34 47.6**	**-0.6**
SWSC				*e*S	**Sb**	**16 35 04.8**	**+0.7**
SWSC	**Sam W. Stewart**	**1.35**	**47**	P	**Pg**	**16 34 47.5**	**-0.6**
	baz=226,SNR=22						
SWSC				S	**Sg**	**16 35 05.1**	**-0.6**
	baz=226						
RHX	**Rio Hardy**	**1.44**	**85**	*e*P	**Pb**	**16 34 48.1**	**-0.4**
CPBX	**Cerro Prieto**	**1.47**	**74**	Pn	**Pn**	**16 34 47.8**	**-0.1**
IMPE	**Imperial**	**1.48**	**54**		**Sn**	**16 35 04.8**	**-2.3**
BZNA	**Buzz No.'s Pla**	**1.48**	**10**		**Pg**	**16 34 49.8**	**-0.8**
FRD	**Ford Ranch, An**	**1.50**	**12**		**Pg**	**16 34 50.0**	**-0.8**
FRD					**Sg**	**16 35 09.2**	**-1.2**
FRD	**Ford Ranch, An**	**1.50**	**12**		**Pg**	**16 34 50.0**	**-0.8**
FRD					**Sg**	**16 35 09.2**	**-1.2**
CRY	**Cary Ranch**	**1.55**	**8**		**Pg**	**16 34 50.8**	**-1.0**
SNDA	**J Saunders Pla**	**1.55**	**11**		**Pg**	**16 34 51.1**	**-0.8**
SNDA					**Sg**	**16 35 11.1**	**-1.1**
MBIG	**Mexicali**	**1.56**	**75**	*e*P	**Pn**	**16 34 49.0**	**-0.1**
MBIG				*e*S	**Sn**	**16 35 08.7**	**-0.2**
DNR	**Dunn Ranch,Anz**	**1.56**	**11**		**Pg**	**16 34 51.8**	**-0.3**
MURC	**Murrieta**	**1.58**	**353**		**Pg**	**16 34 52.4**	**-0.1**
MURC	**Murrieta**	**1.58**	**353**	P	**Pb**	**16 34 50.8**	**0.0**
	baz=171,SNR=25						
MURC				S	**Sg**	**16 35 13.0**	**+0.1**
	baz=171						
BACC	**Bachelor Mtn.**	**1.58**	**358**		**Pb**	**16 34 51.1**	**+0.1**
DGR	**Domenigoni Val**	**1.62**	**359**		**Pb**	**16 34 51.6**	**+0.1**
DGR					**Sg**	**16 35 12.5**	**-1.7**
SPIG	**San Pedro Mart**	**1.62**	**127**	*e*P	**Pb**	**16 34 51.1**	**-0.6**
SPIG	**San Pedro Mart**	**1.62**	**127**	*e*P	**Pb**	**16 34 51.1**	**-0.6**
SPIG				*e*S	**Sn**	**16 35 11.1**	**+0.1**
PFO	**Pinyon Flats O**	**1.64**	**15**		**Sg**	**16 35 13.6**	**-1.4**
PFO	**Pinyon Flats O**	**1.64**	**15**	Pn	**Pb**	**16 34 52.0**	**+0.1**
PFO				IAML		16 35 14.4	
	comp=E,160nm,0.3s						
PFO	**Pinyon Flats O**	**1.64**	**15**	P	**Pb**	**16 34 52.1**	**+0.1**
	baz=194,SNR=29						
PFO				S	**Sb**	**16 35 13.3**	**+0.8**
	baz=194						
POB	**Polly Butte**	**1.66**	**2**		**Pb**	**16 34 52.3**	**+0.1**
POB					**Sg**	**16 35 14.0**	**-1.4**
ELS	**Elsinore Mount**	**1.66**	**347**		**Sg**	**16 35 14.7**	**-0.8**
ELS	**Elsinore Mount**	**1.66**	**347**	Pn	**Pb**	**16 34 52.0**	**-0.3**
ELS	**Elsinore Mount**	**1.66**	**347**	IAML		16 35 18.1	
	comp=E,118nm,0.4s						
ELS				IAML		16 35 19.2	
	comp=N,73nm,0.3s						
HMTC	**Hemet**	**1.68**	**359**		**Sg**	**16 35 14.2**	**-1.9**
PMD	**Palm Desert**	**1.69**	**17**		**Sg**	**16 35 15.0**	**-1.6**
PMD	**Palm Desert**	**1.69**	**17**	Pn	**Pb**	**16 34 53.0**	**+0.2**
PMD	**Palm Desert**	**1.69**	**17**	IAML		16 35 16.3	
	comp=N,110nm,0.4s						
PMD				IAML		16 35 18.1	
	comp=E,134nm,0.4s						
SQX	**San Quintin**	**1.73**	**147**	*e*P	**Pn**	**16 34 52.0**	**+0.6**
SQX				*e*S	**Sn**	**16 35 14.1**	**+1.0**
SQX				*e*S	**Sn**	**16 35 14.1**	**+1.0**
SQX				IAML		16 35 16.0	
	comp=N,234nm,0.3s						
CTW	**Cottonwood Mou**	**1.89**	**29**		**Pg**	**16 34 58.0**	**-0.4**
FMP	**Fort Macarthur**	**2.01**	**327**	Sb	**Sg**	**16 35 27.3**	**+0.6**
	baz=145						
SFX	**San Felipe**	**2.07**	**118**	Pn	**Pn**	**16 34 55.7**	**-0.4**
SFX	**San Felipe**	**2.07**	**118**	*e*P	**Pb**	**16 35 00.3**	**+1.1**
SFX				*e*S	**Sb**	**16 35 25.3**	**+0.7**
BC3	**Big Chuckawall**	**2.07**	**38**	P	**Pn**	**16 34 57.6**	**+1.4**
	baz=217,SNR=8.9						
BC3				S	**Sn**	**16 35 23.1**	**+1.3**
	baz=217						
GLA	**Glamis**	**2.09**	**60**	Pn	**Pn**	**16 34 56.7**	**+0.3**
GLA				IAML		16 35 29.2	
	comp=E,81nm,0.4s						
GLA	**Glamis**	**2.09**	**60**	P	**Pn**	**16 34 57.5**	**+1.1**
	baz=240						
GLA				S	**Sn**	**16 35 23.1**	**+1.0**
	baz=240						
BELC	**Belle Mtn. Jos**	**2.13**	**22**	Sb	**Sg**	**16 35 29.7**	**-1.0**
	baz=202						
RHC	**Rose Hills Cem**	**2.15**	**336**		**Pn**	**16 34 57.4**	**+0.1**
BBRC	**Big Bear Solar**	**2.23**	**1**	Sb	**Sg**	**16 35 33.0**	**-0.8**
	baz=180						
DECC	**Green Verdugo**	**2.50**	**333**	Sb	**Sg**	**16 35 41.6**	**-0.6**
	baz=152						
IRM	**Iron Mountain**	**2.62**	**35**	S	**Sn**	**16 35 37.6**	**+2.2**
	baz=215						
113A	**Mohawk Valley,**	**2.82**	**74**	Pn	**Pn**	**16 35 08.2**	**+1.8**
RRX	**Edison Barstow**	**2.84**	**360**	Sb	**Sg**	**16 35 51.1**	**-2.3**
	baz=179						
HEC	**Hector,Ludlow**	**2.85**	**11**	Sb	**Sg**	**16 35 51.0**	**-2.5**
	baz=190						
GMRC	**Granite Mounta**	**2.96**	**22**		**Pn**	**16 35 11.1**	**+2.5**
GMRC	**Granite Mounta**	**2.96**	**22**	Sb	**Sg**	**16 35 55.0**	**-2.3**
	baz=201						
EDW2	**Edwards Air Fo**	**2.97**	**344**	P	**Pn**	**16 35 11.1**	**+2.5**
	baz=162,SNR=5.9						
EDW2				Sb	**Sg**	**16 35 55.1**	**-2.4**
	baz=162						
PIX	**Pinacate**	**3.03**	**98**	Pn	**Pn**	**16 35 09.3**	**0.0**
LRMC	**Laurel Mtn Rad**	**3.49**	**351**	Sb	**Sg**	**16 36 11.8**	**-2.4**
	baz=169						
TUQ	**Turquoise Moun**	**3.51**	**14**	Sb	**Sg**	**16 36 11.2**	**-3.7**
	baz=194						
214A	**Organ Pipe Nat**	**3.54**	**90**	Pn	**Pn**	**16 35 15.9**	**-0.5**
214A	**Organ Pipe Nat**	**3.54**	**90**	S	**Sn**	**16 35 58.7**	**+0.7**
	baz=272						
MPMC	**Manual Prospec**	**4.04**	**354**	Sb	**Sg**	**16 36 28.0**	**-3.9**
	baz=173						
GWY	**Greenwater Val**	**4.16**	**3**	Pn	**Pn**	**16 35 28.8**	**+3.9**
LCH	**Last Change Ra**	**5.22**	**354**	Pn	**Pn**	**16 35 43.1**	**+3.5**
DSP	**Deep Springs**	**5.39**	**352**	Pn	**Pn**	**16 35 45.0**	**+3.2**
PRN	**Pahroc Range**	**5.60**	**16**	Pn	**Pn**	**16 35 48.7**	**+4.0**
LCMT	**Little Creek M**	**5.85**	**31**	Pn	**Pn**	**16 35 51.5**	**+3.2**

ATH 29 16:40:46.7, 39°.15N×23°.61E, h14^{km}±2^{km}, **ML1.2**/1, **Error ellipse: s-maj=2.6km s-min=1.0km az=41.0, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALNA	**Alonissos**	**0.20**	**92**	P	Pg	16 40 51.1	-0.2
ALNA				S	Sg	16 40 54.4	+0.1
ALNA	**Alonissos**	**0.20**	**92**	P	Pg	16 40 50.9	-0.3
ALNA				S	Sg	16 40 54.3	0.0
NEO	**Neokhori**	**0.34**	**297**	P	Pg	16 40 52.7	-1.0
NEO				S	Sg	16 40 56.5	-1.9
NEO				AML	AML	16 40 58.9	
	comp=N,185μm,0.2s						
NEO				AML	AML	16 41 02.0	
	comp=E,155μm,0.2s						
XOR	**Xorichti**	**0.39**	**303**	P	Pg	16 40 54.8	+0.2
XOR				S	Sg	16 40 59.5	-0.4
XOR				AML	AML	16 40 59.9	
	comp=E,88μm,0.2s						
XOR				AML	AML	16 41 00.3	
	comp=N,105μm,0.2s						
XOR	**Xorichti**	**0.39**	**303**	P	Pg	16 40 53.7	-0.9
XOR				S	Sg	16 40 58.0	-1.9
XOR				AML	AML	16 40 59.9	
	comp=E,88μm,0.2s						
XOR				AML	AML	16 41 00.3	
	comp=N,105μm,0.2s						
KYMI	**Kymi, Euboea I**	**0.64**	**144**	P	Pg	16 40 58.7	-0.6
KYMI				S	Sg	16 41 08.1	+0.3
KYMI	**Kymi, Euboea I**	**0.64**	**144**	P	Pb	16 41 00.0	+0.3
ATAL	**Atalanti**	**0.65**	**225**	P	Pg	16 40 59.2	-0.3
ATAL				S	Sg	16 41 08.4	+0.3
ATAL	**Atalanti**	**0.65**	**225**	P	Pg	16 40 58.9	-0.5
ATAL				S	Sg	16 41 08.0	0.0
ATAL				AML	AML	16 41 10.3	
	comp=E,40μm,0.3s						
ATAL				AML	AML	16 41 11.7	
	comp=N,63μm,0.3s						
LKR	**Lokris**	**0.69**	**224**	P	Pg	16 41 00.1	-0.1
LKR				AML	AML	16 41 10.2	
	comp=N,72μm,0.2s						
LKR				AML	AML	16 41 11.3	
	comp=E,122μm,0.2s						
EREA	**Eretria**	**0.77**	**161**	P	Pg	16 41 01.8	+0.1
EREA	**Eretria**	**0.77**	**161**	P	Pb	16 41 02.1	+0.2
PAIG	**Paliouri**	**0.77**	**4**	P	Pb	16 41 01.9	0.0
PAIG				S	Sb	16 41 12.3	0.0
PAIG	**Paliouri**	**0.77**	**4**	P	Pb	16 41 02.1	+0.2
AXAR	**Agios Charalam**	**0.84**	**243**	P	Pb	16 41 03.1	+0.1
VIL2	**Platees**	**0.98**	**196**	P	Pb	16 41 05.4	0.0
VIL2				S	Sn	16 41 19.1	-0.5
VIL2	**Platees**	**0.98**	**196**	P	Pn	16 41 06.7	+0.7
VIL2				S	Sn	16 41 21.0	+1.4
AGG	**Agios Georgios**	**1.01**	**263**	P	Pb	16 41 04.7	-1.2
DION	**Dionisos Attik**	**1.10**	**167**	P	Pb	16 41 06.4	-1.1
DION	**Dionisos Attik**	**1.10**	**167**	P	Pg	16 41 09.1	+1.1
MAKR	**Makrakomi, Fth**	**1.16**	**264**	P	Pn	16 41 07.7	-0.8
VLY	**Voula,Athens**	**1.31**	**174**	P	Pb	16 41 11.3	+0.3

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*IDC **29** 16:44:11.2±1.4, 8°.50S×30°.11E, h0^{km}, mb3.8/6, mbtmp3.9/6, ML2.3/1, Error ellipse: s-maj=40.9km s-min=27.3km az=110.0*
*NEIC **29** 16:44:12.2±2.0, 8°.50S±0°.09×30°.1E±0°.1, h10^{km}±1^{km}, mb4.1/8, Error ellipse: s-maj=23.1km s-min=3.3km az=127.0*
ISC 29 16:44:11.8±0.7, **8°.54S**±0°.08×**30°.1E**±0°.1, **h10**^{km}, **n22,** σ1^{s}**03**/22, **mb4.1**/8, **Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**6.96**	**196**	Pn	**Pn**	**16 45 55.3**	**+1.3**
MBAR	**Mbarara**	**7.91**	**5**		**Pn**	**16 46 06.8**	**-0.3**
KIBK	**Kibwezi**	**10.01**	**53**		**Pn**	**16 46 35.5**	**-0.5**
KMBO	**Kilima Mbogo**	**10.23**	**44**	Pn	**Pn**	**16 46 38.0**	**-1.2**
	baz=38,slow=20,SNR=9.7						
KMBO				Sn	Sn	16 48 24.6	-10
	0.1nm,0.3s,baz=73,slow=24,SNR=2.5						
KMBO	**Kilima Mbogo**	**10.23**	**44**		**Pn**	**16 46 38.5**	**-0.7**
TSUM	**Tsumeb**	**16.12**	**228**		**Pn**	**16 47 58.4**	**-0.5**
LBTB	**Lobatse**	**16.94**	**194**		**Pn**	**16 48 07.0**	**-2.3**
LBTB				IAmb	IAmb	16 48 20.1	
	comp=Z,7.1nm,0.6s						
BOSA	**Boshof**	**20.49**	**192**	P	**P**	**16 48 51.1**	**+0.9**
	comp=Z,2.4nm,0.6s,baz=18,slow=12,SNR=9.4						
	comp=Z,2.4nm,0.6s						
BOSA	**Boshof**	**20.49**	**192**	P	**P**	**16 48 50.7**	**+0.5**
SOE	**Somerset East**	**24.42**	**189**	P	**P**	**16 49 30.3**	**-0.6**
TOA0	**Torodi Ar. Sit**	**35.51**	**307**	P	**P**	**16 51 07.6**	**-1.6**
TOA0				IAmb	IAmb	16 51 08.4	
	comp=Z,5.3nm,1.4s						
TORD	**Torodi Ar. Bea**	**35.51**	**307**	P	**P**	**16 51 09.6**	**+0.4**
	comp=Z,1.3nm,0.4s,baz=112,slow=7.9,SNR=2.0						
	comp=Z,1.3nm,0.4s						
BRTR	**Keskin Array B**	**48.13**	**4**	P	**P**	**16 52 53.2**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=198,slow=7.8,SNR=4.7						
	comp=Z,1.3nm,0.8s						
BRTR	**Keskin Array B**	**48.13**	**4**	P	**P**	**16 52 52.0**	**-0.2**
GERES	**GERESS Array B**	**58.93**	**347**	P	**P**	**16 54 12.0**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=157,slow=7.2,SNR=3.6						
	comp=Z,0.4nm,0.6s						
AKASG	**Malin Array Be**	**59.00**	**359**	P	**P**	**16 54 11.7**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=186,slow=6.0,SNR=4.3						
	comp=Z,0.5nm,0.5s						
AKBB	**Malin Array Si**	**59.00**	**359**	P	**P**	**16 54 10.5**	**-1.1**
KK31	**Karatay Array**	**63.17**	**32**	P	**P**	**16 54 39.8**	**-0.4**
KK31				IAmb	IAmb	16 54 55.7	
	comp=Z,2.1nm,0.9s						
KKAR	**Karatay Array**	**63.17**	**32**	P	**P**	**16 54 40.6**	**+0.4**
MK31	**Makanchi Array**	**71.97**	**35**	P	**P**	**16 55 36.8**	**+1.0**
MK31				IAmb	IAmb	16 55 51.0	
	comp=Z,1.6nm,1.0s						
MKAR	**Makanchi Array**	**71.97**	**35**	P	**P**	**16 55 37.0**	**+1.3**
	comp=Z,1.2nm,0.7s,baz=235,slow=5.2,SNR=13						
	comp=Z,1.2nm,0.7s						
MKAR	**Makanchi Array**	**71.97**	**35**	P	**P**	**16 55 36.7**	**+1.0**

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*KRSC **29** 16:47:33.8±1.2, 56°.93N×163°.33E, h24^{km}±16^{km}, Ml4.3*
*IDC **29** 16:47:34.2±0.8, 56°.86N×163°.15E, h0^{km}, mb3.6/8, mbtmp3.7/10, ML3.2/2, Error ellipse: s-maj=30.6km s-min=17.5km az=142.0*
*MOS **29** 16:47:37.2±1.1, 56°.90N×163°.14E, h33^{km}, mb4.0/2, Error ellipse: s-maj=12.8km s-min=4.4km az=66.7*
ISC 29 16:47:35.3±1.4, **56°.93N**±0°.04×**163°.15E**±0°.04, **h7**^{km}±9^{km}, **n87,** σ1^{s}**35**/104, **mb3.9**/9, **2C-3D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBG	**Krutoberegovo**	**0.72**	**200**	PN	**Pg**	**16 47 48.6**	**-0.6**
KBG				S	**Sg**	**16 47 59.5**	**+0.9**
KBG	**Krutoberegovo**	**0.72**	**200**	*e*P	**Pg**	**16 47 48.6**	**-0.6**
KBG				*e*S	**Sg**	**16 47 59.5**	**+0.9**
KBTR	**Krutoberegovo**	**0.75**	**194**	PN	**Pg**	**16 47 49.4**	**-0.3**
KBTR				S	**Sg**	**16 48 00.9**	**+1.5**
KBTR	**Krutoberegovo**	**0.75**	**194**	*e*P	**Pg**	**16 47 49.4**	**-0.3**
KBTR				*e*S	**Sg**	**16 48 00.9**	**+1.5**
SMKR	**Semkarok**	**0.99**	**250**	PN	**Pg**	**16 47 52.9**	**-1.4**
SMKR	**Semkarok**	**0.99**	**250**	*e*P	**Pg**	**16 47 52.9**	**-1.4**
SRKR	**Sorokina**	**1.12**	**256**	PN	**Pg**	**16 47 54.9**	**-2.0**
SRKR	**Sorokina**	**1.12**	**256**	*e*P	**Pg**	**16 47 54.9**	**-2.0**
KLY	**Klyuchi**	**1.51**	**247**	PN	**Pn**	**16 47 59.6**	**-3.1**
KLY				S	**Sn**	**16 48 18.5**	**-4.2**
KLY	**Klyuchi**	**1.51**	**247**	*e*P	**Pn**	**16 47 59.6**	**-3.1**
KLY				*e*S	**Sn**	**16 48 18.5**	**-4.2**
CIRR	**Tsirk**	**1.56**	**239**	PN	**Pn**	**16 48 02.1**	**-1.5**
CIRR				S	**Sn**	**16 48 23.0**	**-1.1**
CIRR	**Tsirk**	**1.56**	**239**	*e*P	**Pn**	**16 48 02.1**	**-1.5**
CIRR				*e*S	**Sn**	**16 48 23.0**	**-1.1**
BZGR	**Bezymyannyi-Gr**	**1.69**	**235**	PN	**Pn**	**16 48 04.5**	**-0.8**
BZGR	**Bezymyannyi-Gr**	**1.69**	**235**	*e*P	**Pn**	**16 48 04.5**	**-0.8**
BZWR	**Bezymyannyi-We**	**1.76**	**238**	PN	**Pn**	**16 48 05.4**	**-1.0**
BZWR				S	**Sn**	**16 48 28.9**	**-0.2**
BZWR	**Bezymyannyi-We**	**1.76**	**238**	*e*P	**Pn**	**16 48 05.4**	**-1.0**
BZWR				*e*S	**Sn**	**16 48 28.9**	**-0.2**
BZP	**Bezymyannyi-Pe**	**1.77**	**236**	*e*P	**Pn**	**16 48 06.2**	**-0.3**
BZP				*e*S	**Sn**	**16 48 29.9**	**+0.5**
BZMR	**Bezymyannaya**	**1.78**	**237**	PN	**Pn**	**16 48 06.1**	**-0.5**
BZMR				S	**Sn**	**16 48 29.9**	**+0.3**
BZMR	**Bezymyannaya**	**1.78**	**237**	*e*P	**Pn**	**16 48 06.1**	**-0.5**
BZMR				*e*S	**Sn**	**16 48 29.9**	**+0.3**
KIRR	**Kirishev**	**1.84**	**239**	PN	**Pn**	**16 48 06.7**	**-0.8**
KIRR				S	**Sn**	**16 48 30.9**	**-0.1**
KIRR	**Kirishev**	**1.84**	**239**	*e*P	**Pn**	**16 48 06.7**	**-0.8**
KIRR				*e*S	**Sn**	**16 48 30.9**	**-0.1**
KPT	**Kopyto**	**1.89**	**240**	PN	**Pn**	**16 48 07.2**	**-0.9**
KPT				S	**Sn**	**16 48 32.1**	**-0.1**
KPT	**Kopyto**	**1.89**	**240**	*e*P	**Pn**	**16 48 07.2**	**-0.9**
KPT				*e*S	**Sn**	**16 48 32.1**	**-0.1**
SRDR	**Sredinnyy**	**1.99**	**253**	PN	**Pn**	**16 48 08.4**	**-1.1**
SRDR	**Sredinnyy**	**1.99**	**253**	*e*P	**Pn**	**16 48 08.4**	**-1.1**
KMNR	**Kamenistaya**	**2.00**	**235**	PN	**Pn**	**16 48 09.8**	**+0.2**
KMNR	**Kamenistaya**	**2.00**	**235**	*e*P	**Pn**	**16 48 09.8**	**+0.2**
KOZ	**Kozyrevsk**	**2.02**	**246**	PN	**Pn**	**16 48 09.6**	**-0.1**
KOZ				S	**Sn**	**16 48 36.5**	**+1.4**
KOZ	**Kozyrevsk**	**2.02**	**246**	*e*P	**Pn**	**16 48 09.6**	**-0.1**
KOZ				*e*S	**Sn**	**16 48 36.5**	**+1.4**
TUMD	**Tumrok D**	**2.32**	**223**	*e*P	**Pn**	**16 48 14.0**	**+0.1**
TUMD				*e*S	**Sn**	**16 48 43.2**	**+0.6**
OSSR	**Ossora**	**2.33**	**359**	PN	**Pn**	**16 48 11.8**	**-2.1**
OSSR	**Ossora**	**2.33**	**359**	*e*P	**Pn**	**16 48 11.8**	**-2.1**
BKI	**Bering**	**2.35**	**136**	PN	**Pn**	**16 48 13.5**	**-0.7**
BKI				S	**Sn**	**16 48 41.4**	**-1.8**
BKI	**Bering**	**2.35**	**136**	*e*P	**Pn**	**16 48 13.5**	**-0.7**
BKI				*e*S	**Sn**	**16 48 41.4**	**-1.8**

TUMR	Tumrok	2.36	227	PN	Pn	16 48 14.0	-0.5
TUMR				S	Sn	16 48 43.2	-0.5
TUMR	Tumrok	2.36	227	eP	Pn	16 48 15.2	+0.7
TIGL	Tigil	2.57	291	eP	Pn	16 48 17.9	+0.6
TIGL				eS	Sn	16 48 50.4	+1.8
ESO	Esso	2.67	250	PN	Pn	16 48 20.8	+2.1
ESO	Esso	2.67	250	eP	Pn	16 48 20.8	+2.1
PALN	Palana	2.75	323	PN	Pn	16 48 20.9	+1.2
PALN	Palana	2.75	323	eP	Pn	16 48 20.9	+1.2
SPN	Mys Shipunski	4.24	206	PN	Pn	16 48 39.9	-0.4
SPN	Mys Shipunski	4.24	206	eP	Pn	16 48 39.9	-0.4
GNL	Ganaly	4.40	225	PN	Pn	16 48 43.1	+0.5
GNL	Ganaly	4.40	225	eP	Pn	16 48 43.1	+0.5
KRX	Arik	4.41	218	PN	Pn	16 48 44.5	+1.7
KRX	Arik	4.41	218	eP	Pn	16 48 44.5	+1.7
KRER	Koryakskii	4.43	217	PN	Pn	16 48 44.5	+1.5
KRER	Koryakskii	4.43	217	eP	Pn	16 48 44.5	+1.5
SMAR	Somma	4.44	216	PN	Pn	16 48 44.1	+0.9
SMAR	Somma	4.44	216	eP	Pn	16 48 44.1	+0.9
AVH	Avacha	4.46	216	PN	Pn	16 48 44.7	+1.3
AVH	Avacha	4.46	216	eP	Pn	16 48 44.7	+1.3
KOK	Koryaka	4.47	217	PN	Pn	16 48 44.9	+1.3
KOK	Koryaka	4.47	217	eP	Pn	16 48 44.9	+1.3
UGLR	Uglovaya	4.48	215	PN	Pn	16 48 44.7	+1.0
UGLR	Uglovaya	4.48	215	eP	Pn	16 48 44.7	+1.0
DALK	Dalny	4.66	215	PN	Pn	16 48 46.2	+0.2
DALK	Dalny	4.66	215	eP	Pn	16 48 46.2	+0.2
PET	Petropavlovsk	4.70	215	⇓ePN	Pn	16 48 45.4	-1.1
PEA0B	Petropavlovsk-	4.95	222	⇑ePN	Pn	16 48 51.1	+1.1
PETK	Petropavlovsk-	4.95	222	Pn	Pn	16 48 50.3	+0.3
	0.8nm,0.3s,baz=67,slow=15,SNR=20						
	1.9nm,0.5s						
KRMR	Karymshinskiy	5.03	217	PN	Pn	16 48 52.7	+1.6
KRMR	Karymshinskiy	5.03	217	eP	Pn	16 48 52.7	+1.6
GRL	Gorelyy	5.28	216	PN	Pn	16 48 56.9	+2.2
GRL	Gorelyy	5.28	216	eP	Pn	16 48 56.9	+2.2
MTVR	Mutnovka	5.31	215	PN	Pn	16 48 56.6	+1.6
MTVR	Mutnovka	5.31	215	eP	Pn	16 48 56.6	+1.6
KMSK	Kamenskaya	5.76	14	PN	Pn	16 49 05.1	+4.0
KMSK	Kamenskaya	5.76	14	eP	Pn	16 49 05.1	+4.0
BILL	Bilibino	11.24	6	⇓ePN	Pn	16 50 18.7	+2.6
BILL				pmax	pmax		
	comp=Z,3.0nm,1.5s						
YSS	Yuzh-Sakhalins	15.99	240	⇑eP	Pn	16 51 19.9	-0.6
YSS				pmax	pmax		
	comp=Z,10.0nm,1.6s						
ASAJ	Asahikawa	18.21	234	P	Pn	16 51 48.0	-0.3
	comp=Z,0.4nm,0.3s,baz=80,slow=12,SNR=5.2						
	comp=Z,4.7nm,0.9s						
TIXI	Tiksi	20.49	329	P	Pn	16 52 14.0	-1.4
	comp=Z,1.4nm,0.6s,baz=90,slow=20,SNR=8.5						
	comp=Z,1.4nm,0.6s						
TIXI	Tiksi	20.49	329	P	Pn	16 52 14.0	-1.4
ILAR	Eielson Array	24.94	51	P	P	16 52 58.9	+0.2
	comp=Z,0.7nm,0.7s,baz=257,slow=8.7,SNR=10						
	comp=Z,0.7nm,0.7s						
H11N2	WAKE ISLAND Hy	37.25	174	T	T	17 33 45.2	
	baz=358,slow=76,SNR=29						
H11N3	WAKE ISLAND Hy	37.27	174	T	T	17 33 49.8	
	baz=358,slow=76,SNR=26						
H11N1	WAKE ISLAND Hy	37.27	174	T	T	17 33 50.0	
	baz=358,slow=76,SNR=24						
YKA	Yellowknife Ar	39.19	47	P	P	16 55 03.9	+0.5
	comp=Z,0.6nm,0.7s,baz=300,slow=7.8,SNR=7.5						
	comp=Z,0.6nm,0.7s						
KURK	Kurchatov	47.25	300	⇓eP	P	16 56 08.2	-0.4
KURK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
KURBB	Kurchatov Arra	47.35	300	P	P	16 56 09.3	-0.1
	comp=Z,1.0nm,0.9s,baz=54,slow=8.4,SNR=4.5						
	comp=Z,1.0nm,0.9s						
PDAR	Pinedale Array	54.20	65	P	P	16 57 02.3	+0.8
	comp=Z,0.5nm,0.6s,baz=308,slow=2.2,SNR=6.8						
	comp=Z,0.5nm,0.6s						
KSH	Kashi	56.57	292	P	P	16 57 19.5	+1.1
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TXAR	Lajitas Array	67.60	71	P	P	16 58 32.4	-0.2
	comp=Z,0.6nm,0.7s,baz=293,slow=3.5,SNR=4.6						
	comp=Z,0.6nm,0.7s						
WRA	Warramunga Arr	80.31	207	P	P	16 59 46.9	+0.2
	comp=Z,0.4nm,0.8s,baz=14,slow=5.6,SNR=4.6						
	comp=Z,0.4nm,0.8s						
ASAR	Alice Springs	83.99	207	P	P	17 00 04.6	-1.4
	comp=Z,0.4nm,0.5s,baz=18,slow=4.8,SNR=9.7						
	comp=Z,0.4nm,0.5s						

UPA ***29*** *16:58:59.8±2.6, 12°.08N×87°.16W, h8^{km}±230^{km}, MW5.0*

SNET ***29*** *16:59:07.9±1.4, 11°.82N×86°.62W, h61^{km}, ML5.4*

UCR ***29*** *16:59:08.1±1.6, 11°.80N×86°.63W, h22^{km}±8^{km}, MW4.9, mb5.1(NEIC)*

IDC ***29*** *16:59:08.8±0.4, 12°.19N×86°.20W, h89^{km}±3^{km}, mb4.2/26, mbtmp4.5/27, MS3.9/34, Error ellipse: s-maj=16.9km s-min=5.9km az=59.0*

MOS ***29*** *16:59:08.2±1.2, 12°.02N×86°.41W, h101^{km}, mb4.8/18, Error ellipse: s-maj=13.0km s-min=5.9km az=119.4*

INET ***29*** *16:59:08.6±0.7, 11°.84N×86°.63W, h69^{km}±2^{km}, MW5.1*

NEIC ***29*** *16:59:08.4, 11°.90N×86°.59W, h82^{km}*

NEIC ***29*** *16:59:08.2±1.8, 11°.90N±0°.04×86°.60W±0°.04, h80^{km}±4^{km}, mb5.0/387, Mwr5.1/32, Error ellipse: s-maj=8.0km s-min=2.4km az=218.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.13; $M_{\theta\theta}$2.11; $M_{\phi\phi}$-1.98; $M_{r\theta}$2.59; $M_{\theta\phi}$-0.30; $M_{\phi r}$-3.94; Fault plane solution: $M_0$5.15000×10^{16} NP1:ϕ_s53.42000°, δ23.52000°, λ-179.97000°. NP2:ϕ_s323.39000°, δ89.99000°, λ-66.48000°. Principal axes: T 4.8879, Plg40.0000°, Azm32.0000°; N 0.4851, Plg24.0000°, Azm143.0000°; P -5.3730, Plg40.0000°, Azm255.0000°;*

GCMT ***29*** *16:59:09.2±0.3, 11°.97N±0°.02×86°.76W±0°.02, h97^{km}±4^{km}, MW5.0/114, Moment Tensor Solution. s38,c45; s114,c150; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.85±.14; $M_{\theta\theta}$0.96±.14; $M_{\phi\phi}$-1.81±.15; $M_{r\theta}$1.28±.07; $M_{\theta\phi}$-2.07±.16; $M_{\phi r}$-2.49±.08; Best double couple: $M_0$3.80700×10^{16} NP1:ϕ_s167.00000°, δ81.00000°, λ48.00000°. NP2:ϕ_s66.00000°, δ43.00000°, λ166.00000°. Principal axes: T 3.9830, Plg39.0000°, Azm39.0000°; N -0.3510, Plg41.0000°, Azm175.0000°; P -3.6310, Plg24.0000°, Azm288.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

GCG ***29*** *16:59:42.7±0.3, 13°.99N×88°.64W, h161^{km}±124^{km}, MD4.7*

ISC 29 16:59:07.7±0.3**, 11°.94N**±0°.03×**86°.55W**±0°.04**, h84**^{km}±2^{km}**, h84**^{km}**:pP-P, n991,** σ1^{s}.**55**/969**, mb5.0**/229**, 6C-30D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COPN	Copaltepe	0.24	350	eP	Pn	16 59 19.7	-0.5
TISN	Laguna Tiscapa	0.34	53	eP	Pn	16 59 19.8	-0.9
MGAN	Managua	0.36	55	eP	Pn	16 59 20.9	+0.1
MGAN				eP	Pn	16 59 21.0	+0.1
MASN	Masaya	0.39	83	eP	Pn	16 59 20.9	-0.1
WILN	Americas 2	0.42	58	eP	Pn	16 59 21.5	+0.3
HUEN		0.54	43	eP	Pn	16 59 22.9	+0.7
CNGN	Cerro Negro	0.58	345		Pn	16 59 22.6	0.0
CNGN				Sn	Sn	16 59 33.2	-0.4
CNGN	Cerro Negro	0.58	345	eP	Pn	16 59 22.7	0.0
CNGN	Cerro Negro	0.58	345	eP	Pn	16 59 22.5	0.0
BRAN	Las Pilas	0.80	14	eP	Pn	16 59 20.6	-4.2
CRIN	San Cristobal	0.90	327		Pn	16 59 26.2	+0.3
CRIN				Sn	Sn	16 59 39.7	+0.1
CRIN	San Cristobal	0.90	327	eP	Pn	16 59 26.5	+0.5
CRIN	San Cristobal	0.90	327	eP	Pn	16 59 26.5	+0.5
CRIN	San Cristobal	0.90	327	eP	Pn	16 59 26.5	+0.5
BOAB	BOACO BROADBAN	1.00	59		Pn	16 59 28.1	+1.0
BOAB				Sn	Sn	16 59 42.8	+1.3
BOAB	BOACO BROADBAN	1.00	59	eP	Pn	16 59 28.2	+1.2
MATN	Matagalpa	1.16	32		Pn	16 59 30.5	+1.5
MATN				Sn	Sn	16 59 47.1	+2.1
LCRUZ	La Cruz	1.24	133	eP	Pn	16 59 30.8	+0.8
LCRUZ				eS	Sn	16 59 48.3	+1.6
ACON	Acoyapa	1.35	89		Pn	16 59 32.0	+0.7
ACON				Sn	Sn	16 59 50.8	+1.8
ACON	Acoyapa	1.35	89	eP	Pn	16 59 32.2	+0.9
ACON				eS	Sn	16 59 50.6	+1.6
ACON	Acoyapa	1.35	89	eP	Pn	16 59 32.2	+0.9
ACON	Acoyapa	1.35	89	eP	Pn	16 59 32.2	+0.9
HZTE	Horizontes, Gu	1.54	142	Pn	Pn	16 59 33.2	-0.5
GBS3	Finca Las Img	1.57	137	⇓eP	Pn	16 59 33.6	-0.6
GB1A	Borinquen Arri	1.58	134	eP	Pn	16 59 34.1	-0.3
BUAI	Buenos Aires	1.59	131	⇓iP	Pn	16 59 34.4	0.0
BUAI				eS	Sn	16 59 54.3	-0.3
BUEV	Buena Vista	1.59	135	eP	Pn	16 59 34.1	-0.4
LAPC	Finca la Perla	1.60	137	⇓eP	Pn	16 59 33.8	-0.7
ELI1	Hacienda Flor	1.61	143	eP	Pn	16 59 34.0	-0.7
VORI	VORI	1.62	133	eP	Pn	16 59 34.9	-0.1
GPS1	Guardaparques	1.65	134	eP	Pn	16 59 35.1	-0.1
GPS3	Bodega del ICE	1.65	135	eP	Pn	16 59 35.3	+0.1
GPS2	Hotel Rincn d	1.66	135	⇓eP	Pn	16 59 35.2	-0.2
GPS2				eS	Sn	16 59 59.1	+2.8
GP14	Hacienda Santa	1.67	135	⇓eP	Pn	16 59 35.0	-0.5
GP14				eS	Sn	16 59 57.4	+1.0
GP77	Hacienda Santa	1.68	134	⇑iP	Pn	16 59 36.9	+1.3
CLARA	Aguas Claras	1.77	130	⇓eP	Pn	16 59 37.0	+0.2
CLARA				eS	Sn	16 59 59.3	+0.5
LIM1	Limonal	1.77	134	eP	Pn	16 59 37.2	+0.4
DELF	Filadelfia	1.77	146	eP	Pn	16 59 37.9	+1.1
GUAB	Guayabo de Bag	1.78	133	eP	Pn	16 59 37.2	+0.3
MESS	Mesas	1.78	132	⇓iP	Pn	16 59 37.1	+0.2
MESS				eS	Sn	16 59 59.4	+0.2
VMAR	Armenia, Volca	1.80	128	⇓eP	Pn	16 59 37.0	-0.1
VMAR				eS	Sn	16 59 59.9	+0.4
CAMAV	Centro de Prod	1.81	133	eP	Pn	16 59 37.5	+0.2
CAMAV				eS	Sn	17 00 01.7	+1.9
CNCH	Conchagua	1.83	317	⇓eP	Pn	16 59 37.9	+0.3
CNCH				eS	Sn	16 59 59.8	-0.5
COLC	Colonia	1.83	134	eP	Pn	16 59 37.9	+0.4
COLC				eS	Sn	17 00 01.4	+1.2
CANAL	Canalete	1.83	127	⇓eP	Pn	16 59 37.4	-0.2
CANAL				eS	Sn	17 00 01.7	+1.5
CUI	Cuipilapa	1.86	133	eP	Pn	16 59 38.5	+0.5
CUI				eS	Sn	17 00 02.3	+1.4
BAGA	Bagaces	1.89	138	eP	Pn	16 59 38.7	+0.4
ORTG	Ortega, Santa	1.90	146	Pn	Pn	16 59 38.5	+0.1
MOTZ	Rio Naranjo	1.91	131	⇓iP	Pn	16 59 39.0	+0.4
PTEN	Parque Tenorio	1.96	128	⇓iP	Pn	16 59 39.6	+0.4
PTEN				eS	Sn	17 00 04.3	+1.1
VERA	Finca Concepci	1.97	123	eP	Pn	16 59 39.6	+0.3
ACAL	Aguas Claras	1.97	131	⇓iP	Pn	16 59 39.9	+0.5
ACAL				eS	Sn	17 00 05.0	+1.4
LCHIL	Los Chiles	2.01	116	eP	Pn	16 59 41.3	+1.5
SAJU	San Juanillo,	2.03	156	eP	Pn	16 59 37.8	-2.4
DUNO	Dulce Nombre,	2.12	151	Pn	Pn	16 59 41.3	-0.1
ESPN	Las Esperanzas	2.21	83		Pn	16 59 43.9	+1.3
ESPN	Las Esperanzas	2.21	83	eP	Pn	16 59 44.6	+2.1
ESPN	Las Esperanzas	2.21	83	eP	Pn	16 59 44.7	+2.1
TGUH	Tegucigalpa,Un	2.22	342	Pn	Pn	16 59 44.2	+1.4
TGUH	Tegucigalpa,Un	2.22	342	eP	Pn	16 59 44.9	+2.0
VSM	San Miguel	2.24	312	eP	Pn	16 59 44.0	+0.8
LCY	Lacayo	2.25	311	⇓eP	Pn	16 59 44.1	+0.8
TABAC	Tabacon	2.26	129	eP	Pn	16 59 43.7	+0.4
JTS	Las Juntas de	2.27	136	P	Pn	16 59 44.2	+0.9
	1μm,0.4s,baz=300,slow=7.0,SNR=122						
JTS				S	Sn	17 00 13.1	+2.6
	2μm,0.5s,baz=43,slow=17,SNR=12						
JTS	Las Juntas de	2.27	136	Pn	Pn	16 59 43.2	-0.1
JTS	Las Juntas de	2.27	136	eP	Pn	16 59 44.2	+0.9
JTS				i S	Sn	17 00 16.7	+6.2
JTS	Las Juntas de	2.27	136	eP	Pn	16 59 43.4	0.0
JTS	Las Juntas de	2.27	136	d iP	Pn	16 59 43.2	-0.1
JTS	Las Juntas de	2.27	136	eP	Pn	16 59 43.2	-0.1
JTS	Las Juntas de	2.27	136	eP	Pn	16 59 43.5	+0.1
PACA	Pacayal	2.31	312	eP	Pn	16 59 44.8	+0.8
PACA	Pacayal	2.31	312	eP	Pn	16 59 44.9	+1.0
NYURE	Nandayure	2.31	146	eP	Pn	16 59 44.6	+0.6
CEDE	Laguna Cedeo	2.31	128	⇓iP	Pn	16 59 44.5	+0.4
FAGO	Alcalda de S	2.31	319	⇓eP	Pn	16 59 44.7	+0.7
FAGO				eS	Sn	17 00 11.4	-0.3
CASO	Castillo	2.33	130	⇑eP	Pn	16 59 45.2	+1.1
MTEVE	Monteverde	2.33	133	eP	Pn	16 59 44.9	+0.5
FORC	Fortuna	2.35	128	eP	Pn	16 59 45.4	+0.9
ALJI	Alcalda de J	2.41	305	eP	Pn	16 59 45.4	+0.2
COVE	Coope Vega, Sa	2.43	120		Pn	16 59 45.3	-0.2
SOCE	Pocosol	2.44	129	eP	Pn	16 59 46.0	+0.3
TECA	Tecapa	2.46	309	eP	Pn	16 59 46.6	+0.6
COEB	Comit de Eme	2.48	309	eP	Pn	16 59 47.2	+1.0
PQSS	Presa 15 de Se	2.58	311	eP	Pn	16 59 48.3	+0.8
ARZA	Esparza	2.67	136	eP	Pn	16 59 51.8	+3.0
TECO	Alcaldia de Te	2.70	306	eP	Pn	16 59 49.5	+0.4
SRA1	San Ramn	2.74	132	eP	Pn	16 59 50.6	+0.8
SCLA	Alcaldia de Sa	2.75	310	eP	Pn	16 59 50.9	+1.0
SJTE	Alcalda de S	2.92	305	eP	Pn	16 59 52.5	+0.3
PAVA	Las Pavas	2.92	307	eP	Pn	16 59 52.9	+0.7
JACO	JACO, Garabito	2.93	140	Pn	Pn	16 59 52.6	+0.4
P5NO	Presa 5 de nov	2.96	314	⇓eP	Pn	16 59 53.5	+0.8
LFRS	El Faro	2.97	305	eP	Pn	16 59 53.2	+0.3
LBRS	Las Brisas	3.02	307	eP	Pn	16 59 54.5	+1.0
HDC	Heredia	3.07	129		Pn	16 59 54.8	+0.5
HDC	Heredia	3.07	129	⇓iP	Pn	16 59 55.1	+0.9
HDC				i S	Sn	17 00 41.0	+11
HDC	Heredia	3.07	129	eP	Pn	16 59 55.5	+1.2
HDC	Heredia	3.07	129	eP	Pn	16 59 55.5	+1.2
LFU	La Fuente	3.08	306	eP	Pn	16 59 55.3	+1.0
SNET	Serv Nac Est T	3.14	304		Pn	16 59 55.7	+0.5
SNET	Serv Nac Est T	3.14	304	eP	Pn	16 59 55.8	+0.6
ACOS	Acosta	3.17	132	eP	Pn	16 59 56.4	+0.8
ICR3	Volcano Irazu	3.30	126	eP	Pn	16 59 59.0	+1.4
JAYA	Jayaque - finc	3.30	301	eP	Pn	16 59 57.7	+0.3
ABE2	San Pablo	3.31	132	eP	Pn	16 59 59.1	+1.6
LCR2	La Lucha 2	3.32	131	eP	Pn	16 59 58.4	+0.8
LCR2	La Lucha 2	3.32	131	eP	Pn	16 59 58.6	+0.9
CEDA	San Andres	3.34	304	eP	Pn	16 59 59.2	+1.4
CVTR	Volcan Turrial	3.34	125	Pn	Pn	16 59 58.5	+0.4
RIMA	Rio Macho	3.41	129		Pn	16 59 59.3	+0.4
RVLA	Villa Bonita	3.43	122	eP	Pn	17 00 00.2	+1.3
VERB	Verbena	3.43	125	eP	Pn	17 00 00.8	+1.6
LCOCO	El Coco	3.47	122	eP	Pn	17 00 00.7	+1.1
LCOCO				eS	Sn	17 00 42.2	+2.7
CEVE	Cerro Verde	3.54	302	eP	Pn	17 00 01.9	+1.2
SBLS	San Blas	3.54	303	eP	Pn	17 00 01.9	+1.2
RTR	El Retiro	3.59	303	eP	Pn	17 00 02.7	+1.3
BATAN	Batan	3.61	120	Pn	Pn	17 00 02.4	+0.9
BATAN	Batan	3.61	120	eP	Pn	17 00 02.6	+1.1
BUS1	Rivas	3.63	130	eP	Pn	17 00 03.2	+1.0
MTO3	Montecristo	3.67	312	eP	Pn	17 00 03.7	+1.2
NUBE	Las Nubes	3.71	302	eP	Pn	17 00 03.4	+0.5
EDDO	Dominical	3.75	135	eP	Pn	17 00 06.8	+3.4
ESQI	Esquipulas	3.77	314		Pn	17 00 05.0	+1.4
ESQI	Esquipulas	3.77	314	eP	Pn	17 00 05.5	+1.8
PEZE	Perez Zeledon,	3.80	132	Pn	Pn	17 00 05.8	+1.7
SRBA	San Rafael, Bu	4.13	130	Pn	Pn	17 00 09.4	+0.8
EDBA	Buenos Aires	4.24	130	eP	Pn	17 00 12.3	+2.2
EDPN	Palmar Norte	4.24	134	eP	Pn	17 00 13.6	+3.5
EDP2	Potrero Grande	4.41	131	eP	Pn	17 00 15.4	+3.1
RGM0	Gandoca	4.52	121		Pn	17 00 14.9	+1.1
NBG	Las Nubes	4.54	306	eP	Pn	17 00 17.2	+2.9
PCG	Pacaya	4.64	302	eP	Pn	17 00 19.3	+3.6
EDAD	Golfito	4.66	134	eP	Pn	17 00 18.0	+2.2
EDSV	San Vito	4.69	131	eP	Pn	17 00 13.9	-2.3
CNI2	El Empalme, Bo	4.72	122	eP	Pn	17 00 18.4	+1.8
FUG	Fuego 3	4.87	301	eP	Pn	17 00 21.7	+3.0
BRU2	Volcan	4.92	129	Pn	Pn	17 00 20.2	+0.8
BRU2	Volcan	4.92	129	⇓iP	Pn	17 00 21.2	+1.8
BRU2	Volcan	4.92	129	eP	Pn	17 00 21.5	+2.1
CDITO	Canoas	4.93	132	Pn	Pn	17 00 21.4	+2.1
BC3P	Paso Ancho	4.96	128	eP	Pn	17 00 22.5	+2.4
BCO2	Palmira	5.09	129	eP	Pn	17 00 24.3	+2.6
LESP3	La Esperanza,	5.10	133	eP	Pn	17 00 25.3	+3.6
LNBQ3	Los Naranjos,	5.11	127	i P	Pn	17 00 24.5	+2.5
PTAR3	Potrerillos Ar	5.13	129	eP	Pn	17 00 24.8	+2.6
PTPM	Petroterminale	5.18	135	⇓iP	Pn	17 00 24.4	+1.6
PTPM				eS	Sn	17 01 28.7	+7.4
PRVC	Isla de Provid	5.26	74	Pn	Pn	17 00 25.8	+1.9
PRVC	Isla de Provid	5.26	74	eP	Pn	17 00 25.9	+2.0
SULM	Suchitepequez,	5.42	296	eP	Pn	17 00 29.4	+3.2
STG3	Santiaguito 3,	5.61	300	eP	Pn	17 00 31.0	+2.2
RTAL	Retalhuleu	5.63	298		Pn	17 00 30.1	+1.2
HUEH	Huehuetenango	5.87	305		Pn	17 00 34.7	+2.2
PETF	Flores	5.90	327		Pn	17 00 35.2	+2.5
REME3	Remedios, Chir	5.93	128	eP	Pn	17 00 40.5	+7.5
NANC3	Nancito, Chiri	6.00	127	eP	Pn	17 00 44.7	+11
CALO3	Calobre, Verag	6.67	122	eP	Pn	17 00 42.6	-0.6
GMAL	Guarumal, Vera	6.68	128	i P	Pn	17 00 54.7	+11
CRIS3	El Cristo, Coc	6.89	122	eP	Pn	17 00 43.9	-2.3
CCIG	Comitan	6.93	309	Pn	Pn	17 00 48.8	+1.9
BCIP	Isla Barro Col	7.15	112	Pn	Pn	17 00 50.3	+0.6
BCIP	Isla Barro Col	7.15	112	⇓iP	Pn	17 00 50.6	+0.9
BCIP	Isla Barro Col	7.15	112	P	Pn	17 00 50.3	+0.6
BCIP	Isla Barro Col	7.15	112	eP	Pn	17 00 50.7	+1.0
FRIJ	El Hiral	7.23	111	eP	Pn	17 00 52.6	+1.8
GAMB1	Gamboa	7.28	112	⇓eP	Pn	17 00 53.5	+2.0
ARRA3	Arraijan, Pana	7.39	113	eP	Pn	17 00 54.7	+1.7
AZU	Azuero	7.43	123	eP	Pn	17 00 55.9	+2.4
TEIG	Tepich	8.41	349	eP	Pn	17 01 09.5	+2.7
UPD2	Meteti	9.05	111	eP	Pn	17 01 18.8	+3.1
UPD2				eS	Sn	17 02 52.4	-3.5
APAC	Apartado, Choc	10.61	111	eP	Pn	17 01 40.6	+3.7
MTDJ	Mount Denham	10.71	53	Pn	Pn	17 01 39.8	+1.4
MTDJ	Mount Denham	10.71	53	eP	Pn	17 01 43.1	+4.7
SJCC	San Jacinto, C	11.35	99	eP	Pn	17 01 47.4	+0.3
UREC	San Jos de Ur	11.62	110	eP	Pn	17 01 53.1	+2.4
GR1C	Gorgona, Isla	12.15	136	eP	Pn	17 02 00.3	+2.3
HELC	Santa Helena	12.29	117		Pn	17 02 00.9	+0.9
HELC	Santa Helena	12.29	117	eP	Pn	17 02 02.9	+2.8
ZARC	Zaragoza, Cauc	12.34	110	eP	Pn	17 02 03.4	+2.9
TLIG	Tlapa	12.89	297		Pn	17 02 09.1	+1.1
JAMC	Jamundi, Valle	13.07	131	eP	Pn	17 02 12.3	+1.9
PTBC	PUERTO BERRIO,	13.08	113	eP	Pn	17 02 07.2	-3.2
NORC	Norcasia	13.16	118	eP	Pn	17 02 13.4	+1.9
BBAC	Balboa, Cauca	13.49	136	eP	Pn	17 02 17.6	+1.6
POPC	Popayan, Colom	13.52	133	eP	Pn	17 02 16.4	0.0
GTBY	Guantanamo Bay	13.56	53		Pn	17 02 17.0	+0.4
ORTC	Ortega, Tolima	13.74	125	eP	P	17 02 22.5	-2.3
SPBC	San Pablo de B	13.82	116	eP	Pn	17 02 22.2	+2.0
FLF1	Flavio Alfaro-	13.91	151	eP	P	17 02 30.9	+4.2
ROSC	El Rosal	14.00	119	P	P	17 02 26.7	-1.3
	18nm,0.7s,baz=337,slow=13,SNR=14						
ROSC				LR	LR	17 08 59.7	
	comp=Z,209nm,18.1s,baz=347,slow=43						
ROSC	El Rosal	14.00	119	Pn	Pn	17 02 22.0	-0.8
ROSC	El Rosal	14.00	119	P	Pn	17 02 22.0	-0.8
ROSC	El Rosal	14.00	119	eP	Pn	17 02 22.3	-0.4
GCUF	Volcan Galeras	14.02	139	eP	P	17 02 26.4	-2.0
OTAV	Otavalo	14.13	145	Pn	Pn	17 02 25.5	+0.9
OTAV	Otavalo	14.13	145	P	Pn	17 02 25.5	+0.9
OTAV	Otavalo	14.13	145	eP	P	17 02 27.3	-2.3
TULM	Tulcn-Chalpat	14.14	141	Pn	Pn	17 02 24.8	+0.1
PRAC	Prado	14.14	124	eP	Pn	17 02 24.6	+0.2
BARC	Barichara	14.22	111	eP	P	17 02 30.4	0.0
IMBA	Imbabura, San	14.24	144	P	P	17 02 30.6	-0.3
URIC	Uribia, Colomb	14.25	89	Pn	Pn	17 02 25.4	-0.3
URIC	Uribia, Colomb	14.25	89	eP	Pn	17 02 26.5	+0.8
PULU	Pululahua	14.28	145	Pn	Pn	17 02 28.5	+2.0
PAMC	Pamplona, Colo	14.40	107	eP	Pn	17 02 30.2	+2.2
BONI	La Bonita	14.50	141	eP	P	17 02 32.9	-0.7
RUSC	La Rusia	14.59	113	Pn	Pn	17 02 30.2	-0.3
RUSC	La Rusia	14.59	113	eP	Pn	17 02 28.8	-1.8
CHIC	Chingaza	14.61	119	eP	P	17 02 33.1	-1.8
SLOR	San Lorenzo -	14.91	147	P	P	17 02 37.8	-0.5
FLOC	Florencia	14.92	133	eP	P	17 02 36.8	-1.2
PAPH	Port-au-Prince	15.22	63	P	P	17 02 42.0	+0.8
PIAT	Ana Tenorio	15.26	147	eP	P	17 02 41.9	-0.2
SDV	Santo Domingo	15.95	99	P	Pn	17 02 48.0	+0.5
	70nm,1.0s,baz=264,slow=7.7,SNR=59						
SDV				LR	LR	17 09 37.1	
	comp=Z,133nm,22.0s,baz=287,slow=40						
SDV	Santo Domingo	15.95	99		Pn	17 02 48.0	+0.5
SDV	Santo Domingo	15.95	99	eP	P	17 02 48.8	-0.7
MOIG	Morelia	16.04	300		P	17 02 49.8	-0.8
DWPF	Disney Wildern	16.79	16	P	P	17 02 59.8	+1.3
DWPF	Disney Wildern	16.79	16	P	P	17 03 00.7	+2.2
	baz=198						
DWPF	Disney Wildern	16.79	16	P	P	17 03 01.8	+3.3
	baz=198						
656A	Willston	17.74	12	P	Pn	17 03 11.4	+2.1
656A	Willston	17.74	12	P	Pn	17 03 13.0	+3.7
	baz=193						
553A	Crawfordville	18.27	6	P	Pn	17 03 19.5	+3.9
	baz=187,SNR=10						
451A	Vernon	18.60	2	P	Pn	17 03 22.6	+2.9
	baz=183						
ZAIG	Zacatecas	18.68	307	P	Pn	17 03 20.7	-0.3
BRAL	Brewton	19.14	359	P	Pn	17 03 27.2	+1.2
	baz=179						
BRAL	Brewton	19.14	359	P	Pn	17 03 28.4	+2.3
	baz=179						
456A	Hilliard	19.16	12	P	Pn	17 03 28.5	+2.3
	baz=194						
352A	Blakely	19.51	4		Pn	17 03 31.2	+0.9
352A	Blakely	19.51	4	P	Pn	17 03 31.7	+1.4
	baz=185						
TIGA	Tifton	19.60	8	P	Pn	17 03 32.9	+1.5
	baz=189,SNR=31						
TIGA	Tifton	19.60	8	P	Pn	17 03 33.4	+2.0
	baz=189,SNR=31						
441A	DeRidder	19.70	343	P	Pn	17 03 34.3	+1.6
	baz=161						
MLPR	Magueyes Islan	19.77	70	P	P	17 03 31.3	0.0
344A	Westbrook Farm	19.80	349	P	Pn	17 03 35.2	+1.4
	baz=168						
735A	Kenedy	19.84	330	P	P	17 03 32.2	+0.3
735A	Kenedy	19.84	330	P	Pn	17 03 35.1	+0.8
	baz=146						
HKT	Hockley	19.89	336	P	Pn	17 03 35.1	+0.4
HKT	Hockley	19.89	336	c iP	Pn	17 03 36.1	+1.3
HKT				pmax	pmax		
	comp=Z,48nm,1.3s						
HKT	Hockley	19.89	336	P	Pn	17 03 35.2	+0.4
	baz=153						
250A	Grady	19.95	1	P	Pn	17 03 37.2	+1.7
	baz=181						
OBIP	Obispado Ponce	20.19	70	P	P	17 03 36.6	+0.7
255A	Hazlehurst	20.25	10	P	Pn	17 03 40.7	+1.7
	baz=192,SNR=13						
833A	Chaparral WMA,	20.25	326	P	P	17 03 36.2	-0.2
833A	Chaparral WMA,	20.25	326	P	P	17 03 37.5	+1.1
	baz=141,SNR=16						
833A	Chaparral WMA,	20.25	326	P	Pn	17 03 37.9	-1.2
	baz=141,SNR=16						
ATAH	Atahualpa	20.61	156	P	Pn	17 03 42.9	-1.0
	comp=Z,43nm,0.8s,baz=346,slow=5.2,SNR=17						
ATAH				LR	LR	17 10 35.4	
	comp=Z,181nm,19.6s,baz=342,slow=33						
	comp=Z,43nm,0.8s						
SJG	San Juan	20.63	70	P	P	17 03 39.2	-1.3
	comp=Z,14nm,0.3s,baz=259,slow=10,SNR=9.9						
SJG				LR	LR	17 11 58.5	
	comp=Z,198nm,18.2s,baz=262,slow=38						
SJG	San Juan	20.63	70	P	P	17 03 41.2	+0.6
SJG	San Juan	20.63	70	P	P	17 03 41.2	+0.6
152A	Waverly Hall	20.70	4	P	Pn	17 03 45.6	+1.2
	baz=185,SNR=31						
GCPR	Guaynabo City	20.74	70	P	P	17 03 42.6	+0.8
154A	Montrose	20.82	8	P	Pn	17 03 47.1	+1.4
	baz=190,SNR=5.8						
HUMP	Col San Antoni	20.91	70	P	P	17 03 44.2	+0.6
LRAL	Lakeview Retre	21.00	359	P	P	17 03 45.6	+1.1
LRAL	Lakeview Retre	21.00	359	P	P	17 03 47.2	+2.7
	baz=179,SNR=19						
LRAL	Lakeview Retre	21.00	359	P	P	17 03 47.5	+3.1
	baz=179,SNR=19						
NATX	Nacogdoches	21.10	340	P	P	17 03 46.3	+0.8
NATX	Nacogdoches	21.10	340	P	P	17 03 47.2	+1.7
	baz=158						
NATX	Nacogdoches	21.10	340	P	P	17 03 48.0	+2.5
	baz=158						
HNDO	Hondo	21.14	328	P	P	17 03 45.4	-0.6
MTP	Monte Pirata	21.17	71	P	P	17 03 47.1	+0.7
Z47A	Carrollton	21.21	356	P	P	17 03 49.0	+2.3
	baz=176						
435B	Jarrell	21.36	333	P	P	17 03 47.9	-0.4
435B	Jarrell	21.36	333	P	P	17 03 49.5	+1.3
	baz=149						
435B	Jarrell	21.36	333	P	P	17 03 50.0	+1.8
	baz=149						
CUPR	Culebra, Puert	21.47	70	P	P	17 03 50.4	+0.7
PCRV	Puerto La Cruz	21.58	92	P	P	17 03 51.0	+0.1
	comp=Z,14nm,0.5s,baz=227,slow=3.1,SNR=8.2						
HAW	Hawthorne Fire	21.80	11	P	P	17 03 56.7	+3.8
	baz=193,SNR=17						
Y49A	Blount Mountai	21.82	0	P	P	17 03 54.7	+1.5
Y49A	Blount Mountai	21.82	0	P	P	17 03 55.7	+2.5
	baz=180,SNR=27						
CDVI	St. Croix	21.83	72	P	P	17 03 54.5	+1.2
NHSC	New Hope	21.86	14	P	P	17 03 54.9	+1.2
NHSC	New Hope	21.86	14	P	P	17 03 55.6	+2.0
	baz=197						
NHSC	New Hope	21.86	14	P	P	17 03 57.3	+3.7
	baz=197						
Y52A	Lilburn	21.94	6	P	P	17 03 56.3	+1.8
Y52A	Lilburn	21.94	6	P	P	17 03 58.1	+3.6

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      baz=187,SNR=18
Y52A                            P     P     17 03 58.1 +3.6
      baz=187,SNR=18
Z41A  Richland Creek   21.98 346 P     P     17 03 54.7 -0.2
Y45A  Yeager Farm, C   22.00 353 P     P     17 03 57.5 +2.4
      baz=172
JCT   Junction City    22.17 328 P     P     17 03 57.0  0.0
JCT   Junction City    22.17 328 P     P     17 03 57.0  0.0
JCT   Junction City    22.17 328 P     P     17 03 58.1 +1.1
      baz=144,SNR=14
JCT   Junction City    22.17 328 P     P     17 03 59.3 +2.3
      baz=144,SNR=14
WHTX  Lake Whitney,    22.34 335 P     P     17 03 60.0 +1.2
      baz=151,SNR=12
WHTX  Lake Whitney,    22.34 335 P     P     17 04 00.4 +1.5
      baz=151,SNR=12
X48A  Hartselle        22.42 359 P     P     17 04 00.4 +0.9
X48A  Hartselle        22.42 359 P     P     17 04 01.6 +2.1
      baz=179,SNR=6.7
BRDY  Brady            22.43 331 P     P     17 03 59.9 +0.1
FPAL  Fort Paine       22.52   2 P     P     17 04 01.4 +0.7
HODGE Hodges           22.54   9 P     P     17 04 03.5 +2.7
      baz=191,SNR=16
FW16  Waxahatchie      22.55 337 P     P     17 04 03.0 +1.9
X51A  Calhoun          22.58   4 P     P     17 04 03.9 +2.6
      baz=184,SNR=18
X51A                             P     P     17 04 03.9 +2.6
      baz=184,SNR=18
Z38A  Mt. Pleasant     22.59 341 P     P     17 04 03.4 +2.0
      baz=158
FW14  Alvarado         22.59 336 P     P     17 04 03.1 +1.7
OXF   Oxford           22.62 354 P     P     17 04 02.2 +0.5
      baz=173,SNR=6.8
OXF   Oxford           22.62 354 P     P     17 04 02.7 +0.9
      baz=173,SNR=6.8
FW13  Cleburne         22.65 335 P     P     17 04 02.4 +0.4
Y57A  Sumter           22.69  13 P     P     17 04 05.4 +3.0
      baz=196
Y57A                             P     P     17 04 05.4 +3.0
      baz=196
Y58A  Scranton         22.75  15 P     P     17 04 05.4 +2.4
      baz=198
Y58A                             P     P     17 04 05.4 +2.4
      baz=198
JSC   Jenkinsville     22.76  11 IAmb  IAmb  17 04 07.7
      comp=Z,63nm,0.7s
JSC   Jenkinsville     22.76  11 P     P     17 04 06.0 +2.9
      baz=194,SNR=31
SGCB  S£o Gabriel d    22.78 120 eP    P     17 04 03.3 -0.3
PLAL  Pickwick Lake    22.98 357 P     P     17 04 06.3 +1.0
PLAL                             IAmb  IAmb  17 04 08.5
      comp=Z,31nm,0.8s
FW07  Weatherford      23.10 335 P     P     17 04 07.0 +0.4
FW07                             IAmb  IAmb  17 04 08.9
      comp=Z,105nm,0.6s
X40A  Basin Creek Fa   23.17 347 P     P     17 04 10.2 +3.0
      baz=164,SNR=5.2
X40A                             P     P     17 04 10.2 +3.0
      baz=164,SNR=5.2
W52A  Murphy           23.18   5 IAmb  IAmb  17 04 10.3
      comp=Z,43nm,0.5s
W52A  Murphy           23.18   5 P     P     17 04 09.9 +2.6
      baz=187,SNR=7.8
SWET  Sewanee          23.18   1 IAmb  IAmb  17 04 11.1
      comp=Z,36nm,0.9s
PAULI Pauline          23.18  10 P     P     17 04 07.2 -0.1
PAULI                            IAmb  IAmb  17 04 10.6
      comp=Z,48nm,0.6s
PAULI Pauline          23.18  10 P     P     17 04 09.6 +2.3
      baz=192,SNR=22
W50A  Signal Mountai   23.19   3 IAmb  IAmb  17 04 11.4
      comp=Z,41nm,0.6s
W50A  Signal Mountai   23.19   3 P     P     17 04 08.9 +1.5
      baz=183,SNR=28
BG3   Lake Jocassee    23.19   8 IAmb  IAmb  17 04 11.6
      comp=Z,75nm,0.7s
CASEE Lake Jocassee    23.19   8 P     P     17 04 09.9 +2.5
      baz=189,SNR=31
W45A  Hickory Valley   23.24 355 IAmb  IAmb  17 04 10.9
      comp=Z,158nm,1.6s
W45A  Hickory Valley   23.24 355 P     P     17 04 09.4 +1.6
      baz=174
FW06  Azle             23.24 336 P     P     17 04 08.0 +0.1
FW06                             IAmb  IAmb  17 04 10.5
      comp=Z,67nm,0.6s
Y60A  Bolivia          23.25  18 P     P     17 04 10.3 +2.4
      baz=201
Y60A                             P     P     17 04 10.3 +2.4
      baz=201
BIRD  Birdtown, Kers   23.27  13 IAmb  IAmb  17 04 12.9
      comp=Z,38nm,0.8s
BIRD  Birdtown, Kers   23.27  13 P     P     17 04 10.4 +2.2
      baz=195,SNR=11
HPIG                   23.35 312 IAmb  IAmb  17 04 13.0
      comp=Z,83nm,0.8s
MIAR  Mount Ida        23.40 345 IAmb  IAmb  17 04 11.7
      comp=Z,101nm,1.7s
MIAR  Mount Ida        23.40 345 P     P     17 04 10.0 +0.7
      baz=163,SNR=18
MIAR  Mount Ida        23.40 345 P     P     17 04 10.2 +0.9
      baz=163,SNR=18
Z35A  Perchaven, San   23.44 337 IAmb  IAmb  17 04 12.9
      comp=Z,42nm,0.7s
Z35A  Perchaven, San   23.44 337 P     P     17 04 10.9 +1.2
      baz=153,SNR=7.3
SMRT  St. Maarten      23.46  72 IAmb  IAmb  17 04 11.3
      comp=Z,78nm,1.1s
CPCT  Cooper Cave      23.48   4 P     P     17 04 11.8 +1.8
CPCT                             IAmb  IAmb  17 04 14.1
      comp=Z,61nm,0.6s
FW03  Perrin-Whitt E   23.51 335 IAmb  IAmb  17 04 12.9
      comp=Z,64nm,0.6s
TXAR  Lajitas Array    23.53 320 P     P     17 04 12.0 +1.3
      comp=Z,74nm,0.8s,baz=140,slow=9.5,SNR=410
TXAR                             pP    pP    17 04 31.1 +2.5
      comp=Z,25nm,0.7s,baz=139,slow=12,SNR=5.7
TXAR                             PcP   PcP   17 07 54.8 +0.8
      comp=Z,2.0nm,0.8s,baz=123,slow=4.6,SNR=3.8
TXAR                             ScP   ScP   17 11 25.7 +0.8
      comp=Z,1.5nm,0.7s,baz=134,slow=5.4,SNR=11
TXAR  Lajitas Array    23.53 320 P     P     17 04 11.1 +0.4
TXAR                                   PcP   17 07 54.8 +0.8
TXAR  Lajitas Array    23.53 320 P     P     17 04 11.1 +0.4
TX31  Lajitas Ar. Si   23.53 320 P     P     17 04 12.0 +1.3
      baz=134,SNR=234
TX32  Lajitas Array    23.53 320 P     P     17 04 11.5 +0.8
TX32                             IAmb  IAmb  17 04 13.3
      comp=Z,84nm,0.9s
TX32                                   PcP   17 07 55.2 +1.2
KMSC  Kings Mountain   23.58  11 IAmb  IAmb  17 04 15.4
      comp=Z,56nm,0.7s
KMSC  Kings Mountain   23.58  11 P     P     17 04 12.2 +1.2
      baz=193,SNR=24
KMSC  Kings Mountain   23.58  11 P     P     17 04 13.7 +2.7
      baz=193,SNR=24
V48A  Smith Brothers   23.70 359 P     P     17 04 14.1 +2.1
      baz=180,SNR=7.6
TKL   Tuckaleechee C   23.75   6 P     P     17 04 14.4 +2.0
      comp=Z,39nm,0.7s,baz=176,slow=12,SNR=30
TKL                              LR    LR    17 13 13.0
      comp=Z,202nm,20.6s,baz=198,slow=36
TKL   Tuckaleechee C   23.75   6 IAmb  IAmb  17 04 17.6
      comp=Z,70nm,0.9s
TKL   Tuckaleechee C   23.75   6 P     P     17 04 14.5 +2.0
      baz=187,SNR=26
WHAR  Wooly Hollow     23.82 348 IAmb  IAmb  17 04 15.3
      comp=Z,77nm,1.7s
ABTX  Abilene, Hawle   23.84 332 IAmb  IAmb  17 04 16.3
      comp=Z,34nm,0.6s
ABTX  Abilene, Hawle   23.84 332 P     P     17 04 14.3 +0.9
      baz=147,SNR=13
ABTX  Abilene, Hawle   23.84 332 P     P     17 04 15.5 +2.1
      baz=147,SNR=13
V51A  Loudon           23.84   4 IAmb  IAmb  17 04 17.2
      comp=Z,60nm,0.8s
V51A  Loudon           23.84   4 P     P     17 04 15.6 +2.3
      baz=185,SNR=19
W57A  Gilead           23.87  13 P     P     17 04 15.8 +2.3
      baz=196,SNR=19
W57A                             P     P     17 04 15.8 +2.3
      baz=196,SNR=19
V53A  Saluda           23.87   8 P     P     17 04 15.1 +1.5
V53A                             IAmb  IAmb  17 04 18.4
      comp=Z,52nm,0.7s
V53A  Saluda           23.87   8 P     P     17 04 16.2 +2.6
      baz=189,SNR=29
V53A                             P     P     17 04 16.2 +2.6
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      baz=189,SNR=29
CZSB  Cruzeiro do Su   23.90 144 P     P     17 04 14.3 +0.3
CZSB                             IAmb  IAmb  17 04 18.4
      comp=Z,40nm,0.9s
CZSB  Cruzeiro do Su   23.90 144 eP    P     17 04 15.0 +0.9
X37A  Clayton          23.94 342 IAmb  IAmb  17 04 16.7
      comp=Z,26nm,0.6s
X37A  Clayton          23.94 342 P     P     17 04 15.5 +1.3
      baz=158,SNR=12
V52A  Sevierville      23.95   6 P     P     17 04 15.8 +1.6
V52A                             IAmb  IAmb  17 04 19.5
      comp=Z,45nm,1.1s
V52A  Sevierville      23.95   6 P     P     17 04 16.3 +2.1
      baz=187,SNR=7.4
SGCY  Sterling City    23.99 328 P     P     17 04 14.2 -0.6
SGCY                             IAmb  IAmb  17 04 18.4
      comp=Z,48nm,1.0s
CLTN  Cedars of Leba   24.05   0 IAmb  IAmb  17 04 19.4
      comp=Z,57nm,0.5s
ALPN  Alpine           24.24 322 P     P     17 04 17.5 +0.4
ALPN                             IAmb  IAmb  17 04 20.9
      comp=Z,36nm,0.9s
V55A  Taylorsville     24.29  11 IAmb  IAmb  17 04 22.3
      comp=Z,44nm,0.7s
V55A  Taylorsville     24.29  11 P     P     17 04 20.1 +2.8
      baz=193,SNR=17
V55A                             P     P     17 04 20.1 +2.8
      baz=193,SNR=17
WTFS  Witchita Falls   24.30 335 IAmb  IAmb  17 04 19.5
      comp=Z,95nm,0.5s
LCAR  Lake Charles     24.38 351 P     P     17 04 18.2 +0.1
      baz=169,SNR=9.2
U49A  Red Boiling Sp   24.48   1 P     P     17 04 19.8 +0.8
U49A                             IAmb  IAmb  17 04 21.8
      comp=Z,29nm,0.6s
U49A  Red Boiling Sp   24.48   1 P     P     17 04 20.7 +1.7
      baz=182,SNR=16
CNNC  Cliffs of the    24.49  17 P     P     17 04 20.7 +1.6
      baz=201
CBE   Ff, Capester     24.54  77 P     P     17 04 20.1 +0.2
TZTN  Tazewell         24.65   6 P     P     17 04 22.2 +1.7
      baz=187,SNR=9.2
TZTN  Tazewell         24.65   6 P     P     17 04 22.8 +2.2
      baz=187,SNR=9.2
V58A  Windy Hill, Pi   24.69  15 P     P     17 04 21.9 +1.0
V58A  Windy Hill, Pi   24.69  15 P     P     17 04 23.1 +2.2
      baz=198,SNR=46
V58A                             P     P     17 04 23.1 +2.2
      baz=198,SNR=46
SVB   Belmont          24.72  84 P     P     17 04 21.0 -0.5
SVB                              IAmb  IAmb  17 04 26.8
      comp=Z,71nm,0.7s
X34A  Smith Ranch, M   24.79 337 IAmb  IAmb  17 04 47.8
      comp=Z,43nm,0.9s
U54A  Nelsons Funny    24.85   9 IAmb  IAmb  17 04 28.7
      comp=Z,136nm,1.4s
U54A  Nelsons Funny    24.85   9 P     P     17 04 24.7 +2.2
      baz=191,SNR=14
U54A                             P     P     17 04 24.7 +2.2
      baz=191,SNR=14
ODSA  Odessa           24.91 326 P     P     17 04 23.2 +0.1
ODSA                             IAmb  IAmb  17 04 25.3
      comp=Z,57nm,0.9s
U56A  King             24.93  12 P     P     17 04 24.6 +1.4
U56A                             IAmb  IAmb  17 04 29.5
      comp=Z,50nm,0.8s
U56A  King             24.93  12 P     P     17 04 26.1 +2.9
      baz=194,SNR=7.5
U56A                             P     P     17 04 26.1 +2.9
      baz=194,SNR=7.5
T47A  Sharon Grove     24.95 359 P     P     17 04 24.6 +1.3
      baz=179,SNR=10
T50A  Nancy            25.02   3 P     P     17 04 25.4 +1.4
      baz=184
T50A                             P     P     17 04 25.4 +1.4
      baz=184
MCLT  Moule a Chique   25.03  83 P     P     17 04 27.7 +3.4
PECS  Pecos            25.09 323 P     P     17 04 25.0 +0.2
PECS                             IAmb  IAmb  17 04 27.0
      comp=Z,21nm,0.6s
POST  Post             25.10 329 IAmb  IAmb  17 04 28.9
      comp=Z,51nm,0.7s
SLBS  Sierra La Lagu   25.11 301 P     P     17 04 26.4 +1.4
SLBS                             IAmb  IAmb  17 04 29.1
      comp=Z,55nm,1.1s
MPOM  Morne Pois Mar   25.13  81 P     P     17 04 25.9 +0.7
MPOM                             IAmb  IAmb  17 04 31.3
      comp=Z,93nm,0.9s
WMOK  Wichita Mounta   25.28 336 IAmb  IAmb  17 04 30.8
      comp=Z,68nm,1.1s
WMOK  Wichita Mounta   25.28 336 P     P     17 04 27.7 +1.3
      baz=151,SNR=55
WMOK  Wichita Mounta   25.28 336 P     P     17 04 28.0 +1.7
      baz=151,SNR=55
TUL1  Leonard          25.29 342 IAmb  IAmb  17 04 28.1
      comp=Z,33nm,0.8s
TUL1  Leonard          25.29 342 P     P     17 04 26.3 -0.1
      baz=159,SNR=6.0
TUL1  Leonard          25.29 342 P     P     17 04 26.8 +0.3
      baz=159,SNR=6.0
DKNS  Dickens          25.31 331 P     P     17 04 27.1 +0.4
DKNS                             IAmb  IAmb  17 04 29.1
      comp=Z,36nm,0.6s
425A  Indio Mountain   25.36 321 P     P     17 04 27.3 +0.1
425A                             IAmb  IAmb  17 04 29.8
      comp=Z,46nm,1.1s
U38A  Gravette         25.40 345 P     P     17 04 28.3 +0.9
      baz=162,SNR=6.9
CGM3  Cape Girardeau   25.41 354 P     P     17 04 27.5  0.0
DEOK  Depew            25.45 341 IAmb  IAmb  17 04 29.4
      comp=Z,34nm,0.8s
U59A  Littleton        25.56  17 IAmb  IAmb  17 04 32.9
      comp=Z,41nm,1.2s
U59A  Littleton        25.56  17 P     P     17 04 30.7 +1.8
      baz=200,SNR=7.0
U59A                             P     P     17 04 30.7 +1.8
      baz=200,SNR=7.0
LPIG  La Paz           25.58 301 LR    LR    17 15 52.9
      comp=Z,117nm,19.8s,baz=82,slow=39
NNA   Nana             25.65 158⇓iP    P     17 04 31.8 +1.9
NNA                              pmax  pmax
      comp=Z,64nm,1.6s
OK031 S. Brethren Rd   25.66 340 P     P     17 04 27.8 -1.9
S51A  Beattyville      25.73   5 IAmb  IAmb  17 04 33.3
      comp=Z,23nm,0.6s
S51A  Beattyville      25.73   5 P     P     17 04 32.1 +1.7
      baz=187,SNR=11
S51A                             P     P     17 04 32.1 +1.7
      baz=187,SNR=11
CLNB  Carlsbad         25.75 324 P     P     17 04 30.6 -0.2
BLA   Blacksburg       25.76  11 IAmb  IAmb  17 04 39.6
      comp=Z,27nm,0.8s
BLA   Blacksburg       25.76  11 P     P     17 04 32.7 +2.0
      baz=194,SNR=5.8
BLA   Blacksburg       25.76  11 P     P     17 04 33.4 +2.6
      baz=194,SNR=5.8
S44A  Carbondale       25.76 355 P     P     17 04 31.0 +0.3
S44A  Carbondale       25.76 355 P     P     17 04 32.2 +1.5
      baz=174
OK033 Mehan            25.77 340 IAmb  IAmb  17 04 32.5
      comp=Z,50nm,1.1s
T57A  Hurt             25.80  14 IAmb  IAmb  17 04 34.5
      comp=Z,38nm,0.6s
T57A  Hurt             25.80  14 P     P     17 04 33.3 +2.2
      baz=197,SNR=14
T57A                             P     P     17 04 33.3 +2.2
      baz=197,SNR=14
QUOK  Quay             25.81 341 IAmb  IAmb  17 04 32.9
      comp=Z,58nm,0.7s
OK048 Pawnee Station   26.11 341 IAmb  IAmb  17 05 07.8
      comp=Z,26nm,0.7s
S54A  Dingess, Beckl   26.18   9 P     P     17 04 36.3 +1.8
      baz=192
S54A                             P     P     17 04 36.3 +1.8
      baz=192
WCI   Wyandotte Cave   26.18   0 P     P     17 04 34.9 +0.5
WCI                              IAmb  IAmb  17 04 37.1
      comp=Z,32nm,0.7s
WCI   Wyandotte Cave   26.18   0 P     P     17 04 34.9 +0.5
WCI                              pmax  pmax
      comp=Z,32nm,0.7s
WCI   Wyandotte Cave   26.18   0 P     P     17 04 35.3 +0.8
      baz=181
WCI   Wyandotte Cave   26.18   0 P     P     17 04 36.1 +1.6
      baz=181,SNR=9.1
T59A  Double "B" Far   26.21  16 IAmb  IAmb  17 04 38.2
      comp=Z,94nm,1.8s
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MNTX  Cornudas Mount   26.23 322 P     P     17 04 35.1 +0.1
MNTX  Cornudas Mount   26.23 322 P     P     17 04 35.6 +0.5
      baz=135,SNR=22
MNTX  Cornudas Mount   26.23 322 P     P     17 04 35.8 +0.8
      baz=135,SNR=22
R49A  Shelbyville      26.27   2 IAmb  IAmb  17 04 37.6
      comp=Z,33nm,0.6s
R49A  Shelbyville      26.27   2 P     P     17 04 36.6 +1.3
      baz=183,SNR=12
R49A                             P     P     17 04 36.6 +1.3
      baz=183,SNR=12
R50A  Paris            26.31   4 IAmb  IAmb  17 04 38.3
      comp=Z,24nm,0.6s
R50A  Paris            26.31   4 P     P     17 04 37.1 +1.5
      baz=185,SNR=10.0
R50A                             P     P     17 04 37.1 +1.5
      baz=185,SNR=10.0
CCM   Cathedral Cave   26.35 352 P     P     17 04 35.7 -0.2
CCM   Cathedral Cave   26.35 352 P     P     17 04 35.7 -0.2
CCM                              pmax  pmax
      comp=Z,16nm,0.7s
CCM   Cathedral Cave   26.35 352 P     P     17 04 37.0 +1.1
      baz=170
CCM   Cathedral Cave   26.35 352 P     P     17 04 36.8 +0.9
      baz=170,SNR=13
S39A  Bolivar          26.35 348 IAmb  IAmb  17 04 38.2
      comp=Z,21nm,0.7s
S39A  Bolivar          26.35 348 P     P     17 04 36.4 +0.3
      baz=165,SNR=20
T35B  Sooner Cattle    26.44 342 P     P     17 04 37.9 +1.0
      baz=158,SNR=6.6
MSTX  Muleshoe         26.46 329 IAmb  IAmb  17 04 39.7
      comp=Z,46nm,0.8s
MSTX  Muleshoe         26.46 329 P     P     17 04 37.3 +0.1
      baz=142,SNR=15
MSTX  Muleshoe         26.46 329 P     P     17 04 37.6 +0.4
      baz=142,SNR=15
CROK  Carrier          26.54 339 IAmb  IAmb  17 04 39.3
      comp=Z,32nm,0.7s
S57A  Dark Hollow, R   26.60  14 P     P     17 04 40.2 +2.0
      baz=197,SNR=6.3
S57A                             P     P     17 04 40.2 +2.0
      baz=197,SNR=6.3
T60A  Surry            26.60  18 P     P     17 04 40.5 +2.3
      baz=202
T60A                             P     P     17 04 40.5 +2.3
      baz=202
R53A  Hurricane        26.60   8 P     P     17 04 39.2 +0.9
R53A                             IAmb  IAmb  17 04 41.9
      comp=Z,32nm,0.6s
R53A  Hurricane        26.60   8 P     P     17 04 40.0 +1.7
      baz=190,SNR=12
R53A                             P     P     17 04 40.0 +1.7
      baz=190,SNR=12
AMTX  Amarillo         26.66 331 IAmb  IAmb  17 05 01.2
      comp=Z,33nm,0.9s
AMTX  Amarillo         26.66 331 P     P     17 04 39.4 +0.4
      baz=146
AMTX  Amarillo         26.66 331 P     P     17 04 39.5 +0.6
      baz=146,SNR=7.3
ELIS  Ellis County     26.69 336 P     P     17 04 39.4 +0.3
ELIS                             IAmb  IAmb  17 04 45.0
      comp=Z,42nm,0.7s
OLIL  Olney            26.72 357 P     P     17 04 41.3 +2.0
      baz=177
R40A  Maddies Statio   26.74 350 P     P     17 04 39.4  0.0
      baz=168,SNR=7.2
U32A  Winter Ranch,    26.80 337 P     P     17 04 39.9 -0.2
U32A                             IAmb  IAmb  17 04 45.6
      comp=Z,33nm,0.7s
U32A  Winter Ranch,    26.80 337 P     P     17 04 40.8 +0.7
      baz=152
R55A  Marlinton        26.86  11 IAmb  IAmb  17 04 44.3
      comp=Z,29nm,0.7s
R55A  Marlinton        26.86  11 P     P     17 04 43.3 +2.7
      baz=194,SNR=12
R55A                             P     P     17 04 43.3 +2.7
      baz=194,SNR=12
OK032 Salt Plains WL   26.89 339 IAmb  IAmb  17 04 41.9
      comp=Z,22nm,0.6s
KAN17 Caldwell West    26.95 340 P     P     17 04 40.3 -1.1
KAN17                            IAmb  IAmb  17 04 42.4
      comp=Z,25nm,0.6s
KIDD  KIDD Seismic O   26.98 320 P     P     17 04 43.7 +1.8
      baz=133
KAN05 Bluff City Nor   27.05 340 IAmb  IAmb  17 04 43.0
      comp=Z,28nm,0.7s
KAN01 Argonia South    27.05 340 IAmb  IAmb  17 04 43.0
      comp=Z,24nm,0.6s
BLO   Bloomington      27.12   0 P     P     17 04 43.0 +0.1
BLO                              IAmb  IAmb  17 04 44.8
      comp=Z,31nm,0.6s
BLO   Bloomington      27.12   0 P     P     17 04 43.0 +0.1
BLO                              pmax  pmax
      comp=Z,31nm,0.6s
Q52A  Bidwell          27.18   7 IAmb  IAmb  17 04 46.8
      comp=Z,45nm,0.8s
Q52A  Bidwell          27.18   7 P     P     17 04 45.5 +2.1
      baz=189,SNR=8.7
Q52A                             P     P     17 04 45.5 +2.1
      baz=189,SNR=8.7
KAN08 Anthony NE Sta   27.19 340 IAmb  IAmb  17 04 44.7
      comp=Z,30nm,0.7s
Q54A  Coxs Mills       27.41  10 IAmb  IAmb  17 04 49.0
      comp=Z,43nm,0.9s
Q54A  Coxs Mills       27.41  10 P     P     17 04 47.5 +2.0
      baz=192,SNR=17
Q54A                             P     P     17 04 47.5 +2.0
      baz=192,SNR=17
CBN   Corbin Frederi   27.41  16 P     P     17 04 46.4 +0.9
      baz=200
CBN   Corbin Frederi   27.41  16 P     P     17 04 47.8 +2.3
      baz=200
P48A  Milroy           27.43   2 IAmb  IAmb  17 04 47.3
      comp=Z,45nm,0.6s
P48A  Milroy           27.43   2 P     P     17 04 46.2 +0.5
      baz=182,SNR=16
P48A                             P     P     17 04 46.2 +0.5
      baz=182,SNR=16
BOAV  Boa Vista        27.48 108 eP    P     17 04 48.6 +2.3
P49A  Miami Univ. Ec   27.53   3 IAmb  IAmb  17 04 48.3
      comp=Z,35nm,0.6s
P49A  Miami Univ. Ec   27.53   3 P     P     17 04 47.2 +0.6
      baz=184,SNR=9.9
P49A  Miami Univ. Ec   27.53   3 P     P     17 04 47.5 +0.9
      baz=184,SNR=9.9
P46A  Rosedale         27.57 359 P     P     17 04 48.5 +1.6
      baz=179
P51A  Williamsport     27.61   6 P     P     17 04 48.3 +1.1
P51A  Williamsport     27.61   6 P     P     17 04 48.6 +1.3
      baz=188
P51A                             P     P     17 04 48.6 +1.3
      baz=188
Q56A  Snyder Ridge,    27.78  12 IAmb  IAmb  17 04 53.1
      comp=Z,30nm,0.7s
Q56A  Snyder Ridge,    27.78  12 P     P     17 04 51.9 +3.1
      baz=196,SNR=11
Q56A                             P     P     17 04 51.9 +3.1
      baz=196,SNR=11
P53A  Whipple          27.82   9 IAmb  IAmb  17 04 52.9
      comp=Z,62nm,1.1s
P53A  Whipple          27.82   9 P     P     17 04 51.2 +2.1
      baz=191,SNR=15
P53A                             P     P     17 04 51.2 +2.1
      baz=191,SNR=15
P52A  Corning          27.86   7 P     P     17 04 50.3 +0.8
      baz=189,SNR=17
O49A  Covington        28.21   4 IAmb  IAmb  17 04 55.1
      comp=Z,20nm,0.7s
O49A  Covington        28.21   4 P     P     17 04 53.8 +1.2
      baz=185,SNR=6.1
O49A                             P     P     17 04 53.8 +1.2
      baz=185,SNR=6.1
O48B  Farmland         28.23   2 P     P     17 04 53.3 +0.4
      baz=183,SNR=9.5
O48B  Farmland         28.23   2 P     P     17 04 53.6 +0.8
      baz=183,SNR=9.5
MCWV  Mont Chateau     28.24  11 P     P     17 04 54.3 +1.4
      baz=194
MCWV  Mont Chateau     28.24  11 P     P     17 04 54.9 +2.1
      baz=194
P38A  Dawn             28.26 349 P     P     17 04 53.0 -0.1
      baz=166,SNR=9.8
121A  Cookes Peak, D   28.29 320 P     P     17 04 55.3 +1.6
121A                             IAmb  IAmb  17 05 00.5
      comp=Z,28nm,0.8s
121A  Cookes Peak, D   28.29 320 P     P     17 04 55.5 +1.8
      baz=132
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121A	Cookes Peak, D	28.29	320	P	P	17 04 56.0	+2.3
	baz=132,SNR=25						
SFIN	Lafayette	28.33	359	IAmb	IAmb	17 04 55.0	
	comp=Z,34nm,1.4s						
SFIN	Lafayette	28.33	359	P	P	17 04 54.0	+0.3
	baz=179						
ACSO	Alum Creek Sta	28.36	6	IAmb	IAmb	17 04 56.3	
	comp=Z,28nm,0.6s						
ACSO	Alum Creek Sta	28.36	6	P	P	17 04 54.9	+1.0
	baz=187,SNR=8.7						
ACSO	Alum Creek Sta	28.36	6	P	P	17 04 55.4	+1.5
	baz=187,SNR=8.7						
O52A	Adamsville	28.37	8	P	P	17 04 53.9	-0.1
O52A	Adamsville	28.37	8	P	P	17 04 55.9	+1.8
	baz=190,SNR=7.1						
O52A				P	P	17 04 55.9	+1.8
	baz=190,SNR=7.1						
P57A	Homestead Farm	28.46	14	IAmb	IAmb	17 04 58.7	
	comp=Z,96nm,1.4s						
P57A	Homestead Farm	28.46	14	P	P	17 04 58.0	+3.1
	baz=198,SNR=9.3						
P57A				P	P	17 04 58.0	+3.1
	baz=198,SNR=9.3						
KSU1	Kansas State U	28.49	343	P	P	17 04 55.2	+0.1
	baz=159,SNR=5.7						
KSU1	Kansas State U	28.49	343	P	P	17 04 55.5	+0.3
	baz=159,SNR=5.7						
R32A	Long Quarter,	28.52	340	IAmb	IAmb	17 04 58.4	
	comp=Z,21nm,0.7s						
R32A	Long Quarter,	28.52	340	P	P	17 04 55.8	+0.4
	baz=155						
319A	Douglas	28.54	316	IAmb	IAmb	17 05 03.9	
	comp=Z,23nm,0.7s						
BBSR	BB Station	28.58	41	P	P	17 04 56.4	+0.5
BBSR				IAmb	IAmb	17 04 59.9	
	comp=Z,38nm,0.8s						
BBSR	BB Station	28.58	41	P	P	17 04 58.2	+2.3
	baz=230						
O53A	New Philadelph	28.59	9	P	P	17 04 57.2	+1.2
	baz=191,SNR=14						
HDIL	Hopedale	28.61	356	IAmb	IAmb	17 04 58.8	
	comp=Z,23nm,0.8s						
HDIL	Hopedale	28.61	356	P	P	17 04 56.7	+0.6
	baz=174						
HDIL	Hopedale	28.61	356	P	P	17 04 57.4	+1.3
	baz=174						
O54A	Avella	28.66	10	P	P	17 04 58.4	+1.8
	baz=193						
O54A				P	P	17 04 58.4	+1.8
	baz=193						
SDMD	Soldier’s Deli	28.69	16	IAmb	IAmb	17 04 59.8	
	comp=Z,13nm,0.5s						
SDMD	Soldier’s Deli	28.69	16	P	P	17 04 59.6	+2.7
	baz=200,SNR=6.0						
Y22A	Socorro	28.75	323	P	P	17 04 59.9	+2.2
	baz=135,SNR=14						
N47A	Urbana	28.84	1	IAmb	IAmb	17 05 00.5	
	comp=Z,13nm,0.5s						
N49A	Columbus Grove	28.95	4	P	P	17 05 00.3	+1.2
	baz=185,SNR=26						
N49A				P	P	17 05 00.3	+1.2
	baz=185,SNR=26						
PABK	Blue Knob Stat	29.08	13	P	P	17 05 02.6	+2.2
	baz=196						
DUN6	Lazy B Ranch	29.14	318	P	P	17 05 02.0	+0.9
DUN6				IAmb	IAmb	17 05 09.0	
	comp=Z,49nm,0.9s						
ANMO	Albuquerque	29.18	325	P	P	17 05 02.6	+1.1
	comp=Z,14nm,0.8s,baz=233,slow=5.9,SNR=32						
ANMO				LR	LR	17 18 17.8	
	comp=Z,121nm,18.2s,baz=182,slow=39						
	comp=Z,14nm,0.8s						
ANMO	Albuquerque	29.18	325	P	P	17 05 02.2	+0.7
ANMO	Albuquerque	29.18	325⇓	*i*P	P	17 05 03.4	+1.9
ANMO				pmax	pmax		
	comp=Z,14nm,0.8s						
ANMO	Albuquerque	29.18	325	P	P	17 05 02.8	+1.3
	baz=137						
ANMO	Albuquerque	29.18	325	P	P	17 05 03.5	+2.0
	baz=137,SNR=21						
N53A	Lisbon	29.19	9	P	P	17 05 02.8	+1.5
	baz=192,SNR=14						
N53A				P	P	17 05 02.8	+1.5
	baz=192,SNR=14						
N38A	Joes South For	29.34	350	IAmb	IAmb	17 05 04.7	
	comp=Z,23nm,0.6s						
N38A	Joes South For	29.34	350	P	P	17 05 04.4	+1.8
	baz=167						
MVL	Millersville	29.37	16	P	P	17 05 04.0	+1.2
MVL				IAmb	IAmb	17 05 07.8	
	comp=Z,37nm,1.1s						
M50A	Fremont	29.51	5	P	P	17 05 05.4	+1.3
	baz=187						
M50A				P	P	17 05 05.4	+1.3
	baz=187						
SSPA	Standing Stone	29.59	13	P	P	17 05 06.3	+1.5
SSPA	Standing Stone	29.59	13	P	P	17 05 06.5	+1.7
	baz=197						
SSPA	Standing Stone	29.59	13	P	P	17 05 06.9	+2.1
	baz=197,SNR=17						
ETMB	Extrema	29.59	136	P	P	17 05 04.4	-0.7
ETMB				IAmb	IAmb	17 05 09.2	
	comp=Z,24nm,0.6s						
ETMB	Extrema	29.59	136	*e*P	P	17 05 05.5	+0.3
T25A	Trinidad	29.78	330	P	P	17 05 07.9	+1.0
	baz=143,SNR=8.5						
M53A	WI Miller and	29.84	9	P	P	17 05 06.6	-0.4
M53A	WI Miller and	29.84	9	P	P	17 05 08.4	+1.4
	baz=192						
M52A	Chesterland	29.84	8	P	P	17 05 08.7	+1.6
	baz=190						
M52A				P	P	17 05 08.7	+1.6
	baz=190						
TUPA	Temple Univers	29.86	18	P	P	17 05 09.8	+2.6
	baz=203,SNR=7.8						
PSDB	Penn State Uni	29.87	12	P	P	17 05 09.4	+2.1
	baz=196						
L48A	N Adams	29.95	3	P	P	17 05 07.4	-0.6
L48A	N Adams	29.95	3	P	P	17 05 09.1	+1.0
	baz=184,SNR=6.2						
L48A				P	P	17 05 09.1	+1.0
	baz=184,SNR=6.2						
L46A	Eue Claire	29.96	0	P	P	17 05 08.6	+0.5
	baz=181						
L46A				P	P	17 05 08.6	+0.5
	baz=181						
N58A	Sunbury	30.06	15	IAmb	IAmb	17 05 13.6	
	comp=Z,38nm,0.8s						
N58A	Sunbury	30.06	15	P	P	17 05 11.5	+2.5
	baz=200,SNR=13						
N58A				P	P	17 05 11.5	+2.5
	baz=200,SNR=13						
L42A	Oliver, Polo	30.08	355	IAmb	IAmb	17 05 11.8	
	comp=Z,34nm,0.7s						
L42A	Oliver, Polo	30.08	355	P	P	17 05 09.9	+0.8
	baz=174,SNR=11						
TUC	Tucson	30.12	316	P	P	17 05 08.3	-1.5
TUC					PcP	17 08 09.5	0.0
TUC	Tucson	30.12	316	P	P	17 05 08.3	-1.5
TUC						17 08 09.5	
TUC				pmax	pmax		
	comp=Z,12nm,1.0s						
TUC	Tucson	30.12	316	P	P	17 05 10.1	+0.3
	baz=127						
TUC	Tucson	30.12	316	P	P	17 05 11.1	+1.4
TUC				pP	pP	17 05 31.6	+2.5
ALLY	Alegheny Colle	30.12	10	P	P	17 05 10.5	+1.0
ALLY	Alegheny Colle	30.12	10	P	P	17 05 11.6	+2.1
	baz=193						
L44A	Lake County Fo	30.15	358	P	P	17 05 10.1	+0.3
	baz=178						
PANJ	Princeton	30.19	18	P	P	17 05 13.1	+2.9
	baz=204,SNR=5.2						
M55A	Ridgway	30.20	12	P	P	17 05 11.5	+1.2
	baz=195						
M55A				P	P	17 05 11.5	+1.2
	baz=195						
LUPA	Lehigh Univers	30.20	17	IAmb	IAmb	17 05 14.6	
	comp=Z,28nm,0.9s						
N33B	J Bar K, Exete	30.25	343	P	P	17 05 11.5	+0.8
	baz=159,SNR=11						
L40A	Anamosa	30.29	353	P	P	17 05 09.4	-1.6
L40A				IAmb	IAmb	17 05 11.8	
	comp=Z,16nm,0.8s						
L40A	Anamosa	30.29	353	P	P	17 05 11.5	+0.6
	baz=171						
M57A	Sunshine Farm,	30.43	14	P	P	17 05 14.6	+2.3
	baz=198,SNR=19						
M57A				P	P	17 05 14.6	+2.3
	baz=198,SNR=19						
BRNJ	Basking Ridge	30.52	18	IAmb	IAmb	17 05 16.3	
	comp=Z,32nm,0.8s						
KSCO	Kaye Shedlock’	30.52	335	P	P	17 05 13.8	+0.5
	baz=148						
ERPA	Erie	30.61	10	P	P	17 05 14.9	+1.1
	baz=193,SNR=7.5						
ERPA	Erie	30.61	10	P	P	17 05 15.5	+1.7
	baz=193,SNR=7.5						
SDCO	Great Sand Dun	30.79	330	P	P	17 05 16.6	+0.7
SDCO				IAmb	IAmb	17 05 18.9	
	comp=Z,12nm,0.6s						
SDCO	Great Sand Dun	30.79	330	P	P	17 05 16.6	+0.7
	baz=142,SNR=37						
SDCO	Great Sand Dun	30.79	330	P	P	17 05 17.5	+1.6
	baz=142,SNR=37						
ODNJ	Ogdensburg	30.87	18	IAmb	IAmb	17 05 20.4	
	comp=Z,20nm,1.0s						
X18A	Snowflake	30.96	320	P	P	17 05 17.8	+0.5
X18A				pP	pP	17 05 36.8	+0.1
KSPA	Keystone Colle	30.98	16	IAmb	IAmb	17 05 21.6	
	comp=Z,39nm,0.8s						
KSPA	Keystone Colle	30.98	16	P	P	17 05 19.3	+2.2
	baz=201,SNR=10						
PAL	Palisades	31.01	19	P	P	17 05 17.7	+0.4
	baz=205						
JFWS	Jewell Farm	31.03	355	IAmb	IAmb	17 05 19.3	
	comp=Z,79nm,1.9s						
JFWS	Jewell Farm	31.03	355	P	P	17 05 17.3	-0.2
	baz=173						
BGNE	Belgrade	31.07	343	P	P	17 05 17.8	-0.1
	baz=158,SNR=7.2						
BGNE	Belgrade	31.07	343	P	P	17 05 18.5	+0.6
	baz=158,SNR=7.2						
K38A	Parkersburg	31.07	351	IAmb	IAmb	17 05 19.0	
	comp=Z,17nm,0.7s						
L56A	Greenwood	31.09	13	IAmb	IAmb	17 05 22.2	
	comp=Z,30nm,0.8s						
L56A	Greenwood	31.09	13	P	P	17 05 19.8	+1.6
	baz=197,SNR=9.5						
L56A				P	P	17 05 19.8	+1.6
	baz=197,SNR=9.5						
L34A	Svendsen Farm,	31.12	346	IAmb	IAmb	17 05 20.9	
	comp=Z,20nm,0.8s						
WVNY	West Valley, N	31.13	11	P	P	17 05 20.3	+1.8
	baz=195,SNR=6.6						
W18A	Petrified Fore	31.22	321	P	P	17 05 21.3	+1.7
	baz=132						
214A	Organ Pipe Nat	31.32	314	P	P	17 05 21.3	+1.0
	baz=124						
S22A	4UR Ranch, Cre	31.46	328	P	P	17 05 23.3	+1.6
	baz=140,SNR=20						
BINY	Binghamton	31.52	15	P	P	17 05 23.7	+1.8
	baz=200,SNR=14						
BINY	Binghamton	31.52	15	P	P	17 05 24.1	+2.1
	baz=200,SNR=14						
MMNY	Mt. Morris Dam	31.59	12	P	P	17 05 22.3	-0.1
Q24A	Divide	31.59	332	P	P	17 05 23.9	+1.0
	baz=144						
NPNY	Mohonk Preserv	31.62	18	P	P	17 05 25.3	+2.5
	baz=204,SNR=11						
L59A	Walton	31.77	16	P	P	17 05 26.2	+2.1
	baz=202,SNR=14						
L59A				P	P	17 05 26.2	+2.1
	baz=202,SNR=14						
KSCT	Kent School, K	31.80	19	IAmb	IAmb	17 05 28.0	
	comp=Z,24nm,0.6s						
X16A	Lo Mia Camp, P	31.84	319	P	P	17 05 26.1	+1.1
X16A				IAmb	IAmb	17 05 28.4	
	comp=Z,25nm,0.7s						
K57A	Scipio Center	31.90	14	IAmb	IAmb	17 05 27.5	
	comp=Z,33nm,0.8s						
K57A	Scipio Center	31.90	14	P	P	17 05 26.9	+1.8
	baz=199,SNR=6.6						
I42A	Draeger Farm,	31.90	357	IAmb	IAmb	17 05 26.9	
	comp=Z,35nm,1.0s						
I42A	Draeger Farm,	31.90	357	P	P	17 05 25.6	+0.4
	baz=176,SNR=8.9						
OGNE	Ogallala	31.94	338	IAmb	IAmb	17 05 29.8	
	comp=Z,20nm,0.7s						
OGNE	Ogallala	31.94	338	P	P	17 05 27.1	+1.4
	baz=151						
MVCO	Mesa Verde	31.96	326	IAmb	IAmb	17 05 28.6	
	comp=Z,16nm,0.8s						
MVCO	Mesa Verde	31.96	326	P	P	17 05 27.2	+1.2
	baz=136,SNR=7.4						
I40A	Norwalk	32.03	354	IAmb	IAmb	17 05 26.5	
	comp=Z,20nm,0.9s						
I40A	Norwalk	32.03	354	P	P	17 05 26.4	0.0
	baz=173,SNR=5.8						
J56A	Wolcott	32.33	13	P	P	17 05 29.1	+0.2
J56A	Wolcott	32.33	13	P	P	17 05 30.6	+1.7
	baz=198,SNR=26						
J56A				P	P	17 05 30.6	+1.7
	baz=198,SNR=26						
HCNY	Howe Caverns	32.42	17	P	P	17 05 32.0	+2.3
	baz=203,SNR=11						
ISCO	Idaho Springs	32.47	332	P	P	17 05 31.7	+1.1
	baz=144						
WUAZ	Wupatki	32.49	320	P	P	17 05 29.9	-0.8
WUAZ				IAmb	IAmb	17 05 34.9	
	comp=Z,31nm,1.1s						
I37B	Waseca	32.50	351	P	P	17 05 30.6	+0.1
	baz=168,SNR=7.6						
Y14A	Wickenburg	32.58	317	P	P	17 05 31.3	-0.1
BRYW	Bryant College	32.62	21	IAmb	IAmb	17 05 34.2	
	comp=Z,24nm,0.7s						
J57A	Williamstown	32.66	14	P	P	17 05 32.6	+0.8
J57A	Williamstown	32.66	14	P	P	17 05 33.4	+1.6
	baz=199,SNR=14						
J57A				P	P	17 05 33.4	+1.6
	baz=199,SNR=14						
L61B	Northampton	32.71	19	P	P	17 05 33.7	+1.5
	baz=206						
L61B	Northampton	32.71	19	P	P	17 05 34.4	+2.1
	baz=206,SNR=11						
J58A	Remsen	32.79	15	P	P	17 05 34.6	+1.6
	baz=201,SNR=16						
J58A				P	P	17 05 34.6	+1.6
	baz=201,SNR=16						
GLMI	Grayling	32.81	3	P	P	17 05 33.0	-0.2
	baz=184						
PV13	Radium Mtn., P	32.82	327	P	P	17 05 33.4	-0.2
PV13				IAmb	IAmb	17 05 36.7	
	comp=Z,16nm,0.7s						
ECSD	EROS Data Cent	32.85	346	IAmb	IAmb	17 05 35.0	
	comp=Z,15nm,0.7s						
ECSD	EROS Data Cent	32.85	346	P	P	17 05 32.8	-0.7
	baz=162,SNR=14						
PV05	Paradox Valley	32.91	326	P	P	17 05 33.7	-0.7
PV05				pP	pP	17 05 53.2	-0.6
PV12	Saucer Basin,	32.92	327	P	P	17 05 35.1	+0.6
PECO	Prince Edward	32.93	13	IAmb	IAmb	17 05 35.8	
	comp=Z,44nm,1.2s						
G45A	Suttons Bay	33.00	1	P	P	17 05 35.1	+0.4
	baz=182,SNR=7.4						
G45A				P	P	17 05 35.1	+0.4
	baz=182,SNR=7.4						
K62A	Royalston	33.05	20	IAmb	IAmb	17 05 39.5	
	comp=Z,38nm,1.1s						
J59A	Piesco	33.10	16	IAmb	IAmb	17 05 38.0	
	comp=Z,27nm,0.9s						
J59A	Piesco	33.10	16	P	P	17 05 37.4	+1.7
	baz=202,SNR=8.1						
J59A				P	P	17 05 37.4	+1.7
	baz=202,SNR=8.1						
PV23	Carpenter Ridg	33.14	327	P	P	17 05 35.6	-0.8
PV23				IAmb	IAmb	17 05 39.7	
	comp=Z,20nm,0.7s						
ACCN	Adirondack Com	33.26	17	IAmb	IAmb	17 05 39.6	
	comp=Z,61nm,1.6s						
WCNY	West Carthage	33.28	14	P	P	17 05 38.8	+1.5
	baz=200,SNR=12						
SADO	Sadowa	33.33	10	P	P	17 05 38.2	+0.6
	comp=Z,25nm,0.7s,baz=207,slow=8.7,SNR=22						
SADO				LR	LR	17 18 40.2	
	comp=Z,136nm,21.8s,baz=153,slow=36						
GLA	Glamis	33.34	314	P	P	17 05 37.1	-0.9
GLA				IAmb	IAmb	17 05 41.0	
	comp=Z,19nm,0.8s						
GLA	Glamis	33.34	314	P	P	17 05 37.1	-0.9
GLA				pmax	pmax		
	comp=Z,19nm,0.8s						
GLA	Glamis	33.34	314	P	P	17 05 38.5	+0.5
	baz=123						
DELO	Deloro Mine	33.36	12	P	P	17 05 37.8	-0.1
DELO				IAmb	IAmb	17 05 40.4	
	comp=Z,62nm,1.6s						
G40A	Rib Lake	33.36	355	IAmb	IAmb	17 05 39.3	
	comp=Z,16nm,0.9s						
G40A	Rib Lake	33.36	355	P	P	17 05 38.0	0.0
	baz=174,SNR=6.9						
LPAZ	La Paz	33.44	147	P	P	17 05 40.9	+1.3
	comp=Z,1.0nm,0.4s,baz=264,slow=6.2,SNR=4.5						
LPAZ				LR	LR	17 19 54.7	
	comp=Z,124nm,20.7s,baz=340,slow=37						
	comp=Z,1.0nm,0.4s						
LPAZ	La Paz	33.44	147	*e*P	P	17 05 40.2	+0.6
N23A	Red Feather La	33.51	333	P	P	17 05 40.6	+1.1
	baz=144						
J61A	Chester	33.56	19	P	P	17 05 42.3	+2.6
	baz=205,SNR=10						
J61A				P	P	17 05 42.3	+2.6
	baz=205,SNR=10						
PDMCI	Parker Dam,Lak	33.56	316	P	P	17 05 41.1	+1.3
	baz=125,SNR=7.4						
SPMN	Marine on St.	33.60	352	P	P	17 05 38.9	-1.1
SPMN	Marine on St.	33.60	352	P	P	17 05 39.3	-0.6
	baz=169						
SPMN	Marine on St.	33.60	352	P	P	17 05 39.7	-0.3
	baz=169,SNR=9.8						
PHWY	Pilot Hill	33.62	334	P	P	17 05 40.3	-0.3
NCB	Newcomb	33.64	16	P	P	17 05 41.9	+1.5
	baz=202,SNR=6.8						
W13A	Hualapai Mount	33.85	317	P	P	17 05 42.4	-0.2
YUH	Yuha Desert	33.92	312	P	P	17 05 44.0	+1.0
YUH				IAmb	IAmb	17 06 53.0	
	comp=Z,23nm,1.6s						
SWSC	Sam W. Stewart	33.98	313	P	P	17 05 44.6	+1.1
	baz=121						
O20A	White River Ci	33.99	330	P	P	17 05 42.8	-0.9
O20A				IAmb	IAmb	17 05 48.6	
	comp=Z,16nm,0.7s						
O20A	White River Ci	33.99	330	P	P	17 05 45.5	+1.8
	baz=140						
IKP	In-Ko-Pah, Jac	34.05	312	P	P	17 05 45.8	+1.6
	baz=121						
SUSD	Miller	34.10	344	P	P	17 05 42.9	-1.4
SUSD	Miller	34.10	344	P	P	17 05 43.8	-0.6
	baz=158						
BC3	Big Chuckawall	34.11	314	P	P	17 05 46.0	+1.3
	baz=123,SNR=6.9						
COWI	Conover	34.12	357	P	P	17 05 43.5	-1.0
COWI				IAmb	IAmb	17 05 44.9	
	comp=Z,16nm,0.7s						
NEE2	Needles Airpor	34.15	316	P	P	17 05 46.5	+1.6
	baz=125						
IRM	Iron Mountain	34.17	315	P	P	17 05 46.7	+1.6
	baz=124						
MDP	Montagnes des	34.19	99	LR	LR	17 20 35.5	
	comp=Z,104nm,19.5s,baz=334,slow=38						
E43A	Lone Tree Farm	34.33	359	IAmb	IAmb	17 05 47.0	
	comp=Z,25nm,0.7s						
F36A	Milaca	34.33	351	IAmb	IAmb	17 05 47.2	
	comp=Z,17nm,0.8s						
F36A	Milaca	34.33	351	P	P	17 05 45.6	-0.7
	baz=168,SNR=11						
KNB	Kanab	34.35	321	IAmb	IAmb	17 05 51.8	
	comp=Z,16nm,0.8s						
BMNY	Brushton-Moira	34.38	15	P	P	17 05 47.9	+1.2
	baz=201,SNR=25						
MONP2	Monument Peak	34.40	312	P	P	17 05 48.6	+1.2
	baz=121						
I62A	Tamworth	34.42	20	P	P	17 05 49.8	+2.6
	baz=207,SNR=5.4						
I62A				P	P	17 05 49.8	+2.6
	baz=207,SNR=5.4						
PB16	IPOC Station P	34.46	151	IAmb	IAmb	17 05 52.0	
	comp=Z,33nm,1.4s						
LBNH	Lisbon	34.56	19	IAmb	IAmb	17 05 51.9	
	comp=Z,20nm,0.7s						
LBNH	Lisbon	34.56	19	P	P	17 05 50.0	+1.6
	baz=206						
LCMT	Little Creek M	34.61	321	P	P	17 05 50.2	+1.2
LCMT				pP	pP	17 06 06.1	-2.5
FRNY	Flat Rock	34.62	16	IAmb	IAmb	17 05 50.9	
	comp=Z,42nm,1.4s						
MTPU	Mount Pierson	34.64	323	IAmb	IAmb	17 05 53.8	
	comp=Z,17nm,0.8s						
P18A	Preston Nutter	34.65	327	P	P	17 05 49.9	+0.4
P18A				IAmb	IAmb	17 05 52.1	
	comp=Z,10nm,0.7s						
P18A					PcP	17 08 22.6	+0.4
ITTB	Itaituba	34.66	116	*e*P	P	17 05 50.0	+0.5
BELC	Belle Mtn. Jos	34.68	314	P	P	17 05 50.5	+0.9
	baz=122						
F33A	5 Mile Ranch,	34.79	348	P	P	17 05 49.5	-0.8
	baz=163,SNR=22						
TPFO	Pinon Flats	34.79	313	P	P	17 05 51.2	+0.5
	baz=122						
PFO	Pinyon Flats O	34.80	313	P	P	17 05 52.7	+2.0
	comp=Z,6.2nm,0.8s,baz=130,slow=6.4,SNR=7.9						
PFO				LR	LR	17 20 10.4	
	comp=Z,140nm,20.1s,baz=157,slow=36						
	comp=Z,6.2nm,0.8s						
PFO	Pinyon Flats O	34.80	313	P	P	17 05 52.3	+1.6
PFO	Pinyon Flats O	34.80	313⇓	*e*P	P	17 05 52.1	+1.4
PFO				pmax	pmax		
	comp=Z,16nm,1.3s						
PFO	Pinyon Flats O	34.80	313	P	P	17 05 51.7	+1.0
	baz=122						
PFO	Pinyon Flats O	34.80	313	P	P	17 05 50.6	0.0
PFO				x	x	17 06 02.8	
PFO				pP	pP	17 06 10.3	+0.1
I63A	Otisfield	34.83	20	P	P	17 05 53.3	+2.6
	baz=208,SNR=7.2						
I63A				P	P	17 05 53.3	+2.6
	baz=208,SNR=7.2						
GMRC	Granite Mounta	34.87	316	P	P	17 05 52.3	+1.0
	baz=124						
SZCU	Shurtz Canyon	34.88	322	IAmb	IAmb	17 05 56.0	
	comp=Z,10nm,0.8s						
TMUT	Trail Mountain	34.94	326	P	P	17 05 52.1	+0.1
TMUT				IAmb	IAmb	17 05 56.8	
	comp=Z,32nm,1.5s						
TMUT					PcP	17 08 23.0	0.0
RDMU	Red Mountain	34.99	329	P	P	17 05 51.6	-0.7
RDMU					PcP	17 08 23.1	+0.1
H62A	Milan	35.11	19	IAmb	IAmb	17 05 56.8	
	comp=Z,16nm,0.7s						
MURC	Murrieta	35.32	313	P	P	17 05 56.4	+1.3
	baz=121						
HEC	Hector,Ludlow	35.36	315	P	P	17 05 57.0	+1.6
	baz=123						
TUQ	Turquoise Moun	35.41	316	P	P	17 05 57.1	+1.2
	baz=124						
RSSD	Black Hills	35.43	338	P	P	17 05 57.7	+1.6
	baz=150						
RSSD	Black Hills	35.43	338	P	P	17 05 57.6	+1.6
ELS	Elsinore Mount	35.51	313	P	P	17 05 58.3	+1.6
ELS				IAmb	IAmb	17 06 00.0	
	comp=Z,10nm,0.8s						
BSUT	Blindstream Ca	35.58	328	P	P	17 05 57.9	+0.3
BSUT					PcP	17 08 25.4	+0.4
PB11	IPOC Station P	35.62	152	P	P	17 05 58.2	+0.4
PB11				IAmb	IAmb	17 06 00.8	
	comp=Z,46nm,1.4s						
TRQ	Mont Tremblant	35.66	14	IAmb	IAmb	17 05 59.1	
	comp=Z,18nm,0.8s						
MPU	Maple Canyon	35.67	326	IAmb	IAmb	17 06 00.7	
	comp=Z,11nm,0.6s						
GO01	Chusmiza	35.76	151	IAmb	IAmb	17 06 02.5	
	comp=Z,37nm,1.4s						
G62A	West of Eustis	35.88	19	P	P	17 06 01.7	+2.1
	baz=207,SNR=25						
G62A				P	P	17 06 01.7	+2.1
	baz=207,SNR=25						
GSC	Goldstone, Bar	35.94	315	P	P	17 06 01.6	+1.2
	baz=123						
BFSC	Mount Baldy Ra	35.98	313	P	P	17 06 02.0	+1.2
	baz=121						
VILB	Vilhena	35.98	133	P	P	17 06 00.4	-0.5
VILB	Vilhena	35.98	133	*e*P	P	17 06 00.9	0.0
JLU	Jordanelle	35.99	327	P	P	17 06 01.3	+0.3
JLU				IAmb	IAmb	17 06 03.3	
	comp=Z,8.2nm,0.6s						
TA01	Diego Aracena	36.09	153	P	P	17 06 02.2	+0.5
CIS	Catalina Islan	36.11	311	P	P	17 06 02.9	+1.1
	baz=119						
CTU	Camp Tracy	36.22	327	IAmb	IAmb	17 06 06.3	
	comp=Z,24nm,1.5s						
NPGB	Novo Progresso	36.30	120	*e*P	P	17 06 02.7	-1.0
PKME	Peaks-Kenny Pk	36.34	21	P	P	17 06 05.5	+2.0

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      baz=209,SNR=9.3
PKME  Peaks-Kenny Pk   36.34  21  P     P     17 06 05.9 +2.4
      baz=209,SNR=9.3
DUG   Dugway, Tooele   36.45 325  P     P     17 06 06.0 +1.3
      baz=133,SNR=5.5
TPNV  Topopah Spring   36.48 318  P     P     17 06 06.7 +1.6
      baz=126,SNR=10
SPR3  Spring Creek 3   36.53 322  P     P     17 06 05.5 -0.2
SPR3                                    PcP   17 08 27.8 +0.1
EDW2  Edwards Air Fo   36.54 314  P     P     17 06 06.9 +1.4
      baz=121
FURC  Furnace Creek,   36.62 317  P     P     17 06 07.6 +1.6
      baz=124
LRMC  Laurel Mtn Rad   36.63 315  P     P     17 06 07.5 +1.1
      baz=122
PDAR  Pinedale Array   36.64 331  P     P     17 06 06.8 +0.3
      comp=Z,3.6nm,0.5s,baz=130,slow=10.0,SNR=45
PDAR                              PcP   PcP   17 08 27.7 -0.2
      comp=Z,0.6nm,0.6s,baz=148,slow=4.1,SNR=2.1
PDAR                              ScP   ScP   17 12 06.2 -1.0
      comp=Z,1.2nm,0.9s,baz=135,slow=6.1,SNR=5.2
      comp=Z,3.6nm,0.5s
F62A  Pittston Farm,   36.67  19  P     P     17 06 08.6 +2.2
      baz=208,SNR=5.0
F62A                              P     P     17 06 08.6 +2.2
      baz=208,SNR=5.0
HWUT  Hardware Ranch   36.77 328  P     P     17 06 07.3 -0.2
HWUT                              IAmb  IAmb  17 06 09.7
      comp=Z,14nm,0.7s
HWUT                                    PcP   17 08 28.3  0.0
B35A  Bob, Littlefor   36.80 352  IAmb  IAmb  17 06 08.7
      comp=Z,10nm,0.7s
B35A  Bob, Littlefor   36.80 352  P     P     17 06 07.3 -0.1
      baz=168,SNR=6.0
MPMC  Manual Prospec   36.81 316  P     P     17 06 09.2 +1.3
      baz=123,SNR=5.8
PB01  IPOC Station P   36.81 153  IAmb  IAmb  17 06 10.5
      comp=Z,14nm,1.0s
R11B  Troy Canyon, C   36.89 321  P     P     17 06 10.0 +1.4
      baz=128
G65A  Princeton        36.91  23  P     P     17 06 10.8 +2.5
      baz=212,SNR=6.7
G65A                              P     P     17 06 10.8 +2.5
      baz=212,SNR=6.7
AGMN  Agassiz Nation   37.07 350  IAmb  IAmb  17 06 10.3
      comp=Z,18nm,0.6s
AGMN  Agassiz Nation   37.07 350  P     P     17 06 09.1 -0.7
      baz=165,SNR=16
F64A  Sherman          37.19  21  P     P     17 06 12.6 +1.8
      baz=210,SNR=8.3
F64A                              P     P     17 06 12.6 +1.8
      baz=210,SNR=8.3
ARVC  Arvin            37.26 314  P     P     17 06 11.2 -0.3
      baz=120
MDND  Maddock          37.43 346  P     P     17 06 12.5 -0.3
      baz=159
MDND  Maddock          37.43 346  P     P     17 06 12.9 +0.1
      baz=159,SNR=13
E62A  Clayton Lake     37.45  19  P     P     17 06 14.7 +1.8
      baz=208,SNR=8.7
E62A                              P     P     17 06 14.7 +1.8
      baz=208,SNR=8.7
SIV   San Ignacio      37.49 137  LR    LR    17 21 25.1
      comp=Z,109nm,19.4s,baz=310,slow=36
PB03  IPOC Station P   37.58 154  IAmb  IAmb  17 06 17.7
      comp=Z,35nm,1.3s
E63A  Oxbow            37.65  21  P     P     17 06 16.6 +2.0
      baz=210,SNR=11
E63A                              P     P     17 06 16.6 +2.0
      baz=210,SNR=11
MZP   Montezuma Peak   37.66 318  P     P     17 06 14.3 -0.9
MZP                                     PcP   17 08 32.0 +0.9
PDRB  Porto dos Gac    37.74 127 eP     P     17 06 16.7 +0.9
SNOW  Snow King Moun   37.74 331  IAmb  IAmb  17 06 39.9
      comp=Z,30nm,1.1s
TPH   Tonopah          37.77 319  IAmb  IAmb  17 06 19.2
      comp=Z,24nm,1.0s
VES   Vestal, Richgr   37.80 315  P     P     17 06 17.0 +0.9
      baz=121
PKM   Mcpherson Peak   37.84 313  P     P     17 06 17.1 +0.4
      baz=119
TPAW  Teton Pass       37.85 331  IAmb  IAmb  17 06 53.6
      comp=Z,12nm,0.8s
FXWY  Fox Creek        38.00 331  P     P     17 06 17.5 -0.5
FXWY                              pP    pP    17 06 37.4 -0.3
PQI   Presque Isle     38.00  21  IAmb  IAmb  17 06 20.0
      comp=Z,20nm,0.7s
IMW   Indian Meadow    38.16 331  P     P     17 06 17.5 -1.8
ELK   Elko             38.20 324  P     P     17 06 21.1 +1.5
      comp=Z,7.4nm,0.8s,baz=137,slow=6.0,SNR=24
ELK                               pP    pP    17 06 41.3 +1.9
      comp=Z,4.9nm,0.9s,baz=121,slow=6.6,SNR=4.5
ELK                               PcP   PcP   17 08 32.1 -0.6
      comp=Z,2.4nm,0.7s,baz=29,slow=1.6,SNR=4.7
ELK                               ScP   ScP   17 12 15.1 +2.0
      comp=Z,1.0nm,0.7s,baz=223,slow=3.1,SNR=4.7
      comp=Z,7.4nm,0.8s
RLMT  Red Lodge        38.35 334  P     P     17 06 20.3 -0.5
      baz=143,SNR=7.3
LAO   LASA Array       38.42 338  IAmb  IAmb  17 06 23.1
      comp=Z,9.4nm,0.7s
LAO   LASA Array       38.42 338  P     P     17 06 21.3  0.0
      baz=148
PTLB  Pontes e Lacer   38.43 134 eP     P     17 06 21.4 -0.2
LVC   Limon Verde      38.44 153  P     P     17 06 23.4 +1.5
      comp=Z,15nm,1.1s,baz=325,slow=5.7,SNR=8.1
      comp=Z,15nm,1.1s
LVC   Limon Verde      38.44 153  P     P     17 06 23.0 +1.0
LVC                               IAmb  IAmb  17 06 25.1
      comp=Z,27nm,1.2s
LVC   Limon Verde      38.44 153 eP     P     17 06 22.0  0.0
LVC   Limon Verde      38.44 153  P     P     17 06 22.4 +0.5
LVC                               pP    pP    17 06 42.6 +0.9
BBSD  Serra de San D   38.66 138 eP     P     17 06 22.8 -0.7
NVAR  Mina Array Bea   38.67 319  P     P     17 06 24.9 +1.3
      comp=Z,6.2nm,0.7s,baz=128,slow=8.3,SNR=18
NVAR                              pP    pP    17 06 45.2 +1.8
      comp=Z,5.5nm,0.9s,baz=135,slow=8.0,SNR=4.0
NVAR                              PcP   PcP   17 08 35.0 +0.8
      comp=Z,6.1nm,0.7s,baz=137,slow=4.5,SNR=15
NVAR                              ScP   ScP   17 12 14.9 -0.1
      comp=Z,1.2nm,0.7s,baz=134,slow=5.2,SNR=6.4
NVAR                              LR    LR    17 23 59.5
      comp=Z,138nm,20.0s,baz=138,slow=39
      comp=Z,6.2nm,0.7s
NVAR  Mina Array Bea   38.67 319  P     P     17 06 23.3 -0.3
NVAR                              pP    pP    17 06 41.5 -1.9
NVAR                                    PcP   17 08 34.7 +0.6
KVN   Kaiserville      38.89 320  IAmb  IAmb  17 06 28.4
      comp=Z,12nm,0.8s
ULM   Lac du Bonnet    38.96 350  P     P     17 06 24.5 -1.1
      comp=Z,17nm,0.6s,baz=164,slow=9.0,SNR=36
ULM                               LR    LR    17 26 01.4
      comp=Z,92nm,19.1s,baz=176,slow=42
      comp=Z,17nm,0.6s
ULM   Lac du Bonnet    38.96 350  IAmb  IAmb  17 06 25.2
      comp=Z,18nm,0.7s
BMN   Battle Mountai   39.17 322  IAmb  IAmb  17 06 31.4
      comp=Z,14nm,1.0s
BATG  Bathurst New B   39.22  22  IAmb  IAmb  17 06 29.8
      comp=Z,20nm,0.6s
DGMT  Dagmar           39.28 341  P     P     17 06 28.4  0.0
DGMT                              pP    pP    17 06 47.3 -1.0
DGMT  Dagmar           39.28 341  P     P     17 06 28.4  0.0
      baz=152,SNR=15
DGMT  Dagmar           39.28 341  P     P     17 06 29.0 +0.6
      baz=152,SNR=15
PB14  IPOC Station P   39.61 157  IAmb  IAmb  17 06 34.1
      comp=Z,28nm,1.1s
HLID  Hailey           39.64 328  P     P     17 06 32.0 +0.4
      baz=134,SNR=9.7
BOZ   Bozeman (W)      39.77 332  P     P     17 06 33.0 +0.5
      baz=140,SNR=11
LRM   Limekiln Ridge   40.31 332  P     P     17 06 36.4 -0.8
GO02  Mina Guanaco     40.41 156  P     P     17 06 38.2 -0.1
GO02                              IAmb  IAmb  17 06 40.9
      comp=Z,21nm,1.0s
EGMT  Eagleton         40.87 336  P     P     17 06 41.5 -0.1
      baz=144,SNR=6.8
SALV  Santo Antonio    41.20 131 eP     P     17 06 44.4 -0.2
WVOR  Wild Horse Val   41.24 323  IAmb  IAmb  17 06 47.1
      comp=Z,13nm,0.7s
PLID  Pearl Lake       41.52 328  P     P     17 06 47.1  0.0
MSO   Missoula         41.75 332  P     P     17 06 48.5 -0.4
      baz=138
BMO   Blue Mountains   42.04 327  P     P     17 06 50.7 -0.5
BMO   Blue Mountains   42.04 327  P     P     17 06 50.7 -0.5
BMO                               pmax  pmax
      comp=Z,6.0nm,0.7s
AC06  Mina Casimiro    42.10 158  IAmb  IAmb  17 06 54.0
      comp=Z,24nm,0.8s
PANT  Pantanal (Braz   42.60 136 eP     P     17 06 57.7 +1.8
YBH   Yreka Blue Hor   43.31 320  LR    LR    17 26 43.1
      comp=Z,176nm,18.8s,baz=139,slow=38
AC05  El Transito      43.48 159  IAmb  IAmb  17 07 05.5
      comp=Z,30nm,0.8s
LCO   Las Campanas     43.49 160  P     P     17 07 04.1 +0.8
LCO                               IAmb  IAmb  17 07 05.6
      comp=Z,25nm,1.1s
LCO   Las Campanas     43.49 160  P     P     17 07 04.1 +0.8
LCO                               pmax  pmax
      comp=Z,25nm,1.1s
ARAG  Araguaiana, MT   44.00 128 eP     P     17 07 07.2 -0.1
NEW   Newport          44.28 331  P     P     17 07 08.7 -0.4
      comp=Z,1.9nm,0.5s,baz=138,slow=8.1,SNR=2.8
      comp=Z,1.9nm,0.5s
NEW   Newport          44.28 331  P     P     17 07 08.6 -0.5
      baz=135
DRLN  Deer Lake        44.29  27  P     P     17 07 09.2 +0.1
DRLN                              IAmb  IAmb  17 07 10.9
      comp=Z,28nm,0.8s
FFC   Flin Flon        44.38 347  P     P     17 07 09.3 -0.5
FFC                               IAmb  IAmb  17 07 11.5
      comp=Z,20nm,0.7s
FFC   Flin Flon        44.38 347  P     P     17 07 09.3 -0.5
FFC                               pmax  pmax
      comp=Z,20nm,0.7s
FFC   Flin Flon        44.38 347  P     P     17 07 08.9 -0.9
GO04  Tololo Observa   44.53 160  IAmb  IAmb  17 07 13.8
      comp=Z,26nm,1.1s
RPN   Rapa Nui         44.69 209  LR    LR    17 22 36.5
      comp=Z,93nm,18.3s,baz=92,slow=31
CO06  Fray Jorge       44.73 162  IAmb  IAmb  17 07 15.0
      comp=Z,29nm,0.9s
CO03  El Pedregal      45.18 161  IAmb  IAmb  17 07 18.7
      comp=Z,32nm,1.1s
SCHQ  Schefferville    45.52  16  P     P     17 07 18.4 -0.4
      comp=Z,22nm,0.5s,baz=217,slow=6.3,SNR=99
SCHQ                              LR    LR    17 26 02.4
      comp=Z,234nm,21.0s,baz=224,slow=36
      comp=Z,22nm,0.5s
SCHQ  Schefferville    45.52  16  P     P     17 07 18.1 -0.7
EDM   Edmonton         46.41 338  IAmb  IAmb  17 07 26.9
      comp=Z,20nm,0.6s
AMBA  Amambai (Brazi   46.43 138 eP     P     17 07 25.6 -0.8
ZON   Zonda            46.51 159  IAmb  IAmb  17 07 29.4
      comp=Z,30nm,1.2s
VA06  Catapilco        46.59 162  IAmb  IAmb  17 07 29.3
      comp=Z,28nm,0.9s
BDFB  Brasilia         46.96 125  P     P     17 07 29.4 -1.4
      comp=Z,6.1nm,0.7s,baz=245,slow=8.4,SNR=7.6
      comp=Z,6.1nm,0.7s
ROC1  El Roble         47.06 162  IAmb  IAmb  17 07 38.0
      comp=Z,30nm,1.3s
FCC   Fort Churchill   47.08 355  IAmb  IAmb  17 07 31.7
      comp=Z,9.2nm,0.7s
PEL   Peldehue         47.32 162  P     P     17 07 33.0 -0.2
PEL                               IAmb  IAmb  17 07 52.4
      comp=Z,25nm,1.2s
PEL   Peldehue         47.32 162  P     P     17 07 33.0 -0.2
PEL                               pmax  pmax
      comp=Z,25nm,1.2s
CPUP  Villa Florida    47.48 144  P     P     17 07 33.6 -0.9
      comp=Z,2.6nm,0.7s,baz=326,slow=8.4,SNR=6.0
      comp=Z,2.6nm,0.7s
CPUP  Villa Florida    47.48 144 eP     P     17 07 33.5 -1.0
CPUP  Villa Florida    47.48 144  P     P     17 07 32.4 -2.1
CPUP                              pP    pP    17 07 54.7 -0.1
CPUP                              sP    sP    17 08 00.6 -3.7
MT08  Bocatoma Ro      47.80 161  IAmb  IAmb  17 07 40.2
      comp=Z,46nm,0.8s
MT09  Talagante        47.81 162  IAmb  IAmb  17 07 39.8
      comp=Z,52nm,1.6s
MT13  San Alfonso      47.99 162  IAmb  IAmb  17 09 07.0
      comp=Z,17nm,0.8s
LMEL  Las Melosas      48.12 162  IAmb  IAmb  17 07 41.9
      comp=Z,25nm,1.0s
LLLB  Lillooet         48.16 330  IAmb  IAmb  17 07 41.3
      comp=Z,7.6nm,0.6s
BO01  Tunca            48.36 163  P     P     17 07 41.5 +0.4
BO01                              IAmb  IAmb  17 07 43.8
      comp=Z,34nm,1.1s
BRLDA Berland Lookou   48.62 336  IAmb  IAmb  17 07 44.5
      comp=Z,16nm,0.7s
BO02  Sierra Bellavi   48.82 163  IAmb  IAmb  17 07 51.7
      comp=Z,16nm,0.9s
MECA  Mercedes         49.30 147 eP     P     17 07 48.5  0.0
AZCA  Azaras, Argent   49.58 144 eP     P     17 07 52.1 +1.5
ITQB  Itaqui           50.44 146 eP     P     17 07 57.3 +0.3
RODS  Rosario do Sul   51.75 145 eP     P     17 08 06.6 -0.2
GO06  Curarrehue       53.14 165  IAmb  IAmb  17 08 18.8
      comp=Z,10nm,0.9s
FRB   Frobisher Bay    53.27  10  LR    LR    17 30 33.2
      comp=Z,194nm,20.9s,baz=202,slow=36
PLTB  Pedras Altas     53.71 145  IAmb  IAmb  17 08 21.4
      comp=Z,24nm,1.1s
PLTB  Pedras Altas     53.71 145 eP     P     17 08 21.4 +0.1
LL04  Puerto Octay     54.18 167  IAmb  IAmb  17 08 25.9
      comp=Z,13nm,0.9s
YKA   Yellowknife Ar   54.34 344  P     P     17 08 24.5 -0.9
      comp=Z,3.2nm,0.7s,baz=142,slow=7.4,SNR=54
YKA                               pP    pP    17 08 46.0 -0.3
      comp=Z,4.6nm,0.8s,baz=138,slow=8.0,SNR=9.1
YKA                               PcP   PcP   17 09 27.6 -0.8
      comp=Z,1.5nm,0.7s,baz=146,slow=4.9,SNR=8.3
YKA                               ScP   ScP   17 13 17.7 -1.6
      comp=Z,0.5nm,0.7s,baz=140,slow=4.5,SNR=4.6
YKA                               LR    LR    17 34 23.9
      comp=Z,104nm,18.4s,baz=94,slow=39
      comp=Z,3.2nm,0.7s
PLCA  Paso Flores      54.46 165  P     P     17 08 27.4 +0.7
      comp=Z,22nm,0.9s,baz=339,slow=8.5,SNR=44
      comp=Z,22nm,0.9s
PLCA  Paso Flores      54.46 165  P     P     17 08 27.0 +0.3
PLCA                              pP    pP    17 08 44.9 -2.6
PLCA  Paso Flores      54.46 165  P     P     17 08 27.0 +0.3
PLCA                              pmax  pmax
      comp=Z,35nm,1.0s
PLCA  Paso Flores      54.46 165 eP     P     17 08 27.0 +0.3
PLCA  Paso Flores      54.46 165  P     P     17 08 26.5 -0.2
PLCA                              pP    pP    17 08 49.2 +1.7
TRQA  Tornquist        54.80 156  P     P     17 08 28.4 -0.8
TRQA                              IAmb  IAmb  17 08 30.0
      comp=Z,15nm,1.2s
TRQA  Tornquist        54.80 156  P     P     17 08 28.4 -0.8
TRQA                              pmax  pmax
      comp=Z,15nm,1.2s
ALF01 Guarapari-ES     55.47 125 eP     P     17 08 35.9 +1.7
KOTAN Kotaneelee Air   55.49 338  P     P     17 08 33.4 -0.4
      baz=134
LIRD  Liard River Hi   55.77 337  P     P     17 08 35.8  0.0
      baz=131
T35M  Bob Quinn        55.99 333  P     P     17 08 37.7 +0.3
      baz=126
LL02  Futaleuf         56.48 167  P     P     17 08 41.4 +0.4
LL02                              IAmb  IAmb  17 08 43.1
      comp=Z,20nm,1.1s
DLBC  Dease Lake       56.75 334  IAmb  IAmb  17 09 29.5
      comp=Z,9.9nm,1.1s
DLBC  Dease Lake       56.75 334  P     P     17 08 43.2 +0.3
      baz=126
WTLY  Watson Lake, Y   57.27 336  P     P     17 08 46.4 -0.1
      baz=129
AY01  Puyuhuapi        57.49 168  IAmb  IAmb  17 08 49.8
      comp=Z,13nm,0.9s
SIT   Sitka            58.36 331  P     P     17 08 53.6 -0.5
      baz=120
MMPY  Sheldon Lake,    59.75 338  P     P     17 09 03.0 -0.7
      baz=127
SFJD  Kangerlussuaq    59.97  15  LR    LR    17 34 14.8
      comp=Z,157nm,21.4s,baz=212,slow=35
O30N  Mendenhall       60.61 335  P     P     17 09 09.1 -0.6
      baz=121
M31M  Drury Creek, Y   60.69 337  P     P     17 09 08.4 -1.7
      baz=124
DY2G  Dye2             60.80  17 iP     P     17 09 09.1 -1.9
N31M  Braeburn, Yuko   60.86 335  P     P     17 09 10.5 -0.8
      baz=122
N30M  Aishikik Lake    61.38 335  P     P     17 09 12.5 -2.3
      baz=121
O29M  Mount Kennedy    61.44 333  P     P     17 09 14.0 -1.4
      baz=119
M30M  Minto, Yukon     61.84 336  P     P     17 09 16.3 -1.6
      baz=122
M29M  Somme Creek      62.44 336  P     P     17 09 21.4 -0.6
      baz=120
ISOG  Isortoq, Green   62.50  20 iP     P     17 09 19.9 -2.3
ISOG                              IAmb  IAmb  17 09 21.8
      comp=Z,15nm,0.7s
L29M  L29M             62.64 336  P     P     17 09 22.0 -1.2
      baz=120
YUK3  Moose Creek      62.94 334  P     P     17 09 23.8 -1.7
      baz=118
ANGG  Ammassalik, Gr   63.00  21 iP     P     17 09 22.6 -2.8
DAWY  Dawson           63.61 337  P     P     17 09 27.9 -1.7
      baz=120
I29M  Ogilvie Camp,    63.86 338  P     P     17 09 29.4 -1.8
      baz=121
INK   Inuvik           63.96 342  P     P     17 09 30.8 -1.0
      comp=Z,2.6nm,0.7s,baz=109,slow=6.4,SNR=6.4
INK                               pP    pP    17 09 54.0 +0.9
      comp=Z,5.1nm,1.0s,baz=131,slow=7.4,SNR=3.5
INK                               LR    LR    17 40 21.4
      comp=Z,81nm,18.3s,baz=238,slow=39
      comp=Z,2.6nm,0.7s
INK   Inuvik           63.96 342  P     P     17 09 31.3 -0.4
      baz=127
G30M  tAoh Zraii Nji   64.02 341  P     P     17 09 30.7 -1.6
      baz=124
BCAR  Beaver Creek A   64.08 335  P     P     17 09 31.8 -0.9
BCAR                              pP    pP    17 09 54.7 +0.6
L27K  Beaver Creek,    64.10 335  P     P     17 09 31.4 -1.4
      baz=117
M26K  Nabesna, AK      64.29 334  P     P     17 09 33.0 -1.1
      baz=115
A36M  Sachs Harbour    64.34 348  P     P     17 09 33.0 -1.2
      baz=137
ICESG Greenland Ices   64.41  17 iP     P     17 09 32.8 -2.3
ICESG                             IAmb  IAmb  17 09 34.5
      comp=Z,13nm,0.6s
EGAK  Eagle            64.62 337  P     P     17 09 35.2 -1.0
      baz=118
K27K  Chicken          64.63 336  P     P     17 09 36.1 -0.2
      baz=117
N25K  Chitina, Valde   64.65 333  P     P     17 09 35.9 -0.7
      baz=113
L26K  Log Cabin Wild   64.70 335  P     P     17 09 35.4 -1.3
      baz=115
I27K  Kandik River     65.18 338  P     P     17 09 38.0 -1.9
      baz=118
KLU   Klutina          65.20 333  P     P     17 09 39.7 -0.4
      baz=112
TULEG Thule            65.28   5 iP     P     17 09 41.5 +1.3
SCRK  Sand Creek       65.37 336  P     P     17 09 40.6 -0.6
      baz=115
H27K  Steamboat Moun   65.45 339  P     P     17 09 40.8 -0.8
      baz=118
PAX   Paxson           65.57 335  P     P     17 09 41.1 -1.3
      baz=113
RIDG  Independent Ri   65.62 335  P     P     17 09 41.0 -1.7
      baz=114
I26K  Coal Creek Min   65.62 337  P     P     17 09 41.5 -1.2
      baz=116
G27K  Doyon Strip      65.77 339  P     P     17 09 42.4 -1.2
      baz=118
SCM   Sheep Creek Mo   65.94 333  P     P     17 09 42.8 -2.1
      baz=111
K24K  Donnelly Dome    66.02 335  P     P     17 09 43.9 -1.4
      baz=113
E27K  Coleen River     66.41 340  P     P     17 09 46.2 -1.5
      baz=119
G26K  Porcupine Rive   66.58 339  P     P     17 09 47.1 -1.7
      baz=116
PRP   Porcupine Dome   66.61 337  P     P     17 09 48.6 -0.6
PRP   Porcupine Dome   66.61 337  P     P     17 09 48.3 -0.8
      baz=114
HDA   Harding Lake     66.73 336  P     P     17 09 47.1 -2.6
      baz=112,SNR=7.0
RC01  Rabbit Creek A   66.79 332  P     P     17 09 48.4 -1.8
      baz=108
ILAR  Eielson Array    66.84 336  P     P     17 09 49.5 -1.0
      comp=Z,1.9nm,0.6s,baz=136,slow=4.4,SNR=49
ILAR                              pP    pP    17 10 13.6 +1.6
      comp=Z,2.1nm,0.9s,baz=118,slow=5.3,SNR=5.2
      comp=Z,1.9nm,0.6s
ILAR  Eielson Array    66.84 336  P     P     17 09 48.9 -1.6
ILAR  Eielson Array    66.84 336  P     P     17 09 48.9 -1.6
RND   Reindeer         67.15 334  P     P     17 09 51.7 -0.9
RND   Reindeer         67.15 334  P     P     17 09 51.7 -0.9
RND                               pmax  pmax
      comp=Z,10.0nm,1.0s
POKR  Poker Plat Res   67.19 336  P     P     17 09 51.5 -1.2
      baz=112
COLA  College          67.26 336⇑eP     P     17 09 55.6 +2.5
COLA                              pmax  pmax
      comp=Z,25nm,4.0s
MCK   McKinley         67.30 335  P     P     17 09 51.6 -1.9
      baz=110
G25K  Bearman Lake     67.33 338  P     P     17 09 52.1 -1.3
      baz=114
SUA   Susitna One      67.37 332  P     P     17 09 52.4 -1.6
      baz=107
F25K  Christian Rive   67.51 339  P     P     17 09 54.3 -0.5
      baz=115
H24K  Noodor Dome      67.63 337  P     P     17 09 55.0 -0.5
      baz=112
NEA2  Nenana           67.65 336  P     P     17 09 54.8 -0.8
      baz=110
E25K  Arctic Village   67.71 340  P     P     17 09 54.0 -1.9
      baz=115
C27K  Jago River       67.77 341  P     P     17 09 54.0 -2.3
      baz=117
TRF   Thorofare Moun   67.78 334  P     P     17 09 54.6 -2.1
      baz=109
G24K  Hadweenzic Riv   67.81 338  P     P     17 09 55.0 -1.5
      baz=113
SKT   Skwentna         67.88 332  P     P     17 09 55.9 -1.2
      baz=107
I23K  Minto, Yukon-K   67.96 336  IAmb  IAmb  17 10 41.8
      comp=Z,24nm,1.9s
I23K  Minto, Yukon-K   67.96 336  P     P     17 09 56.6 -0.8
      baz=110,SNR=6.6
EUNU  Eureka           68.13   0  P     P     17 09 58.0 -0.4
F24K  Squaw Lake       68.27 339  P     P     17 09 57.8 -1.7
      baz=112
BPAW  Bear Paw Mtn.    68.28 335  P     P     17 09 57.7 -1.9
      baz=108
PPLA  Purkeypile       68.43 333  P     P     17 09 57.8 -2.9
      baz=107
MLY   Manley           68.47 336  P     P     17 09 59.3 -1.5
      baz=109,SNR=8.5
D25K  Kavik River      68.48 341  P     P     17 09 59.6 -1.2
      baz=115
CAST  Castle Rocks     68.54 334  IAmb  IAmb  17 11 28.9
      comp=Z,29nm,1.9s
CAST  Castle Rocks     68.54 334  P     P     17 09 58.8 -2.4
      baz=107
M20K  Styx River       68.58 332  P     P     17 09 59.7 -1.8
      baz=105
E24K  Your Creek       68.69 339  P     P     17 10 00.2 -1.9
      baz=112
Q18K  Katmai Hardscr   68.71 329  P     P     17 09 58.9 -3.6
      baz=102
G23K  Bananza Creek    68.75 338  P     P     17 10 00.3 -2.2
      baz=110
CHUM  Lake Minchumin   68.77 334  P     P     17 10 00.4 -2.2
      baz=107
BORG  Borgarnes        68.80  25  LR    LR    17 38 34.6
      comp=Z,45nm,19.8s,baz=205,slow=35
I21K  Tanana           69.02 336  P     P     17 10 02.0 -2.0
      baz=108
L20K  Farewell, AK     69.07 333  P     P     17 10 02.0 -2.6
      baz=105
E23K  Chandalar        69.08 339  P     P     17 10 02.2 -2.3
      baz=111
Q17K  Contact Creek    69.08 328  P     P     17 10 02.8 -1.9
      baz=102
K20K  Telida           69.38 334  P     P     17 10 03.5 -2.9
      baz=105
C24K  Franklin Bluff   69.39 341  P     P     17 10 05.2 -1.0
      baz=112
L19K  White Mountain   69.44 332  P     P     17 10 05.1 -1.7
      baz=104
H21K  Melozitna Rive   69.49 336  P     P     17 10 05.5 -1.5
      baz=107
D23K  Nanushuk River   69.77 340  P     P     17 10 06.7 -2.0
      baz=110
E22K  Anaktuvuk Pass   69.88 339  P     P     17 10 08.9 -0.5
      baz=109
O17K  Koliganek Bris   69.99 329  P     P     17 10 08.6 -1.5
      baz=101
G21K  Allakaket        70.01 337  P     P     17 10 09.7 -0.5
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	baz=107						
F21K	Alatna River	70.21	338	P	P	17 10 10.5	-0.9
	baz=107						
SCO	Scoresbysund	70.45	19	i P	P	17 10 11.5	-1.2
FALS	False Pass	72.77	324	P	P	17 10 25.3	-1.7
	baz=94						
DAG	Danmarks Havn	73.45	13	i P	P	17 10 27.2	-3.4
DAG				IAmb	IAmb	17 10 32.2	
	comp=Z,3.1nm,0.5s						
ANM	Nome	74.50	334	P	P	17 10 36.2	-0.7
ANM	Nome	74.50	334	P	P	17 10 36.3	-0.7
ANM				pmax	pmax		
	comp=Z,18nm,2.0s						
ANM	Nome	74.50	334	P	P	17 10 35.4	-1.5
	baz=95						
UNV	Unalaska Valle	74.53	323	P	P	17 10 35.4	-1.9
	baz=91						
TNA	Tin City	75.64	335	P	P	17 10 42.1	-1.4
	baz=93						
EKA	Eskdalemuir Ar	76.52	36	P	P	17 10 46.8	-1.9
	comp=Z,3.3nm,0.6s,baz=263,slow=6.1,SNR=7.6						
	comp=Z,3.3nm,0.6s						
ESDC	Sonseca Array	76.81	52	P	P	17 10 48.8	-1.9
	comp=Z,2.8nm,0.7s,baz=282,slow=5.8,SNR=17						
ESDC				pP	pP	17 11 12.3	-0.4
	comp=Z,5.7nm,1.0s,baz=283,slow=5.9,SNR=9.1						
	comp=Z,2.8nm,0.7s						
ESDC	Sonseca Array	76.81	52	P	P	17 10 49.5	-1.2
MDT	Midelt	76.92	59	LR	LR	17 38 33.7	
	comp=Z,157nm,21.1s,baz=296,slow=31						
DBIC	Dimbokro	80.55	85	P	P	17 11 11.4	-0.2
	comp=Z,1.0nm,0.5s,baz=300,slow=8.1,SNR=1.6						
DBIC				pP	pP	17 11 34.0	0.0
	comp=Z,2.5nm,0.8s,baz=278,slow=4.7,SNR=3.4						
	comp=Z,1.0nm,0.5s						
SPITS	Spitsbergen Ar	81.03	12	LR	LR	17 48 57.0	
	comp=Z,128nm,18.3s,baz=213,slow=37						
NB2	NORSAR Subarra	83.39	29	P	P	17 11 23.6	-2.1
	comp=Z,4.2nm,1.1s,baz=282,slow=5.1						
NOA	NORSAR Array B	83.39	29	P	P	17 11 24.0	-1.7
	comp=Z,1.1nm,0.8s,baz=285,slow=5.0,SNR=6.7						
NOA				pP	pP	17 11 47.1	-0.9
	comp=Z,2.3nm,1.0s,baz=286,slow=4.9,SNR=5.7						
NOA				LR	LR	17 45 20.4	
	comp=Z,58nm,21.0s,baz=260,slow=33						
	comp=Z,1.1nm,0.8s						
NOA	NORSAR Array B	83.39	29	P	P	17 11 24.0	-1.7
HFS	Hagfors	84.79	30	LR	LR	17 48 04.6	
	comp=Z,61nm,18.3s,baz=250,slow=35						
BILL	Bilibino	85.31	339	P	P	17 11 33.7	-1.5
BILL	Bilibino	85.31	339	⇓eP	P	17 11 34.0	-1.2
BILL				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TORD	Torodi Ar. Bea	85.66	78	P	P	17 11 37.1	-0.8
	comp=Z,8.6nm,0.4s,baz=288,slow=5.1,SNR=1.9						
TORD				pP	pP	17 11 59.3	-1.3
	comp=Z,0.8nm,0.8s,baz=294,slow=5.4,SNR=4.0						
TORD				PKKPbc	PKKPbc	17 29 42.0	+2.2
	comp=Z,1.0nm,0.7s,baz=80,slow=2.6,SNR=6.2						
	comp=Z,8.6nm,0.4s						
DAVOX	Davos/Dischmat	85.76	43	P	P	17 11 37.4	-0.7
	comp=Z,1.4nm,0.6s,baz=275,slow=12,SNR=2.9						
DAVOX				pP	pP	17 11 59.7	-0.9
	comp=Z,3.2nm,0.9s,baz=302,slow=10,SNR=4.0						
DAVOX				LR	LR	17 44 48.5	
	comp=Z,97nm,19.5s,baz=257,slow=32						
	comp=Z,1.4nm,0.6s						
ARCES	ARCESS Array B	86.38	19	P	P	17 11 39.6	-0.9
	comp=Z,1.1nm,0.7s,baz=306,slow=4.3,SNR=5.4						
	comp=Z,1.1nm,0.7s						
CLL	Collm	86.67	38	eP	P	17 11 42.0	-0.2
	comp=Z,15nm,1.7s						
CLL				epP	pP	17 12 05.0	+0.3
CLL	Collm	86.67	38	eP	P	17 11 42.0	-0.2
CLL				e*PP	pP	17 12 05.0	+0.3
CLL				pmax	pmax		
	comp=Z,15nm,1.7s						
KHC	Kasperske Hory	87.60	40	⇓eP	P	17 11 44.6	-2.2
KHC				pmax	pmax		
	comp=Z,10.0nm,1.6s						
GERES	GERESS Array B	87.75	41	P	P	17 11 45.1	-2.5
	comp=Z,0.3nm,0.5s,baz=286,slow=7.0,SNR=2.6						
GERES				pP	pP	17 12 09.3	-0.8
	comp=Z,0.4nm,0.5s,baz=251,slow=4.1,SNR=2.8						
GERES				LR	LR	17 45 55.5	
	comp=Z,93nm,21.3s,baz=260,slow=32						
	comp=Z,0.3nm,0.5s						
AFI	Afiamalu	88.28	255	LR	LR	17 43 06.5	
	comp=Z,61nm,20.4s,baz=169,slow=30						
VRAC	Vranov	89.44	40	LR	LR	17 49 45.9	
	comp=Z,86nm,18.5s,baz=264,slow=34						
FINES	FINESS Array B	90.04	26	P	P	17 11 55.5	-2.5
	comp=Z,1.2nm,0.8s,baz=224,slow=5.3,SNR=3.8						
FINES				PP	PP	17 15 31.3	-0.3
	comp=Z,1.3nm,0.8s,baz=288,slow=5.7,SNR=2.2						
FINES				LR	LR	17 49 09.7	
	comp=Z,80nm,20.6s,baz=272,slow=34						
	comp=Z,1.2nm,0.8s						
VSU	Vasula	91.63	29	⇓eP	P	17 12 07.8	+2.4
VSU				pmax	pmax		
	comp=Z,43nm,1.1s						
TIXI	Tiksi	93.31	349	⇓eP	P	17 12 13.5	+0.6
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	Malin Array Be	96.43	35	LR	LR	17 51 17.8	
	comp=Z,83nm,20.3s,baz=246,slow=33						
MSVF	Nonsavu	98.63	254	LR	LR	17 48 01.8	
	comp=Z,178nm,20.4s,baz=151,slow=30						
SNAA	Sanae	99.27	161	⇑eP	Pdif	17 12 43.2	+3.3
SNAA				pmax	pmax		
	comp=Z,44nm,4.9s						
IDI	Anoyia	100.05	51	LR	LR	17 52 55.9	
	comp=Z,30nm,20.6s,baz=250,slow=32						
KIRV	Kirov	101.15	22	⇑eP	Pdif	17 12 49.7	+1.2
BOSA	Boshof	114.68	116	PKKPbc	PKKPbc	17 28 18.8	+1.2
	comp=Z,1.0nm,0.6s,baz=88,slow=2.2,SNR=5.1						
KURK	Kurchatov	116.28	10	PKIKP	PKiKP	17 17 40.4	-1.2
KURBB	Kurchatov Arra	116.35	11	PKP	PKPdf	17 17 40.4	-1.4
	comp=Z,0.3nm,0.7s,baz=351,slow=2.4,SNR=4.2						
SONM	Songino Array	119.39	350	PKP	PKPdf	17 17 46.4	-1.5
	comp=Z,0.4nm,0.5s,baz=125,slow=3.6,SNR=4.4						
MKAR	Makanchi Array	120.69	9	PKP	PKPdf	17 17 48.7	-1.5
	comp=Z,0.1nm,0.5s,baz=322,slow=1.8,SNR=2.0						
KSRS	Korea Array	121.17	328	PKP	PKPdf	17 17 50.8	-0.6
	comp=Z,2.3nm,0.7s,baz=341,slow=1.7,SNR=13						
WMQ	Urumqi	124.26	5	eP	PKiKP	17 17 58.8	+1.2
WMQ				LR	LR		
	comp=Z,130nm,22.5s						
HHC	Hu-ho-hao-te	124.87	343	eP	PKPdf	17 17 57.5	-1.1
GTA	Gaotai	128.57	354	ePKPbc	PKPdf	17 18 03.5	-2.2
NJ2	Nanjing	129.95	332	eP	PKPdf	17 18 08.3	0.0
NJ2				pP	pPKPdf	17 18 30.0	-1.8
NJ2				sP	sPKPdf	17 18 39.8	-0.8
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,110nm,4.4s						
STKA	Stephens Creek	131.57	238	PKP	PKPdf	17 18 11.8	+0.4
	comp=Z,5.5nm,0.6s,baz=75,slow=3.9,SNR=20						
WHN	Wuhan	133.22	335	PKP	PKPdf	17 18 15.0	+0.4
ASAR	Alice Springs	139.89	247	PKhKP	PKPpre	17 18 20.0	
	comp=Z,4.2nm,0.6s,baz=110,slow=3.5,SNR=30						
ASAR				PKP	PKPdf	17 18 27.5	+0.4
	comp=Z,6.3nm,0.7s,baz=106,slow=2.4,SNR=15						
ASAR				SKPbc	SKPbc	17 21 56.2	+0.5
	comp=Z,1.8nm,0.8s,baz=96,slow=3.0,SNR=7.3						
WRA	Warramunga Arr	139.97	253	PKhKP	PKPpre	17 18 19.1	
	comp=Z,1.2nm,0.5s,baz=92,slow=3.5,SNR=21						
WRA				PKP	PKPdf	17 18 27.9	+0.6
	comp=Z,6.1nm,0.5s,baz=92,slow=2.4,SNR=28						
WRA				SKPbc	SKPbc	17 21 56.2	+0.2
	comp=Z,1.0nm,0.8s,baz=94,slow=3.3,SNR=3.7						
PZH	PanZhiHua	140.95	348	PKP	PKPdf	17 18 28.3	-0.8
TNCH	TengChong	142.93	352	eP	PKiKP	17 18 37.5	+1.5
TNCH				pmax	pmax		
	comp=Z,7.0nm,2.5s						
HYB	Hyderabad	147.33	27	ePKPdf	PKPdf	17 18 39.5	-0.9
CMAR	Chiang Mai Arr	149.32	350	PKPbc	PKPbc	17 18 45.8	-2.1
	comp=Z,2.8nm,0.7s,baz=344,slow=3.5,SNR=16						
NWAO	Narrogin (SRO)	149.81	222	PKPbc	PKPbc	17 18 49.1	+0.4
	comp=Z,32nm,0.7s,baz=123,slow=4.6,SNR=9.8						

RSNC 29 17:01:06.6±0.8, 6°.83N×73°.15W, h140^{km}±6^{km}, ML1.5, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.24	187	eP	Pn	17 01 25.4	-0.7
BARC				eS	Sn	17 01 40.6	-0.3
BARC				i		17 01 42.9	
	comp=Z,10nm,0.2s						
BRRC	Barranca, Sant	0.62	296	eP	Pn	17 01 27.0	-0.5
BRRC				eS	Sn	17 01 44.1	+0.7
PAMC	Pamplona, Colo	0.68	41	eP	Pn	17 01 28.0	-0.4
PAMC				eS	Sn	17 01 44.8	-0.3
PAMC				i		17 01 46.0	
	comp=Z,6.7nm,0.2s						
RUSC	La Rusia	0.93	176	eP	Pn	17 01 30.5	0.0
RUSC				eS	Sn	17 01 48.3	-0.3
RUSC				i		17 01 52.7	
	comp=Z,2.9nm,0.3s						
PTBC	PUERTO BERRIO,	1.33	258	eP	Pn	17 01 32.2	-1.5
PTBC				eS	Sn	17 01 53.6	-0.6
PTBC				i		17 01 56.3	
	comp=Z,7.3nm,0.2s						
ZARC	Zaragoza, Cauc	1.82	291	eP	Pn	17 01 39.5	+0.5
ZARC				eS	Sn	17 02 02.8	-1.0
CBOC	Ciudad Bolivar	3.00	252	eP	Pn	17 01 59.2	+5.4
YOTC	Yotoco, Valle	4.25	229	eP	Pn	17 02 06.6	-3.5

IDC 29 17:05:29.2±531.0, 57°.38N×30°.17E, h0^{km}, Error ellipse: s-maj=201.1km s-min=93.6km az=94.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	3.91	97	I	I	17 28 30.0	
	0.1nm,0.7s,baz=281,slow=310,SNR=0.9						
I37NO	I37NO	12.81	341	I	I	18 18 50.0	
	baz=146,slow=336,SNR=1.6						
I46RU	ZALESOVO INFRA	30.32	73	I	I	20 15 40.0	
	baz=299,slow=319,SNR=2.6						

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*IDC **29** 17:13:45.1±1.3, 2°.50N×127°.93E, h0^{km}, mb3.7/6, mbtmp3.7/6, MS3.6/3, Error ellipse: s-maj=122.8km s-min=18.4km az=68.0*

ISC 29 17:13:51.7±1.5, 2°.5N±0°.5×12°8E±°, h51^{km}, n15, σ0^{s}.44/6, mb3.7/6, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	19.87	56	LR	LR	17 24 36.2	
	comp=Z,47nm,19.6s,baz=192,slow=32						
WRA	Warramunga Arr	23.15	165	P	P	17 18 53.4	-0.4
	1.3nm,0.4s,baz=344,slow=10,SNR=4.0						
	1.3nm,0.4s						
ASAR	Alice Springs	26.64	168	P	P	17 19 25.4	-0.4
	0.3nm,0.5s,baz=355,slow=7.8,SNR=4.8						
	0.3nm,0.5s						
STKA	Stephens Creek	36.53	161	P	P	17 20 52.9	+0.4
	0.8nm,0.4s,baz=348,slow=9.5,SNR=4.3						
	0.8nm,0.4s						
H11S3	WAKE ISLAND Hy	40.96	64	T	T	18 04 49.0	
	baz=252,slow=74,SNR=6.0						
H11S2	WAKE ISLAND Hy	40.98	64	T	T	18 04 48.4	
	baz=252,slow=74,SNR=7.1						
H11S1	WAKE ISLAND Hy	40.98	64	T	T	18 04 56.4	
	baz=252						
H11N1	WAKE ISLAND Hy	41.53	63	T	T	18 05 22.6	
	baz=250,slow=75,SNR=7.8						
H11N2	WAKE ISLAND Hy	41.55	63	T	T	18 05 26.2	
	baz=250,slow=75,SNR=4.3						
H11N3	WAKE ISLAND Hy	41.55	63	T	T	18 05 25.6	
	baz=250,slow=75,SNR=6.3						
SONM	Songino Array	48.88	341	P	P	17 22 32.3	-0.2
	0.2nm,0.3s,baz=165,slow=7.4,SNR=1.8						
	0.2nm,0.3s						
MKAR	Makanchi Array	59.33	325	P	P	17 23 48.8	+0.3
	0.4nm,0.4s,baz=116,slow=7.8,SNR=9.3						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	63.50	327	P	P	17 24 16.5	0.0
	0.3nm,0.5s,baz=127,slow=6.3,SNR=7.5						
	0.3nm,0.5s						
AKTO	Aktyubinsk	75.46	322	LR	LR	18 00 05.4	
	comp=Z,81nm,21.6s,baz=130,slow=37						
ARU	Arti	76.69	328	LR	LR	18 03 06.0	
	comp=Z,63nm,18.1s,baz=306,slow=39						

IDC 29 17:30:18.6±6.5, 20°.20S×178°.02W, h532^{km}±43^{km}, mb2.9/3, mbtmp3.9/4, Error ellipse: s-maj=142.8km s-min=47.2km az=141.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.46	303	P	P	17 31 42.9	0.0
	11nm,0.5s,baz=138,slow=14,SNR=28						
STKA	Stephens Creek	37.90	244	P	P	17 36 50.0	-0.5
	4.3nm,1.1s,baz=96,slow=10,SNR=1.8						
	4.3nm,1.1s						
ASAR	Alice Springs	44.57	256	P	P	17 37 43.5	-0.1
	0.9nm,0.6s,baz=94,slow=7.6,SNR=24						
	0.9nm,0.6s						
WRA	Warramunga Arr	44.62	262	P	P	17 37 43.9	-0.1
	0.3nm,0.3s,baz=96,slow=6.9,SNR=18						
	0.3nm,0.3s						
AKASG	Malin Array Be	142.75	331	PKP	PKPdf	17 48 50.6	-0.6
	0.2nm,0.3s,baz=39,slow=4.1,SNR=6.7						

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*IDC **29** 17:59:58.1±1.4, 52°.69N×132°.66W, h0^{km}, mb3.8/5, mbtmp3.8/8, ML3.4/3, MS3.4/4, Error ellipse: s-maj=24.5km s-min=10.6km az=27.0*

*NEIC **29** 18:00:00.8±1.7, 52°.90N±0°.06×132°.41W±0°.08, h10^{km}±1^{km}, mb4.1/23, Error ellipse: s-maj=12.2km s-min=4.1km az=219.0*

*ANF **29** 18:00:01.6±1.2, 52°.98N×132°.99W, h16^{km}±19^{km}, ML4.1/9, Error ellipse: s-maj=18.4km s-min=10.8km az=0.0*

*PGC **29** 18:00:01.2±1.2, 52°.99N×132°.59W, h27^{km}, mb4.1, ML3.8/19, 59km Wsw of Sandspit, Bc Haida Gwaii Region*

ISC 29 17:59:59.6±0.8, 52°.92N±0°.03×132°.53W±0°.04, h4^{km}±4^{km}, n160, σ1^{s}.64/189, mb4.1/13, MS3.7/3, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HG1B	Mitchell Dam	0.24	87	P	Pg	18 00 07.8	+3.5
HG1B				S	Sg	18 00 12.3	+4.9
DIB	Dawson Inlet,	0.28	7	Pg	Pb	18 00 07.0	-0.2
DIB	Dawson Inlet,	0.28	7	P	Pb	18 00 07.1	-0.1
DIB				S	Sb	18 00 11.0	-1.3
H02S1	DAWSON INLET T	0.28	7	Pg	Pb	18 00 07.0	-0.2
H02S1				Lg	Lg	18 00 10.9	
MOBC	Moresby Island	0.41	56		Pn	18 00 09.9	-2.3
MOBC	Moresby Island	0.41	56	P	Pn	18 00 10.1	-2.1
MOBC				S	Sb	18 00 16.3	+0.4
BNB	Barry Inlet	0.59	126	P	Pn	18 00 13.9	-0.8
BNB				S	Sn	18 00 23.2	-1.4
HG4B	Hotspring	1.03	127		Pn	18 00 20.7	+0.1
HG4B				Sg	Sb	18 00 32.0	-1.7
HG4B	Hotspring	1.03	127	P	Pn	18 00 20.3	-0.4
HG4B				S	Sn	18 00 34.7	-0.8
NDB	Naden	1.06	347	P	Pg	18 00 19.6	-0.3
NDB				S	Sg	18 00 33.5	-0.2
BNAB	Bonilla	1.27	63	P	Pn	18 00 23.5	-0.6
BNAB				S	Sn	18 00 40.3	-1.2
LIB	Langara Island	1.37	347	P	Pn	18 00 24.0	-1.4
LIB				S	Sg	18 00 40.5	-3.2
BNKB	Banks Island	1.64	74	Pn	Pb	18 00 28.9	-1.4
BNKB				Pg	Pg	18 00 31.2	+0.3
BNKB				Sg	Sg	18 00 52.9	+0.8
GRNB	Grenville Isla	1.80	58		Pn	18 00 30.8	-0.5
GRNB	Grenville Isla	1.80	58	Pn	Pn	18 00 30.9	-0.5
GRNB				Pg	Pg	18 00 33.9	-0.1
GRNB				Sg	Sg	18 00 57.1	-0.2
RUBB	Prince Rupert	1.96	43		Pn	18 00 32.9	-0.4
RUBB	Prince Rupert	1.96	43	Pn	Pn	18 00 33.0	-0.4
RUBB				Sg	Sg	18 01 01.8	-0.5
HWKB	Hawksbury Isla	2.14	70	Pn	Pn	18 00 36.0	0.0
HWKB				Sg	Sg	18 01 07.5	-0.7
V35K	Ketchikan	2.47	12	P	Pn	18 00 40.5	0.0
	baz=194,SNR=20						
V35K				S	Sb	18 01 12.9	-2.2
	baz=194						
CRAG	Craig	2.58	352		Pn	18 00 41.0	-0.9
CRAG	Craig	2.58	352	P	Pn	18 00 40.8	-1.1
	baz=173						
CRAG				S	Sn	18 01 12.0	-1.7
	baz=173						
MBLB	Minette Bay Lo	2.59	63	Sg	Sg	18 01 21.4	-1.2
KITB	Kitimat	2.60	62	Pn	Pn	18 00 42.2	-0.1
KITB				Sg	Sg	18 01 21.9	-1.1
BBB	Bella Bella	2.80	104	Pn	Pn	18 00 44.5	-0.5
	4.3nm,0.3s,baz=296,slow=13,SNR=22						
BBB				Sn	Sn	18 01 17.3	-1.8
	30nm,0.3s,baz=182,slow=18,SNR=14						
BBB				Lg	Lg	18 01 28.1	
	54nm,0.3s,baz=17,slow=19,SNR=6.6						
	14nm,0.2s						
BBB	Bella Bella	2.80	104	Pn	Pn	18 00 44.4	-0.5
BBB				Sn	Sn	18 01 17.0	-2.0
U33K	Whale Pass	3.22	354	P	Pn	18 00 49.7	-1.0
	baz=174						
U33K				S	Sn	18 01 28.7	-0.8
	baz=174						
WRAK	Wrangell Islan	3.51	2		Pn	18 00 55.0	+0.2
WRAK	Wrangell Islan	3.51	2	P	Pn	18 00 54.9	+0.2
	baz=183,SNR=29						
WRAK				S	Sn	18 01 35.4	-1.2
	baz=183						
HOLB	Holberg	3.56	128	Pn	Pn	18 00 55.0	-0.5
HOLB	Holberg	3.56	128	Pn	Pn	18 00 55.0	-0.5
HOLB				Sn	Sn	18 01 34.9	-3.1
PACB	Port Alice, BC	4.00	126	Pn	Pn	18 01 01.5	0.0
PACB				Sn	Sn	18 01 46.3	-2.5
MAYB	Maynard	4.18	125	Pn	Pn	18 01 03.7	-0.5
MAYB				Sn	Sn	18 01 50.0	-3.5
T35M	Bob Quinn	4.28	17	Pn	Pn	18 01 07.0	+1.7
T35M				Sg	Sg	18 02 12.1	-4.7
T35M	Bob Quinn	4.28	17	P	Pn	18 01 06.9	+1.6
	baz=200,SNR=14						
T35M				Sb	Sg	18 02 12.8	-4.0
	baz=200						
SIT	Sitka	4.45	340	Pn	Pn	18 01 05.9	-1.7
SIT	Sitka	4.45	340	S	Sn	18 01 56.0	-3.7
	baz=158						
EDB	Eliza Dome	4.56	130	Pn	Pn	18 01 10.7	+1.5
EDB				Sn	Sn	18 02 01.2	-1.4
WOSB	Woss	4.63	124	Pn	Pn	18 01 11.0	+0.6
WOSB				Sn	Sn	18 02 04.2	-0.3
S32K	Killisnoo	4.71	346	P	Pn	18 01 10.6	-0.6
	baz=165						
S32K				S	Sn	18 02 04.9	-1.2
	baz=165						
NCRB	Newcastle Ridg	4.75	119	Pn	Pn	18 01 12.8	+0.9
S34M	Telegraph Cree	5.07	8	Pn	Pn	18 01 17.0	+0.9
S34M				Sn	Sn	18 02 14.0	-1.0
S34M	Telegraph Cree	5.07	8	P	Pn	18 01 17.5	+1.3
	baz=190						
S34M				S	Sn	18 02 17.0	+2.0
	baz=190						
FSB	Fort Saint Jam	5.12	69	Pn	Pn	18 01 18.9	+2.0
FSB				Sg	Sg	18 02 40.0	-3.7
FSJB	Fort St James	5.13	69	Pn	Pn	18 01 19.4	+2.2
FSJB				Sg	Sg	18 02 40.1	-4.1
CBB	Campbell River	5.33	120	Pn	Pn	18 01 19.2	-0.6
CBB	Campbell River	5.33	120	Sn	Sn	18 02 21.7	+0.2
JIS	Juneau Island	5.47	350	Pn	Pn	18 01 22.2	+0.5
R32K	Eaglecrest	5.48	349	S	Sn	18 02 22.3	-3.0
	baz=168						
DLBC	Dease Lake	5.71	13	Pn	Pn	18 01 28.0	+3.0
	1.2nm,0.3s,baz=197,slow=10,SNR=18						
DLBC				LR	LR	18 02 53.5	
	comp=Z,98nm,19.1s,baz=32,slow=30						
DLBC				Lg	Lg	18 02 56.5	
	5.0nm,0.3s,baz=282,slow=22,SNR=7.3						
	3.0nm,0.3s						
DLBC	Dease Lake	5.71	13		Pn	18 01 25.3	+0.3
DLBC	Dease Lake	5.71	13	Pn	Pn	18 01 27.4	+2.4
DLBC				Sg	Sg	18 02 55.9	-6.8
DLBC	Dease Lake	5.71	13	P	Pn	18 01 25.9	+0.9
	baz=196						
DLBC				Sb	Sb	18 02 53.5	+5.2
	baz=196						
BESE	Bessie Mountai	5.82	348	Pn	Pn	18 01 26.6	0.0
Q32M	Nakina River	6.06	1	P	Pn	18 01 30.8	+0.8
	baz=182						
P32M	Atlin	6.72	355	Pn	Pn	18 01 39.3	+0.5
P32M	Atlin	6.72	355	P	Pn	18 01 39.4	+0.5
	baz=174						
P32M				Sb	Sb	18 03 21.4	+4.1
	baz=174						
SKAG	Skagway	6.74	348	Pn	Pn	18 01 38.4	-0.6
SKAG	Skagway	6.74	348	P	Pn	18 01 38.5	-0.6
	baz=166						
PLBC	Pleasant Camp	6.89	343	Pn	Pn	18 01 40.9	-0.3
PLBC	Pleasant Camp	6.89	343	P	Pn	18 01 40.7	-0.4
	baz=160						
C03A	Quillayute Air	7.12	131	Pn	Pn	18 01 43.4	-0.9
NBC5	NorthernBC 5	7.28	47	Pn	Pn	18 01 47.8	+1.2
P33M	Teslin, Yukon	7.31	359		Pn	18 01 48.3	+1.3
P33M	Teslin, Yukon	7.31	359	Pn	Pn	18 01 47.9	+0.8
P33M	Teslin, Yukon	7.31	359	P	Pn	18 01 48.0	+1.0
	baz=179,SNR=12						
P33M				S	Sn	18 03 08.9	-1.5
	baz=179						
LIRD	Liard River Hi	7.43	26	Pn	Pn	18 01 50.5	+2.0
LIRD	Liard River Hi	7.43	26	P	Pn	18 01 50.3	+1.7
	baz=212,SNR=8.8						
FNBB	Fort Nelson	8.02	38	Pn	Pn	18 01 57.8	+1.1
O30N	Mendenhall	8.11	348	P	Pn	18 01 58.1	+0.2
	baz=165						
O29M	Mount Kennedy	8.11	338	Pn	Pn	18 02 00.6	+2.6
N32M	Quiet Lake	8.26	358	P	Pn	18 02 01.4	+1.5
	baz=178						
PCA	Pinnacle	8.36	332	Pn	Pn	18 02 02.8	+1.4
HYT	Haines Junctio	8.38	343	Pn	Pn	18 02 03.0	+1.3
HYT	Haines Junctio	8.38	343	Pn	Pn	18 02 02.4	+0.7
NBC6	NorthernBC 6	8.48	44	Pn	Pn	18 02 07.8	+4.7
KOTAN	Kotaneelee Air	8.61	30	P	Pn	18 02 05.8	+1.1
	baz=217,SNR=8.4						
MNB	Mounoet Dainar	8.65	89	Pn	Pn	18 02 08.6	+3.0
NBC2	NorthernBC 2	8.84	35	Pn	Pn	18 02 08.1	+0.1
N30M	Aishikik Lake	8.91	346	Pn	Pn	18 02 09.6	+0.7
FARO	Faro, Yukon	9.35	358		Pn	18 02 16.4	+1.5
FARO	Faro, Yukon	9.35	358	P	Pn	18 02 16.3	+1.5
	baz=177						
M31M	Drury Creek, Y	9.36	355		Pn	18 02 16.6	+1.5
M31M	Drury Creek, Y	9.36	355	Pn	Pn	18 02 16.6	+1.6
M31M	Drury Creek, Y	9.36	355	P	Pn	18 02 15.7	+0.6
	baz=173						
BARN	Barnard Glacie	9.55	332	Pn	Pn	18 02 19.9	+2.1
MMPY	Sheldon Lake,	9.75	3	Pn	Pn	18 02 22.5	+2.1
MMPY	Sheldon Lake,	9.75	3	P	Pn	18 02 21.9	+1.5
	baz=185,SNR=5.9						
M30M	Minto, Yukon	9.94	349	Pn	Pn	18 02 23.4	+0.3
MCARA	McCarthy VSAT	10.21	330	Pn	Pn	18 02 27.9	+1.3
VRDI	Verde Repeater	10.22	329	Pn	Pn	18 02 28.2	+1.3
GLB	Gilahina Butte	10.49	329	Pn	Pn	18 02 31.1	+0.5
N25K	Chitina, Valde	10.87	328	Pn	Pn	18 02 35.4	-0.3
KLU	Klutina	11.22	325	Pn	Pn	18 02 42.5	+1.9
DAWY	Dawson	11.73	345	Pn	Pn	18 02 48.5	+1.0
M24K	Tolsona, Glenn	11.74	327	Pn	Pn	18 02 49.7	+2.0
SCM	Sheep Creek Mo	11.95	324	Pn	Pn	18 02 51.9	+1.4
KNK	Knik Glacier	12.10	321	Pn	Pn	18 02 53.5	+1.1
BRLK	Bradley Lake	12.24	311	Pn	Pn	18 02 54.2	-0.3
GHO	Glory Hole Cre	12.49	322	Pn	Pn	18 03 00.0	+2.1
RIDG	Independent Ri	12.60	334	Pn	Pn	18 03 00.1	+0.7
EGAK	Eagle	12.68	343	Pn	Pn	18 03 02.2	+1.8
YKA	Yellowknife Ar	13.51	38	Pn	Pn	18 03 11.0	-0.6
	0.1nm,0.3s,baz=226,slow=12,SNR=17						
YKA				Lg	Lg	18 07 07.9	
	0.1nm,0.3s,baz=226,slow=28,SNR=4.6						
	1.5nm,0.9s						
SKT	Skwentna	13.62	319	Pn	Pn	18 03 13.7	+0.4
EPYK	Eagle Plains	13.65	353	Pn	Pn	18 03 15.5	+1.8
IL31		13.96	334	Pn	Pn	18 03 18.8	+0.9
ILAR	Eielson Array	13.96	334	Pn	P	18 03 27.6	+1.5
	0.1nm,0.3s,baz=150,slow=11,SNR=14						
ILAR				Lg	Lg	18 07 28.3	
	baz=116,slow=28						
TRF	Thorofare Moun	14.05	326	Pn	Pn	18 03 21.2	+2.0
WRH	Wood River Hil	14.07	331	Pn	Pn	18 03 20.1	+0.8
CCB	Clear Creek Bu	14.12	332	P	P	18 03 28.3	+0.5
P18K	Big Mountain,	14.16	306	Pn	Pn	18 03 22.3	+1.6
PRP	Porcupine Dome	14.23	338	P	P	18 03 31.0	+1.7
KTH	Kantishna Hill	14.33	325	Pn	Pn	18 03 22.1	-0.9
PPLA	Purkeypile	14.39	322	Pn	Pn	18 03 24.1	+0.2
NEA2	Nenana	14.45	331	Pn	Pn	18 03 24.8	+0.3
MDM	Murphy Dome	14.47	333	P	P	18 03 33.5	+1.6
CAST	Castle Rocks	14.66	323	Pn	Pn	18 03 30.5	+3.1
BPAW	Bear Paw Mtn.	14.71	327	Pn	Pn	18 03 29.5	+1.4
HRY	Holter Researc	14.71	107	Pn	Pn	18 03 28.1	-0.2

SVW2	**Sparrevohn**	14.92	312	P	P	18 03 37.9	+1.1
SVW2				IAmb	IAmb	18 03 59.6	
	comp=Z,10.0nm,1.4s						
L19K	**White Mountain**	15.07	317	Pn	Pn	18 03 34.2	+1.2
L19K				P	sP	18 03 40.5	+0.5
L19K				IAmb	IAmb	18 03 50.0	
	comp=Z,5.4nm,0.9s						
MLY	**Manley**	15.26	330	Pn	Pn	18 03 37.0	+1.5
MLY				P	sP	18 03 42.3	+0.2
K20K	**Telida**	15.36	321	Pn	Pn	18 03 36.6	-0.2
K20K				IAmb	IAmb	18 03 47.1	
	comp=Z,6.5nm,1.1s						
INK	**Inuvik**	15.45	359	Pn	Pn	18 03 37.7	-0.2
INK				IAmb	IAmb	18 04 11.4	
	comp=Z,11nm,1.4s						
BOZ	**Bozeman (W)**	15.45	110	P	P	18 03 41.5	-1.4
BMAR	**Burnt Mountain**	15.69	343	P	P	18 03 45.5	+0.2
AFDM	**Forest Hills D**	16.09	146	P	P	18 03 51.1	+1.2
H21K	**Melozitna Rive**	16.32	329	Pn	Pn	18 03 50.5	+1.2
IMAR	**Indian Mountai**	16.83	329	Pn	Pn	18 03 56.9	+1.1
LAO	**LASA Array**	18.03	100	Pn	Pn	18 04 08.3	-2.5
TPNV	**Topopah Spring**	19.62	138	Pn	Pn	18 04 30.1	-0.2
FCC	**Fort Churchill**	22.12	59	P	P	18 04 55.8	+0.2
FCC				IAmb	IAmb	18 05 00.3	
	comp=Z,5.5nm,0.9s						
PV01	**Paradox Valley**	22.22	122	P	P	18 04 55.1	-2.1
PV01				IAmb	IAmb	18 05 03.8	
	comp=Z,4.1nm,1.0s						
KS21	**Milan North St**	28.80	109	P	P	18 05 58.9	+0.5
KAN05	**Bluff City Nor**	28.80	109	P	P	18 05 58.8	+0.4
KAN09	**Caldwell North**	28.93	109	P	P	18 05 59.3	-0.2
EUNU	**Eureka**	31.05	14	P	P	18 06 19.1	+1.2
EUNU				IAmb	IAmb	18 06 21.1	
	comp=Z,5.2nm,1.5s						
ILULI	**Ilulissat**	39.14	34	P	P	18 07 26.6	-0.9
SFJD	**Kangerlussuaq**	40.07	37	P	P	18 07 35.1	-0.1
H11N2	**WAKE ISLAND Hy**	56.82	259	T	T	19 11 20.8	
	baz=38,slow=76,SNR=1640						
H11N3	**WAKE ISLAND Hy**	56.82	259	T	T	19 11 18.9	
	baz=38,slow=76,SNR=1143						
H11N1	**WAKE ISLAND Hy**	56.83	259	T	T	19 11 28.5	
	baz=38,slow=76,SNR=745						
H11S1	**WAKE ISLAND Hy**	57.88	258	T	T	19 12 44.3	
	baz=37						
H11S2	**WAKE ISLAND Hy**	57.89	258	T	T	19 12 46.4	
	baz=37,slow=74						
H11S3	**WAKE ISLAND Hy**	57.90	258	T	T	19 12 45.9	
	baz=37,slow=74						
NOA	**NORSAR Array B**	62.77	19	P	P	18 10 26.4	+1.0
	comp=Z,0.8nm,0.9s,baz=347,slow=6.4,SNR=3.5						
	comp=Z,0.8nm,0.9s						
KSRS	**Korea Array**	66.30	301	LR	LR	18 39 47.2	
	comp=Z,17nm,18.9s,baz=155,slow=36						
ZAA0	**Zalesovo Array**	69.06	337	P	P	18 11 06.5	+0.6
ZAA0				IAmb	IAmb	18 11 07.2	
	comp=Z,1.6nm,0.8s						
ZALV	**Zalesovo Beam**	69.06	337	P	P	18 11 06.0	0.0
	comp=Z,0.9nm,0.7s,baz=35,slow=5.4,SNR=5.1						
	comp=Z,0.9nm,0.7s						
ZALV	**Zalesovo Beam**	69.06	337	P	P	18 11 06.6	+0.7
HHC	**Hu-ho-hao-te**	71.47	314	*e*P	P	18 11 20.3	-0.7
HHC				pmax	pmax		
	comp=Z,27nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,4.8s						
KURK	**Kurchatov**	73.45	340	P	P	18 11 33.3	+0.7
KURK				IAmb	IAmb	18 11 42.0	
	comp=Z,4.0nm,1.4s						
AKASG	**Malin Array Be**	75.61	12	P	P	18 11 45.0	-0.1
	comp=Z,0.1nm,0.3s,baz=347,slow=6.2,SNR=1.9						
	comp=Z,0.1nm,0.3s						
MK31	**Makanchi Array**	76.31	336	P	P	18 11 49.2	0.0
MK31				IAmb	IAmb	18 11 50.4	
	comp=Z,1.7nm,0.9s						
MKAR	**Makanchi Array**	76.31	336	P	P	18 11 49.7	+0.5
	comp=Z,1.4nm,0.7s,baz=31,slow=5.4,SNR=16						
	comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	76.31	336	P	P	18 11 49.4	+0.2
MAKZ	**Makanchi**	76.37	336	P	P	18 11 49.7	+0.2
MAKZ				IAmb	IAmb	18 11 50.9	
	comp=Z,2.3nm,0.8s						
ESDC	**Sonseca Array**	77.60	38	P	P	18 11 58.1	+1.4
	comp=Z,0.6nm,0.8s,baz=324,slow=6.3,SNR=3.3						
	comp=Z,0.6nm,0.8s						
WMQ	**Urumqi**	77.61	331	*e*P	P	18 11 59.5	+2.8
KVAR	**Kislovodsk Arr**	83.41	3	LR	LR	18 53 48.1	
	comp=Z,30nm,18.7s,baz=71,slow=39						
SIJI	**Sorong**	94.44	274	LR	LR	18 49 23.3	
	comp=Z,41nm,19.5s,baz=82,slow=31						

IDC ***29*** *18:02:15.0±0.9, 3°.04S×135°.51E, h0^{km}, mb4.0/5, mbtmp4.1/7, ML1.8/1, MS3.3/2, Error ellipse: s-maj=43.0km s-min=22.5km az=58.0*

ISC 29 18:02:18.8±0.8**, 3°.58S**±0°.09×**135°.2E**±0°.1**, h35^{km}, n12,** σ**1^{s}.81**/14**, mb3.9**/4**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	4.74	305	Pn	Pn	18 03 28.7	+0.9
	27nm,0.2s,baz=76,slow=19,SNR=45						
SIJI				Sn	Sn	18 04 19.8	-1.7
	21nm,0.3s,baz=315,slow=22,SNR=11						
SIJI				LR	LR	18 06 10.5	
	comp=Z,193nm,18.1s,baz=110,slow=50						
PMG	**Port Moresby**	13.24	117	Pn	Pn	18 05 24.1	-0.3
	0.2nm,0.3s,baz=278,slow=10,SNR=2.6						
	7.6nm,0.8s						
WRA	**Warramunga Arr**	16.29	183	Pn	P	18 06 07.2	-0.5
	0.5nm,0.3s,baz=3.0,slow=13,SNR=14						
WRA				Sn	Sn	18 09 02.0	-2.7
	1.1nm,0.3s,baz=7.2,slow=22,SNR=10						
ASAR	**Alice Springs**	20.01	183	P	Pn	18 06 54.7	+4.1
	10nm,0.6s,baz=9.6,slow=12,SNR=57						
ASAR				S	S	18 10 30.2	-1.7
	1.9nm,0.7s,baz=4.3,slow=27,SNR=7.6						
	10nm,0.6s						
JCJ	**Chichijima**	31.24	12	LR	LR	18 19 01.9	
	comp=Z,94nm,21.1s,baz=292,slow=33						
MKAR	**Makanchi Array**	68.36	324	P	P	18 13 17.2	+0.5
	0.5nm,0.4s,baz=112,slow=8.0,SNR=12						
	0.5nm,0.4s						
ZALV	**Zalesovo Beam**	70.94	331	P	P	18 13 32.0	-0.4
	0.8nm,0.5s,baz=121,slow=6.0,SNR=4.0						
	0.8nm,0.5s						
BVAR	**Borovoye Array**	78.02	326	P	P	18 14 13.8	+0.1
	0.7nm,0.6s,baz=121,slow=5.6,SNR=6.0						
	0.7nm,0.6s						
ILAR	**Eielson Array**	88.09	25	P	P	18 15 03.7	-1.7
	0.4nm,0.8s,baz=266,slow=4.5,SNR=5.4						
	0.4nm,0.8s						
ARCES	**ARCESS Array B**	100.14	340	P	Pdif	18 16 00.1	-0.5
	7.1nm,1.1s,baz=88,slow=6.4,SNR=4.5						
CPUP	**Villa Florida**	147.90	159	PKPbc	PKPab	18 22 03.9	+0.3
	2.6nm,0.7s,baz=122,slow=3.0,SNR=4.7						
LPAZ	**La Paz**	149.67	131	PKPbc	PKiKP	18 22 08.7	+1.0
	1.0nm,0.3s,baz=271,slow=3.9,SNR=7.5						

IDC ***29*** *18:08:52.3±2.5, 35°.40N×22°.38E, h79^{km}±22^{km}, mb3.5/7, mbtmp3.7/13, MS3.2/4, Error ellipse: s-maj=44.6km s-min=16.8km az=14.0*

ISK ***29*** *18:08:52.4, 35°.64N×22°.30E, h26^{km}, ML3.2/11*

ATH ***29*** *18:08:53.9, 35°.74N×22°.50E, h89^{km}±2^{km}, ML3.2/28, Error ellipse: s-maj=3.1km s-min=0.9km az=61.0*

THE ***29*** *18:08:54.3, 35°.70N×22°.37E, h64^{km}±6^{km}, ML3.1/8, Error ellipse: s-maj=7.2km s-min=0.8km az=52.0*

ISC 29 18:08:54.0±1.0**, 35°.72N**±0°.05×**22°.44E**±0°.06**, h81^{km}**±7^{km}**, n101,** σ**1^{s}.08**/124**, mb3.5**/7**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANKY	**Antikythira Is**	0.71	78	P	Pn	18 09 09.9	+0.1
ANKY				S	Sn	18 09 21.4	-0.2
	2µm,0.4s						
ANKY	**Antikythira Is**	0.71	78	P	Pn	18 09 10.0	+0.1
ANKY				S	Sn	18 09 21.3	-0.2
ANKY				AML	AML	18 09 22.3	
	comp=E,4784µm,0.5s						
ANKY				AML	AML	18 09 23.3	
	comp=N,4477µm,0.4s						
KTHA	**Kythira Island**	0.73	43	P	Pn	18 09 10.0	0.0
KTHA				S	Sn	18 09 21.6	-0.4
	comp=N,1µm,0.3s						
KTHA	**Kythira Island**	0.73	43	Pg	Pn	18 09 10.1	0.0
KTHA				Sg	Sn	18 09 21.8	-0.2
KTHA	**Kythira Island**	0.73	43	P	Pn	18 09 10.1	0.0
KTHA				S	Sn	18 09 21.5	-0.4
KTHA				AML	AML	18 09 22.2	
	comp=N,1531µm,0.3s						
KTHA				AML	AML	18 09 23.1	
	comp=E,2920µm,0.4s						
VLI	**Veliai**	1.07	22	P	Pn	18 09 14.5	+0.6
VLI				S	Sn	18 09 29.2	+0.4
	comp=E,828nm,0.4s						
VLI	**Veliai**	1.07	22	P	Pn	18 09 14.7	+0.8
VLI				S	Sn	18 09 28.9	+0.1
VLI				AML	AML	18 09 30.5	
	comp=N,2191µm,0.3s						
VLI				AML	AML	18 09 32.8	
	comp=E,1110µm,0.5s						
MNVA	**Monemvasia**	1.08	27	P	Pn	18 09 15.0	+1.1
RODP	**Rodopos**	1.09	98	P	Pn	18 09 14.6	+0.5
RODP				S	Sn	18 09 29.4	+0.3
	comp=E,440nm,0.2s						
RODP	**Rodopos**	1.09	98	Pn	Pn	18 09 14.7	+0.6
RODP				Sn	Sn	18 09 29.6	+0.5
KNDR	**Palaiochora Ch**	1.13	115	P	Pn	18 09 13.9	-0.6
KNDR				S	Sn	18 09 29.7	-0.3
	comp=E,340nm,0.5s						
KNDR	**Palaiochora Ch**	1.13	115	Pn	Pn	18 09 13.8	-0.8
KNDR	**Palaiochora Ch**	1.13	115	P	Pn	18 09 14.0	-0.6
KNDR				AML	AML	18 09 32.9	
	comp=N,1977µm,0.5s						
KNDR				AML	AML	18 09 33.9	
	comp=E,2039µm,0.4s						
IMMV	**Iera Moni Meta**	1.28	101	P	Pn	18 09 16.6	+0.1
IMMV				S	Sn	18 09 33.6	+0.1
	comp=E,655nm,0.4s						
IMMV	**Iera Moni Meta**	1.28	101	Pn	Pn	18 09 16.5	+0.1
IMMV	**Iera Moni Meta**	1.28	101	P	Pn	18 09 16.7	+0.1
IMMV				S	Sn	18 09 32.9	-0.5
IMMV				AML	AML	18 09 34.1	
	comp=E,1274µm,0.5s						
IMMV				AML	AML	18 09 34.1	
	comp=N,1338µm,0.4s						
PYL	**PYLOS**	1.30	334	P	Pn	18 09 16.4	-0.3
PYL				S	Sn	18 09 32.7	-1.1
	comp=N,628nm,0.3s						
PYL	**PYLOS**	1.30	334	P	Pn	18 09 16.4	-0.3
PYL				AML	AML	18 09 34.6	
	comp=N,708µm,0.2s						
PYL				AML	AML	18 09 34.6	
	comp=E,1773µm,0.4s						
CHAN	**Chania**	1.32	98	P	Pn	18 09 17.3	+0.3
CHAN				S	Sn	18 09 33.1	-1.2
CHAN				AML	AML	18 09 35.3	
	comp=N,1150µm,0.4s						
CHAN				AML	AML	18 09 41.8	
	comp=E,849µm,0.2s						
ITM	**Ithomi**	1.51	344	P	Pn	18 09 19.6	+0.1
ITM				S	Sn	18 09 38.6	-0.1
	comp=E,418nm,0.2s						
ITM	**Ithomi**	1.51	344	Pn	Pn	18 09 19.2	-0.3
ITM	**Ithomi**	1.51	344	P	Pn	18 09 19.7	+0.3
ITM				AML	AML	18 09 41.3	
	comp=E,905µm,0.2s						
ITM				AML	AML	18 09 41.4	
	comp=N,755µm,0.2s						
GVD	**Gavdhos**	1.61	123	P	Pn	18 09 20.6	-0.1
GVD	**Gavdhos**	1.61	123	Pn	Pn	18 09 20.4	-0.3
GVD				Sn	Sn	18 09 41.0	0.0
GVD	**Gavdhos**	1.61	123	P	Pn	18 09 20.6	-0.1
GVD				AML	AML	18 09 41.2	
	comp=E,1662µm,0.4s						
GVD				AML	AML	18 09 41.7	
	comp=N,2586µm,0.3s						
GVDS	**Gavdos**	1.61	123	P	Pn	18 09 20.2	-0.5
GVDS	**Gavdos**	1.61	123	Pn	Pn	18 09 20.3	-0.5
GVDS				Sn	Sn	18 09 40.7	-0.3
KRND	**KRANIDI**	1.75	19	P	Pn	18 09 23.0	+0.4
KRND	**KRANIDI**	1.75	19	P	Pn	18 09 22.9	+0.4
KRND				S	Sn	18 09 42.7	-1.6
KRND				AML	AML	18 09 45.5	
	comp=N,642µm,0.4s						
KRND				AML	AML	18 09 47.5	
	comp=E,386µm,0.2s						
MHLO	**Agia Marina, M**	1.86	58	P	Pn	18 09 23.7	-0.3
MHLO				S	Sn	18 09 44.7	-2.0
MHLO				AML	AML	18 09 45.9	
	comp=N,2381µm,0.5s						
MHLO				AML	AML	18 09 46.7	
	comp=E,1741µm,0.6s						
EPID	**Epidavros**	1.96	16	P	Pn	18 09 26.0	+0.6
IDI	**Anoyia**	2.05	102	P	Pn	18 09 26.2	-0.3
	comp=E,10nm,0.3s,baz=257,slow=8.6,SNR=52						
IDI				S	Sn	18 09 50.4	-1.0
	comp=E,37nm,0.2s,baz=253,slow=21,SNR=16						
IDI	**Anoyia**	2.05	102	Pn	Pn	18 09 26.7	+0.2
IDI	**Anoyia**	2.05	102	P	Pn	18 09 26.1	-0.4
IDI				S	Sn	18 09 49.9	-1.4
IDI				AML	AML	18 09 54.0	
	comp=N,304µm,0.5s						
IDI				AML	AML	18 09 54.9	
	comp=E,338µm,0.4s						
GUR	**Goura**	2.21	358	P	Pn	18 09 29.7	+0.9
GUR				S	Sn	18 09 54.2	-1.2
GUR				AML	AML	18 09 59.9	
	comp=N,681µm,0.6s						
GUR				AML	AML	18 10 01.3	
	comp=E,535µm,0.4s						
DRO	**Drossia**	2.30	345	P	Pn	18 09 30.8	+1.0
DRO				AML	AML	18 10 02.4	
	comp=N,629µm,0.6s						
DRO				AML	AML	18 10 07.6	
	comp=E,589µm,0.3s						
LOUT	**Loutraki**	2.30	11	P	Pn	18 09 29.8	0.0
THAL	**Thalero**	2.32	4	P	Pn	18 09 30.4	+0.3
THAL				AML	AML	18 10 02.4	
	comp=N,756µm,0.4s						
THAL				AML	AML	18 10 03.6	
	comp=E,864µm,0.3s						
KLV	**Kalavryta, Ach**	2.33	354	P	Pn	18 09 31.7	+1.4
KLV				S	Sn	18 09 56.7	-1.4
KLV				AML	AML	18 10 01.5	
	comp=E,299µm,0.6s						
KLV				AML	AML	18 10 04.0	
	comp=N,170µm,0.3s						
LTHK	**Lithakia**	2.36	327	P	Pn	18 09 30.4	-0.3
LTHK				AML	AML	18 09 58.5	
	comp=N,452µm,0.3s						
LTHK				AML	AML	18 10 01.6	
	comp=E,498µm,0.2s						
VLY	**Voula,Athens**	2.39	27	P	Pn	18 09 30.6	-0.4
THR9	**Santorini-Faro**	2.45	74	P	Pn	18 09 31.4	-0.4
THR5	**Thira Island,**	2.46	73	P	Pn	18 09 31.7	-0.2
RLS	**Riolos of Patr**	2.46	342	P	Pn	18 09 33.4	+1.5
RLS				AML	AML	18 10 04.5	
	comp=N,574µm,0.3s						
RLS				AML	AML	18 10 06.4	
	comp=E,423µm,0.3s						
SAP3	**Santorini-Thir**	2.46	72	P	Pn	18 09 31.5	-0.4
ATH	**Athens Observa**	2.47	24	P	Pn	18 09 31.9	-0.2
THR6	**Thira Island,**	2.48	74	P	Pn	18 09 32.1	-0.1
ATHU	**Athens Univers**	2.48	25	P	Pn	18 09 31.6	-0.8
THR3	**Thira Island,**	2.50	73	P	Pn	18 09 32.1	-0.3
SANT	**Santorini**	2.53	74	Pn	Pn	18 09 34.8	+1.8
SANT	**Santorini**	2.53	74	P	Pn	18 09 32.4	-0.6
LAKA	**Lakka**	2.54	352	P	Pn	18 09 34.0	+0.9
LAKA				AML	AML	18 10 06.6	
	comp=N,301µm,0.6s						
LAKA				AML	AML	18 10 08.0	
	comp=E,176µm,0.5s						
THR8	**Santorini-Mono**	2.56	74	P	Pn	18 09 32.2	-1.0
VIL2	**Platees**	2.57	15	P	Pn	18 09 32.9	-0.6
VIL2				AML	AML	18 10 04.8	
	comp=E,292µm,0.6s						
VIL2				AML	AML	18 10 06.8	
	comp=N,186µm,0.3s						
PTL	**Penteli**	2.59	26	P	Pn	18 09 34.6	+0.8
PTL				S	Sn	18 10 01.8	-2.4
DION	**Dionisos Attik**	2.64	27	P	Pn	18 09 35.4	+0.9
TRIZ	**Trizonia**	2.65	354	P	Pn	18 09 35.4	+0.9
SERG	**Sergoula**	2.70	354	P	Pn	18 09 35.8	+0.5
SERG				AML	AML	18 10 13.4	
	comp=N,328µm,0.2s						
SERG				AML	AML	18 10 14.3	
	comp=E,385µm,0.4s						
EFP	**Efpalio**	2.73	351	P	Pn	18 09 36.9	+1.3
EFP				AML	AML	18 10 12.4	
	comp=N,290µm,0.4s						
EFP				AML	AML	18 10 12.8	
	comp=E,349µm,0.4s						
FRMA	**Ierapetra Chan**	2.78	104	P	Pn	18 09 38.3	+2.0
PSDA	**Pessada-Kefalo**	2.81	329	P	Pn	18 09 36.6	-0.2
APE	**Apeiranthos**	2.83	61	Pn	Pn	18 09 38.9	+1.8
APE	**Apeiranthos**	2.83	61	P	Pn	18 09 36.3	-0.7
VLS	**Valsamata**	2.86	329	P	Pn	18 09 37.4	0.0
VLS				AML	AML	18 10 10.9	
	comp=N,1064µm,0.4s						
VLS				AML	AML	18 10 13.9	
	comp=E,516µm,0.2s						
ANX	**Ano Chora**	2.90	352	P	Pn	18 09 39.0	+1.0
ANX				AML	AML	18 10 16.5	
	comp=N,485µm,0.4s						
ANX				AML	AML	18 10 19.0	
	comp=E,520µm,0.4s						
EREA	**Eretria**	2.94	23	P	Pn	18 09 38.4	-0.1
EREA				AML	AML	18 10 12.9	
	comp=E,181µm,0.4s						
EREA				AML	AML	18 10 13.8	
	comp=N,144µm,0.3s						
LKR	**Lokris**	2.96	9	P	Pn	18 09 38.8	+0.1
ATAL	**Atalanti**	3.00	9	P	Pn	18 09 39.3	0.0
ATAL				AML	AML	18 10 15.7	
	comp=N,174µm,0.4s						
ATAL				AML	AML	18 10 15.7	
	comp=E,127µm,0.3s						
STIA	**Sitia Lasithi**	3.03	99	P	Pn	18 09 38.0	-1.6
AXAR	**Agios Charalam**	3.04	3	P	Pn	18 09 40.0	+0.1
AXAR				AML	AML	18 10 16.3	
	comp=E,498µm,0.4s						
AXAR				AML	AML	18 10 20.4	
	comp=N,498µm,0.3s						
FSK	**Fiskardo**	3.12	332	P	Pn	18 09 40.9	+0.1
ZKR	**Zakros**	3.14	100	Pn	Pn	18 09 42.9	+1.7
ZKR	**Zakros**	3.14	100	P	Pn	18 09 42.1	+0.8
KYMI	**Kymi, Euboea I**	3.19	24	P	Pn	18 09 41.6	-0.3
EVGI	**Lefkada island**	3.22	334	P	Pn	18 09 42.0	-0.3
MAKR	**Makrakomi, Fth**	3.29	356	P	Pn	18 09 44.0	+0.7
MAKR				AML	AML	18 10 26.1	
	comp=E,350µm,0.3s						
MAKR				AML	AML	18 10 31.9	
	comp=N,321µm,0.5s						
AGG	**Agios Georgios**	3.29	359	Pn	Pn	18 09 44.9	+1.6
AGG	**Agios Georgios**	3.29	359	P	Pn	18 09 43.5	+0.2
LKD2	**Lefkada island**	3.37	336	P	Pn	18 09 45.2	+0.8
TSLK	**Tsoukalades, L**	3.41	336	P	Pn	18 09 45.9	+1.1
KARP	**Karpathos**	3.85	91	Pn	Pn	18 09 53.2	+2.3
KARP	**Karpathos**	3.85	91	P	Pn	18 09 49.5	-1.4
THL	**Klokotos Trika**	3.85	355	P	Pn	18 09 50.8	+0.1
KEK	**Kerkira**	4.50	333	P	Pn	18 10 00.0	+0.4
ARG	**Arkhangelos**	4.64	82	P	Pn	18 10 00.4	-1.1
OHR	**Ohrid**	5.53	347	*i* Pn	Pn	18 10 09.4	-4.3
OHR				*i* Sn	Sn	18 11 12.9	-3.0
STIP	**Stip**	5.97	358	*i* Pn	Pn	18 10 19.9	+0.3
VAE	**Valguarnera**	6.69	288	P	Pn	18 10 29.6	+0.1
	comp=N,5.6nm,0.4s,baz=190,slow=11,SNR=2.3						
BRTR	**Keskin Array B**	9.73	62	P	Pn	18 11 13.5	+2.4
	comp=N,0.5nm,0.4s,baz=234,slow=15,SNR=7.6						
MMAI	**Mount Meron Ar**	11.05	100	P	Pn	18 11 25.8	-3.3
	comp=N,0.7nm,0.3s,baz=268,slow=11,SNR=10						
EIL	**Elat**	12.14	116	P	Pn	18 11 40.3	-3.5
	comp=N,1.5nm,0.3s,baz=347,slow=13,SNR=17						
AKASG	**Malin Array Be**	15.76	16	P	P	18 12 33.1	-0.2
	comp=N,0.2nm,0.3s,baz=213,slow=10,SNR=7.0						
OBN	**Obninsk**	21.70	22	LR	LR	18 23 26.7	
	comp=N,9.6nm,19.3s,baz=7.5,slow=40						
HFS	**Hagfors**	25.07	350	P	P	18 14 11.1	+0.5
	comp=N,0.8nm,0.4s,baz=156,slow=11,SNR=6.0						
	comp=N,0.8nm,0.4s						
FINES	**FINESS Array B**	25.84	4	P	P	18 14 18.4	+0.9
	comp=N,0.3nm,0.3s,baz=176,slow=9.6,SNR=5.3						
	comp=N,0.3nm,0.3s						
NOA	**NORSAR Array B**	26.33	348	P	P	18 14 23.2	+1.2
	comp=N,0.4nm,0.7s,baz=151,slow=9.6,SNR=1.0						
	comp=N,0.4nm,0.7s						
ARCES	**ARCESS Array B**	33.91	2	P	P	18 15 29.8	+1.0
	comp=N,1.8nm,0.7s,baz=193,slow=10.0,SNR=5.5						
	comp=N,1.8nm,0.7s						
SPITS	**Spitsbergen Ar**	42.64	358	P	P	18 16 43.5	+1.6
	comp=N,10nm,1.0s,baz=158,slow=12,SNR=8.7						
	comp=N,10nm,1.0s						
MKAR	**Makanchi Array**	45.32	57	P	P	18 17 04.5	+0.8
	comp=N,0.2nm,0.3s,baz=268,slow=7.9,SNR=7.7						
MKAR				LR	LR	18 39 23.7	
	comp=N,51nm,18.8s,baz=110,slow=40						
	comp=N,0.2nm,0.3s						
ZALV	**Zalesovo Beam**	46.22	46	P	P	18 17 11.2	+0.5
	comp=N,0.3nm,0.3s,baz=277,slow=8.0,SNR=2.3						
ZALV				LR	LR	18 42 21.3	
	comp=N,32nm,18.4s,baz=114,slow=43						
	comp=N,0.3nm,0.3s						
TSUM	**Tsumeb**	54.82	186	LR	LR	18 43 07.7	
	comp=N,78nm,18.0s,baz=160,slow=38						

ISK ***29*** *18:10:42.8, 38°.20N×31°.08E, h5^{km}, ML4.0/35*

DDA ***29*** *18:10:43.8±0.0, 38°.20N×31°.06E, h15^{km}, MW4.0*

MCSM ***29*** *18:10:44.7±0.6, 38°N±4°×3°1E±°, h7^{km}±2^{km}, mb4.3*

IDC ***29*** *18:10:44.6±0.8, 38°.23N×31°.16E, h0^{km}, mb3.9/11, mbtmp3.8/18, ML3.8/7, MS3.2/12, Error ellipse: s-maj=14.1km s-min=13.2km az=150.0*

NEIC ***29*** *18:10:45.8±1.5, 38°.19N±0°.02×31°.04E±0°.04, h10^{km}±1^{km}, mb4.5/11, Error ellipse: s-maj=5.2km s-min=2.9km az=243.0*

CFUSG ***29*** *18:10:45.6, 38°.46N×31°.09E, h5^{km}, mb3.5/5, Western Turkey Magtype MSH 3.1 from 4 stations*

ISC 29 18:10:44.8±1.0**, 38°.21N**±0°.02×**31°.07E**±0°.02**, h3^{km}**±7^{km}**, n211,** σ**1^{s}.03**/248**, mb4.4**/20**, MS3.3**/6**, 14C-15D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YVAC	**Isparta, Yalva**	0.15	66	P	Pg	18 10 47.7	-0.1
YVAC				S	Sg	18 10 51.3	+1.5
BAGO	**Egridir - ISPA**	0.31	225	P	Pg	18 10 50.4	-0.4
BAGO				S	Sg	18 10 55.3	+0.5
DOGA	**KONYA_Doganhis**	0.49	102	P	Pg	18 10 53.9	-0.3
DOGA				S	Sg	18 11 01.0	+0.5
SHUT	**Suhut-Afyon**	0.53	310	Pg	Pg	18 10 54.5	-0.6
SHUT				Sg	Sg	18 11 03.2	+1.2
KURO	**Afyon-Bolvadin**	0.54	349	P	Pg	18 10 54.7	-0.4
KURO				S	Sg	18 11 02.0	0.0
ISP	**Isparta**	0.58	228	Pg	Pg	18 10 54.7	-1.2
ISP				Sg	Sg	18 11 04.6	+1.2
ISP	**Isparta**	0.58	228	Pg	Pg	18 10 54.8	-1.2
ISP				Sg	Sg	18 11 03.3	-0.1
KZIL	**AFYON_Kizioren**	0.73	274	SPECP		18 10 57.0	
KZIL				P	Pg	18 10 57.8	-1.0
KZIL				S	Sg	18 11 09.0	+0.7
SUTC	**Sutluce-Ispart**	0.73	184	Pg	Pg	18 10 57.9	-1.0
SUTC				Sg	Sg	18 11 09.3	+0.9
AFYO	**Afyonkarahisar**	0.83	314	SPECP		18 11 00.0	
AFYO				P	Pg	18 11 00.3	-0.6
AFYO				S	Sb	18 11 13.1	-0.6
BCK	**Bucak**	0.84	207	Pg	Pg	18 11 00.1	-0.8
BASM	**Basmaki-Afyon**	0.85	250	Pg	Pg	18 11 00.2	-1.0
KDHN	**Kadinhani**	0.88	69	P	Pg	18 11 00.9	-0.8
KDHN				SPECP		18 11 01.0	
KDHN				S	Sb	18 11 14.8	-0.3
KIZT	**Kizilcal**	0.93	43	Pg	Pg	18 11 02.2	-0.4
KIZT				Sg	Sb	18 11 15.6	-0.7
SEDI	**Konya, Seydise**	0.93	144	SPECP		18 11 01.0	
SEDI				P	Pg	18 11 01.2	-1.5
SEDI				S	Sb	18 11 16.2	-0.3
BRDR	**BURDUR-Merkez**	0.94	238	SPECP		18 11 01.0	
BRDR				P	Pg	18 11 01.4	-1.6
BRDR				S	Sb	18 11 18.0	+1.2
BUCA	**Burdur, Bucak-**	0.97	205	P	Pg	18 11 02.5	-0.8
BUCA				S	Sn	18 11 20.7	+1.1
SEYD	**Seydisehir-KON**	1.01	142	Pg	Pg	18 11 02.6	-1.6
LADK	**Ladik-KONYA**	1.02	90	Pg	Pg	18 11 03.5	-1.0
LADK				Sg	Sb	18 11 18.3	-0.8
KONT	**Konya--Tatoy**	1.05	104	Pg	Pg	18 11 03.9	-1.2
KONT	**Konya--Tatoy**	1.05	104	SPECP		18 11 04.0	
KONT				P	Pg	18 11 04.1	-1.0
KONT				S	Sb	18 11 19.2	-0.7
KMER	**Konya-Meram**	1.12	113	SPECP		18 11 05.0	
KMER				P	Pg	18 11 05.2	-1.1
KMER				S	Sb	18 11 21.0	-0.9
AUKIR	**Kırka- Seyitga**	1.15	339	P	Pg	18 11 06.1	-0.7
AUKIR				S	Sn	18 11 23.8	-0.3

CIFT	Cifteler, Eski	1.15	360	Pn	Pg	18 11 05.8	-1.1
KHL	Karahalli	1.22	276	Pn	Pg	18 11 07.7	-0.5
PASA	Karahalli, USA	1.25	277	SPECP		18 11 07.0	
PASA				P	Pg	18 11 07.8	-1.0
PASA				S	Sn	18 11 28.5	+1.9
AUSIV	SIVRIHISAR	1.28	17	P	Pg	18 11 08.9	-0.5
AUSIV				S	Sg	18 11 25.9	-0.2
SVRH	Sivrihisar-ESK	1.29	16	Pn	Pg	18 11 08.6	-0.9
SGAZ	Eskisehir, Sey	1.33	352	P	Pg	18 11 09.1	-1.3
SGAZ				S	Sg	18 11 27.5	-0.1
KORT	Korkueli	1.33	205	Pn	Pg	18 11 09.9	-0.5
KORT	Korkueli	1.33	205	P	Pg	18 11 09.6	-0.8
KORT				SPECP		18 11 10.0	
KORT				S	Sn	18 11 29.9	+1.1
ANTB	Antalya	1.35	194	Pn	Pn	18 11 09.8	-0.7
KEPZ	Antalya-Kepez	1.37	162	P	Pn	18 11 08.9	-2.0
KEPZ				S	Sn	18 11 31.8	+2.2
ALIN	Konya, Altinte	1.43	86	P	Pn	18 11 11.0	-0.8
ALIN				SPECP		18 11 12.0	
ALIN				S	Sn	18 11 31.6	+0.5
CHBY	Cihanbeyli	1.48	75	Pn	Pn	18 11 11.7	-0.7
GDZ	Gediz	1.52	306	SPECP		18 11 12.0	
GDZ				P	Pn	18 11 12.6	-0.4
GDZ				S	Sg	18 11 34.2	+0.5
GOLH	Golhisar	1.54	231	SPECP		18 11 12.0	
GOLH				P	Pn	18 11 12.8	-0.5
GEDZ	Gediz	1.54	303	Pn	Pn	18 11 12.8	-0.5
APMY	Acipayam-Deniz	1.58	243	Pn	Pn	18 11 13.4	-0.4
ANDZ	Kutahya, Merke	1.59	325	SPECP		18 11 13.0	
ANDZ				P	Pn	18 11 13.8	-0.1
ANDZ				S	Sg	18 11 36.0	+0.1
HDMB	Hadim	1.68	137	Pn	Pn	18 11 14.5	-0.8
USAK	Uak-Merkez	1.69	288	P	Pn	18 11 14.7	-0.5
USAK				S	Sn	18 11 35.8	-1.5
AUMIH	MIHALICIK	1.69	11	P	Pn	18 11 15.3	0.0
AUMIH				S	Sg	18 11 41.1	+2.0
DNIZ	Denizli-Tavas-	1.71	251	P	Pn	18 11 14.9	-0.6
ELL	Elmali	1.73	213	Pn	Pn	18 11 15.4	-0.4
ELL	Elmali	1.73	213		Pn	18 11 14.8	-1.0
KULU	Kulu	1.73	61	Pn	Pn	18 11 15.3	-0.6
BORA	Eskisehir	1.74	344	Pn	Pn	18 11 15.5	-0.4
BORA	Eskisehir	1.74	344	P	Pn	18 11 15.4	-0.4
BORA				S	Sn	18 11 37.8	-0.8
KKUL	Konya-Kulu	1.74	56	SPECP		18 11 16.0	
KKUL				P	Pn	18 11 16.2	+0.2
KKUL				S	Sg	18 11 45.7	+5.0
CAEL	Denizli, Camel	1.76	232	P	Pn	18 11 16.4	+0.1
TVSB	Tavsanli	1.76	315	Pn	Pn	18 11 15.9	-0.4
KKBE	Karaman, Kazim	1.78	123	P	Pb	18 11 17.3	-0.9
KKBE				S	Sb	18 11 40.0	-1.0
TAVA	DENIZLI_Tavas	1.86	247	P	Pn	18 11 17.2	-0.4
SMAA	Simav-Kutahya	1.86	299	Pn	Pn	18 11 17.4	-0.2
AUBOZ	BOZOYUK	1.88	335	P	Pn	18 11 17.7	-0.2
AUBOZ				S	Sn	18 11 43.0	+0.8
CAME	Cameli-Denizli	1.89	229	Pn	Pn	18 11 17.8	-0.3
KULA	Kula-Manisa	1.92	280	P	Pn	18 11 17.7	-0.7
KULA	Kula-Manisa	1.92	280	Pn	Pn	18 11 18.1	-0.3
AKUM	Antalya-Kumluc	1.97	197	P	Pb	18 11 20.5	-0.8
AKUM				S	Sg	18 11 47.9	-0.2
MANT	Manisa	1.99	279		Pn	18 11 19.0	-0.6
MANT	Manisa	1.99	279	P	Pn	18 11 19.1	-0.5
AFSR	Afar-Bala (An	2.00	51	Pn	Pn	18 11 19.1	-0.4
DEMI	Demirci	2.02	295	P	Pn	18 11 19.6	-0.3
BBAL	Bala	2.09	50	P	Pn	18 11 20.8	0.0
BR231	Keskin MP Arra	2.10	39		Pn	18 11 21.1	0.0
ANTO	Ankara	2.13	39	⇓P	Pn	18 11 21.5	+0.1
ANTO	Ankara	2.13	39	Pn	Pn	18 11 21.1	-0.3
ANTO	Ankara	2.13	39		Pn	18 11 21.3	-0.1
SUSU	Bolu-G¶lynk-	2.13	355	P	Pn	18 11 21.3	-0.1
AKSY	AKSARAY - Alti	2.16	77	P	Pn	18 11 22.2	+0.4
CAVI	Cavuskoy	2.21	335	Pn	Pn	18 11 22.3	0.0
FETY	Fethiye	2.23	226	Pn	Pn	18 11 22.5	-0.1
GULT	Gulveren	2.26	349	Pn	Pn	18 11 22.9	-0.3
MDUB	Mudurnu	2.26	3	Pn	Pn	18 11 23.1	-0.1
MDUB	Mudurnu	2.26	3		Pn	18 11 23.6	+0.4
AKAS	Kas	2.29	211		Pn	18 11 24.9	+1.3
DALY	Dalyan (Mula)	2.37	235	Pn	Pn	18 11 24.1	-0.4
KSL	Kastellorizon	2.37	210	P	Pn	18 11 26.2	+1.6
ADVT	Abdulvahap	2.45	336	Pn	Pn	18 11 25.7	+0.1
YER	Yerkesik	2.46	245	P	Pn	18 11 26.5	+0.7
YER	Yerkesik	2.46	245	Pn	Pn	18 11 25.8	0.0
BR131	Keskin Array S	2.51	52	Pn	Pn	18 11 26.7	0.0
BRTR	Keskin Array B	2.51	52	Pn	Pn	18 11 27.1	+0.4
	5.8nm,0.3s,baz=212,slow=12,SNR=111						
BRTR				Sn	Sn	18 11 58.2	+0.3
	9.4nm,0.3s,baz=216,slow=23,SNR=10						
BRTR				LR	LR	18 12 01.6	
	comp=Z,70nm,18.7s,baz=170,slow=32 26nm,0.6s						
BRTR	Keskin Array B	2.51	52		Pn	18 11 26.3	-0.4
SAUV	Serdivan-Sakar	2.59	347	Pn	Pn	18 11 27.9	+0.3
GEMT	Gemlik	2.66	327	Pn	Pn	18 11 28.7	+0.2
YLV	Yalova	2.70	331	Pn	Pn	18 11 29.1	0.0
MDNY	Mudanya-Bursa	2.74	323	Pn	Pn	18 11 30.2	+0.5
BALB	Balikesir	2.87	301	Pn	Pn	18 11 31.8	+0.4
BALB	Balikesir	2.87	301	Pn	Pn	18 11 31.6	+0.2
ARG	Arkhangelos	3.08	231	Pn	Pn	18 11 35.0	+0.7
KDZE	Karadeniz Ereo	3.11	5	⇓P	Pn	18 11 35.0	+0.2
BLCB	Balcova	3.17	274	P	Pn	18 11 36.2	+0.6
BODT	Bodrum	3.19	250	P	Pn	18 11 35.5	-0.4
SMG	Samos	3.38	263	P	Pn	18 11 38.0	-0.5
KLYT	Kilyos	3.42	333	Pn	Pn	18 11 38.5	-0.4
ILGA	Ilgaz	3.50	35		Pn	18 11 40.3	0.0
CSS	Mathiatis	3.72	150	Pn	Pn	18 11 42.8	-0.3
CSS	Mathiatis	3.72	150	Pn	Pn	18 11 42.5	-0.6
BNN	Bunyan	3.80	79	Pn	Pn	18 11 44.9	+0.5
PRK	Paraskevi	3.89	287	P	Pn	18 11 46.1	+0.7
CHOS	Chios island	3.95	274	P	Pn	18 11 46.7	+0.4
EZN	Ezine	4.03	295	Pn	Pn	18 11 47.7	+0.3
KARP	Karpathos	4.11	231	Pn	Pn	18 11 47.7	-0.8
BZK	Bozkurt	4.37	30	⇓P	Pn	18 11 51.1	-0.9
BZK	Bozkurt	4.37	30		Pn	18 11 51.3	-0.8
ENEZ	Enez	4.56	305	P	Pn	18 11 55.0	+0.3
TOKA	Tokat	4.70	62	Pn	Pn	18 11 56.6	-0.1
DIKM	Dikmen	4.71	42	⇑P	Pn	18 11 55.3	-1.5
ALN	Alexandroupoli	4.72	306	P	Pn	18 11 57.1	+0.3
ALN	Alexandroupoli	4.72	306		Pn	18 11 57.1	+0.3
ALN	Alexandroupoli	4.72	306	Pn	Pn	18 11 57.2	+0.4
ALN				pP	Pn	18 11 58.5	+1.7
ALN				sP	Pn	18 11 59.3	+2.5
LIA	Limnos Island	4.88	292	Pn	Pn	18 11 58.8	-0.2
RDO	Rodhopi	5.18	306	P	Pn	18 12 03.9	+0.8
RDO	Rodhopi	5.18	306		Pn	18 12 04.0	+0.8
JMB	Yambol	5.46	323	P	Pg	18 12 27.8	-1.6
KDZ	Kurdzhali	5.54	310	*i* P	Pn	18 12 10.0	+1.9
KALB	Balgarevo	5.57	340	⇑P	Pn	18 12 10.1	+1.7
KALB				⇑S	Sn	18 13 12.4	-0.6
IDI	Anoyia	5.75	241	Pn	Pn	18 12 13.4	+2.3
	1.1nm,0.3s,baz=56,slow=12,SNR=2.8 5.1nm,0.6s						
IDI	Anoyia	5.75	241	Pn	Pn	18 12 10.7	-0.4
PSN	Preselentsi	5.89	339	*i* P	Pn	18 12 12.6	-0.3
MANR	Mangalia	5.91	342	⇓P	Pn	18 12 14.7	+1.5
RZN	Rozhen	5.99	307	*i* P	Pn	18 12 15.1	+0.6
MMAI	Mount Meron Ar	6.27	144	Pn	Pn	18 12 19.1	+0.8
	2.6nm,0.3s,baz=332,slow=12,SNR=11						
MMAI				LR	LR	18 15 13.6	
	comp=Z,271nm,19.4s,baz=7.0,slow=43 2.2nm,0.3s						
RAZG	Razgrad	6.37	329	⇑P	Pn	18 12 21.5	+2.0
SZH	Strazhica	6.38	324	*i* P	Pn	18 12 20.4	+0.7
ICOR	Ion Corvin	6.39	338	⇓P	Pn	18 12 20.6	+0.7
TIRR	Tirgusor	6.55	343	⇑P	Pn	18 12 22.3	+0.3
TIRR	Tirgusor	6.55	343	Pn	Pn	18 12 21.4	-0.6
SEV	Sevastopol'	6.62	16	*e*P	Pn	18 12 22.7	-0.3
SEV				Pm		18 12 31.0	
	comp=Z,4.0nm,0.4s						
SEV				*e*S	Sn	18 13 36.7	-2.3
SEV				Sm		18 13 40.7	
	comp=N,1.0nm,0.3s						
SEV				Sm		18 13 40.7	
	comp=E,5.0nm,0.4s						
YAL	Yalta	6.69	19	*e*P	Pn	18 12 24.1	+0.2
YAL				Pm		18 12 29.1	
	comp=Z,11nm,0.3s						
YAL				*e*S	Sn	18 13 39.5	-1.0
YAL				Sm		18 13 39.8	
	comp=N,9.0nm,0.2s						
YAL				Sm		18 13 39.8	
	comp=E,10.0nm,0.3s						
AGG	Agios Georgios	6.89	279	Pn	Pn	18 12 26.4	-0.3
HARR	Harsova	6.89	341	⇑P	Pn	18 12 26.4	-0.2
TPGR	Topolog	6.93	344	⇑P	Pn	18 12 27.1	-0.2
TPGR				⇓S	Sn	18 13 44.4	-2.2
ALU	Alushta	6.94	20	*e*P	Pn	18 12 27.1	-0.2
ALU				Pm		18 12 34.0	
	comp=Z,7.0nm,0.4s						
ALU				*e*S	Sn	18 13 45.6	-1.0
ALU				Sm		18 13 48.7	
	comp=N,11nm,0.4s						
ALU				Sm		18 13 48.7	
	comp=E,7.0nm,0.4s						
SIM	Simferopol'	7.11	18	*e*P	Pn	18 12 29.1	-0.6
SIM				Pm		18 12 29.8	
	comp=Z,62nm,0.5s						
SIM				*e*S	Sn	18 13 49.0	-2.0
SIM				Sm		18 13 50.3	
	comp=N,11nm,0.4s						
SIM				Sm		18 13 50.3	
	comp=E,7.0nm,0.4s						
CFR	Carcaliu	7.30	343	⇓P	Pn	18 12 32.2	0.0
CFR				⇑S	Sn	18 13 53.1	-2.4
ITM	Ithomi	7.32	265	Pn	Pn	18 12 34.9	+2.3
MPEP	Malo Peshtene	7.57	315	P	Pn	18 12 36.7	+0.7
GHAJ	Ghor Haditha	7.82	150	Pn	Pn	18 12 41.5	+2.0
FNA	Florina	7.92	292	Pn	Pn	18 12 42.3	+1.4
BISRR	Bisoca	8.02	338	⇓P	Pn	18 12 43.2	+1.0
NEHR	Nehoiu	8.04	335	⇑P	Pn	18 12 43.9	+1.4
MLR	Muntele Rosu	8.22	334	⇑P	Pn	18 12 46.5	+1.5
MLR	Muntele Rosu	8.22	334	Pn	Pn	18 12 46.5	+1.5
	comp=E,0.8nm,0.3s,baz=131,slow=14,SNR=6.6 comp=E,3.4nm,0.4s						
MLR	Muntele Rosu	8.22	334	Pn	Pn	18 12 45.3	+0.3
GHRR		8.30	342	⇑P	Pn	18 12 46.5	+0.5
VRI	Vrincioaia	8.30	339	⇓P	Pn	18 12 46.9	+0.8
PLOR	Plostina	8.31	338	⇓P	Pn	18 12 46.8	+0.6
COVR	Voineasa-Covas	8.44	336	⇑P	Pn	18 12 49.5	+1.5
VOIR		8.50	330	⇓P	Pn	18 12 50.4	+1.6
ARR	Arges	8.61	328	⇓P	Pn	18 12 50.9	+0.5
OZUR		8.80	335	⇑P	Pn	18 12 54.0	+1.1
TESR	Tescani	8.92	340	⇓P	Pn	18 12 55.5	+1.0
LOT	Lotru	9.05	325	⇓P	Pn	18 12 58.3	+1.9
EIL	Elat	9.11	158	Pn	Pn	18 12 57.3	+0.2
	comp=E,1.1nm,0.3s,baz=347,slow=7.1,SNR=7.0						
EIL				Sn	Sn	18 14 39.2	-0.9
	comp=E,0.8nm,0.3s,baz=56,slow=18,SNR=1.6 comp=E,3.0nm,0.4s						
BZS	Buzias	10.21	319	⇑P	Pn	18 13 14.2	+2.0
BURAR	Bucovina Array	10.33	337	⇓P	Pn	18 13 15.2	+1.2
BURAR	Bucovina Array	10.33	337	Pn	Pn	18 13 15.0	+1.1
BUR08	Bucovina Ar. S	10.36	337		Pn	18 13 15.5	+1.1
KBZ	Khabaz	10.51	55	LR	LR	18 17 39.8	
	comp=E,30nm,20.1s,baz=220,slow=40						
GNI	Garni	10.79	75	LR	LR	18 18 06.2	
	comp=E,92nm,19.8s,baz=285,slow=41						
UZHM	Uzhgorod	12.20	331	Pn	Pn	18 13 37.8	-1.6
	comp=E,5.8nm,0.8s						
AK09	Malin Array Si	12.47	355	Pn	Pn	18 13 42.4	-0.6
AK05	Malin Array Si	12.48	355	Pn	Pn	18 13 42.6	-0.6
AK13	Malin Array Si	12.48	354	Pn	Pn	18 13 42.6	-0.6
AK02	Malin Array Si	12.52	355	Pn	Pn	18 13 42.2	-1.5
AK11	Malin Array Si	12.54	354	Pn	Pn	18 13 42.8	-1.2
AK01	Malin Array Si	12.55	355	Pn	Pn	18 13 42.8	-1.3
AKASG	Malin Array Be	12.56	355	Pn	Pn	18 13 44.0	-0.2
	comp=E,0.7nm,0.3s,baz=174,slow=12,SNR=4.6						
AKASG				Sn	Sn	18 16 00.6	-3.9
	comp=E,0.4nm,0.3s,baz=167,slow=23,SNR=5.6 comp=E,0.2nm,0.4s						
AKBB	Malin Array Si	12.56	355	Pn	Pn	18 13 43.1	-1.2
AK03	Malin Array Si	12.58	355	Pn	Pn	18 13 43.9	-0.7
AQU	L'Aquila	14.10	293	Pn	Pn	18 14 05.1	-0.4
VRAC	Vranov	15.22	321	LR	LR	18 21 42.2	
	comp=E,135nm,18.1s,baz=138,slow=43						
GERES	GERESS Array B	16.44	316	Pn	P	18 14 39.8	+0.5
	comp=E,0.1nm,0.3s,baz=134,slow=7.1,SNR=1.9						
GERES				LR	LR	18 22 33.0	
	comp=E,74nm,18.9s,baz=100,slow=43 comp=E,0.6nm,0.8s						
DAVOX	Davos/Dischmat	17.78	306	LR	LR	18 22 04.2	
	comp=E,193nm,18.0s,baz=81,slow=38						
CLL	Collm	18.27	322	*e*(sP)	sP	18 15 02.0	+0.8
GEYT	Alibeck	21.28	82	P	P	18 15 32.0	-0.4
	comp=E,4.5nm,0.6s,baz=292,slow=12,SNR=7.6 comp=E,4.5nm,0.6s						
GEYT	Alibeck	21.28	82	P	P	18 15 31.9	-0.4
GYA0B	ALIBECK ARRAY	21.28	82	P	P	18 15 32.0	-0.3
CLF	Chambon-Foret	23.08	304	P	P	18 15 53.5	+2.1
CLF				IAmb	IAmb	18 16 31.2	
	comp=Z,30nm,1.5s						
ABKAR	Akbulak array	23.46	53	P	P	18 15 55.5	+0.2
FINES	FINESS Array B	23.47	354	P	P	18 15 54.7	-0.5
	comp=Z,0.9nm,0.5s,baz=156,slow=11,SNR=6.6 comp=Z,0.9nm,0.5s						
FINES	FINESS Array B	23.47	354	P	P	18 15 54.2	-1.0
KIRV	Kirov	23.60	24	LR	LR	18 27 09.4	
	comp=Z,55nm,18.1s,baz=310,slow=42						
HFS	Hagfors	24.56	339	P	P	18 16 07.2	+1.7
	comp=Z,2.8nm,0.9s,baz=138,slow=12,SNR=3.7						
HFS				LR	LR	18 26 54.2	
	comp=Z,99nm,18.1s,baz=204,slow=40 comp=Z,2.8nm,0.9s						
ARU	Arti	25.79	36	P	P	18 16 17.4	+0.7
	comp=Z,2.4nm,0.5s,baz=206,slow=7.9,SNR=6.8 comp=Z,2.4nm,0.5s						
ARU	Arti	25.79	36	P	P	18 16 15.6	-1.1
ARU				IAmb	IAmb	18 16 18.2	
	comp=Z,3.1nm,0.6s						
NOA	NORSAR Array B	26.01	338	LR	LR	18 28 10.1	
	comp=Z,69nm,18.9s,baz=165,slow=40						
ESDC	Sonseca Array	27.18	284	P	P	18 16 29.6	0.0
	comp=Z,1.2nm,1.0s,baz=67,slow=9.9,SNR=6.6 comp=Z,1.2nm,1.0s						
WSAR	Wadi Sarin	27.87	114	LR	LR	18 29 45.3	
	comp=Z,53nm,18.3s,baz=344,slow=41						
ARCES	ARCESS Array B	31.53	356	P	P	18 17 07.7	-0.1
	comp=Z,6.4nm,1.0s,baz=169,slow=10,SNR=3.3 comp=Z,6.4nm,1.0s						
TORD	Torodi Ar. Bea	36.10	234	P	P	18 17 48.5	+0.4
	comp=Z,5.0nm,0.3s,baz=34,slow=9.9,SNR=4.8 comp=Z,5.0nm,0.3s						
MKAR	Makanchi Array	38.14	60	P	P	18 18 04.4	-0.7
	comp=Z,0.2nm,0.4s,baz=272,slow=9.1,SNR=2.8 comp=Z,0.2nm,0.4s						
MBAR	Mbarara	38.62	181	LR	LR	18 36 38.6	
	comp=Z,56nm,19.1s,baz=322,slow=40						
ZALV	Zalesovo Beam	39.45	49	P	P	18 18 15.5	-0.5
	comp=Z,0.3nm,0.2s,baz=252,slow=6.5,SNR=2.1 comp=Z,0.3nm,0.2s						
WMQ	Urumqi	42.38	64	*e*P	P	18 18 42.3	+1.9
WMQ				LR	LR		
	comp=Z,100nm,21.3s						
SONM	Songino Array	53.87	54	P	P	18 20 09.5	+0.3
	comp=Z,0.3nm,0.6s,baz=296,slow=6.2,SNR=1.6 comp=Z,0.3nm,0.6s						
PZH	PanZhiHua	59.54	79	P	P	18 20 51.3	+1.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,130nm,6.5s						
HHC	Hu-ho-hao-te	60.00	60	*e*P	P	18 20 54.0	+1.2
HHC				pmax	pmax		
	comp=Z,31nm,0.7s						
HHC				pmax	pmax		
	comp=Z,200nm,5.1s						
NJ2	Nanjing	69.44	65	*e*P	P	18 21 54.5	+0.1
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,130nm,4.1s						
YKA	Yellowknife Ar	75.91	344	P	P	18 22 32.0	-0.2
	comp=Z,0.7nm,1.0s,baz=27,slow=5.7,SNR=8.1 comp=Z,0.7nm,1.0s						
IMAR	Indian Mountai	76.07	2	P	P	18 22 33.7	+0.5
I26K	Coal Creek Min	76.72	358	P	P	18 22 37.9	+1.1
I26K				IAmb	IAmb	18 23 07.7	
	comp=Z,3.6nm,1.2s						
JKA	Kamikawa-asahi	77.35	43	P	P	18 22 39.6	-1.1
JKA				IAmb	IAmb	18 23 17.6	
	comp=Z,16nm,1.5s						
WRH	Wood River Hil	77.65	360	P	P	18 22 42.1	0.0
WRH				IAmb	IAmb	18 23 07.0	
	comp=Z,4.0nm,1.3s						
PPLA	Purkeypile	79.20	2	P	P	18 22 51.1	+0.1
PPLA				IAmb	IAmb	18 23 10.2	
	comp=Z,13nm,1.3s						
SCM	Sheep Creek Mo	80.30	359	P	P	18 22 57.2	+0.4
N19K	Bonanza Creek	81.22	3	P	P	18 23 01.6	-0.2
N19K				IAmb	IAmb	18 23 10.9	
	comp=Z,5.1nm,1.0s						
MLPR	Magueyes Islan	85.23	289	P	P	18 23 22.3	-0.8

KRSC 29 18:13:40.3±0.9**,57°.04N**×**163°.27E,h27**^{km}±12^{km}**,Ml4.0,**
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBG	Krutoberegovo	0.85	202	*e*P	Pb	18 13 56.3	-0.1
KBG				*e*S	Sn	18 14 08.2	+0.2
KBTR	Krutoberegovo	0.88	197	*e*P	Pb	18 13 57.2	+0.4
KBTR				*e*S	Sn	18 14 09.6	+1.0
SMKR	Semkarok	1.09	246	*e*P	Pn	18 13 59.9	0.0
SRKR	Sorokina	1.22	252	*e*P	Pn	18 14 01.7	+0.1
KLY	Klyuchi	1.62	244	*e*P	Pn	18 14 06.7	-0.4
KLY				*e*S	Sn	18 14 25.7	-1.3
CIRR	Tsirk	1.68	237	*e*P	Pb	18 14 09.7	-0.8
LGNR	Loginova	1.72	237	*e*P	Pb	18 14 10.8	-0.6
BZGR	Bezymyannyi-Gr	1.81	233	*e*P	Pb	18 14 11.6	-1.1
BZWR	Bezymyannyi-We	1.88	236	*e*P	Pn	18 14 12.3	+1.5
BZP	Bezymyannyi-Pe	1.89	234	*e*P	Pb	18 14 12.7	-1.6
BZMR	Bezymyannaya	1.90	235	*e*P	Pn	18 14 12.6	+1.6
KIRR	Kirishev	1.96	237	*e*P	Pn	18 14 13.3	+1.5
KPT	Kopyto	2.01	239	*e*P	Pn	18 14 13.5	+1.0
SRDR	Sredinnyy	2.09	251	*e*P	Pn	18 14 14.5	+1.0
KMNR	Kamenistaya	2.12	234	*e*P	Pb	18 14 16.3	-1.8
OSSR	Ossora	2.21	357	*e*P	Pn	18 14 16.7	+1.6
BKI	Bering	2.38	140	*e*P	Pb	18 14 20.3	-2.1
BKI				*e*S	Sb	18 14 49.4	-2.0
TUMD	Tumrok D	2.45	222	*e*P	Pb	18 14 21.7	-1.9
TUMR	Tumrok	2.48	226	*e*P	Pb	18 14 22.1	-2.1
TIGL	Tigil	2.59	288	*e*P	Pn	18 14 22.8	+2.5
TIGL				*e*S	Sb	18 14 54.6	-2.8
PALN	Palana	2.70	321	*e*P	Pb	18 14 26.2	-1.6
ESO	Esso	2.77	248	*e*P	Pb	18 14 26.7	-2.4
GNL	Ganaly	4.53	224	*e*P	Pn	18 14 50.8	+3.7
KRX	Arik	4.54	218	*e*P	Pn	18 14 51.5	+4.1
KRER	Koryakskii	4.56	217	*e*P	Pn	18 14 52.0	+4.4
SMAR	Somma	4.57	216	*e*P	Pn	18 14 51.8	+4.0
AVH	Avacha	4.59	216	*e*P	Pn	18 14 52.1	+4.2
KOK	Koryaka	4.60	217	*e*P	Pn	18 14 52.8	+4.7
UGLR	Uglovaya	4.61	215	*e*P	Pn	18 14 51.7	+3.5
KRMR	Karymshinskiy	5.16	217	*e*P	Pn	18 15 00.6	+5.0

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*IDC **29** 18:25:59.9±10.0,34°.93N×70°.44E,h268*^{km}*±132*^{km}*,*
mb3.7/1,mbtmp3.7/4,MS3.9/2,Error ellipse:
s-maj=115.7km s-min=72.5km az=154.0
*NEIC **29** 18:26:05.7±1.4,36°.44N±0°.07×70°.44E±0°.10,*
h151^{km}*±10*^{km}*,mb4.1/1,Error ellipse: s-maj=11.3km*
s-min=9.6km az=87.0
*NNC **29** 18:26:07.0±6.6,36°.93N×70°.24E,h0*^{km}*,mb3.1,mpv2.7,*
Error ellipse: s-maj=53.3km s-min=40.3km az=163.0
ISC 29 18:26:03.9±0.9**,36°.39N**±0°.06×**70°.46E**±0°.07**,h150**^{km}**,n25,**
σ**1**^{s}**.80**/29**,2C-2D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.18	213		Pn	18 26 43.5	+2.1
CHGR	Chuyangaron	2.49	336	Pn	Pn	18 26 45.9	+0.9
CHGR				Sn	Sn	18 27 14.8	-1.9
GAR	Garm	2.61	357	Pn	Pn	18 26 47.6	+1.1
NIL	Nilore	3.56	139	Pn	Pn	18 27 00.8	+2.2
BTK	Batken	3.67	4	Pn	Pn	18 27 00.6	+0.7
AML	Almayashu	6.26	23	⇑Pn	Pn	18 27 35.1	+0.7
	0.1nm,0.2s						
AML				⇓Sn	Sn	18 28 43.4	-1.8
	1.9nm,0.6s						
KK31	Karatay Array	6.71	0	Pn	Pn	18 27 40.3	+0.3
KK31	Karatay Array	6.71	0	⇓Pn	Pn	18 27 40.8	+0.8
	0.4nm,0.2s,baz=177,slow=12						
KK31				⇑Sn	Sn	18 28 52.9	-2.4
	7.9nm,0.6s,baz=183,slow=24						
KKAR	Karatay Array	6.71	0	Pn	Pn	18 27 40.1	+0.1
KKAR	Karatay Array	6.71	0	Pn	Pn	18 27 40.3	+0.3
AAK	Ala-Archa	6.97	25		Pn	18 27 44.8	+1.1
SMLA	Simla	7.66	131	*e*P	Pn	18 27 52.3	-0.4
SMLA				*e*S	Sn	18 29 13.8	-4.4
GEYT	Alibeck	9.98	283	P	Pn	18 28 23.6	0.0
	0.6nm,0.3s,baz=112,slow=10,SNR=1.6						
GEYT				S	Sn	18 30 13.2	-0.8
	0.6nm,0.3s,baz=101,slow=24,SNR=2.0						
MAKZ	Makanchi	13.50	36	P	P	18 29 15.1	+1.7
MK31	Makanchi Array	13.64	37	P	P	18 29 16.2	+1.4
MKAR	Makanchi Array	13.64	37	P	P	18 29 16.8	+1.9
	0.9nm,0.8s,baz=208,slow=11,SNR=7.3						
MKAR	Makanchi Array	13.64	37	P	P	18 29 16.6	+1.7
AB31	Akbulak array	14.98	332	P	P	18 29 30.1	+0.4
	0.2nm,0.4s,baz=169,slow=11,SNR=14						
AB31				S	Sn	18 32 10.4	-3.7
	0.4nm,0.4s,baz=154,slow=24,SNR=5.0						
ABKAR	Akbulak array	14.98	332	P	P	18 29 30.7	+1.0
ABKAR	Akbulak array	14.98	332	P	P	18 29 30.1	+0.5
BVAR	Borovoye Array	16.64	360	P	Pn	18 29 50.9	+2.7
	0.4nm,0.4s,baz=162,slow=8.6,SNR=7.7						
ZAA0	Zalesovo Array	20.20	25	P	P	18 30 27.9	+1.2
ZAA0				IAmb	IAmb	18 30 28.8	
	comp=Z,4.9nm,0.6s						
ZALV	Zalesovo Beam	20.20	25	P	P	18 30 28.2	+1.5
	comp=Z,5.4nm,0.5s,baz=209,slow=10,SNR=28 comp=Z,5.4nm,0.5s						
SONM	Songino Array	28.75	55	LR	LR	18 46 06.3	
	comp=Z,67nm,18.8s,baz=116,slow=41						
STKA	Stephens Creek	95.07	126	LR	LR	19 27 28.2	
	comp=Z,166nm,18.6s,baz=204,slow=39						

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*GII **29** 18:43:19.0±0.0,33°.50N×35°.60E,h1*^{km}*,MD1.7/3,Mm2.0/4*
*GRAL **29** 18:43:19.3±0.3,33°.55N×35°.60E,h2*^{km}*±4*^{km}*,MD3.4*
*JSO **29** 18:43:19.9,33°.50N×35°.59E,h2*^{km}*,ML2.1/14,Mw2.5/14*
ISC 29 18:43:18.8±0.9**,33°.56N**±0°.02×**35°.61E**±0°.04**,h7**^{km}±7^{km}**,**
n32,σ**0**^{s}**.70**/46**,Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QRWL	Qaraoun	0.06	99	*e*P	Pg	18 43 20.6	-0.1
DQRL	Deir Qamar	0.15	347	*e*P	Pg	18 43 22.2	+0.1
DQRL				*e*S	Sg	18 43 24.3	0.0
RCY	Rachaya	0.20	108	*e*P	Pg	18 43 22.9	+0.1
RCY				*e*S	Sg	18 43 25.6	+0.1
SHBL	Chebaa	0.24	152	*e*P	Pg	18 43 23.5	0.0
SHBL				*e*S	Sg	18 43 26.6	-0.1
NATI	Neve Ativ	0.31	160	Pg	Pg	18 43 25.3	+0.4
NATI				Sg	Sb	18 43 30.0	-2.0
NATI	Neve Ativ	0.31	160	P	Pg	18 43 24.9	0.0
NATI				IAML		18 43 30.7	
BHL	Bhannes	0.35	6	*e*P	Pg	18 43 25.5	-0.2
BHL				*e*S	Sg	18 43 30.4	+0.1
GEM	Giv'at Ha'Em	0.35	173	Pg	Pg	18 43 25.7	+0.1
GEM	Giv'at Ha'Em	0.35	173	P	Pg	18 43 25.5	-0.1
GEM				IAML		18 43 31.9	
ZAHL	Zahle	0.38	37	*e*P	Pg	18 43 26.2	0.0
MMA0B	Mount Meron ar	0.57	198	Pg	Pb	18 43 30.2	-0.9
MMA0B				Sg	Sb	18 43 39.3	-0.2
HNTI	Hanita	0.60	218	Pg	Pg	18 43 30.5	+0.1
HNTI				Sg	Sb	18 43 40.0	-0.3
HNTI	Hanita	0.60	218	P	Pg	18 43 30.7	+0.3
HWQ	Hawqa	0.77	21	*e*P	Pg	18 43 33.2	-0.5
SHMJ	Saham	0.84	171	P	Pb	18 43 35.9	+0.2
BLGI	Bet Lehem HaGe	0.89	203	Pg	Pb	18 43 36.3	-0.4
BLGI				Sg	Sb	18 43 49.0	+0.2
BLGI	Bet Lehem HaGe	0.89	203	P	Pb	18 43 36.1	-0.6
OFRI	`Ofer	1.07	210	Pg	Pg	18 43 39.0	-0.4
OFRI				Sg	Sn	18 43 54.7	-0.7
OFRI	`Ofer	1.07	210	P	Pg	18 43 38.8	-0.6
OFRI				IAML		18 43 58.7	
BEIL	Beino	1.09	26	*e*P	Pg	18 43 39.0	-0.7
BEIL				*e*S	Sg	18 43 53.7	-0.3
MMLI	Mount Malkishu	1.13	188	Pg	Pg	18 43 39.9	-0.6
QRNJ	Al-Qirein	1.22	181	P	Pg	18 43 41.4	-0.8
QRNJ				P	Pb	18 43 42.2	0.0
QRNJ				S	Sn	18 43 59.9	+1.0
QRNJ				IAML		18 44 00.4	
HMDT	Nahal Hemdat	1.30	183	Pg	Pg	18 43 42.8	-1.0
HMDT				Sg	Sn	18 44 02.2	+1.1
HMDT	Nahal Hemdat	1.30	183	P	Pg	18 43 43.0	-0.8
SLTI	Sal'it	1.40	200	Pn	Pg	18 43 44.9	-0.7
SLTI				Sn	Sn	18 44 04.5	+1.1
UJAP	Al Uja	1.60	184	Pn	Pn	18 43 47.7	+0.2

DSI	Dead Sea	1.99	186	Pn	Pn	18 43 53.9	+1.0
WALJ	Wala	2.00	175	P	Pn	18 43 53.8	+0.8
AMAZ	Amatzia	2.10	196	Pn	Pb	18 43 56.3	-1.0
YTIR	Yattir	2.23	191	Pn	Pn	18 43 57.4	+1.2
MSBI	Mazada	2.25	186	Pn	Pn	18 43 57.8	+1.4
LISJ	El Lisan	2.31	183	P	Pb	18 44 00.4	-0.4

IDC 29 18:49:45.5±530.0**, 57°.43N×30°.20E, h0^{km}, Error ellipse: s-maj=200.0km s-min=109.3km az=94.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	3.90	98	I	I	19 13 20.0	
	0.2nm,0.7s,baz=282,slow=306,SNR=0.5						
I37NO	I37NO	12.76	341	I	I	20 04 20.0	
	baz=147,slow=335,SNR=1.2						
I46RU	ZALESOVO INFRA	30.28	73	I	I	21 58 20.0	
	baz=299,slow=321,SNR=1.8						

IDC 29 18:56:19.9±536.0**, 57°.46N×30°.59E, h0^{km}, Error ellipse: s-maj=206.7km s-min=96.6km az=96.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	3.69	99	I	I	19 19 00.0	
	0.2nm,0.7s,baz=283,slow=306,SNR=1.0						
I37NO	I37NO	12.80	340	I	I	20 10 40.0	
	baz=145,slow=334,SNR=1.1						
I46RU	ZALESOVO INFRA	30.07	73	I	I	22 03 18.0	
	baz=299,slow=320						

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*SOME **29** 19:25:14.6, 44°.08N×86°.07E, h30^{km}*

*NNC **29** 19:25:18.3±3.0, 43°.98N×86°.38E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=94.7km s-min=21.6km az=45.0*

ISC 29 19:25:20.8±4.5**, 43°.9N**±0°.2×**86°.2E**±0°.2**, h10^{km}, n6, σ0^{s}83**/5**, 7C, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	Zaisan	3.69	346	*e*Pg	Pn	19 26 17.9	+0.1
	5.3nm,0.1s						
ZSN				*e*Lg	Lg	19 27 03.7	
	2.0nm,0.3s						
MK31	Makanchi Array	4.01	318	⇑Pn	Pn	19 26 21.5	-0.7
	0.9nm,0.3s,baz=39,slow=22,SNR=55						
MK31				⇑Lg	Lg	19 27 27.5	
	3.3nm,0.5s,baz=129,slow=32,SNR=6.9						
MAKZ	Makanchi	4.17	316	⇑Pn	Pn	19 26 23.7	-0.7
	3.4nm,0.4s						
MAKZ				⇑Sn	Sn	19 27 13.5	+0.3
	1.5nm,0.5s						
MAKZ				⇑Lg	Lg	19 27 33.0	
	2.6nm,0.5s						
DJR	Jarkent	4.63	278	*e*Pg	Pb	19 26 42.6	+0.5
	1.8nm,0.3s						
DJR				*e*Lg	Lg	19 27 45.7	
	4.7nm,0.3s						
KURBB	Kurchatov Arra	8.52	325	⇑Lg	Lg	19 29 52.4	
	4.3nm,0.7s						
KURK	Kurchatov	8.55	326	⇑Lg	Lg	19 29 51.2	
	2.8nm,1.1s						

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*IDC **29** 19:30:44.4±8.4, 7°.18N×94°.10E, h152^{km}±74^{km}, mb3.2/8, mbtmp3.6/9, Error ellipse: s-maj=52.0km s-min=17.8km az=49.0*

ISC 29 19:30:44.2±1.2**, 7°.2N**±0°.2×**94°.1E**±0°.2**, h150^{km}, n18, σ1^{s}47**/15**, mb3.5**/9**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.13	22	P	Pn	19 33 32.7	+0.5
	0.6nm,0.7s,baz=215,slow=15,SNR=1.7						
JIRN	Jiri	21.66	341	*e*P	P	19 35 20.7	-2.7
PKI	Pulchoki	21.85	339	*e*P	P	19 35 25.6	+0.3
GUN	Gumba	22.00	340	*e*P	P	19 35 23.6	-3.3
	14nm,0.6s						
DANN	Dangsing	23.17	336	*e*P	P	19 35 37.1	-0.9
PYUN	Piuthan	23.27	335	*e*P	P	19 35 39.6	+0.8
H08S3	Diego Garcia H	26.11	236	T	T	20 02 48.3	
	baz=56,slow=75,SNR=18						
H08S2	Diego Garcia H	26.11	236	T	T	20 02 48.5	
	baz=56,slow=75,SNR=21						
H08S1	Diego Carcia H	26.13	236	T	T	20 02 50.4	
	baz=56,slow=75,SNR=15						
TGY	Tagaytay City	27.24	73	P	P	19 36 15.8	+1.3
	163nm,0.5s,baz=119,slow=14,SNR=4.1						
MKAR	Makanchi Array	40.71	348	P	P	19 38 09.5	-0.6
	1.4nm,0.6s,baz=166,slow=7.9,SNR=21						
	1.4nm,0.6s						
SONM	Songino Array	41.81	12	P	P	19 38 18.9	-0.3
	0.2nm,0.5s,baz=185,slow=6.9,SNR=1.9						
	0.2nm,0.5s						
GEYT	Alibeck	44.65	319	P	P	19 38 43.4	+1.4
	1.9nm,0.7s,baz=145,slow=10,SNR=2.9						
	1.9nm,0.7s						
ZALV	Zalesovo Beam	47.19	353	P	P	19 39 01.8	+0.2
	0.8nm,0.6s,baz=160,slow=4.7,SNR=5.3						
	0.8nm,0.6s						
WRA	Warramunga Arr	47.93	125	P	P	19 39 06.5	-1.3
	0.3nm,0.7s,baz=303,slow=9.0,SNR=1.8						
	0.3nm,0.7s						
ASAR	Alice Springs	49.54	129	P	P	19 39 19.9	-0.2
	0.4nm,1.0s,baz=221,slow=16,SNR=1.8						
	0.4nm,1.0s						
FINES	FINESS Array B	73.26	332	P	P	19 41 59.5	+0.7
	1.5nm,0.7s,baz=132,slow=2.8,SNR=5.4						
	1.5nm,0.7s						
NOA	NORSAR Array B	80.27	331	P	P	19 42 38.1	-0.1
	0.6nm,0.8s,baz=92,slow=5.6,SNR=3.6						
	0.6nm,0.8s						

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*NEIC **29** 19:37:36.7±1.8, 58°.4S±0°.1×25°.5W±0°.2, h41^{km}±4^{km}, mb4.6/16, Error ellipse: s-maj=21.6km s-min=12.7km az=223.0*

*IDC **29** 19:37:39.0±5.7, 58°.34S×25°.48W, h61^{km}±49^{km}, mb4.1/7, mbtmp4.4/9, ML4.5/2, MS3.4/5, Error ellipse: s-maj=27.4km s-min=18.6km az=67.0*

ISC 29 19:37:36.1±0.5**, 58°.38S**±0°.08×**25°.4W**±0°.1**, h38^{km}, n51, σ1^{s}78**/43**, mb4.5**/13**, MS3.4**/4**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	7.39	299	Pn	Pn	19 39 20.7	-0.6
VNA1	Neumayer--Stat	14.27	156	P	Pn	19 40 56.1	+1.1
VNA3	Neumayer Olymp	14.46	159	P	Pn	19 40 58.8	+1.0
VNA3				S	Sn	19 43 26.3	-10
VNA2	Neumayer--Watz	14.66	156	P	Pn	19 41 01.2	+0.8
	baz=321,slow=13						
VNA2				S	Sn	19 43 29.4	-12
	baz=321,slow=22						
SNAA	Sanae	16.21	154	P	Pn	19 41 22.6	+1.9
SNAA				S	Sn	19 44 10.3	-8.8
SNAA	Sanae	16.21	154	P	Pn	19 41 22.6	+1.9
	1.0nm,0.3s,baz=28,slow=9.7,SNR=70						
SNAA				S	Sn	19 44 08.0	-11
	3.4nm,1.1s,baz=317,slow=18,SNR=2.2						
SNAA				LR	LR	19 45 55.5	
	comp=Z,103nm,20.0s,baz=291,slow=30						
	3.0nm,0.3s						
SNAA	Sanae	16.21	154	P	Pn	19 41 22.6	+1.9
TROLL	Troll, Antarti	17.73	151	P	P	19 41 43.5	+3.3
TROLL				S	Sn	19 44 46.0	-10
PMSA	Palmer Station	19.20	234	P	Pn	19 41 58.6	+1.2
	2.4nm,0.3s,baz=172,slow=6.2,SNR=2.3						
	50nm,0.9s						
EFI	East Falkland	19.73	276	Pn	Pn	19 42 03.5	-0.2
EFI				IAmb	IAmb	19 42 14.4	
	comp=Z,58nm,1.2s						
BELA	Belgrano 2	19.83	186	P	P	19 42 03.9	+0.9
QSPA	South Pole Qui	31.86	180	P	P	19 43 58.4	+1.2
	comp=Z,2.8nm,0.5s,baz=206,slow=1.5,SNR=22						
	comp=Z,2.8nm,0.5s						
QSPA	South Pole Qui	31.86	180	P	P	19 43 58.5	+1.4
QSPA				IAmb	IAmb	19 44 03.0	
	comp=Z,8.7nm,1.4s						
PLCA	Paso Flores	33.39	282	P	P	19 44 11.1	+0.4
	comp=Z,2.3nm,0.8s,baz=138,slow=8.9,SNR=7.2						
	comp=Z,2.3nm,0.8s						
PLCA	Paso Flores	33.39	282	P	P	19 44 08.9	-1.8
GO05	Huala	38.46	287	P	P	19 44 53.9	-0.1
GO05				IAmb	IAmb	19 44 57.0	
	comp=Z,8.2nm,0.8s						
MT09	Talagante	38.96	289	P	P	19 44 58.9	+0.5
MT09				IAmb	IAmb	19 45 21.6	
	comp=Z,13nm,1.3s						
CFA	Coronel Fontan	39.38	294	LR	LR	20 00 11.8	
	comp=Z,56nm,21.6s,baz=179,slow=34						
MT02	Curacav	39.45	289	P	P	19 45 02.4	+0.1
MT02				IAmb	IAmb	19 45 20.4	
	comp=Z,13nm,1.1s						
VNDA	Vanda	44.28	182	P	P	19 45 42.0	+0.8
	comp=Z,2.2nm,0.8s,baz=198,slow=6.3,SNR=9.5						
	comp=Z,2.2nm,0.8s						
BOSA	Boshof	45.70	72	LR	LR	20 00 38.7	
	comp=Z,67nm,19.0s,baz=188,slow=30						
LVC	Limon Verde	47.31	300	LR	LR	20 07 45.8	
	comp=Z,33nm,18.5s,baz=224,slow=38						
LBTB	Lobatse	48.84	70	LR	LR	20 02 19.0	
	comp=Z,40nm,21.9s,baz=176,slow=30						
H10S2	ASCENSION HYDR	50.00	14	T	T	20 40 52.3	
	baz=187,slow=74,SNR=9.5						
H10S3	ASCENSION HYDR	50.01	14	T	T	20 40 55.0	
	baz=33,slow=74,SNR=8.1						
H10N1	ASCENSION HYDR	51.12	14	T	T	20 42 19.8	
	baz=187,slow=75,SNR=4.4						
H10N3	ASCENSION HYDR	51.12	14	T	T	20 42 19.0	
	baz=187,slow=75,SNR=5.8						
H10N2	ASCENSION HYDR	51.14	14	T	T	20 42 19.8	
	baz=187,slow=75,SNR=5.5						
LPAZ	La Paz	52.51	305	P	P	19 46 45.5	-0.4
	comp=Z,1.6nm,0.6s,baz=182,slow=7.1,SNR=6.4						
	comp=Z,1.6nm,0.6s						
LPAZ	La Paz	52.51	305	P	P	19 46 45.0	-0.9
BOAV	Boa Vista	66.71	321	P	P	19 48 21.6	-1.4
BOAV				IAmb	IAmb	19 48 29.3	
	comp=Z,6.6nm,1.2s						
DBIC	Dimbokro	66.93	22	P	P	19 48 24.4	0.0
	comp=Z,3.6nm,0.6s,baz=201,slow=6.5,SNR=6.5						
	comp=Z,3.6nm,0.6s						
DBIC	Dimbokro	66.93	22	P	P	19 48 24.5	+0.2
DBIC				IAmb	IAmb	19 48 26.5	
	comp=Z,10nm,1.1s						
TOA0	Torodi Ar. Sit	74.65	27	P	P	19 49 12.3	+1.0
TOA0				IAmb	IAmb	19 49 13.4	
	comp=Z,5.6nm,0.8s						
TORD	Torodi Ar. Bea	74.65	27	P	P	19 49 12.3	+1.1
	comp=Z,24nm,0.4s,baz=205,slow=6.6,SNR=3.9						
TAU	Tasmania Unive	78.89	175	P	P	19 49 33.6	-1.3
THZ	Tophouse	79.05	194	P	P	19 49 36.5	+0.6
DSZ	Denniston Nort	79.20	193	P	P	19 49 36.4	-0.4
STKA	Stephens Creek	89.43	169	P	P	19 50 28.9	+0.2
	comp=Z,2.6nm,0.9s,baz=118,slow=3.9,SNR=3.5						
	comp=Z,2.6nm,0.9s						
ASAR	Alice Springs	96.47	161	P	P	19 51 01.1	-0.1
	comp=Z,1.1nm,0.7s,baz=184,slow=4.1,SNR=14						
	comp=Z,1.1nm,0.7s						
WRA	Warramunga Arr	100.18	161	P	Pdif	19 51 18.4	+0.5
	comp=Z,0.6nm,1.0s,baz=188,slow=4.4,SNR=2.0						
PDAR	Pinedale Array	122.37	300	PKP	PKPdf	19 56 25.1	-1.3
	comp=Z,0.4nm,0.5s,baz=150,slow=3.3,SNR=5.5						
NVAR	Mina Array Bea	123.16	290	PKP	PKiKP	19 56 28.6	+0.4
	comp=Z,0.6nm,0.7s,baz=121,slow=4.3,SNR=5.2						
CMAR	Chiang Mai Arr	123.35	110	PKP	PKPdf	19 56 28.9	+0.2
	comp=Z,0.9nm,0.7s,baz=258,slow=3.5,SNR=6.4						
FINES	FINESS Array B	126.00	28	PKP	PKPdf	19 56 32.2	-0.1
	comp=Z,0.6nm,0.5s,baz=177,slow=2.8,SNR=8.6						
ARCES	ARCESS Array B	132.76	22	PKP	PKPdf	19 56 44.9	-0.1
	comp=Z,2.0nm,1.0s,baz=226,slow=2.4,SNR=0.8						
MKAR	Makanchi Array	136.69	73	PKhKP	PKPpre	19 56 47.3	
	comp=Z,0.1nm,0.5s,baz=212,slow=4.6,SNR=1.8						
MKAR				PKP	PKPdf	19 56 52.2	-1.0
	comp=Z,0.3nm,0.6s,baz=243,slow=1.3,SNR=3.8						
YKA	Yellowknife Ar	138.53	315	PKP	PKPdf	19 56 56.3	+0.4
	comp=Z,2.3nm,0.7s,baz=130,slow=2.5,SNR=40						
ZALV	Zalesovo Beam	142.50	66	PKP	PKPdf	19 57 01.7	-1.6
	comp=Z,0.4nm,0.5s,baz=298,slow=3.1,SNR=1.8						
SONM	Songino Array	149.85	89	PKPbc	PKPbc	19 57 21.0	-0.1
	comp=Z,1.9nm,0.6s,baz=215,slow=3.5,SNR=14						
ILAR	Eielson Array	152.35	308	PKPbc	PKPbc	19 57 26.2	0.0
	comp=Z,5.6nm,0.8s,baz=142,slow=2.7,SNR=41						

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*IDC **29** 20:07:11.4±6.0, 1°.21S×127°.77E, h72^{km}±69^{km}, mb3.2/4, mbtmp3.5/6, ML3.6/2, Error ellipse: s-maj=44.9km s-min=21.5km az=81.0*

ISC 29 20:07:09.7±1.1**, 1°.2S**±0°.2×**127°.66E**±0°.10**, h50^{km}, n6, σ0^{s}88**/7**, mb3.5**/4**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	3.63	84	P	Pn	20 08 03.8	+0.5
	4.3nm,0.3s,baz=266,slow=12,SNR=79						
SIJI				S	Sn	20 08 44.7	-0.2
	22nm,0.8s,baz=225,slow=19,SNR=9.1						
	8.7nm,0.3s						
WRA	Warramunga Arr	19.71	161	P	P	20 11 34.7	-0.4
	0.2nm,0.3s,baz=339,slow=12,SNR=12						
	1.6nm,0.7s						
ASAR	Alice Springs	23.11	165	P	P	20 12 11.7	+0.2
	1.9nm,0.8s,baz=348,slow=11,SNR=17						
	1.9nm,0.8s						
CMAR	Chiang Mai Arr	34.36	306	P	P	20 13 53.0	+1.0
	0.3nm,0.4s,baz=141,slow=8.5,SNR=4.6						
	0.3nm,0.4s						
MKAR	Makanchi Array	62.16	326	P	P	20 17 25.1	-0.7
	0.1nm,0.4s,baz=125,slow=7.2,SNR=2.9						
	0.1nm,0.4s						
KURBB	Kurchatov Arra	66.41	328	P	P	20 17 52.4	-1.1
	0.2nm,0.5s,baz=124,slow=6.8,SNR=2.1						
	0.2nm,0.5s						

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*GUC **29** 20:29:20.4±0.5, 28°.90S×72°.69W, h16^{km}±15^{km}, ML3.7*

*IDC **29** 20:29:25.1±0.9, 29°.04S×72°.38W, h0^{km}, mb3.8/5, mbtmp3.8/9, ML3.8/4, MS2.9/3, Error ellipse: s-maj=26.3km s-min=21.7km az=34.0*

ISC 29 20:29:21.1±2.9**, 28°.92S**±0°.03×**72°.58W**±0°.08**, h9^{km}**±20^{km}**, n36, σ2^{s}80**/38**, mb4.0**/7**, 1C-4D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC04	Llanos de Chal	1.51	62	*e*P	Pb	20 29 49.1	-0.2
AC04				*e*S	Sn	20 30 06.0	-2.1
AC04				IAML		20 30 06.9	
	comp=E,1μm,0.1s						
LCO	Las Campanas	1.65	94	*e*P	Pb	20 29 51.7	-0.2
LCO				*e*S	Sn	20 30 11.1	-0.9
CO06	Fray Jorge	1.93	155	⇓*i*P	Pb	20 29 55.5	-1.0
CO06				*e*S	Sn	20 30 15.9	-2.7
CO06				IAML		20 30 16.7	
	comp=E,365nm,0.2s						
GO04	Tololo Observa	1.99	129	⇓*e*P	Pb	20 29 57.3	-0.4
GO04				*e*S	Sn	20 30 17.6	-2.8
GO04				IAML		20 30 25.8	
	comp=N,3μm,0.4s						
AC05	El Transito	2.03	88	*e*P	Pb	20 29 58.0	-0.2
AC05				*e*S	Sn	20 30 21.0	-0.1
AC05				IAML		20 30 22.1	
	comp=N,878nm,0.4s						
CO01	Juntas del Tor	2.41	116	⇓*e*P	Pb	20 30 04.0	-0.9
CO01				*e*S	Sn	20 30 29.8	-1.0
CO01				IAML		20 30 33.0	
	comp=N,356nm,0.5s						
GO03	Copiap	2.46	58	⇑*e*P	Pb	20 30 03.9	-1.6
GO03				*e*S	Sn	20 30 31.7	+0.1
GO03				IAML		20 30 34.1	
	comp=N,528nm,0.3s						
AC06	Mina Casimiro	2.51	52	*e*P	Pb	20 30 04.0	-2.4
AC06				*e*S	Sn	20 30 32.0	-0.9
AC06				IAML		20 30 34.8	
	comp=N,293nm,0.2s						
CO03	El Pedregal	2.52	140	*e*P	Pb	20 30 04.6	-2.0
CO03				*e*S	Sn	20 30 31.5	-1.7
CO03				*e*S	Sb	20 30 33.0	-4.8
CO02	Combarbal	2.66	149	⇓*i*P	Pb	20 30 06.9	-2.1
AC01	Pan de Azucar	3.27	33	*e*P	Pn	20 30 14.0	+1.3
VA06	Catapilco	3.79	163	*e*P	Pn	20 30 21.7	+2.0
ROCH	El Roble	4.26	162	*e*P	Pn	20 30 28.6	+2.2
MT02	Curacav	4.50	164	*e*P	Pn	20 30 31.6	+2.1
CFA	Coronel Fontan	4.61	127	Pn	Pn	20 30 35.1	+4.0
	comp=N,2.6nm,0.3s,baz=315,slow=12,SNR=19						
CFA				Sn	Sn	20 31 26.6	+1.8
	comp=N,3.5nm,0.3s,baz=258,slow=23,SNR=3.4						
CFA				LR	LR	20 32 24.1	
	comp=N,94nm,20.3s,baz=36,slow=41						
	comp=N,6.8nm,0.3s						
MT10	Hacienda Santa	4.68	159	*e*P	Pn	20 30 35.0	+2.9
MT05	Renca	4.73	161	*e*P	Pn	20 30 35.4	+2.7
MT01	Popeta	5.06	167	*e*P	Pn	20 30 39.1	+2.0
H03N1	Juan Fernandez	7.05	229	T	T	20 40 05.4	
	baz=59,slow=72,SNR=56						
H03N2	Juan Fernandez	7.06	229	T	T	20 40 09.2	
	baz=59,slow=72,SNR=56						
H03N3	Juan Fernandez	7.07	229	T	T	20 39 59.8	
	baz=59,slow=72,SNR=68						
LVC	Limon Verde	7.10	29	Pn	Pn	20 31 07.7	+2.2
	comp=N,0.5nm,0.3s,baz=157,slow=7.5,SNR=13						
LVC				Sn	Sn	20 32 25.7	-0.9
	comp=N,2.8nm,0.3s,baz=110,slow=7.7,SNR=3.3						
PLCA	Paso Flores	11.90	172	Pn	Pn	20 32 13.2	+2.1
	comp=N,0.2nm,0.3s,baz=343,slow=12,SNR=9.6						
	comp=N,0.6nm,0.3s						
LPAZ	La Paz	13.22	19	Pn	P	20 32 35.4	-4.5
	comp=N,0.1nm,0.3s,baz=199,slow=8.6,SNR=5.5						
	comp=N,1.5nm,0.7s						
CPUP	Villa Florida	13.77	83	LR	LR	20 38 36.8	
	comp=N,60nm,19.2s,baz=225,slow=41						
SIV	San Ignacio	16.68	42	Pn	P	20 33 21.2	+3.6
	baz=215,slow=10,SNR=13						
SIV				LR	LR	20 39 10.5	
	comp=N,44nm,19.1s,baz=270,slow=35						
	comp=N,4.6nm,0.8s						
BDFB	Brasilia	26.23	65	P	P	20 35 00.6	+3.9
	comp=N,1.7nm,0.4s,baz=208,slow=9.3,SNR=3.1						
	comp=N,1.7nm,0.4s						
TXAR	Lajitas Array	65.10	330	P	P	20 40 08.8	+6.5
	comp=N,0.4nm,0.7s,baz=153,slow=8.4,SNR=3.5						
	comp=N,0.4nm,0.7s						
DBIC	Dimbokro	74.06	73	P	P	20 41 02.4	+4.5
	comp=N,3.1nm,0.7s,baz=245,slow=3.2,SNR=5.4						
	comp=N,3.1nm,0.7s						
RAR	Rarotonga	77.69	253	P	P	20 41 25.0	+6.4
	comp=N,12nm,0.5s,baz=169,slow=5.9,SNR=2.1						
PDAR	Pinedale Array	79.03	333	P	P	20 41 32.7	+7.0
	comp=N,0.3nm,0.8s,baz=152,slow=6.6,SNR=2.5						
	comp=N,0.3nm,0.8s						
NVAR	Mina Array Bea	79.46	325	P	P	20 41 34.9	+6.8
	comp=N,0.2nm,0.5s,baz=201,slow=4.7,SNR=1.8						
	comp=N,0.2nm,0.5s						
TORD	Torodi Ar. Bea	82.95	71	P	P	20 41 51.4	+4.5
	comp=N,1.4nm,0.9s,baz=248,slow=4.2,SNR=5.8						
ASAR	Alice Springs	121.83	209	PKP	PKiKP	20 48 21.8	+5.3
	comp=N,0.3nm,0.8s,baz=178,slow=38,SNR=2.2						
ZALV	Zalesovo Beam	150.05	27	PKPbc	PKPab	20 49 17.1	-0.4
	comp=N,5.7nm,0.9s,baz=300,slow=3.3,SNR=7.0						
MKAR	Makanchi Array	153.50	41	PKPbc	PKPab	20 49 24.6	-7.6
	comp=N,0.4nm,0.5s,baz=259,slow=3.7,SNR=1.0						

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*MOS **29** 20:37:01.8±0.8, 10°.80S×41°.12E, h10^{km}, mb5.1/47, Error ellipse: s-maj=11.4km s-min=4.9km az=91.8*

*IDC **29** 20:37:01.2±0.5, 10°.95S×41°.17E, h0^{km}, mb4.6/26, mbtmp4.7/27, ML5.0/1, MS4.0/52, Error ellipse: s-maj=16.1km s-min=12.1km az=117.0*

*BJI **29** 20:37:02.1±0.0, 10°.91S×41°.24E, h8^{km}, mb4.6/48, mB5.1/22, Ms4.8/5, Ms7 4.5/5*

*NEIC **29** 20:37:03.8±1.7, 10°.95S±0°.07×41°.05E±0°.09, h10^{km}±1^{km}, mb5.0/111, Error ellipse: s-maj=15.3km s-min=10.1km az=242.0*

*GCMT **29** 20:37:03.8±0.2, 10°.83S±0°.02×41°.14E±0°.02, h19^{km}, MW5.0/89, Moment Tensor Solution. s48,c61; s89,c140; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.99±.20; $M_{\theta\theta}$1.87±.12; $M_{\phi\phi}$2.12±.15; $M_{r\theta}$0.06±.25; $M_{\theta\phi}$-2.13±.08; $M_{\phi r}$0.95±.32; Best double couple: $M_0$4.17200×10^{16} NP1:ϕ_s146.00000°,δ50.00000°,λ-77.00000°. NP2: ϕ_s307.00000°,δ41.00000°,λ-105.00000°. Principal axes: T 4.1820, Plg5.0000°, Azm227.0000°; N -0.0200, Plg10.0000°, Azm318.0000°; P -4.1610, Plg79.0000°, Azm112.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 20:37:03.0±0.8**, 11°.00S**±0°.05×**41°.11E**±0°.05**, h13^{km}**±4^{km}**, n715, σ1^{s}06**/683**, mb5.0**/152**, MS4.0**/55**, 22C-42D, Northwest of Madagascar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBV	Sambava	8.95	107	P	Pn	20 39 11.1	-1.0
	SNR=15						
KIBK	Kibwezi	9.13	340		Pn	20 39 11.4	-3.2
KIBK				Sn	Sn	20 40 45.1	-12
KIBK	Kibwezi	9.13	340	P	Pn	20 39 12.5	-2.1
	SNR=13						
OPO	Ambohidratompo	9.55	143	Pn	Pn	20 39 18.9	-1.5
	1.4nm,0.3s,baz=300,slow=14,SNR=74						
OPO				Sn	Sn	20 41 02.0	-5.7
	1.5nm,0.3s,baz=257,slow=18,SNR=1.6						
OPO				LR	LR	20 42 45.9	
	comp=Z,569nm,19.8s,baz=142,slow=36						
	30nm,0.3s						
ABPO	Ambohimpanom	9.92	144	Pn	Pn	20 39 24.0	-1.5
ABPO	Ambohimpanom	9.92	144	P	Pn	20 39 24.0	-1.5
ABPO	Ambohimpanom	9.92	144	*e*P	Pn	20 39 24.7	-0.8
KMBO	Kilima Mbogo	10.53	338	Pn	Pn	20 39 29.8	-4.2
	0.1nm,0.3s,baz=158,slow=24,SNR=81						
KMBO				Sn	Sn	20 41 19.8	-12
	0.1nm,0.3s,baz=76,slow=24,SNR=8.3						
KMBO	Kilima Mbogo	10.53	338	Pn	Pn	20 39 30.6	-3.4
KMBO				Sn	Sn	20 41 21.6	-10
KMBO	Kilima Mbogo	10.53	338	P	Pn	20 39 30.7	-3.3
VOI	Vohitsoka	12.13	154		Pn	20 39 54.3	-1.5
VOI	Vohitsoka	12.13	154	P	Pn	20 40 04.3	+8.5
LSZ	Lusaka	13.28	250	Pn	Pn	20 40 08.4	-3.0
	37nm,0.3s,baz=77,slow=12,SNR=557						
LSZ				Sn	Sn	20 42 26.0	-13
	17nm,0.3s,baz=176,slow=19,SNR=8.9						
LSZ				LR	LR	20 45 07.9	
	comp=Z,1μm,19.1s,baz=81,slow=36						
LSZ	Lusaka	13.28	250	Pn	Pn	20 40 07.6	-3.9
LSZ	Lusaka	13.28	250	P	Pn	20 40 07.6	-3.9
MBAR	Mbarara	14.59	314	Pn	Pn	20 40 25.7	-3.9
	9.2nm,0.3s,baz=124,slow=13,SNR=40						
MBAR				Sn	Sn	20 42 57.9	-13
	3.6nm,0.3s,baz=185,slow=22,SNR=2.3						
MBAR				LR	LR	20 46 25.8	
	comp=Z,673nm,20.0s,baz=129,slow=39						
MBAR	Mbarara	14.59	314		Pn	20 40 25.4	-4.2
MBAR	Mbarara	14.59	314	*de*P	Pn	20 40 25.6	-3.9
MBAR				pmax	pmax		
	comp=Z,50nm,1.2s						
LODK	Lodwar	15.43	338	P	Pn	20 40 39.4	-1.2
LODK	Lodwar	15.43	338	P	Pn	20 40 40.2	-0.4
MOPA	Mopani	15.51	215	*i* P	Pn	20 40 38.2	-3.4
MUSN	Musina, Limpop	15.55	222	*i* P	Pn	20 40 40.9	-1.2
PILG	Pilgrimsrest,	17.01	214	*e*P	Pn	20 40 58.9	-2.1
PILG				IAmb	IAmb	20 41 12.2	
	comp=Z,176nm,0.9s						
RER	Riviere de l'E	17.30	128	Pn	Pn	20 41 05.0	+0.6
RER				IAmb	IAmb	20 41 14.4	
	comp=Z,48nm,0.5s						
RER	Riviere de l'E	17.30	128	P	Pn	20 41 03.0	-1.5
MMAL	MMAL	17.65	211	*e*P	Pn	20 41 07.5	-1.4
HAGI	HAGI	17.71	211	*e*P	Pn	20 41 08.2	-1.5
LEPH	Lephalale, Lim	18.00	223	*e*P	Pn	20 41 11.4	-1.8
CRLN	Carolina, Mapu	18.23	214	*e*P	Pn	20 41 13.3	-2.7
POGA	Pongola	18.51	207	P	P	20 41 19.0	-0.1
POGA	Pongola	18.51	207	*e*P	P	20 41 18.4	-0.7
LBTB	Lobatse	20.26	224	P	P	20 41 38.6	+0.2
	comp=Z,77nm,0.9s,baz=42,slow=11,SNR=62						
LBTB				LR	LR	20 50 05.3	
	comp=Z,167nm,19.0s,baz=54,slow=38						
	comp=Z,77nm,0.9s						
LBTB	Lobatse	20.26	224	P	P	20 41 38.5	0.0
LBTB				IAmb	IAmb	20 41 47.6	
	comp=Z,80nm,0.7s						
LBTB	Lobatse	20.26	224	*i* P	P	20 41 39.0	+0.5
PRYS	Parys	20.46	217	*e*P	Pn	20 41 42.4	-0.4
KSTD	Kokstad	22.38	208	*e*P	P	20 42 00.9	-0.4
ATD	Arta Tunnel	22.45	4	P	P	20 42 01.5	-0.5
	comp=Z,1.1nm,1.1s,baz=252,slow=13,SNR=4.2						
ATD	Arta Tunnel	22.45	4	P	P	20 42 02.2	+0.2
ATD				IAmb	IAmb	20 42 24.7	
	comp=Z,82nm,1.2s						
BOSA	Boshof	22.96	218	P	P	20 42 07.6	+0.2
	comp=Z,54nm,0.8s,baz=46,slow=10,SNR=76						
BOSA				LR	LR	20 50 51.5	
	comp=Z,535nm,20.2s,baz=52,slow=36						

	comp=Z,54nm,0.8s						
BOSA	**Boshof**	22.96	218	P	P	20 42 07.4	0.0
BOSA				IAmb	IAmb	20 42 13.1	
	comp=Z,81nm,1.0s						
BOSA	**Boshof**	22.96	218	*i* P	P	20 42 06.7	-0.7
BOSA	**Boshof**	22.96	218	*e*P	P	20 42 07.0	-0.4
BOSA				IAmb	IAmb	20 42 12.8	
	comp=Z,74nm,0.9s						
TSUM	**Tsumeb**	24.11	247	P	P	20 42 19.4	+0.6
	comp=Z,89nm,0.8s,baz=60,slow=9.5,SNR=55						
TSUM				LR	LR	20 51 44.7	
	comp=Z,1µm,19.5s,baz=73,slow=36						
	comp=Z,89nm,0.8s						
TSUM	**Tsumeb**	24.11	247	P	P	20 42 19.1	+0.2
WIN	**Windhoek**	25.66	240	P	P	20 42 33.1	+0.2
WIN	**Windhoek**	25.66	240	P	P	20 42 33.1	+0.2
WIN				pmax	pmax		
	comp=Z,105nm,1.0s						
SOE	**Somerset East**	25.91	211	P	P	20 42 35.1	+0.1
SOE				IAmb	IAmb	20 43 11.2	
	comp=Z,30nm,0.9s						
GRHM	**Grahamstown, E**	25.97	209	P	P	20 42 35.7	+0.2
GRHM				IAmb	IAmb	20 42 51.0	
	comp=Z,46nm,1.0s						
GRHM	**Grahamstown, E**	25.97	209	*e*P	P	20 42 36.5	+1.0
GRAF	**Camdeboo Natio**	26.14	213	*e*P	P	20 42 37.6	+0.6
GRAF				IAmb	IAmb	20 42 52.7	
	comp=Z,70nm,1.3s						
BFON	**Badsfontein, M**	26.22	215	*e*P	P	20 42 35.2	-2.6
ARMS	**Ukamas**	26.25	227	*e*P	P	20 42 39.5	+1.4
BRAK	**Brakfontein**	26.66	216	*e*P	P	20 42 43.9	+2.1
GRAN	**Grantham**	27.46	217	*e*P	P	20 42 49.5	+0.6
GRAN				IAmb	IAmb	20 42 58.9	
	comp=Z,33nm,0.7s						
FRAZ	**Fraserburg**	27.65	218	*e*P	P	20 42 50.0	-0.8
FRAZ				IAmb	IAmb	20 43 01.1	
	comp=Z,31nm,0.9s						
SUR	**Sutherland**	28.32	218	P	P	20 42 57.4	+0.6
	comp=Z,18nm,1.1s,baz=46,slow=11,SNR=17						
SUR				LR	LR	20 54 45.0	
	comp=Z,429nm,18.5s,baz=64,slow=38						
	comp=Z,18nm,1.1s						
SUR	**Sutherland**	28.32	218	P	P	20 42 57.1	+0.3
CVNA	**Calvinia**	28.38	221	*e*P	P	20 42 54.9	-2.3
WHFO	**Wadi Hawf**	31.34	24	P	P	20 43 24.9	+1.4
DOK	**Doka**	32.11	24	P	P	20 43 31.4	+1.2
	SNR=14						
KAAM	**Kaadhehdhoo**	33.69	72	P	P	20 43 44.5	+0.4
RAYN	**Ar Rayn**	34.58	7	P	P	20 43 52.2	+0.4
RAYN	**Ar Rayn**	34.58	7	P	P	20 43 52.2	+0.4
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MHTO	**MHTO**	35.85	28	P	P	20 44 03.9	+1.2
MZR	**Muzera**	35.90	20	P	P	20 44 04.6	+1.5
UMZA	**Um Al Zommool**	36.23	22	P	P	20 44 06.7	+0.8
MZWR	**Madinat Zayed**	36.74	20	P	P	20 44 11.5	+1.3
BSY	**Bisya**	37.06	25	P	P	20 44 14.3	+1.3
	SNR=6.1						
JMDO	**Jabal Madar**	37.12	27	P	P	20 44 15.2	+1.7
ARQ	**Araqi**	37.31	24	P	P	20 44 16.6	+1.5
JLN	**Jalan Bani Buh**	37.52	29	P	P	20 44 17.7	+0.8
ALNE	**Al Ain**	37.67	22	P	P	20 44 20.1	+1.9
	SNR=5.3						
SMDO	**Samad**	37.70	26	P	P	20 44 19.5	+1.0
	SNR=7.7						
WBK	**Wadi Bani Khal**	37.72	28	P	P	20 44 20.4	+1.8
HOQ	**Hoqain**	37.85	25	P	P	20 44 20.9	+1.2
SAKB	**Bahrain**	37.89	14	P	P	20 44 21.3	+1.4
ASUD	**Al Ashush, Dub**	38.04	21	P	P	20 44 22.8	+1.5
ASUD	**Al Ashush, Dub**	38.04	21	P	P	20 44 23.2	+2.0
SOHO	**SOHO**	38.04	23	P	P	20 44 22.3	+1.1
SOHO	**SOHO**	38.04	23	P	P	20 44 22.4	+1.1
WSAR	**Wadi Sarin**	38.11	27	LR	LR	20 59 43.6	
	comp=Z,74nm,19.9s,baz=200,slow=36						
FAQ	**Al Faqa, Dubai**	38.24	22	P	P	20 44 24.6	+1.7
FAQ	**Al Faqa, Dubai**	38.24	22	P	P	20 44 24.7	+1.7
ASHO	**Ashiyiah**	38.35	22	P	P	20 44 25.2	+1.3
ASHO	**Ashiyiah**	38.35	22	P	P	20 44 25.3	+1.3
NAZ	**Nazwa, Dubai**	38.49	21	P	P	20 44 27.2	+2.1
HATD	**Hatta, Dubai**	38.51	22	P	P	20 44 26.9	+1.7
HATD	**Hatta, Dubai**	38.51	22	P	P	20 44 27.2	+1.9
UOSS	**Minazif**	38.65	22	P	P	20 44 27.3	+0.9
UOSS	**Minazif**	38.65	22	P	P	20 44 27.7	+1.3
UOSS	**Minazif**	38.65	22	P	P	20 44 27.9	+1.5
MDH	**Madha**	39.00	22	P	P	20 44 31.1	+1.8
	SNR=6.9						
MSFE	**Esma-Masafi**	39.01	22	P	P	20 44 30.9	+1.4
MASF	**Masafi**	39.02	22	P	P	20 44 31.0	+1.5
	SNR=7.7						
BANOM	**Banah**	39.57	22	P	P	20 44 34.6	+0.4
BANOM	**Banah**	39.57	22	P	P	20 44 35.4	+1.3
SHME	**Shamm**	39.63	21	P	P	20 44 35.8	+1.3
SHME	**Shamm**	39.63	21	P	P	20 44 36.2	+1.6
EIL	**Elat**	40.87	352	LR	LR	21 02 12.7	
	comp=Z,208nm,18.1s,baz=202,slow=37						
PALK	**Pallekele**	43.39	67	LR	LR	21 00 05.7	
	comp=Z,380nm,18.4s,baz=347,slow=32						
MMAI	**Mount Meron Ar**	44.11	353	LR	LR	21 03 32.5	
	comp=Z,168nm,18.1s,baz=242,slow=36						
TOA0	**Torodi Ar. Sit**	45.89	301	P	P	20 45 25.6	0.0
TOA0				IAmb	IAmb	20 45 27.4	
	comp=Z,24nm,0.8s						
TORD	**Torodi Ar. Bea**	45.89	301	P	P	20 45 25.5	-0.1
	comp=Z,148nm,0.4s,baz=123,slow=8.3,SNR=9.8						
TORD				PcP	PcP	20 47 03.1	+0.3
	comp=Z,4.9nm,0.9s,baz=117,slow=3.5,SNR=7.5						
TORD				LR	LR	21 05 09.1	
	comp=Z,501nm,19.0s,baz=126,slow=37						
GAZ	**Gaziantep**	48.06	356	P	P	20 45 43.5	+1.2
GAZ				IAmb	IAmb	20 45 45.3	
	comp=Z,30nm,1.4s						
TAM	**Tamanrasset**	48.41	314	P	P	20 45 46.4	+1.1
TAM				IAmb	IAmb	20 45 48.5	
	comp=Z,15nm,1.1s						
TAM	**Tamanrasset**	48.41	314	P	P	20 45 46.4	+1.1
TAM				pmax	pmax		
	comp=Z,15nm,1.1s						
IDI	**Anoyia**	48.53	342	LR	LR	21 07 07.1	
	comp=Z,165nm,21.5s,baz=178,slow=37						
KIC	**Kosan Boka**	48.78	289	⇓*e*P	P	20 45 48.5	+0.3
	comp=Z,111nm,0.9s						
DBIC	**Dimbokro**	49.00	289	P	P	20 45 50.2	+0.4
	comp=Z,40nm,0.8s,baz=113,slow=9.3,SNR=48						
DBIC				LR	LR	21 06 53.7	
	comp=Z,289nm,18.7s,baz=126,slow=36						
	comp=Z,40nm,0.8s						
DBIC	**Dimbokro**	49.00	289	P	P	20 45 50.0	+0.2
DBIC	**Dimbokro**	49.00	289	P	P	20 45 50.5	+0.6
LIC	**Lamto**	49.01	288	⇓*i*P	P	20 45 50.1	+0.2
	comp=Z,100nm,0.8s						
GEVA	**Gevas**	49.09	2	P	P	20 45 49.7	-0.6
GEVA				IAmb	IAmb	20 45 53.6	
	comp=Z,14nm,0.9s						
TIC	**Toumodi**	49.14	289	⇑*i*P	P	20 45 51.8	+0.8
	comp=Z,136nm,0.7s						
GURO	**Guroymak-BITLI**	49.30	1	P	P	20 45 53.3	+1.4
BNN	**Bunyan**	49.84	355	P	P	20 45 56.8	+0.9
KOPT	**Kop Dagi**	50.76	359	P	P	20 46 03.9	+0.7
KOPT				IAmb	IAmb	20 46 06.5	
	comp=Z,17nm,1.1s						
BR131	**Keskin Array S**	50.94	353	P	P	20 46 04.9	+0.5
BR131				IAmb	IAmb	20 46 06.8	
	comp=Z,31nm,1.2s						
BR131	**Keskin Array S**	50.94	353	*d i*P	P	20 46 05.4	+1.1
BRTR	**Keskin Array B**	50.94	353	P	P	20 46 05.2	+0.8
	comp=Z,8.0nm,1.0s,baz=180,slow=8.0,SNR=31						
BRTR				PcP	PcP	20 47 20.2	-0.4
	comp=Z,1.0nm,0.7s,baz=169,slow=8.7,SNR=1.4						
BRTR				LR	LR	21 07 52.1	
	comp=Z,97nm,19.5s,baz=242,slow=36						
	comp=Z,8.0nm,1.0s						
BRTR	**Keskin Array B**	50.94	353	P	P	20 46 04.9	+0.5
BRTR	**Keskin Array B**	50.94	353	*i* P	P	20 46 05.9	+1.6
BRTR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GNI	**Garni**	51.00	4	LR	LR	21 09 05.2	
	comp=Z,98nm,20.3s,baz=196,slow=38						
GNI	**Garni**	51.00	4	P	P	20 46 05.7	+0.9
GNI				IAmb	IAmb	20 46 29.9	
	comp=Z,16nm,1.1s						
GNI	**Garni**	51.00	4	⇓*i*P	P	20 46 05.1	+0.3
GNI				pmax	pmax		
	comp=Z,16nm,1.2s						
GNI	**Garni**	51.00	4	P	P	20 46 06.2	+1.4
ITM	**Ithomi**	51.20	340	P	P	20 46 06.6	+0.4
ITM				IAmb	IAmb	20 46 08.5	
	comp=Z,30nm,1.2s						
GEYT	**Alibeck**	51.22	17	P	P	20 46 06.3	+0.1
	comp=Z,2.5nm,0.8s,baz=218,slow=9.1,SNR=5.7						
GEYT				LR	LR	21 11 30.4	
	comp=Z,133nm,18.1s,baz=238,slow=40						
	comp=Z,2.5nm,0.8s						
GEYT	**Alibeck**	51.22	17	P	P	20 46 06.4	+0.1
GYA0B	**ALIBECK ARRAY**	51.22	17	P	P	20 46 06.3	0.0
TOKA	**Tokat**	51.24	355	P	P	20 46 06.5	0.0
TOKA				IAmb	IAmb	20 46 24.5	
	comp=Z,8.3nm,0.7s						
BORA	**Eskisehir**	51.58	350	P	P	20 46 10.1	+1.1
BORA				IAmb	IAmb	20 46 25.9	
	comp=Z,24nm,1.1s						
MDUB	**Mudurnu**	52.03	350	P	P	20 46 13.3	+0.9
AKH	**Akhalkalaki**	52.20	2	P	P	20 46 14.5	+0.8
AKH	**Akhalkalaki**	52.20	2	P	P	20 46 14.5	+0.8
AKH				pmax	pmax		
	comp=Z,116nm,1.8s						
ILGA	**Ilgaz**	52.24	353	P	P	20 46 14.6	+0.4
ILGA				IAmb	IAmb	20 46 17.8	
	comp=Z,39nm,1.2s						
AKT	**Akhty**	52.58	6	*e*P	P	20 46 16.2	-0.3
AKT				*e*		20 47 25.0	
AKT				pmax	pmax		
	comp=Z,26nm,1.1s						
AGG	**Agios Georgios**	52.76	342	P	P	20 46 17.9	+0.1
AGG	**Agios Georgios**	52.76	342	P	P	20 46 17.9	+0.1
AGG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ONI	**Oni**	53.37	2	P	P	20 46 22.9	+0.6
ONI	**Oni**	53.37	2	P	P	20 46 22.9	+0.6
ONI				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ALN	**Alexandroupoli**	53.48	346	P	P	20 46 23.4	+0.4
ALN	**Alexandroupoli**	53.48	346	P	P	20 46 23.4	+0.4
ALN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ZEI	**Tsey**	53.59	3	*e*P	P	20 46 24.9	+0.9
ZEI				pmax	pmax		
	comp=Z,19nm,0.9s						
RDO	**Rodhopi**	53.84	345	P	P	20 46 25.8	+0.1
RDO				IAmb	IAmb	20 47 33.0	
	comp=Z,19nm,1.7s						
MAK	**Makhachkala**	54.02	6	*e*P	P	20 46 20.9	-6.0
MAK				*e*S	S	20 53 53.4	-9.1
MAK				pmax	pmax		
	comp=Z,159nm,1.2s						
MAK				MLR	MLR		
	comp=Z,76nm,16.0s						
GROC	**Groznyy**	54.11	4	*e*P	P	20 46 24.8	-2.8
GROC				*e*S	S	20 54 02.9	-0.9
VAE	**Valguarnera**	54.34	334	LR	LR	21 13 05.7	
	comp=Z,502nm,18.1s,baz=138,slow=40						
KBZ	**Khabaz**	54.49	2	P	P	20 46 31.4	+1.1
	comp=Z,3.1nm,0.9s,baz=196,slow=3.2,SNR=7.8						
KBZ				LR	LR	21 11 11.5	
	comp=Z,123nm,18.5s,baz=195,slow=38						
	comp=Z,3.1nm,0.9s						
KBZ	**Khabaz**	54.49	2	*d i*P	P	20 46 30.9	+0.6
KBZ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
FNA	**Florina**	54.66	342	P	P	20 46 32.2	+0.5
FNA	**Florina**	54.66	342	P	P	20 46 32.2	+0.5
FNA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV	**Kislovodsk**	54.71	1	⇑P	P	20 46 32.6	+0.5
KIV	**Kislovodsk**	54.71	1	P	P	20 46 32.5	+0.5
KIV				IAmb	IAmb	20 46 33.9	
	comp=Z,11nm,0.9s						
KIV	**Kislovodsk**	54.71	1	*e*P	P	20 46 32.7	+0.5
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
KIV				MLR	MLR		
	comp=Z,71nm,17.0s						
KIV	**Kislovodsk**	54.71	1	P	P	20 46 32.9	+0.8
KVAR	**Kislovodsk Arr**	54.71	1	LR	LR	21 11 23.2	
	comp=Z,80nm,18.5s,baz=91,slow=38						
KEST	**Kesra**	55.32	329	P	P	20 46 36.6	0.0
	comp=Z,8.7nm,1.0s,baz=30,slow=6.9,SNR=4.8						
KEST				LR	LR	21 12 25.0	
	comp=Z,480nm,19.1s,baz=142,slow=38						
	comp=Z,8.7nm,1.0s						
KEST	**Kesra**	55.32	329	P	P	20 46 37.4	+0.7
KEST				IAmb	IAmb	20 46 38.9	
	comp=Z,21nm,1.2s						
ANN	**Anapa**	55.64	357	*e*P	P	20 46 33.4	-5.2
ANN				*e**PP	pP	20 46 37.8	-4.5
ANN				*e*		20 48 41.8	
ANN				*e*S	S	20 54 17.9	-6.3
ANN				pmax	pmax		
	comp=Z,51nm,0.9s						
TIR	**Tirane**	55.65	341	P	P	20 46 39.4	+0.6
TIR	**Tirane**	55.65	341	P	P	20 46 39.4	+0.6
TIR				pmax	pmax		
	comp=Z,81nm,1.3s						
CHGR	**Chuyangaron**	55.91	26	P	P	20 46 41.6	+0.7
CHGR	**Chuyangaron**	55.91	26	P	P	20 46 41.6	+0.7
CHGR				pmax	pmax		
	comp=Z,54nm,1.5s						
SIM	**Simferopol'**	56.05	354	*e*P	P	20 46 42.4	+0.9
SIM				pmax	pmax		
	comp=Z,23nm,1.3s						
PYUN	**Piuthan**	56.16	45	*e*P	P	20 46 43.0	+0.1
	comp=Z,32nm,0.9s						
TIRR	**Tirgusor**	56.39	349	P	P	20 46 44.1	+0.1
TIRR				IAmb	IAmb	20 47 42.0	
	comp=Z,22nm,1.0s						
TIRR	**Tirgusor**	56.39	349	P	P	20 46 44.1	+0.1
TIRR				pmax	pmax		
	comp=Z,22nm,1.0s						
SNSI	**Sinabang, Aceh**	56.52	80	P	P	20 46 47.2	+1.7
	comp=Z,78nm,1.4s						
HARR	**Harsova**	56.70	349	⇑P	P	20 46 46.6	+0.4
HARR	**Harsova**	56.70	349	P	P	20 46 46.6	+0.4
GAR	**Garm**	56.71	27	P	P	20 46 47.2	+0.7
DANN	**Dangsing**	56.84	46	*e*P	P	20 46 47.8	-0.1
	comp=Z,29nm,1.1s						
CFR	**Carcaliu**	57.13	349	⇓P	P	20 46 49.9	+0.6
CFR	**Carcaliu**	57.13	349	P	P	20 46 49.8	+0.6
GKN	**Gorkha**	57.26	46	*e*P	P	20 46 50.7	0.0
DMN	**Daman**	57.36	47	*e*P	P	20 46 51.0	-0.6
PKIN	**Phulchoki**	57.55	47	*e*P	P	20 46 52.8	-0.1
PKI	**Pulchoki**	57.56	47	*e*P	P	20 46 52.9	-0.1
BISRR	**Bisoca**	57.77	348	⇑P	P	20 46 54.6	+0.7
MLR	**Muntele Rosu**	57.87	347	⇓P	P	20 46 55.3	+0.7
MLR	**Muntele Rosu**	57.87	347	LR	LR	21 16 27.0	
	comp=Z,126nm,18.2s,baz=131,slow=41						
MLR	**Muntele Rosu**	57.87	347	P	P	20 46 54.9	+0.2
MLR	**Muntele Rosu**	57.87	347	P	P	20 46 54.9	+0.2
MLR				pmax	pmax		
	comp=Z,70nm,1.9s						
VOIR		58.02	347	⇓P	P	20 46 55.8	+0.2
VOIR		58.02	347	P	P	20 46 55.8	+0.2
ARR	**Arges**	58.05	346	⇓P	P	20 46 55.7	-0.1
VRI	**Vrincioaia**	58.07	348	⇑P	P	20 46 56.9	+1.0
VRI	**Vrincioaia**	58.07	348	P	P	20 46 56.8	+1.0
PLOR	**Plostina**	58.07	348	⇓P	P	20 46 56.6	+0.7
PLOR	**Plostina**	58.07	348	P	P	20 46 56.6	+0.7
GUN	**Gumba**	58.09	47	*e*P	P	20 46 56.2	-0.6
	comp=Z,24nm,0.8s						
DIVS	**Divibare**	58.10	342	P	P	20 46 56.9	+0.6
DIVS				IAmb	IAmb	20 47 13.9	
	comp=Z,14nm,1.1s						
HERR	**Herculane**	58.14	344	⇓P	P	20 46 56.9	+0.5
COVR	**Voineasa-Covas**	58.16	348	⇑P	P	20 46 56.9	+0.4
JIRN	**Jiri**	58.17	48	*e*P	P	20 46 56.5	-0.9
KCSI	**Kotacane, Aceh**	58.20	79	P	P	20 46 57.1	-0.3
	comp=Z,14nm,1.1s						
MDVR	**Moldovita**	58.23	344	⇓P	P	20 46 57.9	+0.8
LOT	**Lotru**	58.33	346	⇓P	P	20 46 58.3	+0.5
INTR	**Introdacqua**	58.38	336	P	P	20 46 58.5	+0.3
INTR				IAmb	IAmb	20 47 00.1	
	comp=Z,23nm,1.2s						
DOPR	**Dopca**	58.45	347	⇑P	P	20 46 58.6	+0.1
OZUR		58.48	348	⇑P	P	20 46 58.8	0.0
MILM	**Milestii Mici**	58.70	350	*e*P	P	20 47 12.0	+12
	comp=Z,27nm,0.9s						
KIS	**Kishinev**	58.77	350	*e*P	P	20 47 15.0	+14
	comp=Z,23nm,0.9s						
KIS	**Kishinev**	58.77	350	*e*P	P	20 47 15.0	+14
KIS				pmax	pmax		
	comp=Z,23nm,0.9s						
AQU	**L'Aquila**	58.87	336	P	P	20 47 01.9	+0.4
AQU				IAmb	IAmb	20 47 04.8	
	comp=Z,24nm,1.1s						
AQU	**L'Aquila**	58.87	336	P	P	20 47 01.9	+0.4
AQU				pmax	pmax		
	comp=Z,24nm,1.1s						
SURR	**Surduc**	59.03	345	⇑P	P	20 47 03.6	+1.0
BZS	**Buzias**	59.03	344	⇑P	P	20 47 03.6	+1.0
BZS	**Buzias**	59.03	344	P	P	20 47 03.6	+1.0
NRCA	**Norcia**	59.38	336	P	P	20 47 05.1	-0.1
NRCA				IAmb	IAmb	20 47 06.9	
	comp=Z,16nm,1.2s						
CESX	**Cesi**	59.41	336	P	P	20 47 05.5	+0.2
CESX				IAmb	IAmb	20 47 07.1	
	comp=Z,20nm,1.3s						
GUMA	**Gualdo di Mace**	59.49	337	P	P	20 47 05.6	-0.2
GUMA				IAmb	IAmb	20 47 07.1	
	comp=Z,25nm,0.9s						
FDMO	**Fiordimonte**	59.56	336	P	P	20 47 06.2	-0.2
FDMO				IAmb	IAmb	20 47 07.9	
	comp=Z,9.0nm,1.0s						
MARR	**Marisel-Cluj**	59.64	346	⇓P	P	20 47 08.0	+1.1
BRDH	**Bariadhala**	59.75	56	LR	LR	21 09 42.9	
	comp=Z,243nm,21.8s,baz=12,slow=33						
PDSI	**Padang**	59.77	85	P	P	20 47 10.1	+1.7
	comp=Z,11nm,1.1s						
KSH	**Kashi**	59.80	31	P	P	20 47 06.3	-1.9
KSH				PcP	PcP	20 47 54.5	-0.3
KSH				PP	PP	20 49 19.3	-1.1
KSH				pmax	pmax		
	comp=Z,2.0nm,0.8s						
DRGR		59.84	345	⇓P	P	20 47 08.9	+0.6
DRGR		59.84	345	P	P	20 47 08.8	+0.6
SORM	**Soroca**	59.95	350	⇑P	P	20 47 08.6	-0.3
SORM	**Soroca**	59.95	350	P	P	20 47 08.5	-0.3
BURAR	**Bucovina Array**	60.05	348	⇑P	P	20 47 10.6	+0.9
BURAR	**Bucovina Array**	60.05	348	P	P	20 47 10.0	+0.3
BURAR	**Bucovina Array**	60.05	348	P	P	20 47 10.5	+0.9
BUR08	**Bucovina Ar. S**	60.08	348	P	P	20 47 09.8	-0.2
BUR08				IAmb	IAmb	20 47 27.1	
	comp=Z,19nm,1.5s						
KK31	**Karatay Array**	60.17	24	P	P	20 47 10.8	+0.2
KK31				IAmb	IAmb	20 47 12.2	
	comp=Z,23nm,1.4s						
KK31	**Karatay Array**	60.17	24	P	P	20 47 10.8	+0.2
KK31				pmax	pmax		
	comp=Z,23nm,1.4s						
KKAR	**Karatay Array**	60.17	24	P	P	20 47 10.6	+0.1
KKAR	**Karatay Array**	60.17	24	P	P	20 47 10.9	+0.3
KKAR				IAmb	IAmb	20 47 12.2	
	comp=Z,23nm,1.4s						
KKAR	**Karatay Array**	60.17	24	P	P	20 47 10.6	+0.1
KKAR						20 47 10.9	
KKAR				pmax	pmax		
	comp=Z,23nm,1.4s						
MORH	**Mrgy, Hungar**	60.42	342	⇓P	P	20 47 12.6	+0.5
SDSI	**Sungai Dareh**	60.71	85	P	P	20 47 15.0	+0.2
	comp=Z,12nm,1.5s						
MASI	**Maura Aman, Be**	61.08	88	P	P	20 47 17.5	+0.2
	comp=Z,36nm,1.5s						
GOLS	**Golise**	61.20	340	*i* P	P	20 47 17.8	+0.3
NRN	**Naryn**	61.28	29	P	P	20 47 18.5	0.0
NRN	**Naryn**	61.28	29	P	P	20 47 18.5	0.0
NRN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ZCCA	**Zocca**	61.50	336	P	P	20 47 19.9	+0.3
ZCCA				IAmb	IAmb	20 47 31.3	
	comp=Z,14nm,1.2s						
AAK	**Ala-Archa**	61.51	28	LR	LR	21 12 56.4	
	comp=Z,62nm,21.2s,baz=228,slow=35						
AAK	**Ala-Archa**	61.51	28	P	P	20 47 20.6	+0.7
AAK	**Ala-Archa**	61.51	28	*d i*P	P	20 47 20.5	+0.7
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
AAK	**Ala-Archa**	61.51	28	P	P	20 47 20.8	+1.0
TRI	**Trieste**	61.59	339	P	P	20 47 21.0	+1.0
TRI				IAmb	IAmb	20 49 03.4	
	comp=Z,10nm,1.0s						
TRI	**Trieste**	61.59	339	P	P	20 47 21.0	+1.0
TRI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GROS	**Grobnik**	61.64	340	*i* P	P	20 47 20.9	+0.4
MDT	**Midelt**	61.64	317	LR	LR	21 16 51.9	
	comp=Z,199nm,19.5s,baz=119,slow=39						
ELIB	**Princess Elisa**	61.85	186	*d*P	P	20 47 24.5	+2.8
VRH	**Novokhopyorsk**	61.95	0	*e*P	P	20 47 21.9	-0.5
VRH				pmax	pmax		
	comp=Z,20nm,1.4s						
VSR	**Storozhevoye**	61.98	359	*e*P	P	20 47 21.8	-0.8
VSR				pmax	pmax		
	comp=Z,20nm,0.8s						
SOKA	**Soboth**	61.98	340	*e*P	P	20 47 23.5	+0.6
	comp=Z,6.3nm,0.9s						
OBKA	**Obir**	62.00	340	*i* P	P	20 47 23.8	+0.8
	comp=Z,8.2nm,0.9s						
TEOL	**Teolo**	62.07	337	P	P	20 47 24.1	+0.7
TEOL				IAmb	IAmb	20 47 26.1	
	comp=Z,17nm,0.8s						
ABKAR	**Akbulak array**	62.25	14	P	P	20 47 24.1	-0.4
ABKAR	**Akbulak array**	62.25	14	P	P	20 47 23.9	-0.5
ABKAR				IAmb	IAmb	20 47 25.5	
	comp=Z,19nm,0.9s						
PRED	**Cave del Predi**	62.29	339	P	P	20 47 24.4	-0.5
AKASG	**Malin Array Be**	62.31	351	P	P	20 47 24.0	-0.8
	comp=Z,2.7nm,0.8s,baz=178,slow=5.3,SNR=16						
AKASG				PcP	PcP	20 48 04.5	+0.1
	comp=Z,2.5nm,0.6s,baz=181,slow=3.6,SNR=11						
	comp=Z,2.7nm,0.8s						
AKBB	**Malin Array Si**	62.31	351	P	P	20 47 24.0	-0.8
AKBB				IAmb	IAmb	20 48 05.6	
	comp=Z,7.6nm,1.1s						
AKBB	**Malin Array Si**	62.31	351	⇑*i*P	P	20 47 23.9	-0.9
AKBB				pmax	pmax		
	comp=Z,16nm,1.5s						
ARSA	**Arzberg**	62.32	341	*e*P	P	20 47 25.5	+0.4
	comp=Z,8.3nm,1.0s						
VYHS	**Vyhne**	62.43	343	*e*P	P	20 47 26.1	+0.4
VYHS				pmax	pmax		
	comp=Z,14nm,1.6s						
VYHS	**Vyhne**	62.43	343	*e*P	P	20 47 26.1	+0.4
VORR	**Voronezh**	62.44	359	*e*P	P	20 47 25.7	+0.1
VORR				pmax	pmax		
	comp=Z,42nm,1.4s						
RONA	**Rosalia, Austr**	62.47	341	*i* P	P	20 47 26.5	+0.4
	comp=Z,10nm,0.7s,SNR=7.2						
CLUD	**Cludinico**	62.55	338	P	P	20 47 26.8	+0.2
CIMO	**Cimolais**	62.58	338	P	P	20 47 27.3	+0.5
CIMO				IAmb	IAmb	20 47 31.4	
	comp=Z,6.4nm,1.0s						
CTI	**Castel Tesino**	62.66	337	P	P	20 47 27.4	0.0
CTI				IAmb	IAmb	20 47 29.5	
	comp=Z,10.0nm,0.9s						
CTI	**Castel Tesino**	62.66	337	P	P	20 47 27.4	0.0
CTI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CONA	**Conrad Observa**	62.81	341	*e*P	P	20 47 28.7	+0.4
	comp=Z,7.8nm,1.0s,SNR=6.5						
KBA	**Koelnbreinsper**	62.91	339	*e*P	P	20 47 29.6	+0.5
	comp=Z,2.3nm,0.7s,SNR=4.4						
LSA	**Lhasa**	62.92	49	P	P	20 47 31.5	+1.5
LSA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
AKTO	**Aktyubinsk**	62.94	12	LR	LR	21 17 28.9	
	comp=Z,58nm,20.7s,baz=236,slow=39						
JAVC	**Velka Javorina**	63.09	343	*e*P	P	20 47 30.4	+0.2
MOA	**Molln**	63.26	340	*e*P	P	20 47 31.4	+0.1
	comp=Z,7.5nm,0.8s,SNR=7.7						
LPSR	**Galich'ya Gora**	63.38	359	*e*P	P	20 47 29.9	-1.9
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BELG	**Belogornoye**	63.39	4	LR	LR	21 17 41.8	
	comp=Z,86nm,18.9s,baz=169,slow=38						
BELG	**Belogornoye**	63.39	4	*d i*P	P	20 47 31.5	-0.4
BELG				pmax	pmax		
	comp=Z,11nm,0.9s						
KRUC	**Moravsky**	63.65	342	*e*P	P	20 47 33.0	-0.8
FUORN	**Ofenpass-Fuorn**	63.66	337	P	P	20 47 34.5	+0.2
OJC	**Ojcow**	63.75	345	P	P	20 47 34.3	-0.1
OJC				IAmb	IAmb	20 47 35.5	
	comp=Z,34nm,1.6s						
OJC	**Ojcow**	63.75	345	P	P	20 47 34.3	-0.1
OJC				pmax	pmax		
	comp=Z,34nm,1.6s						
WATA	**Walderalm**	63.77	338	*e*P	P	20 47 34.2	-0.5
	comp=Z,6.5nm,1.6s						

VRAC	Vranov	63.81	342	LR	LR	21 18 31.7	
	comp=Z,72nm,18.4s,baz=183,slow=39						
VRAC	Vranov	63.81	342	eP	P	20 47 34.2	-0.7
FETA	Feichten	63.82	337	eP	P	20 47 35.8	+0.6
	comp=Z,8.3nm,1.2s						
BNI	Bardonecchia	63.88	333	P	P	20 47 36.2	+0.7
BNI				IAmb	IAmb	20 47 41.1	
	comp=Z,17nm,1.1s						
BNI	Bardonecchia	63.88	333	P	P	20 47 36.2	+0.7
BNI				pmax	pmax		
	comp=Z,17nm,1.2s						
DAVOX	Davos/Dischmat	63.95	337	LR	LR	21 17 32.6	
	comp=Z,108nm,20.5s,baz=97,slow=38						
MORC	Moravsky Berou	63.96	343	P	P	20 47 35.9	+0.1
MORC				IAmb	IAmb	20 47 37.1	
	comp=Z,30nm,1.4s						
MORC	Moravsky Berou	63.96	343	eP	P	20 47 35.7	-0.2
MORC	Moravsky Berou	63.96	343	P	P	20 47 35.9	+0.1
MORC				pmax	pmax		
	comp=Z,30nm,1.4s						
CKRC	Cesky Krumlov	64.09	341	eP	P	20 47 36.7	0.0
CKRC	Cesky Krumlov	64.09	341	eP	P	20 47 36.7	0.0
CMAR	Chiang Mai Arr	64.12	63	P	P	20 47 36.9	-0.6
	comp=Z,1.2nm,0.5s,baz=253,slow=8.1,SNR=14						
CMAR				LR	LR	21 12 58.3	
	comp=Z,135nm,18.8s,baz=240,slow=34						
	comp=Z,1.2nm,0.5s						
CMAR	Chiang Mai Arr	64.12	63	P	P	20 47 37.8	+0.3
CMAR	Chiang Mai Arr	64.12	63	i P	P	20 47 38.4	+0.9
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
RETA	Reutte	64.19	338	eP	P	20 47 37.4	-0.1
	comp=Z,6.3nm,1.2s						
CHTO	Chiang Mai	64.26	63	P	P	20 47 38.5	+0.1
CHTO	Chiang Mai	64.26	63	P	P	20 47 38.5	+0.1
GEC2	GERESS Array S	64.31	340	P	P	20 47 37.6	-0.8
GEC2				IAmb	IAmb	20 47 39.1	
	comp=Z,13nm,1.3s						
GERES	GERESS Array B	64.31	340	P	P	20 47 38.0	-0.3
	comp=Z,2.7nm,0.7s,baz=141,slow=6.5,SNR=23						
GERES				LR	LR	21 17 18.7	
	comp=Z,66nm,20.7s,baz=208,slow=38						
	comp=Z,2.7nm,0.7s						
GERES	GERESS Array B	64.31	340	P	P	20 47 37.5	-0.8
GERES	GERESS Array B	64.31	340	P	P	20 47 37.5	-0.8
DAVA	Damuels	64.36	337	eP	P	20 47 38.3	-0.5
	comp=Z,13nm,1.3s						
KHC	Kasperske Hory	64.60	340	P	P	20 47 39.5	-0.6
KHC	Kasperske Hory	64.60	340	eP	P	20 47 39.6	-0.5
KHC	Kasperske Hory	64.60	340	⇑iP	P	20 47 39.7	-0.4
KHC				pmax	pmax		
	comp=Z,17nm,1.2s						
SENIN	Lac Senin/Sane	64.65	335	P	P	20 47 40.4	-0.3
DPC	Dobruska-Polom	64.82	343	eP	P	20 47 41.5	0.0
DPC	Dobruska-Polom	64.82	343	eP	P	20 47 41.5	0.0
SSB	Saint Sauveur	65.01	332	P	P	20 47 43.6	+0.8
SSB				IAmb	IAmb	20 47 46.4	
	comp=Z,11nm,1.1s						
SSB	Saint Sauveur	65.01	332	P	P	20 47 43.6	+0.8
SSB				pmax	pmax		
	comp=Z,11nm,1.1s						
PHRA	Phrae	65.27	64	P	P	20 47 45.6	+0.6
ESBB	Sonseca Array	65.51	323	P	P	20 47 46.9	+0.7
ESBB				IAmb	IAmb	20 47 49.8	
	comp=Z,7.6nm,1.1s						
ESDC	Sonseca Array	65.51	323	P	P	20 47 46.9	+0.7
	comp=Z,6.0nm,0.9s,baz=134,slow=6.1,SNR=42						
ESDC				LR	LR	21 20 06.3	
	comp=Z,113nm,18.1s,baz=89,slow=40						
	comp=Z,6.0nm,0.9s						
ESDC	Sonseca Array	65.51	323	P	P	20 47 46.5	+0.2
OBN	Obninsk	65.97	357	P	P	20 47 48.5	-0.3
OBN	Obninsk	65.97	357	⇓eP	P	20 47 46.5	-2.3
OBN				e		20 50 11.6	
OBN				pmax	pmax		
	comp=Z,58nm,1.7s						
BRG	Berggiesshubel	66.00	342	eP	P	20 47 49.0	0.0
BRG				Amp		20 47 49.9	
	comp=Z,7.0nm,1.1s						
BRG	Berggiesshubel	66.00	342	P	P	20 48 04.2	+15
BRG				Amp		20 48 05.9	
	comp=Z,5.2nm,1.1s						
BRG	Berggiesshubel	66.00	342	eP	P	20 47 49.0	0.0
BRG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CRAI	Chiangrai	66.04	62	P	P	20 47 50.6	+0.6
CRAI				IAmb	IAmb	20 48 02.5	
	comp=Z,11nm,1.3s						
ECH	Echery	66.19	336	P	P	20 47 50.8	+0.4
ECH				IAmb	IAmb	20 47 51.8	
	comp=Z,8.4nm,1.0s						
ECH	Echery	66.19	336	P	P	20 47 50.8	+0.4
ECH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MNK	Minsk	66.21	352	eP	P	20 47 48.0	-2.3
TNCH	TengChong	66.42	57	⇓P	P	20 47 53.0	+0.4
TNCH				pP	sP	20 47 56.0	-1.7
TNCH				sP	pwP	20 47 58.0	-0.6
TNCH				S	S	20 56 36.8	-6.2
TNCH				sS	sS	20 56 49.5	+0.2
TNCH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TNCH				pmax	pmax		
	comp=Z,92nm,5.6s						
TNCH				LR	LR		
	comp=Z,110nm,6.1s						
TNCH				LR	LR		
	comp=Z,95nm,5.5s						
TNCH				LR	LR		
	comp=Z,83nm,6.3s						
MOS	Moscow	66.56	358	eP	P	20 47 51.4	-1.1
MOS				pmax	pmax		
	comp=Z,79nm,1.2s						
CLL	Collm	66.67	341	eP	P	20 47 53.0	-0.3
	comp=Z,9.0nm,1.5s						
CLL				ePP	PP	20 50 20.0	-0.4
CLL				AMS	AMS	21 19 00.0	
	comp=N,100nm,18.7s						
CLL				AMS	AMS	21 19 00.0	
	comp=E,100nm,19.1s						
CLL	Collm	66.67	341	eP	P	20 47 53.0	-0.3
CLL				pmax	pmax		
	comp=Z,9.0nm,1.5s						
NACGM	Naroch	66.76	351	eP	P	20 47 53.6	-0.2
	comp=Z,26nm,0.8s,baz=165						
MESJ	Messejana	67.00	319	eP	P	20 47 56.9	+1.2
KLNR	Kaliningrad	67.70	347	⇓eP	P	20 48 00.7	+0.9
KLNR				pmax	pmax		
	comp=Z,207nm,1.3s						
WLF	Walferdange	67.74	336	P	P	20 48 00.6	+0.4
WLF				IAmb	IAmb	20 48 02.3	
	comp=Z,16nm,1.1s						
WLF	Walferdange	67.74	336	P	P	20 48 00.6	+0.4
WLF				pmax	pmax		
	comp=Z,16nm,1.1s						
WLF	Walferdange	67.74	336	dP	P	20 48 00.6	+0.4
PABE	Paberze	67.80	350	P	P	20 48 00.2	-0.2
CLF	Chambon-Foret	68.11	333	P	P	20 48 03.6	+1.1
MAKZ	Makanchi	68.15	29	P	P	20 48 02.7	-0.2
MAKZ	Makanchi	68.15	29	P	P	20 48 02.7	-0.2
MAKZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MK31	Makanchi Array	68.29	29	P	P	20 48 03.4	-0.3
MK31	Makanchi Array	68.29	29	⇑eP	P	20 48 03.1	-0.6
MKAR	Makanchi Array	68.29	29	P	P	20 48 03.1	-0.7
	comp=Z,1.2nm,0.7s,baz=213,slow=5.3,SNR=11						
MKAR				LR	LR	21 18 40.6	
	comp=Z,28nm,18.7s,baz=234,slow=37						
	comp=Z,1.2nm,0.7s						
BHOU	Houvegnez	68.35	337	dP	P	20 48 04.2	+0.1
BTNL	Ternell	68.49	337	dP	P	20 48 05.4	+0.5
BRVK	Borovoye	68.52	18	P	P	20 48 04.3	-0.6
BRVK				IAmb	IAmb	20 48 06.4	
	comp=Z,16nm,1.5s						
BRVK	Borovoye	68.52	18	deP	P	20 48 05.0	0.0
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BVAR	Borovoye Array	68.52	19	LR	LR	21 21 52.2	
	comp=Z,35nm,18.1s,baz=224,slow=39						
BCLA	Clavier	68.68	336	dP	P	20 48 06.7	+0.7
BCLA				dPcP	PcP	20 48 30.2	-0.6
DOU	Dourbes	68.70	336	dP	P	20 48 04.9	-1.3
BGES	Gesves	68.73	336	dP	P	20 48 07.3	+0.9
	comp=Z,8.3nm,1.2s						
ARU	Arti	68.73	10	LR	LR	21 22 45.7	
	comp=Z,106nm,18.8s,baz=190,slow=40						
ARU	Arti	68.73	10	P	P	20 48 06.0	-0.2
ARU				IAmb	IAmb	20 48 07.3	
	comp=Z,20nm,1.2s						
ARU	Arti	68.73	10	c iP	P	20 48 05.6	-0.7
ARU						20 48 27.5	
ARU						20 50 34.2	
ARU				S	S	20 57 08.8	-0.3
ARU				pmax	pmax		
	comp=Z,23nm,1.3s						
BMRD	Maredsous	68.80	336	dP	P	20 48 06.7	-0.1
GOMU	GeErMu	68.99	44	P	P	20 48 11.5	+2.7
GOMU				pP	pwP	20 48 14.8	-0.1
GOMU				sP	sP	20 48 16.0	+2.1
GOMU				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GOMU				pmax	pmax		
	comp=Z,78nm,4.0s						
WMQ	Urumqi	69.05	34	eP	P	20 48 11.8	+3.2
SNF	Seneffe	69.15	336	dP	P	20 48 10.1	+1.2
SVE	Sverdlovsk	69.49	11	eP	P	20 48 11.3	+0.3
SVE				pmax	pmax		
	comp=Z,27nm,1.4s						
KURK	Kurchatov	69.59	24	P	P	20 48 11.4	-0.3
KURK				IAmb	IAmb	20 48 21.5	
	comp=Z,8.1nm,1.0s						
KURK	Kurchatov	69.59	24	deP	P	20 48 11.8	+0.1
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIRV	Kirov	69.67	5	LR	LR	21 20 46.7	
	comp=Z,77nm,18.7s,baz=189,slow=38						
KIRV	Kirov	69.67	5	ceP	P	20 48 11.5	-0.5
PZH	PanZhiHua	69.68	56	P	P	20 48 13.0	+0.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,110nm,5.5s						
VSU	Vasula	70.21	352	⇓eP	P	20 48 14.9	-0.4
VSU				pmax	pmax		
	comp=Z,51nm,1.3s						
KLMR	Klimovskoe	71.63	359	eP	P	20 48 22.3	-1.6
KLMR				AMP		20 48 25.6	
	comp=Z,69nm,1.2s						
KLMR	Klimovskoe	71.63	359	eP	P	20 48 22.3	-1.6
KLMR				pmax	pmax		
	comp=Z,69nm,1.2s						
DGZ	Jazzator, Alta	72.78	29	deP	P	20 48 31.6	+0.3
DGZ				pmax	pmax		
	comp=Z,10.0nm,1.4s						
CD2	Chengdu	73.10	53	eP	P	20 48 34.0	+0.6
FINES	FINESS Array B	73.18	353	P	P	20 48 33.2	+0.1
	comp=Z,6.5nm,0.8s,baz=134,slow=5.5,SNR=16						
FINES				LR	LR	21 23 10.9	
	comp=Z,47nm,18.2s,baz=176,slow=38						
	comp=Z,6.5nm,0.8s						
FINES	FINESS Array B	73.18	353	i P	P	20 48 33.0	-0.2
FINES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GYA	Guiyang	73.73	58	⇑P	P	20 48 37.8	+0.5
GYA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
QIZ	Qiongzhong	74.01	67	P	P	20 48 37.8	-1.2
QIZ				S	S	20 58 10.5	-1.1
QIZ				LR	LR		
	comp=Z,310nm,20.7s						
QIZ				LR	LR		
	comp=Z,260nm,15.1s						
GTA	Gaotai	74.03	44	eP	P	20 48 39.3	+0.5
GTA				pP	pwP	20 48 44.5	-0.5
GTA				sP	sP	20 48 47.3	+3.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				LR	LR		
	comp=Z,85nm,17.1s						
GTA				LR	LR		
	comp=Z,72nm,17.8s						
GTA				LR	LR		
	comp=Z,140nm,17.4s						
ZAA0	Zalesovo Array	74.54	25	P	P	20 48 40.6	-0.7
ZALV	Zalesovo Beam	74.54	25	P	P	20 48 40.4	-0.8
	comp=Z,6.5nm,1.0s,baz=224,slow=6.2,SNR=18						
ZALV				LR	LR	21 20 34.9	
	comp=Z,48nm,22.0s,baz=246,slow=35						
	comp=Z,6.5nm,1.0s						
ZALV	Zalesovo Beam	74.54	25	i P	P	20 48 41.0	-0.3
ZALV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KONO	Kongsberg	74.83	344	P	P	20 48 42.4	-0.4
KONO				IAmb	IAmb	20 48 43.7	
	comp=Z,12nm,0.9s						
KONO	Kongsberg	74.83	344	⇓iP	P	20 48 42.6	-0.2
KONO				pmax	pmax		
	comp=Z,14nm,1.0s						
NC602	NORSAR Array S	75.26	345	P	P	20 48 44.5	-0.8
LZH	Lanzhou	75.34	48	eP	P	20 48 48.0	+1.4
LZH				pP	pwP	20 48 53.0	+0.3
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
NAO01	NORSAR Array S	75.52	345	P	P	20 48 46.5	-0.3
NB201	NORSAR Array S	75.59	346	P	P	20 48 47.1	-0.1
NB2	NORSAR Subarra	75.60	345	P	P	20 48 47.0	-0.4
	comp=Z,15nm,1.1s,baz=149,slow=5.6						
NOA	NORSAR Array B	75.60	345	P	P	20 48 47.1	-0.2
	comp=Z,3.8nm,0.9s,baz=150,slow=5.6,SNR=8.8						
NOA				LR	LR	21 25 48.9	
	comp=Z,22nm,18.3s,baz=230,slow=39						
	comp=Z,3.8nm,0.9s						
NC303	NORSAR Array S	75.73	346	P	P	20 48 48.1	+0.1
EKA	Eskdalemuir Ar	75.75	336	LR	LR	21 23 59.8	
	comp=Z,102nm,18.6s,baz=185,slow=37						
NC204	NORSAR Array S	75.92	345	P	P	20 48 49.4	+0.2
RCBR	Riachuelo	76.19	267	eP	P	20 48 52.9	+1.1
ABR01	Abrolhos, BA	77.08	254	eP	P	20 48 57.8	+1.1
XAN	Xi'an	78.33	52	⇑P	P	20 49 04.0	+0.6
XAN				pP	PcP	20 49 12.3	-0.4
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LVZ	Lovozero	78.83	358	⇓eP	P	20 49 05.5	+0.2
LVZ				pmax	pmax		
	comp=Z,65nm,1.3s						
ARCES	ARCESS Array B	81.08	355	P	P	20 49 17.7	+0.3
	comp=Z,9.2nm,0.6s,baz=163,slow=4.6,SNR=35						
ARCES				LR	LR	21 27 22.9	
	comp=Z,41nm,19.9s,baz=204,slow=37						
	comp=Z,9.2nm,0.6s						
ARCES	ARCESS Array B	81.08	355	P	P	20 49 17.9	+0.4
KEV	Kevo	81.16	355	P	P	20 49 18.4	+0.6
KEV	Kevo	81.16	355	P	P	20 49 18.4	+0.6
KEV				pmax	pmax		
	comp=Z,192nm,1.8s						
ZAK	Zakamensk	81.50	35	eP	P	20 49 20.4	+0.2
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
DIAM	Diamantina, MG	81.72	253	eP	P	20 49 23.1	+0.9
SONM	Songino Array	82.16	38	P	P	20 49 25.0	+1.3
	comp=Z,2.2nm,0.8s,baz=233,slow=5.2,SNR=17						
	comp=Z,2.2nm,0.8s						
SONM	Songino Array	82.16	38	P	P	20 49 24.8	+1.0
ULN	Ulaanbaatar	82.57	38	P	P	20 49 26.4	+0.4
ULN	Ulaanbaatar	82.57	38	d iP	P	20 49 26.6	+0.6
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HHC	Hu-ho-hao-te	82.78	46	eP	P	20 49 28.0	+0.8
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,6.2s						
SDBA	SAO DESIDERIO	83.84	259	eP	P	20 49 33.8	+0.6
HNS	HongShan	83.91	50	⇑P	P	20 49 34.8	+1.9
HNS				pmax	pmax		
	comp=Z,13nm,1.2s						
PMNB	Patos De Minas	84.27	252	eP	P	20 49 36.7	+1.4
TIA	Tai'an	85.39	52	eP	P	20 49 37.5	-2.9
TIA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TIJ01	Guaruva-PR	85.47	245	eP	P	20 49 42.1	+0.8
NJ2	Nanjing	85.59	56	eP	P	20 49 41.8	+0.3
NJ2				pP	pwP	20 49 45.5	-2.2
NJ2				sP	sP	20 49 48.0	+1.3
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,130nm,6.0s						
VNDA	Vanda	85.65	169	P	P	20 49 43.1	+2.1
	comp=Z,1.0nm,0.9s,baz=51,slow=11,SNR=2.5						
	comp=Z,1.0nm,0.9s						
IPMB	Ipameri, GO	86.03	253	eP	P	20 49 45.3	+1.2
BDFB	Brasilia	86.26	255	P	P	20 49 47.6	+2.3
	comp=Z,6.5nm,0.9s,baz=110,slow=7.4,SNR=6.3						
BDFB				LR	LR	21 23 06.8	
	comp=Z,169nm,21.6s,baz=135,slow=32						
	comp=Z,6.5nm,0.9s						
BDFB	Brasilia	86.26	255	eP	P	20 49 46.3	+1.0
FRTB	Fartura	86.32	247	eP	P	20 49 45.9	+0.4
NRIK	Noril'sk	86.40	15	P	P	20 49 45.4	+0.7
	comp=Z,2.2nm,0.4s,baz=203,slow=3.6,SNR=6.2						
NRIK				LR	LR	21 33 49.3	
	comp=Z,66nm,18.2s,baz=210,slow=40						
	comp=Z,2.2nm,0.4s						
NRIK	Noril'sk	86.40	15	P	P	20 49 45.5	+0.8
NRIK				IAmb	IAmb	20 49 46.7	
	comp=Z,30nm,1.8s						
NRIK	Noril'sk	86.40	15	d iP	P	20 49 45.2	+0.5
NRIK				pmax	pmax		
	comp=Z,16nm,1.8s						
ASAR	Alice Springs	88.18	114	P	P	20 49 54.6	+0.2
	comp=Z,3.0nm,0.8s,baz=265,slow=4.4,SNR=23						
ASAR				LR	LR	21 24 20.8	
	comp=Z,252nm,20.0s,baz=200,slow=32						
	comp=Z,3.0nm,0.8s						
PLTB	Pedras Altas	88.24	238		P	20 49 56.4	+1.9
PLTB	Pedras Altas	88.24	238	eP	P	20 49 55.2	+0.6
ALGR	Alto Alegre (B	88.35	241	eP	P	20 49 55.9	+0.7
BORG	Borgarnes	88.65	338	LR	LR	21 35 20.3	
	comp=Z,47nm,18.7s,baz=156,slow=40						
WRA	Warramunga Arr	89.30	110	P	P	20 49 60.0	+0.2
	comp=Z,4.1nm,0.8s,baz=259,slow=3.0,SNR=26						
	comp=Z,4.1nm,0.8s						
WRA	Warramunga Arr	89.30	110	P	P	20 50 00.1	+0.4
WRA	Warramunga Arr	89.30	110	P	P	20 50 00.1	+0.4
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRAB	Tennant Creek	89.31	110	⇓eP	P	20 49 59.9	+0.1
WRAB				pmax	pmax		
	comp=Z,20nm,1.7s						
WB0	Warramunga Arr	89.38	110	P	P	20 50 00.4	+0.2
WB0				IAmb	IAmb	20 50 01.1	
	comp=Z,12nm,1.0s						
CRSM	Crissiumal (Br	89.50	242	eP	P	20 50 01.3	+0.7
ARAG	Araguaiana, MT	89.84	254	eP	P	20 50 03.6	+1.3
RODS	Rosario do Sul	89.88	239	eP	P	20 50 02.0	-0.3
SPITS	Spitsbergen Ar	90.10	355	P	P	20 50 02.6	+0.4
	comp=Z,12nm,0.9s,baz=248,slow=8.9,SNR=2.7						
SPITS				LR	LR	21 35 15.3	
	comp=Z,40nm,18.3s,baz=166,slow=39						
	comp=Z,12nm,0.9s						
MCR1	Marechal Candi	90.12	245	eP	P	20 50 06.1	+2.6
ITQB	Itaqui	91.24	240	eP	P	20 50 10.2	+1.7
AMBA	Amambai (Brazi	91.30	246	eP	P	20 50 10.1	+1.0
AQDB	Aquidauana	92.47	249	eP	P	20 50 16.1	+1.6
CPUP	Villa Florida	92.61	243	P	P	20 50 17.1	+2.1
	comp=Z,3.4nm,0.6s,baz=102,slow=5.9,SNR=8.7						
CPUP				LR	LR	21 29 06.6	
	comp=Z,127nm,18.4s,baz=125,slow=34						
	comp=Z,3.4nm,0.6s						
CPUP	Villa Florida	92.61	243	eP	P	20 50 15.2	+0.2
MECA	Mercedes	92.64	240	eP	P	20 50 17.7	+2.6
MCPB	Macapa, AP	93.04	269	eP	P	20 50 19.9	+2.7
TRQA	Tornquist	93.39	230	P	P	20 50 19.2	+0.8
TRQA				IAmb	IAmb	20 50 21.8	
	comp=Z,9.8nm,1.0s						
TRQA	Tornquist	93.39	230	P	P	20 50 19.2	+0.8
TRQA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TRQA	Tornquist	93.39	230	eP	P	20 50 19.2	+0.8
BDQN	Bodoquena, MS	93.44	249	eP	P	20 50 19.9	+1.0
SALV	Santo Antonio	93.45	253	eP	P	20 50 22.7	+3.6
MURT	Porto Murtinho	93.95	247	eP	P	20 50 23.7	+2.4
KSRS	Korea Array	94.09	53	LR	LR	21 34 01.1	
	comp=Z,40nm,18.1s,baz=265,slow=36						
MDP	Montagnes des	94.63	274	LR	LR	21 29 37.0	
	comp=Z,58nm,18.0s,baz=88,slow=33						
MALB	Monte Alegre	94.92	267	eP	P	20 50 26.8	+1.0
NPGB	Novo Progresso	94.97	262	eP	P	20 50 28.4	+2.3
VACA	Villa Angela C	95.21	241	eP	P	20 50 26.6	-0.3
HEH	HeiHe	96.02	40	eP	P	20 50 28.0	-2.0
HEH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HEH				pmax	pmax		
	comp=Z,210nm,6.1s						
USRK	Ussuriysk Ar.	98.20	47	LR	LR	21 32 15.8	
	comp=Z,1µm,21.2s,baz=182,slow=34						
SIV	San Ignacio	98.47	252	LR	LR	21 33 31.3	
	comp=Z,194nm,18.8s,baz=108,slow=34						
KLR	Kul'dur	98.65	42	LR	LR	21 34 28.3	
	comp=Z,39nm,21.1s,baz=235,slow=35						
KLR	Kul'dur	98.65	42	⇓eP	P	20 50 40.6	-1.3
KLR				pmax	pmax		
	comp=Z,5.0nm,1.6s						
YAK	Yakutsk	98.96	28	eP	P	20 50 42.8	-0.2
YAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,1.0nm,1.1s						
TIXI	Tiksi	99.65	19	LR	LR	21 39 40.8	
	comp=N,43nm,19.9s,baz=350,slow=38						
TIXI	Tiksi	99.65	19	⇑iP	Pdif	20 50 45.2	-0.7
TIXI				pmax	pmax		
	comp=Z,7.0nm,2.0s						
BILL	Bilibino	112.86	19	⇑iPKIKP	PKiKP	20 55 40.6	+1.4
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
HRV	Adam Dziewonsk	114.05	312	P	PKPdf	20 55 42.0	-0.2
	baz=83						
LBNH	Lisbon	114.08	314	P	PKPdf	20 55 41.4	-0.8
	baz=82						
L61B	Northampton	114.88	312	P	PKiKP	20 55 42.9	-0.9
	baz=82						
PAL	Palisades	115.99	310	P	PKPdf	20 55 45.9	0.0
	baz=82						
A36M	Sachs Harbour	118.49	355	P	PKiKP	20 55 50.5	+0.6
	baz=15						
C24K	Franklin Bluff	121.00	4	P	PKiKP	20 55 55.7	+0.9
	baz=349						
C27K	Jago River	121.35	2	P	PKiKP	20 55 56.4	+0.8
	baz=354						
D25K	Kavik River	121.54	3	P	PKiKP	20 55 56.6	+0.5
	baz=351						
D24K	Happy Valley	121.55	4	P	PKiKP	20 55 57.1	+1.1
	baz=349						
O53A	New Philadelph	121.59	311	P	PKPdf	20 55 56.4	-0.4
	baz=77						
D23K	Nanushuk River	121.59	5	P	PKiKP	20 55 56.6	+0.5
	baz=346						
TNA	Tin City	121.98	14		PKiKP	20 55 57.2	+0.3
TNA	Tin City	121.98	14	P	PKiKP	20 55 57.5	+0.6
	baz=326						
P52A	Corning	122.42	310	P	PKPdf	20 55 58.5	0.0
	baz=76						
E23K	Chandalar	122.57	5	P	PKiKP	20 55 58.5	+0.3
	baz=348						
E24K	Your Creek	122.64	4	P	PKiKP	20 55 58.6	+0.3
	baz=349						
INK	Inuvik	122.65	358	PKP	PKPdf	20 55 58.2	+0.3
	comp=Z,4.8nm,0.9s,baz=7.9,slow=5.0,SNR=9.7						
INK	Inuvik	122.65	358		PKPdf	20 55 58.0	+0.1
INK	Inuvik	122.65	358	P	PKiKP	20 55 58.4	+0.3
	baz=6.3						
KMSC	Kings Mountain	122.70	305	P	PKPdf	20 55 59.0	-0.1
	baz=80						
E25K	Arctic Village	122.77	3	P	PKiKP	20 55 58.9	+0.4
	baz=352						
E27K	Coleen River	122.85	1	P	PKiKP	20 55 59.1	+0.5
	baz=357						
F22K	John River	122.87	6	P	PKiKP	20 55 59.6	+0.9
	baz=344						
ACSO	Alum Creek Sta	122.91	311	P	PKPdf	20 55 59.5	+0.2
	baz=76						
F21K	Alatna River	123.00	7	P	PKiKP	20 55 59.9	+0.9
	baz=343						
F24K	Squaw Lake	123.23	4	P	PKiKP	20 56 00.1	+0.7
	baz=350						
F26K	Sheenjek River	123.26	2	P	PKiKP	20 56 00.3	+0.8
	baz=354						
ANM	Nome	123.41	13	P	PKiKP	20 56 00.6	+0.8
	baz=328						
G21K	Allakaket	123.68	7	P	PKiKP	20 56 00.9	+0.6
	baz=343						

G23K	**Bananza Creek**	**123.85**	**5**	P	**PKiKP**	**20 56 01.5**	**+0.8**
	baz=347						
G26K	**Porcupine Rive**	**124.02**	**2**	P	**PKiKP**	**20 56 01.5**	**+0.6**
	baz=354						
G30M	**tAoh Zraii Nji**	**124.06**	**359**	P	**PKiKP**	**20 56 01.2**	**+0.1**
	baz=3.2						
G24K	**Hadweenzic Riv**	**124.07**	**4**	P	**PKiKP**	**20 56 01.7**	**+0.6**
	baz=350						
G25K	**Bearman Lake**	**124.09**	**3**	P	**PKiKP**	**20 56 01.6**	**+0.5**
	baz=352						
IMAR	**Indian Mountai**	**124.16**	**7**		**PKiKP**	**20 56 01.5**	**+0.2**
G27K	**Doyon Strip**	**124.23**	**1**	P	**PKiKP**	**20 56 02.0**	**+0.6**
	baz=357						
H21K	**Melozitna Rive**	**124.58**	**7**	P	**PKiKP**	**20 56 02.5**	**+0.4**
	baz=343						
EPYK	**Eagle Plains**	**124.68**	**359**		**PKPdf**	**20 56 02.0**	**0.0**
EPYK	**Eagle Plains**	**124.68**	**359**	P	**PKPdf**	**20 56 02.2**	**+0.2**
	baz=2.7,SNR=7.3						
H23K	**Yukon River**	**124.76**	**5**		**PKiKP**	**20 56 03.1**	**+0.5**
H23K	**Yukon River**	**124.76**	**5**	P	**PKiKP**	**20 56 03.0**	**+0.5**
	baz=347						
H27K	**Steamboat Moun**	**124.81**	**1**	P	**PKiKP**	**20 56 02.8**	**+0.2**
	baz=357						
H24K	**Noodor Dome**	**124.89**	**4**	P	**PKiKP**	**20 56 03.2**	**+0.5**
	baz=349						
I21K	**Tanana**	**125.14**	**7**	P	**PKiKP**	**20 56 04.2**	**+1.0**
	baz=344						
PRP	**Porcupine Dome**	**125.37**	**3**		**PKiKP**	**20 56 04.1**	**+0.3**
PRP	**Porcupine Dome**	**125.37**	**3**	P	**PKiKP**	**20 56 04.3**	**+0.4**
	baz=352						
MLY	**Manley**	**125.42**	**6**		**PKiKP**	**20 56 04.1**	**+0.3**
MLY	**Manley**	**125.42**	**6**	P	**PKiKP**	**20 56 04.2**	**+0.3**
	baz=346						
I27K	**Kandik River**	**125.44**	**1**	P	**PKiKP**	**20 56 04.4**	**+0.5**
	baz=357						
I23K	**Minto, Yukon-K**	**125.44**	**5**		**PKiKP**	**20 56 03.9**	**+0.1**
I23K	**Minto, Yukon-K**	**125.44**	**5**	P	**PKiKP**	**20 56 04.2**	**+0.4**
	baz=347						
POKR	**Poker Plat Res**	**125.64**	**4**	P	**PKiKP**	**20 56 04.4**	**+0.2**
	baz=350						
I26K	**Coal Creek Min**	**125.69**	**2**	P	**PKiKP**	**20 56 04.7**	**+0.4**
	baz=355						
YKA	**Yellowknife Ar**	**125.70**	**346**	PKP	**PKPdf**	**20 56 03.5**	**-0.5**
	comp=Z,3.2nm,0.8s,baz=32,slow=1.7,SNR=42						
I29M	**Ogilvie Camp,**	**125.72**	**360**		**PKPdf**	**20 56 04.0**	**0.0**
I29M	**Ogilvie Camp,**	**125.72**	**360**	P	**PKiKP**	**20 56 04.7**	**+0.3**
	baz=0.8,SNR=6.0						
MDM	**Murphy Dome**	**125.73**	**5**		**PKPdf**	**20 56 03.6**	**-0.4**
EYMN	**Ely**	**125.96**	**322**	P	**PKPdf**	**20 56 05.0**	**+0.1**
	baz=63						
NEA2	**Nenana**	**126.02**	**5**		**PKPdf**	**20 56 04.1**	**-0.5**
NEA2	**Nenana**	**126.02**	**5**	P	**PKPdf**	**20 56 04.9**	**+0.3**
	baz=348						
IL31		**126.02**	**4**		**PKPdf**	**20 56 03.9**	**-0.6**
ILAR	**Eielson Array**	**126.02**	**4**	PKP	**PKPdf**	**20 56 04.2**	**-0.4**
	comp=Z,3.3nm,0.9s,baz=321,slow=3.5,SNR=19						
ILAR	**Eielson Array**	**126.02**	**4**		**PKPdf**	**20 56 03.9**	**-0.7**
ILAR	**Eielson Array**	**126.02**	**4**	PKIKP	**PKPdf**	**20 56 03.9**	**-0.7**
CCB	**Clear Creek Bu**	**126.07**	**5**		**PKPdf**	**20 56 04.0**	**-0.6**
HDC	**Heredia**	**126.19**	**274**	*e*P	**PKiKP**	**20 56 08.0**	**+1.0**
WRH	**Wood River Hil**	**126.22**	**5**		**PKPdf**	**20 56 04.5**	**-0.4**
EGAK	**Eagle**	**126.28**	**1**		**PKPdf**	**20 56 05.3**	**+0.3**
EGAK	**Eagle**	**126.28**	**1**	P	**PKiKP**	**20 56 05.5**	**0.0**
	baz=357						
BPAW	**Bear Paw Mtn.**	**126.30**	**7**		**PKiKP**	**20 56 05.6**	**+0.1**
BPAW	**Bear Paw Mtn.**	**126.30**	**7**	P	**PKiKP**	**20 56 05.7**	**+0.1**
	baz=345						
CHUM	**Lake Minchumin**	**126.35**	**7**	P	**PKiKP**	**20 56 06.0**	**+0.3**
	baz=344						
HDA	**Harding Lake**	**126.37**	**4**	P	**PKiKP**	**20 56 05.9**	**+0.2**
	baz=350						
K20K	**Telida**	**126.62**	**8**		**PKiKP**	**20 56 06.7**	**+0.5**
K20K	**Telida**	**126.62**	**8**	P	**PKiKP**	**20 56 06.7**	**+0.5**
	baz=341						
J29M	**Klondike Camp**	**126.63**	**360**		**PKiKP**	**20 56 06.6**	**+0.3**
J29M	**Klondike Camp**	**126.63**	**360**	P	**PKiKP**	**20 56 06.7**	**+0.3**
	baz=0.9						
CAST	**Castle Rocks**	**126.83**	**7**		**PKPdf**	**20 56 06.5**	**+0.3**
CAST	**Castle Rocks**	**126.83**	**7**	P	**PKiKP**	**20 56 06.9**	**+0.2**
	baz=344						
KTH	**Kantishna Hill**	**126.84**	**7**		**PKPdf**	**20 56 06.4**	**+0.1**
MCK	**McKinley**	**126.87**	**6**	P	**PKiKP**	**20 56 06.8**	**0.0**
	baz=348						
SCRK	**Sand Creek**	**126.98**	**3**		**PKiKP**	**20 56 07.3**	**+0.2**
SCRK	**Sand Creek**	**126.98**	**3**	P	**PKiKP**	**20 56 07.5**	**+0.4**
	baz=354						
K27K	**Chicken**	**127.01**	**2**	P	**PKiKP**	**20 56 07.2**	**+0.3**
	baz=356						
TRF	**Thorofare Moun**	**127.01**	**6**		**PKPdf**	**20 56 07.1**	**+0.4**
TRF	**Thorofare Moun**	**127.01**	**6**	P	**PKPdf**	**20 56 06.6**	**-0.1**
	baz=346						
DAWY	**Dawson**	**127.02**	**0**	P	**PKPdf**	**20 56 06.7**	**+0.1**
	baz=360						
K24K	**Donnelly Dome**	**127.05**	**4**	P	**PKPdf**	**20 56 06.8**	**+0.1**
	baz=352						
RIDG	**Independent Ri**	**127.17**	**3**	P	**PKPdf**	**20 56 07.0**	**+0.1**
	baz=353						
JFWS	**Jewell Farm**	**127.25**	**316**	P	**PKPdf**	**20 56 07.5**	**-0.1**
	baz=68						
DOT	**Dot Lake**	**127.31**	**3**		**PKiKP**	**20 56 07.6**	**0.0**
PPLA	**Purkeypile**	**127.32**	**8**	P	**PKPdf**	**20 56 07.4**	**+0.1**
	baz=344						
ULM	**Lac du Bonnet**	**127.32**	**327**	PKP	**PKPdf**	**20 56 07.1**	**-0.4**
	comp=Z,1.6nm,0.6s,baz=82,slow=4.1,SNR=4.6						
L20K	**Farewell, AK**	**127.48**	**9**	P	**PKiKP**	**20 56 08.7**	**+0.7**
	baz=341						
L19K	**White Mountain**	**127.61**	**9**	P	**PKiKP**	**20 56 08.7**	**+0.5**
	baz=340						
WAT1	**Susitna Watana**	**127.79**	**6**	P	**PKiKP**	**20 56 09.0**	**+0.3**
	baz=348						
M19K	**Big River Lodg**	**127.95**	**9**	P	**PKiKP**	**20 56 09.5**	**+0.5**
	baz=341						
L26K	**Log Cabin Wild**	**127.96**	**3**		**PKiKP**	**20 56 09.3**	**+0.3**
L26K	**Log Cabin Wild**	**127.96**	**3**	P	**PKiKP**	**20 56 09.4**	**+0.4**
	baz=354						
BCAR	**Beaver Creek A**	**127.98**	**2**		**PKiKP**	**20 56 09.1**	**+0.1**
L27K	**Beaver Creek,**	**127.98**	**2**	P	**PKiKP**	**20 56 09.3**	**+0.3**
	baz=356						
SPIA	**Saint Paul Isl**	**128.00**	**21**	P	**PKiKP**	**20 56 09.6**	**+0.5**
	baz=320						
M20K	**Styx River**	**128.16**	**9**	P	**PKPdf**	**20 56 09.1**	**+0.2**
	baz=342						
MMPY	**Sheldon Lake,**	**128.18**	**356**	P	**PKiKP**	**20 56 09.4**	**0.0**
	baz=9.6						
SKT	**Skwentna**	**128.29**	**8**		**PKPdf**	**20 56 08.9**	**-0.1**
SKT	**Skwentna**	**128.29**	**8**	P	**PKiKP**	**20 56 09.7**	**0.0**
	baz=344						
AGMN	**Agassiz Nation**	**128.35**	**324**	P	**PKPdf**	**20 56 09.8**	**+0.4**
	baz=59						
N16K	**Nishlik Lake**	**128.47**	**12**	P	**PKiKP**	**20 56 10.1**	**+0.1**
	baz=335						
HARP	**HAARP**	**128.49**	**4**	P	**PKiKP**	**20 56 10.4**	**+0.4**
	baz=352						
M29M	**Somme Creek**	**128.65**	**360**	P	**PKiKP**	**20 56 10.3**	**-0.1**
	baz=0.6						
M27K	**Edge Creek, AK**	**128.69**	**2**	P	**PKiKP**	**20 56 11.0**	**+0.4**
	baz=356						
M31M	**Drury Creek, Y**	**128.78**	**357**	P	**PKiKP**	**20 56 10.8**	**+0.2**
	baz=5.7						
SUA	**Susitna One**	**128.88**	**7**	P	**PKiKP**	**20 56 11.4**	**+0.4**
	baz=345						
SCM	**Sheep Creek Mo**	**128.89**	**5**	P	**PKiKP**	**20 56 11.2**	**+0.3**
	baz=349						
SPCR	**Spurr Chakacha**	**128.95**	**8**	P	**PKiKP**	**20 56 11.5**	**+0.4**
	baz=343						
PMR	**Palmer**	**128.95**	**6**	P	**PKiKP**	**20 56 11.5**	**+0.6**
	baz=347						
N19K	**Bonanza Creek**	**128.97**	**10**	P	**PKiKP**	**20 56 11.3**	**+0.2**
	baz=340						
KNK	**Knik Glacier**	**129.19**	**6**	P	**PKiKP**	**20 56 11.9**	**+0.4**
	baz=348						
YUK3	**Moose Creek**	**129.30**	**1**	P	**PKiKP**	**20 56 11.9**	**-0.1**
	baz=358						
N25K	**Chitina, Valde**	**129.31**	**4**	P	**PKiKP**	**20 56 12.0**	**+0.2**
	baz=353						
KLU	**Klutina**	**129.34**	**4**	P	**PKiKP**	**20 56 12.2**	**+0.4**
	baz=351						
RC01	**Rabbit Creek A**	**129.37**	**7**	P	**PKiKP**	**20 56 12.4**	**+0.6**
	baz=346						
O16K	**Kokwok River B**	**129.41**	**13**	P	**PKiKP**	**20 56 12.5**	**+0.6**
	baz=335						
O17K	**Koliganek Bris**	**129.46**	**12**	P	**PKiKP**	**20 56 12.7**	**+0.7**
	baz=337						
N31M	**Braeburn, Yuko**	**129.56**	**358**	P	**PKiKP**	**20 56 12.6**	**+0.4**
	baz=4.0						
O19K	**Port Alsworth**	**129.58**	**10**	P	**PKiKP**	**20 56 12.7**	**+0.5**
	baz=340						
N30M	**Aishikik Lake**	**129.62**	**359**	P	**PKiKP**	**20 56 12.7**	**+0.4**
	baz=2.4						
MCARA	**McCarthy VSAT**	**129.62**	**3**		**PKiKP**	**20 56 12.3**	**+0.1**
MCARA	**McCarthy VSAT**	**129.62**	**3**	P	**PKiKP**	**20 56 12.7**	**+0.4**
	baz=355						
CCM	**Cathedral Cave**	**129.69**	**311**	P	**PKiKP**	**20 56 13.0**	**-0.1**
	baz=70						
O18K	**Koktuh Hills**	**129.74**	**11**	P	**PKiKP**	**20 56 13.0**	**+0.5**
	baz=339						
YUK4	**Talbot Arm**	**129.75**	**360**	P	**PKiKP**	**20 56 12.8**	**0.0**
	baz=0.5						
PWL	**Port Wells**	**129.75**	**6**	P	**PKiKP**	**20 56 13.0**	**+0.4**
	baz=348						
P40A	**Paris**	**129.76**	**313**		**PKPdf**	**20 56 12.7**	**+0.2**
YUK8	**Steele Glacier**	**129.81**	**1**	P	**PKiKP**	**20 56 13.1**	**+0.1**
	baz=359						
P16K	**Nushagak River**	**129.95**	**13**	P	**PKiKP**	**20 56 12.9**	**-0.1**
	baz=335						
O20K	**Slope Mountain**	**129.96**	**9**	P	**PKiKP**	**20 56 13.1**	**+0.1**
	baz=342						
HYT	**Haines Junctio**	**130.26**	**359**	P	**PKiKP**	**20 56 13.8**	**0.0**
	baz=1.9						
O30N	**Mendenhall**	**130.28**	**358**	P	**PKiKP**	**20 56 13.5**	**-0.2**
	baz=3.7						
EYAK	**Cordova Ski Ar**	**130.29**	**4**	P	**PKiKP**	**20 56 13.9**	**+0.3**
	baz=351						
O28M	**Mount Upton**	**130.31**	**1**	P	**PKiKP**	**20 56 14.6**	**+0.5**
	baz=358						
P23K	**Montague Islan**	**130.69**	**6**	P	**PKiKP**	**20 56 14.9**	**+0.4**
	baz=349						
MDND	**Maddock**	**130.69**	**326**	P	**PKiKP**	**20 56 14.8**	**-0.1**
	baz=55						
Q18K	**Katmai Hardscr**	**130.91**	**11**	P	**PKiKP**	**20 56 14.9**	**-0.2**
	baz=339						
ECSD	**EROS Data Cent**	**131.09**	**320**	P	**PKiKP**	**20 56 15.6**	**-0.2**
	baz=61						
Q17K	**Contact Creek**	**131.09**	**12**	P	**PKiKP**	**20 56 15.4**	**-0.1**
	baz=338						
P32M	**Atlin**	**131.35**	**356**	P	**PKiKP**	**20 56 15.6**	**-0.2**
	baz=6.8						
Q20K	**Shuyak Island**	**131.40**	**9**	P	**PKiKP**	**20 56 15.9**	**0.0**
	baz=342						
PLBC	**Pleasant Camp**	**131.61**	**358**	P	**PKiKP**	**20 56 16.3**	**0.0**
	baz=3.4						
FALS	**False Pass**	**132.16**	**19**	P	**PKiKP**	**20 56 17.8**	**+0.2**
	baz=327						
MIAR	**Mount Ida**	**132.61**	**307**	P	**PKiKP**	**20 56 19.0**	**-0.1**
	baz=71						
EDM	**Edmonton**	**133.17**	**339**		**PKPdf**	**20 56 19.1**	**+0.6**
EDM	**Edmonton**	**133.17**	**339**	PKIKP	**PKPdf**	**20 56 19.2**	**+0.6**
KSU1	**Kansas State U**	**133.18**	**314**	P	**PKiKP**	**20 56 20.2**	**+0.1**
	baz=65						
SIT	**Sitka**	**133.97**	**357**	P	**PKiKP**	**20 56 21.6**	**+0.5**
	baz=4.9						
U33K	**Whale Pass**	**134.77**	**355**	P	**PKiKP**	**20 56 22.9**	**+0.1**
	baz=8.1						
RSSD	**Black Hills**	**135.38**	**324**	P	**PKiKP**	**20 56 24.2**	**-0.5**
	baz=53						
CBKS	**Cedar Bluff**	**135.50**	**315**	P	**PKiKP**	**20 56 24.9**	**0.0**
	baz=62						
EGMT	**Eagleton**	**135.75**	**332**	P	**PKiKP**	**20 56 25.6**	**+0.4**
	baz=43						
OGNE	**Ogallala**	**135.96**	**319**	P	**PKPdf**	**20 56 25.0**	**+0.8**
	baz=58						
WHTX	**Lake Whitney,**	**136.51**	**305**	P	**PKPdf**	**20 56 26.3**	**+0.9**
	baz=71						
WMOK	**Wichita Mounta**	**136.55**	**310**		**PKPdf**	**20 56 25.6**	**+0.2**
WMOK	**Wichita Mounta**	**136.55**	**310**	PKIKP	**PKPdf**	**20 56 25.6**	**+0.2**
WMOK	**Wichita Mounta**	**136.55**	**310**	P	**PKPdf**	**20 56 26.1**	**+0.7**
	baz=67						
ABTX	**Abilene, Hawle**	**138.02**	**307**	P	**PKPdf**	**20 56 29.3**	**+1.1**
	baz=68						
BOZ	**Bozeman (W)**	**138.40**	**331**	P	**PKPdf**	**20 56 29.8**	**+1.1**
	baz=43						
N23A	**Red Feather La**	**138.44**	**322**	P	**PKPdf**	**20 56 29.8**	**+0.7**
	baz=54						
MSO	**Missoula**	**138.51**	**334**	P	**PKPdf**	**20 56 29.9**	**+1.1**
	baz=39						
NEW	**Newport**	**138.62**	**338**	P	**PKiKP**	**20 56 30.3**	**-0.6**
	baz=33						
ISCO	**Idaho Springs**	**138.88**	**320**	P	**PKPdf**	**20 56 30.9**	**+1.0**
	baz=55						
JCT	**Junction City**	**138.90**	**304**	P	**PKPdf**	**20 56 30.3**	**+0.4**
	baz=70						
BW06	**Boulder Array**	**139.34**	**326**	P	**PKPdf**	**20 56 31.4**	**+0.7**
	baz=48						
PD31	**Pinedale Array**	**139.34**	**326**		**PKPdf**	**20 56 30.5**	**-0.1**
PDAR	**Pinedale Array**	**139.34**	**326**	PKhKP	PKPpre	20 56 24.2	
	comp=Z,0.5nm,0.8s,baz=67,slow=11,SNR=2.2						
PDAR				PKP	**PKPdf**	**20 56 31.2**	**+0.5**
	comp=Z,1.9nm,0.8s,baz=96,slow=3.0,SNR=8.9						
PDAR	**Pinedale Array**	**139.34**	**326**		**PKPdf**	**20 56 30.6**	**-0.1**
C09A	**Chrisman Ranch**	**139.43**	**339**		**PKPdf**	**20 56 30.4**	**+0.1**
T25A	**Trinidad**	**139.53**	**316**	P	**PKPdf**	**20 56 32.2**	**+1.1**
	baz=59						
TPAW	**Teton Pass**	**139.58**	**328**		**PKPdf**	**20 56 30.7**	**-0.4**
MSTX	**Muleshoe**	**139.87**	**311**	P	**PKPdf**	**20 56 33.0**	**+1.3**
	baz=64						
SDCO	**Great Sand Dun**	**139.95**	**317**	P	**PKPdf**	**20 56 33.0**	**+1.1**
	baz=57						
O20A	**White River Ci**	**140.29**	**322**	P	**PKPdf**	**20 56 33.4**	**+1.1**
	baz=52						
S22A	**4UR Ranch, Cre**	**140.82**	**318**	P	**PKPdf**	**20 56 34.8**	**+1.3**
	baz=56						
BMO	**Blue Mountains**	**141.51**	**335**		**PKPdf**	**20 56 34.4**	**+0.1**
BMO	**Blue Mountains**	**141.51**	**335**	PKIKP	**PKPdf**	**20 56 34.4**	**+0.1**
ANMO	**Albuquerque**	**142.08**	**314**	PKhKP	PKPpre	20 56 32.3	
	comp=Z,0.7nm,0.3s,baz=117,slow=4.5,SNR=2.9						
SRU	**San Rafael Swe**	**142.31**	**323**	PKPpre	PKPpre	20 56 31.8	
SRU	**San Rafael Swe**	**142.31**	**323**	PKIKP	**PKPdf**	**20 56 31.8**	**-4.2**
TXAR	**Lajitas Array**	**142.45**	**304**	PKhKP	PKPpre	20 56 30.9	
	comp=Z,0.2nm,0.5s,baz=69,slow=4.9,SNR=2.8						
TXAR				PKP	**PKPdf**	**20 56 34.3**	**-2.1**
	comp=Z,2.9nm,0.9s,baz=97,slow=3.9,SNR=11						
BNM	**Barren Site**	**142.61**	**313**	PKPpre	PKPpre	20 56 33.2	
CRNM	**Carthage**	**142.78**	**313**	PKPpre	PKPpre	20 56 32.6	
MNTX	**Cornudas Mount**	**142.84**	**309**	P	**PKPdf**	**20 56 35.5**	**-1.5**
	baz=64						
LENM	**Lemitar**	**142.85**	**313**		**PKPdf**	**20 56 35.4**	**-1.7**
DUG	**Dugway, Tooele**	**142.88**	**326**	P	**PKPdf**	**20 56 35.8**	**-1.1**
	baz=46						
MSU	**Marysvale**	**143.67**	**323**		PKPbc	20 56 36.9	+1.0
MSU	**Marysvale**	**143.67**	**323**	PKIKP	PKPbc	20 56 36.9	+1.0
MTPU	**Mount Pierson**	**143.99**	**323**		**PKPdf**	**20 56 38.5**	**-0.7**
W18A	**Petrified Fore**	**144.25**	**317**		PKPbc	20 56 38.4	+0.7
W18A	**Petrified Fore**	**144.25**	**317**	P	PKPbc	20 56 38.3	+0.6
	baz=55						
121A	**Cookes Peak, D**	**144.25**	**312**	PKPdf	**PKPdf**	**20 56 39.0**	**-0.6**
121A	**Cookes Peak, D**	**144.25**	**312**	P	**PKPdf**	**20 56 39.0**	**-0.6**
	baz=60,SNR=25						
J05D	**Fort Rock, OR**	**144.37**	**338**		**PKPdf**	**20 56 39.4**	**0.0**
PKCU	**Pink Cliffs**	**144.46**	**322**	PKPdf	PKPbc	20 56 39.4	+0.9
SPR3	**Spring Creek 3**	**144.56**	**326**		**PKPdf**	**20 56 40.1**	**0.0**
K05A	**Summer Lake**	**144.72**	**337**		**PKPdf**	**20 56 40.5**	**+0.4**
X18A	**Snowflake**	**144.72**	**316**		PKPbc	20 56 40.0	+0.8
Q12A	**Willow Creek R**	**144.80**	**327**		**PKPdf**	**20 56 40.9**	**+0.5**
BMN	**Battle Mountai**	**144.99**	**331**		**PKPdf**	**20 56 40.9**	**+0.3**
BMN	**Battle Mountai**	**144.99**	**331**	PKIKP	**PKPdf**	**20 56 40.9**	**+0.3**
KNB	**Kanab**	**145.04**	**322**	PKPdf	**PKPdf**	**20 56 40.8**	**0.0**
KNB	**Kanab**	**145.04**	**322**	PKIKP	**PKPdf**	**20 56 40.8**	**0.0**
WUAZ	**Wupatki**	**145.09**	**319**	P	**PKPdf**	**20 56 41.8**	**+0.8**
	baz=52						
R11B	**Troy Canyon, C**	**145.71**	**326**	P	**PKPab**	**20 56 43.7**	**+1.1**
	baz=44						
YBH	**Yreka Blue Hor**	**146.26**	**338**	PKPbc	**PKPdf**	**20 56 42.2**	**-0.5**
	comp=Z,5.0nm,0.9s,baz=59,slow=1.7,SNR=4.9						
KVN	**Kaiserville**	**146.48**	**330**		**PKPbc**	**20 56 44.9**	**+0.3**
KVN	**Kaiserville**	**146.48**	**330**	PKP2	**PKPbc**	**20 56 44.9**	**+0.3**
TUC	**Tucson**	**146.54**	**314**	P	**PKPab**	**20 56 46.1**	**+0.3**
	baz=57						
NVAR	**Mina Array Bea**	**147.06**	**329**	PKPbc	**PKPdf**	**20 56 44.4**	**+0.1**
	comp=Z,15nm,0.4s,baz=82,slow=6.6,SNR=4.5						
TPNV	**Topopah Spring**	**147.08**	**325**	P	**PKPab**	**20 56 47.4**	**-0.5**
	baz=44						
V12A	**Nelson**	**147.12**	**322**	PKPbc	**PKPbc**	**20 56 46.2**	**-0.2**
WCT	**Wildcat Mounta**	**147.40**	**326**	PKPbc	**PKPbc**	**20 56 47.0**	**-0.2**
PDMCI	**Parker Dam,Lak**	**147.62**	**320**	P	**PKPbc**	**20 56 48.7**	**+1.0**
	baz=50,SNR=5.9						
LCH	**Last Change Ra**	**147.63**	**327**		**PKPbc**	**20 56 47.7**	**-0.2**
GRAC	**Grapevine Rang**	**147.66**	**327**	P	**PKiKP**	**20 56 49.1**	**-0.8**
	baz=42,SNR=8.2						
DSP	**Deep Springs**	**147.70**	**328**	PKPbc	**PKPbc**	**20 56 47.8**	**0.0**
FURC	**Furnace Creek,**	**147.77**	**325**	P	**PKiKP**	**20 56 49.2**	**-0.8**
	baz=44						
SHOC	**Shoshone, Teco**	**147.84**	**324**	P	**PKPbc**	**20 56 49.5**	**+1.2**
	baz=45						
GWY	**Greenwater Val**	**147.86**	**325**		**PKPbc**	**20 56 48.1**	**-0.4**
TUQ	**Turquoise Moun**	**147.96**	**323**	P	**PKiKP**	**20 56 50.0**	**-0.6**
	baz=46,SNR=8.6						
QSM	**Queen of Sheba**	**148.13**	**325**		**PKPbc**	**20 56 48.6**	**-0.5**
214A	**Organ Pipe Nat**	**148.16**	**315**	P	**PKPbc**	**20 56 50.3**	**+1.0**
	baz=55						
GMRC	**Granite Mounta**	**148.25**	**322**	P	**PKiKP**	**20 56 51.0**	**-0.3**
	baz=47,SNR=12						
IRM	**Iron Mountain**	**148.35**	**320**	P	**PKiKP**	**20 56 51.4**	**0.0**
	baz=49,SNR=25						
MPMC	**Manual Prospec**	**148.41**	**326**	P	**PKiKP**	**20 56 51.5**	**-0.1**
	baz=43,SNR=11						
CWC	**Cottonwood Cre**	**148.46**	**327**	P	**PKiKP**	**20 56 51.4**	**-0.3**
	baz=42						
GSC	**Goldstone, Bar**	**148.57**	**324**		**PKiKP**	**20 56 52.1**	**+0.2**
GSC	**Goldstone, Bar**	**148.57**	**324**	PKP2	**PKiKP**	**20 56 52.1**	**+0.2**
GSC	**Goldstone, Bar**	**148.57**	**324**	P	**PKiKP**	**20 56 51.9**	**0.0**
	baz=45						
HEC	**Hector,Ludlow**	**148.62**	**323**	P	**PKiKP**	**20 56 52.3**	**+0.3**
	baz=46,SNR=16						
GLA	**Glamis**	**148.86**	**319**	PKPdf	**PKPdf**	**20 56 46.6**	**-0.6**
GLA	**Glamis**	**148.86**	**319**	PKIKP	**PKPdf**	**20 56 46.6**	**-0.6**
GLA	**Glamis**	**148.86**	**319**	P	**PKiKP**	**20 56 52.4**	**-0.1**
	baz=51						
BC3	**Big Chuckawall**	**148.87**	**320**	P	**PKiKP**	**20 56 52.8**	**+0.2**
	baz=49,SNR=11						
LRMC	**Laurel Mtn Rad**	**148.94**	**325**	P	**PKiKP**	**20 56 53.1**	**+0.4**
	baz=43,SNR=11						
BELC	**Belle Mtn. Jos**	**148.98**	**321**	P	**PKiKP**	**20 56 53.4**	**+0.6**
	baz=48,SNR=6.4						
ISA	**Isabella, Lake**	**149.25**	**326**	P	**PKiKP**	**20 56 53.6**	**+0.4**
	baz=42,SNR=5.4						
BBRC	**Big Bear Solar**	**149.36**	**323**	P	**PKiKP**	**20 56 53.9**	**+0.2**
	baz=46						
PFO	**Pinyon Flats O**	**149.53**	**321**	PKPbc	**PKiKP**	**20 56 54.3**	**+0.4**
	comp=Z,7.1nm,0.8s,baz=98,slow=1.0,SNR=8.4						
PFO	**Pinyon Flats O**	**149.53**	**321**	P	**PKiKP**	**20 56 54.4**	**+0.4**
	baz=48						
TPFO	**Pinon Flats**	**149.53**	**321**	P	**PKiKP**	**20 56 54.3**	**+0.3**
	baz=48						
EDW2	**Edwards Air Fo**	**149.55**	**325**	P	**PKiKP**	**20 56 54.6**	**+0.7**
	baz=44,SNR=6.5						
SWSC	**Sam W. Stewart**	**149.55**	**319**	P	**PKiKP**	**20 56 54.4**	**+0.6**
	baz=49						
BFSC	**Mount Baldy Ra**	**149.81**	**323**	P	**PKiKP**	**20 56 54.7**	**+0.2**
	baz=45,SNR=5.8						
IKP	**In-Ko-Pah, Jac**	**149.94**	**319**	P	**PKiKP**	**20 56 54.9**	**+0.2**
	baz=49						
MONP2	**Monument Peak**	**149.98**	**320**	P	**PKiKP**	**20 56 55.4**	**+0.4**
	baz=48						
MURC	**Murrieta**	**149.98**	**322**	P	**PKiKP**	**20 56 55.2**	**+0.4**
	baz=46						
SMMC	**Simmler**	**150.32**	**328**	P	**PKiKP**	**20 56 56.5**	**+1.1**
	baz=40						
PKM	**Mcpherson Peak**	**150.55**	**327**	P	**PKiKP**	**20 56 57.5**	**+1.4**
	baz=41						
CIS	**Catalina Islan**	**150.85**	**323**	P	**PKiKP**	**20 56 57.6**	**+1.0**
	baz=45						

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*KRSC **29** 20:38:32.4±1.2, 56°.97N×163°.25E, h26km±14km, Ml4.3*
*MOS **29** 20:38:35.4±0.7, 56°.97N×163°.06E, h30km, mb3.9/1, Error ellipse: s-maj=14.2km s-min=4.5km az=67.0*
*IDC **29** 20:38:40.0±2.8, 56°.95N×162°.76E, h58km±28km, mb3.4/7, mbtmp3.8/10, ML3.6/3, Error ellipse: s-maj=26.3km s-min=17.5km az=144.0*
ISC 29 20:38:32.5±1.4, **57°.02N**±0°.04×**163°.08E**±0°.03, **h3**km±9km, **n81**, σ**1s.33**/96, **mb3.5**/6, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBG	**Krutoberegovo**	**0.79**	**195**	PN	**Pg**	**20 38 47.4**	**-0.3**
KBG	**Krutoberegovo**	**0.79**	**195**	*e*P	**Pg**	**20 38 47.4**	**-0.3**
KBTR	**Krutoberegovo**	**0.82**	**190**	PN	**Pg**	**20 38 48.3**	**0.0**
KBTR				S	**Sg**	**20 38 59.4**	**+0.5**
KBTR	**Krutoberegovo**	**0.82**	**190**	*e*P	**Pg**	**20 38 48.3**	**0.0**
KBTR				*e*S	**Sg**	**20 38 59.4**	**+0.5**
SMKR	**Semkarok**	**0.99**	**245**	PN	**Pg**	**20 38 51.3**	**-0.2**
SMKR	**Semkarok**	**0.99**	**245**	*e*P	**Pg**	**20 38 51.3**	**-0.2**
SRKR	**Sorokina**	**1.11**	**252**	PN	**Pg**	**20 38 53.6**	**-0.2**
SRKR				S	**Sg**	**20 39 08.4**	**+0.1**
SRKR	**Sorokina**	**1.11**	**252**	*e*P	**Pg**	**20 38 53.6**	**-0.2**
SRKR				*e*S	**Sg**	**20 39 08.4**	**+0.1**
KLY	**Klyuchi**	**1.52**	**243**	PN	**Pn**	**20 38 58.1**	**-2.4**
KLY				S	**Sn**	**20 39 17.0**	**-3.7**
KLY	**Klyuchi**	**1.52**	**243**	*e*P	**Pn**	**20 38 58.1**	**-2.4**
KLY				*e*S	**Sn**	**20 39 17.0**	**-3.7**
CIRR	**Tsirk**	**1.58**	**236**	PN	**Pn**	**20 39 01.1**	**-0.4**
CIRR				S	**Sn**	**20 39 22.2**	**-0.3**
CIRR	**Tsirk**	**1.58**	**236**	*e*P	**Pn**	**20 39 01.1**	**-0.4**
CIRR				*e*S	**Sn**	**20 39 22.2**	**-0.3**
LGNR	**Loginova**	**1.62**	**236**	*e*S	**Sn**	**20 39 23.4**	**-0.4**
BZGR	**Bezymyannyi-Gr**	**1.71**	**232**	PN	**Pn**	**20 39 03.1**	**-0.2**
BZGR	**Bezymyannyi-Gr**	**1.71**	**232**	*e*P	**Pn**	**20 39 03.1**	**-0.2**
BZWR	**Bezymyannyi-We**	**1.78**	**235**	PN	**Pn**	**20 39 04.2**	**-0.2**
BZWR				S	**Sn**	**20 39 28.0**	**+0.5**
BZWR	**Bezymyannyi-We**	**1.78**	**235**	*e*P	**Pn**	**20 39 04.2**	**-0.2**
BZWR				*e*S	**Sn**	**20 39 28.0**	**+0.5**
BZP	**Bezymyannyi-Pe**	**1.79**	**233**	*e*P	**Pn**	**20 39 04.2**	**-0.3**
BZMR	**Bezymyannaya**	**1.80**	**234**	PN	**Pn**	**20 39 04.4**	**-0.2**
BZMR	**Bezymyannaya**	**1.80**	**234**	*e*P	**Pn**	**20 39 04.4**	**-0.2**
KIRR	**Kirishev**	**1.86**	**236**	PN	**Pn**	**20 39 05.2**	**-0.2**
KIRR				S	**Sn**	**20 39 29.4**	**0.0**
KIRR	**Kirishev**	**1.86**	**236**	*e*P	**Pn**	**20 39 05.2**	**-0.2**
KIRR				*e*S	**Sn**	**20 39 29.4**	**0.0**
KPT	**Kopyto**	**1.90**	**238**	PN	**Pn**	**20 39 05.9**	**-0.1**
KPT				S	**Sn**	**20 39 30.0**	**-0.5**
KPT	**Kopyto**	**1.90**	**238**	*e*P	**Pn**	**20 39 05.9**	**-0.1**
KPT				*e*S	**Sn**	**20 39 30.0**	**-0.5**
SRDR	**Sredinnyy**	**1.99**	**251**	PN	**Pn**	**20 39 06.9**	**-0.1**
SRDR	**Sredinnyy**	**1.99**	**251**	*e*P	**Pn**	**20 39 06.9**	**-0.1**
KMNR	**Kamenistaya**	**2.02**	**233**	PN	**Pn**	**20 39 08.2**	**+0.6**
KMNR	**Kamenistaya**	**2.02**	**233**	*e*P	**Pn**	**20 39 08.2**	**+0.6**
OSSR	**Ossora**	**2.24**	**360**	PN	**Pn**	**20 39 10.6**	**+0.1**
OSSR	**Ossora**	**2.24**	**360**	*e*P	**Pn**	**20 39 10.6**	**+0.1**
TUMD	**Tumrok D**	**2.36**	**221**	*e*P	**Pn**	**20 39 12.7**	**+0.6**
TUMR	**Tumrok**	**2.39**	**225**	PN	**Pn**	**20 39 12.7**	**0.0**
TUMR	**Tumrok**	**2.39**	**225**	*e*P	**Pn**	**20 39 14.3**	**+1.6**
BKI	**Bering**	**2.43**	**137**	PN	**Pn**	**20 39 12.4**	**-0.7**
BKI				S	**Sn**	**20 39 41.2**	**-2.1**
BKI	**Bering**	**2.43**	**137**	*e*P	**Pn**	**20 39 12.4**	**-0.7**
BKI				*e*S	**Sn**	**20 39 41.1**	**-2.1**
TIGL	**Tigil**	**2.50**	**289**	*e*P	**Pb**	**20 39 16.7**	**-1.4**
PALN	**Palana**	**2.66**	**323**	PN	**Pn**	**20 39 17.1**	**+0.9**
PALN	**Palana**	**2.66**	**323**	*e*P	**Pn**	**20 39 17.1**	**+0.9**
ESO	**Esso**	**2.67**	**248**	PN	**Pn**	**20 39 18.0**	**+1.6**
ESO	**Esso**	**2.67**	**248**	*e*P	**Pn**	**20 39 18.0**	**+1.6**
SPN	**Mys Shipunski**	**4.30**	**205**	PN	**Pn**	**20 39 38.9**	**+0.1**
SPN	**Mys Shipunski**	**4.30**	**205**	*e*P	**Pn**	**20 39 38.9**	**+0.1**
NLC	**Nalytchevo**	**4.41**	**211**	PN	**Pn**	**20 39 42.5**	**+2.2**
NLC	**Nalytchevo**	**4.41**	**211**	*e*P	**Pn**	**20 39 42.5**	**+2.2**
GNL	**Ganaly**	**4.44**	**224**	PN	**Pn**	**20 39 42.1**	**+1.3**
GNL	**Ganaly**	**4.44**	**224**	*e*P	**Pn**	**20 39 42.1**	**+1.3**
KRX	**Arik**	**4.46**	**217**	PN	**Pn**	**20 39 43.1**	**+2.0**
KRX	**Arik**	**4.46**	**217**	*e*P	**Pn**	**20 39 43.1**	**+2.0**
KRER	**Koryakskii**	**4.47**	**216**	PN	**Pn**	**20 39 43.5**	**+2.2**
KRER	**Koryakskii**	**4.47**	**216**	*e*P	**Pn**	**20 39 43.5**	**+2.2**
SMAR	**Somma**	**4.49**	**215**	PN	**Pn**	**20 39 43.2**	**+1.6**
SMAR	**Somma**	**4.49**	**215**	*e*P	**Pn**	**20 39 43.2**	**+1.6**
AVH	**Avacha**	**4.51**	**215**	PN	**Pn**	**20 39 43.9**	**+2.2**
AVH	**Avacha**	**4.51**	**215**	*e*P	**Pn**	**20 39 43.9**	**+2.2**
KOK	**Koryaka**	**4.52**	**216**	PN	**Pn**	**20 39 43.8**	**+1.9**
KOK	**Koryaka**	**4.52**	**216**	*e*P	**Pn**	**20 39 43.8**	**+1.9**
UGLR	**Uglovaya**	**4.53**	**214**	PN	**Pn**	**20 39 43.5**	**+1.4**
UGLR	**Uglovaya**	**4.53**	**214**	*e*P	**Pn**	**20 39 43.5**	**+1.4**
DALK	**Dalny**	**4.71**	**214**	PN	**Pn**	**20 39 45.4**	**+1.0**
DALK	**Dalny**	**4.71**	**214**	*e*P	**Pn**	**20 39 45.4**	**+1.0**
PET	**Petropavlovsk**	**4.74**	**214**	*e*PN	**Pn**	**20 39 46.1**	**+1.3**
PET				*e*S	**Sn**	**20 40 40.6**	**+0.3**
PET				pmax	pmax		
	comp=Z,56nm,0.8s						
PET				smax	smax		
	comp=E,64nm,0.5s						
PET				smax	smax		
	comp=N,37nm,0.5s						
PETK	**Petropavlovsk-**	**4.99**	**221**	P	**Pn**	**20 39 49.0**	**+0.7**
	comp=N,1.4nm,0.3s,baz=62,slow=15,SNR=17						
	comp=N,3.3nm,0.5s						
PETK	**Petropavlovsk-**	**4.99**	**221**	PN	**Pn**	**20 39 49.0**	**+0.7**
KRMR	**Karymshinskiy**	**5.08**	**216**	PN	**Pn**	**20 39 51.6**	**+2.2**
KRMR	**Karymshinskiy**	**5.08**	**216**	*e*P	**Pn**	**20 39 51.6**	**+2.2**

GRL	**Gorelyy**	**5.33**	**215**	PN	**Pn**	**20 39 55.4**	**+2.3**
GRL	**Gorelyy**	**5.33**	**215**	*e*P	**Pn**	**20 39 55.4**	**+2.3**
MTVR	**Mutnovka**	**5.36**	**214**	PN	**Pn**	**20 39 55.0**	**+1.6**
MTVR	**Mutnovka**	**5.36**	**214**	*e*P	**Pn**	**20 39 55.0**	**+1.6**
KDTR	**Khodutka, Kamc**	**5.98**	**211**	PN	**Pn**	**20 40 01.8**	**0.0**
KDTR	**Khodutka, Kamc**	**5.98**	**211**	*e*P	**Pn**	**20 40 01.8**	**0.0**
SHEM	**Shemya Is, Ala**	**7.67**	**119**	P	Pn	20 40 31.6	+6.6
	comp=N,2.6nm,0.3s,baz=270,slow=19,SNR=1.5						
	comp=N,46nm,0.8s						
ASAJ	**Asahikawa**	**18.23**	**234**	P	**P**	**20 42 47.0**	**+0.3**
	comp=N,0.5nm,0.3s,baz=67,slow=4.8,SNR=6.5						
	comp=N,4.8nm,0.6s						
ASAJ	**Asahikawa**	**18.23**	**234**	P	**P**	**20 42 47.0**	**+0.3**
TIXI	**Tiksi**	**20.39**	**329**	P	Pn	20 43 12.4	+0.3
	comp=N,2.6nm,0.4s,baz=90,slow=20,SNR=8.4						
	comp=N,2.6nm,0.4s						
ILAR	**Eielson Array**	**24.91**	**51**	P	**P**	**20 43 58.2**	**+1.9**
	comp=N,0.5nm,0.7s,baz=265,slow=9.2,SNR=8.0						
	comp=N,0.5nm,0.7s						
YKA	**Yellowknife Ar**	**39.16**	**47**	P	**P**	**20 46 02.2**	**+1.3**
	comp=N,0.6nm,0.7s,baz=299,slow=7.9,SNR=7.6						
	comp=N,0.6nm,0.7s						
MKAR	**Makanchi Array**	**48.06**	**294**	P	**P**	**20 47 11.3**	**-1.5**
	comp=N,0.2nm,0.6s,baz=46,slow=5.0,SNR=2.5						
	comp=N,0.2nm,0.6s						
TXAR	**Lajitas Array**	**67.61**	**71**	P	**P**	**20 49 32.0**	**+1.5**
	comp=N,0.7nm,0.7s,baz=319,slow=6.5,SNR=5.0						
	comp=N,0.7nm,0.7s						
WRA	**Warramunga Arr**	**80.37**	**207**	P	**P**	**20 50 43.8**	**-1.1**
	comp=N,0.5nm,0.7s,baz=11,slow=5.7,SNR=1.8						
	comp=N,0.5nm,0.7s						
ASAR	**Alice Springs**	**84.05**	**207**	P	**P**	**20 51 03.5**	**-0.6**
	comp=N,0.8nm,0.7s,baz=16,slow=4.7,SNR=7.6						
	comp=N,0.8nm,0.7s						

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*NORS **29** 20:39:55.6±0.0, 42°.46N×43°.23E, h10^{km}, MPVA3.5*
*TIF **29** 20:39:55.6, 42°.49N×43°.28E, h11^{km}*
*MOS **29** 20:39:56.7±0.0, 42°.52N×43°.24E, h1^{km}, MPVA3.3*
*DDA **29** 20:39:58.0±0.0, 42°.45N×43°.18E, h5^{km}±2^{km}, ML2.8*
ISC 29 20:39:56.4±0.9**, 42°.49N**±0°.01×**43°.24E**±0°.01**, h8**^{km}±7^{km}**,**
n74, σ0^{s}.96/144**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONI	**Oni**	**0.19**	**57**	*e*Pg	**Pg**	**20 39 59.8**	**-0.4**
ONI				*e*Sg	**Sg**	**20 40 02.7**	**-0.2**
ONI	**Oni**	**0.19**	**57**	P	**Pg**	**20 39 59.8**	**-0.4**
ONI				S	**Sg**	**20 40 02.7**	**-0.2**
TKB	**Tkibuli**	**0.23**	**233**	*e*Pg	**Pg**	**20 40 01.4**	**+0.4**
TKB				*e*Sg	**Sg**	**20 40 05.7**	**+1.5**
TKB	**Tkibuli**	**0.23**	**233**	P	**Pg**	**20 40 01.4**	**+0.4**
TKB				S	**Sg**	**20 40 05.7**	**+1.5**
DIGR	**Digorskoe uzhe**	**0.48**	**31**	*e*Pg	**Pg**	**20 40 04.9**	**-0.8**
DIGR				*e*Sg	**Sg**	**20 40 11.6**	**-0.5**
DIGR	**Digorskoe uzhe**	**0.48**	**31**	*e*Pg	**Pg**	**20 40 05.0**	**-0.8**
DIGR				*e*Sg	**Sg**	**20 40 11.9**	**-0.2**
ZEI	**Tsey**	**0.57**	**58**	*i* Pg	**Pg**	**20 40 06.6**	**-0.9**
ZEI				*e*Sg	**Sg**	**20 40 14.4**	**-0.6**
ZEI	**Tsey**	**0.57**	**58**	*i* Pg	**Pg**	**20 40 06.9**	**-0.6**
ZEI				*e*Sg	**Sg**	**20 40 14.8**	**-0.2**
ABS	**Abastumani**	**0.80**	**204**	*e*Pg	**Pg**	**20 40 11.8**	**0.0**
ABS				*e*Sg	**Sb**	**20 40 23.7**	**0.0**
ABS	**Abastumani**	**0.80**	**204**	P	**Pg**	**20 40 11.8**	**0.0**
ABS				S	**Sb**	**20 40 23.8**	**0.0**
LACR	**Lac**	**0.85**	**66**	*e*Pg	**Pg**	**20 40 11.9**	**-0.9**
LACR				*e*Sg	**Sg**	**20 40 23.5**	**-0.3**
NEY	**Neytrino**	**0.85**	**333**	*e*Pg	**Pg**	**20 40 11.8**	**-0.9**
NEY				*e*Sg	**Sg**	**20 40 23.5**	**-0.3**
NEY	**Neytrino**	**0.85**	**333**	*e*Pg	**Pg**	**20 40 12.0**	**-0.8**
NEY				*e*Sg	**Sg**	**20 40 23.5**	**-0.3**
KORR	**Kora**	**0.85**	**45**	*e*Pg	**Pg**	**20 40 12.5**	**-0.2**
KORR				*e*Sg	**Sb**	**20 40 25.1**	**0.0**
LSNR	**Lesken**	**0.90**	**28**	*e*Pg	**Pg**	**20 40 13.1**	**-0.6**
LSNR				*e*Sg	**Sg**	**20 40 24.4**	**-1.0**
LSNR	**Lesken**	**0.90**	**28**	*e*Pg	**Pg**	**20 40 13.3**	**-0.4**
LSNR				*e*Sg	**Sb**	**20 40 26.4**	**-0.1**
BRNG	**Burnasheti**	**0.97**	**153**	P	**Pg**	**20 40 15.3**	**+0.2**
BRNG				S	**Sb**	**20 40 28.7**	**+0.1**
PNSH	**Pansheti**	**1.03**	**81**	*e*Pg	**Pg**	**20 40 15.1**	**-1.0**
PNSH				*e*Sg	**Sg**	**20 40 28.9**	**-0.6**
PNSH	**Pansheti**	**1.03**	**81**	P	**Pg**	**20 40 15.1**	**-1.0**
PNSH				S	**Sg**	**20 40 28.9**	**-0.6**
ARNR	**Ardon**	**1.03**	**48**	*e*Pg	**Pb**	**20 40 16.8**	**+0.2**
ARNR				*e*Sg	**Sg**	**20 40 30.1**	**+0.5**
ARNR	**Ardon**	**1.03**	**48**	*e*Pg	**Pb**	**20 40 16.8**	**+0.2**
ARNR				*e*Sg	**Sn**	**20 40 32.0**	**+0.1**
NCK	**Nalchik**	**1.04**	**14**	*e*Pg	**Pb**	**20 40 16.9**	**+0.2**
NCK				*e*Sg	**Sg**	**20 40 30.1**	**+0.3**
NCK	**Nalchik**	**1.04**	**14**	*e*Pg	**Pb**	**20 40 16.9**	**+0.2**
NCK				*e*Sg	**Sn**	**20 40 31.6**	**-0.5**
STDR	**Stavd-Durt**	**1.07**	**34**	*e*Pg	**Pn**	**20 40 17.6**	**-0.1**
STDR				*e*Sg	**Sb**	**20 40 31.9**	**+0.7**
STDR	**Stavd-Durt**	**1.07**	**34**	*e*Pg	**Pn**	**20 40 17.6**	**-0.1**
STDR				*e*Sg	**Sn**	**20 40 33.8**	**+1.1**
AKH	**Akhalkalaki**	**1.09**	**170**	*e*Pg	**Pg**	**20 40 17.1**	**-0.3**
AKH				*e*Sg	**Sb**	**20 40 32.8**	**+0.5**
AKH	**Akhalkalaki**	**1.09**	**170**	P	**Pg**	**20 40 17.1**	**-0.3**
AKH				S	**Sb**	**20 40 32.8**	**+0.5**
TRLG	**Trialeti**	**1.15**	**146**	*e*Pg	**Pb**	**20 40 17.7**	**-0.9**
TRLG				*e*Sg	**Sg**	**20 40 33.7**	**+0.4**
TRLG	**Trialeti**	**1.15**	**146**	P	**Pb**	**20 40 17.7**	**-0.9**
TRLG				S	**Sg**	**20 40 33.7**	**+0.4**
BGD	**Bogdanovka**	**1.25**	**168**	*e*Pg	**Pn**	**20 40 19.8**	**-0.7**
BGD				*e*Sg	**Sb**	**20 40 36.7**	**-0.1**
BGD	**Bogdanovka**	**1.25**	**168**	P	**Pn**	**20 40 19.8**	**-0.7**
BGD				S	**Sb**	**20 40 36.7**	**-0.1**
KBZ	**Khabaz**	**1.26**	**349**	*e*Pg	**Pn**	**20 40 19.8**	**-0.6**
KBZ				*e*Sg	**Sb**	**20 40 36.4**	**-0.5**
BTKR	**Batakoyurt**	**1.30**	**47**	*e*Pg	**Pg**	**20 40 22.9**	**+1.6**
BTKR				*e*Sg	**Sg**	**20 40 42.8**	**+4.5**
SHA1	**Shidzhatmaz**	**1.32**	**341**	*e*Pg	**Pn**	**20 40 21.2**	**-0.2**
SHA1				*e*Sg	**Sn**	**20 40 39.1**	**-0.2**
KMGR	**Komgaron**	**1.32**	**64**	*e*Pg	**Pg**	**20 40 22.3**	**+0.5**
KMGR				*e*Sg	**Sg**	**20 40 40.8**	**+1.8**
KBTC	**Kuba-Taba**	**1.33**	**5**	*e*Pg	**Pb**	**20 40 21.7**	**0.0**
KBTC				*e*Sg	**Sg**	**20 40 41.0**	**+1.8**
SEAG	**Tbilisi Sea**	**1.37**	**121**	*e*Pg	**Pn**	**20 40 20.9**	**-0.9**
SEAG				*e*Sg	**Sn**	**20 40 40.6**	**+0.3**
SEAG	**Tbilisi Sea**	**1.37**	**121**	P	**Pn**	**20 40 20.9**	**-0.9**
SEAG				S	**Sn**	**20 40 40.6**	**+0.3**
AHAN	**Ardahan-Merkez**	**1.40**	**199**	P	**Pn**	**20 40 22.2**	**-0.3**
AHAN				S	**Sb**	**20 40 41.1**	**0.0**
AHAN				*i* AML	AML	20 40 45.0	
	comp=E,141nm,0.6s						
SHTL	**Shatili**	**1.42**	**83**	*e*Pg	**Pn**	**20 40 22.8**	**+0.1**
SHTL				*e*Sg	**Sg**	**20 40 42.4**	**+0.2**
SHTL	**Shatili**	**1.42**	**83**	P	**Pn**	**20 40 22.8**	**+0.1**
SHTL				S	**Sg**	**20 40 42.4**	**+0.2**
DOMR	**Dombai**	**1.43**	**305**	*e*Pg	**Pg**	**20 40 24.2**	**+0.3**
DOMR				*e*Sg	**Sg**	**20 40 44.2**	**+1.7**
BATM	**Batumi**	**1.45**	**233**	*e*Pg	**Pn**	**20 40 22.6**	**-0.4**
BATM				*e*Sg	**Sb**	**20 40 42.6**	**+0.2**
BATM	**Batumi**	**1.45**	**233**	P	**Pn**	**20 40 22.6**	**-0.4**
BATM				S	**Sb**	**20 40 42.6**	**+0.2**
PRTR	**Priterechnaya**	**1.47**	**31**	*e*Pg	**Pg**	**20 40 24.8**	**+0.1**
PRTR				*e*Sg	**Sg**	**20 40 44.0**	**+0.2**
PRTR	**Priterechnaya**	**1.47**	**31**	*e*Pg	**Pg**	**20 40 24.8**	**+0.1**
PRTR				*e*Sg	**Sg**	**20 40 47.6**	**+3.8**
KIV0	**Kislovodsk Arr**	**1.52**	**345**	*e*Pg	**Pb**	**20 40 24.5**	**-0.4**
KIV0				*e*Sg	**Sb**	**20 40 44.5**	**+0.1**
KIV	**Kislovodsk**	**1.52**	**345**	*e*Pg	**Pn**	**20 40 24.0**	**0.0**
KIV				*e*Sg	**Sn**	**20 40 43.9**	**-0.1**
PYA1	**Pyatigorsk**	**1.58**	**356**	*e*Pg	**Pb**	**20 40 26.0**	**+0.1**
PYA1				*e*Sg	**Sn**	**20 40 45.0**	**-0.4**
DBOC	**Borcka**	**1.64**	**226**	P	**Pn**	**20 40 25.4**	**-0.2**
DBOC				*i* AML	AML	20 40 50.0	
	comp=E,126nm,0.3s						
DAGI	**Agillar**	**1.73**	**216**	P	**Pn**	**20 40 27.6**	**+0.8**
DAGI				S	**Sb**	**20 40 49.8**	**-0.5**
ARXR	**Arkhyz**	**1.80**	**307**	*e*Pg	**Pb**	**20 40 29.6**	**0.0**
ARXR				*e*Sg	**Sg**	**20 40 55.3**	**+1.2**
EAK	**Akyaka**	**1.82**	**171**	P	**Pn**	**20 40 29.0**	**+0.8**
EAK				S	**Sn**	**20 40 51.1**	**-0.5**
DBAD	**Bademkaya**	**1.87**	**219**	P	**Pn**	**20 40 29.6**	**+0.8**
DBAD				S	**Sb**	**20 40 53.9**	**-0.6**
DBAD				*i* AML	AML	20 40 58.0	
	comp=N,108nm,0.5s						
DBAD				*i* AML	AML	20 40 58.0	
	comp=E,129nm,0.5s						
DGRG	**David-gareji**	**1.90**	**122**	*e*Pg	**Pb**	**20 40 31.1**	**-0.3**
DGRG				*e*Sg	**Sb**	**20 40 55.6**	**+0.4**
DGRG	**David-gareji**	**1.90**	**122**	P	**Pb**	**20 40 31.1**	**-0.3**
DGRG				S	**Sb**	**20 40 55.6**	**+0.4**
BOZK	**Kars-Merkez-Bo**	**1.91**	**186**	P	**Pb**	**20 40 31.4**	**-0.2**
BOZK				S	**Sb**	**20 40 54.9**	**-0.7**
DDEM	**Demirkent**	**1.95**	**215**	P	**Pn**	**20 40 31.0**	**+1.1**
DDEM				S	**Sb**	**20 40 57.0**	**+0.3**
BTLR	**Botlikh**	**2.21**	**84**	*e*Pg	**Pb**	**20 40 36.6**	**0.0**
BTLR				*e*Sg	**Sb**	**20 41 05.5**	**+1.3**
ALER	**Alexandrovskoy**	**2.29**	**354**	*e*Pn	**Pb**	**20 40 38.5**	**+0.6**
ALER				*e*Sn	**Sb**	**20 41 08.0**	**+1.6**
LGD	**Lagodekhi**	**2.33**	**105**	*e*Pn	**Pn**	**20 40 36.9**	**+1.9**
LGD				*e*Sn	**Sb**	**20 41 08.1**	**+0.6**
LGD	**Lagodekhi**	**2.33**	**105**	P	**Pn**	**20 40 36.9**	**+1.9**
LGD				S	**Sb**	**20 41 08.1**	**+0.6**
DDFL	**Dedoflistskaro**	**2.39**	**115**	P	**Pb**	**20 40 39.6**	**0.0**
DDFL				S	**Sg**	**20 41 11.5**	**-1.5**
RPOR	**Krasnaya Polya**	**2.49**	**300**	*e*Pn	**Pb**	**20 40 40.5**	**-0.9**
RPOR				*e*Sn	**Sb**	**20 41 11.3**	**-1.0**
VSLR	**Vesyoloye**	**2.55**	**293**	*e*Pn	**Pb**	**20 40 41.6**	**-0.8**
VSLR				*e*Sn	**Sb**	**20 41 13.1**	**-0.8**
GNI	**Garni**	**2.60**	**154**	*e*Pn	**Pb**	**20 40 44.0**	**+0.7**
IZDR	**Rize**	**2.63**	**231**	P	**Pn**	**20 40 38.2**	**-1.1**
IZDR				S	**Sn**	**20 41 10.1**	**-1.4**
UNCR	**Uncukul**	**2.63**	**84**	*e*Pn	**Pb**	**20 40 43.6**	**-0.2**
UNCR				*e*Sn	**Sb**	**20 41 14.7**	**-1.7**
HOMI	**Horasan**	**2.64**	**203**	P	**Pn**	**20 40 41.2**	**+1.7**
EATA	**Eleskirt**	**2.69**	**192**	P	**Pb**	**20 40 43.0**	**-2.0**
GUZR	**Guzeripl'**	**2.73**	**304**	*e*Pn	**Pb**	**20 40 44.1**	**-1.5**
GUZR				*e*Sn	**Sb**	**20 41 16.9**	**-2.4**
GNBR	**Gunib**	**2.76**	**91**	*e*Pn	**Pb**	**20 40 44.6**	**-1.4**
GNBR				*e*Sn	**Sb**	**20 41 20.7**	**+0.7**
KRIK	**Erzurum-spir**	**2.77**	**220**	P	**Pn**	**20 40 43.7**	**+2.4**
KRIK				S	**Sb**	**20 41 20.6**	**+0.3**
KMKR	**Kumukh**	**2.88**	**96**	*e*Pn	**Pb**	**20 40 47.7**	**-0.5**
KMKR				*e*Sn	**Sb**	**20 41 22.0**	**-1.8**

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*AEIC **29** 20:40:32.8±2.5, 52°.4N±0°.2×174°.8W±0°.1, h224^{km}±7^{km},*
Error ellipse: s-maj=25.5km s-min=11.9km az=165.0
*IDC **29** 20:40:33.4±4.7, 52°.85N×174°.93W, h222^{km}±45^{km},*
mb3.2/10, mbtmp3.9/14, Error ellipse: s-maj=28.3km
s-min=12.6km az=4.0
*NEIC **29** 20:40:33.0±1.4, 52°.8N±0°.2×174°.7W±0°.2, h195^{km}±13^{km},*
mb4.3/73, ML3.7(AEIC), Error ellipse: s-maj=22.9km
s-min=12.6km az=166.0
ISC 29 20:40:31.6±0.6**, 52°.7N**±0°.1×**174°.76W**±0°.06**, h200**^{km}**, n230,**
σ1^{s}.21/232**, mb4.1**/21**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**1.02**	**231**		**Pn**	**20 41 03.3**	**+1.7**
ADK	**Adak**	**1.46**	**235**	Pn	**Pn**	**20 41 06.2**	**+1.3**
ADK				Sn	**Sn**	**20 41 31.2**	**+0.6**
KIWB	**Kanaga Island**	**1.71**	**240**		**Pn**	**20 41 08.3**	**+1.1**
CLES	**Cleveland East**	**2.96**	**86**	Pn	**Pn**	**20 41 20.2**	**-0.5**
NIKH	**Nikolski High**	**3.59**	**84**	Pn	**Pn**	**20 41 27.0**	**-1.2**
NIKH	**Nikolski High**	**3.59**	**84**	P	**Pn**	**20 41 30.1**	**+1.9**
	baz=269						
UNV	**Unalaska Valle**	**5.08**	**74**	Pn	**Pn**	**20 41 49.5**	**+2.7**
UNV	**Unalaska Valle**	**5.08**	**74**	P	**Pn**	**20 41 48.8**	**+2.0**
	baz=261						
AKUT	**Akutan**	**5.55**	**72**	Pn	**Pn**	**20 41 51.6**	**-1.3**
FALS	**False Pass**	**7.05**	**68**	P	**Pn**	**20 42 15.5**	**+3.3**
	baz=257						
SDPT	**Sand Point**	**8.80**	**67**	Pn	**Pn**	**20 42 35.7**	**+0.6**
CHGN	**Chignik**	**10.15**	**63**	P	**Pn**	**20 42 53.3**	**+0.8**
	baz=256						
P16K	**Nushagak River**	**11.31**	**50**	P	**P**	**20 43 11.8**	**-1.5**
	baz=243						
O16K	**Kokwok River B**	**11.53**	**47**	P	**P**	**20 43 15.1**	**-0.6**
	baz=241						
R17K	**Ugashik Creek**	**11.58**	**58**	P	**P**	**20 43 14.9**	**-1.4**
	baz=253						
N16K	**Nishlik Lake**	**11.71**	**42**	P	**P**	**20 43 18.2**	**+0.5**
	baz=235						
Q16K	**King Salmon**	**11.80**	**53**	P	**P**	**20 43 18.9**	**+0.3**
	baz=247						
Q17K	**Contact Creek**	**12.03**	**55**	P	**P**	**20 43 20.2**	**-1.2**
	baz=251						
O17K	**Koliganek Bris**	**12.06**	**47**	P	**P**	**20 43 21.3**	**-0.3**
	baz=242						
P17K	**Kvichak River**	**12.11**	**50**	P	**P**	**20 43 21.6**	**-0.4**
	baz=246						
Q18K	**Katmai Hardscr**	**12.59**	**54**	P	**P**	**20 43 28.5**	**+0.9**
	baz=250						
P18K	**Big Mountain,**	**12.75**	**51**		**P**	**20 43 29.2**	**-0.1**
P18K	**Big Mountain,**	**12.75**	**51**	P	**P**	**20 43 30.9**	**+1.5**
	baz=247						
ANM	**Nome**	**12.81**	**19**	P	**P**	**20 43 31.7**	**+1.9**
ANM	**Nome**	**12.81**	**19**	P	**P**	**20 43 32.1**	**+2.3**
	baz=206						
O18K	**Koktuh Hills**	**12.95**	**49**	P	**P**	**20 43 32.6**	**+1.0**
O18K	**Koktuh Hills**	**12.95**	**49**	P	**P**	**20 43 32.5**	**+1.0**
	baz=245						
OHAK	**Old Harbor**	**13.10**	**61**	Pn	**Pn**	**20 43 29.6**	**-0.5**
OHAK	**Old Harbor**	**13.10**	**61**	P	**P**	**20 43 33.7**	**+0.6**
	baz=259						
TNA	**Tin City**	**13.32**	**12**	P	**P**	**20 43 35.0**	**-0.4**
	baz=198						
Q19K	**Cape Douglas,**	**13.35**	**54**	P	**P**	**20 43 35.2**	**-0.8**
Q19K	**Cape Douglas,**	**13.35**	**54**	P	**Pn**	**20 43 34.5**	**+1.3**
	baz=251						
SVW2	**Sparrevohn**	**13.36**	**44**	P	**P**	**20 43 39.1**	**+3.0**
O19K	**Port Alsworth**	**13.50**	**48**	P	**P**	**20 43 38.3**	**+0.7**
	baz=245						
KDAK	**Kodiak Island**	**13.59**	**59**	P	**Pn**	**20 43 35.8**	**-0.4**
	27nm,0.4s,baz=280,slow=7.0,SNR=138						
KDAK	**Kodiak Island**	**13.59**	**59**	P	**P**	**20 43 38.1**	**-0.5**
	baz=258						
N19K	**Bonanza Creek**	**13.70**	**46**	P	**P**	**20 43 42.1**	**+2.3**
N19K	**Bonanza Creek**	**13.70**	**46**	P	**P**	**20 43 41.6**	**+1.7**
	baz=243						
L19K	**White Mountain**	**14.23**	**41**		**Pn**	**20 43 44.4**	**+0.3**
L19K	**White Mountain**	**14.23**	**41**	P	**P**	**20 43 46.2**	**+0.6**
	baz=237						
O20K	**Slope Mountain**	**14.24**	**50**	P	**P**	**20 43 46.9**	**+1.1**
	baz=249						
M19K	**Big River Lodg**	**14.27**	**42**		**Pn**	**20 43 44.8**	**+0.3**
M19K	**Big River Lodg**	**14.27**	**42**	P	**P**	**20 43 46.7**	**+0.6**
	baz=239						
CNPM	**China Poot**	**14.72**	**53**	P	**P**	**20 43 51.5**	**+0.4**
L20K	**Farewell, AK**	**14.77**	**40**	P	**P**	**20 43 52.7**	**+1.0**
	baz=238						
M20K	**Styx River**	**14.77**	**43**	P	**P**	**20 43 52.8**	**+1.0**
M20K	**Styx River**	**14.77**	**43**	P	**P**	**20 43 53.3**	**+1.6**
	baz=241						
SPCR	**Spurr Chakacha**	**14.86**	**46**	P	**P**	**20 43 54.4**	**+1.7**
	baz=245						
BRLK	**Bradley Lake**	**14.96**	**53**		**Pn**	**20 43 52.9**	**-0.1**
BRSE	**Bradley Lake S**	**15.02**	**53**	P	**P**	**20 43 56.1**	**+1.6**
	baz=253						
K20K	**Telida**	**15.18**	**37**	P	**P**	**20 43 57.5**	**+1.3**
K20K				IAmb	IAmb	20 44 12.3	
	comp=Z,6.1nm,0.6s						
K20K	**Telida**	**15.18**	**37**	P	**P**	**20 43 59.0**	**+2.8**
	baz=235						
SKT	**Skwentna**	**15.49**	**44**	P	**P**	**20 44 02.3**	**+2.7**
SKT	**Skwentna**	**15.49**	**44**	P	**P**	**20 44 02.1**	**+2.5**
	baz=244,SNR=8.1						
SUA	**Susitna One**	**15.62**	**47**	P	**Pn**	**20 44 02.2**	**+1.1**
SUA				IAmb	IAmb	20 44 06.4	
	comp=Z,10nm,0.9s						
SUA	**Susitna One**	**15.62**	**47**	P	**Pn**	**20 44 03.2**	**+2.2**
	baz=247						
PPLA	**Purkeypile**	**15.66**	**41**	P	**Pn**	**20 44 04.5**	**+2.9**
PPLA	**Purkeypile**	**15.66**	**41**	P	**Pn**	**20 44 04.8**	**+3.2**
	baz=240						
O22K	**Cooper Landing**	**15.73**	**51**	P	**Pn**	**20 44 03.8**	**+1.4**
O22K	**Cooper Landing**	**15.73**	**51**	P	**Pn**	**20 44 04.4**	**+2.1**
	baz=252						
RC01	**Rabbit Creek A**	**15.93**	**49**	P	**Pn**	**20 44 05.3**	**+0.6**
RC01				IAmb	IAmb	20 44 48.1	
	comp=Z,22nm,1.4s						
RC01	**Rabbit Creek A**	**15.93**	**49**	P	**Pn**	**20 44 07.3**	**+2.6**
	baz=249						
CAST	**Castle Rocks**	**15.96**	**39**	P	**Pn**	**20 44 07.2**	**+2.0**
CAST	**Castle Rocks**	**15.96**	**39**	P	**Pn**	**20 44 07.8**	**+2.7**
	baz=238,SNR=8.5						
CHUM	**Lake Minchumin**	**16.13**	**37**	P	**Pn**	**20 44 09.5**	**+2.4**
	baz=236						
CUT	**Chulitna**	**16.21**	**44**	P	**Pn**	**20 44 09.7**	**+1.6**
	baz=244						
KTH	**Kantishna Hill**	**16.48**	**40**	P	**Pn**	**20 44 12.5**	**+1.1**
PWL	**Port Wells**	**16.50**	**50**		**Pn**	**20 44 12.3**	**+0.7**
PWL				IAmb	IAmb	20 44 32.0	
	comp=Z,15nm,0.9s						
GHO	**Glory Hole Cre**	**16.54**	**47**	P	**Pn**	**20 44 12.4**	**+0.3**
GHO				IAmb	IAmb	20 44 54.3	
	comp=Z,15nm,1.2s						
PETK	**Petropavlovsk-**	**16.57**	**282**	P	**P**	**20 44 10.8**	**-0.8**
	comp=Z,1.9nm,0.8s,baz=81,slow=15,SNR=2.5						
KNK	**Knik Glacier**	**16.62**	**48**	P	**Pn**	**20 44 13.2**	**+0.1**
KNK				IAmb	IAmb	20 44 16.0	
	comp=Z,10nm,0.8s						
KNK	**Knik Glacier**	**16.62**	**48**	P	**Pn**	**20 44 14.0**	**+0.9**
	baz=250						
TRF	**Thorofare Moun**	**16.68**	**40**	P	**Pn**	**20 44 14.1**	**+0.2**
TRF				IAmb	IAmb	20 44 45.7	
	comp=Z,13nm,1.0s						
TRF	**Thorofare Moun**	**16.68**	**40**	P	**Pn**	**20 44 14.5**	**+0.6**
	baz=241						
BPAW	**Bear Paw Mtn.**	**16.74**	**38**	P	**Pn**	**20 44 15.1**	**+0.7**
BPAW				IAmb	IAmb	20 44 17.5	
	comp=Z,9.9nm,0.7s						
BPAW	**Bear Paw Mtn.**	**16.74**	**38**	P	**Pn**	**20 44 15.5**	**+1.1**
	baz=238,SNR=11						
SML	**Sawmill**	**16.81**	**47**	P	**Pn**	**20 44 15.5**	**+0.1**
SML				IAmb	IAmb	20 44 59.2	
	comp=Z,9.9nm,0.8s						
I21K	**Tanana**	**16.99**	**34**		**Pn**	**20 44 18.4**	**+1.1**
I21K				IAmb	IAmb	20 44 19.7	
	comp=Z,6.3nm,0.7s						
I21K	**Tanana**	**16.99**	**34**	P	**Pn**	**20 44 18.7**	**+1.3**
	baz=234,SNR=5.9						
H21K	**Melozitna Rive**	**17.01**	**32**		**Pn**	**20 44 18.6**	**+0.9**
H21K	**Melozitna Rive**	**17.01**	**32**	P	**Pn**	**20 44 18.6**	**+0.9**
	baz=231,SNR=5.2						
M23K	**Glacier View**	**17.08**	**47**	P	**Pn**	**20 44 19.3**	**+0.8**
	baz=250						
WAT1	**Susitna Watana**	**17.11**	**44**	P	**Pn**	**20 44 18.9**	**0.0**
	baz=246						
RND	**Reindeer**	**17.23**	**42**	P	**P**	**20 44 19.9**	**+1.1**
SCM	**Sheep Creek Mo**	**17.27**	**47**	P	**P**	**20 44 20.2**	**+1.0**
SCM	**Sheep Creek Mo**	**17.27**	**47**	P	**Pn**	**20 44 20.8**	**0.0**
	baz=250						
MLY	**Manley**	**17.34**	**35**	P	**Pn**	**20 44 21.6**	**+0.2**
MLY				IAmb	IAmb	20 44 22.8	
	comp=Z,8.7nm,0.7s						
MLY	**Manley**	**17.34**	**35**	P	**Pn**	**20 44 21.7**	**+0.2**
	baz=236,SNR=9.8						
MCK	**McKinley**	**17.35**	**41**	P	**P**	**20 44 20.8**	**+0.8**
MCK				IAmb	IAmb	20 44 22.9	
	comp=Z,8.1nm,0.6s						
MCK	**McKinley**	**17.35**	**41**	P	**P**	**20 44 20.8**	**+0.8**
	baz=242,SNR=6.9						
BWN	**Browne**	**17.35**	**39**	P	**Pn**	**20 44 21.6**	**0.0**
G21K	**Allakaket**	**17.36**	**29**	P	**Pn**	**20 44 22.1**	**+0.5**
	baz=227						
NEA2	**Nenana**	**17.71**	**38**	P	**P**	**20 44 24.9**	**+1.0**
NEA2	**Nenana**	**17.71**	**38**	P	**P**	**20 44 24.6**	**+0.8**
	baz=240,SNR=10.0						
KLU	**Klutina**	**17.80**	**49**		**P**	**20 44 24.8**	**-0.2**
KLU				IAmb	IAmb	20 44 31.8	
	comp=Z,9.9nm,1.1s						
KLU	**Klutina**	**17.80**	**49**	P	**Pn**	**20 44 27.2**	**+0.1**
	baz=254						
F21K	**Alatna River**	**17.85**	**27**	P	**Pn**	**20 44 27.2**	**-0.2**
	baz=226,SNR=7.1						
M24K	**Tolsona, Glenn**	**17.88**	**47**	P	**P**	**20 44 25.0**	**-0.8**
I23K	**Minto, Yukon-K**	**17.89**	**36**	P	**Pn**	**20 44 27.6**	**-0.3**
I23K	**Minto, Yukon-K**	**17.89**	**36**	P	**P**	**20 44 27.0**	**+1.2**
	baz=238,SNR=13						
WRH	**Wood River Hil**	**18.02**	**39**	P	**P**	**20 44 27.1**	**-0.1**
H23K	**Yukon River**	**18.20**	**34**	P	**P**	**20 44 30.6**	**+1.5**
H23K				IAmb	IAmb	20 44 31.9	
	comp=Z,7.6nm,0.8s						
H23K	**Yukon River**	**18.20**	**34**	P	**P**	**20 44 30.8**	**+1.7**
	baz=236,SNR=5.7						
MDM	**Murphy Dome**	**18.20**	**37**	P	**P**	**20 44 29.7**	**+0.4**
MDM				IAmb	IAmb	20 44 31.6	
	comp=Z,16nm,1.4s						
CCB	**Clear Creek Bu**	**18.21**	**39**	P	**P**	**20 44 29.0**	**-0.3**
F22K	**John River**	**18.41**	**28**	P	**P**	**20 44 33.2**	**+1.7**
	baz=228						
HARP	**HAARP**	**18.42**	**47**	P	**Pn**	**20 44 35.3**	**+1.1**
	baz=252						
HDA	**Harding Lake**	**18.43**	**40**	P	**P**	**20 44 31.7**	**-0.1**
HDA	**Harding Lake**	**18.43**	**40**	P	**P**	**20 44 32.6**	**+0.9**
	baz=244						
N25K	**Chitina, Valde**	**18.45**	**49**	P	**P**	**20 44 32.7**	**+0.7**
N25K				IAmb	IAmb	20 44 37.5	
	comp=Z,7.0nm,0.8s						
N25K	**Chitina, Valde**	**18.45**	**49**	P	**Pn**	**20 44 34.2**	**-0.3**
	baz=255						
PAX	**Paxson**	**18.47**	**45**	P	**P**	**20 44 33.7**	**+1.4**
PAX				IAmb	IAmb	20 44 35.8	
	comp=Z,5.1nm,0.5s						
PAX	**Paxson**	**18.47**	**45**	P	**P**	**20 44 33.8**	**+1.6**
	baz=250,SNR=6.7						
G23K	**Bananza Creek**	**18.55**	**32**	P	**P**	**20 44 34.8**	**+1.8**
	baz=233						
POKR	**Poker Plat Res**	**18.58**	**38**	P	**P**	**20 44 34.6**	**+1.3**
	baz=241						
IL31		**18.62**	**39**	P	**P**	**20 44 32.8**	**-0.9**
ILAR	**Eielson Array**	**18.62**	**39**	P	**P**	**20 44 32.9**	**-0.9**
	comp=Z,2.5nm,0.6s,baz=242,slow=9.5,SNR=20						
IL03	**Eielson Array**	**18.63**	**39**	P	**P**	**20 44 34.6**	**+0.7**
K24K	**Donnelly Dome**	**18.65**	**42**	P	**P**	**20 44 35.1**	**+1.0**
	baz=247,SNR=12						
GLB	**Gilahina Butte**	**18.77**	**50**	P	**P**	**20 44 36.1**	**+0.6**
GLB				IAmb	IAmb	20 44 53.7	
	comp=Z,12nm,1.3s						
H24K	**Noodor Dome**	**18.78**	**35**	P	**P**	**20 44 37.4**	**+1.9**
H24K	**Noodor Dome**	**18.78**	**35**	P	**P**	**20 44 37.2**	**+1.7**
	baz=238						
E22K	**Anaktuvuk Pass**	**18.94**	**27**	P	**P**	**20 44 38.2**	**+1.0**
	baz=227						
RIDG	**Independent Ri**	**19.01**	**43**	P	**P**	**20 44 38.3**	**+0.3**
RIDG	**Independent Ri**	**19.01**	**43**	P	**P**	**20 44 38.8**	**+0.8**
	baz=248						
MCARA	**McCarthy VSAT**	**19.12**	**51**	P	**P**	**20 44 40.5**	**+1.3**
DOT	**Dot Lake**	**19.30**	**44**	P	**P**	**20 44 41.5**	**+0.3**
DOT				IAmb	IAmb	20 44 43.0	
	comp=Z,10nm,0.8s						
G24K	**Hadweenzic Riv**	**19.38**	**33**	P	**P**	**20 44 43.6**	**+1.7**
	baz=237						
M26K	**Nabesna, AK**	**19.38**	**48**	P	**P**	**20 44 43.3**	**+1.2**
M26K				IAmb	IAmb	20 44 50.2	
	comp=Z,4.3nm,0.5s						
M26K	**Nabesna, AK**	**19.38**	**48**	P	**P**	**20 44 43.8**	**+1.7**
	baz=255						
L26K	**Log Cabin Wild**	**19.41**	**46**	P	**P**	**20 44 43.5**	**+1.2**
L26K				IAmb	IAmb	20 44 45.8	
	comp=Z,5.8nm,0.6s						
L26K	**Log Cabin Wild**	**19.41**	**46**	P	**P**	**20 44 43.2**	**+0.9**
	baz=252,SNR=6.5						
SCRK	**Sand Creek**	**19.45**	**43**	P	**P**	**20 44 43.1**	**+0.3**
SCRK	**Sand Creek**	**19.45**	**43**	P	**P**	**20 44 42.9**	**0.0**
	baz=249,SNR=11						
F24K	**Squaw Lake**	**19.71**	**31**	P	**P**	**20 44 47.4**	**+2.0**
	baz=234						
BARN	**Barnard Glacie**	**19.71**	**52**	P	**P**	**20 44 46.6**	**+0.9**
BARN				IAmb	IAmb	20 44 59.9	
	comp=Z,18nm,1.4s						
D23K	**Nanushuk River**	**19.82**	**26**	P	**P**	**20 44 47.9**	**+1.4**
	baz=227						
E24K	**Your Creek**	**19.86**	**29**	P	**P**	**20 44 48.6**	**+1.6**
	baz=232						
G25K	**Bearman Lake**	**19.88**	**34**	P	**P**	**20 44 49.3**	**+2.1**
	baz=239						
M27K	**Edge Creek, AK**	**19.88**	**48**	P	**P**	**20 44 48.9**	**+1.4**
M27K				IAmb	IAmb	20 44 52.0	
	comp=Z,5.2nm,0.7s						
M27K	**Edge Creek, AK**	**19.88**	**48**	P	**P**	**20 44 49.0**	**+1.5**
	baz=256						
SEY	**Seymchan**	**20.01**	**314**	P	**P**	**20 44 48.6**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=82,slow=18,SNR=4.1						
FYU	**Fort Yukon**	**20.07**	**35**	P	**P**	**20 44 50.3**	**+1.0**
FYU				IAmb	IAmb	20 45 24.4	
	comp=Z,17nm,1.5s						
L27K	**Beaver Creek,**	**20.08**	**46**	P	**P**	**20 44 50.6**	**+1.1**
L27K	**Beaver Creek,**	**20.08**	**46**	P	**P**	**20 44 51.3**	**+1.8**
	baz=254						
BCAR	**Beaver Creek A**	**20.10**	**46**	P	**P**	**20 44 50.4**	**+0.7**
K27K	**Chicken**	**20.26**	**43**	P	**P**	**20 44 52.6**	**+1.3**
K27K				IAmb	IAmb	20 44 54.8	
	comp=Z,12nm,1.4s						
K27K	**Chicken**	**20.26**	**43**	P	**P**	**20 44 53.0**	**+1.7**
	baz=251						

I26K	Coal Creek Min	20.28	39	P	P	20 44 51.0	-0.6
BVCY	Beaver Creek	20.35	48	P	P	20 44 54.3	+1.9
	baz=257						
YUK3	Moose Creek	20.41	50	P	P	20 44 54.6	+1.4
	baz=259						
D24K	Happy Valley	20.44	27	P	P	20 44 54.3	+1.1
	baz=229						
F25K	Christian Rive	20.46	32	P	P	20 44 54.3	+0.8
	baz=238						
BMAR	Burnt Mountain	20.73	33	P	P	20 44 57.3	+1.0
G26K	Porcupine Rive	20.76	35	P	P	20 44 57.4	+0.8
	baz=242						
E25K	Arctic Village	20.77	31	P	P	20 44 57.9	+1.1
	baz=237						
C24K	Franklin Bluff	20.85	25	P	P	20 44 58.6	+1.1
	baz=228						
EGAK	Eagle	20.88	42	P	P	20 44 58.5	+0.7
EGAK				IAmb	IAmb	20 45 00.1	
	comp=Z,7.4nm,0.9s						
EGAK	Eagle	20.88	42	P	P	20 44 58.7	+0.8
	baz=251						
I27K	Kandik River	20.99	39	P	P	20 44 59.1	0.0
	baz=248						
F26K	Sheenjek River	21.01	33	P	P	20 45 00.3	+1.1
	baz=240						
D25K	Kavik River	21.23	28	P	P	20 45 01.9	+0.3
	baz=233						
DAWY	Dawson	21.40	44	P	P	20 45 04.5	+1.1
DAWY	Dawson	21.40	44	P	P	20 45 04.3	+0.9
	baz=255						
M29M	Somme Creek	21.45	49	P	P	20 45 04.6	+0.6
	baz=260						
L29M	L29M	21.73	47	P	P	20 45 07.4	+0.6
	baz=258,SNR=6.5						
E27K	Coleen River	22.09	33	P	P	20 45 10.8	+0.6
	baz=242						
K29M	Barlow Dome	22.15	45	P	P	20 45 11.6	+0.7
	baz=257						
C27K	Jago River	22.17	29	P	P	20 45 11.7	+0.8
	baz=236						
I29M	Ogilvie Camp,	22.21	41	P	P	20 45 10.9	-0.5
I29M				IAmb	IAmb	20 45 11.8	
	comp=Z,5.5nm,0.7s						
I29M	Ogilvie Camp,	22.21	41	P	P	20 45 10.9	-0.5
	baz=253,SNR=6.2						
M30M	Minto, Yukon	22.24	49	P	P	20 45 10.8	-0.9
EPYK	Eagle Plains	23.14	39	P	P	20 45 19.3	-0.4
EPYK				IAmb	IAmb	20 45 21.9	
	comp=Z,12nm,1.4s						
EPYK	Eagle Plains	23.14	39	P	P	20 45 19.2	-0.5
	baz=252						
JIS	Juneau Island	23.25	60	P	P	20 45 21.4	+0.6
JIS				IAmb	IAmb	20 45 27.3	
	comp=Z,6.9nm,0.8s						
F31M	Tsiigehtchic	24.57	38	P	P	20 45 32.9	+0.2
	baz=254						
MMPY	Sheldon Lake,	24.79	49	P	P	20 45 35.2	+0.4
	baz=267						
INK	Inuvik	24.91	36	P	P	20 45 35.0	-0.7
	comp=Z,1.0nm,0.4s,baz=243,slow=7.0,SNR=6.7						
	comp=Z,1.0nm,0.4s						
INK	Inuvik	24.91	36	P	P	20 45 35.5	-0.2
INK	Inuvik	24.91	36	P	P	20 45 35.9	+0.2
	baz=252						
YKA	Yellowknife Ar	32.47	49	P	P	20 46 42.6	-0.1
	comp=Z,0.7nm,0.6s,baz=283,slow=8.3,SNR=7.6						
	comp=Z,0.7nm,0.6s						
LON	Longmire	34.07	78	P	P	20 46 58.3	+1.5
LON				IAmb	IAmb	20 47 22.5	
	comp=Z,10.0nm,1.2s						
LTY	Liberty	34.50	77	P	P	20 47 01.6	+1.1
LTY				IAmb	IAmb	20 47 09.3	
	comp=Z,12nm,1.3s						
HAWA	Hanford	35.61	78	P	P	20 47 09.1	-0.8
EDM	Edmonton	35.97	64	P	P	20 47 13.0	+0.1
EDM				IAmb	IAmb	20 47 13.6	
	comp=Z,5.9nm,1.1s						
YBH	Yreka Blue Hor	36.26	86	P	P	20 47 16.2	+0.7
	comp=Z,3.6nm,0.9s,baz=286,slow=11,SNR=4.2						
	comp=Z,3.6nm,0.9s						
K05A	Summer Lake	36.78	84	P	P	20 47 21.0	+0.9
I07A	Izee	36.86	81	P	P	20 47 21.6	+1.0
I07A				IAmb	IAmb	20 47 44.1	
	comp=Z,11nm,1.4s						
MOD	Modoc Plateau	37.62	84	P	P	20 47 27.6	+0.5
MOD				IAmb	IAmb	20 47 29.9	
	comp=Z,7.3nm,1.4s						
HLID	Hailey	40.20	78	P	P	20 47 49.6	+1.1
HLID	Hailey	40.20	78	P	P	20 47 47.9	-0.5
	baz=305						
NVAR	Mina Array Bea	40.95	87	P	P	20 47 55.8	+1.1
	comp=Z,1.7nm,0.7s,baz=300,slow=7.2,SNR=12						
	comp=Z,1.7nm,0.7s						
HVU	Hansel Valley	42.22	79	P	P	20 48 06.2	+1.3
HVU				IAmb	IAmb	20 48 06.7	
	comp=Z,5.3nm,0.6s						
ISA	Isabella, Lake	42.64	90	P	P	20 48 08.8	+0.6
	baz=312						
R11B	Troy Canyon, C	42.65	85	P	P	20 48 08.6	+0.1
	baz=310,SNR=5.2						
SBC	Santa Barbara	42.71	93	P	P	20 48 09.3	+0.6
	baz=313						
FURC	Furnace Creek,	43.09	88	P	P	20 48 12.3	+0.6
	baz=311						
TPNV	Topopah Spring	43.15	87	P	P	20 48 14.1	+1.7
TPNV	Topopah Spring	43.15	87	P	P	20 48 13.3	+0.8
	baz=311						
DUG	Dugway, Tooele	43.16	81	P	P	20 48 13.6	+1.1
DUG	Dugway, Tooele	43.16	81	P	P	20 48 12.4	-0.1
	baz=308,SNR=5.4						
EDW2	Edwards Air Fo	43.45	91	P	P	20 48 16.1	+1.3
	baz=312						
BW06	Boulder Array	43.54	76	P	P	20 48 14.9	-0.7
	baz=307						
TMUT	Trail Mountain	44.69	81	P	P	20 48 26.3	+1.4
TMUT				IAmb	IAmb	20 48 26.9	
	comp=Z,6.6nm,0.7s						
RDMU	Red Mountain	44.87	79	P	P	20 48 27.4	+1.2
GMRC	Granite Mounta	44.94	89	P	P	20 48 27.3	+0.7
	baz=312						
SRU	San Rafael Swe	45.22	81	P	P	20 48 30.1	+1.3
TPFO	Pinon Flats	45.26	91	P	P	20 48 29.5	+0.4
	baz=313						
BELC	Belle Mtn. Jos	45.26	90	P	P	20 48 29.2	0.0
	baz=313						
IRM	Iron Mountain	45.67	89	P	P	20 48 33.0	+0.7
	baz=313						
O20A	White River Ci	45.94	78	P	P	20 48 34.7	+0.2
	baz=309						
ESJX	Sierra Juarez	46.67	92	P	P	20 48 40.7	+0.5
PV13	Radium Mtn., P	46.85	81	P	P	20 48 42.5	+0.8
WUAZ	Wupatki	47.05	85	P	P	20 48 44.0	+0.9
	baz=312						
SONM	Songino Array	48.24	298	P	P	20 48 50.7	-1.4
	comp=Z,0.3nm,0.8s,baz=54,slow=7.6,SNR=4.0						
	comp=Z,0.3nm,0.8s						
S22A	4UR Ranch, Cre	48.31	80	P	P	20 48 53.4	+0.4
	baz=311						
SDCO	Great Sand Dun	49.11	79	P	P	20 48 59.3	+0.3
	baz=311						
T25A	Trinidad	50.16	79	P	P	20 49 07.0	+0.2
	baz=312						
BTO	Baotou	50.74	288	*e*P	P	20 49 12.5	+1.5
BNM	Barren Site	50.84	83	P	P	20 49 13.3	+1.3
MNTX	Cornudas Mount	53.30	84	P	P	20 49 30.4	+0.5
	baz=315						
TX31	Lajitas Ar. Si	56.02	85	P	P	20 49 50.1	+0.7
TXAR	Lajitas Array	56.02	85	P	P	20 49 49.9	+0.4
	comp=Z,1.1nm,0.5s,baz=306,slow=5.2,SNR=9.4						
TXAR				PcP	PcP	20 50 44.7	-0.6
	comp=Z,0.4nm,0.6s,baz=309,slow=1.0,SNR=3.9						
	comp=Z,1.1nm,0.5s						
TXAR	Lajitas Array	56.02	85	P	P	20 49 49.7	+0.3
L44A	Lake County Fo	56.23	63	P	P	20 49 49.5	-1.1
	baz=313						
R40A	Maddies Statio	56.47	69	P	P	20 49 50.1	-2.3
R40A				IAmb	IAmb	20 49 51.4	
	comp=Z,8.3nm,1.2s						
MKAR	Makanchi Array	61.10	310	P	P	20 50 21.9	-2.3
	comp=Z,0.1nm,0.3s,baz=48,slow=8.2,SNR=1.8						
	comp=Z,0.1nm,0.3s						
NOA	NORSAR Array B	66.47	357	P	P	20 50 57.9	-1.1
	comp=Z,0.2nm,0.5s,baz=334,slow=4.7,SNR=2.8						
	comp=Z,0.2nm,0.5s						
WRA	Warramunga Arr	84.75	227	P	P	20 52 41.3	-1.7
	comp=Z,0.6nm,0.8s,baz=38,slow=6.7,SNR=2.3						
	comp=Z,0.6nm,0.8s						
ASAR	Alice Springs	88.20	226	P	P	20 52 58.6	-1.2
	comp=Z,0.7nm,0.7s,baz=23,slow=4.1,SNR=6.2						
	comp=Z,0.7nm,0.7s						

IDC 29 20:52:51.8±3.9**, 50°.48N**×**178°.23W, h0^{km}, mb3.4**/3**,**
mbtmp3.6/4**, ML3.6**/1**, Error ellipse: s-maj=114.6km**
s-min=33.8km az=177.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	16.64	54	Pn	Pn	20 56 43.4	-2.7
	0.2nm,0.3s,baz=341,slow=1.4,SNR=9.7						
	11nm,1.0s						
YKA	Yellowknife Ar	35.60	46	P	P	20 59 52.3	+1.7
	0.4nm,0.8s,baz=277,slow=7.5,SNR=5.9						
	0.4nm,0.8s						
PDAR	Pinedale Array	46.24	72	P	P	21 01 18.2	-0.6
	0.4nm,0.7s,baz=316,slow=4.1,SNR=4.8						
	0.4nm,0.7s						
MKAR	Makanchi Array	60.88	309	P	P	21 03 05.3	-0.6
	0.4nm,0.9s,baz=55,slow=7.8,SNR=2.6						
	0.4nm,0.9s						

IDC ***29*** *21:01:25.9±0.9, 47°.46S×100°.19E, h0^{km}, mb4.2/7, mbtmp4.2/7, MS4.1/33, Error ellipse: s-maj=34.7km s-min=19.7km az=112.0*

NEIC ***29*** *21:01:27.2±0.4, 47°.49S±0°.08×100°.3E±0°.3, h10^{km}±1^{km}, mb4.6/9, Error ellipse: s-maj=39.5km s-min=12.4km az=100.0*

GCMT ***29*** *21:01:31.2±0.3, 47°.37S±0°.01×99°.98E±0°.02, h13^{km}±1^{km}, MW4.8/84, Moment Tensor Solution. s16,c20; s84,c124; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.23±.09; M$_{\theta\theta}$2.12±.10; M$_{\phi\phi}$-1.90±.09; M$_{r\theta}$-0.75±.25; M$_{\theta\phi}$0.86±.07; M$_{\phi r}$-0.25±.20; Best double couple: M$_0$2.30100×10^{16} NP1:φ$_s$212.00000°,δ81.00000°,λ166.00000°. NP2: φ$_s$305.00000°,δ77.00000°,λ9.00000°. Principal axes: T 2.5200, Plg16.0000°, Azm168.0000°; N -0.4420, Plg74.0000°, Azm360.0000°; P -2.0830, Plg3.0000°, Azm259.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 21:01:27.3±0.7**, 47°.5S**±0°.1×**100°.2E**±0°.2**, h11^{km}, n58,**
σ**0^{s}.57**/22**, mb4.3**/10**, MS4.2**/33**, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	16.31	45	T	T	21 21 56.6	
	baz=215,slow=73,SNR=53						
H01W3	Cape Leeuwin H	16.33	45	T	T	21 21 56.3	
	baz=215,slow=73,SNR=71						
H01W1	Cape Leeuwin H	16.33	45	T	T	21 21 56.2	
	baz=215,slow=73,SNR=60						
NWAO	Narrogin (SRO)	19.42	48	LR	LR	21 11 39.8	
	comp=Z,384nm,19.8s,baz=242,slow=32						
MAW	Mawson	27.73	210	LR	LR	21 15 23.3	
	comp=Z,369nm,19.2s,baz=64,slow=30						
STKA	Stephens Creek	34.98	79	P	P	21 08 19.6	+0.1
	4.8nm,0.9s,baz=261,slow=12,SNR=4.0						
STKA				LR	LR	21 21 15.2	
	comp=Z,210nm,19.4s,baz=201,slow=34						
	4.8nm,0.9s						
ASAR	Alice Springs	35.81	60	P	P	21 08 26.7	-0.1
	3.2nm,1.0s,baz=218,slow=7.8,SNR=12						
ASAR				PcP	PcP	21 10 54.8	+0.5
	0.6nm,1.0s,baz=194,slow=2.4,SNR=2.0						
	3.2nm,1.0s						
ASAR	Alice Springs	35.81	60	P	P	21 08 25.4	-1.3
VNDA	Vanda	38.08	162	P	P	21 08 46.0	+0.6
	1.9nm,0.9s,baz=235,slow=8.5,SNR=4.0						
	1.9nm,0.9s						
VNDA	Vanda	38.08	162	P	P	21 08 44.8	-0.6
WRA	Warramunga Arr	38.96	57	P	P	21 08 53.4	0.0
	3.3nm,1.0s,baz=219,slow=7.7,SNR=9.5						
	3.3nm,1.0s						
WB0	Warramunga Arr	39.13	57	P	P	21 08 54.2	-0.7
WB0				IAmb	IAmb	21 09 02.4	
	comp=Z,13nm,1.2s						
QSPA	South Pole Qui	42.67	180	P	P	21 09 23.6	-0.1
	comp=Z,5.5nm,1.0s,baz=296,slow=8.1,SNR=6.8						
QSPA				LR	LR	21 26 18.4	
	comp=Z,594nm,18.0s,baz=301,slow=35						
	comp=Z,5.5nm,1.0s						
QSPA	South Pole Qui	42.67	180	P	P	21 09 23.6	-0.1
KAPI	Kappang	45.51	28	LR	LR	21 26 48.6	
	comp=Z,141nm,19.6s,baz=192,slow=34						
CTA	Charters Tower	46.08	70	LR	LR	21 27 25.8	
	comp=Z,276nm,20.1s,baz=243,slow=34						
H08S2	Diego Garcia H	46.19	320	T	T	21 58 56.4	
	baz=154,slow=76,SNR=20						
H08S1	Diego Carcia H	46.19	320	T	T	21 58 56.1	
	baz=154,slow=76,SNR=17						
H08S3	Diego Garcia H	46.20	320	T	T	21 58 57.0	
	baz=154,slow=76,SNR=22						
RPZ	Rata Peaks	48.12	113	LR	LR	21 25 51.2	
	comp=Z,209nm,19.1s,baz=244,slow=30						
SNAA	Sanae	49.58	204	P	P	21 10 17.6	-0.3
	comp=Z,6.6nm,1.1s,baz=131,slow=9.6,SNR=4.2						
SNAA				LR	LR	21 29 25.6	
	comp=Z,437nm,19.1s,baz=120,slow=34						
	comp=Z,6.6nm,1.1s						
SNAA	Sanae	49.58	204	P	P	21 10 18.0	+0.1
SNAA				IAmb	IAmb	21 10 29.4	
	comp=Z,9.5nm,1.1s						
PMG	Port Moresby	54.80	62	LR	LR	21 33 10.3	
	comp=Z,187nm,18.2s,baz=258,slow=35						
PALK	Pallekele	57.18	337	LR	LR	21 31 08.5	
	comp=Z,181nm,18.2s,baz=268,slow=31						
DZM	Mont Dzumac	58.11	89	LR	LR	21 31 34.9	
	comp=Z,130nm,19.8s,baz=222,slow=31						
DAV	Davao City (W)	58.75	30	LR	LR	21 38 16.7	
	comp=Z,52nm,18.5s,baz=230,slow=38						
BOSA	Boshof	59.69	260	LR	LR	21 31 52.7	
	comp=Z,183nm,20.1s,baz=166,slow=31						
SUR	Sutherland	60.20	253	LR	LR	21 31 24.5	
	comp=Z,229nm,21.3s,baz=152,slow=30						
LBTB	Lobatse	61.83	263	LR	LR	21 34 29.8	
	comp=Z,128nm,18.2s,baz=148,slow=32						
HNR	Honiara	62.79	73	LR	LR	21 36 19.0	
	comp=Z,3µm,21.4s,baz=224,slow=33						
CM31	Chiang Mai Arr	65.63	359	P	P	21 12 11.7	+0.4
CM31				IAmb	IAmb	21 12 18.8	
	comp=Z,4.7nm,0.9s						
CMAR	Chiang Mai Arr	65.63	359	P	P	21 12 11.7	+0.4
	comp=Z,2.2nm,0.9s,baz=199,slow=5.6,SNR=12						
CMAR				LR	LR	21 37 50.0	
	comp=Z,227nm,19.4s,baz=190,slow=33						
	comp=Z,2.2nm,0.9s						
CMAR	Chiang Mai Arr	65.63	359	P	P	21 12 12.0	+0.7
LSZ	Lusaka	66.78	273	LR	LR	21 35 56.0	
	comp=Z,147nm,19.7s,baz=148,slow=31						
CRAI	Chiangrai	67.38	0	P	P	21 12 22.3	-0.1
CRAI				IAmb	IAmb	21 12 29.7	
	comp=Z,4.5nm,1.0s						
PMSA	Palmer Station	67.43	187	LR	LR	21 41 58.5	
	comp=Z,386nm,19.3s,baz=154,slow=36						
BRDH	Bariadhala	70.24	352	LR	LR	21 39 34.4	
	comp=Z,261nm,19.5s,baz=181,slow=33						
TSUM	Tsumeb	71.20	262	LR	LR	21 38 55.2	
	comp=Z,207nm,20.1s,baz=156,slow=32						
MBAR	Mbarara	75.80	285	LR	LR	21 42 43.7	
	comp=Z,75nm,18.0s,baz=126,slow=33						
AFI	Afiamalu	78.55	98	LR	LR	21 41 06.4	
	comp=Z,119nm,19.2s,baz=74,slow=30						
WSAR	Wadi Sarin	79.72	322	LR	LR	21 42 38.0	
	comp=Z,156nm,18.8s,baz=161,slow=31						
NIL	Nilore	84.31	338	P	P	21 13 59.1	+0.2
JNU	Nakatsue	84.82	25	LR	LR	21 48 35.7	
	comp=Z,52nm,20.3s,baz=160,slow=33						
KBL	Kabul	86.30	335	P	P	21 14 08.3	-0.8
KSRS	Korea Array	88.09	22	LR	LR	21 55 58.3	
	comp=Z,21nm,18.0s,baz=130,slow=37						
PPT	Papeete	90.17	116	LR	LR	21 51 08.6	
	comp=Z,99nm,18.4s,baz=260,slow=33						
PLCA	Paso Flores	91.80	187	LR	LR	21 54 26.1	
	comp=Z,199nm,19.8s,baz=162,slow=35						
AAK	Ala-Archa	92.57	341	LR	LR	21 55 18.6	
	comp=Z,62nm,18.1s,baz=174,slow=35						
GEYT	Alibeck	92.96	328	LR	LR	21 50 24.6	
	comp=Z,77nm,21.9s,baz=164,slow=32						
SONM	Songino Array	95.07	4	LR	LR	21 59 12.8	
	comp=Z,107nm,18.7s,baz=185,slow=36						
MKAR	Makanchi Array	95.18	348	LR	LR	21 57 06.6	
	comp=Z,87nm,18.2s,baz=189,slow=35						
EIL	Elat	96.60	307	LR	LR	21 52 06.7	
	comp=Z,113nm,19.3s,baz=111,slow=32						
MMAI	Mount Meron Ar	98.97	310	LR	LR	21 53 36.7	
	comp=Z,88nm,19.9s,baz=210,slow=32						
YBH	Yreka Blue Hor	149.19	85	PKPbc	PKiKP	21 21 16.6	0.0
	comp=Z,0.6nm,0.2s,baz=194,slow=4.2,SNR=1.9						
NVAR	Mina Array Bea	150.64	94	PKPbc	PKPbc	21 21 19.5	+0.3
	comp=Z,0.6nm,0.8s,baz=224,slow=2.5,SNR=2.9						
RES	Resolute Bay	151.92	8	PKPbc	PKPbc	21 21 20.4	-0.4
	comp=Z,1.5nm,0.7s,baz=4.5,slow=4.6,SNR=6.5						
YKA	Yellowknife Ar	155.40	40	PKPbc	PKPdf	21 21 28.4	+8.9
	comp=Z,0.1nm,0.4s,baz=296,slow=2.5,SNR=2.2						
PDAR	Pinedale Array	158.53	92	PKPab	PKPab	21 22 00.7	+1.0
	comp=Z,0.1nm,0.4s,baz=247,slow=0.7,SNR=1.6						

MEX ***29*** *21:13:56.5±0.5, 13°.88N×92°.70W, h16^{km}±95^{km}, MD4.1*
GCG ***29*** *21:14:08.1±0.4, 14°.48N×91°.95W, h58^{km}±5^{km}, MD3.6*
ISC 29 21:13:56.1±2.4**, 14°.1N**±0°.1×**92°.74W**±0°.07**, h15^{km}**±17^{km}**,**
n12, σ**1^{s}.34**/17**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PATR	El Naranjo	1.14	25	*e*P	Pn	21 14 16.2	-1.5
PATR				*e*S	Sb	21 14 32.3	-0.1
SULM	Suchitepequez,	1.16	79	*e*P	Pg	21 14 18.9	+0.3
CHUJ	Union Juarez	1.18	31	*i* P	Pn	21 14 17.1	-1.2
CHUJ				*e*S	Sb	21 14 32.7	-0.8
PAVE	Pavencul	1.23	26	*e*P	Pn	21 14 17.8	-1.2
PAVE				*e*S	Sn	21 14 34.8	-0.7
STG3	Santiaguito 3,	1.30	61	*e*P	Pn	21 14 19.9	0.0
STG3				*e*S	Sn	21 14 29.1	-7.9
PCIG		1.68	344	*e*P	Pn	21 14 24.8	-0.1
PCIG				*e*S	Sn	21 14 45.6	-0.5
FUG	Fuego 3	1.88	79	*e*P	Pn	21 14 27.8	-0.1
PCG	Pacaya	2.09	81	*e*P	Pn	21 14 30.9	0.0
CCIG	Comitan	2.26	15	*e*P	Pn	21 14 33.0	-0.2
CCIG				*e*S	Sn	21 15 01.5	+0.6
TGIG		2.71	352	*i* P	Pn	21 14 41.1	+2.0
TGIG				*e*S	Sn	21 15 14.7	+3.0
NEUV	Arroyo Zacate	4.66	321	*e*P	Pn	21 15 04.1	-1.8
NEUV				*i* S	Sn	21 15 54.1	-5.7
OXLC	Oaxaca	4.83	308	*e*S	Sn	21 15 33.2	-31

KRSC 29 21:21:47.7±1.2**, 56°.98N**×**163°.20E, h20^{km}**±11^{km}**, Ml3.5,**
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBG	Krutoberegovo	0.77	201	*e*P	Pb	21 22 02.6	+0.2
KBG				*e*S	Sb	21 22 13.2	+0.8
KBTR	Krutoberegovo	0.80	195	*e*P	Pn	21 22 03.5	-0.4
KBTR				*e*S	Sn	21 22 14.3	-0.8
SMKR	Semkarok	1.03	248	*e*P	Pb	21 22 06.7	-0.1
SMKR				*e*S	Sb	21 22 20.4	+0.4
SRKR	Sorokina	1.16	255	*e*P	Pn	21 22 08.4	-0.4
SRKR				*e*S	Sb	21 22 23.0	-0.7
KLY	Klyuchi	1.56	246	*e*P	Pn	21 22 13.3	-0.8
KLY				*e*S	Sn	21 22 31.6	-2.1
BZGR	Bezymyannyi-Gr	1.73	234	*e*P	Pb	21 22 18.1	-0.8
BZGR				*e*S	Sb	21 22 41.2	+1.0
BZWR	Bezymyannyi-We	1.81	237	*e*P	Pb	21 22 19.2	-1.0
BZWR				*e*S	Sb	21 22 42.8	+0.3
BZP	Bezymyannyi-Pe	1.82	235	*e*P	Pb	21 22 19.3	-1.1
BZP				*e*S	Sb	21 22 41.7	-1.1
BZMR	Bezymyannaya	1.83	236	*e*P	Pb	21 22 20.2	-0.4
BZMR				*e*S	Sb	21 22 42.6	-0.4
KIRR	Kirishev	1.89	238	*e*P	Pn	21 22 20.2	+1.2
KIRR				*e*S	Sb	21 22 43.5	-1.2
KPT	Kopyto	1.94	240	*e*P	Pb	21 22 21.0	-1.3
SRDR	Sredinnyy	2.03	252	*e*P	Pn	21 22 22.2	+1.4
KMNR	Kamenistaya	2.05	235	*e*P	Pn	21 22 22.5	+1.4
BKI	Bering	2.36	138	*e*S	Sb	21 22 56.7	-1.5
TUMD	Tumrok D	2.37	223	*e*P	Pb	21 22 28.2	-1.5
TUMR	Tumrok	2.41	226	*e*P	Pb	21 22 28.9	-1.5
TIGL	Tigil	2.57	290	*e*P	Pb	21 22 31.8	-1.3
ESO	Esso	2.71	249	*e*P	Pb	21 22 33.0	-2.5
GNL	Ganaly	4.45	225	*e*P	Pn	21 22 57.1	+3.0
KRX	Arik	4.47	218	*e*P	Pn	21 22 58.7	+4.4
SMAR	Somma	4.50	216	*e*P	Pn	21 22 57.9	+3.1
AVH	Avacha	4.52	216	*e*P	Pn	21 22 59.0	+4.0
KOK	Koryaka	4.53	217	*e*P	Pn	21 22 59.5	+4.4
UGLR	Uglovaya	4.54	215	*e*P	Pn	21 22 58.9	+3.7
MTVR	Mutnovka	5.36	215	*e*P	Pn	21 23 11.3	+4.7

IDC ***29*** *21:31:41.6±4.7, 4°.27S×102°.08E, h0^{km}, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=207.0km s-min=30.7km az=56.0*

DJA ***29*** *21:31:45.5±0.8, 5°S±3°×10°2E±°, h30^{km}±7^{km}, M3.7/9, MLv3.7/9*

ISC 29 21:31:45.0±1.2**, 4°.68S**±0°.08×**102°.14E**±0°.07**, h37^{km}, n16,**
σ**0^{s}.78**/15**, mb3.4**/3**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	Manna	0.87	68	P	Pn	21 32 01.1	+0.3
MNAI				S	Sn	21 32 12.7	+0.3
KSI	Kapahiang	1.12	24	P	Pn	21 32 04.3	+0.1
MASI	Maura Aman, Be	1.54	4	P	Pn	21 32 10.3	+0.4
MASI				S	Sn	21 32 29.6	+0.9
LHSI	Lahat	1.62	58	P	Pn	21 32 12.0	+1.0
LWLI	Liwa	1.94	100	P	Pn	21 32 16.3	+0.8
LWLI				S	Sn	21 32 39.1	+0.4
KASI	Kota Agung	2.49	110	P	Pn	21 32 23.9	+0.9
PPSI	Pulau Pagai	2.86	312	P	Pn	21 32 29.0	+0.9
CGJI	Cibinong	4.02	119	P	Pn	21 32 44.6	+0.5
PDSI	Padang	4.11	336	P	Pn	21 32 46.3	+1.0
H08S2	Diego Garcia H	29.62	263	T	T	22 08 27.2	
	baz=88						
H08S3	Diego Garcia H	29.63	263	T	T	22 08 29.6	
	baz=88						
H08S1	Diego Carcia H	29.64	263	T	T	22 08 28.5	
	baz=88						
ASAR	Alice Springs	35.97	125	P	P	21 38 47.2	+4.7
	0.2nm,0.4s,baz=303,slow=7.9,SNR=5.0						
	0.2nm,0.4s						
SONM	Songino Array	52.43	4	P	P	21 40 53.5	-0.5
	0.3nm,0.7s,baz=195,slow=8.1,SNR=3.6						
	0.3nm,0.7s						
MKAR	Makanchi Array	54.19	343	P	P	21 41 05.9	-0.9
	0.3nm,0.4s,baz=150,slow=9.0,SNR=5.8						
	0.3nm,0.4s						
TXAR	Lajitas Array	145.39	42	PKPbc	PKPbc	21 51 19.2	-0.6
	0.3nm,0.6s,baz=286,slow=3.7,SNR=3.6						

IDC ***29*** *21:40:43.4±2.6, 23°.94N×143°.01E, h75^{km}±31^{km}, mb3.4/8, mbtmp3.7/11, Error ellipse: s-maj=100.8km s-min=16.6km az=75.0*

ISC 29 21:40:41.9±1.4**, 23°.77N**±0°.09×**142°.7E**±0°.4**, h50^{km}, n11,**
σ**1^{s}.12**/12**, mb3.7**/8**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	3.34	353	P	Pn	21 41 33.2	+1.7
	48nm,0.5s,baz=318,slow=22,SNR=7.5						
JCJ				S	Sn	21 42 09.6	-0.4
	84nm,0.5s,baz=115,slow=23,SNR=8.7						
MJAR	Matsushiro Arr	13.29	344	P	Pn	21 43 46.8	-1.2
	1.0nm,0.5s,baz=155,slow=11,SNR=5.2						
KSRS	Korea Array	18.59	321	P	P	21 44 56.0	+1.1
	0.9nm,0.5s,baz=139,slow=12,SNR=4.8						
SONM	Songino Array	37.45	319	P	P	21 47 51.5	+1.0
	0.2nm,0.5s,baz=121,slow=5.6,SNR=1.6						
	0.2nm,0.5s						
WRA	Warramunga Arr	44.20	191	P	P	21 48 47.2	+1.0
	1.7nm,0.6s,baz=12,slow=8.1,SNR=11						
	1.7nm,0.6s						
ASAR	Alice Springs	47.92	191	P	P	21 49 15.7	+0.3
	0.3nm,0.5s,baz=17,slow=9.1,SNR=5.1						
	0.3nm,0.5s						
MKAR	Makanchi Array	52.96	312	P	P	21 49 52.8	-0.6
	0.2nm,0.6s,baz=89,slow=9.5,SNR=2.8						
	0.2nm,0.6s						
STKA	Stephens Creek	55.35	181	P	P	21 50 10.2	-0.5
	1.6nm,0.7s,baz=0.0,slow=1.0,SNR=3.3						
	1.6nm,0.7s						
KURBB	Kurchatov Arra	55.70	316	P	P	21 50 11.5	-1.6
	0.3nm,0.6s,baz=92,slow=7.8,SNR=4.9						
	0.3nm,0.6s						
BVAR	Borovoye Array	60.80	319	P	P	21 50 48.4	-0.3
	0.3nm,0.3s,baz=89,slow=8.8,SNR=2.3						
	0.3nm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FINES	**FINESS Array B**	**81.11**	**334**	P	**P**	**21 52 50.9**	**-0.7**
	2.1nm,0.9s,baz=76,slow=8.0,SNR=2.5						
	2.1nm,0.9s						

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*IDC **29** 22:02:00.7±1.1, 25°.66N×109°.80W, h0km, mb3.6/2, mbtmp3.5/7, ML3.5/4, MS3.2/3, Error ellipse: s-maj=25.7km s-min=10.7km az=107.0*

*ECX **29** 22:02:02.2±0.4, 25°.81N×110°.17W, h20km±13km, MD3.7, ML3.9*

*MEX **29** 22:02:02.9±0.4, 25°.77N×110°.24W, h12km±8km, MD4.2*

ISC 29 22:02:00.4±1.3**, 25°.76N**±0°.04×**110°.17W**±0°.03**, h4**km±10km**, n38, σ1ˢ91**/42**, 5C-2D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSIG	**Topolobambo**	**1.03**	**98**	⇑eP	**Pg**	**22 02 20.0**	**-0.3**
TSIG				eS	**Sg**	**22 02 33.6**	**0.0**
TSIG				IAML		22 02 35.4	
	comp=E,3µm,0.3s						
TSIG				⇑e		22 02 35.4	
TSIG				IAML		22 02 35.6	
	comp=N,3µm,0.3s						
TSIG				⇑e		22 02 35.6	
TSIG	**Topolobambo**	**1.03**	**98**	eP	**Pg**	**22 02 19.9**	**-0.3**
TSIG				eS	**Sg**	**22 02 33.6**	**0.0**
NE77	**Loreto B.C.S**	**1.10**	**284**	⇑eP	**Pg**	**22 02 21.2**	**-0.3**
NE77				eS	**Sg**	**22 02 35.5**	**-0.4**
NE80	**Navojoa**	**1.43**	**36**	⇓eP	**Pn**	**22 02 25.4**	**-1.9**
SNIRB	**San Nicol¡s**	**1.46**	**303**	eP	**Pn**	**22 02 26.2**	**-1.4**
SNIRB				eS	**Sn**	**22 02 45.2**	**-2.2**
SNIRB				IAML		22 02 55.1	
	comp=N,2µm,0.6s						
LPIG	**La Paz**	**1.65**	**184**	Pg	**Pn**	**22 02 30.9**	**+0.6**
	comp=N,9.5nm,0.3s,baz=191,slow=4.5,SNR=20						
LPIG				Lg	Lg	22 02 51.0	
	comp=N,33nm,0.3s,baz=355,slow=16,SNR=9.1						
LPIG	**La Paz**	**1.65**	**184**	eP	**Pn**	**22 02 30.1**	**-0.2**
LPIG	**La Paz**	**1.65**	**184**	eP	**Pn**	**22 02 28.6**	**-1.7**
LPIG				eS	**Sn**	**22 02 48.1**	**-3.9**
CSIG	**Choix**	**1.94**	**56**	eP	**Pn**	**22 02 35.0**	**+0.8**
CSIG				eS	**Sn**	**22 02 56.5**	**-2.5**
SLBS	**Sierra La Lagu**	**2.07**	**174**	eP	**Pn**	**22 02 36.4**	**+0.3**
SLBS	**Sierra La Lagu**	**2.07**	**174**	eP	**Pn**	**22 02 37.4**	**+1.2**
SLBS				eS	**Sn**	**22 02 58.7**	**-3.8**
GUYB	**Guaymas**	**2.22**	**344**	eP	**Pn**	**22 02 36.1**	**-2.0**
GUYB	**Guaymas**	**2.22**	**344**	eP	**Pn**	**22 02 36.0**	**-2.0**
SRIG	**Santa Rosalia**	**2.42**	**310**	eP	**Pn**	**22 02 40.4**	**-0.5**
SRIG	**Santa Rosalia**	**2.42**	**310**	eP	**Pn**	**22 02 39.6**	**-1.3**
NE79	**San Jose del V**	**2.65**	**172**	eP	**Pn**	**22 02 44.9**	**+0.8**
SSIG	**Sanalona**	**2.90**	**108**	e	**Pb**	**22 02 51.8**	**-0.9**
SSIG				e		22 03 32.9	
NOVRB	**El Novillo Son**	**3.21**	**8**	eP	**Pn**	**22 02 50.8**	**-0.9**
NOVRB				⇑e		22 03 54.9	
NOVRB				IAML		22 03 54.9	
	comp=E,356nm,1.1s						
NOVRB				⇓e		22 03 58.6	
NOVRB				IAML		22 03 58.6	
	comp=N,297nm,0.7s						
HSIG		**3.32**	**348**	eP	**Pn**	**22 02 52.8**	**-0.5**
HSIG		**3.32**	**348**	i	**Pb**	**22 03 00.0**	**0.0**
HSIG				i		22 03 50.6	
HPIG		**4.21**	**73**	e	**Pb**	**22 03 11.3**	**-4.0**
HPIG				e		22 04 10.9	
MAIG	**Mazatlaan**	**4.27**	**126**	i	**Pb**	**22 03 20.3**	**+4.2**
MAIG				i		22 04 12.3	
PDIG	**Papasquiaro**	**4.38**	**98**	e	**Pg**	**22 03 23.1**	**-1.3**
PDIG				e		22 04 17.2	
NZIG	**Nacozari, Sono**	**4.63**	**7**	eP	**Pn**	**22 03 10.2**	**-1.2**
NZIG	**Nacozari, Sono**	**4.63**	**7**	i	**Pb**	**22 03 25.8**	**+3.4**
NZIG				e		22 04 23.0	
CGIG		**4.98**	**22**	eP	**Pn**	**22 03 16.9**	**+0.6**
CGIG				e		22 04 32.6	
TUC	**Tucson**	**6.55**	**355**	i P	**Pn**	**22 03 39.2**	**+1.5**
TUC				i S	**Sn**	**22 04 51.5**	**-1.5**
TXAR	**Lajitas Array**	**6.78**	**57**	Pn	**Pn**	**22 03 39.4**	**-1.5**
	comp=N,0.2nm,0.3s,baz=226,slow=14,SNR=7.8						
TXAR				Lg	Lg	22 05 25.9	
	comp=N,0.8nm,0.3s,baz=246,slow=31,SNR=2.3						
TXAR				LR	LR	22 06 31.6	
	comp=N,110nm,21.6s,baz=237,slow=41						
	comp=N,0.4nm,0.4s						
MCIG	**Muzquiz**	**8.04**	**73**	e		22 06 10.5	
ANMO	**Albuquerque**	**9.70**	**18**	Pn	**Pn**	**22 04 23.3**	**+2.2**
	comp=N,0.1nm,0.3s,baz=144,slow=8.7,SNR=1.8						
ANMO				Lg	Lg	22 06 59.5	
	comp=N,0.1nm,0.3s,baz=274,slow=18,SNR=1.6						
	comp=N,1.0nm,0.6s						
NVAR	**Mina Array Bea**	**14.38**	**333**	Pn	**P**	**22 05 30.8**	**-1.5**
	comp=N,0.2nm,0.2s,baz=159,slow=13,SNR=1.4						
ELK	**Elko**	**15.53**	**345**	Pn	**P**	**22 05 45.4**	**+0.3**
	comp=N,0.1nm,0.3s,baz=182,slow=12,SNR=9.3						
ELK				LR	LR	22 12 05.0	
	comp=N,131nm,18.4s,baz=186,slow=38						
	comp=N,4.7nm,0.9s						
PDAR	**Pinedale Array**	**16.98**	**2**	P	**P**	**22 06 02.2**	**+1.1**
	comp=N,0.1nm,0.3s,baz=170,slow=11,SNR=9.3						
PDAR				LR	LR	22 13 10.3	
	comp=N,99nm,21.9s,baz=212,slow=39						
	comp=N,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**36.85**	**357**	P	**P**	**22 09 11.2**	**+1.6**
	comp=N,0.9nm,1.0s,baz=175,slow=8.2,SNR=12						
	comp=N,0.9nm,1.0s						
ILAR	**Eielson Array**	**45.55**	**339**	P	**P**	**22 10 24.0**	**+2.9**
	comp=N,0.9nm,0.9s,baz=139,slow=7.9,SNR=9.4						
	comp=N,0.9nm,0.9s						
H03N2	**Juan Fernandez**	**65.94**	**152**	T	T	23 24 32.7	
	baz=331,slow=77,SNR=2.9						
H03N1	**Juan Fernandez**	**65.95**	**152**	T	T	23 24 35.4	
	baz=331,slow=77,SNR=5.6						
H03N3	**Juan Fernandez**	**65.96**	**152**	T	T	23 24 34.4	
	baz=331,slow=77,SNR=5.4						

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*SKHL **29** 22:09:38.6±0.5, 44°.50N×147°.30E, h120km±4km, mb4.4/3, msha5.2/3*

*JMA **29** 22:09:39.8±0.5, 44°N±2°×14°7E±°, h131km, MV3.1/31, NEAR ETOROFU ISLAND*

ISC 29 22:09:38.0±2.9**, 44°.43N**±0°.09×**147°.5E**±0°.1**, h138**km±17km**, n20, σ0ˢ74**/30**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.72**	**219**	i P	**Pn**	**22 10 00.1**	**+0.7**
SHO				AMB	AMB	22 10 00.5	
	110nm,0.4s						
SHO				i S	**Sn**	**22 10 15.8**	**+0.2**
SHO				A	A	22 10 16.4	
	720nm,0.3s						
SHO				A	A	22 10 16.4	
	930nm,0.3s						
KUR	**Kuril'sk**	**0.85**	**20**	i P	**Pn**	**22 10 00.5**	**+0.1**
KUR				AMB	AMB	22 10 00.9	
	260nm,0.4s						
KUR				i S	**Sn**	**22 10 16.8**	**-0.6**
KUR				A	A	22 10 17.1	
	90nm,0.2s						
KUR				A	A	22 10 17.1	
	170nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.22**	**252**	i P	**Pn**	**22 10 04.1**	**+0.4**
YUK				AMB	AMB	22 10 04.3	
	190nm,0.4s						
YUK				i S	**Sn**	**22 10 23.1**	**-0.2**
YUK				A	A	22 10 27.8	
	180nm,0.2s						
YUK				A	A	22 10 27.8	
	130nm,0.2s						
NEM2	**Nemuro 2**	**1.64**	**230**	eP	**Pn**	**22 10 08.6**	**+0.4**
NEM2				eS	**Sn**	**22 10 30.1**	**-1.1**
NMR	**Nemuro--Hokkai**	**1.64**	**230**	i P	**Pn**	**22 10 08.7**	**+0.4**
NMR				i S	**Sn**	**22 10 30.4**	**-1.0**
JRA	**Rausu**	**1.76**	**254**	eP	**Pn**	**22 10 09.8**	**+0.2**
JNSB	**Nemuroshibetsu**	**1.89**	**251**	eP	**Pn**	**22 10 11.9**	**+0.8**
JKHN	**Kushirohamanak**	**2.15**	**232**	eP	**Pn**	**22 10 14.8**	**+0.6**
JKHN				eS	**Sn**	**22 10 41.4**	**-0.5**
JNK	**Nakash**	**2.15**	**248**	eP	**Pn**	**22 10 14.8**	**+0.5**
AKK	**Akkeshi**	**2.37**	**234**	eP	**Pn**	**22 10 17.4**	**+0.5**
AKK				eS	**Sn**	**22 10 46.4**	**-0.4**
JAK	**Akkeshi**	**2.47**	**235**	eP	**Pn**	**22 10 18.7**	**+0.5**
JAK				eS	**Sn**	**22 10 48.1**	**-0.8**
JTKR	**Abashiri--Toko**	**2.60**	**261**	eP	**Pn**	**22 10 19.7**	**-0.1**
JAR	**Ashorobuto**	**2.90**	**248**	eP	**Pn**	**22 10 24.9**	**+1.3**
JAR				eS	**Sn**	**22 10 59.8**	**+0.9**
JMP	**Maruseppu**	**2.98**	**263**	eP	**Pn**	**22 10 24.6**	**-0.1**
JOB	**Onbets**	**3.04**	**241**	eP	**Pn**	**22 10 26.5**	**+1.1**
JKK2	**Kamakawa 2**	**3.44**	**262**	eP	**Pn**	**22 10 31.1**	**+0.5**
JCH	**Churui**	**3.49**	**240**	eP	**Pn**	**22 10 31.6**	**+0.4**
JCH				eS	**Sn**	**22 11 10.8**	**-1.7**
ASAJ	**Asahikawa**	**3.51**	**267**	eP	**Pn**	**22 10 31.8**	**+0.3**
JNBK	**Urakawa-nobuka**	**4.05**	**240**	eP	**Pn**	**22 10 38.4**	**-0.3**
JWK2	**Keihoku**	**4.05**	**285**	eP	**Pn**	**22 10 39.3**	**+0.7**

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*JMA **29** 22:38:38.4±0.1, 23°.9N±0°.4×121°.6E±0°.4, h44km, MV3.9/15, TAIWAN REGION*

*TAP **29** 22:38:40.0, 23°.97N×121°.63E, h45km, ML4.2, B*

ISC 29 22:38:40.5±0.9**, 23°.95N**±0°.01×**121°.66E**±0°.02**, h33**km±1km**, n165, σ0ˢ96**/284**, 20C-26D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.06**	**296**	P	**Pb**	**22 38 47.5**	**+1.5**
	baz=285						
HWA				S	**Sb**	**22 38 52.9**	**+3.0**
	baz=285						
TEYL	**Yanliau Villag**	**0.10**	**215**	⇑iP	**Pb**	**22 38 47.6**	**+1.4**
	baz=196						
TEYL				S	**Sb**	**22 38 53.7**	**+3.5**
	baz=196						
TWD	**Chiawan**	**0.14**	**335**	⇑iP	**Pb**	**22 38 47.4**	**+0.8**
	baz=333						
TWD				S	**Sb**	**22 38 52.6**	**+1.9**
	baz=333						
ETM	**Tongmen**	**0.16**	**275**	⇓iP	**Pb**	**22 38 47.2**	**+0.5**
	baz=268						
ETM				eS	**Sb**	**22 38 52.1**	**+1.3**
	baz=268						
ETL	**Fush Village**	**0.21**	**350**	eP	**Pn**	**22 38 47.6**	**+0.5**
	baz=345						
ETL				eS	**Sb**	**22 38 53.0**	**+1.2**
	baz=345						
NACB	**Ninganchiao**	**0.23**	**344**	P	**Pn**	**22 38 47.5**	**+0.1**
NACB	**Ninganchiao**	**0.23**	**344**	⇑iP	**Pn**	**22 38 47.6**	**+0.2**
	baz=339						
NACB				i S	**Sb**	**22 38 53.1**	**+1.0**
	baz=339						
ESL	**Shilin**	**0.25**	**237**	⇓iP	**Pn**	**22 38 47.8**	**+0.1**
	baz=234						
ESL				i S	**Sb**	**22 38 53.0**	**+0.6**
	baz=234						
TEGC	**Jichi Village**	**0.27**	**205**	eP	**Pb**	**22 38 48.9**	**+1.1**
	baz=199						
TEGC				eS	**Sb**	**22 38 55.8**	**+3.1**
	baz=199						
ETLH	**Xiulin Townshi**	**0.30**	**327**	⇑iP	**Pb**	**22 38 48.4**	**0.0**
	baz=323						
ETLH				i S	**Sn**	**22 38 54.6**	**+0.8**
	baz=323						
EGFH	**Guangfu**	**0.35**	**217**	⇓P	**Pb**	**22 38 48.8**	**-0.2**
	baz=220						
EGFH				eS	**Sn**	**22 38 54.7**	**-0.4**
	baz=220						
EHP	**Heping Village**	**0.36**	**11**	eP	**Pb**	**22 38 49.5**	**+0.3**
	baz=25						
WHF	**Hehuan Shan**	**0.41**	**298**	⇓iP	**Pb**	**22 38 49.9**	**-0.2**
	baz=293						
WHF				S	**Sb**	**22 38 56.5**	**-0.2**
	baz=293						
OWD	**Renai**	**0.45**	**270**	P	**Pb**	**22 38 50.4**	**+0.1**
	baz=268						
OWD				i S	**Sb**	**22 38 57.4**	**+0.2**
	baz=268						
CHGB	**Renai**	**0.46**	**284**	⇓iP	**Pb**	**22 38 50.7**	**+0.1**
	baz=282						
CHGB				i S	**Sb**	**22 38 58.0**	**+0.4**
	baz=282						
ENA	**Nanau**	**0.48**	**9**	⇑iP	**Pb**	**22 38 50.5**	**-0.3**
	baz=5.0						
ENA				eS	**Sb**	**22 38 57.5**	**-0.4**
	baz=5.0						
FUSS	**Fushou**	**0.48**	**308**	⇓iP	**Pb**	**22 38 51.0**	**0.0**
	baz=310						
FUSS				i S	**Sb**	**22 38 58.2**	**0.0**
	baz=310						
WUSB	**Renai**	**0.50**	**275**	⇓iP	**Pb**	**22 38 51.2**	**0.0**
	baz=267						
WUSB				i S	**Sb**	**22 38 58.5**	**0.0**
	baz=267						
EWUT	**Wuta**	**0.50**	**12**	⇑eP	**Pb**	**22 38 50.9**	**-0.3**
	baz=21						
EWUT				eS	**Sb**	**22 38 59.5**	**+1.0**
	baz=21						
HGSD	**Ruisui**	**0.51**	**206**	⇓iP	**Pb**	**22 38 51.2**	**0.0**
	baz=213						
HGSD				S	**Sb**	**22 38 59.5**	**+1.0**
	baz=213						
VWDT	**VWDT**	**0.52**	**248**	⇓iP	**Pb**	**22 38 51.4**	**+0.1**
	baz=241						
VWDT				i S	**Sb**	**22 38 59.1**	**+0.4**
	baz=241						
TWT	**Tachien**	**0.54**	**304**	⇓iP	**Pn**	**22 38 51.9**	**-0.1**
	baz=303						
TWT				i S	**Sb**	**22 39 00.1**	**+0.5**
	baz=303						
NNSB	**Datong**	**0.54**	**332**	⇑iP	**Pn**	**22 38 51.3**	**-0.7**
	baz=336						
NNSB				i S	**Sb**	**22 38 59.1**	**-0.5**
	baz=336						
NNSH	**Datong**	**0.54**	**332**	⇑P	**Pn**	**22 38 51.4**	**-0.6**
	baz=335						
NNSH				S	**Sb**	**22 38 59.2**	**-0.4**
	baz=335						
EHY	**Hungye**	**0.54**	**215**	eP	**Pn**	**22 38 50.5**	**-1.4**
	baz=211						
EHY				S	**Sb**	**22 38 58.3**	**-1.2**
	baz=211						
TDCB	**Techi**	**0.55**	**303**	⇓iP	**Pn**	**22 38 51.9**	**-0.3**
	baz=297						
TDCB				i S	**Sb**	**22 38 59.6**	**-0.3**
	baz=297						
NNS	**Nan Shan**	**0.55**	**332**	⇑iP	**Pn**	**22 38 51.5**	**-0.6**
	baz=336						
NNS				i S	**Sb**	**22 38 59.7**	**-0.2**
	baz=336						
LATG	**Datong**	**0.59**	**348**	⇑iP	**Pn**	**22 38 51.8**	**-0.9**
	baz=349						
LATG				i S	**Sb**	**22 38 59.8**	**-1.2**
	baz=349						
EOS4	**EOS4**	**0.62**	**74**	eP	**Pn**	**22 38 52.8**	**+0.2**
	baz=87						
EOS4				eS	**Sb**	**22 39 02.1**	**+0.8**
	baz=87						
WPL	**Puli Township**	**0.65**	**275**	P	**Pn**	**22 38 52.9**	**-0.5**
	baz=271						
WPL				eS	**Sn**	**22 39 03.0**	**+0.5**
	baz=271						
YULB	**Yu-li**	**0.65**	**211**	P	**Pn**	**22 38 52.3**	**-1.1**
YULB	**Yu-li**	**0.65**	**211**	⇓eP	**Pn**	**22 38 51.8**	**-1.6**
	baz=209						
YULB				eS	**Sn**	**22 39 00.7**	**-1.9**
	baz=209						
ECBN	**Changbin**	**0.66**	**197**	P	**Pn**	**22 38 53.7**	**+0.1**
	baz=206						
ECBN				eS	**Sb**	**22 39 03.9**	**+1.2**
	baz=206						
NDT	**Datong Townshi**	**0.66**	**348**	⇑iP	**Pn**	**22 38 52.9**	**-0.7**
	baz=348						
NDT				S	**Sn**	**22 39 01.8**	**-1.1**
	baz=348						
SSLB	**Suanglung**	**0.67**	**256**	P	**Pn**	**22 38 53.3**	**-0.4**
SSLB	**Suanglung**	**0.67**	**256**	⇓iP	**Pn**	**22 38 53.1**	**-0.5**
	baz=256						
SSLB				eS	**Sn**	**22 39 03.7**	**+0.7**
	baz=256						
TWC	**Suao**	**0.68**	**15**	⇑P	**Pn**	**22 38 53.4**	**-0.4**
	baz=24						
TWC				eS	**Sn**	**22 39 03.2**	**+0.1**
	baz=24						
DPDB	**Guoxing**	**0.68**	**277**	⇓iP	**Pn**	**22 38 53.6**	**-0.2**
	baz=275						
DPDB				eS	**Sn**	**22 39 03.9**	**+0.5**
	baz=275						
EYUL	**Yuli**	**0.68**	**208**	eP	**Pn**	**22 38 52.5**	**-1.3**
	baz=214						
EYUL				eS	**Sn**	**22 39 03.5**	**+0.3**
	baz=214						
NDS	**Dongshan**	**0.68**	**4**	eP	**Pn**	**22 38 53.1**	**-0.7**
	baz=357						
NDS				eS	**Sn**	**22 39 03.5**	**+0.2**
	baz=357						
TWF1	**Yuli**	**0.68**	**209**	⇓P	**Pn**	**22 38 52.3**	**-1.6**
	baz=215						
TWF1				eS	**Sn**	**22 39 01.8**	**-1.6**
	baz=215						
ENTT	**Nioudou**	**0.69**	**353**	i P	**Pn**	**22 38 53.3**	**-0.7**
	baz=360						
ENTT				S	**Sn**	**22 39 02.6**	**-1.0**
	baz=360						
WCS	**Beigang Elemen**	**0.69**	**279**	⇓P	**Pn**	**22 38 53.7**	**-0.3**
	baz=277						
WCS				eS	**Sn**	**22 39 03.0**	**-0.6**
	baz=277						
SMLT	**Sun Moon Lake**	**0.70**	**265**	⇓iP	**Pn**	**22 38 53.8**	**-0.5**
	baz=262						
SMLT				eS	**Sn**	**22 39 03.0**	**-0.9**
	baz=262						
WHP	**Taichung City**	**0.73**	**297**	eP	**Pn**	**22 38 54.5**	**-0.1**
	baz=298						
WHP				eS	**Sn**	**22 39 04.5**	**-0.1**
	baz=298						
TYC	**Yuchr**	**0.74**	**266**	⇓iP	**Pn**	**22 38 54.1**	**-0.5**
	baz=260						
YHNB	**Yeheng**	**0.76**	**340**	P	**Pn**	**22 38 54.5**	**-0.5**
YHNB	**Yeheng**	**0.76**	**340**	⇑iP	**Pn**	**22 38 54.5**	**-0.5**
	baz=346						
YHNB				S	**Sn**	**22 39 04.0**	**-1.4**
	baz=346						
NSK	**Sanguang**	**0.77**	**339**	⇑iP	**Pn**	**22 38 54.6**	**-0.6**
	baz=345						
NSK				eS	**Sn**	**22 39 04.6**	**-1.1**
	baz=345						
WHYT	**Xinyi Township**	**0.78**	**251**	⇓iP	**Pn**	**22 38 55.4**	**+0.1**
	baz=249						
WHYT				eS	**Sn**	**22 39 06.2**	**+0.3**
	baz=249						
YUS	**Yu-Shan**	**0.80**	**235**	⇓iP	**Pn**	**22 38 55.5**	**-0.4**
	baz=228						
YUS				eS	**Sn**	**22 39 05.9**	**-0.9**
	baz=228						
FUSB	**Fushanzhiwuyua**	**0.81**	**355**	⇑iP	**Pn**	**22 38 54.8**	**-0.8**
	baz=355						
FUSB				i S	**Sn**	**22 39 05.0**	**-1.5**
	baz=355						
ILA	**Ilan**	**0.81**	**6**	eP	**Pn**	**22 38 56.1**	**+0.4**
	baz=358						
ILA				eS	**Sn**	**22 39 06.1**	**-0.5**
	baz=358						
FULB	**Fuli**	**0.82**	**204**	eP	**Pn**	**22 38 55.1**	**-0.7**
	baz=212						
FULB				eS	**Sn**	**22 39 07.3**	**+0.5**
	baz=212						
NWLT	**Wulai**	**0.83**	**350**	⇑iP	**Pn**	**22 38 55.2**	**-0.8**
	baz=350						
NWLT				eS	**Sn**	**22 39 05.6**	**-1.6**
	baz=350						
NFF	**Wufeng Townshi**	**0.84**	**324**	⇑P	**Pn**	**22 38 56.1**	**0.0**
	baz=327						
NFF				eS	**Sn**	**22 39 06.5**	**-0.8**
	baz=327						
WJS	**Zhushan**	**0.86**	**262**	eP	**Pn**	**22 38 56.8**	**+0.5**
	baz=259						
WJS				eS	**Sn**	**22 39 09.1**	**+1.2**
	baz=259						
CHKT	**Chengkung**	**0.89**	**198**	P	**Pn**	**22 38 56.1**	**-0.6**
	baz=198						
CHKT				eS	**Sn**	**22 39 08.8**	**+0.3**
	baz=198						
WNT	**Mingjian**	**0.90**	**266**	P	**Pn**	**22 38 57.5**	**+0.7**
	baz=263						
WNT				eS	**Sn**	**22 39 09.8**	**+1.1**
	baz=263						
ALS	**Alishan**	**0.90**	**241**	⇓iP	**Pn**	**22 38 57.1**	**0.0**
	baz=233						
ALS				eS	**Sn**	**22 39 09.3**	**+0.2**
	baz=233						
EHD	**Haiduan**	**0.90**	**208**	eP	**Pn**	**22 38 55.1**	**-1.8**
	baz=206						
TWQ1	**Liyutan**	**0.90**	**296**	⇓iP	**Pn**	**22 38 57.2**	**+0.3**
	baz=295						
TWQ1				i S	**Sn**	**22 39 09.4**	**+0.5**
	baz=295						
NSTT	**Nanjuang**	**0.91**	**318**	⇑iP	**Pn**	**22 38 57.5**	**+0.5**
	baz=305						
NSTT				eS	**Sn**	**22 39 09.4**	**+0.5**
	baz=305						
LIOB	**Emei**	**0.91**	**320**	P	**Pn**	**22 38 57.6**	**+0.6**
	baz=306						
LIOB				i S	**Sn**	**22 39 09.4**	**+0.4**
	baz=306						
NTC	**Toucheng**	**0.91**	**10**	eP	**Pb**	**22 38 59.0**	**+1.1**
	baz=359						
NTC				eS	**Sb**	**22 39 11.9**	**+2.1**
	baz=359						
TCU	**Taichung**	**0.92**	**282**	⇓P	**Pn**	**22 38 57.9**	**+0.8**
	baz=281						
TCU				eS	**Sb**	**22 39 10.8**	**+0.8**
	baz=281						
EGS		**0.92**	**15**	eP	**Pn**	**22 38 57.4**	**+0.3**
	baz=24						
EGS				eS	**Sb**	**22 39 11.3**	**+1.3**
	baz=24						
NSY	**Sanyi**	**0.94**	**300**	⇓iP	**Pn**	**22 38 57.9**	**+0.4**
	baz=298						
NSY				eS	**Sn**	**22 39 10.6**	**+0.7**
	baz=298						
ELDTW	**Lidau**	**0.96**	**218**	P	**Pn**	**22 38 56.5**	**-1.3**
	baz=212						
ELDTW				eS	**Sn**	**22 39 09.6**	**-0.8**
	baz=212						
NMLH	**Miaoli**	**0.99**	**306**	P	**Pn**	**22 38 58.2**	**+0.2**
	baz=305						
NMLH				eS	**Sn**	**22 39 11.2**	**+0.3**
	baz=305						
WDJ	**Dajia District**	**1.01**	**293**	i P	**Pn**	**22 38 58.6**	**+0.2**
	baz=292						
WDJ				eS	**Sn**	**22 39 12.6**	**+1.0**
	baz=292						
NHDH	**Xindian Distri**	**1.01**	**353**	eP	**Pn**	**22 38 58.2**	**-0.2**
	baz=353						
NHDH				eS	**Sn**	**22 39 11.5**	**0.0**
	baz=353						
WCHH	**Zhanghua**	**1.02**	**277**	⇓P	**Pn**	**22 38 59.0**	**+0.6**
	baz=287						
WCHH				eS	**Sb**	**22 39 13.6**	**+0.8**
	baz=287						
TIPB	**Shuangxi**	**1.03**	**8**	eP	**Pn**	**22 38 58.4**	**-0.3**
	baz=359						
TIPB				eS	**Sn**	**22 39 12.8**	**+0.9**
	baz=359						
TWA	**Mucha**	**1.03**	**356**	eP	**Pn**	**22 38 58.3**	**-0.3**
	baz=356						
TWA				eS	**Sn**	**22 39 11.2**	**-0.7**
	baz=356						
EDH	**Donghe**	**1.03**	**199**	eP	**Pn**	**22 38 57.4**	**-1.2**
	baz=199						
EDH				eS	**Sn**	**22 39 11.0**	**-0.9**
	baz=199						
TATO	**Taipei**	**1.03**	**351**	P	**Pn**	**22 38 58.5**	**-0.2**
SBCB	**Hsinchu**	**1.04**	**324**	eP	**Pn**	**22 38 59.0**	**+0.3**
	baz=323						
SBCB				S	**Sn**	**22 39 12.6**	**+0.4**
	baz=323						
WGK	**Gukeng**	**1.04**	**256**	P	**Pn**	**22 38 59.1**	**+0.3**
	baz=253						
HSN	**Hsinchu**	**1.06**	**323**	eP	**Pn**	**22 38 59.5**	**+0.5**
	baz=325						
HSN				eS	**Sn**	**22 39 13.9**	**+1.3**
	baz=325						
WDLH	**Douliu**	**1.06**	**256**	i P	**Pn**	**22 38 59.9**	**+0.8**
	baz=245						
WDLH				S	**Sn**	**22 39 14.1**	**+1.3**
	baz=245						
TAP	**Taipei**	**1.09**	**353**	eP	**Pn**	**22 38 59.2**	**-0.3**
	baz=352						
TAP				eS	**Sn**	**22 39 13.3**	**-0.2**
	baz=352						
TWB1	**Santiao Chiao**	**1.09**	**16**	eP	**Pn**	**22 38 59.7**	**+0.2**
	baz=25						
TWB1				eS	**Sn**	**22 39 14.6**	**+1.1**
	baz=25						
WCKO	**Fanlu**	**1.10**	**242**	eP	**Pn**	**22 39 00.5**	**+0.9**
	baz=241						
WCKO				eS	**Sn**	**22 39 15.3**	**+1.8**
	baz=241						
NCUH	**Zhongli**	**1.10**	**337**	eP	**Pn**	**22 38 59.6**	**0.0**
	baz=336						
NCUH				eS	**Sn**	**22 39 14.1**	**+0.3**
	baz=336						

NCU	National Centr	1.10	337	*e*P	Pn	22 38 59.9	+0.3
	baz=336						
NCU				*e*S	Sn	22 39 14.2	+0.5
	baz=336						
STYH	Taoyuan	1.12	226	⇑P	Pn	22 39 00.3	+0.4
	baz=226						
STYH				*e*S	Sn	22 39 15.0	+0.8
	baz=226						
TPUB	Ta-pu	1.15	236	P	Pn	22 39 00.4	+0.1
TPUB	Ta-pu	1.15	236	*i* P	Pn	22 39 00.7	+0.4
	baz=226						
TPUB				S	Sn	22 39 16.0	+1.1
	baz=226						
CHN4	Tsaushan	1.15	239	*e*P	Pn	22 39 01.0	+0.7
	baz=229						
CHN4				S	Sb	22 39 16.8	+0.4
	baz=229						
LONT	Longtian	1.15	205	*e*P	Pn	22 38 58.6	-1.7
	baz=197						
LONT				S	Sn	22 39 13.3	-1.6
	baz=197						
SXI1	Grass Mountain	1.15	10	*i* P	Pn	22 39 00.2	-0.2
	baz=355						
SXI1				*e*S	Sn	22 39 14.9	-0.3
	baz=355						
CHN2	Minshiung	1.17	249	*e*P	Pn	22 39 01.7	+1.2
	baz=247						
CHN2				*e*S	Sb	22 39 18.7	+1.8
	baz=247						
TWS1	Kuangyinshan	1.17	349	*e*P	Pn	22 39 00.2	-0.3
TWS1				*e*S	Sn	22 39 15.1	-0.2
WRL	Guolierlin Hig	1.18	268	⇓*e*P	Pn	22 39 01.1	+0.5
	baz=276						
WRL				S	Sn	22 39 17.1	+1.5
	baz=276						
WTP	Ta-pu	1.19	234	⇑P	Pn	22 39 01.4	+0.5
	baz=232						
WTP				*e*S	Sn	22 39 17.2	+1.3
	baz=232						
YM01	YM01	1.19	356	*e*P	Pn	22 39 00.0	-0.9
	baz=355						
YM01				*e*S	Sn	22 39 15.2	-0.8
	baz=355						
WTK	Tuku	1.20	258	*e*P	Pn	22 39 01.5	+0.6
	baz=255						
WTK				*e*S	Sb	22 39 18.3	+0.5
	baz=255						
CHY	Chiayi	1.22	249	*e*P	Pn	22 39 02.5	+1.3
	baz=246						
CHY				*e*S	Sb	22 39 19.2	+0.7
	baz=246						
NTST	Danshui	1.22	351	*e*P	Pn	22 39 00.8	-0.4
	baz=350						
NTST				*e*S	Sn	22 39 16.0	-0.7
	baz=350						
ANP	Anpu	1.24	354	*e*P	Pn	22 39 00.6	-1.0
	baz=355						
TWGBT	Beinan	1.25	205	P	Pn	22 39 00.1	-1.6
TWGBT	Beinan	1.25	205	*e*P	Pn	22 38 59.7	-2.0
	baz=197						
TWGBT				S	Sn	22 39 14.8	-2.6
	baz=197						
WTCT	Ta-ch'eng	1.27	266	*e*P	Pn	22 39 02.0	+0.1
	baz=277						
WTCT				S	Sn	22 39 19.7	+2.0
	baz=277						
JYNG	Yonagunijimaku	1.27	67	P	Pn	22 39 01.6	-0.4
JYNG				*e*S	Sn	22 39 18.2	+0.3
TWK	Hsinying	1.27	238	*e*P	Pn	22 39 02.6	+0.6
	baz=235						
TWK				*e*S	Sn	22 39 19.8	+1.7
	baz=235						
TTN	Taitung	1.28	202	*e*P	Pn	22 39 02.2	+0.1
	baz=194						
TTN				*e*S	Sn	22 39 17.4	-0.8
	baz=194						
LDUT	Ludao	1.28	188	*e*P	Pn	22 39 00.8	-1.4
	baz=184						
LDUT				*e*S	Sn	22 39 17.0	-1.2
	baz=184						
CHN1	Nanshi	1.29	234	*e*P	Pn	22 39 03.0	+0.7
	baz=233						
CHN1				*e*S	Sn	22 39 19.4	+1.0
	baz=233						
SGST	Jiashian	1.31	229	*i* P	Pn	22 39 02.5	-0.1
	baz=220						
SGST				*e*S	Sn	22 39 19.9	+0.9
	baz=220						
TWY	Chenhua	1.32	358	*e*P	Pn	22 39 02.2	-0.5
	baz=357						
YOJ	Yonaguni jima	1.33	67	P	Pn	22 39 02.9	+0.1
YOJ	Yonaguni jima	1.33	67	P	Pn	22 39 02.6	-0.2
YOJ				S	Sn	22 39 19.3	0.0
YOJ	Yonaguni jima	1.33	67	*i* P	Pn	22 39 02.6	-0.2
	baz=67						
YOJ				*i* S	Sn	22 39 19.1	-0.3
	baz=67						
SLGT	Liugui	1.33	225	*e*P	Pn	22 39 04.2	+1.3
	baz=224						
SLGT				*e*S	Sb	22 39 22.2	+0.5
	baz=224						
WSF	Szhu	1.36	257	*e*P	Pn	22 39 03.6	+0.5
	baz=244						
WSF				*e*S	Sn	22 39 21.8	+1.9
	baz=244						
WSL	Shuilin Townsh	1.38	252	P	Pn	22 39 04.1	+0.6
	baz=250						
WSL				*e*S	Sn	22 39 22.4	+1.8
	baz=250						
ICHU	Yijhu	1.40	245	*e*P	Pn	22 39 04.4	+0.7
	baz=243						
ICHU				*e*S	Sn	22 39 22.4	+1.4
	baz=243						
CHN8	Yiju	1.46	246	*e*P	Pn	22 39 05.2	+0.6
	baz=244						
CHN8				*e*S	Sn	22 39 24.2	+1.7
	baz=244						
CHN3	Shinhua	1.48	234	*e*P	Pn	22 39 05.0	+0.2
	baz=244						
ECL	Taimali	1.50	206	*e*P	Pn	22 39 03.5	-1.6
	baz=198						
SSHA	Shanhua	1.50	238	*e*P	Pn	22 39 06.1	+1.0
	baz=235						
SCST	Cishan	1.51	226	*e*P	Pn	22 39 06.3	+1.0
	baz=225						
SCST				*e*S	Sb	22 39 26.5	-0.2
	baz=225						
SSD	Sandimen	1.53	218	*e*P	Pn	22 39 06.1	+0.6
	baz=219						
SSD				*e*S	Sn	22 39 25.6	+1.4
	baz=219						
TSMG	Majia	1.55	217	*e*P	Pn	22 39 06.4	+0.6
	baz=216						
TWM1	Shoushan	1.60	226	*e*P	Pb	22 39 10.1	+0.6
	baz=233						
MASBT	Mashibuluo	1.64	216	*e*P	Pn	22 39 07.2	+0.2
	baz=217						
MASBT				*e*S	Sn	22 39 27.5	+0.7
	baz=217						
TSCK	Chigu Township	1.65	241	*e*P	Pn	22 39 07.8	+0.6
	baz=239						
TSCK				*e*S	Sn	22 39 28.4	+1.1
	baz=239						
EAST	Anshuo	1.73	206	*e*P	Pn	22 39 07.1	-1.3
	baz=201						
TAW	Tawu	1.74	204	*e*P	Pn	22 39 08.5	+0.1
	baz=196						
TAWH	Dawu Township	1.75	204	*e*P	Pn	22 39 08.6	-0.1
	baz=199						
SCZT	Fangliau	1.84	212	*e*P	Pn	22 39 10.4	+0.6
	baz=201						
SLIU	Shizi	1.90	205	*e*P	Pn	22 39 11.1	+0.5
	baz=202						
LAY	Lan-yu	1.91	183	*e*P	Pn	22 39 09.4	-1.4
	baz=180						
LAY				*e*S	Sn	22 39 32.8	-0.8
	baz=180						
IRIF	Iriomote-Funau	1.93	78	P	Pn	22 39 11.0	0.0
IRIF				*e*S	Sn	22 39 34.6	+0.6
LYUB	Lan-yu	1.94	182	*e*P	Pn	22 39 09.0	-2.2
	baz=176						
WDGT	Dungji	1.96	250	*e*P	Pn	22 39 11.3	-0.1
	baz=248						
HATJ	Hateruma jima	1.96	87	P	Pn	22 39 11.4	0.0
HATJ				S	Sn	22 39 35.7	+0.8
PHUB	P'eng-hu	1.96	258	*e*P	Pn	22 39 10.7	-0.8
	baz=256						
PNG	Penghu	1.97	259	*e*P	Pn	22 39 10.9	-0.6
	baz=256						
PNG				*e*S	Sn	22 39 34.7	-0.4
	baz=256						
SMST	Manzhou Townsh	2.07	202	*e*P	Pn	22 39 13.0	+0.1
	baz=194						
HEN	Hengchun	2.12	204	*e*P	Pn	22 39 15.2	+1.6
	baz=195						
TWK1	Hengchun	2.15	202	*e*P	Pn	22 39 14.1	+0.1
	baz=195						
TWKBT	Hengchun	2.15	202	*e*P	Pn	22 39 14.0	0.0
	baz=195						
TSEB	Hengchuen, Pin	2.16	199	*e*P	Pn	22 39 14.8	+0.6
	baz=194						
JKRS	Kuro-shima	2.16	82	P	Pn	22 39 14.8	+0.6
JKRS				*e*S	Sn	22 39 40.9	+0.9
VCHM	Qimei	2.18	251	*e*P	Pn	22 39 13.8	-0.6
	baz=238						
VWUC	VWUC	2.27	298	*e*P	Pn	22 39 13.9	-1.7
	baz=297						
JIJ	Ishigaki jima	2.30	79	P	Pn	22 39 16.0	-0.2
JIJ				S	Sn	22 39 42.1	-1.3
JISG	Ishigakijimahi	2.50	75	P	Pn	22 39 18.5	-0.3
JISG				S	Sn	22 39 47.0	-1.2
PTMZ	Houxiangcun	2.56	296	*e*P	Pn	22 39 18.1	-1.5
	baz=295						
MATB	Ma-tsu	2.69	325	*e*P	Pn	22 39 19.6	-1.8
	baz=324						
JTJ	Tarama	2.86	75	P	Pn	22 39 23.9	+0.1
JTJ				*e*S	Sn	22 39 57.6	+0.6
KNM	Kinmen	2.98	280	*e*P	Pn	22 39 26.0	+0.5
	baz=278						
KNMB	Chin-men Tao	3.03	280	*e*P	Pn	22 39 24.7	-1.4
	baz=279						
MHZQ	Yeshan	3.21	312	*e*P	Pn	22 39 26.4	-2.1
	baz=312						
XPSS	Dashiqiu	3.25	336	*e*P	Pn	22 39 27.3	-1.8
	baz=344						
JIRB	Irabujima	3.32	74	*e*S	Sn	22 40 09.2	+0.8
JIKM	Ikemajima	3.41	73	*e*P	Pn	22 39 32.0	+0.6
JIKM				*e*S	Sn	22 40 10.8	+0.2
JMJ2	Miyako jima3	3.43	76	P	Pn	22 39 32.2	+0.5
JMJ2				*e*S	Sn	22 40 11.7	+0.4
AXDP	Jialang	3.50	286	*e*P	Pn	22 39 31.3	-1.2
	baz=285						
JOGS	Gusukube	3.51	76	P	Pn	22 39 33.9	+1.2
ZPLA	Ao Xicun	3.58	270	*e*P	Pn	22 39 32.6	-1.1
	baz=269						
DSXP	Dongshan	3.89	267	*e*P	Pn	22 39 36.9	-1.1
	baz=265						
SXFK	Yanhouchang	4.38	305	*e*P	Pn	22 39 42.5	-2.3
	baz=304						

IDC ***29*** *22:54:10.5±1.6, 18°.18N×106°.21W, h0^{km}, mb3.9/11, mbtmp3.9/14, ML3.7/3, MS4.0/22, Error ellipse: s-maj=43.6km s-min=17.4km az=54.0*

MEX ***29*** *22:54:14.7±0.4, 18°.48N×106°.01W, h5^{km}, MD4.3*

NEIC ***29*** *22:54:14.1±1.6, 18°.39N±0°.08×106°.13W±0°.08, h10^{km}±1^{km}, mb4.6/101, Md4.3/34(MEX), Error ellipse: s-maj=14.8km s-min=10.1km az=224.0*

GCMT ***29*** *22:54:16.1±0.6, 18°.51N±0°.02×106°.16W±0°.03, h20^{km}±1^{km}, MW4.8/81, Moment Tensor Solution. s12,c12; s81,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.57±.14; $M_{\theta\theta}$-1.57±.10; $M_{\phi\phi}$2.14±.12; $M_{r\theta}$0.28±.23; $M_{\theta\phi}$-1.11±.10; $M_{\phi r}$0.87±.22; Best double couple: $M_0$2.34500×10^{16} NP1:ϕ_s208.00000°, δ86.00000°, λ-24.00000°. NP2: ϕ_s300.00000°, δ66.00000°, λ-175.00000°. Principal axes: T 2.6300, Plg14.0000°, Azm256.0000°; N -0.5720, Plg65.0000°, Azm18.0000°; P -2.0600, Plg20.0000°, Azm161.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 22:54:13.8±0.6, **18°.45N**±0°.06×**106°.08W**±0°.06, **h10**^{km}, **n401**, σ1^{s}.**35**/393, **mb4.6**/46, **MS4.0**/22, **Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	Chamela	1.43	43	*i* P	Pn	22 54 36.5	-3.3
CJM				*e*S	Sn	22 54 54.2	-4.5
CIHU	Emiliano Zapat	1.51	57	*i* P	Pn	22 54 37.6	-3.3
CIHU				*i* S	Sn	22 54 55.7	-4.9
CDAR	Ciudad de Arme	2.02	76	*i* P	Pn	22 54 45.0	-2.9
CDAR				*e*S	Sn	22 55 10.3	-2.9
R15V		2.11	70		Pn	22 54 46.9	-2.4
R15V		2.11	70	*e*P	Pn	22 54 46.9	-2.4
R15V				*e*S	Sn	22 55 09.8	-5.8
COIG	Colima	2.37	72	*i* P	Pn	22 54 50.5	-2.4
COIG				*e*S	Sn	22 55 17.7	-4.4
MNGA	Volcan de Coli	2.53	66	*e*P	Pn	22 54 54.2	-1.0
MNGA				*i* S	Sn	22 55 27.8	+1.4
SOMAC	Volcano de Col	2.55	65	*e*P	Pn	22 54 54.5	-1.1
SOMAC				*i* S	Sn	22 55 28.7	+1.9
EZ5V		2.56	66		Pn	22 54 54.6	-0.9
EZ5V		2.56	66	*i* P	Pn	22 54 54.6	-0.9
EZ5V				*e*S	Sn	22 55 23.9	-2.9
INCO	Volcan de Coli	2.57	65	*e*P	Pn	22 54 54.8	-1.2
INCO				*i* S	Sn	22 55 30.0	+2.5
JUBC	Volcan de Coli	2.60	66	*e*P	Pn	22 54 55.3	-0.8
JUBC				*i* S	Sn	22 55 28.5	+0.5
MMIG	Aquila	2.60	93		Pn	22 54 54.3	-1.6
MMIG	Aquila	2.60	93	*i* P	Pn	22 54 54.3	-1.6
MMIG				*e*S	Sn	22 55 24.3	-3.3
ANIG	Ahuacatlan	2.98	29		Pn	22 55 00.1	-1.1
ANIG					Sn	22 55 38.0	+0.9
ANIG	Ahuacatlan	2.98	29	*e*P	Pn	22 55 00.1	-1.1
ANIG				*e*S	Sn	22 55 38.0	+0.9
ZIIG	Zihuatanejo	4.47	100		Pn	22 55 20.1	-1.5
ZIIG					Sn	22 56 14.5	+0.9
ZIIG	Zihuatanejo	4.47	100	*e*P	Pn	22 55 20.1	-1.5
ZIIG				*e*S	Sn	22 56 14.5	+0.9
H06E1	SOCORRO T-PHAS	4.61	275	T	T	22 59 53.9	
	SNR=787						
MAIG	Mazatlaan	4.72	356		Pn	22 55 22.3	-2.9
MAIG	Mazatlaan	4.72	356	*i* P	Pn	22 55 22.3	-2.9
MAIG				*e*S	Sn	22 56 10.1	-10
MOIG	Morelia	4.78	74	Pn	Pn	22 55 25.2	-1.0
MOIG	Morelia	4.78	74	*e*	Pn	22 55 32.2	+6.0
MOIG				*e*		22 56 34.0	
ZAIG	Zacatecas	5.41	37		Pn	22 55 34.3	-0.5
ZAIG	Zacatecas	5.41	37	*e*	Pn	22 55 38.7	+3.9
ZAIG				*e*		22 56 52.7	
ARIG	Puente Sto Nin	5.44	91		Pn	22 55 36.3	+1.2
ARIG	Puente Sto Nin	5.44	91	*e*P	Pn	22 55 36.3	+1.2
ARIG				*e*S	Sn	22 56 44.7	+6.9
SLBS	Sierra La Lagu	6.34	326	Pn	Pn	22 55 45.2	-2.2
TLIG	Tlapa	7.20	96	Pn	Pn	22 55 59.7	+0.4
HPIG		8.45	2		Pn	22 56 18.6	+2.1
SRIG	Santa Rosalia	10.49	328	Pn	Pn	22 56 45.1	+0.7
TX31	Lajitas Ar. Si	11.05	11		Pn	22 56 54.0	+1.8
TX32	Lajitas Array	11.05	11		Pn	22 56 54.1	+2.0
TXAR	Lajitas Array	11.05	11	Pn	Pn	22 56 55.0	+2.9
	0.1nm,0.3s,baz=190,slow=14,SNR=18						
TXAR				LR	LR	23 01 17.0	
	comp=Z,1μm,18.7s,baz=187,slow=38						
	2.8nm,0.8s						
TXAR	Lajitas Array	11.05	11	Pn	Pn	22 56 54.4	+2.2
HSIG		11.43	338	Pn	Pn	22 56 57.5	+0.4
833A	Chaparral WMA,	11.58	31		Pn	22 57 01.4	+2.1
833A	Chaparral WMA,	11.58	31	P	Pn	22 57 02.2	+3.0
	baz=213						
425A	Indio Mountain	12.32	4	Pn	Pn	22 57 11.1	+1.6
319A	Douglas	13.19	348		Pn	22 57 23.3	+1.9
MNTX	Cornudas Mount	13.21	3	P	Pn	22 57 24.0	+2.5
	baz=183,SNR=5.7						
JCT	Junction City	13.26	24	Pn	Pn	22 57 24.8	+2.5
JCT	Junction City	13.26	24	P	Pn	22 57 24.5	+2.2
	baz=207						
CCIG	Comitan	13.48	97	Pn	Pn	22 57 25.0	-0.5
GDL2	Guadalupe Moun	13.78	6	Pn	Pn	22 57 30.9	+1.5
CLNB	Carlsbad	13.90	8		Pn	22 57 34.4	+3.4
ODSA	Odessa	13.98	12		Pn	22 57 33.5	+1.5
121A	Cookes Peak, D	14.11	354	Pn	Pn	22 57 36.6	+2.7
121A	Cookes Peak, D	14.11	354	P	Pn	22 57 36.9	+2.9
	baz=174						
HTMS	Hat Mesa	14.13	8		Pn	22 57 37.2	+3.0
DUN6	Lazy B Ranch	14.30	350		Pn	22 57 37.7	+1.1
TUC	Tucson	14.44	344	Pn	Pn	22 57 38.0	-0.3
TUC	Tucson	14.44	344	P	Pn	22 57 40.3	+1.9
	baz=162						
435B	Jarrell	14.49	31	P	Pn	22 57 42.1	+3.0
	baz=214						
CPRX	Cap Rock	14.65	7		Pn	22 57 42.9	+1.5
PIX	Pinacate	14.66	334	Pn	Pn	22 57 41.7	+0.3
214A	Organ Pipe Nat	14.76	337		Pn	22 57 44.8	+2.1
214A	Organ Pipe Nat	14.76	337	P	Pn	22 57 43.8	+1.1
	baz=155,SNR=13						
POST	Post	15.12	15		Pn	22 57 49.5	+1.9
POST				IAmb	IAmb	22 58 03.7	
	comp=Z,26nm,0.9s						
ABTX	Abilene, Hawle	15.25	21	Pn	Pn	22 57 51.3	+1.9
ABTX				IAmb	IAmb	22 58 03.9	
	comp=Z,23nm,1.1s						
ABTX	Abilene, Hawle	15.25	21	P	Pn	22 57 52.5	+3.1
	baz=204						
PETF	Flores	15.52	93		Pn	22 57 55.2	+2.3
PETF				IAmb	IAmb	22 58 09.1	
	comp=Z,29nm,0.6s						
WHTX	Lake Whitney,	15.56	28	P	Pn	22 57 55.1	+1.7
	baz=212						
BNM	Barren Site	15.64	358		Pn	22 57 57.3	+2.7
LENM	Lemitar	15.67	357		Pn	22 57 57.5	+2.5
MSTX	Muleshoe	15.73	10	P	Pn	22 57 58.5	+2.8
MSTX	Muleshoe	15.73	10	P	Pn	22 57 58.6	+2.9
	baz=192,SNR=31						
113A	Mohawk Valley,	15.84	336		Pn	22 57 58.8	+1.7
113A				IAmb	IAmb	22 58 04.0	
	comp=Z,33nm,1.1s						
FW07	Weatherford	16.03	26		Pn	22 58 01.2	+1.8
FW07				IAmb	IAmb	22 58 10.8	
	comp=Z,45nm,1.2s						
FW06	Azle	16.36	26	P	Pn	22 58 06.0	+2.4
FW06				IAmb	IAmb	22 58 17.5	
	comp=Z,44nm,0.9s						
ANMO	Albuquerque	16.43	359	Pn	P	22 58 07.3	-0.2
	comp=Z,0.1nm,0.3s,baz=268,slow=13,SNR=2.9						
ANMO				LR	LR	23 04 16.5	
	comp=Z,784nm,19.2s,baz=276,slow=36						
	comp=Z,3.0nm,0.9s						
ANMO	Albuquerque	16.43	359	P	Pn	22 58 06.5	+1.7
ANMO	Albuquerque	16.43	359	P	Pn	22 58 07.0	+2.2
	baz=179						
ESQI	Esquipulas	16.50	101		Pn	22 58 07.7	+2.0
GLA	Glamis	16.52	333	P	Pn	22 58 06.5	+0.7
	baz=150						
IKP	In-Ko-Pah, Jac	16.77	329	P	Pn	22 58 10.4	+1.5
	baz=146						
NATX	Nacogdoches	16.79	36	P	Pn	22 58 10.5	+1.4
NATX				IAmb	IAmb	22 58 14.4	
	comp=Z,53nm,1.2s						
NATX	Nacogdoches	16.79	36	P	P	22 58 12.5	+1.2
	baz=220						
AMTX	Amarillo	16.83	13		Pn	22 58 10.5	+0.9
AMTX	Amarillo	16.83	13	P	Pn	22 58 10.5	+0.9
	baz=195						
SWSC	Sam W. Stewart	16.87	331	P	Pn	22 58 11.6	+1.5
	baz=147						
W18A	Petrified Fore	16.92	350		Pn	22 58 11.4	+0.5
W18A	Petrified Fore	16.92	350	P	Pn	22 58 12.2	+1.3
	baz=168						
MONP2	Monument Peak	17.12	329	P	Pn	22 58 14.6	+1.1
	baz=145						
BC3	Big Chuckawall	17.31	333	P	Pn	22 58 16.2	+0.4
	baz=149						
PDMCI	Parker Dam,Lak	17.35	337	P	Pn	22 58 17.6	+1.4
	baz=154						
109C	Camp Elliot, M	17.46	328	P	Pn	22 58 18.6	+1.1
	baz=143						
WMOK	Wichita Mounta	17.47	20		Pn	22 58 18.6	+0.9
WMOK	Wichita Mounta	17.47	20	P	P	22 58 20.3	+1.4
	baz=204						
IRM	Iron Mountain	17.61	334	P	Pn	22 58 20.5	+1.0
	baz=151						
WUAZ	Wupatki	17.64	346		Pn	22 58 21.0	+1.2
WUAZ	Wupatki	17.64	346	P	P	22 58 21.7	+0.8
	baz=164,SNR=13						
X34A	Smith Ranch, M	17.68	23		Pn	22 58 20.9	+0.6
TPFO	Pinon Flats	17.72	330	P	P	22 58 22.2	+0.4
	baz=146						
PFO	Pinyon Flats O	17.73	330	P	P	22 58 22.7	+0.9
	comp=Z,0.1nm,0.3s,baz=142,slow=8.0,SNR=4.1						
PFO				LR	LR	23 04 25.6	
	comp=Z,276nm,18.1s,baz=166,slow=34						
	comp=Z,1.9nm,0.8s						
PFO	Pinyon Flats O	17.73	330	P	P	22 58 22.5	+0.7
	baz=146						
BELC	Belle Mtn. Jos	17.84	332	P	Pn	22 58 22.5	+0.1
	baz=148,SNR=8.8						
NEE2	Needles Airpor	17.94	337	P	P	22 58 24.8	+0.8
	baz=153						
MURC	Murrieta	18.07	329	P	P	22 58 26.1	+0.5
	baz=144						
GMRC	Granite Mounta	18.37	334	P	P	22 58 29.8	+1.0
	baz=150,SNR=9.8						
CIS	Catalina Islan	18.54	326	P	P	22 58 31.2	+0.5
	baz=141						
TGUH	Tegucigalpa,Un	18.57	101	P	P	22 58 30.8	-0.5
TGUH				IAmb	IAmb	22 59 07.8	
	comp=Z,20nm,0.6s						
T25A	Trinidad	18.68	4	P	Pn	22 58 33.9	+1.2
T25A	Trinidad	18.68	4	P	Pn	22 58 33.6	+1.0
	baz=185,SNR=5.4						
X37A	Clayton	18.69	29	P	P	22 58 33.2	+1.0
X37A				IAmb	IAmb	22 58 49.5	
	comp=Z,24nm,0.8s						
HEC	Hector,Ludlow	18.69	333	P	Pn	22 58 33.5	+0.8
	baz=149						
MVCO	Mesa Verde	18.81	354	P	Pn	22 58 35.4	+1.1
	baz=173						
BFSC	Mount Baldy Ra	18.82	329	P	P	22 58 34.6	+0.8
	baz=144						
V12A	Nelson	18.88	337	P	P	22 58 34.4	-0.1
Z41A	Richland Creek	18.95	36	P	P	22 58 35.5	+0.4
344A	Westbrook Farm	18.97	44	P	P	22 58 35.1	-0.3
344A				IAmb	IAmb	22 58 50.1	
	comp=Z,62nm,1.2s						
SNCC	San Nicolas Is	19.04	323	P	P	22 58 36.2	0.0
	baz=138						
TUQ	Turquoise Moun	19.04	335	P	Pn	22 58 37.6	+0.7
	baz=151						
DECC	Green Verdugo	19.16	328	P	P	22 58 38.5	+0.9
	baz=143						
SDCO	Great Sand Dun	19.23	1	P	P	22 58 39.4	+0.9
SDCO	Great Sand Dun	19.23	1	P	P	22 58 38.9	+0.4
	baz=182						
S22A	4UR Ranch, Cre	19.23	358	P	Pn	22 58 40.5	+1.0
	baz=178						
GSC	Goldstone, Bar	19.30	333	P	P	22 58 39.8	+0.8
	baz=148						
KNB	Kanab	19.42	344	P	P	22 58 41.2	+0.7
KNB				IAmb	IAmb	22 58 48.5	
	comp=Z,35nm,1.2s						
EDW2	Edwards Air Fo	19.50	329	P	P	22 58 41.3	+0.1
	baz=144						
MIAR	Mount Ida	19.52	32	P	P	22 58 41.8	+0.5
MIAR	Mount Ida	19.52	32	P	Pn	22 58 43.4	+0.8
	baz=218						
SHOC	Shoshone, Teco	19.58	335	P	P	22 58 43.3	+1.3
	baz=150						
VBMS	Vicksburg	19.61	43	P	P	22 58 43.4	+1.1
VBMS	Vicksburg	19.61	43	P	P	22 58 43.9	+1.6
	baz=229						
TUL1	Leonard	19.63	26	P	P	22 58 42.7	+0.1
TUL1				IAmb	IAmb	22 58 53.0	
	comp=Z,21nm,0.8s						
TUL1	Leonard	19.63	26	P	P	22 58 43.8	+1.3
	baz=210						
OSI	Osito Audit: C	19.65	328	P	P	22 58 43.3	+0.4
	baz=142						
SCZ2	Santa Cruz Isl	19.65	325	P	P	22 58 43.3	+0.4
	baz=139						
PV13	Radium Mtn., P	19.78	354	P	P	22 58 45.1	+0.6
LRMC	Laurel Mtn Rad	19.84	331	P	P	22 58 45.5	+0.5
	baz=146						
X40A	Basin Creek Fa	19.86	34	P	P	22 58 46.3	+1.2
GWY	Greenwater Val	19.99	334	P	P	22 58 47.2	+0.5
SBC	Santa Barbara	20.03	325	P	P	22 58 46.9	0.0
	baz=140						
ARVC	Arvin	20.10	328	P	P	22 58 49.2	+1.5
	baz=143						
T35A	Sooner Cattle	20.23	23	P	P	22 58 50.0	+0.9
MPMC	Manual Prospec	20.23	332	P	P	22 58 50.7	+1.3
	baz=148,SNR=18						
FURC	Furnace Creek,	20.31	334	P	Pn	22 58 51.8	-0.2
	baz=150						
ISA	Isabella, Lake	20.36	330	P	Pn	22 58 52.4	-0.3
	baz=145						
PKM	Mcpherson Peak	20.43	326	P	P	22 58 51.8	+0.3
	baz=140						

Q24A	Divide	20.46	2	P	Pn	22 58 54.0	0.0
	baz=183						
PRN	Pahroc Range	20.46	339	P	P	22 58 51.3	-0.5
TPNV	Topopah Spring	20.48	336	P	P	22 58 52.6	+0.6
TPNV				IAmb	IAmb	22 59 00.8	
	comp=Z,22nm,1.0s						
TPNV	Topopah Spring	20.48	336	P	P	22 58 53.6	+1.5
	baz=152,SNR=17						
BOAB	BOACO BROADBAN	20.55	104	P	P	22 58 54.0	+1.3
BOAB				IAmb	IAmb	22 59 19.9	
	comp=Z,46nm,1.1s						
SMCO	Snowmass	20.67	358	P	P	22 58 55.0	+0.7
MVU	Marysvale	20.68	346	P	P	22 58 55.4	+1.1
KSCO	Kaye Shedlock’	20.70	8	P	P	22 58 55.8	+1.4
	baz=189						
HHAR	Hobbs	20.74	29	P	P	22 58 55.0	+0.3
HHAR				IAmb	IAmb	22 59 04.9	
	comp=Z,26nm,0.8s						
VES	Vestal, Richgr	20.80	329	P	P	22 58 56.5	+1.3
	baz=143						
CWC	Cottonwood Cre	20.81	332	P	P	22 58 56.7	+1.1
	baz=147						
SMMC	Simmler	20.85	326	P	P	22 58 56.6	+0.7
	baz=140						
GRAC	Grapevine Rang	20.97	334	P	P	22 58 58.3	+1.1
	baz=149						
CBKS	Cedar Bluff	21.03	14	P	P	22 58 58.3	+0.5
CBKS	Cedar Bluff	21.03	14	P	P	22 58 59.3	+1.5
	baz=197,SNR=5.4						
ACON	Acoyapa	21.16	105	P	P	22 58 59.7	+0.3
ACON				IAmb	IAmb	22 59 28.3	
	comp=Z,36nm,1.4s						
ISCO	Idaho Springs	21.28	1	P	P	22 59 02.1	+1.4
ISCO	Idaho Springs	21.28	1	P	P	22 59 02.0	+1.2
	baz=181						
VOG	Valley Oaks Go	21.32	329	P	P	22 59 01.4	+0.5
	baz=144						
P17A	Butcher Ranch,	21.34	350	P	P	22 59 01.8	+0.6
BRAL	Brewton	21.37	50	P	P	22 59 02.2	+0.7
	baz=238						
R11B	Troy Canyon, C	21.49	339	P	P	22 59 03.6	+0.7
	baz=155,SNR=20						
DSP	Deep Springs	21.54	333	P	P	22 59 03.5	+0.3
O20A	White River Ci	21.69	356	P	P	22 59 06.0	+1.0
O20A	White River Ci	21.69	356	P	P	22 59 05.8	+0.8
	baz=175						
OXF	Oxford	21.82	40	P	P	22 59 07.9	+1.6
	baz=227						
Z47A	Carrollton	21.82	44	P	P	22 59 06.6	+0.3
LCAR	Lake Charles	21.95	34	P	P	22 59 08.3	+0.6
LCAR				IAmb	IAmb	22 59 16.4	
	comp=Z,20nm,1.2s						
JTS	Las Juntas de	21.99	109	P	P	22 59 06.9	-1.4
	comp=Z,1.9nm,0.4s,baz=290,slow=12,SNR=1.7						
JTS				LR	LR	23 06 18.8	
	comp=Z,61nm,18.7s,baz=274,slow=33						
	comp=Z,1.9nm,0.4s						
MLAC	Mammoth, Mammo	22.14	332	P	P	22 59 10.7	+0.8
	baz=147						
KSU1	Kansas State U	22.16	20	P	P	22 59 10.6	+0.7
KSU1				IAmb	IAmb	22 59 23.7	
	comp=Z,29nm,0.8s						
KSU1	Kansas State U	22.16	20	P	P	22 59 11.3	+1.4
	baz=204						
S39A	Bolivar	22.18	28	P	P	22 59 10.5	+0.3
S39A				IAmb	IAmb	22 59 16.2	
	comp=Z,26nm,0.9s						
MDPB	Devils Postpil	22.25	332	P	P	22 59 11.3	+0.1
MDPB				IAmb	IAmb	22 59 16.8	
	comp=Z,31nm,1.2s						
250A	Grady	22.37	49	P	P	22 59 11.8	-0.4
N23A	Red Feather La	22.37	0	P	P	22 59 13.7	+1.3
	baz=180						
DUG	Dugway, Tooele	22.43	346	P	P	22 59 13.8	+0.8
DUG	Dugway, Tooele	22.43	346	P	P	22 59 13.9	+0.8
	baz=163,SNR=7.8						
LRAL	Lakeview Retre	22.44	46	P	P	22 59 13.5	+0.5
LRAL				IAmb	IAmb	22 59 16.7	
	comp=Z,22nm,1.0s						
LRAL	Lakeview Retre	22.44	46	P	P	22 59 14.4	+1.4
	baz=234,SNR=11						
LHV	Little Huntoon	22.51	334	P	P	22 59 14.2	+0.6
LHV				IAmb	IAmb	22 59 18.6	
	comp=Z,22nm,1.3s						
NV11	Mina Array Sit	22.52	335	P	P	22 59 14.1	+0.1
NV11				IAmb	IAmb	22 59 17.5	
	comp=Z,20nm,1.2s						
NVAR	Mina Array Bea	22.58	334	P	P	22 59 15.7	+1.0
	comp=Z,10.0nm,1.1s,baz=153,slow=9.7,SNR=28						
NVAR				LR	LR	23 06 58.4	
	comp=Z,165nm,21.0s,baz=212,slow=34						
	comp=Z,10.0nm,1.1s						
NVAR	Mina Array Bea	22.58	334	P	P	22 59 14.7	+0.1
OGNE	Ogallala	22.69	8	P	P	22 59 16.1	+0.5
	baz=190						
CTU	Camp Tracy	22.70	349	P	P	22 59 16.0	+0.2
CTU				IAmb	IAmb	22 59 38.3	
	comp=Z,16nm,1.2s						
KVN	Kaiserville	23.03	336	P	P	22 59 19.4	0.0
KVN				IAmb	IAmb	22 59 50.9	
	comp=Z,18nm,1.5s						
352A	Blakely	23.09	52	P	P	22 59 20.4	+0.5
352A				IAmb	IAmb	22 59 28.0	
	comp=Z,26nm,0.9s						
RIMA	Rio Macho	23.19	109	P	P	22 59 21.7	+0.5
RIMA				IAmb	IAmb	22 59 41.1	
	comp=Z,12nm,1.0s						
SPUT	South Promonto	23.43	348	P	P	22 59 23.3	-0.1
SPUT				IAmb	IAmb	22 59 42.5	
	comp=Z,15nm,1.3s						
CCM	Cathedral Cave	23.44	31	P	P	22 59 23.2	-0.1
CCM	Cathedral Cave	23.44	31	P	P	22 59 24.0	+0.7
	baz=218						
HWUT	Hardware Ranch	23.55	350	P	P	22 59 24.5	-0.1
ELK	Elko	23.57	342	P	P	22 59 24.5	-0.4
	comp=Z,1.5nm,0.8s,baz=170,slow=5.9,SNR=4.4						
ELK				LR	LR	23 08 09.4	
	comp=Z,364nm,18.2s,baz=172,slow=35						
	comp=Z,1.5nm,0.8s						
ELK	Elko	23.57	342	P	P	22 59 24.0	-0.8
P38A	Dawn	23.73	25	P	P	22 59 26.0	-0.1
P38A				IAmb	IAmb	22 59 41.6	
	comp=Z,23nm,1.0s						
FVM	French Village	23.79	32	P	P	22 59 26.6	-0.1
FVM				IAmb	IAmb	22 59 28.6	
	comp=Z,33nm,1.4s						
BGNE	Belgrade	23.87	15	P	P	22 59 28.5	+1.0
	baz=199						
BMN	Battle Mountai	23.92	339	P	P	22 59 27.8	-0.3
BMN				IAmb	IAmb	22 59 33.3	
	comp=Z,14nm,1.1s						
656A	Willston	24.06	59	P	P	22 59 29.6	+0.2
TIGA	Tifton	24.08	53	P	P	22 59 30.1	+0.5
TIGA				IAmb	IAmb	22 59 53.0	
	comp=Z,23nm,0.9s						
TIGA	Tifton	24.08	53	P	P	22 59 30.5	+1.0
	baz=243						
K22A	Casper	24.13	359	P	P	22 59 30.7	+0.6
	baz=179						
SIUC	Southern Illin	24.21	34	P	P	22 59 30.7	0.0
SIUC				IAmb	IAmb	22 59 41.2	
	comp=Z,20nm,0.9s						
FPAL	Fort Paine	24.26	45	P	P	22 59 31.4	+0.2
BW06	Boulder Array	24.42	354	P	P	22 59 33.4	+0.6
	baz=172						
PD31	Pinedale Array	24.42	354	P	P	22 59 32.6	-0.2
PDAR	Pinedale Array	24.42	354	P	P	22 59 33.2	+0.4
	comp=Z,0.6nm,0.8s,baz=160,slow=10.0,SNR=6.9						
PDAR				LR	LR	23 09 08.4	
	comp=Z,262nm,19.4s,baz=182,slow=36						
	comp=Z,0.6nm,0.8s						
PDAR	Pinedale Array	24.42	354	P	P	22 59 32.7	-0.1
DWPF	Disney Wildern	24.55	62	P	P	22 59 33.6	-0.3
DWPF	Disney Wildern	24.55	62	P	P	22 59 35.1	+1.2
	baz=252						
W50A	Signal Mountai	24.85	44	P	P	22 59 36.1	-0.5
ORV	Oroville	24.91	331	P	P	22 59 37.2	+0.2
ORV				IAmb	IAmb	22 59 42.0	
	comp=Z,23nm,1.2s						
154A	Montrose	25.00	51	P	P	22 59 38.6	+0.7
SNOW	Snow King Moun	25.25	352	P	P	22 59 41.1	+0.8
SNOW				IAmb	IAmb	22 59 45.7	
	comp=Z,17nm,1.0s						
OLIL	Olney	25.55	34	P	P	22 59 42.6	-0.2
SCIA	State Center	25.83	22	P	P	22 59 46.8	+1.5
	baz=209						
HLID	Hailey	26.00	346	P	P	22 59 46.9	-0.2
HLID	Hailey	26.00	346	P	P	22 59 48.1	+1.0
	baz=162						
TKL	Tuckaleechee C	26.13	45	P	P	22 59 48.9	+0.7
	comp=Z,6.7nm,0.9s,baz=204,slow=14,SNR=5.2						
	comp=Z,6.7nm,0.9s						
TKL	Tuckaleechee C	26.13	45	P	P	22 59 48.3	+0.1
TKL				IAmb	IAmb	22 59 56.5	
	comp=Z,12nm,0.8s						
H17A	Grant Village	26.14	353	P	P	22 59 49.8	+1.3
	baz=170						
WCI	Wyandotte Cave	26.19	37	P	P	22 59 48.9	+0.2
WCI				IAmb	IAmb	22 59 55.6	
	comp=Z,15nm,0.9s						
WCI	Wyandotte Cave	26.19	37	P	P	22 59 50.3	+1.6
	baz=227						
BG3	Lake Jocassee	26.34	47	P	P	22 59 50.9	+0.9
HDIL	Hopedale	26.34	30	P	P	22 59 50.2	+0.3
HDIL	Hopedale	26.34	30	P	P	22 59 51.3	+1.4
	baz=218						
ECSD	EROS Data Cent	26.44	16	P	P	22 59 53.3	+2.5
	baz=200,SNR=6.7						
RLMT	Red Lodge	26.73	355	P	P	22 59 54.9	+1.2
	baz=173						
TZTN	Tazewell	26.80	43	P	P	22 59 55.3	+1.1
	baz=234						
PAULI	Pauline	27.02	48	P	P	22 59 56.8	+0.6
YBH	Yreka Blue Hor	27.21	332	LR	LR	23 10 11.8	
	comp=Z,136nm,19.0s,baz=156,slow=35						
L42A	Oliver, Polo	27.33	27	P	P	22 59 58.5	-0.3
NHSC	New Hope	27.41	53	P	P	23 00 01.5	+1.8
	baz=244						
BOZ	Bozeman (W)	27.46	352	P	P	23 00 01.1	+0.9
	baz=169						
KMSC	Kings Mountain	27.53	48	P	P	23 00 02.5	+1.7
	baz=239						
I37A	Lemond, Waseca	27.63	20	P	P	23 00 01.7	+0.2
LRM	Limekiln Ridge	27.80	350	P	P	23 00 02.9	-0.5
JFWS	Jewell Farm	27.83	25	P	P	23 00 04.9	+1.6
	baz=214						
P49A	Miami Univ. Ec	27.98	37	P	P	23 00 05.0	+0.3
P49A	Miami Univ. Ec	27.98	37	P	P	23 00 05.6	+0.8
	baz=227						
LAO	LASA Array	28.16	360	P	P	23 00 06.3	0.0
	baz=180						
O48B	Farmland	28.23	35	P	P	23 00 06.7	-0.3
	baz=226						
L44A	Lake County Fo	28.25	29	P	P	23 00 06.8	-0.4
	baz=219						
HRY	Holter Researc	28.58	352	P	P	23 00 10.6	+0.4
SPMN	Marine on St.	28.90	20	P	P	23 00 13.6	+0.7
	baz=207						
MSO	Missoula	29.03	349	P	P	23 00 14.4	+0.2
MSO				IAmb	IAmb	23 00 18.0	
	comp=Z,13nm,1.1s						
MSO	Missoula	29.03	349	P	P	23 00 15.8	+1.6
	baz=165						
ACSO	Alum Creek Sta	29.44	38	P	P	23 00 19.9	+2.2
	baz=229						
P52A	Corning	29.56	39	P	P	23 00 20.9	+2.1
	baz=231						
EGMT	Eagleton	29.65	355	P	P	23 00 19.7	+0.1
EGMT				IAmb	IAmb	23 00 42.2	
	comp=Z,17nm,1.4s						
EGMT	Eagleton	29.65	355	P	P	23 00 20.6	+1.0
	baz=173						
MDND	Maddock	29.79	9	P	P	23 00 21.2	+0.4
	baz=192						
AAM	Ann Arbor	30.47	34	P	P	23 00 27.8	+1.0
	baz=225						
O53A	New Philadelph	30.50	39	P	P	23 00 27.9	+0.8
	baz=232						
AGMN	Agassiz Nation	30.91	13	P	P	23 00 31.6	+1.0
	baz=199						
COWI	Conover	30.93	23	P	P	23 00 31.0	+0.1
NEW	Newport	31.07	346	LR	LR	23 12 32.0	
	comp=Z,200nm,19.2s,baz=164,slow=35						
NEW	Newport	31.07	346	P	P	23 00 33.0	+0.9
	baz=160						
EYMN	Ely	31.73	19	P	P	23 00 38.5	+0.6
	baz=207						
OTAV	Otavalo	32.62	121	P	P	23 00 46.2	-0.3
OTAV				IAmb	IAmb	23 00 50.7	
	comp=Z,10nm,1.3s						
PULU	Pululahua	32.70	121	P	P	23 00 46.8	-0.4
ULM	Lac du Bonnet	32.76	12	P	P	23 00 47.4	+0.6
	comp=Z,3.2nm,0.7s,baz=182,slow=9.6,SNR=4.8						
ULM				LR	LR	23 14 29.5	
	comp=Z,465nm,21.6s,baz=192,slow=37						
	comp=Z,3.2nm,0.7s						
SSPA	Standing Stone	32.78	42	P	P	23 00 47.2	+0.1
	baz=236						
PORT	Chimborazo Vol	33.36	124	P	P	23 00 52.4	-0.8
PORT				IAmb	IAmb	23 00 57.4	
	comp=Z,5.1nm,0.8s						
RUSC	La Rusia	34.50	107	P	P	23 01 02.5	-0.5
RUSC				IAmb	IAmb	23 01 20.8	
	comp=Z,9.0nm,1.1s						
BINY	Binghamton	34.83	41	P	P	23 01 06.2	+1.1
	baz=236						
PAL	Palisades	35.54	44	P	P	23 01 10.9	-0.2
	baz=240						
SDV	Santo Domingo	35.66	101	P	P	23 01 12.4	-0.3
SDV				IAmb	IAmb	23 01 37.4	
	comp=Z,14nm,1.2s						
FFC	Flin Flon	36.34	4	P	P	23 01 17.8	0.0
FFC				IAmb	IAmb	23 01 23.2	
	comp=Z,5.6nm,0.9s						
HRV	Adam Dziewonsk	37.80	43	P	P	23 01 30.4	0.0
	baz=241						
BBB	Bella Bella	37.85	338	LR	LR	23 16 52.2	
	comp=Z,144nm,18.9s,baz=158,slow=36						
BAUV	El Baul	38.07	99	P	P	23 01 32.6	-0.3
BAUV				IAmb	IAmb	23 01 43.4	
	comp=Z,17nm,1.0s						
PKME	Peaks-Kenny Pk	40.57	41	P	P	23 01 54.2	+0.7
	baz=241						
FCC	Fort Churchill	41.20	9	P	P	23 01 58.1	-0.3
FCC				IAmb	IAmb	23 02 04.0	
	comp=Z,6.2nm,0.8s						
T35M	Bob Quinn	42.49	341	P	P	23 02 09.7	+0.6
	baz=145						
TAOE	Nuku Hiva Isla	43.20	234	*e*LR	LR	23 14 02.5	
	comp=Z,211nm,23.8s						
KOTAN	Kotaneelee Air	43.59	347	P	P	23 02 18.2	+0.3
	baz=155						
DLBC	Dease Lake	43.63	342	LR	LR	23 20 51.9	
	comp=Z,238nm,19.3s,baz=144,slow=36						
DLBC	Dease Lake	43.63	342	P	P	23 02 18.3	0.0
	baz=146						
YKA	Yellowknife Ar	44.40	354	P	P	23 02 22.9	-1.4
	comp=Z,0.6nm,0.9s,baz=169,slow=7.0,SNR=6.6						
YKA				LR	LR	23 21 57.2	
	comp=Z,308nm,18.0s,baz=116,slow=37						
	comp=Z,0.6nm,0.9s						
P33M	Teslin, Yukon	45.91	342	P	P	23 02 36.5	0.0
	baz=144						
WRGLY	Wrigley	46.31	349	P	P	23 02 40.2	+0.6
	baz=157						
SCHQ	Schefferville	47.01	30	P	P	23 02 47.0	+1.8
	comp=Z,1.6nm,0.8s,baz=237,slow=13,SNR=2.8						
	comp=Z,1.6nm,0.8s						
O30N	Mendenhall	47.35	341	P	P	23 02 47.2	-0.6
	baz=140						
MMPY	Sheldon Lake,	47.46	345	P	P	23 02 48.6	0.0
	baz=147,SNR=5.9						
N31M	Braeburn, Yuko	47.81	341	P	P	23 02 51.4	+0.1
	baz=141						
M31M	Drury Creek, Y	47.96	343	P	P	23 02 53.0	+0.6
	baz=143						
O28M	Mount Upton	48.72	339	P	P	23 02 59.1	+0.5
	baz=135						
YUK8	Steele Glacier	48.94	339	P	P	23 03 00.3	0.0
	baz=136						
M30M	Minto, Yukon	48.95	342	P	P	23 03 00.1	0.0
	baz=140						
YUK3	Moose Creek	49.52	339	P	P	23 03 05.2	+0.5
	baz=135						
L29M	L29M	49.76	342	P	P	23 03 07.3	+1.0
	baz=139						
MCARA	McCarthy VSAT	50.14	338	P	P	23 03 09.7	+0.5
	baz=132						
K29M	Barlow Dome	50.14	342	P	P	23 03 08.7	-0.6
	baz=140						
M27K	Edge Creek, AK	50.41	339	P	P	23 03 12.6	+1.3
	baz=134						
M26K	Nabesna, AK	50.81	339	P	P	23 03 14.8	+0.5
	baz=133						
DAWY	Dawson	50.85	342	P	P	23 03 14.2	-0.3
	baz=138						
N25K	Chitina, Valde	50.85	337	P	P	23 03 14.7	0.0
	baz=130						
LPAZ	La Paz	50.86	130	P	P	23 03 13.8	-2.1
	comp=Z,0.5nm,0.7s,baz=278,slow=10,SNR=1.8						
	comp=Z,0.5nm,0.7s						
L27K	Beaver Creek,	50.88	340	P	P	23 03 15.4	+0.7
	baz=134						
P23K	Montague Islan	50.93	335	P	P	23 03 15.2	+0.1
	baz=126						
I29M	Ogilvie Camp,	51.52	343	P	P	23 03 20.0	+0.5
	baz=140						
HARP	HAARP	51.57	338	P	P	23 03 20.1	+0.1
	baz=130						
K27K	Chicken	51.64	341	P	P	23 03 21.0	+0.6
	baz=135						
M24K	Tolsona, Glenn	51.75	337	P	P	23 03 22.2	+0.9
	baz=129						
EGAK	Eagle	51.90	342	P	P	23 03 22.3	0.0
EGAK	Eagle	51.90	342	P	P	23 03 22.5	+0.2
	baz=136						
EPYK	Eagle Plains	51.90	345	P	P	23 03 22.2	-0.1
	baz=142						
FRB	Frobisher Bay	51.94	20	LR	LR	23 25 25.2	
	comp=Z,136nm,20.2s,baz=194,slow=36						
KDAK	Kodiak Island	52.00	330	LR	LR	23 22 35.8	
	comp=Z,86nm,20.4s,baz=188,slow=33						
SCM	Sheep Creek Mo	52.01	337	P	P	23 03 22.7	-0.6
	baz=128						
F31M	Tsiigehtchic	52.08	347	P	P	23 03 24.0	+0.4
	baz=146						
C36M	Paulatuk	52.09	352	P	P	23 03 23.3	-0.4
	baz=158						
SCRK	Sand Creek	52.22	340	P	P	23 03 24.9	+0.1
	baz=133						
RIDG	Independent Ri	52.34	339	P	P	23 03 25.4	-0.2
RIDG	Independent Ri	52.34	339	P	P	23 03 25.5	-0.2
	baz=132						
RC01	Rabbit Creek A	52.51	335	P	P	23 03 25.7	-1.2
	baz=124						
HOM	Homer	52.53	333	P	P	23 03 27.4	+0.4
	baz=122						
I27K	Kandik River	52.63	342	P	P	23 03 28.4	+0.6
	baz=136						
INK	Inuvik	52.76	348	LR	LR	23 26 43.8	
	comp=Z,219nm,18.6s,baz=151,slow=37						
INK	Inuvik	52.76	348	P	P	23 03 28.4	-0.2
INK	Inuvik	52.76	348	P	P	23 03 28.2	-0.4
	baz=147						
I26K	Coal Creek Min	52.87	341	P	P	23 03 29.8	+0.3
	baz=134						
SUA	Susitna One	53.12	335	P	P	23 03 32.3	+0.7
	baz=124						
HDA	Harding Lake	53.48	339	P	P	23 03 35.2	+1.2
	baz=130						
G27K	Doyon Strip	53.51	343	P	P	23 03 34.2	-0.1
	baz=137						
ILAR	Eielson Array	53.69	340	P	P	23 03 35.3	-0.3
	comp=Z,5.6nm,1.2s,baz=146,slow=5.0,SNR=16						
ILAR				LR	LR	23 28 03.2	
	comp=Z,64nm,18.3s,baz=81,slow=38						
	comp=Z,5.6nm,1.2s						
ILAR	Eielson Array	53.69	340	P	P	23 03 34.7	-0.9
SKT	Skwentna	53.72	335	P	P	23 03 35.7	-0.1
	baz=123						
PRP	Porcupine Dome	53.74	341	P	P	23 03 35.6	-0.5
	baz=132						
MCK	McKinley	53.75	338	P	P	23 03 35.3	-0.7
	baz=127						
Q17K	Contact Creek	53.78	330	P	P	23 03 35.5	-1.0
	baz=116						
P18K	Big Mountain,	53.99	331	P	P	23 03 37.3	-0.6
	baz=118						
TRF	Thorofare Moun	54.07	337	P	P	23 03 38.2	-0.3
	baz=125						
POKR	Poker Plat Res	54.09	340	P	P	23 03 38.0	-0.5
	baz=129						
G26K	Porcupine Rive	54.20	343	P	P	23 03 39.4	+0.1
	baz=134						
R16K	Pilot Point	54.31	329	P	P	23 03 39.0	-1.1
	baz=114						
M20K	Styx River	54.31	335	P	P	23 03 39.3	-0.9
	baz=121						
NEA2	Nenana	54.31	339	P	P	23 03 39.9	-0.2
	baz=127						
Q16K	King Salmon	54.33	330	P	P	23 03 39.4	-0.9
	baz=116						
N19K	Bonanza Creek	54.33	333	P	P	23 03 39.7	-0.8
	baz=119						
PPLA	Purkeypile	54.48	336	P	P	23 03 40.9	-0.6
	baz=123						
E27K	Coleen River	54.51	345	P	P	23 03 41.7	+0.2
	baz=138						
H24K	Noodor Dome	54.69	340	P	P	23 03 42.7	-0.3
H24K				IAmb	IAmb	23 04 11.9	
	comp=Z,9.9nm,1.4s						
H24K	Noodor Dome	54.69	340	P	P	23 03 43.2	+0.2
	baz=129						
A36M	Sachs Harbour	54.70	353	P	P	23 03 43.3	+0.6
	baz=158						
BPAW	Bear Paw Mtn.	54.70	338	P	P	23 03 43.1	+0.2
	baz=125						
CAST	Castle Rocks	54.72	337	P	P	23 03 42.7	-0.4
CAST				IAmb	IAmb	23 03 46.5	
	comp=Z,9.6nm,1.5s						
CAST	Castle Rocks	54.72	337	P	P	23 03 43.1	0.0
	baz=123						
G25K	Bearman Lake	54.75	342	P	P	23 03 42.8	-0.4
	baz=132						
I23K	Minto, Yukon-K	54.75	339	P	P	23 03 43.1	-0.2
	baz=127						
BMAR	Burnt Mountain	54.76	343	P	P	23 03 43.3	-0.1
L20K	Farewell, AK	54.92	335	P	P	23 03 44.7	+0.2
	baz=121						
O17K	Koliganek Bris	55.01	331	P	P	23 03 45.0	-0.2
	baz=116						
P16K	Nushagak River	55.11	330	P	P	23 03 46.0	0.0
	baz=114						
G24K	Hadweenzic Riv	55.12	341	P	P	23 03 46.0	+0.1
	baz=130						
MLY	Manley	55.15	339	P	P	23 03 46.5	+0.3
	baz=126						
F25K	Christian Rive	55.17	343	P	P	23 03 47.2	+0.8
	baz=133						
K20K	Telida	55.45	336	P	P	23 03 47.9	-0.5
	baz=121						
I21K	Tanana	55.67	338	P	P	23 03 49.1	-0.8
	baz=124						
F24K	Squaw Lake	55.77	342	P	P	23 03 50.6	-0.1
	baz=130						
PPT2	Papeete2	55.79	233	*e*LR	LR	23 19 52.0	
	comp=Z,156nm,22.2s						
PPT2				*e*LR	LR	23 19 52.0	
	comp=Z,230nm,26.8s						
G23K	Bananza Creek	55.92	341	P	P	23 03 51.5	-0.2
	baz=128						
S12K	Black Hills	55.95	326	P	P	23 03 52.2	+0.1
	baz=108						
SIV	San Ignacio	55.99	125	P	P	23 03 50.5	-2.4
	comp=Z,0.2nm,0.3s,baz=19,slow=8.4,SNR=3.1						
	comp=Z,0.2nm,0.3s						
N16K	Nishlik Lake	56.06	332	P	P	23 03 52.5	-0.3
	baz=115						
C27K	Jago River	56.09	345	P	P	23 03 53.4	+0.5
	baz=136						
H21K	Melozitna Rive	56.22	339	P	P	23 03 53.0	-0.8
	baz=124						
COLD	Coldfoot	56.29	341	P	P	23 03 54.3	0.0
	baz=128						
E24K	Your Creek	56.30	342	P	P	23 03 54.9	+0.4
	baz=130						
D25K	Kavik River	56.55	344	P	P	23 03 55.9	-0.4
	baz=133						
RES	Resolute Bay	56.58	4	LR	LR	23 28 51.5	
	comp=Z,236nm,18.5s,baz=186,slow=37						
E23K	Chandalar	56.62	342	P	P	23 03 56.9	+0.1
	baz=129						
G21K	Allakaket	56.94	339	P	P	23 03 58.1	-0.8
	baz=124						
TOLK	Toolik Lake Re	56.98	342	P	P	23 03 59.2	-0.1
	baz=129						
F22K	John River	57.07	341	P	P	23 03 59.9	0.0
	baz=126						
D24K	Happy Valley	57.09	343	P	P	23 04 00.0	0.0
	baz=130						
F21K	Alatna River	57.32	340	P	P	23 04 01.8	+0.1

	baz=124						
D23K	Nanushuk River	57.49	343	P	P	23 04 04.0	+1.1
	baz=128						
H03N2	Juan Fernandez	57.74	153	T	T	00 06 40.8	
	baz=331,slow=77,SNR=15						
H03N1	Juan Fernandez	57.75	153	T	T	00 06 42.6	
	baz=331,slow=77,SNR=20						
H03N3	Juan Fernandez	57.76	153	T	T	00 06 39.4	
	baz=331,slow=77,SNR=19						
TBI	Tubuai	59.33	227	*e*LR	LR	23 21 30.6	
	comp=Z,5μm,23.5s						
TBI				*e*LR	LR	23 21 31.0	
	comp=Z,1μm,24.5s						
ANM	Nome	60.46	335	P	P	23 04 24.0	+0.5
	baz=110						
RDOG	Red Dog Mine	60.87	339	P	P	23 04 26.2	-0.1
RDOG				IAmb	IAmb	23 04 28.8	
	comp=Z,5.3nm,1.0s						
RDOG	Red Dog Mine	60.87	339	P	P	23 04 25.7	-0.6
	baz=115						
DY2G	Dye2	61.33	23	*e*P	P	23 04 26.6	-3.1
TNA	Tin City	61.81	335	P	P	23 04 31.8	-0.8
	baz=108						
MURT	Porto Murtinho	61.96	128	*e*P	P	23 04 35.3	+1.0
EUNU	Eureka	62.28	4	P	P	23 04 35.5	-0.1
EUNU				IAmb	IAmb	23 04 37.7	
	comp=Z,4.3nm,1.1s						
ICESG	Greenland Ices	64.54	21	*e*P	P	23 04 49.5	-1.6
NEEM	North Greenlan	64.78	11	*i* P	P	23 04 51.8	-0.7
NEEM				IAmb	IAmb	23 05 02.5	
	comp=Z,14nm,0.9s						
RAR	Rarotonga	65.72	236	LR	LR	23 24 39.2	
	comp=Z,178nm,20.3s,baz=44,slow=28						
SUMG	Summit	65.87	18	*i* P	P	23 04 57.4	-2.4
SHEM	Shemya Is, Ala	69.41	320	LR	LR	23 27 18.9	
	comp=Z,64nm,21.2s,baz=350,slow=29						
SCO	Scoresbysund	70.80	21	*e*P	P	23 05 24.3	-5.8
DAG	Danmarks Havn	71.58	14	*e*P	P	23 05 33.0	-1.8
NOR	Nord	71.78	9	*e*P	P	23 05 37.1	+1.1
BBTS	Babate	85.04	76	LR	LR	23 41 55.0	
	comp=Z,94nm,20.0s,baz=320,slow=34						
DBIC	Dimbokro	98.46	80	LR	LR	23 48 28.1	
	comp=Z,55nm,19.3s,baz=317,slow=33						

IDC ***29*** *22:56:45.3±0.5, 22°.50S×12°.58W, h0^{km}, mb4.4/26, mbtmp4.4/26, MS4.5/58, Error ellipse: s-maj=16.2km s-min=12.5km az=165.0*

MOS ***29*** *22:56:45.8±0.9, 22°.49S×12°.51W, h10^{km}, mb5.1/40, Error ellipse: s-maj=12.8km s-min=7.6km az=52.3*

NEIC ***29*** *22:56:48.2±1.2, 22°.40S±0°.10×12°.4W±0°.1, h10^{km}±1^{km}, mb5.1/112, Error ellipse: s-maj=18.4km s-min=13.8km az=143.0*

GCMT ***29*** *22:56:50.2±0.1, 22°.44S±0°.01×12°.63W±0°.01, h12^{km}, MW5.3/139, Moment Tensor Solution. s96,c159; s139,c245; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.04±.01; $M_{\theta\theta}$-0.41±.01; $M_{\phi\phi}$0.44±.01; $M_{r\theta}$-0.02±.04; $M_{\theta\phi}$0.90±.01; $M_{\phi r}$0.06±.04; Best double couple: $M_0$0.99700×10^{17} NP1:ϕ_s167.00000°, δ90.00000°, λ-177.00000°. NP2:ϕ_s77.00000°, δ87.00000°, λ0.00000°. Principal axes: T 1.0160, Plg2.0000°, Azm302.0000°; N -0.0390, Plg87.0000°, Azm174.0000°; P -0.9780, Plg3.0000°, Azm32.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 22:56:47.3±0.3**, 22°.39S**±0°.07×**12°.50W**±0°.06**, h9^{km}, n375, σ1^{s}50**/344**, mb5.0**/105**, MS4.6**/65**, 31C-23D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SHEL	Horse Pasture	9.04	46	Pn	Pn	22 58 57.1	-0.9
SHEL	Horse Pasture	9.04	46	P	Pn	22 58 57.2	-0.9
H10S2	ASCENSION HYDR	13.52	351	T	T	23 13 51.3	
	baz=170,slow=74,SNR=92						
H10S3	ASCENSION HYDR	13.53	351	T	T	23 13 52.0	
	baz=50,slow=74,SNR=182						
H09N1	TRISTAN DA CUN	14.62	179	T	T	23 15 18.1	
	SNR=9.7						
H09W1	TRISTAN DA CUN	14.65	179	T	T	23 15 23.6	
	SNR=7.3						
NAN01	Guarapari, ES	26.31	275	*e*P	P	23 02 25.1	+1.5
CMC01	Camacan, BA	26.48	281	*e*P	P	23 02 26.6	+1.5
WIN	Windhoek	27.33	96	P	P	23 02 31.8	-1.2
WIN				IAmb	IAmb	23 02 43.4	
	comp=Z,58nm,1.1s						
WIN	Windhoek	27.33	96	P	P	23 02 31.8	-1.2
WIN				pmax	pmax		
	comp=Z,58nm,1.1s						
WIN	Windhoek	27.33	96	*e*P	P	23 02 34.8	+1.8
TSUM	Tsumeb	28.28	89	P	P	23 02 41.0	-0.4
	comp=Z,4.4nm,0.8s,baz=263,slow=13,SNR=5.6						
TSUM				LR	LR	23 11 44.8	
	comp=Z,834nm,21.0s,baz=262,slow=32						
	comp=Z,4.4nm,0.8s						
TSUM	Tsumeb	28.28	89	P	P	23 02 40.3	-1.1
TSUM				IAmb	IAmb	23 02 53.5	
	comp=Z,27nm,1.1s						
TSUM	Tsumeb	28.28	89	*e*P	P	23 02 42.8	+1.4
ARMS	Ukamas	29.65	108	*e*P	P	23 02 56.0	+2.5
DBIC	Dimbokro	29.84	15	P	P	23 02 55.0	0.0
	comp=Z,11nm,0.8s,baz=194,slow=8.5,SNR=12						
DBIC				LR	LR	23 12 04.0	
	comp=Z,1μm,19.7s,baz=198,slow=31						
	comp=Z,11nm,0.8s						
DBIC	Dimbokro	29.84	15	P	P	23 02 54.9	-0.2
DBIC	Dimbokro	29.84	15	P	P	23 02 54.9	-0.2
DBIC				pmax	pmax		
	comp=Z,14nm,0.9s						
DBIC	Dimbokro	29.84	15	*e*P	P	23 02 54.5	-0.5
DBIC				IAmb	IAmb	23 02 57.9	
	comp=Z,31nm,1.4s						
CER	Ceres	30.04	118	*e*P	P	23 02 58.8	+2.0
JANB	Januaria	30.95	278	*e*P	P	23 03 03.3	-1.7
SUR	Sutherland	31.09	116	P	P	23 03 06.9	+0.6
	comp=Z,11nm,1.1s,baz=288,slow=6.6,SNR=5.6						
SUR				LR	LR	23 12 45.0	
	comp=Z,1μm,21.4s,baz=274,slow=31						
	comp=Z,11nm,1.1s						
SUR	Sutherland	31.09	116	P	P	23 03 04.9	-1.4
SUR	Sutherland	31.09	116	*e*P	P	23 03 07.4	+1.1
SUR				IAmb	IAmb	23 03 15.0	
	comp=Z,153nm,1.8s						
PMNB	Patos De Minas	31.99	271	*e*P	P	23 03 12.8	-1.4
GRAN	Grantham	32.22	115	*e*P	P	23 03 16.3	+0.3
SDBA	SAO DESIDERIO	32.41	282	*e*P	P	23 03 16.4	-1.4
BB19B	Bebedouro	33.45	265	*e*P	P	23 03 29.2	+2.3
BDFB	Brasilia	34.18	275	P	P	23 03 31.7	-1.7
	comp=Z,3.2nm,0.7s,baz=114,slow=8.2,SNR=4.1						
BDFB				LR	LR	23 14 42.8	
	comp=Z,1μm,21.9s,baz=110,slow=32						
	comp=Z,3.2nm,0.7s						
BDFB	Brasilia	34.18	275	P	P	23 03 33.5	+0.1
BDFB				IAmb	IAmb	23 03 34.5	
	comp=Z,50nm,1.8s						
BDFB	Brasilia	34.18	275	*e*P	P	23 03 32.7	-0.7
BOSA	Boshof	34.53	108	P	P	23 03 36.5	+0.1
	comp=Z,12nm,0.7s,baz=279,slow=7.2,SNR=24						
BOSA				LR	LR	23 15 05.1	
	comp=Z,1μm,21.2s,baz=274,slow=32						
	comp=Z,12nm,0.7s						
BOSA	Boshof	34.53	108	P	P	23 03 35.6	-0.8
BOSA				IAmb	IAmb	23 03 41.3	
	comp=Z,15nm,0.8s						
BOSA	Boshof	34.53	108	P	P	23 03 35.6	-0.8
BOSA				pmax	pmax		
	comp=Z,15nm,0.8s						
BOSA	Boshof	34.53	108	*e*P	P	23 03 36.4	+0.1
BOSA				IAmb	IAmb	23 03 40.7	
	comp=Z,17nm,0.8s						
LBTB	Lobatse	34.91	102	P	P	23 03 39.1	-0.5
	comp=Z,12nm,0.6s,baz=265,slow=8.3,SNR=18						
LBTB				LR	LR	23 15 33.5	
	comp=Z,1μm,21.3s,baz=260,slow=32						
	comp=Z,12nm,0.6s						
LBTB	Lobatse	34.91	102	P	P	23 03 38.9	-0.7
LBTB				IAmb	IAmb	23 03 49.7	
	comp=Z,21nm,0.9s						
LBTB	Lobatse	34.91	102	P	P	23 03 38.9	-0.7
LBTB				pmax	pmax		
	comp=Z,21nm,0.9s						
LBTB	Lobatse	34.91	102	*e*P	P	23 03 40.5	+0.9
LBTB				IAmb	IAmb	23 03 49.5	
	comp=Z,20nm,0.9s						
SOE	Somerset East	35.11	115	P	P	23 03 41.1	-0.2
GRHM	Grahamstown, E	35.86	116	P	P	23 03 47.4	-0.3
PCMB	Pacaembu	35.88	264	*e*P	P	23 03 47.1	-0.8
HRAO	HartRAO	36.74	104	*e*P	P	23 03 55.9	+0.5
BBTS	Babate	37.04	354	LR	LR	23 16 48.8	
	comp=Z,1μm,18.1s,baz=198,slow=32						
PLTB	Pedras Altas	37.59	247	P	P	23 04 02.6	+0.3
PLTB				IAmb	IAmb	23 05 19.3	
	comp=Z,34nm,1.4s						
PLTB	Pedras Altas	37.59	247	*e*P	P	23 04 02.8	+0.5
ARAG	Araguaiana, MT	37.67	273	*e*P	P	23 04 02.7	-0.5
TOA0	Torodi Ar. Sit	37.96	23	P	P	23 04 05.3	-0.3
TOA0				IAmb	IAmb	23 04 08.8	
	comp=Z,46nm,0.9s						
TORD	Torodi Ar. Bea	37.96	23	P	P	23 04 05.8	+0.2
	comp=Z,34nm,0.7s,baz=199,slow=8.5,SNR=9.4						
TORD				LR	LR	23 16 38.3	
	comp=Z,1μm,20.8s,baz=199,slow=31						
	comp=Z,34nm,0.7s						
TORD	Torodi Ar. Bea	37.96	23	P	P	23 04 05.3	-0.3
TORD				IAmb	IAmb	23 04 08.8	
	comp=Z,45nm,1.0s						
RODS	Rosario do Sul	38.89	249	*e*P	P	23 04 14.1	+0.8
LSZ	Lusaka	39.06	87	P	P	23 04 16.3	+1.2
	comp=Z,7.5nm,0.8s,baz=255,slow=7.8,SNR=10						
LSZ				LR	LR	23 19 14.0	
	comp=Z,492nm,19.4s,baz=258,slow=34						
	comp=Z,7.5nm,0.8s						
LSZ	Lusaka	39.06	87	P	P	23 04 14.7	-0.4
LSZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HOED	Hoedspruit, Li	39.79	102	*e*P	P	23 04 21.0	0.0
HAGI	HAGI	39.87	104	*e*P	P	23 04 22.2	+0.5
TMAB	Tom-Au,PA,Br	39.87	295	*e*P	P	23 04 21.4	-0.3
MMAL	MMAL	39.89	104	*e*P	P	23 04 23.8	+2.0
AQDB	Aquidauana	40.16	264	P	P	23 04 24.5	+0.5
AQDB	Aquidauana	40.16	264	*e*P	P	23 04 23.9	-0.1
CPUP	Villa Florida	40.88	255	P	P	23 04 28.5	-1.4
	comp=Z,4.2nm,1.0s,baz=90,slow=7.2,SNR=4.0						
CPUP				LR	LR	23 18 56.3	
	comp=Z,598nm,19.2s,baz=102,slow=33						
	comp=Z,4.2nm,1.0s						
CPUP	Villa Florida	40.88	255	P	P	23 04 30.0	+0.1
CPUP	Villa Florida	40.88	255	P	P	23 04 30.0	+0.1
CPUP				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SALV	Santo Antonio	41.20	271	*e*P	P	23 04 33.8	+1.1
PDRB	Porto dos Gac	43.49	277	*e*P	P	23 04 50.7	-0.6
NPGB	Novo Progresso	43.99	284	*e*P	P	23 04 54.8	-0.6
MCPB	Macapa, AP	44.28	294	*e*P	P	23 04 57.5	-0.2
PTLB	Pontes e Lacer	44.52	270	P	P	23 04 59.9	+0.4
PTLB				IAmb	IAmb	23 05 16.2	
	comp=Z,28nm,1.6s						
PTLB	Pontes e Lacer	44.52	270	*e*P	P	23 04 59.6	0.0
TRQA	Tornquist	44.99	238	P	P	23 05 02.2	-1.0
TRQA				IAmb	IAmb	23 05 03.9	
	comp=Z,33nm,1.2s						
TRQA	Tornquist	44.99	238	P	P	23 05 02.2	-1.0
TRQA				pmax	pmax		
	comp=Z,33nm,1.2s						
BBSD	Serra de San D	45.42	268	*e*P	P	23 05 06.3	-0.5
ITTB	Itaituba	45.49	287	*e*P	P	23 05 06.7	-0.7
SIV	San Ignacio	46.16	269	P	P	23 05 12.5	-0.2
	comp=Z,2.7nm,1.1s,baz=115,slow=14,SNR=1.8						
SIV				LR	LR	23 22 33.8	
	comp=Z,851nm,19.8s,baz=114,slow=34						
	comp=Z,2.7nm,1.1s						
VILB	Vilhena	46.24	273	P	P	23 05 13.6	+0.2
VILB				IAmb	IAmb	23 05 22.3	
	comp=Z,28nm,1.2s						
VILB	Vilhena	46.24	273	*e*P	P	23 05 15.0	+1.7
MBAR	Mbarara	47.30	69	LR	LR	23 22 22.0	
	comp=Z,336nm,20.7s,baz=220,slow=32						
MBAR	Mbarara	47.30	69	P	P	23 05 20.6	-1.2
MBAR				IAmb	IAmb	23 05 28.2	
	comp=Z,17nm,1.5s						
MBAR	Mbarara	47.30	69	⇓*e*P	P	23 05 21.1	-0.7
MBAR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MDP	Montagnes des	47.84	300	LR	LR	23 22 44.6	
	comp=Z,659nm,21.7s,baz=125,slow=33						
TAM	Tamanrasset	48.22	23	P	P	23 05 28.6	-0.1
TAM				IAmb	IAmb	23 05 34.6	
	comp=Z,11nm,0.9s						
TAM	Tamanrasset	48.22	23	P	P	23 05 28.6	-0.1
TAM				pmax	pmax		
	comp=Z,11nm,0.9s						
VNA2	Neumayer--Watz	48.64	178	P	P	23 05 34.6	+3.4
	baz=351,slow=10.0						
SNAA	Sanae	49.61	176	P	P	23 05 41.5	+2.8
SNAA	Sanae	49.61	176	P	P	23 05 36.7	-1.9
	comp=Z,5.7nm,1.1s,baz=19,slow=17,SNR=1.9						
SNAA				LR	LR	23 22 25.0	
	comp=Z,226nm,19.0s,baz=322,slow=31						
	comp=Z,5.7nm,1.1s						
SNAA	Sanae	49.61	176	P	P	23 05 39.6	+1.0
SNAA	Sanae	49.61	176	⇑*e*P	P	23 05 36.9	-1.8
SNAA				pmax	pmax		
	comp=Z,13nm,1.1s						
SNAA	Sanae	49.61	176	*e*P	P	23 05 39.5	+0.8
CFA	Coronel Fontan	50.05	247	P	P	23 05 40.6	-2.1
	comp=Z,1.7nm,0.6s,baz=92,slow=7.9,SNR=2.0						
CFA				LR	LR	23 24 40.2	
	comp=Z,422nm,18.8s,baz=100,slow=34						
	comp=Z,1.7nm,0.6s						
TROLL	Troll, Antarti	50.37	174	P	P	23 05 46.1	+1.6
MACA	Manacapuru-AM	50.44	285	P	P	23 05 45.4	-0.3
MACA				IAmb	IAmb	23 05 54.8	
	comp=Z,26nm,1.2s						
MT08	Bocatoma Ro	51.44	244	P	P	23 05 53.6	+0.3
MT08				IAmb	IAmb	23 06 09.2	
	comp=Z,46nm,1.8s						
CO01	Juntas del Tor	51.78	249	P	P	23 05 55.2	-0.7
PLCA	Paso Flores	51.80	235	P	P	23 05 54.0	-1.7
	comp=Z,4.0nm,0.9s,baz=81,slow=4.0,SNR=5.6						
PLCA				LR	LR	23 24 40.7	
	comp=Z,646nm,20.6s,baz=84,slow=32						
	comp=Z,4.0nm,0.9s						
PLCA	Paso Flores	51.80	235	P	P	23 05 55.2	-0.5
PLCA	Paso Flores	51.80	235	P	P	23 05 55.2	-0.5
PLCA				pmax	pmax		
	comp=Z,16nm,1.6s						
LVC	Limon Verde	51.84	258	LR	LR	23 26 30.2	
	comp=Z,299nm,20.4s,baz=122,slow=34						
BO02	Sierra Bellavi	52.00	243	P	P	23 05 57.6	+0.3
MT09	Talagante	52.23	244	P	P	23 05 59.2	+0.1
MT09				IAmb	IAmb	23 06 26.7	
	comp=Z,30nm,1.5s						
MT02	Curacav	52.39	245	P	P	23 06 00.4	+0.3
MT02				IAmb	IAmb	23 06 31.2	
	comp=Z,24nm,1.2s						
LCO	Las Campanas	52.42	250	P	P	23 06 00.3	-0.4
LCO				IAmb	IAmb	23 06 10.5	
	comp=Z,63nm,1.8s						
LCO	Las Campanas	52.42	250	P	P	23 06 00.3	-0.4
LCO				pmax	pmax		
	comp=Z,63nm,1.8s						
CO02	Combarbal	52.44	247	P	P	23 06 00.7	+0.1
PB08	IPOC Station P	52.58	261	P	P	23 06 00.7	-1.5
PB08				IAmb	IAmb	23 06 06.7	
	comp=Z,27nm,1.4s						
LPAZ	La Paz	52.60	266	P	P	23 06 01.2	-1.5
	comp=Z,2.1nm,0.8s,baz=88,slow=4.1,SNR=6.1						
LPAZ				LR	LR	23 28 05.0	
	comp=Z,499nm,18.9s,baz=105,slow=36						
	comp=Z,2.1nm,0.8s						
LPAZ	La Paz	52.60	266	P	P	23 06 02.0	-0.6
LPAZ	La Paz	52.60	266	P	P	23 06 02.1	-0.6
LPAZ				pmax	pmax		
	comp=Z,14nm,1.5s						
LPAZ	La Paz	52.60	266	*e*P	P	23 06 01.1	-1.5
AC01	Pan de Azucar	52.73	254	P	P	23 06 02.4	-0.3
AC01				IAmb	IAmb	23 06 22.7	
	comp=Z,38nm,1.2s						
KMBO	Kilima Mbogo	52.75	73	P	P	23 06 01.5	-1.9
KMBO	Kilima Mbogo	52.75	73	⇓*e*P	P	23 06 00.5	-2.8
PB14	IPOC Station P	52.81	255	P	P	23 06 03.2	-0.5
PB14				IAmb	IAmb	23 06 27.7	
	comp=Z,28nm,1.2s						
ETMB	Extrema	52.85	275	P	P	23 06 03.8	+0.1
ETMB	Extrema	52.85	275	*e*P	P	23 06 02.8	-1.0
LL02	Futaleuf	52.89	232	P	P	23 06 04.0	+0.3
BOAV	Boa Vista	52.93	291	*e*P	P	23 06 04.8	+0.4
MNMC	Minye Minye	53.22	262	P	P	23 06 06.5	-0.3
LODK	Lodwar	53.32	67	P	P	23 06 06.2	-1.1
PB16	IPOC Station P	53.34	263	P	P	23 06 07.5	-0.5
ELIB	Princess Elisa	53.57	167	*d*P	P	23 06 11.8	+3.4
GO08	Villa O’Higgin	53.83	226	P	P	23 06 10.7	+0.1
GO08				IAmb	IAmb	23 06 12.6	
	comp=Z,29nm,1.3s						
PMSA	Palmer Station	53.92	205	LR	LR	23 24 51.6	
	comp=Z,573nm,19.0s,baz=8.5,slow=31						
MDT	Midelt	55.41	8	LR	LR	23 27 33.1	
	comp=Z,758nm,20.9s,baz=196,slow=33						
BELA	Belgrano 2	56.53	185	P	P	23 06 29.0	-0.6
BELA				IAmb	IAmb	23 06 33.0	
	comp=Z,15nm,1.2s						
CZSB	Cruzeiro do Su	59.58	274	P	P	23 06 50.7	-1.1
CZSB	Cruzeiro do Su	59.58	274	*e*P	P	23 06 51.7	-0.2
PVAQ	Vaqueiros	59.65	4	P	P	23 06 51.6	-0.2
PVAQ				IAmb	IAmb	23 08 45.1	
	comp=Z,21nm,1.5s						
PVAQ	Vaqueiros	59.65	4	*e*P	P	23 06 53.1	+1.3
PCRV	Puerto La Cruz	60.48	297	LR	LR	23 30 24.3	
	comp=Z,615nm,21.6s,slow=33						
CART	Cartagena	60.63	10	P	P	23 06 59.9	+1.4
CART				IAmb	IAmb	23 07 04.4	
	comp=Z,9.5nm,0.8s						
KEST	Kesra	61.40	20	P	P	23 07 03.4	-0.6
	comp=Z,5.7nm,0.8s,baz=226,slow=20,SNR=2.2						
KEST				LR	LR	23 31 39.4	
	comp=Z,634nm,20.7s,baz=152,slow=34						
	comp=Z,5.7nm,0.8s						
KEST	Kesra	61.40	20	P	P	23 07 04.3	+0.4
NNA	Nana	61.95	268	LR	LR	23 32 03.9	
	comp=Z,292nm,20.5s,baz=110,slow=34						
NNA	Nana	61.95	268	⇓*e*P	P	23 07 09.3	+1.2
NNA				pmax	pmax		
	comp=Z,35nm,1.1s						
ESDC	Sonseca Array	62.26	7	P	P	23 07 09.1	-0.5
	comp=Z,1.5nm,0.7s,baz=185,slow=6.0,SNR=14						
ESDC				LR	LR	23 34 05.9	
	comp=Z,211nm,18.1s,baz=180,slow=36						
	comp=Z,1.5nm,0.7s						
ESDC	Sonseca Array	62.26	7	P	P	23 07 09.9	+0.4
BAUV	El Baul	62.69	294	P	P	23 07 12.7	-0.2
MVO	Moncorvo	63.44	5	*e*P	P	23 07 18.6	+1.2
ATD	Arta Tunnel	63.86	64	LR	LR	23 33 15.3	
	comp=Z,9.2nm,18.1s,baz=234,slow=34						
MAW	Mawson	63.93	156	LR	LR	23 28 27.0	
	comp=Z,414nm,20.6s,baz=286,slow=30						
VAE	Valguarnera	64.72	23	LR	LR	23 34 39.1	
	comp=Z,579nm,18.6s,baz=168,slow=35						
CDVI	St. Croix	64.85	304	P	P	23 07 26.8	-0.3
SDV	Santo Domingo	64.87	292	LR	LR	23 33 58.5	
	comp=Z,796nm,18.6s,baz=116,slow=34						
SDV	Santo Domingo	64.87	292	P	P	23 07 27.4	-0.1
SDV				IAmb	IAmb	23 07 38.9	
	comp=Z,11nm,0.9s						
SDV	Santo Domingo	64.87	292	*e*P	P	23 07 27.8	+0.2
ATAH	Atahualpa	65.05	272	LR	LR	23 34 29.7	
	comp=Z,2μm,19.9s,baz=109,slow=35						
RUSC	La Rusia	65.57	288	P	P	23 07 31.9	-0.6
RUSC				IAmb	IAmb	23 07 56.2	
	comp=Z,19nm,1.1s						
HUMP	Col San Antoni	65.92	303	P	P	23 07 34.0	0.0
CBYP	Canovanas	66.00	303	P	P	23 07 34.3	-0.3
ROSC	El Rosal	66.19	286	P	P	23 07 37.3	+0.9
	comp=Z,6.5nm,0.4s,baz=142,slow=9.4,SNR=4.0						
ROSC				LR	LR	23 35 33.0	
	comp=Z,1μm,19.1s,baz=149,slow=35						
	comp=Z,6.5nm,0.4s						
ROSC	El Rosal	66.19	286	P	P	23 07 36.1	-0.3
ROSC	El Rosal	66.19	286	P	P	23 07 36.1	-0.3
ROSC				pmax	pmax		
	comp=Z,32nm,1.4s						
TIP	Timpagrande	67.09	24	⇑P	P	23 07 42.0	+0.8
TIP	Timpagrande	67.09	24	P	P	23 07 41.0	-0.2
TIP				IAmb	IAmb	23 07 52.3	
	comp=Z,14nm,0.7s						
IDI	Anoyia	67.44	33	⇓P	P	23 07 46.0	+2.5
IDI	Anoyia	67.44	33	P	P	23 07 43.4	-0.1
IDI				IAmb	IAmb	23 07 58.8	
	comp=Z,18nm,0.9s						
TULM	Tulcn-Chalpat	67.53	281	P	P	23 07 44.6	-0.4
PORT	Chimborazo Vol	67.55	278	P	P	23 07 44.4	-0.9
PORT				IAmb	IAmb	23 07 50.2	
	comp=Z,10nm,0.9s						
QSPA	South Pole Qui	67.81	180	LR	LR	23 32 49.4	
	comp=Z,489nm,21.8s,baz=203,slow=32						
QSPA	South Pole Qui	67.81	180	P	P	23 07 45.8	+0.3
QSPA				IAmb	IAmb	23 07 57.3	
	comp=Z,23nm,1.2s						
OTAV	Otavalo	67.94	280	P	P	23 07 47.0	-0.6
OTAV	Otavalo	67.94	280	P	P	23 07 47.0	-0.6
OTAV				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CESX	Cesi	68.70	20	P	P	23 07 51.7	+0.6
CESX				IAmb	IAmb	23 08 05.4	
	comp=Z,11nm,1.0s						
EIL	Elat	69.02	43	LR	LR	23 36 14.3	
	comp=Z,295nm,19.8s,baz=232,slow=34						
OSSC	Osservatorio P	69.13	18	P	P	23 07 54.9	+1.1
OSSC				IAmb	IAmb	23 08 04.8	
	comp=Z,16nm,0.9s						
AGG	Agios Georgios	69.25	28	P	P	23 07 55.1	+0.4
AGG	Agios Georgios	69.25	28	P	P	23 07 55.1	+0.4
AGG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KBN	Korca	69.93	26	P	P	23 07 59.7	+0.8
KBN	Korca	69.93	26	P	P	23 07 59.7	+0.8
KBN				pmax	pmax		
	comp=Z,36nm,1.5s						
LIT	Litokhoron	70.21	28	P	P	23 08 00.5	-0.1
LIT	Litokhoron	70.21	28	P	P	23 08 00.5	-0.1
FNA	Florina	70.31	27	P	P	23 08 01.7	+0.5
FNA	Florina	70.31	27	P	P	23 08 01.7	+0.5
FNA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OHR	Ohrid	70.34	26	*i* P	P	23 08 05.6	+4.2
VAY	Valandovo	71.25	27	*i* P	P	23 08 08.7	+1.9
SKO	Skopje	71.33	26	*i* P	P	23 08 08.0	+0.7
STIP	Stip	71.40	27	*i* P	P	23 08 09.2	+1.4
CTI	Castel Tesino	71.56	17	P	P	23 08 09.4	+0.7
CTI	Castel Tesino	71.56	17	P	P	23 08 09.4	+0.7
CTI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MMAI	Mount Meron Ar	71.59	41	LR	LR	23 36 57.0	
	comp=Z,247nm,21.7s,baz=296,slow=34						
DAVOX	Davos/Dischmat	71.76	16	LR	LR	23 38 29.4	
	comp=Z,632nm,18.4s,baz=222,slow=35						
MANT	Manisa	71.77	33	P	P	23 08 11.1	+0.7
CIMO	Cimolais	72.02	18	P	P	23 08 12.2	+0.7
CIMO				IAmb	IAmb	23 08 22.6	
	comp=Z,21nm,1.4s						
STAL	STALIGIAL	72.05	18	P	P	23 08 13.4	+1.8
SABO	M.te Sabotino	72.06	19	P	P	23 08 12.7	+1.0
SABO				IAmb	IAmb	23 08 38.4	
	comp=Z,16nm,1.1s						
FETA	Feichten	72.21	16	*e*P	P	23 08 12.3	-0.4
	comp=Z,5.1nm,1.0s						
DAVA	Damuels	72.23	16	*e*P	P	23 08 12.6	-0.2
	comp=Z,5.3nm,0.8s						
CLUD	Cludinico	72.28	18	P	P	23 08 14.2	+1.2
CLUD				IAmb	IAmb	23 08 42.3	
	comp=Z,12nm,0.9s						
RDO	Rodhopi	72.41	29	P	P	23 08 14.7	+0.9
RDO				IAmb	IAmb	23 08 24.9	
	comp=Z,18nm,1.1s						
ABTA	Abfaltersbach	72.44	18	*e*P	P	23 08 15.8	+1.8
	comp=Z,4.1nm,0.8s						
ALN	Alexandroupoli	72.44	30	P	P	23 08 15.2	+1.2
ALN				IAmb	IAmb	23 08 25.2	
	comp=Z,22nm,1.1s						
ALN	Alexandroupoli	72.44	30	P	P	23 08 15.2	+1.2
ALN				pmax	pmax		
	comp=Z,22nm,1.1s						
PRED	Cave del Predi	72.47	19	P	P	23 08 15.2	+1.0
PRED				IAmb	IAmb	23 08 29.5	
	comp=Z,14nm,1.3s						
RAYN	Ar Rayn	72.56	55	P	P	23 08 16.3	+1.1
RAYN	Ar Rayn	72.56	55	⇓P	P	23 08 17.0	+1.8
DIVS	Divibare	72.56	24	P	P	23 08 15.2	+0.4
DIVS				IAmb	IAmb	23 08 26.2	
	comp=Z,19nm,1.2s						
RETA	Reutte	72.64	16	*e*P	P	23 08 18.1	+2.9
	comp=Z,1.8nm,0.9s						
WTTA	Wattenberg	72.67	17	*e*P	P	23 08 16.4	+0.9
	comp=Z,6.1nm,1.0s						

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OBKA  Obir              72.82  19  eP      P        23 08 19.6 +3.3
        comp=Z,5.3nm,0.9s
KBA   Koelnbreinsper    72.98  18  eP      P        23 08 19.2 +1.9
        comp=Z,2.5nm,0.7s
SOKA  Soboth            73.12  19  eP      P        23 08 19.7 +1.7
        comp=Z,6.9nm,0.8s
BIOA  Bad Ischl, Aus    73.62  18  eP      P        23 08 22.8 +1.9
        comp=Z,8.0nm,1.1s
BORA  Eskisehir         73.78  33   P      P        23 08 23.1 +1.0
BORA                                IAmb   IAmb     23 08 34.4
        comp=Z,22nm,1.1s
ARSA  Arzberg           73.78  19  eP      P        23 08 23.4 +1.5
        comp=Z,10nm,1.7s
MDVR  Moldovita         73.79  25 ⇓P      P        23 08 23.3 +1.3
MORH  Mrgy, Hungar      73.89  22 ⇓P      P        23 08 22.6 +0.2
MOA   Molln             73.94  18  eP      P        23 08 24.4 +1.6
        comp=Z,4.5nm,0.8s
RONA  Rosalia, Austr    74.42  20  eP      P        23 08 26.9 +1.3
        comp=Z,1.7nm,0.6s
BZS   Buzias            74.46  24 ⇑P      P        23 08 26.7 +0.9
BZS   Buzias            74.46  24 ⇑P      P        23 08 26.7 +0.9
CONA  Conrad Observa    74.49  19  eP      P        23 08 27.0 +0.9
        comp=Z,4.1nm,0.7s
MDUB  Mudurnu           74.60  33   P      P        23 08 28.0 +1.1
GERES GERESS Array B    74.68  18   P      P        23 08 27.2  0.0
        comp=Z,0.5nm,0.6s,baz=13,slow=24,SNR=3.3
GERES                               PP     PP       23 11 17.3 +2.8
        comp=Z,1.5nm,0.9s,baz=191,slow=10.0,SNR=5.2
GERES                               LR     LR       23 41 44.2
        comp=Z,290nm,18.2s,baz=224,slow=36
        comp=Z,0.5nm,0.6s
GERES GERESS Array B    74.68  18   P      P        23 08 28.1 +1.0
GERES GERESS Array B    74.68  18   P      P        23 08 28.2 +1.0
SURR  Surduc            74.77  24 ⇓P      P        23 08 28.4 +0.8
HUMR  Humele            74.90  27 ⇑P      P        23 08 29.8 +1.5
KHC   Kasperske Hory    74.91  17⇓eP      P        23 08 27.9 -0.5
KHC                                 pmax   pmax
        comp=Z,12nm,1.3s
ANTO  Ankara            74.98  34   P      P        23 08 30.1 +1.0
ANTO                                IAmb   IAmb     23 08 48.5
        comp=Z,25nm,1.3s
ANTO  Ankara            74.98  34   P      P        23 08 30.1 +1.0
ANTO                                pmax   pmax
        comp=Z,25nm,1.3s
BR131 Keskin Array S    75.32  35   P      P        23 08 31.7 +0.6
BR131                               IAmb   IAmb     23 08 43.2
        comp=Z,32nm,1.2s
BR131 Keskin Array S    75.32  35   P      P        23 08 31.7 +0.6
BR131                               pmax   pmax
        comp=Z,32nm,1.3s
BRTR  Keskin Array B    75.32  35   P      P        23 08 32.6 +1.4
        comp=Z,3.7nm,0.8s,baz=189,slow=7.1,SNR=14
BRTR                                LR     LR       23 41 12.1
        comp=Z,98nm,21.4s,baz=244,slow=35
        comp=Z,3.7nm,0.8s
BRTR  Keskin Array B    75.32  35   P      P        23 08 31.6 +0.6
BRTR  Keskin Array B    75.32  35 i P      P        23 08 33.2 +2.1
BRTR                                pmax   pmax
        comp=Z,4.0nm,0.8s
MODS  Modra-Piesok      75.33  20  eP      P        23 08 35.4 +4.6
MODS                                pmax   pmax
        comp=Z,33nm,1.4s
MODS  Modra-Piesok      75.33  20  eP      P        23 08 35.4 +4.6
ARR   Arges             75.44  26 ⇑P      P        23 08 32.2 +0.6
GAZ   Gaziantep         75.52  39   P      P        23 08 32.6 +0.4
GAZ                                 IAmb   IAmb     23 08 44.8
        comp=Z,26nm,1.3s
VOIR                    75.66  26 ⇑P      P        23 08 33.8 +0.9
VOIR                    75.66  26 ⇑P      P        23 08 33.8 +0.9
DRGR                    75.86  24 ⇑P      P        23 08 33.9 -0.1
DRGR                    75.86  24 ⇑P      P        23 08 33.9 -0.1
BNN   Bunyan            75.90  37   P      P        23 08 35.4 +0.9
MARR  Marisel-Cluj      75.92  24 ⇑P      P        23 08 34.8 +0.5
VYHS  Vyhne             75.94  21  eP      P        23 08 38.5 +4.2
VYHS                                pmax   pmax
        comp=Z,9.0nm,1.0s
VYHS  Vyhne             75.94  21  eP      P        23 08 38.5 +4.2
VRAC  Vranov            75.94  19   LR     LR       23 40 51.1
        comp=Z,625nm,20.4s,baz=216,slow=35
MLR   Muntele Rosu      76.08  27 ⇓P      P        23 08 36.1 +0.8
MLR   Muntele Rosu      76.08  27   LR     LR       23 40 39.8
        comp=Z,190nm,20.6s,baz=237,slow=35
MLR   Muntele Rosu      76.08  27   P      P        23 08 35.5 +0.2
MLR                                 IAmb   IAmb     23 08 46.2
        comp=Z,26nm,1.1s
MLR   Muntele Rosu      76.08  27   P      P        23 08 35.5 +0.2
MLR                                 pmax   pmax
        comp=Z,26nm,1.1s
SRBA  San Rafael, Bu    76.16 286   P      P        23 08 36.5  0.0
SRBA                                IAmb   IAmb     23 08 40.8
        comp=Z,23nm,1.4s
DOPR  Dopca             76.23  26 ⇓P      P        23 08 37.0 +0.9
ILGA  Ilgaz             76.32  34   P      P        23 08 37.1 +0.2
TIRR  Tirgusor          76.32  29 ⇓P      P        23 08 37.4 +0.9
TIRR  Tirgusor          76.32  29   P      P        23 08 37.1 +0.6
TIRR  Tirgusor          76.32  29   P      P        23 08 37.1 +0.6
TIRR                                pmax   pmax
        comp=Z,30nm,1.1s
BISRR Bisoca            76.44  27 ⇑P      P        23 08 38.8 +1.4
COVR  Voineasa-Covas    76.47  27 ⇑P      P        23 08 38.7 +1.3
OZUR                    76.50  26 ⇑P      P        23 08 38.2 +0.6
TPGR  Topolog           76.64  29 ⇓P      P        23 08 39.5 +1.1
PLOR  Plostina          76.66  27 ⇑P      P        23 08 39.1 +0.6
PLOR  Plostina          76.66  27 ⇑P      P        23 08 39.1 +0.6
VRI   Vrincioaia        76.70  27 ⇑P      P        23 08 38.5 -0.2
VRI   Vrincioaia        76.70  27 ⇑P      P        23 08 38.5 -0.2
CLL   Collm             76.74  16  eP      P        23 08 39.0 +0.3
CLL                                ePPP    PPP      23 13 18.0
CLL                                eS      S        23 18 22.0 -3.7
CLL                                e(SS)            23 23 00.0
CLL                                eSSS    SSS      23 26 36.0
CLL                                ex      x        23 28 42.0
CLL                                eSSSS            23 29 00.0
CLL                                 AMS    AMS      23 41 00.0
        comp=Z,300nm,20.4s
CLL   Collm             76.74  16  eP      P        23 08 39.0 +0.3
CLL                                eS      S        23 18 22.0 -3.7
CLL                                 MLR    MLR
        comp=Z,300nm,20.4s
CFR   Carcaliu          76.77  28 ⇑P      P        23 08 40.1 +1.1
CFR   Carcaliu          76.77  28 ⇑P      P        23 08 40.1 +1.1
JURR  Jurilovca         76.77  29 ⇑P      P        23 08 39.9 +0.8
TOKA  Tokat             77.28  36   P      P        23 08 42.8 +0.7
TOKA                                IAmb   IAmb     23 08 57.8
        comp=Z,15nm,1.4s
BURAR Bucovina Array    77.50  25 ⇑P      P        23 08 42.8 -0.5
BURAR Bucovina Array    77.50  25   P      P        23 08 44.3 +1.0
BURAR Bucovina Array    77.50  25 ⇑P      P        23 08 42.8 -0.5
DIKM  Dikmen            77.56  35 ⇑P      P        23 08 45.3 +1.8
JTS   Las Juntas de     78.03 286   LR     LR       23 42 39.8
        comp=Z,475nm,19.9s,baz=110,slow=35
ESPN  Las Esperanzas    78.28 288   P      P        23 08 48.4 +0.3
ESPN                                IAmb   IAmb     23 08 51.0
        comp=Z,19nm,1.3s
LVV   L'vov             78.87  23  eP      P        23 08 54.2 +3.6
SORM  Soroca            79.18  26 ⇓P      P        23 08 52.2 -0.2
SORM  Soroca            79.18  26 ⇓P      P        23 08 52.2 -0.2
GURO  Guroymak-BITLI    79.28  41   P      P        23 08 53.5 +0.1
KOPT  Kop Dagi          79.33  39   P      P        23 08 54.7 +0.9
KTUT  Trabzon           79.56  38 ⇑P      P        23 08 56.1 +1.5
BOAB  BOACO BROADBAN79.59 288   P      P        23 08 54.5 -0.9
VNDA  Vanda             80.25 179   P      P        23 08 55.5 -2.5
        comp=Z,1.1nm,1.0s,baz=51,slow=8.0,SNR=2.2
VNDA                                LR     LR       23 39 38.7
        comp=Z,387nm,21.9s,baz=176,slow=32
        comp=Z,1.1nm,1.0s
VNDA  Vanda             80.25 179   P      P        23 08 59.3 +1.4
VNDA  Vanda             80.25 179   P      P        23 08 59.3 +1.4
VNDA                                pmax   pmax
        comp=Z,25nm,1.9s
AKASG Malin Array Be    81.55  25   P      P        23 09 04.3 -0.8
        comp=Z,2.0nm,0.7s,baz=224,slow=5.2,SNR=9.6
AKASG                               LR     LR       23 46 16.4
        comp=Z,240nm,19.9s,baz=244,slow=36
        comp=Z,2.0nm,0.7s
AKASG Malin Array Be    81.55  25   P      P        23 09 04.9 -0.2
AKASG Malin Array Be    81.55  25 i P      P        23 09 05.9 +0.8
AKASG                               pmax   pmax
        comp=Z,1.0nm,0.5s
AKBB  Malin Array Si    81.55  25   P      P        23 09 05.4 +0.3
AKBB  Malin Array Si    81.55  25⇓eP      P        23 09 07.0 +1.9
AKBB                                pmax   pmax
        comp=Z,12nm,1.0s
UOSS  Minazif           81.59  59   P      P        23 09 05.7 -0.2
UOSS                                IAmb   IAmb     23 09 14.8
        comp=Z,22nm,1.3s
DRLN  Deer Lake         81.80 332   P      P        23 09 07.8 +1.3
DRLN                                IAmb   IAmb     23 09 10.2
        comp=Z,17nm,1.1s
GNI   Garni             81.92  41   LR     LR       23 44 40.7
        comp=Z,120nm,18.2s,baz=246,slow=35
GNI   Garni             81.92  41   P      P        23 09 07.6 +0.1
GNI                                 IAmb   IAmb     23 09 18.2
        comp=Z,33nm,1.4s
GNI   Garni             81.92  41⇓eP      P        23 09 08.3 +0.8
GNI                                 pmax   pmax
        comp=Z,32nm,1.7s
SUW   Suwalki           82.07  20   P      P        23 09 08.3 +0.5
SUW   Suwalki           82.07  20   P      P        23 09 08.3 +0.5
SUW                                 pmax   pmax
        comp=Z,28nm,1.0s
ONI   Oni               82.69  38   P      P        23 09 11.9 +0.5
ONI   Oni               82.69  38   P      P        23 09 11.9 +0.5
ONI                                 pmax   pmax
        comp=Z,13nm,1.5s
WSAR  Wadi Sarin        82.72  61   LR     LR       23 45 28.7
        comp=Z,232nm,19.9s,baz=261,slow=35
ZEI   Tsey              83.07  38  eP      P        23 09 03.9  -10
ZEI                                 pmax   pmax
        comp=Z,6.0nm,1.2s
KBZ   Khabaz            83.10  37   P      P        23 09 11.8 -1.6
        comp=Z,1.2nm,0.8s,baz=237,slow=17,SNR=3.1
        comp=Z,1.2nm,0.8s
KBZ   Khabaz            83.10  37⇓eP      P        23 09 13.8 +0.5
KBZ                                 pmax   pmax
        comp=Z,11nm,1.4s
KIV   Kislovodsk        83.13  37 ⇑P      P        23 09 13.9 +0.2
KIV   Kislovodsk        83.13  37  eP      P        23 09 14.8 +1.1
KIV                                 pmax   pmax
        comp=Z,11nm,1.1s
KIV                                 MLR    MLR
        comp=Z,54nm,19.0s
NACGM Naroch            84.00  22  eP      P        23 09 18.3 +0.6
        comp=Z,19nm,0.9s,baz=216
MNK   Minsk             84.06  22 i P      P        23 09 17.9 -0.1
        comp=E,1.0nm,0.9s
MNK                               i P      P        23 09 17.9 -0.1
        comp=N,28nm,0.9s
MNK                               i P      P        23 09 17.9 -0.1
        comp=Z,6.0nm,0.8s,baz=217
MNK                               i PP     PP       23 12 33.1 +0.7
MNK                               i PPP    PPP      23 14 21.9
MNK                               i S      S        23 19 40.3 -2.1
MNK                               i SS     SS       23 25 12.4 +0.8
MNK                               i SSS    SSS      23 28 39.0
MNK                               i LQ     LQ       23 41 07.5
MNK                               i LR     LR       23 44 58.8
MNK                               i LRM    MLR      23 47 27.7
        comp=E,26nm,19.2s
MNK                               i LRM    MLR      23 47 41.7
        comp=N,305nm,16.0s
MNK                               i LRM    MLR      23 48 17.5
        comp=Z,294nm,23.6s
MNK   Minsk             84.06  22 i P      P        23 09 17.9 -0.1
MNK                               i                 23 12 33.1
MNK                               i S      S        23 19 40.3 -2.1
MNK                               i SS     SS       23 25 12.4 +0.8
MNK                               i SSS    SSS      23 28 38.9
MNK                                 pmax   pmax
        comp=Z,6.0nm,0.8s
MNK                                 pmax   pmax
        comp=E,1.0nm,0.9s
MNK                                 pmax   pmax
        comp=N,28nm,0.9s
MNK                                 MLR    MLR
        comp=E,26nm,19.0s
MNK                                 MLR    MLR
        comp=N,305nm,16.0s
MNK                                 MLR    MLR
        comp=Z,294nm,24.0s
BATG  Bathurst New B    84.44 327   P      P        23 09 19.8 -0.4
MAK   Makhachkala       85.27  40  eP      P        23 09 21.8 -2.6
MAK                                e                23 19 43.4
MAK                                eSSS    SSS      23 28 58.0
MAK                                 pmax   pmax
        comp=Z,245nm,1.5s
NB2   NORSAR Subarra    85.33  11   P      P        23 09 27.0 +2.7
        comp=Z,15nm,1.7s,baz=202,slow=5.9
NOA   NORSAR Array B    85.33  11   P      P        23 09 25.1 +0.7
        comp=Z,0.6nm,0.7s,baz=201,slow=5.2,SNR=4.9
        comp=Z,0.6nm,0.7s
RPN   Rapa Nui          85.78 243   LR     LR       23 41 05.6
        comp=Z,177nm,18.6s,baz=84,slow=31
D62A  Allapoint, All    85.87 325   P      P        23 09 26.2 -1.1
BORG  Borgarnes         87.13 356   LR     LR       23 40 29.2
        comp=Z,209nm,21.6s,baz=175,slow=30
Q56A  Snyder Ridge,     87.27 314   P      P        23 09 35.1 +0.7
Q56A                                IAmb   IAmb     23 09 41.1
        comp=Z,16nm,1.0s
OBN   Obninsk           87.80  26   LR     LR       23 49 25.1
        comp=Z,62nm,20.6s,baz=198,slow=36
OBN   Obninsk           87.80  26⇓eP      P        23 09 36.8 +0.3
OBN                                 pmax   pmax
        comp=Z,28nm,1.7s
BG3   Lake Jocassee     87.81 309   P      P        23 09 37.2 +0.1
LATQ  La Tuque          88.06 324   P      P        23 09 39.0 +1.1
TRQ   Mont Tremblant    88.37 322   P      P        23 09 40.6 +1.1
MOS   Moscow            88.67  26  eP      P        23 09 41.1 +0.5
TKL   Tuckaleechee C    88.73 310   LR     LR       23 42 00.8
        comp=Z,320nm,20.4s,baz=134,slow=31
FINES FINESS Array B    89.11  17   P      P        23 09 44.3 +1.7
        comp=Z,2.8nm,0.9s,baz=187,slow=3.5,SNR=7.4
        comp=Z,2.8nm,0.9s
FINES FINESS Array B    89.11  17   P      P        23 09 44.5 +1.9
FINES FINESS Array B    89.11  17   P      P        23 09 44.5 +1.9
DELO  Deloro Mine       89.20 320   P      P        23 09 43.6 +0.2
DELO                                IAmb   IAmb     23 09 54.5
        comp=Z,7.9nm,0.8s
GEYT  Alibeck           89.37  48   P      P        23 09 44.5  0.0
        comp=Z,2.5nm,0.8s,baz=37,slow=37,SNR=3.0
GEYT                                LR     LR       23 48 05.7
        comp=Z,225nm,21.5s,baz=274,slow=34
        comp=Z,2.5nm,0.8s
GEYT  Alibeck           89.37  48   P      P        23 09 44.5  0.0
GEYT                                IAmb   IAmb     23 09 50.9
        comp=Z,15nm,1.5s
GYA0B ALIBECK ARRAY     89.37  48   P      P        23 09 44.9 +0.4
GYA0B                               IAmb   IAmb     23 09 50.8
        comp=Z,20nm,1.6s
SCHQ  Schefferville     89.81 332   P      P        23 09 46.0 -0.1
        comp=Z,2.5nm,0.9s,baz=224,slow=6.1,SNR=2.9
SCHQ                                LR     LR       23 45 07.3
        comp=Z,490nm,18.5s,baz=168,slow=32
        comp=Z,2.5nm,0.9s
SCHQ  Schefferville     89.81 332   P      P        23 09 45.8 -0.2
SCHQ                                IAmb   IAmb     23 10 36.6
        comp=Z,32nm,1.9s
SADO  Sadowa            90.26 319   LR     LR       23 42 21.0
        comp=Z,296nm,20.5s,baz=124,slow=30
BELG  Belogornoye       90.96  32   LR     LR       23 53 54.8
        comp=Z,97nm,18.2s,baz=174,slow=38
PCHI  Peechi            92.89  80  eP      P        23 10 01.8 +0.5
PCHI                               eS      SKSac    23 20 26.6 -9.4
JMIC  Jan Mayen         93.17   1   LR     LR       23 46 46.6
        comp=Z,117nm,18.4s,baz=214,slow=32
SFJD  Kangerlussuaq     93.56 346   LR     LR       23 44 44.8
        comp=Z,148nm,18.7s,baz=152,slow=31
AKTO  Aktyubinsk        95.38  37   LR     LR       23 55 31.0
        comp=Z,76nm,18.8s,baz=44,slow=37
KIRV  Kirov             95.42  28   LR     LR       23 55 57.2
        comp=Z,184nm,18.0s,baz=265,slow=37
ARCES ARCESS Array B    95.63  13   LR     LR       23 53 01.6
        comp=Z,244nm,19.8s,baz=240,slow=35
PALK  Pallekele         95.68  84   LR     LR       23 52 03.7
        comp=Z,164nm,18.0s,baz=357,slow=35
FRB   Frobisher Bay     96.28 338   LR     LR       23 49 42.5
        comp=Z,85nm,18.1s,baz=166,slow=33
ARU   Arti              98.52  32   LR     LR       23 57 40.6
        comp=Z,174nm,19.0s,baz=246,slow=37
ARU   Arti              98.52  32⇑eP      Pdif     23 10 26.2 +0.3
ARU                                 pmax   pmax
        comp=Z,13nm,3.3s
WMQ   Urumqi           112.33  50  eP      PKiKP    23 15 24.0 +0.2
WMQ                                 LR     LR
        comp=Z,120nm,23.5s
YKA   Yellowknife Ar   115.19 330   PKP    PKiKP    23 15 27.0 -1.5
        comp=Z,0.4nm,1.0s,baz=91,slow=1.8,SNR=2.3
TNCH  TengChong        117.42  73   PKP    PKPdf    23 15 31.3 -2.9
TNCH                                sPKP            23 15 39.3
TNCH                                PP     PP       23 16 49.5 +3.5
TNCH                                AMB    AMB
        comp=Z,100nm,5.7s
TAOE  Nuku Hiva Isla   120.05 245  eLR     LR       23 52 25.8
        comp=Z,129nm,24.4s
PZH   PanZhiHua        120.57  72   PKP    PKiKP    23 15 40.5 +0.2
PPT2  Papeete2         122.18 230  eLR     LR       23 53 23.8
        comp=Z,184nm,36.5s
PPT2                               eLR     LR       23 53 24.1
        comp=Z,144nm,21.8s
CD2   Chengdu          123.06  67   PKP    PKPdf    23 15 44.5 -0.3
ASAR  Alice Springs    123.75 142   PKP    PKPdf    23 15 45.2 -1.2
        comp=Z,0.5nm,0.7s,baz=205,slow=2.1,SNR=2.4
SONM  Songino Array    125.54  46   PKP    PKPdf    23 15 48.0 -1.1
        comp=Z,0.3nm,0.3s,baz=217,slow=2.4,SNR=1.4
SONM  Songino Array    125.54  46   PKIKP  PKPdf    23 15 48.0 -1.1
ULN   Ulaanbaatar      125.97  46⇓iPKIKP  PKiKP    23 15 50.9 +0.5
ULN                                 pmax   pmax
        comp=Z,2.0nm,1.0s
E25K  Arctic Village   126.02 340   P      PKiKP    23 15 52.3 +2.6
        baz=57
WRA   Warramunga Arr   126.90 140   PKP    PKPdf    23 15 52.3 -0.2
        comp=Z,0.4nm,0.5s,baz=237,slow=2.3,SNR=2.0
WRAB  Tennant Creek    126.91 140⇑iPKIKP  PKPdf    23 15 49.6 -2.9
WRAB                                pmax   pmax
        comp=Z,21nm,2.5s
TOLK  Toolik Lake Re   126.92 342   P      PKiKP    23 15 53.7 +2.2
        baz=52
L27K  Beaver Creek,    127.18 334   P      PKiKP    23 15 55.5 +3.4
        baz=64
G24K  Hadweenzic Riv   127.43 339   P      PKiKP    23 15 56.2 +3.7
        baz=55
RIDG  Independent Ri   128.07 335   P      PKiKP    23 15 55.5 +1.6
        baz=60
ILAR  Eielson Array    128.29 337   PKP    PKPdf    23 15 53.5 -0.2
        comp=Z,1.6nm,0.8s,baz=329,slow=1.1,SNR=14
F22K  John River       128.40 341   P      PKiKP    23 15 58.3 +3.8
        baz=50
G22K  Bettles          128.57 341   P      PKiKP    23 15 58.4 +3.6
        baz=51
COLA  College          128.58 337⇑iPKIKP  PKiKP    23 15 56.8 +2.0
F21K  Alatna River     128.97 342   P      PKiKP    23 15 59.4 +3.8
        baz=48
G21K  Allakaket        129.44 341   P      PKiKP    23 15 59.8 +3.3
        baz=49
MLY   Manley           129.50 339   P      PKiKP    23 15 59.9 +3.2
        baz=53
H21K  Melozitna Rive   129.78 340   P      PKiKP    23 16 00.8 +3.5
        baz=50
HHC   Hu-ho-hao-te     129.79  55  eP      Pdif     23 12 44.3 -1.3
HHC   Hu-ho-hao-te     129.79  55  eP      PKPdf    23 15 54.3 -3.1
WAT1  Susitna Watana   129.97 335   P      PKiKP    23 16 01.0 +3.2
        baz=57
BPAW  Bear Paw Mtn.    130.14 338   P      PKiKP    23 16 00.7 +2.6
        baz=53
BILL  Bilibino         134.35   1⇑iPKIKP  PKPdf    23 16 05.0  0.0
BILL                               e                23 18 37.2
BILL                                pmax   pmax
        comp=Z,5.0nm,1.1s
NJ2   Nanjing          136.00  67  eP      PKPdf    23 16 09.0 -0.2
NJ2                                 pP     sPKPdf   23 16 12.0 +0.6
NJ2                                 sP     pPKPdf   23 16 13.5 +2.7
NJ2                                 pmax   pmax
        comp=Z,5.0nm,0.5s
NJ2                                 pmax   pmax
        comp=Z,210nm,7.5s
SEY   Seymchan         138.21  10⇓ePKIKP  PKPdf    23 16 12.7 +0.4
MA2   Magadan          141.00  13⇓ePKIKP  PKPdf    23 16 17.2 -0.3
KLR   Kul'dur          141.12  38⇑ePKIKP  PKPdf    23 16 16.5 -1.5
KSRS  Korea Array      142.85  57   PKhKP  PKPpre   23 16 16.1
        comp=Z,1.2nm,0.8s,baz=274,slow=2.3,SNR=2.2
YSS   Yuzh-Sakhalins   148.40  33  ePKP2   PKPbc    23 16 34.4 +0.2
YSS                                 pmax   pmax
        comp=Z,20nm,1.3s
PETK  Petropavlovsk-   148.43  11   PKPbc  PKPbc    23 16 33.4 -0.7
        comp=Z,8.8nm,1.1s,baz=264,slow=4.3,SNR=2.6
MJAR  Matsushiro Arr   151.00  54   PKPbc  PKPbc    23 16 39.2 -1.7
        comp=Z,0.9nm,0.4s,baz=1.9,slow=21,SNR=4.0
```

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*IDC **29** 22:57:38.7±6.3, 16°.79S×173°.76W, h105^{km}±36^{km}, mb3.5/4, mbtmp4.0/5, MS2.7/1, Error ellipse: s-maj=179.4km s-min=23.3km az=145.0*

*NOU **29** 22:58:17.0, 13°.99S×172°.21W, h67^{km}, MLv3.3/4, Samoa Islands*

ISC 29 22:57:41.8±2.7**, 16°.0S**±0°.9×**174°.2W**±0°.6**, h115^{km}, n8, σ1^{s}.75**/9**, mb3.7**/4**, Tonga Islands**

```
Code  Station Name        Δ°  AZ°   Phase ID           Time      Res
                                    Op     ISC        h  m  s    ISC
AFI   Afiamalu           3.09  48   P      Pn       22 58 30.5 +1.3
        208nm,0.4s,baz=191,slow=3.8,SNR=74
AFI                                 S      Sn       22 59 02.9 -2.9
        931nm,0.4s,baz=43,slow=16,SNR=17
AFI                                 LR     LR       22 59 08.2
        comp=Z,98nm,19.9s,baz=97,slow=26
AFI   Afiamalu           3.09  48   P      Pn       22 58 30.5 +1.3
WRA   Warramunga Arr    49.01 257   P      P        23 06 16.1 -1.2
        1.7nm,1.1s,baz=91,slow=5.8,SNR=3.8
        1.7nm,1.1s
ASAR  Alice Springs     49.24 252   P      P        23 06 18.0 -1.1
        2.6nm,0.7s,baz=86,slow=8.3,SNR=29
        2.6nm,0.7s
ILAR  Eielson Array     83.17  11   P      P        23 09 56.5 +1.9
        0.7nm,0.9s,baz=196,slow=6.2,SNR=3.5
        0.7nm,0.9s
PDAR  Pinedale Array    83.19  42   P      P        23 09 55.2 -0.3
        0.4nm,0.7s,baz=228,slow=3.8,SNR=4.7
        0.4nm,0.7s
BRTR  Keskin Array B   146.15 320   PKPbc  PKPdf    23 17 08.5 +0.5
        0.4nm,0.4s,baz=100,slow=4.7,SNR=2.7
GERES GERESS Array B   146.61 351   PKPbc  PKPbc    23 17 09.5 -0.6
        0.1nm,0.4s,baz=327,slow=1.6,SNR=2.1
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*CNRM **29** 23:16:49.8, 38°.77N×8°.42W, h10^{km}, ml1.8*

*MDD **29** 23:16:50.7±0.3, 38°.67N×8°.47W, h12^{km}, mb_Lg2.5/13, Error ellipse: s-maj=2.4km s-min=1.8km az=81.0*

*SFS **29** 23:16:50.6, 38°.71N×8°.46W, h0^{km}, ML2.5/9, ML2.5/7, MLv2.4/9*

*INMG **29** 23:16:50.7±1.4, 38°.68N×8°.44W, h1^{km}, ML2.2, Error ellipse: s-maj=2.1km s-min=1.2km az=93.0*

*IGIL **29** 23:16:50.8, 38°.68N×8°.45W, h0^{km}, ML2.3*

ISC 29 23:16:49.8±1.0**, 38°.67N**±0°.01×**8°.43W**±0°.02**, h13^{km}**±8^{km}**, n58, σ1^{s}.10**/118**, 4C-1D, Portugal**

```
Code  Station Name        Δ°  AZ°   Phase ID           Time      Res
                                    Op     ISC        h  m  s    ISC
EVO   Evora              0.35 113   P      Pb       23 16 57.4 -0.6
EVO                                 S      Sb       23 17 03.2 -0.3
EVO   Evora              0.35 113  ePg     Pb       23 16 57.5 -0.4
EVO                                eSg     Sb       23 17 03.1 -0.3
PMTG  Montargil          0.43  22⇑iPg     Pg       23 16 58.4 +0.1
PMTG                               eSg     Sg       23 17 04.3 +0.3
PMTG                                A      A        23 17 04.8
        43nm,0.2s
PNCL  Nicolau / Gran     0.57 188   P      Pb       23 17 00.8 -0.8
PNCL  Nicolau / Gran     0.57 188  ePg     Pb       23 17 00.8 -0.8
PNCL                               eSg     Sb       23 17 08.9 -0.6
PNCL                                A      A        23 17 10.6
        36nm,0.1s
LIS   Lisbon             0.57 275  eP      Pg       23 17 00.5 -0.4
LIS                                eS      Sg       23 17 08.1 -0.3
LIS                                 IAML            23 17 09.7
        comp=N,88nm,0.2s
PESTR Estremoz           0.68  73   P      Pb       23 17 03.5 -0.1
PESTR                               S      Sg       23 17 12.6 +0.6
PESTR Estremoz           0.68  73  eP      Pb       23 17 03.8 +0.2
PESTR                              eS      Sb       23 17 12.8 -0.1
PESTR                               A      A        23 17 13.4
        comp=N,36nm,0.2s
PMAFR Mafra              0.72 293   S      Sg       23 17 12.3 -1.1
PMAFR                               P      Pg       23 17 03.4 -0.5
PMAFR Mafra              0.72 293  eP      Pg       23 17 03.4 -0.5
PMAFR                              eS      Sg       23 17 13.0 -0.4
PMAFR                               A      A        23 17 16.8
        comp=N,100nm,0.2s
PBEJ  Beja               0.78 145  eP      Pb       23 17 05.5 +0.3
PBEJ                               eS      Sb       23 17 16.1 +0.4
PBEJ                                A      A        23 17 19.2
        comp=N,30nm,0.5s
MESJ  Messejana          0.85 169  eP      Pb       23 17 06.1 -0.3
MESJ                               eS      Sb       23 17 17.7 +0.1
MESJ                                A      A        23 17 20.9
        comp=N,53nm,0.6s
```

MESJ	Messejana	0.85	169	eP	Pb	23 17 06.2	-0.2
MESJ				eS	Sb	23 17 17.2	-0.5
MESJ				IAML		23 17 20.5	
	comp=N,77nm,0.2s						
PCVE	Castro Verde	1.08	163	P	Pn	23 17 10.6	-0.1
PCVE	Castro Verde	1.08	163	eP	Pn	23 17 10.8	+0.1
PCVE				eS	Sn	23 17 25.4	-0.1
PCVE				A	A	23 17 26.8	
	comp=N,58nm,0.4s						
PMRV	Marv??o	1.10	47	⇑eP	Pn	23 17 11.2	+0.2
PMRV				eS	Sb	23 17 25.9	+0.8
PMRV				A	A	23 17 26.9	
	comp=N,20nm,0.4s						
EBAD	Badajoz	1.11	85	P	Pn	23 17 11.6	+0.6
EBAD				S	Sb	23 17 26.1	+0.9
EBAD	Badajoz	1.11	85	Pg	Pn	23 17 11.5	+0.6
EBAD				Sg	Sb	23 17 26.0	+0.8
EBAD				i Vmb_Lg		23 17 27.6	
PTEO	Sao Teotonio	1.15	192	eP	Pn	23 17 12.0	+0.4
PTEO				eS	Sn	23 17 27.6	+0.5
PTEO				A	A	23 17 29.2	
	comp=N,52nm,0.4s						
PBAR	Barrancos	1.20	114	P	Pg	23 17 13.3	+0.4
PBAR	Barrancos	1.20	114	eP	Pg	23 17 13.2	+0.4
PBAR				eS	Sn	23 17 29.8	+1.4
PBAR				A	A	23 17 32.9	
	comp=N,25nm,0.4s						
EGRO	El Granado	1.36	146	P	Pg	23 17 15.7	-0.2
EGRO	El Granado	1.36	146	Pg	Pg	23 17 16.0	+0.1
EGRO				Sg	Sg	23 17 34.2	+0.6
EGRO				i Vmb_Lg		23 17 36.3	
MORF	Marmelete	1.38	187	ePn	Pg	23 17 16.0	-0.3
MORF				eSn	Sg	23 17 34.6	+0.4
MORF				A	A	23 17 35.4	
	comp=N,38nm,0.1s						
MORF	Marmelete	1.38	187	ePg	Pg	23 17 15.8	-0.5
MORF				eS	Sg	23 17 33.3	-0.8
MORF				IAML		23 17 35.2	
	comp=N,48nm,0.1s						
PCAS	Casmilo, Conde	1.38	358	⇓ePn	Pg	23 17 16.0	-0.3
PCAS				eSn	Sg	23 17 34.2	-0.1
PCAS				A	A	23 17 37.6	
	comp=N,27nm,0.3s						
PCBR	Castelo Branco	1.38	32	⇑ePn	Pg	23 17 16.1	-0.2
PCBR				eSg	Sg	23 17 34.1	-0.2
PCBR				A	A	23 17 35.1	
	comp=N,16nm,0.4s						
PVAQ	Vaqueiros	1.39	156	P	Pg	23 17 16.7	+0.3
PVAQ				S	Sg	23 17 35.6	+1.2
PVAQ	Vaqueiros	1.39	156	P	Pg	23 17 16.4	0.0
PVAQ	Vaqueiros	1.39	156	⇑ePn	Pg	23 17 16.4	0.0
PVAQ				eSn	Sg	23 17 33.9	-0.5
PVAQ				A	A	23 17 35.3	
	comp=N,56nm,0.3s						
PBDV	Barranco-do-Ve	1.48	164	ePn	Pg	23 17 17.5	-0.7
PBDV				eSn	Sg	23 17 37.0	-0.5
PBDV				A	A	23 17 42.0	
	comp=N,26nm,0.6s						
COI	Coimbra	1.53	0	eSn	Sb	23 17 38.1	+0.7
COI				A	A	23 17 41.1	
	comp=N,39nm,0.3s						
PFVI	Vila Bisbo	1.57	192	P	Pb	23 17 18.4	-0.2
PFVI				S	Sg	23 17 43.3	+3.0
PFVI	Vila Bisbo	1.57	192	ePg	Pg	23 17 19.4	-0.5
PFVI				eSg	Sg	23 17 40.6	+0.3
PFVI				A	A	23 17 43.1	
	comp=N,17nm,0.5s						
EMIN	Mina Concepcio	1.65	123	P	Pb	23 17 20.3	+0.3
EMIN				S	Sg	23 17 42.7	-0.2
EMIN	Mina Concepcio	1.65	123	Pg	Pg	23 17 20.8	-0.7
EMIN				Sn	Sn	23 17 39.5	-0.1
EMIN				Sg	Sg	23 17 42.7	-0.2
EMIN				i Vmb_Lg		23 17 47.2	
MTE	Manteigas	1.85	21	ePg	Pb	23 17 24.4	+0.8
MTE				eSg	Sg	23 17 48.6	-0.9
MTE				A	A	23 17 51.6	
	comp=N,11nm,0.6s						
PVIS	Viseu	2.08	11	ePg	Pb	23 17 28.0	+0.6
PVIS				eSn	Sb	23 17 54.0	+0.8
PVIS				A	A	23 17 57.6	
	comp=N,11nm,0.3s						
EPLA	Plasencia	2.29	52	Pg	Pb	23 17 31.3	+0.3
EPLA				Sn	Sn	23 17 54.3	-1.1
EPLA				Sg	Sb	23 18 00.8	+1.6
EPLA				i Vmb_Lg		23 18 07.1	
ECAB	El Cabril	2.44	103	P	Pn	23 17 31.2	+1.9
ECAB				S	Sn	23 18 00.6	+1.6
ECAB	El Cabril	2.44	103	Pn	Pn	23 17 29.4	0.0
ECAB				Pg	Pb	23 17 34.0	+0.5
ECAB				Sn	Sn	23 17 58.1	-0.9
ECAB				Sg	Sg	23 18 06.9	-1.3
ECAB				i Vmb_Lg		23 18 11.9	
PVRL	Vila Real	2.66	12	eSg	Sg	23 18 13.7	-1.5
PVRL				A	A	23 18 16.8	
	comp=N,10nm,0.5s						
MVO	Moncorvo	2.71	23	ePn	Pn	23 17 34.3	+1.2
MVO				eSg	Sg	23 18 15.7	-1.2
MVO				A	A	23 18 24.6	
	comp=N,7.3nm,1.0s						
ESPR	Espera	2.72	131	Sn	Sn	23 18 04.6	-1.3
ESPR				Sg	Sg	23 18 15.1	-2.0
ESPR				i Vmb_Lg		23 18 27.4	
POLO	Lamas de Olo	2.74	10	ePn	Pn	23 17 33.8	+0.2
POLO				eSn	Sn	23 18 04.8	-1.8
POLO				A	A	23 18 19.7	
	comp=N,4.2nm,0.6s						
PCAB	Cabril	3.05	6	eSg	Sg	23 18 26.4	-1.3
PCAB				A	A	23 18 50.6	
	comp=N,9.0nm,0.3s						
EADA	Adamuz	3.07	98	Pn	Pn	23 17 38.3	+0.4
EADA				Pg	Pb	23 17 44.8	+0.6
EADA				Sn	Sn	23 18 15.1	+0.5
EADA				Sg	Sg	23 18 27.0	-1.3
EADA				i Vmb_Lg		23 18 32.1	
ELOB	Lobios	3.20	5	Sn	Sn	23 18 16.5	-1.5
ELOB				Sg	Sb	23 18 28.7	+3.2
ELOB				i Vmb_Lg		23 18 36.1	
PAB	San Pablo	3.29	73	Pn	Pn	23 17 41.1	0.0
PAB				Sn	Sn	23 18 20.6	+0.4
PAB				Sg	Sg	23 18 32.4	-3.0
PAB				i Vmb_Lg		23 18 39.7	
PGAV	Gavieira, Arco	3.29	2	ePn	Pn	23 17 41.8	+0.7
PGAV				eSn	Sn	23 18 20.9	+0.7
PGAV				A	A	23 18 35.9	
	comp=N,6.4nm,0.4s						
PBRG	Braganca	3.38	22	ePn	Pn	23 17 43.2	+0.8
PBRG				eSg	Sg	23 18 38.0	-0.5
PBRG				A	A	23 18 41.8	
	comp=N,2.9nm,0.6s						
ECAL	Calabor	3.51	21	Pn	Pn	23 17 44.0	-0.1
ECAL				Sn	Sn	23 18 24.1	-1.5
ECAL				Sg	Sg	23 18 40.6	-1.9
ECAL				i Vmb_Lg		23 18 45.4	
EMIJ	Mijas	3.58	125	Pn	Pn	23 17 45.0	-0.1
EMIJ				Sn	Sn	23 18 28.8	+1.4
EMIJ				Sg	Sg	23 18 42.3	-2.6
EMIJ				i Vmb_Lg		23 18 51.5	
ESDC	Sonseca Array	3.61	73	Pn	Pn	23 17 46.1	+0.6
ESDC				Sn	Sn	23 18 27.9	-0.1
ESDC				Sg	Sb	23 18 41.2	+3.9
ESDC				i Vmb_Lg		23 18 48.8	
PSIM	Granatula de C	3.66	86	Pn	Pn	23 17 46.2	+0.1
PSIM				Sn	Sn	23 18 26.9	-2.2
PSIM				Sg	Sg	23 18 45.3	-1.9
GUD	Guadarrama	3.84	58	Pn	Pn	23 17 48.9	+0.2
GUD				Sn	Sn	23 18 31.5	-2.3
GUD				Sg	Sg	23 18 50.0	-3.2
GUD				i Vmb_Lg		23 18 58.2	
MD31	MD31	6.51	152	P	Pn	23 18 26.1	+0.6
MDT	Midelt	6.62	151	P	Pn	23 18 28.2	+1.3

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*CRAAG **29** 23:17:12.3, 36°.90N×3°.20E, Ml3.7, Algerie 11km NW El-Marsa*

*MDD **29** 23:17:15.3±0.8, 37°.03N×3°.02E, h3km±16km, Mb4.1/15, M_mb3.4/15, Error ellipse: s-maj=20.3km s-min=3.8km az=136.0*

*LDG **29** 23:17:15.1±0.2, 36°.93N×3°.17E, h10km, Ml3.1/34, Error ellipse: s-maj=4.0km s-min=2.7km az=152.0*

*CNRM **29** 23:17:17.1, 36°.77N×2°.63E, h10km*

ISC 29 23:17:11.1±0.9**, 37°.08N**±0°.05×**3°.18E**±0°.06**, h10km, n69, σ2§73**/102**, 11C, Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABA	Alger-Bouzarea	0.30	203	P	Pg	23 17 17.2	0.0
ABMS	Boumerdes	0.41	144	P	Pg	23 17 19.2	+0.1
ADJB	Djebel Djouab	0.95	167	P	Pg	23 17 28.7	-0.6
AKET	Djebel Ketaf	1.18	151	P	Pb	23 17 32.4	-1.2
ATAF	Djebel Tarf	1.50	144	P	Pn	23 17 35.2	-2.9
EIBI	Ibiza	2.42	324	Pn	Pn	23 17 54.0	+3.2
EIBI				⇑iVmb_V		23 17 54.4	
	733nm,SNR=9.3						
EIBI				Sn	Sn	23 18 21.9	+1.4
ETOS	Mallorca	2.70	354	Pn	Pn	23 17 57.9	+3.4
ETOS				⇑iVmb_V		23 17 58.7	
	804nm,SNR=13						
ETOS				Sn	Sn	23 18 29.8	+2.5
EBEN2	Beniarda presa	3.11	302	Pn	Pn	23 18 03.1	+2.9
EBEN2				⇑iVmb_V		23 18 08.9	
	368nm,SNR=2.9						
EBEN2				Sn	Sn	23 18 36.7	-0.7
AFON	Font Roja	3.34	299	Pn	Pn	23 18 06.3	+2.7
AFON				Sn	Sn	23 18 44.5	+1.2
CART	Cartagena	3.37	280	P	Pn	23 18 04.7	+0.8
CART				S	Sn	23 18 41.7	-2.2
EMUR	La Murta	3.60	283	Pn	Pn	23 18 09.1	+2.1
EMUR				Sn	Sn	23 18 49.6	0.0
EVIV	Cofrentes, Val	4.03	304	Pn	Pn	23 18 16.0	+3.1
EVIV				⇑iVmb_V		23 18 17.5	
	356nm,SNR=3.9						
EVIV				Sn	Sn	23 18 59.0	-1.2
ETOB	Tobarra	4.05	294	Pn	Pn	23 18 16.3	+3.0
ETOB				⇑iVmb_V		23 18 22.6	
	179nm,SNR=2.4						
ETOB				Sn	Sn	23 18 59.8	-1.1
ECHE	Chera	4.11	309	Pn	Pn	23 18 17.9	+3.9
ECHE				⇑iVmb_V		23 18 24.4	
	265nm,SNR=2.7						
ECHE				Sn	Sn	23 19 02.9	+0.6
EMOS	Mosqueruela	4.35	320	Pn	Pn	23 18 20.6	+3.2
EMOS				⇑iVmb_V		23 18 28.3	
	219nm,SNR=3.6						
EMOS				Sn	Sn	23 19 08.6	+0.4
ERTA	Horta de San J	4.46	331	Pn	Pn	23 18 21.8	+3.0
ERTA				⇑iVmb_V		23 18 26.2	
	73nm,SNR=1.4						
ERTA				Sn	Sn	23 19 11.0	+0.2
EPOB	Poblet	4.57	340	Pn	Pn	23 18 23.5	+3.2
EPOB				⇑iVmb_V		23 18 30.1	
	140nm,SNR=3.8						
EPOB				Sn	Sn	23 19 13.5	0.0
EBER	Berja	4.87	270	Pn	Pn	23 18 24.7	+0.2
EBER				⇑iVmb_V		23 18 28.3	
	76nm,SNR=1.1						
EBER				Sn	Sn	23 19 19.7	-1.3
EMIR	Miracle	4.99	346	Pn	Pn	23 18 30.8	+4.7
EMIR				Sn	Sn	23 19 25.4	+1.4
EQES	Quesada	5.03	280	Pn	Pn	23 18 29.6	+2.9
EQES				⇑iVmb_V		23 18 30.8	
	117nm,SNR=1.5						
EQES				Sn	Sn	23 19 24.6	-0.3
TAF	Taforalt	5.07	245	P	Pn	23 18 26.2	-1.1
EJON	La Jonquera	5.36	358	Pn	Pn	23 18 35.3	+4.1
JBK	JBK	5.42	241	P	Pn	23 18 32.0	-0.2
TDRA	Tendrara	5.88	228	P	Pn	23 18 37.8	-0.6
FIGM	Figuig	6.15	218	P	Pn	23 18 41.5	-0.6
AKLM	AKL	6.28	248	P	Pn	23 18 43.7	-0.1
MTLF	Montolieu	6.29	354	ePn	Pn	23 18 48.6	+4.6
MTLF				eSn	Sn	23 19 56.8	+0.9
	0.8nm,0.3s						
EPF	Esparros	6.33	341	ePn	Pn	23 18 48.6	+4.1
EPF				eSn	Sn	23 19 57.5	+0.7
	1.6nm,0.2s						
ETSF	Etsaut	6.48	335	ePn	Pn	23 18 50.8	+4.2
ETSF				eSn	Sn	23 20 00.9	+0.3
	1.0nm,0.2s						
LMR	La Mourre	6.74	21	ePn	Pn	23 18 52.7	+2.6
LMR				eSn	Sn	23 20 06.4	-0.5
	1.7nm,0.2s						
SJPF	Ste Jean	6.91	332	ePn	Pn	23 18 56.7	+4.3
SJPF				eSn	Sn	23 20 10.9	-0.1
	1.8nm,0.3s						
LASF	Ste Croix	7.00	4	ePn	Pn	23 18 57.4	+3.7
LASF				eSn	Sn	23 20 13.0	-0.4
	1.3nm,0.3s						
PGF	Pioggiola	7.06	38	ePn	Pn	23 18 57.8	+3.3
PGF				eSn	Sn	23 20 12.4	-2.5
	1.9nm,0.2s						
SMRF	Simiane la Rot	7.12	14	ePn	Pn	23 18 59.9	+4.5
SMRF				eSn	Sn	23 20 16.9	+0.6
	0.5nm,0.2s						
SBF	Sospel	7.51	24	ePn	Pn	23 19 03.9	+3.2
SBF				eSn	Sn	23 20 24.8	-1.1
	4.0nm,0.3s						
MDT	Midelt	7.68	239	P	Pn	23 19 01.0	-2.2
MD31	MD31	7.76	239	P	Pn	23 19 03.6	-0.5
VIVF	Saint-Julien-l	7.85	8	ePn	Pn	23 19 09.1	+3.8
VIVF				eSn	Sn	23 20 34.6	+0.4
	1.4nm,0.3s						
CAF	Calviac	7.88	354	ePn	Pn	23 19 10.3	+4.5
CAF				eSn	Sn	23 20 34.5	-0.5
	0.7nm,0.3s						
LFF	La Frestale	8.06	348	ePn	Pn	23 19 12.1	+3.9
LFF				eSn	Sn	23 20 38.8	-0.6
	1.5nm,0.3s						
ORIF	Oris-en-Rattie	8.09	14	ePn	Pn	23 19 14.1	+5.4
MBDF	Montbardon	8.10	18	ePn	Pn	23 19 13.4	+4.5
MBDF				eSn	Sn	23 20 39.6	-1.1
	0.5nm,0.2s						
RJF	Les Rejaudoux	8.31	352	ePn	Pn	23 19 14.7	+3.1
RJF				eSn	Sn	23 20 44.9	-0.6
	0.6nm,0.3s						
LPL	La Plagne	8.84	16	ePn	Pn	23 19 24.5	+5.4
LPL				eSn	Sn	23 20 57.9	-0.9
	0.6nm,0.3s						
TCF	Toulx Ste Croi	9.23	356	ePn	Pn	23 19 27.3	+3.1
BGF	Bois d'Agland	9.47	359	ePn	Pn	23 19 32.1	+4.6
BGF				eSn	Sn	23 21 12.7	-1.3
	2.8nm,0.3s						
SMF	Signal de Mont	9.57	3	ePn	Pn	23 19 32.3	+3.4
SMF	Signal de Mont	9.57	3	eP	Pn	23 19 38.1	+9.2
SMF				eSn	Sn	23 21 14.8	-1.6
	0.5nm,0.2s						
AVF	Avril sur Loir	9.70	1	ePn	Pn	23 19 34.7	+4.0
AVF	Avril sur Loir	9.70	1	eP	Pn	23 19 40.1	+9.4
AVF				eSn	Sn	23 21 18.1	-1.5
	0.4nm,0.2s						
CABF	La Chapelle	9.76	12	ePn	Pn	23 19 36.0	+4.4
CABF				eSn	Sn	23 21 19.5	-1.8
	0.5nm,0.2s						
MFF	Saint Martin d	9.83	346	ePn	Pn	23 19 35.5	+3.1
MFF	Saint Martin d	9.83	346	eP	Pn	23 19 41.9	+9.5
MFF				eSn	Sn	23 21 21.1	-1.7
	0.3nm,0.2s						
SSF	Saint Saulge	9.97	1	ePn	Pn	23 19 38.9	+4.5
SSF				eSn	Sn	23 21 24.6	-1.8
	0.4nm,0.3s						
LOR	Lormes	10.19	3	ePn	Pn	23 19 40.5	+3.1
	baz=174						
LOR	Lormes	10.19	3	eP	Pn	23 19 47.3	+10
LOR				eSn	Sn	23 21 29.7	-2.0
	0.7nm,0.3s						
HINF	Hinteralfeld	11.06	13	ePn	Pn	23 19 52.4	+3.0
HAU	Haudompre	11.16	11	ePn	Pn	23 19 53.7	+3.0
SFTF	Sexfontaines	11.20	6	ePn	Pn	23 19 54.3	+3.1
SFTF				eSn	Sn	23 21 53.8	-2.6
	2.5nm,0.3s						
MEZF	Maizieres J’vi	11.49	6	ePn	Pn	23 19 58.5	+3.3
MEZF				eSn	Sn	23 22 00.9	-2.7
	2.1nm,0.3s						
SAVF	Savonnieres en	11.61	6	ePn	Pn	23 20 01.5	+4.7
PAGF	Fort de Pagny	11.62	8	ePn	Pn	23 20 01.5	+4.6
GRR	Gorron	11.68	347	ePn	Pn	23 20 00.6	+2.9
GRR				eSn	Sn	23 22 05.3	-2.8
	0.9nm,0.2s						
CDF	Champ du Feu	11.71	14	ePn	Pn	23 20 01.3	+3.0
LDF	La Druitiere	11.76	349	ePn	Pn	23 20 01.9	+3.1
QUIF	Quistinic	11.79	339	ePn	Pn	23 20 02.2	+2.9
QUIF				eSn	Sn	23 22 07.9	-2.9
	1.2nm,0.4s						
SGMF	Saint Gilles	11.93	341	ePn	Pn	23 20 04.1	+2.9
SGMF				eSn	Sn	23 22 11.2	-3.1
	0.6nm,0.3s						
ROSF	Rostrenen	12.20	339	ePn	Pn	23 20 07.9	+3.0
ROSF				eSn	Sn	23 22 17.6	-3.3
	1.5nm,0.5s						
BAIF	Baives	12.99	3	ePn	Pn	23 20 18.8	+3.1

IDC 29 23:35:58.6±2.2**, 6°.89S×128°.75E, h0km, mb3.3**/1**, mbtmp3.6**/3**, ML3.7**/2**, Error ellipse: s-maj=150.6km s-min=32.2km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.06	158	Pn	Pn	23 39 17.6	-1.7
	0.2nm,0.3s,baz=336,slow=13,SNR=3.4						
WRA				Sn	Sn	23 41 43.4	-13
	0.4nm,0.3s,baz=320,slow=30,SNR=2.1						
	0.5nm,0.4s						
ASAR	Alice Springs	17.40	164	P	P	23 40 04.0	-0.3
	0.6nm,0.3s,baz=344,slow=11,SNR=33						
ASAR				S	Sn	23 43 06.0	-11
	0.2nm,0.4s,baz=348,slow=26,SNR=1.5						
	2.8nm,0.7s						
MKAR	Makanchi Array	67.46	327	P	P	23 46 56.3	0.0
	0.2nm,0.5s,baz=114,slow=6.6,SNR=5.0						
	0.2nm,0.5s						

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*NOU **29** 23:37:27.6, 37°.43S×176°.71E, h275km, MLv3.8/12, North Island, New Zealand*

*WEL **29** 23:37:33.1±0.7, 37°S±4°×17°7E±°, h222km±5km, M3.3/55, MLv3.3/55, Error ellipse: s-maj=0.0km s-min=0.0km az=67.8, confirmed*

ISC 29 23:37:26.9±2.1**, 37°.49S**±0°.08×**176°.65E**±0°.07**, h270km**±11km**, n137, σ1§87**/152**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MYRZ	Mayor Island	0.38	302	P	Pn	23 38 03.1	+1.3
MARZ	Manawahe	0.50	178	P	Pn	23 38 04.3	+2.2
OMRZ	Omania	0.66	199	P	Pn	23 38 04.2	+1.7
KMRZ	Kaimai	0.67	237	P	Pn	23 38 04.2	+1.6
TARZ	Mount Tarawera	0.76	189	P	Pn	23 38 05.5	+2.6
URZ	Urewera	0.85	155	P	Pn	23 38 04.2	+1.0
URZ	Urewera	0.85	155	P	Pn	23 38 04.2	+1.0
URZ				S	S	23 38 29.5	-2.6
RRRZ	Republican Roa	0.86	187	P	Pn	23 38 05.1	+1.8
HAZ	Te Kaha	0.94	107	P	Pn	23 38 04.4	+0.8
TOZ	Tahuroa Road	0.94	255	P	Pn	23 38 05.4	+1.8
RUGZ	Raukumara Rang	0.95	121	P	Pn	23 38 04.2	+0.3
RUGZ				S	S	23 38 29.2	-3.9
MUGZ	Murupara	0.99	174	P	Pn	23 38 05.5	+1.5
MUGZ				S	S	23 38 30.2	-3.1
PRRZ	Plateau Road	1.03	191	P	Pn	23 38 06.0	+1.9
KUZ	Kuaotunu	1.05	315	P	Pn	23 38 05.1	+0.8
KUZ	Kuaotunu	1.05	315	P	Pn	23 38 05.2	+1.0
MWZ	Matawai	1.10	141	P	Pn	23 38 06.0	+1.5
MWZ				S	S	23 38 31.7	-2.6
ALRZ	Allen Road	1.10	193	P	Pn	23 38 06.5	+2.0
WPRZ	Whakapapatarin	1.10	200	P	Pn	23 38 06.7	+2.1
RTZ	Ruatahuna	1.16	167	P	Pn	23 38 06.5	+1.5
RTZ				S	S	23 38 33.1	-2.0
RAGZ	Rawiri	1.18	149	P	Pn	23 38 06.9	+1.8
RAGZ				S	S	23 38 33.3	-1.9
PKGZ	Pakihiroa	1.20	110	P	Pn	23 38 06.9	+1.7
PKGZ				S	S	23 38 33.2	-2.3
TLZ	Tolley Road	1.22	226	P	Pn	23 38 07.3	+2.1
TWGZ	Tauwhareparae	1.26	124	P	Pn	23 38 07.6	+2.1
TWGZ				S	S	23 38 36.7	+0.6
MXZ	Matakaoa Point	1.32	94	P	Pn	23 38 07.4	+1.6
MXZ	Matakaoa Point	1.32	94	P	Pn	23 38 07.3	+1.4
TKGZ	Te Karaka	1.34	135	P	Pn	23 38 08.0	+2.0
TKGZ				S	S	23 38 35.3	-1.6
MRHZ	Matea Rd	1.36	188	P	Pn	23 38 07.8	+1.7
MTHZ	Maungataniwha	1.37	174	P	Pn	23 38 08.0	+1.8
MTHZ				S	S	23 38 35.6	-1.8
WIAZ	Waiheke Island	1.39	299	P	Pn	23 38 07.8	+1.4
PUZ	Puketiti	1.40	115	P	Pn	23 38 08.1	+1.7
SNGZ	Shannon Statio	1.40	157	P	Pn	23 38 08.6	+2.2
SNGZ				S	S	23 38 36.4	-1.4
HATZ	Hinemaiaia	1.47	197	P	Pn	23 38 08.6	+1.8
HATZ				S	S	23 38 37.7	-0.9
RAHZ	Arahi	1.47	167	P	Pn	23 38 09.2	+2.4
RAHZ				S	S	23 38 37.4	-1.1
ETAZ	East Tamaki Re	1.47	291	P	Pn	23 38 08.5	+1.7
RIGZ	Rimuhau	1.50	145	P	Pn	23 38 09.5	+2.4
RATZ	Rangitukua	1.54	206	P	Pn	23 38 09.3	+2.0
GRZ	Great Barrier	1.56	322	P	Pn	23 38 08.7	+1.1
MBAZ	Motutapu North	1.57	297	P	Pn	23 38 09.3	+1.7
CNGZ	Carnagh Statio	1.58	129	P	Pn	23 38 10.3	+2.7
NMHZ	Naumai	1.61	176	P	Pn	23 38 10.6	+2.6
NMHZ				S	S	23 38 40.4	-0.2
RITZ	Rihia Road	1.61	202	P	Pn	23 38 10.4	+2.5
AWAZ	Awhitu Peninsu	1.65	284	P	Pn	23 38 10.0	+1.8
WHHZ	Waihua	1.66	164	P	Pn	23 38 10.6	+2.4
BKZ	Black Stump Fm	1.68	184	P	Pn	23 38 10.2	+1.8
BKZ	Black Stump Fm	1.68	184	P	Pn	23 38 10.2	+1.8
BKZ				S	S	23 38 39.4	-2.0
KNZ	Kokohu	1.73	153	P	Pn	23 38 10.8	+2.1
WTAZ	Waiatarua	1.75	288	P	Pn	23 38 10.9	+2.0
HIZ	Hauiti	1.75	234	P	Pn	23 38 11.3	+2.5
HIZ	Hauiti	1.75	234	P	Pn	23 38 11.4	+2.5
NTVZ	North Tongarir	1.78	205	P	Pn	23 38 11.7	+2.4
TMVZ	Te Maari	1.79	204	P	Pn	23 38 11.3	+2.0
KRVZ	Karewarewa	1.79	206	P	Pn	23 38 11.5	+2.1
ARHZ	Aropaoanui	1.80	171	P	Pn	23 38 11.7	+2.5
ETVZ	East Tongariro	1.81	204	P	Pn	23 38 11.5	+2.0
WTVZ	West Tongariro	1.83	207	P	Pn	23 38 11.6	+2.0
NNVZ	North Ngauruho	1.83	206	P	Pn	23 38 11.9	+2.2
OTVZ	Oturere	1.84	204	P	Pn	23 38 12.3	+2.5
TWVZ	Taurewa	1.85	211	P	Pn	23 38 11.9	+2.1
SNVZ	South Ngauruho	1.87	205	P	Pn	23 38 12.4	+2.3
NGZ	Ngauruhoe	1.88	206	P	Pn	23 38 12.3	+2.2
MHGZ	Mahia Peninsul	1.94	150	P	Pn	23 38 12.8	+2.4
KWHZ	Kaweka Forest	1.94	185	P	Pn	23 38 12.8	+2.2
TUVZ	Tukino	1.94	203	P	Pn	23 38 12.7	+2.1
MCHZ	McNeill Hill	1.96	179	P	Pn	23 38 13.1	+2.5
FWVZ	Far West T-bar	1.97	206	P	Pn	23 38 12.9	+2.0
WHVZ	Whangaehu Hut	1.98	205	P	Pn	23 38 13.1	+2.1
DRZ	Dome Shelter	1.98	205	P	Pn	23 38 13.5	+2.4
TRVZ	Turoa	2.01	205	P	Pn	23 38 13.4	+2.2
WNVZ	Wahianoa	2.02	204	P	Pn	23 38 13.2	+2.0
MOVZ	Moawhango	2.04	200	P	Pn	23 38 13.0	+1.6
BHHZ	Black Hill Sta	2.05	193	P	Pn	23 38 13.3	+1.9
PKVZ	Pokaka	2.07	209	P	Pn	23 38 13.6	+2.0
MTVZ	Mangateitei	2.11	206	P	Pn	23 38 14.0	+2.1
CKHZ	Cape Kidnapper	2.20	171	P	Pn	23 38 14.9	+2.3
VRZ	Vera Road	2.21	222	P	Pn	23 38 15.6	+2.9
KAHZ	Kahuranaki	2.31	176	P	Pn	23 38 16.1	+2.3
WCZ	Waipu Caves	2.41	309	P	Pn	23 38 16.7	+1.9
PNHZ	Pukenui	2.45	188	P	Pn	23 38 16.7	+1.7
PXZ	Pawanui	2.55	176	P	Pn	23 38 17.8	+1.9
WPHZ	Waipukurau	2.58	184	P	Pn	23 38 18.1	+1.8
WAZ	Wanganui	2.61	209	P	Pn	23 38 18.6	+2.0
TSZ	Takapari Road	2.62	192	P	Pn	23 38 18.4	+1.7
LREZ	Lake Rotokare	2.65	221	P	Pn	23 38 19.9	+3.1
NEZ	North Egmont	2.68	228	P	Pn	23 38 20.7	+3.3
PKE	Pukeiti	2.70	230	P	Pn	23 38 20.9	+3.4
KHEZ	Kahui Hut	2.75	228	P	Pn	23 38 21.5	+3.5
KHEZ	Kahui Hut	2.75	228	P	Pn	23 38 21.2	+3.2
PRHZ	Porangahau	2.78	180	P	Pn	23 38 20.1	+1.9
DVHZ	Dannevirke	2.83	187	P	Pn	23 38 20.5	+1.7
POWZ	Post Office Ro	2.98	193	P	Pn	23 38 22.0	+1.7
PRWZ	Pori Road	3.11	190	P	Pn	23 38 23.4	+1.8
BFZ	Birch Farm	3.21	185	P	Pn	23 38 24.5	+1.8
BFZ	Birch Farm	3.21	185	P	Pn	23 38 24.3	+1.7
MRZ	Mangatainoka R	3.28	194	P	Pn	23 38 24.7	+1.2
TIWZ	Tintock	3.34	190	P	Pn	23 38 26.2	+2.1
CPWZ	Castlepoint	3.44	186	P	Pn	23 38 27.3	+2.2
HOWZ	Holdsworth Sta	3.52	194	P	Pn	23 38 27.0	+0.9
OGWZ	Otaki Gorge	3.52	199	P	Pn	23 38 27.4	+1.3
KIW	Kapiti Island	3.63	201	P	Pn	23 38 28.4	+1.1
TMWZ	Te Maipa	3.66	189	P	Pn	23 38 29.1	+1.4
MTW	Mount Morrison	3.77	193	P	Pn	23 38 29.7	+0.8
CAW	Cannon Point	3.82	198	P	Pn	23 38 30.4	+1.0
DUWZ	D’Urville Isla	3.93	212	P	Pn	23 38 31.5	+0.8
TRWZ	Traveller	3.98	190	P	Pn	23 38 32.5	+1.3
PAWZ	Paruwai Farm	4.00	193	P	Pn	23 38 32.7	+1.1
WEL	Wellington	4.06	200	P	Pn	23 38 33.3	+1.2
SNZO	South Karori	4.11	201	P	Pn	23 38 33.8	+1.2
TCW	Tory Channel	4.15	206	P	Pn	23 38 34.2	+1.1
PLWZ	Palliser	4.22	194	P	Pn	23 38 34.8	+0.7

TUWZ	**Tuamarina**	4.46	207	P	Pn	23 38 37.5	+0.7
NNZ	**Nelson**	4.51	213	P	Pn	23 38 37.9	+0.6
TKNZ	**Takaka Hill**	4.55	218	P	Pn	23 38 37.9	-0.1
QRZ	**Quartz Range**	4.62	223	P	Pn	23 38 38.9	+0.2
QRZ	**Quartz Range**	4.62	223	P	Pn	23 38 38.7	0.0
CMWZ	**Cape Campbell**	4.66	203	P	Pn	23 38 41.0	+1.9
BSWZ	**Blackbirch Sta**	4.74	206	P	Pn	23 38 41.2	+1.2
MRNZ	**Matariki Terra**	4.93	216	P	Pn	23 38 42.3	-0.1
THZ	**Tophouse**	5.16	213	P	Pn	23 38 45.6	+0.5
KHZ	**Kahutara**	5.47	205	P	Pn	23 38 50.5	+1.7
KHZ	**Kahutara**	5.47	205	P	Pn	23 38 50.3	+1.4
DSZ	**Denniston Nort**	5.66	220	P	Pn	23 38 50.9	-0.4
GVZ	**Greta Valley S**	6.13	206	P	Pn	23 38 58.2	+1.2
LTZ	**Lake Taylor**	6.26	211	P	Pn	23 38 59.3	+0.8
AMCZ	**Amberley**	6.45	207	P	Pn	23 39 01.8	+1.0
INZ	**Inchbonnie**	6.58	216	P	Pn	23 39 03.2	+0.8
OXZ	**Oxford**	6.81	210	P	Pn	23 39 05.5	+0.2
MQZ	**McQueen's Vall**	6.92	205	P	Pn	23 39 06.8	+0.2
AKCZ	**Akaroa Harbour**	6.98	203	P	Pn	23 39 08.5	+1.1
MHCZ	**Mount Hutt**	7.17	211	P	Pn	23 39 10.2	+0.4
WACZ	**Wakanui South**	7.41	208	P	Pn	23 39 13.6	+0.9
RPZ	**Rata Peaks**	7.54	213	P	Pn	23 39 16.0	+1.7
RPZ	**Rata Peaks**	7.54	213	P	Pn	23 39 14.8	+0.5
GCSZ	**Gaunt Creek Bo**	7.56	218	P	Pn	23 39 15.0	+0.4
TMZ	**Timaru**	8.11	210	P	Pn	23 39 22.4	+1.0
ODZ	**Otahua Downs**	8.80	209	P	Pn	23 39 32.5	+2.4
ODZ	**Otahua Downs**	8.80	209	P	Pn	23 39 32.2	+2.2
JCZ	**Jackson Bay**	8.88	220	P	Pn	23 39 31.6	+0.4

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*TIR **29** 23:37:57.3, 43°.91N×18°.35E, h12km±1km, Md4.0, Ml3.8*
*PRU **29** 23:37:58.6±0.0, 43°.88N×18°.60E, h1km*
*LDG **29** 23:37:59.9±0.1, 44°.11N×18°.65E, h4km, Ml3.3/16, Error ellipse: s-maj=3.0km s-min=2.3km az=45.0*
*PDG **29** 23:37:59.6±0.5, 44°.08N×18°.63E, h10km, MD3.7/8, ML3.6/13, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*IDC **29** 23:37:59.5±0.8, 44°.07N×18°.57E, h0km, mb3.6/7, mbtmp3.6/16, ML3.5/8, Error ellipse: s-maj=12.3km s-min=11.3km az=30.0*
*BEO **29** 23:38:00.5±0.2, 44°.08N×18°.60E, h8km±1km, ML3.6/18*
*RHSSO **29** 23:38:00.2±0.2, 44°.06N×18°.60E, h4km±1km, ML3.7/14*
*BGR **29** 23:38:09.6±3.1, 44°.50N×18°.22E, h5km, ML3.7/7, Error ellipse: s-maj=47.8km s-min=11.1km az=146.0*
ISC 29 23:37:59.9±1.0, **44°.07N**±0°.01×**18°.58E**±0°.01, **h5**km±7km, **n227**, σ**1ˢ97**/335, **mb3.6**/8, **41C-39D**, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAPS	**Han Pijesak,Bl**	0.27	86	*e*Pg	Pg	23 38 04.7	-0.5
HAPS				*e*Sg	Sg	23 38 09.0	+0.3
HAPS	**Han Pijesak,Bl**	0.27	86	⇓*i*Pg	Pg	23 38 04.7	-0.5
HAPS				*e*Sg	Sg	23 38 09.1	+0.3
BBLS	**Lazići**	0.63	108	*e*Pg	Pg	23 38 12.1	+0.1
BBLS				*e*Sg	Sg	23 38 20.5	+0.3
DOB	**Doboj**	0.75	333	⇓*i*Pg	Pg	23 38 13.4	-0.9
DOB				*e*Sg	Sg	23 38 24.5	+0.5
TEKS	**Tekeris**	0.83	54	*e*Pg	Pg	23 38 15.4	-0.6
TEKS				*e*Sg	Sb	23 38 27.4	-1.1
TEKS	**Tekeris**	0.83	54	⇓*i*Pg	Pg	23 38 15.0	-1.0
TEKS				*e*Sg	Sg	23 38 26.8	0.0
BLJ	**Bijeljina**	0.87	34	⇑*i*Pg	Pg	23 38 15.0	-1.6
BLJ				*e*Sg	Sg	23 38 26.7	-1.2
UPM	**Unac-Piva**	0.90	165	⇓*i*Pg	Pg	23 38 16.4	-0.7
UPM				*e*Sg	Sg	23 38 28.1	-0.6
UPM	**Unac-Piva**	0.90	165	⇑*i*Pg	Pg	23 38 16.6	-0.5
UPM				*i* Sg	Sg	23 38 28.3	-0.4
PLE	**Pljevlja**	0.94	141	⇑*i*Pg	Pg	23 38 17.3	-0.7
PLE				*i* Sg	Sb	23 38 31.5	-0.1
DIVS	**Divibare**	1.02	88	*e*Pg	Pg	23 38 18.8	-0.7
DIVS				*e*Sg	Sb	23 38 32.7	-1.1
DIVS	**Divibare**	1.02	88	⇓*i*Pg	Pg	23 38 18.4	-1.1
DIVS				*e*Sg	Sg	23 38 32.4	-0.3
SRKY	**Kupres RS**	1.02	271	⇓*i*Pg	Pg	23 38 19.0	-0.5
SRKY				*e*Sg	Sg	23 38 33.2	+0.5
MGRS	**Mrkonjic Grad**	1.13	289	⇓*i*Pg	Pg	23 38 20.5	-1.1
MGRS				*e*Sg	Sg	23 38 36.8	+0.6
BRY	**Bratogost**	1.17	181	⇓*i*Pg	Pg	23 38 20.5	-1.8
BRY				*e*Sg	Sg	23 38 36.8	-0.6
BRY	**Bratogost**	1.17	181	⇓*i*Pg	Pg	23 38 20.7	-1.6
BRY				*i* Sg	Sn	23 38 39.9	+0.6
RICI	**Ricice**	1.19	242	*i* Pg	Pg	23 38 22.0	-0.8
BLY	**Banja Luka**	1.21	305	*e*Pg	Pb	23 38 23.5	+0.2
BLY				*e*Sg	Sb	23 38 40.0	+0.7
BLY	**Banja Luka**	1.21	305	⇓*i*Pg	Pg	23 38 22.4	-0.7
BLY				*e*Sg	Sb	23 38 39.9	+0.7
IVAS	**Ivanjica**	1.24	113	*e*Pg	Pg	23 38 23.2	-0.5
IVAS				*e*Sg	Sb	23 38 39.9	-0.2
A052A	**Srbac**	1.28	324	⇑*i*Pg	Pn	23 38 24.2	-0.3
A052A				*e*Sg	Sb	23 38 41.8	+0.4
SJES	**Sjenica**	1.29	128	*e*Pg	Pg	23 38 23.5	-1.2
SJES				*e*Sg	Sb	23 38 41.6	-0.1
TRUS	**Trudelj**	1.32	83	*e*Pg	Pn	23 38 24.5	-0.6
TRUS				*e*Sg	Sn	23 38 43.2	+0.1
NKME	**Niksic**	1.33	168	⇑*i*Pg	Pn	23 38 23.6	-1.5
NKME				*i* Sg	Sn	23 38 44.5	+1.3
STON	**Ston**	1.35	208	*i* Pn	Pn	23 38 24.5	-0.9
STON	**Ston**	1.35	208	*e*Pg	Pn	23 38 24.5	-0.9
STON				*e*Sg	Sn	23 38 44.8	+1.0
STON	**Ston**	1.35	208	⇓*i*Pg	Pn	23 38 24.2	-1.2
STON				*e*Sg	Sb	23 38 43.5	+0.2
TREB	**Trebinje**	1.36	187	*e*Pg	Pn	23 38 24.9	-0.6
TREB				*e*Sg	Sn	23 38 44.8	+0.9
TREB	**Trebinje**	1.36	187	*e*Pg	Pn	23 38 24.4	-1.1
TREB				*e*Sg	Sb	23 38 43.8	+0.3
MAKA	**Makarska**	1.37	236	*i* Pg	Pn	23 38 24.9	-0.8
MAKA				Sg	Sb	23 38 44.5	+0.6
KOME	**Kolasin**	1.39	150	⇓*i*Pg	Pn	23 38 25.2	-0.9
KOME				*i* Sg	Sn	23 38 46.6	+1.7
FRGS	**Fruska Gora**	1.40	38	⇑P	Pn	23 38 25.1	-1.0
FRGS				⇓S	Sb	23 38 43.9	-0.9
FRGS	**Fruska Gora**	1.40	38	*e*Pg	Pn	23 38 25.0	-1.2
FRGS				*e*Sg	Sn	23 38 45.9	+0.9
DBRK	**Dubrovnik**	1.43	193	*i* Pn	Pn	23 38 26.6	0.0
A051A	**Mrakovica**	1.52	309	⇑*i*Pn	Pn	23 38 27.9	0.0
A051A				*e*Sn	Sb	23 38 48.8	+0.5
A050A	**Klekovaca**	1.53	286	⇑*i*Pn	Pb	23 38 28.8	0.0
A050A				*e*Sn	Sg	23 38 49.6	+0.6
IVA	**Berane**	1.53	141	⇓*i*Pg	Pn	23 38 27.4	-0.6
IVA				*i* Sg	Sg	23 38 50.2	+1.1
CEME	**Cevo**	1.54	171	⇓*i*Pg	Pn	23 38 26.7	-1.4
CEME				*i* Sg	Sg	23 38 49.9	+0.5
BEO	**Beograd**	1.55	61	*e*Pn	Pn	23 38 27.4	-0.7
BEO				*e*Sg	Sb	23 38 48.6	-0.3
GRUS	**Gruza**	1.55	96	*e*Pn	Pn	23 38 27.9	-0.3
GRUS				*e*Sn	Sg	23 38 49.1	-0.7
KIJV	**Kijevo**	1.57	269	*e*Pn	Pb	23 38 29.4	0.0
HCY	**Herceg Novi**	1.62	182	⇑*i*Pn	Pn	23 38 29.5	+0.4
HCY				*e*Sn	Sn	23 38 50.6	+0.2
HCY	**Herceg Novi**	1.62	182	⇑*i*Pn	Pn	23 38 29.6	+0.4
HCY				*i* Sn	Sg	23 38 52.8	+0.9
PDG	**Podgorica**	1.71	163	⇑P	Pn	23 38 30.7	+0.4
PDG				⇑S	Sg	23 38 54.8	-0.1
PDG	**Podgorica**	1.71	163	*e*Pn	Pn	23 38 30.4	+0.1
PDG				*e*Sg	Sg	23 38 55.3	+0.5
PDG	**Podgorica**	1.71	163	⇑*i*Pn	Pn	23 38 30.4	+0.1
PDG				*i* Sn	Sg	23 38 54.7	-0.1
BUM	**Brajici-Budva**	1.78	172	⇑*i*Pn	Pb	23 38 33.2	+0.2
BUM				*i* Sn	Sb	23 38 56.3	+0.6
PVY	**Plav**	1.78	145	⇑*i*Pn	Pn	23 38 31.9	+0.4
PVY				*i* Sn	Sn	23 38 55.1	+0.5
LSTV	**Lastovo**	1.79	224	*i* Pn	Pn	23 38 32.5	+1.1
DRME	**Dracevica, Mon**	1.93	167	⇑*i*Pn	Pn	23 38 33.0	-0.4
DRME				*e*Sn	Sn	23 38 58.7	+0.7
DRME	**Dracevica, Mon**	1.93	167	⇑*i*Pn	Pn	23 38 33.3	-0.1
DRME				*i* Sn	Sb	23 39 00.0	+0.1
BCI	**Bajram Curri**	2.02	147	P	Pn	23 38 35.3	+0.7
	baz=140						
BCI				S	Sb	23 39 01.5	-1.0
	baz=140						
BCI				AMP			
	comp=N,4.3nm,0.6s,baz=140						
MOSL	**Moslavina**	2.02	321	*e*Pn	Pn	23 38 34.6	0.0
SELS	**Selova**	2.03	114	*e*Pn	Pn	23 38 34.3	-0.5
SELS				*e*Sn	Sn	23 38 59.0	-1.5
UDBI	**Udbina**	2.07	284	*e*Pn	Pn	23 38 36.2	+0.8
MORI	**Morici**	2.08	265	*i* Pn	Pb	23 38 37.8	-0.4
MORI				Sn	Sb	23 39 06.0	+1.7
MORH	**Mrgy, Hungar**	2.15	1	⇑P	Pn	23 38 35.6	-0.7
MORH				⇓S	Sn	23 39 01.3	-2.1
MORH	**Mrgy, Hungar**	2.15	1	*e*Pn	Pn	23 38 36.7	+0.3
MORH				*e*Sn	Sn	23 39 03.8	+0.4
ULC	**Ulcinj**	2.16	167	⇓*i*Pn	Pb	23 38 38.8	-0.7
ULC				*i* Sn	Sb	23 39 05.8	-0.7
ZIRJ	**Zirje**	2.16	260	*e*Pn	Pb	23 38 38.6	-0.9
BANR	**Banloc**	2.25	53	⇑P	Pn	23 38 36.7	-1.0
KUBS	**Kucevo**	2.25	80	*e*Pn	Pn	23 38 36.2	-1.6
PLIT	**Plitvice**	2.27	292	*i* Pn	Pn	23 38 39.1	+1.1
BOVS	**Bovan**	2.30	100	⇑P	Pn	23 38 37.6	-0.9
BOVS				⇑S	Sn	23 39 07.7	+0.5
BOVS	**Bovan**	2.30	100	*e*Pn	Pn	23 38 37.6	-0.9
BOVS				*e*Sn	Sn	23 39 07.1	-0.1
MDVR	**Moldovita**	2.36	71	⇑P	Pn	23 38 38.4	-0.9
DUGI	**Dugi Otok**	2.54	270	*e*Pn	Pn	23 38 43.3	+1.5
VIRC	**Vir**	2.55	276	*e*Pn	Pn	23 38 43.5	+1.7
PTJ	**Puntijarka**	2.61	316	*e*Pn	Pn	23 38 42.8	-0.1
ZAGS	**Zajecar**	2.65	94	*e*Pn	Pn	23 38 42.6	-0.7
BZS	**Buzias**	2.66	53	⇓P	Pn	23 38 42.0	-1.4
BZS				⇓S	Sn	23 39 15.3	-0.7
BARS	**Barje**	2.67	117	*e*Pn	Pn	23 38 43.3	-0.2
BARS				*e*Sn	Sn	23 39 17.1	+0.9
OZLJ	**Ozalj**	2.70	306	*e*Pn	Pn	23 38 44.4	+0.4
NVLJ	**Novalja**	2.71	282	*e*Pn	Pn	23 38 45.5	+1.5
LOBO	**Lobor**	2.74	320	*i* Pn	Pn	23 38 44.5	0.0
PHP	**Peshkopia**	2.75	149	P	Pb	23 38 47.1	-2.4
PHP	**Peshkopia**	2.75	149	P	Pb	23 38 47.0	-2.4
	baz=144						
PHP				S	Sb	23 39 22.7	-0.8
	baz=144						
PHP				AMP			
	comp=N,1.0nm,1.1s,baz=144						
BOJS	**Bojanci**	2.77	302	*i* Pn	Pn	23 38 46.1	+1.2
BOJS				*i*		23 38 47.3	
BOJS				*e*Pg	Pb	23 38 51.0	+1.1
BOJS				*i* Sn	Sn	23 39 18.9	+0.1
BOJS				*i* Sg	Sg	23 39 32.9	+4.1
BOJS	**Bojanci**	2.77	302	⇓*i*Pn	Pn	23 38 45.8	+0.9
BOJS				*e*Sn	Sn	23 39 20.0	+1.2
RABC	**Rab**	2.81	285	*e*Pn	Pb	23 38 48.3	-2.1
CRES	**Cresnjev**	2.83	310	⇓*i*Pn	Pn	23 38 46.3	+0.5
CRES				*e*Sn	Sn	23 39 21.4	+1.2
GOLS	**Golise**	2.86	314	*i* Pn	Pn	23 38 46.3	+0.1
HERR	**Herculane**	2.87	72	⇓P	Pn	23 38 45.8	-0.4
HERR				⇓S	Sn	23 39 20.6	-0.4
TIR	**Tirane**	2.88	160	⇓P	Pn	23 38 48.5	+2.1
TIR	**Tirane**	2.88	160	P	Pn	23 38 47.8	+1.4
TIR	**Tirane**	2.88	160	P	Pn	23 38 48.3	+1.9
	baz=155						
TIR				S	Sb	23 39 29.0	+1.8
	baz=155						
TIR				AMP			
	comp=E,0.8nm,0.6s,baz=155						
DJES	**Djerdap**	2.89	77	⇓P	Pn	23 38 46.6	0.0
DJES				⇑S	Sn	23 39 20.1	-1.6
PRVS	**Prvonek**	2.99	120	*e*Pn	Pn	23 38 47.9	-0.1
PRVS				*e*Sn	Sn	23 39 23.8	-0.5
RMGR	**Halanga-Turnu**	3.01	77	⇑P	Pn	23 38 48.6	+0.4
SURR	**Surduc**	3.03	55	⇑P	Pn	23 38 47.1	-1.4
ZAPS	**Zavoj**	3.05	104	*e*Pn	Pn	23 38 48.7	-0.1
ZAPS				*e*Sn	Sn	23 39 25.1	-0.5
SIRR	**Siria**	3.10	44	⇑P	Pn	23 38 48.1	-1.4
SGRT	**San Giovanni R**	3.11	223	P	Pn	23 38 49.7	0.0
	baz=223						
SGRT				S	Sn	23 39 26.0	-1.3
	baz=223						
PUNG	**Punghina**	3.14	85	⇑P	Pn	23 38 50.4	+0.4
RIY	**Rijeka**	3.18	295	*e*Pn	Pn	23 38 52.7	+2.2
SMRN	**Sveta Marina**	3.31	289	*e*Pn	Pn	23 38 53.9	+1.6
SRE	**Strehaia**	3.37	78	⇑P	Pn	23 38 53.9	+0.7
OHR	**Ohrid**	3.38	150	*i* Pn	Pb	23 38 57.0	-3.3
CEY	**Cerknica**	3.39	301	*e*Pn	Pn	23 38 54.6	+1.1
CEY				*e*Sn	Sn	23 39 34.8	+0.7
BAIL	**Bailesti**	3.44	89	⇓P	Pn	23 38 54.2	+0.1
BSZH	**Besenyszg**	3.44	20	⇑P	Pn	23 38 54.5	+0.3
NOCI	**Noci**	3.46	199	P	Pn	23 38 54.8	+0.4
	baz=198						
STIP	**Stip**	3.56	131	*i* Pn	Pn	23 38 56.4	+0.6
DEV	**Deva**	3.57	58	⇑P	Pn	23 38 55.1	-0.8
SKDS	**Skadanscina**	3.57	296	*i* Pn	Pn	23 38 57.4	+1.5
SKDS	**Skadanscina**	3.57	296	*e*Pn	Pn	23 38 56.2	+0.2
SKDS				*e*Sn	Sn	23 39 38.0	-0.5
SOKA	**Soboth**	3.61	318	*i* Pn	Pn	23 38 56.8	+0.1
	comp=E,9.9nm,0.3s,SNR=11						
SOKA				*e*Sn	Sn	23 39 38.7	-1.0
	comp=E,15nm,0.4s						
MATE	**Matera**	3.69	203	⇓P	Pn	23 39 00.2	+2.7
OBKA	**Obir**	3.75	312	*i* Pn	Pn	23 38 59.0	+0.6
	comp=E,10nm,0.2s,SNR=11						
OBKA	**Obir**	3.75	312	*e*Pn	Pn	23 38 59.5	+1.1
SRO	**Srobarova**	3.75	357	*e*PN	Pn	23 39 00.2	+1.8
SRO				*e*SG	Sg	23 40 05.8	+5.4
SRO				*e*LG	Lg	23 40 18.1	
KBN	**Korca**	3.81	154	P	Pn	23 39 01.2	+1.9
KBN	**Korca**	3.81	154	P	Pn	23 39 01.2	+1.9
	baz=150						
KBN				AMP			
	comp=N,0.5nm,1.1s,baz=150						
ARSA	**Arzberg**	3.84	327	*i* Pn	Pn	23 38 59.8	+0.2
	comp=N,43nm,0.4s,SNR=66						
ARSA				*e*Sn	Sn	23 39 44.4	-0.8
	comp=N,53nm,0.5s						
ARSA	**Arzberg**	3.84	327	*e*Pn	Pn	23 39 00.1	+0.5
ARSA	**Arzberg**	3.84	327	⇑*i*Pn	Pn	23 38 59.8	+0.2
ARSA				*e*Sn	Sn	23 39 44.5	-0.6
FNA	**Florina**	3.88	147	P	Pn	23 39 00.6	+0.4
LOT	**Lotru**	3.95	68	⇑P	Pn	23 39 01.6	+0.4
PSZ	**Piszkesteto**	3.96	13	⇑P	Pn	23 39 01.7	+0.3
RONA	**Rosalia, Austr**	3.97	337	*i* Pn	Pn	23 39 01.4	0.0
	comp=N,24nm,0.3s,SNR=27						
RONA				*e*Sn	Sn	23 39 48.4	+0.1
	comp=N,50nm,0.4s						
DRGR		3.99	45	⇓P	Pn	23 39 01.0	-0.8
VAY	**Valandovo**	4.02	132	*i* Pn	Pn	23 39 02.7	+0.6
MARR	**Marisel-Cluj**	4.13	49	⇑P	Pn	23 39 02.6	-1.1
LSK	**Leskovik**	4.19	158	P	Pn	23 39 06.3	+1.7
LSK	**Leskovik**	4.19	158	P	Pn	23 39 06.5	+1.9
	baz=155						
CONA	**Conrad Observa**	4.30	335	*i* Pn	Pn	23 39 06.1	+0.1
	comp=N,13nm,0.3s,SNR=18						
CONA				*e*Sn	Sn	23 39 56.0	-0.6
	comp=N,40nm,0.5s						
SRN	**Sarande**	4.32	165	AMP			
	comp=E,0.2nm,0.6s,baz=162						
MYKA	**Terra Mystica**	4.32	308	*i* Pn	Pn	23 39 07.8	+1.5
	comp=E,6.9nm,0.4s,SNR=6.9						
MODS	**Modra-Piesok**	4.40	349	*e*PN	Pn	23 39 08.0	+0.6
MODS				*e*PG	Pg	23 39 23.1	-1.1
MODS				*e*SN	Sn	23 39 56.5	-2.5
MODS				*e*LG	Lg	23 40 01.5	
CJR	**Cluj-Napoca**	4.42	51	⇓P	Pn	23 39 06.8	-0.8
VYHS	**Vyhne**	4.43	2	*e*PN	Pn	23 39 09.2	+1.4
VYHS				*e*PG	Pg	23 39 25.6	+0.8
VYHS				*e*SN	Sn	23 40 00.3	+0.6
VYHS				*e*SG	Sg	23 40 27.1	+4.9
ARR	**Arges**	4.51	71	⇓P	Pn	23 39 09.9	+1.0
MDB	**Medias**	4.60	61	⇑P	Pn	23 39 10.2	+0.1
KECS	**Kecovo**	4.61	16	*e*PN	Pn	23 39 10.7	+0.5
KECS				*e*PG	Pg	23 39 32.6	+4.4
KECS				*e*SN	Sn	23 40 00.9	-3.2
HUMR	**Humele**	4.62	82	⇓P	Pn	23 39 10.0	-0.4
NVR	**Nevrokopi**	4.75	123	P	Pn	23 39 13.7	+1.6
KBA	**Koelnbreinsper**	4.75	311	*i* Pn	Pn	23 39 13.4	+1.1
	comp=E,1.9nm,0.1s,SNR=5.6						
KBA				*e*Sn	Sn	23 40 07.3	-0.5
	comp=E,10nm,0.4s						
KBA	**Koelnbreinsper**	4.75	311	*e*Pn	Pn	23 39 13.6	+1.2
COPA	**Copaceanca**	4.78	87	⇓P	Pn	23 39 12.5	0.0
VOIR		4.81	71	⇓P	Pn	23 39 14.2	+1.2
MOA	**Molln**	4.83	323	*i* Pn	Pn	23 39 14.3	+1.0
	comp=E,12nm,0.3s,SNR=17						
MOA				*e*Sn	Sn	23 40 08.9	-0.7
	comp=E,43nm,0.5s						
MOA	**Molln**	4.83	323	*e*Pn	Pn	23 39 14.6	+1.3
JAVC	**Velka Javorina**	4.83	353	*e*PN	Pn	23 39 14.3	+0.9
TRPA	**Tarpa**	4.91	33	⇓P	Pn	23 39 14.2	-0.1
BIOA	**Bad Ischl, Aus**	5.00	318	*i* Pn	Pn	23 39 16.5	+0.9
	comp=E,21nm,0.3s,SNR=20						
BIOA				*e*Sn	Sn	23 40 14.0	+0.1
	comp=E,18nm,0.5s						
ABTA	**Abfaltersbach**	5.04	304	*i* Pn	Pn	23 39 18.1	+1.9
	comp=E,9.0nm,0.4s,SNR=9.6						
ABTA				Sn	Sg	23 40 44.6	+2.8
	comp=E,29nm,0.7s						
ARCR	**ARCALIA**	5.05	51	⇑P	Pn	23 39 16.3	0.0
TIP	**Timpagrande**	5.07	196	⇓P	Pn	23 39 17.2	+0.6
LANS	**Liptovska Anna**	5.12	7	*e*PN	Pn	23 39 19.0	+1.7
LANS				*e*PG	Pg	23 39 38.1	+0.1
LANS				*e*		23 59 13.5	
KOKK	**Kokkinochori,**	5.16	127	P	Pn	23 39 18.1	+0.3
DOPR	**Dopca**	5.19	66	⇑P	Pn	23 39 18.3	+0.1
KRUC	**Moravsky**	5.22	344	*e*PN	Pn	23 39 18.0	-0.6
KRUC				*e*SN	Sn	23 40 19.2	+0.1
MAUC	**Maruska**	5.33	355	*e*PN	Pn	23 39 20.7	+0.6
VRAC	**Vranov**	5.42	346	⇓P	Pn	23 39 22.4	+1.1
VRAC	**Vranov**	5.42	346	Pn	Pn	23 39 21.1	-0.3
	comp=E,0.7nm,0.3s,baz=187,slow=14,SNR=5.8						
VRAC				Sn	Sn	23 40 23.8	-0.2
	comp=E,1.8nm,0.3s,baz=260,slow=22,SNR=6.0						
	comp=E,2.6nm,0.5s						
VRAC	**Vranov**	5.42	346	*e*PN	Pn	23 39 22.4	+1.1
VRAC				*e*SN	Sn	23 40 23.7	-0.3
MLR	**Muntele Rosu**	5.43	72	⇓P	Pn	23 39 22.4	+0.8
MLR	**Muntele Rosu**	5.43	72	Pn	Pn	23 39 22.4	+0.8
	comp=E,0.6nm,0.3s,baz=151,slow=5.7,SNR=7.7						
MLR				Pg	Pb	23 39 38.4	+3.1
	comp=E,0.8nm,0.3s,baz=293,slow=19,SNR=5.8						
MLR				Lg	Lg	23 40 51.4	
	comp=E,0.6nm,0.3s,baz=154,slow=20,SNR=3.2						
	comp=E,3.4nm,0.5s						
RJOB	**Jochberg**	5.46	314	*e*Pn	Pn	23 39 23.6	+1.7
NYDR	**Nydri-Lefkada**	5.58	163	P	Pn	23 39 22.8	-0.7
CKRC	**Cesky Krumlov**	5.59	330	*e*PN	Pn	23 39 25.0	+1.2
CKRC				*e*SN	Sn	23 40 30.1	+1.7
STHS	**Stebnicka Huta**	5.66	18	*e*PN	Pn	23 39 25.1	+0.5
STHS				*e*PG	Pg	23 39 50.7	+2.5
MORC	**Moravsky Berou**	5.76	353	⇓P	Pn	23 39 26.2	+0.2
MORC	**Moravsky Berou**	5.76	353	*e*PN	Pn	23 39 26.2	+0.2
MORC				*e*SN	Sn	23 40 29.7	-2.7
MORC	**Moravsky Berou**	5.76	353	*e*Pn	Pn	23 39 27.8	+1.8
AGG	**Agios Georgios**	5.77	150	P	Pn	23 39 27.0	+0.8
OKC	**Ostrava-Krasne**	5.78	357	*e*Pn	Pn	23 39 27.8	+1.6
WTTA	**Wattenberg**	5.82	306	*i* Pn	Pn	23 39 29.0	+2.0
	comp=E,6.6nm,0.2s,SNR=15						
WTTA	**Wattenberg**	5.82	306	*e*Pn	Pn	23 39 29.4	+2.4
BURAR	**Bucovina Array**	5.84	50	⇑P	Pn	23 39 27.3	+0.1
GEC2	**GERESS Array S**	5.85	327	*e*Pn	Pn	23 39 28.2	+0.9
GERES	**GERESS Array B**	5.85	327	Pn	Pn	23 39 27.5	+0.2
	comp=E,1.7nm,0.3s,baz=152,slow=13,SNR=27						
GERES				Sn	Sn	23 40 31.1	-3.6
	comp=E,1.2nm,0.3s,baz=134,slow=16,SNR=1.1						
	comp=E,2.9nm,0.5s						
WATA	**Walderalm**	5.89	306	*i* Pn	Pn	23 39 30.0	+2.0
	comp=E,16nm,0.5s,SNR=13						
PLOR	**Plostina**	6.00	70	⇑P	Pn	23 39 29.5	+0.2
SQTA	**Sankt Quirin**	6.05	304	*i* Pn	Pn	23 39 32.3	+2.1
	comp=E,22nm,0.6s,SNR=15						
VRI	**Vrincioaia**	6.05	70	⇑P	Pn	23 39 29.7	-0.3
KHC	**Kasperske Hory**	6.12	328	*e*PN	Pn	23 39 31.9	+0.8
KHC				*e*SN	Sn	23 40 42.6	+1.1
KRLC	**Kraliky**	6.13	349	*e*PN	Pn	23 39 32.9	+1.7
MOTA	**Moosalm**	6.17	305	*e*Pn	Pn	23 39 33.3	+1.5
	comp=E,14nm,0.3s,SNR=21						
FETA	**Feichten**	6.25	301	*i* Pn	Pn	23 39 34.9	+2.0
	comp=E,3.0nm,0.3s						
RETA	**Reutte**	6.45	305	*i* Pn	Pn	23 39 37.3	+1.8
	comp=E,3.4nm,0.3s						
DPC	**Dobruska-Polom**	6.47	347	*e*PN	Pn	23 39 37.3	+1.5
PRU	**Pruhonice**	6.53	336	*e*PN	Pn	23 39 38.0	+1.4
ICOR	**Ion Corvin**	6.64	86	⇑P	Pn	23 39 38.2	+0.1
DAVOX	**Davos/Dischmat**	6.70	297	Pn	Pn	23 39 40.8	+1.8
	comp=E,3.0nm,0.3s,baz=120,slow=13,SNR=61						
DAVOX				Sn	Sn	23 40 56.0	+0.3
	baz=126,slow=20						
	comp=E,26nm,0.6s						
CHVC	**Chvalec**	6.75	346	*e*PN	Pn	23 39 41.2	+1.6
DAVA	**Damuels**	6.89	301	*e*Pn	Pn	23 39 43.1	+1.4
	comp=E,2.2nm,0.3s						
DAVA	**Damuels**	6.89	301	*e*Pn	Pn	23 39 43.2	+1.4
CFR	**Carcaliu**	6.91	77	⇓P	Pn	23 39 42.1	+0.3
UBR	**Ueberruh**	6.93	304	*e*Pn	Pn	23 39 43.6	+1.4
PGF	**Pioggiola**	7.15	261	*e*Pn	Pn	23 39 45.0	-0.2
PGF				*e*Sn	Sn	23 41 01.6	-5.3
	comp=E,1.2nm,0.4s						
VAE	**Valguarnera**	7.30	207	Pn	Pn	23 39 48.1	+0.9
	comp=E,9.5nm,1.0s,baz=112,slow=14,SNR=2.0						
MANZ	**Manzenberg**	7.39	326	*e*Pn	Pn	23 39 49.1	+0.8
BRG	**Berggiesshubel**	7.50	337	*e*P	Pn	23 39 54.0	+4.2
BRG				Amp		23 40 00.1	
	comp=Z,1.7nm,0.4s						
BRG				r		23 40 27.6	
BRG				Amp		23 40 30.6	
	comp=Z,4.1nm,1.0s						
BRG				S	Sb	23 41 31.2	-8.8
BRG				Amp		23 41 43.1	
	comp=Z,6.2nm,0.6s						
BRG				r		23 41 59.8	
BRG				Amp		23 42 19.6	
	comp=Z,7.8nm,0.9s						
BRG				Amp		23 42 39.0	
	comp=Z,0.6nm,23.2s						
WERN	**Wernitzgruen**	7.52	328	*e*Pn	Pn	23 39 50.6	+0.4
WILA	**Wila**	7.55	300	*e*Pn	Pn	23 39 52.6	+2.0
GRF	**Grafenberg Arr**	7.55	321	*e*Pn	Pn	23 39 51.0	+0.4
SLE	**Schleitheim**	7.95	301	*e*Pn	Pn	23 39 55.9	-0.2
SBF	**Sospel**	8.04	272	*e*Pn	Pn	23 39 55.7	-1.7
SBF				*e*Sn	Sn	23 41 22.4	-6.3
	comp=Z,3.5nm,0.3s						
MOX	**Moxa**	8.10	327	*e*Pn	Pn	23 39 58.9	+0.8
CLL	**Collm**	8.16	335	*e*Pn	Pn	23 40 00.0	+1.1
CLL				*e*x	x	23 40 03.0	
CLL				*e*Sn	Sn	23 41 09.0	-22
CLL				*e*x	x	23 41 30.0	
CLL				*e*Sb	Sb	23 41 54.0	-5.0
CLL				*e*Sg	Sg	23 42 13.0	-8.7
	comp=Z,14nm,1.0s						
MBDF	**Montbardon**	8.48	279	*e*Sn	Sn	23 41 33.2	-6.5
	comp=Z,3.5nm,0.4s						
LPL	**La Plagne**	8.55	284	*e*Pn	Pn	23 40 03.7	-0.8
LPL				*e*Sn	Sn	23 41 35.0	-6.4
	comp=Z,4.8nm,0.4s						
LMR	**La Mourre**	8.78	269	*e*Sn	Sn	23 41 40.0	-6.7
	comp=Z,0.9nm,0.3s						
CDF	**Champ du Feu**	8.96	303	*e*Pn	Pn	23 40 08.4	-1.5
CDF				*e*Sn	Sn	23 41 44.0	-7.2
	comp=Z,1.0nm,0.3s						
HINF	**Hinteralfeld**	8.99	299	*e*Pn	Pn	23 40 09.8	-0.5
HINF				*e*Sn	Sn	23 41 44.4	-7.5
	comp=Z,3.0nm,0.5s						
ORIF	**Oris-en-Rattie**	9.12	280	*e*Pn	Pn	23 40 11.2	-1.0
ORIF				*e*Sn	Sn	23 41 48.0	-7.2
	comp=Z,3.2nm,0.4s						
CABF	**La Chapelle**	9.16	290	*e*Pn	Pn	23 40 11.2	-1.5
CABF				*e*Sn	Sn	23 41 49.1	-7.1
	comp=Z,0.9nm,0.2s						
SMRF	**Simiane la Rot**	9.37	274	*e*Sn	Sn	23 41 54.1	-7.2
	comp=Z,0.7nm,0.3s						
HAU	**Haudompre**	9.37	299	*e*Pn	Pn	23 40 15.0	-0.6
HAU				*e*Sn	Sn	23 41 53.6	-7.7
	comp=Z,2.8nm,0.4s						
AKASG	**Malin Array Be**	9.80	44	Pn	Pn	23 40 21.3	0.0
	comp=Z,0.3nm,0.3s,baz=232,slow=12,SNR=1.4						
	comp=Z,0.1nm,0.2s						
VIVF	**Saint-Julien-l**	9.98	279	*e*Sn	Sn	23 42 08.8	-7.4
	comp=Z,1.0nm,0.4s						
IDI	**Anoyia**	10.02	149	Pn	Pn	23 40 22.9	-1.6
	comp=Z,0.2nm,0.3s,baz=310,slow=17,SNR=1.6						
IDI				Sn	Sn	23 42 07.5	-10
	baz=332,slow=15,SNR=1.4						
	comp=Z,2.5nm,0.7s						
SMF	**Signal de Mont**	10.69	289	*e*Pn	Pn	23 40 31.5	-2.1
LOR	**Lormes**	10.79	292	*e*Pn	Pn	23 40 33.5	-1.5
	baz=103						
LOR				*e*Sn	Sn	23 42 27.6	-8.4
	comp=Z,1.9nm,0.4s						
KEST	**Kesra**	10.93	224	Pn	Pn	23 40 39.1	+2.1
	comp=Z,0.1nm,0.3s,baz=36,slow=19,SNR=1.8						
	comp=Z,1.8nm,0.8s						
BAIF	**Baives**	11.48	307	*e*Pn	Pn	23 40 42.6	-1.8
HFS	**Hagfors**	16.36	351	Pn	Pn	23 41 51.1	+1.0
	comp=Z,0.1nm,0.3s,baz=177,slow=11,SNR=2.1						
FINES	**FINESS Array B**	17.97	12	P	P	23 42 11.7	+0.9
	comp=Z,0.2nm,0.3s,baz=191,slow=10,SNR=8.0						
	comp=Z,0.7nm,0.5s						
TORD	**Torodi Ar. Bea**	34.05	210	P	P	23 44 45.0	0.0
	comp=Z,0.3nm,0.4s,baz=14,slow=8.1,SNR=3.1						

DBIC	Dimbokro	42.53	216	P	P	23 45 56.2	-0.2
	comp=Z,2.3nm,0.7s,baz=50,slow=8.2,SNR=2.4						
	comp=Z,2.3nm,0.7s						
ZALV	Zalesovo Beam	43.05	52	P	P	23 46 01.1	+0.8
	comp=Z,0.4nm,0.3s,baz=293,slow=7.4,SNR=3.9						
	comp=Z,0.4nm,0.3s						
MKAR	Makanchi Array	43.70	63	P	P	23 46 06.0	+0.2
	comp=Z,0.4nm,0.7s,baz=295,slow=6.5,SNR=4.5						
	comp=Z,0.4nm,0.7s						
SONM	Songino Array	57.95	53	P	P	23 47 53.6	+0.4
	comp=Z,0.8nm,0.8s,baz=295,slow=8.0,SNR=5.3						
	comp=Z,0.8nm,0.8s						
YKA	Yellowknife Ar	67.37	338	P	P	23 48 56.0	+0.4
	comp=Z,0.3nm,0.9s,baz=35,slow=6.4,SNR=5.4						
	comp=Z,0.3nm,0.9s						
PDAR	Pinedale Array	81.89	324	P	P	23 50 20.5	0.0
	comp=Z,0.3nm,0.8s,baz=68,slow=5.9,SNR=2.4						
	comp=Z,0.3nm,0.8s						
TXAR	Lajitas Array	89.89	312	P	P	23 51 00.9	+0.7
	comp=Z,0.2nm,0.6s,baz=94,slow=3.6,SNR=2.5						
	comp=Z,0.2nm,0.6s						

SFS ***29*** *23:38:06.3, 41°.76N×2°.76E, h0^{km}, ML3.8/7, ML3.3/7, MLv3.3/7*

LDG ***29*** *23:38:07.2±0.1, 41°.79N×2°.64E, h10^{km}, Md3.3/2, Ml3.3/42, Error ellipse: s-maj=2.6km s-min=1.8km az=148.0*

MDD ***29*** *23:38:07.5±0.3, 41°.83N×2°.75E, h12^{km}, mb_Lg3.2/13, Error ellipse: s-maj=2.9km s-min=1.9km az=108.0*

MRB ***29*** *23:38:07.6±0.2, 41°.83N×2°.66E, h10^{km}±1^{km}, ML3.0/30, Error ellipse: s-maj=0.7km s-min=0.5km az=128.0*

STR ***29*** *23:38:08.1±0.7, 42°N±4°×°±°, h5^{km}, MLv3.3/6, Error ellipse: s-maj=0.0km s-min=0.0km az=169.9, preliminary*

ISC 29 23:38:06.1±0.9**, 41°.89N**±0°.02×**2°.70E**±0°.02**, h17**^{km}±7^{km}**, n139, σ1^{s}.48**/273**, 2C-2D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCAS	Cassa de la Se	0.15	93	P	Pb	23 38 11.5	+1.0
CCAS				S	Sb	23 38 14.7	+1.3
	2µm,0.2s						
CFON	Fontmartina	0.24	237	P	Pg	23 38 11.4	-0.2
CFON				S	Sg	23 38 14.6	-0.7
	3µm,0.2s						
CBEU	Beuda	0.36	357	P	Pn	23 38 15.9	-0.9
CBEU				S	Sb	23 38 22.0	+2.2
	1µm,0.2s						
CORI	Orista	0.49	280	P	Pb	23 38 16.7	+0.3
CORI				S	Sb	23 38 23.3	0.0
	952nm,0.2s						
CPAL	Palau Saverder	0.54	39	P	Pn	23 38 19.0	-0.1
CPAL				S	Sn	23 38 27.4	-0.4
	160nm,0.3s						
CBRU	Bruguera	0.55	315	P	Pb	23 38 18.4	+0.9
CBRU				S	Sb	23 38 26.5	+1.3
	523nm,0.2s						
EJON	La Jonquera	0.57	14	S	Sn	23 38 27.8	-0.8
EJON				P	Pn	23 38 19.6	0.0
EJON	La Jonquera	0.57	14	⇑Pg	Pn	23 38 19.5	0.0
EJON				Sg	Sb	23 38 27.4	+1.8
EJON				*i* Vmb_Lg		23 38 30.6	
EJON	La Jonquera	0.57	14	Pg	Pn	23 38 19.5	0.0
SJAF	Saint Jean de	0.61	13	P	Pn	23 38 20.1	+0.1
SJAF				S	Sn	23 38 29.3	-0.2
	599nm,0.2s						
SJAF	Saint Jean de	0.61	13	Pg	Pn	23 38 20.1	+0.1
SJAF				Sg	Sn	23 38 29.0	-0.5
FILF	Fillols	0.68	351	P	Pn	23 38 21.5	+0.5
FILF				S	Sn	23 38 31.8	+0.5
	306nm,0.2s						
FILF	Fillols	0.68	351	⇓Pg	Pn	23 38 21.6	+0.6
FILF				Sg	Sn	23 38 31.4	+0.1
CLLI	Llivia	0.80	317	P	Pn	23 38 22.7	-0.1
CLLI				S	Sn	23 38 34.1	-0.3
	112nm,0.3s						
CGAR	Garraf	0.84	225	P	Pb	23 38 22.0	-0.3
CGAR				S	Sb	23 38 32.6	-0.8
	129nm,0.3s						
EMIR	Miracle	0.88	272	P	Pb	23 38 23.3	+0.3
EMIR				S	Sb	23 38 34.7	+0.2
	931nm,0.3s						
CARF	Carcanieres	0.94	332	⇓Pg	Pn	23 38 25.9	+1.2
CARF				Sg	Sn	23 38 38.4	+0.6
ARBS	La Rabassa	1.02	303	P	Pn	23 38 26.2	+0.3
ARBS				S	Sn	23 38 40.4	+0.3
	408nm,0.5s						
PAND	Andorre	1.06	307	P	Pg	23 38 27.1	+0.3
PAND				S	Sn	23 38 41.9	+0.8
	707nm,0.2s						
PAND	Andorre	1.06	307	Pg	Pg	23 38 27.7	+0.9
PAND				Sg	Sn	23 38 42.6	+1.5
CORG	Organya	1.09	289	P	Pn	23 38 27.1	+0.4
CORG				S	Sg	23 38 41.6	+0.2
	258nm,0.2s						
CSOR	Sort	1.26	293	P	Pb	23 38 30.2	+0.6
CSOR				S	Sg	23 38 47.1	+0.1
	512nm,0.2s						
CLAF	Gruissan	1.27	13	P	Pb	23 38 30.3	+0.6
CLAF				Pg	Pg	23 38 32.2	+1.5
CLAF				Sg	Sg	23 38 49.6	+2.2
CEST	Esterri de Car	1.29	304	P	Pg	23 38 31.0	0.0
CEST				S	Sg	23 38 48.5	+0.7
	266nm,0.3s						
EPOB	Poblet	1.33	247	⇑Pg	Pb	23 38 31.2	+0.5
EPOB				Sg	Sb	23 38 48.0	+0.5
EPOB				*i* Vmb_Lg		23 38 49.0	
EPOB	Poblet	1.33	247	P	Pb	23 38 30.7	0.0
EPOB				S	Sb	23 38 47.9	+0.3
	186nm,0.2s						
SALF	Salau	1.42	308	P	Pg	23 38 33.6	+0.2
SALF				Pn	Pb	23 38 34.7	+2.5
SALF				Sn	Sg	23 38 52.9	+0.9
CAVN	Les Avellanes	1.46	270	P	Pb	23 38 33.0	+0.1
CAVN				S	Sb	23 38 52.1	+1.0
	462nm,0.3s						
MTLF	Montolieu	1.49	346	*e*Pn	Pb	23 38 34.0	+0.6
MTLF	Montolieu	1.49	346	*e*Pg	Pg	23 38 35.3	+0.5
MTLF				*e*Sg	Sg	23 38 55.6	+1.3
	145nm,0.3s						
MTLF	Montolieu	1.49	346	Sn	Sg	23 38 55.6	+1.3
MTLF	Montolieu	1.49	346	P	Pb	23 38 34.0	+0.6
MTLF				Pn	Pg	23 38 35.4	+0.5
CTRE	Tremp	1.50	287	P	Pb	23 38 34.2	+0.6
CTRE				S	Sg	23 38 54.1	-0.5
	194nm,0.3s						
MLS	Moulis	1.60	312	P	Pb	23 38 35.8	+0.6
MLS				S	Sg	23 38 56.9	-0.7
	232nm,0.4s						
MLS	Moulis	1.60	312	P	Pg	23 38 36.3	-0.6
MLS				Pn	Pb	23 38 36.9	+1.6
MLS				Sn	Sg	23 38 58.2	+0.6
CARA	Val d’Aran	1.62	301	P	Pb	23 38 36.1	+0.5
CARA				S	Sg	23 38 57.5	-0.9
	411nm,0.2s						
CBUD	Illa de Buda	1.85	231	P	Pn	23 38 38.0	+0.9
CBUD				S	Sn	23 39 00.9	+0.9
	292nm,0.3s						
EBR	Ebro Roquetas	1.98	238	Pg	Pg	23 38 43.3	-0.8
EBR				Sg	Sg	23 39 08.3	-1.5
EBR	Ebro Roquetas	1.98	238	P	Pn	23 38 40.2	+1.3
EBR				S	Sn	23 39 04.5	+1.3
	200nm,0.3s						
ERTA	Horta de San J	2.01	243	Pn	Pn	23 38 40.9	+1.5
ERTA				Pg	Pb	23 38 42.2	-0.1
ERTA				Sn	Sn	23 39 05.0	+0.8
ERTA				Sg	Sg	23 39 10.5	-0.4
ECHI	Chisagues Biel	2.02	293	Pn	Pb	23 38 41.6	-0.9
ECHI				Pg	Pg	23 38 44.0	-0.8
ECHI				Sn	Sn	23 39 05.9	+1.5
ECHI				Sg	Sg	23 39 09.9	-1.1
ECHI				*i* Vmb_Lg		23 39 11.8	
ECHI	Chisagues Biel	2.02	293	P	Pb	23 38 41.5	-0.9
ECHI				S	Sb	23 39 06.8	-0.4
	146nm,0.3s						
ECHI	Chisagues Biel	2.02	293	P	Pb	23 38 41.5	-0.9
ECHI				Pn	Pn	23 38 42.1	+2.6
ECHI	Chisagues Biel	2.02	293	Sn	Sb	23 39 08.0	+0.8
CFAR	Far de la Bany	2.04	230	S	Sn	23 39 05.6	+1.0
EPF	Esparros	2.09	304	*e*Pn	Pb	23 38 43.2	-0.4
EPF	Esparros	2.09	304	*e*Pg	Pg	23 38 45.9	-0.3
EPF				*e*Sg	Sb	23 39 10.8	+1.6
	236nm,0.4s						
ETOS	Mallorca	2.12	178	S	Sn	23 39 04.2	-2.8
ETOS				P	Pn	23 38 40.4	-0.5
ETOS	Mallorca	2.12	178	Pn	Pn	23 38 40.4	-0.5
ETOS				Sn	Sn	23 39 03.7	-3.3
CMAS	Mas de Barbera	2.14	238	P	Pn	23 38 42.1	+0.9
CMAS				S	Sn	23 39 08.7	+1.3
	65nm,0.3s						
ALCN	Alcanar	2.15	232	P	Pn	23 38 42.0	+0.8
ALCN				S	Sn	23 39 08.1	+0.6
	66nm,0.3s						
VIEF	Viey	2.22	297	Pn	Pb	23 38 44.9	-1.0
VIEF				Sn	Sb	23 39 13.2	+0.2
MAHO	Mahon	2.32	149	S	Sn	23 39 09.5	-2.2
MAHO				P	Pn	23 38 43.9	+0.4
LASF	Ste Croix	2.34	21	*e*Pn	Pn	23 38 45.8	+1.9
LASF				*e*Sn	Sn	23 39 14.3	+2.0
LASF				*e*Sg	Sg	23 39 22.6	+1.2
	30nm,0.3s						
PYLO	Lourdes	2.37	302	P	Pn	23 38 46.1	+1.9
PYLO				S	Sn	23 39 15.3	+2.4
ESAC	San Caprasio	2.38	267	Pn	Pn	23 38 45.6	+1.1
ESAC				Pg	Pb	23 38 50.0	+1.4
ESAC				Sg	Sg	23 39 20.6	-2.0
ALCX	Castello	2.46	229	S	Sn	23 39 16.3	+1.1
	40nm,0.3s						
ECOL	Islas Columbre	2.51	218	S	Sn	23 39 17.4	+1.0
	31nm,0.5s						
CANF	Canfranc	2.54	291	Pn	Pn	23 38 49.2	+2.5
CANF				Sn	Sb	23 39 20.6	-1.8
ETSF	Etsaut	2.62	294	*e*Pn	Pn	23 38 49.8	+2.1
ETSF	Etsaut	2.62	294	*e*Pg	Pg	23 38 55.6	-0.7
ETSF				*e*Sn	Sn	23 39 19.4	+0.2
ETSF				*e*Sg	Sg	23 39 29.3	-0.9
	137nm,0.3s						
MONQ	Montcuq	2.71	336	P	Pn	23 38 51.0	+2.1
MONQ				Pn	Pb	23 38 51.8	-2.3
ATE	Arette	2.79	296	P	Pn	23 38 52.1	+2.1
ATE				S	Sn	23 39 25.2	+1.9
	70nm,0.3s						
EMOS	Mosqueruela	2.84	239	Pn	Pn	23 38 53.0	+2.1
EMOS				Pg	Pg	23 38 59.5	-1.2
EMOS				Sn	Sn	23 39 25.4	+0.5
EMOS				Sg	Sb	23 39 34.3	+3.1
EMOS				*i* Vmb_Lg		23 39 40.2	
EMOS	Mosqueruela	2.84	239	P	Pn	23 38 52.1	+1.1
EMOS				S	Sn	23 39 25.9	+1.0
	35nm,0.4s						
RUSF	Rustrel	2.89	44	P	Pn	23 38 53.6	+2.1
RUSF				Pn	Pb	23 38 54.6	-2.7
RUSF				Sn	Sb	23 39 29.6	-2.8
SMRF	Simiane la Rot	2.96	44	*e*Pn	Pn	23 38 55.0	+2.5
SMRF	Simiane la Rot	2.96	44	*e*Pg	Pg	23 39 03.6	+0.7
SMRF				*e*Sn	Sn	23 39 27.9	+0.2
SMRF				*e*Sg	Sg	23 39 41.6	+0.3
	13nm,0.2s						
EIBI	Ibiza	3.04	200	P	Pn	23 38 52.7	-0.8
EIBI				S	Sn	23 39 26.7	-2.9
EIBI	Ibiza	3.04	200	Pn	Pn	23 38 52.8	-0.8
EIBI				Sn	Sn	23 39 27.6	-2.0
EIBI				*i* Vmb_Lg		23 39 30.4	
CAF	Calviac	3.07	351	*e*Pn	Pn	23 38 55.5	+1.6
CAF	Calviac	3.07	351	*e*Pg	Pg	23 39 05.3	+0.4
CAF				*e*Sn	Sn	23 39 32.0	+1.8
CAF				*e*Sg	Sg	23 39 45.0	+0.3
	55nm,0.3s						
SJPF	Ste Jean	3.15	294	*e*Pn	Pn	23 38 57.2	+2.2
SJPF	Ste Jean	3.15	294	*e*Pg	Pg	23 39 05.7	-0.8
SJPF				*e*Sn	Sn	23 39 31.9	-0.3
SJPF				*e*Sg	Sg	23 39 46.0	-1.3
	66nm,0.3s						
LMR	La Mourre	3.16	62	*e*Pn	Pn	23 38 56.4	+1.3
LMR				*e*Sn	Sn	23 39 32.2	-0.1
	9.2nm,0.2s						
LMR				*e*Sg	Sg	23 39 48.8	+1.3
	7.6nm,0.2s						
BLAF	les Blancs	3.20	49	P	Pn	23 38 57.7	+2.0
BLAF				Pn	Pb	23 38 58.6	-4.0
OSSF	Osses	3.23	296	P	Pn	23 38 58.0	+1.9
OSSF				Pn	Pb	23 38 59.0	-4.0
VIVF	Saint-Julien-l	3.29	25	*e*Pn	Pn	23 38 58.6	+1.6
VIVF	Saint-Julien-l	3.29	25	*e*Pg	Pg	23 39 09.5	+0.3
VIVF				*e*Sn	Sn	23 39 35.8	0.0
VIVF				*e*Sg	Sg	23 39 52.2	+0.4
	15nm,0.3s						
LFF	La Frestale	3.37	336	*e*Pn	Pn	23 38 59.7	+1.8
LFF	La Frestale	3.37	336	*e*Pg	Pg	23 39 10.6	0.0
LFF				*e*Sg	Sg	23 39 54.8	+0.6
	169nm,0.4s						
EALK	Alkurruntz	3.38	294	Pn	Pn	23 39 00.6	+2.4
EALK				Sn	Sn	23 39 40.3	+2.3
EALK				Sg	Sg	23 39 53.2	-1.5
EALK				*i* Vmb_Lg		23 39 59.4	
EALK	Alkurruntz	3.38	294	Pn	Pn	23 39 00.7	+2.4
EALK	Alkurruntz	3.38	294	Sn	Sn	23 39 41.1	+3.1
RJF	Les Rejaudoux	3.52	346	*e*Pn	Pn	23 39 01.5	+1.4
RJF	Les Rejaudoux	3.52	346	*e*Pg	Pg	23 39 13.0	-0.5
RJF				*e*Sn	Sn	23 39 42.2	+0.9
RJF				*e*Sg	Sg	23 39 59.6	+0.5
	30nm,0.3s						
ECHE	Chera	3.62	232	P	Pn	23 39 01.7	+0.2
ECHE				S	Sn	23 39 43.9	+0.1
ECHE	Chera	3.62	232	Pn	Pn	23 39 02.4	+1.0
ECHE				Pg	Pb	23 39 10.5	+0.9
ECHE				Sn	Sn	23 39 44.2	+0.5
ECHE				Sg	Sg	23 40 00.2	-1.9
ECHE				*i* Vmb_Lg		23 40 10.8	
ETOR	Torete	3.74	255	Pn	Pn	23 39 04.9	+1.7
ETOR				Pg	Pb	23 39 14.8	+3.1
ETOR				Sn	Sn	23 39 48.6	+1.8
ETOR				Sg	Sg	23 40 03.6	-2.6
ETOR				*i* Vmb_Lg		23 40 12.1	
ORIF	Oris-en-Rattie	3.81	36	*e*Pn	Pn	23 39 06.7	+2.6
ORIF				*e*Sn	Sn	23 39 48.5	-0.1
	1.6nm,0.2s						
ORIF				*e*Sg	Sg	23 40 09.3	+0.9
	6.0nm,0.3s						
JAUF	Jausiers	3.90	48	Pn	Pn	23 39 08.8	+3.4
SBF	Sospel	4.00	59	*e*Pn	Pn	23 39 08.1	+1.4
SBF				*e*Sn	Sn	23 39 53.5	+0.3
	31nm,0.4s						
MBDF	Montbardon	4.10	45	*e*Pn	Pn	23 39 10.5	+2.3
MBDF				*e*Sn	Sn	23 39 56.4	+0.5
	3.9nm,0.2s						
SAOF	Saorge	4.13	58	Pn	Pn	23 39 11.1	+2.6
TCF	Toulx Ste Croi	4.41	356	*e*Pn	Pn	23 39 13.8	+1.5
TCF	Toulx Ste Croi	4.41	356	*e*Pg	Pg	23 39 30.2	-0.3
TCF				*e*Sn	Sn	23 40 03.5	+0.2
TCF				*e*Sg	Sg	23 40 27.6	0.0
	12nm,0.3s						
ETOB	Tobarra	4.59	226	P	Pn	23 39 14.7	-0.2
ETOB				S	Sn	23 40 05.6	-2.3
ETOB	Tobarra	4.59	226	Pn	Pn	23 39 15.0	+0.1
LPL	La Plagne	4.65	38	*e*Pn	Pn	23 39 19.2	+3.4
LPL				*e*Sn	Sn	23 40 07.0	-2.6
	5.5nm,0.4s						
BGF	Bois d'Agland	4.67	1	*e*Pn	Pn	23 39 17.5	+1.7
BGF	Bois d'Agland	4.67	1	*e*Pg	Pg	23 39 35.1	-0.3
BGF				*e*Sn	Sn	23 40 10.3	+0.7
BGF				*e*Sg	Sg	23 40 36.1	+0.3
	32nm,0.3s						
PGF	Pioggiola	4.72	80	*e*Pn	Pn	23 39 16.4	-0.3
PGF				*e*Sn	Sn	23 40 08.9	-2.2
	15nm,0.4s						
ELAN	Lanestosa	4.73	288	Pn	Pn	23 39 18.6	+1.9
ELAN				Sn	Sn	23 40 13.8	+2.6
ELAN				*i* Vmb_Lg		23 40 47.1	
SMF	Signal de Mont	4.82	9	*e*Pn	Pn	23 39 19.4	+1.4
SMF	Signal de Mont	4.82	9	*e*Pg	Pg	23 39 37.9	-0.5
SMF				*e*Sn	Sn	23 40 13.4	0.0
SMF				*e*Sg	Sg	23 40 40.4	-0.4
	4.1nm,0.3s						
AVF	Avril sur Loir	4.92	5	*e*Pn	Pn	23 39 20.3	+1.0
AVF	Avril sur Loir	4.92	5	*e*Pg	Pg	23 39 39.6	-0.7
AVF				*e*Sn	Sn	23 40 15.5	-0.3
AVF				*e*Sg	Sg	23 40 43.4	-0.6
	4.0nm,0.2s						
EMUR	La Murta	5.06	218	P	Pn	23 39 19.9	-1.3
EMUR				S	Sn	23 40 16.2	-3.1
MFF	Saint Martin d	5.13	337	*e*Pn	Pn	23 39 24.1	+1.9
MFF	Saint Martin d	5.13	337	*e*Pg	Pg	23 39 43.1	-1.3
MFF				*e*Sn	Sn	23 40 22.1	+1.0
MFF				*e*Sg	Sg	23 40 49.4	-1.4
	14nm,0.4s						
SSF	Saint Saulge	5.20	6	*e*Pn	Pn	23 39 23.8	+0.7
SSF	Saint Saulge	5.20	6	*e*Pg	Pg	23 39 44.8	-0.8
SSF				*e*Sg	Sg	23 40 52.0	-0.9
	4.1nm,0.3s						
CABF	La Chapelle	5.31	26	*e*Pn	Pn	23 39 26.7	+2.0
CABF	La Chapelle	5.31	26	*e*Pg	Pg	23 39 46.7	-1.0
CABF				*e*Sg	Sg	23 40 56.2	-0.2
	2.1nm,0.3s						
GUD	Guadarrama	5.32	259	Pn	Pn	23 39 25.7	+0.8
GUD				Sn	Sn	23 40 24.0	-1.9
GUD				*i* Vmb_Lg		23 40 42.4	
HYF	Humbligny	5.38	360	*e*Pn	Pn	23 39 27.0	+1.4
HYF				*e*Sg	Sg	23 40 58.4	-0.2
LOR	Lormes	5.44	8	*e*Pn	Pn	23 39 28.0	+1.6
LOR	Lormes	5.44	8	*e*Pg	Pg	23 39 48.9	-1.3
	baz=188						
LOR				*e*Sn	Sn	23 40 28.6	0.0
LOR				*e*Sg	Sg	23 41 00.4	-0.2
	4.1nm,0.3s,baz=192						
PAB	San Pablo	5.85	249	Pn	Pn	23 39 32.3	+0.2
PAB				*i* Vmb_Lg		23 41 16.4	
EARI	Arriondas	6.01	286	Pn	Pn	23 39 35.8	+1.5
EARI				Sn	Sn	23 40 41.6	-1.1
SFTF	Sexfontaines	6.53	14	*e*Pn	Pn	23 39 42.5	+1.2
	baz=45						
SFTF				*e*Sg	Sg	23 41 34.3	-1.1
	2.8nm,0.3s						
HINF	Hinteralfeld	6.62	25	*e*Pn	Pn	23 39 42.4	-0.2
HINF	Hinteralfeld	6.62	25	*e*Sg	Sg	23 41 37.7	-0.6
	1.6nm,0.3s						
HAU	Haudompre	6.64	22	*e*Pn	Pn	23 39 44.7	+1.8
HAU	Haudompre	6.64	22	*e*Pg	Pg	23 40 14.1	+1.0
HAU				*e*Sg	Sg	23 41 37.2	-1.7
	1.4nm,0.2s						
GRR	Gorron	6.97	340	*e*Pn	Pn	23 39 48.7	+1.3
GRR	Gorron	6.97	340	*e*Pg	Pg	23 40 16.8	-2.6
GRR				*e*Sn	Sn	23 41 04.7	-1.5
GRR				*e*Sg	Sg	23 41 47.0	-2.5
	3.5nm,0.3s						
LDF	La Druitiere	6.99	344	*e*Pn	Pn	23 39 49.0	+1.3
LDF	La Druitiere	6.99	344	*e*Pg	Pg	23 40 17.6	-2.3
LDF				*e*Sn	Sn	23 41 05.1	-1.7
LDF				*e*Sg	Sg	23 41 48.9	-1.4
	2.3nm,0.3s						
PAGF	Fort de Pagny	7.00	17	*e*Sg	Sg	23 41 49.0	-1.4
	2.6nm,0.4s						
FLN	La Foliniere	7.23	343	*e*Pn	Pn	23 39 52.2	+1.3
	baz=162						
FLN	La Foliniere	7.23	343	*e*Pg	Pg	23 40 22.0	-2.4
FLN				*e*Sn	Sn	23 41 09.9	-2.7
FLN				*e*Sg	Sg	23 41 55.3	-2.5
	2.7nm,0.3s,baz=164						
QUIF	Quistinic	7.32	327	*e*Pn	Pn	23 39 53.9	+1.7
QUIF	Quistinic	7.32	327	*e*Pg	Pg	23 40 23.8	-2.4
QUIF				*e*Sn	Sn	23 41 13.8	-1.1
QUIF				*e*Sg	Sg	23 41 58.3	-2.6
	2.3nm,0.3s						
SGMF	Saint Gilles	7.37	331	*e*Pn	Pn	23 39 54.3	+1.4
SGMF	Saint Gilles	7.37	331	*e*Pg	Pg	23 40 25.0	-2.1
SGMF				*e*Sn	Sn	23 41 12.6	-3.5
SGMF				*e*Sg	Sg	23 41 59.2	-3.2
	3.0nm,0.4s						
ROSF	Rostrenen	7.70	329	*e*Pn	Pn	23 39 58.6	+1.1
ROSF				*e*Sn	Sn	23 41 22.2	-2.1
	0.5nm,0.2s						
ROSF				*e*Sg	Sb	23 42 09.8	+19
	2.6nm,0.4s						
BAIF	Baives	8.23	7	*e*Pn	Pn	23 40 06.8	+2.0
BAIF	Baives	8.23	7	*e*Pg	Pb	23 40 41.2	+13

HEL ***29*** *23:39:50.5±0.2, 67°.81N×20°.18E, h0^{km}, ML1.3, Explosion*

UPP ***29*** *23:39:50.1±0.1, 67°.83N×20°.21E, h0^{km}, ML2.5, Suspected explosion*

ISC 29 23:39:49.2±0.8**, 67°.79N**±0°.03×**20°.31E**±0°.03**, h0**^{km}**, n25, σ1^{s}.15**/38**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATU	Laukkuluspa	0.28	277	P	Pg	23 39 54.8	+0.3
RATU				S	Sg	23 39 58.0	-0.1
NIKU	Nikkaluokta	0.49	280	P	Pg	23 39 58.7	+0.1
LANU	Lannavaara	0.69	67	P	Pb	23 40 03.6	-0.5
LANU	Lannavaara	0.69	67	PG	Pb	23 40 03.3	-0.7
LANU				SG	Sb	23 40 13.0	-1.0
MASU	Masugnsbyn	0.73	117	P	Pb	23 40 04.9	+0.1
SALU	Saltoluokta	0.81	240	P	Pg	23 40 05.1	+0.5
KIF	Kilpisjarvi	1.23	8	*e*P	Pn	23 40 13.4	-0.2
KIF	Kilpisjarvi	1.23	8	PB	Pb	23 40 13.3	-0.1
KIF				MSG		23 40 28.6	
	comp=Z,3.8nm,0.2s						
KIF				SB	Sb	23 40 29.2	-0.5
PAJU	Pajala	1.33	124	P	Pn	23 40 15.4	+0.4
PAJU	Pajala	1.33	124	PG	Pn	23 40 15.1	+0.1
	baz=303						
PAJU				SG	Sn	23 40 33.6	+0.2
HEF	Hetta	1.40	62	*e*P	Pb	23 40 16.4	+0.1
HEF	Hetta	1.40	62	PG	Pb	23 40 16.2	0.0
HEF				MSG		23 40 33.8	
	comp=Z,2.2nm,0.2s						
HEF				SG	Sn	23 40 35.0	-0.1
ERTU	Ertsjaerv	1.44	149	P	Pb	23 40 17.3	+0.4
ERTU	Ertsjaerv	1.44	149	PG	Pb	23 40 17.1	+0.2
ERTU				SN	Sn	23 40 37.3	+1.1
KLF	Kolari	1.51	110	PG	Pg	23 40 18.6	+0.5
KLF				MSG		23 40 37.4	
	comp=Z,1.7nm,0.2s						
KLF				SN	Sn	23 40 39.4	+1.5
KTK1	Kautokeino	1.64	40	PG	Pb	23 40 20.0	-0.2
KTK1				SN	Sg	23 40 42.4	+0.7
HARU	Harads	1.66	171	P	Pb	23 40 20.8	+0.3
TRO	Tromso	1.92	345	PG	Pb	23 40 24.3	-0.7
TRO				SG	Sb	23 40 49.2	-0.3
KALU	Kalix	2.28	147	PG	Pb	23 40 30.7	-0.5
KALU				SG	Sg	23 41 02.1	-0.3
TOF	Tornio	2.33	136	PG	Pb	23 40 31.9	-0.2
TOF				MSG		23 41 01.0	
	comp=Z,1.0nm,0.2s						
TOF				SG	Sg	23 41 04.1	0.0
SGF	Sodankyl	2.40	96	PB	Pb	23 40 32.2	-1.1
SGF				SG	Sg	23 41 05.8	-0.6
RNF	Rovaniemi	2.52	115	PB	Pb	23 40 34.8	-0.5
RNF				SG	Sb	23 41 08.3	+1.6
KEV	Kevo	3.13	48	SN	Sn	23 41 20.7	+2.9
OLKF	Oulanka, Finla	3.85	108	SG	Sg	23 41 49.1	-3.7
UMAU	Umeaa	3.93	178	SG	Sg	23 41 51.9	-3.4

HEL ***29*** *23:45:39.5±0.1, 67°.84N×20°.17E, h0^{km}, ML1.9, Explosion*

UPP ***29*** *23:45:39.2±0.0, 67°.86N×20°.20E, h0^{km}, ML2.3, Suspected explosion*

IDC ***29*** *23:45:40.0±1.3, 67°.87N×20°.62E, h0^{km}, mbtmp2.9/4, ML2.0/4, Error ellipse: s-maj=30.1km s-min=8.0km az=125.0*

ISC 29 23:45:38.7±0.8**, 67°.84N**±0°.02×**20°.21E**±0°.02**, h0**^{km}**, n35, σ1^{s}.64**/52**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATU	Laukkuluspa	0.23	267	P	Pg	23 45 43.8	+0.6
RATU				S	Sg	23 45 47.1	+0.9
KOVU	Salmi	0.39	357	P	Pg	23 45 46.4	+0.2
NIKU	Nikkaluokta	0.45	274	P	Pg	23 45 47.7	+0.5
LANU	Lannavaara	0.71	72	P	Pg	23 45 52.5	+0.3
LANU	Lannavaara	0.71	72	PG	Pg	23 45 52.5	+0.3
LANU				SG	Sg	23 46 01.8	+0.5
DUNU	Dundret	0.73	169	P	Pg	23 45 53.5	+0.8
MASU	Masugnsbyn	0.78	118	P	Pg	23 45 54.1	+0.4
SALU	Saltoluokta	0.80	236	P	Pg	23 45 54.3	+0.3
KIF	Kilpisjarvi	1.19	10	*e*P	Pg	23 46 01.8	+0.2
KIF	Kilpisjarvi	1.19	10	PG	Pg	23 46 02.0	+0.4
KIF				MSG		23 46 16.8	
	comp=Z,15nm,0.2s						
KIF				SB	Sb	23 46 17.8	-0.3
PAJU	Pajala	1.39	125	P	Pg	23 46 04.7	-0.6
PAJU	Pajala	1.39	125	PG	Pg	23 46 04.6	-0.6
	baz=303						
PAJU				SG	Sg	23 46 23.9	+0.7
HEF	Hetta	1.42	64	*e*P	Pn	23 46 05.1	-0.6
HEF	Hetta	1.42	64	PG	Pn	23 46 05.2	-0.6
	baz=247						
HEF				MSG		23 46 22.5	

	comp=Z,9.3nm,0.2s						
HEF				SG	**Sg**	**23 46 23.6**	**-0.5**
ERTU	**Ertsjaerv**	**1.50**	**148**	P	**Pn**	**23 46 06.8**	**-0.1**
ERTU	**Ertsjaerv**	**1.50**	**148**	PG	**Pn**	**23 46 06.7**	**-0.1**
ERTU				SN	**Sn**	**23 46 28.0**	**+0.9**
KLF	**Kolari**	**1.56**	**111**	PG	**Pn**	**23 46 07.8**	**+0.1**
KLF				MSG		23 46 26.7	
	comp=Z,9.3nm,0.2s						
KLF				SN	**Sg**	**23 46 29.8**	**+0.9**
KTK1	**Kautokeino**	**1.63**	**42**	PG	**Pn**	**23 46 08.9**	**+0.3**
KTK1				SN	**Sg**	**23 46 30.8**	**-0.2**
HARU	**Harads**	**1.71**	**169**	P	**Pn**	**23 46 10.4**	**+0.7**
TRO	**Tromso**	**1.86**	**346**	PG	**Pn**	**23 46 12.8**	**+0.9**
TRO				SG	**Sb**	**23 46 37.7**	**+0.3**
KALU	**Kalix**	**2.34**	**146**	PB	**Pn**	**23 46 20.0**	**+1.6**
KALU				SG	**Sb**	**23 46 50.9**	**-0.3**
TOF	**Tornio**	**2.40**	**136**	PB	**Pn**	**23 46 21.1**	**+2.0**
	baz=317						
TOF				MSG		23 46 50.8	
	comp=Z,4.5nm,0.2s						
TOF				SG	**Sb**	**23 46 53.2**	**+0.5**
SGF	**Sodankyl**	**2.45**	**96**	PB	**Pn**	**23 46 21.9**	**+2.1**
	baz=286						
SGF				SB	**Sb**	**23 46 52.7**	**-1.5**
RNF	**Rovaniemi**	**2.57**	**116**	PB	**Pn**	**23 46 23.8**	**+2.2**
RNF				SG	**Sb**	**23 46 57.5**	**-0.3**
ARA0	**ARCESS Array S**	**2.58**	**46**	SN	**Sn**	**23 46 52.6**	**-1.1**
ARCES	**ARCESS Array B**	**2.58**	**46**	Pn	**Pn**	**23 46 22.2**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=226,slow=16,SNR=25						
ARCES				Lg	Lg	23 46 56.0	
	comp=Z,1.5nm,0.3s,baz=228,slow=24,SNR=14						
	comp=Z,1.3nm,0.3s						
KEV	**Kevo**	**3.13**	**49**	PN	**Pn**	**23 46 30.7**	**+1.5**
KEV				SN	**Sn**	**23 47 08.6**	**+1.3**
KEV				MSG		23 47 11.7	
	comp=Z,2.5nm,0.2s						
VRF	**Varrio**	**3.57**	**87**	PG	**Pb**	**23 46 43.4**	**+0.7**
VRF				SB	**Sb**	**23 47 25.9**	**-0.6**
OUL	**Oulu**	**3.58**	**138**	SG	**Sb**	**23 47 29.8**	**+3.0**
OLKF	**Oulanka, Finla**	**3.91**	**109**	PN	**Pn**	**23 46 41.4**	**+1.5**
MSF	**Maaselka**	**3.98**	**115**	PN	**Pn**	**23 46 43.0**	**+2.0**
KU6	**Riekki**	**4.22**	**111**	PN	**Pn**	**23 46 45.6**	**+1.3**
FINES	**FINESS Array B**	**6.89**	**156**	Pn	**Pn**	**23 47 22.3**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=347,slow=11,SNR=2.0						
FINES				Sn	**Sn**	**23 48 33.6**	**-6.2**
	comp=Z,0.2nm,0.3s,baz=145,slow=23,SNR=1.6						
FINES				Lg	Lg	23 49 10.4	
	comp=Z,0.3nm,0.3s,baz=314,slow=32,SNR=1.8						
	comp=Z,1.6nm,1.0s						
NOA	**NORSAR Array B**	**7.84**	**214**	Pn	**Pn**	**23 47 34.8**	**+0.8**
	baz=24,slow=11,SNR=1.3						
NOA				Sn	**Sn**	**23 48 57.1**	**-6.3**
	baz=270,slow=5.8,SNR=1.1						
NOA				Lg	Lg	23 49 43.5	
	baz=198,slow=20,SNR=2.0						
	comp=Z,0.1nm,0.5s						
HFS	**Hagfors**	**8.24**	**203**	Pn	**Pn**	**23 47 39.4**	**0.0**
	baz=0.0,slow=10,SNR=1.6						
	comp=Z,1.9nm,1.1s						

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*IDC **29** 23:48:16.6±0.8, 27°.19N×103°.47E, h0^{km}, mb3.9/21, mbtmp3.9/21, MS3.0/1, Error ellipse: s-maj=27.0km s-min=15.3km az=45.0*

*NEIC **29** 23:48:19.7±1.0, 27°.21N±0°.09×103°.69E±0°.03, h10^{km}±1^{km}, mb4.1/24, Error ellipse: s-maj=16.2km s-min=3.8km az=169.0*

ISC 29 23:48:20.2±0.5**, 27°.10N**±0°.04×**103°.43E**±0°.05**, h10**^{km}**, n70, σ2^{s}.59**/66**, mb4.1**/30**, 2C, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PZH	**PanZhiHua**	**1.62**	**249**	Pg	Pn	23 48 46.5	-2.5
PZH				Sg	**Sn**	**23 49 07.8**	**-2.2**
PZH				smax	smax		
	comp=N,2µm,0.6s						
PZH				smax	smax		
	comp=E,1µm,0.6s						
KMI	**Kunming**	**2.06**	**198**	⇑Pg	**Pn**	**23 48 55.0**	**-0.1**
KMI				Sg	**Sn**	**23 49 20.8**	**-0.2**
KMI				smax	smax		
	comp=N,430nm,0.7s						
KMI				smax	smax		
	comp=E,610nm,0.8s						
KMI				LR	LR		
	comp=N,1µm,4.9s						
KMI				LR	LR		
	comp=E,770nm,3.7s						
KMI				LR	LR		
	comp=Z,550nm,4.5s						
CD2	**Chengdu**	**3.81**	**4**	Pn	**Pn**	**23 49 18.8**	**-0.2**
CD2				Pg	**Pb**	**23 49 29.3**	**+1.7**
CD2				Sg	**Sb**	**23 50 18.5**	**+4.6**
CD2				smax	smax		
	comp=N,970nm,0.9s						
CD2				smax	smax		
	comp=E,1µm,1.2s						
TNCH	**TengChong**	**4.88**	**246**	Pn	Pn	23 49 26.5	-7.3
TNCH				Pg	**Pb**	**23 49 47.8**	**+2.0**
TNCH				Sn	**Sn**	**23 50 29.5**	**-0.9**
TNCH				Sg	**Sb**	**23 50 50.3**	**+5.7**
TNCH				smax	smax		
	comp=N,430nm,1.0s						
TNCH				smax	smax		
	comp=E,520nm,1.5s						
TNCH				LR	LR		
	comp=N,2µm,3.6s						
TNCH				LR	LR		
	comp=E,1µm,3.0s						
TNCH				LR	LR		
	comp=Z,150nm,5.6s						
ENH	**Enshi**	**6.19**	**58**	Pn	Pn	23 49 48.1	-3.6
CRAI	**Chiangrai**	**7.39**	**203**	Pn	**Pn**	**23 50 09.0**	**+0.8**
LZH	**Lanzhou**	**8.97**	**2**	*e*P	**Pn**	**23 50 29.5**	**-0.5**
LZH				pP	Pg	23 50 33.8	-38
LZH				sP		23 50 37.0	
LZH				PP	**PgPg**	**23 51 19.5**	**+7.3**
LZH				pmax	pmax		
	comp=Z,12nm,0.9s						
LZH				LR	LR		
	comp=N,350nm,9.8s						
LZH				LR	LR		
	comp=E,910nm,10.5s						
LZH				LR	LR		
	comp=Z,180nm,12.4s						
CHTO	**Chiang Mai**	**9.22**	**208**	Pn	**Pn**	**23 50 35.5**	**+2.2**
CMAR	**Chiang Mai Arr**	**9.54**	**207**	Pn	**Pn**	**23 50 40.3**	**+2.6**
	comp=Z,1.6nm,0.3s,baz=18,slow=12,SNR=4.5						
CMAR				Lg	Lg	23 53 27.6	
	comp=Z,0.6nm,0.3s,baz=22,slow=18,SNR=2.0						
CMAR				LR	LR	23 54 47.8	
	comp=Z,88nm,19.6s,baz=240,slow=41						
CMAR	**Chiang Mai Arr**	**9.54**	**207**	Pn	**Pn**	**23 50 39.8**	**+2.1**
QIZ	**Qiongzhong**	**9.96**	**142**	P	**Pn**	**23 50 42.5**	**-1.0**
QIZ				S	**Sn**	**23 52 42.0**	**+6.6**
QIZ				pmax	pmax		
	comp=Z,230nm,5.3s						
QIZ				LR	LR		
	comp=N,650nm,6.8s						
QIZ				LR	LR		
	comp=E,570nm,8.8s						
QIZ				LR	LR		
	comp=Z,250nm,8.0s						
WHN	**Wuhan**	**10.17**	**68**	*e*P	**Pn**	**23 50 47.0**	**+0.7**
WHN				S	**Sn**	**23 52 38.8**	**-1.6**
WHN				LR	LR		
	comp=N,2µm,7.9s						
WHN				LR	LR		
	comp=E,410nm,3.5s						
WHN				LR	LR		
	comp=Z,1µm,14.1s						
LYN	**LuoYang**	**10.74**	**44**	*e*P	**Pn**	**23 50 53.0**	**-1.1**
LYN				Pg		23 51 34.5	
LYN				S	**Sn**	**23 53 02.0**	**+7.5**
LYN				Sg		23 53 50.0	
LYN				pmax	pmax		
	comp=Z,12nm,0.7s						
LYN				pmax	pmax		
	comp=Z,110nm,6.8s						
LYN				smax	smax		
	comp=N,53nm,1.2s						
LYN				smax	smax		
	comp=E,45nm,1.3s						
LYN				LR	LR		
	comp=N,560nm,11.1s						
LYN				LR	LR		
	comp=E,590nm,10.7s						
LYN				LR	LR		
	comp=Z,230nm,9.2s						
GOMU	**GeErMu**	**11.67**	**323**	P	**Pn**	**23 51 09.5**	**+2.4**
GOMU				pP		23 51 14.3	
GOMU				sP		23 51 15.3	
GOMU				S	Sn	23 52 54.5	-23
GOMU				sS		23 52 59.8	
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,70nm,4.6s						
GOMU				LR	LR		
	comp=N,240nm,9.0s						
GOMU				LR	LR		
	comp=E,220nm,10.8s						
GOMU				LR	LR		
	comp=Z,130nm,13.1s						
HNS	**HongShan**	**14.01**	**40**	⇑P	**P**	**23 51 49.5**	**+2.8**
HNS				S	**S**	**23 54 38.5**	**+2.6**
HNS				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HNS				LR	LR		
	comp=N,210nm,9.2s						
HNS				LR	LR		
	comp=E,250nm,9.8s						
HNS				LR	LR		
	comp=Z,230nm,9.3s						
TIA	**Tai'an**	**14.77**	**49**	*e*P	Pn	23 51 46.8	-2.4
TIA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TIA				LR	LR		
	comp=N,250nm,13.7s						
TIA				LR	LR		
	comp=E,230nm,16.7s						
TIA				LR	LR		
	comp=Z,220nm,13.7s						
BJT	**Baijiatuau**	**16.67**	**36**		**Pn**	**23 52 11.8**	**-2.1**
SONM	**Songino Array**	**20.83**	**6**	P	**P**	**23 52 59.7**	**-2.4**
	comp=Z,1.2nm,0.4s,baz=185,slow=11,SNR=16						
	comp=Z,1.2nm,0.4s						
SONM	**Songino Array**	**20.83**	**6**	P	**P**	**23 52 59.9**	**-2.1**
ULN	**Ulaanbaatar**	**20.93**	**7**	P	**P**	**23 53 00.8**	**-2.3**
ULN				IAmb	IAmb	23 53 02.0	
	comp=Z,4.2nm,0.7s						
WMQ	**Urumqi**	**20.98**	**327**	*e*P	**P**	**23 53 02.5**	**-1.2**
JOW	**Kunigami**	**22.14**	**85**	P	**P**	**23 53 14.5**	**-1.7**
	comp=Z,11nm,0.7s,baz=277,slow=8.1,SNR=2.6						
	comp=Z,11nm,0.7s						
KSRS	**Korea Array**	**23.08**	**57**	P	**P**	**23 53 23.4**	**-2.6**
	comp=Z,1.5nm,0.6s,baz=240,slow=10,SNR=2.7						
	comp=Z,1.5nm,0.6s						
CN2	**Changchun**	**24.37**	**41**	P	**P**	**23 53 37.8**	**-0.6**
CN2				PP	**PnPn**	**23 54 13.5**	**+4.9**
CN2				S	**S**	**23 57 53.0**	**-4.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=N,200nm,14.0s						
CN2				LR	LR		
	comp=E,200nm,14.0s						
CN2				LR	LR		
	comp=Z,200nm,15.0s						
TARG	**Taragay, Kyrgy**	**25.57**	**311**	P	**P**	**23 53 49.8**	**0.0**
TARG				IAmb	IAmb	23 53 55.5	
	comp=Z,5.1nm,0.7s						
MK31	**Makanchi Array**	**25.78**	**325**	P	**P**	**23 53 50.2**	**-1.0**
MK31				IAmb	IAmb	23 54 02.4	
	comp=Z,3.0nm,0.8s						
MKAR	**Makanchi Array**	**25.78**	**325**	P	**P**	**23 53 48.8**	**-2.5**
	comp=Z,0.4nm,0.4s,baz=129,slow=12,SNR=12						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**25.78**	**325**	P	**P**	**23 53 50.2**	**-1.1**
KDJ	**Kajisay**	**26.17**	**312**	P	**P**	**23 53 54.5**	**-0.5**
KDJ				IAmb	IAmb	23 53 58.9	
	comp=Z,5.6nm,1.2s						
AAK	**Ala-Archa**	**28.18**	**311**	P	**P**	**23 54 12.1**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=155,slow=16,SNR=3.1						
	comp=Z,0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**30.14**	**338**	P	**P**	**23 54 28.4**	**-1.7**
	comp=Z,0.8nm,0.4s,baz=149,slow=7.9,SNR=5.2						
	comp=Z,0.8nm,0.4s						
ZALV	**Zalesovo Beam**	**30.14**	**338**	P	**P**	**23 54 30.0**	**-0.1**
KURK	**Kurchatov**	**30.22**	**328**	P	**P**	**23 54 31.1**	**+0.3**
KURK				IAmb	IAmb	23 54 38.3	
	comp=Z,2.9nm,1.0s						
ABKAR	**Akbulak array**	**40.00**	**315**	P	**P**	**23 55 54.0**	**-1.1**
ABKAR	**Akbulak array**	**40.00**	**315**	P	**P**	**23 55 53.7**	**-1.4**
ABKAR				IAmb	IAmb	23 55 56.8	
	comp=Z,1.2nm,0.8s						
AKTO	**Aktyubinsk**	**41.54**	**317**	P	**P**	**23 56 06.0**	**-1.7**
	comp=Z,0.6nm,0.5s,baz=167,slow=22,SNR=1.9						
	comp=Z,0.6nm,0.5s						
NRIK	**Noril'sk**	**43.29**	**352**	P	**P**	**23 56 19.4**	**-2.4**
	comp=Z,2.2nm,0.5s,baz=142,slow=5.2,SNR=6.4						
	comp=Z,2.2nm,0.5s						
NRIK	**Noril'sk**	**43.29**	**352**	P	**P**	**23 56 19.9**	**-1.8**
NRIK				IAmb	IAmb	23 56 20.3	
	comp=Z,3.1nm,0.8s						
ARU	**Arti**	**43.31**	**325**	P	**P**	**23 56 20.1**	**-1.9**
	comp=Z,1.1nm,0.3s,baz=67,slow=3.0,SNR=5.3						
	comp=Z,1.1nm,0.3s						
ARU	**Arti**	**43.31**	**325**	P	**P**	**23 56 20.7**	**-1.3**
ARU				IAmb	IAmb	23 56 23.9	
	comp=Z,2.8nm,0.9s						
WRA	**Warramunga Arr**	**55.53**	**144**	P	P	23 57 54.1	-1.7
	comp=Z,1.0nm,0.6s,baz=332,slow=8.4,SNR=7.7						
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**55.53**	**144**	P	**P**	**23 57 54.6**	**-1.2**
WB2	**Warramunga Arr**	**55.53**	**144**	P	**P**	**23 57 54.4**	**-1.5**
ASAR	**Alice Springs**	**58.42**	**147**	P	**P**	**23 58 15.2**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=324,slow=6.3,SNR=8.0						
	comp=Z,0.6nm,0.6s						
AKASG	**Malin Array Be**	**59.74**	**315**	P	P	23 58 22.0	-3.1
	comp=Z,0.1nm,0.3s,baz=64,slow=5.9,SNR=1.9						
	comp=Z,0.1nm,0.3s						
FINES	**FINESS Array B**	**60.59**	**327**	P	P	23 58 28.0	-2.8
	comp=Z,0.6nm,0.4s,baz=99,slow=6.2,SNR=6.9						
	comp=Z,0.6nm,0.4s						
FINES	**FINESS Array B**	**60.59**	**327**	P	**P**	**23 58 28.4**	**-2.4**
ARCES	**ARCESS Array B**	**60.68**	**337**	P	P	23 58 28.6	-2.7
	comp=Z,2.6nm,0.9s,baz=96,slow=7.6,SNR=1.6						
	comp=Z,2.6nm,0.9s						
BURAR	**Bucovina Array**	**62.82**	**312**	P	**P**	**23 58 45.3**	**-0.9**
SPITS	**Spitsbergen Ar**	**63.08**	**347**	P	P	23 58 44.6	-2.7
	comp=Z,4.5nm,0.9s,baz=98,slow=11,SNR=1.2						
	comp=Z,4.5nm,0.9s						
NC602	**NORSAR Array S**	**67.66**	**328**	P	**P**	**23 59 16.7**	**-0.5**
NB2	**NORSAR Subarra**	**67.73**	**328**	P	P	23 59 14.4	-3.3
	comp=Z,1.4nm,0.7s,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**67.73**	**328**	P	P	23 59 14.5	-3.3
	comp=Z,0.3nm,0.5s,baz=74,slow=6.5,SNR=5.1						
	comp=Z,0.3nm,0.5s						
GERES	**GERESS Array B**	**69.95**	**315**	P	P	23 59 28.8	-3.0
	comp=Z,0.2nm,0.4s,baz=66,slow=3.3,SNR=2.0						
	comp=Z,0.2nm,0.4s						
IMAR	**Indian Mountai**	**70.58**	**25**	P	**P**	**23 59 33.1**	**-2.1**
TOLK	**Toolik Lake Re**	**70.97**	**22**	P	**P**	**23 59 35.4**	**-2.2**
H21K	**Melozitna Rive**	**71.07**	**25**	P	P	23 59 35.9	-2.3
H21K				IAmb	IAmb	23 59 59.0	
	comp=Z,1.7nm,0.9s						
K20K	**Telida**	**71.49**	**28**	P	**P**	**23 59 39.0**	**-1.8**
K20K				IAmb	IAmb	23 59 43.1	
	comp=Z,2.5nm,1.1s						
MLY	**Manley**	**72.12**	**25**	P	**P**	**23 59 42.9**	**-1.8**
MLY				IAmb	IAmb	23 59 47.9	
	comp=Z,2.6nm,1.1s						
CAST	**Castle Rocks**	**72.28**	**27**	P	**P**	**23 59 43.7**	**-1.9**
CAST				IAmb	IAmb	23 59 46.0	
	comp=Z,3.2nm,1.2s						
BPAW	**Bear Paw Mtn.**	**72.43**	**26**	P	P	23 59 44.1	-2.4
BPAW				IAmb	IAmb	00 00 05.1	
	comp=Z,2.2nm,0.9s						
PPLA	**Purkeypile**	**72.46**	**28**	P	**P**	**23 59 44.7**	**-2.2**
TRF	**Thorofare Moun**	**73.00**	**27**	P	**P**	**23 59 48.5**	**-1.6**
MDM	**Murphy Dome**	**73.11**	**25**	P	**P**	**23 59 48.5**	**-2.0**
BMAR	**Burnt Mountain**	**73.20**	**22**	P	**P**	**23 59 49.3**	**-1.7**
ILAR	**Eielson Array**	**73.70**	**25**	P	P	23 59 50.5	-3.4
	comp=Z,0.3nm,0.6s,baz=318,slow=6.5,SNR=2.2						
	comp=Z,0.3nm,0.6s						
KDAK	**Kodiak Island**	**74.50**	**33**	P	P	23 59 55.6	-3.2
	comp=Z,5.3nm,0.8s,baz=0.0,slow=5.1,SNR=1.2						
	comp=Z,5.3nm,0.8s						
INK	**Inuvik**	**76.12**	**19**	P	P	00 00 05.0	-2.8
	comp=Z,0.9nm,0.6s,baz=335,slow=5.0,SNR=3.8						
	comp=Z,0.9nm,0.6s						
BCAR	**Beaver Creek A**	**76.52**	**25**	P	**P**	**00 00 08.3**	**-2.0**
YKA	**Yellowknife Ar**	**85.68**	**17**	P	P	00 00 56.0	-3.0
	comp=Z,0.7nm,0.9s,baz=324,slow=4.2,SNR=9.0						
	comp=Z,0.7nm,0.9s						

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*BGR **29** 23:56:32.3, 19°.85S×170°.77E, h69^{km}*

*MOS **29** 23:56:36.9±1.0, 19°.28S×168°.87E, h55^{km}, mb5.7/57, Error ellipse: s-maj=7.2km s-min=6.4km az=111.7*

*BJI **29** 23:56:37.0±0.0, 19°.40S×168°.90E, h60^{km}, mb5.2/72, mB5.2/36, Ms4.8/26, Ms7 4.5/30*

*NEIC **29** 23:56:38.5, 19°.37S×168°.90E, h60^{km}*

*NEIC **29** 23:56:38.5, 19°.37S×168°.69E, h60^{km}, Moment Tensor Solution. Duration: 2^{s}.7 Moment tensor: Scale 10^{17}Nm; M_{rr}0.35; $M_{\theta\theta}$-0.44; $M_{\phi\phi}$0.09; $M_{r\theta}$-1.24; $M_{\theta\phi}$-0.16; $M_{\phi r}$0.66; Fault plane solution: $M_0$1.46000×10^{17} NP1: ϕ_s294.90000°, δ84.06000°, λ102.35000°. NP2: ϕ_s50.18000°, δ13.69000°, λ25.92000°. Principal axes: T 1.5270, Plg49.0000°, Azm218.0000°; N -0.1342, Plg12.0000°, Azm114.0000°; P -1.3927, Plg38.0000°, Azm14.0000°;*

*IDC **29** 23:56:39.0±0.5, 19°.29S×168°.90E, h62^{km}±4^{km}, mb5.1/37, mbtmp5.4/40, MS4.5/46 Error ellipse: s-maj=8.9km s-min=8.6km az=103.0*

*NEIC **29** 23:56:38.2±1.8, 19°.36S±0°.07×168°.90E±0°.08, h50^{km}±4^{km}, mb5.7/190, Mww5.4/12, Error ellipse: s-maj=11.6km s-min=9.4km az=123.0*

*NOU **29** 23:56:40.6, 19°.32S×168°.79E, h63^{km}, ML5.5/154, Vanuatu Islands*

*GCMT **29** 23:56:42.2±0.1, 19°.30S±0°.01×168°.76E±0°.01, h65^{km}±1^{km}, MW5.3/156, Moment Tensor Solution. s123,c206; s156,c257; Duration: 1^{s}.2 Moment tensor: Scale 10^{17} Nm; M_{rr}0.36±.02; $M_{\theta\theta}$-0.26±.02; $M_{\phi\phi}$-0.09±.02; $M_{r\theta}$-1.21±.02; $M_{\theta\phi}$-0.11±.02; $M_{\phi r}$0.51±.01; Best double couple: $M_0$1.34400×10^{17} NP1: ϕ_s291.00000°, δ84.00000°, λ96.00000°. NP2: ϕ_s64.00000°, δ8.00000°, λ44.00000°. Principal axes: T 1.4410, Plg50.0000°, Azm207.0000°; N -0.1940, Plg6.0000°, Azm110.0000°; P -1.2470, Plg39.0000°, Azm15.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 23:56:38.7±0.2**, 19°.41S**±0°.03×**168°.94E**±0°.03**, h64**^{km}±1^{km}**, h64**^{km}**:pP-P, n1318, σ1^{s}.22**/1378**, mb5.6**/247**, 47C-81D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.81**	**337**	P	**Pn**	**23 57 08.7**	**+0.9**
LIFNC	**LIFOU**	**2.10**	**229**	Pn	**Pn**	**23 57 10.6**	**-1.0**
LIFNC				Sn	**Sn**	**23 57 32.9**	**-3.8**
LIFNC	**LIFOU**	**2.10**	**229**	P	**Pn**	**23 57 10.6**	**-1.0**
YATNC	**Mamie plateau,**	**3.26**	**216**	P	**Pn**	**23 57 27.9**	**+0.4**
PINNC	**Pines Island,**	**3.48**	**203**		**Pn**	**23 57 30.1**	**-0.3**
PINNC	**Pines Island,**	**3.48**	**203**	P	**Pn**	**23 57 31.3**	**+0.8**
DZM	**Mont Dzumac**	**3.53**	**221**	*e*Pn	**Pn**	**23 57 31.1**	**-0.2**
	7µm,1.1s						
DZM				*e*Sn	**Sn**	**23 58 06.6**	**-5.3**
	30µm,0.9s						
DZM				*e*LR	LR	23 58 16.8	
	comp=Z,34µm,26.2s						
DZM	**Mont Dzumac**	**3.53**	**221**	P	**Pn**	**23 57 31.0**	**-0.2**
	2µm,0.6s,baz=46,slow=14,SNR=872						
DZM				S	**Sn**	**23 58 10.0**	**-1.9**
	8µm,0.6s,baz=126,slow=21,SNR=6.3						
DZM				LR	LR	23 58 41.2	
	comp=Z,11µm,20.7s,baz=40,slow=34						
DZM	**Mont Dzumac**	**3.53**	**221**	P	**Pn**	**23 57 31.7**	**+0.4**
OUENC	**Ouen Island, N**	**3.58**	**213**		**Pn**	**23 57 32.0**	**+0.1**
OUENC	**Ouen Island, N**	**3.58**	**213**	P	**Pn**	**23 57 32.3**	**+0.4**
NOUC	**Port Laguerre**	**3.64**	**222**	P	**Pn**	**23 57 33.7**	**+1.0**
ONTNC	**Ouen Toro**	**3.71**	**218**		**Pn**	**23 57 33.8**	**+0.3**
ONTNC	**Ouen Toro**	**3.71**	**218**	P	**Pn**	**23 57 34.5**	**+1.0**
KOUNC	**Koumac, New Ca**	**4.52**	**255**	Pn	**Pn**	**23 57 44.4**	**-0.3**
KOUNC	**Koumac, New Ca**	**4.52**	**255**	P	**Pn**	**23 57 44.7**	**0.0**
MSVF	**Nonsavu**	**8.80**	**81**	P	Pn	23 58 48.9	+5.5
	126nm,0.8s,baz=227,slow=10.0,SNR=33						
MSVF				LR	LR	00 01 35.7	
	comp=Z,6µm,21.1s,baz=258,slow=34						
MSVF	**Nonsavu**	**8.80**	**81**	P	Pn	23 58 49.8	+6.4
	387nm,1.2s						
NFK	**Norfolk Island**	**9.64**	**185**	P	**Pn**	**23 58 57.0**	**+2.3**
	baz=9.7,SNR=51						
NFK	**Norfolk Island**	**9.64**	**185**	P	**Pn**	**23 58 56.9**	**+2.2**
	2µm,0.7s						
HNR	**Honiara**	**13.19**	**317**	P	**Pn**	**23 59 42.2**	**-1.0**
	2µm,0.3s,baz=187,slow=5.1,SNR=7.8						
HNR				S	**Sn**	**00 02 06.7**	**-1.6**
	947nm,0.3s,baz=186,slow=12,SNR=1.5						
HNR				LR	LR	00 04 03.2	
	comp=Z,15µm,19.8s,baz=148,slow=34						
HNR	**Honiara**	**13.19**	**317**		**Pn**	**23 59 40.8**	**-2.5**
HNR	**Honiara**	**13.19**	**317**	P	**Pn**	**23 59 43.6**	**+0.4**
	709nm,1.2s						
HNR	**Honiara**	**13.19**	**317**	P	**Pn**	**23 59 40.8**	**-2.5**
FUTU	**Fugatoga**	**13.38**	**70**	P	**P**	**23 59 51.9**	**-1.3**
	189nm,1.1s						
FUNA	**Funafuti**	**14.69**	**44**	Pn	**Pn**	**00 00 03.8**	**+0.6**
FUNA	**Funafuti**	**14.69**	**44**	P	**P**	**00 00 05.9**	**-1.8**
	500nm,1.6s						
LHI	**Lord Howe Isla**	**14.99**	**214**	P	**P**	**00 00 09.4**	**-1.6**
	baz=15,SNR=7.8						
LHI	**Lord Howe Isla**	**14.99**	**214**		**Pn**	**00 00 08.7**	**+1.7**
LHI				IAmb	IAmb	00 00 15.0	
	comp=Z,481nm,1.1s						
LHI	**Lord Howe Isla**	**14.99**	**214**	P	**Pn**	**00 00 08.6**	**+1.7**
	comp=Z,542nm,1.1s						
RAO	**Raoul Island**	**15.47**	**132**	P	**P**	**00 00 15.5**	**-0.8**
	comp=Z,93nm,0.3s,baz=92,slow=23,SNR=1.5						
GC1S	**Gold Coast 1 S**	**16.58**	**235**	P	**P**	**00 00 30.5**	**+1.9**
AUWSH	**Wavell State H**	**16.61**	**238**	P	**P**	**00 00 30.7**	**+1.7**
	comp=Z,262nm,1.5s						
GD1S	**Gladstone Soft**	**17.10**	**252**	P	**P**	**00 00 36.5**	**+2.1**
	comp=Z,299nm,1.2s						
EIDS	**Eidsvold**	**17.54**	**247**	P	**P**	**00 00 40.6**	**+1.3**
	baz=18,SNR=34						
EIDS	**Eidsvold**	**17.54**	**247**	P	**P**	**00 00 39.6**	**+0.4**
EIDS	**Eidsvold**	**17.54**	**247**	P	**P**	**00 00 40.8**	**+1.5**
	comp=Z,334nm,1.0s						
RK1H	**Rockhampton Ha**	**17.62**	**254**	P	**P**	**00 00 42.5**	**+2.3**
	comp=Z,160nm,1.1s						
AUMOU	**Moura State Hi**	**18.31**	**250**	P	**Pn**	**00 00 50.8**	**+2.4**
	comp=Z,971nm,1.4s						
ARMA	**Armidale**	**19.12**	**232**	P	**Pn**	**00 00 58.1**	**-0.1**
	baz=19,SNR=75						
ARMA	**Armidale**	**19.12**	**232**		**Pn**	**00 00 59.5**	**+1.3**
ARMA				IAmb	IAmb	00 01 03.3	
	comp=Z,598nm,1.1s						
ARMA	**Armidale**	**19.12**	**232**	P	**Pn**	**00 00 59.8**	**+1.6**
	comp=Z,512nm,1.4s						
AFI	**Afiamalu**	**19.26**	**76**	P	**Pn**	**00 00 59.5**	**-0.4**
	comp=Z,182nm,1.1s,baz=345,slow=20,SNR=7.2						
AFI				LR	LR	00 07 53.4	
	comp=Z,324nm,18.9s,baz=240,slow=35						
AFI	**Afiamalu**	**19.26**	**76**	P	**Pn**	**00 00 59.7**	**-0.2**
AFI	**Afiamalu**	**19.26**	**76**	P	**Pn**	**00 01 01.0**	**+1.1**
	comp=Z,239nm,1.3s						
AFI	**Afiamalu**	**19.26**	**76**	P	**Pn**	**00 00 59.7**	**-0.2**
AFI				pmax	pmax		
	comp=Z,213nm,1.1s						
MXZ	**Matakaoa Point**	**19.86**	**158**	P	**Pn**	**00 01 08.9**	**+2.3**
	comp=Z,238nm,1.1s						
RMQ	**Roma**	**19.86**	**246**	P	**Pn**	**00 01 06.1**	**-0.8**
	baz=20,SNR=223						
RMQ	**Roma**	**19.86**	**246**	P	**Pn**	**00 01 07.4**	**+0.5**
	comp=Z,687nm,1.0s						
NIUE	**Niue**	**19.96**	**93**	P	**P**	**00 01 06.9**	**+1.0**
	baz=20,SNR=6.0						
NIUE	**Niue**	**19.96**	**93**	P	**P**	**00 01 06.5**	**+0.6**
NIUE				IAmb	IAmb	00 01 10.5	
	comp=Z,287nm,0.9s						
NIUE	**Niue**	**19.96**	**93**	P	**Pn**	**00 01 09.9**	**+1.9**
	comp=Z,386nm,1.2s						
URZ	**Urewera**	**20.09**	**161**	P	Pn	00 01 09.2	-0.1
	comp=Z,238nm,0.7s,baz=68,slow=22,SNR=2.1						
URZ				S	Sn	00 04 53.3	-1.5
	comp=Z,7.0nm,0.7s,baz=355,slow=18,SNR=1.1						
URZ				LR	LR	00 07 31.2	
	comp=Z,2µm,20.7s,baz=56,slow=32						
URZ				ScP	**ScP**	**00 08 50.0**	**-1.1**
	comp=Z,18nm,0.9s,baz=357,slow=2.1,SNR=5.1						
	comp=Z,238nm,0.7s						

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RTZ   Ruatahuna          20.38 162   P       Pn      00 01 12.7  -0.2
RTZ                                  IAmb    IAmb    00 01 18.3
      comp=Z,352nm,0.9s
BKZ   Black Stump Fm     20.75 163   P       Pn      00 01 16.4  -0.9
BKZ                                  IAmb    IAmb    00 01 18.1
      comp=Z,454nm,1.1s
TV1H  Townsville Har     20.89 267   P       Pn      00 01 17.6  -1.5
      comp=Z,187nm,1.0s
TARA  Tarawa             21.00  11   P       P       00 01 17.2  +0.1
TARA                                 IAmb    IAmb    00 01 34.7
      comp=Z,616nm,1.2s
TARA  Tarawa             21.00  11   P       Pn      00 01 19.6  -0.7
      comp=Z,445nm,1.4s
MGCD  Mangrove Creek     21.04 226   P       P       00 01 19.6  +2.3
      baz=21,SNR=13
MGCD  Mangrove Creek     21.04 226   P       P       00 01 20.7  +3.3
      comp=Z,512nm,0.9s
CTA   Charters Tower     21.36 264   P       P       00 01 22.4  +1.4
      comp=Z,76nm,0.6s,baz=89,slow=11,SNR=62
CTA                                  S       S       00 05 15.9  +1.1
      comp=Z,7.6nm,0.9s,baz=109,slow=9.9,SNR=1.6
CTA                                  ScP     ScP     00 08 53.5  -1.0
      comp=Z,13nm,0.9s,baz=332,slow=3.6,SNR=5.1
CTA                                  LR      LR      00 09 13.6
      comp=Z,960nm,18.4s,baz=84,slow=35
      comp=Z,76nm,0.6s
CTA   Charters Tower     21.36 264   P       P       00 01 22.1  +1.1
      comp=Z,270nm,0.9s
CTAO  Charters Tower     21.36 264   P       P       00 01 21.8  +0.8
CTAO                                 IAmb    IAmb    00 01 29.6
      comp=Z,184nm,0.8s
CTAO  Charters Tower     21.36 264   P       P       00 01 22.1  +1.1
      comp=Z,235nm,0.9s
CTAO  Charters Tower     21.36 264   P       P       00 01 21.8  +0.8
CTAO                                 pmax    pmax
      comp=Z,184nm,0.9s
RIV   Riverview          21.38 224   P       P       00 01 22.9  +1.9
      baz=21,SNR=4.9
RIV   Riverview          21.38 224   P       P       00 01 23.5  +2.5
      comp=Z,452nm,1.3s
SYDH  Sydney Hard Ro     21.61 225   P       P       00 01 26.4  +2.9
      comp=Z,238nm,0.8s
WOLH  Wollongong Har     21.92 223   P       P       00 01 29.8  +3.0
      comp=Z,652nm,0.8s
AUDCS Dubbo College      22.25 231   P       P       00 01 32.5  +2.1
RABL  Rabaul             22.28 311   P       P       00 01 30.0  -0.9
RABL                                 IAmb    IAmb    00 01 53.1
      comp=Z,232nm,0.8s
RABL  Rabaul             22.28 311   P       P       00 01 32.3  +1.4
      comp=Z,340nm,0.9s
AUUHS Ulladulla High     22.77 222   P       P       00 01 37.6  +1.7
PMG   Port Moresby       23.29 292   P       P       00 01 41.8  +0.6
      comp=Z,121nm,0.9s,baz=106,slow=5.3,SNR=35
PMG                                  ScP     ScP     00 08 58.7  -0.9
      comp=Z,6.6nm,0.4s,baz=84,slow=5.0,SNR=5.0
PMG                                  LR      LR      00 09 19.8
      comp=Z,929nm,19.2s,baz=127,slow=33
      comp=Z,121nm,0.9s
PMG   Port Moresby       23.29 292   P       P       00 01 41.4  +0.2
PMG   Port Moresby       23.29 292   P       P       00 01 41.4  +0.2
PMG                                  pmax    pmax
      comp=Z,141nm,1.0s
MTSU  Mount Surprise     23.34 269   P       P       00 01 42.1  +0.4
      baz=23,SNR=172
MTSU  Mount Surprise     23.34 269   P       P       00 01 42.6  +0.9
      comp=Z,299nm,0.9s
CNB   Canberra Magne     23.45 224   P       P       00 01 44.0  +1.3
      comp=Z,598nm,1.4s
YNG   Young              23.51 227   P       P       00 01 44.6  +1.5
      comp=Z,246nm,1.5s
CAN   Canberra           23.70 224   P       P       00 01 45.9  +1.0
CAN   Canberra           23.70 224   P       P       00 01 46.5  +1.6
      comp=Z,843nm,1.1s
CAN   Canberra           23.70 224   P       P       00 01 45.9  +1.0
CAN                                  pmax    pmax
      comp=Z,361nm,0.8s
QLP   Quilpie            23.81 248   P       P       00 01 46.7  +0.8
      baz=24,SNR=67
QLP   Quilpie            23.81 248   P       P       00 01 47.0  +1.1
      comp=Z,2µm,1.1s
OXZ   Oxford             23.99 174   P       P       00 01 48.0  +0.6
OXZ                                  IAmb    IAmb    00 01 49.4
      comp=Z,211nm,0.7s
CMSA  Cobar Meteorol     24.16 235   P       P       00 01 50.1  +1.1
      baz=24,SNR=198
CMSA  Cobar Meteorol     24.16 235   P       P       00 01 49.5  +0.5
      comp=Z,511nm,1.1s
RPZ   Rata Peaks         24.30 176   P       P       00 01 52.2  +2.0
      comp=Z,153nm,0.8s,baz=338,slow=9.7,SNR=7.1
RPZ                                  ScP     ScP     00 09 00.6  -1.2
      comp=Z,12nm,0.8s,baz=6.5,slow=5.5,SNR=4.4
      comp=Z,153nm,0.8s
JCZ   Jackson Bay        24.60 180   P       P       00 01 55.8  +2.8
      comp=Z,533nm,1.2s
MILA  Mila               24.67 220   P       P       00 01 55.5  +1.7
      baz=25,SNR=29
MILA  Mila               24.67 220   P       P       00 01 55.6  +1.9
      comp=Z,319nm,1.2s
LBZ   Lake Benmore       24.93 178   P       P       00 01 56.9  +1.0
COEN  Coen               25.25 278   P       P       00 02 00.1  +1.0
      baz=25,SNR=20
COEN  Coen               25.25 278   P       P       00 01 59.5  +0.4
COEN                                 IAmb    IAmb    00 02 03.4
      comp=Z,146nm,1.0s
DCZ   Deep Cove          26.03 183   P       P       00 02 06.8  +0.9
DCZ                                  IAmb    IAmb    00 02 08.3
      comp=Z,192nm,1.0s
SYZ   Scrubby Hill       27.06 180   P       P       00 02 17.3  +2.2
      comp=Z,142nm,1.1s
INKA  Innaminka          27.09 247   P       P       00 02 16.7  +1.1
      comp=Z,282nm,1.2s
CTZ   Chatham Island     27.12 157   P       P       00 02 17.4  +1.8
      comp=Z,136nm,0.9s
TOO   Toolangi           27.30 224   P       P       00 02 19.0  +1.5
      baz=27,SNR=25
TOO   Toolangi           27.30 224   P       P       00 02 18.4  +0.9
TOO   Toolangi           27.30 224   P       P       00 02 19.2  +1.7
      comp=Z,99nm,1.3s
TOO   Toolangi           27.30 224   P       P       00 02 18.4  +0.9
TOO                                  pmax    pmax
      comp=Z,110nm,1.2s
STKA  Stephens Creek     27.52 238   P       P       00 02 20.6  +1.2
      comp=Z,107nm,0.6s,baz=71,slow=9.3,SNR=217
STKA                                 ScP     ScP     00 09 12.4  +0.9
      comp=Z,15nm,0.9s,baz=352,slow=2.3,SNR=6.7
STKA                                 LR      LR      00 13 07.4
      comp=Z,1µm,19.4s,baz=62,slow=36
      comp=Z,107nm,0.6s
STKA  Stephens Creek     27.52 238   P       P       00 02 20.6  +1.2
      baz=28,SNR=98
STKA  Stephens Creek     27.52 238   P       P       00 02 20.2  +0.8
STKA  Stephens Creek     27.52 238   P       P       00 02 20.1  +0.8
      comp=Z,53nm,1.1s
STKA  Stephens Creek     27.52 238   P       P       00 02 20.2  +0.8
STKA                                 pmax    pmax
      comp=Z,28nm,0.7s
QIS   Mount Isa          27.57 263   P       P       00 02 20.3  +0.2
      baz=28,SNR=25
QIS   Mount Isa          27.57 263   P       P       00 02 20.1   0.0
      comp=Z,74nm,1.0s
GLAD  Gladstone          27.97 215   P       P       00 02 25.3  +2.0
      comp=Z,169nm,1.0s
PATS  Pohnpei            28.10 337   P       P       00 02 24.3  -0.4
PATS                                 IAmb    IAmb    00 02 49.4
      comp=Z,231nm,1.1s
BRAT  Ballarat           28.32 225   P       P       00 02 28.5  +2.0
      comp=Z,45nm,1.0s
AULHS Lilydale High      28.58 216   P       P       00 02 31.6  +2.8
      comp=Z,86nm,1.4s
CORO  Coronation Par     28.76 215   P       P       00 02 32.9  +2.6
      comp=Z,76nm,1.1s
ARPS  Mount Arapiles     29.36 228   P       P       00 02 37.2  +1.5
      baz=29,SNR=9.4
ARPS  Mount Arapiles     29.36 228   P       P       00 02 37.3  +1.5
      comp=Z,164nm,0.9s
RAR   Rarotonga          29.38  99   LR      LR      00 14 13.9
      comp=Z,163nm,18.4s,baz=253,slow=36
MOO   Moorlands          29.42 214   P       P       00 02 38.0  +1.8
      baz=30,SNR=8.2
MOO   Moorlands          29.42 214   P       P       00 02 38.3  +2.1
      comp=Z,188nm,1.2s
TAU   Tasmania Unive     29.69 213   P       P       00 02 38.9  +0.4
TAU                                  IAmb    IAmb    00 02 41.2
      comp=Z,178nm,1.4s
TAU   Tasmania Unive     29.69 213   P       P       00 02 40.6  +2.1
      comp=Z,96nm,1.6s
TAU   Tasmania Unive     29.69 213   P       P       00 02 38.9  +0.4
TAU                                  pmax    pmax
      comp=Z,178nm,1.4s
LCRK  Leigh Creek        29.86 242   P       P       00 02 41.0  +0.8
      comp=Z,156nm,1.4s
HTT   Hallett            30.17 236   P       P       00 02 43.8  +0.8
      baz=30,SNR=17
HTT   Hallett            30.17 236   P       P       00 02 44.1  +1.1
      comp=Z,145nm,1.4s
PTPS  Port Pirie         30.81 237   P       P       00 02 51.6  +3.0
      comp=Z,199nm,0.5s
WHYH  Whyalla            31.11 238   P       P       00 02 52.0  +0.8
      comp=Z,173nm,0.9s
OOD   Oodnadatta         31.52 248   P       P       00 02 55.8  +0.9
      comp=Z,114nm,1.9s
BBOO  Buckleboo          32.26 239   P       P       00 03 02.0  +0.7
      baz=32,SNR=28
BBOO  Buckleboo          32.26 239   P       P       00 03 00.8  -0.6
BBOO                                 IAmb    IAmb    00 03 03.0
      comp=Z,114nm,0.8s
BBOO  Buckleboo          32.26 239   P       P       00 03 02.3  +0.9
      comp=Z,194nm,1.2s
WB0   Warramunga Arr     32.52 263   P       P       00 03 02.6  -1.2
WB0                                  IAmb    IAmb    00 03 03.9
      comp=Z,75nm,0.9s
WB0                                          ScP     00 09 29.5  +1.6
WRAB  Tennant Creek      32.54 263   P       P       00 03 03.1  -0.9
      comp=Z,62nm,1.0s
WRAB  Tennant Creek      32.54 263c iP       P       00 03 02.8  -1.2
WRAB                                 pmax    pmax
      comp=Z,75nm,1.0s
WRAB  Tennant Creek      32.54 263   P       P       00 03 02.4  -1.6
WRAB                                 pP      pP      00 03 19.2  +0.4
WRA   Warramunga Arr     32.55 263   P       P       00 03 03.1  -1.0
      comp=Z,49nm,0.9s,baz=94,slow=8.6,SNR=89
WRA                                  pP      pP      00 03 19.6  +0.7
      comp=Z,23nm,0.9s,baz=95,slow=8.8,SNR=6.3
WRA                                  PcP     PcP     00 05 50.1  +0.5
      comp=Z,4.7nm,0.7s,baz=91,slow=3.4,SNR=3.1
WRA                                  ScP     ScP     00 09 26.9  -1.1
      comp=Z,16nm,1.1s,baz=94,slow=3.8,SNR=16
WRA                                  PKiKP   PKiKP   00 13 15.4  -1.4
      comp=Z,1.0nm,0.7s,baz=47,slow=0.5,SNR=5.7
WRA                                  LR      LR      00 16 12.2
      comp=Z,885nm,18.1s,baz=96,slow=36
      comp=Z,49nm,0.9s
WRA   Warramunga Arr     32.55 263   P       P       00 03 02.3  -1.8
WRA                                  ScP     ScP     00 09 28.6  +0.6
GENI  Genyem             32.71 297   P       P       00 03 06.9  +1.4
      comp=Z,94nm,1.6s
ASAR  Alice Springs      32.81 256   P       P       00 03 06.2  -0.2
      comp=Z,201nm,0.7s,baz=84,slow=9.0,SNR=1206
ASAR                                 PcP     PcP     00 05 50.1  -0.1
      comp=Z,8.1nm,0.8s,baz=103,slow=3.7,SNR=3.3
ASAR                                 S       S       00 08 17.1  -2.1
      comp=Z,3.3nm,0.9s,baz=84,slow=19,SNR=4.0
ASAR                                 ScP     ScP     00 09 29.1  +0.3
      comp=Z,14nm,0.9s,baz=91,slow=3.7,SNR=19
ASAR                                 PKiKP   PKiKP   00 13 15.7  -1.2
      comp=Z,0.6nm,0.5s,baz=89,slow=1.5,SNR=8.1
ASAR                                 ScS     ScS     00 13 27.8  -1.3
      comp=Z,0.6nm,0.5s,baz=89,slow=8.4,SNR=6.2
ASAR                                 LR      LR      00 16 41.5
      comp=Z,1µm,19.1s,baz=101,slow=37
ASAR                                 P3KPbc          00 34 28.9
      comp=Z,1.4nm,0.9s,baz=272,slow=3.5,SNR=6.5
      comp=Z,201nm,0.7s
MULG  Mulgathing         33.33 244   P       P       00 03 11.2  +0.5
      comp=Z,412nm,1.1s
SMPI  Sarmi              34.26 297   P       P       00 03 18.2  -0.8
      comp=Z,7µmcomp=Z,71nm,1.6s
KDU   Kakadu             35.62 275   P       P       00 03 30.7   0.0
      baz=36,SNR=7.3
KDU   Kakadu             35.62 275   P       P       00 03 30.9  +0.2
      comp=Z,103nm,1.2s
MTN   Manton Dam         36.84 274   P       P       00 03 41.0  -0.1
      baz=37,SNR=36
MTN   Manton Dam         36.84 274   P       P       00 03 40.9  -0.1
MTN   Manton Dam         36.84 274   P       P       00 03 41.3  +0.2
      comp=Z,244nm,0.8s
WRKA  Warakurna          37.94 254   P       P       00 03 50.2  -0.1
      baz=38,SNR=65
WRKA  Warakurna          37.94 254   P       P       00 03 50.3  -0.1
      comp=Z,203nm,1.0s
RKPI  Ransiki, Papua     38.39 293   P       P       00 03 55.0  +0.8
      comp=Z,133nm,1.3s
KNRA  Kununurra          38.43 269   P       P       00 03 54.2  -0.3
      baz=38,SNR=26
KNRA  Kununurra          38.43 269   P       P       00 03 54.0  -0.5
KNRA                                 IAmb    IAmb    00 03 55.2
      comp=Z,152nm,1.1s
KNRA  Kununurra          38.43 269   P       P       00 03 54.2  -0.3
      comp=Z,176nm,1.1s
FORT  Forrest            38.52 245   P       P       00 03 55.4  +0.3
      baz=38,SNR=34
FORT  Forrest            38.52 245   P       P       00 03 55.2  +0.1
FORT  Forrest            38.52 245   P       P       00 03 55.6  +0.5
      comp=Z,396nm,1.2s
PPT2  Papeete2           39.32  94   eS      S       00 10 02.3  +3.5
      comp=Z,85nm,24.8s
PPT2                                 eSS     SnSn    00 12 58.5   0.0
      comp=Z,177nm,25.8s
PPT2                                 eLR     LR      00 14 54.4
      comp=Z,1µm,28.8s
PPT2                                 eLR     LR      00 14 54.9
      comp=Z,868nm,32.2s
PPT   Papeete            39.32  94   P       P       00 04 02.6  +0.6
      comp=Z,38nm,0.6s,baz=51,slow=13,SNR=3.0
      comp=Z,38nm,0.6s
FAKI  Fak Fak            39.41 290   P       P       00 04 01.8  -1.0
FAKI  Fak Fak            39.41 290   P       P       00 04 02.8   0.0
      comp=Z,66nm,0.9s
FAKI  Fak Fak            39.41 290   P       P       00 04 02.7   0.0
      comp=Z,66nm,0.9s
GUMO  Guam               40.46 322   LR      LR      00 19 17.2
      comp=Z,211nm,21.6s,baz=115,slow=34
FITZ  Fitzroy Crossi     40.94 264   P       P       00 04 15.8  +0.5
FITZ  Fitzroy Crossi     40.94 264   P       P       00 04 15.7  +0.3
SIJI  Sorong             41.23 292   LR      LR      00 20 39.6
      comp=Z,449nm,20.4s,baz=94,slow=35
KMBL  Kambalda           43.85 245   P       P       00 04 38.7  -0.3
      baz=44,SNR=24
KMBL  Kambalda           43.85 245   P       P       00 04 38.6  -0.3
      comp=Z,230nm,1.1s
NLAI  Namlea             43.89 286   P       P       00 04 40.6  +1.2
      comp=Z,7µmcomp=Z,46nm,1.4s
SOEI  Soe                44.17 276   P       P       00 04 42.1  +0.3
SOEI                                 IAmb    IAmb    00 05 25.3
      comp=Z,197nm,1.1s
SOEI  Soe                44.17 276   P       P       00 04 43.4  +1.6
      comp=Z,171nm,1.1s
SOEI  Soe                44.17 276   P       P       00 04 43.0  +1.2
      comp=Z,2µmcomp=Z,170nm,1.0s
LBMI  Labuha             44.66 290   P       P       00 04 46.1  +0.5
      comp=Z,2µmcomp=Z,85nm,0.9s
SANI  Sanana             45.40 287   P       P       00 04 51.8  +0.4
      comp=Z,94nm,1.1s
SANI  Sanana             45.40 287   P       P       00 04 51.5  +0.1
      comp=Z,979nmcomp=Z,94nm,0.9s
PSA00 Pilbara Seismi     45.89 258   P       P       00 04 55.6  +0.4
PSA00 Pilbara Seismi     45.89 258   P       P       00 04 54.8  -0.4
PSA00                                IAmb    IAmb    00 04 56.7
      comp=Z,88nm,0.9s
PSA00 Pilbara Seismi     45.89 258   P       P       00 04 55.9  +0.7
      comp=Z,336nm,0.8s
MBWA  Marble Bar         46.04 259   P       P       00 04 56.9  +0.5
MBWA  Marble Bar         46.04 259   P       P       00 04 56.9  +0.5
      comp=Z,180nm,1.1s
MBWA  Marble Bar         46.04 259   P       P       00 04 55.9  -0.5
MBWA                                 sP      pP      00 05 12.9  +0.7
MMRI  Maumere            46.42 277   P       P       00 04 58.6  -0.9
MMRI                                 IAmb    IAmb    00 05 00.5
      comp=Z,116nm,0.8s
MMRI  Maumere            46.42 277   P       P       00 04 59.4  -0.1
      comp=Z,159nm,0.9s
MMRI  Maumere            46.42 277   P       P       00 04 59.6  +0.1
      comp=Z,6µmcomp=Z,163nm,0.9s
KLBR  Kellerberrin       47.38 245   P       P       00 05 06.4  -0.4
      baz=47,SNR=42
KLBR  Kellerberrin       47.38 245   P       P       00 05 06.7  -0.1
      comp=Z,650nm,0.9s
NWAO  Narrogin (SRO)     47.88 243   P       P       00 05 10.6  -0.1
      comp=Z,214nm,0.9s,baz=85,slow=8.3,SNR=62
      comp=Z,214nm,0.9s
NWAO  Narrogin (SRO)     47.88 243   P       P       00 05 10.4  -0.1
      baz=48,SNR=41
NWAO                                 P       P       00 05 10.4  -0.1
      baz=48,SNR=41
NWAO  Narrogin (SRO)     47.88 243   P       P       00 05 10.5  -0.1
NWAO  Narrogin (SRO)     47.88 243   P       P       00 05 10.7  +0.1
      comp=Z,346nm,1.0s
NWAO  Narrogin (SRO)     47.88 243   P       P       00 05 10.5  -0.1
NWAO                                 pmax    pmax
      comp=Z,257nm,1.0s
NWAO  Narrogin (SRO)     47.88 243   P       P       00 05 10.2  -0.4
NWAO  Narrogin (SRO)     47.88 243   P       P       00 05 09.4  -1.2
NWAO                                 pP      pP      00 05 27.1  +0.9
NWAO                                 sP      sP      00 05 33.1   0.0
RKGY  Rocky Gully        48.20 241   P       P       00 05 13.6  +0.5
      baz=48,SNR=15
RKGY  Rocky Gully        48.20 241   P       P       00 05 13.7  +0.6
      comp=Z,245nm,0.7s
BLDU  Ballidu            48.26 246   P       P       00 05 13.1  -0.4
      baz=48,SNR=26
BLDU  Ballidu            48.26 246   P       P       00 05 13.2  -0.4
      comp=Z,130nm,1.2s
MUN   Mundaring          48.71 244   P       P       00 05 17.0  -0.1
      baz=49,SNR=5.1
MUN   Mundaring          48.71 244   P       P       00 05 17.5  +0.5
LUWI  Luwuk              48.73 286   P       P       00 05 17.5  +0.1
LUWI                                 IAmb    IAmb    00 06 12.6
      comp=Z,98nm,0.9s
LUWI  Luwuk              48.73 286   P       P       00 05 18.6  +1.2
      comp=Z,100nm,0.8s
LUWI  Luwuk              48.73 286   P       P       00 05 18.1  +0.7
      comp=Z,6µmcomp=Z,100nm,0.9s
MORW  Morawa             48.84 248   P       P       00 05 17.9  -0.3
      baz=49,SNR=13
MORW  Morawa             48.84 248   P       P       00 05 17.8  -0.3
MORW                                 IAmb    IAmb    00 05 19.3
      comp=Z,113nm,1.1s
MORW  Morawa             48.84 248   P       P       00 05 18.3  +0.2
      comp=Z,102nm,1.3s
BSSI  Bau Bau, Buton     48.88 279   P       P       00 05 19.3  +0.8
      comp=Z,48nm,1.0s
BKSI  Bulukumba          49.51 280   P       P       00 05 23.3   0.0
      comp=Z,1µmcomp=Z,53nm,1.1s
KAPI  Kappang            49.96 280   P       P       00 05 27.0  +0.2
      comp=Z,69nm,0.9s,baz=93,slow=5.7,SNR=24
      comp=Z,69nm,0.9s
KAPI  Kappang            49.96 280   P       P       00 05 26.9  +0.2
KAPI                                 IAmb    IAmb    00 05 28.7
      comp=Z,86nm,0.9s
KAPI  Kappang            49.96 280   P       P       00 05 27.8  +1.0
      comp=Z,113nm,1.1s
KAPI  Kappang            49.96 280c iP       P       00 05 27.6  +0.8
KAPI                                 pmax    pmax
      comp=Z,103nm,1.0s
KAPI  Kappang            49.96 280   P       P       00 05 26.7   0.0
KAPI                                 sP      pwP     00 05 45.0  +0.2
MRSI  Marisa             50.13 288   P       P       00 05 29.0  +1.0
      comp=Z,20nm,1.0s
TAOE  Nuku Hiva Isla     50.31  85   eS      S       00 12 40.3  +2.3
      comp=Z,228nm,34.9s
TAOE                                 eLR     LR      00 19 59.9
      comp=Z,806nm,27.2s
SPSI  Sidrap Palu        50.33 281   P       P       00 05 29.3  -0.2
      comp=Z,49nm,1.0s
PLAI  Plampang           50.55 275   P       P       00 05 31.8  +0.6
      comp=Z,111nm,0.8s
PLAI  Plampang           50.55 275   P       P       00 05 31.6  +0.4
      comp=Z,1µmcomp=Z,112nm,0.8s
DRV   Dumont d'Urvil     50.80 194   P       P       00 05 31.1  -1.1
GIRL  Giralia            50.93 256   P       P       00 05 35.4  +1.4
      baz=51,SNR=10
GIRL  Giralia            50.93 256   P       P       00 05 34.7  +0.7
GIRL  Giralia            50.93 256   P       P       00 05 35.6  +1.6
      comp=Z,282nm,1.1s
TOLI2 Tolitoli           51.45 288   P       P       00 05 36.8  -1.2
TOLI2                                IAmb    IAmb    00 05 41.3
      comp=Z,91nm,0.8s
TOLI2 Tolitoli           51.45 288   P       P       00 05 37.9  -0.1
KIP   Kipapa             51.88  40   P       P       00 05 42.1  +1.1
KIP   Kipapa             51.88  40   P       P       00 05 41.8  +0.8
KIP   Kipapa             51.88  40⇑eP      P       00 05 41.4  +0.4
KIP                                  pmax    pmax
      comp=Z,74nm,0.8s
MPSI  Mapaga             51.92 286   P       P       00 05 41.5  +0.1
      comp=Z,80nm,0.9s
MLOA  Mauna Loa Obse     52.04  44   P       P       00 05 43.0  +0.3
MLOA                                 IAmb    IAmb    00 05 52.9
      comp=Z,100nm,0.9s
OPA   Opana              52.09  40   P       P       00 05 42.7  +0.2
OPA   Opana              52.09  40   P       P       00 05 42.7  +0.2
OPA                                  pmax    pmax
      comp=Z,181nm,0.8s
MLH   Mauna Loa          52.14  44   P       P       00 05 43.3  +0.1
HPAH  Hawaii Prepara     52.32  43   P       P       00 05 44.2  -0.1
JCJ   Chichijima         53.00 330   P       P       00 05 48.6  -0.5
      comp=Z,455nm,0.9s,baz=166,slow=2.5,SNR=17
JCJ                                  LR      LR      00 26 31.8
      comp=Z,294nm,21.9s,baz=138,slow=34
      comp=Z,455nm,0.9s
JCJ   Chichijima         53.00 330   P       P       00 05 48.3  -0.9
JCJ   Chichijima         53.00 330   P       P       00 05 48.8  -0.4
IGBI  Denpasar           53.03 274   P       P       00 05 51.2  +1.5
      comp=Z,203nm,1.4s
JAGI  Jajag, Banyuwa     54.07 274   P       P       00 05 56.0  -1.3
JAGI  Jajag, Banyuwa     54.07 274   P       P       00 05 57.1  -0.2
JAGI  Jajag, Banyuwa     54.07 274   P       P       00 05 56.9  -0.4
      comp=Z,138nm,1.0s
ABJI  Asem Bagus         54.20 274   P       P       00 05 59.0  +0.7
      comp=Z,131nm,1.0s
GMJI  Gumukmas           54.80 274   P       P       00 06 02.6   0.0
      comp=Z,71nm,1.0s
BLJI  Banyuglugur        54.82 274   P       P       00 06 03.4  +0.7
      comp=Z,5µmcomp=Z,79nm,0.9s
BBKI  Banjar Baru        55.09 280   P       P       00 06 05.7  +1.0
      comp=Z,103nm,1.0s
MYLDM Lahad Datu         55.31 291   P       P       00 06 06.5  +0.3
MYLDM                                IAmb    IAmb    00 07 22.3
      comp=Z,75nm,1.3s
MTKI  Muara Teweh, K     55.97 282   P       P       00 06 12.1  +1.0
BWJI  Bawean             56.31 276   P       P       00 06 16.0  +2.6
      comp=Z,9µmcomp=Z,177nm,1.0s
PWJI  Pagerwojo          56.42 273   P       P       00 06 15.3  +1.1
      comp=Z,60nm,0.9s
TBJI  Tambak Boyo        56.76 275   P       P       00 06 17.7  +1.1
      comp=Z,3µmcomp=Z,278nm,1.0s
NGJI  Ngawi              56.95 274   P       P       00 06 18.7  +0.7
      comp=Z,69nm,1.0s
UGM   Wanagama           57.66 273   P       P       00 06 22.8  -0.2
UGM   Wanagama           57.66 273   P       P       00 06 23.7  +0.6
KKM   Kota Kinabalu      57.72 291   P       P       00 06 23.3  -0.2
KKM                                  IAmb    IAmb    00 06 53.2
      comp=Z,58nm,1.1s
KKM   Kota Kinabalu      57.72 291   P       P       00 06 24.6  +1.1
YOGI  Yogyakarta         57.91 273   P       P       00 06 25.5  +0.7
      comp=Z,182nm,1.1s
SMRI  Semarang           58.01 274   P       P       00 06 24.6  -0.8
SMRI                                 IAmb    IAmb    00 06 27.0
      comp=Z,60nm,0.7s
SMRI  Semarang           58.01 274   P       P       00 06 26.9  +1.4
SMRI  Semarang           58.01 274   P       P       00 06 26.3  +0.8
      comp=Z,88nm,1.4s
VNDA  Vanda              58.26 182   P       P       00 06 27.0  +0.8
      comp=Z,21nm,0.7s,baz=359,slow=7.7,SNR=85
VNDA                                 LR      LR      00 27 39.4
      comp=Z,453nm,21.2s,baz=9.5,slow=32
      comp=Z,21nm,0.7s
VNDA  Vanda              58.26 182   P       P       00 06 26.3  +0.1
VNDA                                 IAmb    IAmb    00 06 27.6
      comp=Z,26nm,0.8s
VNDA  Vanda              58.26 182   P       P       00 06 26.3  +0.1
VNDA                                 pmax    pmax
      comp=Z,26nm,0.8s
VNDA  Vanda              58.26 182   P       P       00 06 25.4  -0.8
VNDA                                 pP      pP      00 06 37.8  -4.8
SBA   Scott Base         58.50 181   P       P       00 06 29.1  +1.3
SBA   Scott Base         58.50 181   P       P       00 06 29.1  +1.3
SBA                                  pmax    pmax
      comp=Z,131nm,0.9s
SBA   Scott Base         58.50 181   P       P       00 06 27.8   0.0
SBA                                  pP      pwP     00 06 45.5  -0.8
SBA                                  sP      sP      00 06 53.0  +1.8
KPJI  Karang Pucung      59.34 273   P       P       00 06 35.4  +0.7
      comp=Z,100nm,0.9s
SBUM  Sibu               59.77 285   P       P       00 06 37.2  -0.4
CASY  Casey              59.86 203   P       P       00 06 37.5  +0.1
CASY  Casey              59.86 203   P       P       00 06 36.3  -1.1
CASY                                 pP      pP      00 06 53.5  -0.3
CASY                                 sP      sP      00 06 59.6  -1.1
BBJI  Bungbulang         60.51 272   P       P       00 06 42.6  -0.2
JOW   Kunigami           60.56 318   LR      LR      00 30 42.8
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	comp=Z,205nm,21.2s,baz=122,slow=34					
JOW	Kunigami	60.56 318	P	P	00 06 43.1	+0.3
JOW			IAmb	IAmb	00 06 46.6	
	comp=Z,98nm,1.1s					
JOW	Kunigami	60.56 318	P	P	00 06 44.3	+1.5
CCD	Concordia, Ant	60.68 192	P	P	00 06 42.2	-1.2
CCD			pP	pP	00 06 59.6	0.0
CCD			sP	sP	00 07 07.0	+0.4
KSM	Kuching	61.13 283	P	P	00 06 46.7	-0.3
KSM	Kuching	61.13 283	P	P	00 06 47.6	+0.6
JSG	Sagara	61.22 331	P	P	00 06 47.2	+0.2
XMI	Christmas Isla	61.48 268	P	P	00 06 50.6	+1.2
INU	Inuyama	62.31 331	P	P	00 06 54.0	-0.3
INU			IAmb	IAmb	00 07 13.7	
	comp=Z,52nm,1.1s					
INU	Inuyama	62.31 331	P	P	00 06 54.9	+0.5
INU	Inuyama	62.31 331	P	P	00 06 54.7	+0.3
JGF	Kuroka	62.36 331	P	P	00 06 54.0	-0.8
JGF			IAmb	IAmb	00 07 14.6	
	comp=Z,38nm,0.9s					
JGF	Kuroka	62.36 331	P	P	00 06 54.6	-0.2
SBJI	Serang	62.36 273	P	P	00 06 56.3	+1.1
	comp=Z,6μmcomp=Z,223nm,1.2s					
JMN	Monobe	62.52 327	P	P	00 06 55.8	-0.1
JMN	Monobe	62.52 327	P	P	00 06 56.8	+0.9
CGJI	Cibinong	62.62 273	P	P	00 06 56.4	-0.5
	comp=Z,227nm,0.9s					
JSU	Suzuyama	62.65 323	P	P	00 06 56.8	0.0
JSU	Suzuyama	62.65 323	P	P	00 06 57.5	+0.7
MJAR	Matsushiro Arr	62.77 332	P	P	00 06 56.9	-0.6
	comp=Z,27nm,0.9s,baz=164,slow=7.1,SNR=50					
MJAR			pP	pP	00 07 13.0	-1.2
	comp=Z,30nm,0.8s,baz=165,slow=6.9,SNR=8.2					
MJAR			LR	LR	00 30 06.0	
	comp=Z,105nm,21.4s,baz=126,slow=32					
	comp=Z,27nm,0.9s					
MAJO	Matsushiro	62.77 332	P	P	00 06 56.4	-1.1
MAJO			IAmb	IAmb	00 07 16.2	
	comp=Z,51nm,0.8s					
MAJO	Matsushiro	62.77 332	P	P	00 06 56.9	-0.6
MAJO	Matsushiro	62.77 332	*d i*P	P	00 06 56.8	-0.7
MAJO			pmax	pmax		
	comp=Z,60nm,1.1s					
MAJO	Matsushiro	62.77 332	P	P	00 06 56.7	-0.8
MAJO			pP	pP	00 07 13.5	-0.7
MJB9	Matsu-Tunnel	62.77 332	P	P	00 06 56.3	-1.2
MJB9			IAmb	IAmb	00 07 16.2	
	comp=Z,52nm,0.9s					
JMM	Marumori	62.82 335	P	P	00 06 57.5	-0.2
JMM			IAmb	IAmb	00 06 59.3	
	comp=Z,72nm,0.9s					
JMM	Marumori	62.82 335	P	P	00 06 58.3	+0.6
YULB	Yu-li	63.00 310	P	P	00 06 58.3	-1.0
YULB			IAmb	IAmb	00 07 27.2	
	comp=Z,33nm,0.9s					
YULB	Yu-li	63.00 310	P	P	00 07 02.0	+2.7
NACB	Ninganchiao	63.28 311	P	P	00 07 00.5	-0.6
NACB			IAmb	IAmb	00 07 04.6	
	comp=Z,74nm,0.9s					
NACB	Ninganchiao	63.28 311	P	P	00 07 01.3	+0.2
TPUB	Ta-pu	63.43 310	P	P	00 07 00.8	-1.3
TPUB	Ta-pu	63.43 310	P	P	00 07 01.8	-0.3
SSLB	Suanglung	63.49 310	P	P	00 07 01.3	-1.3
SSLB			IAmb	IAmb	00 07 05.5	
	comp=Z,78nm,0.9s					
SSLB	Suanglung	63.49 310	P	P	00 07 02.1	-0.5
JNU	Nakatsue	63.64 325	LR	LR	00 31 11.2	
	comp=Z,187nm,21.9s,baz=138,slow=33					
JNU	Nakatsue	63.64 325	P	P	00 07 02.4	-0.9
JNU			IAmb	IAmb	00 08 06.0	
	comp=Z,65nm,0.9s					
JNU	Nakatsue	63.64 325	P	P	00 07 03.7	+0.4
YHNB	Yeheng	63.74 312	P	P	00 07 03.6	-0.6
YHNB	Yeheng	63.74 312	P	P	00 07 04.8	+0.6
TATO	Taipei	63.86 312	P	P	00 07 03.9	-0.9
TATO	Taipei	63.86 312	P	P	00 07 06.0	+1.2
JHS	Saijyo	63.91 328	P	P	00 07 05.1	0.0
JHS			IAmb	IAmb	00 07 29.1	
	comp=Z,142nm,1.6s					
JHS	Saijyo	63.91 328	P	P	00 07 05.4	+0.3
JSD	Sado	64.00 333	P	P	00 07 05.4	-0.1
JSD	Sado	64.00 333	P	P	00 07 06.2	+0.7
KASI	Kota Agung	64.09 273	P	P	00 07 05.9	-0.8
	comp=Z,153nm,0.9s					
LWLI	Liwa	64.67 274	P	P	00 07 12.4	+1.8
	comp=Z,11μmcomp=Z,242nm,0.9s					
PMBI	Palembang	64.69 276	P	P	00 07 11.1	+0.5
JTM	Tenmabayashi	65.25 337	P	P	00 07 13.2	-0.4
JTM	Tenmabayashi	65.25 337	P	P	00 07 13.9	+0.3
ERM	Erimo	65.60 339	P	P	00 07 15.6	-0.2
ERM			IAmb	IAmb	00 07 46.9	
	comp=Z,69nm,1.4s					
ERM	Erimo	65.60 339	P	P	00 07 15.6	-0.2
ERM			pmax	pmax		
	comp=Z,69nm,1.4s					
MNAI	Manna	65.92 274	P	P	00 07 18.1	-0.5
MNAI	Manna	65.92 274	P	P	00 07 19.9	+1.3
	comp=Z,289nm,1.6s					
KSI	Kapahiang	66.49 275	P	P	00 07 21.9	-0.4
	comp=Z,112nm,0.5s					
MASI	Maura Aman, Be	67.00 275	P	P	00 07 26.0	+0.5
	comp=Z,215nm,0.9s					
BTDF	Bukit Timah Da	67.14 280	P	P	00 07 27.6	+1.3
MYKOM	Kota Tinggi	67.22 281	P	P	00 07 26.2	-0.6
JKA	Kamikawa-asahi	67.66 340	P	P	00 07 29.6	+0.7
ASAJ	Asahikawa	67.66 340	LR	LR	00 31 59.8	
	comp=Z,892nm,21.9s,baz=172,slow=31					
ASAJ	Asahikawa	67.66 340	P	P	00 07 29.6	+0.7
ASAJ			pmax	pmax		
	comp=Z,118nm,0.8s					
TJN	Taejon	67.98 325	P	P	00 07 31.4	+0.3
TJN	Taejon	67.98 325	P	P	00 07 32.3	+1.2
	comp=Z,143nm,1.4s					
TJN	Taejon	67.98 325	P	P	00 07 31.4	+0.3
TJN			pmax	pmax		
	comp=Z,277nm,1.3s					
KSRS	Korea Array	68.48 326	P	P	00 07 34.5	+0.2
	comp=Z,5.0nm,0.8s,baz=142,slow=5.5,SNR=16					
	comp=Z,5.0nm,0.8s					
KSAR	Wonju Array Be	68.49 326	P	P	00 07 34.3	0.0
KSAR	Wonju Array Be	68.49 326	P	P	00 07 34.3	0.0
SDSI	Sungai Dareh	68.51 277	P	P	00 07 33.8	-1.2
	comp=Z,1μmcomp=Z,32nm,0.9s					
KS19	Wonju Array Si	68.55 326	P	P	00 07 35.3	+0.7
INCN	Inchon	69.19 325	P	P	00 07 38.8	+0.1
INCN			IAmb	IAmb	00 07 42.8	
	comp=Z,103nm,1.3s					
INCN	Inchon	69.19 325	P	P	00 07 39.7	+1.0
INCN	Inchon	69.19 325	P	P	00 07 38.8	+0.1
INCN			pmax	pmax		
	comp=Z,103nm,1.3s					
PPSI	Pulau Pagai	69.22 275	P	P	00 07 40.2	+0.8
	comp=Z,140nm,0.8s					
BKNI	Bangkinang	69.31 278	P	P	00 07 40.0	+0.1
BKNI	Bangkinang	69.31 278	P	P	00 07 41.8	+1.8
BKNI	Bangkinang	69.31 278	P	P	00 07 41.7	+1.8
	comp=Z,196nm,0.9s					
QIZ	Qiongzhong	69.41 300	P	P	00 07 39.5	-0.9
QIZ			S	S	00 16 45.0	+1.9
QIZ			sS	sS	00 17 12.8	+1.8
QIZ			SS	SS	00 21 09.3	-2.4
QIZ			pmax	pmax		
	comp=Z,24nm,1.9s					
QIZ			LR	LR		
	comp=Z,130nm,14.3s					
QIZ			LR	LR		
	comp=Z,170nm,9.6s					
QIZ			LR	LR		
	comp=Z,210nm,27.1s					
PDSI	Padang	69.42 277	P	P	00 07 40.2	-0.5
	comp=Z,43nm,0.8s					
YSS	Yuzh-Sakhalins	70.14 341	P	P	00 07 44.8	+0.5
YSS			IAmb	IAmb	00 07 46.6	
	comp=Z,98nm,1.0s					
YSS	Yuzh-Sakhalins	70.14 341	P	P	00 07 45.9	+1.6
YSS	Yuzh-Sakhalins	70.14 341	*e*P	P	00 07 45.1	+0.8
YSS			*e**PP	pP	00 08 02.1	+0.8
YSS			*e**SP	sP	00 08 10.3	+2.1
YSS			*e*		00 10 18.7	
YSS			*e*S	S	00 16 48.6	-1.9
YSS			pmax	pmax		
	comp=Z,400nm,4.6s					
YSS			pmax	pmax		
	comp=Z,90nm,1.1s					
YSS			smax	smax		
	comp=N,200nm,6.1s					
YSS			smax	smax		
	comp=E,200nm,8.7s					
QSPA	South Pole Qui	70.65 180	P	P	00 07 48.2	+0.8
	comp=E,130nm,0.8s,baz=16,slow=1.6,SNR=245					
QSPA			LR	LR	00 37 31.2	
	comp=E,412nm,18.0s,baz=32,slow=35					
	comp=E,130nm,0.8s					
QSPA	South Pole Qui	70.65 180	P	P	00 07 47.9	+0.5
QSPA	South Pole Qui	70.65 180	P	P	00 07 46.3	-1.1
IPM	Ipoh	70.84 282	P	P	00 07 48.3	-1.0
IPM	Ipoh	70.84 282	P	P	00 07 49.7	+0.4
VLA	Vladivostok	70.93 332	⇓*i*P	P	00 07 50.2	+1.0
VLA			pmax	pmax		
	comp=Z,79nm,0.8s					
KULM	Kulim	71.49 283	P	P	00 07 52.9	-0.3
USA0B	Ussuriysk Arra	71.75 333	P	P	00 07 54.7	+0.5
USA0B			IAmb	IAmb	00 07 56.0	
	comp=Z,80nm,1.1s					
USA0B	Ussuriysk Arra	71.75 333	*d i*P	P	00 07 54.6	+0.5
USRK	Ussuriysk Ar.	71.75 333	P	P	00 07 54.7	+0.6
	comp=Z,42nm,0.9s,baz=140,slow=4.3,SNR=35					
USRK			pP	pP	00 08 10.6	-0.7
	comp=Z,16nm,0.8s,baz=138,slow=4.5,SNR=4.8					
USRK			LR	LR	00 36 07.2	
	comp=Z,153nm,20.9s,baz=127,slow=33					
	comp=Z,42nm,0.9s					
PBSI	Pulau Batu	71.76 277	P	P	00 07 57.1	+2.2
	comp=Z,94nm,1.5s					
SHEM	Shemya Is, Ala	71.97 3	LR	LR	00 34 34.0	
	comp=Z,438nm,20.6s,baz=137,slow=32					
RPSI	Rantau Prapat	72.13 279	P	P	00 07 56.2	-0.9
PSI	Prapat	72.17 280	P	P	00 07 56.8	-0.7
PSI	Prapat	72.17 280	P	P	00 07 56.2	-1.3
PSI			pmax	pmax		
	comp=Z,28nm,0.9s					
WHN	Wuhan	72.25 312	P	P	00 07 57.3	-0.1
WHN			pP	pP	00 08 14.0	-0.5
WHN			sP	sP	00 08 22.0	+0.6
WHN			S	S	00 17 12.5	-3.0
WHN			pmax	pmax		
	comp=Z,81nm,1.0s					
WHN			pmax	pmax		
	comp=Z,680nm,4.7s					
WHN			LR	LR		
	comp=Z,890nm,19.2s					
PET	Petropavlovsk	72.67 354	P	P	00 07 59.3	-0.1
PET			IAmb	IAmb	00 08 00.6	
	comp=Z,67nm,1.3s					
PET	Petropavlovsk	72.67 354	P	P	00 07 59.8	+0.4
PET	Petropavlovsk	72.67 354	*e*P	P	00 07 57.6	-1.8
PET			*e**PP	PcP	00 08 16.3	-0.1
PET			*e*S	S	00 17 17.9	-1.5
PET			pmax	pmax		
	comp=Z,54nm,1.2s					
PET			pmax	pmax		
	comp=Z,100nm,9.7s					
PEA0B	Petropavlovsk-	72.86 353	P	P	00 08 00.8	+0.3
PEA0B			IAmb	IAmb	00 08 02.1	
	comp=Z,73nm,1.0s					
PEA0B	Petropavlovsk-	72.86 353	P	P	00 08 00.8	+0.3
PEA0B			pmax	pmax		
	comp=Z,73nm,1.0s					
PETK	Petropavlovsk-	72.86 353	P	P	00 08 00.3	-0.2
	comp=Z,38nm,0.9s,baz=171,slow=10,SNR=47					
PETK			LR	LR	00 34 47.7	
	comp=Z,440nm,21.1s,baz=156,slow=32					
	comp=Z,38nm,0.9s					
PETK	Petropavlovsk-	72.86 353	P	P	00 08 00.5	-0.1
PETK	Petropavlovsk-	72.86 353	P	P	00 08 00.5	-0.1
GSI	Gunungsitoli	72.89 278	P	P	00 08 01.5	-0.1
GSI			IAmb	IAmb	00 08 03.3	
	comp=Z,58nm,0.9s					
GSI	Gunungsitoli	72.89 278	P	P	00 08 02.1	+0.4
	comp=Z,60nm,0.8s					
DL2	Dalian	72.98 323	P	P	00 08 02.3	+0.8
DL2			pP	pP	00 08 20.0	+1.3
DL2			S	S	00 17 24.5	+1.0
DL2			pmax	pmax		
	comp=Z,67nm,1.0s					
DL2			LR	LR		
	comp=Z,240nm,18.4s					
DL2			LR	LR		
	comp=Z,290nm,18.8s					
DL2			LR	LR		
	comp=Z,300nm,17.8s					
MDJ	Mudanjiang	73.13 332	P	P	00 08 03.0	+0.7
MDJ			pP	pP	00 08 19.3	-0.2
MDJ			sP	sP	00 08 25.5	-1.0
MDJ			S	SKiKP	00 17 31.5	+2.7
MDJ			sS	sS	00 17 57.3	+3.2
MDJ			pmax	pmax		
	comp=Z,100nm,1.0s					
MDJ			pmax	pmax		
	comp=Z,310nm,4.8s					
MDJ			LR	LR		
	comp=Z,330nm,23.2s					
MDJ			LR	LR		
	comp=Z,270nm,24.9s					
MDJ			LR	LR		
	comp=Z,490nm,23.4s					
MDJ	Mudanjiang	73.13 332	P	P	00 08 02.9	+0.5
MDJ			IAmb	IAmb	00 08 04.1	
	comp=Z,87nm,1.0s					
KCSI	Kotacane, Aceh	73.50 280	P	P	00 08 06.2	+1.0
	comp=Z,15nm,0.9s					
TYV	Tymovskoe	73.69 343	*e*P	P	00 08 06.3	+0.9
TYV			*e*S	S	00 17 32.6	+1.6
TYV			pmax	pmax		
	comp=Z,32nm,0.9s					
TYV			pmax	pmax		
	comp=Z,100nm,2.7s					
TYV			smax	smax		
	comp=N,300nm,6.0s					
TYV			smax	smax		
	comp=E,500nm,6.0s					
SRIT	Nakonsritamara	73.72 285	P	P	00 08 06.6	+0.2
SRIT	Nakonsritamara	73.72 285	P	P	00 08 08.0	+1.6
TIA	Tai'an	73.88 319	⇓P	P	00 08 07.0	+0.1
TIA			pP	pP	00 08 25.8	+1.7
TIA			S	SKiKP	00 17 29.0	-1.2
TIA			pmax	pmax		
	comp=E,22nm,1.5s					
TIA			LR	LR		
	comp=E,170nm,16.2s					
TIA			LR	LR		
	comp=E,220nm,18.1s					
SNSI	Sinabang, Aceh	74.45 278	P	P	00 08 11.8	+1.0
	comp=E,135nm,1.0s					
CN2	Changchun	74.45 329	P	P	00 08 10.5	+0.4
CN2			PcP	pP	00 08 27.8	+0.5
CN2			S	SKiKP	00 17 32.3	+1.5
CN2			pmax	pmax		
	comp=E,70nm,0.8s					
NIKH	Nikolski High	74.60 14	P	P	00 08 10.3	-0.4
NIKH	Nikolski High	74.60 14	P	P	00 08 08.9	-1.8
	baz=202					
BNX	BinXian	74.98 331	⇓P	P	00 08 12.8	-0.3
BNX			pmax	pmax		
	comp=E,81nm,0.8s					
BNX			pmax	pmax		
	comp=E,230nm,9.7s					
MLSI	Meulaboh, Aceh	75.04 280	P	P	00 08 14.0	-0.2
	comp=E,48nm,0.9s					
GRNR	Gornyy	75.50 339	⇓*i*P	P	00 08 17.4	+1.4
GRNR			pmax	pmax		
	comp=E,10.0nm,0.7s					
GRNR			pmax	pmax		
	comp=N,20nm,1.0s					
GRNR			pmax	pmax		
	comp=Z,60nm,0.9s					
ENH	Enshi	75.56 310	P	P	00 08 15.9	-0.9
ENH			IAmb	IAmb	00 08 36.0	
	comp=Z,181nm,1.9s					
GYA	Guiyang	75.68 305	⇑*i*P	P	00 08 20.5	+2.8
GYA			pP	pP	00 08 36.5	+1.7
GYA			PP	PP	00 11 09.3	+0.9
GYA			S	S	00 17 54.5	-0.1
GYA			pmax	pmax		
	comp=Z,28nm,1.0s					
LYN	LuoYang	75.88 315	⇓*i*P	P	00 08 19.3	+0.8
LYN			pP	pP	00 08 34.5	-1.2
LYN			sP	sP	00 08 42.8	+0.1
LYN			S	S	00 17 53.0	-3.2
LYN			sS	sS	00 18 25.0	-0.1
LYN			SS	SS	00 22 49.5	-0.7
LYN			pmax	pmax		
	comp=Z,49nm,1.2s					
LYN			pmax	pmax		
	comp=Z,250nm,4.6s					
LYN			LR	LR		
	comp=Z,160nm,23.1s					
LYN			LR	LR		
	comp=Z,180nm,23.3s					
LYN			LR	LR		
	comp=Z,200nm,22.9s					
KLR	Kul'dur	75.90 336	LR	LR	00 37 21.1	
	comp=Z,308nm,21.9s,baz=146,slow=32					
KLR	Kul'dur	75.90 336	*d i*P	P	00 08 18.8	+0.5
KLR			pmax	pmax		
	comp=Z,89nm,1.7s					
UNV	Unalaska Valle	75.95 15	P	P	00 08 16.6	-1.8
	baz=204					
HNS	HongShan	76.13 318	⇓P	P	00 08 20.8	+1.0
HNS			pP	pP	00 08 38.0	+0.9
HNS			sP	sP	00 08 44.3	+0.2
HNS			S	S	00 18 00.3	+1.5
HNS			pmax	pmax		
	comp=Z,32nm,1.2s					
HNS			LR	LR		
	comp=Z,360nm,25.0s					
HNS			LR	LR		
	comp=Z,300nm,21.6s					
BJT	Baijiatuau	76.88 321	P	P	00 08 24.0	0.0
BJT	Baijiatuau	76.88 321	P	P	00 08 24.0	0.0
BJT			pmax	pmax		
	comp=Z,30nm,1.0s					
BJI	Beijing	76.89 321	P	P	00 08 24.5	+0.5
BJI			S	S	00 18 10.3	+3.4
BJI			pmax	pmax		
	comp=Z,12nm,1.1s					
PHRA	Phrae	77.23 295	P	P	00 08 27.4	+0.9
TIY	Taiyuan	77.76 317	*e*P	P	00 08 31.5	+2.4
TIY			sP	sP	00 08 55.5	+2.1
TIY			S	S	00 18 18.5	+1.7
TIY			SKS	SKSac	00 18 33.3	-4.1
TIY			sS	sS	00 18 47.5	+1.5
TIY			pmax	pmax		
	comp=Z,17nm,0.9s					
TIY			LR	LR		
	comp=Z,110nm,13.7s					
TIY			LR	LR		
	comp=Z,140nm,14.4s					
TIY			LR	LR		
	comp=Z,220nm,23.4s					
CRAI	Chiangrai	77.85 297	P	P	00 08 30.8	+0.8
XAN	Xi'an	78.01 313	⇓P	P	00 08 31.3	+0.7
XAN			pP	PcP	00 08 43.8	+3.7
XAN			sP	pP	00 08 48.5	+0.7
XAN			S	S	00 18 18.5	-1.1
XAN			pmax	pmax		
	comp=Z,30nm,1.2s					
XAN			LR	LR		
	comp=Z,150nm,18.7s					
XAN			LR	LR		
	comp=Z,110nm,21.3s					
XAN			LR	LR		
	comp=Z,190nm,21.6s					
KMI	Kunming	78.12 302	⇓P	P	00 08 33.0	+1.4
KMI			pP	PcP	00 08 44.5	+3.5
KMI			sP	pP	00 08 49.5	+0.7
KMI			S	S	00 18 20.3	-1.1
KMI			pmax	pmax		
	comp=Z,63nm,0.8s					
MAW	Mawson	78.17 202	P	P	00 08 32.4	+1.5
	comp=Z,42nm,0.9s,baz=113,slow=7.8,SNR=12					
MAW			LR	LR	00 38 15.7	
	comp=Z,597nm,21.2s,baz=90,slow=32					
	comp=Z,42nm,0.9s					
MAW	Mawson	78.17 202	P	P	00 08 31.4	+0.6
	baz=78,SNR=6.3					
MAW	Mawson	78.17 202	P	P	00 08 31.6	+0.7
MAW	Mawson	78.17 202	P	P	00 08 31.6	+0.7
MAW			pmax	pmax		
	comp=Z,12nm,0.9s					
CM31	Chiang Mai Arr	78.31 294	P	P	00 08 33.1	+0.6
CMAR	Chiang Mai Arr	78.31 294	P	P	00 08 33.9	+1.4
	comp=Z,12nm,0.9s,baz=132,slow=4.3,SNR=44					
	comp=Z,12nm,0.9s					
CMAR	Chiang Mai Arr	78.31 294	P	P	00 08 33.7	+1.2
CMAR	Chiang Mai Arr	78.31 294	*i* P	P	00 08 34.5	+2.0
CMAR			pmax	pmax		
	comp=Z,13nm,0.9s					
HEH	HeiHe	78.44 334	P	P	00 08 32.5	0.0
HEH			pP	pP	00 08 47.5	-2.2
HEH			PP	PP	00 11 30.5	-0.4
HEH			S	S	00 18 26.0	+2.7
HEH			sS	sS	00 18 51.3	-1.2
HEH			SS	SS	00 23 33.5	+5.3
HEH			pmax	pmax		
	comp=Z,32nm,0.8s					
HEH			pmax	pmax		
	comp=Z,280nm,5.8s					
HEH			LR	LR		
	comp=Z,260nm,18.2s					
HEH			LR	LR		
	comp=Z,270nm,19.0s					
HEH			LR	LR		
	comp=Z,450nm,18.9s					
CHTO	Chiang Mai	78.46 295	P	P	00 08 33.5	+0.2
CHTO	Chiang Mai	78.46 295	P	P	00 08 33.5	+0.2
CHTO			pmax	pmax		
	comp=Z,1.0nm,1.0s					
S12K	Black Hills	78.75 16	P	P	00 08 32.7	-1.3
	baz=208					
SDPT	Sand Point	78.87 17	P	P	00 08 33.0	-1.6
	baz=209					
XLT	XiLinHaoTe	79.41 324	⇓*i*P	P	00 08 38.5	+0.4
XLT			PcP	PcP	00 08 47.5	+1.5
XLT			pP	pP	00 08 56.0	+0.5
XLT			sP	sP	00 09 01.0	-1.4
XLT			S	S	00 18 33.0	-1.1
XLT			sS	sS	00 19 04.5	+1.0
XLT			pmax	pmax		
	comp=Z,27nm,1.1s					
XLT			pmax	pmax		
	comp=Z,150nm,3.7s					
XLT			LR	LR		
	comp=Z,14nm,18.7s					
XLT			LR	LR		
	comp=Z,120nm,10.9s					
XLT			LR	LR		
	comp=Z,250nm,19.4s					
PZH	PanZhiHua	79.56 303	P	P	00 08 39.8	+0.5
PZH			PcP	PcP	00 08 51.0	+3.9
PZH			sP	sP	00 09 03.5	+0.1
PZH			S	S	00 18 35.0	-1.5
PZH			sS	ScS	00 19 01.5	+3.5
PZH			SS	SS	00 23 48.3	+2.2
PZH			pmax	pmax		
	comp=Z,30nm,1.0s					
PZH			pmax	pmax		
	comp=Z,100nm,4.1s					
PZH			LR	LR		
	comp=Z,160nm,24.0s					
MA2	Magadan	80.09 351	P	P	00 08 40.7	-0.5
	comp=Z,29nm,0.8s,baz=151,slow=7.0,SNR=11					
MA2			LR	LR	00 40 04.3	
	comp=Z,381nm,21.1s,baz=136,slow=33					
	comp=Z,29nm,0.8s					
MA2	Magadan	80.09 351	P	P	00 08 40.4	-0.8
MA2	Magadan	80.09 351	*d i*P	P	00 08 40.5	-0.8
MA2			pmax	pmax		
	comp=Z,52nm,1.3s					
CD2	Chengdu	80.11 308	P	P	00 08 43.3	+1.2
CD2			PP	PP	00 11 49.3	+4.0
CD2			S	S	00 18 41.0	-1.0
CD2			SS	SS	00 23 56.0	+1.9
CD2			pmax	pmax		
	comp=Z,30nm,1.1s					
CD2			pmax	pmax		
	comp=Z,110nm,4.7s					
CD2			LR	LR		
	comp=Z,170nm,16.2s					
HHC	Hu-ho-hao-te	80.16 320	*e*P	P	00 08 43.0	+0.8
HHC			S	S	00 18 46.3	+4.1
HHC			pmax	pmax		
	comp=Z,42nm,1.0s					
HHC			pmax	pmax		

	comp=Z,310nm,4.4s						
CHGN	**Chignik**	**80.28**	**18**	P	**P**	**00 08 40.5**	**-1.8**
	baz=211						
BTO	**Baotou**	**80.97**	**319**	*e*P	**P**	**00 08 48.3**	**+1.7**
BTO				S	**S**	**00 18 55.5**	**+4.8**
BTO				pmax	pmax		
	comp=Z,37nm,0.8s						
BTO				pmax	pmax		
	comp=Z,430nm,7.0s						
PAF	**Port-aux-Franc**	**81.01**	**221**	P	**P**	**00 08 47.7**	**+1.1**
PAF	**Port-aux-Franc**	**81.01**	**221**	P	**P**	**00 08 47.7**	**+1.1**
PAF				pmax	pmax		
	comp=Z,231nm,1.0s						
HIA	**Hailar**	**81.11**	**330**	P	**P**	**00 08 46.8**	**-0.2**
HIA	**Hailar**	**81.11**	**330**	P	**P**	**00 08 46.8**	**-0.2**
HIA				pmax	pmax		
	comp=Z,34nm,1.2s						
ZEA	**Zeya**	**81.19**	**336**	*e*P	**P**	**00 08 48.3**	**+1.0**
ZEA				pmax	pmax		
	comp=Z,100nm,4.5s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.3s						
R16K	**Pilot Point**	**81.61**	**17**	P	**P**	**00 08 47.0**	**-2.4**
	baz=212						
BELA	**Belgrano 2**	**81.96**	**175**	P	**P**	**00 08 51.0**	**-0.2**
BELA				IAmb	IAmb	00 08 52.0	
	comp=Z,92nm,0.9s						
R17K	**Ugashik Creek**	**82.01**	**18**	P	**P**	**00 08 50.3**	**-1.2**
	baz=213						
MND	**Mandalay**	**82.21**	**297**	P	**P**	**00 08 54.5**	**+1.1**
OHAK	**Old Harbor**	**82.61**	**20**	P	**P**	**00 08 56.4**	**+1.8**
OHAK	**Old Harbor**	**82.61**	**20**	P	**P**	**00 08 53.9**	**-0.7**
	baz=216						
LZH	**Lanzhou**	**82.63**	**312**	⇓P	**P**	**00 08 56.8**	**+1.3**
LZH				pP	pP	00 09 12.0	-0.9
LZH				sP	sP	00 09 22.5	+2.7
LZH				S	**S**	**00 19 10.0**	**+1.9**
LZH				sS	pS	00 19 33.0	+3.2
LZH				pmax	pmax		
	comp=Z,34nm,1.5s						
LZH				pmax	pmax		
	comp=Z,240nm,5.5s						
Q17K	**Contact Creek**	**82.68**	**18**	P	**P**	**00 08 54.3**	**-0.8**
	baz=213,SNR=17						
P16K	**Nushagak River**	**82.74**	**17**	P	**P**	**00 08 54.3**	**-0.9**
	baz=211						
Q16K	**King Salmon**	**82.81**	**17**	P	**P**	**00 08 54.2**	**-1.4**
	baz=212						
SEY	**Seymchan**	**83.09**	**352**	P	**P**	**00 08 56.7**	**-0.3**
	comp=Z,11nm,0.9s,baz=126,slow=5.1,SNR=12						
SEY				LR	LR	00 41 21.4	
	comp=Z,682nm,21.7s,baz=155,slow=32						
	comp=Z,11nm,0.9s						
SEY	**Seymchan**	**83.09**	**352**	⇓*e*P	**P**	**00 08 56.6**	**-0.4**
SEY				pmax	pmax		
	comp=Z,29nm,1.3s						
O16K	**Kokwok River B**	**83.20**	**16**	P	**P**	**00 08 56.3**	**-1.3**
	baz=211						
Q18K	**Katmai Hardscr**	**83.25**	**18**	P	**P**	**00 08 57.4**	**-0.7**
	baz=214,SNR=26						
KDAK	**Kodiak Island**	**83.28**	**20**	P	**P**	**00 08 58.6**	**+0.6**
KDAK				IAmb	IAmb	00 09 00.7	
	comp=Z,94nm,1.1s						
KDAK	**Kodiak Island**	**83.28**	**20**	⇑*i*P	**P**	**00 08 57.2**	**-0.9**
KDAK				pmax	pmax		
	comp=Z,139nm,1.1s						
KDAK	**Kodiak Island**	**83.28**	**20**	P	**P**	**00 08 58.2**	**+0.1**
	baz=216						
P17K	**Kvichak River**	**83.31**	**17**	P	**P**	**00 08 57.3**	**-0.8**
	baz=213						
O17K	**Koliganek Bris**	**83.62**	**17**	P	**P**	**00 08 58.2**	**-1.5**
	baz=212,SNR=9.6						
N16K	**Nishlik Lake**	**83.78**	**15**	P	**P**	**00 09 01.0**	**+0.3**
	baz=210						
P18K	**Big Mountain,**	**83.81**	**18**	P	**P**	**00 09 00.3**	**-0.5**
	baz=214,SNR=38						
Q19K	**Cape Douglas,**	**83.89**	**18**	P	**P**	**00 09 00.9**	**-0.4**
	baz=215,SNR=10						
Q20K	**Shuyak Island**	**84.01**	**19**	P	**P**	**00 09 02.0**	**+0.2**
	baz=216						
O18K	**Koktuh Hills**	**84.20**	**17**	P	**P**	**00 09 02.1**	**-0.7**
	baz=214,SNR=20						
P19K	**Oil Pt**	**84.60**	**18**	P	**P**	**00 09 04.8**	**-0.1**
P19K	**Oil Pt**	**84.60**	**18**	P	**P**	**00 09 04.8**	**-0.1**
	baz=216						
O19K	**Port Alsworth**	**84.73**	**17**	P	**P**	**00 09 05.0**	**-0.4**
	baz=215						
ILSW	**Iliamna Southw**	**84.90**	**18**	P	**P**	**00 09 06.1**	**-0.3**
HOM	**Homer**	**85.09**	**19**	P	**P**	**00 09 06.4**	**-0.8**
	baz=217						
CNPM	**China Poot**	**85.11**	**19**	P	**P**	**00 09 07.5**	**+0.1**
CNPM				IAmb	IAmb	00 09 12.4	
	comp=Z,88nm,1.0s						
O20K	**Slope Mountain**	**85.13**	**18**	P	**P**	**00 09 07.0**	**-0.6**
	baz=216						
SVW2	**Sparrevohn**	**85.14**	**16**	P	**P**	**00 09 09.4**	**+1.9**
N19K	**Bonanza Creek**	**85.20**	**17**	P	**P**	**00 09 06.6**	**-1.3**
	baz=214,SNR=10						
BRLK	**Bradley Lake**	**85.40**	**19**	P	**P**	**00 09 09.4**	**+0.5**
BRSE	**Bradley Lake S**	**85.43**	**19**	P	**P**	**00 09 08.3**	**-0.7**
	baz=218						
ELIB	**Princess Elisa**	**85.93**	**190**	*d*P	**P**	**00 09 11.4**	**-0.3**
	comp=Z,69nm,1.0s						
SNCC	**San Nicolas Is**	**85.97**	**53**	P	**P**	**00 09 11.9**	**-0.4**
	baz=244						
ANM	**Nome**	**86.02**	**11**	P	**P**	**00 09 12.2**	**+0.5**
ANM				IAmb	IAmb	00 09 16.9	
	comp=Z,27nm,1.0s						
ANM	**Nome**	**86.02**	**11**	P	**P**	**00 09 12.3**	**+0.5**
ANM				pmax	pmax		
	comp=Z,27nm,1.0s						
ANM	**Nome**	**86.02**	**11**	P	**P**	**00 09 12.4**	**+0.7**
	baz=204,SNR=20						
KCPM	**Cahto Peak**	**86.05**	**46**	P	**P**	**00 09 14.1**	**+1.5**
KCPM				IAmb	IAmb	00 09 16.5	
	comp=Z,54nm,0.8s						
M19K	**Big River Lodg**	**86.13**	**16**	P	**P**	**00 09 12.5**	**+0.1**
	baz=214						
SAO	**San Andreas Ge**	**86.15**	**49**	P	**P**	**00 09 13.7**	**+0.6**
SAO	**San Andreas Ge**	**86.15**	**49**	P	**P**	**00 09 13.7**	**+0.6**
SAO				pmax	pmax		
	comp=Z,161nm,1.9s						
SPCR	**Spurr Chakacha**	**86.16**	**18**	P	**P**	**00 09 12.9**	**+0.3**
	baz=216						
L19K	**White Mountain**	**86.24**	**16**	P	**P**	**00 09 13.1**	**+0.2**
L19K				IAmb	IAmb	00 09 18.1	
	comp=Z,31nm,0.8s						
L19K	**White Mountain**	**86.24**	**16**	P	**P**	**00 09 13.2**	**+0.2**
	baz=214						
BRDH	**Bariadhala**	**86.27**	**295**	LR	LR	00 51 10.0	
	comp=Z,68nm,18.2s,baz=0.0,slow=38						
O22K	**Cooper Landing**	**86.33**	**19**	P	**P**	**00 09 13.2**	**-0.2**
	baz=219						
SBC	**Santa Barbara**	**86.36**	**52**	P	**P**	**00 09 11.6**	**-2.5**
	baz=244						
M20K	**Styx River**	**86.45**	**17**	P	**P**	**00 09 15.6**	**+1.5**
	baz=216						
PKM	**Mcpherson Peak**	**86.48**	**51**	P	**P**	**00 09 14.1**	**-0.9**
	baz=244						
TNA	**Tin City**	**86.52**	**9**	P	**P**	**00 09 14.1**	**0.0**
TNA				IAmb	IAmb	00 09 19.2	
	comp=Z,62nm,1.1s						
TNA	**Tin City**	**86.52**	**9**	P	**P**	**00 09 14.3**	**+0.1**
	baz=202,SNR=31						
Q23K	**Middleton Isla**	**86.62**	**21**	P	**P**	**00 09 14.3**	**-0.5**
	baz=222						
P23K	**Montague Islan**	**86.69**	**20**	P	**P**	**00 09 16.0**	**+0.8**
	baz=221						
L20K	**Farewell, AK**	**86.74**	**16**	P	**P**	**00 09 14.9**	**-0.5**
	baz=215						
SUA	**Susitna One**	**86.80**	**18**	P	**P**	**00 09 14.5**	**-1.3**
SUA				IAmb	IAmb	00 09 20.0	
	comp=Z,29nm,0.8s						
SUA	**Susitna One**	**86.80**	**18**	P	**P**	**00 09 16.5**	**+0.7**
	baz=218,SNR=13						
BCW	**Bitter Crk WRg**	**86.80**	**51**	P	**P**	**00 09 17.5**	**+1.0**
BCW				IAmb	IAmb	00 09 21.7	
	comp=Z,39nm,0.8s						
RC01	**Rabbit Creek A**	**86.80**	**19**	P	**P**	**00 09 15.5**	**-0.2**
	baz=219						
ULN	**Ulaanbaatar**	**86.83**	**324**	P	**P**	**00 09 16.1**	**-0.2**
ULN	**Ulaanbaatar**	**86.83**	**324**	*d i*P	**P**	**00 09 16.6**	**+0.3**
ULN				pmax	pmax		
	comp=Z,118nm,1.7s						
PMSA	**Palmer Station**	**86.85**	**160**	LR	LR	00 42 18.1	
	comp=Z,243nm,22.0s,baz=178,slow=32						
CIS	**Catalina Islan**	**86.87**	**53**	P	**P**	**00 09 15.8**	**-0.9**
	baz=244						
YAK	**Yakutsk**	**86.94**	**343**	P	**P**	**00 09 15.9**	**-0.5**
	comp=Z,35nm,0.7s,baz=144,slow=1.0,SNR=16						
YAK				LR	LR	00 43 45.2	
	comp=Z,238nm,21.9s,baz=116,slow=32						
	comp=Z,35nm,0.7s						
YAK	**Yakutsk**	**86.94**	**343**	P	**P**	**00 09 15.8**	**-0.5**
YAK	**Yakutsk**	**86.94**	**343**	*e*P	**P**	**00 09 16.2**	**-0.1**
YAK				*e**PP	**pP**	**00 09 27.4**	**-6.4**
YAK				*e*		00 12 38.1	
YAK				*e*S	**SKSac**	**00 19 37.3**	**-0.1**
YAK				*e*		00 19 51.7	
YAK				*e*SS	**SS**	**00 25 31.3**	**-2.5**
YAK				*e*SSS	SSS	00 29 07.8	
YAK				pmax	pmax		
	comp=Z,102nm,0.9s						
YAK				pmax	pmax		
	comp=N,17nm,1.0s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,74nm,2.9s						
YAK				pmax	pmax		
	comp=N,47nm,2.1s						
YAK				pmax	pmax		
	comp=E,41nm,2.8s						
YAK				smax	smax		
	comp=E,40nm,3.5s						
YAK				smax	smax		
	comp=N,64nm,3.8s						
SKT	**Skwentna**	**86.98**	**18**	P	**P**	**00 09 15.9**	**-0.7**
	baz=217						
GTA	**Gaotai**	**87.03**	**314**	⇓P	**P**	**00 09 18.3**	**+0.8**
GTA				pP	pP	00 09 34.5	-0.5
GTA				sP	sP	00 09 44.3	+2.4
GTA				SKS	**SKSac**	**00 19 37.0**	**-2.4**
GTA				S	**S**	**00 19 54.0**	**+2.4**
GTA				sS	sS	00 20 23.8	+2.4
GTA				SS	**SS**	**00 25 35.8**	**-0.6**
GTA				pmax	pmax		
	comp=N,32nm,1.1s						
GTA				LR	LR		
	comp=N,77nm,18.5s						
GTA				LR	LR		
	comp=N,110nm,19.3s						
GTA				LR	LR		
	comp=N,170nm,18.2s						
PWL	**Port Wells**	**87.06**	**19**	P	**P**	**00 09 16.1**	**-0.8**
PWL				IAmb	IAmb	00 09 22.3	
	comp=Z,44nm,0.8s						
PWL	**Port Wells**	**87.06**	**19**	P	**P**	**00 09 16.5**	**-0.5**
	baz=220,SNR=5.8						
SHL	**Shillong**	**87.18**	**298**	P	**P**	**00 09 18.7**	**+0.1**
SHL				IAmb	IAmb	00 09 22.5	
	comp=Z,46nm,1.0s						
SHL	**Shillong**	**87.18**	**298**	P	**P**	**00 09 18.7**	**+0.1**
SHL				pmax	pmax		
	comp=Z,47nm,1.0s						
SONM	**Songino Array**	**87.18**	**323**	P	**P**	**00 09 18.2**	**+0.2**
	comp=Z,34nm,1.0s,baz=141,slow=5.2,SNR=112						
SONM				S	**SKSac**	**00 19 38.4**	**-1.5**
	comp=Z,0.5nm,1.0s,baz=144,slow=5.2,SNR=2.5						
SONM				PKKPbc	**PKKPbc**	**00 27 08.5**	**-2.8**
	comp=Z,1.1nm,0.6s,baz=270,slow=1.9,SNR=10						
SONM				LR	LR	00 46 06.7	
	comp=Z,120nm,21.7s,baz=120,slow=34						
	comp=Z,34nm,1.0s						
SONM	**Songino Array**	**87.18**	**323**	P	**P**	**00 09 17.6**	**-0.4**
SONM				IAmb	IAmb	00 09 21.8	
	comp=Z,76nm,1.3s						
SONM	**Songino Array**	**87.18**	**323**	P	**P**	**00 09 17.6**	**-0.4**
SONM				pmax	pmax		
	comp=Z,76nm,1.3s						
BILL	**Bilibino**	**87.21**	**359**	P	**P**	**00 09 16.8**	**-0.8**
BILL				IAmb	IAmb	00 09 18.4	
	comp=Z,38nm,0.9s						
BILL	**Bilibino**	**87.21**	**359**	*c i*P	**P**	**00 09 17.0**	**-0.5**
BILL				*e*		00 12 44.6	
BILL				*i* S	**SKSac**	**00 19 41.5**	**+2.6**
BILL				pmax	pmax		
	comp=Z,66nm,1.3s						
ARVC	**Arvin**	**87.31**	**51**	P	**P**	**00 09 18.9**	**+0.1**
	baz=244						
PASC	**Pasadena Art C**	**87.38**	**52**	P	**P**	**00 09 19.5**	**+0.4**
PASC				IAmb	IAmb	00 09 22.2	
	comp=Z,23nm,0.8s						
PMR	**Palmer**	**87.38**	**19**	P	**P**	**00 09 20.9**	**+2.5**
PMR	**Palmer**	**87.38**	**19**	P	**P**	**00 09 18.2**	**-0.2**
	baz=219						
ORV	**Oroville**	**87.40**	**46**	P	**P**	**00 09 19.4**	**+0.4**
ORV	**Oroville**	**87.40**	**46**	P	**P**	**00 09 19.5**	**+0.4**
ORV				pmax	pmax		
	comp=Z,22nm,1.0s						
K20K	**Telida**	**87.42**	**16**	P	**P**	**00 09 18.1**	**-0.5**
	baz=215						
VES	**Vestal, Richgr**	**87.44**	**51**	P	**P**	**00 09 18.7**	**-0.7**
	baz=244						
KNK	**Knik Glacier**	**87.44**	**19**	P	**P**	**00 09 18.5**	**-0.3**
	baz=220						
CMB	**Columbia Colle**	**87.48**	**48**	P	**P**	**00 09 20.0**	**+0.4**
CMB				IAmb	IAmb	00 09 22.9	
	comp=Z,26nm,1.0s						
CMB	**Columbia Colle**	**87.48**	**48**	P	**P**	**00 09 20.0**	**+0.4**
CMB				pmax	pmax		
	comp=Z,26nm,1.0s						
YBH	**Yreka Blue Hor**	**87.61**	**44**	P	**P**	**00 09 20.7**	**+0.5**
	comp=Z,17nm,0.9s,baz=203,slow=1.5,SNR=17						
YBH				LR	LR	00 39 57.9	
	comp=Z,641nm,21.9s,baz=248,slow=30						
	comp=Z,17nm,0.9s						
109C	**Camp Elliot, M**	**87.65**	**54**	P	**P**	**00 09 19.2**	**-1.3**
	baz=245						
EYAK	**Cordova Ski Ar**	**87.66**	**21**	P	**P**	**00 09 19.5**	**-0.2**
	baz=222						
CUT	**Chulitna**	**87.68**	**18**	P	**P**	**00 09 19.7**	**-0.2**
	baz=218						
SML	**Sawmill**	**87.79**	**19**	P	**P**	**00 09 19.4**	**-1.0**
SML				IAmb	IAmb	00 09 26.5	
	comp=Z,79nm,1.8s						
SML	**Sawmill**	**87.79**	**19**	P	**P**	**00 09 20.9**	**+0.5**
	baz=220						
BFSC	**Mount Baldy Ra**	**87.80**	**53**	P	**P**	**00 09 20.4**	**-0.9**
	baz=245,SNR=7.7						
ISA	**Isabella, Lake**	**87.81**	**51**	P	**P**	**00 09 21.3**	**+0.1**
ISA				IAmb	IAmb	00 09 24.8	
	comp=Z,26nm,1.0s						
ISA	**Isabella, Lake**	**87.81**	**51**	P	**P**	**00 09 21.3**	**+0.1**
ISA				pmax	pmax		
	comp=Z,26nm,1.0s						
ISA	**Isabella, Lake**	**87.81**	**51**	P	**P**	**00 09 21.3**	**+0.1**
	baz=244,SNR=5.2						
EDW2	**Edwards Air Fo**	**87.82**	**52**	P	**P**	**00 09 21.6**	**+0.3**
	baz=245,SNR=14						
MURC	**Murrieta**	**87.88**	**53**	P	**P**	**00 09 20.9**	**-0.7**
	baz=245						
GCSA	**Galena City Sc**	**87.90**	**14**	P	**P**	**00 09 21.5**	**+0.6**
	baz=212						
M23K	**Glacier View**	**87.96**	**19**	P	**P**	**00 09 20.9**	**-0.4**
	baz=220						
CAST	**Castle Rocks**	**87.99**	**16**	P	**P**	**00 09 18.8**	**-2.6**
	baz=216,SNR=27						
SCM	**Sheep Creek Mo**	**88.11**	**19**	P	**P**	**00 09 20.5**	**-1.5**
	baz=221						
DIB	**Dawson Inlet,**	**88.16**	**31**	P	**P**	**00 09 22.8**	**+0.5**
DIB				IAmb	IAmb	00 09 27.0	
	comp=Z,35nm,0.8s						
MONP2	**Monument Peak**	**88.17**	**54**	P	**P**	**00 09 23.7**	**+0.5**
	baz=246,SNR=15						
ESJX	**Sierra Juarez**	**88.18**	**55**	P	**P**	**00 09 23.9**	**+0.7**
CHUM	**Lake Minchumin**	**88.30**	**16**	P	**P**	**00 09 22.6**	**-0.2**
	baz=216,SNR=7.0						
KLU	**Klutina**	**88.30**	**20**	P	**P**	**00 09 21.9**	**-1.1**
	baz=222						
LRMC	**Laurel Mtn Rad**	**88.31**	**51**	P	**P**	**00 09 23.7**	**0.0**
	baz=245,SNR=15						
IKP	**In-Ko-Pah, Jac**	**88.32**	**55**	P	**P**	**00 09 24.8**	**+1.1**
	baz=246,SNR=5.7						
TROLL	**Troll, Antarti**	**88.35**	**184**	P	**P**	**00 09 23.5**	**+0.1**
TROLL	**Troll, Antarti**	**88.35**	**184**	pP	pP	00 09 41.2	+0.4
MLAC	**Mammoth, Mammo**	**88.40**	**49**	P	**P**	**00 09 23.8**	**-0.4**
	baz=244						
CWC	**Cottonwood Cre**	**88.43**	**50**	P	**P**	**00 09 23.7**	**-0.6**
	baz=244						
PFO	**Pinyon Flats O**	**88.44**	**54**	P	**P**	**00 09 25.0**	**+0.6**
	comp=Z,10nm,1.0s,baz=278,slow=3.2,SNR=12						
PFO				LR	LR	00 40 19.8	
	comp=Z,454nm,22.0s,baz=251,slow=30						
	comp=Z,10nm,1.0s						
PFO	**Pinyon Flats O**	**88.44**	**54**	P	**P**	**00 09 24.2**	**-0.2**
PFO	**Pinyon Flats O**	**88.44**	**54**	*de*P	**P**	**00 09 25.5**	**+1.1**
PFO				pmax	pmax		
	comp=Z,25nm,1.0s						
PFO	**Pinyon Flats O**	**88.44**	**54**	P	**P**	**00 09 23.9**	**-0.5**
	baz=246,SNR=7.9						
TPFO	**Pinon Flats**	**88.44**	**54**	P	**P**	**00 09 24.0**	**-0.4**
	baz=246,SNR=9.5						
TRF	**Thorofare Moun**	**88.50**	**17**	P	**P**	**00 09 23.0**	**-0.9**
	baz=218,SNR=15						
WAT1	**Susitna Watana**	**88.51**	**18**	P	**P**	**00 09 23.0**	**-0.9**
	baz=220						
TIN	**Tinemaha, Big**	**88.58**	**50**	P	**P**	**00 09 24.8**	**-0.2**
	baz=244						
NVL	**N'lazarevskaya**	**88.66**	**187**	*e*P	**P**	**00 09 25.0**	**+0.4**
NVL				pmax	pmax		
	comp=Z,113nm,0.8s						
SWSC	**Sam W. Stewart**	**88.67**	**54**	P	**P**	**00 09 25.3**	**0.0**
	baz=246,SNR=9.4						
M24K	**Tolsona, Glenn**	**88.68**	**19**	P	**P**	**00 09 24.8**	**+0.1**
	baz=222						
MPMC	**Manual Prospec**	**88.70**	**51**	P	**P**	**00 09 25.1**	**-0.5**
	baz=245,SNR=26						
J04A	**Umpqua Nationa**	**88.72**	**43**	P	**P**	**00 09 26.2**	**+0.7**
N25K	**Chitina, Valde**	**88.81**	**20**	P	**P**	**00 09 25.3**	**-0.1**
	baz=223						
BPAW	**Bear Paw Mtn.**	**88.83**	**16**	P	**P**	**00 09 25.0**	**-0.3**
	baz=217						
GSC	**Goldstone, Bar**	**88.88**	**52**	P	**P**	**00 09 26.6**	**+0.2**
	baz=245,SNR=5.3						
LHV	**Little Huntoon**	**88.90**	**49**	P	**P**	**00 09 26.9**	**+0.7**
LHV				IAmb	IAmb	00 09 34.5	
	comp=Z,43nm,1.3s						
BELC	**Belle Mtn. Jos**	**88.95**	**53**	P	**P**	**00 09 27.2**	**+0.4**
	baz=246,SNR=32						
SNAA	**Sanae**	**88.98**	**183**	P	**P**	**00 09 26.1**	**-0.2**
SNAA	**Sanae**	**88.98**	**183**	pP	pP	00 09 43.8	+0.1
SNAA	**Sanae**	**88.98**	**183**	LR	LR	00 46 39.8	
	comp=Z,287nm,20.9s,baz=158,slow=34						
SNAA	**Sanae**	**88.98**	**183**	P	**P**	**00 09 26.1**	**-0.2**
SNAA	**Sanae**	**88.98**	**183**	*d i*P	**P**	**00 09 25.3**	**-0.9**
SNAA				pmax	pmax		
	comp=Z,134nm,1.5s						
HEC	**Hector,Ludlow**	**89.04**	**53**	P	**P**	**00 09 27.0**	**-0.1**
	baz=246,SNR=9.8						
MCK	**McKinley**	**89.10**	**17**	P	**P**	**00 09 26.5**	**-0.1**
	baz=219						
NVAR	**Mina Array Bea**	**89.12**	**49**	P	**P**	**00 09 28.2**	**+0.6**
	comp=Z,8.6nm,0.8s,baz=229,slow=7.1,SNR=40						
NVAR				PKKPbc	**PKKPbc**	**00 27 05.8**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=57,slow=3.3,SNR=2.9						
NVAR				LR	LR	00 41 00.3	
	comp=Z,617nm,21.8s,baz=239,slow=30						
	comp=Z,8.6nm,0.8s						
NVAR	**Mina Array Bea**	**89.12**	**49**	P	**P**	**00 09 27.8**	**+0.2**
MCARA	**McCarthy VSAT**	**89.18**	**21**	P	**P**	**00 09 27.1**	**+0.1**
	baz=225						
GRAC	**Grapevine Rang**	**89.18**	**50**	P	**P**	**00 09 27.3**	**-0.3**
	baz=245,SNR=8.1						
HARP	**HAARP**	**89.22**	**20**	P	**P**	**00 09 27.5**	**+0.3**
	baz=223						
BC3	**Big Chuckawall**	**89.23**	**54**	P	**P**	**00 09 28.3**	**+0.3**
	baz=246,SNR=14						
NV11	**Mina Array Sit**	**89.23**	**49**	P	**P**	**00 09 28.1**	**+0.1**
NV11				IAmb	IAmb	00 09 32.8	
	comp=Z,28nm,1.1s						
PINM	**Pinnacle**	**89.25**	**23**	P	**P**	**00 09 26.8**	**-0.7**
	baz=227						
K05A	**Summer Lake**	**89.27**	**44**	P	**P**	**00 09 28.9**	**+0.7**
K05A				IAmb	IAmb	00 09 32.0	
	comp=Z,50nm,0.9s						
FURC	**Furnace Creek,**	**89.33**	**51**	P	**P**	**00 09 28.2**	**0.0**
	baz=245,SNR=6.5						
BOD	**Bodaibo**	**89.36**	**334**	*e*P	**P**	**00 09 27.3**	**-0.6**
BOD				pmax	pmax		
	comp=Z,65nm,1.6s						
LSA	**Lhasa**	**89.37**	**302**	P	**P**	**00 09 28.9**	**-0.4**
LSA	**Lhasa**	**89.37**	**302**	P	**P**	**00 09 28.9**	**-0.4**
LSA				pmax	pmax		
	comp=Z,12nm,1.0s						
S31K	**Pelican**	**89.41**	**26**	P	**P**	**00 09 27.5**	**-0.6**
	baz=230						
I21K	**Tanana**	**89.43**	**15**	P	**P**	**00 09 27.2**	**-0.9**
	baz=216						
GLA	**Glamis**	**89.47**	**55**	P	**P**	**00 09 28.8**	**-0.2**
	baz=246,SNR=10.0						
SHOC	**Shoshone, Teco**	**89.53**	**52**	P	**P**	**00 09 28.9**	**-0.3**
	baz=246,SNR=8.3						
GMRC	**Granite Mounta**	**89.53**	**53**	P	**P**	**00 09 28.8**	**-0.6**
	baz=246,SNR=12						
PAX	**Paxson**	**89.54**	**19**	P	**P**	**00 09 28.0**	**-0.8**
	baz=222						
VNA3	**Neumayer Olymp**	**89.58**	**180**	P	**P**	**00 09 28.7**	**-0.3**
VNA3	**Neumayer Olymp**	**89.58**	**180**	pP	pP	00 09 46.0	-0.4
TUQ	**Turquoise Moun**	**89.60**	**52**	P	**P**	**00 09 28.9**	**-0.9**
	baz=246,SNR=20						
U33K	**Whale Pass**	**89.60**	**28**	P	**P**	**00 09 29.5**	**+0.5**
	baz=233						
RDOG	**Red Dog Mine**	**89.61**	**10**	P	**P**	**00 09 28.7**	**-0.2**
	baz=206						
H21K	**Melozitna Rive**	**89.62**	**15**	P	**P**	**00 09 27.9**	**-1.1**
	baz=216						
MLY	**Manley**	**89.63**	**16**	P	**P**	**00 09 28.0**	**-1.1**
	baz=218						
IMAR	**Indian Mountai**	**89.66**	**14**	P	**P**	**00 09 28.9**	**-0.3**
IRM	**Iron Mountain**	**89.66**	**54**	P	**P**	**00 09 30.2**	**+0.3**
	baz=246,SNR=21						
NEA2	**Nenana**	**89.73**	**17**	P	**P**	**00 09 28.4**	**-1.1**
	baz=219,SNR=16						
O28M	**Mount Upton**	**89.74**	**22**	P	**P**	**00 09 29.4**	**-0.6**
	baz=227						
TPH	**Tonopah**	**89.74**	**49**	P	**P**	**00 09 30.4**	**-0.1**
TPH	**Tonopah**	**89.74**	**49**	P	**P**	**00 09 30.4**	**-0.1**
TPH				pmax	pmax		
	comp=Z,179nm,1.4s						
LPIG	**La Paz**	**89.74**	**64**	P	**P**	**00 09 31.6**	**+1.1**
	comp=Z,24nm,0.3s,baz=48,slow=21,SNR=5.7						
LPIG				LR	LR	00 40 50.0	
	comp=Z,436nm,20.6s,baz=226,slow=30						
	comp=Z,24nm,0.3s						
GRNB	**Grenville Isla**	**89.76**	**31**	P	**P**	**00 09 30.6**	**+0.7**
GRNB				IAmb	IAmb	00 09 33.6	
	comp=Z,30nm,1.0s						
BBB	**Bella Bella**	**89.77**	**33**	P	**P**	**00 09 29.2**	**-0.7**
	comp=Z,26nm,0.8s,baz=241,slow=6.5,SNR=8.2						
BBB				LR	LR	00 41 44.9	
	comp=Z,255nm,20.2s,baz=216,slow=30						
	comp=Z,26nm,0.8s						
S32K	**Killisnoo**	**89.79**	**27**	P	**P**	**00 09 29.9**	**+0.1**
	baz=232						
V35K	**Ketchikan**	**89.82**	**29**	P	**P**	**00 09 29.7**	**-0.3**
	baz=234,SNR=8.7						
VNA2	**Neumayer--Watz**	**89.87**	**181**	P	**P**	**00 09 30.2**	**-0.1**
	baz=170,slow=5.0						
VNA2	**Neumayer--Watz**	**89.87**	**181**	pP	pP	00 09 47.7	-0.1
	baz=170,slow=5.0						
SLBS	**Sierra La Lagu**	**89.90**	**65**	P	**P**	**00 09 32.1**	**+0.7**
WRH	**Wood River Hil**	**89.91**	**17**	P	**P**	**00 09 28.6**	**-1.7**
M26K	**Nabesna, AK**	**89.91**	**20**	P	**P**	**00 09 30.0**	**-0.5**
	baz=225						
PIX	**Pinacate**	**89.94**	**56**	P	**P**	**00 09 31.0**	**-0.2**
PIX				IAmb	IAmb	00 09 36.2	
	comp=Z,17nm,0.8s						
TPNV	**Topopah Spring**	**89.98**	**51**	P	**P**	**00 09 31.3**	**-0.2**
TPNV				IAmb	IAmb	00 09 36.6	
	comp=Z,33nm,0.9s						
TPNV	**Topopah Spring**	**89.98**	**51**	P	**P**	**00 09 31.3**	**-0.2**
TPNV				pmax	pmax		
	comp=Z,33nm,1.0s						
TPNV	**Topopah Spring**	**89.98**	**51**	P	**P**	**00 09 31.5**	**-0.1**
	baz=246,SNR=26						
K24K	**Donnelly Dome**	**90.07**	**18**	P	**P**	**00 09 30.4**	**-0.7**
	baz=222,SNR=7.1						
I23K	**Minto, Yukon-K**	**90.09**	**16**	P	**P**	**00 09 30.6**	**-0.5**
	baz=219						
CBB	**Campbell River**	**90.11**	**36**	P	**P**	**00 09 31.7**	**+0.1**
CBB				IAmb	IAmb	00 09 35.4	
	comp=Z,46nm,1.0s						
CCB	**Clear Creek Bu**	**90.12**	**17**	P	**P**	**00 09 29.2**	**-2.1**
WRAK	**Wrangell Islan**	**90.13**	**28**	P	**P**	**00 09 31.4**	**-0.1**
WRAK				IAmb	IAmb	00 09 34.6	
	comp=Z,31nm,0.9s						
WRAK	**Wrangell Islan**	**90.13**	**28**	P	**P**	**00 09 30.9**	**-0.5**
	baz=234,SNR=9.2						
G21K	**Allakaket**	**90.16**	**14**	P	**P**	**00 09 31.3**	**-0.2**
	baz=215						

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VNA1  Neumayer--Stat    90.17 181    P        P        00 09 31.6  0.0
HDA   Harding Lake      90.18  18    P        P        00 09 30.4 -1.3
HDA                                  lAmb     lAmb     00 09 35.6
      comp=Z,24nm,0.8s
HDA   Harding Lake      90.18  18    P        P        00 09 30.6 -1.1
      baz=221,SNR=19
YUK8  Steele Glacier    90.24  22    P        P        00 09 31.2 -1.1
      baz=227,SNR=17
MDM   Murphy Dome       90.24  17    P        P        00 09 30.2 -1.7
L26K  Log Cabin Wild    90.25  20    P        P        00 09 30.6 -1.4
      baz=224,SNR=5.7
M27K  Edge Creek, AK    90.25  21    P        P        00 09 31.1 -1.1
      baz=226
ZAK   Zakamensk         90.26 324   eP        P        00 09 32.4 -0.1
ZAK                                 e                  00 19 57.7
ZAK                                  pmax     pmax
      comp=Z,24nm,1.5s
TCOL  CIGO, UAF Yank    90.28  17    P        P        00 09 29.8 -2.2
      baz=220
COLA  College           90.28  17    P        P        00 09 30.4 -1.7
COLA                                 lAmb     lAmb     00 09 35.6
      comp=Z,38nm,1.2s
COLA  College           90.28  17c iP         P        00 09 30.6 -1.4
COLA                                 pmax     pmax
      comp=Z,21nm,1.0s
COLA  College           90.28  17    P        P        00 09 30.2 -1.9
      baz=220
RIDG  Independent Ri    90.30  19    P        P        00 09 30.9 -1.3
RIDG                                 lAmb     lAmb     00 09 37.2
      comp=Z,24nm,0.8s
RIDG  Independent Ri    90.30  19    P        P        00 09 31.1 -1.2
      baz=223
NEE2  Needles Airpor    90.31  53    P        P        00 09 31.7 -1.2
      baz=246
PLBC  Pleasant Camp     90.31  25    P        P        00 09 31.3 -1.0
      baz=230,SNR=8.7
R32K  Eaglecrest        90.31  26    P        P        00 09 31.0 -1.4
      baz=232
YUK3  Moose Creek       90.33  22    P        P        00 09 31.4 -1.2
      baz=227,SNR=9.4
JIS   Juneau Island     90.37  26    P        P        00 09 32.3 -0.3
JIS                                  lAmb     lAmb     00 09 35.5
      comp=Z,28nm,1.1s
JIS   Juneau Island     90.37  26    P        P        00 09 33.4 +0.8
IL31                    90.47  17    P        P        00 09 31.3 -1.6
ILAR  Eielson Array     90.47  17    P        P        00 09 31.1 -1.9
      comp=Z,5.8nm,0.6s,baz=238,slow=5.0,SNR=36
ILAR                                 LR       LR       00 43 19.5
      comp=Z,484nm,21.7s,baz=221,slow=31
      comp=Z,5.8nm,0.6s
PDMCI Parker Dam,Lak    90.48  54    P        P        00 09 32.8 -0.9
      baz=247,SNR=18
P30M  Million Dollar    90.50  24    P        P        00 09 31.8 -1.5
      baz=230
YUK6  Outpost Mounta    90.52  23    P        P        00 09 32.1 -1.5
      baz=229
LON   Longmire          90.57  40    P        P        00 09 33.7 -0.2
LON                                  lAmb     lAmb     00 09 49.0
      comp=Z,26nm,1.1s
LON   Longmire          90.57  40    P        P        00 09 33.7 -0.2
LON                                  pmax     pmax
      comp=Z,26nm,1.1s
H23K  Yukon River       90.57  16    P        P        00 09 33.4  0.0
      baz=219
POKR  Poker Plat Res    90.58  17    P        P        00 09 33.7 +0.2
      baz=221
214A  Organ Pipe Nat    90.61  56    P        P        00 09 35.2 +0.8
214A                                 lAmb     lAmb     00 09 38.5
      comp=Z,27nm,0.9s
214A  Organ Pipe Nat    90.61  56    P        P        00 09 33.6 -0.9
      baz=248
BVCY  Beaver Creek      90.63  21    P        P        00 09 33.4 -0.4
      baz=226
WVOR  Wild Horse Val    90.63  45    P        P        00 09 34.0 -0.4
WVOR                                 lAmb     lAmb     00 09 38.1
      comp=Z,49nm,1.1s
WVOR  Wild Horse Val    90.63  45    P        P        00 09 34.0 -0.4
WVOR                                 pmax     pmax
      comp=Z,49nm,1.1s
YUK4  Talbot Arm        90.68  22    P        P        00 09 34.1 -0.2
      baz=228,SNR=6.0
SKAG  Skagway           90.72  25    P        P        00 09 34.2  0.0
SKAG  Skagway           90.72  25    P        P        00 09 34.9 +0.7
SKAG  Skagway           90.72  25    P        P        00 09 33.7 -0.5
      baz=231,SNR=8.9
PALK  Pallekele         90.73 277    LR       LR       00 52 27.4
      comp=Z,128nm,20.1s,baz=218,slow=37
PALK  Pallekele         90.73 277    P        P        00 09 35.3 -0.1
PALK  Pallekele         90.73 277⇓eP          P        00 09 36.1 +0.7
PALK                                 pmax     pmax
      comp=Z,26nm,1.2s
BMN   Battle Mountai    90.73  47    P        P        00 09 35.1 +0.1
BMN                                  lAmb     lAmb     00 09 38.6
      comp=Z,28nm,1.0s
BMN   Battle Mountai    90.73  47    P        P        00 09 35.1 +0.1
BMN                                  pmax     pmax
      comp=Z,28nm,1.0s
SCRK  Sand Creek        90.74  19    P        P        00 09 33.7 -0.7
      baz=224,SNR=26
F21K  Alatna River      90.74  14    P        P        00 09 33.9 -0.3
      baz=215
HYT   Haines Junctio    90.75  23    P        P        00 09 33.5 -1.0
HYT   Haines Junctio    90.75  23    P        P        00 09 33.3 -1.3
      baz=229
L27K  Beaver Creek,     90.76  20    P        P        00 09 33.4 -1.0
      baz=226
BCAR  Beaver Creek A    90.78  20    P        P        00 09 33.6 -0.9
G22K  Bettles           90.95  15    P        P        00 09 34.9 -0.3
      baz=217
W13A  Hualapai Mount    90.99  53    P        P        00 09 36.5 +0.1
W13A                                 lAmb     lAmb     00 09 40.1
      comp=Z,25nm,0.9s
HSIG                    91.00  60    P        P        00 09 36.6 +0.4
H24K  Noodor Dome       91.01  16    P        P        00 09 33.9 -1.6
      baz=220
R11B  Troy Canyon, C    91.03  50    P        P        00 09 34.8 -1.7
      baz=246,SNR=19
G23K  Bananza Creek     91.14  15    P        P        00 09 35.4 -0.7
      baz=218
GO10  Punta Arenas      91.19 149    P        P        00 09 37.6 +0.8
O30N  Mendenhall        91.25  24    P        P        00 09 35.6 -1.2
      baz=231,SNR=11
F22K  John River        91.27  14    P        P        00 09 35.2 -1.5
      baz=216
MG05  Puerto Natales    91.29 147    P        P        00 09 38.0 +0.8
MG05                                 lAmb     lAmb     00 10 09.1
      comp=Z,28nm,1.1s
N30M  Aishikik Lake     91.32  23    P        P        00 09 36.0 -1.1
      baz=230,SNR=7.4
K27K  Chicken           91.36  19    P        P        00 09 35.9 -1.3
      baz=225
T35M  Bob Quinn         91.40  29    P        P        00 09 37.4 -0.1
      baz=236,SNR=7.4
PRP   Porcupine Dome    91.42  17    P        P        00 09 37.0 -0.5
      baz=222,SNR=5.7
P32M  Atlin             91.45  25    P        P        00 09 36.9 -0.8
      baz=233,SNR=17
M29M  Somme Creek       91.47  22    P        P        00 09 36.8 -1.0
      baz=229
COLD  Coldfoot          91.51  15    P        P        00 09 37.6 -0.2
COLD                                 lAmb     lAmb     00 09 42.2
      comp=Z,13nm,0.8s
COLD  Coldfoot          91.51  15    P        P        00 09 37.5 -0.2
      baz=218
S34M  Telegraph Cree    91.54  28    P        P        00 09 38.5 +0.4
      baz=235,SNR=16
Q32M  Nakina River      91.66  26    P        P        00 09 38.1 -0.7
      baz=234
G24K  Hadweenzic Riv    91.78  16    P        P        00 09 38.3 -0.7
      baz=221,SNR=6.7
HAWA  Hanford           91.80  41    P        P        00 09 39.9 +0.3
HAWA                                 lAmb     lAmb     00 09 43.2
      comp=Z,45nm,1.0s
N31M  Braeburn, Yuko    91.82  23    P        P        00 09 39.2 -0.2
      baz=231,SNR=10
I26K  Coal Creek Min    91.94  18    P        P        00 09 39.3 -0.5
      baz=224
L29M  L29M              92.03  21    P        P        00 09 40.0 -0.3
      baz=229,SNR=14
M30M  Minto, Yukon      92.15  22    P        P        00 09 40.2 -0.7
      baz=230,SNR=16
MOY   Mondy             92.16 325   eP        P        00 09 41.3 +0.1
MOY                                  pmax     pmax
      comp=Z,25nm,1.6s
EGAK  Eagle             92.17  19    P        P        00 09 39.6 -1.2
EGAK                                 lAmb     lAmb     00 09 44.9
      comp=Z,18nm,0.7s
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EGAK  Eagle             92.17  19    P        P        00 09 39.7 -1.2
      baz=226,SNR=24
P33M  Teslin, Yukon     92.18  25    P        P        00 09 40.6 -0.5
      baz=233,SNR=19
G25K  Bearman Lake      92.19  16    P        P        00 09 40.8 -0.1
      baz=222
ELK   Elko              92.24  47    P        P        00 09 42.2 +0.2
      comp=Z,5.6nm,0.9s,baz=270,slow=7.3,SNR=12
      comp=Z,5.6nm,0.9s
ELK   Elko              92.24  47    P        P        00 09 41.5 -0.6
ELK   Elko              92.24  47    P        P        00 09 41.5 -0.6
ELK                                  pmax     pmax
      comp=Z,9.0nm,1.1s
DAWY  Dawson            92.25  20    P        P        00 09 40.6 -0.6
DAWY  Dawson            92.25  20    P        P        00 09 40.8 -0.5
      baz=228
F24K  Squaw Lake        92.30  15    P        P        00 09 41.3 -0.2
      baz=220
E23K  Chandalar         92.30  14    P        P        00 09 41.1 -0.4
      baz=219
DLBC  Dease Lake        92.32  27    P        P        00 09 41.7 -0.1
      comp=Z,28nm,0.9s,baz=211,slow=5.0,SNR=21
DLBC                                 LR       LR       00 43 24.3
      comp=Z,544nm,21.1s,baz=277,slow=30
      comp=Z,28nm,0.9s
DLBC  Dease Lake        92.32  27    P        P        00 09 41.5 -0.2
DLBC                                 lAmb     lAmb     00 09 46.9
      comp=Z,34nm,0.9s
DLBC  Dease Lake        92.32  27    P        P        00 09 41.7 -0.1
      baz=236,SNR=23
TUC   Tucson            92.33  57    P        P        00 09 43.0 +0.5
TUC                                  lAmb     lAmb     00 09 46.6
      comp=Z,33nm,1.1s
TUC   Tucson            92.33  57    P        P        00 09 43.0 +0.5
TUC                                  pmax     pmax
      comp=Z,33nm,1.1s
TUC   Tucson            92.33  57    P        P        00 09 43.1 +0.6
      baz=249
LLLB  Lillooet          92.34  37    P        P        00 09 42.5 +0.5
LLLB                                 lAmb     lAmb     00 09 45.2
      comp=Z,30nm,1.0s
BMO   Blue Mountains    92.54  43    P        P        00 09 43.3 +0.1
BMO   Blue Mountains    92.54  43    P        P        00 09 43.3 +0.1
BMO                                  pmax     pmax
      comp=Z,12nm,1.1s
E24K  Your Creek        92.58  15    P        P        00 09 42.2 -0.5
      baz=220
I27K  Kandik River      92.61  18    P        P        00 09 42.5 -0.5
      baz=226,SNR=7.1
N32M  Quiet Lake        92.64  24    P        P        00 09 43.0 -0.2
      baz=233
JIRN  Jiri              92.68 298   eP        P        00 09 44.0 -0.6
K29M  Barlow Dome       92.72  21    P        P        00 09 43.1 -0.5
      baz=230
TOLK  Toolik Lake Re    92.77  14    P        P        00 09 43.1 -0.5
TOLK  Toolik Lake Re    92.77  14    P        P        00 09 43.6 +0.1
      baz=219
D23K  Nanushuk River    92.77  14    P        P        00 09 43.2 -0.3
      baz=218
M31M  Drury Creek, Y    92.78  23    P        P        00 09 42.9 -0.9
      baz=232,SNR=16
F25K  Christian Rive    92.92  16    P        P        00 09 44.7 +0.4
      baz=222
G26K  Porcupine Rive    92.95  17    P        P        00 09 43.9 -0.5
      baz=224
GUN   Gumba             93.03 298   eP        P        00 09 45.7 -0.4
      comp=Z,41nm,1.1s
WUAZ  Wupatki           93.05  53    P        P        00 09 45.2 -0.7
      baz=248,SNR=16
H27K  Steamboat Moun    93.07  18    P        P        00 09 44.1 -0.9
      baz=226
BMAR  Burnt Mountain    93.08  16    P        P        00 09 44.8 -0.3
FARO  Faro, Yukon       93.19  23    P        P        00 09 45.3 -0.4
FARO  Faro, Yukon       93.19  23    P        P        00 09 45.5 -0.2
      baz=233,SNR=6.3
PKI   Pulchoki          93.30 298   eP        P        00 09 47.5 +0.1
PKIN  Phulchoki         93.31 298   eP        P        00 09 47.4  0.0
E25K  Arctic Village    93.34  16    P        P        00 09 45.2 -1.0
      baz=222
F26K  Sheenjek River    93.39  16    P        P        00 09 46.1 -0.3
      baz=224
G27K  Doyon Strip       93.44  18    P        P        00 09 45.7 -1.0
      baz=226
I29M  Ogilvie Camp,     93.46  20    P        P        00 09 46.2 -0.6
      baz=229,SNR=7.6
MVU   Marysvale         93.53  50    P        P        00 09 47.8 -0.3
MVU                                  lAmb     lAmb     00 09 52.0
      comp=Z,29nm,1.0s
DMN   Daman             93.57 298   eP        P        00 09 49.4 +0.9
DUG   Dugway, Tooele    93.73  49    P        P        00 09 48.7 -0.1
DUG   Dugway, Tooele    93.73  49    P        P        00 09 48.7 -0.1
DUG                                  pmax     pmax
      comp=Z,18nm,1.6s
DUG   Dugway, Tooele    93.73  49    P        P        00 09 47.5 -1.3
      baz=248,SNR=6.6
WTLY  Watson Lake, Y    93.78  26    P        P        00 09 47.0 -1.4
      baz=237,SNR=14
C24K  Franklin Bluff    93.81  14    P        P        00 09 47.9 -0.3
      baz=220
HLID  Hailey            93.92  45    P        P        00 09 49.4 -0.3
HLID  Hailey            93.92  45    P        P        00 09 49.8 +0.1
      baz=247,SNR=17
D25K  Kavik River       94.03  15    P        P        00 09 48.7 -0.7
      baz=222
NEW   Newport           94.08  40    P        P        00 09 49.7 -0.5
      comp=Z,5.1nm,0.9s,baz=205,slow=8.1,SNR=3.7
NEW                                  LR       LR       00 44 15.1
      comp=Z,213nm,21.5s,baz=254,slow=30
      comp=Z,5.1nm,0.9s
NEW   Newport           94.08  40    P        P        00 09 49.5 -0.6
      baz=245
GKN   Gorkha            94.09 298   eP        P        00 09 50.3 -0.5
W18A  Petrified Fore    94.16  54    P        P        00 09 51.1 +0.2
      baz=249
E27K  Coleen River      94.42  17    P        P        00 09 51.2  0.0
      baz=226
LIRD  Liard River Hi    94.56  28    P        P        00 09 52.3 +0.3
      baz=239,SNR=43
EPYK  Eagle Plains      94.61  19    P        P        00 09 51.9 -0.3
EPYK                                 lAmb     lAmb     00 09 55.9
      comp=Z,22nm,0.8s
EPYK  Eagle Plains      94.61  19    P        P        00 09 51.4 -0.7
      baz=230,SNR=12
121A  Cookes Peak, D    94.79  57    P        P        00 09 54.3 +0.4
121A  Cookes Peak, D    94.79  57    P        P        00 09 53.0 -0.9
      baz=250
TIXI  Tiksi             94.84 348    P        P        00 09 51.7 -1.3
      comp=Z,4.2nm,0.8s,baz=270,slow=24,SNR=14
TIXI                                 LR       LR       00 52 02.4
      comp=Z,196nm,19.1s,baz=4.0,slow=35
      comp=Z,4.2nm,0.8s
TIXI  Tiksi             94.84 348    P        P        00 09 51.4 -1.6
TIXI  Tiksi             94.84 348⇑iP          P        00 09 51.9 -1.1
TIXI                                 pmax     pmax
      comp=Z,8.0nm,1.1s
C27K  Jago River        94.90  15    P        P        00 09 52.8 -0.5
      baz=224
DANN  Dangsing          94.94 298   eP        P        00 09 54.7 -0.1
HWUT  Hardware Ranch    95.13  48    P        P        00 09 55.3  0.0
G30M  tAoh Zraii Nji    95.16  19    P        P        00 09 54.1 -0.5
      baz=231
MCMT  McKenzie Canyo    95.44  44    P        P        00 09 56.0 -0.8
PYUN  Piuthan           95.50 298   eP        P        00 09 56.2 -1.1
      comp=Z,26nm,1.0s
KOTAN Kotaneelee Air    95.82  28    P        P        00 09 57.9 +0.2
      baz=241,SNR=10.0
F31M  Tsiigehtchic      96.20  19    P        P        00 09 58.0 -1.3
      baz=233,SNR=36
IMW   Indian Meadow     96.38  46    P        P        00 10 01.0  0.0
MNTX  Cornudas Mount    96.44  59    P        P        00 09 59.5 -1.7
      baz=251
BOZ   Bozeman (W)       96.53  44    P        P        00 10 01.4 -0.1
BOZ   Bozeman (W)       96.53  44    P        P        00 10 01.4 -0.1
BOZ                                  pmax     pmax
      comp=Z,9.0nm,1.3s
BOZ   Bozeman (W)       96.53  44    P        P        00 10 00.5 -0.9
      baz=249
ANMO  Albuquerque       96.63  55    P        P        00 10 02.8 +0.6
      comp=Z,4.8nm,0.8s,baz=305,slow=5.6,SNR=8.6
ANMO                                 LR       LR       00 44 57.5
      comp=Z,155nm,21.8s,baz=352,slow=30
      comp=Z,4.8nm,0.8s
ANMO  Albuquerque       96.63  55    P        P        00 10 02.3  0.0
ANMO  Albuquerque       96.63  55⇓eP          P        00 10 03.4 +1.1
ANMO                                 pmax     pmax
      comp=Z,7.0nm,0.9s
ANMO  Albuquerque       96.63  55    P        P        00 10 00.7 -1.5
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      baz=251
INK   Inuvik            96.79  18    P        P        00 10 00.5 -1.4
      comp=Z,11nm,0.9s,baz=206,slow=3.1,SNR=18
INK                                  LR       LR       00 51 38.7
      comp=Z,128nm,18.7s,baz=226,slow=34
      comp=Z,11nm,0.9s
INK   Inuvik            96.79  18    P        P        00 10 00.2 -1.7
INK   Inuvik            96.79  18    P        P        00 10 01.1 -0.7
      baz=233
H17A  Grant Village     96.80  45    P        P        00 10 02.9  0.0
      baz=250
BW06  Boulder Array     96.94  47    P        P        00 10 03.8 +0.3
BW06  Boulder Array     96.94  47    P        P        00 10 02.7 -0.8
      baz=250
PDAR  Pinedale Array    96.94  47    P        P        00 10 04.2 +0.7
      comp=Z,2.3nm,0.8s,baz=238,slow=2.8,SNR=13
PDAR                                 PP       PP       00 14 01.7 +1.8
      comp=Z,0.2nm,0.6s,baz=318,slow=1.2,SNR=2.0
      comp=Z,2.3nm,0.8s
PDAR  Pinedale Array    96.94  47    P        P        00 10 03.3 -0.2
O20A  White River Ci    96.98  50    P        P        00 10 04.3 +0.5
      baz=251
TX31  Lajitas Ar. Si    97.09  62    P        Pdif     00 10 05.2 +0.7
TX31                                 lAmb     lAmb     00 10 09.5
      comp=Z,16nm,0.8s
TXAR  Lajitas Array     97.09  62    P        Pdif     00 10 06.1 +1.6
      comp=Z,4.0nm,0.7s,baz=220,slow=5.5,SNR=27
TXAR                                 pP       pP       00 10 22.8 +0.7
      comp=Z,2.5nm,0.7s,baz=225,slow=5.9,SNR=6.8
TXAR                                 PKKPbc   PKKPbc   00 26 43.6 -1.1
      comp=Z,0.9nm,0.7s,baz=168,slow=4.6,SNR=9.9
TXAR                                 LR       LR       00 44 47.7
      comp=Z,280nm,21.9s,baz=258,slow=30
      comp=Z,4.0nm,0.7s
TXAR  Lajitas Array     97.09  62    P        Pdif     00 10 05.1 +0.6
WMQ   Urumqi            97.11 314   eP        P        00 10 03.0 -1.1
WMQ                                  pP       pP       00 10 21.5 -0.2
WMQ                                  pmax     pmax
      comp=Z,20nm,0.9s
WMQ                                  pmax     pmax
      comp=Z,140nm,5.5s
WMQ                                  LR       LR
      comp=Z,180nm,23.3s
S22A  4UR Ranch, Cre    97.25  53    P        P        00 10 05.2 +0.1
      baz=251
GDL2  Guadalupe Moun    97.42  59    P        Pdif     00 10 06.1 +0.2
WRGLY Wrigley           97.56  25    P        P        00 10 05.5  0.0
      baz=242
PLCA  Paso Flores       98.60 139    LR       LR       00 46 46.3
      comp=Z,97nm,19.6s,baz=230,slow=30
DGZ   Jazzator, Alta    99.24 319d iP         Pdif     00 10 13.4 -0.2
DGZ                                  pmax     pmax
      comp=Z,10.0nm,1.2s
C36M  Paulatuk         100.25  19    P        Pdif     00 10 16.8 -0.6
      baz=242
YKA   Yellowknife Ar   100.95  27    P        Pdif     00 10 21.4 +0.7
      comp=Z,8.4nm,0.7s,baz=252,slow=4.6,SNR=40
YKA                                  PKKPbc   PKKPbc   00 26 33.0 -2.0
      comp=Z,0.2nm,0.6s,baz=66,slow=3.3,SNR=4.6
A36M  Sachs Harbour    101.16  17    P        Pdif     00 10 21.5 +0.1
      baz=241
MK31  Makanchi Array   101.66 316⇓eP          Pdif     00 10 22.8 -1.4
MKAR  Makanchi Array   101.66 316    P        Pdif     00 10 23.7 -0.5
      comp=Z,2.0nm,0.7s,baz=98,slow=7.5,SNR=17
MKAR                                 PP       PP       00 14 36.4 +0.9
      comp=Z,4.2nm,1.1s,baz=98,slow=6.1,SNR=6.9
MKAR                                 PKiKP    PKiKP    00 14 47.6  0.0
      comp=Z,12nm,1.3s,baz=184,slow=3.0,SNR=5.1
MKAR                                 PKKPbc   PKKPbc   00 26 29.6 -2.7
      comp=Z,0.7nm,0.5s,baz=268,slow=4.2,SNR=11
ZALV  Zalesovo Beam    102.08 323    P        Pdif     00 10 24.7 -1.1
      comp=Z,1.6nm,0.6s,baz=104,slow=5.0,SNR=8.4
ZALV                                 PP       PP       00 14 35.8 -2.6
      comp=Z,0.7nm,0.4s,baz=93,slow=6.5,SNR=4.5
ZALV                                 PKKPbc   PKKPbc   00 26 28.8 -2.6
      comp=Z,1.1nm,0.5s,baz=306,slow=4.1,SNR=5.5
ZALV  Zalesovo Beam    102.08 323  i P        Pdif     00 10 27.6 +1.7
ZALV                                 pmax     pmax
      comp=Z,2.0nm,0.6s
KURK  Kurchatov        104.97 319c iP         Pdif     00 10 39.6 +0.8
NRIK  Noril'sk         104.98 339    Pdiff    Pdif     00 10 38.4  0.0
      comp=Z,7.3nm,0.8s,baz=31,slow=6.5,SNR=3.8
NRIK                                 PP       PP       00 15 00.9 +1.3
      comp=Z,0.9nm,0.2s,baz=111,slow=10,SNR=3.6
NRIK  Noril'sk         104.98 339⇓iP          Pdif     00 10 36.7 -1.8
KURBB Kurchatov Arra   105.00 319    PKKPbc   PKKPbc   00 26 19.1 -3.3
      comp=Z,1.2nm,0.6s,baz=285,slow=3.7,SNR=13
AAK   Ala-Archa        106.07 310    P        PKiKP    00 14 58.0 +2.0
BVAR  Borovoye Array   110.36 320    PKKPbc   PKKPbc   00 26 03.5 -2.2
      comp=Z,1.1nm,0.6s,baz=280,slow=3.5,SNR=7.3
BRVK  Borovoye         110.43 320d iPKIKP     PKiKP    00 15 03.6 +0.1
BRVK  Borovoye         110.43 320    P        PKiKP    00 15 05.5 +2.0
LPAZ  La Paz           113.62 118    PKiKP    PKiKP    00 15 10.5 -1.0
      comp=Z,1.0nm,0.7s,baz=250,slow=3.2,SNR=3.1
NGCH  Negor - Chabah   113.69 290    P        PKiKP    00 15 10.9 +0.3
JLN   Jalan Bani Buh   114.60 286    P        PKPdf    00 15 12.4  0.0
JLN                                  P        PKiKP    00 15 12.8 +0.4
TKL   Tuckaleechee C   114.84  59    PKP      PKPdf    00 15 11.8 -0.7
      comp=Z,2.6nm,0.7s,baz=270,slow=3.0,SNR=2.4
TZTN  Tazewell         115.12  58    P        PKPdf    00 15 13.0  0.0
      baz=264
MHTO  MHTO             115.67 284    P        PKPdf    00 15 14.1 -0.3
      SNR=12
JMDO  Jabal Madar      115.83 286    P        PKPdf    00 15 14.7 -0.1
DQM   DQM              115.84 283    P        PKPdf    00 15 14.3 -0.6
ACSO  Alum Creek Sta   115.90  54    P        PKiKP    00 15 14.6 +0.2
      baz=266
SMDO  Samad            116.01 287    P        PKiKP    00 15 15.5 +0.3
SVE   Sverdlovsk       116.03 324   ePKIKP    PKiKP    00 15 14.4 +0.3
SVE                                  pmax     pmax
      comp=Z,23nm,1.5s
CPUP  Villa Florida    116.10 134    PKP      PKPdf    00 15 14.9 -0.4
      comp=Z,2.7nm,0.8s,baz=13,slow=0.4,SNR=4.4
P52A  Corning          116.51  55    P        PKPdf    00 15 15.6  0.0
      baz=266
BSY   Bisya            116.72 286    P        PKPdf    00 15 16.0 -0.5
      SNR=8.5
KMSC  Kings Mountain   116.77  60    P        PKPdf    00 15 15.6 -0.7
      baz=264
ABKAR Akbulak array    116.79 316             PKPdf    00 15 15.6 -0.2
ARU   Arti             117.20 324    SKiKP    SKiKP    00 18 46.3 -0.3
      comp=Z,2.1nm,0.6s,baz=90,slow=1.0,SNR=2.8
ARU                                  PKKPbc   PKKPbc   00 25 40.5 -1.9
      comp=Z,2.9nm,0.5s,baz=316,slow=7.5,SNR=6.0
ARU   Arti             117.20 324    PKPdf    PKPdf    00 15 15.7 -0.6
ARU   Arti             117.20 324c iPKIKP     PKPdf    00 15 16.0 -0.4
ARU                                  pmax     pmax
      comp=Z,12nm,0.6s
O53A  New Philadelph   117.25  54    P        PKPdf    00 15 16.9 -0.1
      baz=267
SOHO  SOHO             117.58 288    PKPdf    PKPdf    00 15 18.1  0.0
SOHO  SOHO             117.58 288    P        PKPdf    00 15 17.8 -0.3
BLA   Blacksburg       117.68  58    P        PKiKP    00 15 18.2 +0.2
      baz=266
M53A  WI Miller and    117.71  53    P        PKiKP    00 15 18.5 +0.6
      baz=268
DMTO  DMTO             117.75 280    P        PKPdf    00 15 18.5 -0.1
GEYT  Alibeck          117.87 303    PKP      PKiKP    00 15 18.9 +0.6
      comp=Z,7.7nm,0.8s,baz=208,slow=2.9,SNR=16
GEYT  Alibeck          117.87 303    PKPdf    PKPdf    00 15 17.8 -0.5
GEYT  Alibeck          117.87 303    PKIKP    PKPdf    00 15 17.8 -0.5
MDH   Madha            117.98 289    P        PKiKP    00 15 21.8 +2.9
AKTO  Aktyubinsk       118.00 317    SKiKP    SKiKP    00 18 48.4  0.0
      comp=Z,3.5nm,0.6s,baz=84,slow=1.8,SNR=7.9
AKTO                                 PKKPbc   PKKPbc   00 25 38.2 -1.2
      comp=Z,0.8nm,0.4s,baz=306,slow=3.5,SNR=4.7
UOSS  Minazif          118.01 288    PKPdf    PKPdf    00 15 18.2 -0.7
UOSS  Minazif          118.01 288    PKiKP    PKiKP    00 15 20.7 +1.8
UOSS  Minazif          118.01 288    P        PKiKP    00 15 20.2 +1.2
HATD  Hatta, Dubai     118.06 288    PKPdf    PKPdf    00 15 19.0 -0.1
HATD  Hatta, Dubai     118.06 288    P        PKiKP    00 15 20.2 +1.2
      SNR=8.3
ASHO  Ashiyiah         118.10 288    PKPdf    PKPdf    00 15 17.2 -2.0
ASHO  Ashiyiah         118.10 288    P        PKPdf    00 15 18.7 -0.4
MASF  Masafi           118.12 289    P        PKiKP    00 15 20.1 +0.9
SHME  Shamm            118.24 290    PKiKP    PKiKP    00 15 22.1 +2.8
ALNE  Al Ain           118.27 287    PKiKP    PKiKP    00 15 19.7 +0.2
ALNE  Al Ain           118.27 287    P        PKPdf    00 15 19.4  0.0
RUSC  La Rusia         118.31  94    PKPdf    PKPdf    00 15 18.8 -1.7
RBK   Rabkut           118.40 280    P        PKiKP    00 15 20.2 +0.3
NAZ   Nazwa, Dubai     118.50 288    PKiKP    PKiKP    00 15 20.8 +0.9
NAZ   Nazwa, Dubai     118.50 288    P        PKiKP    00 15 21.7 +1.8
FAQ   Al Faqa, Dubai   118.53 288    PKiKP    PKiKP    00 15 20.7 +0.8
FAQ   Al Faqa, Dubai   118.53 288    P        PKiKP    00 15 20.6 +0.6
UMZA  Um Al Zommool    118.57 286    P        PKiKP    00 15 20.1  0.0
DOK   Doka             118.71 281    P        PKPdf    00 15 20.2 -0.2
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	SNR=8.3						
NEEM	**North Greenlan**	**118.71**	**9**	i P	**PKPdf**	**00 15 17.3**	**-1.8**
ASUD	**Al Ashush, Dub**	**118.74**	**288**	P	**PKiKP**	**00 15 21.5**	**+1.1**
WHFO	**Wadi Hawf**	**118.89**	**280**	P	**PKPdf**	**00 15 20.6**	**-0.2**
	SNR=6.8						
ABTO	**Aybut**	**119.21**	**279**	P	**PKPdf**	**00 15 21.4**	**0.0**
	SNR=8.5						
SPA0	**Spitsbergen Ar**	**119.73**	**354**	ePKPdf	**PKPdf**	**00 15 20.1**	**-0.6**
SSPA	**Standing Stone**	**119.80**	**54**	P	**PKPdf**	**00 15 21.8**	**-0.1**
	baz=269						
MZR	**Muzera**	**120.14**	**286**	PKiKP	**PKiKP**	**00 15 23.9**	**+0.7**
MZR	**Muzera**	**120.14**	**286**	P	**PKiKP**	**00 15 23.6**	**+0.5**
	SNR=27						
BOSA	**Boshof**	**120.75**	**217**	PKP	**PKPdf**	**00 15 24.4**	**0.0**
	comp=Z,4.6nm,1.0s,baz=92,slow=5.6,SNR=6.4						
BOSA				PKKPbc	**PKKPbc**	**00 25 28.3**	**-0.8**
	comp=Z,2.0nm,0.8s,baz=291,slow=5.0,SNR=3.9						
GHWR	**Ruwais**	**120.85**	**287**	P	**PKiKP**	**00 15 24.9**	**+0.4**
JRN	**Qarnain Island**	**121.02**	**288**	P	**PKiKP**	**00 15 25.1**	**+0.3**
BINY	**Binghamton**	**121.22**	**52**	P	**PKPdf**	**00 15 24.5**	**-0.1**
	baz=272						
PTLB	**Pontes e Lacer**	**121.38**	**123**		**PKPdf**	**00 15 24.9**	**-0.8**
PTLB	**Pontes e Lacer**	**121.38**	**123**	eP	**PKPdf**	**00 15 25.0**	**-0.6**
SDV	**Santo Domingo**	**121.54**	**91**	PKPdf	**PKPdf**	**00 15 25.8**	**-0.4**
SDV	**Santo Domingo**	**121.54**	**91**	eP	**PKPdf**	**00 15 25.6**	**-0.7**
KIRV	**Kirov**	**121.66**	**328**	c iPKIKP	**PKPdf**	**00 15 24.6**	**-0.2**
NCB	**Newcomb**	**122.42**	**50**		**PKPdf**	**00 15 25.9**	**-1.0**
DAG	**Danmarks Havn**	**122.47**	**2**	i P	**PKPdf**	**00 15 23.2**	**-2.8**
TEFE	**Tefe**	**122.64**	**107**	eP	**PKiKP**	**00 15 28.6**	**+0.3**
PAL	**Palisades**	**122.81**	**53**	P	**PKiKP**	**00 15 28.2**	**+0.4**
	baz=272						
SHMA	**Al-Shehemyia**	**122.83**	**289**	P	**PKiKP**	**00 15 28.4**	**+0.1**
SAKB	**Bahrain**	**123.23**	**289**	P	**PKPdf**	**00 15 28.0**	**-0.9**
PCMB	**Pacaembu**	**123.37**	**134**	eP	**PKPdf**	**00 15 28.9**	**-0.5**
PP1B	**Ponte de Pedra**	**123.39**	**128**	eP	**PKPdf**	**00 15 29.4**	**-0.1**
L61B	**Northampton**	**123.65**	**51**	P	**PKPdf**	**00 15 29.4**	**+0.1**
	baz=274						
SALV	**Santo Antonio**	**123.81**	**126**	eP	**PKPdf**	**00 15 30.1**	**-0.2**
BAUV	**El Baul**	**124.00**	**92**	PKPdf	**PKPdf**	**00 15 29.2**	**-1.5**
PET01	**Itanhaem-SP**	**124.04**	**139**	eP	**PKPdf**	**00 15 30.6**	**0.0**
LBNH	**Lisbon**	**124.05**	**49**	P	**PKiKP**	**00 15 30.4**	**+0.2**
	baz=276						
BELG	**Belogornoye**	**124.17**	**321**	⇑ePKIKP	**PKPdf**	**00 15 29.0**	**-0.8**
HRV	**Adam Dziewonsk**	**124.48**	**51**	P	**PKiKP**	**00 15 31.4**	**+0.3**
	baz=275						
SUMG	**Summit**	**124.57**	**10**	i P	**PKPdf**	**00 15 29.1**	**-1.5**
LMQ	**La Malbaie**	**124.73**	**45**	PKPdf	**PKPdf**	**00 15 30.3**	**-0.8**
DBG	**Daneborg**	**124.85**	**3**	i P	**PKPdf**	**00 15 28.7**	**-1.9**
ARA0	**ARCESS Array S**	**125.15**	**345**	ePKPdf	**PKPdf**	**00 15 31.1**	**-0.2**
ARCES	**ARCESS Array B**	**125.15**	**345**	PKP	**PKPdf**	**00 15 31.0**	**-0.3**
	comp=Z,3.5nm,0.4s,baz=80,slow=2.6,SNR=68						
ARCES	**ARCESS Array B**	**125.15**	**345**	PKPdf	**PKPdf**	**00 15 30.7**	**-0.6**
ARCES	**ARCESS Array B**	**125.15**	**345**	PKIKP	**PKPdf**	**00 15 31.0**	**-0.3**
SCHQ	**Schefferville**	**125.21**	**36**	PKP	**PKPdf**	**00 15 31.4**	**-0.4**
	comp=Z,7.9nm,1.2s,baz=319,slow=1.5,SNR=4.0						
SCHQ	**Schefferville**	**125.21**	**36**	PKPdf	**PKPdf**	**00 15 31.5**	**-0.3**
ITRB	**Iturama**	**125.28**	**133**	eP	**PKPdf**	**00 15 32.6**	**-0.5**
PDRB	**Porto dos Gac**	**125.47**	**121**	eP	**PKPdf**	**00 15 33.2**	**-0.4**
KLMR	**Klimovskoe**	**125.55**	**332**	ePKPdf	**PKPdf**	**00 15 30.5**	**-1.8**
KLMR				AMP		00 15 36.0	
	comp=Z,65nm,1.3s						
KLMR				e		00 18 15.5	
KLMR	**Klimovskoe**	**125.55**	**332**	ePKIKP	**PKPdf**	**00 15 30.4**	**-1.8**
KLMR				pmax	pmax		
	comp=Z,65nm,1.3s						
PKME	**Peaks-Kenny Pk**	**125.79**	**48**	P	**PKPdf**	**00 15 33.3**	**+0.1**
	baz=278						
AKT	**Akhty**	**125.83**	**308**	ePKIKP	**PKiKP**	**00 15 34.3**	**+0.3**
AKT				e		00 17 27.3	
AKT				pmax	pmax		
	comp=Z,24nm,1.0s						
KTK1	**Kautokeino**	**126.09**	**345**	ePKPdf	**PKPdf**	**00 15 31.9**	**-1.2**
PQI	**Presque Isle**	**126.44**	**46**		**PKPdf**	**00 15 33.6**	**-0.8**
TRO	**Tromso**	**126.55**	**347**	ePKPdf	**PKPdf**	**00 15 33.9**	**0.0**
ARAG	**Araguaiana, MT**	**126.86**	**128**	eP	**PKPdf**	**00 15 35.8**	**-0.4**
RAYN	**Ar Rayn**	**127.47**	**285**	PKPdf	**PKiKP**	**00 15 37.8**	**0.0**
RAYN	**Ar Rayn**	**127.47**	**285**	⇓PKIKP	**PKiKP**	**00 15 39.5**	**+1.8**
RAYN	**Ar Rayn**	**127.47**	**285**	PKiKP	**PKiKP**	**00 15 39.2**	**+1.5**
RAYN	**Ar Rayn**	**127.47**	**285**	P	**PKiKP**	**00 15 38.4**	**+0.6**
BATG	**Bathurst New B**	**127.63**	**45**	PKPdf	**PKPdf**	**00 15 36.3**	**-0.4**
DY2G	**Dye2**	**127.74**	**17**	i P	**PKPdf**	**00 15 35.7**	**-1.0**
IPMB	**Ipameri, GO**	**127.93**	**133**	eP	**PKPdf**	**00 15 37.8**	**-0.5**
SJG	**San Juan**	**128.01**	**82**		**PKPdf**	**00 15 38.1**	**-0.1**
SJG	**San Juan**	**128.01**	**82**	PKIKP	**PKPdf**	**00 15 38.1**	**-0.1**
VRH	**Novokhopyorsk**	**128.01**	**321**	ePKIKP	**PKPdf**	**00 15 36.2**	**-1.1**
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
GNI	**Garni**	**128.22**	**306**	c iPKIKP	**PKiKP**	**00 15 40.9**	**+2.0**
GNI	**Garni**	**128.22**	**306**	PKiKP	**PKiKP**	**00 15 41.0**	**+2.1**
GNI	**Garni**	**128.22**	**306**	P	**PKiKP**	**00 15 40.7**	**+1.8**
LSZ	**Lusaka**	**128.24**	**231**	PKIKP	**PKPdf**	**00 15 38.9**	**-0.1**
HUMP	**Col San Antoni**	**128.30**	**82**		**PKiKP**	**00 15 39.2**	**-0.2**
KMBO	**Kilima Mbogo**	**128.40**	**252**	PKiKP	**PKiKP**	**00 15 42.7**	**+2.6**
ZEI	**Tsey**	**128.49**	**310**	i PKIKP	**PKiKP**	**00 15 40.6**	**+1.2**
ZEI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MOS	**Moscow**	**128.67**	**327**	i PKIKP	**PKPdf**	**00 15 37.3**	**-1.1**
MOS				pmax	pmax		
	comp=Z,42nm,1.1s						
STEI	**Steigen**	**128.72**	**348**	ePKPdf	**PKPdf**	**00 15 37.4**	**-0.7**
BOAV	**Boa Vista**	**128.81**	**103**	eP	**PKPdf**	**00 15 39.5**	**-0.4**
ONI	**Oni**	**128.85**	**309**		**PKiKP**	**00 15 39.8**	**-0.1**
ONI	**Oni**	**128.85**	**309**	PKIKP	**PKiKP**	**00 15 39.8**	**-0.1**
KBZ	**Khabaz**	**129.06**	**311**	PKP	**PKiKP**	**00 15 41.5**	**+1.3**
	comp=Z,4.0nm,0.9s,baz=160,slow=3.3,SNR=8.6						
KBZ	**Khabaz**	**129.06**	**311**	d iPKIKP	**PKiKP**	**00 15 40.7**	**+0.5**
NPGB	**Novo Progresso**	**129.07**	**117**	eP	**PKPdf**	**00 15 40.0**	**-0.5**
KIV	**Kislovodsk**	**129.16**	**311**	⇑P	**PKPdf**	**00 15 38.2**	**-1.7**
KIV	**Kislovodsk**	**129.16**	**311**	i PKIKP	**PKiKP**	**00 15 40.9**	**+0.3**
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
KIV	**Kislovodsk**	**129.16**	**311**	PKiKP	**PKiKP**	**00 15 40.6**	**+0.1**
KIV	**Kislovodsk**	**129.16**	**311**	P	**PKiKP**	**00 15 42.3**	**+1.7**
FAUS	**Fauske**	**129.18**	**347**	ePKPdf	**PKPdf**	**00 15 39.0**	**0.0**
LPSR	**Galich'ya Gora**	**129.19**	**323**	ePKIKP	**PKPdf**	**00 15 39.8**	**+0.3**
LPSR				pmax	pmax		
	comp=Z,50nm,1.2s						
NEY	**Neytrino**	**129.27**	**310**	⇑ePKIKP	**PKPdf**	**00 15 38.7**	**-1.5**
VORR	**Voronezh**	**129.35**	**322**	ePKIKP	**PKPdf**	**00 15 39.0**	**-0.8**
VORR				pmax	pmax		
	comp=Z,80nm,1.1s						
OBN	**Obninsk**	**129.48**	**327**	c iPKIKP	**PKiKP**	**00 15 40.9**	**+0.3**
OBN				e		00 17 58.8	
OBN				eSS	SS	00 35 02.1	-5.1
OBN				eSSS	SSS	00 40 01.8	
OBN				pmax	pmax		
	comp=Z,55nm,1.4s						
OBN				MLR	MLR		
	comp=Z,170nm,20.0s						
VSR	**Storozhevoye**	**129.53**	**321**	ePKIKP	**PKPdf**	**00 15 39.7**	**-0.5**
VSR				pmax	pmax		
	comp=Z,20nm,1.0s						
SNDB	**Serra Nova Dou**	**129.57**	**125**	eP	**PKPdf**	**00 15 40.8**	**-0.6**
BDFB	**Brasilia**	**129.66**	**131**	PKP	**PKPdf**	**00 15 40.9**	**-0.7**
	comp=Z,8.9nm,0.8s,baz=264,slow=2.1,SNR=12						
BDFB				SKPbc	SKPab	00 18 57.7	-0.1
	comp=Z,3.3nm,0.7s,baz=296,slow=3.7,SNR=3.3						
PUL	**Pulkovo**	**130.03**	**334**	⇑ePKIKP	**PKiKP**	**00 15 41.3**	**-0.3**
ITTB	**Itaituba**	**130.12**	**114**	eP	**PKPdf**	**00 15 41.9**	**-0.6**
KONS	**Konsvik**	**130.38**	**348**	ePKPdf	**PKPdf**	**00 15 41.5**	**+0.2**
MOR8	**Moi Rana**	**130.38**	**347**	ePKPdf	**PKPdf**	**00 15 41.0**	**-0.4**
FINES	**FINESS Array B**	**130.63**	**338**	PKhKP	PKPpre	00 15 30.5	
	comp=Z,6.4nm,1.2s,baz=90,slow=4.3,SNR=2.0						
FINES				PKP	**PKPdf**	**00 15 41.2**	**-0.7**
	comp=Z,7.1nm,0.9s,baz=58,slow=1.4,SNR=16						
FINES				SKPbc	**SKPbc**	**00 18 59.3**	**-0.9**
	comp=Z,16nm,0.7s,baz=84,slow=5.9,SNR=23						
SJMB	**Sao Joao De Ma**	**131.96**	**140**	eP	**PKPdf**	**00 15 45.6**	**-0.2**
VSU	**Vasula**	**132.30**	**334**	⇓ePKIKP	**PKPdf**	**00 15 45.2**	**0.0**
VSU	**Vasula**	**132.30**	**334**	eP	**PKPdf**	**00 15 44.9**	**-0.3**
NSS	**Namsos**	**132.33**	**347**	ePKPdf	**PKPdf**	**00 15 44.7**	**-0.4**
RAF	**Rauma**	**132.43**	**339**	eP	**PKPdf**	**00 15 44.9**	**-0.5**
JANB	**Januaria**	**132.64**	**134**	eP	**PKPdf**	**00 15 46.9**	**-0.3**
NAN01	**Guarapari, ES**	**133.26**	**141**	eP	**PKPdf**	**00 15 48.5**	**+0.2**
SDBA	**SAO DESIDERIO**	**134.06**	**131**	eP	**PKPdf**	**00 15 49.8**	**-0.2**
MNK	**Minsk**	**134.14**	**329**	i PKIKP	**PKPdf**	**00 15 48.9**	**+0.1**
MNK				i		00 16 06.5	
MNK				i		00 18 19.0	
MNK				i PPP	PPP	00 21 14.0	
MNK				i		00 22 57.7	
MNK				i SS	SS	00 36 07.0	+3.1
MNK				i SSS	SSS	00 41 05.0	
MNK				pmax	pmax		
	comp=Z,18nm,1.0s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.4s						
MNK				pmax	pmax		
	comp=N,32nm,0.8s						
PRPB	**Parauapebas**	**134.16**	**120**	eP	**PKPdf**	**00 15 50.2**	**+0.1**
SMTB	**Santa Maria do**	**134.35**	**125**	eP	**PKPdf**	**00 15 50.1**	**-0.3**
SIM	**Simferopol'**	**134.83**	**315**	i PKIKP	**PKiKP**	**00 15 52.4**	**+0.6**
SIM				pmax	pmax		
	comp=Z,28nm,1.1s						
DIKM	**Dikmen**	**135.01**	**310**	⇓P	**PKiKP**	**00 15 52.5**	**+0.2**
MCPB	**Macapa, AP**	**135.26**	**111**	eP	**PKPdf**	**00 15 51.9**	**-0.2**
PABE	**Paberze**	**135.34**	**332**	PKPdf	**PKPdf**	**00 15 51.2**	**+0.3**
PABE	**Paberze**	**135.34**	**332**	eP	**PKPdf**	**00 15 51.6**	**+0.7**
AKASG	**Malin Array Be**	**135.46**	**324**	PKhKP	PKPpre	00 15 41.8	
	comp=Z,0.4nm,0.4s,baz=45,slow=2.3,SNR=1.8						
AKASG				PKP	**PKPdf**	**00 15 51.2**	**-0.1**
	comp=Z,3.7nm,0.7s,baz=50,slow=2.5,SNR=8.9						
AKASG				SKPbc	**SKPbc**	**00 19 16.5**	**-0.6**
	comp=Z,15nm,0.8s,baz=42,slow=3.9,SNR=29						
AKASG				SKKPbc	**SKKPbc**	**00 28 20.7**	**-1.5**
	comp=Z,0.3nm,0.4s,baz=245,slow=4.5,SNR=5.3						
AKASG	**Malin Array Be**	**135.46**	**324**	PKPdf	**PKPdf**	**00 15 51.3**	**0.0**
AKBB	**Malin Array Si**	**135.46**	**324**	PKPdf	**PKPdf**	**00 15 51.5**	**+0.1**
AKBB	**Malin Array Si**	**135.46**	**324**	⇓iPKIKP	**PKPdf**	**00 15 51.4**	**+0.1**
NB2	**NORSAR Subarra**	**135.53**	**345**	PKPdf	PKPpre	00 15 44.1	
	comp=Z,7.3nm,1.0s,baz=35,slow=1.8						
NB2				pPKP	**SKPbc**	**00 19 15.1**	**-1.9**
	comp=Z,5.1nm,0.9s,baz=32,slow=3.4						
NB2	**NORSAR Subarra**	**135.53**	**345**	PKPdf	PKPpre	00 15 44.1	
	baz=35,slow=1.8						
NOA	**NORSAR Array B**	**135.53**	**345**	PKhKP	PKPpre	00 15 41.3	
	comp=Z,1.0nm,0.8s,baz=41,slow=1.6,SNR=5.3						
NOA				PKP	**PKPdf**	**00 15 51.4**	**+0.2**
	comp=Z,2.8nm,1.0s,baz=52,slow=2.0,SNR=8.7						
NOA				SKPbc	**SKPbc**	**00 19 15.7**	**-1.4**
	comp=Z,3.4nm,0.9s,baz=32,slow=2.9,SNR=8.4						
CMC01	**Camacan, BA**	**135.53**	**139**	eP	**PKPdf**	**00 15 52.0**	**-0.6**
BZK	**Bozkurt**	**135.82**	**311**	⇓P	**PKPdf**	**00 15 52.2**	**-0.1**
BZK	**Bozkurt**	**135.82**	**311**		**PKPdf**	**00 15 51.8**	**-0.5**
SUW	**Suwalki**	**136.65**	**331**		**PKPdf**	**00 15 53.3**	**-0.2**
SUW	**Suwalki**	**136.65**	**331**	PKIKP	**PKPdf**	**00 15 53.3**	**-0.2**
SUW	**Suwalki**	**136.65**	**331**	eP	**PKPdf**	**00 15 50.5**	**-3.0**
BR131	**Keskin Array S**	**136.69**	**308**	⇑iPKIKP	**PKPdf**	**00 15 54.4**	**+0.2**
BRTR	**Keskin Array B**	**136.69**	**308**	PKP	**PKiKP**	**00 15 55.5**	**-0.5**
	comp=Z,3.0nm,0.8s,baz=150,slow=3.4,SNR=11						
BRTR				PP	**PP**	**00 18 38.4**	**+1.2**
	comp=Z,1.2nm,0.8s,baz=60,slow=8.8,SNR=4.1						
BRTR				SKPbc	**SKPbc**	**00 19 21.6**	**+0.2**
	comp=Z,3.5nm,1.0s,baz=106,slow=2.7,SNR=4.7						
BRTR	**Keskin Array B**	**136.69**	**308**	PKPdf	**PKPdf**	**00 15 53.7**	**-0.6**
GDU01	**Guandu, BA**	**136.74**	**137**	eP	**PKPdf**	**00 15 55.0**	**+0.1**
SORM	**Soroca**	**137.20**	**321**	⇑P	PKPpre	00 15 46.4	
SORM	**Soroca**	**137.20**	**321**	⇑PKHKP	PKPpre	00 15 46.4	
KLNR	**Kaliningrad**	**137.56**	**333**	⇓ePKIKP	**PKPdf**	**00 15 55.9**	**+0.8**
TLCR		**138.22**	**317**	⇑P	**PKiKP**	**00 15 57.8**	**-0.9**
TLCR		**138.22**	**317**	⇑PKIKP	**PKiKP**	**00 15 57.8**	**-0.9**
VLDR	**Vladesti**	**138.41**	**318**	⇑P	**PKiKP**	**00 15 58.5**	**-0.6**
TPGR	**Topolog**	**138.62**	**317**	⇑P	**PKPdf**	**00 15 57.8**	**+0.3**
CFR	**Carcaliu**	**138.66**	**317**	⇓P	**PKPdf**	**00 15 57.8**	**+0.3**
LVV	**L'vov**	**138.75**	**326**	ePKIKP	**PKPdf**	**00 15 56.8**	**-0.7**
TIRR	**Tirgusor**	**138.79**	**316**	⇓P	**PKPdf**	**00 15 56.4**	**-1.3**
TIRR	**Tirgusor**	**138.79**	**316**		**PKPdf**	**00 15 58.0**	**+0.3**
TIRR	**Tirgusor**	**138.79**	**316**	PKIKP	**PKPdf**	**00 15 58.0**	**+0.3**
MANR	**Mangalia**	**138.93**	**315**	⇑P	**PKPdf**	**00 15 56.6**	**-1.4**
TESR	**Tescani**	**138.99**	**320**	⇑P	**PKPdf**	**00 15 56.4**	**-1.7**
TLBR	**Topalu**	**138.99**	**317**	⇑P	**PKiKP**	**00 16 00.8**	**+0.5**
HARR	**Harsova**	**139.00**	**317**	⇑P	**PKiKP**	**00 16 00.3**	**0.0**
HARR	**Harsova**	**139.00**	**317**	⇑PKIKP	**PKiKP**	**00 16 00.3**	**0.0**
VRI	**Vrincioaia**	**139.24**	**319**	⇓P	**PKPdf**	**00 15 58.7**	**+0.1**
VRI	**Vrincioaia**	**139.24**	**319**	⇓PKIKP	**PKPdf**	**00 15 58.7**	**+0.1**
BSD	**Bornholm Skovb**	**139.27**	**337**	eP	**PKiKP**	**00 16 00.3**	**-0.3**
BURAR	**Bucovina Array**	**139.29**	**322**	⇑P	**PKPdf**	**00 15 54.3**	**-4.4**
BURAR	**Bucovina Array**	**139.29**	**322**		**PKPdf**	**00 15 59.5**	**+0.8**
BURAR	**Bucovina Array**	**139.29**	**322**	⇑PKIKP	**PKPdf**	**00 15 54.3**	**-4.4**
PLOR	**Plostina**	**139.30**	**319**	⇑P	PKPpre	00 15 50.9	
PLOR	**Plostina**	**139.30**	**319**	⇑PKHKP	PKPpre	00 15 50.9	
NEHR	**Nehoiu**	**139.71**	**319**	⇑P	**PKiKP**	**00 16 03.3**	**+1.5**
MLR	**Muntele Rosu**	**139.90**	**319**	⇓P	**PKPdf**	**00 15 56.4**	**-3.5**
MLR	**Muntele Rosu**	**139.90**	**319**	SKKPbc	SKKPbc	00 28 04.5	-0.5
	comp=Z,3.2nm,0.9s,baz=320,slow=5.8,SNR=6.5						
MLR	**Muntele Rosu**	**139.90**	**319**	PKPdf	**PKPdf**	**00 16 00.5**	**+0.6**
MLR	**Muntele Rosu**	**139.90**	**319**	PKIKP	**PKPdf**	**00 16 00.5**	**+0.6**
ARCR	**ARCALIA**	**140.06**	**322**	⇓P	**PKiKP**	**00 16 03.3**	**+0.9**
VOIR		**140.48**	**319**	⇑P	**PKPdf**	**00 15 58.9**	**-2.0**
VOIR		**140.48**	**319**	⇑PKIKP	**PKPdf**	**00 15 58.9**	**-2.0**
TRPA	**Tarpa**	**140.52**	**324**	⇑P	PKPpre	00 15 51.3	
CBBR	**Cluj-Babes-Bol**	**140.70**	**322**	⇓P	**PKiKP**	**00 16 04.3**	**+0.5**
CJR	**Cluj-Napoca**	**140.70**	**322**	⇓P	**PKiKP**	**00 16 05.2**	**+1.3**
CJR	**Cluj-Napoca**	**140.70**	**322**	⇓PKIKP	**PKiKP**	**00 16 05.2**	**+1.3**
ARR	**Arges**	**140.77**	**319**	⇓P	**PKPdf**	**00 15 57.0**	**-4.4**
MESR	**Meseseni**	**140.84**	**323**	⇓P	**PKiKP**	**00 16 04.7**	**+0.7**
HUMR	**Humele**	**140.96**	**318**	⇓P	**PKPdf**	**00 15 59.2**	**-2.5**
MARR	**Marisel-Cluj**	**141.00**	**322**	⇓P	**PKPdf**	**00 15 55.9**	**-5.9**
DRGR		**141.17**	**322**	⇓P	**PKPdf**	**00 15 57.8**	**-4.3**
LOT	**Lotru**	**141.26**	**320**	⇓P	**PKPdf**	**00 15 57.6**	**-4.8**
LANS	**Liptovska Anna**	**141.53**	**328**	ePKIKP	**PKPdf**	**00 16 03.7**	**+1.1**
VLAD	**Vladila**	**141.57**	**318**	⇓P	PKPpre	00 15 55.5	
OKC	**Ostrava-Krasne**	**141.73**	**329**	ePKP	**PKPdf**	**00 16 02.5**	**-0.4**
OKC	**Ostrava-Krasne**	**141.73**	**329**	ePKIKP	**PKPdf**	**00 16 02.5**	**-0.4**
BSEG	**Bad Segeberg**	**141.82**	**340**	ePKPbc	**PKPdf**	**00 15 57.8**	**-5.1**
	baz=36,slow=3.1						
MORC	**Moravsky Berou**	**142.06**	**330**	⇑P	**PKPdf**	**00 15 58.0**	**-5.6**
MORC	**Moravsky Berou**	**142.06**	**330**	PKPdf	**PKPdf**	**00 16 02.6**	**-0.9**
MORC	**Moravsky Berou**	**142.06**	**330**	ePKP	**PKPdf**	**00 16 01.4**	**-2.2**
MORC				e		00 19 35.6	
MORC	**Moravsky Berou**	**142.06**	**330**	⇑PKHKP	PKPpre	00 15 58.0	
SIRR	**Siria**	**142.07**	**322**	⇑P	PKPpre	00 15 43.2	
SURR	**Surduc**	**142.08**	**321**	⇓P	**PKPdf**	**00 15 59.4**	**-4.2**
OSTC	**Ostas**	**142.13**	**332**	ePKP	**PKPdf**	**00 15 59.6**	**-4.0**
OSTC	**Ostas**	**142.13**	**332**	ePKIKP	**PKPdf**	**00 15 59.6**	**-4.0**
CHVC	**Chvalec**	**142.19**	**332**	ePKP	**PKPdf**	**00 15 59.5**	**-4.2**
CHVC	**Chvalec**	**142.19**	**332**	ePKIKP	**PKPdf**	**00 15 59.5**	**-4.2**
MAUC	**Maruska**	**142.20**	**329**	ePKP	**PKPdf**	**00 16 01.6**	**-2.2**
KRLC	**Kraliky**	**142.22**	**331**	ePKP	**PKPdf**	**00 15 59.3**	**-4.5**
KRLC	**Kraliky**	**142.22**	**331**	ePKIKP	**PKPdf**	**00 15 59.3**	**-4.5**
DPC	**Dobruska-Polom**	**142.23**	**331**	ePKP	**PKPdf**	**00 15 58.9**	**-5.0**
DPC	**Dobruska-Polom**	**142.23**	**331**	ePKHKP	PKPpre	00 15 58.9	
UPC	**Upice**	**142.26**	**332**	ePKP	**PKPdf**	**00 15 59.8**	**-4.0**
UPC	**Upice**	**142.26**	**332**	ePKIKP	**PKPdf**	**00 15 59.8**	**-4.0**
MPEP	**Malo Peshtene**	**142.30**	**317**	P	**PKPdf**	**00 16 03.0**	**-1.1**
HERR	**Herculane**	**142.37**	**320**	⇑P	**PKPdf**	**00 16 01.7**	**-2.5**
BZS	**Buzias**	**142.45**	**322**	⇑P	**PKPdf**	**00 16 00.3**	**-4.0**
JAVC	**Velka Javorina**	**142.62**	**328**	ePKP	**PKPdf**	**00 16 01.6**	**-3.0**
JAVC				e		00 19 37.8	
FLTG	**Flechtingen**	**142.81**	**337**	ePKPbc	**PKPdf**	**00 16 00.6**	**-4.1**
	baz=36,slow=3.1						
VRAC	**Vranov**	**142.83**	**330**	⇓P	**PKPdf**	**00 16 01.3**	**-3.6**
VRAC	**Vranov**	**142.83**	**330**	SKKPbc	SKKPbc	00 27 51.2	-2.2
	comp=Z,2.3nm,0.7s,baz=285,slow=5.8,SNR=3.9						
VRAC	**Vranov**	**142.83**	**330**	ePKP	**PKPdf**	**00 16 01.7**	**-3.2**
VRAC				e		00 19 37.5	
VRAC	**Vranov**	**142.83**	**330**	⇓PKIKP	**PKPdf**	**00 16 01.3**	**-3.6**
MDVR	**Moldovita**	**142.85**	**320**	⇓P	**PKPdf**	**00 16 03.1**	**-2.0**
BANR	**Banloc**	**142.86**	**322**	⇑P	**PKPdf**	**00 16 04.7**	**-0.3**
PVCC	**Panska Ves**	**142.88**	**333**	ePKP	**PKPdf**	**00 16 01.0**	**-3.9**
PVCC	**Panska Ves**	**142.88**	**333**	ePKIKP	**PKPdf**	**00 16 01.0**	**-3.9**
BRG	**Berggiesshubel**	**142.89**	**334**	i PKP	**PKPdf**	**00 16 01.6**	**-3.4**
BRG				Amp		00 16 07.5	
	comp=Z,24nm,1.2s						
BRG	**Berggiesshubel**	**142.89**	**334**	P	PKiKP	00 16 19.1	+11
BRG				Amp		00 16 21.5	
	comp=Z,13nm,1.0s						
BRG				SKP	**SKPbc**	**00 19 37.6**	**0.0**
BRG				Amp		00 19 39.6	
	comp=Z,51nm,1.7s						
BRG	**Berggiesshubel**	**142.89**	**334**	i PKIKP	**PKPdf**	**00 16 01.5**	**-3.4**
BRG				e		00 16 19.0	
BRG				pmax	pmax		
	comp=Z,24nm,1.2s						
BRG				pmax	pmax		
	comp=Z,13nm,1.0s						
BRG				pmax	pmax		
	comp=Z,51nm,1.7s						
BRG	**Berggiesshubel**	**142.89**	**334**	ePKPbc	**PKPdf**	**00 16 01.6**	**-3.4**
	baz=36,slow=3.1						
CLL	**Collm**	**142.95**	**335**	⇑iPKPpre	PKPpre	00 16 01.3	
	comp=Z,10.0nm,0.8s						
CLL				i PKPdf	**PKPdf**	**00 16 06.3**	**+1.3**
	comp=Z,14nm,1.0s						
CLL				i PKiKP	**PKiKP**	**00 16 09.7**	**+1.5**
CLL				i pPKiKP	pPKPdf	00 16 23.7	+0.5
CLL				i x	x	00 18 15.4	
CLL				eSKPdf	**SKPdf**	**00 19 34.0**	**-0.1**
	comp=Z,58nm,2.7s						
CLL				i SKPbc	**SKPbc**	**00 19 37.4**	**-0.3**
	comp=Z,21nm,1.3s						
CLL				i x	x	00 19 41.5	
	comp=Z,5.0nm,0.8s						
CLL				ex	x	00 20 15.0	
CLL				AMS	AMS	01 19 00.0	
	comp=Z,200nm,19.7s						
CLL	**Collm**	**142.95**	**335**	⇑iPKIKP	**PKPdf**	**00 16 01.3**	**-3.7**
CLL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CLL				pmax	pmax		
	comp=Z,14nm,1.0s						
CLL	**Collm**	**142.95**	**335**	ePKPbc	**PKPdf**	**00 16 01.6**	**-3.4**
	baz=36,slow=3.1						
VTS	**Vitosha**	**142.98**	**316**	P	PKiKP	00 16 21.0	+12
NRDL	**Niedersach Rie**	**143.08**	**338**	ePKPbc	PKPbc	00 16 02.2	+0.1
	baz=36,slow=3.1						
KRUC	**Moravsky**	**143.10**	**330**	ePKP	PKPbc	00 16 02.0	-0.4
KRUC				e		00 19 37.9	
FBE	**Freiberg**	**143.10**	**334**	ePKPbc	PKPbc	00 16 01.7	-0.5
	baz=36,slow=3.1						
MMB	**Musomiste**	**143.12**	**315**	P	PKPbc	00 16 03.0	+0.3
NVR	**Nevrokopi**	**143.13**	**314**	P	PKPbc	00 16 04.0	+1.2
PRU	**Pruhonice**	**143.29**	**332**	ePKP	PKPbc	00 16 02.4	-0.5
PRU	**Pruhonice**	**143.29**	**332**	ePKIKP	PKPbc	00 16 02.4	-0.5
TREC	**Trest**	**143.36**	**331**	ePKP	PKPbc	00 16 02.7	-0.4
TREC	**Trest**	**143.36**	**331**	ePKIKP	PKPbc	00 16 02.7	-0.4
SRS	**Serrai**	**143.42**	**314**	P	PKPab	00 16 02.9	+0.5
KKB	**Krupnik**	**143.42**	**315**	P	PKPbc	00 16 04.3	+0.8
NEUB	**Neuenburg**	**143.51**	**336**	ePKPbc	PKPbc	00 16 03.5	0.0
	baz=36,slow=3.1						
CLZ	**Clausthal**	**143.52**	**338**	ePKPbc	PKPbc	00 16 03.4	-0.1
	baz=36,slow=3.1						
FRGS	**Fruska Gora**	**143.76**	**322**	⇓P	PKPbc	00 16 04.7	+0.3
MORH	**Mrgy, Hungar**	**143.80**	**324**	⇓P	**PKPdf**	**00 16 05.6**	**-1.0**
TANN	**Tannenbergstha**	**143.85**	**334**	ePKPbc	PKPbc	00 16 04.9	+0.4
	baz=36,slow=3.1						
PAIG	**Paliouri**	**143.86**	**312**	P	PKPab	00 16 04.0	-0.1
KNT	**Kendrikon**	**143.87**	**314**	P	PKPab	00 16 03.6	-0.6
WERD	**Werda**	**143.89**	**335**	ePKPbc	PKPbc	00 16 04.9	+0.3
	baz=36,slow=3.1						
GTTG	**Gottingen**	**143.91**	**338**	ePKPbc	PKPbc	00 16 04.7	+0.1
	baz=36,slow=3.1						
GUNZ	**Gunzen**	**143.95**	**334**	ePKPbc	PKPbc	00 16 05.0	+0.1
	baz=36,slow=3.1						
WERN	**Wernitzgruen**	**143.99**	**334**	ePKPbc	PKPbc	00 16 05.2	+0.3
	baz=36,slow=3.1						
NKC	**Novy Kostel**	**144.00**	**334**	ePKP	PKPbc	00 16 05.2	+0.2
NKC	**Novy Kostel**	**144.00**	**334**	ePKIKP	PKPbc	00 16 05.2	+0.2
MOX	**Moxa**	**144.01**	**335**	ePKPbc	PKPbc	00 16 05.2	+0.2
	baz=36,slow=3.1						
VAY	**Valandovo**	**144.01**	**315**	i P	**PKPab**	**00 16 04.7**	**-0.1**
IBBN	**Ibbenburen**	**144.02**	**340**	ePKPbc	PKPbc	00 16 05.2	+0.3
	baz=36,slow=3.1						
RONA	**Rosalia, Austr**	**144.07**	**328**	i PKP	**PKPdf**	**00 16 06.3**	**-0.8**
	SNR=36						
RONA				eSKP	**SKPbc**	**00 19 40.6**	**-0.1**
	comp=Z,19nm,0.8s						
STIP	**Stip**	**144.10**	**316**	i P	**PKPab**	**00 16 04.2**	**-0.8**
CONA	**Conrad Observa**	**144.13**	**329**	i PKP	PKPbc	00 16 06.1	+0.5
	comp=Z,92nm,1.3s,SNR=39						
CONA				eSKP	**SKPbc**	**00 19 41.1**	**+0.3**
	comp=Z,17nm,0.9s						
CKRC	**Cesky Krumlov**	**144.24**	**331**	ePKP	PKPbc	00 16 05.6	-0.2
CKRC	**Cesky Krumlov**	**144.24**	**331**	ePKIKP	PKPbc	00 16 05.6	-0.2
DIVS	**Divibare**	**144.25**	**320**		PKPbc	00 16 06.1	+0.1
DIVS	**Divibare**	**144.25**	**320**	eP	**PKPab**	**00 16 05.7**	**+0.1**
TEKS	**Tekeris**	**144.28**	**321**	eP	**PKPab**	**00 16 05.3**	**-0.3**
MANZ	**Manzenberg**	**144.33**	**334**	ePKPbc	PKPbc	00 16 06.3	+0.3
	baz=36,slow=3.1						
KHC	**Kasperske Hory**	**144.35**	**332**		PKPbc	00 16 06.0	-0.1
KHC	**Kasperske Hory**	**144.35**	**332**	ePKP	**PKPab**	**00 16 05.9**	**+0.1**
KHC	**Kasperske Hory**	**144.35**	**332**	ePKIKP	**PKPab**	**00 16 05.9**	**+0.1**
NEO	**Neokhori**	**144.43**	**311**	P	**PKPab**	**00 16 05.8**	**-0.6**
PTL	**Penteli**	**144.46**	**309**	P	PKPbc	00 16 07.1	+0.3
SKO	**Skopje**	**144.46**	**316**	i P	PKPbc	00 16 07.1	+0.5
ROTZ	**Rotzenmuhle**	**144.46**	**334**	ePKPbc	PKPbc	00 16 06.5	+0.1
	baz=36,slow=3.1						
GEC2	**GERESS Array S**	**144.50**	**332**		**PKPab**	**00 16 06.2**	**-0.2**
GEC2	**GERESS Array S**	**144.50**	**332**	ePKPbc	PKPbc	00 16 06.7	+0.1
	baz=36,slow=3.1						
GERES	**GERESS Array B**	**144.50**	**332**	PKP	PKPbc	00 16 06.9	+0.3
	comp=Z,20nm,0.8s,baz=46,slow=2.8,SNR=93						
GERES				pPKP	pPKPdf	00 16 24.9	-1.3
	comp=Z,12nm,0.8s,baz=98,slow=2.0,SNR=5.8						
GERES				SKPbc	**SKPbc**	**00 19 41.4**	**-0.3**
	comp=Z,4.3nm,0.8s,baz=48,slow=2.0,SNR=5.7						
GERES	**GERESS Array B**	**144.50**	**332**	PKPdf	**PKPab**	**00 16 06.3**	**-0.2**
ATHU	**Athens Univers**	**144.54**	**309**	P	**PKPab**	**00 16 06.3**	**-0.5**
VLY	**Voula,Athens**	**144.58**	**309**	P	**PKPab**	**00 16 06.2**	**-0.7**
IDI	**Anoyia**	**144.59**	**304**	⇑P	**PKPdf**	**00 16 08.2**	**-0.3**
IDI	**Anoyia**	**144.59**	**304**	P	**PKPdf**	**00 16 08.7**	**+0.2**
IDI	**Anoyia**	**144.59**	**304**	PKPdf	PKPbc	00 16 07.5	+0.2
LIT	**Litokhoron**	**144.61**	**313**	P	**PKPab**	**00 16 06.5**	**-0.6**
LIT	**Litokhoron**	**144.61**	**313**	PKPdf	**PKPab**	**00 16 06.4**	**-0.6**
LIT	**Litokhoron**	**144.61**	**313**	PKIKP	**PKPab**	**00 16 06.4**	**-0.6**
KASTN	**Kahler Asten**	**144.74**	**339**	ePKPbc	PKPbc	00 16 07.3	+0.1
	baz=36,slow=3.1						
HPK	**Haverah Park**	**144.75**	**350**	eP	**PKPab**	**00 16 06.9**	**-0.1**
ARSA	**Arzberg**	**144.76**	**328**	i PKP	PKPbc	00 16 07.7	+0.3
	comp=Z,112nm,1.4s,SNR=45						
ARSA				epPKP	pPKPdf	00 16 22.2	-4.4
ARSA				eSKP	**SKPbc**	**00 19 44.4**	**+2.1**
	comp=Z,10nm,1.5s						
VILL	**Villia**	**144.82**	**309**	P	**PKPab**	**00 16 07.0**	**-0.9**
PRNS	**Prines Rethymn**	**144.87**	**304**	P	**PKPdf**	**00 16 09.3**	**+0.4**
HAPS	**Han Pijesak,Bl**	**144.88**	**321**	eP	**PKPdf**	**00 16 08.6**	**-0.2**
GRA1	**Grafenberg Arr**	**144.92**	**335**		PKPbc	00 16 07.9	+0.1
GRF	**Grafenberg Arr**	**144.92**	**335**	PKIKP	PKPbc	00 16 07.9	+0.1
GRF	**Grafenberg Arr**	**144.92**	**335**	ePKPbc	PKPbc	00 16 08.1	+0.3
	baz=36,slow=3.1						
GRFO	**Grafenberg**	**144.92**	**335**		PKPbc	00 16 07.9	0.0
GRFO	**Grafenberg**	**144.92**	**335**	PKIKP	PKPbc	00 16 07.9	+0.1
BUG	**Bochum--Univer**	**144.92**	**340**	ePKPbc	**PKPab**	**00 16 07.7**	**0.0**
	baz=36,slow=3.1						
MOA	**Molln**	**144.96**	**330**	i PKP	**PKPdf**	**00 16 08.5**	**-0.2**
	comp=Z,78nm,0.8s,SNR=152						
MOA				epPKiKP	**pPKPdf**	**00 16 28.9**	**+1.9**
DOB	**Doboj**	**145.00**	**323**	eP	PKPbc	00 16 08.0	-0.2
KZN	**Kozani**	**145.02**	**314**	P	**PKPbc**	**00 16 08.5**	**-0.1**
FNA	**Florina**	**145.06**	**315**	P	**PKPbc**	**00 16 08.0**	**-0.7**
FNA	**Florina**	**145.06**	**315**		**PKPbc**	**00 16 07.8**	**-0.9**
FNA	**Florina**	**145.06**	**315**	PKIKP	**PKPbc**	**00 16 07.8**	**-0.9**
A052A	**Srbac**	**145.10**	**324**	eP	**PKPdf**	**00 16 08.9**	**-0.1**
THL	**Klokotos Trika**	**145.18**	**312**	P	**PKPbc**	**00 16 07.4**	**-1.6**
AGG	**Agios Georgios**	**145.18**	**311**	P	**PKPbc**	**00 16 07.9**	**-1.2**
AGG	**Agios Georgios**	**145.18**	**311**		**PKPbc**	**00 16 07.8**	**-1.2**
AGG	**Agios Georgios**	**145.18**	**311**	PKP2	**PKPbc**	**00 16 07.8**	**-1.3**
KRND	**KRANIDI**	**145.23**	**308**	P	**PKPbc**	**00 16 08.1**	**-1.1**
IMMV	**Iera Moni Meta**	**145.25**	**305**	P	**PKPdf**	**00 16 10.0**	**+0.5**
PHP	**Peshkopia**	**145.25**	**317**	P	**PKPbc**	**00 16 09.2**	**0.0**
OHR	**Ohrid**	**145.29**	**316**	i P	**PKPab**	**00 16 09.9**	**+0.3**
LBWR	**Ladybower, Pea**	**145.31**	**350**	eP	**PKPbc**	**00 16 08.5**	**-0.5**
MAKR	**Makrakomi, Fth**	**145.33**	**311**	P	**PKPbc**	**00 16 08.9**	**-0.6**
BIOA	**Bad Ischl, Aus**	**145.37**	**330**	i PKP	**PKPbc**	**00 16 09.4**	**0.0**
	SNR=40						
BIOA				eSKP	**SKPbc**	**00 19 43.2**	**-0.5**
	comp=Z,10nm,1.2s						
SOKA	**Soboth**	**145.40**	**328**	i PKP	**PKPbc**	**00 16 09.6**	**+0.1**
	comp=Z,159nm,1.2s,SNR=94						
SOKA				eSKP	**SKPbc**	**00 19 43.6**	**-0.2**
	comp=Z,16nm,1.3s						
A051A	**Mrakovica**	**145.50**	**324**	eP	**PKPdf**	**00 16 09.2**	**-0.6**
BLY	**Banja Luka**	**145.51**	**323**	eP	**PKPab**	**00 16 10.1**	**0.0**
WACR	**West Acre**	**145.52**	**347**	eP	**PKPdf**	**00 16 09.4**	**0.0**
KBN	**Korca**	**145.53**	**315**	P	**PKPdf**	**00 16 10.0**	**0.0**
KBN	**Korca**	**145.53**	**315**		**PKPdf**	**00 16 09.6**	**-0.4**
KBN	**Korca**	**145.53**	**315**	PKIKP	**PKPdf**	**00 16 09.6**	**-0.4**
KNDR	**Palaiochora Ch**	**145.54**	**304**	P	**PKPab**	**00 16 10.6**	**0.0**
TNS	**Taunus Mts**	**145.55**	**338**	ePKPbc	**PKPbc**	**00 16 10.0**	**+0.1**
	baz=36,slow=3.1						
GUR	**Goura**	**145.61**	**310**	P	**PKPdf**	**00 16 10.1**	**-0.1**
PDG	**Podgorica**	**145.61**	**319**	⇑P	**PKPbc**	**00 16 10.4**	**+0.1**
PDG	**Podgorica**	**145.61**	**319**	PKPdf	**PKPdf**	**00 16 09.6**	**-0.3**
VLI	**Veliai**	**145.62**	**307**	P	**PKPdf**	**00 16 09.4**	**-0.7**
SERG	**Sergoula**	**145.63**	**311**	P	**PKPdf**	**00 16 10.1**	**0.0**
TRIZ	**Trizonia**	**145.63**	**310**	P	**PKPdf**	**00 16 10.2**	**+0.1**
ANKY	**Antikythira Is**	**145.64**	**306**	P	**PKPab**	**00 16 11.3**	**+0.4**
ANX	**Ano Chora**	**145.65**	**311**	P	**PKPab**	**00 16 11.1**	**+0.1**
WME	**Myndd Eilian**	**145.67**	**353**	eP	**PKPdf**	**00 16 09.6**	**-0.1**

STNC	Stoke	145.68	351	*e*P	PKPbc	00 16 10.3	+0.2
KTHA	Kythira Island	145.69	306	P	PKPdf	00 16 10.5	+0.2
KLV	Kalavryta, Ach	145.71	310	P	PKPbc	00 16 10.6	-0.2
RJOB	Jochberg	145.73	331	*e*PKPbc	PKPab	00 16 11.0	0.0
	baz=36,slow=3.1						
RJOB				*e*pPKPbc	pPKPab	00 16 30.5	+1.6
EFP	Efpalio	145.73	311	P	PKPab	00 16 11.0	-0.2
AHRW	Bad Neuenahr-A	145.75	339	*e*PKPbc	PKPbc	00 16 10.3	-0.1
	baz=36,slow=3.1						
CRES	Cresnjev	145.76	326	*e*P	PKPdf	00 16 10.1	0.0
OBKA	Obir	145.76	328	*i* PKP	PKPdf	00 16 10.4	+0.2
	comp=Z,74nm,1.1s,SNR=26						
MGRS	Mrkonjic Grad	145.77	323	*e*P	PKPab	00 16 11.3	+0.1
WLF1	Llynfaes	145.79	353	*e*P	PKPab	00 16 10.9	0.0
DRME	Dracevica, Mon	145.79	318	*e*P	PKPab	00 16 11.2	-0.1
TIR	Tirane	145.79	317	⇓P	PKPbc	00 16 11.0	+0.1
TIR	Tirane	145.79	317	PKPdf	PKPdf	00 16 09.9	-0.4
TIR	Tirane	145.79	317	⇓PKP2	PKPbc	00 16 11.0	+0.1
BRY	Bratogost	145.80	320	*e*P	PKPbc	00 16 10.9	-0.1
CWF	Charnwood Fore	145.87	349	*e*P	PKPdf	00 16 10.0	0.0
CWF				IAmb	IAmb	00 16 11.1	
	comp=Z,92nm,0.9s						
PVO	Paravola	145.92	311	P	PKPdf	00 16 10.8	+0.2
SRKY	Kupres RS	145.93	323	*e*P	PKPbc	00 16 11.1	-0.2
KBA	Koelnbreinsper	145.95	330	*i* PKP	PKPdf	00 16 10.9	+0.3
	comp=Z,22nm,0.6s,SNR=34						
KBA				*e*pPKiKP	pPKPab	00 16 31.2	+1.4
BEBN	Eben Emael	145.98	341	*d*PKPdf	PKPdf	00 16 10.6	+0.4
TREB	Trebinje	146.01	320	*e*P	PKPab	00 16 12.7	+0.6
BTNL	Ternell	146.02	340	*d*PKP	PKPdf	00 16 10.1	-0.3
BTNL				*d*pPKP	pPKPdf	00 16 27.5	-1.1
FOEL	Foel Wylfa	146.03	351	*e*P	PKPdf	00 16 10.8	+0.5
FOEL				IAmb	IAmb	00 16 14.8	
	comp=Z,189nm,1.2s						
DSB	Dublin	146.03	355	PKPdf	PKPdf	00 16 10.4	+0.1
ELMS	Elmsett, Ipswi	146.04	347	*e*P	PKPbc	00 16 11.3	+0.1
ELMS				IAmb	IAmb	00 16 12.0	
	comp=Z,218nm,0.8s						
A050A	Klekovaca	146.04	324	*e*P	PKPdf	00 16 10.5	-0.2
MEM	Membach	146.04	340	*d*PKP	PKPab	00 16 11.7	-0.2
MEM				*d*pPKP	pPKPbc	00 16 29.1	-0.2
HCY	Herceg Novi	146.08	319	*e*P	PKPdf	00 16 10.2	-0.5
BOJS	Bojanci	146.08	326	*e*PKPbc	PKPab	00 16 12.0	-0.2
BOJS	Bojanci	146.08	326	*e*P	PKPdf	00 16 10.7	+0.1
FUR	Furstenfeldbru	146.08	333	*e*PKPbc	PKPbc	00 16 11.6	+0.1
	baz=36,slow=3.1						
LJU	Ljubljana	146.09	327	*e*PKPbc	PKPbc	00 16 11.6	0.0
LJU				*e*pPKPbc	pPKPab	00 16 30.9	+0.7
LJU				*e*		00 19 44.5	
MYKA	Terra Mystica	146.12	329	*i* PKP	PKPdf	00 16 11.2	+0.4
	comp=Z,14nm,0.6s,SNR=42						
MYKA				*e*pPKP	pPKPdf	00 16 29.4	+0.4
MYKA				*e*SKP	SKPbc	00 19 44.5	-0.9
	comp=Z,7.4nm,0.9s						
LLW	Llanuwychllyn	146.13	352	*e*P	PKPdf	00 16 10.8	+0.3
RLS	Riolos of Patr	146.20	310	P	PKPab	00 16 12.7	-0.2
BSTI	Sart Tilman	146.20	341	*d*PKP	PKPbc	00 16 11.8	0.0
BSTI				*d*pPKP	pPKPdf	00 16 29.0	+0.1
ITM	Ithomi	146.21	309	P	PKPbc	00 16 12.1	-0.2
ITM	Ithomi	146.21	309	PKPdf	PKPdf	00 16 11.1	-0.1
BHOU	Houvegnez	146.26	340	*d*PKP	PKPbc	00 16 12.3	+0.3
PRED	Cave del Predi	146.29	329	PKPdf	PKPdf	00 16 11.2	+0.1
STON	Ston	146.32	320	*e*P	PKPdf	00 16 10.9	-0.2
CEY	Cerknica	146.35	327	*e*P	PKPdf	00 16 11.0	-0.1
BCLA	Clavier	146.43	341	*d*PKPdf	PKPbc	00 16 12.1	-0.4
BCLA				*d*PKiKP	pPKPab	00 16 31.7	+0.4
BCLA				*d*sPKP		00 16 38.3	
TSLK	Tsoukalades, L	146.45	312	P	PKPbc	00 16 13.4	+0.5
STU	Stuttgart	146.46	336		PKPdf	00 16 11.8	+0.6
STU	Stuttgart	146.46	336	PKP2	PKPdf	00 16 11.8	+0.6
STU	Stuttgart	146.46	336	*e*PKPbc	PKPbc	00 16 12.9	+0.3
	baz=36,slow=3.1						
LKD2	Lefkada island	146.46	312	P	PKPbc	00 16 13.1	+0.1
NYDR	Nydri-Lefkada	146.47	312	P	PKPbc	00 16 13.0	+0.1
BGES	Gesves	146.52	341	*d*PKP	PKPbc	00 16 12.5	-0.3
BGES				*d*pPKP	pPKPab	00 16 33.8	+2.1
WATA	Walderalm	146.58	332	*i* PKP	PKPbc	00 16 13.1	-0.1
	comp=Z,23nm,0.8s,SNR=23						
ABTA	Abfaltersbach	146.58	330	*e*PKP	PKPdf	00 16 12.3	+0.8
	comp=Z,26nm,0.6s,SNR=34						
ABTA				*e*SKP	SKPbc	00 19 45.7	-0.7
	comp=Z,9.8nm,1.0s						
SABO	M.te Sabotino	146.60	328	PKPdf	PKPdf	00 16 11.0	-0.5
WTTA	Wattenberg	146.60	331	*i* PKP	PKPbc	00 16 13.4	+0.1
	comp=Z,46nm,0.8s,SNR=45						
WTTA				*e*SKP	SKPdf	00 19 41.0	+0.6
	comp=Z,15nm,1.7s						
CLUD	Cludinico	146.62	329		PKPdf	00 16 11.2	-0.3
SNF	Seneffe	146.65	342	*d*PKP	PKPbc	00 16 13.2	+0.2
SNF				*d*pPKP	pPKPdf	00 16 28.8	-0.9
RCHB	Rochefort	146.68	341	*d*PKP	PKPbc	00 16 13.1	-0.1
RCHB				*d*pPKP	pPKPbc	00 16 31.1	-0.2
BMRD	Maredsous	146.69	341	*d*PKP	PKPbc	00 16 12.9	-0.3
SKDS	Skadanscina	146.69	327	*e*P	PKPdf	00 16 11.3	-0.4
TRI	Trieste	146.71	328	PKPdf	PKPdf	00 16 11.4	-0.3
TRI	Trieste	146.71	328	PKIKP	PKPdf	00 16 11.4	-0.3
MOTA	Moosalm	146.78	332	*i* PKP	PKPbc	00 16 13.7	-0.1
	comp=Z,49nm,0.8s,SNR=65						
MOTA				*e*SKP	SKPdf	00 19 40.1	-0.5
	comp=Z,17nm,1.5s						
WLF	Walferdange	146.81	339	PKPdf	PKPdf	00 16 12.1	+0.4
WLF	Walferdange	146.81	339	PKP2	PKPdf	00 16 12.1	+0.4
WLF	Walferdange	146.81	339	*d*PcP	PKPbc	00 16 14.2	+0.6
WLF				*d*pPKP	pPKPab	00 16 32.7	-0.1
WLF	Walferdange	146.81	339	*e*PKPbc	PKPab	00 16 14.7	-0.2
	baz=36,slow=3.1						
WLF				*e*pPKPbc	pPKPab	00 16 34.1	+1.3
RETA	Reutte	146.82	333	*i* PKP	PKPbc	00 16 13.8	0.0
	comp=Z,11nm,0.5s,SNR=32						
RETA				*e*SKP	SKPdf	00 19 39.9	-0.6
	comp=Z,9.7nm,1.4s						
SQTA	Sankt Quirin	146.83	332	*i* PKP	PKPbc	00 16 13.9	0.0
	comp=Z,133nm,1.0s,SNR=48						
STAL	STALIGIAL	146.84	329		PKPdf	00 16 10.9	-1.0
MCH1	Michaelchurch	146.86	351	*e*P	PKPbc	00 16 12.7	-0.9
MCH1				IAmb	IAmb	00 16 17.3	
	comp=Z,135nm,1.0s						
LPW	Lampeter	146.90	352	*e*P	PKPbc	00 16 12.9	-0.8
DOU	Dourbes	146.93	341	*d*PKP	PKPbc	00 16 13.9	0.0
DOU				*d*pPKP	pPKPbc	00 16 31.3	-0.8
CIMO	Cimolais	146.93	330	PKPdf	PKPdf	00 16 10.8	-1.3
STRD	Stroud	146.95	350	*e*P	PKPbc	00 16 13.3	-0.6
UBR	Ueberruh	146.95	333	*e*PKPbc	PKPbc	00 16 14.5	+0.3
	baz=36,slow=3.1						
UBR				*e*pPKPbc	pPKPab	00 16 34.1	+0.6
MONM	Monmouth	146.99	351	*e*P	PKPbc	00 16 13.3	-0.6
SWN1	Swindon	147.14	349	*e*P	PKPbc	00 16 14.2	-0.2
RSBS	Rosebush, Pemb	147.14	353	*e*P	PKPbc	00 16 13.5	-1.0
BFO	Black Forest	147.15	336		PKPbc	00 16 14.1	-0.5
BFO	Black Forest	147.15	336	PKP2	PKPbc	00 16 14.1	-0.5
BFO	Black Forest	147.15	336	*e*PKPbc	PKPbc	00 16 14.3	-0.4
	baz=36,slow=3.1						
FETA	Feichten	147.19	332	*i* PKP	PKPbc	00 16 15.1	+0.1
	comp=Z,37nm,0.7s,SNR=57						
FETA				*e*pPKiKP	pPKPab	00 16 34.3	-0.3
WOL	Wolverton	147.22	349	*e*P	PKPbc	00 16 13.6	-1.1
SCTE	Santa Cesarea	147.35	315		PKPbc	00 16 14.7	-0.7
DAVA	Damuels	147.36	333	*i* PKP	PKPbc	00 16 15.4	-0.1
	comp=Z,38nm,0.9s,SNR=42						
CTI	Castel Tesino	147.50	330		PKPbc	00 16 14.9	-0.8
CTI	Castel Tesino	147.50	330	PKP2	PKPbc	00 16 15.0	-0.8
ECH	Echery	147.69	337		PKPbc	00 16 15.7	-0.4
ECH	Echery	147.69	337	PKP2	PKPbc	00 16 15.7	-0.4
FUORN	Ofenpass-Fuorn	147.71	332	PKPdf	PKPdf	00 16 13.1	-0.6
TEOL	Teolo	147.99	329		PKPdf	00 16 13.1	-0.8
TEOL				PKPbc	PKPbc	00 16 17.5	+0.5
SGRT	San Giovanni R	148.15	320		PKPbc	00 16 17.0	-0.7
MATE	Matera	148.19	318	⇓P	PKPbc	00 16 17.2	-0.4
TUE	Stuetta	148.22	333		PKPbc	00 16 17.9	+0.1
SALO	Salr	148.35	331		PKPbc	00 16 17.7	-0.3
FDMO	Fiordimonte	148.88	325		PKPdf	00 16 14.4	-1.0
FDMO				PKPbc	PKiKP	00 16 20.3	-0.4
TIP	Timpagrande	148.94	315	⇓P	PKPbc	00 16 20.2	+0.5
TIP	Timpagrande	148.94	315	PKPdf	PKPdf	00 16 14.6	-1.1
NRCA	Norcia	149.00	324		PKPdf	00 16 14.8	-0.8
NRCA				PKPbc	PKPbc	00 16 20.2	+0.5
CAMP	Campotosto	149.03	323		PKPdf	00 16 14.7	-1.1
CAMP				PKPbc	PKPbc	00 16 20.2	+0.3
ZCCA	Zocca	149.06	328		PKPdf	00 16 14.7	-1.0
ZCCA				PKPbc	PKiKP	00 16 21.3	+0.1
INTR	Introdacqua	149.08	322	PKPdf	PKPdf	00 16 15.1	-0.8
INTR				PKPbc	PKiKP	00 16 20.7	-0.6
PRMA	PARMA	149.08	330		PKPdf	00 16 15.0	-0.6
AQU	L'Aquila	149.15	323		PKPbc	00 16 20.4	+0.3
AQU	L'Aquila	149.15	323	PKP2	PKPbc	00 16 20.4	+0.3
SENIN	Lac Senin/Sane	149.16	335		PKPbc	00 16 20.0	-0.3
PAOL	Paolisi	149.29	320		PKPbc	00 16 19.9	-0.7
CLF	Chambon-Foret	149.47	342		PKPbc	00 16 20.7	+0.1
MSSA	Maissana	149.80	330		PKPbc	00 16 20.2	-1.5
BNI	Bardonecchia	150.48	334	PKPdf	PKPdf	00 16 17.1	-0.9
BNI				PKPbc	PKiKP	00 16 24.0	-0.1
BNI	Bardonecchia	150.48	334	PKIKP	PKiKP	00 16 24.0	-0.1
SSB	Saint Sauveur	151.13	337		PKPdf	00 16 18.4	-0.5
SSB				PKPbc	PKPbc	00 16 25.1	+0.3
SSB	Saint Sauveur	151.13	337	PKIKP	PKPbc	00 16 25.1	+0.3
RAFF	Raffo Rosso	151.57	314	PKPdf	PKPdf	00 16 19.0	-0.8
KEST	Kesra	155.75	316	PKP	PKPdf	00 16 26.4	+0.5
	comp=Z,3.7nm,0.8s,baz=90,slow=5.1,SNR=2.8						
KEST				PKPab	PKPab	00 16 52.1	-0.5
	comp=Z,17nm,1.0s,baz=317,slow=4.4,SNR=6.9						
PBRG	Braganca	157.37	352	*e*PKPab	PKPab	00 16 58.3	-0.9
POLO	Lamas de Olo	157.92	353	*e*PKPab	PKPab	00 17 01.4	-0.2
PVRL	Vila Real	158.01	353	*e*PKPab	PKPab	00 17 01.8	-0.2
PVIS	Viseu	158.59	353	*e*PKPab	PKPab	00 17 04.7	+0.2
MTE	Manteigas	158.86	353	*e*PKPab	PKPab	00 17 05.9	+0.2
ESDC	Sonseca Array	158.89	345	PKP	PKPdf	00 16 30.7	+1.0
	comp=Z,1.6nm,1.2s,baz=3.8,slow=2.0,SNR=3.6						
ESDC				PKPab	PKPab	00 17 05.8	0.0
	comp=Z,6.6nm,0.9s,baz=16,slow=3.6,SNR=22						
ESDC				PP	PP	00 20 46.8	+1.1
	comp=Z,1.5nm,1.1s,baz=353,slow=6.5,SNR=4.2						
ESDC	Sonseca Array	158.89	345	PKPab	PKPab	00 17 05.1	-0.7
COI	Coimbra	159.14	354	*e*PKPab	PKPab	00 17 07.4	+0.6
PCAS	Casmilo, Conde	159.30	354	*e*PKPab	PKPab	00 17 07.7	+0.2
PMRV	Marv??o	159.79	352	*e*PKPab	PKPab	00 17 10.6	+0.9
PMTG	Montargil	160.25	353	*e*PKPab	PKPab	00 17 11.9	+0.2
PBAR	Barrancos	160.97	350	*e*PKPab	PKPab	00 17 14.8	0.0
PBEJ	Beja	161.24	352	*e*PKPab	PKPab	00 17 16.4	+0.4
PCVE	Castro Verde	161.65	352	*e*PKPab	PKPab	00 17 18.1	+0.3
PVAQ	Vaqueiros	161.83	351	*e*PKPab	PKPab	00 17 18.8	+0.2
DBIC	Dimbokro	165.98	206	PKPab	PKPab	00 17 37.7	+0.3
	comp=Z,18nm,0.8s,baz=149,slow=5.9,SNR=19						
DBIC	Dimbokro	165.98	206	PKPab	PKPab	00 17 36.5	-0.9
TOA0	Torodi Ar. Sit	166.27	245		PKPdf	00 16 36.3	-1.3
TOA0				PKPab	PKPab	00 17 38.3	-0.7
TORD	Torodi Ar. Bea	166.27	245	PKP	PKPdf	00 16 36.8	-0.8
	comp=Z,9.3nm,1.1s,baz=327,slow=1.1,SNR=22						
TORD				pPKP	pPKPdf	00 16 55.3	-0.7
	comp=Z,11nm,1.1s,baz=113,slow=1.5,SNR=7.9						
TORD				PKPab	PKPab	00 17 38.9	0.0
	comp=Z,20nm,1.0s,baz=110,slow=5.2,SNR=9.8						

WEL 29 23:58:43.0±0.7, 39°S±4°×17°6E±°, h5^{km}, M2.8/5, ML4.8/10, MLv2.8/5, Error ellipse: s-maj=0.0km s-min=0.0km az=110.2, confirmed, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KATZ	Kakaramea	0.04	166	P	Pg	23 58 44.7	+0.4
RATZ	Rangitukua	0.10	45	P	Pg	23 58 45.5	+0.4
RITZ	Rihia Road	0.14	106	P	Pg	23 58 46.3	+0.4
KRVZ	Karewarewa	0.16	191	P	Pg	23 58 46.8	+0.5
KRVZ	Karewarewa	0.16	191	P	Pg	23 58 46.7	+0.5
NTVZ	North Tongarir	0.16	182	P	Pg	23 58 47.0	+0.7
NTVZ	North Tongarir	0.16	182	P	Pg	23 58 46.9	+0.7
TMVZ	Te Maari	0.18	175	P	Pg	23 58 47.4	+0.8
TMVZ	Te Maari	0.18	175	P	Pg	23 58 47.2	+0.6
WTVZ	West Tongariro	0.19	202	P	Pg	23 58 47.3	+0.5
WTVZ	West Tongariro	0.19	202	P	Pg	23 58 47.4	+0.6
WTVZ				S	Sg	23 58 50.3	+0.9
ETVZ	East Tongariro	0.20	174	P	Pg	23 58 47.7	+0.7
ETVZ				S	Sg	23 58 50.6	+1.0
NNVZ	North Ngauruho	0.20	195	P	Pg	23 58 47.5	+0.5
NNVZ	North Ngauruho	0.20	195	S	Sg	23 58 50.8	+1.2
OTVZ	Oturere	0.23	183	P	Pg	23 58 48.2	+0.7
OTVZ				S	Sg	23 58 51.4	+0.9
WATZ	Wairara	0.23	10	P	Pg	23 58 48.0	+0.5
TWVZ	Taurewa	0.23	235	P	Pg	23 58 48.0	+0.4
NGZ	Ngauruhoe	0.25	195	P	Pg	23 58 48.4	+0.6
TUVZ	Tukino	0.33	184	P	Pg	23 58 50.3	+0.8
FWVZ	Far West T-bar	0.33	198	P	Pg	23 58 50.0	+0.5
WHTZ	Whakaora	0.34	39	P	Pn	23 58 53.7	-1.0
DRZ	Dome Shelter	0.35	195	P	Pb	23 58 53.0	+1.1
WHVZ	Whangaehu Hut	0.35	192	P	Pb	23 58 51.9	0.0
TRVZ	Turoa	0.38	196	P	Pb	23 58 52.2	0.0
WNVZ	Wahianoa	0.40	190	P	Pg	23 58 51.3	+0.6
PKVZ	Pokaka	0.44	216	P	Pg	23 58 51.9	+0.4
MTVZ	Mangateitei	0.48	200	P	Pb	23 58 54.9	+1.0
VRZ	Vera Road	0.74	255	P	Pg	23 58 57.7	+0.5
KWHZ	Kaweka Forest	0.75	130	P	Pb	23 58 58.2	-0.4
HIZ	Hauiti	0.77	303	P	Pg	23 58 58.2	+0.4
MTHZ	Maungataniwha	0.91	85	P	Pg	23 59 00.8	+0.4
MCHZ	McNeill Hill	0.94	123	P	Pn	23 59 02.6	-0.2
PNHZ	Pukenui	1.05	158	P	Pb	23 59 03.6	-0.1
ARHZ	Aropaoanui	1.07	108	P	Pn	23 59 05.1	+0.4
RAHZ	Arahi	1.09	89	P	Pb	23 59 04.6	+0.2
TOZ	Tahuroa Road	1.21	353	P	Pg	23 59 05.2	-1.0
NEZ	North Egmont	1.28	254	P	Pb	23 59 08.5	+0.9

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*WEL **29** 23:58:00, 38°.92S×175°.71E, h8^{km}, ML4.5, Mw4.7, Moment Tensor Solution. s10 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.34; M$_{\theta\theta}$0.19; M$_{\phi\phi}$1.15; M$_{r\theta}$0.28; M$_{\theta\phi}$0.67; M$_{\phi r}$0.14; Fault plane solution: M$_0$1.46000×10^{16} NP1: ϕ_s18.00000°, δ41.00000°, λ-103.00000°. NP2: ϕ_s215.00000°, δ51.00000°, λ-79.00000°. Principal axes: T 1516.7700, Plg5.0000°, Azm297.0000°; N -122.7500, Plg9.0000°, Azm27.0000°; P -1394.0300, Plg80.0000°, Azm177.0000°;*

*NEIC **29** 23:58:48.5±1.2, 38°.80S±0°.04×175°.70E±0°.06, h5^{km}±7^{km}, Mwr4.6/27 Error ellipse: s-maj=7.3km s-min=4.9km az=225.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.95; M$_{\theta\theta}$0.11; M$_{\phi\phi}$0.84; M$_{r\theta}$0.14; M$_{\theta\phi}$0.52; M$_{\phi r}$-0.18; Fault plane solution: M$_0$1.07000×10^{16} NP1:ϕ_s220.65000°, δ43.92000°, λ-70.31000°. NP2: ϕ_s14.23000°, δ49.23000°, λ-107.97000°. Principal axes: T 1.1149, Plg3.0000°, Azm117.0000°; N -0.1063, Plg14.0000°, Azm26.0000°; P -1.0086, Plg76.0000°, Azm218.0000°;*

*IDC **29** 23:58:48.3±1.3, 38°.92S×175°.73E, h0^{km}, mb4.7/1, mbtmp4.3/2, ML3.5/1, MS4.1/4 Error ellipse: s-maj=49.4km s-min=14.3km az=151.0*

*WEL **29** 23:58:49.4, 39°S±1°×17°6E±°, h6^{km}±3^{km}, M4.5/7, ML4.8/7, MLv4.5/7, Error ellipse: s-maj=0.0km s-min=0.0km az=71.3, confirmed*

*NEIC **29** 23:58:49.6, 38°.84S×175°.74E, h10^{km}*

ISC 29 23:58:49.8±0.8, 38°.93S±0°.02×175°.70E±0°.03, h11^{km}±5^{km}, n76, σ1^{s}.31/79, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KATZ	Kakaramea	0.05	188	P	Pg	23 58 51.4	-0.7
RATZ	Rangitukua	0.08	41	P	Pg	23 58 52.5	+0.2
RITZ	Rihia Road	0.13	112	P	Pg	23 58 53.0	+0.1
TMVZ	Te Maari	0.19	180	S	Sg	23 58 56.9	+0.1
ETVZ	East Tongariro	0.21	178	P	Pg	23 58 54.4	+0.2
WATZ	Wairara	0.22	6	P	Pg	23 58 54.8	+0.4
WATZ				S	Sg	23 58 58.3	+0.8
OTVZ	Oturere	0.24	187	P	Pg	23 58 55.0	+0.2
TWVZ	Taurewa	0.25	235	P	Pg	23 58 54.7	-0.3
TWVZ				S	Sg	23 58 58.7	+0.2
NGZ	Ngauruhoe	0.26	198	P	Pg	23 58 55.3	+0.2
NGZ				S	Sg	23 58 59.1	+0.3
SNVZ	South Ngauruho	0.26	191	P	Pg	23 58 55.7	+0.5
KUTZ	Kaahu Road	0.45	12	P	Pg	23 58 58.8	+0.3
KUTZ				S	Sg	23 59 05.4	+0.9
MOVZ	Moawhango	0.48	175	P	Pg	23 58 59.0	-0.2
MRHZ	Matea Rd	0.56	81	P	Pg	23 59 00.6	-0.1
MRHZ				S	Sg	23 59 08.2	0.0
TLZ	Tolley Road	0.61	348	P	Pg	23 59 01.3	-0.3
TLZ				S	Sg	23 59 09.7	0.0
ALRZ	Allen Road	0.62	54	P	Pg	23 59 02.0	+0.2
BHHZ	Black Hill Sta	0.63	154	P	Pg	23 59 02.0	+0.1
BKZ	Black Stump Fm	0.66	111		Pg	23 59 02.2	-0.3
BKZ	Black Stump Fm	0.66	111	P	Pg	23 59 02.5	-0.1
PRRZ	Plateau Road	0.69	52	P	Pg	23 59 03.3	+0.2
HIZ	Hauiti	0.78	302	Pn	Pg	23 59 04.5	-0.4
RRRZ	Republican Roa	0.87	47	P	Pb	23 59 06.8	0.0
OMRZ	Omania	0.97	33	P	Pb	23 59 08.4	-0.3
WAZ	Wanganui	1.00	214	P	Pb	23 59 08.5	-0.6
RTZ	Ruatahuna	1.05	73	Pn	Pb	23 59 09.1	-0.8
RTZ	Ruatahuna	1.05	73	P	Pb	23 59 09.7	-0.3
TSZ	Takapari Road	1.15	170	P	Pg	23 59 11.7	-0.1
TOZ	Tahuroa Road	1.21	352	Pn	Pn	23 59 11.3	-1.3
URZ	Urewera	1.29	59	Pg	Pn	23 59 13.2	-0.6
	104nm,0.3s,baz=322,slow=9.1,SNR=121						
URZ				Lg	Lg	23 59 29.4	
	75nm,0.3s,baz=137,slow=23,SNR=3.9						
MRZ	Mangatainoka R	1.73	183		Pb	23 59 21.2	-0.4
BFZ	Birch Farm	1.80	167		Pb	23 59 21.8	-1.0
MXZ	Matakaoa Point	2.46	57		Pn	23 59 29.7	-0.2
SNZO	South Karori	2.50	198		Pb	23 59 32.4	-2.3
MSWZ	Moikau Station	2.51	188		Pn	23 59 31.9	+1.3
TCW	Tory Channel	2.53	205		Pn	23 59 32.1	+1.3
BHW	Baring Head	2.56	194	Pn	Pn	23 59 32.1	+0.9
PLWZ	Palliser	2.66	187		Pn	23 59 33.1	+0.5
TUWZ	Tuamarina	2.84	208		Pn	23 59 36.2	+1.2
NNZ	Nelson	2.90	217		Pn	23 59 37.1	+1.2
TKNZ	Takaka Hill	2.98	224		Pn	23 59 37.7	+0.7
CMWZ	Cape Campbell	3.04	202		Pn	23 59 39.4	+1.6
QRZ	Quartz Range	3.09	231		Pn	23 59 39.0	+0.5
BSWZ	Blackbirch Sta	3.11	206		Pn	23 59 40.2	+1.4
MRNZ	Matariki Terra	3.34	222		Pn	23 59 43.0	+1.0
THZ	Tophouse	3.55	216		Pn	23 59 46.3	+1.5
KHZ	Kahutara	3.85	205	Pn	Pn	23 59 49.6	+0.6
DSZ	Denniston Nort	4.10	225		Pn	23 59 52.5	+0.1
GVZ	Greta Valley S	4.51	206		Pn	23 59 58.0	0.0
LTZ	Lake Taylor	4.65	213	Pn	Pn	23 59 59.6	-0.3
INZ	Inchbonnie	4.98	219		Pn	00 00 05.6	+1.1
OXZ	Oxford	5.19	211		Pn	00 00 07.3	0.0
MQZ	McQueen's Vall	5.30	205		Pn	00 00 07.2	-1.6
RPZ	Rata Peaks	5.92	215	Pn	Pn	00 00 19.1	+1.6
	1.1nm,0.3s,baz=274,slow=4.4,SNR=6.4						
RPZ				Sn	Sn	00 01 24.1	-1.3
	baz=286,slow=19						
	4.3nm,0.4s						
RPZ	Rata Peaks	5.92	215	Pn	Pn	00 00 18.7	+1.3
FOZ	Fox Glacier	6.39	222		Pn	00 00 24.6	+0.7
ODZ	Otahua Downs	7.18	210		Pn	00 00 34.1	-0.5
CTZ	Chatham Island	7.51	132	Pn	Pn	00 00 39.3	+0.1
RAO	Raoul Island	11.00	31	LR	LR	00 05 34.6	
	comp=Z,1μm,19.7s,baz=302,slow=37						
DZM	Mont Dzumac	18.58	332	LR	LR	00 08 31.4	
	comp=Z,545nm,21.6s,baz=200,slow=31						
PMG	Port Moresby	38.95	311	LR	LR	00 22 35.3	
	comp=Z,253nm,19.1s,baz=187,slow=37						
WRA	Warramunga Arr	40.28	286	P	P	00 06 28.4	+1.4
	10nm,0.9s,baz=129,slow=7.5,SNR=4.8						
	10nm,0.9s						
ATAH	Atahualpa	97.75	106	LR	LR	00 46 37.1	
	comp=Z,84nm,19.9s,baz=256,slow=29						
KSH	Kashi	119.91	298	PKP	PKiKP	00 17 43.3	+3.0
FINES	FINESS Array B	150.71	330	PKPbc	PKPbc	00 18 38.7	-2.3
	3.5nm,0.9s,baz=35,slow=5.1,SNR=3.4						
TORD	Torodi Ar. Bea	153.78	193	PKPab	PKPab	00 19 01.9	-0.3
	7.7nm,1.2s,baz=177,slow=6.0,SNR=2.9						
OKC	Ostrava-Krasne	160.68	312	*e*PKP	PKPab	00 19 34.7	+3.6
MAUC	Maruska	161.07	311	*e*PKP	PKPab	00 19 36.8	+3.9
KRLC	Kraliky	161.35	314	*e*PKP	PKPab	00 19 35.2	+1.0
OSTC	Ostas	161.43	315	*e*PKP	PKPab	00 19 35.0	+0.6
DPC	Dobruska-Polom	161.48	315	*e*PKP	PKPab	00 19 35.9	+1.2
UPC	Upice	161.57	316	*e*PKP	PKPab	00 19 35.7	+0.7
PVCC	Panska Ves	162.33	317	*e*PKP	PKPab	00 19 37.2	-1.1
TREC	Trest	162.47	313	*e*PKP	PKPab	00 19 38.1	-0.9
PRU	Pruhonice	162.64	316	*e*PKP	PKPab	00 19 38.3	-1.4
CKRC	Cesky Krumlov	163.38	313	*e*PKP	PKPab	00 19 39.3	-3.7
NKC	Novy Kostel	163.61	319	*e*PKP	PKPab	00 19 40.3	-3.7
KHC	Kasperske Hory	163.63	314	*e*PKP	PKPab	00 19 40.9	-3.2

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*NEIC **30** 00:08:10.3±1.0, 21°.7S±0°.2×170°.9E±0°.1, h118^{km}±11^{km}, mb4.2/5, Error ellipse: s-maj=22.9km s-min=15.2km az=179.0*

*IDC **30** 00:08:16.6±6.8, 21°.43S×170°.25E, h151^{km}±38^{km}, mb3.4/2, mbtmp3.8/3, Error ellipse: s-maj=169.2km s-min=44.5km az=156.0*

*NOU **30** 00:08:16.6, 21°.62S×170°.22E, h0^{km}, MLv4.2/8, Southeast of Loyalty Islands*

ISC 30 00:08:12.7±1.2, 21°.8S±0°.1×170°.6E±0°.1, h134^{km}, n23, σ1^{s}.27/26, mb3.9/5, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINNC	Pines Island,	3.07	253		Pn	00 09 00.4	0.0
PINNC				Sn	Sn	00 09 36.5	-0.6
LIFNC	LIFOU	3.31	286		Pn	00 09 03.1	-0.3
LIFNC				Sn	Sn	00 09 41.0	-1.6
LIFNC	LIFOU	3.31	286	P	Pn	00 09 03.5	+0.1
YATNC	Mamie plateau,	3.48	264	P	Pn	00 09 05.6	-0.1
OUENC	Ouen Island, N	3.58	259		Pn	00 09 07.1	+0.2
OUENC	Ouen Island, N	3.58	259	P	Pn	00 09 08.5	+1.6
DZM	Mont Dzumac	3.90	265	P	Pn	00 09 12.0	+0.7
	10nm,0.3s,baz=78,slow=20,SNR=28						
DZM				S	Sn	00 09 54.8	-1.9
	44nm,0.4s,baz=15,slow=20,SNR=11						
DZM	Mont Dzumac	3.90	265		Pn	00 09 11.8	+0.5
DZM	Mont Dzumac	3.90	265	P	Pn	00 09 12.2	+0.9
ONTNC	Ouen Toro	3.91	261		Pn	00 09 12.4	+1.1
ONTNC	Ouen Toro	3.91	261	P	Pn	00 09 14.3	+2.9
NOUC	Port Laguerre	4.03	264	P	Pn	00 09 14.5	+1.6
KOUNC	Koumac, New Ca	6.04	280		Pn	00 09 41.5	+1.8
KOUNC	Koumac, New Ca	6.04	280	P	Pn	00 09 42.4	+2.6
STKA	Stephens Creek	27.73	243	P	P	00 13 49.4	+0.7
STKA				IAmb	IAmb	00 14 09.8	
	comp=Z,4.2nm,1.4s						
ASAR	Alice Springs	33.87	260	P	P	00 14 43.0	+0.2
	comp=Z,0.9nm,0.5s,baz=98,slow=10,SNR=12						
	comp=Z,0.9nm,0.5s						
WRA	Warramunga Arr	33.91	266	P	P	00 14 42.0	-1.1
	comp=Z,0.5nm,0.5s,baz=100,slow=8.1,SNR=2.4						
	comp=Z,0.5nm,0.5s						
WRA	Warramunga Arr	33.91	266	P	P	00 14 44.1	+0.9
MBWA	Marble Bar	47.20	261	P	P	00 16 32.5	+0.4
QSPA	South Pole Qui	68.32	180	P	P	00 18 59.0	-0.2
QSPA				IAmb	IAmb	00 19 02.6	
	comp=Z,5.0nm,1.1s						
SNAA	Sanae	86.72	182	P	P	00 20 40.1	-1.1
SNAA				IAmb	IAmb	00 20 50.8	
	comp=Z,5.3nm,1.3s						
GERES	GERESS Array B	147.31	331	PKPbc	PKPbc	00 27 40.7	+0.2
	comp=Z,0.5nm,0.6s,baz=34,slow=3.7,SNR=5.0						
DAVOX	Davos/Dischmat	150.55	333	PKPbc	PKPbc	00 27 49.0	+0.1
	comp=Z,1.5nm,0.3s,baz=27,slow=2.3,SNR=8.0						

ATH 30 00:13:24.8, 38°.31N×20°.40E, h15^{km}±1^{km}, ML1.8/2, Error ellipse: s-maj=3.1km s-min=0.9km az=266.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF4	Livadi, Kephal	0.05	161	P	Pg	00 13 27.5	-0.1
KEF4				S	Sg	00 13 29.4	-0.1
VLS	Valsamata	0.20	131	P	Pg	00 13 29.3	-0.1
VLS				S	Sg	00 13 32.4	-0.1
VLS				AML	AML	00 13 32.8	
	comp=N,1078μm,0.1s						
VLS				AML	AML	00 13 32.8	
	comp=E,1665μm,0.1s						
FSK	Fiskardo	0.20	39	P	Pg	00 13 29.2	-0.3
FSK				S	Sg	00 13 32.3	-0.3
FSK				AML	AML	00 13 32.4	
	comp=N,449μm,0.3s						
FSK				AML	AML	00 13 33.0	
	comp=E,587μm,0.2s						
PSDA	Pessada-Kefalo	0.24	143	P	Pg	00 13 30.2	+0.1
PSDA				S	Sb	00 13 34.3	-0.5
EVGI	Lefkada island	0.37	32	P	Pg	00 13 32.2	-0.2
EVGI				S	Sg	00 13 37.9	+0.3
LKD2	Lefkada island	0.52	22	P	Pg	00 13 34.8	-0.4
LKD2				S	Sb	00 13 42.9	-0.2
TSLK	Tsoukalades, L	0.56	21	P	Pg	00 13 35.7	-0.1
TSLK				S	Sb	00 13 43.8	-0.2
LTHK	Lithakia	0.69	150	P	Pg	00 13 37.9	-0.3
LTHK				S	Sb	00 13 47.9	+0.2
PVO	Paravola	0.93	70	P	Pb	00 13 41.8	-0.9

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*IDC **30** 00:17:24.4±0.6, 0°.54S×135°.90E, h0^{km}, mb4.3/15, mbtmp4.3/17, ML4.3/2, Error ellipse: s-maj=23.0km s-min=13.7km az=74.0*

*DJA **30** 00:17:28.4±1.5, 1°S±6°×13°6E±°, h24^{km}±17^{km}, M4.6/10,* *mb4.4/7,mB5.3/2,MLv4.7/10,Mw(mB)4.8/2*

NEIC ***30*** *00:17:31.2±0.8,0°.64S±0°.09×135°.73E±0°.10,h45^{km}±7^{km}, mb4.4/24,Error ellipse: s-maj=14.1km s-min=13.3km az=99.0*

ISC 30 00:17:28.6±0.5,**0°.63S**±0°.06×**135°.84E**±0°.06,**h29^{km},n66, σ0^s.76**/63,**mb4.4**/22,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	Serui, Papua	1.30	162	P	Pb	00 17 51.5	-1.0
SRPI				S	Sb	00 18 09.2	+0.4
RKPI	Ransiki, Papua	1.88	242	P	Pn	00 17 58.8	0.0
RKPI				S	Sn	00 18 22.5	+1.0
SMPI	Sarmi	3.18	115	P	Pn	00 18 16.3	-0.4
FAKI	Fak Fak	4.25	238		Pn	00 18 31.8	+0.4
FAKI				Sn	Sn	00 19 18.8	-1.3
FAKI	Fak Fak	4.25	238	P	Pn	00 18 32.1	+0.7
SIJI	Sorong	4.58	267	Pn	Pn	00 18 36.7	+0.8
	10.0nm,0.3s,baz=41,slow=18,SNR=33						
SIJI				Sn	Sn	00 19 29.7	+1.5
	9.7nm,0.3s,baz=22,slow=19,SNR=2.1						
	30nm,0.2s						
GENI	Genyem	4.75	114	P	Pn	00 18 39.1	+0.8
BNDI	Bandanaira	7.08	237	P	Pn	00 19 11.2	+0.9
	178nm,1.4s,1.4nm						
MSAI	Masohi	7.41	249	P	Pn	00 19 15.0	+0.1
MTN	Manton Dam	13.00	201		Pn	00 20 31.9	+0.3
TOLI2	Tolitoli	15.15	277		Pn	00 21 00.3	-0.4
TOLI2				IAmb	IAmb	00 21 07.4	
	comp=Z,13nm,0.7s						
SPSI	Sidrap Palu	16.39	258	P	P	00 21 19.9	+0.5
	comp=Z,10nm,1.5s,comp=Z,1μm						
KNRA	Kununurra	16.50	205		Pn	00 21 17.7	-0.5
KNRA				IAmb	IAmb	00 21 18.2	
	comp=Z,20nm,0.8s						
WB0	Warramunga Arr	19.08	184	P	Pn	00 21 49.0	-0.9
WRA	Warramunga Arr	19.25	184	P	Pn	00 21 51.8	-0.3
	comp=Z,1.3nm,0.3s,baz=0.4,slow=11,SNR=45						
	comp=Z,7.7nm,0.6s						
WRA	Warramunga Arr	19.25	184	P	Pn	00 21 51.0	-1.1
FITZ	Fitzroy Crossi	20.05	209	P	P	00 21 58.7	-0.8
CTA	Charters Tower	21.87	153	P	P	00 22 18.8	-0.5
	comp=Z,5.6nm,0.9s,baz=331,slow=13,SNR=2.0						
	comp=Z,5.6nm,0.9s						
CTAO	Charters Tower	21.87	153	P	P	00 22 20.5	+1.3
CTAO				IAmb	IAmb	00 22 28.9	
	comp=Z,25nm,1.2s						
ASAR	Alice Springs	22.98	185	P	P	00 22 30.8	-0.3
	comp=Z,6.0nm,0.6s,baz=11,slow=9.9,SNR=30						
	comp=Z,6.0nm,0.6s						
MBWA	Marble Bar	25.76	217	P	P	00 22 56.8	-0.3
MBWA				IAmb	IAmb	00 23 22.2	
	comp=Z,36nm,1.4s						
PSA00	Pilbara Seismi	26.01	216	P	P	00 22 58.8	-0.6
PSA00				IAmb	IAmb	00 23 29.1	
	comp=Z,20nm,1.2s						
PMBI	Palembang	31.13	265	P	P	00 23 44.3	-0.8
STKA	Stephens Creek	31.56	171	P	P	00 23 48.9	+0.3
	comp=Z,3.9nm,0.4s,baz=344,slow=8.6,SNR=11						
	comp=Z,3.9nm,0.4s						
STKA	Stephens Creek	31.56	171	P	P	00 23 49.1	+0.5
H11S3	WAKE ISLAND Hy	35.78	56	T	T	01 02 26.3	
	baz=239,slow=74,SNR=14						
H11S2	WAKE ISLAND Hy	35.80	56	T	T	01 02 32.0	
	baz=239,slow=74,SNR=12						
H11S1	WAKE ISLAND Hy	35.80	56	T	T	01 02 26.0	
	baz=239,slow=74,SNR=9.3						
H11N1	WAKE ISLAND Hy	36.55	55	T	T	01 03 47.0	
	baz=243,slow=75,SNR=12						
H11N2	WAKE ISLAND Hy	36.56	55	T	T	01 03 26.3	
	baz=243,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	36.56	55	T	T	01 03 47.9	
	baz=243,slow=75,SNR=13						
CMAR	Chiang Mai Arr	40.92	300	P	P	00 25 08.6	-0.2
	comp=Z,0.9nm,0.4s,baz=109,slow=6.2,SNR=6.9						
	comp=Z,0.9nm,0.4s						
CMAR	Chiang Mai Arr	40.92	300	P	P	00 25 08.0	-0.8
KLR	Kul'dur	49.79	356	P	P	00 26 18.9	+0.3
	comp=Z,1.2nm,0.6s,baz=140,slow=2.8,SNR=4.3						
	comp=Z,1.2nm,0.6s						
RTZ	Ruatahuna	53.37	140	P	P	00 26 45.8	+0.1
SONM	Songino Array	54.64	336	P	P	00 26 55.0	+0.1
	comp=Z,0.3nm,0.5s,baz=161,slow=6.4,SNR=2.4						
	comp=Z,0.3nm,0.5s						
SHEM	Shemya Is, Ala	62.04	25	P	P	00 27 44.8	-1.5
	comp=Z,62nm,0.4s,baz=300,slow=2.8,SNR=13						
MK31	Makanchi Array	66.40	323	P	P	00 28 15.1	0.0
MK31				IAmb	IAmb	00 28 16.3	
	comp=Z,2.4nm,0.8s						
MKAR	Makanchi Array	66.40	323	P	P	00 28 15.3	+0.2
	comp=Z,2.2nm,0.5s,baz=106,slow=8.6,SNR=34						
	comp=Z,2.2nm,0.5s						
MKAR	Makanchi Array	66.40	323	P	P	00 28 15.2	+0.1
ZALV	Zalesovo Beam	68.71	330	P	P	00 28 28.9	-0.5
	comp=Z,0.8nm,0.6s,baz=126,slow=7.1,SNR=4.8						
	comp=Z,0.8nm,0.6s						
ZALV	Zalesovo Beam	68.71	330	P	P	00 28 28.7	-0.8
FRU1	Bishkek	69.69	317	P	P	00 28 33.9	-2.0
KURK	Kurchatov	70.38	325	P	P	00 28 39.7	-0.1
KURK				IAmb	IAmb	00 28 40.6	
	comp=Z,4.7nm,0.8s						
KURBB	Kurchatov Arra	70.39	325	P	P	00 28 40.1	+0.3
	comp=Z,4.2nm,0.8s,baz=116,slow=5.8,SNR=31						
	comp=Z,4.2nm,0.8s						
KKAR	Karatay Array	72.64	316	P	P	00 28 53.3	-0.4
KKAR				IAmb	IAmb	00 28 55.1	
	comp=Z,2.9nm,0.9s						
BVAR	Borovoye Array	75.97	326	P	P	00 29 12.8	0.0
	comp=Z,3.8nm,0.9s,baz=110,slow=8.0,SNR=12						
	comp=Z,3.8nm,0.9s						
BRVK	Borovoye	76.05	326	P	P	00 29 13.2	-0.1
BRVK				IAmb	IAmb	00 29 14.6	
	comp=Z,5.1nm,1.1s						
VNDA	Vanda	78.11	174	P	P	00 29 24.7	+0.3
GEYT	Alibeck	80.70	308	P	P	00 29 40.2	+0.8
	comp=Z,1.4nm,0.5s,baz=20,slow=4.6,SNR=4.0						
	comp=Z,1.4nm,0.5s						
ABKAR	Akbulak array	81.29	320	P	P	00 29 41.5	-0.7
ABKAR	Akbulak array	81.29	320	P	P	00 29 41.8	-0.4
ABKAR				IAmb	IAmb	00 29 55.9	
	comp=Z,1.8nm,1.1s						
M20K	Styx River	81.70	27	P	P	00 29 44.9	+0.7
M20K				IAmb	IAmb	00 30 13.2	
	comp=Z,6.7nm,1.3s						
SML	Sawmill	83.88	28	P	P	00 29 55.6	+0.1
TOLK	Toolik Lake Re	85.00	21	P	P	00 30 02.1	+1.1
TOLK				IAmb	IAmb	00 30 03.6	
	comp=Z,3.1nm,0.9s						
ILAR	Eielson Array	85.15	25	P	P	00 30 01.6	-0.3
	comp=Z,1.3nm,0.8s,baz=263,slow=4.6,SNR=8.7						
	comp=Z,1.3nm,0.8s						
ILAR	Eielson Array	85.15	25	P	P	00 30 02.4	+0.6
GLB	Gilahina Butte	85.93	28		P	00 30 07.1	+1.3
BMAR	Burnt Mountain	86.57	22	P	P	00 30 10.3	+1.4
BCAR	Beaver Creek A	87.09	27	P	P	00 30 12.2	+0.7
QSPA	South Pole Qui	89.31	180	P	P	00 30 22.8	+0.7
	comp=Z,2.6nm,1.0s,baz=303,slow=0.5,SNR=5.8						
	comp=Z,2.6nm,1.0s						
QSPA	South Pole Qui	89.31	180	P	P	00 30 22.8	+0.7
ARCES	ARCESS Array B	97.60	341	P	Pdif	00 30 59.3	-0.7
	comp=Z,3.4nm,0.8s,baz=53,slow=4.7,SNR=4.3						
	comp=Z,3.4nm,0.8s						
YKA	Yellowknife Ar	99.50	26	P	Pdif	00 31 08.7	+0.1
	comp=Z,0.3nm,0.9s,baz=285,slow=4.8,SNR=3.7						
	comp=Z,0.3nm,0.9s						
CPUP	Villa Florida	150.34	156	PKPbc	PKiKP	00 37 19.1	+0.3
	comp=Z,1.8nm,0.4s,baz=143,slow=5.1,SNR=6.5						
LPAZ	La Paz	150.99	126	PKPbc	PKiKP	00 37 22.5	+1.3
	comp=Z,3.0nm,0.8s,baz=264,slow=9.4,SNR=10						

IDC ***30*** *00:20:34.6±3.8,1°.91S×78°.04W,h142^{km}±35^{km},mb3.3/7, mbtmp3.9/10,MS4.2/3,Error ellipse: s-maj=30.9km s-min=15.9km az=63.0*

NEIC ***30*** *00:20:38.4±2.9,1°.76S±0°.07×78°.03W±0°.09,h168^{km}±5^{km}, mb4.3/13,Error ellipse: s-maj=13.3km s-min=9.5km az=101.0*

VAO ***30*** *00:20:40.0±0.3,1°.73S×77°.71W,h150^{km},mb4.0*

ISC 30 00:20:37.0±0.5,**1°.78S**±0°.06×**77°.94W**±0°.06,**h150^{km},n98, σ1^s.70**/96,**mb3.8**/12,**Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIAT	Ana Tenorio	0.84	338	*e*P	Pn	00 21 02.6	+1.7
PORT	Chimborazo Vol	0.89	291	Pn	Pn	00 21 04.0	+2.4
PORT				Sn	Sn	00 21 23.6	+3.5
CHSH	Refugio Sur-Vo	0.97	287		Pn	00 21 04.1	+2.0
CHSH				Sn	Sn	00 21 24.2	+2.9
SLOR	San Lorenzo -	1.18	332	Pn	Pn	00 21 06.5	+2.6
PULU	Pululahua	1.87	343		Pn	00 21 12.6	+1.5
IMBA	Imbabura, San	2.06	353	Pn	Pn	00 21 15.8	+2.6
OTAV	Otavalo	2.07	346	Pn	Pn	00 21 14.9	+1.5
OTAV	Otavalo	2.07	346	*e*P	Pn	00 21 14.7	+1.4
OTAV	Otavalo	2.07	346	*e*P	Pn	00 21 15.4	+2.1
CUSE	Cuicocha Este	2.12	348	*e*P	Pn	00 21 16.3	+2.3
PAC1	Pacto, Paraso	2.20	337	*e*P	Pn	00 21 16.3	+1.6
BONI	La Bonita	2.25	11	*e*P	Pn	00 21 17.1	+1.7
FLF1	Flavio Alfaro-	2.37	307	*e*P	Pn	00 21 17.3	+0.8
TULM	Tulcn-Chalpat	2.48	4	Pn	Pn	00 21 20.8	+2.4
TULM	Tulcn-Chalpat	2.48	4	*e*P	Pn	00 21 22.2	+3.8
CMBC	Cumbal	2.70	2	*e*P	Pn	00 21 24.6	+3.6
GCUF	Volcan Galeras	3.04	11	*e*P	Pn	00 21 27.9	+2.5
SALI	Salinas	3.07	262	Pn	Pn	00 21 24.7	-0.5
SALI				Sn	Sn	00 22 00.5	-2.1
CRUC	La Cruz	3.47	17	*e*P	Pn	00 21 33.1	+2.4
BBAC	Balboa, Cauca	3.84	10	*e*P	Pn	00 21 37.1	+1.7
FLOC	Florencia	4.05	34	*e*P	Pn	00 21 39.4	+1.4
POPC	Popayan, Colom	4.47	16	*e*P	Pn	00 21 44.7	+1.0
GARC	Garzon, Huila	4.64	32	*e*P	Pn	00 21 47.1	+1.3
GR1C	Gorgona, Isla	4.75	357	*e*P	Pn	00 21 48.7	+1.5
JAMC	Jamundi, Valle	5.12	14	*e*P	Pn	00 21 52.6	+0.4
ATAH	Atahualpa	5.34	185	P	Pn	00 21 57.0	+1.7
	32nm,0.6s,baz=18,slow=12,SNR=26						
ATAH				S	Sn	00 22 56.4	-0.1
	45nm,0.7s,baz=30,slow=20,SNR=3.7						
MACC	Macarena, Meta	5.65	46	*e*P	Pn	00 21 59.7	+0.6
YOTC	Yotoco, Valle	5.94	16	*e*P	Pn	00 22 01.0	-2.1
PRAC	Prado	6.25	29		Pn	00 22 07.4	+0.3
PRAC	Prado	6.25	29	*e*P	Pn	00 22 07.4	+0.3
ORTC	Ortega, Tolima	6.26	25	*e*P	Pn	00 22 08.4	+1.2
PLMC	San Jos del P	6.84	14	*e*P	Pn	00 22 12.9	-2.1
VILC	Villavicencio,	7.23	36	*e*P	Pn	00 22 22.2	+2.0
ROSC	El Rosal	7.50	29	P	Pn	00 22 23.3	-0.8
	5.0nm,0.4s,baz=145,slow=21,SNR=1.8						
CHIC	Chingaza	7.63	33	*e*P	Pn	00 22 30.2	+4.3
CZSB	Cruzeiro do Su	7.88	139		Pn	00 22 29.3	+0.5
CZSB	Cruzeiro do Su	7.88	139	*e*P	Pn	00 22 29.6	+0.7
TBTG	Tabatinga, AM	8.37	107	*e*P	Pn	00 22 34.3	-1.1
DBBC	Dabeiba	8.91	11	*e*P	Pn	00 22 43.2	+0.6
PTBC	PUERTO BERRIO,	8.97	23	*e*P	Pn	00 22 42.7	-0.6
RUSC	La Rusia	9.03	32		Pn	00 22 45.5	+0.8
RUSC	La Rusia	9.03	32	*e*P	Pn	00 22 47.0	+2.3
ZARC	Zaragoza, Cauc	9.71	18	*e*P	Pn	00 22 52.0	-1.2
NNA	Nana	10.20	174	S	Sn	00 24 42.1	-11
	6.2nm,0.3s,baz=76,slow=12,SNR=2.0						
NNA	Nana	10.20	174	Pn	Pn	00 23 01.8	+2.1
SGCB	S£o Gabriel d	11.03	82	*e*P	Pn	00 23 08.8	-1.9
SDV	Santo Domingo	12.86	34	P	Pn	00 23 34.0	-0.6
	2.9nm,0.3s,baz=212,slow=4.6,SNR=2.9						
SDV	Santo Domingo	12.86	34		Pn	00 23 34.2	-0.4
SDV	Santo Domingo	12.86	34	*e*P	Pn	00 23 34.7	+0.1
TEFE	Tefe	13.40	98	*e*P	Pn	00 23 40.1	-1.3
ETMB	Extrema	14.13	125	Pn	Pn	00 23 50.5	-0.1
ETMB	Extrema	14.13	125	*e*P	Pn	00 23 48.7	-2.0
BAUV	El Baul	14.52	43		Pn	00 23 54.0	-1.5
URIC	Uribia, Colomb	14.64	24	Pn	Pn	00 23 55.3	-1.7
AUA1	Aruba	16.23	29	P	Pn	00 24 15.6	-1.0
AUA1				IAmb	IAmb	00 24 19.7	
	comp=Z,177nm,0.8s						
MACA	Manacapuru-AM	17.30	95	P	P	00 24 26.5	-2.2
MACA				IAmb	IAmb	00 24 28.9	
	comp=Z,11nm,0.5s						
LPAZ	La Paz	17.36	147	P	P	00 24 29.1	-0.8
	comp=Z,1.6nm,0.4s,baz=288,slow=7.2,SNR=13						
LPAZ	La Paz	17.36	147	P	Pn	00 24 30.7	-0.1
LPAZ	La Paz	17.36	147	*e*P	P	00 24 30.1	+0.2
BOAV	Boa Vista	17.90	77	*e*P	P	00 24 36.0	+0.7
PB12	IPOC Station P	18.32	156	P	P	00 24 40.0	+0.1
PB12				IAmb	IAmb	00 24 50.4	
	comp=Z,13nm,0.9s						
PB16	IPOC Station P	18.42	154	P	Pn	00 24 43.1	-0.3
PB16				IAmb	IAmb	00 24 44.9	
	comp=Z,9.1nm,0.7s						
MNMC	Minye Minye	19.09	155	P	P	00 24 49.9	+1.4
SIV	San Ignacio	21.81	131	P	P	00 25 16.3	-1.2
	comp=Z,2.5nm,0.4s,baz=305,slow=9.5,SNR=17						
	comp=Z,2.5nm,0.4s						
ITTB	Itaituba	22.32	97	*e*P	P	00 25 22.6	0.0
LVC	Limon Verde	22.49	158	*e*P	P	00 25 27.6	+3.1
LVC	Limon Verde	22.49	158	*i* S	P	00 25 27.6	+3.1
BBSD	Serra de San D	22.91	133	*e*P	P	00 25 29.0	+0.9
PTLB	Pontes e Lacer	22.99	127		P	00 25 28.9	+0.1
PTLB				IAmb	IAmb	00 25 30.9	
	comp=Z,5.7nm,0.9s						
PTLB	Pontes e Lacer	22.99	127	*e*P	P	00 25 30.9	+2.1
NPGB	Novo Progresso	23.11	104	*e*P	P	00 25 29.6	-0.4
PDRB	Porto dos Gac	23.20	116	*e*P	P	00 25 32.0	+1.2
MALB	Monte Alegre	23.66	91	*e*P	P	00 25 35.1	+0.1
MCPB	Macapa, AP	25.92	87	*e*P	P	00 25 55.2	-0.2
MDP	Montagnes des	26.18	75	P	P	00 25 57.8	0.0
	comp=Z,3.1nm,0.6s,baz=268,slow=8.4,SNR=7.6						
	comp=Z,3.1nm,0.6s						
SNDB	Serra Nova Dou	28.29	112	*e*P	P	00 26 16.9	+0.2
AQDB	Aquidauana	28.58	132	*e*P	P	00 26 20.1	+1.0
CO01	Juntas del Tor	29.02	166	P	P	00 26 24.4	+1.2
CO01				IAmb	IAmb	00 26 43.1	
	comp=Z,9.9nm,1.3s						
ROC1	El Roble	31.71	169	P	P	00 26 47.3	+0.5
LMEL	Las Melosas	32.72	168	P	P	00 26 57.6	+2.0
LMEL				IAmb	IAmb	00 26 59.3	
	comp=Z,4.6nm,0.6s						
IPMB	Ipameri, GO	33.33	121	*e*P	P	00 27 01.4	+0.5
PLCA	Paso Flores	39.35	171	P	P	00 27 47.8	-4.0
	comp=Z,0.6nm,0.4s,baz=252,slow=1.3,SNR=3.8						
	comp=Z,0.6nm,0.4s						
PLCA	Paso Flores	39.35	171	*e*P	P	00 27 53.5	+1.8
BNM	Barren Site	44.77	326	P	P	00 28 37.0	+1.0
ANMO	Albuquerque	45.26	326		P	00 28 41.0	+1.2
SDCO	Great Sand Dun	46.87	330	P	P	00 28 53.6	+1.1
PDAR	Pinedale Array	52.70	331	P	P	00 29 36.2	-0.2
	comp=Z,0.4nm,0.6s,baz=120,slow=7.1,SNR=4.3						
	comp=Z,0.4nm,0.6s						
ULM	Lac du Bonnet	54.07	346	LR	LR	00 53 59.2	
	comp=Z,156nm,20.4s,baz=240,slow=37						
NVAR	Mina Array Bea	54.61	321	P	P	00 29 50.1	-0.3
	comp=Z,0.5nm,0.5s,baz=130,slow=5.5,SNR=3.8						
	comp=Z,0.5nm,0.5s						
FRB	Frobisher Bay	65.74	5	LR	LR	01 02 22.5	
	comp=Z,207nm,20.0s,baz=316,slow=38						
YKA	Yellowknife Ar	69.82	343	P	P	00 31 28.9	-1.9
	comp=Z,0.2nm,0.6s,baz=139,slow=6.2,SNR=7.7						
	comp=Z,0.2nm,0.6s						
SFJD	Kangerlussuaq	71.30	11	LR	LR	01 03 32.0	
	comp=Z,208nm,21.9s,baz=328,slow=36						
TOA0	Torodi Ar. Sit	80.32	76	P	P	00 32 31.1	-1.0
TOA0				IAmb	IAmb	00 32 56.1	
	comp=Z,11nm,1.5s						
TORD	Torodi Ar. Bea	80.32	76	P	P	00 32 31.0	-1.1
	comp=Z,0.3nm,0.5s,baz=278,slow=6.4,SNR=2.4						
ILAR	Eielson Array	82.76	336	P	P	00 32 43.3	-0.6
	comp=Z,0.5nm,0.7s,baz=170,slow=5.1,SNR=5.4						
	comp=Z,0.5nm,0.7s						
MKAR	Makanchi Array	131.97	18	PKP	PKPdf	00 39 31.8	-1.1
	comp=Z,0.2nm,0.4s,baz=286,slow=3.3,SNR=4.9						
ASAR	Alice Springs	140.01	229	PKhKP	PKPpre	00 39 41.7	
	comp=Z,0.5nm,0.7s,baz=121,slow=3.1,SNR=4.1						
WRA	Warramunga Arr	141.68	234	PKhKP	PKPpre	00 39 45.9	
	comp=Z,0.7nm,0.6s,baz=116,slow=3.0,SNR=2.6						

GUC 30 00:24:44.8±0.8,**21°.36S**×**69°.01W,h102^{km}**±4^{km},**ML3.3, 10C-1D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.49	207	⇑*i*P	Pn	00 25 01.3	+0.4
PB09				*i* S	Sn	00 25 13.9	+0.9
PB09				IAML		00 25 14.7	
	comp=N,884nm,0.3s						
PB01	IPOC Station P	0.55	304	⇑*i*P	Pn	00 25 01.6	+0.3
PB01				*i* S	Sn	00 25 14.3	+0.7
PB01				IAML		00 25 15.5	
	comp=E,2μm,0.4s						
PB02	IPOC Station P	0.83	272	⇑*i*P	Pn	00 25 04.5	+0.8
PB02				*i* S	Sn	00 25 19.1	+1.2
PB07	IPOC Station P	0.90	246	⇑*i*P	Pn	00 25 05.1	+0.6
PB07				*i* S	Sn	00 25 20.0	+0.7
PB07				IAML		00 25 21.0	
	comp=N,1μm,0.2s						
PB03	IPOC Station P	0.98	225	⇑*i*P	Pn	00 25 05.8	+0.5
PB03				*i* S	Sn	00 25 21.4	+0.6
PB03				IAML		00 25 22.2	
	comp=N,857nm,0.3s						
PB08	IPOC Station P	1.22	353	⇑*i*P	Pn	00 25 09.1	+0.9
PB08				*i* S	Sn	00 25 27.3	+1.5
PB08				IAML		00 25 28.4	
	comp=E,526nm,0.2s						
LVC	Limon Verde	1.25	176	⇓*i*P	Pn	00 25 09.1	+0.5
TA01	Diego Aracena	1.35	305	⇑*i*P	Pn	00 25 09.9	+0.5
TA01				*i* S	Sn	00 25 28.7	+0.8
TA01				IAML		00 25 30.4	
	comp=E,438nm,0.2s						
PB04	IPOC Station P	1.44	227	⇑*i*P	Pn	00 25 10.8	+0.2
PB04				*i* S	Sn	00 25 30.9	+0.7
PB04				IAML		00 25 35.2	
	comp=E,290nm,0.4s						
PB11	IPOC Station P	1.70	339	⇑*i*P	Pn	00 25 14.2	+0.4
PB11				*i* S	Sn	00 25 36.6	+0.8
PB11				IAML		00 25 38.4	
	comp=E,498nm,0.1s						
MNMC	Minye Minye	2.28	346	⇑*i*P	Pn	00 25 21.9	+0.5
MNMC				*i* S	Sn	00 25 50.5	+1.2
MNMC				IAML		00 25 56.5	
	comp=E,351nm,0.3s						

WEL 30 00:25:18.5±0.7,**42°S**±4°×**17°4E**±°,**h10^{km}**±4^{km},**M1.9**/3, **ML2.3**/6,**MLv1.9**/3,**Error ellipse: s-maj=0.0km s-min=0.0km az=131.7,confirmed,South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.17	238	P	Pg	00 25 22.9	+0.7
KHZ				S	Sg	00 25 26.7	+1.9
BSWZ	Blackbirch Sta	0.62	10	P	Pg	00 25 30.7	+0.2
BSWZ				S	Sb	00 25 39.7	-0.4
CMWZ	Cape Campbell	0.67	32	P	Pb	00 25 32.8	+0.4
GVZ	Greta Valley S	0.83	219	P	Pb	00 25 34.9	-0.1
GVZ				S	Sn	00 25 47.7	-0.9
THZ	Tophouse	0.84	312	P	Pb	00 25 35.1	0.0
THZ				S	Sb	00 25 47.1	+0.6
TUWZ	Tuamarina	0.91	10	P	Pg	00 25 36.0	0.0
LTZ	Lake Taylor	1.18	247	P	Pb	00 25 40.4	-0.7
LTZ				S	Sg	00 25 56.5	+0.1
TCW	Tory Channel	1.18	20	P	Pb	00 25 39.4	-1.6
DSZ	Denniston Nort	1.55	291	P	Pb	00 25 47.3	-0.1
MQZ	McQueen's Vall	1.59	210	P	Pn	00 25 44.1	-2.7
MQZ				S	Sn	00 26 04.0	-3.5
AKCZ	Akaroa Harbour	1.66	201	P	Pn	00 25 45.7	-2.1
QRZ	Quartz Range	1.75	328	P	Pb	00 25 50.3	-0.5
TMWZ	Te Maipa	2.02	54	P	Pn	00 25 51.5	-1.2
BFZ	Birch Farm	2.50	50	P	Pn	00 25 55.6	-3.6

WEL 30 01:14:12.3±0.9,**39°S**±5°×**17°7E**±°,**h22^{km}**±9^{km},**M1.6**/4, **ML2.0**/7,**MLv1.6**/4,**Error ellipse: s-maj=0.0km s-min=0.0km az=152.8,confirmed,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNZ	Kokohu	0.16	57	P	Pb	01 14 18.2	+0.3
WHHZ	Waihua	0.21	279	P	Pb	01 14 18.6	+0.5
WHHZ				S	Sb	01 14 23.1	+1.0
MHGZ	Mahia Peninsul	0.32	98	P	Pn	01 14 20.9	-0.7
SNGZ	Shannon Statio	0.35	339	P	Pn	01 14 21.1	-0.9
SNGZ				S	Sn	01 14 28.2	-0.3
SNGZ	Shannon Statio	0.35	339	S	Sn	01 14 28.2	-0.2
RAHZ	Arahi	0.38	301	P	Pb	01 14 21.2	+1.0
RAHZ				S	Sn	01 14 28.2	-0.8
RAHZ	Arahi	0.38	301	S	Sn	01 14 28.3	-0.7
ARHZ	Aropaoanui	0.42	248	P	Pb	01 14 21.9	+0.9
ARHZ				S	Sn	01 14 29.6	-0.5
ARHZ	Aropaoanui	0.42	248	S	Sn	01 14 29.6	-0.6
CKHZ	Cape Kidnapper	0.64	211	P	Pb	01 14 25.2	+0.4
CKHZ	Cape Kidnapper	0.64	211	S	Sn	01 14 35.7	+0.1
RTZ	Ruatahuna	0.64	320	P	Pn	01 14 25.5	-0.6
BKZ	Black Stump Fm	0.79	266	P	Pb	01 14 27.5	+0.2
BKZ				S	Sn	01 14 39.4	+0.1
BKZ	Black Stump Fm	0.79	266	S	Sn	01 14 39.3	+0.1
PRHZ	Porangahau	1.33	210	P	Pn	01 14 26.9	-8.8
ETVZ	East Tongariro	1.39	268	P	Pn	01 14 36.8	+0.3
LREZ	Lake Rotokare	2.43	261	P	Pn	01 14 51.0	+0.3
PAWZ	Paruwai Farm	2.77	214	P	Pn	01 14 53.9	-1.5
PLWZ	Palliser	3.00	214	P	Pn	01 14 57.7	-0.8
THZ	Tophouse	4.39	231	P	Pn	01 15 13.7	-4.1

WEL 30 01:14:29.5,39°S±2°×**17°6E**±°,**h7^{km}**±2^{km},**M1.1**/9,**ML1.4**/9, **MLv1.1**/9,**Error ellipse: s-maj=0.0km s-min=0.0km az=92.0,confirmed,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KATZ	Kakaramea	0.04	167	P	Pg	01 14 31.5	+0.4
RATZ	Rangitukua	0.10	43	P	Pg	01 14 32.0	+0.2
RITZ	Rihia Road	0.14	105	P	Pg	01 14 33.1	+0.7
KRVZ	Karewarewa	0.16	192	P	Pg	01 14 33.6	+0.8
NTVZ	North Tongarir	0.16	182	P	Pg	01 14 33.7	+0.9
NTVZ				S	Sg	01 14 36.2	+1.1
TMVZ	Te Maari	0.18	175	P	Pg	01 14 34.1	+1.0
TMVZ				S	Sg	01 14 36.6	+1.0
WTVZ	West Tongariro	0.19	203	P	Pg	01 14 34.2	+0.8
ETVZ	East Tongariro	0.20	174	P	Pg	01 14 34.4	+0.9
ETVZ				S	Sg	01 14 37.8	+1.6
NNVZ	North Ngauruho	0.20	196	P	Pg	01 14 34.4	+0.9
NNVZ				S	Sg	01 14 37.7	+1.4
TWVZ	Taurewa	0.23	236	P	Pg	01 14 34.8	+0.7
NGZ	Ngauruhoe	0.24	195	P	Pg	01 14 35.2	+0.8
NGZ				S	Sg	01 14 38.5	+0.8
WNVZ	Wahianoa	0.39	190	P	Pg	01 14 38.0	+0.8

IDC ***30*** *01:27:43.4±1.3,5°.45S×151°.98E,h0^{km},mb3.9/7, mbtmp3.9/8,ML1.6/1,MS3.5/7,Error ellipse: s-maj=55.1km s-min=21.1km az=125.0*

ISC 30 01:27:49.9±1.2,**5°.5S**±0°.2×**151°.9E**±0°.3,**h45^{km},n13, σ0^s.82**/9,**mb3.8**/7,**MS3.5**/5,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.06	230	Pn	Pn	01 29 17.9	+0.9
	0.8nm,0.3s,baz=30,slow=9.8,SNR=6.4						
PMG				Sn	Sn	01 30 23.8	-1.3
	baz=131,slow=19						
PMG				LR	LR	01 31 45.9	
	comp=Z,342nm,20.9s,baz=42,slow=39						
	21nm,0.7s						
CTA	Charters Tower	15.48	200	LR	LR	01 36 50.1	
	comp=Z,213nm,18.8s,baz=72,slow=35						
SIJI	Sorong	21.07	282	LR	LR	01 42 09.8	
	comp=Z,88nm,19.3s,baz=123,slow=41						
DZM	Mont Dzumac	21.67	141	LR	LR	01 40 30.6	
	comp=Z,183nm,18.2s,baz=28,slow=35						
WRA	Warramunga Arr	22.27	228	P	P	01 32 43.9	+0.5
	2.0nm,0.8s,baz=52,slow=10,SNR=7.0						
	2.0nm,0.8s						
ASAR	Alice Springs	25.00	222	P	P	01 33 09.6	-0.1
	3.7nm,0.8s,baz=57,slow=9.6,SNR=28						
	3.7nm,0.8s						
RAR	Rarotonga	49.35	113	LR	LR	01 53 41.5	
	comp=Z,39nm,21.5s,baz=136,slow=32						
USRK	Ussuriysk Ar.	52.63	342	LR	LR	01 59 09.9	
	comp=Z,42nm,18.0s,baz=190,slow=36						
SONM	Songino Array	66.44	328	P	P	01 38 35.0	+0.3
	0.5nm,0.5s,baz=156,slow=5.5,SNR=5.8						
	0.5nm,0.5s						
MKAR	Makanchi Array	80.25	319	P	P	01 39 55.8	-0.2
	0.9nm,1.0s,baz=95,slow=7.4,SNR=5.3						
MKAR				LR	LR	02 13 12.1	
	comp=Z,26nm,21.8s,baz=321,slow=34						
	0.9nm,1.0s						
ILAR	Eielson Array	83.17	22	P	P	01 40 10.2	-0.8
	0.5nm,0.6s,baz=244,slow=4.9,SNR=7.8						
	0.5nm,0.6s						
NVAR	Mina Array Bea	93.26	52	P	P	01 41 00.1	-0.3
	1.0nm,1.0s,baz=241,slow=1.9,SNR=2.5						
	1.0nm,1.0s						
YKA	Yellowknife Ar	96.49	28	P	P	01 41 14.9	+0.6
	0.1nm,0.6s,baz=270,slow=4.9,SNR=2.0						
	0.1nm,0.6s						

CRAAG ***30*** *01:41:06.6,36°.48N×5°.33E,Ml3.2,Algerie 04km SE*

Kherrata

MDD ***30*** *01:41:09.0±0.6, 36°.60N×5°.43E, h2^{km}±7^{km}, Mb4.1/25, M_mb3.4/25, Error ellipse: s-maj=8.1km s-min=3.0km az=147.0*

IDC ***30*** *01:41:08.3±2.7, 37°.02N×5°.62E, h0^{km}, mb3.3/2, mbtmp3.2/4, ML3.2/2, Error ellipse: s-maj=85.1km s-min=24.6km az=24.0*

LDG ***30*** *01:41:11.3±0.2, 36°.64N×5°.43E, h10^{km}, Ml3.0/12, Error ellipse: s-maj=4.0km s-min=2.7km az=167.0*

ISC 30 01:41:09.0±0.8**, 36°.66N**±0°.05×**5°.40E**±0°.04**, h19^{km}, n51, σ1^{s}84**/77**, 20C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DFRA	Djebel Bou Aff	0.40	106	P	Pg	01 41 17.0	-0.4
CKHR	Kef el Ahmar	0.65	172	P	Pb	01 41 18.7	-2.9
CASM	Ain Smara	0.97	114	P	Pb	01 41 26.9	-0.2
CTEI	Djebel Teioual	1.01	126	P	Pb	01 41 27.3	-0.6
CKFL	Kef-Lekhel	1.10	103	P	Pb	01 41 29.2	-0.2
CAEH	'Ain El Ouahch	1.17	84	P	Pb	01 41 31.6	+0.9
ABMS	Boumerdes	1.54	274	P	Pn	01 41 35.4	-0.1
CMAH	Djebel Manchou	1.63	91	P	Pn	01 41 36.9	+0.2
KEST	Kesra	3.33	105	Pn	Pn	01 42 00.8	+0.7
	5.4nm,0.3s,baz=193,slow=2.7,SNR=71						
KEST				Sn	Sn	01 42 41.1	+2.1
	1.0nm,0.3s,baz=180,slow=20,SNR=1.5						
	17nm,0.4s						
ETOS	Mallorca	3.71	328	P	Pn	01 42 06.6	+1.3
ETOS				⇑*i*Vmb_V		01 42 07.0	
	494nm,SNR=9.8						
ETOS				S	Sn	01 42 45.1	-3.5
EIBI	Ibiza	3.99	308	P	Pn	01 42 10.5	+1.5
EIBI				⇑*i*Vmb_V		01 42 11.0	
	360nm,SNR=5.4						
EIBI				S	Sn	01 42 55.5	+0.2
EBEN2	Beniarda presa	4.87	296	P	Pn	01 42 22.5	+1.3
EBEN2				⇑*i*Vmb_V		01 42 24.6	
	185nm,SNR=1.9						
EBEN2				S	Sn	01 43 17.2	+0.2
ECOL	Islas Columbre	4.92	313	P	Pn	01 42 23.0	+1.1
ECOL				S	Sn	01 43 18.0	-0.3
ETRV	Los Montesinos	5.09	287	P	Pn	01 42 24.7	+0.4
ETRV				⇑*i*Vmb_V		01 42 26.0	
	128nm,SNR=2.0						
ETRV				S	Sn	01 43 21.4	-1.1
AFON	Font Roja	5.12	295	P	Pn	01 42 27.1	+2.3
AFON				⇑*i*Vmb_V		01 42 29.0	
	48nm,SNR=1.4						
AFON				S	Sn	01 43 22.2	-1.2
EMUR	La Murta	5.42	285	P	Pn	01 42 29.9	+1.0
EMUR				⇑*i*Vmb_V		01 42 33.5	
	82nm,SNR=2.1						
EVIV	Cofrentes, Val	5.77	299	P	Pn	01 42 35.3	+1.7
EVIV				⇑*i*Vmb_V		01 42 35.5	
	143nm,SNR=1.7						
EPOB	Poblet	5.77	326	P	Pn	01 42 34.9	+1.2
EPOB				⇑*i*Vmb_V		01 42 35.8	
	118nm,SNR=2.7						
EPOB				S	Sn	01 43 37.6	-1.7
ECHE	Chera	5.81	302	P	Pn	01 42 35.9	+1.8
ECHE				⇑*i*Vmb_V		01 42 37.4	
	91nm,SNR=1.2						
ERTA	Horta de San J	5.84	319	P	Pn	01 42 35.9	+1.4
ERTA				⇑*i*Vmb_V		01 42 41.0	
	68nm,SNR=1.2						
ERTA				S	Sn	01 43 40.6	-0.3
ETOB	Tobarra	5.86	292	P	Pn	01 42 35.9	+1.1
ETOB				⇑*i*Vmb_V		01 42 37.4	
	90nm,SNR=1.6						
ETOB				S	Sn	01 43 41.5	0.0
EMOS	Mosqueruela	5.91	311	P	Pn	01 42 37.0	+1.4
EMOS				⇑*i*Vmb_V		01 42 42.1	
	79nm,SNR=1.3						
EMOS				S	Sn	01 43 43.4	+0.6
EMIR	Miracle	6.05	331	P	Pn	01 42 39.5	+2.1
EJON	La Jonquera	6.10	342	P	Pn	01 42 39.5	+1.4
EJON				⇑*i*Vmb_V		01 42 42.5	
	76nm,SNR=2.0						
EJON				S	Sn	01 43 47.3	-0.1
ENIJ	Nijar	6.11	275	P	Pn	01 42 39.5	+1.3
CLTB	Caltabellotta	6.32	79	P	Pn	01 42 43.1	+2.0
PGF	Pioggiola	6.51	24	*e*Pn	Pn	01 42 44.1	+0.3
PGF				*e*Sn	Sn	01 43 54.9	-2.6
	2.9nm,0.3s						
EBER	Berja	6.66	275	P	Pn	01 42 46.8	+0.9
EBER				⇑*i*Vmb_V		01 42 50.0	
	33nm,SNR=1.3						
EBER				S	Sn	01 43 59.9	-1.4
LMR	La Mourre	6.72	7	*e*Pn	Pn	01 42 47.8	+1.2
LMR				*e*Sn	Sn	01 43 59.9	-2.8
	2.4nm,0.2s						
ESAC	San Caprasio	6.81	320	P	Pn	01 42 50.8	+2.9
ESAC				⇑*i*Vmb_V		01 42 55.4	
	190nm,SNR=1.8						
EQES	Quesada	6.85	282	P	Pn	01 42 50.8	+2.2
EQES				⇑*i*Vmb_V		01 42 56.7	
	87nm,SNR=1.4						
EQES				S	Sn	01 44 04.0	-2.0
EQUE	Quentar	7.10	277	P	Pn	01 42 53.2	+1.3
EQUE				⇑*i*Vmb_V		01 42 58.6	
	21nm,SNR=2.1						
MTLF	Montolieu	7.11	341	*e*Pn	Pn	01 42 53.2	+1.3
MTLF				*e*Sn	Sn	01 44 10.2	-2.0
	1.0nm,0.3s						
ETOR	Torete	7.15	308	P	Pn	01 42 55.3	+2.6
ECHI	Chisagues Biel	7.22	328	P	Pn	01 42 55.3	+1.7
ECHI				⇑*i*Vmb_V		01 42 59.8	
	71nm,SNR=1.7						
ELGU	Los Guajares,	7.25	274	P	Pn	01 42 55.3	+1.4
ELGU				⇑*i*Vmb_V		01 42 57.7	
	44nm,SNR=1.7						
SMRF	Simiane la Rot	7.31	1	*e*Pn	Pn	01 42 56.1	+1.3
SMRF				*e*Sn	Sn	01 44 14.3	-3.0
	0.9nm,0.3s						
SBF	Sospel	7.37	12	*e*Pn	Pn	01 42 56.6	+1.1
SBF				*e*Sn	Sn	01 44 15.2	-3.4
	3.7nm,0.3s						
EPF	Esparros	7.46	330	*e*Pn	Pn	01 42 59.1	+2.3
EPF				*e*Sn	Sn	01 44 18.2	-2.7
	1.0nm,0.2s						
LASF	Ste Croix	7.50	351	*e*Pn	Pn	01 42 57.6	+0.2
LASF				*e*Sn	Sn	01 44 18.5	-3.4
	0.9nm,0.2s						
PSIM	Granatula de C	7.57	289	P	Pn	01 42 59.0	+0.7
ETSF	Etsaut	7.74	326	*e*Pn	Pn	01 43 02.3	+1.7
ETSF				*e*Sn	Sn	01 44 25.3	-2.4
	1.0nm,0.3s						
ESDC	Sonseca Array	7.96	295	Pn	Pn	01 43 04.7	+1.0
	0.1nm,0.3s,baz=103,slow=13,SNR=7.1						
	0.3nm,0.6s						
MBDF	Montbardon	8.13	7	*e*Pn	Pn	01 43 06.9	+0.8
MBDF				*e*Sn	Sn	01 44 33.9	-3.6
	0.6nm,0.2s						
PAB	San Pablo	8.21	294	P	Pn	01 43 08.4	+1.3
PAB				⇑*i*Vmb_V		01 43 09.4	
	51nm,SNR=1.1						
VIVF	Saint-Julien-l	8.21	356	*e*Pn	Pn	01 43 07.5	+0.4
VIVF				*e*Sn	Sn	01 44 36.2	-3.1
	1.4nm,0.2s						
SJPF	Ste Jean	8.21	324	*e*Pn	Pn	01 43 09.6	+2.5
SJPF				*e*Sn	Sn	01 44 36.2	-3.2
	0.8nm,0.3s						
CAF	Calviac	8.64	344	*e*Pn	Pn	01 43 14.2	+1.3
LPL	La Plagne	8.91	6	*e*Pn	Pn	01 43 18.0	+1.2
LPL				*e*Sn	Sn	01 44 52.3	-4.4
	0.5nm,0.2s						
MKAR	Makanchi Array	56.14	54	P	P	01 50 46.9	-0.3
	0.5nm,0.8s,baz=280,slow=7.2,SNR=4.1						
	0.5nm,0.8s						
YKA	Yellowknife Ar	70.14	335	P	P	01 52 21.0	+1.3
	0.1nm,0.5s,baz=46,slow=6.4,SNR=2.7						
	0.1nm,0.5s						

NNC ***30*** *01:48:07.9±9.0, 36°.93N×70°.90E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=78.0km s-min=70.3km az=121.0*

ISC 30 01:48:08.6±3.9**, 36°.6N**±0°.2×**71°.1E**±0°.2**, h100^{km}, n11, σ1^{s}25**/13**, 3C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	5.59	352	Pg	Pn	01 49 30.8	+1.5
	18nm,0.4s						
IUG				Lg	Lg	01 50 33.0	
	6.5nm,0.4s						
AML	Almayashu	5.86	19	P	Pn	01 49 34.2	+0.9
	SNR=27						
AML	Almayashu	5.86	19	⇓P	Pn	01 49 33.5	+0.3
	0.4nm,0.3s						
AML				⇑S	Sn	01 50 38.8	-0.5
	0.7nm,0.5s						
UCH	Uchtor	6.19	24	P	Pn	01 49 38.4	+0.6
	SNR=7.5						
MRKS	Merke	6.33	14	Pg	Pn	01 49 41.8	+2.4
	3.9nm,0.4s						
MRKS				Lg	Lg	01 50 51.5	
	5.3nm,0.7s						
EKS2	Erkin-Say	6.38	18	P	Pn	01 49 41.3	+1.2
	SNR=11						
KK31	Karatay Array	6.50	356	⇓P	Pn	01 49 42.3	+0.8
	9.0nm,0.3s,baz=176,slow=12,SNR=209						
KK31				⇑S	Sn	01 50 53.5	-0.7
	0.7nm,0.3s,baz=178,slow=17,SNR=5.2						
AAK	Ala-Archa	6.56	22	P	Pn	01 49 43.4	+0.9
	SNR=8.3						
TKM2	Tokmak 2	7.18	27	P	Pn	01 49 51.5	+0.5
	SNR=11						
TKM2	Tokmak 2	7.18	27	⇑P	Pn	01 49 51.2	+0.2
	3.4nm,0.5s						
AB31	Akbulak array	15.03	331	⇓P	Pn	01 51 33.7	-1.7
	0.7nm,0.5s,baz=158,slow=11,SNR=30						

IDC 30 02:02:44.1±2.1**, 5°.35S**×**152°.00E, h0^{km}, mb3.6**/4**, mbtmp3.7**/5**, ML2.0**/1**, Error ellipse: s-maj=81.6km s-min=24.8km az=120.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.27	230	Pn	Pn	02 04 18.2	+0.3
	1.9nm,0.3s,baz=41,slow=6.9,SNR=5.7						
PMG				Sn	Sn	02 05 24.8	-5.6
	1.8nm,0.3s,baz=116,slow=18,SNR=1.5						
	15nm,0.7s						
WRA	Warramunga Arr	22.49	228	P	P	02 07 44.7	-0.7
	0.8nm,0.5s,baz=52,slow=9.7,SNR=5.8						
	0.8nm,0.5s						
ASAR	Alice Springs	25.21	222	P	P	02 08 12.2	+0.3
	2.2nm,0.8s,baz=58,slow=9.0,SNR=19						
	2.2nm,0.8s						
SONM	Songino Array	66.37	328	P	P	02 13 35.2	+0.1
	0.2nm,0.4s,baz=148,slow=5.2,SNR=3.4						
	0.2nm,0.4s						
ILAR	Eielson Array	82.96	22	P	P	02 15 10.7	-0.1
	0.2nm,0.6s,baz=244,slow=5.2,SNR=4.4						
	0.2nm,0.6s						

IDC ***30*** *02:29:15.2±0.7, 57°.02N×162°.61E, h0^{km}, mb3.9/16, mbtmp3.9/17, ML1.3/1, MS3.5/10, Error ellipse: s-maj=21.6km s-min=13.6km az=156.0*

KRSC ***30*** *02:29:16.7±1.1, 57°.05N×163°.26E, h44^{km}±13^{km}, Ml4.8*

NEIC ***30*** *02:29:18.1±1.4, 57°.00N±0°.10×163°.0E±0°.2, h10^{km}±1^{km}, mb4.4/71, Error ellipse: s-maj=17.4km s-min=16.2km az=108.0*

MOS ***30*** *02:29:19.6±1.0, 57°.07N×162°.91E, h38^{km}, mb4.6/17, Error ellipse: s-maj=10.7km s-min=4.2km az=68.0*

ISC 30 02:29:18.2±1.1**, 57°.04N**±0°.03×**163°.02E**±0°.03**, h18^{km}**±6^{km}**, n197, σ1^{s}57**/221**, mb4.3**/56**, MS3.7**/8**, 2C-9D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBG	Krutoberegovo	0.81	193	PN	Pg	02 29 33.0	-1.0
KBG				S	Sb	02 29 45.3	+1.0
KBG	Krutoberegovo	0.81	193	*e*P	Pg	02 29 33.0	-1.0
KBG				*e*S	Sb	02 29 45.3	+1.0
KBTR	Krutoberegovo	0.84	188	PN	Pg	02 29 33.7	-0.9
KBTR				S	Sg	02 29 46.1	+0.3
KBTR	Krutoberegovo	0.84	188	*e*P	Pg	02 29 33.7	-0.9
KBTR				*e*S	Sg	02 29 46.1	+0.3
SMKR	Semkarok	0.97	242	PN	Pg	02 29 36.0	-1.0
SMKR				S	Sb	02 29 50.9	+1.8
SMKR	Semkarok	0.97	242	*e*P	Pg	02 29 36.0	-1.0
SMKR				*e*S	Sb	02 29 50.9	+1.8
SRKR	Sorokina	1.09	250	PN	Pg	02 29 37.9	-1.4
SRKR				S	Sb	02 29 53.5	+1.0
SRKR	Sorokina	1.09	250	*e*P	Pg	02 29 37.9	-1.4
SRKR				*e*S	Sb	02 29 53.5	+1.0
KLY	Klyuchi	1.50	242	PN	Pn	02 29 42.4	-1.7
KLY				S	Sn	02 30 02.0	-1.2
KLY	Klyuchi	1.50	242	*e*P	Pn	02 29 42.4	-1.7
KLY				*e*S	Sn	02 30 02.0	-1.2
CIRR	Tsirk	1.56	234	PN	Pn	02 29 44.4	-0.8
CIRR	Tsirk	1.56	234	*e*P	Pn	02 29 44.4	-0.8
BZGR	Bezymyannyi-Gr	1.70	230	PN	Pn	02 29 47.2	+0.2
BZGR	Bezymyannyi-Gr	1.70	230	*e*P	Pn	02 29 47.2	+0.2
BZWR	Bezymyannyi-We	1.77	233	PN	Pn	02 29 48.4	+0.3
BZWR	Bezymyannyi-We	1.77	233	*e*P	Pn	02 29 48.4	+0.3
BZP	Bezymyannyi-Pe	1.79	232	*e*P	Pn	02 29 48.4	+0.1
BZMR	Bezymyannaya	1.79	233	PN	Pn	02 29 48.6	+0.3
BZMR				S	Sn	02 30 13.1	+2.4
BZMR	Bezymyannaya	1.79	233	*e*P	Pn	02 29 48.6	+0.3
BZMR				*e*S	Sn	02 30 13.1	+2.4
KIRR	Kirishev	1.84	235	PN	Pn	02 29 49.3	+0.3
KIRR				S	Sn	02 30 14.3	+2.3
KIRR	Kirishev	1.84	235	*e*P	Pn	02 29 49.3	+0.3
KIRR				*e*S	Sn	02 30 14.3	+2.3
KPT	Kopyto	1.89	236	PN	Pn	02 29 50.0	+0.4
KPT	Kopyto	1.89	236	*e*P	Pn	02 29 50.0	+0.4
SRDR	Sredinnyy	1.96	250	PN	Pn	02 29 50.9	+0.3
SRDR				S	Sn	02 30 17.1	+2.3
SRDR	Sredinnyy	1.96	250	*e*P	Pn	02 29 50.9	+0.3
SRDR				*e*S	Sn	02 30 17.1	+2.3
KOZ	Kozyrevsk	2.00	242	PN	Pn	02 29 51.9	+0.8
KOZ				S	Sb	02 30 19.5	+0.8
KOZ	Kozyrevsk	2.00	242	*e*P	Pn	02 29 51.9	+0.8
KOZ				*e*S	Sb	02 30 19.5	+0.8
KMNR	Kamenistaya	2.02	231	PN	Pn	02 29 52.2	+0.8
KMNR	Kamenistaya	2.02	231	*e*P	Pn	02 29 52.2	+0.8
TUMD	Tumrok D	2.36	220	*e*P	Pn	02 29 57.4	+1.4
TUMR	Tumrok	2.39	224	PN	Pn	02 29 57.4	+0.9
TUMR	Tumrok	2.39	224	*e*P	Pn	02 29 58.4	+1.9
TIGL	Tigil	2.46	289	*e*P	Pb	02 29 59.8	-2.0
TIGL				*e*S	Sb	02 30 31.1	-0.7
BKI	Bering	2.48	137	PN	Pn	02 29 56.6	-1.0
BKI				S	Sn	02 30 25.7	-1.6
BKI	Bering	2.48	137	*e*P	Pn	02 29 56.6	-1.0
BKI				*e*S	Sn	02 30 25.7	-1.6
MKZ	Mys Kozlova	2.60	197	PN	Pn	02 29 59.5	+0.2
MKZ				S	Sn	02 30 31.4	+1.1
MKZ	Mys Kozlova	2.60	197	*e*P	Pn	02 29 59.5	+0.2
MKZ				*e*S	Sn	02 30 31.4	+1.1
PALN	Palana	2.62	323	PN	Pn	02 30 01.2	+1.7
PALN	Palana	2.62	323	*e*P	Pn	02 30 01.2	+1.7
ESO	Esso	2.65	247	PN	Pn	02 30 01.8	+1.8
ESO	Esso	2.65	247	*e*P	Pn	02 30 01.8	+1.8
KII	Karymskiy	3.63	215	PN	Pn	02 30 14.8	+1.2
KII	Karymskiy	3.63	215	*e*P	Pn	02 30 14.8	+1.2
GNL	Ganaly	4.43	223	PN	Pn	02 30 26.3	+1.7
GNL	Ganaly	4.43	223	*e*P	Pn	02 30 26.3	+1.7
KRX	Arik	4.46	216	PN	Pn	02 30 27.9	+2.9
KRX	Arik	4.46	216	*e*P	Pn	02 30 27.9	+2.9
KRER	Koryakskii	4.48	215	PN	Pn	02 30 27.7	+2.4
KRER	Koryakskii	4.48	215	*e*P	Pn	02 30 27.7	+2.4
SMAR	Somma	4.50	214	PN	Pn	02 30 27.5	+2.0
SMAR	Somma	4.50	214	*e*P	Pn	02 30 27.5	+2.0
AVH	Avacha	4.51	215	PN	Pn	02 30 28.0	+2.3
AVH	Avacha	4.51	215	*e*P	Pn	02 30 28.0	+2.3
KOK	Koryaka	4.52	216	PN	Pn	02 30 28.3	+2.5
KOK	Koryaka	4.52	216	*e*P	Pn	02 30 28.3	+2.5
UGLR	Uglovaya	4.54	214	PN	Pn	02 30 28.1	+2.1
UGLR	Uglovaya	4.54	214	*e*P	Pn	02 30 28.1	+2.1
PET	Petropavlovsk	4.75	214		Pn	02 30 30.8	+2.0
PET	Petropavlovsk	4.75	214	*e*PN	Pn	02 30 31.9	+3.1
PET				*e*S	Sn	02 31 25.2	+1.9
PET				smax	smax		
	comp=N,118nm,0.6s						
PET				smax	smax		
	comp=E,106nm,0.8s						
PET				MLR	MLR		
	comp=Z,400nm,7.0s						
PEA0B	Petropavlovsk-	4.99	220	⇓*e*PN	Pn	02 30 33.7	+1.6
PETK	Petropavlovsk-	4.99	220	Pn	Pn	02 30 29.0	-3.1
	comp=Z,0.1nm,0.3s,baz=69,slow=13,SNR=2.3						
PETK				LR	LR	02 32 36.8	
	comp=Z,132nm,21.4s,baz=21,slow=42						
PETK	Petropavlovsk-	4.99	220	Pn	Pn	02 30 33.3	+1.1
APC	Apacha	5.33	222	PN	Pn	02 30 39.5	+2.7
APC	Apacha	5.33	222	*e*P	Pn	02 30 39.5	+2.7
GRL	Gorelyy	5.33	215	PN	Pn	02 30 39.2	+2.2
GRL	Gorelyy	5.33	215	*e*P	Pn	02 30 39.2	+2.2
MTVR	Mutnovka	5.36	214	PN	Pn	02 30 39.3	+2.0
MTVR	Mutnovka	5.36	214	*e*P	Pn	02 30 39.3	+2.0
SEY	Seymchan	7.95	322	Pn	Pn	02 31 15.3	+2.7
	comp=Z,0.1nm,0.3s,baz=83,slow=24,SNR=1.5						
TYV	Tymovskoe	13.46	251	*e*PN	Pn	02 32 27.4	-0.7
TYV				pmax	pmax		
	comp=Z,15nm,0.4s						
TYV				pmax	pmax		
	comp=Z,100nm,2.7s						
YSS	Yuzh-Sakhalins	15.99	239	*e*P	Pn	02 33 02.1	+0.1
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
YSS				MLR	MLR		
	comp=N,200nm,15.0s						
YSS				MLR	MLR		
	comp=E,200nm,14.0s						
TNA	Tin City	16.20	46	P	P	02 33 08.4	+0.7
ANM	Nome	17.00	51		P	02 33 17.3	+0.9
ANM	Nome	17.00	51	P	P	02 33 17.3	+0.9
ANM				pmax	pmax		
	comp=Z,11nm,1.3s						
YAK	Yakutsk	17.49	300	LR	LR	02 40 15.1	
	comp=Z,90nm,18.1s,baz=85,slow=38						
ASAJ	Asahikawa	18.22	233	LR	LR	02 41 00.9	
	comp=Z,89nm,18.7s,baz=171,slow=39						
KLR	Kul'dur	20.18	261	P	P	02 33 46.9	-4.5
	comp=Z,0.5nm,0.5s,baz=80,slow=8.6,SNR=1.9						
KLR				LR	LR	02 42 45.2	
	comp=Z,75nm,18.2s,baz=25,slow=41						
KLR	Kul'dur	20.18	261	⇓*e*P	P	02 33 49.1	-2.4
TIXI	Tiksi	20.36	329	P	P	02 33 52.9	-0.3
	comp=Z,3.4nm,0.6s,baz=90,slow=23,SNR=11						
TIXI				LR	LR	02 42 28.3	
	comp=Z,132nm,19.2s,baz=87,slow=39						
	comp=Z,3.4nm,0.6s						
TIXI	Tiksi	20.36	329	P	P	02 33 54.0	+0.9
TIXI	Tiksi	20.36	329	⇓*e*P	Pn	02 33 54.8	-0.5
TIXI				pmax	pmax		
	comp=Z,12nm,1.2s						
ZEA	Zeya	20.43	276	*e*P	P	02 33 54.6	+0.4
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
L19K	White Mountain	21.61	59	P	P	02 34 08.4	+1.5
K20K	Telida	21.88	55	P	P	02 34 10.3	+0.6
IMAR	Indian Mountai	22.02	48	P	P	02 34 13.2	+2.0
H21K	Melozitna Rive	22.39	49	P	P	02 34 14.8	-0.5
I21K	Tanana	22.73	51	P	P	02 34 19.7	+0.9
I21K				IAmb	IAmb	02 34 30.8	
	comp=Z,11nm,1.1s						
CAST	Castle Rocks	22.77	55	P	P	02 34 20.9	+1.7
PPLA	Purkeypile	22.77	56	P	P	02 34 20.7	+1.3
SKT	Skwentna	23.18	59	P	P	02 34 25.6	+2.0
SKT				IAmb	IAmb	02 34 26.7	
	comp=Z,12nm,1.1s						
BPAW	Bear Paw Mtn.	23.20	53	P	P	02 34 25.2	+1.5
MLY	Manley	23.26	51	P	P	02 34 26.1	+1.8
USRK	Ussuriysk Ar.	23.27	250	P	P	02 34 21.0	-3.5
	comp=Z,1.4nm,0.7s,baz=109,slow=14,SNR=4.4						
USRK				LR	LR	02 44 19.8	
	comp=Z,88nm,18.4s,baz=71,slow=39						
	comp=Z,1.4nm,0.7s						
USRK	Ussuriysk Ar.	23.27	250	P	P	02 34 21.0	-3.5
KTH	Kantishna Hill	23.28	55	P	P	02 34 26.4	+1.9
KTH				IAmb	IAmb	02 34 27.6	
	comp=Z,12nm,1.2s						
COLD	Coldfoot	23.50	45	P	P	02 34 27.2	+0.6
TRF	Thorofare Moun	23.57	55	P	P	02 34 28.9	+1.4
SUA	Susitna One	23.64	60	P	P	02 34 28.9	+0.7
H23K	Yukon River	23.74	49	P	P	02 34 30.6	+1.6
H23K				IAmb	IAmb	02 34 38.4	
	comp=Z,6.6nm,0.8s						
TOLK	Toolik Lake Re	23.84	42	P	P	02 34 30.8	+0.9
TOLK				IAmb	IAmb	02 34 38.3	
	comp=Z,9.5nm,0.7s						
I23K	Minto, Yukon-K	23.84	51	P	P	02 34 30.6	+0.7
I23K				IAmb	IAmb	02 34 33.1	
	comp=Z,8.7nm,1.1s						
MCK	McKinley	24.14	54	P	P	02 34 34.3	+1.5
MCK				IAmb	IAmb	02 34 41.9	
	comp=Z,12nm,1.2s						
MCK	McKinley	24.14	54	P	P	02 34 34.3	+1.5
MCK				pmax	pmax		
	comp=Z,12nm,1.2s						
MDM	Murphy Dome	24.33	51	P	P	02 34 35.9	+1.4
H24K	Noodor Dome	24.43	49	P	P	02 34 36.8	+1.4
H24K				IAmb	IAmb	02 34 49.8	
	comp=Z,14nm,1.4s						
WRH	Wood River Hil	24.43	52	P	P	02 34 36.6	+1.2
WRH				IAmb	IAmb	02 34 44.5	
	comp=Z,10nm,0.8s						
COLA	College	24.50	51	⇓*e*P	P	02 34 36.5	+0.5
CCB	Clear Creek Bu	24.54	52	P	P	02 34 37.1	+0.8
CCB				IAmb	IAmb	02 34 39.6	
	comp=Z,10nm,1.0s						
PWL	Port Wells	24.90	61	P	P	02 34 39.5	-0.2
IL31		24.92	51	P	P	02 34 40.2	+0.4
IL31				IAmb	IAmb	02 34 48.9	
	comp=Z,8.7nm,0.8s						
ILAR	Eielson Array	24.92	51	P	P	02 34 40.0	+0.2
	comp=Z,5.0nm,0.7s,baz=259,slow=7.1,SNR=48						
	comp=Z,5.0nm,0.7s						
ILAR	Eielson Array	24.92	51	P	P	02 34 41.1	+1.4
ILAR	Eielson Array	24.92	51	P	P	02 34 41.2	+1.4
HDA	Harding Lake	24.93	52	P	P	02 34 40.6	+0.7
HDA				IAmb	IAmb	02 34 51.8	
	comp=Z,6.6nm,1.0s						
SCM	Sheep Creek Mo	25.17	58	P	P	02 34 43.2	+1.0
SCM	Sheep Creek Mo	25.17	58	P	P	02 34 43.2	+1.0
SCM				pmax	pmax		
	comp=Z,20nm,0.8s						
PRP	Porcupine Dome	25.42	49	P	P	02 34 46.4	+1.9
PRP				IAmb	IAmb	02 34 46.9	
	comp=Z,6.7nm,0.9s						
FYU	Fort Yukon	25.46	47	P	P	02 34 46.2	+1.5
BMAR	Burnt Mountain	25.68	45	P	P	02 34 48.0	+1.3
SCRK	Sand Creek	26.28	53	P	P	02 34 52.3	0.0
SCRK				IAmb	IAmb	02 34 53.1	
	comp=Z,5.9nm,0.8s						
DOT	Dot Lake	26.30	53	P	P	02 34 51.9	-0.4
DOT				IAmb	IAmb	02 34 59.0	
	comp=Z,13nm,1.4s						
EGAK	Eagle	27.35	50	P	P	02 35 01.7	0.0
EGAK				IAmb	IAmb	02 35 02.7	
	comp=Z,6.9nm,0.8s						
INK	Inuvik	29.75	42	P	P	02 35 24.0	+1.0
	comp=Z,2.4nm,0.9s,baz=306,slow=4.9,SNR=7.4						
	comp=Z,2.4nm,0.9s						
INK	Inuvik	29.75	42	P	P	02 35 24.3	+1.3
INK				IAmb	IAmb	02 35 34.2	
	comp=Z,5.4nm,1.1s						
INK	Inuvik	29.75	42	P	P	02 35 24.3	+1.3
INK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
A36M	Sachs Harbour	31.88	34	P	P	02 35 43.7	+1.9
C36M	Paulatuk	32.87	39	P	P	02 35 51.5	+1.1
SONM	Songino Array	34.78	279	P	P	02 36 05.2	-2.2
	comp=Z,0.2nm,0.4s,baz=60,slow=3.5,SNR=2.6						
SONM				PcP	PcP	02 38 40.4	0.0
	comp=Z,0.8nm,0.8s,baz=94,slow=1.2,SNR=7.6						
	comp=Z,0.2nm,0.4s						
H11N2	WAKE ISLAND Hy	37.37	174	T	T	03 15 24.2	
	baz=358,slow=76,SNR=72						
H11N3	WAKE ISLAND Hy	37.38	174	T	T	03 15 23.9	
	baz=358,slow=76,SNR=92						
H11N1	WAKE ISLAND Hy	37.39	174	T	T	03 15 22.5	
	baz=358,slow=76,SNR=118						
EUNU	Eureka	37.70	15	P	P	02 36 33.1	+1.1
YKA	Yellowknife Ar	39.16	47	P	P	02 36 45.5	+1.1
	comp=Z,2.4nm,0.7s,baz=300,slow=7.9,SNR=46						
	comp=Z,2.4nm,0.7s						
DGZ	Jazzator, Alta	43.52	294	⇓*i*P	P	02 37 20.5	+0.1
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
EDM	Edmonton	45.12	57		P	02 37 34.6	+1.6
EDM	Edmonton	45.12	57	P	P	02 37 34.7	+1.6
EDM				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KURK	Kurchatov	47.13	300	P	P	02 37 48.2	-0.7
KURK				IAmb	IAmb	02 37 58.4	

	comp=Z,3.5nm,0.9s						
KURK	Kurchatov	47.13	300	⇓eP	P	02 37 47.1	-1.8
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WALA	Waterton Lakes	47.61	62	P	P	02 37 54.0	+1.1
MKAR	Makanchi Array	48.01	294	P	P	02 37 54.0	-1.9
	comp=Z,0.4nm,0.7s,baz=56,slow=6.5,SNR=4.0						
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	48.01	294	ceP	P	02 37 56.7	+0.9
FCC	Fort Churchill	49.37	42	P	P	02 38 06.8	+0.8
FCC	Fort Churchill	49.37	42	P	P	02 38 06.8	+0.8
FCC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MFID	Camas Ranch	50.60	69	P	P	02 38 16.5	+0.7
MFID				IAmb	IAmb	02 38 18.0	
	comp=Z,3.4nm,0.9s						
ARU	Arti	51.65	317	⇓eP	P	02 38 22.3	-1.0
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s						
LKWY	Lake	52.49	64	P	P	02 38 31.8	+1.8
LKWY				IAmb	IAmb	02 38 33.8	
	comp=Z,5.7nm,1.1s						
LKWY	Lake	52.49	64	P	P	02 38 31.8	+1.8
LKWY				pmax	pmax		
	comp=Z,6.0nm,1.1s						
H17A	Grant Village	52.52	64	P	P	02 38 31.3	+1.0
H17A				IAmb	IAmb	02 38 34.3	
	comp=Z,3.9nm,0.9s						
PZH	PanZhiHua	52.62	261	P	P	02 38 31.0	-0.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,7.5s						
IMW	Indian Meadow	52.71	65	P	P	02 38 33.0	+1.3
IMW				IAmb	IAmb	02 38 35.4	
	comp=Z,3.7nm,1.0s						
ELK	Elko	52.83	71	P	P	02 38 34.1	+1.5
ELK	Elko	52.83	71	P	P	02 38 34.1	+1.5
ELK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
FXWY	Fox Creek	52.85	65	P	P	02 38 34.7	+2.0
NVAR	Mina Array Bea	52.94	75	P	P	02 38 34.9	+1.5
	comp=Z,0.5nm,0.3s,baz=304,slow=5.8,SNR=7.7						
	comp=Z,0.5nm,0.3s						
LHV	Little Huntoon	52.97	75	P	P	02 38 34.4	+1.2
NV11	Mina Array Sit	53.02	75	P	P	02 38 34.7	+0.8
NV11				IAmb	IAmb	02 38 36.5	
	comp=Z,3.6nm,1.0s						
KIRV	Kirov	53.22	323	⇑eP	P	02 38 37.1	+2.2
MZP	Montezuma Peak	53.97	75	P	P	02 38 42.4	+1.4
HWUT	Hardware Ranch	54.07	67	P	P	02 38 42.9	+1.3
HWUT				IAmb	IAmb	02 38 44.5	
	comp=Z,3.9nm,0.8s						
BW06	Boulder Array	54.22	65	P	P	02 38 44.0	+1.3
BW06				IAmb	IAmb	02 38 45.1	
	comp=Z,2.7nm,0.8s						
PD31	Pinedale Array	54.22	65	P	P	02 38 44.0	+1.3
PD31				IAmb	IAmb	02 38 45.1	
	comp=Z,2.7nm,0.8s						
PDAR	Pinedale Array	54.22	65	P	P	02 38 44.0	+1.3
	comp=Z,2.2nm,0.8s,baz=324,slow=2.9,SNR=18						
	comp=Z,2.2nm,0.8s						
PDAR	Pinedale Array	54.22	65		P	02 38 44.2	+1.4
SPR3	Spring Creek 3	54.59	71	P	P	02 38 45.8	+0.1
AAK	Ala-Archa	54.86	296	⇓eP	P	02 38 46.2	-1.1
AAK				pmax	pmax		
	comp=Z,12nm,3.8s						
BSUT	Blindstream Ca	55.28	68	P	P	02 38 51.7	+1.1
BSUT				IAmb	IAmb	02 38 53.8	
	comp=Z,4.7nm,1.1s						
PRN	Pahroc Range	55.41	73	P	P	02 38 52.5	+1.2
PRN				IAmb	IAmb	02 39 00.5	
	comp=Z,4.4nm,0.9s						
GWY	Greenwater Val	55.48	75	P	P	02 38 53.7	+1.8
GWY				IAmb	IAmb	02 38 54.8	
	comp=Z,3.1nm,0.8s						
TMUT	Trail Mountain	55.98	69	P	P	02 38 57.6	+2.0
TMUT				IAmb	IAmb	02 38 58.6	
	comp=Z,4.6nm,0.9s						
GSC	Goldstone, Bar	56.08	76	P	P	02 38 56.2	+0.1
GSC				IAmb	IAmb	02 39 05.0	
	comp=Z,5.7nm,1.1s						
GSC	Goldstone, Bar	56.08	76	P	P	02 38 56.2	+0.1
GSC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KSH	Kashi	56.46	292	P	P	02 39 03.0	+4.2
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SRU	San Rafael Swe	56.47	69	P	P	02 39 00.5	+1.6
SRU	San Rafael Swe	56.47	69	P	P	02 39 00.5	+1.6
SRU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
O20A	White River Ci	56.84	66	P	P	02 39 03.0	+1.3
FINES	FINESS Array B	57.15	337	P	P	02 39 01.8	-1.3
	comp=Z,1.3nm,0.8s,baz=57,slow=15,SNR=1.6						
	comp=Z,1.3nm,0.8s						
PV13	Radium Mtn., P	58.06	68	P	P	02 39 11.7	+1.5
PV13				IAmb	IAmb	02 39 13.0	
	comp=Z,5.7nm,1.1s						
ISCO	Idaho Springs	58.41	65		P	02 39 14.6	+1.9
ISCO				IAmb	IAmb	02 39 15.9	
	comp=Z,3.1nm,0.9s						
ISCO	Idaho Springs	58.41	65	P	P	02 39 14.6	+1.9
ISCO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GAR	Garm	59.68	296	P	P	02 39 20.4	-1.0
NB2	NORSAR Subarra	60.19	345	P	P	02 39 23.9	-0.5
	comp=Z,9.4nm,1.4s,baz=17,slow=6.9						
NOA	NORSAR Array B	60.19	345	P	P	02 39 24.1	-0.3
	comp=Z,1.3nm,0.8s,baz=18,slow=6.9,SNR=7.2						
	comp=Z,1.3nm,0.8s						
X18A	Snowflake	60.27	72	P	P	02 39 26.4	+0.9
X18A				IAmb	IAmb	02 39 28.9	
	comp=Z,3.2nm,0.8s						
ANMO	Albuquerque	61.74	69	⇓eP	P	02 39 36.8	+1.3
ANMO				pmax	pmax		
	comp=Z,18nm,8.4s						
MNK	Minsk	62.98	332	i P	P	02 39 41.3	-1.9
	comp=E,1.0nm,0.8s						
MNK				i P	P	02 39 41.3	-1.9
	comp=N,35nm,0.7s						
MNK				i P	P	02 39 41.3	-1.9
	comp=Z,4.0nm,0.8s,baz=206						
MNK				i PcP	PcP	02 40 19.0	-2.1
MNK				i PP	PP	02 41 59.9	-1.3
MNK				i PPP	PPP	02 43 28.4	
MNK				i S	S	02 48 09.7	-2.6
MNK				i ScS	SKKSac	02 49 31.3	-3.3
MNK				i SS	SS	02 52 16.6	-0.1
MNK				i SSS	SSS	02 55 12.6	
MNK				i LQ	LQ	03 02 37.9	
MNK				i LR	LR	03 06 57.9	
MNK				i LRM	MLR	03 10 13.0	
	comp=Z,59nm,16.9s						
MNK				i LRM	MLR	03 10 19.8	
	comp=N,271nm,18.7s						
MNK				i LRM	MLR	03 10 41.0	
	comp=E,13nm,19.5s						
MNK	Minsk	62.98	332	i P	P	02 39 41.3	-1.9
MNK				i		02 40 19.0	
MNK				i		02 41 59.9	
MNK				i S	S	02 48 09.6	-2.6
MNK				i		02 49 31.3	
MNK				i SS	SS	02 52 16.5	-0.1
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,35nm,0.7s						
MNK				MLR	MLR		
	comp=Z,59nm,17.0s						
MNK				MLR	MLR		
	comp=N,271nm,19.0s						
MNK				MLR	MLR		
	comp=E,13nm,20.0s						
AKASG	Malin Array Be	66.06	330	P	P	02 40 03.0	-0.4
	comp=E,0.7nm,0.5s,baz=27,slow=6.1,SNR=4.7						
	comp=E,0.7nm,0.5s						
TXAR	Lajitas Array	67.63	71	P	P	02 40 15.4	+1.5
	comp=E,3.5nm,0.8s,baz=297,slow=4.4,SNR=30						
	comp=E,3.5nm,0.8s						
CLL	Collm	69.22	340	eP	P	02 40 24.0	+0.6
GNI	Garni	70.16	314	LR	LR	03 15 44.0	
	comp=E,46nm,19.5s,baz=356,slow=40						
GERES	GERESS Array B	71.45	339	LR	LR	03 14 59.3	
	comp=E,37nm,19.5s,baz=299,slow=38						
MLR	Muntele Rosu	71.72	330	LR	LR	03 16 00.2	
	comp=E,73nm,19.6s,baz=270,slow=39						
DAVOX	Davos/Dischmat	74.14	341	LR	LR	03 16 36.9	
	comp=E,48nm,18.6s,baz=266,slow=38						
WRA	Warramunga Arr	80.38	207	P	P	02 41 27.1	-1.0
	comp=E,1.2nm,1.0s,baz=12,slow=5.6,SNR=4.0						
	comp=E,1.2nm,1.0s						
ESDC	Sonseca Array	83.02	350	P	P	02 41 42.0	-0.2
	comp=E,0.9nm,0.9s,baz=6.4,slow=5.1,SNR=4.9						
	comp=E,0.9nm,0.9s						
ASAR	Alice Springs	84.06	207	P	P	02 41 47.1	-0.3
	comp=E,0.7nm,0.5s,baz=16,slow=4.7,SNR=8.1						
	comp=E,0.7nm,0.5s						
VNDA	Vanda	134.31	180	PKP	PKPdf	02 48 33.5	+0.5
	comp=E,0.6nm,0.3s,baz=93,slow=7.6,SNR=7.5						

IDC 30 02:49:32.2±3.8, 19°.74N×145°.93E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=147.1km s-min=28.0km az=84.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	19.65	90	T	T	03 15 02.8	
	baz=275,slow=74,SNR=3.0						
H11S1	WAKE ISLAND Hy	19.66	90	T	T	03 14 59.1	
	baz=275,slow=74,SNR=2.7						
H11S2	WAKE ISLAND Hy	19.67	90	T	T	03 14 57.9	
	baz=275,slow=74,SNR=3.3						
KLR	Kul'dur	31.55	342	P	P	02 55 55.6	-0.5
	0.9nm,0.4s,baz=154,slow=11,SNR=5.7						
	0.9nm,0.4s						
WRA	Warramunga Arr	41.04	197	P	P	02 57 17.2	-0.3
	0.6nm,0.4s,baz=16,slow=8.5,SNR=6.2						
	0.6nm,0.4s						
SONM	Songino Array	42.48	321	P	P	02 57 29.9	+0.7
	0.3nm,0.5s,baz=136,slow=7.2,SNR=3.0						
	0.3nm,0.5s						
MKAR	Makanchi Array	57.91	313	P	P	02 59 26.3	+0.1
	0.4nm,0.6s,baz=104,slow=6.1,SNR=5.3						
	0.4nm,0.6s						

MOS 30 02:50:15.3±1.1, 51°.96N×153°.19E, h475km, mb3.6/9, Error ellipse: s-maj=11.0km s-min=6.1km az=60.4

IDC 30 02:50:16.3±0.8, 52°.14N×152°.89E, h448km±10km, mb3.0/17, mbtmp3.8/23, Error ellipse: s-maj=15.8km s-min=10.5km az=132.0

KRSC 30 02:50:16.2±1.9, 51°.76N×153°.87E, h478km±22km, Ml4.3

ISC 30 02:50:15.7±0.5, 51°.94N±0°.06×153°.21E±0°.07, h450km, n112, σ2ˢ00/137, mb3.4/23, 8C-5D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.22	124	ePN	P	02 51 19.0	+1.6
SKR				pmax	pmax		
	comp=Z,30nm,0.2s						
PAU	Pauzhetka	2.29	101	PN	P	02 51 21.1	+3.3
PAU	Pauzhetka	2.29	101	eP	P	02 51 21.1	+3.2
APC	Apacha	2.61	66	PN	P	02 51 20.9	+1.1
APC				S	S	02 52 12.5	+0.4
APC	Apacha	2.61	66	eP	P	02 51 20.9	+1.1
APC				eS	S	02 52 12.5	+0.4
PEA0B	Petropavlovsk-	2.98	65	d iPN	P	02 51 23.4	+0.9
PETK	Petropavlovsk-	2.98	65	P	P	02 51 23.0	+0.5
	comp=Z,5.2nm,0.6s,baz=190,slow=7.3,SNR=49						
PETK				S	S	02 52 18.8	+1.9
	comp=Z,3.7nm,0.6s,baz=182,slow=27,SNR=2.1						
KDTR	Khodutka, Kamc	3.02	91	PN	P	02 51 23.6	+0.8
KDTR	Khodutka, Kamc	3.02	91	eP	P	02 51 23.6	+0.8
KDTR				eS	S	02 52 15.0	-2.3
GRL	Gorelyy	3.05	77	PN	P	02 51 26.0	+2.8
GRL	Gorelyy	3.05	77	eP	P	02 51 26.0	+2.8
MTVR	Mutnovka	3.10	78	PN	P	02 51 25.9	+2.3
MTVR				S	S	02 52 19.7	+0.8
MTVR	Mutnovka	3.10	78	eP	P	02 51 25.9	+2.3
MTVR				eS	S	02 52 19.7	+0.8
KRMR	Karymshinskiy	3.14	72	PN	P	02 51 25.2	+1.5
KRMR				S	S	02 52 18.6	-0.4
KRMR	Karymshinskiy	3.14	72	eP	P	02 51 25.2	+1.5
KRMR				eS	S	02 52 18.6	-0.4
RUS	Russkaya	3.30	79	PN	P	02 51 26.3	+1.4
RUS				S	S	02 52 19.9	-1.4
RUS	Russkaya	3.30	79	eP	P	02 51 26.3	+1.4
RUS				eS	S	02 52 19.9	-1.4
GNL	Ganaly	3.36	57	PN	P	02 51 26.7	+1.2
GNL	Ganaly	3.36	57	eP	P	02 51 26.7	+1.2
PET	Petropavlovsk	3.50	70	⇑iPN	P	02 51 28.2	+1.7
PET				eS	S	02 52 24.1	-0.1
PET				pmax	pmax		
	comp=Z,75nm,0.9s						
PET				smax	smax		
	comp=E,113nm,0.6s						
PET				smax	smax		
	comp=N,107nm,0.9s						
PET	Petropavlovsk	3.50	70	eP	P	02 51 28.0	+1.6
PET				eS	S	02 52 24.0	-0.1
DALK	Dalny	3.56	70	PN	P	02 51 28.0	+1.1
DALK				S	S	02 52 24.6	-0.4
DALK	Dalny	3.56	70	eP	P	02 51 28.0	+1.1
DALK				eS	S	02 52 24.6	-0.4
KOK	Koryaka	3.57	66	PN	P	02 51 29.3	+2.1
KOK				S	S	02 52 26.9	+1.4
KOK	Koryaka	3.57	66	eP	P	02 51 29.3	+2.1
KOK				eS	S	02 52 26.9	+1.4
KRX	Arik	3.60	65	PN	P	02 51 29.4	+1.9
KRX				S	S	02 52 27.2	+1.2
KRX	Arik	3.60	65	eP	P	02 51 29.4	+1.9
KRX				eS	S	02 52 27.2	+1.2
AVH	Avacha	3.62	66	PN	P	02 51 29.6	+2.0
AVH				S	S	02 52 26.8	+0.6
AVH	Avacha	3.62	66	eP	P	02 51 29.6	+2.0
AVH				eS	S	02 52 26.8	+0.6
KRER	Koryakskii	3.64	66	PN	P	02 51 30.1	+2.2
KRER				S	S	02 52 28.0	+1.3
KRER	Koryakskii	3.64	66	eP	P	02 51 30.1	+2.2
KRER				eS	S	02 52 28.0	+1.3
UGLR	Uglovaya	3.65	67	PN	P	02 51 30.1	+2.2
UGLR				S	S	02 52 27.9	+1.2
UGLR	Uglovaya	3.65	67	eP	P	02 51 30.1	+2.2
UGLR				eS	S	02 52 27.9	+1.2
SMAR	Somma	3.66	67	PN	P	02 51 30.0	+1.9
SMAR				S	S	02 52 28.2	+1.2
SMAR	Somma	3.66	67	eP	P	02 51 30.0	+1.9
SMAR				eS	S	02 52 28.2	+1.2
NLC	Nalytchevo	3.94	69	eS	S	02 52 31.4	+0.5
SPN	Mys Shipunski	4.32	72	PN	P	02 51 33.9	+0.4
SPN	Mys Shipunski	4.32	72	eP	P	02 51 33.9	+0.4
SPN				eS	S	02 52 32.6	-4.5
ESO	Esso	5.14	37	PN	P	02 51 44.7	+3.5
ESO	Esso	5.14	37	eP	P	02 51 44.7	+3.5
TUMR	Tumrok	5.31	48	PN	P	02 51 45.2	+2.1
TUMR				S	S	02 52 55.2	+0.7
TUMR	Tumrok	5.31	48	eP	P	02 51 45.2	+2.1
TUMR				eS	S	02 52 55.2	+0.7
TUMD	Tumrok D	5.38	50	eP	P	02 51 46.3	+2.7
KMNR	Kamenistaya	5.64	45	PN	P	02 51 49.6	+3.3
KMNR	Kamenistaya	5.64	45	eP	P	02 51 49.6	+3.3
MKZ	Mys Kozlova	5.74	60	PN	P	02 51 47.6	+0.4
MKZ				S	S	02 52 58.1	-4.0
MKZ	Mys Kozlova	5.74	60	eP	P	02 51 47.6	+0.4
MKZ				eS	S	02 52 58.1	-4.0
KPT	Kopyto	5.78	43	PN	P	02 51 50.3	+2.6
KPT	Kopyto	5.78	43	eP	P	02 51 50.3	+2.6
SRDR	Sredinnyy	5.81	39	PN	P	02 51 50.2	+2.2
SRDR	Sredinnyy	5.81	39	eP	P	02 51 50.2	+2.2
KIRR	Kirishev	5.82	44	PN	P	02 51 50.7	+2.6
KIRR	Kirishev	5.82	44	eP	P	02 51 50.7	+2.6
BZMR	Bezymyannaya	5.87	44	PN	P	02 51 52.1	+3.4
BZMR	Bezymyannaya	5.87	44	eP	P	02 51 52.1	+3.4
BZP	Bezymyannyi-Pe	5.88	45	eP	P	02 51 51.3	+2.6
BZWR	Bezymyannyi-We	5.89	44	PN	P	02 51 51.3	+2.4
BZWR	Bezymyannyi-We	5.89	44	eP	P	02 51 51.3	+2.4
BZGR	Bezymyannyi-Gr	5.96	45	PN	P	02 51 51.8	+2.2
BZGR	Bezymyannyi-Gr	5.96	45	eP	P	02 51 51.8	+2.2
KLY	Klyuchi	6.19	42	PN	P	02 51 54.5	+2.8
KLY	Klyuchi	6.19	42	eP	P	02 51 54.5	+2.8
TYV	Tymovskoe	6.69	265	ePN	P	02 51 58.4	+1.3
TYV				eS	S	02 53 15.8	-4.3
TYV				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TYV				pmax	pmax		
	comp=Z,100nm,2.4s						
KBTR	Krutoberegovo	7.08	49	PN	P	02 52 02.2	+1.1
KBTR				S	S	02 53 22.3	-5.2
KBTR	Krutoberegovo	7.08	49	eP	P	02 52 02.2	+1.1
KBTR				eS	S	02 53 22.3	-5.2
BKI	Bering	8.27	62	PN	P	02 52 17.4	+3.6
BKI				S	S	02 53 48.5	-2.2
BKI	Bering	8.27	62	eP	P	02 52 17.4	+3.7
BKI				eS	S	02 53 48.5	-2.2
YSS	Yuzh-Sakhalins	8.44	238	ePN	P	02 52 18.0	+2.1
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
SHO	Shikotan	9.14	210	ePN	P	02 52 22.8	-0.7
SHO				eS	S	02 54 02.8	-5.7
SHO				pmax	pmax		
	comp=N,21nm,0.2s						
SHO				pmax	pmax		
	comp=E,24nm,0.2s						
SHO				pmax	pmax		
	comp=Z,51nm,0.2s						
YUK	Yuzh-Kuril'sk	9.32	215	ePN	P	02 52 26.6	+1.2
YUK				S	S	02 54 10.8	-1.2
YUK				pmax	pmax		
	comp=Z,130nm,0.3s						
YUK				pmax	pmax		
	comp=E,42nm,0.2s						
YUK				pmax	pmax		
	comp=N,30nm,0.3s						
RUSJ	Misakicho	9.48	217	ePN	P	02 52 30.1	+2.9
RUSJ				S	S	02 54 17.1	+1.8
NMR	Nemuro--Hokkai	9.95	213	ePN	P	02 52 31.2	-1.0
NMR				eS	S	02 54 19.3	-5.3
ASAJ	Asahikawa	10.57	226	P	P	02 52 40.2	+1.2
	comp=N,14nm,0.7s,baz=4.8,slow=6.7,SNR=11						
SEY	Seymchan	11.03	358	P	P	02 52 43.0	-0.7
	comp=N,0.9nm,0.3s,baz=180,slow=11,SNR=5.7						
ERM	Erimo	12.06	219	⇓ePN	P	02 52 55.4	+0.2
KLR	Kul'dur	13.89	267	P	P	02 53 14.7	-0.2
	comp=N,1.0nm,0.7s,baz=44,slow=5.5,SNR=3.7						
USRK	Ussuriysk Ar.	16.12	250	P	P	02 53 39.1	+0.4
	comp=N,1.0nm,0.5s,baz=40,slow=12,SNR=4.6						
MJA0	Matsu Arr-Jizo	18.70	220	eP	P	02 54 07.4	+2.2
MJA0				pmax	pmax		
	comp=Z,3.0nm,0.4s						
MAJO	Matsushiro	18.72	221	ceP	P	02 54 06.0	+0.7
MAJO				pmax	pmax		
	comp=Z,22nm,2.6s						
MJAR	Matsushiro Arr	18.72	221	P	P	02 54 05.5	+0.2
	comp=Z,3.3nm,0.7s,baz=16,slow=11,SNR=9.3						
TIXI	Tiksi	22.55	340	P	P	02 54 38.0	-1.7
	comp=Z,1.3nm,0.5s,baz=90,slow=20,SNR=4.3						
	comp=Z,1.3nm,0.5s						
TIXI	Tiksi	22.55	340	⇓eP	P	02 54 38.7	-0.9
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
JOW	Kunigami	31.33	226	P	P	02 55 57.0	-0.6
	comp=Z,5.8nm,0.5s,baz=0.0,slow=8.1,SNR=1.5						
	comp=Z,5.8nm,0.5s						
ILAR	Eielson Array	32.58	44	P	P	02 56 08.8	+0.9
	comp=Z,0.1nm,0.5s,baz=272,slow=5.4,SNR=5.0						
	comp=Z,0.1nm,0.5s						
INK	Inuvik	37.31	36	P	P	02 56 48.4	+1.0
	comp=Z,0.4nm,0.3s,baz=278,slow=7.5,SNR=6.3						
	comp=Z,0.4nm,0.3s						
DGZ	Jazzator, Alta	40.34	294	⇑eP	P	02 57 12.8	+0.1
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.9s						
KURK	Kurchatov	44.70	299	⇓iP	P	02 57 46.0	-0.8
KURK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MK31	Makanchi Array	44.79	293	⇑eP	P	02 57 46.7	-1.0
MKAR	Makanchi Array	44.79	293	P	P	02 57 46.5	-1.2
	comp=Z,0.5nm,0.4s,baz=59,slow=7.6,SNR=10						
	comp=Z,0.5nm,0.4s						
MKAR	Makanchi Array	44.79	293	eP	P	02 57 46.7	-1.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YKA	Yellowknife Ar	46.79	40	P	P	02 58 03.5	+0.9
	comp=Z,0.3nm,0.5s,baz=302,slow=7.2,SNR=7.1						
	comp=Z,0.3nm,0.5s						
BRVK	Borovoye	47.77	306	⇑eP	P	02 58 08.8	-1.4
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARU	Arti	51.31	315	c iP	P	02 58 35.1	-1.3
ARU				*PP	pP	03 00 04.0	-0.8
ARU						03 00 33.3	
ARU				S	S	03 05 19.4	-1.0
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s						
AAK	Ala-Archa	51.73	293	⇑eP	P	02 58 38.9	-1.0
AAK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARCES	ARCESS Array B	52.98	340	P	P	02 58 46.8	-1.5
	comp=Z,3.1nm,0.9s,baz=43,slow=9.1,SNR=4.9						
	comp=Z,3.1nm,0.9s						
KIRV	Kirov	53.72	321	⇑eP	P	02 58 51.2	-2.5
FINES	FINESS Array B	59.39	334	P	P	02 59 31.3	-1.6
	comp=Z,0.9nm,0.4s,baz=32,slow=7.9,SNR=16						
	comp=Z,0.9nm,0.4s						
FINES	FINESS Array B	59.39	334	i P	P	02 59 31.6	-1.3
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PDAR	Pinedale Array	61.71	56	P	P	02 59 49.9	+0.9
	comp=Z,0.1nm,0.3s,baz=308,slow=7.8,SNR=2.8						
	comp=Z,0.1nm,0.3s						
NB2	NORSAR Subarra	63.34	340	P	P	02 59 57.6	-1.4
	comp=Z,0.3nm,0.5s,baz=24,slow=6.2						
NOA	NORSAR Array B	63.34	340	P	P	02 59 57.6	-1.4
	comp=Z,0.8nm,0.6s,baz=25,slow=6.9,SNR=5.1						
	comp=Z,0.8nm,0.6s						
NOA	NORSAR Array B	63.34	340	eP	P	02 59 57.8	-1.2
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GEYT	Alibeck	64.07	299	P	P	03 00 04.3	+0.2
	comp=Z,1.5nm,0.5s,baz=81,slow=3.6,SNR=2.2						
	comp=Z,1.5nm,0.5s						
KBZ	Khabaz	67.34	313	⇓eP	P	03 00 21.1	-3.3
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SCHQ	Schefferville	68.50	24	P	P	03 00 30.7	-0.7
	comp=Z,1.7nm,0.9s,baz=40,slow=15,SNR=1.9						
	comp=Z,1.7nm,0.9s						
WRA	Warramunga Arr	73.46	199	P	P	03 01 02.4	+1.3
	comp=Z,0.7nm,0.6s,baz=18,slow=6.2,SNR=5.0						
	comp=Z,0.7nm,0.6s						
WRA	Warramunga Arr	73.46	199	i P	P	03 01 03.7	+2.7
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	GERESS Array B	73.82	333	P	P	03 01 02.1	-0.8
	comp=Z,0.4nm,0.5s,baz=39,slow=6.8,SNR=4.8						
	comp=Z,0.4nm,0.5s						
GERES	GERESS Array B	73.82	333	eP	P	03 01 02.5	-0.5
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	74.67	316	P	P	03 01 05.9	-2.1
	comp=Z,0.5nm,0.5s,baz=306,slow=37,SNR=3.2						
	comp=Z,0.5nm,0.5s						
TXAR	Lajitas Array	74.92	62	P	P	03 01 10.3	+0.7
	comp=Z,0.2nm,0.5s,baz=293,slow=4.7,SNR=2.6						
	comp=Z,0.2nm,0.5s						
ASAR	Alice Springs	77.16	198	P	P	03 01 24.1	+2.3
	comp=Z,0.4nm,0.5s,baz=9.1,slow=5.0,SNR=5.1						
	comp=Z,0.4nm,0.5s						

WEL 30 02:58:45.9±0.4, 42°S±2°×17°3E±°, h5km, M3.0/13, ML3.1/13, MLv3.0/13, Error ellipse: s-maj=0.0km s-min=0.0km az=94.5, confirmed

NOU 30 02:58:46.1, 41°.63S×172°.61E, h4km, MLv3.8/8, South Island, New Zealand

ISC 30 02:58:45.5±1.2, 41°.65S±0°.02×172°.62E±0°.03, h3km±11km, n70, σ1ˢ23/76, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THZ	Tophouse	0.24	118	P	Pg	02 58 50.5	+0.3
THZ				S	Sg	02 58 54.3	+0.8
MRNZ	Matariki Terra	0.27	23	P	Pg	02 58 51.1	+0.4
MRNZ				S	Sg	02 58 55.1	+0.9
DSZ	Denniston Nort	0.62	261	P	Pg	02 58 57.5	+0.2
TKNZ	Takaka Hill	0.67	23	P	Pg	02 58 57.9	-0.3
TKNZ				S	Sg	02 59 07.5	+0.5
NNZ	Nelson	0.72	53	P	Pg	02 58 59.0	-0.3
QRZ	Quartz Range	0.83	355	P	Pg	02 59 01.7	+0.4

QRZ	Quartz Range	0.83	355	P	Pg	02 59 00.7	-0.7
QRZ				S	Sg	02 59 12.1	+0.1
BSWZ	Blackbirch Sta	0.94	94	P	Pg	02 59 04.0	+0.4
TUWZ	Tuamarina	1.02	78	P	Pg	02 59 04.3	-0.8
TUWZ				S	Sb	02 59 19.5	0.0
KHZ	Kahutara	1.03	138	P	Pg	02 59 06.0	+0.8
KHZ	Kahutara	1.03	138	P	Pg	02 59 06.1	+0.9
LTZ	Lake Taylor	1.16	193	P	Pg	02 59 07.8	+0.1
LTZ				S	Sn	02 59 25.9	+0.9
CMWZ	Cape Campbell	1.20	95	P	Pn	02 59 09.8	+0.7
DUWZ	D'Urville Isla	1.30	50	P	Pg	02 59 08.9	-1.5
DUWZ				S	Sb	02 59 27.7	+0.1
TCW	Tory Channel	1.32	71	P	Pn	02 59 09.5	-1.3
GVZ	Greta Valley S	1.35	167	P	Pn	02 59 11.7	+0.4
INZ	Inchbonnie	1.38	219	P	Pn	02 59 11.4	-0.2
AMCZ	Amberley	1.53	179	P	Pn	02 59 14.1	+0.5
OXZ	Oxford	1.73	194	P	Pn	02 59 16.6	+0.2
KIW	Kapiti Island	1.90	66	P	Pn	02 59 19.6	+0.9
CAW	Cannon Point	1.92	74	P	Pn	02 59 19.7	+0.7
PLWZ	Palliser	1.98	89	P	Pn	02 59 19.7	-0.2
WVZ	Waitaha Valley	1.99	224	P	Pn	02 59 20.4	+0.4
MHCZ	Mount Hutt	2.03	202	P	Pn	02 59 20.7	+0.1
MQZ	McQueen's Vall	2.06	179	P	Pn	02 59 20.2	-0.6
OGWZ	Otaki Gorge	2.10	67	P	Pn	02 59 22.7	+1.2
RACZ	Rakaia	2.11	189	P	Pn	02 59 21.1	-0.5
MTW	Mount Morrison	2.23	78	P	Pn	02 59 22.9	-0.3
AKCZ	Akaroa Harbour	2.23	175	P	Pn	02 59 23.0	-0.3
HOWZ	Holdsworth Sta	2.31	72	P	Pn	02 59 24.8	+0.4
WACZ	Wakanui South	2.36	194	P	Pn	02 59 24.7	-0.4
RPZ	Rata Peaks	2.36	209	P	Pn	02 59 26.8	+1.7
RPZ	Rata Peaks	2.36	209	P	Pn	02 59 26.0	+0.9
GCSZ	Gaunt Creek Bo	2.38	225	P	Pn	02 59 25.6	+0.3
MRZ	Mangatainoka R	2.44	67	P	Pn	02 59 26.5	+0.3
ARCZ	Arundel	2.53	204	P	Pn	02 59 27.6	+0.2
LREZ	Lake Rotokare	2.58	32	P	Pb	02 59 32.1	-0.2
KHEZ	Kahui Hut	2.58	25	P	Pn	02 59 29.5	+1.3
KHEZ	Kahui Hut	2.58	25	P	Pn	02 59 29.1	+0.9
WAZ	Wanganui	2.61	44	P	Pb	02 59 31.1	-1.8
NEZ	North Egmont	2.63	26	P	Pn	02 59 30.5	+1.7
PKE	Pukeiti	2.67	24	P	Pn	02 59 30.4	+1.1
FOZ	Fox Glacier	2.80	227	P	Pn	02 59 31.4	+0.4
TMZ	Timaru	2.98	203	P	Pn	02 59 33.3	-0.3
TSZ	Takapari Road	2.99	59	P	Pn	02 59 35.4	+1.6
VRZ	Vera Road	3.01	34	P	Pn	02 59 35.0	+1.0
PKVZ	Pokaka	3.15	42	P	Pn	02 59 37.6	+1.6
TRVZ	Turoa	3.24	45	P	Pn	02 59 39.8	+2.4
WNVZ	Wahianoa	3.25	45	P	Pn	02 59 39.4	+2.0
MOVZ	Moawhango	3.28	48	P	Pn	02 59 39.2	+1.5
FWVZ	Far West T-bar	3.28	44	P	Pn	02 59 40.2	+2.3
TUVZ	Tukino	3.32	45	P	Pn	02 59 41.0	+2.5
TWVZ	Taurewa	3.36	41	P	Pn	02 59 40.6	+1.7
NGZ	Ngauruhoe	3.36	44	P	Pn	02 59 40.9	+2.0
BHHZ	Black Hill Sta	3.40	52	P	Pn	02 59 40.4	+1.0
NNVZ	North Ngauruho	3.40	43	P	Pn	02 59 41.7	+2.2
OTVZ	Oturere	3.40	44	P	Pn	02 59 41.9	+2.3
KRVZ	Karewarewa	3.44	43	P	Pn	02 59 42.8	+2.7
HIZ	Hauiti	3.57	29	P	Pn	02 59 41.7	0.0
HIZ	Hauiti	3.57	29	P	Pn	02 59 41.7	0.0
KWHZ	Kaweka Forest	3.65	54	P	Pb	02 59 47.9	-2.8
ODZ	Otahua Downs	3.69	202	P	Pn	02 59 43.3	0.0
JCZ	Jackson Bay	3.71	228	P	Pn	02 59 44.0	+0.2
JCZ	Jackson Bay	3.71	228	P	Pn	02 59 43.8	0.0
BKZ	Black Stump Fm	3.86	51	P	Pn	02 59 49.8	+4.0
TLZ	Tolley Road	4.00	35	P	Pn	02 59 48.6	+0.9
KNZ	Kokohu	4.67	57	P	Pb	03 00 02.6	-5.4
WIAZ	Waiheke Island	5.23	23	P	Pn	03 00 05.5	+1.0
KUZ	Kuaotunu	5.46	27	P	Pn	03 00 07.3	-0.3
WCZ	Waipu Caves	5.86	14	P	Pn	03 00 13.1	-0.1

KRSC 30 03:21:23.7±1.4**, 56°.95N**×**163°.35E, h22**^{km}±18^{km}**, Ml4.0,**
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBG	Krutoberegovo	0.78	207	eP	Pb	03 21 39.0	+0.4
KBG				eS	Sn	03 21 49.9	-0.6
KBTR	Krutoberegovo	0.80	202	eP	Pn	03 21 39.8	+0.1
KBTR				eS	Sn	03 21 50.8	-0.1
SMKR	Semkarok	1.10	251	eP	Pn	03 21 43.3	-0.6
SMKR				eS	Sb	03 21 57.2	-0.7
SRKR	Sorokina	1.24	257	eP	Pn	03 21 45.5	-0.3
SRKR				eS	Sn	03 22 00.7	-1.2
KLY	Klyuchi	1.62	248	eP	Pn	03 21 50.0	-1.0
KLY				eS	Sn	03 22 09.1	-2.1
CIRR	Tsirk	1.67	241	eP	Pb	03 21 52.9	-0.9
CIRR				eS	Sb	03 22 14.4	0.0
LGNR	Loginova	1.71	241	eP	Pb	03 21 54.2	-0.4
LGNR				eS	Sb	03 22 16.2	+0.4
BZGR	Bezymyannyi-Gr	1.79	237	eP	Pb	03 21 54.9	-0.9
BZGR				eS	Sb	03 22 16.9	-0.9
BZWR	Bezymyannyi-We	1.87	239	eP	Pb	03 21 56.1	-1.1
BZWR				eS	Sb	03 22 20.3	+0.2
BZP	Bezymyannyi-Pe	1.88	238	eP	Pb	03 21 56.2	-1.1
BZP				eS	Sb	03 22 19.9	-0.6
BZMR	Bezymyannaya	1.89	239	eP	Pb	03 21 56.4	-1.1
BZMR				eS	Sb	03 22 21.1	+0.4
KIRR	Kirishev	1.95	240	eP	Pb	03 21 57.1	-1.4
KIRR				eS	Sb	03 22 21.3	-1.1
KPT	Kopyto	2.00	242	eP	Pn	03 21 57.4	+1.1
KPT				eS	Sb	03 22 22.8	-1.0
SRDR	Sredinnyy	2.11	254	eP	Pn	03 21 58.7	+1.0
SRDR				eS	Sn	03 22 24.8	+1.6
KMNR	Kamenistaya	2.11	237	eP	Pb	03 22 00.1	-1.1
KMNR				eS	Sb	03 22 26.7	-0.3
KOZ	Kozyrevsk	2.13	247	eP	Pb	03 22 00.1	-1.4
KOZ				eS	Sb	03 22 27.9	+0.5
BKI	Bering	2.29	139	eP	Pb	03 22 02.3	-1.9
BKI				eS	Sb	03 22 30.7	-1.2
OSSR	Ossora	2.31	356	eP	Pn	03 22 01.8	+1.4
TUMD	Tumrok D	2.41	225	eP	Pb	03 22 05.3	-1.0
TUMD				eS	Sb	03 22 35.1	-0.5
TUMR	Tumrok	2.45	228	eP	Pb	03 22 06.2	-1.0
MKZ	Mys Kozlova	2.57	202	eP	Pb	03 22 06.7	-2.3
MKZ				eS	Sb	03 22 37.6	-2.5
TIGL	Tigil	2.67	290	eP	Pn	03 22 07.6	+2.3
TIGL				eS	Sb	03 22 40.4	-2.5
ESO	Esso	2.78	250	eP	Pb	03 22 09.8	-2.8
ESO				eS	Sb	03 22 44.8	-1.4
PALN	Palana	2.80	321	eP	Pb	03 22 10.5	-2.4
PALN				eS	Sb	03 22 45.2	-1.6
SPN	Mys Shipunski	4.31	208	eS	Sn	03 23 17.6	+0.2
GNL	Ganaly	4.49	226	eP	Pn	03 22 33.8	+3.3
KRX	Arik	4.50	219	eP	Pn	03 22 34.8	+4.2
SMAR	Somma	4.53	217	eP	Pn	03 22 34.2	+3.2
AVH	Avacha	4.54	218	eP	Pn	03 22 35.3	+4.1
KOK	Koryaka	4.56	218	eP	Pn	03 22 35.6	+4.2
UGLR	Uglovaya	4.56	217	eP	Pn	03 22 35.0	+3.5
GRL	Gorelyy	5.36	217	eP	Pn	03 22 47.4	+4.9
MTVR	Mutnovka	5.38	216	eP	Pn	03 22 45.6	+2.7

TEH ***30*** *03:27:47.4, 32°.41N×47°.68E, h10^{km}±63^{km}, ML2.6*
ISN ***30*** *03:27:47.5±2.2, 32°.48N×47°.68E, h17^{km}±15^{km}, ML2.5*
ISC 30 03:27:47.7±1.0**, 32°.39N**±0°.05×**47°.79E**±0°.06**, h15**^{km}**, n9,**
σ**0^s.86**/12**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKFM	Kafar-mosalman	1.13	2	Pg	Pg	03 28 09.0	-0.5
IKFM				Sg	Sg	03 28 25.1	+0.7
IDOB	Doab	1.43	13	Pg	Pg	03 28 15.4	+0.2
AMIS	Naft Sefid	1.46	119	Pg	Pg	03 28 16.4	+0.7
RAFI	Al-Rafai	1.57	245	ePg	Pn	03 28 14.0	-1.0
	baz=60						
RAFI				eSg	Sb	03 28 37.0	+0.9
IBDR	Badra	1.73	295	ePn	Pn	03 28 17.0	-0.1
IBDR				eSn	Sn	03 28 39.0	+0.1
IBDR				AML	AML	03 28 41.8	
	comp=E,62nm,0.4s						
IBDR				AML	AML	03 28 42.6	
	comp=N,95nm,0.8s						
IKOM	Komasi	1.80	352	Pg	Pb	03 28 20.3	-0.1
HSAM	Samen	1.94	20	Pn	Pg	03 28 23.7	-1.3
IGHG	Ghaleghazi	2.19	332	Pn	Pn	03 28 24.9	+1.2
IPIR	Pirpir	2.63	83	Pn	Pb	03 28 33.9	-0.8

IDC ***30*** *03:41:15.7±6.0, 18°.09N×106°.87W, h0^{km}, mb3.4/5,*
mbtmp3.6/8, ML3.6/3, MS3.4/14, Error ellipse:
s-maj=96.1km s-min=70.8km az=149.0
MEX ***30*** *03:41:26.2±0.5, 18°.78N×106°.97W, h5^{km}, MD4.1*
ISC 30 03:41:27.0±1.4**, 18°.8N**±0°.1×**107°.00W**±0°.08**, h36**^{km}**, n34,**
σ**1^s.09**/35**, mb3.4**/5**, MS3.3**/10**, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CJM	Chamela	1.99	68	i P	Pn	03 41 56.5	-1.7
CJM				eS	Sn	03 42 20.7	-1.3
CIHU	Emiliano Zapat	2.20	76	i P	Pn	03 41 59.8	-1.3
CIHU				i S	Sn	03 42 25.1	-2.0
CDAR	Ciudad de Arme	2.84	86	eP	Pn	03 42 09.1	-0.7
CDAR				eS	Sn	03 42 41.9	-0.8
R15V		2.89	81	eP	Pn	03 42 09.7	-0.8
R15V				i S	Sn	03 42 43.8	-0.2
COIG	Colima	3.16	82	eP	Pn	03 42 13.5	-0.8
COIG				eS	Sn	03 42 51.3	+0.4
ANIG	Ahuacatlan	3.27	45	eP	Pn	03 42 16.1	+0.2
ANIG				eS	Sn	03 42 55.0	+1.4
MNGA	Volcan de Coli	3.27	77	eP	Pn	03 42 16.5	+0.5
MNGA				i S	Sn	03 42 55.3	+1.4
SOMAC	Volcano de Col	3.28	76	eP	Pn	03 42 16.6	+0.4
SOMAC				i S	Sn	03 42 54.3	+0.1
EZ5V		3.29	77	e	Pn	03 42 17.3	+0.9
EZ5V				e		03 42 58.7	
INCO	Volcan de Coli	3.30	76	eP	Pn	03 42 16.9	+0.4
INCO				i S	Sn	03 42 55.8	+1.0
JUBC	Volcan de Coli	3.33	76	eP	Pn	03 42 17.4	+0.5
JUBC				i S	Sn	03 42 55.7	+0.3
MMIG	Aquila	3.50	97	eP	Pn	03 42 18.3	-0.6
MMIG				eS	Sn	03 42 58.8	-0.2
H06E1	SOCORRO T-PHAS	3.72	271	Pn	Pn	03 42 13.2	-8.8
H06E1				Sn	Sn	03 42 50.5	-14
ZIIG	Zihuatanejo	5.38	101	e	Pn	03 42 46.2	+1.4
ZAIG	Zacatecas	5.76	45	e	Pn	03 42 48.6	-1.6
LPIG	La Paz	6.15	331	LR	LR	03 44 45.5	
	comp=Z,290nm,20.1s,baz=163,slow=31						
ARIG	Puente Sto Nin	6.33	93	eP	Pn	03 42 58.8	+1.0
ARIG				eS	Sn	03 44 10.2	+1.2
TXAR	Lajitas Array	10.96	15	Pn	Pn	03 44 03.5	+2.0
	0.2nm,0.3s,baz=196,slow=13,SNR=11						
TXAR				LR	LR	03 48 02.2	
	comp=Z,151nm,21.2s,baz=199,slow=35 0.9nm,0.5s						
ANMO	Albuquerque	16.14	2	Pn	Pn	03 45 13.1	+1.8
	0.1nm,0.3s,baz=210,slow=20,SNR=5.2						
ANMO				LR	LR	03 51 07.0	
	comp=Z,113nm,18.6s,baz=282,slow=35 1.0nm,0.6s						
PFO	Pinyon Flats O	17.05	332	P	Pn	03 45 23.7	+1.0
	baz=162,slow=12,SNR=8.2						
PFO				LR	LR	03 50 29.5	
	comp=Z,206nm,22.0s,baz=167,slow=31 7.4nm,1.0s						
NVAR	Mina Array Bea	21.94	336	P	P	03 46 17.7	0.0
	1.5nm,1.0s,baz=158,slow=12,SNR=8.6						
NVAR				LR	LR	03 53 25.6	
	comp=Z,65nm,18.6s,baz=186,slow=32 1.5nm,1.0s						
ELK	Elko	23.03	344	P	P	03 46 29.6	+0.3
	0.6nm,0.4s,baz=179,slow=7.9,SNR=4.6						
ELK				LR	LR	03 54 44.0	
	comp=Z,59nm,19.1s,baz=174,slow=34 0.6nm,0.4s						
PDAR	Pinedale Array	24.04	355	P	P	03 46 39.0	+0.1
	0.6nm,0.8s,baz=161,slow=11,SNR=5.5						
PDAR				LR	LR	03 55 41.7	
	comp=Z,83nm,19.2s,baz=179,slow=35 0.6nm,0.8s						
YBH	Yreka Blue Hor	26.54	333	LR	LR	03 56 13.3	
	comp=Z,65nm,21.9s,baz=151,slow=33						
NEW	Newport	30.57	347	LR	LR	04 01 32.8	
	comp=Z,62nm,18.6s,baz=170,slow=39						
ULM	Lac du Bonnet	32.66	13	LR	LR	04 00 18.0	
	comp=Z,59nm,18.0s,baz=336,slow=34						
BBB	Bella Bella	37.25	339	LR	LR	04 02 28.2	
	comp=Z,77nm,18.1s,baz=194,slow=34						
YKA	Yellowknife Ar	44.02	355	P	P	03 49 29.3	-1.5
	0.2nm,0.8s,baz=168,slow=6.9,SNR=5.2						
YKA				LR	LR	04 07 56.7	
	comp=Z,93nm,18.9s,baz=17,slow=36 0.2nm,0.8s						
SCHQ	Schefferville	47.19	31	LR	LR	04 10 12.4	
	comp=Z,56nm,20.7s,baz=138,slow=36						
ILAR	Eielson Array	53.11	340	P	P	03 50 40.0	-0.6
	0.8nm,1.0s,baz=150,slow=5.4,SNR=6.9 0.8nm,1.0s						
PPT	Papeete	55.27	232	LR	LR	04 09 36.4	
	comp=Z,54nm,18.2s,baz=45,slow=31						
H03N2	Juan Fernandez	58.41	152	T	T	04 54 37.1	
	baz=330,slow=77,SNR=91						
H03N1	Juan Fernandez	58.42	152	T	T	04 54 38.3	
	baz=330,slow=77,SNR=87						
H03N3	Juan Fernandez	58.42	152	T	T	04 54 38.0	
	baz=330,slow=77,SNR=103						

IDC ***30*** *04:00:08.0±1.5, 15°.80N×145°.87E, h108^{km}±14^{km},*
mb3.9/21, mbtmp4.2/22, MS3.1/3, Error ellipse:
s-maj=17.3km s-min=11.3km az=105.0
NEIC ***30*** *04:00:08.4±1.1, 15°.78N±0°.10×145°.9E±0°.1, h106^{km}±5^{km},*
mb4.6/86, Error ellipse: s-maj=18.7km s-min=12.7km
az=118.0
ISC 30 04:00:08.0±0.4**, 15°.78N**±0°.06×**145°.91E**±0°.10**, h109**^{km}**,**
n127, σ**0^s.75**/122**, mb4.5**/64**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	2.40	205	P	Pn	04 00 47.0	+0.9
	128nm,0.3s,baz=100,slow=3.5,SNR=17						
GUMO				S	Sn	04 01 15.4	+0.1
	482nm,0.3s,baz=342,slow=23,SNR=6.3						
GUMO	Guam	2.40	205	Pn	Pn	04 00 46.8	+0.7
GUMO					Sn	04 01 16.8	+1.5
PATS	Pohnpei	15.06	125	Pn	Pn	04 03 34.1	-1.0
H11S3	WAKE ISLAND Hy	20.04	79	T	T	04 25 10.4	
	baz=266,slow=75,SNR=78						
H11S1	WAKE ISLAND Hy	20.06	79	T	T	04 25 10.0	
	baz=266,slow=75,SNR=52						
H11S2	WAKE ISLAND Hy	20.06	79	T	T	04 25 10.1	
	baz=266,slow=75,SNR=69						
H11N1	WAKE ISLAND Hy	20.36	76	T	T	04 25 31.5	
	baz=263,slow=74,SNR=34						
H11N2	WAKE ISLAND Hy	20.37	76	T	T	04 25 33.1	
	baz=263,slow=74,SNR=31						
H11N3	WAKE ISLAND Hy	20.38	76	T	T	04 25 33.9	
	baz=263,slow=74,SNR=34						
DAV	Davao City (W)	21.70	249	LR	LR	04 11 46.9	
	comp=Z,38nm,21.6s,baz=119,slow=32						
KSRS	Korea Array	26.82	327	P	P	04 05 39.1	+1.0
	1.1nm,0.6s,baz=142,slow=9.7,SNR=5.2						
KSRS				LR	LR	04 15 04.8	
	comp=Z,11nm,21.4s,baz=135,slow=34 1.1nm,0.6s						
MTN	Manton Dam	31.98	208	P	P	04 06 23.9	0.0
KAPI	Kappang	33.12	233	P	P	04 06 33.6	-0.3
	5.2nm,0.2s,baz=38,slow=11,SNR=2.8 5.2nm,0.2s						
KNRA	Kununurra	35.55	209	P	P	04 06 54.8	0.0
WB0	Warramunga Arr	37.09	198	P	P	04 07 06.6	-1.4
WB0				IAmb	IAmb	04 07 12.5	
	comp=Z,6.3nm,1.2s						
WB2	Warramunga Arr	37.27	198	P	P	04 07 09.7	+0.2
WB2				IAmb	IAmb	04 07 11.0	
	comp=Z,4.6nm,0.8s						
WRA	Warramunga Arr	37.28	198	P	P	04 07 09.8	+0.3
	comp=Z,2.6nm,0.7s,baz=26,slow=8.5,SNR=17						
WRA				ScP	ScP	04 13 02.2	-2.0
	comp=Z,0.5nm,0.7s,baz=14,slow=4.0,SNR=2.7						
WRA				LR	LR	04 23 40.1	
	comp=Z,175nm,18.0s,baz=124,slow=38 comp=Z,2.6nm,0.7s						
PETK	Petropavlovsk-	38.39	11	P	P	04 07 17.9	-0.6
	comp=Z,1.2nm,0.8s,baz=189,slow=5.7,SNR=1.7 comp=Z,1.2nm,0.8s						
FITZ	Fitzroy Crossi	39.14	211	P	P	04 07 25.7	+0.5
AS31	Alice Springs	40.92	197	P	P	04 07 40.1	+0.3
ASAR	Alice Springs	40.92	197	P	P	04 07 39.9	0.0
	comp=Z,0.7nm,0.3s,baz=16,slow=10.0,SNR=21 comp=Z,0.7nm,0.3s						
ASAR	Alice Springs	40.92	197	P	P	04 07 39.6	-0.3
MBWA	Marble Bar	44.80	216	P	P	04 08 11.6	+0.4
CMAR	Chiang Mai Arr	44.87	280	P	P	04 08 12.5	+0.7
	comp=Z,0.8nm,0.3s,baz=62,slow=6.3,SNR=7.3 comp=Z,0.8nm,0.3s						
SONM	Songino Array	45.56	323	P	P	04 08 15.9	-1.1
	comp=Z,1.0nm,0.8s,baz=134,slow=7.9,SNR=5.7 comp=Z,1.0nm,0.8s						
SONM	Songino Array	45.56	323	P	P	04 08 15.8	-1.2
STKA	Stephens Creek	47.56	185	P	P	04 08 32.8	+0.2
	comp=Z,1.8nm,0.6s,baz=8.9,slow=7.5,SNR=4.1 comp=Z,1.8nm,0.6s						
RPSI	Rantau Prapat	48.03	259	P	P	04 08 35.5	-1.1
RPSI				IAmb	IAmb	04 08 38.9	
	comp=Z,9.3nm,0.6s						
BBOO	Buckleboo	49.23	191	P	P	04 08 44.2	-1.2
FORT	Forrest	49.37	200	P	P	04 08 47.0	+0.5
GSI	Gunungsitoli	49.76	258	P	P	04 08 50.1	+0.3
UNV	Unalaska Valle	52.95	33	P	P	04 09 13.8	+0.8
MORW	Morawa	53.11	213	P	P	04 09 14.2	-0.3
ANM	Nome	58.80	22	P	P	04 09 55.0	+0.5
ANM				IAmb	IAmb	04 09 56.5	
	comp=Z,6.0nm,1.3s						
ZALV	Zalesovo Beam	60.45	324	P	P	04 10 05.3	-0.8
	comp=Z,0.6nm,0.4s,baz=111,slow=7.9,SNR=3.7 comp=Z,0.6nm,0.4s						
MK31	Makanchi Array	60.64	315	P	P	04 10 08.0	+0.5
MKAR	Makanchi Array	60.64	315	P	P	04 10 08.1	+0.5
	comp=Z,5.1nm,0.4s,baz=91,slow=8.5,SNR=148 comp=Z,5.1nm,0.4s						
MKAR	Makanchi Array	60.64	315	P	P	04 10 08.0	+0.5
MAKZ	Makanchi	60.85	315	P	P	04 10 09.6	+0.6
SVW2	Sparrevohn	61.28	28	P	P	04 10 12.3	+0.7
SVW2				IAmb	IAmb	04 10 33.2	
	comp=Z,12nm,1.5s						
N19K	Bonanza Creek	61.69	29	P	P	04 10 15.1	+0.7
N19K				IAmb	IAmb	04 10 16.5	
	comp=Z,8.0nm,1.1s						
KDAK	Kodiak Island	61.69	32	P	P	04 10 15.1	+0.8
	comp=Z,1.9nm,0.3s,baz=271,slow=2.4,SNR=18 comp=Z,1.9nm,0.3s						
P19K	Oil Pt	61.91	30	P	P	04 10 16.3	+0.4
M20K	Styx River	62.65	28	P	P	04 10 21.8	+1.0
M20K				IAmb	IAmb	04 10 22.4	
	comp=Z,8.8nm,1.1s						
K20K	Telida	62.73	26	P	P	04 10 22.1	+0.8
K20K				IAmb	IAmb	04 10 23.3	
	comp=Z,8.1nm,1.2s						
BRLK	Bradley Lake	63.08	30	P	P	04 10 23.3	-0.4
PPLA	Purkeypile	63.39	27	P	P	04 10 25.4	-0.3
PPLA				IAmb	IAmb	04 10 55.6	
	comp=Z,8.2nm,1.2s						
SKT	Skwentna	63.40	28	P	P	04 10 25.1	-0.7
SKT				IAmb	IAmb	04 10 28.1	
	comp=Z,13nm,1.5s						
KURK	Kurchatov	63.58	319	P	P	04 10 26.7	-0.3
KURK				IAmb	IAmb	04 10 27.4	
	comp=Z,6.3nm,0.6s						
CAST	Castle Rocks	63.60	26	P	P	04 10 27.6	+0.6
CAST				IAmb	IAmb	04 10 28.2	
	comp=Z,15nm,1.3s						
SUA	Susitna One	63.61	29	P	P	04 10 28.0	+0.7
SUA				IAmb	IAmb	04 10 58.8	
	comp=Z,8.6nm,1.2s						
IMAR	Indian Mountai	63.80	23	P	P	04 10 28.3	0.0
KDJ	Kajisay	63.86	309	P	P	04 10 29.9	+0.6
KDJ				IAmb	IAmb	04 10 31.0	
	comp=Z,4.3nm,0.8s						
RC01	Rabbit Creek A	63.98	29	P	P	04 10 30.1	+0.6
H21K	Melozitna Rive	64.05	24	P	P	04 10 30.6	+0.8
H21K				IAmb	IAmb	04 10 45.2	
	comp=Z,7.9nm,1.4s						
CUT	Chulitna	64.09	28	P	P	04 10 29.7	-0.5
KTH	Kantishna Hill	64.14	26	P	P	04 10 30.5	-0.1
KTH				IAmb	IAmb	04 10 35.1	
	comp=Z,8.6nm,1.2s						
I21K	Tanana	64.21	24	P	P	04 10 31.7	+0.8
I21K				IAmb	IAmb	04 10 32.9	
	comp=Z,5.2nm,1.1s						
BPAW	Bear Paw Mtn.	64.27	26	P	P	04 10 31.5	+0.1
BPAW				IAmb	IAmb	04 10 32.4	
	comp=Z,9.1nm,1.2s						
TRF	Thorofare Moun	64.38	27	P	P	04 10 31.9	-0.3
TRF				IAmb	IAmb	04 10 36.5	
	comp=Z,12nm,1.4s						
PWL	Port Wells	64.59	30	P	P	04 10 34.3	+0.8
KNK	Knik Glacier	64.66	29	P	P	04 10 34.2	+0.2
KNK				IAmb	IAmb	04 10 34.5	
	comp=Z,5.4nm,0.7s						
MLY	Manley	64.66	25	P	P	04 10 34.3	+0.4
SML	Sawmill	64.81	29	P	P	04 10 35.3	+0.3
MCK	McKinley	65.04	26	P	P	04 10 36.4	0.0
I23K	Minto, Yukon-K	65.25	25	P	P	04 10 38.1	+0.4
I23K				IAmb	IAmb	04 10 39.0	
	comp=Z,8.5nm,1.3s						
SCM	Sheep Creek Mo	65.28	29	P	P	04 10 38.5	+0.4
COLD	Coldfoot	65.55	23	P	P	04 10 40.4	+0.8
WRH	Wood River Hil	65.59	26	P	P	04 10 39.2	-0.7
CCB	Clear Creek Bu	65.76	26	P	P	04 10 40.2	-0.7
KLU	Klutina	65.87	29	P	P	04 10 42.5	+0.7
KLU				IAmb	IAmb	04 10 42.9	
	comp=Z,5.3nm,0.8s						
M24K	Tolsona, Glenn	65.88	29	P	P	04 10 42.9	+1.0
H24K	Noodor Dome	66.04	24	P	P	04 10 43.0	+0.2
HDA	Harding Lake	66.06	26	P	P	04 10 41.9	-1.0
HDA				IAmb	IAmb	04 11 09.0	
	comp=Z,7.8nm,1.5s						
IL31		66.17	26	P	P	04 10 42.5	-1.0
IL31				IAmb	IAmb	04 10 43.3	
	comp=Z,6.6nm,1.1s						
ILAR	Eielson Array	66.17	26	P	P	04 10 42.3	-1.3
	comp=Z,2.1nm,0.4s,baz=253,slow=5.7,SNR=82 comp=Z,2.1nm,0.4s						
IL03	Eielson Array	66.18	26	P	P	04 10 42.6	-1.1
TOLK	Toolik Lake Re	66.22	21	P	P	04 10 44.5	+0.6
PAX	Paxson	66.38	28	P	P	04 10 45.5	+0.4
PAX				IAmb	IAmb	04 10 45.9	
	comp=Z,12nm,1.2s						
N25K	Chitina, Valde	66.51	29	P	P	04 10 46.9	+0.9
N25K				IAmb	IAmb	04 11 14.3	
	comp=Z,15nm,1.4s						
RIDG	Independent Ri	66.81	27	P	P	04 10 47.9	+0.1
RIDG				IAmb	IAmb	04 10 50.1	
	comp=Z,15nm,1.3s						
VRDI	Verde Repeater	66.99	30	P	P	04 10 49.9	+0.8
VRDI				IAmb	IAmb	04 10 50.3	
	comp=Z,12nm,1.0s						
DOT	Dot Lake	67.13	27	P	P	04 10 50.1	+0.3
DOT				IAmb	IAmb	04 10 50.4	
	comp=Z,8.0nm,1.1s						
MCARA	McCarthy VSAT	67.22	30	P	P	04 10 51.3	+1.0
MCARA				IAmb	IAmb	04 10 51.8	
	comp=Z,12nm,1.0s						
SCRK	Sand Creek	67.23	27	P	P	04 10 50.7	+0.2
L26K	Log Cabin Wild	67.34	28	P	P	04 10 51.4	+0.3
L26K				IAmb	IAmb	04 11 06.8	
	comp=Z,6.0nm,1.3s						
BMAR	Burnt Mountain	67.70	23	P	P	04 10 54.3	+1.0
I26K	Coal Creek Min	67.83	25	P	P	04 10 53.1	-1.0
I26K				IAmb	IAmb	04 11 00.8	
	comp=Z,9.8nm,1.5s						
M27K	Edge Creek, AK	67.90	29	P	P	04 10 55.3	+0.5
M27K				IAmb	IAmb	04 10 55.7	
	comp=Z,10nm,1.4s						
L27K	Beaver Creek,	68.03	28	P	P	04 10 55.9	+0.5
BCAR	Beaver Creek A	68.05	28	P	P	04 10 56.0	+0.4
K27K	Chicken	68.07	27	P	P	04 10 56.4	+0.8
EGAK	Eagle	68.58	26	P	P	04 10 59.2	+0.4
KKAR	Karatay Array	68.79	311	P	P	04 11 01.2	+0.7
KKAR	Karatay Array	68.79	311	P	P	04 11 01.1	+0.6
KKAR				IAmb	IAmb	04 11 01.5	
	comp=Z,3.9nm,0.7s						
BRVK	Borovoye	68.91	321	P	P	04 11 00.6	-0.5
GAR	Garm	69.14	306	P	P	04 11 02.9	0.0
GAR				IAmb	IAmb	04 11 03.4	
	comp=Z,6.4nm,0.6s						
DAWY	Dawson	69.24	27	P	P	04 11 03.6	+0.7
DAWY				IAmb	IAmb	04 11 04.4	
	comp=Z,8.8nm,1.4s						
HYT	Haines Junctio	69.82	31	P	P	04 11 07.0	+0.3
HYT				IAmb	IAmb	04 11 08.9	
	comp=Z,7.5nm,0.7s						
CHGR	Chuyangaron	70.06	306	P	P	04 11 08.5	0.0
M30M	Minto, Yukon	70.27	29	P	P	04 11 10.3	+1.0
N31M	Braeburn, Yuko	70.69	30	P	P	04 11 12.9	+1.1
N31M				IAmb	IAmb	04 11 13.9	
	comp=Z,8.7nm,1.1s						
MAYO	Mayo, Yukon	70.75	28	P	P	04 11 13.3	+1.2
MAYO				IAmb	IAmb	04 11 14.5	
	comp=Z,9.0nm,0.9s						
JIS	Juneau Island	71.32	33	P	P	04 11 16.8	+1.2

JIS				IAmb	IAmb	04 11 59.6	
	comp=Z,6.8nm,1.1s						
M31M	**Drury Creek, Y**	**71.37**	**29**	P	**P**	**04 11 16.6**	**+0.6**
FARO	**Faro, Yukon**	**71.86**	**29**	P	**P**	**04 11 19.5**	**+0.6**
INK	**Inuvik**	**71.97**	**23**	P	**P**	**04 11 19.0**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=261,slow=12,SNR=4.7						
	comp=Z,1.7nm,0.6s						
P33M	**Teslin, Yukon**	**72.12**	**31**	P	**P**	**04 11 21.0**	**+0.5**
DLBC	**Dease Lake**	**73.61**	**33**	P	**P**	**04 11 29.5**	**+0.1**
	comp=Z,4.3nm,0.8s,baz=274,slow=4.4,SNR=9.1						
	comp=Z,4.3nm,0.8s						
C36M	**Paulatuk**	**75.37**	**22**	P	**P**	**04 11 39.1**	**-0.1**
ABKAR	**Akbulak array**	**75.61**	**318**	P	**P**	**04 11 40.0**	**-1.0**
ABKAR	**Akbulak array**	**75.61**	**318**	P	**P**	**04 11 40.1**	**-0.9**
ABKAR				IAmb	IAmb	04 11 40.9	
	comp=Z,2.8nm,0.5s						
NLWA	**Neilton Lookou**	**78.71**	**44**	P	**P**	**04 11 60.0**	**+1.5**
GEYT	**Alibeck**	**78.77**	**306**	P	**P**	**04 11 59.3**	**+0.4**
	comp=Z,2.9nm,0.8s,baz=104,slow=4.7,SNR=4.1						
	comp=Z,2.9nm,0.8s						
YKA	**Yellowknife Ar**	**80.46**	**28**	P	**P**	**04 12 07.2**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=285,slow=5.0,SNR=34						
	comp=Z,1.0nm,0.4s						
NVAR	**Mina Array Bea**	**84.78**	**52**	P	**P**	**04 12 32.2**	**+1.4**
	comp=Z,2.3nm,0.5s,baz=268,slow=6.0,SNR=32						
	comp=Z,2.3nm,0.5s						
ELK	**Elko**	**86.38**	**49**	P	**P**	**04 12 39.6**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=260,slow=7.9,SNR=5.0						
	comp=Z,1.1nm,0.6s						
HRY	**Holter Researc**	**86.83**	**42**	P	**P**	**04 12 40.9**	**+0.3**
DUG	**Dugway, Tooele**	**88.31**	**49**	P	**P**	**04 12 47.2**	**-0.6**
DUG				IAmb	IAmb	04 12 49.6	
	comp=Z,11nm,1.4s						
HWUT	**Hardware Ranch**	**88.73**	**47**	P	**P**	**04 12 49.5**	**-0.3**
HWUT				IAmb	IAmb	04 12 51.5	
	comp=Z,3.7nm,1.1s						
FFC	**Flin Flon**	**89.43**	**33**	P	**P**	**04 12 53.1**	**+0.5**
FFC				IAmb	IAmb	04 12 53.1	
	comp=Z,3.5nm,0.8s						
FINES	**FINESS Array B**	**89.60**	**335**	P	**P**	**04 12 52.6**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=33,slow=5.3,SNR=3.4						
	comp=Z,1.2nm,0.8s						
PDAR	**Pinedale Array**	**89.72**	**45**	P	**P**	**04 12 54.2**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=71,slow=0.3,SNR=6.8						
	comp=Z,0.3nm,0.5s						
VNDA	**Vanda**	**93.58**	**177**	P	**P**	**04 13 10.3**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=325,slow=4.2,SNR=2.2						
	comp=Z,0.4nm,0.4s						
PLCA	**Paso Flores**	**139.83**	**136**	PKP	**PKPdf**	**04 19 21.5**	**-2.1**
	comp=Z,1.9nm,1.0s,baz=225,slow=2.9,SNR=3.1						
DBIC	**Dimbokro**	**143.45**	**305**	PKP	PKPab	04 19 28.0	+0.9
	comp=Z,1.3nm,0.4s,baz=65,slow=4.0,SNR=5.0						
LPAZ	**La Paz**	**147.31**	**96**	PKPbc	**PKPab**	**04 19 42.0**	**-0.5**
	comp=Z,2.6nm,0.5s,baz=339,slow=1.1,SNR=14						

IDC ***30*** *04:05:24.8±1.6, 25°.53N×109°.31W, h0^{km}, mb3.8/2, mbtmp3.6/6, ML3.1/5, MS3.7/24, Error ellipse: s-maj=30.6km s-min=15.3km az=125.0*

MEX ***30*** *04:05:29.3±0.5, 25°.71N×110°.04W, h8^{km}±11^{km}, MD4.3*

ISC 30 04:05:27.1±1.6**, 25°.67N**±0°.04×**110°.02W**±0°.04**, h12**^{km}±11^{km}**, n43, σ2^{s}01**/32**, MS3.6**/19**, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSIG	**Topolobambo**	**0.89**	**94**	*i* P	**Pg**	**04 05 44.2**	**0.0**
TSIG				*e*S	**Sg**	**04 05 56.1**	**+0.3**
LPIG	**La Paz**	**1.58**	**190**	Pg	**Pn**	**04 05 55.4**	**+0.4**
	12nm,0.3s,baz=177,slow=3.6,SNR=20						
LPIG				Lg	Lg	04 06 13.4	
	27nm,0.3s,baz=346,slow=20,SNR=11						
LPIG	**La Paz**	**1.58**	**190**	*e*P	**Pn**	**04 05 54.1**	**-0.9**
LPIG				*i* S	**Sn**	**04 06 13.6**	**-1.8**
CSIG	**Choix**	**1.88**	**52**	*e*P	**Pg**	**04 06 03.1**	**0.0**
CSIG				*e*S	**Sb**	**04 06 24.6**	**-0.3**
SLBS	**Sierra La Lagu**	**1.98**	**178**	*e*P	**Pn**	**04 06 00.8**	**+0.3**
GUYB	**Guaymas**	**2.35**	**341**	*e*P	**Pn**	**04 06 04.4**	**-1.1**
GUYB				*e*S	**Sn**	**04 06 29.2**	**-5.1**
SRIG	**Santa Rosalia**	**2.58**	**310**	*e*P	**Pn**	**04 06 10.8**	**+2.1**
SSIG	**Sanalona**	**2.74**	**107**	*e*P	**Pb**	**04 06 15.1**	**-1.0**
SSIG				*e*S	**Sn**	**04 06 42.7**	**-1.3**
HSIG		**3.44**	**346**	*e*P	**Pn**	**04 06 20.2**	**-0.3**
HSIG				*e*S	**Sn**	**04 07 03.0**	**+1.8**
MAIG	**Mazatlaan**	**4.10**	**126**	*e*P	**Pn**	**04 06 30.0**	**+0.3**
MAIG				*e*S	**Sn**	**04 07 19.2**	**+1.5**
HPIG		**4.11**	**71**	*e*P	**Pn**	**04 06 30.7**	**+0.8**
HPIG				*e*S	**Sn**	**04 07 15.6**	**-2.4**
PDIG	**Papasquiaro**	**4.23**	**98**	*e*P	**Pn**	**04 06 34.2**	**+2.6**
PDIG				*e*S	**Sn**	**04 07 19.1**	**-2.0**
BAHB	**Baha de los**	**4.53**	**317**	*e*P	**Pn**	**04 06 35.1**	**-0.5**
NZIG	**Nacozari, Sono**	**4.70**	**5**	*e*P	**Pn**	**04 06 37.3**	**-0.7**
NZIG				*e*S	**Sn**	**04 07 34.5**	**+1.8**
CGIG		**5.01**	**21**	*e*P	**Pn**	**04 06 41.1**	**-1.2**
CGIG				*e*S	**Sn**	**04 07 34.5**	**-5.8**
TXAR	**Lajitas Array**	**6.72**	**56**	Pn	Pn	04 06 58.5	-7.2
	baz=229,slow=15,SNR=2.1						
TXAR				Lg	Lg	04 08 42.3	
	0.7nm,0.3s,baz=230,slow=30,SNR=2.0						
ANMO	**Albuquerque**	**9.74**	**18**	Pn	**Pn**	**04 07 47.5**	**+0.2**
	0.1nm,0.3s,baz=290,slow=14,SNR=7.1						
ANMO				Lg	Lg	04 10 30.8	
	0.1nm,0.3s,baz=279,slow=5.2,SNR=1.3						
ANMO				LR	LR	04 11 11.4	
	comp=Z,386nm,18.1s,baz=286,slow=36						
	0.3nm,0.3s						
NVAR	**Mina Array Bea**	**14.52**	**333**	Pn	**P**	**04 08 58.9**	**-0.4**
	baz=155,slow=11,SNR=3.2						
NVAR				LR	LR	04 13 19.0	
	comp=Z,127nm,21.5s,baz=91,slow=32						
	1.2nm,1.1s						
ELK	**Elko**	**15.65**	**345**	Pn	**P**	**04 09 12.6**	**+0.7**
	0.1nm,0.3s,baz=166,slow=9.1,SNR=10						
ELK				Lg	Lg	04 13 46.4	
	0.1nm,0.3s,baz=271,slow=16,SNR=1.0						
ELK				LR	LR	04 15 25.9	
	comp=Z,469nm,18.0s,baz=172,slow=38						
	3.4nm,1.0s						
PDAR	**Pinedale Array**	**17.06**	**1**	P	**P**	**04 09 28.1**	**+0.6**
	0.1nm,0.3s,baz=166,slow=15,SNR=10						
PDAR				LR	LR	04 16 21.3	
	comp=Z,462nm,19.6s,baz=182,slow=38						
	1.6nm,1.0s						
YBH	**Yreka Blue Hor**	**19.15**	**330**	LR	LR	04 17 37.8	
	comp=Z,104nm,19.7s,baz=160,slow=37						
NEW	**Newport**	**23.23**	**348**	LR	LR	04 20 25.7	
	comp=Z,149nm,18.1s,baz=176,slow=38						
TKL	**Tuckaleechee C**	**24.61**	**60**	LR	LR	04 21 15.5	
	comp=Z,238nm,18.9s,baz=247,slow=39						
ULM	**Lac du Bonnet**	**26.86**	**20**	LR	LR	04 20 34.1	
	comp=Z,78nm,21.2s,baz=195,slow=34						
JTS	**Las Juntas de**	**28.25**	**118**	LR	LR	04 22 46.9	
	comp=Z,88nm,20.6s,baz=301,slow=38						
BBB	**Bella Bella**	**29.82**	**337**	LR	LR	04 22 45.8	
	comp=Z,119nm,21.5s,baz=159,slow=34						
SADO	**Sadowa**	**31.34**	**45**	LR	LR	04 23 33.3	
	comp=Z,89nm,18.9s,baz=296,slow=35						
DLBC	**Dease Lake**	**35.66**	**342**	LR	LR	04 27 52.1	
	comp=Z,161nm,18.5s,baz=127,slow=37						
YKA	**Yellowknife Ar**	**36.94**	**356**	LR	LR	04 28 15.1	
	comp=Z,189nm,21.3s,baz=346,slow=37						
SDV	**Santo Domingo**	**40.95**	**107**	LR	LR	04 31 23.0	
	comp=Z,51nm,19.6s,baz=305,slow=39						
SJG	**San Juan**	**41.25**	**91**	LR	LR	04 33 33.4	
	comp=Z,59nm,18.1s,baz=306,slow=42						
INK	**Inuvik**	**44.96**	**348**	P	**P**	**04 13 43.5**	**+1.9**
	1.8nm,0.9s,baz=157,slow=7.7,SNR=3.3						
INK				LR	LR	04 34 28.5	
	comp=Z,129nm,20.4s,baz=290,slow=38						
	1.8nm,0.9s						
ILAR	**Eielson Array**	**45.68**	**339**	P	**P**	**04 13 50.3**	**+2.8**
	0.7nm,0.8s,baz=144,slow=6.5,SNR=9.0						
ILAR				LR	LR	04 35 21.1	
	comp=Z,83nm,18.6s,baz=63,slow=39						
	0.7nm,0.8s						
FRB	**Frobisher Bay**	**46.64**	**24**	LR	LR	04 33 14.0	
	comp=Z,115nm,20.3s,baz=205,slow=36						
RES	**Resolute Bay**	**49.69**	**5**	LR	LR	04 36 32.0	
	comp=Z,52nm,18.6s,baz=7.5,slow=38						
RPN	**Rapa Nui**	**52.50**	**179**	LR	LR	04 31 59.2	
	comp=Z,26nm,20.7s,baz=76,slow=30						
SIV	**San Ignacio**	**63.12**	**126**	LR	LR	04 41 47.8	
	comp=Z,44nm,19.8s,baz=81,slow=35						
H03N2	**Juan Fernandez**	**65.80**	**152**	T	T	05 27 52.8	
	baz=331,slow=77,SNR=81						
H03N1	**Juan Fernandez**	**65.81**	**152**	T	T	05 27 53.7	
	baz=331,slow=77,SNR=126						
H03N3	**Juan Fernandez**	**65.82**	**152**	T	T	05 27 52.6	
	baz=331,slow=77,SNR=76						
YAK	**Yakutsk**	**80.48**	**336**	LR	LR	04 56 54.4	
	comp=Z,31nm,18.2s,baz=80,slow=38						
DZM	**Mont Dzumac**	**93.83**	**247**	LR	LR	04 55 27.4	
	comp=Z,105nm,18.7s,baz=210,slow=32						
BELG	**Belogornoye**	**99.84**	**14**	LR	LR	05 06 03.6	
	comp=Z,36nm,19.0s,baz=319,slow=36						

HEL 30 04:06:16.3±0.1**, 67°.66N×33°.69E, h0**^{km}**, ML1.4, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVZ	**Lovozero**	**0.44**	**56**	PG	Pg	04 06 24.1	-0.6
LVZ				SG	Sg	04 06 29.4	-1.0
VRF	**Varrio**	**1.56**	**275**	PG	Pn	04 06 43.9	-1.4
	baz=94						
VRF				MSG		04 07 03.0	
	comp=Z,2.4nm,0.2s						
VRF				SN	Sn	04 07 04.8	-1.3
OLKF	**Oulanka, Finla**	**2.15**	**233**	PG	Pn	04 06 54.7	+1.3
OLKF				MSG		04 07 20.1	
	comp=Z,1.5nm,0.2s						
KU6	**Riekki**	**2.22**	**224**	PG	Pn	04 06 55.7	+1.4
KU6				MSG		04 07 22.1	
	comp=Z,1.2nm,0.2s						
MSF	**Maaselka**	**2.54**	**229**	PG	Pn	04 07 00.5	+1.8
SGF	**Sodankyl**	**2.76**	**269**	PG	Pb	04 07 04.7	-1.7
RNF	**Rovaniemi**	**3.18**	**254**	PN	Pn	04 07 07.2	-0.2
RNF				SN	Sn	04 07 45.7	-0.2
KEV	**Kevo**	**3.22**	**314**	PN	Pn	04 07 08.1	+0.1
KEV				SN	Sn	04 07 46.4	-0.6
ARA0	**ARCESS Array S**	**3.54**	**306**	PN	Pn	04 07 11.6	-0.9
RMF	**Romuvaara**	**3.78**	**206**	PN	Pn	04 07 15.6	-0.2
HEF	**Hetta**	**3.84**	**286**	SN	Sn	04 08 02.1	-0.3
TOF	**Tornio**	**4.02**	**251**	SN	Sn	04 08 07.2	+0.5
KTK1	**Kautokeino**	**4.11**	**294**	SN	Sn	04 08 07.8	-1.1
PAJU	**Pajala**	**4.14**	**266**	SN	Sn	04 08 08.6	-1.1
LANU	**Lannavaara**	**4.44**	**280**	PB	Pb	04 07 30.1	-5.0
KALU	**Kalix**	**4.47**	**251**	SN	Sn	04 08 15.4	-2.4
ERTU	**Ertsjaerv**	**4.62**	**261**	SN	Sn	04 08 21.2	-0.5

KOLA ***30*** *04:06:52.7, 67°.54N×33°.90E, h0^{km}, ML1.6, Error ellipse: s-maj=8.2km s-min=2.1km az=160.0, Murmansk region, Kirovsk district*

BER 30 04:06:48.8±1.1**, 67°.41N×34°.64E, h0**^{km}**, ML2.0, Suspected explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVZ	**Lovozero**	**0.49**	**1**	S	Sb	04 07 07.5	-0.7
APA	**Apatity**	**0.50**	**290**	P	Pg	04 06 56.5	-1.9
APA				S	Sg	04 06 59.1	-5.7
VADS	**Vadso**	**3.33**	**327**	*e*P	Pn	04 07 39.5	-2.6
VADS				*e*S	Sn	04 08 18.4	-4.0
VADS				IAML		04 08 36.3	
	comp=Z,9.7nm,0.8s						
KEV	**Kevo**	**3.66**	**314**	*e*S	Sn	04 08 26.5	-3.8
ARA0	**ARCESS Array S**	**3.99**	**307**	*e*P	Pn	04 07 50.0	-1.0
ARA0				*e*S	Sn	04 08 34.4	-4.0
ARA0				IAML		04 08 52.6	
	comp=Z,7.2nm,0.5s						
ARCES	**ARCESS Array B**	**3.99**	**307**	P	Pn	04 07 49.9	-1.2
ARCES				S	Sn	04 08 31.9	-6.5
HEF	**Hetta**	**4.27**	**289**	*e*S	Sn	04 08 40.5	-4.9
KTK1	**Kautokeino**	**4.54**	**296**	*e*S	Sn	04 08 46.7	-5.5
KTK1				IAML		04 09 07.7	
	comp=Z,6.7nm,0.5s						
HAMF	**Hammerfest**	**5.10**	**315**	*e*S	Sn	04 08 59.5	-6.3
KIF	**Kilpisjarvi**	**5.40**	**294**	*e*S	Sn	04 09 06.7	-6.3

INET ***30*** *04:08:46.2±0.9, 12°.84N×87°.81W, h124^{km}±5^{km}, MW3.1*

SNET ***30*** *04:08:47.6±1.7, 12°.88N×87°.76W, h118^{km}±10^{km}, ML3.2*

ISC 30 04:08:47.4±1.8**, 12°.8N**±0°.1×**87°.74W**±0°.06**, h121**^{km}±12^{km}**, n25, σ0^{s}67**/40**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.44**	**348**	*e*P	**Pn**	**04 09 04.7**	**-0.6**
CNCH				*e*S	**Sn**	**04 09 20.0**	**+1.2**
CNCH				IAML		04 09 26.6	
	comp=Z,2μm,0.1s						
LCND	**La Caada**	**0.49**	**342**	*e*P	**Pn**	**04 09 04.8**	**-0.6**
LCND				*e*P	**Pn**	**04 09 05.1**	**-0.3**
LCND				*e*S	**Sn**	**04 09 18.2**	**-0.7**
LCND				IAML		04 09 25.8	
	comp=Z,842nm,0.3s						
CRIN	**San Cristobal**	**0.69**	**102**	*e*P	**Pn**	**04 09 06.9**	**+0.1**
CRIN				*e*S	**Sn**	**04 09 22.1**	**+0.7**
PACA	**Pacayal**	**0.84**	**318**	*e*P	**Pn**	**04 09 08.4**	**+0.2**
PACA	**Pacayal**	**0.84**	**318**	*e*P	**Pn**	**04 09 08.4**	**+0.2**
TEL3	**Telica 3**	**0.91**	**107**	*e*P	**Pn**	**04 09 08.2**	**-0.5**
TELN	**Telica**	**0.92**	**105**	*e*P	**Pn**	**04 09 08.4**	**-0.5**
TELN				*e*S	**Sn**	**04 09 25.9**	**+1.0**
FAGO	**Alcalda de S**	**0.92**	**337**	*e*P	**Pn**	**04 09 08.2**	**-0.5**
FAGO				*e*S	**Sn**	**04 09 23.9**	**-1.0**
ALJI	**Alcalda de J**	**0.94**	**301**	*e*P	**Pn**	**04 09 08.7**	**-0.3**
ALJI				*e*S	**Sn**	**04 09 24.9**	**-0.3**
TECA	**Tecapa**	**0.99**	**311**	*e*P	**Pn**	**04 09 09.8**	**+0.2**
COEB	**Comit de Eme**	**1.01**	**310**	*e*P	**Pn**	**04 09 09.8**	**0.0**
COEB				*e*S	**Sn**	**04 09 26.6**	**0.0**
COEB				IAML		04 09 36.7	
	comp=Z,332nm,0.3s						
CNGN	**Cerro Negro**	**1.07**	**108**	*e*P	**Pn**	**04 09 09.7**	**-0.6**
PQSS	**Presa 15 de Se**	**1.12**	**314**	*e*P	**Pn**	**04 09 11.8**	**+1.1**
PQSS				*e*S	**Sn**	**04 09 30.4**	**+2.1**
TECO	**Alcaldia de Te**	**1.23**	**304**	*e*P	**Pn**	**04 09 11.4**	**-0.5**
TECO				*e*S	**Sn**	**04 09 29.6**	**-0.9**
SCLA	**Alcaldia de Sa**	**1.29**	**312**	*e*P	**Pn**	**04 09 12.7**	**+0.2**
SCLA				*e*S	**Sn**	**04 09 32.4**	**+0.7**
COPN	**Copaltepe**	**1.30**	**120**	*e*P	**Pn**	**04 09 11.9**	**-0.8**
SJTE	**Alcalda de S**	**1.45**	**302**	*e*P	**Pn**	**04 09 14.2**	**-0.3**
SJTE				*e*S	**Sn**	**04 09 35.5**	**+0.5**
SJTE				IAML		04 09 40.5	
	comp=Z,120nm,0.2s						
LFRS	**El Faro**	**1.50**	**301**	*e*P	**Pn**	**04 09 15.1**	**+0.1**
P5NO	**Presa 5 de nov**	**1.51**	**319**	*e*P	**Pn**	**04 09 14.6**	**-0.5**
P5NO				*e*P	**Pn**	**04 09 14.8**	**-0.3**
HUEN		**1.61**	**108**	*e*P	**Pn**	**04 09 16.0**	**-0.1**
RCON	**San Juan de Ri**	**1.67**	**67**	*e*P	**Pn**	**04 09 16.9**	**-0.2**
MATN	**Matagalpa**	**1.77**	**87**	*e*P	**Pn**	**04 09 17.7**	**-0.5**
JAYA	**Jayaque - finc**	**1.85**	**296**	*e*P	**Pn**	**04 09 19.4**	**+0.1**
JAYA				*e*S	**Sn**	**04 09 42.7**	**-0.9**
BOAB	**BOACO BROADBAN**	**2.06**	**101**	*e*P	**Pn**	**04 09 21.7**	**0.0**
BOAB				*e*S	**Sn**	**04 09 48.4**	**+0.5**
NUBE	**Las Nubes**	**2.25**	**298**	*e*P	**Pn**	**04 09 24.3**	**+0.1**
NUBE				IAML		04 09 58.9	
	comp=Z,42nm,0.2s						

IDC ***30*** *04:28:11.2±2.7, 10°.02S×119°.29E, h0^{km}, mb3.6/2, mbtmp3.6/4, ML3.6/2, MS2.9/1, Error ellipse: s-maj=161.8km s-min=25.9km az=52.0*

DJA ***30*** *04:28:16.4±2.2, 10°S±8°×11°9E±°, h13^{km}±21^{km}, M4.4/9, mb4.5/5, MLv4.4/9*

ISC 30 04:28:11.8±1.1**, 10°.6S**±0°.1×**119°.04E**±0°.08**, h10**^{km}**, n13, σ3^{s}06**/11**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	**Plampang**	**2.13**	**324**	P	**Pn**	**04 28 46.1**	**-1.3**
MMRI	**Maumere**	**3.69**	**59**	P	**Pn**	**04 29 05.3**	**-3.6**
IGBI	**Denpasar**	**4.21**	**294**	P	Pb	04 29 21.2	-4.8
IGBI				Pn	Pn	04 29 15.4	-0.7
IGBI				S	**Sn**	**04 30 02.4**	**-3.0**
BSSI	**Bau Bau, Buton**	**4.62**	**18**	P	**Pn**	**04 29 21.9**	**+0.2**
SOEI	**Soe**	**5.21**	**82**	P	**Pn**	**04 29 32.7**	**+2.8**
	45nm,0.8s,0.2nm						
JAGI	**Jajag, Banyuwa**	**5.25**	**293**	P	**Pn**	**04 29 34.6**	**+4.2**
	45nm,0.8s,0.4nm						
BKSI	**Bulukumba**	**5.32**	**12**	P	**Pn**	**04 29 31.9**	**+0.6**
KAPI	**Kappang**	**5.56**	**7**	LR	LR	04 31 51.1	
	comp=Z,136nm,21.0s,baz=170,slow=44						
GMJI	**Gumukmas**	**5.97**	**292**	P	Pn	04 29 46.1	+5.8
WRA	**Warramunga Arr**	**17.45**	**124**	P	**Pn**	**04 32 16.5**	**+1.0**
	0.2nm,0.3s,baz=299,slow=13,SNR=9.2						
WRA				S	Sn	04 35 20.4	-9.4
	0.3nm,0.5s,baz=191,slow=9.7,SNR=2.5						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**19.25**	**134**	P	**P**	**04 32 40.7**	**+4.1**
	0.4nm,0.3s,baz=318,slow=12,SNR=19						
ASAR				S	**Sn**	**04 36 11.2**	**-2.3**
	1.1nm,0.9s,baz=302,slow=22,SNR=1.8						
	1.0nm,0.5s						
SONM	**Songino Array**	**59.21**	**350**	P	**P**	**04 38 11.8**	**-1.5**
	0.4nm,0.4s,baz=174,slow=7.2,SNR=4.5						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**65.86**	**333**	P	P	04 38 55.4	-2.2
	0.5nm,0.6s,baz=139,slow=8.0,SNR=6.5						
	0.5nm,0.6s						

IDC ***30*** *04:40:58.7±2.6, 18°.68N×145°.46E, h233^{km}±26^{km}, mb3.5/14, mbtmp4.1/16, Error ellipse: s-maj=17.3km s-min=12.4km az=89.0*

NEIC ***30*** *04:41:02.3±1.1, 18°.7N±0°.2×145°.3E±0°.2, h263^{km}±10^{km}, mb4.1/40, Error ellipse: s-maj=27.9km s-min=21.7km az=121.0*

ISC 30 04:40:59.6±0.6**, 18°.46N**±0°.07×**145°.3E**±0°.2**, h250**^{km}**, n62, σ1^{s}25**/63**, mb4.1**/34**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.86**	**185**	P	**Pn**	**04 42 14.7**	**+1.0**
	122nm,0.9s,baz=353,slow=17,SNR=2.2						
GUMO				S	**S**	**04 43 07.5**	**-5.3**
	37nm,0.3s,baz=15,slow=22,SNR=1.5						
MJAR	**Matsushiro Arr**	**19.08**	**342**	P	**P**	**04 45 02.6**	**-1.2**
	1.2nm,0.5s,baz=163,slow=9.1,SNR=4.0						
KLR	**Kul'dur**	**32.60**	**343**	P	**P**	**04 47 07.1**	**-0.6**
	0.9nm,0.3s,baz=148,slow=12,SNR=5.5						
	0.9nm,0.3s						
WB0	**Warramunga Arr**	**39.47**	**196**	P	**P**	**04 48 08.8**	**+2.6**
WB2	**Warramunga Arr**	**39.65**	**196**	P	**P**	**04 48 10.1**	**+2.5**
WB2				IAmb	IAmb	04 48 12.4	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**39.66**	**196**	P	**P**	**04 48 10.1**	**+2.4**
	comp=Z,1.1nm,0.3s,baz=19,slow=9.1,SNR=28						
	comp=Z,1.1nm,0.3s						
WRA	**Warramunga Arr**	**39.66**	**196**	P	**P**	**04 48 10.5**	**+2.8**
SONM	**Songino Array**	**43.11**	**322**	P	**P**	**04 48 36.0**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=138,slow=12,SNR=4.6						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**43.33**	**195**	P	**P**	**04 48 40.1**	**+2.7**
	comp=Z,0.3nm,0.4s,baz=16,slow=8.0,SNR=6.8						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**58.38**	**314**	P	**P**	**04 50 30.2**	**+1.2**
	comp=Z,0.5nm,0.4s,baz=92,slow=7.9,SNR=9.6						
	comp=Z,0.5nm,0.4s						
KDAK	**Kodiak Island**	**59.75**	**33**	P	**P**	**04 50 37.3**	**-0.8**
	comp=Z,2.5nm,0.4s,baz=262,slow=2.4,SNR=9.3						
	comp=Z,2.5nm,0.4s						
KURBB	**Kurchatov Arra**	**61.26**	**318**	P	**P**	**04 50 48.5**	**0.0**
	comp=Z,0.7nm,0.4s,baz=94,slow=7.5,SNR=12						
	comp=Z,0.7nm,0.4s						
CAST	**Castle Rocks**	**61.47**	**27**	P	**P**	**04 50 49.8**	**+0.1**
CAST				IAmb	IAmb	04 50 50.5	
	comp=Z,4.9nm,0.7s						
BPAW	**Bear Paw Mtn.**	**62.13**	**26**	P	**P**	**04 50 54.3**	**+0.3**
BPAW				IAmb	IAmb	04 50 54.7	
	comp=Z,5.0nm,0.7s						
MDM	**Murphy Dome**	**63.50**	**26**	P	**P**	**04 51 03.4**	**+0.3**
HDA	**Harding Lake**	**63.91**	**27**	P	**P**	**04 51 04.3**	**-1.4**
TOLK	**Toolik Lake Re**	**63.95**	**22**	P	**P**	**04 51 06.4**	**+0.5**
IL31		**64.02**	**26**	P	**P**	**04 51 04.7**	**-1.6**
ILAR	**Eielson Array**	**64.02**	**26**	P	**P**	**04 51 04.8**	**-1.6**
	comp=Z,1.7nm,0.7s,baz=248,slow=5.1,SNR=29						
	comp=Z,1.7nm,0.7s						
ILAR	**Eielson Array**	**64.02**	**26**	P	**P**	**04 51 05.0**	**-1.4**
PAX	**Paxson**	**64.28**	**28**	P	**P**	**04 51 07.7**	**-0.5**
PAX				IAmb	IAmb	04 51 08.7	
	comp=Z,2.3nm,0.5s						
RIDG	**Independent Ri**	**64.69**	**28**	P	**P**	**04 51 10.4**	**-0.4**
VRDI	**Verde Repeater**	**64.96**	**30**	P	**P**	**04 51 12.7**	**-0.1**
DOT	**Dot Lake**	**65.02**	**28**	P	**P**	**04 51 12.7**	**-0.2**
DOT				IAmb	IAmb	04 51 13.2	
	comp=Z,2.7nm,0.7s						
SCRK	**Sand Creek**	**65.11**	**27**	P	**P**	**04 51 13.2**	**-0.4**
SCRK				IAmb	IAmb	04 51 13.8	
	comp=Z,5.0nm,1.4s						
M27K	**Edge Creek, AK**	**65.84**	**29**	P	**P**	**04 51 18.1**	**-0.2**
L27K	**Beaver Creek,**	**65.94**	**28**	P	**P**	**04 51 18.8**	**0.0**
L27K				IAmb	IAmb	04 52 02.2	
	comp=Z,6.5nm,1.5s						
K27K	**Chicken**	**65.95**	**27**	P	**P**	**04 51 18.9**	**+0.1**
K27K				IAmb	IAmb	04 51 19.6	
	comp=Z,5.3nm,1.4s						
BCAR	**Beaver Creek A**	**65.96**	**28**	P	**P**	**04 51 18.8**	**-0.2**
BVAR	**Borovoye Array**	**66.44**	**320**	P	**P**	**04 51 21.9**	**-0.2**
	comp=Z,3.5nm,0.5s,baz=96,slow=7.0,SNR=18						
	comp=Z,3.5nm,0.5s						
EGAK	**Eagle**	**66.44**	**27**	P	**P**	**04 51 22.1**	**+0.2**
EGAK				IAmb	IAmb	04 51 27.1	
	comp=Z,5.4nm,1.2s						
BRVK	**Borovoye**	**66.50**	**321**	P	**P**	**04 51 23.9**	**+1.4**
BRVK				IAmb	IAmb	04 51 24.2	
	comp=Z,2.2nm,0.5s						
DAWY	**Dawson**	**67.13**	**27**	P	**P**	**04 51 25.9**	**-0.4**
DAWY				IAmb	IAmb	04 51 36.1	
	comp=Z,5.5nm,1.5s						
HYT	**Haines Junctio**	**67.81**	**31**	P	**P**	**04 51 31.6**	**+0.8**
HYT				IAmb	IAmb	04 51 32.6	
	comp=Z,4.7nm,0.9s						
M30M	**Minto, Yukon**	**68.21**	**29**	P	**P**	**04 51 33.6**	**+0.5**
M30M				IAmb	IAmb	04 51 43.7	
	comp=Z,5.5nm,1.4s						
EPYK	**Eagle Plains**	**68.42**	**25**	P	**P**	**04 51 34.4**	**+0.1**
EPYK				IAmb	IAmb	04 51 35.2	
	comp=Z,2.8nm,0.7s						
SKAG	**Skagway**	**68.89**	**33**	P	**P**	**04 51 37.7**	**+0.5**
M31M	**Drury Creek, Y**	**69.32**	**30**	P	**P**	**04 51 39.7**	**-0.2**
INK	**Inuvik**	**69.73**	**23**	P	**P**	**04 51 41.7**	**-0.5**
	comp=Z,2.0nm,0.5s,baz=278,slow=4.8,SNR=14						
	comp=Z,2.0nm,0.5s						
INK	**Inuvik**	**69.73**	**23**	P	**P**	**04 51 41.6**	**-0.5**
FARO	**Faro, Yukon**	**69.81**	**30**	P	**P**	**04 51 42.6**	**-0.3**
FARO				IAmb	IAmb	04 52 25.5	
	comp=Z,6.5nm,1.4s						
P33M	**Teslin, Yukon**	**70.14**	**32**	P	**P**	**04 51 45.2**	**+0.2**
P33M				IAmb	IAmb	04 52 00.4	
	comp=Z,5.3nm,1.4s						
C36M	**Paulatuk**	**73.10**	**22**	P	**P**	**04 52 01.7**	**-0.6**
C36M				IAmb	IAmb	04 52 02.5	
	comp=Z,5.7nm,1.1s						
ABKAR	**Akbulak array**	**73.28**	**317**	P	**P**	**04 52 02.8**	**-0.9**
ABKAR	**Akbulak array**	**73.28**	**317**	P	**P**	**04 52 03.1**	**-0.6**
EUNU	**Eureka**	**78.01**	**8**	P	**P**	**04 52 30.0**	**0.0**
YKA	**Yellowknife Ar**	**78.36**	**28**	P	**P**	**04 52 31.8**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=288,slow=5.3,SNR=34						
	comp=Z,1.6nm,0.7s						
BUCK	**Buck Mountain**	**78.55**	**47**	P	**P**	**04 52 33.8**	**+0.1**
HUMO	**Hull Mountain**	**78.97**	**49**	P	**P**	**04 52 36.9**	**+1.0**
RES	**Resolute Bay**	**79.74**	**14**	P	**P**	**04 52 39.5**	**+0.1**
J05D	**Fort Rock, OR**	**80.01**	**48**	P	**P**	**04 52 42.3**	**+0.6**
PINE	**Pine Mountain**	**80.08**	**47**	P	**P**	**04 52 42.5**	**+0.4**
MOD	**Modoc Plateau**	**81.06**	**49**	P	**P**	**04 52 46.7**	**-0.6**
CMB	**Columbia Colle**	**82.12**	**53**	P	**P**	**04 52 53.7**	**+0.9**
CMB				IAmb	IAmb	04 52 53.9	
	comp=Z,2.5nm,0.5s						
LHV	**Little Huntoon**	**83.47**	**52**	P	**P**	**04 52 60.0**	**+0.5**
KVN	**Kaiserville**	**83.52**	**51**	P	**P**	**04 53 00.1**	**+0.1**
KVN				IAmb	IAmb	04 53 01.2	
	comp=Z,2.4nm,0.7s						
NVAR	**Mina Array Bea**	**83.56**	**52**	P	**P**	**04 53 01.0**	**+0.6**
	comp=Z,3.0nm,0.7s,baz=264,slow=5.9,SNR=17						
	comp=Z,3.0nm,0.7s						
NV11	**Mina Array Sit**	**83.67**	**52**	P	**P**	**04 52 59.9**	**-0.9**
NV11				IAmb	IAmb	04 53 01.5	
	comp=Z,2.5nm,0.8s						
HRY	**Holter Researc**	**85.23**	**42**	P	**P**	**04 53 09.1**	**+0.7**
FINES	**FINESS Array B**	**86.96**	**335**	P	**P**	**04 53 14.5**	**-1.8**
	comp=Z,0.7nm,0.5s,baz=70,slow=4.6,SNR=7.7						
	comp=Z,0.7nm,0.5s						
PDAR	**Pinedale Array**	**88.24**	**45**	P	**P**	**04 53 21.7**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=269,slow=1.4,SNR=5.7						
	comp=Z,0.2nm,0.3s						
LPAZ	**La Paz**	**148.02**	**91**	PKPbc	**PKPbc**	**05 00 18.3**	**+1.1**
	comp=Z,1.8nm,0.5s,baz=12,slow=4.2,SNR=10						

KRSC ***30*** *04:46:47.5±1.3, 56°.99N×163°.28E, h12^{km}±17^{km}, Ml4.3*

NEIC ***30*** *04:46:50.9±2.1, 57°.3N±0°.1×162°.4E±0°.2, h10^{km}±2^{km}, mb4.2/11, Error ellipse: s-maj=27.7km s-min=16.8km az=142.0*

*MOS **30** 04:46:51.5±0.9,56°.99N×163°.05E,h36^{km},mb4.4/1,Error ellipse: s-maj=14.6km s-min=5.5km az=65.4*

*IDC **30** 04:46:56.0±3.5,56°.98N×162°.66E,h58^{km}±34^{km},mb3.6/14, mbtmp3.9/16,ML4.4/1,MS3.3/1,Error ellipse: s-maj=21.7km s-min=15.1km az=152.0*

ISC 30 04:46:50.0±2.0,**56°.99N**±0°.03×**163°.08E**±0°.03,**h12**^{km}±13^{km}, **n86**,σ**1^{s}62**/110,**mb4.0**/20,**Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBG	Krutoberegovo	0.77	196	eS	Sg	04 47 16.3	+1.4
KBTR	Krutoberegovo	0.80	191	PN	Pb	04 47 04.0	-1.8
KBTR				S	Sb	04 47 15.2	-1.3
KBTR	Krutoberegovo	0.80	191	eP	Pb	04 47 04.0	-1.8
KBTR				eS	Sb	04 47 15.2	-1.3
SMKR	Semkarok	0.98	246	PN	Pb	04 47 07.1	-1.8
SMKR				S	Sb	04 47 21.7	-0.1
SMKR	Semkarok	0.98	246	eP	Pb	04 47 07.1	-1.8
SMKR				eS	Sb	04 47 21.7	-0.1
SRKR	Sorokina	1.10	253	PN	Pb	04 47 09.3	-1.8
SRKR				S	Sb	04 47 24.7	-0.7
SRKR	Sorokina	1.10	253	eP	Pb	04 47 09.3	-1.8
SRKR				eS	Sb	04 47 24.7	-0.7
KLY	Klyuchi	1.50	244	PN	Pn	04 47 14.1	-2.6
KLY				S	Sn	04 47 32.6	-3.6
KLY	Klyuchi	1.50	244	eP	Pn	04 47 14.1	-2.6
KLY				eS	Sn	04 47 32.6	-3.6
CIRR	Tsirk	1.56	237	PN	Pn	04 47 17.4	-0.3
CIRR	Tsirk	1.56	237	eP	Pn	04 47 17.4	-0.3
LGNR	Loginova	1.61	236	eS	Sn	04 47 39.2	-0.1
BZGR	Bezymyannyi-Gr	1.69	232	PN	Pn	04 47 18.8	-0.7
BZGR				S	Sb	04 47 42.3	-0.1
BZGR	Bezymyannyi-Gr	1.69	232	eP	Pn	04 47 18.8	-0.7
BZGR				eS	Sb	04 47 42.3	-0.1
BZWR	Bezymyannyi-We	1.77	235	PN	Pn	04 47 20.2	-0.3
BZWR				S	Sn	04 47 43.6	+0.6
BZWR	Bezymyannyi-We	1.77	235	eP	Pn	04 47 20.2	-0.3
BZWR				eS	Sn	04 47 43.6	+0.6
BZP	Bezymyannyi-Pe	1.78	234	eP	Pn	04 47 20.6	-0.1
BZMR	Bezymyannaya	1.79	235	PN	Pn	04 47 20.3	-0.5
BZMR				S	Sn	04 47 44.2	+0.8
BZMR	Bezymyannaya	1.79	235	eP	Pn	04 47 20.3	-0.5
BZMR				eS	Sn	04 47 44.2	+0.8
KIRR	Kirishev	1.84	237	PN	Pn	04 47 21.2	-0.4
KIRR				S	Sn	04 47 45.0	+0.2
KIRR	Kirishev	1.84	237	eP	Pn	04 47 21.2	-0.4
KIRR				eS	Sn	04 47 45.0	+0.2
KPT	Kopyto	1.89	238	PN	Pn	04 47 21.9	-0.2
KPT				S	Sn	04 47 46.9	+1.0
KPT	Kopyto	1.89	238	eP	Pn	04 47 21.9	-0.2
KPT				eS	Sn	04 47 46.9	+1.0
SRDR	Sredinnyy	1.98	251	PN	Pn	04 47 22.8	-0.5
SRDR	Sredinnyy	1.98	251	eP	Pn	04 47 22.8	-0.5
KMNR	Kamenistaya	2.01	233	PN	Pn	04 47 24.1	+0.3
KMNR	Kamenistaya	2.01	233	eP	Pn	04 47 24.1	+0.3
KOZ	Kozyrevsk	2.01	244	PN	Pn	04 47 24.0	+0.3
KOZ				S	Sb	04 47 51.1	-0.3
KOZ	Kozyrevsk	2.01	244	eP	Pn	04 47 23.9	+0.3
KOZ				eS	Sb	04 47 51.1	-0.3
OSSR	Ossora	2.27	360	PN	Pn	04 47 26.5	-0.7
OSSR	Ossora	2.27	360	eP	Pn	04 47 26.5	-0.7
TUMD	Tumrok D	2.34	221	eP	Pn	04 47 29.1	+0.9
TUMR	Tumrok	2.37	225	PN	Pn	04 47 29.1	+0.3
TUMR	Tumrok	2.37	225	eP	Pn	04 47 30.0	+1.2
BKI	Bering	2.42	137	PN	Pn	04 47 28.1	-1.1
BKI				S	Sn	04 47 56.9	-1.8
BKI	Bering	2.42	137	eP	Pn	04 47 28.1	-1.1
BKI				eS	Sn	04 47 56.9	-1.8
TIGL	Tigil	2.51	290	eP	Pn	04 47 32.4	+1.8
TIGL				eS	Sb	04 48 03.8	-2.0
ESO	Esso	2.66	248	PN	Pn	04 47 35.1	+2.5
ESO	Esso	2.66	248	eP	Pn	04 47 35.1	+2.5
PALN	Palana	2.68	323	PN	Pn	04 47 34.3	+1.4
PALN	Palana	2.68	323	eP	Pn	04 47 34.3	+1.4
SMAR	Somma	4.47	215	PN	Pn	04 47 58.8	+1.1
SMAR	Somma	4.47	215	eP	Pn	04 47 58.8	+1.1
KOK	Koryaka	4.50	216	PN	Pn	04 47 59.8	+1.8
KOK	Koryaka	4.50	216	eP	Pn	04 47 59.8	+1.8
UGLR	Uglovaya	4.51	215	PN	Pn	04 47 59.5	+1.3
UGLR	Uglovaya	4.51	215	eP	Pn	04 47 59.5	+1.3
PET	Petropavlovsk	4.72	215	ePN	Pn	04 48 01.5	+0.6
PET				eS	Sn	04 48 55.8	+0.3
PET				smax	smax		
	comp=E,51nm,0.8s						
PET				smax	smax		
	comp=N,54nm,0.8s						
PEA0B	Petropavlovsk-	4.97	221	Pn	Pn	04 48 05.7	+1.3
PEA0B	Petropavlovsk-	4.97	221	PN	Pn	04 48 05.7	+1.3
PETK	Petropavlovsk-	4.97	221	P	Pn	04 48 05.5	+1.1
	comp=N,1.9nm,0.6s,baz=78,slow=13,SNR=6.5						
PETK				S	Sn	04 49 06.6	+4.8
	comp=N,3.0nm,0.7s,baz=354,slow=25,SNR=1.8						
PETK	Petropavlovsk-	4.97	221	Pn	Pn	04 48 05.4	+1.0
MTVR	Mutnovka	5.33	214	PN	Pn	04 48 11.4	+1.9
MTVR	Mutnovka	5.33	214	eP	Pn	04 48 11.4	+1.9
TNA	Tin City	16.22	46	Pn	P	04 50 40.0	-0.4
ANM	Nome	17.00	51	Pn	P	04 50 49.0	-0.2
ANM	Nome	17.00	51	P	P	04 50 49.0	-0.2
ANM				pmax	pmax		
	comp=Z,8.0nm,1.4s						
UNV	Unalaska Valle	17.47	87	Pn	P	04 50 57.7	+3.3
ASAJ	Asahikawa	18.22	234	P	Pn	04 51 02.6	+0.1
	comp=Z,2.3nm,0.3s,baz=111,slow=13,SNR=4.5						
	comp=Z,4.5nm,0.3s						
TIXI	Tiksi	20.42	329	P	P	04 51 27.1	+0.6
	comp=Z,4.4nm,0.6s,baz=90,slow=23,SNR=11						
	comp=Z,4.4nm,0.6s						
IMAR	Indian Mountai	22.03	48	P	P	04 51 46.4	+2.5
TRF	Thorofare Moun	23.57	55	P	P	04 52 01.9	+1.7
H23K	Yukon River	23.75	49	P	P	04 52 04.8	+3.0
H23K				IAmb	IAmb	04 52 09.9	
	comp=Z,8.9nm,1.1s						
I23K	Minto, Yukon-K	23.85	50	P	P	04 52 05.0	+2.3
I23K				IAmb	IAmb	04 52 10.8	
	comp=Z,7.4nm,1.1s						
TOLK	Toolik Lake Re	23.85	42	P	P	04 52 05.0	+2.3
TOLK				IAmb	IAmb	04 52 10.1	
	comp=Z,6.7nm,0.9s						
WRH	Wood River Hil	24.44	52	P	P	04 52 10.2	+2.0
WRH				IAmb	IAmb	04 52 16.3	
	comp=Z,6.3nm,0.9s						
CCB	Clear Creek Bu	24.55	52	P	P	04 52 11.3	+2.2
CCB				IAmb	IAmb	04 52 16.7	
	comp=Z,5.5nm,0.8s						
IL31		24.93	51	P	P	04 52 14.5	+2.0
IL31				IAmb	IAmb	04 52 20.2	
	comp=Z,4.6nm,0.8s						
ILAR	Eielson Array	24.93	51	P	P	04 52 15.7	+3.1
	comp=Z,2.4nm,0.7s,baz=265,slow=8.8,SNR=17						
	comp=Z,2.4nm,0.7s						
INK	Inuvik	29.77	42	P	P	04 52 57.8	+1.9
	comp=Z,1.1nm,0.8s,baz=299,slow=7.1,SNR=3.7						
	comp=Z,1.1nm,0.8s						
YKA	Yellowknife Ar	39.17	47	P	P	04 54 18.9	+1.8
	comp=Z,1.1nm,0.7s,baz=301,slow=7.9,SNR=8.9						
	comp=Z,1.1nm,0.7s						
YKA	Yellowknife Ar	39.17	47	P	P	04 54 19.0	+1.8
KURK	Kurchatov	47.19	300	P	P	04 55 18.5	-3.5
KURK				IAmb	IAmb	04 55 21.9	
	comp=Z,3.3nm,0.9s						
KURK	Kurchatov	47.19	300	P	P	04 55 18.5	-3.5
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURBB	Kurchatov Arra	47.29	300	P	P	04 55 21.6	-1.2
	comp=Z,1.9nm,0.7s,baz=54,slow=8.1,SNR=17						
	comp=Z,1.9nm,0.7s						
MKAR	Makanchi Array	48.07	294	P	P	04 55 27.4	-1.6
	comp=Z,0.3nm,0.5s,baz=53,slow=4.7,SNR=4.9						
	comp=Z,0.3nm,0.5s						
ARU	Arti	51.71	317	LR	LR	05 18 10.2	
	comp=Z,32nm,21.2s,baz=184,slow=36						
FRB	Frobisher Bay	53.24	26	P	P	04 56 07.0	-0.6
	comp=Z,1.2nm,0.7s,baz=13,slow=9.2,SNR=4.1						
	comp=Z,1.2nm,0.7s						
PDAR	Pinedale Array	54.21	65	P	P	04 56 16.6	+1.2
	comp=Z,1.0nm,0.7s,baz=347,slow=6.1,SNR=9.0						
	comp=Z,1.0nm,0.7s						
ABKAR	Akbulak array	56.58	310	P	P	04 56 28.9	-3.2
NOA	NORSAR Array B	60.25	345	P	P	04 56 57.2	-0.3
	comp=Z,1.1nm,0.8s,baz=18,slow=6.7,SNR=4.5						
	comp=Z,1.1nm,0.8s						
AKASG	Malin Array Be	66.13	330	P	P	04 57 35.9	-0.7
	comp=Z,0.5nm,0.5s,baz=28,slow=6.6,SNR=2.1						
	comp=Z,0.5nm,0.5s						
TXAR	Lajitas Array	67.62	71	P	P	04 57 48.4	+1.9
	comp=Z,1.6nm,0.9s,baz=285,slow=4.9,SNR=5.7						
	comp=Z,1.6nm,0.9s						
WRA	Warramunga Arr	80.34	207	P	P	04 58 59.9	-0.9
	comp=Z,0.5nm,0.7s,baz=10,slow=5.7,SNR=2.6						
	comp=Z,0.5nm,0.7s						
ESDC	Sonseca Array	83.08	350	P	P	04 59 15.4	+0.1
	comp=Z,0.6nm,0.8s,baz=352,slow=7.5,SNR=4.7						
	comp=Z,0.6nm,0.8s						
ASAR	Alice Springs	84.02	207	P	P	04 59 19.4	-0.6
	comp=Z,0.5nm,0.6s,baz=16,slow=5.0,SNR=6.4						
	comp=Z,0.5nm,0.6s						

MAN 30 04:58:24.1,16°.41N×121°.97E,h8^{km},mb3.9,ML2.7,MS2.3, Luzon

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*JSN **30** 05:04:19.8±1.6,18°.04N×76°.54W,h15^{km}±9^{km},MD2.9*

*SSNC **30** 05:04:21.0±1.6,18°.15N×76°.65W,h5^{km}±19^{km},MD2.8, ML1.4*

ISC 30 05:04:20.1±1.1,**18°.18N**±0°.09×**76°.64W**±0°.06,**h15**^{km}±9^{km}, **n10**,σ**1^{s}23**/16,**2C-3D,Jamaica region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GWJ	Greenwich	0.13	219	⇓iP	Pg	05 04 23.5	-0.4
STH	Stony Hill	0.19	238	⇑iP	Pg	05 04 24.8	+0.2
STH				i S	Sg	05 04 28.3	+0.6
HOJ	Hope	0.20	211	i P	Pg	05 04 23.8	-1.0
BNJ	Bonny Gate	0.33	296	⇑iP	Pb	05 04 28.9	+1.2
BBJ	Bamboo Saint A	0.63	289	⇓iP	Pn	05 04 34.3	-0.3
MTDJ	Mount Denham	0.85	273	eP	Pg	05 04 37.2	+0.6
MTDJ				eS	Sn	05 04 50.1	+0.2
MTDJ				IAML		05 04 51.3	
	21nm,0.2s						
MTDJ				IAML		05 04 52.4	
	comp=Z,25nm,0.3s						
MCJ	Malvern	1.03	256	⇓iP	Pb	05 04 39.7	+0.1
MCJ				i S	Sn	05 04 54.2	0.0
LMGC	Las Mercedes	1.91	350	eP	Pn	05 04 50.0	-2.0
LMGC				eS	Sn	05 05 12.9	-2.9
LMGC				IAML		05 05 15.0	
	comp=E,8.5nm,0.1s						
LMGC				IAML		05 05 15.0	
	comp=N,18nm,0.1s						
RCC	Rio Carpintero	2.02	26	eP	Pn	05 04 53.8	+0.2
RCC				eS	Sn	05 05 19.4	+0.9
RCC				IAML		05 05 21.4	
	comp=E,0.7nm,0.1s						
RCC				IAML		05 05 21.6	
	comp=N,1.3nm,0.1s						
GTBY	Guantanamo Bay	2.26	39	eP	Pn	05 04 57.0	0.0
GTBY				eS	Sn	05 05 25.5	+0.9

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*MOS **30** 05:12:24.7±1.1,34°.88N×24°.76E,h43^{km},mb4.6/25,Error ellipse: s-maj=6.5km s-min=3.5km az=80.5*

*ISK **30** 05:12:26.6,34°.83N×24°.98E,h30^{km},ML4.0/23*

*ATH **30** 05:12:27.9,34°.75N×24°.84E,h24^{km}±2^{km},ML4.1/11,Error ellipse: s-maj=3.8km s-min=1.6km az=2.0*

*NEIC **30** 05:12:27.8±1.3,34°.90N±0°.06×24°.84E±0°.05,h52^{km}±6^{km}, mb4.4/43,Error ellipse: s-maj=9.8km s-min=2.3km az=213.0*

*IDC **30** 05:12:27.1±0.9,34°.89N×24°.87E,h48^{km}±5^{km},mb4.0/23, mbtmp4.2/34,MS3.3/21,Error ellipse: s-maj=12.6km s-min=10.9km az=171.0*

*THE **30** 05:12:28.5,34°.78N×24°.86E,h19^{km}±2^{km},ML4.1/10,Error ellipse: s-maj=3.1km s-min=1.0km az=355.0*

*GII **30** 05:12:32.4±0.0,34°.43N×25°.80E,h1^{km},mb4.1/2,MD3.6/6*

*DDA **30** 05:12:33.0±0.0,35°.28N×25°.22E,h92^{km}±22^{km},MW4.1*

ISC 30 05:12:26.6±0.5,**34°.81N**±0°.04×**24°.99E**±0°.03,**h47**^{km}±4^{km}, **n426**,σ**2^{s}14**/472,**mb4.4**/52,**MS3.3**/16,**37C-25D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TMBK	Timbaki Herakl	0.32	325	P	Pn	05 12 35.1	-0.6
TMBK				S	Sn	05 12 41.1	-1.0
	29µm,0.5s						
TMBK	Timbaki Herakl	0.32	325	P	Pn	05 12 35.0	-0.6
TMBK				S	Sn	05 12 40.7	-1.4
TMBK				AML	AML	05 12 42.9	
TMBK				AML	AML	05 12 43.4	
IDI	Anoyia	0.48	350	P	Pn	05 12 37.7	+0.1
	4µm,0.4s,baz=188,slow=14,SNR=6451						
IDI				S	Sn	05 12 46.9	+1.5
	13µm,0.5s,baz=26,slow=18,SNR=35						
IDI	Anoyia	0.48	350	P	Pn	05 12 37.7	+0.1
IDI				S	Sn	05 12 46.5	+1.1
	36µm,0.5s						
IDI	Anoyia	0.48	350	Pg	Pn	05 12 37.3	-0.3
IDI	Anoyia	0.48	350		Pn	05 12 37.8	+0.2
IDI					Sn	05 12 46.6	+1.1
IDI	Anoyia	0.48	350	P	Pn	05 12 37.9	+0.2
IDI	Anoyia	0.48	350	P	Pn	05 12 37.6	0.0
IDI				S	Sn	05 12 46.7	+1.3
IDI				AML	AML	05 12 47.0	
	comp=E,50050µm,0.5s						
IDI				AML	AML	05 12 47.3	
	comp=N,91800µm,0.6s						
IACM	Heraklion	0.50	8	P	Pn	05 12 38.8	+1.1
IACM				S	Sn	05 12 48.5	+2.9
	comp=N,67µm,0.5s						
IACM	Heraklion	0.50	8	P	Pn	05 12 38.8	+1.1
IACM				S	Sn	05 12 48.2	+2.6
HRKL	Herakleio	0.51	11	P	Pn	05 12 39.1	+1.3
HRKL				S	Sn	05 12 47.9	+2.1
	comp=N,38µm,1.0s						
HRKL	Herakleio	0.51	11	Pg	Pn	05 12 37.9	+0.1
HRKL	Herakleio	0.51	11	P	Pn	05 12 39.1	+1.3
HRKL				S	Sn	05 12 48.0	+2.1
HRKL				AML	AML	05 12 56.4	
HRKL				AML	AML	05 13 00.2	
FRMA	Ierapetra Chan	0.65	71	P	Pn	05 12 44.1	+4.5
FRMA				S	Sn	05 12 56.8	+7.9
	comp=N,3µm,0.7s						
FRMA	Ierapetra Chan	0.65	71	P	Pn	05 12 44.1	+4.5
FRMA				AML	AML	05 13 01.0	
	comp=N,12074µm,0.7s						
FRMA				AML	AML	05 13 02.0	
	comp=E,23980µm,0.8s						
PRNS	Prines Rethymn	0.68	324	P	Pn	05 12 40.6	+0.6
PRNS				S	Sn	05 12 51.2	+1.5
	comp=E,13µm,0.7s						
GVD	Gavdhos	0.74	272	P	Pn	05 12 40.7	-0.2
GVD				S	Sn	05 12 51.0	-0.1
	comp=E,33µm,0.6s						
GVD	Gavdhos	0.74	272	Pg	Pn	05 12 40.6	-0.2
GVD				Sg	Sn	05 12 51.8	+0.7
GVD	Gavdhos	0.74	272	P	Pn	05 12 40.6	-0.2
GVD				AML	AML	05 12 54.5	
	comp=N,60426µm,0.7s						
GVD				AML	AML	05 12 54.5	
	comp=E,72059µm,0.6s						
STIA	Sitia Lasithi	0.99	66	P	Pn	05 12 47.9	+3.8
STIA				S	Sn	05 13 02.5	+5.6
STIA	Sitia Lasithi	0.99	66	P	Pn	05 12 48.0	+3.9
CHAN	Chania	1.05	313	P	Pn	05 12 46.1	+1.2
CHAN				AML	AML	05 13 06.3	
	comp=E,20974µm,0.7s						
CHAN				AML	AML	05 13 08.9	
	comp=N,25760µm,0.5s						
IMMV	Iera Moni Meta	1.05	308	P	Pn	05 12 46.1	+1.1
IMMV				S	Sn	05 13 00.8	+2.3
	comp=N,12µm,0.6s						
IMMV	Iera Moni Meta	1.05	308	Pg	Pn	05 12 45.6	+0.6
IMMV				Sg	Sn	05 12 59.4	+0.9
IMMV	Iera Moni Meta	1.05	308	P	Pn	05 12 45.4	+0.4
IMMV				S	Sn	05 12 58.1	-0.4
IMMV				AML	AML	05 13 01.4	
	comp=N,24309µm,0.4s						
IMMV				AML	AML	05 13 06.4	
	comp=E,24271µm,0.8s						
ZKR	Zakros	1.05	73	P	Pn	05 12 48.6	+3.6
ZKR				S	Sn	05 13 06.1	+7.5
	comp=E,4µm,1.0s						
ZKR	Zakros	1.05	73	Pg	Pn	05 12 45.7	+0.7
ZKR	Zakros	1.05	73	P	Pn	05 12 48.9	+3.8
ZKR				AML	AML	05 13 10.5	
	comp=E,12780µm,1.0s						
ZKR				AML	AML	05 13 17.9	
	comp=N,4082µm,1.0s						
KNDR	Palaiochora Ch	1.15	292	P	Pn	05 12 47.3	+1.0
KNDR				S	Sn	05 13 02.6	+1.7
	comp=N,3µm,0.5s						
KNDR	Palaiochora Ch	1.15	292	Pn	Pn	05 12 47.6	+1.3
KNDR	Palaiochora Ch	1.15	292	P	Pn	05 12 47.1	+0.8
KNDR				S	Sn	05 13 01.7	+0.8
KNDR				AML	AML	05 13 09.3	
	comp=E,14913µm,0.5s						
KNDR				AML	AML	05 13 10.4	
	comp=N,17700µm,0.5s						
RODP	Rodopos	1.25	307	P	Pn	05 12 49.7	+1.9
RODP	Rodopos	1.25	307	Pn	Pn	05 12 49.1	+1.3
SANT	Santorini	1.60	14	P	Pn	05 12 53.7	+1.1
SANT	Santorini	1.60	14	Pn	Pn	05 12 53.3	+0.7
SANT	Santorini	1.60	14	Pn	Pn	05 12 53.4	+0.8
SANT	Santorini	1.60	14	P	Pn	05 12 54.0	+1.4
SANT				S	Sn	05 13 11.3	-0.8
SANT	Santorini	1.60	14	P	Pn	05 12 53.7	+1.1
THR5	Thira Island,	1.63	10	P	Pn	05 12 54.2	+1.3
SAP3	Santorini-Thir	1.65	10	P	Pn	05 12 54.9	+1.8
ANKY	Antikythira Is	1.74	308	P	Pn	05 12 56.4	+2.1
ANKY	Antikythira Is	1.74	308	P	Pn	05 12 56.2	+1.9
KARP	Karpathos	1.93	67	P	Pn	05 13 00.8	+3.8
KARP	Karpathos	1.93	67	Pn	Pn	05 12 58.4	+1.4
KARP	Karpathos	1.93	67		Pn	05 12 59.5	+2.5
KARP	Karpathos	1.93	67	P	Pn	05 13 01.3	+4.3
KARP	Karpathos	1.93	67	P	Pn	05 13 00.7	+3.7
KARP				AML	AML	05 13 46.5	
	comp=E,3505µm,0.8s						
KARP				AML	AML	05 13 53.8	
	comp=N,4192µm,0.7s						
MHLO	Agia Marina, M	1.94	346	P	Pn	05 12 57.7	+0.6
MHLO	Agia Marina, M	1.94	346	P	Pn	05 12 58.0	+1.0
KTHA	Kythira Island	2.13	313	P	Pn	05 13 00.4	+0.6
KTHA	Kythira Island	2.13	313	Pn	Pn	05 13 00.2	+0.4
KTHA	Kythira Island	2.13	313	P	Pn	05 13 00.2	+0.4
KTHA				AML	AML	05 13 26.5	
	comp=E,6026µm,0.4s						
KTHA				AML	AML	05 13 45.8	
	comp=N,2629µm,0.6s						
APE	Apeiranthos	2.30	11	⇑P	Pn	05 13 02.3	+0.2
APE				⇓S	Sn	05 13 27.6	-1.6
APE	Apeiranthos	2.30	11	P	Pn	05 13 02.8	+0.7
APE	Apeiranthos	2.30	11	Pn	Pn	05 13 02.5	+0.4
APE	Apeiranthos	2.30	11	P	Pn	05 13 02.8	+0.7
APE				S	Sn	05 13 24.6	-4.5
APE	Apeiranthos	2.30	11	⇑P	Pn	05 13 02.3	+0.2
APE				S	Sn	05 13 27.6	-1.6
KOSK	Kos Island	2.52	39	Pn	Pn	05 13 06.6	+1.5
VLI	Veliai	2.53	319	P	Pn	05 13 05.1	-0.2
VLI	Veliai	2.53	319	P	Pn	05 13 05.1	-0.2
DAT	Datca	2.85	47	Pn	Pn	05 13 11.4	+1.7
DAT	Datca	2.85	47	P	Pn	05 13 11.9	+2.2
DAT				S	Sn	05 13 41.9	-0.9
ARG	Arkhangelos	2.92	60	Pn	Pn	05 13 12.5	+1.9
ARG	Arkhangelos	2.92	60		Pn	05 13 12.9	+2.3
ARG	Arkhangelos	2.92	60	P	Pn	05 13 12.9	+2.3
ARG	Arkhangelos	2.92	60	P	Pn	05 13 13.6	+3.0
BODT	Bodrum	2.93	39	Pn	Pn	05 13 12.6	+1.8
BODT	Bodrum	2.93	39	P	Pn	05 13 12.6	+1.8
BDRM	Kayabasi	3.01	41	SPECP		05 13 13.0	
BDRM				P	Pn	05 13 13.7	+1.9
EPID	Epidavros	3.18	332	P	Pn	05 13 14.4	+0.2
VLY	Voula,Athens	3.19	343	P	Pn	05 13 15.0	+0.8
DDIM	Aydin, Didim	3.21	34	P	Pn	05 13 16.8	+2.2
DDIM				S	Sn	05 13 55.5	+4.0
TURN	Turunc	3.29	53	Pn	Pn	05 13 17.6	+1.9
TURN	Turunc	3.29	53	P	Pn	05 13 18.2	+2.5
TURN				S	Sn	05 13 50.6	-3.0
MLSB	Milas	3.35	42	Pn	Pn	05 13 18.5	+1.9
PTL	Penteli	3.36	345	P	Pn	05 13 18.3	+1.7
DION	Dionisos Attik	3.37	346	P	Pn	05 13 18.6	+1.8
GCAM	G?zelcaml?	3.41	32	Pn	Pn	05 13 19.4	+2.2
GCAM	G?zelcaml?	3.41	32	SPECP		05 13 18.0	
GCAM				P	Pn	05 13 18.8	+1.5
ITM	Ithomi	3.43	314	P	Pn	05 13 17.4	-0.2
ITM	Ithomi	3.43	314	Pn	Pn	05 13 16.3	-1.2
YER	Yerkesik	3.54	48	P	Pn	05 13 22.5	+3.4
YER	Yerkesik	3.54	48	Pn	Pn	05 13 21.3	+2.2
YER	Yerkesik	3.54	48	P	Pn	05 13 22.3	+3.2
YER				S	Sn	05 13 57.3	-2.5
DGB	zmir	3.58	25	P	Pn	05 13 21.6	+2.1
DALY	Dalyan (Mula)	3.59	55	Pn	Pn	05 13 21.8	+2.1
VILL	Villia	3.61	339	P	Pn	05 13 20.3	+0.2
ZEYE	Izmir, Urla-Ze	3.63	19	P	Pn	05 13 20.9	+0.5
CHOS	Chios island	3.67	13	P	Pn	05 13 22.1	+1.1
CHOS	Chios island	3.67	13	Pn	Pn	05 13 22.2	+1.2
AYDN	Tasoluk	3.68	39	P	Pn	05 13 23.4	+2.4
EREA	Eretria	3.70	347	P	Pn	05 13 22.2	+0.9
URLA	Izmir	3.77	20	Pn	Pn	05 13 23.3	+1.0
URLA	Izmir	3.77	20	P	Pn	05 13 22.4	+0.1
GUR	Goura	3.78	326	P	Pn	05 13 22.2	-0.3
FETY	Fethiye	3.80	60	Pn	Pn	05 13 24.9	+2.2
FETY	Fethiye	3.80	60	P	Pn	05 13 24.8	+2.2
FETY				S	Sn	05 13 59.2	-6.9
IZZE	Mula-Seydike	3.81	64	SPECP		05 13 24.0	
IZZE				P	Pn	05 13 24.8	+2.0
IZZE				S	Sn	05 14 02.2	-4.2
KYMI	Kymi, Euboea I	3.88	350	P	Pn	05 13 24.5	+0.7
BLCB	Balcova	3.93	24	Pn	Pn	05 13 26.5	+2.1
BLCB	Balcova	3.93	24	P	Pn	05 13 23.8	-0.6
KLV	Kalavryta, Ach	3.96	325	P	Pn	05 13 24.7	-0.1
KARB	zmir-Karabur	4.01	16	P	Pn	05 13 26.5	+1.0
AKAS	Kas	4.03	68	Pn	Pn	05 13 27.9	+2.0
AKAS	Kas	4.03	68	Pn	Pn	05 13 28.3	+2.5
AKAS	Kas	4.03	68	P	Pn	05 13 27.7	+1.8
AKAS				S	Sn	05 14 04.5	-7.3
CAME	Cameli-Denizli	4.10	57	Pn	Pn	05 13 29.1	+2.2
CAME				Sn	Sn	05 14 14.9	+1.2
TAVA	DENIZLI_Tavas	4.14	49	P	Pn	05 13 29.7	+2.4
TAVA				S	Sn	05 14 10.7	-3.8
CAEL	Denizli, Camel	4.20	55	SPECP		05 13 31.0	
CAEL				P	Pn	05 13 31.1	+2.8
DNIZ	Denizli-Tavas-	4.32	48	P	Pn	05 13 32.4	+2.6
APMY	Acipayam-Deniz	4.39	51	Pn	Pn	05 13 33.2	+2.4
GOLH	Golhisar	4.43	56	SPECP		05 13 34.0	
GOLH				P	Pn	05 13 34.3	+2.9
GOLH				S	Sn	05 14 14.4	-7.2
ELL	Elmali	4.44	63	Pn	Pn	05 13 33.9	+2.3
ELL	Elmali	4.44	63	Pn	Pn	05 13 33.6	+2.0
ELL	Elmali	4.44	63	P	Pn	05 13 34.5	+2.9
ELL				S	Sn	05 14 17.4	-4.7
ELL	Elmali	4.44	63	P	Pn	05 13 33.6	+2.0
AKUM	Antalya-Kumluc	4.62	69	P	Pn	05 13 35.4	+1.6
AKUM				S	Sn	05 14 22.4	-3.8
MANT	Manisa	4.66	37		Pn	05 13 35.8	+1.2
AGG	Agios Georgios	4.71	334	Pn	Pn	05 13 34.6	-0.6
AGG	Agios Georgios	4.71	334	P	Pn	05 13 35.8	+0.7
AGG				S	Sn	05 14 24.4	-4.2
AGG	Agios Georgios	4.71	334	P	Pn	05 13 34.6	-0.6
KULA	Kula-Manisa	4.73	38	P	Pn	05 13 38.6	+3.1
KORT	Korkueli	4.87	62	SPECP		05 13 40.0	
KORT				P	Pn	05 13 40.0	+2.6
KORT				S	Sn	05 14 30.3	-2.3
USAK	Uak-Merkez	5.06	39	P	Pn	05 13 41.3	+1.3
BALB	Balikesir	5.34	25		Pn	05 13 42.6	-1.2
ISP	Isparta	5.38	54	Pn	Pn	05 13 45.5	+1.0
ISP	Isparta	5.38	54	⇓eP	Pn	05 13 47.3	+2.8
LIT	Litokhoron	5.64	340		Pn	05 13 47.0	-0.9
LIT	Litokhoron	5.64	340	P	Pn	05 13 47.0	-0.9
ALN	Alexandroupoli	6.13	8		Pn	05 13 54.8	+0.2
ALN	Alexandroupoli	6.13	8	P	Pn	05 13 54.8	+0.2
RDO	Rodhopi	6.34	4	Pn	Pn	05 13 57.4	0.0
SRS	Serrai	6.39	350	P	Pn	05 14 02.7	+4.5
KEK	Kerkira	6.41	321		Pn	05 13 57.3	-1.1
FNA	Florina	6.61	335	Pn	Pn	05 14 00.2	-1.1
FNA	Florina	6.61	335	P	Pn	05 14 00.2	-1.1
BORA	Eskisehir	6.67	39	Pn	Pn	05 14 02.9	+0.8
VAY	Valandovo	6.77	344	i Pn	Pn	05 14 10.0	+6.6
MMB	Musomiste	6.84	352	P	Pn	05 14 09.5	+5.1
CSS	Mathiatis	6.86	86	Pn	Pn	05 14 05.7	+1.1
OHR	Ohrid	7.11	334	i Pn	Pn	05 14 09.3	+1.2
OHR				i Sn	Sn	05 15 22.3	-5.2
KKB	Krupnik	7.20	349	P	Pn	05 14 01.4	-7.9
STIP	Stip	7.22	343	i Pn	Pn	05 14 15.4	+5.9
SCTE	Santa Cesarea	7.38	317	Pn	Pn	05 14 10.1	-1.6
TIP	Timpagrande	7.89	306	⇑P	Pn	05 14 15.2	-3.7
TIP	Timpagrande	7.89	306	Pn	Pn	05 14 17.4	-1.5

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VTS   Vitosha            7.92 351   P      Pn       05 14 25.4 +6.2
BR231 Keskin MP Arra     7.98  49          Pn       05 14 22.7 +2.6
ANTO  Ankara             8.01  49   Pn     Pn       05 14 23.2 +2.8
ANTO  Ankara             8.01  49   P      Pn       05 14 23.2 +2.8
BR131 Keskin Array S     8.46  52          Pn       05 14 28.8 +2.1
BR131 Keskin Array S     8.46  52deP       Pn       05 14 29.5 +2.8
BRTR  Keskin Array B     8.46  52   P      Pn       05 14 28.1 +1.4
      comp=N,3.6nm,0.8s,baz=231,slow=15,SNR=16
BRTR                                LR     LR       05 18 31.6
      comp=N,281nm,18.8s,baz=266,slow=43
BRTR  Keskin Array B     8.46  52          Pn       05 14 28.4 +1.7
BRTR  Keskin Array B     8.46  52 i P      Pn       05 14 28.8 +2.1
BRTR                                pmax   pmax
      comp=Z,3.0nm,0.6s
MPEP  Malo Peshtene      8.59 354   P      Pn       05 14 34.0 +5.7
DRME  Dracevica, Mon     8.65 330  ePn     Pn       05 14 25.7 -3.5
MATE  Matera             8.77 314 ⇑P       Pn       05 14 26.8 -4.0
PDG   Podgorica          8.83 331 ⇑P       Pn       05 14 29.1 -2.5
MMA0B Mount Meron ar     8.84  99   Pn     Pn       05 14 32.6 +0.7
MMA0B                               Sn     Sn       05 16 05.5 -4.6
MMAI  Mount Meron Ar     8.84  99   P      Pn       05 14 33.2 +1.4
      comp=Z,1.3nm,0.3s,baz=279,slow=11,SNR=8.2
MMAI                                S      Sn       05 16 06.1 -4.0
      comp=Z,2.6nm,0.3s,baz=256,slow=27,SNR=6.5
CUC   Castrocucco        8.94 308   Pn     Pn       05 14 32.6 -0.6
VAE   Valguarnera        8.96 290   P      Pn       05 14 31.1 -2.3
      comp=Z,6.4nm,0.5s,baz=94,slow=15,SNR=1.3
VAE                                 S      Sn       05 16 03.4  -10
      comp=Z,35nm,0.6s,baz=324,slow=16,SNR=3.2
GEM   Giv'at Ha'Em       9.01  97   Pn     Pn       05 14 34.1 +0.1
GEM                                 Sn     Sn       05 16 09.4 -4.7
MMLI  Mount Malkishu     9.02 102   Pn     Pn       05 14 33.3 -0.9
MMLI                                Sn     Sn       05 16 08.4 -6.0
HMDT  Nahal Hemdat       9.16 103   Pn     Pn       05 14 36.1 -0.1
HMDT                                Sn     Sn       05 16 11.9 -6.0
YTIR  Yattir             9.17 109   Pn     Pn       05 14 36.3  0.0
YTIR                                Sn     Sn       05 16 12.5 -5.7
BOVS  Bovan              9.17 345 ⇓P       Pn       05 14 34.2 -2.1
PSN   Preselentsi        9.20  15   P      Pn       05 14 40.0 +3.4
DSI   Dead Sea           9.29 107   Pn     Pn       05 14 37.6 -0.3
DSI                                 Sn     Sn       05 16 15.4 -5.6
MSBI  Mazada             9.38 109   Pn     Pn       05 14 38.8 -0.3
MSBI                                Sn     Sn       05 16 16.6 -6.5
TREB  Trebinje           9.44 329  ePn     Pn       05 14 34.7 -5.3
KRMI  Paran Flat         9.46 117   Pn     Pn       05 14 39.8 -0.5
KRMI                                Sn     Sn       05 16 18.8 -6.5
PRNI  Paran              9.55 115   Pn     Pn       05 14 41.1 -0.4
PRNI                                Sn     Sn       05 16 21.1 -6.3
ZFRI  Zfri               9.58 113   Pn     Pn       05 14 41.2 -0.7
ZFRI  Zfri               9.58 113   P      Pn       05 14 45.6 +3.7
BNN   Bunyan             9.59  62   Pn     Pn       05 14 45.5 +3.3
WALJ  Wala               9.63 107   P      Pn       05 14 45.5 +2.9
HRFI  Mount Harif        9.73 116   Pn     Pn       05 14 44.0 -0.1
HRFI                                Sn     Sn       05 16 25.3 -6.7
MBRI  Mt Berech          9.77 118   Pn     Pn       05 14 44.1 -0.6
MBRI                                Sn     Sn       05 16 27.7 -5.4
MBRI  Mt Berech          9.77 118   P      Pn       05 14 44.6 -0.1
STON  Ston               9.85 327  ePn     Pn       05 14 39.4 -6.1
EIL   Elat               9.87 119   P      Pn       05 14 46.4 +0.5
      comp=Z,4.2nm,0.3s,baz=220,slow=5.1,SNR=8.2
EIL                                 S      Sn       05 16 30.1 -5.2
      comp=Z,14nm,0.4s,baz=195,slow=18,SNR=6.7
EIL   Elat               9.87 119   Pn     Pn       05 14 44.9 -1.0
EIL                                 Sn     Sn       05 16 28.9 -6.4
DIVS  Divibare          10.04 339  ePn     Pn       05 14 45.8 -2.5
HARR  Harsova           10.12  12 ⇑P       Pn       05 14 50.4 +1.1
HARR  Harsova           10.12  12 ⇑P       Pn       05 14 50.4 +1.1
HERR  Herculane         10.25 350 ⇑P       Pn       05 14 50.1 -1.0
MDVR  Moldovita         10.27 347 ⇑P       Pn       05 14 49.6 -1.7
ASF   Jabal al Asfar    10.29 101   P      Pn       05 14 53.0 +1.3
      comp=Z,1.6nm,0.3s,baz=189,slow=9.9,SNR=1.5
ASF                                 S      Sn       05 16 41.2 -4.4
      comp=Z,2.5nm,0.4s,baz=182,slow=22,SNR=1.6
ASF   Jabal al Asfar    10.29 101   P      Pn       05 14 53.0 +1.3
HAPS  Han Pijesak,BI    10.37 335  ePn     Pn       05 14 48.6 -4.2
TPGR  Topolog           10.37  14 ⇑P       Pn       05 14 53.6 +0.9
ARR   Arges             10.55 359 ⇑P       Pn       05 14 55.1  0.0
VOIR                    10.62   0 ⇑P       Pn       05 14 56.3 +0.2
VOIR                    10.62   0 ⇑P       Pn       05 14 56.3 +0.2
CFR   Carcaliu          10.63  12 ⇑P       Pn       05 14 56.0 -0.2
CFR   Carcaliu          10.63  12 ⇑P       Pn       05 14 56.0 -0.2
MLR   Muntele Rosu      10.69   4 ⇑P       Pn       05 14 57.5 +0.3
MLR   Muntele Rosu      10.69   4   P      Pn       05 14 56.5 -0.7
      comp=Z,1.9nm,0.8s,baz=216,slow=14,SNR=3.0
MLR                                 LR     LR       05 19 36.1
      comp=Z,174nm,18.5s,baz=162,slow=40
MLR   Muntele Rosu      10.69   4 ⇑P       Pn       05 14 57.5 +0.3
COVR  Voineasa-Covas    11.06   4 ⇑P       Pn       05 15 02.4 +0.3
BZS   Buzias            11.10 348 ⇑P       Pn       05 15 01.3 -1.3
BZS   Buzias            11.10 348 ⇑P       Pn       05 15 01.3 -1.3
PLOR  Plostina          11.10   6 ⇑P       Pn       05 15 02.8 +0.1
PLOR  Plostina          11.10   6 ⇑P       Pn       05 15 02.8 +0.1
VRI   Vrincioaia        11.12   6 ⇑P       Pn       05 15 03.0 +0.1
VRI   Vrincioaia        11.12   6 ⇑P       Pn       05 15 03.0 +0.1
BLY   Banja Luka        11.59 331  ePn     Pn       05 15 06.2 -3.2
A050A Klekovaca         11.64 329  ePn     Pn       05 15 07.7 -2.5
TESR  Tescani           11.76   6 ⇑P       Pn       05 15 11.3 -0.3
A051A Mrakovica         11.92 331  ePn     Pn       05 15 09.3 -4.6
MARR  Marisel-Cluj      11.94 354 ⇑P       Pn       05 15 12.4 -1.8
DRGR                    12.09 353 ⇑P       Pn       05 15 14.2 -2.1
DRGR                    12.09 353 ⇑P       Pn       05 15 14.2 -2.1
NRCA  Norcia            12.23 314          Pn       05 15 17.7 -0.5
GUMA  Gualdo di Mace    12.25 316   Pn     Pn       05 15 17.2 -1.1
MORH  Mrgy, Hungar      12.37 339 ⇑P       Pn       05 15 16.9 -3.0
FDMO  Fiordimonte       12.37 315   Pn     Pn       05 15 19.4 -0.7
BURAR Bucovina Array    12.79   1 ⇓P       Pn       05 15 26.1 +0.2
BURAR Bucovina Array    12.79   1 ⇓P       Pn       05 15 26.1 +0.2
BOJS  Bojanci           13.01 328  ePn     Pn       05 15 25.0 -3.7
CRES  Cresnjev          13.18 329  ePn     Pn       05 15 27.4 -3.6
SORM  Soroca            13.55  10 ⇓P       Pn       05 15 35.8 -0.2
SORM  Soroca            13.55  10 ⇓P       Pn       05 15 35.8 -0.2
CEY   Cerknica          13.56 327  ePn     Pn       05 15 31.8 -4.4
SKDS  Skadanscina       13.60 325  ePn     Pn       05 15 29.8 -7.0
SOKA  Soboth            14.04 331  eP      P        05 15 50.7 +1.2
      comp=Z,5.3nm,0.6s
OBKA  Obir              14.10 329  ePn     Pn       05 15 36.6 -7.1
SOC   Sochi             14.38  48  eP      Pn       05 15 47.5 +0.2
SOC                                e                05 18 26.4
SOC                                 MLR    MLR
      comp=Z,57nm,16.0s
CONA  Conrad Observa    14.77 335  eP      P        05 15 59.7 +2.1
      comp=Z,5.8nm,0.8s,SNR=4.1
GEVA  Gevas             14.94  71          Pn       05 15 57.7 +2.8
GEVA                                IAmb   IAmb     05 16 04.0
      comp=Z,15nm,0.9s
KBA   Koelnbreinsper    15.06 328  eP      P        05 16 01.5 +0.6
      comp=Z,12nm,0.9s
KBA   Koelnbreinsper    15.06 328   P      P        05 16 01.9 +0.9
ABTA  Abfaltersbach     15.19 325  eP      P        05 16 02.8 +0.5
      comp=Z,3.9nm,0.6s
MOA   Molln             15.29 332  eP      P        05 16 03.1 -0.3
      comp=Z,11nm,0.7s
BIOA  Bad Ischl, Aus    15.42 330  eP      P        05 16 04.0 -0.8
      comp=Z,3.7nm,0.4s
SALO  Salr              15.42 319          Pn       05 15 59.5 -1.5
SALO                                IAmb   IAmb     05 16 05.8
      comp=Z,20nm,0.7s
KARS  Kars              15.44  63   Pn     Pn       05 16 03.0 +1.6
KARS  Kars              15.44  63   P      Pn       05 16 03.0 +1.6
KARS                                pmax   pmax
      comp=Z,108nm,1.0s
MAUC  Maruska           15.47 342  eP      P        05 16 05.3  0.0
KRUC  Moravsky          15.59 339  ePN     P        05 16 04.3 -2.3
VRAC  Vranov            15.76 339   P      Pn       05 16 04.7 -0.5
      comp=Z,5.6nm,0.8s,baz=146,slow=9.8,SNR=5.7
VRAC                                LR     LR       05 22 38.6
      comp=Z,86nm,21.7s,baz=176,slow=39
VRAC  Vranov            15.76 339  ePN     P        05 16 07.4 -1.0
OJC   Ojcow             15.86 348   Pn     Pn       05 16 06.5  0.0
OJC   Ojcow             15.86 348   P      Pn       05 16 06.5  0.0
OJC                                 pmax   pmax
      comp=Z,12nm,1.5s
MORC  Moravsky Berou    15.93 342          Pn       05 16 06.8 -0.6
MORC  Moravsky Berou    15.93 342  ePN     Pn       05 16 08.0 +0.6
MORC  Moravsky Berou    15.93 342   P      Pn       05 16 06.8 -0.6
MORC                                pmax   pmax
      comp=Z,6.0nm,1.0s
WTTA  Wattenberg        15.98 325  eP      P        05 16 10.7 -0.4
      comp=Z,12nm,0.9s
WATA  Walderalm         16.06 325  ePn     P        05 16 10.6 -1.4
      comp=Z,10nm,0.7s
CKRC  Cesky Krumlov     16.08 334  eP      P        05 16 12.6 +0.6
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CKRC  Cesky Krumlov     16.08 334  eP      P        05 16 12.6 +0.6
NEY   Neytrino          16.13  53⇓eP       P        05 16 13.7 +0.9
NEY                                 pmax   pmax
      comp=Z,11nm,0.8s
SQTA  Sankt Quirin      16.15 324  eP      P        05 16 12.9  0.0
      comp=Z,4.5nm,0.7s
AKASG Malin Array Be    16.18  10   P      Pn       05 16 11.5 +0.9
      comp=Z,14nm,0.6s,baz=202,slow=11,SNR=95
AKASG                               S      Sn       05 19 06.9 -2.0
      comp=Z,0.1nm,0.2s,baz=199,slow=22,SNR=1.2
AKASG                               LR     LR       05 21 52.8
      comp=Z,88nm,21.1s,baz=48,slow=35
AKASG Malin Array Be    16.18  10   Pn     Pn       05 16 10.0 -0.5
AKBB  Malin Array Si    16.18  10          Pn       05 16 10.4 -0.1
AKBB  Malin Array Si    16.18  10   P      Pn       05 16 10.4 -0.1
AKBB                                pmax   pmax
      comp=Z,57nm,0.8s
FUORN Ofenpass-Fuorn    16.21 321          Pn       05 16 09.9 -1.3
FETA  Feichten          16.25 323  ePn     P        05 16 12.5 -1.5
      comp=Z,6.2nm,0.9s
MOTA  Moosalm           16.29 324  eP      P        05 16 13.7 -0.8
      comp=Z,6.7nm,1.0s
GEC2  GERESS Array S    16.32 333          Pn       05 16 11.4 -1.1
GEC2                                IAmb   IAmb     05 16 15.6
      comp=Z,16nm,0.7s
GERES GERESS Array B    16.32 333   P      Pn       05 16 11.8 -0.7
      comp=Z,11nm,0.6s,baz=129,slow=10,SNR=61
GERES                               LR     LR       05 23 52.5
      comp=Z,110nm,19.3s,baz=158,slow=42
GERES GERESS Array B    16.32 333          Pn       05 16 11.0 -1.5
GERES GERESS Array B    16.32 333   P      Pn       05 16 11.0 -1.5
ONI   Oni               16.35  56          Pn       05 16 14.0 +1.1
ONI                                 IAmb   IAmb     05 16 18.4
      comp=Z,12nm,0.8s
ONI   Oni               16.35  56   P      Pn       05 16 14.0 +1.1
ONI                                 pmax   pmax
      comp=Z,12nm,0.8s
KRLC  Kraliky           16.40 341  eP      P        05 16 14.8 -0.8
KRLC  Kraliky           16.40 341  eP      P        05 16 14.8 -0.8
KIV   Kislovodsk        16.42  51   Pn     Pn       05 16 14.0 +0.1
KIV                                 IAmb   IAmb     05 16 19.1
      comp=Z,34nm,0.9s
KIV   Kislovodsk        16.42  51  eP      P        05 16 17.7 +1.7
KIV                                 pmax   pmax
      comp=Z,47nm,1.1s
KIV                                 MLR    MLR
      comp=Z,21nm,13.0s
KBZ   Khabaz            16.46  52   P      P        05 16 15.7 -0.5
      comp=Z,80nm,0.9s,baz=244,slow=8.9,SNR=104
KBZ   Khabaz            16.46  52deP       P        05 16 17.1 +0.9
KBZ                                 pmax   pmax
      comp=Z,94nm,0.9s
DAVOX Davos/Dischmat    16.51 321   P      Pn       05 16 14.9 -0.1
      comp=Z,1.8nm,0.5s,baz=144,slow=19,SNR=2.2
DAVOX                               S      Sn       05 19 05.2  -12
      comp=Z,0.6nm,0.3s,baz=301,slow=23,SNR=1.4
DAVOX                               LR     LR       05 24 08.5
      comp=Z,62nm,20.5s,baz=124,slow=43
GNI   Garni             16.55  65   P      P        05 16 17.1 -0.4
      comp=Z,9.2nm,0.6s,baz=333,slow=2.0,SNR=6.4
GNI                                 LR     LR       05 24 05.6
      comp=Z,144nm,19.4s,baz=274,slow=42
GNI   Garni             16.55  65          Pn       05 16 15.8 +0.3
GNI   Garni             16.55  65⇓eP       P        05 16 17.5  0.0
GNI                                 pmax   pmax
      comp=Z,9.0nm,0.7s
RETA  Reutte            16.55 324  ePn     P        05 16 15.8 -1.5
      comp=Z,3.7nm,0.6s
KHC   Kasperske Hory    16.61 333          Pn       05 16 15.4 -0.6
KHC   Kasperske Hory    16.61 333  eP      P        05 16 16.5 -1.4
KHC   Kasperske Hory    16.61 333   P      Pn       05 16 15.4 -0.6
KHC                                 pmax   pmax
      comp=Z,9.0nm,0.8s
DPC   Dobruska-Polom    16.77 340  eP      P        05 16 19.1 -0.6
DPC   Dobruska-Polom    16.77 340  eP      P        05 16 19.1 -0.6
DAVA  Damuels           16.85 322  ePn     Pn       05 16 18.8 -0.4
      comp=Z,3.0nm,0.6s
LPL   La Plagne         17.54 313   P      P        05 16 30.7 +2.3
SENIN Lac Senin/Sane    17.67 316   P      Pn       05 16 25.6 -3.8
SENIN                               IAmb   IAmb     05 16 36.1
      comp=Z,24nm,0.7s
GRA1  Grafenberg Arr    17.98 330   P      P        05 16 28.6 -4.5
GRA1                                IAmb   IAmb     05 16 34.8
      comp=Z,21nm,1.0s
GRF   Grafenberg Arr    17.98 330   P      P        05 16 28.6 -4.5
GRF                                 pmax   pmax
      comp=Z,21nm,1.0s
GRFO  Grafenberg        17.98 330          P        05 16 28.5 -4.5
GRFO                                IAmb   IAmb     05 16 34.7
      comp=Z,19nm,1.0s
GRFO  Grafenberg        17.98 330   P      P        05 16 28.5 -4.5
GRFO                                pmax   pmax
      comp=Z,19nm,1.0s
GROC  Groznyy           18.18  56  eP      P        05 16 35.6 +0.3
BFO   Black Forest      18.32 323   P      P        05 16 34.7 -2.2
BFO   Black Forest      18.32 323   P      P        05 16 34.7 -2.2
BFO                                 pmax   pmax
      comp=Z,3.0nm,0.7s
MOX   Moxa              18.58 332   P      Pn       05 16 39.4 -0.8
CLL   Collm             18.63 336   P      P        05 16 38.5 -1.6
CLL   Collm             18.63 336  eP      Pn       05 16 40.0 -0.8
      comp=Z,5.0nm,0.8s
CLL                                ex      x        05 16 45.0
CLL                                epP     pP       05 16 49.0 -2.1
CLL   Collm             18.63 336   P      P        05 16 38.5 -1.6
CLL                                 pmax   pmax
      comp=Z,6.0nm,0.9s
VORD  Divnogorie        19.19  28  eP      P        05 16 46.7 +0.4
VORD                                pmax   pmax
      comp=Z,70nm,0.4s
SUW   Suwalki           19.24 357   P      P        05 16 44.6 -2.2
SUW   Suwalki           19.24 357   P      P        05 16 44.6 -2.2
SUW                                 pmax   pmax
      comp=Z,69nm,0.9s
SUW   Suwalki           19.24 357  eP      P        05 16 45.2 -1.6
VSR   Storozhevoye      19.34  28  eP      P        05 16 47.9  0.0
VSR                                 pmax   pmax
      comp=Z,6.0nm,0.5s
VORR  Voronezh          19.72  27  eP      P        05 16 47.8 -4.2
VORR                                pmax   pmax
      comp=Z,90nm,0.4s
MNK   Minsk             19.79   5 i P      P        05 16 50.9 -1.9
      comp=E,3.0nm,0.7s
MNK                               i P      P        05 16 50.9 -1.9
      comp=N,29nm,0.8s
MNK                               i P      P        05 16 50.9 -1.9
      comp=Z,23nm,0.8s,baz=188
MNK                               i pP     pP       05 17 03.9 -0.1
MNK                               i S      S        05 20 30.3 -2.9
MNK                               i SS     SnSn     05 20 50.1 -0.9
MNK                               i LR     LR       05 24 12.1
MNK                               i LRM    MLR      05 25 45.0
      comp=Z,61nm,16.8s
MNK                               i LRM    MLR      05 25 50.7
      comp=N,354nm,20.6s
MNK                               i LRM    MLR      05 26 19.7
      comp=E,18nm,20.0s
MNK   Minsk             19.79   5 i P      P        05 16 50.9 -1.9
MNK                               i S      S        05 20 30.2 -2.9
MNK                                 pmax   pmax
      comp=Z,23nm,0.8s
MNK                                 pmax   pmax
      comp=N,29nm,0.9s
MNK                                 pmax   pmax
      comp=E,3.0nm,0.7s
MNK                                 MLR    MLR
      comp=Z,61nm,17.0s
MNK                                 MLR    MLR
      comp=N,354nm,21.0s
MNK                                 MLR    MLR
      comp=E,18nm,20.0s
NACGM Naroch            20.13   3  eP      P        05 16 55.7 -0.8
      comp=Z,24nm,0.7s,baz=184
SSF   Saint Saulge      20.25 314   P      Pn       05 16 58.1 -2.0
VRH   Novokhopyorsk     20.37  31  eP      P        05 16 59.0 -0.1
VRH                                 pmax   pmax
      comp=Z,10.0nm,0.6s
LPSR  Galich'ya Gora    20.38  25  eP      P        05 16 56.9 -2.2
LPSR                                pmax   pmax
      comp=Z,10.0nm,0.5s
PABE  Paberze           20.71 358   P      P        05 16 60.0 -2.7
PABE  Paberze           20.71 358  eP      P        05 17 00.6 -2.1
TAM   Tamanrasset       20.80 240   P      P        05 17 03.4 -0.7
TAM                                 IAmb   IAmb     05 17 10.9
      comp=Z,7.7nm,0.7s
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TAM   Tamanrasset       20.80 240   P      P        05 17 03.4 -0.7
TAM                                 pmax   pmax
      comp=Z,8.0nm,0.7s
BTNL  Ternell           20.90 325  dP      P        05 17 05.0 +0.2
      comp=Z,12nm,0.9s
MEM   Membach           20.97 325  dP      P        05 17 06.1 +0.5
      comp=Z,20nm,0.8s
RCHB  Rochefort         21.06 323  dP      P        05 17 06.2 -0.3
RAYN  Ar Rayn           21.11 117   P      P        05 17 09.5 +2.1
RAYN  Ar Rayn           21.11 117   P      P        05 17 09.5 +2.1
RAYN                                pmax   pmax
      comp=Z,4.0nm,1.0s
BSTI  Sart Tilman       21.17 324  dP      P        05 17 08.6 +0.9
DOU   Dourbes           21.34 322  dP      P        05 17 09.0 -0.5
      comp=Z,14nm,0.7s
BMRD  Maredsous         21.38 323  dP      P        05 17 09.3 -0.6
      comp=Z,5.7nm,0.8s
BSD   Bornholm Skovb    21.47 344  eP      P        05 17 10.1 -0.8
BSD   Bornholm Skovb    21.47 344 i P      P        05 17 08.0 -2.9
BSD                                 IAmb   IAmb     05 17 11.5
      comp=Z,3.6nm,0.7s
OBN   Obninsk           21.84  18   P      P        05 17 15.5 +0.7
OBN   Obninsk           21.84  18⇑eP       P        05 17 15.0 +0.2
OBN                                e                05 17 38.9
OBN                                 pmax   pmax
      comp=Z,24nm,0.8s
OBN                                 MLR    MLR
      comp=Z,76nm,19.0s
LUNU  Lund              22.29 343 i P      P        05 17 16.8 -2.9
BLEU  Blekinge          22.39 347 i P      P        05 17 16.0 -4.8
BJUU  Bjuv              22.80 343 i P      P        05 17 23.6 -1.5
DEL   Delary            22.96 344 i P      P        05 17 23.2 -3.5
ESDC  Sonseca Array     23.50 290   P      P        05 17 32.6 +0.3
      comp=Z,1.1nm,0.8s,baz=82,slow=9.5,SNR=9.3
      comp=Z,1.1nm,0.8s
FABU  Falkenberg        23.71 343 i P      P        05 17 32.5 -1.4
BELG  Belogornoye       23.87  36   P      P        05 17 35.0 -0.5
      comp=Z,31nm,0.8s,baz=320,slow=1.7,SNR=12
      comp=Z,31nm,0.8s
BELG  Belogornoye       23.87  36d iP      P        05 17 35.8 +0.3
MTSE  Matsula           23.93 358  eP      P        05 17 34.8 -1.1
MUD   Monsted U'grnd    24.19 338 i P      P        05 17 37.8 -0.5
ONAU  Onsala            24.25 343 i P      P        05 17 38.0 -1.0
BORU  Boraas            24.27 344 i P      P        05 17 36.9 -2.2
MDT   Midelt            24.63 274   P      P        05 17 41.5 -1.4
      comp=Z,0.8nm,0.6s,baz=268,slow=15,SNR=2.2
      comp=Z,0.8nm,0.6s
MEF   Metsahovi         25.42 359  eP      P        05 17 48.2 -1.3
SNART Snartemo          26.35 339 i P      P        05 17 57.2 -0.7
HFS   Hagfors           26.38 347   P      P        05 17 57.1 -1.1
      comp=Z,3.5nm,0.7s,baz=145,slow=11,SNR=14
HFS                                 LR     LR       05 29 02.1
      comp=Z,84nm,19.2s,baz=113,slow=38
      comp=Z,3.5nm,0.7s
FINES FINESS Array B    26.66   1   P      P        05 17 58.8 -1.9
      comp=Z,4.1nm,0.7s,baz=162,slow=12,SNR=19
FINES                               LR     LR       05 30 07.1
      comp=Z,36nm,19.3s,baz=174,slow=40
      comp=Z,4.1nm,0.7s
FINES FINESS Array B    26.66   1 i P      P        05 17 58.7 -2.0
FINES                               pmax   pmax
      comp=Z,4.0nm,0.7s
NC602 NORSAR Array S    27.36 346   P      P        05 18 06.7 -0.3
NC602                               IAmb   IAmb     05 18 09.0
      comp=Z,17nm,1.1s
KLMR  Klimovskoe        27.69  15  eP      P        05 18 07.5 -2.5
KLMR                                AMP             05 18 09.3
      comp=Z,21nm,0.9s
KLMR  Klimovskoe        27.69  15  eP      P        05 18 07.4 -2.5
KLMR                                pmax   pmax
      comp=Z,21nm,0.9s
NB2   NORSAR Subarra    27.70 346   P      P        05 18 08.8 -1.3
      comp=Z,3.1nm,1.0s,baz=156,slow=9.3
NOA   NORSAR Array B    27.70 346   P      P        05 18 08.8 -1.3
      comp=Z,1.5nm,0.8s,baz=112,slow=21,SNR=8.8
NOA                                 LR     LR       05 31 02.8
      comp=Z,37nm,18.7s,baz=165,slow=40
      comp=Z,1.5nm,0.8s
EKA   Eskdalemuir Ar    28.25 325   P      P        05 18 13.9 -1.1
      comp=Z,1.3nm,0.4s,baz=120,slow=11,SNR=8.6
      comp=Z,1.3nm,0.4s
AKTO  Aktyubinsk        28.59  47   P      P        05 18 18.1 -0.1
      comp=Z,4.2nm,0.6s,baz=262,slow=7.7,SNR=18
AKTO                                LR     LR       05 33 27.4
      comp=Z,51nm,18.2s,baz=108,slow=44
      comp=Z,4.2nm,0.6s
KIRV  Kirov             28.78  27   LR     LR       05 31 13.7
      comp=Z,40nm,21.1s,baz=231,slow=39
ABKAR Akbulak array     29.41  50   P      P        05 18 26.0 +0.7
ABKAR Akbulak array     29.41  50   P      P        05 18 26.2 +0.8
TOA0  Torodi Ar. Sit    30.16 230   P      P        05 18 32.3  0.0
TOA0                                IAmb   IAmb     05 18 33.8
      comp=Z,7.8nm,0.7s
TORD  Torodi Ar. Bea    30.16 230   P      P        05 18 32.9 +0.6
      comp=Z,8.5nm,0.7s,baz=38,slow=9.0,SNR=53
TORD  Torodi Ar. Bea    30.16 230   P      P        05 18 32.2 -0.1
ARU   Arti              31.42  36   P      P        05 18 42.6 -0.5
ARU                                 IAmb   IAmb     05 18 45.1
      comp=Z,5.8nm,0.9s
ARU   Arti              31.42  36d iP      P        05 18 43.9 +0.8
ARU                                 *PP    pP       05 18 56.4 +0.9
ARU                                                 05 19 46.6
ARU                                 S      S        05 23 49.0 +1.8
ARU                                 SS     SnSn     05 25 38.5 +4.0
ARU                                 pmax   pmax
      comp=Z,7.0nm,0.9s
ARCES ARCESS Array B    34.78   0   P      P        05 19 10.2 -2.0
      comp=Z,1.7nm,0.4s,baz=171,slow=9.1,SNR=28
ARCES                               LR     LR       05 34 23.2
      comp=Z,71nm,18.6s,baz=238,slow=38
      comp=Z,1.7nm,0.4s
ARCES ARCESS Array B    34.78   0   P      P        05 19 10.4 -1.8
ARCES ARCESS Array B    34.78   0   P      P        05 19 10.4 -1.8
ARCES                               pmax   pmax
      comp=Z,23nm,1.4s
MBAR  Mbarara           35.64 170   LR     LR       05 33 58.4
      comp=Z,42nm,18.6s,baz=338,slow=36
BRVK  Borovoye          36.63  46⇓eP       P        05 19 28.4 +0.1
BRVK                                pmax   pmax
      comp=Z,11nm,3.1s
BVAR  Borovoye Array    36.69  46   LR     LR       05 36 23.8
      comp=Z,43nm,19.6s,baz=229,slow=39
KIBK  Kibwezi           38.94 159   P      P        05 19 48.0 -0.1
KIBK                                IAmb   IAmb     05 19 51.7
      comp=Z,6.6nm,1.5s
AAK   Ala-Archa         38.94  63   P      P        05 19 48.0 -0.1
AAK                                 IAmb   IAmb     05 19 51.0
      comp=Z,2.4nm,0.8s
AAK   Ala-Archa         38.94  63ceP       P        05 19 49.8 +1.7
AAK                                 pmax   pmax
      comp=Z,2.0nm,0.8s
DBIC  Dimbokro          39.24 231   P      P        05 19 50.6  0.0
      comp=Z,2.4nm,0.6s,baz=36,slow=6.8,SNR=7.3
DBIC                                LR     LR       05 39 03.8
      comp=Z,77nm,19.7s,baz=4.0,slow=41
      comp=Z,2.4nm,0.6s
DBIC  Dimbokro          39.24 231   P      P        05 19 49.9 -0.7
DBIC                                IAmb   IAmb     05 20 15.6
      comp=Z,19nm,1.4s
DBIC  Dimbokro          39.24 231   P      P        05 19 49.9 -0.7
DBIC                                pmax   pmax
      comp=Z,19nm,1.5s
KURK  Kurchatov         41.51  51   P      P        05 20 09.3 +0.2
KURK  Kurchatov         41.51  51⇓iP       P        05 20 10.1 +1.1
KURK                                pmax   pmax
      comp=Z,9.0nm,2.5s
SCO   Scoresbysund      43.61 339   P      P        05 20 25.9 +0.1
SCO                                 IAmb   IAmb     05 20 27.8
      comp=Z,7.4nm,0.9s
SCO   Scoresbysund      43.61 339   P      P        05 20 25.9 +0.1
SCO                                 pmax   pmax
      comp=Z,7.0nm,0.9s
SCO   Scoresbysund      43.61 339 i P      P        05 20 25.9 +0.1
SCO                                 IAmb   IAmb     05 20 28.1
      comp=Z,7.8nm,0.9s
MK31  Makanchi Array    44.09  56   P      P        05 20 31.2 +1.2
MK31                                IAmb   IAmb     05 20 32.1
      comp=Z,7.6nm,0.8s
MK31  Makanchi Array    44.09  56   P      P        05 20 31.2 +1.2
MK31                                pmax   pmax
      comp=Z,8.0nm,0.9s
MKAR  Makanchi Array    44.09  56   P      P        05 20 31.4 +1.3
      comp=Z,8.3nm,0.6s,baz=279,slow=6.4,SNR=95
      comp=Z,8.3nm,0.6s
MKAR  Makanchi Array    44.09  56   P      P        05 20 31.2 +1.2
DBG   Daneborg          45.20 344 i P      P        05 20 38.6 +0.1
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ZAA0	Zalesovo Array	45.35	46	P	P	05 20 39.9	0.0
ZAA0				IAmb	IAmb	05 20 40.8	
	comp=Z,3.3nm,0.7s						
ZALV	Zalesovo Beam	45.35	46	P	P	05 20 40.0	+0.1
	comp=Z,2.6nm,0.5s,baz=271,slow=9.2,SNR=14						
ZALV				LR	LR	05 42 36.0	
	comp=Z,41nm,19.2s,baz=226,slow=40						
	comp=Z,2.6nm,0.5s						
DAG	Danmarks Havn	46.36	347	i P	P	05 20 46.2	-1.3
DAG				IAmb	IAmb	05 20 48.8	
	comp=Z,2.6nm,0.9s						
DGZ	Jazzator, Alta	47.21	52	⇑iP	P	05 20 55.3	+0.5
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NRIK	Noril'sk	48.26	25	P	P	05 21 02.6	+0.2
	comp=Z,2.9nm,0.4s,baz=220,slow=5.1,SNR=3.6						
	comp=Z,2.9nm,0.4s						
NRIK	Noril'sk	48.26	25	⇓eP	P	05 21 03.6	+1.2
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WMQ	Urumqi	48.30	59	eP	P	05 21 09.3	+6.1
WMQ				pmax	pmax		
	comp=Z,29nm,0.8s						
SUMG	Summit	49.25	339	i P	P	05 21 09.7	-0.8
DY2G	Dye2	51.20	331	i P	P	05 21 25.3	+0.2
SFJD	Kangerlussuaq	52.92	331	LR	LR	05 48 22.4	
	comp=Z,48nm,18.2s,baz=119,slow=41						
NEEM	North Greenlan	53.28	345	i P	P	05 21 39.6	-0.8
EUNU	Eureka	59.51	349	P	P	05 22 25.0	+0.6
SONM	Songino Array	59.82	50	P	P	05 22 28.5	+1.3
	comp=Z,2.3nm,0.7s,baz=288,slow=7.8,SNR=17						
SONM				PcP	PcP	05 23 12.3	-1.1
	comp=Z,0.4nm,0.3s,baz=289,slow=4.5,SNR=3.6						
	comp=Z,2.3nm,0.7s						
SONM	Songino Array	59.82	50	P	P	05 22 28.8	+1.6
SONM				IAmb	IAmb	05 22 42.4	
	comp=Z,3.6nm,1.4s						
SONM	Songino Array	59.82	50	P	P	05 22 28.8	+1.6
SONM				pmax	pmax		
	comp=Z,4.0nm,1.4s						
ULN	Ulaanbaatar	60.22	50	P	P	05 22 30.2	+0.2
ULN				IAmb	IAmb	05 22 31.9	
	comp=Z,3.7nm,0.7s						
ULN	Ulaanbaatar	60.22	50	⇑eP	P	05 22 31.1	+1.1
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TIXI	Tiksi	61.54	20	P	P	05 22 38.3	0.0
TIXI				IAmb	IAmb	05 22 38.9	
	comp=Z,3.6nm,0.8s						
TIXI	Tiksi	61.54	20	P	P	05 22 38.3	0.0
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOSA	Boshof	63.08	180	P	P	05 22 50.4	+1.2
	comp=Z,2.0nm,0.9s,baz=7.1,slow=8.1,SNR=2.1						
	comp=Z,2.0nm,0.9s						
BOSA	Boshof	63.08	180	P	P	05 22 50.7	+1.5
BOSA				IAmb	IAmb	05 23 11.3	
	comp=Z,7.0nm,1.2s						
BOSA	Boshof	63.08	180	P	P	05 22 50.7	+1.5
BOSA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SCHQ	Schefferville	63.36	320	P	P	05 22 51.0	+0.3
	comp=Z,6.1nm,0.5s,baz=71,slow=4.6,SNR=30						
	comp=Z,6.1nm,0.5s						
SCHQ	Schefferville	63.36	320	P	P	05 22 51.4	+0.6
PZH	PanZhiHua	65.09	74	P	P	05 23 03.8	+1.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.3s						
HHC	Hu-ho-hao-te	65.95	56	eP	P	05 23 08.8	+0.8
HHC				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,5.8s						
CMAR	Chiang Mai Arr	66.75	83	P	P	05 23 14.4	+1.0
	comp=Z,0.9nm,0.3s,baz=293,slow=8.5,SNR=5.5						
	comp=Z,0.9nm,0.3s						
CMAR	Chiang Mai Arr	66.75	83	i P	P	05 23 15.3	+1.9
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HEH	HeiHe	71.21	41	P	P	05 23 41.3	+0.8
HEH				pmax	pmax		
	comp=Z,14nm,0.7s						
HEH				pmax	pmax		
	comp=Z,97nm,4.0s						
BILL	Bilibino	73.44	14	⇑eP	P	05 23 53.6	+0.1
BILL				e		05 26 36.0	
BILL				eS	SKiKP	05 33 20.3	+0.4
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,30nm,17.0s						
SEY	Seymchan	73.94	22	⇓iP	P	05 23 57.6	+1.1
SEY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KLR	Kul'dur	74.12	41	ceP	P	05 23 58.7	+0.9
KLR				pmax	pmax		
	comp=Z,16nm,2.5s						
MA2	Magadan	75.86	25	LR	LR	06 03 04.3	
	comp=Z,27nm,18.2s,baz=118,slow=40						
MA2	Magadan	75.86	25	⇓eP	P	05 24 08.7	+1.1
MA2				pmax	pmax		
	comp=Z,18nm,1.0s						
INK	Inuvik	75.94	352	LR	LR	06 01 30.9	
	comp=Z,20nm,18.5s,baz=321,slow=39						
USA0B	Ussuriysk Arra	77.19	45	⇑eP	P	05 24 14.9	-0.5
USRK	Ussuriysk Ar.	77.19	45	P	P	05 24 16.1	+0.7
	comp=Z,4.8nm,0.6s,baz=257,slow=4.3,SNR=8.1						
	comp=Z,4.8nm,0.6s						
YKA	Yellowknife Ar	77.74	342	P	P	05 24 18.5	+0.4
	comp=Z,1.0nm,0.6s,baz=34,slow=5.1,SNR=47						
	comp=Z,1.0nm,0.6s						
KSRS	Korea Array	78.61	52	P	P	05 24 24.1	+0.7
	comp=Z,1.6nm,0.6s,baz=309,slow=5.5,SNR=6.1						
	comp=Z,1.6nm,0.6s						
COLA	College	80.48	357	⇑eP	P	05 24 33.0	-0.1
COLA				pmax	pmax		
	comp=Z,19nm,3.9s						
ILAR	Eielson Array	80.54	356	P	P	05 24 34.5	+1.0
	comp=Z,0.8nm,0.7s,baz=335,slow=3.6,SNR=10						
	comp=Z,0.8nm,0.7s						
YSS	Yuzh-Sakhalins	81.29	38	⇓eP	P	05 24 39.4	+1.6
YSS				pmax	pmax		
	comp=Z,16nm,1.7s						
PETK	Petropavlovsk-	83.29	26	LR	LR	06 08 05.4	
	comp=Z,39nm,18.9s,baz=125,slow=40						
MJAR	Matsushiro Arr	85.66	48	P	P	05 25 01.2	+0.8
	comp=Z,1.0nm,0.3s,baz=297,slow=4.2,SNR=5.1						
	comp=Z,1.0nm,0.3s						
PDAR	Pinedale Array	92.33	328	P	P	05 25 31.1	-1.1
	comp=Z,0.3nm,0.8s,baz=46,slow=6.4,SNR=2.4						
	comp=Z,0.3nm,0.8s						

WEL 30 05:14:21.2, 38°S±4°×17°8E±°, h13^{km}±4^{km}, M3.3/9, ML3.5/9, MLv3.3/9, Error ellipse: s-maj=0.0km s-min=0.0km az=56.5, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	0.10	355	P	Pg	05 14 24.6	+0.4
PUZ				S	Sb	05 14 27.5	-0.1
TWGZ	Tauwhareparae	0.23	270	P	Pb	05 14 27.2	0.0
CNGZ	Carnagh Statio	0.31	189	P	Pb	05 14 28.8	+0.2
CNGZ				S	Sn	05 14 37.0	-1.0
PKGZ	Pakihiroa	0.32	332	P	Pb	05 14 28.9	0.0
TKGZ	Te Karaka	0.42	231	P	Pb	05 14 30.4	-0.1
RUGZ	Raukumara Rang	0.51	294	P	Pb	05 14 32.1	0.0
RUGZ				S	Sn	05 14 41.5	-1.6
HAZ	Te Kaha	0.57	317	P	Pb	05 14 33.2	+0.2
HAZ				S	Sn	05 14 43.0	-1.2
MWZ	Matawai	0.60	255	P	Pb	05 14 33.6	-0.1
MXZ	Matakaoa Point	0.61	3	P	Pb	05 14 34.2	+0.5
MXZ				S	Sn	05 14 44.8	-0.6
RIGZ	Rimuhau	0.66	217	P	Pb	05 14 34.6	-0.1
RAGZ	Rawiri	0.74	244	P	Pb	05 14 36.4	+0.4
URZ	Urewera	0.92	264	P	Pn	05 14 39.4	-0.4
SNGZ	Shannon Statio	0.95	230	P	Pg	05 14 38.9	-0.6
KNZ	Kokohu	0.96	209	P	Pb	05 14 37.8	-1.9
MHGZ	Mahia Peninsul	1.02	196	P	Pb	05 14 38.6	-2.1
WHRZ	Whale Island	1.07	287	P	Pn	05 14 43.0	+1.1
RTZ	Ruatahuna	1.10	246	P	Pb	05 14 41.7	-0.5
RAHZ	Arahi	1.19	231	P	Pb	05 14 43.7	+0.2
EDRZ	Edgecumbe	1.21	273	P	Pg	05 14 44.2	-0.2
WHHZ	Waihua	1.21	222	P	Pg	05 14 47.0	+2.6
MUGZ	Murupara	1.22	255	P	Pg	05 14 44.7	+0.1
MARZ	Manawahe	1.27	278	P	Pb	05 14 45.2	+0.1
MTHZ	Maungataniwha	1.31	238	P	Pn	05 14 44.1	-1.1
TARZ	Mount Tarawera	1.39	267	P	Pb	05 14 47.1	0.0
RRRZ	Republican Roa	1.39	263	P	Pb	05 14 46.9	-0.1
MKRZ	Makatiti	1.42	271	P	Pg	05 14 50.5	+2.0
NMHZ	Naumai	1.47	231	P	Pb	05 14 48.0	-0.4
ARHZ	Aropaoanui	1.47	222	P	Pg	05 14 51.0	+1.5
OMRZ	Omania	1.50	272	P	Pg	05 14 51.3	+1.4
PRRZ	Plateau Road	1.51	257	P	Pg	05 14 50.0	-0.2
HLRZ	Highlands Stat	1.51	267	P	Pb	05 14 49.5	+0.4
ALRZ	Allen Road	1.56	255	P	Pg	05 14 51.2	0.0
HRRZ	Handcock Road	1.58	262	P	Pb	05 14 49.6	-0.6
MRHZ	Matea Rd	1.59	245	P	Pn	05 14 48.5	-0.6
HSRZ	Hossack Road	1.60	265	P	Pg	05 14 52.6	+0.8
TGRZ	Tauranga	1.65	285	P	Pn	05 14 49.4	-0.4
WPRZ	Whakapapatarin	1.69	258	P	Pg	05 14 53.9	+0.3
BKZ	Black Stump Fm	1.71	234	P	Pn	05 14 49.5	-1.2
MCHZ	McNeill Hill	1.77	224	P	Pn	05 14 49.6	-1.9
MYRZ	Mayor Island	1.84	298	P	Pg	05 14 58.0	+1.5
KWHZ	Kaweka Forest	1.91	229	P	Pn	05 14 51.8	-1.7
BHHZ	Black Hill Sta	2.17	232	P	Pn	05 14 55.6	-1.4
TMVZ	Te Maari	2.22	244	P	Pn	05 14 56.9	-0.9
ETVZ	East Tongariro	2.22	244	P	Pg	05 15 02.6	-1.2
NTVZ	North Tongarir	2.23	245	P	Pn	05 14 57.7	-0.3
OTVZ	Oturere	2.26	243	P	Pn	05 14 57.7	-0.7
NNVZ	North Ngauruho	2.29	244	P	Pb	05 15 01.1	-1.3
SNVZ	South Ngauruho	2.29	243	P	Pn	05 14 58.4	-0.5
WTVZ	West Tongariro	2.30	245	P	Pg	05 15 04.5	-0.8
NGZ	Ngauruhoe	2.31	244	P	Pb	05 15 02.8	-0.1
TUVZ	Tukino	2.32	241	P	Pg	05 15 05.1	-0.5
MOVZ	Moawhango	2.32	237	P	Pg	05 15 04.9	-0.7
WNVZ	Wahianoa	2.38	240	P	Pn	05 14 59.5	-0.6
TRVZ	Turoa	2.41	241	P	Pn	05 14 59.8	-0.6
KUZ	Kuaotunu	2.48	304	P	Pn	05 15 00.4	-0.9
HIZ	Hauiti	2.71	262	P	Pn	05 15 05.8	+1.4
NEZ	North Egmont	3.44	250	P	Pn	05 15 15.2	+0.6
PKE	Pukeiti	3.50	252	P	Pn	05 15 15.7	+0.3
KHEZ	Kahui Hut	3.51	250	P	Pn	05 15 16.0	+0.5
LTZ	Lake Taylor	6.49	223	P	Pn	05 15 53.6	-2.7
CTZ	Chatham Island	6.77	147	P	Pn	05 15 56.8	-3.4

TRN 30 05:32:23.4, 17°.38N×60°.71W, h27^{km}, MD4.5, 1C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANBD	Bethesda, Anti	1.06	252	⇑iP	Pb	05 32 43.6	+0.4
ANBD				eS	Sb	05 32 58.9	+2.3
ANWB	Willy Bob	1.07	286	eP	Pb	05 32 43.6	+0.3
ANWB				eS	Sb	05 32 59.8	+3.0
ABD	La Joyeuse, An	1.17	220	eP	Pb	05 32 45.0	+0.1
MAGL	Barre de l'ile	1.52	201	eP	Pb	05 32 50.2	-0.8
MAGL				eS	Sb	05 33 10.9	+1.0
CBE	Ff, Capester	1.56	214	eP	Pb	05 32 51.3	-0.3
CBE				eS	Sb	05 33 11.4	+0.5
MLYT	Lee's Yard	1.56	245	eP	Pb	05 32 51.5	-0.1
MBFL	Flemmings, Mon	1.57	247	eP	Pb	05 32 51.3	-0.5
TDBA	Terre de Bas,	1.76	210	eP	Pb	05 32 53.6	-1.4
TBG	Guadaloupe-3	1.76	211	eP	Pb	05 32 54.8	-0.3
SMRT	St. Maarten	2.35	287	eP	Pn	05 33 01.9	+1.6
SABA	Saba	2.43	276	eP	Pn	05 33 03.0	+1.6
SVN	Savane Anatole	2.56	190	eP	Pn	05 33 05.8	+2.6
BAMF	Morne Balai	2.58	189	eP	Pn	05 33 05.8	+2.3
CXM	Morne La Croix	2.59	190	eP	Pn	05 33 05.4	+1.7
ILAM	Ilet Lapin Mar	2.59	183	eP	Pn	05 33 05.4	+1.8
ILAM				eS	Sn	05 33 35.7	+1.5
GBMF	Grand Be	2.60	190	eP	Pn	05 33 05.3	+1.4
PML	Morne Lenard	2.62	190	eP	Pn	05 33 05.6	+1.6
FDF	Fort de France	2.66	189	eP	Pn	05 33 05.8	+1.1
FDF				eS	Sn	05 33 37.8	+1.8
LPMF	Morne Lapointe	2.80	185	eP	Pn	05 33 07.8	+1.4
ZAM	Aeronautique	2.81	186	eP	Pn	05 33 08.8	+2.3
MVM	Montagne Vaucl	2.81	184	eP	Pn	05 33 08.8	+2.1
BIM	Bigot	2.87	187	eP	Pn	05 33 09.0	+1.6
BIM				eS	Sn	05 33 43.2	+2.2
MPOM	Morne Pois Mar	2.92	183	eP	Pn	05 33 09.7	+1.6
MPOM				eS	Sn	05 33 44.0	+1.7
SLBI	Saint Lucia, B	3.34	184	eP	Pn	05 33 15.8	+1.8
SLBI				eS	Sn	05 33 54.2	+1.4
SLB	Belfond	3.54	185	eS	Sn	05 33 58.3	+0.5
MCLT	Moule a Chique	3.65	184	eP	Pn	05 33 20.6	+2.3
MCLT				eS	Sn	05 34 02.8	+2.3
CDVI	St. Croix	3.89	276	eP	Pn	05 33 23.9	+2.5
SVB	Belmont	4.12	187	eP	Pn	05 33 26.6	+2.0
SVB	Belmont	4.12	187	eS	Sn	05 34 13.1	+1.2
AOPR	Arecibo Observ	5.83	280	eP	Pn	05 33 50.4	+2.1
AOPR	Arecibo Observ	5.83	280	eS	Sn	05 34 54.2	-0.1
TRN	Trinidad (W)	6.72	186	eP	Pn	05 34 02.8	+2.3

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*SNET **30** 06:03:10.3±0.8, 13°.49N×90°.64W, h21^{km}±6^{km}, ML2.6*

*GCG **30** 06:03:12.8±1.5, 13°.99N×90°.93W, h75^{km}±25^{km}, MD2.9*

ISC 30 06:03:08.2±2.2, **13°.5N**±0°.1×**90°.85W**±0°.07, **h34**^{km}±5^{km}, **n9**, σ1^{s}.**14**/17, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	0.93	0	eP	Pn	06 03 25.4	+0.4
FUG				eS	Sb	06 03 36.9	-1.4
SULM	Suchitepequez,	1.05	319	eP	Pb	06 03 28.5	+0.5
NUBE	Las Nubes	1.11	69	eP	Pn	06 03 27.2	-0.2
NUBE				eS	Sn	06 03 40.3	-1.2
NUBE				IAML		06 03 42.5	
	comp=Z,46nm,0.1s						
SLOZ	Alcaldia de Sa	1.15	63	eP	Pn	06 03 28.1	+0.1
SLOZ				eS	Sn	06 03 42.4	-0.1
SLOZ				IAML		06 03 45.5	
	comp=Z,102nm,0.3s						
NBG	Las Nubes	1.18	24	eP	Pn	06 03 29.7	+1.2
NBG				eS	Sn	06 03 45.1	+1.7
CEVE	Cerro Verde	1.23	75	eP	Pn	06 03 29.3	+0.2
CEVE				eS	Sn	06 03 44.4	-0.3
CEVE				IAML		06 03 46.5	
	comp=Z,458nm,0.2s						
JAYA	Jayaque - finc	1.36	84	eP	Pn	06 03 31.3	+0.4
JAYA				eS	Sn	06 03 47.1	-0.8
JAYA				IAML		06 03 49.6	
	comp=Z,266nm,0.2s						
STG3	Santiaguito 3,	1.39	330	eP	Pn	06 03 32.3	+1.0
STG3				eS	Sn	06 03 45.9	-2.5
SJTE	Alcalda de S	1.79	86	eP	Pn	06 03 37.4	+0.7
SJTE				eS	Sn	06 03 58.5	+0.1
SJTE				IAML		06 04 01.6	
	comp=Z,39nm,0.2s						

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*IDC **30** 06:08:21.4±0.8, 34°.33N×137°.98E, h302^{km}±9^{km}, mb3.3/6, mbtmp4.1/13, Error ellipse: s-maj=23.9km s-min=11.8km az=71.0*

*JMA **30** 06:08:21.8±0.4, 34°N±2°×13°8E±°, h317^{km}±3^{km}, MV3.3/29, ENSYUNADA*

ISC 30 06:08:22.3±0.8, **34°.47N**±0°.07×**137°.78E**±0°.06, **h310**^{km}±6^{km}, **n42**, σ1^{s}.**77**/54, **mb3.6**/6, **Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TK04	Tokai 4	0.12	139	P	Pn	06 09 02.4	+1.0
TK04				eS	S	06 09 33.8	+1.3
TTO5	TONANKAI O.B.S	0.23	194	P	Pn	06 09 02.1	+0.7
TK03	Tokai 3	0.34	154	P	Pn	06 09 02.6	+0.9
TK03				S	S	06 09 34.2	+1.3
TK02	Tokai 2	0.53	182	P	Pn	06 09 02.5	+0.7
JIE	Ise	0.89	265	P	Pn	06 09 03.6	+0.4
JIE				S	S	06 09 35.2	-0.7
INU	Inuyama	1.08	324	P	Pn	06 09 04.8	+0.8
JGF	Kuroka	1.18	343	P	Pn	06 09 05.4	+0.8
JYN	Shimob	1.20	31	P	Pn	06 09 05.7	+1.0
JOD2	Odawara 2	1.33	53	P	Pn	06 09 06.1	+0.7
JOD2				S	S	06 09 40.5	+0.8
JYTA	Yamagatataniai	1.41	323	P	Pn	06 09 06.6	+0.8
JRY	Ryogami san	1.79	30	P	Pn	06 09 09.8	+1.5
JRY				S	S	06 09 47.4	+2.3
JTNC	Tanabenakahech	1.92	251	eP	Pn	06 09 09.4	0.0
JTNC				S	S	06 09 45.3	-1.5
MJAR	Matsushiro Arr	2.09	9	P	Pn	06 09 11.5	+0.9
	69nm,0.6s,baz=190,slow=9.3,SNR=134						
MJAR				S	S	06 09 49.0	-0.2
	15nm,0.7s,baz=186,slow=16,SNR=11						
MAJO	Matsushiro	2.09	9	P	Pn	06 09 11.9	+1.3
MAT	Matsushiro	2.09	9	P	Pn	06 09 11.7	+1.1
MAT				S	S	06 09 49.6	+0.4
JWT	Wachi	2.12	293	P	Pn	06 09 11.3	+0.5
JWT				S	S	06 09 49.0	-0.5
JKG	Kaga	2.15	327	P	Pn	06 09 12.1	+1.0
JHJ2	Mitsune	2.17	128	P	Pn	06 09 11.1	-0.2
JHJ2	Mitsune	2.17	128	P	Pn	06 09 10.7	-0.6
JAG	Ashikaga	2.38	35	P	Pn	06 09 13.3	+0.3
BSO1	Boso 1	2.64	85	P	Pn	06 09 14.1	-0.6
BSO1				S	S	06 09 56.7	0.0
JSZ	Suzu	2.99	354	eP	Pn	06 09 19.6	+1.1
JMN	Monobe	3.32	258	P	Pn	06 09 21.7	-0.3
JSD	Sado	3.58	6	P	Pn	06 09 25.7	+1.3
JHS	Saijyo	3.88	279	P	Pn	06 09 28.3	+0.6
JMM	Marumori	4.17	35	P	Pn	06 09 31.5	+0.7
JNU	Nakatsue	5.90	259	P	Pn	06 09 50.6	-0.2
	9.2nm,0.7s,baz=75,slow=6.2,SNR=6.6						
JTM	Tenmabayashi	6.82	21	P	Pn	06 10 02.9	+1.4
JTU	Tsushima	6.92	273	P	Pn	06 10 03.0	+0.1
JCJ	Chichijima	8.27	152	P	Pn	06 10 15.9	-3.4
	30nm,0.3s,baz=322,slow=19,SNR=2.9						
JCJ				S	S	06 11 41.2	-13
	71nm,0.3s,baz=279,slow=22,SNR=14						
JCJ	Chichijima	8.27	152	P	Pn	06 10 16.2	-3.1
KSRS	Korea Array	8.53	293	P	Pn	06 10 23.4	+1.1
	1.8nm,0.5s,baz=114,slow=15,SNR=4.9						
JEM	Erimo	8.63	28	P	Pn	06 10 24.0	+0.5
ASAJ	Asahikawa	10.32	20	P	Pn	06 10 43.7	-0.4
	9.5nm,0.3s,baz=210,slow=12,SNR=11						
ASAJ				S	S	06 12 33.2	-7.1
	2.5nm,0.3s,baz=335,slow=33,SNR=1.6						
USRK	Ussuriysk Ar.	10.70	337	P	Pn	06 10 49.6	+0.9
	1.8nm,0.5s,baz=154,slow=9.8,SNR=4.5						
USRK				S	S	06 12 43.1	-5.5
	2.0nm,0.7s,baz=134,slow=38,SNR=1.5						
KLR	Kul'dur	15.41	345	P	P	06 11 44.2	+1.1
	2.8nm,0.5s,baz=173,slow=10,SNR=15						
SONM	Songino Array	26.93	309	P	P	06 13 38.1	+2.2
	1.6nm,0.6s,baz=111,slow=9.0,SNR=11						
	1.6nm,0.6s						
ZALV	Zalesovo Beam	41.53	315	P	P	06 15 42.6	+2.8
	0.8nm,0.4s,baz=100,slow=9.2,SNR=2.6						
	0.8nm,0.4s						
MKAR	Makanchi Array	43.03	304	P	P	06 15 53.4	+1.4
	1.7nm,0.5s,baz=85,slow=10.0,SNR=24						
	1.7nm,0.5s						
WRA	Warramunga Arr	54.21	184	P	P	06 17 15.5	-1.2
	0.9nm,0.3s,baz=0.3,slow=7.6,SNR=30						
	0.9nm,0.3s						
ASAR	Alice Springs	57.94	184	P	P	06 17 41.8	-1.0
	0.4nm,0.3s,baz=354,slow=5.2,SNR=10						
	0.4nm,0.3s						
FINES	FINESS Array B	69.68	332	P	P	06 18 59.1	+0.7
	0.8nm,0.4s,baz=48,slow=2.1,SNR=8.2						
	0.8nm,0.4s						

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*IDC **30** 06:16:13.0±1.2, 21°.36N×122°.27E, h0^{km}, mb3.5/4, mbtmp3.5/4, MS3.2/2, Error ellipse: s-maj=67.7km s-min=26.7km az=70.0*

*TAP **30** 06:16:27.6, 21°.42N×121°.71E, h133^{km}, ML4.1, D*

*MAN **30** 06:16:31.8, 21°.02N×122°.21E, h106^{km}, mb4.1, ML2.9, MS2.6*

ISC 30 06:16:28.1±1.0, **21°.44N**±0°.05×**121°.73E**±0°.05, **h132**^{km}±6^{km}, **n92**, σ1^{s}.**15**/156, **mb3.3**/4, **3C-12D**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LYUB	Lan-yu	0.58	347	⇓iP	Pn	06 16 47.4	-0.4
	baz=349						
LYUB				S	Sn	06 17 02.1	-0.7
	baz=349						
LAY	Lan-yu	0.62	345	⇑P	Pn	06 16 47.3	-0.9
	baz=347						
LAY				i S	Sn	06 17 02.5	-0.9
	baz=347						
TSEB	Hengchuen, Pin	0.90	301	⇑eP	Pn	06 16 51.7	+1.5
	baz=297						
TSEB				i S	Sn	06 17 07.9	+0.9
	baz=297						
TWKBT	Hengchun	0.99	301	⇓P	Pn	06 16 51.6	+0.5
	baz=299						
TWKBT				i S	Sn	06 17 08.4	-0.1
	baz=299						
TWK1	Hengchun	1.00	301	eP	Pn	06 16 51.7	+0.6
	baz=299						
TWK1				S	Sn	06 17 08.1	-0.5
	baz=299						
SMST	Manzhou Townsh	1.01	305	⇓iP	Pn	06 16 51.5	+0.2
	baz=310						
SMST				S	Sn	06 17 08.1	-0.8
	baz=310						
HEN	Hengchun	1.08	302	eS	Sn	06 17 10.7	+0.7
	baz=295						
SLIU	Shizi	1.16	312	⇓P	Pn	06 16 53.0	+0.3
	baz=321						
SLIU				S	Sn	06 17 11.1	-0.3
	baz=321						
TAWH	Dawu Township	1.19	319	⇓P	Pn	06 16 52.7	-0.3
	baz=321						
TAWH				eS	Sn	06 17 10.2	-1.7
	baz=321						
EAST	Anshuo	1.25	319	i P	Pn	06 16 53.6	-0.1
	baz=321						
EAST				S	Sn	06 17 11.9	-1.2
	baz=321						
LDUT	Ludao	1.25	349	⇓eP	Pn	06 16 52.7	-1.0
	baz=349						
LDUT				eS	Sn	06 17 12.0	-1.2
	baz=349						
ECL	Taimali	1.36	328	P	Pn	06 16 54.5	-0.2
	baz=330						
ECL				eS	Sn	06 17 13.1	-2.0
	baz=330						
SCZT	Fangliau	1.39	312	⇓P	Pn	06 16 55.3	+0.2
	baz=320						
SCZT				S	Sn	06 17 15.0	-0.7
	baz=320						
TWG	Pinlang	1.51	336	P	Pn	06 16 55.9	-0.5
	baz=337						
TWG				S	Sn	06 17 16.5	-1.6
	baz=337						
MASBT	Mashibuluo	1.55	319	⇓iP	Pn	06 16 57.1	+0.2
	baz=320						
MASBT				eS	Sn	06 17 17.4	-1.4
	baz=320						
TWP	Hsiaoliuchiu	1.56	306	⇓eP	Pn	06 16 58.7	+1.7
	baz=307						
TWP				eS	Sn	06 17 21.6	+2.6
	baz=307						
LONT	Longtian	1.56	339	⇑P	Pn	06 16 56.6	-0.5
	baz=334						
LONT				S	Sn	06 17 17.9	-1.3
	baz=334						
EDH	Donghe	1.58	346	i P	Pn	06 16 57.1	-0.1
	baz=339						
EDH				S	Sn	06 17 19.1	-0.3
	baz=339						
TSMG	Majia	1.61	322	i P	Pn	06 16 57.8	+0.2
	baz=328						
TSMG				eS	Sn	06 17 19.0	-1.2
	baz=328						
SSD	Sandimen	1.65	322	i P	Pn	06 16 58.4	+0.3
	baz=323						
SSD				eS	Sn	06 17 19.4	-1.6
	baz=323						
CHKT	Chengkung	1.69	349	P	Pn	06 16 58.3	-0.2
	baz=354						
CHKT				eS	Sn	06 17 21.6	0.0
	baz=354						
SGLT	Jiouru	1.72	318	eP	Pn	06 17 00.5	+1.6
	baz=325						
EHD	Haiduan	1.77	344	⇓P	Pn	06 16 58.8	-0.6
	baz=339						
EHD				eS	Sn	06 17 21.4	-2.1
	baz=339						
FULB	Fuli	1.80	347	i P	Pn	06 16 59.9	+0.1
	baz=341						
TWM1	Shoushan	1.84	319	eP	Pn	06 17 01.7	+1.5
	baz=326						
TWM1				S	Sn	06 17 27.3	+2.5
	baz=326						
SCST	Cishan	1.84	322	P	Pn	06 17 00.9	+0.7
	baz=330						
SCST				eS	Sn	06 17 24.7	-0.2
	baz=330						

SLGT	Liugui	1.84	327	eP	Pn	06 17 01.7	+1.3
	baz=328						
SLGT				S	Sn	06 17 25.3	+0.3
	baz=328						
ELDTW	Lidau	1.86	339	eP	Pn	06 17 00.7	+0.1
	baz=340						
ELDTW				eS	Sn	06 17 26.1	+0.5
	baz=340						
EYUL	Yuli	1.94	349	eP	Pn	06 17 02.6	+1.1
	baz=344						
EYUL				eS	Sn	06 17 29.8	+2.8
	baz=344						
STYH	Taoyuan	1.94	333	P	Pn	06 17 02.2	+0.8
	baz=334						
STYH				S	Sn	06 17 27.3	+0.4
	baz=334						
STYT	Tauyuan	1.94	333	eP	Pn	06 17 02.1	+0.6
	baz=333						
STYT				S	Sn	06 17 27.0	-0.1
	baz=333						
TWF1	Yuli	1.95	348	i P	Pn	06 17 01.6	0.0
	baz=343						
SGST	Jiashian	1.95	327	P	Pn	06 17 01.2	-0.4
	baz=328						
SGST				S	Sn	06 17 26.3	-1.0
	baz=328						
YULB	Yu-li	1.99	348	eP	Pn	06 17 01.5	-0.5
	baz=343						
YULB				eS	Sn	06 17 26.2	-1.9
	baz=343						
CHN1	Nanshi	2.06	328	P	Pn	06 17 03.4	+0.4
	baz=328						
CHN1				S	Sn	06 17 29.2	-0.6
	baz=328						
HGSD	Ruisui	2.06	352	i P	Pn	06 17 03.0	0.0
	baz=355						
HGSD				S	Sn	06 17 29.9	+0.2
	baz=355						
WTP	Ta-pu	2.08	330	P	Pn	06 17 03.5	+0.3
	baz=331						
WTP				S	Sn	06 17 29.6	-0.4
	baz=331						
TPUB	Ta-pu	2.12	331	i P	Pn	06 17 03.8	+0.2
	baz=332						
TPUB				S	Sn	06 17 29.9	-1.0
	baz=332						
TWK	Hsinying	2.15	328	i P	Pn	06 17 04.3	+0.2
	baz=329						
TWK				S	Sn	06 17 31.4	-0.3
	baz=329						
SSHA	Shanhua	2.15	322	eP	Pn	06 17 05.3	+1.2
	baz=330						
SSHA				eS	Sn	06 17 32.9	+1.3
	baz=330						
YUS	Yu-Shan	2.17	341	eP	Pn	06 17 05.5	+0.8
	baz=333						
CHN4	Tsaushan	2.18	331	i P	Pn	06 17 04.7	+0.4
	baz=332						
CHN4				eS	Sn	06 17 32.1	0.0
	baz=332						
ALS	Alishan	2.23	338	eP	Pn	06 17 05.8	+0.5
	baz=331						
SCLT	Jiali	2.24	321	P	Pn	06 17 05.7	+0.6
	baz=328						
SCLT				eS	Sn	06 17 33.7	+0.2
	baz=328						
WCKO	Fanlu	2.25	333	P	Pn	06 17 05.3	+0.1
	baz=333						
WCKO				i S	Sn	06 17 32.9	-0.8
	baz=333						
TSCK	Chigu Township	2.28	319	i P	Pn	06 17 06.0	+0.4
	baz=312						
TSCK				S	Sn	06 17 33.6	-0.9
	baz=312						
ICHU	Yijhu	2.34	325	P	Pn	06 17 06.3	0.0
	baz=333						
ICHU				S	Sn	06 17 35.2	-0.5
	baz=333						
CHN5	Tsauling	2.36	336	i P	Pn	06 17 06.9	+0.2
	baz=330						
CHN5				S	Sn	06 17 35.9	-0.5
	baz=330						
CHN8	Yiju	2.36	324	P	Pn	06 17 06.6	0.0
	baz=331						
CHN8				S	Sn	06 17 36.0	-0.3
	baz=331						
VWDT	VWDT	2.37	347	eP	Pn	06 17 08.0	+1.3
	baz=351						
VWDT				eS	Sn	06 17 37.2	+0.8
	baz=351						
CHY	Chiayi	2.38	330	P	Pn	06 17 06.9	0.0
	baz=330						
CHY				S	Sn	06 17 35.5	-1.2
	baz=330						
CHN2	Minshiung	2.39	331	P	Pn	06 17 07.3	+0.4
	baz=332						
SSLB	Suanglung	2.45	343	P	Pn	06 17 08.0	+0.3
	baz=334						
SSLB				eS	Sn	06 17 38.9	+0.6
	baz=334						
WDLH	Douliu	2.50	334	P	Pn	06 17 08.6	+0.3
	baz=335						
WDLH				S	Sn	06 17 38.1	-1.2
	baz=335						
WSL	Shuilin Townsh	2.50	327	P	Pn	06 17 08.3	-0.1
	baz=327						
WSL				S	Sn	06 17 37.8	-1.5
	baz=327						
WJS	Zhushan	2.55	339	P	Pn	06 17 09.5	+0.5
	baz=339						
SMLT	Sun Moon Lake	2.55	343	P	Pn	06 17 09.4	+0.3
	baz=335						
SMLT				S	Sn	06 17 39.7	-1.0
	baz=335						
WTK	Tuku	2.56	331	eP	Pn	06 17 08.8	-0.3
	baz=332						
WTK				S	Sn	06 17 39.6	-1.1
	baz=332						
TYC	Yuchr	2.58	342	P	Pn	06 17 09.8	+0.3
	baz=343						
WUSB	Renai	2.60	348	P	Pn	06 17 10.5	+0.7
	baz=339						
WUSB				S	Sn	06 17 41.4	-0.6
	baz=339						
WDGT	Dungji	2.64	314	P	Pn	06 17 10.0	-0.1
	baz=314						
WDGT				S	Sn	06 17 40.6	-1.8
	baz=314						
EOS4	EOS4	2.73	11	eP	Pn	06 17 11.9	+1.0
	baz=16						
NACB	Ninganchiao	2.73	357	⇓P	Pn	06 17 11.4	+0.1
	baz=5.0						
WHF	Hehuan Shan	2.73	351	eP	Pn	06 17 12.5	+0.8
	baz=354						
VCHM	Qimei	2.76	310	eP	Pn	06 17 11.6	-0.2
	baz=310						
VCHM				eS	Sn	06 17 43.8	-1.6
	baz=310						
FUSS	Fushou	2.83	351	P	Pn	06 17 14.3	+1.4
	baz=358						
WCHH	Zhanghua	2.84	338	i P	Pn	06 17 13.0	+0.3
	baz=332						
TCU	Taichung	2.87	340	eP	Pn	06 17 14.2	+1.1
	baz=341						
PHUB	P'eng-hu	2.87	316	P	Pn	06 17 12.8	-0.3
	baz=317						
PHUB				eS	Sn	06 17 45.6	-2.2
	baz=317						
PNG	Penghu	2.92	317	P	Pn	06 17 13.6	-0.2
	baz=323						
PNG				S	Sn	06 17 47.0	-2.0
	baz=323						
NNSB	Datong	2.99	354	P	Pn	06 17 15.9	+1.1
	baz=359						
NNSB				S	Sn	06 17 50.7	-0.2
	baz=359						
LATG	Datong	3.09	357	eP	Pn	06 17 17.1	+1.0
	baz=3.0						
LATG				eS	Sn	06 17 51.8	-1.3
	baz=3.0						
ENTT	Nioudou	3.19	357	eP	Pn	06 17 18.5	+1.2
	baz=358						
YHNB	Yeheng	3.23	354	eP	Pn	06 17 19.3	+1.4
	baz=355						
YHNB				eS	Sn	06 17 57.1	+0.7
	baz=355						
YOJ	Yonaguni jima	3.23	21	eP	Pn	06 17 18.2	+0.4
	baz=21						
FUSB	Fushanzhiwuyua	3.31	358	eP	Pn	06 17 20.9	+2.0
	baz=358						
FUSB				eS	Sn	06 17 59.2	+1.1
	baz=358						
CVP	Callao Caves	3.72	179	⇓eP	Pn	06 17 24.0	-0.2
VWUC	VWUC	4.11	330	P	Pn	06 17 29.1	-0.2
	baz=330						
VWUC				eS	Sn	06 18 13.8	-3.1
	baz=330						
KNM	Kinmen	4.25	315	P	Pn	06 17 32.4	+1.3
	baz=314						
KNM				S	Sn	06 18 20.4	+0.3
	baz=314						
KNMB	Chin-men Tao	4.31	315	P	Pn	06 17 32.2	+0.2
	baz=315						
KNMB				S	Sn	06 18 19.5	-2.1
	baz=315						
PTMZ	Houxiangcun	4.32	327	P	Pn	06 17 31.8	-0.3
	baz=327						
PTMZ				eS	Sn	06 18 18.6	-3.1
	baz=327						
ZPLA	Ao Xicun	4.43	305	eP	Pn	06 17 34.7	+1.1
	baz=305						
ZPLA				eS	Sn	06 18 23.4	-1.2
	baz=305						
AXDP	Jialang	4.88	316	P	Pn	06 17 39.8	+0.2
	baz=315						
MATB	Ma-tsu	4.97	341	eP	Pn	06 17 39.7	-1.1
	baz=341						
MATB				eS	Sn	06 18 33.4	-4.0
	baz=341						
MHZQ	Yeshan	5.26	332	P	Pn	06 17 44.7	0.0
	baz=332						
MHZQ				eS	Sn	06 18 41.2	-3.1
	baz=332						
SXFK	Yanhouchang	6.19	324	eP	Pn	06 17 57.4	+0.2
	baz=323						
CMAR	Chiang Mai Arr	21.62	266	LR	LR	06 30 33.8	
	comp=Z,12nm,20.8s,baz=130,slow=39						
MKAR	Makanchi Array	40.68	318	P	P	06 23 58.5	+2.9
	0.4nm,0.5s,baz=107,slow=9.1,SNR=5.9						
	0.4nm,0.5s						
WRA	Warramunga Arr	42.94	162	P	P	06 24 12.4	-1.6
	0.2nm,0.5s,baz=343,slow=8.8,SNR=2.8						
	0.2nm,0.5s						
ASAR	Alice Springs	46.37	165	P	P	06 24 38.9	-2.4
	0.2nm,0.3s,baz=349,slow=7.6,SNR=2.2						
	0.2nm,0.3s						
RPZ	Rata Peaks	79.04	146	LR	LR	07 02 09.4	
	comp=Z,83nm,19.6s,baz=196,slow=35						
YKA	Yellowknife Ar	85.30	23	P	P	06 28 50.8	+0.9
	0.5nm,0.7s,baz=314,slow=4.6,SNR=14						
	0.5nm,0.7s						

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*NEIC **30** 06:39:22.3±0.6, 17°.13S±0°.10×178°.3W±0°.2, h583^{km}±10^{km}, mb4.3/19, Error ellipse: s-maj=28.2km s-min=14.1km az=95.0*

*IDC **30** 06:39:26.3±1.9, 17°.38S×179°.00W, h576^{km}±18^{km}, mb2.9/7, mbtmp3.8/9, Error ellipse: s-maj=80.1km s-min=16.2km az=148.0*

ISC 30 06:39:23.4±0.7**, 17°.4S**±0°.1×**178°.8W**±0°.1**, h550**^{km}**, n30, σ1^{s}.64**/31**, mb4.1**/19**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.01	263	P	P	06 40 42.5	+3.9
	30nm,0.6s,baz=60,slow=3.0,SNR=24						
MSVF	Nonsavu	3.01	263	P	P	06 40 43.0	+4.4
DZM	Mont Dzumac	14.63	249	P	P	06 42 30.4	+1.1
	3.0nm,0.6s,baz=77,slow=19,SNR=1.9						
ARMA	Armidale	29.86	239	P	P	06 44 47.7	+0.9
ARMA				IAmb	IAmb	06 44 55.3	
	comp=Z,10nm,1.1s						
CTAO	Charters Tower	33.15	260	P	P	06 45 16.0	+1.0
PMG	Port Moresby	34.00	279	P	P	06 45 21.9	-0.2
PMG				IAmb	IAmb	06 45 28.8	
	comp=Z,9.0nm,0.9s						
TOO	Toolangi	37.19	230	P	P	06 45 48.7	+0.4
TOO				IAmb	IAmb	06 46 14.6	
	comp=Z,14nm,1.2s						
STKA	Stephens Creek	38.53	240	P	P	06 45 59.0	-0.3
	comp=Z,2.3nm,0.4s,baz=74,slow=7.4,SNR=8.2						
	comp=Z,2.3nm,0.4s						
STKA	Stephens Creek	38.53	240	P	P	06 45 60.0	+0.7
BBOO	Buckleboo	43.31	240	P	P	06 46 37.3	+0.1
BBOO				IAmb	IAmb	06 46 37.8	
	comp=Z,17nm,1.0s						
WB0	Warramunga Arr	44.31	259	P	P	06 46 45.9	+0.7
WB0				IAmb	IAmb	06 47 11.9	
	comp=Z,9.6nm,1.4s						
WB2	Warramunga Arr	44.33	259	P	P	06 46 45.2	-0.1
WB2				IAmb	IAmb	06 47 14.3	
	comp=Z,15nm,1.5s						
WRA	Warramunga Arr	44.35	259	P	P	06 46 45.1	-0.3
	comp=Z,1.3nm,0.6s,baz=97,slow=6.8,SNR=28						
	comp=Z,1.3nm,0.6s						
WRA	Warramunga Arr	44.35	259	P	P	06 46 45.2	-0.3
AS31	Alice Springs	44.56	254	P	P	06 46 47.3	+0.2
AS31				IAmb	IAmb	06 46 47.8	
	comp=Z,4.1nm,0.7s						
ASAR	Alice Springs	44.56	254	P	P	06 46 46.9	-0.2
	comp=Z,14nm,0.6s,baz=89,slow=8.1,SNR=243						
ASAR				PcP	PcP	06 48 17.7	-0.6
	comp=Z,0.2nm,0.4s,baz=102,slow=3.7,SNR=1.8						
FORT	Forrest	49.87	244	P	P	06 47 26.1	-0.7
FAKI	Fak Fak	50.10	281	P	P	06 47 26.4	-2.3
FITZ	Fitzroy Crossi	52.73	260	P	P	06 47 47.1	-0.5
TNTI	Ternate	55.97	283	P	P	06 48 08.9	-1.6
TNTI				IAmb	IAmb	06 48 15.6	
	comp=Z,34nm,1.2s						
PSA00	Pilbara Seismi	57.66	255	P	P	06 48 21.8	-0.1
PSA00				IAmb	IAmb	06 48 41.5	
	comp=Z,20nm,1.4s						
MBWA	Marble Bar	57.82	256	P	P	06 48 22.1	-1.0
MBWA				IAmb	IAmb	06 48 37.1	
	comp=Z,14nm,1.2s						
SBA	Scott Base	60.89	183	P	P	06 48 41.3	-1.2
SBA				IAmb	IAmb	06 48 45.6	
	comp=Z,6.1nm,1.2s						
JSD	Sado	68.31	325	P	P	06 49 26.0	-3.9
QSPA	South Pole Qui	72.64	180	P	P	06 49 53.2	-2.0
NVAR	Mina Array Bea	79.33	44	P	P	06 50 34.0	+1.3
	comp=Z,0.3nm,0.6s,baz=212,slow=6.1,SNR=2.8						
	comp=Z,0.3nm,0.6s						
ILAR	Eielson Array	85.49	13	P	P	06 51 03.3	+0.4
	comp=Z,0.2nm,0.3s,baz=225,slow=5.1,SNR=7.6						
	comp=Z,0.2nm,0.3s						
TXAR	Lajitas Array	86.06	58	P	P	06 51 07.9	+1.3
	comp=Z,0.3nm,0.6s,baz=218,slow=6.1,SNR=5.3						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	87.26	44	P	P	06 51 13.1	+1.0
	comp=Z,0.2nm,0.4s,baz=177,slow=3.6,SNR=4.4						
	comp=Z,0.2nm,0.4s						
YKA	Yellowknife Ar	94.04	25	P	P	06 51 43.1	+0.5
	comp=Z,0.2nm,0.8s,baz=260,slow=3.7,SNR=4.2						
	comp=Z,0.2nm,0.8s						

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*KRSC **30** 06:47:25.6±0.6, 57°.03N×163°.26E, h19^{km}±6^{km}, Ml3.9*

*IDC **30** 06:47:34.2±7.3, 56°.89N×165°.38E, h0^{km}, mb3.3/4, mbtmp3.3/4, MS3.1/1, Error ellipse: s-maj=183.7km s-min=86.5km az=108.0*

ISC 30 06:47:26.5±1.6**, 57°.00N**±0°.04×**163°.09E**±0°.04**, h4**^{km}±11^{km}**, n35, σ1^{s}.53**/47**, mb3.3**/4**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBG	Krutoberegovo	0.77	196	eP	Pg	06 47 41.4	+0.2
KBG				eS	Sb	06 47 52.7	-0.5
KBTR	Krutoberegovo	0.80	191	eP	Pg	06 47 42.4	+0.5
KBTR				eS	Sb	06 47 54.0	-0.1
SMKR	Semkarok	0.98	246	eP	Pg	06 47 45.4	0.0
SMKR				eS	Sn	06 47 59.7	-1.8
SRKR	Sorokina	1.11	253	eP	Pb	06 47 47.1	-1.1
SRKR				eS	Sg	06 48 02.8	+0.6
KLY	Klyuchi	1.51	244	eP	Pn	06 47 52.2	-2.1
KLY				eS	Sn	06 48 11.0	-3.3
BZGR	Bezymyannyi-Gr	1.70	232	eP	Pn	06 47 57.0	+0.1
BZGR				eS	Sg	06 48 20.0	-1.0
BZWR	Bezymyannyi-We	1.77	235	eP	Pn	06 47 58.3	+0.3
BZWR				eS	Sb	06 48 21.7	-0.5
BZP	Bezymyannyi-Pe	1.79	234	eP	Pn	06 47 58.1	-0.1
BZP				eS	Sb	06 48 21.4	-1.1
BZMR	Bezymyannaya	1.79	235	eP	Pn	06 47 58.4	+0.1
BZMR				eS	Sb	06 48 21.5	-1.3
KIRR	Kirishev	1.85	237	eP	Pn	06 47 58.9	-0.2
KIRR				eS	Sb	06 48 23.1	-1.2
KPT	Kopyto	1.90	238	eP	Pn	06 47 59.9	+0.2
KPT				eS	Sb	06 48 24.8	-0.9
SRDR	Sredinnyy	1.98	251	eP	Pn	06 48 01.0	+0.2
SRDR				eS	Sb	06 48 27.0	-1.2
KOZ	Kozyrevsk	2.02	244	eP	Pn	06 48 02.0	+0.8
KOZ				eS	Sb	06 48 28.5	-0.5
KMNR	Kamenistaya	2.02	233	eP	Pn	06 48 01.9	+0.6
OSSR	Ossora	2.26	360	eP	Pn	06 48 03.1	-1.5
TUMD	Tumrok D	2.34	221	eP	Pn	06 48 07.1	+1.3
TUMD				eS	Sb	06 48 36.0	-2.5
TUMR	Tumrok	2.38	225	eP	Pn	06 48 07.6	+1.3
BKI	Bering	2.41	137	eP	Pn	06 48 05.9	-0.8
BKI				eS	Sn	06 48 34.5	-2.1
TIGL	Tigil	2.52	290	eP	Pn	06 48 09.4	+1.3
TIGL				eS	Sn	06 48 40.6	+1.5
MKZ	Mys Kozlova	2.56	198	eP	Pn	06 48 08.5	-0.2
PALN	Palana	2.68	323	eP	Pn	06 48 11.3	+1.0
KRX	Arik	4.45	217	eP	Pn	06 48 37.2	+2.5
KRER	Koryakskii	4.46	216	eP	Pn	06 48 37.4	+2.4
AVH	Avacha	4.50	216	eP	Pn	06 48 38.2	+2.9
UGLR	Uglovaya	4.52	215	eP	Pn	06 48 38.4	+2.7
GRL	Gorelyy	5.32	215	eP	Pn	06 48 49.8	+3.1
MTVR	Mutnovka	5.34	214	eP	Pn	06 48 50.0	+3.0
ILAR	Eielson Array	24.92	51	P	P	06 52 50.5	+0.3
	0.5nm,0.7s,baz=262,slow=8.9,SNR=6.6						
	0.5nm,0.7s						
H11N2	WAKE ISLAND Hy	37.32	174	T	T	07 33 26.8	
	baz=358,slow=76,SNR=8.3						
H11N3	WAKE ISLAND Hy	37.33	174	T	T	07 33 29.4	
	baz=358,slow=76,SNR=7.1						
H11N1	WAKE ISLAND Hy	37.33	174	T	T	07 33 42.7	
	baz=358,slow=76,SNR=9.3						
RES	Resolute Bay	39.05	24	LR	LR	07 12 16.7	
	comp=Z,23nm,18.6s,baz=350,slow=38						
YKA	Yellowknife Ar	39.17	47	P	P	06 54 55.3	+0.5
	0.3nm,0.7s,baz=300,slow=7.9,SNR=5.1						
	0.3nm,0.7s						
PDAR	Pinedale Array	54.21	65	P	P	06 56 53.9	+0.8
	0.2nm,0.6s,baz=311,slow=5.8,SNR=3.8						
	0.2nm,0.6s						
TXAR	Lajitas Array	67.61	71	P	P	06 58 25.2	+1.0
	0.4nm,0.7s,baz=290,slow=4.1,SNR=7.0						
	0.4nm,0.7s						

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*NEIC **30** 06:48:23.9±1.5, 37°.11S±0°.05×74°.05W±0°.07, h17^{km}±2^{km}, mb4.8/48, Mwr4.7/45, Mwr4.8(GUC), Error ellipse: s-maj=8.2km s-min=5.8km az=123.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.81; $M_{\theta\theta}$-0.29; $M_{\phi\phi}$-0.53; $M_{r\theta}$-0.16; $M_{\theta\phi}$-0.47; $M_{\phi r}$-0.83; Fault plane solution: $M_0$1.20000×10^{16} NP1:ϕ_s199.43000°, δ68.11000°, λ74.80000°. NP2:ϕ_s55.52000°, δ26.44000°, λ123.13000°. Principal axes: T 1.2154, Plg64.0000°, Azm85.0000°; N -0.0237, Plg14.0000°, Azm205.0000°; P -1.1916, Plg22.0000°, Azm301.0000°;*

*GUC **30** 06:48:23.1±0.6, 37°.01S×74°.23W, h18^{km}±8^{km}, ML4.9*

*IDC **30** 06:48:24.7±0.6, 37°.22S×73°.36W, h0^{km}, mb4.5/15, mbtmp4.5/19, ML4.0/4, MS4.0/22, Error ellipse: s-maj=21.1km s-min=13.6km az=84.0*

*NEIC **30** 06:48:24.3, 37°.09S×74°.01W, h16^{km}*

*VAO **30** 06:48:26.0±0.8, 37°.17S×73°.65W, h10^{km}, mb5.0*

ISC 30 06:48:23.6±0.8**, 37°.14S**±0°.03×**73°.90W**±0°.05**, h6**^{km}±4^{km}**, n227, σ1^{s}.96**/211**, mb4.8**/29**, MS4.2**/23**, 7C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BI05	Punta Hualpn	0.69	56		Pn	06 48 39.5	-0.4
BI05					Sn	06 48 49.8	-1.2
BI05	Punta Hualpn	0.69	56	⇑iP	Pn	06 48 39.4	-0.4
BI05				i S	Sn	06 48 49.8	-1.2
CCSP	San Pedro de C	0.70	65	eP	Pn	06 48 39.5	-0.5
CCSP				i S	Sn	06 48 50.5	-0.7
CCSP				IAML		06 48 52.3	
	comp=N,132µm,0.5s						
BI04	Isla Mocha	1.27	179	eP	Pn	06 48 46.5	-1.3
BI04				i S	Sg	06 49 04.8	+0.5
BI04				IAML		06 49 13.7	
	comp=E,23µm,0.4s						
LC02	Puerto Saavedr	1.70	166	eP	Pb	06 48 55.0	-0.2
LC02				i S	Sg	06 49 18.7	+0.6
ML02	Panimavida	2.43	56		Pn	06 49 04.4	+0.6
ML02	Panimavida	2.43	56	i P	Pn	06 49 04.2	+0.5
ML02				eS	Sb	06 49 37.5	-0.4
ML02				IAML		06 49 50.4	
	comp=N,16µm,0.6s						
GO05	Huala	2.66	37		Pn	06 49 05.9	-1.1
GO05	Huala	2.66	37	eP	Pn	06 49 06.8	-0.2
GO05				i S	Sn	06 49 39.8	+0.2
GO05				IAML		06 50 01.6	
	comp=N,3µm,0.5s						
LR02	Universidad Au	2.71	169	eP	Pn	06 49 08.6	+1.0
LR03	Panguipulli	2.77	154		Pn	06 49 09.2	+0.7
LR03	Panguipulli	2.77	154	⇑iP	Pn	06 49 09.2	+0.7
BO03	Pichilemu	3.08	31	eP	Pn	06 49 12.1	-0.6
BO03				eS	Sn	06 49 46.6	-3.2
GO06	Curarrehue	3.10	143	Pn	Pn	06 49 14.2	+1.1
GO06	Curarrehue	3.10	143	⇑iP	Pn	06 49 14.2	+1.1
GO06				i S	Sn	06 49 51.7	+1.2
GO06				IAML		06 50 05.9	
	comp=N,1µm,0.7s						
LR05	Currie	3.42	155	⇑iP	Pn	06 49 18.5	+1.1
BO02	Sierra Bellavi	3.45	48		Pn	06 49 17.8	-0.1
BO02	Sierra Bellavi	3.45	48	eP	Pn	06 49 17.8	-0.1
BO01	Tunca	3.58	41	Pn	Pn	06 49 20.0	+0.5
BO01	Tunca	3.58	41	i P	Pn	06 49 19.8	+0.2
MT01	Popeta	3.92	34		Pn	06 49 23.7	-0.6
MT01	Popeta	3.92	34	i P	Pn	06 49 24.1	-0.2
MT01				eS	Sn	06 50 08.5	-2.2
LL04	Puerto Octay	3.94	163		Pn	06 49 24.4	-0.1
LL04	Puerto Octay	3.94	163	eP	Pn	06 49 24.4	-0.1
VA05	Santo Domingo	3.95	29	Pn	Pn	06 49 23.8	-0.8
VA05	Santo Domingo	3.95	29	eP	Pn	06 49 23.7	-0.9
MT09	Talagante	4.12	36		Pn	06 49 27.1	0.0
MT09	Talagante	4.12	36	⇑iP	Pn	06 49 27.4	+0.3
LL03	Petrohue	4.16	164		Pn	06 49 27.9	+0.4
LL03	Petrohue	4.16	164	eP	Pn	06 49 27.5	0.0
LL05	Los Muermos	4.27	176		Pn	06 49 28.9	-0.2
LL05	Los Muermos	4.27	176	i P	Pn	06 49 28.8	-0.2
MT12	Pirque	4.37	40	i P	Pn	06 49 30.6	+0.1
PLCA	Paso Flores	4.44	145	Pn	Pn	06 49 31.4	-0.1
	comp=N,1.6nm,0.3s,baz=316,slow=11,SNR=59						
PLCA				Sn	Sn	06 50 18.6	-4.9
	comp=N,16nm,0.3s,baz=305,slow=17,SNR=3.2						
PLCA				Lg	Lg	06 50 39.3	
	comp=N,10nm,0.3s,baz=343,slow=16,SNR=3.5						
	comp=N,26nm,0.9s						
PLCA	Paso Flores	4.44	145	Pn	Pn	06 49 32.6	+1.2
PLCA	Paso Flores	4.44	145	⇑iP	Pn	06 49 32.7	+1.3
LMEL	Las Melosas	4.46	44		Pn	06 49 31.9	0.0
LMEL	Las Melosas	4.46	44	eP	Pn	06 49 32.7	+0.8
MT02	Curacav	4.49	31		Pn	06 49 31.6	-0.5
MT02	Curacav	4.49	31	i P	Pn	06 49 31.5	-0.6
MT13	San Alfonso	4.50	42		Pn	06 49 32.2	-0.1
MT13	San Alfonso	4.50	42	eP	Pn	06 49 32.3	0.0
VA01	Torpederas	4.51	25		Pn	06 49 31.4	-0.9
VA01	Torpederas	4.51	25	i P	Pn	06 49 31.3	-1.1
MT05	Renca	4.55	36	Pn	Pn	06 49 33.1	0.0
MT05	Renca	4.55	36	eP	Pn	06 49 33.0	0.0
MT03	Universidad Ad	4.58	38		Pn	06 49 32.6	-0.8
MT03	Universidad Ad	4.58	38	eP	Pn	06 49 33.5	+0.1
MT10	Hacienda Santa	4.74	36	i P	Pn	06 49 36.0	+0.3
PEL	Peldehue	4.78	34	Pn	Pn	06 49 35.7	-0.5
PEL	Peldehue	4.78	34	eP	Pn	06 49 36.0	-0.1
ROC1	El Roble	4.79	31		Pn	06 49 35.6	-0.8
ROCH	El Roble	4.79	31	i P	Pn	06 49 36.2	-0.3
MT04	Ro Olivares	4.84	41	i P	Pn	06 49 37.6	+0.5
MT08	Bocatoma Ro	4.87	42		Pn	06 49 38.7	+1.1
MT08	Bocatoma Ro	4.87	42	i P	Pn	06 49 38.5	+1.0
VA06	Catapilco	5.05	26	Pn	Pn	06 49 38.9	-0.8
VA06	Catapilco	5.05	26	eP	Pn	06 49 39.0	-0.8
LL06	Loncomilla	5.07	178	Pn	Pn	06 49 39.9	-0.1
VA03	San Esteban	5.16	33		Pn	06 49 40.9	-0.5
H03S1	Juan Fernandez	5.24	307	T	T	06 55 18.4	
	baz=127,slow=74,SNR=2097						
H03S3	Juan Fernandez	5.26	308	T	T	06 55 15.9	

	baz=127,slow=74,SNR=1233						
H03S2	**Juan Fernandez**	**5.26**	**307**	T	T	06 55 14.7	
	baz=127,slow=74,SNR=1335						
VA04	**Juan Fernndez**	**5.33**	**310**	Pn	**Pn**	**06 49 43.1**	**-0.6**
VA04	**Juan Fernndez**	**5.33**	**310**	*e*P	**Pn**	**06 49 43.0**	**-0.6**
H03N3	**Juan Fernandez**	**5.51**	**310**	T	T	06 55 35.1	
	baz=117,slow=78,SNR=39						
H03N1	**Juan Fernandez**	**5.51**	**311**	T	T	06 55 41.6	
	baz=117,slow=78,SNR=29						
H03N2	**Juan Fernandez**	**5.53**	**310**	T	T	06 55 40.3	
	baz=117,slow=78,SNR=27						
LL07	**Hotel Espejo d**	**5.69**	**177**		**Pn**	**06 49 48.5**	**-0.1**
LL02	**Futaleuf**	**6.24**	**166**	Pn	**Pn**	**06 49 57.1**	**+1.0**
CFA	**Coronel Fontan**	**7.24**	**42**	Pn	**Pn**	**06 50 09.6**	**-0.4**
	comp=N,4.3nm,0.3s,baz=214,slow=12,SNR=12						
CFA				Sn	**Sn**	**06 51 28.8**	**-3.8**
	comp=N,8.5nm,0.3s,baz=196,slow=16,SNR=3.8						
CFA				LR	LR	06 53 35.7	
	comp=N,845nm,18.5s,baz=224,slow=44						
	comp=N,11nm,0.4s						
LCO	**Las Campanas**	**8.54**	**19**		**Pn**	**06 50 27.1**	**-0.9**
TRQA	**Tornquist**	**9.51**	**99**		**Pn**	**06 50 40.2**	**-0.8**
GO03	**Copiap**	**10.01**	**19**		**Pn**	**06 50 45.7**	**-2.3**
AC06	**Mina Casimiro**	**10.21**	**18**		**Pn**	**06 50 49.4**	**-1.2**
GO08	**Villa O'Higgin**	**11.36**	**175**		**Pn**	**06 51 06.7**	**+0.4**
GO02	**Mina Guanaco**	**12.50**	**18**		**Pn**	**06 51 21.3**	**-1.0**
LPA	**La Plata**	**13.12**	**85**	PN	**Pn**	**06 51 27.3**	**-3.1**
LPA				pP	P	06 51 33.7	-7.0
LPA				sP		06 51 40.1	
LPA				PPP	PPP	06 51 47.0	
LPA				PP	**PgPg**	**06 52 23.4**	**-12**
LPA				pPP		06 52 38.7	
LPA				S	**Sn**	**06 53 57.7**	**+1.1**
LPA	**La Plata**	**13.12**	**85**	SN	**Sn**	**06 54 04.2**	**+7.6**
LPA				sS	S	06 54 09.9	-12
LPA				SS	**SnSn**	**06 54 17.9**	**+9.2**
LPA				SSS	SSS	06 54 31.5	
LPA				PCP	**PcP**	**06 57 02.7**	**+0.4**
LPA				SCS	**ScS**	**07 04 12.7**	**+0.1**
LPA				PKIKP	**PKiKP**	**07 04 57.7**	**-1.5**
LPA				SKIKP		07 08 23.2	
LPA				PKIKS		07 08 28.6	
LPA				SKIKS		07 11 53.9	
PB15	**IPOC Station P**	**14.40**	**17**		**Pn**	**06 51 46.0**	**-2.2**
LVC	**Limon Verde**	**15.11**	**18**	Pn	**Pn**	**06 51 58.3**	**+0.4**
	comp=N,0.3nm,0.3s,baz=175,slow=11,SNR=3.7						
LVC				LR	LR	06 58 29.4	
	comp=N,357nm,20.5s,baz=198,slow=40						
	comp=N,3.9nm,0.7s						
LVC	**Limon Verde**	**15.11**	**18**		**Pn**	**06 51 55.4**	**-2.6**
LVC	**Limon Verde**	**15.11**	**18**	*e*P	**Pn**	**06 52 00.4**	**+2.5**
PB03	**IPOC Station P**	**15.47**	**15**	IAmb	IAmb	06 52 09.9	
	comp=Z,52nm,1.4s						
PB09	**IPOC Station P**	**15.82**	**16**	IAmb	IAmb	06 52 19.3	
	comp=Z,69nm,1.2s						
PB02	**IPOC Station P**	**16.15**	**14**	IAmb	IAmb	06 52 25.6	
	comp=Z,49nm,0.8s						
ITQB	**Itaqui**	**16.23**	**68**	Pn	**Pn**	**06 52 11.1**	**-1.0**
PB01	**IPOC Station P**	**16.50**	**15**	IAmb	IAmb	06 52 22.1	
	comp=Z,69nm,0.9s						
RODS	**Rosario do Sul**	**16.96**	**72**	*e*P	**Pn**	**06 52 19.8**	**-1.6**
TA02	**Huaiquique**	**17.13**	**12**	IAmb	IAmb	06 52 29.2	
	comp=Z,66nm,1.1s						
PLTB	**Pedras Altas**	**17.57**	**78**	P	**Pn**	**06 52 26.8**	**-2.3**
AZCA	**Azaras, Argent**	**17.57**	**64**	*e*P	**P**	**06 52 29.7**	**-0.5**
PB11	**IPOC Station P**	**17.71**	**13**	IAmb	IAmb	06 52 36.6	
	comp=Z,84nm,0.9s						
CPUP	**Villa Florida**	**17.72**	**57**	P	**Pn**	**06 52 29.5**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=235,slow=8.3,SNR=8.8						
	comp=Z,3.9nm,0.7s						
CPUP	**Villa Florida**	**17.72**	**57**	P	**Pn**	**06 52 28.9**	**-2.0**
CPSB	**Cacapava Do Su**	**18.27**	**74**	*e*P	**P**	**06 52 37.6**	**-0.3**
MG01	**Puerto William**	**18.30**	**168**	P	**Pn**	**06 52 36.9**	**-1.0**
MG01				IAmb	IAmb	06 52 54.0	
	comp=Z,80nm,0.9s						
MNMC	**Minye Minye**	**18.34**	**13**	IAmb	IAmb	06 52 53.4	
	comp=Z,40nm,0.8s						
EFI	**East Falkland**	**18.36**	**147**	P	**Pn**	**06 52 38.3**	**-0.2**
EFI				IAmb	IAmb	06 52 41.1	
	comp=Z,75nm,0.9s						
CRSM	**Crissiumal (Br**	**19.32**	**66**	*e*P	**Pn**	**06 52 49.9**	**-0.5**
ALGR	**Alto Alegre (B**	**19.36**	**71**	*e*P	**P**	**06 52 48.8**	**-1.2**
CNLB	**Canela**	**20.77**	**75**	*e*P	**P**	**06 53 05.5**	**+0.2**
ITAB	**Concordia**	**20.87**	**68**	P	**P**	**06 53 05.9**	**-0.4**
ITAB	**Concordia**	**20.87**	**68**	*e*P	**P**	**06 53 06.6**	**+0.3**
FRBT	**Francisco Belt**	**20.91**	**64**	*e*P	**P**	**06 53 06.4**	**-0.5**
MCR1	**Marechal Candi**	**21.19**	**59**	*e*P	pP	06 53 10.5	-0.7
LPAZ	**La Paz**	**21.39**	**15**	P	**P**	**06 53 15.3**	**+2.7**
	comp=Z,14nm,0.8s,baz=183,slow=6.6,SNR=52						
	comp=Z,14nm,0.8s						
LPAZ	**La Paz**	**21.39**	**15**	P	**P**	**06 53 12.7**	**+0.1**
LPAZ				IAmb	IAmb	06 53 28.0	
	comp=Z,23nm,0.8s						
AMBA	**Amambai (Brazi**	**21.59**	**54**	*e*P	**P**	**06 53 14.6**	**+0.5**
PTGB	**Pitanga**	**22.40**	**63**	*e*P	**P**	**06 53 23.9**	**+1.1**
AQDB	**Aquidauana**	**22.96**	**49**	P	**P**	**06 53 25.4**	**-3.3**
AQDB				IAmb	IAmb	06 53 37.8	
	comp=Z,23nm,0.8s						
AQDB	**Aquidauana**	**22.96**	**49**	*e*P	**P**	**06 53 28.6**	**-0.1**
SIV	**San Ignacio**	**23.94**	**32**	P	**P**	**06 53 38.8**	**+0.2**
	comp=Z,12nm,0.8s,baz=212,slow=7.9,SNR=43						
SIV				LR	LR	07 04 54.3	
	comp=Z,706nm,18.0s,baz=214,slow=42						
	comp=Z,12nm,0.8s						
TIJ01	**Guaruva-PR**	**24.26**	**68**	*e*P	**P**	**06 53 37.7**	**-3.9**
PCMB	**Pacaembu**	**24.99**	**58**	*e*P	**P**	**06 53 48.0**	**0.0**
FRTB	**Fartura**	**25.04**	**64**	*e*P	**P**	**06 53 48.9**	**+0.4**
NNA	**Nana**	**25.19**	**353**	P	**P**	**06 53 52.2**	**+2.3**
	comp=Z,2.5nm,0.4s,baz=192,slow=10,SNR=1.5						
NNA				LR	LR	07 02 24.0	
	comp=Z,228nm,18.1s,baz=175,slow=33						
	comp=Z,2.5nm,0.4s						
PTLB	**Pontes e Lacer**	**25.27**	**35**	P	**P**	**06 53 48.5**	**-2.2**
PTLB				IAmb	IAmb	06 54 00.7	
	comp=Z,20nm,1.0s						
PTLB	**Pontes e Lacer**	**25.27**	**35**	*e*P	**P**	**06 53 51.4**	**+0.8**
PP1B	**Ponte de Pedra**	**25.68**	**46**	*e*P	**P**	**06 53 55.1**	**+0.7**
PET01	**Itanhaem-SP**	**26.13**	**68**	*e*P	**P**	**06 53 59.5**	**+1.0**
SALV	**Santo Antonio**	**26.61**	**42**	*e*P	**P**	**06 54 03.6**	**+0.8**
ITRB	**Iturama**	**26.91**	**56**	*e*P	**P**	**06 54 05.9**	**+0.3**
VILB	**Vilhena**	**27.03**	**31**	P	**P**	**06 54 05.0**	**-1.6**
VILB				IAmb	IAmb	06 54 10.8	
	comp=Z,20nm,0.8s						
VILB	**Vilhena**	**27.03**	**31**	*e*P	**P**	**06 54 06.7**	**+0.1**
RCLB	**Rio Claro- Sao**	**27.07**	**65**	*e*P	**P**	**06 54 08.2**	**+1.2**
VAO	**Valinhos**	**27.12**	**66**	*e*P	**P**	**06 54 08.0**	**+0.4**
BB19B	**Bebedouro**	**27.23**	**61**	*e*P	**P**	**06 54 10.2**	**+1.7**
ETMB	**Extrema**	**28.08**	**16**	P	**P**	**06 54 13.9**	**-2.1**
ETMB				IAmb	IAmb	06 54 25.3	
	comp=Z,24nm,0.8s						
ETMB	**Extrema**	**28.08**	**16**	*e*P	**P**	**06 54 17.7**	**+1.7**
PMSA	**Palmer Station**	**28.28**	**171**	LR	LR	07 06 18.6	
	comp=Z,238nm,19.3s,baz=332,slow=38						
PMSA	**Palmer Station**	**28.28**	**171**	P	**P**	**06 54 16.0**	**-1.3**
ARAG	**Araguaiana, MT**	**28.97**	**48**	*e*P	**P**	**06 54 24.2**	**+0.2**
CZSB	**Cruzeiro do Su**	**29.30**	**2**	*e*P	**P**	**06 54 28.7**	**+1.8**
PDRB	**Porto dos Gac**	**29.74**	**36**	*e*P	**P**	**06 54 31.6**	**+0.9**
ATAH	**Atahualpa**	**30.15**	**351**	LR	LR	07 04 49.9	
	comp=Z,101nm,19.6s,baz=183,slow=32						
BDFB	**Brasilia**	**31.39**	**54**	P	**P**	**06 54 44.9**	**-0.5**
	comp=Z,7.8nm,1.0s,baz=241,slow=9.1,SNR=7.7						
BDFB				LR	LR	07 08 38.0	
	comp=Z,505nm,19.4s,baz=233,slow=39						
	comp=Z,7.8nm,1.0s						
BDFB	**Brasilia**	**31.39**	**54**	*e*P	**P**	**06 54 45.5**	**0.0**
RPN	**Rapa Nui**	**31.46**	**278**	LR	LR	07 03 53.1	
	comp=Z,281nm,19.2s,baz=128,slow=29						
TBTG	**Tabatinga, AM**	**33.00**	**7**	*e*P	**P**	**06 55 00.9**	**+1.5**
JANB	**Januaria**	**34.26**	**58**	*e*P	**P**	**06 55 10.3**	**-0.2**
NPGB	**Novo Progresso**	**34.39**	**34**	*e*P	**P**	**06 55 11.4**	**-0.2**
SDBA	**SAO DESIDERIO**	**35.79**	**54**	*e*P	**P**	**06 55 23.9**	**+0.2**
MACA	**Manacapuru-AM**	**35.94**	**23**	IAmb	IAmb	06 55 32.4	
	comp=Z,13nm,0.7s						
MACA	**Manacapuru-AM**	**35.94**	**23**	*e*P	**P**	**06 55 25.5**	**+0.6**
GUA01	**Guaratinga, BA**	**36.38**	**65**	*e*P	**P**	**06 55 29.2**	**+0.5**
ITTB	**Itaituba**	**36.63**	**31**	*e*P	**P**	**06 55 30.9**	**+0.1**
OTAV	**Otavalo**	**37.43**	**353**	P	**P**	**06 55 35.0**	**-3.1**
OTAV	**Otavalo**	**37.43**	**353**	*e*P	**P**	**06 55 40.9**	**+2.8**
POPC	**Popayan, Colom**	**39.57**	**356**	*e*P	**P**	**06 55 59.4**	**+3.6**
PRAC	**Prado**	**40.66**	**358**	*e*P	**P**	**06 56 07.8**	**+3.1**
ORTC	**Ortega, Tolima**	**40.86**	**358**	*e*P	**P**	**06 56 09.6**	**+3.2**
YOTC	**Yotoco, Valle**	**40.98**	**356**	*e*P	**P**	**06 56 08.9**	**+1.5**
PTGC	**Puerto Gaitan,**	**41.16**	**3**	*e*P	**P**	**06 56 10.5**	**+1.7**
BOAV	**Boa Vista**	**41.26**	**21**	P	**P**	**06 56 06.6**	**-3.0**
CHIC	**Chingaza**	**41.56**	**0**	*e*P	P	06 56 18.8	+6.3
ROSC	**El Rosal**	**41.77**	**359**	P	**P**	**06 56 18.4**	**+4.2**
	comp=Z,6.1nm,0.5s,baz=158,slow=21,SNR=2.4						
	comp=Z,6.1nm,0.5s						
ROSC	**El Rosal**	**41.77**	**359**	P	P	06 56 08.2	-6.0
ROSC				IAmb	IAmb	06 56 26.4	
	comp=Z,19nm,0.7s						
PLMC	**San Jos del P**	**41.89**	**356**	*e*P	**P**	**06 56 17.5**	**+2.7**
TMAB	**Tom-Au,PA,Br**	**41.97**	**41**	*e*P	**P**	**06 56 16.8**	**+1.4**
RUSC	**La Rusia**	**42.82**	**1**	P	**P**	**06 56 20.8**	**-2.1**
RUSC				IAmb	IAmb	06 56 32.3	
	comp=Z,32nm,1.0s						
RUSC	**La Rusia**	**42.82**	**1**	*e*P	**P**	**06 56 24.9**	**+2.0**
CBOC	**Ciudad Bolivar**	**42.83**	**357**	*e*P	**P**	**06 56 24.6**	**+2.0**
HELC	**Santa Helena**	**43.13**	**358**	*e*P	**P**	**06 56 26.8**	**+1.5**
PTBC	**PUERTO BERRIO,**	**43.46**	**359**	*e*P	**P**	**06 56 27.7**	**+0.2**
ZARC	**Zaragoza, Cauc**	**44.41**	**359**	*e*P	**P**	**06 56 36.0**	**+0.8**
SDV	**Santo Domingo**	**45.89**	**5**	P	**P**	**06 56 45.3**	**-1.8**
SDV				IAmb	IAmb	06 56 58.1	
	comp=Z,11nm,0.9s						
SDV	**Santo Domingo**	**45.89**	**5**	*e*P	**P**	**06 56 47.9**	**+0.8**
BAUV	**El Baul**	**46.17**	**8**	P	**P**	**06 56 46.7**	**-2.4**
MDP	**Montagnes des**	**46.48**	**30**	LR	LR	07 18 17.1	
	comp=Z,259nm,18.0s,baz=204,slow=39						
VNA3	**Neumayer Olymp**	**47.06**	**157**	P	**P**	**06 56 56.9**	**+1.4**
VNA2	**Neumayer--Watz**	**47.74**	**156**	P	**P**	**06 57 01.9**	**+1.1**
	baz=278,slow=10.0						
CVTR	**Volcan Turrial**	**47.82**	**347**	P	**P**	**06 56 58.3**	**-4.1**
JTS	**Las Juntas de**	**48.31**	**345**	P	**P**	**06 57 10.2**	**+4.4**
	comp=Z,1.3nm,0.7s,baz=189,slow=14,SNR=3.0						
	comp=Z,1.3nm,0.7s						
SNAA	**Sanae**	**49.28**	**157**	P	**P**	**06 57 14.1**	**+1.4**
SNAA	**Sanae**	**49.28**	**157**	P	**P**	**06 57 13.9**	**+1.1**
	comp=Z,16nm,0.9s,baz=277,slow=7.1,SNR=20						
	comp=Z,16nm,0.9s						
SNAA	**Sanae**	**49.28**	**157**	P	**P**	**06 57 12.2**	**-0.5**
TROLL	**Troll, Antarti**	**50.97**	**157**	P	**P**	**06 57 27.1**	**+1.4**
QSPA	**South Pole Qui**	**53.10**	**180**	P	**P**	**06 57 42.9**	**+1.4**
	comp=Z,8.1nm,1.0s,baz=161,slow=2.3,SNR=12						
QSPA				LR	LR	07 20 16.8	
	comp=Z,98nm,18.1s,baz=215,slow=36						
	comp=Z,8.1nm,1.0s						
QSPA	**South Pole Qui**	**53.10**	**180**	P	**P**	**06 57 42.7**	**+1.1**
QSPA				IAmb	IAmb	06 57 51.1	
	comp=Z,11nm,0.9s						
CELP	**Cerrillos**	**55.35**	**8**	P	**P**	**06 57 55.3**	**-3.0**
TBI	**Tubuai**	**65.16**	**259**	*e*LR	LR	07 18 33.2	
	comp=Z,947nm,26.0s						
TAOE	**Nuku Hiva Isla**	**65.79**	**277**	*e*LR	LR	07 18 50.6	
	comp=Z,182nm,25.2s						
PPT2	**Papeete2**	**68.33**	**264**	*e*S	**S**	**07 08 24.8**	**-3.0**
	comp=Z,64nm,23.0s						
PPT2	**Papeete2**	**68.33**	**264**	*e*LR	LR	07 20 01.0	
	comp=Z,196nm,25.8s						
PPT2				*e*LR	LR	07 20 01.3	
	comp=Z,190nm,24.5s						
PPT	**Papeete**	**68.35**	**264**	LR	LR	07 22 54.5	
	comp=Z,158nm,21.4s,baz=163,slow=30						
LPIG	**La Paz**	**69.91**	**325**	LR	LR	07 23 38.2	
	comp=Z,131nm,18.9s,baz=176,slow=30						
MAW	**Mawson**	**70.60**	**164**	LR	LR	07 30 54.1	
	comp=Z,143nm,18.2s,baz=240,slow=36						
TXAR	**Lajitas Array**	**71.78**	**333**	P	**P**	**06 59 49.2**	**+2.4**
	comp=Z,0.9nm,0.8s,baz=155,slow=7.8,SNR=10						
TXAR				LR	LR	07 26 09.1	
	comp=Z,93nm,21.1s,baz=151,slow=31						
	comp=Z,0.9nm,0.8s						
X48A	**Hartselle**	**72.27**	**349**	P	**P**	**06 59 47.1**	**-2.5**
X48A				IAmb	IAmb	06 59 59.5	
	comp=Z,8.8nm,0.7s						
W50A	**Signal Mountai**	**72.75**	**350**	P	**P**	**06 59 49.8**	**-2.7**
SWET	**Sewanee**	**72.86**	**350**	P	**P**	**06 59 51.9**	**-1.2**
BBTS	**Babate**	**74.59**	**58**	LR	LR	07 32 24.6	
	comp=Z,315nm,18.1s,baz=228,slow=36						
SUR	**Sutherland**	**74.64**	**119**	LR	LR	07 30 17.2	
	comp=Z,66nm,18.2s,baz=164,slow=34						
CCM	**Cathedral Cave**	**76.52**	**346**	P	**P**	**07 00 12.8**	**-1.3**
CCM				IAmb	IAmb	07 00 22.8	
	comp=Z,10nm,0.7s						
LIC	**Lamto**	**77.20**	**72**	⇑*i*P	**P**	**07 00 19.5**	**+0.9**
	comp=Z,44nm,0.9s						
TIC	**Toumodi**	**77.47**	**72**	⇓*i*P	**P**	**07 00 21.5**	**+1.3**
	comp=Z,14nm,0.6s						
WIN	**Windhoek**	**77.50**	**109**	IAmb	IAmb	07 00 22.9	
	comp=Z,16nm,0.9s						
KIC	**Kosan Boka**	**77.50**	**72**	⇓*i*P	**P**	**07 00 21.6**	**+1.2**
	comp=Z,50nm,0.9s						
DBIC	**Dimbokro**	**77.62**	**72**	P	**P**	**07 00 20.9**	**0.0**
	comp=Z,12nm,0.8s,baz=233,slow=5.7,SNR=15						
DBIC				LR	LR	07 32 31.3	
	comp=Z,96nm,19.4s,baz=286,slow=34						
	comp=Z,12nm,0.8s						
DBIC	**Dimbokro**	**77.62**	**72**	P	**P**	**07 00 21.6**	**+0.6**
TSUM	**Tsumeb**	**79.81**	**106**	LR	LR	07 32 21.7	
	comp=Z,107nm,18.6s,baz=164,slow=33						
TSUM	**Tsumeb**	**79.81**	**106**	P	**P**	**07 00 30.7**	**-2.5**
BOSA	**Boshof**	**79.94**	**118**	P	**P**	**07 00 33.2**	**-0.6**
	comp=Z,7.6nm,0.9s,baz=243,slow=5.8,SNR=9.6						
BOSA				LR	LR	07 32 36.6	
	comp=Z,48nm,18.8s,baz=196,slow=33						
	comp=Z,7.6nm,0.9s						
BOSA	**Boshof**	**79.94**	**118**	P	**P**	**07 00 32.2**	**-1.6**
BOSA				IAmb	IAmb	07 00 35.5	
	comp=Z,12nm,1.0s						
LBTB	**Lobatse**	**82.35**	**115**	LR	LR	07 33 12.1	
	comp=Z,74nm,19.0s,baz=181,slow=33						
LBTB	**Lobatse**	**82.35**	**115**	P	**P**	**07 00 45.0**	**-1.7**
NVAR	**Mina Array Bea**	**85.63**	**327**	P	**P**	**07 01 06.4**	**+3.4**
	comp=Z,0.5nm,0.8s,baz=164,slow=7.4,SNR=4.9						
	comp=Z,0.5nm,0.8s						
PDAR	**Pinedale Array**	**85.91**	**335**	P	P	07 01 09.3	+5.0
	comp=Z,1.9nm,0.9s,baz=162,slow=6.2,SNR=12						
	comp=Z,1.9nm,0.9s						
ELK	**Elko**	**86.28**	**330**	LR	LR	07 34 42.1	
	comp=Z,56nm,21.4s,baz=197,slow=32						
TOA0	**Torodi Ar. Sit**	**86.69**	**71**	P	**P**	**07 01 05.8**	**-2.7**
TOA0				IAmb	IAmb	07 01 09.9	
	comp=Z,11nm,1.3s						
TORD	**Torodi Ar. Bea**	**86.69**	**71**	P	**P**	**07 01 08.7**	**+0.1**
	comp=Z,4.8nm,0.2s,baz=235,slow=4.4,SNR=16						
	comp=Z,4.8nm,0.2s						
ULM	**Lac du Bonnet**	**89.16**	**346**	P	**P**	**07 01 23.5**	**+4.1**
	comp=Z,4.1nm,0.7s,baz=153,slow=4.7,SNR=6.3						
	comp=Z,4.1nm,0.7s						
MDT	**Midelt**	**94.96**	**52**	LR	LR	07 44 52.9	
	comp=Z,241nm,19.0s,baz=243,slow=36						
ASAR	**Alice Springs**	**114.08**	**208**	PKP	PKPdf	07 07 08.2	+4.0
	comp=Z,0.2nm,0.5s,baz=133,slow=1.7,SNR=5.6						
GERES	**GERESS Array B**	**115.42**	**47**	PKP	**PKiKP**	**07 07 06.3**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=274,slow=7.9,SNR=3.9						
WRA	**Warramunga Arr**	**117.28**	**210**	PKP	**PKPdf**	**07 07 10.6**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=161,slow=1.6,SNR=5.4						
BRTR	**Keskin Array B**	**124.64**	**63**	PKP	**PKiKP**	**07 07 24.9**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=224,slow=4.0,SNR=4.8						
AKASG	**Malin Array Be**	**125.41**	**49**	PKP	**PKPdf**	**07 07 24.6**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=271,slow=2.7,SNR=1.7						
SEY	**Seymchan**	**141.93**	**328**	PKiKP	**PKiKP**	**07 08 02.2**	**+3.9**
	comp=Z,1.7nm,0.6s,baz=112,slow=4.4,SNR=5.6						
AKTO	**Aktyubinsk**	**143.48**	**53**	PKhKP	PKPpre	07 07 55.6	
	comp=Z,1.4nm,0.6s,baz=258,slow=3.3,SNR=4.4						
TIXI	**Tiksi**	**143.48**	**348**	PKhKP	PKPpre	07 07 55.2	
	comp=Z,1.2nm,0.5s,baz=270,slow=24,SNR=1.2						
TIXI				PKP	pPKPdf	07 07 59.9	+0.3
	comp=Z,5.2nm,0.8s,baz=270,slow=23,SNR=11						
NRIK	**Noril'sk**	**146.20**	**12**	PKPbc	**PKPab**	**07 08 04.4**	**0.0**
	comp=Z,1.1nm,0.3s,baz=303,slow=16,SNR=1.3						
ZALV	**Zalesovo Beam**	**157.68**	**34**	PKP	**PKPdf**	**07 08 20.4**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=300,slow=2.9,SNR=7.6						
ZALV				PKPab	**pPKPab**	**07 08 53.7**	**-0.5**
	comp=Z,2.2nm,0.6s,baz=305,slow=4.5,SNR=5.8						
MKAR	**Makanchi Array**	**159.91**	**54**	PKP	**PKPdf**	**07 08 23.4**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=310,slow=3.2,SNR=6.7						
MKAR				PKPab	**PKPab**	**07 09 02.6**	**0.0**
	comp=Z,1.7nm,0.8s,baz=297,slow=4.0,SNR=10.0						
NJ2	**Nanjing**	**168.33**	**248**	*e*P	**PKPdf**	**07 08 29.5**	**-1.7**
NJ2				pP	**sPKPdf**	**07 08 34.3**	**+0.8**
NJ2				sP	**pPKPdf**	**07 08 35.3**	**+2.4**
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,84nm,4.1s						
HHC	**Hu-ho-hao-te**	**174.36**	**313**	*e*P	**PKPdf**	**07 08 29.0**	**-5.1**

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*IDC **30** 06:58:19.2±3.5, 9°.43S×113°.70E, h0^{km}, mb3.2/4, mbtmp3.3/4, Error ellipse: s-maj=171.0km s-min=24.7km az=50.0*

*DJA **30** 06:58:28.6±0.5, 10°S±5°×11°4E±°, h40^{km}, M3.9/11, mb4.2/1, MLv3.8/11*

ISC 30 06:58:25.6±1.2**, 9°.67S**±0°.09×**113°.92E**±0°.06**, h35**^{km}**, n12, **σ**2**^{s}**.44**/15**, mb3.3**/4**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**1.21**	**11**	P	**Pn**	**06 58 46.5**	**+0.4**
GMJI	**Gumukmas**	**1.46**	**341**	P	**Pn**	**06 58 50.6**	**+1.1**
GMJI				S	**Sn**	**06 59 07.2**	**-0.3**
IGBI	**Denpasar**	**1.48**	**55**	P	**Pn**	**06 58 50.6**	**+0.9**
ABJI	**Asem Bagus**	**1.89**	**10**	P	**Pn**	**06 58 58.2**	**+2.8**
ABJI				S	**Sn**	**06 59 20.9**	**+3.0**
BLJI	**Banyuglugur**	**1.94**	**350**	P	**Pn**	**06 58 58.5**	**+2.4**
BLJI				Pn	Pn	06 59 01.4	+5.3
PWJI	**Pagerwojo**	**2.65**	**308**	P	**Pn**	**06 59 08.2**	**+2.3**
PWJI				S	**Sn**	**06 59 38.4**	**+1.5**
UGM	**Wanagama**	**3.78**	**297**	P	**Pn**	**06 59 23.7**	**+2.2**
PLAI	**Plampang**	**3.90**	**78**	P	**Pn**	**06 59 25.1**	**+2.0**
WRA	**Warramunga Arr**	**22.20**	**120**	P	**P**	**07 03 21.4**	**+2.2**
	0.2nm,0.5s,baz=291,slow=13,SNR=2.0						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**23.62**	**129**	P	**P**	**07 03 35.2**	**+1.5**
	0.4nm,0.6s,baz=300,slow=9.6,SNR=6.6						
	0.4nm,0.6s						
SONM	**Songino Array**	**57.64**	**354**	P	**P**	**07 08 08.4**	**-4.0**
	0.2nm,0.3s,baz=178,slow=6.4,SNR=1.9						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**62.90**	**336**	P	**P**	**07 08 45.7**	**-2.5**
	0.3nm,0.4s,baz=151,slow=6.7,SNR=4.6						
	0.3nm,0.4s						

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*SJA **30** 07:10:25.8±0.7, 19°.19S×70°.05W, h75^{km}±3^{km}, ML4.0, MW4.0, Hypocentre not reviewed by the ISC*

*VAO **30** 07:10:25.5±0.7, 19°.07S×70°.10W, h10^{km}, mb4.1*

*NEIC **30** 07:10:27.7±1.1, 19°.22S±0°.04×70°.04W±0°.06, h68^{km}±7^{km}, mb4.0/8, ML4.1(GUC), Error ellipse: s-maj=8.8km s-min=4.6km az=63.0*

*GUC **30** 07:10:28.0±0.8, 19°.17S×69°.96W, h70^{km}±4^{km}, ML4.1*

*IDC **30** 07:10:31.3±2.2, 19°.30S×69°.51W, h114^{km}±22^{km}, mb3.4/2, mbtmp3.8/6, Error ellipse: s-maj=39.2km s-min=13.4km az=105.0*

ISC 30 07:10:27.0±0.7**, 19°.20S**±0°.03×**70°.03W**±0°.06**, h65**^{km}±6^{km}**, n72, **σ**1**^{s}**.79**/90**, mb3.9**/4**, 1C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNMC	**Minye Minye**	**0.42**	**80**		**Pn**	**07 10 39.8**	**+0.9**
MNMC					**Sn**	**07 10 48.8**	**+1.3**
MNMC	**Minye Minye**	**0.42**	**80**	⇓*i*P	**Pn**	**07 10 39.9**	**+1.0**
MNMC				*e*S	**Sn**	**07 10 48.8**	**+1.3**
MNMC				IAML		07 10 49.3	
	comp=N,25µm,0.3s						
MNMCX	**Minye Minye**	**0.42**	**80**	*e*P		07 10 39.6	
MNMCX				*e*S		07 10 49.8	
MNMCX				IAML		07 10 51.8	
	comp=Z,8µm,0.2s						
PB12	**IPOC Station P**	**0.65**	**334**		**Pn**	**07 10 41.7**	**+0.6**
PB12					**Sn**	**07 10 52.6**	**+1.3**
PB12	**IPOC Station P**	**0.65**	**334**	⇓*e*P	**Pn**	**07 10 42.0**	**+0.9**
PB12				*e*S	**Sn**	**07 10 52.7**	**+1.3**
PB12				IAML		07 10 54.6	
	comp=E,7µm,0.2s						
PB12	**IPOC Station P**	**0.65**	**334**	*e*P		07 10 39.6	
PB12				*e*P		07 10 41.6	
PB12				*e*S		07 10 53.0	
PB12				IAML		07 10 55.5	
	comp=Z,3µm,0.2s						
PB11	**IPOC Station P**	**0.66**	**148**		**Pn**	**07 10 42.0**	**+0.7**
PB11	**IPOC Station P**	**0.66**	**148**	⇓*i*P	**Pn**	**07 10 42.0**	**+0.7**
PB11				*e*S	**Sn**	**07 10 52.9**	**+1.2**
PB11				IAML		07 10 53.8	
	comp=N,17µm,0.3s						
PB11	**IPOC Station P**	**0.66**	**148**	*e*P		07 10 39.6	
PB11				*e*P		07 10 41.8	
PB11				*e*S		07 10 53.3	
PB11				IAML		07 10 53.4	
	comp=Z,5µm,0.2s						
AP01	**Chacalluta**	**0.88**	**340**		**Pn**	**07 10 44.7**	**+1.0**
AP01	**Chacalluta**	**0.88**	**340**	⇓*i*P	**Pn**	**07 10 44.7**	**+1.0**
AP01				*e*S	**Sn**	**07 10 57.7**	**+1.7**
AP01	**Chacalluta**	**0.88**	**340**	*e*P		07 10 44.0	
AP01				*e*S		07 10 57.1	
AP01				IAML		07 10 59.1	
	comp=Z,6µm,0.2s						
GO01	**Chusmiza**	**0.92**	**121**		**Pn**	**07 10 45.7**	**+1.1**
GO01	**Chusmiza**	**0.92**	**121**	⇓*e*P	**Pn**	**07 10 45.9**	**+1.3**
GO01				*e*S	**Sn**	**07 10 59.5**	**+1.8**
GO01				IAML		07 11 01.7	
	comp=N,13µm,0.1s						
GO01	**Chusmiza**	**0.92**	**121**	*e*P		07 10 40.6	
GO01				*e*P		07 10 45.7	
GO01				*e*S		07 10 59.7	
GO01				IAML		07 11 00.1	
	comp=Z,3µm,0.4s						
PB16	**IPOC Station P**	**0.99**	**30**		**Pn**	**07 10 46.7**	**+1.0**
PB16	**IPOC Station P**	**0.99**	**30**	⇓*i*P	**Pn**	**07 10 46.8**	**+1.0**
PB16				*e*S	**Sn**	**07 11 00.2**	**+0.7**
PB16	**IPOC Station P**	**0.99**	**30**	*e*P		07 10 46.7	
PB16				*e*S		07 11 01.4	
PB16				IAML		07 11 01.5	
	comp=Z,2µm,0.6s						
TA02	**Huaiquique**	**1.07**	**185**		**Pn**	**07 10 46.8**	**+0.6**
TA02	**Huaiquique**	**1.07**	**185**	*e*P	**Pn**	**07 10 46.8**	**+0.6**
TA02				*e*S	**Sn**	**07 11 01.6**	**+1.2**
TA02	**Huaiquique**	**1.07**	**185**	*e*P		07 10 46.8	
TA02				*e*S		07 11 02.9	
TA02				IAML		07 11 06.4	
	comp=Z,3µm,0.1s						
PB08	**IPOC Station P**	**1.25**	**139**		**Pn**	**07 10 49.7**	**+0.8**
PB08	**IPOC Station P**	**1.25**	**139**	⇑*i*P	**Pn**	**07 10 50.2**	**+1.3**
PB08				*e*S	**Sn**	**07 11 06.8**	**+1.8**
PB08				IAML		07 11 08.5	
	comp=E,4µm,0.2s						
PB08	**IPOC Station P**	**1.25**	**139**	*e*P		07 10 50.0	
PB08				*e*S		07 11 07.5	
PB08				IAML		07 11 08.1	
	comp=Z,3µm,0.4s						
TA01	**Diego Aracena**	**1.36**	**186**		**Pn**	**07 10 50.5**	**+0.5**
TA01	**Diego Aracena**	**1.36**	**186**	*i* P	**Pn**	**07 10 50.5**	**+0.5**
TA01				*e*S	**Sn**	**07 11 07.8**	**+0.6**
TA01	**Diego Aracena**	**1.36**	**186**	*e*P		07 10 50.6	
TA01				*e*S		07 11 08.8	
TA01				IAML		07 11 12.5	
	comp=Z,1µm,0.5s						
PB18	**Visviri**	**1.69**	**18**	*i* P	**Pn**	**07 10 58.4**	**+3.6**
PB18				*e*S	**Sn**	**07 11 21.5**	**+5.7**
PB01	**IPOC Station P**	**1.90**	**165**		**Pn**	**07 10 58.1**	**+0.8**
PB01	**IPOC Station P**	**1.90**	**165**	*i* P	**Pn**	**07 10 58.1**	**+0.8**
PB01				*e*S	**Sn**	**07 11 21.7**	**+1.3**
PB01				IAML		07 11 30.0	
	comp=N,1µm,0.3s						
PB01	**IPOC Station P**	**1.90**	**165**	*e*P		07 10 58.1	
PB01				*e*S		07 11 23.1	
PB01				IAML		07 11 25.5	
	comp=Z,868nm,0.2s						
PB02	**IPOC Station P**	**2.11**	**177**		**Pn**	**07 11 00.9**	**+0.8**
PB02	**IPOC Station P**	**2.11**	**177**	*e*P	**Pn**	**07 11 01.2**	**+1.0**
PB02				*e*S	**Sn**	**07 11 27.4**	**+2.0**
PB02	**IPOC Station P**	**2.11**	**177**	*e*P		07 11 01.3	
PB02				*e*S		07 11 31.1	
PB02				IAML		07 11 37.8	
	comp=Z,2µm,0.3s						
PB07	**IPOC Station P**	**2.52**	**177**	*e*P	**Pn**	**07 11 06.4**	**+0.7**
PB07				*e*S	**Sn**	**07 11 37.3**	**+1.9**
PB07				IAML		07 11 44.4	
	comp=E,1µm,0.4s						
PB07	**IPOC Station P**	**2.52**	**177**	*e*P		07 11 06.5	
PB07				*e*S		07 11 34.1	
PB07				IAML		07 11 44.7	
	comp=Z,900nm,0.4s						
PB09	**IPOC Station P**	**2.69**	**164**		**Pn**	**07 11 11.2**	**+3.1**
PB09	**IPOC Station P**	**2.69**	**164**	*e*P	**Pn**	**07 11 09.6**	**+1.6**
PB09				*e*S	**Sn**	**07 11 43.9**	**+4.3**
PB09				IAML		07 11 52.7	
PB09	**IPOC Station P**	**2.69**	**164**	*e*P		07 11 09.0	
PB09				*e*S		07 11 40.6	
PB09				IAML		07 11 56.8	
	comp=Z,570nm,0.5s						

PB03	IPOC Station P	2.84	175	Pn	Pn	07 11 12.5	+2.3
PB04	IPOC Station P	3.12	182	Pn	Pn	07 11 17.5	+3.5
PB04	IPOC Station P	3.12	182	eP	Pn	07 11 14.2	+0.2
PB04				IAML		07 12 10.5	
	comp=E,724nm,0.2s						
PB04	IPOC Station P	3.12	182	eP		07 11 14.3	
PB04				eS		07 11 53.1	
PB04				IAML		07 12 10.5	
	comp=Z,407nm,0.3s						
LPAZ	La Paz	3.42	32	P	Pn	07 11 21.8	+3.4
	comp=Z,6.9nm,0.3s,baz=214,slow=11,SNR=109						
LPAZ	La Paz	3.42	32	Pn	Pn	07 11 22.1	+3.7
LPAZ	La Paz	3.42	32	eP	Pn	07 11 18.1	-0.4
LPAZ	La Paz	3.42	32	eP		07 11 22.0	
PB06	IPOC Station P	3.51	173	eP		07 11 20.0	
PB06				eS		07 12 03.6	
PB06				IAML		07 12 21.1	
	comp=Z,382nm,0.7s						
LVC	Limon Verde	3.55	163	P	Pn	07 11 22.0	+2.0
	comp=Z,47nm,0.3s,baz=341,slow=8.6,SNR=62						
LVC				S	Sn	07 12 01.6	+0.7
	comp=Z,98nm,0.4s,baz=328,slow=10,SNR=4.5						
LVC	Limon Verde	3.55	163		Pn	07 11 22.4	+2.4
LVC	Limon Verde	3.55	163	i P	Pn	07 11 21.6	+1.6
LVC	Limon Verde	3.55	163	eP	Pn	07 11 22.2	+2.2
LVC	Limon Verde	3.55	163	eP		07 11 21.0	
LVC				eS		07 12 15.6	
LVC				IAML		07 12 23.7	
	comp=Z,193nm,1.1s						
PB15	IPOC Station P	4.02	173		Pn	07 11 27.2	+0.9
PB15	IPOC Station P	4.02	173	eP	Pn	07 11 26.9	+0.6
PB15	IPOC Station P	4.02	173	eP		07 11 27.0	
PB15				eS		07 12 30.3	
PB15				IAML		07 12 39.3	
	comp=Z,536nm,0.2s						
PB10	IPOC Station P	4.32	186	Pn	Pn	07 11 29.7	-0.5
PB10	IPOC Station P	4.32	186	eP	Pn	07 11 29.9	-0.3
PB10	IPOC Station P	4.32	186	eP		07 11 29.6	
PB10				eS		07 12 19.0	
PB10				IAML		07 12 46.4	
	comp=Z,74nm,0.4s						
GO02	Mina Guanaco	5.95	176	Pn	Pn	07 11 52.8	0.0
AC01	Pan de Azucar	6.93	184	Pn	Pn	07 12 04.0	-2.0
SIV	San Ignacio	9.12	71	P	Pn	07 12 34.6	-1.3
	comp=Z,5.5nm,0.5s,baz=265,slow=11,SNR=66						
SIV				S	Sn	07 14 10.7	-6.5
	comp=Z,1.4nm,0.6s,baz=246,slow=12,SNR=1.5						
AC05	El Transito	9.59	181	Pn	Pn	07 12 40.9	-1.6
NNA	Nana	9.72	317	S	Sn	07 14 52.5	+21
	comp=Z,2.7nm,0.3s,baz=51,slow=20,SNR=2.0						
ETMB	Extrema	10.03	22		Pn	07 12 47.1	-1.3
ETMB	Extrema	10.03	22	eP	Pn	07 12 48.1	-0.3
PTLB	Pontes e Lacer	11.05	72	Pn	Pn	07 13 01.3	-1.0
PTLB	Pontes e Lacer	11.05	72	eP	Pn	07 13 02.1	-0.2
VILB	Vilhena	11.30	58	Pn	Pn	07 13 05.5	-0.3
VILB	Vilhena	11.30	58	eP	Pn	07 13 05.8	0.0
CZSB	Cruzeiro do Su	11.70	347	eP	Pn	07 13 10.0	-1.1
VACA	Villa Angela C	11.99	136	eP	Pn	07 13 17.6	+2.5
CFA	Coronel Fontan	12.46	173	P	Pn	07 13 23.0	+1.6
	comp=Z,0.5nm,0.5s,baz=343,slow=17,SNR=2.0						
CFA				S	Sn	07 15 40.9	+2.4
	comp=Z,0.4nm,0.4s,baz=328,slow=13,SNR=1.0						
SALV	Santo Antonio	14.06	79	eP	Pn	07 13 44.7	+1.6
MCR1	Marechal Candi	15.74	112	eP	P	07 14 07.5	-0.1
TEFE	Tefe	16.46	19	eP	Pn	07 14 13.6	-0.3
MACA	Manacapuru-AM	18.38	31	eP	P	07 14 36.9	+0.2
NPGB	Novo Progresso	18.69	52	eP	Pn	07 14 43.3	+2.1
TRQA	Tornquist	20.05	161	P	P	07 14 54.7	-0.2
TRQA				IAmb	IAmb	07 14 55.5	
	comp=Z,6.0nm,0.8s						
GO06	Curarrehue	20.35	183	P	P	07 14 58.1	-0.1
GO06				IAmb	IAmb	07 14 59.7	
	comp=Z,3.7nm,0.7s						
BDFB	Brasilia	21.30	84	P	P	07 15 08.9	+0.3
PLCA	Paso Flores	21.46	181	P	P	07 15 10.9	+0.8
	comp=Z,1.2nm,0.7s,baz=1.0,slow=9.2,SNR=5.7						
	comp=Z,1.2nm,0.7s						
PLCA	Paso Flores	21.46	181	P	P	07 15 10.6	+0.5
RUSC	La Rusia	25.12	353	P	P	07 15 46.2	-0.4
RUSC				IAmb	IAmb	07 15 49.0	
	comp=Z,3.0nm,0.8s						
COYC	Coyhaique	26.35	183	P	P	07 15 56.2	-0.7
COYC				IAmb	IAmb	07 16 09.9	
	comp=Z,15nm,1.5s						
SNAA	Sanae	64.78	161	P	P	07 20 57.8	-0.7
QSPA	South Pole Qui	70.98	180	P	P	07 21 38.0	+0.5
YKA	Yellowknife Ar	88.68	341	P	P	07 23 12.2	-0.6
	comp=Z,0.8nm,0.8s,baz=136,slow=5.0,SNR=16						
	comp=Z,0.8nm,0.8s						
ASAR	Alice Springs	131.41	210	PKP	PKPdf	07 29 29.8	-3.1
	comp=Z,0.3nm,0.9s,baz=121,slow=1.8,SNR=4.1						
WRA	Warramunga Arr	134.35	213	PKP	PKPdf	07 29 37.6	-0.8
	comp=Z,0.4nm,0.8s,baz=148,slow=1.7,SNR=4.9						
MKAR	Makanchi Array	144.35	33	PKP	PKPab	07 29 53.6	-0.4
	comp=Z,0.2nm,0.6s,baz=302,slow=3.2,SNR=2.1						

JMA 30 07:21:08.9±0.2,37°.7N±0°.8×14°4E±°,h46km,MV3.6/28,
FAR E OFF NORTH HONSHU,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.05	289	P	Pn	07 21 42.0	+1.1
JIKH				S	Sn	07 22 06.2	+1.0
JIO	Ouri	2.18	292	P	Pn	07 21 44.0	+1.4
JIO				S	Sn	07 22 09.6	+1.1
JKMT	Kesennumamotoy	2.25	302	S	Sn	07 22 11.2	+1.2
OFUJ	Ofunato	2.27	309	P	Pn	07 21 44.9	+1.0
OFUJ				S	Sn	07 22 11.6	+0.9
JMK	Ichinoseki	2.49	302	P	Pn	07 21 48.3	+1.4
JMK				S	Sn	07 22 17.7	+1.7
JOM	Ohasama	2.75	312	P	Pn	07 21 52.2	+1.8
JOM				S	Sn	07 22 24.1	+1.7
JOTO	OTAMA OYAMA	2.85	269	S	Sn	07 22 27.3	+2.3
JYK	Kaneyama	3.07	295	P	Pn	07 21 57.2	+2.3
JYK				eS	Sn	07 22 33.7	+3.2
JRY	Ryogami san	4.35	249	P	Pn	07 22 12.9	+0.4
JRY				eS	Sn	07 23 00.2	-1.7
NEM2	Nemuro 2	5.87	13	P	Pn	07 22 30.6	-2.7
JHR	Hokuryu	6.30	345	eP	Pn	07 22 41.6	+2.3
JTKR	Abashiri--Toko	6.31	360	P	Pn	07 22 38.6	-0.7
JTKR				eS	Sn	07 23 46.0	-4.0

IDC ***30*** *07:57:16.4±0.3,5°.52S×151°.64E,h0km,mb4.9/25, mbtmp4.9/27,ML3.5/1,MS4.9/57,Error ellipse: s-maj=12.7km s-min=9.3km az=104.0*

BJI ***30*** *07:57:17.5±0.0,5°.65S×152°.16E,h35km,mb5.0/70, mB5.2/59,Ms5.2/67,Ms7 5.0/63*

DJA ***30*** *07:57:18.6±0.3,5°S±3°×15°2E±°,h13km±1km,M5.5/37, mb5.2/37,mB5.8/13,MLv5.9/2,Mw(mB)5.3/13, MwMwp5.2/4,Mwp5.4/4*

MOS ***30*** *07:57:21.9±1.1,5°.43S×151°.66E,h45km,mb5.4/37, MS5.2/4,Error ellipse: s-maj=8.9km s-min=6.2km az=98.3*

NEIC ***30*** *07:57:22.9±1.3,5°.54S±0°.07×151°.78E±0°.08,h40km±6km, mb5.2/110,Error ellipse: s-maj=11.6km s-min=9.5km az=90.0*

GCMT ***30*** *07:57:23.9±0.1,5°.81S±0°.01×151°.89E±0°.01,h27km, MW5.5/132,Moment Tensor Solution. s132,c233; s121,c214; Duration: 1s4 Moment tensor: Scale* 10^{17} *Nm;* M_{rr}*1.52±.03;* $M_{\theta\theta}$*-1.54±.02;* $M_{\phi\phi}$*0.02±.02;* $M_{r\theta}$*1.44±.04;* $M_{\theta\phi}$*-0.55±.02;* $M_{\phi r}$*0.10±.04; Best double couple:* M_0*2.17000×*10^{17} *NP1:*ϕ_s*82.00000°,δ66.00000°, λ99.00000°. NP2:*ϕ_s*241.00000°,δ25.00000°,λ71.00000°. Principal axes: T 2.0970, Plg68.0000°, Azm8.0000°; N 0.1550, Plg8.0000°, Azm258.0000°; P -2.2440, Plg21.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 07:57:21.6±0.4,5°.53S±0°.03×151°.83E±0°.04,h33km±1km, h33km:pP-P,n709,σ1s43/743,mb5.2/132,MS4.9/86, 24C-14D,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RABL	Rabaul	1.37	14		Pb	07 57 46.9	+0.1
RABL	Rabaul	1.37	14	P	Pb	07 57 48.0	+1.2
PMG	Port Moresby	6.02	230	P	Pn	07 58 52.0	+3.6
PMG	Port Moresby	6.02	230	P	Pn	07 58 52.1	+3.6
PMG	Port Moresby	6.02	230	ceP	Pn	07 58 50.6	+2.1
PMG				pmax	pmax		
	comp=Z,677nm,1.0s						
HNR	Honiara	8.93	116	Pn	Pn	07 59 29.6	+1.2
	comp=Z,2µm,0.8s,baz=270,slow=15,SNR=2.0						
HNR				LR	LR	08 02 26.6	
	comp=Z,74µm,21.0s,baz=286,slow=34						
COEN	Coen	11.95	225	Pn	Pn	08 00 10.2	+0.4
GENI	Genyem	11.99	284	P	Pn	08 00 14.1	+3.7
	comp=Z,207nm,2.8s,comp=Z,5µmcomp=Z,5µm						
PATS	Pohnpei	13.89	28	Pn	Pn	08 00 34.6	-1.6
TV1H	Townsville Har	14.50	199	P	P	08 00 49.1	-1.7
MTSU	Mount Surprise	14.52	210	P	Pn	08 00 47.5	+2.6
CTA	Charters Tower	15.45	200	Pn	Pn	08 00 57.3	0.0
	comp=Z,0.1nm,0.3s,baz=23,slow=14,SNR=1.8						
CTA				LR	LR	08 06 33.3	
	comp=Z,7µm,19.0s,baz=26,slow=36						
	comp=Z,15nm,1.3s						
CTA	Charters Tower	15.45	200	P	P	08 01 00.9	-0.5
CTAO	Charters Tower	15.45	200		Pn	08 00 57.2	0.0
CTAO	Charters Tower	15.45	200	P	P	08 01 01.0	-0.5
CTAO	Charters Tower	15.45	200	P	Pn	08 00 57.3	0.0
CTAO				pmax	pmax		
	comp=Z,31nm,1.1s						
RK1H	Rockhampton Ha	17.80	184	P	P	08 01 29.7	+2.3
RKPI	Ransiki, Papua	18.06	282	P	P	08 01 33.1	+2.7
	comp=Z,135nm,1.0s,comp=Z,5µm						
GD1S	Gladstone Soft	18.22	182	P	P	08 01 34.1	+2.1
AUMOU	Moura State Hi	19.02	185	P	Pn	08 01 42.1	+0.3
QIS	Mount Isa	19.08	217	P	Pn	08 01 42.2	-0.4
KOUNC	Koumac, New Ca	19.21	142	P	P	08 01 43.0	0.0
FAKI	Fak Fak	19.70	277	P	P	08 01 47.8	-0.6
FAKI	Fak Fak	19.70	277	P	Pn	08 01 50.0	0.0
	comp=Z,32nm,2.0s,comp=Z,1µmcomp=Z,3µm						
EIDS	Eidsvold	19.74	182	P	P	08 01 48.9	+0.2
EIDS				IAmb	IAmb	08 01 52.2	
	comp=Z,176nm,1.4s						
EIDS	Eidsvold	19.74	182	P	Pn	08 01 49.6	-0.7
GUMO	Guam	20.21	340	P	P	08 01 52.3	-1.6
	comp=Z,172nm,0.9s,baz=167,slow=14,SNR=1.6						
GUMO				LR	LR	08 08 21.9	
	comp=Z,1µm,21.4s,baz=136,slow=33						
	comp=Z,172nm,0.9s						
KDU	Kakadu	20.38	248	P	P	08 01 55.6	-0.2
SAUI	Saumlaki	20.53	262	P	P	08 01 55.5	-1.9
RMQ	Roma	21.04	188	P	P	08 02 03.3	+0.4
NOUC	Port Laguerre	21.62	141	P	P	08 02 11.4	+2.4
MTN	Manton Dam	21.67	249	P	P	08 02 08.4	-1.3
MTN	Manton Dam	21.67	249	P	P	08 02 11.3	+1.6
DZM	Mont Dzumac	21.68	141	eP	P	08 02 11.7	+1.8
	comp=Z,98nm,1.2s						
DZM				eS	S	08 06 04.2	-4.2
	comp=Z,3µm,24.4s						
DZM				eLR	LR	08 07 24.0	
	comp=Z,9µm,23.1s						
DZM	Mont Dzumac	21.68	141	P	P	08 02 09.9	+0.1
	comp=Z,7.8nm,0.8s,baz=329,slow=12,SNR=10.0						
DZM				LR	LR	08 09 52.8	
	comp=Z,7µm,19.3s,baz=314,slow=35						
	comp=Z,7.8nm,0.8s						
DZM	Mont Dzumac	21.68	141	P	P	08 02 10.0	+0.1
DZM				IAmb	IAmb	08 02 31.9	
	comp=Z,173nm,1.9s						
DZM	Mont Dzumac	21.68	141	P	P	08 02 12.7	+2.8
AUWSH	Wavell State H	21.78	177	P	P	08 02 12.3	+1.6
ONTNC	Ouen Toro	21.86	141	P	P	08 02 12.6	+0.9
YATNC	Mamie plateau,	21.96	140	P	P	08 02 16.0	+3.3
WB0	Warramunga Arr	22.09	229	P	P	08 02 14.1	-0.2
WB0				IAmb	IAmb	08 02 30.3	
	comp=Z,83nm,0.9s						
TARA	Tarawa	22.15	73	P	P	08 02 15.3	+0.5
TARA	Tarawa	22.15	73	P	P	08 02 18.0	+3.1
	comp=Z,176nm,1.1s						
QLP	Quilpie	22.15	198	P	P	08 02 15.0	+0.2
WRAB	Tennant Creek	22.23	228	P	P	08 02 15.2	-0.4
WRAB				IAmb	IAmb	08 02 31.5	
	comp=Z,78nm,0.7s						
WRAB	Tennant Creek	22.23	228	P	P	08 02 16.0	+0.4
WRAB	Tennant Creek	22.23	228	ceP	P	08 02 15.0	-0.6
WRAB				pmax	pmax		
	comp=Z,80nm,1.0s						
WB2	Warramunga Arr	22.23	228	P	P	08 02 15.5	-0.2
WB2				IAmb	IAmb	08 02 31.6	
	comp=Z,69nm,0.8s						
WRA	Warramunga Arr	22.24	228	P	P	08 02 15.1	-0.7
	comp=Z,43nm,0.7s,baz=53,slow=9.6,SNR=76						
WRA				PcP	PcP	08 06 11.9	+0.3
	comp=Z,9.1nm,1.1s,baz=48,slow=2.3,SNR=3.5						
WRA				S	S	08 06 16.9	-2.0
	comp=Z,54nm,1.2s,baz=54,slow=18,SNR=17						
WRA				ScP	ScP	08 09 50.3	+3.5
	comp=Z,3.5nm,0.9s,baz=51,slow=2.7,SNR=5.9						
WRA				LR	LR	08 11 37.2	
	comp=Z,3µm,19.1s,baz=48,slow=39						
WRA	Warramunga Arr	22.24	228	P	P	08 02 14.9	-0.9
PINNC	Pines Island,	22.71	140	P	P	08 02 20.3	-0.5
PINNC				IAmb	IAmb	08 02 35.3	
	comp=Z,230nm,1.8s						
AULRC	Lightning Ridg	24.05	188	P	P	08 02 34.5	+0.7
INKA	Innaminka	24.47	204	P	P	08 02 37.9	+0.1
ARMA	Armidale	24.76	180	P	P	08 02 40.2	-0.3
ARMA				IAmb	IAmb	08 02 48.4	
	comp=Z,82nm,1.4s						
ARMA	Armidale	24.76	180	P	P	08 02 41.6	+1.2
LBMI	Labuha	24.77	280	P	P	08 02 41.8	+1.2
	comp=Z,203nm,2.0s,comp=Z,5µm						
KNRA	Kununurra	24.78	244	P	P	08 02 40.7	0.0
KNRA	Kununurra	24.78	244	P	P	08 02 41.4	+0.7
AS31	Alice Springs	24.96	222	P	P	08 02 42.4	+0.1
ASAR	Alice Springs	24.96	222	P	P	08 02 42.0	-0.3
	comp=Z,72nm,0.8s,baz=57,slow=8.8,SNR=148						
ASAR				PcP	PcP	08 06 17.0	-0.3
	comp=Z,1.9nm,0.8s,baz=41,slow=2.3,SNR=2.3						
ASAR				S	S	08 07 07.7	+3.6
	comp=Z,1.4nm,0.8s,baz=41,slow=20,SNR=2.2						
ASAR				ScP	ScP	08 09 56.5	+2.4
	comp=Z,1.4nm,0.6s,baz=49,slow=3.1,SNR=5.6						
	comp=Z,72nm,0.8s						
ASAR	Alice Springs	24.96	222	P	P	08 02 42.5	+0.2
TNTI	Ternate	25.22	284	P	P	08 02 45.1	+0.4
TNTI				IAmb	IAmb	08 03 13.2	
	comp=Z,67nm,1.2s						
TNTI	Ternate	25.22	284	P	P	08 02 45.4	+0.7
TNTI	Ternate	25.22	284	P	P	08 02 45.2	+0.5
	comp=Z,41nm,0.9s						
AUPHS	Peel High Scho	25.45	182	P	P	08 02 47.3	+0.7
CMSA	Cobar Meteorol	26.50	192	P	P	08 02 55.7	-0.4
AUDCS	Dubbo College	26.73	186	P	P	08 02 59.6	+1.4
OOD	Oodnadatta	26.94	213	P	P	08 03 01.0	+0.9
SOEI	Soe	27.63	260	P	P	08 03 06.3	-0.4
SOEI	Soe	27.63	260	P	P	08 03 07.3	+0.7
	comp=Z,135nm,0.8s						
LCRK	Leigh Creek	27.90	206	P	P	08 03 09.6	+0.9
STKA	Stephens Creek	27.91	199	P	P	08 03 08.2	-0.6
	comp=Z,3.5nm,0.6s,baz=32,slow=12,SNR=13						
STKA				LR	LR	08 14 35.7	
	comp=Z,3µm,18.6s,baz=21,slow=37						
	comp=Z,3.5nm,0.6s						
STKA	Stephens Creek	27.91	199	P	P	08 03 08.6	-0.2
STKA	Stephens Creek	27.91	199	P	P	08 03 09.8	+1.1
STKA	Stephens Creek	27.91	199	i P	P	08 03 08.9	+0.2
MSVF	Nonsavu	28.35	118	P	P	08 03 14.0	+1.1
	comp=Z,12nm,0.8s,baz=319,slow=9.3,SNR=5.8						
	comp=Z,12nm,0.8s						
MSVF	Nonsavu	28.35	118	P	P	08 03 14.7	+1.7
MSVF	Nonsavu	28.35	118	P	P	08 03 17.2	+4.3
MSVF	Nonsavu	28.35	118	P	P	08 03 14.7	+1.7
MSVF				pmax	pmax		
	comp=Z,24nm,1.0s						
FITZ	Fitzroy Crossi	28.46	242	P	P	08 03 13.5	-0.4
FITZ	Fitzroy Crossi	28.46	242	P	P	08 03 13.4	-0.4
DAV	Davao City (W)	29.03	295	LR	LR	08 14 37.5	
	comp=Z,3µm,18.3s,baz=108,slow=36						
MMRI	Maumere	29.52	262	P	P	08 03 22.4	-0.9
WRKA	Warakurna	29.76	227	P	P	08 03 24.8	-0.5
MULG	Mulgathing	29.77	212	P	P	08 03 24.9	-0.5
HTT	Hallett	30.25	202	P	P	08 03 30.6	+1.0
BBOO	Buckleboo	30.87	206	P	P	08 03 34.9	-0.2
BBOO				IAmb	IAmb	08 03 54.3	
	comp=Z,64nm,1.2s						
TOLI2	Tolitoli	31.70	281	P	P	08 03 42.1	-0.5
TOLI2	Tolitoli	31.70	281	P	P	08 03 43.0	+0.4
KAPI	Kappang	31.95	269	LR	LR	08 18 56.5	
	comp=Z,812nm,21.2s,baz=94,slow=41						
KAPI	Kappang	31.95	269	P	P	08 03 43.5	-1.2
KAPI	Kappang	31.95	269	i P	P	08 03 45.7	+1.0
KAPI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ARPS	Mount Arapiles	32.41	195	P	P	08 03 48.3	-0.2
MPSI	Mapaga	32.41	279	P	P	08 03 48.0	-0.9
	comp=Z,12nm,0.9s,comp=Z,685nm						
FORT	Forrest	33.62	219	P	P	08 03 59.1	0.0
FORT	Forrest	33.62	219	P	P	08 03 58.9	-0.2
JCJ	Chichijima	33.75	344	LR	LR	08 17 42.4	
	comp=Z,1µm,19.4s,baz=168,slow=36						
PLAI	Plampang	33.94	262	P	P	08 04 00.6	-1.6
PLAI	Plampang	33.94	262	P	P	08 03 59.9	-2.3
	comp=Z,59nm,0.9s						
PLAI				pP	pP	08 04 06.4	-5.3
	comp=Z,59nm,0.9s						
MBWA	Marble Bar	34.77	240	P	P	08 04 08.0	-1.3
MBWA	Marble Bar	34.77	240	P	P	08 04 08.8	-0.5
MBWA	Marble Bar	34.77	240	P	P	08 04 08.7	-0.6
PSA00	Pilbara Seismi	34.83	240	P	P	08 04 09.3	-0.4
PSA00	Pilbara Seismi	34.83	240	P	P	08 04 08.9	-0.9
PSA00				IAmb	IAmb	08 04 17.9	
	comp=Z,72nm,1.6s						
PSA00	Pilbara Seismi	34.83	240	P	P	08 04 09.4	-0.4
TGY	Tagaytay City	36.33	303	LR	LR	08 16 47.4	
	comp=Z,2µm,21.8s,baz=114,slow=32						
AFI	Afiamalu	36.78	106	LR	LR	08 18 19.8	
	comp=Z,970nm,19.3s,baz=280,slow=34						
BBKI	Banjar Baru	36.93	272	P	P	08 04 28.2	+0.3
BBKI				pP	pP	08 04 28.8	-8.7
RAO	Raoul Island	37.06	133	LR	LR	08 17 45.6	
	comp=Z,2µm,19.7s,baz=274,slow=33						
JAGI	Jajag, Banyuwa	37.50	263	P	P	08 04 30.2	-2.5
JAGI				IAmb	IAmb	08 04 54.7	
	comp=Z,55nm,1.0s						
JAGI	Jajag, Banyuwa	37.50	263	P	P	08 04 30.5	-2.3
	comp=Z,71nm,1.2s						
JAGI				pP	pP	08 04 33.9	-8.5
	comp=Z,71nm,1.2s						
KMBL	Kambalda	38.06	224	P	P	08 04 39.5	+2.2
GMJI	Gumukmas	38.20	264	P	P	08 04 39.6	+1.0
	comp=Z,32nm,1.2s						
GMJI				pP	pP	08 04 43.4	-4.9
	comp=Z,32nm,1.2s						
JOW	Kunigami	39.44	326	LR	LR	08 18 03.6	
	comp=Z,3µm,21.8s,baz=122,slow=32						
JOW	Kunigami	39.44	326	P	P	08 04 50.0	+1.2
JOW				IAmb	IAmb	08 04 51.0	
	comp=Z,64nm,0.9s						
JOW	Kunigami	39.44	326	P	P	08 04 50.3	+1.5
QRZ	Quartz Range	39.74	155	P	P	08 04 54.7	+3.6
PWJI	Pagerwojo	39.81	264	P	P	08 04 51.1	-1.1
	comp=Z,42nm,0.9s						
PWJI				pP	pP	08 04 58.0	-3.8
	comp=Z,42nm,0.9s						
URZ	Urewera	39.86	148	P	P	08 04 54.5	+2.3
	comp=Z,5.0nm,0.7s,baz=342,slow=3.2,SNR=2.5						
URZ				LR	LR	08 19 29.8	
	comp=Z,3µm,19.5s,baz=63,slow=33						
	comp=Z,5.0nm,0.7s						
RTZ	Ruatahuna	40.06	149	P	P	08 04 53.2	-0.8
TUWZ	Tuamarina	40.84	154	P	P	08 04 59.1	-1.1
KLBR	Kellerberrin	41.10	227	P	P	08 05 01.6	-1.0
MORW	Morawa	41.14	231	P	P	08 05 02.4	-0.6
MORW				IAmb	IAmb	08 05 17.3	
	comp=Z,34nm,0.9s						
MORW	Morawa	41.14	231	P	P	08 05 02.5	-0.4
BLDU	Ballidu	41.37	229	P	P	08 05 06.5	+1.7
YULB	Yu-li	41.42	315	P	P	08 05 05.9	+0.6
RPZ	Rata Peaks	41.63	159	P	P	08 05 07.0	+0.3
	comp=Z,9.1nm,1.0s,baz=0.0,slow=4.0,SNR=5.1						
RPZ				LR	LR	08 21 53.5	
	comp=Z,3µm,18.6s,baz=326,slow=35						
	comp=Z,9.1nm,1.0s						
NACB	Ninganchiao	41.72	316	P	P	08 05 06.6	-1.1
NACB				IAmb	IAmb	08 05 11.3	
	comp=Z,38nm,0.8s						
NACB	Ninganchiao	41.72	316	P	P	08 05 08.5	+0.8
TPUB	Ta-pu	41.83	314	P	P	08 05 08.2	-0.5
TPUB				IAmb	IAmb	08 05 09.8	
	comp=Z,31nm,0.7s						
TPUB	Ta-pu	41.83	314	P	P	08 05 09.0	+0.3
SSLB	Suanglung	41.91	315	P	P	08 05 10.1	+0.8
NWAO	Narrogin (SRO)	42.19	225	LR	LR	08 23 38.3	
	comp=Z,3µm,19.2s,baz=56,slow=38						
YHNB	Yeheng	42.19	317	P	P	08 05 11.3	-0.4
YHNB				IAmb	IAmb	08 05 13.8	
	comp=Z,67nm,1.0s						
YHNB	Yeheng	42.19	317	P	P	08 05 12.1	+0.4
MUN	Mundaring	42.43	227	P	P	08 05 13.4	-0.1
JMN	Monobe	42.59	338	P	P	08 05 14.3	-0.4
JMN				IAmb	IAmb	08 05 25.4	
	comp=Z,56nm,1.3s						
JMN	Monobe	42.59	338	P	P	08 05 13.8	-0.9
ODZ	Otahua Downs	42.65	160	P	P	08 05 15.8	+0.8
KPJI	Karang Pucung	42.66	265	P	P	08 05 16.2	+0.7
	comp=Z,71nm,0.6s						
JNU	Nakatsue	43.28	334	LR	LR	08 22 01.3	
	comp=Z,951nm,20.4s,baz=194,slow=34						
JNU	Nakatsue	43.28	334	P	P	08 05 19.9	-0.4
JNU				IAmb	IAmb	08 05 46.2	
	comp=Z,33nm,1.0s						
JNU	Nakatsue	43.28	334	P	P	08 05 20.7	+0.4
MJAR	Matsushiro Arr	43.76	344	P	P	08 05 22.5	-1.6
	comp=Z,3.3nm,0.8s,baz=163,slow=7.7,SNR=5.8						
MJAR				PcP	PcP	08 07 10.3	-0.2
	comp=Z,4.2nm,0.7s,baz=168,slow=3.1,SNR=6.9						
MJAR				LR	LR	08 22 34.8	
	comp=Z,1µm,20.2s,baz=174,slow=35						
	comp=Z,3.3nm,0.8s						
MAJO	Matsushiro	43.76	344	P	P	08 05 23.6	-0.5
MAJO				IAmb	IAmb	08 05 36.3	
	comp=Z,56nm,1.8s						
MAJO	Matsushiro	43.76	344	P	P	08 05 24.6	+0.5
MAJO	Matsushiro	43.76	344	P	P	08 05 23.6	-0.5
MAJO				pmax	pmax		
	comp=Z,56nm,1.8s						
MJB9	Matsu-Tunnel	43.76	344	P	P	08 05 23.5	-0.6
MJB9				IAmb	IAmb	08 05 36.2	
	comp=Z,57nm,1.8s						
BBJI	Bungbulang	43.93	265	P	P	08 05 24.7	-1.2
JHS	Saijyo	44.00	338	P	P	08 05 24.8	-1.3
JHS				IAmb	IAmb	08 05 31.2	
	comp=Z,32nm,0.6s						
JHS	Saijyo	44.00	338	P	P	08 05 25.5	-0.6
SSE	Sheshan	46.73	323	P	P	08 05 48.0	+0.3
SSE				S	S	08 12 36.0	+0.5
SSE				pmax	pmax		
	comp=Z,20nm,0.7s						
SSE				pmax	pmax		
	comp=Z,110nm,6.9s						
SSE				LR	LR		
	comp=Z,420nm,17.3s						
SSE				LR	LR		
	comp=Z,390nm,17.5s						
JTM	Tenmabayashi	47.14	349	P	P	08 05 50.3	-0.5
QIZ	Qiongzhong	48.02	302	⇓iP	P	08 05 59.3	+1.3
QIZ				PcP	PcP	08 07 23.5	-2.3
QIZ				PP	PP	08 07 49.0	-1.4
QIZ				S	S	08 12 55.5	+1.2
QIZ				sS	sS	08 13 14.8	+3.9
QIZ				SS	SS	08 16 16.3	-7.4
QIZ				pmax	pmax		
	comp=Z,29nm,1.0s						
QIZ				LR	LR		
	comp=Z,470nm,14.3s						
QIZ				LR	LR		
	comp=Z,840nm,17.5s						
QIZ				LR	LR		
	comp=Z,1µm,22.3s						
QIZ	Qiongzhong	48.02	302	P	P	08 05 58.7	+0.7
KSRS	Korea Array	48.23	334	P	P	08 05 59.4	+0.1
	comp=Z,3.6nm,0.8s,baz=149,slow=7.6,SNR=8.1						
NJ2	Nanjing	48.81	322	eP	P	08 06 04.5	+0.6
NJ2				pP	pP	08 06 09.3	-4.5
NJ2				sP	sP	08 06 15.0	-2.6
NJ2				S	S	08 13 10.8	+5.7
NJ2				sS	sS	08 13 21.8	+0.1
NJ2				pmax	pmax		
	comp=Z,18nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,280nm,4.3s						
NJ2				LR	LR		
	comp=Z,2µm,20.4s						
NJ2				LR	LR		
	comp=Z,1µm,18.0s						
NJ2				LR	LR		

	comp=Z,2µm,20.8s						
INCN	**Inchon**	**48.82**	**333**	P	**P**	**08 06 03.6**	**-0.2**
INCN				IAmb	IAmb	08 06 05.2	
	comp=Z,30nm,0.8s						
INCN	**Inchon**	**48.82**	**333**	P	**P**	**08 06 04.9**	**+1.0**
INCN	**Inchon**	**48.82**	**333**	P	**P**	**08 06 03.6**	**-0.2**
INCN				pmax	pmax		
	comp=Z,30nm,0.8s						
RAR	**Rarotonga**	**49.37**	**113**	LR	LR	08 24 52.9	
	comp=Z,357nm,20.2s,baz=291,slow=33						
YUK	**Yuzh-Kuril'sk**	**49.63**	**354**	*i* P	**P**	**08 06 09.1**	**-0.8**
ASAJ	**Asahikawa**	**50.12**	**351**	LR	LR	08 27 56.6	
	comp=Z,439nm,18.8s,baz=176,slow=37						
SDSI	**Sungai Dareh**	**50.51**	**273**	P	**P**	**08 06 15.2**	**-2.0**
	comp=Z,15nm,0.6s						
WHN	**Wuhan**	**50.72**	**317**	⇓P	**P**	**08 06 20.0**	**+1.6**
WHN				sP	**sP**	**08 06 36.5**	**+4.3**
WHN				pmax	pmax		
	comp=Z,82nm,0.9s						
WHN				pmax	pmax		
	comp=Z,680nm,12.3s						
WHN				LR	LR		
	comp=Z,2µm,16.9s						
WHN				LR	LR		
	comp=Z,3µm,17.0s						
WHN				LR	LR		
	comp=Z,5µm,20.1s						
IPM	**Ipoh**	**51.70**	**280**	P	**P**	**08 06 24.7**	**-1.4**
IPM				IAmb	IAmb	08 07 40.8	
	comp=Z,35nm,1.3s						
USRK	**Ussuriysk Ar.**	**52.63**	**342**	P	**P**	**08 06 32.5**	**0.0**
	comp=Z,6.0nm,0.8s,baz=156,slow=6.2,SNR=6.5						
USRK				LR	LR	08 28 44.7	
	comp=Z,650nm,18.1s,baz=158,slow=36						
	comp=Z,6.0nm,0.8s						
TIA	**Tai'an**	**52.74**	**325**	⇑P	**P**	**08 06 32.8**	**-0.6**
TIA				pmax	pmax		
	comp=Z,11nm,1.5s						
TIA				pmax	pmax		
	comp=Z,200nm,7.9s						
TIA				LR	LR		
	comp=Z,790nm,18.6s						
TIA				LR	LR		
	comp=Z,560nm,15.9s						
TIA				LR	LR		
	comp=Z,1µm,21.1s						
YSS	**Yuzh-Sakhalins**	**52.87**	**352**	*e*P	**P**	**08 06 34.3**	**+0.1**
YSS				*e*		08 08 32.1	
YSS				*e*S	**S**	**08 13 58.0**	**-2.8**
YSS				*e*		08 16 18.9	
YSS				*e*SS	**SS**	**08 17 37.3**	**-3.0**
MDJ	**Mudanjiang**	**53.77**	**340**	P	**P**	**08 06 40.8**	**-0.1**
MDJ				PP	**PP**	**08 08 43.5**	**+1.3**
MDJ				S	**S**	**08 14 18.5**	**+5.3**
MDJ				pmax	pmax		
	comp=Z,470nm,4.0s						
MDJ				LR	LR		
	comp=Z,910nm,23.9s						
MDJ				LR	LR		
	comp=Z,1µm,23.0s						
ENH	**Enshi**	**53.95**	**314**	P	**P**	**08 06 42.2**	**-0.3**
ENH	**Enshi**	**53.95**	**314**	P	**P**	**08 06 43.0**	**+0.5**
ENH	**Enshi**	**53.95**	**314**	P	**P**	**08 06 41.4**	**-1.1**
ENH				pP	**pP**	**08 06 52.1**	**-0.4**
GYA	**Guiyang**	**54.08**	**308**	⇑*i*P	**P**	**08 06 44.0**	**+0.4**
GYA				sS	sS	08 14 38.5	+5.1
GYA				pmax	pmax		
	comp=Z,260nm,5.9s						
GYA				LR	LR		
	comp=Z,770nm,21.0s						
GYA				LR	LR		
	comp=Z,790nm,20.9s						
GYA				LR	LR		
	comp=Z,1µm,19.8s						
LYN	**LuoYang**	**54.47**	**320**	⇓P	**P**	**08 06 44.0**	**-2.1**
LYN				pP	sP	08 07 01.5	+1.6
LYN				S	**S**	**08 14 28.0**	**+5.1**
LYN				SS	**SS**	**08 18 00.3**	**-5.6**
LYN				pmax	pmax		
	comp=Z,20nm,1.1s						
LYN				pmax	pmax		
	comp=Z,220nm,7.3s						
LYN				LR	LR		
	comp=Z,1µm,20.2s						
LYN				LR	LR		
	comp=Z,1µm,19.0s						
LYN				LR	LR		
	comp=Z,2µm,19.1s						
CN2	**Changchun**	**54.58**	**337**	P	**P**	**08 06 47.3**	**+0.6**
CN2				S	**S**	**08 14 21.0**	**-3.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,700nm,15.0s						
CN2				LR	LR		
	comp=Z,500nm,15.0s						
CN2				LR	LR		
	comp=Z,800nm,17.0s						
COCO	**West Island**	**54.66**	**259**	P	**P**	**08 06 47.6**	**-0.3**
COCO	**West Island**	**54.66**	**259**	P	**P**	**08 06 47.6**	**-0.3**
COCO				pmax	pmax		
	comp=Z,490nm,2.0s						
HNS	**HongShan**	**54.96**	**324**	⇑P	**P**	**08 06 49.5**	**-0.1**
HNS				pP	**pP**	**08 06 59.5**	**-0.2**
HNS				S	**S**	**08 14 26.0**	**-3.4**
HNS				pmax	pmax		
	comp=Z,25nm,1.2s						
HNS				pmax	pmax		
	comp=Z,320nm,5.9s						
HNS				LR	LR		
	comp=Z,690nm,19.9s						
HNS				LR	LR		
	comp=Z,1µm,18.3s						
HNS				LR	LR		
	comp=Z,2µm,22.8s						
BNX	**BinXian**	**55.50**	**339**	⇓P	**P**	**08 06 52.5**	**-0.9**
BNX				pmax	pmax		
	comp=Z,16nm,1.2s						
BNX				pmax	pmax		
	comp=Z,240nm,6.6s						
BJI	**Beijing**	**55.97**	**327**	P	**P**	**08 06 56.5**	**-0.4**
BJI				pP	**pP**	**08 07 07.5**	**+0.5**
BJI				PcP	**PcP**	**08 07 54.3**	**-0.8**
BJI				S	**S**	**08 14 51.0**	**+8.1**
BJI				pmax	pmax		
	comp=Z,140nm,6.4s						
BJI				LR	LR		
	comp=Z,620nm,21.0s						
BJI				LR	LR		
	comp=Z,470nm,19.6s						
PHRA	**Phrae**	**56.18**	**296**	P	**P**	**08 06 58.4**	**-0.3**
XAN	**Xi'an**	**56.49**	**317**	⇓P	**P**	**08 07 00.8**	**0.0**
XAN				S	**S**	**08 14 55.5**	**+5.4**
XAN				pmax	pmax		
	comp=Z,27nm,1.3s						
XAN				pmax	pmax		
	comp=Z,300nm,9.2s						
XAN				LR	LR		
	comp=Z,790nm,20.0s						
XAN				LR	LR		
	comp=Z,980nm,19.7s						
XAN				LR	LR		
	comp=Z,2µm,20.0s						
KMI	**Kunming**	**56.60**	**305**	⇑P	**P**	**08 07 02.5**	**+0.6**
KMI				pP	pP	08 07 11.3	-0.7
KMI				sP	sP	08 07 17.0	+1.3
KMI				S	**S**	**08 14 53.3**	**+1.1**
KMI				pmax	pmax		
	comp=Z,30nm,1.3s						
KMI				pmax	pmax		
	comp=Z,260nm,5.4s						
KMI				LR	LR		
	comp=Z,280nm,17.9s						
KMI				LR	LR		
	comp=Z,590nm,19.8s						
KMI				LR	LR		
	comp=Z,810nm,19.6s						
CRAI	**Chiangrai**	**56.66**	**298**	P	**P**	**08 07 02.2**	**0.0**
CRAI				IAmb	IAmb	08 07 04.5	
	comp=Z,33nm,1.0s						
KLR	**Kul'dur**	**57.28**	**344**	LR	LR	08 28 49.3	
	comp=Z,961nm,21.6s,baz=172,slow=33						
KLR	**Kul'dur**	**57.28**	**344**	*ce*P	**P**	**08 07 04.5**	**-1.5**
KLR				pmax	pmax		
	comp=Z,9.0nm,1.3s						
CM31	**Chiang Mai Arr**	**57.32**	**296**	P	**P**	**08 07 06.6**	**-0.2**
CMAR	**Chiang Mai Arr**	**57.32**	**296**	P	**P**	**08 07 06.4**	**-0.4**
	comp=Z,5.2nm,0.6s,baz=121,slow=5.3,SNR=34						
CMAR				LR	LR	08 31 52.4	
	comp=Z,493nm,18.9s,baz=125,slow=36						
	comp=Z,5.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**57.32**	**296**	P	**P**	**08 07 06.8**	**-0.1**
CMAR	**Chiang Mai Arr**	**57.32**	**296**	*ce*P	**P**	**08 07 07.8**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CHTO	**Chiang Mai**	**57.44**	**296**	P	**P**	**08 07 07.2**	**-0.5**
CHTO	**Chiang Mai**	**57.44**	**296**	P	**P**	**08 07 07.2**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,3.0nm,1.8s						
PZH	**PanZhiHua**	**58.01**	**306**	P	**P**	**08 07 12.0**	**+0.3**
PZH				S	**S**	**08 15 11.8**	**+1.3**
PZH				sS	**sS**	**08 15 28.0**	**+2.3**
PZH				SS	**SS**	**08 19 07.0**	**+4.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,180nm,6.7s						
PZH				LR	LR		
	comp=Z,450nm,17.3s						
PZH				LR	LR		
	comp=Z,500nm,17.1s						
PZH				LR	LR		
	comp=Z,720nm,17.2s						
PPT	**Papeete**	**58.43**	**107**	LR	LR	08 27 19.6	
	comp=Z,252nm,21.6s,baz=250,slow=31						
PPT2	**Papeete2**	**58.43**	**107**	*e*P	**P**	**08 07 16.9**	**+2.1**
	comp=Z,142nm,23.5s						
PPT2				*e*S	**S**	**08 15 15.8**	**-0.4**
	comp=Z,186nm,22.0s						
PPT2				*e*SS	**SS**	**08 19 09.7**	**+0.8**
	comp=Z,265nm,27.5s						
PPT2				*e*LR	LR	08 24 26.0	
	comp=Z,514nm,22.5s						
PPT2				*e*LR	LR	08 24 26.8	
	comp=Z,431nm,23.5s						
CD2	**Chengdu**	**58.49**	**311**	P	**P**	**08 07 14.5**	**-0.4**
CD2				S	**S**	**08 15 18.0**	**+1.6**
CD2				sS	sS	08 15 38.5	+6.8
CD2				SS	**SS**	**08 19 11.3**	**+1.8**
CD2				pmax	pmax		
	comp=Z,30nm,1.2s						
CD2				pmax	pmax		
	comp=Z,260nm,9.8s						
CD2				LR	LR		
	comp=Z,290nm,20.4s						
CD2				LR	LR		
	comp=Z,300nm,21.3s						
CD2				LR	LR		
	comp=Z,2µm,20.6s						
PET	**Petropavlovsk**	**58.62**	**5**	*e*P	**P**	**08 07 15.6**	**+0.3**
PET				*e*S	**S**	**08 15 19.0**	**+1.8**
PET				*e*SS	**SS**	**08 19 13.8**	**+3.2**
PET				pmax	pmax		
	comp=Z,200nm,10.8s						
PET				MLR	MLR		
	comp=Z,600nm,17.0s						
PET				MLR	MLR		
	comp=Z,600nm,18.0s						
PETK	**Petropavlovsk-**	**58.63**	**4**	P	**P**	**08 07 15.5**	**+0.1**
	comp=Z,3.6nm,0.5s,baz=170,slow=7.8,SNR=13						
PETK				LR	LR	08 28 31.1	
	comp=Z,935nm,21.1s,baz=189,slow=32						
	comp=Z,3.6nm,0.5s						
XLT	**XiLinHaoTe**	**58.81**	**330**	*e*P	**P**	**08 07 17.5**	**+0.5**
XLT				pP	pP	08 07 28.3	+1.1
XLT				sP	sP	08 07 30.5	-0.4
XLT				pmax	pmax		
	comp=Z,36nm,0.9s						
XLT				pmax	pmax		
	comp=Z,180nm,5.2s						
HHC	**Hu-ho-hao-te**	**59.08**	**325**	*e*P	**P**	**08 07 19.0**	**+0.1**
HHC				S	**S**	**08 15 26.8**	**+2.8**
HHC				sS	sS	08 15 43.5	+3.7
HHC				pmax	pmax		
	comp=Z,49nm,0.7s						
HHC				pmax	pmax		
	comp=Z,310nm,5.1s						
HHC				LR	LR		
	comp=Z,2µm,17.3s						
HHC				LR	LR		
	comp=Z,2µm,17.9s						
HHC				LR	LR		
	comp=Z,3µm,17.8s						
TBI	**Tubuai**	**59.14**	**114**	*e*S	**S**	**08 15 24.7**	**-0.4**
	comp=Z,1µm,34.0s						
TBI				*e*SS	**SS**	**08 19 20.5**	**+0.7**
	comp=Z,1µm,26.0s						
TBI				*e*LQ	LQ	08 22 16.3	
	comp=Z,11µm,34.0s						
TBI				*e*LR	LR	08 24 46.0	
	comp=Z,8µm,29.2s						
TBI				*e*LR	LR	08 24 46.2	
	comp=Z,4µm,33.8s						
HEH	**HeiHe**	**59.44**	**342**	P	**P**	**08 07 20.0**	**-1.1**
HEH				S	**S**	**08 15 27.5**	**-0.5**
HEH				SS	**SS**	**08 19 25.5**	**+1.8**
HEH				pmax	pmax		
	comp=Z,13nm,0.8s						
HEH				pmax	pmax		
	comp=Z,200nm,8.7s						
HEH				LR	LR		
	comp=Z,640nm,19.9s						
HEH				LR	LR		
	comp=Z,300nm,19.4s						
HEH				LR	LR		
	comp=Z,960nm,22.2s						
TNCH	**TengChong**	**60.05**	**303**	*e*P	**P**	**08 07 26.3**	**+0.3**
TNCH				pmax	pmax		
	comp=Z,240nm,4.4s						
MND	**Mandalay**	**61.01**	**299**	P	**P**	**08 07 32.5**	**+0.1**
SHEM	**Shemya Is, Ala**	**61.04**	**15**	LR	LR	08 29 21.4	
	comp=Z,2µm,21.8s,baz=182,slow=32						
LZH	**Lanzhou**	**61.09**	**317**	⇑P	**P**	**08 07 31.0**	**-1.8**
LZH				pP	pP	08 07 43.8	+0.8
LZH				sP	sP	08 07 47.5	+0.8
LZH				S	**S**	**08 15 49.8**	**-0.2**
LZH				sS	sS	08 16 08.0	+2.3
LZH				pmax	pmax		
	comp=Z,35nm,1.5s						
LZH				pmax	pmax		
	comp=Z,240nm,5.5s						
LZH				LR	LR		
	comp=Z,630nm,15.1s						
LZH				LR	LR		
	comp=Z,600nm,14.4s						
LZH				LR	LR		
	comp=Z,1µm,15.8s						
HIA	**Hailar**	**61.31**	**337**	P	**P**	**08 07 33.9**	**0.0**
ZEA	**Zeya**	**62.57**	**344**	*e*P	**P**	**08 07 41.6**	**-0.6**
ZEA				*e*S	**S**	**08 16 11.1**	**+3.4**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZEA				smax	smax		
	comp=E,100nm,14.6s						
MA2	**Magadan**	**64.91**	**359**	LR	LR	08 39 22.2	
	comp=E,513nm,18.0s,baz=185,slow=39						
BRDH	**Bariadhala**	**65.14**	**298**	LR	LR	08 34 32.7	
	comp=E,378nm,21.7s,baz=181,slow=34						
GTA	**Gaotai**	**65.54**	**318**	⇑P	**P**	**08 08 02.5**	**+0.3**
GTA				pP	sP	08 08 16.3	+0.1
GTA				PcP	**PcP**	**08 08 34.5**	**+0.7**
GTA				sS	sS	08 17 03.8	+2.7
GTA				pmax	pmax		
	comp=E,13nm,1.4s						
GTA				LR	LR		
	comp=E,340nm,20.4s						
GTA				LR	LR		
	comp=E,460nm,21.1s						
GTA				LR	LR		
	comp=E,860nm,20.7s						
SHL	**Shillong**	**65.85**	**301**	P	**P**	**08 08 03.5**	**-1.1**
SHL				IAmb	IAmb	08 08 05.3	
	comp=Z,41nm,1.1s						
SHL	**Shillong**	**65.85**	**301**	P	**P**	**08 08 03.5**	**-1.1**
SHL				pmax	pmax		
	comp=Z,41nm,1.1s						
ULN	**Ulaanbaatar**	**66.11**	**329**	P	**P**	**08 08 05.8**	**0.0**
ULN				IAmb	IAmb	08 08 07.4	
	comp=Z,19nm,0.9s						
ULN	**Ulaanbaatar**	**66.11**	**329**	*ce*P	**P**	**08 08 05.7**	**0.0**
ULN				pmax	pmax		
	comp=Z,21nm,0.8s						
ULN	**Ulaanbaatar**	**66.11**	**329**	P	**P**	**08 08 05.0**	**-0.8**
ULN				sP	**sP**	**08 08 22.7**	**+3.0**
SONM	**Songino Array**	**66.43**	**328**	P	**P**	**08 08 07.9**	**+0.1**
	comp=Z,12nm,0.6s,baz=146,slow=5.8,SNR=64						
SONM				LR	LR	08 35 49.9	
	comp=Z,1µm,21.1s,baz=134,slow=35						
	comp=Z,12nm,0.6s						
SONM	**Songino Array**	**66.43**	**328**	P	**P**	**08 08 07.2**	**-0.6**
SONM				IAmb	IAmb	08 08 09.2	
	comp=Z,18nm,0.7s						
SONM	**Songino Array**	**66.43**	**328**	P	**P**	**08 08 07.2**	**-0.6**
SONM				pmax	pmax		
	comp=Z,19nm,0.7s						
CASY	**Casey**	**67.04**	**197**	P	**P**	**08 08 11.5**	**+0.3**
TAOE	**Nuku Hiva Isla**	**67.49**	**97**	*e*P	**P**	**08 08 16.8**	**+1.6**
	comp=Z,125nm,24.7s						
TAOE	**Nuku Hiva Isla**	**67.49**	**97**	*e*SS	SS	08 21 30.8	0.0
	comp=Z,93nm,32.5s						
TAOE				*e*LR	LR	08 28 38.9	
	comp=Z,423nm,22.9s						
GOMU	**GeErMu**	**67.54**	**313**	P	**P**	**08 08 15.8**	**+0.4**
GOMU				S	**S**	**08 17 15.5**	**+5.2**
GOMU				SS	**SS**	**08 21 36.3**	**+4.9**
GOMU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GOMU				pmax	pmax		
	comp=Z,190nm,5.3s						
GOMU				LR	LR		
	comp=Z,330nm,20.0s						
GOMU				LR	LR		
	comp=Z,730nm,19.4s						
GOMU				LR	LR		
	comp=Z,1µm,19.8s						
LSA	**Lhasa**	**67.86**	**305**	P	**P**	**08 08 17.5**	**-0.2**
LSA				IAmb	IAmb	08 08 19.2	
	comp=Z,20nm,1.1s						
LSA	**Lhasa**	**67.86**	**305**	P	**P**	**08 08 17.5**	**-0.2**
LSA				pmax	pmax		
	comp=Z,20nm,1.1s						
SEY	**Seymchan**	**68.27**	**0**	LR	LR	08 34 14.7	
	comp=Z,659nm,22.0s,baz=168,slow=32						
YAK	**Yakutsk**	**69.50**	**349**	LR	LR	08 38 00.8	
	comp=Z,385nm,20.5s,baz=148,slow=35						
ZAK	**Zakamensk**	**69.62**	**329**	*e*P	**P**	**08 08 26.9**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,39nm,1.0s						
TAPN	**Taplejung**	**69.96**	**302**	*e*P	**P**	**08 08 30.0**	**-0.6**
	comp=Z,65nm,1.2s						
BOD	**Bodaibo**	**70.13**	**340**	*e*P	**P**	**08 08 28.1**	**-2.5**
BOD				pmax	pmax		
	comp=Z,13nm,1.5s						
RAMN	**Ramite**	**70.79**	**301**	*e*P	**P**	**08 08 34.5**	**-1.1**
	comp=Z,85nm,1.6s						
JIRN	**Jiri**	**71.34**	**301**	*e*P	**P**	**08 08 38.4**	**-0.7**
	comp=Z,54nm,1.2s						
CCD	**Concordia, Ant**	**71.42**	**187**	P	**P**	**08 08 38.1**	**-0.5**
MOY	**Mondy**	**71.54**	**329**	*e*P	**P**	**08 08 39.5**	**0.0**
MOY				pmax	pmax		
	comp=Z,41nm,1.5s						
GUN	**Gumba**	**71.68**	**302**	*e*P	**P**	**08 08 40.4**	**-0.6**
	comp=Z,32nm,0.7s						
PKI	**Pulchoki**	**71.98**	**301**	*e*P	**P**	**08 08 41.9**	**-1.0**
	comp=Z,111nm,1.5s						
PALK	**Pallekele**	**72.10**	**279**	LR	LR	08 45 49.8	
	comp=Z,288nm,18.4s,baz=212,slow=40						
PALK	**Pallekele**	**72.10**	**279**	P	**P**	**08 08 43.1**	**-0.4**
PALK	**Pallekele**	**72.10**	**279**	P	**P**	**08 08 43.1**	**-0.4**
PALK				pmax	pmax		
	comp=Z,18nm,1.4s						
VNDA	**Vanda**	**72.14**	**178**	P	**P**	**08 08 42.5**	**+0.1**
	comp=Z,5.0nm,1.1s,baz=336,slow=6.7,SNR=8.7						
VNDA				LR	LR	08 38 41.8	
	comp=Z,625nm,18.6s,baz=342,slow=34						
	comp=Z,5.0nm,1.1s						
VNDA	**Vanda**	**72.14**	**178**	P	**P**	**08 08 42.6**	**+0.1**
VNDA	**Vanda**	**72.14**	**178**	P	**P**	**08 08 42.6**	**+0.1**
VNDA				pmax	pmax		
	comp=Z,32nm,1.8s						
DMN	**Daman**	**72.25**	**301**	*e*P	**P**	**08 08 43.8**	**-0.6**
	comp=Z,109nm,1.2s						
SBA	**Scott Base**	**72.70**	**177**	P	**P**	**08 08 45.3**	**-0.5**
SBA				IAmb	IAmb	08 09 16.5	
	comp=Z,61nm,1.9s						
SBA	**Scott Base**	**72.70**	**177**	P	**P**	**08 08 45.3**	**-0.5**
SBA				pmax	pmax		
	comp=Z,61nm,2.0s						
GKN	**Gorkha**	**72.76**	**301**	*e*P	**P**	**08 08 46.9**	**-0.4**
	comp=Z,54nm,0.9s						
DANN	**Dangsing**	**73.59**	**302**	*e*P	**P**	**08 08 51.5**	**-0.9**
	comp=Z,109nm,1.1s						
BILL	**Bilibino**	**74.11**	**6**	P	**P**	**08 08 54.4**	**+0.3**
BILL	**Bilibino**	**74.11**	**6**	*ce*P	**P**	**08 08 54.0**	**-0.2**
BILL				*e*		08 11 37.7	
BILL				pmax	pmax		
	comp=Z,12nm,0.8s						
PYUN	**Piuthan**	**74.18**	**301**	*e*P	**P**	**08 08 55.7**	**0.0**
	comp=Z,50nm,0.8s						
R17K	**Ugashik Creek**	**75.50**	**26**	P	**P**	**08 09 02.3**	**-0.1**
	baz=234						
WMQ	**Urumqi**	**75.63**	**318**	*e*P	**P**	**08 09 03.5**	**-0.1**
WMQ				sP	sP	08 09 20.8	+3.2
WMQ				pmax	pmax		
	comp=Z,29nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,210nm,4.7s						
WMQ				LR	LR		
	comp=Z,290nm,19.5s						
WMQ				LR	LR		
	comp=Z,420nm,17.9s						
WMQ				LR	LR		
	comp=Z,330nm,22.5s						
P16K	**Nushagak River**	**75.66**	**24**	P	**P**	**08 09 03.1**	**-0.2**
	baz=232						
HYB	**Hyderabad**	**75.82**	**289**	*e*P	**P**	**08 09 05.0**	**-0.1**
O16K	**Kokwok River B**	**75.97**	**24**	P	**P**	**08 09 05.4**	**+0.3**
	baz=232						
Q17K	**Contact Creek**	**76.08**	**26**	P	**P**	**08 09 05.0**	**-0.8**
	baz=234,SNR=16						
O17K	**Koliganek Bris**	**76.48**	**24**	P	**P**	**08 09 07.7**	**-0.2**
	baz=233						
OHAK	**Old Harbor**	**76.64**	**27**	P	**P**	**08 09 08.4**	**-0.5**
	baz=237						
Q18K	**Katmai Hardscr**	**76.68**	**25**	P	**P**	**08 09 08.1**	**-1.1**
	baz=235,SNR=10						
ANM	**Nome**	**76.76**	**18**	P	**P**	**08 09 10.0**	**+0.6**
ANM	**Nome**	**76.76**	**18**	P	**P**	**08 09 10.0**	**+0.6**
ANM				pmax	pmax		
	comp=Z,23nm,1.5s						
ANM	**Nome**	**76.76**	**18**	P	**P**	**08 09 09.3**	**-0.2**
	baz=224,SNR=10						
TNA	**Tin City**	**76.76**	**16**	P	**P**	**08 09 09.3**	**-0.1**
	baz=221						
PCHI	**Peechi**	**76.82**	**282**	*e*P	**P**	**08 09 11.3**	**+0.4**
P18K	**Big Mountain,**	**77.02**	**25**	P	**P**	**08 09 10.5**	**-0.5**
	baz=235						
KDAK	**Kodiak Island**	**77.26**	**27**	LR	LR	08 38 04.9	
	comp=Z,199nm,21.8s,baz=251,slow=32						
KDAK	**Kodiak Island**	**77.26**	**27**	P	**P**	**08 09 12.7**	**+0.3**
KDAK				IAmb	IAmb	08 09 13.7	
	comp=Z,34nm,1.1s						
KDAK	**Kodiak Island**	**77.26**	**27**	P	**P**	**08 09 12.7**	**+0.3**
KDAK				pmax	pmax		
	comp=Z,33nm,1.2s						
KDAK	**Kodiak Island**	**77.26**	**27**	P	**P**	**08 09 12.2**	**-0.1**
	baz=237						
O18K	**Koktuh Hills**	**77.29**	**24**	P	**P**	**08 09 12.3**	**-0.3**
	baz=234						
Q19K	**Cape Douglas,**	**77.42**	**26**	P	**P**	**08 09 12.7**	**-0.7**
	baz=236						
O19K	**Port Alsworth**	**77.86**	**24**	P	**P**	**08 09 15.6**	**-0.1**
	baz=235						
SVW2	**Sparrevohn**	**77.87**	**23**	P	**P**	**08 09 16.1**	**+0.3**
SVW2	**Sparrevohn**	**77.87**	**23**	P	**P**	**08 09 16.7**	**+0.9**
P19K	**Oil Pt**	**78.00**	**25**	P	**P**	**08 09 15.9**	**-0.7**
	baz=236						
DGZ	**Jazzator, Alta**	**78.09**	**323**	⇑*i*P	**P**	**08 09 16.8**	**-0.6**
DGZ				pmax	pmax		
	comp=Z,36nm,1.2s						
N19K	**Bonanza Creek**	**78.14**	**24**	P	**P**	**08 09 17.1**	**-0.3**
	baz=235						
ILSW	**Iliamna Southw**	**78.22**	**25**	P	**P**	**08 09 17.4**	**-0.5**
ILSW				IAmb	IAmb	08 09 20.8	
	comp=Z,33nm,1.3s						
TIXI	**Tiksi**	**78.49**	**353**	LR	LR	08 47 10.6	
	comp=Z,352nm,18.2s,baz=1.5,slow=38						

TIXI	Tiksi	78.49	353	P	P	08 09 18.0	-0.9
TIXI	Tiksi	78.49	353	*ce*P	P	08 09 17.9	-1.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
O20K	Slope Mountain	78.50	25	P	P	08 09 18.6	-0.7
	baz=237						
HOM	Homer	78.68	26	P	P	08 09 20.2	0.0
	baz=238						
CNPM	China Poot	78.79	26	P	P	08 09 20.7	-0.2
L19K	White Mountain	78.79	23	P	P	08 09 21.2	+0.3
L19K				IAmb	IAmb	08 09 22.8	
	comp=Z,34nm,1.4s						
L19K	White Mountain	78.79	23	P	P	08 09 20.4	-0.5
	baz=234						
M19K	Big River Lodg	78.81	23	P	P	08 09 22.1	+1.1
M19K	Big River Lodg	78.81	23	P	P	08 09 21.0	+0.1
	baz=235						
ZSN	Zaisan	78.81	320	*e*P	P	08 09 21.3	0.0
	comp=Z,23nm,1.2s,baz=320						
ZSN				*i* S	S	08 19 18.1	+1.1
	baz=320						
ZSN	Zaisan	78.81	320	*e*P	P	08 09 21.3	0.0
ZSN				pmax	pmax		
	comp=Z,23nm,1.2s						
BRLK	Bradley Lake	79.07	26	P	P	08 09 22.4	0.0
BRLK				IAmb	IAmb	08 09 24.1	
	comp=Z,19nm,0.8s						
BRSE	Bradley Lake S	79.12	26	P	P	08 09 22.9	+0.2
	baz=239,SNR=5.7						
M20K	Styx River	79.29	23	P	P	08 09 24.2	+0.5
M20K				IAmb	IAmb	08 09 24.5	
	comp=Z,48nm,1.7s						
M20K	Styx River	79.29	23	P	P	08 09 23.8	+0.1
	baz=236						
L20K	Farewell, AK	79.33	23	P	P	08 09 24.0	+0.2
	baz=235						
GCSA	Galena City Sc	79.60	20	P	P	08 09 25.6	+0.5
	baz=232						
O22K	Cooper Landing	79.94	25	P	P	08 09 27.2	+0.2
	baz=240						
RDOG	Red Dog Mine	79.94	16	P	P	08 09 27.4	+0.4
	baz=226						
SKT	Skwentna	79.97	24	P	P	08 09 26.7	-0.6
	baz=238						
SUA	Susitna One	80.02	24	P	P	08 09 27.2	-0.4
	baz=238,SNR=5.2						
PPLA	Purkeypile	80.22	23	P	P	08 09 28.8	+0.1
PPLA				IAmb	IAmb	08 10 11.3	
	comp=Z,30nm,1.5s						
PPLA	Purkeypile	80.22	23	P	P	08 09 28.7	-0.1
	baz=237						
RC01	Rabbit Creek A	80.24	25	P	P	08 09 28.4	-0.3
RC01				IAmb	IAmb	08 09 29.7	
	comp=Z,17nm,0.8s						
RC01	Rabbit Creek A	80.24	25	P	P	08 09 28.6	-0.2
	baz=239,SNR=5.4						
MK31	Makanchi Array	80.24	319	P	P	08 09 28.7	-0.4
MK31	Makanchi Array	80.24	319	P	P	08 09 28.7	-0.4
MK31				pmax	pmax		
	comp=Z,19nm,1.2s						
MKAR	Makanchi Array	80.24	319	P	P	08 09 28.7	-0.4
	comp=Z,12nm,1.0s,baz=99,slow=7.5,SNR=62						
MKAR				LR	LR	08 45 13.0	
	comp=Z,723nm,19.6s,baz=102,slow=36						
	comp=Z,12nm,1.0s						
MKAR	Makanchi Array	80.24	319	P	P	08 09 28.2	-0.9
MKAR	Makanchi Array	80.24	319	P	P	08 09 28.2	-0.9
CAST	Castle Rocks	80.54	22	P	P	08 09 30.1	-0.3
	baz=237,SNR=10.0						
CUT	Chulitna	80.70	24	P	P	08 09 31.1	-0.1
	baz=239						
P23K	Montague Islan	80.70	26	P	P	08 09 31.0	-0.3
	baz=242						
CHUM	Lake Minchumin	80.71	22	P	P	08 09 31.0	-0.1
	baz=237,SNR=16						
PWL	Port Wells	80.72	25	P	P	08 09 31.3	-0.1
PWL				IAmb	IAmb	08 09 32.5	
	comp=Z,31nm,0.8s						
PWL	Port Wells	80.72	25	P	P	08 09 30.8	-0.5
	baz=241,SNR=11						
PMR	Palmer	80.75	25	P	P	08 09 31.2	-0.2
PMR	Palmer	80.75	25	P	P	08 09 30.6	-0.8
	baz=240						
Q23K	Middleton Isla	80.91	27	P	P	08 09 32.3	0.0
	baz=243						
KNK	Knik Glacier	80.94	25	P	P	08 09 32.4	-0.1
KNK				IAmb	IAmb	08 09 33.9	
	comp=Z,70nm,1.6s						
KNK	Knik Glacier	80.94	25	P	P	08 09 32.3	-0.3
	baz=240						
SHLS	Shalkode	81.06	315	*e*P	P	08 09 31.6	-2.2
	baz=315						
SHLS	Shalkode	81.06	315	*e*P	P	08 09 31.5	-2.2
SML	Sawmill	81.19	25	P	P	08 09 34.0	+0.2
SML				IAmb	IAmb	08 09 35.0	
	comp=Z,23nm,0.7s						
SML	Sawmill	81.19	25	P	P	08 09 33.3	-0.6
	baz=241,SNR=8.8						
ZAA0	Zalesovo Array	81.23	327	P	P	08 09 32.5	-1.7
ZALV	Zalesovo Beam	81.23	327	P	P	08 09 32.2	-2.0
	comp=Z,8.0nm,0.5s,baz=110,slow=6.0,SNR=34						
ZALV				LR	LR	08 45 19.6	
	comp=Z,737nm,20.1s,baz=116,slow=36						
	comp=Z,8.0nm,0.5s						
ZALV	Zalesovo Beam	81.23	327	P	P	08 09 32.5	-1.7
ZALV	Zalesovo Beam	81.23	327	*i* P	P	08 09 33.0	-1.1
ZALV				pmax	pmax		
	comp=Z,8.0nm,0.5s						
TRF	Thorofare Moun	81.24	23	P	P	08 09 32.7	-1.6
	baz=239						
BPAW	Bear Paw Mtn.	81.32	22	P	P	08 09 34.0	-0.5
BPAW	Bear Paw Mtn.	81.32	22	P	P	08 09 33.3	-1.2
	baz=238						
UZB	Uzynbulak	81.37	315	*e*P	P	08 09 34.9	-0.6
	baz=315						
UZB	Uzynbulak	81.37	315	*e*P	P	08 09 34.8	-0.6
IMAR	Indian Mountai	81.39	20	P	P	08 09 35.1	+0.3
M23K	Glacier View	81.43	25	P	P	08 09 34.4	-0.8
	baz=241						
H21K	Melozitna Rive	81.53	20	P	P	08 09 35.2	-0.3
	baz=236,SNR=6.1						
I21K	Tanana	81.55	21	P	P	08 09 35.2	-0.5
	baz=237						
WAT1	Susitna Watana	81.60	24	P	P	08 09 34.9	-1.1
	baz=240						
SCM	Sheep Creek Mo	81.61	25	P	P	08 09 36.3	+0.1
SCM				IAmb	IAmb	08 09 54.0	
	comp=Z,38nm,1.2s						
SCM	Sheep Creek Mo	81.61	25	P	P	08 09 36.3	+0.1
SCM				pmax	pmax		
	comp=Z,38nm,1.2s						
SCM	Sheep Creek Mo	81.61	25	P	P	08 09 35.5	-0.7
	baz=242						
G21K	Allakaket	81.78	19	P	P	08 09 36.9	+0.1
	baz=235						
SATY	Saty	81.78	315	*e*P	P	08 09 37.2	-0.4
	baz=315						
SATY	Saty	81.78	315	*e*P	P	08 09 37.1	-0.4
MCK	McKinley	81.91	23	P	P	08 09 37.7	+0.1
MCK				IAmb	IAmb	08 09 54.4	
	comp=Z,27nm,1.1s						
MCK	McKinley	81.91	23	P	P	08 09 37.7	+0.1
MCK				pmax	pmax		
	comp=Z,27nm,1.1s						
MCK	McKinley	81.91	23	P	P	08 09 36.4	-1.2
	baz=240,SNR=13						
MLY	Manley	81.91	21	P	P	08 09 37.5	-0.1
MLY				IAmb	IAmb	08 09 39.6	
	comp=Z,17nm,0.6s						
MLY	Manley	81.91	21	P	P	08 09 36.9	-0.7
	baz=238,SNR=26						
KLU	Klutina	82.05	25	P	P	08 09 38.7	+0.3
KLU				IAmb	IAmb	08 09 40.1	
	comp=Z,55nm,1.4s						
KLU	Klutina	82.05	25	P	P	08 09 37.9	-0.5
	baz=243,SNR=6.2						
F21K	Alatna River	82.19	19	P	P	08 09 39.1	+0.1
	baz=235						
M24K	Tolsona, Glenn	82.22	25	P	P	08 09 40.2	+0.9
M24K	Tolsona, Glenn	82.22	25	P	P	08 09 39.5	+0.2
	baz=242,SNR=7.6						
NEA2	Nenana	82.29	22	P	P	08 09 37.9	-1.7
	baz=240,SNR=11						
I23K	Minto, Yukon-K	82.47	21	P	P	08 09 40.8	+0.3
I23K	Minto, Yukon-K	82.47	21	P	P	08 09 39.8	-0.7
	baz=239,SNR=8.8						
N25K	Chitina, Valde	82.67	26	P	P	08 09 41.6	-0.1
	baz=244,SNR=5.3						
KSH	Kashi	82.68	311	P	P	08 09 44.0	+1.7
KSH				pP	pP	08 09 54.5	+1.5
KSH				PP	PP	08 12 58.8	+6.3
KSH				pmax	pmax		
	comp=Z,11nm,1.2s						
KSH				LR	LR		
	comp=Z,600nm,16.5s						
KSH				LR	LR		
	comp=Z,680nm,16.5s						
KSH				LR	LR		
	comp=Z,340nm,18.6s						
H23K	Yukon River	82.75	21	P	P	08 09 41.3	-0.7
	baz=239						
MDOK	Medeo	82.77	315	*e*P	P	08 09 42.3	-0.4
	baz=315						
MDOK	Medeo	82.77	315	*e*P	P	08 09 42.3	-0.4
F22K	John River	82.77	19	P	P	08 09 41.7	-0.3
	baz=236						
HARP	HAARP	82.78	25	P	P	08 09 41.5	-0.6
	baz=243						
CCB	Clear Creek Bu	82.79	22	P	P	08 09 41.6	-0.5
CCB				IAmb	IAmb	08 09 42.2	
	comp=Z,60nm,1.8s						
TNSS	Tian-Shan	82.81	314	*e*P	P	08 09 42.7	-0.6
	baz=314						
TNSS	Tian-Shan	82.81	314	*e*P	P	08 09 42.6	-0.6
TCOL	CIGO, UAF Yank	82.88	22	P	P	08 09 41.1	-1.5
	baz=241,SNR=11						
COLA	College	82.89	22	P	P	08 09 41.7	-0.9
COLA	College	82.89	22	*i* P	P	08 09 41.4	-1.2
COLA				pmax	pmax		
	comp=Z,14nm,0.7s						
COLA	College	82.89	22	P	P	08 09 40.7	-1.9
	baz=241						
PAX	Paxson	82.91	24	P	P	08 09 41.7	-1.2
	baz=243						
GLB	Gilahina Butte	82.94	26	P	P	08 09 42.6	-0.4
CHKK	Chushkaly	82.98	315	*e*P	P	08 09 43.6	0.0
	baz=315						
CHKK	Chushkaly	82.98	315	*e*P	P	08 09 43.6	0.0
HDA	Harding Lake	83.00	23	P	P	08 09 42.0	-1.2
	baz=242,SNR=15						
G23K	Bananza Creek	83.05	20	P	P	08 09 42.8	-0.7
	baz=238						
POKR	Poker Plat Res	83.16	22	P	P	08 09 42.7	-1.4
	baz=241						
K24K	Donnelly Dome	83.17	23	P	P	08 09 42.2	-2.0
	baz=243						
ILAR	Eielson Array	83.20	22	P	P	08 09 43.0	-1.3
	comp=Z,8.7nm,0.6s,baz=245,slow=5.0,SNR=139						
ILAR				LR	LR	08 44 12.8	
	comp=Z,1µm,19.7s,baz=248,slow=34						
	comp=Z,8.7nm,0.6s						
ILAR	Eielson Array	83.20	22	P	P	08 09 43.0	-1.3
E22K	Anaktuvuk Pass	83.24	18	P	P	08 09 43.2	-1.2
	baz=237						
MCARA	McCarthy VSAT	83.25	26	P	P	08 09 43.8	-0.8
	baz=245						
COLD	Coldfoot	83.26	19	P	P	08 09 43.9	-0.7
	baz=238						
H24K	Noodor Dome	83.35	21	P	P	08 09 44.1	-1.0
	baz=240						
KUU	Kurty	83.45	315	*e*P	P	08 09 45.0	-1.1
	baz=315						
KUU	Kurty	83.45	315	*e*P	P	08 09 44.9	-1.1
RIDG	Independent Ri	83.51	24	P	P	08 09 46.0	0.0
RIDG				IAmb	IAmb	08 09 47.0	
	comp=Z,67nm,1.6s						
RIDG	Independent Ri	83.51	24	P	P	08 09 44.8	-1.2
	baz=244,SNR=9.7						
MENT	Mentasta	83.62	25	P	P	08 09 47.3	+0.8
MENT	Mentasta	83.62	25	P	P	08 09 46.7	+0.2
M26K	Nabesna, AK	83.69	25	P	P	08 09 46.2	-0.7
	baz=245						
TKM2	Tokmak 2	83.74	314	P	P	08 09 48.1	+0.3
	SNR=19						
KURK	Kurchatov	83.75	322	P	P	08 09 46.4	-0.9
KURK				IAmb	IAmb	08 09 48.4	
	comp=Z,45nm,1.2s						
KURK	Kurchatov	83.75	322	*ce*P	P	08 09 46.8	-0.6
KURK				pmax	pmax		
	comp=Z,45nm,1.3s						
KURBB	Kurchatov Arra	83.78	322	P	P	08 09 46.3	-1.2
	comp=Z,13nm,1.0s,baz=109,slow=4.0,SNR=47						
KURBB				LR	LR	08 47 46.3	
	comp=Z,693nm,19.0s,baz=175,slow=36						
	comp=Z,13nm,1.0s						
DOT	Dot Lake	83.78	24	P	P	08 09 47.3	0.0
L26K	Log Cabin Wild	83.81	25	P	P	08 09 47.5	0.0
L26K				IAmb	IAmb	08 09 49.4	
	comp=Z,9.6nm,0.5s						
L26K	Log Cabin Wild	83.81	25	P	P	08 09 46.8	-0.7
	baz=245,SNR=11						
E23K	Chandalar	83.89	19	P	P	08 09 47.9	0.0
	baz=239						
G24K	Hadweenzic Riv	83.92	20	P	P	08 09 47.4	-0.6
	baz=241						
SCRK	Sand Creek	83.96	24	P	P	08 09 47.0	-1.3
	baz=244,SNR=7.9						
PINM	Pinnacle	83.99	28	P	P	08 09 47.5	-1.0
	baz=248						
D23K	Nanushuk River	84.04	18	P	P	08 09 48.2	-0.4
	baz=238						
PRP	Porcupine Dome	84.06	22	P	P	08 09 48.6	-0.2
	baz=243						
KBK	Karagaybulak	84.15	314	P	P	08 09 50.3	+0.4
	SNR=6.5						
M27K	Edge Creek, AK	84.15	25	P	P	08 09 49.7	+0.4
	baz=246						
F24K	Squaw Lake	84.18	20	P	P	08 09 49.7	+0.4
	baz=240						
TOLK	Toolik Lake Re	84.21	18	P	P	08 09 49.5	+0.1
	baz=239						
PNL	Peninsula	84.24	28	P	P	08 09 48.7	-1.0
	baz=249						
E24K	Your Creek	84.26	19	P	P	08 09 49.3	-0.4
	baz=240						
O28M	Mount Upton	84.28	27	P	P	08 09 49.3	-0.9
	baz=248						
CHMS	Chumysh	84.36	314	P	P	08 09 50.7	-0.1
	SNR=9.9						
UCH	Uchtor	84.36	313	P	P	08 09 51.7	+0.4
	SNR=34						
G25K	Bearman Lake	84.43	21	P	P	08 09 49.8	-0.7
	baz=242						
QSPA	South Pole Qui	84.43	180	LR	LR	08 47 34.6	
	comp=Z,218nm,18.2s,baz=16,slow=36						
QSPA	South Pole Qui	84.43	180	P	P	08 09 50.7	-0.1
QSPA				IAmb	IAmb	08 10 07.2	
	comp=Z,14nm,0.9s						
L27K	Beaver Creek,	84.45	25	P	P	08 09 50.4	-0.4
	baz=246						
AAK	Ala-Archa	84.47	314	P	P	08 09 51.9	+0.5
	SNR=13						
AAK	Ala-Archa	84.47	314	P	P	08 09 51.5	0.0
	comp=Z,11nm,0.8s,baz=116,slow=4.7,SNR=27						
AAK				LR	LR	08 47 38.6	
	comp=Z,456nm,20.4s,baz=103,slow=36						
	comp=Z,11nm,0.8s						
AAK	Ala-Archa	84.47	314	*ce*P	P	08 09 51.7	+0.2
AAK				pmax	pmax		
	comp=Z,41nm,1.7s						
BCAR	Beaver Creek A	84.47	25	P	P	08 09 51.8	+0.9
MAW	Mawson	84.53	203	P	P	08 09 50.1	-0.9
	comp=Z,10.0nm,1.0s,baz=51,slow=6.5,SNR=2.1						
MAW				LR	LR	08 44 21.2	
	comp=Z,797nm,21.6s,baz=84,slow=33						
	comp=Z,10.0nm,1.0s						
YUK3	Moose Creek	84.53	26	P	P	08 09 51.8	+0.3
	baz=248,SNR=6.5						
SGDS	Sogindy	84.55	314	*e*P	P	08 09 51.1	-0.6
	comp=Z,14nm,1.1s,baz=314						
SGDS	Sogindy	84.55	314	*e*P	P	08 09 51.1	-0.6
SGDS				pmax	pmax		
	comp=Z,15nm,1.1s						
USP	Ospenovka	84.60	314	P	P	08 09 52.4	+0.4
	SNR=26						
BVCY	Beaver Creek	84.61	26	P	P	08 09 52.0	+0.4
	baz=247,SNR=7.3						
YUK8	Steele Glacier	84.66	27	P	P	08 09 52.2	+0.1
	baz=248,SNR=6.7						
K27K	Chicken	84.74	24	P	P	08 09 53.1	+0.9
	baz=246						
O29M	Mount Kennedy	84.85	28	P	P	08 09 53.7	+0.7
	baz=250,SNR=5.6						
I26K	Coal Creek Min	84.85	22	P	P	08 09 52.7	0.0
	baz=245						
AML	Almayashu	84.94	313	P	P	08 09 54.5	+0.3
	SNR=66						
F25K	Christian Rive	84.97	20	P	P	08 09 53.3	0.0
	baz=242						
EKS2	Erkin-Say	84.99	314	P	P	08 09 54.7	+0.7
	SNR=14						
C24K	Franklin Bluff	85.03	18	P	P	08 09 53.6	+0.1
	baz=239						
YUK6	Outpost Mounta	85.17	27	P	P	08 09 55.4	+0.8
	baz=250						
YUK4	Talbot Arm	85.19	27	P	P	08 09 55.7	+1.0
	baz=249,SNR=7.6						
S31K	Pelican	85.21	31	P	P	08 09 55.3	+0.7
	baz=252						
E25K	Arctic Village	85.25	20	P	P	08 09 55.2	+0.5
	baz=242						
BTLS	Baital	85.31	316	*e*P	P	08 09 54.4	-1.0
	comp=Z,23nm,1.1s,baz=316						
BTLS	Baital	85.31	316	*e*P	P	08 09 54.4	-1.0
BTLS				pmax	pmax		
	comp=Z,23nm,1.1s						
G26K	Porcupine Rive	85.33	21	P	P	08 09 55.2	+0.2
	baz=244						
SIT	Sitka	85.40	32	P	P	08 09 56.1	+0.5
	baz=253						
EGAK	Eagle	85.41	23	P	P	08 09 55.5	0.0
	baz=247,SNR=9.0						
HYT	Haines Junctio	85.53	28	P	P	08 09 57.2	+0.9
	baz=250,SNR=19						
F26K	Sheenjek River	85.53	20	P	P	08 09 56.6	+0.5
	baz=244						
P30M	Million Dollar	85.55	28	P	P	08 09 56.3	-0.1
	baz=251						
D25K	Kavik River	85.55	18	P	P	08 09 55.8	-0.3
	baz=242						
I27K	Kandik River	85.56	22	P	P	08 09 55.7	-0.6
	baz=246						
PLBC	Pleasant Camp	85.62	29	P	P	08 09 57.1	+0.5
	baz=252,SNR=7.5						
M29M	Somme Creek	85.65	26	P	P	08 09 56.5	-0.4
	baz=250,SNR=9.5						
DAWY	Dawson	85.85	24	P	P	08 09 58.0	+0.2
DAWY	Dawson	85.85	24	P	P	08 09 57.8	0.0
	baz=248,SNR=9.8						
H27K	Steamboat Moun	85.85	22	P	P	08 09 57.6	-0.1
	baz=246						
DIB	Dawson Inlet,	85.90	36	P	P	08 09 58.8	+0.6
S32K	Killisnoo	85.91	31	P	P	08 09 58.6	+0.5
	baz=253,SNR=5.2						
N30M	Aishikik Lake	85.93	27	P	P	08 09 58.3	+0.1
	baz=251						
L29M	L29M	86.03	25	P	P	08 09 58.7	0.0
	baz=250						
G27K	Doyon Strip	86.03	21	P	P	08 09 58.7	+0.1
	baz=246						
SKAG	Skagway	86.12	29	P	P	08 10 00.5	+1.4
SKAG	Skagway	86.12	29	P	P	08 09 59.1	0.0
	baz=252						
O30N	Mendenhall	86.16	28	P	P	08 09 59.5	+0.1
	baz=252,SNR=14						
R32K	Eaglecrest	86.17	31	P	P	08 09 59.5	+0.1
	baz=253,SNR=6.2						
JIS	Juneau Island	86.24	31	P	P	08 10 00.7	+1.0
U33K	Whale Pass	86.30	33	P	P	08 10 00.6	+0.6
	baz=254,SNR=7.2						
NRIK	Noril'sk	86.34	341	P	P	08 09 58.4	-1.6
	comp=Z,5.0nm,0.6s,baz=114,slow=5.3,SNR=10						
NRIK				LR	LR	08 50 31.8	
	comp=Z,454nm,18.3s,baz=123,slow=37						
	comp=Z,5.0nm,0.6s						
NRIK	Noril'sk	86.34	341	*ce*P	P	08 09 59.6	-0.4
M30M	Minto, Yukon	86.43	26	P	P	08 10 01.1	+0.5
	baz=251,SNR=12						
J29M	Klondike Camp	86.47	24	P	P	08 10 01.0	+0.2
	baz=250,SNR=8.6						
C27K	Jago River	86.53	18	P	P	08 10 01.0	0.0
	baz=244						
N31M	Braeburn, Yuko	86.53	27	P	P	08 10 01.6	+0.5
	baz=252,SNR=15						
K29M	Barlow Dome	86.54	25	P	P	08 10 01.2	-0.1
	baz=250						
T33K	Petersburg	86.58	32	P	P	08 10 01.5	+0.1
	baz=255,SNR=5.1						
E27K	Coleen River	86.61	20	P	P	08 10 01.0	-0.4
	baz=246						
I29M	Ogilvie Camp,	86.75	23	P	P	08 10 02.7	+0.6
	baz=249						
WRAK	Wrangell Islan	86.80	33	P	P	08 10 03.2	+0.7
	baz=255,SNR=10						
DZA	Taraz	86.80	313	*e*P	P	08 10 02.3	-0.6
	comp=Z,15nm,0.8s,baz=313						
DZA	Taraz	86.80	313	*e*P	P	08 10 02.3	-0.6
DZA				pmax	pmax		
	comp=Z,15nm,0.8s						
V35K	Ketchikan	86.92	34	P	P	08 10 03.3	+0.2
	baz=256,SNR=14						
P32M	Atlin	86.95	29	P	P	08 10 03.1	-0.1
	baz=254,SNR=9.3						
MAYO	Mayo, Yukon	87.14	25	P	P	08 10 04.8	+0.7
	baz=252,SNR=12						
BRZS	Berezniki	87.26	321	*e*P	P	08 10 03.9	-1.1
	baz=321						
BRZS	Berezniki	87.26	321	*e*P	P	08 10 03.8	-1.1
M31M	Drury Creek, Y	87.38	27	P	P	08 10 05.6	+0.3
M31M				IAmb	IAmb	08 10 06.8	
	comp=Z,29nm,1.2s						
M31M	Drury Creek, Y	87.38	27	P	P	08 10 05.4	+0.1
	baz=253,SNR=15						
Q32M	Nakina River	87.49	30	P	P	08 10 07.1	+1.0
	baz=255						
GRNB	Grenville Isla	87.52	35	P	P	08 10 06.8	+0.8
P33M	Teslin, Yukon	87.55	29	P	P	08 10 06.2	0.0
	baz=255,SNR=12						
IUG	Iuzhnay	87.62	313	*e*P	P	08 10 06.3	-0.7
	comp=Z,20nm,1.2s,baz=312						
IUG	Iuzhnay	87.62	313	*e*P	P	08 10 06.3	-0.7
IUG				pmax	pmax		
	comp=Z,20nm,1.2s						
N32M	Quiet Lake	87.68	28	P	P	08 10 07.4	+0.6
	baz=254						
EPYK	Eagle Plains	87.71	22	P	P	08 10 06.3	-0.5
	baz=251						
S34M	Telegraph Cree	87.81	31	P	P	08 10 07.6	+0.2
	baz=256,SNR=30						
FARO	Faro, Yukon	87.85	27	P	P	08 10 06.9	-0.6
	baz=254,SNR=20						
T35M	Bob Quinn	88.06	32	P	P	08 10 09.4	+0.8
	baz=257,SNR=12						
G30M	tAoh Zraii Nji	88.09	22	P	P	08 10 08.4	-0.2
	baz=251						
BBB	Bella Bella	88.26	37	P	P	08 10 09.9	+0.3
	comp=Z,23nm,1.1s,baz=276,slow=8.3,SNR=5.2						
BBB				LR	LR	08 44 26.2	
	comp=Z,591nm,19.5s,baz=263,slow=32						
	comp=Z,23nm,1.1s						
DLBC	Dease Lake	88.50	31	LR	LR	08 43 41.5	
	comp=Z,2µm,20.6s,baz=268,slow=31						
DLBC	Dease Lake	88.50	31	P	P	08 10 11.5	+0.7
	baz=257,SNR=19						
MMPY	Sheldon Lake,	88.89	27	P	P	08 10 12.8	+0.3
	baz=256,SNR=12						
F31M	Tsiigehtchic	89.16	22	P	P	08 10 12.4	-1.1
	baz=254						
BVAR	Borovoye Array	89.25	323	P	P	08 10 12.9	-1.4
	comp=Z,18nm,0.8s,baz=106,slow=4.8,SNR=54						
BVAR				LR	LR	08 52 46.3	
	comp=Z,468nm,18.1s,baz=90,slow=37						
	comp=Z,18nm,0.8s						
BRVK	Borovoye	89.31	323	*ce*P	P	08 10 13.3	-1.3
BRVK				pmax	pmax		
	comp=Z,15nm,0.8s						
INK	Inuvik	89.48	21	LR	LR	08 50 49.3	
	comp=Z,410nm,18.3s,baz=272,slow=36						
INK	Inuvik	89.48	21	P	P	08 10 15.1	+0.1
INK				IAmb	IAmb	08 10 16.0	
	comp=Z,39nm,1.5s						
INK	Inuvik	89.48	21	P	P	08 10 15.1	+0.1
INK				pmax	pmax		
	comp=Z,39nm,1.5s						
INK	Inuvik	89.48	21	P	P	08 10 13.9	-1.1
	baz=254						
WTLY	Watson Lake, Y	89.48	29	P	P	08 10 15.5	+0.3
	baz=258,SNR=15						
CBB	Campbell River	89.59	40	P	P	08 10 15.9	0.0
I02E	Swisshome, OR	89.74	46	P	P	08 10 18.2	+1.4
YBH	Yreka Blue Hor	90.26	48	LR	LR	08 43 23.8	
	comp=Z,937nm,21.9s,baz=298,slow=31						

LIRD	Liard River Hi	90.69	30	P	P	08 10 21.0	+0.1
	baz=260,SNR=15						
J05D	Fort Rock, OR	91.52	47	P	P	08 10 27.3	+2.0
PINE	Pine Mountain	91.79	46	P	P	08 10 28.6	+2.0
KOTAN	Kotaneelee Air	91.82	30	P	P	08 10 25.9	-0.3
	baz=262,SNR=9.3						
SCZ2	Santa Cruz Isl	91.84	56	P	P	08 10 26.8	0.0
	baz=265						
FLDN	Fort Liard	92.12	30	P	P	08 10 27.4	-0.1
	baz=263						
VES	Vestal, Richgr	92.46	54	P	P	08 10 29.4	-0.3
	baz=265						
WRGLY	Wrigley	92.51	27	P	P	08 10 29.0	-0.2
	baz=263						
A36M	Sachs Harbour	93.03	18	P	P	08 10 30.4	-1.0
	baz=262						
C36M	Paulatuk	93.05	21	P	P	08 10 30.5	-1.1
	baz=263						
EDW2	Edwards Air Fo	93.27	55	P	P	08 10 32.4	-1.1
	baz=266						
NVAR	Mina Array Bea	93.29	52	P	P	08 10 34.2	+0.5
	comp=Z,5.8nm,0.7s,baz=255,slow=6.5,SNR=42						
NVAR				LR	LR	08 48 38.2	
	comp=Z,2µm,18.6s,baz=270,slow=33						
	comp=Z,5.8nm,0.7s						
NVAR	Mina Array Bea	93.29	52	P	P	08 10 34.4	+0.7
CWC	Cottonwood Cre	93.32	54	P	P	08 10 33.5	-0.3
	baz=266						
NV11	Mina Array Sit	93.41	52	P	P	08 10 34.5	+0.4
NV11				IAmb	IAmb	08 10 35.5	
	comp=Z,17nm,1.1s						
BFSC	Mount Baldy Ra	93.50	56	P	P	08 10 33.6	-1.0
	baz=266						
KVN	Kaiserville	93.50	51	P	P	08 10 34.9	+0.3
KVN				IAmb	IAmb	08 10 36.6	
	comp=Z,21nm,1.2s						
KVN	Kaiserville	93.50	51	P	P	08 10 34.9	+0.3
KVN				pmax	pmax		
	comp=Z,21nm,1.2s						
LRMC	Laurel Mtn Rad	93.57	55	P	P	08 10 34.9	0.0
	baz=266,SNR=7.9						
MPMC	Manual Prospec	93.77	54	P	P	08 10 36.0	+0.1
	baz=266,SNR=8.8						
MURC	Murrieta	93.83	57	P	P	08 10 35.7	-0.4
	baz=266						
109C	Camp Elliot, M	93.86	57	P	P	08 10 36.2	+0.1
	baz=266						
GRAC	Grapevine Rang	93.93	53	P	P	08 10 36.4	0.0
	baz=266,SNR=5.2						
BBRC	Big Bear Solar	94.11	56	P	P	08 10 37.7	+0.2
	baz=266						
GSC	Goldstone, Bar	94.27	55	P	P	08 10 38.0	-0.1
	baz=266						
FURC	Furnace Creek,	94.30	54	P	P	08 10 37.9	-0.1
	baz=266,SNR=7.3						
MONP2	Monument Peak	94.43	58	P	P	08 10 39.5	+0.5
	baz=266						
PFO	Pinyon Flats O	94.45	57	LR	LR	08 45 00.8	
	comp=Z,789nm,21.8s,baz=262,slow=30						
PFO	Pinyon Flats O	94.45	57	P	P	08 10 38.3	-0.7
PFO				IAmb	IAmb	08 10 42.5	
	comp=Z,12nm,1.2s						
PFO	Pinyon Flats O	94.45	57	P	P	08 10 38.3	-0.7
PFO				pmax	pmax		
	comp=Z,12nm,1.2s						
PFO	Pinyon Flats O	94.45	57	P	P	08 10 39.3	+0.3
	baz=266						
TPFO	Pinon Flats	94.45	57	P	P	08 10 39.0	-0.1
	baz=266						
BMO	Blue Mountains	94.47	46	P	P	08 10 38.5	-0.3
BMO				IAmb	IAmb	08 10 40.3	
	comp=Z,22nm,1.1s						
BMO	Blue Mountains	94.47	46	P	P	08 10 38.5	-0.3
BMO				pmax	pmax		
	comp=Z,22nm,1.2s						
HEC	Hector,Ludlow	94.63	56	P	P	08 10 39.9	+0.2
	baz=266						
IKP	In-Ko-Pah, Jac	94.68	58	P	P	08 10 41.0	+1.0
	baz=266						
SHOC	Shoshone, Teco	94.74	55	P	P	08 10 40.8	+0.6
	baz=267,SNR=6.9						
NEW	Newport	94.78	42	LR	LR	08 49 41.4	
	comp=Z,1µm,18.7s,baz=266,slow=33						
NEW	Newport	94.78	42	P	P	08 10 40.2	+0.1
NEW				IAmb	IAmb	08 10 41.5	
	comp=Z,19nm,1.1s						
NEW	Newport	94.78	42	P	P	08 10 40.2	+0.1
NEW				pmax	pmax		
	comp=Z,19nm,1.2s						
NEW	Newport	94.78	42	P	P	08 10 40.2	+0.1
	baz=267						
TPNV	Topopah Spring	94.82	53	P	P	08 10 41.4	+0.7
	baz=267						
BELC	Belle Mtn. Jos	94.86	56	P	P	08 10 42.2	+1.3
	baz=267						
SWSC	Sam W. Stewart	94.96	57	P	P	08 10 42.3	+1.1
	baz=267						
TUQ	Turquoise Moun	95.00	55	P	P	08 10 41.8	+0.3
	baz=267						
WSAR	Wadi Sarin	95.09	293	LR	LR	08 58 14.5	
	comp=Z,108nm,18.3s,baz=110,slow=38						
GMRC	Granite Mounta	95.18	56	P	P	08 10 42.3	-0.1
	baz=267						
BC3	Big Chuckawall	95.29	57	P	P	08 10 44.1	+1.3
	baz=267						
RPN	Rapa Nui	95.33	118	LR	LR	08 45 35.5	
	comp=Z,285nm,21.9s,baz=277,slow=30						
ABKAR	Akbulak array	95.38	319	P	P	08 10 41.5	-1.2
PLID	Pearl Lake	95.41	45	P	P	08 10 42.9	-0.4
PLID				IAmb	IAmb	08 10 44.2	
	comp=Z,8.3nm,1.1s						
R11B	Troy Canyon, C	95.42	52	P	P	08 10 43.4	-0.1
	baz=267,SNR=12						
IRM	Iron Mountain	95.57	56	P	P	08 10 45.3	+1.3
	baz=267						
ELK	Elko	95.79	50	LR	LR	08 48 16.0	
	comp=Z,1µm,20.2s,baz=268,slow=32						
V12A	Nelson	95.89	55	P	P	08 10 45.4	-0.1
ARU	Arti	96.38	326	LR	LR	08 53 49.4	
	comp=Z,2µm,21.6s,baz=110,slow=35						
ARU	Arti	96.38	326	*c i*P	P	08 10 45.8	-1.3
ARU						08 14 40.4	
ARU				S	SKSac	08 21 19.7	-1.6
ARU				SS	SS	08 28 33.9	-4.3
ARU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ARU				MLR	MLR		
	comp=Z,2µm,21.0s						
PDMCI	Parker Dam,Lak	96.41	56	P	P	08 10 48.5	+0.8
	baz=268						
HLID	Hailey	96.50	47	P	P	08 10 47.9	-0.3
	baz=269,SNR=9.1						
YKA	Yellowknife Ar	96.52	28	P	P	08 10 47.7	+0.1
	comp=Z,3.1nm,0.7s,baz=269,slow=4.6,SNR=68						
YKA				PKiKP	PKiKP	08 15 25.3	+0.5
	comp=Z,0.3nm,0.8s,baz=254,slow=1.5,SNR=4.5						
YKA				LR	LR	08 48 22.1	
	comp=Z,663nm,21.6s,baz=286,slow=32						
	comp=Z,3.1nm,0.7s						
AKTO	Aktyubinsk	96.66	320	P	P	08 10 46.6	-1.9
	comp=Z,2.7nm,1.0s,baz=44,slow=6.2,SNR=4.6						
AKTO				LR	LR	08 54 09.7	
	comp=Z,865nm,20.9s,baz=82,slow=35						
	comp=Z,2.7nm,1.0s						
MSO	Missoula	96.89	44	P	P	08 10 49.5	-0.3
	baz=269						
WALA	Waterton Lakes	96.94	41	P	P	08 10 49.8	-0.2
EDM	Edmonton	97.28	37	P	Pdif	08 10 52.7	+1.3
EDM	Edmonton	97.28	37	P	Pdif	08 10 52.7	+1.3
EDM				pmax	pmax		
	comp=Z,50nm,1.1s						
BOZ	Bozeman (W)	98.50	45	P	Pdif	08 10 57.5	+0.3
	baz=271,SNR=5.8						
WUAZ	Wupatki	98.71	55	P	Pdif	08 10 58.4	0.0
	baz=269						
H17A	Grant Village	99.27	46	P	Pdif	08 11 01.4	+0.6
	baz=271,SNR=5.6						
LPIG	La Paz	99.40	67	LR	LR	08 49 04.8	
	comp=Z,717nm,19.9s,baz=278,slow=31						
EGMT	Eagleton	99.72	42	P	Pdif	08 11 02.2	-0.2
	baz=273						
BW06	Boulder Array	100.05	48	P	Pdif	08 11 04.9	+0.7
	baz=272						
PDAR	Pinedale Array	100.05	48	P	Pdif	08 11 04.3	+0.1
	comp=Z,3.6nm,0.9s,baz=251,slow=2.8,SNR=25						
RLMT	Red Lodge	100.18	45	P	Pdif	08 11 06.0	+1.2
	baz=272						
MVCO	Mesa Verde	101.02	53	P	Pdif	08 11 09.6	+0.9
	baz=271						
O20A	White River Ci	101.13	50	P	Pdif	08 11 09.9	+0.9
	baz=272						
LAO	LASA Array	102.20	44	P	Pdif	08 11 14.6	+1.1
	baz=275						
K22A	Casper	102.29	48	P	Pdif	08 11 15.2	+1.1
	baz=274						
S22A	4UR Ranch, Cre	102.33	53	P	Pdif	08 11 15.1	+0.5
	baz=273						
N23A	Red Feather La	102.84	49	P	Pdif	08 11 17.4	+0.7
	baz=274						
SDCO	Great Sand Dun	103.38	53	P	Pdif	08 11 19.5	+0.2
	baz=273						
DGMT	Dagmar	103.38	42	P	Pdif	08 11 19.9	+1.2
	baz=277						
Q24A	Divide	103.58	51	P	Pdif	08 11 20.2	+0.1
	baz=274						
RSSD	Black Hills	103.97	46	P	Pdif	08 11 21.4	-0.3
	baz=276						
APA	Apatity	105.68	339	⇓*i*P	Pdif	08 11 31.5	+3.1
APA				pmax	pmax		
	comp=Z,16nm,1.0s						
APA				MLR	MLR		
	comp=Z,1µm,21.0s						
ARCES	ARCESS Array B	107.28	343	PKiKP	PKiKP	08 15 44.4	+0.3
	comp=Z,3.4nm,1.0s,baz=72,slow=2.9,SNR=11						
FINES	FINESS Array B	111.31	335	PKiKP	PKiKP	08 15 52.3	+0.4
	comp=Z,1.6nm,0.6s,baz=56,slow=2.5,SNR=6.4						
TUL1	Leonard	111.32	54	P	PKiKP	08 15 52.2	-0.5
	baz=279						
MNK	Minsk	113.70	328	*i* PP	PP	08 16 46.6	-2.5
MNK				*i* PP	PP	08 16 46.6	-2.5
MNK				*i* PP	PP	08 16 46.6	-2.5
	baz=244						
MNK				*i* PPP	PPP	08 19 10.8	
MNK				*i* SKS	SKSdf	08 23 02.8	-3.6
MNK				*i* PS	PS	08 26 24.0	-2.3
MNK				*i* SS	SS	08 32 34.6	-0.1
MNK				*i* SSS	SSS	08 36 48.7	
MNK				*i* LR	LR	09 00 55.3	
MNK				*i* LRM	MLR	09 04 34.4	
	comp=Z,870nm,21.9s						
MNK				*i* LRM	MLR	09 04 39.6	
	comp=E,94nm,21.2s						
MNK				*i* LRM	MLR	09 04 53.1	
	comp=N,430nm,22.6s						
NACGM	Naroch	114.10	329	*e*Pdif	Pdif	08 11 57.0	-9.1
	comp=Z,24nm,1.1s,baz=63						
AKASG	Malin Array Be	114.52	324	PKP	PKiKP	08 15 58.2	-0.1
	comp=Z,1.1nm,0.4s,baz=55,slow=2.0,SNR=8.3						
BRTR	Keskin Array B	115.06	311	PKP	PKiKP	08 15 59.5	-0.4
	comp=Z,1.9nm,1.0s,baz=60,slow=7.3,SNR=5.0						
NB2	NORSAR Subarra	117.27	340	PKPdf	PKPdf	08 16 02.7	-0.7
	comp=Z,4.0nm,1.0s,baz=44,slow=1.9						
NOA	NORSAR Array B	117.27	340	PKP	PKPdf	08 16 02.9	-0.6
	comp=Z,1.0nm,0.6s,baz=48,slow=1.8,SNR=5.9						
WCI	Wyandotte Cave	118.23	49	P	PKPdf	08 16 05.9	0.0
	baz=286						
BOSA	Boshof	118.42	233	PKP	PKiKP	08 16 07.0	+0.3
	comp=Z,1.6nm,0.7s,baz=125,slow=2.6,SNR=3.6						
O48B	Farmland	118.47	47	P	PKPdf	08 16 05.7	-0.6
	baz=288						
MLR	Muntele Rosu	118.59	320	⇓P	PKPdf	08 16 06.1	-0.5
LRAL	Lakeview Retre	119.00	55	P	PKPdf	08 16 06.4	-1.2
	baz=283						
P49A	Miami Univ. Ec	119.02	48	P	PKPdf	08 16 06.5	-0.8
	baz=288						
VOIR		119.19	320	⇓P	PKPdf	08 16 04.8	-2.9
ARR	Arges	119.48	320	⇓P	PKPdf	08 16 03.7	-4.5
PLCA	Paso Flores	119.77	144	PKP	PKPdf	08 16 08.5	-0.5
	comp=Z,2.4nm,0.7s,baz=237,slow=5.4,SNR=6.1						
LOT	Lotru	120.00	320	⇓P	PKPdf	08 16 04.8	-4.4
ACSO	Alum Creek Sta	120.05	46	P	PKPdf	08 16 08.7	-0.7
	baz=290						
P52A	Corning	120.87	47	P	PKPdf	08 16 10.6	-0.4
	baz=290						
SURR	Surduc	120.90	321	⇑P	PKiKP	08 16 11.4	+0.5
M53A	WI Miller and	121.24	44	P	PKPdf	08 16 10.8	-0.8
	baz=293						
O53A	New Philadelph	121.31	46	P	PKPdf	08 16 11.4	-0.4
	baz=292						
VYHS	Vyhne	121.54	325	*e*PKIKP	PKiKP	08 16 12.2	+0.1
VYHS	Vyhne	121.54	325	*e*PKP	PKiKP	08 16 12.2	+0.1
MORC	Moravsky Berou	121.57	327	*e*PKP	PKiKP	08 16 12.4	+0.2
MDVR	Moldovita	121.60	320	⇑P	PKPdf	08 16 01.2	-11
MAUC	Maruska	121.64	326	*e*PKPDF	PKPdf	08 16 12.0	-0.2
KRLC	Kraliky	121.81	328	*e*PKPDF	PKiKP	08 16 13.0	+0.3
KRLC	Kraliky	121.81	328	*e*PKIKP	PKiKP	08 16 13.0	+0.3
SCHQ	Schefferville	121.86	25	PKP	PKPdf	08 16 12.3	0.0
	comp=Z,2.5nm,0.8s,baz=338,slow=5.4,SNR=4.1						
DPC	Dobruska-Polom	121.90	328	*e*PKPDF	PKPdf	08 16 11.7	-1.0
DPC	Dobruska-Polom	121.90	328	*e*PKIKP	PKPdf	08 16 11.7	-1.0
JAVC	Velka Javorina	122.00	326	*e*PKP	PKiKP	08 16 13.8	+0.7
MODS	Modra-Piesok	122.48	326	*e*PKIKP	PKiKP	08 16 14.5	+0.5
MODS	Modra-Piesok	122.48	326	*e*PKP	PKiKP	08 16 14.5	+0.5
KRUC	Moravsky	122.59	327	*e*PKP	PKPdf	08 16 13.6	-0.4
FRGS	Fruska Gora	122.62	321	⇑P	PKiKP	08 16 14.5	+0.1
BRG	Berggiesshubel	122.82	330	*e*PKP	PKiKP	08 16 15.0	+0.5
BRG				Amp		08 16 16.8	
	comp=Z,9.5nm,1.0s						
BRG	Berggiesshubel	122.82	330	P	PKiKP	08 16 23.3	+8.7
BRG				Amp		08 16 25.7	
	comp=Z,5.1nm,1.2s						
BRG	Berggiesshubel	122.82	330	*e*PKIKP	PKiKP	08 16 15.0	+0.5
BRG				*e*		08 16 23.2	
BRG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BRG				MLR	MLR		
	comp=Z,808nm,17.9s						
BRG				MLR	MLR		
	comp=N,347nm,15.5s						
KMSC	Kings Mountain	122.95	51	P	PKPdf	08 16 14.6	-0.5
	baz=288						
BLA	Blacksburg	122.97	49	P	PKPdf	08 16 14.6	-0.5
	baz=290						
CLL	Collm	123.02	330	*i* PKPdf	PKPdf	08 16 14.5	-0.2
CLL				*i* PKiKP	PKiKP	08 16 15.3	+0.4
	comp=Z,7.0nm,0.8s						
CLL				*e*pPKPdf	pPKPdf	08 16 25.0	-0.4
CLL				*e*x	x	08 16 43.0	
CLL				*e*PP	PP	08 17 54.0	+0.5
CLL				*e*SKPdf	SKPdf	08 19 42.0	-5.9
CLL				*e*PPP	PPP	08 20 24.0	
CLL				*e*PPPP		08 22 30.0	
CLL				*e*PS	PS	08 27 42.0	-8.3
CLL				*e*PPS	PPS	08 29 14.0	
CLL				*e*SS	SS	08 34 54.0	+19
CLL				*e*SSS	SSS	08 38 48.0	
CLL				*e*x	x	08 40 36.0	
CLL				AMS	AMS	09 11 00.0	
	comp=N,500nm,19.8s						
CLL				AMS	AMS	09 11 00.0	
	comp=E,400nm,20.9s						
CLL				AMS	AMS	09 11 00.0	
	comp=Z,600nm,20.0s						
CLL	Collm	123.02	330	*i* PKIKP	PKPdf	08 16 14.5	-0.2
CLL				*e*		08 16 25.0	
CLL				MLR	MLR		
	comp=Z,600nm,20.0s						
RONA	Rosalia, Austr	123.40	325	*e*PKP	PKPdf	08 16 14.9	-0.7
	comp=Z,5.6nm,0.8s						
SSPA	Standing Stone	123.50	44	P	PKPdf	08 16 15.9	-0.1
	baz=294						
CONA	Conrad Observa	123.52	326	*e*PKP	PKPdf	08 16 15.1	-0.8
	comp=Z,5.3nm,0.8s						
CKRC	Cesky Krumlov	123.85	327	*e*PKPDF	PKiKP	08 16 16.9	+0.2
CKRC	Cesky Krumlov	123.85	327	*e*PKIKP	PKiKP	08 16 16.9	+0.2
KHC	Kasperske Hory	124.06	328	*e*PKPDF	PKiKP	08 16 17.2	+0.1
KHC	Kasperske Hory	124.06	328	*e*PKIKP	PKiKP	08 16 17.2	+0.1
BINY	Binghamton	124.11	42	P	PKPdf	08 16 17.2	+0.1
	baz=297						
GERES	GERESS Array B	124.16	328	PKP	PKiKP	08 16 17.4	0.0
	comp=Z,4.1nm,0.5s,baz=76,slow=2.0,SNR=25						
SOKA	Soboth	124.68	325	*e*PKP	PKPdf	08 16 17.2	-1.0
	comp=Z,8.2nm,1.0s						
CBN	Corbin Frederi	124.84	47	P	PKPdf	08 16 18.5	-0.1
	baz=294						
OBKA	Obir	125.05	325	*e*PKP	PKPdf	08 16 18.4	-0.5
	comp=Z,6.4nm,1.5s						
BOJS	Bojanci	125.21	324	*i* PKPdf	PKPdf	08 16 18.5	-0.6
VISS	Visnje	125.28	324	*i* PKPdf	PKPdf	08 16 18.6	-0.6
KBA	Koelnbreinsper	125.40	326	*e*PKP	PKPdf	08 16 19.0	-0.7
	comp=Z,5.0nm,0.8s						
LBNH	Lisbon	125.69	38	P	PKPdf	08 16 20.0	0.0
	baz=302						
PAL	Palisades	126.04	42	P	PKPdf	08 16 20.6	-0.2
	baz=298						
ABTA	Abfaltersbach	126.06	326	*e*PKP	PKPdf	08 16 19.6	-1.2
	comp=Z,12nm,1.1s						
L61B	Northampton	126.14	40	P	PKPdf	08 16 20.9	-0.1
	baz=300						
WATA	Walderalm	126.21	327	*e*PKP	PKPdf	08 16 19.9	-1.3
	comp=Z,9.9nm,0.9s						
WTTA	Wattenberg	126.22	327	*e*PKP	PKPdf	08 16 20.0	-1.3
	comp=Z,18nm,0.9s						
EKA	Eskdalemuir Ar	126.44	343	PKP	PKiKP	08 16 22.5	+0.9
	comp=Z,1.4nm,0.4s,baz=16,slow=2.9,SNR=10						
MOTA	Moosalm	126.46	328	*e*PKP	PKPdf	08 16 20.1	-1.6
	comp=Z,12nm,1.0s						
SQTA	Sankt Quirin	126.48	327	*e*PKP	PKPdf	08 16 20.5	-1.1
	comp=Z,13nm,1.1s						
PKME	Peaks-Kenny Pk	126.68	35	P	PKPdf	08 16 22.1	+0.2
	baz=305						
MEM	Membach	126.76	333	*d*PKP	PKiKP	08 16 22.3	0.0
HRV	Adam Dziewonsk	126.83	39	P	PKPdf	08 16 22.4	+0.1
	baz=302						
FETA	Feichten	126.86	328	*e*PKP	PKPdf	08 16 21.6	-0.9
	comp=Z,12nm,1.0s						
DAVA	Damuels	127.14	328	*e*PKP	PKPdf	08 16 21.5	-1.4
	comp=Z,7.6nm,0.9s						
WLF	Walferdange	127.37	333	*d*PKP	PKPdf	08 16 22.8	-0.3
DAVOX	Davos/Dischmat	127.46	328	PKP	PKiKP	08 16 24.3	+0.1
	comp=Z,4.6nm,0.5s,baz=74,slow=1.4,SNR=9.4						
BMRD	Maredsous	127.53	334	*d*PKP	PKPdf	08 16 23.3	0.0
ROSC	El Rosal	134.04	89	PKP	PKPdf	08 16 36.9	-0.4
	comp=Z,5.6nm,0.4s,baz=158,slow=16,SNR=4.1						
LPAZ	La Paz	134.91	119	PKP	PKPdf	08 16 39.2	+0.2
	comp=Z,4.4nm,0.9s,baz=280,slow=6.1,SNR=13						
CPUP	Villa Florida	137.55	140	PKP	PKPdf	08 16 43.1	+0.1
	comp=Z,3.8nm,1.0s,baz=230,slow=3.9,SNR=4.9						
ESDC	Sonseca Array	139.60	331	PKhKP	PKPpre	08 16 40.3	
	comp=Z,0.4nm,0.5s,baz=53,slow=1.4,SNR=5.0						
ESDC				PP	PP	08 19 39.8	-0.8
	comp=Z,1.6nm,0.9s,baz=24,slow=7.1,SNR=8.5						
MDT	Midelt	145.08	324	P	PKPdf	08 16 56.2	-0.2
CBE	Ff, Capester	145.58	70	*e*	PKPdf	08 16 56.1	-1.5
ABD	La Joyeuse, An	145.59	69	*e*	PKPdf	08 16 56.1	-1.4
ZHG	ZHG	145.76	327	P	PKPab	08 16 59.0	+0.6
ARF	Arif	145.82	322	P	PKPab	08 16 59.0	+0.3
MAGL	Barre de l’ile	145.91	70	*e*	PKPdf	08 16 56.9	-1.3
GOLM	Goulmima	146.08	323	P	PKPab	08 17 00.1	+0.4
AVE	Averroes	146.29	328	P	PKPbc	08 16 59.8	+0.3
BIM	Bigot	146.44	72	PKPdf	PKPdf	08 16 57.3	-1.8
SVB	Belmont	146.50	74		PKPdf	08 16 57.7	-1.5
SVB	Belmont	146.50	74	*e*	PKPdf	08 16 58.5	-0.7
SLBI	Saint Lucia, B	146.63	73	*e*	PKPdf	08 16 57.4	-1.9
MPOM	Morne Pois Mar	146.65	72	*e*	PKPdf	08 16 57.9	-1.4
TPP	Pointe-a-Pierr	146.71	80	*e*	PKiKP	08 17 03.4	-0.6
MCLT	Moule a Chique	146.72	73	*e*	PKPdf	08 16 58.0	-1.5
TRN	Trinidad (W)	146.72	79	*e*	PKPdf	08 16 58.9	-0.7
TZRR	Tazzarine	147.10	322	P	PKPab	08 17 03.0	-0.6
SRHM	Skhour des Reh	147.19	327	P	PKPbc	08 17 03.0	+0.8
TOSP	Speyside	147.49	78	*e*	PKPbc	08 17 03.0	-0.4
BOAV	Boa Vista	147.58	94		PKPdf	08 17 01.3	+0.3
ZGR	Zagora	147.60	322	P	PKPbc	08 17 04.0	+0.5
OUZM	OUZ	147.72	324	P	PKPbc	08 17 04.0	+0.2
TTIG	Tnine Tigouga,	148.96	326	P	PKPbc	08 17 07.0	0.0
TORD	Torodi Ar. Bea	149.60	287	PKPbc	PKPbc	08 17 08.3	-0.6
	comp=Z,481nm,0.9s,baz=76,slow=2.7,SNR=16						
BDFB	Brasilia	151.21	137	PKP	PKPdf	08 17 06.7	-0.3
	comp=Z,26nm,0.9s,baz=209,slow=1.1,SNR=4.2						
BDFB				PKPbc	PKPbc	08 17 12.9	0.0
	comp=Z,20nm,0.7s,baz=193,slow=2.8,SNR=28						
BDFB				PKPab	PKPab	08 17 20.7	+0.1
	comp=Z,16nm,1.0s,baz=89,slow=1.5,SNR=7.7						
KIC	Kosan Boka	156.68	273	⇑*i*PKP1	PKPab	08 17 44.2	+0.3
	comp=Z,43nm,0.8s						
DBIC	Dimbokro	156.79	274	PKPab	PKPab	08 17 44.0	-0.4
	comp=Z,16nm,0.9s,baz=105,slow=6.2,SNR=10						
DBIC	Dimbokro	156.79	274	PKP2	PKPab	08 17 44.0	-0.4
TIC	Toumodi	156.96	274	⇓*i*PKP1	PKPab	08 17 44.9	-0.2
	comp=Z,13nm,0.3s						
LIC	Lamto	156.97	273	⇑*i*PKP1	PKPab	08 17 45.3	+0.1
	comp=Z,26nm,0.8s						

WEL 30 08:11:05.7,39°S±1°×17°6E±°,h8^{km}±1^{km},M1.8/15, ML2.0/16,MLv1.8/15,Error ellipse: s-maj=0.0km s-min=0.0km az=82.1,confirmed,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KATZ	Kakaramea	0.03	169	P	Pg	08 11 07.9	+0.4
KATZ				S	Sg	08 11 09.2	+0.5
RATZ	Rangitukua	0.10	39	P	Pg	08 11 08.7	+0.5
RITZ	Rihia Road	0.14	103	P	Pg	08 11 09.4	+0.7
RITZ				S	Sg	08 11 11.9	+1.1
KRVZ	Karewarewa	0.15	194	P	Pg	08 11 09.8	+0.8
NTVZ	North Tongarir	0.15	183	P	Pg	08 11 09.9	+0.8
NTVZ				S	Sg	08 11 12.5	+1.2
TMVZ	Te Maari	0.17	176	P	Pg	08 11 10.3	+0.9
TMVZ				S	Sg	08 11 12.7	+0.9
WTVZ	West Tongariro	0.18	204	P	Pg	08 11 10.5	+0.9
WTVZ				S	Sg	08 11 13.7	+1.5
ETVZ	East Tongariro	0.19	175	P	Pg	08 11 10.6	+0.9
ETVZ				S	Sg	08 11 13.9	+1.5
NNVZ	North Ngauruho	0.19	197	P	Pg	08 11 10.7	+0.9
NNVZ				S	Sg	08 11 13.9	+1.4
OTVZ	Oturere	0.22	185	P	Pg	08 11 11.1	+0.9
TWVZ	Taurewa	0.23	238	P	Pg	08 11 11.2	+0.8
TWVZ				S	Sg	08 11 14.7	+1.1
NGZ	Ngauruhoe	0.24	196	P	Pg	08 11 11.6	+1.0
NGZ				S	Sg	08 11 14.9	+1.1
SNVZ	South Ngauruho	0.24	189	P	Pg	08 11 11.7	+1.0
WATZ	Wairara	0.24	8	P	Pg	08 11 11.2	+0.6
WATZ				S	Sg	08 11 15.0	+1.1
TUVZ	Tukino	0.32	185	P	Pb	08 11 13.5	-0.4
DRZ	Dome Shelter	0.34	196	P	Pb	08 11 15.3	+1.0
WNVZ	Wahianoa	0.39	190	P	Pb	08 11 14.3	-0.6
MOVZ	Moawhango	0.46	174	P	Pg	08 11 15.4	+0.6
MRHZ	Matea Rd	0.58	79	P	Pg	08 11 17.1	+0.1
BHHZ	Black Hill Sta	0.61	152	P	Pb	08 11 18.5	-0.3
BKZ	Black Stump Fm	0.66	109	P	Pg	08 11 19.0	+0.5

IDC ***30*** *08:12:44.4±0.9,54°.99S×30°.91W,h0^{km},mb4.3/5, mbtmp4.4/5,Error ellipse: s-maj=42.7km s-min=22.1km az=62.0*

NEIC ***30*** *08:12:46.7±1.6,55°.1S±0°.1×31°.3W±0°.2,h10^{km}±1^{km}, mb4.7/17,Error ellipse: s-maj=25.1km s-min=17.3km az=207.0*

ISC 30 08:12:45.9±0.7,55°.0S±0°.1×31°.2W±0°.1,h10^{km},n39, $\sigma 0^{s}67$/36,mb4.7/13,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	3.18	281		Pn	08 13 35.1	-0.8
EFI	East Falkland	16.36	271	P	P	08 16 37.6	-0.6
SNAA	Sanae	20.62	155	P	P	08 17 25.4	+0.4
	4.6nm,0.8s,baz=319,slow=9.1,SNR=6.8						
	4.6nm,0.8s						
SNAA	Sanae	20.62	155	P	P	08 17 25.3	+0.3
MG02	Cerro Sombrero	22.35	260	P	P	08 17 44.6	+1.0
MG03	Isla Dawson	22.68	257	P	P	08 17 46.6	-0.5
MG03				IAmb	IAmb	08 17 56.2	
	comp=Z,48nm,1.5s						
GO10	Punta Arenas	23.25	258	P	P	08 17 53.0	-0.1
CPUP	Villa Florida	34.46	316	P	P	08 19 33.6	0.0
	comp=Z,6.2nm,1.0s,baz=154,slow=7.6,SNR=7.3						
	comp=Z,6.2nm,1.0s						
MT09	Talagante	34.84	291	P	P	08 19 36.8	-0.2
MT09				IAmb	IAmb	08 19 50.6	
	comp=Z,13nm,1.2s						
MT01	Popeta	34.91	291	P	P	08 19 37.4	-0.1
MT01				IAmb	IAmb	08 19 44.2	
	comp=Z,22nm,1.4s						
QSPA	South Pole Qui	35.23	180	P	P	08 19 40.0	-0.1
	comp=Z,2.3nm,1.0s,baz=256,slow=0.9,SNR=5.8						
	comp=Z,2.3nm,1.0s						
QSPA	South Pole Qui	35.23	180	P	P	08 19 40.4	+0.3
AC05	El Transito	38.34	297	P	P	08 20 08.2	+1.3
AC05				IAmb	IAmb	08 20 14.2	
	comp=Z,15nm,1.3s						
LVC	Limon Verde	42.84	304	P	P	08 20 44.6	+0.3
LVC				IAmb	IAmb	08 21 06.5	
	comp=Z,15nm,1.5s						

PTLB	Pontes e Lacer	45.02	320	P	P	08 21 01.8	+0.3
PTLB				IAmb	IAmb	08 21 03.2	
	comp=Z,6.0nm,0.7s						
GO01	Chusmiza	45.49	306	P	P	08 21 06.9	+1.1
GO01				IAmb	IAmb	08 21 08.7	
	comp=Z,6.7nm,0.8s						
MNMC	Minye Minye	46.15	305	P	P	08 21 11.9	+1.1
LPAZ	La Paz	47.95	309	P	P	08 21 26.6	+1.4
	comp=Z,9.0nm,0.5s,baz=122,slow=5.4,SNR=58						
	comp=Z,9.0nm,0.5s						
LPAZ	La Paz	47.95	309	P	P	08 21 26.1	+0.9
H10N1	ASCENSION HYDR	48.90	22	T	T	09 14 19.1	
	baz=192,slow=74,SNR=6.8						
H10N3	ASCENSION HYDR	48.90	22	T	T	09 14 18.8	
	baz=192,slow=74,SNR=6.1						
H10N2	ASCENSION HYDR	48.92	22	T	T	09 14 20.2	
	baz=192,slow=74,SNR=9.0						
ETMB	Extrema	52.91	315	P	P	08 22 02.7	+0.7
BOAV	Boa Vista	62.13	326	P	P	08 23 06.6	-0.3
BOAV				IAmb	IAmb	08 23 13.3	
	comp=Z,8.6nm,1.3s						
TOA0	Torodi Ar. Sit	73.36	33	P	P	08 24 18.2	+0.5
TOA0				IAmb	IAmb	08 24 28.8	
	comp=Z,10nm,1.5s						
TORD	Torodi Ar. Bea	73.36	33	P	P	08 24 17.4	-0.3
	comp=Z,1.4nm,0.3s,baz=198,slow=6.1,SNR=4.7						
	comp=Z,1.4nm,0.3s						
YKA	Yellowknife Ar	133.91	320	PKP	PKPdf	08 32 00.5	-1.1
	comp=Z,0.4nm,0.7s,baz=124,slow=2.4,SNR=10						
ZALV	Zalesovo Beam	143.96	65	PKP	PKPdf	08 32 19.2	-1.1
	comp=Z,0.5nm,0.4s,baz=233,slow=6.5,SNR=3.5						
BCAR	Beaver Creek A	145.11	312		PKPdf	08 32 21.9	-0.1
L27K	Beaver Creek,	145.12	312		PKPdf	08 32 22.1	0.0
K27K	Chicken	145.54	313		PKPab	08 32 23.8	+0.6
I26K	Coal Creek Min	146.36	315		PKPab	08 32 25.9	-0.4
RIDG	Independent Ri	146.63	312		PKPab	08 32 27.1	-0.3
PAX	Paxson	146.67	311		PKPbc	08 32 26.7	+0.3
IL31		147.75	314		PKPbc	08 32 29.8	+0.6
ILAR	Eielson Array	147.75	314	PKPbc	PKPbc	08 32 29.6	+0.3
	comp=Z,4.0nm,0.8s,baz=121,slow=1.6,SNR=49						
ILAR	Eielson Array	147.75	314		PKPbc	08 32 29.8	+0.5
CCB	Clear Creek Bu	148.11	313		PKPbc	08 32 29.9	-0.3
SONM	Songino Array	152.93	88	PKPbc	PKPbc	08 32 42.0	-0.5
	comp=Z,0.6nm,0.5s,baz=252,slow=3.1,SNR=3.0						

WEL 30 08:28:32.0,39°S±1°×17°6E±°,h5^{km}±2^{km},M0.8/11,ML2.1/7, MLv0.8/11,Error ellipse: s-maj=0.0km s-min=0.0km az=86.7,confirmed,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KATZ	Kakaramea	0.01	303	P	Pg	08 28 33.2	+0.1
RITZ	Rihia Road	0.12	88	P	Pg	08 28 34.9	+0.5
RITZ				S	Sg	08 28 37.6	+1.6
NTVZ	North Tongarir	0.12	192	P	Pg	08 28 35.4	+0.8
NTVZ				S	Sg	08 28 37.8	+1.6
KRVZ	Karewarewa	0.12	204	P	Pg	08 28 37.4	+2.9
RATZ	Rangitukua	0.12	24	P	Pg	08 28 35.6	+1.1
TMVZ	Te Maari	0.13	181	P	Pg	08 28 35.7	+0.9
TMVZ				S	Sg	08 28 37.9	+1.3
ETVZ	East Tongariro	0.15	179	P	Pg	08 28 36.1	+0.9
ETVZ				S	Sg	08 28 39.2	+2.0
WTVZ	West Tongariro	0.16	214	P	Pg	08 28 37.9	+2.6
WTVZ				S	Sg	08 28 39.2	+1.8
WTVZ				P		08 28 43.3	
NNVZ	North Ngauruho	0.17	205	P	Pg	08 28 36.2	+0.8
NNVZ				S	Sg	08 28 39.7	+2.1
OTVZ	Oturere	0.18	190	P	Pg	08 28 38.0	+2.3
NGZ	Ngauruhoe	0.21	203	P	Pg	08 28 40.0	+3.9
SNVZ	South Ngauruho	0.21	194	P	Pg	08 28 40.9	+4.7
TWVZ	Taurewa	0.23	247	P	Pg	08 28 43.9	+7.4
WATZ	Wairara	0.27	4	P	Pn	08 28 43.2	+0.5
FWVZ	Far West T-bar	0.30	204	P	Pn	08 28 46.0	+2.7
PKVZ	Pokaka	0.42	222	P	Pn	08 28 47.6	+2.9
MTVZ	Mangateitei	0.44	204	P	Pn	08 28 48.4	+3.3
MRHZ	Matea Rd	0.57	75	P	Pn	08 28 49.4	+2.6
TLZ	Tolley Road	0.66	348	P	Pn	08 28 49.2	+1.1
VRZ	Vera Road	0.75	259	P	Pn	08 28 54.1	+4.9
HIZ	Hauiti	0.81	305	P	Pn	08 28 53.5	+3.4
WAZ	Wanganui	0.95	216	P	Pn	08 28 57.6	+5.6
TOZ	Tahuroa Road	1.26	353	P	Pn	08 29 01.2	+5.1
TCW	Tory Channel	2.48	206	P	Pg	08 29 21.2	+1.7
THZ	Tophouse	3.51	217	P	Pn	08 29 30.6	+3.4
KHZ	Kahutara	3.81	205	P	Pn	08 29 30.5	-0.7
LTZ	Lake Taylor	4.60	213	P	Pn	08 29 43.3	+1.1

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*IDC **30** 08:30:04.2±1.5,38°.33N×142°.31E,h0^{km},mb3.7/4, mbtmp3.6/6,ML2.5/2,Error ellipse: s-maj=36.8km s-min=21.0km az=85.0*

*JMA **30** 08:30:14.0±0.1,38°.2N±0°.3×141°.7E±0°.5,h50^{km},MV3.4/40, E OFF MIYAGI PREF*

ISC 30 08:30:12.3±1.4,38°.17N±0°.05×141°.9E±0°.1,h52^{km}±10^{km}, n26,σ1^{s}18/30,mb3.8/4,14D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.33	296	⇓*i*P	Pn	08 30 22.5	+0.6
JIKH				⇓S	Sn	08 30 28.4	-0.3
JIO	Ouri	0.48	306	⇓*i*P	Pn	08 30 24.0	+0.5
JIO				⇓S	Sn	08 30 30.8	-0.8
JKMT	Kesennumamotoy	0.71	336	⇓*i*P	Pn	08 30 27.0	+0.7
JKMT				⇓S	Sn	08 30 35.9	-0.4
JOFO	Osakifurukawao	0.85	301	*i*P	Pn	08 30 28.6	+0.4
JOFO				*e*S	Sn	08 30 39.4	-0.3
JMM	Marumori	0.88	250	⇓*i*P	Pn	08 30 28.3	-0.3
JMM				⇓S	Sn	08 30 38.6	-1.8
JMK	Ichinoseki	0.93	328	*i*P	Pn	08 30 29.9	+0.8
JMK				S	Sn	08 30 41.0	-0.4
JOU	Okura	0.95	282	⇓*i*P	Pn	08 30 29.5	+0.1
JOU				⇓S	Sn	08 30 41.1	-0.9
JFK	Kawauchi	1.11	224	*i*P	Pn	08 30 31.9	+0.3
JFK				S	Sn	08 30 45.1	-0.8
JOTO	OTAMA OYAMA	1.34	244	P	Pn	08 30 35.4	+0.7
JOTO				S	Sn	08 30 50.8	-0.7
JOM	Ohasama	1.37	342	*i*P	Pn	08 30 36.4	+1.2
JOM				*e*S	Sn	08 30 52.6	+0.4
JYK	Kaneyama	1.39	303	⇓*i*P	Pn	08 30 35.7	+0.4
JYS	Shirataka	1.40	273	⇓*i*P	Pn	08 30 35.8	+0.2
JRG	Rokugo	1.55	323	⇓*i*P	Pn	08 30 38.7	+1.2
JYA	Atsumi	1.73	285	⇓P	Pn	08 30 40.3	+0.4
MJAR	Matsushiro Arr	3.32	242	Pn	Pn	08 31 03.2	+1.4
	0.4nm,0.3s,baz=47,slow=10,SNR=12						
MJAR				Sn	Sn	08 31 49.6	+10
	0.3nm,0.3s,baz=72,slow=19,SNR=1.9						
	5.6nm,0.7s						
ASAJ	Asahikawa	5.97	5	Pn	Pn	08 31 32.1	-6.0
	0.1nm,0.3s,baz=82,slow=12,SNR=1.7						
ASAJ				Sn	Sn	08 32 40.7	-4.4
	0.1nm,0.3s,baz=340,slow=21,SNR=1.6						
	5.9nm,1.1s						
H11N2	WAKE ISLAND Hy	28.45	123	T	T	09 06 16.2	
	baz=316,slow=75,SNR=58						
H11N1	WAKE ISLAND Hy	28.46	123	T	T	09 06 16.9	
	baz=316,slow=75,SNR=59						
H11N3	WAKE ISLAND Hy	28.47	123	T	T	09 06 19.8	
	baz=316,slow=75,SNR=53						
H11S1	WAKE ISLAND Hy	29.21	125	T	T	09 07 17.4	
	baz=318,slow=76,SNR=32						
H11S3	WAKE ISLAND Hy	29.21	125	T	T	09 07 16.2	
	baz=318,slow=76,SNR=42						
H11S2	WAKE ISLAND Hy	29.22	125	T	T	09 07 16.7	
	baz=318,slow=76,SNR=23						
MKAR	Makanchi Array	43.82	301	P	P	08 38 13.6	+0.5
	0.6nm,0.6s,baz=87,slow=9.6,SNR=7.7						
	0.6nm,0.6s						
KURBB	Kurchatov Arra	45.58	307	P	P	08 38 26.6	-0.5
	1.3nm,0.6s,baz=82,slow=8.0,SNR=9.2						
	1.3nm,0.6s						
WRA	Warramunga Arr	58.23	188	P	P	08 40 02.5	+1.1
	0.4nm,0.4s,baz=4.7,slow=7.1,SNR=10						
	0.4nm,0.4s						
ASAR	Alice Springs	61.96	188	P	P	08 40 26.4	-0.4
	0.3nm,0.4s,baz=358,slow=5.5,SNR=5.4						
	0.3nm,0.4s						

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*NEIC **30** 08:32:49.3±0.5,37°.38N±0°.02×97°.40W±0°.02,h4^{km}±2^{km}, mb_Lg2.9/62,ML3.3/34,Error ellipse: s-maj=2.6km s-min=2.1km az=166.0*

*ANF **30** 08:32:49.9±0.1,37°.38N×97°.38W,h5^{km},ML3.6/18,Error ellipse: s-maj=2.8km s-min=1.7km az=38.0*

ISC 30 08:32:49.8±1.2,37°.38N±0°.03×97°.38W±0°.02,h5^{km}±10^{km}, n93,σ0^{s}37/67,Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KS20	Mayfield South	0.20	224		Pg	08 32 53.8	+0.1
KS20				Sg	Sg	08 32 56.7	+0.4
KS21	Milan North St	0.24	249	IAML		08 32 58.0	
	6µm,0.2s						
KS21	Milan North St	0.24	249	Pg	Pg	08 32 54.6	+0.1
KS21				Sg	Sg	08 32 57.9	+0.2
KAN09	Caldwell North	0.30	218		Pg	08 32 55.8	+0.1
KAN09				Sg	Sg	08 33 00.1	+0.4
KAN09				IAML		08 33 00.2	
	comp=N,4µm,0.2s						
KAN09				IAML		08 33 00.3	
	comp=E,5µm,0.3s						
KAN13	South Haven SW	0.37	192		Pg	08 32 57.1	+0.2
KAN13				IAML		08 33 08.2	
	comp=N,3µm,0.3s						
KAN13				IAML		08 33 09.5	
	comp=E,2µm,0.3s						
KAN01	Argonia South	0.37	234	Pg	Pg	08 32 57.0	0.0
KAN06	Argonia West S	0.40	252		Pg	08 32 57.6	0.0
KAN17	Caldwell West	0.45	223	Pg	Pg	08 32 58.5	0.0
KAN17				IAML		08 33 05.4	
	comp=N,2µm,0.3s						
KAN17				IAML		08 33 07.4	
	comp=E,3µm,0.3s						
KAN08	Anthony NE Sta	0.49	253	Pg	Pg	08 32 59.3	0.0
KAN08				Sg	Sg	08 33 05.9	+0.2
KAN08				IAML		08 33 06.1	
	comp=E,2µm,0.2s						
KAN12	Harper NE Stat	0.50	261		Pg	08 32 59.3	0.0
KAN12				Sg	Sg	08 33 06.0	+0.1
KAN12				IAML		08 33 08.1	
	comp=N,2µm,0.4s						
KAN12				IAML		08 33 11.4	
	comp=E,3µm,0.4s						
KAN14	Manchester OK	0.62	228		Pg	08 33 01.7	-0.1
KAN14				IAML		08 33 13.5	
	comp=N,1µm,0.1s						
KAN14				IAML		08 33 20.5	
	comp=E,1µm,0.1s						
BLOK	Blackwell	0.63	168		Pg	08 33 01.8	0.0
BLOK				IAML		08 33 16.2	
	comp=E,1µm,0.2s						
BLOK				IAML		08 33 16.8	
	comp=N,2µm,0.2s						
GC02	Grant County #	0.65	216	Pg	Pg	08 33 02.1	-0.1
T35A	Sooner Cattle	0.83	123	Pg	Pg	08 33 05.6	-0.1
T35B	Sooner Cattle	0.83	123	P	Pg	08 33 05.6	-0.1
	baz=304,SNR=109						
T35B				S	Sg	08 33 17.0	+0.4
	baz=304						
OK032	Salt Plains WL	0.87	230	Pg	Pg	08 33 06.3	-0.2
OK032				Sg	Sg	08 33 18.1	+0.2
OK032				IAML		08 33 25.8	
	comp=N,1µm,0.2s						
OK051	E0350 and S346	0.97	153		Pg	08 33 08.1	-0.3
CROK	Carrier	0.99	209	Pg	Pg	08 33 08.5	-0.4
CROK				IAML		08 33 26.2	
	comp=E,880nm,0.2s						
CROK				IAML		08 33 27.7	
	comp=N,983nm,0.2s						
OK048	Pawnee Station	1.02	160		Pg	08 33 09.0	-0.3
OK048				IAML		08 33 28.8	
	comp=N,611nm,0.1s						
QUOK	Quay	1.32	156		Pn	08 33 14.4	-0.5
OK038	West end E0370	1.41	231	Pg	Pn	08 33 16.0	-0.3
NOKA	Waynoka	1.44	240	Pg	Pn	08 33 16.4	-0.3
OK052	Battle Ridge R	1.46	161		Pn	08 33 16.6	-0.2
R32A	Long Quarter,	1.48	315		Pn	08 33 17.0	-0.2
R32A	Long Quarter,	1.48	315	P	Pn	08 33 16.9	-0.3
	baz=135,SNR=54						
R32A				S	Sb	08 33 36.8	-0.3
	baz=135						
OK031	S. Brethren Rd	1.48	163		Pn	08 33 17.3	0.0
OK030	Cody Creek RV	1.52	161		Pn	08 33 17.7	0.0
U32A	Winter Ranch,	1.64	233		Pb	08 33 19.9	-0.6
U32A	Winter Ranch,	1.64	233	P	Pn	08 33 19.2	-0.1
	baz=52,SNR=14						
DEOK	Depew	1.69	155		Pn	08 33 20.2	+0.2
KSU1	Kansas State U	1.83	19	Pn	Pn	08 33 22.3	+0.4
KSU1	Kansas State U	1.83	19	P	Pn	08 33 22.0	0.0
	baz=200,SNR=48						
KSU1				S	Sb	08 33 46.1	-0.8
	baz=200						
TUL1	Leonard	1.94	138	P	Pn	08 33 24.1	+0.6
	baz=319,SNR=86						
TUL1				S	Sn	08 33 49.0	+0.7
	baz=319						
OKCSW	OKLAHOMA CITY	1.97	181	Pn	Pn	08 33 24.1	+0.3
FNO	Franklin	2.11	180	Pn	Pn	08 33 26.2	+0.4
FNO				IAmb_Lg		08 33 55.5	
	comp=Z,33nm,0.8s						
W35A	Tecumseh	2.25	169	Pn	Pn	08 33 28.2	+0.4
CBKS	Cedar Bluff	2.35	308	P	Pn	08 33 29.6	+0.5
	baz=127,SNR=14						
CBKS				S	Sn	08 33 59.1	+0.7
	baz=127						
U38A	Gravette	2.58	110	P	Pn	08 33 32.3	0.0
	baz=292,SNR=37						
U38A				S	Sn	08 34 05.1	+1.1
	baz=292						
WMOK	Wichita Mounta	2.87	204	Pn	Pn	08 33 36.5	+0.3
WMOK	Wichita Mounta	2.87	204	P	Pn	08 33 35.8	-0.5
	baz=22						
WMOK				S	Sn	08 34 11.2	0.0
	baz=22						
HHAR	Hobbs	2.97	111	IAmb_Lg		08 34 29.9	
	comp=Z,52nm,0.8s						
X37A	Clayton	3.22	149	Pn	Pn	08 33 41.2	+0.1
X37A	Clayton	3.22	149	P	Pn	08 33 40.9	-0.2
	baz=330,SNR=60						
S39A	Bolivar	3.24	83	P	Pn	08 33 41.7	+0.3
	baz=266,SNR=27						
N33B	J Bar K, Exete	3.36	359	P	Pn	08 33 43.3	+0.3
	baz=179,SNR=13						
LOOK	Love County	3.38	177	IAmb_Lg		08 34 40.7	
	comp=Z,23nm,0.8s						
WTFS	Witchita Falls	3.71	194	IAmb_Lg		08 34 57.7	
	comp=Z,12nm,0.8s						
N35A	Tabor	3.73	21	P	Pn	08 33 48.8	+0.7
	baz=202						
P38A	Dawn	3.76	52	IAmb_Lg		08 34 54.8	
	comp=Z,33nm,0.8s						
P38A	Dawn	3.76	52	P	Pn	08 33 47.8	-0.7
	baz=235,SNR=6.1						
U40A	Yellville	3.77	104	P	Pn	08 33 48.5	-0.2
	baz=287,SNR=42						
U40A				P	Pn	08 33 48.5	-0.2
	baz=287,SNR=42						
Z35A	Perchaven, San	4.04	178	IAmb_Lg		08 35 03.5	
	comp=Z,20nm,0.8s						
Z35A	Perchaven, San	4.04	178	P	Pn	08 33 52.5	+0.2
	baz=358						
BGNE	Belgrade	4.07	352	IAmb_Lg		08 35 00.4	
	comp=Z,36nm,0.8s						
R40A	Maddies Statio	4.15	76	IAmb_Lg		08 35 03.1	
	comp=Z,17nm,0.7s						
R40A	Maddies Statio	4.15	76	P	Pn	08 33 54.0	+0.2
	baz=259,SNR=19						
MIAR	Mount Ida	4.18	131	IAmb_Lg		08 35 04.0	
	comp=Z,23nm,0.8s						
MIAR	Mount Ida	4.18	131	P	Pn	08 33 54.3	0.0
	baz=314,SNR=12						
FW03	Perrin-Whitt E	4.36	188	IAmb_Lg		08 35 09.9	
	comp=Z,27nm,0.8s						
FW06	Azle	4.39	182	IAmb_Lg		08 35 18.0	
	comp=Z,14nm,0.8s						
FCAR	Ozark Folk Cen	4.48	108	IAmb_Lg		08 35 13.3	
	comp=Z,23nm,0.8s						
Z38A	Mt. Pleasant	4.55	154	IAmb_Lg		08 35 19.7	
	comp=Z,30nm,0.8s						
WHAR	Wooly Hollow	4.61	115	IAmb_Lg		08 35 23.1	
	comp=Z,30nm,0.9s						
APMT	Aspermont	4.62	210	IAmb_Lg		08 35 26.3	
	comp=Z,7.2nm,0.7s						
FW07	Weatherford	4.67	184	IAmb_Lg		08 35 18.5	
	comp=Z,14nm,0.8s						
DKNS	Dickens	4.69	219	IAmb_Lg		08 35 19.0	
	comp=Z,9.1nm,0.9s						
N38A	Joes South For	4.70	42	IAmb_Lg		08 35 17.6	
	comp=Z,28nm,0.8s						
P40A	Paris	4.71	61	IAmb_Lg		08 35 28.4	
	comp=Z,29nm,0.8s						
CCM	Cathedral Cave	4.91	80	IAmb_Lg		08 35 34.8	
	comp=Z,14nm,0.8s						
WLAR	White Oak Lake	5.07	135	IAmb_Lg		08 35 43.5	
	comp=Z,21nm,0.8s						
OGNE	Ogallala	5.08	316	IAmb_Lg		08 35 33.5	
	comp=Z,22nm,0.8s						
OGNE	Ogallala	5.08	316	P	Pn	08 34 07.4	+0.7
	baz=133,SNR=10						
WHTX	Lake Whitney,	5.37	181	P	Pn	08 34 10.8	+0.2
	baz=0.5,SNR=6.6						
POST	Post	5.46	219	IAmb_Lg		08 35 54.8	
	comp=Z,7.5nm,0.8s						
MSTX	Muleshoe	5.55	234	IAmb_Lg		08 35 54.1	
	comp=Z,14nm,1.1s						
FVM	French Village	5.55	82	IAmb_Lg		08 35 45.9	
	comp=Z,12nm,0.8s						
SCIA	State Center	5.55	34	IAmb_Lg		08 35 50.7	
	comp=Z,21nm,0.7s						
T25A	Trinidad	5.61	270	IAmb_Lg		08 35 59.4	
	comp=Z,18nm,0.9s						
SLM	Saint Louis	5.78	75	IAmb_Lg		08 35 54.7	
	comp=Z,19nm,0.7s						
CGM3	Cape Girardeau	6.16	88	IAmb_Lg		08 36 04.1	
	comp=Z,15nm,1.1s						
BRDY	Brady	6.22	193	IAmb_Lg		08 36 10.1	
	comp=Z,11nm,0.8s						
BRIGG	Briggsdale	6.28	303	IAmb_Lg		08 36 11.4	
	comp=Z,19nm,0.9s						
ECSD	EROS Data Cent	6.38	5	P	Pn	08 34 24.2	-0.3
	baz=186,SNR=33						
S44A	Carbondale	6.47	85	IAmb_Lg		08 36 22.7	
	comp=Z,13nm,0.7s						
S44A	Carbondale	6.47	85	P	Pn	08 34 25.3	-0.4
	baz=270,SNR=7.7						
SIUC	Southern Illin	6.50	85	IAmb_Lg		08 36 25.8	
	comp=Z,15nm,0.8s						
435B	Jarrell	6.58	182	IAmb_Lg		08 36 23.4	
	comp=Z,20nm,0.9s						
ISCO	Idaho Springs	6.89	293	IAmb_Lg		08 36 44.2	
	comp=Z,11nm,0.8s						
OZNA	Ozona	7.15	207	IAmb_Lg		08 36 38.4	
	comp=Z,7.2nm,0.9s						
SUSD	Miller	7.16	351	IAmb_Lg		08 36 43.9	
	comp=Z,18nm,0.8s						
N23A	Red Feather La	7.53	300	IAmb_Lg		08 36 52.5	
	comp=Z,12nm,0.9s						
HNDO	Hondo	7.98	192	IAmb_Lg		08 37 11.6	
	comp=Z,20nm,1.2s						
K22A	Casper	8.77	310	IAmb_Lg		08 37 49.4	
	comp=Z,13nm,1.1s						

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*NEIC **30** 08:51:08.8±1.3,4°.36S±0°.07×102°.37E±0°.06,h58^{km}±6^{km}, mb5.0/47,Error ellipse: s-maj=11.2km s-min=7.6km az=206.0*

*DJA **30** 08:51:09.2±0.2,4°S±2°×10°2E±°,h60^{km},M4.7/23, mb4.7/15,mB5.2/5,MLv4.8/23,Mw(mB)4.6/5,MwMwp4.9/1, Mwp5.2/1*

*IDC **30** 08:51:12.8±3.1,4°.21S×102°.51E,h94^{km}±25^{km},mb4.3/35, mbtmp4.6/36,MS3.3/1,Error ellipse: s-maj=18.2km s-min=9.2km az=43.0*

ISC 30 08:51:08.1±0.5,4°.36S±0°.05×102°.40E±0°.05,h55^{km}±4^{km}, n177,σ1^{s}26/201,mb4.8/70,1C-2D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	0.55	90	Pn	Pn	08 51 21.7	+1.4
MNAI				Sn	Sn	08 51 31.2	+1.9
MNAI	Manna	0.55	90	P	Pn	08 51 21.8	+1.4
MNAI				S	Sn	08 51 31.2	+1.9
KSI	Kapahiang	0.73	15	P	Pn	08 51 23.5	+1.0
KSI				S	Sn	08 51 33.8	+0.8
MASI	Maura Aman, Be	1.22	352	P	Pn	08 51 30.1	+1.1
MASI				S	Sn	08 51 46.5	+2.0
LWLI	Liwa	1.78	112	P	Pn	08 51 38.5	+1.9
LWLI				S	Sn	08 51 59.8	+1.6
KASI	Kota Agung	2.39	119	P	Pn	08 51 46.4	+1.5
KASI				S	Sn	08 52 13.0	0.0
KLI	Kotabumi	2.50	102	P	Pn	08 51 48.2	+1.8
KLI				S	Sn	08 52 15.0	-0.7
PMBI	Palembang	2.76	59	Pn	Pn	08 51 49.9	-0.1
PMBI	Palembang	2.76	59	P	Pn	08 51 50.3	+0.3
PMBI				S	Sn	08 52 22.4	+0.3
PPSI	Pulau Pagai	2.86	304	P	Pn	08 51 53.6	+2.2
PPSI				S	Sn	08 52 26.2	+1.6
JMBI	JAMBI	2.98	25	P	Pn	08 51 54.6	+1.7
JMBI				S	Sn	08 52 29.7	+2.3
BLSI	Bandar Lampung	3.01	110	P	Pn	08 51 54.5	+1.2
SDSI	Sungai Dareh	3.54	344	P	Pn	08 52 02.5	+1.9
SDSI				S	Sn	08 52 48.0	+6.8
PDSI	Padang	3.93	330	P	Pn	08 52 07.6	+1.5
PDSI				S	Sn	08 52 52.6	+1.6
CGJI	Cibinong	3.97	125	P	Pn	08 52 08.4	+1.9
CGJI				S	Sn	08 52 50.1	-1.8
BKNI	Bangkinang	4.85	344	Pn	Pn	08 52 21.6	+3.0
BKNI	Bangkinang	4.85	344	P	Pn	08 52 21.6	+3.0
CNJI	Cibinong	5.54	122	P	Pn	08 52 29.0	+0.9
	33nm,1.5s,1µm0.2nm						
CNJI				S	Sn	08 53 30.9	+0.3
	33nm,1.5s,1µm0.2nm						
BTDF	Bukit Timah Da	5.84	14	P	Pn	08 52 41.0	+8.8
PBSI	Pulau Batu	5.93	316	P	Pn	08 52 34.7	+1.2
	110nm,1.6s,0.8nm						
PBSI				S	Sn	08 53 42.5	+2.3
	110nm,1.6s,0.8nm						
BBJI	Bungbulang	6.07	121	P	Pn	08 52 37.2	+1.9
JCJI	Jatiwangi	6.22	110	P	Pn	08 52 39.5	+2.2
	319nm,0.4s,2.0nm						
JCJI				S	Sn	08 53 51.7	+4.6
	319nm,0.4s,2.0nm						
MYKOM	Kota Tinggi	6.28	13		Pn	08 52 40.0	+1.9
XMI	Christmas Isla	6.88	152	P	Pn	08 52 42.7	-3.7
CMJI	Cimerak	6.91	120	P	Pn	08 52 48.2	+1.3
	80nm,1.1s,0.3nm						
CMJI				S	Sn	08 54 04.8	+0.6
	80nm,1.1s,0.3nm						
GSI	Gunungsitoli	7.41	319	Pn	Pn	08 52 53.6	0.0
GSI	Gunungsitoli	7.41	319	P	Pn	08 52 54.3	+0.6
GSI	Gunungsitoli	7.41	319	P	Pn	08 52 53.9	+0.2
GSI				S	Sn	08 54 13.7	-2.7
RPSI	Rantau Prapat	7.82	334	Pn	Pn	08 52 59.6	+0.2
SMRI	Semarang	8.44	109	P	Pn	08 53 09.0	+1.2
	102nm,1.1s						
YOGI	Yogyakarta	8.57	114	P	Pn	08 53 11.0	+1.4
	111nm,1.5s						
TSI	Tuntungan	8.70	334	P	Pn	08 53 12.8	+1.5
	101nm,0.5s						
UGM	Wanagama	8.81	114	Pn	Pn	08 53 13.9	+0.9
UGM	Wanagama	8.81	114	P	Pn	08 53 15.6	+2.6
UGM	Wanagama	8.81	114	P	Pn	08 53 13.3	+0.3
	149nm,1.6s						
SNSI	Sinabang, Aceh	9.06	318	S	Pn	08 53 17.7	+1.4
KCSI	Kotacane, Aceh	9.09	329	P	Pn	08 53 18.0	+1.2
	12nm,0.4s						
COCO	West Island	9.53	215		Pn	08 53 22.6	-0.1
TBJI	Tambak Boyo	9.72	105	P	Pn	08 53 25.7	+0.4
	113nm,1.0s						
SBUM	Sibu	11.92	56	Pn	Pn	08 53 56.2	+0.8
JAGI	Jajag, Banyuwa	12.37	110		Pn	08 54 02.1	+0.5
JAGI	Jajag, Banyuwa	12.37	110	P	Pn	08 54 04.0	+2.4
JAGI	Jajag, Banyuwa	12.37	110	S	Pn	08 54 02.6	+1.0
PLAI	Plampang	15.90	107	P	Pn	08 54 48.9	+0.4
KAPI	Kappang	17.31	93	P	Pn	08 55 06.4	+0.3
	6.0nm,0.4s,baz=285,slow=20,SNR=2.6						
NAYO	Nakonayok	18.58	357	P	Pn	08 55 22.3	+0.7
TOLI2	Tolitoli	19.15	74	P	P	08 55 26.7	-0.4
TOLI2	Tolitoli	19.15	74	P	Pn	08 55 29.7	+1.2
LUWI	Luwuk	20.61	81	P	P	08 55 43.9	+0.9
LUWI				IAmb	IAmb	08 55 59.8	
	comp=Z,57nm,0.9s						
PHRA	Phrae	22.81	355	P	P	08 56 06.9	+0.3
CM31	Chiang Mai Arr	22.93	352	P	P	08 56 07.5	-0.2
CMAR	Chiang Mai Arr	22.93	352	P	P	08 56 07.1	-0.6
	comp=Z,6.3nm,0.7s,baz=185,slow=8.8,SNR=38						
	comp=Z,6.3nm,0.7s						
CMAR	Chiang Mai Arr	22.93	352	P	P	08 56 07.3	-0.3
CHTO	Chiang Mai	23.27	352	P	P	08 56 10.7	-0.5
CRAI	Chiangrai	24.51	355	P	P	08 56 22.2	-0.3
PALK	Pallekele	24.54	298	LR	LR	09 05 07.5	
	comp=Z,66nm,18.4s,baz=143,slow=34						
TNTI	Ternate	25.46	79	P	P	08 56 31.7	+0.4
TNTI				IAmb	IAmb	08 57 01.2	
	comp=Z,29nm,1.2s						

FITZ	**Fitzroy Crossi**	**26.52**	**123**	P	**P**	**08 56 40.8**	**0.0**
KMI	**Kunming**	**29.31**	**1**	⇓P	**P**	**08 57 07.0**	**+1.2**
KMI				pmax	pmax		
	comp=Z,11nm,0.9s						
PZH	**PanZhiHua**	**30.68**	**359**	P	**P**	**08 57 18.0**	**+0.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,120nm,6.1s						
SHL	**Shillong**	**31.45**	**342**	P	**P**	**08 57 24.1**	**-0.6**
H01W3	**Cape Leeuwin H**	**32.26**	**162**	T	T	09 31 17.7	
	baz=339,slow=76,SNR=47						
H01W2	**Cape Leeuwin H**	**32.28**	**162**	T	T	09 31 18.7	
	baz=339,slow=76,SNR=38						
H01W1	**Cape Leeuwin H**	**32.28**	**162**	T	T	09 31 24.4	
	baz=339,slow=76,SNR=39						
TAPN	**Taplejung**	**34.57**	**337**	*e*P	**P**	**08 57 52.7**	**+0.7**
	comp=Z,26nm,0.3s						
RAMN	**Ramite**	**34.67**	**335**	*e*P	**P**	**08 57 53.9**	**+1.0**
	comp=Z,29nm,0.3s						
WB0	**Warramunga Arr**	**34.73**	**119**	P	**P**	**08 57 53.6**	**+0.3**
WB0				IAmb	IAmb	08 58 28.1	
	comp=Z,14nm,1.3s						
WRA	**Warramunga Arr**	**34.75**	**119**	P	**P**	**08 57 53.5**	**0.0**
	comp=Z,2.6nm,0.3s,baz=301,slow=9.1,SNR=74						
WRA				PcP	**PcP**	**09 00 26.6**	**+0.4**
	comp=Z,1.2nm,0.4s,baz=307,slow=2.1,SNR=6.3						
WRA				S	**S**	**09 03 17.4**	**-2.8**
	comp=Z,0.2nm,0.7s,baz=296,slow=10.0,SNR=1.9						
	comp=Z,2.6nm,0.3s						
WRA	**Warramunga Arr**	**34.75**	**119**	P	**P**	**08 57 52.7**	**-0.7**
WRAB	**Tennant Creek**	**34.76**	**119**	P	**P**	**08 57 53.1**	**-0.4**
WRAB				sP	**sP**	**08 58 12.5**	**-1.6**
WB2	**Warramunga Arr**	**34.76**	**119**	P	**P**	**08 57 53.5**	**0.0**
JIRN	**Jiri**	**35.47**	**335**	*e*P	**P**	**08 58 00.4**	**+0.5**
	comp=Z,64nm,0.3s						
PKI	**Pulchoki**	**35.73**	**334**	*e*P	**P**	**08 58 02.1**	**0.0**
	comp=Z,14nm,0.3s						
PKIN	**Phulchoki**	**35.74**	**334**	*e*P	**P**	**08 58 02.0**	**-0.1**
	comp=Z,17nm,0.3s						
GUN	**Gumba**	**35.82**	**335**	*e*P	**P**	**08 58 03.4**	**+0.5**
	comp=Z,106nm,0.3s						
DMN	**Daman**	**35.90**	**333**	*e*P	**P**	**08 58 03.6**	**+0.2**
	comp=Z,15nm,0.2s						
AS31	**Alice Springs**	**35.94**	**125**	P	**P**	**08 58 04.5**	**+0.8**
AS31				IAmb	IAmb	08 58 10.6	
	comp=Z,6.2nm,0.3s						
ASAR	**Alice Springs**	**35.94**	**125**	P	**P**	**08 58 04.5**	**+0.8**
	comp=Z,1.9nm,0.3s,baz=298,slow=7.9,SNR=53						
ASAR				PcP	**PcP**	**09 00 30.6**	**+0.9**
	comp=Z,1.8nm,0.4s,baz=301,slow=2.1,SNR=10						
ASAR				S	**S**	**09 03 36.0**	**-2.4**
	comp=Z,0.8nm,0.8s,baz=297,slow=16,SNR=5.4						
	comp=Z,1.9nm,0.3s						
GKN	**Gorkha**	**36.45**	**333**	*e*P	**P**	**08 58 08.4**	**+0.4**
	comp=Z,66nm,0.3s						
DANN	**Dangsing**	**37.14**	**332**	*e*P	**P**	**08 58 14.5**	**+0.4**
	comp=Z,135nm,0.4s						
PYUN	**Piuthan**	**37.30**	**331**	*e*P	**P**	**08 58 15.9**	**+0.6**
	comp=Z,45nm,0.4s						
XAN	**Xi'an**	**38.68**	**9**	P	**P**	**08 58 26.0**	**-0.7**
XAN				pP	pP	08 58 38.0	-2.9
XAN				pmax	pmax		
	comp=Z,12nm,0.8s						
NJ2	**Nanjing**	**39.45**	**22**	*e*P	**P**	**08 58 29.8**	**-3.2**
NJ2				pP	**pP**	**08 58 45.5**	**-1.9**
NJ2				sP	**sP**	**08 58 52.5**	**-1.3**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,320nm,5.9s						
LYN	**LuoYang**	**39.85**	**13**	⇑P	**P**	**08 58 36.8**	**+0.5**
LYN				pmax	pmax		
	comp=Z,33nm,0.7s						
GOMU	**GeErMu**	**40.96**	**351**	P	**P**	**08 58 45.8**	**-0.2**
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,78nm,4.9s						
GTA	**Gaotai**	**43.62**	**357**	*e*P	**P**	**08 59 07.3**	**+0.1**
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CTAO	**Charters Tower**	**45.44**	**114**	P	**P**	**08 59 22.7**	**+0.7**
CTAO				IAmb	IAmb	08 59 23.5	
	comp=Z,15nm,0.8s						
CTAO	**Charters Tower**	**45.44**	**114**	P	**P**	**08 59 22.1**	**+0.1**
CTAO				pP	**sP**	**08 59 41.1**	**-1.8**
HHC	**Hu-ho-hao-te**	**45.77**	**10**	*e*P	**P**	**08 59 25.5**	**+1.2**
HHC				pmax	pmax		
	comp=Z,25nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,4.8s						
STKA	**Stephens Creek**	**45.80**	**131**	P	**P**	**08 59 25.9**	**+1.2**
	comp=Z,6.9nm,0.7s,baz=312,slow=10,SNR=14						
	comp=Z,6.9nm,0.7s						
STKA	**Stephens Creek**	**45.80**	**131**	P	**P**	**08 59 26.0**	**+1.3**
BJI	**Beijing**	**45.96**	**15**	P	**P**	**08 59 26.3**	**+0.6**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
JNU	**Nakatsue**	**46.01**	**34**	P	**P**	**08 59 26.9**	**+0.6**
	comp=Z,2.2nm,0.5s,baz=217,slow=5.1,SNR=2.0						
	comp=Z,2.2nm,0.5s						
JNU	**Nakatsue**	**46.01**	**34**	P	**P**	**08 59 26.5**	**+0.2**
JNU				IAmb	IAmb	09 00 14.9	
	comp=Z,14nm,1.1s						
KSRS	**Korea Array**	**47.90**	**28**	P	**P**	**08 59 41.0**	**+0.1**
	comp=Z,1.9nm,0.7s,baz=234,slow=6.9,SNR=5.1						
KSRS				PcP	**PcP**	**09 01 08.1**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=191,slow=3.7,SNR=2.4						
	comp=Z,1.9nm,0.7s						
JHS	**Saijyo**	**48.65**	**34**	P	**P**	**08 59 46.7**	**-0.1**
JHS				IAmb	IAmb	09 00 01.0	
	comp=Z,29nm,1.5s						
XLT	**XiLinHaoTe**	**49.59**	**13**	*e*P	**P**	**08 59 53.8**	**-0.1**
XLT				pP	pP	09 00 08.3	-0.3
XLT				sP	sP	09 00 14.8	-0.1
XLT				pmax	pmax		
	comp=Z,11nm,0.8s						
XLT				pmax	pmax		
	comp=Z,97nm,6.0s						
WMQ	**Urumqi**	**49.76**	**346**	*e*P	**P**	**08 59 56.0**	**+0.9**
WMQ				sP	sP	09 00 20.5	+4.3
WMQ				pmax	pmax		
	comp=Z,32nm,0.9s						
KSH	**Kashi**	**49.99**	**333**	P	**P**	**08 59 56.0**	**-1.1**
KSH				pP	pP	09 00 14.3	+2.5
KSH				PcP	**PcP**	**09 01 15.8**	**-0.7**
KSH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TARG	**Taragay, Kyrgy**	**51.05**	**336**	P	**P**	**09 00 05.4**	**+0.1**
KDJ	**Kajisay**	**51.64**	**336**	P	**P**	**09 00 10.2**	**+0.7**
KDJ				IAmb	IAmb	09 00 10.9	
	comp=Z,17nm,0.7s						
SONM	**Songino Array**	**52.09**	**3**	P	**P**	**09 00 13.1**	**+0.5**
	comp=Z,16nm,0.8s,baz=182,slow=9.7,SNR=87						
SONM				PcP	**PcP**	**09 01 23.7**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=180,slow=5.1,SNR=5.3						
	comp=Z,16nm,0.8s						
SONM	**Songino Array**	**52.09**	**3**	P	**P**	**09 00 13.6**	**+0.9**
SONM				IAmb	IAmb	09 00 14.5	
	comp=Z,17nm,0.8s						
ULN	**Ulaanbaatar**	**52.16**	**4**	P	**P**	**09 00 13.2**	**0.0**
ULN				IAmb	IAmb	09 00 15.0	
	comp=Z,9.3nm,0.8s						
ULN	**Ulaanbaatar**	**52.16**	**4**	P	**P**	**09 00 13.2**	**0.0**
CN2	**Changchun**	**52.24**	**21**	P	**P**	**09 00 12.3**	**-1.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GAR	**Garm**	**52.34**	**328**	P	**P**	**09 00 14.2**	**-0.4**
GAR				IAmb	IAmb	09 00 15.6	
	comp=Z,8.1nm,0.5s						
MJAR	**Matsushiro Arr**	**52.66**	**36**	P	**P**	**09 00 15.2**	**-1.8**
	comp=Z,2.1nm,0.6s,baz=210,slow=7.0,SNR=6.2						
	comp=Z,2.1nm,0.6s						
CHGR	**Chuyangaron**	**52.70**	**327**	P	**P**	**09 00 16.4**	**-0.9**
CHGR				IAmb	IAmb	09 00 16.6	
	comp=Z,19nm,1.1s						
UCH	**Uchtor**	**52.84**	**334**	P	**P**	**09 00 19.2**	**+0.5**
	SNR=7.9						
CAN	**Canberra**	**52.86**	**132**	P	**P**	**09 00 17.4**	**-1.1**
TKM2	**Tokmak 2**	**52.95**	**335**	P	**P**	**09 00 19.9**	**+0.7**
	SNR=9.7						
KBK	**Karagaybulak**	**53.00**	**335**	P	**P**	**09 00 20.2**	**+0.7**
	SNR=8.5						
AML	**Almayashu**	**53.12**	**333**	P	**P**	**09 00 21.0**	**+0.2**
	SNR=11						
EKS2	**Erkin-Say**	**53.51**	**334**	P	**P**	**09 00 23.8**	**+0.6**
	SNR=8.5						
MK31	**Makanchi Array**	**53.95**	**343**	P	**P**	**09 00 25.9**	**-0.3**
MK31				IAmb	IAmb	09 00 26.5	
	comp=Z,7.4nm,0.6s						
MKAR	**Makanchi Array**	**53.95**	**343**	P	**P**	**09 00 25.3**	**-0.9**
	comp=Z,7.9nm,0.4s,baz=148,slow=8.0,SNR=124						
	comp=Z,7.9nm,0.4s						
MKAR	**Makanchi Array**	**53.95**	**343**	P	**P**	**09 00 25.9**	**-0.3**
MAKZ	**Makanchi**	**54.05**	**343**	P	**P**	**09 00 26.6**	**-0.5**
MAKZ				IAmb	IAmb	09 00 28.3	
	comp=Z,5.7nm,0.5s						
BNX	**BinXian**	**54.62**	**21**	⇓P	**P**	**09 00 31.0**	**-0.1**
BNX				pmax	pmax		
	comp=Z,14nm,0.8s						
BNX				pmax	pmax		
	comp=Z,220nm,3.9s						
JMM	**Marumori**	**55.08**	**37**	P	**P**	**09 00 34.4**	**-0.2**
JMM				IAmb	IAmb	09 00 38.2	
	comp=Z,16nm,1.0s						
USRK	**Ussuriysk Ar.**	**55.16**	**26**	P	**P**	**09 00 34.8**	**-0.2**
	comp=Z,11nm,0.6s,baz=221,slow=6.0,SNR=20						
	comp=Z,11nm,0.6s						
USRK	**Ussuriysk Ar.**	**55.16**	**26**	P	**P**	**09 00 35.0**	**-0.1**
KK31	**Karatay Array**	**55.34**	**332**	P	**P**	**09 00 36.2**	**-0.2**
KKAR	**Karatay Array**	**55.34**	**332**	P	**P**	**09 00 35.8**	**-0.6**
KKAR	**Karatay Array**	**55.34**	**332**	P	**P**	**09 00 35.4**	**-1.0**
KKAR				IAmb	IAmb	09 02 12.4	
	comp=Z,13nm,1.9s						
JTM	**Tenmabayashi**	**57.18**	**34**	P	**P**	**09 00 48.9**	**-0.6**
KURBB	**Kurchatov Arra**	**58.49**	**342**	P	**P**	**09 00 58.0**	**-0.5**
	comp=Z,7.1nm,0.9s,baz=160,slow=6.4,SNR=53						
KURBB				PcP	**PcP**	**09 01 48.7**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=154,slow=4.0,SNR=2.2						
	comp=Z,7.1nm,0.9s						
HEH	**HeiHe**	**58.52**	**19**	P	**P**	**09 00 58.5**	**-0.2**
HEH				pmax	pmax		
	comp=Z,13nm,0.9s						
HEH				pmax	pmax		
	comp=Z,180nm,5.6s						
KURK	**Kurchatov**	**58.55**	**343**	P	**P**	**09 00 58.5**	**-0.3**
KURK				IAmb	IAmb	09 00 59.2	
	comp=Z,11nm,0.9s						
KURK	**Kurchatov**	**58.55**	**343**	P	**P**	**09 00 58.3**	**-0.6**
GEYT	**Alibeck**	**58.78**	**320**	P	**P**	**09 01 00.8**	**0.0**
	comp=Z,2.9nm,0.6s,baz=153,slow=4.5,SNR=4.1						
	comp=Z,2.9nm,0.6s						
KLR	**Kul'dur**	**59.15**	**22**	P	**P**	**09 01 02.5**	**-0.7**
	comp=Z,7.1nm,0.6s,baz=229,slow=5.8,SNR=30						
	comp=Z,7.1nm,0.6s						
ZAA0	**Zalesovo Array**	**59.93**	**348**	P	**P**	**09 01 08.0**	**-0.4**
ZALV	**Zalesovo Beam**	**59.93**	**348**	P	**P**	**09 01 07.7**	**-0.7**
	comp=Z,14nm,0.4s,baz=163,slow=5.1,SNR=62						
	comp=Z,14nm,0.4s						
ZALV	**Zalesovo Beam**	**59.93**	**348**	P	**P**	**09 01 07.9**	**-0.5**
ASAJ	**Asahikawa**	**60.25**	**32**	P	**P**	**09 01 10.3**	**-0.5**
	comp=Z,4.6nm,0.5s,baz=232,slow=10,SNR=12						
	comp=Z,4.6nm,0.5s						
YSS	**Yuzh-Sakhalins**	**62.25**	**30**	P	**P**	**09 01 23.7**	**-0.6**
YSS				IAmb	IAmb	09 01 24.5	
	comp=Z,14nm,0.8s						
BVAR	**Borovoye Array**	**63.22**	**339**	P	**P**	**09 01 29.6**	**-0.9**
	comp=Z,5.4nm,0.4s,baz=142,slow=8.9,SNR=26						
	comp=Z,5.4nm,0.4s						
BRVK	**Borovoye**	**63.28**	**339**	P	**P**	**09 01 30.0**	**-1.0**
BRVK				IAmb	IAmb	09 01 30.8	
	comp=Z,11nm,1.1s						
BRVK	**Borovoye**	**63.28**	**339**	P	**P**	**09 01 29.9**	**-1.1**
ABKAR	**Akbulak array**	**64.85**	**331**	P	**P**	**09 01 41.0**	**-0.4**
ABKAR	**Akbulak array**	**64.85**	**331**	P	**P**	**09 01 40.9**	**-0.5**
ABKAR				IAmb	IAmb	09 01 41.6	
	comp=Z,15nm,0.7s						
AKTO	**Aktyubinsk**	**66.56**	**331**	P	**P**	**09 01 51.9**	**-0.6**
	comp=Z,2.1nm,0.3s,baz=124,slow=5.9,SNR=9.9						
	comp=Z,2.1nm,0.3s						
YAK	**Yakutsk**	**69.44**	**13**	P	**P**	**09 02 08.5**	**-1.6**
YAK				IAmb	IAmb	09 02 09.3	
	comp=Z,21nm,0.7s						
ARU	**Arti**	**70.32**	**336**	P	**P**	**09 02 15.8**	**+0.1**
	comp=Z,5.7nm,0.2s,baz=117,slow=2.3,SNR=5.7						
	comp=Z,5.7nm,0.2s						
ARU	**Arti**	**70.32**	**336**	P	**P**	**09 02 14.9**	**-0.7**
ARU				IAmb	IAmb	09 02 16.0	
	comp=Z,20nm,1.4s						
KBZ	**Khabaz**	**71.65**	**319**	P	**P**	**09 02 24.9**	**+0.8**
	comp=Z,4.7nm,0.9s,baz=124,slow=3.6,SNR=7.6						
	comp=Z,4.7nm,0.9s						
BELG	**Belogornoye**	**72.97**	**328**	P	**P**	**09 02 31.2**	**-0.5**
	comp=Z,18nm,0.9s,baz=150,slow=1.5,SNR=6.7						
	comp=Z,18nm,0.9s						
MMAI	**Mount Meron Ar**	**73.35**	**306**	P	**P**	**09 02 35.3**	**+0.7**
	comp=Z,1.9nm,0.5s,baz=108,slow=9.4,SNR=2.4						
	comp=Z,1.9nm,0.5s						
NRIK	**Noril'sk**	**74.25**	**355**	P	**P**	**09 02 37.8**	**-1.1**
	comp=Z,4.9nm,0.3s,baz=148,slow=6.3,SNR=9.0						
	comp=Z,4.9nm,0.3s						
NRIK	**Noril'sk**	**74.25**	**355**	P	**P**	**09 02 38.1**	**-0.8**
NRIK				IAmb	IAmb	09 02 38.7	
	comp=Z,6.4nm,0.5s						
BKZ	**Black Stump Fm**	**74.93**	**129**	P	**P**	**09 02 44.1**	**+0.4**
BKZ				IAmb	IAmb	09 04 14.7	
	comp=Z,55nm,1.9s						
KIRV	**Kirov**	**75.51**	**334**	P	**P**	**09 02 46.9**	**+0.5**
	comp=Z,14nm,0.7s,baz=178,slow=2.4,SNR=3.8						
	comp=Z,14nm,0.7s						
BRTR	**Keskin Array B**	**76.67**	**312**	P	**P**	**09 02 53.4**	**-0.2**
	comp=Z,1.7nm,0.5s,baz=134,slow=7.1,SNR=8.2						
	comp=Z,1.7nm,0.5s						
BRTR	**Keskin Array B**	**76.67**	**312**	P	**P**	**09 02 52.9**	**-0.7**
SEY	**Seymchan**	**76.93**	**21**	P	**P**	**09 02 53.8**	**-0.5**
	comp=Z,1.7nm,0.4s,baz=217,slow=5.1,SNR=16						
	comp=Z,1.7nm,0.4s						
TIXI	**Tiksi**	**77.81**	**8**	P	**P**	**09 02 57.3**	**-1.8**
	comp=Z,3.0nm,0.3s,baz=90,slow=22,SNR=6.4						
	comp=Z,3.0nm,0.3s						
VNDA	**Vanda**	**79.40**	**169**	P	**P**	**09 03 08.1**	**+0.2**
	comp=Z,1.4nm,1.1s,baz=304,slow=7.3,SNR=3.5						
	comp=Z,1.4nm,1.1s						
IDI	**Anoyia**	**82.36**	**306**	P	**P**	**09 03 25.7**	**+1.2**
	comp=Z,5.8nm,0.7s,baz=120,slow=8.1,SNR=2.0						
	comp=Z,5.8nm,0.7s						
IDI	**Anoyia**	**82.36**	**306**	P	**P**	**09 03 25.6**	**+1.0**
AKASG	**Malin Array Be**	**82.80**	**322**	P	**P**	**09 03 25.8**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=86,slow=4.0,SNR=1.8						
	comp=Z,0.5nm,0.3s						
MLR	**Muntele Rosu**	**83.65**	**317**	P	**P**	**09 03 30.8**	**-0.3**
	comp=Z,2.5nm,0.5s,baz=117,slow=9.0,SNR=3.6						
	comp=Z,2.5nm,0.5s						
QSPA	**South Pole Qui**	**85.62**	**180**	P	**P**	**09 03 41.9**	**+1.3**
QSPA				IAmb	IAmb	09 04 45.1	
	comp=Z,25nm,1.9s						
FINES	**FINESS Array B**	**87.30**	**332**	P	**P**	**09 03 49.0**	**+0.3**
	comp=Z,2.9nm,0.5s,baz=110,slow=5.1,SNR=14						
	comp=Z,2.9nm,0.5s						
ARCES	**ARCESS Array B**	**89.49**	**340**	P	**P**	**09 03 58.8**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=90,slow=6.5,SNR=8.6						
	comp=Z,1.9nm,0.8s						
ARCES	**ARCESS Array B**	**89.49**	**340**	P	**P**	**09 03 58.6**	**-0.3**
GERES	**GERESS Array B**	**92.39**	**319**	P	**P**	**09 04 13.1**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=100,slow=4.1,SNR=1.7						
	comp=Z,0.2nm,0.3s						
HFS	**Hagfors**	**93.10**	**330**	P	**P**	**09 04 16.1**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=74,slow=6.8,SNR=4.8						
	comp=Z,1.9nm,0.6s						
SPITS	**Spitsbergen Ar**	**93.42**	**348**	P	**P**	**09 04 16.4**	**-0.6**
	baz=98,slow=4.4,SNR=1.8						
NOA	**NORSAR Array B**	**94.36**	**331**	P	**P**	**09 04 21.5**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=95,slow=5.0,SNR=2.1						
	comp=Z,0.5nm,0.6s						
FRB	**Frobisher Bay**	**120.37**	**355**	PKP	**PKPdf**	**09 09 51.9**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=351,slow=10,SNR=5.0						
NVAR	**Mina Array Bea**	**129.82**	**42**	PKP	**PKiKP**	**09 10 12.8**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=289,slow=2.8,SNR=3.8						
PDAR	**Pinedale Array**	**132.38**	**32**	PKP	**PKPdf**	**09 10 16.9**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=270,slow=5.4,SNR=4.6						
BDFB	**Brasilia**	**144.61**	**235**	PKP	**PKPdf**	**09 10 40.4**	**+0.6**
	comp=Z,3.2nm,0.4s,baz=119,slow=6.5,SNR=5.9						
TXAR	**Lajitas Array**	**144.98**	**42**	PKP	PKPbc	09 10 39.5	+0.1
	comp=Z,5.6nm,0.8s,baz=271,slow=0.9,SNR=46						
TKL	**Tuckaleechee C**	**148.34**	**10**	PKPbc	**PKPbc**	**09 10 48.0**	**-0.8**
	comp=Z,4.1nm,0.4s,baz=315,slow=2.9,SNR=15						

IDC ***30*** *08:59:59.4±2.5, 52°.22N×35°.66E, h0^{km}, mb3.3/1, mbtmp3.3/3, ML3.1/2, Error ellipse: s-maj=29.8km s-min=14.3km az=126.0*

ISC 30 09:00:04.2±2.3**, 52°.7N**±0°.1×**35°.0E**±0°.2**, h10^{km}, n6,** σ**1^{s}.21**/7**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OBN	**Obninsk**	**2.60**	**21**	Lg	Lg	09 01 28.6	
	2.7nm,0.3s,baz=41,slow=23,SNR=7.7						
OBN				Rg	Rg	09 01 46.5	
	6.5nm,0.5s,baz=338,slow=22,SNR=1.4						
AKASG	**Malin Array Be**	**4.10**	**243**	Pn	**Pn**	**09 01 05.5**	**-1.3**
	1.0nm,0.3s,baz=55,slow=12,SNR=1.7						
AKASG				Pg	**Pb**	**09 01 17.6**	**+1.2**
	2.8nm,0.3s,baz=54,slow=16,SNR=9.5						
AKASG				Sn	**Sn**	**09 01 55.4**	**+0.6**
	5.0nm,0.3s,baz=92,slow=24,SNR=5.2						
AKASG				Lg	Lg	09 02 12.0	
	6.0nm,0.3s,baz=68,slow=29,SNR=4.5						
	0.4nm,0.3s						
I43RU	**DUBNA INFRASON**	**4.24**	**17**	I	I	09 28 50.0	
	0.1nm,0.9s,baz=191,slow=333,SNR=3.3						
NACGM	**Naroch**	**5.34**	**298**	*i* P	**Pg**	**09 01 45.3**	**-1.0**
	comp=Z,10.0nm,1.1s,baz=113						
FINES	**FINESS Array B**	**10.01**	**335**	Pn	**Pn**	**09 02 28.8**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=149,slow=13,SNR=10						
FINES				Sn	**Sn**	**09 04 20.6**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=150,slow=22,SNR=2.9						
	comp=Z,1.1nm,0.3s						
YKA	**Yellowknife Ar**	**62.67**	**345**	P	**P**	**09 10 28.0**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=13,slow=6.4,SNR=6.2						
	comp=Z,0.2nm,0.5s						

DJA ***30*** *09:03:55.7±0.4, 6°S±3°×15°2E±°, h12^{km}±2^{km}, M5.1/12, mB5.2/2, mb4.8/12, MLv5.2/2, Mw(mB)4.6/2*

IDC ***30*** *09:03:59.4±1.7, 5°.50S×151°.72E, h55^{km}±13^{km}, mb4.1/12, mbtmp4.4/13, MS4.0/32, Error ellipse: s-maj=25.6km s-min=10.2km az=125.0*

NEIC ***30*** *09:03:59.9±1.0, 5°.49S±0°.09×151°.8E±0°.1, h58^{km}±3^{km}, mb4.7/30, Error ellipse: s-maj=22.8km s-min=9.4km az=117.0*

ISC 30 09:03:58.2±0.6**, 5°.52S**±0°.06×**151°.91E**±0°.09**, h45^{km}, n97,** σ**1^{s}.71**/79**, mb4.6**/36**, MS4.1**/33**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.34**	**11**		**Pn**	**09 04 22.1**	**+1.5**
PMG	**Port Moresby**	**6.09**	**230**	P	**Pn**	**09 05 26.8**	**+1.1**
	153nm,0.8s,baz=36,slow=9.0,SNR=37						
PMG				S	**Sn**	**09 06 31.5**	**-2.6**
	189nm,0.8s,baz=151,slow=19,SNR=9.8						
PMG	**Port Moresby**	**6.09**	**230**	P	**Pn**	**09 05 27.4**	**+1.6**
HNR	**Honiara**	**8.87**	**116**	LR	LR	09 09 02.4	
	comp=Z,7µm,21.8s,baz=284,slow=34						
MTSU	**Mount Surprise**	**14.57**	**210**	P	**Pn**	**09 07 22.1**	**+0.4**
CTA	**Charters Tower**	**15.49**	**200**	P	**P**	**09 07 38.2**	**+0.7**
	5.4nm,0.8s,baz=14,slow=10,SNR=5.1						
CTA				LR	LR	09 12 59.3	
	comp=Z,675nm,20.3s,baz=31,slow=35						
CTAO	**Charters Tower**	**15.49**	**200**	Pn	**Pn**	**09 07 33.9**	**+0.1**
QIS	**Mount Isa**	**19.14**	**218**	P	**Pn**	**09 08 18.6**	**-0.4**
EIDS	**Eidsvold**	**19.76**	**182**	P	**P**	**09 08 23.9**	**-0.6**
EIDS				IAmb	IAmb	09 08 28.8	
	comp=Z,39nm,1.1s						
EIDS	**Eidsvold**	**19.76**	**182**	P	**P**	**09 08 25.1**	**+0.6**
FAKI	**Fak Fak**	**19.77**	**277**	P	**P**	**09 08 23.8**	**-1.0**
KDU	**Kakadu**	**20.46**	**248**	P	**P**	**09 08 32.0**	**-0.2**
RMQ	**Roma**	**21.07**	**188**	P	**P**	**09 08 39.8**	**+1.1**
DZM	**Mont Dzumac**	**21.65**	**141**	LR	LR	09 16 28.9	
	comp=Z,816nm,18.9s,baz=304,slow=34						
MTN	**Manton Dam**	**21.75**	**249**	P	**P**	**09 08 47.3**	**+1.2**
MTN				IAmb	IAmb	09 09 05.9	
	comp=Z,30nm,0.9s						
WB0	**Warramunga Arr**	**22.16**	**229**	P	**P**	**09 08 50.0**	**-0.5**
WB0				IAmb	IAmb	09 08 59.8	
	comp=Z,18nm,0.9s						
QLP	**Quilpie**	**22.19**	**198**	P	**P**	**09 08 52.3**	**+1.5**
WRAB	**Tennant Creek**	**22.29**	**228**	P	**P**	**09 08 52.8**	**+0.9**
WRAB				IAmb	IAmb	09 09 08.1	
	comp=Z,21nm,0.8s						
WRAB	**Tennant Creek**	**22.29**	**228**	P	**P**	**09 08 53.1**	**+1.1**
WB2	**Warramunga Arr**	**22.30**	**228**	P	**P**	**09 08 53.0**	**+0.9**
WB2				IAmb	IAmb	09 09 08.2	
	comp=Z,23nm,0.8s						
WRA	**Warramunga Arr**	**22.30**	**228**	P	**P**	**09 08 50.8**	**-1.3**
	comp=Z,7.8nm,0.8s,baz=52,slow=8.9,SNR=24						
WRA				S	**S**	**09 12 51.6**	**-3.2**
	comp=Z,9.5nm,1.1s,baz=54,slow=18,SNR=7.7						
WRA				ScP	**ScP**	**09 16 20.3**	**-0.5**
	comp=Z,0.9nm,1.2s,baz=54,slow=3.0,SNR=2.5						
WRA				LR	LR	09 18 58.0	
	comp=Z,307nm,18.8s,baz=70,slow=40						
	comp=Z,7.8nm,0.8s						
WRA	**Warramunga Arr**	**22.30**	**228**	P	**P**	**09 08 50.8**	**-1.3**
INKA	**Innaminka**	**24.52**	**204**	P	**P**	**09 09 14.4**	**+0.8**
KNRA	**Kununurra**	**24.86**	**244**	P	**P**	**09 09 15.7**	**-1.1**
KNRA	**Kununurra**	**24.86**	**244**	P	**P**	**09 09 18.4**	**+1.6**
AS31	**Alice Springs**	**25.02**	**222**	P	**P**	**09 09 17.6**	**-0.7**
ASAR	**Alice Springs**	**25.02**	**222**	P	**P**	**09 09 17.6**	**-0.7**
	comp=Z,18nm,0.8s,baz=54,slow=9.5,SNR=124						
ASAR				S	**S**	**09 13 46.1**	**+6.6**
	comp=Z,5.0nm,1.2s,baz=41,slow=18,SNR=8.8						
ASAR				LR	LR	09 18 53.4	
	comp=Z,306nm,20.6s,baz=60,slow=36						
	comp=Z,18nm,0.8s						
ASAR	**Alice Springs**	**25.02**	**222**	P	**P**	**09 09 17.8**	**-0.5**
OOD	**Oodnadatta**	**26.99**	**213**	P	**P**	**09 09 38.3**	**+2.3**
STKA	**Stephens Creek**	**27.95**	**199**	P	**P**	**09 09 46.2**	**+1.7**
	comp=Z,5.6nm,0.9s,baz=42,slow=12,SNR=5.4						
STKA				LR	LR	09 21 01.3	
	comp=Z,416nm,18.3s,baz=17,slow=37						
	comp=Z,5.6nm,0.9s						
DAV	**Davao City (W)**	**29.09**	**295**	LR	LR	09 21 12.3	
	comp=Z,426nm,18.0s,baz=110,slow=36						
KAPI	**Kappang**	**32.02**	**269**	LR	LR	09 26 34.5	
	comp=Z,80nm,18.3s,baz=98,slow=43						
JCJ	**Chichijima**	**33.76**	**344**	LR	LR	09 24 06.5	
	comp=Z,156nm,19.5s,baz=174,slow=36						
JOW	**Kunigami**	**39.47**	**326**	LR	LR	09 24 38.4	
	comp=Z,288nm,21.4s,baz=277,slow=32						
URZ	**Urewera**	**39.83**	**148**	LR	LR	09 25 54.9	
	comp=Z,351nm,18.8s,baz=22,slow=33						
RPZ	**Rata Peaks**	**41.62**	**159**	LR	LR	09 28 29.5	
	comp=Z,355nm,18.6s,baz=278,slow=35						
NWAO	**Narrogin (SRO)**	**42.25**	**225**	LR	LR	09 30 03.8	
	comp=Z,348nm,19.6s,baz=102,slow=37						
JNU	**Nakatsue**	**43.30**	**334**	LR	LR	09 28 25.3	
	comp=Z,104nm,19.9s,baz=164,slow=34						
MJAR	**Matsushiro Arr**	**43.76**	**344**	LR	LR	09 29 19.1	
	comp=Z,126nm,18.3s,baz=176,slow=35						
QIZ	**Qiongzhong**	**48.07**	**302**	P	**P**	**09 12 32.5**	**-1.2**
QIZ				S	**S**	**09 19 30.5**	**+1.1**
QIZ				sS	**sS**	**09 19 56.0**	**+6.0**
QIZ				LR	LR		
	comp=N,190nm,20.7s						
QIZ				LR	LR		
	comp=E,130nm,17.5s						
QIZ				LR	LR		
	comp=Z,170nm,18.3s						
KSRS	**Korea Array**	**48.24**	**334**	LR	LR	09 31 23.0	
	comp=Z,68nm,21.4s,baz=140,slow=34						
NJ2	**Nanjing**	**48.85**	**322**	*e*P	**P**	**09 12 40.3**	**+0.8**
NJ2				pP	**sP**	**09 12 55.8**	**-1.7**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,95nm,4.1s						
USRK	**Ussuriysk Ar.**	**52.64**	**342**	LR	LR	09 31 59.1	
	comp=Z,95nm,21.9s,baz=157,slow=32						
LYN	**LuoYang**	**54.50**	**320**	*e*P	**P**	**09 13 21.0**	**-0.7**
LYN				pmax	pmax		
	comp=Z,8.0nm,0.5s						
LYN				LR	LR		
	comp=N,140nm,14.5s						
LYN				LR	LR		
	comp=E,170nm,19.9s						
LYN				LR	LR		
	comp=Z,250nm,17.5s						
HNS	**HongShan**	**54.99**	**324**	*e*P	**P**	**09 13 24.8**	**-0.3**
HNS				*e*S	**S**	**09 21 01.0**	**-3.1**
HNS				LR	LR		
	comp=N,200nm,18.3s						
HNS				LR	LR		
	comp=Z,260nm,21.6s						
PHRA	**Phrae**	**56.24**	**296**	P	**P**	**09 13 33.8**	**-0.7**
XAN	**Xi'an**	**56.53**	**317**	P	**P**	**09 13 35.8**	**-0.5**
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						

KLR	Kul'dur	57.28	344	LR	LR	09 35 12.7	
	comp=Z,106nm,21.9s,baz=207,slow=33						
CMAR	Chiang Mai Arr	57.38	296	P	P	09 13 42.6	0.0
	comp=Z,1.4nm,0.3s,baz=120,slow=5.3,SNR=8.0						
CMAR				LR	LR	09 38 45.4	
	comp=Z,42nm,18.3s,baz=245,slow=36						
	comp=Z,1.4nm,0.3s						
PZH	PanZhiHua	58.06	306	P	P	09 13 49.5	+2.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,110nm,5.3s						
XLT	XiLinHaoTe	58.84	330	*e*P	P	09 13 57.0	+4.6
XLT				pP	sP	09 14 12.8	+2.2
XLT				pmax	pmax		
	comp=Z,8.0nm,1.0s						
XLT				pmax	pmax		
	comp=Z,59nm,3.7s						
HHC	Hu-ho-hao-te	59.11	325	*e*P	P	09 13 55.5	+1.1
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,210nm,5.6s						
LZH	Lanzhou	61.13	317	*e*P	P	09 14 05.5	-2.9
LZH				pP	pP	09 14 11.8	-10
LZH				pmax	pmax		
	comp=Z,19nm,1.6s						
MA2	Magadan	64.89	359	LR	LR	09 39 01.4	
	comp=Z,82nm,21.8s,baz=174,slow=32						
GTA	Gaotai	65.58	318	*e*P	P	09 14 37.3	-0.4
GTA				pP	pP	09 14 52.0	+1.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ULN	Ulaanbaatar	66.14	329	P	P	09 14 39.6	-1.5
ULN				IAmb	IAmb	09 14 42.2	
	comp=Z,7.3nm,1.1s						
SONM	Songino Array	66.46	328	P	P	09 14 42.9	-0.3
	comp=Z,3.1nm,0.7s,baz=149,slow=5.1,SNR=16						
SONM				LR	LR	09 42 23.3	
	comp=Z,115nm,20.5s,baz=114,slow=35						
	comp=Z,3.1nm,0.7s						
SONM	Songino Array	66.46	328	P	P	09 14 42.6	-0.6
SONM				IAmb	IAmb	09 14 44.1	
	comp=Z,9.8nm,1.4s						
PALK	Pallekele	72.17	279	LR	LR	09 50 22.1	
	comp=Z,73nm,19.7s,baz=234,slow=39						
BILL	Bilibino	74.08	6	P	P	09 15 29.8	+0.5
BILL				IAmb	IAmb	09 15 38.2	
	comp=Z,10nm,1.5s						
WMQ	Urumqi	75.67	318	*e*P	P	09 15 38.3	-0.7
WMQ				PcP	pP	09 15 53.0	+0.6
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
KDAK	Kodiak Island	77.22	27	LR	LR	09 43 17.9	
	comp=Z,109nm,20.1s,baz=260,slow=30						
CNPM	China Poot	78.74	26	P	P	09 15 55.9	0.0
MK31	Makanchi Array	80.28	319	P	P	09 16 02.0	-2.5
MKAR	Makanchi Array	80.28	319	P	P	09 16 04.1	-0.4
	comp=Z,2.8nm,0.9s,baz=101,slow=6.3,SNR=18						
MKAR				LR	LR	09 51 47.4	
	comp=Z,86nm,19.3s,baz=57,slow=36						
	comp=Z,2.8nm,0.9s						
MKAR	Makanchi Array	80.28	319	P	P	09 16 03.6	-0.9
MAKZ	Makanchi	80.49	319	P	P	09 16 04.9	-0.8
MAKZ				IAmb	IAmb	09 16 05.9	
	comp=Z,9.1nm,1.2s						
ZALV	Zalesovo Beam	81.25	327	P	P	09 16 08.4	-1.1
	comp=Z,1.7nm,0.6s,baz=122,slow=5.2,SNR=8.3						
ZALV				LR	LR	09 51 54.3	
	comp=Z,89nm,20.0s,baz=72,slow=35						
	comp=Z,1.7nm,0.6s						
ZALV	Zalesovo Beam	81.25	327	P	P	09 16 06.5	-2.9
MLY	Manley	81.87	21	P	P	09 16 12.8	+0.2
MLY				IAmb	IAmb	09 16 13.9	
	comp=Z,3.3nm,0.6s						
KDJ	Kajisay	82.46	314	IAmb	IAmb	09 16 17.7	
	comp=Z,8.8nm,1.0s						
KSH	Kashi	82.72	311	P	P	09 16 18.8	+1.1
KSH				sP	sP	09 16 45.5	+9.2
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
IL31		83.16	22	P	P	09 16 18.3	-0.9
ILAR	Eielson Array	83.16	22	P	P	09 16 18.1	-1.1
	comp=Z,1.3nm,0.6s,baz=248,slow=5.3,SNR=31						
	comp=Z,1.3nm,0.6s						
ILAR	Eielson Array	83.16	22	P	P	09 16 18.9	-0.3
KURBB	Kurchatov Arra	83.81	322	P	P	09 16 21.6	-1.2
	comp=Z,3.4nm,1.1s,baz=104,slow=4.0,SNR=11						
	comp=Z,3.4nm,1.1s						
AAK	Ala-Archa	84.51	314	P	P	09 16 26.3	-0.5
	comp=Z,2.5nm,0.7s,baz=100,slow=8.0,SNR=4.3						
	comp=Z,2.5nm,0.7s						
KKAR	Karatay Array	87.47	314	P	P	09 16 40.2	-1.1
BBB	Bella Bella	88.20	37	LR	LR	09 52 10.0	
	comp=Z,64nm,19.2s,baz=101,slow=33						
WTLY	Watson Lake, Y	89.43	29	IAmb	IAmb	09 16 53.0	
	comp=Z,8.9nm,1.2s						
YBH	Yreka Blue Hor	90.19	48	LR	LR	09 50 08.8	
	comp=Z,99nm,21.3s,baz=337,slow=31						
A36M	Sachs Harbour	92.99	18	IAmb	IAmb	09 17 07.6	
	comp=Z,3.8nm,0.8s						
NVAR	Mina Array Bea	93.23	52	P	P	09 17 09.4	+0.9
	comp=Z,1.5nm,0.8s,baz=253,slow=4.6,SNR=10						
NVAR				LR	LR	09 55 31.1	
	comp=Z,171nm,18.1s,baz=310,slow=33						
	comp=Z,1.5nm,0.8s						
MZP	Montezuma Peak	93.90	53	P	P	09 17 11.9	+0.1
MZP				IAmb	IAmb	09 17 14.5	
	comp=Z,3.4nm,1.3s						
PFO	Pinyon Flats O	94.38	57	LR	LR	09 57 16.8	
	comp=Z,84nm,18.1s,baz=254,slow=34						
WCT	Wildcat Mounta	94.44	54	P	P	09 17 15.5	+1.5
WCT				IAmb	IAmb	09 17 24.9	
	comp=Z,5.0nm,1.4s						
ARU	Arti	96.41	326	LR	LR	10 00 55.1	
	comp=Z,174nm,20.5s,baz=353,slow=36						
YKA	Yellowknife Ar	96.47	28	P	P	09 17 22.3	-0.2
	comp=Z,0.6nm,0.8s,baz=269,slow=4.8,SNR=11						
	comp=Z,0.6nm,0.8s						
AKTO	Aktyubinsk	96.70	320	LR	LR	10 03 47.0	
	comp=Z,80nm,18.2s,baz=68,slow=37						
KNB	Kanab	97.50	54	IAmb	IAmb	09 17 30.9	
	comp=Z,8.7nm,1.5s						
LPIG	La Paz	99.33	67	LR	LR	09 55 39.2	
	comp=Z,83nm,19.8s,baz=296,slow=31						
PDAR	Pinedale Array	99.99	48	P	Pdif	09 17 38.9	-0.3
	comp=Z,1.1nm,0.9s,baz=258,slow=3.6,SNR=7.4						
CLL	Collm	123.04	331	*e*PKPdf	PKiKP	09 22 51.0	+1.0
GERES	GERESS Array B	124.19	328	PKP	PKPdf	09 22 51.9	-0.4
	comp=Z,0.7nm,0.5s,baz=64,slow=2.3,SNR=5.7						
SIV	San Ignacio	140.99	124	PKP	PKiKP	09 23 26.5	-0.8
	comp=Z,0.7nm,0.8s,baz=225,slow=1.4,SNR=2.4						
TORD	Torodi Ar. Bea	149.67	287	PKPbc	PKPbc	09 23 42.0	-2.1
	comp=Z,165nm,0.9s,baz=72,slow=2.8,SNR=7.4						
BDFB	Brasilia	151.17	137	PKPbc	PKPbc	09 23 47.3	-0.6
	comp=Z,3.8nm,0.7s,baz=255,slow=3.7,SNR=5.6						

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*GUC **30** 09:06:20.2±0.6, 37°.07S×74°.21W, h19^{km}±4^{km}, ML4.7*

*IDC **30** 09:06:21.3±0.7, 37°.15S×73°.70W, h0^{km}, mb4.2/11, mbtmp4.2/15, ML3.9/4, MS3.9/8, Error ellipse: s-maj=23.4km s-min=14.6km az=77.0*

*NEIC **30** 09:06:21.5±2.1, 37°.13S±0°.04×74°.03W±0°.07, h10^{km}±1^{km}, mb4.7/39, Mwr4.5/39, Mwr4.7(GUC), Error ellipse: s-maj=9.9km s-min=6.5km az=293.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}5.44; $M_{\theta\theta}$-0.57; $M_{\phi\phi}$-4.87; $M_{r\theta}$-0.91; $M_{\theta\phi}$-1.62; $M_{\phi r}$-4.65; Fault plane solution: $M_0$7.20000×10^{15} NP1:ϕ_s193.68000°, δ65.62000°, λ86.02000°. NP2:ϕ_s23.25000°, δ24.68000°, λ98.70000°. Principal axes: T 7.2363, Plg69.0000°, Azm96.0000°; N -0.0652, Plg4.0000°, Azm195.0000°; P -7.1711, Plg21.0000°, Azm287.0000°;*

*NEIC **30** 09:06:21.5, 37°.12S×74°.01W, h10^{km}*

*VAO **30** 09:06:22.1±0.3, 37°.18S×74°.03W, h10^{km}, mb4.7*

ISC 30 09:06:22.6±1.4**, 37°.15S**±0°.03×**73°.92W**±0°.05**, h16**^{km}±8^{km}**, n191,** σ1^{s}.**55**/199**, mb4.5**/21**, MS4.0**/5**, 3C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BI05	Punta Hualpn	0.71	56		Pg	09 06 36.7	+0.2
BI05	Punta Hualpn	0.71	56	*e*P	Pg	09 06 34.7	-1.8
BI05				*e*S	Sg	09 06 46.6	+0.7
BI05				IAML		09 06 51.9	
	comp=E,40µm,0.3s						
CCSP	San Pedro de C	0.72	65	*e*P	Pg	09 06 36.2	-0.5
CCSP				*e*S	Sb	09 06 48.0	+1.6
CCSP				IAML		09 06 50.1	
	comp=E,77µm,0.5s						
BI04	Isla Mocha	1.26	179	*e*P	Pn	09 06 43.6	-2.0
BI04				IAML		09 07 15.0	
	comp=E,29µm,0.4s						
LC02	Puerto Saavedr	1.69	166		Pn	09 06 50.9	-0.7
LC02	Puerto Saavedr	1.69	166	*e*P	Pn	09 06 50.1	-1.4
LC02				*e*S	Sg	09 07 17.6	+0.4
LC02				IAML		09 07 23.3	
	comp=E,148nm,0.6s						
ML02	Panimavida	2.45	56		Pn	09 07 01.4	-0.5
ML02	Panimavida	2.45	56	*e*P	Pn	09 07 01.7	-0.2
ML02				*e*S	Sn	09 07 33.5	+2.0
ML02				IAML		09 07 47.0	
	comp=N,8µm,0.4s						
GO05	Huala	2.68	38		Pn	09 07 04.2	-0.9
GO05	Huala	2.68	38	*e*P	Pn	09 07 03.9	-1.2
GO05				IAML		09 08 00.7	
	comp=E,2µm,0.4s						
LR02	Universidad Au	2.70	169	*e*P	Pn	09 07 04.7	-0.7
LR02				IAML		09 08 02.8	
	comp=N,23µm,0.8s						
LR04	Corral	2.75	172		Pn	09 07 04.9	-1.2
LR03	Panguipulli	2.77	154		Pn	09 07 06.7	+0.3
LR03	Panguipulli	2.77	154	*i* P	Pn	09 07 06.6	+0.3
LR03				*e*S	Sn	09 07 38.0	-1.6
LR03				IAML		09 08 01.4	
	comp=N,7µm,0.5s						
BO03	Pichilemu	3.09	32	*e*P	Pn	09 07 09.5	-1.2
BO03				*e*S	Sn	09 07 42.9	-4.5
BO03				IAML		09 08 12.2	
	comp=N,1µm,0.7s						
GO06	Curarrehue	3.10	142		Pn	09 07 11.5	+0.5
GO06	Curarrehue	3.10	142	⇑*i*P	Pn	09 07 11.5	+0.5
GO06				IAML		09 08 06.5	
	comp=E,868nm,0.6s						
LR05	Currie	3.42	155	⇑*i*P	Pn	09 07 15.8	+0.5
BO02	Sierra Bellavi	3.47	48		Pn	09 07 15.5	-0.5
BO02	Sierra Bellavi	3.47	48	*e*P	Pn	09 07 15.3	-0.7
BO01	Tunca	3.59	41		Pn	09 07 17.4	-0.2
BO01	Tunca	3.59	41	*e*P	Pn	09 07 17.5	-0.2
LL04	Puerto Octay	3.94	163		Pn	09 07 21.6	-0.8
LL04	Puerto Octay	3.94	163	*i* P	Pn	09 07 21.6	-0.8
LL04				*e*S	Sn	09 08 02.4	-5.9
MT01	Popeta	3.94	34		Pn	09 07 21.2	-1.2
MT01	Popeta	3.94	34	*e*P	Pn	09 07 21.4	-1.0
VA05	Santo Domingo	3.96	29		Pn	09 07 21.1	-1.7
VA05	Santo Domingo	3.96	29	*e*P	Pn	09 07 20.9	-1.8
MT09	Talagante	4.13	36		Pn	09 07 24.8	-0.4
MT09	Talagante	4.13	36	*i* P	Pn	09 07 24.5	-0.7
LL03	Petrohue	4.15	164		Pn	09 07 25.3	-0.1
LL03	Petrohue	4.15	164	*e*P	Pn	09 07 24.0	-1.4
LL05	Los Muermos	4.26	175		Pn	09 07 26.1	-0.8
LL05	Los Muermos	4.26	175	*i* P	Pn	09 07 26.1	-0.8
PLCA	Paso Flores	4.44	145	Pn	Pn	09 07 30.1	+0.7
	comp=E,1.4nm,0.3s,baz=312,slow=15,SNR=57						
PLCA				Sn	Sb	09 08 28.7	-4.9
	comp=E,8.8nm,0.3s,baz=14,slow=14,SNR=3.4						
PLCA				Lg	Lg	09 08 41.1	
	comp=E,12nm,0.3s,baz=33,slow=19,SNR=6.4						
	comp=E,8.8nm,0.5s						
PLCA	Paso Flores	4.44	145		Pn	09 07 29.9	+0.5
PLCA	Paso Flores	4.44	145	*i* P	Pn	09 07 30.0	+0.7
PLCA	Paso Flores	4.44	145	*e*P	Pn	09 07 29.6	+0.2
LMEL	Las Melosas	4.48	44		Pn	09 07 30.1	+0.1
LMEL	Las Melosas	4.48	44	*e*P	Pn	09 07 30.0	0.0
MT02	Curacav	4.50	31		Pn	09 07 28.7	-1.5
MT02	Curacav	4.50	31	*i* P	Pn	09 07 28.7	-1.5
MT13	San Alfonso	4.51	42		Pn	09 07 30.0	-0.4
MT13	San Alfonso	4.51	42	*e*P	Pn	09 07 30.0	-0.4
VA01	Torpederas	4.52	25		Pn	09 07 28.8	-1.6
VA01	Torpederas	4.52	25	*i* P	Pn	09 07 28.6	-1.8
MT05	Renca	4.56	36	*e*P	Pn	09 07 30.3	-0.8
MT03	Universidad Ad	4.59	38		Pn	09 07 30.6	-0.9
MT03	Universidad Ad	4.59	38	*e*P	Pn	09 07 30.7	-0.9
MT10	Hacienda Santa	4.76	37	⇑*i*P	Pn	09 07 33.2	-0.6
PEL	Peldehue	4.80	35	*e*P	Pn	09 07 33.5	-0.8
ROC1	El Roble	4.80	31		Pn	09 07 33.5	-0.9
ROCH	El Roble	4.80	31	*e*P	Pn	09 07 33.4	-1.1
FCH	Farellones	4.83	39	*i* P	Pn	09 07 34.2	-0.9
MT04	Ro Olivares	4.85	41	*i* P	Pn	09 07 35.2	0.0
MT08	Bocatoma Ro	4.88	42	*i* P	Pn	09 07 35.6	-0.1
VA06	Catapilco	5.06	26	*e*P	Pn	09 07 36.4	-1.5
VA03	San Esteban	5.18	33		Pn	09 07 38.2	-1.4
H03S1	Juan Fernandez	5.23	308	Pn	Pn	09 07 38.5	-1.4
	baz=96,slow=12						
H03S1				T	T	09 13 01.9	
	baz=128,slow=74,SNR=1821						
H03S3	Juan Fernandez	5.25	308	Pn	Pn	09 07 38.9	-1.3
	baz=96,slow=12						
H03S3				T	T	09 13 02.9	
	baz=128,slow=74,SNR=1323						
H03S2	Juan Fernandez	5.25	308	Pn	Pn	09 07 38.6	-1.6
	baz=96,slow=12						
H03S2				T	T	09 13 01.7	
	baz=128,slow=74,SNR=2152						
VA04	Juan Fernndez	5.32	310		Pn	09 07 39.9	-1.5
VA04	Juan Fernndez	5.32	310	*e*P	Pn	09 07 39.8	-1.6
H03N3	Juan Fernandez	5.50	311	Pn	Pn	09 07 43.1	-0.6
	baz=146,slow=27						
H03N3				Sn	Sn	09 08 41.2	-5.4
H03N3				T	T	09 13 34.3	
	baz=122,slow=78,SNR=52						
H03N1	Juan Fernandez	5.51	311	Pn	Pn	09 07 43.2	-0.5
	baz=146,slow=27						
H03N1				Sn	Sn	09 08 41.4	-5.2
	baz=207,slow=74						
H03N1				T	T	09 13 35.4	
	baz=122,slow=78,SNR=47						
H03N2	Juan Fernandez	5.52	311	Pn	Pn	09 07 43.3	-0.6
	baz=146,slow=27						
H03N2				Sn	Sn	09 08 40.9	-6.0
	baz=55,slow=74						
H03N2				T	T	09 13 38.3	
	baz=122,slow=78,SNR=30						
LL07	Hotel Espejo d	5.69	177		Pn	09 07 45.3	-1.1
ZON	Zonda	7.07	39	Pn	Pn	09 08 04.7	-0.9
CFA	Coronel Fontan	7.26	42	Pn	Pn	09 08 06.8	-1.2
	comp=E,2.5nm,0.3s,baz=215,slow=13,SNR=17						
CFA				Sn	Sn	09 09 26.0	-4.2
	comp=E,3.7nm,0.3s,baz=223,slow=12,SNR=1.9						
CFA				LR	LR	09 11 32.7	
	comp=E,534nm,18.4s,baz=230,slow=44						
	comp=E,5.9nm,0.3s						
AY01	Puyuhuapi	7.33	173		Pn	09 08 08.7	-0.2
GO04	Tololo Observa	7.43	21	Pn	Pn	09 08 09.1	-1.5
LCO	Las Campanas	8.55	19		Pn	09 08 25.3	-0.8
TRQA	Tornquist	9.52	99	Pn	Pn	09 08 39.3	+0.2
GO08	Villa O'Higgin	11.35	175		Pn	09 09 05.3	+1.2
PB04	IPOC Station P	15.12	14	Pn	Pn	09 09 54.7	-1.1
PB04				IAmb	IAmb	09 10 11.5	
	comp=Z,63nm,1.1s						
LVC	Limon Verde	15.12	18	Pn	Pn	09 09 56.5	+0.5
	comp=Z,0.2nm,0.3s,baz=217,slow=5.1,SNR=2.2						
LVC				LR	LR	09 16 27.0	
	comp=Z,229nm,19.3s,baz=184,slow=40						
	comp=Z,3.4nm,0.8s						
LVC	Limon Verde	15.12	18	Pn	Pn	09 09 55.4	-0.6
LVC				IAmb	IAmb	09 10 15.8	
	comp=Z,28nm,1.3s						
LVC	Limon Verde	15.12	18	*e*P	Pn	09 09 55.1	-0.9
MECA	Mercedes	15.32	64	*e*P	Pn	09 09 57.1	-1.1
PB03	IPOC Station P	15.48	15	Pn	Pn	09 09 59.8	-0.7
PB07	IPOC Station P	15.76	14	Pn	Pn	09 10 02.8	-1.4
PB09	IPOC Station P	15.83	16	Pn	Pn	09 10 05.5	+0.4
PB01	IPOC Station P	16.51	15		Pn	09 10 12.3	-1.3
PB01				IAmb	IAmb	09 10 19.8	
	comp=Z,54nm,1.1s						
RODS	Rosario do Sul	16.97	72	*e*P	Pn	09 10 20.6	+1.2
PLTB	Pedras Altas	17.59	78	Pn	Pn	09 10 24.7	-2.4
AZCA	Azaras, Argent	17.59	64	*e*P	Pn	09 10 28.0	+0.9
PB11	IPOC Station P	17.72	13	Pn	Pn	09 10 25.7	-3.2
PB11				IAmb	IAmb	09 10 40.0	
	comp=Z,42nm,0.8s						
CPUP	Villa Florida	17.74	57	P	Pn	09 10 28.7	-0.2
	comp=Z,0.2nm,0.3s,baz=232,slow=10,SNR=5.5						
CPUP				S	Sn	09 13 40.8	-5.5
	comp=Z,0.8nm,0.3s,baz=37,slow=4.5,SNR=1.2						
CPUP				LR	LR	09 17 22.4	
	comp=Z,291nm,19.0s,baz=236,slow=38						
	comp=Z,3.1nm,0.8s						
CPUP	Villa Florida	17.74	57	P	Pn	09 10 29.1	+0.2
CPUP	Villa Florida	17.74	57	*e*P	Pn	09 10 29.4	+0.4
GO01	Chusmiza	17.90	15	P	P	09 10 31.7	-0.4
CPSB	Cacapava Do Su	18.29	74	*e*P	Pn	09 10 34.6	-1.2
MNMC	Minye Minye	18.35	13	IAmb	IAmb	09 10 52.9	
	comp=Z,27nm,0.7s						
EFI	East Falkland	18.36	147	P	Pn	09 10 37.1	+0.8
EFI				IAmb	IAmb	09 10 38.5	
	comp=Z,28nm,0.8s						
PB16	IPOC Station P	19.14	13		Pn	09 10 48.6	+2.0
PB18	Visviri	19.88	13	IAmb	IAmb	09 11 06.4	
	comp=Z,44nm,0.7s						
CNLB	Canela	20.79	75	*e*P	P	09 11 02.6	-0.5
ITAB	Concordia	20.88	68	P	P	09 11 03.8	-0.3
ITAB				IAmb	IAmb	09 11 12.2	
	comp=Z,48nm,0.8s						
ITAB	Concordia	20.88	68	*e*P	P	09 11 03.8	-0.3
FRBT	Francisco Belt	20.93	64	*e*P	P	09 11 04.0	-0.7
MCR1	Marechal Candi	21.20	59	*e*P	P	09 11 08.0	+0.4
LPAZ	La Paz	21.40	15	P	P	09 11 12.5	+2.1
	comp=Z,7.6nm,0.8s,baz=176,slow=11,SNR=22						
	comp=Z,7.6nm,0.8s						
LPAZ	La Paz	21.40	15	P	P	09 11 10.0	-0.4
AMBA	Amambai (Brazi	21.61	54	*e*P	P	09 11 11.6	-0.4
PTGB	Pitanga	22.41	63	*e*P	P	09 11 21.3	+0.6
AQDB	Aquidauana	22.98	49	P	P	09 11 23.6	-2.9
AQDB				IAmb	IAmb	09 11 56.0	
	comp=Z,19nm,1.1s						
AQDB	Aquidauana	22.98	49	*e*P	P	09 11 25.8	-0.7
BBSD	Serra de San D	23.10	34	*e*P	P	09 11 27.6	-0.2
SIV	San Ignacio	23.95	32	P	P	09 11 35.7	-0.6
	comp=Z,6.8nm,0.9s,baz=203,slow=12,SNR=22						
SIV				LR	LR	09 23 00.8	
	comp=Z,507nm,18.6s,baz=233,slow=42						
	comp=Z,6.8nm,0.9s						
TIJ01	Guaruva-PR	24.27	68	*e*P	P	09 11 41.0	+1.7
RVDE	Rio Verde (Bra	24.54	48	*e*P	P	09 11 41.6	-0.1
PCMB	Pacaembu	25.00	58	*e*P	P	09 11 45.4	-0.4
FRTB	Fartura	25.05	64	*e*P	P	09 11 46.2	-0.1
NNA	Nana	25.19	353	P	P	09 11 48.2	+0.6
	comp=Z,3.4nm,0.3s,baz=188,slow=6.8,SNR=1.5						
	comp=Z,3.4nm,0.3s						
PTLB	Pontes e Lacer	25.29	35	P	P	09 11 48.2	-0.2
PTLB				IAmb	IAmb	09 11 57.3	
	comp=Z,18nm,1.3s						
PTLB	Pontes e Lacer	25.29	35	*e*P	P	09 11 48.8	+0.4
PP1B	Ponte de Pedra	25.70	46	*e*P	P	09 11 52.2	0.0
PET01	Itanhaem-SP	26.15	68	*e*P	P	09 11 57.6	+1.4
SPB	Sao Paulo	26.45	67	P	P	09 11 59.3	+0.5
SPB				IAmb	IAmb	09 12 02.9	
	comp=Z,21nm,0.8s						
SALV	Santo Antonio	26.62	42	*e*P	P	09 12 00.9	+0.4
VILB	Vilhena	27.05	31	IAmb	IAmb	09 12 11.0	
	comp=Z,13nm,0.8s						
RCLB	Rio Claro- Sao	27.09	65	*e*P	P	09 12 06.9	+2.2
VAO	Valinhos	27.14	66	*e*P	P	09 12 06.9	+1.6
BB19B	Bebedouro	27.25	61	*e*P	P	09 12 07.3	+1.1
PARB	Paraibuna	27.93	68	*e*P	P	09 12 12.3	0.0
ETMB	Extrema	28.09	16	P	P	09 12 14.7	+1.0
ETMB	Extrema	28.09	16	*e*P	P	09 12 14.7	+1.0
PMSA	Palmer Station	28.28	171	LR	LR	09 21 54.0	
	comp=Z,228nm,20.1s,baz=202,slow=33						
ARAG	Araguaiana, MT	28.99	48	*e*P	P	09 12 20.9	-0.8
CZSB	Cruzeiro do Su	29.31	2	*e*P	P	09 12 25.5	+1.1
IPMB	Ipameri, GO	29.58	57	*e*P	P	09 12 26.2	-0.7
PDRB	Porto dos Gac	29.76	36	*e*P	P	09 12 28.6	+0.1
PMNB	Patos De Minas	30.40	60	*e*P	P	09 12 34.5	+0.2
BDFB	Brasilia	31.40	54	P	P	09 12 41.9	-1.3
	comp=Z,5.1nm,0.8s,baz=176,slow=2.1,SNR=5.7						
	comp=Z,5.1nm,0.8s						
RPN	Rapa Nui	31.45	278	LR	LR	09 22 33.0	
	comp=Z,170nm,20.1s,baz=6.0,slow=31						
SNDB	Serra Nova Dou	32.26	45	*e*P	P	09 12 50.2	-0.4
DIAM	Diamantina, MG	32.50	63	*e*P	P	09 12 52.3	-0.6
TBTG	Tabatinga, AM	33.01	7	P	P	09 12 57.9	+0.8
TBTG	Tabatinga, AM	33.01	7	*e*P	P	09 12 57.4	+0.3
JANB	Januaria	34.27	58	*e*P	P	09 13 07.6	-0.6
SDBA	SAO DESIDERIO	35.81	54	*e*P	P	09 13 21.2	-0.3
MACA	Manacapuru-AM	35.95	23	*e*P	P	09 13 22.6	+0.1
GUA01	Guaratinga, BA	36.40	65	*e*P	P	09 13 27.8	+1.3
ITTB	Itaituba	36.64	31	*e*P	P	09 13 28.2	-0.3
SGCB	S£o Gabriel d	37.39	11	*e*P	P	09 13 34.4	-0.5
OTAV	Otavalo	37.44	353	*e*P	P	09 13 34.2	-1.6
PRPB	Parauapebas	37.87	41	*e*P	P	09 13 38.7	-0.3
PRAC	Prado	40.66	359	*e*P	P	09 14 04.8	+2.6
ORTC	Ortega, Tolima	40.87	358	*e*P	P	09 14 06.0	+2.1
YOTC	Yotoco, Valle	40.98	356	*e*P	P	09 14 07.5	+2.5
BOAV	Boa Vista	41.27	21	*e*P	P	09 14 07.4	+0.2
ROSC	El Rosal	41.77	359	P	P	09 14 14.7	+2.9
	comp=Z,4.5nm,0.4s,baz=162,slow=20,SNR=1.8						
	comp=Z,4.5nm,0.4s						
RUSC	La Rusia	42.83	1	P	P	09 14 20.9	+0.5
RUSC				IAmb	IAmb	09 14 31.0	
	comp=Z,14nm,0.8s						
RUSC	La Rusia	42.83	1	*e*P	P	09 14 22.1	+1.7
CBOC	Ciudad Bolivar	42.83	357	*e*P	P	09 14 21.6	+1.4
HELC	Santa Helena	43.14	358	*e*P	P	09 14 24.7	+1.8
PTBC	PUERTO BERRIO,	43.46	359	*e*P	P	09 14 24.7	-0.4
DBBC	Dabeiba	43.99	357	*e*P	P	09 14 33.4	+4.0
ZARC	Zaragoza, Cauc	44.42	359	*e*P	P	09 14 33.5	+0.8
SDV	Santo Domingo	45.90	5	*e*P	P	09 14 45.8	+1.1
BAUV	El Baul	46.18	8	P	P	09 14 45.7	-1.0
MDP	Montagnes des	46.49	30	LR	LR	09 36 06.6	
	comp=Z,449nm,18.5s,baz=16,slow=38						
VNA3	Neumayer Olymp	47.06	157	P	P	09 14 53.6	+0.5
VNA2	Neumayer--Watz	47.74	156	P	P	09 14 59.8	+1.5
	baz=274,slow=9.0						
SNAA	Sanae	49.28	157	P	P	09 15 11.2	+1.0
SNAA	Sanae	49.28	157	P	P	09 15 10.3	+0.1
TROLL	Troll, Antarti	50.97	157	P	P	09 15 24.3	+1.1
QSPA	South Pole Qui	53.09	180	P	P	09 15 40.6	+1.5
	comp=Z,4.0nm,0.9s,baz=134,slow=6.1,SNR=11						
	comp=Z,4.0nm,0.9s						
QSPA	South Pole Qui	53.09	180	P	P	09 15 40.9	+1.8
QSPA				IAmb	IAmb	09 15 48.0	
	comp=Z,8.6nm,0.9s						
Z47A	Carrollton	71.22	348	P	P	09 17 41.4	+0.7
TX31	Lajitas Ar. Si	71.78	333	P	P	09 17 43.0	-1.3
TX31				IAmb	IAmb	09 17 53.4	
	comp=Z,11nm,1.0s						
TX32	Lajitas Array	71.78	333	P	P	09 17 45.5	+1.2
TX32				IAmb	IAmb	09 17 53.4	
	comp=Z,3.8nm,1.0s						
TXAR	Lajitas Array	71.78	333	P	P	09 17 45.9	+1.5
	comp=Z,0.8nm,0.7s,baz=148,slow=8.6,SNR=13						
	comp=Z,0.8nm,0.7s						
SWET	Sewanee	72.86	350	P	P	09 17 50.3	-0.2
V48A	Smith Brothers	73.50	349	P	P	09 17 54.9	+0.6
CCM	Cathedral Cave	76.53	346	P	P	09 18 12.3	+0.6
CCM				IAmb	IAmb	09 18 20.1	
	comp=Z,8.8nm,0.8s						
OK032	Salt Plains WL	76.95	340	P	P	09 18 13.5	-0.6
DBIC	Dimbokro	77.63	72	P	P	09 18 19.3	+0.8
	comp=Z,8.0nm,0.9s,baz=200,slow=5.9,SNR=6.6						
	comp=Z,8.0nm,0.9s						
BOSA	Boshof	79.95	118	P	P	09 18 31.6	+0.3
	comp=Z,4.8nm,0.9s,baz=231,slow=6.5,SNR=6.0						
	comp=Z,4.8nm,0.9s						
LBTB	Lobatse	82.36	115	P	P	09 18 44.5	+0.3
LBTB				IAmb	IAmb	09 18 44.9	
	comp=Z,7.7nm,0.8s						
ECSD	EROS Data Cent	83.10	344	P	P	09 18 46.8	-0.4
NVAR	Mina Array Bea	85.62	327	P	P	09 19 03.3	+2.9
	comp=Z,0.3nm,0.7s,baz=161,slow=3.5,SNR=2.7						
	comp=Z,0.3nm,0.7s						
PDAR	Pinedale Array	85.91	335	P	P	09 19 04.3	+2.6
	comp=Z,0.4nm,0.8s,baz=157,slow=3.4,SNR=2.5						
	comp=Z,0.4nm,0.8s						
TORD	Torodi Ar. Bea	86.71	71	P	P	09 19 06.0	0.0
	comp=Z,85nm,0.5s,baz=244,slow=4.7,SNR=3.8						
SCHQ	Schefferville	91.82	4	LR	LR	10 00 08.5	
	comp=Z,106nm,21.1s,baz=123,slow=35						
WRA	Warramunga Arr	117.27	210	PKP	PKiKP	09 25 07.5	-0.2
	comp=Z,0.3nm,0.7s,baz=162,slow=2.0,SNR=7.3						
BRTR	Keskin Array B	124.66	63	PKP	PKPdf	09 25 20.1	-1.3
	comp=Z,0.3nm,0.4s,baz=211,slow=3.0,SNR=2.3						
ZALV	Zalesovo Beam	157.70	34	PKP	PKPdf	09 26 17.6	0.0
	comp=Z,0.5nm,0.4s,baz=323,slow=2.2,SNR=4.8						
ZALV				PKPab	PKPab	09 26 50.7	+0.6
	comp=Z,1.1nm,0.6s,baz=317,slow=6.5,SNR=2.6						
MKAR	Makanchi Array	159.93	54	PKP	PKPdf	09 26 21.2	+0.7
	comp=Z,0.5nm,0.8s,baz=270,slow=1.4,SNR=3.6						
MKAR				PKPab	PKPab	09 27 00.1	+0.1
	comp=Z,1.0nm,0.7s,baz=292,slow=3.5,SNR=8.7						
PZH	PanZhiHua	168.77	160	PKP	PKPdf	09 26 27.0	-2.2

SONM	**Songino Array**	**169.32**	**359**	PKPab	**PKPab**	**09 27 42.7**	**+1.4**
	comp=Z,0.4nm,0.8s,baz=17,slow=1.5,SNR=1.9						

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*ANF **30** 09:09:57.4±0.1, 34°.22N×117°.47W, h13km±1km, ML3.0/29, Error ellipse: s-maj=1.0km s-min=0.9km az=34.0*

*NEIC **30** 09:09:58.0±1.0, 34°.25N±0°.01×117°.46W±0°.02, h11km±5km, Error ellipse: s-maj=2.4km s-min=1.2km az=138.0*

*PAS **30** 09:09:58.3±1.2, 34°.23N±0°.01×117°.46W±0°.02, h9km±3km, ML3.0, ML2.7/46(NEIC), Error ellipse: s-maj=2.3km s-min=2.0km az=134.0*

ISC 30 09:09:57.9±0.8**, 34°.23N**±0°.01×**117°.46W**±0°.01**, h14**km±4km**, n115, σ0ˢ.73**/186**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SS2	**San Sevaine**	**0.04**	**230**		**Pg**	**09 10 00.3**	**-0.1**
CSP	**Cedar Springs**	**0.11**	**53**		**Pg**	**09 10 01.0**	**-0.3**
FON	**Fontana**	**0.14**	**172**		**Pg**	**09 10 01.4**	**-0.1**
FON					**Sg**	**09 10 03.9**	**-0.1**
BFSC	**Mount Baldy Ra**	**0.16**	**272**		**Pg**	**09 09 57.3**	**-4.7**
BFSC					**Sg**	**09 10 04.3**	**-0.5**
BFSC	**Mount Baldy Ra**	**0.16**	**272**	P	**Pg**	**09 10 01.7**	**-0.3**
	baz=94,SNR=273						
BFSC				S	**Sg**	**09 10 04.3**	**-0.5**
	baz=94						
CLTC	**Calectric**	**0.18**	**139**		**Pg**	**09 10 02.4**	**+0.2**
CLTC					**Sg**	**09 10 06.5**	**+1.4**
SSK	**Sunset Peak**	**0.19**	**263**		**Pg**	**09 10 02.4**	**0.0**
CFSC	**Central Fire S**	**0.20**	**131**		**Pg**	**09 10 02.6**	**+0.2**
CFSC					**Sg**	**09 10 06.0**	**+0.6**
HLNC	**Highland**	**0.23**	**119**		**Pg**	**09 10 03.1**	**+0.2**
HLNC					**Sg**	**09 10 06.7**	**+0.3**
MLSC	**Mira Loma**	**0.24**	**200**		**Pg**	**09 10 03.1**	**0.0**
MLSC					**Sg**	**09 10 06.5**	**-0.1**
RVR	**Riverside**	**0.25**	**163**		**Pg**	**09 10 03.1**	**-0.1**
RVR					**Sg**	**09 10 06.7**	**-0.2**
RSBC	**Riverside Bore**	**0.28**	**157**		**Pg**	**09 10 03.7**	**-0.1**
RSBC					**Sg**	**09 10 07.8**	**0.0**
RSBC	**Riverside Bore**	**0.28**	**157**		**Pg**	**09 10 00.6**	**-3.2**
RSBC					**Sg**	**09 10 07.4**	**-0.4**
CHNC	**Chino**	**0.30**	**218**		**Pg**	**09 10 04.2**	**+0.2**
CHNC					**Sg**	**09 10 08.5**	**+0.3**
ADO	**Adelanto Recei**	**0.32**	**4**		**Pg**	**09 10 04.6**	**+0.1**
ADO					**Sb**	**09 10 09.7**	**-0.8**
PSRC	**Puddingstone R**	**0.32**	**244**		**Pg**	**09 10 02.1**	**-2.4**
PSRC					**Sg**	**09 10 09.1**	**+0.2**
SVD	**Seven Oaks Dam**	**0.33**	**113**		**Pg**	**09 10 04.7**	**+0.1**
SVD					**Sg**	**09 10 09.6**	**+0.3**
XTL	**Crystal Lake,**	**0.34**	**281**		**Pg**	**09 10 04.8**	**-0.1**
PEM	**Pine Mountain**	**0.34**	**259**		**Pg**	**09 10 05.0**	**+0.1**
VTV	**Victorville**	**0.34**	**19**		**Pg**	**09 10 04.8**	**-0.2**
VTV					**Sg**	**09 10 09.6**	**-0.2**
CFT	**Crafton Hills**	**0.35**	**124**		**Pg**	**09 10 05.3**	**+0.2**
CFT					**Sg**	**09 10 10.2**	**+0.3**
CRNC	**Corona**	**0.37**	**193**		**Pg**	**09 10 05.2**	**-0.1**
BTL	**Butler Peak**	**0.38**	**86**		**Pg**	**09 10 05.9**	**+0.2**
HOLC	**Holcomb Ridge**	**0.39**	**305**		**Pg**	**09 10 05.7**	**-0.1**
HOLC					**Sg**	**09 10 10.8**	**-0.3**
PEC	**Perris**	**0.42**	**144**		**Pg**	**09 10 06.2**	**-0.1**
PEC					**Sg**	**09 10 11.8**	**-0.2**
BBRC	**Big Bear Solar**	**0.45**	**86**		**Pg**	**09 10 07.0**	**+0.1**
BBRC					**Sg**	**09 10 13.3**	**+0.3**
BBRC	**Big Bear Solar**	**0.45**	**86**	P	**Pg**	**09 10 07.0**	**+0.1**
	baz=266,SNR=204						
BBRC				S	**Sg**	**09 10 13.3**	**+0.3**
	baz=266						
JNH	**Juniper Hills**	**0.46**	**298**		**Pg**	**09 10 07.0**	**0.0**
JNH					**Sg**	**09 10 13.4**	**+0.1**
CHFC	**Chilao Flat St**	**0.48**	**282**		**Pg**	**09 10 07.1**	**-0.3**
CHFC					**Sg**	**09 10 13.5**	**-0.4**
MWC	**Mount Wilson**	**0.49**	**269**		**Pg**	**09 10 07.6**	**-0.1**
MWC					**Sg**	**09 10 14.7**	**+0.4**
BBSC	**Beaumont Base**	**0.51**	**128**		**Pg**	**09 10 08.2**	**+0.3**
BBSC					**Sg**	**09 10 15.3**	**+0.6**
RHC	**Rose Hills Cem**	**0.51**	**243**		**Pg**	**09 10 08.2**	**+0.2**
SIL	**Silver Peak**	**0.54**	**78**		**Pg**	**09 10 08.5**	**0.0**
SIL					**Sg**	**09 10 15.9**	**+0.1**
SBB	**Saddle Back Bu**	**0.54**	**327**		**Pg**	**09 10 08.3**	**-0.3**
SBB					**Sg**	**09 10 15.5**	**-0.4**
LRRC	**Littlerock Res**	**0.55**	**302**		**Pg**	**09 10 08.6**	**-0.1**
LRRC					**Sg**	**09 10 16.3**	**+0.2**
CACC	**Caltech Cellar**	**0.56**	**260**		**Pg**	**09 10 08.8**	**0.0**
CACC					**Sg**	**09 10 16.9**	**+0.7**
CRPC	**Caltech Rob'n**	**0.56**	**260**		**Pg**	**09 10 08.9**	**0.0**
GVRC	**Garvey Reservo**	**0.57**	**252**		**Pg**	**09 10 09.2**	**+0.1**
GVRC	**Garvey Reservo**	**0.57**	**252**		**Sg**	**09 10 16.8**	**0.0**
ELS	**Elsinore Mount**	**0.58**	**177**	Pg	**Pg**	**09 10 08.9**	**-0.5**
ELS				IAML		09 10 16.9	
	comp=N,429nm,0.3s						
ELS				IAML		09 10 17.1	
	comp=E,430nm,0.1s						
ELS	**Elsinore Mount**	**0.58**	**177**		**Sg**	**09 10 16.6**	**-0.6**
PASC	**Pasadena Art C**	**0.60**	**264**		**Pg**	**09 10 09.4**	**-0.3**
PASC					**Sg**	**09 10 17.8**	**+0.1**
PASC	**Pasadena Art C**	**0.60**	**264**	IAML		09 10 18.6	
	comp=E,232nm,0.3s						
PASC				IAML		09 10 19.9	
	comp=N,254nm,0.5s						
BREC	**Barre Substati**	**0.60**	**226**		**Sb**	**09 10 20.1**	**+1.5**
SANC	**Santa Ana**	**0.63**	**214**		**Pg**	**09 10 10.4**	**+0.2**
HYS	**Haystack Butte**	**0.64**	**352**		**Sg**	**09 10 18.6**	**-0.2**
CJV	**Casa Juvan**	**0.64**	**298**		**Pg**	**09 10 10.2**	**-0.2**
CJV					**Sg**	**09 10 18.7**	**-0.2**
HMTC	**Hemet**	**0.65**	**144**		**Sg**	**09 10 18.4**	**-0.8**
DLAC	**Del Amo**	**0.65**	**234**		**Sb**	**09 10 21.7**	**+1.8**
MURC	**Murrieta**	**0.67**	**161**		**Pg**	**09 10 10.3**	**-0.6**
MURC					**Sg**	**09 10 19.3**	**-0.6**
MURC	**Murrieta**	**0.67**	**161**	P	**Pg**	**09 10 10.3**	**-0.6**
	baz=341,SNR=56						
MURC				S	**Sg**	**09 10 19.2**	**-0.6**
	baz=341						
DGR	**Domenigoni Val**	**0.69**	**147**		**Pg**	**09 10 10.7**	**-0.7**
DGR					**Sg**	**09 10 19.6**	**-1.0**
GR2C	**Griffith Obs.**	**0.70**	**261**		**Pg**	**09 10 11.1**	**-0.5**
GR2C					**Sg**	**09 10 20.6**	**-0.3**
POB	**Polly Butte**	**0.71**	**140**		**Pg**	**09 10 11.1**	**-0.6**
POB					**Sg**	**09 10 20.1**	**-0.9**
BACC	**Bachelor Mtn.**	**0.71**	**150**		**Pg**	**09 10 11.0**	**-0.8**
BACC					**Sg**	**09 10 20.1**	**-1.1**
WTT2	**Watts, South G**	**0.72**	**247**		**Pb**	**09 10 12.7**	**+0.5**
DECC	**Green Verdugo**	**0.72**	**272**		**Pg**	**09 10 11.7**	**-0.2**
DECC					**Sg**	**09 10 21.8**	**+0.3**
DECC	**Green Verdugo**	**0.72**	**272**	P	**Pg**	**09 10 11.7**	**-0.2**
	baz=92,SNR=18						
DECC				S	**Sg**	**09 10 21.6**	**+0.1**
	baz=92						
HLLC	**North Hollywoo**	**0.75**	**266**		**Pg**	**09 10 12.2**	**-0.2**
HLLC					**Sg**	**09 10 22.8**	**+0.6**
RRX	**Edison Barstow**	**0.75**	**31**		**Pg**	**09 10 12.3**	**-0.2**
RRX					**Sb**	**09 10 22.6**	**-0.1**
RRX	**Edison Barstow**	**0.75**	**31**	P	**Pg**	**09 10 12.2**	**-0.2**
	baz=211,SNR=11						
RRX				S	**Sb**	**09 10 22.7**	**-0.1**
	baz=211						
EDW2	**Edwards Air Fo**	**0.78**	**326**		**Pg**	**09 10 12.7**	**-0.4**
EDW2					**Sg**	**09 10 22.9**	**-0.4**
EDW2	**Edwards Air Fo**	**0.78**	**326**	P	**Pg**	**09 10 12.6**	**-0.4**
	baz=146,SNR=47						
EDW2				S	**Sg**	**09 10 22.8**	**-0.6**
	baz=146						
DEVC	**Devers**	**0.79**	**112**		**Pg**	**09 10 13.2**	**-0.1**
DEVC					**Sb**	**09 10 24.4**	**+0.4**
LEOC	**Leona Valley**	**0.80**	**300**		**Pg**	**09 10 13.2**	**-0.3**
LEOC					**Sg**	**09 10 24.2**	**+0.2**
DJJ	**Donna J Jenkin**	**0.83**	**262**		**Pg**	**09 10 13.2**	**-0.8**
DJJ					**Sg**	**09 10 24.5**	**-0.5**
FMP	**Fort Macarthur**	**0.86**	**233**		**Pg**	**09 10 14.2**	**-0.4**
FMP					**Sb**	**09 10 26.6**	**+0.6**
FMP	**Fort Macarthur**	**0.86**	**233**	P	**Pg**	**09 10 14.1**	**-0.6**
	baz=53						
FMP				S	**Sg**	**09 10 25.9**	**-0.1**
	baz=53						
GVDA	**Garner Valley**	**0.86**	**130**		**Pg**	**09 10 14.1**	**-0.6**
GVDA					**Sg**	**09 10 24.8**	**-1.2**
CRY	**Cary Ranch**	**0.90**	**138**		**Pg**	**09 10 14.5**	**-0.8**
CRY					**Sg**	**09 10 26.2**	**-0.9**
TPO	**Tropico Hills**	**0.90**	**316**		**Pg**	**09 10 14.9**	**-0.5**
TPO					**Sg**	**09 10 26.8**	**-0.4**
BLAC	**Blackrock camp**	**0.91**	**100**		**Pg**	**09 10 15.3**	**-0.1**
BLAC					**Sg**	**09 10 27.4**	**+0.1**
GTM	**Goat Mountain**	**0.92**	**86**		**Pg**	**09 10 14.4**	**-1.3**
GTM					**Sg**	**09 10 27.1**	**-0.6**
RPV	**Rancho Palos V**	**0.92**	**238**		**Pg**	**09 10 15.2**	**-0.5**
CCAC	**Calif City Air**	**1.02**	**334**		**Pg**	**09 10 16.9**	**-0.8**
CCAC				IAML		09 10 31.4	
	comp=E,362nm,0.4s						
CCAC				IAML		09 10 33.8	
	comp=N,288nm,0.3s						
PFO	**Pinyon Flats O**	**1.04**	**126**		**Pg**	**09 10 17.2**	**-0.8**
PFO				IAML		09 10 32.1	
	comp=N,114nm,0.3s						
PFO				IAML		09 10 32.4	
	comp=N,120nm,0.1s						
PFO	**Pinyon Flats O**	**1.04**	**126**	P	**Pg**	**09 10 17.1**	**-0.8**
	baz=307,SNR=13						
PFO				S	**Sg**	**09 10 30.4**	**-1.1**
	baz=307						
PMD	**Palm Desert**	**1.07**	**123**		**Pb**	**09 10 17.9**	**-0.4**
PMD				IAML		09 10 36.1	
	comp=E,288nm,0.4s						
PMD				IAML		09 10 36.5	
	comp=N,139nm,0.6s						
HEC	**Hector,Ludlow**	**1.10**	**57**	P	**Pb**	**09 10 18.7**	**-0.2**
	baz=237,SNR=24						
HEC				S	**Sg**	**09 10 33.5**	**-0.1**
	baz=237						
OSI	**Osito Audit: C**	**1.11**	**290**	P	**Pb**	**09 10 18.4**	**-0.5**
	baz=110						
OSI				S	**Sb**	**09 10 33.8**	**+0.5**
	baz=110						
CIS	**Catalina Islan**	**1.15**	**224**	P	**Pb**	**09 10 18.5**	**-1.0**
	baz=44,SNR=22						
CIS				S	**Sb**	**09 10 34.4**	**+0.1**
	baz=44						
GSC	**Goldstone, Bar**	**1.20**	**27**		**Pb**	**09 10 20.4**	**0.0**
GSC	**Goldstone, Bar**	**1.20**	**27**	P	**Pb**	**09 10 20.4**	**0.0**
	baz=207,SNR=56						
GSC				S	**Sb**	**09 10 36.0**	**+0.2**
	baz=207						
BELC	**Belle Mtn. Jos**	**1.24**	**100**	P	**Pn**	**09 10 21.1**	**+0.2**
	baz=281,SNR=50						
BELC				S	**Sb**	**09 10 37.5**	**+0.5**
	baz=281						
LRMC	**Laurel Mtn Rad**	**1.26**	**352**	P	**Pn**	**09 10 21.1**	**0.0**
	baz=172,SNR=61						
LRMC				S	**Sg**	**09 10 38.2**	**-0.3**
	baz=172						
109C	**Camp Elliot, M**	**1.37**	**167**		**Pn**	**09 10 21.9**	**-0.7**
109C	**Camp Elliot, M**	**1.37**	**167**	P	**Pn**	**09 10 22.0**	**-0.7**
	baz=348,SNR=13						
109C				S	**Sn**	**09 10 39.7**	**-0.9**
	baz=348						
ARVC	**Arvin**	**1.44**	**309**	Pb	**Pn**	**09 10 24.3**	**+0.8**
	baz=128,SNR=11						
ARVC				S	**Sb**	**09 10 43.2**	**+0.6**
	baz=128						
GMRC	**Granite Mounta**	**1.59**	**69**	Pb	**Pb**	**09 10 27.2**	**+0.1**
	baz=250,SNR=45						
GMRC				Sb	**Sg**	**09 10 48.4**	**-0.6**
	baz=250						
MONP2	**Monument Peak**	**1.59**	**147**	Pb	**Pn**	**09 10 26.4**	**+0.6**
	baz=327,SNR=21						
MONP2				S	**Sn**	**09 10 46.9**	**+0.5**
	baz=327						
ISA	**Isabella, Lake**	**1.65**	**330**		**Pn**	**09 10 27.1**	**+0.5**
ISA				IAML		09 10 51.4	
	comp=E,60nm,0.4s						
ISA	**Isabella, Lake**	**1.65**	**330**	P	**Pn**	**09 10 26.8**	**+0.3**
	baz=150,SNR=18						
ISA				Sb	**Sb**	**09 10 49.7**	**+0.9**
	baz=150						
BAR	**Barrett**	**1.68**	**157**		**Pn**	**09 10 27.1**	**+0.2**
TUQ	**Turquoise Moun**	**1.74**	**46**	Pb	**Pb**	**09 10 30.0**	**+0.2**
	baz=227,SNR=14						
TUQ				Sb	**Sg**	**09 10 53.2**	**-0.8**
	baz=227						
BCW	**Bitter Crk WRg**	**1.76**	**294**		**Pn**	**09 10 28.6**	**+0.6**
BC3	**Big Chuckawall**	**1.77**	**108**	P	**Pn**	**09 10 28.2**	**0.0**
	baz=290,SNR=19						
BC3				Sb	**Sb**	**09 10 53.6**	**+1.4**
	baz=290						
SCZ2	**Santa Cruz Isl**	**1.82**	**263**	Sb	**Sb**	**09 10 54.4**	**+0.8**
	baz=82						
MPMC	**Manual Prospec**	**1.82**	**359**	P	**Pn**	**09 10 29.2**	**+0.2**
	baz=179,SNR=20						
MPMC				Sb	**Sg**	**09 10 55.3**	**-1.3**
	baz=179						
SBC	**Santa Barbara**	**1.87**	**277**	P	**Pn**	**09 10 29.4**	**-0.1**
	baz=96						
SWSC	**Sam W. Stewart**	**1.89**	**132**	P	**Pn**	**09 10 29.5**	**-0.2**
	baz=313						
SWSC				Sb	**Sb**	**09 10 57.2**	**+1.6**
	baz=313						
IRM	**Iron Mountain**	**1.92**	**92**	P	**Pn**	**09 10 30.0**	**-0.2**
	baz=273,SNR=40						
IRM				Sb	**Sg**	**09 10 58.6**	**-1.2**
	baz=273						
SHOC	**Shoshone, Teco**	**1.93**	**30**	Pb	**Pb**	**09 10 33.3**	**+0.5**
	baz=210						
SHOC				Sb	**Sg**	**09 10 58.5**	**-1.4**
	baz=210						
IKP	**In-Ko-Pah, Jac**	**1.94**	**144**	Pb	**Pb**	**09 10 32.8**	**-0.3**
	baz=325,SNR=6.9						
IKP				Sb	**Sb**	**09 10 57.8**	**+0.6**
	baz=325						
CBX	**Cerro Bola**	**2.03**	**161**		**Pn**	**09 10 32.6**	**+0.9**
CBX				IAML		09 11 01.8	
	comp=E,73nm,0.6s						
CBX				IAML		09 11 06.5	
	comp=N,66nm,0.6s						
YUH	**Yuha Desert**	**2.04**	**140**		**Pn**	**09 10 32.0**	**+0.2**
FURC	**Furnace Creek,**	**2.28**	**12**	Sb	**Sg**	**09 11 09.7**	**-1.5**
	baz=192						
SMMC	**Simmler**	**2.35**	**298**	P	**Pn**	**09 10 36.4**	**+0.3**
	baz=117						
BLYC	**Blythe**	**2.49**	**100**	Pn	**Pn**	**09 10 38.6**	**+0.6**
BLYC				IAML		09 11 19.7	
	comp=N,45nm,0.6s						
BLYC				IAML		09 11 20.9	
	comp=E,38nm,0.5s						
ESJX	**Sierra Juarez**	**2.56**	**150**		**Pn**	**09 10 39.8**	**+0.7**
V12A	**Nelson**	**2.61**	**54**		**Pn**	**09 10 40.1**	**+0.4**
V12A				IAML		09 11 21.9	
	comp=E,40nm,0.3s						
V12A				IAML		09 11 24.1	
	comp=N,31nm,0.4s						
LCH	**Last Change Ra**	**3.00**	**357**		**Pn**	**09 10 46.2**	**+1.1**
W13A	**Hualapai Mount**	**3.07**	**73**		**Pn**	**09 10 46.5**	**+0.3**
W13A				IAML		09 11 42.9	
	comp=N,14nm,0.7s						
DSP	**Deep Springs**	**3.16**	**353**	Pn	**Pn**	**09 10 48.3**	**+1.2**
Y14A	**Wickenburg**	**3.71**	**93**		**Pn**	**09 10 55.2**	**+0.4**
Y14A				IAML		09 11 57.2	
	comp=E,11nm,0.5s						
Y14A				IAML		09 11 60.0	
	comp=N,14nm,0.6s						
KNB	**Kanab**	**4.69**	**52**	Pn	**Pn**	**09 11 09.1**	**+0.7**

IDC 30 09:37:34.3±16.0**, 5°.16S**×**150°.32E, h191**km±134km**, mb3.3**/3**, mbtmp3.8**/3**, MS3.4**/3**, Error ellipse: s-maj=109.7km s-min=55.4km az=95.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**15.36**	**195**	LR	LR	09 46 29.3	
	comp=Z,141nm,18.0s,baz=75,slow=35						
WRA	**Warramunga Arr**	**21.40**	**225**	P	P	09 42 07.3	0.0
	1.5nm,0.3s,baz=49,slow=10,SNR=27						
	1.5nm,0.3s						
ASAR	**Alice Springs**	**24.27**	**219**	P	P	09 42 34.3	+0.2
	3.0nm,0.8s,baz=52,slow=9.4,SNR=29						
	3.0nm,0.8s						
KAPI	**Kappang**	**30.45**	**269**	LR	LR	09 57 57.2	
	comp=Z,56nm,19.1s,baz=192,slow=40						
JNU	**Nakatsue**	**42.30**	**335**	LR	LR	10 00 31.5	
	comp=Z,47nm,18.5s,baz=119,slow=33						
MKAR	**Makanchi Array**	**78.98**	**320**	P	P	09 49 18.7	+1.7
	0.1nm,0.3s,baz=104,slow=6.1,SNR=2.2						
	0.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**148.06**	**287**	PKPbc	PKPdf	09 56 56.2	+1.2
	2.2nm,1.0s,baz=88,slow=2.8,SNR=7.0						

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*UPP **30** 09:46:54.9±0.0, 67°.64N×21°.03E, h0km, ML2.5, Suspected explosion*

ISC 30 09:46:54.7±1.0**, 67°.63N**±0°.03×**21°.03E**±0°.04**, h10**km**, n13, σ0ˢ.39**/14**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASU	**Masugnsbyn**	**0.41**	**114**	P	**Pg**	**09 47 02.9**	**+0.2**
KUA	**Kurravaara**	**0.42**	**322**	P	**Pg**	**09 47 02.8**	**-0.1**
KUA				S	**Sg**	**09 47 08.7**	**+0.2**
DUNU	**Dundret**	**0.54**	**200**	P	**Pg**	**09 47 05.3**	**+0.2**
LANU	**Lannavaara**	**0.56**	**40**	P	**Pg**	**09 47 05.3**	**-0.3**
RATU	**Laukkuluspa**	**0.58**	**291**	P	**Pg**	**09 47 05.8**	**-0.2**
KOVU	**Salmi**	**0.68**	**332**	P	**Pg**	**09 47 07.7**	**-0.1**
NIKU	**Nikkaluokta**	**0.80**	**289**	P	**Pg**	**09 47 09.8**	**-0.3**
SALU	**Saltoluokta**	**1.00**	**257**	P	**Pg**	**09 47 13.5**	**-0.4**
PAJU	**Pajala**	**1.01**	**126**	P	**Pg**	**09 47 13.6**	**-0.5**
ERTU	**Ertsjaerv**	**1.17**	**157**	P	**Pb**	**09 47 16.4**	**-0.5**
HEF	**Hetta**	**1.26**	**50**	*e*P	**Pn**	**09 47 18.2**	**-0.2**
HARU	**Harads**	**1.47**	**181**	P	**Pn**	**09 47 21.8**	**+0.7**
KTK1	**Kautokeino**	**1.62**	**29**	*e*P	**Pb**	**09 47 25.0**	**+0.4**

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*IDC **30** 09:51:26.4±5.8, 37°.41N×72°.21E, h134km±42km, mb3.2/3, mbtmp3.8/9, MS3.7/1, Error ellipse: s-maj=53.8km s-min=33.8km az=157.0*

*NNC **30** 09:51:32.5±4.6, 38°.09N×72°.05E, h0km, mb4.2, mpv4.0, Error ellipse: s-maj=36.9km s-min=28.4km az=158.0*

ISC 30 09:51:27.6±1.5**, 37°.6N**±0°.1×**71°.84E**±0°.09**, h130**km**, n26, σ1ˢ.76**/30**, mb3.5**/4**, 5C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.75**	**17**	P	**Pn**	**09 52 39.2**	**+1.5**
	SNR=87						
AML	**Almayashu**	**4.75**	**17**	⇑P	**Pn**	**09 52 38.9**	**+1.3**
	2.2nm,0.5s						
AML				⇑S	**Sn**	**09 53 31.2**	**-0.9**
	46nm,0.7s						
IUG	**Iuzhnay**	**4.75**	**344**	Pg	**Pn**	**09 52 40.7**	**+3.2**
	28nm,0.1s						
IUG				Lg	Lg	09 53 33.0	
	67nm,0.4s						
UCH	**Uchtor**	**5.06**	**23**	P	**Pn**	**09 52 43.0**	**+1.1**
	SNR=57						
EKS2	**Erkin-Say**	**5.27**	**16**	P	**Pn**	**09 52 46.3**	**+1.9**
	SNR=19						
AAK	**Ala-Archa**	**5.43**	**21**	P	**Pn**	**09 52 48.3**	**+1.8**
	SNR=40						
AAK	**Ala-Archa**	**5.43**	**21**	P	**Pn**	**09 52 48.3**	**+1.8**
	23nm,0.4s,baz=188,slow=4.8,SNR=72						
AAK				S	**Sn**	**09 53 47.3**	**-0.7**
	3.3nm,0.3s,baz=183,slow=12,SNR=1.9						
KBK	**Karagaybulak**	**5.58**	**24**	P	**Pn**	**09 52 51.5**	**+2.8**
	SNR=6.6						
KK31	**Karatay Array**	**5.59**	**350**	⇑P	**Pn**	**09 52 51.0**	**+2.4**
	18nm,0.3s,baz=162,slow=12						
KK31				⇓S	**Sn**	**09 53 51.0**	**-0.8**
	24nm,0.5s,baz=167,slow=21						
CHMS	**Chumysh**	**5.83**	**21**	P	**Pn**	**09 52 53.3**	**+1.4**
	SNR=17						
USP	**Ospenovka**	**6.01**	**19**	P	**Pn**	**09 52 55.2**	**+0.9**
	SNR=11						
TKM2	**Tokmak 2**	**6.04**	**27**	P	**Pn**	**09 52 55.9**	**+1.1**
	SNR=14						
TKM2	**Tokmak 2**	**6.04**	**27**	⇑P	**Pn**	**09 52 55.7**	**+0.9**
	9.3nm,0.6s						
TKM2				⇑S	**Sn**	**09 54 00.5**	**-2.4**
	9.6nm,0.8s						
SGDS	**Sogindy**	**6.22**	**19**	Pg	**Pn**	**09 52 57.5**	**+0.4**
	7.1nm,0.6s						
SGDS				Lg	Lg	09 54 05.0	
	7.2nm,0.6s						
KST	**Kastek**	**6.28**	**29**	Pg	**Pn**	**09 52 58.6**	**+0.6**
KST				Lg	Lg	09 54 08.4	
GEYT	**Alibeck**	**10.87**	**276**	S	**Sn**	**09 55 57.0**	**-2.5**
	2.5nm,0.5s,baz=182,slow=21,SNR=3.0						
MKAR	**Makanchi Array**	**12.01**	**37**	P	**Pn**	**09 54 13.3**	**-1.2**
	0.4nm,0.5s,baz=224,slow=15,SNR=5.3						
KURBB	**Kurchatov Arra**	**13.87**	**18**	P	**Pn**	**09 54 36.3**	**-2.2**
	0.4nm,0.6s,baz=206,slow=11,SNR=1.4						
BVAR	**Borovoye Array**	**15.46**	**357**	P	**Pn**	**09 54 58.5**	**0.0**
	1.9nm,0.4s,baz=162,slow=11,SNR=7.2						
AKTO	**Aktyubinsk**	**16.20**	**327**	P	**P**	**09 55 10.6**	**+2.3**
	2.5nm,0.4s,baz=136,slow=10,SNR=10						
AKTO				S	**Sn**	**09 58 05.0**	**-2.6**
	0.8nm,0.4s,baz=145,slow=20,SNR=2.7						
ZALV	**Zalesovo Beam**	**18.64**	**25**	P	**P**	**09 55 35.2**	**+0.2**
	1.7nm,0.5s,baz=226,slow=12,SNR=6.4						
FINES	**FINESS Array B**	**36.96**	**325**	P	**P**	**09 58 25.7**	**+1.9**
	0.3nm,0.3s,baz=119,slow=8.1,SNR=6.2						
	0.3nm,0.3s						
HFS	**Hagfors**	**42.63**	**321**	P	**P**	**09 59 12.0**	**+1.2**
	1.4nm,0.8s,baz=94,slow=15,SNR=1.5						
	1.4nm,0.8s						
JCJ	**Chichijima**	**59.10**	**78**	LR	LR	10 28 24.9	
	comp=Z,62nm,20.5s,baz=120,slow=38						
TORD	**Torodi Ar. Bea**	**66.42**	**269**	P	**P**	**10 02 02.0**	**-1.1**
	0.2nm,0.4s,baz=43,slow=7.5,SNR=2.6						
YKA	**Yellowknife Ar**	**80.12**	**3**	P	**P**	**10 03 21.8**	**-0.9**
	0.1nm,0.5s,baz=353,slow=5.4,SNR=5.7						
	0.1nm,0.5s						

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*IDC **30** 09:51:47.8±1.2, 3°.53N×127°.48E, h0km, mb3.7/6, mbtmp3.8/6, Error ellipse: s-maj=116.8km s-min=17.6km az=68.0*

*DJA **30** 09:52:05.3±0.7, 2°N±11°×12°7E±°, h280km±8km, M4.1/6, mb4.1/4, mB4.6/2, MLv4.1/6, Mw(mB)3.8/2*

ISC 30 09:51:60.0±1.1**, 3°.6N**±0°.1×**127°.5E**±0°.1**, h100**km**, n12, σ1ˢ.16**/12**, mb3.8**/6**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.00**	**273**	P	**Sn**	**09 52 57.6**	**+0.3**
TNTI	**Ternate**	**2.78**	**183**	P	**Pn**	**09 52 42.9**	**0.0**
LBMI	**Labuha**	**4.18**	**180**	P	**Pn**	**09 53 03.9**	**+2.3**
GTOI	**Gorontalo**	**5.37**	**237**	P	**Pn**	**09 53 18.3**	**+0.6**
MRSI	**Marisa**	**6.37**	**241**	P	**Pn**	**09 53 32.4**	**+1.1**
	193nm,0.6s,2µm0.7nm						
MPSI	**Mapaga**	**8.27**	**247**	P	**Pn**	**09 53 56.9**	**-0.3**
WRA	**Warramunga Arr**	**24.30**	**164**	P	**P**	**09 57 06.9**	**-1.4**
	3.3nm,0.7s,baz=344,slow=10,SNR=22						
	3.3nm,0.7s						
ASAR	**Alice Springs**	**27.77**	**167**	P	**P**	**09 57 38.5**	**-1.2**
	0.3nm,0.5s,baz=356,slow=7.9,SNR=10						
	0.3nm,0.5s						
STKA	**Stephens Creek**	**37.70**	**160**	P	**P**	**09 59 05.2**	**-0.7**
	1.8nm,0.6s,baz=339,slow=11,SNR=5.0						
	1.8nm,0.6s						
SONM	**Songino Array**	**47.71**	**341**	P	**P**	**10 00 27.8**	**+1.1**
	0.2nm,0.4s,baz=151,slow=9.1,SNR=1.9						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**58.14**	**325**	P	**P**	**10 01 43.0**	**-0.3**
	0.5nm,0.5s,baz=121,slow=7.2,SNR=11						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**62.30**	**327**	P	**P**	**10 02 11.4**	**-0.2**
	0.5nm,0.5s,baz=124,slow=5.9,SNR=7.0						
	0.5nm,0.5s						

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*NOU **30** 10:03:05.8, 10°.91S×162°.31E, h0km, mb5.2/10, Solomon Islands*

*IDC **30** 10:03:09.6±2.1, 11°.03S×162°.22E, h51km±17km, mb3.9/14, mbtmp4.2/16, ML4.4/2, MS3.8/31, Error ellipse: s-maj=19.8km s-min=11.5km az=64.0*

*NEIC **30** 10:03:11.9±2.2, 10°.97S±0°.09×162°.2E±0°.1, h67km±9km, mb4.7/27, Error ellipse: s-maj=19.1km s-min=11.7km az=63.0*

ISC 30 10:03:09.0±0.5**, 10°.96S**±0°.06×**162°.37E**±0°.07**, h46**km**, n92, σ1ˢ.87**/72**, mb4.7**/34**, MS3.9**/28**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.83**	**302**	P	**Pn**	**10 03 50.2**	**-1.5**
	21µm,0.3s,baz=150,slow=4.9,SNR=106						
HNR				S	**Sn**	**10 04 24.3**	**-0.3**
	70µm,0.3s,baz=172,slow=22,SNR=14						
HNR	**Honiara**	**2.83**	**302**	Pn	**Pn**	**10 03 50.4**	**-1.3**
HNR	**Honiara**	**2.83**	**302**	P	**Pn**	**10 03 51.1**	**-0.6**
KOUNC	**Koumac, New Ca**	**9.71**	**169**		**Pn**	**10 05 28.7**	**+2.5**
KOUNC					**Sn**	**10 07 12.8**	**-1.1**
KOUNC	**Koumac, New Ca**	**9.71**	**169**	P	**Pn**	**10 05 27.2**	**+1.0**
LIFNC	**LIFOU**	**10.82**	**155**	Pn	**Pn**	**10 05 41.7**	**+0.3**
LIFNC	**LIFOU**	**10.82**	**155**	P	**Pn**	**10 05 42.2**	**+0.8**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
DZM	Mont Dzumac	11.72	161	P	Pn	10 05 54.1	+0.4
	0.4nm,0.3s,baz=5.2,slow=10,SNR=17						
DZM				S	Sn	10 08 02.5	-0.7
	7.1nm,0.6s,baz=126,slow=20,SNR=2.0						
DZM				LR	LR	10 09 46.9	
	comp=Z,551nm,19.6s,baz=16,slow=34						
	1.6nm,0.3s						
DZM	Mont Dzumac	11.72	161	Pn	Pn	10 05 56.3	+2.5
DZM	Mont Dzumac	11.72	161	P	Pn	10 05 55.8	+2.1
YATNC	Mamie plateau,	11.86	159	P	Pn	10 05 57.7	+2.2
YATNC	Mamie plateau,	11.86	159	P	Pn	10 05 57.5	+2.0
ONTNC	Ouen Toro	11.94	161	Pn	Pn	10 06 00.7	+4.0
ONTNC	Ouen Toro	11.94	161	P	Pn	10 06 06.5	+10
RABL	Rabaul	12.14	303	Pn	Pn	10 06 01.7	+2.2
OUENC	Ouen Island, N	12.17	160	Pn	Pn	10 06 02.5	+2.7
OUENC	Ouen Island, N	12.17	160	P	Pn	10 06 03.0	+3.2
PINNC	Pines Island,	12.56	158	Pn	Pn	10 06 09.7	+4.6
PINNC	Pines Island,	12.56	158	P	Pn	10 06 09.5	+4.3
MSVF	Nonsavu	16.61	116	P	Pn	10 06 54.9	-4.0
	11nm,0.7s,baz=230,slow=7.7,SNR=7.3						
MSVF				LR	LR	10 12 14.8	
	comp=Z,386nm,21.9s,baz=294,slow=33						
EIDS	Eidsvold	17.88	215	P	P	10 07 15.4	+0.8
EIDS				IAmb	IAmb	10 07 17.0	
	comp=Z,40nm,1.0s						
CTA	Charters Tower	17.97	238	P	Pn	10 07 15.1	-0.5
	comp=Z,2.6nm,0.3s,baz=66,slow=12,SNR=26						
CTA				LR	LR	10 13 26.6	
	comp=Z,218nm,20.0s,baz=87,slow=35						
	comp=Z,72nm,0.9s						
CTAO	Charters Tower	17.97	238	P	P	10 07 16.1	+0.4
PATS	Pohnpei	18.14	347	P	Pn	10 07 18.3	+0.6
COEN	Coen	18.97	259	P	Pn	10 07 28.7	+0.9
ARMA	Armidale	21.78	206	P	P	10 07 58.6	+1.4
ARMA				IAmb	IAmb	10 08 14.3	
	comp=Z,31nm,1.2s						
MMPI	Merauke	21.81	275	P	P	10 08 01.8	+4.3
	comp=Z,17nm,0.7s						
SMPI	Sarmi	25.11	289	P	P	10 08 33.3	+3.5
	comp=Z,36nm,1.2s						
AFI	Afiamalu	25.41	99	LR	LR	10 16 55.5	
	comp=Z,246nm,19.9s,baz=259,slow=32						
STKA	Stephens Creek	28.30	220	P	P	10 08 56.2	-2.2
	comp=Z,2.7nm,1.0s,baz=71,slow=12,SNR=5.2						
STKA				LR	LR	10 19 32.1	
	comp=Z,386nm,20.5s,baz=35,slow=35						
	comp=Z,2.7nm,1.0s						
STKA	Stephens Creek	28.30	220	P	P	10 08 58.4	0.0
WB0	Warramunga Arr	28.32	249	P	P	10 08 57.0	-1.8
WRA	Warramunga Arr	28.41	248	P	P	10 08 57.5	-2.1
	comp=Z,1.8nm,0.6s,baz=78,slow=9.3,SNR=14						
WRA				PcP	PcP	10 12 10.5	-0.7
	comp=Z,0.5nm,0.8s,baz=71,slow=2.7,SNR=1.2						
WRA				LR	LR	10 20 16.7	
	comp=Z,616nm,18.2s,baz=82,slow=36						
	comp=Z,1.8nm,0.6s						
WRA	Warramunga Arr	28.41	248	P	P	10 08 56.5	-3.0
AS31	Alice Springs	29.89	241	P	P	10 09 12.5	-0.2
ASAR	Alice Springs	29.89	241	P	P	10 09 10.2	-2.5
	comp=Z,1.0nm,0.6s,baz=69,slow=9.8,SNR=22						
ASAR				PcP	PcP	10 12 13.9	-1.0
	comp=Z,1.1nm,0.9s,baz=74,slow=2.3,SNR=2.7						
ASAR				ScP	ScP	10 15 52.0	-1.5
	comp=Z,0.2nm,0.8s,baz=60,slow=4.4,SNR=1.8						
ASAR				LR	LR	10 20 39.4	
	comp=Z,252nm,18.6s,baz=84,slow=35						
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	29.89	241	P	P	10 09 10.7	-2.0
TOO	Toolangi	30.53	207	P	P	10 09 19.8	+1.7
TOO				IAmb	IAmb	10 09 37.6	
	comp=Z,30nm,1.5s						
MTN	Manton Dam	30.61	263	P	P	10 09 18.6	-0.5
MTN				IAmb	IAmb	10 09 37.9	
	comp=Z,39nm,1.4s						
BKZ	Black Stump Fm	30.78	158	P	P	10 09 22.2	+1.9
BKZ				IAmb	IAmb	10 09 47.2	
	comp=Z,24nm,1.4s						
CMWZ	Cape Campbell	32.38	163	P	P	10 09 34.7	+0.4
BBOO	Buckleboo	32.52	224	P	P	10 09 34.7	-1.0
LTZ	Lake Taylor	32.86	167	P	P	10 09 39.5	+1.1
LTZ				IAmb	IAmb	10 09 47.4	
	comp=Z,13nm,1.4s						
OXZ	Oxford	33.32	167	P	P	10 09 43.4	+0.9
OXZ				IAmb	IAmb	10 09 43.7	
	comp=Z,12nm,0.9s						
RPZ	Rata Peaks	33.49	169	P	P	10 09 44.2	+0.3
	comp=Z,6.6nm,0.7s,baz=308,slow=2.6,SNR=5.7						
	comp=Z,6.6nm,0.7s						
RPZ	Rata Peaks	33.49	169	P	P	10 09 44.3	+0.3
RPZ				IAmb	IAmb	10 09 51.5	
	comp=Z,14nm,1.1s						
MQZ	McQueen's Vall	33.82	167	P	P	10 09 47.3	+0.5
MQZ				IAmb	IAmb	10 10 21.3	
	comp=Z,12nm,1.1s						
LBMI	Labuha	36.12	284	P	P	10 10 12.6	+5.5
	comp=Z,25nm,0.7s						
LBMI				pP	pP	10 10 15.4	-4.0
	comp=Z,25nm,0.7s						
FITZ	Fitzroy Crossi	36.20	254	P	P	10 10 05.5	-2.2
FORT	Forrest	37.41	233	P	P	10 10 17.0	-0.8
RAR	Rarotonga	37.69	110	LR	LR	10 22 33.5	
	comp=Z,139nm,20.5s,baz=286,slow=31						
DAV	Davao City (W)	40.76	294	LR	LR	10 25 50.8	
	comp=Z,137nm,21.9s,baz=96,slow=34						
GTOI	Gorontalo	40.78	284	P	P	10 10 52.7	+6.5
	comp=Z,9.5nm,0.7s						
GTOI				pP	pP	10 10 55.3	-3.4
	comp=Z,9.5nm,0.7s						
PSA00	Pilbara Seismi	42.03	250	P	P	10 10 54.0	-2.4
PSA00				IAmb	IAmb	10 10 55.3	
	comp=Z,23nm,1.4s						
MBWA	Marble Bar	42.09	251	P	P	10 10 55.6	-1.2
MBWA				IAmb	IAmb	10 11 06.8	
	comp=Z,10nm,1.1s						
KAPI	Kappang	42.58	275	P	P	10 10 59.0	-1.9
	comp=Z,2.9nm,0.3s,baz=70,slow=11,SNR=1.9						
KAPI				LR	LR	10 29 25.3	
	comp=Z,58nm,20.1s,baz=127,slow=37						
	comp=Z,2.9nm,0.3s						
IGBI	Denpasar	46.53	268	P	P	10 11 38.6	+6.1
	comp=Z,77nm,1.0s,comp=Z,2μm						
MORW	Morawa	46.77	240	P	P	10 11 32.3	-1.8
MORW				IAmb	IAmb	10 11 48.1	
	comp=Z,17nm,1.2s						
NWAO	Narrogin (SRO)	46.78	235	P	P	10 11 32.2	-2.0
NWAO	Narrogin (SRO)	46.78	235	P	P	10 11 33.0	-1.2
NWAO				IAmb	IAmb	10 11 35.4	
	comp=Z,67nm,1.1s						
PPT	Papeete	46.94	104	LR	LR	10 26 43.7	
	comp=Z,98nm,21.5s,baz=268,slow=30						
JAGI	Jajag, Banyuwa	47.55	269	P	P	10 11 45.3	+4.9
	comp=Z,48nm,1.0s						
JNU	Nakatsue	53.13	327	LR	LR	10 32 21.3	
	comp=Z,41nm,21.4s,baz=138,slow=33						
CGJI	Cibinong	56.11	269	P	P	10 12 50.3	+6.0
CGJI	Cibinong	56.11	269	P	P	10 12 49.9	+5.6
	comp=Z,94nm,0.7s						
ASAJ	Asahikawa	57.69	343	P	P	10 12 55.6	+0.7
	comp=Z,4.0nm,0.6s,baz=240,slow=8.1,SNR=4.1						
ASAJ				LR	LR	10 36 19.5	
	comp=Z,71nm,20.6s,baz=168,slow=34						
	comp=Z,4.0nm,0.6s						
KSRS	Korea Array	57.99	328	LR	LR	10 36 03.0	
	comp=Z,44nm,19.6s,baz=135,slow=34						
USRK	Ussuriysk Ar.	61.44	336	P	P	10 13 21.6	+0.9
	comp=Z,4.5nm,1.0s,baz=111,slow=7.9,SNR=3.3						
USRK				LR	LR	10 37 01.1	
	comp=Z,45nm,21.5s,baz=329,slow=33						
	comp=Z,4.5nm,1.0s						
PETK	Petropavlovsk-	63.94	357	LR	LR	10 35 41.4	
	comp=Z,71nm,21.9s,baz=117,slow=30						
VNDA	Vanda	66.55	180	P	P	10 13 55.4	+1.6
	comp=Z,2.4nm,0.7s,baz=352,slow=6.0,SNR=13						
	comp=Z,2.4nm,0.7s						
CMAR	Chiang Mai Arr	69.05	295	P	P	10 14 10.9	+0.4
	comp=Z,0.5nm,0.3s,baz=123,slow=3.3,SNR=1.6						
	comp=Z,0.5nm,0.3s						
SONM	Songino Array	76.67	325	P	P	10 14 55.7	+0.4
	comp=Z,0.7nm,0.7s,baz=144,slow=5.9,SNR=4.7						
	comp=Z,0.7nm,0.7s						
QSPA	South Pole Qui	79.04	180	P	P	10 15 08.6	+0.4
QSPA				IAmb	IAmb	10 15 11.0	
	comp=Z,14nm,1.1s						
SVW2	Sparrevohn	79.10	19	P	P	10 15 09.5	+1.1
SVW2				IAmb	IAmb	10 15 24.0	
	comp=Z,13nm,1.2s						
PALK	Pallekele	83.25	279	LR	LR	10 56 11.0	
	comp=Z,32nm,18.6s,baz=182,slow=38						
HDA	Harding Lake	84.26	20	P	P	10 15 36.1	+0.6
HDA				IAmb	IAmb	10 15 45.1	
	comp=Z,13nm,1.4s						
ILAR	Eielson Array	84.51	19	P	P	10 15 36.2	-0.5
	comp=Z,0.2nm,0.5s,baz=247,slow=3.6,SNR=4.1						
ILAR				LR	LR	10 48 21.1	
	comp=Z,68nm,19.9s,baz=240,slow=32						
	comp=Z,0.2nm,0.5s						
YBH	Yreka Blue Hor	86.22	46	LR	LR	10 46 24.5	
	comp=Z,72nm,21.2s,baz=153,slow=30						
BBB	Bella Bella	86.41	35	LR	LR	10 51 42.6	
	comp=Z,36nm,18.9s,baz=228,slow=34						
DLBC	Dease Lake	87.93	29	LR	LR	10 52 53.1	
	comp=Z,108nm,18.4s,baz=290,slow=34						
NVAR	Mina Array Bea	88.52	51	P	P	10 15 57.1	-0.2
	comp=Z,1.0nm,0.9s,baz=235,slow=8.7,SNR=5.2						
NVAR				LR	LR	10 50 47.5	
	comp=Z,72nm,18.6s,baz=228,slow=32						
	comp=Z,1.0nm,0.9s						
INK	Inuvik	90.92	20	LR	LR	10 51 53.4	
	comp=Z,98nm,20.2s,baz=252,slow=32						
MKAR	Makanchi Array	91.20	317	P	P	10 16 08.4	-1.0
	comp=Z,0.2nm,0.5s,baz=98,slow=4.4,SNR=2.1						
	comp=Z,0.2nm,0.5s						
ELK	Elko	91.38	49	LR	LR	10 50 21.6	
	comp=Z,43nm,19.0s,baz=231,slow=31						
ZALV	Zalesovo Beam	91.56	325	LR	LR	11 00 04.8	
	comp=Z,30nm,18.1s,baz=80,slow=37						
LPIG	La Paz	92.00	66	LR	LR	10 51 36.7	
	comp=Z,46nm,18.5s,baz=212,slow=32						
AAK	Ala-Archa	95.77	312	LR	LR	11 00 17.4	
	comp=Z,40nm,20.6s,baz=58,slow=36						
PDAR	Pinedale Array	95.94	48	LR	LR	10 54 43.5	
	comp=Z,42nm,18.4s,baz=336,slow=32						
YKA	Yellowknife Ar	96.43	28	P	P	10 16 32.1	-0.8
	comp=Z,0.2nm,0.7s,baz=264,slow=4.3,SNR=3.1						
YKA				LR	LR	10 58 10.7	
	comp=Z,79nm,18.3s,baz=322,slow=34						
	comp=Z,0.2nm,0.7s						
ANMO	Albuquerque	97.14	56	LR	LR	10 54 57.6	
	comp=Z,43nm,18.0s,baz=5.0,slow=32						
TXAR	Lajitas Array	98.71	62	LR	LR	10 55 30.1	
	comp=Z,37nm,19.1s,baz=276,slow=32						
CLL	Collm	132.64	334	*e*PKPdf	PKPdf	10 22 18.0	-0.7

IDC ***30*** *10:13:07.0±1.4, 2°.42S×126°.21E, h0^{km}, mb3.5/3, mbtmp3.6/5, ML3.6/2, Error ellipse: s-maj=48.1km s-min=22.8km az=67.0*

DJA ***30*** *10:13:11.0±0.4, 2°S±2°×12°6E±°, h15^{km}±3^{km}, M4.0/14, mb4.2/5, mB5.2/2, MLv3.8/14, Mw(mB)4.5/2*

ISC 30 10:13:10.3±0.8**, 2°.45S**±0°.05×**126°.07E**±0°.06**, h20**^{km}**, n17,** σ**1ˢ.09**/20**, mb3.7**/3**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANI	Sanana	0.40	348	P	Pb	10 13 17.9	-0.8
SANI				S	Sb	10 13 23.8	-0.7
NLAI	Namlea	1.30	127	P	Pb	10 13 34.3	+0.3
LBMI	Labuha	2.30	39	P	Pn	10 13 48.5	+1.4
LBMI				S	Sn	10 14 14.5	-0.3
AAI	Ambon	2.45	120	P	Pb	10 13 52.8	-1.0
MSAI	Masohi	2.99	107	P	Pb	10 14 00.8	-2.1
TNTI	Ternate	3.45	22	P	Pn	10 14 03.7	+0.8
TNTI				S	Sn	10 14 43.9	+0.6
MRSI	Marisa	5.05	305	P	Pn	10 14 24.4	-0.5
FAKI	Fak Fak	6.19	94	P	Pn	10 14 42.6	+2.0
	27nm,1.0s,0.1nm						
SPSI	Sidrap Palu	6.47	256	P	Pn	10 14 44.5	+0.1
	17nm,0.5s,0.1nm						
BKSI	Bulukumba	6.58	244	P	Pn	10 14 46.4	+0.4
	16nm,0.7s,0.1nm						
BSSI	Bau Bau, Buton	6.67	236	P	Pn	10 14 46.7	-0.5
MPSI	Mapaga	6.76	294	P	Pn	10 14 49.8	+1.3
	6.9nm,1.6s,582nm0.1nm						
KAPI	Kappang	6.80	248	Pn	Pn	10 14 50.6	+1.6
	1.7nm,0.3s,baz=99,slow=17,SNR=6.6						
	9.2nm,0.5s						
WRA	Warramunga Arr	19.17	156	P	P	10 17 31.7	-1.1
	0.2nm,0.3s,baz=333,slow=11,SNR=9.4						
	0.4nm,0.4s						
ASAR	Alice Springs	22.42	161	P	P	10 18 07.3	-0.6
	1.9nm,0.7s,baz=344,slow=12,SNR=44						
	1.9nm,0.7s						
SONM	Songino Array	52.95	343	P	P	10 22 25.8	+0.3
	0.3nm,0.6s,baz=169,slow=8.7,SNR=2.0						
	0.3nm,0.6s						
MKAR	Makanchi Array	62.30	328	P	P	10 23 31.1	-0.1
	0.4nm,0.6s,baz=120,slow=7.2,SNR=4.6						
	0.4nm,0.6s						

NEIC ***30*** *10:34:52.4±1.1, 17°.2N±0°.1×95°.9E±0°.1, h6^{km}±3^{km}, mb4.2/5, Error ellipse: s-maj=20.2km s-min=6.7km az=45.0*

NDI ***30*** *10:34:54.6±2.5, 17°.15N×96°.23E, h10^{km}, ML3.8, mb4.2(NEIC)*

IDC ***30*** *10:34:55.2±1.0, 17°.63N×95°.87E, h0^{km}, mb4.0/11, mbtmp4.0/12, ML3.8/1, MS3.6/11, Error ellipse: s-maj=26.0km s-min=14.8km az=9.0*

ISC 30 10:34:53.9±0.7**, 17°.23N**±0°.07×**96°.01E**±0°.05**, h10**^{km}**, n59,** σ**2ˢ.24**/50**, mb4.2**/18**, MS3.7**/11**, 1C-1D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	3.06	66	Pn	Pn	10 35 41.9	-0.4
CMAR	Chiang Mai Arr	3.06	66	Pn	Pb	10 35 44.5	-3.9
	2.9nm,0.3s,baz=247,slow=15,SNR=16						
CMAR				Pg	Pg	10 35 50.8	-1.7
	17nm,0.3s,baz=247,slow=19,SNR=16						
CMAR				Lg	Lg	10 36 32.2	
	9.3nm,0.3s,baz=244,slow=32,SNR=13						
CMAR				LR	LR	10 37 13.9	
	comp=Z,430nm,18.4s,baz=250,slow=46						
	9.7nm,0.4s						
CMAR	Chiang Mai Arr	3.06	66	Pn	Pn	10 35 42.5	+0.1
CHTO	Chiang Mai	3.21	60	Pn	Pn	10 35 45.2	+0.7
PHRA	Phrae	4.22	72	Pn	Pn	10 35 57.0	-1.3
MND	Mandalay	4.77	1	Pn	Pn	10 36 04.8	-1.0
DGPR	DIGLIPUR	5.00	217	*e*P	Pn	10 36 09.3	+0.2
DGPR				*e*S	Sn	10 37 07.3	+0.4
CRAI	Chiangrai	5.11	54	Pn	Pn	10 36 10.6	+0.1
SAIH	SAIHA	5.96	332	*e*P	Pn	10 36 23.2	+0.9
SAIH				*e*S	Sn	10 37 31.3	+0.6
BRDH	Bariadhala	6.80	324	LR	LR	10 40 18.2	
	comp=Z,287nm,19.9s,baz=236,slow=50						
TNCH	TengChong	8.11	16	P	Pn	10 36 56.3	+4.3
TNCH				S	Sn	10 38 27.5	+3.6
TNCH				pmax	pmax		
	comp=Z,110nm,0.5s						
TNCH				LR	LR		
	comp=N,830nm,4.2s						
TNCH				LR	LR		
	comp=E,1μm,8.8s						
TNCH				LR	LR		
	comp=Z,750nm,8.8s						
KOHI	KOHIMA	8.63	349	*e*P	Pn	10 37 00.8	+1.7
KOHI				*e*P	Pn	10 37 01.5	+2.4
KOHI				IAML		10 38 46.3	
	comp=N,53nm,0.6s						
SHL	Shillong	9.14	336	Pn	Pn	10 37 03.6	-2.5
SHL	Shillong	9.14	336	*e*P	Pn	10 37 07.0	+0.9
SHL				*e*S	Sn	10 38 46.1	-3.2
SHL				*e*S		10 38 47.0	
MOKO	MOKOCHONG	9.16	352	*e*P	Pn	10 37 09.4	+3.1
LSA	Lhasa	13.19	341	Pn	Pn	10 38 00.1	-1.7
QIZ	Qiongzhong	13.28	80	P	Pn	10 38 03.5	+0.9
QIZ				S	Sn	10 40 32.0	+1.6
QIZ				LR	LR		
	comp=N,440nm,8.8s						
QIZ				LR	LR		
	comp=Z,150nm,7.2s						
JIRN	Jiri	13.78	321	*e*P	Pn	10 38 11.9	+2.1
	comp=Z,3.8nm,0.3s						
GUN	Gumba	14.15	320	*e*P	Pn	10 38 15.3	+0.5
	comp=Z,12nm,0.4s						
PKI	Pulchoki	14.20	318	*e*P	Pn	10 38 13.3	-2.2
	comp=Z,6.7nm,0.4s						
PKIN	Phulchoki	14.22	318	*e*P	Pn	10 38 13.1	-2.5
	comp=Z,1.8nm,0.2s						
GKN	Gorkha	14.99	318	*e*P	Pn	10 38 23.7	-2.5
	comp=Z,8.6nm,0.4s						
DANN	Dangsing	15.80	317	*e*P	Pn	10 38 34.5	-2.4
PYUN	Piuthan	16.15	314	*e*P	Pn	10 38 41.0	-0.3
	comp=Z,14nm,0.4s						
PALK	Pallekele	17.91	238	LR	LR	10 45 04.5	
	comp=Z,111nm,21.8s,baz=173,slow=34						
LZH	Lanzhou	20.03	19	⇑P	Pn	10 39 31.3	+2.3
LZH				pP	sP	10 39 34.5	+3.1
LZH				sP	pP	10 39 36.3	+6.2
LZH				pmax	pmax		
	comp=Z,18nm,1.5s						
LZH				pmax	pmax		
	comp=Z,190nm,6.2s						
LZH				LR	LR		
	comp=N,730nm,10.3s						
LZH				LR	LR		
	comp=E,520nm,11.3s						
LZH				LR	LR		
	comp=Z,550nm,10.3s						
LYN	LuoYang	22.68	37	*e*P	P	10 39 58.8	+3.2
LYN				sP	sP	10 40 04.3	+4.5
LYN				S	Sn	10 44 15.5	-2.4
LYN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LYN				LR	LR		
	comp=N,280nm,12.2s						
LYN				LR	LR		
	comp=E,210nm,11.0s						
LYN				LR	LR		
	comp=Z,250nm,15.9s						
HNS	HongShan	25.98	36	⇓P	P	10 40 31.3	+4.5
HNS				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC	Hu-ho-hao-te	27.10	27	*e*P	P	10 40 40.5	+3.4
HHC				pmax	pmax		
	comp=Z,26nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,5.6s						
WMQ	Urumqi	27.43	347	*e*P	P	10 40 40.5	+0.6
KSH	Kashi	28.23	326	P	P	10 40 54.0	+6.8
KSH				PP	PnPn	10 41 32.0	-3.3
KSH				S	S	10 45 31.5	-1.7
KSH				SS	SnSn	10 46 55.5	+6.0
KSH				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KSH				LR	LR		
	comp=N,2μm,22.7s						
KSH				LR	LR		
	comp=E,990nm,21.8s						
KSH				LR	LR		
	comp=Z,340nm,21.2s						
BTK	Batken	31.52	321	P	P	10 41 13.5	-2.9
MK31	Makanchi Array	31.60	342	P	P	10 41 14.8	-2.0
MK31				IAmb	IAmb	10 41 19.5	
	comp=Z,1.7nm,0.9s						
MKAR	Makanchi Array	31.60	342	P	P	10 41 16.6	-0.3
	comp=Z,1.0nm,0.4s,baz=157,slow=9.3,SNR=17						
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	31.60	342	P	P	10 41 14.9	-1.9
MAKZ	Makanchi	31.70	342	P	P	10 41 15.7	-2.1
MAKZ				IAmb	IAmb	10 41 39.5	
	comp=Z,2.1nm,0.5s						
KSRS	Korea Array	34.53	48	LR	LR	10 57 31.4	
	comp=Z,74nm,18.3s,baz=225,slow=40						
JNU	Nakatsue	35.11	57	LR	LR	10 56 22.8	
	comp=Z,59nm,18.1s,baz=10.0,slow=37						
KURK	Kurchatov	36.20	341	P	P	10 41 54.4	-2.3
KURK				IAmb	IAmb	10 41 58.9	
	comp=Z,2.8nm,0.7s						
ZAA0	Zalesovo Array	37.67	349	P	P	10 42 07.1	-2.1
ZALV	Zalesovo Beam	37.67	349	P	P	10 42 09.0	-0.1
	comp=Z,0.6nm,0.4s,baz=169,slow=8.7,SNR=2.5						
	comp=Z,0.6nm,0.4s						
ZALV	Zalesovo Beam	37.67	349	P	P	10 42 07.0	-2.1
KLR	Kul'dur	43.05	34	LR	LR	11 03 12.6	
	comp=Z,96nm,18.0s,baz=256,slow=40						
ABKAR	Akbulak array	43.24	326		P	10 42 53.2	-2.1
BELG	Belogornoye	51.57	324	P	P	10 44 01.2	+1.1
	comp=Z,10.0nm,0.8s,baz=184,slow=2.2,SNR=4.5						
	comp=Z,10.0nm,0.8s						
KBZ	Khabaz	51.78	312	P	P	10 44 01.9	+0.1
	comp=Z,2.8nm,0.8s,baz=150,slow=6.8,SNR=6.1						
	comp=Z,2.8nm,0.8s						
WRA	Warramunga Arr	52.74	133	P	P	10 44 13.7	+4.4
	comp=Z,0.9nm,1.2s,baz=294,slow=6.0,SNR=2.3						
	comp=Z,0.9nm,1.2s						
ASAR	Alice Springs	54.97	137	P	P	10 44 33.1	+7.5
	comp=Z,0.2nm,0.7s,baz=321,slow=8.3,SNR=1.7						
	comp=Z,0.2nm,0.7s						
BRTR	Keskin Array B	58.05	306	P	P	10 44 44.4	-3.1
PETK	Petropavlovsk-	59.47	38	LR	LR	11 11 53.4	
	comp=Z,65nm,21.6s,baz=110,slow=37						
FINES	FINESS Array B	65.44	330	P	P	10 45 36.9	+0.2
	comp=Z,1.6nm,0.8s,baz=89,slow=9.9,SNR=1.1						
	comp=Z,1.6nm,0.8s						
MBAR	Mbarara	66.62	262	LR	LR	11 14 07.3	
	comp=Z,50nm,20.0s,baz=138,slow=35						
ARCES	ARCESS Array B	67.19	339	LR	LR	11 19 49.8	
	comp=Z,70nm,20.4s,baz=101,slow=40						
HFS	Hagfors	71.41	328	LR	LR	11 22 07.8	
	comp=Z,109nm,19.2s,baz=9.0,slow=40						
GERES	GERESS Array B	72.21	317	P	P	10 46 20.0	+0.6
	comp=Z,1.1nm,0.7s,baz=79,slow=6.9,SNR=6.7						
	comp=Z,1.1nm,0.7s						
NOA	NORSAR Array B	72.58	329	LR	LR	11 22 49.5	
	comp=Z,37nm,18.9s,baz=245,slow=40						
ILAR	Eielson Array	85.45	23	P	P	10 47 31.4	-0.2
	comp=Z,0.4nm,0.8s,baz=311,slow=4.6,SNR=4.4						
	comp=Z,0.4nm,0.8s						
ESDC	Sonseca Array	86.59	310	P	P	10 47 37.5	-0.4
	comp=Z,0.2nm,0.3s,baz=58,slow=4.8,SNR=1.6						
	comp=Z,0.2nm,0.3s						
TORD	Torodi Ar. Bea	90.20	284	P	P	10 47 57.6	+2.3
	comp=Z,2.5nm,0.4s,baz=73,slow=4.8,SNR=3.6						
	comp=Z,2.5nm,0.4s						

TAP ***30*** *10:35:23.6, 24°.52N×122°.00E, h60^{km}, ML3.0, B*

JMA ***30*** *10:35:23.1±0.2, 24°.5N±0°.5×122°.0E±0°.4, h66^{km}±2^{km}, MV2.6/10, TAIWAN REGION*

ISC 30 10:35:24.0±1.2**, 24°.51N**±0°.03×**122°.06E**±0°.02**, h57**^{km}±6^{km}**, n97,** σ**0ˢ.91**/179**, 4C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.22	298	⇑*i*P	Pn	10 35 33.4	+0.2
	baz=306						
TWC				S	Sn	10 35 40.4	+0.6
	baz=306						
EWUT	Wuta	0.26	256	⇑*i*P	Pn	10 35 33.6	+0.1
	baz=244						
EWUT				S	Sn	10 35 40.9	+0.6
	baz=244						
ENA	Nanau	0.30	255	P	Pn	10 35 33.9	+0.1
	baz=243						
ENA				S	Sn	10 35 41.2	+0.3
	baz=243						
NDS	Dongshan	0.34	292	⇑*i*P	Pn	10 35 34.3	+0.2
	baz=299						
NDS				*e*S	Sn	10 35 41.7	+0.3
	baz=299						
EHP	Heping Village	0.35	236	*e*P	Pn	10 35 34.2	0.0
	baz=227						
EGS		0.35	341	*e*P	Pn	10 35 34.2	-0.1
	baz=359						
EGS				*e*S	Sn	10 35 41.1	-0.6
	baz=359						
ILA	Ilan	0.38	312	P	Pn	10 35 35.0	+0.5
	baz=323						
ILA				S	Sn	10 35 43.2	+1.1
	baz=323						
TWE	Neicheng	0.41	301	P	Pn	10 35 35.1	+0.3
	baz=305						
TWE				*e*S	Sn	10 35 43.2	+0.5
	baz=305						
ENTT	Nioudou	0.47	286	⇑P	Pn	10 35 35.5	+0.1
	baz=284						
ENTT				S	Sn	10 35 43.8	+0.1
	baz=284						
LATG	Datong	0.49	273	P	Pn	10 35 35.5	-0.2
	baz=266						
LATG				S	Sn	10 35 44.6	+0.4
	baz=266						
FUSB	Fushanzhiwuyua	0.50	300	P	Pn	10 35 36.0	+0.2
	baz=309						
FUSB				*e*S	Sn	10 35 44.1	-0.2
	baz=309						
TWB1	Santiao Chiao	0.50	353	P	Pn	10 35 35.0	-0.7
	baz=8.0						
TWB1				*e*S	Sn	10 35 43.3	-1.0
	baz=8.0						

NDT	**Datong Townshi** baz=275	**0.51**	**281**	P	**Pn**	**10 35 36.0**	**+0.1**
NDT	baz=275			S	**Sn**	**10 35 44.6**	**+0.2**
TIPB	**Shuangxi** baz=351	**0.51**	**335**	P	**Pn**	**10 35 35.6**	**-0.3**
TIPB	baz=351			*e*S	**Sn**	**10 35 44.1**	**-0.4**
ETL	**Fush Village** baz=216	**0.53**	**229**	P	**Pn**	**10 35 35.6**	**-0.5**
ETL	baz=216			*e*S	**Sn**	**10 35 44.6**	**-0.2**
NACB	**Ninganchiao** baz=219	**0.54**	**232**	P	**Pn**	**10 35 35.6**	**-0.6**
NACB	baz=219			*e*S	**Sn**	**10 35 45.1**	**+0.1**
NWLT	**Wulai** baz=300	**0.57**	**298**	P	**Pn**	**10 35 36.9**	**+0.3**
NWLT	baz=300			S	**Sn**	**10 35 46.0**	**+0.3**
TWD	**Chiawan** baz=214	**0.60**	**225**	P	**Pn**	**10 35 36.5**	**-0.3**
TWD	baz=214			S	**Sn**	**10 35 46.5**	**+0.3**
ETLH	**Xiulin Townshi** baz=237	**0.61**	**240**	*e*P	**Pn**	**10 35 36.5**	**-0.6**
ETLH	baz=237			*e*S	**Sn**	**10 35 46.0**	**-0.5**
SXI1	**Grass Mountain** baz=349	**0.61**	**344**	P	**Pn**	**10 35 36.5**	**-0.5**
WFSB	**Wu-fen Shan** baz=341	**0.61**	**336**	*e*P	**Pn**	**10 35 36.6**	**-0.5**
WFSB	baz=341			*e*S	**Sn**	**10 35 45.9**	**-0.7**
NNSB	**Datong** baz=254	**0.62**	**263**	P	**Pn**	**10 35 37.1**	**-0.2**
NNSB	baz=254			*e*S	**Sn**	**10 35 46.8**	**-0.1**
NNSH	**Datong** baz=256	**0.62**	**263**	*e*P	**Pn**	**10 35 37.1**	**-0.2**
NNSH	baz=256			*e*S	**Sn**	**10 35 46.6**	**-0.3**
NNS	**Nan Shan** baz=257	**0.63**	**264**	P	**Pn**	**10 35 37.1**	**-0.2**
NNS	baz=257			S	**Sn**	**10 35 46.9**	**-0.1**
TWA	**Mucha** baz=330	**0.64**	**317**	P	**Pn**	**10 35 37.5**	**+0.1**
TWA	baz=330			*e*S	**Sn**	**10 35 47.7**	**+0.6**
YHNB	**Yeheng** baz=285	**0.64**	**285**	P	**Pn**	**10 35 37.4**	**0.0**
YHNB	baz=285			S	**Sn**	**10 35 46.9**	**-0.3**
NSK	**Sanguang** baz=279	**0.66**	**285**	P	**Pn**	**10 35 37.5**	**-0.2**
NSK	baz=279			*e*S	**Sn**	**10 35 47.3**	**-0.3**
NHDH	**Xindian Distri** baz=316	**0.66**	**313**	P	**Pn**	**10 35 37.7**	**+0.1**
NHDH	baz=316			*e*S	**Sn**	**10 35 47.9**	**+0.4**
HWA	**Hwalien** baz=203	**0.67**	**218**	*e*P	**Pn**	**10 35 37.8**	**0.0**
HWA	baz=203			*e*S	**Sn**	**10 35 49.4**	**+1.7**
TNOU	**National Taiwa** baz=350	**0.69**	**338**	*e*P	**Pn**	**10 35 38.2**	**+0.2**
TNOU	baz=350			*e*S	**Sn**	**10 35 47.7**	**-0.4**
TATO	**Taipei** baz=315	**0.70**	**312**	P	**Pn**	**10 35 37.8**	**-0.3**
TATO	baz=315			*e*S	**Sn**	**10 35 48.0**	**-0.3**
ETM	**Tongmen** baz=219	**0.75**	**224**	P	**Pn**	**10 35 38.1**	**-0.6**
ETM	baz=219			S	**Sn**	**10 35 49.0**	**-0.4**
TEYL	**Yanliau Villag** baz=202	**0.76**	**214**	P	**Pn**	**10 35 38.5**	**-0.4**
TEYL	baz=202			*e*S	**Sn**	**10 35 49.6**	**-0.1**
YM01	**YM01** baz=337	**0.78**	**325**	*e*P	**Pn**	**10 35 38.6**	**-0.5**
YM01	baz=337			*e*S	**Sn**	**10 35 50.1**	**0.0**
FUSS	**Fushou** baz=243	**0.79**	**251**	P	**Pn**	**10 35 39.5**	**+0.1**
FUSS	baz=243			S	**Sn**	**10 35 50.5**	**-0.1**
YM08	**YM08** baz=332	**0.80**	**328**	*e*P	**Pn**	**10 35 38.8**	**-0.6**
YM08	baz=332			*e*S	**Sn**	**10 35 48.8**	**-1.8**
JYNG	**Yonagunijimaku**	**0.81**	**94**	P	**Pn**	**10 35 39.7**	**+0.3**
JYNG				*e*S	**Sn**	**10 35 51.7**	**+0.9**
WHF	**Hehuan Shan** baz=240	**0.81**	**244**	P	**Pn**	**10 35 39.7**	**-0.2**
WHF	baz=240			*e*S	**Sn**	**10 35 50.6**	**-0.9**
TWS1	**Kuangyinshan** baz=326	**0.83**	**315**	P	**Pn**	**10 35 39.7**	**0.0**
TWS1	baz=326			S	**Sn**	**10 35 52.1**	**+0.9**
TWT	**Tachien** baz=251	**0.84**	**253**	*e*P	**Pn**	**10 35 40.8**	**+0.7**
TWT	baz=251			*e*S	**Sn**	**10 35 52.0**	**+0.2**
NTY	**Taoyuan** baz=315	**0.85**	**305**	*e*P	**Pn**	**10 35 39.8**	**-0.1**
NTY	baz=315			*e*S	**Sn**	**10 35 51.9**	**+0.2**
NTST	**Danshui** baz=331	**0.86**	**320**	*e*P	**Pn**	**10 35 39.7**	**-0.3**
NTST	baz=331			*e*S	**Sn**	**10 35 52.4**	**+0.5**
TDCB	**Techi** baz=243	**0.86**	**253**	*e*P	**Pn**	**10 35 40.5**	**+0.3**
TDCB	baz=243			*e*S	**Sn**	**10 35 51.9**	**-0.3**
NFF	**Wufeng Townshi** baz=287	**0.87**	**278**	P	**Pn**	**10 35 40.2**	**0.0**
NFF	baz=287			S	**Sn**	**10 35 52.0**	**-0.2**
YOJ	**Yonaguni jima** baz=85	**0.87**	**93**	P	**Pn**	**10 35 40.4**	**+0.2**
YOJ	baz=85			*e*S	**Sn**	**10 35 52.6**	**+0.5**
ESL	**Shilin** baz=224	**0.90**	**220**	P	**Pn**	**10 35 39.6**	**-1.0**
ESL	baz=224			*e*S	**Sn**	**10 35 51.5**	**-1.3**
NCU	**National Centr** baz=302	**0.92**	**300**	*e*P	**Pn**	**10 35 40.7**	**-0.2**
NCU	baz=302			*e*S	**Sn**	**10 35 53.2**	**-0.1**
NCUH	**Zhongli** baz=302	**0.92**	**300**	*e*P	**Pn**	**10 35 40.4**	**-0.4**
NCUH	baz=302			*e*S	**Sn**	**10 35 53.4**	**+0.1**
CHGB	**Renai** baz=230	**0.92**	**241**	P	**Pn**	**10 35 41.1**	**-0.1**
CHGB	baz=230			S	**Sn**	**10 35 53.6**	**-0.2**
TEGC	**Jichi Village** baz=206	**0.93**	**211**	P	**Pn**	**10 35 40.9**	**0.0**
TEGC	baz=206			*e*S	**Sn**	**10 35 53.9**	**+0.5**
LIOB	**Emei** baz=290	**0.96**	**278**	*e*P	**Pn**	**10 35 41.4**	**-0.1**
LIOB	baz=290			*e*S	**Sn**	**10 35 54.4**	**+0.1**
NSTT	**Nanjuang** baz=289	**0.97**	**277**	*e*P	**Pn**	**10 35 41.6**	**0.0**
NSTT	baz=289			S	**Sn**	**10 35 54.7**	**+0.2**
OWD	**Renai** baz=225	**0.98**	**236**	P	**Pn**	**10 35 41.6**	**-0.2**
OWD	baz=225			*e*S	**Sn**	**10 35 54.2**	**-0.7**
WUSB	**Renai** baz=229	**1.00**	**239**	*i* P	**Pn**	**10 35 42.2**	**+0.1**
WUSB	baz=229			S	**Sn**	**10 35 55.0**	**-0.4**
EGFH	**Guangfu** baz=221	**1.02**	**215**	*e*P	**Pn**	**10 35 41.4**	**-0.8**
EGFH	baz=221			*e*S	**Sn**	**10 35 54.8**	**-0.8**
HSN	**Hsinchu** baz=290	**1.03**	**287**	*e*S	**Sn**	**10 35 54.0**	**-2.0**
WHP	**Taichung City** baz=254	**1.04**	**257**	*e*P	**Pn**	**10 35 43.2**	**+0.7**
WHP	baz=254			S	**Sn**	**10 35 56.9**	**+0.6**
WPL	**Puli Township** baz=237	**1.12**	**244**	*e*P	**Pn**	**10 35 42.6**	**-1.0**
WPL	baz=237			*e*S	**Sn**	**10 35 57.9**	**-0.2**
VWDT	**VWDT** baz=217	**1.13**	**228**	P	**Pn**	**10 35 43.7**	**+0.1**
VWDT	baz=217			*e*S	**Sn**	**10 35 57.7**	**-0.4**
DPDB	**Guoxing** baz=243	**1.14**	**246**	*e*P	**Pn**	**10 35 44.3**	**+0.5**
DPDB	baz=243			*e*S	**Sn**	**10 35 58.7**	**+0.2**
WCS	**Beigang Elemen** baz=237	**1.14**	**247**	*e*P	**Pn**	**10 35 43.7**	**-0.1**
WCS	baz=237			*e*S	**Sn**	**10 35 59.2**	**+0.7**
HGSD	**Ruisui** baz=217	**1.17**	**210**	P	**Pn**	**10 35 43.0**	**-1.2**
HGSD	baz=217			*e*S	**Sn**	**10 35 59.7**	**+0.5**
EHY	**Hungye** baz=210	**1.20**	**214**	*e*P	**Pn**	**10 35 43.2**	**-1.4**
EHY	baz=210			*e*S	**Sn**	**10 35 57.9**	**-2.2**
SMLT	**Sun Moon Lake** baz=230	**1.23**	**240**	*e*P	**Pn**	**10 35 45.7**	**+0.6**
SMLT	baz=230			*e*S	**Sn**	**10 36 03.1**	**+2.3**
SSLB	**Suanglung** baz=227	**1.24**	**235**	*e*P	**Pn**	**10 35 45.6**	**+0.4**
SSLB	baz=227			*e*S	**Sn**	**10 36 01.3**	**+0.4**
TYC	**Yuchr** baz=239	**1.25**	**242**	P	**Pn**	**10 35 46.0**	**+0.7**
TYC	baz=239			*e*S	**Sn**	**10 36 03.3**	**+2.2**
YULB	**Yu-li** baz=217	**1.31**	**212**	*e*P	**Pn**	**10 35 44.5**	**-1.6**
YULB	baz=217			*e*S	**Sn**	**10 36 00.9**	**-1.7**
EYUL	**Yuli** baz=216	**1.34**	**211**	*e*P	**Pn**	**10 35 46.8**	**+0.3**
TWF1	**Yuli** baz=217	**1.35**	**211**	*e*P	**Pn**	**10 35 45.2**	**-1.4**
WHYT	**Xinyi Township** baz=224	**1.37**	**234**	*e*P	**Pn**	**10 35 47.6**	**+0.7**
WHYT	baz=224			*e*S	**Sn**	**10 36 06.1**	**+2.0**
WJS	**Zhushan** baz=250	**1.40**	**241**	*e*P	**Pn**	**10 35 48.4**	**+1.1**
WJS	baz=250			*e*S	**Sn**	**10 36 06.4**	**+1.8**
WNT	**Mingjian** baz=242	**1.40**	**244**	*e*S	**Sn**	**10 36 06.5**	**+1.7**
YUS	**Yu-Shan** baz=214	**1.43**	**225**	P	**Pn**	**10 35 48.0**	**-0.2**
FULB	**Fuli** baz=214	**1.48**	**208**	*e*P	**Pn**	**10 35 47.5**	**-0.9**
FULB	baz=214			*e*S	**Sn**	**10 36 07.0**	**+0.3**
ALS	**Alishan** baz=218	**1.52**	**229**	P	**Pn**	**10 35 49.8**	**+0.7**
ALS	baz=218			*e*S	**Sn**	**10 36 08.8**	**+0.8**
IRIF	**Iriomote-Funau**	**1.53**	**96**	P	**Pn**	**10 35 49.1**	**0.0**
IRIF				*e*S	**Sn**	**10 36 08.0**	**0.0**
CHKT	**Chengkung** baz=191	**1.54**	**205**	*e*S	**Sn**	**10 36 05.9**	**-2.2**
CHN5	**Tsauling** baz=244	**1.56**	**235**	*e*P	**Pn**	**10 35 50.1**	**+0.6**
CHN5	baz=244			S	**Sn**	**10 36 10.7**	**+2.0**
EHD	**Haiduan** baz=214	**1.56**	**210**	*e*P	**Pn**	**10 35 47.3**	**-2.3**
EHD	baz=214			*e*S	**Sn**	**10 36 06.3**	**-2.4**
WDLH	**Douliu** baz=249	**1.61**	**240**	*e*P	**Pn**	**10 35 50.8**	**+0.6**
WDLH	baz=249			*e*S	**Sn**	**10 36 11.4**	**+1.5**
ELDTW	**Lidau** baz=213	**1.62**	**216**	*e*P	**Pn**	**10 35 49.4**	**-1.0**
ELDTW	baz=213			*e*S	**Sn**	**10 36 10.1**	**-0.3**
EDH	**Donghe** baz=194	**1.68**	**205**	*e*P	**Pn**	**10 35 49.4**	**-1.7**
EDH	baz=194			*e*S	**Sn**	**10 36 08.9**	**-2.6**
WCKO	**Fanlu** baz=221	**1.70**	**232**	*e*S	**Sn**	**10 36 13.4**	**+1.2**
CHN4	**Tsaushan** baz=219	**1.77**	**230**	*e*P	**Pn**	**10 35 54.1**	**+1.8**
CHN4	baz=219			*e*S	**Sn**	**10 36 16.6**	**+2.9**
STYH	**Taoyuan** baz=210	**1.78**	**222**	*e*P	**Pn**	**10 35 53.0**	**+0.6**
STYH	baz=210			*e*S	**Sn**	**10 36 15.3**	**+1.4**
TPUB	**Ta-pu** baz=217	**1.78**	**228**	*e*P	**Pn**	**10 35 53.2**	**+0.7**
TPUB	baz=217			*e*S	**Sn**	**10 36 16.1**	**+2.2**
JKRS	**Kuro-shima**	**1.80**	**98**	P	**Pn**	**10 35 53.3**	**+0.6**
JKRS				S	**Sn**	**10 36 15.2**	**+0.8**
WTP	**Ta-pu** baz=216	**1.82**	**227**	*e*P	**Pn**	**10 35 54.4**	**+1.2**
WTP	baz=216			*e*S	**Sn**	**10 36 17.2**	**+2.0**
JIJ	**Ishigaki jima**	**1.91**	**94**	P	**Pn**	**10 35 54.1**	**0.0**
JIJ				S	**Sn**	**10 36 16.4**	**-0.6**
TWGBT	**Beinan** baz=197	**1.91**	**208**	*e*P	**Pn**	**10 35 53.6**	**-0.6**
TWG	**Pinlang** baz=197	**1.91**	**209**	*e*P	**Pn**	**10 35 53.4**	**-0.8**
CHN1	**Nanshi** baz=240	**1.92**	**227**	*e*P	**Pn**	**10 35 56.4**	**+2.0**
SGST	**Jiashian** baz=223	**1.96**	**224**	*e*P	**Pn**	**10 35 54.8**	**-0.1**
JISG	**Ishigakijimahi**	**2.05**	**87**	P	**Pn**	**10 35 56.1**	**0.0**
JISG				*e*S	**Sn**	**10 36 20.7**	**+0.1**
JTJ	**Tarama**	**2.41**	**86**	P	**Pn**	**10 36 01.9**	**+0.9**
JTJ				*e*S	**Sn**	**10 36 29.9**	**+0.5**
VWUC	**VWUC** baz=282	**2.42**	**282**	*e*P	**Pn**	**10 35 59.9**	**-1.3**
PTMZ	**Houxiangcun** baz=281	**2.72**	**282**	*e*P	**Pn**	**10 36 03.3**	**-2.0**

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*IDC **30** 11:10:00.7±0.9,39°.72N×75°.33E,h0^{km},mb3.7/9,*
mbtmp3.6/15,ML3.1/6,MS2.7/2,Error ellipse:
s-maj=19.5km s-min=11.9km az=83.0
*KRNET **30** 11:10:02.9±0.1,39°.76N×75°.41E,mb4.2*
*SOME **30** 11:10:04.2,39°.98N×75°.23E,h0^{km}*
*NNC **30** 11:10:06.8±1.1,39°.99N×75°.33E,h0^{km},mb4.4,mpv4.1,*
Error ellipse: s-maj=7.4km s-min=5.1km az=174.0
ISC 30 11:10:04.6±1.6**,40°.08N**±0°.05×**75°.42E**±0°.03**,h11**^{km}±10^{km}**,**
n98,σ**1^{s}72**/114**,mb3.8**/9**,36C-17D,Kyrgyzstan-Xinjiang**
border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARLS	**Aral** baz=39	**1.96**	**335**	⇓*e*P	**Pg**	**11 10 42.6**	**+0.3**
ARLS	baz=39			⇓*e*S	**Sg**	**11 11 11.4**	**+3.6**
OHH	**Osh** baz=92	**2.07**	**283**	⇑*e*P	**Pn**	**11 10 41.2**	**+1.8**
OHH	baz=92			⇑*e*S	**Sb**	**11 11 09.1**	**+1.1**
ULHL	**Ulahol** SNR=126	**2.25**	**16**	P	**Pg**	**11 10 49.8**	**+2.1**
ULHL	**Ulahol** baz=14	**2.25**	**16**	⇓*e*P	**Pg**	**11 10 46.9**	**-0.9**
ULHL	baz=14			⇓*e*S	**Sg**	**11 11 19.0**	**+2.0**
UCH	**Uchtor** SNR=334	**2.25**	**343**	P	**Pg**	**11 10 47.6**	**-0.2**
UCH	**Uchtor** baz=45	**2.25**	**343**	⇑*e*P	**Pg**	**11 10 46.9**	**-1.0**
UCH	baz=45			⇑*e*S	**Sg**	**11 11 19.0**	**+1.9**
AML	**Almayashu** SNR=32	**2.43**	**328**	P	**Pb**	**11 10 49.5**	**+0.9**
AML	**Almayashu** 7.4nm,0.5s	**2.43**	**328**	Pg	**Pg**	**11 10 51.9**	**+0.7**
AML	40nm,0.7s			⇑Lg	Lg	11 11 26.7	
AML	**Almayashu** baz=32	**2.43**	**328**	⇓*e*P	**Pb**	**11 10 49.1**	**+0.5**
AML	baz=32			⇓*e*S	**Sg**	**11 11 22.7**	**-0.1**
KDJ	**Kajisay** baz=29	**2.44**	**32**	⇑*i*P	**Pb**	**11 10 49.1**	**+0.4**
KDJ	baz=29			⇑*e*S	**Sg**	**11 11 22.7**	**-0.4**
TARG	**Taragay, Kyrgy** baz=42	**2.44**	**47**	⇑*e*P	**Pb**	**11 10 48.7**	**-0.2**
TARG	baz=42			⇑*e*S	**Sg**	**11 11 21.8**	**-1.4**
KBK	**Karagaybulak** SNR=289	**2.60**	**352**	P	**Pg**	**11 10 53.5**	**-1.0**
KBK	**Karagaybulak** baz=53	**2.60**	**352**	⇑*e*P	**Pb**	**11 10 51.8**	**+0.4**
KBK	baz=53			⇑*e*S	**Sg**	**11 11 27.5**	**-0.6**
AAK	**Ala-Archa** SNR=78	**2.65**	**345**	P	**Pg**	**11 10 53.6**	**-1.8**
AAK	**Ala-Archa** 18nm,0.3s,baz=129,slow=3.1,SNR=71	**2.65**	**345**	Pn	**Pg**	**11 10 53.6**	**-1.8**
AAK	8.8nm,0.3s,baz=347,slow=18,SNR=1.7			Sn	**Sg**	**11 11 28.0**	**-1.8**
AAK	comp=Z,43nm,19.4s,baz=236,slow=31			LR	LR	11 11 32.2	
AAK	22nm,0.3s,baz=357,slow=21,SNR=8.1 194nm,0.5s			Lg	Lg	11 11 35.2	
AAK	**Ala-Archa** baz=47	**2.65**	**345**	⇑*e*P	**Pb**	**11 10 52.4**	**+0.2**
AAK	baz=47			⇑*e*S	**Sg**	**11 11 28.4**	**-1.4**
FRU1	**Bishkek** baz=49	**2.79**	**348**	⇓*e*P	**Pb**	**11 10 54.6**	**0.0**
FRU1	baz=49			⇓*e*S	**Sg**	**11 11 32.3**	**-2.0**
TKM2	**Tokmak 2** SNR=67	**2.84**	**3**	P	**Pb**	**11 10 56.8**	**+1.3**
TKM2	**Tokmak 2** 35nm,0.2s	**2.84**	**3**	⇑Pg	**Pg**	**11 11 01.0**	**+1.9**
TKM2	140nm,0.6s			⇓Lg	Lg	11 11 36.5	
TKM2	**Tokmak 2** baz=2.0	**2.84**	**3**	⇓*i*P	**Pb**	**11 10 55.2**	**-0.3**
TKM2	baz=2.0			⇓*e*S	**Sg**	**11 11 33.4**	**-2.5**
DRK	**Karamyk** baz=66	**2.86**	**259**	⇑*e*P	**Pn**	**11 10 49.6**	**-0.9**
DRK	baz=66			⇑*e*S	**Sn**	**11 11 24.5**	**-0.5**
EKS2	**Erkin-Say** SNR=35	**2.86**	**335**	P	**Pb**	**11 10 56.3**	**+0.5**
EKS2	**Erkin-Say** baz=38	**2.86**	**335**	⇑*i*P	**Pb**	**11 10 54.9**	**-0.9**
EKS2	baz=38			⇑*e*S	**Sg**	**11 11 33.0**	**-3.5**
CHMS	**Chumysh** SNR=15	**2.96**	**350**	P	**Pb**	**11 10 58.1**	**+0.7**
CHMS	**Chumysh** baz=51	**2.96**	**350**	⇑*e*P	**Pb**	**11 10 56.7**	**-0.7**
CHMS	baz=51			⇑*e*S	**Sg**	**11 11 35.8**	**-3.9**
KST	**Kastek** 155nm,0.4s	**2.99**	**8**	Pg	**Pg**	**11 11 03.6**	**+1.7**
KST	285nm,0.6s			Lg	Lg	11 11 46.4	
KST	**Kastek** 155nm,0.4s	**2.99**	**8**	*e*Pg	**Pg**	**11 11 03.6**	**+1.7**
KST	285nm,0.6s			*e*Lg	Lg	11 11 46.4	
IZV	**Izvestkoviy** 115nm,0.5s	**3.08**	**16**	Pg	**Pg**	**11 11 05.4**	**+1.7**
IZV	372nm,0.8s			Lg	Lg	11 11 49.4	
IZV	**Izvestkoviy** 115nm,0.5s	**3.08**	**16**	*e*Pg	**Pg**	**11 11 05.4**	**+1.7**
IZV	372nm,0.8s			*e*Lg	Lg	11 11 49.5	
ARK	**Arkit** baz=9.0	**3.13**	**304**	⇑*i*P	**Pn**	**11 10 57.4**	**+3.3**
ARK	baz=9.0			⇑*i*S	**Sb**	**11 11 36.9**	**-1.8**
MRKS	**Merke** 56nm,0.5s	**3.13**	**329**	Pg	**Pb**	**11 11 02.1**	**+1.6**
MRKS	72nm,0.6s			Lg	Lg	11 11 43.9	
MRKS	**Merke** 56nm,0.5s	**3.13**	**329**	*e*Pg	**Pb**	**11 11 02.1**	**+1.6**
MRKS	72nm,0.6s			*e*Lg	Lg	11 11 43.9	
MTBS	**Maitube** 46nm,0.5s	**3.14**	**14**	Pg	**Pg**	**11 11 06.2**	**+1.4**
MTBS	86nm,0.4s			Lg	Lg	11 11 51.2	
MTBS	**Maitube** 46nm,0.5s	**3.14**	**14**	*e*Pg	**Pg**	**11 11 06.2**	**+1.4**
MTBS	86nm,0.4s			*e*Lg	Lg	11 11 51.2	
TNSS	**Tian-Shan** 116nm,0.5s	**3.17**	**21**	Pg	**Pg**	**11 11 06.7**	**+1.4**
TNSS	61nm,0.6s			Lg	Lg	11 11 51.7	
TNSS	**Tian-Shan** 116nm,0.5s	**3.17**	**21**	*e*Pg	**Pg**	**11 11 06.7**	**+1.4**
TNSS	61nm,0.6s			*e*Lg	Lg	11 11 51.7	
USP	**Ospenovka** SNR=23	**3.26**	**348**	P	**Pb**	**11 11 01.5**	**-1.0**
USP	**Ospenovka** baz=49	**3.26**	**348**	⇑*e*P	**Pb**	**11 11 00.7**	**-1.8**
USP	baz=49			⇑*e*S	**Sg**	**11 11 43.1**	**-6.2**
MNAS	**Manas** baz=22	**3.26**	**318**	⇓*e*P	**Pb**	**11 11 00.0**	**-2.6**
MNAS	baz=22			⇓*e*S	**Sb**	**11 11 41.4**	**-1.0**
MDOK	**Medeo** 58nm,0.6s	**3.31**	**21**	Pg	**Pg**	**11 11 09.0**	**+0.9**
MDOK	42nm,0.5s			⇓Pg	Pb	11 11 09.1	+5.6
MDOK	192nm,0.9s			Lg	Lg	11 11 55.8	
MDOK	234nm,0.8s			⇑Lg	Lg	11 11 56.2	
MDOK	**Medeo** 58nm,0.6s	**3.31**	**21**	*e*Pg	**Pg**	**11 11 09.0**	**+0.9**
MDOK	192nm,0.9s			*e*Lg	Lg	11 11 55.8	
AAA	**Alma-Ata** 125nm,0.7s	**3.32**	**19**	Pg	**Pg**	**11 11 09.8**	**+1.6**
AAA	292nm,0.6s			Lg	Lg	11 11 57.3	
AAA	**Alma-Ata** 125nm,0.7s	**3.32**	**19**	*e*Pg	**Pg**	**11 11 09.8**	**+1.6**
AAA	292nm,0.6s			*e*Lg	Lg	11 11 57.3	
KNDC	**Almaty** 98nm,0.4s	**3.34**	**20**	⇓Pg	**Pg**	**11 11 10.0**	**+1.4**
KNDC	548nm,0.5s			⇑Lg	Lg	11 11 58.3	
KOTS	**Kotyrbulak** 63nm,0.7s	**3.40**	**21**	Pg	**Pg**	**11 11 10.9**	**+1.2**
KOTS	635nm,0.7s			Lg	Lg	11 11 59.0	
KOTS	**Kotyrbulak** 63nm,0.7s	**3.40**	**21**	*e*Pg	**Pg**	**11 11 10.9**	**+1.2**
KOTS	635nm,0.7s			*e*Lg	Lg	11 11 59.0	
SGDS	**Sogindy** 29nm,0.7s	**3.42**	**350**	Pg	**Pg**	**11 11 10.8**	**+0.6**
SGDS	30nm,0.5s			Lg	Lg	11 11 58.4	
BTK	**Batken** baz=76	**3.53**	**271**	⇑*i*P	**Pn**	**11 11 00.5**	**+0.9**
BTK	baz=76			⇑*e*S	**Sn**	**11 11 42.2**	**+0.8**
TRKS	**Terek-Say** baz=99	**3.56**	**295**	⇑*i*P	**Pn**	**11 11 01.9**	**+1.9**
TRKS	baz=99			⇑*i*S	**Sn**	**11 11 45.6**	**+3.4**
SATY	**Saty** 30nm,0.6s	**3.72**	**36**	Pg	**Pg**	**11 11 16.6**	**+0.7**

SATY				Lg	Lg	11 12 09.0	
	153nm,0.6s						
SATY	Saty	3.72	36	ePg	Pg	11 11 16.6	+0.7
	30nm,0.6s						
SATY				eLg	Lg	11 12 09.0	
	153nm,0.6s						
KTBS	Karatobe	3.75	14	Pg	Pg	11 11 17.1	+0.7
	54nm,0.5s						
KTBS				Lg	Lg	11 12 10.0	
	263nm,0.7s						
KTBS	Karatobe	3.75	14	ePg	Pg	11 11 17.1	+0.7
	54nm,0.5s						
KTBS				eLg	Lg	11 12 10.0	
	263nm,0.7s						
ZHN	Zhinishke	3.82	35	Pg	Pg	11 11 18.1	+0.2
	11nm,0.4s						
ZHN				Lg	Lg	11 12 11.1	
	43nm,0.6s						
ZHN	Zhinishke	3.82	35	ePg	Pg	11 11 18.1	+0.2
	11nm,0.4s						
ZHN				eLg	Lg	11 12 11.1	
	43nm,0.6s						
KUU	Kurty	3.87	10	Pg	Pg	11 11 19.1	+0.3
	24nm,0.5s						
KUU				Lg	Lg	11 12 13.1	
	160nm,0.8s						
KUU	Kurty	3.87	10	ePg	Pg	11 11 19.1	+0.3
	24nm,0.5s						
KUU				eLg	Lg	11 12 13.1	
	160nm,0.8s						
CHKK	Chushkaly	3.95	17	Pg	Pg	11 11 20.4	+0.1
	46nm,0.7s						
CHKK				Lg	Lg	11 12 15.4	
	114nm,0.7s						
CHKK	Chushkaly	3.95	17	ePg	Pg	11 11 20.4	+0.1
	46nm,0.7s						
CHKK				eLg	Lg	11 12 15.4	
	114nm,0.7s						
KURS	Kuram	3.98	30	Pg	Pg	11 11 20.1	-0.7
	15nm,0.5s						
KURS				Lg	Lg	11 12 14.8	
	39nm,0.7s						
KURS	Kuram	3.98	30	ePg	Pg	11 11 20.1	-0.7
	15nm,0.5s						
KURS				eLg	Lg	11 12 14.8	
	39nm,0.7s						
UZB	Uzynbulak	4.08	40	Pg	Pg	11 11 23.3	+0.5
	14nm,0.4s						
UZB				Lg	Lg	11 12 20.0	
	36nm,0.8s						
UZB	Uzynbulak	4.08	40	ePg	Pg	11 11 23.3	+0.5
	14nm,0.4s						
UZB				eLg	Lg	11 12 20.0	
	36nm,0.8s						
GAR	Garm	4.09	256	⇑eP	Pn	11 11 06.8	-0.5
	baz=61						
GAR				⇑eS	Sn	11 11 54.5	-0.8
	baz=61						
KPKS	Kokpek	4.17	35	Pg	Pg	11 11 24.3	-0.2
	15nm,0.5s						
KPKS				Lg	Lg	11 12 21.8	
	109nm,0.8s						
KPKS	Kokpek	4.17	35	ePg	Pg	11 11 24.3	-0.2
	15nm,0.5s						
KPKS				eLg	Lg	11 12 21.8	
	109nm,0.8s						
SHLS	Shalkode	4.31	43	Pg	Pg	11 11 32.0	+4.7
	22nm,0.9s						
SHLS				Lg	Lg	11 12 34.7	
	73nm,1.3s						
SHLS	Shalkode	4.31	43	ePg	Pg	11 11 32.0	+4.7
	22nm,0.9s						
SHLS				eLg	Lg	11 12 34.7	
	73nm,1.3s						
PDGK	Podgornoye	4.45	42	Pg	Pg	11 11 30.4	+0.6
	4.5nm,0.6s						
PDGK				Lg	Lg	11 12 32.4	
	44nm,0.7s						
PDGK	Podgornoye	4.45	42	⇑Pg	Pg	11 11 29.6	-0.3
	15nm,0.8s						
PDGK				⇓Lg	Lg	11 12 32.4	
	71nm,0.8s						
ARXS	Arharly	4.50	23	Pg	Pg	11 11 30.6	-0.2
	12nm,0.9s						
ARXS				Lg	Lg	11 12 32.5	
	58nm,0.6s						
ARXS	Arharly	4.50	23	ePg	Pg	11 11 30.6	-0.2
	12nm,0.9s						
ARXS				eLg	Lg	11 12 32.5	
	58nm,0.6s						
IUG	Iuzhnay	4.57	299	ePg	Pb	11 11 28.9	+4.0
	21nm,0.5s						
IUG				eLg	Lg	11 12 29.4	
	128nm,0.5s						
BLB	Baldybastay	4.61	29	Pg	Pg	11 11 31.7	-1.3
	39nm,0.4s						
BLB				Lg	Lg	11 12 34.2	
	40nm,0.6s						
KK31	Karatay Array	4.76	311	Pg	Pg	11 11 37.7	+1.9
	3.0nm,0.4s,baz=133,slow=17,SNR=19						
KK31				⇓Lg	Lg	11 12 41.2	
	14nm,0.6s,baz=132,slow=27,SNR=4.4						
BTLS	Baital	5.06	349	Pg	Pg	11 11 39.1	-2.4
	13nm,0.6s						
BTLS				Lg	Lg	11 12 47.7	
	4.2nm,0.7s						
BTLS	Baital	5.06	349	ePg	Pg	11 11 39.1	-2.4
	13nm,0.6s						
BTLS				eLg	Lg	11 12 47.7	
	4.2nm,0.7s						
DJR	Jarkent	5.34	36	Pg	Pg	11 11 46.0	-1.0
	6.9nm,0.4s						
DJR				Lg	Lg	11 12 58.7	
	19nm,0.6s						
DJR	Jarkent	5.34	36	ePg	Pg	11 11 46.0	-1.0
	6.9nm,0.4s						
DJR				eLg	Lg	11 12 58.8	
	19nm,0.6s						
CEP	Cherat	6.85	205	⇑P	Pn	11 11 45.3	+0.1
THW	Thamme Wali	7.85	203	P	Pn	11 11 56.9	-2.0
MK31	Makanchi Array	8.36	34	⇑Pn	Pn	11 12 11.5	+5.7
	0.8nm,0.5s,baz=204,slow=12,SNR=9.7						
MK31				Pg	Pb	11 12 39.7	+10
	0.8nm,0.5s,baz=222,slow=15,SNR=4.3						
MK31				⇑Lg	Lg	11 14 31.1	
	2.6nm,0.7s,baz=218,slow=28,SNR=3.7						
MKAR	Makanchi Array	8.36	34	Pn	Pn	11 12 09.7	+3.9
	0.1nm,0.3s,baz=212,slow=11,SNR=5.1						
MKAR				Lg	Lg	11 14 30.2	
	baz=224,slow=27						
	0.3nm,0.5s						
WMQ	Urumqi	9.88	64	eP	Pn	11 12 26.5	-0.1
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
KURBB	Kurchatov Arra	10.77	11	Pn	Pn	11 12 39.4	+0.7
	baz=194,slow=11,SNR=1.6						
KURBB				Sn	Sn	11 14 41.3	+2.2
	comp=Z,0.1nm,0.3s,baz=25,slow=30,SNR=4.1						
KURBB				Lg	Lg	11 15 50.8	
	comp=Z,0.1nm,0.3s,baz=200,slow=30,SNR=4.4						
	comp=Z,0.1nm,0.3s						
BVAR	Borovoye Array	13.40	347	Pn	Pn	11 13 14.8	+0.1
	baz=187,slow=1.2,SNR=1.7						
BVAR				Lg	Lg	11 17 13.9	
	baz=160,slow=30,SNR=4.2						
	comp=Z,0.3nm,0.3s						
GEYT	Alibeck	13.63	266	Pn	Pn	11 13 13.5	-4.5
	comp=Z,0.5nm,0.3s,baz=181,slow=7.2,SNR=1.5						
	comp=Z,0.9nm,0.3s						
ZALV	Zalesovo Beam	15.26	22	Pn	Pn	11 13 41.2	+1.3
	comp=Z,0.2nm,0.3s,baz=212,slow=13,SNR=3.6						
ZALV				Lg	Lg	11 18 18.7	
	comp=Z,0.2nm,0.3s,baz=210,slow=20,SNR=1.4						
	comp=Z,0.7nm,0.5s						
AKTO	Aktyubinsk	16.00	316	LR	LR	11 20 37.7	
	comp=Z,61nm,18.5s,baz=252,slow=39						
SONM	Songino Array	23.49	60	P	P	11 15 14.8	+0.3
	comp=Z,0.2nm,0.4s,baz=243,slow=6.3,SNR=1.7						
	comp=Z,0.2nm,0.4s						
FINES	FINESS Array B	36.62	322	P	P	11 17 10.9	+0.2
	comp=Z,0.8nm,0.5s,baz=105,slow=12,SNR=7.7						
	comp=Z,0.8nm,0.5s						
ARCES	ARCESS Array B	39.28	335	P	P	11 17 33.5	+0.5
	comp=Z,3.3nm,0.9s,baz=108,slow=7.9,SNR=8.9						
	comp=Z,3.3nm,0.9s						
HFS	Hagfors	42.51	319	P	P	11 17 59.5	-0.3
	comp=Z,1.5nm,0.8s,baz=99,slow=9.2,SNR=2.3						
	comp=Z,1.5nm,0.8s						
TORD	Torodi Ar. Bea	69.25	270	P	P	11 21 08.8	-3.2
	comp=Z,0.5nm,0.6s,baz=48,slow=5.1,SNR=4.5						
	comp=Z,0.5nm,0.6s						
ILAR	Eielson Array	70.35	18	P	P	11 21 17.1	-0.9
	comp=Z,0.5nm,0.8s,baz=315,slow=4.7,SNR=6.0						
	comp=Z,0.5nm,0.8s						
YKA	Yellowknife Ar	77.45	5	P	P	11 21 58.7	-0.9
	comp=Z,0.6nm,0.7s,baz=349,slow=5.5,SNR=16						
	comp=Z,0.6nm,0.7s						
WRA	Warramunga Arr	81.07	125	P	P	11 22 17.6	-2.4
	comp=Z,0.5nm,0.9s,baz=323,slow=4.7,SNR=2.3						
	comp=Z,0.5nm,0.9s						
ASAR	Alice Springs	83.58	128	P	P	11 22 29.9	-3.2
	comp=Z,0.3nm,0.7s,baz=319,slow=5.2,SNR=5.9						
	comp=Z,0.3nm,0.7s						

IDC 30 11:13:21.6±604.0, 56.̊87N×30.̊89E, h0km, Error ellipse: s-maj=231.7km s-min=80.4km az=88.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	3.48	90	I	I	11 35 40.0	
	0.1nm,0.6s,baz=276,slow=316,SNR=0.7						
I37NO	I37NO	13.42	341	I	I	12 40 00.0	
	baz=152,slow=334,SNR=0.8						
I31KZ	AKTYUBINSK INF	17.27	100	I	I	12 56 30.0	
	baz=303,slow=322,SNR=1.1						

NNC 30 11:21:59.7±16.0, 57.̊89N×84.̊84E, h0km, mb3.8, mpv3.5, 7C-1D, Error ellipse: s-maj=129.1km s-min=120.0km az=81.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.95	180	⇑Pn	Pn	11 23 01.4	-0.1
	1.6nm,0.8s						
ZAA0				⇑Sn	Sn	11 23 48.1	-0.4
	4.1nm,0.8s						
KURK	Kurchatov	8.05	209	⇑Pn	Pn	11 23 58.4	+0.6
	2.0nm,0.3s						
KURK				⇓Sn	Sn	11 25 31.7	+2.3
	1.4nm,0.3s						
KURK				⇑Lg	Lg	11 26 17.8	
	20nm,0.9s						
KURBB	Kurchatov Arra	8.16	210	⇑Pn	Pn	11 24 00.1	+0.8
	2.1nm,0.5s,baz=350,slow=10.0						
KURBB				⇑Sn	Sn	11 25 34.8	+2.7
	22nm,0.8s,baz=353,slow=6.8						
KURBB				⇑Lg	Lg	11 26 19.7	
	9.9nm,0.7s						

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*IDC **30** 11:45:29.3±1.1, 60.̊16N×153.̊49W, h120km±13km, mb3.4/7, mbtmp3.8/11, MS3.1/1, Error ellipse: s-maj=17.2km s-min=9.9km az=104.0*

*NEIC **30** 11:45:30.8±0.9, 60.̊08N±0.̊06×153.̊38W±0.̊09, h155km±7km, Error ellipse: s-maj=9.3km s-min=4.2km az=145.0*

*AEIC **30** 11:45:32.0±1.2, 60.̊10N±0.̊06×153.̊32W±0.̊08, h151km±4km, ML3.5, ML3.7/99(NEIC), Error ellipse: s-maj=8.9km s-min=6.1km az=191.0*

ISC 30 11:45:31.7±0.7, 60.̊13N±0.̊04×153.̊29W±0.̊04, h151km±5km, n182, σ0.̊97/183, mb3.7/7, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILSW	Iliamna Southw	0.17	154		Pn	11 45 51.3	-0.8
ILSW				IAML		11 46 07.5	
	comp=N,485nm,1.0s						
O20K	Slope Mountain	0.34	98	P	Pn	11 45 52.4	-0.1
	baz=273						
O20K				S	Sn	11 46 08.7	+0.3
	baz=273						
RSO	Redoubt South	0.42	39		Pn	11 45 52.9	-0.1
OPT	Oil Point	0.48	177	P	Pn	11 45 52.7	-0.3
	baz=354						
P19K	Oil Pt	0.48	177		Pn	11 45 52.8	-0.3
P19K	Oil Pt	0.48	177	P	Pn	11 45 52.7	-0.3
	baz=354						
P19K				S	Sn	11 46 09.2	-0.1
	baz=354						
O19K	Port Alsworth	0.52	277		Pn	11 45 52.5	-0.6
O19K	Port Alsworth	0.52	277	P	Pn	11 45 52.5	-0.6
	baz=101						
O19K				S	Sn	11 46 08.6	-0.9
	baz=101						
RDJH	Redoubt Jeurge	0.52	27		Pn	11 45 53.3	-0.1
N19K	Bonanza Creek	0.90	320		Pn	11 45 55.3	-0.5
N19K				IAML		11 46 14.7	
	comp=E,340nm,0.9s						
N19K	Bonanza Creek	0.90	320	P	Pn	11 45 55.4	-0.5
	baz=141						
N19K				S	Sn	11 46 13.4	-0.9
	baz=141						
HOM	Homer	0.96	119		Pn	11 45 56.2	+0.1
HOM					Sn	11 46 14.8	+0.1
HOM	Homer	0.96	119	P	Pn	11 45 56.2	+0.1
	baz=298						
HOM				S	Sn	11 46 14.8	+0.1
	baz=298						
O18K	Koktuh Hills	1.00	255		Pn	11 45 55.7	-0.8
O18K				IAML		11 46 14.9	
	comp=N,405nm,1.1s						
O18K	Koktuh Hills	1.00	255	P	Pn	11 45 55.7	-0.8
	baz=75						
O18K				S	Sn	11 46 13.9	-1.7
	baz=75						
SPCR	Spurr Chakacha	1.20	26	P	Pn	11 45 58.4	+0.1
	baz=207						
CNPM	China Poot	1.20	120		Pn	11 45 58.2	-0.2
CNPM				IAML		11 46 19.8	
	comp=N,2μm,0.7s						
CNPM	China Poot	1.20	120		Sn	11 46 17.7	-1.0
Q19K	Cape Douglas,	1.22	189	Pn	Pn	11 45 57.6	-1.0
Q19K				IAML		11 46 17.9	
	comp=E,1μm,1.2s						
Q19K	Cape Douglas,	1.22	189	P	Pn	11 45 57.5	-1.0
	baz=7.8						
P18K	Big Mountain,	1.23	234		Pn	11 45 57.4	-1.2
P18K	Big Mountain,	1.23	234	P	Pn	11 45 57.4	-1.2
	baz=53						
CAPN	Captain Cook N	1.24	58		Pn	11 45 60.0	+1.4
CAPN	Captain Cook N	1.24	58	IAML		11 46 37.4	
	comp=E,1μm,0.5s						
CAPN	Captain Cook N	1.24	58	P	Pn	11 45 60.0	+1.4
	baz=239						
BRLK	Bradley Lake	1.27	106		Pn	11 45 58.8	-0.1
BRLK				IAML		11 46 20.8	
	comp=N,1μm,0.3s						
BRLK				IAML		11 46 21.3	
	comp=E,1μm,0.7s						
BRSE	Bradley Lake S	1.34	106		Pn	11 45 59.6	-0.1
BRSE	Bradley Lake S	1.34	106	P	Pn	11 45 59.6	-0.1
	baz=286						
SVW2	Sparrevohn	1.49	312	Pn	Pn	11 46 00.5	-0.6
SLKM	Skilak Lake	1.57	75		Pn	11 46 01.5	-0.5
Q20K	Shuyak Island	1.59	163	P	Pn	11 46 01.2	-1.1
	baz=343						
KAHC	Katmai Hardscr	1.73	211	P	Pn	11 46 02.6	-1.3
	baz=30						
Q18K	Katmai Hardscr	1.73	211	P	Pn	11 46 02.6	-1.3
	baz=30						
M20K	Styx River	1.76	2		Pn	11 46 04.5	+0.4
M20K	Styx River	1.76	2	P	Pn	11 46 04.5	+0.4
	baz=183						
O22K	Cooper Landing	1.81	77		Pn	11 46 04.3	-0.2
O22K				IAML		11 46 37.1	
	comp=E,685nm,0.7s						
O22K				IAML		11 46 38.5	
	comp=N,829nm,0.8s						
O22K	Cooper Landing	1.81	77	P	Pn	11 46 04.2	-0.4
	baz=259						
FIS	Fire Island	1.82	55		Pn	11 46 05.2	+0.5
FIS				IAML		11 46 33.2	
	comp=N,633nm,0.8s						
SUA	Susitna One	1.83	42		Pn	11 46 04.8	-0.1
SUA	Susitna One	1.83	42	P	Pn	11 46 04.8	-0.1
	baz=224						
M19K	Big River Lodg	1.86	344		Pn	11 46 05.0	-0.2
M19K	Big River Lodg	1.86	344	P	Pn	11 46 04.9	-0.3
	baz=164						
O17K	Koliganek Bris	1.95	261	P	Pn	11 46 05.8	-0.4
	baz=79						
RC01	Rabbit Creek A	2.00	60		Pn	11 46 06.1	-0.7
RC01				IAML		11 46 34.5	
	comp=E,342nm,0.3s						
RC01				IAML		11 46 35.2	
	comp=N,396nm,0.4s						
RC01	Rabbit Creek A	2.00	60	P	Pn	11 46 06.0	-0.7
	baz=242						
SKT	Skwentna	2.04	24	Pn	Pn	11 46 07.6	+0.3
SKT				IAML		11 46 37.1	
	comp=E,138nm,0.6s						
SKT	Skwentna	2.04	24	P	Pn	11 46 07.3	0.0
	baz=206						
L19K	White Mountain	2.19	340		Pn	11 46 08.7	-0.4
L19K	White Mountain	2.19	340	P	Pn	11 46 08.7	-0.4
	baz=160						
Q16K	King Salmon	2.26	231	P	Pn	11 46 09.3	-0.5
	baz=49						
Q17K	Contact Creek	2.30	217	P	Pn	11 46 09.3	-1.2
	baz=34						
L20K	Farewell, AK	2.37	353	P	Pn	11 46 11.4	+0.2
	baz=173						
KDAK	Kodiak Island	2.38	171	P	Pn	11 46 08.7	-2.7
	comp=E,58nm,0.3s,baz=73,slow=8.2,SNR=263						
KDAK				S	Sn	11 46 38.2	-3.7
	comp=E,216nm,0.5s,baz=146,slow=23,SNR=77						
KDAK	Kodiak Island	2.38	171	Pn	Pn	11 46 09.0	-2.4
KDAK				IAML		11 46 40.2	
	comp=E,608nm,0.4s						
O16K	Kokwok River B	2.48	260	P	Pn	11 46 12.1	-0.4
	baz=76						
PMR	Palmer	2.51	52	IAML		11 46 44.6	
	comp=N,205nm,0.3s						
PMR				IAML		11 46 44.6	
	comp=E,248nm,0.3s						
PMR	Palmer	2.51	52	P	Pn	11 46 11.4	-1.4
	baz=236						
PWL	Port Wells	2.56	71	Pn	Pn	11 46 13.6	+0.1
PWL				IAML		11 46 45.7	
	comp=E,255nm,0.4s						
PWL				IAML		11 46 46.1	
	comp=N,278nm,0.4s						
PWL	Port Wells	2.56	71	P	Pn	11 46 12.0	-1.4
	baz=255						
P16K	Nushagak River	2.63	247	P	Pn	11 46 14.3	-0.1
	baz=64						
GHO	Glory Hole Cre	2.69	50	IAML		11 46 49.0	
	comp=N,395nm,0.4s						
GHO				IAML		11 46 50.0	
	comp=E,396nm,0.4s						
KNK	Knik Glacier	2.70	59	IAML		11 46 49.1	
	comp=E,363nm,0.5s						
KNK				IAML		11 46 49.6	
	comp=N,370nm,0.4s						
KNK	Knik Glacier	2.70	59	P	Pn	11 46 13.8	-1.4
	baz=243						
CUT	Chulitna	2.71	31		Pn	11 46 15.3	0.0
CUT	Chulitna	2.71	31	P	Pn	11 46 15.1	-0.2
	baz=214						
N16K	Nishlik Lake	2.75	280	P	Pn	11 46 15.8	-0.1
	baz=96						
PPLA	Purkeypile	2.82	10	Pn	Pn	11 46 17.7	+0.8
PPLA	Purkeypile	2.82	10	P	Pn	11 46 17.6	+0.8
	baz=191						
OHAK	Old Harbor	2.92	180	Pn	Pn	11 46 15.1	-2.9
OHAK				IAML		11 46 51.0	
	comp=E,124nm,0.4s						
OHAK	Old Harbor	2.92	180	P	Pn	11 46 15.1	-2.9
	baz=360						
SML	Sawmill	2.94	53	IAML		11 46 53.7	
	comp=N,200nm,0.6s						
SML				IAML		11 46 54.4	
	comp=E,314nm,0.4s						
SML	Sawmill	2.94	53	P	Pn	11 46 17.0	-1.3
	baz=237						
P23K	Montague Islan	2.95	90	P	Pn	11 46 18.3	-0.1
	baz=274						
P23K				S	Sn	11 46 53.6	-0.9
	baz=274						
R17K	Ugashik Creek	2.97	214	P	Pn	11 46 17.6	-1.1
	baz=32						
M23K	Glacier View	3.18	56	P	Pn	11 46 20.1	-1.2
	baz=240						
K20K	Telida	3.26	354		Pn	11 46 22.4	+0.2
K20K	Telida	3.26	354	P	Pn	11 46 21.9	-0.3
	baz=174						
CAST	Castle Rocks	3.35	9	Pn	Pn	11 46 23.4	-0.1
CAST	Castle Rocks	3.35	9	P	Pn	11 46 23.3	-0.1
	baz=191						
SCM	Sheep Creek Mo	3.37	57		Pn	11 46 22.7	-1.1
SCM				IAML		11 47 05.2	
	comp=E,225nm,0.9s						
SCM				IAML		11 47 05.5	
	comp=N,235nm,1.0s						
SCM	Sheep Creek Mo	3.37	57	P	Pn	11 46 22.7	-1.1
	baz=242						
R16K	Pilot Point	3.40	223	P	Pn	11 46 23.0	-1.1
	baz=39						
WAT1	Susitna Watana	3.53	38	P	Pn	11 46 25.1	-0.7
	baz=222						
Q23K	Middleton Isla	3.58	98	P	Pn	11 46 25.3	-1.0
	baz=284						
MID	Middleton Isla	3.58	98	Pn	Pn	11 46 26.2	-0.2
MID				IAML		11 47 18.1	
	comp=E,222nm,1.8s						
MID				IAML		11 49 00.2	
	comp=N,161nm,3.0s						
KTH	Kantishna Hill	3.61	17		Pn	11 46 26.4	-0.5
KTH	Kantishna Hill	3.61	17	IAML		11 47 13.0	
	comp=N,56nm,0.9s						
TRF	Thorofare Moun	3.62	22		Pn	11 46 26.9	-0.2
TRF	Thorofare Moun	3.62	22	IAML		11 47 12.4	
	comp=E,89nm,0.5s						
TRF				IAML		11 47 12.8	
	comp=N,86nm,0.6s						
TRF	Thorofare Moun	3.62	22	P	Pn	11 46 27.2	+0.1
	baz=204						
EYAK	Cordova Ski Ar	3.77	80		Pn	11 46 28.5	-0.4
EYAK	Cordova Ski Ar	3.77	80	P	Pn	11 46 28.5	-0.4
	baz=266						
EYAK				S	Sn	11 47 12.5	-0.7
	baz=266						
CHUM	Lake Minchumin	3.79	7		Pn	11 46 28.9	-0.2
CHUM	Lake Minchumin	3.79	7	P	Pn	11 46 28.9	-0.2
	baz=188						
DIV	Divide	3.84	72		Pn	11 46 28.8	-1.0
KLU	Klutina	3.86	66		Pn	11 46 29.3	-0.8
KLU	Klutina	3.86	66	P	Pn	11 46 28.9	-1.1
	baz=252						
RND	Reindeer	3.90	31	Pn	Pn	11 46 30.3	-0.4
RND				IAML		11 47 17.5	
	comp=N,38nm,0.7s						
RND				IAML		11 47 20.7	
	comp=E,59nm,0.4s						
M24K	Tolsona, Glenn	3.98	57	P	Pn	11 46 31.1	-0.5
	baz=243						
M24K				S	Sn	11 47 18.6	+0.3
	baz=243						
BPAW	Bear Paw Mtn.	4.13	14		Pn	11 46 32.3	-1.2
BPAW	Bear Paw Mtn.	4.13	14	P	Pn	11 46 32.6	-0.9
	baz=196						
MCK	McKinley	4.16	28	P	Pn	11 46 33.6	-0.3
	baz=212						
BWN	Browne	4.43	22	IAML		11 47 34.6	
	comp=E,53nm,0.4s						
BWN				IAML		11 47 54.6	
	comp=N,77nm,1.3s						
N25K	Chitina, Valde	4.50	67	IAML		11 47 31.0	
	comp=E,133nm,0.5s						
N25K				IAML		11 47 32.7	
	comp=N,104nm,0.4s						
N25K	Chitina, Valde	4.50	67	P	Pn	11 46 38.8	+0.3
	baz=254						
HARP	HAARP	4.54	56	P	Pn	11 46 38.6	-0.3
	baz=243						
HARP				S	Sn	11 47 31.4	+0.1
	baz=243						
PAX	Paxson	4.70	49	P	Pn	11 46 40.8	-0.2
	baz=236						
GLB	Gilahina Butte	4.83	70		Pn	11 46 42.2	-0.6
GLB	Gilahina Butte	4.83	70	IAML		11 47 39.0	
	comp=N,65nm,1.0s						
GLB				IAML		11 47 44.7	
	comp=E,48nm,1.2s						
NEA2	Nenana	4.89	22		Pn	11 46 42.5	-1.0
NEA2	Nenana	4.89	22	IAML		11 47 39.7	
	comp=E,23nm,0.6s						
NEA2	Nenana	4.89	22	P	Pn	11 46 42.6	-0.9
	baz=206						

GCSA	Galena City Sc	4.92	342		Pn	11 46 43.5	-0.3
GCSA	Galena City Sc	4.92	342	P	Pn	11 46 43.5	-0.3
	baz=159						
VRDI	Verde Repeater	4.96	73	IAML		11 47 42.4	
	comp=E,40nm,0.7s						
WRH	Wood River Hil	4.98	27	IAML		11 47 41.0	
	comp=N,33nm,0.4s						
WRH				IAML		11 47 41.0	
	comp=E,25nm,0.4s						
MLY	Manley	5.06	12	P	Pn	11 46 44.9	-0.9
	baz=195						
I21K	Tanana	5.10	6	IAML		11 47 43.1	
	comp=E,15nm,1.1s						
I21K				IAML		11 48 02.6	
	comp=N,16nm,3.1s						
I21K	Tanana	5.10	6	P	Pn	11 46 45.7	-0.6
	baz=188						
K24K	Donnelly Dome	5.11	41	P	Pn	11 46 47.3	+0.9
	baz=227						
MCARA	McCarthy VSAT	5.19	72		Pn	11 46 47.8	+0.3
MCARA	McCarthy VSAT	5.19	72	P	Pn	11 46 47.8	+0.3
	baz=260						
MCARA				S	Sn	11 47 46.6	0.0
	baz=260						
CCB	Clear Creek Bu	5.20	27	IAML		11 47 48.6	
	comp=N,21nm,0.4s						
CCB				IAML		11 47 48.7	
	comp=E,26nm,0.3s						
HDA	Harding Lake	5.21	32	P	Pn	11 46 46.9	-0.9
	baz=217						
I23K	Minto, Yukon-K	5.35	18	IAML		11 48 36.4	
	comp=E,13nm,1.8s						
I23K				IAML		11 48 41.0	
	comp=N,15nm,4.4s						
I23K	Minto, Yukon-K	5.35	18	P	Pn	11 46 48.6	-0.9
	baz=202						
MENT	Mentasta	5.37	54		Pn	11 46 49.4	-0.5
TCOL	CIGO, UAF Yank	5.38	26	P	Pn	11 46 49.4	-0.6
	baz=210						
RIDG	Independent Ri	5.38	44	P	Pn	11 46 50.1	0.0
	baz=231						
COLA	College	5.38	26		Pn	11 46 49.3	-0.7
KIAG	Kiagna River	5.46	77		Pn	11 46 51.2	0.0
M26K	Nabesna, AK	5.46	61	P	Pn	11 46 51.8	+0.6
	baz=250						
ILAR	Eielson Array	5.52	30	P	Pn	11 46 50.8	-1.1
	comp=N,14nm,0.4s,baz=218,slow=14,SNR=272						
ILAR				S	Sn	11 47 51.1	-3.5
	comp=N,9.8nm,0.4s,baz=221,slow=22,SNR=23						
H21K	Melozitna Rive	5.55	2	P	Pn	11 46 51.8	-0.5
	baz=183						
DOT	Dot Lake	5.61	47		Pn	11 46 52.3	-0.8
POKR	Poker Plat Res	5.68	26	P	Pn	11 46 53.4	-0.6
	baz=211						
BARN	Barnard Glacie	5.80	76		Pn	11 46 56.3	+0.4
SCRK	Sand Creek	5.83	45		Pn	11 46 55.4	-0.7
SCRK	Sand Creek	5.83	45	P	Pn	11 46 55.4	-0.7
	baz=233						
IMAR	Indian Mountai	5.88	358	Pn	Pn	11 46 56.6	0.0
H23K	Yukon River	5.96	15	P	Pn	11 46 57.5	-0.3
	baz=198						
L27K	Beaver Creek,	6.21	57	P	Pn	11 47 00.8	-0.3
	baz=247						
H24K	Noodor Dome	6.23	21	P	Pn	11 47 00.6	-0.8
	baz=206						
G21K	Allakaket	6.41	359	P	Pn	11 47 03.5	-0.2
	baz=179						
BVCY	Beaver Creek	6.41	64	P	Pn	11 47 03.9	+0.1
	baz=254						
YUK3	Moose Creek	6.46	70	P	Pn	11 47 04.7	+0.1
	baz=261						
PRP	Porcupine Dome	6.46	30	P	Pn	11 47 03.9	-0.6
	baz=217						
O28M	Mount Upton	6.51	79	P	Pn	11 47 06.3	+1.0
	baz=270						
O28M				S	Sn	11 48 17.5	-1.2
	baz=270						
PCA	Pinnacle	6.52	85		Pn	11 47 05.5	+0.3
PINM	Pinnacle	6.52	85	P	Pn	11 47 05.5	+0.3
	baz=276						
K27K	Chicken	6.55	49	P	Pn	11 47 05.3	-0.3
	baz=238						
G23K	Bananza Creek	6.76	11	P	Pn	11 47 07.9	-0.5
	baz=194						
I26K	Coal Creek Min	6.97	38	P	Pn	11 47 10.2	-0.9
	baz=226						
G24K	Hadweenzic Riv	7.09	19	P	Pn	11 47 11.7	-1.0
	baz=204						
COLD	Coldfoot	7.25	10		Pn	11 47 13.9	-1.0
COLD	Coldfoot	7.25	10	P	Pn	11 47 13.9	-1.0
	baz=192						
EGAK	Eagle	7.30	45		Pn	11 47 14.6	-0.9
EGAK	Eagle	7.30	45	P	Pn	11 47 14.7	-0.8
	baz=236						
G25K	Bearman Lake	7.39	23	P	Pn	11 47 15.8	-0.9
	baz=209						
DAWY	Dawson	7.61	53	Pn	Pn	11 47 19.5	-0.2
I27K	Kandik River	7.65	39	P	Pn	11 47 19.5	-0.7
	baz=230						
F24K	Squaw Lake	7.79	15	P	Pn	11 47 21.4	-0.6
	baz=200						
N30M	Aishikik Lake	8.03	73	P	Pn	11 47 23.9	-1.5
	baz=267						
G26K	Porcupine Rive	8.04	28	P	Pn	11 47 24.3	-1.1
	baz=216						
H27K	Steamboat Moun	8.10	36	P	Pn	11 47 24.9	-1.3
	baz=226						
F25K	Christian Rive	8.21	21	P	Pn	11 47 26.4	-1.3
	baz=208						
E24K	Your Creek	8.24	13	P	Pn	11 47 27.1	-1.1
	baz=197						
G27K	Doyon Strip	8.47	33	P	Pn	11 47 29.7	-1.4
	baz=223						
F26K	Sheenjek River	8.58	24	P	Pn	11 47 31.4	-1.2
	baz=212						
E25K	Arctic Village	8.69	19	P	Pn	11 47 32.6	-1.4
	baz=206						
E27K	Coleen River	9.54	27	P	Pn	11 47 44.1	-1.2
	baz=218						
INK	Inuvik	11.82	38	P	Pn	11 48 15.4	+0.2
	comp=N,7.5nm,0.7s,baz=232,slow=15,SNR=38						
INK				S	Sn	11 50 24.4	-1.2
	comp=N,0.8nm,0.7s,baz=323,slow=18,SNR=1.2						
DLBC	Dease Lake	12.00	88	P	P	11 48 21.4	-3.0
	comp=N,2.9nm,0.3s,baz=258,slow=11,SNR=14						
DLBC				S	Sn	11 50 28.9	-1.3
	comp=N,2.4nm,1.1s,baz=187,slow=10,SNR=1.8						
YKA	Yellowknife Ar	18.53	66	P	P	11 49 37.0	+0.7
	comp=N,1.2nm,0.6s,baz=277,slow=10.0,SNR=28						
YKA				PcP	PcP	11 53 58.4	-0.2
	comp=N,0.1nm,0.3s,baz=267,slow=1.4,SNR=6.0						
RES	Resolute Bay	25.27	32	P	P	11 50 44.8	+1.5
	comp=N,0.9nm,0.7s,baz=260,slow=1.5,SNR=3.7						
	comp=N,0.9nm,0.7s						
NVAR	Mina Array Bea	30.91	119	P	P	11 51 35.9	+1.8
	comp=N,0.4nm,0.6s,baz=316,slow=8.3,SNR=3.8						
	comp=N,0.4nm,0.6s						
YAK	Yakutsk	35.27	307	LR	LR	12 07 49.5	
	comp=N,30nm,20.8s,baz=270,slow=38						
TXAR	Lajitas Array	45.16	110	P	P	11 53 34.9	+1.7
	comp=N,0.3nm,0.7s,baz=310,slow=4.3,SNR=4.2						
	comp=N,0.3nm,0.7s						
KSRS	Korea Array	53.01	282	P	P	11 54 32.6	+0.1
	comp=N,1.0nm,0.5s,baz=20,slow=8.4,SNR=4.0						
	comp=N,1.0nm,0.5s						
SONM	Songino Array	54.59	306	P	P	11 54 45.3	+1.1
	comp=N,1.7nm,0.7s,baz=49,slow=7.0,SNR=12						
	comp=N,1.7nm,0.7s						
ZALV	Zalesovo Beam	57.18	323	P	P	11 55 02.2	0.0
	comp=N,2.1nm,0.6s,baz=28,slow=5.8,SNR=7.7						
	comp=N,2.1nm,0.6s						
MKAR	Makanchi Array	64.24	321	P	P	11 55 49.0	-1.2
	comp=N,0.5nm,0.5s,baz=46,slow=6.7,SNR=5.9						
	comp=N,0.5nm,0.5s						

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*INET **30** 11:53:52.3±2.1, 11°.03N×83°.59W, h15km±18km, MW3.0*
*UCR **30** 11:53:53.6±1.7, 10°.97N×83°.76W, h11km±7km, MW3.7*
ISC 30 11:53:50.0±1.3**, 11°.04N**±0°.03×**83°.66W**±0°.04**, h4**km±10km,
n91, σ0ˢ48/121**, 10C-8D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRT1	Tortuguero	0.44	185	⇑iP	Pb	11 54 01.1	+0.7
TRT1				eS	Sb	11 54 07.7	+0.4
RIFO	Rio Frio, Sara	0.76	200	eP	Pb	11 54 06.3	+0.5
RIFO				eS	Sb	11 54 16.0	-0.7
COVE	Coope Vega, Sa	0.80	247	eP	Pg	11 54 05.8	+0.5
ITAL	Pital	0.84	226	eP	Pb	11 54 07.1	-0.1
ITAL				eS	Sg	11 54 17.6	+0.5
RVLA	Villa Bonita	0.93	176	eP	Pn	11 54 10.1	+0.3
IRES	Siquirres	0.95	171	eP	Pn	11 54 10.4	+0.3
LCOCO	El Coco	0.95	174	⇑eP	Pn	11 54 10.2	0.0
LCOCO				eS	Sn	11 54 23.9	-0.4
BATAN	Batan	0.98	164	eP	Pn	11 54 10.4	-0.1
BATAN				eS	Sn	11 54 24.9	+0.1
POA5	Crater Von Fra	1.00	214	eP	Pb	11 54 10.3	+0.1
CRPO	Crater poas	1.01	214	eP	Pb	11 54 10.3	+0.1
CRPO				eS	Sg	11 54 22.9	+0.4
VPTE	Poasito	1.01	212	eP	Pb	11 54 10.2	-0.1
VPS6	Volcano Poas	1.01	214	eP	Pb	11 54 10.3	0.0
VPS6				eS	Sb	11 54 23.9	-0.2
CPMI	Catarata Coope	1.04	223	⇓iP	Pb	11 54 10.6	-0.1
CPMI				eS	Sg	11 54 23.7	+0.4
VTRT	Volcan Turrial	1.04	187	⇓iP	Pn	11 54 11.7	0.0
VTCV	VTCV, Calle Va	1.05	184	eP	Pn	11 54 11.4	-0.3
RVSTA	Santa Teresita	1.06	179	eP	Pn	11 54 11.9	+0.2
RVSTA				eS	Sn	11 54 26.4	-0.5
VICA	Volcano Irazu	1.06	190	eP	Pn	11 54 11.9	-0.2
VICA				eS	Sb	11 54 25.4	-0.3
HAYA	Volcan Irazu	1.07	190	⇓eP	Pn	11 54 12.1	-0.1
ICR3	Volcano Irazu	1.07	189	⇓eP	Pn	11 54 12.6	+0.4
ICR3				eS	Sb	11 54 26.1	+0.3
RAFA	San Farael, Vo	1.08	188	eP	Pb	11 54 12.0	+0.4
VIRE	VIRE	1.09	193	eP	Pn	11 54 12.3	-0.2
HDC3	Heredia 3	1.12	203	eP	Pn	11 54 13.0	+0.4
HDC	Heredia	1.12	204	eP	Pn	11 54 13.0	+0.3
TURIB	Turrialba	1.13	181	eP	Pn	11 54 12.5	-0.1
FORC	Fortuna	1.15	240	i P	Pg	11 54 11.9	-0.1
FORC				i S	Sg	11 54 27.3	+0.4
SOCE	Pocosol	1.15	235	⇓iP	Pg	11 54 12.3	+0.3
SOCE				eS	Sg	11 54 26.8	-0.2
VACR	Volcan Arenal	1.15	241	⇓iP	Pb	11 54 12.4	0.0
VACR				eS	Sg	11 54 27.3	+0.3
LUPE	Guadalupe	1.15	200	eP	Pn	11 54 13.4	+0.3
CEDE	Laguna Cedeo	1.17	242	⇓iP	Pb	11 54 12.7	0.0
CEDE				i S	Sg	11 54 27.9	+0.4
OCM	Ochomogo	1.18	195	eP	Pn	11 54 13.3	-0.1
BELE	Belen	1.18	206	eP	Pb	11 54 13.2	+0.2
VERA	Finca Concepci	1.20	261	eP	Pg	11 54 13.0	-0.1
TABAC	Tabacon	1.22	244	i P	Pb	11 54 13.8	+0.2
CASO	Castillo	1.22	240	i P	Pg	11 54 13.4	+0.1
MRVA	Moravia de Chi	1.23	170	eP	Pn	11 54 14.1	0.0
RIMA	Rio Macho	1.28	189	eP	Pn	11 54 15.1	+0.2
RIMA	Rio Macho	1.28	189	⇑eP	Pb	11 54 14.9	+0.1
ESPN	Las Esperanzas	1.31	331	eP	Pb	11 54 15.3	+0.1
ESPN				eS	Sg	11 54 31.8	-0.4
ESPN	Las Esperanzas	1.31	331	eP	Pb	11 54 15.3	+0.1
ACOS	Acosta	1.33	202	eP	Pb	11 54 15.9	+0.2
ACOS				eS	Sg	11 54 32.6	-0.3
LCR2	La Lucha 2	1.33	195	eP	Pb	11 54 15.8	+0.1
LCR2	La Lucha 2	1.33	195	eP	Pb	11 54 15.8	+0.1
LCR2				eS	Sg	11 54 32.4	-0.6
PTEN	Parque Tenorio	1.34	256	i P	Pn	11 54 15.8	+0.1
MTEVE	Monteverde	1.35	238	⇑eP	Pn	11 54 15.6	-0.2
ABE2	San Pablo	1.38	196	eP	Pb	11 54 16.7	+0.1
ABE2				eS	Sg	11 54 33.4	-1.1
CANAL	Canalete	1.39	262	i P	Pn	11 54 16.0	-0.1
ACAL	Aguas Claras	1.41	254	⇑iP	Pn	11 54 16.6	0.0
MOTZ	Rio Naranjo	1.43	256	i P	Pn	11 54 16.9	0.0
VMAR	Armenia, Volca	1.45	261	i P	Pn	11 54 16.9	-0.2
VMAR				⇑iP	Pb	11 54 17.2	-0.3
VMAR				eS	Sb	11 54 35.9	-0.5
JTS	Las Juntas de	1.47	240	⇓iP	Pn	11 54 17.0	-0.4
BUS1	Rivas	1.48	183	⇑iP	Pg	11 54 18.2	-0.1
BUS1				eS	Sg	11 54 37.6	0.0
CDM	Cerro de Muert	1.48	184	eP	Pg	11 54 18.3	-0.2
CDM				eS	Sg	11 54 36.2	-1.4
CDM	Cerro de Muert	1.48	184	⇑iP	Pg	11 54 18.2	-0.2
CDM				eS	Sg	11 54 37.5	-0.1
JUNT	Juntas	1.48	240	eP	Pn	11 54 17.3	-0.2
CLARA	Aguas Claras	1.51	261	i P	Pn	11 54 18.0	0.0
CUI	Cuipilapa	1.53	256	i P	Pn	11 54 18.3	+0.1
HORNC	Hornillas	1.53	258	i P	Pn	11 54 17.9	-0.3
MESS	Mesas	1.54	259	i P	Pn	11 54 18.8	+0.4
COLC	Colonia	1.56	256	i P	Pn	11 54 18.9	+0.3
GUAB	Guayabo de Bag	1.58	258	i P	Pg	11 54 21.0	+0.7
PEZE	Perez Zeledon,	1.65	181	eP	Pb	11 54 20.9	-0.1
BUAI	Buenos Aires	1.65	265	i P	Pb	11 54 20.6	-0.5
VORI	VORI	1.67	263	eP	Pb	11 54 21.1	-0.4
GP14	Hacienda Santa	1.68	261	i P	Pb	11 54 21.4	-0.1
GPS1	Guardaparques	1.68	261	i P	Pn	11 54 20.9	+0.6
JACO	JACO, Garabito	1.69	216	eP	Pn	11 54 21.0	+0.7
JACO				eS	Sn	11 54 41.5	-0.8
JACO	JACO, Garabito	1.69	216	⇑iP	Pb	11 54 21.2	-0.4
JACO				eS	Sn	11 54 42.8	+0.5
GPS2	Hotel Rincn d	1.69	260	i P	Pb	11 54 21.5	-0.2
GB1A	Borinquen Arri	1.72	263	i P	Pg	11 54 23.2	+0.2
BUEV	Buena Vista	1.73	262	i P	Pb	11 54 22.7	+0.2
LAFE	Finca La Fe, P	1.74	225	eP	Pb	11 54 22.0	-0.5
LAFE				eS	Sn	11 54 43.5	-0.1
LAFE	Finca La Fe, P	1.74	225	eP	Pb	11 54 22.0	-0.5
ACON	Acoyapa	1.75	302	eP	Pn	11 54 21.2	0.0
ACON				eS	Sb	11 54 44.6	-0.4
ACON	Acoyapa	1.75	302	eP	Pn	11 54 21.3	+0.2
LAPC	Finca la Perla	1.77	261	i P	Pb	11 54 22.6	-0.4
GBS3	Finca Las Img	1.78	262	i P	Pb	11 54 22.9	-0.4
EDDO	Dominical	1.79	187	eP	Pg	11 54 24.0	-0.3
SRBA	San Rafael, Bu	1.82	171	⇑eP	Pb	11 54 23.5	-0.4
POPE	POPE, Guanacas	1.85	239	eP	Pn	11 54 22.9	+0.3
NYURE	Nandayure	1.88	237	eP	Pn	11 54 23.9	+1.0
ORTG	Ortega, Santa	1.89	249	eP	Pb	11 54 24.4	-0.8
HZTE	Horizontes, Gu	1.93	261	eP	Pn	11 54 24.7	+1.1
HZTE				eS	Sn	11 54 48.8	+0.4
CMARA	Lajas Hojancha	2.01	240	eP	Pn	11 54 25.8	+1.0
CBL1	Cabuya	2.02	225	eP	Pb	11 54 26.6	-0.6
EDP2	Potrero Grande	2.07	167	eP	Pb	11 54 27.7	-0.4
EDPN	Palmar Norte	2.07	175	eP	Pb	11 54 28.6	+0.4
NARJA	Naranjal	2.14	240	eP	Pb	11 54 28.1	-1.2
HATIL	Hatillo	2.14	250	eP	Pb	11 54 28.5	-0.8
INDI	Punta indio, G	2.16	237	eP	Pn	11 54 28.3	+1.5
BOAB	BOACO BROADBAN	2.42	306	eP	Pn	11 54 30.4	0.0
BOAB				eS	Sn	11 55 00.6	+0.2
EDAD	Golfito	2.42	168	eP	Pn	11 54 32.3	+1.8

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*NEIC **30** 11:56:49.4±1.1, 18°.87N±0°.09×145°.6E±0°.2, h191km±11km, mb4.2/17, Error ellipse: s-maj=21.3km s-min=12.3km az=81.0*
*IDC **30** 11:56:50.6±2.1, 18°.86N×145°.80E, h218km±20km, mb3.0/5, mbtmp3.9/9, Error ellipse: s-maj=38.9km s-min=12.2km az=86.0*
ISC 30 11:56:50.8±0.8**, 18°.89N**±0°.06×**145°.5E**±0°.2**, h214**km**, n31,**
σ1ˢ26/33**, mb4.0**/11**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.30	186	P	Pn	11 58 09.8	+0.3
	103nm,0.8s,baz=354,slow=12,SNR=1.9						
GUMO				S	S	11 59 11.5	0.0
	32nm,0.3s,baz=197,slow=18,SNR=1.3						
GUMO	Guam	5.30	186	Pn	Pn	11 58 07.2	-2.2
JCJ	Chichijima	8.71	340	P	Pn	11 58 54.3	+1.2
	30nm,0.5s,baz=270,slow=21,SNR=1.9						
JCJ				S	S	12 00 28.1	-3.2
	30nm,0.5s,baz=78,slow=22,SNR=2.6						
JCJ	Chichijima	8.71	340	Pn	Pn	11 58 53.9	+0.8
JMZ	Minamidaito 2	14.87	300		Pn	12 00 10.8	0.0
JSG	Sagara	17.00	339	P	P	12 00 35.3	+0.6
JOW	Kunigami	17.70	300	P	Pn	12 00 46.5	+1.9
	8.9nm,0.4s,baz=124,slow=13,SNR=2.0						
JOW	Kunigami	17.70	300	Pn	Pn	12 00 46.0	+1.4
JGF	Kuroka	18.12	338	Pn	P	12 00 49.1	+2.1
JGF				IAmb	IAmb	12 01 17.3	
	comp=Z,15nm,1.2s						
MJAR	Matsushiro Arr	18.71	341	P	P	12 00 55.4	+2.1
	comp=Z,1.4nm,0.5s,baz=169,slow=9.7,SNR=3.1						
MAJO	Matsushiro	18.71	341	P	P	12 00 54.2	+0.8
MAJO				IAmb	IAmb	12 01 36.7	
	comp=Z,14nm,1.2s						
MJB9	Matsu-Tunnel	18.71	341	P	P	12 00 53.9	+0.5
MJB9				IAmb	IAmb	12 01 36.7	
	comp=Z,14nm,1.2s						
JMM	Marumori	19.34	349	P	P	12 01 00.0	0.0
JTU	Tsushima	21.13	321	P	P	12 01 18.1	-1.0
KLR	Kul'dur	32.22	343	P	P	12 02 59.5	+0.7
	comp=Z,1.2nm,0.5s,baz=136,slow=10,SNR=5.1						
	comp=Z,1.2nm,0.5s						
WB0	Warramunga Arr	39.93	196	P	P	12 04 04.0	-0.4
WB2	Warramunga Arr	40.11	196	P	P	12 04 06.7	+0.8
WB2				IAmb	IAmb	12 04 40.8	
	comp=Z,7.5nm,1.4s						
WRA	Warramunga Arr	40.11	196	P	P	12 04 05.8	0.0
	comp=Z,0.7nm,0.7s,baz=9.9,slow=8.5,SNR=12						
	comp=Z,0.7nm,0.7s						
SONM	Songino Array	42.86	321	P	P	12 04 27.2	-0.8
	comp=Z,0.3nm,0.5s,baz=103,slow=9.6,SNR=2.7						
	comp=Z,0.3nm,0.5s						
AS31	Alice Springs	43.78	195	P	P	12 04 37.4	+1.9
ASAR	Alice Springs	43.78	195	P	P	12 04 35.5	0.0
	comp=Z,0.4nm,0.6s,baz=16,slow=9.5,SNR=7.3						
	comp=Z,0.4nm,0.6s						
CAST	Castle Rocks	61.02	27	P	P	12 06 41.9	+0.4
CAST				IAmb	IAmb	12 06 47.2	
	comp=Z,5.3nm,1.3s						
BPAW	Bear Paw Mtn.	61.68	27	P	P	12 06 46.5	+0.7
MLY	Manley	62.04	26	P	P	12 06 49.1	+0.8
I23K	Minto, Yukon-K	62.63	26	P	P	12 06 53.2	+1.1
I23K				IAmb	IAmb	12 07 14.2	
	comp=Z,6.1nm,1.4s						
MDM	Murphy Dome	63.05	26	P	P	12 06 56.0	+1.0
MDM				IAmb	IAmb	12 07 17.8	
	comp=Z,5.3nm,1.4s						
H24K	Noodor Dome	63.40	25	P	P	12 06 57.7	+0.4
H24K				IAmb	IAmb	12 07 26.3	
	comp=Z,4.3nm,1.4s						
TOLK	Toolik Lake Re	63.49	22	P	P	12 06 58.7	+0.9
TOLK				IAmb	IAmb	12 07 12.2	
	comp=Z,8.4nm,1.5s						
BMAR	Burnt Mountain	65.03	24	P	P	12 07 08.6	+0.8
ABKAR	Akbulak array	73.05	317	P	P	12 07 57.1	-0.3
YKA	Yellowknife Ar	77.92	28	P	P	12 08 23.0	-1.7
	comp=Z,0.1nm,0.5s,baz=286,slow=4.9,SNR=4.9						
	comp=Z,0.1nm,0.5s						

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*WEL **30** 11:57:13.5, 38°.9S±0°.8×17°6E±°, h10km±1km, M3.4/32, ML3.7/32, MLv3.4/32, Error ellipse: s-maj=0.0km s-min=0.0km az=78.6, confirmed*
*NOU **30** 11:57:14.9, 38°.84S×175°.67E, h0km, MLv3.7/10, North Island, New Zealand*
ISC 30 11:57:14.4±0.9**, 38°.90S**±0°.02×**175°.66E**±0°.02**, h7**km±7km**,**
n144, σ0ˢ88/149**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KATZ	Kakaramea	0.08	162	P	Pg	11 57 15.7	-0.8
RATZ	Rangitukua	0.09	68	P	Pg	11 57 16.7	+0.1
RATZ				S	Sg	11 57 18.8	+0.7
RITZ	Rihia Road	0.17	117	P	Pg	11 57 17.4	-0.5
RITZ				S	Sg	11 57 20.1	-0.1
KRVZ	Karewarewa	0.19	185	P	Pg	11 57 17.7	-0.7
NTVZ	North Tongarir	0.20	177	P	Pg	11 57 17.8	-0.7
NTVZ				S	Sg	11 57 20.3	-0.9
WATZ	Wairara	0.20	16	P	Pg	11 57 19.2	+0.7
WATZ				S	Sg	11 57 23.1	+1.9
TMVZ	Te Maari	0.22	172	P	Pg	11 57 18.2	-0.6
WTVZ	West Tongariro	0.22	195	P	Pg	11 57 18.3	-0.6
NNVZ	North Ngauruho	0.23	189	P	Pg	11 57 18.5	-0.6
ETVZ	East Tongariro	0.24	171	P	Pg	11 57 18.5	-0.7
ETVZ				S	Sg	11 57 21.8	-0.7
TWVZ	Taurewa	0.24	226	P	Pg	11 57 19.0	-0.3
OTVZ	Oturere	0.26	180	P	Pg	11 57 19.0	-0.7
NGZ	Ngauruhoe	0.28	190	P	Pg	11 57 19.3	-0.7
SNVZ	South Ngauruho	0.28	184	P	Pg	11 57 19.5	-0.6
WHTZ	Whakaora	0.33	44	P	Pb	11 57 21.9	-0.7
HATZ	Hinemaiaia	0.33	88	P	Pg	11 57 20.4	-0.6
FWVZ	Far West T-bar	0.36	194	P	Pg	11 57 20.8	-0.8
TUVZ	Tukino	0.37	181	P	Pg	11 57 21.2	-0.5
DRZ	Dome Shelter	0.38	192	P	Pg	11 57 21.3	-0.7
WHVZ	Whangaehu Hut	0.39	189	P	Pg	11 57 21.2	-0.8
TRVZ	Turoa	0.41	193	P	Pg	11 57 21.6	-0.9
WNVZ	Wahianoa	0.43	187	P	Pg	11 57 22.1	-0.7
KUTZ	Kaahu Road	0.43	17	P	Pb	11 57 23.4	-1.0
PKVZ	Pokaka	0.46	212	P	Pg	11 57 22.7	-0.6
MTVZ	Mangateitei	0.51	197	P	Pg	11 57 23.3	-1.0
MOVZ	Moawhango	0.51	172	P	Pg	11 57 23.3	-1.0
WPRZ	Whakapapatarin	0.55	46	P	Pb	11 57 25.6	-0.7
TLZ	Tolley Road	0.58	350	P	Pg	11 57 25.7	+0.1
MRHZ	Matea Rd	0.59	84	P	Pg	11 57 25.0	-0.8
ALRZ	Allen Road	0.63	58	P	Pg	11 57 26.5	-0.1
GRRZ	Galatos Road	0.65	33	P	Pb	11 57 28.4	+0.3
BHHZ	Black Hill Sta	0.66	152	P	Pg	11 57 26.1	-1.1
BKZ	Black Stump Fm	0.70	113	P	Pg	11 57 26.8	-1.1
BKZ	Black Stump Fm	0.70	113	P	Pg	11 57 27.1	-0.8
PRRZ	Plateau Road	0.70	55	P	Pg	11 57 27.9	0.0
HRRZ	Handcock Road	0.70	44	P	Pb	11 57 28.9	-0.2
VRZ	Vera Road	0.74	252	P	Pg	11 57 28.5	-0.1
HIZ	Hauiti	0.74	301	P	Pb	11 57 29.1	-0.5
HIZ	Hauiti	0.74	301	P	Pb	11 57 29.2	-0.5
HSRZ	Hossack Road	0.74	38	P	Pb	11 57 29.7	0.0
KWHZ	Kaweka Forest	0.79	132	P	Pg	11 57 28.9	-0.7
UTU	Utuhina	0.83	30	P	Pb	11 57 31.3	+0.1
HLRZ	Highlands Stat	0.84	40	P	Pn	11 57 32.2	-0.6
RRRZ	Republican Roa	0.87	50	P	Pb	11 57 31.5	-0.4
NGRZ	Ngongotaha	0.90	27	P	Pb	11 57 32.3	0.0
NMHZ	Naumai	0.91	103	P	Pg	11 57 31.9	0.0
MTHZ	Maungataniwha	0.92	87	P	Pg	11 57 31.4	-0.7
TARZ	Mount Tarawera	0.94	45	P	Pn	11 57 33.4	-0.7
MUGZ	Murupara	0.96	64	P	Pg	11 57 32.4	-0.6
OMRZ	Omania	0.97	35	P	Pb	11 57 33.3	-0.2
MCHZ	McNeill Hill	0.97	124	P	Pb	11 57 33.4	-0.1
KARZ	Kaharoa	0.99	28	P	Pn	11 57 34.6	-0.1
WAZ	Wanganui	1.00	211	P	Pg	11 57 32.6	-1.1
MHEZ	Mangahewa	1.06	260	P	Pb	11 57 35.3	+0.2
RTZ	Ruatahuna	1.07	75	P	Pg	11 57 34.1	-0.8
KMRZ	Kaimai	1.08	12	P	Pb	11 57 35.4	0.0
PNHZ	Pukenui	1.09	158	P	Pg	11 57 34.4	-1.0
ARHZ	Aropaoanui	1.10	110	P	Pn	11 57 36.0	-0.2
RAHZ	Arahi	1.11	91	P	Pb	11 57 35.6	-0.3
LREZ	Lake Rotokare	1.13	240	P	Pg	11 57 35.6	-0.4
EDRZ	Edgecumbe	1.16	47	P	Pn	11 57 38.0	+0.9
DREZ	Durham Road	1.18	255	P	Pg	11 57 36.8	-0.2
TOZ	Tahuroa Road	1.18	354	P	Pg	11 57 36.1	-0.9
TSZ	Takapari Road	1.18	169	P	Pg	11 57 36.0	-1.1
MARZ	Manawahe	1.21	41	P	Pn	11 57 38.7	+0.9
WHHZ	Waihua	1.24	99	P	Pn	11 57 38.5	+0.4
TGRZ	Tauranga	1.26	22	P	Pg	11 57 37.3	-1.3
NEZ	North Egmont	1.27	253	P	Pg	11 57 38.6	-0.3
KAHZ	Kahuranaki	1.30	134	P	Pb	11 57 39.6	+0.4
URZ	Urewera	1.30	61	P	Pb	11 57 39.0	-0.2
URZ	Urewera	1.30	61	P	Pn	11 57 38.8	-0.2
WPHZ	Waipukurau	1.31	153	P	Pn	11 57 39.2	+0.1
SNGZ	Shannon Statio	1.31	85	P	Pb	11 57 39.4	-0.1
OHWZ	Ohakea	1.33	192	P	Pn	11 57 39.0	-0.4
CKHZ	Cape Kidnapper	1.33	125	P	Pg	11 57 40.7	+0.7
PKE	Pukeiti	1.34	257	P	Pn	11 57 39.6	+0.1
KHEZ	Kahui Hut	1.34	252	P	Pb	11 57 40.0	0.0
KHEZ	Kahui Hut	1.34	252	P	Pn	11 57 39.9	+0.2
RAGZ	Rawiri	1.43	74	P	Pg	11 57 42.0	+0.2
NBEZ	Newall Road No	1.45	255	P	Pn	11 57 41.5	+0.5
DVHZ	Dannevirke	1.45	165	P	Pn	11 57 41.4	+0.3
PXZ	Pawanui	1.46	141	P	Pg	11 57 42.3	-0.2
NMEZ	Namu Road	1.48	249	P	Pn	11 57 42.0	+0.5
POWZ	Post Office Ro	1.49	177	P	Pn	11 57 41.8	+0.1
PRHZ	Porangahau	1.56	151	P	Pg	11 57 44.1	-0.2
MWZ	Matawai	1.57	69	P	Pn	11 57 42.1	-0.6
KNZ	Kokohu	1.57	95	P	Pg	11 57 44.6	0.0
RIGZ	Rimuhau	1.65	84	P	Pg	11 57 46.0	-0.1
PRWZ	Pori Road	1.67	172	P	Pb	11 57 45.7	+0.2
MRZ	Mangatainoka R	1.76	182	P	Pn	11 57 46.0	+0.7
MHGZ	Mahia Peninsul	1.77	99	P	Pg	11 57 48.6	+0.4
TKGZ	Te Karaka	1.77	76	P	Pg	11 57 47.4	-1.0
BFZ	Birch Farm	1.83	166	P	Pg	11 57 49.4	-0.2
BFZ	Birch Farm	1.83	166	P	Pg	11 57 49.2	-0.4
RUGZ	Raukumara Rang	1.84	60	P	Pn	11 57 46.7	+0.2
TIWZ	Tintock	1.88	175	P	Pb	11 57 49.2	+0.1
OGWZ	Otaki Gorge	1.95	191	P	Pn	11 57 49.2	+1.2
TWGZ	Tauwhareparae	1.96	69	P	Pb	11 57 50.1	-0.3
HOWZ	Holdsworth Sta	2.00	183	P	Pb	11 57 50.1	-1.0
AWAZ	Awhitu Peninsu	2.00	336	P	Pn	11 57 48.9	+0.3
HAZ	Te Kaha	2.02	56	P	Pn	11 57 49.2	+0.3
ETAZ	East Tamaki Re	2.03	343	P	Pn	11 57 48.3	-0.7
CNGZ	Carnagh Statio	2.03	79	P	Pg	11 57 52.5	-0.9
KIW	Kapiti Island	2.04	196	P	Pn	11 57 50.5	+1.3
CPWZ	Castlepoint	2.05	169	P	Pb	11 57 52.5	+0.5
WIAZ	Waiheke Island	2.15	349	P	Pn	11 57 50.7	+0.1
WTAZ	Waiatarua	2.15	336	P	Pn	11 57 51.1	+0.4
PKGZ	Pakihiroa	2.15	63	P	Pb	11 57 52.5	-1.2

EPAZ	Eden Park BICE	2.15	340	P	Pb	11 57 52.2	-1.5
KUZ	Kuaotunu	2.15	1	P	Pn	11 57 51.0	+0.3
KUZ	Kuaotunu	2.15	1	P	Pn	11 57 50.7	0.0
HBAZ	Herne Bay Bore	2.18	340	P	Pb	11 57 52.6	-1.5
PUZ	Puketiti	2.20	69	P	Pb	11 57 53.2	-1.3
TMWZ	Te Maipa	2.21	176	P	Pb	11 57 54.7	-0.1
MBAZ	Motutapu North	2.21	344	P	Pn	11 57 51.0	-0.6
CAW	Cannon Point	2.25	192	P	Pn	11 57 53.4	+1.3
MTW	Mount Morrison	2.26	183	P	Pb	11 57 55.0	-0.5
RVAZ	Riverhead Bore	2.29	338	P	Pn	11 57 52.7	+0.1
DUWZ	D'Urville Isla	2.32	215	P	Pn	11 57 53.9	+0.8
MXZ	Matakaoa Point	2.47	58	P	Pn	11 57 56.5	+1.4
MXZ	Matakaoa Point	2.47	58	P	Pn	11 57 56.8	+1.7
PAWZ	Paruwai Farm	2.48	184	P	Pb	11 58 00.4	+1.0
TRWZ	Traveller	2.49	180	P	Pn	11 57 57.3	+1.8
SNZO	South Karori	2.52	197	P	Pb	11 57 59.1	-0.8
TCW	Tory Channel	2.54	204	P	Pn	11 57 57.7	+1.6
GRZ	Great Barrier	2.65	356	P	Pb	11 58 00.5	-1.7
PLWZ	Palliser	2.68	187	P	Pb	11 58 00.7	-2.1
TUWZ	Tuamarina	2.85	207	P	Pn	11 58 01.9	+1.6
NNZ	Nelson	2.90	216	P	Pn	11 58 03.1	+2.0
QRZ	Quartz Range	3.08	230	P	Pn	11 58 03.3	-0.2
QRZ	Quartz Range	3.08	230	P	Pn	11 58 03.5	0.0
BSWZ	Blackbirch Sta	3.13	205	P	Pb	11 58 09.6	-0.7
WCZ	Waipu Caves	3.14	340	P	Pn	11 58 05.6	+1.3
MRNZ	Matariki Terra	3.34	221	P	Pn	11 58 09.1	+2.0
THZ	Tophouse	3.55	216	P	Pn	11 58 12.2	+2.2
KHZ	Kahutara	3.87	204	P	Pn	11 58 14.6	+0.4
OUZ	Omahuta	4.03	335	P	Pn	11 58 16.6	+0.1
OUZ	Omahuta	4.03	335	P	Pn	11 58 17.2	+0.7
DSZ	Denniston Nort	4.09	225	P	Pn	11 58 18.4	+0.9
GVZ	Greta Valley S	4.52	205	P	Pn	11 58 25.2	+1.8
LTZ	Lake Taylor	4.65	212	P	Pn	11 58 27.7	+2.5
INZ	Inchbonnie	4.98	219	P	Pn	11 58 31.4	+1.7
OXZ	Oxford	5.20	211	P	Pn	11 58 34.7	+2.1
TMZ	Timaru	6.49	211	P	Pn	11 58 51.7	+1.3

*SOME **30** 11:58:02.9, 42°.52N×70°.07E, h0^{km}*
*NNC **30** 11:58:03.7±1.5, 42°.60N×69°.84E, h0^{km}, mb2.8, mpv2.5, Error ellipse: s-maj=15.2km s-min=4.6km az=107.0*
*KRNET **30** 11:58:04.2±0.1, 42°.66N×69°.85E, h30^{km}, mb2.5*
ISC 30 11:58:03.5±2.1, **42°.60N**±0°.04×**69°.8E**±0°.1, **h1**^{km}±12^{km}, **n22**, σ1^{s}.**18**/38, **20C-10D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	0.47	161	P	Pg	11 58 12.0	-0.6
	52nm,0.2s						
IUG				S	Sg	11 58 18.6	0.0
	53nm,0.2s						
IUG	Iuzhnay	0.47	161	eP	Pg	11 58 11.8	-0.8
	52nm,0.2s						
IUG				eS	Sg	11 58 18.6	0.0
	53nm,0.2s						
KK07	Karatay Array	0.70	45	⇓P	Pg	11 58 17.3	+0.5
KK07				⇑S	Sb	11 58 27.7	-1.0
KK08	Karatay Array	0.70	43	⇓P	Pb	11 58 17.7	-0.9
KK08				⇑S	Sb	11 58 27.9	-0.9
KK03	Karatay Array	0.71	44	⇓P	Pb	11 58 18.1	-0.6
KK03				⇑S	Sb	11 58 28.0	-1.0
KK01	Karatay Array	0.71	44	⇑P	Pg	11 58 17.3	+0.2
KK01				⇓S	Sb	11 58 27.4	-1.7
KK02	Karatay Array	0.71	44	⇓P	Pg	11 58 17.7	+0.5
KK02				⇑S	Sb	11 58 27.6	-1.5
KK31	Karatay Array	0.71	44	⇑P	Pg	11 58 17.1	0.0
	0.6nm,0.2s						
KK31				S	Sg	11 58 26.3	-0.2
	3.6nm,0.2s,baz=213,slow=27,SNR=30						
KKAR	Karatay Array	0.71	44	⇑iP	Pg	11 58 17.1	-0.1
	baz=48						
KKAR				⇑iS	Sg	11 58 26.4	-0.1
	baz=48						
KK06	Karatay Array	0.71	46	⇑P	Pg	11 58 17.5	+0.3
KK06				⇑S	Sg	11 58 27.2	+0.7
KK04	Karatay Array	0.72	44	⇑P	Pb	11 58 18.0	-0.9
KK04				⇑S	Sb	11 58 27.6	-1.6
KK09	Karatay Array	0.72	43	⇓P	Pg	11 58 17.7	+0.4
KK09				⇓S	Sb	11 58 28.0	-1.4
KK05	Karatay Array	0.73	44	⇑P	Pg	11 58 17.6	+0.1
KK05				⇑S	Sg	11 58 27.8	+0.8
TRKS	Terek-Say	1.45	137	⇑iP	Pb	11 58 32.0	+0.7
	baz=40						
TRKS				⇑iS	Sn	11 58 52.3	+1.6
	baz=40						
ARK	Arkit	1.77	116	⇑iP	Pn	11 58 35.3	-0.2
	baz=18						
ARK				⇑iS	Sn	11 58 58.2	-0.6
	baz=18						
MNAS	Manas	1.98	92	⇓iP	Pn	11 58 37.8	-0.5
	baz=94						
MNAS				⇓iS	Sn	11 59 02.3	-1.6
	baz=94						
MRKS	Merke	2.51	85	Pg	Pn	11 58 47.2	+1.6
	2.9nm,0.3s						
MRKS				Lg	Lg	11 59 19.0	
	7.3nm,0.4s						
MRKS	Merke	2.51	85	ePg	Pn	11 58 47.2	+1.6
	2.9nm,0.3s						
MRKS				eLg	Lg	11 59 19.0	
	7.3nm,0.4s						
AML	Almayashu	2.90	98	⇓P	Pn	11 58 53.7	+2.5
	0.1nm,0.6s						
AML				⇑S	Sb	11 59 31.8	-0.7
	0.9nm,0.8s						
SGDS	Sogindy	3.62	75	Lg	Lg	11 59 53.9	
	1.2nm,0.3s						
TKM2	Tokmak 2	4.26	84	⇑P	Pn	11 59 13.1	+3.4
	3.9nm,1.6s						
KST	Kastek	4.54	82	ePg	Pb	11 59 23.2	-0.8
	1.3nm,0.4s						
KST				eLg	Lg	12 00 20.8	
	2.8nm,1.0s						

*INET **30** 12:11:44.4±4.3, 10°.95N×83°.62W, h0^{km}±4^{km}, MW3.6, Fault plane solution: NP1:ϕ$_{s}$252.53000°, δ28.90000°, λ29.03000°.*
*UPA **30** 12:11:46.2±0.5, 11°.09N×83°.71W, h30^{km}±5^{km}, MW4.0*
*UCR **30** 12:11:47.0±2.5, 10°.98N×83°.76W, h13^{km}±7^{km}, MW4.4*
ISC 30 12:11:45.0±1.1, **11°.03N**±0°.02×**83°.71W**±0°.03, **h14**^{km}±9^{km}, **n137**, σ0^{s}.**55**/197, **30C-27D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SARA	Sarapiqu	0.65	208	eP	Pg	12 11 58.0	+0.3
SARA				eS	Sg	12 12 06.3	+0.1
COVE	Coope Vega, Sa	0.75	246	⇓eP	Pg	12 11 59.1	-0.5
ITAL	Pital	0.80	224	⇓iP	Pb	12 12 00.6	-0.1
ITAL				eS	Sg	12 12 11.2	+0.3
RVLA	Villa Bonita	0.92	173	⇑iP	Pn	12 12 03.3	-0.2
RVLA				eS	Sn	12 12 17.0	+0.4
IRES	Siquirres	0.94	168	⇑iP	Pn	12 12 03.6	-0.3
IRES				eS	Sn	12 12 17.0	-0.2
LCOCO	El Coco	0.95	171	⇑eP	Pg	12 12 03.5	+0.1
LCOCO				eS	Sn	12 12 17.5	+0.2
POA5	Crater Von Fra	0.96	212	⇓eP	Pb	12 12 03.4	-0.3
POA5				eS	Sb	12 12 16.1	-0.4
CRPO	Crater poas	0.97	212	eP	Pb	12 12 03.4	-0.4
CRPO				eS	Sb	12 12 15.8	-0.8
VPTE	Poasito	0.97	210	⇓iP	Pb	12 12 03.6	-0.3
VPTE				eS	Sb	12 12 16.7	-0.1
VPS6	Volcano Poas	0.98	212	⇓eP	Pb	12 12 03.6	-0.4
VTLO	VTLO	0.98	181	⇑eP	Pg	12 12 04.0	0.0
VTLO				eS	Sg	12 12 17.2	+0.4
BATAN	Batan	0.98	160	eP	Pg	12 12 04.0	0.0
BATAN				eS	Sn	12 12 17.7	-0.3
BATAN	Batan	0.98	160	eP	Pb	12 12 03.7	-0.1
LCHIL	Los Chiles	0.99	271	⇑eP	Pn	12 12 04.6	+0.1
LCHIL				eS	Sg	12 12 17.5	+0.5
CPMI	Catarata Coope	0.99	222	⇓iP	Pb	12 12 04.0	-0.1
CPMI				eS	Sb	12 12 17.0	-0.1
VTCE	Turrialba Volc	1.00	183	⇑eP	Pb	12 12 04.1	-0.2
CVTR	Volcan Turrial	1.00	183	eP	Pg	12 12 04.6	+0.1
CVTR				eS	Sg	12 12 18.1	+0.5
CVTQ	Turrialba Volc	1.02	183	eP	Pg	12 12 04.7	0.0
CVTQ				eS	Sg	12 12 18.6	+0.5
CVTV	Tajo	1.02	182	eP	Pb	12 12 04.5	-0.1
CVTV				eS	Sn	12 12 18.7	-0.7
VTLA	Turrialba Volc	1.02	184	⇑eP	Pg	12 12 04.9	+0.1
VTCV	VTCV, Calle Va	1.04	181	⇑eP	Pb	12 12 04.9	0.0
VICA	Volcano Irazu	1.04	187	⇓eP	Pg	12 12 05.3	0.0
VICA				eS	Sg	12 12 19.1	+0.1
RVSTA	Santa Teresita	1.04	177	⇑iP	Pn	12 12 05.1	-0.3
RVSTA				eS	Sn	12 12 19.7	-0.1
HAYA	Volcan Irazu	1.05	187	eP	Pb	12 12 05.1	-0.2
HAYA				eS	Sb	12 12 18.9	0.0
ICR3	Volcano Irazu	1.05	187	eP	Pn	12 12 05.7	-0.1
VIRE	VIRE	1.07	190	eP	Pb	12 12 05.3	-0.3
TUNA	La Fortuna	1.07	239	eP	Pb	12 12 05.4	0.0
VERB	Verbena	1.07	179	⇑iP	Pb	12 12 05.5	0.0
CORON	Coronado	1.08	195	eP	Pg	12 12 06.1	+0.1
HDC3	Heredia 3	1.09	201	eP	Pb	12 12 05.7	-0.1
HDC3	Heredia 3	1.09	201	⇓eP	Pn	12 12 06.0	-0.1
HDC	Heredia	1.09	201	eP	Pn	12 12 06.0	0.0
HDC				iS	Sn	12 12 21.2	+0.1
HDC	Heredia	1.09	201	⇓iP	Pb	12 12 05.8	0.0
HDC				eS	Sg	12 12 20.5	+0.1
FORC	Fortuna	1.10	240	eP	Pb	12 12 05.7	-0.1
FORC				eS	Sg	12 12 20.6	+0.1
SOCE	Pocosol	1.10	235	⇓eP	Pb	12 12 05.4	-0.4
VACR	Volcan Arenal	1.10	240	⇓iP	Pb	12 12 05.8	-0.1
PCAYA	Pacayas	1.11	185	eP	Pn	12 12 06.3	0.0
PCAYA				eS	Sn	12 12 21.5	-0.1
TURIB	Turrialba	1.11	179	eP	Pn	12 12 06.1	-0.2
CEDE	Laguna Cedeo	1.11	241	⇓eP	Pb	12 12 06.0	-0.2
CEDE				eS	Sb	12 12 20.9	+0.4
SARCI	Sarchi	1.12	214	eP	Pg	12 12 06.6	-0.1
VINA	Juan Vinas	1.12	182	⇑iP	Pb	12 12 06.2	-0.1
SJS	Escuela Geolog	1.13	197	eP	Pn	12 12 06.5	-0.1
SJS3	Mercedes San J	1.13	197	eP	Pb	12 12 06.4	-0.1
TCS1	Tacares	1.14	211	eP	Pg	12 12 07.3	+0.3
BELE	Belen	1.14	204	eP	Pn	12 12 06.5	-0.3
TRIO	Tres Rios	1.15	194	eP	Pb	12 12 06.7	-0.1
LUJA	Lujan	1.15	198	eP	Pg	12 12 07.4	+0.2
OCM	Ochomogo	1.15	192	eP	Pn	12 12 06.7	-0.2
VERA	Finca Concepci	1.15	262	⇑eP	Pn	12 12 06.5	-0.3
TABAC	Tabacon	1.16	243	eP	Pn	12 12 06.9	-0.1
CASO	Castillo	1.17	240	⇓eP	Pn	12 12 06.7	-0.4
CASO				eS	Sb	12 12 22.3	+0.2
SGBR	La Fortuna	1.17	242	eP	Pb	12 12 07.0	-0.1
AMPA	Desamparados	1.18	197	eP	Pg	12 12 07.8	0.0
AMPA				eS	Sg	12 12 23.1	+0.1
SANTA	Santa Ana	1.18	203	eP	Pn	12 12 06.9	-0.4
RAMO	San Ramon	1.19	219	⇑iP	Pg	12 12 08.1	0.0
SRA1	San Ramn	1.20	219	eP	Pn	12 12 07.2	-0.4
MRVA	Moravia de Chi	1.22	168	eP	Pn	12 12 07.5	-0.4
RIMA	Rio Macho	1.26	187	⇑eP	Pn	12 12 08.5	0.0
RIMA				eS	Sn	12 12 25.4	+0.1
RIMA	Rio Macho	1.26	187	⇑iP	Pn	12 12 08.4	0.0
PTEN	Parque Tenorio	1.29	256	eP	Pn	12 12 08.7	-0.1
PTEN				eS	Sn	12 12 26.1	+0.2
ESPN	Las Esperanzas	1.30	334	⇑eP	Pb	12 12 09.0	-0.3
ESPN				eS	Sb	12 12 25.1	-0.7
ESPN	Las Esperanzas	1.30	334	⇑iP	Pb	12 12 08.9	-0.3
ACOS	Acosta	1.30	200	eP	Pn	12 12 09.0	0.0
MTEVE	Monteverde	1.30	238	eP	Pn	12 12 08.5	-0.5
LCR2	La Lucha 2	1.31	193	⇓eP	Pn	12 12 09.1	0.0
LCR2	La Lucha 2	1.31	193	⇓eP	Pn	12 12 09.1	0.0
CANAL	Canalete	1.33	262	⇓eP	Pn	12 12 09.4	+0.1
CANAL				eS	Sb	12 12 27.0	+0.1
ABE2	San Pablo	1.36	195	eP	Pb	12 12 10.1	-0.3
ABE2				eS	Sn	12 12 27.4	-0.3
ACAL	Aguas Claras	1.36	254	⇓eP	Pn	12 12 09.6	-0.1
ACAL				eS	Sn	12 12 27.4	-0.2
MOTZ	Rio Naranjo	1.38	256	eP	Pb	12 12 10.3	-0.4
MOTZ				eS	Sb	12 12 28.8	+0.5
VMAR	Armenia, Volca	1.40	261	⇑eP	Pn	12 12 10.4	+0.2
VMAR				eP	Pb	12 12 10.6	-0.4
VMAR				eS	Sb	12 12 28.8	+0.2
JTS	Las Juntas de	1.42	239	⇓iP	Pn	12 12 10.4	-0.2
JTS				iS	Sn	12 12 28.4	-0.7
JTS	Las Juntas de	1.42	239	⇓eP	Pn	12 12 10.4	-0.2
JTS	Las Juntas de	1.42	239	⇓iP	Pn	12 12 10.4	-0.2
JUNT	Juntas	1.43	239	⇓iP	Pn	12 12 10.2	-0.4
CLARA	Aguas Claras	1.46	261	eP	Pb	12 12 11.7	-0.4
CLARA				eS	Sb	12 12 31.2	+0.7
BUS1	Rivas	1.46	181	⇑iP	Pb	12 12 11.8	-0.6
CDM	Cerro de Muert	1.46	182	⇑eP	Pn	12 12 11.6	+0.2
CDM	Cerro de Muert	1.46	182	⇑iP	Pn	12 12 11.6	+0.2
CDM				eS	Sb	12 12 30.9	0.0
CUI	Cuipilapa	1.48	256	eP	Pb	12 12 11.8	-0.5
HORNC	Hornillas	1.48	258	eP	Pn	12 12 11.6	+0.3
MESS	Mesas	1.49	259	⇓eP	Pb	12 12 11.9	-0.6
MESS				eS	Sb	12 12 31.2	-0.1
COLC	Colonia	1.51	256	eP	Pn	12 12 12.2	+0.4
COLC				eS	Sb	12 12 32.1	+0.1
GUAB	Guayabo de Bag	1.53	258	eP	Pb	12 12 12.6	-0.6
LLNJ	Naranjito	1.59	194	eP	Pg	12 12 15.2	-0.4
BUAI	Buenos Aires	1.60	265	eP	Pn	12 12 13.0	0.0
BUAI				eS	Sb	12 12 34.5	-0.1
BAGA	Bagaces	1.60	252	eP	Pb	12 12 13.8	-0.7
VORI	VORI	1.62	263	eP	Pb	12 12 14.5	-0.4
GP14	Hacienda Santa	1.63	261	eP	Pb	12 12 14.4	-0.6
GP14				eS	Sb	12 12 35.2	-0.2
GPS1	Guardaparques	1.63	261	eP	Pb	12 12 14.4	-0.6
PEZE	Perez Zeledon,	1.63	179	⇑eP	Pb	12 12 14.1	-0.9
PEZE				eS	Sn	12 12 34.6	+0.2
PEZE	Perez Zeledon,	1.63	179	⇑iP	Pb	12 12 14.1	-0.9
GPS2	Hotel Rincn d	1.64	261	eP	Pb	12 12 14.3	-0.7
GPS2				eS	Sb	12 12 35.3	-0.3
ZELE	Perez Zeledon	1.64	180	⇑iP	Pb	12 12 14.6	-0.6
ZELE				eS	Sb	12 12 35.9	+0.1
VRLE	La Escondida,	1.64	262	eP	Pn	12 12 14.2	+0.6
JACO	JACO, Garabito	1.65	215	⇓eP	Pn	12 12 14.3	+0.7
JACO				eS	Sb	12 12 35.8	0.0
JACO	JACO, Garabito	1.65	215	⇓eP	Pn	12 12 14.1	+0.5
JACO				eS	Sb	12 12 36.0	+0.2
LAFE	Finca La Fe, P	1.69	224	⇓eP	Pb	12 12 15.2	-0.8
LAFE				eS	Sb	12 12 36.5	-0.6
LAFE	Finca La Fe, P	1.69	224	eP	Pb	12 12 15.3	-0.7
LAPC	Finca la Perla	1.71	262	eP	Pb	12 12 15.7	-0.7
ACON	Acoyapa	1.71	303	⇑eP	Pn	12 12 14.6	0.0
ACON				eS	Sn	12 12 36.5	+0.2
ACON	Acoyapa	1.71	303	eP	Pb	12 12 15.4	-1.0
GBS3	Finca Las Img	1.73	262	eP	Pb	12 12 16.0	-0.6
EDDO	Dominical	1.77	185	eP	Pb	12 12 16.9	-0.3
POPE	POPE, Guanacas	1.80	238	eP	Pn	12 12 16.2	+0.5
SRBA	San Rafael, Bu	1.81	169	⇑iP	Pn	12 12 16.6	+0.6
NYURE	Nandayure	1.83	236	eP	Pn	12 12 17.2	+1.0
ORTG	Ortega, Santa	1.84	249	eP	Pb	12 12 17.4	-1.1
ORTG				eS	Sn	12 12 40.4	+0.8
ORTG	Ortega, Santa	1.84	249	eP	Pn	12 12 16.7	+0.4
BURE	Buenos Aires	1.88	169	eP	Pb	12 12 18.2	-0.9
BURE				eS	Sb	12 12 42.7	+0.2
HZTE	Horizontes, Gu	1.88	261	⇑eP	Pn	12 12 17.9	+1.1
HZTE				eS	Sb	12 12 42.5	0.0
HZTE	Horizontes, Gu	1.88	261	eP	Pn	12 12 17.9	+1.1
LCRUZ	La Cruz	1.89	272	eP	Pb	12 12 19.6	+0.3
EDBA	Buenos Aires	1.90	167	⇓iP	Pb	12 12 18.2	-1.3
NICO	Nicoya	1.93	243	eP	Pn	12 12 18.6	+1.2
CONN	Concepcion	1.96	286	eP	Pn	12 12 18.8	+0.9
CONN				eS	Sb	12 12 45.2	+0.4
CBL1	Cabuya	1.97	224	eP	Pn	12 12 19.2	+1.1
EDP2	Potrero Grande	2.06	165	eP	Pb	12 12 21.2	-1.2
EDPN	Palmar Norte	2.06	173	eP	Pb	12 12 21.5	-0.9
HATIL	Hatillo	2.09	250	eP	Pb	12 12 21.8	-0.9
NARJA	Naranjal	2.09	240	⇓iP	Pb	12 12 21.4	-1.3
INDI	Punta indio, G	2.11	237	eP	Pb	12 12 21.5	-1.5
EDSV	San Vito	2.31	162	eP	Pb	12 12 26.1	-0.4
BOAB	BOACO BROADBAN	2.38	307	⇑eP	Pn	12 12 23.7	0.0
BOAB				eS	Sn	12 12 53.6	+0.9
EDAD	Golfito	2.42	167	eP	Pn	12 12 25.3	+1.0
BRU2	Volcan	2.43	156	eP	Pn	12 12 25.5	+0.9
BRU2				eS	Sn	12 12 55.8	+1.5
BC3P	Paso Ancho	2.45	154	eP	Pn	12 12 25.3	+0.5
LNBQ3	Los Naranjos,	2.55	151	eP	Pn	12 12 26.3	+0.2
CDITO	Canoas	2.57	161	⇑eP	Pn	12 12 28.1	+1.9
CDITO				eS	Sn	12 12 57.0	-0.4
CDITO	Canoas	2.57	161	eP	Pn	12 12 28.2	+1.9
CHGR2	Aguacate	2.58	143	eP	Pn	12 12 26.8	+0.3
CHGR2				eS	Sn	12 12 57.1	-0.6
PTAR3	Potrerillos Ar	2.61	153	eP	Pn	12 12 27.4	+0.5
WILN	Americas 2	2.68	295	eP	Pb	12 12 30.9	-1.9
WILN				eS	Sb	12 13 06.5	+0.9
HUEN		2.74	299	eP	Pn	12 12 28.8	+0.2
HUEN				eS	Sb	12 13 08.6	+1.2
MATN	Matagalpa	2.88	311	⇑eP	Pn	12 12 31.0	+0.4
MATN				eS	Sb	12 13 10.5	-0.9
LOCO3	Loma Colorada,	2.89	154	eP	Pn	12 12 31.3	+0.6
PTPM	Petroterminale	2.92	164	eP	Pn	12 12 31.2	+0.1
PTPM				eS	Sn	12 13 06.0	-0.1

*DSN **30** 12:29:46.7±1.5, 26°.88N×55°.00E, h10^{km}, ML2.8/7, Error ellipse: s-maj=19.5km s-min=7.3km az=11.0*
*OMAN **30** 12:29:48.1±1.9, 26°.89N×55°.20E, h10^{km}, mb5.5/1, ml2.9/14, Error ellipse: s-maj=18.3km s-min=11.7km az=32.0*
ISC 30 12:29:47.6±3.0, **26°.9N**±0°.1×**55°.09E**±0°.09, **h11**^{km}±12^{km}, **n25**, σ1^{s}.**04**/37, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHME	Shamm	1.25	131	P	Pb	12 30 11.0	-0.1
SHME				S	Sn	12 30 29.3	+1.5
SHME	Shamm	1.25	131	P	Pg	12 30 11.9	+0.4
	SNR=43						
SHME				S	Sn	12 30 29.6	+1.8
	SNR=6.4						
UMQ	Umm Al-Quwin	1.44	159	P	Pn	12 30 13.1	-0.5
UMQ				S	Sb	12 30 33.2	+0.5
BANOM	Banah	1.44	131	P	Pn	12 30 13.7	0.0
BANOM				S	Sg	12 30 34.5	+0.7
BANOM	Banah	1.44	131	P	Pb	12 30 14.2	-0.2
	SNR=55						
BANOM				S	Sg	12 30 33.9	+0.1
MASF	Masafi	1.78	147	P	Pn	12 30 18.9	+0.6
MASF				S	Sb	12 30 42.3	-0.3
MSFE	Esma-Masafi	1.79	147	P	Pn	12 30 18.2	-0.3
MDH	Madha	1.91	145	P	Pn	12 30 20.3	+0.2
MDH	Madha	1.91	145	P	Pn	12 30 21.2	+1.1
MDH				S	Sb	12 30 46.5	+0.3
NAZ	Nazwa, Dubai	1.94	165	P	Pn	12 30 21.1	+0.5
NAZ				S	Sn	12 30 46.0	+1.0
UOSS	Minazif	2.16	152	P	Pn	12 30 24.0	+0.4
UOSS	Minazif	2.16	152	P	Pb	12 30 25.3	-1.5
UOSS				S	Sb	12 30 53.0	-0.7
FAQ	Al Faqa, Dubai	2.17	168	P	Pn	12 30 24.3	+0.7
HATD	Hatta, Dubai	2.24	155	P	Pn	12 30 25.7	+1.0
HATD	Hatta, Dubai	2.24	155	P	Pb	12 30 26.7	-1.4
ASUD	Al Ashush, Dub	2.25	174	P	Pn	12 30 24.1	-0.6
ASUD	Al Ashush, Dub	2.25	174	P	Pn	12 30 25.8	+1.0
ASUD				S	Sb	12 30 56.9	+0.9
AJN	Ajban	2.30	182	P	Pn	12 30 26.7	+1.2
AJN				S	Sn	12 30 54.7	+0.9
ASHO	Ashiyiah	2.35	158	P	Pn	12 30 24.7	-1.4
ASHO	Ashiyiah	2.35	158	P	Pn	12 30 24.8	-1.4
	SNR=6.9						
SOHO	SOHO	3.02	154	P	Pn	12 30 35.4	0.0
ARQ	Araqi	3.75	159	P	Pn	12 30 45.6	+0.1
SMDO	Samad	4.65	144	P	Pn	12 30 58.8	+0.9
SMDO				S	Sn	12 31 49.7	-2.3
WBK	Wadi Bani Khal	5.52	139	P	Pn	12 31 08.5	-1.2
MHTO	MHTO	6.42	155	P	Pn	12 31 20.2	-1.9

IDC 30 12:34:50.9±2.0, **5°.62S**×**148°.68E, h0**^{km}, **mb3.3**/2, **mbtmp3.4**/3, **ML3.5**/1, **Error ellipse: s-maj=144.4km s-min=29.5km az=124.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.93	223	P	P	12 39 25.0	+0.5
	0.2nm,0.3s,baz=48,slow=11,SNR=10.0						
	0.7nm,0.4s						
ASAR	Alice Springs	22.90	217	P	P	12 39 56.1	-0.4
	0.2nm,0.5s,baz=50,slow=9.6,SNR=5.2						
	0.2nm,0.5s						
ILAR	Eielson Array	84.48	23	P	P	12 47 25.4	0.0
	0.5nm,0.6s,baz=253,slow=4.8,SNR=6.8						
	0.5nm,0.6s						

MAN 30 12:52:50.8, 6°.54N×**124°.35E, h32**^{km}**, mb3.8, ML2.5, MS2.0, Mindanao**

*IDC **30** 12:54:54.5±1.4, 57°.91S×65°.11W, h0^{km}, mb4.2/2, mbtmp4.2/4, ML4.0/2, MS3.5/1, Error ellipse: s-maj=98.1km s-min=24.0km az=81.0*
*NEIC **30** 12:55:01.4±1.4, 57°.5S±0°.1×65°.51W±0°.08, h10^{km}±2^{km}, mb4.7/13, Error ellipse: s-maj=19.6km s-min=3.3km az=200.0*
ISC 30 12:54:56.4±1.0, **57°.9S**±0°.1×**65°.7W**±0°.1, **h10**^{km}, **n27**, σ1^{s}.**04**/28, **mb4.7**/7, **Drake Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MG01	Puerto William	3.17	339		Pn	12 55 46.5	+0.3
USHA	Ushuaia	3.44	332	Pn	Pn	12 55 50.8	+0.9
	12nm,0.3s,baz=147,slow=0.8,SNR=65						
USHA				Sn	Sn	12 56 30.2	-0.5
	22nm,0.3s,baz=220,slow=18,SNR=11						
	29nm,0.3s						
MG03	Isla Dawson	4.88	324		Pn	12 56 11.0	+1.4
MG02	Cerro Sombrero	5.52	337	Pn	Pn	12 56 20.1	+1.7
GO10	Punta Arenas	5.65	325	Pn	Pn	12 56 22.5	+2.1
MG04	Isla Riesco	6.07	324	Pn	Pn	12 56 26.8	+0.8
MG05	Puerto Natales	7.38	325	Pn	Pn	12 56 42.5	-1.5
EFI	East Falkland	7.63	38	Pn	Pn	12 56 47.0	-0.4
EFI					Sn	12 58 06.2	-7.5
GO08	Villa O'Higgin	10.31	334	Pn	Pn	12 57 24.0	-0.1
LL02	Futaleuf	15.23	343	P	P	12 58 35.5	-0.7
HOPE	Hope Point	16.61	90	Pn	P	12 58 52.8	+1.3
HOPE				IAmb	IAmb	12 59 18.7	
	comp=Z,119nm,1.5s						
PLCA	Paso Flores	17.47	348	P	P	12 59 02.2	+1.1
	comp=Z,0.1nm,0.3s,baz=181,slow=10,SNR=6.8						
PLCA				LR	LR	13 06 30.8	
	comp=Z,150nm,19.6s,baz=171,slow=40						
	comp=Z,4.2nm,1.0s						
PLCA	Paso Flores	17.47	348	Pn	Pn	12 58 59.5	-0.5
TRQA	Tornquist	20.00	9	P	P	12 59 29.5	+0.6
ML02	Panimavida	22.48	348	P	P	12 59 56.1	+0.5
GO05	Huala	23.28	347	P	P	13 00 04.6	+0.6
BO02	Sierra Bellavi	23.37	349	P	P	13 00 05.2	+0.3
BO02				IAmb	IAmb	13 00 06.5	
	comp=Z,64nm,1.5s						
BO01	Tunca	23.79	349	P	P	13 00 07.3	-1.8
BO01				IAmb	IAmb	13 00 10.2	
	comp=Z,21nm,0.9s						
MT13	San Alfonso	24.36	351	P	P	13 00 15.3	+0.8
MT13				IAmb	IAmb	13 00 16.9	
	comp=Z,19nm,0.8s						
MT09	Talagante	24.39	349	P	P	13 00 14.3	-0.5
MT09				IAmb	IAmb	13 00 16.5	
	comp=Z,17nm,0.8s						
MT02	Curacav	24.92	349	P	P	13 00 20.3	+0.9
MT02				IAmb	IAmb	13 00 41.1	
	comp=Z,21nm,1.2s						
VA03	San Esteban	25.36	350	P	P	13 00 24.9	+1.5
QSPA	South Pole Qui	32.34	180	P	P	13 01 25.3	-0.1
	comp=Z,2.8nm,0.9s,baz=166,slow=7.3,SNR=7.2						
	comp=Z,2.8nm,0.9s						
LPAZ	La Paz	41.58	356	P	P	13 02 44.6	-0.3
	comp=Z,3.0nm,0.8s,baz=180,slow=3.0,SNR=8.3						
	comp=Z,3.0nm,0.8s						
LPAZ	La Paz	41.58	356	P	P	13 02 43.7	-1.2
YKA	Yellowknife Ar	125.87	334	PKP	PKPdf	13 13 55.9	-0.8
	comp=Z,0.2nm,0.9s,baz=145,slow=2.7,SNR=5.5						
ILAR	Eielson Array	136.80	322	PKP	PKPdf	13 14 17.5	+0.1
	comp=Z,0.7nm,0.9s,baz=199,slow=2.6,SNR=4.9						

IDC 30 13:05:04.9±2.1, **3°.83S**×**135°.99E, h0**^{km}, **mb3.5**/1, **mbtmp4.0**/4, **ML3.8**/3, **Error ellipse: s-maj=75.5km s-min=29.0km az=71.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.10	186	Pn	Pn	13 08 50.9	-1.9
	0.5nm,0.3s,baz=7.3,slow=13,SNR=25						
WRA				Sn	Sn	13 11 44.2	-8.0
	0.1nm,0.3s,baz=7.1,slow=23,SNR=1.6						
	2.2nm,0.5s						
CTA	Charters Tower	19.01	149	P	P	13 09 28.4	-0.1
	0.1nm,0.3s,baz=315,slow=7.1,SNR=1.6						
	8.5nm,1.2s						
ASAR	Alice Springs	19.83	186	P	Pn	13 09 38.3	-0.6
	0.5nm,0.3s,baz=9.2,slow=12,SNR=34						
ASAR				S	S	13 13 16.7	-5.0
	0.4nm,0.6s,baz=5.9,slow=28,SNR=2.8						
	4.4nm,0.8s						

MKAR	**Makanchi Array**	**69.04**	**324**	P	P	13 16 12.5	0.0
	0.4nm,0.7s,baz=116,slow=7.7,SNR=3.5						
	0.4nm,0.7s						

IDC 30 13:08:37.1±582.0**,56°.79N**×**30°.63E,h0^{km},Error ellipse: s-maj=213.0km s-min=81.2km az=87.0,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**3.63**	**88**	I	I	13 32 20.0	
	0.3nm,0.5s,baz=275,slow=312,SNR=1.6						
I37NO	**I37NO**	**13.44**	**341**	I	I	14 36 00.0	
	baz=152,slow=338,SNR=0.9						
I31KZ	**AKTYUBINSK INF**	**17.40**	**100**	I	I	14 49 50.0	
	baz=302,slow=326,SNR=1.7						

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*KRNET **30** 13:12:14.1±0.1, 43°.76N×69°.65E, mb2.8*
*SOME **30** 13:12:14.7, 43°.73N×69°.72E*
*NNC **30** 13:12:16.1±0.9, 43°.72N×69°.76E, h0^{km}, mb3.6, mpv3.1, Error ellipse: s-maj=7.8km s-min=5.0km az=56.0, Suspected Mining explosion.*
ISC 30 13:12:14.2±2.5**,43°.81N**±0°.07×**69°.8E**±0°.1**,h0^{km},n19, σ0^{s}76**/34**,17C-10D,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK09	**Karatay Array**	**0.86**	**143**	⇑P	**Pb**	**13 12 31.6**	**-0.4**
KK09				⇓S	**Sb**	**13 12 43.7**	**-0.4**
KK08	**Karatay Array**	**0.87**	**145**	⇓P	**Pb**	**13 12 31.7**	**-0.5**
KK08				⇓S	**Sb**	**13 12 44.3**	**0.0**
KK04	**Karatay Array**	**0.87**	**144**	⇑P	**Pb**	**13 12 31.6**	**-0.7**
KK04				⇓S	**Sg**	**13 12 43.3**	**+1.1**
KK05	**Karatay Array**	**0.87**	**143**	⇑P	**Pb**	**13 12 31.7**	**-0.5**
KK05				⇓S	**Sg**	**13 12 43.3**	**+1.1**
KK01	**Karatay Array**	**0.87**	**144**	⇑P	**Pb**	**13 12 31.6**	**-0.7**
KK01				⇑S	**Sg**	**13 12 43.2**	**+0.9**
KK03	**Karatay Array**	**0.87**	**144**	⇑P	**Pg**	**13 12 31.4**	**+0.4**
KK03				⇑S	**Sg**	**13 12 43.0**	**+0.8**
KK02	**Karatay Array**	**0.88**	**144**	⇓P	**Pg**	**13 12 31.4**	**+0.4**
KK02				⇓S	**Sg**	**13 12 43.5**	**+1.1**
KK31	**Karatay Array**	**0.88**	**144**	⇑P	**Pb**	**13 12 31.7**	**-0.6**
	1.7nm,0.4s						
KK31				S	**Sg**	**13 12 42.9**	**+0.4**
	21nm,0.6s,baz=296,slow=29,SNR=62						
KKAR	**Karatay Array**	**0.88**	**144**	⇑*i*P	**Pb**	**13 12 31.6**	**-0.7**
	baz=36						
KKAR				⇑*i*S	**Sb**	**13 12 44.4**	**-0.2**
	baz=36						
KK07	**Karatay Array**	**0.89**	**145**	⇓P	**Pb**	**13 12 31.9**	**-0.6**
KK07				⇑S	**Sb**	**13 12 44.3**	**-0.6**
KK06	**Karatay Array**	**0.89**	**143**	⇑P	**Pg**	**13 12 31.7**	**+0.5**
KK06				⇑S	**Sb**	**13 12 44.3**	**-0.7**
IUG	**Iuzhnay**	**1.67**	**174**	P	**Pb**	**13 12 45.7**	**-0.3**
	25nm,0.5s						
IUG				S	**Sg**	**13 13 08.3**	**+0.3**
	57nm,0.5s						
MNAS	**Manas**	**2.38**	**123**	⇑*i*P	**Pb**	**13 12 57.5**	**-0.6**
	baz=20						
MNAS				⇑*i*S	**Sb**	**13 13 29.1**	**+1.1**
	baz=20						
TRKS	**Terek-Say**	**2.49**	**156**	⇓*e*P	**Pb**	**13 12 59.0**	**-0.8**
	baz=53						
TRKS				⇓*i*S	**Sb**	**13 13 31.7**	**+0.6**
	baz=53						
ARK	**Arkit**	**2.57**	**141**	⇑*i*P	**Pb**	**13 12 59.5**	**-1.7**
	baz=38						
ARK				⇑*i*S	**Sb**	**13 13 32.8**	**-0.5**
	baz=38						
MRKS	**Merke**	**2.72**	**112**	Pg	**Pg**	**13 13 06.5**	**+0.2**
	2.9nm,0.5s						
MRKS				Lg	Lg	13 13 43.6	
	12nm,0.6s						
BTLS	**Baital**	**3.28**	**67**	Pg	**Pg**	**13 13 18.2**	**+1.1**
	12nm,0.5s						
BTLS				Lg	Lg	13 14 04.1	
SGDS	**Sogindy**	**3.52**	**94**	Pg	**Pg**	**13 13 21.1**	**-0.6**
	3.4nm,0.4s						
SGDS				Lg	Lg	13 14 08.6	
	4.8nm,0.8s						
KST	**Kastek**	**4.55**	**98**	Pg	**Pg**	**13 13 40.8**	**-0.7**
	3.0nm,0.5s						
KST				Lg	Lg	13 14 42.6	
	9.3nm,0.6s						

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*IDC **30** 13:13:06.7±0.3, 55°.67S×26°.93W, h0^{km}, mb5.1/27, mbtmp5.1/28, ML4.6/1, MS4.7/39, Error ellipse: s-maj=14.3km s-min=9.8km az=46.0*
*BJI **30** 13:13:07.1±0.0, 55°.80S×27°.20W, h10^{km}, mB5.5/12, Ms5.3/24, Ms7 5.0/24*
*MOS **30** 13:13:07.5±1.0, 55°.70S×27°.10W, h13^{km}, mb5.6/12, Error ellipse: s-maj=17.9km s-min=10.4km az=109.7*
*NEIC **30** 13:13:08.6±2.0, 55°.7S±0°.1×27°.1W±0°.2, h10^{km}±1^{km}, mb5.4/89, Error ellipse: s-maj=18.2km s-min=14.5km az=204.0*
*GCMT **30** 13:13:13.6±0.2, 55°.78S±0°.01×26°.94W±0°.02, h12^{km}, MW5.3/116, Moment Tensor Solution. s54,c69; s116,c162; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.11±.01; $M_{\theta\theta}$0.20±.01; $M_{\phi\phi}$-0.30±.01; $M_{r\theta}$-0.50±.04; $M_{\theta\phi}$0.25±.01; $M_{\phi r}$1.10±.03; Best double couple: $M_0$1.23700×10^{17} NP1:ϕ_s335.00000°,δ84.00000°, λ89.00000°. NP2:ϕ_s168.00000°,δ6.00000°,λ103.00000°. Principal axes: T 1.0870, Plg51.0000°, Azm243.0000°; N 0.3010, Plg1.0000°, Azm335.0000°; P -1.3880, Plg39.0000°, Azm66.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 30 13:13:10.2±0.2**,55°.72S**±0°.05×**27°.06W**±0°.05**,h25^{km},n566, σ1^{s}20**/603**,mb5.4**/71**,MS4.9**/57**,13C-6D,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.61**	**281**		**Pn**	**13 14 32.1**	**+0.2**
HOPE	**Hope Point**	**5.61**	**281**	P	**Pn**	**13 14 32.1**	**+0.2**
VNA1	**Neumayer--Stat**	**17.08**	**159**	P	**P**	**13 17 09.4**	**+1.0**
VNA1	**Neumayer--Stat**	**17.08**	**159**	ScP	**ScP**	**13 25 24.9**	**+1.6**
VNA3	**Neumayer Olymp**	**17.28**	**161**	P	**P**	**13 17 12.0**	**+1.3**
VNA3	**Neumayer Olymp**	**17.28**	**161**	ScP	**ScP**	**13 25 24.6**	**+0.8**
VNA2	**Neumayer--Watz**	**17.47**	**158**	P	**P**	**13 17 14.2**	**+1.4**
	baz=317,slow=13						
VNA2				S	S	13 20 50.1	+17
	baz=327,slow=22						
VNA2	**Neumayer--Watz**	**17.47**	**158**	ScP	**ScP**	**13 25 24.8**	**+0.6**
	baz=324,slow=5.0						
EFI	**East Falkland**	**18.71**	**270**		**P**	**13 17 25.9**	**-0.6**
EFI	**East Falkland**	**18.71**	**270**	*ce*P	**P**	**13 17 26.4**	**-0.1**
EFI				pmax	pmax		
	comp=Z,133nm,1.7s						
SNAA	**Sanae**	**19.02**	**157**	P	**P**	**13 17 30.6**	**+0.8**
SNAA				S	S	13 21 15.8	+12
SNAA	**Sanae**	**19.02**	**157**	ScP	**ScP**	**13 25 28.2**	**+0.7**
SNAA	**Sanae**	**19.02**	**157**	P	**P**	**13 17 30.2**	**+0.4**
	comp=Z,2.0nm,0.3s,baz=312,slow=8.4,SNR=49						
SNAA				S	**Sn**	**13 20 59.9**	**-2.6**
	comp=Z,2.7nm,0.5s,baz=255,slow=16,SNR=1.2						
SNAA				PcP	**PcP**	**13 21 54.6**	**+0.8**
	comp=Z,2.5nm,0.5s,baz=257,slow=11,SNR=1.2						
SNAA				LR	LR	13 23 56.9	
	comp=Z,1µm,20.1s,baz=316,slow=34						
SNAA				ScP	**ScP**	**13 25 27.6**	**0.0**
	comp=Z,40nm,1.0s,baz=321,slow=1.9,SNR=24						
	comp=Z,45nm,0.8s						
SNAA	**Sanae**	**19.02**	**157**	P	**P**	**13 17 29.5**	**-0.4**
SNAA	**Sanae**	**19.02**	**157**	*ce*P	**P**	**13 17 30.6**	**+0.8**
SNAA				pmax	pmax		
	comp=Z,108nm,1.7s						
PMSA	**Palmer Station**	**20.17**	**228**	P	Pn	13 17 44.8	+0.5
	comp=Z,110nm,0.8s,baz=65,slow=6.5,SNR=12						
PMSA				LR	LR	13 24 19.9	
	comp=Z,4µm,20.7s,baz=15,slow=33						
PMSA				ScP	**ScP**	**13 25 29.6**	**-0.6**
	comp=Z,26nm,0.8s,baz=138,slow=9.3,SNR=1.9						
	comp=Z,110nm,0.8s						
PMSA	**Palmer Station**	**20.17**	**228**	P	**P**	**13 17 41.6**	**-0.7**
PMSA				IAmb	IAmb	13 17 49.3	
	comp=Z,127nm,0.8s						
TROLL	**Troll, Antarti**	**20.51**	**154**	P	**P**	**13 17 46.8**	**+0.7**
TROLL	**Troll, Antarti**	**20.51**	**154**	ScP	**ScP**	**13 25 31.0**	**-0.1**
BELA	**Belgrano 2**	**22.41**	**184**	P	**P**	**13 18 05.5**	**-0.9**
NVL	**N'lazarevskaya**	**22.50**	**147**	*e*P	**P**	**13 18 07.2**	**-0.2**
NVL				*e*S	**S**	**13 22 11.1**	**-1.4**
NVL				pmax	pmax		
	comp=Z,62nm,1.4s						
NVL				smax	smax		
	comp=E,1µm,10.1s						
USHA	**Ushuaia**	**23.34**	**255**	P	**P**	**13 18 15.3**	**-0.8**
	comp=E,28nm,0.5s,baz=123,slow=0.8,SNR=11						
USHA				LR	LR	13 25 31.2	
	comp=E,5µm,19.7s,baz=96,slow=32						
	comp=E,28nm,0.5s						
MG02	**Cerro Sombrero**	**24.53**	**259**	P	**P**	**13 18 26.0**	**-1.4**
MG03	**Isla Dawson**	**24.80**	**256**	P	**P**	**13 18 28.7**	**-1.1**
GO10	**Punta Arenas**	**25.39**	**257**	P	**P**	**13 18 35.9**	**+0.7**
ELIB	**Princess Elisa**	**26.38**	**147**	*d*P	**P**	**13 18 45.0**	**+0.9**
	comp=Z,48nm,0.9s						
MG05	**Puerto Natales**	**26.82**	**259**	P	**P**	**13 18 47.1**	**-1.0**
GO09	**Cerro Castillo**	**26.92**	**260**	P	**P**	**13 18 48.2**	**-0.8**
GO08	**Villa O'Higgin**	**28.43**	**265**	P	**P**	**13 19 00.5**	**-2.1**
GO08				IAmb	IAmb	13 19 07.7	
	comp=Z,41nm,0.8s						
TRQA	**Tornquist**	**29.26**	**292**	P	**P**	**13 19 09.4**	**-0.7**
TRQA				IAmb	IAmb	13 19 21.2	
	comp=Z,56nm,1.0s						
TRQA	**Tornquist**	**29.26**	**292**	P	**P**	**13 19 09.4**	**-0.7**
TRQA				pmax	pmax		
	comp=Z,57nm,1.0s						
TRQA	**Tornquist**	**29.26**	**292**	*e*P	**P**	**13 19 09.5**	**-0.5**
PLTB	**Pedras Altas**	**30.33**	**311**	P	**P**	**13 19 19.8**	**+0.2**
PLTB	**Pedras Altas**	**30.33**	**311**	*e*P	**P**	**13 19 21.1**	**+1.5**
AY01	**Puyuhuapi**	**30.81**	**272**	P	**P**	**13 19 23.2**	**-0.4**
CNLB	**Canela**	**31.37**	**317**	*e*P	**P**	**13 19 30.8**	**+2.0**
CPSB	**Cacapava Do Su**	**31.44**	**313**	*e*P	**P**	**13 19 31.4**	**+2.1**
PLCA	**Paso Flores**	**32.01**	**279**	P	**P**	**13 19 33.6**	**-0.8**
	comp=Z,3.7nm,0.8s,baz=137,slow=11,SNR=5.0						
PLCA				PcP	**PcP**	**13 22 24.6**	**+0.9**
	comp=Z,3.1nm,0.8s,baz=212,slow=3.9,SNR=4.3						
PLCA				S	**S**	**13 24 39.7**	**-4.8**
	comp=Z,1.9nm,1.0s,baz=83,slow=10,SNR=1.9						
PLCA				ScP	**ScP**	**13 26 02.6**	**-2.5**
	comp=Z,11nm,0.8s,baz=122,slow=2.6,SNR=20						
PLCA				LR	LR	13 33 41.5	
	comp=Z,1µm,18.3s,baz=137,slow=38						
	comp=Z,3.7nm,0.8s						
PLCA	**Paso Flores**	**32.01**	**279**	P	**P**	**13 19 33.6**	**-0.8**
PLCA				PcP	**PcP**	**13 22 23.6**	**-0.1**
PLCA				ScP	**ScP**	**13 26 02.7**	**-2.5**
PLCA	**Paso Flores**	**32.01**	**279**	*e*P	**P**	**13 19 34.8**	**+0.4**
RODS	**Rosario do Sul**	**32.24**	**310**	*e*P	**P**	**13 19 37.9**	**+1.5**
ALGR	**Alto Alegre (B**	**32.69**	**315**	*e*P	**P**	**13 19 41.9**	**+1.6**
LL04	**Puerto Octay**	**32.93**	**277**	P	**P**	**13 19 41.9**	**-0.5**
ITQB	**Itaqui**	**33.44**	**309**	P	**P**	**13 19 45.8**	**-1.1**
ITQB				IAmb	IAmb	13 19 57.0	
	comp=Z,59nm,1.0s						
ITQB	**Itaqui**	**33.44**	**309**	*e*P	**P**	**13 19 48.4**	**+1.5**
ITAB	**Concordia**	**33.73**	**317**	P	**P**	**13 19 48.4**	**-0.9**
ITAB				IAmb	IAmb	13 19 52.3	
	comp=Z,70nm,1.2s						
ITAB	**Concordia**	**33.73**	**317**	*e*P	**P**	**13 19 51.4**	**+2.0**
CRSM	**Crissiumal (Br**	**34.25**	**314**	*e*P	**P**	**13 19 55.2**	**+1.3**
MECA	**Mercedes**	**34.46**	**307**	*e*P	**P**	**13 19 56.8**	**+1.1**
QSPA	**South Pole Qui**	**34.53**	**180**	P	**P**	**13 19 57.6**	**+1.4**
	comp=Z,46nm,0.6s,baz=216,slow=1.0,SNR=229						
QSPA				PcP	**PcP**	**13 22 31.0**	**+0.6**
	comp=Z,7.3nm,0.7s,baz=201,slow=1.8,SNR=1.1						
QSPA				S	**S**	**13 25 23.4**	**+0.2**
	comp=Z,5.6nm,1.0s,baz=226,slow=8.6,SNR=2.6						
QSPA				ScP	**ScP**	**13 26 11.9**	**-1.7**
	comp=Z,13nm,0.7s,baz=122,slow=1.5,SNR=8.0						
QSPA				LR	LR	13 33 41.2	
	comp=Z,3µm,19.5s,baz=190,slow=36						
	comp=Z,46nm,0.6s						
QSPA	**South Pole Qui**	**34.53**	**180**	P	**P**	**13 19 57.1**	**+0.9**
QSPA				IAmb	IAmb	13 20 00.6	
	comp=Z,74nm,0.8s						
AZCA	**Azaras, Argent**	**34.54**	**311**	*e*P	**P**	**13 19 57.4**	**+0.9**
PARB	**Paraibuna**	**35.13**	**329**	*e*P	**P**	**13 20 03.8**	**+2.2**
FRBT	**Francisco Belt**	**35.22**	**317**	*e*P	**P**	**13 20 03.8**	**+1.5**
SPB	**Sao Paulo**	**35.44**	**327**	*e*P	**P**	**13 20 06.5**	**+2.3**
DUB01	**Friburgo-RJ**	**35.48**	**335**	*e*P	**P**	**13 20 06.7**	**+2.1**
VAO	**Valinhos**	**35.85**	**328**	*e*P	**P**	**13 20 10.1**	**+2.3**
PTGB	**Pitanga**	**35.98**	**319**	*e*P	**P**	**13 20 10.1**	**+1.2**
BO02	**Sierra Bellavi**	**36.40**	**287**	P	**P**	**13 20 12.5**	**0.0**
BO02				PcP	**PcP**	**13 22 37.0**	**+0.7**
ALF01	**Guarapari-ES**	**36.52**	**338**	*e*P	**P**	**13 20 14.8**	**+1.3**
CPUP	**Villa Florida**	**36.65**	**311**	P	**P**	**13 20 14.9**	**+0.4**
	comp=Z,26nm,0.9s,baz=151,slow=7.6,SNR=35						
CPUP				PcP	**PcP**	**13 22 37.7**	**+0.7**
	comp=Z,5.5nm,0.9s,baz=179,slow=5.7,SNR=3.1						
CPUP				ScP	**ScP**	**13 26 21.4**	**-0.3**
	comp=Z,11nm,1.0s,baz=123,slow=4.0,SNR=7.1						
CPUP				LR	LR	13 37 40.5	
	comp=Z,654nm,18.1s,baz=156,slow=40						
	comp=Z,26nm,0.9s						
CPUP	**Villa Florida**	**36.65**	**311**	P	**P**	**13 20 13.9**	**-0.6**
CPUP	**Villa Florida**	**36.65**	**311**	*e*P	**P**	**13 20 15.2**	**+0.7**
GO05	**Huala**	**36.86**	**285**	P	**P**	**13 20 15.5**	**-0.8**
MCR1	**Marechal Candi**	**36.96**	**317**	*e*P	**P**	**13 20 18.2**	**+1.0**
MT09	**Talagante**	**37.28**	**287**	P	**P**	**13 20 19.4**	**-0.6**
MT01	**Popeta**	**37.35**	**287**	P	**P**	**13 20 19.7**	**-0.7**
CFA	**Coronel Fontan**	**37.50**	**293**	P	**P**	**13 20 21.2**	**-0.6**
	comp=Z,45nm,0.6s,baz=147,slow=8.1,SNR=24						
CFA				PcP	**PcP**	**13 22 39.9**	**+0.3**
	comp=Z,4.3nm,0.5s,baz=194,slow=3.2,SNR=2.2						
CFA				S	**S**	**13 26 03.4**	**-5.6**
	comp=Z,1.4nm,0.5s,baz=228,slow=18,SNR=1.6						
CFA				ScP	**ScP**	**13 26 22.3**	**-2.6**
	comp=Z,10nm,1.0s,baz=217,slow=5.1,SNR=6.4						
CFA				LR	LR	13 36 00.3	
	comp=Z,1µm,20.4s,baz=139,slow=37						
	comp=Z,45nm,0.6s						
MT02	**Curacav**	**37.75**	**288**	P	**P**	**13 20 22.4**	**-1.4**
MT02				IAmb	IAmb	13 20 28.8	
	comp=Z,38nm,0.8s						
VA03	**San Esteban**	**37.82**	**289**	P	**P**	**13 20 22.6**	**-1.9**
VA03				IAmb	IAmb	13 20 42.4	
	comp=Z,42nm,0.7s						
ROC1	**El Roble**	**37.90**	**288**	P	**P**	**13 20 25.4**	**0.0**
ROC1				IAmb	IAmb	13 20 46.6	
	comp=Z,37nm,0.7s						
TICA	**Tres Isletas**	**37.95**	**307**	*e*P	**P**	**13 20 27.6**	**+2.1**
BB19B	**Bebedouro**	**38.15**	**326**	*e*P	**P**	**13 20 28.7**	**+1.4**
ESFA	**Espinillo Form**	**38.35**	**310**	*e*P	**P**	**13 20 30.7**	**+1.8**
VA06	**Catapilco**	**38.37**	**288**	P	**P**	**13 20 27.9**	**-1.1**
VA06				IAmb	IAmb	13 20 43.8	
	comp=Z,99nm,1.1s						
SJMB	**Sao Joao De Ma**	**38.47**	**338**	*e*P	**P**	**13 20 31.1**	**+1.1**
PCMB	**Pacaembu**	**38.54**	**322**	*e*P	**P**	**13 20 32.2**	**+1.6**
AMBA	**Amambai (Brazi**	**38.72**	**316**	*e*P	**P**	**13 20 32.9**	**+0.9**
CO02	**Combarbal**	**39.27**	**290**	P	**P**	**13 20 37.1**	**+0.3**
CO03	**El Pedregal**	**39.39**	**291**	P	**P**	**13 20 38.3**	**+0.5**
CO03				PcP	**PcP**	**13 22 46.6**	**+1.0**
DIAM	**Diamantina, MG**	**39.43**	**335**	*e*P	**P**	**13 20 39.1**	**+0.9**
CO01	**Juntas del Tor**	**39.76**	**292**	P	**P**	**13 20 40.3**	**-0.7**
PMNB	**Patos De Minas**	**39.92**	**331**	*e*P	**P**	**13 20 43.7**	**+1.5**
GO04	**Tololo Observa**	**39.97**	**291**	P	**P**	**13 20 42.5**	**-0.3**
ITRB	**Iturama**	**40.01**	**325**	*e*P	**P**	**13 20 44.5**	**+1.6**
CO06	**Fray Jorge**	**40.02**	**290**	P	**P**	**13 20 42.0**	**-0.9**
CO06				IAmb	IAmb	13 21 14.8	
	comp=Z,118nm,1.8s						
GUA01	**Guaratinga, BA**	**40.26**	**341**	*e*P	**P**	**13 20 45.6**	**+0.7**
MAW	**Mawson**	**40.37**	**144**	P	**P**	**13 20 46.3**	**+1.0**
	comp=Z,39nm,0.8s,baz=238,slow=8.1,SNR=17						
MAW				ScP	**ScP**	**13 26 36.4**	**+1.1**
	comp=Z,16nm,1.0s,baz=271,slow=8.2,SNR=3.9						
MAW				LR	LR	13 36 45.0	
	comp=Z,734nm,19.9s,baz=260,slow=35						
	comp=Z,39nm,0.8s						
MAW	**Mawson**	**40.37**	**144**	P	**P**	**13 20 46.7**	**+1.4**
MAW	**Mawson**	**40.37**	**144**	P	**P**	**13 20 46.7**	**+1.4**
MAW				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SUR	**Sutherland**	**40.49**	**75**	LR	LR	13 33 31.8	
	comp=Z,2µm,20.8s,baz=203,slow=30						
SUR	**Sutherland**	**40.49**	**75**	P	**P**	**13 20 46.0**	**-0.9**
SUR				IAmb	IAmb	13 20 49.6	
	comp=Z,131nm,1.3s						
SUR				PcP	**PcP**	**13 22 51.5**	**+2.3**
LCO	**Las Campanas**	**40.84**	**292**	P	**P**	**13 20 49.2**	**-0.8**
LCO				IAmb	IAmb	13 21 00.6	
	comp=Z,64nm,1.2s						
LCO	**Las Campanas**	**40.84**	**292**	P	**P**	**13 20 49.2**	**-0.8**
LCO				pmax	pmax		
	comp=Z,64nm,1.2s						
MURT	**Porto Murtinho**	**40.90**	**314**	*e*P	**P**	**13 20 50.2**	**0.0**
IPMB	**Ipameri, GO**	**40.95**	**328**	*e*P	**P**	**13 20 52.0**	**+1.2**
AQDB	**Aquidauana**	**41.21**	**317**	P	**P**	**13 20 53.0**	**+0.3**
AQDB				IAmb	IAmb	13 20 54.1	
	comp=Z,72nm,1.3s						
AQDB	**Aquidauana**	**41.21**	**317**	*e*P	**P**	**13 20 52.9**	**+0.2**
AC04	**Llanos de Chal**	**41.68**	**293**	P	**P**	**13 20 57.1**	**+0.5**
AC04				IAmb	IAmb	13 21 02.2	
	comp=Z,87nm,0.8s						
C2SB	**Chapadao do Su**	**41.72**	**322**	*e*P	**P**	**13 20 58.8**	**+1.9**
GO03	**Copiap**	**41.74**	**294**	P	**P**	**13 20 56.0**	**-1.2**
GO03				IAmb	IAmb	13 21 01.9	
	comp=Z,53nm,0.8s						
AC06	**Mina Casimiro**	**41.99**	**294**	P	**P**	**13 20 59.4**	**+0.2**
AC06				IAmb	IAmb	13 21 05.7	
	comp=Z,112nm,1.4s						
RVDE	**Rio Verde (Bra**	**42.24**	**319**	*e*P	**P**	**13 21 01.8**	**+0.6**
JANB	**Januaria**	**42.70**	**335**	*e*P	**P**	**13 21 05.9**	**+0.9**
PANT	**Pantanal (Braz**	**42.91**	**317**	*e*P	**P**	**13 21 07.3**	**+0.7**
AC01	**Pan de Azucar**	**43.11**	**295**	P	**P**	**13 21 08.2**	**0.0**
AC01				IAmb	IAmb	13 21 19.3	
	comp=Z,61nm,1.1s						
BDFB	**Brasilia**	**43.11**	**330**	P	**P**	**13 21 09.2**	**+0.8**
	comp=Z,9.6nm,0.8s,baz=149,slow=4.4,SNR=8.6						
	comp=Z,9.6nm,0.8s						
BDFB	**Brasilia**	**43.11**	**330**	*e*P	**P**	**13 21 10.2**	**+1.8**
GO02	**Mina Guanaco**	**43.40**	**297**	P	**P**	**13 21 11.6**	**+0.6**
PP1B	**Ponte de Pedra**	**43.52**	**320**	*e*P	**P**	**13 21 12.6**	**+1.0**
ARAG	**Araguaiana, MT**	**44.22**	**325**	*e*P	**P**	**13 21 18.6**	**+1.4**
PB14	**IPOC Station P**	**44.26**	**296**	P	**P**	**13 21 15.9**	**-1.9**
PB14				IAmb	IAmb	13 21 35.4	
	comp=Z,42nm,1.1s						
LVC	**Limon Verde**	**45.20**	**300**	P	**P**	**13 21 27.0**	**+1.6**
	comp=Z,18nm,0.4s,baz=124,slow=3.6,SNR=21						
LVC				ScP	**ScP**	**13 26 54.5**	**-1.4**
	comp=Z,9.1nm,1.0s,baz=241,slow=7.3,SNR=4.5						
LVC				S	**S**	**13 28 04.3**	**+0.4**
	comp=Z,3.7nm,0.7s,baz=49,slow=7.0,SNR=2.2						
LVC				LR	LR	13 44 01.3	
	comp=Z,461nm,18.1s,baz=158,slow=41						
	comp=Z,18nm,0.4s						
LVC	**Limon Verde**	**45.20**	**300**	P	**P**	**13 21 25.4**	**0.0**
LVC				IAmb	IAmb	13 21 35.4	
	comp=Z,60nm,0.8s						
LVC	**Limon Verde**	**45.20**	**300**	P	**P**	**13 21 27.0**	**+1.6**
LVC	**Limon Verde**	**45.20**	**300**	*e*P	**P**	**13 21 27.1**	**+1.8**
SALV	**Santo Antonio**	**45.38**	**320**	*e*P	**P**	**13 21 27.4**	**+0.9**
SDBA	**SAO DESIDERIO**	**45.39**	**335**	*e*P	**P**	**13 21 27.6**	**+1.0**
BOSA	**Boshof**	**45.82**	**76**	P	**P**	**13 21 29.6**	**-0.5**
	comp=Z,59nm,1.1s,baz=216,slow=7.9,SNR=38						
BOSA				PcP	**PcP**	**13 23 08.4**	**+1.3**
	comp=Z,24nm,0.8s,baz=218,slow=4.2,SNR=6.3						
BOSA				LR	LR	13 36 37.6	
	comp=Z,3µm,21.4s,baz=201,slow=31						
	comp=Z,59nm,1.1s						
BOSA	**Boshof**	**45.82**	**76**	P	**P**	**13 21 29.5**	**-0.5**
PB09	**IPOC Station P**	**46.05**	**300**	P	**P**	**13 21 31.6**	**-0.3**
PB03	**IPOC Station P**	**46.09**	**299**	P	**P**	**13 21 33.2**	**+1.0**
PB03				IAmb	IAmb	13 21 41.7	
	comp=Z,46nm,0.9s						
BBSD	**Serra de San D**	**46.14**	**313**	*e*P	**P**	**13 21 33.1**	**+0.6**
SBA	**Scott Base**	**46.41**	**184**	P	**P**	**13 21 35.3**	**+1.4**
SBA				IAmb	IAmb	13 21 39.0	
	comp=Z,34nm,0.8s						
SBA	**Scott Base**	**46.41**	**184**	P	**P**	**13 21 35.3**	**+1.4**
SBA				pmax	pmax		
	comp=Z,34nm,0.8s						
PB07	**IPOC Station P**	**46.42**	**299**	P	**P**	**13 21 34.6**	**-0.3**
PB07				IAmb	IAmb	13 21 46.6	
	comp=Z,49nm,0.8s						
PB02	**IPOC Station P**	**46.77**	**300**	P	**P**	**13 21 37.8**	**+0.3**
PB01	**IPOC Station P**	**46.80**	**300**	P	**P**	**13 21 36.8**	**-0.9**
VNDA	**Vanda**	**46.91**	**183**	P	**P**	**13 21 39.8**	**+2.0**
	comp=Z,43nm,0.7s,baz=184,slow=7.0,SNR=176						
VNDA				ScP	**ScP**	**13 27 00.9**	**-0.8**
	comp=Z,4.0nm,0.8s,baz=242,slow=6.5,SNR=4.4						
VNDA				LR	LR	13 39 54.1	
	comp=Z,555nm,21.9s,baz=160,slow=34						
	comp=Z,43nm,0.7s						
VNDA	**Vanda**	**46.91**	**183**	P	**P**	**13 21 39.1**	**+1.3**
VNDA				IAmb	IAmb	13 21 42.5	
	comp=Z,41nm,0.8s						
PTLB	**Pontes e Lacer**	**47.11**	**316**	P	**P**	**13 21 39.6**	**-0.4**
PTLB	**Pontes e Lacer**	**47.11**	**316**	*e*P	**P**	**13 21 41.0**	**+1.0**
SIV	**San Ignacio**	**47.40**	**313**	P	**P**	**13 21 42.7**	**+0.4**
	comp=Z,16nm,0.8s,baz=144,slow=7.7,SNR=24						
SIV				ScP	**ScP**	**13 27 04.6**	**-0.1**
	comp=Z,13nm,1.0s,baz=139,slow=3.5,SNR=12						
SIV				LR	LR	13 43 11.2	
	comp=Z,331nm,19.4s,baz=156,slow=38						
	comp=Z,16nm,0.8s						
SNDB	**Serra Nova Dou**	**47.56**	**327**	*e*P	**P**	**13 21 45.0**	**+1.4**
H10S2	**ASCENSION HYDR**	**47.66**	**17**	T	T	14 13 11.2	
	baz=189,slow=74,SNR=141						
H10S3	**ASCENSION HYDR**	**47.67**	**17**	T	T	14 13 11.5	
	baz=31,slow=74,SNR=251						
GO01	**Chusmiza**	**47.83**	**301**	P	**P**	**13 21 46.9**	**+0.7**
PB11	**IPOC Station P**	**47.98**	**301**	P	**P**	**13 21 46.8**	**-0.1**
MNMC	**Minye Minye**	**48.49**	**301**	P	**P**	**13 21 51.5**	**+0.5**
H10N1	**ASCENSION HYDR**	**48.78**	**17**	T	T	14 14 35.7	
	baz=189,slow=75,SNR=69						
H10N3	**ASCENSION HYDR**	**48.78**	**17**	T	T	14 14 35.6	
	baz=189,slow=75,SNR=138						
H10N2	**ASCENSION HYDR**	**48.80**	**17**	T	T	14 14 36.7	
	baz=189,slow=75,SNR=122						
LBTB	**Lobatse**	**48.84**	**73**	LR	LR	13 38 55.7	
	comp=Z,387nm,21.6s,baz=216,slow=32						
LBTB	**Lobatse**	**48.84**	**73**	P	**P**	**13 21 52.8**	**-0.8**
LBTB	**Lobatse**	**48.84**	**73**	P	**P**	**13 21 52.8**	**-0.8**
LBTB				pmax	pmax		
	comp=Z,168nm,1.3s						
PB16	**IPOC Station P**	**49.12**	**302**	P	**P**	**13 21 57.0**	**+0.7**
PB16				IAmb	IAmb	13 22 08.3	
	comp=Z,36nm,1.1s						
PB12	**IPOC Station P**	**49.28**	**301**	P	**P**	**13 21 55.6**	**-1.4**
PB12				IAmb	IAmb	13 22 14.7	
	comp=Z,33nm,1.0s						
TSUM	**Tsumeb**	**49.46**	**61**	LR	LR	13 38 28.1	
	comp=Z,712nm,20.6s,baz=154,slow=31						
TSUM	**Tsumeb**	**49.46**	**61**	P	**P**	**13 21 55.6**	**-2.7**
TSUM				IAmb	IAmb	13 21 59.9	
	comp=Z,80nm,1.2s						
SMTB	**Santa Maria do**	**49.47**	**333**	*e*P	**P**	**13 21 59.8**	**+1.5**
PDRB	**Porto dos Gac**	**49.71**	**321**	*e*P	**P**	**13 22 00.7**	**+0.6**
VILB	**Vilhena**	**49.80**	**316**	P	**P**	**13 21 59.5**	**-1.3**
VILB				IAmb	IAmb	13 22 02.3	
	comp=Z,89nm,1.1s						
VILB	**Vilhena**	**49.80**	**316**	*e*P	**P**	**13 22 01.4**	**+0.7**
CLDB	**Colider**	**50.07**	**322**	*e*P	**P**	**13 22 03.8**	**+0.9**
LPAZ	**La Paz**	**50.24**	**305**	P	**P**	**13 22 06.2**	**+1.3**
	comp=Z,17nm,0.5s,baz=81,slow=9.6,SNR=43						
LPAZ				LR	LR	13 43 46.6	
	comp=Z,338nm,20.5s,baz=162,slow=37						
	comp=Z,17nm,0.5s						
LPAZ	**La Paz**	**50.24**	**305**	P	**P**	**13 22 04.2**	**-0.7**
LPAZ				IAmb	IAmb	13 22 13.6	
	comp=Z,54nm,0.9s						
LPAZ	**La Paz**	**50.24**	**305**	*e*P	**P**	**13 22 06.4**	**+1.6**
RCBR	**Riachuelo**	**50.25**	**349**	*e*P	**P**	**13 22 04.3**	**0.0**
PRPB	**Parauapebas**	**52.64**	**331**	*e*P	**P**	**13 22 23.7**	**+1.7**
NPGB	**Novo Progresso**	**53.49**	**324**	*e*P	**P**	**13 22 29.0**	**+0.7**
CASY	**Casey**	**54.20**	**160**	P	**P**	**13 22 34.0**	**+1.1**
CASY				IAmb	IAmb	13 23 10.1	
	comp=Z,71nm,1.6s						
ETMB	**Extrema**	**55.10**	**311**	*e*P	**P**	**13 22 41.0**	**+0.9**
TMAB	**Tom-Au,PA,Br**	**55.84**	**334**	*e*P	**P**	**13 22 47.2**	**+1.9**
ITTB	**Itaituba**	**56.12**	**325**	*e*P	**P**	**13 22 48.1**	**+0.7**
MALB	**Monte Alegre**	**58.03**	**327**	*e*P	**P**	**13 23 02.1**	**+1.2**
NNA	**Nana**	**58.15**	**298**	P	**P**	**13 23 03.4**	**+1.6**
	comp=Z,8.6nm,0.3s,baz=224,slow=11,SNR=4.2						
NNA				LR	LR	13 48 31.1	
	comp=Z,157nm,19.9s,baz=144,slow=36						
	comp=Z,8.6nm,0.3s						
NNA	**Nana**	**58.15**	**298**	*ce*P	**P**	**13 22 59.3**	**-2.5**
NNA				pmax	pmax		
	comp=Z,24nm,1.2s						
LSZ	**Lusaka**	**58.19**	**69**	LR	LR	13 44 24.2	
	comp=Z,2µm,21.6s,baz=192,slow=32						
MCPB	**Macapa, AP**	**58.80**	**330**	*e*P	**P**	**13 23 07.9**	**+1.6**
MACA	**Manacapuru-AM**	**58.96**	**320**	*e*P	**P**	**13 23 07.2**	**-0.2**
CZSB	**Cruzeiro do Su**	**59.85**	**305**	*e*P	**P**	**13 23 14.2**	**+0.6**
TEFE	**Tefe**	**60.15**	**315**	*e*P	**P**	**13 23 16.3**	**+0.7**
ATAH	**Atahualpa**	**63.09**	**300**	P	**P**	**13 23 38.3**	**+2.4**
	comp=Z,11nm,0.6s,baz=170,slow=15,SNR=9.8						
ATAH				LR	LR	13 50 35.5	

	comp=Z,318nm,21.3s,baz=160,slow=36						
	comp=Z,11nm,0.6s						
BOAV	Boa Vista	64.06	322	P	P	13 23 41.2	-0.6
BOAV	Boa Vista	64.06	322	eP	P	13 23 41.9	+0.1
BOAV	Boa Vista	64.06	322	eP	P	13 23 42.0	+0.2
MDP	Montagnes des	64.18	331	P	P	13 23 42.4	-0.1
	comp=Z,14nm,0.7s,baz=131,slow=7.7,SNR=2.9						
MDP				LR	LR	13 51 15.6	
	comp=Z,356nm,18.5s,baz=172,slow=36						
	comp=Z,14nm,0.7s						
LIC	Lamto	64.37	24	⇑eP	P	13 23 43.6	-0.2
	comp=Z,160nm,1.0s						
KIC	Kosan Boka	64.57	25	⇑eP	P	13 23 44.5	-0.6
	comp=Z,142nm,1.1s						
TIC	Toumodi	64.77	24	⇑iP	P	13 23 40.6	-5.8
	comp=Z,36nm,0.8s						
DBIC	Dimbokro	64.84	25	P	P	13 23 46.3	-0.5
	comp=Z,31nm,1.0s,baz=210,slow=6.6,SNR=18						
	comp=Z,31nm,1.0s						
DBIC	Dimbokro	64.84	25	P	P	13 23 46.3	-0.5
OPO	Ambohidratompo	66.00	88	LR	LR	13 46 30.7	
	comp=Z,1µm,21.4s,baz=328,slow=30						
RER	Riviere de l'E	68.78	97	P	P	13 24 11.8	-0.3
MACC	Macarena, Meta	69.11	309	eP	P	13 24 14.0	-0.1
FLOC	Florencia	69.42	307	eP	P	13 24 15.2	-0.8
GARC	Garzon, Huila	69.89	307	eP	P	13 24 19.7	+0.5
BETC	Betania	70.30	308	eP	P	13 24 24.6	+3.1
BBAC	Balboa, Cauca	70.54	305	eP	P	13 24 23.7	+0.6
BBTS	Babate	70.67	11	LR	LR	13 48 57.7	
	comp=Z,1µm,20.7s,baz=219,slow=30						
POPC	Popayan, Colom	70.73	306	eP	P	13 24 25.3	+1.0
PRAC	Prado	70.97	309	eP	P	13 24 25.9	+0.4
ORTC	Ortega, Tolima	71.30	308	eP	P	13 24 27.8	+0.2
JAMC	Jamundi, Valle	71.33	307	eP	P	13 24 28.4	+0.5
ROSC	El Rosal	71.73	310	P	P	13 24 31.6	+1.1
	comp=Z,7.0nm,0.4s,baz=176,slow=8.6,SNR=5.7						
ROSC				LR	LR	13 56 28.8	
	comp=Z,399nm,21.1s,baz=146,slow=36						
	comp=Z,7.0nm,0.4s						
YOTC	Yotoco, Valle	71.86	307	eP	P	13 24 29.8	-1.2
MBAR	Mbarara	71.94	63	LR	LR	13 54 00.7	
	comp=Z,790nm,18.2s,baz=188,slow=34						
MBAR	Mbarara	71.94	63	iP	P	13 24 31.0	-0.5
MBAR				pmax	pmax		
	comp=Z,49nm,1.3s						
RUSC	La Rusia	72.14	311	P	P	13 24 32.6	-0.5
RUSC				IAmb	IAmb	13 24 40.9	
	comp=Z,52nm,1.2s						
RUSC	La Rusia	72.14	311	eP	P	13 24 32.5	-0.5
PLMC	San Jos del P	72.65	308	eP	P	13 24 37.0	+1.3
TOA0	Torodi Ar. Sit	72.73	29	P	P	13 24 36.4	+0.4
TORD	Torodi Ar. Bea	72.73	29	P	P	13 24 36.4	+0.5
	comp=Z,210nm,0.3s,baz=200,slow=6.7,SNR=8.2						
TORD				LR	LR	13 51 46.6	
	comp=Z,312nm,18.5s,baz=193,slow=32						
PCRV	Puerto La Cruz	72.74	321	P	P	13 24 37.2	+1.1
	comp=Z,76nm,0.8s,baz=145,slow=2.2,SNR=25						
PCRV				LR	LR	13 55 59.8	
	comp=Z,518nm,20.7s,slow=35						
	comp=Z,76nm,0.8s						
BAUV	El Baul	72.86	317	P	P	13 24 35.4	-1.3
PTBC	PUERTO BERRIO,	73.30	310	eP	P	13 24 37.6	-1.9
GRGR	Grenville	73.54	325	P	P	13 24 40.7	-0.1
SDV	Santo Domingo	73.83	315	P	P	13 24 43.2	+0.5
	comp=Z,30nm,0.9s,baz=171,slow=1.9,SNR=38						
SDV				LR	LR	13 58 59.2	
	comp=Z,681nm,19.7s,baz=152,slow=37						
	comp=Z,30nm,0.9s						
SDV	Santo Domingo	73.83	315	P	P	13 24 41.8	-0.9
SDV				IAmb	IAmb	13 24 44.6	
	comp=Z,40nm,0.9s						
SDV	Santo Domingo	73.83	315	eP	P	13 24 43.4	+0.7
ZARC	Zaragoza, Cauc	74.33	310	eP	P	13 24 44.8	-0.6
DBBC	Dabeiba	74.50	309	eP	P	13 24 46.3	-0.2
KMBO	Kilima Mbogo	74.85	69	iP	P	13 24 49.6	+0.8
APAC	Apartado, Choc	75.44	309	eP	P	13 24 53.3	+1.5
CBE	Ff, Capester	77.22	326	P	P	13 25 02.5	+0.7
GDHS	Morne Mazeau,	77.46	326	P	P	13 25 03.8	+0.6
MQZ	McQueen's Vall	79.55	194	P	P	13 25 13.8	-0.7
RPZ	Rata Peaks	79.75	193	P	P	13 25 15.8	+0.1
	comp=Z,9.9nm,0.8s,baz=248,slow=4.7,SNR=5.9						
RPZ				LR	LR	13 58 32.3	
	comp=Z,639nm,19.1s,baz=185,slow=34						
	comp=Z,9.9nm,0.8s						
LTZ	Lake Taylor	80.51	194	P	P	13 25 19.7	-0.1
LTZ				IAmb	IAmb	13 25 30.2	
	comp=Z,46nm,1.0s						
CUPR	Culebra, Puert	80.51	323	P	P	13 25 20.1	+0.3
CUPR				IAmb	IAmb	13 25 21.6	
	comp=Z,54nm,0.9s						
SJG	San Juan	80.62	323	P	P	13 25 19.9	-0.6
	comp=Z,6.6nm,0.3s,baz=106,slow=9.3,SNR=4.9						
	comp=Z,6.6nm,0.3s						
INZ	Inchbonnie	80.67	194	P	P	13 25 19.9	-0.6
INZ				IAmb	IAmb	13 26 45.2	
	comp=Z,108nm,1.9s						
JTS	Las Juntas de	81.39	303	P	P	13 25 24.8	+0.1
	comp=Z,3.5nm,0.3s,baz=105,slow=19,SNR=1.9						
JTS				LR	LR	14 04 03.8	
	comp=Z,127nm,19.4s,baz=134,slow=38						
	comp=Z,3.5nm,0.3s						
JTS	Las Juntas de	81.39	303	iP	P	13 25 26.4	+1.7
JTS				pmax	pmax		
	comp=Z,18nm,1.2s						
THZ	Tophouse	81.42	195	P	P	13 25 23.9	-0.7
THZ				IAmb	IAmb	13 25 39.8	
	comp=Z,29nm,0.8s						
DSZ	Denniston Nort	81.59	194	P	P	13 25 24.2	-1.4
DSZ				IAmb	IAmb	13 25 35.8	
	comp=Z,54nm,1.0s						
TAU	Tasmania Unive	81.62	176	P	P	13 25 24.9	-0.7
TAU				IAmb	IAmb	13 25 30.5	
	comp=Z,62nm,0.9s						
TAU	Tasmania Unive	81.62	176	P	P	13 25 24.9	-0.7
TAU				pmax	pmax		
	comp=Z,62nm,1.0s						
MRNZ	Matariki Terra	81.79	195	P	P	13 25 26.3	-0.3
NNZ	Nelson	81.88	195	P	P	13 25 26.5	-0.5
NNZ				IAmb	IAmb	13 25 34.8	
	comp=Z,109nm,1.6s						
MRZ	Mangatainoka R	82.07	197	P	P	13 25 27.2	-0.8
MRZ				IAmb	IAmb	13 25 38.2	
	comp=Z,40nm,1.2s						
QRZ	Quartz Range	82.39	195	P	P	13 25 27.7	-2.0
QRZ				IAmb	IAmb	13 25 34.5	
	comp=Z,29nm,0.8s						
RTZ	Ruatahuna	83.82	199	P	P	13 25 36.3	-0.9
RTZ				IAmb	IAmb	13 25 49.0	
	comp=Z,21nm,0.9s						
URZ	Urewera	84.14	199	LR	LR	14 00 26.6	
	comp=Z,366nm,19.1s,baz=248,slow=34						
NWAO	Narrogin (SRO)	86.58	151	P	P	13 25 51.2	+0.2
	comp=Z,3.6nm,0.5s,baz=167,slow=4.5,SNR=7.5						
	comp=Z,3.6nm,0.5s						
TOO	Toolangi	86.86	174	P	P	13 25 53.7	+1.3
TOO				IAmb	IAmb	13 27 36.9	
	comp=Z,84nm,1.6s						
TOO	Toolangi	86.86	174	P	P	13 25 53.7	+1.3
TOO				pmax	pmax		
	comp=Z,84nm,1.7s						
TBI	Tubuai	87.34	231	eS	S	13 36 35.2	+1.6
	comp=Z,881nm,26.8s						
TBI	Tubuai	87.34	231	eLR	LR	13 53 36.7	
	comp=Z,6µm,27.2s						
TBI				eLR	LR	13 53 36.8	
	comp=Z,19µm,25.5s						
ATD	Arta Tunnel	88.47	67	LR	LR	14 04 35.6	
	comp=Z,25nm,18.3s,baz=180,slow=35						
CAN	Canberra	89.26	177	P	P	13 26 04.7	+0.8
CAN	Canberra	89.26	177	P	P	13 26 04.7	+0.8
CAN				pmax	pmax		
	comp=Z,185nm,2.0s						
MDT	Midelt	90.25	19	LR	LR	14 03 24.6	
	comp=Z,822nm,18.5s,baz=199,slow=34						
BBOO	Buckleboo	90.65	166	P	P	13 26 10.4	+0.1
BBOO				IAmb	IAmb	13 26 46.3	
	comp=Z,60nm,1.4s						
STKA	Stephens Creek	92.21	170	P	P	13 26 18.3	+0.7
	comp=Z,3.8nm,0.6s,baz=159,slow=5.4,SNR=12						
STKA				LR	LR	14 08 28.1	
	comp=Z,509nm,18.1s,baz=191,slow=36						
	comp=Z,3.8nm,0.6s						
STKA	Stephens Creek	92.21	170	P	P	13 26 18.8	+1.2
STKA	Stephens Creek	92.21	170	iP	P	13 26 16.0	-1.6
PPT2	Papeete2	92.43	234	eLR	LR	13 55 58.0	
	comp=Z,1µm,30.0s						
PPT2				eLR	LR	13 55 58.0	
	comp=Z,809nm,30.2s						
PPT	Papeete	92.45	234	LR	LR	13 59 23.8	
	comp=Z,223nm,21.2s,baz=172,slow=30						
RAR	Rarotonga	93.52	223	LR	LR	14 00 58.9	
	comp=Z,231nm,20.5s,baz=139,slow=31						
MORF	Marmelete	93.99	15	eP	P	13 26 27.7	+2.4
PBDV	Barranco-do-Ve	94.03	15	eP	P	13 26 27.2	+1.7
PCVE	Castro Verde	94.40	15	eP	P	13 26 29.1	+2.0
PNCL	Nicolau / Gran	94.80	15	eP	P	13 26 30.5	+1.5
PBAR	Barrancos	95.08	16	eP	P	13 26 32.6	+2.3
PBAR				A	A	13 26 34.8	
	comp=Z,41nm,1.5s						
TAOE	Nuku Hiva Isla	95.34	246	eLR	LR	13 57 19.0	
	comp=Z,689nm,25.1s						
KEST	Kesra	96.25	29	LR	LR	14 05 30.5	
	comp=Z,591nm,21.2s,baz=158,slow=33						
ESDC	Sonseca Array	97.05	18	P	Pdif	13 26 40.4	+1.0
	comp=Z,2.8nm,0.9s,baz=187,slow=4.3,SNR=11						
ESDC				LR	LR	14 06 26.2	
	comp=Z,592nm,18.6s,baz=192,slow=33						
	comp=Z,2.8nm,0.9s						
ASAR	Alice Springs	99.28	162	P	Pdif	13 26 49.6	-0.3
	comp=Z,4.2nm,0.7s,baz=185,slow=4.1,SNR=39						
ASAR				PP	PP	13 30 51.5	-0.4
	comp=Z,1.6nm,0.7s,baz=183,slow=8.2,SNR=5.2						
ASAR				S	SKSac	13 37 21.7	-5.1
	comp=Z,1.9nm,1.0s,baz=170,slow=6.1,SNR=8.4						
ASAR				PKKP	PKKPdf	13 43 13.3	-0.3
	comp=Z,1.0nm,0.7s,baz=9.8,slow=2.5,SNR=6.5						
ASAR				LR	LR	14 09 31.1	
	comp=Z,317nm,20.2s,baz=186,slow=34						
	comp=Z,4.2nm,0.7s						
ASAR	Alice Springs	99.28	162	P	Pdif	13 26 50.1	+0.1
VAE	Valguarnera	99.34	32	LR	LR	14 09 59.9	
	comp=Z,329nm,18.0s,baz=154,slow=34						
EIL	Elat	100.08	51	LR	LR	14 06 58.2	
	comp=Z,865nm,21.9s,baz=239,slow=32						
DZM	Mont Dzumac	101.67	193	eLR	LR	14 00 15.4	
	comp=Z,956nm,23.2s						
WRA	Warramunga Arr	103.00	162	Pdiff	Pdif	13 27 06.2	-0.3
	comp=Z,1.7nm,0.8s,baz=195,slow=4.4,SNR=15						
WRA				PP	PP	13 31 22.3	+2.3
	comp=Z,2.4nm,0.9s,baz=186,slow=5.9,SNR=8.0						
WRA				S	SKSac	13 37 39.7	-5.0
	comp=Z,2.0nm,1.0s,baz=222,slow=7.2,SNR=7.8						
WRA				PKKPbc	PKKPbc	13 43 02.0	+1.4
	comp=Z,0.9nm,0.8s,baz=1.5,slow=3.3,SNR=6.0						
TXAR	Lajitas Array	106.70	298	Pdiff	Pdif	13 27 22.2	-0.5
	comp=Z,0.2nm,0.8s,baz=76,slow=5.7,SNR=1.8						
TXAR				PP	PP	13 31 52.9	+4.1
	comp=Z,0.8nm,0.9s,baz=190,slow=6.4,SNR=4.2						
BRTR	Keskin Array B	108.14	45	PP	PP	13 32 00.5	+1.3
	comp=Z,4.4nm,1.0s,baz=190,slow=6.3,SNR=13						
CLL	Collm	111.72	26	ePS	PS	13 42 02.0	+5.6
CLL				ePPS	PPS	13 43 02.0	
CLL				eSS	SS	13 48 06.0	+7.0
CLL				ex	x	13 49 38.0	
CLL				AMS	AMS	14 14 00.0	
	comp=Z,300nm,21.9s						
SCHQ	Schefferville	114.89	336	PKP	PKiKP	13 31 49.0	+1.6
	comp=Z,2.3nm,0.7s,baz=111,slow=2.9,SNR=2.5						
KBZ	Khabaz	115.30	49	PKP	PKPdf	13 31 48.5	+0.1
	comp=Z,2.1nm,0.8s,baz=195,slow=9.9,SNR=4.4						
KIV	Kislovodsk	115.40	49	iPKIKP	PKPdf	13 31 48.8	0.0
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
AKASG	Malin Array Be	115.89	36	PKP	PKPdf	13 31 47.9	-1.5
	comp=Z,0.4nm,0.4s,baz=246,slow=2.0,SNR=6.8						
AKASG				PP	PP	13 32 49.7	-4.6
	comp=Z,0.6nm,0.6s,baz=214,slow=6.5,SNR=6.0						
AKBB	Malin Array Si	115.89	36	c iPKIKP	PKiKP	13 31 50.0	+0.6
MAK	Makhachkala	116.70	52	iP	Pdif	13 28 04.0	-2.6
MAK				e		13 38 38.4	
MAK				ePS	PS	13 42 39.2	-2.9
MAK				eSSS	SSS	13 53 23.2	
MAK				pmax	pmax		
	comp=Z,130nm,1.5s						
GEYT	Alibeck	117.85	63	PKP	PKPdf	13 31 52.5	-1.1
	comp=Z,1.8nm,0.7s,baz=232,slow=8.5,SNR=2.4						
MNK	Minsk	118.70	33	iPKP	PKPdf	13 31 54.3	-0.4
	comp=E,4.0nm,0.8s						
MNK				iPKP	PKPdf	13 31 54.3	-0.4
	comp=N,42nm,0.8s						
MNK				iPKP	PKPdf	13 31 54.3	-0.4
	comp=Z,7.0nm,0.7s,baz=212						
MNK				iPP	PP	13 33 12.5	-1.3
MNK				iPPP	PPP	13 35 43.2	
MNK				iSKS	SKSdf	13 39 06.4	+2.0
MNK				iPS	PS	13 42 59.9	-0.1
MNK				iSS	SS	13 49 32.9	+2.4
MNK				iSSS	SSS	13 53 56.4	
MNK				iLR	LR	14 16 20.4	
MNK				iLRM	MLR	14 19 20.9	
	comp=Z,438nm,20.6s						
MNK				iLRM	MLR	14 19 33.8	
	comp=E,46nm,18.1s						
MNK				iLRM	MLR	14 19 49.3	
	comp=N,373nm,15.5s						
MNK	Minsk	118.70	33	iPKIKP	PKPdf	13 31 54.3	-0.4
MNK				i		13 33 12.5	
MNK				iPPP	PPP	13 35 43.2	
MNK				i		13 39 06.4	
MNK				iPS	PS	13 42 59.8	-0.1
MNK				iSS	SS	13 49 32.8	+2.3
MNK				iSSS	SSS	13 53 56.3	
MNK				pmax	pmax		
	comp=N,42nm,0.8s						
MNK				pmax	pmax		
	comp=E,4.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MNK				MLR	MLR		
	comp=Z,438nm,21.0s						
MNK				MLR	MLR		
	comp=E,46nm,18.0s						
MNK				MLR	MLR		
	comp=N,373nm,15.0s						
NACGM	Naroch	118.71	32	ePKP	PKiKP	13 31 55.1	+0.4
	comp=Z,10.0nm,0.8s,baz=212						
ULM	Lac du Bonnet	120.06	316	PKP	PKPdf	13 31 56.3	-1.2
	comp=Z,2.3nm,0.5s,baz=169,slow=2.8,SNR=5.1						
ULM				SKP		13 35 28.8	
	comp=Z,2.1nm,0.3s,baz=180,slow=5.1,SNR=5.4						
PDAR	Pinedale Array	120.23	302	PKP	PKPdf	13 31 57.6	-0.7
	comp=Z,0.4nm,0.5s,baz=143,slow=5.3,SNR=6.4						
PDAR				PP	PP	13 33 23.9	-1.0
	comp=Z,0.4nm,0.7s,baz=138,slow=16,SNR=2.1						
PDAR				PKKPbc	PKKPab	13 42 05.5	+0.2
	comp=Z,1.1nm,0.9s,baz=21,slow=2.1,SNR=7.5						
NB2	NORSAR Subarra	120.27	20	PKPdf	PKPdf	13 31 57.5	-0.1
	comp=Z,5.8nm,1.1s,baz=202,slow=1.9						
NOA	NORSAR Array B	120.27	20	PKP	PKPdf	13 31 57.3	-0.3
	comp=Z,2.9nm,0.9s,baz=205,slow=1.9,SNR=9.4						
NVAR	Mina Array Bea	121.33	293	PKP	PKPdf	13 32 01.0	+0.4
	comp=Z,0.8nm,0.6s,baz=136,slow=3.0,SNR=6.9						
NVAR				SKP		13 35 34.0	
	comp=Z,2.1nm,1.0s,baz=173,slow=3.2,SNR=4.5						
NVAR				PKKPab	PKKPab	13 42 02.7	+1.8
	comp=Z,1.1nm,0.9s,baz=326,slow=3.6,SNR=5.4						
ELK	Elko	121.49	297	PKP	PKiKP	13 32 01.8	+0.8
	comp=Z,0.6nm,0.3s,baz=114,slow=11,SNR=5.8						
ELK				SKP		13 35 34.3	
	comp=Z,1.8nm,0.9s,baz=130,slow=4.5,SNR=4.9						
OBN	Obninsk	122.04	37	⇑ePKIKP	PKiKP	13 32 01.6	+0.4
OBN				eSS	SS	13 50 16.7	+3.4
OBN				pmax	pmax		
	comp=Z,17nm,0.8s						
DY2G	Dye2	122.73	351	iP	PKPdf	13 32 01.5	-0.9
MOS	Moscow	122.90	38	iPKIKP	PKPdf	13 32 03.1	+0.4
MOS				e		13 33 39.4	
SOEG	Soedalen	123.65	358	iP	PKPdf	13 32 03.9	+0.2
SFJD	Kangerlussuaq	123.67	349	iP	PKPdf	13 32 03.7	-0.2
BELG	Belogornoye	124.06	46	iPKIKP	PKiKP	13 32 06.0	+0.7
BELG				i		13 32 06.6	
FINES	FINESS Array B	124.06	28	PKP	PKPdf	13 32 04.8	+0.1
	comp=Z,6.5nm,0.7s,baz=191,slow=1.2,SNR=20						
ICESG	Greenland Ices	124.84	355	iP	PKPdf	13 32 07.0	+0.5
CMAR	Chiang Mai Arr	125.11	110	PKP	PKPdf	13 32 08.7	+0.5
	comp=Z,8.9nm,0.8s,baz=235,slow=3.8,SNR=47						
SCO	Scoresbysund	125.96	2	iP	PKPdf	13 32 08.1	0.0
YBH	Yreka Blue Hor	126.05	293	PKP	PKiKP	13 32 10.7	+0.9
	comp=Z,1.8nm,0.6s,baz=166,slow=6.2,SNR=2.7						
ABKAR	Akbulak array	127.12	55	PKPdf	PKiKP	13 32 11.7	+0.2
KLMR	Klimovskoe	127.51	34	ePKPdf	PKPdf	13 32 10.7	-0.7
KLMR				AMP		13 32 13.1	
	comp=Z,40nm,1.5s						
KLMR				ePP	PP	13 34 08.7	-4.5
KLMR				LQ	LQ	14 21 04.6	
KLMR				LQ	LQ	14 21 04.6	
KLMR				LR	LR	14 22 00.8	
KLMR				AMP		14 24 44.1	
	comp=Z,872nm,23.3s						
KLMR	Klimovskoe	127.51	34	ePKIKP	PKPdf	13 32 10.6	-0.8
KLMR				pmax	pmax		
	comp=Z,40nm,1.5s						
KLMR				MLR	MLR		
	comp=Z,872nm,23.0s						
SUMG	Summit	128.25	356	iP	PKPdf	13 32 13.0	0.0
KSH	Kashi	128.41	74	PKP	PKPdf	13 32 14.5	+0.5
AML	Almayashu	129.02	70	P	PKiKP	13 32 16.5	+0.3
	SNR=18						
KIRV	Kirov	129.28	41	iPKIKP	PKPdf	13 32 12.9	-1.9
KIRV				i		13 32 17.0	
EKS2	Erkin-Say	129.44	70	P	PKPdf	13 32 15.4	-0.5
	SNR=21						
UCH	Uchtor	129.53	71	P	PKPdf	13 32 17.3	+0.8
	SNR=22						
AAK	Ala-Archa	129.80	70	P	PKiKP	13 32 17.6	+0.2
	SNR=7.9						
AAK	Ala-Archa	129.80	70	PKP	PKiKP	13 32 17.5	+0.2
	comp=Z,12nm,0.8s,baz=220,slow=4.7,SNR=16						
AAK	Ala-Archa	129.80	70	iPKIKP	PKPdf	13 32 16.9	+0.3
AAK				i		13 32 18.2	
DBG	Daneborg	129.83	2	iP	PKPdf	13 32 15.2	-0.2
KBK	Karagaybulak	130.06	71	P	PKiKP	13 32 18.1	+0.2
	SNR=5.3						
TNCH	TengChong	130.21	105	PKP	PKPdf	13 32 17.5	-0.5
TNCH				sPKP		13 32 22.0	
USP	Ospenovka	130.24	70	P	PKiKP	13 32 18.3	+0.2
	SNR=6.0						
TKM2	Tokmak 2	130.59	71	P	PKPdf	13 32 18.8	+0.7
	SNR=6.2						
ARCES	ARCESS Array B	130.61	22	PKP	PKPdf	13 32 17.3	+0.3
	comp=Z,21nm,0.9s,baz=217,slow=1.2,SNR=17						
ARCES	ARCESS Array B	130.61	22	PKPdf	PKPdf	13 32 17.7	+0.6
QIZ	Qiongzhong	131.16	121	PKP	PKPdf	13 32 19.5	-0.2
QIZ				PP	PP	13 34 36.5	-0.6
QIZ				SS	SS	13 52 10.8	+3.7
QIZ				LR	LR		
	comp=Z,200nm,21.5s						
QIZ				LR	LR		
	comp=Z,170nm,16.7s						
QIZ				LR	LR		
	comp=Z,380nm,20.7s						
ARU	Arti	131.42	48	iPKIKP	PKPdf	13 32 19.7	+0.7
ARU				MLR	MLR		
	comp=Z,497nm,21.0s						
DAG	Danmarks Havn	132.34	3	iP	PKPdf	13 32 19.1	-1.1
PZH	PanZhiHua	133.13	107	PKP	PKPdf	13 32 24.0	+0.6
PZH				PP	PP	13 34 58.8	+8.6
PZH				AMB	AMB		
	comp=Z,110nm,4.8s						
PZH				LR	LR		
	comp=Z,170nm,18.1s						
PZH				LR	LR		
	comp=Z,150nm,18.1s						
PZH				LR	LR		
	comp=Z,200nm,20.1s						
BRVK	Borovoye	134.51	57	iPKIKP	PKPdf	13 32 25.2	+0.3
BRVK				i		13 32 27.7	
BVAR	Borovoye Array	134.54	57	SKPbc	SKPbc	13 35 53.2	+0.3
	comp=Z,3.0nm,0.7s,baz=247,slow=3.1,SNR=6.3						
YKA	Yellowknife Ar	135.97	318	PKhKP	PKPpre	13 32 15.9	
	comp=Z,0.3nm,0.6s,baz=125,slow=2.8,SNR=7.8						
YKA				PKP	PKPdf	13 32 26.6	-0.7
	comp=Z,2.5nm,0.6s,baz=122,slow=2.4,SNR=9.1						
YKA				PP	PP	13 35 04.7	-3.0
	comp=Z,2.9nm,0.9s,baz=122,slow=6.7,SNR=12						
YKA				SKPbc	SKPbc	13 35 56.4	-0.6
	comp=Z,4.1nm,0.7s,baz=133,slow=3.0,SNR=15						
YKA				PKKP	PKKPdf	13 42 07.0	-0.3
	comp=Z,0.3nm,0.7s,baz=307,slow=2.0,SNR=3.9						
GOMU	GeErMu	136.60	92	PKP	PKPdf	13 32 23.0	-6.9
MK31	Makanchi Array	136.71	71	iPKIKP	PKPdf	13 32 29.5	+0.2
MK31				i		13 32 32.2	
MKAR	Makanchi Array	136.71	71	PKhKP	PKPpre	13 32 16.2	
	comp=Z,0.9nm,0.7s,baz=222,slow=1.6,SNR=8.4						
MKAR				PKP	PKPdf	13 32 29.7	+0.4
	comp=Z,5.1nm,0.8s,baz=227,slow=1.9,SNR=18						
MKAR				PP	PP	13 35 13.1	+0.4
	comp=Z,2.9nm,1.1s,baz=250,slow=3.2,SNR=6.2						
MKAR				SKPbc	SKPbc	13 36 00.1	+0.1
	comp=Z,6.7nm,1.1s,baz=222,slow=1.6,SNR=8.2						
KURBB	Kurchatov Arra	137.10	64	PKhKP	PKPpre	13 32 18.3	
	comp=Z,1.3nm,0.7s,baz=236,slow=3.5,SNR=9.8						
KURBB				PKP	PKPdf	13 32 28.6	-1.2
	comp=Z,6.7nm,0.8s,baz=238,slow=3.0,SNR=16						
KURBB				PP	PP	13 35 16.7	+1.6
	comp=Z,2.2nm,1.1s,baz=237,slow=6.3,SNR=5.5						
KURBB				SKPbc	SKPbc	13 35 59.8	-1.1
	comp=Z,4.5nm,1.1s,baz=234,slow=3.5,SNR=11						
KURK	Kurchatov	137.20	64	iPKIKP	PKPdf	13 32 29.5	-0.5
KURK				i		13 32 33.2	
NOR	Nord	137.20	2	iP	PKPdf	13 32 22.9	-6.3
RES	Resolute Bay	137.57	339	SKPbc	SKPbc	13 36 01.7	+0.1
	comp=Z,3.8nm,0.9s,baz=206,slow=1.8,SNR=6.0						
CD2	Chengdu	137.68	105	PKP	PKPdf	13 32 32.0	+0.4
WMQ	Urumqi	137.77	78	ePKP	PKiKP	13 32 33.0	-0.3
WMQ				LR	LR		
	comp=Z,320nm,18.9s						
WMQ				LR	LR		
	comp=Z,98nm,16.5s						
WMQ				LR	LR		
	comp=Z,190nm,24.5s						
DGZ	Jazzator, Alta	141.21	71	iPKHKP	PKPpre	13 32 32.1	
LZH	Lanzhou	141.60	100	⇑PKP	PKPdf	13 32 36.0	-2.7
LZH				PP	PP	13 35 45.0	+2.0
LZH				AMB	AMB		
	comp=Z,49nm,6.5s						
LZH				LR	LR		
	comp=Z,140nm,11.3s						
LZH				LR	LR		
	comp=Z,170nm,11.3s						
LZH				LR	LR		
	comp=Z,130nm,12.0s						
GTA	Gaotai	141.67	92	ePKP	PKPdf	13 32 35.3	-3.4
GTA				AMB	AMB		
	comp=Z,100nm,6.2s						
GTA				LR	LR		
	comp=Z,200nm,18.2s						
GTA				LR	LR		
	comp=Z,220nm,18.2s						
GTA				LR	LR		
	comp=Z,270nm,18.2s						
ZALV	Zalesovo Beam	142.16	63	PKhKP	PKPpre	13 32 33.2	
	comp=Z,5.7nm,0.6s,baz=250,slow=2.9,SNR=17						
ZALV				PKP	PKiKP	13 32 41.4	-0.4
	comp=Z,4.2nm,0.5s,baz=283,slow=3.0,SNR=6.7						
ZALV				SKP		13 36 14.5	
	comp=Z,1.9nm,0.6s,baz=250,slow=4.3,SNR=4.9						
XAN	Xi'an	142.87	107	⇑PKP	PKPdf	13 32 37.8	-3.1
XAN				LR	LR		
	comp=Z,100nm,17.8s						
XAN				LR	LR		
	comp=Z,130nm,18.7s						
XAN				LR	LR		
	comp=Z,200nm,20.9s						
A36M	Sachs Harbour	143.97	328	PKPdf	PKPdf	13 32 41.0	-0.5
HYT	Haines Junctio	144.65	307		PKPdf	13 32 43.8	+0.6
HYT	Haines Junctio	144.65	307	P	PKPbc	13 32 43.0	+0.8
	baz=114,SNR=19						
N30M	Aishikik Lake	144.71	309	P	PKPdf	13 32 43.5	+0.3
	baz=113						
O29M	Mount Kennedy	144.92	306	P	PKPdf	13 32 45.1	+1.4
	baz=114						
MAYO	Mayo, Yukon	145.00	312	P	PKPdf	13 32 44.3	+0.6
	baz=111						
M30M	Minto, Yukon	145.01	311		PKPdf	13 32 44.0	+0.3
M30M	Minto, Yukon	145.01	311	P	PKPdf	13 32 43.9	+0.3
	baz=112						
PNL	Peninsula	145.04	305	P	PKPdf	13 32 44.4	+0.6
	baz=114						
YUK6	Outpost Mounta	145.08	307	P	PKPdf	13 32 45.2	+1.1
	baz=113						
LYN	LuoYang	145.16	110	⇓PKPbc	PKPab	13 32 45.0	+0.5
LYN				AMB	AMB		
	comp=Z,140nm,5.1s						
LYN				LR	LR		
	comp=Z,180nm,24.0s						
LYN				LR	LR		
	comp=Z,140nm,16.2s						

LYN				LR	LR		
	comp=Z,250nm,24.0s						
YUK4	**Talbot Arm**	**145.36**	**308**	P	**PKPab**	**13 32 45.5**	**+0.7**
	baz=112,SNR=27						
F31M	**Tsiigehtchic**	**145.42**	**319**	P	**PKPab**	**13 32 45.0**	**+0.5**
	baz=107,SNR=48						
INK	**Inuvik**	**145.59**	**321**	PKPbc	**PKPbc**	**13 32 45.1**	**+0.4**
	comp=Z,50nm,0.8s,baz=79,slow=3.3,SNR=189						
INK				SKPbc	**SKPbc**	**13 36 22.7**	**+0.5**
	comp=Z,5.8nm,0.8s,baz=50,slow=2.0,SNR=4.1						
INK	**Inuvik**	**145.59**	**321**	PKPdf	**PKPab**	**13 32 45.7**	**+0.6**
INK	**Inuvik**	**145.59**	**321**	PKIKP	**PKPab**	**13 32 45.7**	**+0.6**
INK	**Inuvik**	**145.59**	**321**	P	**PKPab**	**13 32 45.7**	**+0.6**
	baz=106,SNR=73						
PINM	**Pinnacle**	**145.61**	**305**	P	**PKPab**	**13 32 46.1**	**+0.5**
	baz=113						
PCA	**Pinnacle**	**145.61**	**305**		**PKPab**	**13 32 47.2**	**+1.6**
M29M	**Somme Creek**	**145.69**	**310**	P	**PKPab**	**13 32 46.1**	**+0.3**
	baz=111,SNR=37						
K29M	**Barlow Dome**	**145.77**	**312**	P	**PKPbc**	**13 32 45.9**	**+0.2**
	baz=110						
L29M	**L29M**	**145.78**	**311**	P	**PKPab**	**13 32 46.3**	**+0.3**
	baz=110						
YUK8	**Steele Glacier**	**145.84**	**307**	P	**PKPab**	**13 32 46.9**	**+0.3**
	baz=112,SNR=17						
O28M	**Mount Upton**	**145.84**	**307**	P	**PKPab**	**13 32 47.3**	**+0.7**
	baz=112						
JOW	**Kunigami**	**146.06**	**138**	PKPbc	**PKPab**	**13 32 49.2**	**+1.1**
	comp=Z,15nm,0.7s,baz=288,slow=11,SNR=4.4						
G30M	**tAoh Zraii Nji**	**146.21**	**318**	P	**PKPbc**	**13 32 47.4**	**+0.6**
	baz=106						
EPYK	**Eagle Plains**	**146.23**	**317**	P	**PKPbc**	**13 32 47.6**	**+0.7**
	baz=106,SNR=35						
YUK3	**Moose Creek**	**146.33**	**308**	P	**PKPbc**	**13 32 47.7**	**+0.2**
	baz=110,SNR=11						
NJ2	**Nanjing**	**146.45**	**121**	⇓PKPbc	**PKPbc**	**13 32 49.0**	**+0.5**
NJ2				sPKP		13 32 54.8	
I29M	**Ogilvie Camp,**	**146.57**	**315**	P	**PKPbc**	**13 32 48.0**	**+0.1**
	baz=107,SNR=9.8						
DAWY	**Dawson**	**146.62**	**312**	PKPdf	**PKPbc**	**13 32 48.5**	**+0.4**
DAWY	**Dawson**	**146.62**	**312**	P	**PKPbc**	**13 32 48.5**	**+0.4**
	baz=108						
BVCY	**Beaver Creek**	**146.72**	**309**	P	**PKPbc**	**13 32 49.0**	**+0.6**
	baz=109,SNR=25						
M27K	**Edge Creek, AK**	**147.15**	**309**	PKPbc	**PKPbc**	**13 32 51.0**	**+1.2**
M27K	**Edge Creek, AK**	**147.15**	**309**	P	**PKPbc**	**13 32 50.0**	**+0.2**
	baz=109,SNR=12						
BCAR	**Beaver Creek A**	**147.34**	**310**	PKPbc	**PKPbc**	**13 32 51.0**	**+0.9**
MCARA	**McCarthy VSAT**	**147.34**	**307**	P	**PKPbc**	**13 32 51.1**	**+0.9**
	baz=110						
L27K	**Beaver Creek,**	**147.35**	**310**	P	**PKPbc**	**13 32 50.4**	**+0.3**
	baz=108						
VRDI	**Verde Repeater**	**147.49**	**306**		**PKPbc**	**13 32 51.5**	**+0.7**
TIY	**Taiyuan**	**147.51**	**106**	*e*PKPbc	**PKPbc**	**13 32 52.0**	**+0.6**
TIY				LR	LR		
	comp=Z,220nm,21.3s						
TIY				LR	LR		
	comp=Z,150nm,19.2s						
TIY				LR	LR		
	comp=Z,260nm,17.2s						
EGAK	**Eagle**	**147.56**	**313**	P	**PKPbc**	**13 32 50.6**	**0.0**
	baz=106,SNR=19						
M26K	**Nabesna, AK**	**147.66**	**308**	P	**PKPbc**	**13 32 51.4**	**+0.3**
	baz=108						
GLB	**Gilahina Butte**	**147.72**	**307**		**PKPbc**	**13 32 52.6**	**+1.4**
K27K	**Chicken**	**147.74**	**312**	PKPbc	**PKPbc**	**13 32 52.3**	**+1.2**
K27K	**Chicken**	**147.74**	**312**	P	**PKPbc**	**13 32 51.3**	**+0.1**
	baz=106						
I27K	**Kandik River**	**147.96**	**315**	P	**PKPbc**	**13 32 52.0**	**+0.2**
	baz=104						
L26K	**Log Cabin Wild**	**148.00**	**310**	PKPbc	**PKPbc**	**13 32 52.5**	**+0.7**
L26K	**Log Cabin Wild**	**148.00**	**310**	P	**PKPbc**	**13 32 52.6**	**+0.7**
	baz=107,SNR=26						
H27K	**Steamboat Moun**	**148.07**	**316**	P	**PKPbc**	**13 32 52.7**	**+0.7**
	baz=103						
N25K	**Chitina, Valde**	**148.13**	**307**	P	**PKPbc**	**13 32 52.7**	**+0.3**
	baz=108						
BTO	**Baotou**	**148.22**	**100**	⇓*i*PKPbc	**PKPbc**	**13 32 54.0**	**+0.7**
G27K	**Doyon Strip**	**148.25**	**317**	P	**PKPbc**	**13 32 52.7**	**+0.2**
	baz=102						
EYAK	**Cordova Ski Ar**	**148.32**	**304**	P	**PKPbc**	**13 32 53.5**	**+0.7**
	baz=109						
DOT	**Dot Lake**	**148.49**	**310**	PKPbc	**PKPbc**	**13 32 54.0**	**+0.9**
E27K	**Coleen River**	**148.49**	**319**	P	**PKPbc**	**13 32 53.2**	**+0.1**
	baz=100						
HNS	**HongShan**	**148.50**	**109**	⇑PKPbc	**PKPbc**	**13 32 54.5**	**+0.6**
HNS				*e*PP	**PP**	**13 36 30.0**	**+6.2**
HNS				LR	LR		
	comp=Z,300nm,22.0s						
HNS				LR	LR		
	comp=Z,230nm,22.1s						
I26K	**Coal Creek Min**	**148.52**	**314**	PKPbc	**PKPbc**	**13 32 54.0**	**+0.9**
I26K	**Coal Creek Min**	**148.52**	**314**	P	**PKPbc**	**13 32 53.7**	**+0.5**
	baz=103						
SCRK	**Sand Creek**	**148.54**	**311**	PKPbc	**PKPbc**	**13 32 54.4**	**+1.0**
SCRK	**Sand Creek**	**148.54**	**311**	P	**PKPbc**	**13 32 54.3**	**+0.9**
	baz=105,SNR=36						
HARP	**HAARP**	**148.62**	**308**	P	**PKPbc**	**13 32 53.9**	**+0.4**
	baz=106						
KLU	**Klutina**	**148.70**	**306**	P	**PKPbc**	**13 32 54.9**	**+1.0**
	baz=108						
NRIK	**Noril'sk**	**148.71**	**38**	PKPbc	**PKPbc**	**13 32 54.4**	**+0.9**
	comp=Z,50nm,0.9s,baz=255,slow=0.6,SNR=67						
RIDG	**Independent Ri**	**148.85**	**310**	PKPbc	**PKiKP**	**13 32 55.4**	**-0.1**
RIDG	**Independent Ri**	**148.85**	**310**	P	**PKPbc**	**13 32 55.2**	**+1.1**
	baz=105,SNR=56						
TIA	**Tai'an**	**148.88**	**114**	⇓PKPbc	**PKPbc**	**13 32 55.3**	**+0.3**
PAX	**Paxson**	**148.92**	**309**	P	**PKPbc**	**13 32 54.9**	**+0.5**
	baz=105,SNR=21						
P23K	**Montague Islan**	**148.92**	**303**	P	**PKPbc**	**13 32 54.4**	**+0.1**
	baz=109						
M24K	**Tolsona, Glenn**	**149.00**	**307**	P	**PKPbc**	**13 32 55.3**	**+0.8**
	baz=106,SNR=24						
G26K	**Porcupine Rive**	**149.10**	**317**	P	**PKPbc**	**13 32 55.2**	**+0.6**
	baz=100						
HHC	**Hu-ho-hao-te**	**149.24**	**101**	*e*PKPbc	**PKPdf**	**13 32 50.0**	**-1.6**
K24K	**Donnelly Dome**	**149.26**	**310**	P	**PKPbc**	**13 32 55.5**	**+0.4**
	baz=104						
F26K	**Sheenjek River**	**149.37**	**318**	P	**PKPbc**	**13 32 56.1**	**+0.9**
	baz=99						
SCM	**Sheep Creek Mo**	**149.44**	**306**	PKPbc	**PKiKP**	**13 32 57.0**	**+0.2**
SCM	**Sheep Creek Mo**	**149.44**	**306**	PKP2	**PKiKP**	**13 32 57.0**	**+0.2**
SCM	**Sheep Creek Mo**	**149.44**	**306**	P	**PKiKP**	**13 32 56.8**	**+0.1**
	baz=106						
C27K	**Jago River**	**149.45**	**322**	P	**PKiKP**	**13 32 56.4**	**-0.1**
	baz=96						
BMAR	**Burnt Mountain**	**149.49**	**318**		**PKiKP**	**13 32 56.9**	**+0.2**
PRP	**Porcupine Dome**	**149.53**	**314**	PKPbc	**PKiKP**	**13 32 57.0**	**+0.1**
PRP	**Porcupine Dome**	**149.53**	**314**	P	**PKPbc**	**13 32 56.4**	**+0.5**
	baz=101						
MOY	**Mondy**	**149.58**	**76**	*e*PKHKP	PKPpre	13 32 52.0	
MOY				pmax	pmax		
	comp=Z,124nm,1.8s						
FYU	**Fort Yukon**	**149.60**	**316**	PKPbc	**PKiKP**	**13 32 57.3**	**+0.5**
M23K	**Glacier View**	**149.61**	**306**	P	**PKPbc**	**13 32 56.8**	**+0.8**
	baz=106,SNR=11						
PWL	**Port Wells**	**149.63**	**304**	PKPbc	**PKiKP**	**13 32 57.4**	**+0.3**
PWL	**Port Wells**	**149.63**	**304**	P	**PKPbc**	**13 32 56.8**	**+0.7**
	baz=107						
KNK	**Knik Glacier**	**149.84**	**305**	PKPbc	**PKiKP**	**13 32 57.6**	**+0.1**
KNK	**Knik Glacier**	**149.84**	**305**	P	**PKPbc**	**13 32 57.4**	**+0.8**
	baz=106						
SML	**Sawmill**	**149.89**	**306**	PKPbc	**PKPbc**	**13 32 57.6**	**+0.8**
SML	**Sawmill**	**149.89**	**306**	P	**PKPbc**	**13 32 57.5**	**+0.8**
	baz=105,SNR=13						
HDA	**Harding Lake**	**149.90**	**311**	PKPbc	**PKiKP**	**13 32 57.8**	**+0.3**
HDA	**Harding Lake**	**149.90**	**311**	P	**PKPbc**	**13 32 57.0**	**+0.4**
	baz=102,SNR=17						
F25K	**Christian Rive**	**149.92**	**318**	P	**PKiKP**	**13 32 57.8**	**+0.3**
	baz=98						
IL31		**149.95**	**312**	PKPbc	**PKiKP**	**13 32 57.9**	**+0.4**
ILAR	**Eielson Array**	**149.95**	**312**	PKPbc	**PKPbc**	**13 32 56.4**	**-0.3**
	comp=Z,29nm,0.8s,baz=128,slow=2.2,SNR=156						
ILAR				SKP		13 36 29.5	
	comp=Z,2.6nm,1.0s,baz=96,slow=1.9,SNR=4.4						
ILAR	**Eielson Array**	**149.95**	**312**	PKPbc	**PKPbc**	**13 32 57.5**	**+0.8**
ILAR	**Eielson Array**	**149.95**	**312**	PKP2	**PKPbc**	**13 32 57.5**	**+0.8**
E25K	**Arctic Village**	**149.96**	**319**	P	**PKiKP**	**13 32 57.9**	**+0.3**
	baz=97						
G25K	**Bearman Lake**	**149.98**	**316**	P	**PKiKP**	**13 32 58.4**	**+0.8**
	baz=99						
GHO	**Glory Hole Cre**	**150.16**	**306**	PKPbc	**PKiKP**	**13 32 58.7**	**+0.5**
O22K	**Cooper Landing**	**150.18**	**303**	P	**PKPbc**	**13 32 58.2**	**+0.8**
	baz=107						
PMR	**Palmer**	**150.20**	**305**	P	**PKiKP**	**13 32 58.3**	**+0.1**
	baz=105						
ZAK	**Zakamensk**	**150.22**	**79**	*e*PKIKP	**PKPdf**	**13 32 52.7**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,76nm,1.1s						
POKR	**Poker Plat Res**	**150.24**	**313**	P	**PKPbc**	**13 32 57.8**	**+0.4**
	baz=100						
WAT1	**Susitna Watana**	**150.25**	**308**	P	**PKPbc**	**13 32 58.3**	**+0.8**
	baz=104						
CCB	**Clear Creek Bu**	**150.31**	**312**	PKPbc	**PKPbc**	**13 32 57.8**	**+0.3**
RC01	**Rabbit Creek A**	**150.35**	**304**	P	**PKiKP**	**13 32 58.9**	**+0.3**
	baz=106,SNR=14						
JCJ	**Chichijima**	**150.35**	**160**	PKPbc	**PKPbc**	**13 32 57.7**	**-1.1**
	comp=Z,35nm,0.6s,baz=228,slow=18,SNR=1.9						
D25K	**Kavik River**	**150.36**	**321**	P	**PKPbc**	**13 32 58.0**	**+0.4**
	baz=94						
COLA	**College**	**150.37**	**312**	PKPbc	**PKPbc**	**13 32 57.8**	**+0.1**
COLA	**College**	**150.37**	**312**	PKIKP	**PKPbc**	**13 32 57.8**	**+0.1**
COLA	**College**	**150.37**	**312**	P	**PKPbc**	**13 32 58.0**	**+0.3**
	baz=100						
TCOL	**CIGO, UAF Yank**	**150.38**	**312**	P	**PKPbc**	**13 32 58.0**	**+0.3**
	baz=100,SNR=10						
WRH	**Wood River Hil**	**150.40**	**311**	PKPbc	**PKPbc**	**13 32 58.3**	**+0.5**
BRSE	**Bradley Lake S**	**150.44**	**301**	P	**PKPbc**	**13 32 58.8**	**+0.7**
	baz=107						
G24K	**Hadweenzic Riv**	**150.51**	**316**	P	**PKiKP**	**13 32 59.2**	**+0.4**
	baz=98						
RND	**Reindeer**	**150.51**	**309**		**PKiKP**	**13 32 59.6**	**+0.7**
RND	**Reindeer**	**150.51**	**309**	PKIKP	**PKiKP**	**13 32 59.6**	**+0.7**
H24K	**Noodor Dome**	**150.55**	**314**	PKPbc	**PKiKP**	**13 32 59.2**	**+0.3**
H24K	**Noodor Dome**	**150.55**	**314**	P	**PKPbc**	**13 32 58.6**	**+0.4**
	baz=99,SNR=13						
MDM	**Murphy Dome**	**150.55**	**312**	PKPbc	**PKPbc**	**13 32 58.3**	**+0.2**
MCK	**McKinley**	**150.62**	**310**	PKPbc	**PKiKP**	**13 32 59.6**	**+0.6**
MCK	**McKinley**	**150.62**	**310**	PKIKP	**PKiKP**	**13 32 59.6**	**+0.6**
MCK	**McKinley**	**150.62**	**310**	P	**PKiKP**	**13 32 59.3**	**+0.3**
	baz=102,SNR=42						
CNPM	**China Poot**	**150.62**	**301**		**PKiKP**	**13 32 59.4**	**+0.2**
SONM	**Songino Array**	**150.63**	**86**	PKP	**PKPdf**	**13 32 53.9**	**+0.3**
	comp=Z,3.5nm,0.8s,baz=207,slow=2.4,SNR=21						
SONM				PKPbc	**PKPbc**	**13 32 59.4**	**+0.3**
	comp=Z,49nm,0.7s,baz=219,slow=2.7,SNR=158						
SONM	**Songino Array**	**150.63**	**86**	PKPbc	**PKPbc**	**13 32 59.8**	**+0.7**
SONM	**Songino Array**	**150.63**	**86**	PKIKP	**PKPbc**	**13 32 59.8**	**+0.7**
KDAK	**Kodiak Island**	**150.73**	**297**		**PKiKP**	**13 32 59.8**	**+0.4**
KDAK	**Kodiak Island**	**150.73**	**297**	PKIKP	**PKiKP**	**13 32 59.8**	**+0.4**
KDAK	**Kodiak Island**	**150.73**	**297**	P	**PKiKP**	**13 32 59.6**	**+0.3**
	baz=110						
F24K	**Squaw Lake**	**150.76**	**317**	P	**PKiKP**	**13 32 59.9**	**+0.7**
	baz=96						
NEA2	**Nenana**	**150.84**	**311**	P	**PKPbc**	**13 32 59.2**	**+0.4**
	baz=100,SNR=16						
HOM	**Homer**	**150.86**	**301**	P	**PKiKP**	**13 32 59.8**	**+0.2**
	baz=107						
OHAK	**Old Harbor**	**150.90**	**296**	P	**PKPbc**	**13 32 59.8**	**+0.7**
	baz=110						
Q20K	**Shuyak Island**	**150.91**	**299**	P	**PKiKP**	**13 33 00.2**	**+0.5**
	baz=108						
SUA	**Susitna One**	**150.92**	**305**	PKPbc	**PKiKP**	**13 33 00.7**	**+0.9**
SUA	**Susitna One**	**150.92**	**305**	P	**PKiKP**	**13 33 00.3**	**+0.5**
	baz=104,SNR=14						
CUT	**Chulitna**	**150.92**	**307**	P	**PKiKP**	**13 33 00.3**	**+0.7**
	baz=103						
CAPN	**Captain Cook N**	**150.93**	**303**	P	**PKiKP**	**13 33 00.4**	**+0.7**
	baz=105						
E24K	**Your Creek**	**151.04**	**319**	P	**PKiKP**	**13 33 00.1**	**+0.2**
	baz=94						
I23K	**Minto, Yukon-K**	**151.05**	**312**	PKPbc	**PKPbc**	**13 32 59.6**	**+0.3**
I23K	**Minto, Yukon-K**	**151.05**	**312**	P	**PKPbc**	**13 32 59.6**	**+0.3**
	baz=99,SNR=13						
TRF	**Thorofare Moun**	**151.15**	**309**		**PKPbc**	**13 33 00.5**	**+0.7**
TRF	**Thorofare Moun**	**151.15**	**309**	P	**PKPbc**	**13 33 00.5**	**+0.7**
	baz=101						
C24K	**Franklin Bluff**	**151.20**	**322**	P	**PKiKP**	**13 33 00.3**	**+0.3**
	baz=91						
H23K	**Yukon River**	**151.22**	**314**	PKPbc	**PKiKP**	**13 33 00.6**	**+0.4**
H23K	**Yukon River**	**151.22**	**314**	P	**PKPbc**	**13 33 00.3**	**+0.6**
	baz=98,SNR=9.7						
SKT	**Skwentna**	**151.41**	**306**		**PKiKP**	**13 33 01.2**	**+0.5**
SKT	**Skwentna**	**151.41**	**306**	P	**PKPbc**	**13 33 00.8**	**+0.5**
	baz=103						
KTH	**Kantishna Hill**	**151.45**	**309**	PKPbc	**PKPbc**	**13 33 01.0**	**+0.6**
SPU	**Mount Spurr**	**151.46**	**304**	PKPbc	**PKiKP**	**13 33 01.4**	**+0.5**
E23K	**Chandalar**	**151.46**	**318**	P	**PKPbc**	**13 33 00.8**	**+0.5**
	baz=93						
TOLK	**Toolik Lake Re**	**151.48**	**320**	PKPbc	**PKiKP**	**13 33 01.3**	**+0.6**
TOLK	**Toolik Lake Re**	**151.48**	**320**	P	**PKPbc**	**13 33 00.6**	**+0.4**
	baz=92						
G23K	**Bananza Creek**	**151.52**	**316**	P	**PKiKP**	**13 33 01.6**	**+0.7**
	baz=96						
SPCR	**Spurr Chakacha**	**151.54**	**304**	P	**PKPbc**	**13 33 01.2**	**+0.5**
	baz=104						
BPAW	**Bear Paw Mtn.**	**151.57**	**310**		**PKPbc**	**13 33 01.2**	**+0.6**
BPAW	**Bear Paw Mtn.**	**151.57**	**310**	P	**PKPbc**	**13 33 01.0**	**+0.4**
	baz=100,SNR=35						
MLY	**Manley**	**151.61**	**312**	P	**PKPbc**	**13 33 00.6**	**-0.1**
	baz=98,SNR=11						
RSO	**Redoubt South**	**151.61**	**302**	PKPbc	**PKiKP**	**13 33 01.8**	**+0.3**
Q19K	**Cape Douglas,**	**151.62**	**299**	PKPbc	**PKiKP**	**13 33 01.6**	**+0.3**
Q19K	**Cape Douglas,**	**151.62**	**299**	P	**PKPbc**	**13 33 01.2**	**+0.3**
	baz=107						
P19K	**Oil Pt**	**151.63**	**300**	PKPbc	**PKPbc**	**13 33 01.0**	**+0.2**
P19K	**Oil Pt**	**151.63**	**300**	P	**PKPbc**	**13 33 01.1**	**+0.2**
	baz=106						
COLD	**Coldfoot**	**151.63**	**317**	PKPbc	**PKiKP**	**13 33 02.1**	**+1.1**
COLD	**Coldfoot**	**151.63**	**317**	P	**PKiKP**	**13 33 01.9**	**+0.9**
	baz=94						
IRK	**Irkutsk**	**151.65**	**76**	*e*PKIKP	**PKPdf**	**13 32 54.7**	**-0.1**
IRK				pmax	pmax		
	comp=Z,89nm,1.8s						
ILSW	**Iliamna Southw**	**151.68**	**301**	PKPbc	**PKPbc**	**13 33 01.2**	**+0.2**
D23K	**Nanushuk River**	**151.89**	**320**	P	**PKiKP**	**13 33 02.2**	**+0.7**
	baz=91						
PPLA	**Purkeypile**	**151.89**	**307**	PKPbc	**PKPbc**	**13 33 02.0**	**+0.5**
PPLA	**Purkeypile**	**151.89**	**307**	P	**PKPbc**	**13 33 01.9**	**+0.5**
	baz=101						
CAST	**Castle Rocks**	**151.94**	**308**	PKPbc	**PKPbc**	**13 33 01.9**	**+0.4**
CAST	**Castle Rocks**	**151.94**	**308**	P	**PKPbc**	**13 33 01.6**	**+0.1**
	baz=100						
CHUM	**Lake Minchumin**	**152.12**	**309**	P	**PKPbc**	**13 33 02.1**	**+0.3**
	baz=99						
M20K	**Styx River**	**152.12**	**305**	PKPbc	**PKPbc**	**13 33 02.1**	**+0.1**
M20K	**Styx River**	**152.12**	**305**	P	**PKPbc**	**13 33 01.8**	**-0.2**
	baz=102						
I21K	**Tanana**	**152.15**	**312**	PKPbc	**PKiKP**	**13 33 02.5**	**+0.4**
I21K	**Tanana**	**152.15**	**312**	P	**PKPbc**	**13 33 02.1**	**+0.3**
	baz=97						
Q18K	**Katmai Hardscr**	**152.22**	**298**	P	**PKPbc**	**13 33 02.3**	**0.0**
	baz=107						
E22K	**Anaktuvuk Pass**	**152.29**	**319**	P	**PKiKP**	**13 33 02.8**	**+0.3**
	baz=91						
O19K	**Port Alsworth**	**152.30**	**301**		**PKPbc**	**13 33 02.6**	**+0.4**
O19K	**Port Alsworth**	**152.30**	**301**	P	**PKPbc**	**13 33 02.3**	**0.0**
	baz=104,SNR=13						
F22K	**John River**	**152.41**	**317**	P	**PKiKP**	**13 33 03.0**	**+0.4**
	baz=92						
N19K	**Bonanza Creek**	**152.53**	**302**	PKPbc	**PKPbc**	**13 33 03.0**	**0.0**
N19K	**Bonanza Creek**	**152.53**	**302**	P	**PKPbc**	**13 33 02.9**	**0.0**
	baz=103						
P18K	**Big Mountain,**	**152.54**	**299**	PKPbc	**PKPbc**	**13 33 03.1**	**+0.2**
P18K	**Big Mountain,**	**152.54**	**299**	P	**PKPbc**	**13 33 03.1**	**+0.2**
	baz=105						
H21K	**Melozitna Rive**	**152.54**	**313**	PKPbc	**PKiKP**	**13 33 03.9**	**+0.9**
H21K	**Melozitna Rive**	**152.54**	**313**	P	**PKiKP**	**13 33 03.4**	**+0.5**
	baz=95,SNR=8.1						
Q17K	**Contact Creek**	**152.55**	**297**	P	**PKPbc**	**13 33 03.4**	**+0.3**
	baz=107						
L20K	**Farewell, AK**	**152.58**	**306**	P	**PKPbc**	**13 33 02.9**	**0.0**
	baz=100						
R17K	**Ugashik Creek**	**152.62**	**295**	P	**PKPbc**	**13 33 03.1**	**0.0**
	baz=108						
O18K	**Koktuh Hills**	**152.65**	**300**	PKPbc	**PKiKP**	**13 33 03.7**	**+0.4**
O18K	**Koktuh Hills**	**152.65**	**300**	P	**PKPbc**	**13 33 03.2**	**0.0**
	baz=104,SNR=11						
JNU	**Nakatsue**	**152.68**	**137**	PKPbc	**PKPbc**	**13 33 04.2**	**+0.1**
	comp=Z,9.7nm,0.8s,baz=156,slow=10.0,SNR=7.6						
M19K	**Big River Lodg**	**152.71**	**305**	PKPbc	**PKPbc**	**13 33 03.7**	**+0.5**
M19K	**Big River Lodg**	**152.71**	**305**	P	**PKPbc**	**13 33 03.3**	**+0.1**
	baz=101						
K20K	**Telida**	**152.81**	**308**	PKPbc	**PKiKP**	**13 33 04.0**	**+0.4**
K20K	**Telida**	**152.81**	**308**	P	**PKiKP**	**13 33 04.0**	**+0.4**
	baz=98						
G21K	**Allakaket**	**152.89**	**315**	P	**PKiKP**	**13 33 04.2**	**+0.6**
	baz=93						
F21K	**Alatna River**	**152.91**	**317**	P	**PKiKP**	**13 33 04.5**	**+0.9**
	baz=92						
IMAR	**Indian Mountai**	**152.96**	**314**		**PKiKP**	**13 33 05.1**	**+1.3**
L19K	**White Mountain**	**152.98**	**305**	PKPbc	**PKiKP**	**13 33 04.8**	**+0.8**
L19K	**White Mountain**	**152.98**	**305**	P	**PKiKP**	**13 33 04.9**	**+0.9**
	baz=100						
Q16K	**King Salmon**	**153.06**	**297**	P	**PKiKP**	**13 33 05.1**	**+1.0**
	baz=106						
O17K	**Koliganek Bris**	**153.55**	**300**	P	**PKiKP**	**13 33 05.9**	**+0.7**
	baz=103						
A21K	**Barrow**	**153.72**	**326**	P	**PKiKP**	**13 33 06.6**	**+1.4**
	baz=80						
XLT	**XiLinHaoTe**	**153.77**	**101**	*e*P	**PKiKP**	**13 33 07.0**	**+0.7**
XLT				pmax	pmax		
	comp=Z,14nm,1.0s						
XLT				pmax	pmax		
	comp=Z,93nm,3.6s						
P16K	**Nushagak River**	**153.82**	**298**	P	**PKPab**	**13 33 19.2**	**+0.3**
	baz=104						
SDPT	**Sand Point**	**154.01**	**289**	P	**PKPab**	**13 33 21.1**	**+1.2**
	baz=110						
GCSA	**Galena City Sc**	**154.19**	**311**	P	**PKPab**	**13 33 21.6**	**+1.3**
	baz=94						
KSRS	**Korea Array**	**155.14**	**127**	PKP	**PKPdf**	**13 32 58.9**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=158,slow=1.3,SNR=2.8						
KSRS				PKPab	**PKPab**	**13 33 25.5**	**+0.4**
	comp=Z,3.6nm,0.8s,baz=211,slow=3.6,SNR=8.7						
KSRS	**Korea Array**	**155.14**	**127**	PKIKP	**PKPdf**	**13 32 59.0**	**-1.3**
RDOG	**Red Dog Mine**	**156.44**	**319**	P	**PKPab**	**13 33 31.2**	**+1.2**
	baz=80						
CIT	**Chita**	**156.71**	**83**	*e*PKP2	**PKPab**	**13 33 30.5**	**-1.1**
CIT				pmax	pmax		
	comp=Z,140nm,1.5s						
NIKH	**Nikolski High**	**157.75**	**279**	P	**PKPab**	**13 33 36.9**	**+0.9**
	baz=112						
MJAR	**Matsushiro Arr**	**158.36**	**146**	PKPab	**PKPab**	**13 33 38.4**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=192,slow=4.5,SNR=3.0						
BOD	**Bodaibo**	**158.76**	**68**	*e*PKIKP	**PKPdf**	**13 33 03.3**	**-0.9**
BOD				pmax	pmax		
	comp=Z,39nm,1.7s						
CN2	**Changchun**	**158.77**	**113**	PKP	**PKPdf**	**13 33 05.0**	**+0.3**
CN2				PP	**PP**	**13 37 24.3**	**+2.6**
CN2				LR	LR		
	comp=Z,200nm,18.0s						
CN2				LR	LR		
	comp=Z,200nm,18.0s						
CN2				LR	LR		
	comp=Z,300nm,20.0s						
TNA	**Tin City**	**158.81**	**313**	P	**PKPab**	**13 33 41.2**	**+1.0**
	baz=81						
TIXI	**Tiksi**	**161.03**	**23**	PKP	**PKPdf**	**13 33 06.8**	**+0.4**
	comp=Z,0.3nm,0.2s,baz=270,slow=23,SNR=1.5						
TIXI				PKPab	**PKPab**	**13 33 50.0**	**+0.3**
	comp=Z,4.5nm,0.7s,baz=270,slow=23,SNR=11						
TIXI				PP	**PP**	**13 37 32.0**	**-1.4**
	comp=Z,1.0nm,0.6s,baz=270,slow=6.7,SNR=9.1						
BNX	**BinXian**	**161.11**	**111**	⇑P	**PKPab**	**13 33 50.3**	**-0.5**
BNX				pmax	pmax		
	comp=Z,21nm,1.0s						
BNX				pmax	pmax		
	comp=Z,240nm,4.4s						
MDJ	**Mudanjiang**	**161.47**	**117**	PKP	**PKPdf**	**13 33 08.5**	**+0.8**
USRK	**Ussuriysk Ar.**	**162.35**	**122**	PKPab	**PKPab**	**13 33 55.4**	**-0.9**
	comp=Z,6.6nm,1.0s,baz=204,slow=4.4,SNR=5.5						
HEH	**HeiHe**	**163.74**	**99**	PKP	**PKPdf**	**13 33 09.5**	**-0.2**
HEH				PKPab	**PKPab**	**13 34 01.5**	**-0.7**
HEH				LR	LR		
	comp=Z,420nm,16.1s						
HEH				LR	LR		
	comp=Z,220nm,15.5s						
HEH				LR	LR		
	comp=Z,480nm,18.4s						
ZEA	**Zeya**	**165.06**	**87**	*i* PKP2	**PKPab**	**13 34 08.7**	**+0.8**
ZEA				*e*		14 04 54.6	
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KLR	**Kul'dur**	**165.58**	**108**	PKP	**PKPdf**	**13 33 11.1**	**-0.3**
	comp=Z,2.2nm,0.8s,baz=293,slow=6.0,SNR=7.7						
KLR				PKPab	**PKPab**	**13 34 09.6**	**-0.7**
	comp=Z,12nm,0.8s,baz=263,slow=4.5,SNR=20						
KLR				PP	**PP**	**13 37 53.5**	**-4.6**
	comp=Z,0.8nm,0.5s,baz=319,slow=20,SNR=4.5						
BILL	**Bilibino**	**166.19**	**339**	⇓*e*PKP2	**PKPab**	**13 34 13.4**	**+0.9**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GRNR	**Gornyy**	**168.94**	**110**	⇑*i*PKP2	**PKPab**	**13 34 25.6**	**+0.4**
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YSS	**Yuzh-Sakhalins**	**169.17**	**140**	*i* PKIKP	**PKPdf**	**13 33 14.5**	**+0.5**
YSS				*e*		13 34 25.0	
YSS				*e*		13 38 12.3	
YSS				*e*SS	SS	13 59 07.0	-2.1
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SEY	**Seymchan**	**172.76**	**2**	PKP	**PKPdf**	**13 33 14.4**	**-1.0**
	comp=Z,3.7nm,1.1s,baz=305,slow=1.4,SNR=4.1						
SEY				PKPab	**PKPab**	**13 34 42.1**	**+0.5**
	comp=Z,5.9nm,0.9s,baz=26,slow=2.8,SNR=10.0						
PETK	**Petropavlovsk-**	**176.18**	**229**	PKP	**PKPdf**	**13 33 16.9**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=169,slow=8.3,SNR=4.6						
PETK				PKPab	**PKPab**	**13 34 57.0**	**-0.2**
	comp=Z,4.8nm,0.9s,baz=97,slow=9.5,SNR=8.9						

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*IDC **30** 13:13:52.9±1.2, 16°.21S×69°.76W, h199^{km}±9^{km}, mb3.4/4, mbtmp4.1/9, Error ellipse: s-maj=19.6km s-min=18.4km az=157.0*

*GUC **30** 13:13:55.4±0.6, 16°.63S×70°.11W, h212^{km}±4^{km}, ML3.0*

*VAO **30** 13:13:56.4±1.9, 16°.33S×69°.56W, h182^{km}, mb4.1*

ISC 30 13:13:52.1±0.7**, 16°.38S**±0°.06×**69°.91W**±0°.07**, h200^{km}, n34, σ1^{s}80**/45**, mb4.0**/3**, 1C-9D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.71**	**87**	P	**Pn**	**13 14 29.3**	**+0.8**
	55nm,0.4s,baz=272,slow=6.2,SNR=167						
LPAZ				S	**Sn**	**13 14 54.6**	**-1.9**
	117nm,0.5s,baz=295,slow=20,SNR=32						
LPAZ	**La Paz**	**1.71**	**87**	*e*P	**Pn**	**13 14 29.4**	**+0.9**
PB16	**IPOC Station P**	**1.98**	**169**	⇓*i*P	**Pn**	**13 14 33.1**	**+2.0**
PB16				*i* S	**Sn**	**13 15 02.6**	**+1.1**
PB16				IAML		13 15 07.1	
	comp=N,69nm,0.6s						
PB12	**IPOC Station P**	**2.26**	**190**	⇓*i*P	**Pn**	**13 14 33.7**	**+0.3**
PB12				*i* S	**Sn**	**13 15 03.4**	**-2.4**
MNMC	**Minye Minye**	**2.75**	**174**	⇓*i*P	**Pn**	**13 14 40.4**	**+1.2**
MNMC				*i* S	**Sn**	**13 15 14.7**	**-1.3**
GO01	**Chusmiza**	**3.34**	**168**	⇓*i*P	**Pn**	**13 14 47.7**	**+1.5**
GO01				*i* S	**Sn**	**13 15 28.1**	**-0.7**
PB11	**IPOC Station P**	**3.37**	**176**	⇓*i*P	**Pn**	**13 14 46.9**	**+0.6**
PB11				*i* S	**Sn**	**13 15 26.6**	**-2.4**
PB08	**IPOC Station P**	**3.81**	**169**	⇓*i*P	**Pn**	**13 14 53.2**	**+1.3**
PB08				*i* S	**Sn**	**13 15 36.9**	**-2.0**
TA01	**Diego Aracena**	**4.17**	**183**	⇑*i*P	**Pn**	**13 14 56.0**	**-0.1**
TA01				*i* S	Sn	13 15 41.6	-4.7
PB01	**IPOC Station P**	**4.66**	**175**	⇓*i*P	**Pn**	**13 15 02.3**	**+0.1**
PB01				*i* S	**Sn**	**13 15 53.1**	**-4.4**
PB02	**IPOC Station P**	**4.91**	**180**	⇓*i*P	**Pn**	**13 15 05.7**	**+0.1**
PB02				*i* S	Sn	13 15 58.7	-4.8
PB09	**IPOC Station P**	**5.42**	**173**	*e*P	**Pn**	**13 15 12.6**	**+0.5**
PB09				*i* S	**Sn**	**13 16 12.3**	**-3.1**
PB03	**IPOC Station P**	**5.64**	**179**	⇓*i*P	**Pn**	**13 15 14.7**	**-0.1**
PB03				*i* S	Sn	13 16 14.2	-6.1
LVC	**Limon Verde**	**6.27**	**171**	P	**Pn**	**13 15 24.2**	**+1.0**
	comp=N,14nm,0.3s,baz=11,slow=9.3,SNR=64						
LVC				S	**Sn**	**13 16 30.7**	**-4.6**
	comp=N,34nm,0.4s,baz=348,slow=20,SNR=16						
NNA	**Nana**	**8.01**	**302**	P	**Pn**	**13 15 47.2**	**+1.5**
	comp=N,16nm,0.3s,baz=135,slow=16,SNR=5.7						
NNA				S	**Sn**	**13 17 12.9**	**-3.1**
	comp=N,14nm,0.3s,baz=30,slow=20,SNR=4.7						
SIV	**San Ignacio**	**8.50**	**89**	P	**Pn**	**13 15 49.8**	**-2.1**
	comp=N,8.6nm,0.4s,baz=270,slow=8.4,SNR=29						
BBSD	**Serra de San D**	**8.95**	**96**	*e*P	**Pn**	**13 15 56.1**	**-1.6**
VILB	**Vilhena**	**9.99**	**71**	*e*P	**Pn**	**13 16 11.0**	**-0.4**
PTLB	**Pontes e Lacer**	**10.41**	**86**	*e*P	**Pn**	**13 16 15.3**	**-1.3**
SALV	**Santo Antonio**	**13.67**	**90**	*e*P	**P**	**13 16 58.8**	**-1.6**
CFA	**Coronel Fontan**	**15.23**	**175**	P	**P**	**13 17 20.0**	**+2.4**
	comp=N,5.0nm,0.5s,baz=351,slow=13,SNR=9.4						
CPUP	**Villa Florida**	**15.33**	**132**	P	**P**	**13 17 20.6**	**+2.0**
	comp=N,1.1nm,0.5s,baz=258,slow=12,SNR=1.9						
ITTB	**Itaituba**	**18.34**	**51**	*e*P	**Pn**	**13 17 53.1**	**-1.1**
FRBT	**Francisco Belt**	**18.37**	**124**	*e*P	**Pn**	**13 17 54.7**	**+0.1**
SNDB	**Serra Nova Dou**	**18.57**	**79**	*e*P	**Pn**	**13 17 55.8**	**-1.2**
PTGB	**Pitanga**	**18.64**	**119**	*e*P	**Pn**	**13 17 57.4**	**-0.5**
FRTB	**Fartura**	**20.34**	**113**	*e*P	**P**	**13 18 15.6**	**+2.3**
IPMB	**Ipameri, GO**	**20.79**	**98**	*e*P	**P**	**13 18 18.2**	**+0.1**
BDFB	**Brasilia**	**21.06**	**91**	P	**P**	**13 18 20.6**	**-0.4**
	comp=N,2.3nm,0.4s,baz=267,slow=14,SNR=5.3						

	comp=N,2.3nm,0.4s						
SMTB	**Santa Maria do**	**23.01**	**74**	*e*P	**P**	**13 18 41.2**	**+1.4**
PLCA	**Paso Flores**	**24.27**	**181**	P	**P**	**13 18 53.6**	**+2.6**
	comp=N,3.0nm,0.7s,baz=2.6,slow=9.5,SNR=8.5						
	comp=N,3.0nm,0.7s						
DBIC	**Dimbokro**	**68.30**	**76**	P	**P**	**13 24 31.9**	**-0.1**
	comp=N,8.7nm,1.1s,baz=209,slow=7.4,SNR=0.9						
	comp=N,8.7nm,1.1s						
YKA	**Yellowknife Ar**	**86.07**	**341**	P	**P**	**13 26 08.9**	**-0.9**
	baz=133,slow=5.2,SNR=1.5						
WRA	**Warramunga Arr**	**136.75**	**214**	PKP	**PKiKP**	**13 32 53.8**	**+0.5**
	comp=N,0.2nm,0.3s,baz=139,slow=1.8,SNR=5.7						

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*VAO **30** 13:24:59.3±0.8, 11.°06S×74.°46W, h10km, mb4.5*

*NEIC **30** 13:25:11.5±1.9, 10.°71S±0.°07×73.°69W±0.°10, h138km±9km, mb4.5/10, Error ellipse: s-maj=14.2km s-min=10.0km az=103.0*

*IDC **30** 13:25:12.3±0.7, 10.°56S×73.°50W, h130km±6km, mb3.7/13, mbtmp4.2/18, Error ellipse: s-maj=16.1km s-min=12.0km az=71.0*

ISC 30 13:25:12.1±0.4**, 10.°70S**±0.°05×**73.°64W**±0.°05**, h138km, n78, σ1ˢ64**/85**, mb4.0**/15**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZSB	**Cruzeiro do Su**	**3.10**	**17**	Pn	**Pn**	**13 25 59.8**	**-0.5**
NNA	**Nana**	**3.39**	**248**	P	**Pn**	**13 26 04.8**	**+0.7**
	409nm,0.3s,baz=68,slow=12,SNR=64						
NNA				S	**Sn**	**13 26 40.7**	**-3.6**
	860nm,0.4s,baz=150,slow=20,SNR=4.4						
NNA	**Nana**	**3.39**	**248**	Pn	**Pn**	**13 26 03.2**	**-0.9**
ATAH	**Atahualpa**	**5.89**	**307**	P	**Pn**	**13 26 36.9**	**-0.7**
	8.7nm,0.3s,baz=122,slow=12,SNR=30						
ATAH				S	**Sn**	**13 27 42.4**	**-1.9**
	55nm,0.4s,baz=176,slow=15,SNR=5.7						
ETMB	**Extrema**	**7.36**	**84**	Pn	**Pn**	**13 26 57.2**	**+0.3**
ETMB	**Extrema**	**7.36**	**84**	*e*P	**Pn**	**13 26 57.3**	**+0.3**
TBTG	**Tabatinga, AM**	**7.46**	**30**		**Pn**	**13 26 57.6**	**-0.6**
TBTG	**Tabatinga, AM**	**7.46**	**30**	*e*P	**Pn**	**13 26 58.3**	**0.0**
LPAZ	**La Paz**	**7.71**	**137**	P	**Pn**	**13 27 04.3**	**+2.1**
	2.1nm,0.4s,baz=322,slow=6.8,SNR=8.1						
LPAZ	**La Paz**	**7.71**	**137**	Pn	**Pn**	**13 27 04.0**	**+1.8**
PB12	**IPOC Station P**	**8.49**	**158**	Pn	**Pn**	**13 27 11.7**	**-0.5**
PB16	**IPOC Station P**	**8.57**	**153**	Pn	**Pn**	**13 27 12.9**	**-0.9**
MNMC	**Minye Minye**	**9.24**	**155**	Pn	**Pn**	**13 27 22.8**	**+0.4**
PB11	**IPOC Station P**	**9.79**	**157**	Pn	**Pn**	**13 27 29.8**	**+0.2**
PORT	**Chimborazo Vol**	**10.50**	**331**	Pn	**Pn**	**13 27 38.4**	**-1.2**
CHSH	**Refugio Sur-Vo**	**10.52**	**330**	Pn	**Pn**	**13 27 39.9**	**+0.1**
SLOR	**San Lorenzo -**	**11.02**	**334**	Pn	**Pn**	**13 27 44.9**	**-1.5**
SALI	**Salinas**	**11.18**	**319**	Pn	**Pn**	**13 27 46.5**	**-1.5**
PB07	**IPOC Station P**	**11.54**	**162**	Pn	**Pn**	**13 27 52.0**	**-0.9**
MACC	**Macarena, Meta**	**12.77**	**359**	*e*P	**Pn**	**13 28 07.3**	**-1.5**
GARC	**Garzon, Huila**	**12.94**	**352**	*e*P	**Pn**	**13 28 09.9**	**-1.4**
BBAC	**Balboa, Cauca**	**13.14**	**344**	*e*P	**Pn**	**13 28 15.2**	**+1.4**
SIV	**San Ignacio**	**13.30**	**115**	P	**Pn**	**13 28 17.3**	**+1.5**
	6.4nm,0.4s,baz=282,slow=11,SNR=21						
SIV				S	**Sn**	**13 30 39.8**	**-3.0**
	3.1nm,0.5s,baz=255,slow=14,SNR=1.7						
VILB	**Vilhena**	**13.34**	**101**	Pn	**Pn**	**13 28 16.9**	**+0.8**
VILB	**Vilhena**	**13.34**	**101**	*e*P	**Pn**	**13 28 17.7**	**+1.5**
JAMC	**Jamundi, Valle**	**14.15**	**348**	*e*P	**P**	**13 28 30.4**	**+0.4**
BBSD	**Serra de San D**	**14.19**	**118**	*e*P	**Pn**	**13 28 27.6**	**+0.6**
PRAC	**Prado**	**14.38**	**355**	Pn	**Pn**	**13 28 27.4**	**-1.9**
PRAC	**Prado**	**14.38**	**355**	*e*P	**P**	**13 28 32.1**	**-0.2**
ORTC	**Ortega, Tolima**	**14.61**	**354**	*e*P	**P**	**13 28 34.2**	**-0.7**
VILC	**Villavicencio,**	**14.72**	**360**	*e*P	**P**	**13 28 36.2**	**-0.1**
MACA	**Manacapuru-AM**	**14.88**	**61**	Pn	**Pn**	**13 28 34.5**	**-1.1**
PTLB	**Pontes e Lacer**	**14.89**	**110**	Pn	**Pn**	**13 28 34.2**	**-1.5**
PTLB	**Pontes e Lacer**	**14.89**	**110**	*e*P	**P**	**13 28 37.6**	**-0.3**
ANIL	**Santa Ana**	**15.20**	**353**	*e*P	**P**	**13 28 45.9**	**+4.2**
CHIC	**Chingaza**	**15.23**	**360**	*e*P	**P**	**13 28 43.6**	**+1.4**
ROSC	**El Rosal**	**15.46**	**357**	P	**P**	**13 28 48.1**	**+3.5**
	18nm,0.5s,baz=267,slow=7.4,SNR=5.9						
PLMC	**San Jos del P**	**15.73**	**350**	*e*P	**P**	**13 28 50.0**	**+2.6**
RUSC	**La Rusia**	**16.50**	**2**		**P**	**13 28 56.5**	**+0.3**
RUSC				IAmb	IAmb	13 29 09.0	
	comp=Z,34nm,1.0s						
RUSC	**La Rusia**	**16.50**	**2**	*e*P	**P**	**13 28 57.7**	**+1.4**
PDRB	**Porto dos Gac**	**16.61**	**95**	*e*P	**Pn**	**13 28 59.3**	**+2.2**
CBOC	**Ciudad Bolivar**	**16.63**	**352**	*e*P	**P**	**13 28 59.1**	**+1.6**
PTBC	**PUERTO BERRIO,**	**17.15**	**357**	*e*P	**Pn**	**13 29 03.4**	**-0.2**
DBBC	**Dabeiba**	**17.79**	**352**	*e*P	**Pn**	**13 29 11.7**	**+0.5**
PAMC	**Pamplona, Colo**	**17.95**	**3**	*e*P	**Pn**	**13 29 13.3**	**-0.3**
SALV	**Santo Antonio**	**18.20**	**108**	*e*P	**Pn**	**13 29 18.8**	**+2.6**
PANT	**Pantanal (Braz**	**18.39**	**119**	*e*P	**Pn**	**13 29 20.1**	**+1.8**
BOAV	**Boa Vista**	**18.43**	**46**	P	**P**	**13 29 16.0**	**-1.1**
BOAV				IAmb	IAmb	13 29 19.6	
	comp=Z,27nm,0.7s						
BOAV	**Boa Vista**	**18.43**	**46**	*e*P	**Pn**	**13 29 17.9**	**-0.9**
SDV	**Santo Domingo**	**19.69**	**9**	P	**P**	**13 29 30.8**	**-0.1**
	comp=Z,9.5nm,0.4s,baz=192,slow=13,SNR=12						
SDV				S	**S**	**13 33 10.6**	**+4.9**
	comp=Z,3.2nm,0.7s,baz=246,slow=20,SNR=2.4						
SDV	**Santo Domingo**	**19.69**	**9**	P	**P**	**13 29 29.3**	**-1.6**
SDV				IAmb	IAmb	13 29 33.5	
	comp=Z,23nm,1.1s						
BAUV	**El Baul**	**20.30**	**16**	P	**P**	**13 29 35.4**	**-1.8**
SJCC	**San Jacinto, C**	**20.52**	**356**	*e*P	**P**	**13 29 40.0**	**+0.3**
BCIP	**Isla Barro Col**	**20.68**	**342**	P	**P**	**13 29 41.7**	**+0.4**
URIC	**Uribia, Colomb**	**22.32**	**4**	P	**P**	**13 29 54.4**	**-4.1**
URIC				IAmb	IAmb	13 29 56.3	
	comp=Z,14nm,0.6s						
PCRV	**Puerto La Cruz**	**22.59**	**24**	P	**P**	**13 30 00.8**	**-0.5**
	comp=Z,4.7nm,0.4s,baz=195,slow=5.4,SNR=5.6						
	comp=Z,4.7nm,0.4s						
PLCA	**Paso Flores**	**30.03**	**175**	P	**P**	**13 31 10.3**	**+2.2**
	comp=Z,2.0nm,0.5s,baz=357,slow=9.9,SNR=12						
	comp=Z,2.0nm,0.5s						
TKL	**Tuckaleechee C**	**47.09**	**349**	P	**P**	**13 33 31.4**	**+1.3**
	comp=Z,5.2nm,0.8s,baz=222,slow=8.9,SNR=2.8						
	comp=Z,5.2nm,0.8s						
TXAR	**Lajitas Array**	**49.23**	**325**	P	**P**	**13 33 47.2**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=150,slow=9.3,SNR=11						
TXAR				pP	**pP**	**13 34 18.0**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=149,slow=8.8,SNR=4.4						
	comp=Z,0.4nm,0.4s						
TXAR	**Lajitas Array**	**49.23**	**325**	P	**P**	**13 33 46.9**	**+0.1**
TX31	**Lajitas Ar. Si**	**49.23**	**325**	P	**P**	**13 33 47.1**	**+0.3**
PDAR	**Pinedale Array**	**62.53**	**331**	P	**P**	**13 35 22.1**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=111,slow=5.0,SNR=2.0						
PDAR				pP	**pP**	**13 35 54.5**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=128,slow=8.5,SNR=3.9						
	comp=Z,0.3nm,0.6s						
ULM	**Lac du Bonnet**	**63.73**	**344**	P	**P**	**13 35 27.5**	**-1.4**
ULM				IAmb	IAmb	13 35 36.8	
	comp=Z,5.9nm,1.0s						
DBIC	**Dimbokro**	**70.61**	**79**	P	**P**	**13 36 11.9**	**-1.1**
	comp=Z,0.8nm,0.3s,baz=270,slow=20,SNR=8.4						
	comp=Z,0.8nm,0.3s						
SNAA	**Sanae**	**73.90**	**162**	P	**P**	**13 36 34.0**	**+2.4**
	comp=Z,3.2nm,0.6s,baz=320,slow=12,SNR=2.1						
	comp=Z,3.2nm,0.6s						
SNAA	**Sanae**	**73.90**	**162**	P	**P**	**13 36 31.9**	**+0.2**
SNAA				IAmb	IAmb	13 36 34.9	
	comp=Z,3.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**78.42**	**74**	P	**P**	**13 36 57.8**	**-0.4**
	comp=Z,3.7nm,0.8s,baz=246,slow=3.8,SNR=17						
TORD				pP	**pP**	**13 37 31.0**	**-1.7**
	comp=Z,4.6nm,0.9s,baz=252,slow=4.4,SNR=9.6						
	comp=Z,3.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.42**	**74**	P	**P**	**13 36 55.0**	**-3.1**
QSPA	**South Pole Qui**	**79.42**	**180**	P	**P**	**13 37 04.5**	**+1.7**
	comp=Z,1.6nm,0.6s,baz=213,slow=1.0,SNR=17						
	comp=Z,1.6nm,0.6s						
QSPA	**South Pole Qui**	**79.42**	**180**	P	**P**	**13 37 01.7**	**-1.2**
YKA	**Yellowknife Ar**	**79.56**	**342**	P	**P**	**13 37 04.0**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=141,slow=5.8,SNR=5.1						
YKA				pP	**pP**	**13 37 35.6**	**-2.4**
	comp=Z,0.6nm,0.6s,baz=143,slow=5.9,SNR=2.3						
	comp=Z,0.6nm,0.6s						
ESDC	**Sonseca Array**	**81.60**	**47**	P	**P**	**13 37 14.2**	**-0.6**
	comp=Z,1.5nm,1.0s,baz=258,slow=6.3,SNR=5.6						
	comp=Z,1.5nm,1.0s						
RES	**Resolute Bay**	**86.24**	**354**	P	**P**	**13 37 39.5**	**+1.9**
	comp=Z,0.8nm,0.7s,baz=94,slow=1.7,SNR=1.6						
	comp=Z,0.8nm,0.7s						
VNDA	**Vanda**	**86.62**	**190**	P	**P**	**13 37 41.9**	**+2.4**
	comp=Z,1.4nm,0.9s,baz=122,slow=3.8,SNR=6.2						
	comp=Z,1.4nm,0.9s						
KLR	**Kul'dur**	**136.17**	**336**	PKP	**PKiKP**	**13 44 18.4**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=8.1,slow=7.1,SNR=1.8						
ASAR	**Alice Springs**	**136.50**	**218**	PKP	**PKiKP**	**13 44 20.8**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=131,slow=2.3,SNR=2.7						
MKAR	**Makanchi Array**	**138.64**	**25**	PKhKP	PKPpre	13 44 17.9	
	comp=Z,0.4nm,0.9s,baz=270,slow=1.4,SNR=2.3						
WRA	**Warramunga Arr**	**138.94**	**222**	PKP	**PKiKP**	**13 44 24.6**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=133,slow=1.6,SNR=4.9						

NNC 30 13:28:15.3±3.5**, 37.°12N**×**71.°87E, h0km, mb3.6, mpv2.8, 4C-1D, Error ellipse: s-maj=33.4km s-min=23.5km az=124.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.20**	**15**	⇑P	Pn	13 29 34.9	+0.1
	0.4nm,0.9s						
AML				⇑S	Sn	13 30 36.5	+0.8
	0.4nm,0.6s						
KK31	**Karatay Array**	**6.07**	**351**	⇑P	Pn	13 29 46.7	+0.4
	0.8nm,0.3s,baz=172,slow=12,SNR=9.8						
KK31				⇓S	Sn	13 30 58.0	+1.5
	0.7nm,0.3s,baz=174,slow=24,SNR=4.7						
AB31	**Akbulak array**	**14.90**	**328**	P	Pn	13 31 44.1	-3.0
	0.3nm,0.4s,baz=144,slow=14,SNR=10						
AKTO	**Aktyubinsk**	**16.61**	**328**	⇑P	P	13 32 11.1	-0.9
	19nm,1.1s						

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*IDC **30** 13:33:09.6±1.1, 17.°28S×172.°61W, h0km, mb4.0/7, mbtmp4.0/8, ML3.7/1, Error ellipse: s-maj=45.7km s-min=18.3km az=127.0*

ISC 30 13:33:11.6±0.9**, 17.°2S**±0.°1×**172.°6W**±0.°3**, h17km, n11, σ1ˢ33**/11**, mb4.1**/8**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.38**	**14**	Pn	**Pn**	**13 34 03.3**	**-0.4**
	7.0nm,0.3s,baz=201,slow=16,SNR=24						
AFI				Sn	**Sn**	**13 34 41.4**	**-2.1**
	49nm,0.3s,baz=177,slow=19,SNR=11						
	20nm,0.3s						
RAO	**Raoul Island**	**12.94**	**201**	Pn	**Pn**	**13 36 13.3**	**-1.5**
	88nm,0.3s,baz=30,slow=20,SNR=4.2						
URZ	**Urewera**	**22.83**	**201**	P	**P**	**13 38 13.1**	**-0.7**
	5.7nm,0.4s,baz=24,slow=2.9,SNR=10.0						
URZ				S	S	13 42 09.3	-13
	5.7nm,1.0s,baz=343,slow=19,SNR=2.2						
	5.7nm,0.4s						
RPZ	**Rata Peaks**	**29.82**	**204**	P	P	13 39 22.8	+5.0
	2.1nm,0.3s,baz=11,slow=17,SNR=3.5						
STKA	**Stephens Creek**	**43.82**	**242**	P	**P**	**13 41 18.4**	**+1.4**
	1.9nm,0.7s,baz=90,slow=18,SNR=3.0						
	1.9nm,0.7s						
WRA	**Warramunga Arr**	**50.20**	**258**	P	**P**	**13 42 06.5**	**-0.5**
	1.3nm,0.8s,baz=95,slow=7.4,SNR=8.2						
	1.3nm,0.8s						
ASAR	**Alice Springs**	**50.30**	**253**	P	**P**	**13 42 07.5**	**-0.2**
	3.2nm,0.7s,baz=88,slow=8.4,SNR=55						
	3.2nm,0.7s						
NVAR	**Mina Array Bea**	**75.17**	**41**	P	**P**	**13 44 55.0**	**+1.4**
	0.4nm,0.5s,baz=242,slow=9.4,SNR=3.6						
	0.4nm,0.5s						
PDAR	**Pinedale Array**	**83.11**	**41**	P	**P**	**13 45 36.7**	**-0.2**
	0.3nm,0.6s,baz=214,slow=3.1,SNR=2.5						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**84.07**	**11**	P	**P**	**13 45 42.5**	**+1.6**
	0.9nm,0.7s,baz=238,slow=6.5,SNR=13						
	0.9nm,0.7s						
BRTR	**Keskin Array B**	**148.03**	**320**	PKPbc	**PKiKP**	**13 52 58.7**	**+0.1**
	1.1nm,0.7s,baz=114,slow=3.0,SNR=4.2						

DDA 30 13:36:34.6±0.0**, 39.°11N**×**29.°07E, h7km**±2km**, ML1.5, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.28**	**257**	P	Pg	13 36 40.6	+0.5
DEMI				*i* AML	AML	13 36 44.0	
	comp=N,156nm,0.3s						
DEMI				S	Sg	13 36 44.6	+0.7
DEMI				*i* AML	AML	13 36 46.0	
	comp=E,80nm,0.3s						
DEMI	**Demirci**	**0.28**	**257**	P	Pg	13 36 40.7	+0.6
DEMI				*i* AML	AML	13 36 44.0	
	comp=N,156nm,0.3s						
DEMI				S	Sg	13 36 44.5	+0.6
DEMI				*i* AML	AML	13 36 46.0	
	comp=E,80nm,0.3s						
GDZ	**Gediz**	**0.32**	**93**	P	Pg	13 36 41.3	+0.4
GDZ	**Gediz**	**0.32**	**93**	P	Pg	13 36 41.5	+0.6
GDZ				*i* AML	AML	13 36 46.0	
	comp=E,59nm,0.2s						
GDZ				S	Sg	13 36 46.0	+0.8
GDZ				*i* AML	AML	13 36 47.0	
	comp=N,27nm,0.4s						
GDZ	**Gediz**	**0.32**	**93**	P	Pg	13 36 41.3	+0.4
GDZ				S	Sg	13 36 45.8	+0.5
GDZ				*i* AML	AML	13 36 46.0	
	comp=E,59nm,0.2s						
USAK	**Uak-Merkez**	**0.39**	**186**	P	Pb	13 36 43.1	-0.8
USAK				S	Sg	13 36 48.8	+1.4
USAK				*i* AML	AML	13 36 49.0	
	comp=E,34nm,0.1s						
USAK				*i* AML	AML	13 36 51.0	
	comp=N,47nm,0.6s						
USAK	**Uak-Merkez**	**0.39**	**186**	P	Pb	13 36 43.1	-0.8
USAK				*i* AML	AML	13 36 48.0	
	comp=E,31nm,0.7s						
USAK				S	Sb	13 36 49.0	-1.2
USAK				*i* AML	AML	13 36 51.0	
	comp=N,47nm,0.6s						
ANDZ	**Kutahya, Merke**	**0.76**	**58**	P	Pb	13 36 50.4	+0.2
PASA	**Karahalli, USA**	**0.82**	**156**	P	Pb	13 36 50.9	-0.4
PASA				S	Sg	13 37 01.8	+0.7
PASA				*i* AML	AML	13 37 07.0	
	comp=N,12nm,1.0s						
PASA				*i* AML	AML	13 37 07.0	
	comp=E,25nm,0.6s						
PASA	**Karahalli, USA**	**0.82**	**156**	P	Pg	13 36 50.7	+0.3
PASA				S	Sg	13 37 01.8	+0.6
PASA				*i* AML	AML	13 37 07.0	
	comp=N,12nm,1.0s						
PASA				*i* AML	AML	13 37 07.0	
	comp=E,25nm,0.6s						
ULDT	**Uludag**	**1.04**	**3**	P	Pg	13 36 54.1	-0.4
ULDT				*i* AML	AML	13 37 00.0	
	comp=E,7.0nm,0.7s						
ULDT				S	Sg	13 37 06.7	-1.3
ULDT				*i* AML	AML	13 37 14.0	
	comp=N,16nm,0.5s						
BILE	**Bilecik/Merkez**	**1.23**	**30**	P	Pn	13 36 58.3	0.0
BILE				*i* AML	AML	13 37 17.0	
	comp=E,12nm,0.6s						
BORA	**Eskisehir**	**1.32**	**54**	P	Pn	13 36 59.4	-0.2
BORA				*i* AML	AML	13 37 12.0	
	comp=E,7.4nm,0.9s						
BORA				S	Sb	13 37 17.0	0.0
BORA				*i* AML	AML	13 37 19.0	
	comp=N,9.5nm,0.5s						

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*IDC **30** 13:55:56.5±2.0, 57.°68S×24.°12W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=75.4km s-min=35.6km az=11.0*

ISC 30 13:55:58.4±0.8**, 57.°6S**±0.°2×**24.°2W**±0.°3**, h10km, n16, σ0ˢ92**/11**, mb3.9**/4**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.78**	**159**	P	**Pn**	**13 59 26.9**	**-0.2**
VNA3	**Neumayer Olymp**	**15.02**	**162**	P	**Pn**	**13 59 29.5**	**-1.0**
VNA2	**Neumayer--Watz**	**15.17**	**159**	P	**Pn**	**13 59 31.6**	**-0.9**
	baz=322,slow=14						
TROLL	**Troll, Antarti**	**18.15**	**153**	P	**P**	**14 00 12.3**	**+1.7**
CPUP	**Villa Florida**	**39.05**	**309**	P	**P**	**14 03 25.0**	**-0.2**
	1.4nm,0.7s,baz=148,slow=8.4,SNR=1.9						
	1.4nm,0.7s						
H10S2	**ASCENSION HYDR**	**49.05**	**13**	T	T	14 57 52.5	
	baz=186						
H10S3	**ASCENSION HYDR**	**49.05**	**12**	T	T	14 57 47.8	
	baz=34						
SIV	**San Ignacio**	**49.82**	**311**	P	**P**	**14 04 51.6**	**+0.2**
	0.4nm,0.3s,baz=138,slow=8.3,SNR=1.6						
	0.4nm,0.3s						
H10N1	**ASCENSION HYDR**	**50.16**	**13**	T	T	14 59 09.3	
	baz=186						
H10N3	**ASCENSION HYDR**	**50.17**	**13**	T	T	14 59 16.7	
	baz=186,slow=74						
H10N2	**ASCENSION HYDR**	**50.18**	**13**	T	T	14 59 09.1	
	baz=186,slow=74						
LPAZ	**La Paz**	**52.60**	**303**	P	**P**	**14 05 13.7**	**+0.7**
	1.2nm,0.6s,baz=153,slow=4.5,SNR=4.5						
	1.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.62**	**26**	P	**P**	**14 07 32.1**	**+0.3**
	2.1nm,0.8s,baz=200,slow=6.5,SNR=10						
	2.1nm,0.8s						
YKA	**Yellowknife Ar**	**138.41**	**316**	PKP	**PKPdf**	**14 15 22.0**	**-0.5**
	0.7nm,1.0s,baz=137,slow=2.7,SNR=6.0						
SONM	**Songino Array**	**149.16**	**87**	PKPbc	**PKPbc**	**14 15 45.1**	**-1.0**
	0.6nm,0.7s,baz=237,slow=2.4,SNR=3.8						
ILAR	**Eielson Array**	**152.36**	**309**	PKPbc	**PKiKP**	**14 15 52.9**	**-0.4**
	0.9nm,0.9s,baz=119,slow=1.1,SNR=5.6						

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*JMA **30** 14:04:31.0±0.3, 24°N±1°×12°2E±°, h31km±1km, MV2.8/11, TAIWAN REGION*

*TAP **30** 14:04:32.5, 24.°30N×121.°63E, h22km, ML3.5, B*

ISC 30 14:04:32.6±0.8**, 24.°28N**±0.°01×**121.°65E**±0.°02**, h23km**±4km**, n148, σ0ˢ95**/251**, 12C-22D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.09**	**73**	⇑*i*P	**Pb**	**14 04 37.0**	**+0.2**
	baz=85						
EHP				S	**Sb**	**14 04 40.3**	**+0.5**
	baz=85						
NACB	**Ninganchiao**	**0.12**	**204**	P	**Pb**	**14 04 37.1**	**-0.1**
NACB	**Ninganchiao**	**0.12**	**204**	⇑*i*P	**Pb**	**14 04 37.1**	**-0.1**
	baz=193						
NACB				S	**Sb**	**14 04 40.3**	**+0.1**
	baz=193						
ETL	**Fush Village**	**0.13**	**191**	⇑*i*P	**Pb**	**14 04 37.2**	**0.0**
	baz=188						
ETL				*e*S	**Sb**	**14 04 40.7**	**+0.3**
	baz=188						
ENA	**Nanau**	**0.17**	**30**	⇑*i*P	**Pb**	**14 04 37.7**	**+0.1**
	baz=41						
ENA				S	**Sb**	**14 04 41.1**	**0.0**
	baz=41						
ETLH	**Xiulin Townshi**	**0.17**	**243**	⇑*i*P	**Pb**	**14 04 37.8**	**0.0**
	baz=236						
ETLH				S	**Sb**	**14 04 41.0**	**-0.3**
	baz=236						
EWUT	**Wuta**	**0.20**	**36**	⇑*i*P	**Pb**	**14 04 38.1**	**+0.1**
	baz=43						
EWUT				S	**Sb**	**14 04 41.8**	**+0.1**
	baz=43						
TWD	**Chiawan**	**0.21**	**193**	⇑*i*P	**Pb**	**14 04 38.1**	**0.0**
	baz=179						
TWD				*e*S	**Sb**	**14 04 42.4**	**+0.5**
	baz=179						
LATG	**Datong**	**0.27**	**336**	⇓*i*P	**Pb**	**14 04 38.8**	**-0.4**
	baz=339						
LATG				*i* S	**Sb**	**14 04 43.1**	**-0.6**
	baz=339						
NNSB	**Datong**	**0.28**	**301**	⇓*i*P	**Pb**	**14 04 39.0**	**-0.3**
	baz=306						
NNSB				*i* S	**Sb**	**14 04 43.3**	**-0.5**
	baz=306						
NNSH	**Datong**	**0.28**	**301**	⇓*i*P	**Pb**	**14 04 39.0**	**-0.3**
	baz=300						
NNSH				S	**Sb**	**14 04 43.4**	**-0.4**
	baz=300						
NNS	**Nan Shan**	**0.30**	**302**	⇓*i*P	**Pb**	**14 04 39.1**	**-0.4**
	baz=307						
NNS				*e*S	**Sb**	**14 04 43.6**	**-0.6**
	baz=307						
HWA	**Hwalien**	**0.31**	**188**	⇑P	**Pn**	**14 04 40.1**	**-1.5**
	baz=189						
HWA				*e*S	**Sn**	**14 04 46.2**	**-1.3**
	baz=189						
NDT	**Datong Townshi**	**0.34**	**339**	⇓*i*P	**Pb**	**14 04 39.8**	**-0.3**
	baz=345						
NDT				S	**Sb**	**14 04 44.8**	**-0.4**
	baz=345						
ETM	**Tongmen**	**0.35**	**204**	⇑*i*P	**Pb**	**14 04 39.9**	**-0.3**
	baz=193						
ETM				*e*S	**Sb**	**14 04 45.8**	**+0.4**
	baz=193						
NDS	**Dongshan**	**0.35**	**10**	*e*P	**Pb**	**14 04 40.0**	**-0.3**
	baz=13						
NDS				*e*S	**Sb**	**14 04 45.5**	**-0.1**
	baz=13						
ENTT	**Nioudou**	**0.36**	**348**	⇓*i*P	**Pb**	**14 04 40.1**	**-0.3**
	baz=352						
ENTT				S	**Sb**	**14 04 45.5**	**-0.4**
	baz=352						
TWC	**Suao**	**0.37**	**29**	⇓*i*P	**Pb**	**14 04 40.5**	**0.0**
	baz=30						
TWC				*e*S	**Sb**	**14 04 46.0**	**0.0**
	baz=30						
FUSS	**Fushou**	**0.37**	**264**	⇓*i*P	**Pb**	**14 04 40.8**	**0.0**
	baz=263						
FUSS				S	**Sb**	**14 04 45.8**	**-0.5**
	baz=263						
WHF	**Hehuan Shan**	**0.38**	**249**	⇑*i*P	**Pb**	**14 04 40.9**	**-0.1**
	baz=245						
WHF				S	**Sb**	**14 04 46.1**	**-0.6**
	baz=245						
TEYL	**Yanliau Villag**	**0.42**	**186**	*e*P	**Pb**	**14 04 41.2**	**-0.2**
	baz=189						
TEYL				*e*S	**Sb**	**14 04 47.9**	**+0.6**
	baz=189						
TWT	**Tachien**	**0.43**	**266**	⇓*i*P	**Pb**	**14 04 41.9**	**+0.2**
	baz=261						
TWT				*i* S	**Sb**	**14 04 47.9**	**0.0**
	baz=261						
TWE	**Neicheng**	**0.43**	**2**	⇓*i*P	**Pb**	**14 04 41.4**	**-0.2**
	baz=13						
TWE				S	**Sb**	**14 04 47.4**	**-0.4**
	baz=13						
TDCB	**Techi**	**0.45**	**266**	⇓P	**Pb**	**14 04 42.0**	**0.0**
	baz=261						
TDCB				*i* S	**Sb**	**14 04 47.6**	**-0.7**
	baz=261						
YHNB	**Yeheng**	**0.46**	**327**	P	**Pb**	**14 04 41.9**	**-0.2**
YHNB	**Yeheng**	**0.46**	**327**	⇓*i*P	**Pb**	**14 04 41.8**	**-0.2**
	baz=329						
YHNB				S	**Sb**	**14 04 47.7**	**-0.9**
	baz=329						
NSK	**Sanguang**	**0.47**	**326**	⇓*i*P	**Pb**	**14 04 41.9**	**-0.4**
	baz=328						
NSK				S	**Sb**	**14 04 48.2**	**-0.7**
	baz=328						
FUSB	**Fushanzhiwuyua**	**0.48**	**353**	⇓*i*P	**Pb**	**14 04 42.0**	**-0.4**
	baz=355						
FUSB				S	**Sb**	**14 04 48.2**	**-0.8**
	baz=355						
CHGB	**Renai**	**0.49**	**243**	⇑*i*P	**Pb**	**14 04 42.7**	**0.0**
	baz=240						
CHGB				S	**Sb**	**14 04 49.5**	**0.0**
	baz=240						
ILA	**Ilan**	**0.49**	**11**	*e*P	**Pb**	**14 04 42.5**	**-0.1**
	baz=14						
ILA				*e*S	**Sb**	**14 04 49.4**	**+0.2**
	baz=14						
ESL	**Shilin**	**0.51**	**203**	*e*P	**Pb**	**14 04 42.2**	**-0.6**
	baz=199						
ESL				*e*S	**Sb**	**14 04 49.5**	**-0.4**
	baz=199						
NWLT	**Wulai**	**0.51**	**345**	⇓*e*P	**Pb**	**14 04 42.4**	**-0.5**
	baz=341						
NWLT				S	**Sb**	**14 04 49.4**	**-0.6**
	baz=341						
OWD	**Renai**	**0.54**	**233**	*e*P	**Pb**	**14 04 43.5**	**-0.1**
	baz=230						
OWD				*e*S	**Sb**	**14 04 50.4**	**-0.6**
	baz=230						
WUSB	**Renai**	**0.57**	**239**	⇑*i*P	**Pb**	**14 04 43.9**	**-0.1**
	baz=231						
WUSB				*e*S	**Sb**	**14 04 51.2**	**-0.5**
	baz=231						
TEGC	**Jichi Village**	**0.58**	**190**	P	**Pn**	**14 04 44.2**	**-1.2**
	baz=200						
TEGC				*e*S	**Sn**	**14 04 54.1**	**-0.1**
	baz=200						
NFF	**Wufeng Townshi**	**0.59**	**306**	⇓P	**Pb**	**14 04 44.1**	**-0.3**
	baz=311						
NFF				S	**Sb**	**14 04 51.9**	**-0.5**
	baz=311						
EGS		**0.61**	**25**	*e*P	**Pb**	**14 04 44.7**	**0.0**
	baz=28						
EGS				*e*S	**Sb**	**14 04 53.2**	**+0.3**
	baz=28						
WHP	**Taichung City**	**0.64**	**270**	⇓*i*P	**Pn**	**14 04 45.4**	**-1.0**
	baz=268						
WHP				*e*S	**Sb**	**14 04 53.7**	**0.0**

	baz=268						
EGFH	**Guangfu**	0.65	198	*e*P	Pb	14 04 43.8	-1.4
	baz=196						
EGFH				*e*S	Sb	14 04 53.9	+0.1
	baz=196						
LIOB	**Emei**	0.68	302	⇓*i*P	Pn	14 04 46.0	-0.8
	baz=302						
LIOB				S	Sn	14 04 55.3	-1.5
	baz=302						
NJD	**Zhudong**	0.68	311	P	Pn	14 04 45.9	-0.9
	baz=312						
NJD				*e*S	Sn	14 04 55.7	-1.1
	baz=312						
NSTT	**Nanjuang**	0.68	300	⇓*i*P	Pn	14 04 45.9	-0.9
	baz=301						
NSTT				*i* S	Sb	14 04 54.2	-0.7
	baz=301						
NHDH	**Xindian Distri**	0.69	351	*e*P	Pb	14 04 45.9	0.0
	baz=347						
NHDH				S	Sb	14 04 55.0	+0.1
	baz=347						
WPL	**Puli Township**	0.69	247	*e*P	Pn	14 04 45.9	-1.0
	baz=245						
WPL				*e*S	Sb	14 04 54.9	-0.2
	baz=245						
TWA	**Mucha**	0.70	355	*e*P	Pn	14 04 46.3	-0.7
	baz=4.0						
TWA				S	Sb	14 04 55.4	+0.2
	baz=4.0						
TIPB	**Shuangxi**	0.70	13	*e*P	Pb	14 04 45.9	-0.3
	baz=8.0						
TIPB				*e*S	Sb	14 04 54.7	-0.8
	baz=8.0						
VWDT	**VWDT**	0.70	221	⇓P	Pn	14 04 46.1	-1.0
	baz=224						
VWDT				*e*S	Sn	14 04 56.4	-0.8
	baz=224						
TATO	**Taipei**	0.70	348	P	Pn	14 04 46.4	-0.7
TATO	**Taipei**	0.70	348	P	Pn	14 04 46.5	-0.7
	baz=349						
DPDB	**Guoxing**	0.71	249	P	Pn	14 04 46.5	-0.7
	baz=248						
DPDB				S	Sn	14 04 55.9	-1.6
	baz=248						
WCS	**Beigang Elemen**	0.71	252	P	Pn	14 04 46.3	-0.9
	baz=250						
WCS				*e*S	Sb	14 04 55.4	-0.3
	baz=250						
BACT	**New Taipei Cit**	0.73	345	P	Pn	14 04 47.6	0.0
	baz=351						
BACT				*e*S	Sn	14 04 57.2	-0.8
	baz=351						
HSN1	**Hsinchu**	0.76	311	P	Pn	14 04 47.3	-0.5
	baz=311						
HSN1				*e*S	Sn	14 04 57.9	-0.7
	baz=311						
TAP	**Taipei**	0.76	350	*e*P	Pn	14 04 47.4	-0.6
	baz=352						
TAP				*e*S	Sn	14 04 58.0	-0.7
	baz=352						
NTY	**Taoyuan**	0.78	336	P	Pn	14 04 48.3	+0.1
	baz=335						
NTY				*e*S	Sn	14 04 58.6	-0.6
	baz=335						
TWB1	**Santiao Chiao**	0.78	23	*e*P	Pb	14 04 47.3	-0.3
	baz=25						
TWB1				*e*S	Sb	14 04 57.4	-0.4
	baz=25						
SBCB	**Hsinchu**	0.79	310	P	Pn	14 04 48.3	0.0
	baz=310						
SBCB				S	Sn	14 05 00.7	+1.3
	baz=310						
WFSB	**Wu-fen Shan**	0.79	9	P	Pn	14 04 47.9	-0.5
	baz=10.0						
WFSB				*e*S	Sb	14 04 57.3	-0.7
	baz=10.0						
SMLT	**Sun Moon Lake**	0.79	240	P	Pn	14 04 48.0	-0.5
	baz=232						
SMLT				*e*S	Sn	14 04 58.5	-1.2
	baz=232						
NCUH	**Zhongli**	0.80	328	*e*P	Pn	14 04 48.3	-0.2
	baz=329						
NCUH				*e*S	Sn	14 04 59.7	0.0
	baz=329						
NCU	**National Centr**	0.80	328	P	Pn	14 04 48.4	-0.1
	baz=329						
NCU				*e*S	Sn	14 04 59.7	0.0
	baz=329						
TWQ1	**Liyutan**	0.80	275	⇓*i*P	Pn	14 04 48.6	+0.1
	baz=274						
TWQ1				*e*S	Sn	14 04 59.2	-0.6
	baz=274						
SSLB	**Suanglung**	0.81	232	P	Pn	14 04 47.8	-0.8
SSLB	**Suanglung**	0.81	232	P	Pn	14 04 47.7	-0.9
	baz=230						
SSLB				*e*S	Sn	14 04 58.7	-1.2
	baz=230						
HSN	**Hsinchu**	0.81	310	*e*P	Pn	14 04 48.4	-0.1
	baz=314						
HSN				S	Sn	14 05 00.6	+0.8
	baz=314						
HGSD	**Ruisui**	0.81	195	*e*P	Pb	14 04 46.2	-1.9
	baz=203						
TYC	**Yuchr**	0.82	243	*e*P	Pn	14 04 48.1	-0.6
	baz=241						
TYC				*e*S	Sn	14 04 59.6	-0.4
	baz=241						
NSY	**Sanyi**	0.82	279	⇓*i*P	Pn	14 04 49.3	+0.5
	baz=279						
NSY				*e*S	Sn	14 04 60.0	-0.2
	baz=279						
NMLH	**Miaoli**	0.82	288	*e*P	Pn	14 04 49.1	+0.3
	baz=293						
EHY	**Hungye**	0.83	201	*e*P	Pb	14 04 46.3	-2.1
	baz=192						
EHY				*e*S	Sn	14 05 00.1	-0.4
	baz=192						
SXI1	**Grass Mountain**	0.83	14	*i* P	Pb	14 04 48.4	0.0
	baz=359						
SXI1				S	Sb	14 04 59.2	0.0
	baz=359						
TWS1	**Kuangyinshan**	0.84	346	P	Pn	14 04 49.1	+0.1
	baz=355						
TWS1				S	Sn	14 05 01.1	+0.4
	baz=355						
YM01	**YM01**	0.86	355	*e*P	Pb	14 04 48.5	-0.4
	baz=345						
YM01				*e*S	Sb	14 05 00.4	+0.4
	baz=345						
NTST	**Danshui**	0.90	348	*e*P	Pn	14 04 49.4	-0.3
NTST				*i* S	Sn	14 05 02.6	+0.6
TCU	**Taichung**	0.90	261	*e*P	Pn	14 04 51.0	+1.2
	baz=261						
TCU				*e*S	Sn	14 05 04.8	+2.7
	baz=261						
ANP	**Anpu**	0.91	353	*e*P	Pb	14 04 49.4	-0.3
	baz=354						
ANP				*e*S	Sb	14 05 01.6	+0.2
	baz=354						
WDJ	**Dajia District**	0.92	274	P	Pn	14 04 51.3	+1.2
	baz=274						
WDJ				*e*S	Sn	14 05 04.2	+1.5
	baz=274						
WHYT	**Xinyi Township**	0.93	231	*e*P	Pn	14 04 50.4	0.0
	baz=226						
WHYT				*e*S	Sn	14 05 03.0	-0.1
	baz=226						
YULB	**Yu-li**	0.94	200	P	Pn	14 04 50.1	-0.4
YULB	**Yu-li**	0.94	200	P	Pb	14 04 47.8	-2.5
	baz=198						
YULB				*e*S	Sb	14 05 01.3	-1.1
	baz=198						
WJS	**Zhushan**	0.96	242	P	Pn	14 04 51.7	+1.0
	baz=239						
WJS				*e*S	Sn	14 05 04.9	+1.3
	baz=239						
WNT	**Mingjian**	0.97	246	P	Pn	14 04 52.1	+1.3
	baz=244						
WNT				*e*S	Sn	14 05 06.9	+3.0
	baz=244						
EYUL	**Yuli**	0.98	198	*e*P	Pn	14 04 50.7	-0.2
	baz=196						
EYUL				*e*S	Sn	14 05 05.0	+0.9
	baz=196						
TWY	**Chenhua**	0.99	357	*e*P	Pb	14 04 51.5	+0.5
	baz=348						
TWY				*e*S	Sb	14 05 03.5	-0.1
	baz=348						
WCHH	**Zhanghua**	1.02	259	*i* P	Pb	14 04 52.7	+1.2
	baz=258						
WCHH				S	Sn	14 05 06.9	+1.9
	baz=258						
YUS	**Yu-Shan**	1.02	219	*e*P	Pn	14 04 51.6	-0.3
	baz=226						
YUS				*e*S	Sn	14 05 06.1	+0.4
	baz=226						
ALS	**Alishan**	1.09	225	P	Pb	14 04 53.1	+0.2
	baz=210						
ALS				*e*S	Sn	14 05 08.1	+0.8
	baz=210						
CHN5	**Tsauling**	1.12	233	*e*P	Pb	14 04 54.4	+1.0
	baz=231						
CHN5				*e*S	Sn	14 05 09.8	+2.1
	baz=231						
FULB	**Fuli**	1.13	197	*e*P	Pn	14 04 52.1	-0.9
	baz=195						
FULB				*e*S	Sn	14 05 08.4	+0.6
	baz=195						
WDLH	**Douliu**	1.18	240	P	Pb	14 04 55.3	+1.0
	baz=251						
WDLH				*e*S	Sb	14 05 11.6	+2.6
	baz=251						
JYNG	**Yonagunijimaku**	1.19	82	P	Pb	14 04 54.4	-0.1
JYNG				*e*S	Sb	14 05 10.8	+1.2
EHD	**Haiduan**	1.20	200	*e*P	Pn	14 04 52.5	-1.5
	baz=198						
EHD				*e*S	Sb	14 05 09.2	-0.6
	baz=198						
WRL	**Guolierlin Hig**	1.22	252	*e*P	Pb	14 04 55.3	+0.2
	baz=264						
WRL				*e*S	Sb	14 05 11.9	+1.6
	baz=264						
ELDTW	**Lidau**	1.23	208	*e*P	Pn	14 04 52.8	-1.8
	baz=192						
YOJ	**Yonaguni jima**	1.25	82	P	Pb	14 04 55.4	-0.2
YOJ	**Yonaguni jima**	1.25	82	P	Pb	14 04 55.4	-0.2
YOJ				S	Sb	14 05 12.6	+1.4
YOJ	**Yonaguni jima**	1.25	82	*e*P	Pn	14 04 54.6	-0.1
	baz=83						
YOJ				*e*S	Sb	14 05 11.9	+0.7
	baz=83						
WCKO	**Fanlu**	1.27	229	*e*P	Pb	14 04 56.1	+0.2
	baz=242						
WCKO				*e*S	Sb	14 05 14.1	+2.2
	baz=242						
CHN2	**Minshiung**	1.31	235	*e*P	Pb	14 04 57.6	+1.2
	baz=220						
WTCT	**Ta-ch'eng**	1.32	252	*e*P	Pb	14 04 56.9	+0.3
	baz=264						
WTCT				*e*S	Sb	14 05 14.9	+1.8
	baz=264						
CHN4	**Tsaushan**	1.34	226	*e*P	Pb	14 04 57.8	+0.8
	baz=224						
EDH	**Donghe**	1.34	194	*e*P	Pn	14 04 55.0	-1.0
	baz=192						
EDH				*e*S	Sb	14 05 13.0	-0.8
	baz=192						
TPUB	**Ta-pu**	1.35	224	P	Pb	14 04 57.8	+0.5
TPUB	**Ta-pu**	1.35	224	P	Pb	14 04 57.6	+0.3
	baz=210						
TPUB				*e*S	Sb	14 05 16.3	+2.1
	baz=210						
CHY	**Chiayi**	1.37	235	*e*P	Pb	14 04 57.8	+0.3
	baz=234						
CHY				*e*S	Sb	14 05 17.2	+2.7
	baz=234						
STYH	**Taoyuan**	1.37	216	*e*P	Pb	14 04 57.1	-0.4
	baz=202						
WTP	**Ta-pu**	1.40	223	*e*P	Pb	14 04 58.2	+0.1
	baz=206						
LONT	**Longtian**	1.45	199	*e*P	Pn	14 04 55.9	-1.5
	baz=184						
WSF	**Szhu**	1.46	244	*e*P	Pb	14 04 58.6	-0.4
	baz=257						
WSF				*e*S	Sb	14 05 19.0	+1.9
	baz=257						
TWK	**Hsinying**	1.47	227	*e*P	Pb	14 04 59.7	+0.4
	baz=225						
TWK				*e*S	Sb	14 05 19.4	+1.9
	baz=225						
CHN1	**Nanshi**	1.50	223	*e*P	Pb	14 05 00.3	+0.6
	baz=209						
CHN1				*e*S	Sb	14 05 20.3	+1.9
	baz=209						
WSL	**Shuilin Townsh**	1.51	240	*e*P	Pb	14 04 59.3	-0.5
	baz=252						
WSL				*e*S	Sb	14 05 20.1	+1.6
	baz=252						
TWG	**Pinlang**	1.55	200	*e*P	Pn	14 04 58.2	-0.5
	baz=187						
TWG				*e*S	Sn	14 05 17.3	-0.9
	baz=187						
TWGBT	**Beinan**	1.55	200	P	Pb	14 05 01.5	+0.9
TWGBT	**Beinan**	1.55	200	*e*P	Pn	14 04 56.1	-2.7
	baz=184						
ICHU	**Yijhu**	1.56	234	*e*P	Pb	14 05 01.0	+0.3
	baz=233						
ICHU				S	Sb	14 05 21.7	+1.8
	baz=233						
SLGT	**Liugui**	1.58	216	*e*P	Pb	14 05 01.9	+0.8
	baz=201						
SLGT				*e*S	Sb	14 05 22.7	+2.0
	baz=201						
LDUT	**Ludao**	1.61	186	*e*P	Pn	14 04 59.2	-0.4
	baz=184						
SCST	**Cishan**	1.75	218	*e*P	Pb	14 05 03.5	-0.5
	baz=214						
SSD	**Sandimen**	1.79	212	*e*P	Pb	14 05 03.8	-0.9
	baz=209						
ECL	**Taimali**	1.80	201	*e*P	Pn	14 05 01.3	-0.8
	baz=187						
TSCK	**Chigu Township**	1.83	232	*e*P	Pb	14 05 04.1	-1.2
	baz=228						
IRIF	**Iriomote-Funau**	1.90	88	P	Pn	14 05 03.9	+0.4
IRIF				*e*S	Sn	14 05 27.7	+0.9
MASBT	**Mashibuluo**	1.91	209	*e*P	Pn	14 05 03.8	+0.1
	baz=191						
HATJ	**Hateruma jima**	1.98	96	*e*S	Sn	14 05 29.4	+0.6
EAST	**Anshuo**	2.03	201	*e*P	Pb	14 05 07.3	-1.5
	baz=189						
PNG	**Penghu**	2.04	250	*e*P	Pn	14 05 05.6	0.0
	baz=251						
PNG				*e*S	Sb	14 05 31.6	-2.5
	baz=251						
PHUB	**P'eng-hu**	2.05	248	*e*P	Pn	14 05 05.4	-0.3
	baz=249						
PHUB				*e*S	Sn	14 05 31.1	+0.6
	baz=249						
TAWH	**Dawu Township**	2.06	200	*e*P	Pn	14 05 06.0	+0.2
	baz=189						
WDGT	**Dungji**	2.09	241	*e*P	Pn	14 05 06.8	+0.6
	baz=253						
WDGT				*e*S	Sb	14 05 33.8	-1.5
	baz=253						
VWUC	**VWUC**	2.12	290	*e*P	Pn	14 05 06.3	-0.4
	baz=289						
SCZT	**Fangliau**	2.13	207	*e*P	Pb	14 05 09.0	-1.4
	baz=188						
JKRS	**Kuro-shima**	2.15	91	P	Pn	14 05 08.0	+0.9
SLIU	**Shizi**	2.20	201	*e*P	Pb	14 05 09.8	-1.9
	baz=186						
LAY	**Lan-yu**	2.24	182	*e*P	Pn	14 05 06.9	-1.4
	baz=180						
LYUB	**Lan-yu**	2.27	182	*e*P	Pn	14 05 06.2	-2.5
	baz=180						
JIJ	**Ishigaki jima**	2.28	88	P	Pn	14 05 09.3	+0.5
VCHM	**Qimei**	2.30	243	*e*P	Pn	14 05 09.7	+0.6
	baz=238						
SMST	**Manzhou Townsh**	2.37	199	*e*P	Pn	14 05 11.3	+1.2
	baz=186						
MATB	**Ma-tsu**	2.42	321	*e*P	Pn	14 05 09.7	-1.0
	baz=322						
PTMZ	**Houxiangcun**	2.42	289	*e*P	Pn	14 05 10.4	-0.3
	baz=288						
JISG	**Ishigakijimahi**	2.44	82	P	Pn	14 05 11.1	0.0
JTJ	**Tarama**	2.80	82	*e*S	Sn	14 05 51.5	+2.3
KNM	**Kinmen**	2.94	273	*e*P	Pn	14 05 19.3	+1.5
	baz=272						
XPSS	**Dashiqiu**	2.95	334	*e*P	Pn	14 05 17.6	-0.4
	baz=336						
KNMB	**Chin-men Tao**	2.98	274	*e*P	Pn	14 05 18.1	-0.3
	baz=273						
MHZQ	**Yeshan**	2.98	308	*e*P	Pn	14 05 17.6	-0.8
	baz=308						
ZPLA	**Ao Xicun**	3.58	265	*e*P	Pn	14 05 26.5	-0.2
	baz=264						

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*IDC **30** 14:17:44.2±0.6, 55°.64S×26°.93W, h0^{km}, mb4.5/11, mbtmp4.4/12, ML3.8/1, MS4.1/25, Error ellipse: s-maj=23.4km s-min=16.7km az=63.0*

*NEIC **30** 14:17:45.4±1.7, 55°.6S±0°.1×27°.0W±0°.2, h10^{km}±1^{km}, mb4.7/25, Error ellipse: s-maj=22.0km s-min=19.2km az=59.0*

ISC 30 14:17:47.8±0.5**, 55°.63S**±0°.09×**27°.2W**±0°.1**, h25**^{km}**, n92,** σ**0^{s}.91**/67**, mb4.7**/19**, MS4.2**/28**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	5.50	280		Pn	14 19 07.7	-0.2
ESPZ	**Base Esperanza**	16.85	230	Pn	P	14 21 43.1	-0.4
SNAA	**Sanae**	19.14	157	P	P	14 22 07.6	-1.1
	0.3nm,0.3s,baz=358,slow=11,SNR=8.9						
SNAA				LR	LR	14 29 04.2	
	comp=Z,277nm,19.2s,baz=328,slow=36						
	2.2nm,0.6s						
PMSA	**Palmer Station**	20.16	228	P	P	14 22 20.4	+0.6
	33nm,0.9s,baz=113,slow=17,SNR=1.9						
PMSA				LR	LR	14 29 05.1	
	comp=Z,659nm,20.3s,baz=360,slow=34						
	33nm,0.9s						
PMSA	**Palmer Station**	20.16	228	P	Pn	14 22 21.9	+0.2
BELA	**Belgrano 2**	22.50	184	P	P	14 22 43.5	-1.4
GO08	**Villa O'Higgin**	28.34	265	P	P	14 23 33.4	-5.9
GO08				IAmb	IAmb	14 23 41.9	
	comp=Z,15nm,1.2s						
TRQA	**Tornquist**	29.13	292	P	P	14 23 47.0	+0.5
TRQA				IAmb	IAmb	14 23 57.8	
	comp=Z,18nm,1.2s						
PLTB	**Pedras Altas**	30.20	311	P	P	14 23 53.7	-2.3
AY01	**Puyuhuapi**	30.71	272	P	P	14 23 59.3	-1.0
PLCA	**Paso Flores**	31.90	279	P	P	14 24 14.2	+3.2
	comp=Z,2.4nm,1.1s,baz=339,slow=7.5,SNR=2.3						
PLCA				LR	LR	14 38 17.8	
	comp=Z,253nm,18.0s,baz=117,slow=38						
	comp=Z,2.4nm,1.1s						
QSPA	**South Pole Qui**	34.63	180	P	P	14 24 34.6	0.0
	comp=Z,3.7nm,0.6s,baz=51,slow=1.1,SNR=32						
QSPA				LR	LR	14 38 07.0	
	comp=Z,379nm,19.9s,baz=190,slow=35						
	comp=Z,3.7nm,0.6s						
QSPA	**South Pole Qui**	34.63	180	P	P	14 24 34.7	+0.1
CPUP	**Villa Florida**	36.51	311	P	P	14 24 51.7	+0.8
	comp=Z,2.1nm,0.6s,baz=142,slow=7.9,SNR=5.4						
CPUP				LR	LR	14 39 10.9	
	comp=Z,239nm,20.4s,baz=175,slow=35						
	comp=Z,2.1nm,0.6s						
MT09	**Talagante**	37.16	288	P	P	14 24 56.9	+0.4
MT09				IAmb	IAmb	14 25 08.3	
	comp=Z,20nm,1.4s						
CFA	**Coronel Fontan**	37.37	293	P	P	14 24 58.3	0.0
	comp=Z,7.8nm,0.7s,baz=146,slow=7.1,SNR=3.5						
CFA				LR	LR	14 40 36.1	
	comp=Z,326nm,20.7s,baz=140,slow=37						
	comp=Z,7.8nm,0.7s						
MT02	**Curacav**	37.63	288	P	P	14 25 00.9	+0.5
MT02				IAmb	IAmb	14 25 09.8	
	comp=Z,24nm,1.2s						
MAW	**Mawson**	40.51	144	LR	LR	14 41 33.1	
	comp=Z,184nm,19.8s,baz=252,slow=35						
SUR	**Sutherland**	40.56	75	LR	LR	14 39 24.3	
	comp=Z,333nm,18.2s,baz=178,slow=32						
GO03	**Copiap**	41.61	294	P	P	14 25 33.0	-0.6
GO03				IAmb	IAmb	14 25 45.0	
	comp=Z,11nm,0.8s						
AC02	**Maricunga**	41.66	296	P	P	14 25 33.9	-0.7
AC02				IAmb	IAmb	14 25 47.4	
	comp=Z,18nm,1.0s						
GO02	**Mina Guanaco**	43.27	297	P	P	14 25 48.3	+0.8
PB14	**IPOC Station P**	44.13	297	P	P	14 25 53.3	-1.1
PB14				IAmb	IAmb	14 26 02.0	
	comp=Z,11nm,1.0s						
LVC	**Limon Verde**	45.06	300	P	P	14 26 04.3	+2.4
	comp=Z,4.1nm,0.6s,baz=170,slow=11,SNR=2.8						
LVC				LR	LR	14 44 29.3	
	comp=Z,148nm,21.4s,baz=152,slow=36						
	comp=Z,4.1nm,0.6s						
LVC	**Limon Verde**	45.06	300	P	P	14 26 02.0	+0.1
LVC				IAmb	IAmb	14 26 12.6	
	comp=Z,11nm,0.8s						
BOSA	**Boshof**	45.89	76	LR	LR	14 43 27.5	
	comp=Z,381nm,18.3s,baz=201,slow=34						
BOSA	**Boshof**	45.89	76	P	P	14 25 59.6	-8.5
SBA	**Scott Base**	46.50	184	P	P	14 26 13.5	+1.4
PB02	**IPOC Station P**	46.64	300	P	P	14 26 14.2	+0.1
PB01	**IPOC Station P**	46.67	300	P	P	14 26 15.1	+0.9
PTLB	**Pontes e Lacer**	46.97	316	P	P	14 26 16.5	0.0
PTLB				IAmb	IAmb	14 26 27.6	
	comp=Z,8.6nm,0.9s						
VNDA	**Vanda**	47.00	183	P	P	14 26 17.1	+1.1
	comp=Z,3.6nm,0.6s,baz=179,slow=7.4,SNR=16						
	comp=Z,3.6nm,0.6s						
VNDA	**Vanda**	47.00	183	P	P	14 26 16.4	+0.3
VNDA				IAmb	IAmb	14 26 21.1	
	comp=Z,6.6nm,1.0s						
SIV	**San Ignacio**	47.26	313	LR	LR	14 45 29.3	
	comp=Z,137nm,21.3s,baz=139,slow=35						
H10S2	**ASCENSION HYDR**	47.60	17	T	T	15 18 08.8	
	baz=189,slow=74,SNR=54						
H10S3	**ASCENSION HYDR**	47.60	17	T	T	15 18 09.1	
	baz=31,slow=74,SNR=80						
MNMC	**Minye Minye**	48.35	302	P	P	14 26 27.3	-0.2
H10N1	**ASCENSION HYDR**	48.72	17	T	T	15 19 32.9	
	baz=188,slow=75,SNR=54						
H10N3	**ASCENSION HYDR**	48.72	17	T	T	15 19 32.8	
	baz=188,slow=75,SNR=103						
H10N2	**ASCENSION HYDR**	48.73	17	T	T	15 19 34.3	
	baz=188,slow=75,SNR=78						
LBTB	**Lobatse**	48.91	74	LR	LR	14 43 45.2	
	comp=Z,69nm,20.7s,baz=252,slow=32						
TSUM	**Tsumeb**	49.50	61	LR	LR	14 42 46.8	
	comp=Z,139nm,20.9s,baz=156,slow=30						
LPAZ	**La Paz**	50.11	305	P	P	14 26 43.2	+1.8
	comp=Z,2.0nm,0.6s,baz=132,slow=8.2,SNR=6.8						
LPAZ				LR	LR	14 49 12.0	
	comp=Z,92nm,20.4s,baz=151,slow=38						
	comp=Z,2.0nm,0.6s						
LPAZ	**La Paz**	50.11	305	P	P	14 26 41.5	+0.1
LPAZ				IAmb	IAmb	14 26 53.7	
	comp=Z,9.7nm,0.7s						
LSZ	**Lusaka**	58.24	69	LR	LR	14 50 46.7	
	comp=Z,220nm,18.1s,baz=166,slow=34						
BOAV	**Boa Vista**	63.92	322	P	P	14 28 18.5	0.0
BOAV				IAmb	IAmb	14 28 30.3	
	comp=Z,5.2nm,0.9s						
DBIC	**Dimbokro**	64.79	25	LR	LR	14 49 47.2	
	comp=Z,272nm,21.5s,baz=350,slow=30						
OPO	**Ambohidratompo**	66.10	88	LR	LR	14 51 30.0	
	comp=Z,188nm,20.9s,baz=332,slow=31						
BBTS	**Babate**	70.59	11	LR	LR	14 54 36.4	
	comp=Z,297nm,19.6s,baz=234,slow=31						
ROSC	**El Rosal**	71.59	310	LR	LR	15 01 47.8	
	comp=Z,141nm,20.2s,baz=86,slow=37						
MBAR	**Mbarara**	71.98	63	LR	LR	14 57 34.8	
	comp=Z,171nm,21.3s,baz=198,slow=33						
TOA0	**Torodi Ar. Sit**	72.70	30	P	P	14 29 11.8	-1.5
TOA0				IAmb	IAmb	14 29 21.5	
	comp=Z,5.9nm,1.1s						
TORD	**Torodi Ar. Bea**	72.70	30	P	P	14 29 13.8	+0.4
	comp=Z,5.0nm,0.3s,baz=212,slow=5.1,SNR=14						
TORD				LR	LR	14 54 56.0	
	comp=Z,134nm,21.0s,baz=215,slow=31						
	comp=Z,5.0nm,0.3s						
SDV	**Santo Domingo**	73.69	315	LR	LR	15 06 17.5	
	comp=Z,165nm,18.0s,baz=145,slow=40						
JTS	**Las Juntas de**	81.26	303	LR	LR	15 08 59.8	
	comp=Z,55nm,19.1s,baz=108,slow=38						
TBI	**Tubuai**	87.33	231	*e*LR	LR	14 58 20.3	
	comp=Z,3μm,25.0s						
TBI				*e*LR	LR	14 58 20.5	
	comp=Z,692nm,25.8s						
MDT	**Midelt**	90.19	19	LR	LR	15 05 43.0	
	comp=Z,111nm,19.7s,baz=308,slow=32						
STKA	**Stephens Creek**	92.33	171	P	P	14 30 55.6	-0.1
	comp=Z,2.0nm,0.6s,baz=0.0,slow=0.0,SNR=2.2						
	comp=Z,2.0nm,0.6s						
PPT2	**Papeete2**	92.41	234	*e*LR	LR	15 00 41.8	
	comp=Z,135nm,28.2s						
TAOE	**Nuku Hiva Isla**	95.29	246	*e*LR	LR	15 02 01.8	
	comp=Z,107nm,21.6s						
ASAR	**Alice Springs**	99.40	163	P	Pdif	14 31 27.0	-1.1
	comp=Z,0.3nm,0.7s,baz=182,slow=4.2,SNR=2.6						
ASAR				PP	PP	14 35 30.8	+0.4

	comp=Z,0.6nm,0.9s,baz=195,slow=6.7,SNR=2.6						
	comp=Z,0.3nm,0.7s						
EIL	Elat	100.10	51	LR	LR	15 12 08.4	
	comp=Z,124nm,21.9s,baz=240,slow=33						
DZM	Mont Dzumac	101.74	193	eLR	LR	15 05 00.3	
	comp=Z,166nm,22.4s						
DZM	Mont Dzumac	101.74	193	PP	PP	14 35 48.0	-0.2
	comp=Z,8.1nm,1.0s,baz=176,slow=16,SNR=2.9						
WRA	Warramunga Arr	103.12	162	Pdiff	Pdif	14 31 45.0	+0.4
	comp=Z,0.3nm,1.0s,baz=197,slow=4.4,SNR=1.8						
WRA				PP	PP	14 35 59.4	+0.9
	comp=Z,0.4nm,0.9s,baz=186,slow=6.0,SNR=1.1						
GERES	GERESS Array B	109.59	27	PP	PP	14 36 47.3	+0.1
	comp=Z,0.2nm,0.3s,baz=212,slow=9.2,SNR=1.7						
FINES	FINESS Array B	124.02	28	PKP	PKPdf	14 36 41.2	-1.1
	comp=Z,1.5nm,0.9s,baz=219,slow=1.8,SNR=1.6						
CMAR	Chiang Mai Arr	125.24	110	PKP	PKiKP	14 36 46.9	+0.5
	comp=Z,0.5nm,0.6s,baz=235,slow=3.2,SNR=1.9						
ARCES	ARCESS Array B	130.56	22	PKP	PKPdf	14 36 54.0	-0.5
	comp=Z,5.5nm,1.1s,baz=222,slow=1.2,SNR=1.6						
YKA	Yellowknife Ar	135.84	318	PKP	PKPdf	14 37 04.7	+0.1
	comp=Z,0.2nm,0.5s,baz=134,slow=2.3,SNR=4.0						
YKA				PP	PP	14 39 45.0	+0.6
	comp=Z,0.5nm,1.1s,baz=118,slow=5.6,SNR=4.0						
MKAR	Makanchi Array	136.78	71	PKP	PKPdf	14 37 07.0	+0.1
	comp=Z,0.5nm,0.9s,baz=315,slow=0.4,SNR=1.9						
KURBB	Kurchatov Arra	137.14	64	PKP	PKiKP	14 37 08.9	-0.3
	comp=Z,0.1nm,0.3s,baz=240,slow=2.7,SNR=2.2						
RES	Resolute Bay	137.45	339	PKP	PKPdf	14 37 08.2	+0.9
	comp=Z,0.7nm,0.8s,baz=351,slow=4.7,SNR=1.9						
N30M	Aishikik Lake	144.58	309	P	PKPdf	14 37 21.1	+0.5
	baz=113						
M30M	Minto, Yukon	144.88	311	PKPdf	PKPab	14 37 20.1	-0.1
M30M	Minto, Yukon	144.88	311	P	PKPdf	14 37 21.2	+0.2
	baz=112						
F31M	Tsiigehtchic	145.28	319	P	PKPab	14 37 23.2	+1.6
	baz=107						
INK	Inuvik	145.46	321	PKPbc	PKPdf	14 37 21.8	0.0
	comp=Z,4.0nm,0.8s,baz=16,slow=2.2,SNR=6.1						
INK	Inuvik	145.46	321	PKPdf	PKPab	14 37 22.6	+0.5
INK	Inuvik	145.46	321	P	PKPab	14 37 23.6	+1.4
	baz=106						
L29M	L29M	145.64	311	P	PKPab	14 37 23.8	+0.7
	baz=110						
EPYK	Eagle Plains	146.09	317	P	PKPab	14 37 24.6	-0.1
	baz=106						
DAWY	Dawson	146.49	312	P	PKPbc	14 37 25.6	+0.4
	baz=108						
H27K	Steamboat Moun	147.94	316	P	PKPbc	14 37 30.0	+0.8
	baz=103						
I26K	Coal Creek Min	148.38	314	P	PKiKP	14 37 31.2	-0.7
	baz=103						
NRIK	Noril'sk	148.69	38	PKPbc	PKPbc	14 37 31.3	+0.3
	comp=Z,1.2nm,0.3s,baz=25,slow=1.2,SNR=4.1						
RIDG	Independent Ri	148.71	311	P	PKiKP	14 37 32.6	-0.1
	baz=104						
ILAR	Eielson Array	149.81	312	PKPbc	PKiKP	14 37 34.5	-0.4
	comp=Z,3.6nm,0.8s,baz=130,slow=2.1,SNR=18						
E25K	Arctic Village	149.82	319	P	PKiKP	14 37 34.7	-0.2
	baz=96						
KDAK	Kodiak Island	150.60	297	PKPbc	PKPbc	14 37 36.0	0.0
	comp=Z,3.6nm,0.5s,baz=140,slow=4.3,SNR=1.5						
SONM	Songino Array	150.72	86	PKPbc	PKPbc	14 37 36.5	-0.3
	comp=Z,0.8nm,0.4s,baz=200,slow=2.0,SNR=7.7						
TOLK	Toolik Lake Re	151.34	320	P	PKiKP	14 37 37.8	-0.2
	baz=92						

NEIC 30 14:18:05.6±2.1**,55°.61S**±0°.08×**26°.9W**±0°.1**,h10**^{km}±1^{km}**,**
mb5.1/62**,Error ellipse: s-maj=16.1km s-min=9.9km**
az=135.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	5.67	280	Pn	Pn	14 19 31.2	+1.5
ESPZ	Base Esperanza	16.99	231	Pn	Pn	14 22 01.6	-1.3
ESPZ				IAmb	IAmb	14 22 16.5	
	comp=Z,99nm,1.4s						
EFI	East Falkland	18.78	269	P	P	14 22 24.0	-0.7
PMSA	Palmer Station	20.30	228	P	P	14 22 42.0	+0.9
PMSA				IAmb	IAmb	14 23 01.6	
	comp=Z,204nm,1.5s						
BELA	Belgrano 2	22.52	184	P	P	14 23 04.5	-0.5
MG01	Puerto William	22.96	255	P	P	14 23 08.7	-1.1
MG01				IAmb	IAmb	14 23 20.1	
	comp=Z,98nm,1.4s						
MG02	Cerro Sombrero	24.62	259	P	P	14 23 24.1	-1.7
GO08	Villa O'Higgin	28.52	265	P	P	14 23 59.7	-1.2
GO08				IAmb	IAmb	14 24 02.0	
	comp=Z,19nm,0.7s						
TRQA	Tornquist	29.29	292	P	P	14 24 09.0	+1.2
TRQA				IAmb	IAmb	14 24 19.1	
	comp=Z,26nm,0.8s						
COYC	Coyhaique	29.86	270	P	P	14 24 12.1	-0.8
COYC				IAmb	IAmb	14 24 13.8	
	comp=Z,13nm,0.7s						
PLTB	Pedras Altas	30.32	311	P	P	14 24 14.8	-2.3
AY01	Puyuhuapi	30.88	272	P	P	14 24 19.8	-2.0
LL02	Futaleuf	31.19	274	P	P	14 24 22.2	-2.5
PLCA	Paso Flores	32.07	279	P	P	14 24 32.0	-0.5
ITQB	Itaqui	33.43	309	P	P	14 24 43.6	-0.8
ITQB				IAmb	IAmb	14 24 46.7	
	comp=Z,30nm,1.0s						
QSPA	South Pole Qui	34.64	180	P	P	14 24 54.6	-0.1
QSPA				IAmb	IAmb	14 24 59.1	
	comp=Z,15nm,0.6s						
CPUP	Villa Florida	36.63	310	P	P	14 25 10.1	-1.9
CPUP				IAmb	IAmb	14 25 22.4	
	comp=Z,21nm,1.1s						
GO05	Huala	36.90	285	P	P	14 25 12.2	-2.0
MT13	San Alfonso	36.96	288	P	P	14 25 13.1	-1.8
MT13				IAmb	IAmb	14 25 27.7	
	comp=Z,11nm,1.1s						
MT08	Bocatoma Ro	37.04	289	P	P	14 25 16.3	+0.6
MT08				IAmb	IAmb	14 25 18.5	
	comp=Z,12nm,0.7s						
MT09	Talagante	37.32	287	P	P	14 25 17.3	-0.6
MT01	Popeta	37.39	287	P	P	14 25 18.1	-0.3
MT02	Curacav	37.79	288	P	P	14 25 21.4	-0.3
CO02	Combarbal	39.30	290	P	P	14 25 33.4	-1.2
CO02				IAmb	IAmb	14 25 36.6	
	comp=Z,29nm,1.2s						
GO04	Tololo Observa	40.00	291	P	P	14 25 40.6	0.0
GO04				IAmb	IAmb	14 25 41.7	
	comp=Z,27nm,1.0s						
MAW	Mawson	40.42	144	P	P	14 25 43.2	0.0
AC04	Llanos de Chal	41.71	293	P	P	14 25 54.5	0.0
GO03	Copiap	41.77	294	P	P	14 25 55.3	+0.4
GO03				IAmb	IAmb	14 26 06.1	
	comp=Z,24nm,0.8s						
AC02	Maricunga	41.81	296	P	P	14 25 55.0	-0.8
AC02				IAmb	IAmb	14 26 08.6	
	comp=Z,49nm,0.9s						
AC06	Mina Casimiro	42.02	294	P	P	14 25 57.3	+0.3
AC06				IAmb	IAmb	14 25 58.9	
	comp=Z,85nm,1.4s						
AC01	Pan de Azucar	43.13	295	P	P	14 26 06.1	+0.1
AC01				IAmb	IAmb	14 26 22.7	
	comp=Z,49nm,1.2s						
GO02	Mina Guanaco	43.42	297	P	P	14 26 08.9	+0.2
PB14	IPOC Station P	44.28	296	P	P	14 26 14.1	-1.5
PB14				IAmb	IAmb	14 26 36.7	
	comp=Z,38nm,1.2s						
LVC	Limon Verde	45.21	299	P	P	14 26 22.9	-0.2
LVC				IAmb	IAmb	14 26 39.7	
	comp=Z,23nm,0.8s						
BOSA	Boshof	45.72	76	P	P	14 26 25.8	-1.1
BOSA				IAmb	IAmb	14 26 37.3	
	comp=Z,44nm,1.4s						
PB03	IPOC Station P	46.10	299	P	P	14 26 29.1	-0.8
PB03				IAmb	IAmb	14 26 41.6	
	comp=Z,19nm,0.8s						
PB07	IPOC Station P	46.44	299	P	P	14 26 32.4	-0.2
SBA	Scott Base	46.52	184	P	P	14 26 34.3	+1.9
SBA				IAmb	IAmb	14 26 35.4	
	comp=Z,14nm,1.1s						
PB02	IPOC Station P	46.78	299	P	P	14 26 34.5	-0.7
PB01	IPOC Station P	46.81	300	P	P	14 26 34.5	-0.9
VNDA	Vanda	47.02	183	P	P	14 26 37.0	+0.8
VNDA				IAmb	IAmb	14 26 39.5	
	comp=Z,12nm,0.7s						
PTLB	Pontes e Lacer	47.08	315	P	P	14 26 37.5	0.0
PTLB				IAmb	IAmb	14 26 48.3	
	comp=Z,28nm,1.0s						
PB08	IPOC Station P	47.42	301	P	P	14 26 39.8	-0.7
GO01	Chusmiza	47.84	301	P	P	14 26 44.0	+0.1
PB11	IPOC Station P	47.98	301	P	P	14 26 44.8	+0.2
MNMC	Minye Minye	48.49	301	P	P	14 26 48.0	-0.8
PB12	IPOC Station P	49.29	301	P	P	14 26 54.1	-0.5
PB12				IAmb	IAmb	14 27 18.6	
	comp=Z,33nm,1.3s						
LPAZ	La Paz	50.24	305	P	P	14 27 02.4	-0.1
LPAZ				IAmb	IAmb	14 27 14.9	
	comp=Z,19nm,0.8s						
BOAV	Boa Vista	64.02	322	P	P	14 28 39.1	-0.1
BOAV				IAmb	IAmb	14 28 49.4	
	comp=Z,12nm,1.0s						
TOA0	Torodi Ar. Sit	72.60	29	P	P	14 29 31.1	-1.8
TOA0				IAmb	IAmb	14 29 41.4	
	comp=Z,10nm,0.9s						
TORD	Torodi Ar. Bea	72.60	29	P	P	14 29 33.8	+0.9
BAUV	El Baul	72.83	317	P	P	14 29 34.0	-0.3
BAUV				IAmb	IAmb	14 29 46.5	
	comp=Z,21nm,0.8s						
PTCN	Pitcairn Islan	76.71	245	P	P	14 29 57.5	+0.7
SRBA	San Rafael, Bu	79.72	303	P	P	14 30 13.8	+0.2
HUMP	Col San Antoni	80.51	323	P	P	14 30 15.6	-2.0
CBYP	Canovanas	80.63	323	P	P	14 30 18.0	-0.3
CBYP				IAmb	IAmb	14 30 20.6	
	comp=Z,32nm,1.2s						
TAU	Tasmania Unive	81.73	176	P	P	14 30 22.6	-1.3
ESPN	Las Esperanzas	82.74	304	P	P	14 30 29.2	-0.3
ESPN				IAmb	IAmb	14 30 34.4	
	comp=Z,13nm,1.0s						
ACON	Acoyapa	82.96	303	P	P	14 30 29.9	-0.7
N31M	Braeburn, Yuko	144.14	309	PKPdf	PKPbc	14 37 39.0	+0.7
HYT	Haines Junctio	144.64	308	PKPdf	PKPdf	14 37 42.0	+0.9
MAYO	Mayo, Yukon	144.99	313	PKPbc	PKPdf	14 37 41.5	+0.1
M30M	Minto, Yukon	145.00	311	PKPdf	PKPdf	14 37 42.1	+0.6
INK	Inuvik	145.56	321	PKPdf	PKPab	14 37 43.4	+0.6
EPYK	Eagle Plains	146.20	317	PKPdf	PKPab	14 37 45.3	-0.1
J29M	Klondike Camp	146.24	313	PKPdf	PKPab	14 37 46.1	+0.5
I29M	Ogilvie Camp,	146.54	315	PKPdf	PKPbc	14 37 45.8	+0.1
DAWY	Dawson	146.60	312		PKPab	14 37 46.7	-0.3
RIDG	Independent Ri	148.83	311	PKPdf	PKPdf	14 37 46.2	-1.8

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*IDC **30** 14:32:08.3±0.8, 55°.57S×26°.88W, h0^{km}, mb4.2/7,*
mbtmp4.1/8, ML3.7/1, Error ellipse: s-maj=35.3km
s-min=13.2km az=65.0

ISC 30 14:32:12.2±0.8**,55°.6S**±0°.1×**27°.0W**±0°.2**,h25**^{km}**,n21,**
σ**1^{s}14**/17**,mb4.2**/6**,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	17.20	159	P	P	14 36 14.3	+2.5
VNA3	Neumayer Olymp	17.41	161	P	P	14 36 14.6	+0.4
VNA2	Neumayer--Watz	17.60	159	P	P	14 36 16.5	+0.3
	baz=318,slow=15						
SNAA	Sanae	19.14	157	P	P	14 36 32.3	-0.9
	0.2nm,0.3s,baz=342,slow=17,SNR=7.3						
SNAA				S	S	14 40 09.8	+1.5
	1.7nm,0.7s,baz=328,slow=18,SNR=2.0						
	1.4nm,0.5s						
TROLL	Troll, Antarti	20.63	154	P	P	14 36 48.5	-1.0
QSPA	South Pole Qui	34.69	180	P	P	14 38 59.2	-0.5
	1.8nm,0.5s,baz=14,slow=1.7,SNR=27						
	1.8nm,0.5s						
CFA	Coronel Fontan	37.49	292	P	P	14 39 24.1	+0.3
	1.4nm,0.4s,baz=160,slow=11,SNR=1.9						
	1.4nm,0.4s						
LVC	Limon Verde	45.17	299	P	P	14 40 27.9	+0.7
	2.0nm,0.5s,baz=44,slow=22,SNR=1.8						
	2.0nm,0.5s						
VNDA	Vanda	47.07	183	P	P	14 40 40.5	-0.6
	1.3nm,0.5s,baz=4.5,slow=2.6,SNR=12						
	1.3nm,0.5s						
H10S2	ASCENSION HYDR	47.49	17	T	T	15 32 11.8	
	baz=189,slow=74,SNR=6.0						
H10S3	ASCENSION HYDR	47.49	17	T	T	15 32 12.1	
	baz=31,slow=74,SNR=11						
H10N1	ASCENSION HYDR	48.61	17	T	T	15 33 57.0	
	baz=188,slow=77						
H10N3	ASCENSION HYDR	48.61	17	T	T	15 34 29.8	
	baz=188,slow=77						
H10N2	ASCENSION HYDR	48.63	17	T	T	15 34 23.2	
	baz=188,slow=77						
LPAZ	La Paz	50.21	305	P	P	14 41 06.8	+0.2
	0.8nm,0.5s,baz=141,slow=3.0,SNR=2.7						
	0.8nm,0.5s						
TORD	Torodi Ar. Bea	72.56	29	P	P	14 43 37.6	+0.7
	1.6nm,0.3s,baz=198,slow=6.0,SNR=5.3						
	1.6nm,0.3s						
ASAR	Alice Springs	99.42	162	P	Pdif	14 45 50.7	-1.9
	0.3nm,0.7s,baz=186,slow=4.2,SNR=2.2						
	0.3nm,0.7s						
YKA	Yellowknife Ar	135.90	318	PKP	PKPdf	14 51 29.4	+0.2
	0.3nm,0.6s,baz=126,slow=2.5,SNR=5.0						
INK	Inuvik	145.51	321	PKPbc	PKPab	14 51 47.1	+0.3
	1.3nm,0.6s,baz=0.0,slow=1.0,SNR=3.2						
ILAR	Eielson Array	149.89	312	PKPbc	PKPbc	14 51 57.7	-0.9
	1.0nm,0.8s,baz=130,slow=1.2,SNR=7.9						
SONM	Songino Array	150.56	85	PKPbc	PKPbc	14 51 59.8	-1.2
	0.3nm,0.5s,baz=211,slow=1.7,SNR=2.1						

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*IDC **30** 14:35:30.1±2.0, 4°.53N×126°.66E, h0^{km}, mb3.3/3,*
mbtmp3.3/3, Error ellipse: s-maj=156.7km s-min=25.1km
az=66.0

*MAN **30** 14:36:07.4, 8°.24N×126°.23E, h106^{km}, mb4.4, ML3.2,*
MS3.0

ISC 30 14:35:30.1±1.4**,5°.0N**±0°.2×**127°.7E**±0°.2**,h10**^{km}**,n5,**σ**2^{s}24**/6**,**
mb3.2/3**,2D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	Kidapawan	3.28	307	⇓iP	Pb	14 36 30.9	+2.4
KCP				eS	Sn	14 36 57.9	-3.0
BIPH	Bislig	3.43	337	⇓iP	Pn	14 36 23.4	-0.3
BIPH				i S	Sn	14 36 34.7	-30
WRA	Warramunga Arr	25.64	165	P	P	14 40 59.4	-0.8
	0.2nm,0.4s,baz=343,slow=10,SNR=10						
	0.2nm,0.4s						
ASAR	Alice Springs	29.14	168	P	P	14 41 31.5	-0.1
	0.3nm,0.5s,baz=351,slow=7.4,SNR=12						
	0.3nm,0.5s						
MKAR	Makanchi Array	57.08	324	P	P	14 45 16.6	-0.1
	0.2nm,0.7s,baz=116,slow=6.6,SNR=2.6						
	0.2nm,0.7s						

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*IDC **30** 14:39:32.9±0.9, 55°.68S×26°.83W, h0^{km}, mb4.1/4,*
mbtmp4.1/5, ML3.3/1, Error ellipse: s-maj=48.6km
s-min=23.3km az=80.0

ISC 30 14:39:36.6±0.9**,55°.7S**±0°.2×**26°.9W**±0°.3**,h25**^{km}**,n14,**
σ**0^{s}50**/9**,mb4.0**/4**,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	Sanae	18.99	157	P	P	14 43 55.4	-0.5
	0.1nm,0.3s,baz=224,slow=22,SNR=2.8						
	1.5nm,0.6s						
QSPA	South Pole Qui	34.55	180	P	P	14 46 23.6	+0.8
	2.7nm,1.1s,baz=143,slow=0.6,SNR=14						
	2.7nm,1.1s						
VNDA	Vanda	46.93	183	P	P	14 48 04.2	-0.3
	0.7nm,0.5s,baz=203,slow=6.9,SNR=6.0						
	0.7nm,0.5s						
H10S2	ASCENSION HYDR	47.61	16	T	T	15 39 36.6	
	baz=189,slow=74						
H10S3	ASCENSION HYDR	47.61	16	T	T	15 39 36.9	
	baz=31,slow=74						
H10N1	ASCENSION HYDR	48.73	16	T	T	15 41 00.8	
	baz=188,slow=77						
H10N3	ASCENSION HYDR	48.73	16	T	T	15 41 00.7	
	baz=188,slow=77						
H10N2	ASCENSION HYDR	48.74	16	T	T	15 41 02.2	
	baz=188,slow=77						
LPAZ	La Paz	50.33	305	P	P	14 48 32.0	0.0
	1.1nm,0.8s,baz=196,slow=8.1,SNR=2.0						
	1.1nm,0.8s						
TORD	Torodi Ar. Bea	72.66	29	P	P	14 51 02.2	+0.3
	4.1nm,0.3s,baz=200,slow=5.3,SNR=0.7						
	4.1nm,0.3s						
YKA	Yellowknife Ar	136.04	318	PKP	PKPdf	14 58 53.3	-0.5
	0.1nm,0.4s,baz=136,slow=2.7,SNR=1.5						
INK	Inuvik	145.65	321	PKPbc	PKPdf	14 59 11.2	+0.2
	0.6nm,0.5s,baz=207,slow=22,SNR=1.6						
ILAR	Eielson Array	150.02	312	PKPbc	PKPbc	14 59 22.9	-0.4
	0.4nm,0.7s,baz=91,slow=2.9,SNR=3.8						
SONM	Songino Array	150.51	86	PKPbc	PKPbc	14 59 25.3	+0.1
	0.2nm,0.4s,baz=199,slow=3.4,SNR=4.6						

KRSC 30 14:40:49.6±1.1**,56°.95N**×**163°.22E,h22**^{km}±14^{km}**,Ml3.5,**
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBG	Krutoberegovo	0.76	202	eP	Pb	14 41 04.4	+0.3
KBG				eS	Sn	14 41 15.4	-0.2
KBTR	Krutoberegovo	0.78	197	eP	Pn	14 41 05.3	0.0
KBTR				eS	Sn	14 41 16.4	+0.2
SMKR	Semkarok	1.03	250	eP	Pn	14 41 08.5	-0.3
SMKR				eS	Sb	14 41 21.6	-0.4
SRKR	Sorokina	1.17	256	eP	Pn	14 41 10.0	-0.7
SRKR				eS	Sb	14 41 24.9	-1.0
KLY	Klyuchi	1.56	247	eP	Pn	14 41 15.0	-0.9
KLY				eS	Sn	14 41 33.6	-1.9
CIRR	Tsirk	1.61	240	eP	Pn	14 41 17.6	+0.8
CIRR				eS	Sn	14 41 37.4	+0.5
LGNR	Loginova	1.65	239	eP	Pb	14 41 19.0	-0.5
LGNR				eS	Sb	14 41 40.2	+0.2
BZGR	Bezymyannyi-Gr	1.73	235	eP	Pb	14 41 19.8	-0.9
BZGR				eS	Sb	14 41 41.7	-0.4
BZWR	Bezymyannyi-We	1.81	238	eP	Pb	14 41 20.9	-1.2
BZWR				eS	Sb	14 41 44.3	0.0
BZP	Bezymyannyi-Pe	1.82	236	eP	Pb	14 41 21.0	-1.3
BZP				eS	Sb	14 41 44.3	-0.4
BZMR	Bezymyannaya	1.83	237	eP	Pn	14 41 21.1	+1.2
BZMR				eS	Sb	14 41 43.9	-1.0
KIRR	Kirishev	1.89	239	eP	Pb	14 41 22.0	-1.4
KIRR				eS	Sb	14 41 45.8	-0.8
KPT	Kopyto	1.94	241	eP	Pn	14 41 22.7	+1.4
KPT				eS	Sb	14 41 47.1	-0.9
SRDR	Sredinnyy	2.04	253	eP	Pn	14 41 23.7	+1.1
SRDR				eS	Sn	14 41 48.2	+0.8
KMNR	Kamenistaya	2.05	235	eP	Pb	14 41 25.1	-1.1
KMNR				eS	Sb	14 41 50.6	-0.7
KOZ	Kozyrevsk	2.06	246	eP	Pb	14 41 24.9	-1.5
KOZ				eS	Sb	14 41 51.2	-0.3
OSSR	Ossora	2.31	358	eP	Pn	14 41 27.2	+1.0
BKI	Bering	2.33	138	eP	Pb	14 41 28.8	-2.1
BKI				eS	Sb	14 41 57.7	-1.6
TUMD	Tumrok D	2.36	223	eP	Pb	14 41 30.0	-1.5
TUMR	Tumrok	2.40	227	eP	Pb	14 41 30.9	-1.2
TIGL	Tigil	2.60	290	eP	Pb	14 41 33.0	-2.4
TIGL				eS	Sb	14 42 05.2	-1.7
ESO	Esso	2.71	250	eP	Pb	14 41 35.3	-2.1
ESO				eS	Sb	14 42 08.3	-2.0
PALN	Palana	2.75	322	eP	Pb	14 41 37.5	-0.6
GNL	Ganaly	4.44	225	eP	Pn	14 41 58.9	+3.2
KRX	Arik	4.46	218	eP	Pn	14 41 59.6	+3.7
KRER	Koryakskii	4.47	217	eP	Pn	14 42 00.4	+4.2
SMAR	Somma	4.49	216	eP	Pn	14 41 59.9	+3.6
AVH	Avacha	4.50	217	eP	Pn	14 42 01.0	+4.5
KOK	Koryaka	4.51	218	eP	Pn	14 42 00.9	+4.2
UGLR	Uglovaya	4.52	216	eP	Pn	14 42 00.3	+3.5
DALK	Dalny	4.70	215	eP	Pn	14 42 02.5	+3.4
KRMR	Karymshinskiy	5.07	218	eP	Pn	14 42 08.9	+4.7
MTVR	Mutnovka	5.35	215	eP	Pn	14 42 12.8	+4.6

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*IDC **30** 14:44:51.1±1.7, 54°.70N×159°.57W, h0^{km}, mb3.4/5,*
mbtmp3.5/8, ML3.6/3, Error ellipse: s-maj=45.1km
s-min=19.8km az=166.0

*AEIC **30** 14:44:57.8±2.5, 55°.19N±0°.07×159°.45W±0°.07, h5^{km}±6^{km},*
Error ellipse: s-maj=9.8km s-min=5.2km az=165.0

*NEIC **30** 14:44:58.7±2.8, 55°.23N±0°.09×159°.6W±0°.1, h39^{km}±20^{km},*
mb3.7/3, ML3.8/6, ML3.6(AEIC), Error ellipse:
s-maj=14.3km s-min=5.9km az=152.0

ISC 30 14:44:58.8±1.2**,55°.27N**±0°.10×**159°.39W**±0°.06**,**
h43^{km}±13^{km}**,n154,**σ**1^{s}67**/151**,mb3.4**/5**,Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDPT	Sand Point	0.62	277		Pn	14 45 09.9	-1.3
SDPT					Sn	14 45 18.4	-1.8
SDPT				IAML		14 45 18.8	
	comp=E,8µm,0.7s						
SDPT				IAML		14 45 19.8	
	comp=N,4µm,0.6s						
SDPT	Sand Point	0.62	277	P	Pn	14 45 09.9	-1.3
	baz=104						
SDPT				S	Sn	14 45 18.4	-1.8
	baz=104						
CHGN	Chignik	1.17	28	Pn	Pn	14 45 19.2	+0.6
CHGN				Sn	Sn	14 45 35.4	+2.0
CHGN				IAML		14 45 39.3	
	comp=N,2µm,0.5s						
CHGN	Chignik	1.17	28	P	Pn	14 45 19.5	+0.9
	baz=208						
CHGN				S	Sn	14 45 35.3	+2.0
	baz=208						
S12K	Black Hills	1.58	287	P	Pn	14 45 24.3	0.0
	baz=108						
S12K				S	Sn	14 45 45.6	+2.1
	baz=108						
FALS	False Pass	2.35	261	Pn	Pn	14 45 33.4	-1.4
FALS	False Pass	2.35	261		Sn	14 46 04.9	+2.5
FALS	False Pass	2.35	261	P	Pn	14 45 35.7	+0.9
	baz=80						
FALS				S	Sn	14 46 04.9	+2.5
	baz=80						
R16K	Pilot Point	2.51	23	P	Pn	14 45 38.4	+1.3
	baz=204						
R17K	Ugashik Creek	2.90	34	P	Pn	14 45 44.4	+2.0
	baz=216						
Q17K	Contact Creek	3.56	31	P	Pn	14 45 52.9	+1.3
	baz=214						
Q16K	King Salmon	3.73	23	P	Pn	14 45 55.6	+1.9
	baz=205						
P16K	Nushagak River	3.84	11	P	Pn	14 45 57.3	+2.0
	baz=192						
AKUT	Akutan	3.87	255	Pn	Pn	14 45 54.9	-0.9
OHAK	Old Harbor	3.93	58	Pn	Pn	14 45 58.2	+1.7
KAHC	Katmai Hardscr	4.15	34	P	Pn	14 46 01.5	+1.9
	baz=217						
Q18K	Katmai Hardscr	4.15	34	P	Pn	14 46 01.3	+1.6
	baz=217						
UNV	Unalaska Valle	4.38	254	Pn	Pn	14 46 02.6	-0.1
UNV	Unalaska Valle	4.38	254	P	Pn	14 46 02.7	+0.1
	baz=69						
O16K	Kokwok River B	4.39	9	P	Pn	14 46 05.1	+2.3
	baz=190						
KDAK	Kodiak Island	4.53	54	Pn	Pn	14 46 05.4	+0.6
	comp=N,4.6nm,0.3s,baz=229,slow=5.8,SNR=74						
KDAK				Sn	Sn	14 46 55.1	-1.1
	comp=N,3.2nm,0.3s,baz=306,slow=23,SNR=6.5						
	comp=N,10nm,0.3s						
KDAK	Kodiak Island	4.53	54	IAML		14 48 24.9	
	comp=N,35nm,2.9s						
O17K	Koliganek Bris	4.68	14	P	Pn	14 46 08.3	+1.5
	baz=196						
P18K	Big Mountain,	4.71	27	Pn	Pn	14 46 09.0	+1.8
P18K	Big Mountain,	4.71	27	P	Pn	14 46 08.8	+1.6
	baz=210						
Q19K	Cape Douglas,	4.82	38	Pn	Pn	14 46 10.7	+1.9
Q19K	Cape Douglas,	4.82	38	P	Pn	14 46 11.6	+2.8
	baz=223						
Q20K	Shuyak Island	5.09	46	P	Pn	14 46 13.9	+1.5
	baz=231						
O18K	Koktuh Hills	5.12	24	Pn	Pn	14 46 14.9	+2.1
O18K	Koktuh Hills	5.12	24	P	Pn	14 46 15.4	+2.6
	baz=208						
N16K	Nishlik Lake	5.23	3	P	Pn	14 46 17.0	+2.7
	baz=184						
P19K	Oil Pt	5.51	35		Pn	14 46 18.0	-0.1
P19K	Oil Pt	5.51	35	P	Pn	14 46 20.8	+2.7
	baz=220						
OPT	Oil Point	5.51	35	P	Pn	14 46 20.9	+2.7
	baz=220						
O19K	Port Alsworth	5.63	27	Pn	Pn	14 46 21.5	+1.7
O19K	Port Alsworth	5.63	27	P	Pn	14 46 21.7	+1.9
	baz=211						
ILSW	Iliamna Southw	5.79	33		Pn	14 46 24.5	+2.3
O20K	Slope Mountain	6.03	34	P	Pn	14 46 27.7	+2.3
	baz=220						
CNPM	China Poot	6.13	43	Pn	Pn	14 46 29.2	+2.5
N19K	Bonanza Creek	6.13	23		Pn	14 46 29.2	+2.4
N19K	Bonanza Creek	6.13	23	P	Pn	14 46 28.9	+2.1
	baz=207						
SVW2	Sparrevohn	6.18	17		Pn	14 46 29.2	+1.8
RSO	Redoubt South	6.29	32		Pn	14 46 32.3	+3.2
BRLK	Bradley Lake	6.42	42	Pn	Pn	14 46 31.1	+0.4
BRSE	Bradley Lake S	6.46	43		Pn	14 46 31.9	+0.7

BRSE	Bradley Lake S	6.46	43	P	Pn	14 46 32.1	+0.8
	baz=230						
SPU	Mount Spurr	7.08	30		Pn	14 46 42.2	+2.5
M19K	Big River Lodg	7.14	19		Pn	14 46 42.4	+1.8
M19K	Big River Lodg	7.14	19	P	Pn	14 46 42.6	+2.0
	baz=204						
SLKM	Skilak Lake	7.17	39		Pn	14 46 43.6	+2.6
L19K	White Mountain	7.32	17		Pn	14 46 44.6	+1.6
L19K	White Mountain	7.32	17	P	Pn	14 46 45.2	+2.2
	baz=201						
O22K	Cooper Landing	7.33	41	Pn	Pn	14 46 45.0	+1.9
M20K	Styx River	7.39	24		Pn	14 46 46.7	+2.7
SUA	Susitna One	7.69	33		Pn	14 46 50.0	+1.8
SUA	Susitna One	7.69	33	P	Pn	14 46 50.5	+2.3
	baz=220						
RC01	Rabbit Creek A	7.74	37		Pn	14 46 50.8	+2.0
L20K	Farewell, AK	7.77	19	P	Pn	14 46 51.2	+2.1
	baz=204						
SKT	Skwentna	7.87	28	Pn	Pn	14 46 54.4	+3.8
SKT	Skwentna	7.87	28	P	Pn	14 46 53.0	+2.4
	baz=215						
P23K	Montague Islan	7.98	49	P	Pn	14 46 53.5	+1.5
	baz=238						
PWL	Port Wells	8.10	42	Pn	Pn	14 46 55.1	+1.4
PWL	Port Wells	8.10	42	P	Pn	14 46 55.6	+1.9
	baz=231						
KNK	Knik Glacier	8.42	39	Pn	Pn	14 46 59.3	+1.3
KNK	Knik Glacier	8.42	39	P	Pn	14 46 59.5	+1.5
	baz=228						
PPLA	Purkeypile	8.49	23	Pn	Pn	14 47 01.8	+2.7
PPLA	Purkeypile	8.49	23	P	Pn	14 47 01.5	+2.3
	baz=209						
GHO	Glory Hole Cre	8.50	36	Pn	Pn	14 47 01.6	+2.3
K20K	Telida	8.55	16		Pn	14 47 02.1	+2.3
K20K	Telida	8.55	16	P	Pn	14 47 01.6	+1.8
	baz=201						
SML	Sawmill	8.73	37	Pn	Pn	14 47 03.7	+1.4
SML	Sawmill	8.73	37	P	Pn	14 47 03.7	+1.4
	baz=226						
EYAK	Cordova Ski Ar	8.97	48	Pn	Pn	14 47 06.7	+1.1
EYAK	Cordova Ski Ar	8.97	48	P	Pn	14 47 07.0	+1.4
	baz=240						
CAST	Castle Rocks	8.98	22	Pn	Pn	14 47 06.2	+0.5
CAST	Castle Rocks	8.98	22	P	Pn	14 47 07.7	+2.0
	baz=208						
SCM	Sheep Creek Mo	9.10	39		Pn	14 47 08.3	+0.9
SCM	Sheep Creek Mo	9.10	39	P	Pn	14 47 08.5	+1.1
	baz=229						
DIV	Divide	9.27	45		Pn	14 47 08.5	-1.3
WAT7	Susitna Watana	9.31	31		Pn	14 47 10.9	+0.5
KTH	Kantishna Hill	9.35	24		Pn	14 47 12.8	+1.9
WAT1	Susitna Watana	9.40	32		Pn	14 47 12.2	+0.7
WAT1	Susitna Watana	9.40	32	P	Pn	14 47 12.2	+0.7
	baz=221						
TRF	Thorofare Moun	9.41	26		Pn	14 47 14.1	+2.3
KLU	Klutina	9.42	43		Pn	14 47 11.9	+0.1
KLU	Klutina	9.42	43	P	Pn	14 47 12.5	+0.7
	baz=234						
GCSA	Galena City Sc	9.59	6		Pn	14 47 15.4	+1.4
GCSA	Galena City Sc	9.59	6	P	Pn	14 47 15.4	+1.4
	baz=189						
M24K	Tolsona, Glenn	9.69	40		Pn	14 47 17.2	+1.7
M24K	Tolsona, Glenn	9.69	40	P	Pn	14 47 16.0	+0.5
	baz=231						
ANM	Nome	9.79	345		Pn	14 47 17.5	+0.8
ANM	Nome	9.79	345	P	Pn	14 47 17.5	+0.8
	baz=160						
BPAW	Bear Paw Mtn.	9.81	22	Pn	Pn	14 47 18.2	+1.1
MCK	McKinley	10.00	28	Pn	Pn	14 47 22.0	+2.3
N25K	Chitina, Valde	10.01	45		Pn	14 47 20.7	+0.9
SNH	Sunshine Point	10.12	54	Pn	Pn	14 47 21.7	+0.4
GLB	Gilahina Butte	10.24	47	Pn	Pn	14 47 22.9	-0.2
VRDI	Verde Repeater	10.29	48	Pn	Pn	14 47 24.4	+0.7
PAX	Paxson	10.50	37		Pn	14 47 27.8	+1.2
MCARA	McCarthy VSAT	10.54	48	Pn	Pn	14 47 28.2	+1.1
I21K	Tanana	10.59	17		Pn	14 47 29.1	+1.4
NEA2	Nenana	10.67	25	Pn	Pn	14 47 28.1	-0.7
MLY	Manley	10.68	20		Pn	14 47 29.6	+0.6
WRH	Wood River Hil	10.81	27	Pn	Pn	14 47 30.5	-0.3
ADK	Adak	10.82	259	Pn	Pn	14 47 26.8	-4.1
H21K	Melozitna Rive	10.90	15		Pn	14 47 34.3	+2.3
BARN	Barnard Glacie	10.99	51	Pn	Pn	14 47 34.5	+1.1
CCB	Clear Creek Bu	11.03	27	Pn	Pn	14 47 31.7	-1.9
HDA	Harding Lake	11.07	29		Pn	14 47 32.2	-2.1
I23K	Minto, Yukon-K	11.07	23		Pn	14 47 34.9	+0.6
M26K	Nabesna, AK	11.07	43		Pn	14 47 34.3	-0.1
IMAR	Indian Mountai	11.09	12	Pn	Pn	14 47 36.5	+1.9
MENT	Mentasta	11.11	40	Pn	Pn	14 47 35.9	+1.1
TNA	Tin City	11.13	341	Pn	Pn	14 47 36.9	+1.8
MDM	Murphy Dome	11.17	25		Pn	14 47 34.9	-0.8
RIDG	Independent Ri	11.22	35		Pn	14 47 36.0	-0.5
PCA	Pinnacle	11.31	57	Pn	Pn	14 47 38.8	+1.2
IL31		11.37	28		Pn	14 47 37.8	-0.5
ILAR	Eielson Array	11.37	28	Pn	Pn	14 47 37.3	-1.1
	comp=N,0.3nm,0.3s,baz=215,slow=13,SNR=16						
ILAR				Sn	Sn	14 49 38.8	-5.1
	baz=210,slow=19						
	comp=N,0.8nm,0.4s						
ILAR	Eielson Array	11.37	28	Pn	Pn	14 47 36.6	-1.8
DOT	Dot Lake	11.43	37	Pn	Pn	14 47 39.0	-0.1
M27K	Edge Creek, AK	11.49	45	Pn	Pn	14 47 39.5	-0.7
BCPM	Bancas Point	11.57	58	Pn	Pn	14 47 41.6	+0.5
H23K	Yukon River	11.62	20	Pn	Pn	14 47 41.5	-0.3
SCRK	Sand Creek	11.67	35	Pn	Pn	14 47 42.4	-0.2
L27K	Beaver Creek,	11.88	42	Pn	Pn	14 47 44.7	-0.8
BCAR	Beaver Creek A	11.90	42	Pn	Pn	14 47 46.2	+0.5
H24K	Noodor Dome	11.99	23	Pn	Pn	14 47 49.6	+2.8
K27K	Chicken	12.35	38	Pn	Pn	14 47 53.1	+1.3
I26K	Coal Creek Min	12.84	32	Pn	Pn	14 47 57.3	-1.0
EGAK	Eagle	13.13	36	Pn	Pn	14 48 02.2	-0.1
SKAG	Skagway	13.61	62	Pn	Pn	14 48 09.6	+0.6
M30M	Minto, Yukon	13.71	49	Pn	Pn	14 48 12.7	+2.3
JIS	Juneau Island	14.01	67	Pn	Pn	14 48 14.9	+0.6
BMAR	Burnt Mountain	14.05	24	Pn	Pn	14 48 15.6	+0.6
FARO	Faro, Yukon	15.12	52	Pn	Pn	14 48 30.5	+1.3
FARO				IAmb	IAmb	14 48 37.8	
	comp=Z,4.3nm,1.0s						
EPYK	Eagle Plains	15.56	35	P	P	14 48 37.9	-0.6
EPYK				IAmb	IAmb	14 48 42.3	
	comp=Z,13nm,0.8s						
DLBC	Dease Lake	16.30	67	Pn	Pn	14 48 43.8	-0.6
	comp=Z,0.1nm,0.3s,baz=212,slow=18,SNR=2.4						
	comp=Z,2.1nm,1.0s						
INK	Inuvik	17.69	32	P	Pn	14 49 01.4	-0.2
	comp=Z,0.9nm,0.3s,baz=211,slow=15,SNR=8.7						
INK	Inuvik	17.69	32	Pn	Pn	14 49 01.2	-0.2
INK				IAmb	IAmb	14 49 14.3	
	comp=Z,5.7nm,1.4s						
YKA	Yellowknife Ar	23.81	54	P	P	14 50 08.1	+0.9
	comp=Z,0.3nm,0.5s,baz=273,slow=9.4,SNR=6.4						
	comp=Z,0.3nm,0.5s						
PETK	Petropavlovsk-	24.91	283	P	P	14 50 16.0	-1.3
	comp=Z,1.4nm,0.8s,baz=80,slow=16,SNR=11						
	comp=Z,1.4nm,0.8s						
PDAR	Pinedale Array	34.25	90	P	P	14 51 40.6	0.0
	comp=Z,0.1nm,0.6s,baz=284,slow=8.9,SNR=1.6						
	comp=Z,0.1nm,0.6s						
H11N2	WAKE ISLAND Hy	43.64	229	T	T	15 39 25.2	
	baz=28						
H11N3	WAKE ISLAND Hy	43.65	229	T	T	15 39 24.3	
	baz=28						
H11N1	WAKE ISLAND Hy	43.66	229	T	T	15 39 12.7	
	baz=28						
H11S1	WAKE ISLAND Hy	44.81	229	T	T	15 40 49.6	
	baz=29						
H11S2	WAKE ISLAND Hy	44.82	229	T	T	15 40 46.1	
	baz=29						
H11S3	WAKE ISLAND Hy	44.83	229	T	T	15 40 54.0	
	baz=29						
MKAR	Makanchi Array	65.83	318	P	P	14 55 39.5	+0.2
	comp=Z,0.2nm,0.6s,baz=53,slow=6.2,SNR=2.5						
	comp=Z,0.2nm,0.6s						
CMAR	Chiang Mai Arr	81.47	290	P	P	14 57 10.9	-0.5
	comp=Z,0.4nm,0.3s,baz=19,slow=5.7,SNR=2.0						
	comp=Z,0.4nm,0.3s						
H03N2	Juan Fernandez	111.75	117	T	T	17 04 32.4	
	baz=322						
H03N1	Juan Fernandez	111.76	117	T	T	17 04 31.8	
	baz=322						
H03N3	Juan Fernandez	111.76	117	T	T	17 04 32.6	
	baz=322						

MAN 30 14:55:31.2,9°.48N×122°.71E,h22^{km},mb3.8,ML2.5,MS2.0, Negros

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*JMA **30** 15:02:33.5±0.3,36°.2N±0°.5×14°2E±°,h50^{km}±4^{km}, MV2.6/31,FAR E OFF IBARAKI PREF*

*IDC **30** 15:02:34.4±2.4,36°.57N×141°.66E,h0^{km},mb3.3/3, mbtmp3.3/4,ML2.1/1,Error ellipse: s-maj=48.2km s-min=27.8km az=49.0*

ISC 30 15:02:35.0±1.7**,36°.23N**±0°.06×**141°.6E**±0°.1**,h26^{km},n21, σ1^{s}.41**/15**,mb3.4**/3**,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.83	231	P	Pn	15 02 50.8	-0.2
CHOJ				*e*S	Sn	15 03 03.2	+0.9
JHYU	Hitachinakayam	0.86	278	P	Pn	15 02 52.1	+0.7
JHO	Hitachi	0.94	294	P	Pb	15 02 52.9	+0.1
JFK	Kawauchi	1.29	332	P	Pn	15 02 56.8	-0.7
BSO1	Boso 1	1.67	199	*e*P	Pn	15 03 01.5	-0.6
JOTO	OTAMA OYAMA	1.69	322	P	Pb	15 03 04.0	-1.5
BSO3	Boso 3	1.70	213	P	Pn	15 03 02.1	-0.6
JMM	Marumori	1.77	338	P	Pn	15 03 03.7	-0.2
JAG	Ashikaga	1.78	277	P	Pb	15 03 05.1	-1.9
JFY	Yanaizu	1.95	308	P	Pb	15 03 08.0	-1.9
JKT	Katashina	2.00	286	P	Pb	15 03 09.0	-1.8
MJAR	Matsushiro Arr	2.79	277	Pn	Pn	15 03 18.9	+0.9
	0.3nm,0.3s,baz=89,slow=15,SNR=19						
MJAR				Sn	Sb	15 03 56.5	-1.4
	0.1nm,0.3s,baz=85,slow=29,SNR=1.2						
	2.1nm,0.3s						
H11N2	WAKE ISLAND Hy	27.58	120	T	T	15 36 50.8	
	baz=313						
H11N1	WAKE ISLAND Hy	27.59	120	T	T	15 36 53.1	
	baz=313						
H11N3	WAKE ISLAND Hy	27.60	120	T	T	15 36 52.0	
	baz=313						
H11S1	WAKE ISLAND Hy	28.27	122	T	T	15 37 43.5	
	baz=314						
H11S3	WAKE ISLAND Hy	28.27	122	T	T	15 37 40.7	
	baz=314						
H11S2	WAKE ISLAND Hy	28.29	122	T	T	15 37 43.5	
	baz=314						
MKAR	Makanchi Array	44.70	303	P	P	15 10 48.4	+2.5
	0.2nm,0.5s,baz=87,slow=9.1,SNR=2.1						
	0.2nm,0.5s						
WRA	Warramunga Arr	56.29	188	P	P	15 12 18.5	+5.0
	0.3nm,0.7s,baz=3.3,slow=7.2,SNR=1.9						
	0.3nm,0.7s						
ASAR	Alice Springs	60.02	188	P	P	15 12 45.4	+5.8
	0.9nm,1.2s,baz=0.0,slow=7.6,SNR=1.8						
	0.9nm,1.2s						

IDC 30 15:23:20.9±10.0**,21°.41N×142°.84E,h0^{km},mb3.3**/3**, mbtmp3.3**/3**,Error ellipse: s-maj=395.2km s-min=34.2km az=74.0,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	41.93	192	P	P	15 31 13.7	+0.2
	0.3nm,0.5s,baz=12,slow=8.1,SNR=6.1						
	0.3nm,0.5s						
ASAR	Alice Springs	45.64	191	P	P	15 31 42.9	-0.5
	0.3nm,0.6s,baz=13,slow=7.7,SNR=10						
	0.3nm,0.6s						
MKAR	Makanchi Array	54.66	313	P	P	15 32 51.7	0.0
	0.1nm,0.5s,baz=103,slow=6.4,SNR=1.8						
	0.1nm,0.5s						

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*NOU **30** 15:35:59.1,37°.28S×179°.61E,h0^{km},MLv3.6/7,Off E. Coast of N. Island, N.Z.*

*WEL **30** 15:36:07.6±0.8,37°S±4°×17°9E±°,h12^{km},M2.9/15, ML3.2/23,MLv2.9/15,Error ellipse: s-maj=0.0km s-min=0.0km az=91.1,confirmed*

ISC 30 15:36:06.3±2.6**,37°.34S**±0°.09×**179°.0E**±0°.1**,h10^{km},n61, σ0^{s}.82**/65**,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.61	248	P	Pb	15 36 19.4	+0.4
MXZ	Matakaoa Point	0.61	248	P	Pb	15 36 19.5	+0.4
MXZ				S	Sb	15 36 26.8	-0.9
PKGZ	Pakihiroa	0.93	234	P	Pb	15 36 25.3	+0.8
PKGZ				S	Sb	15 36 37.2	+0.2
PUZ	Puketiti	0.95	219	P	Pb	15 36 25.9	+1.0
PUZ				S	Sb	15 36 38.6	+1.1
HAZ	Te Kaha	1.07	247	P	Pg	15 36 26.5	-0.3
HAZ				S	Sb	15 36 40.7	-0.2
TWGZ	Tauwhareparae	1.18	224	P	Pb	15 36 29.1	+0.4
RUGZ	Raukumara Rang	1.24	239	P	Pb	15 36 30.0	+0.2
CNGZ	Carnagh Statio	1.31	209	P	Pn	15 36 31.6	+0.9
TKGZ	Te Karaka	1.44	220	P	Pn	15 36 32.3	0.0
WIZ	White Island	1.47	262	P	Pn	15 36 32.7	-0.2
MWZ	Matawai	1.55	230	P	Pn	15 36 33.8	-0.1
RIGZ	Rimuhau	1.69	216	P	Pn	15 36 35.8	0.0
RAGZ	Rawiri	1.72	227	P	Pn	15 36 36.7	+0.4
URZ	Urewera	1.77	238	P	Pn	15 36 37.1	+0.1
URZ	Urewera	1.77	238	P	Pn	15 36 37.0	+0.1
SNGZ	Shannon Statio	1.96	222	P	Pn	15 36 39.3	-0.3
KNZ	Kokohu	1.99	212	P	Pn	15 36 39.0	-1.0
MHGZ	Mahia Peninsul	2.01	206	P	Pn	15 36 40.2	-0.1
RTZ	Ruatahuna	2.06	231	P	Pn	15 36 41.0	0.0
MUGZ	Murupara	2.11	237	P	Pn	15 36 41.4	-0.3
TARZ	Mount Tarawera	2.19	245	P	Pn	15 36 42.9	+0.1
MTHZ	Maungataniwha	2.29	228	P	Pn	15 36 44.2	0.0
NMHZ	Naumai	2.48	224	P	Pn	15 36 46.9	+0.2
ARHZ	Aropaoanui	2.50	219	P	Pn	15 36 46.6	-0.4
MRHZ	Matea Rd	2.54	233	P	Pn	15 36 47.3	-0.3
BKZ	Black Stump Fm	2.70	227	P	Pn	15 36 49.3	-0.6
BKZ	Black Stump Fm	2.70	227	P	Pn	15 36 49.2	-0.6
KUZ	Kuaotunu	2.71	282	P	Pn	15 36 48.7	-1.1
KUZ	Kuaotunu	2.71	282	P	Pn	15 36 48.0	-1.8
MCHZ	McNeill Hill	2.79	220	P	Pn	15 36 49.2	-1.7
TOZ	Tahuroa Road	2.83	261	P	Pn	15 36 50.6	-0.8
KWHZ	Kaweka Forest	2.92	224	P	Pn	15 36 51.8	-1.0
TLZ	Tolley Road	2.93	249	P	Pn	15 36 53.3	+0.4
KAHZ	Kahuranaki	2.97	214	P	Pn	15 36 52.1	-1.5
GRZ	Great Barrier	3.06	290	P	Pn	15 36 54.2	-0.5
WIAZ	Waiheke Island	3.16	279	P	Pn	15 36 55.6	-0.4
TMVZ	Te Maari	3.16	235	P	Pn	15 36 55.5	-0.6
BHHZ	Black Hill Sta	3.17	226	P	Pn	15 36 55.6	-0.6
ETVZ	East Tongariro	3.17	234	P	Pn	15 36 55.6	-0.7
NTVZ	North Tongarir	3.17	235	P	Pn	15 36 55.8	-0.5
KRVZ	Karewarewa	3.19	236	P	Pn	15 36 56.1	-0.5
OTVZ	Oturere	3.21	234	P	Pn	15 36 56.3	-0.6
NNVZ	North Ngauruho	3.23	235	P	Pn	15 36 56.8	-0.3
SNVZ	South Ngauruho	3.24	234	P	Pn	15 36 56.7	-0.6
NGZ	Ngauruhoe	3.26	235	P	Pn	15 36 57.0	-0.6
ETAZ	East Tamaki Re	3.29	275	P	Pn	15 36 57.8	-0.1
FWVZ	Far West T-bar	3.33	234	P	Pn	15 36 58.1	-0.5
WNVZ	Wahianoa	3.35	233	P	Pn	15 36 57.9	-0.9
MBAZ	Motutapu North	3.35	279	P	Pn	15 36 58.5	-0.1
WPHZ	Waipukurau	3.39	216	P	Pn	15 36 57.4	-1.8
MTVZ	Mangateitei	3.46	233	P	Pn	15 36 59.5	-0.8
HIZ	Hauiti	3.50	249	P	Pn	15 37 01.3	+0.6
HIZ	Hauiti	3.50	249	P	Pn	15 37 01.4	+0.6
AWAZ	Awhitu Peninsu	3.51	273	P	Pn	15 37 01.1	+0.3
RVAZ	Riverhead Bore	3.60	278	P	Pn	15 37 02.3	+0.2
TSZ	Takapari Road	3.62	220	P	Pn	15 37 00.5	-1.9
BFZ	Birch Farm	3.98	212	P	Pn	15 37 05.1	-2.2
WCZ	Waipu Caves	4.01	289	P	Pn	15 37 07.5	-0.3
OUZ	Omahuta	4.87	294	P	Pn	15 37 19.8	+0.3
OUZ	Omahuta	4.87	294	P	Pn	15 37 19.8	+0.3
CTZ	Chatham Island	7.20	154	P	Pn	15 37 53.8	+2.3

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*VIE **30** 15:37:04.1,51°.51N×16°.28E,h0^{km},mb2.3/3,ml2.7/2 69 km NW of Wroclaw Suspected Mining induced.*

*PRU **30** 15:37:09.7±0.0,51°.35N×16°.01E,h0^{km}*

ISC 30 15:37:05.2±1.1**,51°.46N**±0°.05×**16°.08E**±0°.03**,h0^{km},n28, σ0^{s}.96**/56**,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.64	168	*i* Pg	Pb	15 37 17.8	-1.3
KSP				*e*Sg	Sg	15 37 26.7	+1.2
CHVC	Chvalec	0.88	181	*e*PG	Pg	15 37 21.7	-0.2
CHVC				*e*SG	Sg	15 37 33.5	+0.2
	comp=Z,34nm,0.5s						
OSTC	Ostas	0.91	174	*e*PG	Pg	15 37 22.3	-0.3
OSTC				*e*SG	Sg	15 37 34.4	0.0
	comp=Z,22nm,0.5s						
UPC	Upice	0.96	182	*e*PG	Pg	15 37 23.3	-0.2
UPC				*e*SG	Sb	15 37 37.1	-0.7
	comp=Z,52nm,0.4s						
DPC	Dobruska-Polom	1.12	172	*e*PG	Pg	15 37 26.1	-0.6
DPC				*e*SG	Sg	15 37 41.3	0.0
	comp=Z,20nm,0.7s						
PVCC	Panska Ves	1.33	226	*e*PG	Pg	15 37 30.7	-0.1
PVCC				*e*SG	Sn	15 37 49.7	+0.2
	comp=Z,51nm,0.2s						
KRLC	Kraliky	1.46	162	*e*PG	Pn	15 37 31.9	-0.9
KRLC				*e*SG	Sg	15 37 50.8	-1.2
	comp=Z,28nm,0.4s						
BRG	Berggiesshubel	1.47	247	Pg	Pg	15 37 33.6	+0.4
BRG				Sg	Sn	15 37 53.9	+1.1
BRG				Amp		15 37 55.6	
	comp=Z,23nm,0.4s						
GOPC	GO Pecny, Ondr	1.75	208	*e*PG	Pn	15 37 36.5	-0.4
GOPC				*e*SG	Sb	15 38 01.1	+0.3
	comp=Z,14nm,0.7s						
PRU	Pruhonice	1.77	214	*e*PG	Pn	15 37 36.9	-0.1
PRU				*e*SG	Sg	15 38 02.9	+0.9
	comp=Z,29nm,0.5s						
MORC	Moravsky Berou	1.93	150	*e*PN	Pn	15 37 37.9	-1.4
MORC				*e*SG	Sb	15 38 05.7	-0.1
CLL	Collm	1.93	267	*e*Pn	Pn	15 37 38.0	-1.3
	comp=Z,4.0nm,0.4s						
CLL				*e*Pg	Pb	15 37 41.0	-0.3
CLL				*i* x	x	15 37 44.4	
CLL				*e*Sg	Sg	15 38 07.0	-0.2
	comp=Z,15nm,0.8s						
OKC	Ostrava-Krasne	2.09	140	*e*PG	Pb	15 37 43.5	-0.5
OKC				*e*SG	Sb	15 38 10.3	-0.2
	comp=Z,25nm,0.8s						
VRAC	Vranov	2.18	171	*e*PN	Pn	15 37 43.3	+0.6
VRAC				*e*SG	Sg	15 38 14.4	-0.8
TREC	Trest	2.20	190	*e*PG	Pb	15 37 45.3	-0.6
TREC				*e*SG	Sg	15 38 15.6	-0.3
	comp=Z,11nm,0.3s						
MAUC	Maruska	2.38	151	*e*PN	Pn	15 37 44.9	-0.6
MAUC				*e*PG	Pb	15 37 48.6	-0.3
MAUC				*e*SG	Sg	15 38 20.5	-1.1
	comp=Z,18nm,0.4s						
KRUC	Moravsky	2.41	175	*e*PN	Pn	15 37 46.2	+0.3
KRUC				*e*SG	Sg	15 38 22.7	+0.1
NKC	Novy Kostel	2.61	243	*e*PN	Pn	15 37 48.4	-0.2
NKC				*e*SG	Sg	15 38 29.4	+0.4
	comp=Z,18nm,0.7s						
OJC	Ojcow	2.67	116	*e*Pg	Pg	15 37 55.4	-0.9
OJC				*e*Sg	Sg	15 38 29.9	-0.9
JAVC	Velka Javorina	2.80	158	*e*PN	Pn	15 37 51.7	+0.4
KHC	Kasperske Hory	2.83	215	*e*PN	Pn	15 37 51.2	-0.5
KHC				*e*PG	Pb	15 37 57.2	+0.6
KHC				*e*SG	Sg	15 38 35.9	-0.2
	comp=Z,61nm,0.9s						
CKRC	Cesky Krumlov	2.88	204	*e*PN	Pn	15 37 52.5	+0.2
CKRC				*e*PG	Pb	15 37 57.8	+0.4
CKRC				*e*SG	Sg	15 38 37.1	-0.5
LANS	Liptovska Anna	3.17	135	*e*PG	Pg	15 38 07.5	+1.5
LANS				*e*SG	Sg	15 38 46.7	-0.4
MODS	Modra-Piesok	3.19	165	*e*PG	Pg	15 38 07.4	+1.1
MODS				*e*SG	Sg	15 38 47.7	+0.2
VYHS	Vyhne	3.46	148	*e*PN	Pn	15 37 59.5	-0.9
VYHS				*e*PG	Pg	15 38 13.3	+1.8
CONA	Conrad Observa	3.54	182	*e*Pn	Pn	15 38 01.7	+0.2
	comp=Z,0.6nm,0.2s						
MOA	Molln	3.80	199	*e*Pn	Pn	15 38 05.0	0.0
	comp=Z,1.4nm,0.3s						
STHS	Stebnicka Huta	3.89	120	*e*SG	Sg	15 39 14.6	+4.6

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*NEIC **30** 15:40:04.9±2.4,23°.35S±0°.10×179°.7W±0°.1,h517^{km}±2^{km}, mb4.6/92,Error ellipse: s-maj=14.9km s-min=13.3km az=127.0*

*IDC **30** 15:40:05.7±1.0,23°.25S×179°.78W,h526^{km}±11^{km}, mb3.8/27,mbtmp4.6/30,Error ellipse: s-maj=12.8km s-min=9.9km az=109.0*

*NOU **30** 15:40:06.5,23°.33S×179°.53W,h553^{km},mb4.7/65,South of Fiji Islands*

*BGR **30** 15:40:08.3,23°.27S×179°.54W,h500^{km}*

ISC 30 15:40:06.1±0.3**,23°.35S**±0°.05×**179°.70W**±0°.06**,h536^{km}, n551,σ1^{s}.26**/572**,mb4.5**/74**,18C-11D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	5.16	9	P	P	15 41 37.6	+1.0
MSVF	Nonsavu	5.97	339	P	P	15 41 43.8	-0.2
	6.1nm,0.4s,baz=234,slow=22,SNR=17						
MSVF	Nonsavu	5.97	339	P	P	15 41 44.7	+0.7
RAO	Raoul Island	6.09	165	P	P	15 41 45.4	+0.6
	208nm,0.3s,baz=120,slow=16,SNR=4.0						
RAO				S	S	15 43 04.7	-0.8
	199nm,0.4s,baz=96,slow=23,SNR=3.0						
RAO	Raoul Island	6.09	165	P	P	15 41 42.4	-2.3
GLKZ	Green Lake	6.10	165	P	P	15 41 45.4	+0.6
TAVE	Taveuni	6.61	358	P	P	15 41 51.4	+1.5
FUTU	Fugatoga	9.12	10	P	P	15 42 15.5	+0.6
NIUE	Niue	10.06	67	P	P	15 42 24.8	+0.2
	baz=9.9,SNR=7.5						
NIUE	Niue	10.06	67	P	P	15 42 24.5	0.0
NIUE	Niue	10.06	67	P	P	15 42 24.7	+0.2
PINNC	Pines Island,	11.86	271	P	P	15 42 43.7	+0.5
PINNC	Pines Island,	11.86	271	P	P	15 42 44.9	+1.7
AFI	Afiamalu	12.02	40	P	P	15 42 41.9	-3.1
	37nm,0.9s,baz=259,slow=16,SNR=5.9						
AFI				S	S	15 44 46.2	-10
	15nm,0.7s,baz=199,slow=22,SNR=2.2						
AFI	Afiamalu	12.02	40	P	P	15 42 41.4	-3.6
AFI	Afiamalu	12.02	40	P	P	15 42 45.2	+0.2
LIFNC	LIFOU	12.37	279	P	P	15 42 47.2	-1.3
LIFNC	LIFOU	12.37	279	P	P	15 42 48.8	+0.3
OUENC	Ouen Island, N	12.44	272	P	P	15 42 49.7	+0.5
OUENC	Ouen Island, N	12.44	272	P	P	15 42 51.0	+1.8
YATNC	Mamie plateau,	12.44	273	P	P	15 42 51.9	+2.7
NFK	Norfolk Island	12.46	240	P	P	15 42 51.1	+1.8
	baz=13,SNR=4.2						
ONTNC	Ouen Toro	12.81	272	P	P	15 42 52.0	-1.1
DZM	Mont Dzumac	12.85	273	P	P	15 42 53.7	+0.1
	18nm,0.7s,baz=97,slow=18,SNR=19						
DZM	Mont Dzumac	12.85	273	P	P	15 42 54.0	+0.4
DZM	Mont Dzumac	12.85	273	P	P	15 42 57.4	+3.8
OUZ	Omahuta	13.19	205	P	P	15 42 58.7	+1.9
OUZ	Omahuta	13.19	205	P	P	15 42 58.6	+1.8
GRZ	Great Barrier	13.52	197	P	P	15 43 05.7	+5.5
WCZ	Waipu Caves	13.57	201	P	P	15 43 02.6	+1.9
KUZ	Kuaotunu	13.92	195	P	P	15 43 05.2	+0.8
WIAZ	Waiheke Island	14.12	197	P	P	15 43 07.2	+0.7
MXZ	Matakaoa Point	14.27	186	P	P	15 43 08.7	+0.7
HBAZ	Herne Bay Bore	14.29	198	P	P	15 43 13.8	+5.6
MYRZ	Mayor Island	14.32	193	P	P	15 43 13.0	+4.5
ETAZ	East Tamaki Re	14.33	198	P	P	15 43 13.4	+4.8
WSRZ	White Island S	14.37	190	P	P	15 43 11.9	+2.8
WIZ	White Island	14.38	190	P	P	15 43 11.7	+2.6
HAZ	Te Kaha	14.52	188	P	P	15 43 09.9	-0.7
RUGZ	Raukumara Rang	14.74	188	P	P	15 43 12.8	-0.2
TGRZ	Tauranga	14.74	193	P	P	15 43 16.3	+3.4
TWGZ	Tauwhareparae	14.91	187	P	P	15 43 16.8	+2.1
TOZ	Tahuroa Road	14.91	195	P	P	15 43 14.2	-0.5
TOZ	Tahuroa Road	14.91	195	P	P	15 43 15.1	+0.4
KMRZ	Kaimai	14.92	193	P	P	15 43 09.5	-5.3
KARZ	Kaharoa	15.03	192	P	P	15 43 18.2	+2.3
OMRZ	Omania	15.09	192	P	P	15 43 18.7	+2.2
URZ	Urewera	15.11	190	P	P	15 43 14.2	-2.5
	12nm,0.3s,baz=4.5,slow=3.6,SNR=27						
URZ				S	S	15 45 49.3	-4.4
	36nm,1.1s,baz=81,slow=23,SNR=8.6						
URZ	Urewera	15.11	190	P	P	15 43 17.1	+0.4
URZ	Urewera	15.11	190	P	P	15 43 14.2	-2.5
KOUNC	Koumac, New Ca	15.11	278	P	P	15 43 15.7	-1.3
KOUNC				IAmb	IAmb	15 43 23.0	
	comp=Z,20nm,1.1s						
KOUNC	Koumac, New Ca	15.11	278	P	P	15 43 18.0	+1.0
MWZ	Matawai	15.12	188	P	P	15 43 15.6	-1.3
TKGZ	Te Karaka	15.19	187	P	P	15 43 18.1	+0.6
TARZ	Mount Tarawera	15.19	191	P	P	15 43 19.2	+1.6
CNGZ	Carnagh Statio	15.19	186	P	P	15 43 18.0	+0.4
RRRZ	Republican Roa	15.29	191	P	P	15 43 19.6	+1.0
RAGZ	Rawiri	15.30	189	P	P	15 43 18.2	-0.5
MUGZ	Murupara	15.38	190	P	P	15 43 18.0	-1.6
HRRZ	Handcock Road	15.38	192	P	P	15 43 20.0	+0.4
TLZ	Tolley Road	15.48	194	P	P	15 43 20.8	+0.2
RTZ	Ruatahuna	15.48	190		P	15 43 18.7	-2.0

RTZ				IAmb	IAmb	15 43 22.5	
	comp=Z,16nm,0.6s						
RTZ	Ruatahuna	15.48	190	P	P	15 43 19.8	-0.8
SNGZ	Shannon Statio	15.59	189	P	P	15 43 19.9	-1.8
MTHZ	Maungataniwha	15.73	190	P	P	15 43 22.8	-0.4
RAHZ	Arahi	15.76	189	P	P	15 43 23.7	+0.3
KNZ	Kokohu	15.78	188	P	P	15 43 23.2	-0.4
MRHZ	Matea Rd	15.79	191	P	P	15 43 21.6	-2.2
HIZ	Hauiti	15.81	196	P	P	15 43 24.5	+0.5
HIZ	Hauiti	15.81	196	P	P	15 43 24.5	+0.5
WHHZ	Waihua	15.89	189	P	P	15 43 24.8	+0.1
RATZ	Rangitukua	15.94	193	P	P	15 43 24.6	-0.7
NMHZ	Naumai	15.98	190	P	P	15 43 24.7	-1.0
RITZ	Rihia Road	16.03	193	P	P	15 43 25.8	-0.4
KATZ	Kakaramea	16.06	193	P	P	15 43 24.1	-2.4
BKZ	Black Stump Fm	16.10	191	P	P	15 43 23.7	-3.1
BKZ	Black Stump Fm	16.10	191	P	P	15 43 24.1	-2.7
ARHZ	Aropaoanui	16.11	189	P	P	15 43 26.1	-0.7
NTVZ	North Tongarir	16.18	193	P	P	15 43 26.4	-1.4
KRVZ	Karewarewa	16.19	193	P	P	15 43 26.3	-1.5
TMVZ	Te Maari	16.20	193	P	P	15 43 26.4	-1.5
TWVZ	Taurewa	16.21	194	P	P	15 43 27.5	-0.4
ETVZ	East Tongariro	16.21	193	P	P	15 43 27.1	-1.0
WTVZ	West Tongariro	16.22	193	P	P	15 43 26.9	-1.2
NNVZ	North Ngauruho	16.23	193	P	P	15 43 27.3	-1.0
OTVZ	Oturere	16.25	193	P	P	15 43 26.2	-2.3
NGZ	Ngauruhoe	16.27	193	P	P	15 43 28.0	-0.6
SNVZ	South Ngauruho	16.28	193	P	P	15 43 27.9	-0.8
MCHZ	McNeill Hill	16.33	190	P	P	15 43 27.6	-1.4
TUVZ	Tukino	16.35	193	P	P	15 43 26.8	-2.6
KWHZ	Kaweka Forest	16.36	191	P	P	15 43 27.9	-1.4
FWVZ	Far West T-bar	16.36	193	P	P	15 43 28.8	-0.8
TRVZ	Turoa	16.40	193	P	P	15 43 28.9	-1.1
VRZ	Vera Road	16.42	195	P	P	15 43 30.5	+0.7
WNVZ	Wahianoa	16.42	193	P	P	15 43 28.4	-1.7
PKVZ	Pokaka	16.44	194	P	P	15 43 29.4	-0.8
MOVZ	Moawhango	16.47	193	P	P	15 43 29.6	-0.8
BHHZ	Black Hill Sta	16.49	192	P	P	15 43 27.1	-3.4
MTVZ	Mangateitei	16.50	193	P	P	15 43 30.2	-0.5
KAHZ	Kahuranaki	16.65	189	P	P	15 43 30.8	-1.3
NEZ	North Egmont	16.72	197	P	P	15 43 36.0	+3.2
KHEZ	Kahui Hut	16.77	197	P	P	15 43 33.0	-0.2
KHEZ	Kahui Hut	16.77	197	P	P	15 43 37.0	+3.7
NBEZ	Newall Road No	16.78	198	P	P	15 43 37.8	+4.5
LREZ	Lake Rotokare	16.82	196	P	P	15 43 35.1	+1.5
PNHZ	Pukenui	16.87	191	P	P	15 43 32.0	-2.1
PXZ	Pawanui	16.88	189	P	P	15 43 32.8	-1.3
WPHZ	Waipukurau	16.98	190	P	P	15 43 33.8	-1.3
TSZ	Takapari Road	17.06	191	P	P	15 43 33.8	-2.0
DVHZ	Dannevirke	17.25	191	P	P	15 43 36.0	-1.7
PRWZ	Pori Road	17.54	191	P	P	15 43 39.9	-0.3
BFZ	Birch Farm	17.61	190	P	P	15 43 39.1	-1.8
BFZ	Birch Farm	17.61	190	P	P	15 43 40.0	-0.9
BFZ	Birch Farm	17.61	190	P	P	15 43 39.1	-1.8
MRZ	Mangatainoka R	17.71	192	P	P	15 43 39.5	-2.3
MRZ				IAmb	IAmb	15 43 47.8	
	comp=Z,21nm,0.6s						
MRZ	Mangatainoka R	17.71	192	P	P	15 43 39.3	-2.5
OGWZ	Otaki Gorge	17.94	193	P	P	15 43 41.9	-2.0
HOWZ	Holdsworth Sta	17.95	192	P	P	15 43 42.2	-1.9
KIW	Kapiti Island	18.04	193	P	P	15 43 43.6	-1.2
TMWZ	Te Maipa	18.09	191	P	P	15 43 44.2	-1.0
MTW	Mount Morrison	18.21	192	P	P	15 43 44.5	-1.9
DUWZ	D'Urville Isla	18.21	196	P	P	15 43 45.7	-0.7
CAW	Cannon Point	18.24	193	P	P	15 43 45.1	-1.5
PAWZ	Paruwai Farm	18.44	192	P	P	15 43 47.2	-1.2
SNZO	South Karori	18.51	193	P	P	15 43 48.4	-0.7
SNZO	South Karori	18.51	193	P	P	15 43 49.1	0.0
TCW	Tory Channel	18.51	194	P	P	15 43 47.8	-1.2
TCW	Tory Channel	18.51	194	P	P	15 43 48.4	-0.7
RAR	Rarotonga	18.57	87	P	P	15 43 47.0	-2.8
BHW	Baring Head	18.57	193	P	P	15 43 49.0	-0.7
QRZ	Quartz Range	18.61	199		P	15 43 50.8	+0.8
QRZ	Quartz Range	18.61	199	P	P	15 43 51.1	+1.1
PLWZ	Palliser	18.65	192	P	P	15 43 49.3	-1.1
NNZ	Nelson	18.74	196	P	P	15 43 50.5	-0.6
MRNZ	Matariki Terra	19.07	198	P	P	15 43 53.4	-0.8
BSWZ	Blackbirch Sta	19.09	195	P	P	15 43 53.2	-1.1
THZ	Tophouse	19.37	197	P	P	15 43 57.0	0.0
DSZ	Denniston Nort	19.67	199		P	15 43 59.1	-0.6
KHZ	Kahutara	19.83	195	P	P	15 43 59.8	-1.2
KHZ				IAmb	IAmb	15 44 08.7	
	comp=Z,20nm,0.6s						
GVZ	Greta Valley S	20.47	195	P	P	15 44 05.4	-1.5
LTZ	Lake Taylor	20.49	197	P	P	15 44 05.9	-1.3
LHI	Lord Howe Isla	20.50	242	P	P	15 44 06.1	-1.3
	baz=21,SNR=3.7						
INZ	Inchbonnie	20.67	199	P	P	15 44 07.1	-1.7
AMCZ	Amberley	20.76	196	P	P	15 44 06.5	-3.0
OXZ	Oxford	21.06	197	P	P	15 44 10.3	-1.9
RPZ	Rata Peaks	21.70	198	P	P	15 44 16.8	-1.1
	comp=Z,22nm,0.5s,baz=277,slow=2.8,SNR=16						
	comp=Z,22nm,0.5s						
RPZ	Rata Peaks	21.70	198	P	P	15 44 17.6	-0.4
FOZ	Fox Glacier	21.91	201	P	P	15 44 18.3	-1.5
JCZ	Jackson Bay	22.73	202	P	P	15 44 27.3	-0.1
ODZ	Otahua Downs	23.03	198	P	P	15 44 30.6	+0.7
WKZ	Wanaka	23.33	201	P	P	15 44 31.1	-1.4
HNR	Honiara	23.88	302	P	P	15 44 39.8	+1.9
	comp=Z,366nm,0.5s,baz=190,slow=11,SNR=5.1						
MLZ	Mavora Lakes	24.10	201	P	P	15 44 37.9	-1.5
MLZ				IAmb	IAmb	15 44 42.2	
	comp=Z,28nm,0.7s						
DCZ	Deep Cove	24.52	203	P	P	15 44 42.8	-0.2
WHZ	Wether Hill Ro	24.62	201	P	P	15 44 44.6	+0.7
SYZ	Scrubby Hill	24.82	199	P	P	15 44 46.1	+0.4
ARMA	Armidale	26.47	248	P	P	15 45 01.9	+1.2
ARMA				IAmb	IAmb	15 45 03.1	
	comp=Z,21nm,0.9s						
ARMA	Armidale	26.47	248	P	P	15 45 02.6	+1.9
EIDS	Eidsvold	26.67	260	P	P	15 45 02.5	+0.1
EIDS				IAmb	IAmb	15 45 03.7	
	comp=Z,24nm,0.8s						
RMQ	Roma	28.74	257	P	P	15 45 20.5	+0.1
	baz=29,SNR=27						
RMQ	Roma	28.74	257	P	P	15 45 21.2	+0.7
CNB	Canberra Magne	29.36	239	P	P	15 45 27.1	+1.2
CAN	Canberra	29.65	239	P	P	15 45 28.7	+0.4
CAN				IAmb	IAmb	15 45 30.3	
	comp=Z,28nm,0.9s						
CAN	Canberra	29.65	239	P	P	15 45 29.5	+1.2
TV1H	Townsville Har	31.43	271	P	P	15 45 44.3	+0.5
CMSA	Cobar Meteorol	31.67	247	P	P	15 45 46.2	+0.5
	baz=32,SNR=34						
CMSA	Cobar Meteorol	31.67	247	P	P	15 45 45.8	+0.1
CTA	Charters Tower	31.75	269	P	P	15 45 47.1	+0.6
CTAO	Charters Tower	31.75	269	P	P	15 45 46.6	+0.1
CTAO	Charters Tower	31.75	269	P	P	15 45 47.1	+0.6
QLP	Quilpie	32.78	257	P	P	15 45 55.8	+0.6
TOO	Toolangi	32.98	236	P	P	15 45 56.1	-0.7
TOO				IAmb	IAmb	15 45 58.3	
	comp=Z,23nm,0.8s						
TOO	Toolangi	32.98	236	P	P	15 45 57.5	+0.8
TAU	Tasmania Unive	33.51	226	P	P	15 46 01.1	+0.1
TAU				IAmb	IAmb	15 46 03.5	
	comp=Z,16nm,0.9s						
MTSU	Mount Surprise	33.99	272	P	P	15 46 05.8	+0.3
	baz=34,SNR=7.4						
MTSU	Mount Surprise	33.99	272	P	P	15 46 05.9	+0.4
BRAT	Ballarat	34.17	237	P	P	15 46 07.3	+0.6
PMG	Port Moresby	34.58	288	P	P	15 46 10.0	-0.4
PMG				IAmb	IAmb	15 46 11.3	
	comp=Z,24nm,0.8s						
STKA	Stephens Creek	35.18	247	P	P	15 46 15.6	+0.3
	comp=Z,18nm,0.6s,baz=95,slow=10,SNR=65						
	comp=Z,18nm,0.6s						
STKA	Stephens Creek	35.18	247	P	P	15 46 15.3	0.0
ARPS	Mount Arapiles	35.63	239	P	P	15 46 19.2	+0.3
INKA	Innaminka	35.85	255	P	P	15 46 22.6	+1.8
COEN	Coen	36.30	278	P	P	15 46 27.8	+3.1
COEN				IAmb	IAmb	15 46 30.0	
	comp=Z,11nm,0.8s						
HTT	Hallett	37.55	245	P	P	15 46 35.0	+0.2
	baz=38,SNR=12						
HTT	Hallett	37.55	245	P	P	15 46 35.7	+0.9
QIS	Mount Isa	37.76	266	P	P	15 46 37.0	+0.3
LCRK	Leigh Creek	38.02	250	P	P	15 46 39.0	+0.4
BBOO	Buckleboo	39.91	246	P	P	15 46 53.5	-0.4
	baz=40,SNR=7.6						
BBOO	Buckleboo	39.91	246	P	P	15 46 53.1	-0.8
BBOO				IAmb	IAmb	15 46 53.8	
	comp=Z,25nm,0.8s						
BBOO	Buckleboo	39.91	246	P	P	15 46 53.9	0.0
OOD	Oodnadatta	40.32	254	P	P	15 46 58.5	+1.3
MULG	Mulgathing	41.62	250	P	P	15 47 07.5	0.0
AS31	Alice Springs	42.39	260	P	P	15 47 13.3	-0.5
ASAR	Alice Springs	42.40	260	P	P	15 47 13.6	-0.2
	comp=Z,29nm,0.8s,baz=103,slow=7.2,SNR=256						
ASAR				ScP	ScP	15 51 56.8	+2.3
	comp=Z,3.7nm,1.0s,baz=112,slow=4.0,SNR=12						
ASAR				S	S	15 52 53.3	-3.4
	comp=Z,1.8nm,0.8s,baz=97,slow=14,SNR=11						
ASAR				ScS	ScS	15 56 16.6	+1.1
	comp=Z,0.5nm,0.8s,baz=110,slow=8.0,SNR=4.5						
	comp=Z,29nm,0.8s						
ASAR	Alice Springs	42.40	260	P	P	15 47 13.2	-0.6
WB2	Warramunga Arr	42.71	265	P	P	15 47 14.9	-1.3
WB2				IAmb	IAmb	15 47 16.4	
	comp=Z,32nm,0.8s						
WB0	Warramunga Arr	42.71	266	P	P	15 47 15.0	-1.3
WB0				IAmb	IAmb	15 47 16.3	
	comp=Z,30nm,0.8s						
WRAB	Tennant Creek	42.71	265	P	P	15 47 14.7	-1.6
WRAB				IAmb	IAmb	15 47 24.5	
	comp=Z,36nm,0.8s						
WRAB	Tennant Creek	42.71	265	P	P	15 47 15.9	-0.4
WRA	Warramunga Arr	42.72	265	P	P	15 47 15.6	-0.8
	comp=Z,26nm,0.7s,baz=102,slow=8.0,SNR=164						
WRA				ScP	ScP	15 51 58.1	+2.3
	comp=Z,4.3nm,1.0s,baz=98,slow=4.4,SNR=11						
WRA				S	S	15 52 55.3	-6.0
	comp=Z,1.6nm,1.1s,baz=100,slow=14,SNR=5.1						
	comp=Z,26nm,0.7s						
WRA	Warramunga Arr	42.72	265	P	P	15 47 14.9	-1.4
KDU	Kakadu	46.51	275	P	P	15 47 44.9	-0.6
	baz=47,SNR=5.4						
FORT	Forrest	46.76	249	P	P	15 47 46.7	-0.5
FORT	Forrest	46.76	249	P	P	15 47 47.7	+0.5
WRKA	Warakurna	47.22	257	P	P	15 47 50.6	-0.3
	baz=47,SNR=96						
WRKA	Warakurna	47.22	257	P	P	15 47 50.7	-0.2
MTN	Manton Dam	47.69	274	P	P	15 47 53.7	-0.7
MTN				IAmb	IAmb	15 47 54.5	
	comp=Z,7.5nm,0.7s						
MTN	Manton Dam	47.69	274	P	P	15 47 53.9	-0.5
RSD	Rainshed	48.77	31	P	P	15 48 01.8	-0.7
HMH	Humu'ula Sheep	48.80	31	P	P	15 48 01.9	-1.0
KNRA	Kununurra	48.96	269	P	P	15 48 03.7	-0.1
	baz=49,SNR=9.3						
KNRA	Kununurra	48.96	269	P	P	15 48 03.3	-0.6
KNRA				IAmb	IAmb	15 48 11.6	
	comp=Z,33nm,1.1s						
KNRA	Kununurra	48.96	269	P	P	15 48 03.8	-0.1
FAKI	Fak Fak	50.69	286	P	P	15 48 15.2	-1.4
FAKI				IAmb	IAmb	15 48 28.7	
	comp=Z,17nm,1.0s						
FITZ	Fitzroy Crossi	51.14	265	P	P	15 48 19.8	-0.1
SBA	Scott Base	54.94	183	P	P	15 48 47.4	+1.5
VNDA	Vanda	54.95	185	P	P	15 48 48.0	+2.0
	comp=Z,2.8nm,0.7s,baz=15,slow=6.9,SNR=13						
	comp=Z,2.8nm,0.7s						
VNDA	Vanda	54.95	185	P	P	15 48 47.7	+1.7
SOEI	Soe	55.07	274	P	P	15 48 48.7	+0.6
SOEI				IAmb	IAmb	15 48 50.3	
	comp=Z,35nm,0.9s						
SOEI	Soe	55.07	274	P	P	15 48 48.3	+0.3
SOEI	Soe	55.07	274	P	P	15 48 50.5	+2.5
	comp=Z,44nm,1.1s						
KLBR	Kellerberrin	55.45	247	P	P	15 48 50.1	-0.2
	baz=56,SNR=16						
KLBR	Kellerberrin	55.45	247	P	P	15 48 50.5	+0.2
PSA00	Pilbara Seismi	55.53	259	P	P	15 48 49.2	-1.8
NWAO	Narrogin (SRO)	55.71	245	P	P	15 48 50.9	-1.1
NWAO	Narrogin (SRO)	55.71	245	P	P	15 48 51.2	-0.8
NWAO				IAmb	IAmb	15 49 01.1	
	comp=Z,49nm,1.1s						
NWAO	Narrogin (SRO)	55.71	245	P	P	15 48 52.0	-0.1
MBWA	Marble Bar	55.74	260	P	P	15 48 51.9	-0.5
MBWA				IAmb	IAmb	15 48 52.7	
	comp=Z,16nm,0.8s						
MBWA	Marble Bar	55.74	260	P	P	15 48 52.1	-0.3
BLDU	Ballidu	56.48	248	P	P	15 48 57.3	-0.2
MUN	Mundaring	56.70	246	P	P	15 48 59.0	+0.1
	baz=57,SNR=4.3						
MUN	Mundaring	56.70	246	P	P	15 48 59.0	+0.1
MORW	Morawa	57.32	250	P	P	15 49 02.5	-0.7
MORW				IAmb	IAmb	15 49 03.8	
	comp=Z,17nm,0.8s						
MORW	Morawa	57.32	250	P	P	15 49 02.7	-0.5
GIRL	Giralia	60.31	256	P	P	15 49 23.9	+0.5
CASY	Casey	60.72	206	P	P	15 49 25.5	+0.2
PLAI	Plampang	61.37	273	P	P	15 49 30.1	-0.3
TOLI2	Tolitoli	62.70	284	P	P	15 49 38.3	-0.8
TOLI2	Tolitoli	62.70	284	P	P	15 49 39.7	+0.6
MPSI	Mapaga	63.15	283	P	P	15 49 41.7	-0.3
QSPA	South Pole Qui	66.73	180	P	P	15 50 05.4	+1.6
	comp=Z,2.9nm,0.7s,baz=47,slow=0.6,SNR=24						
	comp=Z,2.9nm,0.7s						
QSPA	South Pole Qui	66.73	180	P	P	15 50 05.2	+1.3
KKM	Kota Kinabalu	69.00	287	P	P	15 50 17.6	-0.9
KKM				IAmb	IAmb	15 50 26.6	
	comp=Z,19nm,1.1s						
MJAR	Matsushiro Arr	71.60	325	P	P	15 50 33.4	+0.1
	comp=Z,3.3nm,0.9s,baz=162,slow=6.2,SNR=6.2						
	comp=Z,3.3nm,0.9s						
JSU	Suzuyama	72.46	317	P	P	15 50 37.5	-1.0
JSU				IAmb	IAmb	15 50 46.9	
	comp=Z,14nm,1.1s						
JHS	Saijyo	73.27	321	P	P	15 50 42.8	-0.2
JHS				IAmb	IAmb	15 50 44.2	
	comp=Z,16nm,1.0s						
JTM	Tenmabayashi	73.49	330	P	P	15 50 44.5	+0.4
JTM				IAmb	IAmb	15 50 46.2	
	comp=Z,45nm,1.1s						
TPUB	Ta-pu	74.23	304	P	P	15 50 48.2	-0.5
TPUB				IAmb	IAmb	15 51 04.8	
	comp=Z,13nm,1.0s						
SSLB	Suanglung	74.26	305	P	P	15 50 48.1	-0.8
SSLB				IAmb	IAmb	15 50 48.2	
	comp=Z,16nm,1.1s						
ADK	Adak	74.95	2	P	P	15 50 50.8	-1.2
ADK				IAmb	IAmb	15 51 01.2	
	comp=Z,41nm,1.1s						
UNV	Unalaska Valle	77.72	8	P	P	15 51 08.2	+1.0
	baz=192						
KSRS	Korea Array	78.00	320	P	P	15 51 08.8	-0.3
	comp=Z,1.3nm,0.8s,baz=143,slow=4.4,SNR=5.2						
	comp=Z,1.3nm,0.8s						
PEA0B	Petropavlovsk-	78.63	346	P	P	15 51 12.1	0.0
PETK	Petropavlovsk-	78.63	346	P	P	15 51 11.6	-0.6
	comp=Z,6.4nm,0.8s,baz=157,slow=8.0,SNR=7.9						
	comp=Z,6.4nm,0.8s						
PETK	Petropavlovsk-	78.63	346	P	P	15 51 11.8	-0.4
SDPT	Sand Point	80.09	11	P	P	15 51 18.9	-0.9
SDPT	Sand Point	80.09	11	P	P	15 51 20.6	+0.8
	baz=198						
USRK	Ussuriysk Ar.	80.45	327	P	P	15 51 21.1	-0.8
	comp=Z,2.8nm,0.9s,baz=140,slow=3.4,SNR=4.5						
	comp=Z,2.8nm,0.9s						
NJ2	Nanjing	80.51	311	*e*P	P	15 51 23.0	+0.5
NJ2				pP	pwP	15 53 31.0	+9.4
NJ2				sP	sP	15 54 14.0	+3.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,120nm,3.5s						
CHGN	Chignik	81.37	12	P	P	15 51 27.4	+1.1
	baz=200						
MDJ	Mudanjiang	81.96	326	P	P	15 51 30.8	+1.1
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,220nm,3.8s						
MG03	Isla Dawson	82.07	146	P	P	15 51 31.6	+1.3
MURC	Murrieta	82.12	48	P	P	15 51 31.7	+0.8
	baz=235						
VES	Vestal, Richgr	82.15	46	P	P	15 51 32.0	+1.2
	baz=234						
BFSC	Mount Baldy Ra	82.17	48	P	P	15 51 32.4	+1.2
	baz=235						
MONP2	Monument Peak	82.26	49	P	P	15 51 33.4	+1.6
	baz=236,SNR=6.7						
SLBS	Sierra La Lagu	82.30	60	P	P	15 51 34.4	+2.4
SLBS				IAmb	IAmb	15 51 35.2	
	comp=Z,12nm,0.8s						
EDW2	Edwards Air Fo	82.31	47	P	P	15 51 33.5	+1.7
	baz=235						
IKP	In-Ko-Pah, Jac	82.34	50	P	P	15 51 33.3	+1.3
	baz=236						
ISA	Isabella, Lake	82.45	46	P	P	15 51 34.5	+2.0
	baz=234						
YUH	Yuha Desert	82.47	50	P	P	15 51 33.7	+1.1
CMB	Columbia Colle	82.62	43	P	P	15 51 34.5	+1.2
CMB				IAmb	IAmb	15 51 35.8	
	comp=Z,13nm,0.9s						
ESPZ	Base Esperanza	82.63	158	P	P	15 51 33.8	+1.0
PFO	Pinyon Flats O	82.64	49	P	P	15 51 35.0	+1.4
	baz=236						
TPFO	Pinon Flats	82.64	49	P	P	15 51 34.8	+1.2
	baz=236						
PMD	Palm Desert	82.72	49	P	P	15 51 35.0	+1.2
R16K	Pilot Point	82.72	12	P	P	15 51 35.2	+2.0
	baz=200						
SWSC	Sam W. Stewart	82.72	50	P	P	15 51 35.7	+1.9
	baz=236						
ORV	Oroville	82.85	41	P	P	15 51 35.7	+1.3
ORV				IAmb	IAmb	15 51 37.0	
	comp=Z,12nm,0.9s						
LRMC	Laurel Mtn Rad	82.87	47	P	P	15 51 35.8	+1.1
	baz=235						
RRX	Edison Barstow	82.98	47	P	P	15 51 37.1	+1.9
	baz=235						
CWC	Cottonwood Cre	83.16	46	P	P	15 51 37.2	+1.0
	baz=234						
BELC	Belle Mtn. Jos	83.17	49	P	P	15 51 38.1	+1.8
	baz=236						
MPMC	Manual Prospec	83.33	46	P	P	15 51 39.1	+2.0
	baz=235,SNR=5.1						
GSC	Goldstone, Bar	83.35	47	P	P	15 51 38.2	+1.2
GSC	Goldstone, Bar	83.35	47	P	P	15 51 38.5	+1.4
	baz=235						
BC3	Big Chuckawall	83.36	49	P	P	15 51 39.0	+1.8
	baz=236						
HEC	Hector,Ludlow	83.41	48	P	P	15 51 39.0	+1.6
	baz=236,SNR=7.1						
GLA	Glamis	83.47	50	P	P	15 51 39.6	+2.0
GLA				IAmb	IAmb	15 51 41.1	
	comp=Z,18nm,0.9s						
GLA	Glamis	83.47	50	P	P	15 51 39.8	+2.1
	baz=237						
YBH	Yreka Blue Hor	83.49	39	P	P	15 51 38.7	+1.1
	comp=Z,5.4nm,0.8s,baz=24,slow=4.3,SNR=8.4						
	comp=Z,5.4nm,0.8s						
YBH	Yreka Blue Hor	83.49	39	P	P	15 51 38.8	+1.2
WAKR	Walker	83.50	43	P	P	15 51 39.3	+1.5
WAKR				IAmb	IAmb	15 51 40.8	
	comp=Z,14nm,1.0s						
CN2	Changchun	83.61	323	P	P	15 51 38.3	+0.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ELIB	Princess Elisa	83.64	187	*d*P	P	15 51 39.0	+1.0
QSM	Queen of Sheba	83.69	47	P	P	15 51 39.8	+1.2
Q17K	Contact Creek	83.69	12	P	P	15 51 38.6	+0.4
	baz=202						
DSP	Deep Springs	83.77	45	P	P	15 51 40.1	+1.2
GMRC	Granite Mounta	83.84	48	P	P	15 51 40.8	+1.3
	baz=236,SNR=5.9						
IRM	Iron Mountain	83.85	49	P	P	15 51 41.7	+2.2
	baz=236,SNR=8.2						
BNX	BinXian	83.86	326	⇓P	P	15 51 39.8	+0.6
BNX				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BNX				pmax	pmax		
	comp=Z,160nm,4.3s						
LCH	Last Change Ra	83.90	45	P	P	15 51 40.9	+1.0
YERR	Yerington	83.90	43	P	P	15 51 41.4	+1.5
YERR				IAmb	IAmb	15 51 42.4	
	comp=Z,9.7nm,0.8s						
GWY	Greenwater Val	83.94	46	P	P	15 51 41.3	+1.2
GRAC	Grapevine Rang	83.95	45	P	P	15 51 41.7	+1.7
	baz=235						
KDAK	Kodiak Island	83.95	14	P	P	15 51 39.5	+0.2
	comp=Z,6.8nm,0.9s,baz=174,slow=23,SNR=1.5						
	comp=Z,6.8nm,0.9s						
P16K	Nushagak River	84.02	11	P	P	15 51 40.1	+0.5
	baz=200						
113A	Mohawk Valley,	84.06	51	P	P	15 51 42.5	+1.9
113A				IAmb	IAmb	15 51 43.7	
	comp=Z,10nm,1.1s						
NVAR	Mina Array Bea	84.17	44	P	P	15 51 42.4	+1.1
	comp=Z,5.4nm,1.0s,baz=224,slow=8.7,SNR=17						
	comp=Z,5.4nm,1.0s						
NVAR	Mina Array Bea	84.17	44	P	P	15 51 42.8	+1.6
Q18K	Katmai Hardscr	84.22	13	P	P	15 51 40.9	+0.1
	baz=203						
214A	Organ Pipe Nat	84.32	52	P	P	15 51 43.3	+1.5
	baz=238						
WCT	Wildcat Mounta	84.32	46	P	P	15 51 42.9	+1.1
O16K	Kokwok River B	84.53	11	P	P	15 51 41.9	-0.3
	baz=200						
NEE2	Needles Airpor	84.55	49	P	P	15 51 44.4	+1.5
	baz=237						
PDMCI	Parker Dam,Lak	84.62	49	P	P	15 51 45.2	+2.0
	baz=237						
TPNV	Topopah Spring	84.65	46	P	P	15 51 44.5	+0.9
TPNV	Topopah Spring	84.65	46	P	P	15 51 44.3	+0.8
	baz=236						
Q20K	Shuyak Island	84.74	14	P	P	15 51 44.1	+0.9
	baz=205						
Q19K	Cape Douglas,	84.76	13	P	P	15 51 43.8	+0.4
	baz=204						
P18K	Big Mountain,	84.87	12	P	P	15 51 44.0	+0.1
P18K				IAmb	IAmb	15 51 44.3	
	comp=Z,12nm,0.8s						
P18K	Big Mountain,	84.87	12	P	P	15 51 44.1	+0.2
	baz=202						
O17K	Koliganek Bris	84.88	11	P	P	15 51 44.7	+0.9
	baz=201						
SNAA	Sanae	85.21	179	P	P	15 51 45.5	-0.1
	comp=Z,1.6nm,0.8s,baz=254,slow=19,SNR=1.1						
	comp=Z,1.6nm,0.8s						
O18K	Koktuh Hills	85.30	12	P	P	15 51 45.7	-0.2
O18K				IAmb	IAmb	15 51 47.1	
	comp=Z,28nm,0.8s						
O18K	Koktuh Hills	85.30	12	P	P	15 51 46.4	+0.4
	baz=202,SNR=7.7						
P19K	Oil Pt	85.51	13	P	P	15 51 47.5	+0.5
	baz=204						
O19K	Port Alsworth	85.79	12	P	P	15 51 47.9	-0.3
	baz=203,SNR=11						
HOM	Homer	85.86	14	P	P	15 51 49.3	+0.8
	baz=206						
R11B	Troy Canyon, C	85.88	45	P	P	15 51 50.2	+0.7
	baz=236						
TUC	Tucson	85.97	52	P	P	15 51 52.1	+2.2
	baz=239						
MA2	Magadan	86.12	345	P	P	15 51 49.6	-0.2
	comp=Z,6.0nm,0.8s,baz=116,slow=18,SNR=1.9						
	comp=Z,6.0nm,0.8s						
BRSE	Bradley Lake S	86.14	14	P	P	15 51 50.4	+0.5
	baz=206						
N19K	Bonanza Creek	86.33	12	P	P	15 51 51.0	0.0
	baz=203						
HEH	HeiHe	86.91	329	P	P	15 51 54.0	+0.2
HEH				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HEH				pmax	pmax		
	comp=Z,140nm,5.5s						
SPCR	Spurr Chakacha	87.14	13	P	P	15 51 55.0	+0.3
	baz=205						
WUAZ	Wupatki	87.20	49	P	P	15 51 56.9	+1.2
	baz=239						
M19K	Big River Lodg	87.35	12	P	P	15 51 56.2	+0.6
	baz=203						
ELK	Elko	87.43	43	P	P	15 51 55.3	-1.5
	comp=Z,1.9nm,0.7s,baz=240,slow=4.7,SNR=8.2						
	comp=Z,1.9nm,0.7s						
L19K	White Mountain	87.52	11	P	P	15 51 57.2	+0.8
	baz=203						
RC01	Rabbit Creek A	87.57	14	P	P	15 51 57.2	+0.6
	baz=207						
M20K	Styx River	87.57	12	P	P	15 51 56.4	-0.3
	baz=204						
BBB	Bella Bella	87.65	29	P	P	15 51 57.6	+0.5
	comp=Z,9.5nm,0.7s,baz=256,slow=6.3,SNR=4.2						
	comp=Z,9.5nm,0.7s						
SUA	Susitna One	87.68	13	P	P	15 51 57.2	-0.1
	baz=206,SNR=6.5						
L20K	Farewell, AK	87.98	12	P	P	15 51 58.5	-0.1
	baz=204						
SKT	Skwentna	87.98	13	P	P	15 51 57.9	-0.7
	baz=206						
EYAK	Cordova Ski Ar	88.04	16	P	P	15 51 58.9	+0.1
	baz=211						

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KNK   Knik Glacier      88.14  14  P       P        15 51 58.9 -0.4
      baz=208
PMR   Palmer            88.15  14  P       P        15 51 59.2 -0.1
      baz=208
121A  Cookes Peak, D    88.28  53  P       P        15 52 01.2 +0.3
      baz=241
ANM   Nome              88.33   6  P       P        15 52 00.1  0.0
      baz=193
SIT   Sitka             88.35  22  P       P        15 52 00.8 +0.5
      baz=220
V35K  Ketchikan         88.43  25  P       P        15 52 01.9 +1.1
      baz=223
U33K  Whale Pass        88.43  24  P       P        15 52 01.2 +0.4
      baz=222
PLCA  Paso Flores       88.45 134  P       P        15 52 02.1 +0.5
      comp=Z,2.5nm,0.9s,baz=214,slow=8.2,SNR=3.6
      comp=Z,2.5nm,0.9s
CUT   Chulitna          88.63  13  P       P        15 52 01.3 -0.2
      baz=207
M23K  Glacier View      88.65  15  P       P        15 52 02.2 +0.5
      baz=209
PPLA  Purkeypile        88.68  12  P       P        15 52 02.1 +0.1
      baz=205
DUG   Dugway, Tooele    88.69  45  P       P        15 52 02.5 -0.1
      baz=238
S31K  Pelican           88.73  22  P       P        15 52 01.4 -0.7
      baz=219
K20K  Telida            88.75  11  P       P        15 52 02.5 +0.3
      baz=203
SCM   Sheep Creek Mo    88.77  15  P       P        15 52 02.6 +0.3
      baz=209
SEY   Seymchan          88.79 348  P       P        15 52 01.4 -0.9
      comp=Z,5.4nm,0.8s,baz=156,slow=5.4,SNR=16
      comp=Z,5.4nm,0.8s
XLT   XiLinHaoTe        89.05 319 eP       P        15 52 07.3 +3.2
XLT                                pP      pwP      15 54 16.5  +10
XLT                                sP      sP       15 54 56.0 +1.9
XLT                                pmax    pmax
      comp=Z,12nm,0.9s
XLT                                pmax    pmax
      comp=Z,200nm,4.9s
TNA   Tin City          89.09   5  P       P        15 52 03.6  0.0
      baz=191
CAST  Castle Rocks      89.18  12  P       P        15 52 03.0 -1.2
CAST                               IAmb    IAmb     15 52 04.2
      comp=Z,11nm,0.9s
CAST  Castle Rocks      89.18  12  P       P        15 52 03.3 -0.8
      baz=205
N25K  Chitina, Valde    89.24  16  P       P        15 52 05.0 +0.5
      baz=212
WAT1  Susitna Watana    89.37  14  P       P        15 52 04.8 -0.3
      baz=208
MCARA McCarthy VSAT     89.46  17  P       P        15 52 05.5 +0.1
      baz=213
HLID  Hailey            89.50  41  P       P        15 52 07.5 +1.1
      baz=236,SNR=8.1
CHUM  Lake Minchumin    89.55  12  P       P        15 52 05.6 -0.2
      baz=205
TRF   Thorofare Moun    89.56  13  P       P        15 52 05.3 -0.8
TRF                                IAmb    IAmb     15 52 07.9
      comp=Z,12nm,0.9s
TRF   Thorofare Moun    89.56  13  P       P        15 52 05.6 -0.5
      baz=207
GCSA  Galena City Sc    89.58  10  P       P        15 52 06.3 +0.4
      baz=201
CMAR  Chiang Mai Arr    89.59 290  P       P        15 52 08.9 +1.8
      comp=Z,0.8nm,0.9s,baz=137,slow=3.0,SNR=5.3
      comp=Z,0.8nm,0.9s
MNTX  Cornudas Mount    89.68  55  P       P        15 52 07.6 +0.4
      baz=242
O28M  Mount Upton       89.74  18  P       P        15 52 07.7 +0.6
      baz=216
PLBC  Pleasant Camp     89.85  21  P       P        15 52 08.4 +1.1
      baz=219
TXAR  Lajitas Array     89.91  58  P       P        15 52 09.9 +1.5
      comp=Z,4.1nm,0.8s,baz=214,slow=6.6,SNR=42
      comp=Z,4.1nm,0.8s
TXAR  Lajitas Array     89.91  58  P       P        15 52 09.3 +0.9
MCK   McKinley          90.09  13  P       P        15 52 08.5 +0.1
      baz=208
T35M  Bob Quinn         90.15  25  P       P        15 52 09.4 +0.6
      baz=224
P30M  Million Dollar    90.18  20  P       P        15 52 09.7 +0.8
      baz=219
BSUT  Blindstream Ca    90.20  45  P       P        15 52 09.3 -0.5
HHC   Hu-ho-hao-te      90.22 315 eP       P        15 52 10.8 +1.2
HHC                                pmax    pmax
      comp=Z,25nm,0.8s
HHC                                pmax    pmax
      comp=Z,120nm,4.3s
YUK8  Steele Glacier    90.27  18  P       P        15 52 10.1 +0.6
      baz=216
M26K  Nabesna, AK       90.32  16  P       P        15 52 09.9 +0.4
      baz=213
ANMO  Albuquerque       90.41  52  P       P        15 52 11.4 +0.7
      comp=Z,3.7nm,0.9s,baz=284,slow=5.8,SNR=5.7
      comp=Z,3.7nm,0.9s
ANMO  Albuquerque       90.41  52  P       P        15 52 11.3 +0.6
      baz=242
YUK3  Moose Creek       90.48  18  P       P        15 52 10.8 +0.4
      baz=216
S34M  Telegraph Cree    90.50  24  P       P        15 52 11.4 +1.1
      baz=224,SNR=5.8
M27K  Edge Creek, AK    90.58  17  P       P        15 52 12.0 +1.3
      baz=214
PZH   PanZhiHua         90.66 299  P       P        15 52 13.0 +1.0
PZH                                pmax    pmax
      comp=Z,10.0nm,0.6s
PZH                                pmax    pmax
      comp=Z,120nm,5.7s
L26K  Log Cabin Wild    90.76  16  P       P        15 52 11.5 +0.1
      baz=213
I21K  Tanana            90.80  11  P       P        15 52 11.7 +0.2
      baz=205
NEA2  Nenana            90.83  13  P       P        15 52 11.8 +0.1
      baz=208
P32M  Atlin             90.83  21  P       P        15 52 11.4 -0.4
      baz=221
K24K  Donnelly Dome     90.84  14  P       P        15 52 11.8  0.0
      baz=211
Q32M  Nakina River      90.86  22  P       P        15 52 13.3 +1.1
      baz=223
MLY   Manley            90.89  12  P       P        15 52 11.7 -0.3
      baz=206
BVCY  Beaver Creek      90.89  17  P       P        15 52 11.6 -0.5
      baz=215
RIDG  Independent Ri    91.00  15  P       P        15 52 12.9 +0.3
      baz=212
H21K  Melozitna Rive    91.08  11  P       P        15 52 13.2 +0.3
      baz=205
HDA   Harding Lake      91.11  14  P       P        15 52 12.4 -0.6
      baz=210
L27K  Beaver Creek,     91.17  16  P       P        15 52 13.5 +0.2
      baz=214
IMAR  Indian Mountai    91.22  10  P       P        15 52 13.5  0.0
I23K  Minto, Yukon-K    91.26  12  P       P        15 52 12.4 -1.2
      baz=208
DLBC  Dease Lake        91.28  24  P       P        15 52 14.3 +0.3
      comp=Z,1.8nm,0.8s,baz=219,slow=12,SNR=4.7
      comp=Z,1.8nm,0.8s
DLBC  Dease Lake        91.28  24  P       P        15 52 14.2 +0.1
      baz=224
TCOL  CIGO, UAF Yank    91.32  13  P       P        15 52 13.4 -0.5
      baz=209
COLA  College           91.32  13  P       P        15 52 13.7 -0.2
      baz=209
SCRK  Sand Creek        91.41  15  P       P        15 52 14.9 +0.3
      baz=212
ILAR  Eielson Array     91.44  13  P       P        15 52 13.8 -0.7
      comp=Z,0.9nm,0.8s,baz=212,slow=5.8,SNR=8.9
      comp=Z,0.9nm,0.8s
S22A  4UR Ranch, Cre    91.47  49  P       P        15 52 16.1 +0.3
      baz=241
M29M  Somme Creek       91.58  18  P       P        15 52 16.4 +1.0
      baz=217
P33M  Teslin, Yukon     91.59  21  P       P        15 52 16.1 +0.6
      baz=222
O20A  White River Ci    91.66  47  P       P        15 52 17.0 +0.6
      baz=241
G21K  Allakaket         91.75  10  P       P        15 52 16.9 +1.0
      baz=204
K27K  Chicken           91.91  16  P       P        15 52 17.8 +1.1
      baz=214
BW06  Boulder Array     92.11  44  P       P        15 52 19.0 +0.6
      baz=240
PD31  Pinedale Array    92.11  44  P       P        15 52 18.7 +0.3
PD31                               IAmb    IAmb     15 52 21.2
      comp=Z,3.0nm,0.9s
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PDAR  Pinedale Array    92.11  44  P       P        15 52 19.4 +0.9
      comp=Z,2.5nm,0.8s,baz=213,slow=4.2,SNR=22
      comp=Z,2.5nm,0.8s
PDAR  Pinedale Array    92.11  44  P       P        15 52 18.7 +0.3
M30M  Minto, Yukon      92.16  18  P       P        15 52 18.1 +0.2
M30M                               IAmb    IAmb     15 52 20.3
      comp=Z,3.4nm,0.9s
M30M  Minto, Yukon      92.16  18  P       P        15 52 18.2 +0.3
      baz=219
L29M  L29M              92.20  18  P       P        15 52 19.6 +1.4
      baz=218
N32M  Quiet Lake        92.21  21  P       P        15 52 19.2 +1.0
      baz=222
BOZ   Bozeman (W)       92.27  41  P       P        15 52 20.1 +1.0
      baz=238
SDCO  Great Sand Dun    92.40  50  P       P        15 52 20.9 +1.0
      baz=242
M31M  Drury Creek, Y    92.59  19  P       P        15 52 21.0 +1.1
      baz=221
DAWY  Dawson            92.62  17  P       P        15 52 20.4 +0.3
DAWY                               IAmb    IAmb     15 52 21.1
      comp=Z,4.8nm,0.9s
DAWY  Dawson            92.62  17  P       P        15 52 21.2 +1.1
      baz=216
I26K  Coal Creek Min    92.72  15  P       P        15 52 21.2 +0.8
      baz=213
EGAK  Eagle             92.76  16  P       P        15 52 20.8 +0.3
EGAK                               IAmb    IAmb     15 52 21.9
      comp=Z,4.4nm,0.8s
EGAK  Eagle             92.76  16  P       P        15 52 21.0 +0.4
      baz=215
T25A  Trinidad          92.89  51  P       P        15 52 22.6 +0.4
      baz=243
FARO  Faro, Yukon       92.93  20  P       P        15 52 22.6 +1.2
      baz=222
K29M  Barlow Dome       92.95  17  P       P        15 52 22.7 +1.1
      baz=218
Q24A  Divide            93.21  49  P       P        15 52 24.0 +0.3
      baz=242
ISCO  Idaho Springs     93.28  48  P       P        15 52 24.6 +0.6
      baz=242
RLMT  Red Lodge         93.47  42  P       P        15 52 25.0 +0.4
      baz=240
E22K  Anaktuvuk Pass    93.50  10  P       P        15 52 24.2 +0.2
      baz=206
H27K  Steamboat Moun    93.87  15  P       P        15 52 27.2 +1.6
      baz=215
MMPY  Sheldon Lake,     93.87  20  P       P        15 52 26.2 +0.4
      baz=224
G26K  Porcupine Rive    93.97  13  P       P        15 52 27.8 +1.8
      baz=213
BMAR  Burnt Mountain    94.21  13  P       P        15 52 27.4 +0.2
EPYK  Eagle Plains      95.14  16  P       P        15 52 31.5  0.0
      baz=219
D25K  Kavik River       95.49  11  P       P        15 52 33.2 +0.3
      baz=210
G30M  tAoh Zraii Nji    95.74  16  P       P        15 52 34.5 +0.3
      baz=219
A21K  Barrow            95.78   7  P       P        15 52 34.1  0.0
      baz=201
C27K  Jago River        96.24  12  P       P        15 52 36.5 +0.2
      baz=213
RSSD  Black Hills       96.29  45  P       P        15 52 38.0 +0.6
      baz=244
F31M  Tsiigehtchic      96.72  16  P       P        15 52 38.2 -0.2
      baz=222
INK   Inuvik            97.43  16  P       Pdif     15 52 42.0 +0.4
      comp=Z,1.2nm,0.7s,baz=199,slow=2.3,SNR=4.5
      comp=Z,1.2nm,0.7s
YKA   Yellowknife Ar    99.75  25  P       Pdif     15 52 50.5 -1.6
      comp=Z,0.2nm,0.7s,baz=243,slow=4.1,SNR=2.5
      comp=Z,0.2nm,0.7s
TZTN  Tazewell         108.24  57  P       PKiKP    15 57 33.0 -0.6
      baz=254
MCWV  Mont Chateau     111.84  55  P       PKiKP    15 57 37.8 -2.4
      baz=257
MKAR  Makanchi Array   111.98 313  PKiKP   PKiKP    15 57 39.3 -1.1
      comp=Z,0.7nm,0.6s,baz=218,slow=0.4,SNR=9.2
KSH   Kashi            115.19 304  PKP     PKiKP    15 57 47.3 +0.5
FRB   Frobisher Bay    120.03  29  PKP     PKPdf    15 57 54.6 -0.5
      comp=Z,2.1nm,0.6s,baz=345,slow=1.8,SNR=6.3
SCHQ  Schefferville    121.88  39  PKP     PKiKP    15 57 59.4 +0.2
      comp=Z,2.8nm,0.8s,baz=43,slow=8.5,SNR=2.2
ARCES ARCESS Array B   131.41 348  PKP     PKPdf    15 58 17.4 +0.6
      comp=Z,4.7nm,0.9s,baz=54,slow=1.6,SNR=6.6
FINES FINESS Array B   138.01 342  PKhKP   PKPpre   15 58 18.8
      comp=Z,0.9nm,0.6s,baz=70,slow=3.9,SNR=7.3
FINES                              PKP     PKPdf    15 58 29.1 -0.2
      comp=Z,0.7nm,0.4s,baz=63,slow=3.4,SNR=9.3
FINES                              SKPbc   SKPbc    16 01 13.9 +0.8
      comp=Z,2.0nm,0.9s,baz=8.5,slow=2.8,SNR=4.7
NB2   NORSAR Subarra141.58 351     PKP     PKPdf    15 58 31.1 -4.8
      comp=Z,1.7nm,0.6s,baz=20,slow=3.1
NOA   NORSAR Array B141.58 351     PKhKP   PKPpre   15 58 31.3
      comp=Z,2.8nm,0.7s,baz=16,slow=4.7,SNR=16
MNK   Minsk            142.68 334 i PKiKP  PKPdf    15 58 37.5 -0.4
MNK                               i PKiKP  PKPdf    15 58 37.5 -0.4
MNK                               i PKiKP  PKPdf    15 58 37.5 -0.4
      baz=225
MNK                               i PP     PP       16 01 49.4 -3.7
MNK                               i SKS    SKSdf    16 04 52.0 -4.7
MNK                               i PPP    PPP      16 05 04.2
MNK                               i SKKS   SKKSdf   16 14 09.6 -6.7
MNK                               i SS     SS       16 19 44.2 -2.7
MNK                               i SSS    SSS      16 25 15.0
MNK                               i LRM    MLR      17 02 41.3
      comp=E,16nm,20.0s
MNK                               i LRM    MLR      17 02 41.3
      comp=N,752nm,16.8s
MNK                               i LRM    MLR      17 02 41.3
      comp=Z,48nm,15.5s
KONO  Kongsberg        143.14 352  PKPdf   PKPab    15 58 36.3  0.0
AKASG Malin Array Be   144.65 328  PKP     PKPdf    15 58 41.3 -0.2
      comp=Z,7.0nm,0.6s,baz=39,slow=4.1,SNR=40
AKASG                              SKPbc   SKiKP    16 01 30.8  0.0
      comp=Z,0.1nm,0.3s,baz=49,slow=2.2,SNR=5.0
AKBB  Malin Array Si   144.65 328  PKPdf   PKPdf    15 58 41.2 -0.3
SUW   Suwalki          144.87 336 ePKPbc   PKPab    15 58 43.3 +0.2
SORM  Soroca           146.71 325 ⇑P       PKPbc    15 58 47.7  0.0
BRTR  Keskin Array B   147.46 308  PKPbc   PKPbc    15 58 50.1 -0.1
      comp=Z,1.8nm,0.7s,baz=131,slow=3.4,SNR=10
BRTR  Keskin Array B   147.46 308          PKPdf    15 58 45.5 -1.3
BRTR                               PKPbc   PKPbc    15 58 50.0 -0.2
BSEG  Bad Segeberg     148.54 349 ePKPbc   PKPbc    15 58 52.8 +0.6
      baz=21,slow=2.3
CFR   Carcaliu         148.58 321 ⇓P       PKPbc    15 58 53.2 +0.6
TPGR  Topolog          148.60 320 ⇑P       PKiKP    15 58 53.9 +0.1
BURAR Bucovina Array   148.66 327 ⇑P       PKiKP    15 58 54.1 +0.1
VRI   Vrincioaia       148.98 323 ⇑P       PKPbc    15 58 54.3 +0.6
PLOR  Plostina         149.03 323 ⇓P       PKPbc    15 58 53.8  0.0
RUE   Ruedersdorf      149.14 344 ePKPbc   PKPbc    15 58 54.4 +0.7
      baz=21,slow=2.3
OJC   Ojcow            149.16 335 ePKPbc   PKPbc    15 58 54.3 +0.4
STHS  Stebnicka Huta   149.21 333 ePKP     PKPbc    15 58 54.5 +0.4
COVR  Voineasa-Covas   149.28 323 ⇑P       PKPbc    15 58 54.8 +0.5
NIE   Niedzica         149.59 334 ePKPbc   PKiKP    15 58 56.7 +0.9
KSP   Ksiaz            149.87 340 ePKPbc   PKiKP    15 58 56.5 +0.2
FLTG  Flechtingen      149.87 347 ePKPbc   PKPbc    15 58 55.9 +0.4
      baz=21,slow=2.3
NRDL  Niedersach Rie   149.95 348 ePKPbc   PKiKP    15 58 56.4 +0.2
      baz=21,slow=2.3
LANS  Liptovska Anna   150.14 334 ePKP     PKiKP    15 58 58.0 +1.1
OSTC  Ostas            150.14 339⇑ePKP     PKiKP    15 58 57.2 +0.4
CHVC  Chvalec          150.17 340⇑ePKP     PKiKP    15 58 56.9  0.0
VOIR                   150.17 324 ⇓P       PKiKP    15 58 57.4 +0.3
ASSE  Asse, Remlinge   150.18 347 ePKPbc   PKiKP    15 58 56.7  0.0
      baz=21,slow=2.3
UPC   Upice            150.25 340⇑ePKP     PKPbc    15 58 56.9 +0.4
DPC   Dobruska-Polom   150.29 339⇑ePKP     PKiKP    15 58 57.3 +0.1
DPC                               ePKPAB   PKPab    15 59 06.0 +0.8
MARR  Marisel-Cluj     150.35 327 ⇓P       PKPbc    15 58 57.4 +0.4
MORC  Moravsky Berou   150.35 337 ⇓P       PKiKP    15 58 57.6 +0.3
MORC  Moravsky Berou   150.35 337 ePKP     PKPbc    15 58 57.2 +0.4
MORC                              e                 15 59 06.4
KRLC  Kraliky          150.37 338⇑ePKP     PKPbc    15 58 57.3 +0.5
KRLC                              ePKPAB   PKPab    15 59 06.1 +0.5
CLL   Collm            150.41 344  PKPbc   PKPbc    15 58 56.9 +0.2
CLL   Collm            150.41 344 ePKPdf   PKPdf    15 58 52.0 +1.1
CLL                              ⇑iPKPbc   PKPbc    15 58 57.2 +0.4
      comp=Z,24nm,0.9s
CLL                              ⇓iPKPab   PKPab    15 59 06.0 +0.4
      comp=Z,8.0nm,0.9s
CLL                               epPKPab  pPKPbc   16 01 02.0 +1.3
CLL   Collm            150.41 344 ePKPbc   PKiKP    15 58 57.4 +0.1
      baz=21,slow=2.3
ARR   Arges            150.44 324 ⇑P       PKPdf    15 58 52.3 +1.0
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DRGR                   150.47 328 ⇓P       PKPbc    15 58 57.7 +0.5
CLZ   Clausthal        150.51 347 ePKPbc   PKPbc    15 58 57.6 +0.5
      baz=21,slow=2.3
IBBN  Ibbenburen       150.53 351 ePKPbc   PKiKP    15 58 58.0 +0.5
      baz=21,slow=2.3
BRG   Berggiesshubel   150.55 342 i PKP    PKiKP    15 58 57.9 +0.3
BRG                                 Amp             15 58 58.4
      comp=Z,11nm,0.8s
BRG   Berggiesshubel   150.55 342 ePKPbc   PKiKP    15 58 57.9 +0.3
      baz=21,slow=2.3
MAUC  Maruska          150.59 336⇑ePKP     PKiKP    15 58 58.0 +0.2
FBE   Freiberg         150.67 343 ePKPbc   PKiKP    15 58 58.0 +0.2
      baz=21,slow=2.3
PVCC  Panska Ves       150.68 341⇑ePKP     PKiKP    15 58 58.4 +0.5
NEUB  Neuenburg        150.80 345 ePKPbc   PKiKP    15 58 58.4 +0.3
      baz=21,slow=2.3
GTTG  Gottingen        150.88 348 ePKPbc   PKiKP    15 58 58.7 +0.5
      baz=21,slow=2.3
VYHS  Vyhne            150.91 334 ePKP     PKPbc    15 58 58.5 +0.4
VYHS                              e                 15 59 08.8
JAVC  Velka Javorina   151.07 336 ePKP     PKiKP    15 58 59.8 +1.0
JAVC                              e                 15 59 10.4
VRAC  Vranov           151.08 338 ePKP     PKiKP    15 58 58.9 +0.1
PRU   Pruhonice        151.16 341⇑ePKP     PKPbc    15 58 58.9 +0.3
KRUC  Moravsky         151.36 338 ePKP     PKPbc    15 58 59.4 +0.3
KRUC                              e                 15 59 10.5
MOX   Moxa             151.36 345 ePKPbc   PKiKP    15 58 59.6 +0.3
      baz=21,slow=2.3
TANN  Tannenbergstha   151.36 344 ePKPbc   PKiKP    15 58 59.8 +0.4
      baz=21,slow=2.3
WERD  Werda            151.37 344 ePKPbc   PKiKP    15 58 59.9 +0.6
      baz=21,slow=2.3
GZR   Gura Zlata       151.41 326 ⇓P       PKPbc    15 58 59.5 +0.1
GUNZ  Gunzen           151.44 344 ePKPbc   PKiKP    15 59 00.1 +0.5
      baz=21,slow=2.3
KASTN Kahler Asten     151.49 349 ePKPbc   PKiKP    15 59 00.1 +0.5
      baz=21,slow=2.3
NKC   Novy Kostel      151.53 344 ePKPAB   PKPab    15 59 11.1 +0.7
NKC                               ex       x        15 59 20.5
MODS  Modra-Piesok     151.62 336 ePKP     PKiKP    15 59 00.6 +0.7
BZS   Buzias           151.84 327 ⇓P       PKPbc    15 58 59.6 -0.6
MANZ  Manzenberg       151.85 344 ePKPbc   PKiKP    15 59 00.6 +0.2
      baz=21,slow=2.3
HERR  Herculane        151.94 325 ⇑P       PKPbc    15 59 00.3 -0.2
KHC   Kasperske Hory   152.22 341⇑ePKP     PKPbc    15 59 01.2 +0.2
KHC                               ePKPAB   PKPab    15 59 14.2 +0.8
CKRC  Cesky Krumlov    152.27 340⇑ePKP     PKiKP    15 59 01.6 +0.3
CKRC                              ePKPAB   PKPab    15 59 14.3 +0.7
TNS   Taunus Mts       152.43 349 ePKPbc   PKiKP    15 59 01.9 +0.3
      baz=21,slow=2.3
GEC2  GERESS Array S   152.43 341 ePKPbc   PKiKP    15 59 02.0 +0.3
      baz=21,slow=2.3
GERES GERESS Array B   152.43 341  PKPbc   PKPbc    15 59 01.4 -0.2
      comp=Z,0.6nm,0.4s,baz=77,slow=1.8,SNR=9.7
GERES                              PKPab   PKPab    15 59 14.4  0.0
      comp=Z,0.5nm,0.6s,baz=33,slow=5.8,SNR=2.6
CONA  Conrad Observa   152.51 337 ePKiKP   PKiKP    15 59 02.2 +0.3
      comp=Z,3.9nm,0.9s
CONA                              ePKP     PKPab    15 59 16.0 +1.2
      comp=Z,3.7nm,0.8s
RONA  Rosalia, Austr   152.54 336 ePKiKP   PKiKP    15 59 02.2 +0.3
      comp=Z,3.4nm,0.6s
RONA                              ePKP     PKPab    15 59 16.0 +1.1
      comp=Z,7.8nm,1.0s
SOKA  Soboth           153.87 337 ePKP     PKPab    15 59 20.9 +0.3
      comp=Z,4.8nm,1.2s
WATA  Walderalm        154.41 342 ePKP     PKPab    15 59 24.5 +1.6
      comp=Z,3.6nm,0.5s
WTTA  Wattenberg       154.46 342 ePKP     PKPab    15 59 23.8 +0.6
      comp=Z,2.4nm,0.6s
UBR   Ueberruh         154.49 344 ePKPbc   PKPbc    15 59 06.4 +0.5
      baz=21,slow=2.3
RETA  Reutte           154.50 343 i PKP    PKPab    15 59 23.7 +0.5
      comp=Z,3.6nm,0.7s
MOTA  Moosalm          154.54 343 ePKP     PKPab    15 59 24.4 +0.9
      comp=Z,8.6nm,1.1s
SQTA  Sankt Quirin     154.62 342 ePKP     PKPab    15 59 24.7 +0.9
      comp=Z,4.4nm,0.9s
ABTA  Abfaltersbach    154.66 340 ePKP     PKPdf    15 58 57.0 -0.3
      comp=Z,2.1nm,0.6s
DAVA  Damuels          154.91 344 ePKP     PKPab    15 59 25.6 +0.5
      comp=Z,3.8nm,0.6s
FETA  Feichten         154.94 343 ePKP     PKPdf    15 58 57.6 -0.2
      comp=Z,3.7nm,1.0s
FUORN Ofenpass-Fuorn   155.43 343  PKPdf   PKPdf    15 58 58.0 -0.6
FUORN                              PKPab   PKPab    15 59 27.6 +0.1
DBIC  Dimbokro         162.69 163  PKPab   PKPab    16 00 00.7 +1.2
      comp=Z,2.2nm,0.8s,baz=185,slow=3.8,SNR=3.3
ESDC  Sonseca Array    163.33  12  PKPab   PKPab    16 00 02.3 +0.5
      comp=Z,2.3nm,1.0s,baz=337,slow=4.4,SNR=8.5
ESDC  Sonseca Array    163.33  12  PKPdf   PKPdf    15 59 05.9 -1.6
ESDC                               PKPab   PKPab    16 00 02.1 +0.3
TORD  Torodi Ar. Bea   169.77 188  PKPab   PKPab    16 00 31.1 +0.4
      comp=Z,1.0nm,0.8s,baz=184,slow=3.7,SNR=4.4
```

IDC ***30*** *15:51:01.9±1.8, 23°.39S×179°.67W, h523km±16km, mb3.5/6, mbtmp4.4/9, Error ellipse: s-maj=27.7km s-min=17.7km az=143.0*

NEIC ***30*** *15:51:02.5±2.1, 23°.5S±0°.1×179°.7W±0°.1, h519km±6km, mb4.4/28, Error ellipse: s-maj=19.1km s-min=10.4km az=148.0*

ISC 30 15:51:03.0±0.6, **23°.32S**±0°.07×**179°.75W**±0°.08, **h536**km, **n60, σ3s.03**/68, **mb4.3**/17, **South of Fiji Islands**

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Code  Station Name       Δ°  AZ°    Phase ID             Time     Res
                                   Op      ISC        h  m  s     ISC
MSVF  Nonsavu           5.93 339   P       P        15 52 40.8 +0.2
      39nm,0.7s,baz=193,slow=8.1,SNR=32
MSVF                               S       S        15 54 00.2 +0.1
      1.6nm,0.7s,baz=1.7,slow=22,SNR=0.5
NIUE  Niue             10.09  67   P       P        15 53 20.3 -1.4
PINNC Pines Island,    11.82 271   P       P        15 53 40.6 +0.9
LIFNC LIFOU            12.33 279   P       P        15 53 44.8 -0.2
DZM   Mont Dzumac      12.81 273   P       P        15 53 51.2 +1.1
      6.6nm,0.7s,baz=98,slow=20,SNR=8.2
URZ   Urewera          15.13 190   P       P        15 54 12.9 -0.9
      2.4nm,0.3s,baz=348,slow=2.1,SNR=8.4
URZ                                S       S        15 56 44.1 -6.9
      2.9nm,0.6s,baz=217,slow=19,SNR=1.3
RTZ   Ruatahuna        15.50 190   P       P        15 54 15.8 -2.0
RTZ                                IAmb    IAmb     15 54 44.0
      comp=Z,7.6nm,1.2s
RTZ                                        S        15 56 53.3 -4.5
MTHZ  Maungataniwha    15.75 190   P       S        15 57 00.4 -1.7
WHHZ  Waihua           15.91 189   P       S        15 57 04.5 -0.3
RATZ  Rangitukua       15.96 193   P       S        15 57 13.6 +7.9
RITZ  Rihia Road       16.05 192   P       S        15 57 14.8 +7.6
KATZ  Kakaramea        16.08 193   P       S        15 57 13.0 +5.1
BKZ   Black Stump Fm   16.11 191   P       P        15 54 20.4 -3.5
BKZ                                IAmb    IAmb     15 54 53.0
      comp=Z,7.2nm,1.2s
BKZ                                        S        15 57 03.5 -4.8
BKZ   Black Stump Fm   16.11 191   P       S        15 57 04.0 -4.3
NTVZ  North Tongarir   16.20 193   P       S        15 57 15.3 +5.3
TMVZ  Te Maari         16.21 193   P       S        15 57 15.7 +5.6
ETVZ  East Tongariro   16.23 193   P       S        15 57 16.2 +5.8
WTVZ  West Tongariro   16.24 193   P       S        15 57 15.6 +5.1
NNVZ  North Ngauruho   16.25 193   P       S        15 57 16.5 +5.7
OTVZ  Oturere          16.27 193   P       S        15 57 12.9 +1.7
SNVZ  South Ngauruho   16.29 193   P       S        15 57 18.1 +6.5
MCHZ  McNeill Hill     16.35 190   P       S        15 57 07.3 -5.0
BHHZ  Black Hill Sta   16.50 191   P       S        15 57 10.8 -4.2
PXZ   Pawanui          16.90 189   P       S        15 57 20.2 -1.1
BFZ   Birch Farm       17.63 190   P       P        15 54 36.3 -1.8
BFZ   Birch Farm       17.63 190   P       S        15 57 33.7 +0.4
MRZ   Mangatainoka R   17.73 192   P       P        15 54 36.4 -2.6
TCW   Tory Channel     18.53 194   P       P        15 54 46.8 +0.6
QRZ   Quartz Range     18.62 199   P       P        15 54 47.5 +0.5
LTZ   Lake Taylor      20.51 197   P       P        15 55 03.4 -0.8
LTZ                                IAmb    IAmb     15 55 11.9
      comp=Z,10nm,1.0s
CAN   Canberra         29.63 239   P       P        15 56 26.2 +1.0
CTAO  Charters Tower   31.71 269   P       P        15 56 43.9 +0.7
TOO   Toolangi         32.96 236   P       P        15 56 53.9 +0.4
TOO                                IAmb    IAmb     15 57 16.6
      comp=Z,16nm,1.1s
PMG   Port Moresby     34.53 288   P       P        15 57 06.4 -0.5
      comp=Z,13nm,0.9s,baz=181,slow=4.8,SNR=5.0
      comp=Z,13nm,0.9s
STKA  Stephens Creek   35.16 247   P       P        15 57 12.0  0.0
      comp=Z,3.6nm,0.6s,baz=90,slow=9.1,SNR=9.9
      comp=Z,3.6nm,0.6s
STKA  Stephens Creek   35.16 247   P       P        15 57 12.3 +0.3
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BBOO	**Buckleboo**	39.88	246	P	P	15 57 50.0	-0.7
BBOO				IAmb	IAmb	15 57 58.8	
	comp=Z,23nm,1.2s						
AS31	**Alice Springs**	42.36	260	P	P	15 58 10.2	-0.3
ASAR	**Alice Springs**	42.36	260	P	P	15 58 10.4	0.0
	comp=Z,7.8nm,0.7s,baz=103,slow=7.2,SNR=90						
ASAR				ScP	ScP	16 02 54.0	+2.7
	comp=Z,1.3nm,1.0s,baz=112,slow=4.5,SNR=5.4						
ASAR				S	S	16 03 50.6	-2.6
	comp=Z,0.5nm,0.7s,baz=95,slow=14,SNR=7.2						
	comp=Z,7.8nm,0.7s						
ASAR	**Alice Springs**	42.36	260	P	P	15 58 10.0	-0.4
WB2	**Warramunga Arr**	42.67	265	P	P	15 58 12.2	-0.7
WB2				IAmb	IAmb	15 58 13.1	
	comp=Z,8.7nm,0.7s						
WB0	**Warramunga Arr**	42.67	266	P	P	15 58 12.0	-0.9
WB0				IAmb	IAmb	15 58 13.1	
	comp=Z,12nm,0.5s						
WRA	**Warramunga Arr**	42.68	265	P	P	15 58 12.5	-0.6
	comp=Z,7.4nm,0.6s,baz=90,slow=5.8,SNR=212						
WRA				ScP	ScP	16 02 56.0	+3.4
	comp=Z,1.2nm,0.9s,baz=94,slow=3.9,SNR=6.3						
WRA				S	S	16 03 53.4	-4.4
	comp=Z,0.2nm,0.8s,baz=89,slow=10,SNR=1.4						
	comp=Z,7.4nm,0.6s						
WRA	**Warramunga Arr**	42.68	265	P	P	15 58 12.3	-0.7
FORT	**Forrest**	46.73	249	P	P	15 58 43.5	-0.5
FORT				IAmb	IAmb	15 58 44.3	
	comp=Z,17nm,0.7s						
MTN	**Manton Dam**	47.65	274	P	P	15 58 50.4	-0.7
MTN				IAmb	IAmb	15 58 55.0	
	comp=Z,40nm,1.4s						
KNRA	**Kununurra**	48.92	269	P	P	15 59 00.9	+0.4
FITZ	**Fitzroy Crossi**	51.11	265	P	P	15 59 17.1	+0.6
SBA	**Scott Base**	54.96	183	P	P	15 59 44.0	+1.0
SOEI	**Soe**	55.03	274	P	P	15 59 45.4	+0.7
SOEI				IAmb	IAmb	15 59 47.0	
	comp=Z,15nm,0.9s						
NWAO	**Narrogin (SRO)**	55.69	245	P	P	15 59 47.8	-1.1
MBWA	**Marble Bar**	55.70	260	P	P	15 59 48.0	-1.1
MORW	**Morawa**	57.29	250	P	P	15 59 59.6	-0.4
MORW				IAmb	IAmb	16 00 03.6	
	comp=Z,19nm,1.3s						
TOLI2	**Tolitoli**	62.66	284	P	P	16 00 35.9	+0.1
QSPA	**South Pole Qui**	66.76	180	P	P	16 01 02.3	+1.4
QSPA				IAmb	IAmb	16 01 03.1	
	comp=Z,5.8nm,0.9s						
TMUT	**Trail Mountain**	89.28	46	P	P	16 03 04.1	+1.6
TMUT				IAmb	IAmb	16 03 05.4	
	comp=Z,3.0nm,0.9s						
TXAR	**Lajitas Array**	89.93	58	P	P	16 03 05.2	-0.3
	comp=Z,0.7nm,0.7s,baz=204,slow=6.1,SNR=8.3						
	comp=Z,0.7nm,0.7s						
BSUT	**Blindstream Ca**	90.21	45	P	P	16 03 08.4	+1.5
BSUT				IAmb	IAmb	16 03 09.7	
	comp=Z,4.2nm,1.1s						
PDAR	**Pinedale Array**	92.12	44	P	P	16 03 14.8	-0.7
	comp=Z,0.4nm,0.7s,baz=278,slow=2.6,SNR=3.6						
	comp=Z,0.4nm,0.7s						
AKASG	**Malin Array Be**	144.61	328	PKP	PKPdf	16 09 37.9	-0.5
	comp=Z,0.8nm,0.5s,baz=34,slow=3.9,SNR=6.8						

IDC 30 15:53:27.0±646.0**, 57°.02N×2°.07E, h0^{km}, Error ellipse: s-maj=229.0km s-min=189.7km az=107.0, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I26DE	**FREYUNG INFRAS**	10.77	134	I	I	17 03 00.0	
	baz=323,slow=315,SNR=1.7						
I37NO	**I37NO**	14.15	25	I	I	17 21 00.0	
	baz=219,slow=332,SNR=2.4						
I43RU	**DUBNA INFRASON**	19.09	76	I	I	17 53 10.0	
	baz=285,slow=321,SNR=0.7						

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*IDC **30** 16:01:41.4±0.8, 57°.02N×162°.61E, h0^{km}, mb3.5/9, mbtmp3.4/12, ML3.1/3, MS3.2/3, Error ellipse: s-maj=21.2km s-min=15.2km az=175.0*

*KRSC **30** 16:01:43.1±1.0, 56°.93N×163°.17E, h44^{km}±13^{km}, Mc4.3, Ml4.4*

*MOS **30** 16:01:44.8±1.6, 57°.06N×162°.91E, h38^{km}, mb4.0/1, Error ellipse: s-maj=12.3km s-min=4.2km az=70.0*

ISC 30 16:01:42.8±1.3**, 57°.00N**±0°.03×**162°.99E**±0°.03**, h8**^{km}±8^{km}**, n90,** σ1^{s}**62**/131**, mb3.6**/8**, 1D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBG	**Krutoberegovo**	0.76	192	PN	Pg	16 01 57.4	0.0
KBG				S	Sg	16 02 08.0	+0.6
KBG	**Krutoberegovo**	0.76	192	*e*P	Pg	16 01 57.4	0.0
KBG				*e*S	Sg	16 02 08.0	+0.6
KBTR	**Krutoberegovo**	0.80	187	PN	Pg	16 01 58.2	+0.1
KBTR				S	Sg	16 02 07.4	-1.1
KBTR	**Krutoberegovo**	0.80	187	*e*P	Pg	16 01 58.2	+0.1
KBTR				*e*S	Sg	16 02 07.4	-1.1
SMKR	**Semkarok**	0.94	244	PN	Pg	16 02 00.3	-0.4
SMKR				S	Sg	16 02 13.8	+0.9
SMKR	**Semkarok**	0.94	244	*e*P	Pg	16 02 00.3	-0.4
SMKR				*e*S	Sg	16 02 13.8	+0.9
SRKR	**Sorokina**	1.06	252	PN	Pg	16 02 02.3	-0.8
SRKR	**Sorokina**	1.06	252	*e*P	Pg	16 02 02.3	-0.8
KLY	**Klyuchi**	1.46	243	PN	Pn	16 02 07.4	-2.1
KLY				S	Sn	16 02 25.3	-3.5
KLY	**Klyuchi**	1.46	243	*e*P	Pn	16 02 07.4	-2.1
KLY				*e*S	Sn	16 02 25.3	-3.5
CIRR	**Tsirk**	1.52	235	PN	Pn	16 02 10.7	+0.2
CIRR				S	Sn	16 02 30.2	-0.3
CIRR	**Tsirk**	1.52	235	*e*P	Pn	16 02 10.7	+0.2
CIRR				*e*S	Sn	16 02 30.2	-0.3
LGNR	**Loginova**	1.57	235	PN	Pn	16 02 12.1	+0.9
LGNR				S	Sn	16 02 32.0	+0.1
LGNR	**Loginova**	1.57	235	*e*P	Pn	16 02 12.1	+0.9
LGNR				*e*S	Sn	16 02 32.0	+0.1
BZGR	**Bezymyannyi-Gr**	1.66	231	PN	Pn	16 02 12.6	+0.3
BZGR				S	Sn	16 02 33.6	-0.2
BZGR	**Bezymyannyi-Gr**	1.66	231	*e*P	Pn	16 02 12.6	+0.3
BZGR				*e*S	Sn	16 02 33.6	-0.2
BZWR	**Bezymyannyi-We**	1.73	234	PN	Pn	16 02 13.6	+0.3
BZWR				S	Sn	16 02 35.9	+0.3
BZWR	**Bezymyannyi-We**	1.73	234	*e*P	Pn	16 02 13.6	+0.3
BZWR				*e*S	Sn	16 02 35.9	+0.3
BZP	**Bezymyannyi-Pe**	1.74	232	*e*P	Pn	16 02 13.7	+0.2
BZP				*e*S	Sn	16 02 36.1	+0.2
BZMR	**Bezymyannaya**	1.75	233	PN	Pn	16 02 13.9	+0.3
BZMR				S	Sn	16 02 37.2	+1.1
BZMR	**Bezymyannaya**	1.75	233	*e*P	Pn	16 02 13.9	+0.3
BZMR				*e*S	Sn	16 02 37.2	+1.1
KIRR	**Kirishev**	1.81	236	PN	Pn	16 02 14.8	+0.5
KIRR				S	Sn	16 02 37.8	+0.3
KIRR	**Kirishev**	1.81	236	*e*P	Pn	16 02 14.8	+0.5
KIRR				*e*S	Sn	16 02 37.8	+0.3
KPT	**Kopyto**	1.85	237	PN	Pn	16 02 15.1	+0.2
KPT				S	Sn	16 02 40.0	+1.5
KPT	**Kopyto**	1.85	237	*e*P	Pn	16 02 15.1	+0.2
KPT				*e*S	Sn	16 02 40.0	+1.5
SRDR	**Sredinnyy**	1.93	251	PN	Pn	16 02 16.2	+0.2
SRDR				S	Sn	16 02 40.6	+0.1
SRDR	**Sredinnyy**	1.93	251	*e*P	Pn	16 02 16.2	+0.2
SRDR				*e*S	Sn	16 02 40.6	+0.1
KOZ	**Kozyrevsk**	1.97	243	PN	Pn	16 02 17.1	+0.7
KOZ				S	Sn	16 02 42.8	+1.5
KOZ	**Kozyrevsk**	1.97	243	*e*P	Pn	16 02 17.1	+0.7
KOZ				*e*S	Sn	16 02 42.8	+1.5
KMNR	**Kamenistaya**	1.97	232	PN	Pn	16 02 17.7	+1.1
KMNR				S	Sn	16 02 42.0	+0.5
KMNR	**Kamenistaya**	1.97	232	*e*P	Pn	16 02 17.7	+1.1
KMNR				*e*S	Sn	16 02 42.0	+0.5
OSSR	**Ossora**	2.26	1	PN	Pn	16 02 20.5	+0.2
OSSR				S	Sn	16 02 49.1	+0.7
OSSR	**Ossora**	2.26	1	*e*P	Pn	16 02 20.5	+0.2
OSSR				*e*S	Sn	16 02 49.0	+0.7
TUMD	**Tumrok D**	2.31	220	*e*P	Pn	16 02 22.3	+1.1
TUMR	**Tumrok**	2.34	224	PN	Pn	16 02 23.4	+1.7
TUMR	**Tumrok**	2.34	224	*e*P	Pn	16 02 23.4	+1.7
BKI	**Bering**	2.46	136	PN	Pn	16 02 22.3	-0.8
BKI				S	Sn	16 02 51.2	-2.1
BKI	**Bering**	2.46	136	*e*P	Pn	16 02 22.3	-0.8
BKI				*e*S	Sn	16 02 51.2	-2.1
TIGL	**Tigil**	2.46	290	*e*P	Pn	16 02 24.6	+1.4
TIGL				*e*S	Sb	16 02 57.1	-0.5
ESO	**Esso**	2.61	247	PN	Pn	16 02 27.7	+2.4
ESO				S	Sn	16 02 59.1	+1.9
ESO	**Esso**	2.61	247	*e*P	Pn	16 02 27.7	+2.4
ESO				*e*S	Sn	16 02 59.1	+1.9
PALN	**Palana**	2.64	324	PN	Pn	16 02 27.5	+1.9
PALN	**Palana**	2.64	324	*e*P	Pn	16 02 27.5	+1.9
SPN	**Mys Shipunski**	4.27	205	PN	Pn	16 02 48.3	+0.3
SPN	**Mys Shipunski**	4.27	205	*e*P	Pn	16 02 48.3	+0.3
SPN				*e*S	Sn	16 03 35.6	-2.3
NLC	**Nalytchevo**	4.37	210	PN	Pn	16 02 51.3	+1.9
NLC				S	Sn	16 03 41.4	+1.0
NLC	**Nalytchevo**	4.37	210	*e*P	Pn	16 02 51.3	+1.9
NLC				*e*S	Sn	16 03 41.4	+1.0
GNL	**Ganaly**	4.39	223	PN	Pn	16 02 51.3	+1.5
GNL	**Ganaly**	4.39	223	*e*P	Pn	16 02 51.3	+1.5
KRX	**Arik**	4.42	216	PN	Pn	16 02 52.1	+1.9
KRX	**Arik**	4.42	216	*e*P	Pn	16 02 52.1	+1.9
KRER	**Koryakskii**	4.43	215	PN	Pn	16 02 52.3	+1.9
KRER	**Koryakskii**	4.43	215	*e*P	Pn	16 02 52.3	+1.9
SMAR	**Somma**	4.45	214	PN	Pn	16 02 52.0	+1.3
SMAR	**Somma**	4.45	214	*e*P	Pn	16 02 52.0	+1.3
AVH	**Avacha**	4.47	215	PN	Pn	16 02 53.0	+2.2
AVH	**Avacha**	4.47	215	*e*P	Pn	16 02 53.0	+2.2
KOK	**Koryaka**	4.48	216	PN	Pn	16 02 52.9	+1.9
KOK	**Koryaka**	4.48	216	*e*P	Pn	16 02 52.9	+1.9
UGLR	**Uglovaya**	4.49	214	PN	Pn	16 02 53.0	+1.8
UGLR	**Uglovaya**	4.49	214	*e*P	Pn	16 02 53.0	+1.8
DALK	**Dalny**	4.66	213	PN	Pn	16 02 54.0	+0.6
DALK	**Dalny**	4.66	213	*e*P	Pn	16 02 54.0	+0.6
DALK				*e*S	Sn	16 03 46.5	-1.2
PET	**Petropavlovsk**	4.70	214	⇓*i*PN	Pn	16 02 56.4	+2.5
PET				*e*S	Sn	16 03 50.1	+1.5
PET				pmax	pmax		
	comp=Z,26nm,0.5s						
PET				smax	smax		
	comp=N,51nm,0.6s						
PET				smax	smax		
	comp=E,46nm,0.6s						
PET	**Petropavlovsk**	4.70	214	*e*P	Pn	16 02 55.3	+1.4
PET				*e*S	Sn	16 03 50.0	+1.5
PETK	**Petropavlovsk-**	4.95	220	Pn	Pn	16 02 57.4	+0.1
	comp=E,1.1nm,0.3s,baz=61,slow=16,SNR=34						
PETK				Sn	Sn	16 04 01.9	+7.2
	baz=304,slow=28						
	comp=E,1.8nm,0.5s						
KRMR	**Karymshinskiy**	5.03	216	PN	Pn	16 03 00.4	+1.9
KRMR	**Karymshinskiy**	5.03	216	*e*P	Pn	16 03 00.4	+1.9
APC	**Apacha**	5.29	222	PN	Pn	16 03 04.2	+2.2
APC	**Apacha**	5.29	222	*e*P	Pn	16 03 04.2	+2.2
GRL	**Gorelyy**	5.29	215	PN	Pn	16 03 04.9	+2.8
GRL	**Gorelyy**	5.29	215	*e*P	Pn	16 03 04.9	+2.8
MTVR	**Mutnovka**	5.31	214	PN	Pn	16 03 04.6	+2.1
MTVR	**Mutnovka**	5.31	214	*e*P	Pn	16 03 04.6	+2.1
KMSK	**Kamenskaya**	5.72	15	PN	Pn	16 03 11.6	+3.7
KMSK	**Kamenskaya**	5.72	15	*e*P	Pn	16 03 11.6	+3.7
MA2	**Magadan**	6.94	297	Pn	Pn	16 03 21.8	-2.9
	comp=E,0.1nm,0.3s,baz=110,slow=20,SNR=1.2						
MA2				LR	LR	16 06 22.0	
	comp=E,134nm,18.0s,baz=100,slow=42						
	comp=E,3.4nm,0.8s						
SEY	**Seymchan**	7.97	323	Pn	Pn	16 03 37.0	-1.8
	baz=171,slow=23,SNR=1.5						
	comp=E,0.2nm,0.4s						
KLR	**Kul'dur**	20.15	261	LR	LR	16 14 44.6	
	comp=E,63nm,18.1s,baz=44,slow=39						
TIXI	**Tiksi**	20.38	329	P	P	16 06 16.9	-2.6
	comp=E,0.3nm,0.3s,baz=270,slow=23,SNR=1.2						
	comp=E,0.3nm,0.3s						
ILAR	**Eielson Array**	24.96	51	P	P	16 07 06.3	0.0
	comp=E,1.3nm,0.8s,baz=258,slow=6.7,SNR=17						
	comp=E,1.3nm,0.8s						
SONM	**Songino Array**	34.77	279	P	P	16 08 31.5	-2.0
	comp=E,0.2nm,0.6s,baz=37,slow=9.9,SNR=1.3						
	comp=E,0.2nm,0.6s						
YKA	**Yellowknife Ar**	39.21	47	P	P	16 09 12.1	+1.2
	comp=E,0.6nm,0.6s,baz=300,slow=7.8,SNR=9.9						
	comp=E,0.6nm,0.6s						
MKAR	**Makanchi Array**	48.02	294	P	P	16 10 20.3	-1.7
	comp=E,0.1nm,0.4s,baz=47,slow=6.6,SNR=1.6						
	comp=E,0.1nm,0.4s						
PDAR	**Pinedale Array**	54.26	65	P	P	16 11 10.6	+1.4
	comp=E,0.6nm,0.6s,baz=325,slow=2.6,SNR=6.8						
	comp=E,0.6nm,0.6s						
TXAR	**Lajitas Array**	67.66	70	P	P	16 12 41.9	+1.6
	comp=E,1.3nm,0.7s,baz=291,slow=4.6,SNR=14						
	comp=E,1.3nm,0.7s						
GNI	**Garni**	70.18	314	LR	LR	16 47 37.7	
	comp=E,22nm,21.1s,baz=355,slow=39						
WRA	**Warramunga Arr**	80.33	207	P	P	16 13 53.0	-1.2
	comp=E,0.3nm,0.6s,baz=14,slow=4.9,SNR=1.9						
	comp=E,0.3nm,0.6s						
WRA	**Warramunga Arr**	80.33	207	P	P	16 13 53.0	-1.2
ASAR	**Alice Springs**	84.01	207	P	P	16 14 12.6	-0.9
	comp=E,0.3nm,0.5s,baz=17,slow=4.6,SNR=14						
	comp=E,0.3nm,0.5s						

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*IDC **30** 16:28:49.1±2.2, 2°.68S×139°.67E, h0^{km}, mb3.3/2, mbtmp3.5/3, ML4.0/1, Error ellipse: s-maj=222.3km s-min=31.1km az=108.0*

*DJA **30** 16:28:57.7±0.4, 3°S±3°×13°9E±°, h10^{km}, M3.8/4, mb4.0/3, MLv3.7/4*

ISC 30 16:28:59.2±1.1**, 3°.06S**±0°.07×**139°.04E**±0°.06**, h46**^{km}**, n7,** σ2^{s}**20**/10**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	1.11	343	P	Pn	16 29 17.2	-1.2
SMPI				S	Sn	16 29 32.0	-0.6
GENI	**Genyem**	1.22	68	P	Pn	16 29 20.1	+0.2
GENI				S	Sn	16 29 36.2	+0.9
SRPI	**Serui, Papua**	3.03	293	P	Pn	16 29 45.9	+1.2
SRPI				S	Sn	16 30 19.7	-0.2
FAKI	**Fak Fak**	6.78	271	P	Pn	16 30 37.3	+1.1
	18nm,1.4s,0.1nm						
WRA	**Warramunga Arr**	17.39	195	P	Pn	16 32 59.5	+0.8
	0.5nm,0.3s,baz=18,slow=13,SNR=31						
WRA				S	Sn	16 36 06.4	-5.1
	0.7nm,0.8s,baz=10.0,slow=22,SNR=3.8						
	0.8nm,0.3s						
ASAR	**Alice Springs**	21.08	193	P	P	16 33 41.0	+1.3
	0.8nm,0.6s,baz=16,slow=11,SNR=31						
	0.8nm,0.6s						
ILAR	**Eielson Array**	86.02	24	P	P	16 41 28.3	-6.2
	0.3nm,0.9s,baz=241,slow=5.6,SNR=1.6						
	0.3nm,0.9s						

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*IDC **30** 16:29:12.5±0.6, 24°.90N×126°.80E, h0^{km}, mb4.0/18, mbtmp4.0/21, ML3.4/3, MS3.5/4, Error ellipse: s-maj=18.7km s-min=14.1km az=80.0*

*NEIC **30** 16:29:13.4±2.5, 24°.79N±0°.07×126°.88E±0°.07, h10^{km}±4^{km}, mb4.6/38, Error ellipse: s-maj=11.7km s-min=8.4km az=146.0*

*NIED **30** 16:29:15.7, 24°.92N×126°.88E, h84^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.09; M$_{\theta\theta}$-1.15; M$_{\phi\phi}$0.05; M$_{r\theta}$0.64; M$_{\theta\phi}$-1.38; M$_{\phi r}$0.84; Fault plane solution: M$_{0}$1.96000×10^{15} NP1:φ$_{s}$33.00000°, δ67.00000°, λ60.00000°. NP2:φ$_{s}$269.00000°, δ37.00000°, λ139.00000°.*

*JMA **30** 16:29:15.7±0.2, 25°N±1°×12°7E±°, h84^{km}±3^{km}, MV3.5/21, NEAR MIYAKOJIMA ISLAND*

ISC 30 16:29:12.8±1.6**, 24°.87N**±0°.05×**126°.91E**±0°.04**, h6**^{km}±9^{km}**, n116,** σ0^{s}**99**/125**, mb4.4**/35**, MS3.8**/3**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	1.37	266	*i* P	Pg	16 29 39.6	+0.4
JOGS				*e*S	Sg	16 29 57.4	+0.4
JMJ2	**Miyako jima3**	1.45	265	P	Pg	16 29 40.5	-0.1
JMJ2				*e*S	Sg	16 29 59.4	0.0
JKE	**Kume jima 2**	1.46	355	*i* P	Pb	16 29 40.2	-0.1
JKE				S	Sg	16 29 59.3	-0.4
JMJ	**Miyako jima 2**	1.47	268	P	Pb	16 29 40.6	0.0
JJT3	**Tamagusuku3**	1.50	32	P	Pb	16 29 41.2	+0.2
JJT3				S	Sb	16 29 59.8	-0.4
JIKM	**Ikemajima**	1.51	272	P	Pb	16 29 41.3	-0.1
JIRB	**Irabujima**	1.58	269	P	Pb	16 29 42.0	-0.5
JIRB				*e*S	Sb	16 30 02.3	-0.4
JAGN	**Aguni-jima**	1.74	10	P	Pb	16 29 44.4	-0.8
JAGN				*e*S	Sn	16 30 05.5	-0.6
JNTH	**Nagotoyohara**	1.93	31	P	Pn	16 29 46.5	+0.4
JNTH				*e*S	Sn	16 30 09.6	-1.1
JTJ	**Tarama**	2.02	264	P	Pn	16 29 48.1	+0.7
JTJ				*e*S	Sn	16 30 12.0	-1.1
JOW	**Kunigami**	2.31	32	Pn	Pn	16 29 52.8	+1.4
	7.9nm,0.3s,baz=141,slow=24,SNR=31						
JOW				Sn	Sn	16 30 20.1	-0.1
	51nm,0.3s,baz=136,slow=22,SNR=5.5						
	21nm,0.2s						
JOW	**Kunigami**	2.31	32		Pn	16 29 52.6	+1.2
JOW	**Kunigami**	2.31	32	P	Pb	16 29 54.0	-0.9
JOW	**Kunigami**	2.31	32	P	Pb	16 29 53.2	-1.7
JIH	**Iheya**	2.36	23	P	Pn	16 29 53.0	+0.9
JISG	**Ishigakijimahi**	2.38	264	*i* P	Pn	16 29 52.8	+0.4
JYRO	**Yoronjima**	2.56	32	P	Pn	16 29 56.1	+1.3
JYRO				S	Sn	16 30 25.8	-0.5
JIJ	**Ishigaki jima**	2.57	259	P	Pn	16 29 55.2	+0.2
JKRS	**Kuro-shima**	2.72	257	P	Pn	16 29 57.9	+0.8
JOKE	**Okinoerabujima**	2.90	31	P	Pn	16 30 00.2	+0.7
JOKE				*e*S	Sn	16 30 34.0	-0.7
IRIF	**Iriomote-Funau**	2.95	260	*e*P	Pn	16 30 00.6	+0.4
YOJ	**Yonaguni jima**	3.57	264		Pn	16 30 08.2	-0.6
YOJ	**Yonaguni jima**	3.57	264	P	Pn	16 30 08.9	+0.1
JYNG	**Yonagunijimaku**	3.63	264	P	Pn	16 30 10.6	+1.0
JMZ	**Minamidaito 2**	4.01	75		Pn	16 30 13.8	-1.0
JMZ	**Minamidaito 2**	4.01	75	P	Pn	16 30 13.8	-1.0
NACB	**Ninganchiao**	4.89	263	Pn	Pn	16 30 26.1	-0.9
NACB	**Ninganchiao**	4.89	263	P	Pn	16 30 26.4	-0.6
TATO	**Taipei**	4.93	272	Pn	Pn	16 30 25.3	-2.1
YHNB	**Yeheng**	5.04	269		Pn	16 30 29.5	+0.4
YHNB	**Yeheng**	5.04	269	P	Pn	16 30 29.9	+0.9
YULB	**Yu-li**	5.34	255		Pn	16 30 31.2	-1.9
YULB	**Yu-li**	5.34	255	P	Pn	16 30 31.4	-1.7
SSLB	**Suanglung**	5.54	260		Pn	16 30 34.9	-1.0
SSLB	**Suanglung**	5.54	260	P	Pn	16 30 35.0	-0.9
TWG	**Pinlang**	5.72	250	Pn	Pn	16 30 36.2	-2.2
TPUB	**Ta-pu**	5.95	256		Pn	16 30 41.3	-0.2
TPUB	**Ta-pu**	5.95	256	P	Pn	16 30 41.6	+0.1
JSU	**Suzuyama**	7.31	24	Pn	Pn	16 31 00.0	-0.2
JSU	**Suzuyama**	7.31	24	P	Pn	16 31 02.3	+2.1
JNU	**Nakatsue**	8.93	22	Pn	Pn	16 31 24.1	+1.7
	1.0nm,0.3s,baz=331,slow=3.9,SNR=11						
JNU				Sn	Sn	16 33 03.1	-0.2
	0.2nm,0.3s,baz=17,slow=22,SNR=0.9						
	3.6nm,0.4s						
JNU	**Nakatsue**	8.93	22	Pn	Pn	16 31 23.2	+0.8
JMN	**Monobe**	10.72	33	Pn	Pn	16 31 45.4	-1.5
KSRS	**Korea Array**	12.58	4	LR	LR	16 37 28.8	
	comp=Z,73nm,18.7s,baz=180,slow=40						
USRK	**Ussuriysk Ar.**	19.73	11	P	Pn	16 33 44.8	+0.3
	0.1nm,0.3s,baz=187,slow=8.9,SNR=2.4						
	1.3nm,0.8s						
USRK	**Ussuriysk Ar.**	19.73	11	P	P	16 33 43.0	0.0
ASAJ	**Asahikawa**	23.07	30	P	P	16 34 20.0	+0.9
	4.2nm,0.9s,baz=174,slow=24,SNR=2.2						
	4.2nm,0.9s						
JKA	**Kamikawa-asahi**	23.07	30	P	P	16 34 20.5	+1.4
JKA				IAmb	IAmb	16 34 39.9	
	comp=Z,14nm,1.1s						
CHTO	**Chiang Mai**	26.62	262	P	P	16 34 50.5	-1.9
CMAR	**Chiang Mai Arr**	26.74	262	P	P	16 34 54.6	+1.3
	comp=Z,0.9nm,0.7s,baz=58,slow=8.3,SNR=8.3						
CMAR				LR	LR	16 45 17.5	
	comp=Z,47nm,21.4s,baz=180,slow=36						
	comp=Z,0.9nm,0.7s						
ULN	**Ulaanbaatar**	27.82	331	P	P	16 35 01.9	-1.1
ULN				IAmb	IAmb	16 35 06.3	
	comp=Z,8.2nm,1.4s						
SONM	**Songino Array**	28.09	330	P	P	16 35 04.7	-0.7
	comp=Z,3.6nm,0.7s,baz=145,slow=9.9,SNR=15						
	comp=Z,3.6nm,0.7s						
SONM	**Songino Array**	28.09	330	P	P	16 35 05.2	-0.2
JIRN	**Jiri**	36.51	283	*e*P	P	16 36 20.4	+0.7
	comp=Z,9.5nm,0.6s						
GUN	**Gumba**	36.77	284	*e*P	P	16 36 21.9	+0.1
	comp=Z,9.3nm,0.5s						
PKI	**Pulchoki**	37.21	283	*e*P	P	16 36 26.1	+0.5
PKIN	**Phulchoki**	37.22	283	*e*P	P	16 36 26.0	+0.4
	comp=Z,7.3nm,0.5s						
GKN	**Gorkha**	37.85	284	*e*P	P	16 36 31.3	+0.5
DANN	**Dangsing**	38.59	285	*e*P	P	16 36 38.1	+0.9
	comp=Z,25nm,0.6s						
PYUN	**Piuthan**	39.29	285	*e*P	P	16 36 43.9	+0.9
	comp=Z,35nm,0.8s						
MK31	**Makanchi Array**	41.58	313	P	P	16 37 00.8	-0.6
MKAR	**Makanchi Array**	41.58	313	P	P	16 37 00.8	-0.6
	comp=Z,5.0nm,0.6s,baz=99,slow=10,SNR=78						
MKAR				PcP	PcP	16 38 59.3	+0.7
	comp=Z,0.3nm,0.7s,baz=114,slow=1.7,SNR=3.0						
	comp=Z,5.0nm,0.6s						
MKAR	**Makanchi Array**	41.58	313	P	P	16 37 00.2	-1.3
SEY	**Seymchan**	41.67	17	P	P	16 37 03.4	+1.5
	comp=Z,1.8nm,0.9s,baz=232,slow=21,SNR=4.0						
	comp=Z,1.8nm,0.9s						
MAKZ	**Makanchi**	41.79	313	P	P	16 37 02.4	-0.8
MAKZ				IAmb	IAmb	16 37 03.5	
	comp=Z,6.3nm,0.8s						
ZALV	**Zalesovo Beam**	42.63	324	P	P	16 37 08.9	-1.0
	comp=Z,1.4nm,0.4s,baz=110,slow=12,SNR=5.5						
	comp=Z,1.4nm,0.4s						
FITZ	**Fitzroy Crossi**	42.72	182	P	P	16 37 05.8	-5.1
KURK	**Kurchatov**	45.01	318	P	P	16 37 27.5	-1.5
KURBB	**Kurchatov Arra**	45.04	318	LR	LR	16 57 55.8	
	comp=Z,141nm,21.6s,baz=179,slow=38						
WRA	**Warramunga Arr**	45.12	170	P	P	16 37 31.3	+1.0
	comp=Z,1.1nm,0.6s,baz=351,slow=8.6,SNR=7.9						
	comp=Z,1.1nm,0.6s						
WRA	**Warramunga Arr**	45.12	170		P	16 37 31.2	+1.0
WB2	**Warramunga Arr**	45.12	170	P	P	16 37 30.4	+0.2
WB2				IAmb	IAmb	16 37 41.2	
	comp=Z,8.8nm,1.3s						
AAK	**Ala-Archa**	46.29	306	LR	LR	17 00 15.0	
	comp=Z,103nm,18.3s,baz=103,slow=40						
HNR	**Honiara**	46.90	133	P	P	16 37 45.9	+1.5
	comp=Z,160nm,0.6s,baz=107,slow=8.0,SNR=1.6						
ASAR	**Alice Springs**	48.72	171	P	P	16 37 59.1	+0.8
	comp=Z,0.4nm,0.7s,baz=358,slow=14,SNR=10						
	comp=Z,0.4nm,0.7s						
ASAR	**Alice Springs**	48.72	171	P	P	16 37 56.4	-1.9
FORT	**Forrest**	55.34	179	P	P	16 38 45.4	-2.1
ABKAR	**Akbulak array**	56.72	314	P	P	16 38 57.8	+0.5
ABKAR	**Akbulak array**	56.72	314	P	P	16 38 57.0	-0.3
ABKAR				IAmb	IAmb	16 38 58.4	
	comp=Z,7.1nm,1.2s						
BBOO	**Buckleboo**	58.02	171	P	P	16 39 06.7	+0.2
STKA	**Stephens Creek**	58.14	165	P	P	16 39 07.9	+0.5
	comp=Z,1.3nm,0.7s,baz=336,slow=10,SNR=2.9						
	comp=Z,1.3nm,0.7s						
STKA	**Stephens Creek**	58.14	165	P	P	16 39 07.7	+0.3
NWAO	**Narrogin (SRO)**	58.21	190	P	P	16 39 06.5	-1.3
GEYT	**Alibeck**	58.95	301	P	P	16 39 12.7	-0.6
	comp=Z,3.1nm,0.8s,baz=76,slow=8.5,SNR=5.4						
	comp=Z,3.1nm,0.8s						
GEYT	**Alibeck**	58.95	301	P	P	16 39 12.9	-0.4
GEYT				IAmb	IAmb	16 39 16.4	
	comp=Z,3.4nm,0.7s						
ONTNC	**Ouen Toro**	60.60	137	P	P	16 39 24.3	-0.3
OUENC	**Ouen Island, N**	60.92	137	P	P	16 39 26.9	+0.1
L19K	**White Mountain**	62.86	31	P	P	16 39 39.4	0.0
K20K	**Telida**	63.17	30	P	P	16 39 43.4	+1.9
K20K				IAmb	IAmb	16 40 19.0	
	comp=Z,7.1nm,1.4s						
H21K	**Melozitna Rive**	63.63	27		P	16 39 46.2	+1.8
H21K				IAmb	IAmb	16 40 21.7	
	comp=Z,7.3nm,1.4s						
I21K	**Tanana**	64.00	28	P	P	16 39 46.5	-0.4
I21K				IAmb	IAmb	16 40 10.0	
	comp=Z,9.7nm,1.5s						
PPLA	**Purkeypile**	64.05	30	P	P	16 39 48.8	+1.4
CAST	**Castle Rocks**	64.06	30	P	P	16 39 48.8	+1.5
CAST				IAmb	IAmb	16 39 50.4	
	comp=Z,4.6nm,1.1s						
KDAK	**Kodiak Island**	64.31	36	P	P	16 39 49.3	+0.3
SKT	**Skwentna**	64.43	31	P	P	16 39 50.6	+0.8
SKT				IAmb	IAmb	16 40 12.7	
	comp=Z,6.9nm,1.4s						
BPAW	**Bear Paw Mtn.**	64.50	29	P	P	16 39 50.5	+0.4
BPAW				IAmb	IAmb	16 39 52.0	
	comp=Z,4.7nm,1.2s						
TOO	**Toolangi**	64.52	164	P	P	16 39 48.6	-1.9
MLY	**Manley**	64.53	28	P	P	16 39 50.8	+0.4
MLY				IAmb	IAmb	16 39 53.2	
	comp=Z,4.5nm,1.2s						
CNPM	**China Poot**	64.82	34	P	P	16 39 51.1	-1.2
SUA	**Susitna One**	64.85	32	P	P	16 39 51.8	-0.8
SUA				IAmb	IAmb	16 40 15.3	

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      comp=Z,12nm,1.4s
H23K  Yukon River        64.97  27  P      P       16 39 54.0 +0.8
H23K                                IAmb   IAmb    16 40 07.9
      comp=Z,4.2nm,0.9s
BRLK  Bradley Lake       64.97  34  P      P       16 39 52.4 -1.0
MDM   Murphy Dome        65.60  28  P      P       16 39 58.3 +1.0
MDM                                 IAmb   IAmb    16 40 08.8
      comp=Z,5.5nm,1.1s
ILAR  Eielson Array      66.19  28  P      P       16 40 01.4 +0.2
      comp=Z,0.4nm,0.7s,baz=220,slow=6.7,SNR=4.9
      comp=Z,0.4nm,0.7s
BMAR  Burnt Mountain     66.74  25  P      P       16 40 05.6 +1.0
GLB   Gilahina Butte     68.14  31  P      P       16 40 14.8 +1.1
BCAR  Beaver Creek A     68.72  29  P      P       16 40 19.3 +2.1
KBZ   Khabaz             69.10 309  P      P       16 40 21.0 +1.2
      comp=Z,2.5nm,0.9s,baz=126,slow=4.3,SNR=5.1
      comp=Z,2.5nm,0.9s
ARCES ARCESS Array B     70.83 339  P      P       16 40 29.9 -0.1
      comp=Z,10nm,1.2s,baz=51,slow=7.1,SNR=1.4
      comp=Z,10nm,1.2s
A36M  Sachs Harbour      71.89  18  P      P       16 40 37.0 +0.7
A36M                                IAmb   IAmb    16 40 49.6
      comp=Z,6.2nm,1.1s
FINES FINESS Array B     73.46 331  P      P       16 40 46.0 +0.2
      comp=Z,3.9nm,0.8s,baz=58,slow=5.8,SNR=14
      comp=Z,3.9nm,0.8s
AKASG Malin Array Be     75.79 319  P      P       16 40 59.1 -0.5
      comp=Z,0.2nm,0.3s,baz=49,slow=6.9,SNR=6.2
      comp=Z,0.2nm,0.3s
AKASG Malin Array Be     75.79 319  P      P       16 40 59.1 -0.5
BRTR  Keskin Array B     76.93 308  P      P       16 41 07.0 +0.5
      comp=Z,0.5nm,0.5s,baz=160,slow=3.9,SNR=5.3
      comp=Z,0.5nm,0.5s
NOA   NORSAR Array B     80.00 334  P      P       16 41 22.6 -0.3
      comp=Z,0.7nm,0.6s,baz=55,slow=5.5,SNR=4.3
      comp=Z,0.7nm,0.6s
YKA   Yellowknife Ar     80.25  24  P      P       16 41 24.9 +0.7
      comp=Z,0.4nm,0.7s,baz=300,slow=5.3,SNR=6.0
      comp=Z,0.4nm,0.7s
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*NOU **30** 16:40:48.9, 40°.75S×174°.04E, h101^{km}, MLv3.6/12, Cook Strait, New Zealand*

*WEL **30** 16:40:50.9, 41°S±5°×17°4E±°, h71^{km}±9^{km}, M3.2/19, ML3.5/20, MLv3.2/19, Error ellipse: s-maj=0.0km s-min=0.0km az=114.8, confirmed*

ISC 30 16:40:49.3±1.4, **40°.77S**±0°.04×**174°.01E**±0°.04, **h92**^{km}±8^{km}, **n115**, σ**1^{s}05**/121, **Cook Strait**

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Code  Station Name        Δ°   AZ°   Phase ID          Time       Res
                                    Op     ISC      h  m  s      ISC
DUWZ  D'Urville Isla     0.07 243   P      Pn       16 41 01.9 -0.3
DUWZ                                S      Sn       16 41 10.5 -1.5
TCW   Tory Channel       0.49 156   P      Pn       16 41 04.9 +0.8
TCW                                 S      Sn       16 41 14.9 -0.3
NNZ   Nelson             0.66 226   P      Pn       16 41 06.1 +0.5
NNZ                                 S      Sn       16 41 17.6 -0.1
TUWZ  Tuamarina          0.66 184   P      Pn       16 41 06.3 +0.6
TUWZ                                S      Sn       16 41 17.5 -0.4
KIW   Kapiti Island      0.69  98   P      Pn       16 41 06.4 +0.5
KIW                                 S      Sn       16 41 17.2 -1.1
SNZO  South Karori       0.76 136   P      Pn       16 41 07.2 +0.7
WEL   Wellington         0.77 132   P      Pn       16 41 07.8 +1.1
TKNZ  Takaka Hill        0.84 251   P      Pn       16 41 07.8 +0.4
TKNZ                                S      Sn       16 41 20.4 -0.6
OGWZ  Otaki Gorge        0.88  94   P      Pn       16 41 08.6 +0.7
QRZ   Quartz Range       1.12 267   P      Pn       16 41 10.3 -0.3
QRZ   Quartz Range       1.12 267   P      Pn       16 41 10.6  0.0
OHWZ  Ohakea             1.14  61   P      Pn       16 41 11.9 +1.1
OHWZ                                S      Sn       16 41 28.3 +1.4
MTW   Mount Morrison     1.20 110   P      Pn       16 41 12.0 +0.6
MRZ   Mangatainoka R     1.20  85   P      Pn       16 41 11.6 +0.2
PAWZ  Paruwai Farm       1.23 120   P      Pn       16 41 12.7 +0.8
WAZ   Wanganui           1.26  37   P      Pn       16 41 13.3 +1.1
THZ   Tophouse           1.30 220   P      Pn       16 41 14.1 +1.4
LREZ  Lake Rotokare      1.34  13   P      Pn       16 41 14.3 +1.1
NMEZ  Namu Road          1.36 356   P      Pn       16 41 13.7 +0.4
POWZ  Post Office Ro     1.39  75   P      Pn       16 41 13.9 +0.1
TRWZ  Traveller          1.42 117   P      Pn       16 41 15.1 +1.0
TIWZ  Tintock            1.43  91   P      Pn       16 41 20.9 +6.7
TMWZ  Te Maipa           1.47 104   P      Pn       16 41 15.6 +0.9
KHEZ  Kahui Hut          1.47   0   P      Pn       16 41 15.1 +0.2
KHEZ  Kahui Hut          1.47   0   P      Pn       16 41 15.4 +0.5
NEZ   North Egmont       1.50   3   P      Pn       16 41 15.5 +0.3
NBEZ  Newall Road No     1.50 356   P      Pn       16 41 15.7 +0.6
PRWZ  Pori Road          1.51  83   P      Pn       16 41 15.6 +0.4
PKE   Pukeiti            1.57 359   P      Pn       16 41 16.6 +0.5
DREZ  Durham Road        1.58   5   P      Pn       16 41 16.9 +0.6
TSZ   Takapari Road      1.65  65   P      Pn       16 41 17.0 -0.1
KHZ   Kahutara           1.69 192   P      Pn       16 41 19.2 +1.8
KHZ   Kahutara           1.69 192   P      Pn       16 41 19.1 +1.6
BFZ   Birch Farm         1.70  88   P      Pn       16 41 17.9 +0.2
BFZ   Birch Farm         1.70  88   P      Pn       16 41 17.9 +0.2
MHEZ  Mangahewa          1.71   8   P      Pn       16 41 18.7 +0.9
DVHZ  Dannevirke         1.71  75   P      Pn       16 41 17.5 -0.3
VRZ   Vera Road          1.74  20   P      Pn       16 41 19.0 +0.8
MTVZ  Mangateitei        1.78  40   P      Pn       16 41 19.4 +0.6
PKVZ  Pokaka             1.80  35   P      Pn       16 41 19.3 +0.3
PNHZ  Pukenui            1.88  64   P      Pn       16 41 20.0 -0.1
TRVZ  Turoa              1.88  39   P      Pn       16 41 20.8 +0.6
WNVZ  Wahianoa           1.89  41   P      Pn       16 41 20.6 +0.4
MOVZ  Moawhango          1.91  45   P      Pn       16 41 20.4  0.0
DRZ   Dome Shelter       1.91  39   P      Pn       16 41 22.6 +1.9
WHVZ  Whangaehu Hut      1.92  40   P      Pn       16 41 21.3 +0.6
FWVZ  Far West T-bar     1.92  39   P      Pn       16 41 21.4 +0.7
DSZ   Denniston Nort     1.93 239   P      Pn       16 41 21.5 +0.8
TUVZ  Tukino             1.96  41   P      Pn       16 41 21.7 +0.5
WPHZ  Waipukurau         1.98  70   P      Pn       16 41 21.1 -0.3
NGZ   Ngauruhoe          2.01  38   P      Pn       16 41 22.2 +0.4
SNVZ  South Ngauruho     2.02  39   P      Pn       16 41 22.5 +0.6
TWVZ  Taurewa            2.02  33   P      Pn       16 41 22.5 +0.5
BHHZ  Black Hill Sta     2.03  52   P      Pn       16 41 21.8 -0.2
OTVZ  Oturere            2.05  39   P      Pn       16 41 23.1 +0.7
NNVZ  North Ngauruho     2.05  38   P      Pn       16 41 23.2 +0.9
WTVZ  West Tongariro     2.05  37   P      Pn       16 41 22.8 +0.4
ETVZ  East Tongariro     2.09  39   P      Pn       16 41 23.7 +0.8
KRVZ  Karewarewa         2.09  37   P      Pn       16 41 23.1 +0.3
TMVZ  Te Maari           2.10  39   P      Pn       16 41 23.8 +0.8
NTVZ  North Tongarir     2.10  38   P      Pn       16 41 24.0 +0.9
KWHZ  Kaweka Forest      2.29  55   P      Pn       16 41 28.0 +2.6
PXZ   Pawanui            2.30  72   P      Pn       16 41 25.3 -0.2
GVZ   Greta Valley S     2.32 198   P      Pn       16 41 26.7 +1.0
HIZ   Hauiti             2.34  16   P      Pn       16 41 26.5 +0.4
HIZ   Hauiti             2.34  16   P      Pn       16 41 26.5 +0.4
LTZ   Lake Taylor        2.40 212   P      Pn       16 41 27.8 +1.0
KAHZ  Kahuranaki         2.40  67   P      Pn       16 41 26.5 -0.4
MCHZ  McNeill Hill       2.45  58   P      Pn       16 41 27.2 -0.2
BKZ   Black Stump Fm     2.49  51   P      Pn       16 41 27.3 -0.8
BKZ   Black Stump Fm     2.49  51   P      Pn       16 41 27.6 -0.5
AMCZ  Amberley           2.61 202   P      Pn       16 41 30.5 +0.9
MRHZ  Matea Rd           2.68  45   P      Pn       16 41 29.6 -1.0
TLZ   Tolley Road        2.71  26   P      Pn       16 41 31.2 +0.2
NMHZ  Naumai             2.72  53   P      Pn       16 41 30.5 -0.7
INZ   Inchbonnie         2.74 224   P      Pn       16 41 32.5 +1.2
ARHZ  Aropaoanui         2.74  58   P      Pn       16 41 35.7 +4.3
MTHZ  Maungataniwha      2.90  50   P      Pn       16 41 32.2 -1.4
OXZ   Oxford             2.95 209   P      Pn       16 41 34.0 -0.2
MQZ   McQueen's Vall     3.10 198   P      Pn       16 41 35.8 -0.4
RTZ   Ruatahuna          3.14  48   P      Pn       16 41 34.9 -1.9
AKCZ  Akaroa Harbour     3.21 194   P      Pn       16 41 37.6  0.0
SNGZ  Shannon Statio     3.24  53   P      Pn       16 41 40.5 +2.3
TOZ   Tahuroa Road       3.25  21   P      Pn       16 41 38.6 +0.4
RACZ  Rakaia             3.27 205   P      Pn       16 41 38.0 -0.4
MHCZ  Mount Hutt         3.31 212   P      Pn       16 41 38.9 -0.1
WVZ   Waitaha Valley     3.36 226   P      Pn       16 41 40.4 +0.8
MHGZ  Mahia Peninsul     3.40  63   P      Pn       16 41 38.8 -1.5
URZ   Urewera            3.47  45   P      Pn       16 41 39.1 -2.0
URZ   Urewera            3.47  45   P      Pn       16 41 38.9 -2.2
RAGZ  Rawiri             3.47  50   P      Pn       16 41 45.7 +4.4
TGRZ  Tauranga           3.50  31   P      Pn       16 41 42.0 +0.4
WACZ  Wakanui South      3.56 206   P      Pn       16 41 41.7 -0.6
MWZ   Matawai            3.65  49   P      Pn       16 41 41.4 -2.3
RPZ   Rata Peaks         3.67 216   P      Pn       16 41 43.9  0.0
RPZ   Rata Peaks         3.67 216   P      Pn       16 41 43.5 -0.4
AWAZ  Awhitu Peninsu     3.73   8   P      Pn       16 41 45.4 +0.7
GCSZ  Gaunt Creek Bo     3.74 226   P      Pn       16 41 45.6 +0.8
ARCZ  Arundel            3.81 213   P      Pn       16 41 45.3 -0.5
WTAZ  Waiatarua          3.85   7   P      Pn       16 41 47.2 +0.8
ETAZ  East Tamaki Re     3.88  11   P      Pn       16 41 47.3 +0.6
RVAZ  Riverhead Bore     4.02   7   P      Pn       16 41 49.1 +0.5
TWGZ  Tauwhareparae      4.02  51   P      Pn       16 41 46.9 -1.7
MBAZ  Motutapu North     4.05  10   P      Pn       16 41 49.7 +0.6
WIAZ  Waiheke Island     4.07  13   P      Pn       16 41 49.9 +0.7
FOZ   Fox Glacier        4.17 227   P      Pn       16 41 50.8 +0.3
KUZ   Kuaotunu           4.23  19   P      Pn       16 41 51.4 -0.1
KUZ   Kuaotunu           4.23  19   P      Pn       16 41 51.4 -0.1
TMZ   Timaru             4.24 211   P      Pn       16 41 51.0 -0.5
GRZ   Great Barrier      4.65  15   P      Pn       16 41 57.5 +0.3
WCZ   Waipu Caves        4.83   3   P      Pn       16 42 00.6 +1.0
ODZ   Otahua Downs       4.94 209   P      Pn       16 42 00.3 -0.7
ODZ   Otahua Downs       4.94 209   P      Pn       16 42 00.6 -0.4
JCZ   Jackson Bay        5.08 228   P      Pn       16 42 03.3 +0.2
JCZ   Jackson Bay        5.08 228   P      Pn       16 42 03.3 +0.2
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*MAN **30** 16:41:23.4, 14°.09N×120°.41E, h102^{km}, mb4.7, ML3.6, MS3.6*

*IDC **30** 16:41:23.2±0.7, 14°.09N×120°.82E, h122^{km}±7^{km}, mb3.2/6, mbtmp3.5/6, Error ellipse: s-maj=36.2km s-min=16.2km az=62.0*

ISC 30 16:41:22.9±0.9, **14°.01N**±0°.08×**120°.4E**±0°.1, **h120**^{km}, **n10**, σ**3^{s}40**/14, **mb3.4**/6, **3D**, **Luzon**

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Code  Station Name        Δ°   AZ°   Phase ID          Time       Res
                                    Op     ISC      h  m  s      ISC
TGY   Tagaytay City      0.51  79   P      Pn       16 41 40.7 -0.3
      606nm,0.5s,baz=292,slow=1.9,SNR=11
TGY                                 S      Sn       16 41 53.5 -1.2
      3µm,0.5s,baz=327,slow=22,SNR=11
PGP   Puerto Galera      0.72 134⇓ eP      Pn       16 41 42.7 +0.2
PGP                                eS      Sn       16 41 50.7 -6.6
LQP   Lukban             1.09  84⇓ eP      Pn       16 41 45.9 -0.2
LQP                                eS      Sn       16 42 10.8 +7.2
PCPH  Palayan            1.68  23⇓ eP      Pn       16 41 50.9 -1.6
PCPH                               eS      Sn       16 42 11.7 -3.3
CMAR  Chiang Mai Arr    21.08 285   P      P        16 46 01.7 +3.8
      1.3nm,0.9s,baz=103,slow=8.0,SNR=10
      1.3nm,0.9s
SONM  Songino Array     35.69 344   P      P        16 48 10.1 +0.4
      1.4nm,0.7s,baz=162,slow=11,SNR=11
      1.4nm,0.7s
WRA   Warramunga Arr    36.41 158   P      P        16 48 14.8 -1.2
      0.5nm,0.8s,baz=336,slow=9.6,SNR=6.1
      0.5nm,0.8s
ASAR  Alice Springs     39.70 160   P      P        16 48 43.4 -0.2
      0.3nm,0.4s,baz=337,slow=6.7,SNR=30
      0.3nm,0.4s
MKAR  Makanchi Array    45.62 324   P      P        16 49 32.1 +0.9
      0.1nm,0.4s,baz=128,slow=9.3,SNR=2.5
      0.1nm,0.4s
YKA   Yellowknife Ar    92.60  22   P      P        16 54 19.6 -1.1
      0.3nm,0.7s,baz=307,slow=4.3,SNR=5.7
      0.3nm,0.7s
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*INET **30** 16:44:16.1±0.9, 12°.20N×87°.03W, h65^{km}±5^{km}, MW3.0*

*SNET **30** 16:44:17.0±0.9, 12°.19N×87°.28W, h23^{km}±6^{km}, ML3.6*

ISC 30 16:44:15.1±2.6, **12°.1N**±0°.2×**87°.05W**±0°.08, **h66**^{km}±25^{km}, **n10**, σ**0^{s}50**/18, **1D**, **Near coast of Nicaragua**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time       Res
                                    Op     ISC      h  m  s      ISC
CRIN  San Cristobal      0.56   0  eP      Pn       16 44 28.1 -0.2
CRIN                               eS      Sn       16 44 38.6 +0.6
MATN  Matagalpa          1.35  54  eP      Pn       16 44 38.7 +0.6
MATN                               eS      Sn       16 44 55.1 -0.3
CNCH  Conchagua          1.37 326⇓ eP      Pn       16 44 38.3 -0.1
CNCH                               eS      Sn       16 44 56.2 +0.4
CNCH                                IAML            16 45 00.2
      comp=Z,512nm,0.2s
BOAB  BOACO BROADBAN1.39  77       eP      Pn       16 44 38.3 -0.2
BOAB                               eS      Sn       16 44 55.9 -0.2
LCND  La Caada           1.43 325  eP      Pn       16 44 38.8 -0.2
LCND                               eS      Sn       16 44 56.3 -0.7
LCY   Lacayo             1.76 317  eP      Pn       16 44 44.1 +0.5
PACA  Pacayal            1.82 317  eP      Pn       16 44 44.9 +0.5
PACA                               eS      Sn       16 45 05.7 -0.8
PACA                                IAML            16 45 09.9
      comp=Z,1µm,0.2s
SCLA  Alcaldia de Sa     2.26 314  eP      Pn       16 44 50.8 +0.5
SCLA                               eS      Sn       16 45 16.6 -0.5
LFRS  El Faro            2.46 307  eP      Pn       16 44 53.4 +0.4
LFRS                               eS      Sn       16 45 21.5 -0.5
P5NO  Presa 5 de nov     2.48 318  eP      Pn       16 44 53.5 +0.2
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*TEH **30** 17:16:08.5, 32°.97N×45°.94E, h17^{km}±76^{km}, ML2.5*

*ISN **30** 17:16:08.2±0.7, 33°.01N×45°.95E, h10^{km}±999^{km}, ML2.3*

ISC 30 17:16:08.5±1.1, **32°.99N**±0°.04×**45°.93E**±0°.06, **h8**^{km}±11^{km}, **n7**, σ**0^{s}95**/11, **Iraq**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time       Res
                                    Op     ISC      h  m  s      ISC
IBDR  Badra              0.12 360  ePg     Pg       17 16 11.0 -0.1
IBDR                               eSg     Sg       17 16 12.8 -0.1
IBDR                                AML    AML      17 16 15.7
      comp=E,612nm,0.5s
IBDR                                AML    AML      17 16 15.8
      comp=N,714nm,0.4s
RAFI  Al-Rafai           1.27 173  ePn     Pg       17 16 33.0 +0.1
RAFI                               eSn     Sg       17 16 50.0 +0.6
BHD   Baghdad            1.33 282  ePn     Pg       17 16 34.0  0.0
BHD                                eSn     Sb       17 16 51.0 +0.1
IGHG  Ghaleghazi         1.44  22   Pg     Pg       17 16 35.9 -0.1
IGHG                                Sg     Sg       17 16 56.8 +2.1
IKFM  Kafar-mosalman     1.69  71   Pg     Pb       17 16 39.6 -0.3
IDHR  Dehrash            1.75  12   Pg     Pb       17 16 40.5 -0.4
IKOM  Komasi             1.77  48   Pg     Pb       17 16 40.1 -1.2
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*NEIC **30** 17:22:46.6±2.7, 16°.01N±0°.03×98°.41W±0°.04, h10^{km}±2^{km}, mb4.2/24, Md4.4/33(MEX), Error ellipse: s-maj=6.4km s-min=4.3km az=115.0*

*MEX **30** 17:22:48.8±0.9, 15°.93N×98°.42W, h20^{km}±38^{km}, MD4.4*

*IDC **30** 17:22:52.1±3.8, 17°.00N×97°.62W, h0^{km}, mb3.8/5, mbtmp3.8/8, ML3.9/2, MS3.5/4, Error ellipse: s-maj=100.0km s-min=36.3km az=38.0*

ISC 30 17:22:45.6±1.8, **16°.04N**±0°.06×**98°.43W**±0°.04, **h3**^{km}±11^{km}, **n65**, σ**1^{s}44**/70, **mb4.2**/16, **MS3.4**/3, **Near coast of Guerrero**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time       Res
                                    Op     ISC      h  m  s      ISC
PNIG  Pinotepa           0.46  39          Pb       17 22 56.8 +0.4
PNIG                                       Sb       17 23 02.8 -0.8
PNIG  Pinotepa           0.46  39  i P     Pb       17 22 56.8 +0.4
PNIG                               i S     Sb       17 23 02.8 -0.8
YOIG  Yosondua           1.18  46          Pg       17 23 08.0 -0.2
YOIG                                       Sb       17 23 23.8 -0.7
YOIG  Yosondua           1.18  46  i P     Pg       17 23 08.0 -0.2
YOIG                               i S     Sb       17 23 23.8 -0.7
MGIG  Malinaltepec       1.21 351          Pg       17 23 08.7 -0.1
MGIG                                       Sn       17 23 25.0 -1.5
MGIG  Malinaltepec       1.21 351  i P     Pg       17 23 08.7 -0.1
MGIG                               eS      Sn       17 23 25.0 -1.5
PEIG  Puerto Escondi     1.23  92          Pn       17 23 07.8 -2.0
PEIG  Puerto Escondi     1.23  92  eP      Pn       17 23 07.8 -2.0
TXIG  Tlaxiaco           1.36  28          Pn       17 23 11.3 -0.6
TXIG                                       Sn       17 23 30.7 +0.1
TXIG  Tlaxiaco           1.36  28  i P     Pn       17 23 11.3 -0.6
TXIG                               i S     Sn       17 23 30.7 +0.1
TLIG  Tlapa              1.52 355          Pn       17 23 13.6 -0.2
DAIG  Los Arroyos        1.53 310          Pn       17 23 12.9 -0.9
DAIG                                       Sn       17 23 30.8 -3.5
DAIG  Los Arroyos        1.53 310  eP      Pn       17 23 12.9 -0.9
DAIG                               eS      Sn       17 23 30.8 -3.5
FTIG  Fresnillo de T     1.88   9          Pn       17 23 18.9 +0.1
FTIG  Fresnillo de T     1.88   9  eP      Pn       17 23 18.9 +0.1
OXIG  Oaxaca             1.92  57          Pn       17 23 18.1 -1.4
VHO   Vista Hermosa      1.92  57  eP      Pn       17 23 18.1 -1.4
CAIG  El Cayaco          2.03 300          Pn       17 23 20.7 -0.1
CAIG  El Cayaco          2.03 300  eP      Pn       17 23 20.7 -0.1
TOIG  Toxpalan           2.43  32          Pn       17 23 26.7 +0.4
TOIG  Toxpalan           2.43  32  eP      Pn       17 23 26.7 +0.4
TOIG                               i P     Pn       17 23 26.7 +0.4
TPIG  Tehuac#an          2.58  23          Pg       17 23 34.9 -0.3
TPIG  Tehuac#an          2.58  23  eP      Pg       17 23 34.9 -0.3
YAIG  Yautepec           2.87 348          Pb       17 23 36.3 -1.3
YAIG  Yautepec           2.87 348  eP      Pb       17 23 36.3 -1.3
NEUV  Arroyo Zacate      3.02  56  eP      Pn       17 23 33.7 -0.6
MOIG  Morelia            4.47 324          Pn       17 23 57.8 +3.2
CCIG  Comitan            6.05  87   Pn     Pn       17 24 16.7 +0.5
PETF  Flores             8.26  83   Pn     Pn       17 24 45.9 -0.5
TXAR  Lajitas Array     14.09 341   Pn     Pn       17 26 05.2 -1.0
      0.2nm,0.8s,baz=151,slow=11,SNR=2.7
TXAR                                LR     LR       17 31 58.5
      comp=Z,115nm,20.4s,baz=139,slow=41
JTS   Las Juntas de     14.31 112   Pn     Pn       17 26 11.9 +2.6
      0.9nm,0.3s,baz=308,slow=22,SNR=1.7
      2.1nm,0.3s
ABTX  Abilene, Hawle    16.55 356   P      P        17 26 41.9 +0.5
ABTX                                IAmb   IAmb     17 26 44.9
      comp=Z,22nm,1.1s
ANMO  Albuquerque       20.16 341   P      P        17 27 22.3 +0.9
      comp=Z,0.2nm,0.3s,baz=232,slow=12,SNR=7.6
ANMO                                LR     LR       17 35 57.5
      comp=Z,124nm,19.0s,baz=233,slow=40
      comp=Z,2.7nm,0.6s
ANMO  Albuquerque       20.16 341   P      Pn       17 27 24.7 +1.5
T25A  Trinidad          21.68 347   P      P        17 27 40.9 +3.1
T25A                                IAmb   IAmb     17 27 44.4
      comp=Z,10nm,1.1s
X16A  Lo Mia Camp, P    21.72 330   P      P        17 27 41.1 +2.9
T42A  Van Buren         21.90  16   P      P        17 27 42.1 +2.2
S39A  Bolivar           22.04  11   P      P        17 27 42.4 +1.0
S39A                                IAmb   IAmb     17 27 45.6
      comp=Z,8.3nm,0.8s
WVT   Waverly           22.13  23   P      P        17 27 41.1 -1.3
WVT                                 IAmb   IAmb     17 27 45.7
      comp=Z,11nm,1.0s
SWET  Sewanee           22.14  28   P      P        17 27 41.8 -0.8
SWET                                IAmb   IAmb     17 27 48.6
      comp=Z,10.0nm,0.7s
W50A  Signal Mountai    22.41  29   P      P        17 27 45.6 +0.2
W50A                                IAmb   IAmb     17 27 46.4
      comp=Z,10nm,0.8s
SDCO  Great Sand Dun    22.51 345   P      P        17 27 47.5 +0.7
R40A  Maddies Statio    22.82  13   P      P        17 27 51.0 +1.2
S22A  4UR Ranch, Cre    22.86 343   P      P        17 27 52.3 +1.8
MVCO  Mesa Verde        22.90 339   P      P        17 27 53.1 +2.2
MVCO                                IAmb   IAmb     17 27 54.9
      comp=Z,5.8nm,0.9s
SIUC  Southern Illin    23.08  19   P      P        17 27 51.6 -0.8
T47A  Sharon Grove      23.16  24   P      P        17 27 52.6 -0.7
KSCO  Kaye Shedlock'    23.18 352   P      P        17 27 53.5 -0.1
KSCO                                IAmb   IAmb     17 27 55.7
      comp=Z,6.9nm,0.7s
HODGE Hodges            23.23  36   P      P        17 27 53.7 -0.4
HODGE                               IAmb   IAmb     17 27 54.5
      comp=Z,8.6nm,0.8s
U49A  Red Boiling Sp    23.29  26   P      P        17 27 55.6 +1.0
U49A                                IAmb   IAmb     17 27 56.9
      comp=Z,9.9nm,0.9s
BG3   Lake Jocassee     23.43  33   P      P        17 27 55.7 -0.4
PV01  Paradox Valley    23.76 340   P      P        17 28 01.6 +2.0
SMCO  Snowmass          24.24 344   P      P        17 28 02.7 -1.6
SMCO                                IAmb   IAmb     17 28 13.3
      comp=Z,5.9nm,1.1s
ISCO  Idaho Springs     24.49 347   P      P        17 28 08.7 +2.2
ISCO                                IAmb   IAmb     17 28 13.8
      comp=Z,5.4nm,0.9s
P49A  Miami Univ. Ec    26.30  24   P      P        17 28 22.3 -0.2
PDAR  Pinedale Array    28.29 343   P      P        17 28 42.7 +2.0
      comp=Z,0.4nm,0.7s,baz=159,slow=10,SNR=4.4
      comp=Z,0.4nm,0.7s
ATAH  Atahualpa         30.39 138   LR     LR       17 39 45.3
      comp=Z,79nm,18.6s,baz=36,slow=33
SJG   San Juan          30.91  81   LR     LR       17 40 49.6
      comp=Z,120nm,18.2s,baz=194,slow=36
SCHQ  Schefferville     45.75  25   P      P        17 31 05.7 -2.5
      comp=Z,3.3nm,0.8s,baz=247,slow=8.1,SNR=3.6
      comp=Z,3.3nm,0.8s
YKA   Yellowknife Ar    47.78 350   P      P        17 31 24.9 +1.0
      comp=Z,0.5nm,0.8s,baz=156,slow=7.1,SNR=7.1
      comp=Z,0.5nm,0.8s
H03N2 Juan Fernandez    52.60 159   T      T        18 28 52.4
      baz=337,slow=77,SNR=212
H03N1 Juan Fernandez    52.61 159   T      T        18 28 52.6
      baz=337,slow=77,SNR=349
H03N3 Juan Fernandez    52.62 159   T      T        18 28 49.9
      baz=337,slow=77,SNR=294
INK   Inuvik            56.81 345   P      P        17 32 31.9 +1.0
      comp=Z,2.1nm,0.7s,baz=157,slow=7.7,SNR=4.2
      comp=Z,2.1nm,0.7s
ILAR  Eielson Array     58.58 338   P      P        17 32 45.6 +2.1
      comp=Z,0.4nm,0.8s,baz=144,slow=5.7,SNR=6.4
      comp=Z,0.4nm,0.8s
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*IPEC **30** 17:31:23.3±0.3, 51°.44N×16°.29E, h1^{km}, ML2.6/5, Error ellipse: s-maj=2.1km s-min=1.1km az=39.0*

*PRU **30** 17:31:24.7±0.0, 51°.37N×16°.18E, h0^{km}*

*VIE **30** 17:31:24.2, 51°.38N×16°.25E, h0^{km}, mb2.3/4, ml2.9/3 62 km WNW of Wroclaw Suspected Mining induced.*

ISC 30 17:31:22.4±0.8, **51°.51N**±0°.03×**16°.24E**±0°.02, **h0**^{km}, **n35**, σ**1^{s}23**/74, **Poland**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time       Res
                                    Op     ISC      h  m  s      ISC
KSP   Ksiaz              0.67 177  i Pg    Pg       17 31 35.1  0.0
KSP                                eSg     Sg       17 31 42.6 -1.1
CHVC  Chvalec            0.93 187  ePG     Pg       17 31 40.0 -0.1
CHVC                               eSG     Sg       17 31 50.5 -1.6
      comp=Z,61nm,0.7s
OSTC  Ostas              0.95 181  ePG     Pg       17 31 40.3 -0.3
OSTC                               eSG     Sg       17 31 51.9 -1.0
      comp=Z,104nm,1.1s
UPC   Upice              1.01 188  ePG     Pg       17 31 41.4 -0.3
UPC                                eSG     Sg       17 31 53.3 -1.5
      comp=Z,246nm,0.6s
DPC   Dobruska-Polom     1.16 177  ePG     Pg       17 31 44.0 -0.6
DPC                                eSG     Sg       17 31 58.1 -1.5
      comp=Z,48nm,0.2s
PVCC  Panska Ves         1.44 228  ePG     Pn       17 31 50.0 +0.3
PVCC                               eSG     Sg       17 32 08.7 +0.2
      comp=Z,243nm,0.3s
KRLC  Kraliky            1.48 166  ePG     Pn       17 31 49.5 -0.7
KRLC                               eSG     Sg       17 32 07.5 -2.2
      comp=Z,52nm,0.5s
BRG   Berggiesshubel     1.58 247   Pg     Pg       17 31 53.0 +0.4
BRG                                 Sg     Sb       17 32 13.2 +0.4
BRG                                 Amp             17 32 14.9
      comp=Z,59nm,0.3s
GOPC  GO Pecny, Ondr     1.84 211  ePG     Pb       17 31 56.3 -0.6
GOPC                               eSG     Sn       17 32 19.1 -0.2
      comp=Z,47nm,0.5s
PRU   Pruhonice          1.86 216  ePG     Pn       17 31 55.6 +0.1
PRU                                eSG     Sn       17 32 20.2 +0.5
      comp=Z,65nm,0.9s
MORC  Moravsky Berou     1.92 154  ePN     Pn       17 31 56.0 -0.4
MORC                               eSG     Sn       17 32 21.3  0.0
MORC  Moravsky Berou     1.92 154  ePn     Pn       17 31 55.9 -0.4
      baz=335
MORC                               eSg     Sn       17 32 21.2  0.0
      comp=Z,35nm,0.5s,baz=335
CLL   Collm              2.03 266  ePn     Pn       17 31 58.0 +0.1
CLL                                ePg     Pb       17 32 01.0 +0.8
CLL                                eSg     Sg       17 32 28.0 +0.3
      comp=Z,25nm,0.5s
OKC   Ostrava-Krasne     2.07 143  ePG     Pb       17 32 01.0 +0.2
OKC                                eSG     Sb       17 32 27.0  0.0
      comp=Z,19nm,0.4s
VRAC  Vranov             2.21 174  ePn     Pn       17 32 00.0 -0.4
      baz=355
VRAC                               eSg     Sb       17 32 30.4 -0.8
      comp=Z,44nm,0.6s,baz=355
TREC  Trest              2.27 192  ePN     Pn       17 32 00.9 -0.2
TREC                               ePG     Pb       17 32 03.8 -0.4
TREC                               eSG     Sb       17 32 32.7  0.0
      comp=Z,39nm,0.6s
MAUC  Maruska            2.37 154  ePN     Pn       17 32 03.1 +0.5
MAUC                               ePG     Pb       17 32 06.3 +0.3
MAUC                               eSG     Sb       17 32 36.6 +0.8
      comp=Z,35nm,0.4s
KRUC  Moravsky           2.45 178  ePn     Pn       17 32 03.4 -0.2
      baz=358
KRUC                               eSg     Sb       17 32 38.0  0.0
      comp=Z,32nm,0.6s,baz=358
OJC   Ojcow              2.60 118  ePn     Pn       17 32 02.5 -3.2
OJC                                ePg     Pg       17 32 11.3 -0.9
OJC                                eSg     Sg       17 32 46.4 +0.5
NKC   Novy Kostel        2.72 243  ePN     Pn       17 32 07.9 +0.6
NKC                                ePG     Pb       17 32 12.8 +1.0
NKC                                eSG     Sg       17 32 49.4 -0.2
      comp=Z,41nm,0.3s
JAVC  Velka Javorina     2.81 160  ePN     Pn       17 32 08.3 -0.3
KHC   Kasperske Hory     2.93 217  ePN     Pn       17 32 10.5 +0.3
KHC                                ePG     Pb       17 32 16.2 +0.8
KHC                                eSN     Sn       17 32 44.6 -1.4
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KHC				eSG	Sb	17 32 53.4	+1.7
	comp=Z,21nm,0.6s						
CKRC	Cesky Krumlov	2.96	205	ePN	Pn	17 32 11.5	+0.9
CKRC				ePG	Pb	17 32 16.9	+0.9
CKRC				eSG	Sb	17 32 54.7	+2.0
	comp=Z,26nm,0.5s						
LANS	Liptovska Anna	3.14	137	ePG	Pg	17 32 24.0	+1.5
LANS				eSG	Sb	17 33 00.1	+2.2
MODS	Modra-Piesok	3.21	167	ePG	Pg	17 32 23.9	+0.1
MODS				eSG	Sg	17 33 04.2	-1.2
VYHS	Vyhne	3.45	150	ePG	Pg	17 32 29.4	+0.9
VYHS				eSG	Sg	17 33 12.5	-0.7
CONA	Conrad Observa	3.59	184	ePn	Pn	17 32 19.5	+0.1
	comp=Z,0.3nm,0.2s						
BSD	Bornholm Skovb	3.70	348	i P	Pn	17 32 21.1	+0.4
BSD				i S	Sn	17 33 01.8	-3.1
BSD				IAML		17 33 18.2	
	comp=Z,7.1nm,0.6s						
STHS	Stebnicka Huta	3.82	121	ePN	Pn	17 32 23.1	+0.6
STHS				ePG	Pg	17 32 39.8	+4.2
STHS				eSG	Sg	17 33 27.1	+2.0
ARSA	Arzberg	4.29	186	Pg	Pg	17 32 44.5	+0.1
	comp=Z,2.1nm,0.4s						
LUNU	Lund	4.45	339	i P	Pn	17 32 32.0	+0.9
BLEU	Blekinge	4.81	357	eP	Pn	17 32 36.4	+0.4
BLEU				eS	Sn	17 33 29.9	-2.5
KBA	Koelnbreinsper	4.82	204	ePn	Pn	17 32 36.8	+0.4
	comp=Z,0.2nm,0.2s						
BJUU	Bjuv	4.96	339	eP	Pn	17 32 37.1	-0.9
BJUU				eS	Sn	17 33 33.2	-2.7
DEL	Delary	5.16	345	i P	Pn	17 32 41.0	+0.2
DEL				i S	Sn	17 33 38.5	-2.5

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*IDC **30** 17:48:32.9±1.4, 3°.80S×129°.49E, h0^{km}, mb3.6/4, mbtmp3.6/5, ML3.5/1, Error ellipse: s-maj=104.5km s-min=24.4km az=75.0*

*DJA **30** 17:48:34.0±0.3, 3°S±5°×13°1E±°, h10^{km}, M3.8/10, mb4.1/1, MLv3.6/10*

ISC 30 17:48:36.7±0.9, **3°.36S**±0°.08×**130°.89E**±0°.05, **h30**^{km}, **n13**, σ**2.^{s}02**/14, **mb3.6**/3, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	1.43	72	P	Pn	17 49 00.0	-0.6
FAKI				S	Sn	17 49 19.9	+1.6
BNDI	Bandanaira	1.52	220	P	Pn	17 49 02.0	+0.2
MSAI	Masohi	1.96	270	P	Pn	17 49 07.7	-0.1
AAI	Ambon	2.71	263	P	Pn	17 49 17.7	-0.5
RKPI	Ransiki, Papua	3.76	61	P	Pn	17 49 32.1	-0.6
NLAI	Namlea	3.79	272	P	Pn	17 49 31.5	-1.5
LBMI	Labuha	4.33	309	P	Pn	17 49 37.0	-3.6
SANI	Sanana	5.07	285	P	Pn	17 49 53.8	+3.2
WRA	Warramunga Arr	16.82	169	Pn	Pn	17 52 29.7	-0.5
	0.2nm,0.3s,baz=344,slow=12,SNR=2.7						
WRA				Sn	Sn	17 55 19.2	-17
	baz=345,slow=22,SNR=2.1						
	0.4nm,0.5s						
ASAR	Alice Springs	20.40	172	P	P	17 53 09.0	-2.3
	1.8nm,0.7s,baz=351,slow=11,SNR=38						
	1.8nm,0.7s						
KSRS	Korea Array	40.70	356	P	P	17 56 17.3	+2.7
	0.9nm,0.8s,baz=176,slow=9.3,SNR=2.3						
	0.9nm,0.8s						
SONM	Songino Array	55.32	340	P	P	17 58 08.5	+0.8
	0.6nm,0.9s,baz=142,slow=7.3,SNR=4.3						
	0.6nm,0.9s						
MKAR	Makanchi Array	65.71	326	P	P	17 59 17.0	-1.6
	0.4nm,0.6s,baz=116,slow=7.9,SNR=6.2						
	0.4nm,0.6s						

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*TRN **30** 18:01:00.5, 10°.85N×62°.45W, h75^{km}, MD3.2*

*FUNV **30** 18:01:01.0, 10°.78N×62°.42W, h92^{km}, MW3.1*

ISC 30 18:00:58.3±1.7, **10°.83N**±0°.08×**62°.46W**±0°.05, **h107**^{km}±16^{km}, **n9**, σ**1.^{s}89**/14, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	Carupano	0.78	258	eP	Pn	18 01 18.1	+1.0
CRUV				eS	Sn	18 01 30.7	-0.6
TRN	Trinidad (W)	1.05	100	eP	Pn	18 01 20.8	+1.1
TRN				eS	Sn	18 01 33.7	-2.2
TBH	Brigand Hill	1.41	104	eS	Sn	18 01 42.5	-0.7
GRGR	Grenville	1.51	31	eP	Pn	18 01 25.1	0.0
GRGR				eS	Sn	18 01 44.3	-1.1
GCMP	Grenada, Carri	1.93	31	eP	Pn	18 01 31.2	+0.9
GCMP				eS	Sn	18 01 54.6	+0.1
TOSP	Speyside	1.94	76	eP	Pn	18 01 31.5	+1.1
TOSP				eS	Sn	18 01 54.1	-0.7
PCRV	Puerto La Cruz	2.24	253	eP	Pn	18 01 36.9	+2.6
CACV	CAICARA DEL OR	5.18	231	eP	Pn	18 02 09.7	-3.8
CACV				eS	Sn	18 03 00.8	-11
BAUV	El Baul	5.82	252	eP	Pn	18 02 23.2	+1.0
BAUV				eS	Sn	18 03 23.6	-4.0

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*NEIC **30** 18:01:55.8±1.4, 31°.8S±0°.1×179°.8E±0°.2, h421^{km}±8^{km}, mb4.4/22, Error ellipse: s-maj=22.9km s-min=15.6km az=92.0*

*NOU **30** 18:01:56.5, 31°.72S×179°.97W, h447^{km}, mb4.4/40, Kermadec Islands Region*

*IDC **30** 18:01:57.0±1.1, 31°.58S×179°.73E, h432^{km}±11^{km}, mb3.8/10, mbtmp4.7/16, Error ellipse: s-maj=15.3km s-min=12.8km az=123.0*

*WEL **30** 18:02:00.8±0.6, 32°S±6°×18°0W±1°5, h370^{km}±9^{km}, M4.5/40, mB5.0/36, ML5.3/37, MLv5.4/40, Mw(mB)4.3/36, Error ellipse: s-maj=0.0km s-min=0.0km az=109.5, confirmed*

ISC 30 18:01:56.6±0.4, **31°.77S**±0°.06×**179°.97W**±0°.08, **h450**^{km}, **n181**, σ**1.^{s}82**/195, **mb4.3**/22, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.06	36	P	P	18 03 01.8	-2.3
GLKZ				S	S	18 03 53.1	-5.8
RAO	Raoul Island	3.07	36	P	P	18 03 02.4	-1.8
	453nm,0.2s,baz=103,slow=8.7,SNR=11						
RAO				S	S	18 03 51.7	-7.4
	783nm,0.2s,baz=19,slow=22,SNR=6.6						
RAO	Raoul Island	3.07	36	P	P	18 03 02.0	-2.2
RAO	Raoul Island	3.07	36	P	P	18 03 03.0	-1.2
RIZ	Raoul Island	3.07	36	P	P	18 03 02.8	-1.5
RIZ				S	S	18 03 53.2	-5.8
MXZ	Matakaoa Point	5.95	193		P	18 03 29.4	-0.8
MXZ	Matakaoa Point	5.95	193	P	P	18 03 31.1	+0.9
MXZ	Matakaoa Point	5.95	193	P	P	18 03 30.5	+0.3
MXZ				S	S	18 04 42.9	-3.9
KUZ	Kuaotunu	6.11	215	P	P	18 03 34.6	+2.7
WMGZ	Waiomatatini S	6.18	192	P	P	18 03 33.9	+1.3
WMGZ				S	S	18 04 49.2	-1.9
HAZ	Te Kaha	6.25	197	P	P	18 03 34.3	+1.0
HAZ				S	S	18 04 48.6	-3.9
WCZ	Waipu Caves	6.30	227	P	P	18 03 36.0	+2.2
PKGZ	Pakihiroa	6.31	194	P	P	18 03 34.0	0.0
PKGZ				S	S	18 04 48.0	-5.8
OUZ	Omahuta	6.38	236	P	P	18 03 36.5	+1.8
OUZ	Omahuta	6.38	236	P	P	18 03 36.2	+1.5
PUZ	Puketiti	6.45	193	P	P	18 03 35.4	-0.1
PUZ				S	S	18 04 52.8	-3.6
RUGZ	Raukumara Rang	6.48	197	P	P	18 03 35.5	-0.3
RUGZ				S	S	18 04 52.2	-4.8
WHRZ	Whale Island	6.57	202	P	P	18 03 41.2	+4.5
WHRZ				S	S	18 04 53.9	-4.8
TWGZ	Tauwhareparae	6.61	194	P	P	18 03 38.0	+0.9
TWGZ				S	S	18 04 58.7	-0.7
MARZ	Manawahe	6.79	203	P	P	18 03 41.7	+2.8
MWZ	Matawai	6.86	197	P	P	18 03 39.7	-0.1
MWZ				S	S	18 05 00.7	-3.5
CNGZ	Carnagh Statio	6.86	192	P	P	18 03 40.7	+1.0
CNGZ				S	S	18 05 00.1	-4.1
TKGZ	Te Karaka	6.89	194	P	P	18 03 40.5	+0.5
URZ	Urewera	6.90	199	P	P	18 03 39.7	-0.5
	166nm,0.3s,baz=351,slow=4.6,SNR=94						
URZ				S	S	18 05 01.9	-3.0
	295nm,0.7s,baz=147,slow=24,SNR=23						
URZ	Urewera	6.90	199	P	P	18 03 39.7	-0.5
URZ	Urewera	6.90	199	P	P	18 03 39.6	-0.5
URZ				S	S	18 05 01.7	-3.2
KARZ	Kaharoa	6.97	205	P	P	18 03 44.3	+3.4
OMRZ	Omania	7.00	204	P	P	18 03 44.8	+3.6
TOZ	Tahuroa Road	7.02	211	P	P	18 03 41.2	-0.2
RAGZ	Rawiri	7.04	197	P	P	18 03 42.3	+0.6
TARZ	Mount Tarawera	7.07	203	P	P	18 03 44.9	+2.9
UTU	Utuhina	7.12	205	P	P	18 03 46.3	+3.9
HLRZ	Highlands Stat	7.14	204	P	P	18 03 46.0	+3.4
RRRZ	Republican Roa	7.16	203	P	P	18 03 45.8	+3.0
RIGZ	Rimuhau	7.17	194	P	P	18 03 43.2	+0.3
MUGZ	Murupara	7.21	201	P	P	18 03 42.7	-0.6
HSRZ	Hossack Road	7.23	204	P	P	18 03 47.4	+3.8
RTZ	Ruatahuna	7.27	199		P	18 03 42.6	-1.5
RTZ	Ruatahuna	7.27	199	P	P	18 03 43.4	-0.7
HRRZ	Handcock Road	7.28	204	P	P	18 03 47.0	+2.8
SNGZ	Shannon Statio	7.33	197	P	P	18 03 45.6	+0.8
ALRZ	Allen Road	7.42	203	P	P	18 03 47.5	+1.9
WPRZ	Whakapapatarin	7.44	204	P	P	18 03 48.6	+2.8
KNZ	Kokohu	7.49	194	P	P	18 03 46.7	+0.4
RAHZ	Arahi	7.53	198	P	P	18 03 47.9	+1.1
MTHZ	Maungataniwha	7.53	199	P	P	18 03 47.5	+0.7
MHGZ	Mahia Peninsul	7.57	193	P	P	18 03 49.5	+2.3
WHHZ	Waihua	7.64	197	P	P	18 03 49.3	+1.3
MRHZ	Matea Rd	7.64	202	P	P	18 03 48.3	+0.2
NMHZ	Naumai	7.77	199	P	P	18 03 49.8	+0.4
ARHZ	Aropaoanui	7.88	197	P	P	18 03 51.6	+1.1
RATZ	Rangitukua	7.89	205	P	P	18 03 53.1	+2.4
BKZ	Black Stump Fm	7.92	200	P	P	18 03 48.9	-2.1
BKZ	Black Stump Fm	7.92	200	P	P	18 03 50.0	-1.1
HIZ	Hauiti	7.95	211		P	18 03 49.7	-1.6
HIZ	Hauiti	7.95	211	P	P	18 03 53.1	+1.8
MCHZ	McNeill Hill	8.12	199	P	P	18 03 52.8	-0.4
NTVZ	North Tongarir	8.13	205	P	P	18 03 54.9	+1.6
TMVZ	Te Maari	8.13	205	P	P	18 03 55.1	+1.7
KRVZ	Karewarewa	8.14	205	P	P	18 03 54.9	+1.4
WTVZ	West Tongariro	8.18	205	P	P	18 03 55.3	+1.5
NNVZ	North Ngauruho	8.18	205	P	P	18 03 55.5	+1.5
KWHZ	Kaweka Forest	8.18	200	P	P	18 03 54.4	+0.5
CKHZ	Cape Kidnapper	8.23	196	P	P	18 03 55.8	+1.5
KAHZ	Kahuranaki	8.41	197	P	P	18 03 56.9	+0.6
WPHZ	Waipukurau	8.77	198	P	P	18 04 01.6	+1.4
PRHZ	Porangahau	8.91	197	P	P	18 04 03.2	+1.5
DVHZ	Dannevirke	9.07	199	P	P	18 04 04.0	+0.6
PRWZ	Pori Road	9.36	199	P	P	18 04 08.0	+1.4
BFZ	Birch Farm	9.40	198	P	P	18 04 05.4	-1.7
BFZ	Birch Farm	9.40	198	P	P	18 04 06.3	-0.7
MRZ	Mangatainoka R	9.57	201	P	P	18 04 06.6	-2.3
SNZO	South Karori	10.44	203	P	P	18 04 18.7	+0.5
BHW	Baring Head	10.47	202	P	P	18 04 17.3	-1.4
TCW	Tory Channel	10.49	205	P	P	18 04 16.9	-2.0
PLWZ	Palliser	10.50	200	P	P	18 04 17.4	-1.7
TUWZ	Tuamarina	10.81	205	P	P	18 04 21.0	-1.3
NNZ	Nelson	10.84	208	P	P	18 04 20.3	-2.3
QRZ	Quartz Range	10.87	212	P	P	18 04 22.7	-0.3
QRZ	Quartz Range	10.87	212	P	P	18 04 23.1	+0.1
BSWZ	Blackbirch Sta	11.08	205	P	P	18 04 24.4	-0.9
MRNZ	Matariki Terra	11.24	209	P	P	18 04 25.8	-1.3
THZ	Tophouse	11.49	208	P	P	18 04 28.6	-1.2
KHZ	Kahutara	11.82	204	P	P	18 04 32.1	-1.1
GVZ	Greta Valley S	12.48	204	P	P	18 04 40.2	-0.2
OXZ	Oxford	13.15	206	P	P	18 04 46.6	-1.2
RPZ	Rata Peaks	13.87	208	P	P	18 04 54.7	-0.7
	6.8nm,0.6s,baz=285,slow=1.2,SNR=7.7						
RPZ				S	S	18 07 20.6	-2.5
	9.8nm,0.7s,baz=129,slow=23,SNR=5.9						
RPZ	Rata Peaks	13.87	208	P	P	18 04 56.2	+0.8
MSVF	Nonsavu	14.09	352	P	P	18 04 57.0	-1.3
	10nm,0.5s,baz=267,slow=5.6,SNR=20						
MSVF	Nonsavu	14.09	352	P	P	18 04 56.5	-1.8
MSVF	Nonsavu	14.09	352	P	P	18 04 56.6	-1.6
PINNC	Pines Island,	14.43	306	P	P	18 05 00.7	-1.0
PINNC	Pines Island,	14.43	306	P	P	18 05 01.3	-0.4
OUENC	Ouen Island, N	14.98	305	P	P	18 05 07.2	-0.3
OUENC	Ouen Island, N	14.98	305	P	P	18 05 07.3	-0.3
TAVE	Taveuni	14.99	0	P	P	18 05 08.8	+1.0
JCZ	Jackson Bay	15.13	213	P	P	18 05 08.8	-0.3
YSA	Yasawairara	15.17	351	P	P	18 05 08.8	-0.9
YATNC	Mamie plateau,	15.18	306	P	P	18 05 09.6	-0.2
ONTNC	Ouen Toro	15.32	305	P	P	18 05 10.7	-0.5
ONTNC	Ouen Toro	15.32	305	P	P	18 05 10.8	-0.5
DZM	Mont Dzumac	15.48	305	P	P	18 05 12.2	-0.8
	20nm,0.8s,baz=180,slow=19,SNR=26						
DZM	Mont Dzumac	15.48	305	P	P	18 05 12.4	-0.6
DZM				IAmb	IAmb	18 05 13.7	
	comp=Z,30nm,1.0s						
DZM	Mont Dzumac	15.48	305	P	P	18 05 12.6	-0.5
NOUC	Port Laguerre	15.56	305	P	P	18 05 13.3	-0.5
AFI	Afiamalu	19.30	25	P	P	18 05 53.7	+2.0
	comp=Z,22nm,0.3s,baz=186,slow=10,SNR=5.1						
CMSA	Cobar Meteorol	29.16	261	P	P	18 07 21.0	+1.3
CTAO	Charters Tower	32.40	283	P	P	18 07 48.0	+0.1
CTAO				IAmb	IAmb	18 07 49.1	
	comp=Z,29nm,1.4s						
CTAO	Charters Tower	32.40	283	P	P	18 07 48.2	+0.3
STKA	Stephens Creek	32.54	259	P	P	18 07 50.0	+1.1
	comp=Z,6.8nm,0.8s,baz=102,slow=13,SNR=15						
	comp=Z,6.8nm,0.8s						
STKA	Stephens Creek	32.54	259	P	P	18 07 49.6	+0.6
STKA	Stephens Creek	32.54	259	P	P	18 07 50.1	+1.1
INKA	Innaminka	34.22	266	P	P	18 08 04.3	+1.1
HTT	Hallett	34.52	256	P	P	18 08 06.4	+0.7
MTSU	Mount Surprise	34.94	284	P	P	18 08 09.5	+0.1
LCRK	Leigh Creek	35.67	261	P	P	18 08 15.7	+0.3
BBOO	Buckleboo	36.99	256	P	P	18 08 26.2	-0.1
BBOO				IAmb	IAmb	18 08 56.3	
	comp=Z,32nm,1.4s						
BBOO	Buckleboo	36.99	256	P	P	18 08 26.4	+0.1
RABL	Rabaul	37.91	311	P	P	18 08 33.6	-0.5
RABL	Rabaul	37.91	311	P	P	18 08 34.2	+0.1
KRVT	Keravat (AS076	37.91	310	P	P	18 08 32.8	-1.3
	comp=Z,60nm,0.6s,baz=240,slow=0.2,SNR=14						
	comp=Z,60nm,0.6s						
OOD	Oodnadatta	38.49	264	P	P	18 08 39.2	+0.5
MULG	Mulgathing	39.20	260	P	P	18 08 44.2	-0.3
AS31	Alice Springs	41.38	269	P	P	18 09 01.4	-0.8
ASAR	Alice Springs	41.38	269	P	P	18 09 01.4	-0.7
	comp=Z,4.4nm,0.8s,baz=107,slow=7.4,SNR=53						
ASAR				PcP	PcP	18 10 50.9	+0.7
	comp=Z,0.5nm,0.5s,baz=128,slow=3.5,SNR=5.1						
ASAR				ScP	ScP	18 13 59.0	+2.3
	comp=Z,1.9nm,0.8s,baz=116,slow=3.9,SNR=13						
	comp=Z,4.4nm,0.8s						
ASAR	Alice Springs	41.38	269	P	P	18 09 01.0	-1.1
WB2	Warramunga Arr	42.48	275	P	P	18 09 09.9	-1.1
WB2				IAmb	IAmb	18 09 10.5	
	comp=Z,11nm,0.5s						
WRAB	Tennant Creek	42.49	275	P	P	18 09 09.7	-1.2
WRAB				IAmb	IAmb	18 09 19.9	
	comp=Z,24nm,0.7s						
WRAB	Tennant Creek	42.49	275	P	P	18 09 10.0	-1.0
WRA	Warramunga Arr	42.49	275	P	P	18 09 10.2	-0.9
	comp=Z,6.0nm,0.4s,baz=112,slow=7.9,SNR=95						
WRA				ScP	ScP	18 14 03.6	+2.4
	comp=Z,1.2nm,0.8s,baz=116,slow=3.4,SNR=7.1						
	comp=Z,6.0nm,0.4s						
WB0	Warramunga Arr	42.52	275	P	P	18 09 10.2	-1.1
WB0				IAmb	IAmb	18 09 10.8	
	comp=Z,10.0nm,0.5s						
FORT	Forrest	44.08	257	P	P	18 09 22.7	-0.6
FORT				IAmb	IAmb	18 09 23.5	
	comp=Z,27nm,0.8s						
FORT	Forrest	44.08	257	P	P	18 09 22.9	-0.4
WRKA	Warakurna	45.65	265	P	P	18 09 34.5	-1.1
MTN	Manton Dam	48.56	281	P	P	18 09 56.6	-1.0
MTN	Manton Dam	48.56	281	P	P	18 09 56.7	-1.0
KNRA	Kununurra	49.15	277	P	P	18 10 01.5	-0.6
KNRA	Kununurra	49.15	277	P	P	18 10 02.0	-0.1
FITZ	Fitzroy Crossi	50.69	272	P	P	18 10 13.0	-0.5
CASY	Casey	53.14	208	P	P	18 10 30.7	+0.2
FAKI	Fak Fak	53.27	293	P	P	18 10 30.8	-1.4
FAKI				IAmb	IAmb	18 11 01.2	
	comp=Z,37nm,1.3s						
MBWA	Marble Bar	54.41	266	P	P	18 10 39.2	-1.1
MBWA				IAmb	IAmb	18 10 45.2	
	comp=Z,12nm,1.4s						
MORW	Morawa	54.53	255	P	P	18 10 40.6	-0.5
MORW				IAmb	IAmb	18 10 43.9	
	comp=Z,11nm,1.1s						
QSPA	South Pole Qui	58.34	180	P	P	18 11 11.3	+4.3
	comp=Z,2.2nm,0.8s,baz=270,slow=1.0,SNR=11						
	comp=Z,2.2nm,0.8s						
BELA	Belgrano 2	68.66	173	P	P	18 12 16.2	+3.2
MAW	Mawson	70.43	201	P	P	18 12 26.4	+2.6
MAW				IAmb	IAmb	18 12 36.6	
	comp=Z,8.1nm,1.4s						
KSM	Kuching	73.64	282	P	P	18 12 43.7	+0.2
KSM				IAmb	IAmb	18 12 44.7	
	comp=Z,4.6nm,0.9s						
KSRS	Korea Array	84.32	321	P	P	18 13 40.7	+0.8
	comp=Z,1.8nm,0.7s,baz=134,slow=5.6,SNR=8.4						
	comp=Z,1.8nm,0.7s						
PEA0B	Petropavlovsk-	86.73	347	P	P	18 13 52.5	+1.3
PETK	Petropavlovsk-	86.73	347	P	P	18 13 52.8	+1.5
	comp=Z,5.5nm,0.8s,baz=134,slow=7.2,SNR=15						
	comp=Z,5.5nm,0.8s						
PETK	Petropavlovsk-	86.73	347	P	P	18 13 52.2	+0.9
USRK	Ussuriysk Ar.	87.39	328	P	P	18 13 55.1	+0.6
	comp=Z,2.2nm,0.7s,baz=176,slow=3.8,SNR=3.0						
	comp=Z,2.2nm,0.7s						
USRK	Ussuriysk Ar.	87.39	328	P	P	18 13 55.6	+1.1
PFO	Pinyon Flats O	88.38	48	P	P	18 14 02.1	+2.5
	comp=Z,1.5nm,0.4s,baz=234,slow=4.4,SNR=4.1						
	comp=Z,1.5nm,0.4s						
YBH	Yreka Blue Hor	90.15	39	P	P	18 14 10.9	+3.3
	comp=Z,2.0nm,0.7s,baz=207,slow=2.3,SNR=2.0						
	comp=Z,2.0nm,0.7s						
HHC	Hu-ho-hao-te	95.98	315	eP	P	18 14 38.5	+4.1
HHC				pmax	pmax		
	comp=Z,27nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,5.1s						
WMQ	Urumqi	112.75	308	eP	PKiKP	18 19 42.5	+1.5
MKAR	Makanchi Array	117.36	310	PKP	PKiKP	18 19 50.2	+0.5
	comp=Z,0.4nm,0.5s,baz=198,slow=1.3,SNR=6.5						
ZALV	Zalesovo Beam	117.93	318	PKP	PKiKP	18 19 50.8	+0.2
	comp=Z,0.6nm,0.3s,baz=132,slow=2.1,SNR=2.3						
RES	Resolute Bay	119.06	18	PKP	PKiKP	18 19 53.2	+1.1
	comp=Z,0.4nm,0.5s,baz=222,slow=4.4,SNR=3.5						
KKAR	Karatay Array	124.41	303		PKiKP	18 20 04.1	+0.4
ARCES	ARCESS Array B	139.54	347	PKhKP	PKPpre	18 20 23.4	
	comp=Z,3.0nm,0.8s,baz=62,slow=2.9,SNR=4.8						
ARCES				PKP	PKiKP	18 20 33.0	-0.5
	comp=Z,6.4nm,1.0s,baz=90,slow=2.4,SNR=5.7						
ONI	Oni	144.11	300		PKiKP	18 20 40.9	-2.8
KBZ	Khabaz	144.44	302	PKP	PKPdf	18 20 40.7	+0.3
	comp=Z,6.0nm,1.0s,baz=95,slow=5.4,SNR=9.4						
BORG	Borgarnes	144.45	16	PKP	PKiKP	18 20 41.4	-2.2
	comp=Z,11nm,0.9s,baz=0.0,slow=6.1,SNR=1.9						
FINES	FINESS Array B	145.81	338	PKPbc	PKPab	18 20 44.5	-0.6
	comp=Z,16nm,0.7s,baz=44,slow=4.5,SNR=113						
MEF	Metsahovi	147.28	338	eP	PKiKP	18 20 48.7	-0.9
VSU	Vasula	147.74	334	eP	PKiKP	18 20 50.0	-0.6
MTSE	Matsula	148.61	336	eP	PKiKP	18 20 52.3	0.0
NB2	NORSAR Subarra	149.81	349	PKP	PKiKP	18 20 55.4	+0.5
	comp=Z,1.5nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.81	349	PKPbc	PKiKP	18 20 55.2	+0.4
	comp=Z,2.0nm,0.5s,baz=16,slow=4.1,SNR=15						
PABE	Paberze	150.90	332	eP	PKPbc	18 20 53.6	-3.1
AKASG	Malin Array Be	151.31	320	PKPbc	PKiKP	18 20 58.9	+0.7
	comp=Z,1.2nm,0.4s,baz=58,slow=2.2,SNR=22						
AKASG	Malin Array Be	151.31	320		PKiKP	18 20 58.3	+0.1
AKBB	Malin Array Si	151.31	320		PKiKP	18 20 58.7	+0.5
BR131	Keskin Array S	151.72	296		PKiKP	18 20 59.9	+0.3
BRTR	Keskin Array B	151.72	296	PKPbc	PKiKP	18 21 00.2	+0.5
	comp=Z,1.9nm,0.5s,baz=131,slow=3.3,SNR=14						
BRTR	Keskin Array B	151.72	296		PKiKP	18 20 59.8	+0.2
GERES	GERESS Array B	160.06	333	PKPab	PKPab	18 21 44.5	-1.4
	comp=Z,0.6nm,0.6s,baz=20,slow=4.4,SNR=6.5						
TORD	Torodi Ar. Bea	161.40	185	PKP	PKPdf	18 21 07.7	+2.3
	comp=Z,0.7nm,0.9s,baz=206,slow=0.2,SNR=3.7						
TORD				PKPab	PKPab	18 21 54.0	+1.7
	comp=Z,0.7nm,0.3s,baz=174,slow=2.9,SNR=1.5						
FUORN	Ofenpass-Fuorn	163.21	335		PKPab	18 22 00.7	+0.8

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*BJI **30** 18:18:29.3±0.0, 5°.98S×151°.85E, h5^{km}, mb4.5/21, mB4.9/11, Ms4.3/1, Ms7 4.2/3*

*NEIC **30** 18:18:34.4±2.1, 5°.76S±0°.05×151°.54E±0°.07, h10^{km}±1^{km}, mb5.0/44, Error ellipse: s-maj=12.6km s-min=9.1km az=101.0*

*IDC **30** 18:18:37.6±1.2, 5°.80S×151°.58E, h40^{km}±11^{km}, mb4.0/13, mbtmp4.2/15, ML2.9/2, MS3.5/22, Error ellipse: s-maj=15.0km s-min=7.0km az=113.0*

*DJA **30** 18:18:38.6±0.4, 6°S±3°×15°2E±°, h55^{km}±7^{km}, M4.9/13, mB5.1/3, mb4.5/13, MLv5.2/2, Mw(mB)4.5/3*

ISC 30 18:18:37.9±0.4, **5°.77S**±0°.04×**151°.61E**±0°.05, **h41**^{km}, **n139**, σ**1.^{s}03**/131, **mb4.9**/39, **MS3.5**/20, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.51	16	P	Pn	18 19 01.8	-0.7
	2µm,0.3s,baz=275,slow=1.3,SNR=699						
KRVT				S	Sn	18 19 21.8	+0.9
	8µm,0.5s,baz=242,slow=5.3,SNR=12						
KRVT				LR	LR	18 19 42.2	
	comp=Z,2µm,19.9s,baz=347,slow=42						
RABL	Rabaul	1.66	19		Pn	18 19 04.3	-0.3
RABL	Rabaul	1.66	19	P	Pn	18 19 05.3	+0.7
PMG	Port Moresby	5.70	230	P	Pn	18 20 00.4	+0.3
	29nm,0.3s,baz=90,slow=24,SNR=59						
PMG				S	Sn	18 21 04.1	-0.2
	66nm,0.3s,baz=270,slow=20,SNR=3.1						
PMG				LR	LR	18 22 06.3	
	comp=Z,197nm,19.2s,baz=0.0,slow=37						
	116nm,0.5s						
PMG	Port Moresby	5.70	230	Pn	Pn	18 19 59.6	-0.4
PMG	Port Moresby	5.70	230	P	Pn	18 20 02.1	+2.0
PMG	Port Moresby	5.70	230	P	Pn	18 20 01.7	+1.6
HNR	Honiara	9.03	114	P	Pn	18 20 46.4	+0.7
	309nm,0.4s,baz=301,slow=16,SNR=7.7						
HNR				LR	LR	18 23 42.5	
	comp=Z,4µm,21.7s,baz=264,slow=34						
HNR	Honiara	9.03	114		Pn	18 20 46.5	+0.8
SMPI	Sarmi	13.40	286	P	Pn	18 21 48.0	+2.3
	20nm,1.4s						
MTSU	Mount Surprise	14.20	209	P	Pn	18 21 57.6	+1.1
CTA	Charters Tower	15.15	200	P	Pn	18 22 08.7	-0.6
	baz=32,slow=15,SNR=1.2						
CTA				LR	LR	18 27 49.6	
	comp=Z,222nm,18.8s,baz=72,slow=36						
	1.3nm,0.8s						
CTAO	Charters Tower	15.15	200	P	P	18 22 15.1	+1.4
CTAO	Charters Tower	15.15	200	P	Pn	18 22 10.6	+1.4
SRPI	Serui, Papua	15.81	284	P	P	18 22 20.8	-0.3
QIS	Mount Isa	18.76	217	P	Pn	18 22 54.3	0.0
EIDS	Eidsvold	19.50	181	P	Pn	18 23 02.2	-0.9
EIDS				IAmb	IAmb	18 23 02.9	
	comp=Z,118nm,1.9s						
FAKI	Fak Fak	19.51	278	P	Pn	18 23 01.6	-1.8
FAKI	Fak Fak	19.51	278	P	Pn	18 23 02.3	-1.1
FAKI	Fak Fak	19.51	278	P	Pn	18 23 04.0	+0.6
	comp=Z,27nm,1.5s						
GUMO	Guam	20.36	341	LR	LR	18 29 29.9	
	comp=Z,82nm,21.3s,baz=157,slow=32						
RMQ	Roma	20.78	187	P	P	18 23 16.5	+0.9
MTN	Manton Dam	21.38	249	P	P	18 23 22.1	0.0
MTN				IAmb	IAmb	18 23 24.7	
	comp=Z,152nm,1.8s						
DZM	Mont Dzumac	21.64	140	P	P	18 23 24.4	-0.5
	comp=Z,8.2nm,0.5s,baz=261,slow=5.7,SNR=20						
DZM				LR	LR	18 30 44.0	
	comp=Z,305nm,20.7s,baz=244,slow=34						
	comp=Z,8.2nm,0.5s						
DZM	Mont Dzumac	21.64	140	P	P	18 23 25.5	+0.6
DZM	Mont Dzumac	21.64	140	P	P	18 23 25.9	+0.9
WB0	Warramunga Arr	21.77	229	P	P	18 23 25.5	-0.8
WB0				IAmb	IAmb	18 23 29.0	
	comp=Z,22nm,0.6s						
WRAB	Tennant Creek	21.90	228	P	P	18 23 27.0	-0.7
WB2	Warramunga Arr	21.91	228	P	P	18 23 26.8	-1.0
WB2				IAmb	IAmb	18 23 30.4	
	comp=Z,36nm,0.5s						
WRA	Warramunga Arr	21.92	228	P	P	18 23 27.4	-0.4
	comp=Z,29nm,0.5s,baz=53,slow=10,SNR=91						
WRA				S	S	18 27 27.1	-0.8
	comp=Z,1.9nm,1.0s,baz=56,slow=19,SNR=5.6						
WRA				ScP	ScP	18 31 01.8	+1.5
	comp=Z,1.3nm,0.9s,baz=40,slow=2.0,SNR=4.8						
WRA				LR	LR	18 31 47.9	
	comp=Z,88nm,18.9s,baz=114,slow=36						
WRA	Warramunga Arr	21.92	228	P	P	18 23 26.9	-1.0
YATNC	Mamie plateau,	21.92	139	P	P	18 23 30.2	+2.3
INKA	Innaminka	24.17	204	P	P	18 23 50.4	0.0
KNRA	Kununurra	24.48	244	P	P	18 23 52.9	-0.5
KNRA				IAmb	IAmb	18 24 23.2	
	comp=Z,79nm,1.4s						
KNRA	Kununurra	24.48	244	P	P	18 23 53.2	-0.2
ARMA	Armidale	24.52	180	P	P	18 23 53.6	-0.1
LBMI	Labuha	24.60	281	P	P	18 23 55.6	+1.1
	comp=Z,13nm,0.7s						

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AS31  Alice Springs    24.64 222  P       P       18 23 54.3 -0.5
ASAR  Alice Springs    24.64 222  P       P       18 23 54.4 -0.4
      comp=Z,7.4nm,0.5s,baz=57,slow=9.0,SNR=263
ASAR                              ScP     ScP     18 31 08.9 +1.3
      comp=Z,0.8nm,0.8s,baz=54,slow=3.7,SNR=6.3
ASAR                              LR      LR      18 33 18.9
      comp=Z,110nm,18.1s,baz=44,slow=36
      comp=Z,7.4nm,0.5s
CMSA  Cobar Meteorol   26.23 191  P       P       18 24 08.3 -0.8
OOD   Oodnadatta       26.62 213  P       P       18 24 12.2 -0.4
SOEI  Soe              27.37 260  P       P       18 24 20.4 +0.7
SOEI                              IAmb    IAmb    18 24 52.2
      comp=Z,23nm,0.9s
SOEI  Soe              27.37 260  P       P       18 24 20.2 +0.5
LCRK  Leigh Creek      27.59 206  P       P       18 24 20.9 -0.5
STKA  Stephens Creek   27.61 199  P       P       18 24 20.6 -0.9
      comp=Z,4.2nm,0.6s,baz=3.0,slow=10.0,SNR=7.5
STKA                              LR      LR      18 34 23.9
      comp=Z,174nm,19.5s,baz=23,slow=34
      comp=Z,4.2nm,0.6s
STKA  Stephens Creek   27.61 199  P       P       18 24 20.5 -1.0
STKA  Stephens Creek   27.61 199  P       P       18 24 21.0 -0.5
FITZ  Fitzroy Crossi   28.16 242  P       P       18 24 25.5 -1.1
FITZ  Fitzroy Crossi   28.16 242  P       P       18 24 26.0 -0.5
MSVF  Nonsavu          28.44 117  P       P       18 24 29.2 +0.1
      comp=Z,1.5nm,0.5s,baz=338,slow=1.4,SNR=9.3
      comp=Z,1.5nm,0.5s
DAV   Davao City (W)   28.94 296  LR      LR      18 36 00.4
      comp=Z,71nm,18.6s,baz=95,slow=36
MMRI  Maumere          29.27 263  P       P       18 24 35.0 -1.5
MMRI                              IAmb    IAmb    18 24 45.5
      comp=Z,23nm,0.8s
WRKA  Warakurna        29.43 227  P       P       18 24 37.0 -0.9
MULG  Mulgathing       29.45 212  P       P       18 24 37.2 -0.7
HTT   Hallett          29.94 202  P       P       18 24 41.7 -0.6
BBOO  Buckleboo        30.56 206  P       P       18 24 46.7 -1.0
BBOO  Buckleboo        30.56 206  P       P       18 24 47.1 -0.6
FORT  Forrest          33.29 219  P       P       18 25 10.6 -1.1
FORT  Forrest          33.29 219  P       P       18 25 10.9 -0.8
PLAI  Plampang         33.69 263  P       P       18 25 13.8 -1.6
JCJ   Chichijima       33.92 345  LR      LR      18 37 15.3
      comp=Z,88nm,22.0s,baz=129,slow=33
MBWA  Marble Bar       34.46 241  P       P       18 25 20.9 -1.1
MBWA                              IAmb    IAmb    18 25 29.7
      comp=Z,14nm,0.8s
MBWA  Marble Bar       34.46 241  P       P       18 25 21.3 -0.7
PSA00 Pilbara Seismi   34.52 240  P       P       18 25 21.4 -1.1
PSA00 Pilbara Seismi   34.52 240  P       P       18 25 21.6 -0.9
BKB   Balikpapan       34.93 276  P       P       18 25 25.4 -0.7
BKB                               IAmb    IAmb    18 25 38.1
      comp=Z,21nm,0.8s
MOO   Moorlands        36.73 185  P       P       18 25 42.2 +1.0
TAU   Tasmania Unive   37.18 185  P       P       18 25 46.1 +1.1
TAU   Tasmania Unive   37.18 185  P       P       18 25 46.4 +1.4
KKM   Kota Kinabalu    37.23 288  P       P       18 25 46.6 +0.7
JOW   Kunigami         39.51 326  LR      LR      18 39 29.4
      comp=Z,103nm,19.1s,baz=74,slow=32
GIRL  Giralia          39.76 241  P       P       18 26 06.6 -0.4
RTZ   Ruatahuna        39.97 148  P       P       18 26 08.0 -0.6
TCW   Tory Channel     40.69 154  P       P       18 26 14.3 -0.1
KLBR  Kellerberrin     40.78 227  P       P       18 26 13.9 -1.4
MORW  Morawa           40.82 231  P       P       18 26 14.7 -1.0
MORW  Morawa           40.82 231  P       P       18 26 14.8 -0.9
YOJ   Yonaguni jima    40.98 318  P       P       18 26 17.1 +0.1
BLDU  Ballidu          41.05 229  P       P       18 26 16.5 -1.1
KHZ   Kahutara         41.36 155  P       P       18 26 18.9 -1.0
KHZ                               IAmb    IAmb    18 26 37.6
      comp=Z,48nm,1.8s
PLWZ  Palliser         41.41 153  P       P       18 26 19.4 -1.1
RPZ   Rata Peaks       41.49 159  LR      LR      18 41 02.9
      comp=Z,209nm,20.6s,baz=295,slow=32
TPUB  Ta-pu            41.84 315  P       P       18 26 23.2 -0.9
NWAO  Narrogin (SRO)   41.87 225  P       P       18 26 24.1 -0.1
NWAO                              IAmb    IAmb    18 27 17.7
      comp=Z,66nm,1.8s
SSLB  Suanglung        41.92 316  P       P       18 26 24.7 -0.1
SSLB                              IAmb    IAmb    18 27 56.4
      comp=Z,39nm,1.5s
SSLB  Suanglung        41.92 316  P       P       18 26 25.1 +0.3
MUN   Mundaring        42.11 227  P       P       18 26 25.5 -0.7
YHNB  Yeheng           42.21 317  P       P       18 26 28.1 +0.9
YHNB                              IAmb    IAmb    18 26 37.8
      comp=Z,43nm,1.2s
BBJI  Bungbulang       43.69 265  P       P       18 26 37.7 -1.6
MJAR  Matsushiro Arr   43.92 344  LR      LR      18 42 15.7
      comp=Z,56nm,19.7s,baz=166,slow=32
KSRS  Korea Array      48.34 335  LR      LR      18 46 15.7
      comp=Z,24nm,20.8s,baz=100,slow=34
RAR   Rarotonga        49.48 113  LR      LR      18 44 50.2
      comp=Z,65nm,19.9s,baz=268,slow=32
MDJ   Mudanjiang       53.92 341  P       P       18 28 00.0 +2.7
MDJ                               sP      pP      18 28 04.5 -4.5
MDJ                               pmax    pmax
      comp=Z,5.0nm,1.6s
MDJ                               pmax    pmax
      comp=Z,160nm,3.7s
GSI   Gunungsitoli     54.41 276  P       P       18 28 02.3 +0.9
CRAI  Chiangrai        56.59 299  P       P       18 28 17.9 +0.9
CMAR  Chiang Mai Arr   57.23 296  P       P       18 28 22.5 +1.0
      comp=Z,0.6nm,0.4s,baz=126,slow=6.9,SNR=5.4
CMAR                              LR      LR      18 50 56.8
      comp=Z,12nm,21.6s,baz=105,slow=34
      comp=Z,0.6nm,0.4s
KLR   Kul'dur          57.45 345  LR      LR      18 52 19.3
      comp=Z,42nm,19.0s,baz=160,slow=35
PZH   PanZhiHua        57.97 306  P       P       18 28 28.8 +2.0
PZH                               pmax    pmax
      comp=Z,10.0nm,0.8s
PZH                               pmax    pmax
      comp=Z,100nm,5.9s
CD2   Chengdu          58.48 312 eP       P       18 28 30.5 +0.4
CD2                               pmax    pmax
      comp=Z,10.0nm,0.5s
PETK  Petropavlovsk-   58.88   4  P       P       18 28 33.3 +0.9
      comp=Z,1.6nm,0.6s,baz=146,slow=6.2,SNR=10
PETK                              LR      LR      18 49 39.3
      comp=Z,36nm,20.7s,baz=124,slow=32
      comp=Z,1.6nm,0.6s
HHC   Hu-ho-hao-te     59.15 325 eP       P       18 28 36.5 +1.8
HHC                               pmax    pmax
      comp=Z,17nm,0.8s
HHC                               pmax    pmax
      comp=Z,220nm,4.7s
HEH   HeiHe            59.60 342 eP       P       18 28 35.0 -2.5
TNCH  TengChong        59.99 303  P       P       18 28 41.8 +0.9
TNCH                              pP      pP      18 28 46.8 -6.0
TNCH                              sP      sP      18 28 47.8  -10
TNCH                              pmax    pmax
      comp=Z,150nm,5.3s
SHEM  Shemya Is, Ala   61.33  15  LR      LR      18 49 49.1
      comp=Z,50nm,20.3s,baz=55,slow=30
MA2   Magadan          65.14 360  LR      LR      18 58 11.3
      comp=Z,28nm,18.9s,baz=154,slow=36
SONM  Songino Array    66.52 329  P       P       18 29 23.9 +0.3
      comp=Z,1.4nm,0.5s,baz=142,slow=6.0,SNR=16
SONM                              LR      LR      18 58 02.7
      comp=Z,41nm,20.5s,baz=184,slow=36
      comp=Z,1.4nm,0.5s
SONM  Songino Array    66.52 329  P       P       18 29 23.8 +0.1
CASY  Casey            66.75 197  P       P       18 29 24.5 -0.1
YAK   Yakutsk          69.69 349  LR      LR      18 57 58.1
      comp=Z,28nm,21.9s,baz=114,slow=34
VNDA  Vanda            71.91 178  P       P       18 29 56.5 +0.1
      comp=Z,3.5nm,0.5s,baz=331,slow=6.9,SNR=29
      comp=Z,3.5nm,0.5s
VNDA  Vanda            71.91 178  P       P       18 29 56.3 -0.1
SBA   Scott Base       72.48 177  P       P       18 30 00.8 +1.0
WMQ   Urumqi           75.66 318 eP       P       18 30 21.0 +2.0
MKAR  Makanchi Array   80.28 319  P       P       18 30 43.1 -1.4
      comp=Z,0.3nm,0.5s,baz=102,slow=6.9,SNR=6.9
      comp=Z,0.3nm,0.5s
ZALV  Zalesovo Beam    81.30 327  P       P       18 30 48.1 -1.7
      comp=Z,0.7nm,0.3s,baz=103,slow=6.7,SNR=3.7
      comp=Z,0.7nm,0.3s
KTH   Kantishna Hill   81.36  22  P       P       18 30 49.1 -0.9
BPAW  Bear Paw Mtn.    81.62  22  P       P       18 30 51.1 -0.3
MCK   McKinley         82.21  23  P       P       18 30 53.3 -1.1
MCK                               IAmb    IAmb    18 32 27.6
      comp=Z,32nm,1.9s
MLY   Manley           82.21  21  P       P       18 30 54.3 -0.2
MLY                               IAmb    IAmb    18 32 01.2
      comp=Z,18nm,1.8s
I23K  Minto, Yukon-K   82.77  21  P       P       18 30 56.8 -0.4
I23K                              IAmb    IAmb    18 31 04.7
      comp=Z,22nm,1.9s
WRH   Wood River Hil   82.90  22  P       P       18 30 57.0 -1.0
WRH                               IAmb    IAmb    18 32 48.7
      comp=Z,23nm,1.9s
HDA   Harding Lake     83.30  23  P       P       18 30 59.5 -0.5
HDA                               IAmb    IAmb    18 32 29.8
      comp=Z,18nm,1.8s
IL31                   83.50  22  P       P       18 30 59.3 -1.7
IL31                              IAmb    IAmb    18 31 34.0
      comp=Z,25nm,2.0s
ILAR  Eielson Array    83.50  22  P       P       18 30 59.6 -1.5
      comp=Z,1.0nm,0.6s,baz=246,slow=5.2,SNR=21
      comp=Z,1.0nm,0.6s
ILAR  Eielson Array    83.50  22  P       P       18 30 59.2 -1.9
SCRK  Sand Creek       84.26  24  P       P       18 31 05.1 -0.1
SCRK                              IAmb    IAmb    18 31 39.7
      comp=Z,18nm,1.8s
AAK   Ala-Archa        84.47 314  P       P       18 31 06.3 -0.4
      comp=Z,0.5nm,0.5s,baz=158,slow=9.6,SNR=3.5
      comp=Z,0.5nm,0.5s
BCAR  Beaver Creek A   84.78  25  P       P       18 31 08.2 +0.5
BMAR  Burnt Mountain   85.56  20  P       P       18 31 12.1 +0.6
DAWY  Dawson           86.15  24  P       P       18 31 14.6 +0.1
DAWY                              IAmb    IAmb    18 31 57.7
      comp=Z,30nm,2.0s
GEYT  Alibeck          96.26 307  LR      LR      19 17 57.1
      comp=Z,27nm,19.8s,baz=260,slow=37
YKA   Yellowknife Ar   96.83  28  P       P       18 32 03.8 -0.4
      comp=Z,0.1nm,0.6s,baz=280,slow=4.5,SNR=1.8
      comp=Z,0.1nm,0.6s
PDAR  Pinedale Array  100.37  48  P       Pdif    18 32 20.0 -0.9
      comp=Z,0.4nm,0.8s,baz=258,slow=4.5,SNR=2.4
NOA   NORSAR Array B  117.41 340  PKP     PKPdf   18 37 17.6 -1.3
      comp=Z,0.4nm,0.6s,baz=28,slow=3.5,SNR=2.4
CLL   Collm           123.11 330 ePKPdf   PKPdf   18 37 30.0 -0.1
GERES GERESS Array B  124.25 328  PKP     PKPdf   18 37 31.9 -0.6
      comp=Z,0.7nm,0.6s,baz=82,slow=2.8,SNR=8.3
CBYP  Canovanas       141.40  68          PKPdf   18 38 04.7 -0.7
TOA0  Torodi Ar. Sit  149.46 286          PKPbc   18 38 22.4 -1.3
TORD  Torodi Ar. Bea  149.46 286  PKPbc   PKPbc   18 38 22.4 -1.3
      comp=Z,8.2nm,0.6s,baz=74,slow=3.3,SNR=47
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NNC ***30*** *18:19:34.9±5.8, 37°.17N×69°.67E, h0^{km}, mb3.9, mpv4.0, Error ellipse: s-maj=50.1km s-min=39.9km az=146.0*

ISC 30 18:19:33.6±3.7**, 36°.8N**±0°.2×**69°.7E**±0°.1**, h37^{km}, n15, σ1^{s}.22**/18**, 2C-4D, Hindu Kush region**

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Code  Station Name      Δ°   AZ°   Phase ID          Time     Res
                                   Op      ISC     h  m  s    ISC
IUG   Iuzhnay          5.37    3   Pg      Pn      18 20 53.7 +2.5
      64nm,0.1s
IUG                                Lg      Lg      18 21 54.2
      80nm,0.5s
AML   Almayashu        6.18   29   P       Pn      18 21 03.8 +1.1
      SNR=17
AML   Almayashu        6.18   29  ⇓P       Pn      18 21 03.7 +1.1
      1.1nm,0.7s
AML                               ⇑S       Sn      18 22 13.2 +1.0
      5.1nm,0.6s
KK31  Karatay Array    6.35    5   P       Pn      18 21 05.6 +0.9
      1.2nm,0.3s,baz=199,slow=15,SNR=48
KK31                              ⇓S       Sn      18 22 14.8 -1.1
      1.7nm,0.2s
MRKS  Merke            6.55   23   Pg      Pn      18 21 08.4 +0.9
      9.1nm,0.4s
UCH   Uchtor           6.60   33   P       Pn      18 21 09.4 +1.1
      SNR=17
EKS2  Erkin-Say        6.67   27   P       Pn      18 21 10.3 +1.3
      SNR=17
AAK   Ala-Archa        6.92   31   P       Pn      18 21 13.7 +1.1
      SNR=8.6
KBK   Karagaybulak     7.13   33   P       Pn      18 21 17.0 +1.5
      SNR=5.3
CHMS  Chumysh          7.33   30   P       Pn      18 21 18.3 +0.3
      SNR=10
USP   Ospenovka        7.46   28   P       Pn      18 21 19.9 +0.1
      SNR=8.5
TKM2  Tokmak 2         7.63   35   P       Pn      18 21 22.7 +0.3
      SNR=5.5
TKM2  Tokmak 2         7.63   35  ⇓P       Pn      18 21 22.5 +0.2
      3.0nm,0.7s
TKM2                              ⇓S       Sn      18 22 46.4 -1.2
      3.4nm,0.9s
SGDS  Sogindy          7.67   28   Pg      Pn      18 21 22.5 -0.1
      6.6nm,0.3s
SGDS                               Lg      Lg      18 22 47.7
      3.2nm,0.7s
AB31  Akbulak array   14.35  333  ⇑P       Pn      18 22 52.8 -1.3
      0.4nm,0.3s,baz=151,slow=13,SNR=21
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NEIC ***30*** *18:50:10.4±1.8, 5°.62S±0°.05×151°.95E±0°.08, h10^{km}±1^{km}, mb5.0/81, Error ellipse: s-maj=14.0km s-min=8.7km az=93.0*

IDC ***30*** *18:50:15.7±1.1, 5°.56S×151°.85E, h54^{km}±9^{km}, mb4.0/17, mbtmp4.3/19, MS3.7/35, Error ellipse: s-maj=13.8km s-min=7.6km az=111.0*

DJA ***30*** *18:50:15.4±1.4, 6°S±5°×15°2E±°, h31^{km}±15^{km}, M5.0/9, mB5.1/3, mb4.6/9, MLv5.2/2, Mw(mB)4.4/3*

ISC 30 18:50:15.0±0.4**, 5°.55S**±0°.04×**151°.89E**±0°.06**, h45^{km}, n187, σ0^{s}.97**/173**, mb4.8**/77**, MS3.7**/32**, 1D, New Britain region**

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Code  Station Name      Δ°   AZ°   Phase ID          Time     Res
                                   Op      ISC     h  m  s    ISC
KRVT  Keravat (AS076   1.24    6   P       Pn      18 50 36.2 +0.2
      11µm,0.5s,baz=251,slow=2.2,SNR=9560
KRVT                               S       Sn      18 50 52.8 +1.2
      9µm,0.3s,baz=104,slow=22,SNR=9.3
RABL  Rabaul           1.38   11           Pn      18 50 38.6 +0.8
RABL  Rabaul           1.38   11   P       Pn      18 50 38.9 +1.1
PMG   Port Moresby     6.05  230   P       Pn      18 51 43.4 +1.4
      142nm,0.8s,baz=270,slow=24,SNR=48
PMG                                S       Sn      18 52 49.8 -0.3
      121nm,0.4s,baz=270,slow=24,SNR=5.5
PMG                                LR      LR      18 53 19.4
      comp=Z,93nm,21.4s,baz=0.0,slow=30
PMG   Port Moresby     6.05  230   Pn      Pn      18 51 42.9 +0.8
PMG   Port Moresby     6.05  230   P       Pn      18 51 44.4 +2.4
      187nm,1.0s
PMG   Port Moresby     6.05  230   P       Pn      18 51 44.2 +2.2
      187nm,1.0s
HNR   Honiara          8.87  116   P       Pn      18 52 21.6 +1.0
      462nm,0.7s,baz=253,slow=4.8,SNR=5.8
HNR                                S       Sn      18 54 00.1 +0.7
      340nm,0.6s,baz=225,slow=15,SNR=1.4
HNR                                LR      LR      18 55 18.5
      comp=Z,4µm,21.2s,baz=264,slow=34
HNR   Honiara          8.87  116           Pn      18 52 17.9 -2.8
MTSU  Mount Surprise  14.53  210   P       Pn      18 53 40.0 +2.0
      18nm,0.9s
CTA   Charters Tower  15.45  200   P       Pn      18 53 51.5 +1.4
      5.7nm,0.8s,baz=27,slow=11,SNR=6.1
CTA                                LR      LR      18 59 26.6
      comp=Z,371nm,19.2s,baz=64,slow=36
CTAO  Charters Tower  15.45  200   P       Pn      18 53 51.5 +1.4
QIS   Mount Isa       19.10  218   P       Pn      18 54 35.9 +0.5
      32nm,1.1s
EIDS  Eidsvold        19.72  182           P       18 54 38.6 -2.2
GUMO  Guam            20.25  340   LR      LR      19 01 14.3
      comp=Z,62nm,21.6s,baz=120,slow=32
KDU   Kakadu          20.43  248   P       P       18 54 48.7  0.0
      51nm,1.0s
RMQ   Roma            21.03  188   P       P       18 54 56.3 +1.2
      27nm,1.1s
DZM   Mont Dzumac     21.63  141   P       P       18 55 00.9 -0.7
      5.8nm,0.8s,baz=39,slow=20,SNR=3.8
DZM                                LR      LR      19 02 45.6
      comp=Z,356nm,19.3s,baz=302,slow=35
      5.8nm,0.8s
DZM   Mont Dzumac     21.63  141   P       P       18 55 02.1 +0.5
MTN   Manton Dam      21.72  249   P       P       18 55 02.9 +0.3
MTN                                IAmb    IAmb    18 55 05.6
      comp=Z,27nm,0.6s
MTN   Manton Dam      21.72  249   P       P       18 55 03.1 +0.5
      comp=Z,43nm,1.7s
WB0   Warramunga Arr  22.12  229   P       P       18 55 07.1 +0.2
WRAB  Tennant Creek   22.26  228   P       P       18 55 08.3  0.0
      comp=Z,23nm,0.8s
WB2   Warramunga Arr  22.26  228   P       P       18 55 08.3 -0.1
WRA   Warramunga Arr  22.27  228   P       P       18 55 09.1 +0.6
      comp=Z,14nm,0.7s,baz=53,slow=10,SNR=53
WRA                                S       S       18 59 09.1 -1.8
      comp=Z,5.0nm,1.1s,baz=53,slow=19,SNR=9.2
      comp=Z,14nm,0.7s
WRA   Warramunga Arr  22.27  228   P       P       18 55 08.6 +0.1
INKA  Innaminka       24.48  204   P       P       18 55 30.5 +0.5
      comp=Z,113nm,0.8s
ARMA  Armidale        24.74  181   P       P       18 55 33.1 +0.7
ARMA                               IAmb    IAmb    18 55 35.1
      comp=Z,92nm,1.9s
KNRA  Kununurra       24.83  244   P       P       18 55 33.4 +0.1
KNRA  Kununurra       24.83  244   P       P       18 55 33.4 +0.1
      comp=Z,132nm,0.9s
LBMI  Labuha          24.83  280   P       P       18 55 34.7 +1.3
      comp=Z,23nm,0.9s,comp=Z,783nm
AS31  Alice Springs   24.99  222   P       P       18 55 34.6 -0.2
ASAR  Alice Springs   24.99  222   P       P       18 55 34.8  0.0
      comp=Z,29nm,0.8s,baz=56,slow=9.0,SNR=152
ASAR                               S       S       18 59 54.7 -1.0
      comp=Z,0.2nm,0.6s,baz=39,slow=17,SNR=1.5
ASAR                               LR      LR      19 05 00.2
      comp=Z,175nm,21.8s,baz=78,slow=35
      comp=Z,29nm,0.8s
ASAR  Alice Springs   24.99  222   P       P       18 55 34.6 -0.2
CMSA  Cobar Meteorol  26.50  192   P       P       18 55 48.4 +0.1
      comp=Z,28nm,3.0s
OOD   Oodnadatta      26.95  213   P       P       18 55 52.8 +0.4
      comp=Z,17nm,1.8s
STKA  Stephens Creek  27.91  199   P       P       18 56 01.0 +0.1
      comp=Z,2.9nm,0.7s,baz=3.9,slow=10,SNR=5.9
STKA                               LR      LR      19 07 09.9
      comp=Z,148nm,19.1s,baz=32,slow=36
      comp=Z,2.9nm,0.7s
STKA  Stephens Creek  27.91  199   P       P       18 56 01.3 +0.4
FITZ  Fitzroy Crossi  28.50  242   P       P       18 56 05.9 -0.4
FITZ  Fitzroy Crossi  28.50  242   P       P       18 56 06.0 -0.4
      comp=Z,3.2nm,1.0s
DAV   Davao City (W)  29.09  295   LR      LR      19 07 29.8
      comp=Z,182nm,18.2s,baz=92,slow=36
MMRI  Maumere         29.58  262   P       P       18 56 15.4 -0.6
MMRI                               IAmb    IAmb    18 56 38.1
      comp=Z,19nm,0.8s
WRKA  Warakurna       29.79  227   P       P       18 56 17.3 -0.5
      comp=Z,16nm,0.8s
MULG  Mulgathing      29.79  212   P       P       18 56 17.3 -0.4
      comp=Z,27nm,1.3s
BBOO  Buckleboo       30.88  207   P       P       18 56 27.0 -0.3
KAPI  Kappang         32.00  269   LR      LR      19 11 39.5
      comp=Z,50nm,20.1s,baz=93,slow=40
TOO   Toolangi        32.40  190   P       P       18 56 40.0 -0.7
FORT  Forrest         33.64  219   P       P       18 56 50.9 -0.6
FORT  Forrest         33.64  219   P       P       18 56 51.1 -0.4
      comp=Z,28nm,1.3s
JCJ   Chichijima      33.79  344   LR      LR      19 09 19.2
      comp=Z,90nm,22.0s,baz=135,slow=34
MBWA  Marble Bar      34.81  240   P       P       18 57 01.9 +0.1
MBWA                               IAmb    IAmb    18 57 15.4
      comp=Z,32nm,1.5s
TGY   Tagaytay City   36.39  303   LR      LR      19 09 50.2
      comp=Z,90nm,19.6s,baz=116,slow=32
AFI   Afiamalu        36.72  106   LR      LR      19 11 11.9
      comp=Z,73nm,19.3s,baz=236,slow=34
RAO   Raoul Island    37.01  133   LR      LR      19 09 58.1
      comp=Z,213nm,18.1s,baz=108,slow=32
JAGI  Jajag, Banyuwa  37.56  263   P       P       18 57 23.4 -2.0
JAGI                               IAmb    IAmb    18 58 13.7
      comp=Z,28nm,1.2s
JOW   Kunigami        39.48  326   LR      LR      19 10 33.0
      comp=Z,176nm,20.6s,baz=62,slow=31
YULB  Yu-li           41.47  315   P       P       18 57 57.1 -0.7
RPZ   Rata Peaks      41.59  159   LR      LR      19 14 45.1
      comp=Z,321nm,18.5s,baz=258,slow=35
TPUB  Ta-pu           41.88  314   P       P       18 58 00.7 -0.6
TPUB                               IAmb    IAmb    18 58 18.5
      comp=Z,99nm,1.8s
NWAO  Narrogin (SRO)  42.22  225   LR      LR      19 16 31.9
      comp=Z,158nm,19.2s,baz=272,slow=37
YHNB  Yeheng          42.24  317   P       P       18 58 05.1 +0.8
YHNB                               IAmb    IAmb    18 58 43.7
      comp=Z,57nm,1.4s
JNU   Nakatsue        43.32  334   LR      LR      19 14 50.8
      comp=Z,53nm,20.5s,baz=165,slow=34
MJAR  Matsushiro Arr  43.79  344   LR      LR      19 14 21.4
      comp=Z,88nm,21.1s,baz=165,slow=33
KSRS  Korea Array     48.27  334   P       P       18 58 51.4 -0.3
      comp=Z,1.2nm,0.8s,baz=155,slow=6.7,SNR=3.6
KSRS                               LR      LR      19 20 09.4
      comp=Z,35nm,18.1s,baz=150,slow=37
      comp=Z,1.2nm,0.8s
ASAJ  Asahikawa       50.14  351   LR      LR      19 18 02.3
      comp=Z,43nm,21.7s,baz=174,slow=33
KULM  Kulim           52.28  281   P       P       18 59 21.6 -0.9
MDJ   Mudanjiang      53.81  340   P       P       18 59 35.5 +2.3
MDJ                                sP      sP      18 59 50.8 -0.5
MDJ                                PcP     PcP     19 00 36.8 -1.7
MDJ                                pmax    pmax
      comp=Z,8.0nm,2.3s
MDJ                                pmax    pmax
      comp=Z,210nm,3.6s
HNS   HongShan        55.01  324  ⇓P       P       18 59 42.0  0.0
HNS                                pmax    pmax
      comp=Z,7.0nm,1.1s
XAN   Xi'an           56.55  317  eP       P       18 59 52.5 -0.7
XAN                                pmax    pmax
      comp=Z,5.0nm,1.0s
CRAI  Chiangrai       56.73  298   P       P       18 59 54.7  0.0
KLR   Kul'dur         57.31  344   P       P       18 59 57.0 -1.2
      comp=Z,1.8nm,0.7s,baz=186,slow=4.9,SNR=8.1
KLR                                LR      LR      19 21 39.7
      comp=Z,63nm,21.7s,baz=166,slow=33
      comp=Z,1.8nm,0.7s
CMAR  Chiang Mai Arr  57.38  296   P       P       18 59 59.7 +0.4
      comp=Z,1.9nm,0.8s,baz=125,slow=5.4,SNR=15
CMAR                               LR      LR      19 25 03.0
      comp=Z,28nm,18.5s,baz=140,slow=36
      comp=Z,1.9nm,0.8s
CMAR  Chiang Mai Arr  57.38  296   P       P       18 59 57.1 -2.2
CHTO  Chiang Mai      57.50  296   P       P       18 59 59.9 -0.3
PZH   PanZhiHua       58.07  306   P       P       19 00 07.5 +3.3
PZH                                pmax    pmax
      comp=Z,10.0nm,0.8s
PZH                                pmax    pmax
      comp=Z,80nm,5.5s
PEA0B Petropavlovsk-  58.64    4   P       P       19 00 07.4 -0.1
PETK  Petropavlovsk-  58.64    4   P       P       19 00 07.8 +0.3
      comp=Z,1.0nm,0.6s,baz=174,slow=8.3,SNR=6.7
PETK                               LR      LR      19 21 21.0
      comp=Z,60nm,20.3s,baz=175,slow=32
      comp=Z,1.0nm,0.6s
PETK  Petropavlovsk-  58.64    4   P       P       19 00 08.1 +0.6
HHC   Hu-ho-hao-te    59.13  325  eP       P       19 00 21.0  +10
HHC                                pmax    pmax
      comp=Z,31nm,0.9s
HHC                                pmax    pmax
      comp=Z,93nm,4.9s
HEH   HeiHe           59.48  342  eP       P       19 00 15.0 +1.7
HEH                                pmax    pmax
      comp=Z,4.0nm,0.9s
HEH                                pmax    pmax
      comp=Z,170nm,4.1s
TNCH  TengChong       60.11  303   P       P       19 00 18.3 -0.1
TNCH                               pP      sP      19 00 35.3 -1.2
TNCH                               pmax    pmax
      comp=Z,6.0nm,1.0s
TNCH                               pmax    pmax
      comp=Z,89nm,5.7s
SHEM  Shemya Is, Ala  61.04   15   LR      LR      19 24 52.5
      comp=Z,103nm,18.7s,baz=170,slow=34
LZH   Lanzhou         61.14  317  eP       P       19 00 28.3 +3.1
LZH                                sP      pP      19 00 40.3 +2.1
LZH                                pmax    pmax
      comp=Z,16nm,1.4s
MA2   Magadan         64.93  359   LR      LR      19 31 53.9
      comp=Z,39nm,18.0s,baz=147,slow=38
BRDH  Bariadhala      65.20  298   LR      LR      19 27 02.7
      comp=Z,34nm,21.9s,baz=148,slow=34
GTA   Gaotai          65.59  318  eP       P       19 00 54.3 -0.3
GTA                                pP      pP      19 01 03.3 -4.4
GTA                                PcP     PcP     19 01 26.8 +0.9
GTA                                pmax    pmax
      comp=Z,2.0nm,1.2s
SONM  Songino Array   66.48  328   P       P       19 01 00.0 -0.1
      comp=Z,4.5nm,0.6s,baz=147,slow=4.9,SNR=35
SONM                               LR      LR      19 30 24.6
      comp=Z,83nm,19.3s,baz=123,slow=36
      comp=Z,4.5nm,0.6s
SONM  Songino Array   66.48  328   P       P       19 01 00.0 -0.1
SONM                               IAmb    IAmb    19 01 00.9
      comp=Z,16nm,1.4s
JIRN  Jiri            71.40  301  eP       P       19 01 29.5 -1.9
GUN   Gumba           71.74  302  eP       P       19 01 31.9 -1.5
      comp=Z,17nm,0.9s
PKI   Pulchoki        72.04  301  eP       P       19 01 33.6 -1.6
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PKIN	Phulchoki	72.05	301	*e*P	P	19 01 33.5	-1.7
VNDA	Vanda	72.12	178	P	P	19 01 34.5	+0.2
	comp=Z,0.4nm,0.6s,baz=331,slow=8.0,SNR=1.7						
	comp=Z,0.4nm,0.6s						
VNDA	Vanda	72.12	178	P	P	19 01 34.6	+0.2
VNDA				IAmb	IAmb	19 03 23.1	
	comp=Z,20nm,1.8s						
DMN	Daman	72.31	301	*e*P	P	19 01 35.4	-1.3
GKN	Gorkha	72.82	301	*e*P	P	19 01 38.6	-1.0
DANN	Dangsing	73.66	302	*e*P	P	19 01 42.8	-1.9
	comp=Z,15nm,0.8s						
PYUN	Piuthan	74.24	301	*e*P	P	19 01 46.1	-2.0
	comp=Z,18nm,0.8s						
WMQ	Urumqi	75.68	318	*e*P	P	19 01 56.3	+0.5
WMQ				pmax	pmax		
	comp=Z,15nm,1.1s						
SVW2	Sparrevohn	77.87	23	P	P	19 02 08.6	+0.9
TIXI	Tiksi	78.52	353	P	P	19 02 09.9	-1.1
	comp=Z,1.1nm,0.8s,baz=270,slow=24,SNR=2.4						
TIXI				LR	LR	19 36 42.8	
	comp=Z,33nm,19.6s,baz=358,slow=36						
	comp=Z,1.1nm,0.8s						
CNPM	China Poot	78.78	26	P	P	19 02 13.2	+0.4
L19K	White Mountain	78.78	23	P	P	19 02 13.5	+0.7
L19K				IAmb	IAmb	19 02 20.0	
	comp=Z,37nm,1.8s						
M19K	Big River Lodg	78.80	23	P	P	19 02 13.2	+0.4
M19K				IAmb	IAmb	19 03 05.9	
	comp=Z,29nm,1.7s						
BRLK	Bradley Lake	79.06	26	P	P	19 02 14.3	0.0
K20K	Telida	79.76	22	P	P	19 02 18.8	+0.7
K20K				IAmb	IAmb	19 04 01.0	
	comp=Z,31nm,1.9s						
RDOG	Red Dog Mine	79.94	16	P	P	19 02 18.1	-0.8
SUA	Susitna One	80.01	24	P	P	19 02 19.1	-0.5
MK31	Makanchi Array	80.30	319	P	P	19 02 20.8	-0.6
MKAR	Makanchi Array	80.30	319	P	P	19 02 21.0	-0.3
	comp=Z,3.4nm,0.9s,baz=103,slow=5.4,SNR=23						
MKAR				LR	LR	19 38 05.7	
	comp=Z,40nm,20.5s,baz=116,slow=36						
	comp=Z,3.4nm,0.9s						
MKAR	Makanchi Array	80.30	319	P	P	19 02 20.7	-0.6
MAKZ	Makanchi	80.50	319	P	P	19 02 21.8	-0.7
CAST	Castle Rocks	80.54	22	P	P	19 02 22.0	-0.2
CAST				IAmb	IAmb	19 02 54.9	
	comp=Z,26nm,1.9s						
PWL	Port Wells	80.71	25	P	P	19 02 23.3	0.0
GHO	Glory Hole Cre	80.92	24	P	P	19 02 24.5	+0.1
GHO				IAmb	IAmb	19 03 48.3	
	comp=Z,22nm,1.3s						
KNK	Knik Glacier	80.93	25	P	P	19 02 24.1	-0.3
KNK				IAmb	IAmb	19 03 15.8	
	comp=Z,45nm,1.7s						
KTH	Kantishna Hill	81.05	22	P	P	19 02 24.6	-0.4
KTH				IAmb	IAmb	19 04 27.8	
	comp=Z,18nm,1.5s						
SML	Sawmill	81.18	25	P	P	19 02 25.6	-0.1
SML				IAmb	IAmb	19 02 45.8	
	comp=Z,12nm,0.9s						
TRF	Thorofare Moun	81.24	23	P	P	19 02 25.7	-0.5
TRF				IAmb	IAmb	19 03 22.6	
	comp=Z,20nm,1.6s						
ZALV	Zalesovo Beam	81.27	327	P	P	19 02 25.2	-1.1
	comp=Z,2.5nm,0.6s,baz=110,slow=6.5,SNR=9.6						
	comp=Z,2.5nm,0.6s						
ZALV	Zalesovo Beam	81.27	327	P	P	19 02 24.8	-1.5
BPAW	Bear Paw Mtn.	81.32	22	P	P	19 02 25.4	-1.1
BPAW				IAmb	IAmb	19 04 09.7	
	comp=Z,21nm,1.8s						
IMAR	Indian Mountai	81.39	20	P	P	19 02 26.8	+0.1
SCM	Sheep Creek Mo	81.61	25	P	P	19 02 28.7	+0.6
MCK	McKinley	81.90	23	P	P	19 02 28.9	-0.6
MCK				IAmb	IAmb	19 02 40.7	
	comp=Z,8.3nm,0.9s						
MLY	Manley	81.91	21	P	P	19 02 29.7	+0.2
M24K	Tolsona, Glenn	82.22	25	P	P	19 02 32.2	+0.9
I23K	Minto, Yukon-K	82.47	21	P	P	19 02 32.3	0.0
I23K				IAmb	IAmb	19 03 48.3	
	comp=Z,27nm,1.8s						
WRH	Wood River Hil	82.59	22	P	P	19 02 32.5	-0.5
WRH				IAmb	IAmb	19 04 23.9	
	comp=Z,28nm,1.9s						
KSH	Kashi	82.73	311	P	P	19 02 36.5	+2.0
KSH				pmax	pmax		
	comp=Z,3.0nm,1.2s						
H23K	Yukon River	82.75	21	P	P	19 02 33.5	-0.4
H23K				IAmb	IAmb	19 03 40.4	
	comp=Z,12nm,1.6s						
MDM	Murphy Dome	82.78	22	P	P	19 02 33.4	-0.7
MDM				IAmb	IAmb	19 02 45.2	
	comp=Z,16nm,1.7s						
CCB	Clear Creek Bu	82.79	22	P	P	19 02 33.4	-0.6
CCB				IAmb	IAmb	19 03 02.5	
	comp=Z,29nm,2.0s						
GLB	Gilahina Butte	82.93	26	P	P	19 02 34.9	-0.1
HDA	Harding Lake	83.00	23	P	P	19 02 34.7	-0.4
HDA				IAmb	IAmb	19 04 56.9	
	comp=Z,13nm,1.5s						
IL31		83.19	22	P	P	19 02 35.6	-0.5
IL31				IAmb	IAmb	19 02 48.5	
	comp=Z,22nm,1.9s						
ILAR	Eielson Array	83.19	22	P	P	19 02 35.0	-1.2
	comp=Z,2.3nm,0.6s,baz=245,slow=5.2,SNR=46						
	comp=Z,2.3nm,0.6s						
ILAR	Eielson Array	83.19	22	P	P	19 02 35.1	-1.1
MCARA	McCarthy VSAT	83.24	26	P	P	19 02 37.5	+0.9
MCARA				IAmb	IAmb	19 04 48.0	
	comp=Z,24nm,1.5s						
RIDG	Independent Ri	83.50	24	P	P	19 02 37.8	-0.1
BARN	Barnard Glacie	83.72	27	P	P	19 02 39.7	+0.5
DOT	Dot Lake	83.78	24	P	P	19 02 39.3	0.0
DOT				IAmb	IAmb	19 02 53.4	
	comp=Z,27nm,1.8s						
TKM2	Tokmak 2	83.80	314	P	P	19 02 40.1	0.0
	SNR=5.0						
L26K	Log Cabin Wild	83.80	25	P	P	19 02 39.0	-0.3
L26K				IAmb	IAmb	19 02 41.4	
	comp=Z,16nm,1.6s						
KURK	Kurchatov	83.80	322	P	P	19 02 38.6	-1.0
KURK				IAmb	IAmb	19 02 39.6	
	comp=Z,6.2nm,0.9s						
SCRK	Sand Creek	83.95	24	P	P	19 02 40.2	0.0
M27K	Edge Creek, AK	84.14	25	P	P	19 02 42.0	+0.8
M27K				IAmb	IAmb	19 03 03.4	
	comp=Z,9.1nm,1.2s						
CHMS	Chumysh	84.42	314	P	P	19 02 43.2	+0.2
	SNR=5.3						
UCH	Uchtor	84.42	313	P	P	19 02 44.4	+0.9
	SNR=9.1						
BCAR	Beaver Creek A	84.47	25	P	P	19 02 43.8	+1.1
AAK	Ala-Archa	84.52	314	P	P	19 02 43.9	+0.2
FYU	Fort Yukon	84.64	21	P	P	19 02 44.1	+0.7
USP	Ospenovka	84.66	314	P	P	19 02 44.5	+0.3
	SNR=12						
I26K	Coal Creek Min	84.85	22	P	P	19 02 45.0	+0.4
I26K				IAmb	IAmb	19 05 31.0	
	comp=Z,13nm,1.5s						
AML	Almayashu	85.00	313	P	P	19 02 47.1	+0.7
	SNR=24						
EKS2	Erkin-Say	85.05	314	P	P	19 02 46.7	+0.4
	SNR=12						
BMAR	Burnt Mountain	85.26	20	P	P	19 02 47.5	+0.8
HYT	Haines Junctio	85.52	28	P	P	19 02 49.0	+0.8
HYT				IAmb	IAmb	19 02 53.7	
	comp=Z,7.3nm,0.8s						
DAWY	Dawson	85.84	24	P	P	19 02 50.4	+0.8
DAWY				IAmb	IAmb	19 03 43.7	
	comp=Z,16nm,1.8s						
HG4B	Hotspring	86.41	37	P	P	19 02 53.8	+1.2
M30M	Minto, Yukon	86.42	26	P	P	19 02 53.4	+0.9
M30M				IAmb	IAmb	19 03 29.0	
	comp=Z,12nm,1.6s						
N31M	Braeburn, Yuko	86.52	27	P	P	19 02 54.1	+1.0
N31M				IAmb	IAmb	19 03 36.3	
	comp=Z,28nm,1.6s						
M31M	Drury Creek, Y	87.37	27	P	P	19 02 57.4	+0.3
M31M				IAmb	IAmb	19 05 43.1	
	comp=Z,26nm,2.0s						
RUBB	Prince Rupert	87.44	35	P	P	19 02 57.9	+0.4
KK31	Karatay Array	87.49	314	P	P	19 02 57.8	-0.3
KKAR	Karatay Array	87.49	314	P	P	19 02 57.5	-0.6
GRNB	Grenville Isla	87.50	35	P	P	19 02 59.0	+1.1
EPYK	Eagle Plains	87.70	22	P	P	19 02 59.0	+0.3
FARO	Faro, Yukon	87.84	27	P	P	19 02 59.7	+0.3
FARO				IAmb	IAmb	19 03 00.9	
	comp=Z,4.9nm,0.9s						
BBB	Bella Bella	88.24	37	LR	LR	19 44 55.7	
	comp=Z,48nm,18.1s,baz=206,slow=37						
DLBC	Dease Lake	88.49	31	P	P	19 03 03.4	+0.8
DLBC				IAmb	IAmb	19 03 04.8	
	comp=Z,12nm,1.1s						
INK	Inuvik	89.47	21	P	P	19 03 06.6	-0.3
	comp=Z,2.2nm,1.1s,baz=280,slow=3.7,SNR=5.4						
	comp=Z,2.2nm,1.1s						
INK	Inuvik	89.47	21	P	P	19 03 07.1	+0.2
INK				IAmb	IAmb	19 04 56.7	
	comp=Z,16nm,1.8s						
NVAR	Mina Array Bea	93.26	52	P	P	19 03 25.5	+0.1
	comp=Z,2.1nm,0.7s,baz=247,slow=3.1,SNR=3.5						
NVAR				LR	LR	19 41 56.5	
	comp=Z,103nm,18.1s,baz=256,slow=33						
	comp=Z,2.1nm,0.7s						
NEW	Newport	94.76	42	LR	LR	19 46 21.0	
	comp=Z,38nm,18.1s,baz=184,slow=36						
ELK	Elko	95.76	50	LR	LR	19 41 26.6	
	comp=Z,75nm,19.5s,baz=238,slow=32						
ARU	Arti	96.43	326	LR	LR	19 46 51.7	
	comp=Z,94nm,21.7s,baz=104,slow=35						
YKA	Yellowknife Ar	96.51	28	P	P	19 03 39.6	+0.2
	comp=Z,0.8nm,0.8s,baz=272,slow=4.7,SNR=11						
	comp=Z,0.8nm,0.8s						
AKTO	Aktyubinsk	96.71	320	LR	LR	19 48 35.0	
	comp=Z,50nm,18.7s,baz=169,slow=36						
PDAR	Pinedale Array	100.02	48	P	Pdif	19 03 56.0	-0.1
	comp=Z,1.2nm,0.9s,baz=255,slow=2.9,SNR=7.6						
BRTR	Keskin Array B	115.12	311	PKP	PKiKP	19 08 50.8	-1.2
	comp=Z,0.5nm,0.9s,baz=142,slow=4.2,SNR=3.9						
CLL	Collm	123.06	330	*e*PKPdf	PKiKP	19 09 07.0	+0.2
CLL				*e*SKPdf	SKiKP	19 12 41.0	+1.8
CKRC	Cesky Krumlov	123.90	328	*e*PKPDF	PKPdf	19 09 08.3	-0.1
KHC	Kasperske Hory	124.10	328	*e*PKPDF	PKPdf	19 09 08.9	+0.1
GERES	GERESS Array B	124.21	328	PKP	PKPdf	19 09 09.0	-0.1
	comp=Z,0.8nm,0.5s,baz=87,slow=1.2,SNR=12						
TORD	Torodi Ar. Bea	149.66	287	PKPbc	PKPbc	19 10 00.4	-0.5
	comp=Z,5.9nm,0.3s,baz=74,slow=2.7,SNR=3.5						
BDFB	Brasilia	151.16	137	PKPbc	PKPbc	19 10 04.6	0.0
	comp=Z,2.9nm,0.5s,baz=131,slow=2.2,SNR=8.7						

*NEIC **30** 18:50:45.6±1.2, 17°.00S±0°.06×71°.1W±0°.1, h79km±6km, mb4.0/4, Error ellipse: s-maj=18.2km s-min=7.2km az=108.0*

*IDC **30** 18:50:53.1±2.6, 17°.25S×70°.12W, h152km±17km, mb3.7/4, mbtmp4.1/7, MS3.7/3, Error ellipse: s-maj=41.2km s-min=17.6km az=117.0*

ISC 30 18:50:48.5±1.3**, 17°.17S**±0°.07×**70°.6W**±0°.1**, h129**km±9km**, n48,** σ1ˢ**52**/56**, mb4.0**/5**, 8C-1D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB18	Visviri	1.18	111	Pn	Pn	18 51 14.0	+0.3
PB18	Visviri	1.18	111	⇓*i*P	Pn	18 51 14.2	+0.6
PB18				*i* S	Sn	18 51 33.3	+0.6
AP01	Chacalluta	1.23	167		Pn	18 51 13.4	-0.1
AP01				Sn	Sn	18 51 31.6	-1.1
AP01	Chacalluta	1.23	167	⇑*i*P	Pn	18 51 14.0	+0.4
AP01				*i* S	Sn	18 51 32.2	-0.5
AP01				IAML		18 51 33.6	
	comp=N,2μm,0.4s						
PB12	IPOC Station P	1.47	169		Pn	18 51 15.7	-0.6
PB12	IPOC Station P	1.47	169	⇑*i*P	Pn	18 51 16.6	+0.2
PB12				*i* S	Sn	18 51 36.6	-0.8
PB12				IAML		18 51 37.8	
	comp=N,1μm,0.2s						
PB16	IPOC Station P	1.58	137		Pn	18 51 18.2	+0.2
PB16	IPOC Station P	1.58	137	⇑*i*P	Pn	18 51 18.5	+0.4
PB16				*i* S	Sn	18 51 40.5	0.0
PB16				IAML		18 51 42.5	
	comp=E,368nm,0.7s						
MNMC	Minye Minye	2.19	153		Pn	18 51 25.1	+0.1
MNMC	Minye Minye	2.19	153	⇑*i*P	Pn	18 51 25.7	+0.7
MNMC				*i* S	Sn	18 51 52.4	-0.6
MNMC				IAML		18 51 56.4	
	comp=E,1μm,0.1s						
LPAZ	La Paz	2.55	70	P	Pn	18 51 30.5	+0.6
	comp=E,55nm,0.3s,baz=302,slow=16,SNR=479						
LPAZ				S	Sn	18 51 59.8	-1.8
	comp=E,43nm,0.7s,baz=346,slow=24,SNR=14						
PB11	IPOC Station P	2.74	160	Pn	Pn	18 51 31.6	-0.4
PB11	IPOC Station P	2.74	160	⇑*i*P	Pn	18 51 31.9	-0.1
PB11				*i* S	Sn	18 52 03.6	-1.8
PB11				IAML		18 52 05.7	
	comp=E,442nm,0.3s						
GO01	Chusmiza	2.83	151		Pn	18 51 34.5	+1.1
GO01	Chusmiza	2.83	151	⇑*i*P	Pn	18 51 34.7	+1.3
GO01				*i* S	Sn	18 52 08.7	+0.6
GO01				IAML		18 52 13.8	
	comp=E,699nm,0.1s						
TA02	Huaiquique	3.12	171		Pn	18 51 36.3	-0.4
PB08	IPOC Station P	3.27	155		Pn	18 51 39.6	+0.5
PB08	IPOC Station P	3.27	155	⇑*i*P	Pn	18 51 40.0	+1.0
PB08				*i* S	Sn	18 52 16.9	-1.1
PB08				IAML		18 52 19.4	
	comp=E,295nm,0.2s						
TA01	Diego Aracena	3.41	173	Pn	Pn	18 51 40.3	-0.1
TA01	Diego Aracena	3.41	173	⇑*i*P	Pn	18 51 40.5	0.0
TA01				*i* S	Sn	18 52 17.3	-3.2
TA01				IAML		18 52 20.0	
	comp=E,176nm,0.1s						
PB01	IPOC Station P	4.00	165		Pn	18 51 47.9	-0.5
PB02	IPOC Station P	4.19	171		Pn	18 51 50.6	-0.2
PB07	IPOC Station P	4.59	171		Pn	18 51 56.0	-0.3
PB09	IPOC Station P	4.79	164		Pn	18 51 59.2	+0.3
PB03	IPOC Station P	4.92	170		Pn	18 52 00.3	-0.4
PB04	IPOC Station P	5.16	175	Pn	Pn	18 52 03.3	-0.6
LVC	Limon Verde	5.65	164	P	Pn	18 52 11.3	+0.6
	comp=E,15nm,0.3s,baz=355,slow=13,SNR=96						
LVC				S	Sn	18 53 10.8	-3.9
	comp=E,23nm,0.4s,baz=194,slow=21,SNR=16						
LVC	Limon Verde	5.65	164	Pn	Pn	18 52 11.2	+0.5
PB15	IPOC Station P	6.11	170		Pn	18 52 16.0	-0.7
PB10	IPOC Station P	6.31	179	Pn	Pn	18 52 18.3	-0.9
PB14	IPOC Station P	7.42	178	Pn	Pn	18 52 33.2	-1.3
GO02	Mina Guanaco	8.01	173	Pn	Pn	18 52 41.2	-1.2
ETMB	Extrema	8.47	31	Pn	Pn	18 52 45.2	-3.2
AC01	Pan de Azucar	8.94	180	Pn	Pn	18 52 52.8	-1.7
SIV	San Ignacio	9.24	84	P	Pn	18 52 56.7	-2.0
	comp=E,5.3nm,0.7s,baz=268,slow=12,SNR=23						
AC05	El Transito	11.62	178	Pn	Pn	18 53 28.7	-1.9
GO04	Tololo Observa	12.95	181	Pn	Pn	18 53 47.0	-1.0
CFA	Coronel Fontan	14.54	172	LR	LR	19 01 26.6	
	comp=E,46nm,20.2s,baz=89,slow=44						
GO05	Huala	17.81	183		Pn	18 54 50.2	+2.0
BOAV	Boa Vista	21.85	28	P	P	18 55 32.3	+1.3
BOAV				IAmb	IAmb	18 55 33.6	
	comp=Z,4.8nm,0.7s						
GO06	Curarrehue	22.35	182	P	P	18 55 40.0	+4.0
PLCA	Paso Flores	23.48	180	P	P	18 55 49.6	+3.0
	comp=Z,1.8nm,0.8s,baz=343,slow=11,SNR=6.4						
	comp=Z,1.8nm,0.8s						
PLCA	Paso Flores	23.48	180	P	P	18 55 50.2	+3.6
PLCA				IAmb	IAmb	18 56 31.8	
	comp=Z,8.5nm,1.4s						
DBIC	Dimbokro	69.16	76	P	P	19 01 39.3	-2.2
	comp=Z,1.2nm,0.5s,baz=242,slow=9.0,SNR=3.8						
	comp=Z,1.2nm,0.5s						
YBH	Yreka Blue Hor	75.81	322	LR	LR	19 35 28.0	
	comp=Z,109nm,20.0s,baz=334,slow=35						
TORD	Torodi Ar. Bea	77.50	72	P	P	19 02 30.5	+0.1
	comp=Z,5.0nm,0.3s,baz=264,slow=5.7,SNR=10						
	comp=Z,5.0nm,0.3s						
ESDC	Sonseca Array	83.93	45	LR	LR	19 40 29.2	
	comp=Z,136nm,18.0s,baz=236,slow=36						
YKA	Yellowknife Ar	86.58	341	P	P	19 03 19.7	+2.9
	comp=Z,0.3nm,0.8s,baz=143,slow=5.8,SNR=5.5						
	comp=Z,0.3nm,0.8s						

IDC 30 19:08:33.2±6.9**, 50°.19N**×**114°.42W, h0**km**, mbtmp3.1**/1**, ML3.2**/1**, Error ellipse: s-maj=91.8km s-min=50.1km az=58.0, Alberta**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I56US	NEWPORT INFRAS	2.62	224	I	I	19 24 30.0	
	baz=39,slow=319,SNR=2.1						
I10CA	LAC DU BONNET	11.79	83	I	I	20 24 00.0	
	baz=275,slow=317,SNR=1.2						
YKA	Yellowknife Ar	12.34	360	Pn	Pn	19 11 25.9	-4.0
	0.1nm,0.3s,baz=180,slow=13,SNR=5.6						
YKA				Sn	Sn	19 13 34.3	-14
	baz=177,slow=22,SNR=2.4						
YKA				Lg	Lg	19 14 55.9	
	baz=173,slow=30						
	0.2nm,0.4s						

*NEIC **30** 19:30:14.1±2.6, 54°.5N±0°.1×160°.6W±0°.1, h31km±16km, ML3.6/6, ML3.3(AEIC), Error ellipse: s-maj=17.5km s-min=4.3km az=145.0*

*AEIC **30** 19:30:19.0±2.4, 54°.9N±0°.2×160°.9W±0°.2, h71km±8km, Error ellipse: s-maj=26.8km s-min=7.2km az=152.0*

ISC 30 19:30:16.1±1.8**, 54°.7N**±0°.1×**160°.80W**±0°.06**, h80**km±16km**, n36,** σ1ˢ**05**/41**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDPT	Sand Point	0.67	16		Pn	19 30 31.8	+0.4
SDPT				Sn	Sn	19 30 42.3	-0.5
SDPT				IAML		19 30 43.4	
	comp=E,2μm,0.7s						
SDPT	Sand Point	0.67	16	P	Pn	19 30 32.0	+0.6
	baz=206						
SDPT				S	Sn	19 30 42.2	-0.5
	baz=206						
S12K	Black Hills	1.23	325	P	Pn	19 30 37.7	-0.3
	baz=142						
S12K				S	Sn	19 30 52.7	-1.7
	baz=142						
FALS	False Pass	1.52	277		Sn	19 31 00.3	-0.7
FALS	False Pass	1.52	277		Pn	19 30 42.4	+0.7
FALS	False Pass	1.52	277	P	Pn	19 30 42.4	+0.7
	baz=89						
FALS				S	Sn	19 31 01.5	+0.5
	baz=89						
CHGN	Chignik	2.10	39	Pn	Pn	19 30 50.0	+0.9
CHGN				Sn	Sn	19 31 14.0	-0.4
CHGN				IAML		19 31 14.8	
	comp=E,516nm,0.1s						
CHGN	Chignik	2.10	39	P	Pn	19 30 49.8	+0.6
	baz=225						
AKUT	Akutan	2.96	261	Pn	Pn	19 31 01.5	+0.7
AKUT				IAML		19 31 52.4	
	comp=N,193nm,3.5s						
AKUT				IAML		19 32 22.4	
	comp=E,152nm,4.4s						
R16K	Pilot Point	3.39	31	P	Pn	19 31 07.7	+1.1
	baz=216						
UNV	Unalaska Valle	3.46	258	Pn	Pn	19 31 06.2	-1.4
Q17K	Contact Creek	4.49	35	P	Pn	19 31 22.4	+0.7
	baz=221						
P16K	Nushagak River	4.60	18	P	Pn	19 31 23.4	+0.3
	baz=202						
O17K	Koliganek Bris	5.46	20	P	Pn	19 31 34.9	+0.1
	baz=204						
KDAK	Kodiak Island	5.52	53	Pn	Pn	19 31 35.6	0.0
KDAK	Kodiak Island	5.52	53	P	Pn	19 31 35.3	-0.4
	baz=241						
N16K	Nishlik Lake	5.88	10	P	Pn	19 31 40.9	+0.3
	baz=192						
O18K	Koktuh Hills	5.98	28	Pn	Pn	19 31 43.0	+1.0
O18K	Koktuh Hills	5.98	28	P	Pn	19 31 42.5	+0.5
	baz=214						
ILSW	Iliamna Southw	6.72	35	Pn	Pn	19 31 54.2	+2.1
SVW2	Sparrevohn	6.98	21	Pn	Pn	19 31 56.9	+1.3
N19K	Bonanza Creek	6.99	26	Pn	Pn	19 31 57.4	+1.6
M19K	Big River Lodg	7.96	22	Pn	Pn	19 32 10.0	+1.0
L19K	White Mountain	8.12	20	Pn	Pn	19 32 11.6	+0.6
M20K	Styx River	8.24	26	Pn	Pn	19 32 14.8	+2.0
SUA	Susitna One	8.61	34	Pn	Pn	19 32 17.6	-0.2
K20K	Telida	9.34	19	Pn	Pn	19 32 28.4	+0.7
CAST	Castle Rocks	9.81	24	Pn	Pn	19 32 34.9	+0.8
SCM	Sheep Creek Mo	10.05	39	Pn	Pn	19 32 36.5	-1.0
KTH	Kantishna Hill	10.21	26	Pn	Pn	19 32 37.9	-1.7
KLU	Klutina	10.38	43	Pn	Pn	19 32 40.6	-1.4
GLB	Gilahina Butte	11.22	46	Pn	Pn	19 32 53.7	+0.4
H21K	Melozitna Rive	11.67	17	Pn	Pn	19 33 00.2	+0.8
M26K	Nabesna, AK	12.04	43	Pn	Pn	19 33 05.0	+0.5
RIDG	Independent Ri	12.16	35	Pn	Pn	19 33 05.4	-0.6
I26K	Coal Creek Min	13.75	32	Pn	Pn	19 33 29.6	+2.4

*SJA **30** 19:35:43.1±0.8, 20°.43S×69°.19W, h122km±4km, ML4.3, MW4.2, Hypocentre not reviewed by the ISC*

*VAO **30** 19:35:44.9±0.5, 20°.35S×69°.22W, h110km, mb4.5*

*IDC **30** 19:35:46.0±0.9, 20°.44S×68°.89W, h116km±9km, mb4.1/5, mbtmp4.3/10, MS3.4/1, Error ellipse: s-maj=22.0km s-min=8.6km az=98.0*

*NEIC **30** 19:35:45.0±1.2, 20°.42S±0°.03×69°.16W±0°.08, h110km±4km, mb4.4/12, ML4.4(GUC), Error ellipse: s-maj=10.9km s-min=4.4km az=99.0*

*GUC **30** 19:35:45.5±0.8, 20°.41S×69°.13W, h109km±3km, ML4.4*

ISC 30 19:35:44.7±0.6**, 20°.42S**±0°.03×**69°.16W**±0°.05**, h110**km±5km**, n130,** σ1ˢ**08**/151**, mb4.3**/8**, 7C-5D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.28	0		Pn	19 36 00.6	-0.2
PB08				Sn	Sn	19 36 12.5	-0.3
PB08	IPOC Station P	0.28	0	⇓*i*P	Pn	19 36 01.1	+0.3
PB08				*e*S	Sn	19 36 13.1	+0.3
PB08				IAML		19 36 13.9	
	comp=N,12μm,0.2s						
PB08	IPOC Station P	0.28	0	*e*P		19 36 01.1	
PB08				*e*S		19 36 13.7	
PB08				IAML		19 36 14.1	
	comp=Z,9μm,0.1s						
PB01	IPOC Station P	0.69	207		Pn	19 36 03.4	+0.3
PB01				Sn	Sn	19 36 17.0	+0.1
PB01	IPOC Station P	0.69	207	⇑*i*P	Pn	19 36 03.5	+0.5
PB01				*e*S	Sn	19 36 17.5	+0.6
PB01				IAML		19 36 19.5	
	comp=E,11μm,0.2s						
PB01	IPOC Station P	0.69	207	*e*P		19 36 03.4	
PB01				*e*S		19 36 18.2	
PB01				IAML		19 36 19.6	
	comp=Z,8μm,0.1s						
GO01	Chusmiza	0.75	357		Pn	19 36 04.2	+0.2
GO01				Sn	Sn	19 36 18.6	+0.2
GO01	Chusmiza	0.75	357	⇓*i*P	Pn	19 36 04.2	+0.2
GO01				*e*S	Sn	19 36 19.1	+0.7
GO01				IAML		19 36 20.8	
	comp=N,32μm,0.1s						
PB11	IPOC Station P	0.81	324	Pn	Pn	19 36 04.1	0.0
PB11				Sn	Sn	19 36 19.0	+0.2
PB11	IPOC Station P	0.81	324	⇓*i*P	Pn	19 36 04.5	+0.3
PB11				*e*S	Sn	19 36 18.9	+0.2
PB11				IAML		19 36 20.6	
	comp=N,29μm,0.3s						
PB11	IPOC Station P	0.81	324	*e*P		19 36 04.5	
PB11				*e*S		19 36 19.7	
PB11				IAML		19 36 22.1	
	comp=Z,11μm,0.3s						
TA02	Huaiquique	0.93	279		Pn	19 36 05.4	+0.4
TA02				Sn	Sn	19 36 20.5	0.0
TA02	Huaiquique	0.93	279	⇑*i*P	Pn	19 36 05.5	+0.4
TA02				*e*S	Sn	19 36 20.3	-0.2
TA02				IAML		19 36 24.7	
	comp=N,29μm,0.1s						
TA02	Huaiquique	0.93	279	*e*P		19 36 05.5	
TA02				*e*P		19 36 05.6	
TA02				*e*S		19 36 21.5	
TA02				IAML		19 36 24.4	
	comp=Z,13μm,0.1s						
TA01	Diego Aracena	0.97	261		Pn	19 36 05.5	0.0
TA01	Diego Aracena	0.97	261	⇑*i*P	Pn	19 36 05.7	+0.2
TA01				*e*S	Sn	19 36 21.4	+0.2
TA01	Diego Aracena	0.97	261	*e*P		19 36 05.6	
TA01				*e*S		19 36 22.0	
TA01				IAML		19 36 24.2	
	comp=Z,2μm,0.6s						
PB02	IPOC Station P	1.13	218		Pn	19 36 07.9	+0.5
PB02				Sn	Sn	19 36 24.5	0.0
PB02	IPOC Station P	1.13	218	⇑*i*P	Pn	19 36 08.1	+0.8
PB02				*e*S	Sn	19 36 25.2	+0.7
PB02				IAML		19 36 27.6	
	comp=E,13μm,0.4s						
MNMC	Minye Minye	1.35	342		Pn	19 36 10.7	+0.7
MNMC	Minye Minye	1.35	342	⇓*i*P	Pn	19 36 10.6	+0.7
MNMC				*e*S	Sn	19 36 30.2	+1.2
MNMC				IAML		19 36 32.2	
	comp=N,15μm,0.2s						

MNMCX	Minye Minye	1.35	342	*e*P		19 36 10.6	
MNMCX				*e*S		19 36 30.8	
MNMCX				IAML		19 36 33.6	
	comp=Z,6µm,0.4s						
PB09	IPOC Station P	1.37	183		Pn	19 36 11.0	+0.8
PB09	IPOC Station P	1.37	183	⇑*i*P	Pn	19 36 11.2	+1.0
PB09				*i* S	Sn	19 36 30.7	+1.3
PB09				IAML		19 36 31.7	
	comp=N,3µm,0.4s						
PB09	IPOC Station P	1.37	183	*e*P		19 36 05.5	
PB09				*e*P		19 36 10.0	
PB09				*e*S		19 36 31.1	
PB09				IAML		19 36 33.0	
	comp=Z,2µm,0.3s						
PB07	IPOC Station P	1.47	208		Pn	19 36 11.7	+0.4
PB07	IPOC Station P	1.47	208	⇑*i*P	Pn	19 36 11.8	+0.4
PB07				*e*S	Sn	19 36 31.8	+0.3
PB07				IAML		19 36 32.4	
	comp=N,3µm,0.3s						
PB07	IPOC Station P	1.47	208	*e*P		19 36 11.0	
PB07				*e*S		19 36 32.3	
PB07				IAML		19 36 33.6	
	comp=Z,2µm,0.1s						
PB03	IPOC Station P	1.71	199	*e*P		19 36 14.0	
PB03				*e*S		19 36 37.0	
PB03				IAML		19 36 38.1	
	comp=Z,1µm,0.2s						
PB03	IPOC Station P	1.72	199		Pn	19 36 14.6	+0.4
PB03	IPOC Station P	1.72	199	⇑*i*P	Pn	19 36 14.6	+0.4
PB03				*e*S	Sn	19 36 36.6	-0.1
PB03				IAML		19 36 38.1	
	comp=E,2µm,0.1s						
PB16	IPOC Station P	2.10	351		Pn	19 36 20.4	+1.0
PB16	IPOC Station P	2.10	351	⇓*i*P	Pn	19 36 20.6	+1.1
PB16				*e*S	Sn	19 36 47.7	+1.7
PB16				IAML		19 36 50.5	
	comp=E,1µm,0.4s						
PB16	IPOC Station P	2.10	351	*e*P		19 36 20.0	
PB16				*e*S		19 36 50.0	
PB16				IAML		19 36 52.0	
	comp=Z,731nm,0.3s						
PB12	IPOC Station P	2.11	328	Pn	Pn	19 36 18.7	-0.4
PB12	IPOC Station P	2.11	328	*e*P	Pn	19 36 18.8	-0.3
PB12				*e*S	Sn	19 36 44.3	-1.1
PB12				IAML		19 36 49.4	
	comp=E,3µm,0.3s						
PB12	IPOC Station P	2.11	328	*e*P		19 36 18.8	
PB12				*e*S		19 36 45.8	
PB12				IAML		19 36 48.8	
	comp=Z,1µm,0.4s						
PB04	IPOC Station P	2.12	206		Pn	19 36 19.9	+0.6
PB04	IPOC Station P	2.12	206	*e*P	Pn	19 36 19.9	+0.6
PB04				*e*S	Sn	19 36 44.9	-1.0
PB04				IAML		19 36 45.5	
	comp=N,1µm,0.1s						
PB04	IPOC Station P	2.12	206	*e*P		19 36 19.0	
PB04				*e*S		19 36 45.4	
PB04				IAML		19 36 46.1	
	comp=Z,1µm,0.1s						
LVC	Limon Verde	2.19	174	P	Pn	19 36 22.3	+1.8
	comp=Z,71nm,0.3s,baz=18,slow=8.7,SNR=188						
LVC				S	Sn	19 36 49.2	+1.4
	comp=Z,343nm,0.3s,baz=101,slow=21,SNR=13						
LVC	Limon Verde	2.19	174		Pn	19 36 21.8	+1.3
PB06	IPOC Station P	2.31	190	*e*P		19 36 21.0	
PB06				*e*P		19 36 22.1	
PB06				*e*S		19 36 50.9	
PB06				IAML		19 36 54.0	
	comp=Z,1µm,0.4s						
AP01	Chacalluta	2.32	331		Pn	19 36 21.6	-0.2
AP01	Chacalluta	2.32	331	*e*P	Pn	19 36 21.8	0.0
AP01				*e*S	Sn	19 36 47.3	-2.9
AP01				IAML		19 37 09.9	
	comp=N,4µm,0.4s						
AP01	Chacalluta	2.32	331	*e*P		19 36 21.0	
AP01				*e*S		19 36 48.5	
AP01				IAML		19 36 52.9	
	comp=Z,2µm,0.2s						
PB15	IPOC Station P	2.79	186		Pn	19 36 28.4	+0.3
PB15	IPOC Station P	2.79	186	*e*P	Pn	19 36 29.1	+0.9
PB15				*e*S	Sn	19 37 01.9	+0.4
PB15	IPOC Station P	2.79	186	*e*P		19 36 28.0	
PB15				*e*S		19 37 01.9	
PB15				IAML		19 37 10.8	
	comp=Z,2µm,0.2s						
PB18	Visviri	2.83	354	Pn	Pn	19 36 29.9	+1.0
PB10	IPOC Station P	3.34	203	Pn	Pn	19 36 34.5	-0.7
PB10	IPOC Station P	3.34	203	*e*P	Pn	19 36 34.5	-0.7
PB10				*e*S	Sn	19 37 09.0	-5.3
PB10	IPOC Station P	3.34	203	*e*P		19 36 34.5	
PB10				*e*S		19 37 11.5	
YJA	Yavi	3.82	118	*e*P		19 36 43.0	
LPAZ	La Paz	4.22	13	P	Pn	19 36 49.9	+2.3
	comp=Z,15nm,0.3s,baz=188,slow=4.7,SNR=84						
LPAZ				S	Sn	19 37 37.6	+1.4
	comp=Z,31nm,0.7s,baz=95,slow=15,SNR=5.7						
LPAZ	La Paz	4.22	13	*e*P	Pn	19 36 47.6	0.0
PB14	IPOC Station P	4.34	195	Pn	Pn	19 36 47.5	-1.4
PB14	IPOC Station P	4.34	195	*e*S		19 37 34.3	
PB14				IAML		19 37 39.4	
	comp=Z,104nm,0.2s						
GO02	Mina Guanaco	4.74	185	Pn	Pn	19 36 53.4	-0.8
GO02	Mina Guanaco	4.74	185	*e*P		19 36 53.0	
GO02				*e*S		19 37 46.5	
GO02				IAML		19 37 50.9	
	comp=Z,134nm,0.1s						
AC01	Pan de Azucar	5.86	193	Pn	Pn	19 37 06.5	-2.5
AC05	El Transito	8.44	187	Pn	Pn	19 37 41.3	-2.9
SIV	San Ignacio	8.85	61	P	Pn	19 37 47.3	-2.5
	comp=Z,19nm,0.7s,baz=250,slow=10.0,SNR=75						
TICA	Tres Isletas	10.01	128	*e*P	Pn	19 38 04.4	-0.9
PTLB	Pontes e Lacer	10.74	64	Pn	Pn	19 38 13.8	-1.5
PTLB	Pontes e Lacer	10.74	64	*e*P	Pn	19 38 13.0	-2.3
ETMB	Extrema	10.91	15	Pn	Pn	19 38 17.4	-0.3
ETMB	Extrema	10.91	15	*e*P	Pn	19 38 16.4	-1.4
CFA	Coronel Fontan	11.17	176	P	Pn	19 38 22.6	+1.5
	comp=Z,1.5nm,0.4s,baz=332,slow=15,SNR=1.6						
VILB	Vilhena	11.34	51	Pn	Pn	19 38 21.2	-2.3
VILB	Vilhena	11.34	51	*e*P	Pn	19 38 22.6	-0.9
CPUP	Villa Florida	12.35	121	P	Pn	19 38 35.2	-1.5
	comp=Z,4.3nm,0.7s,baz=300,slow=12,SNR=9.6						
CPUP	Villa Florida	12.35	121	Pn	Pn	19 38 35.7	-1.0
AQDB	Aquidauana	12.61	93	Pn	Pn	19 38 39.9	-0.3
AQDB	Aquidauana	12.61	93	*e*P	Pn	19 38 40.9	+0.7
MT02	Curacav	12.91	187	Pn	Pn	19 38 44.0	0.0
AMBA	Amambai (Brazi	13.40	103	*e*P	Pn	19 38 50.3	-0.3
MT01	Popeta	13.52	187	Pn	Pn	19 38 52.5	+0.5
PP1B	Ponte de Pedra	13.79	81	*e*P	Pn	19 38 55.2	-0.4
BO01	Tunca	14.02	187	Pn	Pn	19 38 58.9	+0.4
AZCA	Azaras, Argent	14.22	125	*e*P	Pn	19 39 01.6	+0.5
BO02	Sierra Bellavi	14.39	185	Pn	Pn	19 39 02.5	-0.7
MCR1	Marechal Candi	14.54	109	*e*P	Pn	19 39 05.5	+0.3
C2SB	Chapadao do Su	15.46	87	*e*P	P	19 39 19.8	+0.9
CRSM	Crissiumal (Br	15.50	120	*e*P	Pn	19 39 16.4	-0.8
H03N1	Juan Fernandez	15.61	212	P	Pn	19 39 20.0	+1.8
	baz=109,slow=14,SNR=26						
H03N1				T	T	19 54 45.8	
	baz=34,slow=72,SNR=2.4						
H03N2	Juan Fernandez	15.62	212	P	Pn	19 39 20.1	+1.7
	baz=109,slow=14,SNR=8.3						
H03N2				T	T	19 54 44.9	
	baz=34,slow=72,SNR=3.1						
H03N3	Juan Fernandez	15.62	212	P	Pn	19 39 20.1	+1.6
	baz=109,slow=14,SNR=37						
H03N3				T	T	19 55 08.8	
	baz=34,slow=72,SNR=7.6						
H03S3	Juan Fernandez	15.91	211	P	Pn	19 39 23.8	+1.7
H03S1	Juan Fernandez	15.93	211	P	Pn	19 39 23.7	+1.4
H03S2	Juan Fernandez	15.93	211	P	P	19 39 24.2	+0.5
RODS	Rosario do Sul	16.01	131	*e*P	P	19 39 24.5	-0.4
PTGB	Pitanga	16.35	108	*e*P	P	19 39 29.7	+0.9
PCMB	Pacaembu	16.75	97	*e*P	Pn	19 39 32.4	-0.4
ALGR	Alto Alegre (B	16.86	123	*e*P	P	19 39 34.3	-0.1
ITAB	Concordia	16.98	117		Pn	19 39 35.4	-0.1
ITAB	Concordia	16.98	117	*e*P	P	19 39 35.6	0.0
ARAG	Araguaiana, MT	17.14	77	*e*P	Pn	19 39 36.8	-0.8
ITRB	Iturama	17.67	91	*e*P	P	19 39 43.4	0.0
PLTB	Pedras Altas	17.94	132	P	P	19 39 46.1	-0.1
TRQA	Tornquist	18.65	162	P	P	19 39 54.2	+0.4
NPGB	Novo Progresso	18.86	47	*e*P	P	19 39 54.4	-2.0
MACA	Manacapuru-AM	19.04	27	P	P	19 39 57.1	-1.1
MACA	Manacapuru-AM	19.04	27	*e*P	P	19 39 57.6	-0.7
SNDB	Serra Nova Dou	19.08	67	*e*P	P	19 39 57.7	-1.1
GO06	Curarrehue	19.21	185	P	P	19 40 00.1	+0.1
GO06				IAmb	IAmb	19 40 02.6	
	comp=Z,25nm,1.0s						
BB19B	Bebedouro	19.30	96	*e*P	P	19 40 00.9	-0.3
IPMB	Ipameri, GO	19.93	87	*e*P	P	19 40 06.7	-1.3
RCLB	Rio Claro- Sao	20.23	100	*e*P	P	19 40 10.7	-0.5
SGCB	S£o Gabriel d	20.28	6	*e*P	P	19 40 10.9	-0.8
PLCA	Paso Flores	20.29	183	P	P	19 40 12.8	+1.2
	comp=Z,14nm,0.9s,baz=7.5,slow=12,SNR=23						
	comp=Z,14nm,0.9s						
PLCA	Paso Flores	20.29	183	P	P	19 40 12.1	+0.3
PLCA				IAmb	IAmb	19 40 16.9	
	comp=Z,22nm,1.0s						
PLCA	Paso Flores	20.29	183	*e*P	P	19 40 12.0	+0.3
PET01	Itanhaem-SP	20.59	105	*e*P	P	19 40 15.3	+0.2
ITTB	Itaituba	20.62	41	*e*P	P	19 40 13.8	-1.6
BDFB	Brasilia	20.65	80	P	P	19 40 14.0	-1.9
	comp=Z,7.3nm,0.8s,baz=243,slow=7.0,SNR=5.6						
	comp=Z,7.3nm,0.8s						
BDFB	Brasilia	20.65	80	*e*P	P	19 40 15.9	+0.1
VAO	Valinhos	20.77	101	*e*P	P	19 40 16.1	-1.0
PMNB	Patos De Minas	21.50	89	*e*P	P	19 40 23.8	-1.2
MALB	Monte Alegre	23.49	40	*e*P	P	19 40 43.8	-1.0
PRPB	Parauapebas	23.51	56	*e*P	P	19 40 44.1	-0.9
SMTB	Santa Maria do	23.78	64	*e*P	P	19 40 47.2	-0.3
DIAM	Diamantina, MG	24.13	89	*e*P	P	19 40 50.6	-0.1
BOAV	Boa Vista	24.20	21	P	P	19 40 50.7	-0.5
BOAV				IAmb	IAmb	19 40 52.7	
	comp=Z,8.8nm,0.7s						
BOAV	Boa Vista	24.20	21	*e*P	P	19 40 51.1	-0.1
SDBA	SAO DESIDERIO	24.57	75	*e*P	P	19 40 53.3	-1.2
MCPB	Macapa, AP	26.02	42	*e*P	P	19 41 07.2	-0.5
SJMB	Sao Joao De Ma	26.40	91	*e*P	P	19 41 10.9	-0.2
RUSC	La Rusia	26.43	351	P	P	19 41 12.2	+0.3
RUSC				IAmb	IAmb	19 41 50.3	
	comp=Z,12nm,1.2s						
ALF01	Guarapari-ES	26.61	95	*e*P	P	19 41 12.1	-0.9
RIB01	Linhares ES	27.06	93	*e*P	P	19 41 16.4	-0.6
TMAB	Tom-Au,PA,Br	27.28	52	*e*P	P	19 41 19.8	+0.8
GUA01	Guaratinga, BA	28.07	87	*e*P	P	19 41 26.1	0.0
MDP	Montagnes des	30.11	34	LR	LR	19 55 17.5	
	comp=Z,77nm,19.7s,baz=132,slow=39						
MG03	Isla Dawson	33.39	181	P	P	19 42 14.1	+1.8
TXAR	Lajitas Array	59.62	325	P	P	19 45 38.1	+0.8
	comp=Z,0.2nm,0.6s,baz=133,slow=7.9,SNR=2.0						
S39A	Bolivar	62.12	338	P	P	19 45 54.0	0.0
S39A				IAmb	IAmb	19 45 54.8	
	comp=Z,3.7nm,0.7s						
DBIC	Dimbokro	68.65	74	P	P	19 46 35.9	-0.7
	comp=Z,3.3nm,0.8s,baz=246,slow=7.5,SNR=5.3						
	comp=Z,3.3nm,0.8s						
DBIC	Dimbokro	68.65	74	P	P	19 46 35.8	-0.8
TOA0	Torodi Ar. Sit	77.21	71	P	P	19 47 26.4	-0.8
TOA0				IAmb	IAmb	19 47 33.0	
	comp=Z,4.9nm,0.8s						
TORD	Torodi Ar. Bea	77.21	71	P	P	19 47 26.4	-0.7
	comp=Z,10nm,0.5s,baz=253,slow=5.5,SNR=15						
	comp=Z,10nm,0.5s						
YKA	Yellowknife Ar	90.09	341	P	P	19 48 32.5	+0.8
	comp=Z,1.2nm,0.9s,baz=134,slow=4.9,SNR=16						
	comp=Z,1.2nm,0.9s						
H11S2	WAKE ISLAND Hy	127.51	278	T	T	22 14 30.5	
	baz=101,slow=75,SNR=7.0						
H11S1	WAKE ISLAND Hy	127.52	278	T	T	22 14 30.9	
	baz=101,slow=75,SNR=25						
H11S3	WAKE ISLAND Hy	127.53	278	T	T	22 14 30.4	
	baz=101,slow=75,SNR=26						
ASAR	Alice Springs	130.76	208	PKP	PKPdf	19 54 44.1	+0.4
	comp=Z,0.5nm,0.8s,baz=134,slow=1.5,SNR=4.4						
WRA	Warramunga Arr	133.76	211	PKP	PKPdf	19 54 50.1	+0.6
	comp=Z,0.5nm,0.7s,baz=151,slow=1.6,SNR=7.2						
MKAR	Makanchi Array	144.89	35	PKP	PKPab	19 55 08.6	+0.4
	comp=Z,0.3nm,0.4s,baz=321,slow=3.3,SNR=5.9						
SONM	Songino Array	152.41	6	PKPbc	PKPbc	19 55 28.6	+0.5
	comp=Z,0.7nm,0.4s,baz=293,slow=2.7,SNR=7.9						

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*IDC **30** 19:37:23.1±3.4, 5°.56S×151°.92E, h57km±22km, mb3.2/3, mbtmp3.6/4, ML1.9/1, Error ellipse: s-maj=69.3km s-min=11.3km az=116.0*

ISC 30 19:37:21.1±2.3**, 5°.6S**±0°.1×**152°.1E**±0°.3**, h45km, n6,** σ**1s.19**/8**,**
mb3.5/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.32	355	P	Pn	19 37 42.9	-0.2
	556nm,0.3s,baz=172,slow=7.1,SNR=306						
KRVT				S	Sn	19 38 00.4	+1.0
	879nm,0.5s,baz=300,slow=20,SNR=25						
PMG	Port Moresby	6.20	232	P	Pn	19 38 51.3	+1.3
	2.1nm,0.3s,baz=270,slow=20,SNR=5.7						
PMG				S	Sn	19 39 58.0	-1.6
	4.3nm,0.4s,baz=90,slow=24,SNR=1.7						
	7.7nm,0.4s						
WRA	Warramunga Arr	22.40	229	P	P	19 42 16.9	+0.9
	0.6nm,0.6s,baz=52,slow=9.7,SNR=10						
	0.6nm,0.6s						
ASAR	Alice Springs	25.09	223	P	P	19 42 42.1	+0.3
	1.2nm,0.7s,baz=57,slow=8.8,SNR=15						
	1.2nm,0.7s						
SONM	Songino Array	66.67	328	P	P	19 48 06.7	-0.6
	0.3nm,0.5s,baz=144,slow=4.9,SNR=2.7						
	0.3nm,0.5s						
TORD	Torodi Ar. Bea	149.92	287	PKPbc	PKPbc	19 57 06.9	-0.7
	0.6nm,0.5s,baz=80,slow=3.1,SNR=8.1						

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*ATH **30** 19:57:47.4, 35°.15N×23°.07E, h24km±1km, ML3.5/8, Error ellipse: s-maj=2.6km s-min=1.6km az=40.0*

*ISK **30** 19:57:48.5, 35°.21N×23°.34E, h50km±1km, ML3.6/13*

*IDC **30** 19:57:48.5±1.4, 36°.13N×23°.73E, h0km, mb3.6/7, mbtmp3.5/11, ML3.3/4, MS2.5/1, Error ellipse: s-maj=32.4km s-min=11.5km az=49.0*

*THE **30** 19:57:49.4, 35°.23N×23°.23E, h30km±1km, ML3.4/10, Error ellipse: s-maj=1.5km s-min=0.6km az=224.0*

ISC 30 19:57:47.1±1.1**, 35°.19N**±0°.05×**23°.22E**±0°.04**, h39km**±2km**,**
n64, σ**2s.12**/81**, mb3.6**/7**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.39	84	P	Pn	19 57 56.7	+0.6
KNDR				S	Sn	19 58 03.1	+0.4
	10µm,0.5s						
KNDR	Palaiochora Ch	0.39	84	Pg	Pn	19 57 56.9	+0.8
KNDR				Sg	Sn	19 58 04.2	+1.5
KNDR	Palaiochora Ch	0.39	84	P	Pn	19 57 56.7	+0.6
KNDR				S	Sn	19 58 03.9	+1.2
KNDR				AML	AML	19 58 06.2	
	comp=E,51373µm,0.4s						
KNDR				AML	AML	19 58 06.9	
	comp=N,61668µm,0.5s						
RODP	Rodopos	0.57	50	P	Pn	19 58 00.1	+1.2
RODP				S	Sn	19 58 08.6	+1.5
	comp=N,1µm,0.6s						
RODP	Rodopos	0.57	50	Pg	Pn	19 58 00.1	+1.2
ANKY	Antikythira Is	0.68	6	P	Pn	19 58 01.0	+0.8
ANKY				S	Sn	19 58 11.0	+1.5
	comp=N,4µm,0.5s						
ANKY	Antikythira Is	0.68	6	P	Pn	19 58 01.2	+1.0
ANKY				S	Sn	19 58 11.7	+2.2
ANKY				AML	AML	19 58 13.8	
	comp=N,8286µm,0.5s						
ANKY				AML	AML	19 58 16.8	
	comp=E,6144µm,0.6s						
IMMV	Iera Moni Meta	0.68	67	P	Pn	19 58 01.6	+1.4
IMMV				S	Sn	19 58 12.2	+2.6
	comp=E,5µm,0.4s						
IMMV	Iera Moni Meta	0.68	67	Pg	Pn	19 58 01.4	+1.2
IMMV	Iera Moni Meta	0.68	67	P	Pn	19 58 01.7	+1.5
IMMV				S	Sn	19 58 13.4	+3.8
IMMV				AML	AML	19 58 14.2	
	comp=E,9590µm,0.5s						
IMMV				AML	AML	19 58 16.0	
	comp=N,11600µm,0.4s						
CHAN	Chania	0.75	64	P	Pn	19 58 02.9	+1.8
CHAN				S	Sn	19 58 15.2	+3.9
CHAN				AML	AML	19 58 16.8	
	comp=E,12964µm,0.6s						
CHAN				AML	AML	19 58 18.3	
	comp=N,12210µm,0.7s						
GVD	Gavdhos	0.80	116	P	Pn	19 58 03.9	+2.1
GVD				S	Sn	19 58 15.2	+2.7
	comp=N,5µm,0.4s						
GVD	Gavdhos	0.80	116	Pg	Pn	19 58 03.2	+1.4
GVD	Gavdhos	0.80	116	P	Pn	19 58 03.9	+2.1
GVD				AML	AML	19 58 21.2	
	comp=E,8090µm,0.4s						
GVD				AML	AML	19 58 23.4	
	comp=N,10542µm,0.4s						
GVDS	Gavdos	0.80	116	P	Pn	19 58 03.5	+1.7
GVDS				S	Sn	19 58 14.3	+1.8
	comp=N,3µm,0.4s						
PRNS	Prines Rethymn	1.06	80	P	Pn	19 58 07.1	+1.7
PRNS				S	Sn	19 58 19.4	+0.4
	comp=N,1µm,0.7s						
KTHA	Kythira Island	1.07	353	P	Pn	19 58 07.5	+2.0
KTHA				S	Sn	19 58 20.3	+1.1
	comp=N,1µm,0.6s						
KTHA	Kythira Island	1.07	353	Pg	Pn	19 58 07.9	+2.4
KTHA	Kythira Island	1.07	353	P	Pn	19 58 07.3	+1.7
KTHA				AML	AML	19 58 29.3	
	comp=N,2058µm,0.6s						
KTHA				AML	AML	19 58 32.0	
	comp=E,2721µm,0.5s						
TMBK	Timbaki Herakl	1.27	95	P	Pn	19 58 11.0	+2.7
IDI	Anoyia	1.37	86	Pg	Pn	19 58 12.0	+2.3
	comp=E,15nm,0.3s,baz=254,slow=12,SNR=58						
IDI				Lg	Lg	19 58 31.0	
	comp=E,42nm,0.3s,baz=4.5,slow=23,SNR=14						
IDI				LR	LR	19 59 01.7	
	comp=E,155nm,21.3s,baz=251,slow=58						
IDI	Anoyia	1.37	86	P	Pn	19 58 12.0	+2.3
IDI				S	Sn	19 58 28.5	+1.8
	comp=E,760nm,0.7s						
IDI	Anoyia	1.37	86	Pn	Pn	19 58 10.7	+1.0
IDI	Anoyia	1.37	86	P	Pn	19 58 11.9	+2.2
IDI				AML	AML	19 58 35.8	
	comp=N,1782µm,0.7s						
IDI				AML	AML	19 58 44.9	
	comp=E,1244µm,0.6s						
VLI	Veliai	1.54	352	P	Pn	19 58 14.2	+2.2
VLI				S	Sn	19 58 32.5	+1.8
	comp=E,782nm,0.8s						
VLI	Veliai	1.54	352	P	Pn	19 58 14.0	+2.0
HRKL	Herakleio	1.55	85	Pn	Pn	19 58 13.3	+1.2
MHLO	Agia Marina, M	1.78	32	P	Pn	19 58 17.4	+2.2
PYL	PYLOS	2.08	325	P	Pn	19 58 20.1	+0.7
PYL				S	Sn	19 58 47.5	+3.5
PYL	PYLOS	2.08	325	P	Pn	19 58 18.8	-0.5
THR5	Thira Island,	2.12	54	P	Pn	19 58 21.3	+1.4
THR6	Thira Island,	2.12	56	P	Pn	19 58 21.5	+1.6
THR3	Thira Island,	2.15	55	P	Pn	19 58 21.9	+1.5
SANT	Santorini	2.17	57	Pn	Pn	19 58 22.1	+1.4
KRND	KRANIDI	2.19	359	P	Pn	19 58 23.2	+2.3
KRND	KRANIDI	2.19	359	P	Pn	19 58 22.7	+1.9
KRND				AML	AML	19 59 00.9	
	comp=E,647µm,0.7s						
KRND				AML	AML	19 59 07.5	
	comp=N,684µm,0.5s						
THR8	Santorini-Mono	2.20	56	P	Pn	19 58 22.5	+1.4
ITM	Ithomi	2.24	333	P	Pn	19 58 23.6	+2.0
ITM	Ithomi	2.24	333	Pn	Pn	19 58 24.9	+3.3
ITM	Ithomi	2.24	333	P	Pn	19 58 23.3	+1.6
STIA	Sitia Lasithi	2.35	89	P	Pn	19 58 25.8	+2.7
ZKR	Zakros	2.46	91	Pn	Pn	19 58 26.3	+1.7
ZKR	Zakros	2.46	91	P	Pn	19 58 27.2	+2.6
APE	Apeiranthos	2.65	44	Pn	Pn	19 58 28.5	+1.2
GUR	Goura	2.83	346	P	Pn	19 58 32.7	+2.9
GUR	Goura	2.83	346	P	Pn	19 58 31.9	+2.2
KLV	Kalavryta, Ach	2.97	344	P	Pn	19 58 33.8	+2.1
KARP	Karpathos	3.24	83	Pn	Pn	19 58 37.3	+1.9
ANX	Ano Chora	3.55	343	P	Pn	19 58 41.8	+2.1
AXAR	Agios Charalam	3.59	353	P	Pn	19 58 42.1	+1.9
BODT	Bodrum	3.80	59	Pn	Pn	19 58 45.3	+2.2
AGG	Agios Georgios	3.89	350	P	Pn	19 58 46.0	+1.7
VAE	Valguarnera	7.46	290	Pn	Pn	19 59 41.1	+7.7
	comp=N,0.4nm,0.3s,baz=36,slow=8.7,SNR=0.7						
VAE				Sn	Sn	20 00 55.9	-0.9
	comp=N,1.7nm,0.3s,baz=181,slow=18,SNR=1.6						
	comp=N,3.5nm,0.5s						
BRTR	Keskin Array B	9.44	58	Pn	Pn	19 59 57.8	-2.8
	comp=N,0.1nm,0.3s,baz=238,slow=15,SNR=1.6						
BRTR				LR	LR	20 03 25.9	
	comp=N,31nm,20.7s,baz=272,slow=39						
	comp=N,0.2nm,0.5s						
MMAI	Mount Meron Ar	10.34	99	Pn	Pn	20 00 13.4	+0.6
	comp=N,1.8nm,0.3s,baz=278,slow=12,SNR=12						
MMAI				Sn	Sn	20 02 02.9	-4.5
	comp=N,1.5nm,0.3s,baz=279,slow=10,SNR=1.8						
	comp=N,0.8nm,0.3s						
EIL	Elat	11.34	116	Pn	Pn	20 00 26.4	0.0
	comp=N,0.4nm,0.3s,baz=360,slow=4.2,SNR=11						
EIL				Sn	Sn	20 02 22.9	-8.9
	comp=N,0.6nm,0.3s,baz=269,slow=20,SNR=2.1						
AKASG	Malin Array Be	16.10	14	Pn	Pn	20 01 23.9	-6.5
	comp=N,0.3nm,0.3s,baz=213,slow=10,SNR=1.4						
	comp=N,0.2nm,0.3s						
HFS	Hagfors	25.71	349	P	P	20 03 12.8	-0.6
	comp=N,1.2nm,0.5s,baz=158,slow=12,SNR=10						
	comp=N,1.2nm,0.5s						
FINES	FINESS Array B	26.33	3	P	P	20 03 17.0	-2.0
	comp=N,0.9nm,0.5s,baz=156,slow=12,SNR=7.8						
	comp=N,0.9nm,0.5s						
NOA	NORSAR Array B	26.99	347	P	P	20 03 24.9	0.0
	comp=N,0.2nm,0.5s,baz=156,slow=9.8,SNR=5.2						
	comp=N,0.2nm,0.5s						
MKAR	Makanchi Array	45.08	56	P	P	20 05 58.5	-0.7
	comp=N,0.6nm,0.3s,baz=265,slow=7.2,SNR=21						
	comp=N,0.6nm,0.3s						
ZALV	Zalesovo Beam	46.13	46	P	P	20 06 06.3	-1.1
	comp=N,1.7nm,0.4s,baz=282,slow=7.2,SNR=2.1						
	comp=N,1.7nm,0.4s						
SONM	Songino Array	60.69	50	P	P	20 07 54.4	-0.1
	comp=N,0.2nm,0.5s,baz=292,slow=5.9,SNR=3.6						
	comp=N,0.2nm,0.5s						
YKA	Yellowknife Ar	76.92	341	P	P	20 09 38.5	+3.6
	comp=N,0.1nm,0.4s,baz=70,slow=5.3,SNR=2.4						
	comp=N,0.1nm,0.4s						

IDC 30 20:20:27.9±2.7**, 6°.10S**×**130°.73E, h0km, mb3.2**/1**,**
mbtmp3.1/3**, ML3.2**/2**, Error ellipse: s-maj=146.7km**
s-min=34.4km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.20	166	Pn	Pn	20 23 49.1	-1.3
	0.1nm,0.3s,baz=350,slow=13,SNR=2.4						
WRA				Sn	Sn	20 26 13.2	-16
	0.3nm,0.3s,baz=335,slow=23,SNR=6.3						
	0.2nm,0.5s						
ASAR	Alice Springs	17.73	170	P	P	20 24 37.3	0.0
	0.1nm,0.3s,baz=340,slow=7.3,SNR=2.1						
	0.1nm,0.4s						
MKAR	Makanchi Array	67.88	326	P	P	20 31 28.3	0.0
	0.1nm,0.5s,baz=119,slow=7.0,SNR=2.0						
	0.1nm,0.5s						

NNC 30 20:23:08.7±5.1**, 36°.92N**×**71°.19E, h0km, mb3.7, mpv3.3,**
3C-3D, Error ellipse: s-maj=44.2km s-min=35.9km
az=134.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	Iuzhnay	5.30	351	Pg	Pn	20 24 30.0	+0.9
	4.5nm,0.2s						
IUG				Lg	Lg	20 25 33.0	
	9.0nm,0.3s						
AML	Almayashu	5.55	20	⇑P	Pn	20 24 33.6	+0.7
	0.1nm,0.3s						
AML				⇑S	Sn	20 25 39.2	+1.5
	1.5nm,0.5s						
MRKS	Merke	6.03	14	Pg	Pn	20 24 39.7	+0.6
	2.1nm,0.7s						
MRKS				Lg	Lg	20 25 50.9	
	4.7nm,0.4s						
KK31	Karatay Array	6.20	355	⇓P	Pn	20 24 42.0	+0.6
	2.7nm,0.3s,baz=174,slow=12,SNR=52						
KK31				⇓S	Sn	20 25 54.8	+1.7
	2.6nm,0.7s						
TKM2	Tokmak 2	6.88	28	⇑P	Pn	20 24 51.5	+0.5
	1.1nm,0.6s						
TKM2				⇓S	Sn	20 26 09.8	-0.3
	1.4nm,0.8s						
AB31	Akbulak array	14.80	330	P	Pn	20 26 35.2	-3.9
	0.2nm,0.3s,baz=166,slow=12,SNR=18						

IDC 30 20:50:35.8±3.6**, 13°.45N**×**144°.86E, h0km, mb3.8**/4**,**
mbtmp3.8/4**, Error ellipse: s-maj=157.0km**

s-min=27.7km az=85.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	34.76	198	P	P	20 57 28.2	0.0
	1.0nm,0.5s,baz=20,slow=9.6,SNR=20						
	1.0nm,0.5s						
ASAR	**Alice Springs**	38.42	196	P	P	20 57 59.1	-0.2
	0.3nm,0.6s,baz=19,slow=14,SNR=8.1						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	61.58	316	P	P	21 00 55.2	+0.1
	0.4nm,0.8s,baz=88,slow=7.7,SNR=3.7						
	0.4nm,0.8s						
FINES	**FINESS Array B**	91.28	335	P	P	21 03 42.9	-0.2
	2.0nm,1.0s,baz=32,slow=5.6,SNR=1.5						
	2.0nm,1.0s						

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*IDC **30** 20:57:36.3±2.5, 38°.62N×142°.39E, h0km, mb3.5/2, mbtmp3.4/3, ML2.5/1, Error ellipse: s-maj=48.3km s-min=39.1km az=72.0*

*JMA **30** 20:57:46.6±0.1, 38°.4N±0°.2×141°.7E±0°.4, h54km, MV3.7/40, KINKAZAN REGION*

JMA Felt I J1 at KINKAZAN REGION .

ISC 30 20:57:46.0±1.2**, 38°.34N**±0°.04×**141°.73E**±0°.08**, h52**km±7km**, n24, σ0ˢ.52**/32**, 21D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	0.21	261	⇓iP	Pn	20 57 55.1	+0.5
JIKH				⇓S	Sn	20 58 01.1	+0.3
JIO	**Ouri**	0.32	290	⇓iP	Pn	20 57 55.8	+0.3
JIO				⇓S	Sn	20 58 02.1	-0.2
JKMT	**Kesennumamotoy**	0.51	337	⇓iP	Pn	20 57 57.8	+0.3
JKMT				⇓S	Sn	20 58 05.5	-0.3
JOFO	**Osakifurukawao**	0.69	292	⇓iP	Pn	20 57 59.8	+0.1
JOFO				⇓S	Sn	20 58 09.8	+0.1
JMK	**Ichinoseki**	0.73	327	⇓iP	Pn	20 58 00.5	+0.3
JMK				⇓S	Sn	20 58 10.2	-0.3
OFUJ	**Ofunato**	0.74	356	⇓iP	Pn	20 58 00.6	+0.3
OFUJ				⇓S	Sn	20 58 10.4	-0.3
JOU	**Okura**	0.84	272	⇓iP	Pn	20 58 01.6	-0.1
JOU				⇓S	Sn	20 58 12.7	-0.4
JMM	**Marumori**	0.88	237	⇓iP	Pn	20 58 01.9	-0.2
JMM				⇓S	Sn	20 58 13.1	-0.9
JOM	**Ohasama**	1.18	343	⇓iP	Pn	20 58 06.5	+0.3
JOM				⇓eS	Sn	20 58 21.8	+0.6
JFK	**Kawauchi**	1.19	215	iP	Pn	20 58 06.5	+0.2
JFK				eS	Sn	20 58 21.2	-0.2
JYK	**Kaneyama**	1.22	299	⇓iP	Pn	20 58 06.7	+0.1
JYS	**Shirataka**	1.31	265	P	Pn	20 58 08.3	+0.3
JYS				S	Sn	20 58 24.6	+0.1
JOTO	**OTAMA OYAMA**	1.35	235	iP	Pn	20 58 08.8	+0.3
JOTO				eS	Sn	20 58 25.8	+0.4
JRG	**Rokugo**	1.35	321	⇓iP	Pn	20 58 09.0	+0.4
JRG				⇓S	Sn	20 58 25.9	+0.5
JYA	**Atsumi**	1.60	280	P	Pn	20 58 12.2	+0.3
JYA				eS	Sn	20 58 31.4	0.0
MJAR	**Matsushiro Arr**	3.33	238	Pn	Pn	20 58 37.5	+2.0
	0.3nm,0.3s,baz=35,slow=13,SNR=21						
MJAR				Sn	Sn	20 59 25.0	+11
	0.2nm,0.3s,baz=181,slow=30,SNR=2.2						
	2.3nm,0.4s						
H11N2	**WAKE ISLAND Hy**	28.63	123	T	T	21 33 55.2	
	baz=316,slow=75,SNR=90						
H11N1	**WAKE ISLAND Hy**	28.64	123	T	T	21 33 56.6	
	baz=316,slow=75,SNR=63						
H11N3	**WAKE ISLAND Hy**	28.65	123	T	T	21 33 57.6	
	baz=316,slow=75,SNR=106						
H11S1	**WAKE ISLAND Hy**	29.38	125	T	T	21 34 50.9	
	baz=318,slow=76,SNR=83						
H11S3	**WAKE ISLAND Hy**	29.39	125	T	T	21 34 50.5	
	baz=318,slow=76,SNR=115						
H11S2	**WAKE ISLAND Hy**	29.40	125	T	T	21 34 52.2	
	baz=318,slow=76,SNR=102						
MKAR	**Makanchi Array**	43.65	301	P	P	21 05 44.8	-0.5
	0.5nm,0.8s,baz=92,slow=8.8,SNR=5.4						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	58.39	188	P	P	21 07 35.8	-0.2
	0.3nm,0.6s,baz=5.5,slow=7.2,SNR=5.2						
	0.3nm,0.6s						

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*KRSC **30** 21:08:49.8±0.7, 56°.97N×163°.24E, h18km±6km, Ml3.9*

*IDC **30** 21:08:50.2±1.1, 56°.99N×162°.91E, h0km, mb3.3/6, mbtmp3.4/8, ML3.0/2, Error ellipse: s-maj=35.8km s-min=21.2km az=144.0*

ISC 30 21:08:51.1±1.6**, 56°.95N**±0°.05×**163°.09E**±0°.04**, h7**km±10km**, n40, σ1ˢ.29**/52**, mb3.3**/5**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBG	**Krutoberegovo**	0.73	197	eP	Pg	21 09 04.5	-0.6
KBG				eS	Sg	21 09 15.1	+0.6
KBTR	**Krutoberegovo**	0.76	192	eP	Pg	21 09 05.4	-0.2
KBTR				eS	Sg	21 09 16.7	+1.2
SMKR	**Semkarok**	0.97	248	eP	Pb	21 09 09.0	-1.2
SMKR				eS	Sg	21 09 22.6	+0.4
SRKR	**Sorokina**	1.10	255	eP	Pb	21 09 11.3	-1.1
SRKR				eS	Sb	21 09 26.6	-0.4
KLY	**Klyuchi**	1.49	246	eP	Pn	21 09 15.8	-2.5
KLY				eS	Sn	21 09 34.5	-3.4
CIRR	**Tsirk**	1.54	238	eP	Pn	21 09 18.6	-0.5
LGNR	**Loginova**	1.59	238	eP	Pn	21 09 19.6	-0.3
LGNR				eS	Sn	21 09 41.1	+0.4
BZGR	**Bezymyannyi-Gr**	1.67	234	eP	Pn	21 09 20.5	-0.3
BZGR				eS	Sn	21 09 42.9	+0.3
BZWR	**Bezymyannyi-We**	1.75	237	eP	Pn	21 09 21.6	-0.4
BZWR				eS	Sn	21 09 44.5	0.0
BZP	**Bezymyannyi-Pe**	1.76	235	eP	Pn	21 09 21.8	-0.3
BZP				eS	Sn	21 09 44.8	+0.1
BZMR	**Bezymyannaya**	1.77	236	eP	Pn	21 09 22.0	-0.2
BZMR				eS	Sn	21 09 45.2	+0.2
KIRR	**Kirishev**	1.82	238	eP	Pn	21 09 22.4	-0.6
KIRR				eS	Sn	21 09 46.5	+0.1
KPT	**Kopyto**	1.87	239	eP	Pn	21 09 23.5	-0.1
KPT				eS	Sn	21 09 47.6	+0.1
SRDR	**Sredinnyy**	1.97	253	eP	Pn	21 09 24.4	-0.5
KMNR	**Kamenistaya**	1.99	234	eP	Pn	21 09 25.7	+0.5
KOZ	**Kozyrevsk**	2.00	245	eP	Pn	21 09 26.1	+0.9
KOZ				eS	Sb	21 09 52.5	-0.2
TUMD	**Tumrok D**	2.31	222	eP	Pn	21 09 30.4	+0.9
TUMR	**Tumrok**	2.35	226	eP	Pn	21 09 31.1	+0.9
BKI	**Bering**	2.38	136	eP	Pn	21 09 29.6	-0.8
BKI				eS	Sn	21 09 58.4	-1.4
TIGL	**Tigil**	2.53	291	eP	Pn	21 09 33.3	+0.8
TIGL				eS	Sn	21 10 05.5	+1.9
ESO	**Esso**	2.65	249	eP	Pn	21 09 35.5	+1.4
PALN	**Palana**	2.72	324	eP	Pn	21 09 35.8	+0.7
NLC	**Nalytchevo**	4.36	211	eP	Pn	21 10 00.0	+2.4
KRER	**Koryakskii**	4.42	216	eP	Pn	21 10 01.1	+2.4
SMAR	**Somma**	4.44	216	eP	Pn	21 10 00.9	+1.9
KOK	**Koryaka**	4.47	217	eP	Pn	21 10 01.7	+2.4
UGLR	**Uglovaya**	4.48	215	eP	Pn	21 10 01.3	+1.9
PETK	**Petropavlovsk-**	4.94	221	Pn	Pn	21 10 06.8	+1.1
	0.5nm,0.3s,baz=69,slow=12,SNR=8.9						
	1.9nm,0.7s						
GRL	**Gorelyy**	5.28	216	eP	Pn	21 10 13.1	+2.7
MTVR	**Mutnovka**	5.30	215	eP	Pn	21 10 12.8	+2.1
ASAJ	**Asahikawa**	18.20	234	P	Pn	21 13 04.3	+0.3
	0.2nm,0.3s,baz=22,slow=16,SNR=2.6						
	2.5nm,0.6s						
TIXI	**Tiksi**	20.46	329	P	P	21 13 28.9	+0.2
	0.4nm,0.2s,baz=89,slow=23,SNR=5.9						
	0.4nm,0.2s						
ILAR	**Eielson Array**	24.95	51	P	P	21 14 15.1	+0.5
	0.3nm,0.7s,baz=281,slow=7.2,SNR=2.3						
	0.3nm,0.7s						
H11N2	**WAKE ISLAND Hy**	37.27	174	T	T	21 55 02.1	
	baz=358,slow=76,SNR=24						
H11N3	**WAKE ISLAND Hy**	37.28	174	T	T	21 55 04.8	
	baz=358,slow=76,SNR=18						
H11N1	**WAKE ISLAND Hy**	37.29	174	T	T	21 55 04.5	
	baz=358,slow=76,SNR=21						
YKA	**Yellowknife Ar**	39.20	47	P	P	21 16 19.9	+0.7
	0.3nm,0.7s,baz=300,slow=7.5,SNR=2.9						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	48.09	294	P	P	21 17 29.4	-1.6
	0.1nm,0.4s,baz=55,slow=7.2,SNR=4.6						
	0.1nm,0.4s						
PDAR	**Pinedale Array**	54.23	65	P	P	21 18 18.5	+1.1
	0.3nm,0.6s,baz=308,slow=4.4,SNR=2.3						
	0.3nm,0.6s						
ASAR	**Alice Springs**	83.99	207	P	P	21 21 21.0	-0.7
	0.1nm,0.3s,baz=14,slow=4.8,SNR=1.6						
	0.1nm,0.3s						

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*FUNV **30** 21:15:41.8, 11°.75N×70°.45W, h28km, MW3.7*

ISC 30 21:15:37.9±1.2**, 11°.74N**±0°.06×**70°.47W**±0°.03**, h10**km**, n34, σ2ˢ.23**/57**, 1C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUA1	**Aruba**	0.88	30	eP	Pn	21 15 59.2	+2.8
SIQV	**Siquisique**	1.26	149	eP	Pg	21 16 04.8	+2.6
SIQV				eS	Sb	21 16 18.4	+0.2
URIC	**Uribia, Colomb**	1.50	269	⇑eP	Pn	21 16 05.7	+0.8
URIC				eS	Sn	21 16 24.0	-0.4
URIC				i		21 16 25.6	
	comp=Z,147nm,0.1s						
JACV	**Jacura**	1.73	112	eP	Pn	21 16 10.3	+2.2
JACV				eS	Sn	21 16 30.2	0.0
CURV	**Curarigua**	1.79	164	eP	Pn	21 16 10.8	+1.9
CURV				eS	Sn	21 16 31.7	0.0
MCQV	**Machiques**	2.64	231	eP	Pn	21 16 22.1	+1.5
MCQV				eS	Sn	21 16 52.1	-0.5
MAPV	**Macapo**	2.74	134	eP	Pn	21 16 23.1	+1.1
MAPV				eS	Sn	21 16 53.8	-1.4
TURV	**Turiamo**	2.88	116	eP	Pn	21 16 24.2	+0.4
TURV				eS	Sn	21 16 56.2	-2.4
BENV	**Beln**	3.33	122	eP	Pn	21 16 32.2	+2.1
BENV				eS	Sn	21 17 07.0	-2.8
SOCV	**Socops**	3.46	186	eP	Pn	21 16 33.6	+1.7
SOCV				eS	Sn	21 17 10.9	-2.0
BAUV	**El Baul**	3.66	139	eP	Pn	21 16 35.4	+0.7
BAUV				eS	Sn	21 17 15.0	-3.0
SMRC	**Santa Marta, M**	3.73	262	eP	Pn	21 16 33.2	-2.4
SMRC				eS	Sn	21 17 16.3	-3.3
SMRC				i		21 17 25.4	
	comp=Z,47nm,0.4s						
TACV	**Tcata**	3.73	115	eP	Pn	21 16 36.1	+0.4
TACV				eS	Sn	21 17 16.3	-3.5
LL1C	**La Loma 1 Cana**	3.74	235	eP	Pn	21 16 36.2	+0.5
LL1C				eS	Sn	21 17 18.4	-1.5
LL1C				i		21 17 23.0	
	comp=Z,776nm,0.5s						
FUNV	**FUNVISIS**	3.80	109	eP	Pn	21 16 35.7	-1.0
FUNV				eS	Sn	21 17 17.7	-3.9
ARGC	**Ariguani, Magd**	4.16	244	eP	Pn	21 16 41.5	0.0
ARGC				eS	Sn	21 17 27.7	-2.5
ARGC				i		21 17 31.1	
	comp=Z,20nm,0.4s						
CAPV	**Capacho**	4.26	205	eP	Pn	21 16 43.8	+0.7
CAPV				eS	Sn	21 17 29.8	-3.2
MERV	**Las Mercedes**	4.79	121	eP	Pn	21 16 50.1	-0.1
MERV				eS	Sn	21 17 41.0	-4.8
PAMC	**Pamplona, Colo**	4.90	207	eP	Pn	21 16 53.2	+1.1
PAMC				eS	Sn	21 17 46.5	-2.6
PAMC				i		21 17 49.9	
	comp=Z,71nm,0.3s						
SJCC	**San Jacinto, C**	4.98	249	eP	Pn	21 16 53.4	+0.5
SJCC				eS	Sn	21 17 48.1	-2.5
SJCC				i		21 17 57.3	
	comp=Z,24nm,0.6s						
BRRC	**Barranca, Sant**	5.61	215	eP	Pn	21 17 03.4	+2.0
CACV	**CAICARA DEL OR**	5.67	137	eP	Pn	21 17 07.6	+5.2
CACV				eS	Sn	21 18 11.7	+4.1
BARC	**Barichara**	5.78	208	eP	Pn	21 17 05.8	+1.9
PCRV	**Puerto La Cruz**	5.93	105	eP	Pn	21 17 05.7	-0.3
PCRV				eS	Sn	21 18 09.9	-4.2
ZARC	**Zaragoza, Cauc**	6.05	226	eP	Pn	21 17 07.2	-0.3
ZARC				eS	Sn	21 18 09.8	-7.0
ZARC				i		21 18 19.0	
	comp=Z,13nm,0.5s						
RUSC	**La Rusia**	6.36	204	eP	Pn	21 17 13.1	+0.9
RUSC				eS	Sn	21 18 22.1	-3.1
RUSC				i		21 18 28.4	
	comp=Z,6.4nm,0.3s						
UREC	**San Jos de Ur**	6.38	232	eP	Pn	21 17 13.8	+1.8
PRGV	**PARIAGUAN**	6.45	117	eP	Pn	21 17 12.6	-0.5
PRGV				eS	Sn	21 18 21.3	-5.4
PTBC	**PUERTO BERRIO,**	6.50	218	eP	Pn	21 17 14.1	+0.4
PTBC				eS	Sn	21 18 23.9	-4.0
SPBC	**San Pablo de B**	7.02	211	eP	Pn	21 17 21.2	+0.3
HELC	**Santa Helena**	7.44	223	eP	Pn	21 17 27.8	+0.7
NORC	**Norcasia**	7.52	216	eP	Pn	21 17 28.1	+0.2
CHIC	**Chingaza**	7.77	205	eP	Pn	21 17 32.0	+0.5
PRAC	**Prado**	9.10	209	eP	Pn	21 17 49.2	-0.2

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*IDC **30** 21:24:50.1±0.4, 56°.73N×162°.80E, h0km, mb4.7/39, mbtmp4.8/43, ML4.8/4, MS4.2/84, Error ellipse: s-maj=11.1km s-min=8.7km az=161.0*

*KRSC **30** 21:24:51.0±1.1, 56°.90N×163°.23E, h46km±14km, Mc6.3, Ml5.5*

*NEIC **30** 21:24:51.8±1.2, 56°.75N±0°.03×162°.7E±0°.1, h10km±1km, mb5.2/469, Error ellipse: s-maj=11.1km s-min=5.6km az=264.0*

*GCMT **30** 21:24:54.9±0.2, 57°.00N±0°.02×163°.12E±0°.02, h21km, MW5.1/108, Moment Tensor Solution. s49,c65; s108,c171; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.40±.25; $M_{\theta\theta}$-0.13±.15; $M_{\phi\phi}$-4.27±.15; $M_{r\theta}$-1.19±.33; $M_{\theta\phi}$-2.54±.09; $M_{\phi r}$0.25±.23; Best double couple: $M_0$5.13500×10^{16} NP1:ϕ_s222.00000°,δ49.00000°, λ114.00000°. NP2:ϕ_s8.00000°,δ46.00000°,λ65.00000°. Principal axes: T 4.7850, Plg72.0000°, Azm200.0000°; N 0.6990, Plg18.0000°, Azm26.0000°; P -5.4850, Plg2.0000°, Azm296.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **30** 21:24:54.6±0.0, 56°.95N×162°.24E, h34km, mb4.6/60, mB5.0/47, Ms5.1/60, Ms7 4.8/57*

*MOS **30** 21:24:55.0±1.1, 56°.87N×162°.76E, h47km, mb5.1/82, MS4.7/27, Error ellipse: s-maj=6.1km s-min=3.1km az=73.6*

ISC 30 21:24:54.8±0.4**, 56°.86N**±0°.03×**162°.91E**±0°.03**, h31**km±2km**, h31km:pP-P, n1180, σ1ˢ.67**/1157**, mb5.1**/354**, MS4.5**/126**, 34C-13D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBG	**Krutoberegovo**	0.62	191	PN	Pn	21 25 04.9	-2.5
KBG				S	Sb	21 25 15.4	-0.1
KBG	**Krutoberegovo**	0.62	191	eP	Pn	21 25 04.9	-2.5
KBG				eS	Sb	21 25 15.4	-0.1
KBTR	**Krutoberegovo**	0.66	184	PN	Pn	21 25 05.7	-2.2
KBTR	**Krutoberegovo**	0.66	184	eP	Pn	21 25 05.7	-2.2
SMKR	**Semkarok**	0.84	251	PN	Pn	21 25 08.6	-2.0
SMKR	**Semkarok**	0.84	251	eP	Pn	21 25 08.6	-2.0
SRKR	**Sorokina**	0.98	259	PN	Pn	21 25 11.0	-1.5
SRKR				S	Sn	21 25 25.5	+0.1
SRKR	**Sorokina**	0.98	259	eP	Pn	21 25 11.0	-1.5
SRKR				eS	Sn	21 25 25.5	+0.1
BDR	**Baidarnaya**	0.98	253	PN	Pn	21 25 11.1	-1.4
BDR	**Baidarnaya**	0.98	253	eP	Pn	21 25 11.1	-1.4
KLY	**Klyuchi**	1.36	247	PN	Pn	21 25 15.4	-2.3
KLY	**Klyuchi**	1.36	247	eP	Pn	21 25 15.4	-2.3
CIRR	**Tsirk**	1.41	239	PN	Pn	21 25 18.4	-0.1
CIRR				S	Sb	21 25 39.4	+1.2
CIRR	**Tsirk**	1.41	239	eP	Pn	21 25 18.4	-0.1
CIRR				eS	Sb	21 25 39.4	+1.2
LGNR	**Loginova**	1.46	239	PN	Pn	21 25 19.4	+0.2
LGNR	**Loginova**	1.46	239	eP	Pn	21 25 19.4	+0.2
BZGR	**Bezymyannyi-Gr**	1.54	234	PN	Pn	21 25 20.4	+0.3
BZGR				S	Sb	21 25 42.4	+0.7
BZGR	**Bezymyannyi-Gr**	1.54	234	eP	Pn	21 25 20.4	+0.3
BZGR				eS	Sb	21 25 42.4	+0.7
BZWR	**Bezymyannyi-We**	1.61	237	PN	Pn	21 25 21.5	+0.2
BZWR	**Bezymyannyi-We**	1.61	237	eP	Pn	21 25 21.5	+0.2
BZP	**Bezymyannyi-Pe**	1.62	235	eP	Pn	21 25 21.5	+0.1
BZMR	**Bezymyannaya**	1.63	236	PN	Pn	21 25 21.8	+0.3
BZMR	**Bezymyannaya**	1.63	236	eP	Pn	21 25 21.8	+0.3
KIRR	**Kirishev**	1.69	239	PN	Pn	21 25 22.6	+0.3
KIRR	**Kirishev**	1.69	239	eP	Pn	21 25 22.6	+0.3
KPT	**Kopyto**	1.74	240	PN	Pn	21 25 23.3	+0.4
KPT	**Kopyto**	1.74	240	eP	Pn	21 25 23.3	+0.4
SRDR	**Sredinnyy**	1.85	254	PN	Pn	21 25 24.6	+0.2
SRDR	**Sredinnyy**	1.85	254	eP	Pn	21 25 24.6	+0.2
KMNR	**Kamenistaya**	1.85	234	PN	Pn	21 25 25.1	+0.6
KMNR	**Kamenistaya**	1.85	234	eP	Pn	21 25 25.1	+0.6
KOZ	**Kozyrevsk**	1.87	246	PN	Pn	21 25 25.4	+0.8
KOZ	**Kozyrevsk**	1.87	246	eP	Pn	21 25 25.4	+0.8
KOZ				eS	Sb	21 25 52.7	+1.6
TUMD	**Tumrok D**	2.18	221	eP	Pn	21 25 29.7	+0.8
TUMD				eS	Sb	21 25 58.8	-1.2
TUMR	**Tumrok**	2.21	226	PN	Pn	21 25 29.7	+0.2
TUMR				S	Sn	21 25 58.8	+3.0
TUMR	**Tumrok**	2.21	226	eP	Pn	21 25 30.9	+1.4
BKI	**Bering**	2.39	133	PN	Pn	21 25 29.8	-2.0
BKI				S	Sn	21 25 58.4	-1.5
BKI	**Bering**	2.39	133	eP	Pn	21 25 29.8	-2.0
BKI				eS	Sn	21 25 58.4	-1.5
OSSR	**Ossora**	2.40	2	PN	Pn	21 25 28.9	-3.0
OSSR	**Ossora**	2.40	2	eP	Pn	21 25 28.9	-3.0
MKZ	**Mys Kozlova**	2.40	197	PN	Pn	21 25 31.9	0.0
MKZ	**Mys Kozlova**	2.40	197	eP	Pn	21 25 31.9	0.0
TIGL	**Tigil**	2.47	293	eP	Pn	21 25 34.1	+1.2
TIGL				eS	Sb	21 26 06.0	-2.4
ESO	**Esso**	2.52	250	PN	Pn	21 25 36.1	+2.5
ESO				S	Sb	21 26 08.6	-1.2
ESO	**Esso**	2.52	250	eP	Pn	21 25 36.1	+2.5
ESO				eS	Sb	21 26 08.6	-1.2
PALN	**Palana**	2.73	326	PN	Pn	21 25 37.0	+0.6
PALN				S	Sb	21 26 10.9	-4.9
PALN	**Palana**	2.73	326	eP	Pn	21 25 37.0	+0.6
PALN				eS	Sb	21 26 10.9	-4.9
KII	**Karymskiy**	3.45	216	PN	Pn	21 25 48.0	+1.6
KII	**Karymskiy**	3.45	216	eP	Pn	21 25 48.0	+1.6
TILK	**Tilichiki**	3.98	24	PN	Pn	21 25 52.5	-1.0
TILK	**Tilichiki**	3.98	24	eP	Pn	21 25 52.5	-1.0
SPN	**Mys Shipunski**	4.12	205	PN	Pn	21 25 56.1	+0.5
SPN				S	Sn	21 26 44.3	+1.7
SPN	**Mys Shipunski**	4.12	205	eP	Pn	21 25 56.1	+0.5
SPN				eS	Sn	21 26 44.3	+1.7
NLC	**Nalytchevo**	4.23	210	PN	Pn	21 25 59.2	+2.2
NLC				S	Sn	21 26 49.5	+4.3
NLC	**Nalytchevo**	4.23	210	eP	Pn	21 25 59.2	+2.2
NLC				eS	Sn	21 26 49.5	+4.3
GNL	**Ganaly**	4.26	224	PN	Pn	21 25 59.1	+1.6
GNL	**Ganaly**	4.26	224	eP	Pn	21 25 59.1	+1.6
KRX	**Arik**	4.28	217	PN	Pn	21 26 00.0	+2.2
KRX	**Arik**	4.28	217	eP	Pn	21 26 00.0	+2.2
KRER	**Koryakskii**	4.29	216	PN	Pn	21 26 00.3	+2.2
KRER	**Koryakskii**	4.29	216	eP	Pn	21 26 00.3	+2.2
SMAR	**Somma**	4.31	215	PN	Pn	21 26 00.0	+1.7
SMAR	**Somma**	4.31	215	eP	Pn	21 26 00.0	+1.7
AVH	**Avacha**	4.33	215	PN	Pn	21 26 00.6	+2.1
AVH	**Avacha**	4.33	215	eP	Pn	21 26 00.6	+2.1
KOK	**Koryaka**	4.34	216	PN	Pn	21 26 00.6	+2.0
KOK	**Koryaka**	4.34	216	eP	Pn	21 26 00.6	+2.0
UGLR	**Uglovaya**	4.35	214	PN	Pn	21 26 00.5	+1.7
UGLR	**Uglovaya**	4.35	214	eP	Pn	21 26 00.5	+1.7
DALK	**Dalny**	4.52	214	PN	Pn	21 26 02.4	+1.3
DALK	**Dalny**	4.52	214	eP	Pn	21 26 02.4	+1.3
PET	**Petropavlovsk**	4.56	214		Pn	21 26 02.4	+0.9
PET	**Petropavlovsk**	4.56	214	P	Pn	21 26 03.8	+2.2
PET	**Petropavlovsk**	4.56	214	αiPN	Pn	21 26 03.2	+1.6
PET				eS	Sn	21 26 57.3	+3.9
PET				pmax	pmax		
	comp=Z,2μm,2.4s						
PET				pmax	pmax		
	comp=Z,1μm,0.6s						
PET				smax	smax		
	comp=E,2μm,0.6s						
PET				smax	smax		
	comp=N,2μm,0.9s						
PET				MLR	MLR		
	comp=Z,11μm,7.0s						
PET				MLR	MLR		
	comp=Z,16μm,7.0s						
PET	**Petropavlovsk**	4.56	214	eP	Pn	21 26 03.6	+2.0
PET				eS	Sn	21 26 55.3	+1.9
I44RU	**PETROPAVLOVSK-**	4.80	221	I	I	21 53 10.0	
	baz=39,slow=326,SNR=1.0						
PEA0B	**Petropavlovsk-**	4.81	221	Pn	Pn	21 26 04.5	-0.6
PEA0B	**Petropavlovsk-**	4.81	221	cePN	Pn	21 26 05.5	+0.5
PETK	**Petropavlovsk-**	4.81	221	Pn	Pn	21 26 06.1	+1.1
	comp=Z,28nm,0.3s,baz=65,slow=16,SNR=281						
PETK				LR	LR	21 28 18.5	
	comp=Z,8μm,18.7s,baz=70,slow=45						
PETK	**Petropavlovsk-**	4.81	221		Pn	21 26 04.7	-0.3
PETK	**Petropavlovsk-**	4.81	221	PN	Pn	21 26 04.7	-0.3
KRMR	**Karymshinskiy**	4.89	216	PN	Pn	21 26 07.5	+1.4
KRMR	**Karymshinskiy**	4.89	216	eP	Pn	21 26 07.5	+1.4
RUS	**Russkaya**	5.12	212	PN	Pn	21 26 10.2	+1.0
RUS				S	Sn	21 27 08.6	+1.5
RUS	**Russkaya**	5.12	212	eP	Pn	21 26 10.2	+1.0
RUS				eS	Sn	21 27 08.6	+1.5
GRL	**Gorelyy**	5.15	215	PN	Pn	21 26 12.2	+2.4
GRL	**Gorelyy**	5.15	215	eP	Pn	21 26 12.2	+2.4
APC	**Apacha**	5.15	222	PN	Pn	21 26 11.8	+2.1
APC	**Apacha**	5.15	222	eP	Pn	21 26 11.8	+2.1
MTVR	**Mutnovka**	5.17	214	PN	Pn	21 26 12.2	+2.1
MTVR	**Mutnovka**	5.17	214	eP	Pn	21 26 12.2	+2.1
KDTR	**Khodutka, Kamc**	5.79	211	PN	Pn	21 26 18.8	+0.3
KDTR	**Khodutka, Kamc**	5.79	211	eP	Pn	21 26 18.8	+0.3
KMSK	**Kamenskaya**	5.87	15	PN	Pn	21 26 18.9	-0.6
KMSK	**Kamenskaya**	5.87	15	eP	Pn	21 26 18.9	-0.6
PAU	**Pauzhetka**	6.48	216	PN	Pn	21 26 30.7	+2.8
PAU	**Pauzhetka**	6.48	216	eP	Pn	21 26 30.7	+2.8
MA2	**Magadan**	6.96	298	Pn	Pn	21 26 36.4	+1.8
	comp=Z,1.6nm,0.3s,baz=98,slow=10,SNR=7.2						
MA2				LR	LR	21 29 12.2	
	comp=Z,2μm,20.3s,baz=118,slow=38						
	comp=Z,19nm,0.6s						
MA2	**Magadan**	6.96	298	Pn	Pn	21 26 36.0	+1.4
MA2	**Magadan**	6.96	298	cePN	Pn	21 26 36.3	+1.8
MA2				pmax	pmax		
	comp=Z,105nm,1.7s						
SKR	**Severo-Kuril’s**	7.38	216	ePN	Pn	21 26 41.1	+0.9
SKR				eS	Sn	21 28 07.7	+4.9
SKR				pmax	pmax		
	comp=Z,29nm,0.3s						
SKR				pmax	pmax		
	comp=Z,300nm,2.1s						
SKR				smax	smax		
	comp=E,133nm,0.9s						
SKR				smax	smax		
	comp=N,46nm,0.6s						
SKR	**Severo-Kuril’s**	7.38	216	eP	Pn	21 26 41.3	+1.0
SHEM	**Shemya Is, Ala**	7.68	118	Pn	Pn	21 26 43.9	-0.4
	comp=N,34nm,0.3s,baz=270,slow=2.9,SNR=16						
SHEM				Sn	Sn	21 28 11.5	+1.4
	comp=N,14nm,0.3s,baz=264,slow=23,SNR=9.0						
SHEM				LR	LR	21 28 32.2	
	comp=N,312nm,19.6s,baz=307,slow=29						
	comp=N,126nm,0.5s						
SMY	**Shemya**	7.68	118	Pn	Pn	21 26 44.1	-0.2
SMY	**Shemya**	7.68	118	PN	Pn	21 26 44.1	-0.2
SEY	**Seymchan**	8.06	323	Pn	Pn	21 26 51.4	+1.9
	comp=N,0.6nm,0.3s,baz=124,slow=14,SNR=12						
SEY	**Seymchan**	8.06	323	cePN	Pn	21 26 51.5	+1.9
SEY				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BILL	**Bilibino**	11.33	6	Pn	Pn	21 27 36.7	+2.5
BILL	**Bilibino**	11.33	6	cePN	Pn	21 27 37.0	+2.8
BILL				pmax	pmax		
	comp=Z,29nm,1.3s						
BILL				MLR	MLR		
	comp=Z,7μm,11.0s						
OKH	**Okha**	11.87	262	dePN	Pn	21 27 49.2	+7.5
OKH				eS	Sn	21 30 03.6	+11
OKH				pmax	pmax		
	comp=Z,200nm,9.4s						
OKH				smax	smax		
	comp=E,300nm,13.4s						
OKH				MLR	MLR		
	comp=E,2μm,13.0s						
OKH				MLR	MLR		
	comp=N,1μm,11.0s						
OKH				MLR	MLR		
	comp=Z,3μm,13.0s						
KIWB	**Kanaga Island**	12.65	105		Pn	21 27 53.1	+0.8
ADK	**Adak**	12.88	104	Pn	Pn	21 27 54.4	-1.1
ADK	**Adak**	12.88	104	PN	Pn	21 27 54.4	-1.1
NKL	**Nikolayevsk**	13.27	263	ePN	Pn	21 28 00.0	-0.8
NKL				pmax	pmax		
	comp=N,35nm,1.0s						
NKL				pmax	pmax		
	comp=E,71nm,1.0s						
NKL				pmax	pmax		
	comp=Z,98nm,1.0s						
NKL				MLR	MLR		

	comp=N,4µm,15.0s						
NKL				MLR	MLR		
	comp=E,7µm,14.0s						
NKL				MLR	MLR		
	comp=Z,9µm,14.0s						
TYV	**Tymovskoe**	**13.35**	**252**	*e*PN	**Pn**	**21 28 06.6**	**+4.7**
TYV				*e*S	Sn	21 30 39.6	+11
TYV				pmax	pmax		
	comp=Z,59nm,1.2s						
TYV				pmax	pmax		
	comp=Z,300nm,2.1s						
TYV				smax	smax		
	comp=N,400nm,5.7s						
TYV				smax	smax		
	comp=E,200nm,5.7s						
UGL	**Uglegorsk**	**14.73**	**247**	*c i*P	**Pn**	**21 28 23.5**	**+2.8**
UGL				*e*S	**Sn**	**21 31 11.4**	**+8.7**
UGL				pmax	pmax		
	comp=Z,140nm,1.1s						
UGL				pmax	pmax		
	comp=Z,840nm,4.5s						
UGL				smax	smax		
	comp=E,440nm,4.0s						
UGL				smax	smax		
	comp=N,720nm,6.0s						
UGL				MLR	MLR		
	comp=E,2µm,13.0s						
UGL				MLR	MLR		
	comp=N,2µm,12.0s						
UGL				MLR	MLR		
	comp=Z,2µm,17.0s						
YSS	**Yuzh-Sakhalins**	**15.84**	**240**		**Pn**	**21 28 35.9**	**+0.5**
YSS				IAmb	IAmb	21 28 38.0	
	comp=Z,126nm,1.0s						
YSS	**Yuzh-Sakhalins**	**15.84**	**240**	*αe*P	**Pn**	**21 28 36.6**	**+1.3**
YSS				*e*S	**Sn**	**21 31 33.2**	**+3.4**
YSS				pmax	pmax		
	comp=Z,120nm,1.2s						
YSS				pmax	pmax		
	comp=Z,800nm,5.8s						
YSS				pmax	pmax		
	comp=N,300nm,5.9s						
YSS				smax	smax		
	comp=N,200nm,7.8s						
YSS				MLR	MLR		
	comp=Z,3µm,13.0s						
YSS				MLR	MLR		
	comp=N,2µm,12.0s						
YSS				MLR	MLR		
	comp=E,2µm,13.0s						
TNA	**Tin City**	**16.38**	**46**	P	**P**	**21 28 46.4**	**+1.8**
TNA	**Tin City**	**16.38**	**46**	P	**Pn**	**21 28 43.2**	**+1.2**
	baz=252,SNR=36						
NIKH	**Nikolski High**	**16.63**	**92**	P	**Pn**	**21 28 45.3**	**0.0**
	baz=294						
GRNR	**Gornyy**	**16.72**	**260**	⇑*i*P	**P**	**21 28 48.1**	**-0.4**
GRNR				*e*S	**Sn**	**21 31 55.1**	**+4.1**
GRNR				pmax	pmax		
	comp=N,4.0nm,0.8s						
GRNR				pmax	pmax		
	comp=E,6.0nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GRNR				smax	smax		
	comp=N,2.0nm,0.7s						
GRNR				MLR	MLR		
	comp=N,1µm,18.0s						
GRNR				MLR	MLR		
	comp=Z,880nm,16.0s						
YUK	**Yuzh-Kuril'sk**	**16.75**	**227**	*e*P	**Pn**	**21 28 41.3**	**-5.5**
YUK				*e*S	**Sn**	**21 31 44.8**	**-6.9**
YUK				pmax	pmax		
	comp=E,180nm,1.1s						
YUK				pmax	pmax		
	comp=Z,291nm,1.1s						
YUK				pmax	pmax		
	comp=N,213nm,0.8s						
YUK				pmax	pmax		
	comp=Z,338nm,1.6s						
YUK				MLR	MLR		
	comp=Z,4µm,14.0s						
YUK				MLR	MLR		
	comp=E,2µm,13.0s						
YUK				MLR	MLR		
	comp=N,3µm,14.0s						
ANM	**Nome**	**17.16**	**50**		**P**	**21 28 53.3**	**0.0**
ANM	**Nome**	**17.16**	**50**	P	**P**	**21 28 53.3**	**0.0**
ANM				pmax	pmax		
	comp=Z,70nm,1.2s						
ANM	**Nome**	**17.16**	**50**	P	**P**	**21 28 53.2**	**0.0**
	baz=258,SNR=25						
YAK	**Yakutsk**	**17.53**	**301**	P	**Pn**	**21 28 55.7**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=318,slow=2.6,SNR=6.9						
YAK				LR	LR	21 35 38.1	
	comp=Z,570nm,18.6s,baz=104,slow=37						
	comp=Z,4.6nm,0.4s						
YAK	**Yakutsk**	**17.53**	**301**	P	**Pn**	**21 28 56.0**	**-0.5**
YAK	**Yakutsk**	**17.53**	**301**	*e*P	**Pn**	**21 28 55.5**	**-1.0**
YAK				*e*S	**Sn**	**21 32 07.9**	**-2.5**
YAK				pmax	pmax		
	comp=Z,92nm,1.0s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,46nm,1.2s						
YAK				smax	smax		
	comp=N,167nm,3.5s						
YAK				smax	smax		
	comp=E,111nm,3.2s						
YAK				MLR	MLR		
	comp=Z,1µm,12.0s						
YAK				MLR	MLR		
	comp=E,788nm,13.0s						
JKA	**Kamikawa-asahi**	**18.06**	**234**		**Pn**	**21 29 02.6**	**-0.5**
JKA				IAmb	IAmb	21 29 05.1	
	comp=Z,178nm,0.8s						
ASAJ	**Asahikawa**	**18.06**	**234**	P	**Pn**	**21 29 02.6**	**-0.5**
	comp=Z,6.5nm,0.3s,baz=52,slow=7.5,SNR=119						
ASAJ				LR	LR	21 36 01.1	
	comp=Z,2µm,19.3s,baz=50,slow=37						
	comp=Z,172nm,0.8s						
ASAJ	**Asahikawa**	**18.06**	**234**	P	**Pn**	**21 29 02.7**	**-0.5**
ASAJ				pmax	pmax		
	comp=Z,178nm,0.8s						
RDOG	**Red Dog Mine**	**19.06**	**40**	P	**Pn**	**21 29 16.2**	**+1.1**
RDOG	**Red Dog Mine**	**19.06**	**40**	P	**P**	**21 29 14.4**	**+0.1**
	baz=251,SNR=10.0						
JEM	**Erimo**	**19.53**	**229**	P	**P**	**21 29 17.4**	**-2.0**
ERM	**Erimo**	**19.53**	**229**	P	**P**	**21 29 16.8**	**-2.6**
ERM	**Erimo**	**19.53**	**229**	P	**P**	**21 29 17.3**	**-2.1**
ERM	**Erimo**	**19.53**	**229**	*ce*P	**P**	**21 29 18.4**	**-1.0**
ERM				pmax	pmax		
	comp=Z,201nm,1.0s						
N16K	**Nishlik Lake**	**20.05**	**64**	P	**P**	**21 29 24.7**	**-0.4**
	baz=276,SNR=7.5						
KLR	**Kul'dur**	**20.09**	**261**	P	**P**	**21 29 24.8**	**-0.8**
	comp=Z,9.5nm,0.8s,baz=50,slow=12,SNR=14						
KLR				LR	LR	21 37 51.7	
	comp=Z,987nm,18.2s,baz=61,slow=39						
	comp=Z,9.5nm,0.8s						
KLR	**Kul'dur**	**20.09**	**261**	*ce*P	**P**	**21 29 24.1**	**-1.4**
KLR				pmax	pmax		
	comp=Z,28nm,1.4s						
TEY	**Ternei**	**20.21**	**245**	*e*P	**P**	**21 29 24.9**	**-2.0**
ZEA	**Zeya**	**20.39**	**276**	*e*P	**P**	**21 29 28.7**	**-0.1**
ZEA				*e*		21 29 47.4	
ZEA				*e*S	**S**	**21 33 06.4**	**-9.0**
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,200nm,2.3s						
ZEA				smax	smax		
	comp=E,400nm,9.7s						
ZEA				MLR	MLR		
	comp=E,2µm,13.0s						
ZEA				MLR	MLR		
	comp=N,600nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,13.0s						
TIXI	**Tiksi**	**20.48**	**330**	P	Pn	21 29 30.3	-1.6
	comp=Z,41nm,0.9s,baz=90,slow=20,SNR=39						
	comp=Z,41nm,0.9s						
TIXI	**Tiksi**	**20.48**	**330**	P	**P**	**21 29 29.7**	**+0.1**
TIXI	**Tiksi**	**20.48**	**330**	*ce*P	**P**	**21 29 29.8**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,47nm,0.9s						
P16K	**Nushagak River**	**20.66**	**68**	P	**P**	**21 29 32.0**	**+0.3**
	baz=281						
GCSA	**Galena City Sc**	**20.81**	**51**	P	**P**	**21 29 33.6**	**+0.4**
	baz=267						
O17K	**Koliganek Bris**	**20.98**	**65**	P	**P**	**21 29 33.5**	**-1.6**
	baz=280						
Q16K	**King Salmon**	**21.42**	**68**	P	**P**	**21 29 39.4**	**-0.4**
	baz=282						
JTM	**Tenmabayashi**	**21.42**	**231**	P	**P**	**21 29 38.7**	**-1.3**
	comp=Z,92nm,1.4s						
SVW2	**Sparrevohn**	**21.53**	**61**	P	**P**	**21 29 41.8**	**+0.8**
SVW2				IAmb	IAmb	21 29 59.4	
	comp=Z,124nm,1.8s						
L19K	**White Mountain**	**21.76**	**58**	P	**P**	**21 29 44.5**	**+1.1**
L19K	**White Mountain**	**21.76**	**58**	P	**P**	**21 29 44.2**	**+0.7**
	baz=275						
R17K	**Ugashik Creek**	**21.81**	**71**	P	**P**	**21 29 44.0**	**0.0**
	baz=285						
HEH	**HeiHe**	**21.90**	**268**	P	**P**	**21 29 42.0**	**-3.1**
HEH				pP	**pP**	**21 29 53.8**	**+0.4**
HEH				PP	**PnPn**	**21 30 04.0**	**-2.8**
HEH				S	**S**	**21 33 39.8**	**-5.3**
HEH				pmax	pmax		
	comp=Z,23nm,1.0s						
HEH				pmax	pmax		
	comp=Z,210nm,4.9s						
HEH				LR	LR		
	comp=Z,3µm,17.0s						
HEH				LR	LR		
	comp=Z,2µm,16.4s						
HEH				LR	LR		
	comp=Z,4µm,13.9s						
Q17K	**Contact Creek**	**21.91**	**69**	P	**P**	**21 29 45.8**	**+0.7**
	baz=284						
O18K	**Koktuh Hills**	**21.91**	**65**	P	**P**	**21 29 46.5**	**+1.4**
O18K	**Koktuh Hills**	**21.91**	**65**	P	**P**	**21 29 45.0**	**0.0**
	baz=280						
P18K	**Big Mountain,**	**21.99**	**66**	P	**P**	**21 29 47.0**	**+1.1**
P18K	**Big Mountain,**	**21.99**	**66**	P	**P**	**21 29 46.9**	**+0.9**
	baz=282						
M19K	**Big River Lodg**	**22.00**	**59**	P	**P**	**21 29 48.0**	**+1.9**
M19K				IAmb	IAmb	21 30 07.9	
	comp=Z,55nm,0.9s						
M19K	**Big River Lodg**	**22.00**	**59**	P	**P**	**21 29 46.6**	**+0.6**
	baz=276						
K20K	**Telida**	**22.04**	**55**	P	**P**	**21 29 47.3**	**+0.8**
K20K				IAmb	IAmb	21 29 53.5	
	comp=Z,58nm,0.9s						
K20K	**Telida**	**22.04**	**55**	P	**P**	**21 29 46.6**	**+0.1**
	baz=273,SNR=34						
N19K	**Bonanza Creek**	**22.10**	**62**	P	**P**	**21 29 48.3**	**+1.0**
N19K	**Bonanza Creek**	**22.10**	**62**	P	**P**	**21 29 47.6**	**+0.4**
	baz=279						
L20K	**Farewell, AK**	**22.18**	**57**	P	**P**	**21 29 48.6**	**+0.5**
	baz=275						
IMAR	**Indian Mountai**	**22.19**	**48**	P	**P**	**21 29 48.3**	**+0.3**
Q18K	**Katmai Hardscr**	**22.26**	**68**	P	**P**	**21 29 49.8**	**+0.8**
	baz=284						
O19K	**Port Alsworth**	**22.28**	**63**	P	**P**	**21 29 49.9**	**+0.9**
O19K	**Port Alsworth**	**22.28**	**63**	P	**P**	**21 29 48.1**	**-1.0**
	baz=280						
G21K	**Allakaket**	**22.32**	**47**	P	**P**	**21 29 50.5**	**+1.0**
	baz=266						
F21K	**Alatna River**	**22.40**	**45**	P	**P**	**21 29 51.3**	**+1.0**
	baz=264						
H21K	**Melozitna Rive**	**22.56**	**49**	P	**P**	**21 29 51.7**	**-0.4**
H21K	**Melozitna Rive**	**22.56**	**49**	P	**P**	**21 29 52.8**	**+0.7**
	baz=268						
M20K	**Styx River**	**22.60**	**59**	P	**P**	**21 29 53.3**	**+0.8**
M20K	**Styx River**	**22.60**	**59**	P	**P**	**21 29 51.9**	**-0.6**
	baz=277						
CHUM	**Lake Minchumin**	**22.79**	**54**	P	**P**	**21 29 54.7**	**+0.2**
	baz=273,SNR=9.2						
I21K	**Tanana**	**22.90**	**50**	P	**P**	**21 29 55.8**	**+0.3**
I21K				IAmb	IAmb	21 30 02.4	
	comp=Z,41nm,0.9s						
I21K	**Tanana**	**22.90**	**50**	P	**P**	**21 29 55.6**	**+0.1**
	baz=270,SNR=36						
ILSW	**Iliamna Southw**	**22.90**	**64**	P	**P**	**21 29 56.9**	**+1.1**
ILSW				IAmb	IAmb	21 30 10.6	
	comp=Z,53nm,1.0s						
PPLA	**Purkeypile**	**22.92**	**56**	P	**P**	**21 29 56.3**	**+0.3**
PPLA				IAmb	IAmb	21 30 14.7	
	comp=Z,132nm,1.5s						
PPLA	**Purkeypile**	**22.92**	**56**	P	**P**	**21 29 56.5**	**+0.5**
	baz=275						
CAST	**Castle Rocks**	**22.93**	**55**	P	**P**	**21 29 56.6**	**+0.8**
CAST	**Castle Rocks**	**22.93**	**55**	P	**P**	**21 29 56.1**	**+0.2**
	baz=274,SNR=5.8						
F22K	**John River**	**22.93**	**44**	P	**P**	**21 29 57.7**	**+1.8**
	baz=264						
RSO	**Redoubt South**	**23.00**	**62**	P	**P**	**21 29 58.2**	**+1.3**
SPCR	**Spurr Chakacha**	**23.13**	**60**	P	**P**	**21 29 58.3**	**+0.2**
	baz=279						
O20K	**Slope Mountain**	**23.14**	**63**	P	**P**	**21 29 58.6**	**+0.4**
	baz=282						
USA0B	**Ussuriysk Arra**	**23.15**	**250**	P	**P**	**21 29 56.5**	**-1.7**
USA0B				IAmb	IAmb	21 30 08.5	
	comp=Z,57nm,1.1s						
USA0B	**Ussuriysk Arra**	**23.15**	**250**	P	**P**	**21 29 56.5**	**-1.7**
USA0B				pmax	pmax		
	comp=Z,57nm,1.2s						
USRK	**Ussuriysk Ar.**	**23.15**	**250**	P	**P**	**21 29 56.5**	**-1.8**
	comp=Z,4.6nm,0.6s,baz=40,slow=12,SNR=6.6						
USRK				LR	LR	21 39 39.9	
	comp=Z,1µm,19.2s,baz=41,slow=39						
	comp=Z,4.6nm,0.6s						
USRK	**Ussuriysk Ar.**	**23.15**	**250**	P	**P**	**21 29 56.2**	**-2.0**
SPU	**Mount Spurr**	**23.21**	**60**	P	**P**	**21 30 00.5**	**+1.6**
SKT	**Skwentna**	**23.34**	**58**	P	**P**	**21 30 00.5**	**+0.5**
SKT				IAmb	IAmb	21 30 05.8	
	comp=Z,45nm,0.8s						
SKT	**Skwentna**	**23.34**	**58**	P	**P**	**21 30 00.2**	**+0.2**
	baz=278,SNR=8.6						
BPAW	**Bear Paw Mtn.**	**23.36**	**53**	P	**P**	**21 30 00.6**	**+0.3**
BPAW				IAmb	IAmb	21 30 08.9	
	comp=Z,45nm,1.0s						
BPAW	**Bear Paw Mtn.**	**23.36**	**53**	P	**P**	**21 30 00.3**	**0.0**
	baz=274,SNR=27						
MLY	**Manley**	**23.43**	**51**	P	**P**	**21 30 01.3**	**+0.4**
MLY				IAmb	IAmb	21 30 07.6	
	comp=Z,40nm,0.8s						
MLY	**Manley**	**23.43**	**51**	P	**P**	**21 30 00.5**	**-0.5**
	baz=272,SNR=47						
KTH	**Kantishna Hill**	**23.43**	**54**	P	**P**	**21 30 01.0**	**0.0**
KTH				IAmb	IAmb	21 30 06.8	
	comp=Z,79nm,1.2s						
OHAK	**Old Harbor**	**23.53**	**71**	P	**P**	**21 30 01.6**	**-0.3**
	baz=288						
D23K	**Nanushuk River**	**23.65**	**41**	P	**P**	**21 30 03.5**	**+0.5**
	baz=263						
G23K	**Bananza Creek**	**23.72**	**46**	P	**P**	**21 30 04.5**	**+0.7**
	baz=268						
TRF	**Thorofare Moun**	**23.73**	**55**	P	**P**	**21 30 04.6**	**+0.6**
TRF	**Thorofare Moun**	**23.73**	**55**	P	**P**	**21 30 03.2**	**-0.8**
	baz=276,SNR=48						
KDAK	**Kodiak Island**	**23.73**	**69**	LR	LR	21 39 17.4	
	comp=Z,473nm,19.0s,baz=281,slow=36						
SUA	**Susitna One**	**23.79**	**59**	IAmb	IAmb	21 30 10.3	
	comp=Z,85nm,0.9s						
SUA	**Susitna One**	**23.79**	**59**	P	**P**	**21 30 03.4**	**-1.0**
	baz=280,SNR=22						
CUT	**Chulitna**	**23.86**	**57**	P	**P**	**21 30 05.1**	**+0.1**
CUT				IAmb	IAmb	21 30 10.1	
	comp=Z,75nm,0.8s						
CUT	**Chulitna**	**23.86**	**57**	P	**P**	**21 30 03.8**	**-1.2**
	baz=278,SNR=7.3						
H23K	**Yukon River**	**23.91**	**49**	P	**P**	**21 30 06.6**	**+1.1**
H23K				IAmb	IAmb	21 30 12.2	
	comp=Z,62nm,0.8s						
H23K	**Yukon River**	**23.91**	**49**	P	**P**	**21 30 07.2**	**+1.7**
	baz=271						
CNPM	**China Poot**	**23.95**	**64**	P	**P**	**21 30 06.0**	**+0.2**
CNPM				IAmb	IAmb	21 30 21.8	
	comp=Z,131nm,1.5s						
E23K	**Chandalar**	**23.95**	**43**	P	**P**	**21 30 05.9**	**0.0**
	baz=266,SNR=51						
JMM	**Marumori**	**24.00**	**227**	P	**P**	**21 30 04.3**	**-2.2**
JMM				IAmb	IAmb	21 30 05.6	
	comp=Z,149nm,1.5s						
JMM	**Marumori**	**24.00**	**227**	P	**P**	**21 30 05.0**	**-1.5**
I23K	**Minto, Yukon-K**	**24.01**	**50**	P	**P**	**21 30 06.8**	**+0.5**
I23K				IAmb	IAmb	21 30 12.6	
	comp=Z,72nm,1.0s						
I23K	**Minto, Yukon-K**	**24.01**	**50**	P	**P**	**21 30 06.0**	**-0.4**
	baz=272,SNR=52						
BWN	**Browne**	**24.03**	**53**	P	**P**	**21 30 08.0**	**+1.4**
MDJ	**Mudanjiang**	**24.11**	**254**	P	**P**	**21 30 05.0**	**-2.5**
MDJ				pP	pP	21 30 15.3	-1.1
MDJ				sP	sP	21 30 19.3	-0.8
MDJ				S	**S**	**21 34 24.0**	**+0.9**
MDJ				pmax	pmax		
	comp=Z,14nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,290nm,4.3s						
MDJ				LR	LR		
	comp=Z,2µm,18.4s						
MDJ				LR	LR		
	comp=Z,2µm,18.6s						
MDJ				LR	LR		
	comp=Z,2µm,14.4s						
MDJ	**Mudanjiang**	**24.11**	**254**	P	**P**	**21 30 04.9**	**-2.6**
BRSE	**Bradley Lake S**	**24.14**	**64**	P	**P**	**21 30 07.3**	**-0.4**
	baz=284						
NEA2	**Nenana**	**24.16**	**52**	P	**P**	**21 30 07.9**	**0.0**
NEA2				IAmb	IAmb	21 30 14.7	
	comp=Z,37nm,0.8s						
NEA2	**Nenana**	**24.16**	**52**	P	**P**	**21 30 06.8**	**-1.0**
	baz=274,SNR=43						
MCK	**McKinley**	**24.30**	**54**	P	**P**	**21 30 09.8**	**+0.7**
MCK				IAmb	IAmb	21 30 15.0	
	comp=Z,92nm,1.1s						
MCK	**McKinley**	**24.30**	**54**	P	**P**	**21 30 09.8**	**+0.7**
MCK				pmax	pmax		
	comp=Z,92nm,1.1s						
MCK	**McKinley**	**24.30**	**54**	P	**P**	**21 30 10.3**	**+1.2**
	baz=276,SNR=33						
D24K	**Happy Valley**	**24.34**	**40**	P	**P**	**21 30 11.1**	**+1.7**
	baz=264						
E24K	**Your Creek**	**24.37**	**43**	P	**P**	**21 30 11.0**	**+1.3**
	baz=267						
RND	**Reindeer**	**24.37**	**54**	P	**P**	**21 30 10.2**	**+0.3**
RND	**Reindeer**	**24.37**	**54**	P	**P**	**21 30 10.2**	**+0.3**
RND				pmax	pmax		
	comp=Z,23nm,0.7s						
C24K	**Franklin Bluff**	**24.44**	**39**	P	**P**	**21 30 11.1**	**+0.8**
	baz=263						
O22K	**Cooper Landing**	**24.47**	**62**	P	**P**	**21 30 11.7**	**+1.1**
O22K				IAmb	IAmb	21 30 28.4	
	comp=Z,53nm,0.8s						
O22K	**Cooper Landing**	**24.47**	**62**	P	**P**	**21 30 12.1**	**+1.5**
	baz=283						
MDM	**Murphy Dome**	**24.50**	**51**	P	**P**	**21 30 11.7**	**+0.7**
MDM				IAmb	IAmb	21 30 16.9	
	comp=Z,43nm,0.9s						
PMR	**Palmer**	**24.52**	**59**	P	**P**	**21 30 12.3**	**+1.2**
PMR	**Palmer**	**24.52**	**59**	P	**P**	**21 30 12.3**	**+1.2**
PMR				pmax	pmax		
	comp=Z,12nm,0.8s						
PMR	**Palmer**	**24.52**	**59**	P	**P**	**21 30 11.7**	**+0.7**
	baz=281						
BNX	**BinXian**	**24.54**	**258**	⇓P	**P**	**21 30 10.0**	**-1.4**
BNX				pP	**sP**	**21 30 23.0**	**-1.0**
BNX				PP	**PnPn**	**21 30 41.3**	**-1.6**
BNX				S	**S**	**21 34 26.3**	**-3.6**
BNX				pmax	pmax		
	comp=Z,31nm,1.2s						
BNX				pmax	pmax		
	comp=Z,250nm,8.6s						
BNX				LR	LR		
	comp=Z,2µm,13.6s						
BNX				LR	LR		
	comp=Z,750nm,13.0s						
BNX				LR	LR		
	comp=Z,1µm,11.2s						
F24K	**Squaw Lake**	**24.58**	**44**	P	**P**	**21 30 12.6**	**+0.9**
	baz=269,SNR=28						
GHO	**Glory Hole Cre**	**24.59**	**58**	P	**P**	**21 30 13.4**	**+1.6**
GHO				IAmb	IAmb	21 30 19.9	
	comp=Z,35nm,0.9s						
H24K	**Noodor Dome**	**24.60**	**48**	P	**P**	**21 30 13.0**	**+1.2**
H24K				IAmb	IAmb	21 30 18.4	
	comp=Z,37nm,1.1s						
H24K	**Noodor Dome**	**24.60**	**48**	P	**P**	**21 30 13.4**	**+1.6**
	baz=272						
WRH	**Wood River Hil**	**24.60**	**52**	P	**P**	**21 30 12.0**	**+0.2**
TCOL	**CIGO, UAF Yank**	**24.66**	**51**	P	**P**	**21 30 13.7**	**+1.4**
TCOL	**CIGO, UAF Yank**	**24.66**	**51**	P	**P**	**21 30 13.6**	**+1.3**
	baz=274,SNR=10						
COLA	**College**	**24.67**	**51**	P	**P**	**21 30 12.6**	**+0.3**
COLA	**College**	**24.67**	**51**	*i* P	**P**	**21 30 11.5**	**-0.8**
COLA				pmax	pmax		
	comp=Z,76nm,0.9s						
COLA	**College**	**24.67**	**51**	P	**P**	**21 30 13.6**	**+1.3**
	baz=274						
G24K	**Hadweenzic Riv**	**24.74**	**46**	P	**P**	**21 30 15.0**	**+2.0**
	baz=271						
POKR	**Poker Plat Res**	**24.82**	**50**	P	**P**	**21 30 15.1**	**+1.2**
POKR				IAmb	IAmb	21 30 32.1	
	comp=Z,33nm,0.8s						
POKR	**Poker Plat Res**	**24.82**	**50**	P	**P**	**21 30 13.7**	**-0.1**
	baz=274						
SML	**Sawmill**	**24.86**	**58**	IAmb	IAmb	21 30 27.8	
	comp=Z,51nm,0.8s						
SML	**Sawmill**	**24.86**	**58**	P	**P**	**21 30 14.6**	**+0.4**
	baz=281,SNR=12						
KNK	**Knik Glacier**	**24.88**	**59**	IAmb	IAmb	21 30 21.4	
	comp=Z,39nm,0.8s						
KNK	**Knik Glacier**	**24.88**	**59**	P	**P**	**21 30 13.6**	**-0.8**
	baz=281						
JSD	**Sado**	**24.91**	**231**	P	**P**	**21 30 13.5**	**-1.3**
PWL	**Port Wells**	**25.05**	**60**	P	**P**	**21 30 15.0**	**-0.9**
	baz=283						
IL31		**25.09**	**51**	IAmb	IAmb	21 30 22.5	
	comp=Z,59nm,0.8s						
ILAR	**Eielson Array**	**25.09**	**51**	P	**P**	**21 30 17.3**	**+1.1**
	comp=Z,39nm,0.8s,baz=261,slow=8.2,SNR=46						
ILAR				LR	LR	21 41 43.0	
	comp=Z,452nm,19.5s,baz=288,slow=40						
	comp=Z,39nm,0.8s						
HDA	**Harding Lake**	**25.10**	**52**	IAmb	IAmb	21 30 22.1	
	comp=Z,34nm,0.8s						
HDA	**Harding Lake**	**25.10**	**52**	P	**P**	**21 30 16.0**	**-0.3**
	baz=276,SNR=13						
M23K	**Glacier View**	**25.14**	**58**	P	**P**	**21 30 16.4**	**-0.3**
	baz=281,SNR=8.1						
D25K	**Kavik River**	**25.22**	**40**	P	**P**	**21 30 17.8**	**+0.4**
	baz=266,SNR=133						
G25K	**Bearman Lake**	**25.28**	**46**	P	**P**	**21 30 18.2**	**+0.3**
	baz=272						
SCM	**Sheep Creek Mo**	**25.32**	**58**	P	**P**	**21 30 17.6**	**-0.8**
	baz=281,SNR=28						
F25K	**Christian Rive**	**25.44**	**44**	P	**P**	**21 30 20.1**	**+0.7**
	baz=271						
E25K	**Arctic Village**	**25.47**	**43**	P	**P**	**21 30 20.0**	**+0.4**
	baz=270,SNR=29						
PRP	**Porcupine Dome**	**25.59**	**49**	P	**P**	**21 30 22.0**	**+1.1**
PRP				IAmb	IAmb	21 30 26.3	
	comp=Z,45nm,1.0s						
PRP	**Porcupine Dome**	**25.59**	**49**	P	**P**	**21 30 21.1**	**+0.1**
	baz=275,SNR=31						
FYU	**Fort Yukon**	**25.64**	**47**	IAmb	IAmb	21 30 28.1	
	comp=Z,54nm,0.8s						
K24K	**Donnelly Dome**	**25.68**	**53**	P	**P**	**21 30 19.9**	**-1.7**
	baz=278,SNR=5.1						
M24K	**Tolsona, Glenn**	**25.80**	**57**	P	**P**	**21 30 24.4**	**+1.7**
M24K	**Tolsona, Glenn**	**25.80**	**57**	P	**P**	**21 30 22.7**	**-0.1**
	baz=282,SNR=12						
BOD	**Bodaibo**	**25.96**	**293**	*e*P	**P**	**21 30 23.8**	**-0.3**
BOD				pmax	pmax		
	comp=Z,63nm,1.6s						
PAX	**Paxson**	**25.96**	**55**	P	**P**	**21 30 25.0**	**+0.8**
PAX	**Paxson**	**25.96**	**55**	P	**P**	**21 30 25.0**	**+0.8**
PAX				pmax	pmax		
	comp=Z,32nm,1.2s						
PAX	**Paxson**	**25.96**	**55**	P	**P**	**21 30 23.8**	**-0.4**
	baz=280						
F26K	**Sheenjek River**	**26.01**	**44**	P	**P**	**21 30 25.2**	**+0.6**
	baz=272						
KLU	**Klutina**	**26.05**	**58**	P	**P**	**21 30 26.1**	**+1.1**
KLU				IAmb	IAmb	21 30 34.8	
	comp=Z,53nm,0.9s						
KLU	**Klutina**	**26.05**	**58**	P	**P**	**21 30 25.7**	**+0.7**
	baz=283,SNR=10						
RIDG	**Independent Ri**	**26.10**	**53**	P	**P**	**21 30 25.4**	**0.0**
RIDG				IAmb	IAmb	21 30 29.3	
	comp=Z,38nm,1.0s						
RIDG	**Independent Ri**	**26.10**	**53**	P	**P**	**21 30 25.2**	**-0.3**
	baz=279,SNR=9.5						
C27K	**Jago River**	**26.17**	**40**	P	**P**	**21 30 27.0**	**+1.0**
	baz=268						
G26K	**Porcupine Rive**	**26.19**	**46**	P	**P**	**21 30 26.4**	**+0.3**
	baz=274						
MJB9	**Matsu-Tunnel**	**26.20**	**230**	P	**P**	**21 30 25.0**	**-1.5**

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MJB9                                IAmb   IAmb      21 30 26.9
        comp=Z,37nm,0.9s
MAJO  Matsushiro       26.20 230    P      P         21 30 24.7  -1.8
MAJO                                IAmb   IAmb      21 30 26.9
        comp=Z,36nm,0.9s
MAJO  Matsushiro       26.20 230    P      P         21 30 24.7  -1.8
MAJO                                pmax   pmax
        comp=Z,36nm,0.9s
MJAR  Matsushiro Arr   26.20 230    P      P         21 30 25.3  -1.2
        comp=Z,28nm,1.0s,baz=22,slow=8.4,SNR=42
MJAR                                LR     LR        21 41 47.2
        comp=Z,2µm,19.2s,baz=30,slow=39
        comp=Z,28nm,1.0s
DIV   Divide           26.20  59    P      P         21 30 26.6  +0.2
DIV                                 IAmb   IAmb      21 30 46.5
        comp=Z,80nm,1.4s
HARP  HAARP            26.21  56    P      P         21 30 27.3  +0.9
        baz=282
SCRK  Sand Creek       26.44  52    IAmb   IAmb      21 30 32.5
        comp=Z,52nm,0.8s
SCRK  Sand Creek       26.44  52    P      P         21 30 28.5  -0.1
        baz=279,SNR=51
I26K  Coal Creek Min   26.60  49    P      P         21 30 31.1  +1.3
N25K  Chitina, Valde   26.64  58    P      P         21 30 31.1  +0.8
N25K  Chitina, Valde   26.64  58    P      P         21 30 32.4  +2.0
        baz=284,SNR=5.5
MENT  Mentasta         26.75  55    P      P         21 30 32.3  +1.0
CN2   Changchun        26.87 257    P      P         21 30 31.3  -1.2
CN2                                 S      S         21 34 59.3  -7.5
CN2                                 pmax   pmax
        comp=Z,10.0nm,0.6s
CN2                                 pmax   pmax
        comp=Z,200nm,6.0s
CN2                                 LR     LR
        comp=Z,2µm,14.0s
CN2                                 LR     LR
        comp=Z,1µm,14.0s
CN2                                 LR     LR
        comp=Z,900nm,15.0s
L26K  Log Cabin Wild   26.90  54    P      P         21 30 33.9  +1.3
L26K  Log Cabin Wild   26.90  54    P      P         21 30 33.0  +0.4
        baz=282,SNR=5.3
E27K  Coleen River     26.95  43    P      P         21 30 32.8  -0.3
        baz=273
G27K  Doyon Strip      27.04  46    P      P         21 30 34.0  +0.1
        baz=276
GLB   Gilahina Butte   27.05  58    P      P         21 30 35.4  +1.4
GLB                                 IAmb   IAmb      21 31 01.3
        comp=Z,40nm,1.3s
H27K  Steamboat Moun   27.15  47    P      P         21 30 36.7  +1.8
        baz=277
M26K  Nabesna, AK      27.19  56    P      P         21 30 35.8  +0.5
M26K                                IAmb   IAmb      21 30 43.9
        comp=Z,37nm,0.9s
M26K  Nabesna, AK      27.19  56    P      P         21 30 35.8  +0.5
        baz=283
I27K  Kandik River     27.20  48    P      P         21 30 35.9  +0.6
        baz=278
K27K  Chicken          27.26  52    P      P         21 30 36.3  +0.5
K27K                                IAmb   IAmb      21 30 40.6
        comp=Z,34nm,1.0s
K27K  Chicken          27.26  52    P      P         21 30 36.4  +0.6
        baz=281
VRDI  Verde Repeater   27.27  58    P      P         21 30 35.9  -0.3
JGF   Kuroka           27.36 230    P      P         21 30 34.3  -2.7
JGF   Kuroka           27.36 230    P      P         21 30 35.8  -1.2
MCARA McCarthy VSAT    27.43  58    P      P         21 30 38.8  +1.4
MCARA                               IAmb   IAmb      21 30 44.2
        comp=Z,69nm,1.1s
MCARA McCarthy VSAT    27.43  58    P      P         21 30 39.3  +1.9
        baz=285,SNR=9.7
EGAK  Eagle            27.52  50    P      P         21 30 37.9  -0.2
EGAK                                IAmb   IAmb      21 30 42.1
        comp=Z,41nm,0.8s
EGAK  Eagle            27.52  50    P      P         21 30 37.9  -0.2
        baz=280,SNR=33
L27K  Beaver Creek,    27.57  54    P      P         21 30 39.1  +0.5
L27K                                IAmb   IAmb      21 30 44.2
        comp=Z,31nm,0.9s
L27K  Beaver Creek,    27.57  54    P      P         21 30 39.4  +0.8
        baz=283
M27K  Edge Creek, AK   27.71  55    IAmb   IAmb      21 30 45.9
        comp=Z,36nm,0.8s
M27K  Edge Creek, AK   27.71  55    P      P         21 30 40.4  +0.4
        baz=284
BARN  Barnard Glacie   28.15  58    P      P         21 30 44.5  +0.4
BARN                                IAmb   IAmb      21 30 54.8
        comp=Z,22nm,0.8s
BVCY  Beaver Creek     28.15  55    P      P         21 30 44.4  +0.6
        baz=284,SNR=5.8
DAWY  Dawson           28.41  51    P      P         21 30 47.6  +1.4
DAWY  Dawson           28.41  51    P      P         21 30 48.1  +1.9
        baz=283
YUK3  Moose Creek      28.50  56    P      P         21 30 48.0  +0.8
        baz=286
I29M  Ogilvie Camp,    28.60  49    P      P         21 30 48.0  +0.2
I29M                                IAmb   IAmb      21 30 52.9
        comp=Z,42nm,1.1s
I29M  Ogilvie Camp,    28.60  49    P      P         21 30 49.0  +1.2
        baz=281,SNR=19
O28M  Mount Upton      28.92  58    P      P         21 30 52.2  +1.2
        baz=288
YUK8  Steele Glacier   28.96  57    P      P         21 30 52.4  +1.1
        baz=287
EPYK  Eagle Plains     29.05  46    P      P         21 30 53.5  +1.7
        baz=280
PCA   Pinnacle         29.11  60    P      P         21 30 53.5  +1.2
PCA                                 IAmb   IAmb      21 30 57.6
        comp=Z,32nm,0.8s
PINM  Pinnacle         29.11  60    P      P         21 30 52.8  +0.4
        baz=289
G30M  tAoh Zraii Nji   29.14  45    P      P         21 30 53.3  +0.8
        baz=280
L29M  L29M             29.19  53    P      P         21 30 53.8  +0.7
        baz=285,SNR=8.5
M29M  Somme Creek      29.22  54    P      P         21 30 54.3  +0.8
        baz=286
K29M  Barlow Dome      29.26  51    P      P         21 30 54.8  +0.9
        baz=284
YUK4  Talbot Arm       29.46  57    P      P         21 30 56.3  +0.7
        baz=288,SNR=6.4
PNL   Peninsula        29.66  60    P      P         21 30 57.5  +0.3
        baz=290
YUK6  Outpost Mounta   29.72  57    P      P         21 30 58.1  +0.1
        baz=289
O29M  Mount Kennedy    29.83  59    P      P         21 30 59.0  +0.2
        baz=290
M30M  Minto, Yukon     29.93  54    P      P         21 30 59.8  +0.3
        baz=287,SNR=5.1
INK   Inuvik           29.93  42    P      P         21 31 00.7  +1.2
        comp=Z,8.4nm,0.7s,baz=259,slow=6.4,SNR=10
INK                                 LR     LR        21 44 51.7
        comp=Z,450nm,19.3s,baz=291,slow=40
        comp=Z,8.4nm,0.7s
INK   Inuvik           29.93  42    P      P         21 31 00.7  +1.2
INK   Inuvik           29.93  42    P      P         21 31 00.5  +1.0
        baz=280,SNR=14
F31M  Tsiigehtchic     30.00  44    P      P         21 31 01.1  +1.0
        baz=281,SNR=18
HYT   Haines Junctio   30.15  57    P      P         21 31 02.7  +1.0
HYT                                 IAmb   IAmb      21 31 08.0
        comp=Z,24nm,0.8s
HYT   Haines Junctio   30.15  57    P      P         21 31 02.9  +1.2
        baz=289,SNR=8.9
KSRS  Korea Array      30.21 245    P      P         21 31 00.1  -2.2
        comp=Z,6.3nm,0.8s,baz=36,slow=9.2,SNR=18
KSRS                                PcP    PcP       21 34 02.8  +0.3
        comp=Z,2.0nm,0.9s,baz=24,slow=3.0,SNR=5.3
KSRS                                LR     LR        21 44 33.2
        comp=Z,912nm,18.0s,baz=50,slow=39
        comp=Z,6.3nm,0.8s
KSAR  Wonju Array Be   30.24 245    P      P         21 30 59.1  -3.4
KSAR  Wonju Array Be   30.24 245    P      P         21 30 59.1  -3.4
N31M  Braeburn, Yuko   30.72  55    P      P         21 31 08.7  +2.1
N31M  Braeburn, Yuko   30.72  55    P      P         21 31 07.2  +0.6
        baz=289
O30N  Mendenhall       30.82  57    P      P         21 31 08.3  +0.7
        baz=290,SNR=5.7
M31M  Drury Creek, Y   31.11  54    P      P         21 31 11.1  +1.1
M31M                                IAmb   IAmb      21 31 16.2
        comp=Z,28nm,0.8s
M31M  Drury Creek, Y   31.11  54    P      P         21 31 10.7  +0.7
        baz=289,SNR=12
PLBC  Pleasant Camp    31.17  59    P      P         21 31 11.5  +0.9
        baz=292
FARO  Faro, Yukon      31.56  53    P      P         21 31 14.9  +1.0
FARO                                IAmb   IAmb      21 31 20.0
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        comp=Z,21nm,1.0s
FARO  Faro, Yukon      31.56  53    P      P         21 31 15.1  +1.1
        baz=290,SNR=8.0
SKAG  Skagway          31.66  59    P      P         21 31 15.7  +0.9
        baz=293
XLT   XiLinHaoTe       31.89 266   eP      P         21 31 16.0  -1.1
XLT                                 pP     pP        21 31 24.8  -1.3
XLT                                 pmax   pmax
        comp=Z,11nm,1.0s
XLT                                 pmax   pmax
        comp=Z,100nm,5.4s
A36M  Sachs Harbour    32.07  34    P      P         21 31 19.1  +0.8
A36M  Sachs Harbour    32.07  34    P      P         21 31 19.4  +1.2
        baz=281,SNR=27
BESE  Bessie Mountai   32.24  60    P      P         21 31 20.3  +0.3
BESE                                IAmb   IAmb      21 31 29.6
        comp=Z,30nm,1.0s
JNU   Nakatsue         32.30 236    P      P         21 31 19.2  -1.5
        comp=Z,7.0nm,0.8s,baz=0.0,slow=8.1,SNR=2.6
JNU                                 LR     LR        21 44 37.0
        comp=Z,697nm,20.1s,baz=48,slow=37
        comp=Z,7.0nm,0.8s
MMPY  Sheldon Lake,    32.33  52    P      P         21 31 22.0  +1.2
        baz=290,SNR=9.5
P32M  Atlin            32.37  58    P      P         21 31 22.0  +0.9
        baz=293
R32K  Eaglecrest       32.53  61    P      P         21 31 22.0  -0.4
        baz=295
P33M  Teslin, Yukon    32.53  57    P      P         21 31 24.2  +1.6
P33M  Teslin, Yukon    32.53  57    P      P         21 31 23.3  +0.7
        baz=293,SNR=5.8
JIS   Juneau Island    32.59  61    P      P         21 31 24.7  +1.7
JIS                                 IAmb   IAmb      21 31 37.9
        comp=Z,32nm,1.0s
C36M  Paulatuk         33.05  38    P      P         21 31 27.4  +0.5
C36M  Paulatuk         33.05  38    P      P         21 31 27.5  +0.6
        baz=286,SNR=74
JCJ   Chichijima       33.22 215    LR     LR        21 45 03.2
        comp=Z,146nm,21.9s,baz=102,slow=37
Q32M  Nakina River     33.30  59    P      P         21 31 31.1  +1.6
        baz=295
IRK   Irkutsk          33.41 288   eP      P         21 31 30.1  -0.1
IRK                                 pmax   pmax
        comp=Z,40nm,1.7s
NRIK  Noril'sk         33.84 322    P      P         21 31 35.0  +1.1
        comp=Z,6.4nm,0.8s,baz=88,slow=9.1,SNR=6.0
NRIK                                LR     LR        21 46 50.8
        comp=Z,328nm,21.5s,baz=72,slow=39
        comp=Z,6.4nm,0.8s
NRIK  Noril'sk         33.84 322    P      P         21 31 34.6  +0.8
NRIK  Noril'sk         33.84 322ceP        P         21 31 34.0  +0.2
NRIK                                pmax   pmax
        comp=Z,8.0nm,1.0s
S34M  Telegraph Cree   34.30  60    P      P         21 31 39.6  +1.7
        baz=297
ULN   Ulaanbaatar      34.37 279    P      P         21 31 37.4  -1.4
ULN   Ulaanbaatar      34.37 279ceP        P         21 31 37.1  -1.7
ULN                                 pmax   pmax
        comp=Z,7.0nm,2.1s
WTLY  Watson Lake, Y   34.41  55    P      P         21 31 39.5  +0.7
WTLY                                IAmb   IAmb      21 31 44.9
        comp=Z,30nm,0.9s
WTLY  Watson Lake, Y   34.41  55    P      P         21 31 39.1  +0.2
        baz=295
WRAK  Wrangell Islan   34.41  63    P      P         21 31 40.1  +1.2
WRAK                                IAmb   IAmb      21 31 45.7
        comp=Z,28nm,1.1s
BJI   Beijing          34.46 261    P      P         21 31 38.0  -1.5
BJI                                 S      S         21 37 07.0  +1.4
BJI                                 pmax   pmax
        comp=Z,5.0nm,0.7s
BJI                                 pmax   pmax
        comp=Z,85nm,6.0s
BJI                                 LR     LR
        comp=Z,2µm,16.8s
BJI                                 LR     LR
        comp=Z,1µm,16.1s
DLBC  Dease Lake       34.59  59    LR     LR        21 46 53.9
        comp=Z,444nm,18.6s,baz=292,slow=38
DLBC  Dease Lake       34.59  59    P      P         21 31 40.7  +0.3
DLBC                                IAmb   IAmb      21 31 47.5
        comp=Z,24nm,0.8s
DLBC  Dease Lake       34.59  59    P      P         21 31 42.4  +2.0
        baz=297,SNR=8.0
SONM  Songino Array    34.74 280    P      P         21 31 41.0  -1.0
        comp=Z,1.3nm,0.5s,baz=62,slow=7.8,SNR=25
SONM                                PcP    PcP       21 34 14.8  -0.2
        comp=Z,2.5nm,1.0s,baz=94,slow=2.2,SNR=4.9
SONM                                ScP    ScP       21 38 01.4  +3.6
        comp=Z,1.7nm,1.1s,baz=315,slow=1.0,SNR=5.2
SONM                                LR     LR        21 47 12.4
        comp=Z,1µm,18.9s,baz=49,slow=39
        comp=Z,1.3nm,0.5s
SONM  Songino Array    34.74 280    P      P         21 31 39.8  -2.2
SONM  Songino Array    34.74 280    P      P         21 31 39.8  -2.2
SONM                                pmax   pmax
        comp=Z,4.0nm,1.0s
ZAK   Zakamensk        34.94 285   eP      P         21 31 45.3  +1.7
ZAK                                 pmax   pmax
        comp=Z,7.0nm,1.5s
T35M  Bob Quinn        35.16  61    P      P         21 31 47.5  +2.1
        baz=299,SNR=6.4
MOY   Mondy            35.43 289   eP      P         21 31 50.1  +2.3
MOY                                 pmax   pmax
        comp=Z,25nm,1.9s
HHC   Hu-ho-hao-te     36.41 266   eP      P         21 31 52.0  -4.4
HHC                                 pmax   pmax
        comp=Z,35nm,0.8s
HHC                                 pmax   pmax
        comp=Z,360nm,4.9s
HHC                                 LR     LR
        comp=Z,2µm,13.1s
HHC                                 LR     LR
        comp=Z,3µm,13.5s
KOTAN Kotaneelee Air   36.52  54    P      P         21 31 58.4  +1.4
        baz=298,SNR=7.2
GRNB  Grenville Isla   36.91  65    P      P         21 32 00.8  +0.5
HNS   HongShan         37.16 259   eP      P         21 32 11.3  +8.7
HNS                                 PP     PnPn      21 33 38.3  +10
HNS                                 PcP    PcP       21 34 42.0  +20
HNS                                eS      S         21 37 59.0  +12
HNS                                 SS     SnSn      21 40 14.5  -8.2
HNS                                 LR     LR
        comp=N,2µm,17.9s
HNS                                 LR     LR
        comp=E,3µm,17.1s
HNS                                 LR     LR
        comp=Z,2µm,14.3s
H11N2 WAKE ISLAND Hy   37.19 174    T      T         22 11 00.2
        baz=357,slow=76,SNR=425
H11N3 WAKE ISLAND Hy   37.21 174    T      T         22 11 08.5
        baz=357,slow=76,SNR=322
H11N1 WAKE ISLAND Hy   37.21 174    T      T         22 11 04.7
        baz=357,slow=76,SNR=375
BTO   Baotou           37.43 267⇓iP        P         21 32 04.5  -0.5
BTO                                 pmax   pmax
        comp=Z,440nm,3.4s
BTO                                 LR     LR
        comp=Z,4µm,17.1s
BTO                                 LR     LR
        comp=Z,5µm,16.3s
BTO                                 LR     LR
        comp=Z,4µm,13.5s
EUNU  Eureka           37.89  15    P      P         21 32 09.0  +0.6
EUNU                                IAmb   IAmb      21 32 13.8
        comp=Z,26nm,0.8s
BBB   Bella Bella      38.76  67    LR     LR        21 48 26.3
        comp=Z,218nm,18.3s,baz=322,slow=36
JOW   Kunigami         38.83 234    LR     LR        21 49 30.1
        comp=Z,424nm,18.7s,baz=102,slow=38
NJ2   Nanjing          39.05 250   eP      P         21 32 18.0  -0.6
NJ2                                 pP     pP        21 32 27.8  +0.2
NJ2                                 sP     sP        21 32 31.5  +0.2
NJ2                                 pmax   pmax
        comp=Z,5.0nm,0.6s
NJ2                                 pmax   pmax
        comp=Z,150nm,4.3s
NJ2                                 LR     LR
        comp=Z,830nm,14.7s
NJ2                                 LR     LR
        comp=Z,1µm,14.2s
NJ2                                 LR     LR
        comp=Z,1µm,15.6s
RES   Resolute Bay     39.22  24    P      P         21 32 20.1  +0.7
        comp=Z,7.7nm,0.8s,baz=311,slow=8.7,SNR=14
RES                                 PcP    PcP       21 34 31.1  +3.2
        comp=Z,3.9nm,0.9s,baz=49,slow=2.2,SNR=3.8
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RES                                 LR     LR        21 49 49.4
        comp=Z,193nm,20.6s,baz=350,slow=38
        comp=Z,7.7nm,0.8s
RES   Resolute Bay     39.22  24    P      P         21 32 20.1  +0.7
RES   Resolute Bay     39.22  24    P      P         21 32 20.2  +0.7
RES                                 pmax   pmax
        comp=Z,9.0nm,0.8s
YKA   Yellowknife Ar   39.34  47    P      P         21 32 21.4  +0.8
        comp=Z,17nm,0.7s,baz=299,slow=7.9,SNR=49
        comp=Z,17nm,0.7s
YKA   Yellowknife Ar   39.34  47  i P      P         21 32 21.3  +0.7
YKA                                 pmax   pmax
        comp=Z,17nm,0.7s
HILA  High Level       40.42  53    P      P         21 32 30.9  +1.1
LYN   LuoYang          40.49 259   eP      P         21 32 29.5  -1.0
LYN                                 LR     LR
        comp=Z,1µm,19.6s
LYN                                 LR     LR
        comp=Z,1µm,19.1s
LYN                                 LR     LR
        comp=Z,800nm,14.9s
WAPA  Wapiti River     41.33  58    P      P         21 32 38.1  +0.8
ZAA0  Zalesovo Array   42.18 301    P      P         21 32 43.5  -0.7
ZALV  Zalesovo Beam    42.18 301    P      P         21 32 43.6  -0.5
        comp=Z,4.5nm,0.8s,baz=48,slow=6.6,SNR=7.4
ZALV                                PcP    PcP       21 34 37.6  -0.2
        comp=Z,4.5nm,0.6s,baz=34,slow=4.3,SNR=7.2
ZALV                                LR     LR        21 52 10.5
        comp=Z,453nm,19.3s,baz=82,slow=39
        comp=Z,4.5nm,0.8s
LLLB  Lillooet         42.83  65    P      P         21 32 51.3  +1.8
TULEG Thule            42.89  16    P      P         21 32 53.4  +3.7
DGZ   Jazzator, Alta   43.53 294  i P      P         21 32 55.0  -0.4
DGZ                                 pmax   pmax
        comp=Z,17nm,1.0s
SPITS Spitsbergen Ar   43.68 351    LR     LR        21 51 08.8
        comp=Z,375nm,18.2s,baz=356,slow=36
SPITS Spitsbergen Ar   43.68 351    P      P         21 32 57.5  +1.4
SPITS                               pmax   pmax
        comp=Z,28nm,0.9s
SPB2  Spitsbergen Ar   43.68 351    P      P         21 32 57.2  +1.1
SPB2                                IAmb   IAmb      21 33 00.9
        comp=Z,33nm,0.9s
GTA   Gaotai           43.87 274  ⇑P       P         21 32 57.0  -1.2
GTA                                 pP     pP        21 33 04.3  -3.0
GTA                                 sP     sP        21 33 09.3  -1.7
GTA                                 sS     sS        21 39 43.8  +1.4
GTA                                 pmax   pmax
        comp=Z,16nm,0.8s
GTA                                 LR     LR
        comp=Z,1µm,14.5s
GTA                                 LR     LR
        comp=Z,2µm,14.2s
GTA                                 LR     LR
        comp=Z,2µm,14.5s
LZH   Lanzhou          44.05 268  ⇑P       P         21 32 59.5  -0.2
LZH                                 pP     sP        21 33 12.0  -0.5
LZH                                 sP     pP        21 33 15.5  +6.6
LZH                                 pmax   pmax
        comp=Z,90nm,1.4s
LZH                                 pmax   pmax
        comp=Z,180nm,5.5s
LZH                                 LR     LR
        comp=Z,2µm,12.7s
LZH                                 LR     LR
        comp=Z,1µm,14.8s
LZH                                 LR     LR
        comp=Z,550nm,12.4s
NEEM  North Greenlan   44.30  10  i P      P         21 33 00.2  -1.2
NEEM                                IAmb   IAmb      21 33 06.0
        comp=Z,43nm,0.9s
B06A  Marblemount      44.36  67    P      P         21 33 02.5  +0.6
B06A                                IAmb   IAmb      21 33 20.1
        comp=Z,20nm,0.8s
EDM   Edmonton         45.28  57    P      P         21 33 09.8  +0.7
EDM   Edmonton         45.28  57    P      P         21 33 09.8  +0.7
EDM                                 pmax   pmax
        comp=Z,66nm,0.9s
GUMO  Guam             45.34 205    LR     LR        21 49 53.7
        comp=Z,259nm,21.4s,baz=30,slow=33
B08A  Colville Reser   45.55  66    P      P         21 33 11.6  +0.3
B08A                                IAmb   IAmb      21 33 17.1
        comp=Z,19nm,0.9s
LTY   Liberty          45.60  68    P      P         21 33 10.9  -1.0
KULLO Kullorsuaq       46.15  14  i P      P         21 33 15.0  -0.7
KULLO                               IAmb   IAmb      21 33 20.4
        comp=Z,50nm,0.9s
HOOD  Mount Hood Mea   46.40  71    P      P         21 33 19.0  +0.8
C09A  Chrisman Ranch   46.45  66    P      P         21 33 19.7  +1.3
C09A                                IAmb   IAmb      21 33 23.9
        comp=Z,12nm,0.8s
DAG   Danmarks Havn    46.63   0  i P      P         21 33 18.4  -1.0
DAG                                 IAmb   IAmb      21 33 23.3
        comp=Z,11nm,0.9s
NEW   Newport          46.71  65    P      P         21 33 21.6  +1.1
        comp=Z,10nm,0.9s,baz=341,slow=7.9,SNR=9.1
NEW                                 LR     LR        21 52 19.1
        comp=Z,228nm,20.9s,baz=298,slow=35
        comp=Z,10nm,0.9s
NEW   Newport          46.71  65    P      P         21 33 21.2  +0.7
NEW                                 IAmb   IAmb      21 33 28.2
        comp=Z,19nm,1.1s
NEW   Newport          46.71  65    P      P         21 33 21.2  +0.7
NEW                                 pmax   pmax
        comp=Z,19nm,1.2s
NEW   Newport          46.71  65    P      P         21 33 21.5  +0.9
        baz=312,SNR=6.5
I04A  Tendick Farm,    47.05  73    P      P         21 33 22.9  -0.3
KURK  Kurchatov        47.17 300    P      P         21 33 23.0  -1.0
KURK  Kurchatov        47.17 300c iP       P         21 33 22.3  -1.7
KURK                                pmax   pmax
        comp=Z,46nm,1.0s
I05D  Terrebonne, OR   47.23  71    P      P         21 33 24.6   0.0
KURBB Kurchatov Arra   47.28 300    LR     LR        21 55 42.7
        comp=Z,438nm,18.8s,baz=177,slow=39
WMQ   Urumqi           47.31 288   eP      P         21 33 24.5  -0.7
WMQ                                 sP     sP        21 33 40.0  +1.9
WMQ                                 pmax   pmax
        comp=Z,16nm,1.1s
WMQ                                 pmax   pmax
        comp=Z,200nm,6.1s
WMQ                                 LR     LR
        comp=Z,1µm,15.1s
WMQ                                 LR     LR
        comp=Z,800nm,17.1s
WMQ                                 LR     LR
        comp=Z,270nm,22.5s
E09A  Wood Farm, Sta   47.38  67    P      P         21 33 27.9  +2.2
J04A  Umpqua Nationa   47.59  73    P      P         21 33 28.4  +0.8
J04A                                IAmb   IAmb      21 33 33.3
        comp=Z,26nm,0.8s
PINE  Pine Mountain    47.82  72    P      P         21 33 30.9  +1.5
PINE                                IAmb   IAmb      21 33 37.9
        comp=Z,29nm,1.1s
UPNV  Upernavik        47.88  15  i P      P         21 33 29.3  +0.1
UPNV                                IAmb   IAmb      21 33 33.6
        comp=Z,22nm,0.9s
CD2   Chengdu          47.99 263    P      P         21 33 29.5  -1.2
CD2                                 pmax   pmax
        comp=Z,30nm,0.5s
CD2                                 LR     LR
        comp=Z,420nm,14.7s
CD2                                 LR     LR
        comp=Z,470nm,13.9s
CD2                                 LR     LR
        comp=Z,930nm,14.5s
J05D  Fort Rock, OR    48.02  72    P      P         21 33 31.6  +0.7
MK31  Makanchi Array   48.03 294  i P      P         21 33 29.1  -1.7
MKAR  Makanchi Array   48.03 294    P      P         21 33 29.3  -1.5
        comp=Z,2.7nm,0.6s,baz=48,slow=6.3,SNR=28
MKAR                                LR     LR        21 55 27.0
        comp=Z,393nm,19.3s,baz=49,slow=38
        comp=Z,2.7nm,0.6s
MAKZ  Makanchi         48.18 294    P      P         21 33 29.9  -2.0
MAKZ  Makanchi         48.18 294    P      P         21 33 29.9  -2.0
MAKZ                                pmax   pmax
        comp=Z,4.0nm,0.9s
L04D  Klamath Falls    48.20  74    P      P         21 33 33.4  +1.1
YBH   Yreka Blue Hor   48.33  75    P      P         21 33 33.2   0.0
        comp=Z,4.6nm,0.8s,baz=351,slow=4.9,SNR=7.6
YBH                                 LR     LR        21 52 09.7
        comp=Z,113nm,18.8s,baz=316,slow=34
        comp=Z,4.6nm,0.8s
YBH   Yreka Blue Hor   48.33  75    P      P         21 33 33.9  +0.7
YBH                                 IAmb   IAmb      21 33 41.5
        comp=Z,12nm,1.0s
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K05A	**Summer Lake**	**48.59**	**73**	P	**P**	**21 33 36.5**	**+1.2**
K05A				IAmb	IAmb	21 33 49.9	
	comp=Z,28nm,1.2s						
GOMU	**GeErMu**	**48.92**	**275**	P	**P**	**21 33 37.3**	**-0.8**
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,150nm,4.4s						
GOMU				LR	LR		
	comp=Z,820nm,13.4s						
GOMU				LR	LR		
	comp=Z,750nm,13.3s						
GOMU				LR	LR		
	comp=Z,1µm,13.0s						
BMO	**Blue Mountains**	**48.95**	**68**	P	**P**	**21 33 39.3**	**+1.3**
BMO	**Blue Mountains**	**48.95**	**68**	P	**P**	**21 33 39.3**	**+1.3**
BMO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
DBG	**Daneborg**	**49.09**	**1**	*i* P	**P**	**21 33 37.3**	**-1.2**
DBG				IAmb	IAmb	21 33 42.1	
	comp=Z,8.9nm,0.9s						
MSO	**Missoula**	**49.27**	**64**	P	**P**	**21 33 41.3**	**+0.9**
MSO	**Missoula**	**49.27**	**64**	P	**P**	**21 33 41.3**	**+0.9**
	baz=314,SNR=6.4						
FFC	**Flin Flon**	**49.29**	**50**	P	**P**	**21 33 40.8**	**+0.5**
FFC	**Flin Flon**	**49.29**	**50**	P	**P**	**21 33 40.8**	**+0.5**
FFC				pmax	pmax		
	comp=Z,12nm,0.9s						
BVAR	**Borovoye Array**	**49.35**	**307**	LR	LR	21 56 40.6	
	comp=Z,831nm,18.3s,baz=43,slow=39						
BRVK	**Borovoye**	**49.38**	**307**	P	**P**	**21 33 40.5**	**-0.5**
BRVK				IAmb	IAmb	21 33 56.9	
	comp=Z,28nm,1.5s						
BRVK	**Borovoye**	**49.38**	**307**	*i* P	**P**	**21 33 40.3**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
J08A	**Circle Bar Ran**	**49.40**	**70**	P	**P**	**21 33 41.8**	**+0.3**
MOD	**Modoc Plateau**	**49.48**	**73**	P	**P**	**21 33 42.5**	**+0.4**
MOD				IAmb	IAmb	21 33 48.3	
	comp=Z,35nm,1.3s						
FCC	**Fort Churchill**	**49.55**	**42**	IAmb	IAmb	21 33 47.1	
	comp=Z,25nm,0.7s						
WVOR	**Wild Horse Val**	**49.97**	**71**	P	**P**	**21 33 46.8**	**+1.0**
WVOR				IAmb	IAmb	21 34 02.3	
	comp=Z,22nm,1.1s						
WVOR	**Wild Horse Val**	**49.97**	**71**	P	**P**	**21 33 46.8**	**+1.0**
WVOR				pmax	pmax		
	comp=Z,22nm,1.1s						
SUMG	**Summit**	**50.01**	**8**	*i* P	**P**	**21 33 45.6**	**-0.4**
SUMG				IAmb	IAmb	21 33 50.5	
	comp=Z,16nm,0.8s						
ARCES	**ARCESS Array B**	**50.20**	**342**	P	**P**	**21 33 48.1**	**+1.0**
	comp=Z,6.9nm,0.8s,baz=30,slow=9.8,SNR=4.0						
ARCES				PcP	**PcP**	**21 35 07.9**	**+2.2**
	comp=Z,4.4nm,0.8s,baz=54,slow=4.8,SNR=7.2						
ARCES				LR	LR	21 58 10.9	
	comp=Z,413nm,19.5s,baz=56,slow=40						
	comp=Z,6.9nm,0.8s						
HRY	**Holter Researc**	**50.39**	**63**	P	**P**	**21 33 50.2**	**+1.3**
EGMT	**Eagleton**	**50.47**	**60**	P	**P**	**21 33 50.0**	**+0.5**
EGMT				IAmb	IAmb	21 33 54.7	
	comp=Z,28nm,0.8s						
EGMT	**Eagleton**	**50.47**	**60**	P	**P**	**21 33 50.5**	**+1.0**
	baz=315,SNR=25						
SVE	**Sverdlovsk**	**50.66**	**316**	*e*P	**P**	**21 33 51.0**	**+0.3**
SVE				pmax	pmax		
	comp=Z,12nm,1.0s						
SVE				MLR	MLR		
	comp=Z,749nm,15.0s						
LRM	**Limekiln Ridge**	**50.71**	**64**	P	**P**	**21 33 52.3**	**+0.8**
MFID	**Camas Ranch**	**50.72**	**69**	P	**P**	**21 33 52.4**	**+0.9**
MFID				IAmb	IAmb	21 33 58.9	
	comp=Z,16nm,0.9s						
DLMT	**Dillon**	**50.97**	**65**	P	**P**	**21 33 54.4**	**+1.1**
DLMT				IAmb	IAmb	21 34 01.8	
	comp=Z,30nm,1.1s						
MCMT	**McKenzie Canyo**	**51.22**	**65**	P	**P**	**21 33 55.7**	**+0.4**
BOZ	**Bozeman (W)**	**51.28**	**64**	P	**P**	**21 33 56.6**	**+1.0**
	baz=315,SNR=9.7						
HLID	**Hailey**	**51.34**	**67**	P	**P**	**21 33 56.9**	**+0.7**
HLID	**Hailey**	**51.34**	**67**	P	**P**	**21 33 57.0**	**+0.8**
	baz=316,SNR=6.2						
ARU	**Arti**	**51.74**	**317**	LR	LR	21 58 26.4	
	comp=Z,598nm,19.6s,baz=34,slow=39						
ARU	**Arti**	**51.74**	**317**	P	**P**	**21 33 58.5**	**-0.2**
ARU	**Arti**	**51.74**	**317**	*i* P	**P**	**21 33 57.6**	**-1.1**
ARU				pmax	pmax		
	comp=Z,11nm,0.8s						
ILULI	**Ilulissat**	**51.83**	**15**	P	**P**	**21 33 59.6**	**+0.4**
ILULI				IAmb	IAmb	21 34 05.2	
	comp=Z,18nm,0.7s						
ILULI	**Ilulissat**	**51.83**	**15**	P	**P**	**21 33 59.6**	**+0.4**
ILULI				pmax	pmax		
	comp=Z,17nm,0.7s						
ILULI	**Ilulissat**	**51.83**	**15**	*i* P	**P**	**21 33 57.0**	**-2.2**
ILULI				IAmb	IAmb	21 34 04.9	
	comp=Z,18nm,0.8s						
QLMT	**Earthquake Lak**	**51.92**	**64**	P	**P**	**21 34 01.4**	**+0.9**
GCMT	**Greycliff**	**52.10**	**62**	P	**P**	**21 34 03.0**	**+1.3**
YERR	**Yerington**	**52.15**	**75**	P	**P**	**21 34 04.0**	**+1.7**
BMN	**Battle Mountai**	**52.15**	**72**	P	**P**	**21 34 03.2**	**+0.9**
BMN	**Battle Mountai**	**52.15**	**72**	P	**P**	**21 34 03.2**	**+0.9**
BMN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CMB	**Columbia Colle**	**52.23**	**76**	P	**P**	**21 34 04.5**	**+1.7**
CMB	**Columbia Colle**	**52.23**	**76**	P	**P**	**21 34 04.5**	**+1.7**
CMB				pmax	pmax		
	comp=Z,7.0nm,1.1s						
YMR	**Madison River**	**52.27**	**64**	P	**P**	**21 34 05.0**	**+1.9**
YMR				IAmb	IAmb	21 34 10.1	
	comp=Z,23nm,0.9s						
JMIC	**Jan Mayen**	**52.30**	**356**	LR	LR	21 54 21.7	
	comp=Z,109nm,20.6s,baz=32,slow=34						
YNR	**Norris Junctio**	**52.38**	**64**	P	**P**	**21 34 04.6**	**+0.7**
WAKR	**Walker**	**52.39**	**75**	P	**P**	**21 34 05.5**	**+1.4**
PZH	**PanZhiHua**	**52.53**	**261**	P	**P**	**21 34 03.8**	**-1.4**
PZH				S	**S**	**21 41 32.5**	**+2.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,150nm,5.6s						
PZH				LR	LR		
	comp=Z,720nm,20.0s						
PZH				LR	LR		
	comp=Z,970nm,18.6s						
PZH				LR	LR		
	comp=Z,1µm,14.5s						
YMP	**Mirror Lake Pl**	**52.62**	**64**	P	**P**	**21 34 06.8**	**+1.0**
YMP				IAmb	IAmb	21 34 12.1	
	comp=Z,16nm,0.8s						
LKWY	**Lake**	**52.62**	**64**	P	**P**	**21 34 07.2**	**+1.4**
LKWY				IAmb	IAmb	21 34 13.9	
	comp=Z,25nm,0.8s						
LKWY	**Lake**	**52.62**	**64**	P	**P**	**21 34 07.2**	**+1.4**
LKWY				pmax	pmax		
	comp=Z,25nm,0.9s						
H17A	**Grant Village**	**52.66**	**64**	P	**P**	**21 34 07.9**	**+1.8**
H17A				IAmb	IAmb	21 34 13.5	
	comp=Z,23nm,0.9s						
H17A	**Grant Village**	**52.66**	**64**	P	**P**	**21 34 07.0**	**+0.9**
	baz=316,SNR=15						
KVN	**Kaiserville**	**52.70**	**74**	P	**P**	**21 34 07.2**	**+0.9**
KVN	**Kaiserville**	**52.70**	**74**	P	**P**	**21 34 07.2**	**+0.9**
KVN				pmax	pmax		
	comp=Z,13nm,0.8s						
DGMT	**Dagmar**	**52.75**	**57**	IAmb	IAmb	21 34 11.9	
	comp=Z,27nm,0.8s						
DGMT	**Dagmar**	**52.75**	**57**	P	**P**	**21 34 07.3**	**+0.9**
	baz=316,SNR=8.4						
DGMT	**Dagmar**	**52.75**	**57**	P	**P**	**21 34 07.3**	**+0.9**
	baz=316,SNR=8.4						
RLMT	**Red Lodge**	**52.78**	**63**	P	**P**	**21 34 07.6**	**+0.7**
RLMT	**Red Lodge**	**52.78**	**63**	P	**P**	**21 34 08.1**	**+1.2**
	baz=316,SNR=43						
FLWY	**Flagg Ranch**	**52.83**	**65**	P	**P**	**21 34 08.7**	**+1.4**
FLWY				IAmb	IAmb	21 34 13.9	
	comp=Z,18nm,0.8s						
IMW	**Indian Meadow**	**52.84**	**65**	P	**P**	**21 34 09.2**	**+1.8**
ELK	**Elko**	**52.95**	**70**	LR	LR	21 56 45.7	
	comp=Z,159nm,18.4s,baz=296,slow=36						
ELK	**Elko**	**52.95**	**70**	P	**P**	**21 34 09.6**	**+1.3**
ELK	**Elko**	**52.95**	**70**	P	**P**	**21 34 09.6**	**+1.3**
ELK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
FXWY	**Fox Creek**	**52.99**	**65**	IAmb	IAmb	21 34 14.7	
	comp=Z,17nm,0.8s						
MOOW	**Moose Ponds**	**53.05**	**65**	P	**P**	**21 34 10.2**	**+1.3**
NVAR	**Mina Array Bea**	**53.05**	**75**	P	**P**	**21 34 09.9**	**+0.9**
	comp=Z,8.0nm,1.0s,baz=327,slow=5.7,SNR=10						
NVAR				LR	LR	21 54 56.5	
	comp=Z,127nm,18.9s,baz=276,slow=34						
	comp=Z,8.0nm,1.0s						
NVAR	**Mina Array Bea**	**53.05**	**75**	P	**P**	**21 34 09.5**	**+0.5**
LHV	**Little Huntoon**	**53.08**	**75**	P	**P**	**21 34 09.7**	**+0.8**
LHV				IAmb	IAmb	21 35 00.5	
	comp=Z,23nm,0.8s						
KMI	**Kunming**	**53.09**	**260**	⇑P	**P**	**21 34 09.0**	**-0.4**
KMI				pP	pP	21 34 18.5	-0.2
KMI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KMI				LR	LR		
	comp=Z,1µm,20.8s						
KMI				LR	LR		
	comp=Z,880nm,20.4s						
KMI				LR	LR		
	comp=Z,920nm,15.0s						
LAO	**LASA Array**	**53.10**	**59**	P	**P**	**21 34 09.7**	**+0.6**
	baz=317,SNR=11						
LAO	**LASA Array**	**53.10**	**59**	P	**P**	**21 34 11.3**	**+2.3**
	baz=317,SNR=11						
NV11	**Mina Array Sit**	**53.13**	**74**	P	**P**	**21 34 10.3**	**+0.9**
TPAW	**Teton Pass**	**53.13**	**65**	P	**P**	**21 34 10.8**	**+1.2**
TPAW				IAmb	IAmb	21 34 16.1	
	comp=Z,17nm,0.8s						
MDPB	**Devils Postpil**	**53.23**	**76**	P	**P**	**21 34 12.7**	**+2.3**
TGY	**Tagaytay City**	**53.23**	**234**	LR	LR	21 59 27.7	
	comp=Z,195nm,18.1s,baz=116,slow=39						
SNOW	**Snow King Moun**	**53.25**	**65**		**P**	**21 34 11.2**	**+0.8**
OMMB	**Old Mammoth Mi**	**53.28**	**76**	P	**P**	**21 34 10.8**	**-0.1**
ICESG	**Greenland Ices**	**53.28**	**10**	*i* P	**P**	**21 34 09.7**	**-0.7**
ICESG				IAmb	IAmb	21 34 14.7	
	comp=Z,18nm,0.7s						
KIRV	**Kirov**	**53.33**	**323**	LR	LR	21 59 13.6	
	comp=Z,568nm,18.1s,baz=34,slow=39						
KIRV	**Kirov**	**53.33**	**323**	*i* P	**P**	**21 34 10.1**	**-0.3**
FRB	**Frobisher Bay**	**53.40**	**26**	LR	LR	22 00 37.2	
	comp=Z,202nm,18.1s,baz=286,slow=40						
HVU	**Hansel Valley**	**53.46**	**68**	P	**P**	**21 34 13.0**	**+1.1**
HVU	**Hansel Valley**	**53.46**	**68**	P	**P**	**21 34 13.0**	**+1.1**
HVU				pmax	pmax		
	comp=Z,11nm,0.9s						
AHID	**Auburn Hatcher**	**53.59**	**66**	P	**P**	**21 34 14.5**	**+1.7**
TARG	**Taragay, Kyrgy**	**53.90**	**293**	P	**P**	**21 34 14.3**	**-1.1**
TARG	**Taragay, Kyrgy**	**53.90**	**293**	P	**P**	**21 34 14.3**	**-1.1**
TARG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KDJ	**Kajisay**	**53.92**	**293**	P	**P**	**21 34 14.3**	**-1.0**
KDJ	**Kajisay**	**53.92**	**293**	P	**P**	**21 34 14.3**	**-1.0**
KDJ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SFJD	**Kangerlussuaq**	**53.95**	**16**	LR	LR	21 58 54.1	
	comp=Z,185nm,20.0s,baz=350,slow=38						
SFJD	**Kangerlussuaq**	**53.95**	**16**	*i* P	**P**	**21 34 13.8**	**-1.1**
BGU	**Big Grassy Mou**	**53.96**	**69**	P	**P**	**21 34 17.1**	**+1.6**
SPUT	**South Promonto**	**53.97**	**68**	P	**P**	**21 34 17.2**	**+1.5**
SPUT				IAmb	IAmb	21 34 24.1	
	comp=Z,12nm,0.9s						
DSP	**Deep Springs**	**54.01**	**75**	P	**P**	**21 34 17.0**	**+1.2**
TKM2	**Tokmak 2**	**54.13**	**295**	P	**P**	**21 34 16.1**	**-0.8**
	SNR=6.3						
HWUT	**Hardware Ranch**	**54.20**	**67**	IAmb	IAmb	21 34 23.7	
	comp=Z,18nm,0.8s						
QIZ	**Qiongzhong**	**54.33**	**249**	P	**P**	**21 34 18.5**	**+0.2**
QIZ				S	**S**	**21 41 52.8**	**-1.3**
QIZ				pmax	pmax		
	comp=Z,9.0nm,3.2s						
QIZ				LR	LR		
	comp=Z,670nm,16.2s						
QIZ				LR	LR		
	comp=Z,610nm,16.2s						
QIZ				LR	LR		
	comp=Z,690nm,11.9s						
BW06	**Boulder Array**	**54.35**	**65**	IAmb	IAmb	21 34 24.4	
	comp=Z,18nm,0.8s						
BW06	**Boulder Array**	**54.35**	**65**	P	**P**	**21 34 19.1**	**+0.6**
	baz=318,SNR=8.6						
PD31	**Pinedale Array**	**54.35**	**65**	IAmb	IAmb	21 34 24.3	
	comp=Z,16nm,0.8s						
PDAR	**Pinedale Array**	**54.35**	**65**	P	**P**	**21 34 19.9**	**+1.3**
	comp=Z,15nm,0.7s,baz=330,slow=2.1,SNR=33						
PDAR				LR	LR	21 56 47.5	
	comp=Z,98nm,19.0s,baz=346,slow=35						
	comp=Z,15nm,0.7s						
USP	**Ospenovka**	**54.42**	**296**	P	**P**	**21 34 17.9**	**-0.9**
	SNR=16						
Q12A	**Willow Creek R**	**54.42**	**72**	P	**P**	**21 34 21.0**	**+2.1**
Q12A				IAmb	IAmb	21 34 48.5	
	comp=Z,20nm,1.2s						
CHMS	**Chumysh**	**54.49**	**296**	P	**P**	**21 34 19.1**	**-0.2**
	SNR=7.1						
KLMR	**Klimovskoe**	**54.50**	**330**	*e*P	**P**	**21 34 19.2**	**+0.2**
KLMR				AMP		21 34 25.1	
	comp=Z,29nm,2.1s						
KLMR				LQ	LQ	21 54 04.5	
KLMR				LQ	LQ	21 54 04.5	
KLMR				LR	LR	21 54 48.6	
KLMR				AMP		22 00 55.0	
	comp=Z,441nm,16.4s						
KLMR	**Klimovskoe**	**54.50**	**330**	*e*P	**P**	**21 34 19.2**	**+0.2**
KLMR				pmax	pmax		
	comp=Z,29nm,2.1s						
KLMR				MLR	MLR		
	comp=Z,441nm,16.0s						
R11B	**Troy Canyon, C**	**54.54**	**73**	P	**P**	**21 34 19.1**	**-0.7**
	baz=318						
DUG	**Dugway, Tooele**	**54.61**	**69**	P	**P**	**21 34 21.8**	**+1.5**
DUG	**Dugway, Tooele**	**54.61**	**69**	P	**P**	**21 34 21.8**	**+1.5**
DUG				pmax	pmax		
	comp=Z,11nm,0.9s						
DUG	**Dugway, Tooele**	**54.61**	**69**	P	**P**	**21 34 20.9**	**+0.6**
	baz=318,SNR=6.2						
KBK	**Karagaybulak**	**54.65**	**295**	P	**P**	**21 34 20.4**	**-0.1**
	SNR=12						
FRU1	**Bishkek**	**54.69**	**296**	P	**P**	**21 34 20.1**	**-0.6**
FRU1				IAmb	IAmb	21 34 21.6	
	comp=Z,29nm,1.1s						
FRU1	**Bishkek**	**54.69**	**296**	P	**P**	**21 34 20.1**	**-0.6**
FRU1				pmax	pmax		
	comp=Z,29nm,1.1s						
SPR3	**Spring Creek 3**	**54.71**	**71**	P	**P**	**21 34 22.8**	**+1.6**
SPR3				IAmb	IAmb	21 34 31.5	
	comp=Z,25nm,1.0s						
CTU	**Camp Tracy**	**54.78**	**68**	P	**P**	**21 34 22.2**	**+0.6**
AAK	**Ala-Archa**	**54.89**	**296**	P	**P**	**21 34 22.2**	**-0.1**
	SNR=16						
AAK	**Ala-Archa**	**54.89**	**296**	P	**P**	**21 34 21.7**	**-0.6**
AAK				IAmb	IAmb	21 34 28.6	
	comp=Z,14nm,0.8s						
AAK	**Ala-Archa**	**54.89**	**296**	⇑*i*P	**P**	**21 34 20.9**	**-1.4**
AAK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AAK	**Ala-Archa**	**54.89**	**296**	*i* P	**P**	**21 34 22.2**	**-0.1**
	SNR=26						
S11A	**Rachel**	**54.98**	**73**	P	**P**	**21 34 24.3**	**+1.3**
S11A				IAmb	IAmb	21 34 40.5	
	comp=Z,23nm,0.9s						
JLU	**Jordanelle**	**55.01**	**68**	P	**P**	**21 34 23.8**	**+0.6**
ISA	**Isabella, Lake**	**55.02**	**77**	P	**P**	**21 34 23.8**	**+0.6**
ISA	**Isabella, Lake**	**55.02**	**77**	P	**P**	**21 34 23.8**	**+0.6**
ISA				pmax	pmax		
	comp=Z,14nm,1.2s						
NRN	**Naryn**	**55.03**	**294**	P	**P**	**21 34 23.0**	**-0.5**
NRN	**Naryn**	**55.03**	**294**	P	**P**	**21 34 23.0**	**-0.5**
NRN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DY2G	**Dye2**	**55.05**	**14**	*i* P	**P**	**21 34 24.5**	**+1.3**
ULM	**Lac du Bonnet**	**55.10**	**50**	P	**P**	**21 34 24.8**	**+1.3**
	comp=Z,15nm,0.8s,baz=299,slow=5.0,SNR=19						
ULM				LR	LR	21 58 45.8	
	comp=Z,160nm,19.3s,baz=28,slow=37						
	comp=Z,15nm,0.8s						
ULM	**Lac du Bonnet**	**55.10**	**50**	P	**P**	**21 34 24.1**	**+0.6**
ULM				IAmb	IAmb	21 34 28.9	
	comp=Z,18nm,0.8s						
ULM	**Lac du Bonnet**	**55.10**	**50**	P	**P**	**21 34 24.1**	**+0.6**
NLU	**North Lily Min**	**55.17**	**69**	P	**P**	**21 34 26.1**	**+1.7**
NLU				IAmb	IAmb	21 34 30.8	
	comp=Z,13nm,0.9s						
UCH	**Uchtor**	**55.18**	**295**	P	**P**	**21 34 24.6**	**-0.1**
	SNR=7.4						
EKS2	**Erkin-Say**	**55.22**	**296**	P	**P**	**21 34 24.2**	**-0.4**
	SNR=18						
TPNV	**Topopah Spring**	**55.24**	**74**	P	**P**	**21 34 25.2**	**+0.3**
	baz=319						
MPMC	**Manual Prospec**	**55.25**	**76**	P	**P**	**21 34 25.8**	**+0.8**
	baz=319						
FURC	**Furnace Creek,**	**55.27**	**75**	P	**P**	**21 34 26.3**	**+1.4**
	baz=319						
MDND	**Maddock**	**55.29**	**54**	P	**P**	**21 34 27.0**	**+2.1**
MDND	**Maddock**	**55.29**	**54**	P	**P**	**21 34 25.6**	**+0.7**
	baz=319						
MPU	**Maple Canyon**	**55.35**	**69**	P	**P**	**21 34 26.9**	**+1.2**
MPU				IAmb	IAmb	21 34 31.7	
	comp=Z,12nm,0.9s						
BSUT	**Blindstream Ca**	**55.40**	**68**	P	**P**	**21 34 28.0**	**+1.7**
BSUT				IAmb	IAmb	21 34 33.0	
	comp=Z,21nm,0.9s						
TNCH	**TengChong**	**55.46**	**263**	P	**P**	**21 34 26.0**	**-0.6**
TNCH				S	**S**	**21 42 06.5**	**-3.1**
TNCH				sS	pS	21 42 18.0	-2.8
TNCH				pmax	pmax		
	comp=Z,13nm,0.9s						
TNCH				pmax	pmax		
	comp=Z,140nm,7.5s						
TNCH				LR	LR		
	comp=Z,430nm,20.2s						
TNCH				LR	LR		
	comp=Z,460nm,18.9s						
TNCH				LR	LR		
	comp=Z,710nm,17.8s						
GWY	**Greenwater Val**	**55.59**	**75**	P	**P**	**21 34 28.5**	**+1.1**
GWY				IAmb	IAmb	21 34 36.1	
	comp=Z,41nm,1.5s						
AML	**Almayashu**	**55.66**	**296**	P	**P**	**21 34 27.9**	**-0.2**
	SNR=7.1						
E28A	**Huff**	**55.75**	**56**	P	**P**	**21 34 29.9**	**+1.6**
E28A	**Huff**	**55.75**	**56**	P	**P**	**21 34 30.1**	**+1.8**
	baz=319,SNR=7.9						
LSA	**Lhasa**	**55.84**	**273**	P	**P**	**21 34 28.8**	**-0.8**
LSA				pmax	pmax		
	comp=Z,12nm,1.2s						
LSA	**Lhasa**	**55.84**	**273**	P	**P**	**21 34 27.7**	**-1.9**
LSA	**Lhasa**	**55.84**	**273**	P	**P**	**21 34 27.7**	**-1.9**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LSA	**Lhasa**	**55.84**	**273**	P	**P**	**21 34 28.7**	**-1.0**
K22A	**Casper**	**55.94**	**63**	P	**P**	**21 34 31.3**	**+1.4**
K22A				IAmb	IAmb	21 34 35.6	
	comp=Z,17nm,0.9s						
K22A	**Casper**	**55.94**	**63**	P	**P**	**21 34 30.4**	**+0.6**
	baz=318						
RDMU	**Red Mountain**	**55.98**	**67**	P	**P**	**21 34 31.3**	**+1.0**
RDMU				IAmb	IAmb	21 34 36.8	
	comp=Z,14nm,0.8s						
RSSD	**Black Hills**	**56.04**	**60**	P	**P**	**21 34 30.9**	**+0.3**
	baz=319						
RSSD	**Black Hills**	**56.04**	**60**	P	**P**	**21 34 31.7**	**+1.1**
	baz=319,SNR=11						
TMUT	**Trail Mountain**	**56.10**	**69**	P	**P**	**21 34 32.7**	**+1.5**
TMUT				IAmb	IAmb	21 34 37.8	
	comp=Z,18nm,0.8s						
SHPR	**Sheep Range**	**56.15**	**74**	P	**P**	**21 34 32.2**	**+0.8**
MVU	**Marysvale**	**56.18**	**70**	P	**P**	**21 34 31.8**	**+0.1**
P17A	**Butcher Ranch,**	**56.21**	**68**	P	**P**	**21 34 32.6**	**+0.8**
P17A				IAmb	IAmb	21 34 53.5	
	comp=Z,14nm,0.8s						
CCUT	**Cedar City**	**56.30**	**72**	P	**P**	**21 34 33.1**	**+0.5**
RWWY	**Rawlins**	**56.32**	**64**	P	**P**	**21 34 33.6**	**+0.9**
RWWY				IAmb	IAmb	21 34 37.2	
	comp=Z,13nm,0.9s						
P18A	**Preston Nutter**	**56.35**	**68**	P	**P**	**21 34 33.6**	**+0.6**
P18A				IAmb	IAmb	21 34 45.2	
	comp=Z,12nm,0.9s						
KSH	**Kashi**	**56.47**	**292**	P	**P**	**21 34 36.8**	**+3.2**
KSH				pP	pP	21 34 43.0	0.0
KSH				sP	sP	21 34 50.8	+4.2
KSH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KSH				LR	LR		
	comp=Z,450nm,17.0s						
KSH				LR	LR		
	comp=Z,640nm,18.5s						
KSH				LR	LR		
	comp=Z,710nm,16.1s						
AKTO	**Aktyubinsk**	**56.48**	**312**	LR	LR	22 00 01.9	
	comp=Z,400nm,19.5s,baz=352,slow=37						
KK31	**Karatay Array**	**56.48**	**299**	IAmb	IAmb	21 34 33.9	
	comp=Z,20nm,0.9s						
KKAR	**Karatay Array**	**56.48**	**299**	IAmb	IAmb	21 34 33.9	
	comp=Z,20nm,0.9s						
MTPU	**Mount Pierson**	**56.54**	**70**	P	**P**	**21 34 35.4**	**+0.9**
AGMN	**Agassiz Nation**	**56.59**	**52**	IAmb	IAmb	21 34 39.5	
	comp=Z,15nm,0.9s						
AGMN	**Agassiz Nation**	**56.59**	**52**	P	**P**	**21 34 34.9**	**+0.7**
	baz=320,SNR=7.6						
AGMN	**Agassiz Nation**	**56.59**	**52**	P	**P**	**21 34 34.9**	**+0.7**
	baz=320,SNR=7.6						
SRU	**San Rafael Swe**	**56.59**	**68**	P	**P**	**21 34 35.2**	**+0.6**
SRU				IAmb	IAmb	21 34 56.2	
	comp=Z,30nm,0.8s						
SRU	**San Rafael Swe**	**56.59**	**68**	P	**P**	**21 34 35.2**	**+0.6**
SRU				pmax	pmax		
	comp=Z,30nm,0.8s						
ANGG	**Ammassalik, Gr**	**56.86**	**10**	P	**P**	**21 34 37.0**	**+1.2**
ANGG	**Ammassalik, Gr**	**56.86**	**10**	*i* P	**P**	**21 34 34.8**	**-1.0**
V12A	**Nelson**	**56.90**	**74**	P	**P**	**21 34 37.3**	**+0.6**
V12A				IAmb	IAmb	21 34 46.5	
	comp=Z,12nm,0.7s						
PKCU	**Pink Cliffs**	**56.93**	**71**	P	**P**	**21 34 35.5**	**-1.7**
PKCU				IAmb	IAmb	21 35 40.1	
	comp=Z,12nm,0.8s						
D32A	**Dogwood Acres,**	**56.98**	**53**	P	**P**	**21 34 37.6**	**+0.7**
O20A	**White River Ci**	**56.98**	**66**	P	**P**	**21 34 37.9**	**+0.5**
	baz=319,SNR=29						
FINES	**FINESS Array B**	**57.29**	**337**	P	**P**	**21 34 39.2**	**+0.3**
	comp=Z,4.6nm,0.7s,baz=38,slow=9.6,SNR=9.3						
FINES				LR	LR	22 02 47.9	
	comp=Z,334nm,18.4s,baz=28,slow=40						
	comp=Z,4.6nm,0.7s						
FINES	**FINESS Array B**	**57.29**	**337**	*i* P	**P**	**21 34 42.5**	**+3.6**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
B35A	**Bob, Littlefor**	**57.45**	**50**	IAmb	IAmb	21 34 45.0	
	comp=Z,11nm,0.7s						
B35A	**Bob, Littlefor**	**57.45**	**50**	P	**P**	**21 34 41.0**	**+0.6**
	baz=321,SNR=6.5						
N23A	**Red Feather La**	**57.55**	**64**	P	**P**	**21 34 42.2**	**+0.8**
N23A				IAmb	IAmb	21 34 47.6	
	comp=Z,20nm,0.8s						
N23A	**Red Feather La**	**57.55**	**64**	P	**P**	**21 34 40.6**	**-0.8**
	baz=319,SNR=12						
DAV	**Davao City (W)**	**57.61**	**225**	LR	LR	22 01 22.5	
	comp=Z,237nm,18.0s,baz=39,slow=38						
PFO	**Pinyon Flats O**	**57.65**	**77**	LR	LR	21 57 17.3	
	comp=Z,160nm,19.1s,baz=226,slow=34						
PV23	**Carpenter Ridg**	**57.86**	**68**	P	**P**	**21 34 44.3**	**+0.6**
PV23				IAmb	IAmb	21 34 52.8	
	comp=Z,19nm,0.9s						
PV20	**West Nyswonger**	**57.97**	**68**	P	**P**	**21 34 46.0**	**+1.7**
PV20				IAmb	IAmb	21 34 53.5	
	comp=Z,16nm,0.9s						
PV17	**East Wray Mesa**	**58.02**	**68**	P	**P**	**21 34 46.8**	**+2.1**
PV17				IAmb	IAmb	21 34 51.0	
	comp=Z,24nm,1.0s						
PV07	**Paradox Valley**	**58.06**	**68**	P	**P**	**21 34 46.2**	**+1.2**
PV07				IAmb	IAmb	21 34 53.4	
	comp=Z,16nm,0.9s						
PV18	**Skein Mesa, Pa**	**58.07**	**68**	P	**P**	**21 34 46.6**	**+1.6**
PV18				IAmb	IAmb	21 34 54.3	
	comp=Z,36nm,1.3s						
PV03	**Paradox Valley**	**58.10**	**68**	P	**P**	**21 34 46.2**	**+1.0**
PV03				IAmb	IAmb	21 34 51.6	
	comp=Z,21nm,1.1s						
PV05	**Paradox Valley**	**58.10**	**68**	P	**P**	**21 34 46.5**	**+1.2**
PV05				IAmb	IAmb	21 34 51.2	
	comp=Z,22nm,0.9s						
SUSD	**Miller**	**58.17**	**57**	P	**P**	**21 34 45.0**	**-0.4**
	baz=320						
PV13	**Radium Mtn., P**	**58.18**	**68**	P	**P**	**21 34 47.4**	**+1.5**
PV13				IAmb	IAmb	21 34 55.1	
	comp=Z,21nm,1.0s						
PV15	**Paradox Valley**	**58.22**	**68**	P	**P**	**21 34 46.2**	**+0.1**
PV15				IAmb	IAmb	21 34 55.1	
	comp=Z,32nm,1.0s						
F33A	**5 Mile Ranch,**	**58.29**	**54**	P	**P**	**21 34 47.9**	**+1.7**
F33A				IAmb	IAmb	21 34 51.8	
	comp=Z,28nm,0.9s						
F33A	**5 Mile Ranch,**	**58.29**	**54**	P	**P**	**21 34 47.0**	**+0.8**

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                baz=321,SNR=5.8
CRAI   Chiangrai         58.32 258   P        P       21 34 44.8 -2.0
PV01   Paradox Valley    58.33  68   P        P       21 34 47.5 +0.6
SMCO   Snowmass          58.34  66   P        P       21 34 48.2 +1.1
SMCO                                 IAmb     IAmb    21 34 53.4
                comp=Z,14nm,0.8s
ISCO   Idaho Springs     58.54  65   P        P       21 34 50.2 +1.8
ISCO                                 IAmb     IAmb    21 34 55.2
                comp=Z,14nm,0.8s
ISCO   Idaho Springs     58.54  65   P        P       21 34 50.2 +1.8
ISCO                                 pmax     pmax
                comp=Z,14nm,0.9s
ISCO   Idaho Springs     58.54  65   P        P       21 34 48.4  0.0
                baz=320,SNR=9.1
ISCO   Idaho Springs     58.54  65   P        P       21 34 49.8 +1.4
                baz=320,SNR=9.1
DRK    Karamyk           58.60 295   P        P       21 34 43.4 -5.5
DRK                                  IAmb     IAmb    21 34 57.5
                comp=Z,14nm,1.1s
BTK    Batken            58.65 296   IAmb     IAmb    21 34 54.5
                comp=Z,25nm,0.9s
SHL    Shillong          58.67 269   P        P       21 34 47.4 -1.9
SHL                                  IAmb     IAmb    21 36 48.9
                comp=Z,12nm,0.5s
SHL    Shillong          58.67 269   P        P       21 34 47.4 -1.9
SHL                                  pmax     pmax
                comp=Z,12nm,0.5s
EYMN   Ely               58.71  49   P        P       21 34 50.9 +1.7
EYMN   Ely               58.71  49   P        P       21 34 48.9 -0.2
                baz=322,SNR=6.5
BELG   Belogornoye       58.90 320   LR       LR      22 01 44.8
                comp=Z,328nm,19.9s,baz=40,slow=38
BELG   Belogornoye       58.90 320 i P        P       21 34 49.3 -1.0
BELG                                 pmax     pmax
                comp=Z,6.0nm,0.9s
MVCO   Mesa Verde        59.07  68   P        P       21 34 53.4 +1.3
MOS    Moscow            59.35 328 eP         P       21 34 59.0 +5.6
MOS                                eS         S       21 43 10.4  +11
MOS                                  MLR      MLR
                comp=Z,400nm,16.0s
OGNE   Ogallala          59.41  61   P        P       21 34 54.9 +0.7
OGNE                                 IAmb     IAmb    21 35 00.2
                comp=Z,18nm,0.8s
OGNE   Ogallala          59.41  61   P        P       21 34 53.6 -0.6
                baz=321
Q24A   Divide            59.41  65   P        P       21 34 55.4 +0.9
Q24A   Divide            59.41  65   P        P       21 34 53.5 -1.1
                baz=320,SNR=5.4
F36A   Milaca            59.49  52   P        P       21 34 55.9 +1.4
GAR    Garm              59.71 296   P        P       21 34 54.9 -1.4
ECSD   EROS Data Cent    59.78  56   P        P       21 34 57.0 +0.4
ECSD                                 IAmb     IAmb    21 35 01.7
                comp=Z,12nm,0.8s
ECSD   EROS Data Cent    59.78  56   P        P       21 34 56.9 +0.2
                baz=321,SNR=8.6
ECSD   EROS Data Cent    59.78  56   P        P       21 34 56.8 +0.2
                baz=321,SNR=8.6
PHRA   Phrae             59.81 257   P        P       21 34 55.9 -1.2
VSU    Vasula            59.83 335 eP         P       21 34 57.9 +1.3
GUN    Gumba             60.12 276 eP         P       21 34 57.2 -2.3
                comp=Z,67nm,1.0s
NC303  NORSAR Array S    60.15 345   P        P       21 35 00.1 +1.3
NC303                                IAmb     IAmb    21 35 03.7
                comp=Z,16nm,0.8s
SDCO   Great Sand Dun    60.18  66   P        P       21 35 00.6 +0.9
SDCO   Great Sand Dun    60.18  66   P        P       21 35 01.0 +1.2
                baz=321,SNR=7.0
SDCO   Great Sand Dun    60.18  66   P        P       21 35 02.0 +2.3
                baz=321,SNR=7.0
NC204  NORSAR Array S    60.19 345   P        P       21 35 00.6 +1.4
NC204                                IAmb     IAmb    21 35 03.7
                comp=Z,23nm,0.9s
OBN    Obninsk           60.20 328   P        P       21 35 00.3 +1.1
                comp=Z,1.5nm,0.6s,baz=45,slow=16,SNR=1.4
OBN                                  LR       LR      22 03 29.3
                comp=Z,73nm,19.1s,baz=16,slow=38
OBN    Obninsk           60.20 328⇑eP         P       21 34 57.4 -1.8
OBN                                e                  21 35 43.1
OBN                                e                  21 37 12.0
OBN                                eS         S       21 43 10.7 +0.3
OBN                                  pmax     pmax
                comp=Z,20nm,1.4s
OBN                                  MLR      MLR
                comp=Z,353nm,18.0s
NC405  NORSAR Array S    60.21 344   P        P       21 34 58.9 -0.3
NC405                                IAmb     IAmb    21 35 04.1
                comp=Z,18nm,0.9s
CHTO   Chiang Mai        60.25 259   P        P       21 34 58.9 -1.2
CHTO   Chiang Mai        60.25 259   P        P       21 34 58.9 -1.2
SPMN   Marine on St.     60.30  52   P        P       21 35 02.1 +2.0
SPMN                                 IAmb     IAmb    21 35 05.2
                comp=Z,16nm,0.7s
SPMN   Marine on St.     60.30  52   P        P       21 35 01.2 +1.1
                baz=322
NB201  NORSAR Array S    60.33 345   P        P       21 35 00.2 +0.1
NB201                                IAmb     IAmb    21 35 04.5
                comp=Z,24nm,0.8s
NB2    NORSAR Subarra    60.35 345   P        P       21 34 59.6 -0.7
                comp=Z,23nm,1.0s,baz=18,slow=6.9
NB2    NORSAR Subarra    60.35 345   P        P       21 34 59.6 -0.7
                baz=18,slow=6.9
NOA    NORSAR Array B    60.35 345   P        P       21 35 00.3 +0.1
                comp=Z,9.9nm,0.8s,baz=18,slow=6.9,SNR=31
NOA                                  LR       LR      22 02 40.6
                comp=Z,183nm,19.8s,baz=40,slow=38
                comp=Z,9.9nm,0.8s
X18A   Snowflake         60.39  72   P        P       21 35 02.7 +1.6
X18A                                 IAmb     IAmb    21 35 08.1
                comp=Z,20nm,1.1s
NBO00  NORSAR Array S    60.43 345   P        P       21 35 01.9 +1.1
NBO00                                IAmb     IAmb    21 35 07.7
                comp=Z,22nm,1.1s
CM31   Chiang Mai Arr    60.54 258   P        P       21 35 00.8 -1.2
CMAR   Chiang Mai Arr    60.54 258   P        P       21 35 01.1 -1.0
                comp=Z,4.2nm,0.9s,baz=18,slow=7.5,SNR=26
CMAR                                 LR       LR      22 04 42.0
                comp=Z,362nm,19.6s,baz=40,slow=40
                comp=Z,4.2nm,0.9s
CMAR   Chiang Mai Arr    60.54 258   P        P       21 35 00.9 -1.1
CMAR   Chiang Mai Arr    60.54 258   P        P       21 35 00.9 -1.1
CHGR   Chuyangaron       60.55 296   P        P       21 35 00.8 -1.2
CHGR   Chuyangaron       60.55 296   P        P       21 35 00.8 -1.2
CHGR                                 pmax     pmax
                comp=Z,34nm,0.8s
KSCO   Kaye Shedlock'    60.62  63   P        P       21 35 03.5 +1.0
                baz=321
PKI    Pulchoki          60.64 276 eP         P       21 35 00.2 -2.9
PKIN   Phulchoki         60.64 276 eP         P       21 35 00.3 -2.7
                comp=Z,15nm,0.7s
GKN    Gorkha            60.72 277 eP         P       21 35 01.3 -2.1
                comp=Z,48nm,1.1s
HFS    Hagfors           60.84 343   P        P       21 35 03.0 -0.5
                comp=Z,10nm,0.7s,baz=46,slow=6.2,SNR=14
HFS                                  LR       LR      22 02 25.2
                comp=Z,274nm,21.3s,baz=31,slow=37
                comp=Z,10nm,0.7s
214A   Organ Pipe Nat    60.88  76   P        P       21 35 04.0 -0.3
214A                                 IAmb     IAmb    21 35 09.6
                comp=Z,23nm,1.2s
214A   Organ Pipe Nat    60.88  76   P        P       21 35 04.2  0.0
                baz=321
BGNE   Belgrade          60.90  58   P        P       21 35 04.9 +0.7
BGNE   Belgrade          60.90  58   P        P       21 35 05.2 +0.9
                baz=322,SNR=5.9
BGNE   Belgrade          60.90  58   P        P       21 35 06.7 +2.4
                baz=322,SNR=5.9
DANN   Dangsing          60.93 278 eP         P       21 35 03.1 -1.9
                comp=Z,33nm,0.8s
I37A   Lemond, Waseca    61.00  53   P        P       21 35 06.4 +1.5
I37B   Waseca            61.00  53   P        P       21 35 07.7 +2.8
                baz=322,SNR=5.9
BRDH   Bariadhala        61.10 268   LR       LR      22 05 00.4
                comp=Z,335nm,18.3s,baz=164,slow=40
T25A   Trinidad          61.20  66   P        P       21 35 07.4 +0.8
T25A                                 IAmb     IAmb    21 35 14.9
                comp=Z,38nm,1.8s
T25A   Trinidad          61.20  66   P        P       21 35 06.0 -0.6
                baz=321
L34A   Svendsen Farm,    61.28  57   P        P       21 35 07.8 +1.0
L34A   Svendsen Farm,    61.28  57   P        P       21 35 09.1 +2.2
                baz=322,SNR=6.2
PYUN   Piuthan           61.54 278 eP         P       21 35 07.1 -1.9
                comp=Z,25nm,0.8s
SCHQ   Schefferville     61.56  30   P        P       21 35 08.2 -0.4
                comp=Z,12nm,0.8s,baz=350,slow=6.3,SNR=9.1
SCHQ                                 LR       LR      22 06 48.9
                comp=Z,148nm,18.1s,baz=360,slow=41
                comp=Z,12nm,0.8s
SCHQ   Schefferville     61.56  30   P        P       21 35 08.4 -0.2
SCHQ                                 IAmb     IAmb    21 35 14.7
                comp=Z,15nm,0.8s
KRVT   Keravat (AS076    61.60 192   P        P       21 35 07.2 -2.0
                comp=Z,36nm,0.6s,baz=4.2,slow=11,SNR=5.5
                comp=Z,36nm,0.6s
LPSR   Galich'ya Gora    61.64 325 eP         P       21 35 07.1 -1.9
LPSR                                 pmax     pmax
                comp=Z,10.0nm,0.7s
TUC    Tucson            61.68  74   P        P       21 35 12.0 +2.3
TUC    Tucson            61.68  74   P        P       21 35 12.0 +2.3
TUC                                  pmax     pmax
                comp=Z,5.0nm,0.8s
TUC    Tucson            61.68  74   P        P       21 35 10.6 +0.9
                baz=322
ANMO   Albuquerque       61.87  69   LR       LR      22 02 21.6
                comp=Z,129nm,19.1s,baz=65,slow=36
ANMO   Albuquerque       61.87  69   P        P       21 35 12.5 +1.4
ANMO   Albuquerque       61.87  69   P        P       21 35 12.5 +1.4
ANMO                                 pmax     pmax
                comp=Z,6.0nm,0.9s
ANMO   Albuquerque       61.87  69   P        P       21 35 12.1 +0.9
                baz=322
ANMO   Albuquerque       61.87  69   P        P       21 35 13.0 +1.9
                baz=322,SNR=7.4
VRH    Novokhopyorsk     61.93 322 eP         P       21 35 10.2 -0.8
VRH                                  pmax     pmax
                comp=Z,10.0nm,0.7s
CBKS   Cedar Bluff       62.18  61   P        P       21 35 13.6 +0.6
CBKS   Cedar Bluff       62.18  61   P        P       21 35 13.6 +0.6
CBKS                                 pmax     pmax
                comp=Z,27nm,0.8s
CBKS   Cedar Bluff       62.18  61   P        P       21 35 14.0 +1.1
                baz=322
LENM   Lemitar           62.21  70   P        P       21 35 16.1 +2.7
VORR   Voronezh          62.35 324 eP         P       21 35 12.7 -1.1
VORR                                 pmax     pmax
                comp=Z,19nm,0.3s
NIL    Nilore            62.38 290   P        P       21 35 13.8 -0.5
NIL    Nilore            62.38 290   P        P       21 35 13.8 -0.5
NIL                                  pmax     pmax
                comp=Z,19nm,0.7s
N35A   Tabor             62.49  57   P        P       21 35 16.0 +1.0
                baz=323,SNR=6.1
VSVD   Vaisvydziai       62.73 335 eP         P       21 35 17.6 +1.3
TNTI   Ternate           62.74 221   P        P       21 35 15.8 -1.0
VSR    Storozhevoye      62.76 324 eP         P       21 35 13.9 -2.6
VSR                                  pmax     pmax
                comp=Z,10.0nm,0.7s
SCIA   State Center      62.76  55   P        P       21 35 17.3 +0.6
SCIA   State Center      62.76  55   P        P       21 35 17.6 +0.9
                baz=323
E46A   Sault Ste Mari    62.90  46   P        P       21 35 18.8 +1.2
E46A                                 IAmb     IAmb    21 35 21.4
                comp=Z,19nm,0.9s
VORD   Divnogorie        62.93 324 eP         P       21 35 14.5 -3.2
VORD                                 pmax     pmax
                comp=Z,50nm,0.5s
NACGM  Naroch            63.03 333 eP         P       21 35 19.1 +0.8
                comp=E,509nm,0.9s
121A   Cookes Peak, D    63.07  71   IAmb     IAmb    21 35 26.2
                comp=Z,12nm,0.9s
121A   Cookes Peak, D    63.07  71   P        P       21 35 19.1 -0.1
                baz=322
MNK    Minsk             63.12 332 i P        P       21 35 20.7 +1.8
                comp=E,2.0nm,0.9s
MNK                                i P        P       21 35 20.7 +1.8
                comp=N,34nm,0.8s
MNK                                i P        P       21 35 20.7 +1.8
                comp=Z,40nm,0.8s,baz=206
MNK                                i pP       sP      21 35 34.7 +2.7
MNK                                i PP       PP      21 37 40.5 +3.2
MNK                                i PPP      PPP     21 39 09.9
MNK                                i S        S       21 43 48.4 +1.0
MNK                                i sS       sS      21 44 12.5 +9.4
MNK                                i SS       SS      21 47 57.1 +4.6
MNK                                i SSS      SSS     21 50 55.2
MNK                                i LQ       LQ      21 58 28.8
MNK                                i LR       LR      22 03 20.1
MNK                                i LRM      MLR     22 06 18.2
                comp=E,23nm,12.9s
MNK                                i LRM      MLR     22 06 19.1
                comp=N,463nm,15.4s
MNK                                i LRM      MLR     22 06 27.7
                comp=Z,477nm,18.1s
MNK    Minsk             63.12 332 i P        P       21 35 20.7 +1.8
MNK                                i *PP      sP      21 35 34.7 +2.7
MNK                                i                  21 37 40.4
MNK                                i PPP      PPP     21 39 09.9
MNK                                i S        S       21 43 48.4 +1.0
MNK                                i *SS      sS      21 44 12.4 +9.4
MNK                                i SS       SS      21 47 57.0 +4.6
MNK                                  pmax     pmax
                comp=N,34nm,0.8s
MNK                                  pmax     pmax
                comp=Z,40nm,0.9s
MNK                                  pmax     pmax
                comp=E,2.0nm,0.9s
MNK                                  MLR      MLR
                comp=N,463nm,15.0s
MNK                                  MLR      MLR
                comp=Z,477nm,18.0s
PABE   Paberze           63.15 335   P        P       21 35 19.8 +0.7
PABE   Paberze           63.15 335 eP         P       21 35 20.4 +1.3
319A   Douglas           63.20  73   P        P       21 35 20.9 +0.9
319A                                 IAmb     IAmb    21 35 42.0
                comp=Z,14nm,0.8s
KSU1   Kansas State U    63.44  59   P        P       21 35 21.6 +0.3
                baz=323
L40A   Anamosa           63.52  53   P        P       21 35 20.9 -0.9
L40A                                 IAmb     IAmb    21 35 26.0
                comp=Z,21nm,1.0s
N38A   Joes South For    63.64  55   P        P       21 35 23.3 +0.7
N38A                                 IAmb     IAmb    21 35 28.5
                comp=Z,20nm,0.8s
GLMI   Grayling          64.05  47   P        P       21 35 26.0 +0.8
GLMI   Grayling          64.05  47   P        P       21 35 25.4 +0.2
                baz=326
AMTX   Amarillo          64.33  65            P       21 35 28.5 +1.2
AMTX                                 IAmb     IAmb    21 35 32.8
                comp=Z,12nm,0.8s
AMTX   Amarillo          64.33  65   P        P       21 35 28.2 +0.8
                baz=323
P38A   Dawn              64.45  56   P        P       21 35 28.6 +0.7
P38A   Dawn              64.45  56   P        P       21 35 29.8 +1.9
                baz=324,SNR=6.1
MSTX   Muleshoe          64.51  67   P        P       21 35 30.6 +2.0
MSTX                                 IAmb     IAmb    21 35 34.1
                comp=Z,19nm,1.0s
MSTX   Muleshoe          64.51  67   P        P       21 35 29.1 +0.6
                baz=323,SNR=6.3
FAKI   Fak Fak           64.56 214   P        P       21 35 27.6 -1.2
FAKI   Fak Fak           64.56 214   P        P       21 35 28.7 -0.1
SUW    Suwalki           64.71 335 eP         P       21 35 32.8 +3.5
SUW    Suwalki           64.71 335   P        P       21 35 29.7 +0.4
SUW    Suwalki           64.71 335   P        P       21 35 29.7 +0.4
SUW                                  pmax     pmax
                comp=Z,33nm,0.9s
SUW    Suwalki           64.71 335 eP         P       21 35 30.9 +1.6
N41A   Harden Midland    64.78  54   P        P       21 35 31.0 +1.0
TOLI2  Tolitoli          64.95 228   P        P       21 35 29.4 -2.0
MNTX   Cornudas Mount    64.98  70   P        P       21 35 32.7 +1.2
MNTX                                 IAmb     IAmb    21 35 38.1
                comp=Z,23nm,0.9s
MNTX   Cornudas Mount    64.98  70   P        P       21 35 33.5 +2.0
                baz=323,SNR=22
MNTX   Cornudas Mount    64.98  70   P        P       21 35 33.9 +2.4
                baz=323,SNR=22
GDL2   Guadalupe Moun    65.10  69   P        P       21 35 33.4 +0.9
P40A   Paris             65.20  55   P        P       21 35 34.0 +1.3
J47A   Sunmer            65.28  48   P        P       21 35 34.7 +1.5
HDIL   Hopedale          65.59  53   P        P       21 35 36.3 +1.0
HDIL   Hopedale          65.59  53   P        P       21 35 35.5 +0.2
                baz=325,SNR=6.1
POST   Post              65.87  66   P        P       21 35 38.9 +1.6
POST                                 IAmb     IAmb    21 35 42.8
                comp=Z,16nm,0.8s
WMOK   Wichita Mounta    65.88  63   P        P       21 35 37.7 +0.4
                baz=324,SNR=11
WMOK   Wichita Mounta    65.88  63   P        P       21 35 38.3 +1.0
                baz=324,SNR=11
HNR    Honiara           66.10 183   LR       LR      22 00 56.1
                comp=Z,4µm,20.2s,baz=344,slow=33
DEOK   Depew             66.10  61   P        P       21 35 37.5 -1.2
DEOK                                 IAmb     IAmb    21 35 43.5
                comp=Z,13nm,0.7s
R40A   Maddies Statio    66.10  56   P        P       21 35 39.3 +0.7
R40A   Maddies Statio    66.10  56   P        P       21 35 38.3 -0.3
                baz=325,SNR=8.9
S39A   Bolivar           66.11  57   P        P       21 35 39.5 +0.8
S39A                                 IAmb     IAmb    21 35 42.7
                comp=Z,11nm,0.8s
S39A   Bolivar           66.11  57   P        P       21 35 37.8 -0.9
                baz=324,SNR=6.6
AKASG  Malin Array Be    66.19 330   P        P       21 35 39.4 +0.5
                comp=Z,6.8nm,0.7s,baz=27,slow=6.2,SNR=20
AKASG                                LR       LR      22 08 45.3
                comp=Z,344nm,18.0s,baz=25,slow=40
                comp=Z,6.8nm,0.7s
AKASG  Malin Array Be    66.19 330   P        P       21 35 39.5 +0.5
AKASG  Malin Array Be    66.19 330 i P        P       21 35 38.7 -0.3
AKASG                                pmax     pmax
                comp=Z,7.0nm,0.7s
AKBB   Malin Array Si    66.19 330   P        P       21 35 38.8 -0.2
AKBB   Malin Array Si    66.19 330   P        P       21 35 38.8 -0.2
AKBB                                 pmax     pmax
                comp=Z,44nm,1.7s
SADO   Sadowa            66.23  43   LR       LR      22 06 27.7
                comp=Z,206nm,20.6s,baz=321,slow=38
P43A   Skaggs, Pawnee    66.24  54   P        P       21 35 39.7 +0.2
LATQ   La Tuque          66.26  38   P        P       21 35 39.8 +0.4
GEYT   Alibeck           66.38 303   P        P       21 35 40.9 +0.4
                comp=Z,32nm,0.9s,baz=0.0,slow=3.3,SNR=79
GEYT                                 LR       LR      22 08 00.2
                comp=Z,432nm,18.9s,baz=40,slow=39
                comp=Z,32nm,0.9s
GYA0B  ALIBECK ARRAY     66.38 303   P        P       21 35 40.3 -0.2
X34A   Smith Ranch, M    66.46  63   P        P       21 35 42.7 +1.7
X34A                                 IAmb     IAmb    21 35 46.4
                comp=Z,36nm,1.5s
W35A   Tecumseh          66.48  62   P        P       21 35 42.0 +0.9
W35A                                 IAmb     IAmb    21 35 47.8
                comp=Z,12nm,0.7s
L48A   N Adams           66.51  49   P        P       21 35 41.9 +0.7
RLO    Rose Lookout      66.55  60   P        P       21 35 42.4 +0.9
RLO                                  IAmb     IAmb    21 35 46.1
                comp=Z,9.5nm,0.8s
U38A   Gravette          66.62  59   IAmb     IAmb    21 35 46.0
                comp=Z,9.2nm,0.8s
TRQ    Mont Tremblant    66.65  40   P        P       21 35 41.4 -0.7
CCM    Cathedral Cave    66.76  56   P        P       21 35 43.6 +0.8
CCM                                  IAmb     IAmb    21 35 47.5
                comp=Z,12nm,0.9s
CCM    Cathedral Cave    66.76  56   P        P       21 35 43.7 +0.8
CCM                                  pmax     pmax
                comp=Z,12nm,1.0s
CCM    Cathedral Cave    66.76  56   P        P       21 35 43.6 +0.8
                baz=325
MAK    Makhachkala       66.77 314 eP         P       21 35 42.3 -0.5
MAK                                eS         S       21 44 33.6 +1.1
MAK                                  pmax     pmax
                comp=Z,138nm,1.4s
MAK                                  MLR      MLR
                comp=Z,463nm,13.0s
LMQ    La Malbaie        66.92  36   P        P       21 35 43.4 -0.4
ABTX   Abilene, Hawle    67.15  65   P        P       21 35 46.4 +0.9
ABTX   Abilene, Hawle    67.15  65   P        P       21 35 46.2 +0.7
                baz=324,SNR=5.5
FVM    French Village    67.19  55   P        P       21 35 46.2 +0.6
FVM    French Village    67.19  55   P        P       21 35 46.2 +0.6
FVM                                  pmax     pmax
                comp=Z,26nm,0.9s
FVM    French Village    67.19  55   P        P       21 35 45.8 +0.2
                baz=325,SNR=6.4
P46A   Rosedale          67.27  52   P        P       21 35 47.5 +1.4
P46A   Rosedale          67.27  52   P        P       21 35 45.5 -0.5
                baz=326,SNR=6.3
PMG    Port Moresby      67.30 197   P        P       21 35 45.6 -0.7
                comp=Z,5.4nm,0.5s,baz=270,slow=24,SNR=4.6
PMG                                  LR       LR      22 00 08.2
                comp=Z,156nm,19.8s,baz=0.0,slow=32
                comp=Z,5.4nm,0.5s
PMG    Port Moresby      67.30 197   P        P       21 35 44.6 -1.8
PMG                                  IAmb     IAmb    21 35 47.4
                comp=Z,18nm,1.1s
PMG    Port Moresby      67.30 197   P        P       21 35 44.6 -1.8
PMG                                  pmax     pmax
                comp=Z,18nm,1.1s
N49A   Columbus Grove    67.47  49   P        P       21 35 48.4 +1.1
SBUM   Sibu              67.47 237   P        P       21 35 46.0 -1.5
SBUM                                 IAmb     IAmb    21 35 48.4
                comp=Z,15nm,0.8s
FW03   Perrin-Whitt E    67.60  64   P        P       21 35 49.2 +1.0
FW03                                 IAmb     IAmb    21 35 53.4
                comp=Z,23nm,0.8s
MNTQ   Montreal, Queb    67.60  39   P        P       21 35 48.4 +0.3
OLIL   Olney             67.61  53   P        P       21 35 49.5 +1.2
OLIL                                 IAmb     IAmb    21 35 53.2
                comp=Z,24nm,1.1s
O48B   Farmland          67.61  50   P        P       21 35 49.0 +0.7
                baz=327
X37A   Clayton           67.66  61   P        P       21 35 49.4 +0.9
X37A                                 IAmb     IAmb    21 35 54.0
                comp=Z,12nm,0.8s
T42A   Van Buren         67.67  56   P        P       21 35 49.4 +0.8
T42A                                 IAmb     IAmb    21 35 53.2
                comp=Z,15nm,0.9s
T42A   Van Buren         67.67  56   P        P       21 35 49.2 +0.6
                baz=325,SNR=6.2
D62A   Allapoint, All    67.75  36   P        P       21 35 50.4 +1.5
D62A                                 IAmb     IAmb    21 35 54.0
                comp=Z,18nm,1.0s
TX31   Lajitas Ar. Si    67.75  70   P        P       21 35 50.3 +0.9
TX31   Lajitas Ar. Si    67.75  70   P        P       21 35 50.8 +1.4
                baz=324,SNR=55
TXAR   Lajitas Array     67.75  70   P        P       21 35 50.8 +1.4
                comp=Z,23nm,0.8s,baz=300,slow=4.4,SNR=53
TXAR                                 LR       LR      22 05 54.7
                comp=Z,152nm,18.1s,baz=335,slow=36
                comp=Z,23nm,0.8s
KVAR   Kislovodsk Arr    67.77 318   LR       LR      22 09 32.6
                comp=Z,416nm,18.6s,baz=280,slow=40
KIV    Kislovodsk        67.77 318   P        P       21 35 48.9 -0.4
KIV    Kislovodsk        67.77 318 eP         P       21 35 48.7 -0.6
KIV                                  pmax     pmax
                comp=Z,4.0nm,1.0s
BMNY   Brushton-Moira    67.86  40   P        P       21 35 48.7 -1.0
                baz=330,SNR=5.1
KBZ    Khabaz            67.89 317   P        P       21 35 51.0 +1.1
                comp=Z,6.4nm,1.0s,baz=236,slow=3.2,SNR=10
KBZ                                  LR       LR      22 07 18.7
                comp=Z,267nm,20.1s,baz=9.5,slow=38
                comp=Z,6.4nm,1.0s
KBZ    Khabaz            67.89 317 i P        P       21 35 48.5 -1.3
KBZ                                  pmax     pmax
                comp=Z,10.0nm,0.9s
AKT    Akhty             67.92 313 eP         P       21 35 50.0 -0.3
AKT                                e                  21 36 16.8
AKT                                  pmax     pmax
                comp=Z,10.0nm,0.6s
E62A   Clayton Lake      68.00  36   P        P       21 35 51.3 +0.7
E62A   Clayton Lake      68.00  36   P        P       21 35 50.3 -0.3
                baz=332,SNR=5.4
E62A                                 P        P       21 35 50.3 -0.3
                baz=332,SNR=5.4
FCAR   Ozark Folk Cen    68.13  58   P        P       21 35 52.4 +0.9
FCAR                                 IAmb     IAmb    21 35 56.0
                comp=Z,21nm,1.0s
ERPA   Erie              68.15  46   P        P       21 35 51.6  0.0
                baz=328
P48A   Milroy            68.16  51   P        P       21 35 52.9 +1.2
P48A                                 IAmb     IAmb    21 35 55.7
                comp=Z,18nm,0.8s
ZEI    Tsey              68.31 316 eP         P       21 35 52.0 -0.9
ZEI                                  pmax     pmax
                comp=Z,8.0nm,1.0s
LVV    L'vov             68.37 333 eP         P       21 35 56.2 +3.4
LVV                                  MLR      MLR
                comp=E,400nm,15.0s
LVV                                  MLR      MLR
                comp=N,300nm,16.0s
LVV                                  MLR      MLR
                comp=Z,500nm,16.0s
P49A   Miami Univ. Ec    68.40  50   P        P       21 35 53.9 +0.7
P49A                                 IAmb     IAmb    21 35 57.9
                comp=Z,21nm,0.9s
P49A   Miami Univ. Ec    68.40  50   P        P       21 35 53.5 +0.3
                baz=327
LCAR   Lake Charles      68.43  57   P        P       21 35 54.0 +0.6
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MMNY Mt. Morris Dam   68.43  44  P     P      21 35 55.0 +1.7
LPIG La Paz           68.44  79  LR    LR     22 02 35.3
     comp=Z,39nm,18.2s,baz=327,slow=33
WVNY West Valley, N   68.44  44  P     P      21 35 53.4 -0.1
M53A Wl Miller and    68.45  46  P     P      21 35 53.6 +0.1
     baz=328,SNR=5.3
ALLY Alegheny Colle   68.49  46  P     P      21 35 55.3 +1.6
ACSO Alum Creek Sta   68.54  49  P     P      21 35 55.5 +1.4
ACSO Alum Creek Sta   68.54  49  P     P      21 35 54.3 +0.3
     baz=328,SNR=6.0
ACSO Alum Creek Sta   68.54  49  P     P      21 35 54.2 +0.1
     baz=328,SNR=6.0
MIAR Mount Ida        68.55  60  P     P      21 35 55.8 +1.6
MIAR                             IAmb  IAmb   21 35 59.7
     comp=Z,15nm,0.9s
MIAR Mount Ida        68.55  60  P     P      21 35 55.8 +1.6
MIAR                             pmax  pmax
     comp=Z,15nm,0.9s
MIAR Mount Ida        68.55  60  P     P      21 35 54.3 +0.2
     baz=325,SNR=5.8
MIAR Mount Ida        68.55  60  P     P      21 35 56.1 +2.0
     baz=325,SNR=5.8
J57A Williamstown     68.56  42  P     P      21 35 55.3 +1.2
J57A                             IAmb  IAmb   21 35 57.9
     comp=Z,18nm,0.9s
ONI  Oni              68.65 316  P     P      21 35 55.7 +0.9
ONI  Oni              68.65 316  P     P      21 35 55.7 +0.9
ONI                              pmax  pmax
     comp=Z,9.0nm,0.9s
BKB  Balikpapan       68.71 231  P     P      21 35 54.2 -1.1
SORM Soroca           68.76 329 ⇑P     P      21 35 56.3 +1.0
SORM Soroca           68.76 329  P     P      21 35 56.2 +1.0
JCT  Junction City    68.80  67  P     P      21 35 56.3 +0.4
JCT  Junction City    68.80  67  P     P      21 35 56.3 +0.4
JCT                              pmax  pmax
     comp=Z,27nm,0.8s
JCT  Junction City    68.80  67  P     P      21 35 56.4 +0.4
     baz=324,SNR=6.1
JCT  Junction City    68.80  67  P     P      21 35 57.7 +1.8
     baz=324,SNR=6.1
WCI  Wyandotte Cave   68.82  52  P     P      21 35 58.0 +2.2
WCI  Wyandotte Cave   68.82  52  P     P      21 35 58.0 +2.2
WCI                              pmax  pmax
     comp=Z,24nm,0.9s
WCI  Wyandotte Cave   68.82  52  P     P      21 35 55.9 +0.1
     baz=327
J58A Remsen           68.87  42  IAmb  IAmb   21 35 59.9
     comp=Z,14nm,0.8s
X40A Basin Creek Fa   68.95  59  P     P      21 35 57.5 +0.9
OJC  Ojcow            69.01 336 eP     P      21 35 59.4 +2.6
OJC  Ojcow            69.01 336  IAmb  IAmb   21 36 02.3
     comp=Z,16nm,0.8s
L56A Greenwood        69.07  44  P     P      21 35 57.9 +0.5
     baz=329,SNR=6.6
L56A                             P     P      21 35 57.9 +0.5
     baz=329,SNR=6.6
O52A Adamsville       69.11  48  P     P      21 35 59.1 +1.5
P51A Williamsport     69.14  49  P     P      21 35 59.6 +1.8
SOC  Sochi            69.17 319 eP     P      21 35 55.2 -2.7
SOC                             e             21 38 29.2
SOC                             ePPP   PPP    21 40 09.4
SOC                             eS     S      21 44 57.3 -4.0
SOC                             eSS    SS     21 49 26.4 -0.4
SOC                             eSSS   SSS    21 52 36.3
SOC                              MLR   MLR
     comp=Z,288nm,17.0s
M55A Ridgway          69.18  45  P     P      21 35 57.2 -0.9
     baz=329,SNR=6.9
M55A                             P     P      21 35 57.2 -0.9
     baz=329,SNR=6.9
KSM  Kuching          69.22 238  P     P      21 35 57.0 -1.5
KSM                              IAmb  IAmb   21 35 58.6
     comp=Z,15nm,0.7s
O53A New Philadelph   69.25  47  P     P      21 35 60.0 +1.5
O53A New Philadelph   69.25  47  P     P      21 35 58.8 +0.4
     baz=328,SNR=5.1
R49A Shelbyville      69.25  51  IAmb  IAmb   21 36 03.3
     comp=Z,14nm,0.8s
LBNH Lisbon           69.29  39  P     P      21 35 58.7 +0.1
     baz=331
CLL  Collm            69.38 340  P     P      21 35 59.4 +0.4
CLL  Collm            69.38 340 i P    P      21 36 02.5 +3.5
     comp=Z,6.0nm,0.9s
CLL                             i x    x      21 36 09.2
CLL                              AMS   AMS    22 07 00.0
     comp=N,500nm,18.8s
CLL                              AMS   AMS    22 07 00.0
     comp=E,200nm,18.3s
CLL                              AMS   AMS    22 07 00.0
     comp=Z,300nm,18.6s
CLL  Collm            69.38 340  P     P      21 35 59.4 +0.4
CLL                              pmax  pmax
     comp=Z,7.0nm,1.0s
P52A Corning          69.39  48  P     P      21 36 01.6 +2.3
P52A                             IAmb  IAmb   21 36 03.3
     comp=Z,16nm,0.7s
P52A Corning          69.39  48  P     P      21 35 58.6 -0.7
     baz=328
STHS Stebnicka Huta   69.42 334 eP     P      21 36 03.8 +4.4
STHS                             pmax  pmax
     comp=Z,12nm,0.8s
STHS Stebnicka Huta   69.42 334 eP     P      21 36 03.8 +4.4
ACCN Adirondack Com   69.43  41  P     P      21 36 00.1 +0.6
ACCN                             IAmb  IAmb   21 36 03.7
     comp=Z,18nm,0.9s
OSTC Ostas            69.47 338  AMS   AMS    22 11 00.0
     comp=Z,500nm,10.5s
CHVC Chvalec          69.47 338 eP     P      21 36 03.4 +3.7
CHVC                             AMS   AMS    22 11 00.0
     comp=Z,600nm,18.3s
CHVC Chvalec          69.47 338 eP     P      21 36 03.4 +3.7
CHVC                             MLR   MLR
     comp=Z,600nm,18.3s
WLAR White Oak Lake   69.47  60  P     P      21 36 00.9 +1.0
UPC  Upice            69.55 338 eP     P      21 36 04.6 +4.4
UPC                              AMS   AMS    22 11 10.0
     comp=Z,600nm,16.8s
UPC  Upice            69.55 338 eP     P      21 36 04.6 +4.4
UPC                              MLR   MLR
     comp=Z,600nm,16.8s
BINY Binghamton       69.61  43  P     P      21 35 60.0 -0.7
     baz=330
BRG  Berggiesshubel   69.61 340 eP     P      21 36 04.6 +4.1
BRG                              Amp          21 36 05.3
     comp=Z,4.1nm,0.9s
BRG                              Amp          22 11 22.0
     comp=N,0.4nm,17.1s
BRG                              Amp          22 11 24.0
     comp=Z,0.4nm,12.1s
BRG                              Amp          22 11 33.0
     comp=E,0.1nm,15.5s
BRG  Berggiesshubel   69.61 340 eP     P      21 36 04.6 +4.1
BRG                              pmax  pmax
     comp=Z,4.0nm,0.9s
BRG                              MLR   MLR
     comp=N,366nm,17.1s
BRG                              MLR   MLR
     comp=Z,368nm,12.1s
BRG                              MLR   MLR
     comp=E,134nm,15.5s
R50A Paris            69.62  51  IAmb  IAmb   21 36 05.9
     comp=Z,19nm,0.8s
R50A Paris            69.62  51  P     P      21 35 59.9 -0.9
     baz=327,SNR=6.5
R50A                             P     P      21 35 59.9 -0.9
     baz=327,SNR=6.5
DPC  Dobruska-Polom   69.64 338 eP     P      21 36 00.9 +0.1
DPC                             ex     x      21 36 12.6
DPC                              AMS   AMS    22 11 00.0
     comp=Z,500nm,17.8s
DPC  Dobruska-Polom   69.64 338 eP     P      21 36 00.9 +0.1
DPC                             e             21 36 12.6
DPC                              MLR   MLR
     comp=Z,500nm,17.8s
O54A Avella           69.64  47  P     P      21 36 01.8 +0.9
O54A                             IAmb  IAmb   21 36 05.3
     comp=Z,20nm,0.8s
NIE  Niedzica         69.64 335 eP     P      21 36 02.5 +1.8
AKH  Akhalkalaki      69.65 316  P     P      21 36 01.3 +0.2
AKH                              IAmb  IAmb   21 36 36.4
     comp=Z,18nm,0.9s
AKH  Akhalkalaki      69.65 316  P     P      21 36 01.3 +0.2
AKH                              pmax  pmax
     comp=Z,18nm,0.9s
MILM Milestii Mici    69.73 328 eP     P      21 36 02.0 +0.7
     comp=Z,30nm,0.8s
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MILM                             LRM   MLR    22 10 25.0
     comp=Z,400nm,16.5s
MILM Milestii Mici    69.73 328 eP     P      21 36 02.0 +0.7
MILM                             pmax  pmax
     comp=Z,30nm,0.8s
MILM                             MLR   MLR
     comp=Z,400nm,16.5s
OKC  Ostrava-Krasne   69.73 337 eP     P      21 36 06.2 +4.9
OKC                              AMS   AMS    22 09 30.0
     comp=Z,400nm,16.7s
KRLC Kraliky          69.80 338 eP     P      21 36 05.5 +3.7
KRLC                             AMS   AMS    22 12 10.0
     comp=Z,400nm,12.4s
KRLC Kraliky          69.80 338 eP     P      21 36 05.5 +3.7
KRLC                             MLR   MLR
     comp=Z,400nm,12.4s
PVCC Panska Ves       69.82 339  AMS   AMS    22 10 30.0
     comp=Z,400nm,9.6s
P53A Whipple          69.82  48  P     P      21 36 03.8 +1.8
P53A                             IAmb  IAmb   21 36 05.8
     comp=Z,19nm,1.1s
SIM  Simferopol'      69.88 324 eP     P      21 36 03.1 +0.9
SIM                                           21 38 39.9
SIM                              pmax  pmax
     comp=Z,11nm,0.8s
SIM                              MLR   MLR
     comp=Z,399nm,16.4s
Q52A Bidwell          69.91  49  P     P      21 36 03.3 +0.8
Q52A                             IAmb  IAmb   21 36 06.7
     comp=Z,22nm,0.8s
MORC Moravsky Berou   69.92 337 ⇓P     P      21 36 06.7 +4.1
MORC Moravsky Berou   69.92 337  P     P      21 36 04.2 +1.7
MORC Moravsky Berou   69.92 337 eP     P      21 36 06.5 +4.0
MORC Moravsky Berou   69.92 337  P     P      21 36 04.2 +1.7
MORC                             pmax  pmax
     comp=Z,8.0nm,0.8s
M57A Sunshine Farm,   69.92  44  P     P      21 36 01.7 -0.9
     baz=330,SNR=6.5
M57A                             P     P      21 36 01.7 -0.9
     baz=330,SNR=6.5
L59A Walton           69.97  42  P     P      21 36 03.8 +0.9
L59A                             IAmb  IAmb   21 36 07.3
     comp=Z,19nm,0.8s
W45A Hickory Valley   70.08  56  P     P      21 36 04.0 +0.3
LANS Liptovska Anna   70.09 335 eP     P      21 36 09.1 +5.6
LANS                             pmax  pmax
     comp=Z,13nm,0.8s
LANS Liptovska Anna   70.09 335 eP     P      21 36 09.0 +5.5
BURAR Bucovina Array  70.09 331 ⇓P     P      21 36 05.8 +2.1
BURAR Bucovina Array  70.09 331  IAmb  IAmb   21 36 09.3
     comp=Z,9.1nm,0.8s
BURAR Bucovina Array  70.09 331  P     P      21 36 05.7 +2.1
SSPA Standing Stone   70.24  45  P     P      21 36 04.0 -0.5
SSPA                             IAmb  IAmb   21 36 08.7
     comp=Z,18nm,0.8s
SSPA Standing Stone   70.24  45  P     P      21 36 04.0 -0.5
     baz=330
GNI  Garni            70.25 314  LR    LR     22 11 19.5
     comp=Z,626nm,19.1s,baz=26,slow=40
GNI  Garni            70.25 314  P     P      21 36 05.6 +0.8
GNI                              IAmb  IAmb   21 36 30.4
     comp=Z,17nm,1.1s
GNI  Garni            70.25 314  P     P      21 36 05.6 +0.8
GNI                              pmax  pmax
     comp=Z,17nm,1.1s
GNI  Garni            70.25 314  P     P      21 36 06.3 +1.5
KSPA Keystone Colle   70.25  43  P     P      21 36 05.5 +1.0
KSPA                             IAmb  IAmb   21 36 08.4
     comp=Z,12nm,0.9s
MAUC Maruska          70.25 337 eP     P      21 36 08.4 +3.9
MAUC                             AMS   AMS    22 10 00.0
     comp=Z,800nm,20.1s
MCWV Mont Chateau     70.30  47  P     P      21 36 04.6 -0.3
     baz=329
TRPA Tarpa            70.31 333 ⇑P     P      21 36 07.9 +3.1
NATX Nacogdoches      70.31  62  P     P      21 36 04.6 -0.5
     baz=325
PRU  Pruhonice        70.34 339 eP     P      21 36 05.6 +0.6
PRU                             epP    pP     21 36 09.4 -5.2
PRU                              AMS   AMS    22 10 50.0
     comp=Z,400nm,15.9s
PRU  Pruhonice        70.34 339 eP     P      21 36 05.6 +0.6
PRU                              MLR   MLR
     comp=Z,400nm,15.9s
GOPC GO Pecny, Ondr   70.36 339 eP     P      21 36 08.5 +3.3
GOPC                             AMS   AMS    22 09 10.0
     comp=Z,400nm,23.1s
GOPC GO Pecny, Ondr   70.36 339 eP     P      21 36 08.5 +3.3
GOPC                             MLR   MLR
     comp=Z,400nm,23.1s
T50A Nancy            70.46  52  P     P      21 36 06.5 +0.6
T50A                             IAmb  IAmb   21 36 10.7
     comp=Z,15nm,0.8s
S51A Beattyville      70.47  51  P     P      21 36 06.8 +0.8
S51A                             IAmb  IAmb   21 36 11.4
     comp=Z,15nm,0.8s
U49A Red Boiling Sp   70.47  53  P     P      21 36 07.4 +1.3
U49A                             IAmb  IAmb   21 36 14.4
     comp=Z,12nm,0.9s
Q54A Coxs Mills       70.48  48  P     P      21 36 06.8 +0.8
Q54A                             IAmb  IAmb   21 36 10.5
     comp=Z,13nm,0.8s
BMR  Baia Mare        70.49 332 ⇑P     P      21 36 07.9 +1.9
BMR  Baia Mare        70.49 332  P     P      21 36 07.8 +1.9
NKC  Novy Kostel      70.51 340 eP     P      21 36 09.5 +3.4
NKC                              AMS   AMS    22 08 00.0
     comp=Z,600nm,18.8s
NKC  Novy Kostel      70.51 340 eP     P      21 36 09.5 +3.4
NKC                              MLR   MLR
     comp=Z,600nm,18.8s
N58A Sunbury          70.51  44  IAmb  IAmb   21 36 10.1
     comp=Z,24nm,0.9s
N58A Sunbury          70.51  44  P     P      21 36 06.8 +0.6
     baz=330,SNR=5.7
N58A                             P     P      21 36 06.8 +0.6
     baz=330,SNR=5.7
OXF  Oxford           70.52  57  P     P      21 36 07.6 +1.3
OXF  Oxford           70.52  57  P     P      21 36 07.6 +1.3
OXF                              pmax  pmax
     comp=Z,88nm,1.0s
OXF  Oxford           70.52  57  P     P      21 36 07.5 +1.2
     baz=326
VRAC Vranov           70.57 337 ⇑P     P      21 36 10.4 +3.9
VRAC Vranov           70.57 337  P     P      21 36 07.1 +0.7
     comp=Z,6.4nm,0.7s,baz=41,slow=7.8,SNR=7.6
VRAC                             LR    LR     22 11 57.0
     comp=Z,196nm,18.3s,baz=19,slow=40
     comp=Z,6.4nm,0.7s
VRAC Vranov           70.57 337 eP     P      21 36 08.7 +2.3
VRAC Vranov           70.57 337  P     P      21 36 10.3 +3.9
R53A Hurricane        70.57  49  P     P      21 36 06.5 -0.1
     baz=328,SNR=8.4
R53A                             P     P      21 36 06.5 -0.1
     baz=328,SNR=8.4
V48A Smith Brothers   70.66  54  P     P      21 36 07.2  0.0
V48A                             IAmb  IAmb   21 36 12.1
     comp=Z,19nm,0.9s
V48A Smith Brothers   70.66  54  P     P      21 36 08.8 +1.5
     baz=327,SNR=5.1
TESR Tescani          70.71 330 ⇑P     P      21 36 09.3 +2.0
833A Chaparral WMA,   70.76  68  P     P      21 36 08.2 +0.3
833A                             IAmb  IAmb   21 36 13.8
     comp=Z,16nm,0.9s
833A Chaparral WMA,   70.76  68  P     P      21 36 08.7 +0.8
     baz=325
JAVC Velka Javorina   70.76 336 eP     P      21 36 09.2 +1.5
TREC Trest            70.81 338 eP     P      21 36 12.0 +4.1
TREC                            ex     x      21 36 20.4
TREC                             AMS   AMS    22 11 00.0
     comp=Z,600nm,21.5s
TREC Trest            70.81 338 eP     P      21 36 12.0 +4.1
TREC                            e             21 36 20.4
TREC                             MLR   MLR
     comp=Z,600nm,21.5s
KRUC Moravsky         70.84 337 eP     P      21 36 10.0 +1.9
VYHS Vyhne            70.85 336 eP     P      21 36 12.9 +4.8
VYHS                             pmax  pmax
     comp=Z,6.0nm,0.9s
VYHS Vyhne            70.85 336 eP     P      21 36 12.9 +4.8
KAPI Kappang          70.94 226  LR    LR     22 06 44.8
     comp=Z,59nm,21.9s,baz=26,slow=36
Y45A Yeager Farm, C   70.99  57  P     P      21 36 09.4 +0.2
143A Socs Landing,    71.09  59  P     P      21 36 10.9 +1.1
SMOL Smolenice        71.14 337 eP     P      21 36 15.5 +5.6
SMOL                             pmax  pmax
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     comp=Z,3.0nm,0.8s
IPM  Ipoh             71.16 248  P     P      21 36 08.3 -2.1
MEM  Membach          71.21 345 dP     P      21 36 13.8 +3.6
BTNL Ternell          71.21 345 dP     P      21 36 14.2 +3.8
LUPA Lehigh Univers   71.23  43  P     P      21 36 11.0 +0.4
LUPA                             IAmb  IAmb   21 36 14.5
     comp=Z,24nm,1.0s
GRA1 Grafenberg Arr   71.25 341  P     P      21 36 12.0 +1.4
GRA1                             IAmb  IAmb   21 36 30.8
     comp=Z,16nm,1.2s
GRF  Grafenberg Arr   71.25 341  P     P      21 36 12.0 +1.4
GRF                              pmax  pmax
     comp=Z,17nm,1.2s
GRFO Grafenberg       71.25 341  P     P      21 36 11.7 +1.1
GRFO                             IAmb  IAmb   21 36 30.8
     comp=Z,19nm,1.3s
GRFO Grafenberg       71.25 341  P     P      21 36 11.7 +1.1
GRFO                             pmax  pmax
     comp=Z,19nm,1.3s
VRI  Vrincioaia       71.28 329 ⇑P     P      21 36 12.6 +1.8
VRI  Vrincioaia       71.28 329  P     P      21 36 12.6 +1.8
MODS Modra-Piesok     71.31 337 eP     P      21 36 16.3 +5.4
MODS                             pmax  pmax
     comp=Z,17nm,1.0s
MODS Modra-Piesok     71.31 337 eP     P      21 36 16.3 +5.4
CJR  Cluj-Napoca      71.35 332 ⇑P     P      21 36 13.5 +2.3
CJR  Cluj-Napoca      71.35 332  P     P      21 36 13.5 +2.3
KHC  Kasperske Hory   71.35 339  P     P      21 36 12.1 +0.9
KHC  Kasperske Hory   71.35 339 eP     P      21 36 13.2 +2.0
KHC                             ex     x      21 36 22.8
KHC                             ePCP   PcP    21 36 33.7 +2.9
KHC                              AMS   AMS    22 11 40.0
     comp=Z,600nm,18.5s
KHC  Kasperske Hory   71.35 339 eP     P      21 36 13.2 +2.0
KHC                             e             21 36 22.8
KHC                             e             21 36 33.7
KHC                              MLR   MLR
     comp=Z,600nm,18.5s
TZTN Tazewell         71.41  51  P     P      21 36 11.9 +0.2
     baz=328
PAL  Palisades        71.42  42  P     P      21 36 12.4 +0.7
PAL                              IAmb  IAmb   21 36 15.7
     comp=Z,23nm,0.8s
PAL  Palisades        71.42  42  P     P      21 36 12.4 +0.7
PAL                              pmax  pmax
     comp=Z,23nm,0.9s
PAL  Palisades        71.42  42  P     P      21 36 11.8 +0.1
     baz=331
COVR Voineasa-Covas   71.45 330 ⇑P     P      21 36 14.3 +2.5
BRNJ Basking Ridge    71.46  43  P     P      21 36 13.2 +1.3
CKRC Cesky Krumlov    71.50 339 eP     P      21 36 15.9 +3.8
CKRC Cesky Krumlov    71.50 339 eP     P      21 36 15.9 +3.8
MARR Marisel-Cluj     71.51 332 ⇓P     P      21 36 14.9 +2.6
CPNY Central Park     71.59  42  P     P      21 36 13.6 +0.9
GERES GERESS Array B  71.60 339  P     P      21 36 13.3 +0.5
     comp=Z,1.6nm,0.7s,baz=30,slow=6.2,SNR=11
GERES                            LR    LR     22 12 39.1
     comp=Z,270nm,18.1s,baz=22,slow=40
     comp=Z,1.6nm,0.7s
X48A Hartselle        71.64  55  IAmb  IAmb   21 36 17.8
     comp=Z,16nm,0.8s
BMRD Maredsous        71.68 345 dP     P      21 36 15.2 +2.1
V51A Loudon           71.69  52  IAmb  IAmb   21 36 18.2
     comp=Z,25nm,0.8s
V51A Loudon           71.69  52  P     P      21 36 13.1 -0.3
     baz=328,SNR=6.7
SDMD Soldier's Deli   71.70  45  P     P      21 36 13.4  0.0
TPGR Topolog          71.72 328 ⇓P     P      21 36 13.9 +0.5
W50A Signal Mountai   71.78  53  P     P      21 36 14.5 +0.5
W50A                             IAmb  IAmb   21 36 18.7
     comp=Z,19nm,0.8s
MLR  Muntele Rosu     71.85 330 ⇓P     P      21 36 16.9 +2.6
MLR  Muntele Rosu     71.85 330  LR    LR     22 11 18.3
     comp=Z,432nm,18.6s,baz=20,slow=39
MLR  Muntele Rosu     71.85 330  P     P      21 36 15.0 +0.6
MLR                              IAmb  IAmb   21 36 20.2
     comp=Z,53nm,2.0s
MLR  Muntele Rosu     71.85 330  P     P      21 36 15.0 +0.6
MLR                              pmax  pmax
     comp=Z,53nm,2.0s
V52A Sevierville      71.99  52  P     P      21 36 16.3 +1.0
V52A                             IAmb  IAmb   21 36 20.1
     comp=Z,17nm,0.8s
KOPT Kop Dagi         71.99 317  P     P      21 36 14.6 -0.9
KOPT                             IAmb  IAmb   21 36 29.9
     comp=Z,13nm,0.8s
CONA Conrad Observa   72.03 337 epP    P      21 36 19.4 +4.0
     comp=Z,4.1nm,0.9s,SNR=5.0
MYKOM Kota Tinggi     72.05 244  P     P      21 36 13.8 -2.0
TKL  Tuckaleechee C   72.07  52  LR    LR     22 09 23.5
     comp=Z,220nm,20.3s,baz=328,slow=37
TIRR Tirgusor         72.08 328 ⇑P     P      21 36 17.3 +1.7
TIRR Tirgusor         72.08 328  P     P      21 36 15.6 -0.1
TIRR                             IAmb  IAmb   21 36 26.4
     comp=Z,26nm,0.9s
TIRR Tirgusor         72.08 328  P     P      21 36 17.3 +1.7
VOIR                  72.14 330 ⇑P     P      21 36 18.4 +2.3
VOIR                  72.14 330  P     P      21 36 18.4 +2.3
RONA Rosalia, Austr   72.16 337 epP    P      21 36 20.4 +4.3
     comp=Z,3.5nm,0.8s
BLA  Blacksburg       72.16  49  P     P      21 36 17.3 +1.0
BLA                              IAmb  IAmb   21 36 20.9
     comp=Z,17nm,0.8s
BLA  Blacksburg       72.16  49  P     P      21 36 17.3 +1.0
BLA                              pmax  pmax
     comp=Z,17nm,0.9s
BLA  Blacksburg       72.16  49  P     P      21 36 16.6 +0.3
     baz=329
Z47A Carrollton       72.22  56  P     P      21 36 17.2 +0.6
     baz=327,SNR=7.1
146A Union            72.24  57  P     P      21 36 17.9 +1.1
146A Union            72.24  57  P     P      21 36 18.3 +1.6
     baz=327,SNR=6.4
S57A Dark Hollow, R   72.29  47  IAmb  IAmb   21 36 22.4
     comp=Z,23nm,0.9s
S57A Dark Hollow, R   72.29  47  P     P      21 36 17.3 +0.4
     baz=330,SNR=5.5
S57A                             P     P      21 36 17.3 +0.4
     baz=330,SNR=5.5
MFTR Murfatlar        72.34 327 ⇑P     P      21 36 18.8 +1.6
Y49A Blount Mountai   72.42  55  P     P      21 36 17.2 -0.6
     baz=328,SNR=5.7
MOA  Molln            72.44 338 epP    P      21 36 21.2 +3.5
     comp=Z,2.5nm,0.9s
V53A Saluda           72.47  51  P     P      21 36 19.8 +1.6
V53A                             IAmb  IAmb   21 36 23.1
     comp=Z,12nm,0.9s
W52A Murphy           72.48  52  P     P      21 36 18.4 +0.2
W52A                             IAmb  IAmb   21 36 23.5
     comp=Z,23nm,0.8s
W52A Murphy           72.48  52  P     P      21 36 18.4 +0.2
     baz=328,SNR=5.5
X51A Calhoun          72.52  53  P     P      21 36 19.5 +1.1
X51A                             IAmb  IAmb   21 36 23.2
     comp=Z,26nm,0.9s
R58B Mineral          72.54  46  P     P      21 36 19.2 +0.7
R58B                             IAmb  IAmb   21 36 23.2
     comp=Z,16nm,1.1s
SURR Surduc           72.62 332 ⇑P     P      21 36 20.4 +1.6
GURO Guroymak-BITLI   72.68 315  P     P      21 36 20.1 +0.6
GZR  Gura Zlata       72.79 332 ⇑P     P      21 36 21.6 +1.7
GZR  Gura Zlata       72.79 332  P     P      21 36 21.6 +1.7
T57A Hurt             72.82  48  IAmb  IAmb   21 36 25.7
     comp=Z,16nm,0.8s
T57A Hurt             72.82  48  P     P      21 36 19.7 -0.4
     baz=330,SNR=6.0
T57A                             P     P      21 36 19.7 -0.4
     baz=330,SNR=6.0
LRAL Lakeview Retre   72.85  56  P     P      21 36 20.2 -0.2
     baz=327,SNR=8.1
LRAL Lakeview Retre   72.85  56  P     P      21 36 19.9 -0.4
     baz=327,SNR=8.1
CASEE Lake Jocassee   72.99  52  P     P      21 36 21.4 +0.1
     baz=328,SNR=5.5
BG3  Lake Jocassee    72.99  52  IAmb  IAmb   21 36 26.2
     comp=Z,21nm,0.8s
HERR Herculane        73.36 332 ⇓P     P      21 36 25.9 +2.7
KBA  Koelnbreinsper   73.36 339 epP    P      21 36 27.7 +4.3
     comp=Z,3.8nm,0.6s
SOKA Soboth           73.40 338 epP    P      21 36 27.6 +4.1
     comp=Z,3.4nm,0.6s,SNR=4.2
Z51A Franklin         73.43  54  P     P      21 36 24.7 +0.9
Z51A                             IAmb  IAmb   21 36 28.3
     comp=Z,30nm,0.9s
RETA Reutte           73.46 341 i pP   P      21 36 27.9 +4.1
```

	comp=Z,2.1nm,0.6s						
Y52A	**Lilburn**	**73.46**	**53**	P	**P**	**21 36 25.3**	**+1.3**
Y52A				IAmb	IAmb	21 36 29.0	
	comp=Z,18nm,0.8s						
Y52A	**Lilburn**	**73.46**	**53**	P	**P**	**21 36 28.2**	**+4.2**
	baz=328,SNR=5.3						
Y52A				P	**P**	**21 36 28.2**	**+4.2**
	baz=328,SNR=5.3						
ILGA	**Ilgaz**	**73.49**	**322**	P	**P**	**21 36 25.6**	**+1.2**
ILGA				IAmb	IAmb	21 36 36.5	
	comp=Z,23nm,0.7s						
WTTA	**Wattenberg**	**73.51**	**340**	*i* pP	**P**	**21 36 28.8**	**+4.5**
	comp=Z,3.2nm,0.7s						
MOTA	**Moosalm**	**73.53**	**340**	*e*pP	**P**	**21 36 28.7**	**+4.3**
	comp=Z,3.2nm,0.7s,SNR=5.0						
KMSC	**Kings Mountain**	**73.55**	**50**	IAmb	IAmb	21 36 29.1	
	comp=Z,22nm,0.8s						
KMSC	**Kings Mountain**	**73.55**	**50**	P	**P**	**21 36 24.4**	**0.0**
	baz=329						
AFI	**Afiamalu**	**73.59**	**154**	LR	LR	22 02 05.2	
	comp=Z,136nm,19.5s,baz=322,slow=30						
SQTA	**Sankt Quirin**	**73.63**	**340**	*e*pP	**P**	**21 36 29.4**	**+4.5**
	comp=Z,3.8nm,0.6s,SNR=5.8						
OBKA	**Obir**	**73.66**	**338**	*e*pP	**P**	**21 36 29.7**	**+4.7**
	comp=Z,16nm,0.7s						
ABTA	**Abfaltersbach**	**73.84**	**339**	*e*pP	**P**	**21 36 30.2**	**+4.1**
	comp=Z,3.0nm,0.6s						
FETA	**Feichten**	**73.91**	**341**	*e*pP	**P**	**21 36 31.0**	**+4.3**
	comp=Z,3.7nm,0.7s						
V58A	**Windy Hill, Pi**	**73.91**	**48**	P	**P**	**21 36 27.4**	**+0.8**
V58A				IAmb	IAmb	21 36 31.5	
	comp=Z,30nm,0.9s						
PRED	**Cave del Predi**	**73.92**	**338**	P	**P**	**21 36 27.6**	**+1.0**
PRED				IAmb	IAmb	21 36 31.4	
	comp=Z,10nm,0.7s						
HODGE	**Hodges**	**73.93**	**51**	IAmb	IAmb	21 36 31.5	
	comp=Z,24nm,0.8s						
HODGE	**Hodges**	**73.93**	**51**	P	**P**	**21 36 26.2**	**-0.6**
	baz=329,SNR=6.6						
U59A	**Littleton**	**73.97**	**47**	P	**P**	**21 36 28.3**	**+1.4**
U59A				IAmb	IAmb	21 36 31.8	
	comp=Z,13nm,0.7s						
CLUD	**Cludinico**	**74.05**	**339**	P	**P**	**21 36 28.6**	**+1.3**
MTN	**Manton Dam**	**74.29**	**212**	P	**P**	**21 36 28.7**	**-0.1**
DAVOX	**Davos/Dischmat**	**74.30**	**341**	LR	LR	22 12 53.8	
	comp=Z,298nm,19.6s,baz=25,slow=39						
BRAL	**Brewton**	**74.39**	**57**	P	**P**	**21 36 29.6**	**+0.2**
	baz=328						
BRTR	**Keskin Array B**	**74.70**	**322**	P	**P**	**21 36 32.1**	**+0.8**
	comp=Z,3.5nm,0.7s,baz=57,slow=4.1,SNR=17						
BRTR				LR	LR	22 11 35.5	
	comp=Z,278nm,19.6s,baz=18,slow=38						
	comp=Z,3.5nm,0.7s						
BNN	**Bunyan**	**74.72**	**320**	IAmb	IAmb	21 36 42.7	
	comp=Z,19nm,0.8s						
TEOL	**Teolo**	**75.34**	**339**	P	**P**	**21 36 35.8**	**+1.1**
TEOL				IAmb	IAmb	21 36 48.7	
	comp=Z,27nm,0.9s						
MSVF	**Nonsavu**	**75.38**	**165**	LR	LR	22 05 00.6	
	comp=Z,128nm,21.0s,baz=153,slow=32						
GSI	**Gunungsitoli**	**75.64**	**250**	P	**P**	**21 36 34.6**	**-2.2**
GSI				IAmb	IAmb	21 36 45.1	
	comp=Z,25nm,1.3s						
GAZ	**Gaziantep**	**75.71**	**318**	P	**P**	**21 36 37.1**	**0.0**
TIGA	**Tifton**	**75.73**	**54**	P	**P**	**21 36 37.0**	**-0.1**
TIGA	**Tifton**	**75.73**	**54**	P	**P**	**21 36 38.1**	**+0.9**
	baz=329						
NHSC	**New Hope**	**75.78**	**51**	P	**P**	**21 36 38.2**	**+0.8**
	baz=330						
255A	**Hazlehurst**	**75.81**	**53**	P	**P**	**21 36 38.6**	**+1.1**
ZCCA	**Zocca**	**76.44**	**340**	P	**P**	**21 36 41.4**	**+0.3**
ZCCA				IAmb	IAmb	21 37 24.2	
	comp=Z,25nm,1.3s						
SHME	**Shamm**	**77.15**	**298**	P	**P**	**21 36 44.7**	**-0.5**
BANOM	**Banah**	**77.18**	**298**	*i* P	**P**	**21 36 45.1**	**-0.4**
	SNR=12						
MURB	**Monte Urbino**	**77.18**	**338**	P	**P**	**21 36 47.3**	**+2.0**
MURB				IAmb	IAmb	21 36 52.3	
	comp=Z,24nm,0.9s						
FDMO	**Fiordimonte**	**77.28**	**338**	P	**P**	**21 36 47.3**	**+1.4**
NRCA	**Norcia**	**77.47**	**338**	IAmb	IAmb	21 36 53.7	
	comp=Z,23nm,0.8s						
KNRA	**Kununurra**	**77.67**	**214**	P	**P**	**21 36 48.5**	**+0.4**
MSFE	**Esma-Masafi**	**77.72**	**298**	P	**P**	**21 36 47.9**	**-0.7**
CESX	**Cesi**	**77.80**	**338**	P	**P**	**21 36 49.7**	**+1.0**
UMQ	**Umm Al-Quwin**	**77.82**	**298**	P	**P**	**21 36 48.2**	**-0.8**
CTA	**Charters Tower**	**77.92**	**196**	LR	LR	22 07 55.4	
	comp=Z,37nm,21.3s,baz=78,slow=33						
CTAO	**Charters Tower**	**77.92**	**196**	P	**P**	**21 36 46.1**	**-3.3**
CTAO	**Charters Tower**	**77.92**	**196**	P	**P**	**21 36 46.1**	**-3.3**
CTAO				pmax	pmax		
	comp=Z,35nm,0.9s						
656A	**Willston**	**77.97**	**54**	P	**P**	**21 36 50.5**	**+0.7**
UOSS	**Minazif**	**78.04**	**297**	P	**P**	**21 36 49.0**	**-1.3**
UOSS				IAmb	IAmb	21 36 55.1	
	comp=Z,16nm,0.8s						
UOSS	**Minazif**	**78.04**	**297**	*i* P	**P**	**21 36 49.1**	**-1.2**
	SNR=11						
INTR	**Introdacqua**	**78.09**	**337**	P	**P**	**21 36 51.3**	**+0.9**
HATD	**Hatta, Dubai**	**78.18**	**297**	*i* P	**P**	**21 36 50.6**	**-0.5**
	SNR=18						
WSAR	**Wadi Sarin**	**78.27**	**294**	LR	LR	22 14 25.7	
	comp=Z,266nm,20.2s,baz=72,slow=38						
ASHO	**Ashiyiah**	**78.33**	**297**	*i* P	**P**	**21 36 51.1**	**-0.8**
	SNR=12						
FAQ	**Al Faqa, Dubai**	**78.51**	**298**	*i* P	**P**	**21 36 51.6**	**-1.3**
	SNR=9.6						
SOHO	**SOHO**	**78.56**	**297**	*i* P	**P**	**21 36 51.8**	**-1.4**
	SNR=9.0						
DZM	**Mont Dzumac**	**78.68**	**177**	*e*LR	LR	22 01 18.8	
	comp=Z,235nm,25.8s						
DZM	**Mont Dzumac**	**78.68**	**177**	LR	LR	22 05 14.2	
	comp=Z,124nm,20.3s,baz=33,slow=31						
DZM	**Mont Dzumac**	**78.68**	**177**	P	**P**	**21 36 53.5**	**-0.1**
DZM				IAmb	IAmb	21 36 56.7	
	comp=Z,26nm,1.3s						
ASUD	**Al Ashush, Dub**	**78.74**	**298**	P	**P**	**21 36 53.1**	**-1.0**
ALNE	**Al Ain**	**79.01**	**297**	*i* P	**P**	**21 36 54.7**	**-1.0**
	SNR=15						
PCHI	**Peechi**	**79.39**	**273**	*e*P	P	21 36 51.8	-6.0
PCHI				*e*S	SKiKP	21 46 24.2	+23
PCHI				*e*x	x	22 15 05.5	
ARG	**Arkhangelos**	**79.71**	**324**	P	**P**	**21 36 59.0**	**-0.2**
ARG	**Arkhangelos**	**79.71**	**324**	P	**P**	**21 36 59.0**	**-0.2**
ARG				pmax	pmax		
	comp=Z,164nm,1.5s						
WB0	**Warramunga Arr**	**80.00**	**207**	P	**P**	**21 36 59.7**	**-1.2**
MMAI	**Mount Meron Ar**	**80.08**	**317**	LR	LR	22 14 48.4	
	comp=Z,186nm,21.7s,baz=88,slow=37						
WRAB	**Tennant Creek**	**80.17**	**207**	P	**P**	**21 37 01.6**	**-0.2**
WB2	**Warramunga Arr**	**80.18**	**207**	IAmb	IAmb	21 37 02.4	
	comp=Z,53nm,1.5s						
WRA	**Warramunga Arr**	**80.18**	**207**	P	**P**	**21 37 01.2**	**-0.6**
	comp=Z,8.4nm,0.7s,baz=16,slow=5.6,SNR=55						
WRA				LR	LR	22 15 51.9	
	comp=Z,34nm,18.2s,baz=35,slow=38						
	comp=Z,8.4nm,0.7s						
WRA	**Warramunga Arr**	**80.18**	**207**	P	**P**	**21 37 01.1**	**-0.7**
WRA	**Warramunga Arr**	**80.18**	**207**	P	**P**	**21 37 01.1**	**-0.7**
WRA				pmax	pmax		
	comp=Z,3.0nm,1.5s						
TAOE	**Nuku Hiva Isla**	**80.31**	**123**	*e*LR	LR	22 02 07.5	
	comp=Z,316nm,24.6s						
MZR	**Muzera**	**81.00**	**298**	*i* P	**P**	**21 37 05.2**	**-1.3**
	SNR=13						
IDI	**Anoyia**	**81.57**	**326**	LR	LR	22 19 42.5	
	comp=Z,83nm,18.7s,baz=15,slow=40						
VAE	**Valguarnera**	**82.31**	**335**	LR	LR	22 19 19.1	
	comp=Z,374nm,18.1s,baz=315,slow=40						
CMIG	**Matias Romero**	**82.36**	**71**	LR	LR	22 14 55.8	
	comp=Z,59nm,18.2s,slow=36						
ESDC	**Sonseca Array**	**83.19**	**350**	P	**P**	**21 37 17.9**	**+0.2**
	comp=Z,4.0nm,0.8s,baz=359,slow=4.7,SNR=17						
	comp=Z,4.0nm,0.8s						
ESDC	**Sonseca Array**	**83.19**	**350**	P	**P**	**21 37 18.9**	**+1.1**
EIL	**Elat**	**83.25**	**316**	LR	LR	22 19 40.4	
	comp=Z,145nm,20.3s,baz=50,slow=40						
AS31	**Alice Springs**	**83.86**	**207**	P	**P**	**21 37 20.4**	**-0.7**
ASAR	**Alice Springs**	**83.86**	**207**	P	**P**	**21 37 21.1**	**0.0**
	comp=Z,8.8nm,0.6s,baz=15,slow=4.9,SNR=115						
ASAR				LR	LR	22 14 15.9	
	comp=Z,46nm,20.9s,baz=8.5,slow=35						
	comp=Z,8.8nm,0.6s						
ASAR	**Alice Springs**	**83.86**	**207**	P	**P**	**21 37 20.7**	**-0.4**
ASAR	**Alice Springs**	**83.86**	**207**	P	**P**	**21 37 20.7**	**-0.4**
PPT	**Papeete**	**84.08**	**135**	LR	LR	22 08 55.2	
	comp=Z,105nm,21.7s,baz=324,slow=32						
PPT2	**Papeete2**	**84.10**	**135**	*e*LR	LR	22 03 20.3	
	comp=Z,348nm,30.8s						
PPT2				*e*LR	LR	22 03 34.4	
	comp=Z,198nm,34.8s						
RAYN	**Ar Rayn**	**84.28**	**305**	P	**P**	**21 37 22.7**	**-0.8**
RAYN	**Ar Rayn**	**84.28**	**305**	P	**P**	**21 37 22.7**	**-0.8**
RAYN				pmax	pmax		
	comp=Z,23nm,0.9s						
RAYN	**Ar Rayn**	**84.28**	**305**	*i* P	**P**	**21 37 22.4**	**-1.1**
	SNR=32						
PBAR	**Barrancos**	**84.95**	**352**	*e*P	**P**	**21 37 31.2**	**+4.6**
PBAR				A	A	21 37 58.3	
	comp=Z,34nm,1.9s						
KEST	**Kesra**	**85.08**	**339**	P	**P**	**21 37 29.9**	**+2.5**
	comp=Z,3.5nm,0.8s,baz=295,slow=4.3,SNR=4.2						
KEST				LR	LR	22 20 48.5	
	comp=Z,196nm,18.1s,baz=322,slow=39						
	comp=Z,3.5nm,0.8s						
MBWA	**Marble Bar**	**85.76**	**220**	P	**P**	**21 37 29.4**	**-1.3**
MBWA	**Marble Bar**	**85.76**	**220**	P	**P**	**21 37 29.6**	**-1.0**
PVAQ	**Vaqueiros**	**85.76**	**353**	*e*P	**P**	**21 37 34.8**	**+4.1**
MORF	**Marmelete**	**85.92**	**353**	*e*P	**P**	**21 37 35.9**	**+4.3**
PSA00	**Pilbara Seismi**	**86.10**	**220**	P	**P**	**21 37 31.0**	**-1.3**
RAO	**Raoul Island**	**87.30**	**163**	LR	LR	22 11 13.5	
	comp=Z,169nm,20.0s,baz=46,slow=32						
STKA	**Stephens Creek**	**90.22**	**198**	P	**P**	**21 37 52.2**	**+0.5**
	comp=Z,7.4nm,0.8s,baz=335,slow=6.8,SNR=9.8						
STKA				LR	LR	22 21 51.0	
	comp=Z,33nm,18.1s,baz=351,slow=38						
	comp=Z,7.4nm,0.8s						
STKA	**Stephens Creek**	**90.22**	**198**	P	**P**	**21 37 51.7**	**0.0**
STKA	**Stephens Creek**	**90.22**	**198**	P	**P**	**21 37 51.7**	**0.0**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
JTS	**Las Juntas de**	**93.18**	**66**	LR	LR	22 24 44.6	
	comp=Z,68nm,18.5s,baz=320,slow=38						
VNDA	**Vanda**	**134.12**	**180**	PKP	**PKPdf**	**21 44 07.5**	**+0.3**
	comp=Z,1.4nm,1.0s,baz=308,slow=5.2,SNR=4.1						
PLCA	**Paso Flores**	**142.34**	**88**	PKP	**PKPdf**	**21 44 23.1**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=25,slow=7.2,SNR=3.1						
TRQA	**Tornquist**	**145.10**	**77**		**PKPab**	**21 44 28.4**	**+0.4**
TRQA	**Tornquist**	**145.10**	**77**	PKIKP	**PKPab**	**21 44 28.4**	**+0.4**
QSPA	**South Pole Qui**	**146.61**	**180**		**PKPdf**	**21 44 31.0**	**+1.0**
ELIB	**Princess Elisa**	**157.57**	**212**	*d*PKP	**PKPab**	**21 45 17.9**	**-0.7**
TROLL	**Troll, Antarti**	**162.76**	**201**	PKPab	**PKPab**	**21 45 40.5**	**-0.7**

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*IDC **30** 21:43:26.9±1.2,2°.49N×126°.03E,h0^{km},mb3.6/6, mbtmp3.7/6,MS4.0/1,Error ellipse: s-maj=154.5km s-min=18.3km az=67.0*

ISC 30 21:43:39.0±1.2,**2°.5N**±0°.5×**12°6E**±°,**h105^{km},n7,**σ**0^{s}.37**/6, **mb3.6**/6,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.69**	**161**	P	**P**	**21 48 40.8**	**-0.6**
	1.9nm,0.6s,baz=339,slow=11,SNR=6.6						
	1.9nm,0.6s						
ASAR	**Alice Springs**	**27.07**	**164**	P	**P**	**21 49 12.0**	**0.0**
	0.2nm,0.3s,baz=346,slow=11,SNR=4.7						
	0.2nm,0.3s						
STKA	**Stephens Creek**	**37.18**	**158**	P	**P**	**21 50 40.4**	**+0.3**
	1.8nm,0.7s,baz=351,slow=6.4,SNR=3.5						
	1.8nm,0.7s						
PALK	**Pallekele**	**45.58**	**278**	LR	LR	22 11 56.2	
	comp=Z,190nm,21.7s,baz=153,slow=38						
SONM	**Songino Array**	**48.29**	**342**	P	**P**	**21 52 09.8**	**0.0**
	0.2nm,0.5s,baz=161,slow=9.2,SNR=2.7						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**58.27**	**326**	P	**P**	**21 53 22.8**	**+0.1**
	0.4nm,0.6s,baz=122,slow=8.0,SNR=6.5						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**62.49**	**328**	P	**P**	**21 53 51.2**	**-0.1**
	0.5nm,0.6s,baz=131,slow=6.2,SNR=9.9						
	0.5nm,0.6s						

ROM 30 21:48:57.2±0.1,**39°.055N**±0°.008×**16°.74E**±0°.01,**h10^{km}, ML1.3**/16,**2C,Error ellipse: s-maj=1.0km s-min=0.7km az=135.0,Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SERS	**Sersale**	**0.04**	**242**	P	Pg	21 48 59.6	+0.3
SERS				S	Sg	21 49 01.0	+0.3
SERS				AML	AML		
	comp=E,310µm,0.1s						
SERS				AML	AML		
	comp=N,235µm,0.6s						
SERS				AML	AML		
	comp=E,235µm,0.2s						
SERS				AML	AML		
	comp=N,353µm,0.1s						
SERS				END			
TIP	**Timpagrande**	**0.12**	**8**	⇑P	Pg	21 49 00.7	+0.4
TIP				S	Sg	21 49 02.9	+0.5
TIP				AML	AML		
	comp=E,103µm,1.2s						
TIP				AML	AML		
	comp=E,126µm,1.2s						
TIP				AML	AML		
	comp=N,321µm,0.3s						
TIP				AML	AML		
	comp=E,103µm,0.8s						
TIP				AML	AML		
	comp=N,242µm,0.3s						
TIP				AML	AML		
	comp=E,126µm,0.8s						
LADO	**San Nicola del**	**0.30**	**40**	P	Pg	21 49 04.0	+0.7
LADO				S	Sb	21 49 08.9	-0.9
CELI	**Celico**	**0.39**	**333**	⇑P	Pg	21 49 05.2	+0.2
CELI				S	Sb	21 49 12.4	0.0
CELI				AML	AML		
	comp=E,110µm,0.4s						
CELI				AML	AML		
	comp=N,189µm,1.6s						
CELI				AML	AML		
	comp=N,189µm,0.4s						
CELI				AML	AML		
	comp=E,110µm,1.6s						
SPS2	**Spezzano della**	**0.39**	**308**	P	Pg	21 49 05.1	+0.2
SPS2				S	Sb	21 49 11.9	-0.6
SPS2				AML	AML		
	comp=N,45µm,0.4s						
SPS2				AML	AML		
	comp=E,32µm,1.2s						
PIPA	**Pietrapaola**	**0.43**	**8**	P	Pg	21 49 06.3	+0.6
PIPA				AML	AML		
	comp=E,64µm,0.3s						
PIPA				AML	AML		
	comp=N,56µm,0.2s						
CAR1	**CAROLEI**	**0.45**	**296**	P	Pg	21 49 06.4	+0.3
CAR1				S	Sb	21 49 13.3	-0.9
CAR1				AML	AML		
	comp=E,59µm,1.4s						
CAR1				AML	AML		
	comp=N,87µm,0.4s						
CAR1				AML	AML		
	comp=E,59µm,0.6s						
PLAC	**Placanica**	**0.65**	**201**	P	Pg	21 49 09.9	+0.2

ROM 30 21:49:38.5±0.1,**40°.583N**±0°.004×**16°.029E**±0°.006, **h43^{km}**±1^{km},**ML2.3**/60,**5C-5D,Error ellipse: s-maj=0.5km s-min=0.2km az=126.0,Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTRP	**Pietrapertosa**	**0.07**	**158**	⇑P	Pn	21 49 45.7	+0.2
PTRP				S	Sn	21 49 51.8	+1.4
PTRP				AML	AML		
	comp=E,683µm,0.3s						
PTRP				AML	AML		
	comp=N,805µm,0.5s						
PTRP				AML	AML		
	comp=N,805µm,1.5s						
PTRP				AML	AML		
	comp=E,683µm,0.3s						
PTRP				AML	AML		
	comp=N,805µm,0.5s						
PZUN	**Potenza**	**0.18**	**291**	P	Pn	21 49 46.4	+0.5
PZUN				S	Sn	21 49 52.2	+1.1
PZUN				AML	AML		
	comp=N,1280µm,0.6s						
PZUN				AML	AML		
	comp=E,759µm,0.7s						
PZUN				AML	AML		
	comp=E,759µm,0.7s						
PZUN				AML	AML		
	comp=E,816µm,0.7s						
PZUN				AML	AML		
	comp=N,1245µm,0.7s						
PZUN				AML	AML		
	comp=N,1245µm,1.3s						
PZUN				AML	AML		
	comp=N,1280µm,1.4s						
PZUN				AML	AML		
	comp=N,872µm,0.4s						
PZUN				AML	AML		
	comp=N,1244µm,0.7s						
PZUN				AML	AML		
	comp=E,753µm,0.3s						
PZUN				AML	AML		
	comp=E,747µm,0.3s						
ACER	**Acerenza**	**0.21**	**342**	⇓P	Pn	21 49 46.6	+0.2
ACER				S	Sn	21 49 52.3	+0.5
ACER				AML	AML		
	comp=E,1230µm,1.0s						
ACER				AML	AML		
	comp=N,1248µm,0.7s						
ACER				AML	AML		
	comp=E,1275µm,1.0s						
ACER				AML	AML		
	comp=N,1320µm,0.6s						
ACER				AML	AML		
	comp=E,1275µm,1.0s						
ACER				AML	AML		
	comp=E,1230µm,1.0s						
ACER				AML	AML		
	comp=N,1175µm,0.3s						
ACER				AML	AML		
	comp=N,1149µm,0.2s						
ACER				AML	AML		
	comp=E,1271µm,0.2s						
ACER				AML	AML		
	comp=E,1176µm,0.2s						
MCEL	**Monticello**	**0.31**	**214**	⇑P	Pn	21 49 47.1	-0.1
MCEL				S	Sn	21 49 53.3	0.0
MCEL				AML	AML		
	comp=E,904µm,0.4s						
MCEL				AML	AML		
	comp=N,566µm,1.1s						
MCEL				AML	AML		
	comp=N,595µm,1.1s						
MCEL				AML	AML		
	comp=N,566µm,0.9s						
MCEL				AML	AML		
	comp=N,595µm,0.9s						
MCEL				AML	AML		
	comp=E,905µm,0.4s						
MCEL				AML	AML		
	comp=E,930µm,0.4s						
MCEL				AML	AML		
	comp=E,699µm,0.4s						
MCEL				AML	AML		
	comp=E,677µm,0.4s						
MCEL				AML	AML		
	comp=N,508µm,0.3s						
MCEL				AML	AML		
	comp=N,531µm,0.3s						
MIGL	**Miglionico**	**0.31**	**86**	P	Pn	21 49 47.6	+0.4
MIGL				S	Sn	21 49 54.5	+1.1
MIGL				AML	AML		
	comp=E,1380µm,0.2s						
MIGL				AML	AML		
	comp=N,1660µm,0.6s						
MIGL				AML	AML		
	comp=N,1660µm,1.4s						
MIGL				AML	AML		
	comp=E,1380µm,0.2s						
MIGL				AML	AML		
	comp=N,1651µm,0.3s						
PALZ	**Palazzo San Ge**	**0.36**	**352**	⇓P	Pn	21 49 48.1	+0.3
PALZ				S	Sn	21 49 55.2	+0.9
PALZ				AML	AML		
	comp=N,177µm,1.2s						
PALZ				AML	AML		
	comp=E,368µm,1.0s						
PALZ				AML	AML		
	comp=N,177µm,0.8s						
PALZ				AML	AML		
	comp=E,368µm,1.0s						
PALZ				AML	AML		
	comp=E,334µm,0.3s						
PALZ				AML	AML		
	comp=N,146µm,0.2s						
CRAC	**Craco**	**0.38**	**125**	P	Pn	21 49 48.4	+0.5
CRAC				S	Sn	21 49 55.9	+1.4
CRAC				AML	AML		
	comp=E,454µm,0.3s						
CRAC				AML	AML		
	comp=N,239µm,0.4s						
CRAC				AML	AML		
	comp=N,239µm,1.6s						
CRAC				AML	AML		
	comp=E,454µm,0.3s						
CRAC				AML	AML		
	comp=N,233µm,0.3s						
MTSN	**Montesano sull**	**0.38**	**214**	⇑P	Pn	21 49 48.0	-0.1
MTSN				S	Sn	21 49 54.8	0.0
SCHR	**S. Chirico Rap**	**0.39**	**175**	⇑P	Pn	21 49 48.0	-0.1
SCHR				S	Sn	21 49 55.0	+0.2
SCHR				AML	AML		
	comp=N,566µm,0.3s						
SCHR				AML	AML		
	comp=E,458µm,1.0s						
SCHR				AML	AML		
	comp=E,452µm,0.3s						
SCHR				AML	AML		
	comp=N,566µm,0.3s						
SIRI	**Monte Sirino -**	**0.42**	**197**	P	Pn	21 49 48.3	-0.2
SIRI				S	Sn	21 49 55.8	+0.3
SIRI				AML	AML		
	comp=N,757µm,1.4s						
SIRI				AML	AML		
	comp=N,776µm,1.4s						
SIRI				AML	AML		
	comp=N,776µm,0.6s						
SIRI				AML	AML		
	comp=E,756µm,0.5s						
SIRI				AML	AML		
	comp=N,757µm,0.6s						
SIRI				AML	AML		
	comp=E,713µm,0.5s						
SIRI				AML	AML		
	comp=E,659µm,0.3s						
SIRI				AML	AML		
	comp=E,632µm,0.3s						
SIRI				AML	AML		
	comp=N,675µm,0.2s						
SIRI				AML	AML		
	comp=N,696µm,0.2s						
MRLC	**Muro Lucano**	**0.45**	**293**	P	Pn	21 49 49.2	+0.4
MRLC				S	Sn	21 49 57.4	+1.4
MRLC				AML	AML		
	comp=N,144µm,1.2s						
MRLC				AML	AML		
	comp=E,114µm,1.2s						
MRLC				AML	AML		
	comp=N,144µm,1.2s						
MRLC				AML	AML		
	comp=E,114µm,0.8s						
MRLC				AML	AML		
	comp=N,144µm,0.8s						
MRLC				AML	AML		
	comp=N,142µm,0.2s						
MRLC				AML	AML		
	comp=N,129µm,0.2s						
MRLC				AML	AML		
	comp=E,101µm,0.2s						
MRLC				AML	AML		
	comp=E,98µm,0.2s						
VULT	**Monte Vulture**	**0.49**	**320**	P	Pn	21 49 49.6	+0.2
VULT				S	Sn	21 49 57.1	+0.1
VULT				AML	AML		
	comp=E,188µm,0.3s						
VULT				AML	AML		
	comp=N,322µm,0.2s						
VULT				AML	AML		
	comp=N,282µm,0.2s						
VULT				AML	AML		
	comp=N,323µm,0.2s						
VULT				AML	AML		

	comp=E,183µm,0.3s						
VULT				AML	AML		
	comp=E,188µm,0.3s						
MRVN	**Minervino Murg**	**0.49**	**15**	⇓P	Pn	21 49 49.5	+0.1
MRVN				S	Sn	21 49 57.3	+0.2
MRVN				AML	AML		
	comp=N,193µm,1.1s						
MRVN				AML	AML		
	comp=E,194µm,0.6s						
MRVN				AML	AML		
	comp=N,193µm,0.9s						
MRVN				AML	AML		
	comp=N,139µm,0.1s						
MRVN				AML	AML		
	comp=E,168µm,0.1s						
MATE	**Matera**	**0.52**	**82**	⇓P	Pn	21 49 49.9	+0.3
MATE				S	Sn	21 49 57.8	+0.3
MATE				AML	AML		
	comp=N,464µm,0.3s						
MATE				AML	AML		
	comp=E,346µm,1.0s						
MATE				AML	AML		
	comp=E,324µm,0.1s						
MATE				AML	AML		
	comp=N,424µm,0.2s						
AMUR	**Altamura**	**0.54**	**53**	⇓P	Pn	21 49 50.3	+0.3
AMUR				S	Sn	21 49 58.7	+0.5
AMUR				AML	AML		
	comp=N,300µm,1.3s						
AMUR				AML	AML		
	comp=N,300µm,0.7s						
AMUR				AML	AML		
	comp=E,412µm,0.5s						
AMUR				AML	AML		
	comp=E,340µm,0.2s						
AMUR				AML	AML		
	comp=N,294µm,0.2s						
MGR	**Morigerati**	**0.57**	**219**	P	Pn	21 49 50.7	+0.3
MGR				S	Sn	21 49 59.8	+1.0
MGR				AML	AML		
	comp=E,232µm,0.5s						
MGR				AML	AML		
	comp=E,232µm,1.5s						
MGR				AML	AML		
	comp=N,274µm,0.4s						
MGR				AML	AML		
	comp=N,273µm,0.4s						
MGR				AML	AML		
	comp=E,295µm,0.6s						
MGR				AML	AML		
	comp=E,230µm,0.6s						
MGR				AML	AML		
	comp=N,1385µm,0.5s						
CAPA	**Cerignola FG**	**0.60**	**344**	P	Pn	21 49 51.0	+0.3
CAPA				S	Sn	21 49 59.8	+0.5
CAPA				AML	AML		
	comp=E,236µm,1.2s						
CAPA				AML	AML		
	comp=N,214µm,1.5s						
CAPA				AML	AML		
	comp=E,236µm,0.8s						
CAPA				AML	AML		
	comp=N,214µm,0.5s						
CAPA				AML	AML		
	comp=E,193µm,0.3s						
CAPA				AML	AML		
	comp=N,205µm,0.1s						
LTRZ	**Laterza**	**0.60**	**88**	P	Pn	21 49 51.0	+0.3
LTRZ				S	Sn	21 49 59.9	+0.4
CUC	**Castrocucco**	**0.61**	**196**	P	Pn	21 49 51.5	+0.5
CUC				S	Sn	21 50 01.1	+1.4
CUC				AML	AML		
	comp=E,228µm,1.0s						
CUC				AML	AML		
	comp=N,202µm,0.7s						
CUC				AML	AML		
	comp=E,274µm,1.0s						
CUC				AML	AML		
	comp=N,220µm,0.7s						
CUC				AML	AML		
	comp=N,202µm,0.7s						
CUC				AML	AML		
	comp=E,228µm,1.0s						
CUC				AML	AML		
	comp=E,274µm,1.0s						
CUC				AML	AML		
	comp=N,177µm,0.7s						
CUC				AML	AML		
	comp=N,175µm,0.3s						
CUC				AML	AML		
	comp=E,239µm,0.4s						
CUC				AML	AML		
	comp=E,197µm,0.4s						
CMPR	**Campora**	**0.61**	**245**	⇑P	Pn	21 49 51.0	+0.1
CMPR				S	Sn	21 50 00.5	+0.7
CMPR				AML	AML		
	comp=N,185µm,0.3s						
CMPR				AML	AML		
	comp=E,212µm,1.3s						
CMPR				AML	AML		
	comp=N,185µm,1.7s						
CMPR				AML	AML		
	comp=E,196µm,0.3s						
CMPR				AML	AML		
	comp=N,185µm,0.3s						
MCRV	**Calabrutti - M**	**0.68**	**287**	AML	AML		
	comp=N,140µm,0.2s						
MCRV				AML	AML		
	comp=E,120µm,0.4s						
MMN	**Mormanno**	**0.69**	**182**	P	Pn	21 49 53.1	+1.2
MMN				AML	AML		
	comp=E,54µm,0.6s						
MMN				AML	AML		
	comp=N,107µm,0.2s						
MMN				AML	AML		
	comp=E,54µm,1.4s						
MMN				AML	AML		
	comp=E,46µm,0.3s						
MMN				AML	AML		
	comp=N,107µm,0.2s						
SNAL	**S. Angelo Dei**	**0.71**	**299**	P	Pn	21 49 52.7	+0.4
SNAL				AML	AML		
	comp=E,55µm,0.3s						
SNAL				AML	AML		
	comp=E,54µm,0.3s						
SALB	**San Lorenzo Be**	**0.74**	**161**	P	Pn	21 49 53.0	+0.3
SALB				AML	AML		
	comp=E,138µm,1.2s						
SALB				AML	AML		
	comp=N,103µm,0.8s						
SALB				AML	AML		
	comp=E,138µm,0.8s						
SALB				AML	AML		
	comp=N,98µm,0.2s						
SALB				AML	AML		
	comp=E,122µm,0.4s						
NOCI	**Noci**	**0.81**	**75**	P	Pn	21 49 54.0	+0.4
NOCI				S	Sn	21 50 05.0	+0.4
NOCI				AML	AML		
	comp=E,324µm,0.5s						
NOCI				AML	AML		
	comp=N,384µm,0.1s						
NOCI				AML	AML		
	comp=E,252µm,0.2s						
NOCI				AML	AML		
	comp=N,384µm,0.1s						
CET2	**Cetraro**	**1.05**	**183**	P	Pn	21 49 57.6	+0.7
CET2				AML	AML		
	comp=E,84µm,0.9s						
CET2				AML	AML		
	comp=N,88µm,0.7s						
CET2				AML	AML		
	comp=N,88µm,1.3s						
MSAG	**Monte S. Angel**	**1.13**	**355**	P	Pn	21 49 58.3	+0.3
MSAG				AML	AML		
	comp=N,206µm,0.9s						
MSAG				AML	AML		
	comp=E,126µm,0.4s						
SGRT	**San Giovanni R**	**1.19**	**350**	P	Pn	21 49 59.1	+0.3
SGRT				AML	AML		
	comp=E,120µm,0.5s						
SGRT				AML	AML		
	comp=N,104µm,1.5s						
SGRT				AML	AML		
	comp=N,104µm,0.5s						
MELA	**Melanico ??? S**	**1.31**	**329**	P	Pn	21 50 01.3	+1.0
MELA				AML	AML		
	comp=E,124µm,0.4s						
MELA				AML	AML		
	comp=N,118µm,0.3s						
CAR1	**CAROLEI**	**1.33**	**174**	AML	AML		
	comp=N,41µm,1.0s						
CAR1				AML	AML		
	comp=E,42µm,1.5s						
CAR1				AML	AML		
	comp=E,42µm,0.5s						
LSTV	**Lastovo**	**2.28**	**16**	*e*Pn	Pn	21 50 14.1	+0.5
LSTV				Sn	Sn	21 50 39.4	-1.0
STON	**Ston**	**2.61**	**28**	*e*Pn	Pn	21 50 18.4	+0.3
STON				Sn	Sn	21 50 47.4	-1.1
ZIRJ	**Zirje**	**3.08**	**355**	Sn	Sn	21 50 58.4	-1.8
KIJV	**Kijevo**	**3.43**	**5**	*e*Pn	Pn	21 50 31.1	+1.6
KIJV				Sn	Sn	21 51 09.4	+0.5
DUGI	**Dugi Otok**	**3.48**	**348**	*e*Pn	Pn	21 50 30.2	+0.1
DUGI				Sn	Sn	21 51 07.8	-2.3
VIRC	**Vir**	**3.78**	**349**	Sn	Sn	21 51 16.0	-1.3
NVLJ	**Novalja**	**4.07**	**348**	Sn	Sn	21 51 23.2	-1.3
SMRN	**Sveta Marina**	**4.66**	**343**	Sn	Sn	21 51 37.9	-1.2

IDC ***30*** *21:58:15.7±0.5, 55°.35S×27°.88W, h0^{km}, mb4.7/12, mbtmp4.7/13, ML5.1/1, MS4.1/25, Error ellipse: s-maj=18.0km s-min=15.9km az=66.0*

NEIC ***30*** *21:58:17.4±1.0, 55°.4S±0°.1×28°.10W±0°.10, h10^{km}±1^{km}, mb5.0/71, Error ellipse: s-maj=19.6km s-min=6.9km az=200.0*

GCMT ***30*** *21:58:23.4±0.4, 55°.36S±0°.03×27°.78W±0°.05, h19^{km}±1^{km}, MW5.0/69, Moment Tensor Solution. s26,c31; s69,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.71±.25; M$_{\theta\theta}$-1.82±.18; M$_{\phi\phi}$-0.89±.16; M$_{r\theta}$0.87±.35; M$_{\theta\phi}$1.62±.10; M$_{\phi r}$2.02±.35; Best double couple: M$_0$3.54800×10^{16} NP1:ϕ_s336.00000°,δ58.00000°,λ125.00000°. NP2: ϕ_s102.00000°,δ46.00000°,λ47.00000°. Principal axes: T 3.9920, Plg60.0000°, Azm300.0000°; N -0.8950, Plg30.0000°, Azm135.0000°; P -3.1050, Plg7.0000°, Azm41.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 21:58:19.2±0.3**, 55°.43S**±0°.07×**28°.08W**±0°.07**, h26**^{km}**, n301,** σ**0^s.73**/280**, mb5.0**/39**, MS4.2**/27**, 1C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.00**	**280**	Pn	**Pn**	**21 59 32.2**	**-0.2**
VNA1	**Neumayer--Stat**	**17.56**	**158**	P	**P**	**22 02 22.9**	**+0.3**
VNA3	**Neumayer Olymp**	**17.74**	**160**	P	**P**	**22 02 25.1**	**+0.4**
VNA2	**Neumayer--Watz**	**17.95**	**158**	P	**Pn**	**22 02 24.4**	**-2.2**
	baz=316,slow=12						
EFI	**East Falkland**	**18.13**	**269**	P	**Pn**	**22 02 27.6**	**-1.4**
EFI				IAmb	IAmb	22 02 33.0	
	comp=Z,135nm,1.4s						
SNAA	**Sanae**	**19.51**	**156**	P	**P**	**22 02 44.3**	**+0.2**
	comp=Z,5.7nm,0.3s,baz=298,slow=10,SNR=127						
SNAA				LR	LR	22 08 52.3	
	comp=Z,198nm,19.4s,baz=336,slow=33						
	comp=Z,32nm,0.6s						
PMSA	**Palmer Station**	**19.94**	**228**	P	Pn	22 02 51.5	+1.0
	comp=Z,64nm,0.5s,baz=59,slow=18,SNR=7.3						
	comp=Z,64nm,0.5s						
TROLL	**Troll, Antarti**	**21.02**	**154**	P	**P**	**22 03 00.3**	**-0.3**
BELA	**Belgrano 2**	**22.66**	**184**	P	**P**	**22 03 18.2**	**+0.2**
BELA				IAmb	IAmb	22 03 20.2	
	comp=Z,57nm,1.2s						
MG02	**Cerro Sombrero**	**24.02**	**259**	P	**P**	**22 03 32.0**	**+0.4**
MG03	**Isla Dawson**	**24.31**	**256**	P	**P**	**22 03 34.6**	**+0.4**
MG03				IAmb	IAmb	22 03 44.4	
	comp=Z,88nm,1.8s						
MG05	**Puerto Natales**	**26.31**	**260**	P	**P**	**22 03 52.7**	**+0.3**
MG05				IAmb	IAmb	22 03 53.5	
	comp=Z,85nm,1.6s						
GO09	**Cerro Castillo**	**26.40**	**260**	P	**P**	**22 03 52.9**	**-0.3**
GO09				IAmb	IAmb	22 04 20.9	
	comp=Z,84nm,1.6s						
GO08	**Villa O'Higgin**	**27.88**	**266**	P	**P**	**22 04 07.5**	**+0.8**
TRQA	**Tornquist**	**28.62**	**293**	P	**P**	**22 04 14.1**	**+0.8**
PLTB	**Pedras Altas**	**29.71**	**312**	P	**P**	**22 04 23.4**	**+0.4**
PLTB				IAmb	IAmb	22 04 38.1	
	comp=Z,27nm,1.3s						
AY01	**Puyuhuapi**	**30.22**	**272**	P	**P**	**22 04 27.1**	**-0.3**
PLCA	**Paso Flores**	**31.40**	**280**	P	**P**	**22 04 38.6**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=150,slow=2.1,SNR=3.3						
PLCA				LR	LR	22 16 00.9	
	comp=Z,108nm,21.8s,baz=130,slow=34						
	comp=Z,1.2nm,0.8s						
RODS	**Rosario do Sul**	**31.61**	**311**	*e*P	**P**	**22 04 40.6**	**+0.8**
ALGR	**Alto Alegre (B**	**32.08**	**316**	*e*P	**P**	**22 04 44.8**	**+0.8**
ITQB	**Itaqui**	**32.82**	**310**	*e*P	**P**	**22 04 50.7**	**+0.4**
ITAB	**Concordia**	**33.13**	**318**	*e*P	**P**	**22 04 54.4**	**+1.3**
CRSM	**Crissiumal (Br**	**33.64**	**315**	*e*P	**P**	**22 04 58.3**	**+0.8**
MECA	**Mercedes**	**33.82**	**308**	*e*P	**P**	**22 04 60.0**	**+0.9**
AZCA	**Azaras, Argent**	**33.92**	**312**	*e*P	**P**	**22 05 00.8**	**+0.9**
FRBT	**Francisco Belt**	**34.62**	**318**	*e*P	**P**	**22 05 07.5**	**+1.4**
QSPA	**South Pole Qui**	**34.82**	**180**	P	**P**	**22 05 08.5**	**+0.9**
	comp=Z,11nm,0.7s,baz=202,slow=3.4,SNR=104						
QSPA				LR	LR	22 18 53.5	
	comp=Z,322nm,18.8s,baz=200,slow=36						
	comp=Z,11nm,0.7s						
QSPA	**South Pole Qui**	**34.82**	**180**	P	**P**	**22 05 07.9**	**+0.3**
QSPA				IAmb	IAmb	22 05 09.5	
	comp=Z,50nm,1.4s						
DUB01	**Friburgo-RJ**	**34.98**	**336**	*e*P	**P**	**22 05 09.7**	**+0.5**
VAS01	**Vassouras-RJ**	**35.04**	**335**	*e*P	**P**	**22 05 08.9**	**-0.8**
VAO	**Valinhos**	**35.30**	**329**	*e*P	**P**	**22 05 13.9**	**+1.9**
PTGB	**Pitanga**	**35.39**	**320**	*e*P	**P**	**22 05 13.6**	**+0.8**
CPUP	**Villa Florida**	**36.03**	**312**	P	**P**	**22 05 18.2**	**+0.2**
	comp=Z,12nm,0.9s,baz=146,slow=8.4,SNR=14						
CPUP				PcP	**PcP**	**22 07 44.5**	**+0.5**
	comp=Z,2.7nm,0.8s,baz=124,slow=2.5,SNR=3.0						
CPUP				LR	LR	22 19 33.2	
	comp=Z,183nm,19.3s,baz=158,slow=35						
	comp=Z,12nm,0.9s						
CPUP	**Villa Florida**	**36.03**	**312**	P	**P**	**22 05 18.4**	**+0.3**
CPUP				IAmb	IAmb	22 05 19.3	
	comp=Z,19nm,1.1s						
CPUP	**Villa Florida**	**36.03**	**312**	*e*P	**P**	**22 05 18.4**	**+0.2**
GO05	**Huala**	**36.23**	**286**	P	**P**	**22 05 19.3**	**-0.5**
MT08	**Bocatoma Ro**	**36.37**	**290**	P	**P**	**22 05 22.3**	**+1.0**
MT08				IAmb	IAmb	22 05 24.1	
	comp=Z,13nm,0.8s						
VACA	**Villa Angela C**	**36.39**	**306**	*e*P	**P**	**22 05 20.8**	**-0.3**
MT09	**Talagante**	**36.64**	**288**	P	**P**	**22 05 23.3**	**-0.2**
MT09				IAmb	IAmb	22 05 26.0	
	comp=Z,70nm,1.6s						
CFA	**Coronel Fontan**	**36.85**	**293**	LR	LR	22 20 38.2	
	comp=Z,284nm,20.4s,baz=142,slow=36						
PEL	**Peldehue**	**36.96**	**289**	P	**P**	**22 05 25.8**	**-0.3**
PEL				IAmb	IAmb	22 05 27.7	
	comp=Z,27nm,0.8s						
ZON	**Zonda**	**37.13**	**293**	P	**P**	**22 05 27.4**	**-0.2**
VA03	**San Esteban**	**37.18**	**290**	P	**P**	**22 05 28.6**	**+0.6**
VA03				IAmb	IAmb	22 05 30.3	
	comp=Z,35nm,1.0s						
ROC1	**El Roble**	**37.27**	**289**	P	**P**	**22 05 29.5**	**+0.5**
ROC1				IAmb	IAmb	22 05 39.2	
	comp=Z,16nm,0.8s						
TICA	**Tres Isletas**	**37.31**	**308**	*e*P	**P**	**22 05 29.6**	**+0.5**
BB19B	**Bebedouro**	**37.59**	**328**	*e*P	**P**	**22 05 32.6**	**+1.1**
VA06	**Catapilco**	**37.74**	**289**	P	**P**	**22 05 32.6**	**0.0**
PCMB	**Pacaembu**	**37.97**	**323**	*e*P	**P**	**22 05 34.3**	**-0.4**
SJMB	**Sao Joao De Ma**	**38.00**	**340**	*e*P	**P**	**22 05 35.2**	**+0.3**
AMBA	**Amambai (Brazi**	**38.11**	**317**	*e*P	**P**	**22 05 36.0**	**+0.1**
CO02	**Combarbal**	**38.63**	**291**	P	**P**	**22 05 40.4**	**+0.1**
CO02				IAmb	IAmb	22 05 42.9	
	comp=Z,58nm,1.4s						
DIAM	**Diamantina, MG**	**38.93**	**336**	*e*P	**P**	**22 05 42.6**	**-0.3**
CO01	**Juntas del Tor**	**39.11**	**293**	P	**P**	**22 05 44.6**	**+0.1**
GO04	**Tololo Observa**	**39.33**	**292**	P	**P**	**22 05 46.0**	**-0.3**
PMNB	**Patos De Minas**	**39.39**	**332**	*e*P	**P**	**22 05 47.8**	**+1.1**
GUA01	**Guaratinga, BA**	**39.81**	**342**	*e*P	**P**	**22 05 50.4**	**+0.4**
AC05	**El Transito**	**40.12**	**294**	P	**P**	**22 05 53.0**	**+0.2**
LCO	**Las Campanas**	**40.20**	**293**	P	**P**	**22 05 53.6**	**0.0**
LCO				IAmb	IAmb	22 06 51.3	
	comp=Z,104nm,1.9s						
MURT	**Porto Murtinho**	**40.29**	**315**	*e*P	**P**	**22 05 54.2**	**+0.1**
IPMB	**Ipameri, GO**	**40.41**	**330**	*e*P	**P**	**22 05 56.0**	**+0.8**
AQDB	**Aquidauana**	**40.61**	**318**	P	**P**	**22 05 56.4**	**-0.3**
AQDB	**Aquidauana**	**40.61**	**318**	*e*P	**P**	**22 05 56.7**	**0.0**
MAW	**Mawson**	**40.94**	**144**	LR	LR	22 23 31.9	
	comp=Z,214nm,18.2s,baz=271,slow=37						
SUR	**Sutherland**	**40.97**	**76**	P	**P**	**22 05 59.9**	**+0.1**
	comp=Z,7.1nm,0.9s,baz=198,slow=10,SNR=2.7						
SUR				LR	LR	22 19 33.4	
	comp=Z,268nm,18.8s,baz=196,slow=31						
	comp=Z,7.1nm,0.9s						
GO03	**Copiap**	**41.10**	**295**	P	**P**	**22 06 00.6**	**-0.1**
GO03				IAmb	IAmb	22 06 02.1	
	comp=Z,28nm,1.1s						
AC02	**Maricunga**	**41.15**	**297**	P	**P**	**22 06 01.1**	**-0.7**
AC06	**Mina Casimiro**	**41.35**	**295**	P	**P**	**22 06 02.8**	**0.0**
AC06				IAmb	IAmb	22 06 04.3	
	comp=Z,40nm,1.2s						
RVDE	**Rio Verde (Bra**	**41.64**	**320**	*e*P	**P**	**22 06 06.0**	**+0.7**
JANB	**Januaria**	**42.20**	**336**	*e*P	**P**	**22 06 09.9**	**0.0**
BDFB	**Brasilia**	**42.58**	**331**	P	**P**	**22 06 13.4**	**+0.5**
	comp=Z,3.1nm,0.7s,baz=173,slow=5.4,SNR=5.5						
	comp=Z,3.1nm,0.7s						
BDFB	**Brasilia**	**42.58**	**331**	*e*P	**P**	**22 06 13.1**	**+0.1**
GO02	**Mina Guanaco**	**42.76**	**298**	P	**P**	**22 06 15.0**	**+0.4**
GO02				IAmb	IAmb	22 06 16.7	
	comp=Z,22nm,0.9s						
SOE	**Somerset East**	**43.38**	**81**	P	**P**	**22 06 19.4**	**+0.1**
ARAG	**Araguaiana, MT**	**43.65**	**326**	*e*P	**P**	**22 06 22.1**	**+0.6**
LVC	**Limon Verde**	**44.55**	**301**	LR	LR	22 23 59.7	
	comp=Z,124nm,21.8s,baz=168,slow=35						
LVC	**Limon Verde**	**44.55**	**301**	P	**P**	**22 06 29.7**	**+0.5**
LVC				IAmb	IAmb	22 06 32.2	
	comp=Z,19nm,0.8s						
LVC	**Limon Verde**	**44.55**	**301**	*e*P	**P**	**22 06 30.8**	**+1.6**
SALV	**Santo Antonio**	**44.79**	**321**	*e*P	**P**	**22 06 31.4**	**+0.8**
SDBA	**SAO DESIDERIO**	**44.90**	**336**	*e*P	**P**	**22 06 31.6**	**0.0**
PB09	**IPOC Station P**	**45.41**	**301**	P	**P**	**22 06 36.6**	**+0.9**
PB03	**IPOC Station P**	**45.44**	**300**	P	**P**	**22 06 35.5**	**-0.6**
PB03				IAmb	IAmb	22 06 38.0	
	comp=Z,18nm,1.1s						
BBSD	**Serra de San D**	**45.52**	**314**	*e*P	**P**	**22 06 36.6**	**+0.1**
PB01	**IPOC Station P**	**46.16**	**301**	P	**P**	**22 06 42.0**	**+0.4**
BOSA	**Boshof**	**46.31**	**77**	P	**P**	**22 06 42.1**	**-0.6**
	comp=Z,7.1nm,0.9s,baz=234,slow=7.2,SNR=11						
BOSA				LR	LR	22 23 10.4	
	comp=Z,332nm,18.7s,baz=206,slow=32						
	comp=Z,7.1nm,0.9s						
BOSA	**Boshof**	**46.31**	**77**	P	**P**	**22 06 42.4**	**-0.4**
BOSA				IAmb	IAmb	22 06 43.5	
	comp=Z,14nm,1.1s						
PTLB	**Pontes e Lacer**	**46.50**	**317**	P	**P**	**22 06 44.0**	**-0.2**
PTLB				IAmb	IAmb	22 06 45.4	
	comp=Z,17nm,0.9s						
PTLB	**Pontes e Lacer**	**46.50**	**317**	*e*P	**P**	**22 06 44.2**	**+0.1**
SBA	**Scott Base**	**46.66**	**184**		**P**	**22 06 45.4**	**+0.6**
SBA				IAmb	IAmb	22 06 47.2	
	comp=Z,18nm,1.1s						
PB08	**IPOC Station P**	**46.77**	**302**	P	**P**	**22 06 47.4**	**+0.6**
WIN	**Windhoek**	**46.77**	**64**	P	**P**	**22 06 46.9**	**+0.4**
WIN				IAmb	IAmb	22 08 18.8	
	comp=Z,21nm,1.6s						
SIV	**San Ignacio**	**46.79**	**314**	LR	LR	22 25 00.8	
	comp=Z,124nm,19.7s,baz=111,slow=34						
SNDB	**Serra Nova Dou**	**47.01**	**328**	*e*P	**P**	**22 06 48.4**	**+0.3**
VNDA	**Vanda**	**47.17**	**183**	P	**P**	**22 06 50.0**	**+1.3**
	comp=Z,11nm,0.8s,baz=186,slow=6.4,SNR=53						
	comp=Z,11nm,0.8s						
VNDA	**Vanda**	**47.17**	**183**	P	**P**	**22 06 49.0**	**+0.3**
VNDA				IAmb	IAmb	22 06 50.8	
	comp=Z,13nm,0.8s						
GO01	**Chusmiza**	**47.19**	**302**	P	**P**	**22 06 51.0**	**+0.9**
PB11	**IPOC Station P**	**47.34**	**302**	P	**P**	**22 06 51.5**	**+0.6**
H10S2	**ASCENSION HYDR**	**47.56**	**18**	T	T	22 58 50.6	
	baz=30,slow=74,SNR=3.3						
H10S3	**ASCENSION HYDR**	**47.56**	**18**	T	T	22 58 45.0	
	baz=190,slow=74,SNR=4.6						
MNMC	**Minye Minye**	**47.84**	**302**	P	**P**	**22 06 55.5**	**+0.5**
PB16	**IPOC Station P**	**48.49**	**303**	P	**P**	**22 07 00.8**	**+0.6**
H10N1	**ASCENSION HYDR**	**48.68**	**18**	T	T	23 00 14.0	
	baz=188						
H10N3	**ASCENSION HYDR**	**48.68**	**18**	T	T	23 00 15.0	
	baz=188						
H10N2	**ASCENSION HYDR**	**48.69**	**18**	T	T	23 00 16.1	
	baz=188						
SMTB	**Santa Maria do**	**48.96**	**334**	*e*P	**P**	**22 07 04.0**	**+0.8**
PB18	**Visviri**	**49.11**	**303**	P	**P**	**22 07 05.0**	**-0.1**
VILB	**Vilhena**	**49.19**	**317**	P	**P**	**22 07 04.6**	**-0.5**
VILB				IAmb	IAmb	22 07 05.8	
	comp=Z,16nm,0.9s						
VILB	**Vilhena**	**49.19**	**317**	*e*P	**P**	**22 07 05.1**	**+0.1**
LBTB	**Lobatse**	**49.32**	**75**	LR	LR	22 26 19.4	
	comp=Z,224nm,18.3s,baz=230,slow=34						
LBTB	**Lobatse**	**49.32**	**75**	P	**P**	**22 07 06.0**	**-0.1**
LBTB				IAmb	IAmb	22 07 27.4	
	comp=Z,51nm,2.0s						
LPAZ	**La Paz**	**49.61**	**306**	P	**P**	**22 07 10.1**	**+1.2**
	comp=Z,16nm,0.8s,baz=140,slow=5.3,SNR=53						
LPAZ				LR	LR	22 26 25.0	
	comp=Z,118nm,21.9s,baz=212,slow=34						
	comp=Z,16nm,0.8s						
LPAZ	**La Paz**	**49.61**	**306**	P	**P**	**22 07 09.0**	**+0.1**
LPAZ				IAmb	IAmb	22 07 11.1	
	comp=Z,30nm,1.1s						
LPAZ	**La Paz**	**49.61**	**306**	*e*P	**P**	**22 07 09.6**	**+0.6**
TSUM	**Tsumeb**	**49.83**	**62**	LR	LR	22 25 33.5	
	comp=Z,191nm,18.4s,baz=228,slow=33						
TSUM	**Tsumeb**	**49.83**	**62**	P	**P**	**22 07 09.6**	**-0.4**
NPGB	**Novo Progresso**	**52.92**	**325**	*e*P	**P**	**22 07 33.2**	**+0.1**
ETMB	**Extrema**	**54.48**	**312**	P	**P**	**22 07 44.2**	**-0.3**
ETMB				IAmb	IAmb	22 07 45.6	
	comp=Z,16nm,1.0s						
ETMB	**Extrema**	**54.48**	**312**	*e*P	**P**	**22 07 44.6**	**+0.2**
ITTB	**Itaituba**	**55.56**	**326**	*e*P	**P**	**22 07 52.1**	**-0.1**
MALB	**Monte Alegre**	**57.48**	**328**	*e*P	**P**	**22 08 06.6**	**+0.7**
NNA	**Nana**	**57.51**	**299**	P	**P**	**22 08 05.0**	**-1.2**
MCPB	**Macapa, AP**	**58.27**	**331**	*e*P	**P**	**22 08 12.9**	**+1.4**
LSZ	**Lusaka**	**58.62**	**70**	LR	LR	22 31 31.3	
	comp=Z,367nm,18.9s,baz=168,slow=34						
TEFE	**Tefe**	**59.54**	**316**	*e*P	**P**	**22 08 20.4**	**+0.1**
ATAH	**Atahualpa**	**62.45**	**301**	LR	LR	22 37 48.9	
	comp=Z,99nm,19.6s,baz=36,slow=38						
BOAV	**Boa Vista**	**63.48**	**323**	P	**P**	**22 08 46.1**	**-0.7**
BOAV				IAmb	IAmb	22 08 47.3	
	comp=Z,9.3nm,1.0s						
BOAV	**Boa Vista**	**63.48**	**323**	*e*P	**P**	**22 08 46.2**	**-0.7**
BOAV	**Boa Vista**	**63.48**	**323**	*e*P	**P**	**22 08 46.7**	**-0.2**
SGCB	**S£o Gabriel d**	**63.58**	**315**	*e*P	**P**	**22 08 46.4**	**-1.2**
DBIC	**Dimbokro**	**64.82**	**26**	P	**P**	**22 08 54.7**	**-0.9**
	comp=Z,2.4nm,0.6s,baz=197,slow=9.7,SNR=6.6						
DBIC				LR	LR	22 30 37.1	
	comp=Z,142nm,19.2s,baz=355,slow=30						
	comp=Z,2.4nm,0.6s						
OPO	**Ambohidratompo**	**66.57**	**89**	LR	LR	22 35 08.6	
	comp=Z,135nm,18.4s,baz=302,slow=33						
PIAT	**Ana Tenorio**	**67.72**	**304**	*e*P	**P**	**22 09 16.4**	**+1.7**
OTAV	**Otavalo**	**68.89**	**304**	P	**P**	**22 09 22.3**	**+0.1**
OTAV				IAmb	IAmb	22 09 24.8	
	comp=Z,24nm,1.6s						
TULM	**Tulcn-Chalpat**	**69.00**	**305**	P	**P**	**22 09 22.4**	**-0.5**
ORTC	**Ortega, Tolima**	**70.67**	**309**	*e*P	**P**	**22 09 32.8**	**+0.1**
RUSC	**La Rusia**	**71.51**	**312**	P	**P**	**22 09 37.2**	**-1.0**
RUSC				IAmb	IAmb	22 09 38.7	
	comp=Z,20nm,1.3s						
RUSC	**La Rusia**	**71.51**	**312**	*e*P	**P**	**22 09 36.4**	**-1.9**
NORC	**Norcasia**	**71.98**	**310**	*e*P	**P**	**22 09 40.8**	**+0.2**
BAUV	**El Baul**	**72.26**	**318**	P	**P**	**22 09 42.4**	**+0.3**
MBAR	**Mbarara**	**72.32**	**64**	LR	LR	22 38 46.0	
	comp=Z,156nm,18.1s,baz=160,slow=34						
MBAR	**Mbarara**	**72.32**	**64**	P	**P**	**22 09 43.0**	**+0.2**
PTBC	**PUERTO BERRIO,**	**72.68**	**311**	*e*P	**P**	**22 09 42.5**	**-2.1**
TOA0	**Torodi Ar. Sit**	**72.77**	**30**	P	**P**	**22 09 45.3**	**+0.2**
TOA0				IAmb	IAmb	22 10 00.1	
	comp=Z,9.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**72.77**	**30**	P	**P**	**22 09 45.2**	**+0.2**
	comp=Z,6.0nm,0.2s,baz=200,slow=6.4,SNR=12						
TORD				LR	LR	22 36 54.8	
	comp=Z,278nm,18.1s,baz=266,slow=32						
	comp=Z,6.0nm,0.2s						
SDV	**Santo Domingo**	**73.22**	**316**	LR	LR	22 44 08.5	
	comp=Z,260nm,18.6s,baz=89,slow=38						
SDV	**Santo Domingo**	**73.22**	**316**	P	**P**	**22 09 48.0**	**0.0**
SDV				IAmb	IAmb	22 09 49.3	
	comp=Z,13nm,0.8s						
SDV	**Santo Domingo**	**73.22**	**316**	*e*P	**P**	**22 09 48.7**	**+0.7**
RPZ	**Rata Peaks**	**79.90**	**194**	LR	LR	22 44 23.2	
	comp=Z,251nm,18.2s,baz=224,slow=35						
CBYP	**Canovanas**	**80.10**	**324**	P	**P**	**22 10 26.2**	**-0.4**
FOZ	**Fox Glacier**	**80.24**	**193**	P	**P**	**22 10 27.7**	**+0.6**
LTZ	**Lake Taylor**	**80.64**	**195**	P	**P**	**22 10 29.6**	**+0.2**

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LTZ                                 IAmb    IAmb        22 10 30.2
        comp=Z,24nm,1.2s
JTS     Las Juntas de     80.75 303 P       P           22 10 30.8 +0.6
ACON    Acoyapa           82.32 304 P       P           22 10 38.3 -0.1
ACON                                IAmb    IAmb        22 10 39.7
        comp=Z,19nm,1.0s
BOAB    BOACO BROADBAN82.97 304     P       P           22 10 41.0 -0.8
TAM     Tamanrasset       83.01  31 P       P           22 10 43.9 +1.9
MATN    Matagalpa         83.51 304 P       P           22 10 45.4 +0.6
ATD     Arta Tunnel       88.89  68 LR      LR          22 50 28.2
        comp=Z,9.7nm,18.1s,baz=178,slow=35
MDT     Midelt            90.17  20 LR      LR          22 47 17.3
        comp=Z,171nm,18.5s,baz=222,slow=33
TEIG    Tepich            90.94 305 P       P           22 11 21.7 +1.2
PPT2    Papeete2          92.14 234 eLR     LR          22 40 57.8
        comp=Z,141nm,25.8s
PPT2                                eLR     LR          22 40 57.8
        comp=Z,115nm,26.0s
TAOE    Nuku Hiva Isla    94.93 247 eLR     LR          22 42 15.7
        comp=Z,144nm,23.0s
KEST    Kesra             96.28  30 LR      LR          22 51 34.3
        comp=Z,138nm,19.2s,baz=300,slow=33
ASAR    Alice Springs     99.73 163 P       Pdif        22 11 59.8 -1.0
        comp=Z,1.8nm,0.9s,baz=190,slow=4.4,SNR=12
ASAR                                LR      LR          22 57 50.7
        comp=Z,78nm,18.1s,baz=179,slow=36
        comp=Z,1.8nm,0.9s
PDAR    Pinedale Array   119.59 303 PKP     PKPdf       22 17 05.1 -0.9
        comp=Z,0.3nm,0.5s,baz=117,slow=5.6,SNR=3.9
FXWY    Fox Creek        120.95 303         PKiKP       22 17 09.3 +0.6
FINES   FINESS Array B   124.07  28 PKP     PKiKP       22 17 13.5 -0.4
        comp=Z,1.4nm,0.5s,baz=160,slow=1.6,SNR=19
MSO     Missoula         124.69 304 PKPdf   PKiKP       22 17 16.2 +0.4
GAR     Garm             125.44  71 PKPdf   PKiKP       22 17 18.3 +0.7
CMAR    Chiang Mai Arr   125.75 111 PKP     PKPdf       22 17 18.1 -0.2
        comp=Z,1.7nm,0.3s,baz=223,slow=3.6,SNR=5.7
G08A    Pilot Rock       126.03 299         PKiKP       22 17 19.0 +0.4
ABKAR   Akbulak array    127.43  56         PKiKP       22 17 20.3 -0.7
KKAR    Karatay Array    128.45  68 PKPdf   PKiKP       22 17 22.9 -0.4
AAK     Ala-Archa        130.25  71 PKP     PKiKP       22 17 26.9 -0.3
        comp=Z,0.4nm,0.3s,baz=187,slow=2.3,SNR=4.5
ARCES   ARCESS Array B   130.56  22 PKP     PKiKP       22 17 25.9 -0.8
        comp=Z,8.7nm,1.0s,baz=200,slow=1.5,SNR=11
TNCH    TengChong        130.84 106 PKP     PKPdf       22 17 28.0  0.0
TNCH                                sPKP                22 17 34.8
PZH     PanZhiHua        133.77 108 PKP     PKiKP       22 17 34.3 -0.4
BRVK    Borovoye         134.84  57         PKiKP       22 17 35.2 -0.6
BVAR    Borovoye Array   134.87  57 PKP     PKiKP       22 17 35.1 -0.8
        comp=Z,3.8nm,0.9s,baz=222,slow=2.0,SNR=13
YKA     Yellowknife Ar   135.38 319 PKP     PKPdf       22 17 35.2 +0.1
        comp=Z,4.0nm,1.0s,baz=128,slow=2.4,SNR=23
YKA                                 PP      PP          22 20 09.2 -3.7
        comp=Z,0.5nm,0.8s,baz=122,slow=6.3,SNR=5.4
RES     Resolute Bay     137.10 339 PKPdf   PKiKP       22 17 39.0 -0.8
MKAR    Makanchi Array   137.16  71 PKP     PKiKP       22 17 40.3 -0.6
        comp=Z,0.5nm,0.7s,baz=238,slow=2.3,SNR=4.5
KURBB   Kurchatov Arra   137.49  65 PKP     PKiKP       22 17 40.1 -1.3
        comp=Z,1.1nm,1.0s,baz=234,slow=2.1,SNR=5.5
WMQ     Urumqi           138.27  78 ePKP    PKiKP       22 17 43.8 +0.5
CD2     Chengdu          138.31 106 PKP     PKiKP       22 17 42.3 -1.4
GTA     Gaotai           142.25  93 ePKPbc  PKiKP       22 17 56.0 +4.3
GTA                                 sPKP                22 18 20.3
A36M    Sachs Harbour    143.42 329         PKPpre      22 17 48.0
YUK4    Talbot Arm       144.73 309 P       PKPdf       22 17 52.2 -0.2
        baz=112,SNR=13
F31M    Tsiigehtchic     144.83 320 P       PKPdf       22 17 51.7 -0.4
        baz=108
PINM    Pinnacle         144.97 306 P       PKPdf       22 17 53.0 +0.4
        baz=113,SNR=5.4
PCA     Pinnacle         144.98 306         PKPdf       22 17 53.3 +0.6
INK     Inuvik           145.01 321 PKPbc   PKPdf       22 17 52.4  0.0
        comp=Z,43nm,0.9s,baz=89,slow=3.3,SNR=102
INK     Inuvik           145.01 321 P       PKPdf       22 17 52.4  0.0
        baz=107
M29M    Somme Creek      145.06 310 P       PKPdf       22 17 53.0 +0.2
        baz=111
K29M    Barlow Dome      145.15 313 P       PKPdf       22 17 52.9  0.0
        baz=110
L29M    L29M             145.15 312 P       PKPdf       22 17 53.2 +0.3
        baz=110
O28M    Mount Upton      145.21 307 P       PKPdf       22 17 54.1 +0.8
        baz=112
YUK8    Steele Glacier   145.21 308 P       PKPdf       22 17 53.8 +0.5
        baz=112
G30M    tAoh Zraii Nji   145.62 319 P       PKPab       22 17 54.0 -0.2
        baz=106
EPYK    Eagle Plains     145.63 317 P       PKPab       22 17 54.0 -0.3
        baz=107
J29M    Klondike Camp    145.64 314 P       PKPab       22 17 54.6 +0.2
        baz=109
YUK3    Moose Creek      145.70 309 P       PKPab       22 17 54.8 -0.1
        baz=111
LYN     LuoYang          145.80 111 ⇑PKPbc  PKPab       22 17 55.3 -0.5
LYN                                 sPKP                22 17 59.3
I29M    Ogilvie Camp,    145.96 315 P       PKPbc       22 17 54.8 -0.1
        baz=107
DAWY    Dawson           146.00 313 P       PKPbc       22 17 55.2 +0.1
        baz=108,SNR=16
M27K    Edge Creek, AK   146.52 309 P       PKPbc       22 17 57.0 +0.1
        baz=109
BCAR    Beaver Creek A   146.71 311         PKPbc       22 17 57.6 +0.4
MCARA   McCarthy VSAT    146.71 307 P       PKPbc       22 17 57.5 +0.2
        baz=110
L27K    Beaver Creek,    146.73 311 P       PKPbc       22 17 57.6 +0.3
        baz=108
EGAK    Eagle            146.95 314 PKPdf   PKPbc       22 17 57.5 -0.3
EGAK    Eagle            146.95 314 P       PKPbc       22 17 57.8 -0.1
        baz=106,SNR=6.4
M26K    Nabesna, AK      147.03 309 P       PKPbc       22 17 58.5 +0.3
        baz=108
NJ2     Nanjing          147.09 121 ePKPbc  PKPdf       22 17 57.0 -0.1
NJ2                                 pPKP    PKPab       22 18 00.5 -0.3
NJ2                                 sPKP                22 18 02.0
K27K    Chicken          147.12 312 P       PKPab       22 17 59.1 -0.9
        baz=106
I27K    Kandik River     147.35 315 P       PKPbc       22 17 59.7 +0.7
        baz=104
L26K    Log Cabin Wild   147.38 310 P       PKPbc       22 17 59.7 +0.5
        baz=107
H27K    Steamboat Moun   147.47 316 P       PKPbc       22 18 00.1 +0.8
        baz=104
N25K    Chitina, Valde   147.50 307 P       PKPbc       22 18 00.0 +0.5
        baz=108
Q23K    Middleton Isla   147.59 303 P       PKPbc       22 18 00.1 +0.4
        baz=111
G27K    Doyon Strip      147.65 317 P       PKPbc       22 18 00.4 +0.7
        baz=103
EYAK    Cordova Ski Ar   147.69 305 P       PKPbc       22 18 00.7 +0.7
        baz=109
E27K    Coleen River     147.90 320 P       PKPbc       22 18 01.0 +0.6
        baz=100
I26K    Coal Creek Min   147.90 314 P       PKPbc       22 18 00.9 +0.5
        baz=104
SCRK    Sand Creek       147.92 312 P       PKiKP       22 18 01.5 -1.0
        baz=105
HARP    HAARP            147.99 309 P       PKiKP       22 18 01.6 -1.0
        baz=107
KLU     Klutina          148.07 307 P       PKiKP       22 18 02.0 -0.8
        baz=108
RIDG    Independent Ri   148.22 311 P       PKiKP       22 18 02.3 -0.7
        baz=105
PAX     Paxson           148.29 309 P       PKPbc       22 18 02.1 +0.5
        baz=106
M24K    Tolsona, Glenn   148.36 308 P       PKiKP       22 18 02.8 -0.6
        baz=107
G26K    Porcupine Rive   148.50 317 P       PKiKP       22 18 02.6 -0.8
        baz=101
K24K    Donnelly Dome    148.64 311 P       PKiKP       22 18 03.1 -0.8
        baz=104
F26K    Sheenjek River   148.77 319 P       PKiKP       22 18 03.7 -0.4
        baz=99
SCM     Sheep Creek Mo   148.81 307 P       PKiKP       22 18 03.8 -0.6
        baz=106
NRIK    Noril'sk         148.84  38 PKPbc   PKiKP       22 18 03.2 -0.9
        comp=Z,3.0nm,0.4s,baz=217,slow=1.5,SNR=4.9
C27K    Jago River       148.87 322 P       PKiKP       22 18 03.5 -0.7
        baz=96
PRP     Porcupine Dome   148.92 314 P       PKiKP       22 18 03.8 -0.8
        baz=102,SNR=7.7
M23K    Glacier View     148.98 307 P       PKiKP       22 18 03.9 -0.8
        baz=106
PWL     Port Wells       148.99 305 P       PKiKP       22 18 03.9 -0.8
        baz=107
KNK     Knik Glacier     149.21 306 P       PKPbc       22 18 04.2 +0.3
        baz=106
SML     Sawmill          149.26 307 P       PKiKP       22 18 04.6 -0.6
        baz=106
HDA     Harding Lake     149.28 312 P       PKPbc       22 18 04.3 +0.3
        baz=102
C26K    Camden Bay       149.31 323 P       PKiKP       22 18 04.9 -0.1
        baz=95
F25K    Christian Rive   149.32 318 P       PKiKP       22 18 05.1 -0.1
        baz=98
ILAR    Eielson Array    149.33 313 PKPbc   PKPbc       22 18 04.4 +0.3
        comp=Z,32nm,1.1s,baz=117,slow=1.3,SNR=80
E25K    Arctic Village   149.36 319 P       PKiKP       22 18 05.0 -0.2
        baz=97
G25K    Bearman Lake     149.37 317 P       PKiKP       22 18 05.5 +0.3
        baz=99
TIA     Tai'an           149.52 115 ePKPbc  PKPbc       22 18 05.0 -0.5
TIA                                 LR      LR
        comp=Z,250nm,21.6s
TIA                                 LR      LR
        comp=Z,360nm,15.2s
O22K    Cooper Landing   149.54 304 P       PKPbc       22 18 05.0 +0.3
        baz=107
POKR    Poker Plat Res   149.62 313 P       PKPbc       22 18 05.1 +0.2
        baz=101
RC01    Rabbit Creek A   149.71 305 P       PKPbc       22 18 05.3 +0.1
        baz=106
COLA    College          149.75 313         PKiKP       22 18 05.6 -0.4
COLA    College          149.75 313 P       PKPbc       22 18 05.0 -0.1
        baz=101
TCOL    CIGO, UAF Yank   149.76 313 P       PKPbc       22 18 05.2 +0.1
        baz=101
D25K    Kavik River      149.78 322 P       PKiKP       22 18 05.5 -0.6
        baz=94
BRSE    Bradley Lake S   149.80 302 P       PKiKP       22 18 05.7 -0.6
        baz=108
HHC     Hu-ho-hao-te     149.86 102 ePKPbc  PKPdf       22 18 00.0 -1.5
G24K    Hadweenzic Riv   149.90 316 P       PKiKP       22 18 06.4  0.0
        baz=98
H24K    Noodor Dome      149.93 315 P       PKiKP       22 18 06.0 -0.5
        baz=99
MCK     McKinley         149.99 310 P       PKiKP       22 18 06.3 -0.3
        baz=102
KDAK    Kodiak Island    150.09 298 PKPbc   PKiKP       22 18 06.6 -0.3
        comp=Z,14nm,0.8s,baz=243,slow=3.5,SNR=7.4
KDAK    Kodiak Island    150.09 298 P       PKiKP       22 18 06.6 -0.3
        baz=110
F24K    Squaw Lake       150.16 318 P       PKiKP       22 18 06.8 -0.1
        baz=96
NEA2    Nenana           150.22 312 P       PKPbc       22 18 06.0 -0.3
        baz=100,SNR=15
HOM     Homer            150.22 302 P       PKPbc       22 18 05.6 -0.8
        baz=107
CUT     Chulitna         150.29 307 P       PKiKP       22 18 07.0 -0.2
        baz=103
I23K    Minto, Yukon-K   150.43 313 P       PKiKP       22 18 07.5 +0.1
        baz=99,SNR=5.6
E24K    Your Creek       150.44 319 P       PKiKP       22 18 07.5  0.0
        baz=95
TRF     Thorofare Moun   150.53 309 P       PKiKP       22 18 07.7 -0.2
        baz=102,SNR=5.6
H23K    Yukon River      150.61 314 P       PKiKP       22 18 07.6 -0.3
        baz=98
C24K    Franklin Bluff   150.62 322 P       PKiKP       22 18 07.5 -0.2
        baz=92
D24K    Happy Valley     150.64 321 P       PKiKP       22 18 07.7 -0.1
        baz=93
SKT     Skwentna         150.77 306 P       PKiKP       22 18 07.9 -0.4
        baz=103,SNR=8.7
E23K    Chandalar        150.87 319 P       PKiKP       22 18 08.0 -0.4
        baz=94
SPCR    Spurr Chakacha   150.90 304 P       PKPbc       22 18 08.1  0.0
        baz=104
G23K    Bananza Creek    150.91 316 P       PKiKP       22 18 08.9 +0.4
        baz=96
BPAW    Bear Paw Mtn.    150.95 311         PKiKP       22 18 08.4 -0.3
BPAW    Bear Paw Mtn.    150.95 311 P       PKiKP       22 18 08.4 -0.3
        baz=100,SNR=21
RSO     Redoubt South    150.97 303         PKPbc       22 18 08.1 -0.3
MLY     Manley           150.99 313 P       PKiKP       22 18 08.6 -0.2
        baz=98,SNR=10
SONM    Songino Array    151.19  86 PKPbc   PKiKP       22 18 09.2 -0.6
        comp=Z,8.8nm,0.8s,baz=224,slow=3.1,SNR=47
PPLA    Purkeypile       151.26 308 P       PKPbc       22 18 08.8 -0.1
        baz=101
D23K    Nanushuk River   151.30 321 P       PKiKP       22 18 09.4 +0.2
        baz=91
CAST    Castle Rocks     151.31 309 P       PKiKP       22 18 09.2 -0.2
        baz=100,SNR=8.2
M20K    Styx River       151.49 306 P       PKPbc       22 18 09.2 -0.2
        baz=102
CHUM    Lake Minchumin   151.49 310 P       PKiKP       22 18 09.3 -0.4
        baz=99,SNR=8.4
G22K    Bettles          151.51 316 P       PKiKP       22 18 09.7 +0.1
        baz=94
I21K    Tanana           151.53 313 P       PKiKP       22 18 09.8 +0.1
        baz=97
Q18K    Katmai Hardscr   151.58 299 P       PKiKP       22 18 10.1 -0.1
        baz=107
O19K    Port Alsworth    151.66 302 P       PKPbc       22 18 09.4 -0.3
        baz=104
F22K    John River       151.81 318 P       PKiKP       22 18 10.6 +0.3
        baz=93
N19K    Bonanza Creek    151.89 303 P       PKPbc       22 18 10.3 -0.1
        baz=103
H21K    Melozitna Rive   151.93 314 P       PKiKP       22 18 10.7 +0.1
        baz=96
O18K    Koktuh Hills     152.00 301 P       PKPbc       22 18 10.5 -0.1
        baz=105
M19K    Big River Lodg   152.07 305 P       PKiKP       22 18 11.3 +0.3
        baz=101
K20K    Telida           152.18 309 P       PKiKP       22 18 10.9 -0.2
        baz=99
G21K    Allakaket        152.28 315 P       PKiKP       22 18 11.4 +0.1
        baz=93
F21K    Alatna River     152.30 317 P       PKiKP       22 18 11.7 +0.4
        baz=92
IMAR    Indian Mountai   152.34 314         PKiKP       22 18 12.0 +0.6
Q16K    King Salmon      152.41 298 P       PKiKP       22 18 12.0 +0.3
        baz=106
O17K    Koliganek Bris   152.91 300 P       PKiKP       22 18 13.1 +0.4
        baz=104
XLT     XiLinHaoTe       154.39 102 ePKPbc  PKPdf       22 18 10.5 +2.4
RDOG    Red Dog Mine     155.85 319 P       PKPab       22 18 37.9 +1.6
        baz=81
ANM     Nome             157.22 311 P       PKPab       22 18 43.8 +1.6
        baz=87
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*IDC **30** 22:02:31.8±1.0, 55°.56S×28°.21W, h0^{km}, mb3.9/2, mbtmp3.9/3, ML4.2/1, Error ellipse: s-maj=51.3km s-min=27.6km az=71.0*

ISC 30 22:02:37.9±0.9, **55°.6S**±0°.2×**28°.3W**±0°.3, **h45**^{km}, **n7**, σ1^{s}.**05**/7, **mb3.9**/3, **South Sandwich Islands region**

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Code    Station Name       Δ°   AZ°    Phase ID              Time     Res
                                      Op      ISC          h  m  s    ISC
SNAA    Sanae             19.40 156   P       P           22 06 59.3 -0.5
        0.6nm,0.3s,baz=305,slow=15,SNR=8.1
        3.0nm,0.6s
QSPA    South Pole Qui    34.65 180   P       P           22 09 23.5 +0.9
        0.9nm,0.5s,baz=262,slow=3.1,SNR=1.9
        0.9nm,0.5s
LPAZ    La Paz            49.61 306   P       P           22 11 25.7 +0.3
        0.8nm,0.5s,baz=180,slow=9.1,SNR=2.7
        0.8nm,0.5s
TORD    Torodi Ar. Bea    72.98  31   P       P           22 14 03.4 +0.8
        0.6nm,0.8s,baz=202,slow=4.7,SNR=3.1
INK     Inuvik           145.07 321   PKPbc   PKPdf       22 22 08.0 -0.6
        1.2nm,0.8s,baz=248,slow=2.1,SNR=3.2
ILAR    Eielson Array    149.36 312   PKPbc   PKiKP       22 22 20.0 -1.4
        0.9nm,0.7s,baz=114,slow=2.0,SNR=5.7
SONM    Songino Array    151.32  87   PKPbc   PKPbc       22 22 25.1 -0.6
        0.4nm,0.5s,baz=229,slow=3.9,SNR=3.1
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*IDC **30** 22:03:34.0±0.4, 56°.89N×162°.75E, h0^{km}, mb4.4/33, mbtmp4.4/37, ML4.6/4, MS3.8/33, Error ellipse: s-maj=13.3km s-min=8.9km az=169.0*

*KRSC **30** 22:03:35.3±0.9, 56°.96N×163°.19E, h44^{km}±11^{km}, Mc5.2, Ml5.1*

*NEIC **30** 22:03:36.5±1.4, 57°.05N±0°.07×162°.8E±0°.1, h10^{km}±1^{km}, mb5.0/362, Error ellipse: s-maj=12.0km s-min=10.7km az=176.0*

*MOS **30** 22:03:38.2±0.9, 57°.00N×162°.83E, h41^{km}, mb5.0/58, MS3.9/10, Error ellipse: s-maj=6.4km s-min=3.1km az=73.8*

*BJI **30** 22:03:39.9±0.0, 57°.20N×162°.22E, h48^{km}, mb4.5/49, mB4.9/27, Ms4.7/28, Ms7 4.4/29*

ISC 30 22:03:40.1±0.4, **56°.94N**±0°.03×**162°.87E**±0°.03, **h44**^{km}±3^{km}, **h43**^{km}**:pP-P**, **n916**, σ1^{s}.**21**/946, **mb4.9**/269, **MS3.9**/43, **24C-7D**, **Near east coast of Kamchatka Peninsula**

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Code    Station Name       Δ°   AZ°    Phase ID              Time     Res
                                      Op      ISC          h  m  s    ISC
KBG     Krutoberegovo      0.69 188    PN     Pn          22 03 50.3 -3.1
KBG                                    S      Sn          22 04 00.7 -2.3
KBG     Krutoberegovo      0.69 188   eP      Pn          22 03 50.3 -3.1
KBG                                   eS      Sn          22 04 00.7 -2.3
KBTR    Krutoberegovo      0.73 182    PN     Pn          22 03 51.1 -2.9
KBTR    Krutoberegovo      0.73 182   eP      Pn          22 03 51.1 -2.9
SMKR    Semkarok           0.85 246    PN     Pn          22 03 53.1 -2.6
SMKR    Semkarok           0.85 246   eP      Pn          22 03 53.1 -2.6
SRKR    Sorokina           0.98 254    PN     Pn          22 03 55.3 -2.1
SRKR    Sorokina           0.98 254   eP      Pn          22 03 55.3 -2.1
BDR     Baidarnaya         0.99 249    PN     Pn          22 03 55.6 -2.0
BDR     Baidarnaya         0.99 249   eP      Pn          22 03 55.6 -2.0
KLY     Klyuchi            1.38 244    PN     Pn          22 04 00.1 -2.7
KLY     Klyuchi            1.38 244   eP      Pn          22 04 00.1 -2.7
CIRR    Tsirk              1.44 236    PN     Pn          22 04 03.3 -0.5
CIRR    Tsirk              1.44 236   eP      Pn          22 04 03.3 -0.5
LGNR    Loginova           1.48 236    PN     Pn          22 04 04.0 -0.5
LGNR                                   S      Sn          22 04 22.5 -0.3
LGNR    Loginova           1.48 236   eP      Pn          22 04 04.0 -0.5
LGNR                                  eS      Sn          22 04 22.5 -0.3
BZGR    Bezymyannyi-Gr     1.57 231    PN     Pn          22 04 05.0 -0.5
BZGR                                   S      Sn          22 04 26.2 +1.6
BZGR    Bezymyannyi-Gr     1.57 231   eP      Pn          22 04 05.0 -0.5
BZGR                                  eS      Sn          22 04 26.2 +1.6
BZWR    Bezymyannyi-We     1.64 235    PN     Pn          22 04 05.7 -0.8
BZWR    Bezymyannyi-We     1.64 235   eP      Pn          22 04 05.7 -0.8
BZP     Bezymyannyi-Pe     1.65 233   eP      Pn          22 04 05.9 -0.9
BZMR    Bezymyannaya       1.66 234    PN     Pn          22 04 06.1 -0.7
BZMR    Bezymyannaya       1.66 234   eP      Pn          22 04 06.1 -0.7
KIRR    Kirishev           1.71 236    PN     Pn          22 04 06.7 -0.9
KIRR                                   S      Sn          22 04 30.1 +1.8
KIRR    Kirishev           1.71 236   eP      Pn          22 04 06.7 -0.9
KIRR                                  eS      Sn          22 04 30.1 +1.8
KPT     Kopyto             1.76 238    PN     Pn          22 04 08.3 +0.1
KPT                                    S      Sn          22 04 30.3 +0.9
KPT     Kopyto             1.76 238   eP      Pn          22 04 08.3 +0.1
KPT                                   eS      Sn          22 04 30.3 +0.9
SRDR    Sredinnyy          1.85 252    PN     Pn          22 04 08.8 -0.5
SRDR                                   S      Sn          22 04 32.6 +1.1
SRDR    Sredinnyy          1.85 252   eP      Pn          22 04 08.8 -0.5
SRDR                                  eS      Sn          22 04 32.6 +1.1
KOZ     Kozyrevsk          1.88 243    PN     Pn          22 04 09.4 -0.3
KOZ     Kozyrevsk          1.88 243   eP      Pn          22 04 09.4 -0.3
KMNR    Kamenistaya        1.88 232    PN     Pn          22 04 10.0 +0.2
KMNR                                   S      Sn          22 04 35.7 +3.3
KMNR    Kamenistaya        1.88 232   eP      Pn          22 04 10.0 +0.2
KMNR                                  eS      Sn          22 04 35.7 +3.3
TUMD    Tumrok D           2.22 220   eP      Pn          22 04 15.0 +0.6
TUMD                                  eS      Sn          22 04 43.2 +2.5
TUMR    Tumrok             2.25 224    PN     Pn          22 04 15.0 +0.1
TUMR                                   S      Sn          22 04 43.2 +1.7
TUMR    Tumrok             2.25 224   eP      Pn          22 04 16.2 +1.2
OSSR    Ossora             2.32   2    PN     Pn          22 04 12.2 -3.5
OSSR    Ossora             2.32   2   eP      Pn          22 04 12.2 -3.5
TIGL    Tigil              2.42 292   eP      Pn          22 04 18.1 +1.0
TIGL                                  eS      Sn          22 04 49.2 +3.7
BKI     Bering             2.46 134    PN     Pn          22 04 14.8 -2.8
BKI                                    S      Sn          22 04 43.5 -2.8
BKI     Bering             2.46 134   eP      Pn          22 04 14.8 -2.8
BKI                                   eS      Sn          22 04 43.5 -2.8
MKZ     Mys Kozlova        2.47 196    PN     Pn          22 04 16.5 -1.3
MKZ                                    S      Sn          22 04 47.5 +0.8
MKZ     Mys Kozlova        2.47 196   eP      Pn          22 04 16.5 -1.3
MKZ                                   eS      Sn          22 04 47.5 +0.8
ESO     Esso               2.53 248    PN     Pn          22 04 21.3 +2.7
ESO     Esso               2.53 248   eP      Pn          22 04 21.3 +2.7
PALN    Palana             2.66 326    PN     Pn          22 04 21.0 +0.7
PALN    Palana             2.66 326   eP      Pn          22 04 21.0 +0.7
TILK    Tilichiki          3.91  25    PN     Pn          22 04 35.2 -2.3
TILK    Tilichiki          3.91  25   eP      Pn          22 04 35.2 -2.3
SPN     Mys Shipunski      4.18 204    PN     Pn          22 04 39.9 -1.4
SPN     Mys Shipunski      4.18 204   eP      Pn          22 04 39.9 -1.4
SPN                                   eS      Sn          22 05 27.5 -1.3
NLC     Nalytchevo         4.28 210    PN     Pn          22 04 44.0 +1.4
NLC                                    S      Sn          22 05 34.5 +3.2
NLC     Nalytchevo         4.28 210   eP      Pn          22 04 44.0 +1.4
NLC                                   eS      Sn          22 05 34.5 +3.2
GNL     Ganaly             4.30 223    PN     Pn          22 04 43.9 +0.9
GNL     Ganaly             4.30 223   eP      Pn          22 04 43.9 +0.9
KRX     Arik               4.33 216    PN     Pn          22 04 44.7 +1.3
KRX     Arik               4.33 216   eP      Pn          22 04 44.7 +1.3
KRER    Koryakskii         4.34 215    PN     Pn          22 04 44.9 +1.2
KRER    Koryakskii         4.34 215   eP      Pn          22 04 44.9 +1.2
SMAR    Somma              4.36 214    PN     Pn          22 04 44.8 +0.9
SMAR    Somma              4.36 214   eP      Pn          22 04 44.8 +0.9
AVH     Avacha             4.38 215    PN     Pn          22 04 45.8 +1.8
AVH     Avacha             4.38 215   eP      Pn          22 04 45.8 +1.8
KOK     Koryaka            4.39 215    PN     Pn          22 04 46.3 +2.1
KOK     Koryaka            4.39 215   eP      Pn          22 04 46.3 +2.1
UGLR    Uglovaya           4.40 214    PN     Pn          22 04 45.7 +1.3
UGLR    Uglovaya           4.40 214   eP      Pn          22 04 45.7 +1.3
DALK    Dalny              4.58 213    PN     Pn          22 04 47.2 +0.6
DALK                                   S      Sn          22 05 41.0 +2.5
DALK    Dalny              4.58 213   eP      Pn          22 04 47.2 +0.6
DALK                                  eS      Sn          22 05 41.0 +2.5
PET     Petropavlovsk      4.61 214           Pn          22 04 48.1 +0.9
PET     Petropavlovsk      4.61 214   ePN     Pn          22 04 48.5 +1.4
PET                                   eS      Sn          22 05 43.2 +3.8
PET                                    pmax   pmax
        comp=Z,243nm,0.6s
PET                                    smax   smax
        comp=N,399nm,0.6s
PET                                    smax   smax
        comp=E,221nm,0.8s
PET                                    MLR    MLR
        comp=Z,1µm,10.0s
PET                                    MLR    MLR
        comp=Z,2µm,8.0s
PET     Petropavlovsk      4.61 214   eP      Pn          22 04 48.6 +1.4
PET                                   eS      Sn          22 05 42.5 +3.2
PEA0B   Petropavlovsk-     4.85 220           Pn          22 04 51.2 +0.7
PEA0B   Petropavlovsk-     4.85 220    PN     Pn          22 04 51.2 +0.7
PETK    Petropavlovsk-     4.85 220    Pn     Pn          22 04 50.8 +0.3
        comp=Z,6.9nm,0.3s,baz=60,slow=15,SNR=37
PETK                                   LR     LR          22 07 01.7
        comp=Z,1µm,18.6s,baz=27,slow=44
KRMR    Karymshinskiy      4.94 216    PN     Pn          22 04 52.9 +1.2
KRMR    Karymshinskiy      4.94 216   eP      Pn          22 04 52.9 +1.2
RUS     Russkaya           5.17 211    PN     Pn          22 04 55.0 +0.2
RUS                                    S      Sn          22 05 57.1 +4.0
RUS     Russkaya           5.17 211   eP      Pn          22 04 55.0 +0.2
RUS                                   eS      Sn          22 05 57.1 +4.0
APC     Apacha             5.20 222    PN     Pn          22 04 56.7 +1.5
APC     Apacha             5.20 222   eP      Pn          22 04 56.7 +1.5
GRL     Gorelyy            5.20 214    PN     Pn          22 04 57.3 +2.0
GRL     Gorelyy            5.20 214   eP      Pn          22 04 57.3 +2.0
MTVR    Mutnovka           5.22 213    PN     Pn          22 04 57.4 +1.7
MTVR    Mutnovka           5.22 213   eP      Pn          22 04 57.4 +1.7
KMSK    Kamenskaya         5.80  16    PN     Pn          22 05 02.4 -1.0
KMSK    Kamenskaya         5.80  16   eP      Pn          22 05 02.4 -1.0
PAU     Pauzhetka          6.53 215    PN     Pn          22 05 16.3 +2.8
PAU     Pauzhetka          6.53 215   eP      Pn          22 05 16.3 +2.8
MA2     Magadan            6.91 298    Pn     Pn          22 05 17.9 -0.8
        comp=Z,2.4nm,0.3s,baz=128,slow=19,SNR=2.8
        comp=Z,4.7nm,0.3s
MA2     Magadan            6.91 298           Pn          22 05 18.3 -0.5
MA2     Magadan            6.91 298   i PN    Pn          22 05 18.2 -0.5
SKR     Severo-Kuril's     7.43 215   ePN     Pn          22 05 27.9 +2.1
SKR                                   eS      Sn          22 06 56.2 +7.6
SKR                                    pmax   pmax
        comp=Z,10.0nm,0.4s
SKR                                    smax   smax
        comp=E,33nm,0.5s
SKR                                    smax   smax
        comp=N,26nm,0.5s
SKR                                    MLR    MLR
        comp=Z,400nm,16.0s
SHEM    Shemya Is, Ala     7.73 118    Pn     Pn          22 05 28.8 -1.1
        comp=Z,6.7nm,0.3s,baz=303,slow=1.2,SNR=4.4
SHEM                                   Sn     Sn          22 06 57.9 +1.9
        comp=Z,3.0nm,0.3s,baz=355,slow=21,SNR=2.7
SHEM                                   LR     LR          22 08 15.2
        comp=Z,390nm,18.1s,baz=153,slow=36
        comp=Z,41nm,0.5s
SMY     Shemya             7.73 118    Pn     Pn          22 05 30.0 +0.1
SMY     Shemya             7.73 118    PN     Pn          22 05 30.0 +0.1
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SEY   Seymchan          7.99 323   Pn     Pn      22 05 32.0  -1.3
      comp=Z,0.2nm,0.3s,baz=126,slow=18,SNR=2.1
SEY                                LR     LR      22 08 52.7
      comp=Z,943nm,19.4s,baz=163,slow=40
SEY   Seymchan          7.99 323  i PN    Pn      22 05 34.6  +1.2
BILL  Bilibino         11.25   7   Pn     Pn      22 06 18.0   0.0
BILL  Bilibino         11.25   7⇑ePN     Pn      22 06 20.8  +2.8
BILL                               pmax   pmax
      comp=Z,6.0nm,1.0s
BILL                               MLR    MLR
      comp=Z,2µm,12.0s
OKH   Okha             11.86 262dePN     Pn      22 06 18.0  -8.4
OKH                                MLR    MLR
      comp=N,400nm,14.0s
OKH                                MLR    MLR
      comp=Z,800nm,13.0s
OKH                                MLR    MLR
      comp=E,900nm,13.0s
ADK   Adak             12.92 104   Pn     Pn      22 06 41.1  +0.3
ADK   Adak             12.92 104   PN     Pn      22 06 41.1  +0.3
TYV   Tymovskoe        13.35 251  ePN     P       22 06 53.8  -1.5
TYV                               eS      S       22 09 27.7  -8.2
TYV                                pmax   pmax
      comp=Z,100nm,2.5s
TYV                                pmax   pmax
      comp=Z,14nm,1.0s
TYV                                smax   smax
      comp=N,400nm,5.6s
YSS   Yuzh-Sakhalins   15.87 240   Pn     Pn      22 07 20.6  +0.6
YSS   Yuzh-Sakhalins   15.87 240  eP      Pn      22 07 20.7  +0.6
YSS                                pmax   pmax
      comp=Z,20nm,0.7s
YSS                                MLR    MLR
      comp=Z,400nm,16.0s
YSS                                MLR    MLR
      comp=N,400nm,17.0s
YSS                                MLR    MLR
      comp=E,400nm,16.0s
TNA   Tin City         16.34  46   P      Pn      22 07 27.0  +1.1
TNA   Tin City         16.34  46   P      Pn      22 07 26.6  +0.7
      baz=252,SNR=11
GRNR  Gornyy           16.71 260⇓iP      P       22 07 32.5  -0.1
GRNR                               pmax   pmax
      comp=Z,3.0nm,0.8s
GRNR                               MLR    MLR
      comp=N,240nm,13.0s
GRNR                               MLR    MLR
      comp=Z,310nm,16.0s
ANM   Nome             17.13  51          Pn      22 07 35.4  -0.5
ANM   Nome             17.13  51   P      Pn      22 07 35.4  -0.5
ANM                                pmax   pmax
      comp=Z,28nm,1.3s
ANM   Nome             17.13  51   P      P       22 07 36.6  -0.5
      baz=259,SNR=6.0
YAK   Yakutsk          17.47 301   P      Pn      22 07 38.9  -1.3
      comp=Z,0.1nm,0.3s,baz=95,slow=7.2,SNR=4.4
      comp=Z,5.9nm,0.4s
YAK   Yakutsk          17.47 301   P      Pn      22 07 39.0  -1.1
YAK   Yakutsk          17.47 301  eP      Pn      22 07 38.8  -1.3
YAK                               eS      Sn      22 10 50.9  -2.5
YAK                                pmax   pmax
      comp=Z,28nm,0.9s
YAK                                pmax   pmax
      comp=N,1.0nm,0.9s
YAK                                pmax   pmax
      comp=E,6.0nm,0.9s
YAK                                smax   smax
      comp=N,95nm,3.8s
YAK                                smax   smax
      comp=E,59nm,3.3s
YAK                                MLR    MLR
      comp=Z,668nm,14.0s
YAK                                MLR    MLR
      comp=E,462nm,14.0s
JKA   Kamikawa-asahi   18.09 233   P      Pn      22 07 48.1  +0.3
ASAJ  Asahikawa        18.09 233   P      P       22 07 46.8  -1.1
      comp=E,1.1nm,0.3s,baz=54,slow=7.4,SNR=21
ASAJ                               LR     LR      22 15 35.8
      comp=E,279nm,18.5s,baz=34,slow=40
      comp=E,23nm,0.8s
ASAJ  Asahikawa        18.09 233   P      Pn      22 07 48.1  +0.2
ASAJ                               pmax   pmax
      comp=Z,23nm,0.8s
RDOG  Red Dog Mine     19.02  40   P      P       22 07 58.2  +0.3
RDOG  Red Dog Mine     19.02  40   P      Pn      22 07 59.2  +0.3
      baz=251
S12K  Black Hills      19.36  79   P      Pn      22 08 03.2  +0.1
      baz=288
ERM   Erimo            19.56 229   P      Pn      22 08 04.7  -0.8
ERM   Erimo            19.56 229   P      Pn      22 08 04.7  -0.8
ERM                                pmax   pmax
      comp=Z,52nm,1.2s
N16K  Nishlik Lake     20.04  64   P      Pn      22 08 10.2  -0.9
      baz=277
KLR   Kul'dur          20.08 261   P      P       22 08 08.8  -0.7
      comp=Z,2.1nm,0.8s,baz=44,slow=13,SNR=8.2
KLR                                PcP    PcP     22 12 22.9  -0.3
      comp=Z,1.2nm,0.9s,baz=34,slow=5.3,SNR=4.0
KLR                                LR     LR      22 16 52.7
      comp=Z,339nm,18.4s,baz=60,slow=40
      comp=Z,2.1nm,0.8s
KLR   Kul'dur          20.08 261ceP      P       22 08 09.1  -0.4
KLR                                pmax   pmax
      comp=Z,9.0nm,1.7s
ZEA   Zeya             20.36 276  eP      P       22 08 13.4  +0.8
ZEA                                pmax   pmax
      comp=E,10.0nm,0.9s
ZEA                                pmax   pmax
      comp=N,10.0nm,0.6s
ZEA                                pmax   pmax
      comp=Z,40nm,0.9s
ZEA                                MLR    MLR
      comp=N,300nm,13.0s
ZEA                                MLR    MLR
      comp=E,600nm,13.0s
ZEA                                MLR    MLR
      comp=Z,700nm,14.0s
TIXI  Tiksi            20.41 329   P      P       22 08 13.4  +0.6
      comp=Z,14nm,0.6s,baz=90,slow=23,SNR=48
TIXI                               PcP    PcP     22 12 23.5  +0.1
      comp=Z,1.8nm,0.4s,baz=89,slow=23,SNR=3.6
TIXI                               LR     LR      22 16 23.5
      comp=Z,145nm,20.6s,baz=115,slow=38
      comp=Z,14nm,0.6s
TIXI  Tiksi            20.41 329   P      P       22 08 12.9  +0.1
TIXI  Tiksi            20.41 329⇑iP      P       22 08 13.5  +0.6
TIXI                               pmax   pmax
      comp=Z,15nm,0.7s
O16K  Kokwok River B   20.50  66   P      P       22 08 14.7  +0.7
      baz=280
P16K  Nushagak River   20.65  68   P      P       22 08 16.0  +0.4
      baz=282
GCSA  Galena City Sc   20.77  51   P      P       22 08 16.9   0.0
      baz=267
O17K  Koliganek Bris   20.97  65   P      P       22 08 19.3  +0.3
      baz=280
SVW2  Sparrevohn       21.51  61   P      P       22 08 25.5  +0.6
L19K  White Mountain   21.73  58   P      P       22 08 29.1  +1.8
L19K  White Mountain   21.73  58   P      P       22 08 28.5  +1.2
      baz=276
HEH   HeiHe            21.89 267   P      P       22 08 26.3  -2.6
HEH                                sP     sP      22 08 44.3  -1.0
HEH                                S      S       22 12 21.5  -6.6
HEH                                pmax   pmax
      comp=Z,12nm,0.7s
HEH                                pmax   pmax
      comp=Z,80nm,3.7s
HEH                                LR     LR
      comp=Z,490nm,12.1s
HEH                                LR     LR
      comp=Z,1µm,13.1s
HEH                                LR     LR
      comp=Z,1µm,13.3s
O18K  Koktuh Hills     21.89  65   P      P       22 08 30.1  +1.1
      baz=281
M19K  Big River Lodg   21.98  59   P      P       22 08 31.0  +1.1
M19K  Big River Lodg   21.98  59   P      P       22 08 30.4  +0.5
      baz=277
K20K  Telida           22.01  55   P      P       22 08 30.6  +0.4
K20K  Telida           22.01  55   P      P       22 08 31.3  +1.1
      baz=273,SNR=12
N19K  Bonanza Creek    22.08  62   P      P       22 08 32.1  +1.0
N19K  Bonanza Creek    22.08  62   P      P       22 08 32.2  +1.1
      baz=279
IMAR  Indian Mountai   22.15  48   P      P       22 08 31.9  +0.2
L20K  Farewell, AK     22.16  58   P      P       22 08 32.5  +0.6
      baz=276
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A21K  Barrow           22.17  34   P      P       22 08 32.7  +0.9
A21K                               IAmb   IAmb    22 08 40.2
      comp=Z,51nm,1.0s
A21K  Barrow           22.17  34   P      P       22 08 32.6  +0.8
      baz=251
Q18K  Katmai Hardscr   22.25  68   P      P       22 08 32.8  -0.1
      baz=284
G21K  Allakaket        22.29  47   P      P       22 08 33.8  +0.7
      baz=266
F21K  Alatna River     22.36  45   P      P       22 08 34.2  +0.3
      baz=264
H21K  Melozitna Rive   22.53  49   P      P       22 08 36.0  +0.3
H21K  Melozitna Rive   22.53  49   P      P       22 08 36.2  +0.4
      baz=269
M20K  Styx River       22.57  59   P      P       22 08 36.6  +0.3
      baz=278
CHUM  Lake Minchumin   22.76  54   P      P       22 08 39.0  +0.8
      baz=273,SNR=7.6
I21K  Tanana           22.87  50   P      P       22 08 39.6  +0.4
I21K  Tanana           22.87  50   P      P       22 08 39.7  +0.4
      baz=271
F22K  John River       22.89  44   P      P       22 08 39.7  +0.1
      baz=265
PPLA  Purkeypile       22.90  56   P      P       22 08 41.0  +1.2
PPLA                               IAmb   IAmb    22 08 43.2
      comp=Z,127nm,1.7s
PPLA  Purkeypile       22.90  56   P      P       22 08 40.4  +0.7
      baz=276,SNR=5.4
CAST  Castle Rocks     22.90  55   P      P       22 08 40.1  +0.5
CAST                               IAmb   IAmb    22 08 42.8
      comp=Z,67nm,1.9s
CAST  Castle Rocks     22.90  55   P      P       22 08 40.4  +0.8
      baz=275,SNR=9.5
RSO   Redoubt South    22.98  63   P      P       22 08 41.5  +0.8
SPCR  Spurr Chakacha   23.11  61   P      P       22 08 42.2  +0.3
      baz=280
USRK  Ussuriysk Ar.    23.16 250   P      P       22 08 41.1  -1.3
      comp=Z,2.0nm,0.5s,baz=64,slow=12,SNR=6.2
USRK                               LR     LR      22 18 16.8
      comp=Z,275nm,18.2s,baz=50,slow=38
      comp=Z,2.0nm,0.5s
USRK  Ussuriysk Ar.    23.16 250   P      P       22 08 43.5  +1.1
USRK  Ussuriysk Ar.    23.16 250   P      P       22 08 43.5  +1.1
SKT   Skwentna         23.31  58   P      P       22 08 44.4  +0.7
SKT                                IAmb   IAmb    22 08 46.0
      comp=Z,32nm,0.9s
SKT   Skwentna         23.31  58   P      P       22 08 44.2  +0.5
      baz=278,SNR=10
BPAW  Bear Paw Mtn.    23.34  53   P      P       22 08 44.3  +0.3
BPAW                               IAmb   IAmb    22 08 46.0
      comp=Z,90nm,1.8s
BPAW  Bear Paw Mtn.    23.34  53   P      P       22 08 44.2  +0.2
      baz=274,SNR=9.9
MLY   Manley           23.40  51   P      P       22 08 45.0  +0.4
MLY                                IAmb   IAmb    22 08 47.7
      comp=Z,112nm,1.8s
MLY                                       PcP     22 12 30.7  +1.1
MLY   Manley           23.40  51   P      P       22 08 45.3  +0.7
      baz=272,SNR=25
KTH   Kantishna Hill   23.41  54   P      P       22 08 45.5  +0.7
KTH                                IAmb   IAmb    22 08 46.9
      comp=Z,56nm,1.3s
OHAK  Old Harbor       23.53  71   P      P       22 08 46.5  +0.7
OHAK                               IAmb   IAmb    22 08 47.6
      comp=Z,59nm,1.2s
OHAK  Old Harbor       23.53  71   P      P       22 08 46.7  +0.9
      baz=288
Q20K  Shuyak Island    23.58  67   P      P       22 08 46.3   0.0
      baz=286
D23K  Nanushuk River   23.61  41   P      P       22 08 46.9  +0.4
      baz=263
G23K  Bananza Creek    23.68  46   P      P       22 08 47.0  -0.3
      baz=269
TRF   Thorofare Moun   23.70  55   P      P       22 08 47.8  +0.1
TRF                                IAmb   IAmb    22 08 50.4
      comp=Z,47nm,1.0s
TRF   Thorofare Moun   23.70  55   P      P       22 08 47.9  +0.3
      baz=276,SNR=17
KDAK  Kodiak Island    23.72  69   P      P       22 08 47.4  -0.2
      comp=Z,11nm,0.7s,baz=305,slow=4.4,SNR=5.8
      comp=Z,11nm,0.7s
SUA   Susitna One      23.76  60   P      P       22 08 48.4  +0.2
      baz=280,SNR=19
CUT   Chulitna         23.84  57   P      P       22 08 49.2  +0.5
CUT                                IAmb   IAmb    22 08 50.3
      comp=Z,37nm,0.8s
CUT   Chulitna         23.84  57   P      P       22 08 48.6  -0.1
      baz=278
H23K  Yukon River      23.88  49   IAmb   IAmb    22 08 52.4
      comp=Z,89nm,1.7s
H23K  Yukon River      23.88  49   P      P       22 08 49.5  +0.4
      baz=271
E23K  Chandalar        23.91  43   P      P       22 08 49.9  +0.5
      baz=266
I23K  Minto, Yukon-K   23.98  50   IAmb   IAmb    22 08 52.5
      comp=Z,46nm,1.2s
I23K  Minto, Yukon-K   23.98  50   P      P       22 08 49.9  -0.1
      baz=273,SNR=19
MDJ   Mudanjiang       24.12 254   P      P       22 08 51.3  -0.1
MDJ                                pP     pP      22 09 02.5  -0.7
MDJ                                PP     PnPn    22 09 21.8  -0.1
MDJ                                S      S       22 13 07.8  +1.9
MDJ                                pmax   pmax
      comp=Z,5.0nm,0.8s
MDJ                                pmax   pmax
      comp=Z,270nm,6.1s
MDJ                                LR     LR
      comp=Z,410nm,17.4s
MDJ                                LR     LR
      comp=Z,450nm,16.3s
MDJ                                LR     LR
      comp=Z,640nm,14.1s
BRSE  Bradley Lake S   24.12  64   P      P       22 08 51.3  -0.1
      baz=284
NEA2  Nenana           24.13  52   P      P       22 08 51.0  -0.4
      baz=274,SNR=9.9
MCK   McKinley         24.27  54   P      P       22 08 53.1  +0.4
MCK                                IAmb   IAmb    22 08 55.7
      comp=Z,57nm,1.2s
MCK   McKinley         24.27  54   P      P       22 08 53.1  +0.4
MCK                                pmax   pmax
      comp=Z,57nm,1.2s
MCK   McKinley         24.27  54   P      P       22 08 52.0  -0.7
      baz=276,SNR=15
D24K  Happy Valley     24.29  41   P      P       22 08 52.7  -0.1
      baz=264
E24K  Your Creek       24.33  43   P      P       22 08 53.3   0.0
      baz=267
RND   Reindeer         24.35  55   P      P       22 08 53.3  -0.1
RND   Reindeer         24.35  55   P      P       22 08 53.3  -0.1
RND                                pmax   pmax
      comp=Z,13nm,0.8s
C24K  Franklin Bluff   24.40  39   P      P       22 08 53.9  +0.2
      baz=263
O22K  Cooper Landing   24.45  62   P      P       22 08 54.0  -0.3
      baz=283
MDM   Murphy Dome      24.46  51   P      P       22 08 54.8  +0.3
BNX   BinXian          24.54 258 ⇑P      P       22 08 54.0  -1.2
BNX                                pmax   pmax
      comp=Z,8.0nm,0.8s
BNX                                pmax   pmax
      comp=Z,120nm,5.7s
F24K  Squaw Lake       24.54  45   P      P       22 08 55.5  +0.4
      baz=269
H24K  Noodor Dome      24.56  49   P      P       22 08 55.6  +0.2
H24K  Noodor Dome      24.56  49   P      P       22 08 55.6  +0.2
      baz=273
GHO   Glory Hole Cre   24.57  58   P      P       22 08 55.6  +0.2
GHO                                IAmb   IAmb    22 09 00.0
      comp=Z,22nm,0.9s
WRH   Wood River Hil   24.57  52   P      P       22 08 55.6  +0.3
WRH                                IAmb   IAmb    22 08 58.1
      comp=Z,34nm,0.8s
TCOL  CIGO, UAF Yank   24.63  51   P      P       22 08 56.4  +0.5
TCOL                               IAmb   IAmb    22 09 07.8
      comp=Z,34nm,1.1s
TCOL  CIGO, UAF Yank   24.63  51   P      P       22 08 55.6  -0.3
      baz=275
COLA  College          24.63  51   P      P       22 08 56.4  +0.5
COLA                               IAmb   IAmb    22 09 07.8
      comp=Z,38nm,1.1s
COLA  College          24.63  51   P      P       22 08 56.4  +0.5
COLA                               pmax   pmax
      comp=Z,38nm,1.2s
COLA  College          24.63  51   P      P       22 08 55.9   0.0
      baz=275
CCB   Clear Creek Bu   24.67  51   IAmb   IAmb    22 08 58.9
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      comp=Z,34nm,0.9s
G24K  Hadweenzic Riv   24.70  47   P      P       22 08 57.2  +0.7
      baz=271
POKR  Poker Plat Res   24.79  50   P      P       22 08 57.7  +0.3
POKR  Poker Plat Res   24.79  50   P      P       22 08 56.9  -0.5
      baz=275
SML   Sawmill          24.84  58   P      P       22 08 57.7  -0.2
SML                                IAmb   IAmb    22 09 00.7
      comp=Z,34nm,0.8s
SML   Sawmill          24.84  58   P      P       22 08 57.5  -0.4
      baz=281,SNR=8.9
KNK   Knik Glacier     24.85  59   IAmb   IAmb    22 08 59.8
      comp=Z,29nm,0.8s
KNK   Knik Glacier     24.85  59   P      P       22 08 57.3  -0.8
      baz=282
PWL   Port Wells       25.03  61   P      P       22 08 59.4  -0.2
PWL   Port Wells       25.03  61   P      P       22 08 59.2  -0.4
      baz=283
IL31                   25.05  51   IAmb   IAmb    22 09 02.5
      comp=Z,29nm,0.8s
ILAR  Eielson Array    25.05  51   P      P       22 08 59.9  +0.1
      comp=Z,20nm,0.7s,baz=261,slow=7.7,SNR=111
ILAR                               PcP    PcP     22 12 32.7  -0.4
      comp=Z,0.8nm,0.7s,baz=246,slow=3.9,SNR=4.7
ILAR                               LR     LR      22 19 38.4
      comp=Z,88nm,19.1s,baz=246,slow=38
      comp=Z,20nm,0.7s
HDA   Harding Lake     25.07  52   P      P       22 08 59.2  -0.6
HDA                                IAmb   IAmb    22 09 02.2
      comp=Z,14nm,0.7s
HDA   Harding Lake     25.07  52   P      P       22 08 59.3  -0.6
      baz=277,SNR=12
M23K  Glacier View     25.12  58   P      P       22 09 00.6  +0.1
      baz=282,SNR=7.9
D25K  Kavik River      25.17  40   P      P       22 09 01.0  +0.1
      baz=266
G25K  Bearman Lake     25.24  46   P      P       22 09 01.6  +0.1
      baz=272
SCM   Sheep Creek Mo   25.30  58   P      P       22 09 01.6  -0.5
      baz=282,SNR=11
F25K  Christian Rive   25.40  44   P      P       22 09 03.5  +0.6
      baz=271,SNR=19
E25K  Arctic Village   25.43  43   P      P       22 09 02.9  -0.2
      baz=270,SNR=20
PRP   Porcupine Dome   25.55  49   P      P       22 09 05.1  +0.6
PRP                                IAmb   IAmb    22 09 06.2
      comp=Z,32nm,1.0s
PRP   Porcupine Dome   25.55  49   P      P       22 09 04.7  +0.2
      baz=275,SNR=22
FYU   Fort Yukon       25.60  47   P      P       22 09 05.2  +0.5
FYU                                IAmb   IAmb    22 09 06.5
      comp=Z,34nm,0.8s
K24K  Donnelly Dome    25.65  53   P      P       22 09 05.4  +0.1
      baz=279
M24K  Tolsona, Glenn   25.77  57   P      P       22 09 07.1  +0.7
M24K  Tolsona, Glenn   25.77  57   P      P       22 09 06.5   0.0
      baz=282
BOD   Bodaibo          25.91 293  eP      P       22 09 06.9  -0.6
BOD                                pmax   pmax
      comp=Z,34nm,1.3s
PAX   Paxson           25.93  55   P      P       22 09 07.9  +0.1
PAX   Paxson           25.93  55   P      P       22 09 07.9  +0.1
PAX                                pmax   pmax
      comp=Z,10.0nm,1.0s
PAX   Paxson           25.93  55   P      P       22 09 07.3  -0.5
      baz=281
F26K  Sheenjek River   25.97  44   P      P       22 09 07.8  -0.3
      baz=272
KLU   Klutina          26.02  58   P      P       22 09 08.9  +0.2
KLU                                IAmb   IAmb    22 09 14.6
      comp=Z,18nm,0.8s
KLU   Klutina          26.02  58   P      P       22 09 08.6  -0.1
      baz=283
RIDG  Independent Ri   26.07  53   IAmb   IAmb    22 09 09.3
      comp=Z,21nm,1.0s
RIDG  Independent Ri   26.07  53   P      P       22 09 07.9  -1.2
      baz=280,SNR=8.5
C27K  Jago River       26.13  40   P      P       22 09 10.0  +0.5
      baz=268
G26K  Porcupine Rive   26.15  46   P      P       22 09 10.4  +0.8
      baz=274
DIV   Divide           26.18  59   P      P       22 09 10.2  +0.1
MJAR  Matsushiro Arr   26.23 229   P      P       22 09 10.5  -0.2
      comp=Z,2.6nm,0.8s,baz=25,slow=8.8,SNR=5.1
MJAR                               LR     LR      22 20 20.5
      comp=Z,322nm,19.0s,baz=15,slow=38
      comp=Z,2.6nm,0.8s
Q23K  Middleton Isla   26.36  63   P      P       22 09 11.1  -0.5
      baz=287
SCRK  Sand Creek       26.41  53   IAmb   IAmb    22 09 12.4
      comp=Z,31nm,0.8s
SCRK  Sand Creek       26.41  53   P      P       22 09 11.5  -0.7
      baz=280,SNR=28
I26K  Coal Creek Min   26.57  49   P      P       22 09 13.2  -0.2
      baz=278
N25K  Chitina, Valde   26.61  58   P      P       22 09 14.2  +0.2
N25K  Chitina, Valde   26.61  58   P      P       22 09 14.4  +0.3
      baz=284
MENT  Mentasta         26.72  55   P      P       22 09 15.9  +1.0
L26K  Log Cabin Wild   26.87  54          P       22 09 16.7  +0.4
L26K  Log Cabin Wild   26.87  54   P      P       22 09 16.1  -0.1
      baz=282
E27K  Coleen River     26.91  43   P      P       22 09 17.6  +1.0
      baz=273,SNR=7.9
G27K  Doyon Strip      27.00  46   P      P       22 09 18.0  +0.7
      baz=276,SNR=10
GLB   Gilahina Butte   27.02  58   P      P       22 09 18.2  +0.6
H27K  Steamboat Moun   27.11  47   P      P       22 09 19.3  +0.9
      baz=277
I27K  Kandik River     27.16  49   P      P       22 09 19.0  +0.1
      baz=278
M26K  Nabesna, AK      27.16  56   IAmb   IAmb    22 09 21.2
      comp=Z,24nm,1.1s
M26K                                      PcP     22 12 40.1  +2.0
M26K  Nabesna, AK      27.16  56   P      P       22 09 20.0  +1.1
      baz=284
K27K  Chicken          27.23  52   P      P       22 09 19.5  +0.1
K27K                               IAmb   IAmb    22 09 20.5
      comp=Z,25nm,1.1s
K27K  Chicken          27.23  52   P      P       22 09 19.7  +0.3
      baz=281
VRDI  Verde Repeater   27.24  58   P      P       22 09 19.6  -0.2
VRDI                               IAmb   IAmb    22 09 37.0
      comp=Z,46nm,1.6s
MCARA McCarthy VSAT    27.40  58   P      P       22 09 21.9  +0.9
MCARA                              IAmb   IAmb    22 09 24.8
      comp=Z,36nm,1.0s
MCARA McCarthy VSAT    27.40  58   P      P       22 09 21.9  +0.9
      baz=285,SNR=5.7
EGAK  Eagle            27.48  50   IAmb   IAmb    22 09 22.1
      comp=Z,29nm,0.8s
EGAK  Eagle            27.48  50   P      P       22 09 21.2  -0.5
      baz=280,SNR=22
L27K  Beaver Creek,    27.54  54   IAmb   IAmb    22 09 24.1
      comp=Z,19nm,1.0s
L27K  Beaver Creek,    27.54  54   P      P       22 09 23.0  +0.8
      baz=283
M27K  Edge Creek, AK   27.68  56   P      P       22 09 24.3  +0.7
M27K                               IAmb   IAmb    22 09 26.0
      comp=Z,21nm,0.9s
M27K  Edge Creek, AK   27.68  56   P      P       22 09 24.5  +0.9
      baz=284
BVCY  Beaver Creek     28.12  55   P      P       22 09 27.6  +0.1
      baz=285
DAWY  Dawson           28.38  51   P      P       22 09 29.5  -0.2
DAWY  Dawson           28.38  51   P      P       22 09 29.5  -0.2
      baz=283
YUK3  Moose Creek      28.48  56   P      P       22 09 31.3  +0.4
      baz=286
I29M  Ogilvie Camp,    28.56  49   P      P       22 09 31.7  +0.3
I29M                               IAmb   IAmb    22 09 32.8
      comp=Z,21nm,1.0s
I29M  Ogilvie Camp,    28.56  49   P      P       22 09 32.1  +0.8
      baz=281,SNR=13
O28M  Mount Upton      28.90  58   P      P       22 09 34.7   0.0
      baz=288
YUK8  Steele Glacier   28.94  57   P      P       22 09 35.3  +0.3
      baz=288
EPYK  Eagle Plains     29.01  46   P      P       22 09 35.6  +0.3
EPYK                               IAmb   IAmb    22 09 37.0
      comp=Z,21nm,1.1s
EPYK  Eagle Plains     29.01  46   P      P       22 09 36.4  +1.1
      baz=281
PINM  Pinnacle         29.09  60   P      P       22 09 36.9  +0.9
      baz=289
G30M  tAoh Zraii Nji   29.10  45   P      P       22 09 36.0  -0.1
      baz=280
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L29M	L29M	29.16	53	P	P	22 09 37.4	+0.8
	baz=286						
M29M	Somme Creek	29.19	55	P	P	22 09 37.8	+0.7
	baz=286						
K29M	Barlow Dome	29.23	52	P	P	22 09 37.5	+0.1
	baz=285						
YUK4	Talbot Arm	29.43	57	P	P	22 09 40.2	+0.9
	baz=288						
PNL	Peninsula	29.64	60	P	P	22 09 41.8	+0.9
	baz=291						
YUK6	Outpost Mounta	29.69	57	P	P	22 09 41.7	+0.1
	baz=289						
O29M	Mount Kennedy	29.81	59	P	P	22 09 42.6	+0.1
	baz=290						
INK	Inuvik	29.89	42	P	P	22 09 43.5	+0.5
	comp=Z,6.3nm,0.6s,baz=294,slow=7.8,SNR=44						
INK				PcP	PcP	22 12 45.2	+0.6
	comp=Z,1.9nm,0.6s,baz=303,slow=3.2,SNR=8.3						
	comp=Z,6.3nm,0.6s						
INK	Inuvik	29.89	42	P	P	22 09 43.5	+0.5
INK	Inuvik	29.89	42	P	P	22 09 43.9	+1.0
	baz=280,SNR=11						
M30M	Minto, Yukon	29.89	54	P	P	22 09 44.0	+0.8
M30M	Minto, Yukon	29.89	54	P	P	22 09 43.6	+0.4
	baz=287						
F31M	Tsiigehtchic	29.96	44	P	P	22 09 44.2	+0.6
	baz=281,SNR=10						
N30M	Aishikik Lake	30.11	56	P	P	22 09 46.2	+1.1
	baz=289						
HYT	Haines Junctio	30.13	57	P	P	22 09 46.1	+0.7
HYT				IAmb	IAmb	22 09 47.7	
	comp=Z,19nm,0.9s						
HYT	Haines Junctio	30.13	57	P	P	22 09 46.3	+1.0
	baz=290,SNR=8.7						
KSRS	Korea Array	30.23	245	P	P	22 09 44.5	-1.7
	comp=Z,1.1nm,0.6s,baz=32,slow=12,SNR=4.2						
KSRS				LR	LR	22 22 32.4	
	comp=Z,125nm,18.6s,baz=70,slow=38						
	comp=Z,1.1nm,0.6s						
P30M	Million Dollar	30.62	58	P	P	22 09 50.8	+1.2
	baz=291						
N31M	Braeburn, Yuko	30.69	56	P	P	22 09 51.5	+1.2
	baz=290						
O30N	Mendenhall	30.80	57	P	P	22 09 52.3	+1.1
	baz=291						
M31M	Drury Creek, Y	31.08	54	P	P	22 09 54.7	+1.2
M31M				IAmb	IAmb	22 09 56.1	
	comp=Z,16nm,0.8s						
M31M	Drury Creek, Y	31.08	54	P	P	22 09 54.8	+1.2
	baz=290,SNR=12						
PLBC	Pleasant Camp	31.15	59	P	P	22 09 55.2	+1.0
	baz=293						
FARO	Faro, Yukon	31.53	53	P	P	22 09 57.8	+0.2
FARO				IAmb	IAmb	22 09 59.9	
	comp=Z,17nm,1.1s						
FARO	Faro, Yukon	31.53	53	P	P	22 09 59.0	+1.4
	baz=290,SNR=11						
XLT	XiLinHaoTe	31.87	266	eP	P	22 10 06.0	+5.2
XLT				pP	sP	22 10 16.0	-2.0
XLT				sP	pP	22 10 23.5	+11
XLT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,140nm,10.6s						
XLT				LR	LR		
	comp=N,55nm,13.2s						
XLT				LR	LR		
	comp=E,650nm,13.2s						
XLT				LR	LR		
	comp=Z,860nm,13.2s						
A36M	Sachs Harbour	32.02	34	P	P	22 10 02.3	+0.7
A36M					PcP	22 12 50.7	+0.5
A36M	Sachs Harbour	32.02	34	P	P	22 10 02.7	+1.0
	baz=281,SNR=23						
MMPY	Sheldon Lake,	32.30	52	P	P	22 10 05.8	+1.4
	baz=291,SNR=8.2						
P33M	Teslin, Yukon	32.51	57	P	P	22 10 06.3	+0.1
P33M	Teslin, Yukon	32.51	57	P	P	22 10 07.1	+0.9
	baz=293						
JIS	Juneau Island	32.57	61	P	P	22 10 07.5	+0.8
SIT	Sitka	32.65	63	P	P	22 10 09.1	+1.7
	baz=297						
S32K	Killisnoo	32.83	62	P	P	22 10 10.4	+1.5
	baz=296						
C36M	Paulatuk	33.00	39	P	P	22 10 10.6	+0.3
C36M	Paulatuk	33.00	39	P	P	22 10 10.6	+0.3
	baz=286,SNR=39						
Q32M	Nakina River	33.28	59	P	P	22 10 14.9	+1.8
	baz=296						
NRIK	Noril'sk	33.77	322	LR	LR	22 23 44.9	
	comp=Z,57nm,20.1s,baz=97,slow=36						
NRIK	Noril'sk	33.77	322	P	P	22 10 17.0	0.0
NRIK	Noril'sk	33.77	322	ceP	P	22 10 16.5	-0.5
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
S34M	Telegraph Cree	34.28	60	P	P	22 10 23.7	+2.1
	baz=297						
ULN	Ulaanbaatar	34.34	279	i P	P	22 10 22.3	-0.1
ULN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
WTLY	Watson Lake, Y	34.38	56	P	P	22 10 23.9	+1.5
WTLY				IAmb	IAmb	22 11 35.1	
	comp=Z,22nm,1.1s						
WTLY					PcP	22 12 59.3	+2.2
WTLY	Watson Lake, Y	34.38	56	P	P	22 10 24.3	+1.9
	baz=296						
DLBC	Dease Lake	34.56	59	P	P	22 10 25.9	+1.8
	comp=Z,15nm,0.7s,baz=285,slow=8.7,SNR=23						
DLBC				LR	LR	22 24 45.9	
	comp=Z,205nm,19.0s,baz=284,slow=37						
	comp=Z,15nm,0.7s						
DLBC	Dease Lake	34.56	59	P	P	22 10 25.5	+1.4
DLBC				IAmb	IAmb	22 10 27.5	
	comp=Z,16nm,0.8s						
DLBC	Dease Lake	34.56	59	P	P	22 10 26.4	+2.3
	baz=297,SNR=9.3						
SONM	Songino Array	34.71	279	P	P	22 10 24.9	-0.7
	comp=Z,0.7nm,0.5s,baz=60,slow=7.6,SNR=6.0						
SONM				PcP	PcP	22 12 58.8	+0.4
	comp=Z,1.9nm,0.7s,baz=77,slow=1.8,SNR=11						
SONM				LR	LR	22 25 54.2	
	comp=Z,450nm,18.4s,baz=72,slow=39						
	comp=Z,0.7nm,0.5s						
SONM	Songino Array	34.71	279	P	P	22 10 25.8	+0.2
ZAK	Zakamensk	34.90	285	eP	P	22 10 32.4	+5.3
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
T35M	Bob Quinn	35.14	61	P	P	22 10 31.3	+2.3
	baz=299,SNR=6.9						
V35K	Ketchikan	35.30	64	P	P	22 10 32.5	+2.2
	baz=300						
MOY	Mondy	35.38	288	eP	P	22 10 31.3	0.0
HHC	Hu-ho-hao-te	36.40	266	eP	P	22 10 40.3	+0.2
HHC				pmax	pmax		
	comp=Z,22nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,5.8s						
HHC				LR	LR		
	comp=Z,670nm,13.7s						
HHC				LR	LR		
	comp=Z,880nm,15.3s						
HHC				LR	LR		
	comp=Z,1µm,13.8s						
KOTAN	Kotaneelee Air	36.49	54	P	P	22 10 41.9	+1.3
	baz=298,SNR=6.3						
H11N2	WAKE ISLAND Hy	37.27	174	T	T	22 49 37.3	
	baz=357,slow=76,SNR=392						
H11N3	WAKE ISLAND Hy	37.28	174	T	T	22 49 39.8	
	baz=357,slow=76,SNR=386						
H11N1	WAKE ISLAND Hy	37.29	174	T	T	22 49 53.0	
	baz=357,slow=76,SNR=224						
EUNU	Eureka	37.82	15	P	P	22 10 52.1	+0.4
EUNU				IAmb	IAmb	22 10 53.5	
	comp=Z,21nm,0.8s						
BBB	Bella Bella	38.75	67	P	P	22 11 01.2	+1.6
	comp=Z,7.5nm,0.7s,baz=357,slow=4.4,SNR=4.4						
	comp=Z,7.5nm,0.7s						
JOW	Kunigami	38.86	234	LR	LR	22 29 35.3	
	comp=Z,134nm,18.1s,baz=286,slow=40						
NJ2	Nanjing	39.06	249	eP	P	22 11 02.5	0.0
NJ2				pP	pP	22 11 14.0	-0.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,140nm,4.1s						
RES	Resolute Bay	39.16	24	LR	LR	22 27 59.4	
	comp=Z,78nm,19.5s,baz=288,slow=37						
RES	Resolute Bay	39.16	24	P	P	22 11 03.2	+0.4
RES	Resolute Bay	39.16	24	P	P	22 11 03.2	+0.4
RES				pmax	pmax		
	comp=Z,7.0nm,0.8s						
YKA	Yellowknife Ar	39.30	47	P	P	22 11 04.8	+0.7
	comp=Z,8.4nm,0.7s,baz=300,slow=7.9,SNR=124						
YKA				PcP	PcP	22 13 12.5	+0.6
	comp=Z,0.8nm,0.7s,baz=304,slow=3.9,SNR=4.7						
	comp=Z,8.4nm,0.7s						
HILA	High Level	40.39	53	P	P	22 11 14.4	+1.1
WAPA	Wapiti River	41.31	58	P	P	22 11 21.4	+0.5
WAPA				IAmb	IAmb	22 11 23.1	
	comp=Z,41nm,1.6s						
ZALV	Zalesovo Beam	42.12	300	P	P	22 11 26.6	-0.9
	comp=Z,0.8nm,0.3s,baz=46,slow=13,SNR=1.4						
ZALV				PcP	PcP	22 13 21.1	-0.1
	comp=Z,3.8nm,0.6s,baz=55,slow=2.0,SNR=8.9						
	comp=Z,0.8nm,0.3s						
LLLB	Lillooet	42.81	65	P	P	22 11 34.3	+1.1
LLLB				IAmb	IAmb	22 11 36.1	
	comp=Z,17nm,0.8s						
TULEG	Thule	42.82	16	P	P	22 11 32.6	-0.3
TULEG	Thule	42.82	16	i P	P	22 11 31.6	-1.3
TULEG				IAmb	IAmb	22 11 33.5	
	comp=Z,6.7nm,0.8s						
BRLDA	Berland Lookou	42.82	59	P	P	22 11 34.6	+1.3
BRLDA				IAmb	IAmb	22 11 35.6	
	comp=Z,34nm,0.8s						
DGZ	Jazzator, Alta	43.48	294	i P	P	22 11 38.1	-0.7
DGZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SPITS	Spitsbergen Ar	43.60	351	P	P	22 11 39.4	+0.2
SPITS				pmax	pmax		
	comp=Z,29nm,1.0s						
SPB2	Spitsbergen Ar	43.60	350	P	P	22 11 39.0	-0.3
SPB2				IAmb	IAmb	22 11 40.4	
	comp=Z,18nm,0.8s						
GTA	Gaotai	43.84	274	eP	P	22 11 41.3	-0.4
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA				LR	LR		
	comp=Z,370nm,14.9s						
GTA				LR	LR		
	comp=Z,470nm,14.5s						
GTA				LR	LR		
	comp=Z,750nm,14.5s						
LZH	Lanzhou	44.03	268	⇑P	P	22 11 43.3	0.0
LZH				pmax	pmax		
	comp=Z,43nm,1.4s						
LZH				LR	LR		
	comp=Z,460nm,12.4s						
LZH				LR	LR		
	comp=Z,540nm,12.7s						
LZH				LR	LR		
	comp=Z,790nm,12.7s						
NEEM	North Greenlan	44.22	10	i P	P	22 11 43.9	-0.6
NEEM				IAmb	IAmb	22 11 45.5	
	comp=Z,41nm,1.2s						
B06A	Marblemount	44.35	67	P	P	22 11 46.3	+0.8
B06A				IAmb	IAmb	22 11 47.6	
	comp=Z,17nm,0.6s						
D05A	Enumclaw	44.97	69	P	P	22 11 52.1	+1.6
EDM	Edmonton	45.25	57	P	P	22 11 53.3	+0.6
EDM	Edmonton	45.25	57	P	P	22 11 53.3	+0.6
EDM				pmax	pmax		
	comp=Z,43nm,0.9s						
B08A	Colville Reser	45.54	66	P	P	22 11 56.0	+1.0
B08A				IAmb	IAmb	22 11 57.1	
	comp=Z,18nm,0.8s						
F04A	Amboy	45.58	70	P	P	22 11 56.4	+1.0
LTY	Liberty	45.59	68	P	P	22 11 56.3	+0.8
LTY				IAmb	IAmb	22 11 57.6	
	comp=Z,26nm,1.4s						
KULLO	Kullorsuaq	46.08	14	i P	P	22 11 58.3	-0.6
KULLO				IAmb	IAmb	22 11 59.9	
	comp=Z,28nm,0.8s						
HOOD	Mount Hood Mea	46.39	71	P	P	22 12 03.1	+1.1
C09A	Chrisman Ranch	46.44	66	P	P	22 12 02.9	+0.8
C09A				IAmb	IAmb	22 12 03.8	
	comp=Z,14nm,0.7s						
DAG	Danmarks Havn	46.55	0	i P	P	22 12 00.8	-1.8
DAG				IAmb	IAmb	22 12 02.8	
	comp=Z,6.2nm,0.8s						
NEW	Newport	46.70	65	LR	LR	22 31 51.5	
	comp=Z,92nm,18.0s,baz=10,slow=36						
NEW	Newport	46.70	65	P	P	22 12 05.0	+0.8
NEW				IAmb	IAmb	22 12 05.9	
	comp=Z,8.2nm,0.8s						
NEW	Newport	46.70	65	P	P	22 12 05.0	+0.8
NEW				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NEW	Newport	46.70	65	P	P	22 12 04.6	+0.4
	baz=312,SNR=5.5						
HAWA	Hanford	46.75	68	P	P	22 12 05.3	+0.7
HAWA				IAmb	IAmb	22 12 07.5	
	comp=Z,25nm,1.5s						
KURK	Kurchatov	47.12	300	P	P	22 12 06.3	-1.0
KURK	Kurchatov	47.12	300	ceP	P	22 12 06.3	-1.0
KURK				pmax	pmax		
	comp=Z,14nm,0.8s						
KURK	Kurchatov	47.12	300	P	P	22 12 06.8	-0.5
WMQ	Urumqi	47.27	288	eP	P	22 12 08.0	-0.7
WMQ				sP	sP	22 12 29.8	+3.6
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.5s						
WMQ				LR	LR		
	comp=Z,120nm,18.5s						
WMQ				LR	LR		
	comp=Z,450nm,12.9s						
WMQ				LR	LR		
	comp=Z,250nm,21.5s						
E09A	Wood Farm, Sta	47.37	67	P	P	22 12 09.9	+0.6
HUMO	Hull Mountain	47.58	74	P	P	22 12 12.6	+1.4
HUMO				IAmb	IAmb	22 12 13.4	
	comp=Z,9.6nm,1.1s						
J04A	Umpqua Nationa	47.59	73	P	P	22 12 12.4	+1.1
WALA	Waterton Lakes	47.74	62	P	P	22 12 12.7	+0.4
G08A	Pilot Rock	47.80	69	P	P	22 12 13.1	+0.3
UPNV	Upernavik	47.81	15	i P	P	22 12 12.4	0.0
UPNV				IAmb	IAmb	22 12 13.2	
	comp=Z,11nm,0.7s						
PINE	Pine Mountain	47.81	72	P	P	22 12 13.9	+0.8
MK31	Makanchi Array	47.98	294	⇑iP	P	22 12 12.0	-2.2
MKAR	Makanchi Array	47.98	294	P	P	22 12 12.9	-1.3
	comp=Z,1.0nm,0.4s,baz=51,slow=6.7,SNR=28						
MKAR				PcP	PcP	22 13 41.0	-0.6
	comp=Z,1.0nm,0.7s,baz=43,slow=5.5,SNR=4.0						
MKAR				PP	PP	22 14 05.5	-0.7
	comp=Z,0.8nm,0.8s,baz=42,slow=6.7,SNR=2.1						
MKAR				LR	LR	22 33 26.6	
	comp=Z,115nm,18.4s,baz=354,slow=37						
	comp=Z,1.0nm,0.4s						
J05D	Fort Rock, OR	48.01	72	P	P	22 12 15.6	+1.0
MAKZ	Makanchi	48.13	294	P	P	22 12 14.0	-1.3
MAKZ	Makanchi	48.13	294	P	P	22 12 14.0	-1.3
MAKZ				pmax	pmax		
	comp=Z,11nm,1.6s						
L04D	Klamath Falls	48.20	74	P	P	22 12 16.7	+0.7
YBH	Yreka Blue Hor	48.33	75	LR	LR	22 30 13.0	
	comp=Z,62nm,18.1s,baz=324,slow=33						
YBH	Yreka Blue Hor	48.33	75	P	P	22 12 17.7	+0.8
YBH				IAmb	IAmb	22 12 19.9	
	comp=Z,8.1nm,0.8s						
YBH	Yreka Blue Hor	48.33	75	P	P	22 12 17.7	+0.8
YBH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
K05A	Summer Lake	48.58	73	P	P	22 12 20.3	+1.2
K05A				IAmb	IAmb	22 12 21.4	
	comp=Z,12nm,0.8s						
BMO	Blue Mountains	48.95	68	P	P	22 12 22.6	+0.9
BMO				IAmb	IAmb	22 12 23.7	
	comp=Z,11nm,0.8s						
BMO	Blue Mountains	48.95	68	P	P	22 12 22.6	+0.9
BMO				pmax	pmax		
	comp=Z,11nm,0.8s						
DBG	Daneborg	49.02	1	i P	P	22 12 19.9	-1.8
DBG				IAmb	IAmb	22 12 22.4	
	comp=Z,4.5nm,0.8s						
FFC	Flin Flon	49.25	50	P	P	22 12 24.3	+0.5
FFC				IAmb	IAmb	22 12 25.4	
	comp=Z,9.1nm,1.0s						
FFC	Flin Flon	49.25	50	P	P	22 12 24.3	+0.5
FFC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MSO	Missoula	49.25	64	P	P	22 12 24.7	+0.7
MSO				IAmb	IAmb	22 12 25.8	
	comp=Z,16nm,1.2s						
MSO	Missoula	49.25	64	P	P	22 12 24.8	+0.7
	baz=314,SNR=5.3						
BVAR	Borovoye Array	49.29	307	LR	LR	22 37 51.5	
	comp=Z,43nm,18.5s,baz=37,slow=42						
BRVK	Borovoye	49.31	307	P	P	22 12 23.6	-0.7
BRVK	Borovoye	49.31	307	P	P	22 12 23.6	-0.7
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRVK	Borovoye	49.31	307	P	P	22 12 23.9	-0.3
J08A	Circle Bar Ran	49.40	70	P	P	22 12 25.1	0.0
J08A				IAmb	IAmb	22 13 09.3	
	comp=Z,12nm,0.9s						
PLID	Pearl Lake	49.44	67	P	P	22 12 26.3	+0.7
PLID				IAmb	IAmb	22 12 28.0	
	comp=Z,9.0nm,0.8s						
MOD	Modoc Plateau	49.48	73	P	P	22 12 27.1	+1.3
MOD				IAmb	IAmb	22 12 28.2	
	comp=Z,13nm,0.8s						
FCC	Fort Churchill	49.51	42	P	P	22 12 25.7	+0.1
FCC				IAmb	IAmb	22 12 26.9	
	comp=Z,12nm,0.8s						
FCC	Fort Churchill	49.51	42	P	P	22 12 25.7	+0.1
FCC				pmax	pmax		
	comp=Z,12nm,0.8s						
SUMG	Summit	49.93	8	i P	P	22 12 28.0	-1.1
SUMG				IAmb	IAmb	22 12 31.1	
	comp=Z,28nm,1.3s						
ARCES	ARCESS Array B	50.12	342	P	P	22 12 30.5	+0.3
	comp=Z,8.1nm,1.2s,baz=49,slow=9.7,SNR=1.3						
ARCES				PcP	PcP	22 13 49.1	+0.1
	comp=Z,3.0nm,0.8s,baz=54,slow=3.4,SNR=7.2						
ARCES				LR	LR	22 37 22.1	
	comp=Z,57nm,19.2s,baz=132,slow=40						
	comp=Z,8.1nm,1.2s						
HRY	Holter Researc	50.37	63	P	P	22 12 33.0	+0.5
EGMT	Eagleton	50.45	60	P	P	22 12 33.6	+0.6
EGMT				IAmb	IAmb	22 12 34.5	
	comp=Z,16nm,0.7s						
EGMT	Eagleton	50.45	60	P	P	22 12 33.2	+0.2
	baz=315,SNR=11						
LRM	Limekiln Ridge	50.70	64	P	P	22 12 36.0	+0.8
MFID	Camas Ranch	50.71	69	P	P	22 12 35.8	+0.7
MFID				IAmb	IAmb	22 12 37.2	
	comp=Z,12nm,0.9s						
DLMT	Dillon	50.95	65	P	P	22 12 38.0	+1.1
DLMT				IAmb	IAmb	22 12 39.5	
	comp=Z,10nm,0.8s						
MCMT	McKenzie Canyo	51.21	65	P	P	22 12 39.7	+0.7
BOZ	Bozeman (W)	51.26	64	P	P	22 12 40.0	+0.7
	baz=316,SNR=10						
HLID	Hailey	51.33	67	P	P	22 12 40.6	+0.8
HLID	Hailey	51.33	67	P	P	22 12 40.7	+0.9
	baz=316,SNR=8.3						
ARU	Arti	51.67	317	LR	LR	22 38 05.6	
	comp=Z,226nm,19.4s,baz=11,slow=40						
ARU	Arti	51.67	317	P	P	22 12 41.5	-0.4
ARU	Arti	51.67	317	c iP	P	22 12 41.3	-0.7
ARU						22 13 54.1	
ARU				S	S	22 20 00.6	+0.9
ARU				SS	SS	22 23 36.7	+1.1
ARU				pmax	pmax		
	comp=Z,14nm,1.2s						
ARU				MLR	MLR		
	comp=Z,284nm,16.0s						
ILULI	Ilulissat	51.76	15	P	P	22 12 41.3	-1.1
ILULI				IAmb	IAmb	22 12 42.8	
	comp=Z,14nm,0.8s						
ILULI	Ilulissat	51.76	15	P	P	22 12 41.3	-1.1
ILULI				pmax	pmax		
	comp=Z,14nm,0.8s						
ILULI	Ilulissat	51.76	15	i P	P	22 12 41.2	-1.1
ILULI				IAmb	IAmb	22 12 42.6	
	comp=Z,13nm,0.7s						
QLMT	Earthquake Lak	51.91	64	P	P	22 12 44.9	+0.7
GCMT	Greycliff	52.08	62	P	P	22 12 46.9	+1.5
YERR	Yerington	52.14	75	P	P	22 12 46.3	+0.3
YERR				IAmb	IAmb	22 12 48.6	
	comp=Z,12nm,1.1s						
BMN	Battle Mountai	52.15	72	P	P	22 12 46.8	+0.8
BMN	Battle Mountai	52.15	72	P	P	22 12 46.8	+0.8
BMN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
JMIC	Jan Mayen	52.23	356	LR	LR	22 32 19.1	
	comp=Z,49nm,19.7s,baz=39,slow=33						
YMR	Madison River	52.26	64	P	P	22 12 48.6	+1.8
YMR				IAmb	IAmb	22 12 49.1	
	comp=Z,17nm,1.0s						
YNR	Norris Junctio	52.36	64	P	P	22 12 48.9	+1.3
WAKR	Walker	52.39	75	P	P	22 12 48.4	+0.6
PZH	PanZhiHua	52.53	261	P	P	22 12 47.5	-1.4
PZH				S	S	22 20 12.3	-0.1
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,130nm,7.5s						
PZH				LR	LR		
	comp=Z,190nm,14.3s						
PZH				LR	LR		
	comp=Z,200nm,13.5s						
PZH				LR	LR		
	comp=Z,330nm,14.5s						
YMP	Mirror Lake Pl	52.60	64	P	P	22 12 50.3	+0.9
LKWY	Lake	52.61	64	P	P	22 12 50.7	+1.2
LKWY				IAmb	IAmb	22 12 53.4	
	comp=Z,15nm,0.9s						
LKWY	Lake	52.61	64	P	P	22 12 50.7	+1.2
LKWY				pmax	pmax		
	comp=Z,15nm,0.9s						
H17A	Grant Village	52.65	64	P	P	22 12 51.5	+1.8
H17A				IAmb	IAmb	22 12 53.4	
	comp=Z,15nm,0.9s						
H17A	Grant Village	52.65	64	P	P	22 12 52.0	+2.2
	baz=317,SNR=14						
KVN	Kaiserville	52.70	74	P	P	22 12 50.5	+0.4
KVN				IAmb	IAmb	22 13 03.6	
	comp=Z,9.8nm,0.8s						
KVN	Kaiserville	52.70	74	P	P	22 12 50.5	+0.4
KVN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
DGMT	Dagmar	52.73	57	P	P	22 12 50.4	+0.4
DGMT				IAmb	IAmb	22 12 51.7	
	comp=Z,16nm,0.9s						
DGMT	Dagmar	52.73	57	P	P	22 12 50.7	+0.8
	baz=317						
RLMT	Red Lodge	52.76	63	P	P	22 12 51.6	+1.2
RLMT				IAmb	IAmb	22 12 53.0	
	comp=Z,25nm,0.9s						
RLMT	Red Lodge	52.76	63	P	P	22 12 51.7	+1.2
	baz=317,SNR=28						
FLWY	Flagg Ranch	52.81	65	P	P	22 12 52.4	+1.5
FLWY				IAmb	IAmb	22 12 53.9	
	comp=Z,12nm,0.8s						
IMW	Indian Meadow	52.83	65	P	P	22 12 52.0	+0.9
IMW				IAmb	IAmb	22 12 54.6	
	comp=Z,26nm,1.4s						
ELK	Elko	52.95	70	P	P	22 12 53.3	+1.3
ELK	Elko	52.95	70	P	P	22 12 53.3	+1.3
ELK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
FXWY	Fox Creek	52.97	65	P	P	22 12 52.5	+0.4
FXWY				IAmb	IAmb	22 12 54.7	
	comp=Z,11nm,0.8s						
MOOW	Moose Ponds	53.03	65	P	P	22 12 53.7	+1.2
NVAR	Mina Array Bea	53.05	75	P	P	22 12 52.8	+0.1
	comp=Z,5.7nm,0.8s,baz=298,slow=6.7,SNR=13						
	comp=Z,5.7nm,0.8s						
NVAR	Mina Array Bea	53.05	75	P	P	22 12 54.1	+1.4
LAO	LASA Array	53.08	59	P	P	22 12 53.7	+1.1
LAO				IAmb	IAmb	22 12 55.0	
	comp=Z,26nm,0.9s						
LAO	LASA Array	53.08	59	P	P	22 12 53.3	+0.7
	baz=317,SNR=8.2						
KMI	Kunming	53.09	259	⇓P	P	22 12 52.0	-1.1
KMI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TPAW	Teton Pass	53.12	65	P	P	22 12 54.3	+1.1
TPAW				IAmb	IAmb	22 12 55.9	
	comp=Z,13nm,0.8s						
ICESG	Greenland Ices	53.21	10	i P	P	22 12 52.3	-1.3
ICESG				IAmb	IAmb	22 12 53.8	
	comp=Z,15nm,0.8s						
MDPB	Devils Postpil	53.23	76	P	P	22 12 55.0	+0.9
MDPB				IAmb	IAmb	22 12 57.2	

	comp=Z,16nm,1.0s						
SNOW	**Snow King Moun**	**53.23**	**65**	P	**P**	**22 12 55.1**	**+1.0**
SNOW				IAmb	IAmb	22 12 57.0	
	comp=Z,18nm,1.4s						
KIRV	**Kirov**	**53.26**	**323**	LR	LR	22 37 07.1	
	comp=Z,91nm,20.2s,baz=14,slow=38						
KIRV	**Kirov**	**53.26**	**323**	*ce*P	**P**	**22 12 53.4**	**-0.2**
OMMB	**Old Mammoth Mi**	**53.28**	**76**	P	**P**	**22 12 55.1**	**+0.6**
FRB	**Frobisher Bay**	**53.34**	**26**	LR	LR	22 38 09.3	
	comp=Z,82nm,19.3s,baz=224,slow=39						
HVU	**Hansel Valley**	**53.45**	**68**	P	**P**	**22 12 56.0**	**+0.4**
HVU	**Hansel Valley**	**53.45**	**68**	P	**P**	**22 12 56.0**	**+0.4**
HVU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AHID	**Auburn Hatcher**	**53.57**	**66**	P	**P**	**22 12 56.5**	**0.0**
KDJ	**Kajisay**	**53.87**	**293**	P	**P**	**22 12 58.2**	**-0.5**
KDJ				IAmb	IAmb	22 14 20.3	
	comp=Z,42nm,2.0s						
KDJ	**Kajisay**	**53.87**	**293**	P	**P**	**22 12 58.2**	**-0.5**
KDJ				pmax	pmax		
	comp=Z,42nm,2.0s						
TPH	**Tonopah**	**53.88**	**74**	P	**P**	**22 12 59.6**	**+0.9**
TPH	**Tonopah**	**53.88**	**74**	P	**P**	**22 12 59.7**	**+0.9**
TPH				pmax	pmax		
	comp=Z,51nm,0.9s						
SFJD	**Kangerlussuaq**	**53.88**	**16**	P	**P**	**22 12 58.3**	**+0.2**
SFJD				IAmb	IAmb	22 13 29.2	
	comp=Z,12nm,1.1s						
SFJD	**Kangerlussuaq**	**53.88**	**16**	P	**P**	**22 12 58.3**	**+0.2**
SFJD				pmax	pmax		
	comp=Z,12nm,1.2s						
SFJD	**Kangerlussuaq**	**53.88**	**16**	*e*P	**P**	**22 12 56.6**	**-1.6**
BGU	**Big Grassy Mou**	**53.95**	**69**	P	**P**	**22 12 59.6**	**+0.4**
SPUT	**South Promonto**	**53.96**	**68**	P	**P**	**22 12 59.9**	**+0.5**
SPUT				IAmb	IAmb	22 13 01.9	
	comp=Z,9.5nm,1.0s						
DSP	**Deep Springs**	**54.01**	**75**	P	**P**	**22 13 00.9**	**+1.5**
DSP				IAmb	IAmb	22 13 03.0	
	comp=Z,13nm,1.2s						
HWUT	**Hardware Ranch**	**54.19**	**67**	P	**P**	**22 13 01.5**	**+0.5**
HWUT				IAmb	IAmb	22 13 03.7	
	comp=Z,11nm,0.8s						
BW06	**Boulder Array**	**54.34**	**65**	P	**P**	**22 13 03.0**	**+0.9**
BW06				IAmb	IAmb	22 13 04.3	
	comp=Z,11nm,0.8s						
BW06	**Boulder Array**	**54.34**	**65**	P	**P**	**22 13 03.2**	**+1.0**
	baz=318,SNR=10.0						
PD31	**Pinedale Array**	**54.34**	**65**	P	**P**	**22 13 02.9**	**+0.7**
PD31				IAmb	IAmb	22 13 04.3	
	comp=Z,9.7nm,0.8s						
PDAR	**Pinedale Array**	**54.34**	**65**	P	**P**	**22 13 03.3**	**+1.2**
	comp=Z,6.7nm,0.7s,baz=323,slow=2.8,SNR=74						
PDAR				LR	LR	22 36 20.7	
	comp=Z,55nm,18.9s,baz=7.0,slow=36						
	comp=Z,6.7nm,0.7s						
QIZ	**Qiongzhong**	**54.34**	**248**	P	**P**	**22 13 02.5**	**+0.4**
QIZ				S	**S**	**22 20 31.5**	**-5.4**
QIZ				LR	LR		
	comp=Z,200nm,9.6s						
QIZ				LR	LR		
	comp=Z,150nm,12.0s						
QIZ				LR	LR		
	comp=Z,200nm,13.5s						
Q12A	**Willow Creek R**	**54.42**	**72**	P	**P**	**22 13 03.7**	**+1.0**
DUG	**Dugway, Tooele**	**54.60**	**69**	P	**P**	**22 13 04.4**	**+0.4**
DUG	**Dugway, Tooele**	**54.60**	**69**	P	**P**	**22 13 04.4**	**+0.4**
DUG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
DUG	**Dugway, Tooele**	**54.60**	**69**	P	**P**	**22 13 05.6**	**+1.6**
	baz=318,SNR=5.7						
FRU1	**Bishkek**	**54.64**	**296**	P	**P**	**22 13 04.2**	**+0.1**
FRU1				IAmb	IAmb	22 13 11.0	
	comp=Z,11nm,0.9s						
FRU1	**Bishkek**	**54.64**	**296**	P	**P**	**22 13 04.2**	**+0.1**
FRU1				pmax	pmax		
	comp=Z,11nm,0.9s						
CWC	**Cottonwood Cre**	**54.65**	**76**	P	**P**	**22 13 06.2**	**+1.8**
	baz=319						
SPR3	**Spring Creek 3**	**54.71**	**71**	P	**P**	**22 13 06.2**	**+1.3**
SPR3				IAmb	IAmb	22 13 08.5	
	comp=Z,17nm,0.9s						
CTU	**Camp Tracy**	**54.77**	**68**	P	**P**	**22 13 06.1**	**+0.8**
AAK	**Ala-Archa**	**54.84**	**296**	P	**P**	**22 13 05.3**	**-0.3**
AAK				IAmb	IAmb	22 13 12.3	
	comp=Z,11nm,1.1s						
AAK	**Ala-Archa**	**54.84**	**296**	*ce*P	**P**	**22 13 04.5**	**-1.1**
AAK				pmax	pmax		
	comp=Z,14nm,1.7s						
AAK	**Ala-Archa**	**54.84**	**296**	P	**P**	**22 13 05.0**	**-0.6**
AAK	**Ala-Archa**	**54.84**	**296**	P	**P**	**22 13 05.2**	**-0.3**
NRN	**Naryn**	**54.98**	**294**	P	**P**	**22 13 06.7**	**-0.2**
NRN	**Naryn**	**54.98**	**294**	P	**P**	**22 13 06.7**	**-0.2**
NRN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
S11A	**Rachel**	**54.98**	**73**	P	**P**	**22 13 08.1**	**+1.3**
S11A				IAmb	IAmb	22 13 12.5	
	comp=Z,14nm,0.7s						
DY2G	**Dye2**	**54.98**	**14**	*i* P	**P**	**22 13 05.2**	**-1.2**
JLU	**Jordanelle**	**54.99**	**68**	P	**P**	**22 13 07.3**	**+0.4**
ISA	**Isabella, Lake**	**55.02**	**77**	P	**P**	**22 13 07.2**	**+0.3**
ISA				IAmb	IAmb	22 13 09.5	
	comp=Z,9.9nm,1.0s						
ISA	**Isabella, Lake**	**55.02**	**77**	P	**P**	**22 13 07.3**	**+0.3**
ISA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ULM	**Lac du Bonnet**	**55.07**	**50**	P	**P**	**22 13 07.5**	**+0.6**
	comp=Z,6.1nm,0.8s,baz=286,slow=8.7,SNR=7.9						
	comp=Z,6.1nm,0.8s						
ULM	**Lac du Bonnet**	**55.07**	**50**	P	**P**	**22 13 07.7**	**+0.7**
ULM				IAmb	IAmb	22 13 08.2	
	comp=Z,9.0nm,0.8s						
ULM	**Lac du Bonnet**	**55.07**	**50**	P	**P**	**22 13 07.7**	**+0.7**
ULM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NLU	**North Lily Min**	**55.16**	**69**	P	**P**	**22 13 08.1**	**0.0**
NLU				IAmb	IAmb	22 13 10.7	
	comp=Z,8.6nm,0.9s						
TPNV	**Topopah Spring**	**55.24**	**74**	P	**P**	**22 13 09.3**	**+0.7**
TPNV	**Topopah Spring**	**55.24**	**74**	P	**P**	**22 13 09.3**	**+0.7**
TPNV				pmax	pmax		
	comp=Z,13nm,0.6s						
MPMC	**Manual Prospec**	**55.25**	**76**	P	**P**	**22 13 10.3**	**+1.6**
	baz=319,SNR=5.0						
MDND	**Maddock**	**55.26**	**54**	P	**P**	**22 13 09.6**	**+1.2**
MDND	**Maddock**	**55.26**	**54**	P	**P**	**22 13 10.0**	**+1.5**
	baz=319,SNR=5.3						
FURC	**Furnace Creek,**	**55.27**	**75**	P	**P**	**22 13 10.7**	**+2.0**
	baz=319						
MPU	**Maple Canyon**	**55.34**	**69**	P	**P**	**22 13 10.1**	**+0.8**
MPU				IAmb	IAmb	22 13 12.1	
	comp=Z,9.8nm,1.0s						
BSUT	**Blindstream Ca**	**55.39**	**68**	P	**P**	**22 13 10.8**	**+0.9**
BSUT				IAmb	IAmb	22 13 12.9	
	comp=Z,15nm,1.0s						
TNCH	**TengChong**	**55.45**	**263**	⇑P	**P**	**22 13 11.3**	**+1.0**
TNCH				pP	pP	22 13 23.8	+1.0
TNCH				sP	sP	22 13 30.8	+2.9
TNCH				S	**S**	**22 20 53.5**	**+1.5**
TNCH				sS	sS	22 21 10.5	-2.4
TNCH				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TNCH				pmax	pmax		
	comp=Z,75nm,4.8s						
TNCH				LR	LR		
	comp=Z,110nm,15.9s						
TNCH				LR	LR		
	comp=Z,160nm,15.4s						
TNCH				LR	LR		
	comp=Z,210nm,15.3s						
PRN	**Pahroc Range**	**55.52**	**73**	P	**P**	**22 13 12.0**	**+1.3**
PRN				IAmb	IAmb	22 13 15.4	
	comp=Z,11nm,0.9s						
GWY	**Greenwater Val**	**55.59**	**75**	P	**P**	**22 13 11.2**	**0.0**
GWY				IAmb	IAmb	22 13 13.9	
	comp=Z,11nm,0.8s						
E28A	**Huff**	**55.73**	**56**	P	**P**	**22 13 12.3**	**+0.5**
EDW2	**Edwards Air Fo**	**55.87**	**77**	P	**P**	**22 13 14.8**	**+1.8**
	baz=320						
K22A	**Casper**	**55.92**	**63**	P	**P**	**22 13 12.9**	**-0.5**
K22A				IAmb	IAmb	22 13 15.4	
	comp=Z,11nm,1.0s						
K22A	**Casper**	**55.92**	**63**	P	**P**	**22 13 14.3**	**+0.9**
	baz=319						
RDMU	**Red Mountain**	**55.97**	**67**	P	**P**	**22 13 15.1**	**+1.2**
RDMU				IAmb	IAmb	22 13 16.7	
	comp=Z,7.9nm,0.8s						
RSSD	**Black Hills**	**56.02**	**60**	P	**P**	**22 13 14.6**	**+0.4**
RSSD				IAmb	IAmb	22 13 16.1	
	comp=Z,16nm,0.7s						
RSSD	**Black Hills**	**56.02**	**60**	P	**P**	**22 13 14.6**	**+0.4**
RSSD				pmax	pmax		
	comp=Z,16nm,0.7s						
RSSD	**Black Hills**	**56.02**	**60**	P	**P**	**22 13 15.1**	**+1.0**
	baz=319						
TMUT	**Trail Mountain**	**56.09**	**69**	P	**P**	**22 13 16.0**	**+1.1**
TMUT				IAmb	IAmb	22 13 17.7	
	comp=Z,13nm,0.9s						
MVU	**Marysvale**	**56.17**	**70**	P	**P**	**22 13 16.6**	**+1.2**
GSC	**Goldstone, Bar**	**56.18**	**76**	P	**P**	**22 13 16.2**	**+0.9**
GSC				IAmb	IAmb	22 13 18.1	
	comp=Z,13nm,0.8s						
GSC	**Goldstone, Bar**	**56.18**	**76**	P	**P**	**22 13 16.2**	**+0.9**
GSC				pmax	pmax		
	comp=Z,13nm,0.8s						
GSC	**Goldstone, Bar**	**56.18**	**76**	P	**P**	**22 13 16.8**	**+1.5**
	baz=320						
P17A	**Butcher Ranch,**	**56.20**	**68**	P	**P**	**22 13 16.6**	**+1.1**
CCUT	**Cedar City**	**56.30**	**72**	P	**P**	**22 13 16.8**	**+0.5**
RWWY	**Rawlins**	**56.31**	**64**	P	**P**	**22 13 15.7**	**-0.7**
RWWY				IAmb	IAmb	22 13 17.1	
	comp=Z,8.8nm,0.9s						
P18A	**Preston Nutter**	**56.34**	**68**	P	**P**	**22 13 17.7**	**+1.1**
AKTO	**Aktyubinsk**	**56.42**	**312**	LR	LR	22 41 30.8	
	comp=Z,78nm,19.5s,baz=56,slow=40						
KSH	**Kashi**	**56.43**	**292**	P	**P**	**22 13 20.8**	**+3.8**
KSH				sP	sP	22 13 38.8	+4.1
KSH				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KSH				LR	LR		
	comp=Z,240nm,14.2s						
KSH				LR	LR		
	comp=Z,210nm,16.1s						
KSH				LR	LR		
	comp=Z,280nm,13.7s						
ABKAR	**Akbulak array**	**56.53**	**310**	P	**P**	**22 13 17.1**	**-0.3**
MTPU	**Mount Pierson**	**56.54**	**71**	P	**P**	**22 13 19.2**	**+1.0**
MTPU				IAmb	IAmb	22 13 46.1	
	comp=Z,7.2nm,0.7s						
AGMN	**Agassiz Nation**	**56.56**	**52**	P	**P**	**22 13 17.9**	**+0.2**
AGMN	**Agassiz Nation**	**56.56**	**52**	P	**P**	**22 13 18.4**	**+0.7**
	baz=320						
SRU	**San Rafael Swe**	**56.58**	**69**	P	**P**	**22 13 19.3**	**+1.1**
SRU				IAmb	IAmb	22 13 21.0	
	comp=Z,20nm,1.0s						
SRU	**San Rafael Swe**	**56.58**	**69**	P	**P**	**22 13 19.3**	**+1.1**
D32A	**Dogwood Acres,**	**56.95**	**53**	P	**P**	**22 13 20.7**	**+0.2**
D32A				IAmb	IAmb	22 13 22.1	
	comp=Z,17nm,0.8s						
O20A	**White River Ci**	**56.96**	**66**	P	**P**	**22 13 22.3**	**+1.4**
	baz=319,SNR=16						
GMRC	**Granite Mounta**	**57.19**	**76**	P	**P**	**22 13 24.1**	**+1.6**
	baz=320,SNR=5.7						
FINES	**FINESS Array B**	**57.21**	**337**	P	**P**	**22 13 21.6**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=37,slow=7.1,SNR=13						
FINES				LR	LR	22 41 28.6	
	comp=Z,83nm,18.2s,baz=44,slow=40						
	comp=Z,1.6nm,0.6s						
FINES	**FINESS Array B**	**57.21**	**337**	*i* P	**P**	**22 13 22.7**	**+0.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
B35A	**Bob, Littlefor**	**57.42**	**50**	P	**P**	**22 13 24.0**	**+0.2**
N23A	**Red Feather La**	**57.53**	**64**	IAmb	IAmb	22 13 27.4	
	comp=Z,9.8nm,0.8s						
N23A	**Red Feather La**	**57.53**	**64**	P	**P**	**22 13 26.1**	**+1.1**
	baz=320,SNR=10.0						
PFO	**Pinyon Flats O**	**57.66**	**77**	P	**P**	**22 13 28.5**	**+2.7**
PFO	**Pinyon Flats O**	**57.66**	**77**	P	**P**	**22 13 28.5**	**+2.7**
PFO				pmax	pmax		
	comp=Z,29nm,1.1s						
PV23	**Carpenter Ridg**	**57.85**	**68**	P	**P**	**22 13 27.6**	**+0.2**
PV23				IAmb	IAmb	22 13 30.6	
	comp=Z,10.0nm,0.7s						
IRM	**Iron Mountain**	**57.94**	**76**	P	**P**	**22 13 29.7**	**+2.0**
	baz=320						
PV07	**Paradox Valley**	**58.05**	**68**	P	**P**	**22 13 29.3**	**+0.7**
PV07				IAmb	IAmb	22 13 31.1	
	comp=Z,9.1nm,0.9s						
BC3	**Big Chuckawall**	**58.16**	**76**	P	**P**	**22 13 31.2**	**+1.9**
	baz=321						
PV13	**Radium Mtn., P**	**58.17**	**68**	P	**P**	**22 13 30.4**	**+0.9**
PV13				IAmb	IAmb	22 13 32.1	
	comp=Z,18nm,1.1s						
PV15	**Paradox Valley**	**58.21**	**68**	P	**P**	**22 13 30.9**	**+1.2**
PV15				IAmb	IAmb	22 13 32.2	
	comp=Z,11nm,0.7s						
F33A	**5 Mile Ranch,**	**58.26**	**54**	IAmb	IAmb	22 13 31.5	
	comp=Z,23nm,1.2s						
SMCO	**Snowmass**	**58.33**	**66**	P	**P**	**22 13 31.9**	**+1.1**
SMCO				IAmb	IAmb	22 13 33.3	
	comp=Z,9.2nm,0.8s						
SWSC	**Sam W. Stewart**	**58.52**	**77**	P	**P**	**22 13 33.0**	**+1.3**
	baz=321						
ISCO	**Idaho Springs**	**58.53**	**65**	P	**P**	**22 13 33.1**	**+1.1**
ISCO				IAmb	IAmb	22 13 35.1	
	comp=Z,10nm,0.9s						
ISCO	**Idaho Springs**	**58.53**	**65**	P	**P**	**22 13 33.1**	**+1.1**
ISCO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ISCO	**Idaho Springs**	**58.53**	**65**	P	**P**	**22 13 33.8**	**+1.8**
	baz=320,SNR=12						
BTK	**Batken**	**58.60**	**296**	IAmb	IAmb	22 13 32.9	
	comp=Z,13nm,0.8s						
EYMN	**Ely**	**58.68**	**49**	P	**P**	**22 13 33.1**	**+0.5**
	baz=322						
BELG	**Belogornoye**	**58.82**	**320**	*i* P	**P**	**22 13 33.0**	**-0.5**
BELG				pmax	pmax		
	comp=Z,5.0nm,1.3s						
MVCO	**Mesa Verde**	**59.06**	**69**	P	**P**	**22 13 37.0**	**+1.3**
	baz=320						
ESJX	**Sierra Juarez**	**59.17**	**78**	P	**P**	**22 13 36.8**	**+0.4**
ESJX				IAmb	IAmb	22 15 40.4	
	comp=Z,10nm,1.0s						
Y14A	**Wickenburg**	**59.24**	**74**	P	**P**	**22 13 37.3**	**+0.5**
OGNE	**Ogallala**	**59.40**	**61**	P	**P**	**22 13 38.7**	**+0.9**
	baz=321						
Q24A	**Divide**	**59.40**	**65**	P	**P**	**22 13 39.0**	**+0.9**
	baz=321						
S22A	**4UR Ranch, Cre**	**59.50**	**67**	P	**P**	**22 13 40.0**	**+1.2**
S22A				IAmb	IAmb	22 13 41.9	
	comp=Z,7.2nm,0.8s						
S22A	**4UR Ranch, Cre**	**59.50**	**67**	P	**P**	**22 13 40.4**	**+1.6**
	baz=321,SNR=9.6						
X16A	**Lo Mia Camp, P**	**59.69**	**73**	P	**P**	**22 13 41.9**	**+1.8**
X16A				IAmb	IAmb	22 13 43.2	
	comp=Z,5.4nm,0.7s						
113A	**Mohawk Valley,**	**59.74**	**76**	P	**P**	**22 13 41.6**	**+1.5**
ECSD	**EROS Data Cent**	**59.76**	**56**	P	**P**	**22 13 40.3**	**+0.2**
	baz=322						
PHRA	**Phrae**	**59.81**	**257**	P	**P**	**22 13 40.4**	**-0.4**
NC303	**NORSAR Array S**	**60.08**	**345**	P	**P**	**22 13 42.0**	**0.0**
GUN	**Gumba**	**60.09**	**276**	*e*P	**P**	**22 13 39.1**	**-3.9**
	comp=Z,8.7nm,0.6s						
NC204	**NORSAR Array S**	**60.11**	**345**	P	**P**	**22 13 42.1**	**-0.3**
MANU	**Manus Island**	**60.12**	**198**	P	**P**	**22 13 46.5**	**+3.8**
SDCO	**Great Sand Dun**	**60.16**	**66**	P	**P**	**22 13 43.3**	**-0.1**
SDCO	**Great Sand Dun**	**60.16**	**66**	P	**P**	**22 13 44.8**	**+1.5**
	baz=321,SNR=5.3						
CHTO	**Chiang Mai**	**60.24**	**259**	P	**P**	**22 13 42.4**	**-1.3**
CHTO	**Chiang Mai**	**60.24**	**259**	P	**P**	**22 13 42.4**	**-1.3**
NB201	**NORSAR Array S**	**60.25**	**345**	P	**P**	**22 13 42.9**	**-0.4**
SPMN	**Marine on St.**	**60.27**	**52**	P	**P**	**22 13 42.9**	**-0.7**
SPMN				IAmb	IAmb	22 13 45.0	
	comp=Z,9.8nm,0.7s						
SPMN	**Marine on St.**	**60.27**	**52**	P	**P**	**22 13 44.2**	**+0.6**
	baz=322						
NB2	**NORSAR Subarra**	**60.27**	**345**	P	**P**	**22 13 42.9**	**-0.5**
	comp=Z,16nm,1.1s,baz=18,slow=6.9						
NOA	**NORSAR Array B**	**60.27**	**345**	P	**P**	**22 13 43.1**	**-0.3**
	comp=Z,5.8nm,0.9s,baz=18,slow=6.9,SNR=22						
	comp=Z,5.8nm,0.9s						
X18A	**Snowflake**	**60.38**	**72**	P	**P**	**22 13 46.4**	**+1.7**
X18A				IAmb	IAmb	22 13 48.0	
	comp=Z,16nm,0.9s						
CHGR	**Chuyangaron**	**60.49**	**296**	P	**P**	**22 13 43.8**	**-1.5**
CHGR	**Chuyangaron**	**60.49**	**296**	P	**P**	**22 13 43.8**	**-1.5**
CMAR	**Chiang Mai Arr**	**60.54**	**258**	P	**P**	**22 13 45.0**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=15,slow=6.7,SNR=7.6						
CMAR				LR	LR	22 43 08.2	
	comp=Z,84nm,18.0s,baz=240,slow=39						
	comp=Z,0.7nm,0.3s						
KSCO	**Kaye Shedlock’**	**60.61**	**63**	P	**P**	**22 13 47.4**	**+1.3**
	baz=321						
PKI	**Pulchoki**	**60.61**	**276**	*e*P	**P**	**22 13 44.3**	**-2.3**
	comp=Z,10nm,0.8s						
PKIN	**Phulchoki**	**60.62**	**276**	*e*P	**P**	**22 13 44.5**	**-2.0**
	comp=Z,15nm,0.8s						
GKN	**Gorkha**	**60.69**	**277**	*e*P	**P**	**22 13 44.3**	**-2.6**
BGNE	**Belgrade**	**60.87**	**58**	P	**P**	**22 13 48.9**	**+1.1**
	baz=322						
214A	**Organ Pipe Nat**	**60.88**	**76**	P	**P**	**22 13 49.3**	**+1.3**
214A				IAmb	IAmb	22 13 50.7	
	comp=Z,8.9nm,0.9s						
214A	**Organ Pipe Nat**	**60.88**	**76**	P	**P**	**22 13 49.5**	**+1.6**
	baz=322						
DANN	**Dangsing**	**60.90**	**278**	*e*P	**P**	**22 13 45.7**	**-2.8**
	comp=Z,16nm,0.7s						
I37A	**Lemond, Waseca**	**60.97**	**53**	P	**P**	**22 13 49.3**	**+0.9**
BRDH	**Bariadhala**	**61.08**	**267**	LR	LR	22 45 17.5	
	comp=Z,132nm,19.3s,baz=18,slow=41						
T25A	**Trinidad**	**61.18**	**66**	IAmb	IAmb	22 13 53.5	
	comp=Z,30nm,1.9s						
T25A	**Trinidad**	**61.18**	**66**	P	**P**	**22 13 51.7**	**+1.5**
	baz=322						
SCHQ	**Schefferville**	**61.51**	**30**	P	**P**	**22 13 51.7**	**-0.1**
	comp=Z,9.3nm,0.8s,baz=352,slow=6.9,SNR=16						
	comp=Z,9.3nm,0.8s						
SCHQ	**Schefferville**	**61.51**	**30**	P	**P**	**22 13 51.8**	**-0.1**
PYUN	**Piuthan**	**61.51**	**278**	*e*P	**P**	**22 13 50.8**	**-1.7**
	comp=Z,17nm,0.8s						
LPSR	**Galich'ya Gora**	**61.57**	**325**	*e*P	**P**	**22 13 50.2**	**-2.0**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TUC	**Tucson**	**61.67**	**74**	P	**P**	**22 13 54.5**	**+1.1**
TUC				IAmb	IAmb	22 13 56.3	
	comp=Z,15nm,1.7s						
TUC	**Tucson**	**61.67**	**74**	P	**P**	**22 13 54.5**	**+1.1**
TUC				pmax	pmax		
	comp=Z,15nm,1.7s						
TUC	**Tucson**	**61.67**	**74**	P	**P**	**22 13 54.9**	**+1.5**
	baz=322						
VRH	**Novokhopyorsk**	**61.85**	**322**	*e*P	**P**	**22 13 52.8**	**-1.4**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ANMO	**Albuquerque**	**61.86**	**69**	P	**P**	**22 13 56.2**	**+1.5**
ANMO	**Albuquerque**	**61.86**	**69**	P	**P**	**22 13 56.3**	**+1.5**
ANMO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ANMO	**Albuquerque**	**61.86**	**69**	P	**P**	**22 13 55.7**	**+1.0**
	baz=322						
CBKS	**Cedar Bluff**	**62.16**	**61**	P	**P**	**22 13 57.1**	**+0.6**
	baz=322						
LENM	**Lemitar**	**62.20**	**70**	P	**P**	**22 13 58.9**	**+1.8**
VORR	**Voronezh**	**62.28**	**324**	*e*P	**P**	**22 13 55.7**	**-1.3**
NIL	**Nilore**	**62.33**	**290**	P	**P**	**22 13 57.6**	**-0.1**
NIL	**Nilore**	**62.33**	**290**	P	**P**	**22 13 57.6**	**-0.1**
NIL				pmax	pmax		
	comp=Z,18nm,0.9s						
BNM	**Barren Site**	**62.40**	**69**	P	**P**	**22 13 58.7**	**+0.3**
N35A	**Tabor**	**62.47**	**57**	P	**P**	**22 13 59.3**	**+0.8**
VSR	**Storozhevoye**	**62.68**	**324**	*e*P	**P**	**22 13 57.5**	**-2.2**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SCIA	**State Center**	**62.73**	**55**	P	**P**	**22 14 00.3**	**+0.1**
SCIA	**State Center**	**62.73**	**55**	P	**P**	**22 14 00.5**	**+0.3**
	baz=323						
NACGM	**Naroch**	**62.95**	**333**	*e*P	**P**	**22 14 01.4**	**-0.1**
MNK	**Minsk**	**63.04**	**332**	*i* P	**P**	**22 13 58.5**	**-3.6**
	comp=E,1.0nm,0.8s						
MNK				*i* P	**P**	**22 13 58.5**	**-3.6**
	comp=N,30nm,0.8s						
MNK				*i* P	**P**	**22 13 58.5**	**-3.6**
	comp=Z,14nm,0.9s,baz=206						
MNK				*i* pP	**pP**	**22 14 12.5**	**-2.3**
MNK				*i* PP	**PP**	**22 16 18.5**	**-1.9**
MNK				*i* PPP	PPP	22 17 48.2	
MNK				*i* S	**S**	**22 22 28.7**	**-0.3**
MNK				*i* sS	**sS**	**22 22 52.8**	**+2.6**
MNK				*i* SS	**SS**	**22 26 37.7**	**+3.7**
MNK				*i* SSS	SSS	22 29 36.4	
MNK				*i* LQ	LQ	22 38 02.7	
MNK				*i* LR	LR	22 42 01.7	
MNK				*i* LRM	MLR	22 44 54.2	
	comp=E,18nm,16.1s						
MNK				*i* LRM	MLR	22 44 56.8	
	comp=N,284nm,16.1s						
MNK				*i* LRM	MLR	22 45 09.7	
	comp=Z,175nm,16.8s						
MNK	**Minsk**	**63.04**	**332**	*i* P	**P**	**22 13 58.4**	**-3.6**
MNK				*i* *PP	**pP**	**22 14 12.4**	**-2.3**
MNK				*i*		22 14 34.5	
MNK				*i*		22 16 18.5	
MNK				*i* PPP	PPP	22 17 48.1	
MNK				*i* S	**S**	**22 22 28.7**	**-0.3**
MNK				*i* *SS	**sS**	**22 22 52.7**	**+2.6**
MNK				*i*		22 23 47.2	
MNK				*i* SS	**SS**	**22 26 37.7**	**+3.7**
MNK				pmax	pmax		
	comp=N,30nm,0.8s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,14nm,0.9s						
MNK				MLR	MLR		
	comp=E,18nm,16.0s						
MNK				MLR	MLR		
	comp=N,284nm,16.0s						
MNK				MLR	MLR		
	comp=Z,175nm,17.0s						
121A	**Cookes Peak, D**	**63.07**	**71**	P	**P**	**22 14 04.6**	**+1.8**
	baz=322						
PABE	**Paberze**	**63.08**	**335**	P	**P**	**22 14 02.1**	**-0.2**
319A	**Douglas**	**63.20**	**73**	P	**P**	**22 14 04.2**	**+0.6**
319A				IAmb	IAmb	22 14 06.5	
	comp=Z,14nm,0.9s						
KSU1	**Kansas State U**	**63.42**	**59**	P	**P**	**22 14 04.4**	**-0.4**
	baz=323						
N38A	**Joes South For**	**63.62**	**55**	P	**P**	**22 14 05.6**	**-0.5**
N38A				IAmb	IAmb	22 16 17.7	
	comp=Z,9.0nm,0.7s						
GLMI	**Grayling**	**64.01**	**47**	P	**P**	**22 14 08.2**	**-0.4**
GLMI	**Grayling**	**64.01**	**47**	P	**P**	**22 14 07.9**	**-0.7**
	baz=326						
HSIG		**64.17**	**76**	P	**P**	**22 14 11.0**	**+1.0**
HSIG				IAmb	IAmb	22 14 12.6	
	comp=Z,11nm,1.0s						
AMTX	**Amarillo**	**64.32**	**65**	P	**P**	**22 14 11.3**	**+0.3**
	baz=323						
P38A	**Dawn**	**64.42**	**56**	P	**P**	**22 14 11.5**	**+0.1**
P38A				IAmb	IAmb	22 14 12.5	
	comp=Z,14nm,0.9s						
KS20	**Mayfield South**	**64.46**	**61**	P	**P**	**22 14 11.4**	**-0.4**
MSTX	**Muleshoe**	**64.50**	**67**	P	**P**	**22 14 12.7**	**+0.6**
MSTX				IAmb	IAmb	22 14 13.9	
	comp=Z,13nm,1.1s						
MSTX	**Muleshoe**	**64.50**	**67**	P	**P**	**22 14 12.7**	**+0.6**
	baz=323						
KAN09	**Caldwell North**	**64.51**	**61**	P	**P**	**22 14 12.8**	**+0.8**
MNTX	**Cornudas Mount**	**64.97**	**70**	P	**P**	**22 14 16.5**	**+1.4**
	baz=323,SNR=17						
P40A	**Paris**	**65.17**	**55**	P	**P**	**22 14 16.2**	**-0.1**
HDIL	**Hopedale**	**65.56**	**53**	P	**P**	**22 14 18.5**	**-0.3**
	baz=325						
QUOK	**Quay**	**65.72**	**61**	P	**P**	**22 14 20.5**	**+0.6**
POST	**Post**	**65.86**	**66**	P	**P**	**22 14 21.9**	**+1.0**
POST				IAmb	IAmb	22 14 22.7	
	comp=Z,11nm,0.8s						
WMOK	**Wichita Mounta**	**65.86**	**63**	P	**P**	**22 14 21.5**	**+0.6**
	baz=324,SNR=19						
S39A	**Bolivar**	**66.08**	**57**	IAmb	IAmb	22 14 22.4	
	comp=Z,6.8nm,0.8s						
AKASG	**Malin Array Be**	**66.11**	**330**	P	**P**	**22 14 22.1**	**-0.1**
	comp=Z,3.1nm,0.5s,baz=28,slow=6.5,SNR=14						
AKASG				LR	LR	22 47 19.0	
	comp=Z,119nm,18.8s,baz=6.0,slow=40						
	comp=Z,3.1nm,0.5s						
AKASG	**Malin Array Be**	**66.11**	**330**	P	**P**	**22 14 22.4**	**+0.2**
AKASG	**Malin Array Be**	**66.11**	**330**	P	**P**	**22 14 22.4**	**+0.2**
AKASG				pmax	pmax		
	comp=Z,3.0nm,1.1s						
AKBB	**Malin Array Si**	**66.11**	**330**	P	**P**	**22 14 21.9**	**-0.2**
AKBB				IAmb	IAmb	22 14 22.7	
	comp=Z,13nm,1.2s						
AKBB	**Malin Array Si**	**66.11**	**330**	*ce*P	**P**	**22 14 22.0**	**-0.2**
AKBB				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SADO	**Sadowa**	**66.18**	**43**	P	**P**	**22 14 22.6**	**-0.1**

LATQ	La Tuque	66.21	38	P	P	22 14 22.8	0.0
GEYT	Alibeck	66.32	303	P	P	22 14 24.0	+0.2
	comp=Z,4.7nm,0.7s,baz=336,slow=3.3,SNR=13						
	comp=Z,4.7nm,0.7s						
GEYT	Alibeck	66.32	303	P	P	22 14 23.5	-0.3
GEYT				IAmb	IAmb	22 14 25.3	
	comp=Z,7.2nm,0.8s						
GEYT	Alibeck	66.32	303	P	P	22 14 23.5	-0.3
GEYT				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GYA0B	ALIBECK ARRAY	66.32	303	P	P	22 14 23.7	-0.1
TUL1	Leonard	66.36	60	P	P	22 14 24.1	+0.1
TUL1	Leonard	66.36	60	P	P	22 14 23.8	-0.2
	baz=324						
X34A	Smith Ranch, M	66.44	63	P	P	22 14 24.3	-0.2
X34A				IAmb	IAmb	22 14 27.5	
	comp=Z,14nm,1.2s						
W35A	Tecumseh	66.46	62	P	P	22 14 24.6	-0.1
W35A				IAmb	IAmb	22 14 26.1	
	comp=Z,21nm,1.4s						
AAM	Ann Arbor	66.49	48	P	P	22 14 24.1	-0.6
	baz=327						
U38A	Gravette	66.60	59	IAmb	IAmb	22 14 26.4	
	comp=Z,16nm,1.5s						
TRQ	Mont Tremblant	66.61	40	P	P	22 14 25.3	-0.2
TRQ				IAmb	IAmb	22 14 25.8	
	comp=Z,12nm,0.8s						
CCM	Cathedral Cave	66.73	56	P	P	22 14 26.5	+0.1
CCM				IAmb	IAmb	22 14 27.3	
	comp=Z,17nm,1.3s						
CCM	Cathedral Cave	66.73	56	P	P	22 14 26.5	+0.1
CCM				pmax	pmax		
	comp=Z,17nm,1.3s						
CCM	Cathedral Cave	66.73	56	P	P	22 14 25.7	-0.7
	baz=325						
ABTX	Abilene, Hawle	67.14	65	P	P	22 14 29.5	+0.5
ABTX	Abilene, Hawle	67.14	65	P	P	22 14 28.9	-0.1
	baz=324,SNR=5.5						
FVM	French Village	67.16	55	P	P	22 14 29.0	-0.1
FVM	French Village	67.16	55	P	P	22 14 29.0	-0.1
FVM				pmax	pmax		
	comp=Z,14nm,0.7s						
SBUM	Sibu	67.50	237	P	P	22 14 31.5	+0.1
O48B	Farmland	67.58	50	P	P	22 14 30.6	-1.0
	baz=327						
T42A	Van Buren	67.64	56	IAmb	IAmb	22 14 33.0	
	comp=Z,17nm,1.2s						
KIV	Kislovodsk	67.70	318	eP	P	22 14 33.0	+0.5
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,53nm,17.0s						
TX31	Lajitas Ar. Si	67.74	70	P	P	22 14 33.7	+0.7
TX32	Lajitas Array	67.74	70	P	P	22 14 34.0	+1.0
TXAR	Lajitas Array	67.74	70	P	P	22 14 34.7	+1.7
	comp=Z,15nm,0.7s,baz=295,slow=4.6,SNR=148						
KBZ	Khabaz	67.82	317	P	P	22 14 33.8	+0.7
	comp=Z,2.9nm,0.8s,baz=148,slow=0.5,SNR=6.5						
	comp=Z,2.9nm,0.8s						
KBZ	Khabaz	67.82	317	ceP	P	22 14 33.6	+0.5
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
E62A	Clayton Lake	67.95	36	P	P	22 14 33.8	-0.2
FCAR	Ozark Folk Cen	68.11	58	P	P	22 14 34.9	-0.1
ERPA	Erie	68.11	46	P	P	22 14 33.8	-1.2
	baz=328						
P49A	Miami Univ. Ec	68.37	50	P	P	22 14 36.2	-0.4
P49A				IAmb	IAmb	22 14 43.0	
	comp=Z,18nm,1.1s						
P49A	Miami Univ. Ec	68.37	50	P	P	22 14 35.8	-0.8
	baz=327						
M53A	WI Miller and	68.42	46	P	P	22 14 36.0	-0.9
M53A	WI Miller and	68.42	46	P	P	22 14 36.4	-0.6
	baz=328						
ACSO	Alum Creek Sta	68.50	49	P	P	22 14 37.1	-0.4
	baz=328						
WHAR	Wooly Hollow	68.52	58	IAmb	IAmb	22 14 38.8	
	comp=Z,14nm,0.9s						
MIAR	Mount Ida	68.53	60	P	P	22 14 38.0	+0.3
	baz=325,SNR=9.7						
HPIG		68.63	73	P	P	22 14 40.0	+1.3
HPIG				IAmb	IAmb	22 14 41.5	
	comp=Z,8.1nm,1.2s						
SORM	Soroca	68.68	329	⇓P	P	22 14 38.4	-0.1
SORM	Soroca	68.68	329	P	P	22 14 38.3	-0.1
WHTX	Lake Whitney,	68.73	64	P	P	22 14 39.1	+0.1
	baz=325						
WCI	Wyandotte Cave	68.79	52	P	P	22 14 39.5	+0.3
WCI				IAmb	IAmb	22 14 39.9	
	comp=Z,11nm,0.7s						
WCI	Wyandotte Cave	68.79	52	P	P	22 14 39.5	+0.3
WCI				pmax	pmax		
	comp=Z,11nm,0.7s						
WCI	Wyandotte Cave	68.79	52	P	P	22 14 39.1	-0.2
	baz=327						
JCT	Junction City	68.79	67	P	P	22 14 40.1	+0.6
JCT	Junction City	68.79	67	P	P	22 14 40.1	+0.6
JCT				pmax	pmax		
	comp=Z,18nm,0.8s						
JCT	Junction City	68.79	67	P	P	22 14 40.0	+0.6
	baz=325,SNR=6.8						
X40A	Basin Creek Fa	68.92	59	P	P	22 14 40.4	+0.2
OJC	Ojcow	68.93	336	eP	P	22 14 40.8	+0.8
OJC	Ojcow	68.93	336	P	P	22 14 40.0	0.0
OJC				IAmb	IAmb	22 14 41.8	
	comp=Z,17nm,1.2s						
OJC	Ojcow	68.93	336	P	P	22 14 40.0	0.0
OJC				pmax	pmax		
	comp=Z,17nm,1.2s						
O52A	Adamsville	69.07	48	P	P	22 14 40.4	-0.6
O53A	New Philadelph	69.21	47	P	P	22 14 41.1	-0.8
	baz=328						
LBNH	Lisbon	69.25	39	P	P	22 14 41.4	-0.6
	baz=332						
CLL	Collm	69.30	340	i P	P	22 14 42.0	-0.2
	comp=Z,7.0nm,1.3s						
CLL				i x	x	22 14 55.8	
CLL				ePP	PP	22 17 16.0	+1.0
CLL	Collm	69.30	340	i P	P	22 14 42.0	-0.2
CLL				i *PP	pP	22 14 55.8	+0.8
CLL				e		22 24 14.0	
CLL				pmax	pmax		
	comp=Z,7.0nm,1.3s						
P52A	Corning	69.36	48	P	P	22 14 41.5	-1.3
	baz=328						
WLAR	White Oak Lake	69.45	60	P	P	22 14 44.2	+0.8
T47A	Sharon Grove	69.47	53	P	P	22 14 43.5	0.0
DPC	Dobruska-Polom	69.56	338	eP	P	22 14 43.7	-0.2
DPC	Dobruska-Polom	69.56	338	eP	P	22 14 43.7	-0.2
NIE	Niedzica	69.57	335	eP	P	22 14 46.0	+2.1
R50A	Paris	69.58	51	P	P	22 14 43.8	-0.4
R50A				IAmb	IAmb	22 14 45.1	
	comp=Z,12nm,0.8s						
KRLC	Kraliky	69.72	337	eP	P	22 14 45.4	+0.4
KRLC	Kraliky	69.72	337	eP	P	22 14 45.4	+0.4
MORC	Moravsky Berou	69.85	337	eP	P	22 14 46.4	+0.7
BUR08	Bucovina Ar. S	69.99	331	P	P	22 14 46.7	0.0
BUR08				IAmb	IAmb	22 16 06.9	
	comp=Z,21nm,2.0s						
LANS	Liptovska Anna	70.01	335	eP	P	22 14 48.2	+1.5
LANS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LANS	Liptovska Anna	70.01	335	eP	P	22 14 48.2	+1.5
BURAR	Bucovina Array	70.02	331	⇓P	P	22 14 47.2	+0.4
BURAR	Bucovina Array	70.02	331	P	P	22 14 46.9	0.0
BURAR	Bucovina Array	70.02	331	P	P	22 14 47.2	+0.4
W45A	Hickory Valley	70.06	56	P	P	22 14 47.8	+0.6
GNI	Garni	70.18	314	LR	LR	22 50 12.1	
	comp=Z,167nm,18.7s,baz=190,slow=40						
SSPA	Standing Stone	70.20	45	P	P	22 14 48.1	+0.2
SSPA				IAmb	IAmb	22 14 48.2	
	comp=Z,14nm,0.9s						
SSPA	Standing Stone	70.20	45	P	P	22 14 47.0	-0.9
	baz=330						
TRPA	Tarpa	70.23	333	⇑P	P	22 14 48.1	+0.1
MCWV	Mont Chateau	70.26	47	P	P	22 14 48.2	-0.2
	baz=329						
PRU	Pruhonice	70.26	339	eP	P	22 14 48.1	-0.1
PRU	Pruhonice	70.26	339	eP	P	22 14 48.1	-0.1
NATX	Nacogdoches	70.29	62	P	P	22 14 49.1	+0.5
	baz=326						
KECS	Kecovo	70.40	334	eP	P	22 14 48.7	-0.3
KECS	Kecovo	70.40	334	eP	P	22 14 48.7	-0.3
VRAC	Vranov	70.49	337	eP	P	22 14 50.4	+0.8
R53A	Hurricane	70.54	49	P	P	22 14 50.0	0.0
CLTN	Cedars of Leba	70.56	53	P	P	22 14 50.4	+0.2
CLTN				IAmb	IAmb	22 14 51.3	
	comp=Z,12nm,0.8s						
JAVC	Velka Javorina	70.68	336	eP	P	22 14 52.5	+1.6
PLAL	Pickwick Lake	70.71	55	P	P	22 14 51.3	+0.2
833A	Chaparral WMA,	70.75	68	P	P	22 14 51.6	+0.1
	baz=325						
KRUC	Moravsky	70.77	337	eP	P	22 14 51.9	+0.6
VYHS	Vyhne	70.77	336	eP	P	22 14 52.3	+0.9
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VYHS	Vyhne	70.77	336	eP	P	22 14 52.2	+0.9
Y45A	Yeager Farm, C	70.97	57	P	P	22 14 53.6	+0.9
PAGS	Pennsylvania G	71.00	44	P	P	22 14 54.2	+1.5
HKT	Hockley	71.20	64	P	P	22 14 54.6	+0.5
HKT	Hockley	71.20	64	P	P	22 14 54.6	+0.5
HKT				pmax	pmax		
	comp=Z,40nm,2.0s						
MODS	Modra-Piesok	71.23	337	eP	P	22 14 55.6	+1.4
MODS				pmax	pmax		
	comp=Z,12nm,0.9s						
MODS	Modra-Piesok	71.23	337	eP	P	22 14 55.5	+1.4
KHC	Kasperske Hory	71.27	339	eP	P	22 14 54.3	-0.1
KHC	Kasperske Hory	71.27	339	eP	P	22 14 54.3	-0.1
R55A	Marlinton	71.33	48	P	P	22 14 55.1	+0.2
R55A				IAmb	IAmb	22 14 55.3	
	comp=Z,21nm,1.2s						
COVR	Voineasa-Covas	71.37	330	⇑P	P	22 14 54.3	-0.7
PAL	Palisades	71.37	42	P	P	22 14 54.2	-0.8
	baz=331						
TZTN	Tazewell	71.38	51	P	P	22 14 54.4	-0.9
	baz=328						
CKRC	Cesky Krumlov	71.42	339	eP	P	22 14 55.7	+0.4
CKRC	Cesky Krumlov	71.42	339	eP	P	22 14 55.7	+0.4
DRGR		71.43	332	⇑P	P	22 14 55.3	-0.1
DRGR		71.43	332	P	P	22 14 55.3	-0.1
CFR	Carcaliu	71.44	328	⇑P	P	22 14 54.7	-0.7
CFR	Carcaliu	71.44	328	P	P	22 14 54.6	-0.7
SWET	Sewanee	71.47	54	P	P	22 14 55.3	-0.5
GEC2	GERESS Array S	71.52	339	P	P	22 14 56.3	+0.4
GEC2				IAmb	IAmb	22 14 57.4	
	comp=Z,12nm,1.5s						
GERES	GERESS Array B	71.52	339	P	P	22 14 56.4	+0.4
	comp=Z,1.3nm,0.6s,baz=42,slow=6.1,SNR=12						
	comp=Z,1.3nm,0.6s						
GERES	GERESS Array B	71.52	339	P	P	22 14 56.2	+0.2
GERES	GERESS Array B	71.52	339	P	P	22 14 56.2	+0.2
TPGR	Topolog	71.64	328	⇑P	P	22 14 56.5	-0.2
V51A	Loudon	71.66	52	IAmb	IAmb	22 14 57.8	
	comp=Z,11nm,0.8s						
W50A	Signal Mountai	71.75	53	P	P	22 14 57.3	-0.2
W50A				IAmb	IAmb	22 14 58.3	
	comp=Z,9.6nm,0.8s						
MLR	Muntele Rosu	71.77	330	⇓P	P	22 14 57.8	+0.3
MLR	Muntele Rosu	71.77	330	LR	LR	22 50 22.0	
	comp=Z,105nm,18.3s,baz=38,slow=39						
MLR	Muntele Rosu	71.77	330	P	P	22 14 58.1	+0.5
MLR				IAmb	IAmb	22 15 00.2	
	comp=Z,32nm,1.9s						
MLR	Muntele Rosu	71.77	330	P	P	22 14 58.1	+0.5
MLR				pmax	pmax		
	comp=Z,32nm,1.9s						
CPCT	Cooper Cave	71.89	52	P	P	22 14 57.8	-0.5
CPCT				IAmb	IAmb	22 14 59.0	
	comp=Z,8.8nm,0.8s						
KOPT	Kop Dagi	71.92	317	P	P	22 14 60.0	+1.2
KOPT				IAmb	IAmb	22 15 48.9	
	comp=Z,15nm,1.4s						
CONA	Conrad Observa	71.95	337	i P	P	22 14 59.7	+1.1
	comp=Z,3.7nm,0.8s						
TKL	Tuckaleechee C	72.03	52	P	P	22 14 59.2	+0.1
	comp=Z,4.1nm,0.9s,baz=356,slow=5.8,SNR=3.0						
	comp=Z,4.1nm,0.9s						
VOIR		72.07	330	⇑P	P	22 14 59.1	-0.2
VOIR		72.07	330	P	P	22 14 59.1	-0.2
RONA	Rosalia, Austr	72.08	337	eP	P	22 15 00.5	+1.2
	comp=Z,4.9nm,0.9s						
BLA	Blacksburg	72.12	49	P	P	22 14 59.8	+0.1
	baz=329						
FPAL	Fort Paine	72.18	54	P	P	22 14 58.8	-1.2
FPAL				IAmb	IAmb	22 15 00.9	
	comp=Z,17nm,0.8s						
Z47A	Carrollton	72.20	56	P	P	22 15 00.4	+0.3
146A	Union	72.22	57	P	P	22 15 01.3	+1.0
ARR	Arges	72.24	330	⇑P	P	22 15 00.6	+0.3
MOA	Molln	72.36	338	eP	P	22 15 01.4	+0.5
	comp=Z,4.6nm,1.3s						
W52A	Murphy	72.45	52	P	P	22 15 01.6	-0.1
W52A				IAmb	IAmb	22 15 02.7	
	comp=Z,13nm,0.8s						
GZR	Gura Zlata	72.71	332	⇑P	P	22 15 02.9	-0.2
GZR	Gura Zlata	72.71	332	P	P	22 15 02.9	-0.2
T57A	Hurt	72.78	48	P	P	22 15 03.2	-0.3
T57A				IAmb	IAmb	22 15 03.8	
	comp=Z,9.5nm,0.8s						
BZS	Buzias	72.80	333	⇑P	P	22 15 03.9	+0.3
BZS	Buzias	72.80	333	P	P	22 15 03.8	+0.3
LRAL	Lakeview Retre	72.82	56	P	P	22 15 03.5	-0.4
	baz=328,SNR=7.9						
BG3	Lake Jocassee	72.96	52	P	P	22 15 04.6	-0.1
BG3				IAmb	IAmb	22 15 05.8	
	comp=Z,11nm,0.8s						
HERR	Herculane	73.28	332	⇓P	P	22 15 06.6	+0.3
KBA	Koelnbreinsper	73.28	339	i P	P	22 15 07.9	+1.3
	comp=Z,3.2nm,0.6s,SNR=6.9						
SOKA	Soboth	73.32	338	eP	P	22 15 07.4	+0.7
	comp=Z,2.4nm,0.7s						
Z51A	Franklin	73.40	54	P	P	22 15 06.8	-0.5
Z51A				IAmb	IAmb	22 15 08.0	
	comp=Z,14nm,0.8s						
Y52A	Lilburn	73.43	53	P	P	22 15 07.4	0.0
Y52A				IAmb	IAmb	22 15 08.5	
	comp=Z,11nm,0.8s						
WTTA	Wattenberg	73.43	340	eP	P	22 15 08.2	+0.7
	comp=Z,2.7nm,0.6s						
MOTA	Moosalm	73.45	340	i P	P	22 15 07.9	+0.4
	comp=Z,2.9nm,0.7s						
KMSC	Kings Mountain	73.52	50	P	P	22 15 07.9	0.0
KMSC	Kings Mountain	73.52	50	P	P	22 15 07.1	-0.8
	baz=329						
SQTA	Sankt Quirin	73.55	340	eP	P	22 15 08.7	+0.6
	comp=Z,5.8nm,0.7s,SNR=5.1						
OBKA	Obir	73.58	338	i P	P	22 15 09.1	+0.9
	comp=Z,11nm,0.7s,SNR=19						
PAULI	Pauline	73.58	51	P	P	22 15 08.6	+0.3
ZAIG	Zacatecas	73.64	74	P	P	22 15 09.9	+0.7
ZAIG				IAmb	IAmb	22 15 12.0	
	comp=Z,9.4nm,1.0s						
FRGS	Fruska Gora	73.68	334	⇑P	P	22 15 08.3	-0.4
ABTA	Abfaltersbach	73.76	339	eP	P	22 15 09.8	+0.5
	comp=Z,3.9nm,0.7s						
FETA	Feichten	73.83	341	eP	P	22 15 10.5	+0.7
	comp=Z,3.9nm,0.7s,SNR=5.7						
PRED	Cave del Predi	73.85	338	P	P	22 15 09.6	-0.2
152A	Waverly Hall	74.15	54	P	P	22 15 11.5	-0.2
152A				IAmb	IAmb	22 15 12.0	
	comp=Z,8.5nm,0.7s						
FUORN	Ofenpass-Fuorn	74.31	341	P	P	22 15 11.8	-0.9
DIVS	Divibare	74.63	333	P	P	22 15 14.2	-0.2
DIVS				IAmb	IAmb	22 15 15.4	
	comp=Z,12nm,1.3s						
BR131	Keskin Array S	74.63	322	P	P	22 15 14.3	-0.2
BR131	Keskin Array S	74.63	322	P	P	22 15 14.4	-0.2
BR131				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRTR	Keskin Array B	74.63	322	P	P	22 15 14.9	+0.3
	comp=Z,1.4nm,0.6s,baz=48,slow=3.8,SNR=9.9						
	comp=Z,1.4nm,0.6s						
BRTR	Keskin Array B	74.63	322	P	P	22 15 14.6	+0.1
BRTR	Keskin Array B	74.63	322	i P	P	22 15 14.8	+0.2
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BNN	Bunyan	74.64	320	P	P	22 15 14.4	-0.2
BNN				IAmb	IAmb	22 15 15.6	
	comp=Z,12nm,0.8s						
MDUB	Mudurnu	74.77	324	P	P	22 15 15.1	-0.1
ANTO	Ankara	74.79	322	P	P	22 15 15.6	+0.2
ANTO				IAmb	IAmb	22 16 53.4	
	comp=Z,7.3nm,0.5s						
ANTO	Ankara	74.79	322	P	P	22 15 15.6	+0.2
ANTO				pmax	pmax		
	comp=Z,7.0nm,0.5s						
TEOL	Teolo	75.26	339	P	P	22 15 18.0	+0.2
TEOL				IAmb	IAmb	22 15 19.2	
	comp=Z,16nm,1.0s						
451A	Vernon	75.43	56	P	P	22 15 19.9	+0.9
TIGA	Tifton	75.70	54	P	P	22 15 20.8	+0.1
TIGA	Tifton	75.70	54	P	P	22 15 20.3	-0.3
	baz=329						
NHSC	New Hope	75.75	51	P	P	22 15 20.2	-0.6
	baz=330						
255A	Hazlehurst	75.78	53	P	P	22 15 21.6	+0.6
RDO	Rodhopi	75.89	328	P	P	22 15 21.6	+0.1
RDO				IAmb	IAmb	22 15 23.3	
	comp=Z,14nm,1.4s						
ZCCA	Zocca	76.36	340	P	P	22 15 25.2	+1.0
ZCCA				IAmb	IAmb	22 15 27.3	
	comp=Z,9.0nm,0.9s						
SHME	Shamm	77.09	298	P	P	22 15 27.3	-1.3
SHME	Shamm	77.09	298	P	P	22 15 27.9	-0.7
MURB	Monte Urbino	77.10	338	P	P	22 15 29.0	+0.5
MURB				IAmb	IAmb	22 15 31.3	
	comp=Z,14nm,0.9s						
OSSC	Osservatorio P	77.11	339	P	P	22 15 27.9	-0.6
BANOM	Banah	77.12	298	P	P	22 15 27.2	-1.6
BANOM	Banah	77.12	298	P	P	22 15 27.8	-1.0
GUMA	Gualdo di Mace	77.13	338	P	P	22 15 28.6	0.0
GUMA				IAmb	IAmb	22 15 32.0	
	comp=Z,17nm,1.3s						
FDMO	Fiordimonte	77.21	338	P	P	22 15 29.8	+0.7
FDMO				IAmb	IAmb	22 15 31.0	
	comp=Z,29nm,1.7s						
NRCA	Norcia	77.39	338	P	P	22 15 30.5	+0.3
CAMP	Campotosto	77.62	337	P	P	22 15 31.6	+0.1
CAMP				IAmb	IAmb	22 15 33.5	
	comp=Z,12nm,0.9s						
MASF	Masafi	77.65	298	P	P	22 15 31.5	-0.3
MSFE	Esma-Masafi	77.66	297	P	P	22 15 31.3	-0.6
656A	Willston	77.94	54	P	P	22 15 33.8	+0.6
UOSS	Minazif	77.99	297	P	P	22 15 32.8	-0.9
UOSS				IAmb	IAmb	22 15 33.4	
	comp=Z,14nm,0.7s						
UOSS	Minazif	77.99	297	P	P	22 15 32.8	-0.9
UOSS	Minazif	77.99	297	P	P	22 15 32.7	-0.9
INTR	Introdacqua	78.02	337	P	P	22 15 33.9	+0.3
HATD	Hatta, Dubai	78.12	297	P	P	22 15 33.5	-0.9
HATD	Hatta, Dubai	78.12	297	P	P	22 15 33.8	-0.5
NAZ	Nazwa, Dubai	78.22	298	P	P	22 15 34.4	-0.5
ASHO	Ashiyiah	78.28	297	P	P	22 15 34.2	-1.1
ASHO	Ashiyiah	78.28	297	P	P	22 15 34.5	-0.8
FAQ	Al Faqa, Dubai	78.46	298	P	P	22 15 35.3	-0.9
FAQ	Al Faqa, Dubai	78.46	298	P	P	22 15 35.5	-0.7
	SNR=6.8						
SOHO	SOHO	78.51	297	P	P	22 15 35.5	-1.0
WBK	Wadi Bani Khal	78.58	294	P	P	22 15 37.6	+0.7
HOQ	Hoqain	78.59	296	P	P	22 15 36.6	-0.4
SMDO	Samad	78.66	295	P	P	22 15 37.3	-0.2
ASUD	Al Ashush, Dub	78.68	298	P	P	22 15 36.8	-0.6
ASUD	Al Ashush, Dub	78.68	298	P	P	22 15 36.9	-0.5
DZM	Mont Dzumac	78.75	177	P	P	22 15 39.7	+2.0
DZM				IAmb	IAmb	22 15 47.3	
	comp=Z,31nm,1.5s						
AJN	Ajban	78.90	298	P	P	22 15 37.9	-0.8
ALNE	Al Ain	78.96	297	P	P	22 15 37.8	-1.1
ALNE	Al Ain	78.96	297	P	P	22 15 38.4	-0.6
	SNR=6.0						
ARQ	Araqi	79.19	296	P	P	22 15 39.9	-0.3
JMDO	Jabal Madar	79.21	294	P	P	22 15 40.3	-0.1
	SNR=11						
BSY	Bisya	79.35	295	P	P	22 15 41.2	0.0
	SNR=6.4						
MMAI	Mount Meron Ar	80.02	317	LR	LR	22 57 09.0	
	comp=Z,92nm,19.1s,baz=278,slow=40						
WRA	Warramunga Arr	80.24	207	P	P	22 15 45.6	-0.2
	comp=Z,2.5nm,0.6s,baz=16,slow=5.5,SNR=23						
	comp=Z,2.5nm,0.6s						
WRA	Warramunga Arr	80.24	207	i P	P	22 15 45.2	-0.6
WRA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
UMZA	Um Al Zommool	80.38	297	P	P	22 15 45.6	-1.1
MHTO	MHTO	80.44	294	P	P	22 15 46.9	-0.1
ESDC	Sonseca Array	83.11	350	P	P	22 16 01.6	+0.7
	comp=Z,3.4nm,0.9s,baz=7.1,slow=5.6,SNR=20						
	comp=Z,3.4nm,0.9s						
ESDC	Sonseca Array	83.11	350	P	P	22 16 01.5	+0.5
ASAR	Alice Springs	83.92	207	P	P	22 16 05.4	+0.4
	comp=Z,2.9nm,0.5s,baz=15,slow=4.9,SNR=62						
	comp=Z,2.9nm,0.5s						
ASAR	Alice Springs	83.92	207	P	P	22 16 04.6	-0.4
RAYN	Ar Rayn	84.22	305	P	P	22 16 06.3	-0.5
RAYN	Ar Rayn	84.22	305	P	P	22 16 06.3	-0.5
RAYN				pmax	pmax		
	comp=Z,30nm,1.5s						
RAYN	Ar Rayn	84.22	305	P	P	22 16 06.2	-0.6
DOK	Doka	84.35	296	P	P	22 16 06.5	-0.9
	SNR=13						
DMTO	DMTO	84.71	294	P	P	22 16 07.4	-1.9
KEST	Kesra	85.00	339	P	P	22 16 11.1	+0.5
	comp=Z,2.0nm,0.6s,baz=334,slow=5.6,SNR=5.7						
	comp=Z,2.0nm,0.6s						
WHFO	Wadi Hawf	85.12	295	P	P	22 16 10.3	-1.2
	SNR=6.3						
ABTO	Aybut	85.84	296	P	P	22 16 14.1	-1.0
	SNR=11						
STKA	Stephens Creek	90.28	198	P	P	22 16 35.9	+0.2
	comp=Z,2.7nm,0.7s,baz=353,slow=9.0,SNR=4.1						
	comp=Z,2.7nm,0.7s						
SIV	San Ignacio	127.49	57	PKP	PKPdf	22 22 40.1	+0.1
	comp=Z,3.5nm,0.8s,baz=62,slow=0.6,SNR=15						
BOSA	Boshof	138.98	295	PKhKP	PKPpre	22 22 54.4	
	comp=Z,2.7nm,0.9s,baz=200,slow=3.6,SNR=3.6						
BOSA				PKP	PKiKP	22 23 03.2	-0.4
	comp=Z,1.2nm,0.6s,baz=110,slow=3.2,SNR=4.7						

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*DJA **30** 22:22:33.2±1.4, 3°S±15°×13°1E±°, h10^{km}, M3.2/5, MLv3.2/5*

*IDC **30** 22:22:35.4±2.8, 3°.60S×130°.27E, h0^{km}, mb3.1/2, mbtmp3.2/3, ML3.1/1, Error ellipse: s-maj=175.4km s-min=31.5km az=70.0*

ISC 30 22:22:38.0±1.5, **3°.5S**±0°.2×**130°.9E**±0°.1, **h30^{km}, n5, σ1^{s}.37**/5, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	1.50	66	P	Pn	22 23 01.7	-1.3
FAKI				S	Sn	22 23 22.9	+1.3
RKPI	Ransiki, Papua	3.87	59	P	Pn	22 23 34.9	-0.6
WRA	Warramunga Arr	16.65	169	Pn	P	22 26 31.8	+0.3
	0.1nm,0.3s,baz=347,slow=12,SNR=2.3						
	0.4nm,0.7s						
ASAR	Alice Springs	20.23	172	P	Pn	22 27 12.3	-0.5
	0.6nm,0.6s,baz=349,slow=11,SNR=7.1						
	0.6nm,0.6s						
MKAR	Makanchi Array	65.85	326	P	P	22 33 21.1	+0.3
	0.2nm,0.6s,baz=122,slow=7.2,SNR=2.1						
	0.2nm,0.6s						

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*IDC **30** 22:34:51.4±0.7, 19°.20N×65°.21W, h0^{km}, mb4.0/9, mbtmp4.1/11, ML3.6/2, MS3.6/8, Error ellipse: s-maj=18.4km s-min=13.9km az=88.0*

*RSPR **30** 22:34:55.0, 19°.31N×65°.06W, h29^{km}±17^{km}, MD4.0/12*

*OSPL **30** 22:34:56.8±2.6, 19°.31N×65°.10W, h31^{km}±200^{km}, ML3.9*

*NEIC **30** 22:34:59.1±2.1, 19°.01N±0°.05×65°.30W±0°.05, h46^{km}±10^{km}, mb4.3/35, ML4.1/50, Md4.0/34(RSPR), Error ellipse: s-maj=8.0km s-min=6.1km az=211.0*

ISC 30 22:34:56.4±1.3, **19°.16N**±0°.05×**65°.25W**±0°.03, **h31^{km}**±10^{km}, **n179, σ1^{s}.56**/188, **mb4.2**/25, **MS3.6**/6, **14C-4D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUPR	Culebra, Puert	0.84	182	⇑eP	Pb	22 35 11.8	-0.8
CUPR	Culebra, Puert	0.84	182	eS	Sn	22 35 24.5	+1.0
CUPR	Culebra, Puert	0.84	182		Pb	22 35 11.7	-0.9
CUPR					Sb	22 35 23.5	-0.1
CUPR				IAML		22 35 27.9	
	comp=N,3µm,0.7s						
CBYP	Canovanas	1.05	213	⇑eP	Pn	22 35 14.9	-0.1
CBYP	Canovanas	1.05	213	eS	Sn	22 35 31.0	+2.3
CBYP	Canovanas	1.05	213		Pn	22 35 14.3	-0.7
CBYP				Sn	Sb	22 35 28.7	-0.8
CBYP				IAML		22 35 34.7	
	comp=N,9µm,0.2s						
CBYP				IAML		22 35 37.9	
	comp=E,8µm,0.2s						
MTP	Monte Pirata	1.09	195	⇓eP	Pn	22 35 15.8	+0.2

MTP	Monte Pirata	1.09	195	eS	Sb	22 35 30.6	0.0
MTP	Monte Pirata	1.09	195		Pn	22 35 15.7	+0.2
MTP				Sn	Sn	22 35 30.0	+0.4
MTP				IAML		22 35 31.5	
	comp=E,5µm,0.7s						
MTP				IAML		22 35 31.6	
	comp=N,3µm,0.7s						
GCPR	Guaynabo City	1.15	223⇑	eP	Pn	22 35 16.2	-0.2
GCPR	Guaynabo City	1.15	223	eS	Sb	22 35 33.8	+1.3
GCPR	Guaynabo City	1.15	223		Pn	22 35 15.8	-0.6
GCPR				Sn	Sn	22 35 29.2	-1.9
HUMP	Col San Antoni	1.16	209⇑	eP	Pn	22 35 16.5	0.0
HUMP	Col San Antoni	1.16	209	eS	Sb	22 35 32.2	-0.3
HUMP	Col San Antoni	1.16	209		Pn	22 35 16.1	-0.3
HUMP				Sn	Sn	22 35 31.5	+0.3
SJG	San Juan	1.34	220	Pn	Pn	22 35 18.8	-0.2
	comp=N,58nm,0.3s,baz=58,slow=10,SNR=55						
SJG				Sn	Sn	22 35 36.4	+0.6
	comp=N,192nm,0.3s,baz=331,slow=10,SNR=11						
SJG				LR	LR	22 36 08.4	
	comp=N,913nm,18.7s,baz=27,slow=55						
SJG	San Juan	1.34	220		Pn	22 35 18.4	-0.6
SJG				Sn	Sn	22 35 34.6	-1.2
SJG				IAML		22 35 40.5	
	comp=N,2µm,0.7s						
SJG	San Juan	1.34	220	eP	Pn	22 35 17.7	-1.3
EMPR	Esperanza - Ma	1.39	241⇑	eP	Pn	22 35 19.9	+0.3
EMPR	Esperanza - Ma	1.39	241	eS	Sb	22 35 39.1	+0.1
EMPR	Esperanza - Ma	1.39	241	Pn	Pn	22 35 20.0	+0.3
EMPR				Sn	Sb	22 35 39.1	+0.1
EMPR				IAML		22 35 41.9	
	comp=E,4µm,1.0s						
EMPR				IAML		22 35 43.7	
	comp=N,2µm,0.6s						
IGPR	InterUniversit	1.44	215⇓	eP	Pn	22 35 20.3	0.0
IGPR	InterUniversit	1.44	215	eS	Sb	22 35 40.6	+0.2
IGPR	InterUniversit	1.44	215		Pn	22 35 20.3	0.0
IGPR					Sb	22 35 40.6	+0.2
CDVI	St. Croix	1.47	162	Pn	Pb	22 35 22.5	-0.7
CDVI	St. Croix	1.47	162	eP	Pb	22 35 22.0	-1.2
CDVI				eS	Sb	22 35 44.4	+3.0
AOPR	Arecibo Observ	1.64	241⇓	eP	Pn	22 35 23.2	+0.1
AOPR	Arecibo Observ	1.64	241	eS	Sb	22 35 45.5	-0.7
AOPR	Arecibo Observ	1.64	241		Pn	22 35 23.2	+0.1
AOPR					Sb	22 35 45.5	-0.7
AOPR	Arecibo Observ	1.64	241	IAML		22 35 53.3	
	comp=E,5µm,0.4s						
AOPR				IAML		22 35 54.5	
	comp=N,3µm,0.5s						
AOPR	Arecibo Observ	1.64	241	eP	Pn	22 35 22.9	-0.2
AOPR				eS	Sn	22 35 39.1	-3.9
CELP	Cerrillos	1.66	230	IAML		22 35 48.6	
	comp=N,1µm,1.0s						
UUPR	Utuado, UPR, P	1.66	237⇑	eP	Pn	22 35 23.6	+0.3
UUPR	Utuado, UPR, P	1.66	237		Pn	22 35 23.6	+0.3
OBIP	Obispado Ponce	1.70	229⇑	eP	Pn	22 35 23.4	-0.4
OBIP	Obispado Ponce	1.70	229	eS	Sb	22 35 46.6	-1.3
OBIP	Obispado Ponce	1.70	229		Pn	22 35 23.4	-0.4
OBIP	Obispado Ponce	1.70	229		Sn	22 35 43.7	-0.9
OBIP				IAML		22 35 50.1	
	comp=E,1µm,0.7s						
ICMP	Isla Caja de M	1.75	224⇑	eP	Pn	22 35 25.5	+0.9
ICMP	Isla Caja de M	1.75	224	eS	Sb	22 35 48.4	-1.0
ICMP	Isla Caja de M	1.75	224		Pn	22 35 25.2	+0.6
ICMP				IAML		22 35 55.4	
	comp=N,1µm,1.2s						
ICMP	Isla Caja de M	1.75	224		Sb	22 35 48.4	-1.0
AGPR	Aguadilla, PR	1.89	249⇑	eP	Pn	22 35 26.9	+0.4
AGPR	Aguadilla, PR	1.89	249	eS	Sb	22 35 51.9	-1.6
AGPR	Aguadilla, PR	1.89	249		Pn	22 35 26.9	+0.4
AGPR	Aguadilla, PR	1.89	249		Sn	22 35 50.4	+1.1
AGPR				IAML		22 35 54.5	
	comp=N,1µm,0.5s						
AGPR	Aguadilla, PR	1.89	249	i P	Pn	22 35 27.0	+0.4
AGPR				eS	Sn	22 35 49.7	+0.4
AGPR				IAML		22 35 57.0	
	comp=Z,333nm,0.8s						
GBPR	Guanica, Bosqu	1.94	233⇑	eP	Pn	22 35 28.1	+0.9
GBPR	Guanica, Bosqu	1.94	233	eS	Sb	22 35 54.2	-0.7
GBPR	Guanica, Bosqu	1.94	233		Pn	22 35 28.1	+0.9
GBPR					Sb	22 35 54.2	-0.7
LSP	Las Mesas	1.99	241⇑	eP	Pn	22 35 28.4	+0.4
LSP	Las Mesas	1.99	241	eS	Sb	22 35 54.6	-1.9
LSP	Las Mesas	1.99	241		Pn	22 35 28.4	+0.4
LSP					Sb	22 35 54.6	-1.9
PRSN	Puerto Rico Se	2.02	243⇑	eP	Pn	22 35 28.9	+0.5
PRSN	Puerto Rico Se	2.02	243		Pn	22 35 28.9	+0.5
PRSN	Puerto Rico Se	2.02	243	IAML		22 35 59.1	
	comp=E,2µm,0.2s						
PRSN				IAML		22 36 06.7	
	comp=N,3µm,0.3s						
MLPR	Magueyes Islan	2.07	236⇓	eP	Pn	22 35 29.6	+0.6
MLPR	Magueyes Islan	2.07	236	eS	Sb	22 35 56.6	-2.0
MLPR	Magueyes Islan	2.07	236		Pn	22 35 29.6	+0.6
MLPR					Sb	22 35 56.6	-2.0
CRPR	Cabo Rojo, PR	2.10	237⇑	eP	Pn	22 35 30.1	+0.7
CRPR	Cabo Rojo, PR	2.10	237	eS	Sb	22 35 57.7	-1.8
CRPR	Cabo Rojo, PR	2.10	237		Pn	22 35 30.1	+0.7
CRPR					Sb	22 35 57.7	-1.8
CRPR	Cabo Rojo, PR	2.10	237	IAML		22 36 05.5	
	comp=E,914nm,0.8s						
CRPR				IAML		22 36 21.5	
	comp=N,678nm,0.8s						
CRPR	Cabo Rojo, PR	2.10	237	i P	Pn	22 35 30.1	+0.7
IDE	Isla Desecheo	2.24	250⇑	eP	Pn	22 35 31.5	+0.1
IDE	Isla Desecheo	2.24	250	eS	Sn	22 36 01.0	+3.0
IDE	Isla Desecheo	2.24	250		Pn	22 35 31.5	+0.1
IDE					Sn	22 36 01.0	+3.0
SMRT	St. Maarten	2.34	118		Pn	22 35 32.9	+0.1
SMRT				IAML		22 36 08.7	
	comp=N,1µm,0.6s						
SMRT				IAML		22 36 16.7	
	comp=E,1µm,0.5s						
SABA	Saba	2.44	128		Pn	22 35 35.0	+0.8
SABA				IAML		22 36 16.8	
	comp=N,2µm,0.6s						
SABA	Saba	2.44	128	eP	Pn	22 35 34.5	+0.4
SABA				eS	Sn	22 36 01.6	-1.4
SEUS	St. Eustatius	2.72	127		Pn	22 35 40.1	+2.1
SEUS				IAML		22 36 38.6	
	comp=N,523nm,0.8s						
PCDR	Punta Cana, DR	3.03	258		Pn	22 35 42.5	+0.2
PCDR	Punta Cana, DR	3.03	258	i P	Pn	22 35 43.9	+1.6
PCDR				IAML		22 36 37.0	
	comp=Z,229nm,1.0s						
ANWB	Willy Bob	3.61	114		Pn	22 35 53.6	+3.4
ANWB				IAML		22 37 00.5	
	comp=Z,476nm,1.2s						
ANWB				IAML		22 37 18.3	
	comp=Z,307nm,1.2s						
ANWB	Willy Bob	3.61	114	eP	Pn	22 35 49.5	-0.7
ANWB				eS	Sn	22 36 29.2	-2.5
MBFL	Flemmings, Mon	3.75	129	eP	Pn	22 35 53.1	+0.8
MBFL	Flemmings, Mon	3.75	129	eS	Sn	22 36 40.4	+5.0
MLYT	Lee's Yard	3.79	129	eP	Pn	22 35 53.1	+0.4
MLYT				eS	Sn	22 36 38.0	+1.8
ANBD	Bethesda, Anti	3.92	122	eP	Pn	22 35 53.3	-1.2
ANBD	Bethesda, Anti	3.92	122	eS	Sn	22 36 38.8	-0.7
ABD	La Joyeuse, An	4.47	126	eP	Pn	22 36 02.5	+0.5
ABD	La Joyeuse, An	4.47	126	eS	Sn	22 36 52.3	-0.7
CBE	Ff, Capester	4.64	131	eS	Sn	22 37 01.5	+4.3
MAGL	Barre de l'ile	4.95	129	IAML		22 37 26.2	
	comp=E,211nm,0.9s						
MAGL				IAML		22 37 27.1	
	comp=N,200nm,1.4s						
MAGL	Barre de l'ile	4.95	129	eP	Pn	22 36 11.4	+2.8
MAGL	Barre de l'ile	4.95	129	eS	Sn	22 37 05.7	+0.8
SC01	Santiago de lo	5.18	274		Pn	22 36 12.9	+1.1
SDDR	Presa de Saban	5.71	269	Pn	Pn	22 36 20.0	+0.9
SDDR	Presa de Saban	5.71	269	eP	Pn	22 36 20.9	+1.8
SDDR				eS	Sn	22 37 25.3	+1.6
SDDR	Presa de Saban	5.71	269	eP	Pn	22 36 19.9	+0.7
SDDR	Presa de Saban	5.71	269	i P	Pn	22 36 21.0	+1.8
SDDR				IAML		22 37 28.8	
	comp=Z,46nm,0.6s						
PODR	Polo	5.80	261	i P	Pn	22 36 25.3	+4.8
PODR				eS	Sn	22 37 28.9	+2.8
SVN	Savane Anatole	5.80	137	Pn	Pn	22 36 21.6	+1.2
FDF	Fort de France	5.89	138		Pn	22 36 23.6	+1.9
FDF	Fort de France	5.89	138	eP	Pn	22 36 26.2	+4.5
FDF	Fort de France	5.89	138	eS	Sb	22 37 42.6	-6.1
GRTK	Grand Turk	6.00	294	i P	Pn	22 36 20.7	-2.3
GRTK				eS	Sn	22 37 24.5	-6.1
GRTK				IAML		22 37 28.4	
	comp=Z,69nm,1.1s						
BIM	Bigot	6.11	138	eP	Pn	22 36 24.9	+0.3
MPOM	Morne Pois Mar	6.30	137	Pn	Pn	22 36 29.4	+2.2
MPOM	Morne Pois Mar	6.30	137	eP	Pn	22 36 29.2	+2.0
MPOM	Morne Pois Mar	6.30	137	eS	Sn	22 37 34.8	-3.3
MCLT	Moule a Chique	6.81	142	Pn	Pn	22 36 37.6	+3.3
SVB	Belmont	7.00	146	Pn	Pn	22 36 37.3	+0.5
MASC	Masc	8.52	278	i P	Pn	22 36 54.7	-3.0
MASC				IAML		22 38 27.9	
	comp=Z,13nm,1.2s						
PCRV	Puerto La Cruz	8.95	176	Pn	Pn	22 37 03.8	+0.2
	comp=Z,0.4nm,0.3s,baz=25,slow=14,SNR=2.5						
PCRV				Sn	Sn	22 38 44.2	+0.8
	comp=Z,1.2nm,0.3s,baz=227,slow=21,SNR=2.0						
PCRV				LR	LR	22 40 36.7	
	comp=Z,331nm,21.6s,slow=38						
	comp=Z,17nm,0.9s						
SDV	Santo Domingo	11.46	208	Pn	Pn	22 37 43.6	+5.3
	comp=Z,0.9nm,0.3s,baz=168,slow=22,SNR=2.7						
SDV				Sn	Sn	22 39 46.4	+1.0
	baz=164,slow=22						
SDV	Santo Domingo	11.46	208	Pn	Pn	22 37 39.6	+1.4
PAMC	Pamplona, Colo	13.80	213	eP	Pn	22 38 12.6	+2.2
UREC	San Jos de Ur	15.11	223	eP	Pn	22 38 29.7	+1.9
RUSC	La Rusia	15.23	211		Pn	22 38 29.5	-0.3
RUSC	La Rusia	15.23	211	eP	Pn	22 38 31.2	+1.4
PTBC	PUERTO BERRIO,	15.41	217	eP	Pn	22 38 31.8	+0.1
HELC	Santa Helena	16.32	219	eP	P	22 38 48.5	+2.1
NORC	Norcasia	16.44	216	eP	P	22 38 47.4	-0.1
CHIC	Chingaza	16.64	211	eP	P	22 38 49.4	-0.6
ROSC	El Rosal	16.75	213	Pn	P	22 38 52.9	+1.6
	comp=Z,2.6nm,0.3s,baz=61,slow=21,SNR=4.9						
ROSC	El Rosal	16.75	213	P	P	22 38 51.2	-0.1
ROSC				IAmb	IAmb	22 39 03.9	
	comp=Z,17nm,0.6s						
CBOC	Ciudad Bolivar	16.86	220	eP	Pn	22 38 51.2	+0.8
SOR	Soroa	16.97	285		P	22 38 54.6	+1.3
SOR				IAmb	IAmb	22 38 58.9	
	comp=Z,22nm,1.1s						
BOAV	Boa Vista	17.29	164	P	Pn	22 38 55.8	+0.2
BOAV	Boa Vista	17.29	164	eP	Pn	22 38 56.0	+0.4
PLMC	San Jos del P	17.79	219	eP	P	22 39 03.9	+1.5
PRAC	Prado	18.00	213	eP	Pn	22 39 04.2	-0.3
ORTC	Ortega, Tolima	18.03	214	eP	P	22 39 06.4	+1.4
YOTC	Yotoco, Valle	18.57	217	eP	Pn	22 39 13.0	+1.6
MDP	Montagnes des	18.61	137	P	P	22 39 10.7	-0.7
	comp=Z,0.4nm,0.3s,baz=331,slow=13,SNR=2.1						
MDP				LR	LR	22 48 52.4	
	comp=Z,134nm,18.6s,baz=116,slow=45						
	comp=Z,16nm,0.9s						
U59A	Littleton	20.38	330	P	Pn	22 39 37.1	+4.3
U59A				IAmb	IAmb	22 39 54.6	
	comp=Z,10nm,0.9s						
TULM	Tulcn-Chalpat	22.07	215	P	P	22 39 49.4	0.0
WUPA	West Chester U	22.55	339	P	P	22 39 56.5	+2.6
WUPA				IAmb	IAmb	22 40 10.4	
	comp=Z,7.0nm,0.5s						
OTAV	Otavalo	22.83	216	P	P	22 39 57.5	0.0
WSPT	Westport, CT	23.00	344	P	P	22 40 02.2	+3.6
P57A	Homestead Farm	23.06	334	P	P	22 40 02.7	+3.5
P57A				IAmb	IAmb	22 40 21.4	
	comp=Z,7.4nm,0.6s						
LUPA	Lehigh Univers	23.07	340			22 40 15.6	
UCCT	U. Connecticut	23.34	347			22 40 18.7	
W45A	Hickory Valley	26.50	312			22 40 45.7	
CZSB	Cruzeiro do Su	27.71	196	P	P	22 40 42.2	+0.2
SADO	Sadowa	28.04	339	LR	LR	22 50 54.0	
	comp=Z,95nm,21.2s,baz=120,slow=34						
LPAZ	La Paz	35.34	185	P	P	22 41 50.1	+0.4
	comp=Z,1.0nm,0.7s,baz=34,slow=8.8,SNR=3.7						
	comp=Z,1.0nm,0.7s						
SCHQ	Schefferville	35.63	358	P	P	22 41 50.5	-0.9
	comp=Z,2.7nm,0.7s,baz=174,slow=7.2,SNR=8.5						
	comp=Z,2.7nm,0.7s						
TXAR	Lajitas Array	36.32	294	P	P	22 41 58.0	+0.3
	comp=Z,0.5nm,0.7s,baz=110,slow=11,SNR=6.6						
	comp=Z,0.5nm,0.7s						
TX31	Lajitas Ar. Si	36.32	294	P	P	22 41 58.5	+0.8
TX32	Lajitas Array	36.32	294		pwP	22 42 12.8	0.0
T25A	Trinidad	38.57	306	P	P	22 42 17.4	+0.7
T25A				IAmb	IAmb	22 42 18.4	
	comp=Z,4.8nm,1.0s						
SDCO	Great Sand Dun	39.58	306	P	P	22 42 26.0	+0.7
SDCO				IAmb	IAmb	22 42 27.1	
	comp=Z,4.9nm,1.0s						
ISCO	Idaho Springs	40.28	309	P	P	22 42 32.0	+0.9
PB07	IPOC Station P	40.88	187	P	P	22 42 34.2	-1.8
LVC	Limon Verde	41.66	185	LR	LR	23 01 59.0	
	comp=Z,71nm,19.9s,baz=346,slow=39						
LVC	Limon Verde	41.66	185	P	P	22 42 38.6	-4.0
PV07	Paradox Valley	42.15	306	P	P	22 42 47.4	+1.0
PV07				IAmb	IAmb	22 42 55.3	
	comp=Z,5.3nm,1.1s						
PV13	Radium Mtn., P	42.22	306	P	P	22 42 49.2	+2.3
PV13				IAmb	IAmb	22 42 56.2	
	comp=Z,6.8nm,0.9s						
BW06	Boulder Array	44.04	312	P	P	22 43 02.1	+0.4
PD31	Pinedale Array	44.04	312	P	P	22 43 01.9	+0.2
PDAR	Pinedale Array	44.04	312	P	P	22 43 01.6	-0.1
	comp=Z,2.0nm,0.7s,baz=114,slow=9.6,SNR=16						
	comp=Z,2.0nm,0.7s						
PDAR	Pinedale Array	44.04	312	P	P	22 43 00.8	-0.8
BSUT	Blindstream Ca	44.27	309	P	P	22 43 04.6	+1.0
BSUT				IAmb	IAmb	22 43 12.5	
	comp=Z,7.5nm,1.1s						
FRB	Frobisher Bay	44.61	358	LR	LR	22 59 50.6	
	comp=Z,99nm,21.8s,baz=201,slow=34						
RLMT	Red Lodge	44.63	316	P	P	22 43 06.5	+0.2
RLMT				IAmb	IAmb	22 43 13.5	
	comp=Z,4.1nm,1.1s						
HWUT	Hardware Ranch	45.14	310	P	P	22 43 10.8	+0.4
HWUT				IAmb	IAmb	22 43 18.1	
	comp=Z,4.5nm,1.1s						
MOOW	Moose Ponds	45.17	313	P	P	22 43 11.0	+0.4
MOOW				IAmb	IAmb	22 43 12.4	
	comp=Z,3.2nm,0.8s						
TPAW	Teton Pass	45.23	313	P	P	22 43 11.6	+0.4
TPAW				IAmb	IAmb	22 43 12.6	
	comp=Z,3.2nm,0.7s						
FXWY	Fox Creek	45.33	313	P	P	22 43 13.2	+1.3
FXWY				IAmb	IAmb	22 43 29.9	
	comp=Z,3.4nm,1.1s						
IMW	Indian Meadow	45.35	313	P	P	22 43 12.2	0.0
IMW				IAmb	IAmb	22 43 16.3	
	comp=Z,1.9nm,0.7s						
CPUP	Villa Florida	45.87	170	P	P	22 43 14.7	-1.2
	comp=Z,3.3nm,0.8s,baz=350,slow=8.8,SNR=8.0						
	comp=Z,3.3nm,0.8s						
CPUP	Villa Florida	45.87	170	P	P	22 43 14.7	-1.2
CPUP				IAmb	IAmb	22 43 15.3	
	comp=Z,3.8nm,0.9s						
QLMT	Earthquake Lak	45.98	314	P	P	22 43 18.9	+1.9
BGU	Big Grassy Mou	46.04	309	P	P	22 43 18.8	+1.4
BGU				IAmb	IAmb	22 43 27.0	
	comp=Z,2.0nm,0.8s						
BOZ	Bozeman (W)	46.36	315	P	P	22 43 20.4	+0.5
MCMT	McKenzie Canyo	46.94	314	P	P	22 43 26.3	+1.7
LRM	Limekiln Ridge	46.98	315	P	P	22 43 25.3	+0.5
HLID	Hailey	47.67	312	P	P	22 43 31.1	+0.9
HLID				IAmb	IAmb	22 43 40.7	
	comp=Z,2.9nm,1.1s						
NEW	Newport	50.75	317	P	P	22 43 53.2	-0.3
YKA	Yellowknife Ar	54.92	335	P	P	22 44 22.9	-1.1
	comp=Z,0.4nm,0.5s,baz=107,slow=7.3,SNR=14						
YKA				LR	LR	23 10 00.1	
	comp=Z,42nm,18.3s,baz=114,slow=38						
	comp=Z,0.4nm,0.5s						
SUMG	Summit	55.58	9	i P	P	22 44 28.0	-1.1
DBIC	Dimbokro	59.90	93	P	P	22 45 00.1	+0.3
	comp=Z,2.0nm,0.6s,baz=298,slow=4.5,SNR=5.2						
	comp=Z,2.0nm,0.6s						
TORD	Torodi Ar. Bea	64.26	84	P	P	22 45 28.7	-0.4
	comp=Z,0.7nm,0.6s,baz=292,slow=6.3,SNR=5.3						
ILAR	Eielson Array	69.29	333	P	P	22 45 59.9	-0.5
	comp=Z,0.7nm,0.8s,baz=96,slow=3.7,SNR=10.0						
ILAR				LR	LR	23 16 49.2	
	comp=Z,50nm,20.6s,baz=96,slow=36						
	comp=Z,0.7nm,0.8s						
FINES	FINESS Array B	74.01	30	P	P	22 46 27.6	-1.2
	comp=Z,5.2nm,1.1s,baz=282,slow=9.5,SNR=3.4						
	comp=Z,5.2nm,1.1s						
MA2	Magadan	96.22	342	LR	LR	23 36 12.7	
	comp=Z,25nm,19.2s,baz=64,slow=38						
ASAR	Alice Springs	161.61	253	PKPab	PKPab	22 55 39.8	-0.2
	comp=Z,0.6nm,0.7s,baz=99,slow=4.5,SNR=5.3						

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*IDC **30** 22:54:12.4±1.7, 53°.17N×160°.70W, h0^{km}, mb3.5/5, mbtmp3.6/8, ML3.4/3, MS3.3/2, Error ellipse: s-maj=33.7km s-min=25.8km az=9.0*

*NEIC **30** 22:54:14.9±1.4, 53°.15N±0°.09×160°.8W±0°.1, h29^{km}±11^{km}, Error ellipse: s-maj=15.3km s-min=8.8km az=146.0*

*AEIC **30** 22:54:15.8±1.6, 53°.20N±0°.10×160°.9W±0°.1, h35^{km}±10^{km}, ML3.5, Error ellipse: s-maj=16.7km s-min=4.8km az=148.0*

ISC 30 22:54:16.9±1.0**, 53°.24N**±0°.10×**160°.72W**±0°.06**, h35**^{km}**, n19,** σ**1^{s}73**/19**, mb3.6**/5**, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SDPT	Sand Point	2.12	4	Pn	Pn	22 54 49.1	-0.7
SDPT				Sn	Sn	22 55 15.6	+0.7
FALS	False Pass	2.27	317		Pn	22 54 50.5	-1.3
FALS					Sn	22 55 18.5	-0.1
AKUT	Akutan	3.13	289	Pn	Pn	22 55 01.1	-2.6
AKUT				Sn	Sn	22 55 39.5	-0.3
CHGN	Chignik	3.35	23	Pn	Pn	22 55 07.0	+0.3
CHGN				Sn	Sn	22 55 45.3	+0.2
UNV	Unalaska Valle	3.50	282		Pn	22 55 07.3	-1.4
KDAK	Kodiak Island	6.49	42	Pn	Pn	22 55 48.3	-1.4
	0.4nm,0.3s,baz=212,slow=7.3,SNR=9.1						
KDAK				Sn	Sn	22 56 58.1	-4.3
	0.8nm,0.3s,baz=320,slow=22,SNR=6.6						
	15nm,0.9s						
P18K	Big Mountain,	6.88	24	Pn	Pn	22 55 55.0	-0.2
ILAR	Eielson Array	13.54	26	Pn	Pn	22 57 22.9	-3.3
	0.1nm,0.3s,baz=221,slow=13,SNR=2.7						
	0.4nm,0.6s						
INK	Inuvik	19.84	30	P	Pn	22 58 45.5	-0.5
	0.3nm,0.3s,baz=238,slow=9.3,SNR=10						
	1.9nm,0.7s						
YKA	Yellowknife Ar	25.68	51	P	P	22 59 44.0	+0.9
	0.8nm,1.0s,baz=266,slow=7.9,SNR=6.3						
	0.8nm,1.0s						
SEY	Seymchan	26.03	310	LR	LR	23 11 30.6	
	comp=Z,66nm,20.7s,baz=74,slow=40						
PDAR	Pinedale Array	35.09	86	P	P	23 01 07.6	+0.9
	0.2nm,0.5s,baz=282,slow=5.1,SNR=2.2						
	0.2nm,0.5s						
H11S1	WAKE ISLAND Hy	42.88	229	T	T	23 48 03.7	
	baz=28,slow=76,SNR=6.6						
H11S2	WAKE ISLAND Hy	42.89	229	T	T	23 48 01.9	
	baz=28,slow=76,SNR=6.2						
H11S3	WAKE ISLAND Hy	42.89	229	T	T	23 48 02.7	
	baz=28,slow=76,SNR=6.3						
TXAR	Lajitas Array	47.55	97	P	P	23 02 49.0	+0.1
	0.6nm,0.5s,baz=304,slow=5.3,SNR=10.0						
	0.6nm,0.5s						
JNU	Nakatsue	51.66	276	LR	LR	23 24 55.3	
	comp=Z,31nm,19.8s,baz=208,slow=36						
BVAR	Borovoye Array	65.86	329	P	P	23 04 59.9	+1.5
	0.7nm,0.6s,baz=38,slow=7.5,SNR=4.1						
	0.7nm,0.6s						
MKAR	Makanchi Array	66.84	318	P	P	23 05 05.9	+1.1
	0.6nm,1.0s,baz=52,slow=8.0,SNR=2.8						
	0.6nm,1.0s						

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*IDC **30** 22:59:24.3±0.8, 56°.79N×162°.88E, h0^{km}, mb3.7/8, mbtmp3.8/9, ML3.8/1, MS2.6/1, Error ellipse: s-maj=30.1km s-min=19.0km az=144.0*

*KRSC **30** 22:59:25.6±1.7, 56°.87N×163°.22E, h42^{km}±17^{km}, Mc4.6, Ml4.4*

*NEIC **30** 22:59:28.5±2.3, 56°.9N±0°.1×162°.9E±0°.3, h10^{km}±2^{km}, mb4.2/22, Error ellipse: s-maj=36.4km s-min=5.3km az=307.0*

*MOS **30** 22:59:28.5±1.5, 56°.86N×162°.99E, h48^{km}, mb4.1/1, Error ellipse: s-maj=13.6km s-min=4.4km az=66.8*

ISC 30 22:59:25.5±1.4**, 56°.91N**±0°.03×**162°.95E**±0°.03**, h6**^{km}±9^{km}**, n119,** σ**1^{s}86**/153**, mb4.2**/19**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KBG	Krutoberegovo	0.67	192	PN	Pb	22 59 38.8	-0.8
KBG				S	Sn	22 59 49.5	-2.8
KBG	Krutoberegovo	0.67	192	eP	Pb	22 59 38.8	-0.8
KBG				eS	Sn	22 59 49.5	-2.8
KBTR	Krutoberegovo	0.71	186	PN	Pb	22 59 39.6	-0.7
KBTR				S	Sn	22 59 50.0	-3.2
KBTR	Krutoberegovo	0.71	186	eP	Pb	22 59 39.6	-0.7
KBTR				eS	Sn	22 59 50.0	-3.2
SMKR	Semkarok	0.88	248	PN	Pg	22 59 42.5	+0.1
SMKR				S	Sn	22 59 56.3	-1.2
SMKR	Semkarok	0.88	248	eP	Pg	22 59 42.5	+0.1
SMKR				eS	Sn	22 59 56.3	-1.2
SRKR	Sorokina	1.01	256	eS	Sb	22 59 59.2	+0.2
KLY	Klyuchi	1.40	246	PN	Pn	22 59 49.4	-2.2
KLY				S	Sn	23 00 07.6	-2.7
KLY	Klyuchi	1.40	246	eP	Pn	22 59 49.4	-2.2
KLY				eS	Sn	23 00 07.6	-2.7
CIRR	Tsirk	1.46	238	PN	Pb	22 59 52.4	-0.7
CIRR				S	Sb	23 00 11.7	-0.2
CIRR	Tsirk	1.46	238	eP	Pb	22 59 52.4	-0.7
CIRR				eS	Sb	23 00 11.7	-0.2
LGNR	Loginova	1.50	237	PN	Pb	22 59 53.4	-0.5
LGNR				S	Sg	23 00 13.7	-0.1
LGNR	Loginova	1.50	237	eP	Pb	22 59 53.4	-0.5
LGNR				eS	Sg	23 00 13.7	-0.1
BZGR	Bezymyannyi-Gr	1.59	233	PN	Pn	22 59 53.8	-0.4
BZGR				S	Sg	23 00 16.1	-0.3
BZGR	Bezymyannyi-Gr	1.59	233	eP	Pn	22 59 53.8	-0.4
BZGR				eS	Sg	23 00 16.1	-0.3
BZWR	Bezymyannyi-We	1.66	236	PN	Pn	22 59 55.3	0.0
BZWR				S	Sb	23 00 17.4	-0.3
BZWR	Bezymyannyi-We	1.66	236	eP	Pn	22 59 55.3	0.0
BZWR				eS	Sb	23 00 17.4	-0.3
BZP	Bezymyannyi-Pe	1.67	234	eP	Pn	22 59 55.2	-0.2
BZP				eS	Sb	23 00 17.8	-0.3
BZMR	Bezymyannaya	1.68	235	PN	Pb	22 59 55.7	-1.2
BZMR				S	Sb	23 00 18.6	+0.3
BZMR	Bezymyannaya	1.68	235	eP	Pb	22 59 55.7	-1.2
BZMR				eS	Sb	23 00 18.6	+0.3
KIRR	Kirishev	1.74	237	PN	Pn	22 59 56.3	0.0
KIRR				S	Sb	23 00 19.4	-0.5
KIRR	Kirishev	1.74	237	eP	Pn	22 59 56.3	0.0
KIRR				eS	Sb	23 00 19.4	-0.5
KPT	Kopyto	1.79	239	PN	Pn	22 59 56.9	0.0
KPT				S	Sb	23 00 20.9	-0.4
KPT	Kopyto	1.79	239	eP	Pn	22 59 56.9	0.0
KPT				eS	Sb	23 00 20.9	-0.4
SRDR	Sredinnyy	1.88	253	PN	Pb	22 59 59.1	-1.2
SRDR				S	Sb	23 00 23.6	-0.4
SRDR	Sredinnyy	1.88	253	eP	Pb	22 59 59.1	-1.2
SRDR				eS	Sb	23 00 23.6	-0.4
KMNR	Kamenistaya	1.90	234	PN	Pb	22 59 59.4	-1.3
KMNR				S	Sg	23 00 26.2	-0.4
KMNR	Kamenistaya	1.90	234	eP	Pb	22 59 59.4	-1.3
KMNR				eS	Sg	23 00 26.2	-0.4
KOZ	Kozyrevsk	1.91	245	PN	Pb	22 59 59.5	-1.2
KOZ				S	Sg	23 00 26.4	-0.4
KOZ	Kozyrevsk	1.91	245	eP	Pb	22 59 59.5	-1.2
KOZ				eS	Sg	23 00 26.4	-0.4
TUMD	Tumrok D	2.23	221	eP	Pb	23 00 04.0	-2.2
TUMD				eS	Sb	23 00 34.2	+0.2
TUMR	Tumrok	2.27	225	PN	Pn	23 00 04.0	+0.5
TUMR				S	Sb	23 00 34.2	-0.9
TUMR	Tumrok	2.27	225	eP	Pb	23 00 05.7	-1.1
OSSR	Ossora	2.34	1	PN	Pn	23 00 02.7	-1.8
OSSR	Ossora	2.34	1	eP	Pn	23 00 02.7	-1.8
BKI	Bering	2.41	134	PN	Pn	23 00 04.1	-1.3
BKI				S	Sn	23 00 33.1	-2.0
BKI	Bering	2.41	134	eP	Pn	23 00 04.1	-1.3
BKI				eS	Sn	23 00 33.1	-2.0
MKZ	Mys Kozlova	2.46	197	PN	Pn	23 00 06.5	+0.4
MKZ	Mys Kozlova	2.46	197	eP	Pn	23 00 06.5	+0.4
TIGL	Tigil	2.47	292	eP	Pn	23 00 08.0	+1.8
TIGL				eS	Sb	23 00 40.2	-0.7
ESO	Esso	2.56	249	PN	Pb	23 00 10.2	-1.6
ESO				S	Sb	23 00 43.2	-0.2
ESO	Esso	2.56	249	eP	Pb	23 00 10.2	-1.6
ESO				eS	Sb	23 00 43.2	-0.2
PALN	Palana	2.70	325	PN	Pb	23 00 12.3	-1.8
PALN				S	Sb	23 00 48.8	+1.5
PALN	Palana	2.70	325	eP	Pb	23 00 12.3	-1.8

PALN				eS	Sb	23 00 48.8	+1.5
KII	**Karymskiy**	3.50	216	PN	Pn	23 00 22.0	+1.5
KII	**Karymskiy**	3.50	216	eP	Pn	23 00 22.0	+1.5
SPN	**Mys Shipunski**	4.18	205	PN	Pn	23 00 28.9	-0.8
SPN				S	Sn	23 01 17.4	-1.3
SPN	**Mys Shipunski**	4.18	205	eP	Pn	23 00 28.9	-0.8
SPN				eS	Sn	23 01 17.4	-1.3
NLC	**Nalytchevo**	4.28	210	PN	Pn	23 00 33.6	+2.5
NLC	**Nalytchevo**	4.28	210	eP	Pn	23 00 33.6	+2.5
GNL	**Ganaly**	4.31	224	PN	Pn	23 00 33.5	+1.9
GNL	**Ganaly**	4.31	224	eP	Pn	23 00 33.5	+1.9
KRX	**Arik**	4.33	216	PN	Pn	23 00 35.0	+3.1
KRX	**Arik**	4.33	216	eP	Pn	23 00 35.0	+3.1
SMAR	**Somma**	4.37	215	PN	Pn	23 00 34.1	+1.7
SMAR	**Somma**	4.37	215	eP	Pn	23 00 34.1	+1.7
AVH	**Avacha**	4.38	215	PN	Pn	23 00 35.4	+2.8
AVH	**Avacha**	4.38	215	eP	Pn	23 00 35.4	+2.8
KOK	**Koryaka**	4.39	216	PN	Pn	23 00 35.3	+2.6
KOK	**Koryaka**	4.39	216	eP	Pn	23 00 35.3	+2.6
UGLR	**Uglovaya**	4.40	214	PN	Pn	23 00 34.9	+2.0
UGLR	**Uglovaya**	4.40	214	eP	Pn	23 00 34.9	+2.0
DALK	**Dalny**	4.58	214	PN	Pn	23 00 36.7	+1.5
DALK	**Dalny**	4.58	214	eP	Pn	23 00 36.7	+1.5
PET	**Petropavlovsk**	4.62	214		Pn	23 00 38.3	+2.6
PET	**Petropavlovsk**	4.62	214	ePN	Pn	23 00 38.6	+2.9
PET				eS	Sn	23 01 33.0	+3.5
PET				pmax	pmax		
	comp=Z,46nm,0.9s						
PET				smax	smax		
	comp=E,41nm,0.8s						
PET				smax	smax		
	comp=N,36nm,0.6s						
PEA0B	**Petropavlovsk-**	4.86	221		Pn	23 00 42.1	+3.0
PEA0B	**Petropavlovsk-**	4.86	221	PN	Pn	23 00 42.1	+3.0
PETK	**Petropavlovsk-**	4.86	221	Pn	Pn	23 00 41.0	+1.9
	comp=N,1.5nm,0.3s,baz=60,slow=15,SNR=10						
PETK	**Petropavlovsk-**	4.86	221		Pn	23 00 41.9	+2.8
PETK	**Petropavlovsk-**	4.86	221	PN	Pn	23 00 41.9	+2.8
KRMR	**Karymshinskiy**	4.95	216	PN	Pn	23 00 42.9	+2.7
KRMR	**Karymshinskiy**	4.95	216	eP	Pn	23 00 42.9	+2.7
RUS	**Russkaya**	5.17	212	PN	Pn	23 00 44.0	+0.7
RUS	**Russkaya**	5.17	212	eP	Pn	23 00 44.0	+0.7
GRL	**Gorelyy**	5.20	215	PN	Pn	23 00 47.4	+3.5
GRL	**Gorelyy**	5.20	215	eP	Pn	23 00 47.4	+3.5
MTVR	**Mutnovka**	5.23	214	PN	Pn	23 00 46.8	+2.6
MTVR	**Mutnovka**	5.23	214	eP	Pn	23 00 46.8	+2.6
MA2	**Magadan**	6.96	298	LR	LR	23 04 05.1	
	comp=N,46nm,20.8s,baz=108,slow=40						
AKUT	**Akutan**	17.84	86		P	23 03 38.8	+4.1
ASAJ	**Asahikawa**	18.11	234	P	P	23 03 37.0	-0.8
	comp=N,0.7nm,0.3s,baz=335,slow=13,SNR=6.1						
	comp=N,4.9nm,0.6s						
TIXI	**Tiksi**	20.45	329	P	Pn	23 04 04.7	-0.5
	comp=N,1.9nm,0.6s,baz=270,slow=20,SNR=7.0						
	comp=N,1.9nm,0.6s						
TIXI	**Tiksi**	20.45	329	P	Pn	23 04 05.8	+0.6
TIXI	**Tiksi**	20.45	329	P	Pn	23 04 05.9	+0.7
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
L19K	**White Mountain**	21.71	58		P	23 04 22.8	+5.8
O18K	**Koktuh Hills**	21.86	65	P	P	23 04 22.2	+3.7
K20K	**Telida**	21.99	55	P	P	23 04 21.5	+1.6
K20K				IAmb	IAmb	23 04 37.2	
	comp=Z,11nm,1.4s						
N19K	**Bonanza Creek**	22.06	62	P	P	23 04 23.6	+2.9
N19K				IAmb	IAmb	23 04 26.2	
	comp=Z,16nm,1.2s						
IMAR	**Indian Mountai**	22.14	48	P	P	23 04 24.1	+2.6
H21K	**Melozitna Rive**	22.51	49	P	P	23 04 28.4	+3.0
M20K	**Styx River**	22.55	59	P	P	23 04 27.5	+1.5
PPLA	**Purkeypile**	22.88	56	P	P	23 04 32.5	+3.0
CAST	**Castle Rocks**	22.88	55	P	P	23 04 31.5	+2.1
SKT	**Skwentna**	23.29	58	P	P	23 04 35.1	+1.5
SKT				IAmb	IAmb	23 04 42.2	
	comp=Z,14nm,1.4s						
TRF	**Thorofare Moun**	23.68	55	P	P	23 04 39.0	+1.3
TRF				IAmb	IAmb	23 04 41.4	
	comp=Z,7.7nm,1.1s						
SUA	**Susitna One**	23.74	60	P	P	23 04 39.8	+1.6
SUA				IAmb	IAmb	23 04 57.1	
	comp=Z,9.0nm,1.1s						
H23K	**Yukon River**	23.86	49	P	P	23 04 40.9	+1.7
I23K	**Minto, Yukon-K**	23.96	50	P	P	23 04 42.8	+2.7
I23K				IAmb	IAmb	23 04 48.8	
	comp=Z,9.2nm,1.4s						
H24K	**Noodor Dome**	24.55	49	P	P	23 04 50.7	+5.2
H24K				IAmb	IAmb	23 05 06.6	
	comp=Z,12nm,1.5s						
WRH	**Wood River Hil**	24.55	52	P	P	23 04 46.4	+0.9
WRH				IAmb	IAmb	23 05 04.0	
	comp=Z,8.7nm,1.5s						
ILAR	**Eielson Array**	25.04	51	P	P	23 04 50.4	+0.4
	comp=Z,1.1nm,0.7s,baz=242,slow=7.7,SNR=13						
	comp=Z,1.1nm,0.7s						
SCM	**Sheep Creek Mo**	25.27	58	P	P	23 04 53.0	+0.8
FYU	**Fort Yukon**	25.58	47	P	P	23 04 56.4	+1.6
FYU				IAmb	IAmb	23 04 59.9	
	comp=Z,9.3nm,1.3s						
RIDG	**Independent Ri**	26.05	53	P	P	23 05 02.6	+3.4
RIDG				IAmb	IAmb	23 05 10.8	
	comp=Z,7.7nm,1.2s						
SCRK	**Sand Creek**	26.39	52	P	P	23 05 02.3	0.0
SCRK				IAmb	IAmb	23 05 13.4	
	comp=Z,5.3nm,1.2s						
N25K	**Chitina, Valde**	26.59	58	P	P	23 05 04.9	+0.8
M27K	**Edge Creek, AK**	27.66	56	P	P	23 05 15.4	+1.6
M27K				IAmb	IAmb	23 05 33.7	
	comp=Z,8.1nm,1.4s						
H11N2	**WAKE ISLAND Hy**	37.24	174	T	T	23 45 34.9	
	baz=358,slow=76,SNR=52						
H11N3	**WAKE ISLAND Hy**	37.26	174	T	T	23 45 40.0	
	baz=358,slow=76,SNR=48						
H11N1	**WAKE ISLAND Hy**	37.26	174	T	T	23 45 36.3	
	baz=358,slow=76,SNR=47						
YKA	**Yellowknife Ar**	39.28	47	P	P	23 06 55.0	+0.6
	comp=Z,0.8nm,0.7s,baz=300,slow=8.0,SNR=9.3						
	comp=Z,0.8nm,0.7s						
KURK	**Kurchatov**	47.16	300	P	P	23 07 58.2	0.0
KURBB	**Kurchatov Arra**	47.27	300	P	P	23 07 58.1	-0.9
	comp=Z,1.0nm,0.7s,baz=53,slow=7.9,SNR=4.9						
	comp=Z,1.0nm,0.7s						
PDAR	**Pinedale Array**	54.31	65	P	P	23 08 52.8	+0.3
	comp=Z,0.5nm,0.6s,baz=337,slow=2.4,SNR=4.1						
	comp=Z,0.5nm,0.6s						
TXAR	**Lajitas Array**	67.71	70	P	P	23 10 24.3	+0.7
	comp=Z,1.3nm,0.7s,baz=269,slow=5.0,SNR=8.8						
	comp=Z,1.3nm,0.7s						
WRA	**Warramunga Arr**	80.24	207	P	P	23 11 34.8	-1.9
	comp=Z,0.5nm,0.7s,baz=14,slow=5.3,SNR=2.6						
	comp=Z,0.5nm,0.7s						
ASAR	**Alice Springs**	83.92	207	P	P	23 11 55.4	-0.5
	comp=Z,0.5nm,0.5s,baz=15,slow=4.9,SNR=8.0						
	comp=Z,0.5nm,0.5s						
QSPA	**South Pole Qui**	146.67	180	PKPbc	PKPbc	23 19 05.5	-1.0
	comp=Z,2.6nm,0.5s,baz=248,slow=0.9,SNR=24						

RSNC 30 22:59:39.4±0.7, 10°.16N×73°.15W, h124km±4km, ML3.6, Mw3.8, 3C-4D, Fault plane solution: NP1:φs27.00000°, δ46.00000°, λ-122.00000°., Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LL5C	**La Loma 5 El P**	0.70	234	⇓eP	Pn	22 59 59.0	-0.1
LL1C	**La Loma 1 Cana**	0.73	213	⇓iP	Pn	22 59 59.2	-0.2
LL1C				eS	Sn	23 00 11.0	-3.5
LL1C				i		23 00 16.1	
	comp=Z,3µm,0.3s						
ARGC	**Ariguani, Magd**	1.12	254	⇓eP	Pn	23 00 03.1	+0.2
ARGC				eS	Sn	23 00 20.7	-0.1
ARGC				i		23 00 22.1	
	comp=Z,426nm,0.4s						
SMRC	**Santa Marta, M**	1.45	313	⇑eP	Pn	23 00 05.8	-0.7
SMRC				eS	Sn	23 00 25.4	-1.8
SMRC				i		23 00 31.2	
	comp=Z,751nm,0.3s						
URIC	**Uribia, Colomb**	1.91	37	⇓eP	Pn	23 00 11.3	-0.6
URIC				eS	Sn	23 00 36.0	-0.7
URIC				i		23 00 38.1	
	comp=Z,146nm,0.3s						
SJCC	**San Jacinto, C**	2.02	263	⇑eP	Pn	23 00 12.8	-0.5
SJCC				eS	Sn	23 00 38.2	-1.0
SJCC				i		23 00 40.4	
	comp=Z,589nm,0.8s						
PAMC	**Pamplona, Colo**	2.84	171	⇑eP	Pn	23 00 24.4	+0.1
PAMC				eS	Sn	23 00 57.9	-0.8
PAMC				i		23 01 01.9	
	comp=Z,237nm,0.3s						
BRRC	**Barranca, Sant**	3.09	190	eP	Pn	23 00 26.9	-0.1
BRRC				eS	Sn	23 01 02.6	-1.1
BRRC				i		23 01 07.8	
	comp=Z,192nm,0.3s						
ZARC	**Zaragoza, Cauc**	3.14	213	eP	Pn	23 00 27.1	-0.6
ZARC				eS	Sn	23 01 01.0	-4.1
ZARC				i		23 01 08.5	
	comp=Z,126nm,0.3s						
UREC	**San Jos de Ur**	3.36	225	eP	Pn	23 00 29.6	-1.0
UREC				eS	Sn	23 01 06.3	-3.8
UREC				i		23 01 11.0	
	comp=Z,110nm,0.2s						
LCBC	**Los crdobas,**	3.43	248	eP	Pn	23 00 30.6	-0.8
LCBC				eS	Sn	23 01 06.2	-5.5
LCBC				i		23 01 08.5	
	comp=Z,192nm,0.3s						
BARC	**Barichara**	3.55	181	eP	Pn	23 00 33.5	+0.2
PTBC	**PUERTO BERRIO,**	3.83	200	eP	Pn	23 00 36.1	-0.7
APAC	**Apartado, Choc**	4.07	237	eP	Pn	23 00 39.4	-0.5
APAC				i		23 01 27.4	
	comp=Z,57nm,0.4s						
RUSC	**La Rusia**	4.24	179	eP	Pn	23 00 42.0	-0.7
RUSC				i		23 01 58.8	
	comp=Z,42nm,0.5s						
DBBC	**Dabeiba**	4.35	224	eP	Pn	23 00 42.4	-1.4
DBBC				i		23 01 33.1	
	comp=Z,24nm,0.3s						
SPBC	**San Pablo de B**	4.57	192	eP	Pn	23 00 44.7	-2.1
SPBC				eS	Sn	23 01 36.8	-2.4
SPBC				i		23 01 50.5	
	comp=Z,61nm,0.4s						
HELC	**Santa Helena**	4.59	211	eP	Pn	23 00 47.7	+0.3
HELC				eS	Sn	23 01 35.3	-4.8
HELC				i		23 01 50.9	
	comp=Z,49nm,0.4s						
NORC	**Norcasia**	4.88	201	eP	Pn	23 00 50.1	-0.7
NORC				eS	Sn	23 01 41.1	-5.3
NORC				i		23 01 52.4	
	comp=Z,47nm,0.7s						
CBOC	**Ciudad Bolivar**	5.12	214	eP	Pn	23 00 54.4	+0.1
CBOC				i		23 02 05.5	
	comp=Z,19nm,0.4s						
PTAC	**Punta Ardita,**	5.49	237	eP	Pn	23 00 55.9	-3.2
PTAC				i		23 02 05.3	
	comp=Z,32nm,0.4s						
CHIC	**Chingaza**	5.53	186	eP	Pn	23 01 02.0	+2.0
PTGC	**Puerto Gaitan,**	6.01	170	eP	Pn	23 01 05.1	-1.0
PTGC				eS	Sn	23 02 09.1	-4.6
VILC	**Villavicencio,**	6.04	185	eS	Sn	23 02 14.1	-0.4
PLMC	**San Jos del P**	6.08	211	eP	Pn	23 01 07.1	+0.1
PLMC				eS	Sn	23 02 11.4	-4.0
PLMC				i		23 02 19.6	
	comp=Z,17nm,0.4s						
ORTC	**Ortega, Tolima**	6.55	199	eP	Pn	23 01 14.2	+0.7
ORTC				eS	Sn	23 02 27.9	+1.1
ORTC				i		23 02 48.1	
	comp=Z,14nm,0.5s						
PRAC	**Prado**	6.63	195	eP	Pn	23 01 14.0	-0.5
PRAC				eS	Sn	23 02 25.6	-3.3
BCIP	**Isla Barro Col**	6.67	262	eP	Pn	23 01 14.0	-0.9
BCIP				eS	Sn	23 02 22.9	-6.6
BCIP				i		23 02 29.5	
	comp=Z,35nm,0.4s						
YOTC	**Yotoco, Valle**	6.91	208	eP	Pn	23 01 17.3	-1.0
YOTC				i		23 02 36.1	
	comp=Z,6.4nm,0.5s						
JAMC	**Jamundi, Valle**	7.74	207	eP	Pn	23 01 28.7	-0.9
SDDR	**Presa de Saban**	8.95	11	eP	Pn	23 01 47.7	+2.0
SDDR				eS	Sn	23 03 22.9	-2.0

ROM 30 23:01:59.6±0.0, 43°.012N±0°.002×13°.027E±0°.003, h9km, ML2.4/53, 18C-19D, Error ellipse: s-maj=0.3km s-min=0.0km az=69.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	0.05	341	P	Pg	23 02 01.5	0.0
T1219				S	Sg	23 02 02.5	-0.3
T1219				AML	AML		
	comp=E,15300µm,0.4s						
T1219				AML	AML		
	comp=E,14500µm,0.4s						
T1219				AML	AML		
	comp=N,24650µm,0.2s						
T1219				AML	AML		
	comp=N,24100µm,0.2s						
T1219				AML	AML		
	comp=N,24700µm,0.2s						
T1219				AML	AML		
	comp=E,14500µm,0.3s						
T1219				AML	AML		
	comp=E,15300µm,0.3s						
FEMA	**Monte Fema**	0.05	162	P	Pg	23 02 01.8	+0.2
FEMA				S	Sg	23 02 03.1	0.0
FEMA				AML	AML		
	comp=E,22050µm,0.2s						
FEMA				AML	AML		
	comp=N,13350µm,0.1s						
FEMA				AML	AML		
	comp=E,22050µm,0.2s						
CESI	**CESI - Serrava**	0.09	265	P	Pg	23 02 02.6	+0.6
CESI				S	Sg	23 02 04.6	+0.9
CESI				AML	AML		
	comp=E,4655µm,0.6s						
CESI				AML	AML		
	comp=N,5225µm,0.9s						
CESI				AML	AML		
	comp=N,5225µm,1.1s						
T1220	**Camerino, Fraz**	0.11	25	⇑P	Pg	23 02 02.7	+0.5
T1220				S	Sg	23 02 04.8	+0.7
T1220				AML	AML		
	comp=N,14000µm,0.5s						
T1220				AML	AML		
	comp=E,30650µm,0.3s						
T1220				AML	AML		
	comp=E,30650µm,0.3s						
T1220				AML	AML		
	comp=N,14000µm,0.5s						
T1220				AML	AML		
	comp=N,14000µm,1.5s						
T1216	**Preci, Frazion**	0.12	183	P	Pg	23 02 03.0	+0.5
T1216				S	Sg	23 02 05.3	+0.9
T1216				AML	AML		
	comp=N,4375µm,0.3s						
T1216				AML	AML		
	comp=E,4175µm,0.4s						
T1216				AML	AML		
	comp=N,4375µm,0.4s						
T1216				AML	AML		
	comp=N,4380µm,0.4s						
T1216				AML	AML		
	comp=E,4175µm,0.4s						
T1256	**Bolognola (MC)**	0.15	92	⇑P	Pg	23 02 03.4	+0.5
T1256				S	Sg	23 02 05.9	+0.7
T1256				AML	AML		
	comp=E,1965µm,0.8s						
T1256				AML	AML		
	comp=E,1970µm,0.8s						
T1256				AML	AML		
	comp=N,2865µm,0.6s						
T1256				AML	AML		
	comp=E,2120µm,0.8s						
T1256				AML	AML		
	comp=N,2765µm,0.3s						
T1256				AML	AML		
	comp=N,2865µm,1.4s						
SEF1	**Sefro**	0.15	337	P	Pg	23 02 03.4	+0.6
SEF1				S	Sg	23 02 06.1	+1.0
SEF1				AML	AML		
	comp=N,5150µm,0.5s						
SEF1				AML	AML		
	comp=N,5150µm,0.5s						
SEF1				AML	AML		
	comp=N,5155µm,0.5s						
SEF1				AML	AML		
	comp=E,4855µm,0.2s						
MC2	**Monte Cornacci**	0.16	130	⇓P	Pg	23 02 03.6	+0.6
MC2				S	Sg	23 02 06.4	+0.9
NRCA	**Norcia**	0.19	160	⇓P	Pg	23 02 04.2	+0.6
NRCA				S	Sg	23 02 07.7	+1.4
NRCA				AML	AML		
	comp=E,4600µm,0.2s						
NRCA				AML	AML		
	comp=N,3605µm,0.2s						
NRCA				AML	AML		
	comp=N,3860µm,0.2s						
NRCA				AML	AML		
	comp=N,3610µm,0.2s						
NRCA				AML	AML		
	comp=N,3860µm,1.8s						
NRCA				AML	AML		
	comp=N,3610µm,1.8s						
NRCA				AML	AML		
	comp=E,4595µm,0.2s						
NRCA				AML	AML		
	comp=E,4905µm,0.2s						
T1245	**Castelsantange**	0.20	143	⇓P	Pg	23 02 04.3	+0.6
T1245				S	Sg	23 02 07.9	+1.4
T1245				AML	AML		
	comp=E,2930µm,0.3s						
T1245				AML	AML		
	comp=N,5035µm,0.3s						
T1245				AML	AML		
	comp=N,5030µm,0.3s						
T1245				AML	AML		
	comp=E,3025µm,0.9s						
T1245				AML	AML		
	comp=N,4680µm,0.3s						
T1245				AML	AML		
	comp=E,2930µm,0.2s						
T1245				AML	AML		
	comp=N,5035µm,0.3s						
T1245				AML	AML		
	comp=E,2930µm,1.8s						
T1245				AML	AML		
	comp=E,3025µm,1.1s						
GAG1	**Gagliole**	0.23	7	P	Pg	23 02 05.2	+1.0
GAG1				S	Sg	23 02 09.3	+1.9
GUMA	**Gualdo di Mace**	0.23	77	⇑P	Pg	23 02 05.3	+0.9
GUMA				S	Sg	23 02 09.6	+2.1
GUMA				AML	AML		
	comp=E,9025µm,0.3s						
GUMA				AML	AML		
	comp=N,10450µm,0.3s						
GUMA				AML	AML		
	comp=N,9820µm,0.2s						
GUMA				AML	AML		
	comp=N,10450µm,1.7s						
GUMA				AML	AML		
	comp=E,13400µm,0.2s						
MMO1	**Montemonaco**	0.25	117	P	Pg	23 02 05.2	+0.6
MMO1				S	Sg	23 02 09.4	+1.4
SNTG	**Esanatoglia**	0.25	345	P	Pg	23 02 05.3	+0.6
SNTG				S	Sb	23 02 09.8	-1.1
SNTG				AML	AML		
	comp=E,924µm,0.9s						
SNTG				AML	AML		
	comp=N,948µm,0.5s						
SNTG				AML	AML		
	comp=N,958µm,0.2s						
SNTG				AML	AML		
	comp=E,940µm,0.9s						
SNTG				AML	AML		
	comp=E,924µm,0.9s						
T1212	**Cascia, Frazio**	0.26	177	P	Pg	23 02 05.6	+0.7
T1212				S	Sb	23 02 10.1	-1.1
T1212				AML	AML		
	comp=E,2505µm,0.3s						
T1212				AML	AML		
	comp=N,2170µm,0.6s						
T1212				AML	AML		
	comp=E,2450µm,0.3s						
T1212				AML	AML		
	comp=N,2125µm,0.2s						
T1212				AML	AML		
	comp=E,2455µm,0.3s						
T1212				AML	AML		
	comp=N,2130µm,0.2s						
ASSB	**Assisi San Ben**	0.27	277	⇑P	Pg	23 02 05.8	+0.7
ASSB				S	Sb	23 02 10.6	-1.0
ASSB				AML	AML		
	comp=E,2125µm,0.3s						
ASSB				AML	AML		
	comp=N,1890µm,0.3s						
ASSB				AML	AML		
	comp=N,1890µm,1.7s						
T1214	**Arquata del Tr**	0.29	152	⇓P	Pg	23 02 05.9	+0.6
T1214				S	Sb	23 02 10.8	-1.2
T1214				AML	AML		
	comp=N,1480µm,0.2s						
T1214				AML	AML		
	comp=N,1270µm,0.6s						
T1214				AML	AML		
	comp=E,1545µm,0.2s						
T1214				AML	AML		
	comp=E,1252µm,0.8s						
T1214				AML	AML		
	comp=N,1270µm,0.6s						
T1217	**Poggiodomo (PG**	0.31	193	⇑P	Pg	23 02 06.5	+0.7
T1217				S	Sb	23 02 11.8	-0.8
T1217				AML	AML		
	comp=E,1330µm,1.2s						
T1217				AML	AML		
	comp=E,1295µm,1.2s						
T1217				AML	AML		
	comp=N,1155µm,1.1s						
T1217				AML	AML		
	comp=N,1125µm,0.7s						
T1217				AML	AML		
	comp=E,1295µm,0.8s						
T1217				AML	AML		
	comp=E,1330µm,0.8s						
EL6	**Elcito**	0.32	10	P	Pg	23 02 06.6	+0.6
EL6				S	Sb	23 02 12.1	-0.9
EL6				AML	AML		
	comp=E,2140µm,0.3s						
EL6				AML	AML		
	comp=N,1950µm,0.2s						
T1241	**Roccafluvione,**	0.34	118	P	Pg	23 02 06.8	+0.5
T1241				S	Sb	23 02 12.4	-1.0
T1241				AML	AML		
	comp=E,911µm,0.7s						
T1241				AML	AML		
	comp=N,892µm,0.7s						
T1241				AML	AML		
	comp=E,864µm,0.7s						
T1241				AML	AML		
	comp=E,912µm,0.7s						
T1241				AML	AML		
	comp=N,892µm,0.8s						
T1241				AML	AML		
	comp=N,840µm,0.8s						
T1241				AML	AML		
	comp=E,864µm,1.3s						
T1241				AML	AML		
	comp=E,912µm,1.3s						
FOSV	**Fossato di Vic**	0.34	326	P	Pg	23 02 07.1	+0.7
FOSV				S	Sb	23 02 12.8	-0.8
FOSV				AML	AML		
	comp=E,508µm,0.3s						
FOSV				AML	AML		
	comp=N,498µm,0.3s						
T1218	**Civita (PG)**	0.35	169	P	Pg	23 02 07.1	+0.5
T1218				S	Sb	23 02 12.9	-0.9
T1218				AML	AML		
	comp=E,942µm,1.6s						
T1218				AML	AML		
	comp=N,1220µm,1.5s						
T1218				AML	AML		
	comp=E,950µm,1.6s						
T1218				AML	AML		
	comp=N,1230µm,0.7s						
T1218				AML	AML		
	comp=E,942µm,0.4s						
T1218				AML	AML		
	comp=E,950µm,0.4s						
T1218				AML	AML		
	comp=N,1220µm,0.5s						
CING	**Cingoli**	0.38	19	⇑P	Pg	23 02 07.7	+0.5
CING				S	Sb	23 02 14.1	-0.6
CING				AML	AML		
	comp=N,547µm,0.4s						
CING				AML	AML		
	comp=E,1060µm,0.2s						
MOMA	**Monte Martano**	0.40	238	⇑P	Pg	23 02 08.1	+0.7
MOMA				AML	AML		
	comp=E,498µm,1.4s						
MOMA				AML	AML		

	comp=N,514µm,1.4s						
MOMA				AML	AML		
	comp=E,533µm,0.3s						
MOMA				AML	AML		
	comp=N,496µm,0.5s						
MOMA				AML	AML		
	comp=N,514µm,0.6s						
MOMA				AML	AML		
	comp=E,498µm,0.6s						
SMA1	**SAN MARTINO**	**0.44**	**149**	⇓P	Pg	23 02 08.7	+0.4
SMA1				S	Sb	23 02 16.1	-0.5
SMA1				AML	AML		
	comp=N,567µm,1.0s						
SMA1				AML	AML		
	comp=N,567µm,1.0s						
SMA1				AML	AML		
	comp=E,676µm,0.4s						
MURB	**Monte Urbino**	**0.45**	**304**	⇑P	Pb	23 02 09.1	-0.7
MURB				S	Sb	23 02 17.2	+0.6
MURB				AML	AML		
	comp=E,1455µm,0.2s						
MURB				AML	AML		
	comp=N,861µm,1.4s						
MURB				AML	AML		
	comp=E,1400µm,0.8s						
MURB				AML	AML		
	comp=N,830µm,0.8s						
SSFR	**Montelago di S**	**0.46**	**337**	⇑P	Pg	23 02 09.2	+0.6
SSFR				AML	AML		
	comp=N,830µm,0.7s						
SSFR				AML	AML		
	comp=N,1000µm,0.3s						
SSFR				AML	AML		
	comp=E,1150µm,0.2s						
SSFR				AML	AML		
	comp=N,830µm,1.3s						
SSFR				AML	AML		
	comp=E,1250µm,0.2s						
ARRO	**Arrone**	**0.47**	**204**	P	Pg	23 02 09.4	+0.6
ARRO				S	Sb	23 02 17.1	-0.2
ARRO				AML	AML		
	comp=E,502µm,0.3s						
ARRO				AML	AML		
	comp=N,357µm,0.7s						
ATFO	**Monte Foce - G**	**0.49**	**317**	⇑P	Pg	23 02 09.7	+0.6
ATFO				AML	AML		
	comp=E,219µm,0.7s						
ATFO				AML	AML		
	comp=N,246µm,0.2s						
ATFO				AML	AML		
	comp=E,219µm,1.3s						
OFFI	**Offida**	**0.49**	**99**	P	Pb	23 02 10.7	+0.2
OFFI				AML	AML		
	comp=E,887µm,0.3s						
OFFI				AML	AML		
	comp=N,1028µm,0.4s						
ARVD	**Arcevia**	**0.49**	**353**	P	Pg	23 02 09.7	+0.6
ARVD				S	Sb	23 02 18.2	+0.4
ARVD				AML	AML		
	comp=N,284µm,0.4s						
ARVD				AML	AML		
	comp=E,351µm,0.2s						
T1211	**Morro Reatino**	**0.50**	**195**	⇓P	Pg	23 02 09.9	+0.6
T1211				S	Sb	23 02 18.1	+0.1
T1211				AML	AML		
	comp=E,549µm,0.6s						
T1211				AML	AML		
	comp=E,528µm,0.9s						
T1211				AML	AML		
	comp=E,528µm,0.9s						
T1211				AML	AML		
	comp=N,802µm,0.4s						
T1211				AML	AML		
	comp=E,528µm,1.1s						
T1211				AML	AML		
	comp=N,846µm,0.3s						
CESX	**Cesi**	**0.52**	**219**	⇑P	Pg	23 02 10.1	+0.4
CESX				S	Sb	23 02 18.4	-0.2
CESX				AML	AML		
	comp=N,578µm,0.5s						
CESX				AML	AML		
	comp=E,556µm,1.2s						
RM33	**Pellescritta (**	**0.52**	**165**	⇓P	Pg	23 02 10.0	+0.3
RM33				S	Sb	23 02 18.7	-0.1
RM33				AML	AML		
	comp=E,570µm,0.2s						
RM33				AML	AML		
	comp=N,524µm,1.2s						
RM33				AML	AML		
	comp=E,550µm,0.2s						
RM33				AML	AML		
	comp=E,570µm,0.2s						
RM33				AML	AML		
	comp=E,550µm,1.8s						
RM33				AML	AML		
	comp=N,444µm,0.8s						
RM33				AML	AML		
	comp=N,524µm,0.8s						
RM33				AML	AML		
	comp=E,570µm,1.8s						
ATTE	**AVT- Monte Tez**	**0.53**	**291**	⇓P	Pb	23 02 10.9	-0.2
ATTE				AML	AML		
	comp=E,220µm,0.5s						
ATTE				AML	AML		
	comp=N,161µm,1.0s						
ATTE				AML	AML		
	comp=N,161µm,1.0s						
FRON	**Frontone**	**0.55**	**337**	⇑P	Pg	23 02 10.8	+0.5
FRON				AML	AML		
	comp=E,246µm,0.2s						
FRON				AML	AML		
	comp=N,402µm,0.3s						
CAMP	**Campotosto**	**0.55**	**149**	⇓P	Pg	23 02 10.5	+0.1
CAMP				AML	AML		
	comp=E,147µm,0.9s						
CAMP				AML	AML		
	comp=N,156µm,1.2s						
CAMP				AML	AML		
	comp=N,156µm,0.8s						
CAMP				AML	AML		
	comp=E,147µm,1.1s						
PP3	**Marolino**	**0.56**	**49**	⇓P	Pb	23 02 11.8	+0.1
PP3				AML	AML		
	comp=E,597µm,0.3s						
PP3				AML	AML		
	comp=N,758µm,0.4s						
PP3				AML	AML		
	comp=E,626µm,0.3s						
PP3				AML	AML		
	comp=N,778µm,0.4s						
TERO	**Teramo**	**0.58**	**132**	⇓P	Pg	23 02 10.8	0.0
TERO				AML	AML		
	comp=N,378µm,0.1s						
TERO				AML	AML		
	comp=E,334µm,0.2s						
TERO				AML	AML		
	comp=N,408µm,0.1s						
TERO				AML	AML		
	comp=E,366µm,0.2s						
ATVO	**AVT- Monte Val**	**0.58**	**309**	⇑P	Pg	23 02 11.4	+0.4
ATVO				S	Sb	23 02 21.1	+0.5
ATVO				AML	AML		
	comp=E,168µm,0.3s						
ATVO				AML	AML		
	comp=N,126µm,0.7s						
T1247	**Pizzolo (AQ)**	**0.60**	**161**	⇑P	Pg	23 02 11.6	+0.3
T1247				S	Sb	23 02 21.1	0.0
T1247				AML	AML		
	comp=E,444µm,1.3s						
T1247				AML	AML		
	comp=N,416µm,0.3s						
T1247				AML	AML		
	comp=N,416µm,1.7s						
T1222	**Castel Sant'An**	**0.61**	**179**	⇓P	Pg	23 02 12.0	+0.5
T1222				S	Sg	23 02 20.3	+0.8
T1222				AML	AML		
	comp=E,302µm,0.4s						
T1222				AML	AML		
	comp=N,252µm,1.6s						
T1222				AML	AML		
	comp=E,302µm,0.3s						
T1222				AML	AML		
	comp=N,252µm,1.6s						
T1222				AML	AML		
	comp=N,252µm,0.4s						
ATPI	**Pietralunga -**	**0.63**	**314**	⇓P	Pg	23 02 12.3	+0.5
ATPI				S	Sb	23 02 22.9	+0.9
ATPI				AML	AML		
	comp=N,113µm,0.6s						
ATPI				AML	AML		
	comp=E,112µm,0.5s						
PIEI	**Pieia**	**0.64**	**326**	⇓P	Pg	23 02 12.3	+0.4
PIEI				AML	AML		
	comp=E,144µm,1.5s						
PIEI				AML	AML		
	comp=N,161µm,0.2s						
PIEI				AML	AML		
	comp=E,144µm,0.5s						
MGAB	**Montegabbione**	**0.68**	**262**	⇓P	Pb	23 02 13.4	-0.3
MGAB				AML	AML		
	comp=E,272µm,0.6s						
MGAB				AML	AML		
	comp=E,276µm,0.6s						
MGAB				AML	AML		
	comp=N,297µm,1.3s						
MGAB				AML	AML		
	comp=N,276µm,0.2s						
MGAB				AML	AML		
	comp=E,272µm,1.4s						
MGAB				AML	AML		
	comp=N,297µm,0.7s						
GIGS	**Gran Sasso**	**0.69**	**144**	⇑P	Pg	23 02 12.8	-0.1
GIGS				AML	AML		
	comp=E,86µm,0.5s						
GIGS				AML	AML		
	comp=N,53µm,0.3s						
APEC	**Apecchio**	**0.70**	**321**	⇓P	Pb	23 02 13.9	-0.2
APEC				AML	AML		
	comp=E,116µm,1.6s						
APEC				AML	AML		
	comp=N,130µm,0.3s						
FSSB	**Fossombrone**	**0.70**	**345**	P	Pg	23 02 13.6	+0.4
FSSB				S	Sn	23 02 25.6	-1.3
FSSB				AML	AML		
	comp=E,615µm,0.3s						
FSSB				AML	AML		
	comp=N,710µm,0.3s						
FIAM	**Fiamignano**	**0.75**	**175**	⇓P	Pg	23 02 14.2	+0.2
FIAM				S	Sb	23 02 25.8	+0.6
FIAM				AML	AML		
	comp=E,161µm,1.1s						
FIAM				AML	AML		
	comp=N,208µm,0.2s						
PE3	**Peglio**	**0.79**	**331**	P	Pb	23 02 15.9	+0.4
SACS	**San Casciano d**	**0.84**	**259**	⇑P	Pb	23 02 16.7	+0.3
SACS				AML	AML		
	comp=N,65µm,1.6s						
SACS				AML	AML		
	comp=N,65µm,0.4s						
SACS				AML	AML		
	comp=E,72µm,0.5s						
CAFI	**Castiglion Fio**	**0.84**	**293**	⇑P	Pb	23 02 16.1	-0.3
CAFI				S	Sn	23 02 29.7	-0.5
FAGN	**Fagnano**	**0.85**	**151**	P	Pg	23 02 15.5	-0.5
FAGN				AML	AML		
	comp=N,304µm,0.5s						
FAGN				AML	AML		
	comp=E,249µm,0.5s						
VCEL	**Villa Celiera**	**0.86**	**136**	⇓P	Pg	23 02 16.2	0.0
VCEL				AML	AML		
	comp=N,239µm,0.4s						
VCEL				AML	AML		
	comp=E,202µm,0.4s						
CPGN	**Carpegna, Ital**	**0.94**	**327**	P	Pb	23 02 18.4	+0.2
CPGN				AML	AML		
	comp=E,94µm,1.3s						
CPGN				AML	AML		
	comp=N,94µm,1.1s						
CPGN				AML	AML		
	comp=N,94µm,0.9s						
CPGN				AML	AML		
	comp=E,94µm,0.7s						
T0110	**Collepietro**	**0.96**	**145**	⇓P	Pg	23 02 17.9	-0.2
T0110				AML	AML		
	comp=E,192µm,0.3s						
T0110				AML	AML		
	comp=N,163µm,0.4s						
INTR	**Introdacqua**	**1.19**	**147**	⇑P	Pb	23 02 21.6	-0.9
INTR				AML	AML		
	comp=E,63µm,1.0s						
INTR				AML	AML		
	comp=N,185µm,0.7s						
DUGI	**Dugi Otok**	**1.77**	**56**	*e*Pn	Pb	23 02 31.8	-0.5
VIRC	**Vir**	**1.95**	**48**	*e*Pn	Pn	23 02 33.8	+0.9
ZIRJ	**Zirje**	**2.01**	**71**	*e*Pn	Pb	23 02 35.2	-1.2
MORI	**Morici**	**2.13**	**65**	*e*Pn	Pn	23 02 36.7	+1.3
KIJV	**Kijevo**	**2.65**	**67**	*e*Pn	Pn	23 02 43.8	+1.2
KIJV				Sn	Sn	23 03 16.7	+1.8
ABTA	**Abfaltersbach**	**3.75**	**355**	*e*Pn	Pn	23 02 59.7	+1.8
	comp=N,0.9nm,0.3s						

ROM 30 23:02:36.7±0.0**, 42°.783N**±0°.003×**12°.763E**±0°.003**,**
h10$^{\mathrm{km}}$, ML1.7/12**, 2D, Error ellipse: s-maj=0.2km**
s-min=0.2km az=205.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMA	**Monte Martano**	**0.14**	**279**	P	Pg	23 02 40.5	+0.5
MOMA				S	Sg	23 02 43.0	+0.7
MOMA				AML	AML		
	comp=N,397µm,0.3s						
MOMA				AML	AML		
	comp=N,279µm,0.2s						
MOMA				AML	AML		
	comp=E,586µm,0.3s						
MOMA				AML	AML		
	comp=E,582µm,0.3s						
T1217	**Poggiodomo (PG**	**0.14**	**120**	P	Pg	23 02 40.6	+0.6
T1217				S	Sg	23 02 43.1	+0.9
T1217				AML	AML		
	comp=E,1060µm,0.1s						
T1217				AML	AML		
	comp=N,913µm,0.6s						
T1217				AML	AML		
	comp=E,1060µm,0.1s						
T1217				AML	AML		
	comp=N,912µm,0.6s						
T1217				AML	AML		
	comp=N,891µm,0.2s						
T1217				AML	AML		
	comp=N,885µm,0.2s						
T1217				AML	AML		
	comp=E,1058µm,0.1s						
T1217				AML	AML		
	comp=E,1070µm,0.2s						
ARRO	**Arrone**	**0.20**	**179**	P	Pg	23 02 41.6	+0.7
ARRO				AML	AML		
	comp=N,107µm,0.2s						
ARRO				AML	AML		
	comp=E,117µm,0.2s						
T1212	**Cascia, Frazio**	**0.21**	**98**	P	Pg	23 02 41.8	+0.7
T1212				S	Sg	23 02 45.3	+1.2
T1212				AML	AML		
	comp=E,442µm,0.1s						
T1212				AML	AML		
	comp=N,363µm,0.2s						
T1212				AML	AML		
	comp=E,445µm,0.1s						
T1212				AML	AML		
	comp=N,372µm,0.2s						
T1216	**Preci, Frazion**	**0.22**	**60**	⇓P	Pg	23 02 41.9	+0.7
T1216				S	Sg	23 02 45.6	+1.3
T1216				AML	AML		
	comp=E,338µm,0.1s						
T1216				AML	AML		
	comp=N,357µm,0.1s						
CESX	**Cesi**	**0.22**	**218**	P	Pg	23 02 42.1	+1.0
CESX				S	Sg	23 02 45.4	+1.1
CESI	**CESI - Serrava**	**0.24**	**25**	P	Pg	23 02 42.4	+0.6
CESI				S	Sg	23 02 46.5	+1.3
CESI				AML	AML		
	comp=E,167µm,0.1s						
CESI				AML	AML		
	comp=N,266µm,0.1s						
T1211	**Morro Reatino**	**0.26**	**165**	P	Pg	23 02 42.6	+0.7
T1211				S	Sb	23 02 47.0	-1.0
T1211				AML	AML		
	comp=E,174µm,0.1s						
T1211				AML	AML		
	comp=N,175µm,0.1s						
T1211				AML	AML		
	comp=N,177µm,0.1s						
T1211				AML	AML		
	comp=E,170µm,0.1s						
NRCA	**Norcia**	**0.26**	**79**	P	Pg	23 02 42.6	+0.6
NRCA				S	Sb	23 02 47.0	-1.2
NRCA				AML	AML		
	comp=N,160µm,0.1s						
NRCA				AML	AML		
	comp=E,368µm,0.1s						
NRCA				AML	AML		
	comp=N,172µm,0.2s						
NRCA				AML	AML		
	comp=E,348µm,0.1s						
ASSB	**Assisi San Ben**	**0.27**	**344**	P	Pg	23 02 42.9	+0.7
ASSB				S	Sb	23 02 47.7	-0.7
ASSB				AML	AML		
	comp=E,137µm,0.2s						
ASSB				AML	AML		
	comp=N,233µm,0.1s						
T1218	**Civita (PG)**	**0.28**	**113**	⇓P	Pg	23 02 43.1	+0.7
T1218				S	Sb	23 02 47.7	-1.1
T1218				AML	AML		
	comp=E,152µm,0.1s						
T1218				AML	AML		
	comp=E,140µm,0.2s						
T1218				AML	AML		
	comp=N,220µm,0.2s						
T1218				AML	AML		
	comp=N,234µm,0.2s						
T1245	**Castelsantange**	**0.32**	**77**	P	Pg	23 02 43.8	+0.7
T1245				S	Sb	23 02 49.0	-1.0
T1245				AML	AML		
	comp=E,161µm,0.1s						
T1219	**Muccia, Frazio**	**0.33**	**33**	S	Sb	23 02 49.1	-0.9
MC2	**Monte Cornacci**	**0.34**	**67**	S	Sg	23 02 49.0	+0.9
FDMO	**Fiordimonte**	**0.35**	**43**	S	Sb	23 02 49.8	-0.9
MURB	**Monte Urbino**	**0.51**	**340**	S	Sb	23 02 55.9	+0.5

NNC ***30*** *23:03:03.5±4.2, 36°.51N×70°.84E, h0$^{\mathrm{km}}$, mb4.2, mpv4.3,*
Error ellipse: s-maj=47.1km s-min=20.4km az=156.0
IDC ***30*** *23:03:05.3±3.7, 36°.22N×71°.29E, h64$^{\mathrm{km}}$±30$^{\mathrm{km}}$, mb3.7/10,*
mbtmp4.0/16, ML3.7/6, MS3.7/1, Error ellipse:
s-maj=34.4km s-min=21.4km az=144.0
NEIC ***30*** *23:03:09.9±2.7, 36°.47N±0°.06×71°.25E±0°.07, h90$^{\mathrm{km}}$±9$^{\mathrm{km}}$,*
mb4.0/18, Error ellipse: s-maj=9.2km s-min=8.4km
az=210.0

ISC 30 23:03:10.0±0.5**, 36°.47N**±0°.05×**71°.56E**±0°.06**, h114$^{\mathrm{km}}$, n88,**
σ**2$^{\mathrm{s}}$.08**/91**, mb4.0**/15**, 2C-3D, Afghanistan-Tajikistan**
border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	**Garm**	**2.71**	**339**		**Pn**	**23 03 50.8**	**-1.7**
CHGR	**Chuyangaron**	**2.90**	**320**	Pn	**Pn**	**23 03 51.7**	**-3.2**
DRK	**Karamyk**	**3.02**	**4**		**Pn**	**23 03 52.3**	**-4.3**
NIL	**Nilore**	**3.13**	**153**		**Pn**	**23 03 58.9**	**+1.0**
SRNI	**Srinagar**	**3.58**	**130**	*e*S	**Sn**	**23 04 47.5**	**+2.0**
BTK	**Batken**	**3.63**	**351**		**Pn**	**23 04 04.5**	**-0.1**
KSH	**Kashi**	**4.63**	**48**	Pn	**Pn**	**23 04 14.8**	**-3.2**
KSH				Sn	**Sn**	**23 05 03.0**	**-7.8**
KSH				pmax	pmax		
	comp=Z,14nm,0.6s						
KSH				smax	smax		
	comp=N,330nm,0.6s						
KSH				smax	smax		
	comp=E,320nm,0.4s						
JMU	**Jammu**	**4.65**	**143**	*e*P	**Pn**	**23 04 18.3**	**+0.2**
JMU				*e*S	**Sn**	**23 05 09.3**	**-1.7**
THN	**Thein Dam**	**5.29**	**138**	*e*P	**Pn**	**23 04 27.6**	**+0.8**
THN				*e*S	**Sn**	**23 05 24.0**	**-2.6**
THN				IAML		23 05 30.8	
	comp=N,205nm,0.4s						
AML	**Almayashu**	**5.89**	**16**	P	**Pn**	**23 04 35.7**	**+0.4**
	SNR=86						
NRN	**Naryn**	**6.05**	**34**	Pn	**Pn**	**23 04 37.3**	**0.0**
UCH	**Uchtor**	**6.19**	**21**	P	**Pn**	**23 04 39.9**	**+0.5**
	SNR=26						
EKS2	**Erkin-Say**	**6.42**	**15**	P	**Pn**	**23 04 42.8**	**+0.7**
	SNR=32						
BHK	**Bhakra**	**6.46**	**140**	*e*P	**Pn**	**23 04 41.5**	**-1.1**
BHK				*e*S	**Sn**	**23 05 51.5**	**-3.3**
BHK				IAML		23 05 53.6	
	comp=N,147nm,0.4s						
AAK	**Ala-Archa**	**6.57**	**19**	P	**Pn**	**23 04 45.3**	**+1.1**
	SNR=10						
AAK	**Ala-Archa**	**6.57**	**19**	P	**Pn**	**23 04 45.2**	**+1.0**
	comp=N,6.7nm,0.3s,baz=160,slow=4.7,SNR=31						
AAK				S	**Sn**	**23 05 57.4**	**-0.3**
	comp=N,5.4nm,0.3s,baz=126,slow=23,SNR=7.6						
	comp=N,11nm,0.3s						
KK31	**Karatay Array**	**6.68**	**353**		**Pn**	**23 04 44.3**	**-1.2**
KK31	**Karatay Array**	**6.68**	**353**	⇑P	**Pn**	**23 04 44.5**	**-1.0**
	comp=N,8.5nm,0.3s,baz=189,slow=21,SNR=195						
KK31				S	**Sn**	**23 05 57.4**	**-2.7**
	comp=N,7.2nm,0.3s,baz=183,slow=23,SNR=7.1						
KKAR	**Karatay Array**	**6.68**	**353**		**Pn**	**23 04 44.6**	**-0.9**
KKAR	**Karatay Array**	**6.68**	**353**	Pn	**Pn**	**23 04 44.2**	**-1.3**
KBK	**Karagaybulak**	**6.71**	**22**	P	**Pn**	**23 04 47.5**	**+1.3**
	SNR=12						
FRU1	**Bishkek**	**6.76**	**20**		**Pn**	**23 04 47.9**	**+1.2**
ULHL	**Ulahol**	**6.82**	**31**	P	**Pn**	**23 04 49.4**	**+1.8**
	SNR=7.3						
CHMS	**Chumysh**	**6.97**	**20**	P	**Pn**	**23 04 50.1**	**+0.6**
	SNR=14						
SMLA	**Simla**	**7.08**	**137**	*e*P	**Pn**	**23 04 50.1**	**-0.9**
SMLA				*e*S	**Sn**	**23 06 06.3**	**-3.7**
SMLA				IAML		23 06 09.3	
	comp=N,141nm,0.3s						
SMLA				IAML		23 06 09.7	
	comp=E,105nm,0.1s						
SMLA	**Simla**	**7.08**	**137**	*e*P	**Pn**	**23 04 50.2**	**-0.8**
SMLA				*e*S	**Sn**	**23 06 06.2**	**-3.7**
SMLA				IAML		23 06 09.4	
	comp=N,154nm,0.3s						
SMLA				IAML		23 06 10.2	
	comp=E,112nm,0.2s						
TARG	**Taragay, Kyrgy**	**7.16**	**41**		**Pn**	**23 04 52.8**	**+0.4**
TKM2	**Tokmak 2**	**7.16**	**25**	P	**Pn**	**23 04 53.1**	**+0.8**
	SNR=38						
TKM2	**Tokmak 2**	**7.16**	**25**	⇓P	**Pn**	**23 04 53.0**	**+0.8**
	comp=E,12nm,0.6s						
USP	**Ospenovka**	**7.16**	**18**	P	**Pn**	**23 04 52.0**	**0.0**
	SNR=13						
PTH	**Pithoragarh**	**10.02**	**131**	*e*P	**Pn**	**23 05 28.9**	**-2.1**
PTH				*e*S	Sn	23 07 10.9	-11
LGTI	**Lohaghat**	**10.11**	**131**	*e*P	**Pn**	**23 05 29.2**	**-2.8**
GEYT	**Alibeck**	**10.82**	**282**	P	Pn	23 05 34.5	-7.1
	comp=E,0.8nm,0.3s,baz=104,slow=12,SNR=14						
GEYT				S	Sn	23 07 29.1	-12
	comp=E,4.8nm,0.4s,baz=116,slow=20,SNR=8.6						
	comp=E,4.8nm,0.6s						
GEYT	**Alibeck**	**10.82**	**282**		Pn	23 05 35.8	-5.9
GYA0B	**ALIBECK ARRAY**	**10.82**	**282**	Pn	Pn	23 05 35.5	-6.1
GYA0B	**ALIBECK ARRAY**	**10.82**	**282**	P	Pn	23 05 32.4	-9.3
GYA0B				S	Sn	23 07 27.2	-14
PYUN	**Piuthan**	**12.77**	**128**	*e*P	**Pn**	**23 06 05.0**	**-2.6**
	comp=E,54nm,0.4s						
MAKZ	**Makanchi**	**12.93**	**34**		**Pn**	**23 06 09.1**	**-0.3**
MK31	**Makanchi Array**	**13.06**	**34**	Pn	**Pn**	**23 06 11.7**	**+0.5**
MK31	**Makanchi Array**	**13.06**	**34**	⇓P	**Pn**	**23 06 10.6**	**-0.5**
	comp=E,1.2nm,0.6s,baz=203,slow=11,SNR=21						
MKAR	**Makanchi Array**	**13.06**	**34**	P	**Pn**	**23 06 11.4**	**+0.3**
	comp=E,0.1nm,0.3s,baz=226,slow=12,SNR=15						
	comp=E,1.0nm,0.7s						
MKAR	**Makanchi Array**	**13.06**	**34**	Pn	**Pn**	**23 06 11.1**	**-0.1**
DANN	**Dangsing**	**13.10**	**125**	*e*P	**Pn**	**23 06 09.0**	**-3.0**
GKN	**Gorkha**	**13.91**	**124**	*e*P	**Pn**	**23 06 19.5**	**-2.9**
	comp=E,36nm,0.4s						
WMQ	**Urumqi**	**14.35**	**54**	*e*P	**P**	**23 06 31.8**	**+0.3**
DMN	**Daman**	**14.48**	**124**	*e*P	**Pn**	**23 06 26.5**	**-3.3**
	comp=E,24nm,0.4s						
PKIN	**Phulchoki**	**14.70**	**123**	*e*P	**Pn**	**23 06 30.0**	**-2.5**
	comp=E,14nm,0.4s						
PKI	**Pulchoki**	**14.71**	**123**	*e*P	**Pn**	**23 06 30.1**	**-2.7**
GUN	**Gumba**	**14.81**	**121**	*e*P	**Pn**	**23 06 31.0**	**-3.1**
	comp=E,10nm,0.4s						
KURBB	**Kurchatov Arra**	**15.02**	**17**	P	**P**	**23 06 39.0**	**+0.3**
	comp=E,0.1nm,0.3s,baz=207,slow=11,SNR=22						
	comp=E,2.8nm,0.8s						
KURK	**Kurchatov**	**15.12**	**17**	P	**P**	**23 06 40.8**	**+0.9**
JIRN	**Jiri**	**15.19**	**121**	*e*P	**Pn**	**23 06 36.0**	**-2.8**
	comp=E,34nm,0.4s						
AB31	**Akbulak array**	**15.33**	**330**	P	**Pn**	**23 06 36.7**	**-3.4**
	comp=E,1.4nm,0.3s,baz=139,slow=12,SNR=168						

ABKAR	Akbulak array	15.33	330	Pn	Pn	23 06 36.7	-3.4
ABKAR	Akbulak array	15.33	330		Pn	23 06 36.4	-3.7
ABKAR				IAmb	IAmb	23 06 37.9	
	comp=Z,5.4nm,0.3s						
BVA0	Borovoye Array	16.58	358	P	P	23 06 56.3	+0.3
	comp=Z,0.1nm,0.2s,baz=166,slow=11,SNR=9.2						
BVAR	Borovoye Array	16.58	358	P	Pn	23 06 54.9	-0.6
	comp=Z,0.1nm,0.3s,baz=156,slow=8.6,SNR=10						
	comp=Z,1.0nm,0.4s						
BRVK	Borovoye	16.61	357		Pn	23 06 56.3	+0.4
AKTO	Aktyubinsk	17.04	329	P	P	23 06 59.6	-1.5
	comp=Z,1.3nm,0.3s,baz=138,slow=5.8,SNR=21						
AKTO				S	Sn	23 10 00.5	-10
	comp=Z,0.6nm,0.3s,baz=255,slow=16,SNR=1.9						
	comp=Z,4.5nm,0.3s						
AKTO	Aktyubinsk	17.04	329	⇓P	P	23 06 58.9	-2.1
	comp=Z,6.4nm,0.8s						
UOSS	Minazif	17.47	233	P	P	23 07 05.1	-1.0
UOSS				IAmb	IAmb	23 07 14.9	
	comp=Z,6.4nm,1.1s						
LSA	Lhasa	17.74	107	P	Pn	23 07 11.2	+1.0
ZAA0	Zalesovo Array	19.76	24	P	P	23 07 32.2	+1.4
ZAA0				IAmb	IAmb	23 07 33.1	
	comp=Z,8.1nm,0.7s						
ZALV	Zalesovo Beam	19.76	24	P	P	23 07 32.1	+1.3
	comp=Z,5.0nm,0.4s,baz=224,slow=9.7,SNR=16						
	comp=Z,5.0nm,0.4s						
ZALV	Zalesovo Beam	19.76	24	P	P	23 07 31.8	+1.0
GNI	Garni	21.33	288	P	P	23 07 51.9	+3.9
	comp=Z,4.6nm,0.6s,baz=100,slow=4.6,SNR=8.6						
GNI	Garni	21.33	288	P	P	23 07 48.8	+0.8
GNI				IAmb	IAmb	23 07 56.9	
	comp=Z,26nm,1.4s						
ARU	Arti	21.81	340	P	P	23 07 54.0	+1.2
	comp=Z,1.2nm,0.3s,baz=203,slow=13,SNR=3.1						
	comp=Z,1.2nm,0.3s						
ARU	Arti	21.81	340	P	P	23 07 53.9	+1.2
ARU				IAmb	IAmb	23 08 16.9	
	comp=Z,4.9nm,1.0s						
AKH	Akhalkalaki	22.33	291	P	P	23 07 58.3	-0.2
GTA	Gaotai	22.44	74	⇑P	P	23 08 04.0	+4.4
GTA				sP	pP	23 08 27.5	+4.9
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ONI	Oni	22.46	294	P	P	23 08 00.8	+1.0
ONI				IAmb	IAmb	23 08 09.0	
	comp=Z,4.8nm,1.0s						
KBZ	Khabaz	23.02	297	P	P	23 08 03.7	-1.3
	comp=Z,1.1nm,0.7s,baz=27,slow=20,SNR=2.3						
	comp=Z,1.1nm,0.7s						
KIV	Kislovodsk	23.20	298	P	P	23 08 09.2	+2.3
KIV				IAmb	IAmb	23 08 35.7	
	comp=Z,4.8nm,0.8s						
RAYN	Ar Rayn	25.90	247	P	P	23 08 31.7	+0.2
BRTR	Keskin Array B	29.87	288	P	P	23 09 06.0	-0.8
	comp=Z,0.1nm,0.3s,baz=81,slow=9.2,SNR=1.6						
	comp=Z,0.1nm,0.3s						
HHC	Hu-ho-hao-te	31.36	70	*e*P	P	23 09 21.5	+1.7
HHC				pmax	pmax		
	comp=Z,27nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,5.8s						
AKASG	Malin Array Be	33.32	309	P	P	23 09 37.0	+0.3
	comp=Z,1.5nm,0.6s,baz=77,slow=6.6,SNR=9.2						
	comp=Z,1.5nm,0.6s						
BURAR	Bucovina Array	35.68	303	P	P	23 09 58.8	+1.6
BURAR				IAmb	IAmb	23 10 05.9	
	comp=Z,1.3nm,1.1s						
FINES	FINESS Array B	37.76	326	P	P	23 10 16.1	+1.5
	comp=Z,1.2nm,0.3s,baz=120,slow=9.6,SNR=26						
	comp=Z,1.2nm,0.3s						
FINES	FINESS Array B	37.76	326	P	P	23 10 15.9	+1.4
ARCES	ARCESS Array B	41.35	337	P	P	23 10 46.2	+2.0
NB2	NORSAR Subarra	44.68	323	P	P	23 11 12.1	+0.9
	comp=Z,2.5nm,0.6s,baz=96,slow=7.9						
NOA	NORSAR Array B	44.68	323	P	P	23 11 12.3	+1.2
	comp=Z,1.9nm,0.6s,baz=96,slow=7.8,SNR=19						
	comp=Z,1.9nm,0.6s						
ASAJ	Asahikawa	53.19	58	LR	LR	23 37 51.9	
	comp=Z,69nm,20.7s,baz=160,slow=39						
TORD	Torodi Ar. Bea	66.17	269	P	P	23 13 43.9	-1.8
	comp=Z,5.0nm,0.3s,baz=47,slow=5.9,SNR=7.7						
	comp=Z,5.0nm,0.3s						
BOSA	Boshof	78.01	221	P	P	23 14 56.4	+0.4
	comp=Z,2.3nm,0.9s,baz=16,slow=7.4,SNR=3.1						
	comp=Z,2.3nm,0.9s						
YKA	Yellowknife Ar	81.26	3	P	P	23 15 14.7	+1.7
	comp=Z,0.1nm,0.4s,baz=355,slow=4.1,SNR=3.0						
	comp=Z,0.1nm,0.4s						

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*IDC **30** 23:26:00.1±16.0, 35°.89N×70°.92E, h158^{km}±83^{km}, mb3.2/3, mbtmp3.7/7, Error ellipse: s-maj=185.5km s-min=53.1km az=173.0*

*NNC **30** 23:26:09.9±3.3, 37°.01N×70°.95E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=31.0km s-min=25.8km az=76.0*

ISC 30 23:26:08.6±2.4**, 36°.7N**±0°.2×**70°.9E**±0°.1**, h188^{km}, n25, σ1^{s}.43**/27**, 3C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	Iuzhnay	5.49	353	Pg	Pn	23 27 31.4	+2.3
	16nm,0.3s						
IUG				Lg	Lg	23 28 32.7	
	34nm,0.6s						
AML	Almayashu	5.83	21	P	Pn	23 27 35.2	+1.4
	SNR=115						
AML	Almayashu	5.83	21	⇓P	Pn	23 27 35.2	+1.4
	3.1nm,0.5s						
AML				⇑S	Sn	23 28 39.7	-1.3
	14nm,0.8s						
UCH	Uchtor	6.18	25	P	Pn	23 27 39.5	+1.2
	SNR=47						
MRKS	Merke	6.29	16	Pg	Pn	23 27 41.0	+1.5
	8.5nm,0.6s						
EKS2	Erkin-Say	6.35	19	P	Pn	23 27 42.0	+1.8
	SNR=14						
KK31	Karatay Array	6.41	357	P	Pn	23 27 42.5	+1.6
	2.2nm,0.4s,baz=176,slow=12,SNR=34						
KK31				⇑S	Sn	23 28 52.5	-1.4
	15nm,0.5s						
AAK	Ala-Archa	6.54	24	P	Pn	23 27 44.3	+1.6
	SNR=22						
AAK	Ala-Archa	6.54	24	P	Pn	23 27 44.2	+1.6
	10nm,0.3s,baz=193,slow=6.6,SNR=76						
AAK				S	Sn	23 28 57.0	-0.2
	2.0nm,0.3s,baz=145,slow=22,SNR=9.2						
KBK	Karagaybulak	6.71	26	P	Pn	23 27 46.7	+1.7
	SNR=14						
ULHL	Ulahol	6.89	35	P	Pn	23 27 48.5	+1.1
	SNR=11						
CHMS	Chumysh	6.94	24	P	Pn	23 27 49.8	+1.9
	SNR=7.5						
USP	Ospenovka	7.11	21	P	Pn	23 27 51.5	+1.5
	SNR=7.0						
TKM2	Tokmak 2	7.17	28	P	Pn	23 27 52.4	+1.2
	SNR=28						
TKM2	Tokmak 2	7.17	28	⇓P	Pn	23 27 51.9	+0.8
	12nm,0.6s						
KST	Kastek	7.42	30	Pg	Pn	23 27 55.9	+1.6
	13nm,0.4s						
KST				Lg	Lg	23 29 14.4	
	3.8nm,0.8s						
MDOK	Medeo	7.98	34	P	Pn	23 28 02.2	+0.6
	6.4nm,0.6s						
MKAR	Makanchi Array	13.16	36	P	Pn	23 29 08.8	+0.4
	0.8nm,0.5s,baz=207,slow=11,SNR=11						
AB31	Akbulak array	14.89	331	⇑P	P	23 29 36.1	+5.3
	0.7nm,0.8s,baz=143,slow=11,SNR=12						
KURBB	Kurchatov Arra	14.95	19	P	Pn	23 29 29.6	-0.9
	0.5nm,0.5s,baz=206,slow=11,SNR=6.1						
BVAR	Borovoye Array	16.33	359	P	Pn	23 29 48.4	+1.1
	0.4nm,0.3s,baz=159,slow=9.9,SNR=4.2						
AKTO	Aktyubinsk	16.59	330	P	Pn	23 29 50.2	-0.2
	0.7nm,0.4s,baz=144,slow=8.8,SNR=2.5						
ZALV	Zalesovo Beam	19.76	25	P	Pn	23 30 25.9	-1.8
	0.9nm,0.3s,baz=212,slow=10,SNR=3.5						
	0.9nm,0.3s						
FINES	FINESS Array B	37.30	326	P	P	23 33 01.9	-0.2
	1.7nm,0.9s,baz=116,slow=9.4,SNR=5.8						
	1.7nm,0.9s						
NOA	NORSAR Array B	44.20	323	P	P	23 33 57.7	-0.9
	0.4nm,0.7s,baz=96,slow=7.7,SNR=2.0						
	0.4nm,0.7s						

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*IDC **30** 23:27:59.8±5.2, 6°.98N×73°.08W, h146^{km}±41^{km}, mb2.8/2, mbtmp3.3/3, Error ellipse: s-maj=87.7km s-min=40.5km az=89.0*

*RSNC **30** 23:28:01.5±1.0, 6°.82N×73°.18W, h144^{km}±4^{km}, ML3.2, Mw3.6*

ISC 30 23:27:59.8±0.9**, 6°.88N**±0°.04×**73°.14W**±0°.05**, h150^{km}**±6^{km}**, n27, σ1^{s}.30**/49**, 3C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.29	189	⇓*e*P	Pn	23 28 20.8	+0.1
BARC				*e*S	Sn	23 28 36.0	-0.6
BARC				*i*		23 28 39.0	
	comp=Z,280nm,0.3s						
BRRC	Barranca, Sant	0.61	292	⇑*i*P	Pn	23 28 22.4	+0.6
BRRC				*e*S	Sn	23 28 39.1	+0.5
BRRC				*i*		23 28 43.6	
	comp=Z,280nm,0.2s						
PAMC	Pamplona, Colo	0.63	43	⇑*e*P	Pn	23 28 23.6	+1.1
PAMC				*e*S	Sn	23 28 40.6	+0.9
PAMC				*i*		23 28 42.5	
	comp=Z,550nm,0.5s						
RUSC	La Rusia	0.98	177	⇓*e*P	Pn	23 28 25.0	-0.1
RUSC				*e*S	Sn	23 28 43.6	-0.7
RUSC				*i*		23 28 46.3	
	comp=Z,107nm,0.6s						
PTBC	PUERTO BERRIO,	1.35	256	⇑*e*P	Pn	23 28 27.3	-0.7
PTBC				*e*S	Sn	23 28 48.1	-1.3
PTBC				*i*		23 28 54.0	
	comp=Z,263nm,0.3s						
SPBC	San Pablo de B	1.54	217	*e*P	Pn	23 28 29.3	-0.6
SPBC				*e*S	Sn	23 28 52.1	-0.8
SPBC				*i*		23 28 58.4	
	comp=Z,215nm,0.2s						
ZARC	Zaragoza, Cauc	1.81	290	*e*P	Pn	23 28 33.2	+0.4
ZARC				*e*S	Sn	23 28 58.2	0.0
ZARC				*i*		23 29 08.5	
	comp=Z,199nm,0.6s						
NORC	Norcasia	2.16	233	*e*P	Pn	23 28 36.9	-0.1
NORC				*e*S	Sn	23 29 03.4	-2.1
NORC				*i*		23 29 11.1	
	comp=Z,130nm,0.2s						
CHIC	Chingaza	2.31	195	*e*P	Pn	23 28 39.4	+0.2
CHIC				*e*S	Sn	23 29 08.8	-0.6
CHIC				*i*		23 29 11.4	
	comp=Z,56nm,0.4s						
ROSC	El Rosal	2.34	210	P	Pn	23 28 41.3	+1.8
	comp=Z,27nm,0.3s,baz=301,slow=17,SNR=23						
ROSC				S	Sn	23 29 12.2	+2.2
	comp=Z,107nm,0.3s,baz=24,slow=21,SNR=19						
ROSC	El Rosal	2.34	210	*e*P	Pn	23 28 41.0	+1.5
ROSC				*e*S	Sn	23 29 10.1	+0.1
ROSC				*i*		23 29 15.3	
	comp=Z,101nm,0.4s						
HELC	Santa Helena	2.48	254	*e*P	Pn	23 28 42.9	+1.8
HELC				*e*S	Sn	23 29 12.4	-0.3
HELC				*i*		23 29 17.5	
	comp=Z,89nm,0.4s						
UREC	San Jos de Ur	2.53	290	*e*P	Pn	23 28 40.7	-0.6
UREC				*e*S	Sn	23 29 11.3	-2.1
UREC				*i*		23 29 20.7	
	comp=Z,223nm,0.3s						
VILC	Villavicencio,	2.81	191	*e*P	Pn	23 28 45.0	0.0
VILC				*e*S	Sn	23 29 19.8	0.0
VILC				*i*		23 29 30.1	
	comp=Z,89nm,0.4s						
PTGC	Puerto Gaitan,	2.84	159	⇓*e*P	Pn	23 28 44.2	-1.1
PTGC				*e*S	Sn	23 29 17.7	-2.7
PTGC				*i*		23 29 20.7	
	comp=Z,57nm,0.4s						
CBOC	Ciudad Bolivar	3.03	251	*e*P	Pn	23 28 48.0	+0.1
CBOC				*e*S	Sn	23 29 23.9	-0.9
CBOC				*i*		23 29 29.4	
	comp=Z,29nm,0.4s						
DBBC	Dabeiba	3.06	273	*e*P	Pn	23 28 49.2	+1.1
DBBC				*e*S	Sn	23 29 23.1	-2.1
DBBC				*i*		23 29 28.8	
	comp=Z,79nm,0.4s						
ARGC	Ariguani, Magd	3.16	340	*e*P	Pn	23 28 50.5	+1.2
ARGC				*i*		23 29 34.6	
	comp=Z,23nm,0.4s						
APAC	Apartado, Choc	3.56	287	*e*P	Pn	23 28 55.4	+0.9
APAC				*e*S	Sn	23 29 37.3	+0.5
APAC				*i*		23 29 41.7	
	comp=Z,46nm,0.6s						
PRAC	Prado	3.60	209	*e*P	Pn	23 28 54.7	-0.3
PRAC				*e*S	Sn	23 29 36.7	-1.0
PRAC				*i*		23 29 42.9	
	comp=Z,60nm,0.3s						
SJCC	San Jacinto, C	3.62	326	*e*P	Pn	23 28 54.7	-0.5
SJCC				*e*S	Sn	23 29 35.5	-2.7
SJCC				*i*		23 29 39.7	
	comp=Z,75nm,0.5s						
ORTC	Ortega, Tolima	3.62	216	*e*P	Pn	23 28 56.4	+1.1
ORTC				*e*S	Sn	23 29 40.8	+2.5
ORTC				*i*		23 29 44.9	
	comp=Z,54nm,0.5s						
PLMC	San Jos del P	3.69	238	*e*P	Pn	23 28 55.6	-0.6
PLMC				*e*S	Sn	23 29 37.2	-2.7
PLMC				*i*		23 29 47.2	
	comp=Z,22nm,0.4s						
YOTC	Yotoco, Valle	4.30	228	*e*P	Pn	23 29 06.2	+2.0
TXAR	Lajitas Array	36.41	312	P	P	23 34 50.8	+0.6
	comp=Z,0.2nm,0.6s,baz=134,slow=9.1,SNR=2.5						
	comp=Z,0.2nm,0.6s						
YKA	Yellowknife Ar	63.20	340	P	P	23 38 11.3	-0.4
	comp=Z,0.2nm,0.6s,baz=134,slow=6.5,SNR=6.2						
	comp=Z,0.2nm,0.6s						
ASAR	Alice Springs	149.13	234	PKPbc	PKPbc	23 47 31.9	+0.6
	comp=Z,0.2nm,0.4s,baz=142,slow=3.5,SNR=1.8						

IDC 30 23:34:10.6±6.1**, 19°.46S**×**176°.38W, h0^{km}, mb4.0**/3**, mbtmp4.0**/3**, Error ellipse: s-maj=188.2km s-min=99.3km az=143.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	39.61	243	P	P	23 41 44.2	+0.1
	1.4nm,0.7s,baz=75,slow=8.4,SNR=3.0						
	1.4nm,0.7s						
ASAR	Alice Springs	46.25	256	P	P	23 42 37.8	-0.3
	1.4nm,0.5s,baz=97,slow=7.5,SNR=22						
	1.4nm,0.5s						
WRA	Warramunga Arr	46.26	261	P	P	23 42 38.1	-0.1
	0.7nm,0.3s,baz=97,slow=7.7,SNR=16						
	0.7nm,0.3s						
AKASG	Malin Array Be	142.82	333	PKP	PKPdf	23 53 45.2	-0.7
	0.5nm,0.3s,baz=36,slow=4.4,SNR=7.0						

NNC 30 23:40:47.9±4.4**, 37°.06N**×**70°.54E, h0^{km}, mb3.6, mpv3.3, 2C-1D, Error ellipse: s-maj=34.9km s-min=26.9km az=158.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	Iuzhnay	5.09	356	Pg	Pn	23 42 08.5	+2.8
	12nm,0.2s						
IUG				Lg	Lg	23 43 10.2	
	13nm,0.4s						
AML	Almayashu	5.62	25	⇑P	Pn	23 42 12.7	-0.4
	0.3nm,0.6s						
AML				⇑S	Sn	23 43 19.1	+0.5
	1.5nm,0.8s						
KK31	Karatay Array	6.04	360	P	Pn	23 42 19.9	+1.4
	0.5nm,0.3s,baz=181,slow=14,SNR=10						
KK31				⇓S	Sn	23 43 30.0	+1.8
	1.2nm,0.3s,baz=182,slow=22						
MRKS	Merke	6.04	19	Pg	Pn	23 42 18.5	-0.1
	1.8nm,0.5s						
MRKS				Lg	Lg	23 43 29.4	
	2.4nm,0.6s						
AB31	Akbulak array	14.42	331	P	Pn	23 44 13.2	0.0
	0.4nm,0.7s,baz=155,slow=12,SNR=5.7						

IDC 30 23:46:23.7±23.0**, 33°.54N**×**105°.33E, h0^{km}, mb3.4**/2**, mbtmp3.4**/3**, ML2.8**/1**, Error ellipse: s-maj=344.9km s-min=91.3km az=145.0, Gansu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	14.30	3	Pn	Pn	23 49 47.7	+0.2
	baz=188,slow=15,SNR=4.9						
	0.7nm,1.0s						
MKAR	Makanchi Array	21.93	314	P	P	23 51 18.8	+0.2
	0.6nm,0.9s,baz=114,slow=9.2,SNR=4.5						
	0.6nm,0.9s						
ZALV	Zalesovo Beam	25.04	331	P	P	23 51 49.3	-0.2
	0.9nm,0.3s,baz=118,slow=8.3,SNR=1.5						
	0.9nm,0.3s						

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*RSPR **30** 23:49:09.7, 19°.19N×65°.19W, h33^{km}±12^{km}, MD3.3/6*

*NEIC **30** 23:49:10.2±1.0, 19°.12N±0°.05×65°.25W±0°.04, h35^{km}±2^{km}, ML2.4/26, Md3.3/12(RSPR), Error ellipse: s-maj=10.4km s-min=3.7km az=211.0*

ISC 30 23:49:05.0±1.7**, 19°.27N**±0°.09×**65°.26W**±0°.04**, h10^{km}, n35, σ0^{s}.97**/36**, 7C, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUPR	Culebra, Puert	0.96	181	⇑*e*P	Pg	23 49 24.2	+0.7
CUPR	Culebra, Puert	0.96	181	*e*S	Sg	23 49 35.7	-0.2
CUPR	Culebra, Puert	0.96	181		Pg	23 49 24.1	+0.7
CUPR					Sg	23 49 35.6	-0.3
CBYP	Canovanas	1.14	210	⇑*e*P	Pg	23 49 28.4	+1.4
CBYP	Canovanas	1.14	210	*e*S	Sb	23 49 41.2	-0.6
CBYP	Canovanas	1.14	210		Sb	23 49 41.2	-0.6
CBYP	Canovanas	1.14	210		Pg	23 49 28.0	+1.0
CBYP	Canovanas	1.14	210	IAML		23 49 48.0	
	comp=N,163nm,0.2s						
CBYP				IAML		23 49 48.6	
	comp=E,146nm,0.2s						
MTP	Monte Pirata	1.20	193	⇑*e*P	Pn	23 49 28.0	+0.1
MTP	Monte Pirata	1.20	193	*e*S	Sb	23 49 42.8	-0.6
MTP	Monte Pirata	1.20	193		Pn	23 49 28.0	+0.1
MTP					Sb	23 49 42.5	-0.9
MTP				IAML		23 49 43.8	
	comp=E,145nm,0.5s						
MTP				IAML		23 49 43.8	
	comp=N,96nm,0.3s						
GCPR	Guaynabo City	1.23	219	Pn	Pg	23 49 29.9	+1.2
HUMP	Col San Antoni	1.25	206	⇑*e*P	Pb	23 49 29.1	+0.4
HUMP	Col San Antoni	1.25	206	*e*S	Sb	23 49 43.9	-1.1
HUMP	Col San Antoni	1.25	206		Pn	23 49 28.9	+0.3
HUMP					Sb	23 49 43.6	-1.3
HUMP				IAML		23 49 45.6	
	comp=E,50nm,0.2s						
HUMP				IAML		23 49 48.5	
	comp=N,47nm,0.2s						
SJG	San Juan	1.43	216	Pn	Pb	23 49 32.5	+0.8
IGPR	InterUniversit	1.52	212	⇑*e*P	Pn	23 49 33.1	+0.8
IGPR	InterUniversit	1.52	212		Pn	23 49 33.1	+0.8
CDVI	St. Croix	1.58	163		Pb	23 49 35.0	+0.6
CDVI	St. Croix	1.58	163	*e*P	Pb	23 49 35.2	+0.8
AOPR	Arecibo Observ	1.69	237	⇑*e*P	Pb	23 49 35.6	-0.5
AOPR	Arecibo Observ	1.69	237	*e*S	Sn	23 49 56.3	0.0
AOPR	Arecibo Observ	1.69	237		Sn	23 49 56.3	0.0
AOPR	Arecibo Observ	1.69	237		Pb	23 49 35.3	-0.8
AOPR	Arecibo Observ	1.69	237	IAML		23 49 57.7	
	comp=E,63nm,0.3s						
AOPR				IAML		23 49 57.8	
	comp=N,42nm,0.4s						
AOPR	Arecibo Observ	1.69	237	*e*P	Pn	23 49 33.9	-0.7
UUPR	Utuado, UPR, P	1.71	234	Pn	Pb	23 49 36.9	+0.3
OBIP	Obispado Ponce	1.76	226	Pn	Pb	23 49 37.2	-0.3
OBIP				IAML		23 50 08.4	
	comp=E,20nm,2.5s						
OBIP				IAML		23 50 32.1	
	comp=N,27nm,2.5s						
ICMP	Isla Caja de M	1.82	221	Pn	Pb	23 49 37.8	-0.7
ICMP				IAML		23 50 15.0	
	comp=N,50nm,1.8s						
ICMP				IAML		23 50 30.5	
	comp=E,41nm,0.9s						
MLPR	Magueyes Islan	2.13	233	Pn	Pb	23 49 42.2	-1.5
MLPR				IAML		23 50 25.0	
	comp=E,23nm,1.8s						
MLPR				IAML		23 50 42.4	
	comp=N,31nm,2.0s						
CRPR	Cabo Rojo, PR	2.15	235	⇑*e*P	Pn	23 49 42.3	+1.3
CRPR	Cabo Rojo, PR	2.15	235		Pn	23 49 42.3	+1.3
CRPR	Cabo Rojo, PR	2.15	235	IAML		23 50 36.2	
	comp=E,44nm,2.0s						
SMRT	St. Maarten	2.40	120	Pn	Pn	23 49 45.6	+1.1
ANBD	Bethesda, Anti	3.99	123	*e*P	Pn	23 50 06.5	+0.2
ANBD				*e*S	Sn	23 50 50.2	-3.0

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*IDC **30** 23:54:55.0±0.9, 3°.54N×126°.63E, h0^{km}, mb4.1/8, mbtmp4.0/8, Error ellipse: s-maj=88.5km s-min=16.8km az=72.0*

*NEIC **30** 23:54:57.8±1.8, 3°.61N±0°.09×126°.76E±0°.07, h10^{km}±1^{km}, mb4.2/18, Error ellipse: s-maj=20.2km s-min=3.2km az=38.0*

*DJA **30** 23:54:58.4±1.4, 4°N±14°×12°7E±°, h73^{km}±18^{km}, M4.0/9, mb4.0/6, MLv4.1/9*

ISC 30 23:55:02.6±0.6**, 3°.56N**±0°.07×**126°.71E**±0°.08**, h53^{km}, n39, σ1^{s}.32**/39**, mb4.2**/16**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.19	276	P	Pn	23 55 22.5	-0.4
SGSI				S	Sn	23 55 38.2	+0.1
TNTI	Ternate	2.84	167	P	Pn	23 55 50.6	+5.1
LBMI	Labuha	4.24	169	P	Pn	23 56 08.3	+3.6
GTOI	Gorontalo	4.70	232	P	Pn	23 56 14.2	+3.2
	8.7nm,0.5s,0.0nm						
SANI	Sanana	5.61	187	P	Pn	23 56 24.0	+0.4
	7.0nm,0.5s,0.1nm						
TOLI2	Tolitoli	6.40	248	Pn	Pn	23 56 34.0	-0.4
MYLDM	Lahad Datu	8.34	281	Pn	Pn	23 57 03.8	+2.7
FAKI	Fak Fak	8.48	139	Pn	Pn	23 57 01.4	-1.6
KKM	Kota Kinabalu	10.75	284	Pn	Pn	23 57 32.2	-1.9
SBUM	Sibu	14.51	266	P	Pn	23 58 25.5	+0.3
MTN	Manton Dam	16.87	165	P	Pn	23 58 54.0	-1.3
MTN				IAmb	IAmb	23 59 01.9	
	comp=Z,12nm,0.9s						
KNRA	Kununurra	19.22	174	P	Pn	23 59 24.3	+0.5
KNRA				IAmb	IAmb	23 59 28.4	
	comp=Z,15nm,1.1s						
FITZ	Fitzroy Crossi	21.54	183	P	P	23 59 48.0	+0.4
YHNB	Yeheng	21.61	347	P	P	23 59 48.4	0.0
YHNB				IAmb	IAmb	23 59 52.0	
	comp=Z,15nm,0.9s						
WB0	Warramunga Arr	24.38	162	P	P	00 00 15.0	-1.0
WB0				IAmb	IAmb	00 00 16.2	
	comp=Z,9.3nm,0.9s						
WRA	Warramunga Arr	24.52	162	P	P	00 00 16.3	-1.1
	comp=Z,4.1nm,0.8s,baz=342,slow=10,SNR=18						
	comp=Z,4.1nm,0.8s						
WRA	Warramunga Arr	24.52	162	P	P	00 00 15.6	-1.7
WB2	Warramunga Arr	24.53	162	P	P	00 00 16.4	-0.9
WB2				IAmb	IAmb	00 00 18.0	
	comp=Z,8.9nm,0.8s						
PSA00	Pilbara Seismi	25.86	195	P	P	00 00 29.2	-0.3
PSA00				IAmb	IAmb	00 00 39.4	
	comp=Z,4.9nm,0.9s						
RABL	Rabaul	26.57	107	P	P	00 00 38.6	+2.6
ASAR	Alice Springs	27.95	166	P	P	00 00 47.7	-0.6
	comp=Z,0.4nm,0.3s,baz=346,slow=14,SNR=14						
	comp=Z,0.4nm,0.3s						
ASAR	Alice Springs	27.95	166	P	P	00 00 48.3	0.0
FORT	Forrest	34.17	178	P	P	00 01 42.9	0.0
BBOO	Buckleboo	37.24	167		P	00 02 08.9	-0.3
STKA	Stephens Creek	37.97	159	P	P	00 02 14.7	-0.7
	comp=Z,1.0nm,0.4s,baz=339,slow=12,SNR=4.8						
	comp=Z,1.0nm,0.4s						
STKA	Stephens Creek	37.97	159	P	P	00 02 15.6	+0.2
USRK	Ussuriysk Ar.	40.74	6	P	P	00 02 38.2	-0.1
KLR	Kul'dur	45.71	5	P	P	00 03 17.9	-0.4
	comp=Z,0.9nm,0.5s,baz=181,slow=9.3,SNR=5.0						
	comp=Z,0.9nm,0.5s						
SONM	Songino Array	47.46	341	P	P	00 03 31.5	-0.7
	comp=Z,0.4nm,0.6s,baz=153,slow=7.5,SNR=4.3						
	comp=Z,0.4nm,0.6s						
SONM	Songino Array	47.46	341	P	P	00 03 32.2	0.0
MK31	Makanchi Array	57.69	325	P	P	00 04 47.3	-0.5
MK31				IAmb	IAmb	00 04 49.7	
	comp=Z,0.8nm,0.5s						
MKAR	Makanchi Array	57.69	325	P	P	00 04 46.9	-0.9
	comp=Z,1.1nm,0.4s,baz=118,slow=7.5,SNR=25						
	comp=Z,1.1nm,0.4s						
MKAR	Makanchi Array	57.69	325	P	P	00 04 47.9	+0.1
TARG	Taragay, Kyrgy	57.87	318		P	00 04 47.3	-2.4
TARG				IAmb	IAmb	00 04 47.6	
	comp=Z,1.5nm,0.8s						
MAKZ	Makanchi	57.87	325	P	P	00 04 48.9	-0.2

MAKZ				IAmb	IAmb	00 04 50.4	
	comp=Z,1.2nm,0.5s						
KDJ	Kajisay	58.46	318	P	P	00 04 53.4	-0.2
KDJ				IAmb	IAmb	00 04 58.1	
	comp=Z,5.3nm,1.0s						
KURK	Kurchatov	61.88	328	P	P	00 05 16.7	+0.2
ARCES	ARCESS Array B	90.60	340	P	P	00 07 58.3	-0.6
	comp=Z,5.9nm,1.0s,baz=58,slow=5.0,SNR=5.1						
	comp=Z,5.9nm,1.0s						
FINES	FINESS Array B	91.98	332	P	P	00 08 06.6	+1.2
	comp=Z,0.7nm,0.7s,baz=173,slow=5.0,SNR=4.0						
	comp=Z,0.7nm,0.7s						

*AZER **30** 23:55:13.7±0.0,38°.01N×39°.81E,h2^{km},Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*DDA **30** 23:55:14.6±0.0,38°.05N×39°.78E,h7^{km}±2^{km},MW3.8*

*ISK **30** 23:55:14.3,38°.07N×39°.79E,h2^{km},ML3.9/13*

ISC 30 23:55:15.0±1.2,**38°.06N**±0°.03×**39°.79E**±0°.02,**h5**^{km}±10^{km},**n56,**σ**1^{s}.50**/71,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DYBB	Diyarbakir	0.29	110	Pg	Pg	23 55 21.2	+0.5
HANI	Diyarbakir_Han	0.60	53	P	Pg	23 55 26.2	-0.2
KOVA	Elazig, Kovanc	0.65	1	SPECP		23 55 27.0	
KOVA				P	Pg	23 55 27.7	+0.2
NARI	Adyaman-Kaht	0.83	258	SPECP		23 55 30.0	
NARI				P	Pg	23 55 30.9	0.0
HANM	anlurfa/Hi	0.86	237	SPECP		23 55 31.0	
HANM				P	Pg	23 55 31.7	+0.1
SANL	SANLIURFA_Merk	1.09	216	P	Pg	23 55 36.2	+0.4
SANL				S	Sg	23 55 50.5	+0.5
MAYA	Malatya/Merkez	1.11	284	SPECP		23 55 35.0	
MAYA				P	Pg	23 55 35.6	-0.7
SVAN	Silvan-Diyarba	1.11	85	Pn	Pg	23 55 36.2	-0.1
SVAN				Sn	Sn	23 55 52.8	-0.3
SVAN	Silvan-Diyarba	1.11	85	SPECP		23 55 36.0	
SVAN				P	Pg	23 55 36.1	-0.1
SVAN				S	Sb	23 55 51.3	-0.3
SVAN				*i* AML	AML	23 55 53.0	
	comp=N,2µm,0.7s						
BNGB	Bingl	1.16	36	Pn	Pg	23 55 37.1	-0.2
BNGB				Sn	Sn	23 55 54.1	-0.4
AZEY	Adyaman-Merk	1.25	259	SPECP		23 55 38.0	
AZEY				P	Pg	23 55 38.5	-0.3
AZEY				S	Sg	23 55 55.7	+0.7
AZEY				*i* AML	AML	23 55 57.0	
	comp=N,3µm,0.3s						
SLHN	Bingol, Solhan	1.32	47	SPECP		23 55 39.0	
SLHN				P	Pg	23 55 39.9	-0.4
SLHN				S	Sb	23 55 58.2	+0.6
SLHN				*i* AML	AML	23 56 06.0	
	comp=E,2µm,0.6s						
MIDY	Mardin/Midyat-	1.43	117	SPECP		23 55 40.0	
MIDY				P	Pn	23 55 40.9	-0.8
SURC	SANLIURFA_SURC	1.50	219	SPECP		23 55 42.0	
SURC				P	Pn	23 55 42.7	0.0
SURC				S	Sn	23 56 02.3	-0.4
SURC				*i* AML	AML	23 56 06.0	
	comp=E,2µm,0.6s						
SURC				*i* AML	AML	23 56 06.0	
	comp=N,2µm,0.3s						
MUSM	Mu-Merkez	1.51	63	SPECP		23 55 42.0	
MUSM				P	Pn	23 55 42.5	-0.3
MUSM				S	Sb	23 56 01.3	-1.7
MUSM				*i* AML	AML	23 56 08.0	
	comp=N,640nm,0.9s						
ARPR	Arapgir-MALATY	1.54	313	Pn	Pn	23 55 43.4	+0.1
EUZM	Uzumlu	1.65	357	SPECP		23 55 45.0	
EUZM				P	Pn	23 55 45.5	+0.7
AKCA	Adyaman/G¶l	1.69	262	SPECP		23 55 44.0	
AKCA				P	Pn	23 55 44.9	-0.3
AKCA				S	Sn	23 56 07.3	0.0
AKCA				*i* AML	AML	23 56 17.0	
	comp=N,4µm,0.6s						
VRTB	Varto-Mus	1.71	49	Pn	Pn	23 55 45.9	+0.3
VRTB				Sn	Sb	23 56 08.9	+0.1
VRTB	Varto-Mus	1.71	49	SPECP		23 55 46.0	
VRTB				P	Pn	23 55 46.6	+1.0
GURO	Guroymak-BITLI	1.83	74	Pn	Pn	23 55 47.0	-0.2
GURO				Sn	Sn	23 56 11.9	+1.0
BLIS	Bitlis-Merkez	1.86	78	P	Pn	23 55 47.5	-0.2
DARE	Darende-Malaty	1.89	287	Pn	Pn	23 55 48.4	+0.4
EJDE	Erzurum, Palan	2.13	33	P	Pb	23 55 54.5	+0.2
GAZ	Gaziantep	2.23	248	Pn	Pn	23 55 53.5	+0.8
BAYT	Aydıntepe-Bayb	2.35	6	Pn	Pn	23 55 55.1	+0.6
KMRS	Kahramanmaras	2.36	257	Pn	Pn	23 55 55.2	+0.8
MLAZ	Malazgirt-MUS	2.42	62	Pn	Pn	23 55 56.1	+0.8
KOPR	Koprukoy-ERZUR	2.51	39	Pn	Pn	23 55 57.4	+0.7
AKDM	Akdamar-Van	2.52	83	Pn	Pn	23 55 57.7	+0.8
VANB	Van	2.88	78	Pn	Pn	23 56 02.8	+1.1
HYR	Heyderabad	4.28	66	P	Pn	23 56 24.3	+3.4
HYR				S	Sb	23 57 25.0	+2.1
BEIL	Beino	4.56	221	*e*P	Pn	23 56 25.5	+0.8
NAX	Nakhchivan	4.60	74	P	Pn	23 56 28.9	+3.6
NAX				S	Sb	23 57 30.7	-1.4
SBZ	Shahbuz	4.70	72	P	Pn	23 56 30.2	+3.5
SBZ				S	Sb	23 57 33.8	-1.1
HWQ	Hawqa	4.89	221	*e*P	Pn	23 56 30.5	+1.2
ORD	Ordubad	4.94	78	P	Pn	23 56 33.6	+3.6
QZX	Qazax, Azerbai	5.25	53	P	Pn	23 56 37.8	+3.7
QZX				S	Sb	23 57 50.8	+0.2
ZAHL	Zahle	5.25	218	*e*P	Pn	23 56 36.1	+1.8
GDB	GEDABAY	5.33	58	P	Pn	23 56 39.1	+3.7
GDB				S	Sb	23 57 52.3	-0.8
BHL	Bhannes	5.33	220	*e*P	Pn	23 56 37.0	+1.6
DQRL	Deir Qamar	5.53	220	*e*P	Pn	23 56 40.0	+1.9
QRWL	Qaraoun	5.60	218	*e*P	Pn	23 56 40.7	+1.6
GANJ	Ganja	5.68	61	P	Pn	23 56 43.7	+3.6
GANJ				S	Sb	23 58 01.5	-1.5
NATI	Neve Ativ	5.81	216	P	Pn	23 56 43.5	+1.7
GEM	Giv'at Ha'Em	5.89	216	P	Pn	23 56 43.9	+1.0
SHMJ	Saham	6.25	213	P	Pn	23 56 49.0	+1.1
ASF	Jabal al Asfar	6.33	203	P	Pn	23 56 51.2	+2.1
BLGI	Bet Lehem HaGe	6.50	217	P	Pg	23 57 20.3	+0.7
HSUJ	Al Zarqa	6.63	207	P	Pg	23 57 22.7	+0.7
HMDT	Nahal Hemdat	6.76	212	P	Pn	23 56 55.9	+1.0
SLTI	Sal'it	6.99	215	P	Pn	23 56 59.7	+1.7
UJAP	Al Uja	7.05	212	P	Pb	23 57 10.8	-7.1
WALJ	Wala	7.26	208	P	Pn	23 57 12.1	+10
DSI	Dead Sea	7.42	211	P	Pb	23 57 21.5	-2.7
VYHS	Vyhne	18.43	311	*e*PN	Pn	23 59 30.5	-0.6

*IDC **31** 00:12:13.8±0.8,29°.73N×129°.30E,h156^{km}±7^{km},mb3.5/14, mbtmp3.9/19,Error ellipse: s-maj=16.7km s-min=7.2km az=104.0*

*NIED **31** 00:12:14.9,29°.71N×129°.69E,h155^{km},MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.55; $M_{\theta\theta}$-1.04; $M_{\phi\phi}$0.49; $M_{r\theta}$0.62; $M_{\theta\phi}$-0.12; $M_{\phi r}$-0.31; Fault plane solution: $M_0$1.12000×10^{15} NP1: ϕ_s114.00000°,δ71.00000°,λ124.00000°. NP2: ϕ_s230.00000°,δ39.00000°,λ32.00000°.*

*NEIC **31** 00:12:14.6±1.4,29°.75N±0°.05×129°.5E±0°.1,h156^{km}±7^{km}, mb4.5/46 Error ellipse: s-maj=13.0km s-min=7.4km az=98.0*

*JMA **31** 00:12:14.9±0.2,29°.7N±0°.7×13°0E±°,h155^{km}±1^{km}, MV4.2/36,NEAR TOKARA ISLANDS*

ISC 31 00:12:13.8±0.7,**29°.73N**±0°.04×**129°.53E**±0°.06,**h156**^{km}±6^{km},**n107,**σ**1^{s}.31**/119,**mb4.5**/38,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNN	Nakanoshima	0.32	70	P	Pn	00 12 36.1	+1.0
JTAJ	Takarajima	0.65	207	P	Pn	00 12 38.0	+1.3
JTAJ				S	Sn	00 12 56.4	+2.4
JKC	Kuchinoerabu	0.93	38	*e*P	Pn	00 12 39.7	+1.2
JYAK	Yakushimahirau	0.98	59	P	Pn	00 12 39.2	+0.3
JYAK				*e*S	Sn	00 12 57.1	-1.2
JAM	Amami Oshima	1.32	177	*i* P	Pn	00 12 42.8	+0.8
JMTN	Minamitane	1.36	60	P	Pn	00 12 42.6	+0.2
JZK	Kikaishima	1.47	165	P	Pn	00 12 45.2	+1.7
JZK	Kikaishima	1.47	165	A	A	00 12 45.2	
	comp=E,9.0nm,0.2s,comp=E,10.0nm,1.2s						
JAMN	Amaminishikomi	1.52	192	P	Pn	00 12 44.8	+0.7
JAMN				S	Sn	00 13 07.4	+0.3
JAMN	Amaminishikomi	1.52	192	A	A	00 12 44.8	
	comp=E,12nm,0.2s,comp=E,12nm,0.2s						
JTN	Tanegashima 3	1.55	53	*i* P	Pn	00 12 44.5	+0.2
JTN				S	Sn	00 13 06.9	-1.0
JSU	Suzuyama	1.94	24		Pn	00 12 49.5	+1.0
JSU				Sn	Sn	00 13 15.8	+0.4
JSU	Suzuyama	1.94	24	P	Pn	00 12 49.6	+1.0
JSU	Suzuyama	1.94	24	P	Pn	00 12 49.6	+1.0
JSJ	Shimokoshiki	1.94	5	P	Pn	00 12 49.4	+0.8
JNAR	Kushima--Naru	2.33	40	P	Pn	00 12 54.1	+1.0
JOKE	Okinoerabujima	2.51	200	P	Pn	00 12 56.2	+0.8
JOKE				S	Sn	00 13 28.2	+0.7
JTZ	Takazaki	2.54	31	*i* P	Pn	00 12 56.6	+0.9
JTZ				S	Sn	00 13 28.4	+0.3
JZO	Okuchi	2.57	21	*i* P	Pn	00 12 57.6	+1.5
JOW	Kunigami	3.10	201	P	Pn	00 13 02.7	0.0
	55nm,0.3s,baz=88,slow=20,SNR=8.6						
JOW				S	Sn	00 13 38.3	-2.1
	349nm,0.2s,baz=121,slow=28,SNR=32						
JOW	Kunigami	3.10	201		Pn	00 13 02.5	-0.1
JOW				Sn	Sn	00 13 39.0	-1.4
JNU	Nakatsue	3.57	18	P	Pn	00 13 10.2	+1.5
	56nm,0.3s,baz=250,slow=3.5,SNR=120						
JNU				S	Sn	00 13 53.6	+2.3
	105nm,0.8s,baz=230,slow=18,SNR=10						
JNU	Nakatsue	3.57	18		Pn	00 13 10.0	+1.3
JNU				Sn	Sn	00 13 51.5	+0.1
JNU	Nakatsue	3.57	18	P	Pn	00 13 10.4	+1.8
JMZ	Minamidaito 2	4.18	159		Pn	00 13 17.5	+1.0
JMZ				Sn	Sn	00 14 03.4	-2.0
JTU	Tsushima	4.78	359	Pn	Pn	00 13 25.7	+1.4
JTU	Tsushima	4.78	359	P	Pn	00 13 26.0	+1.7
JMN	Monobe	5.44	42		Pn	00 13 33.4	+0.3
JMN				Sn	Sn	00 14 33.0	-2.1
JMN	Monobe	5.44	42	P	Pn	00 13 33.4	+0.3
JHS	Saijyo	6.06	29		Pn	00 13 41.5	+0.1
JHS				Sn	Sn	00 14 44.9	-5.1
JHS	Saijyo	6.06	29	P	Pn	00 13 41.8	+0.4
	35nm,2.2s						
KSRS	Korea Array	7.82	351	P	Pn	00 14 05.5	+0.8
	3.4nm,0.5s,baz=172,slow=14,SNR=12						
INU	Inuyama	8.44	47	Pn	Pn	00 14 16.2	+3.2
INU	Inuyama	8.44	47	P	Pn	00 14 16.5	+3.5
	20nm,0.8s						
JGF	Kuroka	8.81	46	Pn	Pn	00 14 21.0	+3.0
JGF	Kuroka	8.81	46	P	Pn	00 14 21.0	+3.0
	14nm,2.0s						
JHJ2	Mitsune	9.41	66	Pn	Pn	00 14 31.0	+5.2
JHJ2	Mitsune	9.41	66	P	Pn	00 14 31.3	+5.5
	308nm,1.5s						
MJAR	Matsushiro Arr	9.95	45	P	Pn	00 14 36.6	+3.6
	1.9nm,0.4s,baz=246,slow=13,SNR=7.3						
KLR	Kul'dur	19.55	4	P	P	00 16 28.1	-1.1
	0.8nm,0.5s,baz=238,slow=6.5,SNR=4.3						
SONM	Songino Array	25.38	322	P	P	00 17 26.1	-0.5
	0.8nm,0.3s,baz=141,slow=11,SNR=18						
	0.8nm,0.3s						
SONM	Songino Array	25.38	322	P	P	00 17 26.4	-0.2
FAKI	Fak Fak	32.57	175	P	P	00 18 31.6	+1.2
FAKI				IAmb	IAmb	00 18 56.4	
	comp=Z,19nm,1.3s						
MKAR	Makanchi Array	40.16	309	P	P	00 19 34.0	-0.6
	comp=Z,0.2nm,0.4s,baz=94,slow=11,SNR=6.4						
MKAR				PcP	PcP	00 21 35.3	-0.4
	comp=Z,0.5nm,0.6s,baz=90,slow=3.4,SNR=4.8						
	comp=Z,0.2nm,0.4s						
KURBB	Kurchatov Arra	43.20	314	P	P	00 19 58.0	-1.1
	comp=Z,0.5nm,0.4s,baz=96,slow=8.9,SNR=7.6						
KURBB				PcP	PcP	00 21 44.8	-0.8
	comp=Z,0.3nm,0.6s,baz=99,slow=3.4,SNR=2.4						
	comp=Z,0.5nm,0.4s						
WRA	Warramunga Arr	49.60	174	P	P	00 20 50.0	+0.6
	comp=Z,1.4nm,0.6s,baz=354,slow=8.2,SNR=15						
	comp=Z,1.4nm,0.6s						
ASAR	Alice Springs	53.26	175	P	P	00 21 17.3	+0.8
	comp=Z,0.4nm,0.5s,baz=5.2,slow=14,SNR=13						
	comp=Z,0.4nm,0.5s						
NEA2	Nenana	59.91	30	P	P	00 22 03.6	+0.6
NEA2				IAmb	IAmb	00 22 04.7	
	comp=Z,8.7nm,1.0s						
MCK	McKinley	60.07	31	P	P	00 22 04.2	+0.1
MCK				IAmb	IAmb	00 22 35.6	
	comp=Z,12nm,1.5s						
MDM	Murphy Dome	60.23	29	P	P	00 22 06.1	+0.9
MDM				IAmb	IAmb	00 22 06.9	
	comp=Z,6.4nm,0.7s						
H24K	Noodor Dome	60.27	28	P	P	00 22 06.7	+1.2
H24K				IAmb	IAmb	00 22 17.1	
	comp=Z,11nm,1.4s						
WRH	Wood River Hil	60.35	30	P	P	00 22 06.9	+1.0
WRH				IAmb	IAmb	00 22 45.2	
	comp=Z,6.5nm,1.3s						
CCB	Clear Creek Bu	60.45	29	P	P	00 22 07.3	+0.7
POKR	Poker Plat Res	60.55	29	P	P	00 22 08.4	+1.1
POKR				IAmb	IAmb	00 22 08.9	
	comp=Z,4.8nm,0.6s						
SML	Sawmill	60.61	33	P	P	00 22 08.7	+0.9
IL31		60.82	29	P	P	00 22 09.6	+0.6
ILAR	Eielson Array	60.82	29	P	P	00 22 08.6	-0.5
	comp=Z,1.1nm,0.7s,baz=270,slow=5.5,SNR=21						
	comp=Z,1.1nm,0.7s						
ILAR	Eielson Array	60.82	29	P	P	00 22 08.8	-0.3
HDA	Harding Lake	60.85	30	P	P	00 22 09.1	-0.3
HDA				IAmb	IAmb	00 22 09.8	
	comp=Z,5.5nm,0.8s						
SCM	Sheep Creek Mo	61.08	33	P	P	00 22 11.7	+0.7
PRP	Porcupine Dome	61.28	28	P	P	00 22 12.7	+0.3
PRP				IAmb	IAmb	00 22 14.5	
	comp=Z,3.5nm,0.8s						
BMAR	Burnt Mountain	61.36	26	P	P	00 22 14.5	+1.7
M24K	Tolsona, Glenn	61.56	32	P	P	00 22 15.1	+0.8
RIDG	Independent Ri	61.87	30	P	P	00 22 16.0	-0.2
RIDG				IAmb	IAmb	00 22 43.8	
	comp=Z,13nm,1.4s						
SCRK	Sand Creek	62.20	30	P	P	00 22 18.8	+0.3
SCRK				IAmb	IAmb	00 22 19.5	
	comp=Z,3.5nm,0.6s						
DOT	Dot Lake	62.23	30	P	P	00 22 18.8	+0.2
DOT				IAmb	IAmb	00 22 19.3	
	comp=Z,4.9nm,0.7s						
I26K	Coal Creek Min	62.29	28	P	P	00 22 19.2	+0.3
N25K	Chitina, Valde	62.40	33	P	P	00 22 20.7	+0.9
MENT	Mentasta	62.52	31	P	P	00 22 21.2	+0.6
MENT				IAmb	IAmb	00 22 26.0	
	comp=Z,7.9nm,1.1s						
L26K	Log Cabin Wild	62.67	31	P	P	00 22 22.6	+1.0
GLB	Gilahina Butte	62.80	33	P	P	00 22 23.4	+0.9
GLB				IAmb	IAmb	00 22 42.2	
	comp=Z,15nm,1.5s						
M26K	Nabesna, AK	62.96	31	P	P	00 22 24.6	+1.0
K27K	Chicken	63.01	30	P	P	00 22 24.7	+0.9
K27K				IAmb	IAmb	00 22 25.6	
	comp=Z,7.2nm,1.2s						
VRDI	Verde Repeater	63.01	33	P	P	00 22 24.4	+0.4
MCARA	McCarthy VSAT	63.18	33	P	P	00 22 26.0	+1.0
EGAK	Eagle	63.23	29	P	P	00 22 25.3	+0.1
L27K	Beaver Creek,	63.34	31	P	P	00 22 27.0	+1.0
BCAR	Beaver Creek A	63.36	31	P	P	00 22 27.5	+1.3
A36M	Sachs Harbour	66.55	19	P	P	00 22 47.3	+0.8
A36M				IAmb	IAmb	00 22 47.9	
	comp=Z,5.8nm,0.7s						
ARCES	ARCESS Array B	67.18	338	P	P	00 22 49.1	-1.5
	comp=Z,3.9nm,0.9s,baz=65,slow=8.6,SNR=5.5						
	comp=Z,3.9nm,0.9s						
FARO	Faro, Yukon	67.33	30	P	P	00 22 53.0	+1.3
FARO				IAmb	IAmb	00 22 53.6	
	comp=Z,6.0nm,0.8s						
MWH	Moku‘aweowe	67.80	80	P	P	00 22 53.9	-2.0
C36M	Paulatuk	68.02	22	P	P	00 22 56.4	+0.6
C36M				IAmb	IAmb	00 22 56.9	
	comp=Z,7.9nm,0.6s						
EUNU	Eureka	68.68	6	P	P	00 22 59.5	-0.3
FINES	FINESS Array B	70.40	330	P	P	00 23 09.2	-1.3
	comp=Z,0.6nm,0.3s,baz=65,slow=5.2,SNR=12						
	comp=Z,0.6nm,0.3s						
FINES	FINESS Array B	70.40	330	P	P	00 23 09.4	-1.1
RES	Resolute Bay	71.90	11	P	P	00 23 19.3	0.0
RAYN	Ar Rayn	73.81	288	P	P	00 23 32.2	+0.6
YKA	Yellowknife Ar	74.88	26	P	P	00 23 37.5	+0.6
	comp=Z,1.3nm,0.7s,baz=302,slow=5.6,SNR=23						
	comp=Z,1.3nm,0.7s						
BRTR	Keskin Array B	75.81	308	P	P	00 23 42.8	-0.1
	comp=Z,0.4nm,0.7s,baz=35,slow=5.3,SNR=3.7						
	comp=Z,0.4nm,0.7s						
NC405	NORSAR Array S	76.45	334	P	P	00 23 44.7	-1.3
NC405				IAmb	IAmb	00 24 06.9	
	comp=Z,20nm,1.2s						
NB201	NORSAR Array S	76.65	334	P	P	00 23 45.5	-1.6
NB2	NORSAR Subarra	76.69	334	P	P	00 23 45.7	-1.7
	comp=Z,0.7nm,0.7s,baz=47,slow=5.6						
NOA	NORSAR Array B	76.69	334	P	P	00 23 45.6	-1.7
	comp=Z,0.6nm,0.6s,baz=50,slow=5.5,SNR=6.4						
	comp=Z,0.6nm,0.6s						
NC204	NORSAR Array S	76.71	334	P	P	00 23 46.0	-1.5
NC204				IAmb	IAmb	00 24 24.5	
	comp=Z,15nm,1.2s						
BURAR	Bucovina Array	77.42	318	P	P	00 23 51.8	0.0
SCO	Scoresbysund	78.00	351	P	P	00 23 55.3	+0.9
GERES	GERESS Array B	83.10	323	P	P	00 24 22.5	+0.4
	comp=Z,0.3nm,0.5s,baz=42,slow=3.1,SNR=5.4						
	comp=Z,0.3nm,0.5s						
SFJD	Kangerlussuaq	83.58	0	P	P	00 24 23.5	-0.5
SFJD				IAmb	IAmb	00 24 30.0	
	comp=Z,7.5nm,1.1s						
FFC	Flin Flon	84.95	27	P	P	00 24 31.7	+0.4
FFC				IAmb	IAmb	00 24 32.3	
	comp=Z,4.2nm,0.8s						
ITM	Ithomi	85.02	310	P	P	00 24 30.9	-1.1
PDAR	Pinedale Array	89.72	39	P	P	00 24 55.5	+0.7
	comp=Z,0.6nm,0.7s,baz=105,slow=1.5,SNR=6.1						
	comp=Z,0.6nm,0.7s						
ULM	Lac du Bonnet	90.78	27	P	P	00 24 59.5	+0.3
	comp=Z,1.7nm,0.4s,baz=319,slow=4.6,SNR=3.1						
	comp=Z,1.7nm,0.4s						
P17A	Butcher Ranch,	91.23	42	P	P	00 25 02.5	+0.9
P17A				IAmb	IAmb	00 25 04.1	
	comp=Z,2.7nm,0.7s						
P18A	Preston Nutter	91.41	42	P	P	00 25 03.6	+0.8
P18A				IAmb	IAmb	00 25 05.2	
	comp=Z,3.2nm,0.8s						
ESJX	Sierra Juarez	92.66	51	P	P	00 25 08.8	+0.4
SDV	Santo Domingo	136.97	30	PKP	PKPdf	00 31 19.1	0.0
	comp=Z,2.4nm,0.7s,baz=242,slow=2.6,SNR=5.4						

MAN 31 00:27:20.5,9°.98N×125°.28E,h3^{km},mb4.1,ML2.9,MS2.5, 3C-5D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.28	134	⇓*i*P	Pg	00 27 27.0	+1.0
SCPH				*i* S	Sb	00 27 32.3	-1.1
MSLP	Maasin	0.44	290	⇑*e*P	Pg	00 27 29.4	+0.4
MSLP				*e*S	Sb	00 27 37.2	-0.8
GLSP	General Luna,	0.86	103	⇓*e*P	Pg	00 27 35.1	-1.8
GLSP				*e*S	Sg	00 27 46.4	-1.7
BUTP	Butuan	1.06	162	⇓*e*P	Pn	00 27 45.4	+3.1
BUTP				*e*S	Sn	00 27 59.4	+1.8
OCLP	Ormoc	1.25	328	⇓*e*P	Pg	00 27 44.5	0.0
OCLP				*e*S	Sn	00 28 02.3	+0.1
LLP	Lapu-Lapu	1.34	284	*e*P	Pn	00 27 43.7	-2.4
LLP				*e*S	Sg	00 28 01.8	-1.8
TBP	Tagbilaran	1.43	258	*e*P	Pn	00 27 46.4	-1.0
TBP				*e*S	Sb	00 28 04.8	-1.6
BIPH	Bislig	2.08	149	⇓*e*P	Pn	00 27 56.2	-0.1
BIPH				*e*S	Sb	00 28 25.9	+0.7
DCPH	Dipolog City	2.36	234	⇑*e*P	Pn	00 27 51.0	-9.1
RCP	Roxas	2.94	302	⇑*e*P	Pn	00 28 08.7	+0.4
RCP				*e*S	Sn	00 28 43.1	-1.1

*IDC **31** 00:56:23.7±0.7,24°.20N×125°.01E,h0^{km},mb3.9/20, mbtmp3.9/22,ML3.2/2,MS3.8/4,Error ellipse: s-maj=18.3km s-min=16.6km az=69.0*

*JMA **31** 00:56:27.6±0.2,24°.3N±0°.9×125°.3E±0°.7,h39^{km},MV3.8/11, NEAR MIYAKOJIMA ISLAND*

*NIED **31** 00:56:27.6,24°.25N×125°.26E,h39^{km},MW4.1,Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}0.17; $M_{\theta\theta}$-0.10; $M_{\phi\phi}$-0.07; $M_{r\theta}$1.09; $M_{\theta\phi}$-0.79; $M_{\phi r}$0.98; Fault plane solution: $M_0$1.56000×10^{15} NP1:ϕ_s50.00000°, δ80.00000°,λ94.00000°. NP2:ϕ_s207.00000°,δ11.00000°, λ67.00000°.*

*NEIC **31** 00:56:29.2±2.8,24°.0N±0°.1×125°.19E±0°.07,h36^{km}±7^{km}, mb4.4/38,Mwr4.0/18 Error ellipse: s-maj=15.0km s-min=9.2km az=167.0,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.11; $M_{\theta\theta}$-0.52; $M_{\phi\phi}$0.63; $M_{r\theta}$0.96; $M_{\theta\phi}$-0.03; $M_{\phi r}$0.84; Fault plane solution: $M_0$1.40000×10^{15} NP1:ϕ_s225.14000°,δ88.19000°, λ-65.55000°. NP2:ϕ_s319.10000°,δ24.51000°, λ-175.64000°. Principal axes: T 1.3411, Plg38.0000°, Azm293.0000°; N 0.1127, Plg24.0000°, Azm44.0000°; P -1.4538, Plg42.0000°, Azm158.0000°;*

*NEIC **31** 00:56:29.2,24°.03N×125°.19E,h36^{km}*

ISC 31 00:56:27.3±1.5,**24°.26N**±0°.07×**125°.23E**±0°.05,**h26**^{km}±9^{km},**n101,**σ**1^{s}.57**/102,**mb4.3**/39,**MS3.8**/4,**Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMJ2	Miyako jima3	0.49	10	*i* P	Pb	00 56 38.0	+0.6
JMJ2				S	Sn	00 56 45.8	-0.5
JOGS	Gusukube	0.53	18	*i* P	Pb	00 56 38.6	+0.6
JOGS				S	Sn	00 56 47.0	-0.3
JIRB	Irabujima	0.57	355	*i* P	Pb	00 56 39.0	+0.3
JIRB				S	Sn	00 56 47.6	-0.8
JTJ	Tarama	0.62	309	*i* P	Pn	00 56 40.0	-0.3
JTJ				*e*S	Sn	00 56 49.4	0.0
JIKM	Ikemajima	0.67	1	*i* P	Pn	00 56 40.6	-0.5
JIKM				S	Sn	00 56 50.6	-0.1
JISG	Ishigakijimahi	0.90	292	P	Pb	00 56 44.2	-0.1
JISG				*e*S	Sb	00 56 56.2	+0.4
JIJ	Ishigaki jima	1.00	276	*i* P	Pb	00 56 46.4	+0.4
JIJ				*e*S	Sb	00 56 59.1	+0.5
JKRS	Kuro-shima	1.11	269	P	Pb	00 56 48.1	+0.2
HATJ	Hateruma jima	1.32	262	P	Pb	00 56 50.7	-0.6
IRIF	Iriomote-Funau	1.37	274	*i* P	Pb	00 56 51.6	-0.6
YOJ	Yonaguni jima	2.04	276	Pn	Pn	00 57 00.8	+1.0
NACB	Ninganchiao	3.32	269	Pn	Pn	00 57 17.5	0.0
NACB	Ninganchiao	3.32	269	P	Pn	00 57 17.7	+0.1
TATO	Taipei	3.48	283	Pn	Pn	00 57 21.7	+2.0
YHNB	Yeheng	3.54	278	Pn	Pn	00 57 22.5	+1.8
YHNB	Yeheng	3.54	278	P	Pn	00 57 22.6	+2.0
YULB	Yu-li	3.70	257	Pn	Pn	00 57 22.1	-0.8
YULB	Yu-li	3.70	257	P	Pn	00 57 22.0	-0.8
JOW	Kunigami	3.76	46	Pn	Pn	00 57 26.9	+3.3
	3.4nm,0.3s,baz=127,slow=28,SNR=6.1						
JOW				Sn	Sb	00 58 14.6	-3.5
	7.0nm,0.3s,baz=77,slow=25,SNR=1.4						
	9.0nm,0.3s						
JOW	Kunigami	3.76	46	Pn	Pn	00 57 27.7	+4.1
SSLB	Suanglung	3.94	264	Pn	Pn	00 57 26.4	+0.3
SSLB	Suanglung	3.94	264	P	Pn	00 57 26.6	+0.5
TWGBT	Beinan	4.07	250	P	Pn	00 57 26.4	-1.5
TWG	Pinlang	4.07	250	Pn	Pn	00 57 26.8	-1.2
TPUB	Ta-pu	4.32	258	Pn	Pn	00 57 32.1	+0.8
TPUB	Ta-pu	4.32	258	P	Pn	00 57 31.8	+0.4
JMZ	Minamidaito 2	5.65	73	Pn	Pn	00 57 52.6	+3.0
KNMB	Chin-men Tao	6.24	273		Pn	00 57 58.2	+0.5
NJ2	Nanjing	9.59	326	*e*P	Pn	00 58 48.0	+4.4
NJ2				pP		00 58 55.0	
NJ2				sP		00 59 00.3	
NJ2				pmax	pmax		
	comp=Z,16nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,190nm,5.2s						
NJ2				LR	LR		
	comp=N,670nm,14.2s						
NJ2				LR	LR		
	comp=E,360nm,15.6s						
NJ2				LR	LR		
	comp=Z,630nm,12.8s						
KSRS	Korea Array	13.36	9	Pn	P	00 59 41.2	-3.3
	comp=Z,0.2nm,0.3s,baz=195,slow=14,SNR=2.6						
MJAR	Matsushiro Arr	16.57	39	Pn	P	01 00 21.0	+0.8
	comp=Z,0.1nm,0.3s,baz=181,slow=14,SNR=4.1						
	comp=Z,1.5nm,0.6s						
PZH	PanZhiHua	21.34	281	P	P	01 01 14.0	+1.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,80nm,4.5s						
CMAR	Chiang Mai Arr	25.13	262	P	P	01 01 49.4	-1.0
	comp=Z,0.7nm,0.3s,baz=54,slow=8.2,SNR=4.8						
	comp=Z,0.7nm,0.3s						
SONM	Songino Array	27.88	332	P	P	01 02 13.8	-1.2
	comp=Z,0.4nm,0.3s,baz=157,slow=11,SNR=4.6						
	comp=Z,0.4nm,0.3s						
PETK	Petropavlovsk-	37.80	32	P	P	01 03 41.1	-0.2
	comp=Z,1.5nm,0.8s,baz=225,slow=3.9,SNR=1.8						

	comp=Z,1.5nm,0.8s						
PETK	**Petropavlovsk-**	**37.80**	**32**	P	**P**	**01 03 41.5**	**+0.2**
H11N1	**WAKE ISLAND Hy**	**38.79**	**88**	T	T	01 45 07.0	
	baz=290						
H11N2	**WAKE ISLAND Hy**	**38.79**	**88**	T	T	01 45 06.2	
	baz=290,slow=76						
H11N3	**WAKE ISLAND Hy**	**38.81**	**88**	T	T	01 45 06.2	
	baz=290,slow=76						
MK31	**Makanchi Array**	**40.90**	**314**	P	**P**	**01 04 07.1**	**-0.2**
MKAR	**Makanchi Array**	**40.90**	**314**	P	**P**	**01 04 06.8**	**-0.5**
	comp=Z,2.8nm,0.5s,baz=100,slow=10,SNR=52						
	comp=Z,2.8nm,0.5s						
MKAR	**Makanchi Array**	**40.90**	**314**	P	**P**	**01 04 07.0**	**-0.2**
MAKZ	**Makanchi**	**41.10**	**314**	P	**P**	**01 04 09.0**	**0.0**
MAKZ				IAmb	IAmb	01 04 10.0	
	comp=Z,4.1nm,0.5s						
ZALV	**Zalesovo Beam**	**42.24**	**325**	P	**P**	**01 04 16.6**	**-1.5**
	comp=Z,1.7nm,0.4s,baz=92,slow=8.9,SNR=4.8						
	comp=Z,1.7nm,0.4s						
KDJ	**Kajisay**	**43.37**	**306**	P	**P**	**01 04 28.6**	**+0.9**
KDJ				IAmb	IAmb	01 04 38.8	
	comp=Z,4.6nm,0.9s						
NRN	**Naryn**	**44.15**	**305**	P	**P**	**01 04 35.3**	**+1.1**
NRN				IAmb	IAmb	01 04 36.0	
	comp=Z,3.1nm,0.7s						
KURK	**Kurchatov**	**44.44**	**319**	P	**P**	**01 04 35.3**	**-0.6**
KURK				IAmb	IAmb	01 04 45.6	
	comp=Z,6.6nm,1.1s						
KURBB	**Kurchatov Arra**	**44.47**	**319**	P	**P**	**01 04 35.5**	**-0.7**
	comp=Z,2.0nm,0.7s,baz=109,slow=9.0,SNR=16						
	comp=Z,2.0nm,0.7s						
WB0	**Warramunga Arr**	**44.66**	**168**	P	**P**	**01 04 37.8**	**-0.2**
WB0				IAmb	IAmb	01 04 46.1	
	comp=Z,6.5nm,1.1s						
WRA	**Warramunga Arr**	**44.82**	**168**	P	**P**	**01 04 39.1**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=348,slow=8.7,SNR=18						
	comp=Z,1.2nm,0.5s						
WB2	**Warramunga Arr**	**44.82**	**168**	P	**P**	**01 04 36.8**	**-2.5**
WB2				IAmb	IAmb	01 04 47.1	
	comp=Z,12nm,1.1s						
FRU1	**Bishkek**	**45.34**	**307**	P	**P**	**01 04 40.0**	**-3.3**
AAK	**Ala-Archa**	**45.41**	**307**	P	**P**	**01 04 43.8**	**-0.2**
	comp=Z,1.4nm,0.5s,baz=137,slow=9.1,SNR=5.3						
	comp=Z,1.4nm,0.5s						
AAK	**Ala-Archa**	**45.41**	**307**	P	**P**	**01 04 44.7**	**+0.7**
GAR	**Garm**	**48.33**	**301**	P	**P**	**01 05 07.5**	**+0.6**
ASAR	**Alice Springs**	**48.37**	**169**	P	**P**	**01 05 07.1**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=356,slow=12,SNR=14						
	comp=Z,0.6nm,0.4s						
KKAR	**Karatay Array**	**48.37**	**307**	P	**P**	**01 05 08.1**	**+1.1**
CHGR	**Chuyangaron**	**49.23**	**301**	P	**P**	**01 05 14.0**	**+0.2**
KBL	**Kabul**	**49.47**	**296**	P	**P**	**01 05 16.8**	**+1.1**
KBL				IAmb	IAmb	01 05 17.5	
	comp=Z,3.7nm,0.6s						
BRVK	**Borovoye**	**50.05**	**320**	P	**P**	**01 05 19.6**	**0.0**
BRVK				IAmb	IAmb	01 05 37.6	
	comp=Z,2.2nm,0.6s						
ABKAR	**Akbulak array**	**56.04**	**314**	P	**P**	**01 06 04.2**	**+0.4**
SPIA	**Saint Paul Isl**	**56.19**	**36**	P	**P**	**01 06 02.9**	**-1.8**
ARU	**Arti**	**57.28**	**323**	P	**P**	**01 06 12.2**	**-0.3**
ARU				IAmb	IAmb	01 06 22.5	
	comp=Z,3.5nm,0.8s						
AKTO	**Aktyubinsk**	**57.31**	**316**	P	**P**	**01 06 12.8**	**0.0**
	comp=Z,1.4nm,0.5s,baz=102,slow=15,SNR=8.8						
AKTO				LR	LR	01 35 03.6	
	comp=Z,62nm,18.8s,baz=158,slow=41						
	comp=Z,1.4nm,0.5s						
GEYT	**Alibeck**	**57.94**	**301**	P	**P**	**01 06 18.3**	**+0.7**
	comp=Z,1.9nm,0.6s,baz=54,slow=7.0,SNR=5.0						
	comp=Z,1.9nm,0.6s						
GEYT	**Alibeck**	**57.94**	**301**	P	**P**	**01 06 18.7**	**+1.1**
GEYT				IAmb	IAmb	01 06 31.4	
	comp=Z,3.5nm,0.8s						
IMAR	**Indian Mountai**	**64.47**	**27**	P	**P**	**01 07 03.4**	**+2.2**
H21K	**Melozitna Rive**	**64.87**	**27**	P	**P**	**01 07 07.3**	**+3.4**
H21K				IAmb	IAmb	01 07 25.4	
	comp=Z,3.2nm,0.9s						
PPLA	**Purkeypile**	**65.35**	**30**	P	**P**	**01 07 07.5**	**+0.3**
PPLA				IAmb	IAmb	01 07 09.8	
	comp=Z,6.5nm,1.2s						
CAST	**Castle Rocks**	**65.35**	**29**	P	**P**	**01 07 10.1**	**+3.0**
CAST				IAmb	IAmb	01 07 19.7	
	comp=Z,3.3nm,1.1s						
BPAW	**Bear Paw Mtn.**	**65.77**	**29**	P	**P**	**01 07 13.2**	**+3.5**
MLY	**Manley**	**65.78**	**28**	P	**P**	**01 07 13.2**	**+3.3**
H23K	**Yukon River**	**66.20**	**27**	P	**P**	**01 07 15.1**	**+2.6**
H23K				IAmb	IAmb	01 07 30.0	
	comp=Z,3.8nm,0.7s						
MDM	**Murphy Dome**	**66.85**	**28**	P	**P**	**01 07 19.7**	**+3.0**
MDM				IAmb	IAmb	01 07 30.9	
	comp=Z,5.5nm,1.2s						
H24K	**Noodor Dome**	**66.88**	**27**	P	**P**	**01 07 20.6**	**+3.7**
H24K				IAmb	IAmb	01 07 31.3	
	comp=Z,2.3nm,0.9s						
WRH	**Wood River Hil**	**66.98**	**28**	P	**P**	**01 07 19.7**	**+2.3**
WRH				IAmb	IAmb	01 07 37.5	
	comp=Z,1.6nm,0.9s						
SML	**Sawmill**	**67.27**	**31**		**P**	**01 07 19.9**	**+0.5**
ILAR	**Eielson Array**	**67.45**	**28**	P	**P**	**01 07 23.4**	**+3.0**
	comp=Z,0.4nm,0.8s,baz=286,slow=6.5,SNR=5.6						
	comp=Z,0.4nm,0.8s						
BMAR	**Burnt Mountain**	**67.93**	**25**	P	**P**	**01 07 25.7**	**+2.2**
KVAR	**Kislovodsk Arr**	**68.40**	**310**	P	**P**	**01 07 27.2**	**+0.3**
	comp=Z,2.1nm,0.8s,baz=158,slow=5.7,SNR=1.7						
	comp=Z,2.1nm,0.8s						
EGAK	**Eagle**	**69.85**	**27**	P	**P**	**01 07 38.2**	**+2.8**
EGAK				IAmb	IAmb	01 07 49.6	
	comp=Z,3.7nm,1.0s						
INK	**Inuvik**	**71.76**	**23**	P	**P**	**01 07 49.5**	**+2.6**
	comp=Z,0.7nm,0.9s,baz=97,slow=3.5,SNR=1.6						
	comp=Z,0.7nm,0.9s						
M30M	**Minto, Yukon**	**72.34**	**29**	P	**P**	**01 07 53.6**	**+3.1**
FIA1	**FINESS Array S**	**73.23**	**330**	P	**P**	**01 07 56.0**	**+0.2**
FINES	**FINESS Array B**	**73.23**	**330**	P	**P**	**01 07 55.6**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=62,slow=6.2,SNR=15						
	comp=Z,2.0nm,0.6s						
FINES	**FINESS Array B**	**73.23**	**330**	P	**P**	**01 07 55.8**	**0.0**
M31M	**Drury Creek, Y**	**73.52**	**29**	P	**P**	**01 07 58.5**	**+0.9**
EUNU	**Eureka**	**74.50**	**5**	P	**P**	**01 08 02.3**	**-0.8**
EUNU				IAmb	IAmb	01 08 10.7	
	comp=Z,2.6nm,0.9s						
AKASG	**Malin Array Be**	**75.25**	**319**	P	**P**	**01 08 07.4**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=50,slow=5.7,SNR=2.2						
	comp=Z,0.4nm,0.5s						
BRTR	**Keskin Array B**	**76.08**	**307**	P	**P**	**01 08 13.1**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=87,slow=6.6,SNR=4.8						
	comp=Z,0.6nm,0.7s						
BRTR	**Keskin Array B**	**76.08**	**307**	P	**P**	**01 08 14.0**	**+0.9**
RAO	**Raoul Island**	**76.26**	**131**	LR	LR	01 37 48.4	
	comp=Z,70nm,20.4s,baz=148,slow=32						
EIL	**Elat**	**78.62**	**297**	LR	LR	01 49 20.4	
	comp=Z,43nm,19.1s,baz=238,slow=40						
BURAR	**Bucovina Array**	**78.85**	**317**	P	**P**	**01 08 28.3**	**+0.1**
NC405	**NORSAR Array S**	**79.61**	**333**	P	**P**	**01 08 31.5**	**-0.6**
NB2	**NORSAR Subarra**	**79.86**	**333**	P	**P**	**01 08 33.4**	**0.0**
	comp=Z,0.4nm,0.6s,baz=56,slow=5.6						
NOA	**NORSAR Array B**	**79.86**	**333**	P	**P**	**01 08 33.6**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=53,slow=5.6,SNR=4.6						
	comp=Z,0.6nm,0.6s						
NC204	**NORSAR Array S**	**79.92**	**333**	P	**P**	**01 08 33.6**	**-0.1**
YKA	**Yellowknife Ar**	**81.44**	**24**	P	**P**	**01 08 42.1**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=304,slow=5.2,SNR=5.9						
	comp=Z,0.3nm,0.6s						
GERES	**GERESS Array B**	**85.10**	**322**	P	**P**	**01 09 00.7**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=101,slow=4.1,SNR=2.1						
	comp=Z,0.1nm,0.3s						
SFJD	**Kangerlussuaq**	**88.98**	**358**	LR	LR	01 52 49.3	
	comp=Z,42nm,18.5s,baz=126,slow=38						

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*BJI **31** 00:58:53.4±0.0, 23°.72N×125°.64E, h16^{km}, mb4.4/35, mB4.6/19, Ms4.1/24, Ms7 4.0/26*

*NEIC **31** 00:58:56.3±2.2, 23°.7N±0°.1×125°.66E±0°.08, h17^{km}±6^{km}, mb4.6/26, Mwr4.3/21, Error ellipse: s-maj=16.7km s-min=9.6km az=156.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.64; $M_{\theta\theta}$-3.92; $M_{\phi\phi}$0.28; $M_{r\theta}$1.06; $M_{\theta\phi}$0.01; $M_{\phi r}$0.77; Fault plane solution: $M_0$4.01000×10^{15} NP1:ϕ_s281.99000°, δ38.40000°, λ108.70000°. NP2:ϕ_s78.63000°, δ53.96000°, λ75.74000°. Principal axes: T 3.9427, Plg76.0000°, Azm303.0000°; N 0.1234, Plg11.0000°, Azm87.0000°; P -4.0661, Plg8.0000°, Azm179.0000°;*

*IDC **31** 00:58:58.0±0.7, 24°.20N×124°.94E, h0^{km}, mb4.1/22, mbtmp4.1/24, ML3.4/2, MS3.6/11 Error ellipse: s-maj=17.7km s-min=16.9km az=74.0*

*NEIC **31** 00:58:57.4, 23°.78N×125°.39E, h10^{km}*

*NIED **31** 00:59:02.1, 24°.28N×125°.25E, h42^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.89; $M_{\theta\theta}$-1.34; $M_{\phi\phi}$0.45; $M_{r\theta}$3.10; $M_{\theta\phi}$-1.91; $M_{\phi r}$2.48; Fault plane solution: $M_0$4.34000×10^{15} NP1:ϕ_s48.00000°, δ79.00000°, λ82.00000°. NP2:ϕ_s265.00000°, δ14.00000°, λ125.00000°.*

*JMA **31** 00:59:02.1±0.2, 24°N±1°×125°.3E±0°.6, h42^{km}±3^{km}, MD4.5/11, MV4.1/11, NEAR MIYAKOJIMA ISLAND*

ISC 31 00:58:60.0±0.9, **24°.13N**±0°.05×**125°.27E**±0°.04, **h18**^{km}±3^{km}, **n124**, σ1^{s}**77**/114, **mb4.3**/41, **MS3.8**/17, **2C-4D**,
Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMJ2	**Miyako jima3**	**0.61**	**5**	*i* P	**Pg**	**00 59 12.2**	**0.0**
JMJ2				S	**Sg**	**00 59 19.7**	**-0.7**
JMJ2	**Miyako jima3**	**0.61**	**5**	A	A	00 59 12.2	
	comp=E,82nm,1.7s,comp=E,34nm,1.8s						
JOGS	**Gusukube**	**0.64**	**11**	*i* P	**Pg**	**00 59 12.9**	**+0.1**
JOGS				S	**Sg**	**00 59 21.2**	**-0.2**
JOGS	**Gusukube**	**0.64**	**11**	A	A	00 59 12.9	
	comp=E,88nm,1.6s,comp=E,42nm,0.8s						
JIRB	**Irabujima**	**0.70**	**353**	*i* P	**Pb**	**00 59 13.3**	**-0.5**
JIRB				S	**Sb**	**00 59 21.4**	**-1.7**
JIRB	**Irabujima**	**0.70**	**353**	A	A	00 59 13.3	
	comp=E,38nm,1.5s,comp=E,22nm,1.3s						
JTJ	**Tarama**	**0.73**	**315**	*i* P	**Pg**	**00 59 14.2**	**-0.1**
JTJ				S	**Sg**	**00 59 23.4**	**-0.6**
JTJ	**Tarama**	**0.73**	**315**	A	A	00 59 14.2	
	comp=E,34nm,2.8s,comp=E,53nm,0.9s						
JIKM	**Ikemajima**	**0.80**	**359**	*i* P	**Pb**	**00 59 14.8**	**-0.5**
JIKM				S	**Sb**	**00 59 24.4**	**-1.3**
JIKM	**Ikemajima**	**0.80**	**359**	A	A	00 59 14.8	
	comp=E,41nm,1.7s,comp=E,24nm,1.3s						
JISG	**Ishigakijimahi**	**0.99**	**298**	*i* P	**Pb**	**00 59 18.4**	**-0.2**
JISG				*e*S	**Sb**	**00 59 29.9**	**-1.3**
JISG	**Ishigakijimahi**	**0.99**	**298**	A	A	00 59 18.4	
	comp=E,44nm,0.6s,comp=E,31nm,0.5s						
JIJ	**Ishigaki jima**	**1.06**	**283**	*i* P	**Pg**	**00 59 20.4**	**0.0**
JIJ				S	**Sn**	**00 59 33.3**	**-0.7**
JIJ	**Ishigaki jima**	**1.06**	**283**	A	A	00 59 20.4	
	comp=E,17nm,0.8s,comp=E,13nm,1.3s						
JKRS	**Kuro-shima**	**1.16**	**276**	P	**Pg**	**00 59 22.1**	**-0.3**
JKRS				*e*S	**Sg**	**00 59 37.1**	**-0.5**
JKRS	**Kuro-shima**	**1.16**	**276**	A	A	00 59 22.1	
	comp=E,43nm,1.5s,comp=E,58nm,1.5s						
HATJ	**Hateruma jima**	**1.34**	**267**	P	**Pb**	**00 59 24.8**	**+0.3**
HATJ				*e*S	**Sb**	**00 59 41.9**	**+0.5**
HATJ	**Hateruma jima**	**1.34**	**267**	A	A	00 59 24.8	
	comp=E,18nm,2.4s,comp=E,22nm,1.2s						
IRIF	**Iriomote-Funau**	**1.42**	**279**	*i* P	**Pb**	**00 59 25.9**	**-0.1**
IRIF				*e*S	**Sn**	**00 59 42.1**	**-1.0**
IRIF	**Iriomote-Funau**	**1.42**	**279**	A	A	00 59 25.9	
	comp=E,23nm,2.4s,comp=E,30nm,2.5s						
YOJ	**Yonaguni jima**	**2.09**	**280**		**Pb**	**00 59 36.5**	**-0.8**
YOJ				Sn	**Sg**	**01 00 07.1**	**-0.2**
YOJ	**Yonaguni jima**	**2.09**	**280**	A	A	00 59 35.1	
	comp=E,6.0nm,4.1s,comp=E,5.0nm,2.4s						
JYNG	**Yonagunijimaku**	**2.15**	**279**	A	A	00 59 36.0	
	comp=E,7.0nm,3.1s,comp=E,7.0nm,2.5s						
JKE	**Kume jima 2**	**2.59**	**32**	A	A	00 59 41.2	
	comp=E,5.0nm,2.7s,comp=E,4.0nm,3.2s						
JJT3	**Tamagusuku3**	**3.04**	**48**	A	A	00 59 48.1	
	comp=E,8.0nm,3.4s,comp=E,12nm,1.8s						
NACB	**Ninganchiao**	**3.36**	**272**		**Pn**	**00 59 51.6**	**+0.1**
TATO	**Taipei**	**3.55**	**285**		**Pn**	**00 59 57.3**	**+3.2**
YHNB	**Yeheng**	**3.59**	**279**		**Pn**	**00 59 57.1**	**+2.3**
YHNB				Sn	**Sb**	**01 00 49.8**	**+3.6**
YULB	**Yu-li**	**3.71**	**259**		**Pn**	**00 59 56.1**	**-0.3**
YULB				Sn	**Sn**	**01 00 36.5**	**-3.2**
JOW	**Kunigami**	**3.83**	**45**	Pn	**Pn**	**01 00 02.2**	**+4.3**
	7.3nm,0.3s,baz=82,slow=30,SNR=1.3						
JOW				Sn	**Sb**	**01 00 50.5**	**-2.5**
	baz=347,slow=29						
	14nm,0.3s						
SSLB	**Suanglung**	**3.96**	**266**		**Pn**	**01 00 00.2**	**+0.4**
TWG	**Pinlang**	**4.07**	**252**		**Pn**	**01 00 00.4**	**-0.9**
TWG				Sn	**Sn**	**01 00 45.2**	**-3.2**
TPUB	**Ta-pu**	**4.33**	**260**		**Pn**	**01 00 06.6**	**+1.7**
KNMB	**Chin-men Tao**	**6.29**	**274**		**Pn**	**01 00 32.2**	**+0.4**
KSRS	**Korea Array**	**13.48**	**9**	Pn	**Pn**	**01 02 13.8**	**+3.5**
	0.1nm,0.3s,baz=192,slow=14,SNR=2.0						
KSRS				LR	LR	01 07 36.1	
	comp=Z,219nm,18.7s,baz=180,slow=39						
QIZ	**Qiongzhong**	**15.22**	**254**	P	**Pn**	**01 02 32.3**	**-1.7**
QIZ				S	**Sn**	**01 05 29.0**	**+6.8**
QIZ				LR	LR		
	comp=N,220nm,17.5s						
QIZ				LR	LR		
	comp=E,160nm,19.9s						
QIZ				LR	LR		
	comp=Z,210nm,14.7s						
LYN	**LuoYang**	**15.23**	**316**	⇑P	**P**	**01 02 39.8**	**+0.8**
LYN				S	**S**	**01 05 38.0**	**-1.0**
LYN				pmax	pmax		
	comp=Z,13nm,1.0s						
LYN				LR	LR		
	comp=N,410nm,15.2s						
LYN				LR	LR		
	comp=E,310nm,16.7s						
LYN				LR	LR		
	comp=Z,460nm,16.2s						
JCJ	**Chichijima**	**15.54**	**75**	LR	LR	01 08 04.4	
	comp=Z,169nm,19.6s,baz=102,slow=35						
HNS	**HongShan**	**16.03**	**328**	⇓P	**P**	**01 02 48.5**	**+0.7**
HNS				*e*S	**S**	**01 05 54.0**	**-1.2**
HNS				pmax	pmax		
	comp=Z,11nm,0.7s						
HNS				LR	LR		
	comp=N,260nm,15.1s						
HNS				LR	LR		
	comp=E,450nm,13.5s						
HNS				LR	LR		
	comp=Z,510nm,17.1s						
MJAR	**Matsushiro Arr**	**16.65**	**39**	Pn	**P**	**01 02 55.6**	**+0.9**
	0.1nm,0.3s,baz=226,slow=9.5,SNR=5.0						
	2.1nm,0.6s						
DAV	**Davao City (W)**	**16.96**	**179**	LR	LR	01 10 27.2	
	comp=Z,108nm,18.9s,baz=346,slow=40						
SNY	**Shenyang**	**17.71**	**356**	⇓P	P	01 03 15.0	+8.6
SNY				S	S	01 06 53.3	+24
SNY				pmax	pmax		
	comp=Z,180nm,4.9s						
SNY				pmax	pmax		
	comp=Z,200nm,3.6s						
SNY				LR	LR		
	comp=N,340nm,14.9s						
SNY				LR	LR		
	comp=E,320nm,11.2s						
SNY				LR	LR		
	comp=Z,470nm,19.2s						
HHC	**Hu-ho-hao-te**	**20.25**	**329**	*e*P	Pn	01 03 39.5	+3.1
HHC				S	Sn	01 07 26.0	+2.1
HHC				pmax	pmax		
	comp=Z,27nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,5.3s						
HHC				LR	LR		
	comp=Z,470nm,13.0s						
HHC				LR	LR		
	comp=Z,520nm,14.0s						
HHC				LR	LR		
	comp=Z,770nm,13.3s						
KMI	**Kunming**	**20.50**	**277**	⇓P	Pn	01 03 40.3	+0.7
KMI				pP	sP	01 03 43.5	-0.8
KMI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KMI				LR	LR		
	comp=Z,94nm,19.0s						
KMI				LR	LR		
	comp=Z,290nm,14.6s						
KMI				LR	LR		
	comp=Z,350nm,20.6s						
BTO	**Baotou**	**20.83**	**326**	*e*P	Pn	01 03 43.8	+0.7
BTO				pP	pwP	01 03 48.3	+0.6
BTO				sP	sP	01 03 50.8	+3.4
BTO				S	Sn	01 07 41.8	+3.9
BTO				pmax	pmax		
	comp=Z,22nm,0.5s						
BTO				pmax	pmax		
	comp=Z,190nm,4.4s						
BTO				LR	LR		
	comp=Z,960nm,13.7s						
BTO				LR	LR		
	comp=Z,750nm,12.8s						
BTO				LR	LR		
	comp=Z,2µm,16.6s						
XLT	**XiLinHaoTe**	**21.12**	**341**	*e*P	**P**	**01 03 42.0**	**-1.7**
XLT				PP	**PnPn**	**01 04 12.0**	**+8.9**
XLT				S	**S**	**01 07 40.5**	**+2.5**
XLT				sS	pS	01 07 50.3	+2.3
XLT				pmax	pmax		
	comp=Z,11nm,0.8s						
XLT				pmax	pmax		
	comp=Z,91nm,4.8s						
XLT				LR	LR		
	comp=Z,27nm,16.2s						
XLT				LR	LR		
	comp=Z,220nm,12.3s						
XLT				LR	LR		
	comp=Z,410nm,14.9s						
GUMO	**Guam**	**21.28**	**116**	LR	LR	01 11 20.7	
	comp=Z,118nm,21.0s,baz=128,slow=34						
PZH	**PanZhiHua**	**21.39**	**281**	P	**P**	**01 03 48.0**	**+1.1**
PZH				pP	**pP**	**01 03 51.0**	**-0.5**
PZH				S	**S**	**01 07 43.0**	**-0.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,90nm,7.0s						
PZH				LR	LR		
	comp=Z,130nm,14.7s						
PZH				LR	LR		
	comp=Z,280nm,14.1s						
PZH				LR	LR		
	comp=Z,360nm,16.3s						
LZH	**Lanzhou**	**21.98**	**308**	⇑P	**P**	**01 03 55.3**	**+2.1**
LZH				pP	sP	01 03 59.3	-0.7
LZH				pmax	pmax		
	comp=Z,17nm,1.4s						
LZH				pmax	pmax		
	comp=Z,150nm,6.2s						
LZH				LR	LR		
	comp=Z,250nm,13.1s						
LZH				LR	LR		
	comp=Z,340nm,12.4s						
LZH				LR	LR		
	comp=Z,400nm,11.7s						
CRAI	**Chiangrai**	**23.37**	**265**	P	**P**	**01 04 06.8**	**-0.9**
PHRA	**Phrae**	**23.97**	**261**	P	**P**	**01 04 12.4**	**-1.2**
TNCH	**TengChong**	**24.33**	**278**	⇓*e*P	**P**	**01 04 14.5**	**-2.5**
TNCH				pmax	pmax		
	comp=Z,280nm,5.5s						
ASAJ	**Asahikawa**	**24.47**	**31**	P	**P**	**01 04 20.3**	**+2.4**
	comp=Z,1.6nm,0.4s,baz=5.8,slow=34,SNR=1.8						
ASAJ				LR	LR	01 14 43.0	
	comp=Z,176nm,20.2s,baz=295,slow=38						
	comp=Z,1.6nm,0.4s						
CHTO	**Chiang Mai**	**25.04**	**263**	P	**P**	**01 04 24.8**	**+1.5**
CMAR	**Chiang Mai Arr**	**25.15**	**262**	P	**P**	**01 04 22.9**	**-1.3**
	comp=Z,1.1nm,0.3s,baz=62,slow=6.5,SNR=2.6						
	comp=Z,1.1nm,0.3s						
KLR	**Kul'dur**	**25.57**	**10**	LR	LR	01 15 04.4	
	comp=Z,92nm,18.1s,baz=176,slow=38						
GTA	**Gaotai**	**26.35**	**311**	*e*P	**P**	**01 04 34.0**	**-1.1**
GTA				pP	pwP	01 04 44.0	+1.5
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				LR	LR		
	comp=Z,110nm,14.9s						
GTA				LR	LR		
	comp=Z,240nm,14.2s						
GTA				LR	LR		
	comp=Z,250nm,15.3s						
ULN	**Ulaanbaatar**	**27.76**	**333**	P	**P**	**01 04 47.5**	**-0.2**
SONM	**Songino Array**	**28.01**	**332**	P	**P**	**01 04 47.8**	**-2.1**
	comp=Z,0.6nm,0.4s,baz=152,slow=11,SNR=5.5						
SONM				LR	LR	01 17 23.9	
	comp=Z,231nm,18.6s,baz=139,slow=40						
	comp=Z,0.6nm,0.4s						
SONM	**Songino Array**	**28.01**	**332**	P	**P**	**01 04 48.1**	**-1.9**
SOEI	**Soe**	**33.69**	**182**	P	P	01 05 29.2	-11
JIRN	**Jiri**	**35.23**	**284**	*e*P	**P**	**01 05 54.6**	**+0.7**
GUN	**Gumba**	**35.50**	**285**	*e*P	**P**	**01 05 56.8**	**+0.6**
PKI	**Pulchoki**	**35.93**	**284**	*e*P	**P**	**01 05 59.7**	**-0.2**
PKIN	**Phulchoki**	**35.94**	**284**	*e*P	**P**	**01 06 00.0**	**+0.1**
WMQ	**Urumqi**	**36.43**	**312**	*e*P	**P**	**01 06 02.5**	**-1.1**
WMQ				pP	pwP	01 06 12.5	+1.3
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
WMQ				LR	LR		
	comp=Z,170nm,19.5s						
GKN	**Gorkha**	**36.59**	**285**	*e*P	**P**	**01 06 05.5**	**+0.2**
	comp=Z,5.1nm,0.3s						
DANN	**Dangsing**	**37.34**	**286**	*e*P	**P**	**01 06 12.3**	**+0.4**
	comp=Z,32nm,0.8s						
PETK	**Petropavlovsk-**	**37.89**	**32**	LR	LR	01 22 31.0	
	comp=Z,74nm,20.3s,baz=200,slow=37						
PETK	**Petropavlovsk-**	**37.89**	**32**	P	**P**	**01 06 15.0**	**-0.8**
YAK	**Yakutsk**	**38.01**	**3**	LR	LR	01 22 16.5	
	comp=Z,50nm,19.6s,baz=253,slow=37						
PYUN	**Piuthan**	**38.03**	**285**	*e*P	**P**	**01 06 17.5**	**-0.1**
	comp=Z,37nm,0.8s						
H11N1	**WAKE ISLAND Hy**	**38.76**	**88**	T	T	01 48 15.5	
	baz=290						
H11N2	**WAKE ISLAND Hy**	**38.76**	**88**	T	T	01 48 10.6	
	baz=290						
H11N3	**WAKE ISLAND Hy**	**38.78**	**88**	T	T	01 48 20.2	
	baz=290						
H11S3	**WAKE ISLAND Hy**	**38.89**	**90**	T	T	01 48 23.5	
	baz=282						
H11S1	**WAKE ISLAND Hy**	**38.90**	**90**	T	T	01 48 15.2	
	baz=282						
H11S2	**WAKE ISLAND Hy**	**38.91**	**90**	T	T	01 48 11.0	
	baz=282						
MA2	**Magadan**	**39.68**	**20**	LR	LR	01 23 17.1	
	comp=Z,82nm,18.3s,baz=254,slow=37						
MK31	**Makanchi Array**	**41.01**	**314**	P	**P**	**01 06 41.3**	**-0.7**
MK31				IAmb	IAmb	01 06 51.4	
	comp=Z,7.1nm,0.9s						
MKAR	**Makanchi Array**	**41.01**	**314**	P	**P**	**01 06 40.8**	**-1.2**
	comp=Z,4.2nm,0.5s,baz=101,slow=10,SNR=44						
	comp=Z,4.2nm,0.5s						
MKAR	**Makanchi Array**	**41.01**	**314**	P	**P**	**01 06 41.1**	**-0.9**
MAKZ	**Makanchi**	**41.22**	**314**	P	**P**	**01 06 42.7**	**-1.0**
MAKZ				IAmb	IAmb	01 06 53.3	
	comp=Z,12nm,1.0s						
ZAA0	**Zalesovo Array**	**42.37**	**325**	P	**P**	**01 06 51.4**	**-1.6**
ZALV	**Zalesovo Beam**	**42.37**	**325**	P	**P**	**01 06 50.9**	**-2.0**
	comp=Z,2.4nm,0.5s,baz=111,slow=8.1,SNR=5.6						
	comp=Z,2.4nm,0.5s						
SEY	**Seymchan**	**42.82**	**18**	P	**P**	**01 06 57.5**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=154,slow=23,SNR=1.1						
	comp=Z,0.3nm,0.3s						
KDJ	**Kajisay**	**43.48**	**306**	P	**P**	**01 07 02.1**	**-0.3**
KDJ				IAmb	IAmb	01 07 12.6	
	comp=Z,6.0nm,0.7s						
KSH	**Kashi**	**44.07**	**303**	P	**P**	**01 07 11.0**	**+3.9**
KSH				pP	pwP	01 07 16.5	+1.8
KSH				sP	sP	01 07 20.3	+6.0
KSH				PcP	**PcP**	**01 08 51.8**	**-0.5**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KSH				LR	LR		
	comp=Z,160nm,13.7s						
KSH				LR	LR		
	comp=Z,170nm,12.4s						
KSH				LR	LR		
	comp=Z,130nm,13.7s						
NRN	**Naryn**	**44.26**	**305**	P	**P**	**01 07 09.2**	**+0.4**
NRN				IAmb	IAmb	01 07 19.7	
	comp=Z,13nm,1.2s						
KURK	**Kurchatov**	**44.56**	**319**	P	**P**	**01 07 09.7**	**-1.0**
KURK				IAmb	IAmb	01 07 19.9	
	comp=Z,17nm,1.2s						
KURBB	**Kurchatov Arra**	**44.59**	**319**	P	**P**	**01 07 09.6**	**-1.3**
	comp=Z,3.2nm,0.7s,baz=109,slow=8.3,SNR=19						
	comp=Z,3.2nm,0.7s						
WRA	**Warramunga Arr**	**44.68**	**168**	P	**P**	**01 07 13.2**	**+1.3**
	comp=Z,1.4nm,0.7s,baz=348,slow=8.8,SNR=10						
	comp=Z,1.4nm,0.7s						
AAK	**Ala-Archa**	**45.52**	**307**	P	**P**	**01 07 17.7**	**-0.9**
	comp=Z,1.9nm,0.5s,baz=130,slow=6.0,SNR=7.0						
	comp=Z,1.9nm,0.5s						
AAK	**Ala-Archa**	**45.52**	**307**	P	**P**	**01 07 18.8**	**+0.1**
AAK				IAmb	IAmb	01 07 29.2	
	comp=Z,5.4nm,1.1s						
BTK	**Batken**	**48.07**	**303**	P	**P**	**01 07 38.5**	**-0.1**
BTK				IAmb	IAmb	01 07 52.4	

	comp=Z,6.0nm,1.4s						
ASAR	Alice Springs	48.24	169	P	P	01 07 41.9	+2.0
	comp=Z,0.7nm,0.6s,baz=355,slow=9.6,SNR=9.5						
	comp=Z,0.7nm,0.6s						
GAR	Garm	48.43	301	P	P	01 07 41.8	+0.4
KK31	Karatay Array	48.48	307	P	P	01 07 42.2	+0.6
KKAR	Karatay Array	48.48	307	P	P	01 07 42.3	+0.6
KKAR				IAmb	IAmb	01 07 52.5	
	comp=Z,4.7nm,1.4s						
KKAR	Karatay Array	48.48	307	P	P	01 07 41.8	+0.1
CHGR	Chuyangaron	49.33	301	P	P	01 07 48.2	-0.1
BRVK	Borovoye	50.17	320	P	P	01 07 53.8	-0.6
BRVK				IAmb	IAmb	01 08 03.4	
	comp=Z,5.4nm,0.9s						
NRIK	Noril'sk	50.47	344	P	P	01 07 54.9	-1.4
	comp=Z,1.8nm,0.7s,baz=101,slow=7.7,SNR=2.1						
	comp=Z,1.8nm,0.7s						
ABKAR	Akbulak array	56.16	314	P	P	01 08 38.1	-0.3
ABKAR	Akbulak array	56.16	314	P	P	01 08 38.3	-0.1
ABKAR				IAmb	IAmb	01 08 39.0	
	comp=Z,12nm,0.7s						
ARU	Arti	57.41	323	P	P	01 08 46.3	-0.9
ARU				IAmb	IAmb	01 08 56.8	
	comp=Z,11nm,0.9s						
AKTO	Aktyubinsk	57.42	316	P	P	01 08 46.6	-0.9
	comp=Z,3.3nm,0.6s,baz=112,slow=14,SNR=12						
	comp=Z,3.3nm,0.6s						
GEYT	Alibeck	58.04	301	P	P	01 08 52.1	0.0
	comp=Z,4.4nm,0.7s,baz=48,slow=2.1,SNR=9.4						
	comp=Z,4.4nm,0.7s						
GEYT	Alibeck	58.04	301	P	P	01 08 52.4	+0.3
GEYT				IAmb	IAmb	01 09 05.6	
	comp=Z,8.7nm,0.8s						
GYA0B	ALIBECK ARRAY	58.04	301	P	P	01 08 52.1	+0.1
GYA0B				IAmb	IAmb	01 09 05.6	
	comp=Z,10nm,0.8s						
ILAR	Eielson Array	67.55	28	P	P	01 09 55.7	+0.8
	comp=Z,0.4nm,0.8s,baz=240,slow=4.1,SNR=6.1						
	comp=Z,0.4nm,0.8s						
KBZ	Khabaz	68.42	309	P	P	01 10 00.3	-0.4
	comp=Z,2.6nm,0.9s,baz=292,slow=3.9,SNR=4.0						
	comp=Z,2.6nm,0.9s						
INK	Inuvik	71.86	23	P	P	01 10 23.6	+2.3
	comp=Z,1.2nm,0.8s,baz=234,slow=4.3,SNR=3.2						
	comp=Z,1.2nm,0.8s						
AFI	Afiamalu	72.16	115	LR	LR	01 36 50.1	
	comp=Z,41nm,21.7s,baz=264,slow=31						
NOR	Nord	72.77	355	iP	P	01 10 24.9	-1.7
NOR				IAmb	IAmb	01 10 26.0	
	comp=Z,0.9nm,0.7s						
FINES	FINESS Array B	73.36	330	P	P	01 10 29.9	-0.5
	comp=Z,3.7nm,0.6s,baz=58,slow=7.2,SNR=16						
	comp=Z,3.7nm,0.6s						
AKASG	Malin Array Be	75.38	319	P	P	01 10 41.8	-0.5
	comp=Z,0.6nm,0.5s,baz=52,slow=6.3,SNR=7.1						
	comp=Z,0.6nm,0.5s						
BRTR	Keskin Array B	76.19	307	P	P	01 10 47.0	-0.5
	comp=Z,1.0nm,0.9s,baz=90,slow=6.2,SNR=5.4						
	comp=Z,1.0nm,0.9s						
DAG	Danmarks Havn	76.97	352	iP	P	01 10 48.2	-2.8
DAG				IAmb	IAmb	01 10 50.8	
	comp=Z,1.8nm,0.9s						
DBG	Daneborg	79.27	351	iP	P	01 11 02.5	-1.2
DBG				IAmb	IAmb	01 11 04.6	
	comp=Z,0.8nm,0.8s						
NB2	NORSAR Subarra	79.99	333	P	P	01 11 07.1	-0.9
	comp=Z,8.6nm,1.2s,baz=54,slow=6.2						
NOA	NORSAR Array B	79.99	333	P	P	01 11 07.3	-0.7
	comp=Z,1.7nm,0.8s,baz=55,slow=5.5,SNR=7.9						
	comp=Z,1.7nm,0.8s						
YKA	Yellowknife Ar	81.54	24	P	P	01 11 16.7	+0.6
	comp=Z,0.8nm,0.9s,baz=304,slow=5.0,SNR=7.2						
	comp=Z,0.8nm,0.9s						
GERES	GERESS Array B	85.22	322	P	P	01 11 35.1	-0.4
	comp=Z,0.2nm,0.4s,baz=46,slow=2.8,SNR=4.5						
	comp=Z,0.2nm,0.4s						

IDC ***31*** *01:00:40.2±0.9, 23.°91N×124.°72E, h0^{km}, mb3.8/12, mbtmp3.8/15, ML3.5/1, Error ellipse: s-maj=25.6km s-min=20.6km az=81.0*

JMA ***31*** *01:00:43.5±0.2, 24°N±1°×125.°2E±0.°7, h40^{km}±4^{km}, MV3.9/11, NEAR MIYAKOJIMA ISLAND*

NIED ***31*** *01:00:43.5, 24.°29N×125.°24E, h40^{km}, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}0.22; $M_{\theta\theta}$-0.76; $M_{\phi\phi}$0.54; $M_{r\theta}$-0.56; $M_{\theta\phi}$-0.92; $M_{\phi r}$1.06; Fault plane solution: $M_0$1.56000×10^{15} NP1: ϕ_s282.00000°, δ66.00000°, λ153.00000°. NP2: ϕ_s24.00000°, δ65.00000°, λ27.00000°.*

ISC 31 01:00:44.0±1.6**, 24.°28N**±0.°08×**125.°18E**±0.°05**, h24**^{km}±10^{km}**, n25, σ2.^{s}07**/33**, mb3.7**/12**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMJ2	Miyako jima3	0.48	17	P	Pb	01 00 53.5	-0.3
JMJ2				S	Sb	01 01 00.7	+0.3
JOGS	Gusukube	0.52	24	P	Pb	01 00 54.1	-0.4
JOGS				S	Sn	01 01 02.3	-1.7
JIRB	Irabujima	0.54	360	P	Pb	01 00 54.4	-0.6
JIRB				S	Sb	01 01 02.6	+0.3
JTJ	Tarama	0.56	310	P	Pb	01 00 55.5	+0.3
JTJ				S	Sn	01 01 03.9	-1.1
JIKM	Ikemajima	0.64	6	P	Pb	01 00 55.9	-0.7
JIKM				S	Sn	01 01 05.7	-1.3
JISG	Ishigakijimahi	0.85	291	P	Pb	01 00 59.8	-0.3
JISG				eS	Sb	01 01 11.2	+0.2
JIJ	Ishigaki jima	0.95	275	P	Pn	01 01 01.7	-0.1
JIJ				eS	Sn	01 01 14.9	+0.3
JKRS	Kuro-shima	1.07	268	P	Pn	01 01 03.1	-0.3
JKRS				eS	Sn	01 01 17.7	+0.2
HATJ	Hateruma jima	1.27	260	eP	Pn	01 01 06.3	0.0
IRIF	Iriomote-Funau	1.32	273	eP	Pn	01 01 07.0	+0.1
JOW	Kunigami	3.78	47	Pn	Pb	01 01 47.0	-3.0
	32nm,0.6s,baz=278,slow=29,SNR=0.6						
JOW				Sn	Sb	01 02 41.5	+6.2
	6.6nm,0.3s,baz=351,slow=29,SNR=1.8						
KSRS	Korea Array	13.34	10	Pn	P	01 03 56.4	-4.8
	0.2nm,0.3s,baz=190,slow=13,SNR=2.7						
	1.1nm,0.4s						
MJAR	Matsushiro Arr	16.58	40	Pn	P	01 04 40.4	+3.1
	1.1nm,0.4s,baz=248,slow=12,SNR=1.8						
SONM	Songino Array	27.84	332	P	P	01 06 34.7	+3.0
	0.4nm,0.6s,baz=138,slow=7.6,SNR=2.2						
	0.4nm,0.6s						
MKAR	Makanchi Array	40.84	314	P	P	01 08 22.2	-1.7
	0.7nm,0.5s,baz=107,slow=11,SNR=3.1						
	0.7nm,0.5s						
ZALV	Zalesovo Beam	42.19	325	P	P	01 08 35.4	+0.7
	1.2nm,0.3s,baz=111,slow=6.3,SNR=2.3						
	1.2nm,0.3s						
KURBB	Kurchatov Arra	44.41	319	P	P	01 08 51.4	-1.3
	0.6nm,0.6s,baz=111,slow=8.8,SNR=3.3						
	0.6nm,0.6s						
WRA	Warramunga Arr	44.85	168	P	P	01 08 54.2	-2.3
	1.3nm,0.8s,baz=348,slow=8.8,SNR=3.3						
	1.3nm,0.8s						
ASAR	Alice Springs	48.41	169	P	P	01 09 22.2	-2.2
	0.5nm,0.5s,baz=353,slow=13,SNR=3.1						
	0.5nm,0.5s						
ILAR	Eielson Array	67.44	28	P	P	01 11 42.5	+5.1
	0.6nm,0.9s,baz=296,slow=9.8,SNR=2.7						
	0.6nm,0.9s						
INK	Inuvik	71.75	23	P	P	01 12 05.8	+1.9
	1.1nm,0.8s,baz=240,slow=12,SNR=2.1						
	1.1nm,0.8s						
FINES	FINESS Array B	73.18	330	P	P	01 12 12.0	-0.5
	2.4nm,1.0s,baz=68,slow=9.2,SNR=2.5						
	2.4nm,1.0s						
BRTR	Keskin Array B	76.03	307	P	P	01 12 29.9	+0.2
	0.2nm,0.7s,baz=86,slow=7.1,SNR=1.4						
	0.2nm,0.7s						
NOA	NORSAR Array B	79.81	333	P	P	01 12 52.6	+2.4
	0.6nm,0.8s,baz=54,slow=5.7,SNR=4.7						
	0.6nm,0.8s						
YKA	Yellowknife Ar	81.43	24	P	P	01 13 00.2	+1.5
	0.4nm,0.8s,baz=304,slow=5.0,SNR=2.0						
	0.4nm,0.8s						

NEIC ***31*** *01:45:51.8±1.9, 10.°34S±0.°06×74.°97W±0.°06, h119^{km}±6^{km}, mb4.8/102, Error ellipse: s-maj=9.4km s-min=8.4km az=134.0*

IDC ***31*** *01:45:52.5±1.1, 10.°32S×75.°07W, h129^{km}±12^{km}, mb4.0/14, mbtmp4.4/20, MS2.6/1, Error ellipse: s-maj=14.1km s-min=9.8km az=63.0*

VAO ***31*** *01:45:53.2±0.3, 10.°24S×74.°89W, h114^{km}, mb4.5*

ISC 31 01:45:51.9±0.4**, 10.°35S**±0.°04×**75.°00W**±0.°05**, h129**^{km}**, n204, σ1.^{s}37**/172**, mb4.7**/67**, 1C-1D, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.43	228	P	Pn	01 46 31.6	+0.3
	151nm,0.3s,baz=73,slow=9.3,SNR=118						
NNA				S	Sn	01 47 01.9	+0.3
	902nm,0.4s,baz=330,slow=21,SNR=22						
NNA				LR	LR	01 47 49.3	
	comp=Z,126nm,21.3s,baz=15,slow=48						
NNA	Nana	2.43	228	⇑iP	Pn	01 46 31.5	+0.2
CZSB	Cruzeiro do Su	3.45	41		Pn	01 46 44.6	+0.2
CZSB				Sn	Sn	01 47 23.8	-1.3
CZSB	Cruzeiro do Su	3.45	41	eP	Pn	01 46 44.6	+0.2
ATAH	Atahualpa	4.63	313	P	Pn	01 47 00.4	-0.1
	46nm,0.5s,baz=98,slow=4.2,SNR=54						
ATAH				S	Sn	01 47 53.9	+0.2
	255nm,0.5s,baz=295,slow=12,SNR=8.0						
TBTG	Tabatinga, AM	7.93	40	Pn	Pn	01 47 43.0	-1.5
TBTG	Tabatinga, AM	7.93	40	eP	Pn	01 47 43.4	-1.2
TBTG	Tabatinga, AM	7.93	40	eP	Pn	01 47 43.6	-0.9
ETMB	Extrema	8.67	87	Pn	Pn	01 47 52.6	-1.8
ETMB	Extrema	8.67	87	eP	Pn	01 47 52.9	-1.5
LPAZ	La Paz	8.92	132	P	Pn	01 47 59.6	+1.4
	8.6nm,0.6s,baz=309,slow=10.0,SNR=25						
LPAZ	La Paz	8.92	132	Pn	Pn	01 47 59.1	+0.8
LPAZ	La Paz	8.92	132	eP	Pn	01 48 01.4	+3.1
LPAZ	La Paz	8.92	132	eP	Pn	01 47 57.9	-0.4
PB18	Visviri	8.97	144		Pn	01 47 57.5	-1.4
PB12	IPOC Station P	9.38	152	Pn	Pn	01 48 03.4	-0.7
PB16	IPOC Station P	9.55	147	Pn	Pn	01 48 07.9	+1.0
PORT	Chimborazo Vol	9.59	337		Pn	01 48 06.8	-0.5
CHSH	Refugio Sur-Vo	9.60	336		Pn	01 48 06.9	-0.6
PIAT	Ana Tenorio	9.84	341	eP	Pn	01 48 08.5	-2.0
SALI	Salinas	10.06	323	Pn	Pn	01 48 11.8	-1.3
SLOR	San Lorenzo -	10.17	340	Pn	Pn	01 48 14.0	-1.0
MNMC	Minye Minye	10.17	150		Pn	01 48 14.3	-0.6
PB11	IPOC Station P	10.68	152	Pn	Pn	01 48 21.1	-0.5
PULU	Pululahua	10.88	341	Pn	Pn	01 48 22.6	-1.9
IMBA	Imbabura, San	11.03	343		Pn	01 48 26.3	-0.2
FLF1	Flavio Alfaro-	11.03	334	eP	Pn	01 48 24.2	-2.0
OTAV	Otavalo	11.06	342		Pn	01 48 26.1	-0.8
OTAV	Otavalo	11.06	342	eP	Pn	01 48 26.8	-0.1
CUSE	Cuicocha Este	11.11	342	eP	P	01 48 32.8	-4.1
PAC1	Pacto, Paraso	11.20	340	eP	Pn	01 48 32.4	+3.9
PB08	IPOC Station P	11.25	151	Pn	Pn	01 48 28.6	-0.7
TULM	Tulcn-Chalpat	11.34	346		Pn	01 48 29.3	-1.3
TULM	Tulcn-Chalpat	11.34	346	eP	Pn	01 48 30.3	-0.3
CMBC	Cumbal	11.56	346	eP	Pn	01 48 34.8	+1.2
GCUF	Volcan Galeras	11.73	348	eP	Pn	01 48 36.8	+0.9
FLOC	Florencia	11.87	357	eP	Pn	01 48 35.7	-1.6
PB01	IPOC Station P	11.88	154	Pn	Pn	01 48 37.5	+0.1
PB02	IPOC Station P	11.96	156	Pn	Pn	01 48 37.8	-0.6
CRUC	La Cruz	12.00	351	eP	Pn	01 48 38.5	-0.7
TEFE	Tefe	12.32	57	eP	Pn	01 48 40.7	-2.4
PB07	IPOC Station P	12.33	157	Pn	Pn	01 48 42.3	-1.1
GARC	Garzon, Huila	12.46	358	eP	Pn	01 48 43.8	-1.4
MACC	Macarena, Meta	12.46	5	eP	Pn	01 48 42.6	-2.4
PB09	IPOC Station P	12.65	155	Pn	Pn	01 48 47.1	-0.4
BETC	Betania	12.95	358	eP	Pn	01 48 53.5	+2.1
LVC	Limon Verde	13.51	155	P	P	01 49 04.9	+1.4
	0.8nm,0.3s,baz=1.8,slow=17,SNR=1.1						
LVC				S	Sn	01 51 21.9	-6.3
	1.3nm,0.2s,baz=96,slow=0.9,SNR=8.3						
LVC	Limon Verde	13.51	155	eP	Pn	01 49 00.7	+1.9
GR1C	Gorgona, Isla	13.63	346	eP	Pn	01 48 59.8	-0.3
PRAC	Prado	13.97	0	Pn	Pn	01 49 04.4	0.0
YOTC	Yotoco, Valle	14.30	355	eP	P	01 49 12.0	0.0
VILC	Villavicencio,	14.42	5	eP	P	01 49 12.1	-1.3
SIV	San Ignacio	14.67	114	P	Pn	01 49 13.6	+0.2
	9.8nm,0.4s,baz=291,slow=12,SNR=30						
VILB	Vilhena	14.72	102	Pn	Pn	01 49 14.3	+0.4
VILB	Vilhena	14.72	102	eP	Pn	01 49 14.8	+0.8
ROSC	El Rosal	15.10	3	P	Pn	01 49 19.9	+0.8
	6.2nm,0.3s,baz=139,slow=23,SNR=1.8						
ROSC	El Rosal	15.10	3	P	Pn	01 49 20.0	+0.9
BBSD	Serra de San D	15.54	118	eP	Pn	01 49 24.1	0.0
NORC	Norcasia	15.81	0	eP	P	01 49 29.1	+0.4
MACA	Manacapuru-AM	15.90	64	Pn	Pn	01 49 26.4	-2.2
MACA	Manacapuru-AM	15.90	64	eP	Pn	01 49 26.6	-2.0
CBOC	Ciudad Bolivar	16.14	356	eP	P	01 49 34.2	+1.7
RUSC	La Rusia	16.25	7		P	01 49 34.1	+0.1
RUSC				IAmb	IAmb	01 49 37.3	
	comp=Z,57nm,1.0s						
RUSC	La Rusia	16.25	7	eP	P	01 49 35.7	+1.7
PTLB	Pontes e Lacer	16.27	110		Pn	01 49 33.0	-0.1
PTLB	Pontes e Lacer	16.27	110	eP	Pn	01 49 33.0	-0.1
PTBC	PUERTO BERRIO,	16.79	2	eP	P	01 49 40.2	+0.7
DBBC	Dabeiba	17.29	356	eP	Pn	01 49 46.6	+1.0
BRRC	Barranca, Sant	17.39	4	eP	P	01 49 46.4	+0.3
PAMC	Pamplona, Colo	17.72	8	eP	Pn	01 49 52.0	+0.9
ZARC	Zaragoza, Cauc	17.72	0	eP	Pn	01 49 51.2	+0.5
PDRB	Porto dos Gac	17.98	96	eP	P	01 49 53.4	+0.8
UREC	San Jos de Ur	17.99	358	eP	P	01 49 52.8	+0.1
CLDB	Colider	18.88	93	eP	P	01 50 03.3	+0.8
BOAV	Boa Vista	19.18	49	P	P	01 50 06.4	+0.7
BOAV				IAmb	IAmb	01 50 10.2	
	comp=Z,32nm,0.8s						
BOAV	Boa Vista	19.18	49	eP	P	01 50 07.3	+1.6
BOAV	Boa Vista	19.18	49	eP	P	01 50 06.7	+1.0
SALV	Santo Antonio	19.59	108	eP	P	01 50 11.1	+1.0
SDV	Santo Domingo	19.60	13	P	P	01 50 09.8	-0.6
	comp=Z,18nm,0.5s,baz=175,slow=16,SNR=19						
SDV	Santo Domingo	19.60	13	P	P	01 50 09.9	-0.5
SDV				IAmb	IAmb	01 50 16.3	
	comp=Z,29nm,0.7s						
SDV	Santo Domingo	19.60	13	eP	P	01 50 11.2	+0.8
NPGB	Novo Progresso	19.69	82	eP	P	01 50 10.5	-0.7
LL1C	La Loma 1 Cana	19.81	4	eP	P	01 50 14.0	+1.5
ITTB	Itaituba	20.00	74	eP	P	01 50 14.0	-0.6
SJCC	San Jacinto, C	20.11	359	⇓iP	P	01 50 17.2	+1.3
MURT	Porto Murtinho	20.12	126	eP	P	01 50 16.6	+0.7
BDQN	Bodoquena, MS	20.24	122	eP	P	01 50 19.0	+2.0
BAUV	El Baul	20.38	20	P	P	01 50 18.4	-0.2
BRU2	Volcan	20.50	338	P	P	01 50 21.4	+1.3
PP1B	Ponte de Pedra	20.80	112	eP	P	01 50 24.9	+1.8
AQDB	Aquidauana	21.13	121	eP	P	01 50 29.4	+2.8
SRBA	San Rafael, Bu	21.16	337	P	P	01 50 28.2	+1.1
SRBA				IAmb	IAmb	01 50 30.0	
	comp=Z,30nm,1.0s						
RIMA	Rio Macho	21.84	336	P	P	01 50 35.6	+1.1
CFA	Coronel Fontan	22.06	164	P	P	01 50 38.9	+2.5
	comp=Z,1.2nm,0.6s,baz=214,slow=9.3,SNR=2.0						
	comp=Z,1.2nm,0.6s						
URIC	Uribia, Colomb	22.11	8	P	P	01 50 35.7	-1.3
URIC				IAmb	IAmb	01 50 37.9	
	comp=Z,95nm,1.7s						
MALB	Monte Alegre	22.26	69	eP	P	01 50 39.0	+0.4
PCRV	Puerto La Cruz	22.85	27	P	P	01 50 44.9	+0.6
	comp=Z,6.9nm,0.4s,baz=248,slow=2.7,SNR=7.0						
	comp=Z,6.9nm,0.4s						
CPUP	Villa Florida	23.06	136	P	P	01 50 47.7	+1.5
	comp=Z,1.8nm,0.7s,baz=340,slow=9.9,SNR=3.4						
	comp=Z,1.8nm,0.7s						
CPUP	Villa Florida	23.06	136	P	P	01 50 47.7	+1.5
ARAG	Araguaiana, MT	23.20	106	eP	P	01 50 48.1	+0.5
SNDB	Serra Nova Dou	23.31	96	eP	P	01 50 49.5	+0.9
ESPN	Las Esperanzas	24.23	337	P	P	01 50 58.1	+1.2
ACON	Acoyapa	24.37	335	P	P	01 50 59.1	+1.0
PRVC	Isla de Provid	24.40	345	P	P	01 50 59.5	+1.0
MCPB	Macapa, AP	24.88	68	eP	P	01 51 03.3	+0.4
PRPB	Parauapebas	25.26	83	eP	P	01 51 07.5	+1.2
PCMB	Pacaembu	25.38	119	eP	P	01 51 10.7	+3.4
ITRB	Iturama	25.52	114	eP	P	01 51 11.1	+2.4
BDFB	Brasilia	26.80	104	P	P	01 51 21.0	+0.6
	comp=Z,2.1nm,0.6s,baz=20,slow=15,SNR=3.1						
	comp=Z,2.1nm,0.6s						
MDP	Montagnes des	27.04	56	P	P	01 51 25.0	+2.6
	comp=Z,32nm,1.1s,baz=231,slow=8.2,SNR=7.5						
	comp=Z,32nm,1.1s						
SMTB	Santa Maria do	27.06	89	eP	P	01 51 24.0	+1.4
CRPR	Cabo Rojo, PR	29.23	16	P	P	01 51 41.8	+0.1
OBIP	Obispado Ponce	29.40	16	P	P	01 51 42.9	-0.3
SDBA	SAO DESIDERIO	29.57	97	eP	P	01 51 46.0	+1.1
SJG	San Juan	29.60	17	P	P	01 51 45.3	+0.3
	comp=Z,26nm,0.6s,baz=174,slow=5.7,SNR=18						
	comp=Z,26nm,0.6s						
SJG	San Juan	29.60	17	P	P	01 51 44.7	-0.3
GCPR	Guaynabo City	29.80	17	IAmb	IAmb	01 51 47.4	
	comp=Z,21nm,0.7s						
JANB	Januaria	30.28	102	eP	P	01 51 51.4	+0.2
DIAM	Diamantina, MG	31.32	108	eP	P	01 52 02.0	+1.6
ROSB	Rosrio	31.52	79	eP	P	01 52 02.5	+0.4
FPAL	Fort Paine	45.76	348	P	P	01 53 59.9	-0.6
W50A	Signal Mountai	46.34	348	IAmb	IAmb	01 54 05.3	
	comp=Z,10nm,0.7s						
SWET	Sewanee	46.48	348	IAmb	IAmb	01 54 05.8	
	comp=Z,9.2nm,0.6s						
V48A	Smith Brothers	47.18	347	IAmb	IAmb	01 54 11.6	
	comp=Z,14nm,0.7s						
T57A	Hurt	47.26	355	IAmb	IAmb	01 54 13.4	
	comp=Z,19nm,0.8s						
FW13	Cleburne	47.57	334	IAmb	IAmb	01 54 16.3	
	comp=Z,14nm,0.9s						
WVT	Waverly	47.79	346	P	P	01 54 14.0	-2.2
WVT				pP	pP	01 54 32.4	-14
TXAR	Lajitas Array	48.18	326	P	P	01 54 20.4	+0.9
	comp=Z,2.1nm,0.6s,baz=149,slow=8.8,SNR=27						
	comp=Z,2.1nm,0.6s						
X37A	Clayton	48.69	338	IAmb	IAmb	01 54 24.6	
	comp=Z,9.6nm,0.7s						
FCAR	Ozark Folk Cen	48.75	341	P	P	01 54 22.2	-1.3
RLO	Rose Lookout	49.97	339	P	P	01 54 33.3	+0.4
RLO				IAmb	IAmb	01 54 34.1	
	comp=Z,13nm,0.6s						
TUL1	Leonard	50.02	338	P	P	01 54 33.2	-0.1
TUL1				IAmb	IAmb	01 54 34.5	
	comp=Z,18nm,1.1s						
POST	Post	50.02	331	IAmb	IAmb	01 54 34.8	
	comp=Z,16nm,0.7s						
FVM	French Village	50.20	344	IAmb	IAmb	01 54 34.9	
	comp=Z,20nm,1.1s						
OLIL	Olney	50.34	347	P	P	01 54 34.2	-1.4
OK030	Cody Creek RV	50.41	337	IAmb	IAmb	01 54 37.8	
	comp=Z,10.0nm,0.8s						
P49A	Miami Univ. Ec	50.44	350	IAmb	IAmb	01 54 35.9	
	comp=Z,17nm,1.1s						
P48A	Milroy	50.49	350	IAmb	IAmb	01 54 35.8	
	comp=Z,12nm,0.6s						
CCM	Cathedral Cave	50.49	343	P	P	01 54 35.9	-0.8
S39A	Bolivar	50.78	341	IAmb	IAmb	01 54 39.9	
	comp=Z,6.1nm,0.6s						
OK051	E0350 and S346	50.94	337	IAmb	IAmb	01 54 41.4	
	comp=Z,18nm,0.9s						
MSTX	Muleshoe	51.37	330	P	P	01 54 42.6	-1.0
MSTX				IAmb	IAmb	01 54 44.6	
	comp=Z,9.4nm,1.2s						
KAN13	South Haven SW	51.63	337	IAmb	IAmb	01 54 46.5	
	comp=Z,20nm,1.0s						
KAN09	Caldwell North	51.79	337	IAmb	IAmb	01 54 47.8	
	comp=Z,14nm,1.0s						
BRYW	Bryant College	52.10	3	P	P	01 54 49.3	+0.6
BRYW				IAmb	IAmb	01 54 50.2	
	comp=Z,13nm,0.7s						
P38A	Dawn	52.62	342	IAmb	IAmb	01 54 52.7	
	comp=Z,27nm,1.6s						
HRV	Adam Dziewonsk	52.69	3	P	P	01 54 52.3	-0.7
KSU1	Kansas State U	53.15	339	IAmb	IAmb	01 54 57.9	
	comp=Z,13nm,0.9s						
ANMO	Albuquerque	54.00	328	P	P	01 55 03.6	+0.6
T25A	Trinidad	54.72	331	IAmb	IAmb	01 55 10.0	
	comp=Z,11nm,0.8s						
SDCO	Great Sand Dun	55.72	331	P	P	01 55 15.2	-0.2
SDCO				IAmb	IAmb	01 55 17.1	
	comp=Z,8.6nm,0.7s						
ECSD	EROS Data Cent	57.31	342	IAmb	IAmb	01 55 26.5	
	comp=Z,9.4nm,1.1s						
SMCO	Snowmass	57.56	331	IAmb	IAmb	01 55 30.9	
	comp=Z,4.3nm,0.7s						
SPMN	Marine on St.	57.60	345	P	P	01 55 27.2	-1.0
SPMN				IAmb	IAmb	01 55 28.2	
	comp=Z,14nm,0.8s						
O20A	White River Ci	58.91	331	IAmb	IAmb	01 55 39.3	
	comp=Z,6.9nm,0.8s						
F33A	5 Mile Ranch,	59.12	343	IAmb	IAmb	01 55 38.5	
	comp=Z,5.7nm,0.7s						
RWWY	Rawlins	59.65	332	IAmb	IAmb	01 55 44.3	
	comp=Z,8.8nm,1.1s						
P17A	Butcher Ranch,	59.66	328	IAmb	IAmb	01 55 44.3	
	comp=Z,5.7nm,0.7s						
TMUT	Trail Mountain	59.77	328	P	P	01 55 44.4	+0.6
RSSD	Black Hills	60.28	336	P	P	01 55 47.6	+0.5
BSUT	Blindstream Ca	60.47	329	IAmb	IAmb	01 55 50.8	
	comp=Z,6.0nm,0.7s						
AGMN	Agassiz Nation	61.24	344	IAmb	IAmb	01 55 53.6	
	comp=Z,12nm,0.7s						
DUG	Dugway, Tooele	61.27	328	P	P	01 55 54.5	+0.8
DUG				IAmb	IAmb	01 55 55.8	
	comp=Z,6.5nm,0.8s						
PD31	Pinedale Array	61.58	332	P	P	01 55 56.4	+0.5
PDAR	Pinedale Array	61.58	332	P	P	01 55 55.8	-0.1
	comp=Z,1.8nm,0.7s,baz=126,slow=8.5,SNR=15						
	comp=Z,1.8nm,0.7s						
HWUT	Hardware Ranch	61.67	329	P	P	01 55 56.7	+0.3
HWUT				IAmb	IAmb	01 55 57.6	
	comp=Z,11nm,0.7s						
AHID	Auburn Hatcher	62.31	331	IAmb	IAmb	01 56 01.7	
	comp=Z,6.3nm,0.7s						
ULM	Lac du Bonnet	63.04	345	P	P	01 56 04.8	-0.4
	comp=Z,17nm,0.7s,baz=152,slow=6.4,SNR=23						
	comp=Z,17nm,0.7s						
ULM	Lac du Bonnet	63.04	345	IAmb	IAmb	01 56 05.3	
	comp=Z,14nm,0.7s						
MDPB	Devils Postpil	63.09	322	IAmb	IAmb	01 56 10.4	
	comp=Z,9.0nm,0.9s						
FLWY	Flagg Ranch	63.12	332	P	P	01 56 06.9	+0.8
FLWY				IAmb	IAmb	01 56 07.9	
	comp=Z,9.5nm,0.8s						
YMR	Madison River	63.69	332	IAmb	IAmb	01 56 12.6	
	comp=Z,6.7nm,0.8s						
DGMT	Dagmar	64.00	339	IAmb	IAmb	01 56 13.3	
	comp=Z,11nm,0.8s						
MFID	Camas Ranch	65.15	328	IAmb	IAmb	01 56 21.4	
	comp=Z,11nm,1.0s						
SCHQ	Schefferville	65.30	5	P	P	01 56 19.7	-0.1
	comp=Z,4.5nm,0.7s,baz=202,slow=6.0,SNR=7.0						
	comp=Z,4.5nm,0.7s						
MSO	Missoula	66.69	332	P	P	01 56 30.1	+1.1
MSO				IAmb	IAmb	01 56 31.1	
	comp=Z,8.5nm,1.0s						
FFC	Flin Flon	68.70	344	P	P	01 56 40.2	-1.1
FFC				pP	PcP	01 57 00.3	-4.9
EDM	Edmonton	71.25	337	IAmb	IAmb	01 56 57.4	
	comp=Z,8.9nm,0.8s						
DBIC	Dimbokro	71.86	79	P	P	01 57 02.0	+0.6
	comp=Z,3.3nm,1.0s,baz=272,slow=7.8,SNR=4.1						
	comp=Z,3.3nm,1.0s						
DBIC	Dimbokro	71.86	79	P	P	01 57 01.9	+0.5
DBIC				IAmb	IAmb	01 57 16.9	
	comp=Z,15nm,1.3s						
BRLDA	Berland Lookou	73.52	336	IAmb	IAmb	01 57 11.2	
	comp=Z,13nm,1.2s						
YKA	Yellowknife Ar	78.82	342	P	P	01 57 40.1	0.0
	comp=Z,1.5nm,0.6s,baz=139,slow=6.2,SNR=30						
	comp=Z,1.5nm,0.6s						
DY2G	Dye2	79.46	11	iP	P	01 57 43.5	-0.4
DY2G				IAmb	IAmb	01 57 44.5	
	comp=Z,7.7nm,0.7s						
TORD	Torodi Ar. Bea	79.61	75	P	P	01 57 45.9	+0.4
	comp=Z,1.9nm,0.8s,baz=277,slow=5.5,SNR=9.0						
ESDC	Sonseca Array	82.34	47	P	P	01 58 00.6	+1.0
	comp=Z,1.6nm,1.0s,baz=254,slow=3.9,SNR=6.5						
	comp=Z,1.6nm,1.0s						
ESDC	Sonseca Array	82.34	47	P	P	01 58 00.8	+1.3
ICESG	Greenland Ices	83.02	12	iP	P	01 58 02.8	0.0
ICESG				IAmb	IAmb	01 58 05.6	
	comp=Z,26nm,1.4s						
TAM	Tamanrasset	85.37	66	P	P	01 58 15.5	0.0
SUMG	Summit	86.10	10	iP	P	01 58 18.9	+0.6
SUMG				IAmb	IAmb	01 58 19.9	
	comp=Z,11nm,0.9s						
TULEG	Thule	86.81	1	iP	P	01 58 22.1	+0.9
TULEG				IAmb	IAmb	01 58 23.8	
	comp=Z,3.8nm,0.8s						
A36M	Sachs Harbour	88.50	346	IAmb	IAmb	01 58 30.1	
	comp=Z,8.4nm,0.8s						
NEEM	North Greenlan	88.70	5	iP	P	01 58 31.8	+1.3
NEEM				IAmb	IAmb	01 58 32.4	
	comp=Z,14nm,0.8s						
BCAR	Beaver Creek A	88.98	335	P	P	01 58 32.4	+0.6
ILAR	Eielson Array	91.73	336	P	P	01 58 44.1	-0.4
	comp=Z,0.5nm,0.8s,baz=146,slow=2.3,SNR=7.0						
	comp=Z,0.5nm,0.8s						
DAG	Danmarks Havn	92.76	11	iP	P	01 58 48.0	-1.0
DAG				IAmb	IAmb	01 58 49.7	
	comp=Z,2.8nm,1.2s						
ASAR	Alice Springs	135.94	220	PKP	PKPdf	02 04 59.5	+1.0
	comp=Z,0.4nm,0.7s,baz=124,slow=1.7,SNR=4.7						

WRA	**Warramunga Arr**	138.28	224	PKP	**PKPdf**	02 05 03.7	+0.8
	comp=Z,0.7nm,0.7s,baz=124,slow=2.1,SNR=5.4						
MKAR	**Makanchi Array**	138.88	24	PKP	**PKiKP**	02 05 05.0	-0.4
	comp=Z,0.4nm,0.6s,baz=11,slow=2.9,SNR=4.0						
MDJ	**Mudanjiang**	139.81	333	PKP	**PKPdf**	02 05 05.0	+0.1
MDJ				PP	PP	02 07 45.5	-16
MDJ				AMB	AMB		
	comp=Z,240nm,8.8s						
SONM	**Songino Array**	142.62	358	PKhKP	PKPpre	02 05 06.4	
	comp=Z,0.6nm,0.5s,baz=321,slow=2.0,SNR=5.6						
KSRS	**Korea Array**	146.03	326	PKPbc	**PKPbc**	02 05 17.2	+0.1
	comp=Z,2.8nm,1.0s,baz=37,slow=2.4,SNR=5.8						
KSAR	**Wonju Array Be**	146.05	326	PKPbc	**PKPdf**	02 05 15.6	-0.6
GTA	**Gaotai**	150.69	8	*e*PKPbc	**PKiKP**	02 05 30.5	+0.5
PZH	**PanZhiHua**	163.64	10	PKP	**PKPdf**	02 05 37.0	-3.4

RSNC 31 02:03:25.7±1.3, 6°.82N×73°.13W, h145^{km}±5^{km}, ML3.0, Mw3.6, 2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	0.23	193	*e*P	Pn	02 03 45.1	-0.7
BARC				*e*S	Sn	02 03 59.7	-1.3
BARC				*i*		02 04 02.8	
	comp=Z,129nm,0.2s						
BRRC	**Barranca, Sant**	0.64	297	⇓*i*P	Pn	02 03 46.9	-0.4
BRRC				*e*S	Sn	02 04 04.2	+0.6
BRRC				*i*		02 04 07.4	
	comp=Z,197nm,0.1s						
PAMC	**Pamplona, Colo**	0.67	40	*e*P	Pn	02 03 47.9	-0.1
PAMC				*e*S	Sn	02 04 05.1	+0.1
PAMC				*i*		02 04 06.7	
	comp=Z,64nm,0.3s						
RUSC	**La Rusia**	0.92	177	*e*P	Pn	02 03 49.4	-0.5
RUSC				*e*S	Sn	02 04 07.9	-0.4
RUSC				*i*		02 04 08.6	
	comp=Z,109nm,0.3s						
PTBC	**PUERTO BERRIO,**	1.34	258	*e*P	Pn	02 03 51.7	-1.6
PTBC				*e*S	Sn	02 04 12.9	-1.4
PTBC				*i*		02 04 20.0	
	comp=Z,178nm,0.6s						
SPBC	**San Pablo de B**	1.49	219	*e*P	Pn	02 03 54.0	-0.9
SPBC				*e*S	Sn	02 04 16.3	-0.8
SPBC				*i*		02 04 22.3	
	comp=Z,176nm,0.2s						
ZARC	**Zaragoza, Cauc**	1.84	291	*e*P	Pn	02 03 57.8	-0.9
ZARC				*e*S	Sn	02 04 23.7	-0.2
NORC	**Norcasia**	2.13	234	*e*P	Pn	02 04 01.1	-1.1
NORC				*e*S	Sn	02 04 29.7	-0.3
NORC				*i*		02 04 37.5	
	comp=Z,65nm,0.3s						
CHIC	**Chingaza**	2.25	195	*e*P	Pn	02 04 03.3	-0.7
CHIC				*e*S	Sn	02 04 33.6	+0.2
CHIC				*i*		02 04 42.4	
	comp=Z,49nm,0.3s						
ROSC	**El Rosal**	2.29	211	*e*P	Pn	02 04 05.0	+0.6
ROSC				*e*S	Sn	02 04 36.4	+2.3
ROSC				*i*		02 04 42.9	
	comp=Z,102nm,0.4s						
HELC	**Santa Helena**	2.46	255	*e*P	Pn	02 04 06.8	+0.3
HELC				*e*S	Sn	02 04 37.8	0.0
HELC				*i*		02 04 44.4	
	comp=Z,75nm,0.4s						
UREC	**San Jos de Ur**	2.56	291	*e*P	Pn	02 04 05.6	-1.7
UREC				*e*S	Sn	02 04 36.1	-3.3
UREC				*i*		02 04 37.9	
	comp=Z,118nm,0.1s						
LL1C	**La Loma 1 Cana**	2.74	351	*e*P	Pn	02 04 11.5	+1.9
LL1C				*e*S	Sn	02 04 45.6	+2.1
VILC	**Villavicencio,**	2.75	192	*e*P	Pn	02 04 08.8	-1.0
VILC				*e*S	Sn	02 04 43.3	-0.5
VILC				*i*		02 04 46.2	
	comp=Z,66nm,0.3s						
PTGC	**Puerto Gaitan,**	2.78	159	⇓*i*P	Pn	02 04 08.1	-2.0
PTGC				*e*S	Sn	02 04 41.6	-2.9
PTGC				*i*		02 04 48.5	
	comp=Z,39nm,0.3s						
CBOC	**Ciudad Bolivar**	3.02	252	*e*P	Pn	02 04 12.9	-0.3
CBOC				*e*S	Sn	02 04 50.2	+0.2
CBOC				*i*		02 04 54.0	
	comp=Z,18nm,0.5s						
DBBC	**Dabeiba**	3.06	274	*e*P	Pn	02 04 13.2	-0.5
DBBC				*e*S	Sn	02 04 49.3	-1.6
DBBC				*i*		02 04 49.9	
	comp=Z,38nm,0.3s						
ARGC	**Ariguani, Magd**	3.22	340	*e*P	Pn	02 04 15.5	-0.2
ARGC				*e*S	Sn	02 04 54.0	-0.4
ARGC				*i*		02 05 03.1	
	comp=Z,17nm,0.2s						
ANIL	**Santa Ana**	3.23	224	*e*P	Pn	02 04 16.7	+0.6
ANIL				*e*S	Sn	02 04 56.5	+1.4
PRAC	**Prado**	3.54	210	*e*P	Pn	02 04 18.9	-1.1
PRAC				*e*S	Sn	02 05 01.2	-0.7
PRAC				*i*		02 05 08.6	
	comp=Z,72nm,0.7s						
ORTC	**Ortega, Tolima**	3.57	216	*e*P	Pn	02 04 19.6	-0.7
ORTC				*e*S	Sn	02 05 03.3	+0.6
ORTC				*i*		02 05 09.1	
	comp=Z,37nm,0.7s						
APAC	**Apartado, Choc**	3.58	288	*e*P	Pn	02 04 18.9	-1.5
APAC				*e*S	Sn	02 05 00.4	-2.5
APAC				*i*		02 05 04.3	
	comp=Z,23nm,0.3s						
PLMC	**San Jos del P**	3.67	239	*e*P	Pn	02 04 20.7	-0.8
PLMC				*e*S	Sn	02 05 04.9	+0.1
PLMC				*i*		02 05 07.8	
	comp=Z,23nm,0.2s						
SJCC	**San Jacinto, C**	3.67	327	*e*P	Pn	02 04 18.8	-2.8
SJCC				*e*S	Sn	02 05 02.0	-2.9
SJCC				*i*		02 05 04.8	
	comp=Z,20nm,0.6s						
LCBC	**Los crdobas,**	3.79	303	*e*P	Pn	02 04 22.2	-0.9
LCBC				*e*S	Sn	02 05 07.9	+0.2
LCBC				*i*		02 05 10.0	
	comp=Z,41nm,0.4s						
SMRC	**Santa Marta, M**	4.45	346	*e*P	Pn	02 04 29.9	-1.9
SMRC				*e*S	Sn	02 05 18.9	-4.4
SMRC				*i*		02 05 19.1	
	comp=Z,16nm,0.4s						
MACC	**Macarena, Meta**	4.70	189	*e*P	Pn	02 04 32.0	-3.0
MACC				*e*S	Sn	02 05 24.1	-5.0
MACC				*i*		02 05 41.7	
	comp=Z,9.1nm,0.4s						
GARC	**Garzon, Huila**	5.17	207	*e*P	Pn	02 04 39.1	-2.4
GARC				*e*S	Sn	02 05 37.1	-3.6
GARC				*i*		02 05 42.1	
	comp=Z,14nm,0.3s						

IDC ***31*** *02:15:15.9±1.5, 44°.56N×9°.59E, h0^{km}, mb3.1/2, mbtmp3.2/6, ML3.3/4, Error ellipse: s-maj=29.0km s-min=14.0km az=115.0*
ROM ***31*** *02:15:16.5±0.1, 44°.50N×9°.744E±0°.001, h11^{km}, ML3.2/140, Error ellipse: s-maj=0.8km s-min=0.0km az=90.0*
GEN ***31*** *02:15:16.2, 44°.50N×9°.76E, h11^{km}, Ml2.8*
PRU ***31*** *02:15:16.5±0.0, 44°.52N×9°.86E, h0^{km}*
LDG ***31*** *02:15:17.2±0.1, 44°.48N×9°.74E, h5^{km}, Md3.4/7, Ml3.2/49, Error ellipse: s-maj=1.9km s-min=1.4km az=27.0*

ISC 31 02:15:16.6±0.8, 44°.43N±0°.02×9°.71E±0°.01, h13^{km}±6^{km}, n233, σ2^{s}.09/320, 6C, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSSA	**Maissana**	0.17	231	P	**Pb**	**02 15 21.9**	**+0.1**
MSSA				S	**Sb**	**02 15 26.1**	**+1.0**
MSSA				AML	AML		
	comp=N,4960µm,1.4s						
MSSA				AML	AML		
	comp=E,3785µm,0.4s						
MSSA	**Maissana**	0.17	231	P	**Pb**	**02 15 21.8**	**+0.1**
MSSA				S	**Sb**	**02 15 25.9**	**+0.8**
GRAM	**Graiana**	0.27	75	P	**Pg**	**02 15 21.4**	**-0.9**
GRAM				S	**Sg**	**02 15 25.4**	**-0.7**
GRAM				AML	AML		
	comp=E,23300µm,0.3s						
GRAM				AML	AML		
	comp=N,18650µm,0.3s						
GRAM	**Graiana**	0.27	75	P	**Pg**	**02 15 21.4**	**-0.9**
GRAM				S	**Sg**	**02 15 25.3**	**-0.7**
GORR	**Gorreto**	0.35	302	⇑P	**Pg**	**02 15 23.2**	**-0.4**
GORR				S	**Sg**	**02 15 28.6**	**+0.2**
GORR	**Gorreto**	0.35	302	P	**Pg**	**02 15 23.2**	**-0.4**
GORR				S	**Sg**	**02 15 28.9**	**+0.5**
FIVI	**Fivizzano**	0.35	121	P	**Pg**	**02 15 24.1**	**+0.3**
FIVI				S	**Sb**	**02 15 29.8**	**-0.4**
FIVI	**Fivizzano**	0.35	121	P	**Pb**	**02 15 24.2**	**-0.5**
FIVI				S	**Sb**	**02 15 30.3**	**+0.1**
BOB	**Bobbio (Coli)**	0.39	332	⇑P	**Pg**	**02 15 23.4**	**-1.1**
BOB				S	**Sg**	**02 15 28.8**	**-0.9**
BOB	**Bobbio (Coli)**	0.39	332	P	**Pg**	**02 15 23.3**	**-1.1**
BOB				S	**Sg**	**02 15 28.9**	**-0.9**
PLMA	**Palmaria, Port**	0.39	165	P	**Pb**	**02 15 25.3**	**0.0**
PLMA				AML	AML		
	comp=E,2315µm,1.0s						
PLMA				AML	AML		
	comp=E,2315µm,1.0s						
PLMA				AML	AML		
	comp=N,2620µm,0.3s						
PLMA	**Palmaria, Port**	0.39	165	P	**Pb**	**02 15 25.3**	**0.0**
PLMA				S	**Sb**	**02 15 31.3**	**+0.1**
EQUI	**Equi**	0.41	129	⇑P	**Pg**	**02 15 25.1**	**+0.3**
EQUI				S	**Sb**	**02 15 31.5**	**-0.4**
EQUI				AML	AML		
	comp=E,1330µm,1.0s						
EQUI				AML	AML		
	comp=E,1330µm,1.0s						
EQUI				AML	AML		
	comp=N,1830µm,0.4s						
EQUI	**Equi**	0.41	129	P	**Pg**	**02 15 25.1**	**+0.3**
EQUI				S	**Sb**	**02 15 31.4**	**-0.4**
NEVI	**Neviano degli**	0.46	70	P	**Pg**	**02 15 25.6**	**-0.1**
NEVI				S	**Sb**	**02 15 33.4**	**0.0**
RNCA	**Ronca, Sant'Ol**	0.54	275	⇑P	**Pg**	**02 15 27.2**	**0.0**
RNCA				S	**Sg**	**02 15 35.5**	**+1.0**
RNCA				AML	AML		
	comp=N,1350µm,1.0s						
RNCA				AML	AML		
	comp=E,1955µm,0.7s						
RNCA				AML	AML		
	comp=N,1350µm,1.0s						
RNCA	**Ronca, Sant'Ol**	0.54	275	P	**Pg**	**02 15 27.3**	**0.0**
RNCA				S	**Sg**	**02 15 35.7**	**+1.2**
PRMA	**PARMA**	0.55	52	P	**Pg**	**02 15 27.2**	**-0.1**
PRMA				S	**Sb**	**02 15 36.0**	**+0.2**
PRMA				AML	AML		
	comp=E,7510µm,0.3s						
PRMA				AML	AML		
	comp=N,13700µm,0.3s						
PRMA				AML	AML		
	comp=E,7510µm,1.7s						
PRMA	**PARMA**	0.55	52	P	**Pg**	**02 15 27.3**	**-0.1**
PRMA				S	**Sb**	**02 15 36.2**	**+0.4**
SARO	**Sassorosso**	0.55	116	P	**Pg**	**02 15 27.4**	**0.0**
SARO				S	**Sb**	**02 15 35.6**	**-0.5**
SARO				AML	AML		
	comp=E,3110µm,0.3s						
SARO				AML	AML		
	comp=N,4460µm,0.2s						
SARO	**Sassorosso**	0.55	116	P	**Pg**	**02 15 27.5**	**0.0**
SARO				S	**Sb**	**02 15 36.1**	**+0.1**
VLC	**Villacollemand**	0.56	118	P	**Pg**	**02 15 27.5**	**0.0**
VLC				S	**Sb**	**02 15 36.0**	**-0.1**
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC	**Villacollemand**	0.56	118	P	**Pg**	**02 15 27.5**	**0.0**
GSCL	**Gusciola**	0.64	96	P	**Pg**	**02 15 28.6**	**-0.4**
GSCL				S	**Sb**	**02 15 38.1**	**-0.3**
GSCL				AML	AML		
	comp=N,1430µm,0.2s						
GSCL				AML	AML		
	comp=E,1580µm,0.5s						
GSCL	**Gusciola**	0.64	96	P	**Pg**	**02 15 28.7**	**-0.4**
GSCL				S	**Sb**	**02 15 38.5**	**+0.1**
A306A	**Viano (RE)**	0.65	80	P	**Pb**	**02 15 29.7**	**0.0**
CARD	**Cardoso**	0.69	125	P	**Pb**	**02 15 30.1**	**-0.3**
CARD				AML	AML		
	comp=N,4940µm,0.6s						
CARD				AML	AML		
	comp=E,3455µm,0.4s						
CARD	**Cardoso**	0.69	125	P	**Pb**	**02 15 30.1**	**-0.3**
SARZ	**Sarezzano**	0.72	308	P	**Pg**	**02 15 31.0**	**+0.4**
SARZ				AML	AML		
	comp=E,2200µm,0.5s						
SARZ				AML	AML		
	comp=E,2190µm,0.5s						
SARZ				AML	AML		
	comp=N,3150µm,0.4s						
SARZ				AML	AML		
	comp=N,3140µm,0.4s						
SARZ	**Sarezzano**	0.72	308	P	**Pg**	**02 15 31.5**	**+0.9**
BDI	**Bagni Di Lucca**	0.73	119	P	**Pg**	**02 15 30.6**	**-0.3**
MAIM	**Mastiano**	0.76	132	P	**Pb**	**02 15 31.5**	**-0.1**
MAIM				S	**Sb**	**02 15 42.5**	**+0.6**
PCP	**Piancastagn**	0.84	278	P	**Pb**	**02 15 32.4**	**-0.7**
PCP				AML	AML		
	comp=E,737µm,0.4s						
PCP				AML	AML		
	comp=N,861µm,0.9s						
PCP				AML	AML		
	comp=E,737µm,1.6s						
PCP	**Piancastagn**	0.84	278	P	**Pb**	**02 15 32.4**	**-0.7**
POPM	**Popiglio**	0.84	116	P	**Pg**	**02 15 32.9**	**-0.1**
A312A	**Bozzolo (MN)**	0.88	39	P	**Pn**	**02 15 34.6**	**0.0**
EUCT	**Pavia**	0.88	333	P	**Pg**	**02 15 34.6**	**+1.0**
ZCCA	**Zocca**	0.91	94	P	**Pn**	**02 15 35.2**	**+0.1**
PII	**Pisa**	0.92	140	P	**Pg**	**02 15 34.4**	**+0.1**
PII				S	**Sn**	**02 15 47.5**	**-0.7**
PII				AML	AML		
	comp=N,3750µm,0.3s						
PII				AML	AML		
	comp=E,3055µm,0.3s						
PII	**Pisa**	0.92	140	P	**Pg**	**02 15 34.4**	**+0.1**
PII				S	**Sn**	**02 15 47.8**	**-0.3**
QLNO	**Quiliano**	0.98	265	⇑P	**Pb**	**02 15 35.3**	**-0.1**
QLNO	**Quiliano**	0.98	265	P	**Pb**	**02 15 35.3**	**-0.1**
ORZI	**Orzinuovi**	0.99	9	AML	AML		
	comp=N,1600µm,0.7s						
ORZI				AML	AML		
	comp=E,1310µm,1.0s						
GROG	**Isola di Gorgo**	1.01	172	P	**Pn**	**02 15 36.9**	**+0.5**
GROG				AML	AML		
	comp=E,1365µm,0.7s						
GROG				AML	AML		
	comp=N,916µm,0.6s						
GROG				AML	AML		
	comp=E,1365µm,1.3s						
GROG				AML	AML		
	comp=N,916µm,1.4s						
GROG	**Isola di Gorgo**	1.01	172	P	**Pn**	**02 15 36.9**	**+0.5**
GROG				S	**Sn**	**02 15 51.5**	**+1.1**
MTCR	**Monte La Croce**	1.01	113	AML	AML		
	comp=E,758µm,0.4s						
MTCR				AML	AML		
	comp=E,758µm,1.6s						
MTCR				AML	AML		
	comp=N,1405µm,1.3s						
MTCR	**Monte La Croce**	1.01	113	P	**Pg**	**02 15 36.1**	**0.0**
CAVE	**Cavezzo**	1.02	64	P	**Pn**	**02 15 37.6**	**+1.0**
CAVE				AML	AML		
	comp=E,2250µm,0.4s						
CAVE				AML	AML		
	comp=N,2685µm,0.5s						
CAVE	**Cavezzo**	1.02	64	P	**Pn**	**02 15 38.1**	**+1.5**
CAVE				S	**Sn**	**02 15 55.8**	**+5.0**
ROTM	**Rocchetta Tana**	1.06	294	P	**Pb**	**02 15 37.2**	**+0.5**
ROTM				AML	AML		
	comp=E,2575µm,1.5s						
ROTM				AML	AML		
	comp=N,3460µm,0.5s						
ROTM				AML	AML		
	comp=E,2575µm,0.5s						
ROTM	**Rocchetta Tana**	1.06	294	P	**Pn**	**02 15 37.8**	**+0.7**
MNTV	**Mantova**	1.06	46	AML	AML		
	comp=N,3720µm,1.2s						
MNTV				AML	AML		
	comp=E,2605µm,0.6s						
MNTV				AML	AML		
	comp=N,3720µm,0.8s						
RAVA	**Ravarino**	1.06	71	P	**Pg**	**02 15 40.3**	**+3.3**
CANO	**Canova, Maglio**	1.08	259	⇑P	**Pb**	**02 15 36.9**	**-0.2**
CANO				AML	AML		
	comp=E,1510µm,0.3s						
CANO				AML	AML		
	comp=N,2105µm,0.4s						
CANO	**Canova, Maglio**	1.08	259	P	**Pb**	**02 15 36.9**	**-0.2**
MPPT	**Montemurlo**	1.10	115	P	**Pg**	**02 15 37.9**	**+0.1**
MPPT				AML	AML		
	comp=E,554µm,0.7s						
MPPT				AML	AML		
	comp=N,478µm,0.7s						
MPPT				AML	AML		
	comp=N,478µm,1.3s						
MILN	**Milano**	1.11	342	AML	AML		
	comp=N,3785µm,0.7s						
MILN				AML	AML		
	comp=E,3050µm,0.7s						
MILN				AML	AML		
	comp=E,2085µm,0.7s						
MILN				AML	AML		
	comp=N,3650µm,0.3s						
CRMI	**Carmignano**	1.11	124	P	**Pg**	**02 15 38.1**	**+0.1**
CRMI				AML	AML		
	comp=E,505µm,0.4s						
CRMI				AML	AML		
	comp=N,512µm,0.5s						
CRMI				AML	AML		
	comp=N,541µm,0.5s						
CRMI				AML	AML		
	comp=N,512µm,1.5s						
CRMI				AML	AML		
	comp=E,530µm,0.4s						
CRMI				AML	AML		
	comp=N,541µm,1.5s						
CRMI	**Carmignano**	1.11	124	P	**Pg**	**02 15 38.3**	**+0.4**
TRES	**Parco Tresine**	1.21	28	P	**Pn**	**02 15 39.0**	**-0.1**
RORO	**Rocca Rossa**	1.22	256	P	**Pn**	**02 15 38.5**	**-0.8**
RORO				AML	AML		
	comp=E,383µm,0.2s						
RORO				AML	AML		
	comp=N,384µm,1.4s						
RORO				AML	AML		
	comp=N,384µm,0.6s						
RORO	**Rocca Rossa**	1.22	256	P	**Pn**	**02 15 38.5**	**-0.8**
SEI	**Scarperia**	1.24	107	P	**Pg**	**02 15 40.5**	**0.0**
SEI				AML	AML		
	comp=N,1185µm,0.4s						
SEI				AML	AML		
	comp=E,724µm,0.8s						
MTRZ	**Monterenzio**	1.26	92	P	**Pg**	**02 15 42.4**	**+1.5**
MTRZ				AML	AML		
	comp=N,1155µm,0.5s						
MTRZ				AML	AML		
	comp=E,1275µm,0.9s						
MTRZ				AML	AML		
	comp=E,1340µm,0.9s						
MTRZ				AML	AML		
	comp=N,1165µm,0.5s						
SERM	**Sermide**	1.27	62	AML	AML		
	comp=N,1260µm,0.3s						
SERM				AML	AML		
	comp=E,1183µm,1.2s						
SERM				AML	AML		
	comp=N,1570µm,0.8s						
SERM				AML	AML		
	comp=E,1775µm,0.6s						
SERM				AML	AML		
	comp=N,1570µm,1.2s						
SERM				AML	AML		
	comp=E,1775µm,1.4s						
SERM				AML	AML		
	comp=E,1183µm,0.8s						
BRIS	**BRISIGHELLA**	1.32	101	P	**Pg**	**02 15 46.0**	**+3.9**
BRIS				AML	AML		
	comp=E,515µm,0.6s						
BRIS				AML	AML		
	comp=E,442µm,0.8s						
BRIS				AML	AML		
	comp=N,636µm,0.8s						
BRIS				AML	AML		
	comp=N,587µm,0.7s						
SALO	**Salr**	1.33	26	P	**Pn**	**02 15 40.6**	**-0.2**
SALO				AML	AML		
	comp=N,2590µm,0.9s						
SALO				AML	AML		
	comp=E,2235µm,0.9s						
SALO				AML	AML		
	comp=N,2445µm,1.0s						
SALO				AML	AML		
	comp=E,2060µm,0.4s						
SALO				AML	AML		
	comp=N,2590µm,1.1s						
SALO				AML	AML		
	comp=N,2445µm,1.0s						
MDI	**Monti di Nese**	1.35	0	P	**Pn**	**02 15 41.7**	**+0.5**
MDI				AML	AML		
	comp=N,2780µm,0.4s						
MDI				AML	AML		
	comp=E,2375µm,0.4s						
MDI				AML	AML		
	comp=N,2370µm,0.4s						
MDI				AML	AML		
	comp=E,2290µm,0.4s						
MDI	**Monti di Nese**	1.35	0	P	**Pn**	**02 15 41.8**	**+0.5**
GBOS	**Grotte di Boss**	1.35	263	P	**Pn**	**02 15 40.9**	**-0.3**
ZONE	**Zone**	1.37	12	P	**Pn**	**02 15 41.3**	**-0.1**
ZONE				AML	AML		
	comp=E,1135µm,0.8s						
ZONE				AML	AML		
	comp=E,309µm,1.4s						
ZONE				AML	AML		
	comp=N,1032µm,0.5s						
ZONE				AML	AML		
	comp=N,310µm,0.5s						
MGRO	**Montegrosso**	1.42	255	P	**Pn**	**02 15 41.9**	**-0.3**
MGRO				AML	AML		
	comp=E,463µm,0.6s						
MGRO				AML	AML		
	comp=N,424µm,1.1s						
MGRO				AML	AML		
	comp=N,424µm,0.9s						
MGRO	**Montegrosso**	1.42	255	P	**Pn**	**02 15 41.9**	**-0.3**
RUFI	**Rufina**	1.42	114	P	**Pb**	**02 15 42.9**	**-0.1**
RUFI				AML	AML		
	comp=E,300µm,0.5s						
RUFI				AML	AML		
	comp=N,368µm,1.3s						
RUFI	**Rufina**	1.42	114	P	**Pb**	**02 15 43.0**	**0.0**
MONC	**Moncucco Torin**	1.43	298	P	**Pg**	**02 15 44.6**	**+0.7**
MONC				AML	AML		
	comp=E,1250µm,1.2s						
MONC				AML	AML		
	comp=N,1185µm,0.7s						
MONC				AML	AML		
	comp=N,1185µm,1.3s						
MONC	**Moncucco Torin**	1.43	298	P	**Pg**	**02 15 45.4**	**+1.5**
OSSC	**Osservatorio P**	1.43	129	P	**Pb**	**02 15 43.0**	**-0.1**
IMOL	**Imola, Italy**	1.46	92	AML	AML		
	comp=E,591µm,0.9s						
IMOL				AML	AML		
	comp=E,591µm,1.1s						
IMOL				AML	AML		
	comp=N,700µm,0.8s						
LMD	**Lutirano**	1.48	103	AML	AML		
	comp=E,238µm,0.9s						
LMD				AML	AML		
	comp=E,238µm,1.1s						
LMD				AML	AML		
	comp=N,234µm,1.1s						
BALD	**Monte Baldo**	1.48	32	P	**Pn**	**02 15 43.1**	**-0.1**
CSNT	**Castellina Chi**	1.49	129	P	**Pb**	**02 15 43.6**	**-0.5**
CSNT				AML	AML		
	comp=E,112µm,0.3s						
CSNT				AML	AML		
	comp=N,130µm,0.4s						
CSNT	**Castellina Chi**	1.49	129	P	**Pb**	**02 15 43.6**	**-0.5**
MAGA	**Magasa**	1.50	25	P	**Pn**	**02 15 42.8**	**-0.5**
MAGA				AML	AML		
	comp=N,2300µm,0.5s						
MAGA				AML	AML		
	comp=N,2300µm,1.5s						
MAGA				AML	AML		
	comp=E,4540µm,0.5s						
ROVR	**Rover Verones**	1.56	38	P	**Pn**	**02 15 43.6**	**-0.4**
ROVR				AML	AML		
	comp=E,1505µm,1.2s						
ROVR				AML	AML		
	comp=E,1505µm,0.8s						
ROVR				AML	AML		

	comp=N,1145µm,0.3s						
ROVR				AML	AML		
	comp=N,2860µm,0.3s						
ROVR				AML	AML		
	comp=E,517µm,0.6s						
MUGIO	**Muggio**	**1.57**	**343**	P	**Pn**	**02 15 44.2**	**0.0**
MUGIO				AML	AML		
	comp=E,456µm,0.7s						
MUGIO				AML	AML		
	comp=N,632µm,0.4s						
MUGIO				AML	AML		
	comp=E,456µm,1.3s						
MUGIO				AML	AML		
	comp=N,632µm,1.6s						
MUGIO	**Muggio**	**1.57**	**343**	P	**Pn**	**02 15 44.3**	**+0.1**
SAOF	**Saorge**	**1.61**	**255**	P	**Pn**	**02 15 44.7**	**+0.1**
SAOF				AML	AML		
	comp=E,288µm,0.6s						
SAOF				AML	AML		
	comp=N,302µm,0.9s						
ASQU	**Asqua**	**1.63**	**112**	P	**Pb**	**02 15 45.6**	**-0.8**
ASQU				AML	AML		
	comp=E,86µm,1.1s						
ASQU				AML	AML		
	comp=N,89µm,0.5s						
ASQU				AML	AML		
	comp=E,86µm,0.9s						
ENR	**Entracque**	**1.65**	**264**	P	**Pn**	**02 15 45.4**	**+0.1**
ENR				AML	AML		
	comp=E,208µm,1.6s						
ENR				AML	AML		
	comp=N,335µm,0.5s						
BURY	**Giardini Botan**	**1.68**	**248**	P	**Pn**	**02 15 45.1**	**-0.5**
BURY				AML	AML		
	comp=E,236µm,0.4s						
BURY				AML	AML		
	comp=N,195µm,0.5s						
TEOL	**Teolo**	**1.68**	**55**	P	**Pn**	**02 15 45.7**	**+0.1**
TEOL				AML	AML		
	comp=E,2150µm,0.6s						
TEOL				AML	AML		
	comp=N,1790µm,1.6s						
STV	**Sant Anna di V**	**1.72**	**265**	P	**Pn**	**02 15 46.2**	**0.0**
STV				AML	AML		
	comp=E,143µm,0.3s						
STV				AML	AML		
	comp=N,145µm,0.9s						
STV				AML	AML		
	comp=N,145µm,1.1s						
MABI	**Malga Bissina**	**1.73**	**19**	P	**Pn**	**02 15 46.3**	**-0.2**
MABI				AML	AML		
	comp=E,508µm,0.5s						
MABI				AML	AML		
	comp=N,352µm,0.5s						
MABI				AML	AML		
	comp=E,508µm,1.5s						
MABI				AML	AML		
	comp=N,352µm,1.5s						
SBF	**Sospel**	**1.73**	**252**	*e*Pn	**Pn**	**02 15 46.4**	**0.0**
SBF				*e*Sn	**Sn**	**02 16 08.1**	**-0.2**
	comp=N,133nm,0.3s						
SBF				*e*Sg	**Sg**	**02 16 13.2**	**+1.0**
	comp=N,151nm,0.3s						
LUSI	**Trento, Gardas**	**1.77**	**29**	P	**Pn**	**02 15 46.2**	**-0.7**
LUSI				AML	AML		
	comp=E,1014µm,0.4s						
LUSI				AML	AML		
	comp=N,1300µm,1.0s						
LUSI				AML	AML		
	comp=E,1014µm,1.6s						
TRAV	**Traversella**	**1.77**	**309**	P	**Pn**	**02 15 47.3**	**+0.4**
TRAV				AML	AML		
	comp=E,316µm,0.3s						
TRAV				AML	AML		
	comp=N,286µm,0.2s						
BHB	**Bricherasio**	**1.79**	**284**	P	**Pn**	**02 15 47.8**	**+0.6**
DOSS	**Dosso del Somm**	**1.79**	**35**	P	**Pn**	**02 15 46.8**	**-0.5**
DOSS				AML	AML		
	comp=E,1230µm,1.4s						
DOSS				AML	AML		
	comp=N,1230µm,1.4s						
DOSS				AML	AML		
	comp=N,1220µm,0.5s						
DOSS				AML	AML		
	comp=E,1255µm,0.5s						
CRE	**Caprese Michel**	**1.81**	**116**	P	**Pb**	**02 15 48.5**	**-1.0**
CRE				AML	AML		
	comp=N,117µm,0.2s						
CRE				AML	AML		
	comp=E,103µm,0.3s						
CRE				AML	AML		
	comp=N,117µm,1.8s						
PZZ	**Stroppo**	**1.86**	**273**	P	**Pn**	**02 15 47.9**	**-0.3**
PZZ				AML	AML		
	comp=E,402µm,0.4s						
PZZ				AML	AML		
	comp=E,402µm,1.6s						
PZZ				AML	AML		
	comp=N,502µm,1.3s						
GAGG	**Gaggia**	**1.88**	**28**	P	**Pn**	**02 15 48.0**	**-0.6**
GAGG				AML	AML		
	comp=E,412µm,0.4s						
GAGG				AML	AML		
	comp=N,472µm,1.1s						
GAGG				AML	AML		
	comp=E,504µm,1.1s						
GAGG				AML	AML		
	comp=N,395µm,0.5s						
GAGG				AML	AML		
	comp=E,504µm,0.9s						
GAGG				AML	AML		
	comp=N,395µm,1.5s						
GAGG				AML	AML		
	comp=E,412µm,1.6s						
GAGG				AML	AML		
	comp=N,472µm,0.9s						
RSP	**Reno Superiore**	**1.88**	**293**	P	**Pn**	**02 15 48.8**	**+0.3**
CIRO	**Champorcher**	**1.92**	**309**	P	**Pn**	**02 15 49.0**	**-0.2**
PGF	**Pioggiola**	**1.94**	**196**	*e*Pn	**Pn**	**02 15 49.8**	**+0.4**
PGF				*e*Sn	**Sn**	**02 16 13.5**	**-0.2**
	comp=N,21nm,0.2s						
CGRP	**Cima Grappa**	**2.08**	**45**	P	**Pn**	**02 15 51.1**	**-0.1**
CGRP				AML	AML		
	comp=N,644µm,0.5s						
CGRP				AML	AML		
	comp=E,989µm,0.6s						
CGRP				AML	AML		
	comp=N,625µm,0.5s						
CGRP				AML	AML		
	comp=E,997µm,0.6s						
MBDF	**Montbardon**	**2.12**	**279**	*e*P	**Pn**	**02 15 52.1**	**+0.3**
MBDF				*e*Sn	**Sn**	**02 16 16.6**	**-1.5**
	comp=E,18nm,0.2s						
MBDF				*e*Sg	**Sb**	**02 16 24.0**	**+2.8**
	comp=E,46nm,0.3s						
CTI	**Castel Tesino**	**2.13**	**40**	P	**Pn**	**02 15 51.4**	**-0.4**
CTI				AML	AML		
	comp=E,628µm,0.8s						
CTI				AML	AML		
	comp=N,732µm,0.4s						
CTI				AML	AML		
	comp=E,628µm,1.2s						
CTI				AML	AML		
	comp=N,732µm,1.6s						
FUSIO	**Fusio**	**2.16**	**340**	P	**Pn**	**02 15 52.4**	**0.0**
CORF	**Corte**	**2.16**	**191**	AML	AML		
	comp=N,46µm,0.4s						
CORF				AML	AML		
	comp=E,36µm,0.5s						
MOSI	**Grossmontoni**	**2.27**	**15**	P	**Pn**	**02 15 55.2**	**+1.2**
MOSI				AML	AML		
	comp=N,752µm,1.4s						
MOSI				AML	AML		
	comp=E,574µm,1.0s						
MOSI				AML	AML		
	comp=N,752µm,0.6s						
REMY	**Saint-Rhmy-en**	**2.29**	**309**	P	**Pn**	**02 15 55.0**	**+0.6**
APPI	**Appiano**	**2.32**	**27**	P	**Pn**	**02 15 55.0**	**+0.5**
MPAG	**Monte Paganucc**	**2.34**	**109**	AML	AML		
	comp=E,4070µm,0.7s						
MPAG				AML	AML		
	comp=N,456µm,0.6s						
DAVOX	**Davos/Dischmat**	**2.36**	**3**	Pn	**Pn**	**02 15 56.2**	**+1.0**
	comp=N,6.2nm,0.3s,baz=186,slow=13,SNR=54						
DAVOX				Lg	Lg	02 16 26.3	
	comp=N,8.1nm,0.3s,baz=329,slow=23,SNR=9.4						
	comp=N,11nm,0.3s						
DAVOX	**Davos/Dischmat**	**2.36**	**3**	P	**Pn**	**02 15 56.6**	**+1.4**
LPL	**La Plagne**	**2.38**	**298**	*e*P	**Pn**	**02 15 57.3**	**+1.9**
LPL	**La Plagne**	**2.38**	**298**	*e*Pg	**Pb**	**02 16 01.6**	**+2.2**
LPL				*e*Sn	**Sn**	**02 16 22.7**	**-1.8**
	comp=N,28nm,0.4s						
LPL				*e*Sg	**Sb**	**02 16 31.5**	**+2.8**
	comp=N,63nm,0.4s						
POLC	**Polcenigo**	**2.54**	**50**	P	**Pn**	**02 15 57.3**	**-0.2**
POLC				AML	AML		
	comp=E,584µm,0.5s						
POLC				AML	AML		
	comp=N,460µm,1.4s						
POLC				AML	AML		
	comp=N,460µm,0.6s						
LMR	**La Mourre**	**2.56**	**246**	*e*Pn	**Pn**	**02 15 57.7**	**0.0**
LMR				*e*Sn	**Sn**	**02 16 27.7**	**-0.9**
	comp=N,57nm,0.3s						
BNALP	**Bannalp**	**2.61**	**340**	P	**Pn**	**02 15 59.6**	**+1.1**
PLONS	**Plons/SG**	**2.63**	**355**	P	**Pn**	**02 16 00.8**	**+1.9**
FETA	**Feichten**	**2.69**	**15**	Pn	**Pn**	**02 16 00.6**	**+0.9**
	comp=N,4.0nm,0.4s,SNR=13						
FETA				Sn	**Sn**	**02 16 34.8**	**+2.5**
	comp=N,26nm,0.6s						
CIMO	**Cimolais**	**2.69**	**45**	P	**Pn**	**02 15 59.6**	**0.0**
ROSI	**Rosskopf**	**2.77**	**25**	P	**Pn**	**02 16 01.9**	**+1.1**
ORIF	**Oris-en-Rattie**	**2.77**	**282**	*e*P	**Pn**	**02 16 03.4**	**+2.6**
ORIF				*e*Sn	**Sn**	**02 16 32.6**	**-1.6**
	comp=N,40nm,0.5s						
ORIF				*e*Sg	**Sg**	**02 16 44.7**	**-1.0**
	comp=N,32nm,0.3s						
STAL	**STALIGIAL**	**2.80**	**48**	P	**Pn**	**02 16 00.6**	**-0.5**
DAVA	**Damuels**	**2.87**	**2**	Pn	**Pn**	**02 16 03.6**	**+1.5**
	comp=N,6.2nm,0.2s,SNR=23						
DAVA				Sn	**Sn**	**02 16 39.3**	**+2.9**
	comp=N,33nm,0.4s						
SQTA	**Sankt Quirin**	**2.99**	**20**	*e*Pn	**Pn**	**02 16 06.2**	**+2.5**
	comp=N,4.7nm,0.2s,SNR=19						
SQTA				Sn	**Sn**	**02 16 42.8**	**+3.4**
	comp=N,58nm,0.5s						
SMRF	**Simiane la Rot**	**3.00**	**263**	*e*P	**Pn**	**02 16 05.5**	**+1.6**
SMRF				*e*Sn	**Sn**	**02 16 38.3**	**-1.5**
	comp=N,13nm,0.2s						
SMRF				*e*Sg	**Sg**	**02 16 52.7**	**-0.4**
	comp=N,29nm,0.4s						
OBER	**Oberstdorf**	**3.01**	**8**	*e*Pn	**Pn**	**02 16 05.9**	**+1.9**
OBER				*e*Sn	**Sn**	**02 16 40.8**	**+0.8**
ABTA	**Abfaltersbach**	**3.04**	**39**	*e*Pn	**Pn**	**02 16 05.9**	**+1.4**
	comp=N,4.8nm,0.4s,SNR=16						
MOTA	**Moosalm**	**3.08**	**18**	*i* Pn	**Pn**	**02 16 07.0**	**+2.0**
	comp=N,6.7nm,0.2s,SNR=31						
MOTA				*e*Sn	**Sn**	**02 16 44.7**	**+3.0**
	comp=N,48nm,0.5s						
WTTA	**Wattenberg**	**3.14**	**25**	*e*Pn	**Pn**	**02 16 07.6**	**+1.7**
	comp=N,5.5nm,0.3s,SNR=16						
WTTA				*e*Sn	**Sn**	**02 16 45.9**	**+2.5**
	comp=N,68nm,0.7s						
RETA	**Reutte**	**3.15**	**13**	*i* Pn	**Pn**	**02 16 07.5**	**+1.6**
	comp=N,4.0nm,0.3s,SNR=7.4						
RETA				*e*Sn	**Sn**	**02 16 45.7**	**+2.3**
	comp=N,24nm,0.6s						
WATA	**Walderalm**	**3.19**	**23**	*i* Pn	**Pn**	**02 16 08.4**	**+1.9**
	comp=N,2.5nm,0.1s,SNR=12						
WATA				*e*Sn	**Sn**	**02 16 47.0**	**+2.5**
	comp=N,43nm,0.4s						
PART	**Garmisch-Parte**	**3.23**	**17**	*e*Pn	**Pn**	**02 16 08.7**	**+1.8**
PART				*e*Sn	**Sn**	**02 16 47.1**	**+1.8**
SMRN	**Sveta Marina**	**3.23**	**78**	*i* Pn	**Pn**	**02 16 06.7**	**-0.2**
SKDS	**Skadanscina**	**3.25**	**68**	*i* Pn	**Pn**	**02 16 06.7**	**-0.6**
SKDS				*e*Sn	**Sn**	**02 16 44.2**	**-1.7**
SKDS				IAML		02 16 52.3	
	comp=Z,41nm,0.4s						
SKDS	**Skadanscina**	**3.25**	**68**	*e*Pn	**Pn**	**02 16 06.0**	**-1.3**
UBR	**Ueberruh**	**3.27**	**5**	*e*Pn	**Pn**	**02 16 08.6**	**+1.1**
CABF	**La Chapelle**	**3.35**	**312**	*e*P	**Pn**	**02 16 10.5**	**+1.8**
CABF				*e*Sn	**Sn**	**02 16 45.7**	**-2.8**
	comp=Z,12nm,0.3s						
CABF				*e*Sg	**Sb**	**02 17 01.6**	**+5.0**
	comp=Z,32nm,0.6s						
JAVS	**Javornik**	**3.41**	**63**	*i* Pn	**Pn**	**02 16 09.2**	**-0.4**
KNDS	**Knezji Dol**	**3.50**	**70**	*i* Pn	**Pn**	**02 16 10.4**	**-0.3**
LAV9	**Lanuvio**	**3.51**	**140**	AML	AML		
	comp=N,252µm,1.5s						
LAV9				AML	AML		
	comp=E,452µm,1.5s						
LAV9				AML	AML		
	comp=E,386µm,1.5s						
LAV9				AML	AML		
	comp=N,172µm,0.3s						
MYKA	**Terra Mystica**	**3.54**	**50**	*e*Pn	**Pn**	**02 16 12.5**	**+1.3**
	comp=N,0.8nm,0.1s						
MYKA				*e*Sn	**Sn**	**02 16 54.9**	**+2.0**
	comp=N,15nm,0.4s						
CEY	**Cerknica**	**3.59**	**67**	*e*Pn	**Pn**	**02 16 11.2**	**-0.7**
VIVF	**Saint-Julien-l**	**3.62**	**279**	*e*P	**Pn**	**02 16 13.5**	**+1.2**
VIVF				*e*Sn	**Sn**	**02 16 52.8**	**-2.1**
	comp=N,9.7nm,0.4s						
VIVF				*e*Sg	**Sg**	**02 17 10.4**	**-2.4**
	comp=N,5.8nm,0.4s						
RABC	**Rab**	**3.64**	**83**	*e*Pn	**Pn**	**02 16 14.5**	**+2.0**
RABC				Sn	**Sn**	**02 16 57.7**	**+2.4**
KBA	**Koelnbreinsper**	**3.68**	**43**	*e*Pn	**Pn**	**02 16 14.4**	**+1.1**
	comp=N,2.4nm,0.2s						
NVLJ	**Novalja**	**3.70**	**86**	*e*Pn	**Pn**	**02 16 14.4**	**+1.0**
VIRC	**Vir**	**3.84**	**90**	*e*Pn	**Pn**	**02 16 16.8**	**+1.5**
DUGI	**Dugi Otok**	**3.87**	**95**	*e*Pn	**Pn**	**02 16 17.0**	**+1.3**
HINF	**Hinteralfeld**	**3.93**	**331**	*e*P	**Pn**	**02 16 17.4**	**+0.8**
HINF				*e*Sn	**Sn**	**02 16 59.3**	**-3.3**
	comp=N,14nm,0.3s						
OBKA	**Obir**	**3.99**	**57**	*e*Pn	**Pn**	**02 16 18.5**	**+1.0**
	comp=N,0.5nm,0.1s						
OBKA				*e*Sn	**Sn**	**02 17 05.9**	**+1.7**
	comp=N,36nm,0.5s						
OBKA	**Obir**	**3.99**	**57**	*e*Pn	**Pn**	**02 16 17.3**	**-0.2**
BFO	**Black Forest**	**4.02**	**347**	*e*Pn	**Pn**	**02 16 17.5**	**-0.3**
BFO				*e*Sn	**Sn**	**02 17 00.9**	**-3.9**
BOJS	**Bojanci**	**4.08**	**73**	*e*Pn	**Pn**	**02 16 18.9**	**+0.3**
LASF	**Ste Croix**	**4.22**	**267**	*e*Pn	**Pn**	**02 16 20.8**	**+0.3**
LASF				*e*Sn	**Sn**	**02 17 07.5**	**-2.1**
	comp=N,6.6nm,0.2s						
PLIT	**Plitvice**	**4.25**	**82**	*e*Pn	**Pn**	**02 16 22.7**	**+1.7**
OZLJ	**Ozalj**	**4.25**	**72**	*e*Pn	**Pn**	**02 16 21.5**	**+0.5**
HAU	**Haudompre**	**4.27**	**328**	*e*P	**Pn**	**02 16 22.4**	**+1.1**
HAU				*e*Sn	**Sn**	**02 17 07.7**	**-3.3**
	comp=N,27nm,0.3s						
CRES	**Cresnjev**	**4.30**	**69**	*e*Pn	**Pn**	**02 16 21.9**	**+0.2**
CDF	**Champ du Feu**	**4.33**	**338**	*e*Pn	**Pn**	**02 16 22.4**	**+0.3**
CDF				*e*Sn	**Sn**	**02 17 09.7**	**-2.7**
	comp=N,12nm,0.3s						
NORI	**Noerdlinger Ri**	**4.34**	**8**	*e*Sn	**Sn**	**02 17 09.8**	**-2.9**
ZIRJ	**Zirje**	**4.35**	**98**	*e*Pn	**Pn**	**02 16 23.6**	**+1.3**
MORI	**Morici**	**4.35**	**95**	*e*Pn	**Pn**	**02 16 24.3**	**+1.9**
SOKA	**Soboth**	**4.37**	**57**	*i* Pn	**Pn**	**02 16 23.2**	**+0.6**
	comp=N,0.9nm,0.3s,SNR=5.4						
SOKA				*e*Sn	**Sn**	**02 17 13.1**	**-0.3**
	comp=N,6.0nm,0.4s						
MOA	**Molln**	**4.67**	**41**	*e*Pn	**Pn**	**02 16 27.9**	**+1.3**
	comp=N,2.6nm,0.2s,SNR=9.3						
SMF	**Signal de Mont**	**4.68**	**300**	*e*P	**Pn**	**02 16 28.6**	**+1.7**
SMF				*e*Sn	**Sn**	**02 17 17.2**	**-3.8**
	comp=N,16nm,0.3s						
LOBO	**Lobor**	**4.81**	**67**	*e*Pn	**Pn**	**02 16 29.6**	**+0.9**
KIJV	**Kijevo**	**4.83**	**93**	*e*Pn	**Pn**	**02 16 30.3**	**+1.3**
A050A	**Klekovaca**	**4.89**	**87**	*e*Pn	**Pn**	**02 16 30.4**	**+0.6**
ARSA	**Arzberg**	**4.95**	**53**	*e*Pn	**Pn**	**02 16 31.5**	**+0.9**
	comp=N,2.1nm,0.3s						
ARSA				*e*Sn	**Sn**	**02 17 26.5**	**-1.1**
	comp=N,1.4nm,0.3s						
PAGF	**Fort de Pagny**	**4.96**	**328**	*e*P	**Pn**	**02 16 32.3**	**+1.6**
PAGF				*e*Sn	**Sn**	**02 17 24.3**	**-3.6**
	comp=N,12nm,0.3s						
PAGF				*e*Sg	**Sg**	**02 17 51.1**	**-4.7**
	comp=N,20nm,0.7s						
SFTF	**Sexfontaines**	**4.97**	**321**	*e*Pn	**Pn**	**02 16 30.4**	**-0.5**
SFTF				*e*Sn	**Sn**	**02 17 24.4**	**-3.9**
	comp=N,9.2nm,0.3s						
LOR	**Lormes**	**4.98**	**307**	*e*P	**Pn**	**02 16 32.8**	**+1.8**
	baz=122						
LOR				*e*Sn	**Sn**	**02 17 24.5**	**-3.9**
	comp=N,16nm,0.3s						
AVF	**Avril sur Loir**	**5.05**	**300**	*e*P	**Pn**	**02 16 33.5**	**+1.6**
AVF				*e*Sn	**Sn**	**02 17 26.0**	**-4.0**
	comp=N,2.6nm,0.3s						
SSF	**Saint Saulge**	**5.08**	**303**	*e*P	**Pn**	**02 16 34.7**	**+2.4**
SSF				*e*Sn	**Sn**	**02 17 26.5**	**-4.3**
	comp=N,9.3nm,0.4s						
MOSL	**Moslavina**	**5.14**	**74**	*e*Pn	**Pn**	**02 16 33.9**	**+0.7**
A051A	**Mrakovica**	**5.17**	**81**	*e*Pn	**Pn**	**02 16 33.3**	**-0.3**
MEZF	**Maizieres J'vi**	**5.19**	**323**	*e*P	**Pn**	**02 16 36.3**	**+2.4**
	baz=143						
MEZF				*e*Sn	**Sn**	**02 17 29.5**	**-4.1**
	comp=N,6.1nm,0.4s						
MEZF				*e*Sg	**Sb**	**02 17 57.4**	**+8.0**
	comp=N,12nm,0.5s						
GEC2	**GERESS Array S**	**5.21**	**30**	*e*Pn	**Pn**	**02 16 33.6**	**-0.6**
GEC2				*e*Sn	**Sn**	**02 17 31.4**	**-2.7**
GERES	**GERESS Array B**	**5.21**	**30**	Pn	**Pn**	**02 16 33.5**	**-0.6**
	comp=N,0.6nm,0.3s,baz=208,slow=14,SNR=19						
GERES				Sn	**Sn**	**02 17 33.2**	**-0.9**
	comp=N,2.7nm,0.3s,baz=202,slow=22,SNR=8.3						
GERES				Lg	Lg	02 17 59.6	
	comp=N,0.8nm,0.3s,baz=213,slow=32,SNR=2.3						
	comp=N,1.1nm,0.4s						
SAVF	**Savonnieres en**	**5.25**	**325**	*e*P	**Pn**	**02 16 36.3**	**+1.6**
	baz=144						
SAVF				*e*Sn	**Sn**	**02 17 31.0**	**-4.0**
	comp=N,6.2nm,0.4s						
BGF	**Bois d'Agland**	**5.27**	**296**	*e*P	**Pn**	**02 16 37.2**	**+2.2**
BGF				*e*Sn	**Sn**	**02 17 31.3**	**-4.3**
	comp=N,14nm,0.3s						
MGRS	**Mrkonjic Grad**	**5.28**	**88**	*e*Pn	**Pn**	**02 16 36.5**	**+1.3**
BLY	**Banja Luka**	**5.35**	**84**	*e*Pn	**Pn**	**02 16 36.0**	**-0.1**
SRKY	**Kupres RS**	**5.37**	**91**	*e*Pn	**Pn**	**02 16 37.9**	**+1.5**
KHC	**Kasperske Hory**	**5.41**	**28**	*e*PN	**Pn**	**02 16 37.0**	**+0.1**
KHC				*e*SN	**Sn**	**02 17 35.6**	**-3.3**
CKRC	**Cesky Krumlov**	**5.42**	**34**	*e*PN	**Pn**	**02 16 36.2**	**-0.8**
CAF	**Calviac**	**5.47**	**278**	*e*Pn	**Pn**	**02 16 38.4**	**+0.6**
CAF				*e*Sn	**Sn**	**02 17 35.8**	**-4.8**
	comp=N,2.0nm,0.4s						
MTLF	**Montolieu**	**5.52**	**261**	*e*Pn	**Pn**	**02 16 38.8**	**+0.4**
MTLF				*e*Sn	**Sn**	**02 17 38.2**	**-3.5**
	comp=N,4.9nm,0.3s						
CONA	**Conrad Observa**	**5.53**	**48**	*i* Pn	**Pn**	**02 16 39.1**	**+0.6**
	comp=N,1.4nm,0.3s,SNR=8.0						
CONA				*e*Sn	**Sn**	**02 17 41.7**	**-0.3**
	comp=N,3.5nm,0.5s						
TCF	**Toulx Ste Croi**	**5.60**	**292**	*e*P	**Pn**	**02 16 41.8**	**+2.2**
TCF				*e*Sn	**Sn**	**02 17 39.2**	**-4.6**
	comp=N,3.9nm,0.2s						
ROTZ	**Rotzenmuhle**	**5.61**	**17**	*e*Pn	**Pn**	**02 16 38.1**	**-1.5**
RONA	**Rosalia, Austr**	**5.63**	**52**	*i* Pn	**Pn**	**02 16 40.8**	**+0.8**
	comp=N,2.0nm,0.2s,SNR=6.4						
RONA				*e*Sn	**Sn**	**02 17 44.0**	**-0.6**
	comp=N,15nm,0.6s						
HYF	**Humbligny**	**5.70**	**302**	*e*P	**Pn**	**02 16 43.6**	**+2.8**
HYF				*e*Sn	**Sn**	**02 17 41.5**	**-4.6**
TNS	**Taunus Mts**	**5.86**	**352**	*e*Pn	**Pn**	**02 16 43.1**	**0.0**
RJF	**Les Rejaudoux**	**5.89**	**281**	*e*P	**Pn**	**02 16 46.2**	**+2.7**
RJF				*e*Sn	**Sn**	**02 17 45.9**	**-4.9**
	comp=N,2.1nm,0.4s						
STON	**Ston**	**6.00**	**102**	*e*Pn	**Pn**	**02 16 45.9**	**+0.9**
NKC	**Novy Kostel**	**6.10**	**17**	*e*SN	**Sn**	**02 17 52.3**	**-3.7**
MOX	**Moxa**	**6.36**	**11**	*e*Sn	**Sn**	**02 17 56.3**	**-6.0**
PRU	**Pruhonice**	**6.47**	**29**	*e*PN	**Pn**	**02 16 51.5**	**+0.1**
TREB	**Trebinje**	**6.51**	**102**	*e*Pn	**Pn**	**02 16 52.5**	**+0.5**
KRUC	**Moravsky**	**6.53**	**42**	*e*PN	**Pn**	**02 16 50.6**	**-1.6**
KRUC				*e*SN	**Sn**	**02 18 02.7**	**-3.8**
MODS	**Modra-Piesok**	**6.56**	**50**	*e*PN	**Pn**	**02 16 53.5**	**+0.9**
MODS				*e*SN	**Sn**	**02 18 04.6**	**-2.6**
GIVF	**Givet**	**6.58**	**331**	*e*P	**Pn**	**02 16 56.1**	**+3.2**
BRY	**Bratogost**	**6.58**	**100**	*e*Pn	**Pn**	**02 16 54.1**	**+0.9**
BAIF	**Baives**	**6.76**	**328**	*e*P	**Pn**	**02 16 58.6**	**+3.1**
BAIF				*e*Sn	**Sn**	**02 18 07.0**	**-5.3**
	comp=N,1.8nm,0.4s						
VRAC	**Vranov**	**6.79**	**42**	Lg	Lg	02 18 49.7	
	comp=N,0.1nm,0.3s,baz=154,slow=20,SNR=1.8						
EPF	**Esparros**	**6.93**	**262**	*e*Pn	**Pn**	**02 16 58.2**	**+0.4**
EPF				*e*Sn	**Sn**	**02 18 11.3**	**-5.2**
	comp=N,1.3nm,0.3s						
BBLS	**Lazići**	**7.00**	**91**	*e*Pn	**Pn**	**02 16 59.0**	**+0.2**
RUDO	**Rudo**	**7.01**	**93**	*e*Pn	**Pn**	**02 16 58.8**	**-0.1**
BRG	**Berggiesshubel**	**7.06**	**22**	Pg	Pg	02 17 42.3	+11
BRG				Amp		02 17 44.6	
	comp=Z,2.5nm,0.6s						
BRG	**Berggiesshubel**	**7.06**	**22**	Sn	**Sn**	**02 18 15.6**	**-3.9**
BRG				Amp		02 18 18.8	
	comp=Z,6.0nm,0.6s						
BRG				S	**Sg**	**02 19 02.2**	**-0.7**
BRG				Amp		02 19 18.8	
	comp=Z,5.5nm,1.0s						
CLL	**Collm**	**7.23**	**17**	*e*(Sn)	**Sn**	**02 18 22.0**	**-1.8**
CLL				*e*Sg	**Sg**	**02 19 12.0**	**+3.4**
MFF	**Saint Martin d**	**7.26**	**291**	*e*P	**Pn**	**02 17 05.6**	**+3.4**
MFF				*e*Sn	**Sn**	**02 18 18.7**	**-5.7**
	comp=Z,1.5nm,0.4s						
DRME	**Dracevica, Mon**	**7.27**	**105**	*e*Pn	**Pn**	**02 17 04.2**	**+1.8**
VYHS	**Vyhne**	**7.50**	**54**	*e*PN	**Pn**	**02 17 05.1**	**-0.5**
VYHS				*e*SN	**Sn**	**02 18 24.9**	**-5.6**
SJES	**Sjenica**	**7.51**	**95**	*e*Pn	**Pn**	**02 17 07.2**	**+1.3**
ETSF	**Etsaut**	**7.60**	**262**	*e*Pn	**Pn**	**02 17 06.2**	**-0.8**
ETSF	**Etsaut**	**7.60**	**262**	*e*P	**Pn**	**02 17 11.1**	**+4.1**
ETSF				*e*Sn	**Sn**	**02 18 28.0**	**-5.0**
	comp=Z,1.5nm,0.3s						
LDF	**La Druitiere**	**7.96**	**305**	*e*P	**Pn**	**02 17 15.1**	**+3.3**
LDF				*e*Sn	**Sn**	**02 18 35.6**	**-6.1**
	comp=Z,1.0nm,0.3s						
SJPF	**Ste Jean**	**8.02**	**264**	*e*Pn	**Pn**	**02 17 12.5**	**-0.3**
SJPF				*e*Sn	**Sn**	**02 18 36.9**	**-6.4**
	comp=Z,0.6nm,0.3s						
FLN	**La Foliniere**	**8.25**	**305**	*e*P	**Pn**	**02 17 19.2**	**+3.4**
	baz=126						
FLN				*e*Sn	**Sn**	**02 18 42.3**	**-6.5**
	comp=Z,1.7nm,0.3s						
GRR	**Gorron**	**8.31**	**302**	*e*P	**Pn**	**02 17 19.0**	**+2.4**
GRR				*e*Sn	**Sn**	**02 18 43.9**	**-6.3**
	comp=Z,1.4nm,0.3s						
KEST	**Kesra**	**8.69**	**182**	Pn	**Pn**	**02 17 26.7**	**+4.7**
	comp=Z,0.3nm,0.3s,baz=313,slow=4.8,SNR=8.6						
	comp=Z,1.8nm,0.6s						
SGMF	**Saint Gilles**	**9.31**	**299**	*e*P	**Pn**	**02 17 34.1**	**+3.8**
SGMF				*e*Sn	**Sn**	**02 19 07.8**	**-7.0**
	comp=Z,1.0nm,0.3s						
QUIF	**Quistinic**	**9.59**	**296**	*e*P	**Pn**	**02 17 36.8**	**+2.6**
ESDC	**Sonseca Array**	**11.21**	**250**	Pn	**Pn**	**02 17 56.6**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=59,slow=14,SNR=7.0						
	comp=Z,0.3nm,0.3s						
MKAR	**Makanchi Array**	**49.14**	**60**	P	**P**	**02 24 04.4**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=302,slow=6.1,SNR=3.4						
	comp=Z,0.2nm,0.5s						
YKA	**Yellowknife Ar**	**64.51**	**335**	P	**P**	**02 25 52.1**	**-0.5**
	comp=Z,0.1nm,0.5s,baz=42,slow=6.4,SNR=2.0						
	comp=Z,0.1nm,0.5s						

IDC 31 02:31:27.1±3.3, 18°.36S×178°.49W, h467^{km}±29^{km}, mb3.2/4, mbtmp3.9/5, Error ellipse: s-maj=121.3km s-min=25.5km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.35**	**280**	P	P	02 32 38.2	0.0
	7.9nm,0.6s,baz=192,slow=19,SNR=5.9						
STKA	**Stephens Creek**	**38.35**	**242**	P	P	02 38 06.6	-0.3
	1.9nm,0.6s,baz=69,slow=8.6,SNR=4.5						
	1.9nm,0.6s						
WRA	**Warramunga Arr**	**44.48**	**260**	P	P	02 38 55.6	-0.3
	0.3nm,0.3s,baz=96,slow=7.7,SNR=16						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**44.60**	**255**	P	P	02 38 57.0	+0.1
	3.5nm,0.5s,baz=89,slow=8.4,SNR=49						
	3.5nm,0.5s						
TXAR	**Lajitas Array**	**86.30**	**58**	P	P	02 43 19.0	-0.1
	0.6nm,0.8s,baz=220,slow=6.9,SNR=6.9						
	0.6nm,0.8s						

IDC 31 02:42:34.3±2.0, 17°.53S×179°.08W, h564^{km}±18^{km}, mb3.1/6, mbtmp4.0/7, Error ellipse: s-maj=80.6km s-min=18.1km az=149.0

ISC 31 02:42:33.1±1.5, 17°.7S±0°.6×178°.9W±0°.3, h550^{km}, n8, σ1^{s}.31/8, mb3.5/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.91**	**269**	P	**P**	**02 43 49.1**	**+1.4**
	26nm,0.7s,baz=83,slow=2.9,SNR=22						
STKA	**Stephens Creek**	**38.31**	**241**	P	**P**	**02 49 07.0**	**-0.2**
	2.6nm,0.5s,baz=97,slow=10,SNR=9.0						
	2.6nm,0.5s						
WRA	**Warramunga Arr**	**44.20**	**259**	P	**P**	**02 49 53.3**	**-0.8**
	0.7nm,0.3s,baz=97,slow=7.1,SNR=28						
	0.7nm,0.3s						

ASAR	Alice Springs 10.0nm,0.6s,baz=89,slow=8.2,SNR=168 10.0nm,0.6s	44.39	254	P	P	02 49 54.4	-1.1
ILAR	Eielson Array 0.2nm,0.4s,baz=224,slow=5.3,SNR=5.2 0.2nm,0.4s	85.81	13	P	P	02 54 13.4	-0.7
TXAR	Lajitas Array 0.4nm,0.7s,baz=219,slow=5.8,SNR=6.7 0.4nm,0.7s	86.29	58	P	P	02 54 17.7	+0.3
PDAR	Pinedale Array 0.3nm,0.6s,baz=206,slow=3.8,SNR=4.9 0.3nm,0.6s	87.54	44	P	P	02 54 22.4	-0.7
GERES	GERESS Array B 0.4nm,0.5s,baz=51,slow=2.6,SNR=3.9	147.31	345	PKPbc	PKPdf	03 01 13.9	+1.9

KRSC 31 02:45:27.7±1.8,48°.75N×157°.28E,h15^{km}±42^{km},Ml3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	Pauzhetka	2.74	354	*e*P	Pn	02 46 11.4	+0.3
KDTR	Khodutka, Kamc	3.10	9	*e*P	Pn	02 46 18.4	+2.3
KDTR				*e*S	Sn	02 46 54.7	+1.7
RUS	Russkaya	3.77	12	*e*P	Pn	02 46 28.5	+3.2
MTVR	Mutnovka	3.78	8	*e*P	Pn	02 46 29.1	+3.5
MTVR				*e*S	Sn	02 47 14.2	+4.3
GRL	Gorelyy	3.84	7	*e*P	Pn	02 46 30.1	+3.7
GRL				*e*S	Sn	02 47 15.7	+4.3
KRMR	Karymshinskiy	4.12	7	*e*P	Pn	02 46 34.0	+3.9
KRMR				*e*S	Sb	02 47 23.8	-5.7
DALK	Dalny	4.39	12	*e*P	Pn	02 46 37.5	+3.8
UGLR	Uglovaya	4.57	12	*e*P	Pn	02 46 41.0	+4.6
AVH	Avacha	4.61	11	*e*P	Pn	02 46 42.1	+5.1
SMAR	Somma	4.62	11	*e*P	Pn	02 46 42.5	+5.3
KOK	Koryaka	4.63	10	*e*P	Pn	02 46 42.1	+4.9
KRX	Arik	4.70	10	*e*P	Pn	02 46 42.6	+4.5
KRX				*e*S	Sn	02 47 37.8	+5.4
GNL	Ganaly	4.97	5	*e*P	Pn	02 46 44.9	+3.0
MKZ	Mys Kozlova	6.44	24	*e*P	Pn	02 47 06.0	+4.1

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*TAP **31** 02:46:10.9,24°.89N×122°.03E,h113^{km},ML3.3,C*
*JMA **31** 02:46:10.6±0.2,24°.8N±0°.7×122°.0E±0°.5,h115^{km}±1^{km}, MV2.6/10,TAIWAN REGION*
ISC 31 02:46:10.6±1.5,24°.88N±0°.04×122°.02E±0°.03,h116^{km}±7^{km}, n110,σ0^{s}.68/195,3C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS	baz=237	0.09	249	P	Pn	02 46 26.6	+0.1
EGS	baz=237			S	Sn	02 46 37.6	-0.8
TWB1	Santiao Chiao baz=348	0.13	346	⇑*i*P	Pn	02 46 26.6	0.0
TWB1	baz=348			*i* S	Sn	02 46 37.6	-1.0
TIPB	Shuangxi baz=283	0.20	298	P	Pn	02 46 26.7	-0.1
TIPB	baz=283			*e*S	Sn	02 46 37.7	-1.2
SXI1	Grass Mountain baz=316	0.25	328	P	Pn	02 46 26.8	-0.3
SXI1	baz=316			*e*S	Sn	02 46 38.6	-0.7
WFSB	Wu-fen Shan baz=301	0.29	311	P	Pn	02 46 27.1	0.0
TWC	Suao baz=202	0.31	211	P	Pn	02 46 27.2	+0.1
TWC	baz=202			S	Sn	02 46 38.6	-0.9
TNOU	National Taiwa baz=311	0.35	320	*i* P	Pn	02 46 27.2	-0.1
TNOU	baz=311			*i* S	Sn	02 46 38.9	-1.0
TWE	Neicheng baz=236	0.36	244	P	Pn	02 46 27.6	+0.3
TWE	baz=236			*e*S	Sn	02 46 41.3	+1.4
NDS	Dongshan baz=222	0.37	229	P	Pn	02 46 27.8	+0.4
NDS	baz=222			*e*S	Sn	02 46 40.5	+0.5
TWA	Mucha baz=281	0.41	284	P	Pn	02 46 27.4	-0.2
TWA	baz=281			*e*S	Sn	02 46 41.3	+0.9
FUSB	Fushanzhiwuyua baz=248	0.41	254	*i* P	Pn	02 46 27.8	+0.1
FUSB	baz=248			S	Sn	02 46 40.7	+0.2
NHDH	Xindian Distri baz=277	0.46	281	P	Pn	02 46 27.8	0.0
NHDH	baz=277			*e*S	Sn	02 46 41.1	+0.3
ENTT	Nioudou baz=234	0.48	240	*i* P	Pn	02 46 28.6	+0.6
ENTT	baz=234			S	Sn	02 46 41.8	+0.8
NWLT	Wulai baz=257	0.48	258	*i* P	Pn	02 46 28.1	+0.1
NWLT	baz=257			S	Sn	02 46 40.9	-0.2
EWUT	Wuta baz=196	0.48	208	P	Pn	02 46 28.6	+0.6
EWUT	baz=196			S	Sn	02 46 41.2	+0.1
YM01	YM01 baz=301	0.49	303	P	Pn	02 46 27.9	-0.2
YM01	baz=301			*e*S	Sn	02 46 40.0	-1.2
TATO	Taipei	0.50	281	P	Pn	02 46 28.3	+0.2
TATO	Taipei baz=278	0.50	281	P	Pn	02 46 28.0	0.0
TATO	baz=278			S	Sn	02 46 41.2	0.0
YM08	YM08 baz=307	0.50	308	*e*P	Pn	02 46 27.8	-0.4
ENA	Nanau baz=198	0.52	210	*i* P	Pn	02 46 28.7	+0.5
ENA	baz=198			S	Sn	02 46 41.6	+0.1
NDT	Datong Townshi baz=247	0.54	240	P	Pn	02 46 29.0	+0.6
NDT	baz=247			S	Sn	02 46 41.8	0.0
ANP	Anpu baz=308	0.55	304	P	Pn	02 46 28.3	-0.2
LATG	Datong baz=239	0.57	233	⇑*i*P	Pn	02 46 29.3	+0.6
LATG	baz=239			S	Sn	02 46 42.7	+0.5
TWS1	Kuangyinshan baz=290	0.59	292	P	Pn	02 46 29.1	+0.4
TWS1	baz=290			S	Sn	02 46 43.5	+1.1
NTST	Danshui baz=297	0.59	299	P	Pn	02 46 28.9	+0.2
NTST	baz=297			*e*S	Sn	02 46 42.8	+0.5
YHNB	Yeheng	0.62	251	P	Pn	02 46 29.3	+0.2
YHNB	Yeheng baz=238	0.62	251	⇑*i*P	Pn	02 46 29.2	+0.2
YHNB	baz=238			S	Sn	02 46 42.1	-0.9
NSK	Sanguang baz=239	0.64	252	*i* P	Pn	02 46 29.2	+0.1
NSK	baz=239			S	Sn	02 46 42.1	-1.0
NNS	Nan Shan baz=229	0.73	234	*i* P	Pn	02 46 30.5	+0.5
NNS	baz=229			S	Sn	02 46 44.6	0.0
NNSB	Datong baz=229	0.73	233	P	Pn	02 46 30.4	+0.5
NNSB	baz=229			S	Sn	02 46 44.4	-0.2
NNSH	Datong baz=229	0.73	233	*e*P	Pn	02 46 30.5	+0.5
NNSH	baz=229			S	Sn	02 46 44.3	-0.2
NCU	National Centr baz=265	0.77	277	*i* P	Pn	02 46 30.6	+0.5
NCU	baz=265			S	Sn	02 46 45.4	+0.7
NCUH	Zhongli baz=265	0.77	277	P	Pn	02 46 30.5	+0.4
NCUH	baz=265			S	Sn	02 46 45.4	+0.6
NACB	Ninganchiao	0.80	209	P	Pn	02 46 30.5	+0.1
NACB	Ninganchiao baz=206	0.80	209	P	Pn	02 46 30.1	-0.4
NACB	baz=206			*e*S	Sn	02 46 44.3	-1.1
ETL	Fush Village baz=212	0.80	207	P	Pn	02 46 30.5	0.0
ETL	baz=212			*e*S	Sn	02 46 44.7	-0.7
ETLH	Xiulin Townshi baz=219	0.83	217	P	Pn	02 46 30.9	+0.1
ETLH	baz=219			S	Sn	02 46 45.3	-0.7
NFF	Wufeng Townshi baz=251	0.86	254	P	Pn	02 46 31.0	0.0
NFF	baz=251			S	Sn	02 46 45.6	-0.8
TWD	Chiawan baz=213	0.89	206	P	Pn	02 46 30.8	-0.4
TWD	baz=213			*e*S	Sn	02 46 45.7	-0.9
JYNG	Yonagunijimaku	0.94	117	P	Pn	02 46 31.9	+0.2
JYNG				S	Sn	02 46 47.2	-0.3
LIOB	Emei baz=246	0.94	256	P	Pn	02 46 32.2	+0.4
LIOB	baz=246			S	Sn	02 46 47.5	-0.2
FUSS	Fushou baz=219	0.95	229	P	Pn	02 46 32.8	+0.8
FUSS	baz=219			*e*S	Sn	02 46 48.5	+0.3
SBCB	Hsinchu baz=262	0.95	265	*e*P	Pn	02 46 31.9	+0.1
SBCB	baz=262			*e*S	Sn	02 46 47.4	-0.3
NSTT	Nanjuang baz=246	0.96	255	P	Pn	02 46 32.2	+0.3
NSTT	baz=246			S	Sn	02 46 47.4	-0.6
YOJ	Yonaguni jima	0.99	115	P	Pn	02 46 32.5	+0.3
YOJ	Yonaguni jima	0.99	115	P	Pn	02 46 32.4	+0.2
YOJ				*e*S	Sn	02 46 48.1	-0.3
YOJ	Yonaguni jima baz=123	0.99	115	*i* P	Pn	02 46 32.3	+0.2
YOJ	baz=123			*e*S	Sn	02 46 47.6	-0.8
TWT	Tachien baz=229	0.99	231	*e*P	Pn	02 46 33.4	+1.0
TWT	baz=229			*e*S	Sn	02 46 49.5	+0.7
TDCB	Techi baz=228	1.00	232	P	Pn	02 46 33.5	+0.9
TDCB	baz=228			*e*S	Sn	02 46 49.3	+0.3
WHF	Hehuan Shan baz=215	1.00	224	P	Pn	02 46 33.4	+0.6
WHF	baz=215			*e*S	Sn	02 46 49.7	+0.2
ETM	Tongmen baz=205	1.03	208	P	Pn	02 46 32.2	-0.4
ETM	baz=205			*e*S	Sn	02 46 48.9	-0.3
TEYL	Yanliau Villag baz=190	1.08	201	P	Pn	02 46 33.4	+0.3
TEYL	baz=190			*e*S	Sn	02 46 49.8	-0.3
CHGB	Renai baz=215	1.12	224	*i* P	Pn	02 46 34.8	+1.0
CHGB	baz=215			S	Sn	02 46 51.9	+0.5
WHP	Taichung City baz=236	1.15	239	P	Pn	02 46 34.8	+0.8
WHP	baz=236			S	Sn	02 46 51.6	0.0
NMLH	Miaoli baz=251	1.17	253	P	Pn	02 46 34.8	+0.7
NMLH	baz=251			S	Sn	02 46 51.9	0.0
ESL	Shilin baz=210	1.19	207	*e*P	Pn	02 46 35.5	+1.2
OWD	Renai baz=214	1.20	220	P	Pn	02 46 35.2	+0.7
OWD	baz=214			S	Sn	02 46 52.7	0.0
WUSB	Renai baz=216	1.21	223	P	Pn	02 46 35.8	+1.2
WUSB	baz=216			*e*S	Sn	02 46 52.8	+0.1
NSY	Sanyi baz=246	1.24	248	P	Pn	02 46 35.7	+0.8
NSY	baz=246			S	Sn	02 46 53.5	+0.4
TEGC	Jichi Village baz=194	1.24	201	*e*P	Pn	02 46 35.0	+0.1
TEGC	baz=194			*e*S	Sn	02 46 53.5	+0.2
TWQ1	Liyutan baz=243	1.25	245	P	Pn	02 46 35.4	+0.4
TWQ1	baz=243			S	Sn	02 46 53.2	-0.2
WPL	Puli Township baz=236	1.30	229	*e*P	Pn	02 46 37.0	+1.4
WCS	Beigang Elemen baz=234	1.30	231	*i* P	Pn	02 46 36.4	+0.9
WCS	baz=234			S	Sn	02 46 54.7	+0.3
DPDB	Guoxing baz=234	1.31	230	*e*P	Pn	02 46 35.8	+0.2
DPDB	baz=234			*e*S	Sn	02 46 55.1	+0.5
EGFH	Guangfu baz=196	1.32	204	*e*P	Pn	02 46 35.8	0.0
WDJ	Dajia District baz=238	1.36	248	*e*S	Sn	02 46 55.8	+0.1
VWDT	VWDT baz=208	1.38	216	P	Pn	02 46 37.5	+1.1
VWDT	baz=208			*e*S	Sn	02 46 56.5	+0.6
SMLT	Sun Moon Lake baz=230	1.43	226	P	Pn	02 46 37.8	+0.7
SMLT	baz=230			*e*S	Sn	02 46 57.9	+0.8
TYC	Yuchr baz=232	1.44	228	P	Pn	02 46 37.8	+0.7
TYC	baz=232			S	Sn	02 46 58.1	+0.9
SSLB	Suanglung	1.46	222	P	Pn	02 46 38.5	+1.1
SSLB	Suanglung baz=216	1.46	222	*i* P	Pn	02 46 38.2	+0.8
SSLB	baz=216			S	Sn	02 46 58.3	+0.6
HGSD	Ruisui baz=198	1.48	202	*e*P	Pn	02 46 37.9	+0.3
HGSD	baz=198			*e*S	Sn	02 46 58.4	+0.2
EHY	Hungye baz=194	1.51	205	*e*P	Pn	02 46 37.5	-0.4
EHY	baz=194			*e*S	Sn	02 46 57.1	-1.6
WNT	Mingjian baz=236	1.58	231	*e*P	Pn	02 46 39.2	+0.5
WNT	baz=236			*e*S	Sn	02 47 00.8	+0.8
WHYT	Xinyi Township baz=226	1.59	222	*e*P	Pn	02 46 39.4	+0.5
WHYT	baz=226			*e*S	Sn	02 47 01.5	+1.1
YULB	Yu-li	1.62	204	P	Pn	02 46 39.7	+0.4
YULB	Yu-li baz=194	1.62	204	*e*P	Pn	02 46 37.8	-1.5
YULB	baz=194			*e*S	Sn	02 46 59.7	-1.4
ECBN	Changbin baz=194	1.64	199	P	Pn	02 46 39.6	+0.1
ECBN	baz=194			S	Sn	02 47 00.9	-0.5
IRIF	Iriomote-Funau	1.64	109	P	Pn	02 46 39.6	+0.1
EYUL	Yuli baz=198	1.65	203	*e*P	Pn	02 46 40.4	+0.8
TWF1	Yuli baz=199	1.66	204	*e*P	Pn	02 46 39.4	-0.3
TWF1	baz=199			*e*S	Sn	02 47 01.4	-0.4
YUS	Yu-Shan baz=204	1.69	216	*e*P	Pn	02 46 41.9	+1.3
YUS	baz=204			*e*S	Sn	02 47 04.3	+1.0
ALS	Alishan baz=225	1.76	220	*e*P	Pn	02 46 42.1	+0.9
ALS	baz=225			*e*S	Sn	02 47 05.3	+0.9
CHN5	Tsauling baz=220	1.77	224	*e*P	Pn	02 46 41.6	+0.5
CHN5	baz=220			*e*S	Sn	02 47 05.0	+0.6
WRL	Guolierlin Hig baz=242	1.79	237	*e*P	Pn	02 46 41.0	-0.2
WRL	baz=242			*e*S	Sn	02 47 04.0	-0.6
FULB	Fuli baz=206	1.80	202	*e*P	Pn	02 46 41.9	+0.5
FULB	baz=206			*e*S	Sn	02 47 05.4	+0.5
WDLH	Douliu baz=235	1.80	229	*e*P	Pn	02 46 41.9	+0.5
WDLH	baz=235			*e*S	Sn	02 47 04.7	-0.1
HATJ	Hateruma jima	1.82	116	P	Pn	02 46 42.2	+0.6
HATJ				*e*S	Sn	02 47 06.3	+1.1
CHKT	Chengkung baz=194	1.87	199	*e*P	Pn	02 46 43.0	+0.7
CHKT	baz=194			*e*S	Sn	02 47 05.0	-1.4
EHD	Haiduan baz=196	1.88	204	*e*P	Pn	02 46 40.8	-1.6
WTK	Tuku baz=229	1.91	232	*e*P	Pn	02 46 43.2	+0.5
WTK	baz=229			*e*S	Sn	02 47 06.8	-0.4
ELDTW	Lidau baz=197	1.92	209	*e*P	Pn	02 46 43.4	+0.4
ELDTW	baz=197			*e*S	Sn	02 47 06.6	-1.1
JKRS	Kuro-shima	1.92	109	P	Pn	02 46 43.5	+0.7
JKRS				*e*S	Sn	02 47 08.2	+0.8
WCKO	Fanlu baz=218	1.93	222	*e*S	Sn	02 47 08.0	+0.2
JIJ	Ishigaki jima	2.00	104	P	Pn	02 46 44.1	+0.3
JIJ				*e*S	Sn	02 47 09.2	0.0
CHN4	Tsaushan baz=221	2.00	221	*e*P	Pn	02 46 45.1	+1.1
EDH	Donghe baz=197	2.01	199	P	Pn	02 46 44.0	0.0
EDH	baz=197			*e*S	Sn	02 47 08.2	-1.3
TPUB	Ta-pu baz=220	2.02	219	P	Pn	02 46 44.2	0.0
STYT	Tauyuan baz=214	2.06	214	*e*P	Pn	02 46 45.0	+0.3
WTP	Ta-pu baz=214	2.07	219	*e*P	Pn	02 46 45.3	+0.4
WTP	baz=214			*e*S	Sn	02 47 11.3	+0.2
JISG	Ishigakijimahi	2.10	97	*e*P	Pn	02 46 45.8	+0.7
JISG				*e*S	Sn	02 47 11.6	+0.1
WSL	Shuilin Townsh baz=234	2.12	231	*e*P	Pn	02 46 45.6	+0.2
WSL	baz=234			*e*S	Sn	02 47 11.8	-0.3
LONT	Longtian baz=191	2.13	203	*e*S	Sn	02 47 11.5	-0.7
CHN1	Nanshi baz=215	2.17	219	*e*P	Pn	02 46 46.8	+0.7
CHN1	baz=215			*e*S	Sn	02 47 12.9	-0.3
ICHU	Yijhu baz=234	2.20	227	*e*S	Sn	02 47 13.5	-0.2
SGST	Jiashian baz=220	2.22	217	*e*S	Sn	02 47 14.2	-0.2
LDUT	Ludao baz=183	2.25	193	*e*P	Pn	02 46 46.1	-1.0
LDUT	baz=183			*e*S	Sn	02 47 13.0	-2.0
MATB	Ma-tsu baz=303	2.27	304	*e*P	Pn	02 46 47.5	+0.2
VWUC	VWUC baz=271	2.34	273	*e*P	Pn	02 46 47.9	-0.3
VWUC	baz=271			*e*S	Sn	02 47 15.3	-1.7
WDGT	Dungji baz=231	2.69	234	*e*S	Sn	02 47 22.9	-2.3

IDC 31 03:00:06.2±2.0,4°.30S×102°.26E,h0^{km},mb3.4/4, mbtmp3.4/4,Error ellipse: s-maj=115.9km s-min=27.0km az=44.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.3nm,0.7s,baz=304,slow=9.0,SNR=1.5 0.3nm,0.7s	34.90	119	P	P	03 06 59.4	-0.6
ASAR	Alice Springs 0.1nm,0.3s,baz=297,slow=7.7,SNR=1.5 0.1nm,0.3s	36.09	125	P	P	03 07 10.0	-0.1
MKAR	Makanchi Array 0.2nm,0.4s,baz=132,slow=8.6,SNR=2.9 0.2nm,0.4s	53.85	343	P	P	03 09 31.6	+0.5
BRTR	Keskin Array B 0.7nm,0.8s,baz=94,slow=5.8,SNR=3.6 0.7nm,0.8s	76.52	312	P	P	03 11 57.9	-0.8
TXAR	Lajitas Array 0.4nm,0.7s,baz=315,slow=2.1,SNR=5.6	145.03	42	PKPbc	PKPab	03 19 45.9	+0.1

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*IDC **31** 03:02:05.7±1.1,17°.55S×178°.84W,h569^{km}±10^{km}, mb3.1/11,mbtmp4.0/12,Error ellipse: s-maj=26.4km s-min=15.4km az=138.0*
ISC 31 03:02:03.6±0.7,17°.6S±0°.2×178°.6W±0°.1,h547^{km},n15, σ1^{s}.51/16,mb3.5/11,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu 21nm,0.7s,baz=134,slow=6.1,SNR=14	3.20	267	P	P	03 03 21.7	+1.9
MSVF	12nm,1.2s,baz=276,slow=23,SNR=6.5			S	S	03 04 25.4	+3.5
STKA	Stephens Creek 1.4nm,0.5s,baz=84,slow=9.5,SNR=5.5 1.4nm,0.5s	38.63	241	P	P	03 08 39.3	-1.1
WRA	Warramunga Arr 0.4nm,0.6s,baz=100,slow=7.5,SNR=11 0.4nm,0.6s	44.52	259	P	P	03 09 25.6	-1.5
ASAR	Alice Springs 3.9nm,0.5s,baz=88,slow=8.0,SNR=70 3.9nm,0.5s	44.71	254	P	P	03 09 27.6	-1.0
VNDA	Vanda 0.6nm,0.6s,baz=358,slow=7.4,SNR=2.3 0.6nm,0.6s	60.74	185	P	P	03 11 22.1	+0.1
MJAR	Matsushiro Arr 2.0nm,0.5s,baz=138,slow=5.9,SNR=5.7 2.0nm,0.5s	67.55	323	P	P	03 12 04.1	-1.8
PETK	Petropavlovsk- 2.8nm,0.8s,baz=116,slow=9.8,SNR=3.2 2.8nm,0.8s	73.33	345	P	P	03 12 39.8	+0.2
NVAR	Mina Array Bea 0.8nm,0.7s,baz=231,slow=9.4,SNR=4.2 0.8nm,0.7s	79.32	44	P	P	03 13 13.5	+0.4
ILAR	Eielson Array 0.4nm,0.4s,baz=225,slow=5.2,SNR=26 0.4nm,0.4s	85.62	13	P	P	03 13 43.4	-0.7
TXAR	Lajitas Array 0.4nm,0.7s,baz=213,slow=6.0,SNR=7.5 0.4nm,0.7s	85.98	58	P	P	03 13 48.5	+1.9
PDAR	Pinedale Array 0.4nm,0.5s,baz=210,slow=3.9,SNR=6.3 0.4nm,0.5s	87.25	44	P	P	03 13 53.2	+0.6
YKA	Yellowknife Ar 0.3nm,0.8s,baz=241,slow=4.5,SNR=5.9 0.3nm,0.8s	94.12	25	P	P	03 14 22.6	-0.8
BRTR	Keskin Array B 1.0nm,0.8s,baz=132,slow=3.5,SNR=6.0	144.44	315	PKP	PKPdf	03 20 38.1	-0.2
GERES	GERESS Array B 0.9nm,0.6s,baz=33,slow=5.1,SNR=8.7	147.26	345	PKPbc	PKPbc	03 20 46.1	+0.2
TORD	Torodi Ar. Bea 0.2nm,0.9s,baz=134,slow=2.7,SNR=1.0	175.57	184	PKPab	PKPab	03 22 52.3	-0.8

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*IDC **31** 03:06:51.5±1.6,4°.76S×101°.75E,h0^{km},mb3.9/7, mbtmp3.9/7,MS3.7/1,Error ellipse: s-maj=66.5km s-min=19.3km az=52.0*
*DJA **31** 03:06:58.4±0.8,5°S±4°×10°2E±°,h14^{km}±4^{km},M4.2/11,*

mb4.5/1, MLv4.1/11

ISC 31 03:06:54.0±2.0, **4°.51S**±0°.07×**101°.99E**±0°.06, **h10**^{km}±12^{km}, **n24**, σ**1**^{s}.**11**/22, **mb3.9**/7, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	0.97	81	P	Pn	03 07 14.5	+0.8
MNAI				S	Sg	03 07 24.7	-0.8
KSI	Kapahiang	1.04	35	P	Pn	03 07 16.5	+1.8
KSI				S	Sn	03 07 29.4	0.0
MASI	Maura Aman, Be	1.38	10	P	Pg	03 07 21.4	+0.8
LWLI	Liwa	2.12	104	P	Pb	03 07 32.0	-0.7
LWLI				S	Sn	03 07 56.0	-0.2
PPSI	Pulau Pagai	2.63	311	P	Pb	03 07 41.6	+0.3
PPSI				S	Sb	03 08 13.1	-0.5
KASI	Kota Agung	2.69	112	P	Pn	03 07 38.6	+1.2
KASI				S	Sn	03 08 09.7	-0.4
SDSI	Sungai Dareh	3.60	351	P	Pb	03 07 56.2	-1.5
PDSI	Padang	3.88	337	P	Pb	03 07 59.9	-2.8
CGJI	Cibinong	4.24	120	P	Pn	03 07 59.3	+0.6
CMAR	Chiang Mai Arr	23.02	353	P	P	03 12 00.8	+1.4
	1.1nm,0.3s,baz=183,slow=9.2,SNR=7.1						
	1.1nm,0.3s						
TGY	Tagaytay City	26.36	45	LR	LR	03 23 48.6	
	comp=Z,193nm,22.0s,baz=35,slow=38						
H08S2	Diego Garcia H	29.49	262	T	T	03 43 29.8	
	baz=85,slow=76,SNR=6.5						
H08S3	Diego Garcia H	29.50	263	T	T	03 43 27.0	
	baz=85,slow=76,SNR=8.5						
H08S1	Diego Carcia H	29.51	262	T	T	03 43 24.6	
	baz=85,slow=76,SNR=6.2						
H01W3	Cape Leeuwin H	32.25	161	T	T	03 47 18.9	
	baz=334						
H01W2	Cape Leeuwin H	32.27	161	T	T	03 47 19.8	
	baz=334						
H01W1	Cape Leeuwin H	32.27	161	T	T	03 47 22.6	
	baz=334,SNR=2.9						
WRA	Warramunga Arr	35.03	119	P	P	03 13 46.5	-0.7
	0.7nm,0.7s,baz=321,slow=11,SNR=11						
	0.7nm,0.7s						
ASAR	Alice Springs	36.19	125	P	P	03 13 56.8	-0.4
	0.7nm,0.6s,baz=303,slow=8.1,SNR=7.6						
	0.7nm,0.6s						
SONM	Songino Array	52.27	4	P	P	03 16 06.4	+0.7
	1.2nm,0.6s,baz=186,slow=9.2,SNR=12						
	1.2nm,0.6s						
MKAR	Makanchi Array	53.97	343	P	P	03 16 18.5	+0.4
	1.6nm,0.5s,baz=144,slow=8.6,SNR=21						
	1.6nm,0.5s						
ZALV	Zalesovo Beam	60.00	348	P	P	03 17 00.5	-0.1
	1.7nm,0.4s,baz=157,slow=5.1,SNR=4.1						
	1.7nm,0.4s						
BRTR	Keskin Array B	76.47	312	P	P	03 18 43.5	-1.0
	0.7nm,0.6s,baz=134,slow=8.8,SNR=5.3						
	0.7nm,0.6s						
TXAR	Lajitas Array	145.36	42	PKPbc	PKPab	03 26 33.0	-0.1
	2.2nm,0.8s,baz=283,slow=0.8,SNR=24						

*IDC **31** 03:09:14.8±1.0, 31°.78S×179°.94E, h331^{km}±14^{km}, mb2.7/1, mbtmp3.9/3, Error ellipse: s-maj=50.2km s-min=14.7km az=117.0*

*WEL **31** 03:09:19.3±0.6, 32°S±7°×18°0W±1°6, h277^{km}±12^{km}, M3.8/18, mB4.3/11, ML4.7/23, MLv4.6/18, Mw(mB)3.4/11, Error ellipse: s-maj=0.0km s-min=0.0km az=110.4*

ISC 31 03:09:14.3±0.9, **31°.89S**±0°.08×**179°.8W**±0°.1, **h350**^{km}, **n42**, σ**2**^{s}.**07**/61, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.06	32	P	Pn	03 10 14.3	0.0
GLKZ				S	S	03 11 00.1	-2.3
RAO	Raoul Island	3.07	32	P	Pn	03 10 14.5	+0.1
	87nm,0.2s,baz=132,slow=22,SNR=1.1						
RAO				S	S	03 11 01.5	-1.1
	241nm,0.3s,baz=239,slow=22,SNR=4.5						
MXZ	Matakaoa Point	5.88	195	P	Pn	03 10 46.7	+3.1
MXZ				S	S	03 11 52.9	-3.2
HAZ	Te Kaha	6.20	198	P	Pn	03 10 50.3	+3.1
HAZ				S	S	03 11 59.9	-2.7
PKGZ	Pakihiroa	6.25	196	P	Pn	03 10 49.7	+1.8
PKGZ				S	S	03 12 03.1	-0.8
PUZ	Puketiti	6.38	194	P	Pn	03 10 52.7	+3.3
PUZ				S	S	03 12 05.6	-1.1
RUGZ	Raukumara Rang	6.42	198	P	Pn	03 10 53.4	+3.5
RUGZ				S	S	03 12 04.3	-3.4
OUZ	Omahuta	6.47	237	P	Pn	03 10 53.3	+2.9
CNGZ	Carnagh Statio	6.79	194	P	Pn	03 10 58.3	+4.2
MWZ	Matawai	6.81	198	P	Pn	03 10 58.1	+3.7
MWZ				S	S	03 12 14.1	-1.6
URZ	Urewera	6.86	201	P	Pn	03 10 56.9	+2.0
	5.4nm,0.3s,baz=344,slow=4.8,SNR=28						
URZ				S	S	03 12 14.5	-2.2
	18nm,0.4s,baz=331,slow=22,SNR=4.2						
URZ	Urewera	6.86	201	P	Pn	03 10 57.4	+2.5
URZ				S	S	03 12 15.4	-1.3
RAGZ	Rawiri	6.99	199	P	Pn	03 10 59.1	+2.6
RAGZ				S	S	03 12 20.4	+0.7
TOZ	Tahuroa Road	7.01	212	P	Pn	03 10 57.1	+0.3
RIGZ	Rimuhau	7.10	196	P	Pn	03 10 59.2	+1.5
RIGZ				S	S	03 12 21.7	-0.2
RTZ	Ruatahuna	7.22	201	P	Pn	03 11 01.3	+2.0
RTZ				S	S	03 12 21.8	-2.9
SNGZ	Shannon Statio	7.28	198	P	Pn	03 11 02.8	+3.0
SNGZ				S	S	03 12 24.6	-1.1
KNZ	Kokohu	7.42	196	P	Pn	03 11 01.1	-0.3
KNZ				S	S	03 12 26.7	-2.1
RAHZ	Arahi	7.47	199	P	Pn	03 11 04.7	+2.6
RAHZ				S	S	03 12 27.6	-2.3
TLZ	Tolley Road	7.50	210	P	Pn	03 11 07.7	+5.3
MHGZ	Mahia Peninsul	7.50	194	P	Pn	03 11 06.6	+4.2
NMHZ	Naumai	7.72	200	P	Pn	03 11 08.0	+2.8
NMHZ				S	S	03 12 34.6	-0.8
ARHZ	Aropaoanui	7.82	199	P	Pn	03 11 08.4	+2.2
ARHZ				S	S	03 12 36.4	-1.1
BKZ	Black Stump Fm	7.88	202	P	Pn	03 11 09.0	+2.1
BKZ				S	S	03 12 37.0	-1.8
ETVZ	East Tongariro	8.12	206	P	P	03 11 12.4	-0.5
OTVZ	Oturere	8.16	206	P	P	03 11 12.6	-0.8
OTVZ				S	S	03 12 43.8	-1.4
SNVZ	South Ngauruho	8.19	206	P	P	03 11 12.8	-0.9
NGZ	Ngauruhoe	8.20	206	P	P	03 11 13.6	-0.2
TUVZ	Tukino	8.26	206	P	P	03 11 13.8	-0.6
BHHZ	Black Hill Sta	8.31	203	P	Pn	03 11 13.1	+1.0
TRVZ	Turoa	8.33	206	P	Pn	03 11 14.1	+1.7
WNVZ	Wahianoa	8.33	206	P	Pn	03 11 13.9	+1.4
KAHZ	Kahuranaki	8.35	198	P	Pn	03 11 14.1	+1.6
VRZ	Vera Road	8.49	210	P	P	03 11 17.9	+1.0
PXZ	Pawanui	8.58	198	P	Pn	03 11 16.6	+1.4
PNHZ	Pukenui	8.65	201	P	Pn	03 11 17.0	+0.9
TSZ	Takapari Road	8.86	202	P	Pn	03 11 19.4	+0.8
BFZ	Birch Farm	9.35	199	P	Pn	03 11 25.3	+1.0
WRA	Warramunga Arr	42.69	275	P	P	03 16 38.0	-0.3
	0.2nm,0.4s,baz=112,slow=8.1,SNR=5.0						
	0.2nm,0.4s						
FINES	FINESS Array B	145.99	338	PKPbc	PKPab	03 28 13.9	0.0
	1.2nm,0.5s,baz=49,slow=4.1,SNR=16						
NB2	NORSAR Subarra	149.96	349	PKP	PKiKP	03 28 24.3	+0.6
	comp=Z,0.3nm,0.5s,baz=14,slow=2.5						
NOA	NORSAR Array B	149.96	349	PKPbc	PKiKP	03 28 24.5	+0.8
	comp=Z,0.3nm,0.5s,baz=12,slow=4.1,SNR=4.5						

*NEIC **31** 03:15:17.7±1.7, 16°.4N±0°.1×148°.5E±0°.1, h10^{km}±1^{km}, mb4.4/16, Error ellipse: s-maj=21.5km s-min=16.3km az=137.0*

*IDC **31** 03:15:17.1±0.9, 16°.60N×148°.56E, h0^{km}, mb3.8/11, mbtmp3.9/11, Error ellipse: s-maj=31.5km s-min=18.7km az=95.0*

ISC 31 03:15:21.1±0.6, **16°.39N**±0°.08×**148°.46E**±0°.09, **h35**^{km}, **n41**, σ**1**^{s}.**24**/39, **mb4.2**/19, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.44	232	Sn	Sn	03 17 15.4	-1.2
	27nm,0.3s,baz=194,slow=20,SNR=2.3						
GUMO	Guam	4.44	232	Pn	Pn	03 16 24.1	-1.9
GUMO				Sn	Sn	03 17 16.1	-0.5
PATS	Pohnpei	13.53	133	Pn	Pn	03 18 29.4	-1.2
H11S3	WAKE ISLAND Hy	17.52	80	T	T	03 37 30.3	
	baz=265,SNR=3.4						
H11S1	WAKE ISLAND Hy	17.54	80	T	T	03 37 34.3	
	baz=265						
H11S2	WAKE ISLAND Hy	17.54	80	T	T	03 37 31.0	
	baz=265						
MJAR	Matsushiro Arr	22.04	338	P	P	03 20 11.9	-0.8
	1.2nm,0.6s,baz=165,slow=9.7,SNR=2.6						
	1.2nm,0.6s						
KLR	Kul'dur	35.47	341	P	P	03 22 13.7	-0.5
	1.2nm,0.6s,baz=126,slow=6.6,SNR=6.8						
	1.2nm,0.6s						
WB0	Warramunga Arr	38.49	202	P	P	03 22 42.5	+2.4
WB0				IAmb	IAmb	03 22 53.0	
	comp=Z,5.9nm,0.8s						
WB2	Warramunga Arr	38.67	202	P	P	03 22 44.2	+2.6
WB2				IAmb	IAmb	03 22 54.9	
	comp=Z,5.3nm,0.7s						
WRA	Warramunga Arr	38.68	202	P	P	03 22 44.5	+2.8
	comp=Z,2.0nm,0.7s,baz=27,slow=9.3,SNR=29						
	comp=Z,2.0nm,0.7s						
WRA	Warramunga Arr	38.68	202	P	P	03 22 42.7	+1.0
ASAR	Alice Springs	42.27	200	P	P	03 23 14.2	+2.9
	comp=Z,0.3nm,0.5s,baz=26,slow=7.5,SNR=4.7						
	comp=Z,0.3nm,0.5s						
SONM	Songino Array	46.58	322	P	P	03 23 46.2	+0.5
	comp=Z,1.1nm,0.6s,baz=138,slow=7.3,SNR=9.0						
	comp=Z,1.1nm,0.6s						
SONM	Songino Array	46.58	322	P	P	03 23 46.2	+0.5
PSA00	Pilbara Seismi	47.01	218	P	P	03 23 49.6	+0.4
PSA00				IAmb	IAmb	03 24 03.6	
	comp=Z,4.9nm,1.0s						
CMAR	Chiang Mai Arr	47.17	280	P	P	03 23 52.2	+1.6
	comp=Z,0.7nm,0.3s,baz=60,slow=5.5,SNR=5.3						
	comp=Z,0.7nm,0.3s						
CMAR	Chiang Mai Arr	47.17	280	P	P	03 23 51.5	+0.8
ZAA0	Zalesovo Array	61.44	323	P	P	03 25 33.5	-0.3
ZALV	Zalesovo Beam	61.44	323	P	P	03 25 34.6	+0.7
	comp=Z,2.2nm,0.6s,baz=101,slow=7.7,SNR=5.0						
	comp=Z,2.2nm,0.6s						
ZALV	Zalesovo Beam	61.44	323	P	P	03 25 33.5	-0.3
MK31	Makanchi Array	61.95	315	P	P	03 25 37.3	-0.2
MKAR	Makanchi Array	61.95	315	P	P	03 25 38.0	+0.4
	comp=Z,0.8nm,0.5s,baz=86,slow=7.9,SNR=11						
	comp=Z,0.8nm,0.5s						
MKAR	Makanchi Array	61.95	315	P	P	03 25 37.3	-0.2
MAKZ	Makanchi	62.17	315	P	P	03 25 39.3	+0.3
MAKZ				IAmb	IAmb	03 25 40.2	
	comp=Z,1.8nm,0.8s						
ILAR	Eielson Array	64.57	25	P	P	03 25 53.7	-0.8
	comp=Z,0.3nm,0.8s,baz=238,slow=5.2,SNR=5.5						
	comp=Z,0.3nm,0.8s						
KURK	Kurchatov	64.74	319	P	P	03 25 55.3	-0.5
BMAR	Burnt Mountain	66.19	23	P	P	03 26 05.8	+0.7
L27K	Beaver Creek,	66.35	28	P	P	03 26 04.2	-1.9
L27K				IAmb	IAmb	03 26 07.7	
	comp=Z,1.7nm,0.8s						
BCAR	Beaver Creek A	66.37	28	P	P	03 26 07.5	+1.3
NIL	Nilore	68.95	300	P	P	03 26 22.9	-0.2
BRVK	Borovoye	69.98	321	P	P	03 26 28.8	-0.3
BRVK				IAmb	IAmb	03 26 30.4	
	comp=Z,4.1nm,0.8s						
KK31	Karatay Array	70.26	310	P	P	03 26 30.3	-0.6
KK31				IAmb	IAmb	03 26 32.3	
	comp=Z,1.4nm,0.8s						
KKAR	Karatay Array	70.26	310	P	P	03 26 29.8	-1.2
KBL	Kabul	72.31	302	P	P	03 26 44.4	+0.6
KBL				IAmb	IAmb	03 26 47.1	
	comp=Z,2.6nm,0.7s						
ARU	Arti	76.46	325	P	P	03 27 06.0	-1.2
ABKAR	Akbulak array	76.81	318	P	P	03 27 08.8	-0.5
YKA	Yellowknife Ar	78.79	28	P	P	03 27 20.6	+0.6
	comp=Z,0.3nm,0.6s,baz=277,slow=5.5,SNR=7.1						
	comp=Z,0.3nm,0.6s						
ARCES	ARCESS Array B	85.48	343	P	P	03 27 55.3	+0.3
	comp=Z,2.3nm,0.8s,baz=46,slow=8.8,SNR=4.5						
	comp=Z,2.3nm,0.8s						
LPAZ	La Paz	144.92	95	PKP	PKiKP	03 34 58.6	-1.4
	comp=Z,1.3nm,0.6s,baz=245,slow=5.6,SNR=6.1						
DBIC	Dimbokro	145.04	309	PKP	PKPdf	03 34 55.9	+0.1
	comp=Z,2.3nm,0.4s,baz=61,slow=3.8,SNR=8.6						

*KRSC **31** 03:21:27.9±1.5, 48°.11N×156°.25E, h15^{km}±33^{km}, Ml4.7*

*MOS **31** 03:21:28.0±1.0, 48°.21N×154°.50E, h73^{km}, mb4.1/11, Error ellipse: s-maj=11.3km s-min=4.5km az=69.6*

*SKHL **31** 03:21:29.6±0.1, 48°.20N×154°.50E, h82^{km}±5^{km}, mb4.9/11, msha5.6/8*

*IDC **31** 03:21:29.4±2.6, 48°.31N×154°.22E, h66^{km}±24^{km}, mb3.7/16, mbtmp4.0/19, MS3.1/13, Error ellipse: s-maj=19.1km s-min=11.8km az=145.0*

*NEIC **31** 03:21:30.5±1.4, 48°.3N±0°.1×154°.3E±0°.1, h72^{km}±7^{km}, mb4.4/26, Error ellipse: s-maj=17.8km s-min=10.9km az=144.0*

ISC 31 03:21:27.0±0.5, **48°.16N**±0°.06×**154°.57E**±0°.05, **h42**^{km}, **n173**, σ**1**^{s}.**95**/185, **mb4.3**/33, **MS3.3**/7, **3C-1D**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.72	21	PN	Pn	03 22 10.8	+2.6
SKR				S	Sn	03 22 41.1	+1.3
SKR	Severo-Kuril's	2.72	21	*e*P	Pn	03 22 10.8	+2.6
SKR				*e*S	Sn	03 22 41.1	+1.3
SKR	Severo-Kuril's	2.72	21	*e*P	Pn	03 22 10.9	+2.7
SKR				AMB	AMB	03 22 13.2	
	160nm,0.6s						
SKR				*e*S	Sn	03 22 41.8	+2.0
SKR				A	A	03 22 48.5	
	460nm,0.5s						
SKR				A	A	03 22 48.5	
	330nm,0.5s						
PAU	Pauzhetka	3.62	23	PN	Pn	03 22 23.6	+3.1
PAU				S	Sn	03 23 04.3	+2.4
PAU	Pauzhetka	3.62	23	*e*P	Pn	03 22 23.6	+3.1
PAU				*e*S	Sn	03 23 04.3	+2.4
PAU	Pauzhetka	3.62	23	*i* P	Pn	03 22 23.8	+3.3
PAU				AMB	AMB	03 22 25.1	
	70nm,0.2s						
PAU				*e*S	Sn	03 23 04.4	+2.5
PAU				A	A	03 23 14.5	
	340nm,0.2s						
PAU				A	A	03 23 14.5	
	500nm,0.2s						
KDTR	Khodutka, Kamc	4.30	30	PN	Pn	03 22 30.6	+0.8
KDTR				S	Sn	03 23 17.0	-1.7
KDTR	Khodutka, Kamc	4.30	30	*e*P	Pn	03 22 30.6	+0.8
KDTR				*e*S	Sn	03 23 17.0	-1.7
MTVR	Mutnovka	4.91	27	PN	Pn	03 22 40.0	+1.7
MTVR				S	Sn	03 23 33.5	-0.4
MTVR	Mutnovka	4.91	27	*e*P	Pn	03 22 40.0	+1.7
MTVR				*e*S	Sn	03 23 33.5	-0.4
GRL	Gorelyy	4.94	26	PN	Pn	03 22 41.1	+2.4
GRL				S	Sn	03 23 35.3	+0.7
GRL	Gorelyy	4.94	26	*e*P	Pn	03 22 41.1	+2.4
GRL				*e*S	Sn	03 23 35.3	+0.7
RUS	Russkaya	4.97	29	PN	Pn	03 22 39.7	+0.7
RUS				S	Sn	03 23 33.3	-1.9
RUS	Russkaya	4.97	29	*e*P	Pn	03 22 39.7	+0.7
RUS				*e*S	Sn	03 23 33.3	-1.9
RUS	Russkaya	4.97	29	*e*P	Pn	03 22 39.7	+0.7
APC	Apacha	5.05	18	PN	Pn	03 22 43.7	+3.6
APC	Apacha	5.05	18	*e*P	Pn	03 22 43.7	+3.6
KRMR	Karymshinskiy	5.20	25	PN	Pn	03 22 45.4	+3.2
KRMR	Karymshinskiy	5.20	25	*e*P	Pn	03 22 45.4	+3.2
PEA0B	Petropavlovsk-	5.34	21	Pn	Pn	03 22 46.7	+2.5
PEA0B	Petropavlovsk-	5.34	21	*ce*PN	Pn	03 22 46.9	+2.7
PETK	Petropavlovsk-	5.34	21	P	Pn	03 22 46.2	+2.0
	12nm,0.5s,baz=182,slow=13,SNR=48						
PETK				LR	LR	03 25 07.8	
	comp=Z,67nm,20.3s,baz=147,slow=41						
PETK	Petropavlovsk-	5.34	21	Pn	Pn	03 22 45.9	+1.7
KUR	Kuril'sk	5.46	240	*e*PN	Pn	03 22 49.9	+4.1
KUR				*e*S	Sn	03 23 51.8	+4.5
KUR				pmax	pmax		
	comp=Z,90nm,0.4s						
KUR				pmax	pmax		
	comp=N,47nm,0.3s						
KUR				pmax	pmax		
	comp=E,23nm,0.5s						
KUR				smax	smax		
	comp=E,99nm,0.5s						
KUR				smax	smax		
	comp=N,36nm,0.3s						
KUR	Kuril'sk	5.46	240	*e*P	Pn	03 22 49.5	+3.7
KUR				AMB	AMB	03 22 51.9	
	comp=N,50nm,0.4s						
KUR				AMB	AMB	03 22 51.9	
	comp=N,20nm,0.4s						
KUR				AMB	AMB	03 22 51.9	
	comp=N,90nm,0.4s						
KUR				*e*S	Sn	03 23 49.2	+1.9
KUR				A	A	03 24 01.0	
	comp=N,30nm,0.6s						
KUR				A	A	03 24 01.0	
	comp=N,130nm,0.6s						
PET	Petropavlovsk	5.52	27		Pn	03 22 48.9	+2.3
PET	Petropavlovsk	5.52	27	*e*PN	Pn	03 22 49.3	+2.7
PET				*e*S	Sn	03 23 48.5	-0.2
PET				pmax	pmax		
	comp=Z,47nm,0.4s						
PET				smax	smax		
	comp=N,119nm,0.5s						
PET				smax	smax		
	comp=E,135nm,0.4s						
PET	Petropavlovsk	5.52	27	*e*P	Pn	03 22 49.3	+2.7
PET				AMB	AMB	03 22 53.5	
	comp=E,50nm,0.4s						
PET				*e*S	Sn	03 23 49.1	+0.4
PET				A	A	03 23 56.5	
	comp=E,160nm,0.4s						
PET				A	A	03 23 56.5	
	comp=E,200nm,0.4s						
UGLR	Uglovaya	5.74	27	PN	Pn	03 22 51.9	+2.3
UGLR	Uglovaya	5.74	27	*e*P	Pn	03 22 51.9	+2.3
KOK	Koryaka	5.75	25	PN	Pn	03 22 52.6	+2.7
KOK	Koryaka	5.75	25	*e*P	Pn	03 22 52.6	+2.7
KOK	Koryaka	5.75	25	*e*P	Pn	03 22 52.6	+2.7
AVH	Avacha	5.76	26	PN	Pn	03 22 52.7	+2.7
AVH				S	Sn	03 23 55.8	+1.1
AVH	Avacha	5.76	26	*e*P	Pn	03 22 52.7	+2.7
AVH				*e*S	Sn	03 23 55.8	+1.1
SMAR	Somma	5.78	26	PN	Pn	03 22 52.5	+2.2
SMAR	Somma	5.78	26	*e*P	Pn	03 22 52.5	+2.2
KRER	Koryakskii	5.80	26	PN	Pn	03 22 53.1	+2.6
KRER	Koryakskii	5.80	26	*e*P	Pn	03 22 53.1	+2.6
KRX	Arik	5.81	25	PN	Pn	03 22 53.3	+2.5
KRX	Arik	5.81	25	*e*P	Pn	03 22 53.3	+2.5
GNL	Ganaly	5.94	20	PN	Pn	03 22 55.4	+2.9
GNL	Ganaly	5.94	20	*e*P	Pn	03 22 55.4	+2.9
SPN	Mys Shipunski	6.04	33	PN	Pn	03 22 55.0	+1.3
SPN	Mys Shipunski	6.04	33	*e*P	Pn	03 22 55.0	+1.3
SPN				*e*S	Sn	03 23 59.2	-2.3
SPN	Mys Shipunski	6.04	33	*e*P	Pn	03 22 55.0	+1.3
SHO	Shikotan	6.88	234	*e*PN	Pn	03 23 05.4	+0.1
SHO	Shikotan	6.88	234	*e*P	Pn	03 23 07.2	+1.9
SHO				AMB	AMB	03 23 11.6	
	comp=E,50nm,0.5s						
SHO				*e*S	Sn	03 24 21.7	-0.6
SHO				A	A	03 24 43.6	
	comp=E,30nm,0.6s						
SHO				A	A	03 24 43.6	
	comp=E,70nm,0.6s						
YUK	Yuzh-Kuril'sk	7.32	239	*e*P	Pn	03 23 14.0	+2.7
YUK				AMB	AMB	03 23 15.0	
	comp=E,40nm,0.5s						
YUK				*e*S	Sn	03 24 34.0	+0.9
YUK				A	A	03 24 46.9	
	comp=E,170nm,0.5s						
YUK				A	A	03 24 46.9	
	comp=E,20nm,0.5s						
MKZ	Mys Kozlova	7.82	32	PN	Pn	03 23 17.2	-0.8
MKZ	Mys Kozlova	7.82	32	*e*P	Pn	03 23 17.2	-0.8
MKZ				*e*S	Sn	03 24 39.3	-5.8
NMR	Nemuro--Hokkai	7.82	236	*e*P	Pn	03 23 17.5	-0.6
YSS	Yuzh-Sakhalins	8.09	266	Pn	Pn	03 23 23.6	+1.8
YSS	Yuzh-Sakhalins	8.09	266	*e*PN	Pn	03 23 25.0	+3.2
YSS				*e*S	Sn	03 24 53.2	+1.4
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				smax	smax		
	comp=N,40nm,1.0s						
YSS				smax	smax		
	comp=E,40nm,0.4s						
YSS	Yuzh-Sakhalins	8.09	266	*e*P	Pn	03 23 25.0	+3.2
YSS				AMB	AMB	03 23 26.0	
	comp=E,30nm,0.5s						
YSS				*e*S	Sn	03 24 50.9	-0.9
YSS				A	A	03 24 59.9	
	comp=E,10.0nm,0.6s						
YSS				A	A	03 24 59.9	
	comp=E,10.0nm,0.6s						
TYV	Tymovskoe	8.21	294	*e*P	Pn	03 23 26.8	+3.3
TYV				AMB	AMB	03 23 28.3	
	comp=E,30nm,0.6s						
TYV				AMB	AMB	03 23 30.1	
	comp=E,200nm,3.3s						
TYV				*e*S	Sn	03 24 54.1	-0.8
TYV				A	A	03 24 59.0	
	comp=E,30nm,0.8s						
TYV				A	A	03 24 59.0	
	comp=E,20nm,0.8s						
TYV				A	A	03 25 00.6	
	comp=E,200nm,5.1s						
TYV				A	A	03 25 00.6	
	comp=E,200nm,5.1s						
AKK	Akkeshi	8.54	237	*e*P	Pn	03 23 27.9	-0.1
OKH	Okha	9.12	311	*e*P	Pn	03 23 39.2	+3.2
OKH				AMB	AMB	03 23 39.9	
	comp=E,20nm,0.4s						
OKH				AMS	AMS	03 28 27.4	
	comp=E,100nm,16.0s						
JKA	Kamikawa-asahi	9.24	249	Pn	Pn	03 23 41.2	+3.6
JKA	Kamikawa-asahi	9.24	249	*e*P	Pn	03 23 41.2	+3.6
ASAJ	Asahikawa	9.24	249	P	Pn	03 23 41.7	+4.0
	comp=E,20nm,0.5s,baz=72,slow=15,SNR=19						
ASAJ				LR	LR	03 26 33.7	
	comp=E,100nm,21.9s,baz=18,slow=34						
ASAJ	Asahikawa	9.24	249	PN	Pn	03 23 41.2	+3.6
ERM	Erimo	10.14	237	Pn	Pn	03 23 51.6	+1.7
ERM	Erimo	10.14	237	PN	Pn	03 23 51.6	+1.7
MA2	Magadan	11.66	350	P	Pn	03 24 11.3	+0.7
	comp=E,16nm,0.3s,baz=211,slow=5.1,SNR=13						
MA2				LR	LR	03 29 14.0	
	comp=E,64nm,19.1s,baz=132,slow=40						
MA2	Magadan	11.66	350		Pn	03 24 11.6	+1.0
MA2	Magadan	11.66	350	PN	Pn	03 24 11.6	+1.0
MA2	Magadan	11.66	350	*e*P	Pn	03 24 11.6	+1.0
SHEM	Shemya Is, Ala	13.25	63	P	Pn	03 24 34.3	+2.0
	comp=E,58nm,0.4s,baz=140,slow=2.6,SNR=11						
SHEM				LR	LR	03 30 14.2	
	comp=E,28nm,18.2s,baz=120,slow=39						
SMY	Shemya	13.25	63	Pn	Pn	03 24 33.9	+1.6
SMY	Shemya	13.25	63	PN	Pn	03 24 33.9	+1.6
SEY	Seymchan	14.86	356	P	Pn	03 24 56.2	+2.2
	comp=E,1.3nm,0.5s,baz=173,slow=12,SNR=6.2						
KLR	Kul'dur	15.10	283	P	Pn	03 24 57.5	+0.2
	comp=E,3.9nm,0.6s,baz=77,slow=13,SNR=7.2						
KLR				LR	LR	03 30 24.6	
	comp=E,67nm,19.3s,baz=74,slow=36						
KLR	Kul'dur	15.10	283	*ce*P	Pn	03 24 59.4	+2.1
KLR				pmax	pmax		
	comp=Z,12nm,1.5s						
KLR	Kul'dur	15.10	283	*e*P	Pn	03 24 58.0	+0.7
JSD	Sado	15.60	236		P	03 25 07.2	-0.2
JSD				IAmb	IAmb	03 25 10.8	
	comp=Z,21nm,0.8s						
USRK	Ussuriysk Ar.	16.12	264	P	P	03 25 12.3	-0.8
	comp=Z,7.7nm,0.7s,baz=69,slow=13,SNR=17						
MJA0	Matsu Arr-Jizo	16.70	232	*e*P	P	03 25 23.7	+4.0
MJAR	Matsushiro Arr	16.72	232	P	Pn	03 25 16.9	-1.3
	comp=Z,0.9nm,0.6s,baz=30,slow=11,SNR=2.0						
MJB9	Matsu-Tunnel	16.72	232		P	03 25 22.4	+2.5
MJB9				IAmb	IAmb	03 25 36.4	
	comp=Z,14nm,1.3s						
HEH	HeiHe	17.84	287	P	P	03 25 33.3	+1.2
HEH				pmax	pmax		
	comp=Z,12nm,0.9s						
HEH				pmax	pmax		
	comp=Z,170nm,5.3s						
BNX	BinXian	18.67	273	⇓P	P	03 25 40.8	-0.5
BNX				pmax	pmax		
	comp=Z,4.0nm,0.5s						
BNX				pmax	pmax		
	comp=Z,77nm,4.4s						
YAK	Yakutsk	19.72	324	P	P	03 25 50.3	-2.3
	comp=Z,9.0nm,0.4s,baz=121,slow=1.0,SNR=2.1						
YAK				LR	LR	03 33 11.4	
	comp=Z,42nm,20.0s,baz=84,slow=36						
YAK	Yakutsk	19.72	324	*e*P	P	03 25 53.3	+0.7
YAK				*e*S	S	03 29 29.6	-2.8
YAK				pmax	pmax		
	comp=Z,35nm,1.1s						
YAK				pmax	pmax		

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       comp=N,6.0nm,1.2s
YAK                                  pmax   pmax
       comp=E,7.0nm,1.0s
YAK                                  smax   smax
       comp=E,99nm,4.1s
YAK                                  smax   smax
       comp=N,73nm,4.8s
YAK    Yakutsk           19.72 324  eP      P      03 25 53.3 +0.7
BILL   Bilibino          20.80  12  i P     P      03 26 05.6 +1.3
BILL                                 pmax   pmax
       comp=Z,11nm,2.3s
BILL   Bilibino          20.80  12  i P     P      03 26 05.6 +1.3
KSRS   Korea Array       22.18 251   P      P      03 26 18.8 -0.5
       comp=Z,4.4nm,0.6s,baz=50,slow=9.8,SNR=14
KSRS                                 LR     LR     03 34 27.4
       comp=Z,26nm,18.7s,baz=10.0,slow=35
       comp=Z,4.4nm,0.6s
KSRS   Korea Array       22.18 251  eP      P      03 26 20.3 +1.0
KSRS                                 pmax   pmax
       comp=Z,6.0nm,0.8s
KSRS   Korea Array       22.18 251  eP      P      03 26 20.3 +1.0
XLT    XiLinHaoTe        26.87 275  eP      P      03 27 02.8 -0.9
XLT                                  pP     sP     03 27 18.5 -0.9
XLT                                  sP     pwP    03 27 30.3  +14
XLT                                  pmax   pmax
       comp=Z,18nm,0.8s
XLT                                  pmax   pmax
       comp=Z,130nm,4.3s
H11N2  WAKE ISLAND Hy    30.06 156   T      T      04 00 01.7
       baz=341,slow=74,SNR=591
H11N1  WAKE ISLAND Hy    30.08 156   T      T      04 00 01.9
       baz=341,slow=74,SNR=1126
H11N3  WAKE ISLAND Hy    30.08 156   T      T      03 59 19.7
       baz=341,SNR=391
H11S1  WAKE ISLAND Hy    31.18 157   T      T      04 00 38.1
       baz=344,slow=76,SNR=4271
H11S3  WAKE ISLAND Hy    31.19 157   T      T      04 00 42.6
       baz=344,slow=76,SNR=4241
H11S2  WAKE ISLAND Hy    31.20 157   T      T      04 00 39.5
       baz=344,slow=76,SNR=3594
HHC    Hu-ho-hao-te      31.20 273  eP      P      03 27 41.3 -0.9
HHC                                  pmax   pmax
       comp=Z,23nm,0.8s
HHC                                  pmax   pmax
       comp=Z,240nm,5.6s
SONM   Songino Array     31.82 288   P      P      03 27 46.6 -1.1
       comp=Z,0.5nm,0.8s,baz=57,slow=10,SNR=2.8
       comp=Z,0.5nm,0.8s
IMAR   Indian Mountai    32.05  37   P      P      03 27 49.4 +0.1
KDAK   Kodiak Island     32.45  53   LR     LR     03 42 46.1
       comp=Z,65nm,19.1s,baz=229,slow=39
PPLA   Purkeypile        32.46  43   P      P      03 27 54.7 +1.7
CAST   Castle Rocks      32.52  42   P      P      03 27 54.7 +1.2
CAST                                 IAmb   IAmb   03 28 08.4
       comp=Z,6.5nm,1.4s
KTH    Kantishna Hill    33.05  42   P      P      03 27 59.2 +1.0
TRF    Thorofare Moun    33.33  42   P      P      03 28 01.2 +0.5
KNK    Knik Glacier      34.24  46   P      P      03 28 08.9 +0.5
MDM    Murphy Dome       34.26  39   P      P      03 28 09.9 +1.4
MDM                                  IAmb   IAmb   03 28 11.0
       comp=Z,3.8nm,1.0s
SML    Sawmill           34.27  45   P      P      03 28 09.0 +0.2
CCB    Clear Creek Bu    34.44  40   P      P      03 28 10.9 +0.8
CCB                                  IAmb   IAmb   03 28 14.1
       comp=Z,5.6nm,1.4s
ILAR   Eielson Array     34.83  40   P      P      03 28 13.4 -0.1
       comp=Z,0.9nm,0.8s,baz=254,slow=6.5,SNR=12
       comp=Z,0.9nm,0.8s
ILAR   Eielson Array     34.83  40   P      P      03 28 14.1 +0.6
ILAR   Eielson Array     34.83  40  eP      P      03 28 13.9 +0.4
ILAR                                 pmax   pmax
       comp=Z,1.0nm,0.8s
BMAR   Burnt Mountain    35.80  35   P      P      03 28 22.9 +1.0
K27K   Chicken           36.96  41   IAmb   IAmb   03 28 33.7
       comp=Z,5.1nm,0.9s
A36M   Sachs Harbour     42.15  27   P      P      03 29 15.2 +0.5
A36M                                 IAmb   IAmb   03 29 19.0
       comp=Z,6.7nm,0.8s
C36M   Paulatuk          43.10  31   P      P      03 29 22.7 +0.2
C36M                                 IAmb   IAmb   03 29 26.0
       comp=Z,2.6nm,0.5s
WMQ    Urumqi            45.35 291  eP      P      03 29 41.5 +0.6
MK31   Makanchi Array    47.18 297   P      P      03 29 53.5 -1.7
MK31   Makanchi Array    47.18 297   P      P      03 29 53.5 -1.7
MK31                                 pmax   pmax
       comp=Z,1.0nm,0.9s
MKAR   Makanchi Array    47.18 297   P      P      03 29 52.1 -3.1
       comp=Z,1.1nm,0.7s,baz=63,slow=5.7,SNR=12
MKAR                                 LR     LR     03 50 10.4
       comp=Z,38nm,18.7s,baz=20,slow=37
       comp=Z,1.1nm,0.7s
MKAR   Makanchi Array    47.18 297   P      P      03 29 54.2 -1.0
MKAR   Makanchi Array    47.18 297  eP      P      03 29 54.3 -0.9
MKAR                                 pmax   pmax
       comp=Z,1.0nm,0.7s
MKAR   Makanchi Array    47.18 297  eP      P      03 29 54.3 -0.9
KURK   Kurchatov         47.42 303   P      P      03 29 54.9 -2.0
KURK                                 IAmb   IAmb   03 29 57.3
       comp=Z,2.3nm,0.7s
KURK   Kurchatov         47.42 303ceP       P      03 29 54.1 -2.8
KURK                                 pmax   pmax
       comp=Z,7.0nm,2.0s
RES    Resolute Bay      49.18  19   P      P      03 30 10.1 -0.1
RES    Resolute Bay      49.18  19   P      P      03 30 10.1 -0.1
YKA    Yellowknife Ar    49.20  38   P      P      03 30 11.2 +0.7
       comp=Z,2.6nm,0.8s,baz=297,slow=7.4,SNR=32
       comp=Z,2.6nm,0.8s
BVAR   Borovoye Array    50.73 309   LR     LR     03 53 44.8
       comp=Z,69nm,18.2s,baz=75,slow=38
BRVK   Borovoye          50.77 309  i P     P      03 30 20.2 -2.4
BRVK                                 pmax   pmax
       comp=Z,1.0nm,0.3s
CHTO   Chiang Mai        53.40 257   P      P      03 30 41.8 -0.8
CHTO   Chiang Mai        53.40 257   P      P      03 30 41.8 -0.8
CMAR   Chiang Mai Arr    53.66 257   P      P      03 30 44.0 -0.5
       comp=Z,1.1nm,0.3s,baz=31,slow=6.9,SNR=6.1
       comp=Z,1.1nm,0.3s
CMAR   Chiang Mai Arr    53.66 257   P      P      03 30 43.2 -1.3
CMAR   Chiang Mai Arr    53.66 257  eP      P      03 30 46.5 +2.0
CMAR                                 pmax   pmax
       comp=Z,1.0nm,0.3s
AAK    Ala-Archa         54.10 296   LR     LR     03 57 37.0
       comp=Z,22nm,19.9s,baz=182,slow=40
WALA   Waterton Lakes    56.79  52   P      P      03 31 07.6 +0.9
WALA                                 IAmb   IAmb   03 31 09.6
       comp=Z,4.1nm,0.8s
PLID   Pearl Lake        58.06  57   P      P      03 31 16.5 +0.5
PLID                                 IAmb   IAmb   03 31 18.0
       comp=Z,3.9nm,0.8s
ABKAR  Akbulak array     58.28 310   P      P      03 31 14.9 -2.2
FFC    Flin Flon         59.03  41   P      P      03 31 22.9 +0.7
FFC                                  IAmb   IAmb   03 31 23.8
       comp=Z,3.0nm,0.8s
FFC    Flin Flon         59.03  41   P      P      03 31 22.9 +0.7
FFC                                  pmax   pmax
       comp=Z,3.0nm,0.9s
BOZ    Bozeman (W)       60.15  54   P      P      03 31 31.4 +1.1
BOZ                                  IAmb   IAmb   03 31 47.9
       comp=Z,1.5nm,0.8s
BOZ    Bozeman (W)       60.15  54   P      P      03 31 31.4 +1.1
BOZ                                  pmax   pmax
       comp=Z,2.0nm,0.8s
NVAR   Mina Array Bea    60.91  64   P      P      03 31 36.3 +0.6
       comp=Z,1.1nm,0.6s,baz=289,slow=6.9,SNR=4.7
       comp=Z,1.1nm,0.6s
NVAR   Mina Array Bea    60.91  64   P      P      03 31 36.0 +0.4
BELG   Belogornoye       62.14 318   LR     LR     03 59 26.9
       comp=Z,58nm,19.1s,baz=138,slow=37
PD31   Pinedale Array    63.12  55   P      P      03 31 51.3 +0.9
PDAR   Pinedale Array    63.12  55   P      P      03 31 51.4 +0.9
       comp=Z,1.1nm,0.9s,baz=253,slow=1.5,SNR=7.9
       comp=Z,1.1nm,0.9s
FINES  FINESS Array B    63.19 335   P      P      03 31 47.5 -2.7
       comp=Z,1.1nm,0.7s,baz=42,slow=7.1,SNR=7.5
       comp=Z,1.1nm,0.7s
FINES  FINESS Array B    63.19 335   P      P      03 31 47.2 -3.0
OBN    Obninsk           64.70 326   LR     LR     04 05 42.1
       comp=Z,6.8nm,18.9s,baz=326,slow=41
ULM    Lac du Bonnet     64.81  42   P      P      03 32 00.9 -0.2
       comp=Z,1.2nm,0.4s,baz=287,slow=7.0,SNR=2.0
       comp=Z,1.2nm,0.4s
NOA    NORSAR Array B    67.21 342   P      P      03 32 13.9 -2.5
       comp=Z,0.2nm,0.7s,baz=29,slow=6.6,SNR=1.4
       comp=Z,0.2nm,0.7s
WB2    Warramunga Arr    70.17 200   P      P      03 32 34.5 -0.6
WRA    Warramunga Arr    70.17 200   P      P      03 32 34.6 -0.6
       comp=Z,4.5nm,0.6s,baz=16,slow=6.4,SNR=35
       comp=Z,4.5nm,0.6s
WRA    Warramunga Arr    70.17 200   P      P      03 32 34.2 -1.0
WRA    Warramunga Arr    70.17 200  eP      P      03 32 35.1 -0.1
WRA                                  pmax   pmax
       comp=Z,4.0nm,0.6s
KIV    Kislovodsk        70.52 315  eP      P      03 32 34.9 -2.4
KIV                                  pmax   pmax
       comp=Z,5.0nm,1.1s
SCHQ   Schefferville     71.62  24   P      P      03 32 42.9 -0.8
       comp=Z,4.0nm,0.9s,baz=320,slow=6.5,SNR=7.7
       comp=Z,4.0nm,0.9s
AS31   Alice Springs     73.86 200   P      P      03 32 57.5 +0.3
ASAR   Alice Springs     73.86 200   P      P      03 32 57.5 +0.2
       comp=Z,1.1nm,0.6s,baz=14,slow=5.2,SNR=23
       comp=Z,1.1nm,0.6s
ASAR   Alice Springs     73.86 200   P      P      03 32 57.3 +0.1
TX31   Lajitas Ar. Si    75.94  62   P      P      03 33 09.4 -0.2
TX31                                 IAmb   IAmb   03 33 11.0
       comp=Z,6.7nm,1.0s
TXAR   Lajitas Array     75.95  62   P      P      03 33 10.4 +0.9
       comp=Z,0.9nm,0.5s,baz=302,slow=4.9,SNR=28
       comp=Z,0.9nm,0.5s
TXAR   Lajitas Array     75.95  62   P      P      03 33 09.1 -0.5
TXAR   Lajitas Array     75.95  62   P      P      03 33 09.1 -0.5
BRTR   Keskin Array B    78.03 317   P      P      03 33 19.6 -1.6
       comp=Z,0.8nm,0.8s,baz=27,slow=3.3,SNR=4.7
       comp=Z,0.8nm,0.8s
H06E1  SOCORRO T-PHAS79.17  74       T      T      05 01 00.5
       SNR=4.0
H03N2  Juan Fernandez   137.76  90   T      T      06 14 11.3
       baz=309,slow=77,SNR=92
H03N1  Juan Fernandez   137.78  90   T      T      06 14 12.2
       baz=309,slow=77,SNR=124
H03N3  Juan Fernandez   137.78  90   T      T      06 14 12.2
       baz=309,slow=77,SNR=83
CPUP   Villa Florida    146.91  60   PKPbc  PKPdf  03 41 04.2 +1.4
       comp=Z,1.2nm,0.7s,baz=322,slow=9.4,SNR=3.7
PLCA   Paso Flores      147.33  94   PKPbc  PKPbc  03 41 05.3 -0.3
       comp=Z,2.6nm,1.0s,baz=271,slow=6.0,SNR=5.5
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*TAP **31** 03:35:13.9, 24°.77N×122°.84E, h131^{km}±1^{km}, ML3.0, D*
*JMA **31** 03:35:15.1±0.3, 25°N±3°×122°.9E±0°.8, h118^{km}±2^{km}, MV1.8/9, NW OFF ISHIGAKIJIMA IS*
ISC 31 03:35:14.3±1.9**, 24°.79N**±0°.06×**122°.85E**±0°.03**, h125**^{km}±11^{km}**, n54, σ0^{s}.81**/101**, Taiwan region**

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Code   Station Name       Δ°   AZ°    Phase ID         Time     Res
                                     Op     ISC     h  m  s    ISC
JYNG   Yonagunijimaku     0.35 165   P      Pn     03 35 32.3 +0.1
JYNG                                eS      Sn     03 35 44.9 -0.6
YOJ    Yonaguni jima      0.36 156  i P     Pn     03 35 32.2  0.0
       baz=153
YOJ                                 i S     Sn     03 35 45.8 +0.2
       baz=153
EOS2   EOS2               0.67 237   P      Pn     03 35 34.2 +0.4
       baz=237
EOS2                                 S      Sn     03 35 49.5 +0.9
       baz=237
EOS3   EOS3               0.70 224  i P     Pn     03 35 34.4 +0.4
       baz=224
EOS3                                 S      Sn     03 35 49.9 +1.0
       baz=224
TWB1   Santiao Chiao      0.81 286  eP      Pn     03 35 33.4 -1.7
       baz=287
EOS4   EOS4               0.82 216  i P     Pn     03 35 35.7 +0.9
       baz=216
EOS4                                 S      Sn     03 35 51.6 +1.3
       baz=216
EGS                       0.83 274   P      Pn     03 35 35.5 +0.2
       baz=275
EGS                                 eS      Sn     03 35 50.5 -0.6
       baz=275
IRIF   Iriomote-Funau     0.92 119  eP      Pn     03 35 36.3 +0.2
IRIF                                eS      Sn     03 35 52.2 -0.3
TWC    Suao               0.93 259   P      Pn     03 35 34.8 -1.3
       baz=259
TWC                                 i S     Sn     03 35 52.0 -0.5
       baz=259
NTC    Toucheng           0.93 274  eP      Pn     03 35 35.0 -1.1
       baz=275
NTC                                 eS      Sn     03 35 53.5 +0.9
       baz=275
SXI1   Grass Mountain     0.93 289  eP      Pn     03 35 35.2 -1.0
       baz=290
SXI1                                eS      Sn     03 35 53.5 +0.6
       baz=290
TIPB   Shuangxi           0.95 281   P      Pn     03 35 36.6 +0.3
       baz=282
TIPB                                i S     Sn     03 35 53.2 +0.2
       baz=282
ILA    Ilan               1.00 269  eP      Pn     03 35 36.8  0.0
       baz=269
ILA                                 eS      Sn     03 35 54.6 +0.8
       baz=269
ENA    Nanau              1.07 251   P      Pn     03 35 37.8 +0.3
       baz=250
ENA                                  S      Sn     03 35 54.9 -0.1
       baz=250
TWE    Neicheng           1.08 267   P      Pn     03 35 36.5 -1.0
       baz=267
TWE                                  S      Sn     03 35 56.3 +1.2
       baz=267
HATJ   Hateruma jima      1.14 130   P      Pn     03 35 38.8 +0.6
HATJ                                eS      Sn     03 35 56.0 -0.3
FUSB   Fushanzhiwuyua     1.15 269   P      Pn     03 35 38.4 +0.1
       baz=269
FUSB                                i S     Sn     03 35 55.6 -0.9
       baz=269
TWA    Mucha              1.16 280   S      Sn     03 35 57.2 +0.4
       baz=280
ENTT   Nioudou            1.18 263   P      Pn     03 35 39.5 +0.9
       baz=263
ENTT                                 S      Sn     03 35 57.6 +0.6
       baz=263
JKRS   Kuro-shima         1.19 117   P      Pn     03 35 39.4 +0.6
JKRS                                 S      Sn     03 35 57.4 +0.1
YM01   YM01               1.21 287   P      Pn     03 35 38.6 -0.4
       baz=288
YM01                                 S      Sn     03 35 57.1 -0.6
       baz=288
NWLT   Wulai              1.22 270  eP      Pn     03 35 39.5 +0.4
       baz=270
NWLT                                eS      Sn     03 35 57.9  0.0
       baz=270
LATG   Datong             1.23 258   P      Pn     03 35 40.5 +1.2
       baz=258
LATG                                 S      Sn     03 35 58.1 -0.1
       baz=258
TWY    Chenhua            1.23 293   P      Pn     03 35 39.7 +0.6
       baz=294
TWY                                  S      Sn     03 35 57.8 -0.2
       baz=294
JIJ    Ishigaki jima      1.25 110   P      Pn     03 35 39.6 +0.2
JIJ                                  S      Sn     03 35 57.4 -1.0
ETL    Fush Village       1.28 241   P      Pn     03 35 39.9 +0.2
       baz=241
ETL                                  S      Sn     03 35 57.8 -1.2
       baz=241
NACB   Ninganchiao        1.30 242   P      Pn     03 35 39.9  0.0
       baz=242
NACB                                 S      Sn     03 35 58.0 -1.3
       baz=242
TWD    Chiawan            1.34 238   P      Pn     03 35 40.2 -0.1
       baz=238
TWD                                 i S     Sn     03 35 59.3 -0.8
       baz=238
YHNB   Yeheng             1.34 265   P      Pn     03 35 41.2 +0.7
       baz=265
YHNB                                i S     Sn     03 36 00.2 -0.1
       baz=265
JISG   Ishigakijimahi     1.35  98   P      Pn     03 35 40.6 +0.3
JISG                                eS      Sn     03 35 59.3 -0.9
ETLH   Xiulin Townshi     1.37 245   P      Pn     03 35 40.1 -0.6
       baz=245
ETLH                                i S     Sn     03 36 00.1 -0.8
       baz=245
NNSB   Datong             1.38 255  i P     Pn     03 35 41.5 +0.5
       baz=255
NNSB                                 S      Sn     03 36 00.4 -0.7
       baz=255
FUSS   Fushou             1.56 250  eP      Pn     03 35 43.9 +0.9
       baz=250
FUSS                                eS      Sn     03 36 04.6 -0.3
       baz=250
WHF    Hehuan Shan        1.58 246  eP      Pn     03 35 43.4 -0.1
       baz=246
WHF                                 eS      Sn     03 36 04.8 -0.8
       baz=246
NFF    Wufeng Townshi     1.58 265  eS      Sn     03 36 04.7 -0.3
       baz=264
TWT    Tachien            1.61 251  eP      Pn     03 35 43.8 +0.2
       baz=251
TWT                                 eS      Sn     03 36 05.6 -0.3
       baz=251
LIOB   Emei               1.67 265  eS      Sn     03 36 06.6 -0.2
       baz=265
CHGB   Renai              1.69 245  eP      Pn     03 35 45.2 +0.7
       baz=245
CHGB                                eS      Sn     03 36 06.3 -1.2
       baz=245
OWD    Renai              1.74 242  eP      Pn     03 35 45.1 +0.1
       baz=241
OWD                                 eS      Sn     03 36 07.2 -1.2
       baz=241
WUSB   Renai              1.77 244  eP      Pn     03 35 46.2 +0.8
       baz=243
WUSB                                eS      Sn     03 36 08.0 -1.0
       baz=243
WHP    Taichung City      1.81 254  eP      Pn     03 35 47.7 +1.9
       baz=254
WHP                                 eS      Sn     03 36 09.8 +0.1
       baz=254
HGSD   Ruisui             1.83 225  i P     Pn     03 35 45.7 -0.4
       baz=225
HGSD                                i S     Sn     03 36 09.4 -0.8
       baz=225
VWDT   VWDT               1.87 237  eP      Pn     03 35 46.8 +0.4
       baz=236
VWDT                                eS      Sn     03 36 10.5 -0.5
       baz=236
EHY    Hungye             1.89 228   P      Pn     03 35 45.8 -1.0
       baz=227
EHY                                  S      Sn     03 36 09.8 -1.7
       baz=227
YULB   Yu-li              1.99 226   P      Pn     03 35 48.4 +0.4
       baz=225
YULB                                 S      Sn     03 36 12.1 -1.5
       baz=225
SMLT   Sun Moon Lake      1.99 243  eS      Sn     03 36 13.3 -0.6
       baz=243
SSLB   Suanglung          2.00 240  eP      Pn     03 35 49.5 +1.4
       baz=240
SSLB                                eS      Sn     03 36 13.8 -0.1
       baz=240
TYC    Yuchr              2.02 244  eP      Pn     03 35 49.0 +0.7
       baz=244
TYC                                 eS      Sn     03 36 13.0 -1.2
       baz=244
WHYT   Xinyi Township     2.12 240  eS      Sn     03 36 17.7 +1.1
       baz=239
FULB   Fuli               2.13 222  eP      Pn     03 35 50.5 +0.8
       baz=222
FULB                                eS      Sn     03 36 17.4 +0.6
       baz=222
CHKT   Chengkung          2.16 219   S      Sn     03 36 16.2 -1.3
       baz=218
EHD    Haiduan            2.22 223  eP      Pn     03 35 50.5 -0.3
       baz=222
EHD                                 eS      Sn     03 36 17.1 -1.7
       baz=222
ALS    Alishan            2.26 236   P      Pn     03 35 52.3 +0.7
       baz=235
ALS                                 eS      Sn     03 36 19.4 -0.7
       baz=235
STYH   Taoyuan            2.49 230  eP      Pn     03 35 55.4 +1.2
       baz=229
STYH                                eS      Sn     03 36 25.4 +0.6
       baz=229
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*IDC **31** 03:49:09.8±0.6, 4°.41S×102°.13E, h0^{km}, mb4.5/18, mbtmp4.6/19, ML4.6/1, MS3.6/21, Error ellipse: s-maj=21.5km s-min=13.1km az=56.0*
*NEIC **31** 03:49:16.0±1.5, 4°.41S±0°.07×102°.11E±0°.05, h45^{km}±6^{km}, mb4.8/52, Error ellipse: s-maj=10.4km s-min=7.6km az=199.0*
*DJA **31** 03:49:16.2±0.3, 5°S±3°×10°2E±°, h48^{km}±3^{km}, M5.0/38, mb5.0/38, mB5.5/11, MLv5.0/22, Mw(mB)5.0/11, MwMwp5.1/1, Mwp5.4/1*
ISC 31 03:49:16.0±0.4**, 4°.41S**±0°.04×**102°.15E**±0°.04**, h47**^{km}±2^{km}**, h48**^{km}**:pP-P, n219, σ1^{s}.66**/230**, mb4.8**/56**, MS3.6**/20**, 1C-1D, Southern Sumatera**

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Code   Station Name       Δ°   AZ°    Phase ID         Time     Res
                                     Op     ISC     h  m  s    ISC
MNAI   Manna              0.81  87          Pn     03 49 31.4 +0.3
MNAI                                 Sn     Sn     03 49 42.6 +0.6
MNAI   Manna              0.81  87   P      Pn     03 49 31.4 +0.3
MNAI                                 S      Sn     03 49 42.9 +0.8
KSI    Kapahiang          0.87  31   P      Pn     03 49 32.8 +0.8
MASI   Maura Aman, Be     1.26   4   P      Pn     03 49 38.8 +1.5
MASI                                 S      Sn     03 49 55.8 +2.7
LWLI   Liwa               2.00 108   P      Pn     03 49 47.8 +0.4
LWLI                                 S      Sn     03 50 12.9 +1.6
KASI   Kota Agung         2.59 115   P      Pn     03 49 55.6 +0.2
KASI                                 S      Sn     03 50 26.3 +0.6
PPSI   Pulau Pagai        2.69 307   P      Pn     03 49 58.7 +2.0
PPSI                                 S      Sn     03 50 29.5 +1.5
KLI    Kotabumi           2.74 100   P      Pn     03 49 58.4 +0.9
PMBI   Palembang          3.01  61   Pn     Pn     03 50 00.6 -0.5
PMBI   Palembang          3.01  61   P      Pn     03 50 03.0 +1.9
JMBI   JAMBI              3.14  28   P      Pn     03 50 05.2 +2.3
BLSI   Bandar Lampung     3.23 107   P      Pn     03 50 05.8 +1.6
SDSI   Sungai Dareh       3.53 348   P      Pn     03 50 10.8 +2.5
PDSI   Padang             3.86 334   P      Pn     03 50 14.7 +1.8
PDSI                                 S      Sn     03 50 59.3 +2.3
CGJI   Cibinong           4.16 122   P      Pn     03 50 17.1 +0.2
BKNI   Bangkinang         4.83 347   Pn     Pn     03 50 25.8 -0.4
BKNI   Bangkinang         4.83 347   P      Pn     03 50 29.0 +2.8
SKJI   Sukabumi           5.09 121   P      Pn     03 50 43.4  +14
CNJI   Cibinong           5.73 120   P      Pn     03 50 38.6  0.0
PBSI   Pulau Batu         5.80 318   P      Pn     03 50 40.9 +1.4
       187nm,1.3s,1.6nm
PBSI                                 S      Sn     03 51 43.7 -1.0
       187nm,1.3s,1.6nm
BBJI   Bungbulang         6.26 119   P      Pn     03 50 46.4 +0.5
MYKOM  Kota Tinggi        6.39  15   Pn     Pn     03 50 46.8 -0.8
JCJI   Jatiwangi          6.44 109   P      Pn     03 50 49.1 +0.9
       309nm,0.5s,1.4nm
CMJI   Cimerak            7.11 118   P      Pn     03 50 57.1 -0.3
       165nm,0.7s,3µm0.7nm
GSI    Gunungsitoli       7.28 321   Pn     Pn     03 50 59.4 -0.4
GSI    Gunungsitoli       7.28 321   P      Pn     03 50 59.6 -0.3
       104nm,0.5s,5µm9µm0.6nm
KPJI   Karang Pucung      7.35 114   P      Pn     03 51 02.1 +1.4
       48nm,0.6s,0.3nm
RPSI   Rantau Prapat      7.76 335          Pn     03 51 07.1 +0.8
SMRI   Semarang           8.66 108          Pn     03 51 18.8  0.0
SMRI   Semarang           8.66 108   P      Pn     03 51 20.1 +1.3
SMRI   Semarang           8.66 108   P      Pn     03 51 21.2 +2.4
       173nm,0.6s
IPM    Ipoh               8.90 353   Pn     Pn     03 51 20.8 -1.2
SNSI   Sinabang, Aceh     8.93 319   P      Pn     03 51 23.5 +1.1
       120nm,0.8s
KCSI   Kotacane, Aceh     9.01 331   P      Pn     03 51 23.7 +0.2
       12nm,0.5s
UGM    Wanagama           9.03 113          Pn     03 51 24.6 +0.7
UGM    Wanagama           9.03 113   P      Pn     03 51 25.0 +1.2
UGM    Wanagama           9.03 113   P      Pn     03 51 24.5 +0.7
       270nm,0.5s
COCO   West Island        9.35 214   Pn     Pn     03 51 26.5 -1.6
KSM    Kuching           10.03  55   Pn     Pn     03 51 36.4 -1.2
PWJI   Pagerwojo         10.25 111   P      Pn     03 51 41.1 +0.6
       103nm,0.8s
MLSI   Meulaboh, Aceh    10.35 326   P      Pn     03 51 42.8 +0.9
       122nm,0.5s
GRJI   Gresik            10.58 104   P      Pn     03 51 45.4 +0.4
       326nm,0.9s,3µm
BLJI   Banyuglugur       11.86 107   P      Pn     03 52 04.1 +1.6
       80nm,0.5s
GMJI   Gumukmas          11.87 109   P      Pn     03 52 01.8 -0.8
       51nm,0.6s
SBUM   Sibu              12.16  56   Pn     Pn     03 52 06.2 -0.4
ABJI   Asem Bagus        12.48 106   P      Pn     03 52 13.6 +2.6
       220nm,0.5s
JAGI   Jajag, Banyuwa    12.59 109   Pn     Pn     03 52 11.7 -0.8
JAGI   Jajag, Banyuwa    12.59 109   P      Pn     03 52 12.1 -0.5
JAGI   Jajag, Banyuwa    12.59 109   P      Pn     03 52 11.4 -1.2
       142nm,0.7s,2µm
IGBI   Denpasar          13.63 109   P      Pn     03 52 24.7 -2.1
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             69nm,0.9s
PLAI  Plampang          16.13 107  P       Pn     03 52 57.0 -2.6
PLAI  Plampang          16.13 107  P       Pn     03 52 56.1 -3.5
KAPI  Kappang           17.56  93  P       P      03 53 18.0 -0.1
             2.2nm,0.3s,baz=272,slow=8.5,SNR=5.4
KAPI                               LR      LR     04 00 38.2
             comp=Z,150nm,21.9s,baz=258,slow=39
             21nm,0.7s
KAPI  Kappang           17.56  93  P       Pn     03 53 16.5 -0.9
SPSI  Sidrap Palu       17.58  89  P       P      03 53 18.8 +0.5
             44nm,1.1s
BKSI  Bulukumba         17.93  94  P       P      03 53 22.5 +0.3
             48nm,0.8s
MPSI  Mapaga            18.35  76  P       Pn     03 53 28.6 +1.4
             20nm,1.0s,801nm
MYLDM Lahad Datu        18.91  60          Pn     03 53 34.0 +0.1
TOLI2 Tolitoli          19.41  74  P       P      03 53 38.7 +0.3
TOLI2 Tolitoli          19.41  74  P       Pn     03 53 39.8 -0.1
MRSI  Marisa            20.36  77  P       Pn     03 53 50.3 -0.9
             82nm,0.7s
LUWI  Luwuk             20.87  81          P      03 53 54.2 -0.1
LUWI                               IAmb    IAmb   03 54 08.1
             comp=Z,50nm,0.7s
LUWI  Luwuk             20.87  81  P       Pn     03 53 56.0 -1.2
             comp=Z,62nm,0.7s,comp=Z,3μm
GTOI  Gorontalo         21.44  77  P       P      03 53 59.2 -1.2
             comp=Z,9.4nm,0.8s
SOEI  Soe               22.58 105  P       P      03 54 12.0 -0.8
SOEI  Soe               22.58 105  P       P      03 54 09.7 -3.0
SOEI  Soe               22.58 105  P       P      03 54 13.0 +0.3
             comp=Z,54nm,0.6s
CMAR  Chiang Mai Arr    22.94 352  P       P      03 54 16.5 +0.2
             comp=Z,3.2nm,0.5s,baz=184,slow=8.2,SNR=13
CMAR                               LR      LR     04 04 22.0
             comp=Z,83nm,18.7s,baz=175,slow=40
             comp=Z,3.2nm,0.5s
CMAR  Chiang Mai Arr    22.94 352  P       P      03 54 15.0 -1.3
PSA00 Pilbara Seismi    24.21 136  P       P      03 54 27.3 -1.0
PSA00                              IAmb    IAmb   03 54 30.5
             comp=Z,16nm,0.9s
PALK  Pallekele         24.34 298  LR      LR     04 02 46.2
             comp=Z,128nm,20.4s,baz=210,slow=34
CRAI  Chiangrai         24.55 356  P       P      03 54 30.6 -0.8
LBMI  Labuha            25.60  82  P       P      03 54 57.4  +16
DAV   Davao City (W)    26.02  64  LR      LR     04 06 01.3
             comp=Z,69nm,18.4s,baz=278,slow=39
KNRA  Kununurra         28.46 115  P       P      03 55 05.3 -1.4
KNRA  Kununurra         28.46 115  P       P      03 55 05.8 -0.9
H08S2 Diego Garcia H    29.66 262  T       T      04 25 34.1
             baz=84,slow=75,SNR=43
H08S3 Diego Garcia H    29.67 262  T       T      04 25 13.5
             baz=84,slow=75,SNR=45
H08S1 Diego Carcia H    29.68 262  T       T      04 25 14.3
             baz=84,slow=75,SNR=40
MTN   Manton Dam        29.83 108          P      03 55 18.2 -0.8
FAKI  Fak Fak           30.08  88  P       P      03 55 20.1 -1.1
FAKI  Fak Fak           30.08  88  P       P      03 55 21.6 +0.4
PZH   PanZhiHua         30.73 359  P       P      03 55 30.0 +3.1
PZH                                pmax    pmax
             comp=Z,10.0nm,0.6s
PZH                                pmax    pmax
             comp=Z,140nm,5.5s
KDU   Kakadu            31.07 107  P       P      03 55 27.6 -2.3
SHL   Shillong          31.42 342  P       P      03 55 31.0 -2.0
SHL                                IAmb    IAmb   03 55 33.6
             comp=Z,17nm,0.9s
NWAO  Narrogin (SRO)    31.68 155  P       P      03 55 35.2 +0.1
H01W3 Cape Leeuwin H    32.30 161  T       T      04 29 39.5
             baz=339,slow=76,SNR=11
H01W2 Cape Leeuwin H    32.31 161  T       T      04 29 38.3
             baz=339,slow=76,SNR=17
H01W1 Cape Leeuwin H    32.31 161  T       T      04 29 45.3
             baz=339,slow=76,SNR=9.6
WRKA  Warakurna         32.43 132  P       P      03 55 43.3 +1.5
WB0   Warramunga Arr    34.93 119  P       P      03 56 03.0 -0.6
WB0                                IAmb    IAmb   03 56 18.3
             comp=Z,30nm,1.5s
WRA   Warramunga Arr    34.95 119  P       P      03 56 03.4 -0.4
             comp=Z,2.8nm,0.3s,baz=304,slow=8.9,SNR=114
WRA                                PcP     PcP    03 58 35.7 +0.1
             comp=Z,1.0nm,0.6s,baz=319,slow=2.1,SNR=3.3
WRA                                S       S      04 01 35.1 +2.7
             comp=Z,0.6nm,0.7s,baz=291,slow=16,SNR=3.3
             comp=Z,2.8nm,0.3s
WRA   Warramunga Arr    34.95 119  P       P      03 56 03.2 -0.6
WRAB  Tennant Creek     34.95 119  P       P      03 56 03.6 -0.2
WRAB  Tennant Creek     34.95 119  P       P      03 56 02.6 -1.1
WRAB                               pP      pP     03 56 16.3 +0.1
WB2   Warramunga Arr    34.96 119  P       P      03 56 03.2 -0.7
ENH   Enshi             35.19  11  P       P      03 56 03.4 -2.2
ENH                                IAmb    IAmb   03 56 20.8
             comp=Z,12nm,1.2s
JIRN  Jiri              35.41 335  eP      P      03 56 09.3 +1.3
             comp=Z,22nm,0.3s
LSA   Lhasa             35.52 343  P       P      03 56 08.0 -1.0
LSA                                IAmb    IAmb   03 56 11.0
             comp=Z,7.1nm,0.9s
PKI   Pulchoki          35.66 334  eP      P      03 56 11.2 +1.1
             comp=Z,8.0nm,0.4s
PKIN  Phulchoki         35.67 334  eP      P      03 56 10.7 +0.6
             comp=Z,9.8nm,0.3s
GUN   Gumba             35.76 335  eP      P      03 56 12.3 +1.4
             comp=Z,25nm,0.2s
DMN   Daman             35.83 334  eP      P      03 56 12.5 +1.0
             comp=Z,10nm,0.3s
FORT  Forrest           35.83 140  P       P      03 56 11.0 -0.1
FORT                               IAmb    IAmb   03 56 30.5
             comp=Z,16nm,0.9s
FORT  Forrest           35.83 140  P       P      03 56 12.2 +1.0
AS31  Alice Springs     36.12 125  P       P      03 56 14.2 +0.4
AS31                               IAmb    IAmb   03 56 21.7
             comp=Z,8.9nm,0.4s
ASAR  Alice Springs     36.12 125  P       P      03 56 14.1 +0.3
             comp=Z,4.8nm,0.6s,baz=294,slow=7.6,SNR=82
ASAR                               PcP     PcP    03 58 39.6 +0.6
             comp=Z,0.6nm,0.6s,baz=293,slow=2.8,SNR=4.4
ASAR                               S       S      04 01 52.6 +2.3
             comp=Z,0.5nm,0.6s,baz=298,slow=14,SNR=2.9
ASAR                               LR      LR     04 14 31.6
             comp=Z,65nm,18.1s,baz=235,slow=42
             comp=Z,4.8nm,0.6s
GKN   Gorkha            36.38 333  eP      P      03 56 17.2 +1.2
             comp=Z,28nm,0.3s
DANN  Dangsing          37.07 333  eP      P      03 56 23.2 +1.1
             comp=Z,56nm,0.3s
PYUN  Piuthan           37.22 331  eP      P      03 56 24.6 +1.3
             comp=Z,16nm,0.4s
XAN   Xi'an             38.77   9 ⇑P       P      03 56 35.0 -1.1
XAN                                pmax    pmax
             comp=Z,4.0nm,0.7s
OOD   Oodnadatta        39.50 130  P       P      03 56 43.0 +0.8
NJ2   Nanjing           39.59  23  eP      P      03 56 46.3 +3.4
NJ2                                pP      pP     03 56 57.3 +1.8
NJ2                                sP      sP     03 57 01.5 +0.5
NJ2                                pmax    pmax
             comp=Z,11nm,0.7s
NJ2                                pmax    pmax
             comp=Z,190nm,5.2s
MULG  Mulgathing        39.61 134  P       P      03 56 43.8 +0.7
QIS   Mount Isa         39.80 117  P       P      03 56 45.0 +0.2
JOW   Kunigami          40.04  38  LR      LR     04 12 33.8
             comp=Z,92nm,20.8s,baz=296,slow=35
COEN  Coen              41.53 106          P      03 56 58.1 -1.2
COEN                               IAmb    IAmb   03 57 06.9
             comp=Z,49nm,1.9s
BBOO  Buckleboo         42.44 136  P       P      03 57 05.5 -0.8
BBOO                               IAmb    IAmb   03 57 07.7
             comp=Z,29nm,1.4s
GTA   Gaotai            43.65 357  eP      P      03 57 17.8 +1.6
GTA                                pP      sP     03 57 32.8 -1.6
GTA                                pmax    pmax
             comp=Z,3.0nm,1.0s
PMG   Port Moresby      44.93  99  LR      LR     04 18 22.6
             comp=Z,75nm,19.1s,baz=231,slow=39
BTO   Baotou            45.37   8  eP      P      03 57 26.3 -3.6
BTO                                pP      pP     03 57 42.0 -0.7
BTO                                sP      sP     03 57 51.5 +3.3
BTO                                PP      PcP    03 59 08.3 -0.4
BTO                                S       S      04 03 59.8 -7.9
BTO                                sS      sS     04 04 29.0 +0.1
BTO                                SS      ScS    04 07 16.5 -6.1
BTO                                pmax    pmax
             comp=Z,23nm,0.7s
BTO                                pmax    pmax
             comp=Z,240nm,6.5s
BTO                                LR      LR
             comp=N,270nm,5.4s
BTO                                LR      LR
             comp=E,290nm,7.2s
BTO                                LR      LR
             comp=Z,380nm,8.8s
CTA   Charters Tower    45.66 114  LR      LR     04 18 55.5
             comp=Z,96nm,18.7s,baz=260,slow=39
CTAO  Charters Tower    45.66 114  P       P      03 57 32.6 +0.3
CTAO                               IAmb    IAmb   03 57 34.4
             comp=Z,13nm,0.8s
CTAO  Charters Tower    45.66 114  P       P      03 57 32.0 -0.4
CTAO                               pP      pP     03 57 44.9 -0.2
CTAO                               sP      sP     03 57 49.1 -1.4
HHC   Hu-ho-hao-te      45.86  10  eP      P      03 57 34.5 +0.8
HHC                                pmax    pmax
             comp=Z,34nm,0.8s
HHC                                pmax    pmax
             comp=Z,240nm,5.7s
STKA  Stephens Creek    45.96 131  P       P      03 57 35.5 +0.9
             comp=Z,8.1nm,0.6s,baz=308,slow=7.6,SNR=20
STKA                               LR      LR     04 17 39.9
             comp=Z,97nm,20.4s,baz=214,slow=37
             comp=Z,8.1nm,0.6s
STKA  Stephens Creek    45.96 131  P       P      03 57 34.9 +0.3
BJI   Beijing           46.08  15  P       P      03 57 35.8 +0.6
BJI                                S       S      04 04 20.5 +3.0
JNU   Nakatsue          46.20  34  P       P      03 57 37.0 +0.6
NIL   Nilore            46.68 326  P       P      03 57 40.3 +0.1
NIL                                IAmb    IAmb   03 57 52.1
             comp=Z,12nm,0.6s
NIL   Nilore            46.68 326  P       P      03 57 40.0 -0.2
NIL                                pP      pP     03 57 51.3 -1.6
KSRS  Korea Array       48.06  28  P       P      03 57 51.6 +0.8
             comp=Z,2.8nm,0.6s,baz=222,slow=7.1,SNR=11
             comp=Z,2.8nm,0.6s
XLT   XiLinHaoTe        49.70  13  eP      P      03 58 10.3 +6.9
XLT                                pP      sP     03 58 30.8 +8.9
XLT                                pmax    pmax
             comp=Z,10.0nm,1.1s
XLT                                pmax    pmax
             comp=Z,130nm,5.5s
WMQ   Urumqi            49.74 346  eP      P      03 58 05.3 +1.6
WMQ                                sP      sP     03 58 22.3 +0.2
WMQ                                pmax    pmax
             comp=Z,26nm,0.7s
KSH   Kashi             49.92 334  P       P      03 58 05.3 +0.1
KSH                                pP      pP     03 58 19.5 +1.4
KSH                                S       S      04 05 10.8 -1.6
KSH                                pmax    pmax
             comp=Z,9.0nm,0.7s
WSAR  Wadi Sarin        50.57 305  LR      LR     04 16 58.7
             comp=Z,61nm,20.6s,baz=149,slow=33
NRN   Naryn             51.49 335  P       P      03 58 16.1 -1.1
KDJ   Kajisay           51.59 336  P       P      03 58 18.0 +0.2
KDJ                                IAmb    IAmb   03 58 37.4
             comp=Z,10nm,0.8s
JGF   Kuroka            51.71  37  P       P      03 58 17.4 -1.2
SONM  Songino Array     52.16   4  P       P      03 58 23.0 +1.2
             comp=Z,8.4nm,0.6s,baz=184,slow=9.8,SNR=67
SONM                               PcP     PcP    03 59 33.6 +0.5
             comp=Z,2.2nm,0.4s,baz=185,slow=4.3,SNR=8.2
             comp=Z,8.4nm,0.6s
SONM  Songino Array     52.16   4  P       P      03 58 21.5 -0.3
SONM                               IAmb    IAmb   03 58 23.8
             comp=Z,9.0nm,0.6s
ULN   Ulaanbaatar       52.23   4  P       P      03 58 21.5 -0.9
ULN                                IAmb    IAmb   03 58 24.2
             comp=Z,3.5nm,0.6s
ULN   Ulaanbaatar       52.23   4  P       P      03 58 22.9 +0.5
ULN                                pP      pP     03 58 34.9 -0.5
ULN                                sP      sP     03 58 40.4 -0.4
GAR   Garm              52.25 329  P       P      03 58 22.0 -0.7
GAR                                IAmb    IAmb   03 58 41.7
             comp=Z,13nm,1.3s
CN2   Changchun         52.38  21  eP      P      03 58 27.0 +3.6
CN2                                pmax    pmax
             comp=Z,10.0nm,0.6s
MJAR  Matsushiro Arr    52.85  36  P       P      03 58 25.8 -1.3
             comp=Z,2.8nm,0.6s,baz=223,slow=7.3,SNR=5.9
             comp=Z,2.8nm,0.6s
AAK   Ala-Archa         53.12 335  LR      LR     04 23 06.0
             comp=Z,38nm,20.5s,baz=155,slow=38
MK31  Makanchi Array    53.92 343  P       P      03 58 34.7 -0.1
MK31                               IAmb    IAmb   03 58 35.9
             comp=Z,9.2nm,0.5s
MKAR  Makanchi Array    53.92 343  P       P      03 58 35.1 +0.3
             comp=Z,11nm,0.5s,baz=152,slow=8.9,SNR=218
MKAR                               LR      LR     04 24 15.0
             comp=Z,34nm,18.9s,baz=230,slow=39
             comp=Z,11nm,0.5s
MKAR  Makanchi Array    53.92 343  P       P      03 58 34.9 +0.2
MAKZ  Makanchi          54.03 343  P       P      03 58 35.6 +0.1
MAKZ                               IAmb    IAmb   03 58 38.1
             comp=Z,3.8nm,0.5s
MAKZ  Makanchi          54.03 343  P       P      03 58 34.2 -1.3
MAKZ                               sP      pP     03 58 46.2 -2.4
MDJ   Mudanjiang        54.66  24  P       P      03 58 44.8 +4.7
MDJ                                pP      sP     03 58 58.3 -0.3
MDJ                                sP      pP     03 59 04.5  +11
MDJ                                PcP     PcP    03 59 47.0 +4.5
MDJ                                PP      PP     04 00 47.3 +4.2
MDJ                                ScP     ScP    04 03 40.8 +3.6
MDJ                                PcS     PcS    04 03 46.5 +4.5
MDJ                                S       S      04 06 21.5 +4.8
MDJ                                ScS     ScS    04 08 16.5 -8.8
MDJ   Mudanjiang        54.66  24  pmax    pmax
             comp=Z,5.0nm,0.5s
MDJ                                pmax    pmax
             comp=Z,280nm,7.6s
BNX   BinXian           54.76  21 ⇓P       P      03 58 41.3 +0.5
BNX                                pmax    pmax
             comp=Z,13nm,1.0s
BNX                                pmax    pmax
             comp=Z,140nm,5.4s
KK31  Karatay Array     55.27 332  P       P      03 58 44.1 -0.5
KKAR  Karatay Array     55.27 332  P       P      03 58 44.4 -0.2
USA0B Ussuriysk Arra    55.32  26  P       P      03 58 44.7 -0.1
USA0B                              IAmb    IAmb   03 58 45.8
             comp=Z,14nm,1.1s
USRK  Ussuriysk Ar.     55.32  26  P       P      03 58 45.1 +0.2
             comp=Z,7.6nm,0.4s,baz=216,slow=3.9,SNR=36
             comp=Z,7.6nm,0.4s
USRK  Ussuriysk Ar.     55.32  26  P       P      03 58 44.7 -0.1
KURK  Kurchatov         58.52 343  P       P      03 59 07.4 +0.1
KURK                               IAmb    IAmb   03 59 08.5
             comp=Z,7.5nm,0.8s
KURK  Kurchatov         58.52 343  P       P      03 59 06.7 -0.7
KURK                               pP      pP     03 59 18.0 -2.6
KURK                               sP      sP     03 59 25.1 -0.9
HEH   HeiHe             58.65  19  P       P      03 59 08.5 +0.2
HEH                                pmax    pmax
             comp=Z,11nm,0.8s
HEH                                pmax    pmax
             comp=Z,170nm,4.2s
GEYT  Alibeck           58.66 320  P       P      03 59 09.6 +0.9
             comp=Z,2.5nm,0.7s,baz=155,slow=18,SNR=4.1
             comp=Z,2.5nm,0.7s
KLR   Kul'dur           59.29  22  LR      LR     04 27 04.8
             comp=Z,43nm,19.5s,baz=232,slow=38
ZAA0  Zalesovo Array    59.93 348  P       P      03 59 17.0 -0.1
ZALV  Zalesovo Beam     59.93 348  P       P      03 59 17.1  0.0
             comp=Z,18nm,0.4s,baz=176,slow=5.2,SNR=42
             comp=Z,18nm,0.4s
ZALV  Zalesovo Beam     59.93 348  P       P      03 59 17.0 -0.1
YSS   Yuzh-Sakhalins    62.42  30  P       P      03 59 33.5 -0.6
BVAR  Borovoye Array    63.18 339  LR      LR     04 31 14.4
             comp=Z,42nm,18.6s,baz=189,slow=40
BRVK  Borovoye          63.24 339  P       P      03 59 39.0 -0.4
BRVK                               IAmb    IAmb   03 59 40.0
             comp=Z,8.8nm,1.1s
BRVK  Borovoye          63.24 339  P       P      03 59 39.0 -0.4
BRVK                               pP      pP     03 59 52.2 -0.5
ABKAR Akbulak array     64.77 331  P       P      03 59 49.3 -0.3
DRV   Dumont d’Urvil    67.44 165  P       P      04 00 07.0 +0.6
GNI   Garni             68.74 316  LR      LR     04 34 07.7
             comp=Z,20nm,18.2s,baz=184,slow=39
YAK   Yakutsk           69.54  13  LR      LR     04 32 32.3
             comp=Z,32nm,19.7s,baz=118,slow=37
YAK   Yakutsk           69.54  13  P       P      04 00 18.4 -1.1
GURO  Guroymak-BITLI    69.99 314  P       P      04 00 23.1 +0.1
ARU   Arti              70.26 336  P       P      04 00 23.7 -0.4
ARU                                IAmb    IAmb   04 00 25.3
             comp=Z,14nm,1.2s
ARU   Arti              70.26 336  P       P      04 00 24.0 -0.1
KBZ   Khabaz            71.52 319  P       P      04 00 33.2 +1.2
             comp=Z,2.6nm,0.8s,baz=160,slow=6.6,SNR=4.4
             comp=Z,2.6nm,0.8s
CCD   Concordia, Ant    71.68 174  P       P      04 00 34.6 +1.7
CCD                                sP      PcP    04 00 53.5 +1.6
EIL   Elat              72.62 303  LR      LR     04 32 10.6
             comp=Z,41nm,19.3s,baz=240,slow=36
MMAI  Mount Meron Ar    73.18 306  LR      LR     04 33 00.5
             comp=Z,55nm,20.3s,baz=242,slow=36
PETK  Petropavlovsk-    73.79  31  P       P      04 00 43.8 -1.5
             comp=Z,2.4nm,0.7s,baz=225,slow=1.9,SNR=6.1
LBTB  Lobatse           75.96 245  LR      LR     04 27 14.2
             comp=Z,81nm,19.8s,baz=110,slow=30
BOSA  Boshof            76.39 242  P       P      04 01 02.0 +1.0
             comp=Z,1.3nm,0.5s,baz=122,slow=4.4,SNR=5.3
BOSA                               LR      LR     04 28 08.0
             comp=Z,58nm,19.2s,baz=182,slow=31
             comp=Z,1.3nm,0.5s
BR131 Keskin Array S    76.52 312  P       P      04 01 00.2 -1.3
BR131                              IAmb    IAmb   04 01 02.6
             comp=Z,4.6nm,0.6s
BRTR  Keskin Array B    76.52 312  P       P      04 01 01.9 +0.3
             comp=Z,2.7nm,0.6s,baz=136,slow=7.3,SNR=18
             comp=Z,2.7nm,0.6s
TIXI  Tiksi             77.90   8  P       P      04 01 06.6 -1.8
TIXI                               IAmb    IAmb   04 01 08.0
             comp=Z,5.7nm,0.8s
VNDA  Vanda             79.40 169  P       P      04 01 17.8 +1.2
             comp=Z,1.9nm,0.9s,baz=326,slow=3.8,SNR=7.2
             comp=Z,1.9nm,0.9s
VNDA  Vanda             79.40 169  P       P      04 01 16.6  0.0
VNDA                               IAmb    IAmb   04 01 19.2
             comp=Z,9.1nm,1.4s
IDI   Anoyia            82.18 306  LR      LR     04 38 53.4
             comp=Z,60nm,21.8s,baz=96,slow=36
AKASG Malin Array Be    82.69 322  P       P      04 01 34.7 +0.2
             comp=Z,0.3nm,0.3s,baz=79,slow=4.5,SNR=6.4
             comp=Z,0.3nm,0.3s
BURAR Bucovina Array    84.47 319  P       P      04 01 44.1 +0.2
BURAR                              IAmb    IAmb   04 01 46.6
             comp=Z,3.2nm,0.7s
BUR08 Bucovina Ar. S    84.49 319  P       P      04 01 42.9 -1.1
FINES FINESS Array B    87.23 332  P       P      04 01 57.5 +0.4
             comp=Z,1.2nm,0.5s,baz=109,slow=4.6,SNR=19
             comp=Z,1.2nm,0.5s
ARCES ARCESS Array B    89.45 340  P       P      04 02 08.7 +1.1
             comp=Z,6.6nm,0.9s,baz=109,slow=4.9,SNR=11
             comp=Z,6.6nm,0.9s
PDAR  Pinedale Array   132.56  32  PKP     PKPdf  04 08 25.9 -0.1
             comp=Z,0.2nm,0.6s,baz=54,slow=4.6,SNR=2.2
CPUP  Villa Florida    143.54 212  PKP     PKPdf  04 08 46.2 -0.1
             comp=Z,1.4nm,0.9s,baz=152,slow=4.1,SNR=3.5
BDFB  Brasilia         144.37 235  PKP     PKPdf  04 08 48.0 -0.2
             comp=Z,3.9nm,0.4s,baz=148,slow=2.6,SNR=11
FNO   Franklin         144.38  28  PKPdf   PKPbc  04 08 46.0  0.0
U38A  Gravette         144.68  23  PKPdf   PKPab  04 08 46.2 -0.5
P53A  Whipple          144.94   5          PKPab  04 08 46.0 -1.5
HHAR  Hobbs            144.99  23  PKPbc   PKPab  04 08 46.4 -1.5
WTFS  Witchita Falls   145.05  31  PKPbc   PKPbc  04 08 46.1 -2.1
TXAR  Lajitas Array    145.18  42  PKPbc   PKPdf  04 08 49.8 +0.5
             comp=Z,10nm,0.5s,baz=270,slow=0.8,SNR=251
TXAR  Lajitas Array    145.18  42  PKPbc   PKPbc  04 08 47.9 -1.0
ABTX  Abilene, Hawle   145.31  33  PKPbc   PKPbc  04 08 47.8 -1.3
WCI   Wyandotte Cave   145.47  12          PKPdf  04 08 47.3 -2.0
R50A  Paris            145.77   9          PKPdf  04 08 48.6 -1.2
Z35A  Perchaven, San   146.01  30  PKPbc   PKPdf  04 08 49.6 -0.8
PARMO Parma            146.09  17  PKPbc   PKPdf  04 08 49.7 -0.7
S51A  Beattyville      146.51   8  PKPbc   PKPdf  04 08 50.2 -1.0
JCT   Junction City    146.82  36  PKPbc   PKPbc  04 08 52.8 -0.9
Z38A  Mt. Pleasant     147.15  27  PKPbc   PKPdf  04 08 52.3  0.0
SWET  Sewanee          148.45  13  PKPbc   PKPdf  04 08 55.5 +1.0
W52A  Murphy           148.95  10  PKPbc   PKPbc  04 08 57.9 -1.4
Y49A  Blount Mountai   149.64  14  PKPbc   PKPdf  04 08 58.3 +1.9
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*MOS **31** 04:05:25.6±1.4, 42°.32N×142°.92E, h64km, mb4.1/1, Error ellipse: s-maj=25.2km s-min=11.8km az=54.7*

*SKHL **31** 04:05:25.6±0.1, 42°.20N×143°.00E, h64km±5km, mb4.6/4*

*JMA **31** 04:05:26.9±0.1, 42°.4N±0°.4×143°.0E±0°.5, h52km±1km, MV3.3/39, HIDAKA MOUNTAINS REGION*

*IDC **31** 04:05:28.6±2.7, 42°.39N×142°.72E, h68km±20km, mb3.3/4, mbtmp3.5/6, MS2.7/1, Error ellipse: s-maj=36.2km s-min=16.3km az=111.0*

ISC 31 04:05:26.8±0.8**, 42°.30N**±0°.06×**143°.02E**±0°.03**, h56**km±6km**, n33,** σ0ˢ**97**/43**, mb3.5**/4**, 6D, Hokkaido region**

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Code  Station Name        Δ°   AZ°    Phase ID         Time      Res
                                   Op      ISC       h  m  s     ISC
JNBK  Urakawa-nobuka     0.20 265⇓iP       Pn     04 05 35.2 -0.5
JNBK                             ⇓eS       Sn     04 05 42.0 -0.2
JTHR  Tokachihiroo       0.21  92⇓iP       Pn     04 05 35.7 -0.1
JTHR                             ⇓eS       Sn     04 05 42.3 +0.1
JEM   Erimo              0.30 160⇓eP       Pn     04 05 36.7 +0.2
JCH   Churui             0.41  39  P       Pn     04 05 37.0 -0.4
JCH                               eS       Sn     04 05 44.9 -0.2
JSHD  Hidakashinhida     0.42 285 ⇓P       Pn     04 05 37.4 -0.2
JBT2  Biratori 2         0.68 315  P       Pn     04 05 40.0 -0.5
JBT2                              eS       Sn     04 05 50.8 +0.2
JOB   Onbets             0.85  45  P       Pn     04 05 43.0 +0.3
JFR   Furan              0.92 340 eP       Pn     04 05 42.5 -1.1
JAR   Ashorobuto         1.14  29  P       Pn     04 05 45.8 -0.7
JAR                               eS       Sn     04 06 00.1 -1.1
JEW   Eniwo              1.28 296 eP       Pn     04 05 48.4  0.0
JEW                               eS       Sn     04 06 04.9 +0.4
JAB   Ashibetsu          1.34 334 eP       Pn     04 05 49.1 -0.1
JAK   Akkeshi            1.42  60  P       Pn     04 05 49.9 -0.3
JAK                               eS       Sn     04 06 07.4 -0.5
AKK   Akkeshi            1.52  61 eP       Pn     04 05 51.3 -0.4
AKK                                AMB     AMB    04 05 51.7
             280nm,0.3s
AKK                               i S      Sn     04 06 10.3 -0.1
AKK                                A       A      04 06 11.9
             1μm,0.6s
AKK                                A       A      04 06 11.9
             620nm,0.6s
ASAJ  Asahikawa          1.84 350  P       Pn     04 05 56.1 +0.1
             35nm,0.4s,baz=196,slow=14,SNR=22
ASAJ                               S       Sn     04 06 18.0 -0.2
             61nm,0.5s,baz=249,slow=33,SNR=11
NMR   Nemuro--Hokkai     2.26  61 ePN      Pn     04 06 01.3 -0.4
NMR                               eS       Sn     04 06 27.1 -1.3
NMR   Nemuro--Hokkai     2.26  61 eP       Pn     04 06 01.3 -0.4
NMR                               eS       Sn     04 06 27.1 -1.3
RUSJ  Misakicho          2.43  41 ePN      Pn     04 06 06.2 +2.2
RUSJ                              eS       Sn     04 06 35.8 +3.2
YUK   Yuzh-Kuril'sk      2.71  49  PN      Pn     04 06 08.7 +0.9
YUK                               eS       Sn     04 06 40.3 +1.0
YUK                                smax    smax
             comp=E,306nm,0.2s
YUK                                smax    smax
             comp=N,292nm,0.3s
YUK   Yuzh-Kuril'sk      2.71  49 eP       Pn     04 06 08.2 +0.4
YUK                                AMB     AMB    04 06 11.6
             comp=N,60nm,0.5s
YUK                               eS       Sn     04 06 39.2 -0.1
YUK                                A       A      04 06 44.1
             comp=N,290nm,0.4s
YUK                                A       A      04 06 44.1
             comp=N,310nm,0.4s
SHO   Shikotan           3.20  59 ePN      Pn     04 06 14.1 -0.5
SHO                               eS       Sn     04 06 51.4 -0.1
SHO                                pmax    pmax
             comp=N,9.0nm,0.2s
SHO                                pmax    pmax
             comp=E,14nm,0.2s
SHO                                pmax    pmax
             comp=Z,27nm,0.2s
SHO                                smax    smax
             comp=N,189nm,0.4s
SHO                                smax    smax
             comp=E,136nm,0.5s
SHO   Shikotan           3.20  59 eP       Pn     04 06 14.3 -0.3
SHO                                AMB     AMB    04 06 15.4
             comp=E,10.0nm,0.2s
SHO                                AMB     AMB    04 06 15.4
             comp=E,10.0nm,0.2s
SHO                                AMB     AMB    04 06 15.4
             comp=E,30nm,0.2s
SHO                               eS       Sn     04 06 51.0 -0.5
SHO                                A       A      04 06 52.0
             comp=E,190nm,0.5s
SHO                                A       A      04 06 52.0
             comp=E,140nm,0.5s
MJAR  Matsushiro Arr     6.85 215  P       Pn     04 07 05.7 +1.1
             comp=E,0.9nm,0.5s,baz=26,slow=15,SNR=2.4
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MJAR				LR	LR	04 10 21.7	
	comp=E,60nm,19.7s,baz=189,slow=43						
KSRS	Korea Array	12.56	252	P	Pn	04 08 22.8	+0.1
	comp=E,0.7nm,0.7s,baz=59,slow=17,SNR=1.4						
H11N2	WAKE ISLAND Hy	30.22	131	T	T	04 43 14.1	
	baz=324,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	30.23	131	T	T	04 43 08.5	
	baz=324,slow=76,SNR=7.3						
H11N3	WAKE ISLAND Hy	30.24	131	T	T	04 43 12.7	
	baz=324,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	31.10	132	T	T	04 44 12.4	
	baz=325,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	31.10	132	T	T	04 44 06.0	
	baz=325,slow=76,SNR=9.5						
H11S2	WAKE ISLAND Hy	31.11	132	T	T	04 44 10.1	
	baz=325,slow=76,SNR=6.4						
MKAR	Makanchi Array	42.57	298	P	P	04 13 16.1	-1.0
	comp=E,0.7nm,0.7s,baz=83,slow=9.0,SNR=6.5						
	comp=E,0.7nm,0.7s						
YKA	Yellowknife Ar	58.66	32	P	P	04 15 20.1	+2.3
	comp=E,0.1nm,0.6s,baz=292,slow=5.5,SNR=2.4						
	comp=E,0.1nm,0.6s						
FINES	FINESS Array B	64.75	332	P	P	04 15 57.1	-1.8
	comp=E,4.9nm,1.0s,baz=76,slow=8.7,SNR=3.3						
	comp=E,4.9nm,1.0s						
TXAR	Lajitas Array	85.96	54	P	P	04 18 01.1	0.0
	comp=E,0.2nm,0.5s,baz=318,slow=3.5,SNR=2.7						
	comp=E,0.2nm,0.5s						

*BJI **31** 04:35:05.7±0.0, 5°.40S×152°.19E, h52^{km}, mb4.9/69, mB5.1/44, Ms4.7/36, Ms7 4.4/39*

*MOS **31** 04:35:07.3±1.1, 5°.43S×151°.72E, h49^{km}, mb5.3/33, MS4.4/5, Error ellipse: s-maj=9.9km s-min=6.6km az=107.0*

*IDC **31** 04:35:08.8±1.7, 5°.50S×151°.83E, h52^{km}±15^{km}, mb4.6/23, mbtmp4.9/24, ML2.5/1, MS4.3/52, Error ellipse: s-maj=17.4km s-min=10.1km az=88.0*

*NEIC **31** 04:35:08.0±1.9, 5°.52S±0°.07×151°.85E±0°.09, h44^{km}±5^{km}, mb5.1/166, Error ellipse: s-maj=13.9km s-min=8.7km az=113.0*

*DJA **31** 04:35:10.4±0.3, 6°S±2°×15°2E±°, h82^{km}±4^{km}, M5.3/39, mB5.6/7, mb5.1/39, MLv5.6/2, Mw(mB)5.1/7*

*GCMT **31** 04:35:10.0±0.2, 5°.72S±0°.02×151°.93E±0°.02, h27^{km}, MW5.1/79, Moment Tensor Solution. s61,c79; s79,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.13±.22; $M_{\theta\theta}$-4.45±.14; $M_{\phi\phi}$0.31±.14; $M_{r\theta}$2.85±.24; $M_{\theta\phi}$-1.39±.12; $M_{\phi r}$0.58±.27; Best double couple: $M_0$5.34100×10^{16} NP1:ϕ_s77.00000°, δ62.00000°, λ92.00000°. NP2: ϕ_s252.00000°, δ29.00000°, λ86.00000°. Principal axes: T 4.9960, Plg73.0000°, Azm353.0000°; N 0.6870, Plg2.0000°, Azm256.0000°; P -5.6850, Plg16.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 04:35:09.5±0.4**, 5°.56S**±0°.03×**151°.83E**±0°.04**, h62**^{km}±3^{km}**, h62**^{km}**:pP-P, n655,** σ1^s**41**/620**, mb5.0**/149**, 16C-7D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.26	9	P	Pn	04 35 29.6	-1.5
	23μm,0.4s,baz=252,slow=1.3,SNR=2612						
KRVT				S	Sn	04 35 48.0	+0.8
	31μm,0.4s,baz=305,slow=23,SNR=33						
KRVT				LR	LR	04 35 58.4	
	comp=Z,12μm,20.7s,baz=316,slow=41						
RABL	Rabaul	1.40	14	Pn	Pn	04 35 32.7	-0.3
RABL	Rabaul	1.40	14	P	Pn	04 35 32.9	-0.1
PMG	Port Moresby	6.00	230	P	Pn	04 36 36.7	+0.9
	7.6nm,0.3s,baz=42,slow=9.1,SNR=76						
PMG				S	Sn	04 37 45.0	+1.8
	222nm,0.8s,baz=142,slow=18,SNR=8.5						
	475nm,0.9s						
PMG	Port Moresby	6.00	230	Pn	Pn	04 36 36.2	+0.4
PMG	Port Moresby	6.00	230	P	Pn	04 36 37.7	+1.9
PMG	Port Moresby	6.00	230	*ce*P	Pn	04 36 37.2	+1.4
PMG				pmax	pmax		
	comp=Z,586nm,1.0s						
HNR	Honiara	8.92	116	LR	LR	04 40 11.2	
	comp=Z,17μm,20.9s,baz=290,slow=34						
COEN	Coen	11.93	225	P	Pn	04 37 57.2	+0.3
	baz=12						
COEN	Coen	11.93	225	Pn	Pn	04 37 53.9	-3.0
GENI	Genyem	12.00	284	P	Pn	04 38 00.7	+2.8
	comp=Z,59nm,1.2s,comp=Z,3μm						
SMPI	Sarmi	13.56	285	P	Pn	04 38 22.3	+3.2
	comp=Z,104nm,0.8s,comp=Z,4μm						
PATS	Pohnpei	13.91	28	P	Pn	04 38 23.9	+0.1
	baz=14,SNR=3.5						
TV1H	Townsville Har	14.48	199	P	Pn	04 38 33.3	+2.1
MTSU	Mount Surprise	14.49	210	P	Pn	04 38 31.6	+0.1
	baz=15,SNR=7.2						
MTSU	Mount Surprise	14.49	210	P	Pn	04 38 33.1	+1.6
CTA	Charters Tower	15.43	200	P	P	04 38 47.1	+0.3
	comp=Z,16nm,0.8s,baz=25,slow=13,SNR=20						
CTA				LR	LR	04 44 18.5	
	comp=Z,2μm,19.2s,baz=29,slow=36						
CTA	Charters Tower	15.43	200	P	P	04 38 45.6	-1.3
CTAO	Charters Tower	15.43	200	Pn	Pn	04 38 43.3	-0.2
CTAO	Charters Tower	15.43	200	P	Pn	04 38 43.3	-0.2
CTAO				pmax	pmax		
	comp=Z,23nm,0.9s						
RK1H	Rockhampton Ha	17.77	184	P	P	04 39 14.9	+2.1
RKPI	Ransiki, Papua	18.07	282	P	Pn	04 39 18.5	+2.0
	comp=Z,67nm,0.9s,comp=Z,15μm						
GD1S	Gladstone Soft	18.19	182	P	Pn	04 39 19.1	+1.3
	comp=Z,96nm,0.9s						
AUMOU	Moura State Hi	19.00	185	P	Pn	04 39 27.6	+0.1
	comp=Z,178nm,1.1s						
QIS	Mount Isa	19.06	217	P	Pn	04 39 28.1	-0.3
	baz=19,SNR=57						
QIS	Mount Isa	19.06	217	P	Pn	04 39 28.0	-0.3
KOUNC	Koumac, New Ca	19.19	142	P	P	04 39 26.4	-2.0
FAKI	Fak Fak	19.70	277	P	P	04 39 34.6	+0.5
	comp=Z,24nm,1.1s						
EIDS	Eidsvold	19.71	182	P	P	04 39 34.7	+0.7
	baz=20,SNR=10						
EIDS	Eidsvold	19.71	182	P	P	04 39 33.9	-0.2
EIDS				IAmb	IAmb	04 39 38.1	
	comp=Z,108nm,1.0s						
EIDS	Eidsvold	19.71	182	P	Pn	04 39 35.1	-0.9
DVP	Devils Point	20.05	128	P	Pn	04 39 39.7	-0.3
GUMO	Guam	20.24	340	P	P	04 39 39.9	+0.1
	comp=Z,153nm,0.8s,baz=192,slow=15,SNR=4.3						
GUMO				LR	LR	04 47 22.1	
	comp=Z,156nm,18.4s,baz=138,slow=36						
	comp=Z,153nm,0.8s						
GUMO	Guam	20.24	340	P	P	04 39 39.1	-0.7
GUMO	Guam	20.24	340	P	P	04 39 39.1	-0.7
GUMO				pmax	pmax		
	comp=Z,430nm,1.1s						
KDU	Kakadu	20.37	248	P	P	04 39 41.6	+0.3
	baz=20,SNR=4.0						
KDU	Kakadu	20.37	248	P	P	04 39 42.1	+0.8
RMQ	Roma	21.02	188	P	P	04 39 49.2	+1.1
	baz=21,SNR=13						
RMQ	Roma	21.02	188	P	P	04 39 48.8	+0.6
NOUC	Port Laguerre	21.60	141	P	P	04 39 56.5	+2.1
MTN	Manton Dam	21.66	249	P	P	04 39 55.8	+0.7
	baz=22,SNR=29						
MTN	Manton Dam	21.66	249	P	P	04 39 55.5	+0.4
MTN				IAmb	IAmb	04 40 04.7	
	comp=Z,63nm,0.8s						
MTN	Manton Dam	21.66	249	P	P	04 39 56.2	+1.0
DZM	Mont Dzumac	21.66	141	*e*Pn	P	04 39 54.3	-0.9
	comp=Z,78nm,1.1s						
DZM				*e*S	S	04 43 46.9	-5.0
	comp=Z,594nm,24.6s						
DZM				*e*LR	LR	04 45 10.8	
	comp=Z,2μm,23.3s						
DZM	Mont Dzumac	21.66	141	P	P	04 39 54.5	-0.7
	comp=Z,11nm,0.8s,baz=356,slow=9.6,SNR=8.7						
DZM				LR	LR	04 47 37.8	
	comp=Z,2μm,19.4s,baz=315,slow=34						
	comp=Z,11nm,0.8s						
DZM	Mont Dzumac	21.66	141	P	P	04 39 54.2	-1.0
DZM	Mont Dzumac	21.66	141	P	P	04 39 57.1	+1.9
AUWSH	Wavell State H	21.75	177	P	P	04 39 57.8	+1.8
YATNC	Mamie plateau,	21.94	140	P	P	04 40 01.0	+2.9
	comp=Z,30nm,1.1s						
QLP	Quilpie	22.13	198	P	P	04 40 00.5	+0.4
	baz=22,SNR=23						
QLP	Quilpie	22.13	198	P	P	04 40 00.2	+0.1
	comp=Z,189nm,1.0s						
TARA	Tarawa	22.16	73	P	P	04 39 58.2	-2.3
TARA	Tarawa	22.16	73	P	P	04 40 02.4	+1.9
	comp=Z,198nm,1.2s						
WC3	Warramunga Arr	22.21	228	P	P	04 40 00.4	-0.6
	baz=22						
WRAB	Tennant Creek	22.21	228	P	P	04 39 59.4	-1.6
WRAB				IAmb	IAmb	04 40 17.6	
	comp=Z,76nm,0.8s						
WRAB	Tennant Creek	22.21	228	P	P	04 40 01.7	+0.7
	comp=Z,106nm,0.9s						
WRAB	Tennant Creek	22.21	228	*ce*P	P	04 40 01.4	+0.4
WRAB				pmax	pmax		
	comp=Z,61nm,0.7s						
WRA	Warramunga Arr	22.22	228	P	P	04 40 01.6	+0.5
	comp=Z,61nm,0.9s,baz=53,slow=9.9,SNR=60						
WRA				S	S	04 44 02.3	+0.1
	comp=Z,20nm,1.1s,baz=54,slow=18,SNR=7.0						
WRA				LR	LR	04 50 17.2	
	comp=Z,712nm,19.3s,baz=50,slow=41						
	comp=Z,61nm,0.9s						
INKA	Innaminka	24.45	204	P	P	04 40 24.0	+1.4
ARMA	Armidale	24.73	180	P	P	04 40 23.0	-2.3
KNRA	Kununurra	24.77	244	P	P	04 40 26.4	+0.7
	baz=25,SNR=63						
KNRA	Kununurra	24.77	244	P	P	04 40 25.8	+0.1
KNRA	Kununurra	24.77	244	P	P	04 40 26.5	+0.7
AS31	Alice Springs	24.94	222	P	P	04 40 27.1	-0.2
AS31				IAmb	IAmb	04 40 31.2	
	comp=Z,34nm,0.8s						
ASAR	Alice Springs	24.94	222	P	P	04 40 27.9	+0.6
	comp=Z,117nm,0.8s,baz=56,slow=9.1,SNR=269						
ASAR				LR	LR	04 50 02.8	
	comp=Z,631nm,21.1s,baz=63,slow=36						
	comp=Z,117nm,0.8s						
TNTI	Ternate	25.23	284	P	P	04 40 28.4	-1.6
AUPHS	Peel High Scho	25.42	182	P	P	04 40 33.3	+1.8
	comp=Z,117nm,1.0s						
CMSA	Cobar Meteorol	26.48	192	P	P	04 40 40.8	-0.2
	baz=27,SNR=21						
CMSA	Cobar Meteorol	26.48	192	P	P	04 40 40.7	-0.3
AUDCS	Dubbo College	26.70	186	P	P	04 40 43.8	+0.8
OOD	Oodnadatta	26.92	213	P	P	04 40 46.6	+1.6
SOEI	Soe	27.63	260	P	P	04 40 51.0	-0.7
SOEI				IAmb	IAmb	04 41 03.6	
	comp=Z,43nm,0.8s						
SOEI	Soe	27.63	260	P	P	04 40 52.3	+0.6
	comp=Z,73nm,1.3s						
LCRK	Leigh Creek	27.88	206	P	P	04 40 55.4	+1.8
STKA	Stephens Creek	27.88	199	P	P	04 40 53.9	+0.2
	comp=Z,9.5nm,0.8s,baz=15,slow=12,SNR=10						
STKA				LR	LR	04 52 21.0	
	comp=Z,656nm,18.8s,baz=20,slow=37						
	comp=Z,9.5nm,0.8s						
STKA	Stephens Creek	27.88	199	P	P	04 40 52.9	-0.7
	baz=28,SNR=7.8						
STKA	Stephens Creek	27.88	199	P	P	04 40 54.5	+0.9
STKA	Stephens Creek	27.88	199	*i* P	P	04 40 53.3	-0.3
FITZ	Fitzroy Crossi	28.45	242	P	P	04 40 58.1	-0.7
FITZ	Fitzroy Crossi	28.45	242	P	P	04 40 58.4	-0.4
LUWI	Luwuk	29.35	278	P	P	04 41 06.3	-0.6
LUWI				IAmb	IAmb	04 41 14.3	
	comp=Z,42nm,1.3s						
MMRI	Maumere	29.52	262	P	P	04 41 07.6	-0.8
WRKA	Warakurna	29.74	227	P	P	04 41 10.0	-0.2
	baz=30,SNR=44						
WRKA	Warakurna	29.74	227	P	P	04 41 09.8	-0.5
MULG	Mulgathing	29.75	212	P	P	04 41 10.2	0.0
HTT	Hallett	30.22	202	P	P	04 41 14.7	+0.3
	baz=30,SNR=3.6						
TOLI2	Tolitoli	31.71	281	P	P	04 41 24.8	-3.0
TOLI2	Tolitoli	31.71	281	P	P	04 41 27.9	+0.2
KAPI	Kappang	31.95	269	LR	LR	04 56 42.3	
	comp=Z,196nm,21.1s,baz=94,slow=40						
SPSI	Sidrap Palu	31.99	271	P	P	04 41 30.4	+0.2
	comp=Z,6.7nm,1.0s						
ARPS	Mount Arapiles	32.38	195	P	P	04 41 34.1	+0.8
	baz=32,SNR=10						
ARPS	Mount Arapiles	32.38	195	P	P	04 41 34.4	+1.1
	comp=Z,52nm,1.0s						
MPSI	Mapaga	32.42	279	P	P	04 41 32.3	-1.7
	comp=Z,14nm,0.8s						
BRAT	Ballarat	32.65	192	P	P	04 41 37.1	+1.5
FORT	Forrest	33.59	219	P	P	04 41 44.3	+0.3
	baz=34,SNR=16						
FORT	Forrest	33.59	219	P	P	04 41 43.0	-1.0
FORT	Forrest	33.59	219	P	P	04 41 43.8	-0.2
JCJ	Chichijima	33.78	344	LR	LR	04 55 17.4	
	comp=Z,283nm,19.4s,baz=110,slow=36						
PLAI	Plampang	33.93	262	P	P	04 41 45.3	-1.9
PLAI	Plampang	33.93	262	P	P	04 41 45.3	-1.9
	comp=Z,54nm,0.8s						
MBWA	Marble Bar	34.76	240	P	P	04 41 54.6	+0.4
MBWA	Marble Bar	34.76	240	P	P	04 41 55.2	+1.0
MBWA	Marble Bar	34.76	240	P	P	04 41 56.0	+1.8
PSA00	Pilbara Seismi	34.81	240	P	P	04 41 53.5	-1.2
PSA00	Pilbara Seismi	34.81	240	P	P	04 41 55.7	+1.0
TGY	Tagaytay City	36.35	303	LR	LR	04 54 32.4	
	comp=Z,437nm,21.2s,baz=124,slow=32						
AFI	Afiamalu	36.77	106	LR	LR	04 55 45.0	
	comp=Z,222nm,18.3s,baz=274,slow=34						
MOO	Moorlands	36.96	186	P	P	04 42 14.1	+1.3
	baz=37,SNR=3.4						
RAO	Raoul Island	37.05	133	LR	LR	04 55 19.8	
	comp=Z,547nm,20.2s,baz=287,slow=33						
TAU	Tasmania Unive	37.41	185	P	P	04 42 16.7	+0.2
TAU				IAmb	IAmb	04 42 19.0	
	comp=Z,43nm,1.1s						
TAU	Tasmania Unive	37.41	185	P	P	04 42 16.7	+0.2
TAU				pmax	pmax		
	comp=Z,43nm,1.1s						
JAGI	Jajag, Banyuwa	37.50	263	P	P	04 42 15.3	-2.5
JAGI				IAmb	IAmb	04 42 29.8	
	comp=Z,31nm,0.8s						
JAGI	Jajag, Banyuwa	37.50	263	P	P	04 42 18.8	+1.1
JAGI	Jajag, Banyuwa	37.50	263	P	P	04 42 15.2	-2.5
	comp=Z,33nm,0.7s,comp=Z,2μm						
KMBL	Kambalda	38.04	224	P	P	04 42 22.8	+0.7
	baz=38						
KMBL	Kambalda	38.04	224	P	P	04 42 23.5	+1.4
JOW	Kunigami	39.46	326	LR	LR	04 55 48.9	
	comp=Z,697nm,21.6s,baz=243,slow=32						
PWJI	Pagerwojo	39.81	264	P	P	04 42 34.8	-2.3
	comp=Z,37nm,0.8s						
URZ	Urewera	39.84	148	PcP	PcP	04 44 41.0	-0.9
	comp=Z,6.7nm,0.7s,baz=31,slow=2.0,SNR=4.3						
URZ				LR	LR	04 57 33.0	
	comp=Z,555nm,18.1s,baz=58,slow=34						
RTZ	Ruatahuna	40.03	149	P	P	04 42 38.1	-0.6
GIRL	Giralia	40.06	241	P	P	04 42 40.3	+1.3
	baz=40,SNR=8.7						
SBUM	Sibu	40.35	280	P	P	04 42 41.0	-0.6
KLBR	Kellerberrin	41.09	227	P	P	04 42 47.8	+0.4
	baz=41,SNR=8.6						
KLBR	Kellerberrin	41.09	227	P	P	04 42 48.1	+0.7
MORW	Morawa	41.12	231	P	P	04 42 48.9	+1.1
	baz=41,SNR=7.7						
MORW	Morawa	41.12	231	P	P	04 42 47.2	-0.5
MORW	Morawa	41.12	231	P	P	04 42 49.3	+1.5
BLDU	Ballidu	41.35	229	P	P	04 42 50.3	+0.7
	baz=42,SNR=8.4						
BLDU	Ballidu	41.35	229	P	P	04 42 50.7	+1.0
YULB	Yu-li	41.44	315	P	P	04 42 50.1	-0.3
YULB				IAmb	IAmb	04 42 53.0	
	comp=Z,34nm,0.7s						
YULB	Yu-li	41.44	315	P	P	04 42 50.9	+0.5
RPZ	Rata Peaks	41.60	159	P	P	04 42 51.3	-0.2
	comp=Z,16nm,0.9s,baz=301,slow=2.8,SNR=9.1						
RPZ				LR	LR	04 57 49.4	
	comp=Z,876nm,21.7s,baz=327,slow=33						
	comp=Z,16nm,0.9s						
NACB	Ninganchiao	41.73	316	P	P	04 42 53.9	+1.1
TPUB	Ta-pu	41.85	314	P	P	04 42 53.5	-0.3
TPUB				IAmb	IAmb	04 42 54.4	
	comp=Z,30nm,0.8s						
TPUB	Ta-pu	41.85	314	P	P	04 42 54.8	+1.0
SSLB	Suanglung	41.93	315	P	P	04 42 54.2	-0.3
SSLB				IAmb	IAmb	04 42 59.2	
	comp=Z,20nm,0.7s						
SSLB	Suanglung	41.93	315	P	P	04 42 56.1	+1.7
KSM	Kuching	42.05	278	P	P	04 42 53.6	-2.0
NWAO	Narrogin (SRO)	42.17	225	LR	LR	05 01 13.5	
	comp=Z,589nm,20.8s,baz=68,slow=37						
MUN	Mundaring	42.41	227	P	P	04 42 58.9	+0.7
	baz=42,SNR=5.3						
MUN	Mundaring	42.41	227	P	P	04 42 59.6	+1.3
KPJI	Karang Pucung	42.65	265	P	P	04 43 00.5	0.0
	comp=Z,46nm,0.7s						
JNU	Nakatsue	43.30	334	P	P	04 43 04.2	-1.2
	comp=Z,20nm,0.9s,baz=111,slow=5.0,SNR=7.3						
JNU				LR	LR	04 59 46.3	
	comp=Z,234nm,20.5s,baz=186,slow=34						
	comp=Z,20nm,0.9s						
MJAR	Matsushiro Arr	43.78	344	P	P	04 43 07.1	-2.1
	comp=Z,4.1nm,0.8s,baz=169,slow=7.8,SNR=5.8						
MJAR				PcP	PcP	04 44 54.6	-0.4
	comp=Z,2.2nm,0.6s,baz=157,slow=3.7,SNR=5.2						
MJAR				LR	LR	05 00 08.6	
	comp=Z,293nm,20.0s,baz=172,slow=34						
	comp=Z,4.1nm,0.8s						
BBJI	Bungbulang	43.92	265	P	P	04 43 09.9	-0.9
CGJI	Cibinong	45.88	266	P	P	04 43 23.8	-2.4
	comp=Z,47nm,1.1s						
DLV	T Lat	46.48	292	P	P	04 43 31.6	+0.4
	comp=Z,38nm,1.2s						
SSE	Sheshan	46.75	323	P	P	04 43 33.0	+0.2
SSE				S	S	04 50 21.5	+3.1
SSE				pmax	pmax		
	comp=Z,12nm,0.6s						
SSE				pmax	pmax		
	comp=Z,170nm,3.5s						
SSE				LR	LR		
	comp=Z,240nm,21.1s						
SSE				LR	LR		
	comp=Z,150nm,22.1s						
TJN	Taejon	47.60	333	*i* P	P	04 43 39.6	+0.3
QIZ	Qiongzhong	48.03	302	P	P	04 43 42.3	-0.7
QIZ				S	S	04 50 35.3	-1.7
QIZ				sS	sS	04 51 07.0	+3.0
QIZ				pmax	pmax		
	comp=Z,160nm,11.2s						
QIZ				LR	LR		
	comp=Z,220nm,15.1s						
QIZ				LR	LR		
	comp=Z,220nm,18.3s						
QIZ				LR	LR		
	comp=Z,360nm,23.1s						
KSRS	Korea Array	48.25	334	P	P	04 43 44.5	+0.2
	comp=Z,4.6nm,0.9s,baz=157,slow=9.5,SNR=11						
KSRS				LR	LR	05 05 21.0	
	comp=Z,135nm,18.2s,baz=145,slow=38						
	comp=Z,4.6nm,0.9s						
NJ2	Nanjing	48.84	322	*e*P	P	04 43 50.3	+1.4
NJ2				pP	pP	04 44 05.8	+0.6
NJ2				sP	sP	04 44 13.3	+0.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,280nm,3.9s						
RAR	Rarotonga	49.36	113	LR	LR	05 03 14.8	
	comp=Z,140nm,18.3s,baz=261,slow=34						
ASAJ	Asahikawa	50.14	351	P	P	04 43 58.2	-0.5
	comp=Z,1.9nm,0.3s,baz=222,slow=30,SNR=1.7						
ASAJ				LR	LR	05 05 59.8	
	comp=Z,99nm,18.8s,baz=46,slow=37						
	comp=Z,1.9nm,0.3s						
WHN	Wuhan	50.74	317	⇓P	P	04 44 05.0	+1.6
USRK	Ussuriysk Ar.	52.66	342	P	P	04 44 17.1	-0.4
	comp=Z,6.2nm,0.8s,baz=169,slow=7.4,SNR=7.3						
USRK				LR	LR	05 06 29.5	
	comp=Z,137nm,18.1s,baz=154,slow=36						
	comp=Z,6.2nm,0.8s						
TIA	Tai'an	52.76	325	P	P	04 44 18.5	+0.1
TIA				S	S	04 51 46.8	+4.6
TIA				pmax	pmax		
	comp=Z,11nm,1.0s						
TIA				pmax	pmax		
	comp=Z,200nm,4.6s						
TIA				LR	LR		
	comp=Z,190nm,21.2s						
TIA				LR	LR		
	comp=Z,160nm,19.8s						
TIA				LR	LR		
	comp=Z,350nm,18.7s						
MDJ	Mudanjiang	53.80	340	P	P	04 44 25.5	-0.3
MDJ				pP	pP	04 44 42.5	+0.3
MDJ				sP	sP	04 44 47.8	-1.5
MDJ				PcP	PcP	04 45 25.3	-5.7
MDJ				PP	PP	04 46 29.5	+1.9
MDJ				ScP	ScP	04 49 18.5	-5.3
MDJ				PcS	PcS	04 49 25.5	-4.6
MDJ				ScS	ScS	04 54 09.5	-0.2
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,140nm,6.5s						
ENH	Enshi	53.97	314	P	P	04 44 27.6	+0.1
ENH	Enshi	53.97	314	P	P	04 44 26.8	-0.7
GYA	Guiyang	54.09	308	P	P	04 44 30.5	+2.0
GYA				LR	LR		
	comp=Z,350nm,16.0s						
LYN	LuoYang	54.49	320	⇓*i*P	P	04 44 31.5	+0.4
LYN				pmax	pmax		
	comp=Z,15nm,1.4s						
LYN				LR	LR		
	comp=Z,280nm,17.3s						
LYN				LR	LR		
	comp=Z,320nm,17.3s						
LYN				LR	LR		
	comp=Z,480nm,20.0s						
CN2	Changchun	54.60	337	*e*P	P	04 44 33.0	+1.3
CN2				*e*pP	pP	04 44 48.0	-0.2
CN2				*e*S	S	04 52 07.8	+1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,100nm,5.0s						
CN2				LR	LR		
	comp=Z,100nm,13.0s						
CN2				LR	LR		
	comp=Z,200nm,13.0s						
CN2				LR	LR		
	comp=Z,200nm,12.0s						
HNS	HongShan	54.98	324	⇑P	P	04 44 34.8	+0.2
HNS				sP	sP	04 44 56.0	-2.2
HNS				*e*S	S	04 52 08.5	-3.6
HNS				pmax	pmax		
	comp=Z,16nm,1.3s						
HNS				LR	LR		
	comp=Z,250nm,18.3s						
HNS				LR	LR		
	comp=Z,440nm,18.3s						
HNS				LR	LR		
	comp=Z,420nm,21.5s						
BNX	BinXian	55.53	339	⇓P	P	04 44 37.5	-0.8
BNX				pmax	pmax		
	comp=Z,11nm,0.9s						
BNX				pmax	pmax		
	comp=Z,130nm,5.3s						
BJT	Baijiatuau	55.98	327	P	P	04 44 41.8	+0.1
BJT	Baijiatuau	55.98	327	P	P	04 44 41.8	+0.1
BJT				pmax	pmax		
	comp=Z,22nm,1.7s						
BJI	Beijing	56.00	327	P	P	04 44 42.8	+1.0
BJI				pmax	pmax		
	comp=Z,120nm,4.6s						
BJI				LR	LR		
	comp=Z,190nm,19.9s						
BJI				LR	LR		
	comp=Z,110nm,20.3s						
BJI				LR	LR		
	comp=Z,220nm,21.0s						
XAN	Xi'an	56.51	317	⇓P	P	04 44 46.0	+0.3
XAN				pmax	pmax		
	comp=Z,19nm,1.3s						
XAN				LR	LR		
	comp=Z,240nm,19.7s						
XAN				LR	LR		
	comp=Z,230nm,20.0s						
XAN				LR	LR		
	comp=Z,410nm,18.4s						
XAN	Xi'an	56.51	317	P	P	04 44 45.1	-0.5
KMI	Kunming	56.62	305	⇓P	P	04 44 48.5	+1.7
KMI				sP	pP	04 45 02.0	-1.3
KMI				pmax	pmax		
	comp=Z,16nm,1.9s						
KMI				pmax	pmax		
	comp=Z,170nm,5.8s						
KMI				LR	LR		
	comp=Z,130nm,16.9s						
KMI				LR	LR		

	comp=Z,180nm,15.9s						
KMI				LR	LR		
	comp=Z,210nm,20.0s						
CRAI	**Chiangrai**	**56.68**	**298**	P	**P**	**04 44 47.4**	**+0.3**
CRAI				IAmb	IAmb	04 44 49.2	
	comp=Z,23nm,0.9s						
KLR	**Kul'dur**	**57.31**	**344**	LR	LR	05 06 34.2	
	comp=Z,225nm,21.9s,baz=184,slow=33						
KLR	**Kul'dur**	**57.31**	**344**	*ce*P	**P**	**04 44 50.4**	**-0.5**
KLR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CM31	**Chiang Mai Arr**	**57.33**	**296**	P	**P**	**04 44 51.7**	**0.0**
CM31				IAmb	IAmb	04 44 55.4	
	comp=Z,14nm,0.9s						
CMAR	**Chiang Mai Arr**	**57.33**	**296**	P	**P**	**04 44 52.6**	**+0.9**
	comp=Z,5.4nm,0.7s,baz=125,slow=5.3,SNR=29						
CMAR				LR	LR	05 09 37.6	
	comp=Z,103nm,18.9s,baz=110,slow=36						
	comp=Z,5.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**57.33**	**296**	*ce*P	**P**	**04 44 52.5**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CHTO	**Chiang Mai**	**57.45**	**296**	P	**P**	**04 44 51.9**	**-0.6**
CHTO	**Chiang Mai**	**57.45**	**296**	P	**P**	**04 44 51.9**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,1.0nm,1.5s						
PZH	**PanZhiHua**	**58.02**	**306**	P	**P**	**04 44 57.0**	**+0.4**
PZH				S	**S**	**04 52 54.8**	**+1.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,140nm,6.5s						
PZH				LR	LR		
	comp=Z,130nm,15.5s						
PZH				LR	LR		
	comp=Z,170nm,15.3s						
PZH				LR	LR		
	comp=Z,220nm,17.5s						
PPT	**Papeete**	**58.42**	**107**	LR	LR	05 05 03.6	
	comp=Z,90nm,20.7s,baz=276,slow=31						
PPT2	**Papeete2**	**58.42**	**107**	*e*P	**P**	**04 45 00.8**	**+1.3**
	comp=Z,74nm,24.8s						
PPT2				*e*S	**S**	**04 52 57.2**	**-1.2**
	comp=Z,68nm,22.5s						
PPT2				*e*SS	**SS**	**04 56 51.5**	**-0.2**
	comp=Z,50nm,34.5s						
PPT2				*e*LR	LR	05 02 12.6	
	comp=Z,146nm,22.0s						
CD2	**Chengdu**	**58.50**	**311**	*e*P	**P**	**04 45 00.0**	**+0.2**
PETK	**Petropavlovsk-**	**58.66**	**4**	P	**P**	**04 45 00.1**	**-0.2**
	comp=Z,2.5nm,0.5s,baz=166,slow=6.4,SNR=9.2						
PETK				LR	LR	05 06 05.0	
	comp=Z,229nm,21.1s,baz=187,slow=32						
	comp=Z,2.5nm,0.5s						
XLT	**XiLinHaoTe**	**58.84**	**330**	⇑*i*P	**P**	**04 45 02.0**	**+0.1**
XLT				pP	pP	04 45 14.5	-4.1
XLT				sP	sP	04 45 26.8	+1.2
XLT				pmax	pmax		
	comp=Z,31nm,0.9s						
XLT				pmax	pmax		
	comp=Z,68nm,3.8s						
XLT				LR	LR		
	comp=Z,290nm,22.1s						
XLT				LR	LR		
	comp=Z,320nm,20.0s						
HHC	**Hu-ho-hao-te**	**59.11**	**325**	*e*P	**P**	**04 45 04.3**	**+0.5**
HHC				pmax	pmax		
	comp=Z,43nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,4.6s						
HHC				LR	LR		
	comp=Z,470nm,16.5s						
HHC				LR	LR		
	comp=Z,360nm,17.1s						
HHC				LR	LR		
	comp=Z,720nm,17.8s						
TBI	**Tubuai**	**59.13**	**114**	*e*LR	LR	05 02 31.8	
	comp=Z,954nm,37.2s						
HEH	**HeiHe**	**59.47**	**342**	P	**P**	**04 45 04.8**	**-1.2**
HEH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HEH				pmax	pmax		
	comp=Z,120nm,6.4s						
BTO	**Baotou**	**59.84**	**324**	*e*P	**P**	**04 45 10.3**	**+1.4**
BTO				pP	**pP**	**04 45 18.0**	**-7.5**
BTO				PP	**PP**	**04 47 25.3**	**+3.7**
BTO				S	**S**	**04 53 19.0**	**+3.0**
BTO				SS	**SS**	**04 57 10.5**	**-2.8**
BTO				pmax	pmax		
	comp=Z,66nm,0.9s						
BTO				pmax	pmax		
	comp=Z,540nm,4.4s						
BTO				LR	LR		
	comp=Z,990nm,19.0s						
BTO				LR	LR		
	comp=Z,950nm,16.1s						
BTO				LR	LR		
	comp=Z,1μm,22.9s						
TNCH	**TengChong**	**60.07**	**303**	*e*P	**P**	**04 45 12.5**	**+1.7**
TNCH				pP	pP	04 45 27.8	+0.3
TNCH				pmax	pmax		
	comp=Z,26nm,0.4s						
SHEM	**Shemya Is, Ala**	**61.07**	**15**	LR	LR	05 07 16.7	
	comp=Z,347nm,21.6s,baz=184,slow=32						
LZH	**Lanzhou**	**61.11**	**317**	⇓P	**P**	**04 45 19.0**	**+1.3**
LZH				pP	pP	04 45 35.3	+0.8
LZH				PcP	**PcP**	**04 46 01.3**	**+1.1**
LZH				pmax	pmax		
	comp=Z,28nm,1.5s						
LZH				LR	LR		
	comp=Z,150nm,13.7s						
LZH				LR	LR		
	comp=Z,190nm,13.7s						
LZH				LR	LR		
	comp=Z,290nm,15.8s						
HIA	**Hailar**	**61.34**	**337**	P	**P**	**04 45 17.6**	**-1.2**
HIA	**Hailar**	**61.34**	**337**	P	**P**	**04 45 17.6**	**-1.2**
HIA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
DRV	**Dumont d'Urvil**	**61.55**	**185**	P	**P**	**04 45 21.0**	**+1.1**
ZEA	**Zeya**	**62.59**	**344**	*e*P	**P**	**04 45 23.3**	**-3.8**
ZEA				MLR	MLR		
	comp=Z,100nm,15.0s						
MA2	**Magadan**	**64.94**	**359**	LR	LR	05 16 57.6	
	comp=Z,120nm,18.0s,baz=161,slow=39						
GTA	**Gaotai**	**65.56**	**318**	*e*P	**P**	**04 45 47.8**	**+0.8**
GTA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GTA				LR	LR		
	comp=Z,94nm,17.1s						
GTA				LR	LR		
	comp=Z,220nm,18.5s						
GTA				LR	LR		
	comp=Z,200nm,19.3s						
SHL	**Shillong**	**65.86**	**301**	P	**P**	**04 45 47.9**	**-1.4**
SHL				IAmb	IAmb	04 45 50.3	
	comp=Z,22nm,0.9s						
SHL	**Shillong**	**65.86**	**301**	P	**P**	**04 45 47.9**	**-1.4**
SHL				pmax	pmax		
	comp=Z,22nm,0.9s						
ULN	**Ulaanbaatar**	**66.13**	**329**	P	**P**	**04 45 50.5**	**0.0**
ULN				IAmb	IAmb	04 45 52.4	
	comp=Z,23nm,1.1s						
ULN	**Ulaanbaatar**	**66.13**	**329**	*ce*P	**P**	**04 45 50.9**	**+0.3**
ULN				pmax	pmax		
	comp=Z,23nm,1.0s						
ULN	**Ulaanbaatar**	**66.13**	**329**	P	**P**	**04 45 50.8**	**+0.3**
ULN				pP	**PcP**	**04 46 20.3**	**-0.2**
SONM	**Songino Array**	**66.45**	**328**	P	**P**	**04 45 53.2**	**+0.6**
	comp=Z,14nm,0.6s,baz=142,slow=5.5,SNR=54						
SONM				LR	LR	05 13 35.1	
	comp=Z,260nm,21.2s,baz=140,slow=35						
	comp=Z,14nm,0.6s						
TAOE	**Nuku Hiva Isla**	**67.49**	**97**	*e*LR	LR	05 06 23.8	
	comp=Z,111nm,22.0s						
GOMU	**GeErMu**	**67.56**	**313**	P	**P**	**04 46 00.5**	**+0.3**
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,50nm,4.9s						
GOMU				LR	LR		
	comp=Z,130nm,15.2s						
GOMU				LR	LR		
	comp=Z,150nm,15.8s						
GOMU				LR	LR		
	comp=Z,260nm,15.7s						
LSA	**Lhasa**	**67.88**	**305**	P	**P**	**04 46 02.1**	**-0.3**
LSA				IAmb	IAmb	04 46 04.2	
	comp=Z,17nm,1.1s						
LSA	**Lhasa**	**67.88**	**305**	P	**P**	**04 46 02.1**	**-0.3**
LSA				pmax	pmax		
	comp=Z,17nm,1.1s						
YAK	**Yakutsk**	**69.53**	**349**	LR	LR	05 15 35.8	
	comp=Z,98nm,20.4s,baz=210,slow=35						
ZAK	**Zakamensk**	**69.64**	**329**	*e*P	**P**	**04 46 12.3**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,35nm,1.0s						
JIRN	**Jiri**	**71.36**	**301**	*e*P	**P**	**04 46 23.5**	**-0.3**
CCD	**Concordia, Ant**	**71.39**	**187**	P	**P**	**04 46 23.8**	**+0.7**
MOY	**Mondy**	**71.57**	**329**	*e*P	**P**	**04 46 25.0**	**+0.8**
MOY				pmax	pmax		
	comp=Z,24nm,1.2s						
GUN	**Gumba**	**71.69**	**302**	*e*P	**P**	**04 46 25.8**	**+0.1**
PKI	**Pulchoki**	**71.99**	**301**	*e*P	**P**	**04 46 26.8**	**-0.7**
PKIN	**Phulchoki**	**72.01**	**301**	*e*P	**P**	**04 46 26.3**	**-1.2**
PALK	**Pallekele**	**72.10**	**279**	LR	LR	05 22 14.2	
	comp=Z,43nm,18.4s,baz=215,slow=39						
PALK	**Pallekele**	**72.10**	**279**	P	**P**	**04 46 26.9**	**-1.2**
PALK	**Pallekele**	**72.10**	**279**	P	**P**	**04 46 26.9**	**-1.2**
PALK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
VNDA	**Vanda**	**72.11**	**178**	P	**P**	**04 46 28.1**	**+1.1**
	comp=Z,3.5nm,1.0s,baz=322,slow=7.3,SNR=8.8						
	comp=Z,3.5nm,1.0s						
DMN	**Daman**	**72.26**	**301**	*e*P	**P**	**04 46 28.9**	**-0.2**
SDPT	**Sand Point**	**72.32**	**26**	P	**P**	**04 46 28.8**	**+0.4**
	baz=230						
GKN	**Gorkha**	**72.77**	**301**	*e*P	**P**	**04 46 31.9**	**-0.1**
DANN	**Dangsing**	**73.61**	**302**	*e*P	**P**	**04 46 36.5**	**-0.6**
	comp=Z,46nm,0.8s						
CHGN	**Chignik**	**73.83**	**26**	P	**P**	**04 46 37.5**	**+0.2**
	baz=232						
BILL	**Bilibino**	**74.13**	**6**	P	**P**	**04 46 38.8**	**-0.1**
BILL	**Bilibino**	**74.13**	**6**	*ce*P	**P**	**04 46 38.9**	**0.0**
BILL				*i*		04 46 54.8	
BILL				*i* S	**S**	**04 56 14.5**	**+7.5**
BILL				pmax	pmax		
	comp=Z,14nm,0.8s						
BILL				MLR	MLR		
	comp=Z,77nm,19.0s						
PYUN	**Piuthan**	**74.20**	**301**	*e*P	**P**	**04 46 39.8**	**-0.6**
	comp=Z,52nm,0.8s						
R17K	**Ugashik Creek**	**75.52**	**26**	P	**P**	**04 46 47.8**	**+0.6**
	baz=234						
WMQ	**Urumqi**	**75.65**	**318**	*e*P	**P**	**04 46 48.3**	**0.0**
WMQ				PcP	**pP**	**04 47 03.3**	**-2.2**
WMQ				pmax	pmax		
	comp=Z,20nm,1.1s						
WMQ				LR	LR		
	comp=Z,140nm,22.1s						
P16K	**Nushagak River**	**75.69**	**24**	P	**P**	**04 46 48.7**	**+0.7**
	baz=232						
O16K	**Kokwok River B**	**75.99**	**24**	P	**P**	**04 46 50.3**	**+0.6**
	baz=232						
Q16K	**King Salmon**	**76.02**	**25**	P	**P**	**04 46 50.3**	**+0.4**
	baz=233						
Q17K	**Contact Creek**	**76.10**	**26**	P	**P**	**04 46 51.0**	**+0.4**
	baz=234						
O17K	**Koliganek Bris**	**76.50**	**24**	P	**P**	**04 46 53.5**	**+0.8**
	baz=233						
OHAK	**Old Harbor**	**76.66**	**27**	P	**P**	**04 46 53.8**	**+0.3**
	baz=237						
Q18K	**Katmai Hardscr**	**76.70**	**25**	P	**P**	**04 46 53.9**	**-0.1**
	baz=235						
ANM	**Nome**	**76.78**	**18**	P	**P**	**04 46 55.1**	**+0.9**
ANM	**Nome**	**76.78**	**18**	P	**P**	**04 46 55.1**	**+0.9**
ANM				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ANM	**Nome**	**76.78**	**18**	P	**P**	**04 46 54.5**	**+0.4**
	baz=224,SNR=7.8						
TNA	**Tin City**	**76.79**	**16**	P	**P**	**04 46 53.1**	**-1.0**
KDAK	**Kodiak Island**	**77.29**	**27**	LR	LR	05 14 15.6	
	comp=Z,217nm,20.6s,baz=247,slow=30						
KDAK	**Kodiak Island**	**77.29**	**27**	P	**P**	**04 46 57.6**	**+0.5**
	baz=237						
O18K	**Koktuh Hills**	**77.32**	**24**	P	**P**	**04 46 56.3**	**-1.0**
O18K	**Koktuh Hills**	**77.32**	**24**	P	**P**	**04 46 57.8**	**+0.5**
	baz=234						
Q19K	**Cape Douglas,**	**77.45**	**26**	P	**P**	**04 46 58.0**	**0.0**
	baz=236						
O19K	**Port Alsworth**	**77.88**	**24**	P	**P**	**04 47 00.8**	**+0.4**
	baz=235						
SVW2	**Sparrevohn**	**77.90**	**23**	P	**P**	**04 47 01.4**	**+0.9**
SVW2				IAmb	IAmb	04 47 04.1	
	comp=Z,16nm,0.8s						
P19K	**Oil Pt**	**78.03**	**25**	P	**P**	**04 47 01.7**	**+0.4**
	baz=236						
DGZ	**Jazzator, Alta**	**78.11**	**323**	⇑*i*P	**P**	**04 47 02.1**	**0.0**
DGZ				pmax	pmax		
	comp=Z,20nm,0.8s						
N19K	**Bonanza Creek**	**78.17**	**24**	P	**P**	**04 47 02.4**	**+0.3**
	baz=235						
ILSW	**Iliamna Southw**	**78.25**	**25**	P	**P**	**04 47 02.2**	**-0.4**
O20K	**Slope Mountain**	**78.52**	**25**	P	**P**	**04 47 04.7**	**+0.7**
	baz=237						
TIXI	**Tiksi**	**78.52**	**353**	LR	LR	05 24 00.5	
	comp=Z,86nm,18.6s,baz=0.0,slow=37						
TIXI	**Tiksi**	**78.52**	**353**	P	**P**	**04 47 03.6**	**0.0**
TIXI	**Tiksi**	**78.52**	**353**	*ce*P	**P**	**04 47 06.1**	**+2.4**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CNPM	**China Poot**	**78.81**	**26**	P	**P**	**04 47 06.2**	**+0.6**
L19K	**White Mountain**	**78.82**	**23**	IAmb	IAmb	04 47 07.6	
	comp=Z,16nm,0.8s						
L19K	**White Mountain**	**78.82**	**23**	P	**P**	**04 47 06.6**	**+1.1**
	baz=234						
M19K	**Big River Lodg**	**78.83**	**23**	P	**P**	**04 47 06.7**	**+1.1**
	baz=235						
ZSN	**Zaisan**	**78.83**	**320**	*e*P	**P**	**04 47 06.6**	**+0.6**
	comp=Z,15nm,1.0s,baz=320						
ZSN	**Zaisan**	**78.83**	**320**	*e*P	**P**	**04 47 06.6**	**+0.6**
ZSN				pmax	pmax		
	comp=Z,15nm,1.0s						
BRSE	**Bradley Lake S**	**79.14**	**26**	P	**P**	**04 47 08.3**	**+1.0**
	baz=239						
M20K	**Styx River**	**79.31**	**23**	P	**P**	**04 47 09.3**	**+0.9**
	baz=236						
L20K	**Farewell, AK**	**79.36**	**23**	P	**P**	**04 47 09.6**	**+1.0**
	baz=235						
CAPN	**Captain Cook N**	**79.51**	**25**	P	**P**	**04 47 10.3**	**+1.1**
	baz=238						
K20K	**Telida**	**79.79**	**22**	P	**P**	**04 47 12.0**	**+1.2**
	baz=235						
RDOG	**Red Dog Mine**	**79.97**	**16**	P	**P**	**04 47 13.1**	**+1.4**
	baz=226						
SUA	**Susitna One**	**80.04**	**24**	P	**P**	**04 47 11.3**	**-1.0**
SUA				IAmb	IAmb	04 47 11.6	
	comp=Z,41nm,1.4s						
MK31	**Makanchi Array**	**80.26**	**319**	P	**P**	**04 47 12.8**	**-1.0**
MK31	**Makanchi Array**	**80.26**	**319**	⇓*i*P	**P**	**04 47 13.2**	**-0.6**
MKAR	**Makanchi Array**	**80.26**	**319**	P	**P**	**04 47 13.7**	**0.0**
	comp=Z,12nm,0.9s,baz=107,slow=5.1,SNR=69						
MKAR				PKKPbc	**PKKPbc**	**05 05 57.4**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=336,slow=2.7,SNR=5.3						
MKAR				LR	LR	05 22 58.3	
	comp=Z,159nm,19.7s,baz=94,slow=36						
	comp=Z,12nm,0.9s						
MKAR	**Makanchi Array**	**80.26**	**319**	*ce*P	**P**	**04 47 13.6**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,12nm,0.9s						
RC01	**Rabbit Creek A**	**80.27**	**25**	P	**P**	**04 47 13.5**	**+0.1**
RC01				IAmb	IAmb	04 47 14.1	
	comp=Z,48nm,1.4s						
RC01	**Rabbit Creek A**	**80.27**	**25**	P	**P**	**04 47 14.0**	**+0.6**
	baz=239						
MAKZ	**Makanchi**	**80.47**	**319**	P	**P**	**04 47 15.3**	**+0.4**
MAKZ				IAmb	IAmb	04 47 16.6	
	comp=Z,24nm,1.1s						
MAKZ	**Makanchi**	**80.47**	**319**	P	**P**	**04 47 15.3**	**+0.4**
MAKZ				pmax	pmax		
	comp=Z,24nm,1.1s						
CAST	**Castle Rocks**	**80.57**	**22**	P	**P**	**04 47 14.8**	**-0.2**
CAST	**Castle Rocks**	**80.57**	**22**	P	**P**	**04 47 15.2**	**+0.2**
	baz=237						
CUT	**Chulitna**	**80.73**	**24**	P	**P**	**04 47 14.6**	**-1.2**
CHUM	**Lake Minchumin**	**80.74**	**22**	P	**P**	**04 47 16.6**	**+0.8**
	baz=236,SNR=9.0						
PWL	**Port Wells**	**80.74**	**25**	P	**P**	**04 47 13.8**	**-2.2**
PWL	**Port Wells**	**80.74**	**25**	P	**P**	**04 47 16.9**	**+0.9**
	baz=241						
PMR	**Palmer**	**80.77**	**25**	P	**P**	**04 47 16.5**	**+0.4**
PMR	**Palmer**	**80.77**	**25**	P	**P**	**04 47 16.5**	**+0.4**
PMR				pmax	pmax		
	comp=Z,86nm,1.8s						
PMR	**Palmer**	**80.77**	**25**	P	**P**	**04 47 16.6**	**+0.6**
	baz=240						
KNK	**Knik Glacier**	**80.96**	**25**	P	**P**	**04 47 17.5**	**+0.4**
	baz=240						
KTH	**Kantishna Hill**	**81.08**	**22**	P	**P**	**04 47 17.0**	**-0.8**
SHLS	**Shalkode**	**81.08**	**315**	*e*P	**P**	**04 47 16.9**	**-1.4**
	baz=315						
SHLS	**Shalkode**	**81.08**	**315**	*e*P	**P**	**04 47 16.9**	**-1.4**
SML	**Sawmill**	**81.21**	**25**	P	**P**	**04 47 18.8**	**+0.3**
	baz=240						
ZAA0	**Zalesovo Array**	**81.25**	**327**	P	**P**	**04 47 17.5**	**-1.3**
ZALV	**Zalesovo Beam**	**81.25**	**327**	P	**P**	**04 47 18.1**	**-0.6**
	comp=Z,6.8nm,0.5s,baz=110,slow=5.9,SNR=23						
ZALV				LR	LR	05 23 04.8	
	comp=Z,150nm,20.4s,baz=94,slow=35						
	comp=Z,6.8nm,0.5s						
TRF	**Thorofare Moun**	**81.27**	**23**	P	**P**	**04 47 18.5**	**-0.4**
TRF	**Thorofare Moun**	**81.27**	**23**	P	**P**	**04 47 19.4**	**+0.5**
	baz=238						
BPAW	**Bear Paw Mtn.**	**81.35**	**22**	P	**P**	**04 47 19.7**	**+0.5**
	baz=238						
UZB	**Uzynbulak**	**81.39**	**315**	*e*P	**P**	**04 47 20.2**	**+0.1**
	comp=Z,11nm,1.2s,baz=315						
UZB	**Uzynbulak**	**81.39**	**315**	*e*P	**P**	**04 47 20.1**	**+0.1**
UZB				pmax	pmax		
	comp=Z,11nm,1.2s						
H21K	**Melozitna Rive**	**81.55**	**20**	IAmb	IAmb	04 47 22.6	
	comp=Z,31nm,1.9s						
H21K	**Melozitna Rive**	**81.55**	**20**	P	**P**	**04 47 21.1**	**+0.9**
	baz=236						
I21K	**Tanana**	**81.57**	**21**	P	**P**	**04 47 21.2**	**+1.0**
	baz=237						
SCM	**Sheep Creek Mo**	**81.64**	**25**	P	**P**	**04 47 21.5**	**+0.7**
	baz=241						
KPKS	**Kokpek**	**81.71**	**315**	*e*P	**P**	**04 47 22.4**	**+0.7**
	baz=315						
KPKS	**Kokpek**	**81.71**	**315**	*e*P	**P**	**04 47 22.3**	**+0.7**
SATY	**Saty**	**81.80**	**315**	*e*P	**P**	**04 47 22.4**	**+0.2**
	baz=315						
SATY	**Saty**	**81.80**	**315**	*e*P	**P**	**04 47 22.4**	**+0.2**
G21K	**Allakaket**	**81.81**	**19**	P	**P**	**04 47 22.6**	**+1.1**
	baz=235						
ZHN	**Zhinishke**	**81.81**	**315**	*e*P	**P**	**04 47 22.5**	**+0.3**
	baz=315						
ZHN	**Zhinishke**	**81.81**	**315**	*e*P	**P**	**04 47 22.5**	**+0.3**
MCK	**McKinley**	**81.93**	**23**	P	**P**	**04 47 21.5**	**-0.7**
MCK				IAmb	IAmb	04 47 29.3	
	comp=Z,34nm,1.3s						
MCK	**McKinley**	**81.93**	**23**	P	**P**	**04 47 21.5**	**-0.7**
MCK				pmax	pmax		
	comp=Z,34nm,1.3s						
MCK	**McKinley**	**81.93**	**23**	P	**P**	**04 47 22.7**	**+0.5**
	baz=240						
MLY	**Manley**	**81.94**	**21**	P	**P**	**04 47 22.6**	**+0.4**
MLY				IAmb	IAmb	04 47 24.4	
	comp=Z,15nm,0.6s						
MLY	**Manley**	**81.94**	**21**	P	**P**	**04 47 22.7**	**+0.4**
	baz=238,SNR=19						
KLU	**Klutina**	**82.07**	**25**	P	**P**	**04 47 23.7**	**+0.6**
	baz=243						
F21K	**Alatna River**	**82.22**	**19**	P	**P**	**04 47 24.7**	**+1.0**
	baz=235						
M24K	**Tolsona, Glenn**	**82.25**	**25**	P	**P**	**04 47 24.9**	**+1.0**
	baz=242						
NEA2	**Nenana**	**82.32**	**22**	P	**P**	**04 47 24.8**	**+0.5**
	baz=240,SNR=5.3						
KDJ	**Kajisay**	**82.43**	**314**	P	**P**	**04 47 25.8**	**+0.2**
KDJ				IAmb	IAmb	04 47 27.9	
	comp=Z,31nm,1.0s						
KDJ	**Kajisay**	**82.43**	**314**	P	**P**	**04 47 25.8**	**+0.2**
KDJ				pmax	pmax		
	comp=Z,31nm,1.0s						
I23K	**Minto, Yukon-K**	**82.49**	**21**	P	**P**	**04 47 26.7**	**+1.6**
	baz=239,SNR=5.7						
WRH	**Wood River Hil**	**82.62**	**22**	IAmb	IAmb	04 47 26.3	
	comp=Z,47nm,1.8s						
KSH	**Kashi**	**82.70**	**311**	P	**P**	**04 47 28.8**	**+1.9**
KSH				pP	pP	04 47 46.5	+2.3
KSH				pmax	pmax		
	comp=Z,9.0nm,1.3s						
H23K	**Yukon River**	**82.78**	**21**	IAmb	IAmb	04 47 28.8	
	comp=Z,54nm,1.9s						
H23K	**Yukon River**	**82.78**	**21**	P	**P**	**04 47 27.9**	**+1.3**
	baz=239						
MDOK	**Medeo**	**82.79**	**315**	*e*P	**P**	**04 47 27.6**	**+0.2**
	baz=315						
MDOK	**Medeo**	**82.79**	**315**	*e*P	**P**	**04 47 27.5**	**+0.2**
F22K	**John River**	**82.80**	**19**	P	**P**	**04 47 28.3**	**+1.6**
	baz=236						
TNSS	**Tian-Shan**	**82.83**	**314**	*e*P	**P**	**04 47 28.6**	**+0.7**
	baz=314						
TNSS	**Tian-Shan**	**82.83**	**314**	*e*P	**P**	**04 47 28.5**	**+0.7**
TCOL	**CIGO, UAF Yank**	**82.91**	**22**	IAmb	IAmb	04 47 29.8	
	comp=Z,15nm,0.7s						
TCOL	**CIGO, UAF Yank**	**82.91**	**22**	P	**P**	**04 47 27.6**	**+0.3**
	baz=241						
COLA	**College**	**82.91**	**22**	P	**P**	**04 47 25.5**	**-1.7**
COLA				IAmb	IAmb	04 47 29.8	
	comp=Z,15nm,0.7s						
COLA	**College**	**82.91**	**22**	*i* P	**P**	**04 47 26.9**	**-0.3**
COLA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
COLA	**College**	**82.91**	**22**	P	**P**	**04 47 27.5**	**+0.2**
	baz=241						
PAX	**Paxson**	**82.94**	**24**	P	**P**	**04 47 27.9**	**+0.3**
	baz=243						
GLB	**Gilahina Butte**	**82.96**	**26**	IAmb	IAmb	04 47 29.6	
	comp=Z,46nm,1.4s						
CHKK	**Chushkaly**	**83.00**	**315**	*e*P	**P**	**04 47 28.4**	**+0.1**
	baz=315						
CHKK	**Chushkaly**	**83.00**	**315**	*e*P	**P**	**04 47 28.3**	**+0.1**
HDA	**Harding Lake**	**83.03**	**23**	P	**P**	**04 47 28.3**	**+0.4**
	baz=242,SNR=6.4						
G23K	**Bananza Creek**	**83.08**	**20**	P	**P**	**04 47 28.8**	**+0.6**
	baz=238						
ULHL	**Ulahol**	**83.14**	**314**	P	**P**	**04 47 29.9**	**+0.6**
	SNR=21						
POKR	**Poker Plat Res**	**83.19**	**22**	P	**P**	**04 47 28.9**	**+0.2**
	baz=241						
K24K	**Donnelly Dome**	**83.19**	**23**	P	**P**	**04 47 28.8**	**0.0**
	baz=243						
ILAR	**Eielson Array**	**83.22**	**22**	P	**P**	**04 47 28.1**	**-0.8**
	comp=Z,6.5nm,0.6s,baz=246,slow=5.2,SNR=139						
ILAR				LR	LR	05 21 57.4	
	comp=Z,262nm,19.0s,baz=249,slow=34						
	comp=Z,6.5nm,0.6s						
MCARA	**McCarthy VSAT**	**83.28**	**26**	P	**P**	**04 47 29.8**	**+0.5**
	baz=245						
COLD	**Coldfoot**	**83.29**	**19**	IAmb	IAmb	04 47 31.7	
	comp=Z,35nm,1.8s						
COLD	**Coldfoot**	**83.29**	**19**	P	**P**	**04 47 30.2**	**+1.0**
	baz=238						
KUU	**Kurty**	**83.47**	**315**	*e*P	**P**	**04 47 30.8**	**+0.1**
	baz=315						
KUU	**Kurty**	**83.47**	**315**	*e*P	**P**	**04 47 30.8**	**+0.1**
RIDG	**Independent Ri**	**83.53**	**24**	IAmb	IAmb	04 47 32.7	
	comp=Z,23nm,1.3s						
RIDG	**Independent Ri**	**83.53**	**24**	P	**P**	**04 47 31.7**	**+1.1**
	baz=244						
NIL	**Nilore**	**83.61**	**305**	P	**P**	**04 47 30.6**	**-1.0**
NIL				IAmb	IAmb	04 47 33.1	
	comp=Z,20nm,1.1s						
NIL	**Nilore**	**83.61**	**305**	P	**P**	**04 47 30.6**	**-1.0**
NIL				pmax	pmax		
	comp=Z,20nm,1.1s						
MENT	**Mentasta**	**83.64**	**25**	IAmb	IAmb	04 47 36.5	
	comp=Z,11nm,0.8s						
M26K	**Nabesna, AK**	**83.72**	**25**	P	**P**	**04 47 32.3**	**+0.8**
	baz=245						
BARN	**Barnard Glacie**	**83.75**	**27**	IAmb	IAmb	04 47 33.6	
	comp=Z,13nm,0.8s						
TKM2	**Tokmak 2**	**83.76**	**314**	P	**P**	**04 47 33.2**	**+0.8**
	SNR=6.9						
KURK	**Kurchatov**	**83.77**	**322**	P	**P**	**04 47 31.1**	**-0.8**
KURK				IAmb	IAmb	04 47 33.5	
	comp=Z,32nm,1.1s						
KURK	**Kurchatov**	**83.77**	**322**	*ce*P	**P**	**04 47 31.9**	**-0.1**
KURK				pmax	pmax		
	comp=Z,36nm,1.3s						
A21K	**Barrow**	**83.78**	**15**	P	**P**	**04 47 32.7**	**+1.1**
	baz=232						
L26K	**Log Cabin Wild**	**83.83**	**25**	P	**P**	**04 47 33.3**	**+1.2**
	baz=245,SNR=7.7						
E23K	**Chandalar**	**83.92**	**19**	P	**P**	**04 47 33.9**	**+1.4**
	baz=239						
G24K	**Hadweenzic Riv**	**83.94**	**20**	P	**P**	**04 47 33.9**	**+1.3**

	baz=241						
SCRK	Sand Creek	83.98	24	P	P	04 47 32.4	-0.6
SCRK				IAmb	IAmb	04 47 34.7	
	comp=Z,23nm,1.6s						
SCRK	Sand Creek	83.98	24	P	P	04 47 33.7	+0.7
	baz=244						
PINM	Pinnacle	84.02	28	P	P	04 47 34.3	+1.1
	baz=248						
D23K	Nanushuk River	84.06	18	P	P	04 47 34.7	+1.6
	baz=238						
KBK	Karagaybulak	84.17	314	P	P	04 47 36.0	+1.6
	SNR=7.2						
M27K	Edge Creek, AK	84.17	25	IAmb	IAmb	04 47 38.9	
	comp=Z,17nm,0.9s						
M27K	Edge Creek, AK	84.17	25	P	P	04 47 35.7	+1.7
	baz=246						
F24K	Squaw Lake	84.21	20	P	P	04 47 35.3	+1.4
	baz=240						
PNL	Peninsula	84.26	28	P	P	04 47 35.5	+1.2
	baz=249						
E24K	Your Creek	84.29	19	P	P	04 47 35.4	+1.0
	baz=240						
O28M	Mount Upton	84.30	27	P	P	04 47 35.2	+0.3
	baz=248						
CHMS	Chumysh	84.38	314	P	P	04 47 35.6	+0.2
	SNR=9.4						
UCH	Uchtor	84.38	313	P	P	04 47 36.9	+1.0
	SNR=27						
QSPA	South Pole Qui	84.41	180	P	P	04 47 35.6	+0.4
	comp=Z,6.6nm,1.1s,baz=344,slow=0.8,SNR=14						
	comp=Z,6.6nm,1.1s						
QSPA	South Pole Qui	84.41	180	P	P	04 47 35.9	+0.8
QSPA				IAmb	IAmb	04 47 45.4	
	comp=Z,53nm,1.9s						
G25K	Bearman Lake	84.45	21	P	P	04 47 36.0	+0.9
	baz=242						
L27K	Beaver Creek,	84.48	25	IAmb	IAmb	04 47 39.3	
	comp=Z,57nm,1.9s						
L27K	Beaver Creek,	84.48	25	P	P	04 47 36.5	+1.1
	baz=246						
AAK	Ala-Archa	84.49	314	P	P	04 47 37.1	+1.0
	SNR=14						
AAK	Ala-Archa	84.49	314	LR	LR	05 25 23.5	
	comp=Z,98nm,20.4s,baz=106,slow=36						
AAK	Ala-Archa	84.49	314	P	P	04 47 35.7	-0.4
AAK				IAmb	IAmb	04 47 37.9	
	comp=Z,14nm,0.9s						
AAK	Ala-Archa	84.49	314	*ce*P	P	04 47 36.9	+0.8
AAK				pmax	pmax		
	comp=Z,16nm,0.8s						
MAW	Mawson	84.50	203	LR	LR	05 22 06.3	
	comp=Z,229nm,21.2s,baz=106,slow=33						
YUK3	Moose Creek	84.56	26	P	P	04 47 37.0	+1.0
	baz=248						
SGDS	Sogindy	84.57	314	*e*P	P	04 47 35.9	-0.5
	baz=314						
SGDS	Sogindy	84.57	314	*e*P	P	04 47 35.8	-0.5
USP	Ospenovka	84.62	314	P	P	04 47 37.6	+1.0
	SNR=14						
BVCY	Beaver Creek	84.63	26	P	P	04 47 37.0	+0.8
	baz=247						
FYU	Fort Yukon	84.67	21	IAmb	IAmb	04 47 38.5	
	comp=Z,8.0nm,0.7s						
YUK8	Steele Glacier	84.68	27	P	P	04 47 37.8	+1.0
	baz=248						
K27K	Chicken	84.77	24	IAmb	IAmb	04 47 44.0	
	comp=Z,13nm,1.0s						
K27K	Chicken	84.77	24	P	P	04 47 38.0	+1.2
	baz=246						
O29M	Mount Kennedy	84.87	28	P	P	04 47 37.6	0.0
	baz=250						
I26K	Coal Creek Min	84.88	22	IAmb	IAmb	04 47 39.8	
	comp=Z,32nm,1.7s						
I26K	Coal Creek Min	84.88	22	P	P	04 47 37.6	+0.3
	baz=245						
AML	Almayashu	84.96	313	P	P	04 47 39.8	+1.1
	SNR=69						
F25K	Christian Rive	85.00	20	P	P	04 47 38.7	+0.8
	baz=242						
EKS2	Erkin-Say	85.01	314	P	P	04 47 39.5	+0.8
	SNR=26						
C24K	Franklin Bluff	85.06	18	P	P	04 47 39.4	+1.3
	baz=239						
YUK4	Talbot Arm	85.21	27	P	P	04 47 40.3	+1.0
	baz=249						
E25K	Arctic Village	85.27	20	P	P	04 47 40.3	+1.0
	baz=242						
BTLS	Baital	85.33	316	*e*P	P	04 47 40.4	+0.4
	comp=Z,21nm,1.1s,baz=316						
BTLS	Baital	85.33	316	*e*P	P	04 47 40.4	+0.4
BTLS				pmax	pmax		
	comp=Z,21nm,1.1s						
G26K	Porcupine Rive	85.36	21	P	P	04 47 40.5	+0.8
	baz=244						
SIT	Sitka	85.42	32	P	P	04 47 40.7	+0.6
	baz=253						
EGAK	Eagle	85.43	23	IAmb	IAmb	04 47 45.3	
	comp=Z,10nm,1.1s						
EGAK	Eagle	85.43	23	P	P	04 47 41.2	+1.1
	baz=247						
HYT	Haines Junctio	85.55	28	IAmb	IAmb	04 47 43.0	
	comp=Z,30nm,1.2s						
HYT	Haines Junctio	85.55	28	P	P	04 47 41.6	+0.7
	baz=250,SNR=6.6						
F26K	Sheenjek River	85.56	20	P	P	04 47 41.9	+1.2
	baz=244						
P30M	Million Dollar	85.57	28	P	P	04 47 41.6	+0.6
	baz=251						
D25K	Kavik River	85.58	18	P	P	04 47 41.8	+1.0
	baz=242						
I27K	Kandik River	85.59	22	P	P	04 47 41.8	+0.9
	baz=246						
R31K	City Hall, Gus	85.62	30	P	P	04 47 41.7	+0.6
	baz=252						
PLBC	Pleasant Camp	85.64	29	P	P	04 47 42.2	+0.9
	baz=252						
M29M	Somme Creek	85.68	26	P	P	04 47 42.3	+0.7
	baz=249						
DAWY	Dawson	85.87	24	IAmb	IAmb	04 47 44.9	
	comp=Z,32nm,1.6s						
DAWY	Dawson	85.87	24	P	P	04 47 43.1	+0.7
	baz=248,SNR=5.5						
H27K	Steamboat Moun	85.87	22	P	P	04 47 43.1	+0.8
	baz=246						
DIB	Dawson Inlet,	85.92	36	P	P	04 47 43.3	+0.6
S32K	Killisnoo	85.93	31	P	P	04 47 43.4	+0.7
	baz=253						
N30M	Aishikik Lake	85.95	27	P	P	04 47 43.8	+1.0
	baz=251						
L29M	L29M	86.06	25	P	P	04 47 44.3	+1.1
	baz=250						
G27K	Doyon Strip	86.06	21	P	P	04 47 45.0	+1.7
	baz=246						
SKAG	Skagway	86.15	29	P	P	04 47 44.8	+1.1
	baz=252						
CRAG	Craig	86.15	33	P	P	04 47 44.7	+0.9
	baz=254						
O30N	Mendenhall	86.19	28	P	P	04 47 45.4	+1.4
	baz=252,SNR=8.4						
R32K	Eaglecrest	86.20	31	P	P	04 47 44.8	+0.8
	baz=253						
C26K	Camden Bay	86.31	18	P	P	04 47 45.7	+1.4
	baz=243						
U33K	Whale Pass	86.32	33	P	P	04 47 45.4	+0.7
	baz=254						
M30M	Minto, Yukon	86.45	26	IAmb	IAmb	04 47 47.7	
	comp=Z,26nm,1.3s						
M30M	Minto, Yukon	86.45	26	P	P	04 47 47.0	+1.7
	baz=251,SNR=5.1						
J29M	Klondike Camp	86.49	24	P	P	04 47 47.0	+1.6
	baz=250,SNR=6.6						
C27K	Jago River	86.55	18	P	P	04 47 47.3	+1.7
	baz=244						
N31M	Braeburn, Yuko	86.56	27	P	P	04 47 47.2	+1.4
N31M	Braeburn, Yuko	86.56	27	P	P	04 47 47.0	+1.2
	baz=252,SNR=6.7						
K29M	Barlow Dome	86.57	25	P	P	04 47 46.9	+1.1
	baz=250						
T33K	Petersburg	86.60	32	P	P	04 47 47.6	+1.7
	baz=255						
E27K	Coleen River	86.64	20	P	P	04 47 47.4	+1.4
	baz=246						
BTK	Batken	86.69	311	IAmb	IAmb	04 47 48.2	
	comp=Z,12nm,1.3s						
I29M	Ogilvie Camp,	86.77	23	IAmb	IAmb	04 47 52.0	
	comp=Z,11nm,0.7s						
I29M	Ogilvie Camp,	86.77	23	P	P	04 47 47.9	+1.2
	baz=249,SNR=8.9						
DZA	Taraz	86.82	313	*e*P	P	04 47 47.9	+0.3
	baz=313						
DZA	Taraz	86.82	313	*e*P	P	04 47 47.8	+0.3
WRAK	Wrangell Islan	86.82	33	P	P	04 47 48.0	+0.9
	baz=255						
GAR	Garm	86.90	309	IAmb	IAmb	04 48 00.3	
	comp=Z,11nm,1.1s						
V35K	Ketchikan	86.95	34	P	P	04 47 49.2	+1.5
	baz=256,SNR=5.3						
P32M	Atlin	86.97	29	P	P	04 47 48.9	+1.0
	baz=254						
MAYO	Mayo, Yukon	87.17	25	P	P	04 47 49.6	+1.0
	baz=252,SNR=5.8						
BRZS	Berezniki	87.28	321	*e*P	P	04 47 48.5	-1.1
	baz=321						
BRZS	Berezniki	87.28	321	*e*P	P	04 47 48.4	-1.1
M31M	Drury Creek, Y	87.40	27	IAmb	IAmb	04 47 51.8	
	comp=Z,22nm,1.1s						
M31M	Drury Creek, Y	87.40	27	P	P	04 47 50.6	+0.8
	baz=253,SNR=5.7						
KK31	Karatay Array	87.45	314	P	P	04 47 50.5	0.0
KK31				IAmb	IAmb	04 47 51.8	
	comp=Z,15nm,1.2s						
KK31	Karatay Array	87.45	314	P	P	04 47 50.5	0.0
KK31				pmax	pmax		
	comp=Z,15nm,1.2s						
KKAR	Karatay Array	87.45	314	P	P	04 47 49.7	-0.8
KKAR				IAmb	IAmb	04 47 51.8	
	comp=Z,15nm,1.2s						
KKAR	Karatay Array	87.45	314	P	P	04 47 49.7	-0.8
KKAR				pmax	pmax		
	comp=Z,15nm,1.2s						
Q32M	Nakina River	87.52	30	P	P	04 47 51.7	+1.0
	baz=255						
P33M	Teslin, Yukon	87.58	29	IAmb	IAmb	04 47 53.0	
	comp=Z,21nm,1.1s						
P33M	Teslin, Yukon	87.58	29	P	P	04 47 51.8	+1.0
	baz=254,SNR=5.5						
IUG	Iuzhnay	87.64	313	*e*P	P	04 47 52.0	+0.5
	baz=312						
IUG	Iuzhnay	87.64	313	*e*P	P	04 47 52.0	+0.5
EPYK	Eagle Plains	87.73	22	P	P	04 47 52.2	+0.8
	baz=251						
S34M	Telegraph Cree	87.83	31	P	P	04 47 53.6	+1.7
	baz=256,SNR=13						
FARO	Faro, Yukon	87.88	27	P	P	04 47 53.1	+1.0
	baz=254,SNR=9.5						
T35M	Bob Quinn	88.08	32	P	P	04 47 55.0	+1.8
	baz=257,SNR=8.1						
G30M	tAoh Zraii Nji	88.12	22	P	P	04 47 54.0	+0.8
	baz=251						
BBB	Bella Bella	88.28	37	LR	LR	05 22 50.2	
	comp=Z,134nm,19.4s,baz=258,slow=32						
DLBC	Dease Lake	88.53	31	LR	LR	05 21 46.4	
	comp=Z,349nm,19.9s,baz=288,slow=32						
DLBC	Dease Lake	88.53	31	P	P	04 47 56.7	+1.3
	baz=257,SNR=12						
MMPY	Sheldon Lake,	88.92	27	P	P	04 47 58.5	+1.5
	baz=256						
F31M	Tsiigehtchic	89.18	22	P	P	04 47 58.9	+0.8
	baz=254						
BVAR	Borovoye Array	89.27	323	LR	LR	05 30 40.2	
	comp=Z,100nm,18.0s,baz=85,slow=37						
BRVK	Borovoye	89.34	323	P	P	04 47 57.4	-1.7
BRVK				IAmb	IAmb	04 48 00.4	
	comp=Z,14nm,0.9s						
BRVK	Borovoye	89.34	323	*ce*P	P	04 47 58.4	-0.7
BRVK				pmax	pmax		
	comp=Z,13nm,0.8s						
INK	Inuvik	89.50	21	LR	LR	05 28 42.3	
	comp=Z,108nm,18.1s,baz=284,slow=36						
INK	Inuvik	89.50	21	IAmb	IAmb	04 48 01.0	
	comp=Z,27nm,1.5s						
INK	Inuvik	89.50	21	P	P	04 48 00.7	+1.2
	baz=254						
WTLY	Watson Lake, Y	89.51	29	P	P	04 48 00.1	+0.3
	baz=258,SNR=12						
YBH	Yreka Blue Hor	90.28	48	LR	LR	05 21 08.0	
	comp=Z,215nm,21.6s,baz=286,slow=31						
YBH	Yreka Blue Hor	90.28	48	P	P	04 48 03.9	-0.1
YBH				IAmb	IAmb	04 48 06.9	
	comp=Z,19nm,1.2s						
YBH	Yreka Blue Hor	90.28	48	P	P	04 48 03.9	-0.1
YBH				pmax	pmax		
	comp=Z,19nm,1.2s						
L04D	Klamath Falls	90.64	48	P	P	04 48 06.3	+0.6
LIRD	Liard River Hi	90.72	30	P	P	04 48 06.2	+0.7
	baz=260						
HOOD	Mount Hood Mea	91.46	45	P	P	04 48 09.6	+0.1
KOTAN	Kotaneelee Air	91.85	30	P	P	04 48 11.8	+1.1
	baz=262						
LLLB	Lillooet	91.90	40	IAmb	IAmb	04 48 13.3	
	comp=Z,14nm,1.0s						
LTY	Liberty	92.34	43	IAmb	IAmb	04 48 15.0	
	comp=Z,11nm,1.1s						
WRGLY	Wrigley	92.54	27	P	P	04 48 14.7	+0.9
	baz=263						
YERR	Yerington	92.62	51	IAmb	IAmb	04 48 25.1	
	comp=Z,11nm,1.3s						
A36M	Sachs Harbour	93.06	18	P	P	04 48 17.0	+1.0
	baz=262						
C36M	Paulatuk	93.08	21	P	P	04 48 15.7	-0.5
C36M				IAmb	IAmb	04 48 17.7	
	comp=Z,10nm,0.8s						
C36M	Paulatuk	93.08	21	P	P	04 48 16.7	+0.6
	baz=262						
EDW2	Edwards Air Fo	93.28	55	P	P	04 48 18.1	+0.1
	baz=266						
NVAR	Mina Array Bea	93.31	52	P	P	04 48 19.8	+1.5
	comp=Z,5.2nm,0.7s,baz=251,slow=6.6,SNR=18						
NVAR				LR	LR	05 26 39.4	
	comp=Z,350nm,18.4s,baz=272,slow=33						
	comp=Z,5.2nm,0.7s						
NV11	Mina Array Sit	93.43	52	P	P	04 48 18.4	-0.3
NV11				IAmb	IAmb	04 48 19.1	
	comp=Z,11nm,1.0s						
DSP	Deep Springs	93.49	53	IAmb	IAmb	04 48 21.9	
	comp=Z,16nm,1.3s						
KVN	Kaiserville	93.52	51	IAmb	IAmb	04 48 21.6	
	comp=Z,13nm,1.2s						
MPMC	Manual Prospec	93.78	54	P	P	04 48 20.7	+0.3
	baz=266						
GRAC	Grapevine Rang	93.95	53	P	P	04 48 21.1	+0.1
	baz=266						
QSM	Queen of Sheba	94.28	54	IAmb	IAmb	04 48 21.4	
	comp=Z,9.1nm,0.6s						
BMN	Battle Mountai	94.29	50	IAmb	IAmb	04 48 25.0	
	comp=Z,8.4nm,1.2s						
PFO	Pinyon Flats O	94.46	57	LR	LR	05 22 55.9	
	comp=Z,176nm,20.9s,baz=228,slow=30						
BMO	Blue Mountains	94.49	46	P	P	04 48 23.1	-0.3
BMO	Blue Mountains	94.49	46	P	P	04 48 23.1	-0.3
BMO				pmax	pmax		
	comp=Z,21nm,1.2s						
NEW	Newport	94.80	42	LR	LR	05 27 35.2	
	comp=Z,271nm,18.4s,baz=271,slow=33						
NEW	Newport	94.80	42	IAmb	IAmb	04 48 26.5	
	comp=Z,14nm,1.1s						
NEW	Newport	94.80	42	P	P	04 48 25.5	+0.9
	baz=267						
TPNV	Topopah Spring	94.84	53	P	P	04 48 25.6	+0.4
	baz=267						
ABKAR	Akbulak array	95.40	319	P	P	04 48 25.8	-1.5
PLID	Pearl Lake	95.43	45	IAmb	IAmb	04 48 32.9	
	comp=Z,5.9nm,0.9s						
R11B	Troy Canyon, C	95.44	52	P	P	04 48 28.9	+0.9
	baz=267						
SHPR	Sheep Range	95.69	54	IAmb	IAmb	04 48 31.6	
	comp=Z,13nm,1.7s						
ELK	Elko	95.81	50	LR	LR	05 26 00.4	
	comp=Z,276nm,20.2s,baz=254,slow=32						
ELK	Elko	95.81	50	IAmb	IAmb	04 48 33.8	
	comp=Z,6.4nm,1.1s						
GEYT	Alibeck	96.31	307	LR	LR	05 34 38.0	
	comp=Z,122nm,20.2s,baz=102,slow=37						
ARU	Arti	96.41	326	P	P	04 48 30.7	-1.0
	comp=Z,4.7nm,0.2s,baz=42,slow=0.5,SNR=5.3						
ARU				LR	LR	05 31 34.6	
	comp=Z,361nm,21.6s,baz=94,slow=35						
	comp=Z,4.7nm,0.2s						
ARU	Arti	96.41	326	*c i*P	P	04 48 31.0	-0.7
ARU				*PP	pP	04 48 49.6	+0.4
ARU						04 52 25.0	
ARU				S	SKSac	04 59 01.0	-1.9
ARU				SS	SS	05 06 14.4	-6.6
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ARU				MLR	MLR		
	comp=Z,339nm,19.0s						
SPR3	Spring Creek 3	96.44	51	IAmb	IAmb	04 48 35.3	
	comp=Z,14nm,1.2s						
HLID	Hailey	96.52	47	IAmb	IAmb	04 48 36.0	
	comp=Z,4.3nm,0.9s						
HLID	Hailey	96.52	47	P	P	04 48 33.3	+0.6
	baz=269						
YKA	Yellowknife Ar	96.54	28	P	P	04 48 32.8	+0.6
	comp=Z,3.1nm,0.7s,baz=270,slow=4.6,SNR=58						
YKA				PKKPbc	PKKPbc	05 05 16.8	-2.0
	comp=Z,0.1nm,0.7s,baz=86,slow=3.1,SNR=4.1						
YKA				LR	LR	05 28 25.9	
	comp=Z,151nm,19.7s,baz=298,slow=33						
	comp=Z,3.1nm,0.7s						
AKTO	Aktyubinsk	96.68	320	P	P	04 48 31.4	-1.6
	comp=Z,3.7nm,1.1s,baz=195,slow=1.5,SNR=4.8						
AKTO				LR	LR	05 31 54.6	
	comp=Z,190nm,20.9s,baz=82,slow=35						
	comp=Z,3.7nm,1.1s						
WALA	Waterton Lakes	96.95	41	P	P	04 48 35.5	+1.0
CCUT	Cedar City	97.16	53	IAmb	IAmb	04 48 40.6	
	comp=Z,4.7nm,1.0s						
LCMT	Little Creek M	97.24	54	IAmb	IAmb	04 48 40.7	
	comp=Z,7.4nm,1.3s						
SZCU	Shurtz Canyon	97.38	53	IAmb	IAmb	04 48 39.8	
	comp=Z,10nm,1.4s						
BOZ	Bozeman (W)	98.52	45	P	P	04 48 41.5	-0.2
BOZ	Bozeman (W)	98.52	45	P	P	04 48 41.5	-0.2
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BOZ	Bozeman (W)	98.52	45	P	Pdif	04 48 42.1	+0.4
	baz=271						
WUAZ	Wupatki	98.73	55	P	P	04 48 42.2	-0.6
	baz=269						
TMUT	Trail Mountain	98.88	51	IAmb	IAmb	04 48 52.4	
	comp=Z,4.9nm,1.0s						
FXWY	Fox Creek	98.98	47	IAmb	IAmb	04 48 46.0	
	comp=Z,5.0nm,1.1s						
YMR	Madison River	99.00	46	IAmb	IAmb	04 48 46.6	
	comp=Z,7.1nm,1.0s						
YNR	Norris Junctio	99.21	46	P	Pdif	04 48 44.8	-0.1
YNR				IAmb	IAmb	04 48 53.0	
	comp=Z,4.8nm,0.9s						
H17A	Grant Village	99.29	46	IAmb	IAmb	04 48 50.4	
	comp=Z,4.3nm,0.9s						
LPIG	La Paz	99.41	67	LR	LR	05 26 49.1	
	comp=Z,158nm,19.9s,baz=232,slow=31						
EGMT	Eagleton	99.74	42	P	Pdif	04 48 47.3	+0.3
	baz=272						
BW06	Boulder Array	100.07	48	P	Pdif	04 48 48.5	-0.2
	baz=272						
PDAR	Pinedale Array	100.07	48	P	Pdif	04 48 49.2	+0.5
	comp=Z,3.2nm,0.9s,baz=250,slow=2.4,SNR=21						
PDAR				PP	PP	04 52 59.5	+4.7
	comp=Z,1.0nm,0.9s,baz=280,slow=4.4,SNR=5.1						
RLMT	Red Lodge	100.20	45	P	Pdif	04 48 49.3	+0.1
	baz=272						
LAO	LASA Array	102.22	44	P	Pdif	04 48 58.5	+0.5
	baz=275						
K22A	Casper	102.31	48	P	Pdif	04 48 58.4	-0.2
	baz=274						
N23A	Red Feather La	102.86	49	P	Pdif	04 49 01.2	-0.1
	baz=274						
RSSD	Black Hills	103.99	46	P	Pdif	04 49 06.1	-0.1
	baz=276						
TXAR	Lajitas Array	105.34	61	Pdiff	Pdif	04 49 15.7	+3.4
	comp=Z,0.2nm,0.7s,baz=267,slow=1.8,SNR=2.4						
TXAR				PP	PP	04 53 41.5	+6.9
	comp=Z,0.8nm,1.1s,baz=278,slow=3.7,SNR=4.5						
FINES	FINESS Array B	111.34	335	PKiKP	PKiKP	04 53 37.6	+1.4
	comp=Z,1.0nm,0.7s,baz=105,slow=4.5,SNR=4.7						
MIAR	Mount Ida	113.34	55	P	PKiKP	04 53 41.1	+0.2
	baz=280						
MNK	Minsk	113.73	328	*i* PKP	PKiKP	04 53 35.1	-5.9
	comp=E,1.0nm,0.9s						
MNK				*i* PKP	PKiKP	04 53 35.1	-5.9
	comp=N,11nm,0.9s						
MNK				*i* PKP	PKiKP	04 53 35.1	-5.9
	comp=Z,10.0nm,0.9s,baz=64						
MNK				*i* PP	PP	04 54 31.8	-2.2
MNK				*i* PPP	PPP	04 56 51.1	
MNK				*i* SKS	SKSdf	05 00 51.5	+3.7
MNK				*i* PS	PS	05 04 14.3	+2.6
MNK				*i* SS	SS	05 10 16.3	-1.2
MNK				*i* SSS	SSS	05 13 50.8	
MNK				*i* LQ	LQ	05 34 56.1	
MNK				*i* LR	LR	05 38 36.2	
MNK				*i* LRM	MLR	05 41 19.5	
	comp=E,49nm,18.1s						
MNK				*i* LRM	MLR	05 41 38.1	
	comp=N,329nm,18.4s						
MNK				*i* LRM	MLR	05 41 56.2	
	comp=Z,176nm,18.0s						
MNK	Minsk	113.73	328	*i* PKIKP	PKiKP	04 53 35.0	-5.9
MNK				*i*		04 53 55.0	
MNK				*i*		04 54 31.8	
MNK				*i*		05 00 51.4	
MNK				*i* PS	PS	05 04 14.3	+2.6
MNK				*i* SS	SS	05 10 16.2	-1.2
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,11nm,0.9s						
MNK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MNK				MLR	MLR		
	comp=E,49nm,18.0s						
MNK				MLR	MLR		
	comp=N,329nm,18.0s						
MNK				MLR	MLR		
	comp=Z,176nm,18.0s						
CCM	Cathedral Cave	114.51	51	P	PKiKP	04 53 43.4	+0.4
	baz=283						
AKASG	Malin Array Be	114.54	324	PKP	PKiKP	04 53 42.7	0.0
	comp=Z,1.2nm,0.5s,baz=54,slow=2.5,SNR=12						
AKBB	Malin Array Si	114.54	324	*c i*PKIKP	PKiKP	04 53 39.7	-3.0
BRTR	Keskin Array B	115.08	311	PKP	PKiKP	04 53 44.0	-0.3
	comp=Z,1.3nm,0.8s,baz=163,slow=4.7,SNR=6.1						
HDIL	Hopedale	115.38	48	P	PKPdf	04 53 44.8	+0.2
	baz=285						
SFIN	Lafayette	117.04	47	P	PKPdf	04 53 47.7	-0.1
	baz=287						
NB2	NORSAR Subarra	117.29	340	PKPdf	PKPdf	04 53 46.8	-1.0
	comp=Z,0.7nm,0.7s,baz=44,slow=1.9						
NOA	NORSAR Array B	117.29	340	PKP	PKPdf	04 53 47.5	-0.3
	comp=Z,0.8nm,0.7s,baz=49,slow=1.9,SNR=6.4						
WCI	Wyandotte Cave	118.25	49	P	PKPdf	04 53 49.5	-0.7
	baz=286						
O48B	Farmland	118.49	47	P	PKPdf	04 53 49.8	-0.9
	baz=288						
LRAL	Lakeview Retre	119.01	55	P	PKPdf	04 53 50.5	-1.3
	baz=283						
P49A	Miami Univ. Ec	119.03	48	P	PKPdf	04 53 51.1	-0.6
	baz=288						
PLCA	Paso Flores	119.75	144	PKP	PKiKP	04 53 53.8	+0.6
	comp=Z,2.0nm,0.7s,baz=220,slow=3.0,SNR=7.5						
ACSO	Alum Creek Sta	120.07	46	P	PKPdf	04 53 52.8	-0.9
	baz=290						
LANS	Liptovska Anna	120.86	326	*e*PKIKP	PKiKP	04 53 56.9	+1.8
LANS	Liptovska Anna	120.86	326	*e*PKP	PKiKP	04 53 56.9	+1.8
P52A	Corning	120.89	47	P	PKPdf	04 53 54.6	-0.7
	baz=290						
M53A	WI Miller and	121.26	44	P	PKPdf	04 53 55.2	-0.8
	baz=293						
N53A	Lisbon	121.39	45		PKPdf	04 53 55.6	-0.6
VYHS	Vyhne	121.56	325	*e*PKIKP	PKiKP	04 53 58.1	+1.7
VYHS	Vyhne	121.56	325	*e*PKP	PKiKP	04 53 58.1	+1.7
MORC	Moravsky Berou	121.59	327		PKPdf	04 53 55.8	-0.6
MORC	Moravsky Berou	121.59	327	PKIKP	PKPdf	04 53 55.8	-0.6
KRLC	Kraliky	121.83	328	*e*PKPDF	PKiKP	04 53 57.6	+0.6
KRLC	Kraliky	121.83	328	*e*PKIKP	PKiKP	04 53 57.6	+0.6
OSTC	Ostas	121.86	328	*e*PKPDF	PKiKP	04 53 58.3	+1.3
OSTC	Ostas	121.86	328	*e*PKIKP	PKiKP	04 53 58.3	+1.3
DPC	Dobruska-Polom	121.92	328	*e*PKPDF	PKiKP	04 53 57.6	+0.5
DPC				AMS	AMS	05 45 50.0	
	comp=Z,200nm,19.3s						
DPC	Dobruska-Polom	121.92	328	*e*PKIKP	PKiKP	04 53 57.6	+0.5
DPC				MLR	MLR		
	comp=Z,200nm,19.3s						
O54A	Avella	121.95	46		PKPdf	04 53 56.6	-0.6
MODS	Modra-Piesok	122.50	326	*e*PKIKP	PKiKP	04 54 00.5	+2.1
MODS	Modra-Piesok	122.50	326	*e*PKP	PKiKP	04 54 00.4	+2.1
KMSC	Kings Mountain	122.97	51	P	PKPdf	04 53 58.7	-0.7
	baz=288						
BLA	Blacksburg	122.99	49	P	PKPdf	04 53 58.8	-0.6
	baz=290						

DIVS	Divibare	123.03	320		PKPdf	04 53 58.3	-1.1
CLL	Collm	123.04	330	*i* PKPdf	PKiKP	04 54 00.2	+1.0
	comp=Z,6.0nm,0.6s						
CLL				AMS	AMS	05 49 00.0	
	comp=Z,200nm,19.1s						
PRU	Pruhonice	123.06	329	*e*PKPDF	PKiKP	04 54 00.2	+0.9
PRU	Pruhonice	123.06	329	*e*PKIKP	PKiKP	04 54 00.2	+0.9
SSPA	Standing Stone	123.52	44	P	PKPdf	04 53 59.7	-0.6
	baz=294						
CONA	Conrad Observa	123.54	326	*e*PKP	PKPdf	04 53 57.5	-2.8
	comp=Z,4.7nm,0.7s						
FNA	Florina	123.58	316	PKPdf	PKPdf	04 53 58.8	-1.7
FNA	Florina	123.58	316	PKIKP	PKPdf	04 53 58.8	-1.7
CKRC	Cesky Krumlov	123.88	327	*e*PKPDF	PKiKP	04 54 01.8	+0.8
CKRC	Cesky Krumlov	123.88	327	*e*PKIKP	PKiKP	04 54 01.8	+0.8
KHC	Kasperske Hory	124.08	328	*e*PKPDF	PKiKP	04 54 02.1	+0.7
KHC	Kasperske Hory	124.08	328	*e*PKIKP	PKiKP	04 54 02.1	+0.7
ARSA	Arzberg	124.11	325	*e*PKP	PKPdf	04 53 58.8	-2.5
	comp=Z,2.7nm,1.0s						
BINY	Binghamton	124.13	42	P	PKPdf	04 54 01.3	-0.2
	baz=297						
GEC2	GERESS Array S	124.19	328	PKPdf	PKPdf	04 54 01.3	-0.1
GERES	GERESS Array B	124.19	328	PKP	PKiKP	04 54 02.1	+0.3
	comp=Z,2.8nm,0.5s,baz=74,slow=1.9,SNR=30						
SOKA	Soboth	124.71	325	*e*PKiKP	PKPdf	04 54 02.6	+0.2
	comp=Z,4.7nm,0.9s						
OBKA	Obir	125.08	325	*e*PKiKP	PKPdf	04 54 03.1	-0.2
	comp=Z,4.0nm,1.1s						
KBA	Koelnbreinsper	125.42	326	*e*PKP	PKPdf	04 54 03.3	-0.7
	comp=Z,5.8nm,1.1s						
ODNJ	Ogdensburg	125.56	42		PKPdf	04 54 03.0	-1.1
LBNH	Lisbon	125.71	38	P	PKPdf	04 54 04.4	0.0
	baz=302						
TRI	Trieste	125.98	325		PKPdf	04 54 03.4	-1.4
TRI	Trieste	125.98	325	PKIKP	PKPdf	04 54 03.4	-1.4
PAL	Palisades	126.06	42	P	PKPdf	04 54 05.2	+0.1
	baz=298						
ABTA	Abfaltersbach	126.08	326	*e*PKP	PKPdf	04 54 04.5	-0.6
	comp=Z,6.5nm,1.0s						
L61B	Northampton	126.16	40	P	PKPdf	04 54 04.9	-0.4
	baz=300						
WATA	Walderalm	126.23	327	*e*PKiKP	PKiKP	04 54 05.8	-0.1
	comp=Z,7.2nm,0.7s						
WTTA	Wattenberg	126.25	327	*e*PKiKP	PKiKP	04 54 05.9	0.0
	comp=Z,8.7nm,0.7s						
CIMO	Cimolais	126.38	326	PKPdf	PKPdf	04 54 05.0	-0.7
EKA	Eskdalemuir Ar	126.47	343	PKP	PKPdf	04 54 05.0	-0.5
	comp=Z,1.1nm,0.5s,baz=14,slow=3.8,SNR=6.5						
MOTA	Moosalm	126.48	328	*e*PKiKP	PKiKP	04 54 06.5	+0.1
	comp=Z,11nm,0.9s						
SQTA	Sankt Quirin	126.50	327	*e*PKiKP	PKiKP	04 54 06.6	+0.1
	comp=Z,11nm,0.9s						
HRV	Adam Dziewonsk	126.85	39	P	PKPdf	04 54 06.1	-0.5
	baz=301						
FETA	Feichten	126.88	328	*e*PKiKP	PKiKP	04 54 07.1	-0.2
	comp=Z,5.0nm,0.9s						
DAVA	Damuels	127.17	328	*e*PKiKP	PKiKP	04 54 08.0	+0.2
	comp=Z,7.8nm,0.9s						
BNI	Bardonecchia	130.31	328	PKPdf	PKPdf	04 54 13.5	+0.2
BNI	Bardonecchia	130.31	328	PKIKP	PKPdf	04 54 13.5	+0.2
ROSC	El Rosal	134.04	89	PKP	PKiKP	04 54 23.1	+0.2
	comp=Z,6.9nm,0.4s,baz=162,slow=21,SNR=5.5						
ROSC	El Rosal	134.04	89	PKPdf	PKPdf	04 54 20.4	-1.1
KEST	Kesra	134.29	316	PKP	PKiKP	04 54 21.9	-0.5
	comp=Z,9.6nm,0.9s,baz=201,slow=2.8,SNR=9.5						
LPAZ	La Paz	134.90	119	PKP	PKiKP	04 54 24.6	-0.2
	comp=Z,3.7nm,0.9s,baz=8.3,slow=4.5,SNR=9.7						
LPAZ	La Paz	134.90	119	PKPdf	PKPdf	04 54 21.5	-1.8
LPAZ	La Paz	134.90	119	PKIKP	PKPdf	04 54 21.5	-1.8
CPUP	Villa Florida	137.53	140	PKP	PKPdf	04 54 27.8	+0.6
	comp=Z,2.7nm,0.8s,baz=324,slow=2.0,SNR=6.2						
SDV	Santo Domingo	137.76	83	PKPdf	PKPdf	04 54 27.2	-1.0
ESDC	Sonseca Array	139.63	331	PKhKP	PKPpre	04 54 24.8	
	comp=Z,0.8nm,0.8s,baz=83,slow=2.1,SNR=5.3						
ESDC				PP	PP	04 57 24.9	-0.5
	comp=Z,1.5nm,0.9s,baz=34,slow=6.1,SNR=8.3						
PTLB	Pontes e Lacer	142.90	125	PKPdf	PKPdf	04 54 34.9	-2.3
TAM	Tamanrasset	143.26	301	PKPdf	PKPbc	04 54 35.6	+0.6
TAM	Tamanrasset	143.26	301	PKIKP	PKPbc	04 54 35.6	+0.6
MDT	Midelt	145.10	324	PKPbc	PKPdf	04 54 41.3	+0.6
	comp=Z,12nm,1.0s,baz=97,slow=4.0,SNR=24						
MDT	Midelt	145.10	324	P	PKPdf	04 54 41.4	+0.6
ZHG	ZHG	145.79	327	P	PKPab	04 54 44.0	+1.2
ARF	Arif	145.84	322	P	PKPab	04 54 44.0	+0.8
GOLM	Goulmima	146.10	323	P	PKPab	04 54 45.1	+0.9
AVE	Averroes	146.32	328	PKPbc	PKPdf	04 54 43.2	+0.5
AVE	Averroes	146.32	328	P	PKPab	04 54 45.1	+0.4
MACA	Manacapuru-AM	146.39	104		PKPdf	04 54 42.5	-0.9
TZRR	Tazzarine	147.12	322	P	PKPbc	04 54 47.2	+0.8
SRHM	Skhour des Reh	147.21	327	P	PKPab	04 54 48.0	-0.4
BOAV	Boa Vista	147.58	94		PKPdf	04 54 45.6	+0.3
ZGR	Zagora	147.62	322	P	PKiKP	04 54 49.0	-0.9
OUZM	OUZ	147.74	324	P	PKiKP	04 54 49.2	-1.0
TOA0	Torodi Ar. Sit	149.61	286	PKPbc	PKPbc	04 54 51.9	-1.3
TORD	Torodi Ar. Bea	149.61	286	PKP	PKPdf	04 54 47.6	-1.0
	comp=Z,498nm,1.0s,baz=347,slow=1.0,SNR=6.1						
TORD				PKPbc	PKPbc	04 54 53.7	+0.5
	comp=Z,68nm,0.8s,baz=68,slow=2.5,SNR=217						
BDFB	Brasilia	151.19	137	PKPbc	PKiKP	04 54 58.0	+0.4
	comp=Z,16nm,0.7s,baz=244,slow=1.7,SNR=32						
BDFB	Brasilia	151.19	137	PKIKP	PKiKP	04 54 58.0	+0.4
DBIC	Dimbokro	156.79	274	PKPbc	PKPdf	04 55 10.6	+12
	comp=Z,3.8nm,0.7s,baz=231,slow=3.4,SNR=3.9						
DBIC				PKPab	PKPab	04 55 28.9	+0.1
	comp=Z,11nm,0.8s,baz=103,slow=6.1,SNR=8.7						

*DNK **31** 04:43:26.1±1.2, 51°.24N×16°.17E, h32^{km}±37^{km}, ML2.8*

*IPEC **31** 04:43:28.7±0.2, 51°.49N×16°.18E, h0^{km}, ML2.3/5, Error ellipse: s-maj=2.0km s-min=1.1km az=36.0*

*VIE **31** 04:43:28.8, 51°.49N×16°.21E, h0^{km}, mb2.5/3, ml2.7/2 71 km NW of Wroclaw Suspected Mining induced.*

*IDC **31** 04:43:29.9±0.9, 51°.47N×15°.98E, h0^{km}, mbtmp3.3/6, ML2.7/6, Error ellipse: s-maj=16.2km s-min=8.4km az=110.0*

*PRU **31** 04:43:30.2±0.0, 51°.41N×16°.08E, h0^{km}*

ISC 31 04:43:27.3±0.7, **51°.55N**±0°.03×**16°.13E**±0°.03, **h0**^{km}, **n38**, σ**1**^{s}**.11**/69, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.71	172	*e*Pg	Pg	04 43 41.6	+0.7
KSP				*e*Sg	Sg	04 43 50.0	-0.1
CHVC	Chvalec	0.96	183	*e*PG	Pg	04 43 46.2	+0.5
CHVC				*e*SG	Sg	04 43 58.2	+0.1
OSTC	Ostas	0.99	177	*e*PG	Pg	04 43 47.0	+0.7
OSTC				*e*SG	Sg	04 43 59.0	-0.1
	comp=Z,30nm,0.3s						
UPC	Upice	1.04	184	*e*PG	Pg	04 43 47.8	+0.6
UPC				*e*SG	Sg	04 44 00.7	-0.1
DPC	Dobruska-Polom	1.21	174	*e*PG	Pg	04 43 50.1	-0.2
DPC				*e*SG	Sg	04 44 04.8	-1.1
	comp=Z,23nm,0.5s						
PVCC	Panska Ves	1.42	225	*e*PG	Pb	04 43 54.9	+0.3
PVCC				*e*SG	Sg	04 44 12.6	-0.2
	comp=Z,112nm,0.3s						
KRLC	Kraliky	1.53	164	*e*PG	Pn	04 43 56.2	+0.3
KRLC				*e*SG	Sg	04 44 14.6	-1.8
	comp=Z,38nm,0.5s						
BRG	Berggiesshubel	1.53	245	Pg	Pg	04 43 57.2	+0.6
BRG				Sg	Sn	04 44 17.4	+0.9
BRG				Amp		04 44 19.3	
	comp=Z,38nm,0.3s						
PRU	Pruhonice	1.86	213	*e*PG	Pb	04 44 01.9	-0.2
PRU				*e*SG	Sn	04 44 25.3	+0.8
	comp=Z,21nm,0.5s						
CLL	Collm	1.97	264	*i* Pn	Pn	04 44 02.3	+0.4
CLL				*i* Pg	Pg	04 44 05.5	+0.5
CLL				*i* x	x	04 44 09.3	
CLL				*i* Sg	Sg	04 44 32.6	+2.0
	comp=Z,19nm,0.3s						
MORC	Moravsky Berou	1.99	153	*e*Pn	Pn	04 44 02.5	+0.3
	baz=334						
MORC				*e*Sg	Sb	04 44 29.1	-0.5
	comp=Z,18nm,0.3s,baz=334						
OKC	Ostrava-Krasne	2.14	142	*e*PG	Pb	04 44 07.4	+0.5
OKC				*e*SG	Sb	04 44 34.2	+0.3
VRAC	Vranov	2.26	172	Pn	Pn	04 44 07.3	+1.4
	comp=Z,1.8nm,0.3s,baz=354,slow=15,SNR=9.0						
VRAC				Lg	Lg	04 44 39.2	
	comp=Z,3.6nm,0.3s,baz=251,slow=23,SNR=7.7						
	comp=Z,5.5nm,0.3s						
VRAC	Vranov	2.26	172	*e*Pn	Pn	04 44 06.6	+0.7
	baz=353						
VRAC				*e*Sg	Sb	04 44 37.4	-0.1
	comp=Z,14nm,0.6s,baz=353						
TREC	Trest	2.29	191	*e*SG	Sb	04 44 38.9	+0.5
MAUC	Maruska	2.44	153	*e*PG	Pb	04 44 13.1	+1.1
MAUC				*e*SG	Sg	04 44 45.6	0.0
	comp=Z,42nm,0.6s						
KRUC	Moravsky	2.50	176	*e*Pn	Pn	04 44 10.1	+1.0
	baz=357						
KRUC				*e*Sg	Sb	04 44 45.0	+0.9
	comp=Z,18nm,0.6s,baz=357						
OJC	Ojcow	2.68	118	*e*Pg	Pg	04 44 20.4	+1.9
OJC				*e*Sg	Sg	04 44 55.0	+1.9
NKC	Novy Kostel	2.68	242	*e*PN	Pn	04 44 13.0	+1.4
NKC				*e*PG	Pg	04 44 18.2	-0.3
NKC				*e*SG	Sg	04 44 53.2	0.0
	comp=Z,27nm,0.3s						
JAVC	Velka Javorina	2.87	159	*e*Pn	Pn	04 44 14.7	+0.4
	baz=340						
KHC	Kasperske Hory	2.92	215	*e*PN	Pn	04 44 15.6	+0.6
KHC				*e*PG	Pb	04 44 21.4	+1.2
KHC				*e*SN	Sn	04 44 49.8	-1.0
KHC				*e*SG	Sg	04 45 00.4	-0.6
	comp=Z,12nm,0.6s						
CKRC	Cesky Krumlov	2.97	204	*e*PG	Pb	04 44 22.3	+1.3
GERES	GERESS Array B	3.12	211	Pn	Pn	04 44 19.2	+1.4
	comp=Z,0.7nm,0.3s,baz=26,slow=13,SNR=16						
GERES				Pg	Pb	04 44 24.9	+1.2
	comp=Z,2.2nm,0.3s,baz=30,slow=17,SNR=18						
GERES				Sn	Sn	04 44 51.2	-4.6
	comp=Z,1.4nm,0.3s,baz=30,slow=25,SNR=5.1						
GERES				Lg	Lg	04 45 04.0	
	comp=Z,2.8nm,0.3s,baz=35,slow=28,SNR=6.9						
	comp=Z,1.4nm,0.4s						
LANS	Liptovska Anna	3.21	137	*e*PG	Pg	04 44 28.2	-0.6
LANS				*e*SG	Sg	04 45 11.6	+1.2
MODS	Modra-Piesok	3.26	166	*e*SG	Sg	04 45 11.0	-1.0
NIE	Niedzica	3.41	127	*e*P	Pg	04 44 32.8	+0.2
NIE				*e*S	Sg	04 45 16.9	+0.1
VYHS	Vyhne	3.52	149	*e*PG	Pg	04 44 34.0	-0.7
CONA	Conrad Observa	3.63	183	*e*Pn	Pn	04 44 25.6	+0.9
	comp=Z,0.7nm,0.2s						
BSD	Bornholm Skovb	3.65	349	*i* P	Pn	04 44 25.0	+0.1
BSD				*i* S	Sn	04 45 08.1	-0.5
BSD				IAML		04 45 16.6	
	comp=Z,11nm,1.0s						
LUNU	Lund	4.39	340	*i* P	Pn	04 44 35.1	0.0
LUNU				*i* S	Sn	04 45 26.8	-0.2
BLEU	Blekinge	4.77	358	*i* P	Pn	04 44 41.4	+1.1
BLEU				*i* S	Sn	04 45 35.0	-1.3
KBA	Koelnbreinsper	4.83	203	*e*Pn	Pn	04 44 42.4	+1.0
	comp=Z,1.2nm,0.4s						
BJUU	Bjuv	4.89	339	*i* P	Pn	04 44 41.8	-0.2
BJUU				*i* S	Sn	04 45 37.9	-1.4
DEL	Delary	5.11	346	*i* P	Pn	04 44 45.0	+0.1
DEL				*i* S	Sn	04 45 42.0	-2.6
AKASG	Malin Array Be	8.28	91	Pn	Pn	04 45 28.9	+0.4
	comp=Z,0.4nm,0.3s,baz=276,slow=13,SNR=2.4						
	comp=Z,0.1nm,0.3s						
HFS	Hagfors	8.71	352	Pn	Pn	04 45 35.0	+0.6
	comp=Z,0.1nm,0.3s,baz=161,slow=14,SNR=1.5						
	comp=Z,1.3nm,0.8s						
FINES	FINESS Array B	11.32	25	Pn	Pn	04 46 10.2	+0.1
	comp=Z,0.1nm,0.3s,baz=201,slow=10,SNR=3.8						
	comp=Z,4.8nm,1.1s						
ARCES	ARCESS Array B	18.58	10	Pn	P	04 47 43.2	-2.3
	comp=Z,0.1nm,0.3s,baz=188,slow=13,SNR=4.8						
	comp=Z,2.2nm,0.8s						

*JMA **31** 04:46:09.6±0.7, 36°N±2°×12°9E±°, h21^{km}, MV3.6/11, S KOREAN PENINSULA REG*

*KMA **31** 04:46:09.9±0.4, 35°.78N×129°.20E, h18^{km}±3^{km}, Error ellipse: s-maj=1.7km s-min=1.6km az=29.0*

ISC 31 04:46:08.9±1.0, **35°.77N**±0°.04×**129°.24E**±0°.05, **h10**^{km}, **n11**, σ**0**^{s}**.50**/16, **South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSDAG	Daegu	0.28	269	P	Pb	04 46 15.4	-0.6
	SNR=747						
YOCB	Yeongcheon	0.31	311	P	Pb	04 46 16.0	-0.6
	SNR=252						
KSPHA	Pohang	0.43	14	P	Pb	04 46 18.6	0.0
	SNR=135						
KSPHA				P	Pb	04 46 18.6	0.0
	SNR=135						
MIYA	Miryang-si	0.49	236	P	Pg	04 46 19.2	+0.8
	SNR=46						
KSDAU	Deagu-acc	0.52	283	P	Pb	04 46 19.5	-0.6
	SNR=165						
KSBUS	Busan	0.53	192	P	Pb	04 46 20.3	0.0
	SNR=258						
KSBUS				P	Pb	04 46 20.3	0.0
	SNR=258						
JTU	Tsushima	1.25	174	P	Pn	04 46 32.6	+0.2
JTU				*e*S	Sb	04 46 49.0	+0.3
JTSM	Tsushimamitsus	1.44	175	*e*P	Pn	04 46 35.2	+0.3
JTSM				*e*S	Sn	04 46 53.6	-0.2
JHGM	Hagimishima	1.84	122	*e*P	Pn	04 46 40.7	+0.2
JHGM				*e*S	Sb	04 47 04.8	-0.8
JII	Iki	2.01	168	*e*P	Pb	04 46 44.8	-0.8
JTY	Toyota	2.12	135	*e*P	Pn	04 46 44.2	-0.2

IDC 31 05:11:04.5±2.0, **7°.32S**×**128°.44E**, **h0**^{km}, **mb3.7**/2, **mbtmp3.7**/4, **ML3.7**/2, **Error ellipse: s-maj=264.2km s-min=26.8km az=64.0**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.79	156	Pn	Pn	05 14 21.1	-0.4
	0.4nm,0.3s,baz=334,slow=13,SNR=31						
WRA				Sn	Sn	05 16 43.8	-12
	0.8nm,0.3s,baz=334,slow=22,SNR=8.2						
	0.8nm,0.4s						
ASAR	Alice Springs	17.08	163	P	Pn	05 15 05.4	+0.5
	0.3nm,0.3s,baz=343,slow=9.8,SNR=13						
ASAR				S	Sn	05 18 07.4	-8.3
	0.3nm,0.4s,baz=316,slow=18,SNR=2.0						
	0.6nm,0.5s						
STKA	Stephens Creek	27.34	155	P	P	05 16 51.3	-0.1
	0.9nm,0.4s,baz=326,slow=11,SNR=3.3						
	0.9nm,0.4s						
MKAR	Makanchi Array	67.65	328	P	P	05 22 03.5	0.0
	0.2nm,0.3s,baz=121,slow=9.1,SNR=5.3						
	0.2nm,0.3s						

*MAN **31** 05:44:43.9, 13°.78N×120°.55E, h126^{km}, mb4.3, ML3.1, MS2.8*

*IDC **31** 05:44:43.2±2.1, 13°.66N×120°.83E, h144^{km}±44^{km}, mb3.1/4, mbtmp3.6/4, Error ellipse: s-maj=316.7km s-min=17.3km az=63.0*

ISC 31 05:44:43.2±0.9, **13°.73N**±0°.05×**120°.62E**±0°.09, **h144**^{km}±7^{km}, **n14**, σ**1**^{s}**.36**/21, **mb3.5**/4, **4C-5D**, **Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.36	271	⇓*e*P	Pn	05 45 03.5	+0.3
LUBP				*e*S	Sn	05 45 17.3	-1.0
PGP	Puerto Galera	0.39	125	⇓*e*P	Pn	05 45 03.3	-0.1
PGP				*e*S	Sn	05 45 05.7	-13
TGY	Tagaytay City	0.48	39	P	Pn	05 45 04.6	+0.7
	1μm,0.4s,baz=211,slow=4.6,SNR=19						
TGY				S	Sn	05 45 20.6	+1.1
	521nm,0.3s,baz=295,slow=19,SNR=10.0						
TGY	Tagaytay City	0.48	39	⇑*e*P	Pn	05 45 04.7	+0.8
MACP	Maragondon, Ca	0.54	10	⇑*e*P	Pn	05 45 03.7	-0.4
MACP				*e*S	Sn	05 45 19.4	-0.6
SJMP	San Jose	1.35	159	⇓*e*P	Pn	05 45 10.4	-0.3
SJMP				*e*S	Sn	05 45 29.6	-2.2
BUSP	Coron	1.76	194	⇑*e*P	Pn	05 45 15.4	+0.2
BUSP				*e*S	Sn	05 45 43.3	+3.5
GQP	Guinayangan	1.78	84	⇓*e*P	Pn	05 45 16.4	+1.0
BALP	Baler	2.21	25	⇑*e*P	Pn	05 45 21.0	+0.6
BALP				*e*S	Sn	05 45 49.3	+0.2
BOLP	Bolinao	2.73	346	⇓*e*P	Pn	05 45 27.1	+0.3
BOLP				*e*S	Sn	05 45 59.0	-1.6
WRA	Warramunga Arr	36.08	158	P	P	05 51 29.5	-1.7
	0.5nm,0.5s,baz=335,slow=9.6,SNR=16						
	0.5nm,0.5s						
ASAR	Alice Springs	39.37	161	P	P	05 51 58.0	-1.0
	0.3nm,0.4s,baz=336,slow=6.6,SNR=8.9						
	0.3nm,0.4s						
MKAR	Makanchi Array	45.97	324	P	P	05 52 52.8	+0.9
	0.2nm,0.3s,baz=115,slow=10.0,SNR=3.4						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	50.12	326	P	P	05 53 24.9	+1.2
	0.5nm,0.5s,baz=127,slow=7.6,SNR=6.9						
	0.5nm,0.5s						

IDC 31 05:52:01.8±2.3, **7°.05S**×**129°.38E**, **h0**^{km}, **mb3.4**/1, **mbtmp3.5**/3, **ML3.8**/2, **Error ellipse: s-maj=112.3km s-min=33.3km az=68.0**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.69	160	Pn	Pn	05 55 17.4	+0.1
	0.5nm,0.3s,baz=339,slow=13,SNR=22						
WRA				Sn	Sn	05 57 39.0	-11
	0.5nm,0.3s,baz=334,slow=22,SNR=9.0						
	0.7nm,0.4s						
ASAR	Alice Springs	17.09	166	P	Pn	05 56 02.1	-0.1
	0.3nm,0.3s,baz=331,slow=8.5,SNR=14						
	0.6nm,0.6s						
MKAR	Makanchi Array	67.93	327	P	P	06 03 02.5	0.0
	0.2nm,0.5s,baz=124,slow=7.8,SNR=2.3						
	0.2nm,0.5s						

*IDC **31** 06:00:40.7±1.7, 2°.04N×127°.76E, h0^{km}, mb4.3/4, mbtmp4.3/4, MS3.7/1, Error ellipse: s-maj=131.4km s-min=21.6km az=66.0*

*NEIC **31** 06:00:56.5±1.8, 1°.83N±0°.08×127°.4E±0°.1, h137^{km}±3^{km}, mb4.1/15, Error ellipse: s-maj=20.3km s-min=11.0km az=71.0*

ISC 31 06:00:54.0±0.8, **1°.89N**±0°.10×**127°.4E**±0°.1, **h112**^{km}, **n23**, σ**1**^{s}**.45**/22, **mb4.1**/13, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.11	181	Pn	Pn	06 01 20.0	+3.5
TOLI2	Tolitoli	6.65	263	Pn	Pn	06 02 31.6	+2.4
FAKI	Fak Fak	6.81	134	Pn	Pn	06 02 32.9	+1.5
SBUM	Sibu	15.17	272	P	P	06 04 23.6	-1.3
KNRA	Kununurra	17.50	176	P	Pn	06 04 50.8	-0.3
FITZ	Fitzroy Crossi	19.93	185	P	P	06 05 17.2	0.0
WB0	Warramunga Arr	22.59	163	P	P	06 05 43.9	-1.5
WB0				IAmb	IAmb	06 05 45.4	
	comp=Z,7.6nm,0.6s						
WRA	Warramunga Arr	22.74	163	P	P	06 05 45.6	-1.3
	comp=Z,6.2nm,0.4s,baz=344,slow=11,SNR=94						
	comp=Z,6.2nm,0.4s						
PSA00	Pilbara Seismi	24.45	197	P	P	06 06 00.7	-1.8
PSA00				IAmb	IAmb	06 06 07.7	
	comp=Z,9.8nm,1.1s						
AS31	Alice Springs	26.18	166	P	P	06 06 16.9	-1.3
AS31				IAmb	IAmb	06 06 21.6	
	comp=Z,1.8nm,0.4s						
ASAR	Alice Springs	26.18	166	P	P	06 06 17.3	-0.9
	comp=Z,2.0nm,0.3s,baz=343,slow=7.5,SNR=49						
	comp=Z,2.0nm,0.3s						
CTA	Charters Tower	28.63	141	LR	LR	06 18 37.7	
	comp=Z,130nm,19.0s,baz=98,slow=38						
FORT	Forrest	32.49	179	P	P	06 07 13.0	-1.0
BBOO	Buckleboo	35.47	167	P	P	06 07 38.4	-1.4
STKA	Stephens Creek	36.19	159	P	P	06 07 45.1	-0.8
	comp=Z,1.9nm,0.4s,baz=332,slow=11,SNR=6.9						
	comp=Z,1.9nm,0.4s						
STKA	Stephens Creek	36.19	159	P	P	06 07 45.4	-0.5
USA0B	Ussuriysk Arra	42.33	5	P	P	06 08 36.6	-0.1
USA0B				IAmb	IAmb	06 08 48.1	
	comp=Z,3.5nm,0.9s						
ULN	Ulaanbaatar	49.06	342	P	P	06 09 29.9	0.0
ULN				IAmb	IAmb	06 09 51.1	
	comp=Z,5.8nm,1.5s						
MK31	Makanchi Array	59.43	326	P	P	06 10 45.4	+0.4
MK31				IAmb	IAmb	06 10 46.4	
	comp=Z,0.9nm,0.5s						
MKAR	Makanchi Array	59.43	326	P	P	06 10 46.0	+1.1
	comp=Z,1.0nm,0.4s,baz=120,slow=8.5,SNR=21						
	comp=Z,1.0nm,0.4s						
MAKZ	Makanchi	59.62	325	P	P	06 10 47.0	+0.8
MAKZ				IAmb	IAmb	06 10 47.9	
	comp=Z,1.1nm,0.6s						
KURK	Kurchatov	63.64	328	P	P	06 11 13.9	+0.8
KURK				IAmb	IAmb	06 11 14.4	
	comp=Z,2.3nm,0.8s						
VNDA	Vanda	81.53	173	P	P	06 12 57.3	-1.3
VNDA				IAmb	IAmb	06 13 06.2	
	comp=Z,2.8nm,1.2s						

*DJA **31** 06:06:17.3±0.5, 2°S±3°×12°8E±°, h80^{km}±9^{km}, M3.2/8, MLv3.2/8*

*IDC **31** 06:06:32.0±2.4, 4°.01S×127°.87E, h0^{km}, mb3.2/2, mbtmp3.2/3, ML3.1/1, Error ellipse: s-maj=180.1km s-min=30.9km az=67.0*

ISC 31 06:06:15.5±1.0, **1°.96S**±0°.08×**127°.96E**±0°.06, **h33**^{km}, **n9**, σ**2**^{s}**.49**/11, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	Labuha	1.40	341	P	Pb	06 06 42.5	+1.4
NLAI	Namlea	1.53	214	P	Pn	06 06 41.7	+1.1
MSAI	Masohi	1.68	145	P	Pn	06 06 44.9	+2.3
MSAI				S	Sb	06 07 06.2	-0.4
AAI	Ambon	1.73	172	P	Pn	06 06 45.3	+2.0
SANI	Sanana	1.98	268	P	Pn	06 06 48.5	+1.8
SANI				S	Sn	06 07 10.8	+0.5
FAKI	Fak Fak	4.39	103	P	Pn	06 07 21.4	+1.5
WRA	Warramunga Arr	18.93	161	P	P	06 10 32.7	-1.1
	0.1nm,0.3s,baz=341,slow=12,SNR=1.7						
	0.2nm,0.7s						
ASAR	Alice Springs	22.33	166	P	P	06 11 10.2	-0.5
	0.3nm,0.3s,baz=347,slow=11,SNR=6.1						
	0.3nm,0.3s						
MKAR	Makanchi Array	62.93	326	P	PcP	06 17 11.2	-5.5
	0.2nm,0.7s,baz=123,slow=7.1,SNR=1.7						
	0.2nm,0.7s						

IDC 31 06:20:54.4±3.6, **53°.67N**×**91°.19E**, **h0**^{km}, **mbtmp2.8**/3, **ML2.4**/3, **Error ellipse: s-maj=34.5km s-min=25.5km az=34.0**, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.79	277	I	I	06 45 00.0	
	baz=88,slow=341,SNR=1.1						
ZALV	Zalesovo Beam	3.79	277	Pn	Pn	06 21 55.8	+1.8
	0.7nm,0.3s,baz=102,slow=15,SNR=3.4						
ZALV				Pg	Pb	06 22 04.4	+2.3
	0.8nm,0.3s,baz=100,slow=14,SNR=7.0						
ZALV				Lg	Lg	06 22 55.5	
	0.8nm,0.3s,baz=96,slow=22,SNR=4.2						
	0.9nm,0.4s						
KURBB	Kurchatov Arra	8.36	254	Pn	Pn	06 22 56.2	-0.5
	baz=66,slow=15,SNR=6.0						
KURBB				Sn	Sn	06 24 28.9	-3.0
	baz=40,slow=33,SNR=1.7						
KURBB				Lg	Lg	06 25 21.5	
	baz=60,slow=32,SNR=6.0						
	0.5nm,0.6s						
MKAR	Makanchi Array	8.93	223	Pn	Pn	06 23 05.3	+0.6
	0.1nm,0.3s,baz=36,slow=12,SNR=5.9						
MKAR				Lg	Lg	06 25 39.5	
	0.1nm,0.3s,baz=31,slow=29,SNR=2.9						
	0.1nm,0.4s						
SONM	Songino Array	11.25	115	Lg	Lg	06 26 54.8	
	0.3nm,0.3s,baz=292,slow=37,SNR=3.3						

IDC 31 06:27:44.6±6.1, **28°.03S**×**74°.37E**, **h0**^{km}, **mb3.7**/3, **mbtmp3.7**/3, **Error ellipse: s-maj=225.1km s-min=40.8km az=40.0**, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	20.35	355	T	T	06 53 44.5	
	baz=177,slow=75,SNR=7.2						
H08S1	Diego Carcia H	20.35	355	T	T	06 53 38.1	
	baz=177,slow=75,SNR=6.6						
H08S3	Diego Garcia H	20.37	355	T	T	06 53 46.5	
	baz=177,slow=75,SNR=6.1						
ASAR	Alice Springs	53.31	100	P	P	06 37 05.4	-0.4
	0.5nm,0.8s,baz=227,slow=7.3,SNR=5.2						
	0.5nm,0.8s						
WRA	Warramunga Arr	54.92	96	P	P	06 37 17.8	+0.2
	0.9nm,0.8s,baz=254,slow=7.9,SNR=4.9						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	0.9nm,0.8s						
MKAR	**Makanchi Array**	**74.81**	**6**	P	P	06 39 26.3	-0.2
	1.0nm,1.1s,baz=172,slow=4.4,SNR=2.8						
	1.0nm,1.1s						
YKA	**Yellowknife Ar**	**145.03**	**7**	PKPbc	PKPbc	06 47 22.0	-0.5
	0.4nm,0.8s,baz=329,slow=3.1,SNR=7.7						

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*IDC **31** 06:31:46.9±2.2, 36°.37S×74°.09W, h0^{km}, mb3.2/2, mbtmp3.3/3, ML3.5/1, Error ellipse: s-maj=78.9km s-min=22.0km az=66.0*

*GUC **31** 06:31:46.7±0.6, 36°.04S×73°.71W, h15^{km}, ML3.7*

ISC 31 06:31:46.7±0.9**, 36°.08S**±0°.05×**73°.64W**±0°.06**, h10^{km}, n24, σ1^s.37**/25**, 1C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BI05	**Punta Hualpn**	**0.76**	**151**	*e*P	**Pg**	**06 32 01.0**	**-0.3**
BI05				⇑*i*P	**Pb**	**06 32 01.3**	**-0.7**
BI05				*e*S	**Sg**	**06 32 11.3**	**+0.1**
BI05				IAML		06 32 14.9	
	comp=N,3μm,0.1s						
CCSP	**San Pedro de C**	**0.87**	**151**	*e*P	**Pg**	**06 32 03.0**	**-0.5**
CCSP				*e*S	**Sg**	**06 32 14.7**	**-0.2**
CCSP				IAML		06 32 18.6	
	comp=E,5μm,0.2s						
GO05	**Huala**	**1.76**	**53**	*e*P	**Pn**	**06 32 16.3**	**-0.9**
GO05				IAML		06 32 48.0	
	comp=N,653nm,0.3s						
ML02	**Panimavida**	**1.83**	**81**	*e*P	**Pn**	**06 32 18.0**	**-0.2**
ML02				*i* S	**Sn**	**06 32 41.4**	**0.0**
ML02				IAML		06 32 56.6	
	comp=E,1μm,0.5s						
BO03	**Pichilemu**	**2.10**	**41**	*e*P	**Pn**	**06 32 21.1**	**-0.7**
BO03				IAML		06 33 00.4	
	comp=N,496nm,0.6s						
BO02	**Sierra Bellavi**	**2.67**	**62**	*i* P	**Pn**	**06 32 29.6**	**-0.1**
BO02				IAML		06 33 14.8	
	comp=N,546nm,0.2s						
BO01	**Tunca**	**2.69**	**52**	*e*P	**Pn**	**06 32 29.9**	**-0.1**
BO01				IAML		06 33 19.6	
	comp=N,256nm,0.8s						
MT01	**Popeta**	**2.96**	**42**	*e*P	**Pn**	**06 32 33.0**	**-0.7**
MT01				IAML		06 33 29.5	
	comp=N,144nm,0.2s						
MT09	**Talagante**	**3.17**	**44**	*e*P	**Pn**	**06 32 36.3**	**-0.4**
MT09				IAML		06 33 34.5	
	comp=N,299nm,0.6s						
MT12	**Pirque**	**3.46**	**48**	*e*P	**Pn**	**06 32 40.8**	**+0.2**
MT02	**Curacav**	**3.49**	**37**	*i* P	**Pn**	**06 32 40.0**	**-1.0**
MT05	**Renca**	**3.59**	**43**	*e*P	**Pn**	**06 32 42.5**	**0.0**
LMEL	**Las Melosas**	**3.60**	**53**	*e*P	**Pn**	**06 32 43.7**	**+1.1**
LR03	**Panguipulli**	**3.69**	**164**	*e*P	**Pn**	**06 32 43.3**	**-0.5**
MT10	**Hacienda Santa**	**3.79**	**43**	*i* P	**Pn**	**06 32 45.5**	**+0.2**
H03S1	**Juan Fernandez**	**4.87**	**296**	T	T	06 37 56.6	
	baz=116,slow=74						
H03S3	**Juan Fernandez**	**4.88**	**296**	T	T	06 37 57.8	
	baz=116,slow=74						
H03S2	**Juan Fernandez**	**4.88**	**296**	T	T	06 37 56.7	
	baz=116,slow=74						
H03N1	**Juan Fernandez**	**5.08**	**300**	Pn	**Pn**	**06 33 04.4**	**+1.9**
H03N1				Sn	**Sn**	**06 33 57.3**	**-3.8**
H03N3	**Juan Fernandez**	**5.08**	**300**	Pn	**Pn**	**06 33 05.3**	**+2.7**
H03N2	**Juan Fernandez**	**5.09**	**300**	Pn	**Pn**	**06 33 04.7**	**+1.9**
PLCA	**Paso Flores**	**5.24**	**153**	Pn	**Pn**	**06 33 06.1**	**+1.0**
	comp=N,0.4nm,0.3s,baz=326,slow=12,SNR=24						
PLCA				Lg	Lg	06 34 30.4	
	comp=N,0.5nm,0.3s,baz=247,slow=19,SNR=3.0						
	comp=N,1.3nm,0.4s						
LPAZ	**La Paz**	**20.32**	**15**	P	Pn	06 36 29.3	+3.8
	comp=N,1.1nm,0.7s,baz=200,slow=11,SNR=4.6						
	comp=N,1.1nm,0.7s						
TXAR	**Lajitas Array**	**70.94**	**332**	P	**P**	**06 43 06.6**	**+2.4**
	comp=N,0.2nm,0.6s,baz=161,slow=9.4,SNR=2.5						
	comp=N,0.2nm,0.6s						

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*IDC **31** 06:49:09.8±1.6, 15°.53S×175°.87E, h0^{km}, mb4.0/6, mbtmp4.0/6, MS3.9/15, Error ellipse: s-maj=99.4km s-min=22.9km az=145.0*

*GCMT **31** 06:49:15.0±0.4, 16°.42S±0°.02×176°.70E±0°.02, h22^{km}±2^{km}, MW4.9/70, Moment Tensor Solution. s15,c15; s70,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.22±.18; $M_{\theta\theta}$-0.20±.15; $M_{\phi\phi}$0.42±.12; $M_{r\theta}$0.86±.25; $M_{\theta\phi}$2.24±.10; $M_{\phi r}$0.33±.20; Best double couple: $M_0$2.43100×10^{16} NP1:ϕ_s86.00000°,δ88.00000°,λ21.00000°. NP2: ϕ_s355.00000°,δ69.00000°,λ178.00000°. Principal axes: T 2.6110, Plg16.0000°, Azm313.0000°; N -0.3590, Plg69.0000°, Azm92.0000°; P -2.2520, Plg13.0000°, Azm219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 31 06:49:15.2±1.4**, 15°.5S**±0°.5×**175°.8E**±0°.4**, h35^{km}, n23, σ0^s.88**/8**, mb4.0**/6**, MS3.9**/15**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.01**	**232**	*e*Pn	Pn	06 51 59.0	+8.6
	59nm,1.8s						
DZM				*e*LR	LR	06 54 28.0	
	comp=Z,1μm,25.6s						
DZM	**Mont Dzumac**	**11.01**	**232**	LR	LR	06 55 20.0	
	comp=Z,895nm,21.8s,baz=60,slow=34						
HNR	**Honiara**	**16.59**	**289**	LR	LR	06 59 33.0	
	comp=Z,8μm,18.4s,baz=128,slow=37						
KRVT	**Keravat (AS076**	**25.87**	**293**	LR	LR	07 04 35.6	
	comp=Z,276nm,21.6s,baz=244,slow=36						
CTA	**Charters Tower**	**28.47**	**256**	LR	LR	07 03 50.3	
	comp=Z,114nm,21.3s,baz=96,slow=31						
PMG	**Port Moresby**	**28.58**	**279**	LR	LR	07 04 58.0	
	comp=Z,177nm,18.6s,baz=36,slow=33						
STKA	**Stephens Creek**	**35.12**	**236**	P	**P**	**06 56 04.9**	**-0.6**
	4.0nm,0.8s,baz=51,slow=10,SNR=6.9						
STKA				LR	LR	07 09 35.4	
	comp=Z,205nm,18.2s,baz=63,slow=35						
	4.0nm,0.8s						
WRA	**Warramunga Arr**	**39.66**	**257**	P	**P**	**06 56 43.6**	**-0.6**
	2.1nm,0.8s,baz=90,slow=8.5,SNR=6.3						
	2.1nm,0.8s						
ASAR	**Alice Springs**	**40.18**	**252**	P	**P**	**06 56 49.2**	**+0.8**
	2.3nm,0.7s,baz=80,slow=9.2,SNR=20						
ASAR				PcP	**PcP**	**06 58 53.2**	**+0.8**
	0.3nm,0.7s,baz=84,slow=2.9,SNR=1.8						
	2.3nm,0.7s						
TAOE	**Nuku Hiva Isla**	**43.52**	**87**	*e*LR	LR	07 09 09.4	
	comp=Z,250nm,23.9s						
JCJ	**Chichijima**	**53.43**	**322**	LR	LR	07 20 47.6	
	comp=Z,65nm,18.0s,baz=107,slow=36						
DAV	**Davao City (W)**	**54.54**	**291**	LR	LR	07 20 18.1	
	comp=Z,82nm,22.0s,baz=100,slow=34						
NWAO	**Narrogin (SRO)**	**55.49**	**241**	LR	LR	07 20 30.4	
	comp=Z,262nm,21.7s,baz=222,slow=34						
ASAJ	**Asahikawa**	**66.59**	**335**	LR	LR	07 23 55.1	
	comp=Z,94nm,21.4s,baz=170,slow=31						
KSRS	**Korea Array**	**69.25**	**321**	LR	LR	07 26 23.9	
	comp=Z,49nm,22.0s,baz=115,slow=32						
LPIG	**La Paz**	**82.15**	**62**	LR	LR	07 32 15.4	
	comp=Z,64nm,18.7s,baz=205,slow=32						
CMAR	**Chiang Mai Arr**	**82.82**	**291**	LR	LR	07 35 24.2	
	comp=Z,37nm,21.6s,baz=115,slow=34						
BBB	**Bella Bella**	**82.98**	**31**	LR	LR	07 31 02.1	
	comp=Z,83nm,20.2s,baz=232,slow=30						
ILAR	**Eielson Array**	**84.89**	**15**	P	**P**	**07 01 46.6**	**+0.5**
	1.1nm,0.8s,baz=228,slow=5.5,SNR=13						
	1.1nm,0.8s						
TXAR	**Lajitas Array**	**89.48**	**59**	P	**P**	**07 02 09.2**	**-0.1**
	0.6nm,1.0s,baz=205,slow=5.4,SNR=4.3						
TXAR				LR	LR	07 34 26.8	
	comp=Z,67nm,19.0s,baz=244,slow=30						
	0.6nm,1.0s						
PDAR	**Pinedale Array**	**89.52**	**45**	LR	LR	07 37 32.0	
	comp=Z,48nm,18.1s,baz=214,slow=32						
YKA	**Yellowknife Ar**	**94.52**	**26**	P	**P**	**07 02 30.6**	**-1.0**
	0.2nm,0.6s,baz=236,slow=4.4,SNR=3.2						
	0.2nm,0.6s						
GERES	**GERESS Array B**	**143.62**	**340**	PKP	**PKPdf**	**07 08 47.3**	**+0.8**
	1.6nm,0.8s,baz=30,slow=3.7,SNR=7.0						

IDC 31 06:52:05.1±1.7**, 1°.97N**×**123°.81E, h0^{km}, mb3.6**/4**, mbtmp3.6**/4**, MS2.8**/1**, Error ellipse: s-maj=194.2km s-min=24.9km az=62.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**5.36**	**19**	LR	LR	06 56 32.5	
	comp=Z,87nm,18.1s,baz=120,slow=50						
WRA	**Warramunga Arr**	**24.11**	**155**	P	P	06 57 23.8	+1.0
	1.6nm,0.8s,baz=333,slow=11,SNR=14						
	1.6nm,0.8s						
ASAR	**Alice Springs**	**27.31**	**160**	P	P	06 57 52.8	+1.0
	0.3nm,0.7s,baz=344,slow=6.6,SNR=1.7						
	0.3nm,0.7s						
STKA	**Stephens Creek**	**37.66**	**155**	P	P	06 59 20.7	-1.5
	1.5nm,0.7s,baz=322,slow=9.1,SNR=3.3						
	1.5nm,0.7s						
MKAR	**Makanchi Array**	**57.39**	**327**	P	P	07 01 54.8	-0.6
	0.3nm,0.5s,baz=126,slow=7.4,SNR=5.5						
	0.3nm,0.5s						

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*BGR **31** 06:59:15.9, 15°.84S×172°.73W, h33^{km}, Ms4.6*

*IDC **31** 06:59:19.5±1.8, 15°.30S×173°.73W, h61^{km}±15^{km}, mb4.4/18, mbtmp4.7/20, MS3.8/22, Error ellipse: s-maj=18.8km s-min=10.1km az=126.0*

*NEIC **31** 06:59:21.4±0.9, 15°.38S±0°.08×173°.7W±0°.1, h71^{km}±7^{km}, mb5.0/73, Error ellipse: s-maj=16.6km s-min=11.8km az=104.0*

*NOU **31** 06:59:24.4, 15°.15S×173°.27W, h141^{km}, mb4.9/29, Tonga Islands*

*GCMT **31** 06:59:28.4±0.2, 15°.30S±0°.02×173°.30W±0°.02, h101^{km}±2^{km}, MW5.1/112, Moment Tensor Solution. s46,c53; s112,c175; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.30±.14; $M_{\theta\theta}$4.51±.14; $M_{\phi\phi}$-1.22±.15; $M_{r\theta}$-0.06±.11; $M_{\theta\phi}$2.60±.16; $M_{\phi r}$2.80±.09; Best double couple: $M_0$5.56300×10^{16} NP1:ϕ_s217.00000°,δ62.00000°, λ-134.00000°. NP2:ϕ_s101.00000°,δ51.00000°, λ-37.00000°. Principal axes: T 5.6280, Plg7.0000°, Azm337.0000°; N -0.1390, Plg38.0000°, Azm241.0000°; P -5.4990, Plg51.0000°, Azm75.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 06:59:21.3±0.4**, 15°.45S**±0°.05×**173°.52W**±0°.06**, h74^{km}**±3^{km}**, h75^{km}:pP-P, n510, σ1^s.28**/484**, mb5.0**/56**, 16C-16D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.28**	**48**	P	**Pn**	**06 59 57.2**	**+0.3**
	2μm,0.5s,baz=216,slow=2.4,SNR=281						
AFI				S	**Sn**	**07 00 23.6**	**-0.6**
	5μm,0.3s,baz=248,slow=19,SNR=19						
AFI	**Afiamalu**	**2.28**	**48**	P	**Pn**	**06 59 57.6**	**+0.6**
FUTU	**Fugatoga**	**4.59**	**284**	P	Pn	07 00 34.5	+6.2
NIUE	**Niue**	**4.98**	**137**	Pn	**Pn**	**07 00 34.7**	**+1.1**
NIUE	**Niue**	**4.98**	**137**	P	**Pn**	**07 00 35.9**	**+2.3**
TAVE	**Taveuni**	**6.26**	**258**	P	Pn	07 00 58.7	+7.6
RAR	**Rarotonga**	**14.25**	**116**	P	**P**	**07 02 42.6**	**-2.1**
	52nm,0.7s,baz=272,slow=9.0,SNR=8.9						
RAR	**Rarotonga**	**14.25**	**116**	Pn	**Pn**	**07 02 41.4**	**+1.8**
RAR	**Rarotonga**	**14.25**	**116**	P	**Pn**	**07 02 38.9**	**-0.6**
RAO	**Raoul Island**	**14.32**	**196**	LR	LR	07 07 10.5	
	comp=Z,238nm,21.3s,baz=342,slow=33						
LIFNC	**LIFOU**	**19.03**	**251**	P	**P**	**07 03 35.9**	**-1.6**
LIFNC				IAmb	IAmb	07 03 47.4	
	comp=Z,185nm,1.6s						
PINNC	**Pines Island,**	**19.34**	**245**	P	**P**	**07 03 39.6**	**-1.2**
YATNC	**Mamie plateau,**	**19.67**	**248**	P	**Pn**	**07 03 47.0**	**+0.5**
DZM	**Mont Dzumac**	**20.07**	**248**	*e*P	Pn	07 03 51.7	+0.4
	comp=Z,110nm,1.3s						
DZM				*e*S	**S**	**07 07 26.2**	**-4.4**
	comp=Z,178nm,30.5s						
DZM				*e*LR	LR	07 08 37.2	
	comp=Z,844nm,28.4s						
DZM	**Mont Dzumac**	**20.07**	**248**	P	Pn	07 03 52.8	+1.5
	comp=Z,9.6nm,0.8s,baz=109,slow=21,SNR=9.5						
DZM				LR	LR	07 09 43.0	
	comp=Z,340nm,18.4s,baz=54,slow=31						
ONTNC	**Ouen Toro**	**20.12**	**247**	P	**P**	**07 03 49.3**	**-0.1**
TARA	**Tarawa**	**21.41**	**320**	P	**P**	**07 04 02.9**	**-0.5**
TARA				IAmb	IAmb	07 04 05.8	
	comp=Z,79nm,0.8s						
KOUNC	**Koumac, New Ca**	**21.70**	**253**	P	**P**	**07 04 04.4**	**-1.9**
OUZ	**Omahuta**	**22.82**	**208**	P	**P**	**07 04 19.1**	**+0.9**
PPT	**Papeete**	**23.05**	**99**	LR	LR	07 11 05.8	
	comp=Z,70nm,21.5s,baz=248,slow=30						
PPT2	**Papeete2**	**23.05**	**99**	*e*LR	LR	07 04 12.6	
	comp=Z,236nm,29.0s						
PPT2				*e*LR	LR	07 04 12.6	
	comp=Z,324nm,26.8s						
PPT2	**Papeete2**	**23.05**	**99**	*e*LR	LR	07 09 52.9	
	comp=Z,617nm,39.8s						
PPT2				*e*LR	LR	07 10 01.5	
	comp=Z,169nm,33.5s						
PPT2	**Papeete2**	**23.05**	**99**	*e*T	T	07 27 54.9	
	comp=Z,9.5nm,0.4s						
MXZ	**Matakaoa Point**	**23.18**	**197**	P	**P**	**07 04 21.5**	**-0.2**
MXZ				IAmb	IAmb	07 04 25.4	
	comp=Z,52nm,0.6s						
MXZ	**Matakaoa Point**	**23.18**	**197**	P	**P**	**07 04 23.2**	**+1.5**
KUZ	**Kuaotunu**	**23.27**	**202**	P	**P**	**07 04 23.5**	**+1.0**
TVO	**Taravao**	**23.37**	**99**	*e*T	T	07 28 19.6	
	comp=Z,5.0nm,0.4s						
TGRZ	**Tauranga**	**23.96**	**200**	P	**P**	**07 04 32.4**	**+3.6**
TBI	**Tubuai**	**23.99**	**113**	*e*LR	LR	07 10 14.8	
	comp=Z,4μm,27.5s						
TBI				*e*LR	LR	07 10 25.0	
	comp=Z,3μm,50.0s						
TBI	**Tubuai**	**23.99**	**113**	*e*T	T	07 29 03.7	
	comp=Z,20nm,0.3s						
MWZ	**Matawai**	**24.12**	**197**	P	**P**	**07 04 30.9**	**+0.7**
TKGZ	**Te Karaka**	**24.13**	**197**	P	**P**	**07 04 33.8**	**+3.5**
KMRZ	**Kaimai**	**24.17**	**201**	P	**P**	**07 04 34.1**	**+3.4**
URZ	**Urewera**	**24.17**	**198**	P	**P**	**07 04 31.4**	**+0.7**
	comp=Z,20nm,0.3s,baz=38,slow=3.8,SNR=28						
URZ				S	**S**	**07 08 46.4**	**+2.8**
	comp=Z,5.0nm,0.7s,baz=162,slow=19,SNR=6.8						
URZ				LR	LR	07 13 24.6	
	comp=Z,298nm,19.4s,baz=102,slow=35						
	comp=Z,20nm,0.3s						
URZ	**Urewera**	**24.17**	**198**	P	**P**	**07 04 31.0**	**+0.3**
URZ	**Urewera**	**24.17**	**198**	P	**P**	**07 04 31.3**	**+0.7**
TOZ	**Tahuroa Road**	**24.22**	**202**	P	**P**	**07 04 32.1**	**+0.9**
TOZ	**Tahuroa Road**	**24.22**	**202**	P	**P**	**07 04 33.3**	**+2.2**
KARZ	**Kaharoa**	**24.23**	**200**	P	**P**	**07 04 35.7**	**+4.5**
MKRZ	**Makatiti**	**24.26**	**199**	P	**P**	**07 04 35.1**	**+3.5**
OMRZ	**Omania**	**24.27**	**200**	P	**P**	**07 04 34.9**	**+3.3**
RAGZ	**Rawiri**	**24.30**	**197**	P	**P**	**07 04 34.9**	**+2.9**
TARZ	**Mount Tarawera**	**24.34**	**199**	P	**P**	**07 04 34.5**	**+2.2**
UTU	**Utuhina**	**24.39**	**200**	P	**P**	**07 04 37.0**	**+4.4**
RIGZ	**Rimuhau**	**24.40**	**197**	P	**P**	**07 04 35.7**	**+2.9**
HLRZ	**Highlands Stat**	**24.41**	**200**	P	**P**	**07 04 35.2**	**+2.3**
RRRZ	**Republican Roa**	**24.43**	**199**	P	**P**	**07 04 36.8**	**+3.8**
MUGZ	**Murupara**	**24.48**	**199**	P	**P**	**07 04 34.7**	**+1.2**
HSRZ	**Hossack Road**	**24.49**	**200**	P	**P**	**07 04 36.5**	**+2.9**
RTZ	**Ruatahuna**	**24.54**	**198**	P	**P**	**07 04 34.3**	**+0.2**
RTZ				IAmb	IAmb	07 04 38.5	
	comp=Z,29nm,0.7s						
RTZ	**Ruatahuna**	**24.54**	**198**	P	**P**	**07 04 34.8**	**+0.7**
HRRZ	**Handcock Road**	**24.55**	**200**	P	**P**	**07 04 36.2**	**+2.1**
SNGZ	**Shannon Statio**	**24.59**	**197**	P	**P**	**07 04 37.6**	**+3.0**
ALRZ	**Allen Road**	**24.69**	**199**	P	**P**	**07 04 38.8**	**+3.4**
KNZ	**Kokohu**	**24.72**	**197**	P	**P**	**07 04 39.7**	**+4.1**
TLZ	**Tolley Road**	**24.75**	**201**	P	**P**	**07 04 39.6**	**+3.6**
MHGZ	**Mahia Peninsul**	**24.78**	**196**	P	**P**	**07 04 39.7**	**+3.5**
RAHZ	**Arahi**	**24.79**	**198**	P	**P**	**07 04 38.3**	**+2.0**
MTHZ	**Maungataniwha**	**24.80**	**198**	P	**P**	**07 04 37.6**	**+1.1**
WHHZ	**Waihua**	**24.89**	**197**	P	**P**	**07 04 41.2**	**+4.0**
NMHZ	**Naumai**	**25.04**	**198**	P	**P**	**07 04 41.2**	**+2.5**
HIZ	**Hauiti**	**25.15**	**202**	P	**P**	**07 04 41.0**	**+1.4**
HIZ	**Hauiti**	**25.15**	**202**	P	**P**	**07 04 42.8**	**+3.2**
BKZ	**Black Stump Fm**	**25.20**	**198**	P	**P**	**07 04 40.6**	**+0.5**
BKZ	**Black Stump Fm**	**25.20**	**198**	P	**P**	**07 04 40.5**	**+0.5**
BKZ	**Black Stump Fm**	**25.20**	**198**	P	**P**	**07 04 40.5**	**+0.5**
MCHZ	**McNeill Hill**	**25.39**	**198**	P	**P**	**07 04 43.5**	**+1.8**
NTVZ	**North Tongarir**	**25.39**	**200**	P	**P**	**07 04 43.9**	**+1.9**
TMVZ	**Te Maari**	**25.40**	**200**	P	**P**	**07 04 43.3**	**+1.3**
ETVZ	**East Tongariro**	**25.42**	**200**	P	**P**	**07 04 43.2**	**+1.0**
NNVZ	**North Ngauruho**	**25.44**	**200**	P	**P**	**07 04 42.3**	**-0.1**
TWVZ	**Taurewa**	**25.45**	**200**	P	**P**	**07 04 42.7**	**+0.3**
KWHZ	**Kaweka Forest**	**25.45**	**198**	P	**P**	**07 04 43.6**	**+1.1**
OTVZ	**Oturere**	**25.46**	**200**	P	**P**	**07 04 42.6**	**0.0**
SNVZ	**South Ngauruho**	**25.48**	**200**	P	**P**	**07 04 43.1**	**+0.3**
NGZ	**Ngauruhoe**	**25.49**	**200**	P	**P**	**07 04 43.6**	**+0.8**
TRVZ	**Turoa**	**25.62**	**200**	P	**P**	**07 04 44.9**	**+0.8**
BHHZ	**Black Hill Sta**	**25.62**	**199**	P	**P**	**07 04 43.3**	**-0.7**
WNVZ	**Wahianoa**	**25.63**	**200**	P	**P**	**07 04 43.9**	**-0.2**
MOVZ	**Moawhango**	**25.65**	**199**	P	**P**	**07 04 45.7**	**+1.5**
KAHZ	**Kahuranaki**	**25.66**	**197**	P	**P**	**07 04 46.2**	**+1.9**
PKVZ	**Pokaka**	**25.68**	**200**	P	**P**	**07 04 46.4**	**+1.9**
PXZ	**Pawanui**	**25.89**	**197**	P	**P**	**07 04 48.7**	**+2.5**
NEZ	**North Egmont**	**26.09**	**202**	P	**P**	**07 04 52.2**	**+4.0**
KHEZ	**Kahui Hut**	**26.15**	**202**	P	**P**	**07 04 50.8**	**+2.1**
TSZ	**Takapari Road**	**26.18**	**199**	P	**P**	**07 04 49.8**	**+0.8**
DVHZ	**Dannevirke**	**26.34**	**198**	P	**P**	**07 04 53.3**	**+2.9**
HNR	**Honiara**	**26.57**	**280**	LR	LR	07 14 50.4	
	comp=Z,714nm,18.8s,baz=110,slow=35						
BFZ	**Birch Farm**	**26.67**	**198**	P	**P**	**07 04 54.4**	**+1.1**
BFZ	**Birch Farm**	**26.67**	**198**	P	**P**	**07 04 53.4**	**+0.1**
SNZO	**South Karori**	**27.71**	**199**	P	**P**	**07 05 04.0**	**+1.4**
SNZO	**South Karori**	**27.71**	**199**	P	**P**	**07 05 03.7**	**+1.1**
QRZ	**Quartz Range**	**28.04**	**203**	P	**P**	**07 05 05.4**	**-0.1**
QRZ				IAmb	IAmb	07 05 06.8	
	comp=Z,32nm,0.9s						
QRZ	**Quartz Range**	**28.04**	**203**	P	**P**	**07 05 05.9**	**+0.4**
THZ	**Tophouse**	**28.72**	**201**	P	**P**	**07 05 11.5**	**-0.1**
THZ				IAmb	IAmb	07 05 35.2	
	comp=Z,64nm,1.7s						
RPZ	**Rata Peaks**	**31.09**	**202**	P	**P**	**07 05 32.3**	**-0.3**
	comp=Z,3.7nm,0.5s,baz=102,slow=19,SNR=2.8						
RPZ				LR	LR	07 16 27.9	
	comp=Z,203nm,18.8s,baz=18,slow=33						
	comp=Z,3.7nm,0.5s						
JCZ	**Jackson Bay**	**32.25**	**204**	P	**P**	**07 05 41.3**	**-1.5**
TAOE	**Nuku Hiva Isla**	**33.25**	**83**	*e*LR	LR	07 14 32.5	
	comp=Z,328nm,27.5s						
TAOE	**Nuku Hiva Isla**	**33.25**	**83**	*e*T	T	07 40 42.0	
	comp=Z,58nm,0.2s						
ARMA	**Armidale**	**35.21**	**239**	P	**P**	**07 06 07.7**	**-1.1**
CTA	**Charters Tower**	**38.52**	**257**	LR	LR	07 20 48.6	
	comp=Z,85nm,19.1s,baz=104,slow=34						
PMG	**Port Moresby**	**38.82**	**274**	LR	LR	07 21 23.1	
	comp=Z,72nm,19.2s,baz=90,slow=34						
CAN	**Canberra**	**38.90**	**232**	P	**P**	**07 06 39.2**	**-0.8**
H11N3	**WAKE ISLAND Hy**	**39.90**	**331**	T	T	07 49 24.9	
	baz=150,slow=76,SNR=7.3						
H11N1	**WAKE ISLAND Hy**	**39.91**	**331**	T	T	07 49 32.2	
	baz=150,slow=76,SNR=7.3						
H11N2	**WAKE ISLAND Hy**	**39.92**	**331**	T	T	07 49 43.3	
	baz=150,slow=76,SNR=8.9						
CMSA	**Cobar Meteorol**	**40.42**	**239**	P	**P**	**07 06 50.4**	**-2.2**
TOO	**Toolangi**	**42.34**	**231**	P	**P**	**07 07 07.4**	**-0.8**
TOO				IAmb	IAmb	07 07 46.1	
	comp=Z,65nm,1.9s						
STKA	**Stephens Creek**	**43.91**	**240**	P	**P**	**07 07 18.9**	**-2.0**
	comp=Z,4.8nm,0.7s,baz=95,slow=9.8,SNR=11						
STKA				LR	LR	07 23 29.5	
	comp=Z,114nm,19.7s,baz=208,slow=33						
	comp=Z,4.8nm,0.7s						
STKA	**Stephens Creek**	**43.91**	**240**	P	**P**	**07 07 19.4**	**-1.5**
LCRK	**Leigh Creek**	**46.54**	**243**	P	**P**	**07 07 39.2**	**-2.5**
BBOO	**Buckleboo**	**48.68**	**240**	P	**P**	**07 07 57.4**	**-1.0**
BBOO	**Buckleboo**	**48.68**	**240**	P	**P**	**07 07 56.6**	**-1.8**
WB0	**Warramunga Arr**	**49.68**	**257**	P	**P**	**07 08 04.1**	**-2.0**
WB0				IAmb	IAmb	07 08 39.8	
	comp=Z,44nm,1.9s						
WRAB	**Tennant Creek**	**49.71**	**257**	P	**P**	**07 08 04.6**	**-1.8**
WRAB	**Tennant Creek**	**49.71**	**257**	P	**P**	**07 08 04.4**	**-2.0**
WRAB				sP	**sP**	**07 08 31.8**	**-0.9**
WRA	**Warramunga Arr**	**49.72**	**257**	P	**P**	**07 08 04.5**	**-2.0**
	comp=Z,2.6nm,0.6s,baz=90,slow=7.0,SNR=62						
WRA				PcP	**PcP**	**07 09 26.1**	**-0.6**
	comp=Z,2.9nm,0.9s,baz=90,slow=4.2,SNR=2.6						
WRA				LR	LR	07 29 15.2	
	comp=Z,91nm,18.1s,baz=87,slow=36						
	comp=Z,2.6nm,0.6s						
AS31	**Alice Springs**	**49.98**	**252**	P	**P**	**07 08 06.0**	**-2.4**
ASAR	**Alice Springs**	**49.98**	**252**	P	**P**	**07 08 06.2**	**-2.2**
	comp=Z,11nm,0.7s,baz=87,slow=7.9,SNR=126						
ASAR				LR	LR	07 28 48.3	
	comp=Z,121nm,18.0s,baz=112,slow=36						
	comp=Z,11nm,0.7s						
MULG	**Mulgathing**	**50.09**	**243**	P	**P**	**07 08 06.8**	**-2.3**
WRKA	**Warakurna**	**55.07**	**250**	P	**P**	**07 08 44.2**	**-1.8**
FORT	**Forrest**	**55.29**	**243**	P	**P**	**07 08 45.0**	**-2.5**
FORT	**Forrest**	**55.29**	**243**	P	**P**	**07 08 44.7**	**-2.7**
SBA	**Scott Base**	**63.19**	**185**	P	**P**	**07 09 43.7**	**+2.5**
VNDA	**Vanda**	**63.31**	**186**	P	**P**	**07 09 43.5**	**+1.5**
	comp=Z,1.9nm,0.9s,baz=360,slow=6.4,SNR=6.2						
	comp=Z,1.9nm,0.9s						
VNDA	**Vanda**	**63.31**	**186**	P	**P**	**07 09 42.9**	**+0.9**
VNDA	**Vanda**	**63.31**	**186**	P	**P**	**07 09 43.3**	**+1.3**
VNDA				pP	**pP**	**07 10 00.6**	**-0.2**
VNDA				sP	**sP**	**07 10 10.1**	**+1.2**
KAPI	**Kappang**	**66.26**	**271**	LR	LR	07 39 51.0	
	comp=Z,46nm,18.0s,baz=94,slow=37						
CCD	**Concordia, Ant**	**68.39**	**194**	P	**P**	**07 10 15.4**	**+0.2**
CCD				sP	**sP**	**07 10 43.3**	**+1.0**
SHEM	**Shemya Is, Ala**	**68.74**	**352**	LR	LR	07 33 09.8	
	comp=Z,65nm,21.9s,baz=109,slow=30						
MJAR	**Matsushiro Arr**	**68.90**	**320**	LR	LR	07 34 50.3	
	comp=Z,70nm,21.7s,baz=124,slow=31						
ASAJ	**Asahikawa**	**71.52**	**328**	LR	LR	07 36 34.8	
	comp=Z,33nm,19.4s,baz=158,slow=31						
KMRM	**Mail Ridge**	**72.17**	**38**	P	**P**	**07 10 39.4**	**+1.0**
ARVC	**Arvin**	**72.23**	**45**	P	**P**	**07 10 39.0**	**+0.3**
	baz=236						
VES	**Vestal, Richgr**	**72.46**	**44**	P	**P**	**07 10 40.2**	**+0.1**
	baz=235,SNR=5.6						
MURC	**Murrieta**	**72.52**	**47**	P	**P**	**07 10 41.0**	**+0.5**
	baz=237						
CHGN	**Chignik**	**72.60**	**9**	P	**P**	**07 10 42.0**	**+1.7**
	baz=195						
PETK	**Petropavlovsk-**	**72.65**	**342**	P	**P**	**07 10 40.5**	**-0.3**
	comp=Z,3.0nm,0.8s,baz=120,slow=10,SNR=5.4						
	comp=Z,3.0nm,0.8s						
EDW2	**Edwards Air Fo**	**72.66**	**45**	P	**P**	**07 10 42.2**	**+0.8**
	baz=236						
ISA	**Isabella, Lake**	**72.77**	**44**	P	**P**	**07 10 42.2**	**+0.2**
ISA				IAmb	IAmb	07 10 43.7	
	comp=Z,25nm,1.3s						
ISA	**Isabella, Lake**	**72.77**	**44**	P	**P**	**07 10 42.7**	**+0.7**
	baz=236						
IKP	**In-Ko-Pah, Jac**	**72.78**	**48**	P	**P**	**07 10 42.6**	**+0.4**
	baz=238						
CMB	**Columbia Colle**	**72.88**	**41**	P	**P**	**07 10 43.0**	**+0.4**
CMB				IAmb	IAmb	07 10 43.9	
	comp=Z,19nm,0.9s						
YUH	**Yuha Desert**	**72.92**	**48**	P	**P**	**07 10 43.3**	**+0.5**
YUH				IAmb	IAmb	07 10 44.2	
	comp=Z,28nm,1.2s						
PFO	**Pinyon Flats O**	**73.04**	**47**	LR	LR	07 33 14.4	
	comp=Z,111nm,21.6s,baz=236,slow=28						
PFO	**Pinyon Flats O**	**73.04**	**47**	P	**P**	**07 10 44.1**	**+0.4**
	baz=238						
TPFO	**Pinon Flats**	**73.04**	**47**	P	**P**	**07 10 43.9**	**+0.2**
	baz=238						
SRIG	**Santa Rosalia**	**73.06**	**55**	P	**P**	**07 10 43.7**	**-0.1**
ORV	**Oroville**	**73.09**	**40**	P	**P**	**07 10 44.5**	**+0.8**
ORV				IAmb	IAmb	07 10 45.0	
	comp=Z,15nm,0.9s						
SWSC	**Sam W. Stewart**	**73.16**	**48**	P	**P**	**07 10 44.7**	**+0.4**
	baz=238						
SLBS	**Sierra La Lagu**	**73.29**	**59**	P	**P**	**07 10 44.8**	**-0.5**
BELC	**Belle Mtn. Jos**	**73.58**	**47**	P	**P**	**07 10 47.6**	**+0.7**
	baz=238						
MLAC	**Mammoth, Mammo**	**73.65**	**42**	P	**P**	**07 10 48.2**	**+0.9**
	baz=235						
MPMC	**Manual Prospec**	**73.66**	**44**	P	**P**	**07 10 47.9**	**+0.6**
	baz=236,SNR=9.4						
GSC	**Goldstone, Bar**	**73.71**	**45**	P	**P**	**07 10 47.5**	**-0.1**
	baz=237,SNR=5.3						
YBH	**Yreka Blue Hor**	**73.71**	**37**	P	**P**	**07 10 47.9**	**+0.4**
	comp=Z,20nm,0.9s,baz=212,slow=3.0,SNR=29						
	comp=Z,20nm,0.9s						
YBH	**Yreka Blue Hor**	**73.71**	**37**	P	**P**	**07 10 48.4**	**+1.0**
YBH				IAmb	IAmb	07 10 49.4	
	comp=Z,30nm,1.0s						
HEC	**Hector,Ludlow**	**73.78**	**46**	P	**P**	**07 10 48.3**	**+0.4**
	baz=238,SNR=5.6						
DSP	**Deep Springs**	**74.07**	**43**	P	**P**	**07 10 50.1**	**+0.6**
DSP				IAmb	IAmb	07 10 51.4	
	comp=Z,25nm,1.4s						
HUMO	**Hull Mountain**	**74.12**	**36**	P	**P**	**07 10 51.0**	**+1.3**
HUMO				IAmb	IAmb	07 10 51.8	
	comp=Z,18nm,1.1s						
LHV	**Little Huntoon**	**74.22**	**42**	P	**P**	**07 10 50.5**	**+0.2**
LHV				IAmb	IAmb	07 11 09.6	
	comp=Z,20nm,0.7s						
GMRC	**Granite Mounta**	**74.23**	**46**	P	**P**	**07 10 50.5**	**-0.2**
	baz=238						
IRM	**Iron Mountain**	**74.26**	**47**	P	**P**	**07 10 51.2**	**+0.5**

```
      baz=239
SHOC  Shoshone, Teco    74.40  45  P      P       07 10 51.6 +0.1
      baz=237
NVAR  Mina Array Bea    74.45  42  P      P       07 10 52.4 +0.5
      comp=Z,14nm,0.8s,baz=228,slow=9.8,SNR=35
      comp=Z,14nm,0.8s
PAHR  Pah Rah Range     74.50  40  P      P       07 10 52.4 +0.3
PAHR                               IAmb   IAmb    07 10 53.6
      comp=Z,22nm,1.1s
QSPA  South Pole Qui    74.59 180  P      P       07 10 52.8 +0.5
QSPA                               IAmb   IAmb    07 10 54.3
      comp=Z,16nm,0.9s
214A  Organ Pipe Nat    74.84  50  P      P       07 10 54.1 -0.1
      baz=241
KDAK  Kodiak Island     75.00  11  LR     LR      07 36 25.2
      comp=Z,85nm,19.4s,baz=220,slow=30
PDMCI Parker Dam,Lak    75.05  48  P      P       07 10 55.8 +0.5
      baz=239
MOD   Modoc Plateau     75.24  38  P      P       07 10 56.4  0.0
MOD                                IAmb   IAmb    07 10 57.8
      comp=Z,27nm,1.0s
P16K  Nushagak River    75.30   8  P      P       07 10 56.9 +0.8
      baz=196
K05A  Summer Lake       75.39  37  P      P       07 10 57.8 +0.5
J05D  Fort Rock, OR     75.53  37  P      P       07 10 58.2 +0.2
O16K  Kokwok River B    75.83   8  P      P       07 10 59.7 +0.6
      baz=196
Q19K  Cape Douglas,     75.88  10  P      P       07 10 59.6 +0.2
      baz=200
PINE  Pine Mountain     76.01  36  P      P       07 11 01.1 +0.3
P18K  Big Mountain,     76.06  10  P      P       07 10 59.9 -0.5
      baz=198
O17K  Koliganek Bris    76.14   8  P      P       07 11 00.5 -0.3
      baz=196
R11B  Troy Canyon, C    76.18  43  P      P       07 11 01.7 -0.2
      baz=237,SNR=5.4
BMN   Battle Mountai    76.27  41  P      P       07 11 02.1 -0.2
BMN                                IAmb   IAmb    07 11 03.6
      comp=Z,20nm,0.9s
TUC   Tucson            76.52  51  P      P       07 11 04.4 +0.6
TUC                                IAmb   IAmb    07 11 05.6
      comp=Z,27nm,1.1s
TUC   Tucson            76.52  51  P      P       07 11 03.9 +0.2
      baz=242
I07A  Izee              77.01  37  P      P       07 11 06.8 +0.5
X16A  Lo Mia Camp, P    77.04  49  P      P       07 11 07.4 +0.6
X16A                               IAmb   IAmb    07 11 08.8
      comp=Z,23nm,1.3s
BRSE  Bradley Lake S    77.18  12  P      P       07 11 06.6 -0.2
      baz=203
319A  Douglas           77.22  52  P      P       07 11 08.0 +0.2
319A                               IAmb   IAmb    07 11 09.6
      comp=Z,28nm,1.0s
KNB   Kanab             77.35  46  P      P       07 11 08.8 +0.3
USRK  Ussuriysk Ar.     77.36 323  LR     LR      07 38 50.2
      comp=Z,57nm,21.0s,baz=145,slow=31
SZCU  Shurtz Canyon     77.46  45  P      P       07 11 09.6 +0.4
SZCU                               IAmb   IAmb    07 11 11.0
      comp=Z,30nm,1.4s
N19K  Bonanza Creek     77.53   9  P      P       07 11 08.3 -0.5
      baz=199
WUAZ  Wupatki           77.62  48  P      P       07 11 10.2 +0.1
      baz=241,SNR=6.0
ELK   Elko              77.70  41  P      P       07 11 10.7 +0.3
G08A  Pilot Rock        78.05  36  P      P       07 11 12.1  0.0
G08A                               IAmb   IAmb    07 11 13.2
      comp=Z,16nm,1.1s
MSU   Marysvale         78.55  45  P      P       07 11 15.6 +0.4
M19K  Big River Lodg    78.58   9  P      P       07 11 13.9 -0.6
      baz=199
RC01  Rabbit Creek A    78.62  12  P      P       07 11 13.8 -0.9
      baz=204
M20K  Styx River        78.75  10  P      P       07 11 15.4 -0.2
      baz=200
L19K  White Mountain    78.77   9  P      P       07 11 15.6  0.0
      baz=198
SUA   Susitna One       78.78  11  P      P       07 11 15.5 -0.2
      baz=202
121A  Cookes Peak, D    78.87  52  P      P       07 11 16.4 -0.6
      baz=244
121A  Cookes Peak, D    78.87  52  P      P       07 11 17.5 +0.5
      baz=244
EYAK  Cordova Ski Ar    78.96  14  P      P       07 11 17.2 +0.6
      baz=207
DUG   Dugway, Tooele    78.98  43  P      P       07 11 17.0 -0.4
      baz=239,SNR=6.2
MDJ   Mudanjiang        79.00 322  P      P       07 11 20.0 +2.8
MDJ                                pP     pP      07 11 37.5 +0.9
MDJ                                sP     sP      07 11 46.0 +1.6
MDJ                                S      S       07 21 12.0 +1.8
MDJ                                ScS    SKKSac  07 21 28.8 +1.1
MDJ                                pmax   pmax
      comp=Z,2.0nm,0.9s
MDJ                                pmax   pmax
      comp=Z,160nm,11.8s
ZAIG  Zacatecas         79.13  63  P      P       07 11 18.8  0.0
PMR   Palmer            79.20  12  P      P       07 11 17.9  0.0
      baz=204
L20K  Farewell, AK      79.20   9  P      P       07 11 17.5 -0.4
      baz=199
HLID  Hailey            79.74  39  P      P       07 11 21.5  0.0
HLID                               IAmb   IAmb    07 11 22.9
      comp=Z,17nm,0.9s
HLID  Hailey            79.74  39  P      P       07 11 20.8 -0.7
      baz=237,SNR=17
SCM   Sheep Creek Mo    79.78  12  P      P       07 11 21.0 -0.1
      baz=206
P17A  Butcher Ranch,    80.00  44  P      P       07 11 23.2 +0.2
K20K  Telida            80.00   9  P      P       07 11 21.9 -0.4
      baz=199
ANM   Nome              80.02   4  P      P       07 11 22.9 +0.7
      baz=188
NJ2   Nanjing           80.10 307  eP     P       07 11 25.3 +1.9
NJ2                                pP     pP      07 11 44.3 +1.4
NJ2                                sP     sP      07 11 51.0 +0.3
NJ2                                pmax   pmax
      comp=Z,10.0nm,0.8s
NJ2                                pmax   pmax
      comp=Z,370nm,4.3s
Y22A  Socorro           80.11  51  P      P       07 11 24.2 +0.6
      baz=244
N25K  Chitina, Valde    80.16  14  P      P       07 11 23.5 +0.3
      baz=208
MA2   Magadan           80.18 342  LR     LR      07 43 01.0
      comp=Z,47nm,20.7s,baz=132,slow=33
M24K  Tolsona, Glenn    80.26  13  P      P       07 11 24.0 +0.3
      baz=207
MCARA McCarthy VSAT     80.33  14  P      P       07 11 23.5 -0.5
      baz=210
MNTX  Cornudas Mount    80.35  53  P      P       07 11 23.9 -0.9
      baz=245,SNR=14
MNTX  Cornudas Mount    80.35  53  P      P       07 11 25.2 +0.3
      baz=245
BNM   Barren Site       80.45  51  P      P       07 11 25.8 +0.2
BSUT  Blindstream Ca    80.51  43  P      P       07 11 26.2 +0.3
O29M  Mount Kennedy     80.56  17  P      P       07 11 24.7 -0.7
      baz=214
TRF   Thorofare Moun    80.70  10  P      P       07 11 24.8 -1.4
      baz=203,SNR=5.1
TX31  Lajitas Ar. Si    80.74  56  P      P       07 11 28.6 +1.5
      baz=247
TXAR  Lajitas Array     80.74  56  P      P       07 11 27.5 +0.4
      comp=Z,9.5nm,1.1s,baz=225,slow=5.1,SNR=49
      comp=Z,9.5nm,1.1s
CHUM  Lake Minchumin    80.77   9  P      P       07 11 25.5 -0.8
      baz=201
NEW   Newport           80.82  34  P      P       07 11 26.3 -0.7
      comp=Z,4.4nm,0.9s,baz=133,slow=8.6,SNR=3.9
      comp=Z,4.4nm,0.9s
NEW   Newport           80.82  34  P      P       07 11 26.0 -1.0
      baz=234
TNA   Tin City          80.88   2  P      P       07 11 26.4 -0.4
TNA                                IAmb   IAmb    07 11 28.2
      comp=Z,20nm,1.1s
TNA   Tin City          80.88   2  P      P       07 11 26.5 -0.4
      baz=186,SNR=7.7
ANMO  Albuquerque       80.93  50  LR     LR      07 39 21.3
      comp=Z,53nm,20.2s,baz=331,slow=30
ANMO  Albuquerque       80.93  50  P      P       07 11 28.3 +0.2
ANMO  Albuquerque       80.93  50  P      P       07 11 26.5 -1.5
      baz=244
ANMO  Albuquerque       80.93  50  P      P       07 11 29.6 +1.5
      baz=244
GCSA  Galena City Sc    80.96   7  P      P       07 11 27.4 +0.1
      baz=196
S34M  Telegraph Cree    81.01  21  P      P       07 11 27.2 -0.5
      baz=221
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CN2   Changchun         81.05 320  eP     P       07 11 31.3 +3.0
CN2                                pmax   pmax
      comp=Z,10.0nm,0.7s
YUK8  Steele Glacier    81.06  16  P      P       07 11 27.5 -0.8
      baz=213
YUK6  Outpost Mounta    81.16  17  P      P       07 11 28.5 -0.2
      baz=214
MCK   McKinley          81.20  11  P      P       07 11 27.9 -0.7
      baz=204,SNR=5.7
M26K  Nabesna, AK       81.23  14  P      P       07 11 28.1 -0.7
      baz=210
HYT   Haines Junctio    81.30  17  P      P       07 11 28.9 -0.4
      baz=215
YUK3  Moose Creek       81.30  15  P      P       07 11 29.0 -0.5
      baz=212
GDL2  Guadalupe Moun    81.35  53  P      P       07 11 30.5 +0.2
MCMT  McKenzie Canyo    81.37  39  P      P       07 11 29.8 -0.5
YUK4  Talbot Arm        81.41  16  P      P       07 11 29.6 -0.4
      baz=214
M27K  Edge Creek, AK    81.45  14  P      P       07 11 29.9 -0.3
      baz=211
O30N  Mendenhall        81.66  18  P      P       07 11 30.6 -0.5
      baz=216
L26K  Log Cabin Wild    81.69  13  P      P       07 11 31.1 -0.1
      baz=210
BVCY  Beaver Creek      81.75  15  P      P       07 11 31.2 -0.4
      baz=212
CLNB  Carlsbad          81.75  53  P      P       07 11 32.0 -0.3
MSO   Missoula          81.80  37  P      P       07 11 31.4 -0.9
      baz=237,SNR=5.9
TPAW  Teton Pass        81.85  41  P      P       07 11 32.5 -0.4
K24K  Donnelly Dome     81.87  12  P      P       07 11 31.9 -0.3
      baz=207
S22A  4UR Ranch, Cre    81.89  47  P      P       07 11 32.9 -0.3
      baz=244,SNR=18
NEA2  Nenana            81.96  10  P      P       07 11 32.2 -0.4
      baz=204
RIDG  Independent Ri    82.00  12  P      P       07 11 32.5 -0.4
      baz=208
O20A  White River Ci    82.00  45  P      P       07 11 32.5 -1.2
      baz=242
I21K  Tanana            82.04   9  P      P       07 11 32.4 -0.5
      baz=201
IMW   Indian Meadow     82.07  40  P      P       07 11 33.7 -0.3
IMW                                IAmb   IAmb    07 11 35.3
      comp=Z,20nm,1.2s
L27K  Beaver Creek,     82.07  14  P      P       07 11 32.5 -0.7
      baz=211
MLY   Manley            82.09  10  P      P       07 11 31.5 -1.9
      baz=202,SNR=5.3
MOOW  Moose Ponds       82.11  41  P      P       07 11 33.7 -0.5
LRM   Limekiln Ridge    82.13  38  P      P       07 11 33.8 -0.5
HDA   Harding Lake      82.18  11  P      P       07 11 32.2 -1.6
      baz=206,SNR=6.3
QLMT  Earthquake Lak    82.24  39  P      P       07 11 35.0 +0.2
H21K  Melozitna Rive    82.36   9  P      P       07 11 33.7 -1.0
      baz=200
M29M  Somme Creek       82.38  16  P      P       07 11 33.9 -1.1
      baz=214
BW06  Boulder Array     82.38  42  P      P       07 11 34.1 -1.5
      baz=241
PDAR  Pinedale Array    82.38  42  P      P       07 11 35.2 -0.4
      comp=Z,6.1nm,0.9s,baz=223,slow=3.2,SNR=45
      comp=Z,6.1nm,0.9s
SCRK  Sand Creek        82.39  13  P      P       07 11 34.2 -0.9
      baz=209,SNR=6.4
I23K  Minto, Yukon-K    82.42  10  P      P       07 11 33.9 -1.1
      baz=204
TCOL  CIGO, UAF Yank    82.44  11  P      P       07 11 33.5 -1.5
      baz=205
COLA  College           82.44  11  P      P       07 11 34.5 -0.5
COLA                               IAmb   IAmb    07 11 35.3
      comp=Z,29nm,0.9s
COLA  College           82.44  11  P      P       07 11 33.8 -1.2
      baz=205
BOZ   Bozeman (W)       82.51  39  P      P       07 11 35.3 -0.8
      baz=239,SNR=10
ILAR  Eielson Array     82.52  11  P      P       07 11 34.4 -1.1
      comp=Z,3.7nm,1.0s,baz=232,slow=6.4,SNR=38
      comp=Z,3.7nm,1.0s
SEY   Seymchan          82.54 345  P      P       07 11 34.9 -0.8
      comp=Z,3.2nm,0.8s,baz=127,slow=5.4,SNR=9.0
      comp=Z,3.2nm,0.8s
H17A  Grant Village     82.54  40  P      P       07 11 35.7 -0.8
      baz=240,SNR=7.2
POKR  Poker Plat Res    82.73  11  P      P       07 11 35.7 -0.9
      baz=205,SNR=7.8
SDCO  Great Sand Dun    82.84  48  P      P       07 11 37.7 -0.5
      baz=244,SNR=9.9
SDCO  Great Sand Dun    82.84  48  P      P       07 11 37.6 -0.6
      baz=244
K27K  Chicken           82.85  13  P      P       07 11 37.8 +0.5
      baz=211
M30M  Minto, Yukon      82.93  16  P      P       07 11 37.6 -0.1
      baz=216
L29M  L29M              83.02  15  P      P       07 11 38.8 +0.6
      baz=214,SNR=7.0
H23K  Yukon River       83.02  10  P      P       07 11 38.3 +0.2
      baz=203
G21K  Allakaket         83.08   8  P      P       07 11 38.6 +0.2
      baz=200
MSTX  Muleshoe          83.28  52  P      P       07 11 39.8 -0.5
      baz=246,SNR=13
MSTX  Muleshoe          83.28  52  P      P       07 11 39.7 -0.6
      baz=246
M31M  Drury Creek, Y    83.30  17  P      P       07 11 40.1 +0.5
      baz=218
T25A  Trinidad          83.36  49  P      P       07 11 40.1 -0.7
      baz=245
PRP   Porcupine Dome    83.45  11  P      P       07 11 39.8 -0.7
      baz=207,SNR=12
WTLY  Watson Lake, Y    83.46  21  P      P       07 11 40.0 -0.5
      baz=223
DAWY  Dawson            83.50  14  P      P       07 11 40.5 -0.1
      baz=213
Q24A  Divide            83.61  47  P      P       07 11 42.2  0.0
      baz=244,SNR=5.4
RDOG  Red Dog Mine      83.63   4  P      P       07 11 41.6 +0.4
RDOG                               IAmb   IAmb    07 11 42.5
      comp=Z,12nm,1.0s
RDOG  Red Dog Mine      83.63   4  P      P       07 11 40.7 -0.5
      baz=190
ISCO  Idaho Springs     83.65  46  P      P       07 11 41.4 -0.9
      baz=244,SNR=5.3
ISCO  Idaho Springs     83.65  46  P      P       07 11 42.1 -0.2
      baz=244
EGAK  Eagle             83.70  13  P      P       07 11 40.6 -0.9
      baz=211
RLMT  Red Lodge         83.71  40  P      P       07 11 41.9 -0.5
      baz=241,SNR=12
I26K  Coal Creek Min    83.73  12  P      P       07 11 41.4 -0.4
      baz=210
F21K  Alatna River      83.75   8  P      P       07 11 41.7 -0.2
      baz=200
G23K  Bananza Creek     83.76   9  P      P       07 11 42.1 +0.1
      baz=203
K29M  Barlow Dome       83.78  15  P      P       07 11 41.8 -0.3
      baz=215
833A  Chaparral WMA,    83.83  59  P      P       07 11 42.0 -1.1
      baz=249
833A  Chaparral WMA,    83.83  59  P      P       07 11 43.0 -0.1
      baz=249
N23A  Red Feather La    83.91  45  P      P       07 11 43.5  0.0
N23A                               IAmb   IAmb    07 11 44.7
      comp=Z,16nm,1.1s
N23A  Red Feather La    83.91  45  P      P       07 11 43.2 -0.4
      baz=244,SNR=9.0
LIRD  Liard River Hi    83.91  22  P      P       07 11 42.8  0.0
      baz=226
BELA  Belgrano 2        83.96 172  P      P       07 11 42.9 -0.1
BELA                               IAmb   IAmb    07 11 44.0
      comp=Z,22nm,1.1s
MAYO  Mayo, Yukon       84.00  16  P      P       07 11 43.6 +0.5
      baz=216
J29M  Klondike Camp     84.11  15  P      P       07 11 43.7 -0.1
      baz=214,SNR=5.9
F22K  John River        84.19   8  P      P       07 11 43.8 -0.3
      baz=201
COLD  Coldfoot          84.22   9  P      P       07 11 44.3 +0.2
      baz=203,SNR=13
JCT   Junction City     84.28  56  P      P       07 11 44.3 -1.1
      baz=248
JCT   Junction City     84.28  56  P      P       07 11 45.1 -0.3
      baz=248
K22A  Casper            84.31  43  P      P       07 11 44.0 -1.4
      baz=243
K22A  Casper            84.31  43  P      P       07 11 44.9 -0.5
      baz=243
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I27K  Kandik River      84.31  13  P      P       07 11 44.4 -0.4
      baz=211
G25K  Bearman Lake      84.46  11  P      P       07 11 45.0 -0.4
      baz=207
AMTX  Amarillo          84.47  52  P      P       07 11 45.8 -0.6
AMTX                               IAmb   IAmb    07 11 46.9
      comp=Z,21nm,1.1s
AMTX  Amarillo          84.47  52  P      P       07 11 44.8 -1.6
      baz=247
AMTX  Amarillo          84.47  52  P      P       07 11 46.2 -0.1
      baz=247
MMPY  Sheldon Lake,     84.54  18  P      P       07 11 45.3 -0.7
      baz=221
BILL  Bilibino          84.55 353  P      P       07 11 45.2 -0.6
E22K  Anaktuvuk Pass    84.83   8  P      P       07 11 47.0 -0.4
      baz=201
F24K  Squaw Lake        84.84  10  P      P       07 11 47.1 -0.3
      baz=205
EGMT  Eagleton          84.84  37  P      P       07 11 47.7 -0.2
      baz=240
I29M  Ogilvie Camp,     84.84  14  P      P       07 11 46.9 -0.6
      baz=214,SNR=8.1
H27K  Steamboat Moun    84.87  12  P      P       07 11 47.2 -0.4
      baz=211
G26K  Porcupine Rive    85.05  11  P      P       07 11 48.2 -0.2
      baz=209
E23K  Chandalar         85.07   9  P      P       07 11 48.8 +0.2
      baz=203,SNR=8.9
KOTAN Kotaneelee Air    85.16  22  P      P       07 11 48.6 -0.4
      baz=228,SNR=5.4
ABTX  Abilene, Hawle    85.19  54  P      P       07 11 49.4 -0.5
ABTX  Abilene, Hawle    85.19  54  P      P       07 11 49.1 -0.8
      baz=248
ABTX  Abilene, Hawle    85.19  54  P      P       07 11 49.7 -0.2
      baz=248
E24K  Your Creek        85.26   9  P      P       07 11 49.4 -0.1
      baz=204
H03S2 Juan Fernandez    85.27 124  T      T       08 46 03.2
      baz=251,slow=74,SNR=6.7
F25K  Christian Rive    85.28  10  P      P       07 11 49.8 +0.2
      baz=207,SNR=8.2
H03S1 Juan Fernandez    85.28 124  T      T       08 46 04.2
      baz=251,slow=74,SNR=3.3
H03S3 Juan Fernandez    85.29 124  T      T       08 45 59.0
      baz=251,slow=74,SNR=3.1
735A  Kenedy            85.32  59  P      P       07 11 51.3 +0.7
      baz=250
G27K  Doyon Strip       85.34  12  P      P       07 11 50.0 +0.1
      baz=211
FLDN  Fort Liard        85.44  23  P      P       07 11 51.0 +0.6
      baz=228
F26K  Sheenjek River    85.64  11  P      P       07 11 51.8 +0.4
      baz=208
D23K  Nanushuk River    85.76   8  P      P       07 11 52.2 +0.3
      baz=202
E25K  Arctic Village    85.77  10  P      P       07 11 52.2 +0.2
      baz=207,SNR=8.5
EPYK  Eagle Plains      86.05  14  P      P       07 11 53.6 +0.1
      baz=216
435B  Jarrell           86.17  57  P      P       07 11 54.7 -0.1
435B  Jarrell           86.17  57  P      P       07 11 54.2 -0.6
      baz=250
435B  Jarrell           86.17  57  P      P       07 11 54.5 -0.3
      baz=250
LAO   LASA Array        86.32  40  P      P       07 11 54.5 -0.7
      baz=243,SNR=6.3
LAO   LASA Array        86.32  40  P      P       07 11 55.1 -0.1
      baz=243
E27K  Coleen River      86.55  11  P      P       07 11 55.9 +0.1
      baz=211
RSSD  Black Hills       86.58  43  P      P       07 11 56.1 -0.7
      baz=245
G30M  tAoh Zraii Nji    86.66  14  P      P       07 11 55.6 -0.8
      baz=216
WHTX  Lake Whitney,     86.69  56  P      P       07 11 55.7 -1.6
      baz=250
WHTX  Lake Whitney,     86.69  56  P      P       07 11 57.0 -0.3
      baz=250
D25K  Kavik River       86.72   9  P      P       07 11 56.5 -0.1
      baz=206
C24K  Franklin Bluff    86.73   8  P      P       07 11 56.2 -0.4
      baz=204
HKT   Hockley           87.31  58  P      P       07 12 00.3 +0.1
HKT   Hockley           87.31  58  P      P       07 12 00.4 +0.1
      baz=251
A21K  Barrow            87.33   5  P      P       07 11 59.0 -0.5
      baz=196
CBKS  Cedar Bluff       87.42  49  P      P       07 11 59.5 -1.3
      baz=248
C27K  Jago River        87.42  10  P      P       07 11 59.7 -0.3
      baz=209
WRGLY Wrigley           87.47  20  P      P       07 11 59.6 -0.7
      baz=228
C26K  Camden Bay        87.48  10  P      P       07 11 59.4 -0.8
      baz=208
F31M  Tsiigehtchic      87.61  14  P      P       07 12 00.1 -0.7
      baz=218,SNR=14
MAW   Mawson            87.70 199  LR     LR      07 51 00.5
      comp=Z,70nm,18.1s,baz=94,slow=35
237A  Washetta, Mont    88.01  56  P      P       07 12 04.2 +0.5
      baz=251
R32A  Long Quarter,     88.02  49  P      P       07 12 02.9 -0.7
      baz=249
DGMT  Dagmar            88.34  39  P      P       07 12 04.8  0.0
DGMT  Dagmar            88.34  39  P      P       07 12 03.9 -1.0
      baz=245,SNR=5.1
DGMT  Dagmar            88.34  39  P      P       07 12 04.7 -0.1
      baz=245
INK   Inuvik            88.35  14  P      P       07 12 03.1 -1.2
      comp=Z,4.5nm,0.9s,baz=217,slow=5.3,SNR=15
      comp=Z,4.5nm,0.9s
INK   Inuvik            88.35  14  P      P       07 12 03.6 -0.7
      baz=218,SNR=6.2
HHC   Hu-ho-hao-te      88.98 313  eP     P       07 12 09.5 +1.4
HHC                                pmax   pmax
      comp=Z,38nm,0.8s
HHC                                pmax   pmax
      comp=Z,210nm,6.0s
PLCA  Paso Flores       89.56 132  P      P       07 12 12.2 +1.2
      comp=Z,2.9nm,1.0s,baz=233,slow=4.2,SNR=4.8
      comp=Z,2.9nm,1.0s
KSU1  Kansas State U    89.80  49  P      P       07 12 10.9 -0.9
      baz=250
BTO   Baotou            89.99 312  eP     P       07 12 17.8 +4.9
BTO                                pP     pwP     07 12 37.5 +2.5
BTO                                sP     sP      07 12 43.0 +2.7
BTO                                PP     PP      07 15 53.3 +6.3
BTO                                S      S       07 23 07.3 +7.3
BTO                                pmax   pmax
      comp=Z,20nm,0.8s
BTO                                pmax   pmax
      comp=Z,210nm,3.2s
BTO                                LR     LR
      comp=Z,700nm,15.7s
BTO                                LR     LR
      comp=Z,320nm,11.7s
BTO                                LR     LR
      comp=Z,860nm,16.1s
YKA   Yellowknife Ar    90.19  23  P      P       07 12 12.7 -0.5
      comp=Z,4.9nm,1.0s,baz=234,slow=4.3,SNR=46
      comp=Z,4.9nm,1.0s
JTS   Las Juntas de     91.33  80  LR     LR      07 45 59.9
      comp=Z,68nm,19.7s,baz=180,slow=31
JTS   Las Juntas de     91.33  80  P      P       07 12 20.2 +0.6
ECSD  EROS Data Cent    91.38  45  P      P       07 12 17.7 -1.4
      baz=250
C36M  Paulatuk          91.44  16  P      P       07 12 18.4 -0.4
      baz=227
CD2   Chengdu           91.74 301  eP     P       07 12 21.3 +0.1
344A  Westbrook Farm    91.95  58  P      P       07 12 23.1 +1.0
      baz=253
ELIB  Princess Elisa    92.07 185  dP     P       07 12 21.8 -0.3
      comp=Z,10nm,1.1s
ELIB                               dpP    pP      07 12 40.5 -1.5
ELIB                               dsP    sP      07 12 50.5 +0.7
PZH   PanZhiHua         92.19 297  P      P       07 12 22.5 -1.0
PZH                                pmax   pmax
      comp=Z,10.0nm,0.5s
PZH                                pmax   pmax
      comp=Z,120nm,5.1s
R40A  Maddies Statio    92.75  51  P      P       07 12 25.2 -0.4
      baz=253
LCAR  Lake Charles      92.95  54  P      P       07 12 26.0 -0.6
      baz=253
346A  Big Creek Wild    92.97  58  P      P       07 12 26.7 -0.1
      baz=254
A36M  Sachs Harbour     92.98  13  P      P       07 12 25.4 -0.5
A36M  Sachs Harbour     92.98  13  P      P       07 12 25.0 -0.9
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	baz=226						
T42A	Van Buren	93.28	53	P	P	07 12 26.7	-1.3
	baz=253						
P40A	Paris	93.28	50	P	P	07 12 26.9	-1.2
	baz=253						
AGMN	Agassiz Nation	93.41	41	P	P	07 12 26.6	-1.8
	baz=251						
AGMN	Agassiz Nation	93.41	41	P	P	07 12 25.9	-2.5
	baz=251						
CCM	Cathedral Cave	93.45	52	P	P	07 12 26.9	-2.0
	baz=253						
CCM	Cathedral Cave	93.45	52	P	P	07 12 27.6	-1.2
	baz=253						
I37B	Waseca	93.67	45	P	P	07 12 28.7	-1.0
	baz=252						
K38A	Parkersburg	93.69	47	P	P	07 12 28.4	-1.4
	baz=253						
ULM	Lac du Bonnet	94.05	39	P	P	07 12 29.6	-1.7
	comp=Z,2.5nm,0.7s,baz=239,slow=6.1,SNR=3.7						
	comp=Z,2.5nm,0.7s						
FVM	French Village	94.05	52	P	P	07 12 31.0	-0.6
	baz=254						
F36A	Milaca	94.15	44	P	P	07 12 31.0	-0.9
	baz=252						
W45A	Hickory Valley	94.23	55	P	P	07 12 32.2	-0.3
	baz=254						
SPMN	Marine on St.	94.44	44	P	P	07 12 32.0	-1.2
	baz=253						
TNCH	TengChong	94.60	295	eP	P	07 12 33.5	-1.2
TNCH				pP	pP	07 12 55.5	+0.9
L40A	Anamosa	94.62	48	P	P	07 12 33.3	-0.8
	baz=254						
U49A	Red Boiling Sp	97.25	54	P	P	07 12 45.5	-0.8
	baz=256						
M53A	WI Miller and	102.16	50	P	Pdif	07 13 07.5	-0.6
	baz=260						
MKAR	Makanchi Array	110.78	315	PKiKP	PKiKP	07 17 43.1	-2.7
	comp=Z,0.4nm,0.7s,baz=51,slow=2.3,SNR=3.9						
KURBB	Kurchatov Arra	113.17	319	PKiKP	PKiKP	07 17 48.3	-1.9
	comp=Z,0.7nm,0.8s,baz=80,slow=2.3,SNR=9.0						
BVAR	Borovoye Array	117.85	322	PKP	PKPdf	07 17 57.5	-1.7
	comp=Z,1.4nm,0.7s,baz=48,slow=2.2,SNR=5.1						
ARCES	ARCESS Array B	124.65	352	PKP	PKPdf	07 18 09.0	-2.7
	comp=Z,4.5nm,0.8s,baz=54,slow=6.2,SNR=4.1						
AKASG	Malin Array Be	140.34	337	PKP	PKPdf	07 18 41.4	-0.4
	comp=Z,0.9nm,0.6s,baz=40,slow=1.6,SNR=4.7						
CLL	Collm	143.85	353	i PKPdf	PKPab	07 18 45.1	-0.1
	comp=Z,7.0nm,0.9s						
OSTC	Ostas	144.11	349	ePKP	PKPab	07 18 46.4	+0.2
BRG	Berggiesshubel	144.16	352	ePKP	PKPab	07 18 46.5	+0.2
BRG				Amp		07 18 47.6	
	comp=Z,2.6nm,0.9s						
BRG	Berggiesshubel	144.16	352	P	PKiKP	07 18 52.4	+0.2
BRG				Amp		07 18 52.7	
	comp=Z,4.7nm,0.8s						
FBE	Freiberg	144.19	353	ePKPbc	PKPab	07 18 46.6	+0.2
	baz=6.8,slow=3.2						
DPC	Dobruska-Polom	144.29	349	ePKP	PKPab	07 18 47.0	+0.1
NIE	Niedzica	144.30	344	ePKP	PKPbc	07 18 48.0	+0.7
KASTN	Kahler Asten	144.31	358	ePKPbc	PKPab	07 18 46.5	-0.4
	baz=6.8,slow=3.2						
OKC	Ostrava-Krasne	144.42	347	ePKP	PKPbc	07 18 47.7	+0.1
KRLC	Kraliky	144.47	349	ePKP	PKPbc	07 18 47.8	-0.1
MORC	Moravsky Berou	144.60	348	⇑P	PKPbc	07 18 48.3	0.0
MORC	Moravsky Berou	144.60	348	ePKP	PKPab	07 18 48.0	-0.1
UBBA	Unterbreizbach	144.61	356	ePKPbc	PKPab	07 18 47.5	-0.3
	baz=6.8,slow=3.2						
MOX	Moxa	144.66	354	ePKPbc	PKPab	07 18 48.0	-0.3
	baz=6.8,slow=3.2						
MOX				eL	L	08 07 05.9	
	comp=Z,83nm,22.0s						
LANS	Liptovska Anna	144.75	345	ePKP	PKPdf	07 18 49.7	0.0
PLN	Plauen	144.76	354	ePKPbc	PKPab	07 18 48.1	-0.5
	baz=6.8,slow=3.2						
WERD	Werda	144.78	354	ePKPbc	PKPab	07 18 48.5	-0.2
	baz=6.8,slow=3.2						
TANN	Tannenbergstha	144.79	353	ePKPbc	PKPab	07 18 48.5	-0.3
	baz=6.8,slow=3.2						
TRPA	Tarpa	144.82	341	⇑P	PKPab	07 18 48.8	0.0
GUNZ	Gunzen	144.86	353	ePKPbc	PKPab	07 18 48.8	-0.2
	baz=6.8,slow=3.2						
WERN	Wernitzgruen	144.93	353	ePKPbc	PKPab	07 18 49.0	-0.2
	baz=6.8,slow=3.2						
MAUC	Maruska	144.93	347	ePKP	PKPab	07 18 49.3	0.0
MEM	Membach	144.93	1	dPKP	PKPab	07 18 48.7	-0.5
PRU	Pruhonice	144.94	351	ePKP	PKPbc	07 18 49.3	0.0
BSTI	Sart Tilman	144.95	1	dPcP	PKPbc	07 18 49.1	-0.2
BTNL	Ternell	144.96	0	dPKP	PKPbc	07 18 48.9	-0.5
SNF	Seneffe	144.99	2	dPKP	PKPbc	07 18 48.8	-0.6
AHRW	Bad Neuenahr-A	145.00	359	ePKPbc	PKPbc	07 18 48.7	-0.7
	baz=6.8,slow=3.2						
BCLA	Clavier	145.11	1	dPKP	PKPbc	07 18 49.5	-0.3
ARCR	ARCALIA	145.13	338	⇑P	PKPbc	07 18 49.5	-0.5
BGES	Gesves	145.14	2	dPcP	PKPbc	07 18 48.6	-1.3
BHOU	Houvegnez	145.19	1	dPKP	PKPbc	07 18 49.8	-0.3
BMRD	Maredsous	145.22	2	dPKP	PKPbc	07 18 49.6	-0.5
VRAC	Vranov	145.24	348	ePKP	PKPbc	07 18 50.0	-0.3
VRI	Vrincioaia	145.25	335	⇑P	PKPbc	07 18 49.8	-0.6
MANZ	Manzenberg	145.26	354	ePKPbc	PKPbc	07 18 50.1	-0.3
	baz=6.8,slow=3.2						
TNS	Taunus Mts	145.29	358	ePKPbc	PKPbc	07 18 50.3	-0.2
	baz=6.8,slow=3.2						
PLOR	Plostina	145.29	335	⇓P	PKPbc	07 18 49.8	-0.8
TPGR	Topolog	145.32	332	⇓P	PKPbc	07 18 50.1	-0.6
RCHB	Rochefort	145.37	1	dPKP	PKPbc	07 18 50.0	-0.7
DOU	Dourbes	145.41	2	dPKP	PKPdf	07 18 50.2	-0.5
OZUR		145.43	336	⇑P	PKPdf	07 18 50.6	-0.4
JAVC	Velka Javorina	145.44	347	ePKP	PKPab	07 18 51.6	+0.3
ROTZ	Rotzenmuhle	145.46	353	ePKPbc	PKPdf	07 18 50.9	0.0
	baz=6.8,slow=3.2						
COVR	Voineasa-Covas	145.47	335	⇑P	PKPdf	07 18 50.6	-0.4
KRUC	Moravsky	145.51	348	ePKP	PKPdf	07 18 50.7	-0.3
VYHS	Vyhne	145.52	345	ePKP	PKPdf	07 18 51.1	+0.1
GRF	Grafenberg Arr	145.63	355	ePKPbc	PKPbc	07 18 51.7	+0.2
	baz=6.8,slow=3.2						
GRF				eL	L	08 09 02.8	
	comp=Z,145nm,20.2s						
HARR	Harsova	145.67	332	⇑P	PKPdf	07 18 51.5	+0.1
MLR	Muntele Rosu	145.87	335	⇑P	PKPdf	07 18 51.8	-0.1
WLF	Walferdange	145.88	0	dPcP	PKPab	07 18 52.6	-0.1
WLF	Walferdange	145.88	0	ePKPbc	PKPab	07 18 52.6	-0.1
	baz=6.8,slow=3.2						
KHC	Kasperske Hory	145.91	352	ePKP	PKPbc	07 18 52.2	-0.2
MARR	Marisel-Cluj	145.91	339	⇑P	PKPdf	07 18 52.1	+0.2
ISR	Istrita	145.93	334	⇑P	PKPbc	07 18 52.7	0.0
DRGR		145.95	340	⇑P	PKPdf	07 18 52.1	+0.2
MODS	Modra-Piesok	145.99	347	ePKP	PKPbc	07 18 52.9	+0.2
CKRC	Cesky Krumlov	146.11	351	ePKP	PKPbc	07 18 52.6	-0.4
BRTR	Keskin Array B	146.12	321	PKPbc	PKPdf	07 18 52.5	0.0
	comp=Z,6.4nm,0.9s,baz=98,slow=2.5,SNR=18						
GEC2	GERESS Array S	146.18	351	ePKPbc	PKPbc	07 18 53.0	-0.4
	baz=6.8,slow=3.2						
GERES	GERESS Array B	146.18	351	PKPbc	PKPdf	07 18 51.6	-0.6
	comp=Z,4.3nm,0.9s,baz=35,slow=3.3,SNR=23						
VOIR		146.27	336	⇑P	PKPbc	07 18 53.5	-0.1
ARR	Arges	146.49	337	⇑P	PKPbc	07 18 53.8	-0.5
CONA	Conrad Observa	146.70	348	ePKP	PKPbc	07 18 54.5	-0.4
	comp=Z,11nm,1.0s,SNR=7.8						
SIRR	Siria	146.75	341	⇑P	PKPdf	07 18 53.6	+0.5
RONA	Rosalia, Austr	146.84	348	ePKP	PKPbc	07 18 54.8	-0.4
	comp=Z,11nm,1.0s						
MOA	Molln	147.06	350	ePKP	PKPbc	07 18 55.3	-0.5
	comp=Z,8.6nm,0.9s						
FUR	Furstenfeldbru	147.14	354	ePKPbc	PKPbc	07 18 56.1	0.0
	baz=6.8,slow=3.2						
GZR	Gura Zlata	147.15	339	⇑P	PKPdf	07 18 54.9	+1.0
BFO	Black Forest	147.18	358	ePKPbc	PKPbc	07 18 55.9	-0.2
	baz=6.8,slow=3.2						
BZS	Buzias	147.34	340	⇑P	PKPdf	07 18 54.4	+0.2
RJOB	Jochberg	147.39	352	ePKPbc	PKPbc	07 18 56.6	-0.2
	baz=6.8,slow=3.2						
ARSA	Arzberg	147.42	349	ePKP	PKPbc	07 18 55.8	-1.1
	comp=Z,13nm,1.4s						
UBR	Ueberruh	147.73	355	ePKPbc	PKPbc	07 18 57.2	-0.5
	baz=6.8,slow=3.2						
RETA	Reutte	147.86	355	ePKP	PKPbc	07 18 57.3	-0.8
	comp=Z,14nm,1.2s,SNR=5.1						
WATA	Walderalm	147.93	353	ePKP	PKPbc	07 18 57.5	-0.9
	comp=Z,9.9nm,0.9s						
KBA	Koelnbreinsper	147.96	351	i PKP	PKPdf	07 18 56.8	+1.5
	comp=Z,8.1nm,1.1s						
MOTA	Moosalm	147.97	354	ePKP	PKPbc	07 18 57.4	-1.1
	comp=Z,15nm,0.9s,SNR=5.8						
WTTA	Wattenberg	148.00	353	ePKP	PKPbc	07 18 57.8	-0.8
	comp=Z,23nm,1.2s,SNR=5.4						
SOKA	Soboth	148.06	349	i PKP	PKPbc	07 18 57.3	-1.3
	comp=Z,10nm,1.2s						
SQTA	Sankt Quirin	148.08	354	ePKP	PKPbc	07 18 57.8	-1.0
	comp=Z,15nm,1.1s						
DAVA	Damuels	148.13	356	ePKP	PKPbc	07 18 58.2	-0.7
	comp=Z,28nm,1.1s,SNR=7.4						
FETA	Feichten	148.33	354	ePKP	PKPbc	07 18 58.8	-0.6
	comp=Z,9.5nm,0.9s						
MYKA	Terra Mystica	148.35	351	ePKP	PKPbc	07 18 57.7	-1.7
	comp=Z,7.7nm,0.9s						
ABTA	Abfaltersbach	148.40	352	ePKP	PKPbc	07 18 58.1	-1.4
	comp=Z,15nm,1.0s,SNR=7.0						
POLO	Lamas de Olo	151.37	23	ePKPbc	PKPbc	07 19 06.0	-1.0
MVO	Moncorvo	151.83	22	ePKPbc	PKPbc	07 19 07.3	-0.7
PMRV	Marv??o	153.20	24	ePKPdf	PKPdf	07 19 02.6	-0.9
ESDC	Sonseca Array	154.20	19	PKP	PKPdf	07 19 04.5	-0.5
	comp=Z,1.3nm,1.0s,baz=3.3,slow=5.0,SNR=5.2						
TORD	Torodi Ar. Bea	174.83	116	PKP	PKPdf	07 19 21.4	-2.2
	comp=Z,2.3nm,1.1s,baz=306,slow=0.6,SNR=6.3						
TORD				PKPab	PKPab	07 20 57.1	-1.2
	comp=Z,1.9nm,1.1s,baz=264,slow=4.4,SNR=5.0						

DDA ***31*** *07:27:34.1±0.0, 38.°19N×26.°57E, h7^{km}±1^{km}, ML2.5*

ISK ***31*** *07:27:34.0, 38.°19N×26.°58E, h7^{km}, ML2.5/7*

ISC 31 07:27:34.3±0.9**, 38.°19N**±0.°03×**26.°57E**±0.°03**, h9**^{km}±6^{km}**,**
n21, σ0.^{s}59/39**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZEYE	Izmir, Urla-Ze	0.07	312	P	Pg	07 27 36.2	-0.2
ZEYE				S	Sg	07 27 37.8	-0.2
ZEYE				i AML	AML	07 27 38.0	
	comp=N,1µm,0.2s						
ZEYE				i AML	AML	07 27 38.0	
	comp=E,2µm,0.2s						
URLA	Izmir	0.17	6	Pg	Pg	07 27 37.9	-0.1
URLA				Sg	Sg	07 27 40.9	+0.4
URLA	Izmir	0.17	6	P	Pg	07 27 37.9	-0.1
URLA				S	Sg	07 27 40.9	+0.4
URLA				i AML	AML	07 27 41.0	
	comp=N,1µm,0.3s						
DGB	zmir	0.28	119	P	Pg	07 27 40.0	+0.1
DGB				i AML	AML	07 27 44.0	
	comp=N,684nm,0.3s						
DGB				S	Sg	07 27 44.2	+0.5
BLCB	Balcova	0.42	62	Pg	Pg	07 27 42.6	+0.1
BLCB				Sg	Sg	07 27 48.8	+0.8
CHOS	Chios island	0.45	296	Pg	Pg	07 27 43.6	+0.5
CHOS				Sg	Sg	07 27 49.9	+0.8
KARB	zmir-Karabur	0.49	345	P	Pg	07 27 43.6	-0.2
KARB				S	Sg	07 27 51.0	+0.8
GCAM	G?zelcaml?	0.72	133	Pg	Pg	07 27 48.2	+0.1
GCAM				Sg	Sb	07 27 58.0	-0.9
GCAM	G?zelcaml?	0.72	133	P	Pg	07 27 47.9	-0.2
GCAM				S	Sb	07 27 58.0	-0.9
ZEDA	zmir-Bergama	0.87	27	P	Pb	07 27 51.3	-0.3
ZEDA				S	Sg	07 28 02.8	+0.4
DDIM	Aydin, Didim	0.90	144	P	Pb	07 27 51.7	-0.5
DDIM				S	Sn	07 28 05.7	-0.6
DKL	Dikili	0.92	16	Pg	Pb	07 27 52.4	0.0
DKL				Sg	Sb	07 28 05.5	+0.8
AYVA	Ayvalik	1.12	5	P	Pg	07 27 54.6	-1.2
AYVA				S	Sn	07 28 12.9	+1.2
AYDN	Tasoluk	1.16	117	P	Pn	07 27 57.0	+0.1
AYDN				S	Sb	07 28 11.9	+0.1
SIGR	SIGRI	1.16	331	Pn	Pn	07 27 56.9	+0.1
SIGR				Sn	Sn	07 28 12.6	-0.2
BODT	Bodrum	1.27	152	Pn	Pg	07 27 58.7	0.0
BODT				Sn	Sn	07 28 16.4	+1.0
BUHA	Balikesir, Bur	1.37	17	P	Pb	07 27 60.0	-0.1
BUHA				S	Sb	07 28 17.5	-0.2
STEP	BALIKESIR_Sava	1.49	37	P	Pb	07 28 01.9	-0.3
STEP				S	Sg	07 28 21.9	-0.2
BAYC	CANAKKALE_Bayr	1.55	359	P	Pn	07 28 00.8	-1.3
MANT	Manisa	1.59	79	S	Sn	07 28 24.0	+0.3
KULA	Kula-Manisa	1.67	78	Pn	Pn	07 28 04.5	+0.6

IDC ***31*** *07:32:13.6±0.8, 24.°17N×124.°88E, h0^{km}, mb4.0/11,*
mbtmp4.0/12, ML3.2/1, MS3.4/8, Error ellipse:
s-maj=30.0km s-min=17.2km az=68.0

NEIC ***31*** *07:32:13.1±2.0, 23.°9N±0.°1×125.°49E±0.°03, h10^{km}±2^{km},*
mb4.6/25, Error ellipse: s-maj=25.0km s-min=4.3km
az=187.0

JMA ***31*** *07:32:18.1±0.1, 24.°3N±0.°8×125.°3E±0.°4, h40^{km}±2^{km},*
MV3.7/11, NEAR MIYAKOJIMA ISLAND

NIED ***31*** *07:32:18.1, 24.°30N×125.°25E, h40^{km}, MW4.1, Moment*
Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm;
M_{rr}0.43; $M_{\theta\theta}$-0.32; $M_{\phi\phi}$-0.11; $M_{r\theta}$0.81; $M_{\theta\phi}$-0.35; $M_{\phi r}$0.94;
Fault plane solution: $M_0$1.34000×10^{15} NP1:ϕ_s41.00000°,
δ79.00000°, λ84.00000°. NP2:ϕ_s252.00000°, δ12.00000°,
λ120.00000°.

ISC 31 07:32:16.2±1.2**, 24.°16N**±0.°05×**125.°27E**±0.°05**, h20**^{km}±5^{km}**,**
n68, σ0.^{s}98/69**, mb4.4**/23**, MS3.3**/7**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMJ2	Miyako jima3	0.58	5	P	Pg	07 32 28.1	+0.2
JMJ2				S	Sb	07 32 35.2	-0.3
JOGS	Gusukube	0.61	11	P	Pg	07 32 28.6	+0.2
JOGS				S	Sg	07 32 36.5	-0.1
JMJ	Miyako jima 2	0.65	2	P	Pb	07 32 28.1	-0.8
JIRB	Irabujima	0.67	352	P	Pb	07 32 29.1	-0.2
JIRB				S	Sb	07 32 37.1	-1.0
JTJ	Tarama	0.71	313	P	Pg	07 32 30.1	-0.1
JTJ				S	Sb	07 32 39.2	0.0
JIKM	Ikemajima	0.76	358	P	Pb	07 32 30.6	-0.2
JIKM				S	Sb	07 32 39.2	-1.5
JISG	Ishigakijimahi	0.97	296	P	Pb	07 32 34.4	0.0
JISG				eS	Sb	07 32 46.5	-0.5
JIJ	Ishigaki jima	1.05	281	P	Pg	07 32 36.3	-0.4
JIJ				S	Sb	07 32 48.9	-0.2
JKRS	Kuro-shima	1.16	274	P	Pg	07 32 38.4	-0.3
HATJ	Hateruma jima	1.35	266	eP	Pb	07 32 40.8	0.0
HATJ				eS	Sn	07 32 57.3	+0.1
IRIF	Iriomote-Funau	1.42	277	P	Pb	07 32 41.8	-0.2
YOJ	Yonaguni jima	2.09	279		Pn	07 32 51.3	+1.2
YOJ	Yonaguni jima	2.09	279	P	Pb	07 32 52.4	-1.0
NACB	Ninganchiao	3.36	271		Pn	07 33 07.7	+0.1
NACB	Ninganchiao	3.36	271	P	Pn	07 33 07.4	-0.2
YHNB	Yeheng	3.59	279		Pn	07 33 12.6	+1.7
YHNB	Yeheng	3.59	279	P	Pn	07 33 12.5	+1.7
YULB	Yu-li	3.72	259		Pn	07 33 12.0	-0.6
YULB	Yu-li	3.72	259	P	Pn	07 33 12.2	-0.4
SSLB	Suanglung	3.97	265		Pn	07 33 16.4	+0.4
SSLB	Suanglung	3.97	265	P	Pn	07 33 16.5	+0.4
TWGBT	Beinan	4.08	252	P	Pn	07 33 16.5	-1.0
TWG	Pinlang	4.08	252		Pn	07 33 16.0	-1.6
TPUB	Ta-pu	4.34	260		Pn	07 33 22.4	+1.3
TPUB	Ta-pu	4.34	260	P	Pn	07 33 22.6	+1.4
MAJO	Matsushiro	16.62	39	P	Pn	07 36 07.4	-0.6
MJAR	Matsushiro Arr	16.62	39	Pn	P	07 36 11.4	+0.9
	0.1nm,0.3s,baz=223,slow=11,SNR=4.3						
	2.0nm,0.6s						
MJB9	Matsu-Tunnel	16.62	39	P	Pn	07 36 07.7	-0.4
DAV	Davao City (W)	17.00	179	LR	LR	07 43 58.2	
	comp=Z,53nm,18.0s,baz=1.5,slow=41						
GUMO	Guam	21.29	116	LR	LR	07 44 18.6	
	comp=Z,51nm,20.9s,baz=60,slow=34						
CMAR	Chiang Mai Arr	25.16	262	LR	LR	07 48 40.1	
	comp=Z,49nm,19.7s,baz=70,slow=40						
KLR	Kul'dur	25.53	10	LR	LR	07 47 37.5	
	comp=Z,66nm,18.3s,baz=184,slow=36						
PMG	Port Moresby	39.62	145	LR	LR	07 54 37.7	
	comp=Z,65nm,20.4s,baz=58,slow=34						
MK31	Makanchi Array	40.99	314	P	P	07 39 56.9	-0.9
MKAR	Makanchi Array	40.99	314	P	P	07 39 56.9	-0.9
	3.3nm,0.5s,baz=100,slow=10,SNR=63						
MKAR				LR	LR	07 56 28.8	
	comp=Z,38nm,19.8s,baz=92,slow=36						
	3.3nm,0.5s						
MAKZ	Makanchi	41.20	314	P	P	07 39 59.0	-0.6
MAKZ				IAmb	IAmb	07 40 00.0	
	comp=Z,4.7nm,0.6s						
ZALV	Zalesovo Beam	42.34	325	P	P	07 40 06.5	-2.3
	comp=Z,1.6nm,0.4s,baz=116,slow=8.9,SNR=6.3						
	comp=Z,1.6nm,0.4s						
KDJ	Kajisay	43.46	306	P	P	07 40 18.7	+0.5
NRN	Naryn	44.24	305	P	P	07 40 25.8	+1.1
KURK	Kurchatov	44.54	319	P	P	07 40 25.4	-1.2
KURBB	Kurchatov Arra	44.56	319	P	P	07 40 24.9	-1.8
	comp=Z,1.9nm,0.6s,baz=109,slow=9.2,SNR=20						
	comp=Z,1.9nm,0.6s						
WRA	Warramunga Arr	44.72	168	P	P	07 40 28.9	+0.7
	comp=Z,1.8nm,0.6s,baz=348,slow=8.8,SNR=28						
	comp=Z,1.8nm,0.6s						
NIL	Nilore	46.10	294	P	P	07 40 39.3	0.0
ASAR	Alice Springs	48.27	169	P	P	07 40 57.4	+1.3
	comp=Z,0.7nm,0.5s,baz=356,slow=13,SNR=23						
	comp=Z,0.7nm,0.5s						
GAR	Garm	48.41	301	P	P	07 40 57.6	+0.3
GAR				IAmb	IAmb	07 40 58.2	
	comp=Z,14nm,1.2s						
BVAR	Borovoye Array	50.08	320	P	P	07 41 08.1	-1.6
	comp=Z,1.8nm,0.6s,baz=101,slow=6.6,SNR=9.0						
	comp=Z,1.8nm,0.6s						
ABKAR	Akbulak array	56.13	314	P	P	07 41 54.0	-0.3
H21K	Melozitna Rive	64.94	27	P	P	07 42 54.4	+0.2
H21K				IAmb	IAmb	07 43 09.5	
	comp=Z,3.5nm,1.1s						
CAST	Castle Rocks	65.41	29	P	P	07 42 57.8	+0.5
CAST				IAmb	IAmb	07 42 59.0	
	comp=Z,5.7nm,1.2s						
KDAK	Kodiak Island	65.76	36	P	P	07 42 58.0	-1.6
H23K	Yukon River	66.27	27	P	P	07 43 03.2	+0.4
H23K				IAmb	IAmb	07 43 11.2	
	comp=Z,4.2nm,0.9s						
I23K	Minto, Yukon-K	66.42	27	P	P	07 43 06.1	+2.4
I23K				IAmb	IAmb	07 43 10.9	
	comp=Z,6.1nm,1.3s						
MDM	Murphy Dome	66.92	28	P	P	07 43 07.8	+0.9
MDM				IAmb	IAmb	07 43 14.7	
	comp=Z,4.1nm,1.0s						
ILAR	Eielson Array	67.51	28	P	P	07 43 13.3	+2.6
	comp=Z,0.3nm,0.6s,baz=293,slow=9.5,SNR=6.6						
	comp=Z,0.3nm,0.6s						
FYU	Fort Yukon	67.90	26	P	P	07 43 13.1	+0.1
FYU				IAmb	IAmb	07 43 33.2	
	comp=Z,6.9nm,1.4s						
M24K	Tolsona, Glenn	68.28	30	P	P	07 43 14.8	-0.9
KBZ	Khabaz	68.39	309	LR	LR	08 17 24.7	
	comp=Z,45nm,19.1s,baz=44,slow=40						
RIDG	Independent Ri	68.57	29	P	P	07 43 17.3	-0.1
RIDG				IAmb	IAmb	07 43 17.6	
	comp=Z,9.8nm,1.2s						
I26K	Coal Creek Min	68.97	27	P	P	07 43 18.5	-1.3
I26K				IAmb	IAmb	07 43 55.9	
	comp=Z,6.2nm,1.2s						
M26K	Nabesna, AK	69.67	30	P	P	07 43 24.3	0.0
M26K				IAmb	IAmb	07 43 54.9	
	comp=Z,11nm,1.4s						
EGAK	Eagle	69.92	27	P	P	07 43 25.2	-0.4
EGAK				IAmb	IAmb	07 43 39.7	
	comp=Z,9.1nm,1.4s						
INK	Inuvik	71.83	23	P	P	07 43 38.9	+1.7
	comp=Z,1.0nm,0.7s,baz=322,slow=6.7,SNR=6.4						
	comp=Z,1.0nm,0.7s						
INK	Inuvik	71.83	23	P	P	07 43 37.4	+0.2
INK				IAmb	IAmb	07 43 59.4	
	comp=Z,5.5nm,1.4s						
FINES	FINESS Array B	73.33	330	P	P	07 43 45.9	-0.4
	comp=Z,2.9nm,0.6s,baz=54,slow=6.1,SNR=13						
	comp=Z,2.9nm,0.6s						
MMAI	Mount Meron Ar	77.15	300	LR	LR	08 21 50.2	
	comp=Z,50nm,19.3s,baz=65,slow=39						
NB2	NORSAR Subarra	79.96	333	P	P	07 44 23.6	-0.2
	comp=Z,3.0nm,0.9s,baz=59,slow=5.6						
NOA	NORSAR Array B	79.96	333	P	P	07 44 23.8	-0.1
	comp=Z,0.6nm,0.6s,baz=55,slow=5.6,SNR=4.9						
	comp=Z,0.6nm,0.6s						
YKA	Yellowknife Ar	81.51	24	P	P	07 44 31.8	-0.2
	comp=Z,0.3nm,0.6s,baz=303,slow=4.9,SNR=6.8						
	comp=Z,0.3nm,0.6s						

IDC ***31*** *07:38:18.6±0.8, 3.°86N×31.°58W, h0^{km}, mb4.0/14,*
mbtmp4.0/14, MS3.8/49, Error ellipse: s-maj=27.9km
s-min=14.9km az=139.0

NEIC ***31*** *07:38:20.6±1.6, 4.°1N±0.°1×31.°7W±0.°1, h10^{km}±1^{km},*
mb4.6/16, Error ellipse: s-maj=21.9km s-min=16.8km
az=157.0

ISC 31 07:38:20.3±0.5**, 4.°01N**±0.°09×**31.°67W**±0.°07**, h10**^{km}**, n103,**
σ1.^{s}01/61**, mb4.3**/21**, MS3.8**/48**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SACV	Santiago Islan	13.48	36		Pn	07 41 29.6	-2.2
ROSB	Rosrio	14.21	241	eP	Pn	07 41 39.5	-2.4
TMAB	Tom-Au,PA,Br	17.59	249	eP	Pn	07 42 26.6	+0.7
MBO	M'Bour	17.80	54		Pn	07 42 26.9	-1.5
BBTS	Babate	18.29	54	LR	LR	07 47 50.2	
	comp=Z,298nm,20.5s,baz=240,slow=31						
SMTB	Santa Maria do	20.38	231	eP	P	07 42 57.1	-0.4
PRPB	Parauapebas	20.75	241	eP	P	07 42 59.9	-1.6
H10N3	ASCENSION HYDR	20.79	124	T	T	08 04 24.3	
	baz=304,slow=75,SNR=67						
H10N2	ASCENSION HYDR	20.79	124	T	T	08 04 24.6	
	baz=304,slow=75,SNR=65						
H10N1	ASCENSION HYDR	20.81	124	T	T	08 04 25.8	
	baz=304,slow=75,SNR=82						
SDBA	SAO DESIDERIO	20.95	219	eP	P	07 43 02.7	-1.0
ASCN	Ascension	20.95	124	P	P	07 43 04.0	+0.3
H10S3	ASCENSION HYDR	21.29	127	T	T	08 04 59.1	
	baz=304,slow=74,SNR=100						
H10S2	ASCENSION HYDR	21.31	127	T	T	08 05 04.1	
	baz=276,slow=74,SNR=40						
GUA01	Guaratinga, BA	21.98	201	eP	P	07 43 15.6	+0.9
JANB	Januaria	22.71	213	eP	P	07 43 21.8	-0.8
RIB01	Linhares ES	24.72	200	eP	P	07 43 43.9	+1.9
DIAM	Diamantina, MG	25.12	208	eP	P	07 43 46.0	+0.1
SNDB	Serra Nova Dou	25.16	231	eP	P	07 43 47.1	+1.1
BDFB	Brasilia	25.36	219	P	P	07 43 47.9	0.0
	4.1nm,0.8s,baz=47,slow=10.0,SNR=9.4						
BDFB				LR	LR	07 52 36.2	
	comp=Z,352nm,20.2s,baz=351,slow=34						
	4.1nm,0.8s						
BDFB	Brasilia	25.36	219	P	P	07 43 47.9	0.0
BDFB	Brasilia	25.36	219	eP	P	07 43 48.4	+0.4
ITTB	Itaituba	25.44	251	eP	P	07 43 50.3	+1.7
NPGB	Novo Progresso	26.07	245	eP	P	07 43 55.0	+0.6
PMNB	Patos De Minas	26.71	213	eP	P	07 44 01.3	+1.1
DBIC	Dimbokro	26.83	83	P	P	07 44 00.2	-1.1
	2.1nm,0.6s,baz=314,slow=14,SNR=2.4						
DBIC				LR	LR	07 52 17.1	
	comp=Z,165nm,18.9s,baz=269,slow=31						
	2.1nm,0.6s						
DBIC	Dimbokro	26.83	83	P	P	07 44 00.1	-1.1
DBIC				IAmb	IAmb	07 44 09.6	
	comp=Z,17nm,1.4s						
IPMB	Ipameri, GO	27.27	216	eP	P	07 44 05.8	+0.6
ARAG	Araguaiana, MT	27.95	225	eP	P	07 44 11.8	+0.6
VAS01	Vassouras-RJ	28.55	203	eP	P	07 44 17.8	+1.2
BOAV	Boa Vista	28.85	268	P	P	07 44 19.3	0.0
PDRB	Porto dos Gac	29.36	238	eP	P	07 44 24.4	+0.5
H05S1	Guadeloupe/Mar	30.55	292	T	T	08 16 28.1	
	SNR=12						
SALV	Santo Antonio	30.93	230	eP	P	07 44 37.1	-0.5
H05N1	Guadeloupe/Mar	31.34	295	T	T	08 17 28.3	
	SNR=4.3						
PCMB	Pacaembu	31.88	216	eP	P	07 44 46.4	+0.4
PTLB	Pontes e Lacer	33.37	234	eP	P	07 44 59.4	+0.4
TOA0	Torodi Ar. Sit	34.18	72	P	P	07 45 05.0	-1.2
TOA0				IAmb	IAmb	07 45 15.4	
	comp=Z,5.3nm,0.9s						
TORD	Torodi Ar. Bea	34.18	72	P	P	07 45 05.8	-0.5
	comp=Z,5.1nm,0.9s,baz=260,slow=8.7,SNR=16						
TORD				LR	LR	07 56 30.6	
	comp=Z,189nm,20.2s,baz=246,slow=32						
	comp=Z,5.1nm,0.9s						
SIV	San Ignacio	35.23	235	P	P	07 45 15.3	+0.1
	comp=Z,3.2nm,0.7s,baz=85,slow=8.3,SNR=21						
SIV				LR	LR	07 59 11.2	
	comp=Z,428nm,18.3s,baz=91,slow=36						
	comp=Z,3.2nm,0.7s						
BBSD	Serra de San D	35.50	233	eP	P	07 45 18.1	+0.5
MURT	Porto Murtinho	36.00	224	eP	P	07 45 21.9	+0.1
SJG	San Juan	36.53	295	LR	LR	07 57 35.1	
	comp=Z,100nm,19.5s,baz=109,slow=32						
ITAB	Concordia	36.81	211	eP	P	07 45 29.3	+0.6
CRSM	Crissiumal (Br	38.04	213	eP	P	07 45 40.5	+1.4
MDT	Midelt	38.23	38	LR	LR	07 58 59.6	
	comp=Z,409nm,21.8s,baz=250,slow=32						
CPUP	Villa Florida	39.07	218	P	P	07 45 47.0	-0.7
	comp=Z,1.8nm,0.8s,baz=356,slow=7.8,SNR=4.0						

CPUP				LR	LR	08 01 41.8	
	comp=Z,270nm,19.6s,baz=39,slow=36						
	comp=Z,1.8nm,0.8s						
CPUP	**Villa Florida**	**39.07**	**218**	P	**P**	**07 45 47.1**	**-0.7**
AZCA	**Azaras, Argent**	**39.58**	**215**	*e*P	**P**	**07 45 52.1**	**+0.2**
TAM	**Tamanrasset**	**40.53**	**59**	P	**P**	**07 46 01.5**	**+1.3**
TAM				IAmb	IAmb	07 46 03.0	
	comp=Z,8.6nm,1.3s						
RODS	**Rosario do Sul**	**40.91**	**212**	*e*P	**P**	**07 46 03.5**	**+0.5**
SC01	**Santiago de lo**	**41.06**	**295**	P	**P**	**07 46 04.4**	**0.0**
ITQB	**Itaqui**	**41.15**	**214**	P	**P**	**07 46 04.0**	**-1.0**
ITQB				IAmb	IAmb	07 46 13.5	
	comp=Z,15nm,1.1s						
LPAZ	**La Paz**	**41.31**	**240**	P	**P**	**07 46 05.3**	**-1.9**
	comp=Z,1.5nm,0.8s,baz=76,slow=6.8,SNR=5.0						
LPAZ				LR	LR	08 02 31.1	
	comp=Z,107nm,21.7s,baz=68,slow=35						
	comp=Z,1.5nm,0.8s						
LPAZ	**La Paz**	**41.31**	**240**	P	**P**	**07 46 07.3**	**+0.1**
MECA	**Mercedes**	**41.76**	**216**	*e*P	**P**	**07 46 10.7**	**+0.7**
CZSB	**Cruzeiro do Su**	**42.57**	**254**	P	**P**	**07 46 16.0**	**-0.9**
CZSB				IAmb	IAmb	07 46 24.5	
	comp=Z,12nm,1.0s						
CZSB	**Cruzeiro do Su**	**42.57**	**254**	*e*P	**P**	**07 46 16.8**	**0.0**
ESDC	**Sonseca Array**	**43.46**	**31**	P	**P**	**07 46 24.8**	**+1.0**
	comp=Z,1.7nm,0.9s,baz=227,slow=8.0,SNR=8.5						
ESDC				LR	LR	08 01 31.9	
	comp=Z,92nm,18.4s,baz=255,slow=32						
	comp=Z,1.7nm,0.9s						
LVC	**Limon Verde**	**44.98**	**232**	LR	LR	08 06 12.0	
	comp=Z,249nm,18.1s,baz=50,slow=37						
LVC	**Limon Verde**	**44.98**	**232**	*e*P	**P**	**07 46 37.3**	**+0.7**
TULM	**Tulcn-Chalpat**	**46.18**	**267**	P	**P**	**07 46 45.7**	**-0.8**
TULM				IAmb	IAmb	07 47 01.2	
	comp=Z,8.1nm,1.2s						
NNA	**Nana**	**47.64**	**250**	LR	LR	08 05 48.5	
	comp=Z,61nm,19.1s,baz=69,slow=35						
ATAH	**Atahualpa**	**47.93**	**257**	LR	LR	08 07 16.9	
	comp=Z,138nm,19.2s,baz=94,slow=36						
CFA	**Coronel Fontan**	**49.65**	**222**	LR	LR	08 09 22.4	
	comp=Z,184nm,18.5s,baz=58,slow=38						
TSUM	**Tsumeb**	**53.66**	**117**	LR	LR	08 04 57.9	
	comp=Z,73nm,20.3s,baz=170,slow=30						
SSPA	**Standing Stone**	**55.22**	**318**	P	**P**	**07 47 53.1**	**-0.6**
SSPA				IAmb	IAmb	07 48 07.5	
	comp=Z,9.4nm,1.2s						
DAVOX	**Davos/Dischmat**	**55.70**	**33**	LR	LR	08 11 16.5	
	comp=Z,79nm,18.5s,baz=260,slow=36						
EKA	**Eskdalemuir Ar**	**56.09**	**19**	LR	LR	08 08 44.7	
	comp=Z,74nm,19.4s,baz=190,slow=32						
PLCA	**Paso Flores**	**56.98**	**215**	LR	LR	08 12 13.1	
	comp=Z,211nm,21.0s,baz=46,slow=36						
TKL	**Tuckaleechee C**	**57.36**	**310**	LR	LR	08 10 04.7	
	comp=Z,60nm,18.7s,baz=118,slow=33						
SADO	**Sadowa**	**58.05**	**322**	LR	LR	08 10 17.4	
	comp=Z,71nm,18.3s,baz=133,slow=33						
SCHQ	**Schefferville**	**58.09**	**337**	P	**P**	**07 48 14.6**	**+0.7**
	comp=Z,1.8nm,0.6s,baz=110,slow=9.3,SNR=3.8						
SCHQ				LR	LR	08 11 29.8	
	comp=Z,68nm,18.0s,baz=154,slow=34						
	comp=Z,1.8nm,0.6s						
GERES	**GERESS Array B**	**59.00**	**33**	P	**P**	**07 48 20.0**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=245,slow=2.8,SNR=5.7						
GERES				LR	LR	08 11 48.1	
	comp=Z,60nm,19.5s,baz=290,slow=34						
	comp=Z,0.3nm,0.4s						
IDI	**Anoyia**	**60.68**	**52**	LR	LR	08 16 20.0	
	comp=Z,56nm,19.5s,baz=266,slow=38						
VRAC	**Vranov**	**60.85**	**34**	LR	LR	08 12 01.5	
	comp=Z,49nm,21.2s,baz=354,slow=33						
SUR	**Sutherland**	**61.51**	**130**	LR	LR	08 10 47.2	
	comp=Z,62nm,20.0s,baz=217,slow=32						
OLIL	**Olney**	**61.66**	**312**	P	**P**	**07 48 36.9**	**-1.8**
LBTB	**Lobatse**	**62.60**	**121**	LR	LR	08 11 42.3	
	comp=Z,88nm,18.5s,baz=181,slow=32						
LBTB	**Lobatse**	**62.60**	**121**	P	**P**	**07 48 45.4**	**+0.1**
LBTB				IAmb	IAmb	07 48 53.7	
	comp=Z,6.9nm,1.3s						
BOSA	**Boshof**	**63.54**	**125**	LR	LR	08 10 17.1	
	comp=Z,96nm,20.8s,baz=186,slow=30						
MLR	**Muntele Rosu**	**64.84**	**41**	LR	LR	08 15 47.0	
	comp=Z,70nm,20.9s,baz=332,slow=35						
NOA	**NORSAR Array B**	**65.39**	**21**	P	**P**	**07 49 03.0**	**+0.1**
	comp=Z,1.0nm,0.9s,baz=17,slow=20,SNR=3.6						
NOA				LR	LR	08 14 36.5	
	comp=Z,55nm,19.2s,baz=230,slow=33						
	comp=Z,1.0nm,0.9s						
HFS	**Hagfors**	**65.74**	**23**	LR	LR	08 14 57.8	
	comp=Z,47nm,18.7s,baz=294,slow=33						
EIL	**Elat**	**67.75**	**60**	LR	LR	08 17 40.8	
	comp=Z,33nm,18.5s,baz=239,slow=35						
JMIC	**Jan Mayen**	**68.52**	**8**	LR	LR	08 13 30.5	
	comp=Z,20nm,20.8s,baz=3.0,slow=31						
FINES	**FINESS Array B**	**71.54**	**25**	LR	LR	08 18 07.4	
	comp=Z,64nm,20.1s,baz=296,slow=33						
TXAR	**Lajitas Array**	**72.36**	**299**	P	**P**	**07 49 48.4**	**+1.4**
	comp=Z,0.3nm,0.8s,baz=123,slow=3.3,SNR=2.2						
TXAR				LR	LR	08 23 56.6	
	comp=Z,21nm,18.4s,baz=87,slow=38						
	comp=Z,0.3nm,0.8s						
ARCES	**ARCESS Array B**	**75.21**	**18**	LR	LR	08 21 23.9	
	comp=Z,31nm,18.6s,baz=220,slow=34						
ANMO	**Albuquerque**	**75.25**	**305**	LR	LR	08 18 53.1	
	comp=Z,89nm,20.6s,baz=194,slow=32						
SPITS	**Spitsbergen Ar**	**78.14**	**9**	LR	LR	08 17 33.5	
	comp=Z,37nm,20.4s,baz=185,slow=30						
PDAR	**Pinedale Array**	**78.39**	**313**	P	**P**	**07 50 23.2**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=97,slow=7.9,SNR=6.4						
PDAR				LR	LR	08 24 33.8	
	comp=Z,37nm,18.3s,baz=108,slow=35						
	comp=Z,0.6nm,0.6s						
RPN	**Rapa Nui**	**80.88**	**242**	LR	LR	08 22 40.0	
	comp=Z,67nm,18.9s,baz=18,slow=33						
KIRV	**Kirov**	**81.94**	**32**	LR	LR	08 26 05.9	
	comp=Z,54nm,18.1s,baz=307,slow=35						
YKA	**Yellowknife Ar**	**83.19**	**332**	P	**P**	**07 50 46.9**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=99,slow=5.1,SNR=13						
YKA				LR	LR	08 26 41.6	
	comp=Z,59nm,18.2s,baz=328,slow=35						
	comp=Z,0.6nm,0.7s						
NVAR	**Mina Array Bea**	**84.89**	**308**	LR	LR	08 23 41.2	
	comp=Z,40nm,20.4s,baz=262,slow=32						
ARU	**Arti**	**86.82**	**34**	LR	LR	08 27 46.4	
	comp=Z,58nm,20.9s,baz=235,slow=34						
YBH	**Yreka Blue Hor**	**88.14**	**312**	LR	LR	08 30 47.7	
	comp=Z,16nm,18.4s,baz=90,slow=36						
WSAR	**Wadi Sarin**	**88.72**	**67**	LR	LR	08 31 55.1	
	comp=Z,62nm,18.1s,baz=286,slow=36						
BBB	**Bella Bella**	**90.81**	**322**	LR	LR	08 27 44.5	
	comp=Z,41nm,21.5s,baz=115,slow=33						
BVAR	**Borovoye Array**	**94.05**	**36**	LR	LR	08 32 55.6	
	comp=Z,44nm,19.8s,baz=216,slow=35						
NRIK	**Noril'sk**	**96.20**	**18**	LR	LR	08 33 08.8	
	comp=Z,48nm,21.4s,baz=333,slow=34						
ILAR	**Eielson Array**	**96.86**	**337**	P	**P**	**07 51 53.2**	**+1.7**
	comp=Z,0.5nm,0.8s,baz=49,slow=4.2,SNR=5.1						
ILAR				LR	LR	08 33 11.4	
	comp=Z,34nm,19.9s,baz=141,slow=34						
	comp=Z,0.5nm,0.8s						

*IDC **31** 07:46:23.4±2.3, 0.°82S×129.°38E, h0^{km}, mb3.2/2, mbtmp3.2/3, ML2.8/1, Error ellipse: s-maj=147.0km s-min=28.5km az=69.0*
*DJA **31** 07:46:23.9±0.5, 1.°S±7.°×13.°1E±.°, h10^{km}, M3.1/5, MLv3.1/5*
ISC 31 07:46:21.8±1.6, **0.°5S**±0.°1×**131.°2E**±0.°1, **h10**^{km}, **n6,** σ**2.**^{s}**17**/7, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWI	**Sorong**	**0.36**	**168**	P	**Pg**	**07 46 28.3**	**-0.6**
SWI				S	**Sg**	**07 46 31.3**	**-2.3**
FAKI	**Fak Fak**	**2.62**	**156**	P	**Pn**	**07 47 04.4**	**+0.3**
NLAI	**Namlea**	**4.90**	**236**	P	**Pn**	**07 47 35.8**	**+0.3**
WRA	**Warramunga Arr**	**19.56**	**171**	P	**Pn**	**07 50 53.3**	**+2.1**
	baz=346,slow=9.6,SNR=1.6						
	0.4nm,1.0s						
ASAR	**Alice Springs**	**23.17**	**174**	P	**P**	**07 51 31.1**	**+2.4**
	0.3nm,0.5s,baz=348,slow=9.4,SNR=2.2						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**63.56**	**325**	P	**P**	**07 56 51.0**	**-1.7**
	0.4nm,0.7s,baz=112,slow=6.7,SNR=5.0						
	0.4nm,0.7s						

*IDC **31** 08:04:23.6±1.1, 12.°94N×143.°90E, h148^{km}±13^{km}, mb3.2/7, mbtmp3.7/7, Error ellipse: s-maj=37.7km s-min=15.5km az=101.0*
ISC 31 08:04:23.7±0.9, **12.°9N**±0.°2×**143.°9E**±0.°2, **h150**^{km}, **n8,** σ**0.**^{s}**70**/9, **mb3.4**/7, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.15**	**56**	P	**Pn**	**08 04 50.2**	**+0.4**
	52nm,0.3s,baz=194,slow=22,SNR=8.1						
GUMO				S	**Sn**	**08 05 09.2**	**-0.6**
	150nm,0.3s,baz=250,slow=23,SNR=18						
WRA	**Warramunga Arr**	**34.00**	**196**	P	**P**	**08 10 53.4**	**0.0**
	0.5nm,0.6s,baz=14,slow=9.7,SNR=14						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**37.67**	**195**	P	**P**	**08 11 24.6**	**0.0**
	0.3nm,0.4s,baz=18,slow=13,SNR=19						
	0.3nm,0.4s						
SONM	**Songino Array**	**46.72**	**326**	P	**P**	**08 12 38.0**	**+0.3**
	0.5nm,0.5s,baz=142,slow=10,SNR=2.7						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**61.29**	**316**	P	**P**	**08 14 23.6**	**+0.3**
	0.3nm,0.4s,baz=87,slow=8.7,SNR=6.0						
	0.3nm,0.4s						
ILAR	**Eielson Array**	**69.56**	**25**	P	**P**	**08 15 16.1**	**0.0**
	0.2nm,0.4s,baz=245,slow=5.5,SNR=5.4						
	0.2nm,0.4s						
YKA	**Yellowknife Ar**	**83.87**	**27**	P	**P**	**08 16 37.1**	**+0.7**
	0.2nm,0.4s,baz=284,slow=4.9,SNR=7.8						
	0.2nm,0.4s						
FINES	**FINESS Array B**	**91.34**	**335**	P	**P**	**08 17 10.9**	**-1.3**
	1.3nm,0.9s,baz=66,slow=6.7,SNR=4.4						
	1.3nm,0.9s						

IDC 31 08:16:28.5±713.0, **54.°18N**×**7.°55E, h0**^{km}**, Error ellipse: s-maj=310.3km s-min=137.9km az=130.0, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**6.58**	**142**	I	I	08 57 20.0	
	baz=327,slow=326,SNR=1.2						
I43RU	**DUBNA INFRASON**	**16.96**	**69**	I	I	10 01 10.0	
	baz=275,slow=322,SNR=1.2						
I31KZ	**AKTYUBINSK INF**	**30.57**	**76**	I	I	11 24 20.0	
	baz=295,slow=323,SNR=0.8						

*IDC **31** 08:17:04.5±2.2, 9.°16S×75.°35W, h110^{km}±22^{km}, mb3.6/7, mbtmp4.0/11, Error ellipse: s-maj=27.7km s-min=16.9km az=82.0*
*NEIC **31** 08:17:06.2±1.7, 9.°25S±0.°07×75.°41W±0.°08, h116^{km}±7^{km}, mb4.5/44, Error ellipse: s-maj=11.1km s-min=10.5km az=133.0*
*VAO **31** 08:17:09.0±0.6, 9.°15S×75.°28W, h124^{km}, mb4.4*
ISC 31 08:17:05.8±0.4, **9.°15S**±0.°05×**75.°50W**±0.°06, **h120**^{km}, **n111,** σ**1.**^{s}**41**/112, **mb4.5**/27, **Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZSB	**Cruzeiro do Su**	**3.10**	**63**	Pn	**Pn**	**08 17 54.8**	**+1.3**
CZSB	**Cruzeiro do Su**	**3.10**	**63**	*e*P	**Pn**	**08 17 54.6**	**+1.1**
NNA	**Nana**	**3.11**	**205**	P	**Pn**	**08 17 53.7**	**0.0**
	42nm,0.3s,baz=14,slow=6.8,SNR=47						
NNA				S	**Sn**	**08 18 30.2**	**-0.4**
	342nm,0.6s,baz=16,slow=12,SNR=21						
ATAH	**Atahualpa**	**3.50**	**305**	P	**Pn**	**08 18 00.4**	**+1.3**
	37nm,0.3s,baz=87,slow=2.4,SNR=147						
ATAH				S	**Sn**	**08 18 35.6**	**-4.7**
	40nm,0.4s,baz=151,slow=20,SNR=6.1						
TBTG	**Tabatinga, AM**	**7.42**	**49**	Pn	**Pn**	**08 18 51.5**	**-0.1**
TBTG	**Tabatinga, AM**	**7.42**	**49**	*e*P	**Pn**	**08 18 51.8**	**+0.2**
TBTG	**Tabatinga, AM**	**7.42**	**49**	*e*P	**Pn**	**08 18 51.5**	**-0.1**
PORT	**Chimborazo Vol**	**8.30**	**337**		**Pn**	**08 19 06.8**	**+2.7**
CHSH	**Refugio Sur-Vo**	**8.31**	**336**		**Pn**	**08 19 06.9**	**+2.7**
PIAT	**Ana Tenorio**	**8.56**	**341**	*e*P	**Pn**	**08 19 08.9**	**+1.6**
SLOR	**San Lorenzo -**	**8.88**	**340**		**Pn**	**08 19 12.9**	**+1.1**
ETMB	**Extrema**	**9.18**	**95**	Pn	**Pn**	**08 19 12.7**	**-2.6**
OTAV	**Otavalo**	**9.78**	**342**	Pn	**Pn**	**08 19 26.3**	**+2.4**
TULM	**Tulcn-Chalpat**	**10.06**	**347**		**Pn**	**08 19 29.7**	**+2.0**
LPAZ	**La Paz**	**10.09**	**135**	P	**Pn**	**08 19 30.9**	**+2.7**
	0.6nm,0.6s,baz=18,slow=21,SNR=1.6						
LPAZ				S	**Sn**	**08 21 20.6**	**+0.7**
	1.5nm,0.5s,baz=41,slow=25,SNR=0.8						
LPAZ	**La Paz**	**10.09**	**135**	*e*P	**Pn**	**08 19 28.8**	**+0.6**
GCUF	**Volcan Galeras**	**10.47**	**350**	*e*P	**Pn**	**08 19 32.7**	**-0.6**
FLOC	**Florencia**	**10.66**	**359**	*e*P	**Pn**	**08 19 34.8**	**-0.6**
GARC	**Garzon, Huila**	**11.26**	**0**	*e*P	**Pn**	**08 19 44.4**	**+0.8**
MACC	**Macarena, Meta**	**11.34**	**8**	*e*P	**Pn**	**08 19 43.5**	**-0.9**
TEFE	**Tefe**	**12.16**	**63**	*e*P	**Pn**	**08 19 53.5**	**-1.7**
PRAC	**Prado**	**12.79**	**3**	Pn	**Pn**	**08 20 05.7**	**+2.2**
ORTC	**Ortega, Tolima**	**12.98**	**1**	*e*P	**Pn**	**08 20 06.5**	**+0.6**
PLMC	**San Jos del P**	**13.99**	**357**	*e*P	**P**	**08 20 24.0**	**+0.9**
CBOC	**Ciudad Bolivar**	**14.93**	**358**	*e*P	**P**	**08 20 36.0**	**+2.3**
RUSC	**La Rusia**	**15.14**	**9**		**Pn**	**08 20 35.0**	**+1.0**
RUSC	**La Rusia**	**15.14**	**9**	*e*P	**P**	**08 20 36.9**	**+0.6**
VILB	**Vilhena**	**15.48**	**106**	Pn	**Pn**	**08 20 36.6**	**-1.2**
VILB	**Vilhena**	**15.48**	**106**	*e*P	**Pn**	**08 20 37.4**	**-0.5**
PTBC	**PUERTO BERRIO,**	**15.62**	**4**	*e*P	**P**	**08 20 42.0**	**+0.8**
SIV	**San Ignacio**	**15.63**	**117**	P	**Pn**	**08 20 37.4**	**-2.3**
	2.1nm,0.6s,baz=289,slow=10,SNR=8.6						
MACA	**Manacapuru-AM**	**15.88**	**69**	P	**Pn**	**08 20 42.8**	**+0.1**
MACA	**Manacapuru-AM**	**15.88**	**69**	*e*P	**Pn**	**08 20 42.6**	**-0.1**
BBSD	**Serra de San D**	**16.54**	**120**	*e*P	**Pn**	**08 20 49.7**	**-1.2**
PTLB	**Pontes e Lacer**	**17.16**	**113**	P	**P**	**08 20 57.1**	**-1.1**
PTLB	**Pontes e Lacer**	**17.16**	**113**	*e*P	**P**	**08 20 57.0**	**-1.1**
SDV	**Santo Domingo**	**18.56**	**15**	P	**P**	**08 21 11.2**	**-2.6**
	3.1nm,0.4s,baz=234,slow=19,SNR=1.4						
SDV	**Santo Domingo**	**18.56**	**15**	*e*P	**Pn**	**08 21 14.8**	**-0.6**
PDRB	**Porto dos Gac**	**18.62**	**99**	*e*P	**P**	**08 21 12.8**	**-1.4**
BOAV	**Boa Vista**	**18.82**	**53**	P	**P**	**08 21 17.1**	**+0.6**
BOAV	**Boa Vista**	**18.82**	**53**	*e*P	**Pn**	**08 21 17.4**	**-0.8**
BOAV	**Boa Vista**	**18.82**	**53**	*e*P	**Pn**	**08 21 18.8**	**+0.5**
SJCC	**San Jacinto, C**	**18.93**	**1**	*e*P	Pn	08 21 30.3	+11
BAUV	**El Baul**	**19.45**	**23**	P	**Pn**	**08 21 24.3**	**-1.3**
BAUV				IAmb	IAmb	08 21 49.7	
	comp=Z,13nm,0.9s						
CLDB	**Colider**	**19.48**	**97**	*e*P	**P**	**08 21 23.7**	**+0.2**
NPGB	**Novo Progresso**	**20.05**	**85**	*e*P	**P**	**08 21 28.1**	**-1.6**
URIC	**Uribia, Colomb**	**21.01**	**10**	P	**P**	**08 21 38.8**	**-1.2**
URIC				IAmb	IAmb	08 21 41.9	
	comp=Z,24nm,1.3s						
MURT	**Porto Murtinho**	**21.23**	**128**	*e*P	**P**	**08 21 41.6**	**-0.7**
CO01	**Juntas del Tor**	**21.33**	**167**	P	**P**	**08 21 41.1**	**-2.4**
MALB	**Monte Alegre**	**22.33**	**72**	*e*P	**P**	**08 21 54.2**	**+0.2**
VA03	**San Esteban**	**23.94**	**170**	P	**P**	**08 22 09.4**	**+0.3**
VA03				IAmb	IAmb	08 22 19.6	
	comp=Z,12nm,1.1s						
SNDB	**Serra Nova Dou**	**23.95**	**99**	*e*P	**P**	**08 22 09.0**	**-0.2**
ARAG	**Araguaiana, MT**	**24.02**	**108**	*e*P	**P**	**08 22 09.8**	**0.0**
MCPB	**Macapa, AP**	**24.92**	**71**	*e*P	**P**	**08 22 18.0**	**0.0**
GRGR	**Grenville**	**25.23**	**33**	P	**P**	**08 22 22.3**	**+1.6**
SVB	**Belmont**	**26.39**	**33**	P	**P**	**08 22 32.7**	**+1.4**
SMTB	**Santa Maria do**	**27.56**	**92**	*e*P	**P**	**08 22 42.2**	**+0.3**
IPMB	**Ipameri, GO**	**27.91**	**111**	*e*P	**P**	**08 22 46.4**	**+1.4**
TMAB	**Tom-Au,PA,Br**	**28.07**	**78**	*e*P	**P**	**08 22 48.5**	**+2.2**
Z47A	**Carrollton**	**43.78**	**345**	P	**P**	**08 25 00.2**	**+0.5**
Z47A				IAmb	IAmb	08 25 01.3	
	comp=Z,18nm,1.4s						
T57A	**Hurt**	**46.04**	**356**	P	**P**	**08 25 18.9**	**+1.4**
T57A				IAmb	IAmb	08 25 19.2	
	comp=Z,8.4nm,0.8s						
UALR	**University of**	**46.51**	**341**	P	**P**	**08 25 21.5**	**+0.4**
UALR				IAmb	IAmb	08 25 23.2	
	comp=Z,8.6nm,1.0s						
MIAR	**Mount Ida**	**46.71**	**339**	P	**P**	**08 25 23.8**	**+1.0**
S57A	**Dark Hollow, R**	**46.78**	**356**	P	**P**	**08 25 24.4**	**+1.1**
TXAR	**Lajitas Array**	**46.92**	**326**	P	**P**	**08 25 25.8**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=150,slow=8.7,SNR=19						
TXAR				PcP	**PcP**	**08 26 56.1**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=153,slow=5.8,SNR=3.0						
	comp=Z,0.9nm,0.6s						
TXAR	**Lajitas Array**	**46.92**	**326**	P	**P**	**08 25 26.0**	**+1.4**
TX32	**Lajitas Array**	**46.92**	**326**	P	**P**	**08 25 26.2**	**+1.6**
WHAR	**Wooly Hollow**	**46.96**	**341**	P	**P**	**08 25 25.1**	**+0.4**
WHAR				IAmb	IAmb	08 25 25.4	
	comp=Z,5.0nm,0.8s						
FCAR	**Ozark Folk Cen**	**47.46**	**342**	P	**P**	**08 25 28.9**	**+0.3**
FCAR				IAmb	IAmb	08 25 29.1	
	comp=Z,3.8nm,0.7s						
Q54A	**Coxs Mills**	**48.14**	**354**	P	**P**	**08 25 34.5**	**+0.7**
Q54A				IAmb	IAmb	08 25 47.1	
	comp=Z,16nm,1.2s						
HHAR	**Hobbs**	**48.41**	**340**	P	**P**	**08 25 36.6**	**+0.7**
U38A	**Gravette**	**48.70**	**340**	P	**P**	**08 25 38.9**	**+0.8**
FVM	**French Village**	**48.92**	**344**	P	**P**	**08 25 40.6**	**+0.8**
FVM				IAmb	IAmb	08 25 40.7	
	comp=Z,4.1nm,0.7s						
T25A	**Trinidad**	**53.44**	**331**	P	**P**	**08 26 14.8**	**+1.0**
T25A				IAmb	IAmb	08 26 16.5	
	comp=Z,4.8nm,0.9s						
PTCN	**Pitcairn Islan**	**54.17**	**246**	P	**P**	**08 26 20.3**	**+1.1**
L34A	**Svendsen Farm,**	**54.35**	**341**	P	**P**	**08 26 20.1**	**0.0**
SDCO	**Great Sand Dun**	**54.44**	**331**	P	**P**	**08 26 22.5**	**+1.3**
SDCO				IAmb	IAmb	08 26 23.2	
	comp=Z,4.0nm,0.7s						
G65A	**Princeton**	**54.57**	**7**	P	**P**	**08 26 22.8**	**+1.3**
K31A	**O'Neill**	**55.74**	**339**	P	**P**	**08 26 30.1**	**0.0**
ECSD	**EROS Data Cent**	**56.02**	**342**	IAmb	IAmb	08 26 32.4	
	comp=Z,3.9nm,0.9s						
ECSD				P	**P**	**08 26 32.4**	**+0.3**
PHWY	**Pilot Hill**	**57.27**	**333**	P	**P**	**08 26 44.8**	**+3.5**
RDMU	**Red Mountain**	**58.62**	**330**	P	**P**	**08 26 50.7**	**0.0**
RDMU				IAmb	IAmb	08 26 52.3	
	comp=Z,5.4nm,0.6s						
BSUT	**Blindstream Ca**	**59.19**	**329**	P	**P**	**08 26 55.6**	**+0.8**
BSUT				IAmb	IAmb	08 26 57.7	
	comp=Z,5.4nm,1.0s						
DUG	**Dugway, Tooele**	**60.00**	**328**	P	**P**	**08 27 01.4**	**+1.3**
DUG				IAmb	IAmb	08 27 02.4	
	comp=Z,3.5nm,0.7s						
PDAR	**Pinedale Array**	**60.30**	**332**	P	**P**	**08 27 02.3**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=127,slow=11,SNR=9.4						
	comp=Z,0.8nm,0.5s						
HWUT	**Hardware Ranch**	**60.39**	**329**	P	**P**	**08 27 03.7**	**+0.9**
HWUT				IAmb	IAmb	08 27 04.2	
	comp=Z,6.6nm,0.7s						
AHID	**Auburn Hatcher**	**61.03**	**331**	P	**P**	**08 27 07.5**	**+0.4**
AHID				IAmb	IAmb	08 27 08.4	
	comp=Z,3.2nm,0.7s						
ULM	**Lac du Bonnet**	**61.77**	**345**	P	**P**	**08 27 09.9**	**-1.7**
	comp=Z,3.5nm,0.7s,baz=166,slow=6.1,SNR=4.4						
	comp=Z,3.5nm,0.7s						
MDPB	**Devils Postpil**	**61.85**	**322**	P	**P**	**08 27 11.7**	**-1.1**
RLMT	**Red Lodge**	**62.00**	**334**	P	**P**	**08 27 13.9**	**+0.3**
GCMT	**Greycliff**	**62.70**	**334**	P	**P**	**08 27 18.8**	**+0.7**
BOZ	**Bozeman (W)**	**63.42**	**332**	P	**P**	**08 27 23.6**	**+0.7**
MSO	**Missoula**	**65.41**	**332**	P	**P**	**08 27 37.0**	**+1.2**
MSO				IAmb	IAmb	08 27 37.9	
	comp=Z,5.3nm,0.9s						
I07A	**Izee**	**66.28**	**327**	P	**P**	**08 27 42.6**	**+1.2**
I07A				IAmb	IAmb	08 27 43.6	
	comp=Z,4.8nm,0.8s						
EDM	**Edmonton**	**69.97**	**337**	P	**P**	**08 28 04.4**	**+0.2**
EDM				IAmb	IAmb	08 28 04.7	
	comp=Z,4.8nm,0.7s						
YKA	**Yellowknife Ar**	**77.54**	**343**	P	**P**	**08 28 48.0**	**-0.1**
	comp=Z,1.0nm,0.9s,baz=144,slow=6.4,SNR=14						
YKA				pP	**pP**	**08 29 12.6**	**-5.9**
	comp=Z,0.5nm,0.7s,baz=130,slow=6.0,SNR=6.7						
	comp=Z,1.0nm,0.9s						
SFS	**San Fernando**	**79.17**	**50**	P	**P**	**08 28 57.7**	**+0.1**
TORD	**Torodi Ar. Bea**	**79.77**	**75**	P	**P**	**08 29 01.2**	**-0.2**
	comp=Z,0.9nm,0.9s,baz=278,slow=4.5,SNR=3.6						
	comp=Z,0.9nm,0.9s						
INK	**Inuvik**	**87.27**	**342**	P	**P**	**08 29 38.2**	**-0.3**
	comp=Z,2.4nm,0.9s,baz=80,slow=3.7,SNR=12						
	comp=Z,2.4nm,0.9s						
ILAR	**Eielson Array**	**90.44**	**336**	P	**P**	**08 29 53.4**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=70,slow=1.3,SNR=2.7						
	comp=Z,0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**133.41**	**23**	PKP	**PKiKP**	**08 36 08.7**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=300,slow=2.9,SNR=5.2						
ASAR	**Alice Springs**	**136.53**	**221**	PKP	**PKPdf**	**08 36 14.2**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=116,slow=1.9,SNR=8.8						
MKAR	**Makanchi Array**	**137.98**	**23**	PKP	**PKPdf**	**08 36 16.8**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=14,slow=2.5,SNR=3.9						
WRA	**Warramunga Arr**	**138.79**	**225**	PKP	**PKPdf**	**08 36 18.6**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=124,slow=2.0,SNR=12						
KSH	**Kashi**	**140.46**	**35**	PKP	**PKiKP**	**08 36 24.5**	**+0.4**
SONM	**Songino Array**	**141.41**	**358**	PKhKP	PKPpre	08 36 19.5	
	comp=Z,0.5nm,0.4s,baz=330,slow=2.3,SNR=3.0						
KSRS	**Korea Array**	**144.76**	**327**	PKP	**PKPab**	**08 36 27.8**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=52,slow=3.2,SNR=6.4						
NJ2	**Nanjing**	**153.61**	**332**	*e*P	**PKPdf**	**08 36 42.5**	**-0.7**
NJ2	**Nanjing**	**153.61**	**332**	pmax	pmax		
	comp=Z,12nm,0.5s						
NJ2	**Nanjing**	**153.61**	**332**	pmax	pmax		
	comp=Z,370nm,4.3s						
PZH	**PanZhiHua**	**162.54**	**8**	PKP	**PKPdf**	**08 36 52.3**	**-2.1**

MAN 31 08:29:40.8, 13.°08N×124.°61E, h33^{km}**, mb3.8, ML2.6, MS2.1, 1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.57**	**175**	⇑*e*P	Pn	08 29 53.4	+0.8
CNP				*e*S	Sn	08 30 01.5	+0.6

MAN 31 08:32:48.6, 16.°57N×119.°98E, h17^{km}**, mb3.8, ML2.5, MS2.0, Luzon**

*IDC **31** 08:37:25.8±1.5, 36.°41N×68.°34E, h0^{km}, mb3.8/7, mbtmp4.0/13, ML3.9/6, MS3.1/4, Error ellipse: s-maj=26.0km s-min=14.7km az=155.0*
*NNC **31** 08:37:30.7±2.4, 36.°84N×68.°24E, h0^{km}, mb4.3, mpv3.8, Error ellipse: s-maj=19.8km s-min=15.0km az=2.0*
*NEIC **31** 08:37:31.4±2.1, 36.°48N±0.°05×68.°15E±0.°09, h47^{km}±11^{km}, mb4.0/11, Error ellipse: s-maj=10.0km s-min=7.6km az=78.0*
ISC 31 08:37:30.0±0.6, **36.°56N**±0.°06×**68.°18E**±0.°05, **h30**^{km}, **n74,** σ**2.**^{s}**04**/84, **mb4.0**/12, **10C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.13**	**160**	Pn	**Pn**	**08 38 04.1**	**+0.4**
CHGR	**Chuyangaron**	**2.23**	**20**	Pn	**Pn**	**08 38 07.4**	**+2.3**
GAR	**Garm**	**2.97**	**34**		**Pn**	**08 38 17.4**	**+2.3**
BTK	**Batken**	**4.06**	**30**		**Pn**	**08 38 33.5**	**+3.3**
DRK	**Karamyk**	**4.08**	**43**		**Pn**	**08 38 28.3**	**-2.3**
CEP	**Cherat**	**4.09**	**131**	P	**Pn**	**08 38 32.4**	**+1.8**
CEP				S	**Sn**	**08 39 23.0**	**+5.4**
NIL	**Nilore**	**5.07**	**123**		**Pn**	**08 38 44.9**	**+0.9**
CHCP	**Chirah Chowk**	**5.07**	**123**	P	**Pn**	**08 38 44.4**	**+0.4**
KK31	**Karatay Array**	**6.78**	**15**		**Pn**	**08 39 09.7**	**+2.3**
KK31	**Karatay Array**	**6.78**	**15**	⇓Pn	**Pn**	**08 39 09.7**	**+2.3**
	1.0nm,0.2s,baz=194,slow=14,SNR=43						
KK31				⇑Sn	**Sn**	**08 40 23.1**	**-0.4**
	6.8nm,0.3s,baz=195,slow=22,SNR=5.4						
KK31				⇓Lg	Lg	08 40 58.9	
	28nm,0.6s,baz=195,slow=28,SNR=5.4						
KKAR	**Karatay Array**	**6.78**	**15**		**Pn**	**08 39 09.7**	**+2.3**
KKAR	**Karatay Array**	**6.78**	**15**	Pn	**Pn**	**08 39 09.8**	**+2.4**
KSH	**Kashi**	**6.82**	**62**	Pn	**Pn**	**08 39 04.8**	**-3.3**
KSH				Sn	**Sn**	**08 40 18.8**	**-6.0**
KSH				pmax	pmax		
	comp=Z,11nm,0.6s						
KSH				smax	smax		
	comp=N,140nm,0.6s						
KSH				smax	smax		
	comp=E,90nm,0.6s						
KSH				LR	LR		
	comp=N,310nm,8.6s						
KSH				LR	LR		
	comp=E,330nm,4.8s						
KSH				LR	LR		
	comp=Z,210nm,8.3s						
AML	**Almayashu**	**7.01**	**36**	P	**Pn**	**08 39 12.4**	**+1.4**
	SNR=51						
AML	**Almayashu**	**7.01**	**36**	⇑Pn	**Pn**	**08 39 12.3**	**+1.4**
	comp=Z,1.5nm,0.5s						
AML				⇓Sn	**Sn**	**08 40 31.4**	**+1.5**
	comp=Z,7.1nm,0.5s						
EKS2	**Erkin-Say**	**7.47**	**34**	P	**Pn**	**08 39 19.3**	**+2.3**
	SNR=6.6						
UCH	**Uchtor**	**7.49**	**39**	P	**Pn**	**08 39 19.3**	**+1.7**
	SNR=121						
AAK	**Ala-Archa**	**7.78**	**37**	P	**Pn**	**08 39 23.1**	**+1.7**
	SNR=25						
AAK	**Ala-Archa**	**7.78**	**37**	Pn	**Pn**	**08 39 22.2**	**+0.9**
	comp=Z,10.0nm,0.3s,baz=175,slow=2.5,SNR=50						
AAK				Sn	**Sn**	**08 40 50.1**	**+1.7**
	comp=Z,3.4nm,0.3s,baz=349,slow=22,SNR=6.6						
AAK				Lg	Lg	08 41 36.5	
	baz=94,slow=19						
	comp=Z,33nm,0.4s						
AAK	**Ala-Archa**	**7.78**	**37**	Pn	**Pn**	**08 39 22.9**	**+1.5**
NRN	**Naryn**	**7.79**	**49**	Pn	**Pn**	**08 39 21.8**	**+0.2**

KBK	Karagaybulak	8.02	39	P	Pn	08 39 26.8	+2.2
	SNR=46						
GEYT	Alibeck	8.14	283	Pn	Pn	08 39 25.9	-0.3
	comp=Z,1.8nm,0.3s,baz=130,slow=7.6,SNR=7.1						
GEYT				Sn	Sn	08 40 53.9	-3.3
	comp=Z,3.1nm,0.3s,baz=104,slow=11,SNR=1.7						
GEYT				Lg	Lg	08 41 49.8	
	baz=208,slow=28						
GEYT				LR	LR	08 42 58.6	
	comp=Z,42nm,18.8s,baz=183,slow=40						
	comp=Z,1.7nm,0.3s						
GEYT	Alibeck	8.14	283	Pn	Pn	08 39 25.1	-1.1
GYA0B	ALIBECK ARRAY	8.14	283	Pn	Pn	08 39 24.5	-1.6
CHMS	Chumysh	8.18	36	P	Pn	08 39 28.0	+1.4
	SNR=14						
USP	Ospenovka	8.27	34	P	Pn	08 39 29.1	+1.2
	SNR=7.5						
ULHL	Ulahol	8.44	45	P	Pn	08 39 31.1	+0.8
	SNR=23						
TKM2	Tokmak 2	8.54	40	P	Pn	08 39 32.9	+1.1
	SNR=30						
TKM2	Tokmak 2	8.54	40	⇑Pn	Pn	08 39 32.7	+0.9
	comp=Z,8.3nm,0.4s						
TKM2				⇑Sn	Sn	08 41 07.7	+0.5
	comp=Z,14nm,0.6s						
KDJ	Kajisay	8.92	49	Pn	Pn	08 39 36.9	0.0
TARG	Taragay, Kyrgy	9.08	52		Pn	08 39 38.9	-0.5
MDOK	Medeo	9.48	43	⇑P	Pn	08 39 45.5	+0.9
	comp=Z,17nm,0.5s						
AB31	Akbulak array	14.04	337	Pn	Pn	08 40 45.8	-1.0
	comp=Z,0.6nm,0.3s,baz=159,slow=14,SNR=76						
AB31				⇑Sn	Sn	08 43 21.1	-0.3
	comp=Z,3.8nm,0.6s,baz=164,slow=22,SNR=9.2						
ABKAR	Akbulak array	14.04	337	Pn	Pn	08 40 46.1	-0.6
MAKZ	Makanchi	14.51	41		Pn	08 40 51.8	-1.3
MAKZ	Makanchi	14.51	41	⇑P	Pn	08 40 51.4	-1.7
	comp=Z,6.9nm,0.9s						
MK31	Makanchi Array	14.67	41	Pn	Pn	08 40 53.7	-1.5
MK31	Makanchi Array	14.67	41	⇓P	Pn	08 40 53.8	-1.5
	comp=Z,10nm,0.8s,baz=230,slow=14,SNR=73						
MKAR	Makanchi Array	14.67	41	Pn	Pn	08 40 53.4	-1.9
	comp=Z,0.5nm,0.3s,baz=232,slow=14,SNR=80						
MKAR				LR	LR	08 46 53.5	
	comp=Z,52nm,18.1s,baz=238,slow=39						
	comp=Z,8.8nm,0.7s						
MKAR	Makanchi Array	14.67	41	Pn	Pn	08 40 53.1	-2.1
UOSS	Minazif	15.47	225	P	P	08 41 08.8	-1.4
AKTO	Aktyubinsk	15.69	335	Pn	Pn	08 41 07.9	-0.8
	comp=Z,0.6nm,0.3s,baz=142,slow=6.1,SNR=8.6						
AKTO				Sn	Sn	08 43 57.6	-3.9
	comp=Z,0.2nm,0.3s,baz=332,slow=20,SNR=2.7						
	comp=Z,1.3nm,0.3s						
AKTO	Aktyubinsk	15.69	335	⇑Pn	Pn	08 41 09.5	+0.8
	comp=Z,2.4nm,0.8s						
AKTO				⇓Sn	Sn	08 44 02.2	+0.7
	comp=Z,3.9nm,0.8s						
KURBB	Kurchatov Arra	15.91	25	Pn	Pn	08 41 09.0	-2.5
	comp=Z,0.2nm,0.3s,baz=214,slow=9.9,SNR=5.1						
	comp=Z,0.6nm,0.5s						
KURBB	Kurchatov Arra	15.91	25	⇓P	Pn	08 41 13.7	+2.2
	comp=Z,4.0nm,0.5s						
KURK	Kurchatov	16.02	25	P	Pn	08 41 15.1	+2.2
KURK	Kurchatov	16.02	25	⇑P	Pn	08 41 14.4	+1.5
	comp=Z,2.2nm,0.7s						
BVAR	Borovoye Array	16.54	5	Pn	Pn	08 41 17.2	-2.4
	comp=Z,0.1nm,0.3s,baz=185,slow=8.9,SNR=5.9						
BVAR				Sn	Sn	08 44 15.9	-6.2
	baz=238,slow=38,SNR=2.4						
	comp=Z,0.9nm,0.5s						
WMQ	Urumqi	16.56	58	*e*P	Pn	08 41 19.0	-1.0
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
BRVK	Borovoye	16.57	4	P	P	08 41 22.8	+0.6
BRVK				IAmb	IAmb	08 41 35.0	
	comp=Z,5.0nm,0.7s						
GNI	Garni	18.72	288	P	Pn	08 41 45.9	-0.9
GNI				IAmb	IAmb	08 42 11.9	
	comp=Z,7.9nm,0.7s						
ZAA0	Zalesovo Array	20.88	28	P	P	08 42 08.7	-0.7
ZAA0				IAmb	IAmb	08 42 32.2	
	comp=Z,6.2nm,0.6s						
ZALV	Zalesovo Beam	20.88	28	P	P	08 42 09.3	-0.1
	comp=Z,4.0nm,0.5s,baz=223,slow=10,SNR=13						
	comp=Z,4.0nm,0.5s						
ZALV	Zalesovo Beam	20.88	28	P	P	08 42 08.9	-0.5
ARU	Arti	20.91	345	P	P	08 42 10.5	+0.7
	comp=Z,3.6nm,0.2s,baz=253,slow=7.8,SNR=1.2						
	comp=Z,3.6nm,0.2s						
BELG	Belogornoye	21.46	324	P	P	08 42 21.3	+5.6
	comp=Z,14nm,0.7s,baz=144,slow=19,SNR=4.3						
KOPT	Kop Dagi	21.97	287	P	P	08 42 19.9	-1.7
KOPT				IAmb	IAmb	08 42 42.6	
	comp=Z,7.9nm,1.1s						
RAYN	Ar Rayn	23.47	243	P	P	08 42 35.9	-1.2
RAYN				IAmb	IAmb	08 42 43.7	
	comp=Z,6.1nm,1.3s						
GAZ	Gaziantep	24.73	281	P	P	08 42 47.4	-1.4
GTA	Gaotai	25.03	74	*e*P	P	08 42 51.5	0.0
GTA				pP	pP	08 43 02.5	+2.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ILGA	Ilgaz	27.12	290	P	P	08 43 10.6	+0.1
LZH	Lanzhou	28.64	80	⇑P	P	08 43 26.0	+1.9
LZH				pP	pP	08 43 32.3	-0.7
LZH				sP	sP	08 43 37.0	+0.3
LZH				pmax	pmax		
	comp=Z,15nm,1.5s						
SONM	Songino Array	30.18	56	P	P	08 43 38.1	+0.6
	comp=Z,0.5nm,0.5s,baz=274,slow=10,SNR=5.7						
	comp=Z,0.5nm,0.5s						
HHC	Hu-ho-hao-te	33.87	69	*e*P	P	08 44 08.3	-1.7
HHC				pmax	pmax		
	comp=Z,25nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,4.9s						
FINES	FINESS Array B	36.18	327	P	P	08 44 30.0	+0.5
HFS	Hagfors	41.62	322	LR	LR	09 02 55.7	
	comp=Z,59nm,18.6s,baz=247,slow=37						
NOA	NORSAR Array B	42.97	323	P	P	08 45 27.0	+1.0
	comp=Z,0.6nm,0.9s,baz=100,slow=8.0,SNR=3.6						
NOA				LR	LR	09 06 46.4	
	comp=Z,22nm,18.2s,baz=65,slow=41						
	comp=Z,0.6nm,0.9s						
TORD	Torodi Ar. Bea	63.45	267	P	P	08 47 60.0	+2.7
	comp=Z,0.6nm,0.5s,baz=50,slow=5.1,SNR=4.6						
	comp=Z,0.6nm,0.5s						
C36M	Paulatuk	74.02	4	P	P	08 49 03.0	+0.8
C36M				IAmb	IAmb	08 49 16.6	
	comp=Z,1.8nm,0.8s						
INK	Inuvik	74.19	8	P	P	08 49 04.5	+1.2
	comp=Z,0.7nm,0.5s,baz=349,slow=7.6,SNR=6.6						
	comp=Z,0.7nm,0.5s						
INK	Inuvik	74.19	8	P	P	08 49 03.5	+0.2
INK				IAmb	IAmb	08 49 16.3	
	comp=Z,4.6nm,1.3s						
DAWY	Dawson	77.36	12	P	P	08 49 21.4	-0.2
YKA	Yellowknife Ar	81.27	1	P	P	08 49 43.2	+0.5
	comp=Z,0.2nm,0.5s,baz=353,slow=5.2,SNR=9.2						
	comp=Z,0.2nm,0.5s						

IDC 31 08:44:03.1±1.9**, 4°.53S**×**135°.55E, h0^{km}, mb3.7**/1**,**
mbtmp4.2/4**, ML4.2**/3**, Error ellipse: s-maj=79.4km**
s-min=27.4km az=70.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.36	184	Pn	Pn	08 47 39.5	-1.9
	0.9nm,0.3s,baz=4.2,slow=13,SNR=38						
WRA				Sn	Sn	08 50 22.8	-10
	1.0nm,0.3s,baz=6.7,slow=22,SNR=9.1						
	3.0nm,0.4s						
CTA	Charters Tower	18.65	147	P	Pn	08 48 22.9	+0.1
	0.2nm,0.3s,baz=328,slow=10,SNR=6.3						
	5.1nm,0.8s						
ASAR	Alice Springs	19.09	185	P	Pn	08 48 27.8	-0.3
	3.2nm,0.3s,baz=9.7,slow=11,SNR=280						
ASAR				S	Sn	08 51 54.1	-8.7
	1.4nm,0.7s,baz=9.5,slow=29,SNR=5.0						
	17nm,0.6s						
MKAR	Makanchi Array	69.35	324	P	P	08 55 12.7	0.0
	0.4nm,0.5s,baz=109,slow=7.6,SNR=5.9						
	0.4nm,0.5s						

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*TEH **31** 08:53:27.2, 28°.09N×51°.86E, h12^{km}±35^{km}, ML3.5*
*DSN **31** 08:53:30.8±1.0, 27°.92N×52°.05E, h10^{km}, ML2.7/7, Error ellipse: s-maj=19.5km s-min=5.9km az=11.0*
*OMAN **31** 08:53:32.0±0.2, 27°.96N×52°.18E, h10^{km}, mb4.8/8, ml3.1/11, Error ellipse: s-maj=3.6km s-min=2.2km az=1.0*
ISC 31 08:53:27.3±0.8**, 28°.12N**±0°.03×**51°.89E**±0°.04**, h10^{km}, n65,**
σ1^{s}.35/86**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DSBU	Dashti - Bushe	0.61	294	Pg	Pg	08 53 38.9	-0.3
AHBU	AHRAM	0.91	325	Pg	Pg	08 53 44.6	-0.3
AHBU				Sg	Sn	08 53 58.5	-0.9
LMD1	Lamerd	1.37	124	Pg	Pg	08 53 53.9	+0.2
KAZ1	Kazerun	1.52	352	Pg	Pb	08 53 56.3	+0.6
JHRM	Jahrom	1.53	75	Pg	Pg	08 53 57.3	+0.5
SHI	Shiraz	1.61	20	Pg	Pb	08 53 57.7	+0.4
SHMA	Al-Shehemyia	2.40	200	P	Pg	08 54 13.4	0.0
SHMA				S	Sb	08 54 41.2	+0.8
SAKB	Bahrain	2.45	210	P	Pg	08 54 14.5	+0.2
SAKB				S	Sg	08 54 48.9	+2.7
KLNJ	Kolanjah	2.89	355	Pn	Pn	08 54 14.3	+0.5
IRAM	Ramesheh	3.70	6	Pn	Pn	08 54 26.2	+1.4
IMEH	Mehriz	4.03	35	Pn	Pn	08 54 32.3	+2.9
AMIS	Naft Sefid	4.20	328	Pn	Pn	08 54 31.2	-0.3
SHME	Shamm	4.31	118	P	Pn	08 54 33.2	+0.2
SHME				S	Sn	08 55 22.8	-0.5
SHME	Shamm	4.31	118	P	Pn	08 54 33.7	+0.7
SHME	Shamm	4.31	118	Pn	Pn	08 54 33.5	+0.5
BANOM	Banah	4.50	118	P	Pn	08 54 36.3	+0.8
BANOM				S	Sn	08 55 26.9	-1.1
BANOM	Banah	4.50	118	P	Pn	08 54 36.4	+0.8
	SNR=23						
BANOM				S	Sn	08 55 27.0	-1.0
BANOM	Banah	4.50	118	Pn	Pn	08 54 36.5	+0.9
NGRK	Negar Kerman	4.50	69	Pn	Pn	08 54 37.6	+1.5
NAZ	Nazwa, Dubai	4.59	132	P	Pn	08 54 35.1	-1.8
NAZ				S	Sn	08 55 30.3	-0.1
ASUD	Al Ashush, Dub	4.65	138	P	Pn	08 54 39.0	+1.3
	SNR=11						
ASUD				S	Sn	08 55 31.4	-0.3
ASUD	Al Ashush, Dub	4.65	138	Pn	Pn	08 54 38.8	+1.2
MASF	Masafi	4.69	125	P	Pn	08 54 39.2	+0.9
MASF				S	Sn	08 55 32.0	-0.9
MSFE	Esma-Masafi	4.70	125	P	Pn	08 54 39.2	+0.8
MSFE	Esma-Masafi	4.70	125	Pn	Pn	08 54 39.1	+0.7
FAQ	Al Faqa, Dubai	4.72	135	P	Pn	08 54 38.5	-0.1
FAQ				S	Sn	08 55 33.5	0.0
IZEF	Zefreh	4.78	4	Pn	Pn	08 54 41.3	+1.6
MDH	Madha	4.84	124	P	Pn	08 54 40.9	+0.6
MDH				S	Sn	08 55 36.3	-0.1
MDH	Madha	4.84	124	Pn	Pn	08 54 40.7	+0.5
UOSS	Minazif	4.99	128	P	Pn	08 54 41.9	-0.5
UOSS	Minazif	4.99	128	P	Pn	08 54 42.7	+0.3
UOSS				S	Sn	08 55 38.3	-1.8
UOSS	Minazif	4.99	128	Pn	Pn	08 54 42.8	+0.5
HATD	Hatta, Dubai	5.02	130	P	Pn	08 54 43.3	+0.6
HATD	Hatta, Dubai	5.02	130	P	Pn	08 54 43.9	+1.2
HATD				S	Sn	08 55 40.6	-0.3
HATD	Hatta, Dubai	5.02	130	Pn	Pn	08 54 44.3	+1.5
ASHO	Ashiyiah	5.06	132	P	Pn	08 54 43.8	+0.4
ASHO	Ashiyiah	5.06	132	P	Pn	08 54 44.1	+0.7
ASHO				S	Sn	08 55 40.9	-1.1
ASHO	Ashiyiah	5.06	132	Pn	Pn	08 54 44.1	+0.7
CHMN	Cheshme madani	5.24	69	Pn	Pn	08 54 48.5	+2.4
MZR	Muzera	5.29	164	P	Pn	08 54 48.6	+2.1
MZR	Muzera	5.29	164	Pn	Pn	08 54 48.6	+2.1
ALNE	Al Ain	5.33	139	P	Pn	08 54 47.2	+0.2
ALNE	Al Ain	5.33	139	P	Pn	08 54 47.9	+0.9
ALNE				S	Sn	08 55 47.5	-0.9
ALNE	Al Ain	5.33	139	Pn	Pn	08 54 49.0	+2.0
SOHO	SOHO	5.76	133	P	Pn	08 54 53.0	+0.2
SOHO	SOHO	5.76	133	P	Pn	08 54 53.2	+0.4
SOHO				S	Sn	08 55 56.7	-2.3
SOHO	SOHO	5.76	133	Pn	Pn	08 54 53.4	+0.6
JASK	Jask - Hormozg	5.78	111	P	Pn	08 54 53.8	+0.6
JASK				S	Sn	08 55 59.1	-0.5
JASK	Jask - Hormozg	5.78	111	Pn	Pn	08 54 53.6	+0.4
KRSH	Karshahi	5.84	2	Pn	Pn	08 54 55.2	+1.1
KBAM	BAM	5.85	78	Pn	Pn	08 54 56.8	+2.5
UMZA	Um Al Zommool	6.14	151	Pn	Pn	08 55 00.8	+2.7
ISFB	Sefidab	6.22	3	Pn	Pn	08 55 00.2	+0.9
ARQ	Araqi	6.33	138	P	Pn	08 55 00.7	-0.1
	SNR=11						
ARQ				S	Sn	08 56 10.6	-2.6
HOQ	Hoqain	6.65	132	P	Pn	08 55 04.4	-0.7
HOQ				S	Sn	08 56 18.2	-2.9
BSY	Bisya	7.18	137	P	Pn	08 55 12.5	0.0
BSY				S	Sn	08 56 30.1	-4.2
SMDO	Samad	7.50	131	P	Pn	08 55 16.4	-0.5
SMDO				S	Sn	08 56 39.8	-2.3
IDHR	Dehrash	8.07	326	Pn	Pn	08 55 24.1	-0.7
WBK	Wadi Bani Khal	8.43	129	P	Pn	08 55 29.2	-0.4
MHTO	MHTO	9.00	141	P	Pn	08 55 37.3	-0.1
DQM	DQM	9.65	146	P	Pn	08 55 46.9	+0.6
DOK	Doka	9.68	167	P	Pn	08 55 47.0	+0.3
WHFO	Wadi Hawf	10.30	170	P	Pn	08 55 53.3	-2.0
DMTO	DMTO	10.73	164	P	Pn	08 55 58.0	-3.1
ABTO	Aybut	10.79	173	P	Pn	08 55 59.9	-2.2

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*JMA **31** 09:13:28.4±0.2, 24°N±1°×125°.3E±0°.7, h30^{km}±4^{km},*
MV3.0/11, NEAR MIYAKOJIMA ISLAND
ISC 31 09:13:25.4±3.3**, 24°.2N**±0°.1×**125°.29E**±0°.08**, h4^{km}**±25^{km}**,**
n17, σ0^{s}.79/25**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMJ2	Miyako jima3	0.57	4	P	Pb	09 13 38.5	+0.4
JMJ2				S	Sb	09 13 46.4	-0.3
JOGS	Gusukube	0.60	10	P	Pb	09 13 39.4	+0.8
JOGS				*e*S	Sb	09 13 47.1	-0.4
JMJ	Miyako jima 2	0.65	0	P	Pb	09 13 38.8	-0.5
JIRB	Irabujima	0.67	351	P	Pb	09 13 39.8	+0.1
JIRB				S	Sb	09 13 48.6	-0.7
JTJ	Tarama	0.71	312	P	Pb	09 13 40.9	+0.4
JTJ				S	Sb	09 13 49.8	-0.9
JIKM	Ikemajima	0.76	357	P	Pb	09 13 41.3	+0.1
JIKM				S	Sb	09 13 50.9	-1.0
JISG	Ishigakijimahi	0.98	295	*e*P	Pb	09 13 45.5	+0.4
JISG				S	Sb	09 13 57.8	-0.7
JIJ	Ishigaki jima	1.06	281	P	Pn	09 13 47.2	0.0
JIJ				*e*S	Sb	09 14 00.6	-0.2
JKRS	Kuro-shima	1.17	274	P	Pn	09 13 49.4	+0.8
HATJ	Hateruma jima	1.36	266	*e*P	Pn	09 13 51.5	+0.2
HATJ				*e*S	Sg	09 14 08.8	-0.4
IRIF	Iriomote-Funau	1.43	277	*e*P	Pn	09 13 52.6	+0.4
NACB	Ninganchiao	3.37	271	P	Pn	09 14 18.6	-0.4
YHNB	Yeheng	3.60	279	P	Pn	09 14 24.2	+2.0
YULB	Yu-li	3.74	259	P	Pn	09 14 23.2	-0.8
SSLB	Suanglung	3.98	265	P	Pn	09 14 27.8	+0.4
TWGBT	Beinan	4.09	252	P	Pn	09 14 27.8	-1.0
TPUB	Ta-pu	4.36	260	P	Pn	09 14 33.8	+1.3

IDC 31 09:15:37.6±2.9**, 53°.54N**×**87°.66E, h0^{km}, mbtmp3.0**/2**,**
ML2.6/2**, Error ellipse: s-maj=25.6km s-min=14.4km**
az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.73	285	I	I	09 27 20.0	
	0.1nm,0.7s,baz=100,slow=345,SNR=2.9						
ZALV	Zalesovo Beam	1.73	285	Pg	Pb	09 16 09.6	-0.6
	1.9nm,0.3s,baz=103,slow=17,SNR=14						
ZALV				Lg	Lg	09 16 32.8	
	2.2nm,0.3s,baz=103,slow=28,SNR=6.6						
KURBB	Kurchatov Arra	6.34	246	Pn	Pn	09 17 12.2	+0.1
	0.1nm,0.3s,baz=61,slow=14,SNR=5.3						
KURBB				Lg	Lg	09 18 55.9	
	baz=60,slow=29,SNR=6.1						
	1.4nm,0.7s						
MKAR	Makanchi Array	7.58	209	Pn	Pn	09 17 30.7	+1.4
	0.2nm,0.3s,baz=29,slow=12,SNR=9.6						
MKAR				Sn	Sn	09 18 56.5	+0.7
	0.1nm,0.3s,baz=30,slow=26,SNR=2.9						
MKAR				Lg	Lg	09 19 35.2	
	baz=28,slow=28,SNR=2.7						
	0.6nm,0.5s						

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*TEH **31** 09:19:27.4, 27°.86N×57°.61E, h10^{km}±964^{km}, ML2.8*
*DSN **31** 09:19:31.6±1.7, 27°.67N×58°.01E, h10^{km}, ML2.4/5, Error ellipse: s-maj=36.9km s-min=13.3km az=135.0*
*OMAN **31** 09:19:36.5±1.5, 27°.32N×58°.04E, h10^{km}, ml2.3/10, Error ellipse: s-maj=14.0km s-min=10.1km az=44.0*
ISC 31 09:19:29.4±1.3**, 27°.76N**±0°.05×**58°.13E**±0°.07**, h10^{km}, n23,**
σ1^{s}.93/33**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBAM	BAM	1.40	12	Pg	Pn	09 19 55.4	+0.3
JASK	Jask - Hormozg	1.90	187	Pn	Pb	09 20 04.9	+0.7
NGRK	Negar Kerman	2.24	327	Pn	Pn	09 20 05.5	-1.4
BANOM	Banah	2.46	222	P	Pn	09 20 09.9	+0.3
BANOM				S	Sn	09 20 39.0	-0.7
BANOM	Banah	2.46	222	P	Pn	09 20 10.0	+0.4
	SNR=9.3						
BANOM				S	Sn	09 20 38.2	-1.5
SHME	Shamm	2.46	227	P	Pn	09 20 09.2	-0.4
SHME	Shamm	2.46	227	P	Pn	09 20 09.6	0.0
MDH	Madha	2.95	214	P	Pn	09 20 15.9	-0.4
MASF	Masafi	2.96	217	P	Pn	09 20 17.9	+1.3
MASF				S	Sn	09 20 53.1	+0.9
MSFE	Esma-Masafi	2.97	217	P	Pn	09 20 17.9	+1.2
MSFE				S	Sn	09 20 52.8	+0.4
KHGB	Koh Gabri	2.98	331	Pn	Pn	09 20 19.4	+2.5
UOSS	Minazif	3.29	212	P	Pn	09 20 22.7	+1.6
UOSS	Minazif	3.29	212	P	Pn	09 20 23.1	+2.0
ASHO	Ashiyiah	3.59	212	P	Pn	09 20 26.4	+1.3
ASHO	Ashiyiah	3.59	212	P	Pn	09 20 27.3	+2.2
SOHO	SOHO	3.89	202	P	Pn	09 20 28.4	-0.9
SOHO	SOHO	3.89	202	P	Pn	09 20 28.6	-0.6
SOHO				S	Sn	09 21 09.7	-5.2
ASUD	Al Ashush, Dub	4.01	219	P	Pn	09 20 33.0	+2.1
	SNR=5.4						
HOQ	Hoqain	4.23	190	P	Pn	09 20 34.2	+0.3
HOQ				S	Sn	09 21 19.2	-4.2
ARQ	Araqi	4.64	199	P	Pn	09 20 41.7	+2.1
	SNR=8.0						
ARQ				S	Sn	09 21 33.5	-0.1
SMDO	Samad	4.69	181	P	Pn	09 20 41.8	+1.5
SMDO				S	Sn	09 21 33.7	-1.1
WBK	Wadi Bani Khal	5.19	171	P	Pn	09 20 49.2	+2.0
	SNR=14						
WBK				S	Sn	09 21 45.2	-1.9
JLN	Jalan Bani Buh	5.71	168	P	Pn	09 20 56.6	+2.3
JLN				S	Sn	09 21 56.6	-3.3

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*NNC **31** 09:27:51.0±1.1, 54°.08N×87°.23E, h0^{km}, mb3.1, mpv2.9,*
Error ellipse: s-maj=10.0km s-min=5.1km az=18.0,
Suspected Mining explosion.
*IDC **31** 09:27:50.5±2.8, 54°.23N×87°.07E, h0^{km}, mbtmp3.0/2,*
ML2.5/2, Error ellipse: s-maj=23.6km s-min=16.2km
az=63.0
ISC 31 09:27:51.6±4.3**, 54°.2N**±0°.2×**87°.0E**±0°.2**, h0^{km}, n8, σ1^{s}.17**/12**,**
3C-7D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.31	262	I	I	09 37 20.0	
	baz=79,slow=342,SNR=2.8						
ZAA0	Zalesovo Array	1.31	262	⇑P	Pn	09 28 17.3	+0.2
	1.0nm,0.7s						
ZAA0				⇓S	Sn	09 28 37.0	+1.7
	3.9nm,0.8s						
ZALV	Zalesovo Beam	1.31	262	Pn	Pg	09 28 15.3	-1.4
	0.8nm,0.3s,baz=79,slow=17,SNR=17						
ZALV				Lg	Lg	09 28 34.1	
	1.0nm,0.3s,baz=73,slow=25,SNR=3.9						
KURK	Kurchatov	6.18	240	⇓Pn	Pn	09 29 23.6	-0.4
	3.0nm,1.1s						
KURK				⇓Lg	Lg	09 31 09.2	
	4.3nm,1.1s						
KURBB	Kurchatov Arra	6.28	239	Pn	Pn	09 29 26.4	+0.9
	baz=55,slow=14,SNR=9.4						
KURBB				Sn	Sn	09 30 37.1	-0.7
	baz=48,slow=3.0,SNR=1.4						
KURBB				Lg	Lg	09 31 12.9	
	baz=46,slow=50,SNR=3.0						
	1.5nm,0.7s						
KURBB	Kurchatov Arra	6.28	239	⇑Pn	Pn	09 29 26.0	+0.6
	2.9nm,0.8s						
KURBB				⇓Sn	Sn	09 30 39.7	+1.9
	3.8nm,0.7s						
KURBB				⇓Lg	Lg	09 31 14.5	
	6.3nm,0.8s						
MK31	Makanchi Array	7.96	204	⇑Pn	Pn	09 29 48.8	+0.4
	0.3nm,0.5s,baz=26,slow=14,SNR=5.4						
MK31				⇓Sn	Sn	09 31 19.0	-0.3
	0.7nm,0.6s,baz=25,slow=27,SNR=4.6						
MK31				⇓Lg	Lg	09 32 06.1	
	3.6nm,0.9s,baz=24,slow=31,SNR=3.8						
MKAR	Makanchi Array	7.96	204	Pn	Pn	09 29 49.8	+1.3
	0.1nm,0.3s,baz=26,slow=13,SNR=6.1						
MKAR				Sn	Sn	09 31 18.7	-0.5
	0.1nm,0.3s,baz=26,slow=28,SNR=7.4						
MKAR				Lg	Lg	09 32 07.9	
	0.1nm,0.3s,baz=21,slow=29,SNR=6.8						
	0.4nm,0.6s						

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*JMA **31** 09:31:24.0±0.2, 24°N±3°×12°3E±°, h50^{km}, MV2.2/10, NW*
OFF ISHIGAKIJIMA IS
*TAP **31** 09:31:24.2, 24°.33N×122°.93E, h47^{km}, ML2.9, D*
ISC 31 09:31:24.4±1.2**, 24°.30N**±0°.05×**122°.95E**±0°.02**, h47^{km}**±7^{km}**,**
n52, σ0^{s}.83/94**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.15	359	*e*P	Pn	09 31 31.6	-0.5
JYNG				S	Sn	09 31 37.6	0.0
YOJ	Yonaguni jima	0.17	20	P	Pn	09 31 32.2	0.0
YOJ				S	Sn	09 31 37.6	-0.2
YOJ	Yonaguni jima	0.17	20	*i* P	Pn	09 31 32.2	0.0
	baz=25						
YOJ				S	Sn	09 31 37.8	0.0
	baz=25						
EOS3	EOS3	0.57	269	P	Pn	09 31 36.9	+0.6
	baz=266						
EOS4	EOS4	0.60	253	*e*P	Pn	09 31 37.5	+1.1
	baz=252						
EOS4				*e*S	Sn	09 31 45.6	+0.5
	baz=252						
EOS2	EOS2	0.66	280	*e*P	Pn	09 31 37.8	+0.4
	baz=281						
EOS2				*e*S	Sn	09 31 47.7	+0.9
	baz=281						
IRIF	Iriomote-Funau	0.71	87	P	Pn	09 31 38.0	-0.2
IRIF				S	Sn	09 31 48.4	+0.1
HATJ	Hateruma jima	0.82	107	*e*P	Pn	09 31 40.2	+0.6
JKRS	Kuro-shima	0.97	93	P	Pn	09 31 42.4	+0.8
JKRS				S	Sn	09 31 54.9	+0.6
TWC	Suao	1.05	287	*e*P	Pn	09 31 41.8	-0.9
	baz=294						
TWC				*e*S	Sn	09 31 54.7	-1.5
	baz=294						
EWUT	Wuta	1.07	278	*e*P	Pn	09 31 43.1	+0.1
	baz=286						
EWUT				*e*S	Sn	09 31 55.8	-1.1
	baz=286						
JIJ	Ishigaki jima	1.09	86	*e*P	Pn	09 31 43.2	-0.1
JIJ				S	Sn	09 31 56.4	-0.9
ENA	Nanau	1.11	277	P	Pn	09 31 43.3	-0.2
	baz=284						
ENA				*e*S	Sn	09 31 57.0	-0.6
	baz=284						
NDS	Dongshan	1.17	287	*e*S	Sn	09 31 59.3	+0.1
	baz=293						
TIPB	Shuangxi	1.22	303	P	Pn	09 31 45.0	-0.1
	baz=311						
TIPB				*e*S	Sn	09 31 59.5	-0.9
	baz=311						
NACB	Ninganchiao	1.24	264	*e*S	Sn	09 32 01.6	+0.6
	baz=263						
JISG	Ishigakijimahi	1.27	77	P	Pn	09 31 45.9	+0.1
JISG				*e*S	Sn	09 32 01.4	-0.3
ENTT	Nioudou	1.30	285	*e*P	Pn	09 31 46.8	+0.6
	baz=291						
ENTT				*e*S	Sn	09 32 02.6	+0.2
	baz=291						
FUSB	Fushanzhiwuyua	1.32	291	*e*P	Pn	09 31 47.3	+0.9
	baz=297						
FUSB				*e*S	Sn	09 32 01.3	-1.7
	baz=297						
ETLH	Xiulin Townshi	1.34	266	*e*P	Pn	09 31 47.0	+0.2
	baz=265						

ETLH				*e*S	Sn	09 32 03.9	+0.4
	baz=265						
ETM	Tongmen	1.37	256	P	Pn	09 31 47.0	-0.1
	baz=245						
ETM				*e*S	Sn	09 32 03.5	-0.6
	baz=245						
NWLT	Wulai	1.40	290	*e*P	Pn	09 31 47.9	+0.3
	baz=299						
NWLT				*e*S	Sn	09 32 04.0	-0.9
	baz=299						
YHNB	Yeheng	1.48	285	*e*P	Pn	09 31 49.0	+0.4
	baz=292						
YHNB				*e*S	Sn	09 32 06.5	-0.3
	baz=292						
EGFH	Guangfu	1.52	246	*e*S	Sn	09 32 07.6	-0.3
	baz=244						
WHF	Hehuan Shan	1.54	265	*e*P	Pn	09 31 49.8	0.0
	baz=251						
WHF				*e*S	Sn	09 32 08.2	-0.8
	baz=251						
FUSS	Fushou	1.56	268	*e*P	Pn	09 31 49.6	-0.3
	baz=267						
FUSS				*e*S	Sn	09 32 08.8	-0.2
	baz=267						
HGSD	Ruisui	1.61	240	P	Pn	09 31 49.8	-0.5
	baz=239						
HGSD				*e*S	Sn	09 32 08.6	-1.3
	baz=239						
JTJ	Tarama	1.64	78	*e*S	Sn	09 32 10.6	0.0
CHGB	Renai	1.64	262	*e*P	Pn	09 31 51.8	+0.8
	baz=250						
OWD	Renai	1.65	258	P	Pn	09 31 51.4	+0.2
	baz=257						
OWD				S	Sn	09 32 10.8	-0.5
	baz=257						
EHY	Hungye	1.68	242	P	Pn	09 31 51.2	-0.2
	baz=241						
EHY				*e*S	Sn	09 32 11.8	-0.1
	baz=241						
WUSB	Renai	1.70	260	P	Pn	09 31 52.5	+0.8
	baz=259						
WUSB				*e*S	Sn	09 32 12.8	+0.5
	baz=259						
VWDT	VWDT	1.74	252	P	Pn	09 31 52.8	+0.7
	baz=241						
VWDT				S	Sn	09 32 13.3	+0.2
	baz=241						
YULB	Yu-li	1.76	239	P	Pn	09 31 52.1	-0.3
	baz=238						
YULB				S	Sn	09 32 12.8	-0.9
	baz=238						
EYUL	Yuli	1.77	238	*e*P	Pn	09 31 51.8	-0.7
	baz=236						
EYUL				*e*S	Sn	09 32 14.0	+0.2
	baz=236						
TWF1	Yuli	1.78	238	P	Pn	09 31 53.0	+0.2
	baz=237						
TWF1				S	Sn	09 32 13.8	-0.5
	baz=237						
FULB	Fuli	1.87	234	*e*P	Pn	09 31 52.8	-1.2
	baz=223						
FULB				*e*S	Sn	09 32 15.4	-1.0
	baz=223						
SSLB	Suanglung	1.89	255	*e*P	Pn	09 31 54.9	+0.6
	baz=253						
SSLB				*e*S	Sn	09 32 16.6	-0.4
	baz=253						
SMLT	Sun Moon Lake	1.92	258	*e*P	Pn	09 31 54.7	0.0
	baz=248						
SMLT				*e*S	Sn	09 32 17.5	-0.1
	baz=248						
TYC	Yuchr	1.95	259	*e*P	Pn	09 31 55.4	+0.4
	baz=248						
TYC				*e*S	Sn	09 32 18.6	+0.3
	baz=248						
EHD	Haiduan	1.96	235	*e*P	Pn	09 31 54.4	-0.8
	baz=224						
EHD				*e*S	Sn	09 32 16.9	-1.8
	baz=224						
EDH	Donghe	2.00	229	*e*P	Pn	09 31 54.6	-1.2
	baz=219						
EDH				*e*S	Sn	09 32 16.9	-2.7
	baz=219						
WHYT	Xinyi Township	2.01	253	*e*P	Pn	09 31 57.2	+1.4
	baz=243						
WHYT				*e*S	Sn	09 32 19.6	-0.2
	baz=243						
ELDTW	Lidau	2.09	238	P	Pn	09 31 56.5	-0.5
	baz=237						
ELDTW				*e*S	Sn	09 32 20.1	-1.8
	baz=237						
ALS	Alishan	2.11	249	*e*P	Pn	09 31 58.4	+0.9
	baz=247						
ALS				*e*S	Sn	09 32 22.5	-0.3
	baz=247						
TWGBT	Beinan	2.26	230	*e*P	Pn	09 31 59.8	+0.4
	baz=238						
STYH	Taoyuan	2.29	241	P	Pn	09 32 00.2	+0.6
	baz=232						
STYH				*e*S	Sn	09 32 26.9	+0.3
	baz=232						
TPUB	Ta-pu	2.34	245	*e*P	Pn	09 32 02.0	+1.5
	baz=244						
TPUB				*e*S	Sn	09 32 30.1	+2.1
	baz=244						
WTP	Ta-pu	2.38	244	P	Pn	09 32 02.1	+1.1
	baz=243						
WTP				*e*S	Sn	09 32 29.6	+0.6
	baz=243						
CHN1	Nanshi	2.48	244	*e*P	Pn	09 32 03.9	+1.6
	baz=242						
CHN1				*e*S	Sn	09 32 33.4	+2.0
	baz=242						
MASBT	Mashibuluo	2.71	232	*e*P	Pn	09 32 05.0	-0.5
	baz=224						
HEN	Hengchun	3.06	222	*e*P	Pn	09 32 10.8	+0.6
	baz=221						

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*IDC **31** 09:35:55.8±0.7, 12°.45N×143°.39E, h0^{km}, mb4.1/12, mbtmp4.1/12, MS3.6/5, Error ellipse: s-maj=21.2km s-min=17.0km az=111.0*

ISC 31 09:35:59.8±0.7, **12°.4N**±0°.1×**143°.4E**±0°.1, **h27**^{km}, **n21**, σ**1^{s}.18**/15, **mb4.2**/12, **MS3.7**/4, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.83	50	Pn	Pn	09 36 30.3	+0.9
	90nm,0.3s,baz=200,slow=8.2,SNR=30						
GUMO				Sn	Sb	09 36 54.7	-0.3
	263nm,0.3s,baz=329,slow=23,SNR=40						
DAV	Davao City (W)	18.37	255	LR	LR	09 47 09.5	
	comp=Z,74nm,19.7s,baz=98,slow=37						
H11N1	WAKE ISLAND Hy	23.67	69	T	T	10 05 56.3	
	baz=254,slow=75,SNR=9.8						
H11N2	WAKE ISLAND Hy	23.68	69	T	T	10 05 49.7	
	baz=254,slow=75,SNR=5.7						
H11N3	WAKE ISLAND Hy	23.68	69	T	T	10 05 54.5	
	baz=254,slow=75,SNR=7.7						
HNR	Honiara	27.21	142	LR	LR	09 52 15.8	
	comp=Z,830nm,19.8s,baz=1.0,slow=36						
WRA	Warramunga Arr	33.38	196	P	P	09 42 37.0	+0.9
	3.5nm,0.9s,baz=18,slow=9.8,SNR=7.6						
	3.5nm,0.9s						
ASAR	Alice Springs	37.05	195	P	P	09 43 08.3	+0.6
	0.7nm,0.7s,baz=21,slow=11,SNR=6.3						
	0.7nm,0.7s						
DZM	Mont Dzumac	41.04	146	P	P	09 43 40.1	-1.1
	3.2nm,0.8s,baz=267,slow=18,SNR=1.7						
	3.2nm,0.8s						
PETK	Petropavlovsk-	42.16	13	LR	LR	10 00 58.7	
	comp=Z,52nm,19.7s,baz=165,slow=36						
CMAR	Chiang Mai Arr	43.22	284	P	P	09 43 59.9	+0.9
	1.0nm,0.3s,baz=89,slow=6.4,SNR=2.1						
CMAR				LR	LR	10 02 05.5	
	comp=Z,35nm,20.0s,baz=115,slow=36						
	1.0nm,0.3s						
SONM	Songino Array	46.90	326	P	P	09 44 27.1	-1.0
	0.3nm,0.6s,baz=145,slow=5.3,SNR=2.3						
	0.3nm,0.6s						
MKAR	Makanchi Array	61.37	317	P	P	09 46 13.6	+0.2
	0.5nm,0.8s,baz=120,slow=4.6,SNR=4.2						
	0.5nm,0.8s						
KURBB	Kurchatov Arra	64.62	320	P	P	09 46 34.4	-0.6
	2.2nm,0.8s,baz=105,slow=6.9,SNR=12						
	2.2nm,0.8s						
ILAR	Eielson Array	70.22	25	P	P	09 47 09.2	-0.9
	1.4nm,0.8s,baz=264,slow=4.6,SNR=12						
	1.4nm,0.8s						
YKA	Yellowknife Ar	84.54	27	P	P	09 48 30.3	0.0
	2.2nm,0.8s,baz=288,slow=5.3,SNR=29						
	2.2nm,0.8s						
ARCES	ARCESS Array B	87.76	342	P	P	09 48 47.5	+1.4
	7.2nm,1.0s,baz=40,slow=8.0,SNR=3.7						
	7.2nm,1.0s						
NVAR	Mina Array Bea	88.75	51	P	P	09 48 53.5	+1.8
	1.2nm,0.7s,baz=260,slow=5.2,SNR=5.3						
	1.2nm,0.7s						
FINES	FINESS Array B	91.62	335	P	P	09 49 02.4	-1.8
	1.2nm,0.7s,baz=57,slow=10,SNR=2.0						
	1.2nm,0.7s						
LPIG	La Paz	99.40	63	LR	LR	10 27 29.7	
	comp=Z,47nm,19.1s,baz=182,slow=31						
CFA	Coronel Fontan	145.17	128	PKPbc	PKPbc	09 55 33.8	-1.3
	3.2nm,0.8s,baz=234,slow=3.5,SNR=5.0						

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*IDC **31** 09:54:34.5±0.7, 16°.13S×74°.34W, h0^{km}, mb4.4/8, mbtmp4.4/13, ML3.8/5, MS4.0/11, Error ellipse: s-maj=25.2km s-min=17.7km az=64.0*

*NEIC **31** 09:54:38.3±2.3, 16°.20S±0°.06×74°.36W±0°.09, h24^{km}±4^{km}, mb4.8/52, Error ellipse: s-maj=12.5km s-min=8.6km az=68.0*

*VAO **31** 09:54:41.6±0.3, 16°.13S×74°.28W, h36^{km}, mb4.7*

ISC 31 09:54:40.0±0.4, **16°.23S**±0°.05×**74°.37W**±0°.06, **h49**^{km}, **n228**, σ**1^{s}.67**/215, **mb4.7**/22, **MS3.9**/5, **Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	4.40	120	Pn	Pn	09 55 44.2	-0.1
AP01	Chacalluta	4.40	120	*e*P	Pn	09 55 47.6	+3.3
PB12	IPOC Station P	4.53	122	Pn	Pn	09 55 45.6	-0.6
PB12	IPOC Station P	4.53	122	*e*P	Pn	09 55 46.0	-0.3
NNA	Nana	4.85	330	Pn	Pn	09 55 49.3	-1.3
	2.0nm,0.3s,baz=121,slow=13,SNR=3.7						
NNA				Sn	Sn	09 56 42.6	-3.0
	36nm,0.3s,baz=208,slow=12,SNR=4.2						
NNA				LR	LR	09 57 48.5	
	comp=Z,915nm,20.4s,baz=156,slow=40						
	15nm,0.4s						
NNA	Nana	4.85	330	Pn	Pn	09 55 50.2	-0.4
NNA	Nana	4.85	330	*e*P	Pn	09 55 56.4	+5.7
PB18	Visviri	4.87	107	Pn	Pn	09 55 49.3	-2.0
PB18	Visviri	4.87	107	*e*P	Pn	09 55 54.8	+3.5
PB16	IPOC Station P	5.10	115	Pn	Pn	09 55 52.6	-1.8
PB16	IPOC Station P	5.10	115	*e*P	Pn	09 55 55.7	+1.3
MNMC	Minye Minye	5.39	123		Pn	09 55 56.5	-1.7
MNMC	Minye Minye	5.39	123	*e*P	Pn	09 55 58.4	+0.2
TA02	Huaiquique	5.69	136	Pn	Pn	09 56 02.0	-0.1
PB11	IPOC Station P	5.70	129	Pn	Pn	09 56 01.7	-0.6
PB11	IPOC Station P	5.70	129	*e*P	Pn	09 56 02.2	-0.1
TA01	Diego Aracena	5.87	138	Pn	Pn	09 56 04.2	-0.3
LPAZ	La Paz	5.99	91	Pn	Pn	09 56 08.8	+2.0
	5.1nm,0.3s,baz=287,slow=7.8,SNR=100						
LPAZ				Sn	Sn	09 57 07.3	-7.1
	baz=210,slow=13						
LPAZ				LR	LR	09 58 53.3	
	comp=Z,3μm,20.8s,baz=266,slow=43						
LPAZ	La Paz	5.99	91	Pn	Pn	09 56 04.1	-2.7
LPAZ	La Paz	5.99	91	*e*P	Pn	09 56 10.7	+4.0
LPAZ	La Paz	5.99	91	*e*P	Pn	09 56 12.5	+5.7
GO01	Chusmiza	6.00	126		Pn	09 56 06.3	-0.4
GO01	Chusmiza	6.00	126	*e*P	Pn	09 56 07.6	+0.9
PB08	IPOC Station P	6.30	129		Pn	09 56 11.1	+0.3
PB08	IPOC Station P	6.30	129	*e*P	Pn	09 56 11.6	+0.8
PB02	IPOC Station P	6.60	141		Pn	09 56 14.5	-0.2
PB01	IPOC Station P	6.66	137		Pn	09 56 15.3	-0.1
PB07	IPOC Station P	6.92	143		Pn	09 56 17.9	-1.2
PB03	IPOC Station P	7.25	144	Pn	Pn	09 56 22.9	-0.6
PB04	IPOC Station P	7.26	147		Pn	09 56 23.8	+0.1
PB09	IPOC Station P	7.36	140		Pn	09 56 25.6	+0.4
PB10	IPOC Station P	8.09	154	Pn	Pn	09 56 33.6	-1.3
LVC	Limon Verde	8.17	142	Pn	Pn	09 56 36.3	-0.1
	2.1nm,0.3s,baz=309,slow=8.1,SNR=24						
LVC				Sn	Sn	09 58 03.9	-3.8
	4.3nm,0.3s,baz=80,slow=22,SNR=7.0						
LVC				LR	LR	09 59 33.2	
	comp=Z,828nm,21.8s,baz=306,slow=36						
	23nm,0.6s						
LVC	Limon Verde	8.17	142	Pn	Pn	09 56 35.0	-1.4
LVC	Limon Verde	8.17	142	*e*P	Pn	09 56 37.8	+1.3
PB15	IPOC Station P	8.33	147		Pn	09 56 38.0	-0.5
CZSB	Cruzeiro do Su	8.60	11	Pn	Pn	09 56 41.7	-0.4
CZSB	Cruzeiro do Su	8.60	11	*e*P	Pn	09 56 41.0	-1.1
PB14	IPOC Station P	9.14	157		Pn	09 56 49.4	-0.3
ATAH	Atahualpa	9.86	336	Pn	Pn	09 57 00.6	+1.0
	0.4nm,0.3s,baz=309,slow=20,SNR=3.0						
ATAH				Sn	Sn	09 58 58.5	+9.3
	0.2nm,0.3s,baz=84,slow=18,SNR=1.5						
ATAH				LR	LR	10 00 20.4	
	comp=Z,458nm,18.1s,baz=203,slow=35						
GO02	Mina Guanaco	9.95	154	Pn	Pn	09 57 00.1	-0.6
ETMB	Extrema	10.19	52	Pn	Pn	09 57 04.2	+0.5
ETMB	Extrema	10.19	52	*e*P	Pn	09 57 04.1	+0.4
AC01	Pan de Azucar	10.47	161	Pn	Pn	09 57 07.5	-0.1
AC02	Maricunga	11.62	156		Pn	09 57 24.5	+0.7
AC06	Mina Casimiro	11.68	162	Pn	Pn	09 57 24.5	+0.3
TBTG	Tabatinga, AM	12.75	21	Pn	Pn	09 57 38.0	-0.8
TBTG	Tabatinga, AM	12.75	21	*e*P	Pn	09 57 36.2	-2.5
TBTG	Tabatinga, AM	12.75	21	*e*P	Pn	09 57 37.9	-0.8
TBTG	Tabatinga, AM	12.75	21	*e*P	Pn	09 57 37.9	-0.8
SIV	San Ignacio	12.78	91	Pn	Pn	09 57 36.7	-2.6
	0.1nm,0.3s,baz=260,slow=13,SNR=23						
SIV				LR	LR	10 03 05.3	
	comp=Z,2μm,18.5s,baz=283,slow=40						
	6.6nm,0.8s						
AC05	El Transito	13.10	164	Pn	Pn	09 57 42.1	-1.6
BBSD	Serra de San D	13.22	96	*e*P	Pn	09 57 43.4	-1.8
VILB	Vilhena	14.10	78	Pn	Pn	09 57 55.3	-1.8
VILB	Vilhena	14.10	78	*e*P	Pn	09 57 55.9	-1.3
CO01	Juntas del Tor	14.23	165	Pn	Pn	09 57 57.2	-1.9
GO04	Tololo Observa	14.26	167	Pn	Pn	09 57 57.6	-1.8
PTLB	Pontes e Lacer	14.68	89	Pn	Pn	09 58 03.5	-1.3
PTLB	Pontes e Lacer	14.68	89	*e*P	Pn	09 58 03.2	-1.6
CO03	El Pedregal	14.93	168	Pn	Pn	09 58 05.5	-2.6
PORT	Chimborazo Vol	15.30	343	Pn	Pn	09 58 13.1	-0.5
SLOR	San Lorenzo -	15.93	345	Pn	Pn	09 58 20.8	-0.7
CFA	Coronel Fontan	16.29	161	Pn	Pn	09 58 26.6	+1.0
	0.7nm,0.3s,baz=342,slow=11,SNR=39						
CFA				LR	LR	10 04 04.0	
	comp=Z,252nm,19.6s,baz=326,slow=35						
	9.8nm,1.1s						
TICA	Tres Isletas	16.48	130	*e*P	Pn	09 58 28.9	+0.9
VA03	San Esteban	16.82	169		P	09 58 33.9	+0.1
VA03				IAmb	IAmb	09 58 40.5	
	comp=Z,48nm,1.9s						
OTAV	Otavalo	16.85	346	Pn	Pn	09 58 32.1	-1.0
OTAV	Otavalo	16.85	346	*e*P	Pn	09 58 33.1	0.0
ROC1	El Roble	16.95	170	Pn	Pn	09 58 33.2	-0.8
VACA	Villa Angela C	17.00	134	*e*P	Pn	09 58 35.1	+0.6
PEL	Peldehue	17.17	169		P	09 58 37.1	-0.5
TULM	Tulcn-Chalpat	17.17	348	Pn	Pn	09 58 35.4	-1.8
BDQN	Bodoquena, MS	17.24	107	*e*P	Pn	09 58 36.6	-0.9
SGCB	S£o Gabriel d	17.57	25	*e*P	Pn	09 58 41.0	-0.5
H03N1	Juan Fernandez	17.62	193	T	T	10 16 57.6	
	baz=15,slow=73,SNR=1409						
H03N2	Juan Fernandez	17.62	193	T	T	10 16 58.0	
	baz=15,slow=73,SNR=1172						
H03N3	Juan Fernandez	17.64	193	T	T	10 16 56.0	
	baz=15,slow=73,SNR=1233						
PDRB	Porto dos Gac	17.73	77	*e*P	Pn	09 58 41.5	-2.0
MT09	Talagante	17.73	171	Pn	Pn	09 58 42.8	-0.8
VA04	Juan Fernndez	17.80	192	Pn	Pn	09 58 42.2	-2.0
VA04				IAmb	IAmb	09 58 48.1	
	comp=Z,55nm,0.9s						
LMEL	Las Melosas	17.94	169		Pn	09 58 45.4	-0.7
AQDB	Aquidauana	18.22	106		P	09 58 49.5	+0.3
AQDB	Aquidauana	18.22	106	*e*P	P	09 58 49.7	+0.5
MACC	Macarena, Meta	18.27	2	*e*P	P	09 58 41.9	-7.8
PP1B	Ponte de Pedra	18.70	97	*e*P	Pn	09 58 56.0	+0.7
MACA	Manacapuru-AM	18.70	47	P	P	09 58 53.2	-1.4
MACA				IAmb	IAmb	09 58 58.5	
	comp=Z,70nm,1.0s						
MACA	Manacapuru-AM	18.70	47	*e*P	Pn	09 58 56.3	+0.9
BO02	Sierra Bellavi	18.76	171	P	P	09 58 54.7	-0.5
CPUP	Villa Florida	18.77	125	P	P	09 58 53.9	-1.4
	baz=282,slow=5.9,SNR=2.6						
CPUP				PcP	PcP	10 03 24.1	+2.8
	comp=Z,0.7nm,0.3s,baz=38,slow=10,SNR=2.8						
CPUP				LR	LR	10 06 59.1	
	comp=Z,207nm,18.1s,baz=306,slow=40						
	comp=Z,2.2nm,0.8s						
CPUP	Villa Florida	18.77	125		P	09 58 54.0	-1.2
CPUP	Villa Florida	18.77	125	*e*P	Pn	09 58 56.6	+0.5
CLDB	Colider	18.82	76	*e*P	Pn	09 58 57.2	+0.3
GO05	Huala	18.83	174	P	P	09 58 55.5	-0.4
AMBA	Amambai (Brazi	19.43	113	*e*P	Pn	09 59 04.8	+0.8
ML02	Panimavida	19.63	173	P	P	09 59 04.9	+0.4
ML02				IAmb	IAmb	09 59 18.9	
	comp=Z,21nm,0.9s						
MECA	Mercedes	19.77	134	*e*P	Pn	09 59 09.1	+1.0
PRAC	Prado	19.82	358	*e*P	Pn	09 59 11.1	+2.4
ORTC	Ortega, Tolima	20.03	357	*e*P	Pn	09 59 17.9	+6.8
YOTC	Yotoco, Valle	20.18	354	*e*P	Pn	09 59 21.3	+8.3
VILC	Villavicencio,	20.22	2	*e*P	Pn	09 59 18.5	+4.9
AZCA	Azaras, Argent	20.68	128	*e*P	Pn	09 59 18.5	-0.3
NPGB	Novo Progresso	20.72	66	*e*P	P	09 59 16.3	-0.3
MCR1	Marechal Candi	20.73	117	*e*P	Pn	09 59 19.4	-0.1
ROSC	El Rosal	20.93	0	P	P	09 59 17.9	-1.4
	comp=Z,5.3nm,0.4s,baz=156,slow=22,SNR=1.7						
	comp=Z,5.3nm,0.4s						
ROSC	El Rosal	20.93	0	P	P	09 59 18.1	-1.2
ROSC				IAmb	IAmb	09 59 33.4	
	comp=Z,14nm,0.8s						
ROSC	El Rosal	20.93	0	*e*P	Pn	09 59 25.5	+3.2
ITQB	Itaqui	21.08	132		P	09 59 20.3	0.0
ITQB				IAmb	IAmb	09 59 34.5	
	comp=Z,82nm,1.2s						
ITQB	Itaqui	21.08	132	*e*P	P	09 59 23.4	+3.0
PLMC	San Jos del P	21.09	355	*e*P	P	09 59 30.6	+10
NORC	Norcasia	21.66	359	*e*P	P	09 59 32.7	+6.0
ARAG	Araguaiana, MT	21.70	92	*e*P	P	09 59 27.3	+0.3
SPBC	San Pablo de B	21.74	1	*e*P	P	09 59 30.6	+3.0
ITTB	Itaituba	21.77	59	*e*P	P	09 59 28.0	+0.2
CRSM	Crissiumal (Br	21.91	124	*e*P	P	09 59 32.3	+3.0
CBOC	Ciudad Bolivar	22.01	356	*e*P	P	09 59 36.7	+6.2
RUSC	La Rusia	22.02	3	P	P	09 59 29.2	-1.7
RUSC				IAmb	IAmb	09 59 49.6	
	comp=Z,32nm,1.0s						
RUSC	La Rusia	22.02	3	*e*P	P	09 59 29.8	-1.2
FRBT	Francisco Belt	22.09	120	*e*P	P	09 59 32.7	+1.4
RODS	Rosario do Sul	22.48	132	*e*P	P	09 59 37.5	+2.1
PCMB	Pacaembu	22.50	107	*e*P	P	09 59 36.5	+0.9
PTGB	Pitanga	22.51	116	*e*P	P	09 59 36.1	+0.2
PTBC	PUERTO BERRIO,	22.62	360	*e*P	P	09 59 44.7	+7.7
SNDB	Serra Nova Dou	22.77	82	*e*P	P	09 59 37.8	-0.8
BOAV	Boa Vista	23.02	38	P	P	09 59 41.0	0.0
BOAV				IAmb	IAmb	10 00 02.2	
	comp=Z,21nm,1.1s						
BOAV	Boa Vista	23.02	38	*e*P	P	09 59 40.8	-0.3
BOAV	Boa Vista	23.02	38	*e*P	P	09 59 41.5	+0.4
ITRB	Iturama	23.09	102	*e*P	P	09 59 43.2	+1.3
DBBC	Dabeiba	23.17	355	*e*P	P	09 59 51.0	+8.3
ALGR	Alto Alegre (B	23.30	126	*e*P	P	09 59 44.4	+0.6
ITAB	Concordia	23.34	122	P	P	09 59 45.4	+1.2
ITAB				IAmb	IAmb	09 59 47.1	
	comp=Z,28nm,1.0s						
ITAB	Concordia	23.34	122	*e*P	P	09 59 46.4	+2.3
GO06	Curarrehue	23.41	174	P	P	09 59 44.6	-0.1
GO06				IAmb	IAmb	10 00 10.8	
	comp=Z,15nm,1.0s						
CPSB	Cacapava Do Su	23.79	130	*e*P	P	09 59 49.7	+1.4
TRQA	Tornquist	24.33	156	P	P	09 59 54.1	+0.9
TRQA				IAmb	IAmb	10 00 20.7	
	comp=Z,13nm,1.3s						
TRQA	Tornquist	24.33	156	*e*P	P	09 59 54.4	+1.1
FRTB	Fartura	24.37	111	*e*P	P	09 59 55.6	+1.8
PLTB	Pedras Altas	24.41	133	*e*P	P	09 59 55.0	+1.0
MALB	Monte Alegre	24.42	56	*e*P	P	09 59 54.6	+0.4
PLCA	Paso Flores	24.64	173	P	P	09 59 58.5	+2.4
	comp=Z,4.9nm,0.8s,baz=339,slow=10,SNR=18						
PLCA				LR	LR	10 07 41.3	
	comp=Z,167nm,18.5s,baz=24,slow=32						
	comp=Z,4.9nm,0.8s						
PLCA	Paso Flores	24.64	173	P	P	09 59 57.0	+0.9
PLCA				IAmb	IAmb	10 00 15.8	
	comp=Z,56nm,1.4s						
PLCA	Paso Flores	24.64	173	*e*P	P	09 59 59.0	+2.9
LL04	Puerto Octay	24.65	176	P	P	09 59 57.5	+1.5
LL04				IAmb	IAmb	10 00 15.8	
	comp=Z,13nm,0.9s						
BB19B	Bebedouro	24.94	105	*e*P	P	10 00 00.7	+1.7
IPMB	Ipameri, GO	25.06	98	*e*P	P	10 00 01.1	+1.0
LL05	Los Muermos	25.10	178	P	P	09 59 59.6	-0.5
SDV	Santo Domingo	25.23	9	P	P	10 00 01.1	-0.6
	comp=Z,2.6nm,0.4s,baz=198,slow=20,SNR=1.6						
	comp=Z,2.6nm,0.4s						
SDV	Santo Domingo	25.23	9	P	P	10 00 00.8	-0.9
SDV				IAmb	IAmb	10 00 17.6	
	comp=Z,48nm,1.8s						
SDV	Santo Domingo	25.23	9	*e*P	P	10 00 03.7	+1.9
CNLB	Canela	25.23	125	*e*P	P	10 00 03.5	+1.9
BDFB	Brasilia	25.35	92	P	P	10 00 03.4	+0.6
	comp=Z,14nm,0.9s,baz=253,slow=11,SNR=14						
BDFB				LR	LR	10 10 48.9	
	comp=Z,232nm,18.8s,baz=293,slow=38						
	comp=Z,14nm,0.9s						
BDFB	Brasilia	25.35	92	P	P	10 00 03.8	+1.0
BDFB				IAmb	IAmb	10 00 13.1	
	comp=Z,31nm,1.1s						
BDFB	Brasilia	25.35	92	*e*P	P	10 00 03.3	+0.5
TIJ01	Guaruva-PR	25.35	115	*e*P	P	10 00 06.1	+3.4
BAUV	El Baul	25.79	15	P	P	10 00 06.7	+0.1
BAUV				IAmb	IAmb	10 00 28.5	
	comp=Z,45nm,1.1s						
SJCC	San Jacinto, C	25.97	358	*e*P	P	10 00 20.6	+12
CDITO	Canoas	26.04	341	P	P	10 00 09.4	+0.4
CDITO				IAmb	IAmb	10 00 18.2	
	comp=Z,47nm,1.6s						
RCLB	Rio Claro- Sao	26.04	108	*e*P	P	10 00 10.8	+1.7
PRPB	Parauapebas	26.05	70	*e*P	P	10 00 09.3	+0.3
SPB	Sao Paulo	26.34	110	*e*P	P	10 00 15.3	+3.7
PMNB	Patos De Minas	26.75	99	*e*P	P	10 00 17.1	+1.7
SMTB	Santa Maria do	27.13	78	*e*P	P	10 00 20.7	+1.9
PARB	Paraibuna	27.93	109	*e*P	P	10 00 29.3	+3.3
SDBA	SAO DESIDERIO	28.79	86	*e*P	P	10 00 34.9	+1.2
JANB	Januaria	28.96	92	*e*P	P	10 00 36.9	+1.7
TMAB	Tom-Au,PA,Br	29.30	65	*e*P	P	10 00 40.2	+2.1
DIAM	Diamantina, MG	29.37	99	*e*P	P	10 00 40.8	+1.8
PRVC	Isla de Provid	30.22	346	*e*P	P	10 00 50.5	+4.4
RIB01	Linhares ES	32.47	101	*e*P	P	10 01 07.8	+1.7
ROSB	Rosrio	32.57	69	*e*P	P	10 01 07.9	+1.0
GUA01	Guaratinga, BA	33.14	96	*e*P	P	10 01 14.2	+2.2
AOPR	Arecibo Observ	35.17	13	P	P	10 01 28.3	-1.1
AOPR				IAmb	IAmb	10 01 54.0	
	comp=Z,80nm,1.6s						
CMIG	Matias Romero	38.80	328	LR	LR	10 16 30.5	
	comp=Z,204nm,20.6s,baz=207,slow=34						
441A	DeRidder	50.10	339	P	P	10 03 31.0	+0.7
735A	Kenedy	50.22	333	P	P	10 03 32.3	+1.0
833A	Chaparral WMA,	50.48	331	P	P	10 03 33.6	+0.3
146A	Union	50.58	344	P	P	10 03 34.5	+0.5
TXAR	Lajitas Array	53.41	328	P	P	10 03 54.1	-1.0
TX31	Lajitas Ar. Si	53.41	328	P	P	10 03 55.1	-0.1
TX32	Lajitas Array	53.41	328	P	P	10 03 54.1	-1.0
TX32				IAmb	IAmb	10 04 08.9	
	comp=Z,81nm,1.8s						
SSPA	Standing Stone	56.67	357	P	P	10 04 18.3	0.0
ODNJ	Ogdensburg	57.02	360	P	P	10 04 21.0	+0.2
ODNJ				IAmb	IAmb	10 04 40.1	
	comp=Z,41nm,1.2s						
WSPT	Westport, CT	57.12	1	P	P	10 04 21.5	0.0
KSPA	Keystone Colle	57.51	359	P	P	10 04 24.1	-0.2
KSPA				IAmb	IAmb	10 05 04.9	
	comp=Z,41nm,1.1s						
M55A	Ridgway	57.55	356	P	P	10 04 24.2	-0.4
BINY	Binghamton	58.15	359	P	P	10 04 27.7	-1.1
ERPA	Erie	58.28	355	P	P	10 04 29.9	+0.2
WVNY	West Valley, N	58.47	356	P	P	10 04 30.8	-0.2
J58A	Remsen	59.30	359	P	P	10 04 37.4	+0.6
DBIC	Dimbokro	72.43	77	P	P	10 06 03.0	+1.2
	comp=Z,3.2nm,0.8s,baz=270,slow=8.4,SNR=4.1						
	comp=Z,3.2nm,0.8s						
QSPA	South Pole Qui	73.93	180	P	P	10 06 13.2	+3.3
QSPA				IAmb	IAmb	10 06 27.5	
	comp=Z,25nm,1.9s						
TOA0	Torodi Ar. Sit	80.64	73	P	P	10 06 49.3	+1.0
TOA0				IAmb	IAmb	10 07 05.2	
	comp=Z,10nm,1.0s						
TORD	Torodi Ar. Bea	80.64	73	P	P	10 06 49.6	+1.3
	comp=Z,6.8nm,0.8s,baz=258,slow=4.9,SNR=33						
TORD				LR	LR	10 41 36.2	
	comp=Z,281nm,19.3s,baz=253,slow=35						
	comp=Z,6.8nm,0.8s						
TORD	Torodi Ar. Bea	80.64	73	P	P	10 06 49.2	+0.9

TORD				IAmb	IAmb	10 07 05.2	
	comp=Z,8.7nm,0.9s						
ESDC	Sonseca Array	85.87	47	P	P	10 07 16.9	+2.1
	comp=Z,1.8nm,1.0s,baz=258,slow=5.5,SNR=7.4						
	comp=Z,1.8nm,1.0s						
TSUM	Tsumeb	86.57	109	P	P	10 07 20.6	+1.8
	comp=Z,3.4nm,0.8s,baz=254,slow=22,SNR=6.5						
	comp=Z,3.4nm,0.8s						
STKA	Stephens Creek	121.03	216	PKP	PKPdf	10 13 27.3	-0.6
	comp=Z,0.6nm,0.3s,baz=132,slow=11,SNR=2.1						
H11N3	WAKE ISLAND Hy	121.87	283	T	T	12 27 01.1	
	baz=98,slow=75,SNR=9.5						
H11N2	WAKE ISLAND Hy	121.89	283	T	T	12 27 04.1	
	baz=98,slow=75,SNR=12						
H11N1	WAKE ISLAND Hy	121.89	283	T	T	12 27 02.4	
	baz=98,slow=75,SNR=7.8						
H11S2	WAKE ISLAND Hy	121.90	282	T	T	12 27 04.3	
	baz=99,slow=75,SNR=23						
H11S1	WAKE ISLAND Hy	121.91	282	T	T	12 27 06.0	
	baz=99,slow=75,SNR=23						
H11S3	WAKE ISLAND Hy	121.92	282	T	T	12 27 05.7	
	baz=99,slow=75,SNR=27						
ASAR	Alice Springs	131.67	216	PKP	PKiKP	10 13 50.0	+0.5
	comp=Z,1.2nm,0.8s,baz=147,slow=1.9,SNR=11						
WRA	Warramunga Arr	134.30	219	PKP	PKiKP	10 13 54.9	+0.1
	comp=Z,2.5nm,0.8s,baz=140,slow=2.0,SNR=21						
ZALV	Zalesovo Beam	139.01	19	PKP	PKPdf	10 14 00.4	-0.6
	comp=Z,2.2nm,0.7s,baz=316,slow=4.1,SNR=6.9						
MKAR	Makanchi Array	143.89	28	PKP	PKPdf	10 14 09.5	-0.6
	comp=Z,0.8nm,0.8s,baz=327,slow=2.0,SNR=5.7						
USA0B	Ussuriysk Arra	144.30	327	PKPdf	PKPdf	10 14 11.5	+0.7
USRK	Ussuriysk Ar.	144.30	327	PKP	PKPdf	10 14 10.4	-0.4
	comp=Z,2.5nm,0.7s,baz=57,slow=10,SNR=4.3						
USRK	Ussuriysk Ar.	144.30	327	PKPdf	PKPdf	10 14 11.5	+0.7
MJAR	Matsushiro Arr	144.74	311	PKP	PKPdf	10 14 11.6	-0.3
	comp=Z,1.4nm,0.8s,baz=149,slow=1.8,SNR=5.2						
MAJO	Matsushiro	144.74	311	PKPdf	PKPab	10 14 09.4	-1.4
MJB9	Matsu-Tunnel	144.75	311	PKPdf	PKPab	10 14 09.5	-1.3
JHJ2	Mitsune	144.88	305	PKPdf	PKPab	10 14 09.9	-1.4
HIA	Hailar	145.10	344	PKPbc	PKPdf	10 14 12.1	0.0
MDJ	Mudanjiang	145.22	329	PKPbc	PKPdf	10 14 12.9	+0.5
KSH	Kashi	145.26	42	PKPbc	PKiKP	10 14 15.3	-1.5
KSH				LR	LR		
	comp=N,390nm,17.2s						
KSH				LR	LR		
	comp=E,350nm,13.7s						
KSH				LR	LR		
	comp=Z,350nm,13.1s						
NIL	Nilore	146.09	53		PKPab	10 14 17.0	+1.1
JWT	Wachi	147.34	311	PKPbc	PKPbc	10 14 19.3	+0.5
ULN	Ulaanbaatar	148.43	358	PKPbc	PKiKP	10 14 22.8	-0.3
SONM	Songino Array	148.48	359	PKPbc	PKiKP	10 14 23.6	+0.5
	comp=Z,3.6nm,0.9s,baz=325,slow=2.0,SNR=15						
SONM	Songino Array	148.48	359	PKPbc	PKiKP	10 14 22.7	-0.4
KSRS	Korea Array	151.11	321	PKPbc	PKiKP	10 14 30.5	+1.9
	comp=Z,3.6nm,0.9s,baz=353,slow=1.9,SNR=10						
KSAR	Wonju Array Be	151.14	321	PKPbc	PKiKP	10 14 29.6	+0.9
NACB	Ninganchiao	163.07	300	PKPdf	PKPdf	10 14 34.5	-3.3
NACB				PKPab	PKPab	10 15 25.0	-2.8
MYLDM	Lahad Datu	163.26	230	PKPdf	PKPdf	10 14 36.6	-1.6
MYLDM				PKPab	PKPab	10 15 28.2	-0.6
KSM	Kuching	164.63	198	PKPdf	PKPdf	10 14 37.2	-2.3
KSM				PKPab	PKPab	10 15 33.2	-1.4
SBUM	Sibu	164.85	206	PKPdf	PKPdf	10 14 36.7	-3.0
SBUM				PKPab	PKPab	10 15 33.8	-1.7
KNMB	Chin-men Tao	165.51	306	PKPdf	PKPdf	10 14 37.7	-2.2
KNMB				PKPab	PKPab	10 15 36.6	-1.8
PBA	Port Blair	166.69	108	PKPdf	PKPdf	10 14 40.0	-1.1
PBA				PKPab	PKPab	10 15 41.8	-2.1

GCMT ***31*** *09:58:04.7±0.2, 15.°66N±0.°01×93.°16W±0.°01, h94^{km}±1^{km}, MW5.3/131, Moment Tensor Solution. s102,c149; s131,c222; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.76±.01; M$_{\theta\theta}$0.36±.02; M$_{\phi\phi}$0.39±.02; M$_{r\theta}$0.45±.01; M$_{\theta\phi}$-0.63±.01; M$_{\phi r}$-0.07±.01; Best double couple: M$_0$1.00800×10^{17} NP1:ϕ_s296.00000°,δ60.00000°, λ-114.00000°. NP2:ϕ_s158.00000°,δ38.00000°, λ-55.00000°. Principal axes: T 1.0810, Plg12.0000°, Azm43.0000°; N -0.1470, Plg20.0000°, Azm309.0000°; P -0.9340, Plg66.0000°, Azm161.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MEX ***31*** *09:58:05.9±0.7, 15.°59N×93.°18W, h102^{km}±6^{km}, MD5.3*

IDC ***31*** *09:58:05.1±0.3, 15.°70N×92.°81W, h100^{km}±2^{km}, mb4.5/39, mbtmp4.8/40, MS4.1/38, Error ellipse: s-maj=13.5km s-min=6.4km az=56.0*

NEIC ***31*** *09:58:05.7±1.9, 15.°64N±0.°04×93.°15W±0.°05, h92^{km}±3^{km}, mb5.4/288, Mwr5.3/11, Mww5.2/48, Md5.3/154(MEX), Error ellipse: s-maj=7.6km s-min=5.1km az=48.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.02; M$_{\theta\theta}$0.67; M$_{\phi\phi}$0.36; M$_{r\theta}$0.29; M$_{\theta\phi}$-0.59; M$_{\phi r}$0.36; Fault plane solution: M$_0$1.17000×10^{17} NP1: ϕ_s286.72000°,δ49.55000°,λ-120.14000°. NP2: ϕ_s148.54000°,δ48.85000°,λ-59.51000°. Principal axes: T 1.1207, Plg0.0000°, Azm38.0000°; N 0.0915, Plg22.0000°, Azm307.0000°; P -1.2122, Plg68.0000°, Azm128.0000°;*

SNET ***31*** *09:58:05.8±0.9, 15.°67N×93.°05W, h105^{km}±13^{km}, ML5.3*

MOS ***31*** *09:58:05.0±1.2, 15.°68N×93.°01W, h108^{km}, mb5.3/22, Error ellipse: s-maj=9.4km s-min=4.5km az=114.0*

NEIC ***31*** *09:58:06.9, 15.°73N×92.°99W, h102^{km}*

NEIC ***31*** *09:58:07, 15.°73N×92.°98W, h90^{km}*

NEIC ***31*** *09:58:07, 15.°83N×93.°08W, h90^{km}, Moment Tensor Solution. Duration: 2^{s}1 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-7.72; M$_{\theta\theta}$4.49; M$_{\phi\phi}$3.23; M$_{r\theta}$2.94; M$_{\theta\phi}$-3.71; M$_{\phi r}$-0.57; Fault plane solution: M$_0$8.23000×10^{16} NP1: ϕ_s300.39000°,δ55.20000°,λ-101.22000°. NP2: ϕ_s139.55000°,δ36.35000°,λ-74.37000°. Principal axes: T 8.0627, Plg10.0000°, Azm38.0000°; N 0.3375, Plg9.0000°, Azm307.0000°; P -8.4002, Plg77.0000°, Azm174.0000°;*

GCG ***31*** *09:58:07.9±0.7, 15.°64N×93.°00W, h25^{km}, MD5.1*

ISC 31 09:58:04.9±0.3, **15.°61N**±0.°03×**93.°09W**±0.°03, **h99**^{km}±2^{km}, **h100**^{km}**:pP-P, n1400, σ1^{s}50**/1528, **mb5.3**/205, **53C-22D,**

Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.15	307		Pn	09 58 18.4	-0.5
PCIG					Sn	09 58 29.0	-0.3
PCIG		0.15	307	⇓iP	Pn	09 58 18.4	-0.5
PCIG				i S	Sn	09 58 29.0	-0.3
PATR	El Naranjo	0.96	121	⇓iP	Pn	09 58 25.3	+0.1
PATR				eS	Sn	09 58 40.7	+0.3
PAVE	Pavencul	0.98	115	⇓iP	Pn	09 58 25.9	+0.6
PAVE				eS	Sn	09 58 41.9	+1.3
THIG		1.06	131		Pn	09 58 26.7	+0.7
THIG					Sn	09 58 43.5	+1.6
THIG		1.06	131	⇓iP	Pn	09 58 26.7	+0.7
THIG				eS	Sn	09 58 43.5	+1.6
CHUJ	Union Juarez	1.08	118	i P	Pn	09 58 26.7	+0.2
CHUJ				eS	Sn	09 58 43.4	+0.8
CCIG	Comitan	1.14	54	Pn	Pn	09 58 28.3	+1.3
CCIG	Comitan	1.14	54	⇑eP	Pn	09 58 28.4	+1.3
CCIG				eS	Sn	09 58 45.4	+1.8
TGBT	Tuxtla Gutierr	1.16	0		Pn	09 58 27.6	+0.5
TGBT					Sn	09 58 44.0	+0.2
TGBT	Tuxtla Gutierr	1.16	0	eP	Pn	09 58 27.6	+0.5
TGBT				eS	Sn	09 58 44.0	+0.2
TGIG		1.16	359		Pn	09 58 27.6	+0.5
TGIG					Sn	09 58 43.7	-0.2
TGIG		1.16	359	⇑iP	Pn	09 58 27.6	+0.5
TGIG				eS	Sn	09 58 43.7	-0.2
HUEH	Huehuetenango	1.56	101		Pn	09 58 33.5	+1.3
HUEH	Huehuetenango	1.56	101	⇑eP	Pn	09 58 33.6	+1.5
HUEH				eS	Sn	09 58 55.8	+3.0
STG3	Santiaguito 3,	1.72	121	⇑eP	Pn	09 58 35.6	+1.5
RTAL	Retalhuleu	1.73	129		Pn	09 58 35.3	+1.3
RTAL	Retalhuleu	1.73	129	eP	Pn	09 58 35.4	+1.3
RTAL				eS	Sn	09 58 58.2	+2.0
NILT	Santiago Nilte	1.74	303	eP	Pn	09 58 33.6	-0.6
NILT				eS	Sn	09 58 55.1	-1.3
SULM	Suchitepequez,	1.97	131	⇓eP	Pn	09 58 39.4	+2.3
CMIG	Matias Romero	2.26	311	P	Pn	09 58 40.3	-0.5
	2µm,0.4s,baz=141,slow=11,SNR=7865						
CMIG				S	Sn	09 59 04.7	-3.8
	8µm,0.5s,baz=144,slow=12,SNR=6.0						
CMIG	Matias Romero	2.26	311		Pn	09 58 40.4	-0.5
CMIG					Sn	09 59 07.2	-1.3
CMIG	Matias Romero	2.26	311	⇓iP	Pn	09 58 40.4	-0.5
CMIG				i S	Sn	09 59 07.2	-1.3
FUG	Fuego 3	2.46	118	⇓eP	Pn	09 58 46.0	+2.3
PCG	Pacaya	2.69	116	⇑eP	Pn	09 58 49.8	+3.0
TUIG	Tuzandepetl	2.72	332	eP	Pn	09 58 46.6	-0.4
TUIG				eS	Sn	09 59 16.9	-2.5
MIHL	Minatitlan	2.74	330	eP	Pn	09 58 47.0	-0.2
MIHL				eS	Sn	09 59 18.0	-1.7
NBG	Las Nubes	2.84	111	eP	Pn	09 58 51.3	+2.5
HUIG	Huatulco	2.91	273	⇑iP	Pn	09 58 46.7	-2.8
HUIG				eS	Sn	09 59 17.2	-6.5
PANG	Puerto Angel	3.26	271		Pn	09 58 50.9	-3.2
PANG	Puerto Angel	3.26	271	eP	Pn	09 58 50.9	-3.2
PANG				eS	Sn	09 59 25.1	-7.0
NEUV	Arroyo Zacate	3.33	309	⇓eP	Pn	09 58 53.7	-1.4
NEUV				eS	Sn	09 59 27.2	-6.7
PETF	Flores	3.36	67	Pn	Pn	09 58 56.7	+1.2
PMUV	Sontecomapan	3.50	327	⇓iP	Pn	09 58 55.2	-2.3
PMUV				eS	Sn	09 59 32.4	-5.7
SLOZ	Alcaldia de Sa	3.57	116	eP	Pn	09 58 59.7	+1.4
LOAL	Lomas de Alarc	3.58	116	eP	Pn	09 59 00.2	+1.7
NUBE	Las Nubes	3.63	118	eP	Pn	09 59 00.8	+1.5
RTR	El Retiro	3.75	117	eP	Pn	09 59 02.9	+2.0
OXLC	Oaxaca	3.75	293	eP	Pn	09 59 01.4	+0.4
OXLC				eS	Sn	09 59 44.7	+0.3
ESQI	Esquipulas	3.77	106		Pn	09 59 01.9	+0.7
ESQI	Esquipulas	3.77	106	eP	Pn	09 59 01.9	+0.7
OXBJ	Oaxaca	3.77	293		Pn	09 59 01.7	+0.5
OXBJ					Sn	09 59 44.7	-0.2
OXBJ	Oaxaca	3.77	293	eP	Pn	09 59 01.7	+0.5
OXBJ				eS	Sn	09 59 44.7	-0.2
VHO	Vista Hermosa	3.78	293	⇑iP	Pn	09 59 02.0	+0.6
VHO				eS	Sn	09 59 43.1	-1.9
CEVE	Cerro Verde	3.80	117	eP	Pn	09 59 03.5	+1.9
CEVE				IAML		10 00 03.7	
	comp=Z,7µm,0.5s						
SCIG	Sabancuy	3.80	28	⇑iP	Pn	09 59 02.2	+0.8
SCIG				eS	Sn	09 59 44.9	-0.3
PEIG	Puerto Escondi	3.92	276	⇑iP	Pn	09 59 00.7	-2.4
PEIG				eS	Sn	09 59 41.6	-6.6
CEDA	San Andres	4.00	116	eP	Pn	09 59 05.8	+1.6
JAYA	Jayaque - finc	4.03	118	eP	Pn	09 59 06.2	+1.5
JAYA				IAML		10 00 05.2	
	comp=Z,3µm,0.4s						
PMON	Piamonte	4.12	117	eP	Pn	09 59 07.6	+1.8
BOQS	Boqueron	4.13	116	eP	Pn	09 59 09.1	+2.9
SNET	Serv Nac Est T	4.20	117		Pn	09 59 08.7	+1.8
SNET	Serv Nac Est T	4.20	117	eP	Pn	09 59 08.4	+1.5
IGN	Direccin Gen	4.24	116	eP	Pn	09 59 09.9	+2.5
LLGN	La Laguna	4.26	109	eP	Pn	09 59 09.7	+2.0
LFRS	El Faro	4.37	116	eP	Pn	09 59 10.9	+1.6
SJTE	Alcalda de S	4.43	116	eP	Pn	09 59 11.7	+1.7
PAVA	Las Pavas	4.44	115	eP	Pn	09 59 12.0	+1.8
YOIG	Yosondua	4.45	287		Pn	09 59 10.0	-0.5
YOIG					Sn	09 59 59.3	-2.1
YOIG	Yosondua	4.45	287	⇑iP	Pn	09 59 10.0	-0.5
YOIG				eS	Sn	09 59 59.3	-2.1
P5NO	Presa 5 de nov	4.49	111	eP	Pn	09 59 11.7	+0.9
TOIG	Toxpalan	4.53	304		Pn	09 59 10.9	-0.6
TOIG					Sn	10 00 01.7	-1.4
TOIG	Toxpalan	4.53	304	⇓eP	Pn	09 59 10.9	-0.6
TOIG				eS	Sn	10 00 01.7	-1.4
SCLA	Alcaldia de Sa	4.63	114	eP	Pn	09 59 14.9	+2.2
TXIG	Tlaxiaco	4.77	291		Pn	09 59 15.3	+0.4
TXIG					Sn	10 00 05.9	-3.3
TXIG	Tlaxiaco	4.77	291	⇑iP	Pn	09 59 15.3	+0.4
TXIG				eS	Sn	10 00 05.9	-3.3
PQSS	Presa 15 de Se	4.81	114	eP	Pn	09 59 16.8	+1.7
COEB	Comit de Eme	4.89	115	eP	Pn	09 59 18.2	+1.9
PNIG	Pinotepa	4.90	280		Pn	09 59 14.7	-1.6
PNIG					Sn	10 00 07.3	-4.7
PNIG	Pinotepa	4.90	280	⇑iP	Pn	09 59 14.7	-1.6
PNIG				eS	Sn	10 00 07.3	-4.7
TECA	Tecapa	4.92	115	eP	Pn	09 59 18.7	+2.0
ALJI	Alcalda de J	4.94	117	eP	Pn	09 59 19.1	+2.3
TPIG	Tehuac#an	4.95	305		Pn	09 59 18.1	+1.0
TPIG	Tehuac#an	4.95	305	⇑eP	Pn	09 59 18.1	+1.0
TPIG				eS	Sn	10 00 07.7	-5.5
OZST	Orizaba	5.00	311	eP	Pn	09 59 16.8	-1.1
OZST				eS	Sn	10 00 11.3	-3.3
HLIG	Huajuapan de L	5.02	297		Pn	09 59 19.1	+1.0
HLIG					Sn	10 00 12.2	-3.0
HLIG	Huajuapan de L	5.02	297	⇑iP	Pn	09 59 19.1	+1.0
HLIG				eS	Sn	10 00 12.2	-3.0
PACA	Pacayal	5.09	114	eP	Pn	09 59 20.7	+1.8
LCY	Lacayo	5.13	114	eP	Pn	09 59 21.6	+2.0
JAUV	Jalcomulco	5.14	317	i P	Pn	09 59 17.8	-1.9
JAUV				eS	Sn	10 00 13.2	-4.6
LVIG	Laguna Verde	5.17	323	⇓iP	Pn	09 59 17.8	-2.2
LVIG				eS	Sn	10 00 11.6	-6.8
FAGO	Alcalda de S	5.19	111	eP	Pn	09 59 21.6	+1.3
FTIG	Fresnillo de T	5.34	296	⇑eP	Pn	09 59 23.4	+1.0
FTIG				eS	Sn	10 00 19.7	-3.1
LCND	La Caada	5.54	114	eP	Pn	09 59 26.7	+1.8
MGIG	Malinaltepec	5.56	288		Pn	09 59 25.6	+0.2
MGIG					Sn	10 00 23.5	-4.5
MGIG	Malinaltepec	5.56	288	⇑iP	Pn	09 59 25.6	+0.2
MGIG				eS	Sn	10 00 23.5	-4.5
TLIG	Tlapa	5.59	291	Pn	Pn	09 59 26.4	+0.6
TLIG	Tlapa	5.59	291	⇑iP	Pn	09 59 26.5	+0.6
TLIG				eS	Sn	10 00 25.3	-3.6
CNCH	Conchagua	5.60	114	eP	Pn	09 59 27.4	+1.5
TGUH	Tegucigalpa,Un	5.84	105	Pn	Pn	09 59 30.6	+1.4
TGUH	Tegucigalpa,Un	5.84	105	eP	Pn	09 59 29.9	+0.7
TGUH	Tegucigalpa,Un	5.84	105	eP	Pn	09 59 30.4	+1.3
PHPU	Puebla	5.93	306		Pn	09 59 30.7	+0.2
PHPU					Sn	10 00 35.4	-1.9
PHPU	Puebla	5.93	306	eP	Pn	09 59 30.7	+0.2
PHPU				eS	Sn	10 00 35.4	-1.9
MYIG	Mrida	6.20	30	⇑eP	Pn	09 59 34.4	+0.5
MYIG				eS	Sn	10 00 42.4	-0.9
CXUV	Coxquihui	6.24	317	⇑eP	Pn	09 59 33.2	-1.3
CXUV				eS	Sn	10 00 39.5	-4.9
DAIG	Los Arroyos	6.45	283		Pn	09 59 36.5	-0.9
DAIG					Sn	10 00 44.3	-5.3
DAIG	Los Arroyos	6.45	283	⇑iP	Pn	09 59 36.5	-0.9
DAIG				eS	Sn	10 00 44.3	-5.3
AMVM	AMECAMECA	6.46	304		Pn	09 59 39.3	+1.5
AMVM					Sn	10 00 50.2	-0.1
AMVM	AMECAMECA	6.46	304	eP	Pn	09 59 39.3	+1.5
AMVM				eS	Sn	10 00 50.2	-0.1
TEIG	Tepich	6.49	44	Pn	Pn	09 59 37.2	-0.6
TEIG	Tepich	6.49	44	⇑eP	Pn	09 59 37.2	-0.6
CRIN	San Cristobal	6.54	116		Pn	09 59 40.2	+1.6
CRIN	San Cristobal	6.54	116	eP	Pn	09 59 41.1	+2.5
YAIG	Yautepec	6.56	300	⇑iP	Pn	09 59 40.9	+1.9
YAIG				eS	Sn	10 00 50.3	-2.1
MEIG	Mezcala	6.66	291	⇑eP	Pn	09 59 41.4	+1.1
MEIG				eS	Sn	10 00 52.7	-2.2
MPVM	San Francisco	6.68	303	eP	Pn	09 59 43.3	+2.6
MPVM				eS	Sn	10 00 50.3	-5.2
THVM	De Xico	6.71	304	eP	Pn	09 59 43.5	+2.4
THVM				eS	Sn	10 00 56.2	-0.1
PLIG	Platanillo	6.73	295		Pn	09 59 42.6	+1.4
PLIG					Sn	10 00 53.7	-2.7
PLIG	Platanillo	6.73	295	⇑iP	Pn	09 59 42.6	+1.4
PLIG				eS	Sn	10 00 53.7	-2.7
XCVM	Xochimilco	6.79	303	eP	Pn	09 59 45.0	+2.7
XCVM				eS	Sn	10 00 54.3	-4.0
TLVM	San Miguel Top	6.80	303	eP	Pn	09 59 44.0	+1.5
TLVM				eS	Sn	10 00 55.8	-2.8
VTVM	Tizayuca	6.81	308		Pn	09 59 40.8	-1.7
VTVM					Sn	10 00 54.6	-4.2
VTVM	Tizayuca	6.81	308	eP	Pn	09 59 40.8	-1.7
VTVM				eS	Sn	10 00 54.6	-4.2
PBVM	Pinon	6.87	305		Pn	09 59 44.0	+1.0
PBVM					Sn	10 00 56.0	-3.7
PBVM	Pinon	6.87	305	eP	Pn	09 59 44.0	+1.0
PBVM				eS	Sn	10 00 56.0	-3.7
CNCY	Coyoacan	6.87	303	eP	Pn	09 59 42.7	-0.6
CNCY				eS	Sn	10 00 59.6	-0.7
VRVM	Mexico City	6.88	304	e	Pn	10 00 06.4	+23
VRVM				e		10 01 22.6	
UNM	Universidad Na	6.88	303	Pn	Pn	09 59 42.8	-0.7
UNM	Universidad Na	6.88	303	P	Pn	09 59 42.8	-0.7
UNM	Universidad Na	6.88	303	eP	Pn	09 59 42.7	-0.7
UNM				eP		09 59 45.1	
UNM				eS	Sn	10 00 56.3	-4.2
UNM				eS		10 00 56.5	
CUIG	Ciudad Univers	6.88	303		Pn	09 59 45.1	+1.6
CUIG					Sn	10 00 56.3	-4.3
CUP5	Mexico City	6.89	303	eP	Pn	09 59 44.0	+0.4
CUP5				eS	Sn	10 00 55.0	-5.5
SCT2	Benito Juarez	6.89	304	eS	Sn	10 00 58.6	-2.1
BJVM	Benito Juarez	6.90	304	eP	Pn	09 59 44.0	+0.3
BJVM				eS	Sn	10 01 00.4	-0.5
GMVM	Gustavo A Made	6.92	305	eP	Pn	09 59 44.8	+0.8
GMVM				eS	Sn	10 00 55.9	-5.4
CNGN	Cerro Negro	6.93	116		Pn	09 59 45.5	+1.5
CNGN	Cerro Negro	6.93	116	eP	Pn	09 59 46.0	+2.0
MHVM	Bosque de Chap	6.95	304	eP	Pn	09 59 43.9	-0.5
MHVM				eS	Sn	10 00 55.9	-6.2
AOVM	Tlapan	6.97	302	⇑iP	Pn	09 59 46.9	+2.1
AOVM				eS	Sn	10 00 57.7	-5.2
PTVM	Pico Tres Padr	6.97	305		Pn	09 59 46.3	+1.6
PTVM					Sn	10 00 59.2	-3.5
PTVM	Pico Tres Padr	6.97	305	eP	Pn	09 59 46.3	+1.6
PTVM				eS	Sn	10 00 59.2	-3.5
CJVM	Cuajimalpa	6.99	303	eP	Pn	09 59 43.0	-1.9
CJVM				eS	Sn	10 00 57.9	-5.1
CAIG	El Cayaco	7.04	283		Pn	09 59 44.6	-0.7
CAIG	El Cayaco	7.04	283	⇑iP	Pn	09 59 44.6	-0.7
CAIG				eS	Sn	10 00 55.8	-8.0
ZUVM	ZUMPANGO	7.08	307		Pn	09 59 47.4	+1.3
ZUVM	ZUMPANGO	7.08	307	eP	Pn	09 59 47.4	+1.3
ZUVM				eS	Sn	10 01 00.1	-5.1
TOVM	TOLUCA	7.27	301		Pn	09 59 51.2	+2.4
TOVM					Sn	10 01 05.2	-4.8
TOVM	TOLUCA	7.27	301	eP	Pn	09 59 51.2	+2.4
TOVM				eS	Sn	10 01 05.2	-4.8
DEIG	Demacu	7.33	310	⇑eP	Pn	09 59 51.2	+1.7
DEIG				eS	Sn	10 01 04.6	-6.7
DHIG	Demacu	7.33	310		Pn	09 59 51.2	+1.7
ARIG	Puente Sto Nin	7.43	292	⇑iP	Pn	09 59 52.3	+1.5
ARIG				eS	Sn	10 01 10.4	-3.1
MATN	Matagalpa	7.44	110		Pn	09 59 52.8	+1.8
TEJU	Tejupilco	7.50	297	eP	Pn	09 59 50.0	-1.8
TEJU				eS	Sn	10 01 13.1	-2.3
ATVM	ATLACOMULCO	7.64	304		Pn	09 59 55.1	+1.3
ATVM	ATLACOMULCO	7.64	304	eP	Pn	09 59 55.1	+1.3
CTUV	Llano Grande	7.67	320	⇑eP	Pn	09 59 52.1	-1.9
CTUV				eS	Sn	10 01 13.7	-5.6
ACIG	Acambay	7.79	305		Pn	09 59 56.0	+0.3
ACIG					Sn	10 01 25.1	+2.7
ACIG	Acambay	7.79	305	eP	Pn	09 59 56.0	+0.3
ACIG				eS	Sn	10 01 25.1	+2.7
BOAB	BOACO BROADBAN	7.86	113	Pn	Pn	09 59 57.7	+1.1
ZIIG	Zihuatanejo	8.27	285		Pn	10 00 02.5	+0.4
ZIIG					Sn	10 01 30.1	-3.7
ZIIG	Zihuatanejo	8.27	285	⇑eP	Pn	10 00 02.5	+0.4
ZIIG				eS	Sn	10 01 30.1	-3.7
ACON	Acoyapa	8.50	114		Pn	10 00 06.8	+1.4
ACON	Acoyapa	8.50	114	eP	Pn	10 00 06.7	+1.4
JRQG	Juriquilla Cam	8.63	307	⇑eP	Pn	10 00 09.8	+2.5
JRQG				eS	Sn	10 01 40.1	-2.9
MOIG	Morelia	8.71	299	Pn	Pn	10 00 08.5	+0.1
MOIG	Morelia	8.71	299	⇑iP	Pn	10 00 11.2	+2.9
MOIG				eS	Sn	10 01 45.1	+0.1
HZTE	Horizontes, Gu	8.78	123		Pn	10 00 11.1	+2.1
RPIG	Rio Verde	9.03	315		Pn	10 00 13.5	+1.0
RPIG					Sn	10 01 54.6	+2.1
RPIG	Rio Verde	9.03	315	eP	Pn	10 00 13.5	+1.0
RPIG				eS	Sn	10 01 54.6	+2.1
ORTG	Ortega, Santa	9.09	124	Pn	Pn	10 00 15.2	+1.8
ESPN	Las Esperanzas	9.19	111		Pn	10 00 16.0	+1.4
DUNO	Dulce Nombre,	9.23	126		Pn	10 00 16.9	+1.7
IGIG	Irapuato, Guan	9.35	304	eP	Pn	10 00 19.7	+2.7
IGIG				eS	Sn	10 01 53.1	-7.3
URUA	Uruapan	9.37	295		Pn	10 00 18.6	+1.4
URUA	Uruapan	9.37	295	eP	Pn	10 00 18.6	+1.4
GTIG	Gomez Farias	9.37	323		Pn	10 00 16.9	-0.3
GTIG					Sn	10 01 57.0	-3.7
GTIG	Gomez Farias	9.37	323	eP	Pn	10 00 16.9	-0.3
GTIG				eS	Sn	10 01 57.0	-3.7
JTS	Las Juntas de	9.53	123	P	Pn	10 00 19.8	+0.4
	comp=Z,108nm,0.5s,baz=315,slow=5.0,SNR=105						
JTS				S	Sn	10 02 01.6	-3.1
	comp=Z,16nm,0.4s,baz=307,slow=19,SNR=1.0						
JTS	Las Juntas de	9.53	123	Pn	Pn	10 00 20.3	+0.9
JTS	Las Juntas de	9.53	123	d iP	Pn	10 00 19.7	+0.3
JTS				pmax	pmax		
	comp=Z,102nm,0.5s						
JTS	Las Juntas de	9.53	123	eP	Pn	10 00 20.2	+0.8
COVE	Coope Vega, Sa	9.76	119		Pn	10 00 22.8	+0.3
JACO	JACO, Garabito	10.13	125		Pn	10 00 28.8	+1.3
MMIG	Aquila	10.16	287		Pn	10 00 28.6	+0.7
MMIG	Aquila	10.16	287	⇑iP	Pn	10 00 28.6	+0.7
MMIG				eS	Sn	10 02 12.0	-8.0
HDC	Heredia	10.38	121		Pn	10 00 31.8	+0.8
CVTR	Volcan Turrial	10.66	120	Pn	Pn	10 00 35.7	+0.6
RIMA	Rio Macho	10.71	122		Pn	10 00 36.8	+1.1
JUBC	Volcan de Coli	10.72	293	eP	Pn	10 00 38.7	+3.0
JUBC				eS	Sn	10 02 34.1	+0.1
COIG	Colima	10.72	291	⇑iP	Pn	10 00 37.2	+1.7
COIG				eS	Sn	10 02 32.0	-1.6
EZ5V		10.73	293		Pn	10 00 38.7	+2.8
EZ5V					Sn	10 02 34.0	-0.3
EZ5V		10.73	293	⇑iP	Pn	10 00 38.7	+2.8
EZ5V				eS	Sn	10 02 27.1	-7.2
MNGA	Volcan de Coli	10.75	292	⇑iP	Pn	10 00 38.4	+2.3
MNGA				eS	Sn	10 02 36.0	+1.4
INCO	Volcan de Coli	10.75	293	⇑iP	Pn	10 00 38.9	+2.6
INCO				eS	Sn	10 02 33.3	-1.6
SOMAC	Volcano de Col	10.78	293	eP	Pn	10 00 39.8	+3.3
SOMAC				eS	Sn	10 02 37.1	+1.7
CDAR	Ciudad de Arme	10.94	289	⇑iP	Pn	10 00 37.7	-0.7
CDAR				eS	Sn	10 02 38.0	-0.9
BATAN	Batan	10.94	119		Pn	10 00 39.2	+0.7
R15V		10.98	290		Pn	10 00 40.6	+1.5
R15V		10.98	290	eP	Pn	10 00 40.6	+1.5
R15V				eS	Sn	10 02 37.7	-2.3
PEZE	Perez Zeledon,	11.08	123		Pn	10 00 41.7	+1.2
SRBA	San Rafael, Bu	11.42	123	Pn	Pn	10 00 45.5	+0.3
ZAIG	Zacatecas	11.43	310	⇑iP	Pn	10 00 47.9	+2.5
ZAIG				eS	Sn	10 02 46.1	-5.1
PRVC	Isla de Provid	11.57	100	Pn	Pn	10 00 46.8	-0.2
CIHU	Emiliano Zapat	11.69	290	eP	Pn	10 00 47.3	-1.3
CIHU				eS	Sn	10 02 53.9	-3.2
RGM0	Gandoca	11.85	119	Pn	Pn	10 00 51.6	+0.8
SOR	Soroa	11.90	52	Pn	Pn	10 00 50.9	-0.5
SOR	Soroa	11.90	52	P	Pn	10 00 50.9	-0.5
MNIG	Monterrey	12.01	327		Pn	10 00 54.1	+1.3
MNIG	Monterrey	12.01	327	eP	Pn	10 00 54.1	+1.3
CJM	Chamela	12.03	290	eP	Pn	10 00 51.5	-1.6
CJM				eS	Sn	10 03 05.5	0.0
ANIG	Ahuacatlan	12.12	298		Pn	10 00 57.0	+2.6
ANIG	Ahuacatlan	12.12	298	eP	Pn	10 00 57.0	+2.6
CDITO	Canoas	12.20	124		Pn	10 00 55.7	+0.4
BRU2	Volcan	12.21	122		Pn	10 00 55.8	+0.1
KVTX	Kingsville	12.68	340	P	Pn	10 01 04.7	+3.0
	baz=158						
735A	Kenedy	13.88	343	Pn	Pn	10 01 18.5	+1.2
735A	Kenedy	13.88	343	P	Pn	10 01 19.1	+1.8
	baz=160,SNR=13						
833A	Chaparral WMA,	13.93	336	Pn	Pn	10 01 18.5	+0.5
833A	Chaparral WMA,	13.93	336	P	Pn	10 01 18.5	+0.5
	baz=154,SNR=57						
833A	Chaparral WMA,	13.93	336	P	Pn	10 01 19.4	+1.4
	baz=154,SNR=57						
BCIP	Isla Barro Col	14.44	115		Pn	10 01 25.0	+0.3
BCIP	Isla Barro Col	14.44	115	P	Pn	10 01 25.0	+0.3
BCIP	Isla Barro Col	14.44	115	eP	Pn	10 01 24.4	-0.2
MCIG	Muzquiz	14.47	329	P	P	10 01 27.3	-1.6
MCIG	Muzquiz	14.47	329	⇑iP	P	10 01 27.3	-1.6
HKT	Hockley	14.49	350	Pn	Pn	10 01 25.8	+0.7
HKT	Hockley	14.49	350	c iP	Pn	10 01 25.6	+0.5
HKT				pmax	pmax		
	comp=Z,158nm,1.6s						
HKT	Hockley	14.49	350	P	Pn	10 01 26.4	+1.3
	baz=169						
MAIG	Mazatlaan	14.65	303	P	Pn	10 01 28.7	+1.4
MAIG	Mazatlaan	14.65	303	eP	Pn	10 01 28.7	+1.4
HNDO	Hondo	14.98	339	Pn	Pn	10 01 32.1	+0.6
441A	DeRidder	15.07	360		Pn	10 01 33.2	+0.7
441A	DeRidder	15.07	360	P	Pn	10 01 33.3	+0.8
	baz=179,SNR=34						
MTDJ	Mount Denham	15.11	78		Pn	10 01 33.9	+0.6

061Z	Ochoppi	15.28	46		Pn	10 01 35.2	-0.1
061Z	Ochoppi	15.28	46	P	Pn	10 01 35.2	-0.1
	baz=230,SNR=8.7						
435B	Jarrell	15.65	346		P	10 01 41.1	-0.8
435B	Jarrell	15.65	346	P	Pn	10 01 40.5	+0.6
	baz=163						
435B	Jarrell	15.65	346	P	P	10 01 41.4	-0.5
	baz=163,SNR=15						
342A	Flagon Creek P	15.71	2		P	10 01 41.5	-1.0
342B	Flagon Creek P	15.71	2	P	P	10 01 41.7	-0.8
	baz=182						
344A	Westbrook Farm	15.91	7		Pn	10 01 43.6	+0.4
344A	Westbrook Farm	15.91	7	P	P	10 01 44.7	-0.1
	baz=188,SNR=53						
JCT	Junction City	16.03	339	Pn	Pn	10 01 44.8	+0.2
JCT	Junction City	16.03	339	P	Pn	10 01 44.8	+0.2
JCT	Junction City	16.03	339	P	Pn	10 01 45.0	+0.3
	baz=156,SNR=32						
JCT	Junction City	16.03	339	P	P	10 01 46.2	0.0
	baz=156,SNR=32						
346A	Big Creek Wild	16.05	11	Pn	Pn	10 01 45.4	+0.6
346A	Big Creek Wild	16.05	11	P	P	10 01 45.9	-0.4
	baz=192,SNR=14						
NATX	Nacogdoches	16.14	355		Pn	10 01 46.4	+0.5
NATX	Nacogdoches	16.14	355	P	Pn	10 01 46.4	+0.5
	baz=174,SNR=17						
NATX	Nacogdoches	16.14	355	P	P	10 01 47.2	-0.1
	baz=174,SNR=17						
MAPC	Malpelo	16.15	134	*e*P	P	10 01 48.6	+1.0
HPIG		16.24	316	P	P	10 01 49.7	+1.0
451A	Vernon	16.38	23	P	P	10 01 51.8	+1.8
451A	Vernon	16.38	23	P	P	10 01 50.9	+0.9
	baz=206						
060A	Indiantown	16.41	44	P	P	10 01 51.5	+1.1
060A	Indiantown	16.41	44	P	Pn	10 01 49.3	-0.1
	baz=229,SNR=8.6						
BRAL	Brewton	16.44	19	P	P	10 01 51.8	+1.2
BRAL	Brewton	16.44	19	P	P	10 01 50.3	-0.3
	baz=201,SNR=22						
BRAL	Brewton	16.44	19	P	P	10 01 51.2	+0.6
	baz=201,SNR=22						
DWPF	Disney Wildern	16.47	39	P	P	10 01 51.9	+0.9
DWPF	Disney Wildern	16.47	39	P	Pn	10 01 50.5	+0.4
	baz=223						
DWPF	Disney Wildern	16.47	39	P	Pn	10 01 50.0	-0.1
	baz=223,SNR=16						
BCIG	La Boquilla	16.48	318	P	P	10 01 53.0	+1.7
BCIG	La Boquilla	16.48	318	*e*P	P	10 01 53.0	+1.7
237A	Washetta, Mont	16.50	352	P	P	10 01 51.9	+0.5
237A	Washetta, Mont	16.50	352	P	P	10 01 52.4	+1.1
	baz=170,SNR=22						
BRDY	Brady	16.51	342	P	P	10 01 51.7	+0.2
SAND	Sanderson	16.51	331	P	P	10 01 52.1	+0.6
553A	Crawfordville	16.55	27	P	Pn	10 01 50.9	-0.1
	baz=210,SNR=11						
VBMS	Vicksburg	16.70	8	P	P	10 01 53.8	+0.3
VBMS	Vicksburg	16.70	8	P	Pn	10 01 52.9	+0.1
	baz=188,SNR=25						
VBMS	Vicksburg	16.70	8	P	P	10 01 54.4	+0.9
	baz=188,SNR=25						
TXAR	Lajitas Array	16.78	326	P	P	10 01 56.0	+1.5
	comp=Z,71nm,0.9s,baz=149,slow=11,SNR=197						
TXAR				pP	pP	10 02 15.4	+2.2
	comp=Z,38nm,0.9s,baz=138,slow=10.0,SNR=4.9						
TXAR				LR	LR	10 09 25.4	
	comp=Z,276nm,19.0s,baz=137,slow=40						
TXAR	Lajitas Array	16.78	326	P	P	10 01 55.4	+0.9
TX31	Lajitas Ar. Si	16.78	326	P	P	10 01 55.4	+0.9
TX31	Lajitas Ar. Si	16.78	326	P	P	10 01 56.0	+1.5
	baz=142,SNR=176						
TX32	Lajitas Array	16.78	326	P	P	10 01 55.5	+1.0
WHTX	Lake Whitney,	16.78	347	P	P	10 01 55.3	+0.9
WHTX	Lake Whitney,	16.78	347	P	P	10 01 54.7	+0.3
	baz=165,SNR=18						
WHTX	Lake Whitney,	16.78	347	P	P	10 01 55.9	+1.5
	baz=165,SNR=18						
656A	Willston	16.80	34	P	P	10 01 55.1	+0.5
656A	Willston	16.80	34	P	P	10 01 54.4	-0.1
	baz=218,SNR=19						
OZNA	Ozona	16.92	336	P	P	10 01 57.2	+1.1
143A	Socs Landing,	17.08	5	P	P	10 01 58.2	+0.5
143A	Socs Landing,	17.08	5	P	P	10 01 58.7	+1.0
	baz=185,SNR=26						
FW14	Alvarado	17.12	348	P	P	10 02 00.1	+1.9
FW13	Cleburne	17.12	347	P	P	10 01 59.3	+1.1
FW16	Waxahatchie	17.15	349	P	P	10 02 00.2	+1.7
146A	Union	17.34	11	P	Pn	10 02 01.7	+1.0
146A	Union	17.34	11	P	Pn	10 02 01.3	+0.6
	baz=193,SNR=23						
250A	Grady	17.44	20	P	Pn	10 02 03.2	+1.3
250A	Grady	17.44	20	P	Pn	10 02 03.4	+1.5
	baz=202,SNR=31						
352A	Blakely	17.47	24	P	Pn	10 02 03.1	+0.9
352A	Blakely	17.47	24	P	Pn	10 02 03.0	+0.8
	baz=207,SNR=49						
FW07	Weatherford	17.54	347	P	Pn	10 02 04.0	+0.9
Z41A	Richland Creek	17.57	1	P	Pn	10 02 04.5	+1.1
Z41A	Richland Creek	17.57	1	P	Pn	10 02 04.7	+1.3
	baz=181,SNR=59						
Z41A				P	Pn	10 02 04.7	+1.3
	baz=181,SNR=59						
ALPN	Alpine	17.59	328	P	Pn	10 02 05.9	+1.9
GTBY	Guantanamo Bay	17.65	73	P	Pn	10 02 05.5	+1.0
Z38A	Mt. Pleasant	17.65	355		Pn	10 02 05.2	+0.7
Z38A	Mt. Pleasant	17.65	355	P	Pn	10 02 06.7	+2.3
	baz=174,SNR=28						
FW06	Azle	17.75	348	P	Pn	10 02 06.9	+1.2
SLBS	Sierra La Lagu	17.78	299	P	Pn	10 02 06.9	+0.8
SLBS	Sierra La Lagu	17.78	299	*e*P	Pn	10 02 08.4	+2.2
SGCY	Sterling City	17.80	337	P	Pn	10 02 07.2	+0.8
APAC	Apartado, Choc	17.88	114	*e*P	P	10 02 06.0	-0.7
ABTX	Abilene, Hawle	17.95	342	P	Pn	10 02 08.1	0.0
ABTX	Abilene, Hawle	17.95	342	P	Pn	10 02 08.7	+0.6
	baz=159,SNR=54						
ABTX	Abilene, Hawle	17.95	342	P	Pn	10 02 09.3	+1.2
	baz=159,SNR=54						
TIGA	Tifton	17.99	27	P	Pn	10 02 09.0	+0.5
TIGA	Tifton	17.99	27	P	Pn	10 02 08.8	+0.3
	baz=211,SNR=25						
TIGA	Tifton	17.99	27	P	Pn	10 02 09.1	+0.6
	baz=211,SNR=25						
Z35A	Perchaven, San	18.04	349	P	Pn	10 02 09.1	-0.1
Z35A	Perchaven, San	18.04	349	P	Pn	10 02 09.7	+0.6
	baz=167,SNR=14						
Z47A	Carrollton	18.09	14		Pn	10 02 09.7	-0.1
Z47A	Carrollton	18.09	14	P	Pn	10 02 10.2	+0.5
	baz=196,SNR=29						
456A	Hilliard	18.14	32	P	Pn	10 02 10.6	+0.2
456A	Hilliard	18.14	32	P	Pn	10 02 10.5	+0.2
	baz=216						
LRAL	Lakeview Retre	18.20	17	P	P	10 02 10.6	+0.5
LRAL	Lakeview Retre	18.20	17	P	Pn	10 02 11.4	+0.3
	baz=199,SNR=35						
LRAL	Lakeview Retre	18.20	17	P	Pn	10 02 11.3	+0.2
	baz=199,SNR=35						
LPIG	La Paz	18.25	300	LR	LR	10 09 08.6	
	comp=Z,561nm,20.8s,baz=120,slow=36						
CCAR	Cane Creek	18.27	4	P	P	10 02 10.4	-0.3
SJCC	San Jacinto, C	18.37	106	*e*P	P	10 02 11.2	-0.9
Y45A	Yeager Farm, C	18.45	9		Pn	10 02 13.5	-0.6
Y45A	Yeager Farm, C	18.45	9	P	Pn	10 02 13.7	-0.4
	baz=191,SNR=30						
152A	Waverly Hall	18.61	23	P	Pn	10 02 15.7	-0.2
152A	Waverly Hall	18.61	23	P	Pn	10 02 15.3	-0.6
	baz=206,SNR=32						
DBBC	Dabeiba	18.61	115	*e*P	P	10 02 15.4	+0.6
LOOK	Love County	18.67	349		Pn	10 02 16.0	-0.6
WTFS	Witchita Falls	18.71	346	P	Pn	10 02 16.6	-0.6
APMT	Aspermont	18.75	341	P	Pn	10 02 17.1	-0.5
X40A	Basin Creek Fa	18.80	1	P	Pn	10 02 18.2	0.0
	baz=180						
X40A				P	Pn	10 02 18.2	0.0
	baz=180						
MIAR	Mount Ida	18.86	359	P	P	10 02 17.8	+0.6
	baz=178,SNR=278						
255A	Hazlehurst	18.90	29	P	P	10 02 18.3	+0.5
	baz=213						
POST	Post	18.98	338	P	P	10 02 19.4	+0.8
X37A	Clayton	19.01	354	P	Pn	10 02 20.3	-0.4
	baz=173,SNR=69						
Z51A	Franklin	19.03	21	P	Pn	10 02 20.4	-0.5
Z51A	Franklin	19.03	21	P	Pn	10 02 20.6	-0.3
	baz=204						
UALR	University of	19.09	2	P	P	10 02 20.6	+0.9
OXF	Oxford	19.11	9	P	P	10 02 20.3	+0.4
	baz=191,SNR=30						
OXF	Oxford	19.11	9	P	Pn	10 02 21.2	-0.7
	baz=191,SNR=30						
Y49A	Blount Mountai	19.14	17	P	Pn	10 02 21.4	-0.9
	baz=200,SNR=12						
154A	Montrose	19.20	26	P	P	10 02 21.9	+1.0
154A	Montrose	19.20	26	P	Pn	10 02 22.7	-0.3
	baz=210,SNR=26						
GR1C	Gorgona, Isla	19.32	129	*e*P	Pn	10 02 24.1	-0.4
HTMS	Hat Mesa	19.33	332	P	Pn	10 02 24.0	-0.5
X34A	Smith Ranch, M	19.38	348		P	10 02 23.9	+1.0
GDL2	Guadalupe Moun	19.44	330	P	Pn	10 02 25.0	-0.8
X48A	Hartselle	19.53	15	P	P	10 02 24.7	+0.1
X48A	Hartselle	19.53	15	P	Pn	10 02 26.2	-0.6
	baz=197,SNR=56						
MNTX	Cornudas Mount	19.55	327	P	P	10 02 25.6	+0.9
	baz=142,SNR=71						
MNTX	Cornudas Mount	19.55	327	P	Pn	10 02 26.7	-0.3
	baz=142,SNR=71						
WHAR	Wooly Hollow	19.61	2	P	P	10 02 26.0	+0.6
PLMC	San Jos del P	19.65	121	*e*P	P	10 02 26.1	+0.1
TUMC	Tumaco	19.71	133	*e*P	Pn	10 02 29.5	+0.5
WMOK	Wichita Mounta	19.72	346		P	10 02 26.9	+0.3
WMOK	Wichita Mounta	19.72	346	P	P	10 02 26.9	+0.3
WMOK	Wichita Mounta	19.72	346	P	P	10 02 27.0	+0.3
	baz=163,SNR=21						
W35A	Tecumseh	19.75	351		P	10 02 27.4	+0.4
W45A	Hickory Valley	19.78	9	P	Pn	10 02 28.8	-0.8
	baz=191,SNR=30						
Y52A	Lilburn	19.92	23	P	P	10 02 29.9	+1.1
Y52A	Lilburn	19.92	23	P	Pn	10 02 30.1	-1.2
	baz=206,SNR=35						
Y52A				P	Pn	10 02 30.1	-1.2
	baz=206,SNR=35						
FNO	Franklin	19.94	350		P	10 02 29.6	+0.6
FPAL	Fort Paine	20.01	18	P	P	10 02 30.1	+0.3
OKCSW	OKLAHOMA CITY	20.09	350		P	10 02 31.3	+0.6
YOTC	Yotoco, Valle	20.12	123	*e*P	P	10 02 31.0	-0.2
KIDD	KIDD Seismic O	20.21	325	P	Pn	10 02 34.4	-0.4
	baz=139,SNR=9.2						
MSTX	Muleshoe	20.26	336	P	P	10 02 33.2	+0.6
MSTX	Muleshoe	20.26	336	P	P	10 02 33.3	+0.7
	baz=152,SNR=74						
X51A	Calhoun	20.27	20	P	P	10 02 33.3	+0.7
	baz=203						
X51A				P	P	10 02 33.3	+0.7
	baz=203						
JAMC	Jamundi, Valle	20.32	126	*e*P	P	10 02 34.2	+0.7
TUL1	Leonard	20.36	354		P	10 02 34.4	+0.9
TUL1	Leonard	20.36	354	P	P	10 02 34.5	+1.1
	baz=172,SNR=58						
TUL1	Leonard	20.36	354	P	P	10 02 34.7	+1.2
	baz=172,SNR=58						
LCAR	Lake Charles	20.45	4	P	P	10 02 35.8	+1.3
	baz=185						
GNAR	Gosnell	20.45	7	P	P	10 02 35.5	+1.1
NORC	Norcasia	20.49	117	*e*P	Pn	10 02 37.0	-1.2
HALT	Halls	20.49	9	P	P	10 02 36.1	+1.2
HAW	Hawthorne Fire	20.50	28	P	P	10 02 36.0	+1.0
	baz=213						
OK030	Cody Creek RV	20.50	351	P	P	10 02 34.5	-0.6
GUYB	Guaymas	20.51	310	*e*P	Pn	10 02 41.9	+3.6
RLO	Rose Lookout	20.54	356	P	P	10 02 35.5	+0.1
OK052	Battle Ridge R	20.57	351	P	P	10 02 35.1	-0.6
HHAR	Hobbs	20.60	358	P	P	10 02 36.6	+0.5
ANIL	Santa Ana	20.61	121	*e*P	Pn	10 02 38.8	-1.0
ANIL	Santa Ana	20.61	121	*e*P	P	10 02 37.6	+1.0
LNXT	Lenox	20.66	8	P	P	10 02 37.6	+1.0
	baz=190						
U40A	Yellville	20.66	1	P	P	10 02 37.7	+1.0
	baz=180						
U40A				P	P	10 02 37.7	+1.0
	baz=180						
AMTX	Amarillo	20.68	340	P	P	10 02 38.0	+0.9
AMTX	Amarillo	20.68	340	P	P	10 02 38.2	+1.1
	baz=156						
AMTX	Amarillo	20.68	340	P	P	10 02 38.1	+1.1
	baz=156,SNR=25						
W50A	Signal Mountai	20.72	18	P	P	10 02 38.5	+1.1
W50A	Signal Mountai	20.72	18	P	P	10 02 38.8	+1.4
	baz=201						
QUOK	Quay	20.73	352		P	10 02 38.9	+1.4
U38A	Gravette	20.77	357	P	P	10 02 39.0	+0.9
U38A	Gravette	20.77	357	P	P	10 02 38.9	+0.9
	baz=176,SNR=26						
V48A	Smith Brothers	20.81	14	P	P	10 02 39.6	+1.2
V48A	Smith Brothers	20.81	14	P	P	10 02 39.6	+1.2
	baz=197,SNR=13						
GLAT	Glass	20.85	9	P	P	10 02 38.8	0.0
URIC	Uribia, Colomb	20.86	98	P	P	10 02 38.4	-0.8
URIC	Uribia, Colomb	20.86	98	*e*P	P	10 02 37.2	-1.9
HODGE	Hodges	20.95	26	P	P	10 02 40.8	+0.9
HODGE	Hodges	20.95	26	P	P	10 02 41.2	+1.3
	baz=210						
WVT	Waverly	20.97	12	P	P	10 02 39.8	-0.2
WVT	Waverly	20.97	12	P	P	10 02 39.8	-0.2
NHSC	New Hope	20.98	32	P	P	10 02 40.4	+0.2
	baz=217,SNR=7.9						
NHSC	New Hope	20.98	32	P	P	10 02 41.5	+1.3
	baz=217						
OK048	Pawnee Station	21.00	351		P	10 02 40.3	-0.1
OTAV	Otavalo	21.03	135	P	P	10 02 42.1	+0.7
OTAV	Otavalo	21.03	135	P	P	10 02 42.1	+0.7
OTAV	Otavalo	21.03	135	*e*P	P	10 02 43.1	+1.7
ORTC	Ortega, Tolima	21.06	122	*e*P	P	10 02 41.8	+0.5
W52A	Murphy	21.07	21	P	P	10 02 41.8	+0.6
W52A	Murphy	21.07	21	P	P	10 02 42.7	+1.6
	baz=205						
SDDR	Presa de Saban	21.08	78	P	P	10 02 41.0	-0.5
SDDR	Presa de Saban	21.08	78	*e*P	P	10 02 43.0	+1.5
GCUF	Volcan Galeras	21.11	131	*e*P	P	10 02 44.5	+2.2
ELIS	Ellis County	21.14	346	P	P	10 02 41.6	-0.3
TULM	Tulcn-Chalpat	21.15	133	*e*P	P	10 02 45.4	+2.7
PULU	Pululahua	21.16	136	P	P	10 02 45.0	+2.3
CRUC	La Cruz	21.17	130	*e*P	P	10 02 45.4	+2.6
CPCT	Cooper Cave	21.19	20	P	P	10 02 41.7	-0.8
HSIG		21.20	312	P	P	10 02 42.3	-0.3
PBMO	Poplar Bluff	21.21	6	P	P	10 02 44.0	+1.4
	baz=187						
CROK	Carrier	21.26	349		P	10 02 43.8	+0.7
CLTN	Cedars of Leba	21.27	15	P	P	10 02 42.9	-0.3
ROSC	El Rosal	21.33	118	P	P	10 02 41.4	-3.1
	comp=Z,8.6nm,0.3s,baz=341,slow=21,SNR=2.3						
	comp=Z,8.6nm,0.3s						
ROSC	El Rosal	21.33	118	P	P	10 02 43.8	-0.7
ROSC	El Rosal	21.33	118	P	P	10 02 43.8	-0.7
U32A	Winter Ranch,	21.34	347		P	10 02 43.6	-0.5
U32A	Winter Ranch,	21.34	347	P	P	10 02 44.9	+0.8
	baz=164						
BG3	Lake Jocassee	21.35	23	P	P	10 02 44.7	+0.6
CASEE	Lake Jocassee	21.35	23	P	P	10 02 45.6	+1.4
	baz=208,SNR=14						
BLOK	Blackwell	21.38	351	P	P	10 02 44.9	+0.4
OK038	West end E0370	21.38	347	P	P	10 02 45.3	+0.8
JSC	Jenkinsville	21.43	28	P	P	10 02 46.5	+1.5
	baz=213						
T35A	Sooner Cattle	21.43	352		P	10 02 44.1	-0.9
PRAC	Prado	21.46	122	P	P	10 02 45.9	+0.3
PRAC	Prado	21.46	122	*e*P	P	10 02 45.5	-0.1
PRAC				*e*P	P	10 02 45.7	+0.1
121A	Cookes Peak, D	21.49	324	P	P	10 02 47.4	+1.6
	baz=138,SNR=60						
121A	Cookes Peak, D	21.49	324	P	P	10 02 49.0	+3.1
	baz=138,SNR=60						
BONI	La Bonita	21.52	133	*e*P	P	10 02 49.1	+2.7
GC02	Grant County #	21.57	350		P	10 02 46.7	+0.1
OK032	Salt Plains WL	21.59	349	P	P	10 02 47.1	+0.4
OK035	E0210 Rd and N	21.60	348		P	10 02 46.1	-0.7
Y57A	Sumter	21.61	30	P	P	10 02 47.6	+0.7
Y57A	Sumter	21.61	30	P	P	10 02 47.5	+0.6
	baz=215						
Y57A				P	P	10 02 47.5	+0.6
	baz=215						
GRTK	Grand Turk	21.62	71	P	P	10 02 47.5	+0.4
TKL	Tuckaleechee C	21.63	21	P	P	10 02 46.5	-0.6
	comp=Z,8.7nm,0.7s,baz=223,slow=8.2,SNR=16						
TKL				S	Sn	10 06 48.8	-7.6
	comp=Z,33nm,0.8s,baz=64,slow=17,SNR=2.3						
TKL				LR	LR	10 13 16.1	
	comp=Z,703nm,18.5s,baz=204,slow=42						
	comp=Z,8.7nm,0.7s						
TKL	Tuckaleechee C	21.63	21	P	P	10 02 48.5	+1.3
TKL	Tuckaleechee C	21.63	21	P	P	10 02 48.5	+1.3
TKL	Tuckaleechee C	21.63	21	P	P	10 02 48.5	+1.3
	baz=205						
PAULI	Pauline	21.65	26	P	P	10 02 47.7	+0.4
PAULI	Pauline	21.65	26	P	P	10 02 48.9	+1.6
	baz=210,SNR=20						
SC01	Santiago de lo	21.66	77	P	P	10 02 47.7	+0.1
KAN13	South Haven SW	21.67	350	P	P	10 02 47.7	+0.1
T45B	Paducah	21.68	10	P	P	10 02 47.0	-0.6
	baz=191,SNR=5.5						
SLOR	San Lorenzo -	21.72	137	P	P	10 02 49.4	+0.7
U49A	Red Boiling Sp	21.81	16	P	P	10 02 47.9	-1.1
	baz=199,SNR=8.1						
CGM3	Cape Girardeau	21.81	7	P	P	10 02 48.0	-1.0
KAN05	Bluff City Nor	21.83	350	P	P	10 02 48.5	-0.7
V52A	Sevierville	21.86	21	P	P	10 02 50.8	+1.2
	baz=205,SNR=7.6						
KS20	Mayfield South	21.89	350	P	P	10 02 50.0	+0.1
CHIC	Chingaza	21.94	118	*e*P	P	10 02 52.0	+1.0
T47A	Sharon Grove	21.94	13	P	P	10 02 49.2	-1.2
T47A	Sharon Grove	21.94	13	P	P	10 02 49.2	-1.2
	baz=195,SNR=18						
V53A	Saluda	21.99	23	P	P	10 02 51.6	+0.6
V53A	Saluda	21.99	23	P	P	10 02 51.9	+0.9
	baz=207						
V53A				P	P	10 02 51.9	+0.9
	baz=207						
S39A	Bolivar	21.99	360	P	P	10 02 50.5	-0.5
S39A	Bolivar	21.99	360	P	P	10 02 50.5	-0.5
	baz=179,SNR=46						
CHSH	Refugio Sur-Vo	22.06	139	P	P	10 02 54.8	+2.3
BIRD	Birdtown, Kers	22.09	29	P	P	10 02 51.6	-0.4
BIRD	Birdtown, Kers	22.09	29	P	P	10 02 53.6	+1.6
	baz=214						
PORT	Chimborazo Vol	22.10	139	P	P	10 02 55.1	+2.2
KMSC	Kings Mountain	22.12	26	P	P	10 02 53.3	+1.0
KMSC	Kings Mountain	22.12	26	P	P	10 02 52.7	+0.4
	baz=211,SNR=8.8						
KMSC	Kings Mountain	22.12	26	P	P	10 02 53.3	+1.0
	baz=211						
BNM	Barren Site	22.13	329	P	P	10 02 53.4	+0.7
Y22A	Socorro	22.13	328	P	P	10 02 54.5	+1.9
	baz=142						
FLOC	Florencia	22.14	127	*e*P	P	10 02 54.0	+1.2
Y22D	IRIS PASSCAL I	22.21	328	P	P	10 02 55.0	+1.5
Y22D	IRIS PASSCAL I	22.21	328	P	P	10 02 55.4	+1.9
	baz=142,SNR=13						
Y22D	IRIS PASSCAL I	22.21	328	P	P	10 02 55.2	+1.7
	baz=142						
Y22F	Passcal Instru	22.21	328	P	P	10 02 55.6	+2.1
	baz=142,SNR=14						
S44A	Carbondale	22.25	8	P	P	10 02 53.0	-0.7
S44A	Carbondale	22.25	8	P	P	10 02 54.7	+1.0
	baz=190						
DUN6	Lazy B Ranch	22.26	322	P	P	10 02 55.6	+1.7
SIUC	Southern Illin	22.28	8	P	P	10 02 53.1	-0.9
SDD	Santo Domingo	22.34	79	P	P	10 02 54.8	0.0
FVM	French Village	22.41	6	P	P	10 02 54.0	-1.3
	baz=186						
CCM	Cathedral Cave	22.41	4	P	P	10 02 54.0	-1.4
CCM	Cathedral Cave	22.41	4	P	P	10 02 54.0	-1.4
CCM	Cathedral Cave	22.41	4	P	P	10 02 54.9	-0.5
	baz=184						
CCM	Cathedral Cave	22.41	4	P	P	10 02 54.3	-1.0
	baz=184,SNR=30						
TZTN	Tazewell	22.51	20	P	P	10 02 55.7	-0.7
	baz=204,SNR=13						
TZTN	Tazewell	22.51	20	P	P	10 02 56.5	+0.1
	baz=204						
T50A	Nancy	22.55	17	P	P	10 02 55.2	-1.6
T50A	Nancy	22.55	17	P	P	10 02 55.5	-1.2
	baz=201						
T50A				P	P	10 02 55.5	-1.2
	baz=201						
X58A	Rowland	22.56	31	P	P	10 02 56.9	+0.1
X58A	Rowland	22.56	31	P	P	10 02 57.0	+0.1
	baz=216						
X58A				P	P	10 02 57.0	+0.1
	baz=216						
R40A	Maddies Statio	22.60	2	P	P	10 02 56.0	-1.3
	baz=182,SNR=27						
ANMO	Albuquerque	22.68	331	P	P	10 02 59.8	+1.4
	comp=Z,47nm,0.7s,baz=236,slow=11,SNR=143						
	comp=Z,47nm,0.7s						
ANMO	Albuquerque	22.68	331	P	P	10 02 59.2	+0.8
ANMO	Albuquerque	22.68	331	*c i*P	P	10 02 59.9	+1.5
ANMO				pmax	pmax		
	comp=Z,55nm,0.8s						
ANMO	Albuquerque	22.68	331	P	P	10 02 59.6	+1.2
	baz=144						
ANMO	Albuquerque	22.68	331	P	P	10 02 59.9	+1.5
	baz=144,SNR=126						
W57A	Gilead	22.73	29	P	P	10 02 58.6	0.0
W57A	Gilead	22.73	29	P	P	10 02 58.4	-0.2
	baz=214,SNR=6.6						
W57A				P	P	10 02 58.4	-0.2
	baz=214,SNR=6.6						
USIN	University of	22.78	11	P	P	10 02 58.1	-0.9
V55A	Taylorsville	22.78	26	P	P	10 02 59.2	+0.1
V55A	Taylorsville	22.78	26	P	P	10 03 00.0	+0.9
	baz=211						
V55A				P	P	10 03 00.0	+0.9
	baz=211						
SDV	Santo Domingo	22.93	104	P	P	10 02 59.7	-1.3
	comp=Z,22nm,0.5s,baz=255,slow=15,SNR=9.9						
SDV				LR	LR	10 11 40.7	
	comp=Z,654nm,21.4s,baz=332,slow=36						
	comp=Z,22nm,0.5s						
SDV	Santo Domingo	22.93	104	P	P	10 03 00.0	-1.0
SDV	Santo Domingo	22.93	104	*e*P	P	10 02 59.8	-1.3
SLM	Saint Louis	23.07	6	P	P	10 03 00.8	-1.1
	baz=187,SNR=8.7						
U54A	Nelsons Funny	23.12	24	P	P	10 03 02.9	+0.4
	baz=208						
U54A				P	P	10 03 02.9	+0.4
	baz=208						
TUC	Tucson	23.13	319	P	P	10 03 03.4	+0.7
TUC	Tucson	23.13	319	P	P	10 03 03.4	+0.7
TUC	Tucson	23.13	319	*e*	P	10 03 04.5	+1.9
TUC	Tucson	23.13	319	P	P	10 03 03.4	+0.7
	baz=132						
MACC	Macarena, Meta	23.21	123	*e*P	P	10 03 03.6	0.0
R32A	Long Quarter,	23.25	349	P	P	10 03 03.1	-0.6
R32A	Long Quarter,	23.25	349	P	P	10 03 03.5	-0.1
	baz=166,SNR=36						
WCI	Wyandotte Cave	23.31	14	P	P	10 03 03.3	-0.9
WCI	Wyandotte Cave	23.31	14	P	P	10 03 03.3	-0.9
WCI	Wyandotte Cave	23.31	14	P	P	10 03 03.2	-0.9
	baz=196						
WCI	Wyandotte Cave	23.31	14	P	P	10 03 03.3	-0.9
	baz=196,SNR=12						
OLIL	Olney	23.45	10	P	P	10 03 04.3	-1.1
OLIL	Olney	23.45	10	P	P	10 03 04.3	-1.1
	baz=192,SNR=13						
Q44A	Meyer Farm, Va	23.48	8	P	P	10 03 04.5	-1.2
	baz=190,SNR=8.8						
S51A	Beattyville	23.50	19	P	P	10 03 06.6	+0.8
	baz=203						
S51A				P	P	10 03 06.6	+0.8
	baz=203						
U56A	King	23.55	26	P	P	10 03 07.1	+0.7
U56A	King	23.55	26	P	P	10 03 06.6	+0.2
	baz=212						
U56A				P	P	10 03 06.6	+0.2
	baz=212						
KSU1	Kansas State U	23.60	353	P	P	10 03 05.9	-0.9
	baz=171,SNR=26						
R49A	Shelbyville	23.65	16	P	P	10 03 07.5	+0.3
	baz=199						
R49A				P	P	10 03 07.5	+0.3
	baz=199						
V58A	Windy Hill, Pi	23.66	29	P	P	10 03 06.8	-0.6
V58A	Windy Hill, Pi	23.66	29	P	P	10 03 07.0	-0.4
	baz=215						
V58A				P	P	10 03 07.0	-0.4
	baz=215						
T25A	Trinidad	23.68	337	P	P	10 03 09.6	+1.9
T25A	Trinidad	23.68	337	P	P	10 03 09.5	+1.7
	baz=152,SNR=114						
CBKS	Cedar Bluff	23.84	347	P	P	10 03 08.9	-0.1
CBKS	Cedar Bluff	23.84	347	P	P	10 03 08.9	-0.1
CBKS	Cedar Bluff	23.84	347	P	P	10 03 08.9	-0.1
	baz=164,SNR=13						
CBKS	Cedar Bluff	23.84	347	P	P	10 03 09.0	0.0
	baz=164,SNR=13						
P40A	Paris	23.84	2	P	P	10 03 07.5	-1.4
	baz=182,SNR=20						
R50A	Paris	23.87	17	P	P	10 03 10.3	+1.1

R50A	Paris	23.87	17	P	P	10 03 09.5	+0.3
	baz=201						
R50A				P	P	10 03 09.5	+0.3
	baz=201						
P38A	Dawn	23.93	359	P	P	10 03 09.0	-0.7
	baz=179,SNR=19						
P43A	Skaggs, Pawnee	24.14	7	P	P	10 03 11.5	-0.2
P43A	Skaggs, Pawnee	24.14	7	P	P	10 03 11.9	+0.3
	baz=188						
BLO	Bloomington	24.17	13	P	P	10 03 10.6	-1.3
BLO	Bloomington	24.17	13	P	P	10 03 10.6	-1.3
X18A	Snowflake	24.18	324	P	P	10 03 13.7	+1.4
214A	Organ Pipe Nat	24.23	316	P	P	10 03 12.7	+0.2
214A	Organ Pipe Nat	24.23	316	P	P	10 03 13.4	+0.8
	baz=127,SNR=5.4						
BLA	Blacksburg	24.27	25	P	P	10 03 14.3	+1.5
BLA	Blacksburg	24.27	25	P	P	10 03 14.4	+1.5
BLA	Blacksburg	24.27	25	P	P	10 03 15.3	+2.4
	baz=211						
S54A	Dingess, Beckl	24.43	23	P	P	10 03 14.0	-0.3
P46A	Rosedale	24.46	11	P	P	10 03 13.2	-1.3
W18A	Petrified Fore	24.50	326	P	P	10 03 17.4	+2.3
	baz=138,SNR=5.3						
T57A	Hurt	24.59	27	P	P	10 03 16.0	+0.3
SDCO	Great Sand Dun	24.63	336	P	P	10 03 16.9	+0.5
SDCO	Great Sand Dun	24.63	336	P	P	10 03 18.3	+1.9
	baz=150,SNR=41						
R53A	Hurricane	24.67	21	P	P	10 03 16.4	0.0
U59A	Littleton	24.75	31	P	P	10 03 18.0	+0.8
KSCO	Kaye Shedlock’	24.77	342	P	P	10 03 17.9	+0.4
KSCO	Kaye Shedlock’	24.77	342	P	P	10 03 18.0	+0.4
	baz=157,SNR=13						
KSCO	Kaye Shedlock’	24.77	342	P	P	10 03 18.3	+0.8
	baz=157,SNR=13						
O44A	Mansfield	24.78	8	P	P	10 03 16.1	-1.3
V61A	Roper	24.93	33	P	P	10 03 19.1	+0.2
	baz=220						
V61A				P	P	10 03 19.1	+0.2
	baz=220						
P49A	Miami Univ. Ec	24.93	15	P	P	10 03 16.9	-1.9
P49A	Miami Univ. Ec	24.93	15	P	P	10 03 16.9	-1.9
	baz=199						
P49A	Miami Univ. Ec	24.93	15	P	P	10 03 19.7	+0.8
	baz=199						
X16A	Lo Mia Camp, P	24.96	322	P	P	10 03 20.4	+0.9
CRPR	Cabo Rojo, PR	24.98	81	P	P	10 03 20.8	+1.3
HDIL	Hopedale	25.07	7	P	P	10 03 18.9	-1.1
HDIL	Hopedale	25.07	7	P	P	10 03 19.0	-1.1
	baz=188,SNR=6.4						
HDIL	Hopedale	25.07	7	P	P	10 03 19.0	-1.1
	baz=188						
N41A	Harden Midland	25.08	4	P	P	10 03 19.1	-1.1
N41A	Harden Midland	25.08	4	P	P	10 03 19.0	-1.1
	baz=185						
N38A	Joes South For	25.09	360	P	P	10 03 19.4	-0.8
N38A	Joes South For	25.09	360	P	P	10 03 19.8	-0.5
	baz=180						
Q52A	Bidwell	25.13	20	P	P	10 03 21.6	+0.9
	baz=205						
Q52A				P	P	10 03 21.6	+0.9
	baz=205						
S22A	4UR Ranch, Cre	25.17	334	P	P	10 03 22.9	+1.5
	baz=147,SNR=38						
SFIN	Lafayette	25.22	11	P	P	10 03 19.9	-1.5
	baz=194						
N35A	Tabor	25.25	355	P	P	10 03 21.3	-0.5
	baz=174,SNR=29						
N33B	J Bar K, Exete	25.32	352	P	P	10 03 22.3	-0.1
	baz=170,SNR=18						
N33A	J Bar K, Exete	25.32	352	P	P	10 03 22.0	-0.4
AOPR	Arecibo Observ	25.33	80	P	P	10 03 23.3	+0.6
T59A	Double "B" Far	25.36	30	P	P	10 03 22.5	-0.2
T59A	Double "B" Far	25.36	30	P	P	10 03 24.3	+1.6
	baz=217						
T59A				P	P	10 03 24.3	+1.6
	baz=217						
OBIP	Obispado Ponce	25.46	81	P	P	10 03 24.0	+0.2
MVCO	Mesa Verde	25.48	330	P	P	10 03 26.1	+1.9
MVCO	Mesa Verde	25.48	330	P	P	10 03 25.4	+1.3
	baz=143,SNR=76						
CELP	Cerrillos	25.49	81	P	P	10 03 24.6	+0.4
O48B	Farmland	25.51	14	P	P	10 03 22.3	-1.7
	baz=198,SNR=5.1						
Q24A	Divide	25.56	338	P	P	10 03 25.1	+0.2
Q24A	Divide	25.56	338	P	P	10 03 25.4	+0.5
	baz=152						
Q54A	Coxs Mills	25.65	22	P	P	10 03 26.2	+0.8
WUAZ	Wupatki	25.70	324	P	P	10 03 27.6	+1.5
WUAZ	Wupatki	25.70	324	P	P	10 03 27.4	+1.3
	baz=136,SNR=11						
P52A	Corning	25.78	20	P	P	10 03 27.1	+0.6
	baz=205						
JSRW	J. Sargeant Re	25.79	29	P	P	10 03 26.7	+0.2
T60A	Surry	25.89	31	P	P	10 03 28.4	+0.9
T60A				IAmb	IAmb	10 04 04.0	
	comp=Z,190nm,0.9s						
SJG	San Juan	25.89	81	P	P	10 03 26.1	-1.7
	comp=Z,17nm,0.5s,baz=267,slow=5.7,SNR=5.9						
SJG				pP	pP	10 03 50.4	+0.3
	comp=Z,64nm,0.4s,baz=333,slow=9.3,SNR=8.2						
	comp=Z,17nm,0.5s						
P53A	Whipple	25.90	21	P	P	10 03 28.0	+0.4
P53A				IAmb	IAmb	10 04 05.0	
	comp=Z,139nm,0.8s						
R58B	Mineral	26.00	28	P	P	10 03 29.7	+1.1
R58B	Mineral	26.00	28	P	P	10 03 29.0	+0.5
	baz=215						
R58B				P	P	10 03 29.0	+0.5
	baz=215						
M44A	Midewin, Midew	26.05	9	P	P	10 03 29.6	+0.6
	baz=191						
ACSO	Alum Creek Sta	26.07	18	P	P	10 03 28.3	-0.8
	baz=202						
BGNE	Belgrade	26.07	351	P	P	10 03 29.5	+0.3
BGNE	Belgrade	26.07	351	P	P	10 03 29.0	-0.2
	baz=169						
BGNE	Belgrade	26.07	351	P	P	10 03 30.1	+0.9
	baz=169						
SCIA	State Center	26.20	360	P	P	10 03 29.5	-0.8
	baz=180,SNR=17						
GLA	Glamis	26.25	315	IAmb	IAmb	10 03 57.5	
	comp=Z,158nm,0.8s						
GLA	Glamis	26.25	315	P	P	10 03 32.2	+1.3
	baz=126,SNR=9.8						
O52A	Adamsville	26.31	20	P	P	10 03 31.0	-0.3
O52A				IAmb	IAmb	10 04 11.4	
	comp=Z,84nm,1.0s						
PV15	Paradox Valley	26.39	332	P	P	10 03 33.8	+1.5
PV15				IAmb	IAmb	10 03 58.3	
	comp=Z,118nm,1.3s						
PV13	Radium Mtn., P	26.40	331	P	P	10 03 33.5	+1.1
PV13				IAmb	IAmb	10 03 58.6	
	comp=Z,99nm,0.9s						
L40A	Anamosa	26.41	3	P	P	10 03 31.1	-1.0
L40A	Anamosa	26.41	3	P	P	10 03 31.2	-1.0
	baz=184,SNR=18						
OGNE	Ogallala	26.41	345	P	P	10 03 32.9	+0.6
OGNE	Ogallala	26.41	345	P	P	10 03 32.9	+0.6
	baz=160						
L34A	Svendsen Farm,	26.41	354	P	P	10 03 32.4	+0.1
	baz=173						
SMCO	Snowmass	26.45	335	P	P	10 03 34.5	+1.4
BLYC	Blythe	26.46	317	P	P	10 03 33.9	+1.2
BLYC					PcP	10 06 56.5	+1.0
L42A	Oliver, Polo	26.46	6	P	P	10 03 31.1	-1.6
ISCO	Idaho Springs	26.47	338	P	P	10 03 33.6	+0.5
ISCO	Idaho Springs	26.47	338	P	P	10 03 33.6	+0.5
ISCO				pmax	pmax		
	comp=Z,19nm,0.8s						
ISCO	Idaho Springs	26.47	338	P	P	10 03 34.1	+1.0
	baz=152,SNR=14						
ISCO	Idaho Springs	26.47	338	P	P	10 03 34.7	+1.6
	baz=152,SNR=14						
PV18	Skein Mesa, Pa	26.51	331	P	P	10 03 35.5	+2.0
PV18				IAmb	IAmb	10 03 58.8	
	comp=Z,153nm,1.3s						
PV11	David Mesa, Pa	26.54	331	IAmb	IAmb	10 03 59.9	
	comp=Z,240nm,1.3s						
PV07	Paradox Valley	26.55	332	IAmb	IAmb	10 03 59.3	
	comp=Z,85nm,1.2s						
PDMCI	Parker Dam,Lak	26.56	318	P	P	10 03 35.6	+2.0
	baz=129,SNR=7.2						
O53A	New Philadelph	26.64	21	P	P	10 03 34.6	+0.3
	baz=206						
PV23	Carpenter Ridg	26.72	331	P	P	10 03 37.4	+2.0
PV23				IAmb	IAmb	10 04 19.3	
	comp=Z,119nm,1.1s						
L44A	Lake County Fo	26.85	9	P	P	10 03 36.1	0.0
	baz=191						
SWSC	Sam W. Stewart	26.85	314	P	P	10 03 37.0	+0.8
	baz=124						
O54A	Avella	26.87	22	P	P	10 03 36.6	+0.2
ATAH	Atahualpa	26.89	146	P	P	10 03 36.9	-0.3
	comp=Z,64nm,0.9s,baz=335,slow=6.6,SNR=18						
	comp=Z,64nm,0.9s						
IKP	In-Ko-Pah, Jac	26.90	313	P	P	10 03 37.9	+1.1
	baz=123,SNR=6.0						
W13A	Hualapai Mount	26.91	320	P	P	10 03 38.7	+1.7
W13A					PcP	10 06 57.7	+0.8
K38A	Parkersburg	26.94	1	P	P	10 03 36.6	-0.4
K38A	Parkersburg	26.94	1	P	P	10 03 37.0	+0.1
	baz=180,SNR=6.7						
BC3	Big Chuckawall	27.02	316	P	P	10 03 39.2	+1.2
	baz=126,SNR=11						
IRM	Iron Mountain	27.12	317	P	P	10 03 40.3	+1.6
	baz=127						
NEE2	Needles Airpor	27.16	319	P	P	10 03 39.4	+0.5
	baz=129						
P57A	Homestead Farm	27.20	26	P	P	10 03 38.2	-1.1
TKX	Tecate	27.21	313	P	P	10 03 38.7	-0.8
L48A	N Adams	27.28	14	P	P	10 03 39.1	-0.9
L48A				IAmb	IAmb	10 04 03.0	
	comp=Z,91nm,0.9s						
JFWS	Jewell Farm	27.32	5	P	P	10 03 38.7	-1.6
JFWS	Jewell Farm	27.32	5	P	P	10 03 38.7	-1.6
JFWS				pmax	pmax		
	comp=Z,245nm,0.9s						
JFWS	Jewell Farm	27.32	5	P	P	10 03 39.1	-1.2
	baz=186,SNR=7.1						
K31A	O'Neill	27.35	351	P	P	10 03 40.5	-0.2
K31A	O'Neill	27.35	351	P	P	10 03 40.9	+0.3
	baz=168,SNR=15						
N23A	Red Feather La	27.55	339	P	P	10 03 44.0	+1.2
N23A	Red Feather La	27.55	339	P	P	10 03 43.2	+0.4
	baz=152						
KNB	Kanab	27.59	324	P	P	10 03 45.2	+2.2
KNB	Kanab	27.59	324	P	P	10 03 45.2	+2.2
KNB				pmax	pmax		
	comp=Z,55nm,1.1s						
BELC	Belle Mtn. Jos	27.59	316	P	P	10 03 44.1	+1.0
	baz=126						
PMD	Palm Desert	27.65	315	P	P	10 03 46.0	+2.6
TPFO	Pinon Flats	27.68	315	P	P	10 03 44.8	+1.0
	baz=124,SNR=5.8						
PFO	Pinyon Flats O	27.68	315	P	P	10 03 45.8	+1.9
	comp=Z,10nm,0.9s,baz=103,slow=8.5,SNR=5.2						
PFO				pP	pP	10 04 08.8	+2.6
	comp=Z,37nm,1.1s,baz=124,slow=5.2,SNR=8.3						
PFO				LR	LR	10 15 45.0	
	comp=Z,318nm,18.2s,baz=128,slow=38						
	comp=Z,10nm,0.9s						
PFO	Pinyon Flats O	27.68	315	P	P	10 03 42.0	-1.9
PFO	Pinyon Flats O	27.68	315	⇓eP	P	10 03 44.5	+0.6
PFO				pmax	pmax		
	comp=Z,36nm,1.2s						
PFO	Pinyon Flats O	27.68	315	P	P	10 03 45.2	+1.3
	baz=124,SNR=5.5						
PHWY	Pilot Hill	27.75	340	P	P	10 03 43.0	-1.5
O20A	White River Ci	27.77	335	P	P	10 03 44.6	-0.1
O20A	White River Ci	27.77	335	P	P	10 03 45.5	+0.8
	baz=147,SNR=8.7						
LCMT	Little Creek M	27.82	324	P	P	10 03 46.0	+0.9
V12A	Nelson	27.91	320	P	P	10 03 47.7	+1.9
V12A				IAmb	IAmb	10 04 10.9	
	comp=Z,114nm,1.1s						
Q16A	Castle Valley	28.13	329	P	P	10 03 49.5	+1.7
Q16A				IAmb	IAmb	10 04 12.8	
	comp=Z,90nm,1.3s						
SZCU	Shurtz Canyon	28.15	325	P	P	10 03 49.5	+1.5
SZCU					PcP	10 07 01.1	+1.3
MURC	Murrieta	28.18	314	P	P	10 03 50.0	+1.8
	baz=123,SNR=8.6						
ECSD	EROS Data Cent	28.19	355	IAmb	IAmb	10 04 24.0	
	comp=Z,226nm,1.6s						
ECSD	EROS Data Cent	28.19	355	P	P	10 03 46.9	-1.2
	baz=173,SNR=26						
ECSD	EROS Data Cent	28.19	355	P	P	10 03 47.9	-0.2
	baz=173,SNR=26						
SSPA	Standing Stone	28.22	25	P	P	10 03 48.5	+0.1
	baz=212						
P18A	Preston Nutter	28.24	331	P	P	10 03 49.7	+0.7
PCRV	Puerto La Cruz	28.24	98	P	P	10 03 47.4	-1.5
	comp=Z,7.7nm,0.5s,baz=304,slow=4.6,SNR=6.7						
	comp=Z,7.7nm,0.5s						
I40A	Norwalk	28.27	4	IAmb	IAmb	10 04 28.2	
	comp=Z,93nm,1.1s						
HEC	Hector,Ludlow	28.31	317	P	P	10 03 49.7	+0.4
	baz=126,SNR=5.0						
I37A	Lemond, Waseca	28.31	360	P	P	10 03 48.8	-0.4
I37A				IAmb	IAmb	10 04 46.4	
	comp=Z,87nm,0.9s						
I37B	Waseca	28.31	360	P	P	10 03 48.4	-0.7
	baz=179						
MSU	Marysvale	28.33	327	P	P	10 03 49.6	0.0
MSU					PcP	10 06 59.6	-0.7
MSU	Marysvale	28.33	327	P	P	10 03 49.6	0.0
MSU						10 06 59.6	
P17A	Butcher Ranch,	28.35	330	P	P	10 03 51.5	+1.7
P17A				IAmb	IAmb	10 04 14.4	
	comp=Z,84nm,1.3s						
I42A	Draeger Farm,	28.41	6	P	P	10 03 49.6	-0.4
	baz=188						
TMUT	Trail Mountain	28.44	330	P	P	10 03 49.5	-1.2
TCRU	Three Creeks R	28.54	327	P	P	10 03 52.4	+0.8
TCRU					PcP	10 07 02.2	+1.4
SHPR	Sheep Range	28.61	321	P	P	10 03 52.9	+0.8
RDMU	Red Mountain	28.70	333	P	P	10 03 54.7	+1.8
RWWY	Rawlins	28.70	338	P	P	10 03 53.7	+0.7
RWWY				IAmb	IAmb	10 04 44.5	
	comp=Z,73nm,1.2s						
SCI2	San Clemente I	28.81	311	P	P	10 03 54.5	+0.7
	baz=121						
BFSC	Mount Baldy Ra	28.86	314	P	P	10 03 55.2	+0.9
	baz=124,SNR=5.1						
GSC	Goldstone, Bar	28.90	317	P	P	10 03 57.0	+2.4
	baz=126,SNR=5.2						
PRN	Pahroc Range	29.14	322	P	P	10 03 56.6	-0.2
SUSD	Miller	29.16	351	P	P	10 03 56.4	-0.3
SUSD				IAmb	IAmb	10 04 33.1	
	comp=Z,75nm,1.0s						
SUSD	Miller	29.16	351	P	P	10 03 56.7	0.0
	baz=168						
SUSD	Miller	29.16	351	P	P	10 03 57.6	+0.9
	baz=168						
MPU	Maple Canyon	29.20	330	P	P	10 03 58.6	+1.3
BSUT	Blindstream Ca	29.20	332	P	P	10 03 58.2	+0.7
K22A	Casper	29.31	340	P	P	10 03 59.5	+1.3
K22A	Casper	29.31	340	P	P	10 03 58.6	+0.4
	baz=153,SNR=8.0						
K22A	Casper	29.31	340	P	P	10 03 59.5	+1.3
	baz=153,SNR=8.0						
QSM	Queen of Sheba	29.34	318	P	P	10 03 58.3	-0.1
QSM				IAmb	IAmb	10 04 23.6	
	comp=Z,59nm,1.1s						
GWY	Greenwater Val	29.35	319	P	P	10 03 58.4	-0.2
NLU	North Lily Min	29.37	329	P	P	10 03 58.9	0.0
EDW2	Edwards Air Fo	29.45	315	P	P	10 04 00.7	+1.3
	baz=124						
SPMN	Marine on St.	29.52	0	P	P	10 03 58.8	-1.0
	baz=180,SNR=29						
TPNV	Topopah Spring	29.56	320	P	P	10 04 02.2	+1.6
	baz=130,SNR=5.6						
JLU	Jordanelle	29.57	331	P	P	10 04 00.1	-0.6
FURC	Furnace Creek,	29.64	319	P	P	10 04 02.3	+1.2
	baz=128,SNR=5.6						
MBFL	Flemmings, Mon	29.66	83	eP	P	10 03 57.8	-3.7
WCT	Wildcat Mounta	29.70	320	P	P	10 04 02.3	+0.7
MPMC	Manual Prospec	29.80	318	P	P	10 04 04.1	+1.4
	baz=127,SNR=9.7						
SPR3	Spring Creek 3	29.83	325	P	P	10 04 03.8	+0.7
RSSD	Black Hills	29.90	344	P	P	10 04 04.0	+0.5
RSSD	Black Hills	29.90	344	P	P	10 04 04.0	+0.5
RSSD				pmax	pmax		
	comp=Z,19nm,1.0s						
RSSD	Black Hills	29.90	344	P	P	10 04 03.7	+0.2
	baz=158						
RSSD	Black Hills	29.90	344	P	P	10 04 04.5	+1.0
	baz=158,SNR=12						
DUG	Dugway, Tooele	29.92	329	P	P	10 04 04.5	+0.9
DUG	Dugway, Tooele	29.92	329	P	P	10 04 04.5	+0.9
DUG				pmax	pmax		
	comp=Z,33nm,1.3s						
DUG	Dugway, Tooele	29.92	329	P	P	10 04 04.2	+0.6
	baz=139,SNR=8.9						
R11B	Troy Canyon, C	30.09	323	P	P	10 04 06.0	+0.8
	baz=132						
SGCB	S£o Gabriel d	30.11	119	eP	P	10 04 02.7	-2.7
ARVC	Arvin	30.15	315	P	P	10 04 07.4	+1.8
	baz=123,SNR=6.1						
F36A	Milaca	30.16	359	P	P	10 04 05.0	-0.5
F36A				IAmb	IAmb	10 04 40.7	
	comp=Z,86nm,1.1s						
ISA	Isabella, Lake	30.21	316	P	P	10 04 06.0	-0.1
ISA					PcP	10 07 04.9	0.0
ISA	Isabella, Lake	30.21	316	P	P	10 04 06.1	-0.1
ISA						10 07 04.9	
ISA				pmax	pmax		
	comp=Z,48nm,1.2s						
ISA	Isabella, Lake	30.21	316	P	P	10 04 07.8	+1.5
	baz=125						
TBTG	Tabatinga, AM	30.23	129	P	P	10 04 07.0	+0.6
TBTG				IAmb	IAmb	10 04 07.5	
	comp=Z,86nm,1.4s						
TBTG				PcP	PcP	10 07 05.4	+0.3
TBTG	Tabatinga, AM	30.23	129	eP	P	10 04 07.0	+0.6
TRNY	Table Rock, Ra	30.24	29	P	P	10 04 07.1	+0.8
PAL	Palisades	30.28	30	P	P	10 04 06.2	-0.4
PAL	Palisades	30.28	30	P	P	10 04 06.2	-0.4
PAL				pmax	pmax		
	comp=Z,44nm,1.1s						
GRAC	Grapevine Rang	30.29	319	P	P	10 04 07.4	+0.6
GRAC				IAmb	IAmb	10 04 32.7	
	comp=Z,112nm,1.1s						
GRAC	Grapevine Rang	30.29	319	P	P	10 04 08.1	+1.3
	baz=128						
BINY	Binghamton	30.31	26	P	P	10 04 07.0	+0.1
	baz=214						
CWC	Cottonwood Cre	30.41	318	P	P	10 04 08.7	+0.7
	baz=126						
HWUT	Hardware Ranch	30.42	332	P	P	10 04 09.3	+1.2
BW06	Boulder Array	30.52	336	P	P	10 04 09.9	+0.8
BW06	Boulder Array	30.52	336	P	P	10 04 09.7	+0.6
	baz=147						
PD31	Pinedale Array	30.52	336	P	P	10 04 09.2	+0.2
PDAR	Pinedale Array	30.52	336	P	P	10 04 09.8	+0.8
	comp=Z,4.4nm,0.7s,baz=134,slow=10,SNR=25						
PDAR				pP	pP	10 04 31.9	+0.3
	comp=Z,4.7nm,0.8s,baz=141,slow=9.6,SNR=4.9						
PDAR				PcP	PcP	10 07 05.3	-0.5
	comp=Z,7.9nm,1.1s,baz=125,slow=5.3,SNR=4.7						
PDAR				ScP	ScP	10 10 40.0	+0.6
	comp=Z,2.5nm,1.0s,baz=90,slow=1.5,SNR=4.3						
PDAR				LR	LR	10 18 18.4	
	comp=Z,222nm,19.6s,baz=152,slow=40						
	comp=Z,4.4nm,0.7s						
PDAR	Pinedale Array	30.52	336	P	P	10 04 08.8	-0.2
MAGL	Barre de l’ile	30.60	85	eP	P	10 04 06.8	-2.9
PKM	Mcpherson Peak	30.70	314	P	P	10 04 10.9	+0.2
	baz=122,SNR=7.1						
L59A	Walton	30.70	27	P	P	10 04 10.9	+0.5
VES	Vestal, Richgr	30.72	316	P	P	10 04 11.0	+0.4
	baz=124,SNR=13						
CZSB	Cruzeiro do Su	30.75	138	P	P	10 04 12.8	+1.8
J56A	Wolcott	30.86	23	P	P	10 04 12.4	+0.7
TPH	Tonopah	30.88	321	P	P	10 04 11.1	-1.1
TPH	Tonopah	30.88	321	P	P	10 04 11.1	-1.1
TPH				pmax	pmax		
	comp=Z,223nm,1.1s						
E38A	The Farm, Brul	30.93	2	P	P	10 04 11.1	-1.2
E38A				IAmb	IAmb	10 04 34.9	
	comp=Z,89nm,1.1s						
KSCT	Kent School, K	31.04	29	P	P	10 04 14.2	+0.9
KSCT				IAmb	IAmb	10 04 49.1	
	comp=Z,52nm,1.1s						
SMMC	Simmler	31.06	314	P	P	10 04 14.3	+0.7
	baz=122						
MPOM	Morne Pois Mar	31.14	88	eP	P	10 04 11.4	-3.1
AHID	Auburn Hatcher	31.16	334	P	P	10 04 15.2	+0.6
SADO	Sadowa	31.37	19	P	P	10 04 14.7	-1.4
	comp=Z,2.1nm,0.5s,baz=0.4,slow=7.6,SNR=1.3						
SADO				LR	LR	10 18 58.6	
	comp=Z,786nm,18.1s,baz=191,slow=40						
	comp=Z,2.1nm,0.5s						
E28A	Huff	31.52	350	P	P	10 04 17.4	0.0
E28A	Huff	31.52	350	P	P	10 04 17.5	0.0
	baz=166,SNR=17						
ELK	Elko	31.57	327	P	P	10 04 19.8	+1.5
	comp=Z,9.6nm,0.8s,baz=142,slow=5.7,SNR=25						
ELK				pP	pP	10 04 42.4	+1.5
	comp=Z,15nm,0.8s,baz=137,slow=5.3,SNR=10						
ELK				PcP	PcP	10 07 09.0	+0.4
	comp=Z,5.1nm,0.7s,baz=192,slow=2.7,SNR=4.0						
ELK				ScP	ScP	10 10 43.7	+0.7
	comp=Z,0.6nm,0.3s,baz=167,slow=0.3,SNR=4.2						
ELK				LR	LR	10 19 03.5	
	comp=Z,292nm,19.4s,baz=110,slow=40						
	comp=Z,9.6nm,0.8s						
ELK	Elko	31.57	327	P	P	10 04 20.6	+2.3
ELK				PcP	PcP	10 07 09.8	+1.1
SNOW	Snow King Moun	31.59	335	P	P	10 04 20.1	+1.7
MLAC	Mammoth, Mammo	31.60	319	P	P	10 04 18.9	+0.3
	baz=127						
NV11	Mina Array Sit	31.67	321	P	P	10 04 19.5	+0.4
NV11				IAmb	IAmb	10 04 42.4	
	comp=Z,115nm,1.1s						
NV11					PcP	10 07 07.2	-1.6
TPAW	Teton Pass	31.69	335	P	P	10 04 20.6	+1.2
TPAW				IAmb	IAmb	10 04 44.0	
	comp=Z,62nm,1.1s						
OMMB	Old Mammoth Mi	31.70	319	IAmb	IAmb	10 04 47.7	
	comp=Z,90nm,1.3s						
NVAR	Mina Array Bea	31.76	321	P	P	10 04 22.4	+2.4
	comp=Z,23nm,0.8s,baz=135,slow=8.8,SNR=49						
NVAR				pP	pP	10 04 45.1	+2.4
	comp=Z,112nm,0.9s,baz=136,slow=9.0,SNR=29						
NVAR				PcP	PcP	10 07 09.8	+0.6
	comp=Z,7.7nm,0.8s,baz=126,slow=3.4,SNR=5.2						
NVAR				ScP	ScP	10 10 44.1	+0.5
	comp=Z,0.9nm,0.6s,baz=153,slow=5.0,SNR=5.2						
NVAR				LR	LR	10 19 29.7	
	comp=Z,233nm,18.6s,baz=90,slow=40						
	comp=Z,23nm,0.8s						
NVAR	Mina Array Bea	31.76	321	P	P	10 04 22.7	+2.7
NVAR				PcP	PcP	10 07 10.3	+1.2
NNA	Nana	31.79	149	LR	LR	10 14 59.6	
	comp=Z,216nm,20.8s,baz=325,slow=32						
NNA	Nana	31.79	149	P	P	10 04 21.4	+1.2
NNA				IAmb	IAmb	10 04 22.3	
	comp=Z,48nm,1.1s						
NNA	Nana	31.79	149	⇓eP	P	10 04 20.7	+0.5
NNA				pmax	pmax		
	comp=Z,92nm,1.4s						
L61B	Northampton	31.98	29	P	P	10 04 21.1	-0.4
	baz=219						
KVN	Kaiserville	32.03	322	IAmb	IAmb	10 04 47.8	
	comp=Z,74nm,1.0s						
EYMN	Ely	32.27	2	P	P	10 04 22.6	-1.4
EYMN				IAmb	IAmb	10 04 46.4	
	comp=Z,88nm,1.4s						
EYMN	Ely	32.27	2	P	P	10 04 24.3	+0.3
	baz=183						
H17A	Grant Village	32.29	336	P	P	10 04 25.2	+0.6
	baz=147,SNR=11						
RLMT	Red Lodge	32.43	338	P	P	10 04 25.7	0.0
	baz=150,SNR=19						
BMN	Battle Mountai	32.43	324	P	P	10 04 27.5	+1.8
BMN				IAmb	IAmb	10 04 51.1	
	comp=Z,70nm,1.1s						
BMN	Battle Mountai	32.43	324	P	P	10 04 27.5	+1.8
BMN				pmax	pmax		
	comp=Z,70nm,1.1s						
MDND	Maddock	32.59	352	P	P	10 04 26.1	-0.7
MDND	Maddock	32.59	352	P	P	10 04 25.7	-1.1
	baz=168,SNR=15						
MDND	Maddock	32.59	352	P	P	10 04 26.6	-0.2
	baz=168,SNR=15						
YNR	Norris Junctio	32.60	336	P	P	10 04 28.6	+1.3
B35A	Bob, Littlefor	32.66	359	P	P	10 04 25.9	-1.6
	baz=179,SNR=9.6						
AGMN	Agassiz Nation	32.67	357	P	P	10 04 25.9	-1.6
AGMN				IAmb	IAmb	10 05 02.8	
	comp=Z,81nm,0.9s						
AGMN	Agassiz Nation	32.67	357	P	P	10 04 26.2	-1.3
	baz=175,SNR=10						
AGMN	Agassiz Nation	32.67	357	P	P	10 04 26.4	-1.1
	baz=175,SNR=10						
YMR	Madison River	32.67	336	IAmb	IAmb	10 04 32.5	
	comp=Z,46nm,0.8s						

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YERR  Yerington          32.68 320  IAmb   IAmb   10 04 53.6
      comp=Z,73nm,1.0s
CMB   Columbia Colle     32.83 318  IAmb   IAmb   10 04 54.2
      comp=Z,47nm,1.1s
LAO   LASA Array         32.86 343  P      P      10 04 29.5 +0.1
LAO                                 IAmb   IAmb   10 04 53.0
      comp=Z,138nm,1.9s
LAO   LASA Array         32.86 343  P      P      10 04 28.9  -0.4
      baz=156,SNR=13
LAO   LASA Array         32.86 343  P      P      10 04 29.4 +0.1
      baz=156,SNR=13
GCMT  Greycliff          33.15 339  P      P      10 04 32.9 +1.0
PAHR  Pah Rah Range      33.22 321  IAmb   IAmb   10 04 58.1
      comp=Z,64nm,1.1s
HLID  Hailey             33.26 331  IAmb   IAmb   10 04 57.7
      comp=Z,53nm,1.1s
HLID  Hailey             33.26 331  P      P      10 04 33.6 +0.6
      baz=140,SNR=19
MCMT  McKenzie Canyo     33.57 334  P      P      10 04 38.4 +2.7
BOZ   Bozeman (W)        33.71 336  P      P      10 04 37.5 +0.7
BOZ   Bozeman (W)        33.71 336  P      P      10 04 37.5 +0.7
BOZ                                 pmax   pmax
      comp=Z,15nm,0.8s
BOZ   Bozeman (W)        33.71 336  P      P      10 04 37.8 +1.0
      baz=146,SNR=26
LBNH  Lisbon             33.72  28  P      P      10 04 37.0 +0.3
      baz=219
DLMT  Dillon             33.90 335  IAmb   IAmb   10 05 04.3
      comp=Z,113nm,1.2s
TEFE  Tefe               33.97 122 eP      P      10 04 38.9  -0.4
DGMT  Dagmar             34.02 347  IAmb   IAmb   10 05 17.1
      comp=Z,44nm,0.9s
DGMT  Dagmar             34.02 347  P      P      10 04 39.4 +0.2
      baz=160,SNR=9.0
DGMT  Dagmar             34.02 347  P      P      10 04 39.8 +0.6
      baz=160,SNR=9.0
ULM   Lac du Bonnet      34.62 357  P      P      10 04 42.1  -2.3
      comp=Z,7.3nm,0.7s,baz=177,slow=10.0,SNR=9.0
ULM                                 pP     pP     10 05 05.7  -1.5
      comp=Z,25nm,0.5s,baz=179,slow=9.4,SNR=15
ULM                                 sP     sP     10 05 18.5  -0.3
      comp=Z,64nm,0.7s,baz=172,slow=9.7,SNR=18
ULM                                 LR     LR     10 20 23.0
      comp=Z,216nm,21.4s,baz=166,slow=39
      comp=Z,7.3nm,0.7s
BOAV  Boa Vista          34.67 109 eP      P      10 04 43.7  -1.6
J08A  Circle Bar Ran     35.12 327  P      P      10 04 50.5 +1.6
EGMT  Eagleton           35.12 340  P      P      10 04 49.6 +0.7
EGMT                                IAmb   IAmb   10 05 27.2
      comp=Z,40nm,0.9s
EGMT  Eagleton           35.12 340  P      P      10 04 49.6 +0.7
      baz=151,SNR=24
MOD   Modoc Plateau      35.15 324  P      P      10 04 49.4 +0.1
MOD                                 IAmb   IAmb   10 05 13.9
      comp=Z,63nm,1.2s
MSO   Missoula           35.64 335  IAmb   IAmb   10 05 18.3
      comp=Z,57nm,1.2s
MSO   Missoula           35.64 335  P      P      10 04 53.3  -0.1
      baz=144,SNR=14
I07A  Izee               36.16 327  IAmb   IAmb   10 05 22.1
      comp=Z,38nm,1.1s
YBH   Yreka Blue Hor     36.45 321  P      P      10 05 00.3  -0.1
      comp=Z,4.2nm,0.5s,baz=127,slow=3.7,SNR=15
YBH                                 pP     pP     10 05 22.4  -1.0
      comp=Z,8.7nm,0.8s,baz=123,slow=3.0,SNR=8.6
YBH                                 PcP    PcP    10 07 21.5  -0.9
      comp=Z,5.5nm,1.1s,baz=131,slow=6.1,SNR=2.9
      comp=Z,4.2nm,0.5s
YBH   Yreka Blue Hor     36.45 321  P      P      10 05 00.6 +0.3
YBH   Yreka Blue Hor     36.45 321  P      P      10 05 00.6 +0.3
YBH                                 pmax   pmax
      comp=Z,10.0nm,0.9s
KHMM  Horse Mountain     36.58 320  P      P      10 05 00.7  -0.8
KHMM                                IAmb   IAmb   10 05 26.9
      comp=Z,74nm,1.0s
KHMM                                PcP    PcP    10 07 21.6  -1.3
F64A  Sherman            36.60  29  P      P      10 05 01.9 +0.5
F64A                                IAmb   IAmb   10 05 49.2
      comp=Z,35nm,1.2s
ETMB  Extrema            36.70 132  IAmb   IAmb   10 05 03.3
      comp=Z,68nm,1.1s
ETMB  Extrema            36.70 132 eP      P      10 05 01.9  -0.7
PINE  Pine Mountain      36.73 326  IAmb   IAmb   10 05 27.1
      comp=Z,52nm,1.1s
J04A  Umpqua Nationa     37.03 324  P      P      10 05 07.1 +1.8
MACA  Manacapuru-AM      37.10 117  P      P      10 05 05.4  -0.6
MACA                                IAmb   IAmb   10 05 08.0
      comp=Z,28nm,0.7s
MACA  Manacapuru-AM      37.10 117 eP      P      10 05 04.4  -1.6
WALA  Waterton Lakes     37.45 337  IAmb   IAmb   10 05 33.3
      comp=Z,57nm,1.6s
NEW   Newport            38.09 334  P      P      10 05 13.1  -0.9
      comp=Z,6.6nm,0.7s,baz=146,slow=10,SNR=8.1
NEW                                 PcP    PcP    10 07 26.7  -0.5
      comp=Z,16nm,1.1s,baz=204,slow=1.7,SNR=3.8
NEW                                 LR     LR     10 24 30.6
      comp=Z,183nm,18.6s,baz=147,slow=42
      comp=Z,6.6nm,0.7s
NEW   Newport            38.09 334  IAmb   IAmb   10 05 37.9
      comp=Z,53nm,1.5s
NEW   Newport            38.09 334  P      P      10 05 14.6 +0.6
      baz=140,SNR=5.4
HOOD  Mount Hood Mea     38.13 327  P      P      10 05 16.9 +2.4
H04D  Lebanon            38.19 325  P      P      10 05 15.5 +0.6
C09A  Chrisman Ranch     38.24 332  P      P      10 05 17.0 +1.7
LTY   Liberty            38.96 330  IAmb   IAmb   10 05 46.1
      comp=Z,120nm,1.2s
LON   Longmire           39.17 328  IAmb   IAmb   10 05 48.0
      comp=Z,80nm,1.3s
D05A  Enumclaw           39.56 329  P      P      10 05 27.1 +0.8
D05A                                IAmb   IAmb   10 05 51.7
      comp=Z,81nm,1.1s
FFC   Flin Flon          39.64 352  P      P      10 05 26.7  -0.1
FFC                                 IAmb   IAmb   10 06 03.4
      comp=Z,40nm,0.8s
FFC   Flin Flon          39.64 352  P      P      10 05 26.7  -0.1
FFC                                 pmax   pmax
      comp=Z,40nm,0.9s
FFC   Flin Flon          39.64 352  P      P      10 05 25.1  -1.6
FFC                                 pP     pP     10 05 49.6  -0.3
E03A  Lebam              39.94 327  P      P      10 05 30.6 +1.2
LPAZ  La Paz             40.15 141  P      P      10 05 30.9  -1.3
      comp=Z,17nm,0.8s,baz=330,slow=6.4,SNR=43
LPAZ                                LR     LR     10 21 38.1
      comp=Z,168nm,20.1s,baz=334,slow=35
      comp=Z,17nm,0.8s
LPAZ  La Paz             40.15 141  P      P      10 05 31.2  -0.9
LPAZ  La Paz             40.15 141  P      P      10 05 31.2  -0.9
LPAZ                                pmax   pmax
      comp=Z,19nm,0.8s
LPAZ  La Paz             40.15 141 eP      P      10 05 32.2 +0.1
LPAZ  La Paz             40.15 141  P      P      10 05 30.9  -1.3
B06A  Marblemount        40.24 331  IAmb   IAmb   10 05 55.9
      comp=Z,58nm,1.1s
PB18  Visviri            40.38 144  P      P      10 05 35.3 +1.4
PB18                                IAmb   IAmb   10 05 37.2
      comp=Z,136nm,1.4s
PB12  IPOC Station P     40.73 146  P      P      10 05 36.7 +0.4
PB12                                IAmb   IAmb   10 05 37.9
      comp=Z,64nm,1.2s
EDM   Edmonton           40.78 341  P      P      10 05 36.3   0.0
EDM   Edmonton           40.78 341  P      P      10 05 36.3   0.0
EDM                                 pmax   pmax
      comp=Z,141nm,1.3s
PB16  IPOC Station P     40.96 145  P      P      10 05 39.7 +0.9
PB16                                IAmb   IAmb   10 05 41.1
      comp=Z,35nm,0.9s
MDP   Montagnes des      41.06 100  PcP    PcP    10 07 37.1  -0.1
      comp=Z,24nm,1.0s,baz=63,slow=5.3,SNR=3.0
MNMC  Minye Minye        41.55 145  P      P      10 05 44.2 +1.0
LLLB  Lillooet           41.91 333  P      P      10 05 46.5 +1.0
LLLB                                IAmb   IAmb   10 06 11.1
      comp=Z,93nm,1.5s
PB11  IPOC Station P     42.03 146  P      P      10 05 47.2 +0.2
PB11                                PcP    PcP    10 07 40.8 +0.4
MALB  Monte Alegre       42.13 111 eP      P      10 05 46.7  -1.0
TA02  Huaiquique         42.20 147  P      P      10 05 49.1 +1.0
TA02                                IAmb   IAmb   10 05 49.9
      comp=Z,93nm,1.2s
GO01  Chusmiza           42.21 145  P      P      10 05 50.1 +1.2
GO01                                IAmb   IAmb   10 05 51.3
      comp=Z,88nm,1.1s
TA01  Diego Aracena      42.42 147  IAmb   IAmb   10 05 51.9
      comp=Z,145nm,1.4s
PB08  IPOC Station P     42.62 146  P      P      10 05 52.8 +0.7
PB08                                IAmb   IAmb   10 05 53.7
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      comp=Z,35nm,0.9s
BRLDA Berland Lookou     42.83 339  P      P      10 05 53.6 +0.6
BRLDA                               IAmb   IAmb   10 06 29.7
      comp=Z,52nm,0.9s
FCC   Fort Churchill     43.08 359  IAmb   IAmb   10 06 18.3
      comp=Z,78nm,1.3s
CBB   Campbell River     43.13 330  IAmb   IAmb   10 06 20.9
      comp=Z,82nm,1.3s
PB01  IPOC Station P     43.17 147  P      P      10 05 56.6 +0.4
PB01                                IAmb   IAmb   10 05 58.0
      comp=Z,52nm,1.2s
VILB  Vilhena            43.18 129  P      P      10 05 55.8  -0.4
VILB  Vilhena            43.18 129 eP      P      10 05 55.3  -1.0
PB02  IPOC Station P     43.19 148  P      P      10 05 57.1 +0.8
PB02                                IAmb   IAmb   10 05 58.2
      comp=Z,95nm,0.9s
PB04  IPOC Station P     43.90 149  P      P      10 06 03.2 +1.1
PB04                                IAmb   IAmb   10 06 04.1
      comp=Z,107nm,1.4s
PB09  IPOC Station P     43.92 147  IAmb   IAmb   10 06 04.6
      comp=Z,135nm,1.3s
SCHQ  Schefferville      44.10  22  P      P      10 06 01.3  -1.8
      comp=Z,1.5nm,0.5s,baz=273,slow=15,SNR=1.3
      comp=Z,1.5nm,0.5s
WAPA  Wapiti River       44.35 339  P      P      10 06 05.6 +0.5
WAPA                                IAmb   IAmb   10 06 41.7
      comp=Z,82nm,1.0s
SIV   San Ignacio        44.56 133  P      P      10 06 06.7  -0.6
      comp=Z,27nm,0.5s,baz=298,slow=7.6,SNR=86
SIV                                 PcP    PcP    10 07 49.2 +0.3
      comp=Z,10nm,0.9s,baz=315,slow=6.5,SNR=2.5
SIV                                 ScP    ScP    10 11 32.7 +0.6
      comp=Z,6.4nm,1.0s,baz=307,slow=3.1,SNR=8.9
      comp=Z,27nm,0.5s
LVC   Limon Verde        44.76 147  P      P      10 06 08.3  -0.9
      comp=Z,29nm,1.0s,baz=317,slow=5.5,SNR=14
LVC                                 PcP    PcP    10 07 50.8 +1.0
      comp=Z,7.4nm,0.8s,baz=328,slow=4.9,SNR=3.1
LVC                                 LR     LR     10 24 08.1
      comp=Z,49nm,18.2s,baz=334,slow=35
      comp=Z,29nm,1.0s
LVC   Limon Verde        44.76 147  P      P      10 06 10.8 +1.6
LVC                                 IAmb   IAmb   10 06 11.6
      comp=Z,82nm,1.3s
LVC   Limon Verde        44.76 147  P      P      10 06 10.8 +1.6
LVC                                 pmax   pmax
      comp=Z,82nm,1.3s
LVC   Limon Verde        44.76 147 eP      P      10 06 09.0  -0.2
LVC   Limon Verde        44.76 147  P      P      10 06 08.4  -0.8
PB15  IPOC Station P     44.97 149  P      P      10 06 11.5 +0.8
PB15                                IAmb   IAmb   10 06 12.7
      comp=Z,118nm,1.7s
RPN   Rapa Nui           45.32 201  P      P      10 06 13.4 +0.3
      comp=Z,131nm,1.1s,baz=39,slow=4.9,SNR=4.4
RPN                                 LR     LR     10 21 46.3
      comp=Z,88nm,18.3s,baz=57,slow=31
      comp=Z,131nm,1.1s
RPN   Rapa Nui           45.32 201  P      P      10 06 14.6 +1.5
RPN   Rapa Nui           45.32 201  P      P      10 06 14.6 +1.5
RPN                                 pmax   pmax
      comp=Z,557nm,1.5s
CLDB  Colider            45.35 123 eP      P      10 06 11.0  -2.6
PTLB  Pontes e Lacer     45.58 131  P      P      10 06 14.5  -0.8
PTLB                                IAmb   IAmb   10 06 15.4
      comp=Z,64nm,1.2s
PTLB  Pontes e Lacer     45.58 131 eP      P      10 06 14.3  -1.0
BBSD  Serra de San D     45.70 134 eP      P      10 06 15.1  -1.2
PB14  IPOC Station P     45.71 151  P      P      10 06 17.1 +0.4
BBB   Bella Bella        45.84 330  LR     LR     10 26 32.0
      comp=Z,166nm,18.3s,baz=148,slow=37
GO02  Mina Guanaco       46.56 150  P      P      10 06 24.2 +1.0
PRPB  Parauapebas        48.02 114 eP      P      10 06 32.8  -1.6
AC06  Mina Casimiro      48.08 152  IAmb   IAmb   10 06 35.8
      comp=Z,40nm,0.8s
AC02  Maricunga          48.19 151  P      P      10 06 37.3 +1.3
GO03  Copiap             48.33 153  P      P      10 06 37.5 +0.8
SALV  Santo Antonio      48.41 129 eP      P      10 06 36.5  -0.9
YKA   Yellowknife Ar     49.22 347  P      P      10 06 42.4  -0.6
      comp=Z,12nm,0.8s,baz=150,slow=7.6,SNR=105
YKA                                 pP     pP     10 07 05.9  -1.0
      comp=Z,18nm,0.6s,baz=151,slow=7.5,SNR=17
YKA                                 sP     sP     10 07 17.3  -0.9
      comp=Z,43nm,1.1s,baz=148,slow=7.8,SNR=7.3
YKA                                 PcP    PcP    10 08 04.9 +0.4
      comp=Z,3.6nm,0.7s,baz=156,slow=3.8,SNR=3.9
YKA                                 ScP    ScP    10 11 50.6  -0.3
      comp=Z,1.7nm,1.1s,baz=142,slow=6.3,SNR=3.5
YKA                                 LR     LR     10 30 46.1
      comp=Z,133nm,18.6s,baz=146,slow=40
      comp=Z,12nm,0.8s
LCO   Las Campanas       49.36 154  P      P      10 06 45.3 +0.6
LCO                                 IAmb   IAmb   10 06 46.5
      comp=Z,81nm,1.1s
LCO   Las Campanas       49.36 154  P      P      10 06 45.3 +0.6
LCO                                 pmax   pmax
      comp=Z,81nm,1.2s
LCO   Las Campanas       49.36 154  P      P      10 06 44.1  -0.6
LCO                                 pP     pP     10 07 08.7 +0.2
AC05  El Transito        49.39 153  P      P      10 06 45.5 +0.7
SNDB  Serra Nova Dou     49.63 121 eP      P      10 06 46.1  -0.6
KOTAN Kotaneelee Air     49.82 340  P      P      10 06 47.6 +0.1
      baz=139,SNR=5.9
T35M  Bob Quinn          49.89 334  P      P      10 06 49.3 +1.2
      baz=130
LIRD  Liard River Hi     49.98 339  P      P      10 06 50.0 +1.2
      baz=137
PP1B  Ponte de Pedra     50.08 130 eP      P      10 06 49.5  -0.6
CO01  Juntas del Tor     50.46 154  IAmb   IAmb   10 06 55.2
      comp=Z,32nm,1.1s
BDQN  Bodoquena, MS      50.59 134 eP      P      10 06 52.6  -1.2
DLBC  Dease Lake         50.76 336  P      P      10 06 56.8 +2.0
      comp=Z,24nm,0.8s,baz=143,slow=7.6,SNR=26
DLBC                                pP     pP     10 07 20.5 +1.7
      comp=Z,69nm,1.1s,baz=132,slow=4.9,SNR=11
DLBC                                LR     LR     10 29 44.1
      comp=Z,165nm,18.3s,baz=104,slow=37
      comp=Z,24nm,0.8s
DLBC  Dease Lake         50.76 336  P      P      10 06 56.2 +1.5
DLBC  Dease Lake         50.76 336  P      P      10 06 56.0 +1.3
      baz=132,SNR=12
MURT  Porto Murtinho     50.82 136 eP      P      10 06 54.0  -1.5
S34M  Telegraph Cree     50.86 335  P      P      10 06 56.8 +1.4
      baz=130
T33K  Petersburg         50.94 333  P      P      10 06 57.7 +1.7
      baz=127
CO03  El Pedregal        50.97 155  P      P      10 06 57.4 +0.8
FRB   Frobisher Bay      51.00  14  LR     LR     10 31 40.0
      comp=Z,225nm,18.4s,baz=198,slow=40
SMTB  Santa Maria do     51.21 115 eP      P      10 06 56.3  -2.4
ARAG  Araguaiana, MT     51.28 125 eP      P      10 06 57.7  -1.4
AQDB  Aquidauana         51.34 133  P      P      10 06 58.8  -0.6
AQDB                                IAmb   IAmb   10 06 59.6
      comp=Z,103nm,1.5s
AQDB  Aquidauana         51.34 133 eP      P      10 06 58.1  -1.3
WTLY  Watson Lake, Y     51.44 338  IAmb   IAmb   10 07 29.1
      comp=Z,58nm,1.1s
WTLY  Watson Lake, Y     51.44 338  P      P      10 07 00.9 +1.2
      baz=134,SNR=7.7
ROSB  Rosrio             51.80 107 eP      P      10 07 01.8  -1.3
Q32M  Nakina River       51.99 335  P      P      10 07 05.9 +1.9
      baz=129
WRGLY Wrigley            52.05 343  P      P      10 07 05.1 +1.0
      baz=142
VA06  Catapilco          52.25 157  P      P      10 07 06.2 +0.3
C2SB  Chapadao do Su     52.32 129 eP      P      10 07 06.9 +0.1
TICA  Tres Isletas       52.48 142 eP      P      10 07 07.7  -0.2
VA01  Torpederas         52.53 157  P      P      10 07 08.7 +0.6
TAOE  Nuku Hiva Isla     52.57 246 eP      P      10 07 12.6 +3.8
      comp=Z,126nm,26.8s
TAOE                               eS      S      10 14 30.8 +2.1
      comp=Z,123nm,23.9s
TAOE                               eLR     LR     10 22 27.8
      comp=Z,376nm,24.4s
TAOE  Nuku Hiva Isla     52.57 246 eT      T      11 02 29.7
      comp=Z,26nm,0.2s
ESFA  Espinillo Form     52.58 140 eP      P      10 07 08.5  -0.1
CFA   Coronel Fontan     52.66 153  P      P      10 07 09.5 +0.4
      comp=Z,38nm,0.8s,baz=331,slow=7.1,SNR=35
CFA                                 PcP    PcP    10 08 18.2 +0.4
      comp=Z,18nm,1.0s,baz=316,slow=4.6,SNR=3.2
      comp=Z,38nm,0.8s
ROC1  El Roble           52.72 157  P      P      10 07 10.3 +0.5
ROC1                                IAmb   IAmb   10 07 10.9
      comp=Z,29nm,0.8s
MT02  Curacav            52.93 157  P      P      10 07 11.9 +0.9
P32M  Atlin              52.96 335  P      P      10 07 11.8 +0.7
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      baz=128
PEL   Peldehue           53.00 156  IAmb   IAmb   10 07 13.3
      comp=Z,89nm,1.3s
PEL   Peldehue           53.00 156  P      P      10 07 11.1  -0.5
P33M  Teslin, Yukon      53.00 336  P      P      10 07 12.9 +1.5
      baz=129
MT05  Renca              53.20 157  P      P      10 07 13.8 +0.7
VACA  Villa Angela C     53.24 144 eP      P      10 07 14.0 +0.6
MT01  Popeta             53.42 157  P      P      10 07 14.7   0.0
MT01                                IAmb   IAmb   10 07 15.2
      comp=Z,31nm,0.8s
MT09  Talagante          53.45 157  P      P      10 07 15.4 +0.4
AMBA  Amambai (Brazi     53.45 135 eP      P      10 07 14.4  -0.7
MT08  Bocatoma Ro        53.52 156  IAmb   IAmb   10 07 18.4
      comp=Z,126nm,1.0s
SKAG  Skagway            53.54 335  P      P      10 07 16.4 +1.2
      baz=126
MT13  San Alfonso        53.68 156  IAmb   IAmb   10 07 19.0
      comp=Z,81nm,1.1s
MMPY  Sheldon Lake,      54.03 339  P      P      10 07 20.5 +1.7
      baz=132,SNR=9.1
GO05  Huala              54.21 159  P      P      10 07 20.7 +0.3
GO05                                IAmb   IAmb   10 07 21.2
      comp=Z,52nm,0.8s
BDFB  Brasilia           54.28 123  P      P      10 07 19.4  -1.9
      comp=Z,31nm,0.8s,baz=289,slow=8.2,SNR=40
      comp=Z,31nm,0.8s
BDFB  Brasilia           54.28 123 eP      P      10 07 20.3  -1.0
CPUP  Villa Florida      54.29 140  P      P      10 07 19.4  -1.6
      comp=Z,34nm,1.0s,baz=332,slow=7.6,SNR=39
CPUP                                PcP    PcP    10 08 24.1   0.0
      comp=Z,4.9nm,0.8s,baz=328,slow=7.4,SNR=2.8
      comp=Z,34nm,1.0s
CPUP  Villa Florida      54.29 140  P      P      10 07 20.0  -1.1
CPUP                                IAmb   IAmb   10 07 21.0
      comp=Z,79nm,1.3s
CPUP  Villa Florida      54.29 140  P      P      10 07 20.0  -1.1
CPUP                                pmax   pmax
      comp=Z,79nm,1.3s
CPUP  Villa Florida      54.29 140 eP      P      10 07 19.7  -1.4
CPUP  Villa Florida      54.29 140  P      P      10 07 18.2  -2.9
CPUP                                pP     pP     10 07 44.3  -0.9
BO02  Sierra Bellavi     54.43 157  P      P      10 07 22.6 +0.6
BO02                                IAmb   IAmb   10 07 23.8
      comp=Z,93nm,1.4s
FARO  Faro, Yukon        54.50 338  P      P      10 07 22.3 +0.1
      baz=130
O30N  Mendenhall         54.62 336  P      P      10 07 23.8 +0.7
      baz=126,SNR=5.0
ITRB  Iturama            54.75 128 eP      P      10 07 23.8  -0.8
M31M  Drury Creek, Y     54.86 338  IAmb   IAmb   10 08 04.2
      comp=Z,26nm,1.1s
M31M  Drury Creek, Y     54.86 338  P      P      10 07 25.6 +0.8
      baz=129
N31M  Braeburn, Yuko     54.93 337  P      P      10 07 26.3 +1.0
      baz=127,SNR=5.2
MCR1  Marechal Candi     55.13 136 eP      P      10 07 25.6  -1.6
SDBA  SAO DESIDERIO      55.22 118 eP      P      10 07 25.6  -2.5
HYT   Haines Junctio     55.22 335  P      P      10 07 28.7 +1.2
      baz=125,SNR=5.2
PCMB  Pacaembu           55.24 131 eP      P      10 07 27.1  -1.0
BI05  Punta Hualpn       55.36 161  P      P      10 07 29.4 +0.8
BI05                                IAmb   IAmb   10 07 30.0
      comp=Z,49nm,1.0s
IPMB  Ipameri, GO        55.41 125 eP      P      10 07 28.1  -1.3
N30M  Aishikik Lake      55.42 336  P      P      10 07 29.5 +0.6
      baz=126
YUK6  Outpost Mounta     55.63 335  P      P      10 07 31.8 +1.2
      baz=124
MECA  Mercedes           55.95 143 eP      P      10 07 32.6  -0.4
PINM  Pinnacle           55.96 334  P      P      10 07 33.7 +0.9
      baz=121
M30M  Minto, Yukon       55.97 337  IAmb   IAmb   10 07 58.6
      comp=Z,46nm,1.2s
M30M  Minto, Yukon       55.97 337  P      P      10 07 34.5 +1.7
      baz=126,SNR=7.9
YUK4  Talbot Arm         55.97 335  P      P      10 07 33.8 +0.8
      baz=124
MAYO  Mayo, Yukon        56.27 339  P      P      10 07 35.8 +1.0
MAYO  Mayo, Yukon        56.27 339  P      P      10 07 36.4 +1.6
      baz=128,SNR=7.6
O28M  Mount Upton        56.29 334  P      P      10 07 36.3 +0.9
      baz=122
AZCA  Azaras, Argent     56.38 140 eP      P      10 07 35.4  -0.6
YUK8  Steele Glacier     56.39 335  P      P      10 07 37.3 +1.3
      baz=123,SNR=5.6
M29M  Somme Creek        56.52 337  P      P      10 07 37.8 +1.0
      baz=125,SNR=9.8
PTGB  Pitanga            56.64 134 eP      P      10 07 36.5  -1.7
L29M  L29M               56.78 337  P      P      10 07 39.8 +1.2
      baz=125
FRBT  Francisco Belt     56.80 136 eP      P      10 07 37.9  -1.3
BB19B Bebedouro          56.94 129 eP      P      10 07 39.3  -0.9
YUK3  Moose Creek        56.94 335  P      P      10 07 40.3 +0.4
      baz=122
K29M  Barlow Dome        56.99 338  P      P      10 07 41.2 +1.2
      baz=126
JANB  Januaria           57.02 120 eP      P      10 07 39.1  -1.8
C36M  Paulatuk           57.10 347  P      P      10 07 40.8 +0.2
      baz=144
PMNB  Patos De Minas     57.11 125 eP      P      10 07 40.7  -0.8
ITQB  Itaqui             57.13 142  P      P      10 07 41.1  -0.3
ITQB  Itaqui             57.13 142 eP      P      10 07 40.5  -0.9
CRSM  Crissiumal (Br     57.19 138 eP      P      10 07 40.3  -1.5
BVCY  Beaver Creek       57.44 336  P      P      10 07 44.1 +0.9
      baz=122
FRTB  Fartura            57.54 131 eP      P      10 07 43.6  -0.8
J29M  Klondike Camp      57.60 339  P      P      10 07 45.8 +1.5
      baz=126
MCARA McCarthy VSAT      57.79 334  P      P      10 07 46.7 +1.1
      baz=119
DAWY  Dawson             57.80 338  P      P      10 07 46.8 +1.1
      baz=124,SNR=5.2
M27K  Edge Creek, AK     57.81 336  P      P      10 07 47.1 +1.2
      baz=121
F31M  Tsiigehtchic       58.07 343  P      P      10 07 48.5 +1.1
      baz=132,SNR=5.8
BCAR  Beaver Creek A     58.15 336  P      P      10 07 48.8 +0.7
L27K  Beaver Creek,      58.16 336  P      P      10 07 48.8 +0.6
L27K                                IAmb   IAmb   10 08 14.1
      comp=Z,36nm,1.0s
L27K  Beaver Creek,      58.16 336  P      P      10 07 49.4 +1.2
      baz=121,SNR=8.2
I29M  Ogilvie Camp,      58.17 340  P      P      10 07 49.1 +0.9
      baz=126
ITAB  Concordia          58.26 137  P      P      10 07 48.3  -1.0
ITAB  Concordia          58.26 137 eP      P      10 07 48.8  -0.5
LR03  Panguipulli        58.27 161  P      P      10 07 49.7 +0.6
LR03                                IAmb   IAmb   10 07 50.5
      comp=Z,43nm,1.1s
EPYK  Eagle Plains       58.27 341  P      P      10 07 49.5 +0.6
EPYK                                IAmb   IAmb   10 08 41.4
      comp=Z,20nm,0.8s
EPYK  Eagle Plains       58.27 341  P      P      10 07 49.5 +0.6
      baz=128
M26K  Nabesna, AK        58.28 335  P      P      10 07 50.3 +1.2
      baz=120
SFJD  Kangerlussuaq      58.31  18  LR     LR     10 34 49.1
      comp=Z,357nm,18.2s,baz=228,slow=38
RODS  Rosario do Sul     58.48 141 eP      P      10 07 50.4  -0.4
RCLB  Rio Claro- Sao     58.48 129 eP      P      10 07 50.8  -0.2
GO06  Curarrehue         58.50 160  P      P      10 07 50.9   0.0
GO06                                IAmb   IAmb   10 07 52.3
      comp=Z,49nm,1.4s
G30M  tAoh Zraii Nji     58.50 342  P      P      10 07 52.1 +1.6
      baz=129
N25K  Chitina, Valde     58.56 334  P      P      10 07 52.5 +1.4
N25K                                IAmb   IAmb   10 08 17.8
      comp=Z,61nm,1.1s
N25K  Chitina, Valde     58.56 334  P      P      10 07 53.0 +2.0
      baz=118,SNR=5.8
INK   Inuvik             58.60 344  P      P      10 07 50.1  -1.0
      comp=Z,12nm,0.7s,baz=123,slow=5.9,SNR=51
INK                                 pP     pP     10 08 15.0  -0.8
      comp=Z,25nm,0.8s,baz=122,slow=11,SNR=12
INK                                 LR     LR     10 38 06.2
      comp=Z,118nm,18.5s,baz=126,slow=41
      comp=Z,12nm,0.7s
INK   Inuvik             58.60 344  P      P      10 07 51.7 +0.7
      baz=133,SNR=22
ALGR  Alto Alegre (B     58.73 139 eP      P      10 07 51.2  -1.4
L26K  Log Cabin Wild     58.74 336  P      P      10 07 51.9  -0.3
      baz=120
K27K  Chicken            58.76 337  P      P      10 07 53.0 +0.7
      baz=122
EGAK  Eagle              58.83 338  P      P      10 07 53.4 +0.7
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EGAK				IAmb	IAmb	10 08 17.6	
	comp=Z,28nm,1.2s						
EGAK	Eagle	58.83	338	P	P	10 07 53.3	+0.5
	baz=123						
KLU	Klutina	59.07	334	P	P	10 07 56.0	+1.4
KLU				IAmb	IAmb	10 08 21.1	
	comp=Z,48nm,1.0s						
KLU	Klutina	59.07	334	P	P	10 07 55.4	+0.9
	baz=116						
RES	Resolute Bay	59.08	359	P	P	10 07 52.8	-1.5
	comp=Z,4.0nm,0.8s,baz=192,slow=11,SNR=20						
RES				pP	pP	10 08 17.8	-1.3
	comp=Z,21nm,0.9s,baz=183,slow=9.5,SNR=16						
RES				LR	LR	10 34 41.3	
	comp=Z,80nm,19.8s,baz=191,slow=37						
	comp=Z,4.0nm,0.8s						
PUH	Pauahi	59.10	283	P	P	10 07 56.5	+1.0
RIM	Rim	59.15	283	P	P	10 07 56.5	+0.6
HARP	HAARP	59.16	335	P	P	10 07 56.4	+1.2
	baz=118						
DIAM	Diamantina, MG	59.20	123	*e*P	P	10 07 55.7	-0.5
VAO	Valinhos	59.24	129	*e*P	P	10 07 55.7	-0.6
SPB	Sao Paulo	59.24	130	P	P	10 07 55.2	-1.0
SPB	Sao Paulo	59.24	130	*e*P	P	10 07 56.1	-0.1
SPB	Sao Paulo	59.24	130	P	P	10 07 54.3	-1.9
SPB				pP	pP	10 08 20.2	-0.5
DOT	Dot Lake	59.33	336	P	P	10 07 57.3	+1.0
DOT				IAmb	IAmb	10 08 22.3	
	comp=Z,46nm,1.1s						
LL04	Puerto Octay	59.42	162	P	P	10 07 57.1	+0.1
LL04				IAmb	IAmb	10 07 58.0	
	comp=Z,57nm,1.1s						
I27K	Kandik River	59.44	339	P	P	10 07 58.1	+1.0
	baz=123						
M24K	Tolsona, Glenn	59.45	334	P	P	10 07 58.8	+1.6
	baz=116						
SCRK	Sand Creek	59.46	337	P	P	10 07 58.3	+1.0
SCRK				IAmb	IAmb	10 08 23.3	
	comp=Z,46nm,1.4s						
SCRK	Sand Creek	59.46	337	P	P	10 07 57.8	+0.5
	baz=120,SNR=5.4						
A36M	Sachs Harbour	59.47	349	P	P	10 07 56.5	-0.5
	baz=143,SNR=7.6						
HPAH	Hawaii Prepara	59.47	284	P	P	10 07 57.8	-0.3
PAX	Paxson	59.56	335	P	P	10 07 58.7	+0.8
PAX				IAmb	IAmb	10 08 23.6	
	comp=Z,43nm,1.0s						
PAX	Paxson	59.56	335	P	P	10 07 58.7	+0.8
PAX				pmax	pmax		
	comp=Z,43nm,1.0s						
PAX	Paxson	59.56	335	P	P	10 07 58.9	+1.0
	baz=118,SNR=8.1						
CPSB	Cacapava Do Su	59.59	140	*e*P	P	10 07 57.8	-0.7
RIDG	Independent Ri	59.68	336	P	P	10 07 59.1	+0.4
RIDG	Independent Ri	59.68	336	P	P	10 08 00.0	+1.3
	baz=119,SNR=6.8						
H27K	Steamboat Moun	59.76	339	P	P	10 08 00.4	+1.2
	baz=123						
PET01	Itanhaem-SP	59.77	131	*e*P	P	10 07 58.6	-1.3
I26K	Coal Creek Min	59.83	338	P	P	10 08 00.3	+0.7
I26K				IAmb	IAmb	10 08 25.9	
	comp=Z,31nm,1.4s						
I26K	Coal Creek Min	59.83	338	P	P	10 08 00.7	+1.1
	baz=121						
PLCA	Paso Flores	59.84	160	P	P	10 07 59.0	-1.0
	comp=Z,68nm,1.0s,baz=337,slow=7.6,SNR=72						
PLCA				PKKP	PKKPdf	10 29 11.3	+1.5
	comp=Z,1.2nm,0.8s,baz=209,slow=5.0,SNR=2.9						
	comp=Z,68nm,1.0s						
PLCA	Paso Flores	59.84	160	P	P	10 08 00.7	+0.6
PLCA	Paso Flores	59.84	160	P	P	10 08 00.7	+0.6
PLCA				pmax	pmax		
	comp=Z,119nm,1.1s						
PLCA	Paso Flores	59.84	160	*e*P	P	10 08 00.6	+0.5
PLCA	Paso Flores	59.84	160	P	P	10 07 58.8	-1.2
PLCA				pP	pP	10 08 29.8	+5.2
M23K	Glacier View	59.98	333	P	P	10 08 01.6	+0.9
	baz=115						
K24K	Donnelly Dome	60.07	336	P	P	10 08 03.2	+1.8
	baz=118,SNR=9.1						
G27K	Doyon Strip	60.12	340	P	P	10 08 02.9	+1.2
	baz=124,SNR=5.8						
KNK	Knik Glacier	60.14	333	P	P	10 08 03.1	+1.2
	baz=114						
SML	Sawmill	60.25	333	P	P	10 08 02.9	+0.3
	baz=114						
O22K	Cooper Landing	60.34	332	P	P	10 08 04.0	+0.8
	baz=112						
PARB	Paraibuna	60.44	129	*e*P	P	10 08 04.6	+0.1
PLTB	Pedras Altas	60.44	141	P	P	10 08 03.6	-0.7
PLTB	Pedras Altas	60.44	141	*e*P	P	10 08 03.3	-1.0
CNLB	Canela	60.48	138	*e*P	P	10 08 03.6	-1.0
GHO	Glory Hole Cre	60.49	333	P	P	10 08 04.9	+0.6
RCBR	Riachuelo	60.50	106	*e*P	P	10 08 04.0	-1.1
PMR	Palmer	60.51	333	P	P	10 08 05.1	+0.8
	baz=113						
BRSE	Bradley Lake S	60.54	331	P	P	10 08 06.1	+1.4
	baz=111						
RC01	Rabbit Creek A	60.58	332	P	P	10 08 05.0	+0.2
RC01				IAmb	IAmb	10 08 30.8	
	comp=Z,52nm,1.1s						
RC01	Rabbit Creek A	60.58	332	P	P	10 08 05.5	+0.6
	baz=112						
PRP	Porcupine Dome	60.79	338	P	P	10 08 07.1	+0.8
PRP				IAmb	IAmb	10 08 31.9	
	comp=Z,48nm,1.0s						
PRP	Porcupine Dome	60.79	338	P	P	10 08 06.7	+0.3
	baz=119,SNR=18						
KDAK	Kodiak Island	60.80	328	P	P	10 08 07.3	+1.0
	comp=Z,14nm,0.8s,baz=32,slow=14,SNR=1.6						
	comp=Z,14nm,0.8s						
HDA	Harding Lake	60.81	336	P	P	10 08 07.0	+0.7
HDA				IAmb	IAmb	10 08 31.6	
	comp=Z,74nm,1.4s						
HDA	Harding Lake	60.81	336	P	P	10 08 07.1	+0.7
	baz=117,SNR=10.0						
TRQA	Tornquist	60.85	152	P	P	10 08 06.7	-0.3
TRQA				IAmb	IAmb	10 08 07.9	
	comp=Z,92nm,1.6s						
TRQA	Tornquist	60.85	152	P	P	10 08 06.7	-0.3
TRQA				pmax	pmax		
	comp=Z,92nm,1.6s						
E27K	Coleen River	60.88	341	P	P	10 08 07.5	+0.8
	baz=124						
G26K	Porcupine Rive	60.91	340	P	P	10 08 06.9	-0.1
	baz=121						
IL03	Eielson Array	60.94	337	P	P	10 08 07.9	+0.8
IL31		60.95	337	P	P	10 08 08.1	+0.9
IL31				pP	pP	10 08 31.4	-0.7
IL31				IAmb	IAmb	10 08 32.8	
	comp=Z,46nm,1.0s						
ILAR	Eielson Array	60.95	337	P	P	10 08 07.7	+0.4
	comp=Z,12nm,0.8s,baz=129,slow=5.4,SNR=75						
ILAR				pP	pP	10 08 31.6	-0.6
	comp=Z,32nm,1.1s,baz=127,slow=4.8,SNR=15						
ILAR				PKKP	PKKPdf	10 29 05.2	0.0
	comp=Z,0.2nm,0.4s,baz=145,slow=25,SNR=6.7						
	comp=Z,12nm,0.8s						
ILAR	Eielson Array	60.95	337	P	P	10 08 08.1	+0.8
ILAR				pP	pP	10 08 31.7	-0.5
GO07	Milladeo Hill,	61.10	164	P	P	10 08 08.7	+0.3
GO07				pP	pP	10 08 34.8	+1.7
CAPN	Captain Cook N	61.10	332	P	P	10 08 08.3	0.0
RND	Reindeer	61.13	335	P	P	10 08 10.1	+1.5
RND				pP	pP	10 08 33.3	-0.2
SUA	Susitna One	61.17	332	P	P	10 08 10.2	+1.3
SUA				pP	pP	10 08 32.9	-1.0
SUA	Susitna One	61.17	332	P	P	10 08 09.9	+0.9
	baz=112						
CCB	Clear Creek Bu	61.24	336	P	P	10 08 09.5	+0.3
CCB				pP	pP	10 08 33.4	-0.7
MCK	McKinley	61.30	335	P	P	10 08 10.7	+1.0
MCK				pP	pP	10 08 34.0	-0.5
MCK				IAmb	IAmb	10 08 35.3	
	comp=Z,67nm,1.2s						
MCK	McKinley	61.30	335	P	P	10 08 10.1	+0.5
	baz=114,SNR=5.5						
POKR	Poker Plat Res	61.31	337	P	P	10 08 10.5	+0.8
POKR				pP	pP	10 08 34.1	-0.5
POKR				IAmb	IAmb	10 08 35.2	
	comp=Z,46nm,1.1s						
POKR	Poker Plat Res	61.31	337	P	P	10 08 09.6	-0.1
	baz=117,SNR=7.4						
CUT	Chulitna	61.32	334	P	P	10 08 09.8	0.0
	baz=112,SNR=6.3						
COLA	College	61.36	337	P	P	10 08 10.9	+0.9
COLA				pP	pP	10 08 34.4	-0.6
COLA				IAmb	IAmb	10 08 53.8	
	comp=Z,38nm,0.8s						
COLA	College	61.36	337*c*	*i*P	P	10 08 10.4	+0.4
COLA				pmax	pmax		
	comp=Z,16nm,0.8s						
COLA	College	61.36	337	P	P	10 08 10.6	+0.6
	baz=116						
COLA	College	61.36	337	P	P	10 08 09.6	-0.4
COLA				pP	pP	10 08 33.4	-1.5
TCOL	CIGO, UAF Yank	61.37	337	IAmb	IAmb	10 08 53.8	
	comp=Z,38nm,0.8s						
TCOL	CIGO, UAF Yank	61.37	337	P	P	10 08 10.7	+0.7
	baz=116,SNR=7.0						
F26K	Sheenjek River	61.42	340	P	P	10 08 11.3	+0.9
	baz=121						
BMAR	Burnt Mountain	61.42	340	P	P	10 08 11.8	+1.3
BMAR				pP	pP	10 08 34.5	-0.9
SJMB	Sao Joao De Ma	61.43	122	*e*P	P	10 08 10.7	-0.6
KIP	Kipapa	61.47	286⇑	*e*P	P	10 08 11.6	+0.1
KIP				pmax	pmax		
	comp=Z,54nm,1.1s						
VAS01	Vassouras-RJ	61.51	127	*e*P	P	10 08 12.2	+0.5
GUA01	Guaratinga, BA	61.54	119	*e*P	P	10 08 11.9	-0.1
O20K	Slope Mountain	61.55	331	P	P	10 08 11.9	+0.4
	baz=109						
G25K	Bearman Lake	61.61	339	P	P	10 08 12.2	+0.5
	baz=119						
SPU	Mount Spurr	61.66	332	P	P	10 08 13.3	+1.1
SPU				pP	pP	10 08 36.7	-0.4
LL02	Futaleuf	61.68	162	P	P	10 08 12.9	+0.5
LL02				IAmb	IAmb	10 08 14.0	
	comp=Z,84nm,1.3s						
BWN	Browne	61.69	336	P	P	10 08 12.6	+0.3
BWN				pP	pP	10 08 36.5	-0.7
SKT	Skwentna	61.71	333	P	P	10 08 13.0	+0.6
SKT				pP	pP	10 08 36.5	-0.9
SKT				IAmb	IAmb	10 08 38.4	
	comp=Z,38nm,1.0s						
SKT	Skwentna	61.71	333	P	P	10 08 13.3	+0.9
	baz=111,SNR=5.7						
NEA2	Nenana	61.71	336	P	P	10 08 12.1	-0.3
	baz=115,SNR=5.6						
SPCR	Spurr Chakacha	61.74	332	P	P	10 08 13.6	+0.9
	baz=110						
TRF	Thorofare Moun	61.74	335	P	P	10 08 13.2	+0.4
	baz=113,SNR=8.0						
H24K	Noodor Dome	61.81	338	P	P	10 08 13.6	+0.5
H24K				pP	pP	10 08 37.8	-0.2
H24K				IAmb	IAmb	10 08 38.7	
	comp=Z,58nm,1.1s						
H24K	Noodor Dome	61.81	338	P	P	10 08 13.9	+0.8
	baz=117						
F25K	Christian Rive	61.86	340	P	P	10 08 15.1	+1.6
	baz=120						
KTH	Kantishna Hill	62.04	335	IAmb	IAmb	10 08 40.1	
	comp=Z,51nm,1.0s						
G24K	Hadweenzic Riv	62.06	339	P	P	10 08 14.9	+0.2
	baz=117						
I23K	Minto, Yukon-K	62.06	337	P	P	10 08 15.9	+1.2
I23K				pP	pP	10 08 39.7	0.0
I23K	Minto, Yukon-K	62.06	337	P	P	10 08 15.5	+0.8
	baz=115,SNR=17						
E25K	Arctic Village	62.10	340	P	P	10 08 16.3	+1.3
	baz=120,SNR=10.0						
DUB01	Friburgo-RJ	62.23	126	*e*P	P	10 08 17.6	+1.0
BPAW	Bear Paw Mtn.	62.28	335	IAmb	IAmb	10 08 41.6	
	comp=Z,67nm,1.1s						
BPAW	Bear Paw Mtn.	62.28	335	P	P	10 08 16.5	+0.3
	baz=113,SNR=7.8						
Q18K	Katmai Hardscr	62.28	329	P	P	10 08 17.0	+0.6
	baz=106						
C27K	Jago River	62.31	342	P	P	10 08 17.6	+1.3
	baz=123						
PPLA	Purkeypile	62.33	334	P	P	10 08 16.9	+0.2
PPLA				pP	pP	10 08 40.6	-1.1
PPLA				IAmb	IAmb	10 08 42.2	
	comp=Z,74nm,1.3s						
PPLA	Purkeypile	62.33	334	P	P	10 08 17.0	+0.3
	baz=111						
RIB01	Linhares ES	62.38	122	*e*P	P	10 08 16.9	-0.7
M20K	Styx River	62.39	332	P	P	10 08 17.7	+0.7
M20K				pP	pP	10 08 41.5	-0.5
M20K				IAmb	IAmb	10 08 43.8	
	comp=Z,27nm,0.9s						
M20K	Styx River	62.39	332	P	P	10 08 17.7	+0.7
	baz=110						
O19K	Port Alsworth	62.39	330	P	P	10 08 17.8	+0.8
O19K				pP	pP	10 08 41.6	-0.3
O19K				IAmb	IAmb	10 08 42.4	
	comp=Z,61nm,1.2s						
O19K	Port Alsworth	62.39	330	P	P	10 08 17.8	+0.8
	baz=108						
H23K	Yukon River	62.42	337	IAmb	IAmb	10 08 42.8	
	comp=Z,25nm,1.1s						
H23K	Yukon River	62.42	337	P	P	10 08 17.5	+0.4
	baz=115						
CAST	Castle Rocks	62.47	334	P	P	10 08 17.9	+0.3
CAST				pP	pP	10 08 41.2	-1.3
CAST				IAmb	IAmb	10 08 42.6	
	comp=Z,54nm,1.1s						
CAST	Castle Rocks	62.47	334	P	P	10 08 17.2	-0.3
	baz=111,SNR=8.0						
MLY	Manley	62.55	336	IAmb	IAmb	10 08 43.6	
	comp=Z,63nm,1.0s						
MLY	Manley	62.55	336	P	P	10 08 18.3	+0.3
	baz=113,SNR=17						
F24K	Squaw Lake	62.58	339	P	P	10 08 18.8	+0.6
	baz=117						
P18K	Big Mountain,	62.60	329	P	P	10 08 18.7	+0.2
	baz=106						
Q17K	Contact Creek	62.62	328	P	P	10 08 19.4	+0.7
	baz=105						
N19K	Bonanza Creek	62.66	331	P	P	10 08 18.1	-0.8
N19K				pP	pP	10 08 43.3	-0.6
N19K				IAmb	IAmb	10 08 44.5	
	comp=Z,48nm,0.9s						
N19K	Bonanza Creek	62.66	331	P	P	10 08 19.7	+0.7
	baz=108						
R17K	Ugashik Creek	62.72	327	P	P	10 08 20.1	+0.9
	baz=104						
O18K	Koktuh Hills	62.72	330	P	P	10 08 20.1	+0.8
O18K				pP	pP	10 08 43.9	-0.3
O18K				IAmb	IAmb	10 09 20.6	
	comp=Z,89nm,1.6s						
O18K	Koktuh Hills	62.72	330	P	P	10 08 19.4	+0.2
	baz=106						
CHUM	Lake Minchumin	62.74	335	P	P	10 08 19.7	+0.5
	baz=111						
ALF01	Guarapari-ES	62.77	123	*e*P	P	10 08 19.6	-0.5
C26K	Camden Bay	62.82	342	P	P	10 08 21.3	+1.6
	baz=122						
L20K	Farewell, AK	62.91	333	P	P	10 08 21.5	+1.0
	baz=109						
M19K	Big River Lodg	62.96	332	P	P	10 08 21.3	+0.5
M19K				pP	pP	10 08 45.4	-0.4
M19K				IAmb	IAmb	10 08 46.6	
	comp=Z,46nm,1.1s						
M19K	Big River Lodg	62.96	332	P	P	10 08 21.2	+0.4
	baz=108						
D25K	Kavik River	62.96	341	P	P	10 08 21.6	+0.9
	baz=120						
G23K	Bananza Creek	62.97	338	P	P	10 08 21.1	+0.3
	baz=115						
E24K	Your Creek	63.04	340	P	P	10 08 22.0	+0.7
	baz=117						
I21K	Tanana	63.09	336	IAmb	IAmb	10 08 47.1	
	comp=Z,48nm,1.2s						
I21K	Tanana	63.09	336	P	P	10 08 22.7	+1.1
	baz=112						
Q16K	King Salmon	63.12	328	P	P	10 08 22.8	+1.0
	baz=105						
ABR01	Abrolhos, BA	63.13	120	*e*P	P	10 08 23.2	+0.7
L19K	White Mountain	63.25	332	P	P	10 08 23.8	+1.1
	baz=108						
COLD	Coldfoot	63.25	339	P	P	10 08 23.2	+0.6
COLD				pP	pP	10 08 46.5	-1.1
COLD				IAmb	IAmb	10 08 49.1	
	comp=Z,36nm,1.2s						
COLD	Coldfoot	63.25	339	P	P	10 08 23.8	+1.2
	baz=115,SNR=8.4						
SVW2	Sparrevohn	63.26	331	P	P	10 08 23.2	+0.4
SVW2				pP	pP	10 08 47.2	-0.6
SVW2				IAmb	IAmb	10 09 46.4	
	comp=Z,92nm,1.8s						
K20K	Telida	63.29	334	IAmb	IAmb	10 08 48.3	
	comp=Z,78nm,1.1s						
K20K	Telida	63.29	334	P	P	10 08 23.1	+0.1
	baz=109,SNR=12						
E23K	Chandalar	63.41	339	P	P	10 08 25.0	+1.3
	baz=116						
H21K	Melozitna Rive	63.59	336	P	P	10 08 25.0	+0.1
	baz=112,SNR=8.1						
O17K	Koliganek Bris	63.62	329	P	P	10 08 25.6	+0.5
	baz=105						
COYC	Coyhaique	63.80	164	P	P	10 08 26.4	0.0
C24K	Franklin Bluff	63.87	341	P	P	10 08 27.5	+0.9
	baz=118						
P16K	Nushagak River	63.88	329	P	P	10 08 27.1	+0.3
	baz=104						
O16K	Kokwok River B	64.06	329	P	P	10 08 28.3	+0.3
	baz=104						
F22K	John River	64.07	338	P	P	10 08 28.9	+0.9
	baz=113						
D23K	Nanushuk River	64.16	340	P	P	10 08 29.9	+1.3
	baz=115						
G21K	Allakaket	64.17	337	P	P	10 08 29.4	+0.8
	baz=111						
E22K	Anaktuvuk Pass	64.19	339	P	P	10 08 29.6	+0.8
	baz=114						
F21K	Alatna River	64.42	338	P	P	10 08 31.6	+1.3
	baz=112						
N16K	Nishlik Lake	64.60	330	P	P	10 08 32.9	+1.3
	baz=104						
PPT	Papeete	64.70	242	LR	LR	10 28 33.9	
	comp=Z,162nm,21.1s,baz=21,slow=28						
PPT2	Papeete2	64.71	242	*e*SS	SS	10 21 22.3	+3.2
	comp=Z,126nm,25.0s						
PPT2				*e*LR	LR	10 28 05.4	
	comp=Z,428nm,37.5s						
PPT2				*e*LR	LR	10 28 08.6	
	comp=Z,133nm,33.5s						
GCSA	Galena City Sc	64.90	335	P	P	10 08 34.4	+1.0
	baz=107						
SUMG	Summit	64.97	16	*i* P	P	10 08 40.5	+6.3
SUMG				IAmb	IAmb	10 08 58.1	
	comp=Z,28nm,1.5s						
GO08	Villa O’Higgin	66.36	165	P	P	10 08 44.3	+1.4
GO08				IAmb	IAmb	10 08 45.3	
	comp=Z,87nm,1.6s						
A21K	Barrow	66.95	342	P	P	10 08 47.4	+1.0
A21K				IAmb	IAmb	10 09 12.3	
	comp=Z,33nm,1.0s						
A21K	Barrow	66.95	342	P	P	10 08 47.0	+0.6
	baz=110,SNR=16						
TBI	Tubuai	67.35	236	*e*LR	LR	10 29 21.6	
	comp=Z,4µm,26.5s						
TBI				*e*LR	LR	10 29 21.8	
	comp=Z,2µm,31.2s						
UNV	Unalaska Valle	67.76	322	P	P	10 08 52.8	+0.9
	baz=94						
RDOG	Red Dog Mine	68.11	338	P	P	10 08 54.7	+0.9
RDOG				pP	pP	10 09 18.6	-0.6
RDOG	Red Dog Mine	68.11	338	P	P	10 08 54.7	+0.9
	baz=103,SNR=5.3						
ANM	Nome	68.42	334	P	P	10 08 56.7	+0.9
ANM				pP	pP	10 09 20.9	-0.3
ANM	Nome	68.42	334	P	P	10 08 56.8	+1.0
	baz=99,SNR=8.6						
GO09	Cerro Castillo	69.03	166	P	P	10 09 00.7	+1.1
GO09				IAmb	IAmb	10 09 02.1	
	comp=Z,59nm,1.4s						
NIKH	Nikolski High	69.12	321	P	P	10 09 01.2	+0.8
	baz=92						
MG05	Puerto Natales	69.37	166	P	P	10 09 03.1	+1.4
MG05				IAmb	IAmb	10 09 04.5	
	comp=Z,122nm,1.9s						
TNA	Tin City	69.63	335	P	P	10 09 04.6	+1.4
TNA				pP	pP	10 09 28.6	-0.2
TNA	Tin City	69.63	335	P	P	10 09 04.4	+1.2
	baz=97,SNR=9.5						
GO10	Punta Arenas	71.07	166	P	P	10 09 13.9	+1.7
GO10				IAmb	IAmb	10 09 15.0	
	comp=Z,65nm,1.1s						
MG02	Cerro Sombrero	71.17	165	P	P	10 09 13.8	+1.1
DAG	Danmarks Havn	71.35	14	*i* P	P	10 09 10.8	-2.8
DAG				IAmb	IAmb	10 09 54.7	
	comp=Z,25nm,1.4s						
MG03	Isla Dawson	71.85	166	P	P	10 09 18.1	+1.4
MG03				IAmb	IAmb	10 09 19.1	
	comp=Z,78nm,1.1s						
NOR	Nord	72.67	9	*i* P	P	10 09 19.7	-1.7
MG01	Puerto William	73.52	165	P	P	10 09 27.6	+1.0
MG01				IAmb	IAmb	10 09 28.4	
	comp=Z,65nm,1.1s						
JMIC	Jan Mayen	73.59	20	LR	LR	10 41 51.5	
	comp=Z,240nm,21.2s,baz=256,slow=36						
EFI	East Falkland	73.62	158⇓	*i*P	P	10 09 28.6	+1.4
EFI				pmax	pmax		
	comp=Z,176nm,2.5s						
PCAS	Casmilo, Conde	76.05	52	*e*pP	pP	10 10 07.3	-0.2
PCAS				*e*sP	sP	10 10 19.2	+0.9
PCAB	Cabril	76.15	50	*e*pP	pP	10 10 08.0	-0.1
POLO	Lamas de Olo	76.38	51	*e*pP	pP	10 10 09.0	-0.5
POLO				*e*sP	sP	10 10 19.6	-0.7
PVIS	Viseu	76.40	51	*e*pP	pP	10 10 09.1	-0.5
PVIS				*e*sP	sP	10 10 21.0	+0.6
PMTG	Montargil	76.41	53	*e*pP	pP	10 10 09.0	-0.6
PMTG				*e*sP	sP	10 10 20.9	+0.5
MTE	Manteigas	76.72	51	*e*pP	pP	10 10 11.1	-0.3
MTE				*e*sP	sP	10 10 22.4	+0.2
PCBR	Castelo Branco	76.86	52	*e*pP	pP	10 10 11.5	-0.6
PCBR				*e*sP	sP	10 10 24.1	+1.2
PMRV	Marv??o	76.99	52	*e*pP	pP	10 10 12.7	-0.2
PMRV				*e*sP	sP	10 10 24.4	+0.7
EKA	Eskdalemuir Ar	77.28	36	LR	LR	10 44 43.9	
	comp=Z,196nm,18.5s,baz=190,slow=36						
PBAR	Barrancos	77.47	54	*e*pP	pP	10 10 14.7	-1.0
SPITS	Spitsbergen Ar	78.72	11	LR	LR	10 46 32.4	
	comp=Z,256nm,19.9s,baz=228,slow=37						
ESDC	Sonseca Array	79.55	52	P	P	10 10 00.5	-0.8
	comp=Z,1.4nm,0.8s,baz=292,slow=6.2,SNR=4.5						
ESDC				pP	pP	10 10 26.6	-0.6
	comp=Z,7.7nm,1.0s,baz=291,slow=5.7,SNR=12						
	comp=Z,1.4nm,0.8s						
BILL	Bilibino	79.58	338	P	P	10 10 01.6	+0.8
BILL				IAmb	IAmb	10 10 27.5	
	comp=Z,101nm,1.3s						
BILL	Bilibino	79.58	338*c*	*i*P	P	10 10 01.5	+0.8
BILL				*i*		10 10 25.1	
BILL				*i*		10 10 36.6	
BILL				pmax	pmax		
	comp=Z,16nm,0.8s						
PMSA	Palmer Station	83.15	168	LR	LR	10 39 07.2	
	comp=Z,103nm,18.4s,baz=133,slow=30						
NB2	NORSAR Subarra	83.24	28	P	P	10 10 21.5	+1.3
	comp=Z,4.2nm,1.1s,baz=290,slow=5.6						
NOA	NORSAR Array B	83.24	28	P	P	10 10 20.5	+0.3
	comp=Z,1.7nm,0.8s,baz=290,slow=5.2,SNR=7.4						
NOA				pP	pP	10 10 46.3	-0.1
	comp=Z,3.0nm,0.9s,baz=290,slow=5.2,SNR=5.2						
	comp=Z,1.7nm,0.8s						
NC405	NORSAR Array S	83.44	28	P	P	10 10 23.4	+2.2
NC405				IAmb	IAmb	10 11 21.8	
	comp=Z,97nm,1.6s						
WLF	Walferdange	84.11	40	*e*pP	pP	10 10 50.6	-0.5
BUG	Bochum--Univer	84.25	38	*e*pP	pP	10 10 52.2	+0.4
IBBN	Ibbenburen	84.28	37	*e*pP	pP	10 10 52.7	+0.8
AHRW	Bad Neuenahr-A	84.41	39	*e*pP	pP	10 10 53.1	+0.5
HOPE	Hope Point	84.59	151	P	P	10 10 27.7	+0.7
HOPE	Hope Point	84.59	151	P	P	10 10 27.7	+0.7
HOPE				pmax	pmax		
	comp=Z,245nm,1.5s						
ARCES	ARCESS Array B	84.94	18	P	P	10 10 26.9	-1.8
	comp=Z,1.7nm,0.5s,baz=292,slow=3.8,SNR=5.9						
ARCES				LR	LR	10 48 26.6	
	comp=Z,137nm,21.8s,baz=278,slow=36						
	comp=Z,1.7nm,0.5s						
KASTN	Kahler Asten	85.01	38	*e*pP	pP	10 10 56.1	+0.4
RETH	Rethem/Aller,	85.07	37	*e*pP	pP	10 10 57.2	+1.4
BSEG	Bad Segeberg	85.21	35	*e*pP	pP	10 10 57.7	+1.2
TNS	Taunus Mts	85.34	39	*e*pP	pP	10 10 58.1	+0.7
NRDL	Niedersach Rie	85.58	37	*e*pP	pP	10 11 01.0	+2.7
CLZ	Clausthal	85.95	37	*e*pP	pP	10 11 01.5	+1.1
ASSE	Asse, Remlinge	86.03	37	*e*pP	pP	10 11 01.9	+1.2
UBBA	Unterbreizbach	86.08	38	*e*pP	pP	10 11 01.6	+0.7
FLTG	Flechtingen	86.28	37	*e*pP	pP	10 11 02.4	+0.5
DBIC	Dimbokro	86.54	84	P	P	10 10 35.4	-2.2
	comp=Z,3.7nm,0.8s,baz=80,slow=7.9,SNR=4.7						
	comp=Z,3.7nm,0.8s						
SEY	Seymchan	86.86	335⇓	*e*P	P	10 10 38.4	+0.2

SEY				*i* *PP	pP	10 11 03.9	-0.7
SEY				pmax	pmax		
	comp=Z,14nm,1.0s						
MOX	Moxa	87.11	38	*e*pP	pP	10 11 06.7	+0.7
GRF	Grafenberg Arr	87.21	39	*e*pP	pP	10 11 07.6	+1.0
	comp=Z,18nm,1.1s						
DAVA	Damuels	87.21	42	*e*pP	pP	10 11 07.6	+0.8
	comp=Z,10nm,0.9s						
DAVOX	Davos/Dischmat	87.38	42	LR	LR	10 44 24.2	
	comp=Z,107nm,20.5s,baz=262,slow=32						
PLN	Plauen	87.49	38	*e*pP	pP	10 11 08.6	+0.7
GUNZ	Gunzen	87.63	38	*e*pP	pP	10 11 09.4	+0.7
MANZ	Manzenberg	87.64	39	*e*pP	pP	10 11 09.4	+0.7
CLL	Collm	87.68	37	*i* pP	pP	10 11 09.5	+0.7
CLL				*i* (sP)	sP	10 11 21.5	+2.0
	comp=Z,8.0nm,0.9s						
WERN	Wernitzgruen	87.69	38	*e*pP	pP	10 11 09.8	+0.8
TANN	Tannenbergstha	87.69	38	*e*pP	pP	10 11 09.8	+0.8
RETA	Reutte	87.70	41	*i* pP	pP	10 11 08.5	-0.6
	comp=Z,9.6nm,1.0s						
FETA	Feichten	87.85	42	*e*pP	pP	10 11 09.1	-0.8
	comp=Z,5.0nm,1.1s						
MOTA	Moosalm	87.97	41	*e*pP	pP	10 11 11.0	+0.4
	comp=Z,6.2nm,0.8s						
SQTA	Sankt Quirin	88.08	41	*i* pP	pP	10 11 11.7	+0.7
	comp=Z,8.5nm,1.1s						
PET	Petropavlovsk	88.23	325	*e*P	P	10 10 45.0	0.0
PET				*e*S	S	10 21 20.7	-0.7
PET				*e*SS	SS	10 27 17.9	+6.1
PET				MLR	MLR		
	comp=Z,100nm,22.0s						
WATA	Walderalm	88.28	41	*e*pP	pP	10 11 10.8	-1.2
	comp=Z,6.5nm,1.0s						
TIXI	Tiksi	88.47	348	⇓*e*P	P	10 10 44.8	-0.9
TIXI				pmax	pmax		
	comp=Z,13nm,1.0s						
PETK	Petropavlovsk-	88.72	325	P	P	10 10 47.8	+0.5
	comp=Z,7.2nm,1.0s,baz=96,slow=6.0,SNR=6.6						
PETK				pP	pP	10 11 13.9	0.0
	comp=Z,7.7nm,1.1s,baz=106,slow=9.4,SNR=3.9						
	comp=Z,7.2nm,1.0s						
PETK	Petropavlovsk-	88.72	325	P	P	10 10 48.3	+1.0
GERES	GERESS Array B	89.03	39	P	P	10 10 48.6	-0.4
	comp=Z,0.2nm,0.3s,baz=254,slow=9.1,SNR=3.5						
GERES				pP	pP	10 11 15.1	-0.4
	comp=Z,1.3nm,0.8s,baz=318,slow=1.8,SNR=4.2						
GERES				LR	LR	10 52 56.5	
	comp=Z,136nm,18.0s,baz=266,slow=37						
	comp=Z,0.2nm,0.3s						
ABTA	Abfaltersbach	89.09	41	*e*pP	pP	10 11 15.5	-0.2
	comp=Z,5.4nm,1.1s						
MA2	Magadan	89.19	333	P	P	10 10 49.6	+0.3
	comp=Z,15nm,0.9s,baz=64,slow=5.6,SNR=6.3						
MA2				pP	pP	10 11 15.6	-0.3
	comp=Z,21nm,0.9s,baz=27,slow=4.3,SNR=5.9						
	comp=Z,15nm,0.9s						
MA2	Magadan	89.19	333	P	P	10 10 50.2	+0.8
MA2				IAmb	IAmb	10 11 17.2	
	comp=Z,33nm,1.1s						
MA2	Magadan	89.19	333	*de*P	P	10 10 49.9	+0.5
MA2				*i* *PP	pP	10 11 16.2	+0.3
MA2				pmax	pmax		
	comp=Z,28nm,1.0s						
FINES	FINESS Array B	89.49	25	P	P	10 10 50.8	+0.1
	comp=Z,1.9nm,0.9s,baz=233,slow=6.8,SNR=1.9						
FINES				pP	pP	10 11 16.6	-0.6
	comp=Z,3.1nm,0.9s,baz=345,slow=6.7,SNR=2.8						
FINES				LR	LR	10 49 56.5	
	comp=Z,101nm,21.7s,baz=302,slow=35						
	comp=Z,1.9nm,0.9s						
VRAC	Vranov	90.59	38	LR	LR	10 51 36.1	
	comp=Z,116nm,18.7s,baz=301,slow=36						
SOKA	Soboth	90.71	41	*i* pP	pP	10 11 21.7	-1.7
	comp=Z,1.6nm,0.6s						
CONA	Conrad Observa	90.72	40	*e*pP	pP	10 11 22.8	-0.6
	comp=Z,4.5nm,1.1s						
TORD	Torodi Ar. Bea	91.03	76	P	P	10 10 56.0	-2.8
	comp=Z,0.4nm,0.5s,baz=286,slow=4.8,SNR=5.2						
TORD				PKKPbc	PKKPbc	10 28 22.5	+0.7
	comp=Z,2.0nm,1.1s,baz=68,slow=1.5,SNR=3.5						
	comp=Z,0.4nm,0.5s						
MNK	Minsk	94.13	30	*i* P	P	10 11 19.4	+7.0
	comp=E,3.0nm,1.0s						
MNK				*i* P	P	10 11 19.4	+7.0
	comp=N,49nm,1.0s						
MNK				*i* P	P	10 11 19.4	+7.0
	comp=Z,14nm,1.0s,baz=304						
MNK				*i* pP	sP	10 11 45.7	-3.9
MNK				*i* PPP	PPP	10 17 15.7	
MNK				*i* SKS		10 20 41.0	
MNK				*i* S	SKSac	10 21 44.5	+6.2
MNK				*i* SS	SS	10 28 44.5	+8.1
MNK				*i* SSS	SSS	10 31 54.9	
MNK				*i* LQ	LQ	10 47 59.5	
MNK				*i* LR	LR	10 50 10.9	
MNK				*i* LRM	MLR	10 53 32.6	
	comp=Z,155nm,19.5s						
MNK				*i* LRM	MLR	10 54 36.4	
	comp=N,244nm,19.8s						
MNK				*i* LRM	MLR	10 54 46.1	
	comp=E,53nm,19.8s						
MNK	Minsk	94.13	30	*i* P	P	10 11 19.3	+7.0
MNK				*i* *PP	sP	10 11 45.7	-3.9
MNK				*i* SS	SS	10 28 44.4	+8.0
MNK				pmax	pmax		
	comp=Z,14nm,1.0s						
MNK				pmax	pmax		
	comp=N,49nm,1.0s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.0s						
MNK				MLR	MLR		
	comp=Z,155nm,20.0s						
MNK				MLR	MLR		
	comp=N,244nm,20.0s						
MNK				MLR	MLR		
	comp=E,53nm,20.0s						
NRIK	Noril'sk	95.27	360	*ce*P	P	10 11 17.2	-0.1
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
YAK	Yakutsk	95.60	341	LR	LR	11 04 29.5	
	comp=Z,114nm,18.3s,baz=38,slow=42						
AKASG	Malin Array Be	96.96	33	LR	LR	10 57 47.4	
	comp=Z,108nm,18.0s,baz=254,slow=37						
OBN	Obninsk	97.72	27	LR	LR	10 56 33.6	
	comp=Z,32nm,18.5s,baz=326,slow=36						
MLR	Muntele Rosu	97.98	38	LR	LR	10 56 13.6	
	comp=Z,130nm,21.0s,baz=300,slow=36						
MILM	Milestii Mici	98.88	36	*e*P	Pdif	10 11 39.0	+5.0
	comp=Z,50nm,1.3s						
MILM	Milestii Mici	98.88	36	*e*P	Pdif	10 11 39.0	+5.0
MILM				pmax	pmax		
	comp=Z,50nm,1.3s						
URZ	Urewera	99.34	233	LR	LR	10 48 36.1	
	comp=Z,137nm,18.3s,baz=336,slow=30						
KIRV	Kirov	99.94	19	LR	LR	10 59 02.7	
	comp=Z,96nm,18.1s,baz=322,slow=37						
DZM	Mont Dzumac	105.20	251	*e*SS	SS	10 31 16.2	+2.3
	comp=Z,192nm,25.4s						
DZM	Mont Dzumac	105.20	251	*e*LR	LR	10 46 17.6	
	comp=Z,276nm,23.2s						
DZM	Mont Dzumac	105.20	251	Pdif	Pdif	10 12 03.0	+0.3
MDJ	Mudanjiang	108.58	329	Pdif	Pdif	10 12 21.3	+4.1
AKTO	Aktyubinsk	109.50	19	PKKPbc	PKKPbc	10 27 27.0	-3.4
	comp=Z,1.3nm,0.6s,baz=244,slow=4.8,SNR=5.0						
BRVK	Borovoye	110.12	11	⇑*i*PKIKP	PKiKP	10 16 25.0	0.0
ELIB	Princess Elisa	112.82	162	*d*PKiKP	PKiKP	10 16 30.6	+1.0
ELIB				*d*pPKiKP	pPKiKP	10 16 58.9	+1.8
ELIB				*d*PP	PP	10 17 17.6	-1.4
KURK	Kurchatov	113.56	6	⇑*i*PKIKP	PKiKP	10 16 32.1	+0.6
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KURBB	Kurchatov Arra	113.64	6	PKKPbc	PKKPbc	10 27 13.8	-3.1
	comp=Z,0.3nm,0.5s,baz=243,slow=5.0,SNR=6.2						
SONM	Songino Array	114.48	346	PKKPbc	PKKPbc	10 27 11.2	-3.0
	comp=Z,1.7nm,1.0s,baz=200,slow=3.0,SNR=6.7						
KSRS	Korea Array	114.62	325	PKP	PKiKP	10 16 33.5	-0.5
	comp=Z,2.4nm,0.9s,baz=35,slow=1.8,SNR=4.4						
KSRS				PKKPab	PKKPab	10 27 18.9	-1.6
	comp=Z,2.4nm,1.1s,baz=211,slow=4.4,SNR=4.4						
XLT	XiLinHaoTe	115.05	337	*e*PKP	PKiKP	10 16 34.0	-0.8
MK31	Makanchi Array	117.75	4	PKPdf	PKPdf	10 16 37.7	-2.1
MK31	Makanchi Array	117.75	4	⇑*i*PKIKP	PKPdf	10 16 38.4	-1.4
MKAR	Makanchi Array	117.75	4	PKP	PKPdf	10 16 38.7	-1.1
	comp=Z,1.4nm,0.6s,baz=356,slow=1.8,SNR=7.3						
MKAR				PKKPbc	PKKPbc	10 27 00.8	-1.9
	comp=Z,0.9nm,0.9s,baz=157,slow=4.0,SNR=5.8						
MKAR	Makanchi Array	117.75	4	PKPdf	PKPdf	10 16 38.8	-1.0
HHC	Hu-ho-hao-te	119.34	339	*e*PKP	PKiKP	10 16 43.5	+0.3
KK31	Karatay Array	119.66	14	PKPdf	PKiKP	10 16 44.7	+1.0
KK31	Karatay Array	119.66	14	PKIKP	PKiKP	10 16 44.7	+1.0
KKAR	Karatay Array	119.66	14	PKPdf	PKPdf	10 16 42.4	-1.2
KKAR	Karatay Array	119.66	14	PKIKP	PKPdf	10 16 42.4	-1.2
BTO	Baotou	120.09	340	*e*PKP	PKPdf	10 16 43.5	-1.1
BTO				LR	LR		
	comp=Z,3μm,13.7s						
BTO				LR	LR		
	comp=Z,2μm,14.7s						
BTO				LR	LR		
	comp=Z,4μm,13.8s						
GEYT	Alibeck	120.27	26	PKP	PKPdf	10 16 43.4	-1.5
	comp=Z,6.4nm,0.7s,baz=263,slow=2.5,SNR=7.4						
GEYT				pPKP	pPKPdf	10 17 12.3	-0.3
	comp=Z,2.3nm,0.5s,baz=76,slow=25,SNR=2.8						
GEYT	Alibeck	120.27	26	PKPdf	PKiKP	10 16 45.0	0.0
GYA0B	ALIBECK ARRAY	120.27	26	PKPdf	PKiKP	10 16 45.2	+0.2
WMQ	Urumqi	120.85	359	*e*PKP	PKiKP	10 16 47.3	+1.3
WMQ				LR	LR		
	comp=Z,360nm,13.7s						
WMQ				LR	LR		
	comp=Z,460nm,13.7s						
WMQ				LR	LR		
	comp=Z,260nm,15.1s						
AAK	Ala-Archa	120.92	11	PKPdf	PKiKP	10 16 46.4	+0.1
AAK	Ala-Archa	120.92	11	⇑*i*PKIKP	PKiKP	10 16 46.6	+0.3
AAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
HNS	HongShan	121.13	334	⇑PKP	PKiKP	10 16 46.8	+0.2
BOOM	Boomskoye usch	121.31	9	PKPdf	PKPdf	10 16 47.0	0.0
BOOM	Boomskoye usch	121.31	9	PKIKP	PKPdf	10 16 47.0	0.0
KDJ	Kajisay	121.85	9	PKPdf	PKPdf	10 16 48.1	0.0
KDJ	Kajisay	121.85	9	PKIKP	PKPdf	10 16 48.1	0.0
BOSA	Boshof	121.98	114	PKP	PKPdf	10 16 47.7	-0.8
	comp=Z,12nm,0.8s,baz=310,slow=2.6,SNR=15						
BOSA				pPKP	pPKPdf	10 17 14.3	-1.6
	comp=Z,7.7nm,0.8s,baz=234,slow=2.0,SNR=4.2						
BOSA	Boshof	121.98	114	PKPdf	PKPdf	10 16 48.5	0.0
LBTB	Lobatse	122.15	110	PKP	PKPdf	10 16 48.1	-0.7
	comp=Z,16nm,1.1s,baz=279,slow=0.1,SNR=6.7						
LBTB	Lobatse	122.15	110	PKPdf	PKPdf	10 16 48.8	-0.1
LBTB	Lobatse	122.15	110	PKIKP	PKPdf	10 16 48.8	-0.1
TARG	Taragay, Kyrgy	122.33	8		PKPdf	10 16 49.2	-0.1
TARG	Taragay, Kyrgy	122.33	8	PKIKP	PKPdf	10 16 49.2	-0.1
BTK	Batken	122.62	15	PKPdf	PKiKP	10 16 50.2	+0.6
BTK	Batken	122.62	15	PKIKP	PKiKP	10 16 50.2	+0.6
MBAR	Mbarara	122.63	81	PKPdf	PKiKP	10 16 50.4	0.0
MBAR	Mbarara	122.63	81	PKIKP	PKiKP	10 16 50.4	0.0
GAR	Garm	123.50	15		PKPdf	10 16 51.2	0.0
CHGR	Chuyangaron	123.51	17	PKPdf	PKiKP	10 16 51.8	+0.3
CHGR	Chuyangaron	123.51	17	PKIKP	PKiKP	10 16 51.8	+0.3
LSZ	Lusaka	123.57	98		PKPdf	10 16 51.8	-0.1
LSZ	Lusaka	123.57	98	PKIKP	PKPdf	10 16 51.8	-0.1
NJ2	Nanjing	123.58	327	*e*PKP	PKiKP	10 16 52.3	+0.7
RAYN	Ar Rayn	123.86	47	PKPdf	PKPdf	10 16 51.9	-0.3
RAYN	Ar Rayn	123.86	47	PKIKP	PKPdf	10 16 51.9	-0.3
GTA	Gaotai	123.95	348	*e*PKP	PKPdf	10 16 52.0	-0.1
TOO	Toolangi	124.16	235	PKPdf	PKiKP	10 16 52.8	+0.2
TOO	Toolangi	124.16	235	PKIKP	PKiKP	10 16 52.8	+0.2
KSH	Kashi	124.22	10	PKP	PKiKP	10 16 54.0	+1.1
KSH				LR	LR		
	comp=Z,390nm,15.1s						
KSH				LR	LR		
	comp=Z,350nm,16.5s						
KSH				LR	LR		
	comp=Z,340nm,19.9s						
LODK	Lodwar	125.61	74		PKiKP	10 16 56.6	+0.4
COEN	Coen	125.70	264	PKPdf	PKPdf	10 16 55.3	-0.5
MAW	Mawson	125.75	169	PKP	PKPdf	10 16 53.9	-0.4
	comp=Z,4.3nm,0.6s,baz=92,slow=7.1,SNR=3.0						
LZH	Lanzhou	126.14	343	*e*PKP	PKPdf	10 16 55.3	-1.1
LZH				sPKP		10 17 31.5	
XAN	Xi'an	126.35	337	⇑PKP	PKPdf	10 16 56.5	-0.2
CASY	Casey	126.99	192	PKPdf	PKPdf	10 16 57.0	+0.2
STKA	Stephens Creek	127.91	242	PKP	PKPdf	10 16 59.5	0.0
	comp=Z,19nm,0.8s,baz=82,slow=2.0,SNR=29						
STKA	Stephens Creek	127.91	242	PKPdf	PKiKP	10 17 00.0	-0.2
STKA	Stephens Creek	127.91	242	PKIKP	PKiKP	10 17 00.0	-0.2
KMBO	Kilima Mbogo	128.97	79	PKPdf	PKiKP	10 17 03.5	+0.4
KMBO	Kilima Mbogo	128.97	79	PKIKP	PKiKP	10 17 03.6	+0.4
ENH	Enshi	129.46	335		PKPdf	10 17 03.0	+0.3
UOSS	Minazif	129.79	37	PKPdf	PKPdf	10 17 02.4	-1.0
CD2	Chengdu	130.99	341	PKP	PKPdf	10 17 05.0	-0.6
WB0	Warramunga Arr	134.68	258	PKPdf	PKPdf	10 17 11.7	-1.1
WB2	Warramunga Arr	134.73	257		PKPdf	10 17 13.1	+0.3
WRA	Warramunga Arr	134.74	257	PKhKP	PKPpre	10 17 04.3	
	comp=Z,1.2nm,0.6s,baz=90,slow=3.8,SNR=9.3						
WRA				PKP	PKPdf	10 17 12.8	-0.1
	comp=Z,10.0nm,0.9s,baz=90,slow=2.9,SNR=50						
WRA				pPKP	pPKPdf	10 17 39.7	-0.5
	comp=Z,1.4nm,0.5s,baz=86,slow=2.7,SNR=2.3						
WRA				PKKP	PKKPdf	10 26 56.4	-1.2
	comp=Z,0.2nm,0.5s,baz=276,slow=1.9,SNR=5.5						
WRA	Warramunga Arr	134.74	257	PKPdf	PKPdf	10 17 13.1	+0.3
AS31	Alice Springs	135.18	252	PKPdf	PKPdf	10 17 13.4	-0.2
ASAR	Alice Springs	135.18	252	PKhKP	PKPpre	10 17 03.5	
	comp=Z,1.4nm,0.6s,baz=102,slow=3.7,SNR=6.5						
ASAR				PKP	PKPdf	10 17 13.3	-0.3
	comp=Z,2.1nm,0.5s,baz=87,slow=1.6,SNR=17						
ASAR				PP	PP	10 19 48.8	-1.8
	comp=Z,1.5nm,1.0s,baz=110,slow=4.4,SNR=4.3						
ASAR				SKP		10 20 41.5	
	comp=Z,1.9nm,1.1s,baz=73,slow=5.0,SNR=5.0						
ASAR				PKKP	PKKPdf	10 26 55.6	-1.2
	comp=Z,0.3nm,0.5s,baz=288,slow=1.7,SNR=5.5						
ASAR	Alice Springs	135.18	252	PKPdf	PKPdf	10 17 13.6	-0.1
PZH	PanZhiHua	135.72	341	PKP	PKPdf	10 17 14.5	-0.2
DANN	Dangsing	136.19	4	*e*P	PKPdf	10 17 15.7	-0.1
	comp=Z,39nm,0.9s						
PYUN	Piuthan	136.38	5	*e*P	PKPdf	10 17 15.6	-0.4
	comp=Z,12nm,0.5s						
GKN	Gorkha	136.59	3	*e*P	PKPdf	10 17 16.3	-0.1
KMI	Kunming	136.67	339	⇑PKP	PKiKP	10 17 18.0	-0.4
KMI				sPKP		10 17 56.3	
KMI				LR	LR		
	comp=Z,110nm,39.6s						
GUN	Gumba	136.72	1	*e*P	PKPdf	10 17 15.8	-1.1
KOLN	Koldanda	136.76	4	*e*P	PKPdf	10 17 16.2	-0.5
KKN	Kakani	136.83	2	*e*P	PKPdf	10 17 16.7	-0.2
JIRN	Jiri	136.98	1	*e*P	PKPdf	10 17 15.9	-1.5
DMN	Daman	137.00	2	*e*P	PKPdf	10 17 16.9	-0.4
PKIN	Phulchoki	137.04	2	*e*P	PKPdf	10 17 16.6	-0.8
	comp=Z,14nm,0.5s						
PKI	Pulchoki	137.05	2	*e*P	PKPdf	10 17 16.8	-0.6
MTN	Manton Dam	137.10	268	PKPdf	PKPdf	10 17 17.5	+0.2
MYLDM	Lahad Datu	142.51	301	PKPdf	PKPdf	10 17 28.7	+1.4
CM31	Chiang Mai Arr	144.13	340	PKPdf	PKPbc	10 17 28.0	-0.2
CMAR	Chiang Mai Arr	144.13	340	PKP	PKPab	10 17 27.7	0.0
	comp=Z,12nm,0.9s,baz=339,slow=3.9,SNR=26						
CMAR				SKPbc	SKPbc	10 20 59.3	-0.8
	comp=Z,0.8nm,0.3s,baz=1.9,slow=2.7,SNR=2.4						
CMAR	Chiang Mai Arr	144.13	340	PKPdf	PKPbc	10 17 28.1	-0.1
MMRI	Maumere	144.81	277	PKPdf	PKPab	10 17 29.8	-0.6
KAPI	Kappang	146.07	285	PKPbc	PKPdf	10 17 32.9	-0.5
	comp=Z,17nm,0.9s,baz=28,slow=16,SNR=4.4						
KAPI				pPKPbc	pPKPab	10 18 01.9	0.0
	comp=Z,75nm,1.1s,baz=108,slow=2.9,SNR=7.8						
HYB	Hyderabad	146.16	14	*e*PKPdf	PKPdf	10 17 33.6	+0.1
BKB	Balikpapan	147.16	293	PKPbc	PKPbc	10 17 37.1	-0.5
NWAO	Narrogin (SRO)	147.59	232		PKPbc	10 17 38.3	+0.1
NWAO	Narrogin (SRO)	147.59	232		PKPbc	10 17 38.3	+0.1
NWAO	Narrogin (SRO)	147.59	232	PKP2	PKPbc	10 17 38.3	+0.1
PSA00	Pilbara Seismi	148.26	254	PKPbc	PKPbc	10 17 39.8	-0.5
MBWA	Marble Bar	148.41	255	PKPbc	PKPbc	10 17 40.4	-0.3
SBUM	Sibu	149.19	303	PKPbc	PKPbc	10 17 43.4	+0.5
MORW	Morawa	150.01	238	PKPbc	PKPbc	10 17 44.4	-0.1
KSM	Kuching	151.31	304		PKiKP	10 17 48.2	-0.2
PCHI	Peechi	152.00	23	⇓*e*P	PKPdf	10 17 42.3	-0.7
PBA	Port Blair	152.30	348	PKPbc	PKPbc	10 17 50.3	+0.1
JAGI	Jajag, Banyuwa	152.45	282	PKPbc	PKPbc	10 17 49.3	-1.3
SRIT	Nakonsritamara	152.86	332	PKPbc	PKPbc	10 17 51.2	-0.2
KULM	Kulim	155.17	326	PKPdf	PKPdf	10 17 47.3	-0.2
KULM					PKPab	10 18 12.5	+0.1
IPM	Ipoh	155.63	324	PKPdf	PKPdf	10 17 47.9	-0.3
IPM				PKPab	PKPab	10 18 14.8	+0.4
ROCAM	Rodrigues Isla	157.21	104	PKPdf	PKPdf	10 17 48.3	-1.6
ROCAM				PKPab	PKPab	10 18 23.4	+2.1
PSI	Prapat	158.18	326	PKIKP	PKPdf	10 17 51.0	-0.5
PSI						10 18 25.7	
RPSI	Rantau Prapat	158.27	326	PKPdf	PKPdf	10 17 51.0	-0.5
RPSI					PKPab	10 18 25.6	-0.1

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*IDC **31** 09:58:20.0±1.1, 10°.16N×93°.81E, h0^{km}, mb3.7/7, mbtmp3.7/7, MS3.5/1, Error ellipse: s-maj=67.4km s-min=18.8km az=57.0*

ISC 31 09:58:23.3±0.9**, 9°.9N**±0°.1×**93°.4E**±0°.1**, h24**^{km}**, n10, σ1^s.40**/10**, mb3.8**/7**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.06	32	Pn	Pn	10 00 46.9	+0.5
	0.5nm,0.3s,baz=227,slow=13,SNR=1.8						
PALK	Pallekele	12.84	259	Sn	Sn	10 03 46.4	-0.3
	0.5nm,0.3s,baz=90,slow=22,SNR=2.4						
MKAR	Makanchi Array	37.98	348	P	P	10 05 37.2	-2.0
	0.4nm,0.7s,baz=148,slow=7.1,SNR=4.1						
	0.4nm,0.7s						
GEYT	Alibeck	42.24	317	P	P	10 06 16.5	+1.8
	2.4nm,0.6s,baz=130,slow=2.3,SNR=2.8						
	2.4nm,0.6s						
KURBB	Kurchatov Arra	42.43	346	P	P	10 06 14.9	-1.1
	0.3nm,0.7s,baz=161,slow=8.1,SNR=3.6						
	0.3nm,0.7s						
ZALV	Zalesovo Beam	44.48	353	P	P	10 06 31.5	-1.0
	0.5nm,0.3s,baz=178,slow=12,SNR=1.6						
ZALV				LR	LR	10 28 21.4	
	comp=Z,57nm,18.9s,baz=17,slow=41						
	0.5nm,0.3s						
WRA	Warramunga Arr	50.02	126	P	P	10 07 15.5	-0.7
	0.5nm,0.6s,baz=303,slow=9.0,SNR=8.7						
	0.5nm,0.6s						
ASAR	Alice Springs	51.76	131	P	P	10 07 27.9	-1.3
	0.4nm,0.7s,baz=303,slow=6.7,SNR=5.8						
	0.4nm,0.7s						
STKA	Stephens Creek	62.01	134	P	P	10 08 43.1	+1.2
	2.2nm,0.7s,baz=264,slow=6.9,SNR=4.0						
	2.2nm,0.7s						
PLCA	Paso Flores	146.16	202	PKPbc	PKPbc	10 18 02.1	+0.2
	1.0nm,0.7s,baz=176,slow=4.6,SNR=4.6						

RSNC 31 10:01:35.4±1.1**, 6°.79N×73°.13W, h144**^{km}±6^{km}**, ML2.6, 1C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.20	194	⇓*i*P	Pn	10 01 54.9	-0.4
BARC				*e*S	Sn	10 02 09.9	-0.6
BARC				*i*		10 02 11.0	
	comp=Z,157nm,0.3s						
BRRC	Barranca, Sant	0.66	299	*e*P	Pn	10 01 56.5	-0.5
BRRC	Barranca, Sant	0.66	299	*e*P	Pn	10 01 56.9	-0.1
BRRC				*e*S	Sn	10 02 13.6	+0.2
BRRC				*i*		10 02 17.9	
	comp=Z,118nm,0.1s						
PAMC	Pamplona, Colo	0.69	38	*e*P	Pn	10 01 57.8	-0.1
PAMC				*e*S	Sn	10 02 14.7	-0.2
PAMC				*i*		10 02 19.8	
	comp=Z,20nm,0.2s						
RUSC	La Rusia	0.89	177	*e*P	Pn	10 01 59.6	+0.2
RUSC	La Rusia	0.89	177	⇑*i*P	Pn	10 01 59.0	-0.4
RUSC				*e*S	Sn	10 02 16.9	-0.6
RUSC				*i*		10 02 17.8	
	comp=Z,40nm,0.3s						
PTBC	PUERTO BERRIO,	1.34	259	*e*P	Pn	10 02 03.0	+0.2
PTBC	PUERTO BERRIO,	1.34	259	*e*P	Pn	10 02 01.7	-1.2
PTBC				*e*S	Sn	10 02 22.6	-1.2
PTBC				*i*		10 02 25.9	
	comp=Z,38nm,0.2s						
SPBC	San Pablo de B	1.47	220	*e*P	Pn	10 02 03.9	-0.4
SPBC				*e*S	Sn	10 02 25.9	-0.5
SPBC				*i*		10 02 29.7	
	comp=Z,59nm,0.2s						
ZARC	Zaragoza, Cauc	1.85	292	*e*P	Pn	10 02 08.6	+0.1
ZARC	Zaragoza, Cauc	1.85	292	*e*P	Pn	10 02 08.1	-0.4
ZARC				*e*S	Sn	10 02 34.0	+0.2
ZARC				*i*		10 02 39.7	
	comp=Z,40nm,0.2s						
NORC	Norcasia	2.11	235	*e*P	Pn	10 02 11.4	-0.2
NORC				*e*S	Sn	10 02 39.3	-0.1
NORC				*i*		10 02 44.8	
	comp=Z,27nm,0.2s						
ROSC	El Rosal	2.27	211	*e*P	Pn	10 02 14.7	+0.9
ROSC	El Rosal	2.27	211	*e*P	Pn	10 02 15.0	+1.1
ROSC				*e*S	Sn	10 02 46.9	+3.6
ROSC				*i*		10 02 49.5	
	comp=Z,33nm,0.7s						
HELC	Santa Helena	2.46	256	*e*P	Pn	10 02 20.5	+4.4
HELC	Santa Helena	2.46	256	*e*P	Pn	10 02 17.1	+1.1
HELC				*e*S	Sn	10 02 46.7	-0.6
HELC				*i*		10 02 55.2	
	comp=Z,15nm,0.4s						
UREC	San Jos de Ur	2.57	292	*e*P	Pn	10 02 15.3	-1.8
UREC	San Jos de Ur	2.57	292	*e*P	Pn	10 02 15.4	-1.7
UREC				*e*S	Sn	10 02 46.9	-2.3
UREC				*i*		10 02 54.9	
	comp=Z,25nm,0.1s						
CBOC	Ciudad Bolivar	3.01	252	*e*P	Pn	10 02 23.1	+0.3
CBOC	Ciudad Bolivar	3.01	252	*e*P	Pn	10 02 24.0	+1.2
CBOC				*i*		10 02 55.8	
	comp=Z,6.9nm,0.5s						
CBOC				*e*S	Sn	10 02 59.1	-0.3
PRAC	Prado	3.52	210	*e*P	Pn	10 02 29.1	-0.2
PRAC				*e*S	Sn	10 03 11.5	+0.4
PRAC				*i*		10 03 16.2	
	comp=Z,18nm,0.3s						
PLMC	San Jos del P	3.65	239	*e*P	Pn	10 02 26.9	-4.1
PLMC				*e*S	Sn	10 03 16.2	+2.1
PLMC				*i*		10 03 23.7	
	comp=Z,9.8nm,0.7s						
SJCC	San Jacinto, C	3.69	327	*e*P	Pn	10 02 29.7	-1.9
SJCC				*e*S	Sn	10 03 11.1	-4.1
SJCC				*i*		10 03 14.9	
	comp=Z,13nm,0.5s						
MACC	Macarena, Meta	4.67	189	*e*P	Pn	10 02 42.6	-1.9
MACC				*i*		10 03 27.9	
	comp=Z,15nm,0.6s						
MACC				*e*S	Sn	10 03 34.0	-4.1
GARC	Garzon, Huila	5.14	207	*e*P	Pn	10 02 50.5	-0.4

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*RSPR **31** 10:03:05.7, 19°.26N×65°.05W, h60^{km}±13^{km}, MD3.5/9*

*NEIC **31** 10:03:05.4±1.4, 19°.27N±0°.06×65°.09W±0°.05, h35^{km}±2^{km}, ML2.9/30, Md3.5/20(RSPR), Error ellipse: s-maj=11.4km s-min=6.8km az=208.0*

ISC 31 10:03:05.4±2.3**, 19°.3N**±0°.1×**65°.12W**±0°.04**, h30**^{km}±14^{km}**, n41, σ0^s.79**/53**, 9C-1D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUPR	Culebra, Puert	0.95	189	⇑*e*P	Pb	10 03 22.9	-0.4
CUPR	Culebra, Puert	0.95	189	*e*S	Sb	10 03 35.9	+0.4
CUPR	Culebra, Puert	0.95	189		Pb	10 03 22.8	-0.6
CUPR					Sb	10 03 34.4	-1.1
CUPR				IAML		10 03 39.9	
	comp=N,230nm,0.3s						
CUPR				IAML		10 03 40.3	
	comp=E,213nm,0.4s						
CBYP	Canovanas	1.20	216	⇑*e*P	Pn	10 03 25.6	-0.6
CBYP	Canovanas	1.20	216	*e*S	Sn	10 03 40.6	-1.0
CBYP	Canovanas	1.20	216		Pn	10 03 25.7	-0.6
CBYP					Sn	10 03 41.0	-0.5
MTP	Monte Pirata	1.22	200	⇓*e*P	Pn	10 03 26.8	+0.4
MTP	Monte Pirata	1.22	200	*e*S	Sn	10 03 42.2	+0.3
MTP	Monte Pirata	1.22	200		Pn	10 03 26.8	+0.4
MTP					Sn	10 03 42.0	+0.1
MTP				IAML		10 03 43.1	
	comp=N,288nm,0.3s						
HUMP	Col San Antoni	1.30	212	⇑*e*P	Pn	10 03 27.3	-0.3
HUMP	Col San Antoni	1.30	212	*e*S	Sn	10 03 43.2	-0.8
HUMP	Col San Antoni	1.30	212		Pn	10 03 27.3	-0.3
HUMP					Sn	10 03 43.3	-0.7
HUMP				IAML		10 03 48.9	
	comp=E,181nm,0.2s						
HUMP				IAML		10 03 55.2	
	comp=N,129nm,0.2s						
GCPR	Guaynabo City	1.31	224	Pn	Pn	10 03 27.0	-0.7
SJG	San Juan	1.50	221	Pn	Pn	10 03 29.8	-0.5
SJG				IAML		10 03 51.6	
	comp=N,114nm,0.3s						
SJG				IAML		10 03 54.0	
	comp=N,91nm,0.4s						
CDVI	St. Croix	1.53	167		Pn	10 03 30.1	-0.6
CDVI	St. Croix	1.53	167	*e*P	Pb	10 03 33.5	+0.4
CDVI				*e*S	Sb	10 03 54.4	+2.3
IGPR	InterUniversit	1.58	216	⇑*e*P	Pn	10 03 31.4	-0.1

IGPR	InterUniversit	1.58	216	eS	Sn	10 03 51.4	+0.4
IGPR	InterUniversit	1.58	216		Pn	10 03 31.4	-0.1
IGPR					Sn	10 03 51.4	+0.4
AOPR	Arecibo Observ	1.79	240	⇑eP	Pn	10 03 34.3	-0.1
AOPR	Arecibo Observ	1.79	240	eS	Sn	10 03 56.8	+0.6
AOPR	Arecibo Observ	1.79	240		Pn	10 03 33.9	-0.5
AOPR					Sn	10 03 56.7	+0.6
AOPR				IAML		10 04 00.5	
	comp=N,191nm,0.3s						
AOPR	Arecibo Observ	1.79	240	eP	Pn	10 03 34.2	-0.1
AOPR				eS	Sn	10 03 55.2	-0.9
CELP	Cerrillos	1.81	230	⇑eP	Pn	10 03 34.7	0.0
CELP	Cerrillos	1.81	230	eS	Sn	10 03 57.7	+1.1
CELP	Cerrillos	1.81	230		Pn	10 03 34.6	0.0
CELP					Sn	10 03 57.3	+0.7
UUPR	Utuado, UPR, P	1.81	237	Pn	Pn	10 03 35.0	+0.4
OBIP	Obispado Ponce	1.85	230	⇑eP	Pn	10 03 34.4	-0.8
OBIP	Obispado Ponce	1.85	230	eS	Sn	10 03 56.6	-1.0
OBIP	Obispado Ponce	1.85	230		Pn	10 03 34.4	-0.8
OBIP					Sn	10 03 55.9	-1.7
OBIP				IAML		10 04 00.1	
	comp=E,88nm,0.6s						
ICMP	Isla Caja de M	1.90	225	Pn	Pn	10 03 36.2	+0.4
ICMP				IAML		10 04 04.4	
	comp=E,86nm,0.6s						
ICMP				IAML		10 04 05.7	
	comp=N,68nm,0.9s						
AGPR	Aguadilla, PR	2.04	248	Pn	Pn	10 03 38.4	+0.7
AGPR				IAML		10 03 56.8	
	comp=E,108nm,2.8s						
AGPR				IAML		10 04 09.8	
	comp=N,109nm,0.5s						
MLPR	Magueyes Islan	2.23	235	⇑eP	Pn	10 03 40.7	+0.4
MLPR	Magueyes Islan	2.23	235	eS	Sn	10 04 07.3	+0.4
MLPR	Magueyes Islan	2.23	235		Pn	10 03 40.5	+0.2
MLPR					Sn	10 04 07.1	+0.3
CRPR	Cabo Rojo, PR	2.26	237	⇑eP	Pn	10 03 41.0	+0.3
CRPR	Cabo Rojo, PR	2.26	237	eS	Sn	10 04 08.8	+1.2
CRPR	Cabo Rojo, PR	2.26	237		Pn	10 03 40.3	-0.4
CRPR					Sn	10 04 07.4	-0.2
CRPR				IAML		10 04 24.3	
	comp=N,67nm,1.4s						
CRPR				IAML		10 04 51.0	
	comp=E,48nm,2.5s						
SMRT	St. Maarten	2.28	121	Pn	Pn	10 03 40.2	-0.8
SMRT				IAML		10 04 25.9	
	comp=N,128nm,0.2s						
ANBD	Bethesda, Anti	3.87	124	eP	Pn	10 04 01.5	-1.5
ANBD	Bethesda, Anti	3.87	124	eS	Sn	10 04 49.3	+1.9

MAN 31 10:08:29.8, 9°.85N×125°.42E, h25^{km}, mb3.8, ML2.5, MS2.1, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	0.62	298	⇓eP	Pb	10 08 42.0	-0.1
MSLP				eS	Sn	10 08 53.6	+1.3
GLSP	General Luna,	0.70	95	⇑eP	Pn	10 08 44.4	+0.2
GLSP				eS	Sn	10 08 54.7	+0.4

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*NEIC **31** 10:23:57.9±1.5, 30°.33S±0°.07×177°.9W±0°.2, h35^{km}±2^{km}, mb4.6/14, Error ellipse: s-maj=24.9km s-min=10.5km az=105.0*

*IDC **31** 10:23:58.5±2.3, 30°.24S×177°.94W, h45^{km}±19^{km}, mb4.3/7, mbtmp4.5/7, MS3.7/1, Error ellipse: s-maj=26.7km s-min=17.3km az=127.0*

ISC 31 10:23:55.9±0.7, **30°.56S**±0°.05×**178°.0W**±0°.1, **h35**^{km}**, n72,** σ**2^{s}48**/85, **mb4.7**/12, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.29	1	P	Pn	10 24 15.3	-2.2
GLKZ				S	Sn	10 24 27.7	-5.8
RAO	Raoul Island	1.30	2	LR	LR	10 24 15.4	
	comp=Z,96nm,18.1s,baz=62,slow=17						
RAO				P	Pn	10 24 16.0	-1.7
	1μm,0.2s,baz=197,slow=22,SNR=15						
RAO				S	Sn	10 24 29.1	-4.7
	5μm,0.4s,baz=90,slow=20,SNR=12						
RIZ	Raoul Island	1.31	1	P	Pn	10 24 15.5	-2.2
RIZ				S	Sn	10 24 28.8	-5.2
MXZ	Matakaoa Point	7.64	203	P	Pn	10 25 43.7	-1.1
MXZ				S	Sn	10 27 12.2	+2.1
PKGZ	Pakihiroa	8.01	203	P	Pn	10 25 49.3	-0.6
PKGZ				S	Sn	10 27 22.4	+3.1
URZ	Urewera	8.69	207	P	Pn	10 25 58.5	-0.6
	3.2nm,0.3s,baz=352,slow=4.2,SNR=17						
URZ				S	Sn	10 27 38.4	+2.5
	64nm,0.6s,baz=343,slow=24,SNR=17						
MUGZ	Murupara	9.02	207	P	Pn	10 26 01.6	-2.0
MUGZ				S	Sn	10 27 45.0	+1.2
RTZ	Ruatahuna	9.05	206	P	Pn	10 26 02.9	-1.3
RTZ				S	Sn	10 27 45.2	+0.3
RAHZ	Arahi	9.28	205	P	Pn	10 26 05.0	-2.2
RAHZ				S	Sn	10 27 50.6	+0.2
MTHZ	Maungataniwha	9.31	206	P	Pn	10 26 08.2	+0.5
MTHZ				S	Sn	10 27 53.8	+2.5
WHHZ	Waihua	9.37	204	P	Pn	10 26 06.3	-2.1
WHHZ				S	Sn	10 27 54.1	+1.5
NMHZ	Naumai	9.54	205	P	Pn	10 26 06.1	-4.8
NMHZ				S	Sn	10 27 59.2	+2.4
ARHZ	Aropaoanui	9.62	204	P	Pn	10 26 08.7	-3.2
ARHZ				S	Sn	10 27 58.1	-0.6
BKZ	Black Stump Fm	9.72	206	P	Pn	10 26 08.8	-4.5
BKZ				S	Sn	10 28 00.3	-0.9
RATZ	Rangitukua	9.76	210	S	Sn	10 28 04.5	+2.3
RITZ	Rihia Road	9.81	210	S	Sn	10 28 05.7	+2.2
KATZ	Kakaramea	9.88	210	S	Sn	10 28 04.3	-1.0
MCHZ	McNeill Hill	9.89	205	P	Pn	10 26 13.9	-1.6
MCHZ				S	Sn	10 28 07.6	+2.3
KWHZ	Kaweka Forest	9.97	206	P	Pn	10 26 13.6	-3.2
KWHZ				S	Sn	10 28 08.9	+1.5
NTVZ	North Tongarir	9.99	210	S	Sn	10 28 07.7	-0.3
KRVZ	Karewarewa	10.01	210	S	Sn	10 28 07.7	-0.7
TWVZ	Taurewa	10.07	211	S	Sn	10 28 07.7	-2.3
BHHZ	Black Hill Sta	10.17	207	P	Pn	10 26 14.7	-4.7
BHHZ				S	Sn	10 28 11.6	-0.5
PXZ	Pawanui	10.35	203	P	Pn	10 26 19.1	-2.8
PXZ				S	Sn	10 28 14.4	-2.2
PNHZ	Pukenui	10.48	205	P	Pn	10 26 25.0	+1.2
PNHZ				S	Sn	10 28 17.6	-2.3
WPHZ	Waipukurau	10.53	204	S	Sn	10 28 18.9	-2.0
PRHZ	Porangahau	10.64	203	P	Pn	10 26 23.1	-2.7
PRHZ				S	Sn	10 28 21.7	-2.0
TSZ	Takapari Road	10.70	206	P	Pn	10 26 22.9	-3.8
TSZ				S	Sn	10 28 23.6	-1.5
DVHZ	Dannevirke	10.83	205	P	Pn	10 26 33.8	+5.3
DVHZ				S	Sn	10 28 25.8	-2.6
PRWZ	Pori Road	11.13	205	S	Sn	10 28 33.2	-2.5
BFZ	Birch Farm	11.14	203	P	Pn	10 26 28.6	-4.1
BFZ				S	Sn	10 28 31.5	-4.5
MRZ	Mangatainoka R	11.36	206	P	Pn	10 26 30.8	-4.9
MRZ				S	Sn	10 28 37.0	-4.5
RPZ	Rata Peaks	15.77	211	P	P	10 27 36.9	-1.9
	4.1nm,0.6s,baz=305,slow=20,SNR=2.1						
RPZ				S	Sn	10 30 19.5	-9.3
	7.7nm,0.5s,baz=30,slow=21,SNR=9.0						
DZM	Mont Dzumac	16.33	297		Pn	10 27 42.0	-0.7
DZM				IAmb	IAmb	10 28 15.9	
	comp=Z,18nm,1.2s						
CTA	Charters Tower	33.86	279	P	P	10 30 37.7	+2.4
	comp=Z,6.3nm,0.7s,baz=100,slow=9.9,SNR=17						
	comp=Z,6.3nm,0.7s						
CTAO	Charters Tower	33.86	279	P	P	10 30 38.2	+2.8
CTAO				IAmb	IAmb	10 30 38.8	
	comp=Z,6.5nm,0.8s						
STKA	Stephens Creek	34.48	257	P	P	10 30 43.2	+2.6
	comp=Z,16nm,0.8s,baz=90,slow=9.9,SNR=20						
STKA				LR	LR	10 42 04.1	
	comp=Z,134nm,20.6s,baz=187,slow=31						
	comp=Z,16nm,0.8s						
STKA	Stephens Creek	34.48	257	P	P	10 30 43.2	+2.6
STKA				IAmb	IAmb	10 30 45.7	
	comp=Z,3.7nm,0.8s						
BBOO	Buckleboo	38.96	254	P	P	10 31 20.8	+2.0
BBOO				IAmb	IAmb	10 31 41.8	
	comp=Z,22nm,1.3s						
AS31	Alice Springs	43.13	267	P	P	10 31 54.7	+1.4
ASAR	Alice Springs	43.14	267	P	P	10 31 53.6	+0.3
	comp=Z,3.2nm,0.7s,baz=102,slow=6.6,SNR=36						
	comp=Z,3.2nm,0.7s						
ASAR	Alice Springs	43.14	267	P	P	10 31 54.1	+0.9
WB2	Warramunga Arr	44.13	272	P	P	10 32 02.5	+1.3
WB2				IAmb	IAmb	10 32 04.5	
	comp=Z,9.9nm,0.7s						
WRAB	Tennant Creek	44.13	272	P	P	10 32 02.5	+1.2
WRAB				IAmb	IAmb	10 32 04.5	
	comp=Z,7.5nm,0.7s						
WRA	Warramunga Arr	44.14	272	P	P	10 32 02.0	+0.6
	comp=Z,8.1nm,0.7s,baz=112,slow=7.7,SNR=47						
	comp=Z,8.1nm,0.7s						
WRA	Warramunga Arr	44.14	272	P	P	10 32 02.6	+1.3
WB0	Warramunga Arr	44.16	273	P	P	10 32 02.7	+1.1
WB0				IAmb	IAmb	10 32 04.8	
	comp=Z,10nm,0.7s						
FORT	Forrest	46.04	255	P	P	10 32 17.5	+1.2
FORT				IAmb	IAmb	10 32 53.0	
	comp=Z,16nm,0.9s						
KNRA	Kununurra	50.75	274	P	P	10 32 54.7	+1.9
FITZ	Fitzroy Crossi	52.40	270	P	P	10 33 06.5	+1.4
CASY	Casey	55.02	208	P	P	10 33 25.1	+1.5
QSPA	South Pole Qui	59.55	180	P	P	10 33 59.5	+3.7
	comp=Z,5.5nm,1.0s,baz=73,slow=1.0,SNR=17						
	comp=Z,5.5nm,1.0s						
QSPA	South Pole Qui	59.55	180	P	P	10 33 59.7	+4.0
H03S2	Juan Fernandez	80.35	124	T	T	12 05 12.3	
	baz=238,slow=74,SNR=16						
H03S1	Juan Fernandez	80.36	124	T	T	12 05 13.1	
	baz=238,slow=74,SNR=16						
H03S3	Juan Fernandez	80.36	124	T	T	12 05 09.1	
	baz=238,slow=74,SNR=19						
H03N3	Juan Fernandez	80.54	123	T	T	12 05 30.2	
	baz=241,slow=72,SNR=12						
H03N2	Juan Fernandez	80.54	123	T	T	12 05 29.5	
	baz=241,slow=72,SNR=11						
H03N1	Juan Fernandez	80.56	123	T	T	12 05 19.9	
	baz=241,slow=72,SNR=25						
PETK	Petropavlovsk-	85.97	346	P	P	10 36 33.0	+0.9
	comp=Z,2.3nm,0.8s,baz=159,slow=9.1,SNR=5.5						
	comp=Z,2.3nm,0.8s						
NVAR	Mina Array Bea	88.33	43	P	P	10 36 44.8	+0.6
	comp=Z,0.5nm,0.5s,baz=221,slow=8.0,SNR=2.4						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	117.90	310	PKP	PKPdf	10 42 37.6	-0.9
	comp=Z,0.6nm,0.8s,baz=90,slow=2.9,SNR=3.5						
KURBB	Kurchatov Arra	121.22	314	PKP	PKPdf	10 42 43.9	-0.8
	comp=Z,1.1nm,0.7s,baz=102,slow=2.0,SNR=8.6						
BVAR	Borovoye Array	126.54	316	PKP	PKiKP	10 42 55.1	-0.2
	comp=Z,0.5nm,0.5s,baz=72,slow=1.8,SNR=3.8						
FINES	FINESS Array B	145.31	340	PKPbc	PKPbc	10 43 28.0	-1.1
	comp=Z,4.9nm,0.6s,baz=52,slow=3.7,SNR=14						
NB2	NORSAR Subarra	148.91	351	PKP	PKPbc	10 43 38.9	-0.5
	comp=Z,0.2nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	148.91	351	PKPbc	PKPbc	10 43 37.1	-2.2
	comp=Z,0.2nm,0.5s,baz=15,slow=4.2,SNR=1.6						
HFS	Hagfors	149.41	349	PKPbc	PKPbc	10 43 39.9	-0.7
	comp=Z,3.1nm,0.8s,baz=111,slow=3.3,SNR=5.8						
AKASG	Malin Array Be	151.45	323	PKPbc	PKiKP	10 43 45.2	-0.9
	comp=Z,2.0nm,0.5s,baz=49,slow=2.3,SNR=6.7						
EIL	Elat	151.57	277	PKPbc	PKiKP	10 43 49.8	+2.7
	comp=Z,5.0nm,0.8s,baz=170,slow=11,SNR=5.2						
MMAI	Mount Meron Ar	151.60	284	PKPbc	PKiKP	10 43 50.0	+2.8
	comp=Z,6.0nm,0.8s,baz=10,slow=5.1,SNR=6.5						
BRTR	Keskin Array B	152.71	298	PKPbc	PKiKP	10 43 51.5	+2.1
	comp=Z,2.2nm,1.0s,baz=113,slow=4.0,SNR=5.2						

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*BJI **31** 10:40:38.6±0.0, 24°.74N×126°.91E, h10^{km}, mb4.5/53, mB4.7/34, Ms4.5/52, Ms7 4.4/52*

*IDC **31** 10:40:40.7±0.6, 25°.00N×126°.84E, h0^{km}, mb4.6/33, mbtmp4.5/36, ML3.8/4, MS3.6/9, Error ellipse: s-maj=15.3km s-min=12.4km az=105.0*

*NEIC **31** 10:40:42.8±2.0, 24°.82N±0°.07×126°.89E±0°.07, h15^{km}±4^{km}, mb4.9/100, Error ellipse: s-maj=11.2km s-min=8.1km az=148.0*

*MOS **31** 10:40:43.8±1.1, 25°.03N×126°.89E, h32^{km}, mb4.9/29, MS4.0/6, Error ellipse: s-maj=10.2km s-min=5.7km az=102.7*

*JMA **31** 10:40:44.1±0.2, 25°N±1°×12°7E±°, h79^{km}, MD4.7/21, MV4.2/21, NEAR MIYAKOJIMA ISLAND*

*NIED **31** 10:40:44.1, 24°.95N×126°.85E, h79^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$3.14; M$_{\theta\theta}$-3.19; M$_{\phi\phi}$0.05; M$_{r\theta}$5.29; M$_{\theta\phi}$-5.17; M$_{\phi r}$6.16; Fault plane solution: M$_{0}$9.72000×10^{15} NP1:φ$_{s}$36.00000°, δ76.00000°, λ73.00000°. NP2:φ$_{s}$268.00000°, δ22.00000°, λ140.00000°.*

ISC 31 10:40:44.1±0.7, **24°.87N**±0°.04×**126°.91E**±0°.04, **h27**^{km}±4^{km}, **n292,** σ**1^{s}40**/307, **mb4.8**/117, **MS4.2**/21, **12C-14D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	Gusukube	1.37	266	P	Pn	10 41 07.5	+0.1
JOGS				eS	Sn	10 41 24.8	0.0
JOGS	Gusukube	1.37	266	A	A	10 41 07.5	
	comp=E,46nm,2.4s,comp=E,25nm,1.8s						
JMJ2	Miyako jima3	1.45	265	P	Pn	10 41 08.4	-0.1
JMJ2	Miyako jima3	1.45	265	A	A	10 41 08.4	
	comp=E,31nm,1.8s,comp=E,31nm,3.5s						
JKE	Kume jima 2	1.46	356	P	Pn	10 41 08.1	-0.6
JKE				eS	Sn	10 41 26.0	-1.0
JKE	Kume jima 2	1.46	356	A	A	10 41 08.1	
	comp=E,9.0nm,4.4s,comp=E,6.0nm,1.1s						
JMJ	Miyako jima 2	1.47	268	P	Pn	10 41 08.5	-0.4
JJT3	Tamagusuku3	1.50	32	P	Pn	10 41 09.3	+0.1
JJT3				eS	Sn	10 41 27.4	-0.5
JJT3	Tamagusuku3	1.50	32	A	A	10 41 09.3	
	comp=E,28nm,5.9s,comp=E,26nm,1.9s						
JIKM	Ikemajima	1.51	273	P	Pn	10 41 09.2	-0.2
JIKM	Ikemajima	1.51	273	A	A	10 41 09.2	
	comp=E,25nm,2.2s,comp=E,26nm,2.4s						
JIRB	Irabujima	1.58	269	P	Pn	10 41 09.9	-0.4
JIRB				eS	Sn	10 41 29.0	-0.9
JIRB	Irabujima	1.58	269	A	A	10 41 09.9	
	comp=E,23nm,1.3s,comp=E,24nm,1.6s						
JAGN	Aguni-jima	1.74	10	P	Pn	10 41 12.4	-0.2
JAGN	Aguni-jima	1.74	10	A	A	10 41 12.4	
	comp=E,13nm,3.7s,comp=E,12nm,1.3s						
JNTH	Nagotoyohara	1.93	31	P	Pn	10 41 14.3	-0.8
JNTH				eS	Sn	10 41 36.8	-1.7
JNTH	Nagotoyohara	1.93	31	A	A	10 41 14.3	
	comp=E,7.0nm,6.9s,comp=E,5.0nm,4.7s						
JTJ	Tarama	2.02	264	P	Pn	10 41 16.1	-0.3
JTJ	Tarama	2.02	264	A	A	10 41 16.1	
	comp=E,15nm,3.0s,comp=E,16nm,1.4s						
JOW	Kunigami	2.31	32	Pn	Pn	10 41 19.4	-1.0
	23nm,0.3s,baz=169,slow=18,SNR=38						
JOW				Sn	Sn	10 41 46.6	-1.4
	176nm,0.3s,baz=130,slow=24,SNR=5.2						
JOW	Kunigami	2.31	32		Pn	10 41 20.9	+0.4
JOW	Kunigami	2.31	32	P	Pn	10 41 21.5	+1.1
JOW	Kunigami	2.31	32	eP	Pn	10 41 20.4	0.0
JOW				eS	Sn	10 41 47.1	-1.0
JIH	Iheya	2.36	24	P	Pn	10 41 20.9	-0.2
JIH	Iheya	2.36	24	A	A	10 41 20.9	
	comp=E,8.0nm,3.5s,comp=E,5.0nm,1.5s						
JISG	Ishigakijimahi	2.38	264	P	Pn	10 41 20.4	-1.0
JISG	Ishigakijimahi	2.38	264	A	A	10 41 20.4	
	comp=E,7.0nm,8.9s,comp=E,5.0nm,4.4s						
JYRO	Yoronjima	2.56	32	P	Pn	10 41 24.1	+0.3
JYRO				eS	Sn	10 41 53.8	-0.2
JYRO	Yoronjima	2.56	32	A	A	10 41 24.1	
	comp=E,4.0nm,9.1s,comp=E,5.0nm,9.0s						
JIJ	Ishigaki jima	2.57	259	P	Pn	10 41 23.1	-0.9
JKRS	Kuro-shima	2.72	257	eP	Pn	10 41 25.3	-0.7
JKRS	Kuro-shima	2.72	257	A	A	10 41 25.3	
	comp=E,17nm,2.9s,comp=E,22nm,2.3s						
JOKE	Okinoerabujima	2.90	31	eP	Pn	10 41 28.6	+0.1
IRIF	Iriomote-Funau	2.94	260	eP	Pn	10 41 28.1	-1.0
YOJ	Yonaguni jima	3.57	264	Pn	Pn	10 41 36.5	-1.2
JMZ	Minamidaito 2	4.01	75		Pn	10 41 42.7	-1.1
JMZ	Minamidaito 2	4.01	75	P	Pn	10 41 42.0	-1.8
NACB	Ninganchiao	4.89	263		Pn	10 41 54.5	-1.4
NACB	Ninganchiao	4.89	263	P	Pn	10 41 54.4	-1.5
TATO	Taipei	4.93	272	Pn	Pn	10 41 55.0	-1.3
YHNB	Yeheng	5.04	269	Pn	Pn	10 41 58.7	+0.7
YHNB	Yeheng	5.04	269	P	Pn	10 41 58.4	+0.4
YULB	Yu-li	5.33	255		Pn	10 41 59.3	-2.7
YULB	Yu-li	5.33	255	P	Pn	10 41 59.2	-2.8
SSLB	Suanglung	5.54	260		Pn	10 42 03.6	-1.3
SSLB	Suanglung	5.54	260	P	Pn	10 42 02.9	-2.0
TWGBT	Beinan	5.71	250	P	Pn	10 42 04.4	-2.9
TWG	Pinlang	5.72	250		Pn	10 42 04.5	-2.8
TPUB	Ta-pu	5.95	256	Pn	Pn	10 42 09.3	-1.2
TPUB	Ta-pu	5.95	256	P	Pn	10 42 09.7	-0.8
JSU	Suzuyama	7.32	24		Pn	10 42 28.4	-0.8
KNMB	Chin-men Tao	7.76	269	Pn	Pn	10 42 33.9	-1.5
JNU	Nakatsue	8.93	22	Pn	Pn	10 42 51.3	-0.1
	3.3nm,0.3s,baz=187,slow=7.5,SNR=5.8						
JNU				Sn	Sn	10 44 31.4	+0.3
	0.7nm,0.3s,baz=163,slow=11,SNR=1.6						
JNU				LR	LR	10 46 48.3	
	comp=Z,794nm,19.3s,baz=207,slow=42						
	17nm,0.5s						
JNU	Nakatsue	8.93	22	Pn	Pn	10 42 50.9	-0.5
JNU	Nakatsue	8.93	22	P	Pn	10 42 52.3	+0.9
NJ2	Nanjing	10.07	317	eP	Pn	10 43 05.3	-1.7
NJ2				pP		10 43 12.5	
NJ2				sP		10 43 17.5	
NJ2				pmax	pmax		
	comp=Z,13nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,380nm,4.3s						
NJ2				LR	LR		
	comp=N,1μm,10.3s						
NJ2				LR	LR		
	comp=E,1μm,10.3s						
NJ2				LR	LR		
	comp=Z,2μm,13.3s						
JMN	Monobe	10.72	33	Pn	Pn	10 43 14.4	-1.5
JHS	Saijyo	11.44	27	Pn	Pn	10 43 23.5	-2.2
KSRS	Korea Array	12.58	4	Pn	Pn	10 43 40.5	-0.8
	0.3nm,0.3s,baz=276,slow=16,SNR=4.4						
KSRS				LR	LR	10 48 56.8	
	comp=Z,354nm,18.5s,baz=180,slow=40						
	1.5nm,0.7s						
JCJ	Chichijima	13.92	78	LR	LR	10 48 40.5	
	comp=Z,166nm,20.6s,baz=118,slow=34						
MAJO	Matsushiro	15.14	37	Pn	Pn	10 44 16.9	+0.7
MAJO	Matsushiro	15.14	37	⇓eP	Pn	10 44 13.3	-2.9
MAJO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MJAR	Matsushiro Arr	15.14	37	Pn	Pn	10 44 16.4	+0.1
	comp=Z,0.4nm,0.5s,baz=245,slow=12,SNR=1.3						
MJB9	Matsu-Tunnel	15.14	37	Pn	Pn	10 44 16.9	+0.7
HNS	HongShan	16.27	323	⇑P	P	10 44 33.8	+0.3
HNS				eS	S	10 47 38.5	-4.1
HNS				pmax	pmax		
	comp=Z,19nm,0.8s						
HNS				LR	LR		
	comp=Z,1μm,13.9s						
HNS				LR	LR		
	comp=Z,750nm,14.3s						
HNS				LR	LR		
	comp=Z,1μm,14.3s						
QIZ	Qiongzhong	16.86	253	P	Pn	10 44 35.8	-2.6
QIZ				S	Sn	10 47 46.5	+1.5
QIZ				LR	LR		
	comp=Z,610nm,16.7s						
QIZ				LR	LR		
	comp=Z,340nm,17.5s						
QIZ				LR	LR		
	comp=Z,570nm,17.5s						
BJI	Beijing	17.61	332	P	P	10 44 49.5	+1.1
BJI				PP	PnPn	10 44 59.0	+0.7
BJI				LR	LR		
	comp=Z,380nm,14.3s						
BJI				LR	LR		
	comp=Z,160nm,14.3s						
BJI				LR	LR		
	comp=Z,340nm,17.5s						
DAV	Davao City (W)	17.74	184	LR	LR	10 51 25.5	
	comp=Z,104nm,19.6s,baz=332,slow=36						
XAN	Xi'an	18.12	304	⇑P	Pn	10 44 53.5	-0.4
XAN				pP	sP	10 45 03.3	-0.6
XAN				pmax	pmax		
	comp=Z,13nm,1.0s						
XAN				LR	LR		
	comp=Z,770nm,11.1s						
XAN				LR	LR		
	comp=Z,1μm,13.3s						
XAN				LR	LR		
	comp=Z,2μm,13.6s						
GYA	Guiyang	18.32	279	P	P	10 44 55.3	-1.2
GYA				LR	LR		
	comp=Z,890nm,17.1s						
USA0B	Ussuriysk Arra	19.73	11	⇓eP	Pn	10 45 12.7	-0.5
USRK	Ussuriysk Ar.	19.73	11	P	P	10 45 09.3	-2.3
	comp=Z,0.2nm,0.3s,baz=189,slow=8.6,SNR=2.3						
USRK				LR	LR	10 52 43.5	
	comp=Z,146nm,20.7s,baz=164,slow=37						
USRK	Ussuriysk Ar.	19.73	11	P	P	10 45 11.1	-0.5
MDJ	Mudanjiang	19.82	6	P	P	10 45 13.0	+0.3
MDJ				pP	Pn	10 45 16.0	+1.7
MDJ				sP	pP	10 45 17.3	-2.0
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,99nm,10.2s						
MDJ				LR	LR		
	comp=Z,370nm,13.5s						
MDJ				LR	LR		
	comp=Z,280nm,12.3s						
MDJ				LR	LR		
	comp=Z,480nm,14.7s						
GUMO	Guam	20.30	120	LR	LR	10 53 41.7	
	comp=Z,135nm,18.4s,baz=12,slow=38						
HHC	Hu-ho-hao-te	20.45	325	eP	P	10 45 19.8	+0.2
HHC				pmax	pmax		
	comp=Z,39nm,1.0s						
HHC				pmax	pmax		
	comp=Z,400nm,5.8s						
HHC				LR	LR		
	comp=Z,1μm,13.3s						
HHC				LR	LR		
	comp=Z,1μm,13.0s						
HHC				LR	LR		
	comp=Z,2μm,14.0s						
XLT	XiLinHaoTe	20.95	338	eP	P	10 45 24.5	-0.5
XLT				pP	Pn	10 45 27.3	-0.3
XLT				sP	pP	10 45 32.0	+0.3
XLT				S	S	10 49 19.5	+2.3
XLT				sS	pS	10 49 29.5	0.0
XLT				pmax	pmax		
	comp=Z,13nm,0.7s						
XLT				pmax	pmax		
	comp=Z,96nm,4.2s						
XLT				LR	LR		
	comp=Z,410nm,15.3s						
XLT				LR	LR		
	comp=Z,550nm,14.0s						
BTO	Baotou	21.11	322	eP	P	10 45 29.8	+3.0
BTO				pP	pwP	10 45 34.5	-1.5
BTO				sP	sP	10 45 39.0	+2.3
BTO				PP	PnPn	10 45 53.0	+6.7
BTO				PcP	PcP	10 49 35.3	+2.9
BTO				SS	Sn	10 49 54.5	+27
BTO				pmax	pmax		
	comp=Z,35nm,0.8s						
BTO				pmax	pmax		
	comp=Z,250nm,3.1s						
BTO				LR	LR		
	comp=Z,3μm,13.7s						
BTO				LR	LR		
	comp=Z,2μm,17.5s						
BTO				LR	LR		
	comp=Z,4μm,13.6s						
CD2	Chengdu	21.32	292	P	P	10 45 27.5	-1.5
ERM	Erimo	21.76	34	P	P	10 45 32.2	-1.4
ERM	Erimo	21.76	34	ceP	P	10 45 32.4	-1.2
ERM				pmax	pmax		
	comp=Z,15nm,0.8s						
PZH	PanZhiHua	22.73	280	P	P	10 45 44.0	-0.3
PZH				S	S	10 49 49.8	-1.8
PZH				pmax	pmax		
	comp=Z,20nm,1.0s						
PZH				pmax	pmax		
	comp=Z,80nm,3.5s						
PZH				LR	LR		
	comp=Z,460nm,14.3s						
PZH				LR	LR		
	comp=Z,450nm,14.5s						
PZH				LR	LR		
	comp=Z,530nm,15.3s						
LZH	Lanzhou	22.75	305	⇓P	P	10 45 43.8	-0.7
LZH				pP	pP	10 45 47.8	-3.5
LZH				sP	pwP	10 45 50.5	-3.1
LZH				pmax	pmax		
	comp=Z,39nm,1.5s						

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LZH                             pmax   pmax
      comp=Z,110nm,5.8s
LZH                             LR     LR
      comp=Z,870nm,12.7s
LZH                             LR     LR
      comp=Z,1µm,12.0s
LZH                             LR     LR
      comp=Z,2µm,12.7s
ASAJ  Asahikawa       23.08  30 P      P       10 45 45.8 -1.8
      comp=Z,3.0nm,0.5s,baz=226,slow=6.1,SNR=9.5
      comp=Z,3.0nm,0.5s
JKA   Kamikawa-asahi  23.08  30 P      P       10 45 46.5 -1.0
KLR   Kul'dur         24.61   8 P      P       10 46 01.4 -0.7
      comp=Z,3.0nm,0.7s,baz=207,slow=5.5,SNR=13
      comp=Z,3.0nm,0.7s
KLR   Kul'dur         24.61   8⇓eP     P       10 46 01.9 -0.2
KLR                             pmax   pmax
      comp=Z,8.0nm,1.7s
CRAI  Chiangrai       24.92 265 P      P       10 46 04.4 -0.8
MPSI  Mapaga          25.31 197 P      P       10 46 14.1 +5.4
      comp=Z,3.8nm,0.5s
HEH   HeiHe           25.35   1 eP     P       10 46 10.0 +1.3
HEH                             sP     pP      10 46 15.8 -0.1
HEH                             S      S       10 50 30.5 -2.8
HEH                             pmax   pmax
      comp=Z,4.0nm,1.1s
HEH                             pmax   pmax
      comp=Z,200nm,5.4s
HEH                             LR     LR
      comp=Z,680nm,13.2s
HEH                             LR     LR
      comp=Z,380nm,12.6s
HEH                             LR     LR
      comp=Z,990nm,13.4s
YSS   Yuzh-Sakhalins  25.41  26 P      P       10 46 09.9 +0.6
YSS                             IAmb   IAmb    10 46 23.6
      comp=Z,25nm,1.0s
YSS   Yuzh-Sakhalins  25.41  26 eP     P       10 46 09.8 +0.6
YSS                             pmax   pmax
      comp=Z,10.0nm,0.9s
YSS                             pmax   pmax
      comp=Z,100nm,5.5s
YSS                             MLR    MLR
      comp=Z,300nm,18.0s
PHRA  Phrae           25.57 261 P      P       10 46 10.7 -0.3
TNCH  TengChong       25.73 276 eP     P       10 46 11.5 -1.2
TNCH                            pP     pP      10 46 13.3 -6.6
CHTO  Chiang Mai      26.62 262 P      P       10 46 19.7 -0.9
CMAR  Chiang Mai Arr  26.73 262 P      P       10 46 21.6 -0.1
      comp=Z,5.6nm,0.9s,baz=58,slow=8.1,SNR=30
      comp=Z,5.6nm,0.9s
CMAR  Chiang Mai Arr  26.73 262 P      P       10 46 21.2 -0.5
CMAR  Chiang Mai Arr  26.73 262 i P    P       10 46 22.8 +1.2
CMAR                            pmax   pmax
      comp=Z,6.0nm,0.9s
SANI  Sanana          26.77 182 P      P       10 46 21.4 -0.5
      comp=Z,17nm,0.8s
GTA   Gaotai          27.01 309 ⇑P     P       10 46 22.8 -1.3
GTA                             pmax   pmax
      comp=Z,18nm,0.9s
GTA                             LR     LR
      comp=Z,290nm,13.8s
GTA                             LR     LR
      comp=Z,540nm,15.6s
GTA                             LR     LR
      comp=Z,740nm,14.9s
ULN   Ulaanbaatar     27.82 331 P      P       10 46 30.6 -0.6
ULN                             IAmb   IAmb    10 46 34.8
      comp=Z,17nm,1.0s
ULN   Ulaanbaatar     27.82 331deP     P       10 46 30.3 -0.9
ULN                             pmax   pmax
      comp=Z,24nm,1.3s
SONM  Songino Array   28.09 330 P      P       10 46 32.0 -1.6
      comp=Z,14nm,0.7s,baz=146,slow=8.7,SNR=33
SONM                            PcP    PcP     10 49 49.2 +1.6
      comp=Z,0.3nm,0.5s,baz=137,slow=4.3,SNR=3.6
SONM                            LR     LR      10 59 31.7
      comp=Z,372nm,19.6s,baz=92,slow=40
      comp=Z,14nm,0.7s
SONM  Songino Array   28.09 330 P      P       10 46 32.3 -1.3
SONM                            IAmb   IAmb    10 46 37.2
      comp=Z,15nm,0.8s
FAKI  Fak Fak         28.10 169 P      P       10 46 34.6 +0.8
ZEA   Zeya            28.84   0 eP     P       10 46 47.2 +7.2
ZEA                             pmax   pmax
      comp=Z,20nm,0.5s
ZEA                             MLR    MLR
      comp=N,300nm,14.0s
ZEA                             MLR    MLR
      comp=E,200nm,14.0s
ZEA                             MLR    MLR
      comp=Z,300nm,13.0s
GOMU  GeErMu          29.74 300 P      P       10 46 48.5 -0.2
GOMU                            pP     pP      10 46 52.0 -3.9
GOMU                            sP     pwP     10 46 54.8 -3.6
GOMU                            pmax   pmax
      comp=Z,6.0nm,0.6s
GOMU                            pmax   pmax
      comp=Z,38nm,4.2s
GOMU                            LR     LR
      comp=Z,220nm,14.5s
GOMU                            LR     LR
      comp=Z,280nm,14.2s
GOMU                            LR     LR
      comp=Z,380nm,14.8s
SHL   Shillong        31.64 279 P      P       10 47 05.1 -0.3
SHL                             IAmb   IAmb    10 47 06.8
      comp=Z,28nm,1.1s
KULM  Kulim           31.84 237 P      P       10 47 06.2 -0.8
LSA   Lhasa           32.06 287 P      P       10 47 08.5 -0.9
LSA                             IAmb   IAmb    10 47 12.0
      comp=Z,9.0nm,0.5s
MOY   Mondy           33.28 330 eP     P       10 47 18.0 -1.4
MOY                             pmax   pmax
      comp=Z,20nm,1.3s
SOEI  Soe             34.51 185 P      P       10 47 28.8 -1.5
PEA0B Petropavlovsk-  36.48  31 P      P       10 47 45.7 -1.1
PEA0B                           IAmb   IAmb    10 48 34.5
      comp=Z,41nm,1.4s
PETK  Petropavlovsk-  36.48  31 P      P       10 47 47.0 +0.2
      comp=Z,2.6nm,0.9s,baz=234,slow=3.4,SNR=1.9
PETK                            LR     LR      11 05 02.3
      comp=Z,74nm,18.7s,baz=223,slow=40
      comp=Z,2.6nm,0.9s
PETK  Petropavlovsk-  36.48  31 P      P       10 47 47.6 +0.8
JIRN  Jiri            36.51 283 eP     P       10 47 48.5 +0.6
GUN   Gumba           36.76 284 eP     P       10 47 50.7 +0.7
WMQ   Urumqi          37.07 311 eP     P       10 47 51.5 -0.5
WMQ                             sP     sP      10 48 03.3 +0.9
WMQ                             PP     PnPn    10 49 19.0 +1.9
WMQ                             pmax   pmax
      comp=Z,14nm,0.9s
WMQ                             LR     LR
      comp=Z,370nm,12.7s
WMQ                             LR     LR
      comp=Z,480nm,13.9s
WMQ                             LR     LR
      comp=Z,260nm,17.1s
YAK   Yakutsk         37.20   2 eP     P       10 47 51.7 -1.1
YAK                             pmax   pmax
      comp=Z,15nm,1.0s
YAK                             pmax   pmax
      comp=N,5.0nm,1.0s
YAK                             pmax   pmax
      comp=E,2.0nm,1.0s
YAK                             MLR    MLR
      comp=Z,136nm,17.0s
YAK                             MLR    MLR
      comp=N,104nm,16.0s
YAK                             MLR    MLR
      comp=E,47nm,15.0s
PKI   Pulchoki        37.21 283 eP     P       10 47 54.0 +0.2
      comp=E,74nm,1.0s
PKIN  Phulchoki       37.22 283 eP     P       10 47 53.9 +0.1
      comp=E,43nm,0.7s
KKN   Kakani          37.30 284 eP     P       10 47 54.7 +0.3
DMN   Daman           37.47 284 eP     P       10 47 56.3 +0.4
MTN   Manton Dam      37.71 173 P      P       10 47 56.0 -1.5
MTN                             IAmb   IAmb    10 48 49.7
      comp=Z,41nm,1.4s
GKN   Gorkha          37.85 284 eP     P       10 47 59.2 +0.2
MA2   Magadan         38.48  19 LR     LR      11 06 05.3
      comp=Z,83nm,18.4s,baz=233,slow=40
DANN  Dangsing        38.59 285 eP     P       10 48 06.2 +0.8
      comp=Z,104nm,0.6s
KOLN  Koldanda        38.79 284 eP     P       10 48 07.5 +0.6
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      comp=Z,94nm,1.1s
PYUN  Piuthan         39.29 285 eP     P       10 48 12.0 +0.9
DGZ   Jazzator, Alta  39.35 319⇓iP     P       10 48 10.3 -1.0
DGZ                             pmax   pmax
      comp=Z,5.0nm,0.7s
KNRA  Kununurra       40.34 177 P      P       10 48 18.5 -1.0
KNRA                            IAmb   IAmb    10 48 30.2
      comp=Z,75nm,1.6s
MK31  Makanchi Array  41.58 313 P      P       10 48 28.8 -0.8
MK31                            IAmb   IAmb    10 48 29.6
      comp=Z,16nm,0.7s
MK31  Makanchi Array  41.58 313c iP    P       10 48 28.6 -1.0
MKAR  Makanchi Array  41.58 313 P      P       10 48 28.6 -1.0
      comp=Z,20nm,0.6s,baz=98,slow=10,SNR=215
      comp=Z,20nm,0.6s
SEY   Seymchan        41.67  17⇑eP     P       10 48 31.0 +1.0
SEY                             pmax   pmax
      comp=Z,10.0nm,1.3s
MAKZ  Makanchi        41.79 313 P      P       10 48 30.6 -0.8
MAKZ                            IAmb   IAmb    10 48 31.5
      comp=Z,26nm,0.8s
ZAA0  Zalesovo Array  42.63 324 P      P       10 48 37.3 -0.7
ZALV  Zalesovo Beam   42.63 324 P      P       10 48 36.5 -1.5
      comp=Z,4.1nm,0.4s,baz=109,slow=8.0,SNR=15
      comp=Z,4.1nm,0.4s
ZALV  Zalesovo Beam   42.63 324 P      P       10 48 36.7 -1.3
ZALV  Zalesovo Beam   42.63 324 i P    P       10 48 36.7 -1.3
ZALV                            pmax   pmax
      comp=Z,4.0nm,0.4s
TARG  Taragay, Kyrgy  43.75 305 P      P       10 48 45.9 -1.9
KDJ   Kajisay         44.26 306 P      P       10 48 51.4 -0.2
KSH   Kashi           44.94 302 P      P       10 48 58.0 +1.0
KSH                             pP     pP      10 49 01.5 -3.0
KSH                             PcP    PP      10 50 41.3 -0.9
KSH                             PP     PP      10 50 48.3 +6.1
KSH                             pmax   pmax
      comp=Z,4.0nm,0.5s
KSH                             LR     LR
      comp=Z,340nm,13.1s
KSH                             LR     LR
      comp=Z,450nm,13.7s
KSH                             LR     LR
      comp=Z,430nm,14.4s
WB0   Warramunga Arr  44.96 170 P      P       10 48 57.6 +0.5
KURK  Kurchatov       45.01 318 P      P       10 48 56.2 -0.9
KURK                            IAmb   IAmb    10 48 57.2
      comp=Z,23nm,1.1s
KURK  Kurchatov       45.01 318c iP    P       10 48 56.2 -0.9
KURK                            pmax   pmax
      comp=Z,24nm,1.3s
KURBB Kurchatov Arra  45.04 318 P      P       10 48 56.4 -1.0
      comp=Z,5.4nm,0.5s,baz=106,slow=8.4,SNR=39
KURBB                           PcP    PcP     10 50 38.8 +0.8
      comp=Z,1.5nm,0.8s,baz=105,slow=3.2,SNR=4.3
      comp=Z,5.4nm,0.5s
WRAB  Tennant Creek   45.11 170 P      P       10 48 59.0 +0.7
WRAB                            IAmb   IAmb    10 49 10.4
      comp=Z,49nm,1.9s
WRA   Warramunga Arr  45.12 170 P      P       10 48 59.3 +0.9
      comp=Z,4.5nm,0.6s,baz=349,slow=8.9,SNR=45
      comp=Z,4.5nm,0.6s
WRA   Warramunga Arr  45.12 170 P      P       10 48 58.5 +0.2
WB2   Warramunga Arr  45.12 170 P      P       10 48 59.0 +0.6
WB2                             IAmb   IAmb    10 49 11.6
      comp=Z,8.8nm,0.8s
BOOM  Boomskoye usch  45.21 306 P      P       10 48 59.1 -0.1
AAK   Ala-Archa       46.29 306⇓eP     P       10 49 07.9 +0.2
AAK                             pmax   pmax
      comp=Z,2.0nm,1.0s
PSA00 Pilbara Seismi  46.67 189 P      P       10 49 09.1 -1.5
TIXI  Tiksi           46.83   1 P      P       10 49 09.6 -1.6
TIXI  Tiksi           46.83   1⇓eP     P       10 49 10.6 -0.6
TIXI                            pmax   pmax
      comp=Z,2.0nm,0.6s
NIL   Nilore          47.18 294 P      P       10 49 14.1 -0.6
AS31  Alice Springs   48.72 171 P      P       10 49 26.3 -0.2
ASAR  Alice Springs   48.72 171 P      P       10 49 27.9 +1.4
      comp=Z,2.2nm,0.8s,baz=357,slow=14,SNR=33
      comp=Z,2.2nm,0.8s
ASAR  Alice Springs   48.72 171 P      P       10 49 26.5 +0.1
BTK   Batken          48.93 302 P      P       10 49 28.4 +0.2
BTK                             IAmb   IAmb    10 49 29.6
      comp=Z,13nm,1.2s
KK31  Karatay Array   49.24 306 P      P       10 49 31.2 +0.8
KK31                            IAmb   IAmb    10 49 32.5
      comp=Z,6.6nm,0.9s
KKAR  Karatay Array   49.24 306 P      P       10 49 30.3  0.0
KKAR                            IAmb   IAmb    10 49 32.5
      comp=Z,6.6nm,0.9s
GAR   Garm            49.32 301 P      P       10 49 31.7 +0.5
BILL  Bilibino        49.33  18 P      P       10 49 31.7 +1.1
BILL  Bilibino        49.33  18 i P    P       10 49 30.1 -0.6
BILL                           i               10 49 43.1
BILL                            pmax   pmax
      comp=Z,6.0nm,0.9s
BILL                            MLR    MLR
      comp=Z,102nm,18.0s
NRIK  Noril'sk        50.19 343 P      P       10 49 36.5 -0.6
      comp=Z,2.9nm,0.6s,baz=117,slow=6.7,SNR=5.7
      comp=Z,2.9nm,0.6s
NRIK  Noril'sk        50.19 343 P      P       10 49 37.2  0.0
NRIK  Noril'sk        50.19 343ceP     P       10 49 37.1  0.0
NRIK                            pmax   pmax
      comp=Z,6.0nm,1.0s
CHGR  Chuyangaron     50.24 301 P      P       10 49 38.6 +0.5
BVAR  Borovoye Array  50.51 319 P      P       10 49 39.3 -0.5
      comp=Z,3.5nm,0.6s,baz=89,slow=8.0,SNR=14
BVAR                            PcP    PcP     10 50 58.1 +0.6
      comp=Z,1.2nm,0.4s,baz=103,slow=4.7,SNR=3.7
      comp=Z,3.5nm,0.6s
BRVK  Borovoye        50.58 319 P      P       10 49 40.0 -0.4
BRVK  Borovoye        50.58 319c iP    P       10 49 39.8 -0.6
BRVK                            pmax   pmax
      comp=Z,7.0nm,1.0s
KBL   Kabul           50.59 295 P      P       10 49 41.1 +0.1
KBL                             IAmb   IAmb    10 49 42.8
      comp=Z,26nm,0.9s
FORT  Forrest         55.34 179 P      P       10 50 14.1 -1.5
ABKAR Akbulak array   56.72 314 P      P       10 50 25.4  0.0
ABKAR                           IAmb   IAmb    10 50 26.5
      comp=Z,22nm,1.1s
TNA   Tin City        57.38  27 P      P       10 50 30.0 +0.2
TNA                             IAmb   IAmb    10 50 53.1
      comp=Z,8.6nm,1.2s
ARU   Arti            57.73 322 P      P       10 50 31.6 -0.8
      comp=Z,5.5nm,0.2s,baz=73,slow=9.5,SNR=4.9
      comp=Z,5.5nm,0.2s
ARU   Arti            57.73 322 P      P       10 50 31.9 -0.6
ARU                             IAmb   IAmb    10 50 53.8
      comp=Z,9.6nm,1.0s
ARU   Arti            57.73 322c iP    P       10 50 31.8 -0.6
ARU                                            10 52 37.1
ARU                             S      S       10 58 32.1 +2.6
ARU                             pmax   pmax
      comp=Z,9.0nm,1.0s
ARU                             MLR    MLR
      comp=Z,278nm,18.0s
AKTO  Aktyubinsk      57.95 315 P      P       10 50 33.9 -0.2
      comp=Z,4.4nm,0.8s,baz=85,slow=5.0,SNR=12
      comp=Z,4.4nm,0.8s
STKA  Stephens Creek  58.14 165 P      P       10 50 36.8 +1.3
      comp=Z,3.0nm,0.5s,baz=356,slow=7.5,SNR=5.2
      comp=Z,3.0nm,0.5s
STKA  Stephens Creek  58.14 165 P      P       10 50 34.8 -0.7
ANM   Nome            58.27  28 P      P       10 50 36.6 +0.6
GEYT  Alibeck         58.95 301 P      P       10 50 41.7 +0.4
      comp=Z,11nm,0.8s,baz=62,slow=3.5,SNR=14
      comp=Z,11nm,0.8s
GEYT  Alibeck         58.95 301 P      P       10 50 40.1 -1.3
GEYT                            IAmb   IAmb    10 50 44.0
      comp=Z,13nm,0.9s
GYA0B ALIBECK ARRAY   58.95 301 P      P       10 50 39.5 -1.8
GYA0B                           IAmb   IAmb    10 50 48.3
      comp=Z,13nm,0.8s
JOHN  Johnston Islan  59.52  85 P      P       10 50 43.5 -1.9
WSAR  Wadi Sarin      61.75 284 P      P       10 51 01.5 +0.8
      comp=Z,3.9nm,0.9s,baz=108,slow=6.5,SNR=4.2
      comp=Z,3.9nm,0.9s
SVW2  Sparrevohn      62.55  32 P      P       10 51 05.8 +0.4
KIRV  Kirov           62.66 325⇓eP     P       10 51 05.6 -0.5
L19K  White Mountain  62.86  31 P      P       10 51 07.7 +0.3
M19K  Big River Lodg  63.09  31 P      P       10 51 09.1 +0.1
K20K  Telida          63.17  30 P      P       10 51 11.3 +1.8
IMAR  Indian Mountai  63.23  27 P      P       10 51 11.8 +1.9
H21K  Melozitna Rive  63.63  27 P      P       10 51 14.8 +2.3
H21K                            IAmb   IAmb    10 51 16.1
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      comp=Z,7.7nm,0.9s
M20K  Styx River      63.68  31 P      P       10 51 14.0 +1.0
I21K  Tanana          64.00  28 P      P       10 51 15.2 +0.4
I21K                            IAmb   IAmb    10 51 28.9
      comp=Z,11nm,1.1s
CAST  Castle Rocks    64.06  30 P      P       10 51 17.7 +2.3
CAST                            IAmb   IAmb    10 51 18.2
      comp=Z,8.9nm,1.0s
BELG  Belogornoye     64.28 318 P      P       10 51 16.4 -0.5
      comp=Z,13nm,0.8s,baz=3.6,slow=6.5,SNR=4.1
      comp=Z,13nm,0.8s
BELG  Belogornoye     64.28 318⇑eP     P       10 51 16.1 -0.8
BELG                            pmax   pmax
      comp=Z,2.0nm,0.8s
MLY   Manley          64.53  28 P      P       10 51 20.2 +1.8
MLY                             IAmb   IAmb    10 51 21.9
      comp=Z,7.6nm,0.8s
H23K  Yukon River     64.97  27 P      P       10 51 23.5 +2.2
H23K                            IAmb   IAmb    10 51 24.7
      comp=Z,12nm,0.9s
I23K  Minto, Yukon-K  65.11  28 P      P       10 51 24.5 +2.4
NEA2  Nenana          65.29  28 P      P       10 51 25.0 +1.7
NEA2                            IAmb   IAmb    10 51 26.2
      comp=Z,12nm,0.9s
MCK   McKinley        65.44  29 P      P       10 51 26.2 +1.9
MCK                             IAmb   IAmb    10 51 27.4
      comp=Z,13nm,1.0s
RND   Reindeer        65.51  29 P      P       10 51 26.2 +1.3
RND                             IAmb   IAmb    10 51 37.7
      comp=Z,9.6nm,0.8s
MDM   Murphy Dome     65.60  28 P      P       10 51 26.5 +1.1
MDM                             IAmb   IAmb    10 51 28.6
      comp=Z,15nm,0.9s
H24K  Noodor Dome     65.65  27 P      P       10 51 27.5 +1.8
H24K                            IAmb   IAmb    10 51 28.8
      comp=Z,10nm,1.1s
COLA  College         65.77  28⇓eP     P       10 51 27.7 +1.3
COLA                            pmax   pmax
      comp=Z,3.0nm,0.8s
AKT   Akhty           66.17 306 eP     P       10 51 28.5 -1.1
AKT                            e               10 51 59.2
AKT                             pmax   pmax
      comp=Z,26nm,1.3s
IL31                  66.20  28 P      P       10 51 29.6 +0.5
IL31                            IAmb   IAmb    10 52 07.5
      comp=Z,18nm,1.6s
ILAR  Eielson Array   66.20  28 P      P       10 51 29.4 +0.2
      comp=Z,1.1nm,0.7s,baz=266,slow=7.4,SNR=12
      comp=Z,1.1nm,0.7s
HDA   Harding Lake    66.22  28 P      P       10 51 30.0 +0.7
HDA                             IAmb   IAmb    10 51 30.6
      comp=Z,7.9nm,1.0s
PRP   Porcupine Dome  66.66  27 P      P       10 51 33.5 +1.3
PRP                             IAmb   IAmb    10 51 46.6
      comp=Z,8.1nm,1.2s
BMAR  Burnt Mountain  66.74  25 P      P       10 51 35.1 +2.5
KLMR  Klimovskoe      67.36 328 eP     P       10 51 31.9 -4.7
KLMR                            AMP            10 51 37.3
      comp=Z,22nm,1.4s
KLMR  Klimovskoe      67.36 328 eP     P       10 51 31.8 -4.8
KLMR                            pmax   pmax
      comp=Z,22nm,1.4s
DOT   Dot Lake        67.60  29 P      P       10 51 39.2 +1.1
VRH   Novokhopyorsk   68.10 317 eP     P       10 51 41.0 -0.5
VRH                             pmax   pmax
      comp=Z,18nm,0.8s
EGAK  Eagle           68.61  27 P      P       10 51 45.6 +1.2
ZEI   Tsey            68.63 308 eP     P       10 51 44.8 -0.4
ZEI                             pmax   pmax
      comp=Z,9.0nm,1.0s
BCAR  Beaver Creek A  68.72  29 P      P       10 51 46.2 +0.9
M27K  Edge Creek, AK  68.84  30 P      P       10 51 46.4 +0.3
KBZ   Khabaz          69.10 309 P      P       10 51 46.4 -1.4
      comp=Z,11nm,0.9s,baz=148,slow=2.2,SNR=13
      comp=Z,11nm,0.9s
KBZ   Khabaz          69.10 309⇓eP     P       10 51 48.9 +1.1
KIV   Kislovodsk      69.19 310 eP     P       10 51 50.0 +1.4
KIV                             pmax   pmax
      comp=Z,14nm,1.1s
LPSR  Galich'ya Gora  69.46 319 eP     P       10 51 48.2 -1.7
LPSR                            pmax   pmax
      comp=Z,10.0nm,0.8s
VORR  Voronezh        69.52 318 P      P       10 51 50.3  0.0
VORR                            pmax   pmax
      comp=Z,20nm,0.8s
I29M  Ogilvie Camp,   69.64  26 P      P       10 51 52.5 +1.7
VSR   Storozhevoye    69.66 318 eP     P       10 51 49.5 -1.7
VSR                             pmax   pmax
      comp=Z,7.0nm,0.6s
SPITS Spitsbergen Ar  69.91 348 P      P       10 51 52.5 +0.2
      comp=Z,13nm,0.9s,baz=67,slow=6.5,SNR=7.7
      comp=Z,13nm,0.9s
EPYK  Eagle Plains    70.00  25 P      P       10 51 54.8 +1.8
EPYK                            IAmb   IAmb    10 51 55.9
      comp=Z,12nm,0.8s
OBN   Obninsk         70.17 322 i P    P       10 51 52.8 -1.4
OBN                            i               10 52 15.5
OBN                             pmax   pmax
      comp=Z,11nm,1.1s
OBN                             MLR    MLR
      comp=Z,121nm,16.0s
INK   Inuvik          70.60  23 P      P       10 51 58.1 +1.5
INK                             IAmb   IAmb    10 52 32.1
      comp=Z,7.3nm,1.0s
ARCES ARCESS Array B  70.83 339 P      P       10 51 58.3 +0.2
      comp=Z,6.1nm,1.0s,baz=57,slow=7.3,SNR=5.7
      comp=Z,6.1nm,1.0s
SOC   Sochi           71.36 310 eP     P       10 51 58.7 -3.0
SOC                             eS     S       11 01 16.0 -2.1
SOC                             eSS    SS      11 05 55.8 +3.5
A36M  Sachs Harbour   71.89  18 P      P       10 52 05.5 +1.1
A36M                            IAmb   IAmb    10 52 10.6
      comp=Z,18nm,0.9s
NOR   Nord            72.17 355 i P    P       10 52 01.8 -4.1
NOR                             IAmb   IAmb    10 52 07.5
      comp=Z,3.6nm,0.7s
RAYN  Ar Rayn         73.11 288 P      P       10 52 12.4 -0.2
RAYN                            IAmb   IAmb    10 52 14.3
      comp=Z,7.1nm,1.1s
C36M  Paulatuk        73.38  20 P      P       10 52 14.2 +1.0
C36M                            IAmb   IAmb    10 52 19.4
      comp=Z,12nm,1.0s
FIA1  FINESS Array S  73.46 331 P      P       10 52 14.8 +1.0
FIA1                            IAmb   IAmb    10 52 15.1
      comp=Z,20nm,0.9s
FINES FINESS Array B  73.46 331 P      P       10 52 14.1 +0.2
      comp=Z,12nm,0.8s,baz=67,slow=5.3,SNR=31
      comp=Z,12nm,0.8s
FINES FINESS Array B  73.46 331 P      P       10 52 13.9 +0.1
FINES FINESS Array B  73.46 331 i P    P       10 52 14.6 +0.7
FINES                           pmax   pmax
      comp=Z,12nm,0.8s
EUNU  Eureka          73.75   6 P      P       10 52 16.0 +0.6
VSU   Vasula          74.25 327d iP    P       10 52 19.5 +0.9
VSU                             pmax   pmax
      comp=Z,53nm,0.9s
MNK   Minsk           75.14 323 i P    P       10 52 23.9 +0.1
      comp=E,1.0nm,0.9s
MNK                             i P    P       10 52 23.9 +0.1
      comp=N,6.0nm,0.9s
MNK                             i P    P       10 52 23.9 +0.1
      comp=Z,17nm,0.9s,baz=68
MNK                             i PcP  PcP     10 52 37.4 +0.1
MNK                             i PP   PP      10 55 11.4 -0.3
MNK                             i PPP  PPP     10 56 57.2
MNK                             i S    S       11 02 02.4 +1.8
MNK                             i SS   SS      11 06 08.9  -40
MNK                             i SSS  SSS     11 10 14.2
MNK                             i LQ   LQ      11 20 25.0
MNK                             i LR   LR      11 26 42.5
MNK                             i LRM  MLR     11 30 38.7
      comp=N,230nm,17.0s
MNK                             i LRM  MLR     11 30 38.7
      comp=Z,103nm,17.0s
MNK                             i LRM  MLR     11 30 39.7
      comp=E,42nm,17.0s
MNK   Minsk           75.14 323 i P    P       10 52 23.9 +0.1
MNK                             i              10 52 37.3
MNK                             i              10 55 11.4
MNK                             i PPP  PPP     10 56 57.1
MNK                             i S    S       11 02 02.3 +1.8
MNK                             pmax   pmax
      comp=N,6.0nm,0.9s
MNK                             pmax   pmax
      comp=E,1.0nm,0.9s
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MNK                                   pmax     pmax
        comp=Z,17nm,0.9s
NIUE    Niue               75.40 119    P       P       10 52 25.6 -0.2
NACGM   Naroch             75.57 324   eP       P       10 52 27.8 +1.5
        comp=Z,16nm,0.8s,baz=68
AKASG   Malin Array Be     75.79 319    P       P       10 52 27.3 -0.3
        comp=Z,2.5nm,0.6s,baz=52,slow=6.0,SNR=22
        comp=Z,2.5nm,0.6s
AKASG   Malin Array Be     75.79 319    P       P       10 52 27.4 -0.2
AKASG                                   IAmb    IAmb    10 52 28.9
        comp=Z,9.9nm,1.4s
AKASG   Malin Array Be     75.79 319  i P       P       10 52 27.8 +0.2
AKASG                                   pmax    pmax
        comp=Z,1.0nm,0.4s
AKBB    Malin Array Si     75.79 319    P       P       10 52 27.4 -0.2
AKBB                                    IAmb    IAmb    10 52 28.5
        comp=Z,8.9nm,0.9s
AKBB    Malin Array Si     75.79 319 deP        P       10 52 27.8 +0.2
DAG     Danmarks Havn      76.44 352  i P       P       10 52 30.5 -0.4
DAG                                     IAmb    IAmb    10 52 31.0
        comp=Z,4.5nm,1.1s
BR131   Keskin Array S     76.93 308    P       P       10 52 35.2 +0.7
BR131                                   IAmb    IAmb    10 52 51.8
        comp=Z,14nm,0.9s
BR131   Keskin Array S     76.93 308 deP        P       10 52 35.0 +0.5
BRTR    Keskin Array B     76.93 308    P       P       10 52 35.1 +0.7
        comp=Z,6.4nm,1.1s,baz=104,slow=3.1,SNR=11
        comp=Z,6.4nm,1.1s
RES     Resolute Bay       77.10  10    P       P       10 52 35.6 +1.0
RES                                     IAmb    IAmb    10 52 40.2
        comp=Z,6.5nm,0.9s
ASF     Jabal al Asfar     77.21 300    P       P       10 52 37.5 +1.4
        comp=Z,5.9nm,0.8s,baz=105,slow=3.2,SNR=8.4
        comp=Z,5.9nm,0.8s
NEEM    North Greenlan     77.91 360  i P       P       10 52 38.2 -1.2
DBG     Daneborg           78.77 351  i P       P       10 52 43.8 -0.1
DBG                                     IAmb    IAmb    10 52 45.3
        comp=Z,4.2nm,1.0s
BUR08   Bucovina Ar. S     79.43 318    P       P       10 52 47.3 -0.8
BURAR   Bucovina Array     79.44 318    P       P       10 52 49.2 +1.0
HFS     Hagfors            79.47 332    P       P       10 52 47.7 -0.2
        comp=Z,5.5nm,0.8s,baz=71,slow=5.3,SNR=10
        comp=Z,5.5nm,0.8s
NC405   NORSAR Array S     79.76 333    P       P       10 52 49.1 -0.5
NC303   NORSAR Array S     79.84 334    P       P       10 52 49.9 -0.1
MLR     Muntele Rosu       79.88 315    P       P       10 52 51.0 +0.3
        comp=Z,4.7nm,1.0s,baz=53,slow=2.4,SNR=3.2
        comp=Z,4.7nm,1.0s
NB201   NORSAR Array S     79.97 334    P       P       10 52 50.4 -0.2
NB2     NORSAR Subarra     80.00 334    P       P       10 52 51.2 +0.3
        comp=Z,2.1nm,0.6s,baz=55,slow=5.6
NOA     NORSAR Array B     80.00 334    P       P       10 52 50.9  0.0
        comp=Z,5.5nm,0.8s,baz=54,slow=5.5,SNR=23
        comp=Z,5.5nm,0.8s
NC204   NORSAR Array S     80.05 334    P       P       10 52 51.7 +0.6
YKA     Yellowknife Ar     80.26  24    P       P       10 52 53.1 +1.0
        comp=Z,1.4nm,0.8s,baz=301,slow=5.3,SNR=22
        comp=Z,1.4nm,0.8s
YKA     Yellowknife Ar     80.26  24  i P       P       10 52 53.0 +0.8
YKA                                     pmax    pmax
        comp=Z,1.0nm,0.8s
SUMG    Summit             82.30 356  i P       P       10 53 04.0 +0.6
SUMG                                    IAmb    IAmb    10 53 20.2
        comp=Z,14nm,1.1s
VYHS    Vyhne              82.83 320   eP       P       10 53 07.8 +1.7
VYHS                                   e                10 53 21.4
VYHS    Vyhne              82.83 320   eP       P       10 53 07.8 +1.7
VYHS                                   e                10 53 21.4
VRAC    Vranov             83.70 322    P       P       10 53 12.1 +1.5
        comp=Z,4.0nm,0.6s,baz=79,slow=11,SNR=3.5
        comp=Z,4.0nm,0.6s
BRG     Berggiesshubel     84.32 324   eP       P       10 53 15.8 +2.1
BRG                                     Amp             10 53 16.1
        comp=Z,7.0nm,0.9s
BRG     Berggiesshubel     84.32 324   eP       P       10 53 15.8 +2.1
BRG                                     pmax    pmax
        comp=Z,7.0nm,0.9s
CLL     Collm              84.58 325  i P       P       10 53 14.6 -0.4
KHC     Kasperske Hory     85.47 323⇑eP       P       10 53 20.8 +1.3
KHC                                     pmax    pmax
        comp=Z,4.0nm,1.0s
GERES   GERESS Array B     85.56 322    P       P       10 53 21.0 +0.9
        comp=Z,1.8nm,0.8s,baz=54,slow=3.4,SNR=12
        comp=Z,1.8nm,0.8s
GERES   GERESS Array B     85.56 322    P       P       10 53 20.1 +0.1
ICESG   Greenland Ices     85.81 355  i P       P       10 53 24.7 +3.5
ICESG                                   IAmb    IAmb    10 53 37.8
        comp=Z,12nm,1.0s
DY2G    Dye2               88.80 357  i P       P       10 53 36.9 +1.4
DY2G                                    IAmb    IAmb    10 53 52.3
        comp=Z,3.2nm,0.7s
DAVOX   Davos/Dischmat     88.85 322    P       P       10 53 36.5 +0.3
        comp=Z,2.6nm,0.8s,baz=24,slow=12,SNR=3.7
        comp=Z,2.6nm,0.8s
FCC     Fort Churchill     90.02  20    P       P       10 53 41.7 +0.6
FCC                                     IAmb    IAmb    10 53 49.4
        comp=Z,5.3nm,0.8s
FFC     Flin Flon          90.33  26    P       P       10 53 43.5 +0.8
FFC                                     IAmb    IAmb    10 53 52.4
        comp=Z,6.7nm,1.0s
NRS     Narsarsuaq         94.06 356  i P       P       10 54 06.0 +6.2
NRS                                     IAmb    IAmb    10 54 08.7
        comp=Z,38nm,0.9s
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*IDC **31** 10:50:57.6±1.0, 55°.20S×28°.34W, h0km, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=48.0km s-min=30.6km az=81.0*

*NEIC **31** 10:50:57.8±1.5, 55°.3S±0°.2×28°.6W±0°.2, h10km±2km, mb4.5/9, Error ellipse: s-maj=32.8km s-min=12.5km az=39.0*

ISC 31 10:50:58.5±0.9**, 55°.3S**±0°.1×**28°.7W**±0°.1**, h10**km**, n16, σ1ˢ08**/16**, mb4.1**/6**, South Sandwich Islands region**

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Code    Station Name         Δ°  AZ°     Phase ID            Time      Res
                                        Op      ISC       h  m  s     ISC
HOPE    Hope Point          4.62 279    Pn      Pn      10 52 09.0 +0.7
ESPZ    Base Esperanza     16.43 229    Pn      Pn      10 54 48.5 -0.4
ESPZ                                    IAmb    IAmb    10 55 16.1
        comp=Z,86nm,1.3s
EFI     East Falkland      17.78 270            Pn      10 55 05.6 -0.2
EFI                                     IAmb    IAmb    10 55 25.0
        comp=Z,59nm,1.3s
PMSA    Palmer Station     19.77 227    P       P       10 55 28.8 +0.4
SNAA    Sanae              19.79 156    P       P       10 55 27.4 -1.2
MG02    Cerro Sombrero     23.69 259    P       P       10 56 09.3 -0.9
TRQA    Tornquist          28.23 294    P       P       10 56 50.7 -0.7
TRQA                                    IAmb    IAmb    10 57 00.6
        comp=Z,7.8nm,1.3s
PLCA    Paso Flores        31.02 280    P       P       10 57 15.6 -0.6
PLCA                                    IAmb    IAmb    10 57 38.8
        comp=Z,5.2nm,1.3s
QSPA    South Pole Qui     34.97 180    P       P       10 57 51.9 +1.3
        comp=Z,0.8nm,0.6s,baz=198,slow=2.6,SNR=9.3
        comp=Z,0.8nm,0.6s
QSPA    South Pole Qui     34.97 180    P       P       10 57 51.4 +0.9
BO02    Sierra Bellavi     35.38 288    P       P       10 57 51.8 -2.5
BO02                                    IAmb    IAmb    10 58 33.7
        comp=Z,8.3nm,1.3s
LPAZ    La Paz             49.23 306    P       P       10 59 49.0 +1.3
        comp=Z,1.0nm,0.6s,baz=162,slow=3.2,SNR=5.5
        comp=Z,1.0nm,0.6s
TORD    Torodi Ar. Bea     72.83  31    P       P       11 02 26.9 -0.3
        comp=Z,0.7nm,0.7s,baz=202,slow=7.5,SNR=4.1
YKA     Yellowknife Ar    135.03 319    PKP     PKPdf   11 10 17.0 +0.6
        comp=Z,0.2nm,0.8s,baz=127,slow=1.9,SNR=2.5
ILAR    Eielson Array     148.96 313    PKPbc   PKPbc   11 10 45.6 +0.5
        comp=Z,1.0nm,0.7s,baz=117,slow=1.8,SNR=13
SONM    Songino Array     151.54  86    PKPbc   PKPbc   11 10 51.7 -0.3
        comp=Z,0.5nm,0.6s,baz=223,slow=3.8,SNR=3.7
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*IDC **31** 10:52:45.1±0.5, 19°.79N×120°.31E, h0km, mb4.2/33, mbtmp4.2/35, ML4.2/2, MS3.6/11, Error ellipse: s-maj=17.0km s-min=12.2km az=75.0*

*NEIC **31** 10:52:47.8±2.1, 19°.84N±0°.05×120°.12E±0°.03, h10km±1km, mb4.8/106, Error ellipse: s-maj=10.0km s-min=2.8km az=210.0*

*MAN **31** 10:52:48.5, 19°.71N×120°.25E, h21km, mb5.3, ML4.2, MS4.4*

*BJI **31** 10:52:51.8±0.0, 20°.23N×119°.83E, h10km, mb4.5/22, mB4.7/10, ML4.1/2, Ms4.2/9, Ms7 3.9/10*

ISC 31 10:52:47.9±2.9**, 19°.77N**±0°.03×**120°.17E**±0°.04**, h16**km±18km**, n242, σ1ˢ46**/259**, mb4.7**/94**, MS3.6**/10**, 11C-10D, Philippine Islands region**

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Code    Station Name         Δ°  AZ°     Phase ID            Time      Res
                                        Op      ISC       h  m  s     ISC
PIP     Pasuquin            1.49 163⇑iP        Pn      10 53 12.4 -1.6
PIP                                   i S       Sn      10 53 30.3 -2.8
BBP     Basco               1.81  68⇓eP        Pn      10 53 18.2 -0.2
BBP                                    eS       Sn      10 53 40.6 -0.5
SIPP    Brgy, Tapao         1.85 172⇓eP        Pn      10 53 17.9 -1.0
SIPP                                  i S       Sn      10 53 43.3 +1.3
SGCP    Gonzaga             2.33 130⇑eP        Pn      10 53 24.7 -0.9
SGCP                                   eS       Sn      10 53 52.4 -1.5
CVP     Callao Caves        2.58 142⇑iP        Pn      10 53 29.3 +0.3
CVP                                   i S       Sg      10 55 00.7 +50
SAMP    Sagada Mountai      2.76 165⇓eP        Pn      10 53 30.6 -0.8
SAMP                                   eS       Sn      10 54 03.4 -1.0
TWGBT   Beinan              3.15  15    P       Pn      10 53 37.2 +0.3
TWGBT   Beinan              3.15  15    P       Pn      10 53 36.6 -0.3
TWG     Pinlang             3.15  15            Pn      10 53 36.6 -0.3
CAUP    Cauayan             3.21 151⇓eP        Pn      10 53 39.9 +2.2
CAUP                                   eS       Sb      10 54 26.2 +2.7
BOLP    Bolinao             3.37 184⇑eP        Pn      10 53 40.7 +0.8
BOLP                                   eS       Sn      10 54 20.6 +1.0
PALP    Palanan             3.44 141⇑eP        Pn      10 53 42.1 +1.4
PALP                                   eS       Sn      10 54 23.6 +2.5
TPUB    Ta-pu               3.54   7    Pn      Pn      10 53 41.0 -1.2
TPUB    Ta-pu               3.54   7    P       Pn      10 53 41.2 -1.0
TPUB    Ta-pu               3.54   7    P       Pn      10 53 41.3 -1.0
SMPP    San Manuel, Pa      3.63 172⇑eP        Pn      10 53 42.6 -0.8
SMPP                                   eS       Sn      10 54 23.7 -2.2
YULB    Yu-li               3.76  16    Pn      Pn      10 53 44.1 -1.1
YULB    Yu-li               3.76  16    P       Pn      10 53 45.9 +0.7
YULB    Yu-li               3.76  16    P       Pn      10 53 45.2  0.0
SSLB    Suanglung           4.07  10            Pn      10 53 48.5 -1.0
SSLB    Suanglung           4.07  10    P       Pn      10 53 49.0 -0.5
SSLB    Suanglung           4.07  10    P       Pn      10 53 48.9 -0.5
BALP    Baler               4.22 161⇑eP        Pn      10 53 52.9 +1.3
BALP                                   eS       Sn      10 54 42.9 +2.5
PCPH    Palayan             4.27 168⇓eP        Pn      10 53 53.2 +0.9
PCPH                                   eS       Sn      10 54 43.2 +1.4
NACB    Ninganchiao         4.58  16            Pn      10 53 56.2 -0.3
NACB    Ninganchiao         4.58  16    P       Pn      10 53 57.1 +0.5
NACB    Ninganchiao         4.58  16    P       Pn      10 53 57.0 +0.5
KNMB    Chin-men Tao        4.96 341            Pn      10 54 00.4 -1.3
YHNB    Yeheng              5.01  13    Pn      Pn      10 54 02.4 -0.1
YHNB    Yeheng              5.01  13    P       Pn      10 54 02.9 +0.5
TATO    Taipei              5.33  13    Pn      Pn      10 54 04.4 -2.4
MACP    Maragondon, Ca      5.50 174⇓eP        Pn      10 54 13.6 +4.5
TGY     Tagaytay City       5.68 172    Pn      Pn      10 54 12.4 +0.7
        60nm,0.3s,baz=212,slow=4.7,SNR=2.3
TGY                                     Sn      Sn      10 55 21.0 +4.4
        44nm,0.3s,baz=166,slow=9.5,SNR=1.3
TGY                                     LR      LR      10 56 43.0
        comp=Z,889nm,19.4s,baz=32,slow=42
        174nm,0.4s
TGY     Tagaytay City       5.68 172⇑eP        Pn      10 54 09.1 -2.6
LQP     Lukban              5.77 167⇑eP        Pn      10 54 13.4 +0.4
LQP                                    eS       Sn      10 55 22.9 +3.9
LUBP    Lubang              6.00 179⇑eP        Pn      10 54 17.8 +1.8
HKPS    Hong Kong Po S      6.16 295    Pn      Pn      10 54 16.7 -1.5
SJMP    San Jose            7.32 173⇓eP        Pn      10 54 36.0 +1.9
WHN     Wuhan              11.95 335    P       Pn      10 55 36.5 -1.1
WHN                                     S       Sn      10 57 56.0 +5.3
DAV     Davao City (W)     13.67 157    LR      LR      11 02 08.5
        comp=Z,442nm,21.2s,baz=9.0,slow=41
ENH     Enshi              14.25 319    Pn      Pn      10 56 06.7 -2.3
MYLDM   Lahad Datu         14.59 187    Pn      Pn      10 56 14.1 +0.3
LYN     LuoYang            16.23 337⇓iP        P       10 56 41.0 +2.7
LYN                                     pmax    pmax
        comp=Z,31nm,1.0s
LYN                                     LR      LR
        comp=N,370nm,12.6s
LYN                                     LR      LR
        comp=E,200nm,10.8s
LYN                                     LR      LR
        comp=Z,270nm,9.6s
XAN     Xi'an              17.38 327  ⇑P        Pn      10 56 50.0 +0.2
XAN                                     pmax    pmax
        comp=Z,7.0nm,0.8s
XAN                                     LR      LR
        comp=Z,280nm,12.4s
XAN                                     LR      LR
        comp=Z,260nm,12.1s
XAN                                     LR      LR
        comp=Z,360nm,13.3s
HNS     HongShan           18.21 346  ⇓P        P       10 57 04.0 +3.9
HNS                                     pmax    pmax
        comp=Z,18nm,0.8s
PZH     PanZhiHua          18.22 295    P       Pn      10 57 01.5 +1.2
PZH                                     pmax    pmax
        comp=Z,10.0nm,1.0s
TOLI2   Tolitoli           18.55 178    P       P       10 57 05.0 +1.0
KSAR    Wonju Array Be     18.86  19    P       P       10 57 04.8 -2.4
KSRS    Korea Array        18.88  19    P       P       10 57 04.7 -2.8
        comp=Z,0.1nm,0.3s,baz=207,slow=12,SNR=1.6
KSRS                                    LR      LR      11 05 14.4
        comp=Z,92nm,18.9s,baz=210,slow=40
        comp=Z,0.4nm,0.4s
SBUM    Sibu               18.88 205    P       P       10 57 06.9 -0.8
PHRA    Phrae              18.89 269    P       P       10 57 07.2 -0.5
PHRA                                    IAmb    IAmb    10 57 13.2
        comp=Z,79nm,1.1s
KS19    Wonju Array Si     18.91  19    P       P       10 57 05.4 -2.4
GTOI    Gorontalo          19.21 171    P       P       10 57 10.2 -1.1
        comp=Z,15nm,0.8s
MRSI    Marisa             19.25 175    P       P       10 57 12.2 +0.6
        comp=Z,36nm,1.0s
MPSI    Mapaga             19.31 181    P       P       10 57 13.6 +1.3
        comp=Z,13nm,0.7s,comp=Z,832nm
CHTO    Chiang Mai         20.06 271    P       P       10 57 19.1 -1.5
CMAR    Chiang Mai Arr     20.10 270    P       P       10 57 21.3 +0.2
        comp=Z,5.1nm,1.1s,baz=76,slow=9.6,SNR=10.0
CMAR                                    PcP     PcP     11 01 37.5 +1.3
        comp=Z,2.6nm,0.7s,baz=65,slow=0.7,SNR=16
        comp=Z,5.1nm,1.1s
CMAR    Chiang Mai Arr     20.10 270    P       P       10 57 19.9 -1.1
TNCH    TengChong          20.68 289   eP       P       10 57 29.3 +1.8
TNCH                                    pP      Pn      10 57 32.0 +2.1
TNCH                                    S       S       11 01 14.8 -3.5
TNCH                                    pmax    pmax
        comp=Z,90nm,0.6s
TNCH                                    pmax    pmax
        comp=Z,150nm,5.0s
TNCH                                    LR      LR
        comp=Z,350nm,9.9s
TNCH                                    LR      LR
        comp=Z,260nm,12.8s
TNCH                                    LR      LR
        comp=Z,350nm,13.3s
LUWI    Luwuk              20.83 173    P       P       10 57 29.1 +0.2
LUWI                                    IAmb    IAmb    10 57 55.4
        comp=Z,61nm,1.0s
LUWI    Luwuk              20.83 173    P       P       10 57 26.6 -2.3
        comp=Z,65nm,1.0s
JCJ     Chichijima         21.46  66    P       P       10 57 35.6  0.0
INU     Inuyama            21.49  40    P       P       10 57 34.1 -1.8
LBMI    Labuha             21.51 160    P       P       10 57 38.2 +1.9
        comp=Z,36nm,0.8s,comp=Z,1μm
LZH     Lanzhou            21.68 322  ⇓P        P       10 57 40.8 +2.6
LZH                                     pP      pwP     10 57 49.0 +2.0
LZH                                     pmax    pmax
        comp=Z,33nm,1.5s
JGF     Kuroka             21.86  40    P       P       10 57 39.2 -0.8
JGF                                     IAmb    IAmb    10 57 41.6
        comp=Z,23nm,1.0s
SANI    Sanana             22.42 165    P       P       10 57 41.7 -4.3
        comp=Z,43nm,0.9s
SRIT    Nakonsritamara     22.79 244    P       P       10 57 50.3 +0.3
SRIT                                    IAmb    IAmb    10 57 55.7
        comp=Z,28nm,1.2s
MAJO    Matsushiro         23.00  40    P       P       10 57 51.6 -0.5
MJAR    Matsushiro Arr     23.00  40    P       P       10 57 50.2 -1.9
        comp=Z,1.7nm,0.9s,baz=200,slow=6.7,SNR=2.9
MJAR                                    LR      LR      11 07 21.2
        comp=Z,81nm,18.9s,baz=105,slow=38
        comp=Z,1.7nm,0.9s
MJB9    Matsu-Tunnel       23.00  40    P       P       10 57 52.0 -0.1
SPSI    Sidrap Palu        23.58 181    P       P       10 58 11.8 +14
BBKI    Banjar Baru        23.67 193    P       P       10 57 57.5 -1.3
        comp=Z,40nm,0.8s
KULM    Kulim              23.83 235    P       P       10 57 59.1 -1.4
NLAI    Namlea             23.85 163    P       P       10 58 01.3 +0.7
        comp=Z,64nm,1.2s
IPM     Ipoh               24.06 233    P       P       10 58 02.6  0.0
GUMO    Guam               24.43 101    LR      LR      11 06 15.2
        comp=Z,88nm,21.0s,baz=346,slow=33
KAPI    Kappang            24.63 181    LR      LR      11 09 01.5
        comp=Z,80nm,18.8s,baz=48,slow=40
FAKI    Fak Fak            25.47 151    P       P       10 58 15.4  0.0
FAKI                                    IAmb    IAmb    10 58 25.9
        comp=Z,16nm,0.8s
FAKI    Fak Fak            25.47 151    P       P       10 58 10.1 -5.3
USA0B   Ussuriysk Arra     26.29  19    P       P       10 58 20.4 -2.2
USRK    Ussuriysk Ar.      26.29  19    P       P       10 58 19.9 -2.6
        comp=Z,1.7nm,0.7s,baz=182,slow=4.2,SNR=2.9
        comp=Z,1.7nm,0.7s
USRK    Ussuriysk Ar.      26.29  19    P       P       10 58 20.2 -2.3
SHL     Shillong           26.70 288    P       P       10 58 26.7  0.0
SHL                                     IAmb    IAmb    10 58 37.1
        comp=Z,16nm,1.2s
SONM    Songino Array      30.15 341    P       P       10 58 57.7 +0.6
        comp=Z,0.3nm,0.4s,baz=134,slow=4.2,SNR=3.1
        comp=Z,0.3nm,0.4s
KLR     Kul'dur            30.83  15    P       P       10 59 01.9 -1.1
        comp=Z,1.2nm,0.8s,baz=237,slow=5.4,SNR=5.6
KLR                                     LR      LR      11 11 23.4
        comp=Z,118nm,19.3s,baz=213,slow=36
        comp=Z,1.2nm,0.8s
HEH     HeiHe              30.96   9   eP       P       10 59 08.5 +4.4
HEH                                     pmax    pmax
        comp=Z,2.0nm,0.7s
FITZ    Fitzroy Crossi     38.01 172    P       P       11 00 04.5 -0.9
PALK    Pallekele          40.22 258    P       P       11 00 23.6 -0.5
        comp=Z,2.2nm,0.6s,baz=162,slow=13,SNR=2.0
        comp=Z,2.2nm,0.6s
PALK    Pallekele          40.22 258    P       P       11 00 23.9 -0.2
COEN    Coen               40.44 144    P       P       11 00 25.5 -0.3
COEN                                    IAmb    IAmb    11 00 35.6
        comp=Z,12nm,0.9s
MBWA    Marble Bar         40.67 181    P       P       11 00 27.3 -0.3
MBWA                                    IAmb    IAmb    11 00 35.9
        comp=Z,22nm,1.4s
MK31    Makanchi Array     40.98 320    P       P       11 00 28.7 -1.3
MKAR    Makanchi Array     40.98 320    P       P       11 00 29.4 -0.6
        comp=Z,0.5nm,0.5s,baz=120,slow=9.1,SNR=8.2
MKAR                                    PcP     PcP     11 02 30.3 +0.3
        comp=Z,1.3nm,0.8s,baz=104,slow=5.1,SNR=4.3
        comp=Z,0.5nm,0.5s
MKAR    Makanchi Array     40.98 320    P       P       11 00 28.7 -1.2
PSA00   Pilbara Seismi     41.09 180    P       P       11 00 30.5 -0.5
MAKZ    Makanchi           41.17 320    P       P       11 00 30.8 -0.8
WB0     Warramunga Arr     41.69 160    P       P       11 00 35.3 -0.6
WB0                                     IAmb    IAmb    11 00 36.5
        comp=Z,21nm,1.1s
WRAB    Tennant Creek      41.83 160    P       P       11 00 36.8 -0.4
WRAB                                    IAmb    IAmb    11 00 37.9
        comp=Z,29nm,1.1s
WRA     Warramunga Arr     41.83 160    P       P       11 00 35.5 -1.7
        comp=Z,14nm,0.9s,baz=341,slow=9.0,SNR=47
WRA                                     PcP     PcP     11 02 33.4 +0.3
        comp=Z,4.4nm,0.6s,baz=345,slow=3.5,SNR=14
        comp=Z,14nm,0.9s
WRA     Warramunga Arr     41.83 160    P       P       11 00 36.8 -0.4
WB2     Warramunga Arr     41.84 160    P       P       11 00 36.8 -0.4
TARG    Taragay, Kyrgy     41.95 311    P       P       11 00 35.6 -2.9
KSH     Kashi              42.66 307    P       P       11 00 49.0 +5.0
KSH                                     pP      pwP     11 00 55.3 +2.1
KSH                                     pmax    pmax
        comp=Z,6.0nm,0.4s
KSH                                     LR      LR
        comp=Z,390nm,13.7s
KSH                                     LR      LR
        comp=Z,180nm,13.1s
KSH                                     LR      LR
        comp=Z,140nm,13.1s
YAK     Yakutsk            42.75   7    LR      LR      11 20 25.4
        comp=Z,49nm,18.5s,baz=264,slow=39
ZAA0    Zalesovo Array     43.52 330    P       P       11 00 49.7 -0.8
ZALV    Zalesovo Beam      43.52 330    P       P       11 00 49.6 -0.8
        comp=Z,0.6nm,0.3s,baz=112,slow=6.6,SNR=4.9
ZALV                                    LR      LR      11 19 41.3
        comp=Z,91nm,19.0s,baz=88,slow=37
        comp=Z,0.6nm,0.3s
ZALV    Zalesovo Beam      43.52 330    P       P       11 00 49.0 -1.5
KURK    Kurchatov          44.96 323    P       P       11 01 02.9 +0.8
KURK                                    IAmb    IAmb    11 01 14.3
        comp=Z,13nm,0.9s
KURBB   Kurchatov Arra     44.97 323    P       P       11 01 03.1 +0.9
        comp=Z,2.1nm,0.6s,baz=123,slow=7.8,SNR=20
        comp=Z,2.1nm,0.6s
AS31    Alice Springs      45.20 162    P       P       11 01 04.4 +0.1
AS31                                    IAmb    IAmb    11 01 15.1
        comp=Z,4.1nm,0.6s
ASAR    Alice Springs      45.20 162    P       P       11 01 03.7 -0.6
        comp=Z,8.8nm,0.8s,baz=339,slow=6.4,SNR=122
        comp=Z,8.8nm,0.8s
ASAR    Alice Springs      45.20 162    P       P       11 01 04.4 +0.1
MA2     Magadan            45.42  21    LR      LR      11 21 50.4
        comp=Z,73nm,18.0s,baz=68,slow=38
GAR     Garm               46.86 305    P       P       11 01 17.6 +0.1
KK31    Karatay Array      47.52 311            P       11 01 24.3 +1.9
KKAR    Karatay Array      47.52 311    P       P       11 01 21.3 -1.1
SEY     Seymchan           48.44  19    P       P       11 01 29.1 -0.1
        comp=Z,2.4nm,0.8s,baz=229,slow=7.5,SNR=9.5
SEY                                     PcP     PcP     11 02 55.9 +0.6
        comp=Z,2.1nm,0.7s,baz=220,slow=4.0,SNR=5.4
        comp=Z,2.4nm,0.8s
MORW    Morawa             48.71 185    P       P       11 01 30.9 -0.7
HNR     Honiara            48.74 123    P       P       11 01 31.9 -0.3
KAAM    Kaadhehdhoo        49.98 253    P       P       11 01 40.7 -1.0
BVAR    Borovoye Array     50.56 323    P       P       11 01 46.6 +1.1
        comp=Z,0.7nm,0.5s,baz=99,slow=9.2,SNR=4.0
BVAR                                    PcP     PcP     11 03 03.8 +0.5
        comp=Z,2.1nm,0.7s,baz=105,slow=3.4,SNR=5.1
        comp=Z,0.7nm,0.5s
BRVK    Borovoye           50.63 323    P       P       11 01 45.6 -0.5
BRVK                                    IAmb    IAmb    11 01 59.0
        comp=Z,5.9nm,0.9s
FORT    Forrest            50.82 171    P       P       11 01 49.7 +2.1
TIXI    Tiksi              52.14   3    P       P       11 01 56.7 -0.4
        comp=Z,1.9nm,0.3s,baz=270,slow=7.0,SNR=3.3
        comp=Z,1.9nm,0.3s
NWAO    Narrogin (SRO)     52.47 183    P       P       11 01 59.1 -0.8
NRIK    Noril'sk           53.43 346    P       P       11 02 06.6  0.0
        comp=Z,2.9nm,0.6s,baz=115,slow=6.3,SNR=2.4
        comp=Z,2.9nm,0.6s
NRIK    Noril'sk           53.43 346    P       P       11 02 06.4 -0.2
BBOO    Buckleboo          54.44 164    P       P       11 02 15.0 +0.5
STKA    Stephens Creek     55.30 158    P       P       11 02 20.6 -0.1
        comp=Z,5.5nm,0.8s,baz=335,slow=8.2,SNR=7.0
        comp=Z,5.5nm,0.8s
STKA    Stephens Creek     55.30 158    P       P       11 02 20.2 -0.5
ABKAR   Akbulak array      55.92 317    P       P       11 02 24.6 -0.4
BILL    Bilibino           56.14  19    P       P       11 02 26.3  0.0
GEYT    Alibeck            56.30 303    P       P       11 02 28.9 +0.9
        comp=Z,1.2nm,0.5s,baz=124,slow=9.4,SNR=1.8
        comp=Z,1.2nm,0.5s
GEYT    Alibeck            56.30 303    P       P       11 02 28.1 +0.1
GEYT                                    IAmb    IAmb    11 02 40.1
        comp=Z,6.8nm,0.9s
GYA0B   ALIBECK ARRAY      56.30 303    P       P       11 02 28.1 +0.1
GYA0B                                   IAmb    IAmb    11 02 40.1
        comp=Z,6.7nm,0.9s
MIDW    Midway             57.15  69    P       P       11 02 34.1  0.0
AKTO    Aktyubinsk         57.33 318    P       P       11 02 36.1 +1.0
        comp=Z,0.8nm,0.6s,baz=47,slow=6.6,SNR=2.2
        comp=Z,0.8nm,0.6s
ARU     Arti               58.11 325    P       P       11 02 41.4 +1.0
        comp=Z,1.4nm,0.3s,baz=106,slow=15,SNR=1.3
        comp=Z,1.4nm,0.3s
TOO     Toolangi           61.81 157    P       P       11 03 07.6 +1.6
TOO                                     IAmb    IAmb    11 03 08.0
        comp=Z,6.1nm,0.7s
TNA     Tin City           64.70  26    P       P       11 03 26.7 +1.9
TNA                                     IAmb    IAmb    11 03 45.1
        comp=Z,3.9nm,1.1s
ANM     Nome               65.66  27    P       P       11 03 33.1 +2.0
ANM                                     IAmb    IAmb    11 03 34.0
        comp=Z,5.8nm,1.0s
ONI     Oni                67.27 309    P       P       11 03 41.0 -0.8
ONI                                     IAmb    IAmb    11 03 56.5
        comp=Z,6.4nm,0.8s
KBZ     Khabaz             67.55 310    P       P       11 03 42.3 -1.2
        comp=Z,5.5nm,1.0s,baz=179,slow=4.4,SNR=4.4
        comp=Z,5.5nm,1.0s
ROCAM   Rodrigues Isla     68.11 238    P       P       11 03 46.4 -0.9
RAYN    Ar Rayn            68.78 288    P       P       11 03 52.3 +0.6
A21K    Barrow             69.26  20    P       P       11 03 55.4 +1.7
O18K    Koktuh Hills       70.44  32    P       P       11 04 03.1 +1.9
IMAR    Indian Mountai     70.55  26    P       P       11 04 03.3 +1.6
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K20K	Telida	70.64	28	P	P	11 04 04.3	+1.9
H21K	Melozitna Rive	70.96	26	P	P	11 04 06.3	+2.0
H21K				IAmb	IAmb	11 04 06.6	
	comp=Z,8.0nm,0.9s						
M20K	Styx River	71.23	30	P	P	11 04 06.0	-0.1
P19K	Oil Pt	71.46	32	P	P	11 04 07.1	-0.4
CAST	Castle Rocks	71.53	28	P	P	11 04 09.3	+1.5
CAST				IAmb	IAmb	11 04 10.1	
	comp=Z,9.0nm,0.8s						
PPLA	Purkeypile	71.54	29	P	P	11 04 09.7	+1.7
PPLA				IAmb	IAmb	11 04 09.7	
	comp=Z,8.9nm,0.8s						
MLY	Manley	71.90	27	P	P	11 04 11.2	+1.2
MLY				IAmb	IAmb	11 04 12.4	
	comp=Z,6.7nm,0.9s						
BPAW	Bear Paw Mtn.	71.92	28	P	P	11 04 08.8	-1.3
BPAW				IAmb	IAmb	11 04 12.6	
	comp=Z,15nm,1.3s						
SKT	Skwentna	71.97	30	P	P	11 04 11.0	+0.6
SKT				IAmb	IAmb	11 04 15.3	
	comp=Z,15nm,1.3s						
H23K	Yukon River	72.28	26	P	P	11 04 11.8	-0.5
I23K	Minto, Yukon-K	72.46	26	P	P	11 04 13.5	+0.3
I23K				IAmb	IAmb	11 04 15.1	
	comp=Z,5.8nm,1.1s						
NEA2	Nenana	72.67	27	P	P	11 04 14.9	+0.3
NEA2				IAmb	IAmb	11 04 16.4	
	comp=Z,5.8nm,0.7s						
MCK	McKinley	72.87	28	P	P	11 04 15.7	-0.1
H24K	Noodor Dome	72.95	25	P	P	11 04 18.1	+1.8
H24K				IAmb	IAmb	11 04 31.5	
	comp=Z,17nm,1.5s						
MDM	Murphy Dome	72.96	26	P	P	11 04 17.7	+1.4
MDM				IAmb	IAmb	11 04 18.6	
	comp=Z,11nm,0.9s						
RND	Reindeer	72.97	28	P	P	11 04 17.2	+0.7
RND				IAmb	IAmb	11 04 19.0	
	comp=Z,9.2nm,1.0s						
WRH	Wood River Hil	73.11	27	P	P	11 04 18.2	+1.0
WRH				IAmb	IAmb	11 04 19.6	
	comp=Z,4.9nm,0.7s						
TCOL	CIGO, UAF Yank	73.13	26	P	P	11 04 18.1	+0.8
TCOL				IAmb	IAmb	11 04 44.2	
	comp=Z,13nm,1.4s						
COLA	College	73.14	26	P	P	11 04 18.1	+0.8
COLA				IAmb	IAmb	11 04 44.2	
	comp=Z,14nm,1.5s						
PMR	Palmer	73.16	30	P	P	11 04 17.3	-0.2
PMR				IAmb	IAmb	11 04 18.4	
	comp=Z,9.9nm,0.8s						
IL31		73.56	27	P	P	11 04 20.1	+0.3
ILAR	Eielson Array	73.56	27	P	P	11 04 18.4	-1.5
	comp=Z,1.4nm,0.8s,baz=278,slow=5.6,SNR=17						
	comp=Z,1.4nm,0.8s						
ILAR	Eielson Array	73.56	27	P	P	11 04 19.8	-0.1
SPITS	Spitsbergen Ar	73.58	348	P	P	11 04 20.0	+0.2
	comp=Z,7.0nm,1.0s,baz=106,slow=6.2,SNR=4.8						
	comp=Z,7.0nm,1.0s						
BMAR	Burnt Mountain	73.93	24	P	P	11 04 23.6	+1.5
RIDG	Independent Ri	74.65	27	P	P	11 04 26.1	-0.2
RIDG				IAmb	IAmb	11 04 27.9	
	comp=Z,12nm,1.1s						
FINES	FINESS Array B	74.78	330	P	P	11 04 27.4	+0.5
	comp=Z,1.5nm,0.6s,baz=72,slow=6.2,SNR=2.7						
	comp=Z,1.5nm,0.6s						
SCRK	Sand Creek	74.97	27	P	P	11 04 28.8	+0.6
SCRK				IAmb	IAmb	11 04 46.0	
	comp=Z,16nm,1.5s						
I26K	Coal Creek Min	74.98	26	P	P	11 04 28.9	+0.8
I26K				IAmb	IAmb	11 04 29.7	
	comp=Z,8.2nm,0.8s						
DOT	Dot Lake	75.01	27	P	P	11 04 29.1	+0.8
BRTR	Keskin Array B	75.05	307	P	P	11 04 29.4	+0.2
	comp=Z,0.6nm,0.6s,baz=123,slow=3.6,SNR=2.5						
	comp=Z,0.6nm,0.6s						
N25K	Chitina, Valde	75.27	29	P	P	11 04 30.8	+0.8
MENT	Mentasta	75.34	28	P	P	11 04 30.6	+0.4
MENT				IAmb	IAmb	11 04 34.4	
	comp=Z,9.0nm,1.2s						
L26K	Log Cabin Wild	75.48	28	P	P	11 04 31.7	+0.6
L26K				IAmb	IAmb	11 04 33.3	
	comp=Z,4.9nm,0.8s						
AKASG	Malin Array Be	75.55	319	P	P	11 04 31.1	-0.5
	comp=Z,1.0nm,0.5s,baz=59,slow=5.4,SNR=6.4						
	comp=Z,1.0nm,0.5s						
AKBB	Malin Array Si	75.55	319	P	P	11 04 32.0	+0.3
AKBB				IAmb	IAmb	11 04 32.7	
	comp=Z,6.6nm,0.8s						
GLB	Gilahina Butte	75.68	30	P	P	11 04 33.0	+0.8
KIP	Kipapa	75.70	72	P	P	11 04 32.5	-0.6
K27K	Chicken	75.77	27	P	P	11 04 34.2	+1.6
K27K				IAmb	IAmb	11 04 53.2	
	comp=Z,12nm,1.2s						
M26K	Nabesna, AK	75.80	28	P	P	11 04 34.0	+1.1
M26K				IAmb	IAmb	11 05 00.0	
	comp=Z,20nm,1.5s						
VRDI	Verde Repeater	75.90	30	P	P	11 04 34.4	+0.7
EGAK	Eagle	75.94	26	P	P	11 04 34.5	+0.9
EGAK				IAmb	IAmb	11 04 35.1	
	comp=Z,3.6nm,0.8s						
NACGM	Naroch	75.98	324	*e*P	P	11 04 36.3	+2.3
	comp=Z,29nm,0.9s,baz=76						
MCARA	McCarthy VSAT	76.06	30	P	P	11 04 34.9	+0.6
L27K	Beaver Creek,	76.14	28	P	P	11 04 36.5	+1.6
L27K				IAmb	IAmb	11 04 49.2	
	comp=Z,13nm,1.4s						
BCAR	Beaver Creek A	76.16	28	P	P	11 04 36.7	+1.8
NOR	Nord	76.62	354	*e*P	P	11 04 36.8	-0.4
NOR				IAmb	IAmb	11 04 38.5	
	comp=Z,1.9nm,1.0s						
DAWY	Dawson	76.89	26	P	P	11 04 40.3	+1.2
DAWY				IAmb	IAmb	11 04 40.9	
	comp=Z,5.2nm,0.9s						
I29M	Ogilvie Camp,	76.92	25	P	P	11 04 40.3	+1.1
I29M				IAmb	IAmb	11 04 42.8	
	comp=Z,8.8nm,1.2s						
EPYK	Eagle Plains	77.20	24	P	P	11 04 41.4	+0.6
EPYK				IAmb	IAmb	11 04 41.6	
	comp=Z,5.2nm,0.8s						
J29M	Klondike Camp	77.25	26	P	P	11 04 42.5	+1.3
J29M				IAmb	IAmb	11 05 09.0	
	comp=Z,5.6nm,0.8s						
TIRR	Tirgusor	77.65	313	P	P	11 04 44.0	+0.4
INK	Inuvik	77.66	21	P	P	11 04 43.3	+0.1
	comp=Z,1.9nm,0.9s,baz=301,slow=6.3,SNR=7.7						
	comp=Z,1.9nm,0.9s						
INK	Inuvik	77.66	21	P	P	11 04 44.1	+0.9
INK				IAmb	IAmb	11 05 01.8	
	comp=Z,6.1nm,1.2s						
A36M	Sachs Harbour	78.61	17	P	P	11 04 48.7	+0.3
A36M				IAmb	IAmb	11 04 49.9	
	comp=Z,10nm,0.9s						
BURAR	Bucovina Array	78.90	317	P	P	11 04 49.6	-1.1
BUR08	Bucovina Ar. S	78.90	317	P	P	11 04 52.1	+1.4
MLR	Muntele Rosu	79.04	314	P	P	11 04 52.1	+0.6
	comp=Z,3.2nm,0.6s,baz=69,slow=4.1,SNR=4.8						
	comp=Z,3.2nm,0.6s						
EUNU	Eureka	79.36	5	P	P	11 04 53.6	+1.0
EUNU				IAmb	IAmb	11 05 05.5	
	comp=Z,10.0nm,1.4s						
M31M	Drury Creek, Y	79.67	27	P	P	11 04 55.7	+1.3
C36M	Paulatuk	80.27	19	P	P	11 04 57.7	+0.2
C36M				IAmb	IAmb	11 04 58.5	
	comp=Z,7.2nm,1.1s						
DAG	Danmarks Havn	80.57	351	*i* P	P	11 04 58.2	-0.8
DAG				IAmb	IAmb	11 04 59.9	
	comp=Z,5.3nm,0.9s						
HFS	Hagfors	80.95	331	P	P	11 05 01.1	-0.2
	comp=Z,2.4nm,0.6s,baz=108,slow=4.8,SNR=5.8						
	comp=Z,2.4nm,0.6s						
NC405	NORSAR Array S	81.43	332	P	P	11 05 04.1	+0.2
NC405				IAmb	IAmb	11 05 12.7	
	comp=Z,9.3nm,0.9s						
NB2	NORSAR Subarra	81.68	332	P	P	11 05 04.9	-0.3
	comp=Z,5.0nm,1.1s,baz=64,slow=5.3						
NOA	NORSAR Array B	81.68	332	P	P	11 05 04.9	-0.3
	comp=Z,1.5nm,0.7s,baz=65,slow=5.3,SNR=6.4						
NOA				LR	LR	11 44 27.3	
	comp=Z,78nm,19.4s,baz=65,slow=38						
	comp=Z,1.5nm,0.7s						
DBG	Daneborg	82.76	350	*i* P	P	11 05 10.3	-0.4
DBG				IAmb	IAmb	11 05 11.7	
	comp=Z,8.6nm,1.2s						
NEEM	North Greenlan	82.86	358	*i* P	P	11 05 11.7	+0.2
NEEM				IAmb	IAmb	11 05 13.3	
	comp=Z,6.6nm,0.8s						
RES	Resolute Bay	83.15	9	P	P	11 05 12.7	+0.1
	comp=Z,4.0nm,0.9s,baz=337,slow=5.9,SNR=10						
	comp=Z,4.0nm,0.9s						
RES	Resolute Bay	83.15	9	P	P	11 05 13.4	+0.8
RES				IAmb	IAmb	11 05 14.4	
	comp=Z,4.2nm,0.9s						
JAVC	Velka Javorina	83.24	320	*e*P	P	11 05 16.0	+2.3
VRAC	Vranov	83.72	320	P	P	11 05 16.6	+0.5
	comp=Z,1.5nm,0.3s,baz=70,slow=7.5,SNR=3.9						
	comp=Z,1.5nm,0.3s						
VRAC	Vranov	83.72	320	*e*P	P	11 05 17.5	+1.4
BRG	Berggiesshubel	84.65	322	P	P	11 05 33.6	+13
BRG				Amp		11 05 34.4	
	comp=Z,6.8nm,0.9s						
CLL	Collm	85.00	323	*i* P	P	11 05 23.3	+0.8
	comp=Z,9.0nm,1.0s						
CLL				*i* x	x	11 05 28.9	
CLL				*i* x	x	11 05 32.7	
GERES	GERESS Array B	85.64	321	P	P	11 05 26.2	+0.3
	comp=Z,1.0nm,0.7s,baz=69,slow=4.4,SNR=8.6						
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	85.64	321	P	P	11 05 25.8	-0.1
YKA	Yellowknife Ar	87.39	22	P	P	11 05 33.5	-0.5
	comp=Z,4.3nm,0.8s,baz=314,slow=4.5,SNR=88						
	comp=Z,4.3nm,0.8s						
TXAR	Lajitas Array	115.42	42	PKP	PKiKP	11 11 29.6	-0.1
	comp=Z,0.3nm,0.7s,baz=300,slow=1.0,SNR=4.8						
MG03	Isla Dawson	145.01	169	PKPbc	PKPbc	11 12 24.6	+1.2
BCIP	Isla Barro Col	145.15	36	PKPbc	PKPbc	11 12 24.3	-0.7
GO10	Punta Arenas	145.56	168		PKPbc	11 12 27.3	+2.0
MPOM	Morne Pois Mar	145.99	2	PKPbc	PKPdf	11 12 26.5	-0.4
MG05	Puerto Natales	146.63	166	PKPbc	PKPbc	11 12 30.3	+1.8
GO09	Cerro Castillo	147.05	166	PKPbc	PKPbc	11 12 31.1	+1.4
SDV	Santo Domingo	149.61	21	PKPbc	PKPbc	11 12 37.9	0.0
BAUV	El Baul	150.35	17	PKPbc	PKPdf	11 12 37.8	+3.6
RUSC	La Rusia	151.36	28	PKPbc	PKPbc	11 12 41.6	-0.9
RUSC				PKPab	PKPab	11 12 50.9	+0.5
COYC	Coyhaique	152.34	161	PKPbc	PKPbc	11 12 42.2	-0.9
PRAC	Prado	152.37	34	PKPdf	PKPdf	11 12 35.1	-2.3
PRAC				PKPbc	PKPbc	11 12 44.5	+0.4
PRAC				PKPab	PKPab	11 12 53.8	-0.3
NNA	Nana	161.91	67	PKPdf	PKPdf	11 12 48.5	-0.8
NNA					PKPab	11 13 35.3	+0.1
LPAZ	La Paz	171.38	68	PKPdf	PKPdf	11 12 53.7	-3.5
LPAZ				PKPab	PKPab	11 14 14.3	-3.3
PTLB	Pontes e Lacer	175.66	351	PKPdf	PKPdf	11 12 57.6	-0.4
PTLB				PKPab	PKPab	11 14 34.2	-1.2

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*ANF **31** 10:55:53.0±1.1, 36°.81N×121°.60W, h0^{km}, ML4.0/23, Error ellipse: s-maj=12.1km s-min=6.4km az=84.0*

*NEIC **31** 10:55:53.6±1.4, 36°.837N±0°.004×121°.63W±0°.02, h15^{km}±1^{km}, Error ellipse: s-maj=2.2km s-min=0.5km az=92.0*

*NEIC **31** 10:55:53.7, 36°.88N×121°.62W, h6^{km}*

*NEIC **31** 10:55:53.7, 36°.88N×121°.62W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.35; M$_{\theta\theta}$-1.38; M$_{\phi\phi}$1.03; M$_{r\theta}$-0.19; M$_{\theta\phi}$0.18; M$_{\phi r}$0.09; Fault plane solution: M$_0$1.27000×10^{15} NP1:ϕ_s139.21000°, δ89.66000°, λ-171.22000°. NP2:ϕ_s49.16000°, δ81.22000°, λ-0.34000°. Principal axes: T 1.0513, Plg6.0000°, Azm274.0000°; N 0.3631, Plg81.0000°, Azm141.0000°; P -1.4144, Plg6.0000°, Azm5.0000°;*

*NCEDC **31** 10:55:53.7±2.6, 36°.88N±0°.01×121°.61W±0°.02, h6^{km}±3^{km}, Mwr4.0/4, ML3.6/108(NEIC) Error ellipse: s-maj=2.2km s-min=1.6km az=57.0*

ISC 31 10:55:53.0±0.9**, 36°.86N**±0°.02×**121°.62W**±0°.02**, h15**^{km}±6^{km}**, n284, σ0^{s}.92**/287**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTUM	Tustin Road	0.04	204		Pg	10 55 56.9	+1.2
HBTM	San Juan Bauti	0.06	102		Pg	10 55 55.3	-0.6
HJGM	San Juan Grade	0.08	148		Pg	10 55 55.8	-0.2
HSFM	Saint Francis	0.11	117		Pb	10 55 56.4	-0.5
FRP	Fremont Peak	0.15	135		Pb	10 55 57.0	-0.6
SAO	San Andreas Ge	0.17	125	Pg	Pb	10 55 57.3	-0.6
JELB	Ellicott, Sant	0.18	292		Pg	10 55 57.8	+0.5
CDC	Canada Road	0.20	34		Pb	10 55 57.8	-0.5
HCAM	Canada Road	0.20	34		Pb	10 55 57.9	-0.4
BSRM	Salinas Radio	0.21	157		Pb	10 55 58.2	-0.4
HFEM	San Felipe	0.21	56		Pb	10 55 58.4	-0.3
BSLM	Silva Ranch	0.24	111		Pg	10 55 59.5	+1.2
JTGM	Trout Gulch Ro	0.26	309		Pg	10 56 00.1	+1.4
CADM	Anderson Res.	0.30	360		Pg	10 55 59.7	+0.3
JLAB	Laurel Hill	0.30	343		Pg	10 55 59.9	+0.5
PACP	Pacheco Peak	0.31	62		Pb	10 56 00.2	-0.1
SCZ	Santa Cruz	0.32	146		Pg	10 55 59.9	+0.2
SCZ					Sg	10 56 04.5	+0.4
JRGM	Rodeo Gulch Ro	0.32	303		Pg	10 56 00.1	+0.3
HPCM	Pacheco Lake	0.34	55		Pb	10 56 00.8	-0.1
BJOM	Mount Johnson	0.34	133		Pg	10 56 00.5	+0.4
HMOM	Monterey	0.35	222		Pb	10 56 01.2	+0.2
SLD	San Luis Dam	0.39	57		Pb	10 56 01.6	0.0
CCOB	Coe Ranch Numb	0.40	354		Pb	10 56 02.3	+0.5
C072	Blauer Lane Sa	0.43	346		Pb	10 56 02.9	+0.5
C054	Valleyhaven Wa	0.44	339		Pb	10 56 02.7	+0.3
JJOM	Saint Joseph's	0.45	321		Pg	10 56 02.0	+0.1
BVL	Bear Valley	0.45	129		Pg	10 56 02.4	+0.4
SCCB	Santa Clara Co	0.47	336		Pb	10 56 03.2	+0.3
BEMM	Emmet	0.47	115		Pb	10 56 03.6	+0.7
HAST	Hastings Reser	0.48	173		Pb	10 56 03.2	+0.1
MHC	Mount Hamilton	0.48	358		Pb	10 56 03.4	+0.2
ARN	Arnold Ranch	0.49	8		Pg	10 56 03.5	+0.7
C059	Quail Canyon R	0.49	346		Pg	10 56 03.8	+0.9
JBNB	Ben Lomond Mou	0.50	302		Pb	10 56 03.0	-0.5
BPIM	Pinnacles	0.52	135		Pb	10 56 03.4	-0.4
BAVM	Antelope Valle	0.52	114		Pg	10 56 04.4	+1.0
C046	N 16th Street	0.53	337		Pg	10 56 04.5	+1.0
C041	El Campo Drive	0.54	343		Pn	10 56 05.1	-1.1
BSGM	Shirttail Gulc	0.54	146		Pb	10 56 03.8	-0.3
JSGM	Saratoga Golf	0.54	321		Pg	10 56 04.3	+0.6
SCKWR	San Luis Creek	0.55	54		Pn	10 56 05.7	-0.5
BBGB	Big Mountain B	0.55	121		Pg	10 56 05.1	+1.2
CMPM	Mikes Peak	0.55	26		Pg	10 56 04.7	+0.7
BCWM	Chews Ridge	0.56	175		Pg	10 56 04.8	+0.7
C016	Longford Drive	0.57	340		Pg	10 56 05.1	+0.9
JSCM	Stevens Creek	0.58	317		Pb	10 56 04.6	-0.3
JSJM	St Joseph	0.60	322		Pg	10 56 05.4	+0.6
CALM	Calaveras Res.	0.60	347		Pg	10 56 05.8	+0.9
JBMM	Black Mountain	0.62	317		Pg	10 56 05.8	+0.5
BPOM	Post Ranch	0.64	190		Pg	10 56 06.2	+0.6
C039	Semillon Drive	0.65	339		Pn	10 56 06.9	-0.7
LRV	Little Rabbit	0.66	132		Pg	10 56 06.6	+0.8
JPSM		0.67	300		Pg	10 56 06.4	+0.3
JFP	Foothills Park	0.67	318		Pg	10 56 06.5	+0.3
COSM	Mount Oso	0.68	17		Pg	10 56 07.1	+0.9
C017	S Grimmer Bl F	0.69	339		Pn	10 56 07.7	-0.5
JSFB	Stanford Teles	0.70	321		Pg	10 56 07.3	+0.7
C001	Firth Court Fr	0.70	339		Pn	10 56 08.0	-0.4
C050	Festivo Court	0.70	340		Pn	10 56 08.0	-0.4
JRSC	Jasper Ridge	0.73	318		Pb	10 56 07.2	-0.2
BGH	Bear Gulch	0.75	310		Pg	10 56 08.2	+0.7
C015	Bright Common	0.76	337		Pg	10 56 08.4	+0.6
WENL	Wente Vineyard	0.77	352		Pn	10 56 09.1	-0.2
C002	Farnham Drive	0.77	335		Pb	10 56 07.9	-0.2
C048	Posada Way Fre	0.77	338		Pn	10 56 08.7	-0.6
CVLM	Vallecito	0.78	348		Pn	10 56 09.1	-0.4
CNIC	Niles Canyon	0.79	340		Pn	10 56 09.2	-0.4
CYD1	Coyote D'meter	0.80	332		Pg	10 56 09.0	+0.5
C062	Calle Reynoso	0.83	345		Pn	10 56 10.0	-0.2
PCCM	Crazy Canyon	0.86	154		Pn	10 56 10.1	-0.4
C055	Cottonwood Ave	0.88	334		Pg	10 56 10.4	+0.3
JCHM	Cahill Ridge	0.89	318		Pb	10 56 10.1	0.0
JCPM	Coyote Point	0.91	323		Pn	10 56 10.8	-0.5
PMPB	Monarch Peak	0.93	134		Pg	10 56 11.4	+0.4
C045	Hawkins Drive	0.93	343		Pg	10 56 11.6	+0.7
CSLM	San Leandro Hi	0.95	335		Pn	10 56 11.4	-0.4
CBSNC	Byron Hot Spri	0.95	359		Pg	10 56 13.6	+2.1
CMOB	Morgan Territo	0.96	351		Pg	10 56 12.6	+1.0
SAC	San Andreas	0.96	319		Pn	10 56 11.7	-0.2
C051	Centre Court A	1.01	331		Pn	10 56 12.2	-0.4
BGC	Bolinger Road	1.01	340		Pg	10 56 13.0	+0.4
C047	Rutherford Dri	1.01	342		Pg	10 56 13.8	+1.2
CMCM	Mills College	1.02	335		Pg	10 56 12.8	+0.1
JSBM	San Bruno Moun	1.02	323		Pb	10 56 12.1	-0.3
PSAM	San Ardo	1.02	144		Pg	10 56 12.8	0.0
JMGM	Milagra Ridge	1.03	319		Pn	10 56 12.8	-0.1
CRHM	Round Hill Res	1.04	344		Pg	10 56 14.0	+0.9
PJUM	Juniper Ridge	1.04	127		Pg	10 56 13.4	+0.2
PPTM	Peach Tree Val	1.05	136		Pg	10 56 13.4	+0.1
CRPB	Russellman Par	1.07	348		Pn	10 56 13.5	0.0
MYLM	Yosemite Lake	1.09	61		Pb	10 56 13.6	0.0
CYBM	Yerba Buena Is	1.11	328		Pn	10 56 13.5	-0.5
BKS	Berkeley--Byer	1.12	334		Pn	10 56 13.9	-0.3
CVPM	Vollmer Peak	1.13	335		Pg	10 56 14.7	-0.1
BL67	Building 67, L	1.13	334		Pb	10 56 14.2	0.0
VAK	Adit at Lawren	1.13	334		Pn	10 56 13.7	-0.6
BRK	Berkeley--Havi	1.13	333		Pb	10 56 14.2	0.0
PHSB	Hesperia Broad	1.13	156		Pb	10 56 14.5	+0.1
PDRM	Domengine Ranc	1.14	117		Pb	10 56 14.7	+0.3
PSMM	Smith Mountain	1.15	133		Pg	10 56 15.2	0.0
JPRM	Presidio of Sa	1.15	324		Pn	10 56 14.3	-0.3
CTAM	Taylor	1.20	345		Pg	10 56 16.0	-0.2
PHPM	Hope Ranch	1.20	137		Pb	10 56 15.2	-0.3
CPIM	Pinole Ridge	1.22	337		Pb	10 56 15.8	0.0
CSPM	San Pablo Ridg	1.22	334		Pb	10 56 15.7	-0.1
PANM	San Antonio Re	1.23	152		Pb	10 56 16.0	+0.2
PHCM	Hearst Castle	1.24	162		Pb	10 56 16.4	+0.3
CPMM	Point Molate	1.25	330		Pb	10 56 16.0	-0.3
HERB	Hercules	1.25	336		Pn	10 56 15.8	-0.1
PKD	Bear Valley Ra	1.27	136		Pn	10 56 16.0	-0.1
PPO	Portuguese Can	1.28	140		Pb	10 56 16.9	+0.1
PVCM	Vineyard Canyo	1.28	137		Pb	10 56 16.5	-0.4
PSTM	Stockdale Moun	1.30	136		Pb	10 56 16.7	-0.4
NLHM	Lake Herman	1.32	342		Pb	10 56 17.9	+0.3
RAMR	Ramage Ranch	1.37	153		Pb	10 56 17.9	-0.4
MCUB	Copperopolis B	1.37	35		Pn	10 56 17.5	-0.1
PWKM	Work Ranch	1.38	139		Pb	10 56 18.2	-0.3
PHFM	Heflinger Ranc	1.39	134		Pb	10 56 18.3	-0.3
CTM	Castle Mountai	1.39	131		Pb	10 56 19.2	+0.4
MHDM	Hidden Dam	1.41	79		Pn	10 56 18.0	-0.1
GHC	Gold Hill	1.45	135		Pb	10 56 19.1	-0.6
SNT	Sears Point	1.47	334		Pb	10 56 19.4	-0.7
ARDC	Alexander Ranc	1.49	159		Pn	10 56 19.5	+0.2
NOLM	Olema	1.50	322		Pn	10 56 19.5	+0.2
PSNM	Stone Corral	1.52	135		Pb	10 56 20.0	-0.8
TCAS	Cass Winery, P	1.52	145		Pn	10 56 19.9	+0.3
CMB	Columbia Colle	1.53	40		Pn	10 56 20.1	+0.2
CMB	Columbia Colle	1.53	40		Pb	10 56 20.5	-0.6
CMB				IAML		10 56 45.4	
	comp=E,463nm,0.9s						
CMB				IAML		10 56 46.0	
	comp=N,368nm,0.7s						
TCHL	Shandon	1.53	140		Pb	10 56 20.7	-0.5
PMRM	Maxey Ranch	1.55	133		Pb	10 56 20.8	-0.7
NBRB	Beebe Ranch Br	1.58	332		Pn	10 56 20.8	+0.3
PAGB	Antelope Grade	1.58	135	Pn	Pb	10 56 21.4	-0.5
MMIM	Miami Mountain	1.60	69		Pn	10 56 21.4	+0.5
TRAM	Private Proper	1.61	137		Pb	10 56 21.5	-0.9
CVS	Carmenet Viney	1.62	336		Pn	10 56 20.7	-0.3
MCCM	Marconi Confer	1.62	322		Pn	10 56 20.6	-0.4
MCCM	Marconi Confer	1.62	322	IAML		10 56 54.8	
	comp=N,746nm,0.8s						
MCCM				IAML		10 56 59.9	
	comp=E,517nm,1.3s						
PTAM	Tassajara Cree	1.64	153		Pn	10 56 21.8	+0.4
NAPC	Atlas Peak	1.65	343		Pn	10 56 21.9	+0.4
TSCN	Private Proper	1.67	142		Pn	10 56 22.4	+0.6
LSDC	Los Osos Digit	1.69	158		Pn	10 56 22.4	+0.5
EFD	Emergency Oper	1.70	154		Pn	10 56 22.6	+0.4
VPDC	Valencia Peak	1.73	159		Pn	10 56 23.1	+0.5
NTYM	Taylor	1.73	332		Pn	10 56 22.4	-0.1
TSCS	Shell Creek So	1.75	144		Pn	10 56 23.0	+0.2
DPD	Davis Peak	1.76	157		Pn	10 56 23.6	+0.5
DCD	Diablo Creek	1.77	159		Pn	10 56 23.3	+0.3
TRAY	Twisselman Ran	1.78	137		Pn	10 56 23.9	+0.6
NBPM	Berryessa Peak	1.86	346		Pn	10 56 24.1	-0.2
VOG	Valley Oaks Go	1.88	106		Pn	10 56 25.3	+0.7
VOG	Valley Oaks Go	1.88	106	P	Pb	10 56 25.8	-1.3
	baz=288,SNR=17						
MAC	Mark West Spri	1.90	333		Pn	10 56 24.7	-0.2
NHSM	Mount Saint He	1.96	337		Pn	10 56 25.7	-0.1
SMMC	Simmler	2.03	139		Pn	10 56 27.2	+0.5
SMMC	Simmler	2.03	139	P	Pn	10 56 27.8	+1.1
	baz=321,SNR=30						
SMMC				S	Sb	10 56 55.1	+0.4
	baz=321						
NMTM	Middletown	2.05	342		Pn	10 56 27.0	+0.1
GAXM	Alexander Vall	2.05	334		Pn	10 56 26.3	-0.6
BCH	Branch Mountai	2.09	143		Pn	10 56 28.2	+0.7
GCRM	Castle Rock Sp	2.09	336		Pn	10 56 27.5	-0.1
CARC	Carrizo Plain	2.12	137		Pn	10 56 28.6	+0.7
MRHM	Rocky Hill	2.12	105		Pn	10 56 28.3	+0.4
AFDM	Forest Hills D	2.15	14		Pn	10 56 28.6	+0.3
GDXM	Geysers	2.15	335		Pn	10 56 28.5	+0.1
MDPB	Devils Postpil	2.17	69		Pb	10 56 31.0	-1.1
MDPB				IAML		10 57 02.0	
	comp=E,794nm,0.8s						
MRDM	Red Cones	2.17	70		Pb	10 56 31.1	-1.2
GSGM	Seigler Mounta	2.18	337		Pn	10 56 27.8	-0.9
MINS	Minaret Summit	2.19	68		Pb	10 56 31.2	-1.4
MLIM	Lincoln Peak	2.22	69		Pb	10 56 32.1	-0.9
OMMB	Old Mammoth Mi	2.22	70		Pb	10 56 31.7	-1.4
OMMB				IAML		10 57 03.2	
	comp=E,485nm,0.7s						
OMMB				IAML		10 57 04.7	
	comp=N,526nm,0.5s						
MDCM	Deadman Creek	2.23	67		Pb	10 56 32.0	-1.1
MDYM	Dry Creek	2.23	68		Pb	10 56 32.5	-0.7
CRGC	Crocker Grade	2.23	136		Pb	10 56 31.7	-1.4
GACM	Adobe Creek	2.23	334		Pn	10 56 30.2	+0.7
MMLB	Mammoth Lakes	2.25	69		Pb	10 56 32.7	-0.9
MEMM	East Mammoth H	2.29	69		Pb	10 56 33.2	-0.9
MLCM	Laurel Creek C	2.29	70		Pb	10 56 33.1	-1.0
VES	Vestal, Richgr	2.29	116		Pn	10 56 31.2	+1.0
VES	Vestal, Richgr	2.29	116	P	Pn	10 56 30.5	+0.3
	baz=298,SNR=54						
VES				S	Sb	10 57 00.1	-2.0
	baz=298						
MCSM	Casa Diablo Ho	2.31	69		Pb	10 56 33.5	-0.9
MCVM	Convict Lake	2.35	71		Pb	10 56 33.9	-1.2
MLAC	Mammoth, Mammo	2.35	70	P	Pn	10 56 33.0	+1.7
	baz=252,SNR=29						
MDRNC	Doe Ridge	2.35	70		Pb	10 56 34.6	-0.7
SUTB	Sutter Butte	2.37	357		Pn	10 56 32.0	+0.7
MLHM	Little Hot Cre	2.38	69		Pb	10 56 33.6	-2.2
WAKR	Walker	2.39	46		Pb	10 56 34.5	-1.2
WAKR				IAML		10 57 12.5	
	comp=N,322nm,0.7s						
WAKR				IAML		10 57 16.1	
	comp=E,589nm,1.3s						
SPG2	Springville 2	2.39	105		Pn	10 56 32.8	+1.1
HOPS	Hopland Field	2.42	332	Pn	Pn	10 56 32.5	+0.5
EMB	Emerald Bay	2.43	29		Pn	10 56 32.6	+0.2
EMB				IAML		10 57 15.8	
	comp=E,579nm,0.8s						
EMB				IAML		10 57 18.5	
	comp=N,610nm,0.9s						
GHLM	Highland Sprin	2.44	334		Pn	10 56 32.3	-0.1
GHGM	Hogback Ridge	2.45	338		Pn	10 56 32.4	-0.2
PKM	Mcpherson Peak	2.46	143		Pn	10 56 33.7	+1.0
PKM	Mcpherson Peak	2.46	143	P	Pn	10 56 33.4	+0.7
	baz=324,SNR=22						
PKM				S	Sb	10 57 05.4	-1.7
	baz=324						
GGUM	Gualala	2.48	324		Pn	10 56 33.5	+0.5
MTUM	Tungsten Hills	2.49	78		Pb	10 56 36.0	-1.6
FIGC	Figueroa Mtn.	2.51	148		Pn	10 56 34.4	+1.0
GFC	Funks Creek	2.52	348		Pn	10 56 34.5	+1.2
BENR	Benton	2.58	70		Pb	10 56 36.9	-2.2
OWYM	Wyandotte	2.59	2		Pn	10 56 36.3	+2.0
NJQ	Nojoqui County	2.60	153		Pn	10 56 35.3	+0.7
MRCM	Red Rock Canyo	2.62	71		Pb	10 56 38.4	-1.3
BCW	Bitter Crk WRg	2.63	136	Pn	Pn	10 56 36.3	+1.3
DONR	Donner Summit	2.69	22		Pb	10 56 38.7	-2.3
ORV	Oroville	2.69	2	Pn	Pn	10 56 36.8	+1.1
TIN	Tinemaha, Big	2.73	85	P	Pn	10 56 37.1	+0.8
	baz=267,SNR=7.1						
MPK	Martis Peak	2.73	27	Pn	Pn	10 56 36.9	+0.3
MPK				IAML		10 57 25.5	
	comp=E,406nm,1.0s						
ISA	Isabella, Lake	2.81	114		Pn	10 56 38.7	+1.2
ISA				IAML		10 57 30.4	
	comp=E,277nm,1.1s						
ISA				IAML		10 57 41.2	
	comp=N,211nm,1.1s						
ISA	Isabella, Lake	2.81	114	P	Pn	10 56 38.7	+1.2
	baz=297,SNR=30						
YERR	Yerington	2.84	41		Pn	10 56 39.9	+1.9
YERR				IAML		10 57 32.7	

	comp=N,280nm,0.7s						
LHV	Little Huntoon	2.84	60	Pn	Pn	10 56 38.9	+1.1
ARVC	Arvin	2.85	127	P	Pn	10 56 39.6	+1.6
	baz=309,SNR=17						
SBC	Santa Barbara	2.87	147	P	Pn	10 56 39.1	+0.8
	baz=328						
CWC	Cottonwood Cre	2.88	97	P	Pn	10 56 40.4	+1.9
	baz=280						
DSP	Deep Springs	2.96	79		Pn	10 56 41.1	+1.6
DSP				IAML		10 57 37.8	
	comp=E,319nm,1.2s						
DSP				IAML		10 57 40.6	
	comp=N,228nm,0.8s						
NVAR	Mina Array Bea	3.06	58		Pn	10 56 42.7	+1.6
NV11	Mina Array Sit	3.17	59		Pn	10 56 43.7	+1.3
NV11				IAML		10 57 40.6	
	comp=N,103nm,1.4s						
NV11				IAML		10 57 44.6	
	comp=E,105nm,1.0s						
LCH	Last Change Ra	3.20	82		Pn	10 56 44.5	+1.6
LCH				IAML		10 57 39.1	
	comp=N,176nm,1.2s						
LCH				IAML		10 57 39.2	
	comp=E,249nm,0.5s						
KCPM	Cahto Peak	3.21	332	Pn	Pn	10 56 42.7	-0.4
KCPM				IAML		10 58 01.5	
	comp=E,92nm,2.3s						
PAHR	Pah Rah Range	3.34	31		Pn	10 56 45.1	+0.2
PAHR				IAML		10 57 49.5	
	comp=N,85nm,1.2s						
PAHR				IAML		10 57 51.3	
	comp=E,106nm,1.9s						
CCAC	Calif City Air	3.39	119		Pn	10 56 45.9	+0.5
GRAC	Grapevine Rang	3.41	86	Pb	Pb	10 56 54.8	+1.6
	baz=269						
MPMC	Manual Prospec	3.43	102	P	Pn	10 56 47.2	+1.1
	baz=285,SNR=36						
LRMC	Laurel Mtn Rad	3.48	112	P	Pn	10 56 47.2	+0.6
	baz=295						
MZP	Montezuma Peak	3.48	75	Pn	Pn	10 56 47.7	+0.8
MZP				IAML		10 57 45.0	
	comp=N,100nm,0.6s						
MZP				IAML		10 58 02.5	
	comp=E,74nm,1.2s						
KVN	Kaiserville	3.54	51	Pn	Pn	10 56 48.9	+1.3
KVN				IAML		10 57 52.1	
	comp=E,138nm,1.1s						
KVN				IAML		10 57 52.4	
	comp=N,100nm,1.1s						
EDW2	Edwards Air Fo	3.55	123	P	Pn	10 56 50.1	+2.5
	baz=305,SNR=7.4						
TPH	Tonopah	3.71	70	Pn	Pn	10 56 50.4	+0.5
KMRM	Mail Ridge	3.73	335	Pn	Pn	10 56 50.0	-0.1
KMRM				IAML		10 58 19.2	
	comp=E,72nm,3.5s						
FURC	Furnace Creek,	3.85	94	P	Pn	10 56 55.2	+3.6
	baz=278						
PASC	Pasadena Art C	3.88	133		Pn	10 56 53.4	+1.2
QSM	Queen of Sheba	3.94	102		Pn	10 56 54.8	+1.9
QSM				IAML		10 58 08.8	
	comp=N,97nm,0.9s						
QSM				IAML		10 58 14.6	
	comp=E,125nm,1.1s						
WCT	Wildcat Mounta	4.01	90	Pn	Pn	10 56 57.3	+3.3
WCT				IAML		10 58 06.0	
	comp=N,84nm,1.4s						
WCT				IAML		10 58 07.3	
	comp=E,62nm,1.1s						
Q09A	Carvers	4.03	59	Pn	Pn	10 56 54.7	+0.4
GWY	Greenwater Val	4.05	98		Pn	10 56 54.8	+0.3
GWY				IAML		10 58 10.5	
	comp=E,100nm,1.1s						
GWY				IAML		10 58 20.8	
	comp=N,94nm,1.5s						
KMPM	Mount Pierce	4.05	332	Pn	Pn	10 56 55.9	+1.4
KMPM				IAML		10 58 06.3	
	comp=N,80nm,3.2s						
KMPM				IAML		10 58 49.1	
	comp=E,90nm,3.5s						
BFSC	Mount Baldy Ra	4.16	128	P	Pn	10 56 58.2	+2.1
	baz=310						
PLTX	Planet X, Gerl	4.19	23	Pn	Pn	10 56 57.3	+0.8
GSC	Goldstone, Bar	4.20	110		Pn	10 56 57.8	+1.2
GSC				IAML		10 58 21.1	
	comp=N,92nm,1.3s						
GSC				IAML		10 58 28.3	
	comp=E,133nm,1.4s						
GSC	Goldstone, Bar	4.20	110	P	Pn	10 56 58.1	+1.5
	baz=294,SNR=6.6						
TPNV	Topopah Spring	4.31	87		Pn	10 56 59.4	+1.2
TPNV				IAML		10 58 30.5	
	comp=E,119nm,1.2s						
TPNV	Topopah Spring	4.31	87	P	Pn	10 56 59.0	+0.8
	baz=271						
KHMM	Horse Mountain	4.33	338	Pn	Pn	10 56 58.6	+0.1
KHMM				IAML		10 58 49.4	
	comp=E,58nm,3.1s						
KHMM				IAML		10 58 55.0	
	comp=N,58nm,2.9s						
SHOC	Shoshone, Teco	4.42	101	P	Pn	10 57 01.3	+1.7
	baz=284						
ELS	Elsinore Mount	4.70	132		Pn	10 57 02.1	-1.3
HEC	Hector,Ludlow	4.75	114	P	Pn	10 57 05.4	+1.3
	baz=297,SNR=9.7						
S11A	Rachel	4.75	79	Pn	Pn	10 57 04.1	-0.1
MURC	Murrieta	4.87	131	P	Pn	10 57 07.5	+1.7
	baz=314						
YBH	Yreka Blue Hor	4.94	351	Pn	Pn	10 57 07.7	+1.0
BMN	Battle Mountai	4.96	43	Pn	Pn	10 57 07.5	+0.5
MOD	Modoc Plateau	5.14	11	Pn	Pn	10 57 08.8	-0.7
MOD				IAML		10 58 56.2	
	comp=E,34nm,1.9s						
MOD				IAML		10 59 04.1	
	comp=N,26nm,1.8s						
SHPR	Sheep Range	5.21	92	Pn	Pn	10 57 11.6	+1.1
PRN	Pahroc Range	5.28	82	Pn	Pn	10 57 12.7	+1.2
PFO	Pinyon Flats O	5.33	126	Pn	Pn	10 57 13.0	+0.9
PFO				IAML		10 58 44.9	
	comp=N,21nm,2.8s						
PFO				IAML		10 59 04.0	
	comp=N,21nm,2.5s						
PFO	Pinyon Flats O	5.33	126	P	Pn	10 57 13.2	+1.1
	baz=309						
TPFO	Pinon Flats	5.33	126	P	Pn	10 57 13.5	+1.3
	baz=309						
PMD	Palm Desert	5.36	125	Pn	Pn	10 57 13.2	+0.8
PMD				IAML		10 59 18.8	
	comp=N,22nm,2.1s						
L04D	Klamath Falls	5.37	355	Pn	Pn	10 57 12.4	-0.4
V12A	Nelson	5.59	100	Pn	Pn	10 57 16.4	+0.8
Q12A	Willow Creek R	5.79	66	Pn	Pn	10 57 19.0	+0.5
BAR	Barrett	5.83	134	Pn	Pn	10 57 20.0	+1.0
K05A	Summer Lake	5.88	5	Pn	Pn	10 57 20.2	+0.4
TKX	Tecate	5.95	135	Pn	Pn	10 57 21.7	+1.1
WVOR	Wild Horse Val	6.02	22	Pn	Pn	10 57 23.5	+1.9
CBX	Cerro Bola	6.11	137	Pn	Pn	10 57 24.0	+1.2
SPR3	Spring Creek 3	6.15	67	Pn	Pn	10 57 23.0	-0.6
ELK	Elko	6.32	50	Pn	Pn	10 57 28.0	+2.2
J04A	Umpqua Nationa	6.38	357	Pn	Pn	10 57 27.1	+0.4
W13A	Hualapai Mount	6.52	103	Pn	Pn	10 57 28.3	-0.3
BLYC	Blythe	6.58	116	Pn	Pn	10 57 29.8	+0.6
PDMCI	Parker Dam,Lak	6.61	111	P	Pn	10 57 30.3	+0.7
	baz=295						
LCMT	Little Creek M	6.71	86	Pn	Pn	10 57 32.6	+1.4
ESJX	Sierra Juarez	6.74	134		Pn	10 57 33.0	+1.4
GLA	Glamis	6.75	122	Pn	Pn	10 57 33.8	+2.2
SZCU	Shurtz Canyon	6.85	81	Pn	Pn	10 57 32.6	-0.5
J08A	Circle Bar Ran	6.92	19	Pn	Pn	10 57 35.2	+1.2
PINE	Pine Mountain	6.94	4	Pn	Pn	10 57 33.5	-0.9
KNB	Kanab	7.05	86	Pn	Pn	10 57 35.7	-0.1
GUVIX	Guadalupe Vict	7.06	128	Pn	Pn	10 57 36.2	+0.5
TCRU	Three Creeks R	7.48	74	Pn	Pn	10 57 42.3	+0.6
Y14A	Wickenburg	7.62	110		Pn	10 57 42.6	-0.9
MVU	Marysvale	7.64	75	Pn	Pn	10 57 43.5	-0.5
DUG	Dugway, Tooele	7.67	62	Pn	Pn	10 57 43.5	-0.7
MSU	Marysvale	7.67	75	Pn	Pn	10 57 43.8	-0.6
H04D	Lebanon	7.70	354	Pn	Pn	10 57 44.2	-0.3
HWUT	Hardware Ranch	9.13	56	Pn	Pn	10 58 05.6	+1.3

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*NCEDC **31** 10:56:11.8±2.9,36°.86N±0°.04×121°.60W±0°.07,h7^{km}±6^{km}, Md3.2/3,Error ellipse: s-maj=9.1km s-min=4.8km az=58.0*

NEIC 31 10:56:11.4±1.6,36°.87N±0°.05×121°.58W±0°.07,h16^{km}±6^{km}, Error ellipse: s-maj=10.4km s-min=3.0km az=53.0,

Central California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HTUM	Tustin Road	0.07	229		Pg	10 56 14.8	+0.3
HJGM	San Juan Grade	0.07	175		Pg	10 56 13.8	-0.8
SAO	San Andreas Ge	0.15	134		Pg	10 56 15.6	+0.1
CDC	Canada Road	0.17	27		Pb	10 56 16.1	-0.1
HCAM	Canada Road	0.17	27		Pb	10 56 16.1	-0.1
JELB	Ellicott, Sant	0.20	286		Pg	10 56 16.2	0.0
BSRM	Salinas Radio	0.21	166		Pg	10 56 16.1	-0.2
CADM	Anderson Res.	0.29	353		Pb	10 56 18.4	+0.1
JLAB	Laurel Hill	0.31	337		Pb	10 56 18.6	0.0
JLAB					Sb	10 56 23.2	-0.2
BBGB	Big Mountain B	0.52	124	Pg	Pg	10 56 21.6	-0.2
C055	Cottonwood Ave	0.89	332	Pg	Pb	10 56 28.0	-0.5
PMPB	Monarch Peak	0.91	136	Pg	Pb	10 56 28.4	-0.4
CMB	Columbia Colle	1.50	39	Pn	Pb	10 56 38.6	-0.3
PAGB	Antelope Grade	1.57	136	Pn	Pb	10 56 39.6	-0.4
MCCM	Marconi Confer	1.64	321	Pn	Pn	10 56 40.3	+0.8
AFDM	Forest Hills D	2.13	13	Pn	Pb	10 56 48.1	-1.5
MDPB	Devils Postpil	2.14	68	Pn	Pn	10 56 47.3	+0.7
GDXM	Geysers	2.16	334	Pn	Pn	10 56 47.2	+0.4
OMMB	Old Mammoth Mi	2.19	69	Pn	Pn	10 56 47.0	-0.5
WAKR	Walker	2.36	46	Pn	Pn	10 56 48.7	-0.9
HOPS	Hopland Field	2.42	331	Pn	Pn	10 56 50.0	-0.4
BCW	Bitter Crk WRg	2.61	137	Pn	Pn	10 56 52.5	-0.5
ORV	Oroville	2.68	1	Pn	Pn	10 56 54.9	+1.0
MPK	Martis Peak	2.71	26	Pn	Pn	10 56 54.9	+0.3
ISA	Isabella, Lake	2.79	115	Pn	Pn	10 56 55.1	-0.3
LHV	Little Huntoon	2.81	60	Pn	Pn	10 56 56.3	+0.7
DSP	Deep Springs	2.93	79	Pn	Pn	10 56 57.0	-0.3
NVAR	Mina Array Bea	3.03	58	Pn	Pn	10 56 58.8	-0.1
NV11	Mina Array Sit	3.13	59	Pn	Pn	10 56 58.7	-1.5
LCH	Last Change Ra	3.17	82	Pn	Pn	10 57 00.2	-0.6
KCPM	Cahto Peak	3.22	331	Pn	Pn	10 57 00.2	-1.3
PAHR	Pah Rah Range	3.32	31	Pn	Pn	10 57 01.7	-1.1
TPH	Tonopah	3.67	70	Pn	Pn	10 57 07.6	-0.1
KMRM	Mail Ridge	3.74	334	Pn	Pn	10 57 07.3	-1.2
QSM	Queen of Sheba	3.91	102	Pn	Pn	10 57 10.4	-0.3
WCT	Wildcat Mounta	3.98	90	Pn	Pn	10 57 12.7	+0.9
SNCC	San Nicolas Is	3.99	154	Pn	Pn	10 57 10.8	-1.0
Q09A	Carvers	4.00	59		Pn	10 57 10.4	-1.7
GWY	Greenwater Val	4.02	98	Pn	Pn	10 57 12.7	+0.3
PLTX	Planet X, Gerl	4.17	23	Pn	Pn	10 57 15.2	+0.7
GSC	Goldstone, Bar	4.17	111	Pn	Pn	10 57 14.4	-0.1
TPNV	Topopah Spring	4.28	87	Pn	Pn	10 57 16.9	+1.0
KHMM	Horse Mountain	4.34	338	Pn	Pn	10 57 16.2	-0.6
ELS	Elsinore Mount	4.68	132	Pn	Pn	10 57 20.4	-1.0
KRPM	Rodgers	4.69	337	Pn	Pn	10 57 20.6	-0.9
S11A	Rachel	4.72	79	Pn	Pn	10 57 21.1	-1.0
BMN	Battle Mountai	4.93	42	Pn	Pn	10 57 25.2	+0.2
YBH	Yreka Blue Hor	4.93	350	Pn	Pn	10 57 24.0	-1.0
MOD	Modoc Plateau	5.12	11	Pn	Pn	10 57 26.7	-0.9
SHPR	Sheep Range	5.17	92	Pn	Pn	10 57 28.1	-0.2
PRN	Pahroc Range	5.25	82	Pn	Pn	10 57 29.1	-0.2
PFO	Pinyon Flats O	5.30	126	Pn	Pn	10 57 29.5	-0.6
PMD	Palm Desert	5.33	126	Pn	Pn	10 57 29.1	-1.2
L04D	Klamath Falls	5.37	354	Pn	Pn	10 57 29.0	-2.0
V12A	Nelson	5.55	100	Pn	Pn	10 57 33.5	0.0
K04D	Chiloquin, OR	5.75	359	Pn	Pn	10 57 36.5	+0.3
BAR	Barrett	5.81	135	Pn	Pn	10 57 35.6	-1.4
HUMO	Hull Mountain	5.83	350	Pn	Pn	10 57 36.5	-0.7
K05A	Summer Lake	5.87	5	Pn	Pn	10 57 36.7	-1.2
SPR3	Spring Creek 3	6.11	67	Pn	Pn	10 57 40.5	-0.9
J04A	Umpqua Nationa	6.38	357	Pn	Pn	10 57 44.1	-0.7
CCX	Cicese	6.44	139	Pn	Pn	10 57 45.4	-0.1
W13A	Hualapai Mount	6.49	104	Pn	Pn	10 57 45.7	-0.7
CCUT	Cedar City	6.59	82	Pn	Pn	10 57 47.2	-0.7
LCMT	Little Creek M	6.68	86	Pn	Pn	10 57 48.7	-0.3
I05D	Terrebonne, OR	7.46	1	Pn	Pn	10 57 59.0	-0.6
MTPU	Mount Pierson	7.57	78	Pn	Pn	10 58 01.7	+0.3
Y14A	Wickenburg	7.59	110	Pn	Pn	10 58 00.7	-0.7
H04D	Lebanon	7.70	354	Pn	Pn	10 58 03.5	+0.7
BGU	Big Grassy Mou	7.80	56	Pn	Pn	10 58 03.3	-1.1
MFID	Camas Ranch	7.88	32	Pn	Pn	10 58 05.4	0.0
NLU	North Lily Min	8.07	65	Pn	Pn	10 58 07.7	-0.5
F04A	Amboy	9.08	356	Pn	Pn	10 58 21.5	-0.2
HWUT	Hardware Ranch	9.10	56	Pn	Pn	10 58 24.0	+1.9

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*MOS **31** 11:20:59.4±0.8,0°.33N×120°.66E,h104^{km},mb5.6/82, MS4.3/5,Error ellipse: s-maj=7.1km s-min=4.0km az=108.4*

*NEIC **31** 11:21:00.5,0°.30N×120°.60E,h87^{km}*

*NEIC **31** 11:21:00.5,0°.30N×120°.60E,h90^{km}*

*NEIC **31** 11:21:00.5,0°.30N×120°.60E,h90^{km},Moment Tensor Solution. Duration: 3^s.1 Moment tensor: Scale 10^{17}Nm; M_{rr}2.27; $M_{\theta\theta}$-0.56; $M_{\phi\phi}$-1.70; $M_{r\theta}$-0.66; $M_{\theta\phi}$1.07; $M_{\phi r}$-1.06; Fault plane solution: $M_0$2.60000×10^{17} NP1: ϕ_s170.89000°,δ56.27000°,λ116.16000°. NP2: ϕ_s309.40000°,δ41.71000°,λ56.56000°. Principal axes: T 2.7867, Plg67.0000°, Azm134.0000°; N -0.3640, Plg22.0000°, Azm336.0000°; P -2.4226, Plg8.0000°, Azm243.0000°;*

*KLM **31** 11:21:00,0°.35N×120°.54E,h10^{km},mb5.8*

*IDC **31** 11:21:00.4±0.6,0°.22N×120°.57E,h103^{km}±4^{km},mb5.0/31, mbtmp5.4/33,MS4.2/57,Error ellipse: s-maj=11.1km s-min=6.3km az=67.0*

*BJI **31** 11:21:00.3±0.0,0°.44N×120°.59E,h90^{km},mb5.2/91, mB5.2/67,Ms4.7/71,Ms7 4.4/67*

*DJA **31** 11:21:00.1±0.1,0°N±1°×12°1E±°,h98^{km}±2^{km},M5.5/105, mB5.9/83,mb5.5/105,MLv6.0/19,Mw(mB)5.5/83, MwMwp5.3/39,Mwp5.5/39*

*GCMT **31** 11:21:01.0±0.1,0°.37N±0°.01×120°.59E±0°.01,h102^{km}, MW5.5/154,Moment Tensor Solution. s141,c234; s154,c290; Duration: 1^s.4 Moment tensor: Scale 10^{17} Nm; M_{rr}2.18±.03; $M_{\theta\theta}$-0.89±.03; $M_{\phi\phi}$-1.29±.04; $M_{r\theta}$-0.62±.02; $M_{\theta\phi}$0.92±.03; $M_{\phi r}$-1.18±.03; Best double couple: $M_0$2.43300×10^{17} NP1:ϕ_s165.00000°,δ57.00000°, λ116.00000°. NP2:ϕ_s303.00000°,δ41.00000°,λ56.00000°. Principal axes: T 2.7550, Plg66.0000°, Azm126.0000°; N -0.6400, Plg22.0000°, Azm330.0000°; P -2.1110, Plg9.0000°, Azm237.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **31** 11:21:01.0±2.2,0°.31N±0°.06×120°.58E±0°.06,h94^{km}±1^{km}, mb5.6/236,Mwb5.6/15,Mww5.5/38 Error ellipse: s-maj=10.1km s-min=9.4km az=234.0,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.27; $M_{\theta\theta}$-0.93; $M_{\phi\phi}$-1.34; $M_{r\theta}$-0.05; $M_{\theta\phi}$1.02; $M_{\phi r}$-1.50; Fault plane solution: $M_0$2.68000×10^{17} NP1:ϕ_s160.33000°, δ61.46000°,λ108.36000°. NP2:ϕ_s305.54000°,δ33.51000°, λ59.92000°. Principal axes: T 2.8555, Plg68.0000°, Azm107.0000°; N -0.3880, Plg16.0000°, Azm331.0000°; P -2.4675, Plg15.0000°, Azm237.0000°;*

ISC 31 11:20:60.0±0.2,**0°.24N**±0°.02×**120°.62E**±0°.03,**h99**^{km}±1^{km}, **h99^{km}:pP-P,n1506,**σ1^s.26/1743,**mb5.5**/240,**53C-39D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPSI	Mapaga	0.73	277	P	Pn	11 21 16.2	-1.3
TOLI2	Tolitoli	0.88	11	Pn	Pn	11 21 18.4	-0.7
TOLI2	Tolitoli	0.88	11	P	Pn	11 21 18.8	-0.2
MRSI	Marisa	1.34	80	P	Pn	11 21 25.0	+0.8
MRSI				S	Sn	11 21 43.9	+1.3
GTOI	Gorontalo	2.42	81	P	Pn	11 21 37.9	-0.1
GTOI				S	Sn	11 22 05.1	-2.1
LUWI	Luwuk	2.50	121	Pn	Pn	11 21 41.1	+2.0
LUWI	Luwuk	2.50	121	P	Pn	11 21 41.3	+2.2
LUWI	Luwuk	2.50	121	P	Pn	11 21 40.7	+1.6
LUWI				S	Sn	11 22 10.2	+1.1
SMKI	Samarinda	3.48	259	P	Pn	11 21 52.0	-0.2
SMKI				S	Sn	11 22 30.6	-1.9
BKB	Balikpapan	4.01	248		Pn	11 21 58.7	-0.6
BKB	Balikpapan	4.01	248	P	Pn	11 21 59.0	-0.3
BKB	Balikpapan	4.01	248	P	Pn	11 21 58.6	-0.7
BKB				S	Sn	11 22 42.4	-3.0
SPSI	Sidrap Palu	4.26	192	P	Pn	11 22 03.5	+0.7
KAPI	Kappang	5.29	189	P	Pn	11 22 18.0	+1.3
	832nm,0.5s,baz=334,slow=6.9,SNR=443						
KAPI				S	Sn	11 23 13.1	-3.4
	244nm,0.4s,baz=284,slow=17,SNR=1.6						
KAPI	Kappang	5.29	189	Pn	Pn	11 22 17.8	+1.1
KAPI	Kappang	5.29	189	P	Pn	11 22 18.3	+1.6
KAPI	Kappang	5.29	189	P	Pn	11 22 17.8	+1.1
KAPI	Kappang	5.29	189	P	Pn	11 22 18.1	+1.3
MYLDM	Lahad Datu	5.34	337	Pn	Pn	11 22 18.1	+0.7
BKSI	Bulukumba	5.55	185	P	Pn	11 22 20.3	+0.1
	1µm,0.6s,13µm11µm4.9nm						
SANI	Sanana	5.83	113	P	Pn	11 22 24.1	+0.1
SANI	Sanana	5.83	113	P	Pn	11 22 23.3	-0.7
	912nm,1.1s,10µm8µm4.8nm						
SANI				S	Sn	11 23 25.4	-4.1
	912nm,1.1s,10µm8µm4.8nm						
MTKI	Muara Teweh, K	5.84	258	P	Pn	11 22 23.6	-0.6
	2µm,0.5s,50µm19µm22nm						
MTKI				S	Sn	11 23 26.1	-3.8
	2µm,0.5s,50µm19µm22nm						
SGSI	Sangihe	5.98	55	P	Pn	11 22 24.4	-1.6
	835nm,0.6s,16µm12nm						
SGSI				S	Sn	11 23 28.9	-4.3
	835nm,0.6s,16µm12nm						
SPMM	Sapulut	6.08	317	P	Pn	11 22 27.0	-0.4
BSSI	Bau Bau, Buton	6.34	181	P	Pn	11 22 32.5	+1.5
	649nm,0.8s,7µm8µm2.8nm						
BBKI	Banjar Baru	6.85	237	P	Pn	11 22 36.9	-1.0
	1µm,1.3s,18µm10nm						
LBMI	Labuha	6.94	97	P	Pn	11 22 38.3	-0.7
	848nm,1.2s,10µm19nm						
GSPH	General Santos	7.24	37	⇑eP	Pn	11 22 43.2	0.0
KKM	Kota Kinabalu	7.25	323	Pn	Pn	11 22 43.3	-0.1
KKM	Kota Kinabalu	7.25	323	P	Pn	11 22 43.7	+0.3
NLAI	Namlea	7.34	118	P	Pn	11 22 46.7	+2.1
	3µm,0.9s,66µm7.8nm						
CTBH	Cotabato--PC H	7.82	27	⇑eP	Pn	11 22 50.0	-1.1
DAV	Davao City (W)	8.39	36	P	Pn	11 22 59.9	+1.1
	258nm,0.4s,baz=219,slow=0.9,SNR=31						
DAV				S	Sn	11 24 32.6	+0.6
	268nm,0.3s,baz=231,slow=22,SNR=1.8						
DAV				LR	LR	11 26 15.1	
	comp=Z,6µm,21.7s,baz=197,slow=37						
DAV	Davao City (W)	8.39	36		Pn	11 22 58.6	-0.2
DAV	Davao City (W)	8.39	36	P	Pn	11 23 00.3	+1.4
DAV				P	Pn	11 23 00.3	+1.4
AAI	Ambon	8.52	117	P	Pn	11 23 03.2	+2.6
	2µm,0.8s,17µm9µm						
SBUM	Sibu	8.68	285	Pn	Pn	11 23 02.9	+0.1
DCPH	Dipolog City	8.72	18	⇓eP	Pn	11 23 04.5	+1.2
DCPH				eS	Sn	11 24 39.8	-0.2
MMRI	Maumere	8.97	170	Pn	Pn	11 23 08.0	+1.3
MMRI	Maumere	8.97	170	P	Pn	11 23 06.9	+0.2
	171nm,1.3s,4µm8µm						
MSAI	Masohi	9.04	113	P	Pn	11 23 10.8	+3.2
	87nm,0.6s,980nm						
CGP	Cagayan de Oro	9.11	26	⇓eP	Pn	11 23 11.1	+2.4
PLAI	Plampang	9.45	197	P	Pn	11 23 15.3	+2.1
PLAI	Plampang	9.45	197	P	Pn	11 23 15.4	+2.2
	306nm,0.9s,3µm10µm						
BIPH	Bislig	9.74	36	⇓eP	Pn	11 23 19.1	+1.8
TBP	Tagbilaran	9.93	19	eP	Pn	11 23 20.8	+1.0
TBP				eS	Sn	11 25 07.5	-1.8
ABJI	Asem Bagus	10.21	218	P	Pn	11 23 26.3	+2.6
	107nm,1.7s,5µm8µm						
DNP	Denpasar	10.37	211	P	Pn	11 23 27.1	+1.3
	2µm,1.8s,32µm						
KSM	Kuching	10.38	277		Pn	11 23 25.8	-0.2
BASI	Baing, Sumba	10.39	180	P	Pn	11 23 28.2	+2.1
	497nm,1.2s,6µm8µm						
BNDI	Bandanaira	10.41	117	P	Pn	11 23 28.7	+2.3
	2µm,1.1s,28µm10µm						
IGBI	Denpasar	10.53	211	P	Pn	11 23 30.3	+2.4
	631nm,1.6s,10µm						
SOEI	Soe	10.57	160	Pn	Pn	11 23 31.8	+3.1
SOEI	Soe	10.57	160	P	Pn	11 23 32.6	+3.9
	511nm,0.9s,5µm9µm						
BLJI	Banyuglugur	10.59	221	P	Pn	11 23 27.0	-1.7
	134nm,1.0s,4µm8µm						
JAGI	Jajag, Banyuwa	10.79	217	Pn	Pn	11 23 33.0	+1.4
JAGI	Jajag, Banyuwa	10.79	217	P	Pn	11 23 33.0	+1.4
	483nm,2.1s,11µm8µm						
GRJI	Gresik	10.79	229	P	Pn	11 23 31.7	+0.1
	616nm,1.3s,14µm7µm						
GMJI	Gumukmas	11.08	220	P	Pn	11 23 34.7	-0.7
	150nm,1.2s,6µm						
RCP	Roxas	11.44	11	⇓iP	Pn	11 23 43.0	+2.8
IBAJ	Ibajay, Aklan	11.60	8	⇑eP	Pn	11 23 45.4	+2.9
NGJI	Ngawi	11.86	230	P	Pn	11 23 47.4	+1.5
	323nm,2.2s,9µm14µm						
PWJI	Pagerwojo	12.03	227	P	Pn	11 23 48.5	+0.4
	107nm,0.6s,5µm						
FAKI	Fak Fak	12.04	105	Pn	Pn	11 23 47.5	-0.8
FAKI	Fak Fak	12.04	105	P	Pn	11 23 47.6	-0.8
FAKI	Fak Fak	12.04	105	P	Pn	11 23 47.0	-1.3
	213nm,1.1s,2µm8µm						
SMRI	Semarang	12.47	234		Pn	11 23 55.0	+0.9
SMRI	Semarang	12.47	234	P	Pn	11 23 55.2	+1.1
	243nm,1.4s,10µm9µm						
UGM	Wanagama	12.92	231		Pn	11 23 60.0	-0.1
UGM	Wanagama	12.92	231	P	Pn	11 24 01.5	+1.5
UGM	Wanagama	12.92	231	P	Pn	11 24 01.2	+1.2
	275nm,1.4s,8µm8µm						
YOGI	Yogyakarta	13.04	232	P	Pn	11 24 03.3	+1.7
	433nm,1.3s,6µm						
LUBP	Lubang	13.41	358	⇑eP	Pn	11 24 08.6	+2.2
SAUI	Saumlaki	13.42	128		Pn	11 24 08.8	+2.3
SAUI	Saumlaki	13.42	128	P	Pn	11 24 08.4	+1.9
	737nm,1.1s,10µm10µm						
RKPI	Ransiki, Papua	13.67	97	P	Pn	11 24 11.9	+2.1
	156nm,0.8s,4µm8µm						
PVCP	Virac	13.72	15	⇓eP	P	11 24 13.2	-2.5
TGY	Tagaytay City	13.77	1	P	P	11 24 15.8	-0.6
	382nm,0.7s,baz=288,slow=3.0,SNR=3.7						
TGY	Tagaytay City	13.77	1	⇑eP	Pn	11 24 12.4	+1.2
LQP	Lukban	13.81	4	⇑eP	P	11 24 15.0	-1.9
KPJI	Karang Pucung	13.88	237	P	Pn	11 24 13.9	+1.4
	452nm,0.7s,5µm						
MACP	Maragondon, Ca	13.93	0	⇓eP	P	11 24 15.6	-2.4
JCJI	Jatiwangi	14.02	241	P	P	11 24 20.6	+1.5
JCNP	Jose Panganiba	14.11	8	⇓eP	P	11 24 18.0	-2.0
QVP	Quezon City--P	14.29	2	⇑eP	P	11 24 21.7	-0.3
CMJI	Cimerak	14.52	236	P	P	11 24 24.3	-0.3
	804nm,0.6s,9µm7µm						
BBJI	Bungbulang	15.03	239	P	Pn	11 24 28.1	+0.8
PCPH	Palayan	15.23	2	⇑eP	P	11 24 33.0	+0.6
CBJI	Citeko	15.25	244	P	Pn	11 24 30.5	+0.4
	291nm,1.7s,8µm7µm						
BALP	Baler	15.43	3	⇑eP	P	11 24 34.1	-0.5
BALP				eS	pP	11 24 51.6	-1.4
I39PW	PALAU INFRASON	15.66	62	I	I	12 57 20.0	
	baz=241,slow=292,SNR=0.9						
SBJI	Serang	15.79	246	P	Pn	11 24 37.5	+0.7
	255nm,1.0s,7µm						
BOLP	Bolinao	16.05	358	⇑eP	Pn	11 24 39.2	-0.8
CGJI	Cibinong	16.38	245	P	P	11 24 45.2	0.0
	316nm,1.2s,9µm						
KLI	Kotabumi	16.54	252	P	P	11 25 02.4	+15
CAUP	Cauayan	16.64	4	⇑eP	P	11 24 48.9	+0.9
MTN	Manton Dam	16.67	142	P	P	11 24 49.6	+1.2
	baz=17,SNR=122						
MTN	Manton Dam	16.67	142	P	P	11 24 48.9	+0.5
MTN	Manton Dam	16.67	142	P	P	11 24 49.7	+1.3
PALP	Palanan	16.81	6	⇑eP	P	11 24 51.8	+1.9
MYKOM	Kota Tinggi	16.84	275		Pn	11 24 49.4	-0.5
JMBI	JAMBI	17.08	264	P	P	11 24 57.0	+4.0
KASI	Kota Agung	17.09	250	P	P	11 24 54.5	+1.4
	384nm,0.9s,6µm						
LWLI	Liwa	17.35	252	P	Pn	11 24 58.0	+1.8
	540nm,0.6s,9µm7µm						
KDU	Kakadu	17.41	138	P	Pn	11 24 57.6	+0.8
	baz=18,SNR=61						
KDU	Kakadu	17.41	138	P	Pn	11 24 57.6	+0.8
KNRA	Kununurra	17.75	153	P	Pn	11 25 02.2	+1.5
	baz=18,SNR=109						
KNRA	Kununurra	17.75	153	P	Pn	11 25 02.4	+1.6
KNRA	Kununurra	17.75	153	P	Pn	11 25 02.3	+1.5
SMPI	Sarmi	18.22	97	P	Pn	11 25 08.1	+1.5
	116nm,1.5s,4µm6µm						
MNAI	Manna	18.23	255	P	Pn	11 25 06.8	0.0
MNAI	Manna	18.23	255	P	Pn	11 25 07.6	+0.9
MNAI	Manna	18.23	255	P	Pn	11 25 07.8	+1.1
	486nm,0.6s,15µm11µm						
XMI	Christmas Isla	18.26	234	P	Pn	11 25 08.0	+1.0
KSI	Kapahiang	18.43	258	P	Pn	11 25 10.8	+1.7
MASI	Maura Aman, Be	18.68	259	P	Pn	11 25 12.2	+0.1
	589nm,1.1s,14µm8µm						
FITZ	Fitzroy Crossi	18.88	165	P	Pn	11 25 14.4	0.0
SDSI	Sungai Dareh	19.23	266	P	P	11 25 17.2	+0.6
	188nm,1.5s,5µm5µm						
BKNI	Bangkinang	19.58	270	P	P	11 25 21.3	+0.9

BKNI	**Bangkinang**	**19.58**	**270**	P	**Pn**	**11 25 22.3**	**-0.4**
	327nm,1.4s,13μm6μm						
GENI	**Genyem**	**19.74**	**98**	P	**Pn**	**11 25 23.5**	**-1.1**
	125nm,1.0s,5μm6μm						
IPM	**Ipoh**	**20.02**	**282**	P	**P**	**11 25 26.0**	**+0.7**
IPM	**Ipoh**	**20.02**	**282**	P	**P**	**11 25 25.9**	**+0.7**
PDSI	**Padang**	**20.19**	**267**	P	**P**	**11 25 27.3**	**+0.3**
	413nm,0.7s,6μm5μm						
KULM	**Kulim**	**20.56**	**284**	P	**P**	**11 25 31.3**	**+0.3**
PPSI	**Pulau Pagai**	**20.82**	**262**	P	**P**	**11 25 33.7**	**-0.1**
	527nm,0.7s,10μm						
SKLT	**Songkhla**	**21.10**	**289**	P	**P**	**11 25 38.1**	**+1.3**
MBWA	**Marble Bar**	**21.29**	**182**	P	**P**	**11 25 39.5**	**+0.8**
MBWA	**Marble Bar**	**21.29**	**182**	P	**P**	**11 25 38.8**	**+0.1**
MBWA	**Marble Bar**	**21.29**	**182**	P	**P**	**11 25 39.1**	**+0.4**
QIZ	**Qiongzhong**	**21.46**	**331**	P	**P**	**11 25 40.5**	**0.0**
QIZ				sP	**sP**	**11 26 09.0**	**-2.1**
QIZ				S	**S**	**11 29 30.3**	**-2.8**
QIZ				sS	**sS**	**11 30 02.3**	**-2.3**
QIZ				pmax	pmax		
	comp=Z,48nm,0.8s						
QIZ	**Qiongzhong**	**21.46**	**331**	P	**P**	**11 25 41.2**	**+0.6**
PSA00	**Pilbara Seismi**	**21.70**	**182**	P	**P**	**11 25 42.5**	**-0.5**
PSA00	**Pilbara Seismi**	**21.70**	**182**	P	**P**	**11 25 42.6**	**-0.5**
RPSI	**Rantau Prapat**	**21.82**	**277**	P	**P**	**11 25 44.4**	**-0.1**
PSI	**Prapat**	**21.84**	**277**	P	**P**	**11 25 44.4**	**-0.4**
TSI	**Tuntungan**	**22.28**	**279**	P	**P**	**11 25 46.8**	**-2.5**
	273nm,1.5s,7μm4μm						
PBSI	**Pulau Batu**	**22.34**	**269**	P	**P**	**11 25 47.8**	**-2.2**
	185nm,1.0s,6μm						
TWG	**Pinlang**	**22.45**	**1**	P	**P**	**11 25 50.9**	**0.0**
SRIT	**Nakonsritamara**	**22.52**	**292**	P	**P**	**11 25 52.1**	**+0.3**
HKPS	**Hong Kong Po S**	**22.79**	**344**	P	**P**	**11 25 54.7**	**+0.2**
TPUB	**Ta-pu**	**22.92**	**0**	P	**P**	**11 25 56.9**	**+1.1**
TPUB	**Ta-pu**	**22.92**	**0**	P	**P**	**11 25 57.7**	**+2.0**
YULB	**Yu-li**	**23.02**	**2**	P	**P**	**11 25 56.5**	**-0.2**
YULB	**Yu-li**	**23.02**	**2**	P	**P**	**11 25 57.1**	**+0.4**
KCSI	**Kotacane, Aceh**	**23.07**	**278**	P	**P**	**11 25 56.2**	**-1.1**
	181nm,1.5s,2μm						
GSI	**Gunungsitoli**	**23.07**	**273**	P	**P**	**11 25 56.6**	**-0.6**
GSI	**Gunungsitoli**	**23.07**	**273**	P	**P**	**11 25 57.2**	**-0.1**
GSI	**Gunungsitoli**	**23.07**	**273**	P	**P**	**11 25 56.3**	**-1.0**
	560nm,0.6s,8μm						
SSLB	**Suanglung**	**23.41**	**1**	P	**P**	**11 26 00.2**	**-0.1**
SSLB	**Suanglung**	**23.41**	**1**	P	**P**	**11 26 01.1**	**+0.8**
GIRL	**Giralia**	**23.58**	**195**	P	**P**	**11 26 03.0**	**+1.2**
	baz=24,SNR=3.5						
GIRL	**Giralia**	**23.58**	**195**	P	**P**	**11 26 03.4**	**+1.5**
GIRL	**Giralia**	**23.58**	**195**	P	**P**	**11 26 03.1**	**+1.2**
GZH	**Guangzhou**	**23.78**	**343**	P	**P**	**11 26 09.0**	**+5.3**
GZH				sP	**sP**	**11 26 40.0**	**+3.2**
GZH				S	**S**	**11 30 22.3**	**+10**
GZH				pmax	pmax		
	comp=Z,38nm,0.6s						
NACB	**Ninganchiao**	**23.81**	**2**	P	**P**	**11 26 04.4**	**+0.5**
WB0	**Warramunga Arr**	**24.04**	**147**	P	**P**	**11 26 05.8**	**-0.3**
WRAB	**Tennant Creek**	**24.15**	**147**	P	**P**	**11 26 07.0**	**0.0**
WRAB	**Tennant Creek**	**24.15**	**147**	P	**P**	**11 26 07.3**	**+0.3**
WRAB	**Tennant Creek**	**24.15**	**147**	P	**P**	**11 26 07.0**	**0.0**
WRA	**Warramunga Arr**	**24.15**	**147**	P	**P**	**11 26 06.8**	**-0.2**
	339nm,0.7s,baz=334,slow=9.4,SNR=1359						
WRA				S	**S**	**11 30 16.8**	**-1.3**
	10nm,1.1s,baz=334,slow=14,SNR=5.0						
WRA				ScP	**ScP**	**11 33 12.7**	**-2.8**
	3.6nm,0.7s,baz=334,slow=2.4,SNR=11						
WRA				PKiKP	**PKiKP**	**11 37 26.8**	**-1.9**
	0.9nm,0.7s,baz=314,slow=1.5,SNR=6.4						
WRA				P3KPbc		11 59 20.2	
	1.1nm,1.0s,baz=143,slow=5.5,SNR=4.5						
WRA	**Warramunga Arr**	**24.15**	**147**	P	**P**	**11 26 07.2**	**+0.1**
LHMI	**Lhok Sumawe**	**24.15**	**282**	P	**P**	**11 26 08.3**	**+1.2**
LHMI	**Lhok Sumawe**	**24.15**	**282**	P	**P**	**11 26 08.1**	**+1.0**
	355nm,1.0s,6μm						
WB2	**Warramunga Arr**	**24.16**	**147**	P	**P**	**11 26 06.9**	**-0.2**
WB1	**Warramunga Ar.**	**24.16**	**147**	P	**P**	**11 26 07.4**	**+0.2**
YHNB	**Yeheng**	**24.29**	**2**	P	**P**	**11 26 08.6**	**+0.2**
SNSI	**Sinabang, Aceh**	**24.38**	**275**	P	**P**	**11 26 08.5**	**-0.7**
	136nm,1.0s						
MLSI	**Meulaboh, Aceh**	**24.52**	**280**	P	**P**	**11 26 09.7**	**-0.8**
	198nm,0.8s,3μm						
TATO	**Taipei**	**24.60**	**2**	P	**P**	**11 26 11.1**	**+0.1**
WRKA	**Warakurna**	**26.21**	**164**	P	**P**	**11 26 25.7**	**0.0**
	baz=26,SNR=150						
WRKA	**Warakurna**	**26.21**	**164**	P	**P**	**11 26 25.9**	**+0.2**
COEN	**Coen**	**26.42**	**123**	P	**P**	**11 26 28.6**	**+1.0**
	baz=26,SNR=6.4						
COEN	**Coen**	**26.42**	**123**	P	**P**	**11 26 28.5**	**+0.8**
GULI	**GuiLin**	**26.80**	**339**	*e*P	P	11 26 40.5	+10
GULI				S	S	11 31 11.8	+12
GULI				pmax	pmax		
	comp=Z,20nm,0.7s						
GULI				LR	LR		
	comp=N,680nm,17.9s						
GULI				LR	LR		
	comp=E,790nm,19.0s						
GULI				LR	LR		
	comp=Z,1μm,16.3s						
PHRA	**Phrae**	**27.02**	**313**	P	**P**	**11 26 33.8**	**+0.8**
AS31	**Alice Springs**	**27.04**	**152**	P	**P**	**11 26 33.5**	**+0.2**
ASAR	**Alice Springs**	**27.04**	**152**	P	**P**	**11 26 33.5**	**+0.2**
	comp=Z,81nm,0.7s,baz=325,slow=7.7,SNR=515						
ASAR				PcP	**PcP**	**11 29 51.1**	**-1.2**
	comp=Z,6.4nm,0.6s,baz=345,slow=2.1,SNR=6.3						
ASAR				S	**S**	**11 31 03.3**	**-0.7**
	comp=Z,8.2nm,1.1s,baz=346,slow=22,SNR=4.6						
ASAR				ScP	**ScP**	**11 33 20.8**	**-3.0**
	comp=Z,5.7nm,0.6s,baz=339,slow=2.9,SNR=14						
ASAR				P3KPbc		11 59 06.5	
	comp=Z,0.8nm,0.9s,baz=142,slow=4.4,SNR=8.6						
	comp=Z,81nm,0.7s						
GUMO	**Guam**	**27.43**	**60**	LR	LR	11 36 23.5	
	comp=Z,361nm,21.5s,baz=228,slow=34						
JOW	**Kunigami**	**27.44**	**15**	P	**P**	**11 26 38.1**	**+1.4**
	comp=Z,37nm,0.7s,baz=245,slow=10,SNR=4.9						
JOW				LR	LR	11 36 56.6	
	comp=Z,597nm,20.6s,baz=142,slow=35						
	comp=Z,37nm,0.7s						
QIS	**Mount Isa**	**27.79**	**139**	P	**P**	**11 26 39.9**	**-0.1**
	baz=28,SNR=73						
QIS	**Mount Isa**	**27.79**	**139**	P	**P**	**11 26 40.1**	**+0.1**
CM31	**Chiang Mai Arr**	**27.95**	**312**	P	**P**	**11 26 42.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**27.95**	**312**	P	**P**	**11 26 42.3**	**+0.9**
	comp=Z,2.8nm,0.5s,baz=137,slow=7.0,SNR=26						
CMAR				PcP	**PcP**	**11 29 55.0**	**+0.5**
	comp=Z,10nm,0.8s,baz=184,slow=2.1,SNR=16						
CMAR				ScP	**ScP**	**11 33 26.7**	**+0.1**
	comp=Z,1.3nm,0.3s,baz=164,slow=2.7,SNR=6.9						
CMAR				PKiKP	**PKiKP**	**11 37 30.0**	**-0.8**
	comp=Z,3.6nm,0.8s,baz=270,slow=1.1,SNR=18						
CMAR				LR	LR	11 39 50.2	
	comp=Z,831nm,18.5s,baz=125,slow=40						
	comp=Z,2.8nm,0.5s						
CMAR	**Chiang Mai Arr**	**27.95**	**312**	P	**P**	**11 26 42.2**	**+0.9**
CMAR					**PcP**	**11 29 54.4**	**-0.1**
CRAI	**Chiangrai**	**28.06**	**316**	P	**P**	**11 26 42.9**	**+0.6**
PMG	**Port Moresby**	**28.11**	**111**	P	**P**	**11 26 43.3**	**+0.5**
	comp=Z,72nm,0.8s,baz=318,slow=4.5,SNR=32						
	comp=Z,72nm,0.8s						
PMG	**Port Moresby**	**28.11**	**111**	P	**P**	**11 26 42.8**	**0.0**
PMG				IAmb	IAmb	11 26 44.5	
	comp=Z,116nm,0.9s						
PMG	**Port Moresby**	**28.11**	**111**	P	**P**	**11 26 43.7**	**+0.9**
PMG	**Port Moresby**	**28.11**	**111**	*ce*P	**P**	**11 26 42.6**	**-0.2**
PMG				pmax	pmax		
	comp=Z,101nm,0.7s						
CHTO	**Chiang Mai**	**28.17**	**312**	P	**P**	**11 26 43.4**	**+0.1**
CHTO					**PcP**	**11 29 55.1**	**0.0**
GYA	**Guiyang**	**29.33**	**334**	P	**P**	**11 26 54.8**	**+1.2**
GYA				pP	pP	11 27 20.0	+4.2
GYA				sP	sP	11 27 30.5	+3.2
GYA				PP	**PnPn**	**11 27 52.8**	**+0.8**
GYA				PcP	**PcP**	**11 29 58.8**	**+0.8**
GYA				S	**S**	**11 31 38.3**	**-1.7**
GYA				sS	sS	11 32 16.5	-1.7
GYA				pmax	pmax		
	comp=Z,18nm,0.8s						
GYA				pmax	pmax		
	comp=Z,230nm,8.8s						
MORW	**Morawa**	**29.47**	**188**	P	**P**	**11 26 54.7**	**0.0**
	baz=30,SNR=15						
MORW	**Morawa**	**29.47**	**188**	P	**P**	**11 26 55.3**	**+0.6**
MORW				IAmb	IAmb	11 26 56.0	
	comp=Z,104nm,0.9s						
MORW	**Morawa**	**29.47**	**188**	P	**P**	**11 26 54.8**	**0.0**
MTSU	**Mount Surprise**	**29.60**	**129**	P	**P**	**11 26 56.9**	**+0.8**
	baz=30,SNR=81						
MTSU	**Mount Surprise**	**29.60**	**129**	P	**P**	**11 26 56.7**	**+0.6**
KMI	**Kunming**	**30.18**	**326**	⇑P	**P**	**11 27 03.5**	**+2.2**
KMI				pP	pP	11 27 26.0	+2.4
KMI				sP	sP	11 27 35.5	+0.4
KMI				PcP	**PcP**	**11 30 00.3**	**-0.1**
KMI				S	**S**	**11 31 55.0**	**+1.4**
KMI				sS	sS	11 32 26.0	-5.8
KMI				pmax	pmax		
	comp=Z,19nm,0.6s						
KMI				pmax	pmax		
	comp=Z,390nm,11.1s						
KMI				LR	LR		
	comp=Z,360nm,19.0s						
KMI				LR	LR		
	comp=Z,510nm,12.4s						
KMI				LR	LR		
	comp=Z,700nm,16.2s						
SSE	**Sheshan**	**30.69**	**1**	P	**P**	**11 27 06.0**	**+0.6**
SSE				pP	**pP**	**11 27 28.3**	**+0.7**
SSE				S	**S**	**11 32 00.3**	**-0.7**
SSE				pmax	pmax		
	comp=Z,24nm,0.8s						
SSE				pmax	pmax		
	comp=Z,140nm,3.7s						
WHN	**Wuhan**	**30.72**	**349**	⇑P	**P**	**11 27 09.5**	**+3.8**
WHN				sP	**sP**	**11 27 40.0**	**+0.7**
WHN				S	**S**	**11 32 05.0**	**+3.6**
WHN				pmax	pmax		
	comp=Z,2μm,4.7s						
WHN				LR	LR		
	comp=Z,3μm,15.8s						
BLDU	**Ballidu**	**30.91**	**187**	P	**P**	**11 27 06.6**	**-0.8**
	baz=31,SNR=42						
BLDU	**Ballidu**	**30.91**	**187**	P	**P**	**11 27 06.5**	**-0.9**
OOD	**Oodnadatta**	**31.41**	**154**	P	**P**	**11 27 12.2**	**+0.4**
KMBL	**Kambalda**	**31.46**	**178**	P	**P**	**11 27 12.8**	**+0.6**
	baz=32,SNR=6.9						
KMBL	**Kambalda**	**31.46**	**178**	P	**P**	**11 27 12.3**	**+0.1**
FORT	**Forrest**	**31.65**	**168**	P	**P**	**11 27 13.9**	**0.0**
	baz=32,SNR=124						
FORT	**Forrest**	**31.65**	**168**	P	**P**	**11 27 14.0**	**0.0**
FORT	**Forrest**	**31.65**	**168**	P	**P**	**11 27 13.9**	**0.0**
NJ2	**Nanjing**	**31.68**	**357**	*e*P	**P**	**11 27 16.5**	**+2.4**
NJ2				pP	**pP**	**11 27 37.8**	**+1.4**
NJ2				sP	**sP**	**11 27 45.3**	**-2.6**
NJ2				PP	**PnPn**	**11 28 23.0**	**+0.9**
NJ2				S	**S**	**11 32 20.8**	**+4.3**
NJ2				ScS	**ScS**	**11 37 38.0**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,210nm,4.7s						
NJ2				LR	LR		
	comp=Z,420nm,13.3s						
NJ2				LR	LR		
	comp=Z,410nm,14.7s						
NJ2				LR	LR		
	comp=Z,660nm,17.1s						
ENH	**Enshi**	**31.69**	**341**	P	**P**	**11 27 14.0**	**-0.3**
ENH				IAmb	IAmb	11 27 49.8	
	comp=Z,316nm,1.8s						
ENH					**PcP**	**11 30 04.4**	**+0.4**
ENH	**Enshi**	**31.69**	**341**	P	**P**	**11 27 14.9**	**+0.7**
ENH				pP	**pP**	**11 27 37.2**	**+0.6**
ENH				sP	**sP**	**11 27 47.0**	**-1.0**
KLBR	**Kellerberrin**	**31.78**	**185**	P	**P**	**11 27 15.1**	**0.0**
	baz=32,SNR=5.5						
KLBR	**Kellerberrin**	**31.78**	**185**	P	**P**	**11 27 14.8**	**-0.2**
PZH	**PanZhiHua**	**31.82**	**327**	P	**P**	**11 27 16.5**	**+0.9**
PZH				pP	**pP**	**11 27 38.8**	**+0.9**
PZH				sP	**sP**	**11 27 52.3**	**+2.9**
PZH				PcP	**PcP**	**11 30 04.8**	**+0.2**
PZH				S	**S**	**11 32 20.0**	**+1.0**
PZH				sS	**sS**	**11 32 58.8**	**+1.6**
PZH				ScP	**ScP**	**11 33 37.5**	**-1.7**
PZH				PcS	**PcS**	**11 33 48.8**	**-0.7**
PZH				ScS	**ScS**	**11 37 36.5**	**-1.4**
PZH				pmax	pmax		
	comp=Z,20nm,0.7s						
PZH				pmax	pmax		
	comp=Z,230nm,4.3s						
PZH				LR	LR		
	comp=Z,340nm,15.0s						
PZH				LR	LR		
	comp=Z,520nm,16.6s						
PZH				LR	LR		
	comp=Z,600nm,14.9s						
RABL	**Rabaul**	**31.82**	**98**	P	**P**	**11 27 16.9**	**+1.3**
RABL	**Rabaul**	**31.82**	**98**	P	**P**	**11 27 16.7**	**+1.0**
TV1H	**Townsville Har**	**32.17**	**129**	P	**P**	**11 27 19.6**	**+1.0**
CTA	**Charters Tower**	**32.23**	**130**	P	**P**	**11 27 20.0**	**+0.9**
	comp=Z,30nm,0.8s,baz=306,slow=9.6,SNR=30						
CTA				PcP	**PcP**	**11 30 06.3**	**+0.6**
	comp=Z,15nm,0.9s,baz=42,slow=3.5,SNR=5.2						
CTA				LR	LR	11 41 49.0	
	comp=Z,968nm,18.1s,baz=312,slow=39						
	comp=Z,30nm,0.8s						
CTAO	**Charters Tower**	**32.23**	**130**	P	**P**	**11 27 20.7**	**+1.6**
CTAO				IAmb	IAmb	11 27 23.3	
	comp=Z,69nm,1.1s						
CTAO	**Charters Tower**	**32.23**	**130**	P	**P**	**11 27 20.7**	**+1.6**
CTAO				pmax	pmax		
	comp=Z,69nm,1.1s						
CTAO	**Charters Tower**	**32.23**	**130**	P	**P**	**11 27 19.8**	**+0.7**
MUN	**Mundaring**	**32.32**	**187**	P	**P**	**11 27 19.9**	**+0.2**
	baz=32,SNR=6.7						
MUN	**Mundaring**	**32.32**	**187**	P	**P**	**11 27 19.9**	**+0.2**
JSU	**Suzuyama**	**32.46**	**16**	P	**P**	**11 27 20.6**	**-0.4**
TNCH	**TengChong**	**32.62**	**321**	P	**P**	**11 27 24.3**	**+1.6**
TNCH				pP	pP	11 27 47.0	+2.0
TNCH				sP	sP	11 27 59.3	+2.9
TNCH				S	**S**	**11 32 31.8**	**+0.2**
TNCH				sS	sS	11 33 11.5	+1.5
TNCH				pmax	pmax		
	comp=Z,87nm,0.5s						
TNCH				pmax	pmax		
	comp=Z,190nm,4.6s						
TNCH				LR	LR		
	comp=Z,570nm,10.5s						
TNCH				LR	LR		
	comp=Z,530nm,12.3s						
TNCH				LR	LR		
	comp=Z,480nm,16.7s						
MULG	**Mulgathing**	**32.94**	**158**	P	**P**	**11 27 25.7**	**+0.5**
NWAO	**Narrogin (SRO)**	**33.15**	**185**	P	**P**	**11 27 26.7**	**-0.3**
	comp=Z,73nm,0.7s,baz=3.9,slow=7.6,SNR=49						
NWAO				LR	LR	11 41 20.0	
	comp=Z,457nm,19.9s,baz=334,slow=37						
	comp=Z,73nm,0.7s						
NWAO	**Narrogin (SRO)**	**33.15**	**185**	P	**P**	**11 27 26.9**	**0.0**
	baz=33,SNR=40						
NWAO				P	**P**	**11 27 26.9**	**0.0**
	baz=33,SNR=40						
NWAO	**Narrogin (SRO)**	**33.15**	**185**	P	**P**	**11 27 27.7**	**+0.7**
NWAO				IAmb	IAmb	11 27 28.4	
	comp=Z,104nm,0.8s						
NWAO	**Narrogin (SRO)**	**33.15**	**185**	P	**P**	**11 27 27.0**	**0.0**
NWAO	**Narrogin (SRO)**	**33.15**	**185**	P	**P**	**11 27 26.9**	**0.0**
NWAO	**Narrogin (SRO)**	**33.15**	**185**	P	**P**	**11 27 27.7**	**+0.7**
NWAO				pmax	pmax		
	comp=Z,104nm,0.9s						
NWAO	**Narrogin (SRO)**	**33.15**	**185**	P	**P**	**11 27 26.9**	**0.0**
NWAO	**Narrogin (SRO)**	**33.15**	**185**	P	**P**	**11 27 25.9**	**-1.0**
NWAO				pP	**pwP**	**11 27 52.2**	**+1.2**
NWAO				sP	**sP**	**11 28 05.0**	**+5.0**
JCJ	**Chichijima**	**33.80**	**36**	P	**P**	**11 27 32.3**	**-0.4**
JCJ	**Chichijima**	**33.80**	**36**	P	**P**	**11 27 33.1**	**+0.4**
INKA	**Innaminka**	**33.87**	**147**	P	**P**	**11 27 34.3**	**+1.0**
JNU	**Nakatsue**	**34.10**	**15**	P	**P**	**11 27 35.2**	**-0.1**
CD2	**Chengdu**	**34.44**	**334**	P	**P**	**11 27 39.0**	**+0.7**
CD2				S	**S**	**11 33 01.5**	**+2.0**
CD2				pmax	pmax		
	comp=Z,90nm,0.7s						
CD2				LR	LR		
	comp=Z,710nm,27.4s						
CD2				LR	LR		
	comp=Z,1μm,35.7s						
LCRK	**Leigh Creek**	**34.81**	**153**	P	**P**	**11 27 41.9**	**+0.5**
RKGY	**Rocky Gully**	**34.84**	**185**	P	**P**	**11 27 43.6**	**+2.0**
	baz=35,SNR=8.5						
LYN	**LuoYang**	**34.97**	**348**	⇑*i*P	**P**	**11 27 44.5**	**+1.8**
LYN				pP	pP	11 28 06.0	+0.8
LYN				sP	sP	11 28 16.0	-0.6
LYN				PcP	**PcP**	**11 30 14.3**	**+1.2**
LYN				S	**S**	**11 33 10.0**	**+2.6**
LYN				sS	sS	11 33 47.5	+1.6
LYN				pmax	pmax		
	comp=Z,60nm,0.8s						
LYN				pmax	pmax		
	comp=Z,200nm,5.3s						
LYN				LR	LR		
	comp=Z,800nm,16.7s						
LYN				LR	LR		
	comp=Z,2μm,19.1s						
LYN				LR	LR		
	comp=Z,580nm,20.1s						
QLP	**Quilpie**	**35.05**	**141**	P	**P**	**11 27 44.5**	**+0.9**
	baz=35,SNR=63						
QLP	**Quilpie**	**35.05**	**141**	P	**P**	**11 27 44.4**	**+0.9**
JTU	**Tsushima**	**35.08**	**13**	P	**P**	**11 27 43.5**	**-0.2**
JTU	**Tsushima**	**35.08**	**13**	P	**P**	**11 27 43.6**	**0.0**
XAN	**Xi'an**	**35.37**	**343**	⇑P	**P**	**11 27 47.0**	**+0.8**
XAN				pP	pP	11 28 09.0	+0.4
XAN				sP	sP	11 28 19.3	-0.7
XAN				PcP	**PcP**	**11 30 14.8**	**+0.4**
XAN				S	**S**	**11 33 13.8**	**+0.3**
XAN				sS	sS	11 33 52.3	+0.2
XAN				pmax	pmax		
	comp=Z,15nm,0.9s						
XAN				pmax	pmax		
	comp=Z,250nm,9.2s						
XAN				LR	LR		
	comp=Z,700nm,19.0s						
XAN				LR	LR		
	comp=Z,870nm,19.0s						
XAN				LR	LR		
	comp=Z,690nm,19.0s						
XAN	**Xi'an**	**35.37**	**343**	P	**P**	**11 27 46.3**	**+0.1**
XAN				pP	**pP**	**11 28 08.6**	**-0.1**
XAN				sP	**sP**	**11 28 19.1**	**-0.9**
JMN	**Monobe**	**35.56**	**19**	P	**P**	**11 27 48.3**	**+0.4**
JMN				IAmb	IAmb	11 27 50.7	
	comp=Z,83nm,1.0s						
JMN	**Monobe**	**35.56**	**19**	P	**P**	**11 27 48.1**	**+0.3**
TIA	**Tai'an**	**35.93**	**355**	P	**P**	**11 27 52.0**	**+1.0**
TIA				pP	**pP**	**11 28 16.3**	**+2.8**
TIA				sP	**sP**	**11 28 25.5**	**+0.7**
TIA				S	**S**	**11 33 25.0**	**+2.9**
TIA				sS	**sS**	**11 34 02.8**	**+2.0**
TIA				ScS	**ScS**	**11 37 55.5**	**-3.4**
TIA				pmax	pmax		
	comp=Z,51nm,0.8s						
TIA				LR	LR		
	comp=Z,260nm,13.5s						
TIA				LR	LR		
	comp=Z,260nm,10.0s						
TIA				LR	LR		
	comp=Z,600nm,17.6s						
BRDH	**Bariadhala**	**35.95**	**310**	LR	LR	11 45 42.8	
	comp=Z,704nm,18.8s,baz=134,slow=41						
BBOO	**Buckleboo**	**35.96**	**158**	P	**P**	**11 27 51.3**	**0.0**
	baz=36,SNR=82						
BBOO	**Buckleboo**	**35.96**	**158**	P	**P**	**11 27 51.3**	**0.0**
BBOO	**Buckleboo**	**35.96**	**158**	P	**P**	**11 27 51.4**	**+0.2**
TJN	**Taejon**	**36.49**	**9**	P	**P**	**11 27 56.6**	**+0.9**
TJN	**Taejon**	**36.49**	**9**	*de*P	**P**	**11 27 56.3**	**+0.6**
JHS	**Saijyo**	**36.49**	**17**	P	**P**	**11 27 55.6**	**-0.2**
JHS				IAmb	IAmb	11 28 21.9	
	comp=Z,51nm,1.0s						
JHS	**Saijyo**	**36.49**	**17**	P	**P**	**11 27 57.6**	**+1.8**
WHYH	**Whyalla**	**36.75**	**156**	P	**P**	**11 27 59.0**	**+1.1**
RK1H	**Rockhampton Ha**	**37.34**	**131**	P	**P**	**11 28 03.4**	**+0.3**
HNS	**HongShan**	**37.37**	**352**	⇑P	**P**	**11 28 04.5**	**+1.4**
HNS				sP	**sP**	**11 28 36.5**	**-0.6**
HNS				PP	**PnPn**	**11 29 35.5**	**+3.3**
HNS				PcP	**PcP**	**11 30 21.0**	**+0.8**
HNS				S	**S**	**11 33 45.5**	**+1.6**
HNS				SS	**SnSn**	**11 36 22.0**	**-9.1**
HNS				pmax	pmax		
	comp=Z,23nm,1.1s						
HNS				LR	LR		
	comp=Z,500nm,21.5s						
HNS				LR	LR		
	comp=Z,540nm,19.1s						
HNS				LR	LR		
	comp=Z,630nm,19.9s						
SHL	**Shillong**	**37.46**	**314**	P	**P**	**11 28 04.3**	**0.0**
SHL				IAmb	IAmb	11 28 05.7	
	comp=Z,46nm,0.9s						
SHL					**PcP**	**11 30 20.9**	**-0.1**
SHL	**Shillong**	**37.46**	**314**	P	**P**	**11 28 04.6**	**+0.3**
	SNR=14						
INCN	**Inchon**	**37.47**	**8**	P	**P**	**11 28 05.3**	**+1.4**
INCN	**Inchon**	**37.47**	**8**	P	**P**	**11 28 05.4**	**+1.4**
INCN				pmax	pmax		
	comp=Z,39nm,1.0s						
STKA	**Stephens Creek**	**37.61**	**150**	P	**P**	**11 28 06.1**	**+0.8**
	comp=Z,199nm,0.7s,baz=319,slow=8.8,SNR=234						
STKA				LR	LR	11 45 47.3	
	comp=Z,453nm,18.9s,baz=323,slow=40						
	comp=Z,199nm,0.7s						
STKA	**Stephens Creek**	**37.61**	**150**	P	**P**	**11 28 06.1**	**+0.8**
	baz=38,SNR=151						
STKA	**Stephens Creek**	**37.61**	**150**	P	**P**	**11 28 06.1**	**+0.8**
STKA				IAmb	IAmb	11 28 07.8	
	comp=Z,59nm,0.9s						
STKA	**Stephens Creek**	**37.61**	**150**	P	**P**	**11 28 06.1**	**+0.8**
KSAR	**Wonju Array Be**	**37.62**	**9**	P	**P**	**11 28 05.4**	**+0.2**
KSAR	**Wonju Array Be**	**37.62**	**9**	P	**P**	**11 28 05.4**	**+0.2**
KSRS	**Korea Array**	**37.64**	**10**	P	**P**	**11 28 07.0**	**+1.7**
	comp=Z,26nm,0.8s,baz=191,slow=8.9,SNR=81						
KSRS				pP	**pP**	**11 28 29.7**	**+1.6**
	comp=Z,14nm,0.9s,baz=189,slow=7.3,SNR=4.3						
KSRS				PcP	**PcP**	**11 30 21.1**	**+0.1**
	comp=Z,3.4nm,0.7s,baz=183,slow=2.8,SNR=8.3						
KSRS				ScP	**ScP**	**11 33 59.6**	**0.0**
	comp=Z,1.7nm,0.8s,baz=184,slow=3.2,SNR=3.5						
KSRS				LR	LR	11 44 10.3	
	comp=Z,330nm,21.1s,baz=195,slow=37						
	comp=Z,26nm,0.8s						
HTT	**Hallett**	**37.66**	**155**	P	**P**	**11 28 06.6**	**+0.9**
	baz=38,SNR=268						
HTT	**Hallett**	**37.66**	**155**	P	**P**	**11 28 06.5**	**+0.8**
KS19	**Wonju Array Si**	**37.67**	**9**	P	**P**	**11 28 05.4**	**-0.3**
RMQ	**Roma**	**37.96**	**137**	P	**P**	**11 28 09.5**	**+1.2**
	baz=38,SNR=18						
RMQ	**Roma**	**37.96**	**137**	P	**P**	**11 28 09.5**	**+1.2**
TIY	**Taiyuan**	**38.04**	**349**	P	**P**	**11 28 10.5**	**+1.6**
TIY				S	**S**	**11 33 53.8**	**-0.5**
TIY				pmax	pmax		
	comp=Z,46nm,0.8s						
TIY				pmax	pmax		
	comp=Z,220nm,4.9s						
TIY				LR	LR		
	comp=Z,430nm,13.7s						
TIY				LR	LR		
	comp=Z,330nm,15.1s						
TIY				LR	LR		
	comp=Z,370nm,19.2s						
INU	**Inuyama**	**38.13**	**22**	P	**P**	**11 28 09.0**	**-0.5**
JGF	**Kuroka**	**38.48**	**22**	P	**P**	**11 28 12.0**	**-0.5**
JGF	**Kuroka**	**38.48**	**22**	P	**P**	**11 28 11.9**	**-0.6**
DL2	**Dalian**	**38.49**	**1**	P	**P**	**11 28 12.8**	**+0.3**
DL2				pP	**pP**	**11 28 35.8**	**+0.6**
DL2				S	**S**	**11 33 57.0**	**-3.7**
DL2				sS	**sS**	**11 34 33.5**	**-6.1**
DL2				pmax	pmax		
	comp=Z,59nm,0.7s						
DL2				pmax	pmax		
	comp=Z,290nm,3.6s						
EIDS	**Eidsvold**	**38.92**	**133**	P	**P**	**11 28 16.8**	**+0.4**
EIDS				IAmb	IAmb	11 28 18.0	
	comp=Z,82nm,1.3s						
LZH	**Lanzhou**	**38.92**	**338**	⇑P	**P**	**11 28 18.0**	**+1.6**
LZH				pP	pP	11 28 39.3	0.0
LZH				sP	sP	11 28 50.5	-0.2
LZH				PP	**PnPn**	**11 29 55.8**	**+4.9**
LZH				PcP	**PcP**	**11 30 26.5**	**+1.2**
LZH				S	**S**	**11 34 02.0**	**-5.7**
LZH				PcS	**PcS**	**11 34 16.5**	**+1.4**
LZH				sS	sS	11 34 49.5	+2.8
LZH				pmax	pmax		
	comp=Z,35nm,1.4s						
LZH				LR	LR		
	comp=Z,650nm,14.8s						
LZH				LR	LR		
	comp=Z,430nm,13.1s						
LZH				LR	LR		

	comp=Z,700nm,15.1s						
CMSA	Cobar Meteorol	39.54	145	P	P	11 28 22.5	+1.1
	baz=40,SNR=254						
CMSA	Cobar Meteorol	39.54	145	P	P	11 28 22.4	+1.0
MAJO	Matsushiro	39.63	22	P	P	11 28 21.4	-0.7
MAJO				IAmb	IAmb	11 28 57.3	
	comp=Z,104nm,1.8s						
MAJO	Matsushiro	39.63	22	d iP	P	11 28 21.1	-1.0
MAJO				pmax	pmax		
	comp=Z,22nm,1.1s						
MJAR	Matsushiro Arr	39.63	22	P	P	11 28 20.4	-1.7
	comp=Z,18nm,0.9s,baz=197,slow=8.8,SNR=28						
MJAR				pP	pP	11 28 44.4	-0.8
	comp=Z,11nm,0.9s,baz=194,slow=8.9,SNR=3.9						
MJAR				PcP	PcP	11 30 27.8	+0.4
	comp=Z,13nm,1.1s,baz=202,slow=5.4,SNR=7.1						
MJAR				ScP	ScP	11 34 06.3	-1.1
	comp=Z,6.8nm,0.7s,baz=205,slow=4.9,SNR=11						
	comp=Z,18nm,0.9s						
MJB9	Matsu-Tunnel	39.63	22	P	P	11 28 20.7	-1.4
MJB9				IAmb	IAmb	11 28 57.3	
	comp=Z,106nm,1.8s						
BJT	Baijiatuau	39.80	355	P	P	11 28 24.6	+1.2
BJT				IAmb	IAmb	11 28 25.8	
	comp=Z,91nm,0.7s						
BJT	Baijiatuau	39.80	355	P	P	11 28 25.0	+1.6
BJT	Baijiatuau	39.80	355	P	P	11 28 24.6	+1.2
BJT				pmax	pmax		
	comp=Z,91nm,0.7s						
BJT	Baijiatuau	39.80	355	P	P	11 28 24.0	+0.6
BJT				pP	pP	11 28 49.1	+2.9
BJI	Beijing	39.82	355	P	P	11 28 25.3	+1.8
BJI				pP	pP	11 28 49.3	+3.0
BJI				sP	sP	11 28 57.5	-0.1
BJI				PP	PnPn	11 30 05.0	+3.8
BJI				S	S	11 34 20.5	-0.1
BJI				sS	sS	11 35 01.8	+2.1
BJI				pmax	pmax		
	comp=Z,86nm,0.6s						
BJI				LR	LR		
	comp=Z,300nm,15.8s						
HNR	Honiara	40.31	105	P	P	11 28 27.2	-0.8
	comp=Z,2µm,0.8s,baz=217,slow=3.4,SNR=10						
HNR	Honiara	40.31	105	P	P	11 28 27.9	-0.1
HNR	Honiara	40.31	105	P	P	11 28 27.9	-0.1
HNR				pmax	pmax		
	comp=Z,268nm,1.0s						
PALK	Pallekele	40.41	281	LR	LR	11 46 31.7	
	comp=Z,716nm,19.2s,baz=208,slow=38						
PALK	Pallekele	40.41	281	P	P	11 28 28.4	-0.5
PALK	Pallekele	40.41	281	d iP	P	11 28 29.5	+0.5
PALK				pmax	pmax		
	comp=Z,40nm,1.1s						
PALK	Pallekele	40.41	281	P	P	11 28 29.4	+0.5
LSA	Lhasa	40.58	319	P	P	11 28 32.3	+1.7
LSA				pmax	pmax		
	comp=Z,43nm,0.7s						
LSA	Lhasa	40.58	319	P	P	11 28 32.1	+1.5
LSA				IAmb	IAmb	11 28 42.6	
	comp=Z,34nm,0.6s						
LSA	Lhasa	40.58	319	P	P	11 28 32.1	+1.5
LSA				pmax	pmax		
	comp=Z,34nm,0.6s						
LSA	Lhasa	40.58	319	P	P	11 28 32.3	+1.7
HHC	Hu-ho-hao-te	41.25	350	eP	P	11 28 37.0	+1.5
HHC				pP	pP	11 28 58.8	+0.4
HHC				S	S	11 34 42.5	+0.3
HHC				sS	sS	11 35 23.3	+1.9
HHC				pmax	pmax		
	comp=Z,92nm,0.7s						
HHC				pmax	pmax		
	comp=Z,440nm,5.0s						
BTO	Baotou	41.31	348	⇓iP	P	11 28 38.8	+2.8
BTO				pP	pP	11 29 01.8	+2.8
BTO				sP	sP	11 29 09.8	-0.6
BTO				PcP	PcP	11 30 33.8	+1.0
BTO				S	S	11 34 47.8	+4.6
BTO				sS	sS	11 35 25.3	+2.9
BTO				ScS	ScS	11 38 30.3	+0.1
BTO				pmax	pmax		
	comp=Z,170nm,1.1s						
BTO				pmax	pmax		
	comp=Z,840nm,3.9s						
BTO				LR	LR		
	comp=Z,2µm,15.3s						
BTO				LR	LR		
	comp=Z,6µm,17.1s						
BTO				LR	LR		
	comp=Z,3µm,17.4s						
SNY	Shenyang	41.48	3	⇑P	P	11 28 37.5	+0.3
SNY				S	S	11 34 45.8	+0.5
SNY				pmax	pmax		
	comp=Z,130nm,0.8s						
SNY				pmax	pmax		
	comp=Z,280nm,3.9s						
SNY				LR	LR		
	comp=Z,800nm,19.2s						
SNY				LR	LR		
	comp=Z,870nm,15.1s						
SNY				LR	LR		
	comp=Z,1µm,25.5s						
ARPS	Mount Arapiles	41.75	154	P	P	11 28 40.3	+0.8
	baz=42,SNR=96						
ARPS	Mount Arapiles	41.75	154	P	P	11 28 40.4	+0.8
JMM	Marumori	41.80	24	P	P	11 28 39.9	0.0
JMM				IAmb	IAmb	11 28 40.9	
	comp=Z,328nm,2.0s						
JMM	Marumori	41.80	24	P	P	11 28 40.4	+0.5
ARMA	Armidale	42.42	139	P	P	11 28 48.2	+3.0
	baz=43,SNR=15						
ARMA	Armidale	42.42	139	P	P	11 28 47.8	+2.6
ARMA	Armidale	42.42	139	P	P	11 28 46.9	+1.7
JIRN	Jiri	42.82	312	eP	P	11 28 49.6	+0.8
	comp=Z,39nm,0.4s						
GOMU	GeErMu	43.06	329	P	P	11 28 52.3	+1.7
GOMU				S	S	11 35 10.3	+0.8
GOMU				pmax	pmax		
	comp=Z,8.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,55nm,5.8s						
GOMU				LR	LR		
	comp=Z,270nm,17.3s						
GOMU				LR	LR		
	comp=Z,260nm,17.5s						
GOMU				LR	LR		
	comp=Z,390nm,17.7s						
YNG	Young	43.10	146	P	P	11 28 51.8	+1.2
GUN	Gumba	43.18	313	eP	P	11 28 52.4	+0.7
BRAT	Ballarat	43.34	153	P	P	11 28 54.6	+2.3
PKI	Pulchoki	43.35	312	eP	P	11 28 53.4	+0.4
PKIN	Phulchoki	43.36	312	eP	P	11 28 53.4	+0.4
	comp=Z,17nm,0.3s						
GTA	Gaotai	43.38	336	⇑P	P	11 28 54.8	+2.0
GTA				pP	pP	11 29 16.5	+0.5
GTA				sP	sP	11 29 28.3	+1.0
GTA				PcP	PcP	11 30 41.0	+1.2
GTA				PcS	PcS	11 34 31.5	-1.1
GTA				S	S	11 35 13.8	+0.2
GTA				ScS	ScS	11 38 40.0	-3.0
GTA				pmax	pmax		
	comp=Z,36nm,1.0s						
GTA				pmax	pmax		
	comp=Z,150nm,4.7s						
GTA				LR	LR		
	comp=Z,400nm,18.5s						
GTA				LR	LR		
	comp=Z,430nm,18.9s						
GTA				LR	LR		
	comp=Z,470nm,19.3s						
KKN	Kakani	43.56	312	eP	P	11 28 54.9	+0.3
CN2	Changchun	43.58	5	eP	P	11 28 57.5	+3.3
CN2				epP	pP	11 29 21.5	+4.0
CN2				eS	S	11 35 19.5	+3.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
DMN	Daman	43.59	312	eP	P	11 28 55.9	+1.0
XLT	XiLinHaoTe	43.66	355	eP	P	11 28 55.8	+0.9
XLT				pP	pP	11 29 16.3	-1.8
XLT				sP	sP	11 29 28.3	-1.1
XLT				PcP	PcP	11 30 43.5	+3.0
XLT				S	S	11 35 15.5	-1.9
XLT				sS	sS	11 35 57.3	+0.4
XLT				pmax	pmax		
	comp=Z,110nm,1.0s						
XLT				pmax	pmax		
	comp=Z,630nm,4.0s						
VLA	Vladivostok	43.87	12	d iP	P	11 28 55.0	-1.5
VLA				pmax	pmax		
	comp=Z,47nm,0.9s						
MGCD	Mangrove Creek	43.94	142	P	P	11 28 59.8	+2.6
	baz=44,SNR=11						
MGCD	Mangrove Creek	43.94	142	P	P	11 28 59.5	+2.3
GEXS	Deakin Univers	44.03	153	P	P	11 29 00.2	+2.3
TOO	Toolangi	44.08	151	P	P	11 28 60.0	+1.5
	baz=44,SNR=40						
TOO	Toolangi	44.08	151	P	P	11 29 00.3	+1.9
TOO	Toolangi	44.08	151	P	P	11 28 59.9	+1.5
TOO	Toolangi	44.08	151	P	P	11 29 00.3	+1.9
TOO				pmax	pmax		
	comp=Z,441nm,2.0s						
GKN	Gorkha	44.16	312	eP	P	11 29 00.0	+0.7
CAN	Canberra	44.19	146	P	P	11 29 00.8	+1.5
CAN	Canberra	44.19	146	P	P	11 29 01.1	+1.8
CAN	Canberra	44.19	146	P	P	11 29 00.8	+1.5
CAN				pmax	pmax		
	comp=Z,225nm,0.7s						
CNB	Canberra Magne	44.39	146	P	P	11 29 01.6	+0.7
RIV	Riverview	44.39	143	P	P	11 29 02.5	+1.7
	baz=44,SNR=4.0						
RIV	Riverview	44.39	143	P	P	11 29 03.2	+2.4
JTM	Tenmabayashi	44.42	22	P	P	11 29 01.3	+0.4
JTM				IAmb	IAmb	11 29 02.2	
	comp=Z,90nm,1.0s						
HYB	Hyderabad	44.77	295	⇓eP	P	11 29 04.6	+0.4
HYB				epP	pP	11 29 27.0	-0.6
HYB				esP	sP	11 29 38.1	-0.9
HYB				eS	S	11 35 34.3	+0.1
HYB				e		11 38 48.7	
KOLN	Koldanda	44.81	311	eP	P	11 29 05.2	+0.6
MDJ	Mudanjiang	44.90	9	P	P	11 29 05.3	+0.6
MDJ				pP	pP	11 29 28.3	+0.3
MDJ				sP	sP	11 29 39.3	+0.1
MDJ				PcP	PcP	11 30 46.5	+1.9
MDJ				PP	PP	11 30 50.8	-0.7
MDJ				ScP	ScP	11 34 29.0	+0.8
MDJ				PcS	PcS	11 34 40.0	+1.7
MDJ				S	S	11 35 34.0	-1.2
MDJ				ScS	ScS	11 38 53.0	+0.9
MDJ				pmax	pmax		
	comp=Z,140nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,540nm,4.6s						
MDJ				LR	LR		
	comp=Z,730nm,15.7s						
MDJ				LR	LR		
	comp=Z,770nm,15.9s						
MDJ				LR	LR		
	comp=Z,610nm,19.6s						
MDJ	Mudanjiang	44.90	9	P	P	11 29 04.7	0.0
MDJ				IAmb	IAmb	11 29 06.7	
	comp=Z,126nm,1.0s						
MDJ	Mudanjiang	44.90	9	P	P	11 29 06.1	+1.4
MDJ	Mudanjiang	44.90	9	S	P	11 29 04.0	-0.7
MDJ				P	pP	11 29 04.8	-23
MDJ				pP	sP	11 29 28.0	-11
MDJ				sP	sP	11 29 39.6	+0.3
USA0B	Ussuriysk Arra	44.92	12	P	P	11 29 05.2	+0.3
USA0B				IAmb	IAmb	11 29 06.7	
	comp=Z,52nm,0.8s						
USA0B	Ussuriysk Arra	44.92	12	P	P	11 29 05.2	+0.3
USA0B				pmax	pmax		
	comp=Z,52nm,0.8s						
USRK	Ussuriysk Ar.	44.92	12	P	P	11 29 05.3	+0.4
	comp=Z,30nm,0.5s,baz=192,slow=6.5,SNR=106						
USRK				pP	pP	11 29 28.6	+0.3
	comp=Z,15nm,0.8s,baz=207,slow=7.9,SNR=4.3						
USRK				S	S	11 35 36.1	+0.5
	comp=Z,1.6nm,0.8s,baz=203,slow=14,SNR=6.2						
	comp=Z,30nm,0.5s						
DANN	Dangsing	44.99	312	eP	P	11 29 06.5	+0.4
	comp=Z,75nm,0.5s						
PCHI	Peechi	45.18	285	⇓eP	P	11 29 07.8	+0.4
PCHI				eS	S	11 35 40.5	+0.2
PYUN	Piuthan	45.44	311	eP	P	11 29 10.3	+0.7
	comp=Z,84nm,0.5s						
MILA	Mila	45.55	148	P	P	11 29 12.3	+2.2
	baz=46,SNR=4.2						
MILA	Mila	45.55	148	P	P	11 29 11.9	+1.8
BNX	BinXian	45.70	7	⇓P	P	11 29 11.3	+0.3
BNX				pP	pP	11 29 34.5	+0.1
BNX				sP	sP	11 29 45.5	-0.1
BNX				PP	PP	11 31 06.5	+6.5
BNX				S	S	11 35 44.5	-2.2
BNX				sS	sS	11 36 26.3	-0.2
BNX				pmax	pmax		
	comp=Z,20nm,1.1s						
BNX				pmax	pmax		
	comp=Z,380nm,9.8s						
BNX				LR	LR		
	comp=Z,200nm,10.3s						
BNX				LR	LR		
	comp=Z,250nm,11.4s						
BNX				LR	LR		
	comp=Z,340nm,16.3s						
ERM	Erimo	46.28	23	P	P	11 29 14.4	-1.2
ERM	Erimo	46.28	23	P	P	11 29 15.8	+0.2
ERM	Erimo	46.28	23	⇑eP	P	11 29 15.0	-0.6
ERM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TEY	Ternei	46.80	16	⇑eP	P	11 29 19.6	0.0
TEY				e		11 29 42.8	
TEY				e		11 35 58.5	
TEY				pmax	pmax		
	comp=N,100nm,2.4s						
TEY				pmax	pmax		
	comp=Z,100nm,2.1s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.2s						
TEY				pmax	pmax		
	comp=N,20nm,1.4s						
TEY				pmax	pmax		
	comp=Z,30nm,1.4s						
KOUNC	Koumac, New Ca	47.43	119	P	P	11 29 26.2	+1.2
KOUNC	Koumac, New Ca	47.43	119	P	P	11 29 26.6	+1.6
KAAM	Kaadhehdhoo	47.63	270	P	P	11 29 26.2	-0.4
KAAM	Kaadhehdhoo	47.63	270	P	P	11 29 27.1	+0.5
ASAJ	Asahikawa	47.87	21	LR	LR	11 47 49.7	
	comp=Z,304nm,21.6s,baz=187,slow=34						
ASAJ	Asahikawa	47.87	21	P	P	11 29 27.6	-0.3
ASAJ				pmax	pmax		
	comp=Z,38nm,0.7s						
JKA	Kamikawa-asahi	47.87	21	P	P	11 29 27.6	-0.4
CORO	Coronation Par	47.95	153	P	P	11 29 26.8	-1.8
MNCI	Minicoy	48.05	281	P	P	11 29 29.5	-0.4
MNCI				IAmb	IAmb	11 29 56.9	
	comp=Z,154nm,1.1s						
DGAR	Diego Garcia	48.63	260	P	P	11 29 34.6	+0.3
DGAR	Diego Garcia	48.63	260	c eP	P	11 29 36.4	+2.1
DGAR				pmax	pmax		
	comp=Z,204nm,2.5s						
DGAR	Diego Garcia	48.63	260	P	P	11 29 34.9	+0.6
MOO	Moorlands	48.76	154	P	P	11 29 37.4	+2.6
	baz=49,SNR=3.8						
HIA	Hailar	48.84	359	P	P	11 29 35.5	+0.1
HIA				PcP	PcP	11 30 59.3	+0.7
HIA	Hailar	48.84	359	P	P	11 29 35.5	+0.1
HIA						11 30 59.3	
HIA				pmax	pmax		
	comp=Z,36nm,1.2s						
ULN	Ulaanbaatar	48.88	348	P	P	11 29 37.1	+1.2
ULN				IAmb	IAmb	11 29 38.6	
	comp=Z,100nm,0.9s						
ULN	Ulaanbaatar	48.88	348	c iP	P	11 29 37.2	+1.4
ULN				pmax	pmax		
	comp=Z,204nm,1.7s						
ULN	Ulaanbaatar	48.88	348	P	P	11 29 37.3	+1.5
ULN	Ulaanbaatar	48.88	348	P	P	11 29 37.1	+1.2
ULN				pP	pP	11 30 01.9	+2.4
SONM	Songino Array	48.99	347	P	P	11 29 38.1	+1.4
	comp=Z,38nm,0.8s,baz=165,slow=8.9,SNR=178						
SONM				PcP	PcP	11 30 59.6	+0.3
	comp=Z,12nm,0.8s,baz=167,slow=2.2,SNR=2.3						
SONM				S	S	11 36 30.9	-2.8
	comp=Z,0.2nm,0.4s,baz=219,slow=50,SNR=1.2						
SONM				LR	LR	11 52 51.6	
	comp=Z,215nm,18.5s,baz=160,slow=39						
	comp=Z,38nm,0.8s						
SONM	Songino Array	48.99	347	P	P	11 29 37.4	+0.7
SONM				IAmb	IAmb	11 29 39.3	
	comp=Z,66nm,1.0s						
SONM	Songino Array	48.99	347	P	P	11 29 37.4	+0.7
SONM				pmax	pmax		
	comp=Z,66nm,1.0s						
YUK	Yuzh-Kuril'sk	49.06	24	⇓iP	P	11 29 36.7	-0.3
TAU	Tasmania Unive	49.19	154	P	P	11 29 39.8	+1.7
TAU	Tasmania Unive	49.19	154	P	P	11 29 39.0	+0.9
TAU	Tasmania Unive	49.19	154	P	P	11 29 39.8	+1.7
TAU				pmax	pmax		
	comp=Z,129nm,1.1s						
KLR	Kul'dur	49.73	10	c iP	P	11 29 41.8	-0.3
KLR				pmax	pmax		
	comp=Z,95nm,1.7s						
KLR				MLR	MLR		
	comp=Z,149nm,17.0s						
NOUC	Port Laguerre	49.73	120	P	P	11 29 43.4	+0.8
NOUC	Port Laguerre	49.73	120	P	P	11 29 42.6	0.0
NOUC				P	P	11 29 42.8	+0.2
NOUC				pP	pP	11 30 08.7	+2.8
DZM	Mont Dzumac	49.85	119	eP	P	11 29 44.1	+0.5
	comp=Z,398nm,1.2s						
DZM	Mont Dzumac	49.85	119	eLR	LR	11 44 06.9	
	comp=Z,1µm,35.2s						
DZM	Mont Dzumac	49.85	119	P	P	11 29 44.9	+1.3
	comp=Z,105nm,1.0s,baz=242,slow=9.6,SNR=74						
DZM				LR	LR	11 51 57.3	
	comp=Z,158nm,19.8s,baz=279,slow=37						
	comp=Z,105nm,1.0s						
DZM	Mont Dzumac	49.85	119	P	P	11 29 44.4	+0.8
DZM	Mont Dzumac	49.85	119	P	P	11 29 44.2	+0.6
DZM	Mont Dzumac	49.85	119	P	P	11 29 45.0	+1.4
ONTNC	Ouen Toro	49.94	120	P	P	11 29 45.2	+1.1
ONTNC	Ouen Toro	49.94	120	P	P	11 29 45.2	+1.1
LIFNC	LIFOU	50.12	118	P	P	11 29 47.0	+1.5
LIFNC	LIFOU	50.12	118	P	P	11 29 46.6	+1.1
HEH	HeiHe	50.16	6	⇑P	P	11 29 45.8	+0.5
HEH				pP	pP	11 30 08.8	-0.3
HEH				sP	sP	11 30 20.5	+0.3
HEH				PcP	PcP	11 31 02.8	-0.5
HEH				S	S	11 36 47.8	-1.8
HEH				sS	sS	11 37 27.5	-2.4
HEH				pmax	pmax		
	comp=Z,130nm,1.3s						
HEH				pmax	pmax		
	comp=Z,620nm,4.1s						
YATNC	Mamie plateau,	50.23	119	P	P	11 29 48.0	+1.6
RTV	Rentapao	50.31	113	P	P	11 29 48.9	+1.9
OUENC	Ouen Island, N	50.31	120	P	P	11 29 48.6	+1.7
OUENC	Ouen Island, N	50.31	120	P	P	11 29 48.5	+1.5
YSS	Yuzh-Sakhalins	50.39	20	P	P	11 29 46.7	-0.4
YSS				IAmb	IAmb	11 29 48.0	
	comp=Z,103nm,1.7s						
YSS	Yuzh-Sakhalins	50.39	20	⇓iP	P	11 29 47.0	-0.1
YSS				e		11 31 04.4	
YSS				eS	S	11 36 49.3	-3.5
YSS				pmax	pmax		
	comp=Z,30nm,1.2s						
YSS				pmax	pmax		
	comp=Z,400nm,4.4s						
YSS				MLR	MLR		
	comp=Z,300nm,13.0s						
YSS				MLR	MLR		
	comp=N,200nm,14.0s						
YSS				MLR	MLR		
	comp=E,100nm,14.0s						
PINNC	Pines Island,	50.90	120	P	P	11 29 53.2	+1.8
PINNC	Pines Island,	50.90	120	P	P	11 29 53.4	+2.0
CIT	Chita	51.94	354	eP	P	11 30 00.0	+1.3
CIT				e		11 30 23.0	
CIT				e		11 31 10.2	
CIT				pmax	pmax		
	comp=Z,162nm,2.3s						
UGL	Uglegorsk	52.03	18	c iP	P	11 29 59.4	+0.1
UGL				pmax	pmax		
	comp=Z,160nm,1.0s						
ZAK	Zakamensk	52.10	346	eP	P	11 30 00.1	+0.1
ZAK				e		11 31 08.3	
ZAK				pmax	pmax		
	comp=Z,39nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,29nm,1.1s						
WMQ	Urumqi	52.38	330	eP	P	11 30 03.8	+1.7
WMQ				pP	pP	11 30 27.3	+1.1
WMQ				sP	sP	11 30 38.5	+1.2
WMQ				PcP	PcP	11 31 09.5	-2.3
WMQ				S	S	11 37 18.0	-2.5
WMQ				sS	sS	11 37 57.5	-3.3
WMQ				ScS	ScS	11 39 36.8	-5.7
WMQ				pmax	pmax		
	comp=Z,31nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,450nm,4.3s						
WMQ				LR	LR		
	comp=Z,480nm,17.3s						
WMQ				LR	LR		
	comp=Z,390nm,18.3s						
WMQ				LR	LR		
	comp=Z,540nm,25.9s						
ZEA	Zeya	53.60	5	eP	P	11 30 10.9	+0.1
ZEA				eS	S	11 37 39.8	+3.2
ZEA				e		11 41 15.8	
ZEA				pmax	pmax		
	comp=N,20nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.0s						
ZEA				pmax	pmax		
	comp=N,100nm,6.3s						
ZEA				pmax	pmax		
	comp=Z,200nm,4.9s						
ZEA				smax	smax		
	comp=E,200nm,9.1s						
IRK	Irkutsk	53.61	348	⇑iP	P	11 30 11.6	+0.7
IRK				eS	S	11 37 35.9	-0.9
IRK				pmax	pmax		
	comp=Z,109nm,1.7s						
TYV	Tymovskoe	53.79	17	eP	P	11 30 12.7	+0.4
TYV				eS	S	11 37 41.7	+2.4
TYV				pmax	pmax		
	comp=Z,300nm,2.9s						
TYV				pmax	pmax		
	comp=Z,23nm,1.2s						
TYV				smax	smax		
	comp=N,200nm,6.2s						
TYV				smax	smax		
	comp=E,600nm,6.2s						
MOY	Mondy	53.85	345	eP	P	11 30 14.0	+1.2
MOY				pmax	pmax		
	comp=Z,121nm,1.5s						
NIL	Nilore	55.44	312	P	P	11 30 24.7	+0.1
NIL				IAmb	IAmb	11 31 25.3	
	comp=Z,56nm,0.9s						
NIL	Nilore	55.44	312	P	P	11 30 24.7	+0.1
NIL				pmax	pmax		
	comp=Z,56nm,1.0s						
ZSN	Zaisan	56.37	332	eP	P	11 30 32.1	+1.1
	comp=Z,29nm,1.5s,baz=332						
ZSN				eS	S	11 38 16.2	+2.3
	baz=332						
ZSN	Zaisan	56.37	332	eP	P	11 30 32.0	+1.1
ZSN				eS	S	11 38 16.2	+2.3
ZSN				pmax	pmax		
	comp=Z,29nm,1.5s						
SHLS	Shalkode	56.37	325	eP	P	11 30 31.0	-0.2
	comp=Z,32nm,1.2s,baz=325						
SHLS	Shalkode	56.37	325	eP	P	11 30 31.0	-0.2
SHLS				pmax	pmax		
	comp=Z,32nm,1.2s						
KSH	Kashi	56.43	319	P	P	11 30 33.5	+1.9
KSH				pP	pP	11 30 57.0	+0.8
KSH				sP	sP	11 31 10.0	+2.7
KSH				PcP	PcP	11 31 29.8	+2.2
KSH				PP	PP	11 32 45.8	+7.5
KSH				S	S	11 38 17.5	+2.3
KSH				sS	sS	11 38 57.3	+2.3
KSH				ScS	ScS	11 40 05.8	-5.9
KSH				pmax	pmax		
	comp=Z,21nm,1.3s						
KSH				pmax	pmax		
	comp=Z,360nm,6.4s						
KSH				LR	LR		
	comp=Z,340nm,19.9s						
KSH				LR	LR		
	comp=Z,200nm,15.1s						

KSH				LR	LR		
	comp=Z,260nm,21.3s						
UZB	**Uzynbulak**	56.62	324	*e*P	P	11 30 34.0	+1.0
	baz=324						
UZB				*e*S	S	11 38 20.1	+2.4
	baz=324						
UZB	**Uzynbulak**	56.62	324	*e*P	P	11 30 34.0	+1.0
UZB				*e*S	S	11 38 20.1	+2.4
DGZ	**Jazzator, Alta**	56.87	335	*c i*P	P	11 30 36.0	+1.4
DGZ				pmax	pmax		
	comp=Z,39nm,1.0s						
DGZ				MLR	MLR		
	comp=Z,188nm,17.0s						
SATY	**Saty**	56.93	324	⇑*i*P	P	11 30 36.7	+1.6
	comp=Z,23nm,0.7s,baz=324						
SATY	**Saty**	56.93	324	*c i*P	P	11 30 36.7	+1.6
SATY				pmax	pmax		
	comp=Z,23nm,0.7s						
ZHN	**Zhinishke**	56.98	324	*e*P	P	11 30 36.6	+1.2
	baz=324						
ZHN	**Zhinishke**	56.98	324	*e*P	P	11 30 36.6	+1.2
KPKS	**Kokpek**	57.01	325	*e*P	P	11 30 36.8	+1.1
	comp=Z,33nm,1.4s,baz=324						
KPKS	**Kokpek**	57.01	325	*e*P	P	11 30 36.8	+1.1
KPKS				pmax	pmax		
	comp=Z,33nm,1.4s						
MK31	**Makanchi Array**	57.18	330	P	P	11 30 37.1	+0.4
MK31				IAmb	IAmb	11 31 02.5	
	comp=Z,55nm,1.2s						
MK31	**Makanchi Array**	57.18	330	*d i*P	P	11 30 37.5	+0.8
MKAR	**Makanchi Array**	57.18	330	P	P	11 30 37.5	+0.9
	comp=Z,25nm,0.8s,baz=128,slow=7.9,SNR=150						
MKAR				pP	pP	11 31 01.1	0.0
	comp=Z,29nm,0.9s,baz=133,slow=6.8,SNR=5.1						
MKAR				LR	LR	11 56 46.0	
	comp=Z,136nm,18.1s,baz=136,slow=38						
MKAR				PKPPKP	P'P'df	12 00 17.4	-7.9
	comp=Z,0.1nm,0.4s,baz=54,slow=6.2,SNR=3.6						
	comp=Z,25nm,0.8s						
MKAR	**Makanchi Array**	57.18	330	P	P	11 30 37.4	+0.8
MAKZ	**Makanchi**	57.35	329	P	P	11 30 38.3	+0.4
MAKZ				IAmb	IAmb	11 31 31.7	
	comp=Z,42nm,1.1s						
MAKZ	**Makanchi**	57.35	329	P	P	11 30 38.3	+0.4
MAKZ				pmax	pmax		
	comp=Z,42nm,1.1s						
MAKZ	**Makanchi**	57.35	329	P	P	11 30 36.7	-1.2
MAKZ				pP	pP	11 31 00.7	-1.6
BOD	**Bodaibo**	57.65	356	*e*P	P	11 30 40.0	+0.3
BOD				pmax	pmax		
	comp=Z,146nm,1.8s						
ULHL	**Ulahol**	57.76	322	P	P	11 30 43.0	+1.9
	SNR=9.8						
TNSS	**Tian-Shan**	57.78	323	*e*P	P	11 30 43.0	+1.5
	baz=323						
TNSS	**Tian-Shan**	57.78	323	*e*P	P	11 30 43.0	+1.5
MDOK	**Medeo**	57.79	323	*e*P	P	11 30 42.4	+1.2
	baz=323						
MDOK				*e*S	S	11 38 36.0	+2.9
	baz=323						
MDOK	**Medeo**	57.79	323	*e*P	P	11 30 42.4	+1.2
MDOK				*e*S	S	11 38 35.9	+2.9
AAA	**Alma-Ata**	57.90	323	*e*P	P	11 30 42.9	+1.0
	baz=323						
AAA	**Alma-Ata**	57.90	323	*e*P	P	11 30 42.9	+1.0
BOOM	**Boomskoye usch**	58.08	322	P	P	11 30 44.1	+0.8
BOOM				IAmb	IAmb	11 30 51.2	
	comp=Z,62nm,1.4s						
BOOM	**Boomskoye usch**	58.08	322	P	P	11 30 44.1	+0.8
BOOM				pmax	pmax		
	comp=Z,62nm,1.4s						
TDK	**Taldyqorghan**	58.10	326	*e*P	P	11 30 44.4	+1.2
	baz=326						
TDK	**Taldyqorghan**	58.10	326	*e*P	P	11 30 44.4	+1.2
CHKK	**Chushkaly**	58.23	324	*e*P	P	11 30 45.0	+0.8
	baz=324						
CHKK	**Chushkaly**	58.23	324	*e*P	P	11 30 44.9	+0.8
TKM2	**Tokmak 2**	58.53	322	P	P	11 30 47.5	+1.1
	SNR=28						
SKR	**Severo-Kuril's**	58.59	26	⇓*e*P	P	11 30 46.5	+0.1
KUU	**Kurty**	58.63	324	*e*P	P	11 30 48.0	+1.0
	comp=Z,68nm,1.1s,baz=324						
KUU				*e*S	S	11 38 45.7	+2.0
	baz=324						
KUU	**Kurty**	58.63	324	*e*P	P	11 30 47.9	+1.0
KUU				*e*S	S	11 38 45.7	+2.0
KUU				pmax	pmax		
	comp=Z,68nm,1.1s						
KBK	**Karagaybulak**	58.78	322	P	P	11 30 50.3	+2.2
	SNR=14						
UCH	**Uchtor**	58.82	321	P	P	11 30 50.3	+1.5
	SNR=17						
KBL	**Kabul**	58.98	311	P	P	11 30 50.2	+0.5
KBL				IAmb	IAmb	11 30 53.0	
	comp=Z,53nm,0.8s						
KBL	**Kabul**	58.98	311	P	P	11 30 50.2	+0.5
KBL				pmax	pmax		
	comp=Z,53nm,0.8s						
AAK	**Ala-Archa**	59.05	322	P	P	11 30 51.6	+1.6
	SNR=8.6						
AAK	**Ala-Archa**	59.05	322	LR	LR	12 00 43.4	
	comp=Z,158nm,18.0s,baz=119,slow=40						
AAK	**Ala-Archa**	59.05	322	P	P	11 30 51.3	+1.3
AAK				IAmb	IAmb	11 30 58.1	
	comp=Z,41nm,1.1s						
AAK	**Ala-Archa**	59.05	322	*c i*P	P	11 30 51.4	+1.4
AAK				pmax	pmax		
	comp=Z,64nm,2.5s						
AAK	**Ala-Archa**	59.05	322	*i* P	P	11 30 51.2	+1.2
	SNR=16						
AAK	**Ala-Archa**	59.05	322	P	P	11 30 51.5	+1.4
AAK	**Ala-Archa**	59.05	322	P	P	11 30 50.2	+0.2
AAK				pP	pP	11 31 14.4	-0.3
MSVF	**Nonsavu**	59.22	111	P	P	11 30 53.4	+2.0
	comp=Z,22nm,0.7s,baz=276,slow=7.6,SNR=15						
	comp=Z,22nm,0.7s						
AML	**Almayashu**	59.28	321	P	P	11 30 53.0	+1.1
	SNR=32						
USP	**Ospenovka**	59.39	322	P	P	11 30 53.8	+1.6
	SNR=14						
SGDS	**Sogindy**	59.41	323	*e*P	P	11 30 53.0	+0.6
	baz=322						
SGDS	**Sogindy**	59.41	323	*e*P	P	11 30 53.0	+0.6
EKS2	**Erkin-Say**	59.51	321	P	P	11 30 54.7	+1.5
	SNR=10						
BTK	**Batken**	60.13	317	IAmb	IAmb	11 31 28.1	
	comp=Z,90nm,1.6s						
CHGR	**Chuyangaron**	60.63	315	P	P	11 31 01.2	+0.4
CHGR	**Chuyangaron**	60.63	315	P	P	11 31 01.2	+0.4
CHGR				pmax	pmax		
	comp=Z,119nm,1.0s						
BTLS	**Baital**	60.64	324	*e*P	P	11 31 01.1	+0.5
	baz=324						
BTLS				*e*S	S	11 39 11.1	+1.6
	baz=324						
BTLS	**Baital**	60.64	324	*e*P	P	11 31 01.1	+0.5
BTLS				*e*S	S	11 39 11.0	+1.6
PEA0B	**Petropavlovsk-**	61.03	25	P	P	11 31 02.9	-0.2
PEA0B				IAmb	IAmb	11 31 04.9	
	comp=Z,89nm,1.0s						
PEA0B	**Petropavlovsk-**	61.03	25	P	P	11 31 02.9	-0.2
PEA0B				pmax	pmax		
	comp=Z,89nm,1.0s						
PETK	**Petropavlovsk-**	61.03	25	P	P	11 31 03.3	+0.2
	comp=Z,51nm,0.9s,baz=208,slow=8.2,SNR=62						
PETK				PcP	PcP	11 31 45.6	+0.2
	comp=Z,15nm,1.0s,baz=180,slow=1.4,SNR=3.5						
PETK				LR	LR	11 58 58.9	
	comp=Z,118nm,18.8s,baz=212,slow=37						
	comp=Z,51nm,0.9s						
PETK	**Petropavlovsk-**	61.03	25	P	P	11 31 03.5	+0.4
ZAA0	**Zalesovo Array**	61.13	337	P	P	11 31 03.8	+0.1
ZALV	**Zalesovo Beam**	61.13	337	P	P	11 31 03.8	+0.1
	comp=Z,32nm,0.8s,baz=123,slow=5.5,SNR=105						
ZALV				pP	pP	11 31 27.7	-0.6
	comp=Z,36nm,0.9s,baz=123,slow=5.5,SNR=6.1						
ZALV				LR	LR	11 58 13.7	
	comp=Z,220nm,20.4s,baz=106,slow=36						
ZALV				PKP2bc		12 00 25.8	
	comp=Z,0.7nm,0.5s,baz=302,slow=2.8,SNR=5.4						
	comp=Z,32nm,0.8s						
ZALV	**Zalesovo Beam**	61.13	337	P	P	11 31 03.6	-0.2
ZALV	**Zalesovo Beam**	61.13	337	*i* P	P	11 31 03.7	-0.1
ZALV				pmax	pmax		
	comp=Z,32nm,0.8s						
DZA	**Taraz**	61.17	321	*e*P	P	11 31 04.9	+0.5
	baz=320						
DZA	**Taraz**	61.17	321	*e*P	P	11 31 04.8	+0.5
PET	**Petropavlovsk**	61.37	25	P	P	11 31 05.5	+0.2
PET	**Petropavlovsk**	61.37	25	P	P	11 31 05.5	+0.2
PET	**Petropavlovsk**	61.37	25	*e*P	P	11 31 05.3	-0.1
PET				*e**PP	pP	11 31 29.8	-0.2
PET				*e**SP	sP	11 31 39.9	-1.0
PET				*e*S	S	11 39 19.4	+1.1
PET				*e**SS	sS	11 39 53.8	-4.8
PET				*e*SS	SS	11 43 22.1	+1.4
PET				pmax	pmax		
	comp=Z,900nm,4.9s						
PET				pmax	pmax		
	comp=Z,134nm,1.3s						
PET				pmax	pmax		
	comp=Z,300nm,6.2s						
PET				MLR	MLR		
	comp=Z,200nm,15.0s						
PET	**Petropavlovsk**	61.37	25	P	P	11 31 04.8	-0.6
PET				pP	pP	11 31 29.3	-0.7
JCZ	**Jackson Bay**	61.46	142	P	P	11 31 07.8	+1.5
KURK	**Kurchatov**	61.60	331	P	P	11 31 08.0	+1.1
KURK	**Kurchatov**	61.60	331	*c i*P	P	11 31 07.6	+0.7
KURK				pmax	pmax		
	comp=Z,125nm,1.3s						
KURK	**Kurchatov**	61.60	331	P	P	11 31 07.9	+0.9
KURK	**Kurchatov**	61.60	331	P	P	11 31 06.0	-1.0
KURK				pP	pP	11 31 30.8	-1.0
KURK				sP	PcP	11 31 46.8	-0.9
IUG	**Iuzhnay**	61.65	319	*e*P	P	11 31 08.6	+0.9
	comp=Z,42nm,1.1s,baz=319						
IUG				*e*S	S	11 39 25.1	+2.5
	baz=319						
IUG	**Iuzhnay**	61.65	319	*e*P	P	11 31 08.5	+0.9
IUG				*e*S	S	11 39 25.0	+2.5
IUG				pmax	pmax		
	comp=Z,42nm,1.1s						
MLZ	**Mavora Lakes**	61.75	144	P	P	11 31 09.5	+1.4
MLZ				IAmb	IAmb	11 31 10.1	
	comp=Z,56nm,1.0s						
KK31	**Karatay Array**	61.80	320	P	P	11 31 09.2	+0.7
KK31	**Karatay Array**	61.80	320	P	P	11 31 09.2	+0.7
KK31				pmax	pmax		
	comp=Z,18nm,1.0s						
KKAR	**Karatay Array**	61.80	320	P	P	11 31 08.6	+0.1
KKAR	**Karatay Array**	61.80	320	P	P	11 31 08.6	+0.1
WHZ	**Wether Hill Ro**	61.94	144	P	P	11 31 10.0	+0.6
WHZ				IAmb	IAmb	11 31 11.8	
	comp=Z,91nm,1.3s						
YAK	**Yakutsk**	62.01	5	S	S	11 39 22.6	-3.5
	comp=Z,3.8nm,0.4s,baz=324,slow=2.3,SNR=1.2						
YAK				LR	LR	12 01 31.3	
	comp=Z,106nm,18.7s,baz=207,slow=39						
YAK	**Yakutsk**	62.01	5	P	P	11 31 09.5	0.0
YAK	**Yakutsk**	62.01	5	*c i*P	P	11 31 09.3	-0.2
YAK				*e**PP	pP	11 31 32.6	-1.5
YAK				*e*		11 31 48.8	
YAK				*e*		11 33 26.8	
YAK				*e*PPP	PPP	11 34 52.7	
YAK				*e*S	S	11 39 26.5	+0.4
YAK				*e*		11 40 46.1	
YAK				*e*SS	SS	11 43 35.1	+4.7
YAK				pmax	pmax		
	comp=Z,392nm,0.9s						
YAK				pmax	pmax		
	comp=N,165nm,1.1s						
YAK				pmax	pmax		
	comp=E,83nm,1.6s						
YAK				pmax	pmax		
	comp=Z,80nm,3.0s						
YAK				pmax	pmax		
	comp=N,52nm,2.5s						
YAK				pmax	pmax		
	comp=E,35nm,2.0s						
YAK				smax	smax		
	comp=N,348nm,2.7s						
YAK				smax	smax		
	comp=E,85nm,2.5s						
YAK	**Yakutsk**	62.01	5	P	P	11 31 08.8	-0.7
YAK				pP	pP	11 31 35.0	+0.9
DSZ	**Denniston Nort**	62.21	139	P	P	11 31 12.6	+1.3
QRZ	**Quartz Range**	62.26	138	P	P	11 31 12.7	+1.1
INZ	**Inchbonnie**	62.44	140	IAmb	IAmb	11 31 14.6	
	comp=Z,129nm,1.6s						
LBZ	**Lake Benmore**	62.48	142	IAmb	IAmb	11 31 14.8	
	comp=Z,88nm,1.3s						
NGCH	**Negor - Chabah**	62.54	299	P	P	11 31 13.4	-0.4
RPZ	**Rata Peaks**	62.68	141	P	P	11 31 14.8	+0.4
	comp=Z,144nm,0.9s,baz=271,slow=0.9,SNR=61						
RPZ				LR	LR	11 59 01.1	
	comp=Z,532nm,18.7s,baz=294,slow=36						
	comp=Z,144nm,0.9s						
RPZ	**Rata Peaks**	62.68	141	P	P	11 31 15.2	+0.8
KUZ	**Kuaotunu**	62.80	132	P	P	11 31 16.3	+1.0
HIZ	**Hauiti**	62.88	134	IAmb	IAmb	11 31 19.1	
	comp=Z,100nm,1.1s						
THZ	**Tophouse**	62.94	138	P	P	11 31 16.9	+0.7
THZ				IAmb	IAmb	11 31 18.3	
	comp=Z,80nm,1.1s						
TOZ	**Tahuroa Road**	63.03	133	IAmb	IAmb	11 31 20.2	
	comp=Z,121nm,1.3s						
JLN	**Jalan Bani Buh**	63.38	295	P	P	11 31 18.8	-0.6
BSWZ	**Blackbirch Sta**	63.57	138	P	P	11 31 21.2	+0.9
GVZ	**Greta Valley S**	63.59	139	IAmb	IAmb	11 31 22.8	
	comp=Z,72nm,1.0s						
MA2	**Magadan**	63.66	17	LR	LR	11 59 25.4	
	comp=Z,93nm,20.2s,baz=222,slow=36						
MA2	**Magadan**	63.66	17	P	P	11 31 21.0	+0.5
MA2				IAmb	IAmb	11 31 22.7	
	comp=Z,94nm,0.9s						
MA2	**Magadan**	63.66	17	P	P	11 31 21.4	+0.9
MA2	**Magadan**	63.66	17	P	P	11 31 21.0	+0.5
MA2				pmax	pmax		
	comp=Z,94nm,0.9s						
MA2	**Magadan**	63.66	17	P	P	11 31 19.9	-0.6
MA2				pP	pP	11 31 45.3	+0.1
MA2				sP	sP	11 31 56.8	+0.8
KHZ	**Kahutara**	63.66	139	IAmb	IAmb	11 31 22.7	
	comp=Z,118nm,1.2s						
KHZ	**Kahutara**	63.66	139	P	P	11 31 20.9	+0.1
MQZ	**McQueen's Vall**	63.69	140	IAmb	IAmb	11 31 23.4	
	comp=Z,135nm,1.4s						
SNVZ	**South Ngauruho**	63.71	135	P	P	11 31 23.1	+1.6
OTVZ	**Oturere**	63.72	135	P	P	11 31 22.8	+1.3
WNVZ	**Wahianoa**	63.74	135	P	P	11 31 20.9	-0.7
WBK	**Wadi Bani Khal**	63.87	295	P	P	11 31 22.5	-0.2
	SNR=8.0						
SNZO	**South Karori**	63.95	137	P	P	11 31 23.1	+0.4
SNZO				IAmb	IAmb	11 31 24.3	
	comp=Z,110nm,0.8s						
SNZO	**South Karori**	63.95	137	P	P	11 31 22.3	-0.5
BHW	**Baring Head**	64.11	137	IAmb	IAmb	11 31 24.6	
	comp=Z,102nm,1.0s						
BHHZ	**Black Hill Sta**	64.13	135	P	P	11 31 23.6	-0.5
BRZS	**Berezniki**	64.17	328	*e*P	P	11 31 25.0	+0.8
	comp=Z,86nm,2.1s,baz=328						
BRZS				*e*S	S	11 39 56.3	+2.6
	baz=328						
BRZS	**Berezniki**	64.17	328	*e*P	P	11 31 24.9	+0.8
BRZS				*e*S	S	11 39 56.2	+2.6
BRZS				pmax	pmax		
	comp=Z,86nm,2.1s						
MRZ	**Mangatainoka R**	64.27	136	IAmb	IAmb	11 31 26.1	
	comp=Z,75nm,1.1s						
MRZ	**Mangatainoka R**	64.27	136	P	P	11 31 23.9	-1.0
WSAR	**Wadi Sarin**	64.30	296	LR	LR	12 01 06.7	
	comp=Z,166nm,19.4s,baz=116,slow=37						
BKZ	**Black Stump Fm**	64.31	134	IAmb	IAmb	11 31 27.1	
	comp=Z,150nm,1.3s						
BKZ	**Black Stump Fm**	64.31	134	P	P	11 31 25.2	-0.1
BKZ	**Black Stump Fm**	64.31	134	P	P	11 31 25.0	-0.3
HOWZ	**Holdsworth Sta**	64.33	137	P	P	11 31 24.5	-0.9
KWHZ	**Kaweka Forest**	64.36	135	P	P	11 31 25.3	-0.4
URZ	**Urewera**	64.40	133	P	P	11 31 25.1	-0.7
	comp=Z,29nm,0.8s,baz=360,slow=3.0,SNR=16						
URZ				LR	LR	11 59 45.1	
	comp=Z,316nm,18.9s,baz=4.0,slow=36						
	comp=Z,29nm,0.8s						
URZ	**Urewera**	64.40	133	P	P	11 31 25.5	-0.3
URZ	**Urewera**	64.40	133	P	P	11 31 25.4	-0.3
RTZ	**Ruatahuna**	64.45	134	IAmb	IAmb	11 31 27.7	
	comp=Z,99nm,1.0s						
MHTO	**MHTO**	64.48	293	P	P	11 31 25.7	-0.9
	SNR=22						
NMHZ	**Naumai**	64.51	134	P	P	11 31 26.6	0.0
JMDO	**Jabal Madar**	64.61	295	P	P	11 31 27.0	-0.5
	SNR=12						
DQM	**DQM**	64.70	292	P	P	11 31 28.1	0.0
	SNR=14						
HAZ	**Te Kaha**	64.71	133	P	P	11 31 28.4	+0.6
MWZ	**Matawai**	64.74	133	P	P	11 31 28.1	+0.1
BFZ	**Birch Farm**	64.75	136	IAmb	IAmb	11 31 29.4	
	comp=Z,96nm,1.1s						
BFZ	**Birch Farm**	64.75	136	P	P	11 31 28.2	+0.2
BFZ	**Birch Farm**	64.75	136	P	P	11 31 27.2	-0.8
SNGZ	**Shannon Statio**	64.77	134	P	P	11 31 28.2	0.0
SMDO	**Samad**	64.79	295	P	P	11 31 28.1	-0.6
	SNR=6.8						
SMDO				P	P	11 31 28.1	-0.6
	SNR=6.8						
BIDO	**Bidbid**	64.81	296	P	P	11 31 28.3	-0.5
	SNR=14						
KAHZ	**Kahuranaki**	64.83	135	P	P	11 31 29.3	+0.7
PXZ	**Pawanui**	64.91	135	P	P	11 31 29.3	+0.2
TWGZ	**Tauwhareparae**	65.01	133	P	P	11 31 30.6	+0.7
TKGZ	**Te Karaka**	65.01	133	P	P	11 31 31.1	+1.4
MXZ	**Matakaoa Point**	65.02	132	P	P	11 31 30.4	+0.5
MXZ				IAmb	IAmb	11 31 31.6	
	comp=Z,60nm,0.8s						
MXZ	**Matakaoa Point**	65.02	132	P	P	11 31 30.8	+1.0
RIGZ	**Rimuhau**	65.05	134	P	P	11 31 30.3	+0.2
CNGZ	**Carnagh Statio**	65.29	133	P	P	11 31 32.5	+0.9
MHGZ	**Mahia Peninsul**	65.32	134	P	P	11 31 32.0	+0.3
RAO	**Raoul Island**	65.45	122	LR	LR	11 59 58.7	
	comp=Z,112nm,20.1s,baz=294,slow=36						
BSY	**Bisya**	65.50	295	P	P	11 31 32.9	-0.4
	SNR=10						
HOQ	**Hoqain**	65.56	296	P	P	11 31 33.7	+0.1
	SNR=10						
ARQ	**Araqi**	66.22	295	P	P	11 31 37.2	-0.7
	SNR=11						
SOHO	**SOHO**	66.36	296	*i* P	P	11 31 38.3	-0.5
	SNR=9.4						
SOHO	**SOHO**	66.36	296	P	P	11 31 37.7	-1.0
CASY	**Casey**	66.77	184	P	P	11 31 41.0	+0.6
CASY				IAmb	IAmb	11 31 41.7	
	comp=Z,56nm,1.1s						
DMTO	**DMTO**	66.80	289	P	P	11 31 41.2	-0.4
	SNR=12						
UOSS	**Minazif**	66.81	297	P	P	11 31 41.0	-0.6
UOSS	**Minazif**	66.81	297	P	P	11 31 43.4	+1.8
UOSS	**Minazif**	66.81	297	P	P	11 31 42.5	+0.9
HATD	**Hatta, Dubai**	66.85	297	*i* P	P	11 31 41.9	+0.1
	SNR=9.3						
HATD	**Hatta, Dubai**	66.85	297	P	P	11 31 42.4	+0.5
	SNR=9.9						
SEY	**Seymchan**	66.88	15	LR	LR	11 59 43.9	
	comp=Z,150nm,21.4s,baz=276,slow=35						
SEY	**Seymchan**	66.88	15	⇑*e*P	P	11 31 41.4	+0.2
SEY				pmax	pmax		
	comp=Z,124nm,1.7s						
ASHO	**Ashiyiah**	66.89	297	*i* P	P	11 31 41.3	-0.9
	SNR=6.5						
ASHO	**Ashiyiah**	66.89	297	P	P	11 31 43.0	+0.8
	SNR=10						
BANOM	**Banah**	66.92	298	P	P	11 31 42.7	+0.4
MSFE	**Esma-Masafi**	66.93	297	P	P	11 31 40.1	-2.3
MASF	**Masafi**	66.93	297	P	P	11 31 43.9	+1.5
ALNE	**Al Ain**	67.05	296	*i* P	P	11 31 42.8	-0.3
	SNR=5.3						
ALNE	**Al Ain**	67.05	296	P	P	11 31 43.2	0.0
BVAR	**Borovoye Array**	67.06	330	LR	LR	12 03 48.9	
	comp=Z,150nm,19.3s,baz=126,slow=38						
SHME	**Shamm**	67.08	298	P	P	11 31 44.9	+1.7
SHME	**Shamm**	67.08	298	P	P	11 31 45.7	+2.4
BRVK	**Borovoye**	67.13	330	P	P	11 31 43.4	+0.4
BRVK				IAmb	IAmb	11 31 45.1	
	comp=Z,109nm,1.1s						
BRVK	**Borovoye**	67.13	330	P	P	11 31 43.4	+0.4
BRVK				pmax	pmax		
	comp=Z,109nm,1.1s						
BRVK	**Borovoye**	67.13	330	P	P	11 31 44.1	+1.1
BRVK	**Borovoye**	67.13	330	P	P	11 31 41.4	-1.7
BRVK				pP	pP	11 32 07.0	-1.2
NAZ	**Nazwa, Dubai**	67.30	297	P	P	11 31 46.2	+1.5
	SNR=6.0						
FAQ	**Al Faqa, Dubai**	67.32	297	*i* P	P	11 31 46.0	+1.2
	SNR=5.7						
FAQ	**Al Faqa, Dubai**	67.32	297	P	P	11 31 45.0	+0.2
	SNR=6.0						
UMZA	**Um Al Zommool**	67.35	294	P	P	11 31 45.3	+0.3
RBK	**Rabkut**	67.48	289	P	P	11 31 45.3	-0.7
	SNR=21						
ASUD	**Al Ashush, Dub**	67.53	297	*i* P	P	11 31 46.0	-0.2
	SNR=17						
ASUD	**Al Ashush, Dub**	67.53	297	P	P	11 31 46.7	+0.5
	SNR=18						
DOK	**Doka**	67.69	290	P	P	11 31 46.1	-1.2
	SNR=45						
AJN	**Ajban**	67.83	296	*i* P	P	11 31 47.5	-0.5
	SNR=12						
AJN	**Ajban**	67.83	296	P	P	11 31 47.7	-0.3
	SNR=12						
WHFO	**Wadi Hawf**	67.94	289	P	P	11 31 47.5	-1.3
	SNR=29						
DRV	**Dumont d'Urvil**	68.17	172	P	P	11 31 48.1	-1.1
ABTO	**Aybut**	68.32	289	P	P	11 31 50.5	-0.7
	SNR=33						
AFI	**Afiamalu**	68.35	105	P	P	11 31 52.4	+0.9
	comp=Z,50nm,0.9s,baz=66,slow=3.9,SNR=6.7						
AFI				LR	LR	12 03 06.0	
	comp=Z,89nm,18.6s,baz=272,slow=37						
	comp=Z,50nm,0.9s						
AFI	**Afiamalu**	68.35	105	P	P	11 31 52.6	+1.1
AFI				IAmb	IAmb	11 31 54.5	
	comp=Z,56nm,0.9s						
AFI	**Afiamalu**	68.35	105	P	P	11 31 52.6	+1.1
AFI				pmax	pmax		
	comp=Z,56nm,0.9s						
GEYT	**Alibeck**	68.43	311	P	P	11 31 52.4	+0.8
	comp=Z,17nm,0.8s,baz=145,slow=5.4,SNR=16						
GEYT				LR	LR	12 07 38.8	
	comp=Z,202nm,20.4s,baz=118,slow=41						
	comp=Z,17nm,0.8s						
GEYT	**Alibeck**	68.43	311	P	P	11 31 51.9	+0.3
GEYT	**Alibeck**	68.43	311	P	P	11 31 51.9	+0.3
GEYT				pmax	pmax		
	comp=Z,37nm,1.1s						
GYA0B	**ALIBECK ARRAY**	68.43	311	P	P	11 31 52.4	+0.9
GYA0B				IAmb	IAmb	11 31 53.7	
	comp=Z,136nm,1.8s						
MZWR	**Madinat Zayed**	68.69	295	P	P	11 31 54.0	+0.7
MZR	**Muzera**	68.93	295	*i* P	P	11 31 55.0	+0.1
	SNR=30						
MZR	**Muzera**	68.93	295	P	P	11 31 55.2	+0.3
	SNR=20						
GHWR	**Ruwais**	69.62	295	P	P	11 31 59.9	+0.7
ABKAR	**Akbulak array**	71.09	323	P	P	11 32 07.8	+0.2
ABKAR				IAmb	IAmb	11 32 09.4	
	comp=Z,100nm,1.2s						
SBV	**Sambava**	71.30	256	P	P	11 32 09.7	+0.2
TIXI	**Tiksi**	71.49	3	S	S	11 41 17.8	-2.3
	comp=Z,0.6nm,0.2s,baz=270,slow=24,SNR=20						
TIXI				LR	LR	12 04 27.3	
	comp=Z,247nm,21.8s,baz=122,slow=36						
TIXI	**Tiksi**	71.49	3	P	P	11 32 08.1	-1.4
TIXI				IAmb	IAmb	11 32 10.6	
	comp=Z,128nm,0.9s						
TIXI	**Tiksi**	71.49	3	P	P	11 32 08.1	-1.4
TIXI				pmax	pmax		
	comp=Z,128nm,0.9s						
TIXI	**Tiksi**	71.49	3	P	P	11 32 06.0	-3.6
TIXI				pP	pP	11 32 31.9	-3.0
TIXI				sP	sP	11 32 46.5	+0.8
SHMA	**Al-Shehemyia**	71.64	297	P	P	11 32 11.5	+0.1
NRIK	**Noril'sk**	72.46	348	P	P	11 32 15.2	-0.1
	comp=Z,30nm,0.7s,baz=134,slow=6.0,SNR=56						
NRIK				LR	LR	12 06 27.8	
	comp=Z,169nm,19.3s,baz=155,slow=38						
	comp=Z,30nm,0.7s						
NRIK	**Noril'sk**	72.46	348	*ce*P	P	11 32 15.0	-0.4
NRIK				*i* *PP	pP	11 32 38.5	-2.4
SVE	**Sverdlovsk**	73.83	330	*de*P	P	11 32 24.1	+0.4
SVE				pmax	pmax		
	comp=Z,239nm,1.5s						
ABPO	**Ambohimpanom**	74.39	250	P	P	11 32 28.1	+0.1
ABPO				IAmb	IAmb	11 32 28.6	
	comp=Z,225nm,2.0s						
ABPO	**Ambohimpanom**	74.39	250	P	P	11 32 28.1	+0.1
ABPO				pmax	pmax		
	comp=Z,225nm,2.0s						

BILL	Bilibino	74.52	16	P	P	11 32 27.5	0.0
BILL	Bilibino	74.52	16d	iP	P	11 32 26.1	-1.4
BILL				i *PP	pP	11 32 55.1	+2.1
BILL				pmax	pmax		
	comp=Z,25nm,1.1s						
ARU	Arti	74.70	329	P	P	11 32 29.0	+0.2
ARU				IAmb	IAmb	11 32 30.4	
	comp=Z,99nm,1.0s						
ARU	Arti	74.70	329c	iP	P	11 32 28.0	-0.8
ARU						11 32 40.9	
ARU				*PP	pP	11 32 49.8	-4.4
ARU						11 35 14.5	
ARU				PPP	PPP	11 37 03.0	
ARU				S	S	11 41 56.5	-0.5
ARU						11 42 23.2	
ARU				*SS	ScS	11 42 35.0	+3.6
ARU				pmax	pmax		
	comp=Z,126nm,1.0s						
VOI	Vohitsoka	75.10	247	P	P	11 32 31.4	-0.6
VOI				IAmb	IAmb	11 32 32.3	
	comp=Z,70nm,0.9s						
VOI	Vohitsoka	75.10	247	P	P	11 32 31.6	-0.4
VOI	Vohitsoka	75.10	247	P	P	11 32 31.4	-0.6
RAYN	Ar Rayn	76.27	294	P	P	11 32 38.4	-0.1
RAYN	Ar Rayn	76.27	294	P	P	11 32 38.4	-0.1
RAYN				pmax	pmax		
	comp=Z,42nm,1.0s						
RAYN	Ar Rayn	76.27	294	i P	P	11 32 39.1	+0.6
	SNR=9.7						
AKT	Akhty	77.07	313	eP	P	11 32 43.7	+1.0
AKT				e		11 32 54.0	
AKT				e*PP	pP	11 33 08.0	-0.1
AKT				e*SP	sP	11 33 17.7	-1.1
AKT				pmax	pmax		
	comp=Z,65nm,0.8s						
MAK	Makhachkala	77.52	314	eP	P	11 32 42.3	-2.7
MAK				e*PP	pP	11 33 10.8	+0.3
MAK				e*SP	sP	11 33 21.7	+0.6
MAK				e		11 35 40.6	
MAK				eS	S	11 42 22.9	-5.5
MAK				e*SS	sS	11 43 12.7	+2.3
MAK				eSS	SS	11 47 30.6	+1.0
MAK				pmax	pmax		
	comp=Z,369nm,1.4s						
ATD	Arta Tunnel	77.97	282	LR	LR	12 05 52.8	
	comp=Z,6.4nm,20.4s,baz=80,slow=34						
ATD	Arta Tunnel	77.97	282	P	P	11 32 47.0	-1.2
ATD				IAmb	IAmb	11 32 50.5	
	comp=Z,61nm,1.1s						
MAW	Mawson	78.43	199	P	P	11 32 49.9	+0.4
	comp=Z,35nm,1.0s,baz=51,slow=8.2,SNR=14						
MAW				LR	LR	12 03 08.4	
	comp=Z,110nm,19.4s,baz=64,slow=32						
	comp=Z,35nm,1.0s						
MAW	Mawson	78.43	199	P	P	11 32 50.1	+0.6
	baz=78,SNR=10						
MAW	Mawson	78.43	199	P	P	11 32 50.1	+0.6
MAW	Mawson	78.43	199	P	P	11 32 50.1	+0.6
MAW				pmax	pmax		
	comp=Z,20nm,1.4s						
GROC	Groznyy	78.80	314	eP	P	11 32 52.1	0.0
GROC				e		11 33 01.2	
GROC				eS	S	11 42 41.2	-0.9
GNI	Garni	79.06	311	LR	LR	12 16 03.2	
	comp=Z,92nm,18.5s,baz=94,slow=42						
GNI	Garni	79.06	311	P	P	11 32 53.0	-0.8
GNI				IAmb	IAmb	11 32 58.3	
	comp=Z,72nm,1.1s						
GNI	Garni	79.06	311c	iP	P	11 32 54.5	+0.6
GNI				pmax	pmax		
	comp=Z,126nm,1.7s						
GNI	Garni	79.06	311	P	P	11 32 55.8	+1.9
BELG	Belogornoye	79.48	323	LR	LR	12 11 09.6	
	comp=Z,234nm,20.5s,baz=67,slow=38						
BELG	Belogornoye	79.48	323c	iP	P	11 32 54.8	-0.8
BELG				pmax	pmax		
	comp=Z,21nm,1.0s						
UNV	Unalaska Valle	79.75	35	P	P	11 32 57.7	+0.7
UNV				IAmb	IAmb	11 33 24.0	
	comp=Z,152nm,1.4s						
UNV	Unalaska Valle	79.75	35	P	P	11 32 57.2	+0.2
	baz=256						
KIRV	Kirov	80.08	330	LR	LR	12 13 29.7	
	comp=Z,107nm,18.7s,baz=110,slow=39						
KIRV	Kirov	80.08	330d	eP	P	11 32 58.7	0.0
GEVA	Gevas	80.09	309	P	P	11 33 00.5	+1.0
GEVA				IAmb	IAmb	11 33 01.9	
	comp=Z,120nm,0.9s						
ZEI	Tsey	80.10	313	eP	P	11 32 57.3	-2.2
ZEI				pmax	pmax		
	comp=Z,122nm,1.4s						
AKH	Akhalkalaki	80.19	312	P	P	11 33 00.9	+0.9
AKH	Akhalkalaki	80.19	312	P	P	11 33 00.9	+0.9
AKH				pmax	pmax		
	comp=Z,636nm,1.3s						
AKUT	Akutan	80.24	35	P	P	11 32 60.0	+0.3
ONI	Oni	80.40	313	P	P	11 33 01.9	+1.0
ONI	Oni	80.40	313	P	P	11 33 01.9	+1.0
ONI				pmax	pmax		
	comp=Z,24nm,0.9s						
RAR	Rarotonga	80.40	111	LR	LR	12 06 55.6	
	comp=Z,61nm,21.7s,baz=274,slow=34						
VNDA	Vanda	80.82	172	P	P	11 33 02.2	-0.1
	comp=Z,17nm,0.7s,baz=315,slow=6.3,SNR=62						
VNDA				LR	LR	12 09 55.6	
	comp=Z,307nm,18.9s,baz=319,slow=36						
	comp=Z,17nm,0.7s						
VNDA	Vanda	80.82	172	P	P	11 33 03.1	+0.8
VNDA	Vanda	80.82	172	P	P	11 33 03.1	+0.8
VNDA				pmax	pmax		
	comp=Z,22nm,0.7s						
GURO	Guroymak-BITLI	80.92	309	IAmb	IAmb	11 33 06.2	
	comp=Z,98nm,0.9s						
KBZ	Khabaz	80.97	314	P	P	11 33 03.2	-0.5
	comp=Z,33nm,0.9s,baz=95,slow=4.5,SNR=56						
KBZ				S	S	11 43 02.3	-2.5
	comp=Z,0.7nm,0.7s,baz=351,slow=20,SNR=7.3						
KBZ				LR	LR	12 14 49.1	
	comp=Z,79nm,18.7s,baz=81,slow=40						
	comp=Z,33nm,0.9s						
KBZ	Khabaz	80.97	314c	iP	P	11 33 03.7	-0.1
KBZ				pmax	pmax		
	comp=Z,55nm,0.9s						
NEY	Neytrino	81.02	314⇓	eP	P	11 33 04.7	+0.3
NEY				pmax	pmax		
	comp=Z,12nm,1.0s						
GOF	Gofitskoye	81.06	316⇑	eP	P	11 33 04.9	+0.6
GOF				pmax	pmax		
	comp=Z,117nm,0.7s						
KVAR	Kislovodsk Arr	81.14	314	LR	LR	12 15 01.7	
	comp=Z,99nm,18.5s,baz=239,slow=40						
KIV	Kislovodsk	81.15	314	P	P	11 33 04.5	-0.4
KIV	Kislovodsk	81.15	314	eP	P	11 33 04.9	0.0
KIV				e*PP	pP	11 33 28.3	-2.3
KIV				eS	S	11 43 08.1	+1.1
KIV				pmax	pmax		
	comp=Z,25nm,1.0s						
KIV	Kislovodsk	81.15	314	i P	P	11 33 05.0	+0.1
	SNR=6.3						
TNA	Tin City	82.17	23	P	P	11 33 10.4	+0.8
TNA	Tin City	82.17	23	P	P	11 33 10.8	+1.1
	baz=253,SNR=24						
KIBK	Kibwezi	82.59	268	P	P	11 33 13.4	+0.3
KIBK				IAmb	IAmb	11 33 14.7	
	comp=Z,77nm,1.0s						
KIBK	Kibwezi	82.59	268	P	P	11 33 13.8	+0.7
	SNR=18						
S12K	Black Hills	82.66	34	P	P	11 33 13.3	+0.9
	baz=260						
VRH	Novokhopyorsk	82.85	322	eP	P	11 33 12.8	-0.7
VRH				e*PP	pP	11 33 37.9	-1.6
VRH				e		11 43 17.1	
VRH				pmax	pmax		
	comp=Z,50nm,0.6s						
ANM	Nome	82.95	25	P	P	11 33 14.3	+0.6
ANM				IAmb	IAmb	11 33 16.1	
	comp=Z,95nm,1.4s						
ANM	Nome	82.95	25	P	P	11 33 14.3	+0.6
ANM				pmax	pmax		
	comp=Z,95nm,1.4s						
ANM	Nome	82.95	25	P	P	11 33 14.4	+0.7
	baz=256,SNR=30						
SOC	Sochi	83.24	314	eP	P	11 33 14.2	-1.5
SOC				e*PP	pP	11 33 38.5	-3.0
SOC				ePPP	PPP	11 38 17.7	
SOC				eS	S	11 43 26.6	-1.5
SOC				eSSS	SSS	11 52 14.6	
SOC				pmax	pmax		
	comp=Z,60nm,0.9s						
KMBO	Kilima Mbogo	83.38	269	P	P	11 33 16.2	-1.1
	comp=Z,0.5nm,0.8s,baz=65,slow=23,SNR=26						
KMBO	Kilima Mbogo	83.38	269	P	P	11 33 18.4	+1.1
KMBO				IAmb	IAmb	11 33 19.3	
	comp=Z,70nm,1.1s						
KMBO	Kilima Mbogo	83.38	269	P	P	11 33 18.4	+1.1
KMBO				pmax	pmax		
	comp=Z,70nm,1.1s						
KMBO	Kilima Mbogo	83.38	269	i P	P	11 33 18.0	+0.7
	SNR=32						
KMBO	Kilima Mbogo	83.38	269	P	P	11 33 18.5	+1.2
SDPT	Sand Point	83.49	34	P	P	11 33 16.3	-0.4
SDPT	Sand Point	83.49	34	P	P	11 33 17.5	+0.8
	baz=261						
VORD	Divnogorie	84.34	321	eP	P	11 33 20.5	-0.6
VORD				e*PP	pP	11 33 45.2	-1.7
VORD				pmax	pmax		
	comp=Z,120nm,0.7s						
VSR	Storozhevoye	84.45	321	eP	P	11 33 21.1	-0.6
VSR				e*PP	pP	11 33 45.8	-1.6
VSR				pmax	pmax		
	comp=Z,120nm,0.6s						
VORR	Voronezh	84.47	322	eP	P	11 33 21.8	0.0
VORR				e*PP	pP	11 33 46.3	-1.3
VORR				pmax	pmax		
	comp=Z,300nm,0.9s						
GAZ	Gaziantep	84.59	307	P	P	11 33 23.6	+0.8
GAZ				IAmb	IAmb	11 33 24.6	
	comp=Z,79nm,1.2s						
RDOG	Red Dog Mine	84.73	22	P	P	11 33 23.4	+0.6
RDOG				IAmb	IAmb	11 33 24.9	
	comp=Z,80nm,1.1s						
RDOG	Red Dog Mine	84.73	22	P	P	11 33 23.7	+0.9
	baz=258						
LPSR	Galich'ya Gora	84.75	323	eP	P	11 33 22.9	-0.2
LPSR				e*PP	pP	11 33 47.2	-2.1
LPSR				pmax	pmax		
	comp=Z,160nm,0.9s						
CHGN	Chignik	84.78	34	P	P	11 33 24.0	+0.9
	baz=263						
ANN	Anapa	84.99	315	eP	P	11 33 23.7	-0.8
ANN				pmax	pmax		
	comp=Z,178nm,0.9s						
N16K	Nishlik Lake	85.15	29	P	P	11 33 26.5	+1.4
	baz=262						
LODK	Lodwar	85.25	273	P	P	11 33 27.7	+1.1
	SNR=12						
P16K	Nushagak River	85.35	31	P	P	11 33 27.1	+1.1
	baz=263						
O16K	Kokwok River B	85.37	30	P	P	11 33 26.7	+0.6
	baz=263						
R16K	Pilot Point	85.39	32	P	P	11 33 26.5	+0.3
	baz=263						
KLMR	Klimovskoe	85.45	331	eP	P	11 33 23.7	-2.7
KLMR				AMP		11 33 26.9	
	comp=Z,137nm,1.0s						
KLMR				epP	pP	11 33 49.2	-3.3
KLMR				ePP	PP	11 36 43.1	-2.8
KLMR	Klimovskoe	85.45	331	eP	P	11 33 23.6	-2.8
KLMR				e*PP	pP	11 33 49.1	-3.4
KLMR				e		11 36 43.1	
KLMR				pmax	pmax		
	comp=Z,137nm,1.0s						
MOS	Moscow	85.85	326	eP	P	11 33 26.7	-1.8
MOS				e		11 33 52.3	
MOS				eS	S	11 43 49.3	-4.2
MOS				pmax	pmax		
	comp=Z,96nm,0.7s						
MMAI	Mount Meron Ar	85.85	303	LR	LR	12 18 44.6	
	comp=Z,206nm,18.1s,baz=184,slow=40						
O17K	Koliganek Bris	85.90	30	P	P	11 33 28.7	+0.1
	baz=264						
R17K	Ugashik Creek	86.03	32	P	P	11 33 29.6	+0.1
	baz=264						
EIL	Elat	86.11	300	LR	LR	12 16 56.4	
	comp=Z,182nm,19.1s,baz=69,slow=39						
Q17K	Contact Creek	86.36	32	P	P	11 33 30.9	-0.3
	baz=265						
OBN	Obninsk	86.39	325c	iP	P	11 33 30.2	-1.0
OBN				i *PP	pP	11 33 53.4	-4.0
OBN				i		11 34 05.2	
OBN				pmax	pmax		
	comp=Z,71nm,0.9s						
OBN				MLR	MLR		
	comp=Z,163nm,19.0s						
GCSA	Galena City Sc	86.57	25	P	P	11 33 32.1	+0.3
	baz=263,SNR=27						
SVW2	Sparrevohn	86.78	29	P	P	11 33 33.0	0.0
P18K	Big Mountain,	86.80	31	P	P	11 33 32.6	-0.6
	baz=265						
O18K	Koktuh Hills	86.85	30	P	P	11 33 33.4	0.0
	baz=265						
Q18K	Katmai Hardscr	86.85	31	P	P	11 33 32.9	-0.7
	baz=265						
L19K	White Mountain	87.22	28	IAmb	IAmb	11 33 37.0	
	comp=Z,88nm,1.6s						
L19K	White Mountain	87.22	28	P	P	11 33 35.8	+0.6
	baz=265						
N19K	Bonanza Creek	87.29	29	IAmb	IAmb	11 33 37.4	
	comp=Z,53nm,0.9s						
N19K	Bonanza Creek	87.29	29	P	P	11 33 36.2	+0.6
	baz=266						
O19K	Port Alsworth	87.33	30	P	P	11 33 35.8	+0.2
	baz=266						
SIM	Simferopol'	87.35	315	eP	P	11 33 37.2	+1.1
SIM				pmax	pmax		
	comp=Z,50nm,0.8s						
M19K	Big River Lodg	87.42	28	P	P	11 33 35.8	-0.3
M19K	Big River Lodg	87.42	28	P	P	11 33 36.2	+0.1
	baz=266						
A21K	Barrow	87.44	19	P	P	11 33 36.5	+0.6
	baz=263,SNR=79						
ILGA	Ilgaz	87.50	311	P	P	11 33 36.1	-1.2
BR131	Keskin Array S	87.52	310	P	P	11 33 36.6	-0.7
BR131				IAmb	IAmb	11 33 38.2	
	comp=Z,66nm,0.8s						
BR131	Keskin Array S	87.52	310	P	P	11 33 36.6	-0.7
BR131				pmax	pmax		
	comp=Z,66nm,0.8s						
BRTR	Keskin Array B	87.52	310	P	P	11 33 36.5	-0.7
	comp=Z,38nm,0.8s,baz=125,slow=5.8,SNR=123						
BRTR				LR	LR	12 21 60.0	
	comp=Z,91nm,18.8s,baz=96,slow=42						
	comp=Z,38nm,0.8s						
BRTR	Keskin Array B	87.52	310	i P	P	11 33 36.7	-0.6
BRTR				pmax	pmax		
	comp=Z,40nm,0.8s						
Q19K	Cape Douglas,	87.58	31	P	P	11 33 37.3	+0.3
	baz=266						
CSS	Mathiatis	87.64	305	IAmb	IAmb	11 33 38.8	
	comp=Z,58nm,0.9s						
K20K	Telida	87.67	27	IAmb	IAmb	11 33 38.8	
	comp=Z,36nm,0.8s						
OHAK	Old Harbor	87.67	33	P	P	11 33 37.8	+0.4
	baz=267						
L20K	Farewell, AK	87.70	28	P	P	11 33 38.0	+0.6
	baz=266						
IMAR	Indian Mountai	87.99	24	P	P	11 33 38.4	-0.3
M20K	Styx River	88.01	28	P	P	11 33 39.5	+0.4
M20K				IAmb	IAmb	11 33 40.1	
	comp=Z,34nm,0.9s						
M20K	Styx River	88.01	28	P	P	11 33 39.5	+0.4
	baz=267						
KDAK	Kodiak Island	88.08	32	LR	LR	12 07 32.9	
	comp=Z,188nm,21.2s,baz=273,slow=32						
G21K	Allakaket	88.13	24	P	P	11 33 40.2	+0.8
	baz=266,SNR=13						
O20K	Slope Mountain	88.17	30	P	P	11 33 40.8	+1.0
	baz=267						
ANTO	Ankara	88.17	310	P	P	11 33 39.3	-1.0
ANTO	Ankara	88.17	310	P	P	11 33 39.3	-1.0
ANTO				pmax	pmax		
	comp=Z,30nm,1.0s						
F21K	Alatna River	88.18	23	P	P	11 33 40.4	+0.8
	baz=266						
H21K	Melozitna Rive	88.36	24	P	P	11 33 41.0	+0.5
	baz=267						
SPCR	Spurr Chakacha	88.42	29	P	P	11 33 40.3	-0.6
	baz=268,SNR=6.4						
CHUM	Lake Minchumin	88.48	26	P	P	11 33 40.9	-0.2
	baz=268,SNR=18						
PPLA	Purkeypile	88.50	27	P	P	11 33 41.0	-0.4
PPLA	Purkeypile	88.50	27	P	P	11 33 41.3	0.0
	baz=268						
CAST	Castle Rocks	88.57	27	P	P	11 33 41.5	0.0
CAST				IAmb	IAmb	11 33 43.4	
	comp=Z,27nm,0.7s						
CAST	Castle Rocks	88.57	27	P	P	11 33 41.8	+0.2
	baz=268,SNR=17						
I21K	Tanana	88.68	25	P	P	11 33 42.2	+0.2
I21K	Tanana	88.68	25	P	P	11 33 42.7	+0.7
	baz=268						
F22K	John River	88.70	23	P	P	11 33 43.1	+1.0
	baz=268						
SKT	Skwentna	88.77	28	P	P	11 33 42.0	-0.6
SKT	Skwentna	88.77	28	P	P	11 33 41.6	-0.9
	baz=268,SNR=5.0						
E22K	Anaktuvuk Pass	88.86	22	P	P	11 33 43.8	+0.9
	baz=268						
G22K	Bettles	88.94	23	P	P	11 33 43.8	+0.7
	baz=268						
BRLK	Bradley Lake	89.03	30	P	P	11 33 43.4	-0.4
BPAW	Bear Paw Mtn.	89.08	26	P	P	11 33 43.8	-0.1
BPAW				IAmb	IAmb	11 33 44.7	
	comp=Z,21nm,0.8s						
BPAW	Bear Paw Mtn.	89.08	26	P	P	11 33 44.0	+0.1
	baz=269,SNR=10						
KTH	Kantishna Hill	89.09	27	IAmb	IAmb	11 33 45.1	
	comp=Z,29nm,1.0s						
BRSE	Bradley Lake S	89.10	30	P	P	11 33 43.7	-0.4
	baz=269						
SUA	Susitna One	89.13	29	P	P	11 33 44.1	-0.3
SUA				IAmb	IAmb	11 33 44.7	
	comp=Z,36nm,0.8s						
SUA	Susitna One	89.13	29	P	P	11 33 43.6	-0.8
	baz=269,SNR=5.6						
MLY	Manley	89.20	25	IAmb	IAmb	11 33 45.9	
	comp=Z,27nm,0.9s						
MLY	Manley	89.20	25	P	P	11 33 45.0	+0.5
	baz=269,SNR=18						
D23K	Nanushuk River	89.31	21	P	P	11 33 45.9	+1.0
	baz=269						
CUT	Chulitna	89.37	28	P	P	11 33 44.6	-0.7
	baz=269						
TRF	Thorofare Moun	89.38	27	IAmb	IAmb	11 33 45.7	
	comp=Z,28nm,1.0s						
TRF	Thorofare Moun	89.38	27	P	P	11 33 45.1	-0.4
	baz=269,SNR=6.7						
COLD	Coldfoot	89.46	23	P	P	11 33 45.7	+0.1
	baz=269,SNR=14						
G23K	Bananza Creek	89.52	23	P	P	11 33 46.2	+0.2
	baz=270						
RC01	Rabbit Creek A	89.61	29	IAmb	IAmb	11 33 46.8	
	comp=Z,95nm,1.4s						
RC01	Rabbit Creek A	89.61	29	P	P	11 33 45.8	-0.7
	baz=270,SNR=5.5						
O22K	Cooper Landing	89.62	30	P	P	11 33 45.9	-0.6
O22K	Cooper Landing	89.62	30	P	P	11 33 45.9	-0.6
	baz=270						
E23K	Chandalar	89.69	22	P	P	11 33 46.7	-0.1
	baz=270						
H23K	Yukon River	89.71	24	P	P	11 33 47.0	+0.1
	baz=270						
I23K	Minto, Yukon-K	89.79	25	P	P	11 33 46.7	-0.4
I23K				IAmb	IAmb	11 33 48.4	
	comp=Z,60nm,1.1s						
I23K	Minto, Yukon-K	89.79	25	P	P	11 33 47.0	-0.2
	baz=270,SNR=24						
PPT2	Papeete2	89.88	107	eP	P	11 33 46.2	-2.5
	comp=Z,88nm,22.8s						
PPT2	Papeete2	89.88	107	eLR	LR	12 02 39.5	
	comp=Z,1µm,43.5s						
PPT2				eLR	LR	12 02 39.7	
	comp=Z,504nm,43.2s						
MBAR	Mbarara	89.89	269	LR	LR	12 14 39.1	
	comp=Z,146nm,18.1s,baz=66,slow=36						
MBAR	Mbarara	89.89	269	P	P	11 33 48.8	-0.2
MBAR				IAmb	IAmb	11 34 16.4	
	comp=Z,77nm,1.4s						
MBAR	Mbarara	89.89	269⇑	eP	P	11 33 49.4	+0.4
MBAR				pmax	pmax		
	comp=Z,29nm,1.4s						
MBAR	Mbarara	89.89	269	P	P	11 33 49.8	+0.8
PMR	Palmer	89.91	29	P	P	11 33 46.3	-1.5
PMR	Palmer	89.91	29	P	P	11 33 47.0	-0.8
	baz=270						
NEA2	Nenana	89.92	26	P	P	11 33 47.4	-0.4
	baz=270,SNR=6.2						
BORA	Eskisehir	89.97	310	P	P	11 33 48.3	-0.4
MCK	McKinley	89.98	26	P	P	11 33 47.5	-0.6
MCK				IAmb	IAmb	11 33 48.3	
	comp=Z,37nm,1.0s						
MCK	McKinley	89.98	26	P	P	11 33 47.5	-0.6
MCK				pmax	pmax		
	comp=Z,37nm,1.0s						
MCK	McKinley	89.98	26	P	P	11 33 47.7	-0.4
	baz=270,SNR=9.6						
C24K	Franklin Bluff	90.01	20	P	P	11 33 48.5	+0.4
	baz=271						
E24K	Your Creek	90.11	22	P	P	11 33 49.4	+0.7
	baz=271						
QSPA	South Pole Qui	90.17	180	LR	LR	12 16 02.1	
	comp=Z,207nm,18.4s,baz=342,slow=37						
QSPA	South Pole Qui	90.17	180	P	P	11 33 48.9	-0.2
QSPA				IAmb	IAmb	11 33 50.3	
	comp=Z,119nm,1.6s						
KNK	Knik Glacier	90.23	29	IAmb	IAmb	11 33 50.5	
	comp=Z,60nm,0.8s						
KNK	Knik Glacier	90.23	29	P	P	11 33 49.4	+0.1
	baz=271,SNR=8.3						
MDM	Murphy Dome	90.27	25	P	P	11 33 49.2	-0.2
SML	Sawmill	90.28	28	IAmb	IAmb	11 33 50.1	
	comp=Z,55nm,0.7s						
SML	Sawmill	90.28	28	P	P	11 33 49.4	-0.3
	baz=271,SNR=8.2						
PWL	Port Wells	90.30	29	P	P	11 33 48.7	-1.0
	baz=271						
F24K	Squaw Lake	90.35	23	P	P	11 33 50.0	+0.2
	baz=272						
H24K	Noodor Dome	90.40	24	P	P	11 33 50.2	+0.2
H24K	Noodor Dome	90.40	24	P	P	11 33 50.3	+0.2
	baz=272						
TCOL	CIGO, UAF Yank	90.43	25	P	P	11 33 50.1	0.0
TCOL	CIGO, UAF Yank	90.43	25	P	P	11 33 50.1	0.0
	baz=272,SNR=6.0						
COLA	College	90.43	25	P	P	11 33 49.8	-0.4
COLA	College	90.43	25	P	P	11 33 51.0	+0.8
COLA	College	90.43	25⇓	iP	P	11 33 49.2	-1.0
COLA				pmax	pmax		
	comp=Z,11nm,0.8s						
COLA	College	90.43	25	P	P	11 33 50.1	0.0
	baz=272						
CCB	Clear Creek Bu	90.46	25	P	P	11 33 49.6	-0.7
G24K	Hadweenzic Riv	90.54	23	P	P	11 33 50.3	-0.4
	baz=272						
M23K	Glacier View	90.57	28	P	P	11 33 50.5	-0.4
	baz=272,SNR=11						
POKR	Poker Plat Res	90.60	25	P	P	11 33 48.3	-2.7
	baz=272						
AKASG	Malin Array Be	90.70	321	P	P	11 33 49.9	-1.8
	comp=Z,13nm,0.7s,baz=66,slow=4.5,SNR=62						
AKASG				LR	LR	12 19 50.4	
	comp=Z,141nm,19.1s,baz=78,slow=39						
	comp=Z,13nm,0.7s						
AKASG	Malin Array Be	90.70	321	P	P	11 33 50.9	-0.9
AKASG	Malin Array Be	90.70	321	i P	P	11 33 50.2	-1.5
AKASG				pmax	pmax		
	comp=Z,18nm,0.6s						
AKBB	Malin Array Si	90.70	321	P	P	11 33 50.5	-1.2
AKBB				IAmb	IAmb	11 33 51.4	
	comp=Z,24nm,0.8s						
AKBB	Malin Array Si	90.70	321⇓	eP	P	11 33 50.7	-1.0
SCM	Sheep Creek Mo	90.76	28	P	P	11 33 50.7	-1.2
	baz=272						
P23K	Montague Islan	90.78	30	P	P	11 33 51.7	-0.3
	baz=272						
HDA	Harding Lake	90.84	26	IAmb	IAmb	11 33 52.0	
	comp=Z,21nm,0.8s						
HDA	Harding Lake	90.84	26	P	P	11 33 50.8	-1.3
	baz=272,SNR=11						
D25K	Kavik River	90.84	21	P	P	11 33 51.4	-0.7
	baz=273						
IL31		90.85	25	P	P	11 33 50.8	-1.2
ILAR	Eielson Array	90.85	25	P	P	11 33 50.5	-1.6
	comp=Z,5.0nm,0.7s,baz=253,slow=5.1,SNR=59						
ILAR				LR	LR	12 14 32.4	
	comp=Z,60nm,20.8s,baz=254,slow=35						
	comp=Z,5.0nm,0.7s						
ILAR	Eielson Array	90.85	25	P	P	11 33 50.7	-1.4

ILAR	Eielson Array	90.85	25	P	P	11 33 50.7	-1.4
G25K	Bearman Lake	91.08	23	P	P	11 33 53.1	0.0
	baz=273						
E25K	Arctic Village	91.20	22	P	P	11 33 53.7	-0.1
	baz=274,SNR=21						
F25K	Christian Rive	91.21	22	P	P	11 33 54.0	+0.2
	baz=274,SNR=6.6						
M24K	Tolsona, Glenn	91.29	28	P	P	11 33 54.0	-0.4
M24K	Tolsona, Glenn	91.29	28	P	P	11 33 54.3	0.0
	baz=273,SNR=6.5						
C26K	Camden Bay	91.31	20	P	P	11 33 54.6	+0.4
	baz=274						
K24K	Donnelly Dome	91.38	26	P	P	11 33 53.9	-0.8
	baz=273,SNR=6.1						
PRP	Porcupine Dome	91.39	25	P	P	11 33 54.2	-0.6
	baz=274						
MNK	Minsk	91.40	324	*i* P	P	11 33 55.5	+0.6
	comp=E,4.0nm,1.0s						
MNK				*i* P	P	11 33 55.5	+0.6
	comp=N,25nm,1.0s						
MNK				*i* P	P	11 33 55.5	+0.6
	comp=Z,33nm,1.0s,baz=88						
MNK				*i* pP	pP	11 34 19.6	-1.4
MNK				*i* sP	sP	11 34 29.5	-2.0
MNK				*i* PP	PP	11 37 33.9	+0.3
MNK				*i* PPP	PPP	11 39 32.6	
MNK				*i* SKS		11 43 45.1	
MNK				*i* S	SKSac	11 44 19.0	+0.7
MNK				*i* sS	ScS	11 45 02.5	+14
MNK				*i* SS	SS	11 51 01.8	+8.4
MNK				*i* SSS	SSS	11 54 24.0	
MNK				*i* LQ	LQ	12 09 22.7	
MNK				*i* LR	LR	12 11 35.5	
MNK				*i* LRM	MLR	12 17 29.2	
	comp=N,550nm,19.3s						
MNK				*i* LRM	MLR	12 17 54.1	
	comp=E,36nm,19.5s						
MNK				*i* LRM	MLR	12 17 56.0	
	comp=Z,163nm,19.5s						
MNK	Minsk	91.40	324	*i* P	P	11 33 55.5	+0.6
MNK				*i* *PP	pP	11 34 19.5	-1.4
MNK				*i* *SP	sP	11 34 29.4	-2.0
MNK				*i*		11 37 33.8	
MNK				*i* PPP	PPP	11 39 32.5	
MNK				*i* S	SKSac	11 44 19.0	+0.7
MNK				*i* SS	SS	11 51 01.8	+8.4
MNK				*i* SSS	SSS	11 54 23.9	
MNK				pmax	pmax		
	comp=Z,33nm,1.0s						
MNK				pmax	pmax		
	comp=N,25nm,1.0s						
MNK				pmax	pmax		
	comp=E,4.0nm,1.0s						
MNK				MLR	MLR		
	comp=N,550nm,19.0s						
MNK				MLR	MLR		
	comp=E,36nm,20.0s						
MNK				MLR	MLR		
	comp=Z,163nm,20.0s						
FYU	Fort Yukon	91.44	24	IAmb	IAmb	11 33 56.4	
	comp=Z,32nm,1.3s						
KLU	Klutina	91.45	29	IAmb	IAmb	11 33 55.9	
	comp=Z,20nm,0.7s						
KLU	Klutina	91.45	29	P	P	11 33 55.2	+0.1
	baz=273						
MANT	Manisa	91.47	308	P	P	11 33 55.8	-0.1
MANT				IAmb	IAmb	11 33 56.3	
	comp=Z,35nm,1.1s						
PAX	Paxson	91.57	27	P	P	11 33 56.0	+0.3
PAX				IAmb	IAmb	11 33 56.5	
	comp=Z,72nm,1.7s						
PAX	Paxson	91.57	27	P	P	11 33 56.0	+0.3
PAX				pmax	pmax		
	comp=Z,72nm,1.7s						
PAX	Paxson	91.57	27	P	P	11 33 55.7	+0.1
	baz=274,SNR=7.3						
ARA0	ARCESS Array S	91.57	339	*e*P	P	11 33 56.6	+1.2
ARCES	ARCESS Array B	91.57	339	P	P	11 33 53.6	-1.8
	comp=Z,6.4nm,0.8s,baz=88,slow=6.4,SNR=18						
ARCES				LR	LR	12 20 38.8	
	comp=Z,190nm,18.7s,baz=89,slow=39						
	comp=Z,6.4nm,0.8s						
EYAK	Cordova Ski Ar	91.58	30	P	P	11 33 55.7	+0.1
	baz=273						
BMAR	Burnt Mountain	91.63	23	P	P	11 33 56.2	+0.4
HARP	HAARP	91.75	28	P	P	11 33 56.3	-0.1
	baz=274						
C27K	Jago River	91.76	20	P	P	11 33 56.6	+0.3
	baz=275						
F26K	Sheenjek River	91.77	22	P	P	11 33 56.8	+0.4
	baz=275						
RIDG	Independent Ri	91.80	26	P	P	11 33 56.5	-0.2
RIDG				IAmb	IAmb	11 33 57.1	
	comp=Z,26nm,0.9s						
RIDG	Independent Ri	91.80	26	P	P	11 33 56.0	-0.6
	baz=274,SNR=6.9						
VSU	Vasula	91.84	328	⇓*e*P	P	11 33 56.3	-0.5
VSU				pmax	pmax		
	comp=Z,61nm,0.9s						
FIA1	FINESS Array S	91.97	331	P	P	11 33 56.2	-1.1
FIA1				IAmb	IAmb	11 37 16.7	
	comp=Z,63nm,1.9s						
FINES	FINESS Array B	91.97	331	P	P	11 33 55.8	-1.6
	comp=Z,3.9nm,0.7s,baz=69,slow=6.3,SNR=11						
FINES				PKiKP	PKiKP	11 38 46.1	-1.0
	comp=Z,2.2nm,0.8s,baz=108,slow=6.2,SNR=4.9						
	comp=Z,3.9nm,0.7s						
FINES	FINESS Array B	91.97	331	P	P	11 33 56.8	-0.6
FINES	FINESS Array B	91.97	331	*i* P	P	11 33 56.4	-1.0
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
G26K	Porcupine Rive	91.98	23	P	P	11 33 57.4	+0.1
	baz=275						
NACGM	Naroch	92.02	325	*e*P	P	11 33 58.1	+0.4
	comp=Z,36nm,1.2s,baz=87						
N25K	Chitina, Valde	92.07	28	P	P	11 33 58.0	0.0
	baz=274						
DOT	Dot Lake	92.15	26	IAmb	IAmb	11 33 58.8	
	comp=Z,43nm,1.5s						
SCRK	Sand Creek	92.16	26	P	P	11 33 57.4	-0.9
SCRK				IAmb	IAmb	11 33 59.2	
	comp=Z,27nm,1.4s						
SCRK	Sand Creek	92.16	26	P	P	11 33 58.0	-0.4
	baz=275,SNR=6.2						
I26K	Coal Creek Min	92.39	25	IAmb	IAmb	11 34 00.6	
	comp=Z,50nm,1.1s						
I26K	Coal Creek Min	92.39	25	P	P	11 33 58.7	-0.5
	baz=276						
LSZ	Lusaka	92.41	255	LR	LR	12 11 25.0	
	comp=Z,253nm,19.9s,baz=124,slow=33						
LSZ	Lusaka	92.41	255	P	P	11 33 59.9	-0.7
LSZ				IAmb	IAmb	11 34 27.3	
	comp=Z,97nm,2.0s						
LSZ	Lusaka	92.41	255	P	P	11 33 59.9	-0.7
LSZ				pmax	pmax		
	comp=Z,97nm,2.0s						
KTK1	Kautokeino	92.43	339	*e*P	P	11 34 01.1	+1.7
GLB	Gilahina Butte	92.46	29	IAmb	IAmb	11 34 00.7	
	comp=Z,55nm,1.2s						
ELIB	Princess Elisa	92.49	198	*d*P	P	11 33 59.8	0.0
	comp=Z,47nm,0.9s						
ELIB				*d*pP	pP	11 34 26.0	+0.6
L26K	Log Cabin Wild	92.53	27	P	P	11 34 00.2	+0.2
	baz=276,SNR=5.2						
VRI	Vrincioaia	92.55	316	⇑P	P	11 34 00.7	+0.3
VRI	Vrincioaia	92.55	316	⇑P	P	11 34 00.7	+0.3
TESR	Tescani	92.57	316	⇓P	P	11 34 00.4	-0.1
BISRR	Bisoca	92.58	315	⇑P	P	11 33 56.9	-3.8
SPB2	Spitsbergen Ar	92.67	348	P	P	11 33 59.2	-1.1
SPA0	Spitsbergen Ar	92.67	348	*e*P	P	11 33 59.0	-1.3
SPITS	Spitsbergen Ar	92.67	348	LR	LR	12 19 49.8	
	comp=Z,129nm,19.9s,baz=22,slow=38						
SPITS	Spitsbergen Ar	92.67	348	P	P	11 33 59.2	-1.2
SPITS				pmax	pmax		
	comp=Z,177nm,1.6s						
E27K	Coleen River	92.68	22	P	P	11 34 00.4	-0.2
	baz=277						
KARP	Karpathos	92.68	305	P	P	11 34 00.6	-0.7
M26K	Nabesna, AK	92.75	28	P	P	11 34 01.4	+0.3
M26K				IAmb	IAmb	11 34 27.4	
	comp=Z,85nm,1.9s						
M26K	Nabesna, AK	92.75	28	P	P	11 34 01.1	0.0
	baz=276						
G27K	Doyon Strip	92.83	23	P	P	11 34 01.4	+0.1
	baz=277						
MCARA	McCarthy VSAT	92.84	29	P	P	11 34 01.4	0.0
	baz=276						
H27K	Steamboat Moun	92.95	24	P	P	11 34 02.0	+0.1
	baz=277						
K27K	Chicken	92.99	26	P	P	11 34 02.5	+0.4
K27K				IAmb	IAmb	11 34 04.1	
	comp=Z,54nm,1.2s						
K27K	Chicken	92.99	26	P	P	11 34 02.3	+0.2
	baz=277						
I27K	Kandik River	93.00	24	P	P	11 34 02.3	+0.2
	baz=277,SNR=22						
MLR	Muntele Rosu	93.11	315	⇓P	P	11 34 01.7	-1.5
MLR	Muntele Rosu	93.11	315	LR	LR	12 25 38.5	
	comp=Z,147nm,18.5s,baz=63,slow=42						
MLR	Muntele Rosu	93.11	315	⇓P	P	11 34 01.7	-1.5
L27K	Beaver Creek,	93.22	27	P	P	11 34 03.3	+0.1
L27K				IAmb	IAmb	11 34 04.9	
	comp=Z,24nm,0.9s						
L27K	Beaver Creek,	93.22	27	P	P	11 34 03.5	+0.3
	baz=277						
BCAR	Beaver Creek A	93.23	27	P	P	11 34 03.2	0.0
M27K	Edge Creek, AK	93.28	28	P	P	11 34 02.6	-1.0
M27K				IAmb	IAmb	11 34 14.5	
	comp=Z,46nm,1.6s						
M27K	Edge Creek, AK	93.28	28	P	P	11 34 04.1	+0.5
	baz=277						
EGAK	Eagle	93.29	25	P	P	11 34 03.2	-0.2
EGAK	Eagle	93.29	25	P	P	11 34 04.0	+0.6
	baz=278,SNR=6.7						
KBS	Kingsbay	93.31	349	⇑*e*P	P	11 34 01.7	-1.6
KBS				pmax	pmax		
	comp=Z,34nm,1.0s						
KBS	Kingsbay	93.31	349	*i* P	P	11 34 00.5	-2.8
JETT	Jettan, Norway	93.34	340	*e*P	P	11 34 03.1	-0.5
BURAR	Bucovina Array	93.47	318	⇓P	P	11 34 04.7	-0.1
BURAR	Bucovina Array	93.47	318	P	P	11 34 04.7	-0.1
BURAR	Bucovina Array	93.47	318	⇓P	P	11 34 04.7	-0.1
BUR08	Bucovina Ar. S	93.48	318	P	P	11 34 04.8	0.0
BVCY	Beaver Creek	93.74	27	P	P	11 34 05.4	-0.2
	baz=278						
YUK3	Moose Creek	94.01	28	P	P	11 34 06.9	-0.2
	baz=278						
LVV	L'vov	94.08	320	*e*P	P	11 34 06.5	-0.9
DAWY	Dawson	94.16	26	P	P	11 34 08.1	+0.6
DAWY				IAmb	IAmb	11 34 08.6	
	comp=Z,18nm,0.9s						
DAWY	Dawson	94.16	26	P	P	11 34 07.4	-0.1
	baz=279,SNR=8.1						
O28M	Mount Upton	94.28	29	P	P	11 34 07.9	-0.5
	baz=278						
PINM	Pinnacle	94.35	30	P	P	11 34 07.6	-0.9
	baz=278						
I29M	Ogilvie Camp,	94.40	24	IAmb	IAmb	11 34 09.5	
	comp=Z,33nm,1.1s						
I29M	Ogilvie Camp,	94.40	24	P	P	11 34 08.1	-0.5
	baz=280,SNR=12						
YUK8	Steele Glacier	94.41	29	P	P	11 34 08.5	-0.5
	baz=279						
IDI	Anoyia	94.55	305	LR	LR	12 25 02.7	
	comp=Z,51nm,19.0s,baz=84,slow=41						
J29M	Klondike Camp	94.60	25	P	P	11 34 10.0	+0.5
J29M				IAmb	IAmb	11 34 11.2	
	comp=Z,34nm,0.9s						
J29M	Klondike Camp	94.60	25	P	P	11 34 09.3	-0.2
	baz=280,SNR=14						
LBTB	Lobatse	94.66	245	LR	LR	12 14 00.4	
	comp=Z,118nm,18.1s,baz=88,slow=34						
YKU2	Yakutat	94.72	30	P	P	11 34 11.9	+1.8
BOSA	Boshof	94.83	241	P	P	11 34 11.8	+0.4
	comp=Z,3.8nm,1.0s,baz=108,slow=9.5,SNR=3.3						
BOSA				LR	LR	12 11 05.4	
	comp=Z,154nm,21.8s,baz=115,slow=32						
	comp=Z,3.8nm,1.0s						
M29M	Somme Creek	94.84	27	P	P	11 34 10.8	+0.1
	baz=280						
PNL	Peninsula	94.84	30	P	P	11 34 10.9	+0.2
PNL	Peninsula	94.84	30	P	P	11 34 10.2	-0.5
	baz=279						
EPYK	Eagle Plains	94.85	23	P	P	11 34 10.1	-0.5
EPYK				IAmb	IAmb	11 34 11.2	
	comp=Z,32nm,1.1s						
EPYK	Eagle Plains	94.85	23	P	P	11 34 10.2	-0.4
	baz=282,SNR=8.5						
L29M	L29M	94.87	27	P	P	11 34 10.7	-0.1
	baz=280						
G30M	tAoh Zraii Nji	94.91	23	P	P	11 34 09.7	-1.2
	baz=282						
YUK4	Talbot Arm	94.94	28	P	P	11 34 10.4	-0.9
	baz=280						
MARR	Marisel-Cluj	94.98	317	⇑P	P	11 34 11.2	-0.5
K29M	Barlow Dome	95.01	26	P	P	11 34 10.8	-0.7
	baz=281						
YUK6	Outpost Mounta	95.14	29	P	P	11 34 12.2	-0.1
	baz=280						
O29M	Mount Kennedy	95.14	29	P	P	11 34 12.1	-0.1
	baz=280						
DRGR		95.25	317	⇑P	P	11 34 12.4	-0.5
DRGR		95.25	317	⇑P	P	11 34 12.4	-0.5
STEI	Steigen	95.53	339	*e*P	P	11 34 12.1	-1.5
HYT	Haines Junctio	95.58	29	P	P	11 34 14.0	-0.1
	baz=281						
M30M	Minto, Yukon	95.58	27	IAmb	IAmb	11 34 15.7	
	comp=Z,30nm,0.9s						
M30M	Minto, Yukon	95.58	27	P	P	11 34 14.0	0.0
	baz=281,SNR=11						
INK	Inuvik	95.60	21	LR	LR	12 19 21.9	
	comp=Z,73nm,21.6s,baz=278,slow=37						
INK	Inuvik	95.60	21	P	P	11 34 13.5	-0.4
INK				IAmb	IAmb	11 34 14.4	
	comp=Z,17nm,0.9s						
INK	Inuvik	95.60	21	P	P	11 34 13.5	-0.4
INK				pmax	pmax		
	comp=Z,17nm,0.9s						
INK	Inuvik	95.60	21	P	P	11 34 13.8	-0.1
	baz=285,SNR=18						
FAUS	Fauske	95.65	338	*e*P	P	11 34 13.0	-1.1
N30M	Aishikik Lake	95.66	28	P	P	11 34 14.1	-0.3
	baz=281						
F31M	Tsiigehtchic	95.75	22	P	P	11 34 14.5	-0.1
	baz=285,SNR=14						
MAYO	Mayo, Yukon	95.77	26	P	P	11 34 15.2	+0.4
MAYO	Mayo, Yukon	95.77	26	P	P	11 34 14.9	+0.1
	baz=282,SNR=9.9						
NOR	Nord	95.96	354	*i* P	P	11 34 12.8	-2.6
NOR				IAmb	IAmb	11 34 15.0	
	comp=Z,19nm,1.2s						
P30M	Million Dollar	95.97	29	P	P	11 34 15.5	-0.3
	baz=281						
LOF	Lofoten	96.09	339	*e*P	P	11 34 15.5	-0.7
N31M	Braeburn, Yuko	96.27	28	P	P	11 34 18.1	+0.9
N31M	Braeburn, Yuko	96.27	28	P	P	11 34 16.7	-0.5
	baz=282,SNR=7.0						
O30N	Mendenhall	96.27	29	P	P	11 34 16.8	-0.4
	baz=282,SNR=5.6						
MOR8	Moi Rana	96.28	337	*e*P	P	11 34 15.0	-2.1
BOVS	Bovan	96.29	314	⇓P	P	11 34 15.7	-1.9
PLBC	Pleasant Camp	96.39	30	P	P	11 34 17.4	-0.3
	baz=281						
M31M	Drury Creek, Y	96.75	27	P	P	11 34 20.0	+0.7
M31M				IAmb	IAmb	11 34 20.4	
	comp=Z,13nm,0.8s						
M31M	Drury Creek, Y	96.75	27	P	P	11 34 19.3	0.0
	baz=284,SNR=6.4						
S31K	Pelican	96.76	32	P	P	11 34 19.0	-0.4
	baz=281						
SKAG	Skagway	96.91	30	P	P	11 34 21.4	+1.4
SKAG	Skagway	96.91	30	P	P	11 34 19.7	-0.4
	baz=282,SNR=5.2						
PSZ	Piszkesteto	97.01	318	P	P	11 34 20.3	-0.6
PSZ				IAmb	IAmb	11 36 20.3	
	comp=Z,8.9nm,0.6s						
PSZ	Piszkesteto	97.01	318	P	P	11 34 20.3	-0.6
PSZ				pmax	pmax		
	comp=Z,9.0nm,0.6s						
A36M	Sachs Harbour	97.08	17	P	P	11 34 20.4	-0.1
A36M				IAmb	IAmb	11 34 21.5	
	comp=Z,59nm,2.0s						
A36M	Sachs Harbour	97.08	17	P	P	11 34 20.5	-0.1
	baz=293,SNR=7.0						
FARO	Faro, Yukon	97.22	27	P	Pdif	11 34 21.8	+0.3
FARO	Faro, Yukon	97.22	27	P	Pdif	11 34 21.7	+0.2
	baz=284,SNR=16						
JIS	Juneau Island	97.65	31	P	Pdif	11 34 24.3	+0.9
P32M	Atlin	97.69	30	P	P	11 34 23.5	-0.1
	baz=284						
NSS	Namsos	97.73	336	*e*P	P	11 34 23.2	-0.4
P33M	Teslin, Yukon	97.97	29	P	Pdif	11 34 25.9	+0.9
P33M				IAmb	IAmb	11 34 26.9	
	comp=Z,15nm,1.0s						
P33M	Teslin, Yukon	97.97	29	P	P	11 34 24.7	-0.2
	baz=285						
MMPY	Sheldon Lake,	98.05	26	P	P	11 34 25.1	-0.1
	baz=286						
HFS	Hagfors	98.17	331	LR	LR	12 21 14.6	
	comp=Z,119nm,19.3s,baz=66,slow=37						
PDG	Podgorica	98.22	313	⇓P	P	11 34 25.1	-1.2
PDG	Podgorica	98.22	313	P	P	11 34 25.2	-1.1
PDG				IAmb	IAmb	11 34 26.2	
	comp=Z,14nm,0.8s						
MORC	Moravsky Berou	98.25	320	⇓P	P	11 34 25.8	-0.5
MORC	Moravsky Berou	98.25	320	P	P	11 34 25.9	-0.5
MORC	Moravsky Berou	98.25	320	*e*PDIFF	P	11 34 26.1	-0.3
MORC	Moravsky Berou	98.25	320	⇓P	P	11 34 25.8	-0.5
JAVC	Velka Javorina	98.33	319	*e*PDIFF	Pdif	11 34 27.2	+0.4
C36M	Paulatuk	98.50	19	P	P	11 34 26.4	-0.4
C36M				IAmb	IAmb	11 34 27.4	
	comp=Z,20nm,1.2s						
C36M	Paulatuk	98.50	19	P	P	11 34 26.5	-0.4
	baz=294,SNR=12						
EUNU	Eureka	98.67	5	P	P	11 34 27.2	-0.4
U33K	Whale Pass	98.82	33	P	P	11 34 28.0	-0.7
	baz=284						
NC405	NORSAR Array S	98.84	332	P	P	11 34 27.8	-0.9
VRAC	Vranov	98.94	320	LR	LR	12 23 43.6	
	comp=Z,136nm,20.8s,baz=57,slow=38						
VRAC	Vranov	98.94	320	*e*PDIFF	P	11 34 29.3	-0.1
NC602	NORSAR Array S	99.03	332	*e*P	Pdif	11 34 28.5	-1.0
NB2	NORSAR Subarra	99.09	332	P	Pdif	11 34 28.2	-1.7
	comp=Z,20nm,1.2s,baz=73,slow=4.6						
NB2	NORSAR Subarra	99.09	332	P	Pdif	11 34 28.2	-1.7
	baz=73,slow=4.6						
NOA	NORSAR Array B	99.09	332	P	Pdif	11 34 28.4	-1.4
	comp=Z,3.0nm,0.7s,baz=74,slow=4.5,SNR=18						
NOA				LR	LR	12 22 14.3	
	comp=Z,210nm,19.8s,baz=75,slow=37						
	comp=Z,3.0nm,0.7s						
KRUC	Moravsky	99.12	320	*e*PDIFF	Pdif	11 34 29.8	-0.4
TAOE	Nuku Hiva Isla	99.16	99	*e*LR	LR	12 06 56.9	
	comp=Z,323nm,36.0s						
NC204	NORSAR Array S	99.23	333	P	Pdif	11 34 29.8	-0.7
OSL	Oslo	99.66	331	*e*P	Pdif	11 34 32.3	0.0
DOMB	Dombas	99.75	334	*e*P	Pdif	11 34 32.1	-0.7
DAG	Danmarks Havn	99.81	351	*i* P	Pdif	11 34 30.0	-2.7
DAG				IAmb	IAmb	11 34 32.0	
	comp=Z,88nm,2.0s						
DLBC	Dease Lake	99.83	30	LR	LR	12 17 12.0	
	comp=Z,72nm,21.1s,baz=288,slow=34						
DLBC	Dease Lake	99.83	30	P	Pdif	11 34 32.4	-0.9
	baz=287						
V35K	Ketchikan	99.84	34	P	Pdif	11 34 32.3	-0.9
	baz=285						
WTLY	Watson Lake, Y	99.93	28	P	Pdif	11 34 33.0	-0.6
	baz=288						
SNAA	Sanae	100.28	196	Pdif	Pdif	11 34 35.4	+0.4
SNAA	Sanae	100.28	196	*i* P	Pdif	11 34 35.4	+0.4
KONO	Kongsberg	100.28	331	⇑*e*P	Pdif	11 34 35.7	+0.6
KONO				pmax	pmax		
	comp=Z,11nm,1.2s						
KONO	Kongsberg	100.28	331	*e*P	Pdif	11 34 35.3	+0.1
BRG	Berggiesshubel	100.29	322	*i* P	Pdif	11 34 35.5	+0.1
BRG				Amp		11 34 36.3	
	comp=Z,10nm,0.9s						
BRG	Berggiesshubel	100.29	322	P	Pdif	11 34 57.1	+22
BRG				Amp		11 34 59.9	
	comp=Z,3.6nm,0.7s						
BRG				Amp		12 17 33.0	
	comp=Z,0.5nm,36.1s						
BRG	Berggiesshubel	100.29	322	*i* P	Pdif	11 34 35.4	+0.1
BRG				pmax	pmax		
	comp=Z,11nm,0.9s						
BRG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SKAR	Skarslia	100.56	332	*e*P	Pdif	11 34 36.4	-0.1
CLL	Collm	100.76	322	Pdif	Pdif	11 34 36.9	-0.5
CLL	Collm	100.76	322	*e*PS	PS	11 47 46.0	-3.5
CLL				AMS	AMS	12 30 00.0	
	comp=Z,200nm,18.2s						
CLL	Collm	100.76	322	*i* P	Pdif	11 34 36.9	-0.5
GERES	GERESS Array B	100.90	320	P	Pdif	11 34 38.0	-0.3
	comp=Z,0.9nm,0.6s,baz=93,slow=5.7,SNR=6.1						
GERES				PKiKP	PKiKP	11 39 04.0	+0.6
	comp=Z,0.2nm,0.3s,baz=128,slow=2.2,SNR=3.6						
GERES	GERESS Array B	100.90	320	Pdif	Pdif	11 34 38.3	0.0
LIRD	Liard River Hi	101.45	29	P	Pdif	11 34 39.9	-0.4
	baz=290						
BLS5	Blasjo	101.87	332	*e*P	Pdif	11 34 42.3	+0.1
DBG	Daneborg	101.94	350	*i* P	Pdif	11 34 40.6	-1.6
DBG				IAmb	IAmb	11 34 42.1	
	comp=Z,8.5nm,1.2s						
BER	Bergen	102.03	333	*e*P	Pdif	11 34 42.8	0.0
YKA	Yellowknife Ar	105.13	23	Pdiff	Pdif	11 34 56.5	-0.2
	comp=Z,1.3nm,0.8s,baz=296,slow=4.3,SNR=17						
YKA				PKiKP	PKiKP	11 39 09.6	-0.9
	comp=Z,1.3nm,0.5s,baz=303,slow=1.7,SNR=33						
YKA				PKKPbc	PKKPbc	11 50 31.4	-8.6
	comp=Z,0.9nm,0.9s,baz=102,slow=2.7,SNR=5.7						
SUMG	Summit	106.10	354	*i* P	Pdif	11 35 03.0	+1.7
SUMG				IAmb	IAmb	11 35 04.7	
	comp=Z,6.1nm,1.0s						
MSO	Missoula	113.27	38	P	PKiKP	11 39 25.5	-1.0
	baz=298						
NVAR	Mina Array Bea	113.75	47	PKiKP	PKiKP	11 39 28.2	+0.4
	comp=Z,1.3nm,0.6s,baz=313,slow=0.9,SNR=5.6						
PKM	Mcpherson Peak	113.78	51	P	PKiKP	11 39 27.4	-0.5
	baz=288						
HLID	Hailey	114.44	41	P	PKiKP	11 39 29.3	+0.4
	baz=296						
EGMT	Eagleton	115.15	35	P	PKPdf	11 39 30.1	+0.1
	baz=302						
MPMC	Manual Prospec	115.19	49	P	PKiKP	11 39 30.4	-0.2
	baz=290						
BOZ	Bozeman (W)	115.27	38	P	PKPdf	11 39 30.6	+0.2
	baz=299						
R11B	Troy Canyon, C	115.77	47	P	PKPdf	11 39 31.7	+0.1
	baz=293,SNR=5.6						
ESDC	Sonseca Array	115.81	315	PKP	PKiKP	11 39 30.6	-0.9
	comp=Z,0.7nm,0.6s,baz=26,slow=3.0,SNR=4.9						
ESDC				PKKPab	PKKPab	11 50 10.1	+0.9
	comp=Z,1.6nm,1.1s,baz=270,slow=5.9,SNR=5.1						
GSC	Goldstone, Bar	115.97	50	P	PKiKP	11 39 32.6	+0.6
	baz=291						
GCMT	Greycliff	116.36	37		PKiKP	11 39 32.7	+0.2
H17A	Grant Village	116.51	39	P	PKPdf	11 39 32.8	-0.2
	baz=300						
PFO	Pinyon Flats O	116.82	52	P	PKPdf	11 39 33.6	-0.1
	baz=290						
TPFO	Pinon Flats	116.83	52	P	PKiKP	11 39 33.8	0.0
	baz=290						
RLMT	Red Lodge	116.95	37	P	PKiKP	11 39 34.4	+0.6
	baz=301						
AHID	Auburn Hatcher	116.96	40		PKPdf	11 39 33.3	-0.5
DUG	Dugway, Tooele	116.98	44	P	PKiKP	11 39 34.1	+0.2
	baz=296,SNR=7.4						
MONP2	Monument Peak	117.09	52	P	PKiKP	11 39 34.7	+0.3
	baz=290						
BC3	Big Chuckawall	117.59	51	P	PKiKP	11 39 35.6	+0.4
	baz=291						
JLU	Jordanelle	117.73	43		PKiKP	11 39 35.6	+0.1
MPU	Maple Canyon	117.87	43		PKiKP	11 39 35.7	0.0
LAO	LASA Array	117.89	35	P	PKiKP	11 39 35.9	+0.5
	baz=304						
LAO	LASA Array	117.89	35	P	PKiKP	11 39 35.7	+0.3
	baz=304						
BW06	Boulder Array	117.95	40	P	PKPdf	11 39 35.8	0.0
	baz=300						
PDAR	Pinedale Array	117.95	40	PKP	PKPdf	11 39 35.2	-0.6
	comp=Z,2.4nm,0.7s,baz=355,slow=1.6,SNR=18						
PDAR				PKKPbc	PKKPbc	11 49 55.0	-2.5
	comp=Z,3.9nm,0.8s,baz=122,slow=4.2,SNR=17						
PDAR	Pinedale Array	117.95	40		PKPdf	11 39 35.4	-0.4
DGMT	Dagmar	117.97	32	P	PKiKP	11 39 35.7	+0.3
	baz=307						
DGMT	Dagmar	117.97	32	P	PKiKP	11 39 35.6	+0.2
	baz=307						
LCMT	Little Creek M	118.00	47		PKPdf	11 39 35.7	-0.2
TOA0	Torodi Ar. Sit	118.05	285	PKPdf	PKPdf	11 39 35.0	-1.4
TORD	Torodi Ar. Bea	118.05	285	PKP	PKPdf	11 39 35.0	-1.4
	comp=Z,6.5nm,0.7s,baz=52,slow=1.5,SNR=10.0						
TORD	Torodi Ar. Bea	118.05	285		PKPdf	11 39 35.3	-1.1
GLA	Glamis	118.30	52	P	PKiKP	11 39 37.3	+0.8
	baz=291						
Q16A	Castle Valley	118.68	44	PKPdf	PKPdf	11 39 37.0	-0.3
K22A	Casper	119.93	39		PKPdf	11 39 39.1	-0.4

K22A	Casper	119.93	39	P	PKPdf	11 39 39.2	-0.4
	baz=302,SNR=8.2						
K22A	Casper	119.93	39	P	PKPdf	11 39 39.4	-0.1
	baz=302						
WUAZ	Wupatki	119.99	48	P	PKiKP	11 39 40.2	+0.3
	baz=295,SNR=6.0						
O20A	White River Ci	120.11	42	PKPdf	PKiKP	11 39 40.1	0.0
O20A	White River Ci	120.11	42	P	PKiKP	11 39 40.2	+0.2
	baz=300,SNR=21						
PV11	David Mesa, Pa	120.56	44		PKiKP	11 39 41.9	+0.9
RSSD	Black Hills	120.62	36	PKPdf	PKPdf	11 39 40.8	0.0
RSSD	Black Hills	120.62	36	PKIKP	PKPdf	11 39 40.8	0.0
RSSD	Black Hills	120.62	36	P	PKPdf	11 39 40.6	-0.2
	baz=305						
RSSD	Black Hills	120.62	36	P	PKPdf	11 39 40.3	-0.6
	baz=305						
PV13	Radium Mtn., P	120.66	44		PKiKP	11 39 41.3	+0.1
MDND	Maddock	120.74	30	PKPdf	PKiKP	11 39 41.0	+0.1
MDND	Maddock	120.74	30	P	PKPdf	11 39 40.3	-0.4
	baz=311						
MDND	Maddock	120.74	30	P	PKiKP	11 39 40.8	0.0
	baz=311						
ULM	Lac du Bonnet	120.85	26	PKP	PKPdf	11 39 39.8	-1.0
	comp=Z,14nm,0.7s,baz=313,slow=2.7,SNR=24						
ULM				PKKPbc	PKKPbc	11 49 42.5	-4.3
	comp=Z,3.5nm,0.6s,baz=156,slow=3.2,SNR=5.6						
E28A	Huff	121.00	32	P	PKPdf	11 39 41.2	0.0
	baz=310						
N23A	Red Feather La	121.23	40		PKPdf	11 39 42.0	-0.2
N23A	Red Feather La	121.23	40	P	PKiKP	11 39 42.3	-0.1
	baz=302						
MVCO	Mesa Verde	121.33	45	PKPdf	PKiKP	11 39 43.0	+0.4
MVCO	Mesa Verde	121.33	45	P	PKiKP	11 39 43.0	+0.4
	baz=298,SNR=12						
W18A	Petrified Fore	121.37	48	P	PKiKP	11 39 43.0	+0.4
	baz=296,SNR=6.3						
SMCO	Snowmass	121.43	42		PKiKP	11 39 43.1	+0.1
ISCO	Idaho Springs	122.02	41	P	PKiKP	11 39 44.2	+0.3
	baz=302						
ISCO	Idaho Springs	122.02	41	P	PKiKP	11 39 43.9	-0.1
	baz=302,SNR=14						
S22A	4UR Ranch, Cre	122.24	44	P	PKiKP	11 39 45.2	+0.8
	baz=300,SNR=8.3						
AGMN	Agassiz Nation	122.26	28	P	PKiKP	11 39 43.8	0.0
	baz=316,SNR=9.1						
AGMN	Agassiz Nation	122.26	28	P	PKPdf	11 39 42.3	-1.3
	baz=316						
D32A	Dogwood Acres,	122.52	30		PKPdf	11 39 43.9	-0.2
D32B	Dogwood Acres,	122.52	30	P	PKPdf	11 39 43.7	-0.4
	baz=314						
Q24A	Divide	122.76	42		PKPdf	11 39 44.5	-0.7
Q24A	Divide	122.76	42	P	PKPdf	11 39 45.0	-0.2
	baz=302						
SDCO	Great Sand Dun	123.15	43	P	PKiKP	11 39 46.7	+0.4
	baz=301,SNR=11						
SDCO	Great Sand Dun	123.15	43	P	PKiKP	11 39 46.5	+0.3
	baz=301						
B35A	Bob, Littlefor	123.20	27	P	PKPdf	11 39 44.6	-0.8
	baz=318						
SUSD	Miller	123.31	33	P	PKPdf	11 39 45.0	-0.8
	baz=310						
SUSD	Miller	123.31	33	P	PKPdf	11 39 45.6	-0.2
	baz=310						
OGNE	Ogallala	123.67	38	P	PKPdf	11 39 45.9	-0.7
	baz=306						
OGNE	Ogallala	123.67	38	P	PKPdf	11 39 46.8	+0.1
	baz=306						
F33A	5 Mile Ranch,	123.77	30	P	PKPdf	11 39 46.4	-0.2
	baz=314						
ANMO	Albuquerque	123.85	46	PKPdf	PKiKP	11 39 48.5	+0.9
ANMO	Albuquerque	123.85	46	PKIKP	PKiKP	11 39 48.5	+0.9
ANMO	Albuquerque	123.85	46	P	PKiKP	11 39 48.0	+0.4
	baz=298						
ANMO	Albuquerque	123.85	46	P	PKiKP	11 39 48.0	+0.4
	baz=298						
Y22D	IRIS PASSCAL I	123.92	48	P	PKiKP	11 39 48.1	+0.4
	baz=297						
Y22F	Passcal Instru	123.92	48	P	PKiKP	11 39 48.1	+0.4
	baz=297						
Y22A	Socorro	123.95	48	P	PKPdf	11 39 47.4	-0.1
	baz=297						
121A	Cookes Peak, D	123.95	50	P	PKiKP	11 39 48.6	+0.8
	baz=296						
121A	Cookes Peak, D	123.95	50	P	PKPdf	11 39 47.6	+0.1
	baz=296						
T25A	Trinidad	124.21	43	P	PKiKP	11 39 48.5	+0.2
	baz=301,SNR=14						
KSCO	Kaye Shedlock’	124.39	40	PKPdf	PKiKP	11 39 48.6	+0.1
KSCO	Kaye Shedlock’	124.39	40	P	PKiKP	11 39 48.4	-0.1
	baz=304,SNR=5.4						
KSCO	Kaye Shedlock’	124.39	40	P	PKiKP	11 39 48.6	+0.1
	baz=304,SNR=5.4						
EYMN	Ely	124.49	26	P	PKPdf	11 39 47.6	-0.3
	baz=320						
EYMN	Ely	124.49	26	P	PKPdf	11 39 47.8	-0.1
	baz=320						
K31A	O'Neill	124.59	35	P	PKPdf	11 39 47.9	-0.3
	baz=310						
SCHQ	Schefferville	124.77	5	PKP	PKPdf	11 39 47.9	-0.4
	comp=Z,20nm,0.9s,baz=2.8,slow=1.9,SNR=16						
SCHQ	Schefferville	124.77	5	PKPdf	PKPdf	11 39 48.3	+0.1
ECSD	EROS Data Cent	125.04	32	P	PKPdf	11 39 48.9	-0.3
	baz=312,SNR=30						
ECSD	EROS Data Cent	125.04	32	P	PKPdf	11 39 48.8	-0.3
	baz=312						
KIC	Kosan Boka	125.08	278	⇓*i*PKIKP	PKPdf	11 39 49.4	-0.6
	comp=Z,40nm,1.0s						
F36A	Milaca	125.12	29	P	PKPdf	11 39 48.8	-0.4
	baz=317						
DBIC	Dimbokro	125.17	278	PKP	PKPdf	11 39 49.3	-0.8
	comp=Z,9.3nm,0.9s,baz=41,slow=3.4,SNR=8.2						
DBIC	Dimbokro	125.17	278	PKPdf	PKPdf	11 39 49.5	-0.6
DBIC	Dimbokro	125.17	278	PKIKP	PKPdf	11 39 49.5	-0.6
TIC	Toumodi	125.33	278	⇑*e*PKIKP	PKPdf	11 39 49.3	-1.2
	comp=Z,21nm,0.8s						
LIC	Lamto	125.38	278	⇓*i*PKIKP	PKPdf	11 39 49.8	-0.7
	comp=Z,27nm,0.7s						
E38A	The Farm, Brul	125.49	27		PKPdf	11 39 49.9	+0.1
E38A	The Farm, Brul	125.49	27	P	PKPdf	11 39 49.4	-0.4
	baz=319						
BGNE	Belgrade	125.71	35	P	PKPdf	11 39 49.6	-0.8
	baz=310,SNR=20						
BGNE	Belgrade	125.71	35	P	PKPdf	11 39 50.1	-0.4
	baz=310						
SPMN	Marine on St.	125.93	29		PKPdf	11 39 50.6	-0.1
SPMN	Marine on St.	125.93	29	P	PKPdf	11 39 50.0	-0.7
	baz=317,SNR=6.9						
SPMN	Marine on St.	125.93	29	P	PKPdf	11 39 50.6	-0.1
	baz=317						
MNTX	Cornudas Mount	126.15	49	P	PKiKP	11 39 52.1	+0.1
	baz=297						
MNTX	Cornudas Mount	126.15	49	P	PKiKP	11 39 52.4	+0.4
	baz=297						
CBKS	Cedar Bluff	126.35	39	PKPdf	PKiKP	11 39 52.1	-0.1
CBKS	Cedar Bluff	126.35	39	PKIKP	PKiKP	11 39 52.1	-0.1
CBKS	Cedar Bluff	126.35	39	P	PKPdf	11 39 51.6	-0.2
	baz=307						
CBKS	Cedar Bluff	126.35	39	P	PKPdf	11 39 51.5	-0.3
	baz=307,SNR=7.6						
L34A	Svendsen Farm,	126.36	34	P	PKPdf	11 39 50.7	-1.0
	baz=312						
D41A	Chassel	126.43	24	P	PKPdf	11 39 51.7	+0.1
	baz=323						
I37B	Waseca	126.52	30	P	PKPdf	11 39 52.0	+0.2
	baz=316						
COWI	Conover	126.94	26		PKiKP	11 39 53.0	-0.2
COWI	Conover	126.94	26	P	PKiKP	11 39 53.0	-0.2
	baz=322						
MSTX	Muleshoe	126.98	46	P	PKPdf	11 39 53.2	-0.1
	baz=301						
MSTX	Muleshoe	126.98	46	P	PKPdf	11 39 53.3	+0.1
	baz=301						
G40A	Rib Lake	127.12	27		PKPdf	11 39 53.1	+0.1
G40A	Rib Lake	127.12	27	P	PKPdf	11 39 53.0	-0.1
	baz=320						
R32A	Long Quarter,	127.22	39		PKPdf	11 39 53.5	0.0
R32A	Long Quarter,	127.22	39	P	PKiKP	11 39 53.7	-0.3
	baz=307,SNR=14						
AMTX	Amarillo	127.28	44	PKPdf	PKiKP	11 39 54.8	+0.6
AMTX	Amarillo	127.28	44	P	PKiKP	11 39 54.1	-0.2
	baz=302						
AMTX	Amarillo	127.28	44	P	PKiKP	11 39 54.3	+0.1
	baz=302						
N35A	Tabor	127.50	34	P	PKPdf	11 39 53.9	+0.1
	baz=312						
E43A	Lone Tree Farm	127.62	24		PKiKP	11 39 54.3	-0.2
E43A	Lone Tree Farm	127.62	24	P	PKiKP	11 39 54.3	-0.2
	baz=324						
F42A	Maple Grove Fa	127.64	25	P	PKPdf	11 39 54.1	+0.2
	baz=323						
K38A	Parkersburg	127.82	31		PKPdf	11 39 54.0	-0.5
K38A	Parkersburg	127.82	31	P	PKPdf	11 39 53.9	-0.5
	baz=316						
I40A	Norwalk	127.97	28	P	PKPdf	11 39 54.6	0.0
	baz=319						
KSU1	Kansas State U	128.09	37	P	PKPdf	11 39 55.1	+0.1
	baz=310						
KSU1	Kansas State U	128.09	37	P	PKiKP	11 39 55.4	-0.2
	baz=310,SNR=12						
SCIA	State Center	128.11	32		PKPdf	11 39 55.1	+0.1
SCIA	State Center	128.11	32	P	PKPdf	11 39 54.6	-0.4
	baz=315						
SCIA	State Center	128.11	32	P	PKPdf	11 39 55.0	+0.1
	baz=315						
ELIS	Ellis County	128.16	42	PKPdf	PKiKP	11 39 56.2	+0.3
OK035	E0210 Rd and N	128.25	40		PKiKP	11 39 56.3	+0.2
U32A	Winter Ranch,	128.25	41	P	PKPdf	11 39 55.3	-0.2
	baz=306						
TX31	Lajitas Ar. Si	128.53	51	P	PKiKP	11 39 56.6	-0.3
	baz=297						
TXAR	Lajitas Array	128.53	51	PKP	PKPdf	11 39 56.4	+0.1
	comp=Z,1.8nm,0.6s,baz=5.2,slow=1.0,SNR=26						
KAN01	Argonia South	128.59	39		PKiKP	11 39 56.5	-0.2
E46A	Sault Ste Mari	128.68	22	P	PKPdf	11 39 55.9	0.0
	baz=327						
I42A	Draeger Farm,	128.76	27	P	PKPdf	11 39 55.5	-0.7
	baz=321						
JFWS	Jewell Farm	128.88	29	P	PKPdf	11 39 55.8	-0.7
	baz=319						
JFWS	Jewell Farm	128.88	29	P	PKPdf	11 39 56.3	-0.1
	baz=319						
CSTR	Hydro, Custer	128.88	42		PKiKP	11 39 57.6	+0.2
N38A	Joes South For	128.88	33	P	PKPdf	11 39 56.5	0.0
	baz=314						
L40A	Anamosa	129.03	30		PKPdf	11 39 56.4	-0.4
L40A	Anamosa	129.03	30	P	PKPdf	11 39 56.6	-0.1
	baz=317						
G45A	Suttons Bay	129.25	24	P	PKiKP	11 39 57.7	-0.1
	baz=325						
G45A				P	PKiKP	11 39 57.7	-0.1
	baz=325						
WMOK	Wichita Mounta	129.34	43	P	PKPdf	11 39 57.5	-0.1
	baz=305						
WMOK	Wichita Mounta	129.34	43	P	PKiKP	11 39 58.2	-0.1
	baz=305						
T35B	Sooner Cattle	129.53	39	P	PKPdf	11 39 57.9	0.0
	baz=309						
P38A	Dawn	129.53	34	P	PKPdf	11 39 57.8	+0.1
	baz=314,SNR=14						
GLMI	Grayling	129.85	23	P	PKPdf	11 39 58.2	0.0
	baz=326						
GLMI	Grayling	129.85	23	P	PKPdf	11 39 58.2	0.0
	baz=326						
L42A	Oliver, Polo	129.85	29	P	PKiKP	11 39 58.7	-0.4
	baz=319						
ABTX	Abilene, Hawle	129.92	45	P	PKPdf	11 39 59.0	+0.2
	baz=303						
K43A	Burlington	129.95	28	P	PKPdf	11 39 58.5	+0.1
	baz=321						
OK030	Cody Creek RV	129.96	40		PKiKP	11 39 59.4	-0.1
WTFS	Witchita Falls	130.11	43		PKiKP	11 39 59.7	-0.2
N41A	Harden Midland	130.21	31	P	PKPdf	11 39 59.1	+0.1
	baz=317						
P40A	Paris	130.42	33	P	PKPdf	11 39 59.1	-0.3
	baz=315,SNR=9.7						
L44A	Lake County Fo	130.56	28	P	PKPdf	11 39 59.0	-0.6
	baz=321						
L44A	Lake County Fo	130.56	28	P	PKiKP	11 40 00.3	-0.2
	baz=321						
TUL1	Leonard	130.60	39		PKPdf	11 40 00.1	+0.2
TUL1	Leonard	130.60	39	P	PKPdf	11 40 00.0	+0.2
	baz=309						
TUL1	Leonard	130.60	39	P	PKiKP	11 40 00.6	-0.2
	baz=309						
FW03	Perrin-Whitt E	130.80	44		PKPdf	11 40 00.7	+0.3
JCT	Junction City	130.93	48	P	PKPdf	11 40 01.0	+0.3
	baz=301,SNR=6.5						
JCT	Junction City	130.93	48	P	PKPdf	11 40 01.1	+0.4
	baz=301						
S39A	Bolivar	130.96	36	P	PKPdf	11 40 00.2	-0.4
	baz=312,SNR=31						
J47A	Sunmer	131.07	25	P	PKPdf	11 40 00.7	+0.1
	baz=325						
J47A				P	PKPdf	11 40 00.7	+0.1
	baz=325						
M44A	Midewin, Midew	131.11	29	P	PKiKP	11 40 01.3	-0.3
	baz=321						
HDIL	Hopedale	131.12	30	P	PKPdf	11 40 00.5	-0.2
	baz=319						
HDIL	Hopedale	131.12	30	P	PKPdf	11 40 00.7	-0.1
	baz=319						
U38A	Gravette	131.15	38	PKPdf	PKPdf	11 40 00.4	-0.5
U38A	Gravette	131.15	38	P	PKPdf	11 40 00.6	-0.4
	baz=311						
R40A	Maddies Statio	131.16	35	PKPdf	PKPdf	11 40 00.4	-0.5
R40A	Maddies Statio	131.16	35	P	PKPdf	11 40 00.7	-0.2
	baz=314,SNR=19						
FW07	Weatherford	131.18	44	PKPdf	PKPdf	11 40 00.8	-0.3
Z35A	Perchaven, San	131.19	43	P	PKPdf	11 40 00.8	-0.3
	baz=306						
HHAR	Hobbs	131.52	38		PKPdf	11 40 00.5	-1.2
P43A	Skaggs, Pawnee	131.69	31	P	PKPdf	11 40 01.7	-0.1
	baz=318						
X37A	Clayton	131.69	40	P	PKPdf	11 40 02.1	+0.1
	baz=308						
WHTX	Lake Whitney,	131.81	45	P	PKPdf	11 40 02.7	+0.4
	baz=304						
O44A	Mansfield	131.84	30	P	PKPdf	11 40 02.5	+0.4
	baz=319						
CCM	Cathedral Cave	131.90	34	PKPdf	PKPdf	11 40 01.3	-1.0
CCM	Cathedral Cave	131.90	34	PKIKP	PKPdf	11 40 01.3	-1.0
CCM	Cathedral Cave	131.90	34	P	PKPdf	11 40 02.1	-0.2
	baz=315						
CCM	Cathedral Cave	131.90	34	P	PKPdf	11 40 02.1	-0.2
	baz=315,SNR=10.0						
D62A	Allapoint, All	132.11	9	P	PKPdf	11 40 01.9	-0.4
	baz=347						
D62A				P	PKPdf	11 40 01.9	-0.4
	baz=347						
U40A	Yellville	132.13	37	P	PKPdf	11 40 02.0	-0.8
	baz=312						
U40A				P	PKPdf	11 40 02.0	-0.8
	baz=312						
L48A	N Adams	132.30	25	P	PKPdf	11 40 02.6	-0.3
	baz=325						
L48A				P	PKPdf	11 40 02.6	-0.3
	baz=325						
833A	Chaparral WMA,	132.31	50	P	PKiKP	11 40 04.2	-0.2
	baz=300						
AAM	Ann Arbor	132.33	24	P	PKPdf	11 40 03.0	0.0
	baz=326						
SFIN	Lafayette	132.34	29	P	PKPdf	11 40 03.2	+0.2
	baz=321						
SFIN	Lafayette	132.34	29	P	PKPdf	11 40 02.9	-0.2
	baz=321						
FVM	French Village	132.41	34	P	PKPdf	11 40 03.2	0.0
	baz=316,SNR=9.7						
E62A	Clayton Lake	132.49	9	P	PKPdf	11 40 02.9	-0.2
	baz=346						
E62A				P	PKPdf	11 40 02.9	-0.2
	baz=346						
Q44A	Meyer Farm, Va	132.50	32	P	PKPdf	11 40 03.6	+0.2
	baz=318						
N47A	Urbana	132.60	27	P	PKPdf	11 40 03.0	-0.5
	baz=323						
N47A				P	PKPdf	11 40 03.0	-0.5
	baz=323						
T42A	Van Buren	132.71	35	P	PKPdf	11 40 03.7	-0.1
	baz=314						
MNTQ	Montreal, Queb	132.74	14		PKiKP	11 40 04.3	-0.4
E63A	Oxbow	132.85	9	P	PKPdf	11 40 03.7	-0.2
	baz=348						
E63A				P	PKPdf	11 40 03.7	-0.2
	baz=348						
MIAR	Mount Ida	132.87	39	PKPdf	PKPdf	11 40 04.2	0.0
MIAR	Mount Ida	132.87	39	PKIKP	PKPdf	11 40 04.2	0.0
MIAR	Mount Ida	132.87	39	P	PKPdf	11 40 04.7	+0.5
	baz=310,SNR=19						
MIAR	Mount Ida	132.87	39	P	PKPdf	11 40 04.5	+0.3
	baz=310						
P46A	Rosedale	132.88	29	P	PKPdf	11 40 04.0	-0.1
	baz=321						
FCAR	Ozark Folk Cen	132.88	37		PKPdf	11 40 04.0	-0.2
OLIL	Olney	133.10	31	P	PKPdf	11 40 04.6	+0.1
	baz=319,SNR=6.2						
F62A	Pittston Farm,	133.11	10	P	PKPdf	11 40 04.1	-0.3
	baz=346						
F62A				P	PKPdf	11 40 04.1	-0.3
	baz=346						
BMNY	Brushton-Moira	133.14	15	P	PKPdf	11 40 04.3	-0.1
	baz=339,SNR=6.7						
WHAR	Wooly Hollow	133.19	38		PKPdf	11 40 05.2	+0.4
N49A	Columbus Grove	133.25	26	P	PKPdf	11 40 04.6	-0.2
	baz=325,SNR=6.1						
N49A				P	PKPdf	11 40 04.6	-0.2
	baz=325,SNR=6.1						
CGM3	Cape Girardeau	133.32	34		PKiKP	11 40 05.9	-0.3
M50A	Fremont	133.33	25	P	PKPdf	11 40 04.6	-0.2
	baz=327						
M50A				P	PKPdf	11 40 04.6	-0.2
	baz=327						
LCAR	Lake Charles	133.34	36	PKPdf	PKPdf	11 40 05.4	+0.4
LCAR	Lake Charles	133.34	36	P	PKPdf	11 40 05.0	0.0
	baz=314						
O48B	Farmland	133.35	27	P	PKPdf	11 40 05.1	+0.2
	baz=323						
O48B	Farmland	133.35	27	P	PKPdf	11 40 04.7	-0.2
	baz=323						
FRNY	Flat Rock	133.38	14	P	PKPdf	11 40 04.3	-0.5
	baz=340						
F64A	Sherman	133.41	9	P	PKPdf	11 40 04.3	-0.6
	baz=348						
F64A				P	PKPdf	11 40 04.3	-0.6
	baz=348						
UALR	University of	133.49	38	PKPdf	PKiKP	11 40 06.3	-0.3
J55A	Hilton	133.64	19	P	PKPdf	11 40 05.6	+0.2
	baz=334						
J55A				P	PKPdf	11 40 05.6	+0.2
	baz=334						
G62A	West of Eustis	133.67	11	P	PKPdf	11 40 05.6	+0.2
	baz=345						
G62A				P	PKPdf	11 40 05.6	+0.2
	baz=345						
WLAR	White Oak Lake	133.72	40	PKPdf	PKPdf	11 40 06.3	+0.5
O49A	Covington	133.77	27		PKPdf	11 40 05.2	-0.6
O49A	Covington	133.77	27	P	PKPdf	11 40 05.6	-0.2
	baz=324,SNR=6.9						
O49A				P	PKPdf	11 40 05.6	-0.2
	baz=324,SNR=6.9						
PKME	Peaks-Kenny Pk	133.84	10	P	PKPdf	11 40 05.9	+0.2
	baz=346						
PKME	Peaks-Kenny Pk	133.84	10	P	PKPdf	11 40 05.6	-0.1
	baz=346						
P48A	Milroy	133.86	28	P	PKPdf	11 40 05.6	-0.3
	baz=323						
P48A				P	PKPdf	11 40 05.6	-0.3
	baz=323						
N51A	Ashland	134.01	24	P	PKPdf	11 40 05.9	-0.3
	baz=327						
N51A				P	PKPdf	11 40 05.9	-0.3
	baz=327						
J57A	Williamstown	134.06	17	P	PKPdf	11 40 06.6	+0.4
	baz=337						
J57A				P	PKPdf	11 40 06.6	+0.4
	baz=337						
P49A	Miami Univ. Ec	134.13	27	P	PKPdf	11 40 06.0	-0.4
	baz=324						
P49A	Miami Univ. Ec	134.13	27	P	PKPdf	11 40 06.7	+0.2
	baz=324						
M53A	WI Miller and	134.25	22		PKPdf	11 40 06.5	-0.1
M53A	WI Miller and	134.25	22	P	PKPdf	11 40 06.3	-0.3
	baz=330						
J58A	Remsen	134.31	16	P	PKPdf	11 40 06.6	-0.1
	baz=338,SNR=9.9						
J58A				P	PKPdf	11 40 06.6	-0.1
	baz=338,SNR=9.9						
LBNH	Lisbon	134.32	13	P	PKPdf	11 40 07.1	+0.4
	baz=342						
LBNH	Lisbon	134.32	13	P	PKPdf	11 40 07.0	+0.3
	baz=342						
ACSO	Alum Creek Sta	134.33	25	P	PKPdf	11 40 06.8	0.0
	baz=326,SNR=6.6						
ACSO	Alum Creek Sta	134.33	25	P	PKPdf	11 40 07.1	+0.3
	baz=326,SNR=6.6						
MCVT	Middlebury Col	134.35	14	P	PKPdf	11 40 07.2	+0.5
	baz=341						
WCI	Wyandotte Cave	134.40	30	PKPdf	PKPdf	11 40 06.9	-0.1
WCI	Wyandotte Cave	134.40	30	PKIKP	PKPdf	11 40 06.9	-0.1
WCI	Wyandotte Cave	134.40	30	P	PKPdf	11 40 06.9	-0.1
	baz=321						
WCI	Wyandotte Cave	134.40	30	P	PKPdf	11 40 07.2	+0.2
	baz=321,SNR=6.7						
J59A	Piesco	134.43	15		PKPdf	11 40 07.2	+0.3
J59A	Piesco	134.43	15	P	PKPdf	11 40 07.2	+0.3
	baz=339						
J59A				P	PKPdf	11 40 07.2	+0.3
	baz=339						
K57A	Scipio Center	134.53	18	P	PKPdf	11 40 07.0	-0.1
	baz=336,SNR=5.8						
N53A	Lisbon	134.73	23	P	PKPdf	11 40 07.6	+0.1
	baz=329						
N53A				P	PKPdf	11 40 07.6	+0.1
	baz=329						
L56A	Greenwood	134.74	19	P	PKPdf	11 40 07.5	-0.1
	baz=334,SNR=7.0						
L56A				P	PKPdf	11 40 07.5	-0.1
	baz=334,SNR=7.0						
HNH	Hanover	134.75	13		PKPdf	11 40 07.2	-0.2
I63A	Otisfield	134.78	11	P	PKPdf	11 40 07.6	+0.1
	baz=344						
I63A				P	PKPdf	11 40 07.6	+0.1
	baz=344						
I62A	Tamworth	134.79	12	P	PKPdf	11 40 07.6	0.0
	baz=343						
I62A				P	PKPdf	11 40 07.6	0.0
	baz=343						
PAMR	Moraine State	134.90	22	P	PKPdf	11 40 07.7	-0.1
	baz=330						
R49A	Shelbyville	134.90	29		PKPdf	11 40 08.1	+0.2
R49A	Shelbyville	134.90	29	P	PKPdf	11 40 08.4	+0.5
	baz=322						
R49A				P	PKPdf	11 40 08.4	+0.5
	baz=322						
O52A	Adamsville	134.91	24	P	PKPdf	11 40 08.1	+0.2
	baz=328,SNR=6.1						
O52A				P	PKPdf	11 40 08.1	+0.2
	baz=328,SNR=6.1						
P51A	Williamsport	134.92	26	P	PKPdf	11 40 07.7	-0.3
	baz=326						
P51A				P	PKPdf	11 40 07.7	-0.3
	baz=326						
M55A	Ridgway	134.92	21	P	PKPdf	11 40 08.0	+0.1
	baz=332						
M55A				P	PKPdf	11 40 08.0	+0.1
	baz=332						
J61A	Chester	135.03	14	P	PKPdf	11 40 08.6	+0.6
	baz=341						
J61A				P	PKPdf	11 40 08.6	+0.6
	baz=341						
O53A	New Philadelph	135.05	24		PKPdf	11 40 08.4	+0.3
O53A	New Philadelph	135.05	24	P	PKPdf	11 40 08.1	-0.1
	baz=328						
W45A	Hickory Valley	135.12	35	PKPdf	PKPdf	11 40 08.3	-0.1
W45A	Hickory Valley	135.12	35	P	PKPdf	11 40 08.9	+0.5
	baz=315						
HCNY	Howe Caverns	135.17	16	P	PKPdf	11 40 08.7	+0.5
	baz=338						
BINY	Binghamton	135.17	18	P	PKPdf	11 40 08.3	0.0
	baz=336						
BINY	Binghamton	135.17	18	P	PKPdf	11 40 08.6	+0.2
	baz=336						
WVT	Waverly	135.18	33		PKPdf	11 40 08.4	-0.1
WVT	Waverly	135.18	33	PKIKP	PKPdf	11 40 08.4	-0.1
P52A	Corning	135.19	25	P	PKPdf	11 40 08.7	+0.2
	baz=327,SNR=6.4						
PSDB	Penn State Uni	135.23	21	P	PKPdf	11 40 08.4	-0.1
	baz=332						
R50A	Paris	135.31	28		PKPdf	11 40 07.8	-0.9
R50A	Paris	135.31	28	P	PKPdf	11 40 08.3	-0.4
	baz=323						
R50A				P	PKPdf	11 40 08.3	-0.4
	baz=323						
UPAO	U. Pittsburgh	135.32	22	P	PKPdf	11 40 08.7	+0.1
	baz=330						
O54A	Avella	135.44	23	P	PKPdf	11 40 09.1	+0.2
	baz=329,SNR=6.7						
O54A				P	PKPdf	11 40 09.1	+0.2
	baz=329,SNR=6.7						
OXF	Oxford	135.44	36	P	PKPdf	11 40 09.7	+0.6
	baz=315,SNR=8.4						
OXF	Oxford	135.44	36	P	PKPdf	11 40 09.4	+0.4
	baz=315						

M57A	Sunshine Farm,	135.59	19	P	PKPdf	11 40 09.6	+0.4
	baz=334						
M57A				P	PKPdf	11 40 09.6	+0.4
	baz=334						
P53A	Whipple	135.62	25	P	PKPdf	11 40 09.4	+0.2
	baz=328,SNR=8.4						
P53A				P	PKPdf	11 40 09.4	+0.2
	baz=328,SNR=8.4						
UNH	University of	135.64	12	P	PKPdf	11 40 09.5	+0.4
	baz=344						
Q52A	Bidwell	135.69	26		PKPdf	11 40 09.3	-0.1
Q52A	Bidwell	135.69	26	P	PKPdf	11 40 09.2	-0.1
	baz=326,SNR=6.7						
Q52A				P	PKPdf	11 40 09.2	-0.1
	baz=326,SNR=6.7						
K62A	Royalston	135.75	14	P	PKPdf	11 40 09.5	+0.2
	baz=342						
K62A				P	PKPdf	11 40 09.5	+0.2
	baz=342						
Y45A	Yeager Farm, C	135.81	37	PKPdf	PKPdf	11 40 08.5	-1.3
Y45A	Yeager Farm, C	135.81	37	P	PKiKP	11 40 10.7	-0.6
	baz=314						
KSPA	Keystone Colle	135.82	18	P	PKPdf	11 40 09.8	+0.2
	baz=336						
L61B	Northampton	135.84	14	P	PKPdf	11 40 09.9	+0.4
	baz=341						
L61B	Northampton	135.84	14	P	PKPdf	11 40 10.0	+0.4
	baz=341						
SSPA	Standing Stone	135.97	20	PKPdf	PKPdf	11 40 08.1	-1.8
SSPA	Standing Stone	135.97	20	P	PKPdf	11 40 10.4	+0.6
	baz=333						
SSPA	Standing Stone	135.97	20	P	PKPdf	11 40 10.2	+0.4
	baz=333,SNR=7.1						
U49A	Red Boiling Sp	135.98	31	P	PKPdf	11 40 10.5	+0.5
	baz=320						
V48A	Smith Brothers	136.01	33		PKPdf	11 40 08.7	-1.4
V48A	Smith Brothers	136.01	33	P	PKPdf	11 40 10.9	+0.8
	baz=319						
PABK	Blue Knob Stat	136.04	21	P	PKPdf	11 40 10.5	+0.4
	baz=332						
HRV	Adam Dziewonsk	136.05	13		PKPdf	11 40 09.5	-0.4
HRV	Adam Dziewonsk	136.05	13	PKIKP	PKPdf	11 40 09.5	-0.4
HRV	Adam Dziewonsk	136.05	13	P	PKPdf	11 40 10.1	+0.2
	baz=342						
HRV	Adam Dziewonsk	136.05	13	P	PKiKP	11 40 10.8	-0.7
	baz=342						
T50A	Nancy	136.06	30		PKPdf	11 40 10.0	-0.1
T50A	Nancy	136.06	30	P	PKPdf	11 40 10.4	+0.3
	baz=322						
T50A				P	PKPdf	11 40 10.4	+0.3
	baz=322						
MCWV	Mont Chateau	136.10	23	P	PKPdf	11 40 10.3	+0.2
	baz=330						
NPNY	Mohonk Preserv	136.11	16	P	PKPdf	11 40 10.2	+0.1
	baz=338						
S51A	Beattyville	136.17	28	P	PKPdf	11 40 10.5	+0.1
	baz=324						
S51A				P	PKPdf	11 40 10.5	+0.1
	baz=324						
N58A	Sunbury	136.18	19	PKPdf	PKPdf	11 40 09.5	-0.7
N58A	Sunbury	136.18	19	P	PKPdf	11 40 10.3	+0.1
	baz=335,SNR=5.8						
N58A				P	PKPdf	11 40 10.3	+0.1
	baz=335,SNR=5.8						
Q54A	Coxs Mills	136.28	24	P	PKPdf	11 40 10.4	0.0
	baz=328						
Q54A				P	PKPdf	11 40 10.4	0.0
	baz=328						
VBMS	Vicksburg	136.32	39	P	PKPdf	11 40 11.3	+0.6
	baz=312						
R53A	Hurricane	136.35	26	P	PKPdf	11 40 10.9	+0.2
	baz=326						
R53A				P	PKPdf	11 40 10.9	+0.2
	baz=326						
BRNY	Black Rk. Fore	136.47	16	P	PKPdf	11 40 11.1	+0.3
	baz=339						
TRNY	Table Rock, Ra	136.66	16	PKPdf	PKPdf	11 40 10.2	-1.0
L64A	Middleborough	136.75	12	P	PKiKP	11 40 12.3	-0.7
	baz=343						
L64A				P	PKiKP	11 40 12.3	-0.7
	baz=343						
X48A	Hartselle	136.84	34	P	PKPdf	11 40 11.9	+0.2
	baz=317						
PAL	Palisades	136.88	16	P	PKPdf	11 40 11.8	+0.3
	baz=339						
PAL	Palisades	136.88	16	P	PKPdf	11 40 12.4	+0.9
	baz=339						
P57A	Homestead Farm	136.94	21		PKPdf	11 40 11.4	-0.3
P57A	Homestead Farm	136.94	21	P	PKPdf	11 40 11.8	+0.1
	baz=332						
P57A				P	PKPdf	11 40 11.8	+0.1
	baz=332						
TZTN	Tazewell	137.07	29	P	PKPdf	11 40 12.2	+0.1
	baz=323						
TZTN	Tazewell	137.07	29	P	PKiKP	11 40 13.5	-0.4
	baz=323						
S54A	Dingess, Beckl	137.07	26	P	PKiKP	11 40 13.2	-0.7
	baz=327						
S54A				P	PKiKP	11 40 13.2	-0.7
	baz=327						
Z47A	Carrollton	137.16	36	P	PKPdf	11 40 12.9	+0.7
	baz=315						
R55A	Marlinton	137.17	24	P	PKPdf	11 40 13.2	+0.9
	baz=329						
R55A				P	PKPdf	11 40 13.2	+0.9
	baz=329						
PANJ	Princeton	137.23	17	P	PKPdf	11 40 13.0	+0.8
	baz=337						
W50A	Signal Mountai	137.23	32	P	PKiKP	11 40 13.4	-0.9
	baz=320						
V51A	Loudon	137.26	30		PKPdf	11 40 12.5	+0.1
V51A	Loudon	137.26	30	P	PKPdf	11 40 12.9	+0.5
	baz=322						
GEDE	Greenville	137.46	19	P	PKPdf	11 40 12.6	0.0
	baz=336						
V52A	Sevierville	137.61	30	P	PKPdf	11 40 13.4	+0.4
	baz=323						
Y49A	Blount Mountai	137.64	34	PKPdf	PKiKP	11 40 14.3	-0.8
Y49A	Blount Mountai	137.64	34	P	PKPdf	11 40 13.7	+0.6
	baz=318						
TKL	Tuckaleechee C	137.66	30	P	PKPdf	11 40 13.3	+0.2
	baz=322						
LRAL	Lakeview Retre	137.90	36	P	PKPdf	11 40 13.6	0.0
	baz=316						
BLA	Blacksburg	137.95	25	P	PKPdf	11 40 14.2	+0.5
	baz=328						
CBN	Corbin Frederi	138.30	21	P	PKPdf	11 40 14.8	+0.6
	baz=332						
PLCA	Paso Flores	138.44	167	PKhKP	PKPpre	11 40 04.8	
	comp=Z,1.3nm,0.9s,baz=352,slow=4.6,SNR=3.2						
PLCA				PKP	PKPdf	11 40 14.5	-0.1
	comp=Z,3.4nm,0.8s,baz=210,slow=4.0,SNR=6.8						
PLCA				SKP		11 43 37.2	
	comp=Z,1.4nm,0.8s,baz=209,slow=1.2,SNR=4.9						
PLCA	Paso Flores	138.44	167		PKPdf	11 40 15.0	+0.4
PLCA	Paso Flores	138.44	167	PKIKP	PKPdf	11 40 15.0	+0.4
PLCA	Paso Flores	138.44	167	*e*P	PKPdf	11 40 14.9	+0.4
Z51A	Franklin	138.73	34		PKPdf	11 40 15.5	+0.3
BRAL	Brewton	139.20	38	P	PKPdf	11 40 16.8	+0.7
	baz=315						
KMSC	Kings Mountain	139.26	28	P	PKiKP	11 40 17.6	-0.8
	baz=325						
GO06	Curarrehue	139.31	166	PKPdf	PKPdf	11 40 16.7	+0.5
T59A	Double "B" Far	139.32	23	PKPdf	PKPdf	11 40 16.9	+0.8
T60A	Surry	139.48	22		PKPdf	11 40 17.1	+0.7
U59A	Littleton	139.77	23		PKPdf	11 40 17.1	+0.1
X58A	Rowland	140.66	26	PKPdf	PKPdf	11 40 19.1	+0.5
CMIG	Matias Romero	141.02	62	PKhKP	PKPpre	11 40 13.0	
	comp=Z,5.8nm,0.8s,baz=306,slow=2.8,SNR=12						
TIGA	Tifton	141.02	34	P	PKiKP	11 40 20.9	-1.1
	baz=320						
TRQA	Tornquist	142.29	177	*e*P	PKPdf	11 40 21.5	0.0
BO01	Tunca	144.30	163	PKPdf	PKPbc	11 40 23.6	0.0
MT01	Popeta	144.75	163		PKPab	11 40 24.9	0.0
DWPF	Disney Wildern	144.76	35		PKPdf	11 40 25.7	-0.3
DWPF	Disney Wildern	144.76	35	P	PKPdf	11 40 25.7	-0.3
	baz=320						
VA05	Santo Domingo	144.83	162	PKPbc	PKPab	11 40 25.1	0.0
LMEL	Las Melosas	145.06	164		PKPdf	11 40 27.2	+0.6
TEIG	Tepich	145.16	53		PKPab	11 40 26.8	+0.1
MT03	Universidad Ad	145.31	164	PKPdf	PKPab	11 40 27.4	+0.3
ROC1	El Roble	145.65	163	PKPbc	PKPab	11 40 28.5	-0.1
VA03	San Esteban	145.98	163		PKPab	11 40 29.4	-0.3
PLTB	Pedras Altas	148.18	189		PKPbc	11 40 35.1	0.0
PLTB	Pedras Altas	148.18	189	*e*P	PKPdf	11 40 32.5	+0.7
GO04	Tololo Observa	148.31	161		PKPbc	11 40 35.0	-0.8
CO01	Juntas del Tor	148.72	162	PKPbc	PKPbc	11 40 37.1	+0.3
TGUH	Tegucigalpa,Un	148.94	62	PKPbc	PKPbc	11 40 36.2	-1.4
PAYG	Puerto Ayora	149.09	91	PKPbc	PKPbc	11 40 38.1	+0.1
LCO	Las Campanas	149.42	160	PKPdf	PKPdf	11 40 32.4	-1.8
LCO				PKPbc	PKPbc	11 40 38.7	0.0
LCO	Las Campanas	149.42	160	PKIKP	PKPdf	11 40 32.4	-1.8
AC05	El Transito	149.72	161		PKPbc	11 40 39.4	+0.2
AC05				PKPab	PKPab	11 40 45.0	+0.4
CNGN	Cerro Negro	150.08	64	PKPdf	PKPdf	11 40 33.7	-1.6
CNGN				PKPbc	PKPbc	11 40 39.8	-0.6
CNGN				PKPab	PKPab	11 40 46.8	+0.3
MATN	Matagalpa	150.60	63	PKPdf	PKPdf	11 40 35.0	-1.1
MATN					PKPbc	11 40 41.6	-0.1
MATN				PKPab	PKPab	11 40 49.2	+0.5
ITQB	Itaqui	150.62	185	PKPdf	PKPdf	11 40 35.3	-0.4
ITQB				PKPbc	PKPbc	11 40 41.1	-0.1
ITQB				PKPab	PKPab	11 40 48.6	+0.5
ITQB	Itaqui	150.62	185	*e*P	PKPdf	11 40 35.5	-0.1
ALGR	Alto Alegre (B	150.96	192	*e*P	PKPdf	11 40 36.6	+0.2
MECA	Mercedes	151.09	182	*e*P	PKPdf	11 40 37.2	+0.8
DUNO	Dulce Nombre,	152.07	68	PKPdf	PKPdf	11 40 38.0	-0.3
DUNO					PKiKP	11 40 45.9	+0.6
DUNO				PKPab	PKPab	11 40 53.4	-1.4
AZCA	Azaras, Argent	152.13	186	*e*P	PKPdf	11 40 38.2	+0.2
ITAB	Concordia	152.27	194	*e*P	PKPdf	11 40 38.4	+0.2
CRSM	Crissiumal (Br	152.43	190	*e*P	PKPdf	11 40 38.2	-0.3
JTS	Las Juntas de	152.49	67	PKPdf	PKPdf	11 40 37.5	-1.4
JTS					PKPbc	11 40 45.9	-0.1
JTS				PKPab	PKPab	11 40 56.6	+0.1
JTS	Las Juntas de	152.49	67	PKIKP	PKPdf	11 40 37.5	-1.4
VACA	Villa Angela C	152.73	177	*e*P	PKPdf	11 40 39.2	+0.3
GO02	Mina Guanaco	153.33	159	PKPdf	PKPdf	11 40 38.7	-1.5
GO02					PKPbc	11 40 47.3	-0.6
GO02				PKPab	PKPab	11 40 59.2	-0.8
HDC	Heredia	153.37	67	*e*P	PKPdf	11 40 39.9	-0.5
PB14	IPOC Station P	153.51	157	PKPdf	PKPdf	11 40 38.5	-2.1
PB14				PKPbc	PKiKP	11 40 48.5	+0.2
PB14				PKPab	PKPab	11 41 01.6	+0.9
CPUP	Villa Florida	153.99	184	PKP	PKPdf	11 40 40.3	-0.5
	comp=Z,6.5nm,0.9s,baz=135,slow=1.0,SNR=12						
CPUP	Villa Florida	153.99	184		PKPdf	11 40 40.9	+0.1
CPUP					PKPbc	11 40 48.6	-0.3
CPUP				PKPab	PKPab	11 41 02.2	-0.1
VAO	Valinhos	154.36	207	*e*P	PKPdf	11 40 41.3	-0.2
GUA01	Guaratinga, BA	154.78	229	*e*P	PKPdf	11 40 42.1	0.0
RCLB	Rio Claro- Sao	155.12	207	*e*P	PKPdf	11 40 42.8	+0.2
DIAM	Diamantina, MG	156.33	220	*e*P	PKPdf	11 40 44.6	+0.3
IPMB	Ipameri, GO	159.23	211	*e*P	PKPdf	11 40 47.9	+0.1
GCPR	Guaynabo City	160.42	19	PKPdf	PKPdf	11 40 46.6	-2.4
GCPR					sPKPdf	11 41 28.0	+1.5
CELP	Cerrillos	160.47	21		PKPdf	11 40 47.9	-1.2
CELP					PKPab	11 41 30.6	+0.2
RVDE	Rio Verde (Bra	160.83	193	*e*P	PKPdf	11 40 50.0	+0.4
BDFB	Brasilia	161.03	216	PKP	PKPdf	11 40 49.9	0.0
	comp=Z,8.5nm,0.9s,baz=72,slow=1.9,SNR=9.4						
BDFB	Brasilia	161.03	216	PKPdf	PKPdf	11 40 49.1	-0.8
BDFB				PKPab	PKPab	11 41 33.4	+0.2
BDFB	Brasilia	161.03	216	PKIKP	PKPdf	11 40 49.2	-0.8
BDFB						11 41 33.4	
BDFB	Brasilia	161.03	216	*e*P	PKPdf	11 40 49.8	-0.2
SDBA	SAO DESIDERIO	161.23	229	*e*P	PKPdf	11 40 50.0	-0.1
SMRT	St. Maarten	161.46	11	PKPdf	PKPdf	11 40 50.4	+0.2
LPAZ	La Paz	161.87	152	PKP	PKPdf	11 40 51.5	0.0
	comp=Z,12nm,1.0s,baz=104,slow=0.7,SNR=30						
LPAZ	La Paz	161.87	152		PKPdf	11 40 50.9	-0.5
LPAZ				PKPab	PKPab	11 41 38.2	+0.9
LPAZ	La Paz	161.87	152	*e*P	PKPdf	11 40 51.0	-0.4
PP1B	Ponte de Pedra	162.19	194	*e*P	PKPdf	11 40 51.0	0.0
HELC	Santa Helena	162.66	68	PKPdf	PKPdf	11 40 49.9	-2.1
HELC				PKPab	PKPab	11 41 39.7	-1.2
ARAG	Araguaiana, MT	162.91	206	*e*P	PKPdf	11 40 52.0	+0.3
BBSD	Serra de San D	163.12	176	*e*P	PKPdf	11 40 52.2	+0.3
GDHS	Morne Mazeau,	163.42	8	PKPdf	PKPdf	11 40 50.1	-2.2
PRAC	Prado	164.01	76		PKPdf	11 40 50.7	-2.2
SALV	Santo Antonio	164.02	193	*e*P	PKPdf	11 40 51.6	-1.1
ROSC	El Rosal	164.25	71	PKPdf	PKPdf	11 40 52.4	-1.1
ROSC				PKPab	PKPab	11 41 48.4	+0.4
ROSC	El Rosal	164.25	71	PKIKP	PKPdf	11 40 52.4	-1.1
ROSB	Rosrio	164.53	260	*e*P	PKPdf	11 40 53.3	0.0
CZSB	Cruzeiro do Su	164.78	120	PKPdf	PKPdf	11 40 53.2	-0.3
CZSB				PKPab	PKPab	11 41 51.8	+2.1
CZSB	Cruzeiro do Su	164.78	120	*e*P	PKPdf	11 40 53.5	0.0
PTLB	Pontes e Lacer	164.89	181	*e*P	PKPdf	11 40 53.7	+0.2
SVN	Savane Anatole	164.91	7	PKPdf	PKPdf	11 40 54.3	+0.7
SVN				PKPab	PKPab	11 41 47.9	-2.0
FDF	Fort de France	165.02	7	PKPdf	PKPdf	11 40 52.9	-0.8
FDF				PKPab	PKPab	11 41 49.8	-0.6
FDF	Fort de France	165.02	7	PKIKP	PKPdf	11 40 52.9	-0.8
FDF						11 41 49.8	
RUSC	La Rusia	165.02	66	PKPdf	PKPdf	11 40 52.9	-1.4
RUSC				PKPab	PKPab	11 41 51.3	-0.1
SMTB	Santa Maria do	165.47	234	*e*P	PKPdf	11 40 54.3	+0.2
SDV	Santo Domingo	165.58	51		PKPdf	11 40 52.4	-2.0
SDV					PKPab	11 41 52.8	-0.6
SDV	Santo Domingo	165.58	51	*e*P	PKPdf	11 40 52.7	-1.7
SNDB	Serra Nova Dou	165.85	214	*e*P	PKPdf	11 40 54.5	+0.2
VILB	Vilhena	167.35	176	PKPdf	PKPdf	11 40 54.5	-1.1
VILB					PKPab	11 42 01.7	+1.1
VILB	Vilhena	167.35	176	*e*P	PKPdf	11 40 56.2	+0.6
BAUV	El Baul	167.44	43	PKPdf	PKPdf	11 40 53.9	-1.7
BAUV				PKPab	PKPab	11 42 00.2	-1.1
ETMB	Extrema	168.31	145		PKPdf	11 40 55.2	-0.9
ETMB				PKPab	PKPab	11 42 05.1	+0.1
ETMB	Extrema	168.31	145	*e*P	PKPdf	11 40 55.8	-0.4
PDRB	Porto dos Gac	168.40	193	*e*P	PKPdf	11 40 56.4	+0.1
TMAB	Tom-Au,PA,Br	168.52	259	*e*P	PKPdf	11 40 56.8	+0.4
TBTG	Tabatinga, AM	168.77	111	PKPdf	PKPdf	11 40 55.8	-0.8
TBTG				PKPab	PKPab	11 42 07.4	0.0
TBTG	Tabatinga, AM	168.77	111	*e*P	PKPdf	11 40 56.1	-0.4
PRPB	Parauapebas	168.78	238	*e*P	PKPdf	11 40 55.8	-0.8
CLDB	Colider	168.85	199	*e*P	PKPdf	11 40 56.4	-0.2
NPGB	Novo Progresso	172.14	211	*e*P	PKPdf	11 40 57.8	-0.6
SGCB	S£o Gabriel d	172.35	89	*e*P	PKPdf	11 40 57.8	-0.7
MCPB	Macapa, AP	172.68	269	*e*P	PKPdf	11 40 58.4	-0.2
TEFE	Tefe	173.83	122	*e*P	PKPdf	11 40 58.4	-0.6
ITTB	Itaituba	174.52	222	*e*P	PKPdf	11 40 58.4	-0.8
MALB	Monte Alegre	174.64	253	*e*P	PKPdf	11 40 59.9	+0.6
MACA	Manacapuru-AM	176.82	156	PKPdf	PKPdf	11 40 58.3	-1.6
MACA				PKPab	PKPab	11 42 43.1	+0.4
MACA	Manacapuru-AM	176.82	156	*e*P	PKPdf	11 40 59.7	-0.2
BOAV	Boa Vista	177.14	24		PKPdf	11 40 57.5	-2.4
BOAV				PKPab	PKPab	11 42 43.8	-0.4
BOAV	Boa Vista	177.14	24	*e*P	PKPdf	11 40 59.3	-0.7

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*NEIC **31** 11:31:32.0±1.8, 25°.57S±0°.07×176°.6W±0°.1, h10^{km}±1^{km}, mb4.7/21, Error ellipse: s-maj=19.9km s-min=10.5km az=111.0*

*NOU **31** 11:31:38.2, 25°.69S×175°.97W, h104^{km}, mb4.7/13, South of Tonga Islands*

*IDC **31** 11:31:38.3±2.3, 25°.45S×176°.93W, h52^{km}±19^{km}, mb4.2/14, mbtmp4.4/15, ML4.5/2, Error ellipse: s-maj=19.7km s-min=15.7km az=111.0*

ISC 31 11:31:32.5±2.2**, 25°.61S**±0°.06×**176°.74W**±0°.08**, h13**^{km}±14^{km}**, n94, σ1^{s}.87**/92**, mb4.5**/23**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.77	196	P	Pb	11 32 36.7	-2.2
	172nm,0.3s,baz=63,slow=13,SNR=6.7						
RAO				S	Sb	11 33 22.4	-2.1
	647nm,0.3s,baz=73,slow=19,SNR=1.9						
RAO	Raoul Island	3.77	196		Pn	11 32 30.0	-0.3
RAO	Raoul Island	3.77	196	P	Pb	11 32 37.3	-1.6
NIUE	Niue	9.06	45	Pn	Pn	11 33 41.7	-1.3
NIUE	Niue	9.06	45	P	Pn	11 33 41.8	-1.1
	235nm,1.6s						
MSVF	Nonsavu	9.22	327	P	Pn	11 33 51.6	+6.3
	18nm,0.5s,baz=156,slow=12,SNR=24						
MSVF	Nonsavu	9.22	327	P	Pn	11 33 51.8	+6.6
	59nm,1.3s						
TAVE	Taveuni	9.34	341	P	Pn	11 33 54.7	+7.8
	87nm,0.8s						
AFI	Afiamalu	12.54	23	P	Pn	11 34 27.4	-3.4
	22nm,0.5s,baz=198,slow=6.4,SNR=5.8						
AFI				S	Sn	11 36 34.3	-16
	13nm,0.5s,baz=280,slow=19,SNR=2.6						
AFI	Afiamalu	12.54	23	Pn	Pn	11 34 27.1	-3.7
OUZ	Omahuta	12.69	219	P	P	11 34 39.6	-4.3
	18nm,1.4s						
HAZ	Te Kaha	12.97	200	P	P	11 34 49.7	+2.8
TWGZ	Tauwhareparae	13.30	198	P	P	11 34 54.7	+3.9
CNGZ	Carnagh Statio	13.53	197	P	P	11 34 53.9	+0.8
MWZ	Matawai	13.58	200	P	P	11 34 56.3	+2.4
TKGZ	Te Karaka	13.58	198	P	P	11 34 56.2	+2.4
URZ	Urewera	13.64	201	P	Pn	11 34 49.4	+3.8
	0.5nm,0.3s,baz=54,slow=14,SNR=1.7						
URZ				S	Sn	11 37 04.3	-13
	1.8nm,0.4s,baz=13,slow=14,SNR=1.0						
	2.8nm,0.6s						
URZ	Urewera	13.64	201	P	P	11 34 50.7	-3.8
	8.6nm,0.5s						
URZ	Urewera	13.64	201	P	P	11 34 55.0	+0.6
KARZ	Kaharoa	13.72	204	P	P	11 34 59.5	+4.1
RIGZ	Rimuhau	13.86	198	P	P	11 34 56.0	-0.9
SNGZ	Shannon Statio	14.05	199	P	P	11 34 58.1	-1.0
MHGZ	Mahia Peninsul	14.23	197	P	P	11 35 03.7	+2.7
NMHZ	Naumai	14.50	200	P	P	11 35 06.0	+1.9
RATZ	Rangitukua	14.65	204	P	P	11 35 13.3	+7.6
BKZ	Black Stump Fm	14.66	201	P	Pn	11 35 00.4	+0.7
PINNC	Pines Island,	14.75	278	Pn	Pn	11 35 00.0	-0.8
KATZ	Kakaramea	14.77	204	P	P	11 35 13.3	+6.1
KWHZ	Kaweka Forest	14.92	201	P	P	11 35 09.2	+0.4
OTVZ	Oturere	14.95	203	P	P	11 35 07.4	-1.8
SNVZ	South Ngauruho	14.98	204	P	P	11 35 07.5	-2.1
BHHZ	Black Hill Sta	15.10	202	P	P	11 35 09.0	-1.7
WNVZ	Wahianoa	15.12	203	P	P	11 35 09.1	-1.9
KAHZ	Kahuranaki	15.12	199	P	P	11 35 08.7	-2.3
PXZ	Pawanui	15.34	199	P	P	11 35 11.9	-1.5
YATNC	Mamie plateau,	15.39	280	P	P	11 35 19.7	+5.7
	16nm,0.9s						
PRHZ	Porangahau	15.63	199	P	Pn	11 35 14.2	+1.8
DZM	Mont Dzumac	15.79	279	P	P	11 35 23.5	+5.0
	4.0nm,0.6s,baz=94,slow=23,SNR=3.2						
DZM	Mont Dzumac	15.79	279	Pn	Pn	11 35 14.4	-0.2
DZM				IAmb	IAmb	11 35 29.2	
	comp=Z,35nm,1.4s						
BFZ	Birch Farm	16.12	200	Pn	Pn	11 35 17.8	-1.0
BFZ	Birch Farm	16.12	200	P	Pn	11 35 19.2	+0.4
	comp=Z,28nm,1.9s						
BFZ	Birch Farm	16.12	200	P	Pn	11 35 19.3	+0.5
RAR	Rarotonga	16.17	78	P	Pn	11 35 20.1	+0.6
	comp=Z,20nm,0.7s,baz=200,slow=12,SNR=1.7						
RAR				S	Sn	11 38 00.9	-18
	comp=Z,32nm,0.8s,baz=126,slow=8.7,SNR=2.2						
MRZ	Mangatainoka R	16.32	201	P	Pn	11 35 21.4	+0.2
HOWZ	Holdsworth Sta	16.55	201	P	Pn	11 35 24.8	+0.5
RPZ	Rata Peaks	20.62	206	P	P	11 36 07.0	-4.5
	comp=Z,7.9nm,0.9s,baz=86,slow=19,SNR=1.5						
JCZ	Jackson Bay	21.86	209	P	P	11 36 24.3	-0.6
	comp=Z,24nm,1.9s						
EIDS	Eidsvold	29.01	263	P	P	11 37 32.2	0.0
EIDS				IAmb	IAmb	11 38 11.0	
	comp=Z,29nm,1.4s						
CTA	Charters Tower	34.47	271	P	P	11 38 21.6	+1.3
	comp=Z,3.3nm,0.3s,baz=99,slow=10,SNR=6.8						
	comp=Z,3.3nm,0.3s						
CTAO	Charters Tower	34.47	271	P	P	11 38 21.5	+1.3
CTAO				IAmb	IAmb	11 38 23.3	
	comp=Z,12nm,1.1s						
STKA	Stephens Creek	36.89	250	P	P	11 38 40.1	-0.8
	comp=Z,3.0nm,0.5s,baz=94,slow=9.5,SNR=12						
	comp=Z,3.0nm,0.5s						
STKA	Stephens Creek	36.89	250	P	P	11 38 42.6	+1.7
PMG	Port Moresby	37.85	289	P	P	11 38 49.3	+0.1
	comp=Z,14nm,0.8s,baz=76,slow=6.9,SNR=4.1						
	comp=Z,14nm,0.8s						
PMG	Port Moresby	37.85	289	P	P	11 38 49.9	+0.6
PMG				IAmb	IAmb	11 38 51.8	
	comp=Z,12nm,0.7s						
COEN	Coen	39.32	279	P	P	11 39 01.2	-0.4
COEN				IAmb	IAmb	11 39 18.2	
	comp=Z,31nm,1.1s						
BBOO	Buckleboo	41.55	249	P	P	11 39 20.6	+0.8
BBOO				IAmb	IAmb	11 39 22.6	
	comp=Z,22nm,1.3s						
AS31	Alice Springs	44.70	262	P	P	11 39 45.2	-0.4
ASAR	Alice Springs	44.70	262	P	P	11 39 44.6	-0.9
	comp=Z,5.5nm,0.7s,baz=90,slow=6.7,SNR=51						
ASAR				PcP	PcP	11 41 27.3	-0.6
	comp=Z,1.0nm,0.9s,baz=161,slow=3.4,SNR=2.9						
ASAR				ScP	ScP	11 45 17.4	-2.6
	comp=Z,0.4nm,1.1s,baz=126,slow=26,SNR=2.9						
	comp=Z,5.5nm,0.7s						
ASAR	Alice Springs	44.70	262	P	P	11 39 43.9	-1.6
ASAR				PcP	PcP	11 41 27.8	-0.2
WB2	Warramunga Arr	45.25	267	P	P	11 39 50.2	+0.3
WB2				IAmb	IAmb	11 39 55.6	
	comp=Z,13nm,1.4s						
WB2				PcP	PcP	11 41 29.4	-0.5
WRAB	Tennant Creek	45.25	267	P	P	11 39 50.3	+0.4
WRAB				IAmb	IAmb	11 40 11.1	
	comp=Z,12nm,1.5s						
WRAB				PcP	PcP	11 41 29.2	-0.6
WRA	Warramunga Arr	45.26	267	P	P	11 39 48.7	-1.3
	comp=Z,2.4nm,0.6s,baz=102,slow=6.4,SNR=36						
WRA				PcP	PcP	11 41 29.8	-0.1
	comp=Z,1.7nm,0.8s,baz=106,slow=3.3,SNR=5.7						
WRA				ScP	ScP	11 45 20.3	-2.0
	comp=Z,0.5nm,1.0s,baz=108,slow=5.5,SNR=4.5						
	comp=Z,2.4nm,0.6s						
WRA	Warramunga Arr	45.26	267	P	P	11 39 49.4	-0.6
FORT	Forrest	48.52	251	P	P	11 40 15.3	0.0
KNRA	Kununurra	51.65	270	P	P	11 40 39.1	-0.1
VNDA	Vanda	52.95	186	P	P	11 40 47.8	-0.3
VNDA				IAmb	IAmb	11 41 14.4	
	comp=Z,6.1nm,1.4s						
FITZ	Fitzroy Crossi	53.66	266	P	P	11 40 54.2	+0.1
PSA00	Pilbara Seismi	57.78	260	P	P	11 41 23.9	+0.2
MBWA	Marble Bar	58.00	260	P	P	11 41 24.2	-1.1
MBWA				IAmb	IAmb	11 41 54.1	
	comp=Z,16nm,1.4s						
MORW	Morawa	59.08	250	P	P	11 41 33.2	+0.5
MORW				IAmb	IAmb	11 41 56.2	
	comp=Z,8.4nm,1.1s						
CASY	Casey	59.89	207	P	P	11 41 36.6	-1.1
QSPA	South Pole Qui	64.48	180	P	P	11 42 09.9	+1.3
	comp=Z,5.9nm,0.6s,baz=43,slow=1.2,SNR=38						
	comp=Z,5.9nm,0.6s						
QSPA	South Pole Qui	64.48	180	P	P	11 42 10.3	+1.7
MAW	Mawson	77.17	200	P	P	11 43 26.3	+0.8
	comp=Z,7.7nm,0.8s,baz=119,slow=7.9,SNR=8.2						
	comp=Z,7.7nm,0.8s						
H06S1	SOCORRO T	77.66	62	T	T	13 08 19.8	
	SNR=4.5						
PETK	Petropavlovsk-	81.49	345	P	P	11 43 49.3	+0.2
	comp=Z,2.5nm,0.7s,baz=224,slow=4.0,SNR=11						
	comp=Z,2.5nm,0.7s						
H03S2	Juan Fernandez	82.17	124	T	T	13 14 39.0	
	baz=243,slow=74,SNR=93						
H03S1	Juan Fernandez	82.19	124	T	T	13 14 40.2	
	baz=243,slow=74,SNR=111						
H03S3	Juan Fernandez	82.19	124	T	T	13 14 39.0	
	baz=243,slow=74,SNR=151						
YBH	Yreka Blue Hor	83.58	38	P	P	11 44 01.8	+1.4
	comp=Z,2.6nm,0.9s,baz=189,slow=3.5,SNR=4.2						
	comp=Z,2.6nm,0.9s						
NVAR	Mina Array Bea	83.97	42	P	P	11 44 03.6	+0.9
	comp=Z,2.1nm,0.9s,baz=230,slow=8.6,SNR=5.4						
	comp=Z,2.1nm,0.9s						
SEY	Seymchan	91.60	346	P	P	11 44 38.3	-0.2
	comp=Z,1.0nm,0.5s,baz=79,slow=18,SNR=2.9						
	comp=Z,1.0nm,0.5s						
PDAR	Pinedale Array	91.89	43	P	P	11 44 41.7	+1.0
	comp=Z,1.8nm,0.8s,baz=191,slow=3.0,SNR=8.5						
	comp=Z,1.8nm,0.8s						
CMAR	Chiang Mai Arr	92.89	289	P	P	11 44 46.7	+1.1
	comp=Z,1.0nm,0.7s,baz=134,slow=3.3,SNR=7.7						
	comp=Z,1.0nm,0.7s						
ILAR	Eielson Array	93.03	12	P	P	11 44 46.5	+1.4
	comp=Z,0.3nm,0.8s,baz=222,slow=5.5,SNR=4.5						
	comp=Z,0.3nm,0.8s						
MKAR	Makanchi Array	115.50	312	PKP	PKPdf	11 50 12.4	-1.6
	comp=Z,0.9nm,0.5s,baz=96,slow=1.8,SNR=12						
KURBB	Kurchatov Arra	118.53	315	PKP	PKPdf	11 50 17.9	-1.8
	comp=Z,0.8nm,0.5s,baz=111,slow=1.7,SNR=14						
BVAR	Borovoye Array	123.69	318	PKP	PKPdf	11 50 28.2	-1.3
	comp=Z,1.1nm,0.5s,baz=107,slow=1.5,SNR=5.8						
ARCES	ARCESS Array B	134.14	349	PKP	PKPdf	11 50 48.8	-0.2
	comp=Z,2.6nm,0.8s,baz=341,slow=1.2,SNR=6.1						
FINES	FINESS Array B	140.98	343	PKhKP	PKPpre	11 50 55.2	
	comp=Z,1.3nm,0.8s,baz=22,slow=2.1,SNR=5.1						
NB2	NORSAR Subarra	144.17	353	PKP	PKPab	11 51 05.1	-0.1
	comp=Z,1.9nm,0.7s,baz=9.7,slow=3.5						
NOA	NORSAR Array B	144.17	353	PKP	PKPab	11 51 04.6	-0.6

	comp=Z,2.8nm,0.7s,baz=1.7,slow=2.2,SNR=13						
AKASG	Malin Array Be	148.00	328	PKPbc	PKPdf	11 51 15.4	+1.2
	comp=Z,2.4nm,0.5s,baz=38,slow=4.2,SNR=11						
BRTR	Keskin Array B	150.97	307	PKPbc	PKPbc	11 51 24.4	-0.9
	comp=Z,2.9nm,0.6s,baz=123,slow=2.0,SNR=11						

IDC 31 11:47:16.4±1.3, 12°.18N×144°.16E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=52.7km s-min=18.7km az=108.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.56	26	Pn	Pb	11 47 45.9	-0.3
	36nm,0.3s,baz=185,slow=7.4,SNR=11						
GUMO				Sn	Sn	11 48 06.0	-0.4
	56nm,0.3s,baz=165,slow=23,SNR=8.0						
WRA	Warramunga Arr	33.35	197	P	P	11 53 55.1	-1.3
	0.7nm,1.0s,baz=19,slow=9.2,SNR=2.8 0.7nm,1.0s						
ASAR	Alice Springs	37.01	196	P	P	11 54 28.6	+0.6
	0.3nm,0.6s,baz=18,slow=10,SNR=8.0 0.3nm,0.6s						
MKAR	Makanchi Array	62.02	317	P	P	11 57 38.6	0.0
	0.5nm,0.5s,baz=94,slow=8.2,SNR=7.9 0.5nm,0.5s						

DDA 31 11:48:40.6±0.0, 39°.53N×26°.18E, h8km, MW3.1
ISK 31 11:48:40.4, 39°.54N×26°.18E, h7km, ML2.8/20
ATH 31 11:48:41.2, 39°.54N×26°.19E, h7km±2km, ML2.4/7, Error ellipse: s-maj=2.7km s-min=0.8km az=235.0
THE 31 11:48:41.2, 39°.53N×26°.18E, h3km±1km, ML2.5/2, Error ellipse: s-maj=2.0km s-min=0.6km az=268.0
ISC 31 11:48:41.1±0.8, 39°.54N±0°.01×26°.18E±0°.02, h8km±5km, n61, σ0s.56/97, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.05	225	P	Pg	11 48 42.6	-0.2
KOCA				S	Sg	11 48 43.9	-0.1
GPNR	Gulpinar-Canak	0.09	205	Pg	Pg	11 48 42.7	-0.6
GPNR				Sg	Sg	11 48 44.8	0.0
PRK	Paraskevi	0.30	166	P	Pg	11 48 46.9	-0.1
PRK				S	Sg	11 48 51.3	+0.4
	2µm,0.4s						
PRK	Paraskevi	0.30	166	P	Pg	11 48 46.6	-0.3
PRK				S	Sg	11 48 51.1	+0.2
PRK				AML	AML	11 48 51.9	
	comp=N,4141µm,0.5s						
PRK				AML	AML	11 48 53.1	
	comp=E,3829µm,0.4s						
EZN	Ezine	0.31	21	P	Pg	11 48 47.3	+0.1
EZN				S	Sg	11 48 52.1	+0.7
EZN	Ezine	0.31	21	Pg	Pg	11 48 47.4	+0.2
EZN				Sg	Sg	11 48 51.9	+0.5
BOZC	Bozcaada	0.32	342	Pg	Pg	11 48 47.2	-0.3
BOZC				Sg	Sg	11 48 52.1	+0.4
BOZC	Bozcaada	0.32	342	P	Pg	11 48 47.1	-0.3
BOZC				i AML	AML	11 48 53.0	
	comp=E,221nm,0.2s						
BOZC				i AML	AML	11 48 55.0	
	comp=E,195nm,0.2s						
BAYC	CANAKKALE_Bayr	0.35	54	P	Pg	11 48 47.9	-0.1
BAYC				S	Sg	11 48 52.8	+0.2
BAYC				i AML	AML	11 48 53.0	
	comp=E,643nm,0.2s						
BAYC				i AML	AML	11 48 53.0	
	comp=E,604nm,0.4s						
SIGR	SIGRI	0.41	218	P	Pg	11 48 49.7	+0.6
SIGR				S	Sg	11 48 55.3	+0.8
	comp=E,748nm,0.3s						
SIGR	SIGRI	0.41	218	Pg	Pg	11 48 49.6	+0.5
SIGR				Sg	Sg	11 48 55.4	+0.9
SIGR	SIGRI	0.41	218	P	Pg	11 48 49.1	0.0
SIGR				S	Sg	11 48 54.8	+0.3
SIGR				AML	AML	11 48 56.2	
	comp=E,1667µm,0.3s						
SIGR				AML	AML	11 48 56.9	
	comp=N,1321µm,0.3s						
AYVA	Ayvalik	0.46	120	P	Pg	11 48 49.5	-0.4
AYVA				i AML	AML	11 49 00.0	
	comp=N,328nm,0.5s						
AYVA				i AML	AML	11 49 03.0	
	comp=N,204nm,0.2s						
ECEA	Canakkale, Ece	0.51	359	SPECP		11 48 50.0	
ECEA				P	Pg	11 48 51.0	0.0
ECEA				S	Sg	11 48 58.4	+0.8
CNKL	anakkale-Mer	0.55	17	SPECP		11 48 51.0	
CNKL				P	Pg	11 48 51.5	-0.3
CNKL				S	Sg	11 48 59.3	+0.3
CNKL				i AML	AML	11 49 00.0	
	comp=N,178nm,0.4s						
CNKL				i AML	AML	11 49 05.0	
	comp=N,157nm,0.5s						
COMU	Canakkale	0.61	22	Pg	Pg	11 48 52.6	-0.2
GOKA	anakkale-Gk	0.69	342	SPECP		11 48 53.0	
GOKA				P	Pg	11 48 54.0	-0.4
GOKA				S	Sg	11 49 03.4	0.0
GOKA				i AML	AML	11 49 08.0	
	comp=N,174nm,0.5s						
GOKA				i AML	AML	11 49 09.0	
	comp=N,151nm,0.1s						
GADA	Gvkgeada	0.69	342	Pg	Pg	11 48 53.8	-0.6
BUHA	Balikesir, Bur	0.69	93	P	Pg	11 48 54.3	-0.1
BUHA				S	Sg	11 49 04.4	+0.9
BUHA				i AML	AML	11 49 08.0	
	comp=N,218nm,0.3s						
DKL	Dikili	0.73	129	Pg	Pg	11 48 55.6	+0.5
CANM	Can-anakkale	0.82	54	Pg	Pg	11 48 56.9	0.0
LIA	Limnos Island	0.85	296	P	Pg	11 48 56.8	-0.7
LIA	Limnos Island	0.85	296	P	Pg	11 48 56.8	-0.7
LIA				S	Sg	11 49 08.4	-0.1
LIA				AML	AML	11 49 08.8	
	comp=E,1225µm,0.5s						
LIA				AML	AML	11 49 12.5	
	comp=N,1214µm,0.4s						
KARB	zmir-Karabur	0.89	168	P	Pg	11 48 57.7	-0.5
KARB				i AML	AML	11 49 11.0	
	comp=N,207nm,0.3s						
KARB				i AML	AML	11 49 12.0	
	comp=N,226nm,0.4s						
GELI	Tayfur-Gelibol	0.89	15	Pg	Pg	11 48 57.9	-0.3
GELI				Sg	Sb	11 49 10.5	-0.3
ZEDA	zmir-Bergama	0.90	129	SPECP		11 48 58.0	
ZEDA				P	Pg	11 48 58.4	+0.1
ZEDA				S	Sg	11 49 10.7	+0.6
ZEDA				i AML	AML	11 49 12.0	
	comp=N,186nm,0.5s						
ZEDA				i AML	AML	11 49 13.0	
	comp=N,113nm,0.6s						
LPK	Lapseki	0.95	28	Pg	Pg	11 48 59.2	-0.1
LPK				Sg	Sb	11 49 12.4	0.0
SMTH	Samothraki Isl	1.06	332	P	Pg	11 49 00.8	-0.7
SMTH	Samothraki Isl	1.06	332	P	Pg	11 49 00.7	-0.7
SMTH				S	Sg	11 49 15.3	+0.1
SMTH				AML	AML	11 49 16.6	
	comp=E,198µm,0.3s						
SMTH				AML	AML	11 49 17.0	
	comp=N,179µm,0.1s						
PSRA	Psara	1.10	206	P	Pg	11 49 01.9	-0.3
PSRA				S	Sb	11 49 17.5	+0.7
BALY	Balya	1.13	79	P	Pg	11 49 02.1	-0.7
BALY				S	Sg	11 49 17.0	-0.4
BALY				i AML	AML	11 49 19.0	
	comp=N,100nm,0.2s						
BALY				i AML	AML	11 49 19.0	
	comp=N,264nm,0.7s						
CHOS	Chios island	1.15	185	P	Pg	11 49 01.6	-1.6
CHOS				S	Sb	11 49 19.1	+0.7
CHOS	Chios island	1.15	185	Pn	Pg	11 49 02.1	-1.1
CHOS	Chios island	1.15	185	P	Pg	11 49 02.4	-0.8
CHOS				S	Sg	11 49 18.4	+0.3
CHOS				AML	AML	11 49 20.8	
	comp=N,403µm,0.3s						
CHOS				AML	AML	11 49 22.2	
	comp=E,769µm,0.3s						
CAVK	Edirne/Enez-Ca	1.16	360	SPECP		11 49 03.0	
CAVK				P	Pg	11 49 03.1	-0.2
CAVK				S	Sb	11 49 19.0	+0.6
CAVK				i AML	AML	11 49 23.0	
	comp=E,100nm,0.8s						
CAVK				i AML	AML	11 49 27.0	
	comp=E,107nm,0.9s						
ERIK	Erikli-Kesan	1.16	13	Pn	Pg	11 49 02.3	-1.1
ENEZ	Enez	1.20	359	P	Pg	11 49 03.6	-0.5
ENEZ				S	Sn	11 49 21.4	+0.8
ENEZ	Enez	1.20	359	Pn	Pg	11 49 03.4	-0.7
STEP	BALIKESIR_Sava	1.20	97	SPECP		11 49 03.0	
STEP				P	Pg	11 49 03.5	-0.6
STEP				S	Sb	11 49 20.4	+0.6
STEP				i AML	AML	11 49 24.0	
	comp=E,101nm,0.5s						
STEP				i AML	AML	11 49 26.0	
	comp=E,99nm,0.3s						
KRBG	Karabiga-Canak	1.21	45	Pn	Pg	11 49 03.8	-0.6
URLA	Izmir	1.22	164	Pn	Pg	11 49 03.5	-0.9
GONE	Gonen-Balikesi	1.27	66	Pn	Pn	11 49 04.9	-0.2
BALB	Balikesir	1.32	85	Pn	Pn	11 49 05.4	-0.3
ZEYE	Izmir, Urla-Ze	1.32	169	P	Pn	11 49 05.7	0.0
ZEYE				S	Sb	11 49 22.0	-1.1
ZEYE				i AML	AML	11 49 27.0	
	comp=E,102nm,0.3s						
ZEYE				i AML	AML	11 49 27.0	
	comp=E,125nm,0.4s						
BLCB	Balcova	1.33	149	P	Pb	11 49 06.5	+0.2
BLCB				S	Sn	11 49 24.1	+0.3
BLCB	Balcova	1.33	149	Pn	Pn	11 49 05.8	-0.1
ALN	Alexandroupoli	1.36	356	P	Pn	11 49 05.7	-0.7
ALN				S	Sb	11 49 24.8	+0.4
ALN	Alexandroupoli	1.36	356	Pn	Pn	11 49 05.9	-0.5
ALN				Sn	Sn	11 49 24.9	+0.3
ALN	Alexandroupoli	1.36	356	P	Pn	11 49 05.8	-0.7
ALN				S	Sb	11 49 24.0	-0.4
ALN				AML	AML	11 49 26.7	
	comp=E,203µm,0.3s						
ALN				AML	AML	11 49 26.7	
	comp=N,136µm,0.3s						
RKY	Sarkoy-Tekirda	1.38	33	Pn	Pn	11 49 06.4	-0.3
RKY				Sn	Sn	11 49 25.5	+0.3
THAS	Thassos island	1.55	314	P	Pn	11 49 08.8	-0.1
THAS				S	Sn	11 49 29.3	+0.1
THAS				AML	AML	11 49 31.5	
	comp=N,89µm,0.3s						
THAS				AML	AML	11 49 35.2	
	comp=E,92µm,0.5s						
DGB	zmir	1.58	159	P	Pn	11 49 09.5	+0.1
DGB				S	Sn	11 49 28.3	-1.6
DGB				i AML	AML	11 49 34.0	
	comp=E,27nm,0.4s						
UKOP	Uzunkopru-Edir	1.63	12	Pn	Pn	11 49 10.1	+0.1
RDO	Rodhopi	1.68	343	Pn	Pn	11 49 10.6	-0.2
RDO	Rodhopi	1.68	343	P	Pn	11 49 09.9	-0.8
BAND	Balkesir-Ban	1.69	60	P	Pn	11 49 10.2	-0.6
BAND				S	Sn	11 49 32.2	-0.4
OUR	Ouranopolis	1.87	296	P	Pn	11 49 13.7	+0.4
PAIG	Paliouri	1.97	282	P	Pn	11 49 14.9	+0.2
KOKK	Kokkinochori,	2.11	308	P	Pn	11 49 17.3	+0.7
KULA	Kula-Manisa	2.18	117	Pn	Pn	11 49 17.5	-0.3
ULDT	Uludag	2.35	74	P	Pn	11 49 21.0	+0.8

HEL 31 11:58:54.0±0.3, 60°.36N×25°.16E, h0km, ML0.7, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HEL1	Helsinki	0.23	217	PG	Pg	11 58 58.5	+0.1
	baz=37						
NUR	Nurmijrvi	0.29	300	PG	Pg	11 58 58.7	-0.9
PVF	Pernaja	0.39	62	PG	Pg	11 59 00.4	-1.1
PVF				SG	Sg	11 59 05.9	-0.7
MEF	Metsahovi	0.41	249	PG	Pg	11 59 01.2	-0.6
MEF				SG	Sg	11 59 06.7	-0.3
FIA0	FINESS Array S	1.17	22	PN	Pn	11 59 17.7	+0.1
FIA0				MSG		11 59 29.5	
	comp=Z,0.5nm,0.2s						
FIA0				SN	Sn	11 59 35.6	+1.3
OBF4	Vikkela, Lumij	4.47	360	SB	Sb	12 01 04.5	-3.0

OTT 31 12:00:32.8±0.3, 74°.70N×71°.87W, h18km, ML3.3/4, 294km northeast from Pond Inlet, Nu Baffin Bay Seismic Zone.
DNK 31 12:00:35.9±1.2, 74°.75N×71°.72W, h36km±999km, ML2.2
ISC 31 12:00:29.1±0.8, 74°.71N±0°.05×72°.17W±0°.05, h10km, n11, σ3s.67/22, Baffin Bay

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TULEG	Thule	2.02	23	i P	Pb	12 01 05.5	-0.3
TULEG				i S	Sn	12 01 27.7	-0.5
TULEG				IAML		12 01 28.2	
	comp=Z,57nm,0.3s						
KULLO	Kullorsuaq	3.98	85	PN	Pn	12 01 32.2	+2.3
KULLO				SN	Sn	12 02 13.6	-2.9
KULLO				Trac		12 02 17.2	
	comp=Z,6.2nm,0.1s						
KULLO	Kullorsuaq	3.98	85	i P	Pn	12 01 32.0	+2.1
KULLO				i S	Sn	12 02 13.3	-3.2
KULLO				IAML		12 02 21.3	
	comp=Z,5.8nm,0.4s						
CLRN	Clyde River	4.39	164	PN	Pn	12 01 39.3	+3.6
CLRN				SN	Sn	12 02 25.2	-1.6
CLRN				Trac		12 02 28.4	
	comp=Z,6.4nm,0.1s						
UPNV	Upernavik	4.89	105	i P	Pn	12 01 44.6	+2.1
UPNV				i S	Sn	12 02 34.7	-4.4
UPNV				IAML		12 02 37.9	
	comp=Z,19nm,0.3s						
NEEM	North Greenlan	5.76	52	i P	Pn	12 01 57.2	+2.5
NEEM				i S	Sn	12 02 56.0	-4.8
NEEM				IAML		12 03 16.2	
	comp=Z,4.8nm,0.3s						
RES	Resolute Bay	6.00	281	PN	Pn	12 02 01.3	+3.6
RES				SN	Sn	12 03 04.9	-1.4
RES				Trac		12 03 19.6	
	comp=Z,7.9nm,0.4s						
ILON	Igloolik, Nuna	6.13	214	PN	Pn	12 02 03.5	+4.0
ILON				SN	Sn	12 03 08.1	-1.5
ILON				Trac		12 03 12.8	
	comp=Z,2.4nm,0.1s						
EUNU	Eureka	6.18	337	PN	Pn	12 02 03.8	+3.5
EUNU				SN	Sn	12 03 09.5	-1.3
EUNU				Trac		12 03 17.1	
	comp=Z,16nm,0.8s						
A36M	Sachs Harbour	15.01	286	PN	Pn	12 04 02.7	+1.9
A36M				SN	Sn	12 06 39.8	-6.9
KUKN	Kugluktuk,NWT	15.04	265	PN	Pn	12 04 02.8	+1.5
KUKN				SN	Sn	12 06 40.0	-7.7
KUKN				Trac		12 07 22.4	
	comp=Z,440nm,5.0s						

IDC 31 12:05:35.5±2.9, 36°.79N×55°.07E, h0km, mb3.3/3, mbtmp3.6/8, ML3.5/5, Error ellipse: s-maj=42.9km s-min=21.0km az=13.0
AZER 31 12:05:37.8±1.3, 36°.50N×55°.05E, h11km, Error ellipse: s-maj=37.2km s-min=11.0km az=19.0
TEH 31 12:05:37.3, 36°.89N×55°.27E, h11km±33km, ML3.5
NNC 31 12:05:40.1±5.7, 37°.46N×55°.19E, h0km, mb3.9, Error ellipse: s-maj=57.0km s-min=32.5km az=33.0
ISC 31 12:05:37.7±0.7, 36°.94N±0°.05×55°.26E±0°.03, h10km, n63, σ1s.44/69, mb3.3/3, 3C-3D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMND	Minoodasht	0.34	21	Pg	Pg	12 05 44.3	-0.1
IMND				Sg	Sg	12 05 50.0	+1.1
MRVT	Maraveh tapeh	0.98	43	Pg	Pg	12 05 55.7	-0.8
MRVT				Sg	Sn	12 06 13.3	+1.8
IGLO	Ghaloghah	1.23	250	Pg	Pn	12 06 00.7	-0.4
IANJ	Anjilo	1.83	217	Pg	Pb	12 06 10.7	-0.7
ISHM	Shahmirzad	1.95	235	Pn	Pb	12 06 12.6	-0.8
SBZV	Sabzevar	1.97	106	Pn	Pb	12 06 12.5	-1.3
ISFR	Sfrayin	2.20	86	Pn	Pb	12 06 15.7	-2.0
IFIR	Firoozkooh	2.40	238	Pn	Pb	12 06 18.9	-2.3
ILAS	Lasjerd	2.42	231	Pn	Pb	12 06 19.4	-2.1
IPRN	Peran	2.45	254	Pn	Pb	12 06 19.7	-2.2
GEYT	Alibeck	2.48	66	Pn	Pb	12 06 20.1	-2.2
	22nm,0.3s,baz=247,slow=13,SNR=38						
GEYT				Lg	Lg	12 06 55.3	
	20nm,0.3s,baz=256,slow=24,SNR=1.9 94nm,0.6s						
GYA0B	ALIBECK ARRAY	2.48	66	⇓Pn	Pn	12 06 19.8	+1.6
GYA0B				⇑Lg	Lg	12 06 55.7	
IEMG	Emamgholi	2.75	79	Pn	Pn	12 06 23.5	+1.3
IAKL	Akhelmad	2.83	96	Pn	Pn	12 06 24.1	+1.0
IDMV	Damavand	2.94	243	Pn	Pb	12 06 27.5	-2.9
MZPU	Pul - Mazandar	3.01	262	Pn	Pn	12 06 27.5	+2.0
IPAY	Payeh	3.04	98	Pn	Pn	12 06 27.5	+1.4
TNSJ	Nastanj	3.17	159	Pn	Pn	12 06 28.1	+0.4
IMOG	Moghan	3.39	103	Pn	Pn	12 06 32.2	+1.3
KLST	Kelardasht - M	3.40	264	Pn	Pn	12 06 33.1	+2.1
IKRD	Kardeh	3.42	91	Pn	Pn	12 06 32.7	+1.4
IVRN	Varamin	3.46	237	Pn	Pn	12 06 33.5	+1.9
TBHD	Torbat heydari	3.56	114	Pn	Pn	12 06 34.7	+1.6
ISFB	Sefidab	3.56	224	Pn	Pn	12 06 34.7	+1.6
TKDS	Koohdasht(Taba	3.65	155	Pn	Pn	12 06 35.0	+0.6
QALM	Alamut, Qazvin	3.74	264	Pn	Pn	12 06 37.5	+1.8
KRSH	Karshahi	3.91	222	Pn	Pn	12 06 39.5	+1.6
IMYA	Miami	3.94	97	Pn	Pn	12 06 39.5	+1.1
ANAR	Anarak	3.95	199	Pn	Pn	12 06 39.3	+0.9
IQOM	Qom	3.99	240	Pn	Pn	12 06 41.2	+2.1
TPRV	Parvadeh(Tabas	4.08	163	Pn	Pn	12 06 40.7	+0.6
JRKH	Jarkhoshk	4.24	103	Pn	Pn	12 06 43.6	+1.3
TBJM	Torbat-e-JAM	4.43	111	Pn	Pn	12 06 46.5	+1.3
QAMS	Qamsar	4.49	226	Pn	Pn	12 06 47.3	+1.3
IRAZ	Razeghan	4.57	252	Pn	Pn	12 06 49.8	+2.7
AFRZ	Afriz	4.67	138	Pn	Pn	12 06 49.4	+1.1
IZEF	Zefreh	4.70	212	Pn	Pn	12 06 50.5	+1.7
IKLH	Kolahrood	4.71	221	Pn	Pn	12 06 50.6	+1.7
ITEG	Tejag	4.95	144	Pn	Pn	12 06 53.4	+1.2
SHRT	Shahrakht	5.27	127	Pn	Pn	12 06 57.3	+0.8
ASTR	Astara	5.37	289	P	Pn	12 06 57.8	-0.1
ASTR				S	Sn	12 08 00.4	+0.6
IRAM	Ramesheh	5.64	206	Pn	Pn	12 07 04.1	+2.3
LRK	Lerik	5.74	289	P	Pn	12 07 03.1	0.0
	SNR=9.0						
LRK				S	Sn	12 08 10.2	+1.3
GLBA	Clilabad	5.88	295	P	Pn	12 07 05.6	+0.7
GLBA				S	Sn	12 08 13.7	+1.5
YRD	Yardimli	5.89	292	P	Pn	12 07 04.7	-0.4
	SNR=4.1						
YRD				S	Sn	12 08 13.4	+0.7
BSRN	Basiran	5.90	146	Pn	Pn	12 07 05.9	+0.6
ISRB	Sarab	6.11	281	Pn	Pn	12 07 09.8	+1.6
IHRS	Heris	6.66	284	Pn	Pn	12 07 17.2	+1.4
AMIS	Naft Sefid	7.22	225	Pn	Pn	12 07 25.4	+2.2
SEKA	Sheki	7.58	307	P	Pn	12 07 29.2	+1.0
ORD	Ordubad	7.58	288	P	Pn	12 07 29.0	+0.7
SBZ	Shahbuz	8.03	291	P	Pn	12 07 35.2	+0.8
GDB	GEDABAY	8.32	300	P	Pn	12 07 39.4	+0.9
QZX	Qazax, Azerbai	8.72	301	P	Pn	12 07 45.8	+2.0
KBZ	Khabaz	11.61	310	Pn	Pn	12 08 23.2	-0.1
	0.2nm,0.3s,baz=203,slow=11,SNR=1.9 0.7nm,0.3s						
AB31	Akbulak array	12.77	14	⇑Pn	Pn	12 08 38.4	-0.8
	1.8nm,0.9s,baz=209,slow=14,SNR=6.6						
AB31				⇓Sn	Sn	12 10 52.9	-8.4
	1.7nm,0.7s,baz=202,slow=22,SNR=5.5						
AKTO	Aktyubinsk	13.63	8	Pn	Pn	12 08 49.3	-1.7
	0.2nm,0.3s,baz=192,slow=10,SNR=4.3 0.9nm,0.5s						
AKTO	Aktyubinsk	13.63	8	⇑Pn	Pn	12 08 50.2	-0.8
	3.0nm,1.1s						
AKTO				⇓Sn	Sn	12 11 13.8	-8.6
	1.8nm,0.7s						
BELG	Belogornoye	16.36	343	Pn	P	12 09 29.1	-1.1
	0.2nm,0.3s,baz=204,slow=20,SNR=3.9 9.6nm,0.9s						
BVAR	Borovoye Array	19.25	29	P	Pn	12 10 03.3	+0.2
	baz=204,slow=9.5,SNR=3.4 0.8nm,0.6s						
KURBB	Kurchatov Arra	21.55	43	P	P	12 10 28.4	+1.4
	0.6nm,0.7s,baz=242,slow=11,SNR=4.2 0.6nm,0.7s						
MKAR	Makanchi Array	22.31	55	P	P	12 10 36.4	+1.1
	1.4nm,0.9s,baz=249,slow=10,SNR=7.3 1.4nm,0.9s						
AKASG	Malin Array Be	23.13	315	P	P	12 10 43.5	-0.2
	0.3nm,0.3s,baz=122,slow=10,SNR=4.3 0.3nm,0.3s						

IDC 31 12:06:47.8±0.6, 24°.93N×126°.83E, h0km, mb3.9/14, mbtmp3.9/16, ML3.8/2, MS3.3/6, Error ellipse: s-maj=22.7km s-min=13.5km az=85.0
NEIC 31 12:06:49.2±2.6, 24°.89N±0°.08×126°.88E±0°.07, h10km±1km, mb4.4/23, Error ellipse: s-maj=13.6km s-min=10.1km az=336.0
JMA 31 12:06:51.6±0.2, 25°N±1°×12°7E±°, h75km, MV3.7/18, NEAR MIYAKOJIMA ISLAND
ISC 31 12:06:49.3±1.6, 24°.90N±0°.05×126°.90E±0°.05, h13km±10km, n86, σ0s.99/95, mb4.2/27, MS3.3/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	Gusukube	1.36	265	P	Pg	12 07 15.2	-0.3
JOGS				eS	Sg	12 07 32.9	-0.3
JKE	Kume jima 2	1.43	356	P	Pb	12 07 15.6	-0.2
JKE				eS	Sb	12 07 33.3	-0.6
JMJ2	Miyako jima3	1.43	264	P	Pb	12 07 16.0	+0.1
JMJ	Miyako jima 2	1.46	267	P	Pg	12 07 18.6	+1.3
JJT3	Tamagusuku3	1.48	33	P	Pb	12 07 16.7	0.0
JJT3				S	Sb	12 07 35.2	-0.1
JIKM	Ikemajima	1.50	271	eP	Pb	12 07 17.1	+0.2
JIRB	Irabujima	1.57	268	P	Pb	12 07 17.6	-0.5
JAGN	Aguni-jima	1.71	10	eP	Pb	12 07 20.4	-0.3
JNTH	Nagotoyohara	1.91	32	P	Pn	12 07 21.9	+0.3
JNTH				eS	Sn	12 07 44.4	-1.0
JTJ	Tarama	2.01	263	P	Pn	12 07 23.6	+0.7
JTJ				eS	Sn	12 07 47.7	-0.3
JOW	Kunigami	2.29	33	Pn	Pn	12 07 28.2	+1.4
	22nm,0.3s,baz=189,slow=29,SNR=60						
JOW				Sn	Sn	12 07 55.4	+0.4
	78nm,0.3s,baz=115,slow=27,SNR=12 58nm,0.3s						
JOW	Kunigami	2.29	33	Pn	Pn	12 07 28.0	+1.2
JOW	Kunigami	2.29	33	P	Pn	12 07 25.3	-1.6
JOW	Kunigami	2.29	33	eP	Pn	12 07 28.2	+1.4
JOW				eS	Sn	12 07 55.0	0.0
JIH	Iheya	2.34	24	eP	Pn	12 07 28.4	+1.0
JIH				eS	Sn	12 07 56.0	0.0
JISG	Ishigakijimahi	2.37	263	eP	Pn	12 07 28.7	+0.8
JISG				eS	Sn	12 07 57.1	+0.3
JYRO	Yoronjima	2.54	33	P	Pn	12 07 31.1	+0.9
JYRO				S	Sn	12 08 01.0	0.0
JIJ	Ishigaki jima	2.56	259	P	Pn	12 07 30.9	+0.4
JOKE	Okinoerabujima	2.88	31	P	Pn	12 07 36.1	+1.2
JOKE				S	Sn	12 08 08.9	-0.5
JMZ	Minamidaito 2	4.02	76	Pn	Pn	12 07 49.7	-0.8
NACB	Ninganchiao	4.88	263	Pn	Pn	12 08 01.8	-0.6
NACB	Ninganchiao	4.88	263	P	Pn	12 08 02.1	-0.3
YHNB	Yeheng	5.02	269	Pn	Pn	12 08 06.2	+1.7
YHNB	Yeheng	5.02	269	P	Pn	12 08 06.7	+2.2
YULB	Yu-li	5.33	255	Pn	Pn	12 08 07.1	-1.5
YULB	Yu-li	5.33	255	P	Pn	12 08 07.0	-1.6
SSLB	Suanglung	5.53	260	Pn	Pn	12 08 11.2	-0.1
SSLB	Suanglung	5.53	260	P	Pn	12 08 11.3	-0.1
TWGBT	Beinan	5.71	250	P	Pn	12 08 12.1	-1.8
TWG	Pinlang	5.72	250	Pn	Pn	12 08 12.0	-1.9
TPUB	Ta-pu	5.94	256	Pn	Pn	12 08 17.2	+0.1
TPUB	Ta-pu	5.94	256	P	Pn	12 08 17.2	+0.1
JSU	Suzuyama	7.29	25	Pn	Pn	12 08 36.4	+0.8
JNU	Nakatsue	8.90	22	Pn	Pn	12 08 58.6	+0.9
	1.6nm,0.3s,baz=295,slow=2.8,SNR=13						
JNU				LR	LR	12 12 56.3	
	comp=Z,154nm,19.3s,baz=172,slow=41 16nm,0.9s						
JNU	Nakatsue	8.90	22	Pn	Pn	12 08 58.0	+0.3
JMN	Monobe	10.70	33	Pn	Pn	12 09 20.5	-1.8
JHS	Saijyo	11.42	27	Pn	Pn	12 09 31.0	-1.1
KSRS	Korea Array	12.55	4	LR	LR	12 15 04.5	
	comp=Z,100nm,18.3s,baz=170,slow=40						
ERM	Erimo	21.74	34	P	P	12 11 40.7	+0.3
ERM				IAmb	IAmb	12 11 48.0	
	comp=Z,25nm,1.2s						
ASAJ	Asahikawa	23.06	30	P	P	12 11 53.8	-0.6
	comp=Z,2.8nm,0.7s,baz=164,slow=4.6,SNR=5.4 comp=Z,2.8nm,0.7s						
JKA	Kamikawa-asahi	23.06	30	P	P	12 11 54.3	-0.1
JKA				IAmb	IAmb	12 12 18.4	
	comp=Z,11nm,1.4s						
KLR	Kul'dur	24.59	8	P	P	12 12 08.2	-0.8
	comp=Z,1.0nm,0.8s,baz=201,slow=4.0,SNR=4.4 comp=Z,1.0nm,0.8s						
PHRA	Phrae	25.56	261	P	P	12 12 16.4	-1.6
CM31	Chiang Mai Arr	26.72	262	P	P	12 12 27.4	-1.2

CM31				IAmb	IAmb	12 13 08.7	
	comp=Z,7.8nm,1.4s						
CMAR	**Chiang Mai Arr**	**26.72**	**262**	LR	LR	12 23 02.2	
	comp=Z,24nm,18.9s,baz=50,slow=36						
SONM	**Songino Array**	**28.06**	**330**	P	**P**	**12 12 39.9**	**-0.7**
	comp=Z,1.8nm,0.7s,baz=147,slow=9.4,SNR=16						
SONM				LR	LR	12 25 19.8	
	comp=Z,60nm,18.6s,baz=150,slow=40						
	comp=Z,1.8nm,0.7s						
PETK	**Petropavlovsk-**	**36.46**	**31**	LR	LR	12 31 14.8	
	comp=Z,60nm,18.8s,baz=250,slow=40						
KNRA	**Kununurra**	**40.37**	**177**	P	**P**	**12 14 28.0**	**+1.0**
KNRA				IAmb	IAmb	12 14 35.6	
	comp=Z,19nm,1.2s						
MK31	**Makanchi Array**	**41.55**	**313**	P	**P**	**12 14 36.7**	**+0.2**
MKAR	**Makanchi Array**	**41.55**	**313**	P	**P**	**12 14 36.7**	**+0.1**
	comp=Z,2.1nm,0.6s,baz=98,slow=10,SNR=24						
	comp=Z,2.1nm,0.6s						
MKAR	**Makanchi Array**	**41.55**	**313**	P	**P**	**12 14 36.6**	**0.0**
MAKZ	**Makanchi**	**41.76**	**313**	P	**P**	**12 14 37.5**	**-0.8**
COEN	**Coen**	**41.76**	**156**	P	**P**	**12 14 37.0**	**-1.5**
COEN				IAmb	IAmb	12 14 50.7	
	comp=Z,15nm,1.4s						
ZAA0	**Zalesovo Array**	**42.60**	**324**	P	**P**	**12 14 43.8**	**-1.2**
ZALV	**Zalesovo Beam**	**42.60**	**324**	P	**P**	**12 14 44.8**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=114,slow=9.6,SNR=3.5						
	comp=Z,0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**42.60**	**324**	P	**P**	**12 14 43.9**	**-1.0**
KURK	**Kurchatov**	**44.98**	**318**	P	**P**	**12 15 04.3**	**+0.1**
KURK				IAmb	IAmb	12 15 14.1	
	comp=Z,5.6nm,1.4s						
WB0	**Warramunga Arr**	**44.99**	**170**	P	**P**	**12 15 03.8**	**-0.7**
WB0				IAmb	IAmb	12 15 06.0	
	comp=Z,4.9nm,0.8s						
KURBB	**Kurchatov Arra**	**45.00**	**318**	P	**P**	**12 15 04.2**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=105,slow=8.7,SNR=7.2						
KURBB				PcP	**PcP**	**12 16 44.4**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=118,slow=3.6,SNR=1.8						
	comp=Z,0.7nm,0.6s						
WRAB	**Tennant Creek**	**45.15**	**170**	P	**P**	**12 15 05.0**	**-0.8**
WRA	**Warramunga Arr**	**45.16**	**170**	P	**P**	**12 15 06.8**	**+1.0**
	comp=Z,3.6nm,0.6s,baz=350,slow=8.9,SNR=37						
	comp=Z,3.6nm,0.6s						
WRA	**Warramunga Arr**	**45.16**	**170**	P	**P**	**12 15 07.2**	**+1.3**
WB2	**Warramunga Arr**	**45.16**	**170**	P	**P**	**12 15 06.6**	**+0.8**
WB2				IAmb	IAmb	12 15 07.8	
	comp=Z,6.3nm,0.8s						
PSA00	**Pilbara Seismi**	**46.70**	**189**	P	**P**	**12 15 18.8**	**+0.8**
AS31	**Alice Springs**	**48.75**	**171**	P	**P**	**12 15 33.1**	**-0.8**
AS31				IAmb	IAmb	12 15 46.4	
	comp=Z,1.9nm,1.3s						
ASAR	**Alice Springs**	**48.75**	**171**	P	**P**	**12 15 35.0**	**+1.0**
	comp=Z,1.6nm,0.8s,baz=356,slow=13,SNR=27						
ASAR				PcP	**PcP**	**12 16 59.8**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=333,slow=3.6,SNR=1.3						
	comp=Z,1.6nm,0.8s						
ASAR	**Alice Springs**	**48.75**	**171**	P	**P**	**12 15 32.1**	**-1.9**
KKAR	**Karatay Array**	**49.21**	**306**	P	**P**	**12 15 37.1**	**-0.3**
ABKAR	**Akbulak array**	**56.69**	**314**	P	**P**	**12 16 32.0**	**-0.4**
ARU	**Arti**	**57.70**	**322**	LR	LR	12 41 31.2	
	comp=Z,56nm,19.3s,baz=186,slow=36						
BBOO	**Buckleboo**	**58.05**	**171**	P	**P**	**12 16 42.4**	**+0.3**
STKA	**Stephens Creek**	**58.18**	**165**	P	**P**	**12 16 43.0**	**0.0**
	comp=Z,2.7nm,0.5s,baz=353,slow=7.7,SNR=9.4						
	comp=Z,2.7nm,0.5s						
STKA	**Stephens Creek**	**58.18**	**165**	P	**P**	**12 16 44.4**	**+1.4**
ILAR	**Eielson Array**	**66.17**	**28**	P	**P**	**12 17 37.0**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=253,slow=5.6,SNR=5.7						
	comp=Z,0.3nm,0.7s						
BMAR	**Burnt Mountain**	**66.72**	**25**	P	**P**	**12 17 38.4**	**-1.4**
EGAK	**Eagle**	**68.59**	**27**	P	**P**	**12 17 51.5**	**-0.1**
EPYK	**Eagle Plains**	**69.97**	**25**	P	**P**	**12 18 01.8**	**+1.6**
EPYK				IAmb	IAmb	12 18 29.2	
	comp=Z,6.0nm,1.1s						
A36M	**Sachs Harbour**	**71.86**	**18**	P	**P**	**12 18 13.3**	**+1.8**
A36M				IAmb	IAmb	12 18 18.2	
	comp=Z,3.4nm,0.8s						
M31M	**Drury Creek, Y**	**72.22**	**29**	P	**P**	**12 18 13.3**	**-0.7**
M31M				IAmb	IAmb	12 18 35.9	
	comp=Z,9.0nm,1.4s						
C36M	**Paulatuk**	**73.36**	**20**	P	**P**	**12 18 22.1**	**+1.7**
C36M				IAmb	IAmb	12 18 41.2	
	comp=Z,5.5nm,1.4s						
FINES	**FINESS Array B**	**73.42**	**330**	P	**P**	**12 18 22.1**	**+1.1**
	comp=Z,1.3nm,0.8s,baz=71,slow=8.3,SNR=6.3						
	comp=Z,1.3nm,0.8s						
FINES	**FINESS Array B**	**73.42**	**330**	P	**P**	**12 18 22.4**	**+1.4**
AKASG	**Malin Array Be**	**75.76**	**319**	P	**P**	**12 18 34.9**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=55,slow=6.2,SNR=1.7						
	comp=Z,0.1nm,0.3s						
NB2	**NORSAR Subarra**	**79.97**	**334**	P	**P**	**12 18 58.5**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=58,slow=5.6						
NOA	**NORSAR Array B**	**79.97**	**334**	P	**P**	**12 18 59.1**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=55,slow=5.4,SNR=3.8						
	comp=Z,0.7nm,0.8s						
YKA	**Yellowknife Ar**	**80.23**	**24**	P	**P**	**12 19 01.2**	**+1.8**
	comp=Z,0.4nm,0.9s,baz=300,slow=5.3,SNR=4.1						
	comp=Z,0.4nm,0.9s						

*IDC **31** 12:13:32.2±0.9, 24°.95N×126°.65E, h0^{km}, mb3.6/8, mbtmp3.6/10, ML3.1/2, Error ellipse: s-maj=32.6km s-min=18.2km az=77.0*
*JMA **31** 12:13:36.1±0.2, 25°N±1°×12°7E±°, h79^{km}, MV3.1/15, NEAR MIYAKOJIMA ISLAND*
ISC 31 12:13:36.2±0.8**, 25°.00N**±0°.08×**126°.81E**±0°.07**, h28^{km}, n22,** σ**0^{s}.97**/26**, mb3.5**/8**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**1.30**	**260**	P	**Pb**	**12 13 59.6**	**-0.4**
JOGS				*e*S	**Sb**	**12 14 16.5**	**+0.2**
JKE	**Kume jima 2**	**1.32**	**359**	P	**Pn**	**12 14 00.1**	**+1.3**
JMJ2	**Miyako jima3**	**1.37**	**260**	P	**Pb**	**12 14 00.5**	**-0.7**
JIKM	**Ikemajima**	**1.42**	**267**	P	**Pb**	**12 14 01.2**	**-0.8**
JJT3	**Tamagusuku3**	**1.44**	**37**	*e*P	**Pn**	**12 14 01.2**	**+0.7**
JJT3				*e*S	**Sn**	**12 14 19.6**	**+1.2**
JIRB	**Irabujima**	**1.50**	**264**	P	**Pn**	**12 14 02.0**	**+0.7**
JAGN	**Aguni-jima**	**1.63**	**14**	*e*S	**Sb**	**12 14 25.8**	**0.0**
JNTH	**Nagotoyohara**	**1.87**	**36**	*e*P	**Pn**	**12 14 06.7**	**+0.4**
JNTH				*e*S	**Sn**	**12 14 28.9**	**0.0**
JTJ	**Tarama**	**1.95**	**260**	P	**Pn**	**12 14 08.0**	**+0.5**
JOW	**Kunigami**	**2.25**	**36**	Pn	**Pn**	**12 14 13.3**	**+1.6**
	4.8nm,0.3s,baz=146,slow=22,SNR=12						
JOW				Sn	**Sn**	**12 14 36.3**	**-2.2**
	15nm,0.3s,baz=136,slow=23,SNR=5.2						
	16nm,0.2s						
JOW	**Kunigami**	**2.25**	**36**	S	**Sn**	**12 14 38.3**	**-0.2**
JIH	**Iheya**	**2.28**	**27**	*e*S	**Sn**	**12 14 39.7**	**+0.6**
JISG	**Ishigakijimahi**	**2.31**	**260**	*e*P	**Pn**	**12 14 13.1**	**+0.7**
JNU	**Nakatsue**	**8.84**	**23**	Pn	**Pn**	**12 15 41.7**	**-0.5**
	0.3nm,0.3s,baz=153,slow=23,SNR=1.5						
	7.5nm,1.0s						
SONM	**Songino Array**	**27.93**	**330**	P	**P**	**12 19 22.9**	**-1.3**
	0.7nm,0.9s,baz=148,slow=10,SNR=3.0						
	0.7nm,0.9s						
MKAR	**Makanchi Array**	**41.42**	**313**	P	**P**	**12 21 20.5**	**+0.2**
	1.5nm,0.6s,baz=98,slow=11,SNR=19						
	1.5nm,0.6s						
ZALV	**Zalesovo Beam**	**42.47**	**324**	P	**P**	**12 21 27.1**	**-1.6**
	0.5nm,0.4s,baz=126,slow=7.3,SNR=2.0						
	0.5nm,0.4s						
WRA	**Warramunga Arr**	**45.27**	**170**	P	**P**	**12 21 51.3**	**-0.2**
	0.3nm,0.6s,baz=350,slow=8.7,SNR=2.0						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**48.86**	**171**	P	**P**	**12 22 19.8**	**+0.2**
	0.1nm,0.6s,baz=0.6,slow=9.3,SNR=4.4						
	0.1nm,0.6s						
STKA	**Stephens Creek**	**58.29**	**165**	P	**P**	**12 23 27.9**	**-0.6**
	0.7nm,0.4s,baz=351,slow=19,SNR=1.9						
	0.7nm,0.4s						
FINES	**FINESS Array B**	**73.30**	**330**	P	**P**	**12 25 05.8**	**+0.9**
	0.8nm,0.5s,baz=72,slow=6.2,SNR=5.4						
	0.8nm,0.5s						
YKA	**Yellowknife Ar**	**80.17**	**24**	P	**P**	**12 25 44.8**	**+1.1**
	0.1nm,0.5s,baz=302,slow=5.8,SNR=2.5						
	0.1nm,0.5s						

IDC 31 12:13:54.2±2.6**, 30°.13S**×**178°.05W, h236^{km}**±19^{km}**,**
mb2.8/2**, mbtmp3.6**/3**, Error ellipse: s-maj=105.6km s-min=46.2km az=172.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.88**	**8**	P	Pn	12 14 27.2	+0.1
	1μm,0.3s,baz=112,slow=19,SNR=16						
URZ	**Urewera**	**9.04**	**205**	S	S	12 17 46.2	+3.5
	2.0nm,0.3s,baz=262,slow=14,SNR=2.4						
DZM	**Mont Dzumac**	**16.06**	**296**	P	Pn	12 17 27.7	-0.1
	1.9nm,0.5s,baz=105,slow=20,SNR=1.4						
ASAR	**Alice Springs**	**43.08**	**267**	P	P	12 21 31.5	+0.1
	0.3nm,0.5s,baz=102,slow=6.6,SNR=13						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**44.04**	**272**	P	P	12 21 38.5	-0.6
	0.2nm,0.3s,baz=110,slow=8.2,SNR=14						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**144.87**	**340**	PKP	PKPbc	12 33 02.0	-0.1
	0.8nm,0.5s,baz=42,slow=3.1,SNR=5.6						

IDC 31 12:14:07.3±3.2**, 55°.23S**×**28°.18W, h0^{km}, mb3.8**/2**,**
mbtmp3.8/2**, Error ellipse: s-maj=118.2km s-min=52.0km az=172.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**49.44**	**306**	P	P	12 22 59.5	-0.2
	1.1nm,0.5s,baz=145,slow=7.0,SNR=5.1						
	1.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**72.63**	**31**	P	P	12 25 36.5	0.0
	0.3nm,0.5s,baz=201,slow=7.1,SNR=4.8						
	0.3nm,0.5s						
YKA	**Yellowknife Ar**	**135.18**	**319**	PKP	PKPdf	12 33 26.2	-1.0
	0.2nm,0.6s,baz=122,slow=2.6,SNR=3.9						
ILAR	**Eielson Array**	**149.15**	**313**	PKPbc	PKPbc	12 33 55.7	-0.3
	1.5nm,0.8s,baz=128,slow=2.1,SNR=16						

IDC 31 12:14:41.4±999.0**, 54°.25N**×**7°.24E, h0^{km}, Error ellipse:**
s-maj=506.2km s-min=229.6km az=45.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I37NO	**I37NO**	**15.78**	**15**	I	I	13 55 50.0	
	baz=206,slow=328,SNR=0.8						
I43RU	**DUBNA INFRASON**	**17.10**	**69**	I	I	13 54 30.0	
	baz=276,slow=321,SNR=0.8						
I31KZ	**AKTYUBINSK INF**	**30.73**	**76**	I	I	15 24 10.0	
	baz=295,slow=321,SNR=1.3						

*HVO **31** 12:24:36.3±1.0, 19°.436N±0°.010×155°.85W±0°.02, h14^{km}±1^{km}, ML2.4/11, ML2.6/34(NEIC), Error ellipse: s-maj=2.4km s-min=1.1km az=69.0*
NEIC 31 12:24:35.4±1.1**, 19°.43N**±0°.04×**155°.84W**±0°.06**,**
h22^{km}±12^{km}**, Error ellipse: s-maj=8.0km s-min=5.3km az=93.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPH	**Captain Cook**	**0.10**	**309**		Pb	12 24 39.2	-0.6
KHLU	**Kahalu`u**	**0.17**	**342**		Pb	12 24 40.3	-0.3
KHLU				Sg	Sb	12 24 42.7	-1.5
ALEP	**Alea Permanent**	**0.21**	**57**		Pb	12 24 41.5	+0.1
ALEP					Sb	12 24 45.3	-0.1
MWH	**Moku‘aweowe**	**0.23**	**75**		Pb	12 24 41.5	-0.2
MWH				Sg	Sb	12 24 45.3	-0.7
MLOA	**Mauna Loa Obse**	**0.27**	**66**		Pb	12 24 42.1	-0.1
MLOA				Sg	Sb	12 24 46.2	-0.4
MLOA				IAML		12 24 47.0	
	comp=E,1μm,0.2s						
KHU	**Kahuku**	**0.27**	**130**		Pb	12 24 42.4	+0.4
KHU				Sg	Sb	12 24 47.0	+0.4
AIN	**Ainahou**	**0.36**	**98**		Pb	12 24 43.5	+0.2
AIN				Sg	Sb	12 24 49.0	+0.4
AIN				IAML		12 24 50.1	
	comp=E,633nm,0.4s						
AIN				IAML		12 24 50.8	
	comp=N,941nm,0.2s						
HMH	**Humu‘ula Sheep**	**0.38**	**62**		Pb	12 24 43.9	+0.2
HMH					Sb	12 24 49.6	+0.3
HMH				IAML		12 24 52.0	
	comp=N,581nm,0.5s						
HMH				IAML		12 24 57.8	
	comp=E,465nm,0.5s						
MLH	**Mauna Loa**	**0.43**	**81**		Pb	12 24 44.5	0.0
MLH					Sb	12 24 50.5	-0.1
MLH				IAML		12 24 51.5	
	comp=E,410nm,0.3s						
MLH				IAML		12 24 52.4	
	comp=N,495nm,1.1s						
POHA	**Pohakuloa**	**0.44**	**41**		Pb	12 24 44.9	+0.3
POHA				Sg	Sb	12 24 50.8	-0.1
POHA				IAML		12 24 58.6	
	comp=N,392nm,0.3s						
POHA				IAML		12 24 59.6	
	comp=N,437nm,0.3s						
HTC	**Hot Caves**	**0.45**	**114**		Pb	12 24 45.0	+0.2
WRMHI	**West Rim**	**0.51**	**92**		Pb	12 24 45.7	0.0
UWE	**Uwekahuna**	**0.51**	**90**	Pg	Pb	12 24 46.3	+0.5
UWE				Sg	Sb	12 24 53.8	+0.9
SDHHI	**Sand Hill**	**0.51**	**94**	Pg	Pb	12 24 45.9	+0.1
HLP	**Hilina Pali**	**0.52**	**104**	Pg	Pb	12 24 46.0	+0.2
HLP				Sg	Sb	12 24 53.0	+0.1
HLP				IAML		12 25 04.2	
	comp=E,600nm,0.7s						
HLP				IAML		12 25 04.8	
	comp=N,502nm,0.5s						
UWB	**Uwekahuna B**	**0.53**	**90**		Pb	12 24 45.0	-1.0
UWB				IAML		12 25 00.4	
	comp=E,255nm,2.0s						
UWB				IAML		12 25 01.4	
	comp=N,444nm,1.5s						
RSD	**Rainshed**	**0.53**	**86**		Pb	12 24 46.3	+0.2
RSD				Sg	Sb	12 24 54.2	+0.8
RSD				IAML		12 25 02.5	
	comp=E,337nm,1.4s						
RSD				IAML		12 25 04.3	
	comp=N,465nm,2.9s						
SBLHI	**Steaming Bluff**	**0.54**	**90**	Pg	Pb	12 24 44.1	-2.1
SBLHI				IAML		12 24 59.6	
	comp=N,601nm,1.2s						
HATHI	**Halema‘uma‘u T**	**0.54**	**90**	Pg	Pb	12 24 43.8	-2.5
PUH	**Pauahi**	**0.59**	**95**		Pb	12 24 46.6	-0.4
PUH	**Pauahi**	**0.59**	**95**	IAML		12 24 56.6	
	comp=E,288nm,0.4s						
PUH				IAML		12 24 57.7	
	comp=N,311nm,0.5s						
HPAH	**Hawaii Prepara**	**0.62**	**12**	Pg	Pb	12 24 47.5	0.0
KNHH	**Kane Nui o Ham**	**0.63**	**94**		Pb	12 24 47.6	-0.2
JOKA	**Jonika Flow**	**0.79**	**89**		Pb	12 24 49.0	-1.4

*IDC **31** 12:45:52.0±1.8, 5°.89S×152°.51E, h0^{km}, mb3.4/3, mbtmp3.5/4, ML1.8/1, Error ellipse: s-maj=40.3km s-min=13.6km az=90.0*
ISC 31 12:45:57.8±1.7**, 5°.8S**±0°.2×**152°.3E**±0°.2**, h38^{km}, n6,** σ**0^{s}.71**/7**,**
mb3.5/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.50**	**349**	Pg	**Pn**	**12 46 22.6**	**+0.4**
	99nm,0.3s,baz=238,slow=2.3,SNR=89						
KRVT				Lg	Lg	12 46 43.5	
	77nm,0.3s,baz=123,slow=18,SNR=7.6						
PMG	**Port Moresby**	**6.24**	**235**	Pn	**Pn**	**12 47 28.2**	**+0.8**
	1.3nm,0.3s,baz=9.0,slow=6.8,SNR=3.6						
PMG				Sn	**Sn**	**12 48 37.1**	**-0.5**
	0.7nm,0.3s,baz=49,slow=13,SNR=2.2						
	10nm,0.7s						
WRA	**Warramunga Arr**	**22.43**	**230**	P	**P**	**12 50 52.6**	**-0.9**
	0.4nm,0.5s,baz=54,slow=10,SNR=5.8						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**25.09**	**223**	P	**P**	**12 51 19.2**	**+0.1**
	1.4nm,0.7s,baz=60,slow=8.7,SNR=18						
	1.4nm,0.7s						
ILAR	**Eielson Array**	**83.26**	**22**	P	**P**	**12 58 19.9**	**-0.3**
	0.3nm,0.8s,baz=256,slow=5.5,SNR=2.3						
	0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**150.14**	**286**	PKPbc	**PKiKP**	**13 05 46.9**	**+0.3**
	0.2nm,0.6s,baz=90,slow=1.4,SNR=1.7						

*IDC **31** 12:48:48.9±5.0, 24°.58S×68°.07W, h0^{km}, mb3.7/1, mbtmp3.5/2, ML3.4/1, Error ellipse: s-maj=157.0km s-min=59.2km az=68.0*
*SJA **31** 12:49:07.1±1.9, 23°.56S×68°.20W, h100^{km}, ML3.6, MW3.4, Hypocentre not reviewed by the ISC*
*GUC **31** 12:49:08.1±0.5, 23°.45S×68°.40W, h149^{km}±6^{km}, ML3.7*
ISC 31 12:49:06.5±1.4**, 23°.53S**±0°.06×**68°.3W**±0°.1**, h142^{km}**±12^{km}**,**
n19, σ**0^{s}.79**/30**, 5C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.07**	**328**	⇑*i*P	**Pn**	**12 49 31.3**	**-0.3**
LVC				*e*S	**Sn**	**12 49 49.7**	**-1.0**
LVC				IAML		12 49 51.2	
	2μm,0.2s						
LVC	**Limon Verde**	**1.07**	**328**	*e*P		12 49 31.8	
LVC				*e*S		12 49 50.6	
PB15	**IPOC Station P**	**1.13**	**286**	⇑*i*P	**Pn**	**12 49 32.6**	**+0.7**
PB15				*e*S	**Sn**	**12 49 51.5**	**+0.3**
PB15	**IPOC Station P**	**1.13**	**286**	*e*P		12 49 32.5	
PB15				*e*S		12 49 51.9	
PB06	**IPOC Station P**	**1.43**	**304**	*e*P		12 49 35.6	
PB06				*e*S		12 49 57.1	
PB06				IAML		12 49 58.4	
	comp=Z,773nm,0.1s						
PB09	**IPOC Station P**	**1.93**	**333**	*e*P		12 49 41.6	
PB09				*e*S		12 50 07.2	
PB09				IAML		12 50 08.2	
	comp=Z,186nm,0.4s						
PB09	**IPOC Station P**	**1.93**	**333**	⇑*i*P	**Pn**	**12 49 41.5**	**+1.0**
PB09				*e*S	**Sn**	**12 50 06.4**	**-0.2**
PB09				IAML		12 50 10.5	
	comp=E,214nm,0.5s						
PB03	**IPOC Station P**	**2.00**	**317**	⇑*i*P	**Pn**	**12 49 41.8**	**+0.5**
PB03				*e*S	**Sn**	**12 50 07.3**	**-0.6**
PB03				IAML		12 50 09.6	
	comp=E,578nm,0.5s						
PB03	**IPOC Station P**	**2.00**	**317**	*e*P		12 49 41.7	
PB03				*e*S		12 50 08.0	
PB03				IAML		12 50 10.8	
	comp=Z,409nm,0.1s						
PB10	**IPOC Station P**	**2.08**	**270**	*e*P	**Pn**	**12 49 43.3**	**+1.3**
PB10				*e*S	**Sn**	**12 50 08.9**	**-0.4**
PB10				IAML		12 50 16.3	
	comp=E,345nm,0.4s						
PB10	**IPOC Station P**	**2.08**	**270**	*e*P		12 49 43.3	
PB10				*e*S		12 50 09.7	
PB10				IAML		12 50 13.3	
	comp=Z,262nm,0.3s						
PB04	**IPOC Station P**	**2.08**	**304**	*e*P	**Pn**	**12 49 42.8**	**+0.5**
PB04				*e*S	**Sn**	**12 50 09.0**	**-0.8**
PB04				IAML		12 50 11.4	
	comp=E,532nm,0.1s						
PB04	**IPOC Station P**	**2.08**	**304**	*e*P		12 49 42.8	
PB04				*e*S		12 50 09.7	
PB04				IAML		12 50 14.8	
	comp=Z,398nm,0.3s						
PB14	**IPOC Station P**	**2.22**	**240**	*e*P	**Pn**	**12 49 43.0**	**-1.0**
PB14				*e*S	**Sn**	**12 50 12.7**	**-0.3**
PB14	**IPOC Station P**	**2.22**	**240**	*e*P		12 49 42.3	
PB14				*e*S		12 50 12.5	
PB14				IAML		12 50 15.8	
	comp=Z,237nm,0.4s						
PB07	**IPOC Station P**	**2.32**	**320**	⇑*i*P	**Pn**	**12 49 45.7**	**+0.5**
PB07				*e*S	**Sn**	**12 50 14.3**	**-0.6**
PB07				IAML		12 50 15.6	
	comp=N,567nm,0.2s						
PB07	**IPOC Station P**	**2.32**	**320**	*e*P		12 49 45.7	
PB07				*e*S		12 50 15.2	
PB07				IAML		12 50 15.7	
	comp=Z,363nm,0.2s						
PB02	**IPOC Station P**	**2.65**	**326**	*e*P	**Pn**	**12 49 49.4**	**+0.1**
PB02				*e*S	**Sn**	**12 50 21.1**	**-1.1**
PB02				IAML		12 50 27.4	
	comp=E,330nm,0.2s						
PB02	**IPOC Station P**	**2.65**	**326**	*e*P		12 49 49.3	
PB02				*e*S		12 50 22.0	
PB02				IAML		12 50 24.4	
	comp=Z,378nm,0.4s						
HJA	**Humahuaca**	**2.67**	**84**	*e*P		12 49 50.6	
PB01	**IPOC Station P**	**2.71**	**336**	*e*P	**Pn**	**12 49 49.8**	**-0.1**
PB01				*e*S	**Sn**	**12 50 22.8**	**-0.6**
PB01	**IPOC Station P**	**2.71**	**336**	*e*P		12 49 50.0	
PB01				*e*S		12 50 23.1	
PB01				IAML		12 50 24.2	
	comp=Z,188nm,0.2s						
YJA	**Yavi**	**2.89**	**63**	*e*P		12 49 53.4	
AC01	**Pan de Azucar**	**3.35**	**218**	*e*P	**Pn**	**12 49 57.8**	**-0.2**
AC01	**Pan de Azucar**	**3.35**	**218**	*e*P		12 49 57.8	
AC01				*e*S		12 50 38.0	
AC02	**Maricunga**	**3.38**	**193**	*e*P		12 50 00.3	
AC02				*e*S		12 50 40.2	
TA01	**Diego Aracena**	**3.43**	**329**	*e*P	**Pn**	**12 49 57.6**	**-1.5**
PB08	**IPOC Station P**	**3.46**	**346**	*e*P	**Pn**	**12 50 00.5**	**+0.6**
PB08				*e*S	**Sn**	**12 50 41.0**	**-0.2**
PB11	**IPOC Station P**	**3.96**	**341**	*e*P	**Pn**	**12 50 05.1**	**-1.1**
GO03	**Copiap**	**4.42**	**203**	*e*P	**Pn**	**12 50 11.2**	**-0.8**
GO03	**Copiap**	**4.42**	**203**	*e*P		12 50 11.4	
GO03				*e*S		12 51 02.8	
GO03				IAML		12 51 06.2	
	comp=Z,42nm,0.3s						
MNMC	**Minye Minye**	**4.54**	**344**	*e*P	**Pn**	**12 50 12.8**	**-1.2**
AC04	**Llanos de Chal**	**5.29**	**208**	*e*P		12 50 21.3	
AC04				*e*S		12 51 22.4	
LPAZ	**La Paz**	**7.20**	**1**	Pn	**Pn**	**12 50 50.5**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=178,slow=3.6,SNR=2.8						
	comp=Z,0.6nm,0.4s						
TORD	**Torodi Ar. Bea**	**77.51**	**70**	P	**P**	**13 00 48.0**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=257,slow=4.6,SNR=5.3						
	comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	**146.90**	**38**	PKPbc	**PKiKP**	**13 08 34.4**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=313,slow=2.3,SNR=4.7						

*IDC **31** 13:08:47.9±3.3, 36°.24N×70°.86E, h140^{km}±29^{km}, mb3.3/10, mbtmp3.7/14, Error ellipse: s-maj=25.8km s-min=18.3km az=17.0*
*SOME **31** 13:08:52.3, 37°.80N×71°.50E, h0^{km}*
*NNC **31** 13:08:56.4±5.6, 37°.13N×70°.85E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=44.5km s-min=36.0km az=160.0*
ISC 31 13:08:49.5±0.8**, 36°.39N**±0°.07×**70°.89E**±0°.08**, h150^{km}, n25,**
σ**2^{s}.22**/30**, mb3.5**/9**, 5C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**5.79**	**354**	*e*Pg	**Pn**	**13 10 16.4**	**+3.0**
	23nm,0.1s						
IUG				*e*Lg	Lg	13 11 16.5	
	80nm,0.9s						
AML	**Almayashu**	**6.13**	**20**	⇓P	**Pn**	**13 10 20.3**	**+2.1**
	0.5nm,0.5s						
AML				⇑S	**Sn**	**13 11 24.1**	**-3.5**
	7.0nm,0.6s						
MRKS	**Merke**	**6.60**	**15**	*e*Pg	**Pn**	**13 10 27.2**	**+3.1**
	5.2nm,0.2s						
MRKS				*e*Lg	Lg	13 11 35.4	
	32nm,0.5s						
KK31	**Karatay Array**	**6.71**	**358**	⇑P	**Pn**	**13 10 27.2**	**+1.6**
	0.9nm,0.2s						
KK31				⇓S	**Sn**	**13 11 36.7**	**-4.2**
	5.4nm,0.5s						
AAK	**Ala-Archa**	**6.83**	**23**	P	**Pn**	**13 10 29.4**	**+2.1**
	2.7nm,0.3s,baz=167,slow=4.6,SNR=8.0						
AAK				S	**Sn**	**13 11 42.4**	**-1.6**
	12nm,0.6s,baz=142,slow=19,SNR=10						
TKM2	**Tokmak 2**	**7.46**	**28**	⇑P	**Pn**	**13 10 37.5**	**+1.7**
	2.3nm,0.6s						
TKM2				⇑S	**Sn**	**13 11 56.9**	**-2.3**
	4.2nm,0.7s						
GEYT	**Alibeck**	**10.31**	**282**	P	**Pn**	**13 11 11.4**	**-2.2**
	1.8nm,0.6s,baz=96,slow=14,SNR=4.1						
PYUN	**Piuthan**	**13.15**	**126**	*e*P	**P**	**13 11 52.4**	**-2.9**
	8.2nm,0.4s						
MKAR	**Makanchi Array**	**13.43**	**36**	P	**Pn**	**13 11 53.6**	**-0.4**
	0.6nm,0.7s,baz=220,slow=11,SNR=17						
DANN	**Dangsing**	**13.50**	**123**	*e*P	**P**	**13 11 59.1**	**-0.2**
	6.7nm,0.3s						
PKIN	**Phulchoki**	**15.11**	**121**	*e*P	**P**	**13 12 21.2**	**+4.1**
PKI	**Pulchoki**	**15.12**	**121**	*e*P	**P**	**13 12 21.6**	**+4.3**
	27nm,0.6s						
AB31	**Akbulak array**	**15.14**	**332**	⇑P	**P**	**13 12 20.0**	**+3.1**
	0.3nm,0.5s,baz=150,slow=13,SNR=12						
AB31				⇓S	**Sn**	**13 15 04.4**	**+0.9**
	0.9nm,0.8s,baz=156,slow=24,SNR=2.5						
KURBB	**Kurchatov Arra**	**15.25**	**19**	P	**Pn**	**13 12 15.8**	**-1.0**
	0.6nm,0.5s,baz=209,slow=10,SNR=12						
ZALV	**Zalesovo Beam**	**20.05**	**25**	P	**P**	**13 13 10.9**	**+0.2**
	3.1nm,0.5s,baz=220,slow=11,SNR=16						
	3.1nm,0.5s						
AKASG	**Malin Array Be**	**32.95**	**309**	P	**P**	**13 15 10.2**	**+0.7**
	0.5nm,0.5s,baz=78,slow=6.7,SNR=4.2						

	0.5nm,0.5s						
FINES	**FINESS Array B**	37.53	326	P	P	13 15 48.4	-0.1
	1.1nm,0.6s,baz=111,slow=10,SNR=4.9						
	1.1nm,0.6s						
ARCES	**ARCESS Array B**	41.21	338	P	P	13 16 19.5	+0.5
	1.5nm,0.8s,baz=122,slow=8.6,SNR=4.3						
	1.5nm,0.8s						
HFS	**Hagfors**	43.10	322	P	P	13 16 34.4	0.0
	2.2nm,0.7s,baz=106,slow=11,SNR=3.5						
	2.2nm,0.7s						
NB2	**NORSAR Subarra**	44.42	323	P	P	13 16 44.8	-0.1
	comp=Z,0.7nm,0.6s,baz=98,slow=7.9						
NOA	**NORSAR Array B**	44.42	323	P	P	13 16 45.1	+0.2
	comp=Z,0.7nm,0.6s,baz=104,slow=7.3,SNR=6.2						
	comp=Z,0.7nm,0.6s						
TORD	**Torodi Ar. Bea**	65.63	269	P	P	13 19 16.8	-0.9
	comp=Z,0.2nm,0.4s,baz=51,slow=4.2,SNR=2.3						
	comp=Z,0.2nm,0.4s						
YKA	**Yellowknife Ar**	81.36	3	P	P	13 20 49.2	+0.3
	comp=Z,0.3nm,0.4s,baz=353,slow=5.3,SNR=11						
	comp=Z,0.3nm,0.4s						
WRA	**Warramunga Arr**	82.00	122	P	P	13 20 51.9	-1.0
	comp=Z,0.3nm,0.7s,baz=322,slow=4.9,SNR=2.2						
	comp=Z,0.3nm,0.7s						
ASAR	**Alice Springs**	84.26	125	P	P	13 21 04.0	-0.5
	comp=Z,0.5nm,0.7s,baz=308,slow=4.9,SNR=11						
	comp=Z,0.5nm,0.7s						

IDC 31 13:09:54.8±22.0**,11°.87S**×**166°.60E,h304**^{km}±269^{km}**,**
mb3.0/4**,mbtmp3.7**/5**,ML2.9**/1**,Error ellipse:**
s-maj=239.1km s-min=31.7km az=156.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	10.15	181	P	Pn	13 12 15.1	+0.3
	0.1nm,0.3s,baz=68,slow=11,SNR=2.1						
	6.9nm,1.1s						
WRA	**Warramunga Arr**	32.00	251	P	P	13 15 53.5	-0.2
	0.4nm,0.6s,baz=83,slow=9.4,SNR=4.6						
	0.4nm,0.6s						
ASAR	**Alice Springs**	33.19	245	P	P	13 16 03.6	-0.3
	0.5nm,0.8s,baz=68,slow=10,SNR=6.4						
	0.5nm,0.8s						
ILAR	**Eielson Array**	84.02	18	P	P	13 21 50.6	-0.5
	0.4nm,0.7s,baz=229,slow=5.9,SNR=6.8						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	94.69	317	P	P	13 22 42.6	+0.8
	0.3nm,0.6s,baz=84,slow=4.9,SNR=3.7						
	0.3nm,0.6s						

BUL 31 13:19:15.8±0.6**,25°.80S**×**29°.28E,h10**^{km}±36^{km}**,MD3.2,**
South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	**Mopani**	2.98	41	*i* P	Pn	13 19 58.7	-4.5
MOPA				*i* S	Sn	13 20 29.6	-9.3
LBTB	**Lobatse**	3.42	282	*i* P	Pn	13 20 06.2	-3.2
LBTB				*i* S	Sn	13 20 42.0	-8.1
MUSN	**Musina, Limpop**	3.54	9	*e*P	Pn	13 20 07.5	-3.3
MUSN				*e*S	Sn	13 20 45.2	-7.6
BOSA	**Boshof**	4.55	231	*e*P	Pn	13 20 21.2	-3.7
BOSA				*e*S	Sn	13 21 08.9	-9.0

OTT ***31*** *13:21:31.1±0.2,74°.72N×71°.85W,h18^{km},ML3.4/4,296km*
northeast from Pond Inlet, Nu Baffin Bay Seismic Zone.
DNK ***31*** *13:21:34.3±3.0,74°.74N×71°.82W,h36^{km}±51^{km},ML2.3*
ISC 31 13:21:26.0±0.7**,74°.76N**±0°.05×**71°.86W**±0°.04**,h10**^{km}**,n13,**
σ3^s.69/24**,Baffin Bay**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TULEG	**Thule**	1.94	21	*e*	Pg	13 22 03.1	-0.1
	baz=220,slow=14						
TULEG				*i* P	Pb	13 22 03.9	+2.5
TULEG				*i* S	Sb	13 22 25.1	-0.5
TULEG				IAML		13 22 26.6	
	comp=Z,91nm,0.3s						
KULLO	**Kullorsuaq**	3.89	86	PN	Pn	13 22 29.5	+3.8
KULLO				SN	Sn	13 23 11.1	-0.2
KULLO				Trac		13 23 14.7	
	comp=Z,4.2nm,0.1s						
KULLO	**Kullorsuaq**	3.89	86	*i* P	Pb	13 22 30.7	-3.8
KULLO				*i* S	Sn	13 23 10.9	-0.4
KULLO				IAML		13 23 15.8	
	comp=Z,9.3nm,0.3s						
CLRN	**Clyde River**	4.42	166	PN	Pn	13 22 37.4	+4.5
CLRN				SN	Sn	13 23 24.1	-0.1
CLRN				Trac		13 23 27.1	
	comp=Z,8.3nm,0.1s						
UPNV	**Upernavik**	4.83	106	*i* P	Pn	13 22 42.9	+4.3
UPNV				*i* S	Sn	13 23 32.5	-1.9
UPNV				IAML		13 23 36.2	
	comp=Z,26nm,0.3s						
NEEM	**North Greenlan**	5.67	52	*i* P	Pn	13 22 55.5	+5.2
NEEM				*i* S	Sn	13 23 54.6	-0.8
NEEM				IAML		13 24 14.4	
	comp=Z,8.9nm,0.3s						
RES	**Resolute Bay**	6.07	280	PN	Pn	13 22 59.2	+3.7
RES				SN	Sn	13 24 04.2	-0.8
RES				Trac		13 24 09.3	
	comp=Z,4.6nm,0.2s						
EUNU	**Eureka**	6.17	336	PN	Pn	13 23 02.1	+5.1
EUNU				SN	Sn	13 24 07.3	-0.3
EUNU				Trac		13 24 23.8	
	comp=Z,19nm,1.2s						
ILON	**Igloolik, Nuna**	6.21	214	PN	Pn	13 23 01.8	+4.3
ILON				SN	Sn	13 24 07.0	-1.6
ILON				Trac		13 24 19.1	
	comp=Z,7.5nm,0.4s						
SUMG	**Summit**	9.56	87	*e*P	Pn	13 23 45.9	+2.0
SUMG				*e*S	Sn	13 25 24.4	-6.9
SUMG				IAML		13 25 30.6	
	comp=Z,2.7nm,0.4s						
A36M	**Sachs Harbour**	15.07	286	PN	P	13 25 01.6	-2.3
A36M				SN	Sn	13 27 38.0	-7.2
A36M				Trac		13 27 51.2	
	comp=Z,71nm,2.9s						
KUKN	**Kugluktuk,NWT**	15.13	265	PN	Pn	13 25 00.5	+1.1
KUKN				SN	Sn	13 27 39.1	-7.5
KUKN				Trac		13 29 12.4	
	comp=Z,356nm,4.9s						
FCC	**Fort Churchill**	18.07	219	PN	P	13 25 39.3	+2.2

LDG ***31*** *13:44:33.4±0.1,43°.05N×0°.36W,h2^{km},Md2.8/2,Ml2.7/11,*
Error ellipse: s-maj=1.4km s-min=1.1km az=153.0
MDD ***31*** *13:44:34.4±0.2,43°.00N×0°.38W,h0^{km},mb_Lg2.4/14,*
Error ellipse: s-maj=2.5km s-min=1.5km az=6.0
STR ***31*** *13:44:34.2±0.4,43°N±4°×°±°,h5^{km},MLv1.9/11,Error*
ellipse: s-maj=0.0km s-min=0.0km az=10.9,preliminary
ISC 31 13:44:33.1±0.9**,43°.09N**±0°.02×**0°.35W**±0°.02**,h13**^{km}±6^{km}**,**
n42,σ**1^s.06**/83**,Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYLO	**Lourdes**	0.22	88	Pg	Pg	13 44 38.1	+0.2
PYLO				Sg	Sg	13 44 41.3	+0.2
ETSF	**Etsaut**	0.25	218	*e*Pg	Pg	13 44 37.2	-1.1
ETSF				*e*Sg	Sg	13 44 40.7	-1.2
	129nm,0.2s						
ATE	**Arette**	0.26	269	Pg	Pg	13 44 38.8	+0.4
ATE				Sg	Sg	13 44 42.5	+0.4
VIEF	**Viey**	0.35	127	Pg	Pg	13 44 39.7	-0.4
VIEF				Sg	Sg	13 44 44.4	-0.4
CANF	**Canfranc**	0.35	200	Pg	Pg	13 44 39.5	-0.7
CANF				Sg	Sg	13 44 43.7	-1.2
EPF	**Esparros**	0.51	97	*e*Pg	Pg	13 44 42.8	-0.3
EPF				*e*Sg	Sg	13 44 49.5	-0.4
	70nm,0.2s						
ECHI	**Chisagues Biel**	0.59	137	Pg	Pg	13 44 44.0	-0.6
ECHI				Sg	Sg	13 44 50.9	-1.5
ECHI				*i* Vmb_Lg		13 44 51.8	
ECHI	**Chisagues Biel**	0.59	137	Pg	Pg	13 44 44.1	-0.5
SJPF	**Ste Jean**	0.64	272	*e*Pg	Pg	13 44 45.6	0.0
SJPF				*e*Sg	Sg	13 44 54.2	+0.2
	32nm,0.2s						
OSSF	**Osses**	0.69	284	Pg	Pg	13 44 45.6	-0.8
OSSF				Sg	Sb	13 44 56.7	+0.4
EORO	**Oroz-Betelu**	0.73	254	Pg	Pg	13 44 46.7	-0.6
EORO				Sg	Sb	13 44 57.2	-0.5
EORO				*i* Vmb_Lg		13 44 59.1	
TERF	**Tercis-les-Bai**	0.81	317	Pg	Pb	13 44 49.5	+0.5
TERF				Sg	Sn	13 45 04.0	+1.9
EALK	**Alkurruntz**	0.85	279	Pg	Pg	13 44 49.6	0.0
EALK				Sg	Sb	13 45 01.2	-0.1
EALK				*i* Vmb_Lg		13 45 06.0	
EALK	**Alkurruntz**	0.85	279	Pg	Pg	13 44 49.7	0.0
EARA	**Aranguren**	0.96	251	Sg	Sg	13 45 03.5	-0.5
EARA				*i* Vmb_Lg		13 45 10.9	
MLS	**Moulis**	1.07	97	Pg	Pn	13 44 54.4	+0.6
MLS				Pn	Pb	13 44 56.6	+3.2
MLS				Sg	Sn	13 45 09.5	+0.9
SALF	**Salau**	1.18	106	Pn	Pg	13 44 55.5	-0.3
SALF				Sg	Sb	13 45 11.2	+0.6
ESAC	**San Caprasio**	1.37	184	Pg	Pg	13 44 58.7	-0.7
ESAC				Sg	Sn	13 45 16.3	+0.2
ESAC				*i* Vmb_Lg		13 45 20.6	
MONQ	**Montcuq**	1.70	41	Pg	Pg	13 45 06.2	+0.5
FNEB	**Nbias**	1.81	95	Pg	Pg	13 45 08.8	+0.9
FNEB				Sg	Sg	13 45 33.2	+1.7
EMIR	**Miracle**	1.82	130	Sg	Sg	13 45 31.3	-0.3
EMIR				*i* Vmb_Lg		13 45 33.2	
CARF	**Carcanieres**	1.84	101	Pg	Pg	13 45 07.9	-0.5
CARF				Sg	Sg	13 45 33.7	+1.3
MTLF	**Montolieu**	1.89	82	*e*Pg	Pb	13 45 08.4	+0.9
MTLF				*e*Sg	Sg	13 45 33.2	-0.8
	4.8nm,0.1s						
MTLF	**Montolieu**	1.89	82	Pn	Pn	13 45 05.2	+0.1
MTLF				Pg	Pg	13 45 09.4	0.0
MTLF				Sg	Sg	13 45 34.5	+0.5
LFF	**La Frestale**	2.01	23	*e*Pg	Pg	13 45 11.5	-0.1
LFF				*e*Sn	Sn	13 45 32.0	+0.3
LFF				*e*Sg	Sg	13 45 37.9	+0.3
	10nm,0.3s						
EPOB	**Poblet**	2.04	148	Pg	Pb	13 45 09.6	-0.4
EPOB				Sn	Sn	13 45 33.0	+0.5
EPOB				*i* Vmb_Lg		13 45 39.4	
ERTA	**Horta de San J**	2.19	166	Pg	Pb	13 45 13.2	+0.5
ERTA				Sn	Sn	13 45 36.1	-0.3
ERTA				Sg	Sg	13 45 41.1	-2.5
ERTA				*i* Vmb_Lg		13 45 44.4	
EJON	**La Jonquera**	2.47	104	Sg	Sg	13 45 51.7	-0.8
EJON				*i* Vmb_Lg		13 45 58.2	
CAF	**Calviac**	2.53	43	*e*P	Pn	13 45 16.5	+2.6
CAF	**Calviac**	2.53	43	*e*Pg	Pg	13 45 20.5	-1.1
CAF				*e*Sn	Sn	13 45 43.7	-0.9
CAF				*e*Sg	Sg	13 45 53.8	-0.5
	4.7nm,0.1s						
RJF	**Les Rejaudoux**	2.59	31	*e*Pn	Pn	13 45 15.2	+0.5
RJF	**Les Rejaudoux**	2.59	31	*e*Pg	Pg	13 45 22.2	-0.5
RJF				*e*Sg	Sg	13 45 55.0	-1.2
	5.4nm,0.2s						
ETOR	**Torete**	2.60	210	Pn	Pn	13 45 16.3	+1.3
ETOR				Pg	Pb	13 45 20.1	+0.4
ETOR				Sn	Sn	13 45 46.2	-0.3
ETOR				*i* Vmb_Lg		13 45 58.1	
EMOS	**Mosqueruela**	2.73	182	Pg	Pb	13 45 22.9	+1.0
EMOS				Sn	Sn	13 45 49.4	-0.3
EMOS				Sg	Sb	13 45 56.8	+1.5
EMOS				*i* Vmb_Lg		13 46 04.8	
LASF	**Ste Croix**	3.21	71	*e*Pn	Pn	13 45 23.5	+0.2
LASF	**Ste Croix**	3.21	71	*e*Pg	Pg	13 45 32.9	-1.7
LASF				*e*Sn	Sn	13 46 00.3	-1.1
LASF				*e*Sg	Sg	13 46 14.4	-1.8
	2.6nm,0.3s						
MFF	**Saint Martin d**	3.51	2	*e*Pn	Pn	13 45 27.9	+0.5
MFF				*e*Sg	Sg	13 46 24.8	-1.0
	2.3nm,0.2s						
TCF	**Toulx Ste Croi**	3.68	29	*e*Pn	Pn	13 45 29.0	-0.7
TCF				*e*Sn	Sn	13 46 11.3	-1.7
TCF				*e*Sg	Sg	13 46 30.2	-1.0
	1.9nm,0.1s						
VIVF	**Saint-Julien-l**	4.03	62	*e*Pn	Pn	13 45 34.1	-0.5
VIVF	**Saint-Julien-l**	4.03	62	*e*Pg	Pg	13 45 48.1	-2.2
VIVF				*e*Sg	Sg	13 46 40.9	-1.6
	1.6nm,0.2s						
BGF	**Bois d'Agland**	4.14	32	*e*Pg	Pg	13 45 51.6	-0.8
BGF				*e*Sn	Sn	13 46 22.5	-1.9
BGF				*e*Sg	Sg	13 46 44.1	-2.0
	8.1nm,0.4s						
LOR	**Lormes**	5.13	34	*e*Pn	Pn	13 45 49.0	-0.6

IDC ***31*** *14:12:58.2±1.5,74°.73N×72°.37W,h0^{km},mb3.5/3,*
mbtmp3.6/8,ML3.6/5,MS3.5/1,Error ellipse: s-maj=34.6km
s-min=21.4km az=148.0
OTT ***31*** *14:12:59.9±0.3,74°.70N×71°.84W,h18^{km},ML3.4/5,295km*
northeast from Pond Inlet, Nu Baffin Bay Seismic Zone.
DNK ***31*** *14:13:03.7±1.2,74°.79N×71°.56W,h35^{km}±30^{km},ML2.6*
ISC 31 14:12:57.3±0.7**,74°.71N**±0°.05×**71°.90W**±0°.05**,h10**^{km}**,n21,**
σ**2^s.63**/31**,mb3.5**/3**,Baffin Bay**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TULEG	**Thule**	2.00	21	*i* P	Pn	14 13 32.7	+1.8
TULEG				*i* S	Sn	14 13 54.5	-1.4
TULEG				*i* S	Sb	14 13 54.6	-3.8
TULEG				IAML		14 13 55.8	
	comp=Z,234nm,0.3s						
KULLO	**Kullorsuaq**	3.90	85	PN	Pn	14 13 58.9	+1.7
KULLO				SN	Sn	14 14 40.3	-2.6
KULLO				Trac		14 14 45.2	
	comp=Z,13nm,0.1s						
KULLO	**Kullorsuaq**	3.90	85	*i* P	Pn	14 13 59.2	+2.0
KULLO				*i* S	Sn	14 14 39.7	-3.2
KULLO				IAML		14 14 44.8	
	comp=Z,21nm,0.3s						
CLRN	**Clyde River**	4.37	165	PN	Pn	14 14 05.6	+2.1
CLRN				SN	Sn	14 14 52.5	-1.8
CLRN				Trac		14 14 54.1	
	comp=Z,9.1nm,0.1s						
UPNV	**Upernavik**	4.82	106	*i* P	Pn	14 14 11.7	+1.9
UPNV				*i* S	Sn	14 15 00.3	-5.3
UPNV				IAML		14 15 05.0	
	comp=Z,60nm,0.3s						
NEEM	**North Greenlan**	5.71	52	*i* P	Pn	14 14 24.1	+2.0
NEEM				*i* S	Sn	14 15 24.2	-3.5
NEEM				IAML		14 15 43.4	
	comp=Z,20nm,0.4s						
RES	**Resolute Bay**	6.07	281	Pn	Pn	14 14 28.4	+1.6
	comp=Z,7.6nm,0.3s,baz=82,slow=14,SNR=203						
RES				Sn	Sn	14 15 31.9	-4.3
	comp=Z,4.5nm,0.3s,baz=151,slow=22,SNR=7.2						
	comp=Z,18nm,0.4s						
RES	**Resolute Bay**	6.07	281	PN	Pn	14 14 28.2	+1.4
RES				SN	Sn	14 15 32.0	-4.2
RES				Trac		14 15 49.5	
	comp=Z,12nm,0.2s						
ILON	**Igloolik, Nuna**	6.17	215	PN	Pn	14 14 30.4	+2.2
ILON				SN	Sn	14 15 35.6	-3.0
ILON				Trac		14 15 39.9	
	comp=Z,5.1nm,0.1s						
EUNU	**Eureka**	6.21	336	PN	Pn	14 14 30.7	+1.8
EUNU				SN	Sn	14 15 37.4	-2.5
EUNU				Trac		14 15 44.6	
	comp=Z,8.8nm,0.3s						
NUUG	**Nuugaatsiaq**	6.28	111	*i* P	Pn	14 14 32.6	+2.8
NUUG				IAML		14 15 43.4	
	comp=Z,8.5nm,0.3s						
SUMG	**Summit**	9.58	86	*i* P	Pn	14 15 14.8	-0.5
SUMG				*e*S	Sn	14 16 53.9	-9.0
SUMG				IAML		14 16 59.3	
	comp=Z,6.3nm,0.4s						
FRB	**Frobisher Bay**	11.07	172	Pn	Pn	14 15 36.3	+0.9
	comp=Z,0.1nm,0.3s,baz=69,slow=21,SNR=2.2						
FRB				Sn	Sn	14 17 30.8	-8.3
	comp=Z,0.4nm,0.3s,baz=90,slow=20,SNR=3.7						
	comp=Z,1.0nm,0.7s						
FRB	**Frobisher Bay**	11.07	172	PN	Pn	14 15 35.7	+0.3
FRB				SN	Sn	14 17 31.2	-7.8
FRB				Trac		14 17 47.6	
	comp=Z,66nm,1.3s						
SPITS	**Spitsbergen Ar**	19.08	39	P	Pn	14 17 21.8	+1.6
	baz=308,slow=8.2						
	comp=Z,2.4nm,0.7s						
YKA	**Yellowknife Ar**	19.18	253	P	P	14 17 19.9	-0.7
	comp=Z,0.2nm,0.3s,baz=28,slow=11,SNR=19						
YKA				S	Sn	14 20 38.4	-18
	comp=Z,0.4nm,0.6s,baz=15,slow=21,SNR=5.2						
	comp=Z,0.6nm,0.5s						
INK	**Inuvik**	19.62	283	P	P	14 17 26.1	+0.7
	baz=48,slow=8.5,SNR=2.6						
	comp=Z,1.1nm,1.0s						
ILAR	**Eielson Array**	25.77	288	P	P	14 18 29.6	+2.0
	comp=Z,0.2nm,0.6s,baz=35,slow=10,SNR=2.0						
	comp=Z,0.2nm,0.6s						
EKA	**Eskdalemuir Ar**	32.20	88	LR	LR	14 31 40.4	
	comp=Z,69nm,18.1s,baz=187,slow=35						
ZALV	**Zalesovo Beam**	50.69	18	P	P	14 21 59.5	+3.3
	comp=Z,2.2nm,0.6s,baz=347,slow=6.5,SNR=10.0						
	comp=Z,2.2nm,0.6s						
MKAR	**Makanchi Array**	57.56	21	P	P	14 22 48.2	+1.7
	comp=Z,0.3nm,0.6s,baz=6.6,slow=6.2,SNR=3.8						
	comp=Z,0.3nm,0.6s						

JMA ***31*** *14:22:04.0±0.6,35°N±2°×14°2E±°,h28^{km}±2^{km},MV3.1/29,*
FAR SE OFF BOSO PEN
IDC ***31*** *14:22:03.0±1.1,34°.72N×141°.78E,h0^{km},mb3.4/4,*
mbtmp3.6/7,ML3.8/2,MS2.8/2,Error ellipse: s-maj=33.5km
s-min=19.4km az=78.0
ISC 31 14:22:05.3±0.9**,34°.64N**±0°.06×**141°.68E**±0°.07**,h27**^{km}**,n22,**
σ**2^s.16**/19**,mb3.4**/4**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	0.58	271	P	Pb	14 22 14.9	-1.6
BSO3	**Boso 3**	0.97	280	P	Pn	14 22 21.9	-1.0
BSO4	**Boso 4**	1.16	288	P	Pn	14 22 25.3	-0.3
CHOJ	**Chosi**	1.25	328	P	Pn	14 22 27.5	+0.4
JKUC	**kamogawauchiur**	1.32	293	P	Pn	14 22 27.1	-0.9
JMYK	**Miyake Tsubota**	1.85	252	*e*S	Sn	14 22 56.6	-1.3
JMKN	**Mikurajimanish**	1.88	247	P	Pn	14 22 34.9	-0.8
JMKN				S	Sn	14 22 57.0	-1.6
JIZS	**Izushimoda**	2.31	273	*e*S	Sn	14 23 07.9	-1.2
MJAR	**Matsushiro Arr**	3.40	305	Pn	Pn	14 22 57.5	+0.8
	1.9nm,0.4s,baz=118,slow=8.7,SNR=20						
MJAR				Sn	Sn	14 23 38.1	+1.9
	0.4nm,0.3s,baz=88,slow=28,SNR=7.3						
MJAR				LR	LR	14 24 38.9	
	comp=Z,173nm,19.2s,baz=44,slow=45						
JCJ	**Chichijima**	7.53	177	Pn	Pn	14 23 53.5	0.0
	3.9nm,0.3s,baz=129,slow=21,SNR=1.5						
JCJ				Sn	Sn	14 25 14.1	-3.8
	2.3nm,0.3s,baz=288,slow=19,SNR=1.3						
	29nm,0.6s						
ASAJ	**Asahikawa**	9.49	4	Pn	Pn	14 24 19.1	-1.1
	0.8nm,0.3s,baz=229,slow=11,SNR=18						
ASAJ				Sn	Sn	14 26 01.2	-4.7
	0.2nm,0.3s,baz=175,slow=9.2,SNR=1.5						
	2.1nm,0.4s						
KSRS	**Korea Array**	11.48	288	LR	LR	14 29 44.9	
	comp=Z,44nm,19.2s,baz=110,slow=40						
H11N2	**WAKE ISLAND Hy**	26.80	117	T	T	14 56 03.2	
	baz=309,slow=75,SNR=7.3						
H11N1	**WAKE ISLAND Hy**	26.81	117	T	T	14 56 03.7	
	baz=309,slow=75,SNR=4.1						
H11N3	**WAKE ISLAND Hy**	26.82	117	T	T	14 56 05.1	
	baz=309,slow=75,SNR=4.5						
H11S3	**WAKE ISLAND Hy**	27.44	119	T	T	14 56 52.5	
	baz=313,slow=74,SNR=4.3						
H11S1	**WAKE ISLAND Hy**	27.44	119	T	T	14 56 51.9	
	baz=313,slow=74,SNR=4.8						
H11S2	**WAKE ISLAND Hy**	27.45	119	T	T	14 56 53.6	
	baz=313						
MKAR	**Makanchi Array**	45.60	304	P	P	14 30 25.7	+2.6
	0.3nm,0.7s,baz=90,slow=9.1,SNR=1.6						
	0.3nm,0.7s						
ILAR	**Eielson Array**	51.41	31	P	P	14 31 08.0	+0.5
	0.3nm,0.7s,baz=261,slow=6.2,SNR=4.4						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	54.73	188	P	P	14 31 34.0	+1.6
	1.4nm,1.2s,baz=1.2,slow=7.6,SNR=9.9						
	1.4nm,1.2s						
ASAR	**Alice Springs**	58.45	188	P	P	14 32 02.3	+3.4
	0.2nm,0.5s,baz=3.1,slow=6.4,SNR=11						
	0.2nm,0.5s						

WEL 31 14:44:25.6,41°S±3°×**17°5E**±°**,h31**^{km}±5^{km}**,M3.3**/14**,**
ML3.6/14**,MLv3.3**/14**,Error ellipse: s-maj=0.0km**
s-min=0.0km az=124.3,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WEL	**Wellington**	0.12	136	P	Pn	14 44 32.0	+0.6
TCW	**Tory Channel**	0.28	267	P	Pn	14 44 33.3	-0.3
TCW				S	Sn	14 44 38.5	-0.3
CAW	**Cannon Point**	0.32	74	P	Pn	14 44 34.1	0.0
CAW				S	Sn	14 44 40.6	+0.8
KIW	**Kapiti Island**	0.39	30	P	Pn	14 44 35.0	0.0
KIW				S	Sn	14 44 41.2	-0.1
OGWZ	**Otaki Gorge**	0.55	46	P	Pn	14 44 37.2	+0.1
OGWZ				S	Sn	14 44 45.6	+0.4
TUWZ	**Tuamarina**	0.58	246	P	Pb	14 44 37.1	-0.3
TUWZ				S	Sb	14 44 45.1	-0.5
PLWZ	**Palliser**	0.59	130	P	Pb	14 44 37.6	0.0
PLWZ				S	Sn	14 44 46.7	+0.4
PAWZ	**Paruwai Farm**	0.61	108	P	Pn	14 44 38.1	-0.1
PAWZ				S	Sn	14 44 47.6	+0.6
MTW	**Mount Morrison**	0.64	87	P	Pn	14 44 38.6	+0.1
MTW				S	Sn	14 44 48.3	+0.7
CMWZ	**Cape Campbell**	0.64	211	P	Pn	14 44 39.4	+0.9
CMWZ				S	Sn	14 44 50.1	+2.4
DUWZ	**D’Urville Isla**	0.68	305	P	Pn	14 44 39.4	+0.4
DUWZ				S	Sn	14 44 48.9	+0.3
HOWZ	**Holdsworth Sta**	0.72	66	P	Pb	14 44 39.8	+0.1
HOWZ				S	Sn	14 44 50.6	+1.1
BSWZ	**Blackbirch Sta**	0.78	228	P	Pn	14 44 40.5	0.0
BSWZ				S	Sn	14 44 51.9	+0.8
TRWZ	**Traveller**	0.81	105	P	Pn	14 44 40.5	-0.3
TRWZ				S	Sb	14 44 51.9	+0.1
MRZ	**Mangatainoka R**	0.88	53	P	Pb	14 44 42.2	-0.2
TMWZ	**Te Maipa**	0.94	85	P	Pn	14 44 42.4	-0.2
NNZ	**Nelson**	0.96	268	P	Pn	14 44 43.1	+0.2
TIWZ	**Tintock**	1.02	66	P	Pn	14 44 43.8	0.0
OHWZ	**Ohakea**	1.11	27	P	Pb	14 44 47.0	+0.7
POWZ	**Post Office Ro**	1.17	47	P	Pn	14 44 46.1	+0.3
PRWZ	**Pori Road**	1.19	58	P	Pn	14 44 46.1	+0.1
CPWZ	**Castlepoint**	1.21	77	P	Pn	14 44 46.9	+0.6
TKNZ	**Takaka Hill**	1.29	277	P	Pn	14 44 48.3	+0.9
BFZ	**Birch Farm**	1.31	67	P	Pn	14 44 47.2	-0.5
THZ	**Tophouse**	1.43	246	P	Pn	14 44 49.7	+0.3
MRNZ	**Matariki Terra**	1.44	261	P	Pn	14 44 50.5	+0.9
DVHZ	**Dannevirke**	1.46	53	P	Pn	14 44 49.3	-0.4
WAZ	**Wanganui**	1.46	10	P	Pb	14 44 52.6	+0.4
KHZ	**Kahutara**	1.48	214	P	Pn	14 44 49.7	-0.2
TSZ	**Takapari Road**	1.51	42	P	Pn	14 44 50.6	+0.1
QRZ	**Quartz Range**	1.65	282	P	Pn	14 44 53.5	+1.2
PNHZ	**Pukenui**	1.74	43	P	Pn	14 44 53.4	-0.3
LREZ	**Lake Rotokare**	1.75	354	P	Pb	14 44 56.1	-0.8
PRHZ	**Porangahau**	1.77	59	P	Pn	14 44 53.1	-0.9
WPHZ	**Waipukurau**	1.77	51	P	Pn	14 44 53.8	-0.2
PREZ	**Palmer Road**	1.89	348	P	Pb	14 44 59.0	-0.5
MTVZ	**Mangateitei**	1.91	19	P	Pb	14 44 59.3	-0.6
KHEZ	**Kahui Hut**	1.96	345	P	Pb	14 44 60.0	-0.8
NEZ	**North Egmont**	1.97	347	P	Pb	14 45 00.5	-0.4
MOVZ	**Moawhango**	1.98	26	P	Pb	14 44 59.9	-1.1
PKVZ	**Pokaka**	1.98	16	P	Pb	14 45 00.8	-0.2
WNVZ	**Wahianoa**	2.00	21	P	Pn	14 44 58.8	+1.4
TRVZ	**Turoa**	2.02	20	P	Pb	14 45 01.4	-0.3
BHHZ	**Black Hill Sta**	2.02	33	P	Pn	14 44 58.1	+0.6
NBEZ	**Newall Road No**	2.02	342	P	Pb	14 45 01.8	+0.2
DREZ	**Durham Road**	2.04	350	P	Pb	14 45 01.5	-0.4
DRZ	**Dome Shelter**	2.04	20	P	Pb	14 45 03.8	+1.6
WHVZ	**Whangaehu Hut**	2.04	21	P	Pb	14 45 01.2	-0.9
PXZ	**Pawanui**	2.04	56	P	Pn	14 44 56.6	-1.2
FWVZ	**Far West T-bar**	2.06	20	P	Pn	14 44 59.8	+1.6
PKE	**Pukeiti**	2.06	345	P	Pb	14 45 01.7	-0.7
VRZ	**Vera Road**	2.07	2	P	Pb	14 45 00.9	-1.6
TUVZ	**Tukino**	2.07	22	P	Pn	14 44 59.8	+1.5
GVZ	**Greta Valley S**	2.14	214	P	Pn	14 44 58.3	-0.8
NGZ	**Ngauruhoe**	2.15	20	P	Pb	14 45 03.1	-0.8
SNVZ	**South Ngauruho**	2.15	21	P	Pb	14 45 03.0	-0.9
OTVZ	**Oturere**	2.17	21	P	Pn	14 45 01.2	+1.4
NNVZ	**North Ngauruho**	2.19	20	P	Pb	14 45 04.1	-0.5
KAHZ	**Kahuranaki**	2.20	51	P	Pn	14 44 59.0	-1.0
WTVZ	**West Tongariro**	2.20	19	P	Pb	14 45 04.3	-0.5
TWVZ	**Taurewa**	2.21	16	P	Pb	14 45 05.1	+0.2
DSZ	**Denniston Nort**	2.21	255	P	Pn	14 45 00.5	+0.3
ETVZ	**East Tongariro**	2.21	22	P	Pn	14 45 01.7	+1.4
KWHZ	**Kaweka Forest**	2.23	38	P	Pn	14 45 00.3	-0.1
TMVZ	**Te Maari**	2.23	22	P	Pn	14 45 01.8	+1.4
KRVZ	**Karewarewa**	2.23	20	P	Pb	14 45 05.2	-0.2
NTVZ	**North Tongarir**	2.24	21	P	Pn	14 45 02.0	+1.4
MCHZ	**McNeill Hill**	2.35	42	P	Pb	14 45 09.7	+2.5

KATZ	**Kakaramea**	**2.36**	**20**	P	Pb	14 45 08.8	+1.3
LTZ	**Lake Taylor**	**2.38**	**227**	P	Pn	14 45 01.7	-0.7
RITZ	**Rihia Road**	**2.40**	**23**	P	Pb	14 45 09.2	+1.1
BKZ	**Black Stump Fm**	**2.47**	**35**	P	Pn	14 45 05.1	+1.4
RATZ	**Rangitukua**	**2.48**	**21**	P	Pb	14 45 11.5	+2.0
NMHZ	**Naumai**	**2.67**	**39**	P	Pb	14 45 14.3	+1.6
HIZ	**Hauiti**	**2.68**	**3**	P	Pb	14 45 10.3	-2.7
INZ	**Inchbonnie**	**2.84**	**236**	P	Pn	14 45 08.5	-0.2
OXZ	**Oxford**	**2.88**	**222**	P	Pn	14 45 08.3	-1.0
MQZ	**McQueen’s Vall**	**2.91**	**210**	P	Pn	14 45 07.2	-2.5
TLZ	**Tolley Road**	**2.94**	**14**	P	Pb	14 45 15.7	-1.7
AKCZ	**Akaroa Harbour**	**2.97**	**205**	P	Pn	14 45 09.1	-1.5
MHCZ	**Mount Hutt**	**3.27**	**223**	P	Pn	14 45 14.3	-0.3
WVZ	**Waitaha Valley**	**3.46**	**236**	P	Pn	14 45 17.2	-0.1
GCSZ	**Gaunt Creek Bo**	**3.85**	**235**	P	Pn	14 45 23.5	+0.9
TMZ	**Timaru**	**4.17**	**219**	P	Pn	14 45 26.3	-0.7
JCZ	**Jackson Bay**	**5.20**	**234**	P	Pn	14 45 39.9	-1.4

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*HVO **31** 14:49:48.6±1.4, 19°.37N±0°.01×155°.213W±0°.009, h3^{km}±4^{km}, ML2.8/23, ML2.1/46(NEIC), Error ellipse: s-maj=2.1km s-min=0.6km az=149.0*

NEIC 31 14:49:48.4±1.4**, 19°.33N**±0°.01×**155°.21W**±0°.01**, h13**^{km}±1^{km}**, Error ellipse: s-maj=2.2km s-min=1.1km az=156.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUH	**Pauahi**	**0.04**	**347**		Pg	14 49 50.2	-0.9
KNHH	**Kane Nui o Ham**	**0.06**	**37**		Pg	14 49 50.2	-1.0
KKO	**Keanakako`i**	**0.09**	**319**		Pg	14 49 51.9	+0.4
RIM	**Rim**	**0.09**	**314**		Pg	14 49 52.4	+0.8
STCH	**Steam Cracks**	**0.09**	**55**		Pg	14 49 51.1	-0.4
STCH	**Steam Cracks**	**0.09**	**55**	IAML		14 49 53.0	
	comp=E,2µm,0.6s						
STCH				IAML		14 49 53.3	
	comp=N,1µm,0.3s						
BYL	**Byron's Ledge**	**0.09**	**327**	IAML		14 49 51.8	
	comp=N,1µm,0.5s						
BYL	**Byron's Ledge**	**0.09**	**327**		Pg	14 49 52.1	+0.5
SDHHI	**Sand Hill**	**0.10**	**304**		Pg	14 49 51.0	-0.7
SDHHI	**Sand Hill**	**0.10**	**304**		Sg	14 49 53.0	-0.9
HLP	**Hilina Pali**	**0.10**	**249**		Pg	14 49 51.7	+0.1
HLP				IAML		14 49 54.2	
	comp=E,995nm,0.6s						
HLP	**Hilina Pali**	**0.10**	**249**		Sg	14 49 54.1	+0.3
HATHI	**Halema‘uma‘u T**	**0.10**	**330**		Pb	14 49 52.4	0.0
HATHI	**Halema‘uma‘u T**	**0.10**	**330**	IAML		14 49 52.4	
	comp=N,1µm,0.3s						
HATHI				IAML		14 49 52.4	
	comp=E,3µm,0.8s						
NPH	**North Pit**	**0.11**	**318**		Pg	14 49 50.3	-1.4
NPOC	**North of Pu‘u**	**0.11**	**56**		Pg	14 49 50.7	-1.0
NPOC				IAML		14 49 54.1	
	comp=N,1µm,0.7s						
JCUZ	**Jacuzzi**	**0.11**	**62**		Pg	14 49 51.6	-0.1
JCUZ	**Jacuzzi**	**0.11**	**62**	IAML		14 49 53.7	
	comp=E,1µm,1.0s						
JCUZ				IAML		14 49 53.8	
	comp=N,878nm,0.6s						
SBLHI	**Steaming Bluff**	**0.11**	**328**	IAML		14 49 52.8	
	comp=N,2µm,0.4s						
SBLHI	**Steaming Bluff**	**0.11**	**328**		Pb	14 49 52.5	0.0
OBL	**Observatory Le**	**0.11**	**319**		Pg	14 49 51.3	-0.5
OBL				IAML		14 49 52.8	
	comp=N,2µm,0.8s						
OBL				IAML		14 49 52.9	
	comp=E,2µm,0.8s						
UWB	**Uwekahuna B**	**0.11**	**323**		Pg	14 49 51.2	-0.6
WRMHI	**West Rim**	**0.12**	**310**		Pg	14 49 51.4	-0.5
UWE	**Uwekahuna**	**0.12**	**317**		Sg	14 49 53.3	-1.0
UWE	**Uwekahuna**	**0.12**	**317**	Pg	Pg	14 49 51.2	-0.7
UWE				IAML		14 49 51.7	
	comp=E,798nm,1.1s						
UWE				IAML		14 49 53.0	
	comp=N,2µm,1.1s						
RSD	**Rainshed**	**0.15**	**332**		Pg	14 49 51.6	-0.7
RSD				IAML		14 49 53.9	
	comp=E,1µm,1.1s						
HTC	**Hot Caves**	**0.20**	**242**		Pg	14 49 53.5	+0.5
HTC					Sb	14 49 57.5	-0.3
JOKA	**Jonika Flow**	**0.21**	**62**		Pg	14 49 53.1	-0.2
JOKA					Sg	14 49 55.5	-1.0
MLH	**Mauna Loa**	**0.23**	**313**		Pg	14 49 53.4	-0.2
MLH	**Mauna Loa**	**0.23**	**313**		Sg	14 49 57.4	+0.2
MLH	**Mauna Loa**	**0.23**	**313**	IAML		14 49 56.7	
	comp=N,378nm,2.7s						
MLH				IAML		14 49 57.2	
	comp=E,280nm,0.9s						
AIN	**Ainahou**	**0.24**	**279**		Pg	14 49 53.9	+0.1
AIN					Sb	14 49 58.2	-0.7
AIN	**Ainahou**	**0.24**	**279**	IAML		14 50 01.3	
	comp=E,284nm,0.4s						
AIN				IAML		14 50 01.3	
	comp=N,491nm,0.5s						
HMH	**Humu‘ula Sheep**	**0.38**	**316**	Pg	Pg	14 49 54.9	-1.2
HMH				IAML		14 50 03.5	
	comp=N,164nm,0.9s						
KHU	**Kahuku**	**0.40**	**258**		Pg	14 49 56.8	+0.3
KHU					Sb	14 50 03.3	-0.2
KHU	**Kahuku**	**0.40**	**258**	IAML		14 50 03.7	
	comp=N,197nm,0.7s						
KHU				IAML		14 50 05.8	
	comp=E,324nm,4.3s						
MWH	**Moku‘aweowe**	**0.40**	**292**	Pg	Pg	14 49 56.2	-0.4
MWH				IAML		14 50 01.6	
	comp=N,196nm,1.7s						
MLOA	**Mauna Loa Obse**	**0.40**	**300**	Pg	Pg	14 49 56.3	-0.4
MLOA				IAML		14 49 59.6	
	comp=N,231nm,3.8s						
MLOA				IAML		14 50 06.2	
	comp=E,163nm,1.6s						
ALEP	**Alea Permanent**	**0.46**	**297**		Pg	14 49 57.8	0.0
POHA	**Pohakuloa**	**0.52**	**324**	Pg	Pg	14 49 57.9	-0.9
POHA				IAML		14 50 09.5	
	comp=E,150nm,1.3s						
POHA				IAML		14 50 11.1	
	comp=E,216nm,0.9s						
CPH	**Captain Cook**	**0.69**	**283**		Pg	14 50 01.2	-0.7
KHLU	**Kahalu`u**	**0.70**	**292**		Pg	14 50 01.5	-0.6

IDC 31 14:53:22.0±3.1**, 5°.62S**×**154°.83E, h0**^{km}**, mb3.2**/3**, mbtmp3.3**/4**, ML3.0**/1**, Error ellipse: s-maj=56.2km s-min=36.7km az=71.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.08**	**295**	Pn	Pn	14 54 13.1	+1.1
	1.9nm,0.3s,baz=305,slow=4.5,SNR=11						
KRVT				Sn	Sn	14 54 50.6	+1.1
	4.1nm,0.3s,baz=188,slow=19,SNR=2.2						
	6.7nm,0.2s						
WRA	**Warramunga Arr**	**24.48**	**233**	P	P	14 58 43.1	0.0
	0.5nm,0.8s,baz=54,slow=9.6,SNR=5.5						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**26.98**	**226**	P	P	14 59 05.5	-0.2
	0.6nm,1.1s,baz=53,slow=9.4,SNR=2.5						
	0.6nm,1.1s						
MKAR	**Makanchi Array**	**82.27**	**319**	P	P	15 05 45.2	-0.3
	0.1nm,0.5s,baz=93,slow=6.1,SNR=1.5						
	0.1nm,0.5s						

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*IDC **31** 15:12:37.4±1.8, 36°.86N×21°.46E, h0^{km}, mb3.7/7, mbtmp3.6/11, ML3.4/3, Error ellipse: s-maj=38.5km s-min=20.0km az=42.0*

*ATH **31** 15:12:40.9, 36°.67N×21°.26E, h4^{km}±1^{km}, ML3.4/5, Error ellipse: s-maj=2.7km s-min=0.9km az=28.0*

*THE **31** 15:12:41.2, 36°.69N×21°.32E, h2^{km}±1^{km}, ML3.4/10, Error ellipse: s-maj=1.4km s-min=0.8km az=25.0*

ISC 31 15:12:38.5±1.4**, 36°.64N**±0°.04×**21°.20E**±0°.04**, h15**^{km}±8^{km}**, n64, σ1^{s}.10**/82**, mb3.8**/8**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.50**	**59**	P	**Pb**	**15 12 49.8**	**+0.8**
PYL				S	**Sg**	**15 12 54.5**	**-0.8**
	8µm,0.5s						
PYL	**PYLOS**	**0.50**	**59**	P	**Pb**	**15 12 49.5**	**+0.5**
PYL				S	**Sg**	**15 12 55.4**	**+0.1**
PYL				AML	AML	15 12 56.7	
	comp=E,21045µm,0.5s						
PYL				AML	AML	15 12 59.6	
	comp=N,12661µm,0.5s						
ITM	**Ithomi**	**0.79**	**47**	P	**Pb**	**15 12 54.4**	**+0.5**
ITM				S	**Sg**	**15 13 03.8**	**-0.6**
	comp=N,5µm,0.4s						
ITM	**Ithomi**	**0.79**	**47**	P	**Pb**	**15 12 54.5**	**+0.5**
ITM				S	**Sg**	**15 13 04.6**	**+0.2**
ITM				AML	AML	15 13 06.0	
	comp=N,11111µm,0.3s						
ITM				AML	AML	15 13 06.5	
	comp=E,9959µm,0.5s						
LTHK	**Lithakia**	**1.11**	**345**	P	**Pn**	**15 13 01.1**	**+1.7**
LTHK				S	**Sn**	**15 13 17.4**	**+3.0**
	comp=E,1µm,0.5s						
LTHK	**Lithakia**	**1.11**	**345**	P	**Pn**	**15 13 01.0**	**+1.6**
LTHK				S	**Sn**	**15 13 16.7**	**+2.3**
LTHK				AML	AML	15 13 26.7	
	comp=N,1740µm,0.3s						
LTHK				AML	AML	15 13 28.2	
	comp=E,1638µm,0.5s						
DRO	**Drossia**	**1.37**	**17**	P	**Pg**	**15 13 04.7**	**-0.2**
DRO				S	**Sg**	**15 13 25.0**	**+2.2**
	comp=E,2µm,0.6s						
DRO	**Drossia**	**1.37**	**17**	P	**Pg**	**15 13 05.4**	**+0.4**
DRO				S	**Sg**	**15 13 23.7**	**+0.8**
VLI	**Veliai**	**1.40**	**86**	P	**Pg**	**15 13 05.7**	**+0.4**
VLI				S	**Sg**	**15 13 24.7**	**+1.2**
	comp=E,1µm,0.6s						
VLI	**Veliai**	**1.40**	**86**	P	**Pg**	**15 13 05.8**	**+0.4**
VLI				S	**Sg**	**15 13 24.3**	**+0.7**
VLI				AML	AML	15 13 31.6	
	comp=N,2552µm,0.5s						
VLI				AML	AML	15 13 35.9	
	comp=E,2024µm,0.8s						
RLS	**Riolos of Patr**	**1.43**	**8**	P	**Pg**	**15 13 06.3**	**+0.2**
RLS				S	**Sg**	**15 13 25.8**	**+1.1**
	comp=E,680nm,0.8s						
RLS	**Riolos of Patr**	**1.43**	**8**	P	**Pg**	**15 13 06.2**	**+0.1**
MNVA	**Monemvasia**	**1.48**	**88**	P	**Pg**	**15 13 07.0**	**+0.2**
KTHA	**Kythira Island**	**1.55**	**104**	P	**Pg**	**15 13 08.3**	**+0.1**
KTHA				S	**Sg**	**15 13 28.4**	**+0.1**
	comp=E,2µm,0.6s						
KTHA	**Kythira Island**	**1.55**	**104**	P	**Pg**	**15 13 08.2**	**-0.1**
KTHA				S	**Sb**	**15 13 27.3**	**+1.1**
KTHA				AML	AML	15 13 36.9	
	comp=N,2076µm,0.6s						
KTHA				AML	AML	15 13 40.1	
	comp=E,4529µm,0.7s						
PSDA	**Pessada-Kefalo**	**1.55**	**342**	P	**Pg**	**15 13 08.3**	**-0.1**
PSDA	**Pessada-Kefalo**	**1.55**	**342**	P	**Pg**	**15 13 08.2**	**-0.1**
GUR	**Goura**	**1.58**	**35**	P	**Pb**	**15 13 07.8**	**+0.3**
GUR				S	**Sg**	**15 13 29.8**	**+0.3**
	comp=E,2µm,0.7s						
GUR	**Goura**	**1.58**	**35**	P	**Pb**	**15 13 08.1**	**+0.7**
KLV	**Kalavryta, Ach**	**1.59**	**28**	P	**Pb**	**15 13 08.1**	**+0.5**
KLV				S	**Sg**	**15 13 29.4**	**-0.5**
	comp=E,510nm,0.7s						
KLV	**Kalavryta, Ach**	**1.59**	**28**	P	**Pg**	**15 13 08.4**	**-0.7**
VLS	**Valsamata**	**1.61**	**343**	P	**Pg**	**15 13 09.3**	**-0.2**
VLS	**Valsamata**	**1.61**	**343**	P	**Pg**	**15 13 09.0**	**-0.5**
VLS				S	**Sg**	**15 13 30.0**	**-0.4**
LAKA	**Lakka**	**1.71**	**21**	P	**Pb**	**15 13 09.8**	**+0.1**
LAKA	**Lakka**	**1.71**	**21**	P	**Pb**	**15 13 09.9**	**+0.2**
KRND	**KRANIDI**	**1.73**	**64**	P	**Pn**	**15 13 08.9**	**+1.0**
KRND				S	**Sb**	**15 13 32.1**	**+0.8**
	comp=E,1µm,0.7s						
THAL	**Thalero**	**1.82**	**39**	P	**Pb**	**15 13 11.1**	**-0.3**
ANKY	**Antikythira Is**	**1.86**	**114**	P	**Pb**	**15 13 12.4**	**+0.2**
ANKY	**Antikythira Is**	**1.86**	**114**	P	**Pb**	**15 13 11.9**	**-0.2**
EFP	**Efpalio**	**1.87**	**17**	P	**Pb**	**15 13 13.0**	**+0.7**
EFP	**Efpalio**	**1.87**	**17**	P	**Pb**	**15 13 12.5**	**+0.2**
FSK	**Fiskardo**	**1.89**	**345**	P	**Pb**	**15 13 13.3**	**+0.7**
SERG	**Sergoula**	**1.90**	**21**	P	**Pb**	**15 13 13.2**	**+0.4**
SERG	**Sergoula**	**1.90**	**21**	P	**Pb**	**15 13 13.2**	**+0.4**
LOUT	**Loutraki**	**1.95**	**46**	P	**Pn**	**15 13 12.3**	**+1.3**
PVO	**Paravola**	**1.99**	**7**	P	**Pb**	**15 13 14.1**	**-0.3**
EVGI	**Lefkada island**	**2.03**	**348**	P	**Pg**	**15 13 16.2**	**-1.2**
EVGI	**Lefkada island**	**2.03**	**348**	P	**Pb**	**15 13 14.9**	**-0.1**
ANX	**Ano Chora**	**2.03**	**16**	P	**Pb**	**15 13 15.7**	**+0.5**
ANX	**Ano Chora**	**2.03**	**16**	P	**Pb**	**15 13 15.2**	**+0.1**
NYDR	**Nydri-Lefkada**	**2.11**	**349**	P	**Pb**	**15 13 17.0**	**+0.6**
LKD2	**Lefkada island**	**2.19**	**349**	P	**Pb**	**15 13 17.5**	**-0.3**
TSLK	**Tsoukalades, L**	**2.23**	**349**	P	**Pb**	**15 13 17.8**	**-0.5**
EVR	**Evrytania**	**2.32**	**12**	P	**Pb**	**15 13 19.2**	**-0.9**
AXAR	**Agios Charalam**	**2.42**	**28**	P	**Pb**	**15 13 20.2**	**-1.5**
MAKR	**Makrakomi, Fth**	**2.48**	**17**	P	**Pb**	**15 13 21.3**	**-1.5**
AGG	**Agios Georgios**	**2.54**	**20**	P	**Pb**	**15 13 21.9**	**-1.9**
AGG	**Agios Georgios**	**2.54**	**20**	P	**Pb**	**15 13 21.9**	**-1.9**
IGT	**Igoumenitsa**	**2.97**	**347**	P	**Pn**	**15 13 27.3**	**+2.3**
IDI	**Anoyia**	**3.28**	**113**	Pn	**Pn**	**15 13 30.5**	**+1.2**
	comp=E,0.5nm,0.3s,baz=338,slow=11,SNR=1.9						
	comp=E,13nm,0.9s						
SCTE	**Santa Cesarea**	**4.05**	**329**	P	**Pn**	**15 13 41.9**	**+2.1**
BRTR	**Keskin Array B**	**10.26**	**69**	Pn	**Pn**	**15 15 05.0**	**-0.3**
	comp=E,0.6nm,0.7s,baz=254,slow=12,SNR=1.6						
MMAI	**Mount Meron Ar**	**12.21**	**103**	Pn	**Pn**	**15 15 31.6**	**-0.3**
	comp=E,0.4nm,0.3s,baz=294,slow=11,SNR=2.6						
	comp=E,3.3nm,0.9s						
AKASG	**Malin Array Be**	**15.19**	**20**	Pn	**Pn**	**15 16 08.1**	**-4.2**
	comp=E,0.6nm,0.3s,baz=205,slow=12,SNR=1.4						
	comp=E,0.2nm,0.3s						
HFS	**Hagfors**	**24.00**	**351**	P	**P**	**15 17 51.3**	**-1.0**
	comp=E,1.8nm,0.6s,baz=164,slow=12,SNR=14						
	comp=E,1.8nm,0.6s						
BELG	**Belogornoye**	**24.36**	**41**	P	**P**	**15 17 54.5**	**-1.2**
	comp=E,33nm,0.8s,baz=331,slow=2.6,SNR=6.4						
EKA	**Eskdalemuir Ar**	**25.00**	**326**	P	**P**	**15 18 03.5**	**+2.1**
	comp=E,0.8nm,0.6s,baz=127,slow=11,SNR=1.8						
	comp=E,0.8nm,0.6s						
FINES	**FINESS Array B**	**25.02**	**6**	P	**P**	**15 18 01.2**	**-0.3**
	comp=E,1.3nm,0.6s,baz=169,slow=11,SNR=11						
	comp=E,1.3nm,0.6s						
NB2	**NORSAR Subarra**	**25.23**	**349**	P	**P**	**15 18 03.3**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=156,slow=9.3						
NOA	**NORSAR Array B**	**25.23**	**349**	P	**P**	**15 18 03.0**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=158,slow=9.1,SNR=7.3						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**45.66**	**57**	P	**P**	**15 20 57.0**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=271,slow=7.6,SNR=7.2						
MKAR				PcP	**PcP**	**15 22 36.6**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=273,slow=3.5,SNR=1.8						
	comp=Z,0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**46.33**	**47**	P	**P**	**15 21 02.0**	**-1.5**
	comp=Z,0.9nm,0.5s,baz=276,slow=8.0,SNR=5.2						
	comp=Z,0.9nm,0.5s						
CMAR	**Chiang Mai Arr**	**69.57**	**82**	P	**P**	**15 23 46.2**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=300,slow=7.7,SNR=4.4						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**121.45**	**97**	PKP	**PKPdf**	**15 31 31.8**	**+0.3**
	comp=Z,0.3nm,0.9s,baz=304,slow=1.8,SNR=2.3						

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*NEIC **31** 15:14:40.5±2.0, 18°.1S±0°.1×178°.2W±0°.1, h482^{km}±8^{km}, mb4.2/27, Error ellipse: s-maj=18.0km s-min=15.7km az=188.0*

*IDC **31** 15:14:42.5±1.4, 18°.20S×178°.09W, h512^{km}±12^{km}, mb3.4/17, mbtmp4.2/18, Error ellipse: s-maj=21.4km s-min=14.0km az=121.0*

ISC 31 15:14:41.1±0.5**, 18°.01S**±0°.09×**178°.02W**±0°.07**, h500**^{km}**, n79, σ1^{s}.49**/82**, mb4.0**/30**, 9C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.75**	**274**	P	**P**	**15 16 00.1**	**+2.5**
	66nm,0.7s,baz=116,slow=8.3,SNR=36						
MSVF				S	**S**	**15 17 03.3**	**+3.3**
	13nm,0.8s,baz=118,slow=22,SNR=7.4						
AFI	**Afiamalu**	**7.26**	**57**	P	**P**	**15 16 29.3**	**-0.7**
	13nm,0.5s,baz=8.6,slow=11,SNR=9.1						
AFI				S	**S**	**15 17 53.3**	**-5.9**
	9.9nm,0.4s,baz=198,slow=23,SNR=1.5						
AFI	**Afiamalu**	**7.26**	**57**	P	**P**	**15 16 29.2**	**-0.8**
NIUE	**Niue**	**7.75**	**99**	P	**P**	**15 16 37.3**	**+2.3**
FUNA	**Funafuti**	**9.81**	**344**	P	**P**	**15 16 56.7**	**+0.1**
DZM	**Mont Dzumac**	**15.14**	**252**	P	**P**	**15 17 50.0**	**-2.9**
	4.5nm,1.0s,baz=126,slow=19,SNR=2.1						
KOUNC	**Koumac, New Ca**	**16.89**	**259**	P	**P**	**15 18 06.9**	**-4.2**
KOUNC				IAmb	IAmb	15 18 16.7	
	comp=Z,6.9nm,0.8s						
URZ	**Urewera**	**20.62**	**191**	P	**P**	**15 18 43.1**	**-2.1**
	comp=Z,5.3nm,0.6s,baz=95,slow=3.8,SNR=6.9						
	comp=Z,5.3nm,0.6s						
BFZ	**Birch Farm**	**23.13**	**191**	P	**P**	**15 19 06.0**	**-1.8**
MRZ	**Mangatainoka R**	**23.24**	**192**	P	**P**	**15 19 06.8**	**-1.9**
MRZ				IAmb	IAmb	15 19 11.3	
	comp=Z,8.0nm,1.2s						
CTAO	**Charters Tower**	**33.79**	**261**	P	**P**	**15 20 40.5**	**-0.6**
CTAO				IAmb	IAmb	15 20 41.4	
	comp=Z,6.9nm,0.8s						
PMG	**Port Moresby**	**34.84**	**280**	P	**P**	**15 20 50.8**	**+0.9**
PMG				IAmb	IAmb	15 21 10.5	
	comp=Z,13nm,1.1s						
STKA	**Stephens Creek**	**38.91**	**241**	P	**P**	**15 21 22.3**	**-0.9**
	comp=Z,2.1nm,0.5s,baz=86,slow=10,SNR=7.0						
	comp=Z,2.1nm,0.5s						
STKA	**Stephens Creek**	**38.91**	**241**	P	**P**	**15 21 23.7**	**+0.5**
BBOO	**Buckleboo**	**43.68**	**241**	P	**P**	**15 22 00.5**	**-0.6**
BBOO				IAmb	IAmb	15 22 04.8	
	comp=Z,6.6nm,0.9s						
WB0	**Warramunga Arr**	**44.94**	**260**	P	**P**	**15 22 09.0**	**-2.1**
WB0				IAmb	IAmb	15 22 12.9	
	comp=Z,5.2nm,1.0s						
WB2	**Warramunga Arr**	**44.97**	**260**	P	**P**	**15 22 09.6**	**-1.7**
WB2				IAmb	IAmb	15 22 13.5	
	comp=Z,4.2nm,0.7s						
WRA	**Warramunga Arr**	**44.98**	**260**	P	**P**	**15 22 10.3**	**-1.1**
	comp=Z,1.7nm,0.3s,baz=96,slow=7.1,SNR=64						
WRA				PcP	**pP**	**15 23 43.0**	**-1.0**
	comp=Z,1.1nm,0.8s,baz=92,slow=2.8,SNR=5.0						
	comp=Z,1.7nm,0.3s						
WRA	**Warramunga Arr**	**44.98**	**260**	P	**P**	**15 22 09.8**	**-1.6**
AS31	**Alice Springs**	**45.12**	**254**	P	**P**	**15 22 12.0**	**-0.5**
AS31				IAmb	IAmb	15 22 12.8	
	comp=Z,6.7nm,0.7s						
ASAR	**Alice Springs**	**45.12**	**254**	P	**P**	**15 22 12.2**	**-0.3**
	comp=Z,17nm,0.5s,baz=89,slow=8.1,SNR=843						
ASAR				PcP	**pP**	**15 23 43.4**	**-1.4**
	comp=Z,0.8nm,0.5s,baz=102,slow=4.0,SNR=5.1						
	comp=Z,17nm,0.5s						
ASAR	**Alice Springs**	**45.12**	**254**	P	**P**	**15 22 12.1**	**-0.4**
MTN	**Manton Dam**	**49.16**	**268**	P	**P**	**15 22 42.3**	**-0.8**
MTN				IAmb	IAmb	15 22 43.7	
	comp=Z,15nm,1.1s						
FORT	**Forrest**	**50.30**	**245**	P	**P**	**15 22 49.9**	**-1.3**
KNRA	**Kununurra**	**50.84**	**264**	P	**P**	**15 22 54.3**	**-1.1**
FAKI	**Fak Fak**	**50.96**	**281**	P	**P**	**15 22 55.5**	**-0.8**
FITZ	**Fitzroy Crossi**	**53.38**	**261**	P	**P**	**15 23 13.2**	**-0.4**
SOEI	**Soe**	**56.44**	**270**	P	**P**	**15 23 35.7**	**+0.4**
SOEI				IAmb	IAmb	15 23 37.4	
	comp=Z,14nm,0.7s						
PSA00	**Pilbara Seismi**	**58.24**	**255**	P	**P**	**15 23 46.1**	**-1.3**
PSA00				IAmb	IAmb	15 24 03.0	
	comp=Z,8.9nm,0.9s						
MBWA	**Marble Bar**	**58.41**	**256**	P	**P**	**15 23 47.1**	**-1.4**
MBWA				IAmb	IAmb	15 23 48.9	
	comp=Z,9.5nm,0.9s						
JGF	**Kuroka**	**68.04**	**322**	P	**P**	**15 24 50.8**	**+0.5**
JGF				IAmb	IAmb	15 25 03.6	
	comp=Z,10nm,1.1s						
MJAR	**Matsushiro Arr**	**68.21**	**323**	P	**P**	**15 24 51.1**	**-0.2**
	comp=Z,3.6nm,0.7s,baz=154,slow=6.5,SNR=8.4						
	comp=Z,3.6nm,0.7s						
MAJO	**Matsushiro**	**68.21**	**323**	P	**P**	**15 24 51.4**	**+0.2**
MAJO				IAmb	IAmb	15 25 01.5	
	comp=Z,9.4nm,1.1s						
UGM	**Wanagama**	**70.01**	**268**	P	**P**	**15 25 02.1**	**-0.5**
JHS	**Saijyo**	**70.21**	**319**	P	**P**	**15 25 04.3**	**+1.0**
JKA	**Kamikawa-asahi**	**71.54**	**331**	P	**P**	**15 25 11.7**	**+0.7**
ASAJ	**Asahikawa**	**71.54**	**331**	P	**P**	**15 25 12.8**	**+1.9**
	comp=Z,1.1nm,0.4s,baz=234,slow=6.8,SNR=8.3						
	comp=Z,1.1nm,0.4s						
QSPA	**South Pole Qui**	**72.05**	**180**	P	**P**	**15 25 15.2**	**+1.4**
PEA0B	**Petropavlovsk-**	**73.87**	**345**	P	**P**	**15 25 24.1**	**-0.1**
PEA0B				IAmb	IAmb	15 25 36.7	
	comp=Z,5.1nm,1.0s						
PETK	**Petropavlovsk-**	**73.87**	**345**	P	**P**	**15 25 24.4**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=136,slow=6.7,SNR=8.4						
	comp=Z,1.8nm,0.7s						
PETK	**Petropavlovsk-**	**73.87**	**345**	P	**P**	**15 25 23.3**	**-0.8**
KSRS	**Korea Array**	**75.02**	**318**	P	**P**	**15 25 32.4**	**+1.4**
	comp=Z,1.5nm,0.7s,baz=127,slow=6.4,SNR=5.8						
	comp=Z,1.5nm,0.7s						
USRK	**Ussuriysk Ar.**	**76.91**	**326**	P	**P**	**15 25 42.2**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=141,slow=4.2,SNR=2.1						
	comp=Z,1.1nm,0.6s						
NVAR	**Mina Array Bea**	**79.24**	**44**	P	**P**	**15 25 56.1**	**+1.8**
	comp=Z,0.6nm,0.6s,baz=248,slow=9.6,SNR=2.0						
	comp=Z,0.6nm,0.6s						
KLR	**Kul'dur**	**80.39**	**329**	P	**P**	**15 26 02.8**	**+3.0**
	comp=Z,0.6nm,0.5s,baz=191,slow=4.8,SNR=3.8						
	comp=Z,0.6nm,0.5s						
BELA	**Belgrano 2**	**82.02**	**173**	P	**P**	**15 26 09.6**	**+1.7**
SEY	**Seymchan**	**83.96**	**347**	P	**P**	**15 26 18.0**	**+0.4**
	comp=Z,2.3nm,0.5s,baz=148,slow=6.8,SNR=34						
	comp=Z,2.3nm,0.5s						
TXAR	**Lajitas Array**	**85.74**	**57**	P	**P**	**15 26 30.1**	**+2.8**
	comp=Z,0.6nm,0.9s,baz=215,slow=4.1,SNR=4.2						
	comp=Z,0.6nm,0.9s						
ILAR	**Eielson Array**	**85.90**	**13**	P	**P**	**15 26 26.8**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=220,slow=5.6,SNR=28						
	comp=Z,0.6nm,0.4s						
PDAR	**Pinedale Array**	**87.17**	**43**	P	**P**	**15 26 35.5**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=207,slow=0.7,SNR=3.5						
	comp=Z,0.4nm,0.6s						
INK	**Inuvik**	**91.89**	**15**	P	**P**	**15 26 54.2**	**-0.7**
	comp=Z,1.1nm,0.9s,baz=206,slow=4.3,SNR=2.8						
	comp=Z,1.1nm,0.9s						
MTO3	**Montecristo**	**93.12**	**76**	P	**P**	**15 27 00.6**	**-1.4**
YKA	**Yellowknife Ar**	**94.27**	**25**	P	**P**	**15 27 06.2**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=246,slow=4.4,SNR=5.9						
	comp=Z,0.3nm,0.6s						
LNXT	**Lenox**	**99.24**	**55**		pwP	15 29 26.3	+2.6
MKAR	**Makanchi Array**	**109.47**	**314**	PKiKP	**PKiKP**	**15 32 14.4**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=208,slow=1.4,SNR=9.2						
AKASG	**Malin Array Be**	**140.82**	**333**	PKP	**PKPdf**	**15 33 13.2**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=30,slow=2.3,SNR=2.5						
VASR	**Vaslui**	**144.38**	**329**	⇑P	**PKPab**	**15 33 21.4**	**+1.4**
BUR08	**Bucovina Ar. S**	**144.86**	**332**	PKPdf	**PKiKP**	**15 33 23.2**	**-1.7**
BURAR	**Bucovina Array**	**144.87**	**332**	⇑P	**PKiKP**	**15 33 23.8**	**-1.1**
BURAR	**Bucovina Array**	**144.87**	**332**	PKPdf	**PKiKP**	**15 33 23.1**	**-1.8**
BRTR	**Keskin Array B**	**145.11**	**315**	PKPbc	**PKPab**	**15 33 23.3**	**0.0**
	comp=Z,3.2nm,0.6s,baz=111,slow=3.7,SNR=16						
BRTR	**Keskin Array B**	**145.11**	**315**	PKPdf	**PKPab**	**15 33 23.1**	**-0.2**
TPGR	**Topolog**	**145.29**	**326**	⇑P	**PKPab**	**15 33 22.7**	**-0.9**
TRPA	**Tarpa**	**145.59**	**335**	⇑P	**PKPab**	**15 33 24.3**	**-0.3**
CLL	**Collm**	**145.64**	**348**	*i* PKPbc	**PKPab**	**15 33 24.4**	**-0.3**
	comp=Z,5.0nm,0.5s						
DOPR	**Dopca**	**146.03**	**330**	⇑P	**PKiKP**	**15 33 26.6**	**-0.7**
MARR	**Marisel-Cluj**	**146.51**	**333**	⇑P	**PKiKP**	**15 33 27.7**	**-0.6**
DRGR		**146.59**	**334**	⇑P	**PKiKP**	**15 33 27.6**	**-0.8**
ARR	**Arges**	**146.83**	**330**	⇑P	**PKPab**	**15 33 29.1**	**-0.6**
SURR	**Surduc**	**147.66**	**333**	⇑P	**PKiKP**	**15 33 30.2**	**-0.3**
GERES	**GERESS Array B**	**147.80**	**345**	PKPbc	**PKiKP**	**15 33 30.3**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=18,slow=1.7,SNR=13						
CONA	**Conrad Observa**	**148.07**	**342**	*i* PKP	**PKiKP**	**15 33 31.9**	**+0.5**
	comp=Z,4.0nm,0.9s						
RONA	**Rosalia, Austr**	**148.15**	**342**	*e*PKP	**PKiKP**	**15 33 32.0**	**+0.4**
	comp=Z,3.2nm,0.6s						
HERR	**Herculane**	**148.22**	**332**	⇓P	**PKiKP**	**15 33 31.6**	**-0.1**
SOKA	**Soboth**	**149.44**	**342**	*i* PKP	**PKiKP**	**15 33 34.5**	**+0.1**
	comp=Z,3.9nm,1.2s						
KBA	**Koelnbreinsper**	**149.54**	**345**	*i* PKP	**PKiKP**	**15 33 34.4**	**-0.2**
	comp=Z,2.1nm,0.7s						
SQTA	**Sankt Quirin**	**149.89**	**347**	*i* PKP	**PKiKP**	**15 33 35.9**	**+0.6**
	comp=Z,1.9nm,0.6s						
ABTA	**Abfaltersbach**	**150.05**	**345**	*i* PKP	**PKiKP**	**15 33 35.6**	**0.0**
	comp=Z,5.8nm,0.9s						
FETA	**Feichten**	**150.18**	**348**	*i* PKP	**PKiKP**	**15 33 36.7**	**+0.7**
	comp=Z,4.3nm,1.0s						

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*IDC **31** 15:29:18.9±3.9, 5°.63S×152°.18E, h55^{km}±27^{km}, mb3.2/4, mbtmp3.6/5, ML1.8/1, Error ellipse: s-maj=63.3km s-min=14.8km az=109.0*

ISC 31 15:29:16.7±1.6**, 5°.68S**±0°.10×**152°.4E**±0°.2**, h40**^{km}**, n7, σ0^{s}.87**/8**, mb3.4**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.41**	**346**	P	**Pn**	**15 29 40.0**	**+0.2**
	1µm,0.3s,baz=248,slow=1.5,SNR=991						
KRVT				S	**Sn**	**15 29 57.8**	**+0.6**
	3µm,0.4s,baz=77,slow=22,SNR=9.8						
PMG	**Port Moresby**	**6.35**	**234**	P	**Pn**	**15 30 48.3**	**+0.5**
	1.5nm,0.3s,baz=76,slow=20,SNR=2.6						
	5.7nm,0.4s						
WRA	**Warramunga Arr**	**22.55**	**229**	P	**P**	**15 34 13.4**	**-0.1**
	0.4nm,0.4s,baz=52,slow=9.9,SNR=4.0						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**25.21**	**223**	P	**P**	**15 34 39.1**	**+0.2**
	1.1nm,0.7s,baz=57,slow=9.0,SNR=21						
	1.1nm,0.7s						

MKAR	**Makanchi Array**	**80.70**	**319**	P	**P**	**15 41 24.2**	**-1.5**
	0.2nm,0.6s,baz=95,slow=6.1,SNR=1.7						
	0.2nm,0.6s						
ILAR	**Eielson Array**	**83.13**	**22**	P	**P**	**15 41 39.0**	**+0.8**
	0.5nm,0.8s,baz=230,slow=4.9,SNR=5.0						
	0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**150.16**	**287**	PKPbc	**PKPbc**	**15 49 04.2**	**-0.2**
	1.9nm,0.8s,baz=67,slow=2.6,SNR=8.1						

IDC 31 15:29:20.7±1.2,**55°.17S**×**28°.19W**,**h0^{km}**,**mb3.9**/1,
mbtmp3.9/2,**ML4.1**/1,**Error ellipse: s-maj=69.8km s-min=27.5km az=90.0,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**19.78**	**156**	P	P	15 33 52.0	-0.1
	0.6nm,0.3s,baz=310,slow=10,SNR=14						
	1.8nm,0.4s						
QSPA	**South Pole Qui**	**35.08**	**180**	P	P	15 36 15.3	0.0
	1.1nm,0.7s,baz=193,slow=4.2,SNR=8.9						
	1.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**72.58**	**31**	P	P	15 40 49.6	+0.1
	1.1nm,0.8s,baz=190,slow=5.9,SNR=6.1						
ILAR	**Eielson Array**	**149.10**	**313**	PKPbc	PKPbc	15 49 08.8	-0.6
	1.7nm,0.8s,baz=118,slow=1.9,SNR=14						
SONM	**Songino Array**	**151.24**	**86**	PKPbc	PKPbc	15 49 15.0	-0.2
	0.6nm,0.6s,baz=212,slow=1.8,SNR=4.7						

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*AUST **31** 16:04:12.9±0.5,33°.08S×121°.12E,h10^{km},Error ellipse: s-maj=7.1km s-min=3.8km az=154.0*

*NOU **31** 16:04:13.0,33°.22S×121°.24E,h0^{km},MLv4.3/11,Western Australia*

ISC 31 16:04:11.9±1.0,**33°.10S**±0°.06×**121°.13E**±0°.05,**h10^{km},n24,** σ**2^{s}63**/35,**1D,Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMBL	**Kambalda**	**1.84**	**20**	⇓P	**Pn**	**16 04 45.1**	**+1.5**
	baz=1.8						
KMBL				S	**Sb**	**16 05 10.0**	**+1.3**
	baz=1.8						
KMBL	**Kambalda**	**1.84**	**20**	P	**Pb**	**16 04 47.2**	**+1.6**
AUKAL	**John Paul Coll**	**2.35**	**7**	P	**Pb**	**16 04 55.5**	**+1.2**
	baz=2.3						
AUKAL				S	**Sn**	**16 05 20.1**	**+0.7**
	baz=2.3						
KLBR	**Kellerberrin**	**3.23**	**297**	P	**Pn**	**16 05 02.7**	**+0.1**
	baz=3.2						
KLBR				S	**Sn**	**16 05 42.9**	**+1.8**
	baz=3.2						
KLBR	**Kellerberrin**	**3.23**	**297**	P	**Pb**	**16 05 07.9**	**-1.4**
NWAO	**Narrogin (SRO)**	**3.28**	**272**	P	**Pn**	**16 05 05.4**	**+2.0**
	baz=3.3						
NWAO				P	**Pn**	**16 05 05.4**	**+2.0**
	baz=3.3						
NWAO	**Narrogin (SRO)**	**3.28**	**272**	P	**Pn**	**16 05 06.2**	**+2.9**
NWAO	**Narrogin (SRO)**	**3.28**	**272**	P	**Pn**	**16 05 05.4**	**+2.0**
RKGY	**Rocky Gully**	**3.77**	**245**	P	**Pn**	**16 05 12.7**	**+2.6**
	baz=3.8						
RKGY				S	**Sn**	**16 05 55.7**	**+1.1**
	baz=3.8						
RKGY	**Rocky Gully**	**3.77**	**245**	P	**Pn**	**16 05 13.4**	**+3.3**
MUN	**Mundaring**	**4.30**	**284**	P	**Pn**	**16 05 18.5**	**+1.0**
	baz=4.3						
MUN				S	**Sn**	**16 06 05.6**	**-2.2**
	baz=4.3						
MUN	**Mundaring**	**4.30**	**284**	P	**Pn**	**16 05 22.0**	**+4.5**
BLDU	**Ballidu**	**4.50**	**302**	P	**Pn**	**16 05 21.1**	**+0.9**
	baz=4.5						
BLDU				S	**Sn**	**16 06 09.8**	**-2.8**
	baz=4.5						
BLDU	**Ballidu**	**4.50**	**302**	P	**Pn**	**16 05 24.4**	**+4.2**
AUBUS	**Georgiana Moll**	**4.84**	**262**	P	**Pn**	**16 05 24.0**	**-0.9**
	baz=4.8						
MORW	**Morawa**	**5.93**	**311**	P	**Pn**	**16 05 40.5**	**+0.7**
	baz=5.9						
MORW				S	**Sn**	**16 06 45.1**	**-2.7**
	baz=5.9						
MORW	**Morawa**	**5.93**	**311**	P	**Pn**	**16 05 43.4**	**+3.6**
FORT	**Forrest**	**6.33**	**70**	P	**Pn**	**16 05 46.9**	**+1.7**
	baz=6.3						
FORT				S	**Sn**	**16 06 56.1**	**-1.4**
	baz=6.3						
FORT	**Forrest**	**6.33**	**70**	P	**Pn**	**16 05 47.0**	**+1.8**
WRKA	**Warakurna**	**10.18**	**40**	P	**Pn**	**16 06 38.5**	**+0.3**
	baz=10						
WRKA				S	**Sn**	**16 08 25.7**	**-6.8**
	baz=10						
WRKA	**Warakurna**	**10.18**	**40**	P	**Pn**	**16 06 40.3**	**+2.1**
MULG	**Mulgathing**	**11.36**	**79**	P	**Pn**	**16 06 55.4**	**+1.1**
	baz=11						
MULG				S	**Sn**	**16 08 55.7**	**-5.7**
	baz=11						
MULG	**Mulgathing**	**11.36**	**79**	P	**Pn**	**16 06 55.6**	**+1.3**
OOD	**Oodnadatta**	**13.62**	**71**	P	**Pn**	**16 07 24.5**	**-0.6**
	baz=14						
OOD				S	Sn	16 09 49.1	-7.5
	baz=14						

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*IDC **31** 16:08:47.6±0.9,9°.66N×121°.92E,h0^{km},mb3.9/7,mbtmp3.9/7,Error ellipse: s-maj=38.2km s-min=18.5km az=68.0*

*MAN **31** 16:08:49.5,9°.77N×121°.82E,h19^{km},mb5.0,ML3.9,MS4.0*

ISC 31 16:08:48.6±1.7,**9°.73N**±0°.03×**121°.93E**±0°.04,**h10^{km}**±11^{km},**n28,**σ**1^{s}40**/44,**mb4.0**/7,**12C-8D,Sulu Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNOP	**Candoni, Negro**	**0.70**	**82**	⇓*e*P	**Pn**	**16 09 03.8**	**-0.9**
CNOP				*e*S	**Sn**	**16 09 14.5**	**-1.1**
GUIM	**Jordan**	**1.10**	**36**	⇑*e*P	**Pb**	**16 09 09.6**	**-0.2**
GUIM				*e*S	**Sb**	**16 09 23.6**	**-0.6**
DCPH	**Dipolog City**	**1.81**	**129**	⇓*e*P	**Pb**	**16 09 20.9**	**-0.9**
DCPH				*e*S	**Sb**	**16 09 45.1**	**+0.6**
TBP	**Tagbilaran**	**1.90**	**91**	⇑*e*P	**Pb**	**16 09 22.8**	**-0.7**
TBP				*e*S	**Sg**	**16 09 48.4**	**-1.5**
RCP	**Roxas**	**1.98**	**24**	⇑*e*P	**Pb**	**16 09 24.1**	**-0.8**
RCP				*i* S	**Sb**	**16 09 49.1**	**-0.6**
IPIL	**Ipil**	**2.03**	**162**	⇓*e*P	**Pn**	**16 09 22.6**	**-0.3**
IPIL				*e*S	**Sn**	**16 09 44.9**	**-3.5**
LLP	**Lapu-Lapu**	**2.08**	**74**	*e*P	**Pb**	**16 09 25.9**	**-0.6**
LLP				*e*S	**Sb**	**16 09 52.0**	**-0.6**
IBAJ	**Ibajay, Aklan**	**2.09**	**6**	⇓*i*P	**Pn**	**16 09 24.1**	**+0.4**
OTRP	**Odiongan**	**2.62**	**2**	⇑*e*P	**Pn**	**16 09 30.3**	**-0.7**
OTRP				*e*S	**Sn**	**16 10 00.8**	**-2.0**
BUSP	**Coron**	**2.83**	**323**	⇑*e*P	**Pn**	**16 09 33.5**	**-0.4**
BUSP				*e*S	**Sn**	**16 10 05.9**	**-2.2**
BUSP	**Coron**	**2.83**	**323**	⇑*e*P	**Pn**	**16 09 33.5**	**-0.4**
ENPP	**El Nido**	**2.87**	**301**	⇓*e*P	**Pn**	**16 09 33.9**	**-0.5**
ENPP				*e*S	**Sn**	**16 10 06.1**	**-2.9**
MSLP	**Maasin**	**2.91**	**82**	⇓*e*P	**Pn**	**16 09 35.9**	**+0.9**
MSLP				*e*S	**Sb**	**16 10 14.4**	**-1.9**
CGP	**Cagayan de Oro**	**3.01**	**115**	⇑*e*P	**Pn**	**16 09 36.2**	**-0.2**
CGP				*e*S	**Sn**	**16 10 12.2**	**-0.3**
MMPH	**Masbate**	**3.09**	**32**	⇑*i*P	**Pg**	**16 09 48.9**	**+0.9**
MMPH				*i* S	Sn	16 09 50.4	-24
CTBH	**Cotabato--PC H**	**3.38**	**137**	⇑*i*P	**Pb**	**16 09 48.7**	**0.0**
BOAC	**Boac**	**3.71**	**359**	⇓*e*P	**Pn**	**16 09 47.7**	**+1.7**
BOAC				*e*S	**Sn**	**16 10 28.5**	**-1.2**
BOAC	**Boac**	**3.71**	**359**	⇓*e*P	**Pb**	**16 09 53.4**	**-0.8**
BOAC				*e*S	**Sn**	**16 10 28.6**	**-1.1**
CNP	**Catarman**	**3.85**	**44**	⇑*e*P	**Pn**	**16 09 46.5**	**-1.4**
CNP				*e*S	Sn	16 10 20.6	-13
LUBP	**Lubang**	**4.31**	**338**	⇑*e*P	**Pn**	**16 09 54.7**	**+0.4**
LUBP				*e*S	**Sn**	**16 10 40.4**	**-4.2**
BIPH	**Bislig**	**4.64**	**109**	⇑*i*P	Pb	16 10 04.4	-5.7
BIPH				*i* S	Sn	16 10 28.4	-24
CMAR	**Chiang Mai Arr**	**23.90**	**294**	P	**P**	**16 14 04.6**	**+1.8**
	0.5nm,0.6s,baz=82,slow=7.6,SNR=6.9						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**31.92**	**158**	P	**P**	**16 15 14.2**	**-0.5**
	1.4nm,0.6s,baz=336,slow=9.4,SNR=11						
	1.4nm,0.6s						
ASAR	**Alice Springs**	**35.20**	**161**	P	**P**	**16 15 43.5**	**+0.3**
	1.8nm,0.6s,baz=341,slow=7.3,SNR=39						
ASAR				PcP	**PcP**	**16 18 14.7**	**+0.3**
	0.2nm,0.7s,baz=345,slow=2.4,SNR=1.5						
	1.8nm,0.6s						
USRK	**Ussuriysk Ar.**	**35.43**	**13**	P	**P**	**16 15 46.6**	**+1.7**
	1.3nm,0.7s,baz=196,slow=10.0,SNR=4.2						
	1.3nm,0.7s						
MKAR	**Makanchi Array**	**49.94**	**325**	P	**P**	**16 17 43.3**	**+0.6**
	1.4nm,0.8s,baz=125,slow=8.4,SNR=12						
MKAR				PcP	**PcP**	**16 19 03.0**	**+0.1**
	0.3nm,0.5s,baz=121,slow=5.4,SNR=3.1						
	1.4nm,0.8s						
PETK	**Petropavlovsk-**	**51.96**	**27**	P	**P**	**16 17 59.2**	**+1.4**
	0.8nm,0.8s,baz=233,slow=7.0,SNR=1.5						
	0.8nm,0.8s						
FINES	**FINESS Array B**	**84.32**	**331**	P	**P**	**16 21 20.6**	**-0.1**
	4.6nm,1.2s,baz=57,slow=5.1,SNR=3.9						
	4.6nm,1.2s						

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*IDC **31** 16:09:42.4±0.5,53°.92S×3°.47E,h0^{km},mb4.6/17,mbtmp4.6/17,MS4.3/29,Error ellipse: s-maj=17.3km s-min=15.2km az=77.0*

*NEIC **31** 16:09:44.7±2.3,54°.0S±0°.1×3°.1E±0°.2,h10^{km}±1^{km},mb5.1/53,Error ellipse: s-maj=20.4km s-min=17.2km az=130.0*

*GCMT **31** 16:09:46.7±0.3,53°.98S±0°.01×3°.78E±0°.05,h12^{km},MW5.0/84,Moment Tensor Solution. s27,c28; s84,c137; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.35±.16; M$_{\theta\theta}$4.87±.11; M$_{\phi\phi}$-1.51±.16; M$_{r\theta}$0.49±.41; M$_{\theta\phi}$-0.98±.12; M$_{\phi r}$-1.22±.57; Best double couple: M$_0$4.51400×10^{16} NP1:φ$_s$302.00000°,δ55.00000°,λ-58.00000°. NP2: φ$_s$74.00000°,δ46.00000°,λ-127.00000°. Principal axes: T 5.0700, Plg5.0000°, Azm9.0000°; N -1.1020, Plg26.0000°, Azm102.0000°; P -3.9580, Plg64.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 16:09:44.2±0.3,**53°.96S**±0°.07×**3°.25E**±0°.08,**h10^{km},n168,** σ**1^{s}24**/140,**mb5.1**/39,**MS4.4**/34,**1C,Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**17.53**	**193**	P	**P**	**16 13 50.6**	**+1.2**
VNA2	**Neumayer--Watz**	**17.67**	**192**	P	**P**	**16 13 51.4**	**+0.3**
	baz=11,slow=15						
SNAA	**Sanae**	**17.98**	**186**	P	**P**	**16 13 54.8**	**+0.3**
SNAA	**Sanae**	**17.98**	**186**		**Pn**	**16 13 53.9**	**-0.1**
SNAA				IAmb	IAmb	16 13 58.9	
	comp=Z,125nm,0.9s						
TROLL	**Troll, Antarti**	**18.12**	**181**	P	**P**	**16 13 57.2**	**+1.0**
VNA3	**Neumayer Olymp**	**18.26**	**193**	P	**P**	**16 13 58.4**	**+0.9**
SUR	**Sutherland**	**24.95**	**37**	P	**P**	**16 15 07.3**	**-0.5**
	comp=Z,25nm,1.2s,baz=225,slow=5.7,SNR=3.5						
SUR				LR	LR	16 22 23.0	
	comp=Z,650nm,20.4s,baz=200,slow=31						
	comp=Z,25nm,1.2s						
SUR	**Sutherland**	**24.95**	**37**	P	**P**	**16 15 06.8**	**-1.0**
SUR				IAmb	IAmb	16 15 16.9	
	comp=Z,50nm,1.3s						
GRHM	**Grahamstown, E**	**26.39**	**48**	P	**P**	**16 15 20.8**	**+0.1**
BELA	**Belgrano 2**	**27.49**	**196**	P	**P**	**16 15 28.4**	**-1.8**
BOSA	**Boshof**	**30.00**	**41**	P	**P**	**16 15 50.5**	**-2.5**
	comp=Z,2.9nm,0.9s,baz=258,slow=18,SNR=2.6						
BOSA				LR	LR	16 25 21.1	
	comp=Z,803nm,22.0s,baz=202,slow=31						
	comp=Z,2.9nm,0.9s						
MAW	**Mawson**	**30.73**	**140**	P	**P**	**16 15 57.7**	**-1.2**
	comp=Z,16nm,0.9s,baz=266,slow=14,SNR=6.6						
MAW				LR	LR	16 26 42.9	
	comp=Z,177nm,19.8s,baz=274,slow=33						
	comp=Z,16nm,0.9s						
MAW	**Mawson**	**30.73**	**140**	P	**P**	**16 15 59.2**	**+0.3**
WIN	**Windhoek**	**33.05**	**24**	P	**P**	**16 16 20.1**	**+0.2**
WIN				IAmb	IAmb	16 16 21.2	
	comp=Z,29nm,1.4s						
LBTB	**Lobatse**	**33.37**	**39**	LR	LR	16 27 25.5	
	comp=Z,266nm,21.2s,baz=194,slow=32						
LBTB	**Lobatse**	**33.37**	**39**	P	**P**	**16 16 21.1**	**-1.6**
LBTB				IAmb	IAmb	16 16 22.8	
	comp=Z,26nm,1.2s						
PMSA	**Palmer Station**	**34.25**	**225**	LR	LR	16 27 25.0	
	comp=Z,314nm,18.4s,baz=150,slow=31						
QSPA	**South Pole Qui**	**36.28**	**180**	P	**P**	**16 16 47.8**	**+0.3**
	comp=Z,14nm,1.1s,baz=233,slow=4.5,SNR=18						
QSPA				LR	LR	16 30 54.7	
	comp=Z,2µm,20.3s,baz=212,slow=35						
	comp=Z,14nm,1.1s						
QSPA	**South Pole Qui**	**36.28**	**180**	P	**P**	**16 16 48.1**	**+0.6**
TSUM	**Tsumeb**	**36.41**	**23**	LR	LR	16 28 40.1	
	comp=Z,944nm,21.1s,baz=182,slow=31						
TSUM	**Tsumeb**	**36.41**	**23**	P	**P**	**16 16 47.9**	**-1.0**
TSUM				IAmb	IAmb	16 16 50.1	
	comp=Z,45nm,1.5s						
MG04	**Isla Riesco**	**42.67**	**240**	P	**P**	**16 17 38.3**	**-2.2**
MG04				IAmb	IAmb	16 18 40.1	
	comp=Z,92nm,1.4s						
LSZ	**Lusaka**	**43.25**	**36**	P	**P**	**16 17 44.7**	**-1.2**
	comp=Z,5.9nm,0.8s,baz=188,slow=7.9,SNR=7.2						
LSZ				LR	LR	16 33 49.7	
	comp=Z,787nm,19.1s,baz=203,slow=34						
	comp=Z,5.9nm,0.8s						
PLTB	**Pedras Altas**	**45.74**	**275**	P	**P**	**16 18 05.1**	**-0.4**
PLTB				IAmb	IAmb	16 18 07.9	
	comp=Z,26nm,1.1s						
PLTB	**Pedras Altas**	**45.74**	**275**	*e*P	**P**	**16 18 06.1**	**+0.5**
TRQA	**Tornquist**	**46.31**	**262**	P	**P**	**16 18 10.8**	**+0.7**
CPSB	**Cacapava Do Su**	**46.63**	**277**	*e*P	**P**	**16 18 14.6**	**+2.0**
H10S2	**ASCENSION HYDR**	**47.12**	**336**	T	T	17 09 01.3	
	baz=165,slow=74,SNR=38						
H10S3	**ASCENSION HYDR**	**47.13**	**336**	T	T	17 09 02.1	
	baz=55,slow=74,SNR=65						
ALGR	**Alto Alegre (B**	**47.58**	**279**	*e*P	**P**	**16 18 21.5**	**+1.5**
SBA	**Scott Base**	**48.06**	**175**	P	**P**	**16 18 25.2**	**+2.1**
SBA				IAmb	IAmb	16 18 30.4	
	comp=Z,25nm,0.9s						
VNDA	**Vanda**	**48.11**	**174**	P	**P**	**16 18 24.4**	**+0.9**
	comp=Z,5.3nm,1.0s,baz=219,slow=7.2,SNR=14						
VNDA				LR	LR	16 39 02.0	
	comp=Z,249nm,18.9s,baz=193,slow=37						
	comp=Z,5.3nm,1.0s						
VNDA	**Vanda**	**48.11**	**174**	P	**P**	**16 18 24.6**	**+1.2**
VNDA				IAmb	IAmb	16 18 30.1	
	comp=Z,20nm,0.8s						
ABPO	**Ambohimpanom**	**48.42**	**61**	P	**P**	**16 18 27.5**	**+0.8**
LL02	**Futaleuf**	**48.60**	**250**	P	**P**	**16 18 26.2**	**-1.4**
OPO	**Ambohidratompo**	**48.78**	**61**	LR	LR	16 34 33.7	
	comp=Z,321nm,20.9s,baz=354,slow=31						
SJMB	**Sao Joao De Ma**	**48.92**	**298**	*e*P	**P**	**16 18 30.8**	**+0.4**
CRSM	**Crissiumal (Br**	**49.15**	**279**	*e*P	**P**	**16 18 32.7**	**+0.6**
PLCA	**Paso Flores**	**49.48**	**254**	P	**P**	**16 18 35.1**	**+0.5**
	comp=Z,4.5nm,0.9s,baz=136,slow=9.2,SNR=9.6						
PLCA				LR	LR	16 36 16.0	
	comp=Z,101nm,21.5s,baz=130,slow=32						
	comp=Z,4.5nm,0.9s						
PLCA	**Paso Flores**	**49.48**	**254**	P	**P**	**16 18 33.8**	**-0.8**
PLCA				IAmb	IAmb	16 19 57.6	
	comp=Z,52nm,1.9s						
MECA	**Mercedes**	**50.23**	**274**	*e*P	**P**	**16 18 40.9**	**+0.6**
LL04	**Puerto Octay**	**50.41**	**252**	P	**P**	**16 18 40.1**	**-1.5**
MCR1	**Marechal Candi**	**51.45**	**281**	*e*P	**P**	**16 18 51.3**	**+1.8**
CPUP	**Villa Florida**	**51.94**	**277**	P	**P**	**16 18 52.9**	**-0.3**
	comp=Z,15nm,0.9s,baz=132,slow=6.5,SNR=24						
CPUP				LR	LR	16 36 59.9	
	comp=Z,133nm,21.8s,baz=121,slow=31						
	comp=Z,15nm,0.9s						
CPUP	**Villa Florida**	**51.94**	**277**	P	**P**	**16 18 52.6**	**-0.6**
CPUP				IAmb	IAmb	16 18 54.6	
	comp=Z,33nm,1.1s						
AMBA	**Amambai (Brazi**	**53.18**	**282**	*e*P	**P**	**16 19 03.0**	**+0.6**
IPMB	**Ipameri, GO**	**53.27**	**292**	*e*P	**P**	**16 19 03.3**	**+0.1**
JANB	**Januaria**	**53.59**	**298**	*e*P	**P**	**16 19 05.5**	**0.0**
BO02	**Sierra Bellavi**	**53.70**	**259**	P	**P**	**16 19 06.2**	**+0.1**
CFA	**Coronel Fontan**	**54.49**	**264**	LR	LR	16 38 36.8	
	comp=Z,154nm,21.3s,baz=124,slow=32						
MT09	**Talagante**	**54.54**	**260**	P	**P**	**16 19 12.2**	**-0.2**
MT09				IAmb	IAmb	16 19 13.5	
	comp=Z,21nm,1.1s						
MT01	**Popeta**	**54.63**	**260**	P	**P**	**16 19 11.7**	**-1.2**
MT01				IAmb	IAmb	16 19 28.8	
	comp=Z,23nm,1.3s						
ZON	**Zonda**	**54.79**	**263**	P	**P**	**16 19 14.2**	**+0.1**
ZON				IAmb	IAmb	16 19 24.2	
	comp=Z,46nm,1.8s						
BDFB	**Brasilia**	**55.08**	**294**	P	**P**	**16 19 16.8**	**+0.4**
	comp=Z,7.3nm,0.9s,baz=169,slow=7.1,SNR=8.6						
	comp=Z,7.3nm,0.9s						
BDFB	**Brasilia**	**55.08**	**294**	P	**P**	**16 19 14.8**	**-1.7**
AQDB	**Aquidauana**	**55.50**	**283**	P	**P**	**16 19 19.8**	**+0.5**
AQDB				IAmb	IAmb	16 19 20.7	
	comp=Z,20nm,1.1s						
AQDB	**Aquidauana**	**55.50**	**283**	*e*P	**P**	**16 19 19.8**	**+0.5**
SDBA	**SAO DESIDERIO**	**56.12**	**299**	*e*P	**P**	**16 19 23.8**	**-0.1**
CO01	**Juntas del Tor**	**56.77**	**264**	P	**P**	**16 19 28.7**	**+0.2**
AC05	**El Transito**	**57.71**	**264**	P	**P**	**16 19 35.1**	**0.0**
AC05				IAmb	IAmb	16 19 41.6	
	comp=Z,18nm,1.1s						
MBAR	**Mbarara**	**57.82**	**33**	LR	LR	16 42 41.9	
	comp=Z,835nm,19.5s,baz=175,slow=34						
MBAR	**Mbarara**	**57.82**	**33**	P	**P**	**16 19 36.6**	**+0.7**
AC02	**Maricunga**	**58.53**	**267**	P	**P**	**16 19 39.2**	**-2.0**
AC02				IAmb	IAmb	16 19 43.3	
	comp=Z,17nm,0.9s						
KIBK	**Kibwezi**	**58.83**	**42**	P	**P**	**16 19 43.3**	**+0.4**
KIBK				IAmb	IAmb	16 19 51.4	
	comp=Z,19nm,1.2s						
AC06	**Mina Casimiro**	**58.86**	**265**	P	**P**	**16 19 43.1**	**+0.1**
AC06				IAmb	IAmb	16 19 43.8	
	comp=Z,22nm,1.0s						
SALV	**Santo Antonio**	**59.13**	**286**	*e*P	**P**	**16 19 45.8**	**+0.9**
KMBO	**Kilima Mbogo**	**59.63**	**40**	P	**P**	**16 19 49.6**	**+0.9**
AC01	**Pan de Azucar**	**59.91**	**266**	P	**P**	**16 19 49.2**	**-1.1**
GO02	**Mina Guanaco**	**60.06**	**268**	P	**P**	**16 19 51.3**	**-0.3**
GO02				IAmb	IAmb	16 19 52.8	
	comp=Z,14nm,0.9s						
SMTB	**Santa Maria do**	**60.51**	**298**	*e*P	**P**	**16 19 54.9**	**+0.4**
DBIC	**Dimbokro**	**60.78**	**351**	P	**P**	**16 19 56.6**	**+0.4**
	comp=Z,4.7nm,0.9s,baz=171,slow=11,SNR=3.0						
DBIC				LR	LR	16 42 20.9	
	comp=Z,284nm,18.3s,baz=170,slow=32						
	comp=Z,4.7nm,0.9s						
BBSD	**Serra de San D**	**60.93**	**281**	*e*P	**P**	**16 19 57.3**	**-0.1**
PTLB	**Pontes e Lacer**	**61.46**	**283**	P	**P**	**16 20 00.1**	**-0.8**
PTLB				IAmb	IAmb	16 20 02.1	
	comp=Z,18nm,1.1s						
PTLB	**Pontes e Lacer**	**61.46**	**283**	*e*P	**P**	**16 20 01.0**	**+0.1**
PB15	**IPOC Station P**	**61.47**	**269**	P	**P**	**16 20 00.0**	**-1.2**
LVC	**Limon Verde**	**61.59**	**270**	LR	LR	16 44 09.3	
	comp=Z,73nm,20.4s,baz=184,slow=34						
LVC	**Limon Verde**	**61.59**	**270**	P	**P**	**16 20 01.5**	**-0.7**
LVC	**Limon Verde**	**61.59**	**270**	*e*P	**P**	**16 20 02.6**	**+0.4**
PB09	**IPOC Station P**	**62.41**	**270**	P	**P**	**16 20 07.6**	**+0.1**
PB03	**IPOC Station P**	**62.52**	**270**	P	**P**	**16 20 07.5**	**-0.7**
LODK	**Lodwar**	**63.14**	**37**	P	**P**	**16 20 13.2**	**+1.0**
PB08	**IPOC Station P**	**63.64**	**272**	P	**P**	**16 20 16.0**	**+0.1**
PB08				IAmb	IAmb	16 20 18.1	
	comp=Z,21nm,1.4s						
VILB	**Vilhena**	**64.07**	**284**	P	**P**	**16 20 16.9**	**-1.5**
TA02	**Huaiquique**	**64.12**	**271**	P	**P**	**16 20 16.6**	**-2.0**
LPAZ	**La Paz**	**66.04**	**275**	P	**P**	**16 20 32.6**	**+0.8**
	comp=Z,17nm,0.9s,baz=140,slow=4.8,SNR=54						
	comp=Z,17nm,0.9s						
LPAZ	**La Paz**	**66.04**	**275**	P	**P**	**16 20 32.0**	**+0.2**
LPAZ	**La Paz**	**66.04**	**275**	*e*P	**P**	**16 20 32.7**	**+0.8**
NPGB	**Novo Progresso**	**66.18**	**292**	*e*P	**P**	**16 20 32.7**	**+0.6**
TOA0	**Torodi Ar. Sit**	**66.85**	**358**	P	**P**	**16 20 36.1**	**0.0**
TOA0				IAmb	IAmb	16 20 39.4	
	comp=Z,24nm,1.9s						
TORD	**Torodi Ar. Bea**	**66.85**	**358**	P	**P**	**16 20 36.1**	**0.0**
	comp=Z,29nm,0.7s,baz=185,slow=6.4,SNR=8.5						
TORD				LR	LR	16 43 28.0	
	comp=Z,319nm,21.5s,baz=174,slow=30						
	comp=Z,29nm,0.7s						
ITTB	**Itaituba**	**68.61**	**293**	*e*P	**P**	**16 20 47.8**	**+0.4**
ETMB	**Extrema**	**70.06**	**281**	P	**P**	**16 20 54.9**	**-1.5**
ETMB				IAmb	IAmb	16 20 57.3	
	comp=Z,27nm,1.7s						
ETMB	**Extrema**	**70.06**	**281**	*e*P	**P**	**16 20 55.8**	**-0.6**
BBTS	**Babate**	**70.41**	**340**	LR	LR	16 45 47.5	
	comp=Z,328nm,18.8s,baz=168,slow=31						
H01W2	**Cape Leeuwin H**	**73.37**	**127**	T	T	17 42 11.6	
	baz=215,slow=75,SNR=130						
H01W3	**Cape Leeuwin H**	**73.38**	**127**	T	T	17 42 12.6	
	baz=215,slow=75,SNR=116						
H01W1	**Cape Leeuwin H**	**73.38**	**127**	T	T	17 42 12.6	
	baz=215,slow=75,SNR=117						
NNA	**Nana**	**74.57**	**271**	LR	LR	16 55 47.7	
	comp=Z,50nm,18.1s,baz=89,slow=37						
MDP	**Montagnes des**	**75.00**	**301**	LR	LR	16 49 46.8	
	comp=Z,235nm,20.2s,baz=46,slow=32						
CZSB	**Cruzeiro do Su**	**75.52**	**277**	P	**P**	**16 21 28.0**	**-0.8**
CZSB				IAmb	IAmb	16 21 29.6	
	comp=Z,45nm,1.5s						
RPZ	**Rata Peaks**	**82.14**	**171**	LR	LR	16 56 59.4	
	comp=Z,113nm,18.8s,baz=210,slow=34						
OTAV	**Otavalo**	**85.30**	**277**	P	**P**	**16 22 22.5**	**+0.6**
OTAV				IAmb	IAmb	16 22 24.9	
	comp=Z,26nm,1.2s						
RAYN	**Ar Rayn**	**85.33**	**38**	P	**P**	**16 22 22.2**	**+0.9**
BAUV	**El Baul**	**86.40**	**290**	P	**P**	**16 22 25.0**	**-1.8**
MDT	**Midelt**	**86.68**	**353**	P	**P**	**16 22 29.0**	**+1.2**
	comp=Z,2.5nm,0.8s,baz=212,slow=19,SNR=4.2						
MDT				LR	LR	16 56 26.2	
	comp=Z,426nm,19.7s,baz=162,slow=32						
	comp=Z,2.5nm,0.8s						
RUSC	**La Rusia**	**86.75**	**284**	P	**P**	**16 22 27.5**	**-1.6**
RUSC				IAmb	IAmb	16 22 30.0	
	comp=Z,26nm,1.5s						
STKA	**Stephens Creek**	**87.23**	**146**	P	**P**	**16 22 31.4**	**+0.7**
	comp=Z,4.7nm,0.9s,baz=190,slow=6.1,SNR=5.8						
	comp=Z,4.7nm,0.9s						
SDV	**Santo Domingo**	**87.80**	**288**	LR	LR	17 02 28.9	
	comp=Z,79nm,18.0s,baz=94,slow=36						
URZ	**Urewera**	**88.00**	**175**	LR	LR	17 00 20.4	
	comp=Z,500nm,18.4s,baz=252,slow=34						
PALK	**Pallekele**	**88.52**	**76**	LR	LR	16 53 52.3	
	comp=Z,68nm,20.5s,baz=313,slow=30						
PCHI	**Peechi**	**88.71**	**70**	*e*P	**P**	**16 22 34.8**	**-3.0**
KEST	**Kesra**	**89.48**	**5**	LR	LR	17 02 49.2	
	comp=Z,174nm,18.2s,baz=199,slow=36						
IDI	**Anoyia**	**90.83**	**18**	LR	LR	17 05 45.1	
	comp=Z,78nm,18.1s,baz=265,slow=37						
VAE	**Valguarnera**	**91.58**	**9**	LR	LR	17 01 33.9	
	comp=Z,202nm,19.8s,baz=158,slow=34						
ASAR	**Alice Springs**	**91.78**	**136**	P	**P**	**16 22 50.4**	**-1.9**
	comp=Z,2.6nm,0.9s,baz=201,slow=4.9,SNR=15						
	comp=Z,2.6nm,0.9s						
ASAR	**Alice Springs**	**91.78**	**136**	P	**P**	**16 22 53.5**	**+1.3**
AS31	**Alice Springs**	**91.78**	**136**	P	**P**	**16 22 51.7**	**-0.6**
ESDC	**Sonseca Array**	**93.47**	**354**	P	**P**	**16 22 59.5**	**+0.1**
	comp=Z,1.3nm,1.0s,baz=188,slow=2.6,SNR=5.7						
	comp=Z,1.3nm,1.0s						
WRA	**Warramunga Arr**	**95.27**	**135**	P	**P**	**16 23 09.1**	**+0.7**
	comp=Z,0.6nm,0.9s,baz=182,slow=3.8,SNR=3.1						
	comp=Z,0.6nm,0.9s						
RAO	**Raoul Island**	**97.13**	**179**	LR	LR	17 05 04.6	
	comp=Z,82nm,19.5s,baz=150,slow=34						
TBI	**Tubuai**	**99.48**	**205**	*e*LR	LR	16 55 49.2	
	comp=Z,5µm,23.0s						
TBI				*e*LR	LR	16 55 49.3	
	comp=Z,886nm,23.5s						
DZM	**Mont Dzumac**	**102.91**	**164**	*e*LR	LR	16 57 26.5	
	comp=Z,346nm,28.0s						
PPT2	**Papeete2**	**105.02**	**207**	*e*SS	SS	16 43 07.4	+2.4
	comp=Z,104nm,25.5s						
PPT2	**Papeete2**	**105.02**	**207**	*e*LR	LR	16 58 23.0	
	comp=Z,219nm,31.2s						
PPT2				*e*LR	LR	16 58 23.4	
	comp=Z,133nm,22.0s						
CLL	**Collm**	**105.21**	**6**	*e*PKPdf	**PKiKP**	**16 28 09.0**	**+3.2**
CLL				*e*Sdif	Sdif	16 35 48.0	+2.1
CLL				*e*PS	**PS**	**16 37 30.0**	**+2.3**
CLL				*e*SS	**SKKPbc**	**16 43 18.0**	**+0.9**
CLL				AMS	AMS	17 16 00.0	
	comp=Z,100nm,18.0s						
TAOE	**Nuku Hiva Isla**	**110.21**	**219**	*e*LR	LR	17 00 46.2	
	comp=Z,212nm,26.9s						
PZH	**PanZhiHua**	**115.87**	**80**	PKP	**PKiKP**	**16 28 28.5**	**+1.6**
W50A	**Signal Mountai**	**116.79**	**293**	PKPdf	PKiKP	16 28 37.4	+9.1
X48A	**Hartselle**	**117.18**	**292**	PKPdf	**PKiKP**	**16 28 35.1**	**+6.1**
CD2	**Chengdu**	**120.33**	**78**	PKP	**PKiKP**	**16 28 35.8**	**+0.4**
MKAR	**Makanchi Array**	**120.59**	**52**	PKP	**PKPdf**	**16 28 34.2**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=241,slow=1.5,SNR=4.2						
WMQ	**Urumqi**	**121.01**	**57**	*e*PKP	**PKiKP**	**16 28 38.3**	**+2.0**
TXAR	**Lajitas Array**	**122.91**	**276**	PKP	**PKPdf**	**16 28 39.5**	**-0.8**
	comp=Z,0.5nm,0.9s,baz=145,slow=5.4,SNR=4.4						
GTA	**Gaotai**	**124.23**	**69**	*e*PKP	**PKPdf**	**16 28 42.5**	**-0.1**
XAN	**Xi'an**	**125.60**	**79**	⇑PKP	**PKPdf**	**16 28 44.8**	**-0.5**
NJ2	**Nanjing**	**130.01**	**89**	*e*PKP	**PKiKP**	**16 28 54.8**	**+0.3**
HHC	**Hu-ho-hao-te**	**131.80**	**75**	*e*PKP	**PKPdf**	**16 28 54.0**	**-2.9**
SONM	**Songino Array**	**133.37**	**64**	PKP	**PKPdf**	**16 28 58.1**	**-1.6**
	comp=Z,1.1nm,0.8s,baz=204,slow=3.0,SNR=4.7						
PDAR	**Pinedale Array**	**135.60**	**284**	PKP	**PKPdf**	**16 29 03.5**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=153,slow=3.0,SNR=2.7						
XLT	**XiLinHaoTe**	**136.32**	**75**	*e*PKP	**PKiKP**	**16 29 06.5**	**-0.5**
CN2	**Changchun**	**141.67**	**81**	*e*PKP	**PKPdf**	**16 29 13.3**	**-1.6**
RES	**Resolute Bay**	**143.12**	**334**	PKP	PKPbc	16 29 13.6	0.0
	comp=Z,1.8nm,0.8s,baz=81,slow=5.1,SNR=7.7						

MDJ	**Mudanjiang**	**144.57**	**83**	PKP	**PKPdf**	**16 29 21.0**	**+1.0**
MDJ				AMB	AMB		
	comp=Z,120nm,6.3s						
USRK	**Ussuriysk Ar.**	**145.74**	**85**	PKPbc	**PKPdf**	**16 29 19.5**	**-2.6**
	comp=Z,2.5nm,0.8s,baz=224,slow=2.5,SNR=11						
USRK	**Ussuriysk Ar.**	**145.74**	**85**	PKPdf	**PKPbc**	**16 29 22.5**	**0.0**
HEH	**HeiHe**	**146.26**	**73**	*e*PKPbc	**PKPdf**	**16 29 22.5**	**-0.2**
YKA	**Yellowknife Ar**	**147.42**	**310**	PKPbc	**PKPbc**	**16 29 26.0**	**-0.8**
	comp=Z,6.1nm,0.9s,baz=104,slow=2.7,SNR=62						
TIXI	**Tiksi**	**150.95**	**32**		**PKPbc**	**16 29 34.9**	**-0.5**
KOTAN	**Kotaneelee Air**	**151.35**	**304**	PKP	**PKPab**	**16 29 46.5**	**+1.5**
	baz=101						
WRGLY	**Wrigley**	**151.54**	**310**	PKP	**PKPab**	**16 29 46.6**	**+0.9**
	baz=96						
A36M	**Sachs Harbour**	**151.77**	**329**		**PKPbc**	**16 29 37.3**	**0.0**
A36M	**Sachs Harbour**	**151.77**	**329**	PKP	**PKPab**	**16 29 47.1**	**+0.6**
	baz=78						
JKA	**Kamikawa-asahi**	**151.95**	**94**		**PKPbc**	**16 29 38.6**	**0.0**
INK	**Inuvik**	**155.36**	**322**	PKPab	**PKPab**	**16 30 01.9**	**+0.2**
	comp=Z,3.5nm,1.0s,baz=84,slow=3.8,SNR=6.2						
INK	**Inuvik**	**155.36**	**322**	PKP	**PKPab**	**16 30 02.0**	**+0.3**
	baz=76						
F31M	**Tsiigehtchic**	**155.64**	**320**	PKP	**PKPab**	**16 30 03.5**	**+0.6**
	baz=78						
K29M	**Barlow Dome**	**157.82**	**312**	PKP	**PKPab**	**16 30 14.0**	**+1.3**
	baz=82						
E27K	**Coleen River**	**158.25**	**324**	PKP	**PKPab**	**16 30 15.3**	**+1.1**
	baz=67						
C27K	**Jago River**	**158.29**	**329**	PKP	**PKPab**	**16 30 15.8**	**+1.4**
	baz=61						
YUK4	**Talbot Arm**	**158.58**	**305**	PKP	**PKPab**	**16 30 17.5**	**+1.4**
	baz=87						
G27K	**Doyon Strip**	**158.78**	**321**	PKP	**PKPab**	**16 30 17.4**	**+0.8**
	baz=70						
H27K	**Steamboat Moun**	**158.93**	**319**	PKP	**PKPab**	**16 30 18.0**	**+0.7**
	baz=72						
D25K	**Kavik River**	**159.26**	**330**	PKP	**PKPab**	**16 30 20.2**	**+1.6**
	baz=58						
F26K	**Sheenjek River**	**159.33**	**324**	PKP	**PKPab**	**16 30 20.8**	**+1.8**
	baz=65						
G26K	**Porcupine Rive**	**159.51**	**322**	PKP	**PKPab**	**16 30 20.6**	**+0.9**
	baz=67						
E25K	**Arctic Village**	**159.62**	**326**	PKP	**PKPab**	**16 30 20.9**	**+0.7**
	baz=62						
C24K	**Franklin Bluff**	**159.70**	**332**	PKP	**PKPab**	**16 30 22.3**	**+1.9**
	baz=54						
ILAR	**Eielson Array**	**161.53**	**318**	PKPab	**PKPab**	**16 30 28.9**	**+0.3**
	comp=Z,1.8nm,1.0s,baz=50,slow=3.3,SNR=8.0						

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*AZER **31** 16:34:11.4±0.9, 38°.44N×42°.83E, h9^{km}±41^{km}, Error ellipse: s-maj=132.0km s-min=10.3km az=240.0*
*DDA **31** 16:34:16.0±0.0, 38°.63N×43°.16E, h6^{km}±7^{km}, MW3.5*
*ISK **31** 16:34:16.5, 38°.66N×43°.16E, h5^{km}, ML3.5/16*
*TEH **31** 16:34:17.2, 38°.65N×43°.16E, h16^{km}±18^{km}, ML3.2*
*NSSP **31** 16:34:18.4, 38°.65N×43°.18E, h10^{km}, Ms3.1*
ISC 31 16:34:17.6±0.9, **38°.65N**±0°.01×**43°.15E**±0°.01, **h19**^{km}±2^{km}, **n86**, σ**1^{s}.49**/137, **8C-6D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.19**	**106**	Pg	**Pg**	**16 34 22.3**	**-0.4**
VANB				Sg	**Sg**	**16 34 26.9**	**+0.9**
VANB	**Van**	**0.19**	**106**	Pg	**Pg**	**16 34 22.2**	**-0.4**
TVAN	**Van**	**0.23**	**121**	SPECP		16 34 22.0	
TVAN				P	**Pg**	**16 34 22.6**	**-0.7**
TVAN				S	**Sg**	**16 34 26.6**	**-0.5**
TVAN	**Van**	**0.23**	**121**	Pg	**Pg**	**16 34 22.5**	**-0.7**
GEVA	**Gevas**	**0.34**	**192**	SPECP		16 34 24.0	
GEVA				P	**Pb**	**16 34 24.6**	**-0.7**
GEVA				S	**Sb**	**16 34 31.7**	**+1.3**
GEVA	**Gevas**	**0.34**	**192**	Pg	**Pb**	**16 34 24.6**	**-0.7**
AKDM	**Akdamar-Van**	**0.35**	**203**	Pg	**Pb**	**16 34 24.6**	**-0.7**
AKDM				Sg	**Sb**	**16 34 31.0**	**+0.5**
AKDM	**Akdamar-Van**	**0.35**	**203**	Pg	**Pb**	**16 34 24.4**	**-0.9**
ADCV	**BITLIS_Adilcev**	**0.37**	**295**	SPECP		16 34 25.0	
ADCV				P	**Pb**	**16 34 25.5**	**-0.3**
ADCV				S	**Sb**	**16 34 31.8**	**+0.6**
ADCV				*i* AML	AML	16 34 34.0	
	comp=N,5μm,0.3s						
ADCV	**BITLIS_Adilcev**	**0.37**	**295**	Pg	**Pb**	**16 34 25.4**	**-0.3**
ERCV	**ERCIS-VAN**	**0.40**	**21**	Pg	**Pg**	**16 34 25.1**	**-0.9**
ERCV				Sg	**Sb**	**16 34 31.7**	**-0.4**
ERCV	**ERCIS-VAN**	**0.40**	**21**	Pg	**Pg**	**16 34 25.0**	**-0.9**
VMUR	**Van-Muradiye**	**0.47**	**44**	SPECP		16 34 26.0	
VMUR				P	**Pb**	**16 34 26.9**	**-0.5**
VMUR				S	**Sb**	**16 34 34.1**	**0.0**
VMUR	**Van-Muradiye**	**0.47**	**44**	Pg	**Pb**	**16 34 26.9**	**-0.5**
OZAP	**Van, Ozalp-Mer**	**0.66**	**89**	SPECP		16 34 30.0	
OZAP				P	**Pb**	**16 34 30.1**	**-0.4**
OZAP				S	**Sb**	**16 34 39.6**	**+0.3**
MLAZ	**Malazgirt-MUS**	**0.68**	**316**	Pg	**Pb**	**16 34 30.8**	**-0.1**
MLAZ				Sg	**Sb**	**16 34 41.3**	**+1.3**
MLAZ	**Malazgirt-MUS**	**0.68**	**316**	Pg	**Pb**	**16 34 30.8**	**-0.1**
BLIS	**Bitlis-Merkez**	**0.85**	**254**	P	**Pb**	**16 34 33.7**	**-0.1**
BLIS				S	**Sb**	**16 34 44.7**	**-0.2**
PERV	**Siirt/Pervari-**	**0.85**	**215**	P	**Pb**	**16 34 34.1**	**+0.3**
GURO	**Guroymak-BITLI**	**0.88**	**264**	Pg	**Pb**	**16 34 34.5**	**+0.1**
GURO	**Guroymak-BITLI**	**0.88**	**264**	Pg	**Pb**	**16 34 34.0**	**-0.4**
AGRB	**Hanur-Agry**	**0.93**	**352**	Pg	**Pg**	**16 34 34.7**	**-1.1**
AGRB	**Hanur-Agry**	**0.93**	**352**	Pg	**Pg**	**16 34 34.7**	**-1.1**
DYDN	**Diyadin**	**0.99**	**25**	SPECP		16 34 34.0	
DYDN				P	**Pg**	**16 34 34.3**	**-2.5**
DYDN				S	**Sn**	**16 34 54.0**	**+3.8**
DYDN	**Diyadin**	**0.99**	**25**	Pg	**Pg**	**16 34 34.3**	**-2.5**
HAKT	**HAKKARI**	**1.17**	**158**	P	**Pn**	**16 34 39.2**	**0.0**
HAKT				S	**Sn**	**16 34 56.0**	**+1.2**
MUSM	**Mu-Merkez**	**1.29**	**274**	SPECP		16 34 41.0	
MUSM				P	**Pg**	**16 34 41.6**	**-0.9**
MUSM				S	**Sn**	**16 34 58.2**	**+0.7**
EATA	**Eleskirt**	**1.32**	**337**	SPECP		16 34 41.0	
EATA				P	**Pg**	**16 34 42.0**	**-1.1**
EATA				S	**Sb**	**16 34 58.6**	**+0.1**
MAKU	**Maku**	**1.39**	**59**	Pg	**Pg**	**16 34 43.3**	**-1.0**
MAKU				Sg	**Sg**	**16 35 02.7**	**+0.2**
YOVA	**Hakkari_Yksek**	**1.39**	**139**	P	**Pg**	**16 34 43.3**	**-1.1**
YOVA				S	**Sg**	**16 35 02.9**	**+0.4**
IGDI	**IGDIR**	**1.41**	**30**	P	**Pb**	**16 34 43.2**	**-0.1**
IGDI				S	**Sg**	**16 35 02.1**	**-1.2**
VRTB	**Varto-Mus**	**1.42**	**292**	Pn	**Pg**	**16 34 44.4**	**-0.6**
VRTB	**Varto-Mus**	**1.42**	**292**	SPECP		16 34 44.0	
VRTB				P	**Pg**	**16 34 44.7**	**-0.3**
VRTB				S	**Sb**	**16 35 01.6**	**+0.3**
CUKT	**Cukurca**	**1.45**	**165**	Pn	**Pg**	**16 34 44.8**	**-0.7**
CUKT	**Cukurca**	**1.45**	**165**	P	**Pg**	**16 34 44.1**	**-1.3**
CUKT				S	**Sg**	**16 35 05.5**	**+1.1**
VNNZ	**Vanand**	**1.54**	**19**	⇑*i*P	**Pg**	**16 34 46.0**	**-1.3**
VNNZ				⇓*i*S	**Sg**	**16 35 07.7**	**+0.2**
TASB	**TASBURUN-IGDIR**	**1.58**	**32**	Pn	**Pg**	**16 34 46.7**	**-1.3**
TASB				Sn	**Sg**	**16 35 08.6**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.61**	**253**	Pn	**Pg**	**16 34 47.3**	**-1.4**
SVAN				Sn	**Sg**	**16 35 10.3**	**+0.6**
SVAN	**Silvan-Diyarba**	**1.61**	**253**	SPECP		16 34 47.0	
SVAN				P	**Pg**	**16 34 47.7**	**-1.0**
SVAN				S	**Sg**	**16 35 09.3**	**-0.4**
METS	**Metsamor**	**1.66**	**25**	⇑*i*P	**Pg**	**16 34 48.5**	**-1.1**
METS				⇑*i*S	**Sg**	**16 35 12.8**	**+1.5**
BTMN	**Batman**	**1.66**	**244**	P	**Pg**	**16 34 48.7**	**-0.9**
BTMN				S	**Sg**	**16 35 12.2**	**+0.9**
BTMN				*i* AML	AML	16 35 14.0	
	comp=E,557nm,0.6s						
KOPR	**Koprukoy-ERZUR**	**1.68**	**323**	Pn	**Pg**	**16 34 48.3**	**-1.6**
SLHN	**Bingol, Solhan**	**1.69**	**281**	SPECP		16 34 47.0	
SLHN				P	**Pb**	**16 34 47.3**	**-0.8**
SLHN				S	**Sg**	**16 35 12.7**	**+0.5**
HOMI	**Horasan**	**1.70**	**326**	SPECP		16 34 49.0	
HOMI				P	**Pg**	**16 34 49.7**	**-0.6**
HOMI				S	**Sg**	**16 35 14.1**	**+1.6**
HYR	**Heyderabad**	**1.70**	**50**	P	**Pg**	**16 34 48.6**	**-1.6**
	SNR=19						
HYR				S	**Sg**	**16 35 16.4**	**+4.0**
NRKZ	**NAREK**	**1.79**	**40**	⇑*i*P	**Pb**	**16 34 49.4**	**-0.3**
NRKZ				⇑*i*S	**Sg**	**16 35 14.2**	**-1.0**
ARUZ	**Aruch**	**1.79**	**24**	⇑*i*P	**Pg**	**16 34 51.4**	**-0.5**
ARUZ				⇑*i*S	**Sg**	**16 35 17.1**	**+1.9**
MIDY	**Mardin/Midyat-**	**1.86**	**229**	P	**Pb**	**16 34 51.3**	**+0.3**
MIDY				S	**Sb**	**16 35 14.7**	**+0.8**
EJDE	**Erzurum, Palan**	**1.86**	**310**	P	**Pg**	**16 34 53.7**	**+0.3**
EJDE				S	**Sg**	**16 35 20.3**	**+2.7**
NAX	**Nakhchivan**	**1.90**	**73**	P	**Pb**	**16 34 51.5**	**-0.2**
	SNR=7.0						
NAX				S	**Sg**	**16 35 21.8**	**+3.0**
AMBZ	**Amberd**	**1.94**	**26**	⇓*i*P	**Pb**	**16 34 52.3**	**-0.1**
AMBZ				⇑*i*S	**Sg**	**16 35 18.6**	**-1.5**
GNI	**Garni**	**1.94**	**39**	⇓*i*P	**Pb**	**16 34 52.4**	**0.0**
GNI				⇓*i*S	**Sg**	**16 35 19.1**	**-1.0**
GNI	**Garni**	**1.94**	**39**	Pn	**Pb**	**16 34 51.9**	**-0.5**
BOZK	**Kars-Merkez-Bo**	**1.94**	**356**	P	**Pb**	**16 34 51.8**	**-0.7**
ECAT	**Cat-ERZURUM**	**1.95**	**300**	P	**Pn**	**16 34 49.1**	**-0.7**
ECAT				S	**Sg**	**16 35 21.9**	**+1.6**
BNGB	**Bingl**	**1.96**	**281**	Pn	**Pb**	**16 34 52.6**	**-0.2**
ISHB	**Shabestar**	**1.97**	**100**	Pn	**Pb**	**16 34 51.4**	**-1.5**
KARS	**Kars**	**1.98**	**358**	Pn	**Pb**	**16 34 52.3**	**-0.7**
IMRD	**Marand**	**2.00**	**87**	Pn	**Pb**	**16 34 52.5**	**-0.9**
SENK	**Senkaya-Erzuru**	**2.01**	**342**	Pn	**Pb**	**16 34 52.9**	**-0.7**
SBZ	**Shahbuz**	**2.01**	**67**	P	**Pb**	**16 34 52.7**	**-1.0**
	SNR=65						
SBZ				S	**Sg**	**16 35 24.7**	**+2.3**
KAPZ	**Kaputan**	**2.06**	**35**	⇓*i*P	**Pb**	**16 34 53.9**	**-0.5**
KAPZ				⇓*i*S	**Sg**	**16 35 21.4**	**-2.4**
EAK	**Akyaka**	**2.06**	**10**	P	**Pg**	**16 34 56.5**	**-0.8**
EAK				S	**Sg**	**16 35 25.7**	**+1.6**
HANI	**Diyarbakir_Han**	**2.17**	**265**	P	**Pb**	**16 34 56.5**	**+0.2**
HANI				S	**Sg**	**16 35 25.4**	**-2.1**
EMRE	**Erzurum,Aziziy**	**2.18**	**310**	P	**Pg**	**16 34 57.7**	**-1.7**
EMRE				S	**Sg**	**16 35 29.1**	**+1.3**
ORD	**Ordubad**	**2.24**	**82**	P	**Pb**	**16 34 55.8**	**-1.7**
	SNR=17						
ORD				S	**Sg**	**16 35 30.3**	**+0.7**
ITBZ	**Tabriz**	**2.39**	**99**	Pn	**Pn**	**16 34 57.8**	**+1.9**
KRIK	**Erzurum-spir**	**2.41**	**315**	P	**Pg**	**16 35 03.1**	**-0.8**
KRIK				S	**Sg**	**16 35 32.2**	**-2.9**
IAZR	**Azarshahr**	**2.43**	**113**	Pn	**Pb**	**16 34 59.5**	**-1.3**
DYBB	**Diyarbakir**	**2.47**	**255**	Pn	**Pb**	**16 34 59.9**	**-1.5**
KOPT	**Kop Dagi**	**2.47**	**304**	P	**Pg**	**16 35 04.6**	**-0.5**
KOPT				S	**Sg**	**16 35 36.7**	**-0.4**
DDEM	**Demirkent**	**2.49**	**335**	P	**Pb**	**16 35 02.7**	**+1.0**
DIYA	**Diyarbakir**	**2.49**	**254**	P	**Pb**	**16 35 01.5**	**-0.3**
DIYA				S	**Sg**	**16 35 36.8**	**-1.0**
DAGI	**Agillar**	**2.61**	**339**	P	**Pb**	**16 35 04.3**	**+0.6**
DAGI				S	**Sn**	**16 35 24.0**	**-6.0**
KOVA	**Elazig, Kovanc**	**2.62**	**272**	P	**Pb**	**16 35 03.3**	**-0.6**
DBAD	**Bademkaya**	**2.62**	**335**	P	**Pb**	**16 35 04.2**	**+0.2**
MAHB	**Mahabad**	**2.76**	**132**	Pn	**Pb**	**16 35 03.9**	**-2.5**
GDB	**GEDABAY**	**2.88**	**43**	P	**Pb**	**16 35 06.0**	**-2.5**
	SNR=7.3						
GDB				S	**Sg**	**16 35 47.4**	**-2.8**
QZX	**Qazax, Azerbai**	**2.95**	**35**	P	**Pb**	**16 35 08.8**	**-0.8**
	SNR=7.2						
QZX				S	**Sb**	**16 35 47.3**	**+2.0**
IHRS	**Heris**	**3.07**	**95**	Pn	**Pn**	**16 35 07.9**	**+2.6**
GANJ	**Ganja**	**3.16**	**50**	P	**Pn**	**16 35 09.1**	**+2.9**
GANJ				S	**Sb**	**16 35 53.3**	**+2.2**
QRD	**Qoradiz**	**3.34**	**75**	P	**Pn**	**16 35 10.9**	**+2.1**
QRD				S	**Sb**	**16 35 56.0**	**-0.6**
KELT	**Kelkit**	**3.37**	**298**	P	**Pg**	**16 35 20.6**	**-1.6**
ISRB	**Sarab**	**3.65**	**102**	Pn	**Pn**	**16 35 16.4**	**+3.2**
YRD	**Yardimli**	**3.98**	**85**	P	**Pn**	**16 35 20.2**	**+2.4**
YRD				S	**Sb**	**16 36 10.6**	**-4.5**
IDHR	**Dehrash**	**4.72**	**146**	Pn	**Pn**	**16 35 29.0**	**+1.0**

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*IDC **31** 16:34:35.2±1.4, 27°.13S×178°.65W, h351^{km}±17^{km}, mb2.8/2, mbtmp4.1/5, Error ellipse: s-maj=32.1km s-min=21.9km az=126.0*
ISC 31 16:34:36.6±1.2, **27°.48S**±0°.09×**178°.7W**±0°.1, **h350**^{km}, **n50**, σ**1^{s}.62**/80, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	**Raoul Island**	**1.88**	**159**	P	**Pn**	**16 35 28.6**	**+1.6**
RIZ				S	**S**	**16 36 12.0**	**+4.4**
RAO	**Raoul Island**	**1.89**	**159**	P	**Pn**	**16 35 28.9**	**+1.8**
	454nm,0.3s,baz=0.0,slow=20,SNR=11						
RAO				S	**S**	**16 36 07.2**	**-0.5**
	401nm,0.3s,baz=242,slow=24,SNR=1.8						
GLKZ	**Green Lake**	**1.90**	**159**	P	**Pn**	**16 35 28.3**	**+1.2**
GLKZ				S	**S**	**16 36 09.0**	**+1.3**
MSVF	**Nonsavu**	**10.15**	**342**	P	Pn	16 36 51.2	-5.5
	4.2nm,0.5s,baz=180,slow=20,SNR=5.8						
MXZ	**Matakaoa Point**	**10.37**	**193**	P	**P**	**16 37 01.0**	**+1.0**
MXZ				S	**S**	**16 38 54.1**	**-1.5**
WMGZ	**Waiomatatini S**	**10.60**	**193**	P	**Pn**	**16 37 00.2**	**-1.3**
WMGZ				S	**S**	**16 39 00.3**	**-0.3**
HAZ	**Te Kaha**	**10.67**	**195**	P	**Pn**	**16 37 01.5**	**-0.9**
HAZ				S	**S**	**16 39 00.8**	**-1.4**
PKGZ	**Pakihiroa**	**10.73**	**194**	P	**Pn**	**16 37 01.8**	**-1.4**
PKGZ				S	**S**	**16 39 01.6**	**-2.0**
MARZ	**Manawahe**	**11.18**	**199**	P	**P**	**16 37 11.1**	**+2.1**
CNGZ	**Carnagh Statio**	**11.28**	**193**	P	**P**	**16 37 10.6**	**+0.5**
MWZ	**Matawai**	**11.28**	**195**	P	**Pn**	**16 37 07.0**	**-2.8**
MWZ				S	**S**	**16 39 13.1**	**-2.8**
URZ	**Urewera**	**11.32**	**197**	P	**P**	**16 37 10.6**	**+0.1**
	4.2nm,0.3s,baz=6.7,slow=3.2,SNR=37						
URZ				S	**S**	**16 39 15.4**	**-1.2**
	8.9nm,0.4s,baz=344,slow=19,SNR=18						
URZ	**Urewera**	**11.32**	**197**	P	**Pn**	**16 37 10.2**	**+0.1**
URZ				S	**S**	**16 39 18.7**	**+2.1**
RAGZ	**Rawiri**	**11.46**	**196**	P	**P**	**16 37 13.0**	**+0.8**
RAGZ				S	**S**	**16 39 18.2**	**-1.7**
RIGZ	**Rimuhau**	**11.59**	**194**	P	**P**	**16 37 14.2**	**+0.6**
RIGZ				S	**S**	**16 39 19.9**	**-2.6**
MUGZ	**Murupara**	**11.61**	**198**	P	**P**	**16 37 15.2**	**+1.4**
MUGZ				S	**S**	**16 39 22.6**	**-0.5**
RTZ	**Ruatahuna**	**11.69**	**197**	P	**Pn**	**16 37 12.7**	**-1.9**
RTZ				S	**S**	**16 39 26.0**	**+1.1**
SNGZ	**Shannon Statio**	**11.75**	**195**	P	Pn	16 37 08.2	-7.1
SNGZ				S	**S**	**16 39 24.0**	**-2.3**
TLZ	**Tolley Road**	**11.86**	**203**	P	Pn	16 37 21.7	+5.2
KNZ	**Kokohu**	**11.91**	**194**	P	**Pn**	**16 37 17.8**	**+0.7**
KNZ				S	**S**	**16 39 27.4**	**-2.1**
RAHZ	**Arahi**	**11.94**	**196**	P	**Pn**	**16 37 19.8**	**+2.2**
RAHZ				S	**S**	**16 39 29.6**	**-0.8**
MTHZ	**Maungataniwha**	**11.95**	**197**	P	**Pn**	**16 37 18.7**	**+1.1**
MTHZ				S	**S**	**16 39 29.6**	**-0.8**
MHGZ	**Mahia Peninsul**	**11.99**	**193**	P	**Pn**	**16 37 18.5**	**+0.5**
MHGZ				S	**S**	**16 39 27.6**	**-3.7**
WHHZ	**Waihua**	**12.06**	**195**	P	P	16 37 10.5	-8.3
WHHZ				S	**S**	**16 39 30.5**	**-2.3**
NMHZ	**Naumai**	**12.18**	**197**	P	**Pn**	**16 37 21.5**	**+1.0**
NMHZ				S	**S**	**16 39 34.5**	**-1.0**
ARHZ	**Aropaoanui**	**12.29**	**196**	P	**P**	**16 37 21.1**	**-0.2**
ARHZ				S	**S**	**16 39 36.9**	**-0.8**
BKZ	**Black Stump Fm**	**12.33**	**198**	P	**Pn**	**16 37 22.1**	**-0.1**
BKZ				S	**S**	**16 39 37.8**	**-0.8**
ETVZ	**East Tongariro**	**12.53**	**200**	P	**Pn**	**16 37 25.9**	**+1.2**
ETVZ				S	**S**	**16 39 46.2**	**+3.4**
MCHZ	**McNeill Hill**	**12.54**	**197**	P	**Pn**	**16 37 25.9**	**+1.3**
MCHZ				S	**S**	**16 39 43.2**	**+0.5**
OTVZ	**Oturere**	**12.57**	**201**	P	**Pn**	**16 37 25.9**	**+0.8**
OTVZ				S	**S**	**16 39 46.2**	**+2.5**
KWHZ	**Kaweka Forest**	**12.59**	**198**	P	**Pn**	**16 37 25.1**	**-0.2**
KWHZ				S	**S**	**16 39 44.1**	**+0.2**
SNVZ	**South Ngauruho**	**12.60**	**201**	P	**Pn**	**16 37 26.9**	**+1.4**
SNVZ				S	**S**	**16 39 46.7**	**+2.4**
FWVZ	**Far West T-bar**	**12.69**	**201**	P	**Pn**	**16 37 27.3**	**+0.7**
FWVZ				S	**S**	**16 39 47.6**	**+1.4**
WNVZ	**Wahianoa**	**12.74**	**201**	P	**P**	**16 37 26.7**	**+0.2**
WNVZ				S	**S**	**16 39 50.2**	**+3.1**
BHHZ	**Black Hill Sta**	**12.75**	**199**	P	**P**	**16 37 26.6**	**+0.1**
BHHZ				S	**S**	**16 39 46.4**	**-0.8**
PKVZ	**Pokaka**	**12.79**	**201**	P	**Pn**	**16 37 28.2**	**+0.6**
KAHZ	**Kahuranaki**	**12.83**	**196**	P	**Pn**	**16 37 27.8**	**-0.2**
PXZ	**Pawanui**	**13.05**	**195**	P	**P**	**16 37 29.5**	**-0.2**
PXZ				S	**S**	**16 39 49.8**	**-3.3**
PNHZ	**Pukenui**	**13.11**	**198**	P	**Pn**	**16 37 31.0**	**-0.3**
PNHZ				S	**S**	**16 39 51.6**	**-2.7**
WPHZ	**Waipukurau**	**13.19**	**197**	P	**Pn**	**16 37 33.1**	**+0.9**
WPHZ				S	**S**	**16 39 56.2**	**+0.3**
TSZ	**Takapari Road**	**13.31**	**198**	P	**P**	**16 37 32.8**	**+0.2**
PRHZ	**Porangahau**	**13.33**	**196**	P	**Pn**	**16 37 33.4**	**-0.5**
PRHZ				S	**S**	**16 39 58.3**	**-0.5**
BFZ	**Birch Farm**	**13.82**	**196**	P	**P**	**16 37 38.6**	**+0.4**
BFZ				S	**S**	**16 40 07.0**	**-1.7**
DZM	**Mont Dzumac**	**14.54**	**288**	P	**Pn**	**16 37 48.5**	**+0.2**
	3.3nm,0.9s,baz=101,slow=16,SNR=2.0						
AFI	**Afiamalu**	**14.96**	**27**	P	P	16 37 44.1	-6.9
	13nm,0.3s,baz=216,slow=19,SNR=6.5						
ASAR	**Alice Springs**	**42.74**	**264**	P	**P**	**16 41 59.9**	**-1.0**
	0.3nm,0.5s,baz=93,slow=7.1,SNR=16						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**43.46**	**269**	P	**P**	**16 42 04.9**	**-1.7**
	0.9nm,0.6s,baz=106,slow=6.0,SNR=9.7						
	0.9nm,0.6s						
FINES	**FINESS Array B**	**142.20**	**341**	PKhKP	PKPpre	16 53 20.3	
	1.3nm,1.0s,baz=5.7,slow=1.4,SNR=5.2						
NOA	**NORSAR Array B**	**145.78**	**351**	PKPbc	**PKPdf**	**16 53 31.3**	**-1.9**
	0.1nm,0.5s,baz=24,slow=4.4,SNR=3.9						
HFS	**Hagfors**	**146.27**	**349**	PKPbc	**PKPdf**	**16 53 32.9**	**-1.1**
	0.6nm,0.4s,baz=29,slow=3.3,SNR=7.3						

NOU 31 16:43:55.2, 19°.66S×169°.67E, h242^{km}, MLv3.8/11, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIFNC	**LIFOU**	**2.54**	**244**	P	Pn	16 44 41.7	-0.5
YATNC	**Mamie plateau,**	**3.53**	**227**	P	Pn	16 44 52.2	-0.9
PINNC	**Pines Island,**	**3.60**	**215**	P	Pn	16 44 53.4	-0.5
OUENC	**Ouen Island, N**	**3.81**	**223**	P	Pn	16 44 56.7	+0.3
OUENC	**Ouen Island, N**	**3.81**	**223**	P	Pn	16 44 56.8	+0.4
DZM	**Mont Dzumac**	**3.85**	**231**	P	Pn	16 44 57.3	+0.3
DZM	**Mont Dzumac**	**3.85**	**231**	P	Pn	16 44 57.4	+0.4
NOUC	**Port Laguerre**	**3.98**	**232**	P	Pn	16 44 58.6	+0.3
NOUC	**Port Laguerre**	**3.98**	**232**	P	Pn	16 44 58.7	+0.4
ONTNC	**Ouen Toro**	**4.00**	**228**	P	Pn	16 44 59.0	+0.4
ONTNC	**Ouen Toro**	**4.00**	**228**	P	Pn	16 44 59.1	+0.5
KOUNC	**Koumac, New Ca**	**5.14**	**259**	P	Pn	16 45 25.4	+13
KOUNC	**Koumac, New Ca**	**5.14**	**259**	P	Pn	16 45 12.6	+0.2

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*OSPL **31** 16:44:07.4±0.5, 19°.78N×66°.09W, h6^{km}±52^{km}, ML3.3*
*NEIC **31** 16:44:08.1±1.1, 19°.9N±0°.1×66°.11W±0°.08, h35^{km}±25^{km}, ML3.3/34, Error ellipse: s-maj=23.4km s-min=4.8km az=205.0*
ISC 31 16:44:05.9±1.8, **20°.0N**±0°.1×**66°.04W**±0°.05, **h35**^{km}, **n25**, σ**1^{s}.19**/29, **Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**1.56**	**197**	Pn	**Pn**	**16 44 32.2**	**+1.1**
EMPR				Sn	**Sn**	**16 44 50.0**	**0.0**
EMPR				IAML		16 44 53.7	
	comp=E,498nm,0.4s						
EMPR				IAML		16 44 55.0	
	comp=N,431nm,0.3s						
GCPR	**Guaynabo City**	**1.65**	**181**		**Pn**	**16 44 33.2**	**+0.8**
GCPR				Sn	**Sn**	**16 44 51.9**	**-0.6**
CBYP	**Canovanas**	**1.70**	**174**		**Pn**	**16 44 33.7**	**+0.6**
AOPR	**Arecibo Observ**	**1.75**	**203**	Pn	**Pn**	**16 44 34.4**	**+0.6**
AGPR	**Aguadilla, PR**	**1.80**	**214**	Pn	**Pn**	**16 44 35.2**	**+0.7**
AGPR				Sn	**Sn**	**16 44 54.8**	**-1.3**
AGPR				IAML		16 44 57.4	
	comp=N,328nm,0.4s						
AGPR				IAML		16 45 02.0	
	comp=E,324nm,0.2s						
AGPR	**Aguadilla, PR**	**1.80**	**214**	*i* P	**Pn**	**16 44 34.9**	**+0.4**
AGPR				*e*S	**Sn**	**16 44 54.8**	**-1.3**
AGPR				IAML		16 45 01.9	
	comp=E,306nm,0.1s						
CUPR	**Culebra, Puert**	**1.81**	**156**	Pn	**Pn**	**16 44 35.8**	**+1.4**
HUMP	**Col San Antoni**	**1.83**	**174**		**Pn**	**16 44 35.9**	**+1.1**
HUMP				IAML		16 45 03.1	
	comp=N,292nm,0.2s						
HUMP				IAML		16 45 05.6	
	comp=E,347nm,0.2s						
SJG	**San Juan**	**1.85**	**183**		**Pn**	**16 44 36.8**	**+1.6**
SJG				IAML		16 45 01.7	
	comp=E,379nm,0.2s						
SJG				IAML		16 45 02.0	
	comp=E,340nm,0.4s						
MTP	**Monte Pirata**	**1.92**	**166**	Pn	**Pn**	**16 44 37.2**	**+1.1**
MTP				IAML		16 45 02.0	
	comp=E,321nm,0.3s						
CELP	**Cerrillos**	**1.95**	**195**		**Pn**	**16 44 37.8**	**+1.2**
CELP				IAML		16 45 03.7	
	comp=N,265nm,0.2s						
OBIP	**Obispado Ponce**	**1.99**	**196**		**Pn**	**16 44 37.3**	**+0.2**
OBIP				IAML		16 45 01.8	
	comp=E,312nm,0.3s						
OBIP				IAML		16 45 03.4	
	comp=N,314nm,0.2s						
PRSN	**Puerto Rico Se**	**2.03**	**211**	Pn	**Pn**	**16 44 38.4**	**+0.8**
CRPR	**Cabo Rojo, PR**	**2.20**	**207**		**Pn**	**16 44 41.4**	**+1.5**
CRPR				IAML		16 45 11.7	
	comp=E,190nm,0.4s						
CRPR				IAML		16 45 15.0	
	comp=N,200nm,0.2s						
MLPR	**Magueyes Islan**	**2.21**	**206**		**Pn**	**16 44 41.4**	**+1.4**
MLPR				IAML		16 45 10.0	
	comp=N,221nm,0.3s						
CDVI	**St. Croix**	**2.52**	**151**	Pn	**Pn**	**16 44 46.1**	**+1.8**
PCDR	**Punta Cana, DR**	**2.64**	**237**	Pn	**Pn**	**16 44 46.7**	**+0.8**
PCDR				IAML		16 45 24.6	
	comp=N,214nm,1.2s						
PCDR	**Punta Cana, DR**	**2.64**	**237**	*i* P	**Pn**	**16 44 46.8**	**+0.8**
PCDR				IAML		16 45 16.9	
	comp=Z,148nm,0.4s						
ANWB	**Willy Bob**	**4.64**	**119**	*e*P	Pn	16 45 19.0	+5.6
ANWB	**Willy Bob**	**4.64**	**119**	*e*S	**Sn**	**16 46 05.3**	**-0.8**
ANBD	**Bethesda, Anti**	**4.99**	**125**	*e*P	**Pn**	**16 45 17.4**	**-0.9**
ANBD	**Bethesda, Anti**	**4.99**	**125**	*e*S	**Sn**	**16 46 12.8**	**-2.0**
SDDR	**Presa de Saban**	**5.04**	**260**		**Pn**	**16 45 20.1**	**+1.0**
SDDR				IAML		16 46 17.6	
	comp=Z,21nm,0.9s						
SDDR				IAML		16 46 22.1	
	comp=Z,19nm,0.6s						
SDDR	**Presa de Saban**	**5.04**	**260**	*e*P	**Pn**	**16 45 20.3**	**+1.2**
SDDR	**Presa de Saban**	**5.04**	**260**	*i* P	**Pn**	**16 45 20.3**	**+1.2**
SDDR				*e*S	**Sn**	**16 46 14.9**	**-1.3**
SDDR				IAML		16 46 18.0	
	comp=Z,16nm,1.1s						

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*ISN **31** 16:57:02.9±1.3, 36°.95N×44°.94E, h6^{km}±23^{km}, ML3.5*
*AZER **31** 16:57:02.4±0.5, 36°.70N×45°.08E, h5^{km}±14^{km}, Error ellipse: s-maj=51.0km s-min=5.2km az=26.0*
*TEH **31** 16:57:03.6, 36°.92N×45°.14E, h6^{km}±51^{km}, ML3.4*
*DDA **31** 16:57:03.3±0.0, 36°.54N×44°.85E, h5^{km}±2^{km}, ML3.3*
ISC 31 16:57:03.8±1.2, **36°.88N**±0°.02×**45°.11E**±0°.02, **h1**^{km}±10^{km}, **n50**, σ**1^{s}.84**/74, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAHB	**Mahabad**	**0.49**	**104**	Pg	**Pg**	**16 57 12.8**	**-0.3**
MAHB				Sg	**Sg**	**16 57 20.0**	**+0.5**
YOVA	**Hakkari_Yksek**	**0.96**	**317**	P	**Pg**	**16 57 21.6**	**-0.6**
YOVA				S	**Sn**	**16 57 37.3**	**-1.8**
YOVA	**Hakkari_Yksek**	**0.96**	**317**	Pg	**Pg**	**16 57 21.6**	**-0.6**
IAZR	**Azarshahr**	**1.05**	**41**	Pg	**Pg**	**16 57 23.0**	**-1.0**
CUKT	**Cukurca**	**1.26**	**287**	P	**Pn**	**16 57 27.4**	**-1.2**
CUKT				S	**Sn**	**16 57 47.4**	**+1.1**
CUKT				*i* AML	AML	16 57 52.0	
	comp=Z,697nm,0.6s						
CUKT				*i* AML	AML	16 57 53.0	
	comp=N,1μm,0.6s						
CUKT				*i* AML	AML	16 57 57.0	
	comp=E,1μm,0.5s						
CUKT	**Cukurca**	**1.26**	**287**	Pg	**Pn**	**16 57 27.4**	**-1.2**
HAKT	**HAKKARI**	**1.31**	**301**	P	**Pn**	**16 57 28.1**	**-1.4**
HAKT				S	**Sn**	**16 57 49.1**	**+1.4**
HAKT				*i* AML	AML	16 57 55.0	
	comp=N,371nm,0.6s						
HAKT				*i* AML	AML	16 57 55.0	
	comp=E,375nm,0.7s						
HAKT	**HAKKARI**	**1.31**	**301**	Pg	**Pn**	**16 57 28.0**	**-1.4**
ISHB	**Shabestar**	**1.45**	**16**	Pg	**Pn**	**16 57 29.4**	**-2.1**
TAB1	**Tabriz**	**1.52**	**39**	Pg	**Pn**	**16 57 31.3**	**-0.9**
ITBZ	**Tabriz**	**1.58**	**31**	Pg	**Pn**	**16 57 31.7**	**-1.4**
IKRK	**Kirkuk**	**1.61**	**203**	*e*Pn	**Pg**	**16 57 34.6**	**0.0**
IKRK				*e*Sn	**Sg**	**16 57 56.0**	**+0.6**
IKRK				AML	AML	16 58 01.6	
	comp=N,598nm,0.6s						
IKRK				AML	AML	16 58 01.9	
	comp=E,822nm,0.5s						
MSL	**Mosul**	**1.68**	**254**	*e*Pn	**Pn**	**16 57 33.5**	**-0.8**
MSL				*e*Sn	**Sn**	**16 57 55.0**	**-1.5**
MSL				AML	AML	16 58 02.6	
	comp=N,640nm,0.8s						
MSL				AML	AML	16 58 06.5	
	comp=E,545nm,0.9s						
IHSH	**Hashtrud**	**1.77**	**76**	Pg	**Pn**	**16 57 35.8**	**0.0**
IMRD	**Marand**	**1.89**	**14**	Pn	**Pb**	**16 57 38.1**	**-1.1**
OZAP	**Van, Ozalp-Mer**	**1.98**	**334**	P	**Pg**	**16 57 44.0**	**+2.2**
OZAP				S	**Sg**	**16 58 13.5**	**+5.9**
IHRS	**Heris**	**2.10**	**46**	Pn	**Pb**	**16 57 42.1**	**-0.7**

TVAN	Van	2.13	321	P	Pg	16 57 44.8	+0.2
TVAN				S	Sg	16 58 16.5	+4.4
TVAN	Van	2.13	321	Pn	Pg	16 57 44.7	+0.2
ORD	Ordubad	2.16	19	P	Pb	16 57 44.1	+0.4
	SNR=32						
ORD				S	Sg	16 58 13.7	+0.6
GEVA	Gevas	2.17	312	P	Pb	16 57 44.1	+0.2
GEVA				S	Sg	16 58 15.4	+2.0
GEVA	Gevas	2.17	312	Pn	Pb	16 57 44.1	+0.2
ISRB	Sarab	2.24	64	Pn	Pb	16 57 44.4	-0.8
PERV	Siirt/Pervari-	2.31	298	P	Pb	16 57 45.5	-0.7
PERV				S	Sg	16 58 19.8	+2.0
PERV				*i* AML	AML	16 58 21.0	
	comp=E,229nm,0.6s						
PERV				*i* AML	AML	16 58 30.0	
	comp=E,180nm,0.5s						
NAX	Nakhchivan	2.31	7	P	Pg	16 57 47.5	-0.5
	SNR=4.3						
NAX				S	Sg	16 58 20.5	+2.6
IDHR	Dehrash	2.41	154	Pn	Pb	16 57 47.0	-1.1
VMUR	Van-Muradiye	2.43	330	P	Pg	16 57 50.0	-0.4
VMUR	Van-Muradiye	2.43	330	Pn	Pg	16 57 49.9	-0.4
MAKU	Maku	2.49	352	Pn	Pb	16 57 47.6	-1.9
SBZ	Shahbuz	2.53	8	P	Pb	16 57 50.7	+0.5
	SNR=10						
SBZ				S	Sg	16 58 26.2	+0.9
IGHG	Ghaleghazi	2.81	155	Pn	Pb	16 57 53.1	-1.8
HYR	Heyderabad	2.84	356	P	Pb	16 57 53.5	-1.8
HYR				S	Sg	16 58 34.6	-0.4
MIDY	Mardin/Midyat-	3.01	281	P	Pn	16 57 52.6	-0.2
MIDY				S	Sg	16 58 38.9	-1.6
MIDY				*i* AML	AML	16 58 48.0	
	comp=E,92nm,1.0s						
KCHF	Cheshme Sefid,	3.04	148	Pn	Pb	16 57 55.8	-3.0
LRK	Lerik	3.10	55	P	Pb	16 57 57.0	-2.9
	SNR=9.3						
LRK				S	Sb	16 58 39.5	+1.2
YRD	Yardimli	3.20	50	P	Pb	16 57 58.8	-2.7
	SNR=9.5						
YRD				S	Sb	16 58 40.5	-0.6
IKOM	Komasi	3.34	143	Pn	Pn	16 57 59.3	+2.0
SVAN	Silvan-Diyarba	3.36	293	P	Pg	16 58 06.1	-2.1
SVAN				S	Sg	16 58 49.3	-2.4
ASTR	Astara	3.36	59	P	Pb	16 58 00.5	-3.7
ASTR				S	Sb	16 58 46.1	+0.5
MUSM	Mu-Merkez	3.39	304	P	Pb	16 58 05.8	+1.0
GLBA	Clilabad	3.50	47	P	Pb	16 58 03.7	-2.8
GLBA				S	Sb	16 58 48.8	-0.8
AGDM	Agdam	3.58	25	P	Pb	16 58 04.8	-3.2
AGDM				S	Sb	16 58 50.8	-1.1
BHD	Baghdad	3.65	190	*e*Pn	Pn	16 58 02.0	+0.5
BHD				*e*Sn	Sn	16 58 46.0	+0.8
GANJ	Ganja	3.88	14	P	Pn	16 58 08.1	+3.5
GANJ				S	Sb	16 59 00.3	0.0
HSAM	Samen	3.90	132	Pn	Pn	16 58 06.7	+1.6
IDOB	Doab	3.98	140	Pn	Pn	16 58 08.0	+1.8
IKFM	Kafar-mosalman	4.03	145	Pn	Pn	16 58 09.0	+2.4
QALM	Alamut, Qazvin	4.47	94	Pn	Pn	16 58 15.4	+2.4
RAFI	Al-Rafai	5.21	171	*e*Pn	Pn	16 58 24.0	+1.1
RAFI				*e*Sn	Sn	16 59 25.0	+1.3
IPIR	Pirpir	6.34	130	Pn	Pn	16 58 41.2	+2.6

MAN **31** *16:57:57.7, 5°.01N×125°.30E, h32km, mb4.3, ML3.1, MS2.9*
IDC **31** *16:57:58.9±3.8, 5°.26N×125°.53E, h37km±31km, mb3.6/6, mbtmp3.8/6, MS2.9/1, Error ellipse: s-maj=61.2km s-min=17.3km az=71.0*
NEIC **31** *16:58:11.1±2.0, 4°.46N±0°.09×125°.0E±0°.1, h108km±14km, mb4.0/10, Error ellipse: s-maj=14.8km s-min=12.2km az=74.0*
ISC 31 16:57:59.2±0.6**, 5°.17N**±0°.05×**125°.35E**±0°.07**, h35km, n32, σ1s.59**/36**, mb3.8**/10**, 3C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	1.00	336	⇑*i*P	Pn	16 58 16.1	-0.7
GSPH				*i* S	Sn	16 58 30.2	+0.5
SKMP	Bagumbayan, Su	1.56	329	⇓*e*P	Pn	16 58 25.5	+1.0
SKMP				*e*S	Sn	16 58 45.5	+2.0
DAV	Davao City (W)	1.90	7	Sn	Sn	16 58 51.4	-0.5
	57nm,0.3s,baz=92,slow=7.9,SNR=4.4						
DAV				LR	LR	16 59 20.3	
	comp=Z,111nm,18.5s,baz=176,slow=45						
DAV	Davao City (W)	1.90	7	Pn	Sn	16 58 52.1	+0.2
CTBH	Cotabato--PC H	2.32	332	⇑*e*P	Pn	16 58 36.9	+2.0
BIPH	Bislig	3.16	18	⇓*i*P	Pn	16 58 48.4	+2.0
BIPH				*i* S	Sn	16 59 21.3	-1.6
CGP	Cagayan de Oro	3.33	349	⇓*e*P	Pn	16 58 59.9	+11
CGP				*e*S	Sn	16 59 37.9	+11
IPIL	Ipil	3.80	313	⇑*e*P	Pn	16 58 56.3	+1.1
IPIL				*e*S	Sn	16 59 37.9	-0.7
TNTI	Ternate	4.81	155	Pn	Pn	16 59 13.2	+4.1
TOLI2	Tolitoli	6.09	229	Pn	Pn	16 59 27.1	+0.4
MYLDM	Lahad Datu	6.83	270	Pn	Pn	16 59 40.5	+3.7
TGY	Tagaytay City	9.88	334	LR	LR	17 05 26.2	
	comp=Z,68nm,18.6s,baz=190,slow=45						
FAKI	Fak Fak	10.58	139	Pn	Pn	17 00 30.5	+2.1
SOEI	Soe	14.87	184	Pn	Pn	17 01 22.9	-4.1
MTN	Manton Dam	18.79	162	P	Pn	17 02 16.1	-0.3
MTN				IAmb	IAmb	17 02 18.1	
	comp=Z,17nm,1.1s						
KNRA	Kununurra	20.98	171	P	P	17 02 40.0	+0.4
KNRA				IAmb	IAmb	17 02 44.2	
	comp=Z,9.5nm,1.0s						
FITZ	Fitzroy Crossi	23.12	179	P	P	17 03 03.0	+0.7
WB0	Warramunga Arr	26.33	161	P	P	17 03 31.4	-0.5
WB0				IAmb	IAmb	17 03 34.6	
	comp=Z,6.1nm,1.0s						
WRA	Warramunga Arr	26.47	161	P	P	17 03 32.5	-0.8
	comp=Z,1.2nm,0.6s,baz=337,slow=10,SNR=36						
	comp=Z,1.2nm,0.6s						
WRA	Warramunga Arr	26.47	161	P	P	17 03 31.9	-1.3
WB2	Warramunga Arr	26.48	161	P	P	17 03 33.0	-0.3
WB2				IAmb	IAmb	17 03 36.4	
	comp=Z,4.4nm,1.1s						
AS31	Alice Springs	29.85	164	P	P	17 04 02.8	-0.6
AS31				IAmb	IAmb	17 04 03.9	
	comp=Z,0.8nm,0.6s						
ASAR	Alice Springs	29.85	164	P	P	17 04 03.1	-0.3
	comp=Z,0.8nm,0.5s,baz=346,slow=7.4,SNR=52						
ASAR				PcP	PcP	17 07 05.8	-0.4
	comp=Z,0.3nm,0.5s,baz=344,slow=2.4,SNR=6.6						
ASAR				ScP	ScP	17 10 44.5	-1.4
	comp=Z,0.3nm,0.7s,baz=339,slow=1.9,SNR=4.2						
	comp=Z,0.8nm,0.5s						
ASAR	Alice Springs	29.85	164	P	P	17 04 02.6	-0.8
CTAO	Charters Tower	32.44	141	P	P	17 04 27.1	+0.8
MJAR	Matsushiro Arr	33.38	19	P	P	17 04 31.9	-2.4
	comp=Z,0.7nm,0.5s,baz=196,slow=9.2,SNR=1.9						
	comp=Z,0.7nm,0.5s						
BBOO	Buckleboo	39.12	166	P	P	17 05 23.4	+0.1
BBOO				IAmb	IAmb	17 05 34.2	
	comp=Z,3.7nm,0.8s						
STKA	Stephens Creek	39.96	158	P	P	17 05 30.7	+0.3
	comp=Z,3.5nm,0.7s,baz=339,slow=9.7,SNR=5.7						
	comp=Z,3.5nm,0.7s						
TOO	Toolangi	46.48	158	P	P	17 06 22.1	-0.9
MKAR	Makanchi Array	55.60	325	P	P	17 07 31.4	0.0
	comp=Z,0.4nm,0.4s,baz=127,slow=8.1,SNR=12						
	comp=Z,0.4nm,0.4s						
KURBB	Kurchatov Arra	59.80	327	P	P	17 08 00.3	-0.5
	comp=Z,0.2nm,0.5s,baz=131,slow=5.9,SNR=2.3						
	comp=Z,0.2nm,0.5s						
QSPA	South Pole Qui	95.07	180	P	P	17 11 18.8	+0.5

IDC **31** *17:19:29.6±1.0, 2°.19S×119°.54E, h0km, mb3.6/5, mbtmp3.6/6, ML3.8/1, MS2.8/1, Error ellipse: s-maj=69.9km s-min=17.0km az=69.0*
DJA **31** *17:19:35.1±2.0, 2°S±3°×11°9E±°, h32km±32km, M4.1/9, mb4.5/2, MLv4.0/9*
ISC 31 17:19:34.2±0.9**, 2°.25S**±0°.05×**119°.12E**±0°.08**, h35km, n14, σ1s.52**/17**, mb3.7**/5**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPSI	Sidrap Palu	1.83	159	P	Pn	17 20 03.3	+0.1
SPSI				S	Sn	17 20 24.4	-0.7
BKB	Balikpapan	2.43	294	P	Sn	17 20 36.7	-3.3
MPSI	Mapaga	2.68	17	P	Pn	17 20 15.6	+0.7
KAPI	Kappang	2.82	167	Pn	Pn	17 20 17.5	+0.7
	14nm,0.3s,baz=351,slow=17,SNR=14						
KAPI				Sn	Sn	17 20 50.4	+0.7
	9.0nm,0.3s,baz=23,slow=12,SNR=14						
KAPI				LR	LR	17 21 34.5	
	comp=Z,175nm,19.0s,baz=350,slow=44						
	37nm,0.3s						
BKSI	Bulukumba	3.22	162	P	Pn	17 20 22.1	-0.2
LUWI	Luwuk	3.84	72	P	Pn	17 20 31.4	+0.5
MRSI	Marisa	3.91	46	P	Pn	17 20 32.0	+0.2
GTOI	Gorontalo	4.83	54	P	Pn	17 20 43.7	-0.8
LBMI	Labuha	8.53	79	P	Pn	17 21 33.7	-1.7
	30nm,0.9s						
WRA	Warramunga Arr	23.03	141	P	P	17 24 34.1	-2.4
	1.2nm,0.6s,baz=318,slow=11,SNR=10.0						
	1.2nm,0.6s						
ASAR	Alice Springs	25.66	147	P	P	17 24 59.4	-1.6
	0.5nm,0.7s,baz=326,slow=8.2,SNR=7.2						
ASAR				PcP	PcP	17 28 30.9	-0.3
	0.2nm,0.6s,baz=341,slow=2.2,SNR=5.4						
	0.5nm,0.7s						
SONM	Songino Array	51.10	349	P	P	17 28 35.3	+1.8
	0.5nm,0.5s,baz=166,slow=7.9,SNR=4.5						
	0.5nm,0.5s						
MKAR	Makanchi Array	58.58	331	P	P	17 29 29.5	+1.9
	0.5nm,0.7s,baz=135,slow=6.6,SNR=5.4						
	0.5nm,0.7s						
ZALV	Zalesovo Beam	62.84	338	P	P	17 29 57.3	+0.9
	1.4nm,0.8s,baz=123,slow=5.3,SNR=4.5						
	1.4nm,0.8s						

IDC **31** *17:23:32.1±1.6, 23°.70S×179°.84W, h496km±13km, mb3.7/13, mbtmp4.6/15, Error ellipse: s-maj=18.8km s-min=14.9km az=85.0*
NEIC **31** *17:23:32.2±2.2, 23°.86S±0°.05×179°.6W±0°.1, h506km±9km, mb4.5/50, Error ellipse: s-maj=18.8km s-min=3.1km az=110.0*
ISC 31 17:23:32.5±0.5**, 23°.79S**±0°.06×**179°.69W**±0°.08**, h512km, n104, σ1s.56**/114**, mb4.5**/32**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	5.68	164	P	P	17 25 08.7	+2.5
MSVF	Nonsavu	6.38	340	P	P	17 25 14.9	+1.7
	5.6nm,0.5s,baz=204,slow=20,SNR=8.0						
PINNC	Pines Island,	11.89	273	P	P	17 26 11.4	+1.6
AFI	Afiamalu	12.35	39	P	P	17 26 14.3	-0.7
	18nm,0.5s,baz=180,slow=20,SNR=5.3						
AFI				S	S	17 28 22.6	-6.2
	12nm,0.5s,baz=359,slow=23,SNR=2.5						
AFI	Afiamalu	12.35	39	P	P	17 26 13.9	-1.1
LIFNC	LIFOU	12.46	281	P	P	17 26 15.6	-0.4
OUENC	Ouen Island, N	12.47	274	P	P	17 26 19.2	+3.2
OUZ	Omahuta	12.80	206	P	P	17 26 21.1	+1.9
DZM	Mont Dzumac	12.89	275	P	P	17 26 22.9	+2.3
MXZ	Matakaoa Point	13.84	187	P	P	17 26 29.0	-1.1
TOZ	Tahuroa Road	14.49	195	P	P	17 26 38.8	+1.8
KMRZ	Kaimai	14.50	194	P	P	17 26 41.0	+3.9
URZ	Urewera	14.68	190	P	P	17 26 39.2	+0.3
	7.6nm,0.6s,baz=358,slow=3.2,SNR=13						
URZ	Urewera	14.68	190	P	P	17 26 38.7	-0.2
URZ				S	S	17 29 10.7	-2.1
MWZ	Matawai	14.69	189	P	P	17 26 40.6	+1.5
MWZ				S	S	17 29 12.9	-0.2
RTZ	Ruatahuna	15.05	190		P	17 26 42.5	-0.4
TLZ	Tolley Road	15.05	195	P	P	17 26 46.9	+4.0
KOUNC	Koumac, New Ca	15.19	279	P	P	17 26 44.7	+0.2
KOUNC				IAmb	IAmb	17 27 12.9	
	comp=Z,13nm,1.3s						
HIZ	Hauiti	15.39	196	P	P	17 26 46.4	-0.1
NMHZ	Naumai	15.55	190	P	P	17 26 48.9	+0.7
NMHZ				S	S	17 29 29.2	-0.1
BKZ	Black Stump Fm	15.67	191	P	P	17 26 48.3	-1.0
BKZ				IAmb	IAmb	17 27 06.2	
	comp=Z,13nm,1.2s						
ETVZ	East Tongariro	15.79	193	P	P	17 26 50.9	+0.2
OTVZ	Oturere	15.82	193	P	P	17 26 51.2	+0.1
SNVZ	South Ngauruho	15.85	193	P	P	17 26 51.1	-0.3
MCHZ	McNeill Hill	15.90	190	P	P	17 26 52.1	+0.4
TUVZ	Tukino	15.93	193	P	P	17 26 52.3	+0.2
WNVZ	Wahianoa	16.00	193	P	P	17 26 52.8	0.0
BHHZ	Black Hill Sta	16.06	192	P	P	17 26 52.2	-1.2
KAHZ	Kahuranaki	16.22	189	P	P	17 26 54.8	-0.2
KAHZ				S	S	17 29 39.1	-2.3
MRZ	Mangatainoka R	17.29	192	P	P	17 27 02.9	-2.7
MRZ				IAmb	IAmb	17 27 04.5	
	comp=Z,8.2nm,0.8s						
BHW	Baring Head	18.15	193	P	P	17 27 10.4	-3.0
QRZ	Quartz Range	18.20	199	P	P	17 27 13.8	-0.1
NNZ	Nelson	18.32	197	P	P	17 27 14.4	-0.5
KHZ	Kahutara	19.41	195	P	P	17 27 24.7	-0.1
KHZ				IAmb	IAmb	17 27 35.0	
	comp=Z,32nm,1.4s						
LTZ	Lake Taylor	20.08	197	P	P	17 27 29.6	-1.4
LTZ				IAmb	IAmb	17 27 33.4	
	comp=Z,7.5nm,0.5s						
RPZ	Rata Peaks	21.28	199	P	P	17 27 42.3	+0.4
	comp=Z,5.0nm,0.7s,baz=21,slow=8.7,SNR=2.4						
	comp=Z,5.0nm,0.7s						
RPZ	Rata Peaks	21.28	199	P	P	17 27 41.5	-0.4
RPZ				IAmb	IAmb	17 28 07.3	
	comp=Z,27nm,1.4s						
WKZ	Wanaka	22.92	201	P	P	17 27 56.7	+0.1
HNR	Honiara	24.13	303	P	P	17 28 05.7	-2.0
	comp=Z,285nm,0.5s,baz=193,slow=8.8,SNR=4.0						
HNR	Honiara	24.13	303	P	P	17 28 07.4	-0.3
WHZ	Wether Hill Ro	24.21	201	P	P	17 28 09.3	+1.2
WHZ				IAmb	IAmb	17 28 28.6	
	comp=Z,27nm,1.4s						
TARA	Tarawa	26.00	343	P	P	17 28 24.8	+0.5
ARMA	Armidale	26.32	249	P	P	17 28 28.1	+0.9
ARMA				IAmb	IAmb	17 28 59.3	
	comp=Z,36nm,1.5s						
EIDS	Eidsvold	26.60	261	P	P	17 28 29.8	+0.3
EIDS				IAmb	IAmb	17 28 30.4	
	comp=Z,9.5nm,0.6s						
CAN	Canberra	29.44	240	P	P	17 28 54.7	+0.4
CAN				IAmb	IAmb	17 29 02.2	
	comp=Z,32nm,1.3s						
CTA	Charters Tower	31.76	270	P	P	17 29 14.7	+0.2
	comp=Z,28nm,0.5s,baz=94,slow=10,SNR=100						
	comp=Z,28nm,0.5s						
CTAO	Charters Tower	31.76	270	P	P	17 29 14.6	+0.2
TOO	Toolangi	32.74	237	P	P	17 29 23.1	+0.5
TOO				IAmb	IAmb	17 29 58.0	
	comp=Z,30nm,1.5s						
KRVT	Keravat (AS076	33.45	301	P	P	17 29 27.7	-1.1
	comp=Z,22nm,0.5s,baz=119,slow=2.9,SNR=3.5						
	comp=Z,22nm,0.5s						
PMG	Port Moresby	34.72	289	P	P	17 29 39.0	-0.6
	comp=Z,26nm,0.7s,baz=112,slow=5.8,SNR=15						
	comp=Z,26nm,0.7s						
PMG	Port Moresby	34.72	289	P	P	17 29 38.7	-0.9
STKA	Stephens Creek	35.02	248	P	P	17 29 41.5	-0.4
	comp=Z,2.2nm,0.5s,baz=96,slow=9.2,SNR=3.8						
	comp=Z,2.2nm,0.5s						
BBOO	Buckleboo	39.74	247	P	P	17 30 19.3	-1.3
BBOO				IAmb	IAmb	17 30 52.2	
	comp=Z,31nm,1.5s						
AS31	Alice Springs	42.33	260	P	P	17 30 40.9	-0.5
ASAR	Alice Springs	42.33	260	P	P	17 30 40.9	-0.5
	comp=Z,11nm,0.8s,baz=96,slow=7.2,SNR=153						
ASAR				ScP	ScP	17 35 27.4	+2.4
	comp=Z,2.5nm,0.7s,baz=110,slow=4.3,SNR=19						
	comp=Z,11nm,0.8s						
ASAR	Alice Springs	42.33	260	P	P	17 30 40.3	-1.0
WB2	Warramunga Arr	42.68	266	P	P	17 30 43.0	-1.1
WB2				IAmb	IAmb	17 30 43.9	
	comp=Z,19nm,0.8s						
WB0	Warramunga Arr	42.69	266	P	P	17 30 43.0	-1.2
WRA	Warramunga Arr	42.69	266	P	P	17 30 43.2	-1.0
	comp=Z,15nm,0.5s,baz=105,slow=8.5,SNR=123						
WRA				ScP	ScP	17 35 29.2	+2.6
	comp=Z,1.8nm,0.9s,baz=96,slow=3.7,SNR=7.8						
WRA				S	S	17 36 23.8	-6.7
	comp=Z,0.6nm,0.7s,baz=107,slow=13,SNR=3.9						
	comp=Z,15nm,0.5s						
FORT	Forrest	46.61	249	P	P	17 31 13.3	-1.0
MTN	Manton Dam	47.73	274	P	P	17 31 22.1	-0.8
MTN				IAmb	IAmb	17 31 40.6	
	comp=Z,29nm,1.3s						
KNRA	Kununurra	48.97	270	P	P	17 31 31.9	-0.2
KNRA				IAmb	IAmb	17 31 32.5	
	comp=Z,24nm,1.0s						
FAKI	Fak Fak	50.82	287	P	P	17 31 45.1	-0.6
FITZ	Fitzroy Crossi	51.12	265	P	P	17 31 47.5	-0.3
SBA	Scott Base	54.50	183	P	P	17 32 08.3	-2.8
SOEI	Soe	55.12	275	P	P	17 32 17.4	+0.8
SOEI				IAmb	IAmb	17 32 26.9	
	comp=Z,39nm,1.1s						
PSA00	Pilbara Seismi	55.46	259	P	P	17 32 17.6	-1.1
PSA00				IAmb	IAmb	17 32 18.7	
	comp=Z,30nm,1.4s						
NWAO	Narrogin (SRO)	55.54	245	P	P	17 32 17.9	-1.2
NWAO	Narrogin (SRO)	55.54	245	P	P	17 32 18.1	-1.1
NWAO				IAmb	IAmb	17 32 53.5	
	comp=Z,42nm,1.4s						
MBWA	Marble Bar	55.67	260	P	P	17 32 18.9	-1.3
MORW	Morawa	57.18	250	P	P	17 32 29.8	-0.7
MORW				IAmb	IAmb	17 32 45.6	
	comp=Z,23nm,1.4s						
MMRI	Maumere	57.39	275	P	P	17 32 31.3	-0.9
MMRI				IAmb	IAmb	17 33 09.9	
	comp=Z,25nm,1.1s						
TOLI2	Tolitoli	62.82	284	P	P	17 33 07.2	-1.1
TOLI2				IAmb	IAmb	17 33 08.1	
	comp=Z,11nm,0.8s						
QSPA	South Pole Qui	66.29	180	P	P	17 33 31.4	+1.9
	comp=Z,2.5nm,0.7s,baz=31,slow=2.1,SNR=6.5						
	comp=Z,2.5nm,0.7s						
QSPA	South Pole Qui	66.29	180	P	P	17 33 31.4	+1.9
UGM	Wanagama	68.38	271	P	P	17 33 42.9	-0.3
KKM	Kota Kinabalu	69.14	287	P	P	17 33 48.0	+0.2
KKM				IAmb	IAmb	17 33 48.2	
	comp=Z,8.5nm,0.7s						
MJAR	Matsushiro Arr	71.97	325	P	P	17 34 04.0	+0.1
	comp=Z,1.6nm,0.8s,baz=160,slow=3.9,SNR=3.1						
	comp=Z,1.6nm,0.8s						
JSU	Suzuyama	72.79	317	P	P	17 34 09.4	+0.6
JKA	Kamikawa-asahi	75.89	333	P	P	17 34 29.2	+3.3
BELA	Belgrano 2	76.51	173	P	P	17 34 29.4	+0.4
KSRS	Korea Array	78.34	320	P	P	17 34 38.8	-0.7
	comp=Z,1.7nm,0.7s,baz=132,slow=6.0,SNR=7.1						
	comp=Z,1.7nm,0.7s						
MYKOM	Kota Tinggi	78.35	277	P	P	17 34 40.2	+0.1
PEA0B	Petropavlovsk-	79.06	346	P	P	17 34 43.9	+0.9
PETK	Petropavlovsk-	79.06	346	P	P	17 34 43.8	+0.9
	comp=Z,1.3nm,0.6s,baz=131,slow=7.1,SNR=7.9						
	comp=Z,1.3nm,0.6s						
PETK	Petropavlovsk-	79.06	346	P	P	17 34 44.1	+1.2
USRK	Ussuriysk Ar.	80.82	327	P	P	17 34 53.9	+1.5
	comp=Z,1.3nm,0.6s,baz=127,slow=3.8,SNR=4.3						
	comp=Z,1.3nm,0.6s						
IPM	Ipoh	82.03	278	P	P	17 34 59.2	-0.2
IPM				IAmb	IAmb	17 35 00.2	
	comp=Z,6.5nm,0.6s						
KULM	Kulim	82.70	279	P	P	17 35 03.2	+0.5
GSI	Gunungsitoli	83.87	274	P	P	17 35 09.1	+0.4
GSI				IAmb	IAmb	17 35 16.5	
	comp=Z,20nm,1.5s						
CMAR	Chiang Mai Arr	89.75	290	P	P	17 35 38.1	+1.7
	comp=Z,2.0nm,0.9s,baz=144,slow=3.4,SNR=14						
	comp=Z,2.0nm,0.9s						
CMAR	Chiang Mai Arr	89.75	290	P	P	17 35 37.7	+1.3
CHTO	Chiang Mai	89.90	291	P	P	17 35 38.9	+1.7
MKAR	Makanchi Array	112.28	313	PKiKP	PKiKP	17 41 09.7	-0.1
	comp=Z,0.6nm,0.8s,baz=259,slow=2.9,SNR=2.6						
ARCES	ARCESS Array B	131.84	348	PKP	PKiKP	17 41 48.0	+0.5
	comp=Z,2.1nm,0.8s,baz=56,slow=3.7,SNR=1.5						
FINES	FINESS Array B	138.43	342	PKP	PKPdf	17 42 00.7	+1.8
	comp=Z,1.6nm,0.9s,baz=44,slow=4.2,SNR=5.4						
FINES				SKPbc	SKPbc	17 44 45.7	+0.6
	comp=Z,3.3nm,0.8s,baz=37,slow=3.5,SNR=9.0						
HFS	Hagfors	142.49	349	PKhKP	PKPpre	17 42 03.8	
	comp=Z,1.7nm,0.4s,baz=66,slow=3.6,SNR=22						
AKASG	Malin Array Be	145.03	328	PKP	PKPdf	17 42 11.8	+0.8
	comp=Z,1.4nm,0.4s,baz=43,slow=4.3,SNR=18						
AKASG				SKPbc	SKPbc	17 45 02.8	+0.8
	comp=Z,0.4nm,0.4s,baz=39,slow=2.8,SNR=6.6						
AKASG	Malin Array Be	145.03	328		PKPdf	17 42 11.3	+0.3
AKBB	Malin Array Si	145.03	328		PKPdf	17 42 11.6	+0.7
BRTR	Keskin Array B	147.73	307	PKPbc	PKPbc	17 42 19.7	0.0
	comp=Z,2.3nm,0.6s,baz=133,slow=4.7,SNR=4.7						
CLL	Collm	150.83	344	*i* PKPbc	PKPbc	17 42 27.4	+0.8
	comp=Z,4.0nm,0.7s						
CLL				*e*PKPab	PKPab	17 42 36.0	-0.1
DAVOX	Davos/Dischmat	155.80	344	PKPab	PKPab	17 42 58.0	+0.3
	comp=Z,0.7nm,0.4s,baz=8.7,slow=13,SNR=3.6						
TORD	Torodi Ar. Bea	169.33	187	PKPab	PKPab	17 43 57.9	+0.5
	comp=Z,0.4nm,0.6s,baz=210,slow=3.2,SNR=2.6						

DNK **31** *17:25:20.0±5.4, 51°.98N×32°.67W, h31km±72km, mb5.5*
MOS **31** *17:25:21.2±0.9, 52°.61N×32°.38W, h10km, mb5.3/127, MS5.0/67, Error ellipse: s-maj=5.4km s-min=4.3km az=52.1*
IDC **31** *17:25:21.9±0.4, 52°.64N×32°.35W, h0km, mb4.7/36, mbtmp4.7/38, ML4.9/2, MS4.9/94, Error ellipse: s-maj=11.7km s-min=8.3km az=6.0*
NEIC **31** *17:25:23.1, 52°.66N×32°.30W, h10km*
NEIC **31** *17:25:23.1±1.2, 52°.67N±0°.07×32°.32W±0°.08, h10km±1km, mb5.4/672, Ms_20 5.1/291, Mwb5.5/42, Mww5.5/25, Error ellipse: s-maj=12.7km s-min=7.7km az=194.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.07; $M_{\theta\theta}$-0.86; $M_{\phi\phi}$0.79; $M_{r\theta}$0.48; $M_{\theta\phi}$-1.58; $M_{\phi r}$-0.73; Fault plane solution: $M_0$1.98000×10^{17} NP1: ϕ_s101.42000°, δ74.76000°, λ162.34000°. NP2: ϕ_s196.21000°, δ72.98000°, λ15.96000°. Principal axes: T 2.1165, Plg23.0000°, Azm59.0000°; N -0.2997, Plg67.0000°, Azm242.0000°; P -1.8168, Plg1.0000°, Azm149.0000°;*
NEIC **31** *17:25:24.5, 52°.71N×32°.31W, h20km, Moment Tensor Solution. Duration: 2s.9 Moment tensor: Scale 10^{17}Nm; M_{rr}0.05; $M_{\theta\theta}$-0.55; $M_{\phi\phi}$0.50; $M_{r\theta}$-0.51; $M_{\theta\phi}$-2.47; $M_{\phi r}$0.48; Fault plane solution: $M_0$2.62000×10^{17} NP1: ϕ_s275.10000°, δ81.12000°, λ167.99000°. NP2: ϕ_s6.98000°, δ78.14000°, λ9.08000°. Principal axes: T 2.6842, Plg15.0000°, Azm231.0000°; N -0.1261, Plg75.0000°, Azm59.0000°; P -2.5582, Plg2.0000°, Azm321.0000°;*
NEIC **31** *17:25:24.5, 52°.71N×32°.31W, h20km*
GCMT **31** *17:25:27.1±0.1, 52°.66N±0°.01×32°.23W±0°.01, h23km, MW5.6/160, Moment Tensor Solution. s133,c225; s160,c312; Duration: 1s.6 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.72±.05; $M_{\theta\theta}$-0.39±.05; $M_{\phi\phi}$1.11±.05; $M_{r\theta}$0.22±.08; $M_{\theta\phi}$-3.51±.04; $M_{\phi r}$-0.46±.07; Best double couple: $M_0$3.61800×10^{17} NP1: ϕ_s186.00000°, δ88.00000°, λ6.00000°. NP2: ϕ_s96.00000°, δ84.00000°, λ178.00000°. Principal axes: T 3.9990, Plg6.0000°, Azm51.0000°; N -0.7650, Plg83.0000°, Azm206.0000°; P -3.2370, Plg3.0000°, Azm321.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BER **31** *17:25:27.3±1.9, 52°.67N×31°.91W, h20km, mb5.2, MW5.5(CSEM)*
BGR **31** *17:25:40.7, 52°.48N×30°.79W, h10km, mb4.9, Ms4.8*
ISC 31 17:25:24.7±0.5**, 52°.60N**±0°.03×**32°.36W**±0°.03**, h18km**±2km**, h18km:pP-P, n1898, σ1s.40**/1925**, mb5.3**/523**, MS5.1**/309**, 64C-39D, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRS	Narsarsuaq	11.14	325		Pn	17 28 03.0	+0.2
NRS	Narsarsuaq	11.14	325	P	Pn	17 28 03.1	+0.2
NRS	Narsarsuaq	11.14	325	*i* P	Pn	17 28 06.4	+3.5
IVI	Ivigtut	12.17	321	Pn	Pn	17 28 15.0	-2.0
IVI	Ivigtut	12.17	321	*i* P	Pn	17 28 19.0	+1.9
H07N1	FLORES T-PHASE	12.94	176	Pn	Pn	17 28 27.5	-0.2
H07N1	FLORES T-PHASE	12.94	176	*e*S	Sn	17 31 07.8	+17
H07S1	FLORES T-PHASE	13.25	176	Pn	Pn	17 28 33.6	+1.7
H07S1	FLORES T-PHASE	13.25	176	*e*P	P	17 28 46.9	+5.2
	195nm,1.1s						
H07S1				*e*S	S	17 31 13.2	-10
ANGG	Ammassalik, Gr	13.32	350		Pn	17 28 31.4	-1.3
ANGG	Ammassalik, Gr	13.32	350	*i* P	Pn	17 28 33.8	+1.1
ANGG				*i* S	S	17 31 13.1	-11
ISOG	Isortoq, Green	13.41	348	*i* P	Pn	17 28 34.2	+0.3
ISOG				*i* S	Sn	17 31 08.0	+5.7
BORG	Borgarnes	13.43	21	Pn	Pn	17 28 35.9	+1.7
	2.3nm,0.3s,baz=210,slow=7.6,SNR=13						
BORG				Sn	Sn	17 30 56.7	-6.1
	0.6nm,0.3s,baz=52,slow=22,SNR=1.8						
BORG	Borgarnes	13.43	21		Pn	17 28 31.1	-3.0
BORG	Borgarnes	13.43	21	P	Pn	17 28 31.2	-3.0
SRBC	Serra Branca	13.89	166	*e*S	S	17 31 25.3	-11
ROSA	Rosais	14.18	167	*e*P	P	17 28 53.4	+1.4

	154nm,1.1s						
ROSA				eS	Sn	17 31 22.6	+1.3
PCED	Cedros	14.21	168	eS	S	17 31 33.4	-9.2
PSBA	Serra de Santa	14.27	164	eP	P	17 28 54.4	+1.4
	234nm,1.3s						
PSBA				eS	S	17 31 48.3	+4.3
PMAN	Manadas	14.28	166	eP	P	17 28 56.3	+3.2
	221nm,1.5s						
PMAN				eS	S	17 31 40.2	-4.0
PAGU	Agualva, Azore	14.30	163	eP	P	17 28 54.9	+1.6
	185nm,2.1s						
PAGU				eS	S	17 31 42.9	-1.6
HOR	Horta	14.31	168	eS	S	17 31 38.8	-6.0
PICO	Pico	14.37	167	eP	P	17 28 56.8	+2.7
	359nm,1.5s						
PICO				eS	Sn	17 31 34.8	+8.8
PSCM	Serra do Cume	14.37	163	eS	S	17 31 49.6	+3.5
PCAN	Candelaria	14.40	168	eS	S	17 31 38.8	-7.8
PPNO	Prainha do Nor	14.42	167	eS	S	17 31 38.8	-8.3
PID	Ribeirinha	14.47	167	eS	S	17 31 42.9	-5.1
NUUK	Nuuk	15.33	327	i P	Pn	17 29 00.7	+0.7
NUUK				eS	Sn	17 31 53.0	+4.0
LEWI	Lewis, Hebride	15.46	59	eP	Pn	17 29 01.6	-0.1
LEWI				IAmb	IAmb	17 29 07.1	
	comp=Z,102nm,1.3s						
PSET	Sete Cidades	15.49	160	eP	P	17 29 06.2	-0.4
	comp=Z,370nm,1.6s						
PSET				eS	S	17 32 12.6	+3.6
DY2G	Dye2	15.53	339	i P	Pn	17 29 01.1	-1.7
PCALD	Caldeiras da R	15.57	159	eP	P	17 29 06.2	-1.2
	comp=Z,113nm,1.0s						
PCALD				eS	S	17 32 16.7	+6.2
PDA	Ponta Delgada	15.58	160	eS	S	17 32 38.3	+28
PGRON	Lagoa das Cont	15.62	159	eS	S	17 32 32.9	+21
BART	Pico Bartolome	15.65	158	eP	P	17 29 08.9	+0.4
	comp=Z,214nm,1.7s						
BART				eS	S	17 32 20.7	+8.3
DSB	Dublin	15.66	77	Pn	Pn	17 29 02.2	-2.1
KPL	Plockton	15.99	62	eP	Pn	17 29 07.5	-1.0
KPL				IAMs_20	IAMs_20	17 34 21.1	
	comp=Z,8µm,16.4s						
LAWE	Loch Awe, Argy	16.06	66	eP	Pn	17 29 09.6	+0.2
LAWE				IAMs_20	IAMs_20	17 35 03.5	
	comp=Z,5µm,12.5s						
DRLN	Deer Lake	16.17	268	Pn	Pn	17 29 08.8	-2.1
DRLN				IAmb	IAmb	17 29 12.7	
	comp=Z,204nm,0.7s						
PSMA	Santa Maria	16.41	159	eP	P	17 29 19.7	+2.9
	comp=Z,298nm,1.6s						
PSMA				eS	S	17 32 45.0	+17
PSMN	Pico do Norte,	16.42	159	eP	P	17 29 19.7	+2.8
	comp=Z,231nm,1.7s						
PSMN				eS	S	17 32 35.6	+7.7
GAL1	Galloway	16.47	71	eP	Pn	17 29 14.9	+0.3
GAL1				IAMs_20	IAMs_20	17 37 40.1	
	comp=Z,4µm,10.6s						
PGBU	Glenifferbraes	16.57	68	eP	Pn	17 29 14.9	-1.0
PGBU				IAmb	IAmb	17 29 18.5	
	comp=Z,83nm,0.9s						
NEWG	New Galloway	16.73	70	eP	Pn	17 29 17.9	-0.1
NEWG				IAMs_20	IAMs_20	17 35 08.8	
	comp=Z,6µm,13.2s						
INVG	Invergeldie, C	16.82	66	eP	Pn	17 29 19.0	-0.1
INVG				IAmb	IAmb	17 29 24.2	
	comp=Z,546nm,1.6s						
WLF1	Llynfaes	16.83	77	eP	Pn	17 29 18.9	-0.3
WLF1				IAmb	IAmb	17 29 24.6	
	comp=Z,98nm,0.9s						
WLF1				IAMs_20	IAMs_20	17 35 19.0	
	comp=Z,13µm,12.1s						
RSBS	Rosebush, Pemb	16.88	81	eP	Pn	17 29 17.9	-1.9
ICESG	Greenland Ices	16.90	351	i P	Pn	17 29 20.4	+0.1
SFJD	Kangerlussuaq	16.99	335	Pn	Pn	17 29 19.7	-1.4
	comp=Z,1.0nm,0.3s,baz=146,slow=13,SNR=27						
SFJD				LR	LR	17 34 39.9	
	comp=Z,11µm,20.5s,baz=144,slow=33						
	comp=Z,91nm,1.0s						
SFJD	Kangerlussuaq	16.99	335	Pn	Pn	17 29 19.4	-1.8
SFJD	Kangerlussuaq	16.99	335	P	Pn	17 29 19.4	-1.8
SFJD				pmax	pmax		
	comp=Z,956nm,1.7s						
SFJD	Kangerlussuaq	16.99	335	i P	Pn	17 29 19.0	-2.1
BIGH	Upper Bighouse	17.06	59	eP	Pn	17 29 21.2	-0.8
BIGH				IAMs_20	IAMs_20	17 35 23.3	
	comp=Z,7µm,15.3s						
ESK	Eskdalemuir	17.31	69	eP	Pn	17 29 24.8	-0.5
ESK				IAMs_20	IAMs_20	17 35 39.3	
	comp=Z,4µm,13.0s						
ESK	Eskdalemuir	17.31	69		Pn	17 29 24.3	-1.0
ESK	Eskdalemuir	17.31	69	P	Pn	17 29 24.3	-1.0
ESK				pmax	pmax		
	comp=Z,64nm,0.8s						
EKA	Eskdalemuir Ar	17.34	69	P	Pn	17 29 23.3	-2.3
	baz=280,slow=9.3						
EKA				S	Sn	17 32 31.7	-6.2
	comp=Z,2.0nm,0.7s,baz=282,slow=25,SNR=1.6						
EKA				LR	LR	17 34 47.2	
	comp=Z,2µm,20.4s,baz=270,slow=33						
	comp=Z,15nm,0.6s						
FOEL	Foel Wylfa	17.61	77	eP	Pn	17 29 28.7	-0.2
FOEL				IAMs_20	IAMs_20	17 36 15.3	
	comp=Z,6µm,12.5s						
HLM1	Long Mynd	17.87	78	eP	Pn	17 29 31.8	-0.5
HLM1				IAMs_20	IAMs_20	17 36 13.6	
	comp=Z,6µm,13.3s						
EDMD	Edmundbyers	18.06	71	eP	Pn	17 29 33.2	-1.3
EDMD				IAMs_20	IAMs_20	17 38 50.0	
	comp=Z,5µm,10.0s						
STNC	Stoke	18.16	76	eP	Pn	17 29 34.9	-0.8
STNC				IAmb	IAmb	17 29 37.9	
	comp=Z,615nm,1.4s						
HPK	Haverah Park	18.36	74	eP	P	17 29 37.8	-0.3
LBWR	Ladybower, Pea	18.39	75	eP	P	17 29 38.5	-0.1
LBWR				IAMs_20	IAMs_20	17 36 23.6	
	comp=Z,7µm,12.2s						
STRD	Stroud	18.47	80	eP	P	17 29 38.3	-1.1
STRD				IAMs_20	IAMs_20	17 36 31.6	
	comp=Z,8µm,11.6s						
SCO	Scoresbysund	18.56	11	P	P	17 29 38.2	-2.1
SCO	Scoresbysund	18.56	11	P	P	17 29 38.2	-2.1
SCO				pmax	pmax		
	comp=Z,183nm,1.9s						
SCO	Scoresbysund	18.56	11	i P	Pn	17 29 44.6	+4.1
LRW	Lerwick	18.70	54	eP	P	17 29 41.8	0.0
SWN1	Swindon	18.76	81	eP	P	17 29 41.1	-1.4
SWN1				IAmb	IAmb	17 29 43.9	
	comp=Z,155nm,1.1s						
ILULI	Ilulissat	18.84	339	P	P	17 29 41.9	-1.4
ILULI	Ilulissat	18.84	339	P	P	17 29 41.9	-1.4
ILULI				pmax	pmax		
	comp=Z,116nm,1.0s						
ILULI	Ilulissat	18.84	339	i P	P	17 29 41.0	-2.3
ILULI				IAmb	IAmb	17 29 45.3	
	comp=Z,5µm,3.9s						
PGAV	Gavieira, Arco	19.41	114	eP	Pn	17 29 50.7	-0.3
PGAV				A	A	17 30 45.4	
	comp=Z,132nm,1.6s						
PGAV				eLR	LR	17 33 35.0	
PGAV				A	A	17 35 42.7	
	comp=Z,6µm,20.0s						
PCAB	Cabril	19.71	114	eP	Pn	17 29 54.3	-0.3
PCAB				epP	pwP	17 30 01.2	0.0
PCAB				A	A	17 30 04.8	
	comp=Z,190nm,1.4s						
PTO	Porto	19.78	116	eP	Pn	17 29 57.0	+1.6
PTO				A	A	17 30 30.9	
	comp=Z,174nm,1.7s						
POLO	Lamas de Olo	20.07	114	eP	Pn	17 29 58.7	-0.2
POLO				A	A	17 30 08.8	
	comp=Z,117nm,1.7s						
POLO				A	A	17 36 04.2	
	comp=Z,3µm,18.0s						
PVRL	Vila Real	20.18	114	eP	Pn	17 29 59.3	-0.8
PVRL				A	A	17 30 09.8	
	comp=Z,212nm,1.5s						
SUMG	Summit	20.22	355	i P	P	17 29 58.0	-0.8
SUMG				IAmb	IAmb	17 30 07.3	
	comp=Z,288nm,1.4s						
GBN	Guysborough	20.34	261	P	P	17 29 58.2	-1.6
GBN				IAmb	IAmb	17 30 09.1	
	comp=Z,319nm,1.2s						
PBRG	Braganca	20.37	112	eP	Pn	17 30 02.2	-0.2
PBRG				A	A	17 30 12.1	
	comp=Z,84nm,1.3s						
PBRG				A	A	17 36 23.0	
	comp=Z,7µm,20.0s						
SCHQ	Schefferville	20.40	290	P	P	17 29 59.7	-0.8
	comp=Z,55nm,0.8s,baz=87,slow=8.0,SNR=93						
SCHQ				S	Sn	17 33 50.3	-1.6
	comp=Z,18nm,0.8s,baz=192,slow=16,SNR=3.0						
SCHQ				LR	LR	17 36 34.0	
	comp=Z,6µm,21.2s,baz=86,slow=33						
	comp=Z,55nm,0.8s						
SCHQ	Schefferville	20.40	290	P	P	17 29 59.1	-1.5
SCHQ				IAmb	IAmb	17 30 08.9	
	comp=Z,334nm,1.4s						
PVIS	Viseu	20.46	116	eP	P	17 30 02.0	+0.7
PVIS				A	A	17 30 13.1	
	comp=Z,157nm,1.5s						
COI	Coimbra	20.53	118	P	P	17 30 01.5	-0.5
COI				IAMs_20	IAMs_20	17 35 42.1	
	comp=Z,6µm,19.0s						
COI	Coimbra	20.53	118	P	P	17 30 01.5	-0.5
COI				pmax	pmax		
	comp=Z,136nm,1.3s						
COI				MLR	MLR		
	comp=Z,6µm,19.0s						
PCAS	Casmilo, Conde	20.60	118	eP	Pn	17 30 04.5	-0.5
PCAS				A	A	17 30 10.0	
	comp=Z,138nm,1.5s						
MVO	Moncorvo	20.63	114	eP	P	17 30 03.7	+0.5
MVO				A	A	17 30 14.4	
	comp=Z,156nm,1.3s						
MVO				eLR	LR	17 34 06.0	
MVO				A	A	17 36 21.4	
	comp=Z,5µm,20.0s						
MTE	Manteigas	20.87	116	P	P	17 30 05.4	-0.3
MTE				IAMs_20	IAMs_20	17 36 09.0	
	comp=Z,6µm,19.0s						
MTE	Manteigas	20.87	116	eP	Pn	17 30 07.5	-0.8
MTE				A	A	17 30 19.8	
	comp=Z,155nm,1.5s						
MTE				eLR	LR	17 34 03.5	
MTE				A	A	17 36 27.4	
	comp=Z,5µm,18.0s						
PMAFR	Mafra	20.98	121	eP	Pn	17 30 10.3	+0.8
PMAFR				A	A	17 31 09.8	
	comp=Z,225nm,1.5s						
PMAFR				A	A	17 36 15.0	
	comp=Z,3µm,20.0s						
NUUG	Nuugaatsiaq	21.13	342	i P	P	17 30 06.1	-2.1
NUUG				IAmb	IAmb	17 30 11.3	
	comp=Z,467nm,1.7s						
PCBR	Castelo Branco	21.30	117	eP	P	17 30 10.1	-0.2
PCBR				A	A	17 30 20.5	
	comp=Z,139nm,1.4s						
JMIC	Jan Mayen	21.33	21	LR	LR	17 36 00.0	
	comp=Z,2µm,21.8s,baz=218,slow=30						
PMTG	Montargil	21.45	120	eP	P	17 30 11.9	0.0
PMTG				A	A	17 30 28.4	
	comp=Z,171nm,1.4s						
PMTG				A	A	17 36 53.2	
	comp=Z,4µm,20.0s						
PMRV	Marv??o	21.64	118	eP	P	17 30 16.2	+2.2
PMRV				A	A	17 30 25.5	
	comp=Z,204nm,1.4s						
PMRV				eLR	LR	17 34 18.4	
PMRV				A	A	17 37 00.3	
	comp=Z,5µm,18.0s						
SUE	Sulen	21.73	52	eP	P	17 30 14.6	0.0
FRB	Frobisher Bay	21.77	315	P	P	17 30 15.2	+0.2
	comp=Z,320nm,1.2s,baz=100,slow=10,SNR=139						
FRB				LR	LR	17 37 05.5	
	comp=Z,5µm,18.4s,baz=104,slow=32						
	comp=Z,320nm,1.2s						
KMY	Karmoy	21.85	57	eP	P	17 30 14.5	-1.5
ASK	Askoy	21.89	54	eP	P	17 30 15.5	-0.9
ASK				IAmb	IAmb	17 30 17.2	
	comp=Z,330nm,0.9s						
FOO	Floro	21.92	51	eP	P	17 30 15.6	-1.2
FOO	Floro	21.92	51	eP	P	17 30 16.3	-0.4
FOO				IAmb	IAmb	17 30 18.0	
	comp=Z,177nm,0.7s						
PESTR	Estremoz	21.94	119	P	P	17 30 17.5	+0.4
PESTR	Estremoz	21.94	119	eP	P	17 30 22.3	+5.1
PESTR				A	A	17 30 46.4	
	comp=Z,134nm,1.7s						
PESTR				A	A	17 37 18.3	
	comp=Z,6µm,18.0s						
BER	Bergen	21.95	54	eP	P	17 30 15.6	-1.4
BER	Bergen	21.95	54	eP	P	17 30 16.7	-0.3
BER				IAmb	IAmb	17 30 17.8	
	comp=Z,134nm,0.9s						
EVO	Evora	21.96	120	eP	P	17 30 18.5	+1.1
EVO				A	A	17 30 25.5	
	comp=Z,88nm,1.8s						
PNCL	Nicolau / Gran	22.00	122	eP	P	17 30 20.6	+2.8
PNCL				A	A	17 30 35.0	
	comp=Z,106nm,1.7s						
PNCL				A	A	17 36 46.8	
	comp=Z,3µm,20.0s						
BATG	Bathurst New B	22.20	270	P	P	17 30 18.6	-1.3
DBG	Daneborg	22.36	9	i P	P	17 30 22.2	+0.9
DBG				IAmb	IAmb	17 30 42.0	
	comp=Z,87nm,1.2s						
MESJ	Messejana	22.37	122	P	P	17 30 22.2	+0.5
MESJ	Messejana	22.37	122	P	P	17 30 22.3	+0.5
MESJ				pmax	pmax		
	comp=Z,79nm,1.4s						
MESJ	Messejana	22.37	122	eP	P	17 30 23.7	+1.9
MESJ				A	A	17 30 38.0	
	comp=Z,103nm,1.5s						
MESJ	Messejana	22.37	122	eP	P	17 30 22.3	+0.5
MESJ				IAMs_20	IAMs_20	17 35 05.5	
	comp=E,6µm,15.4s						
PBEJ	Beja	22.41	121	eP	P	17 30 27.8	+5.6
PBEJ				A	A	17 30 36.5	
	comp=E,58nm,1.6s						
HYA	Hoyanger	22.43	52	eP	P	17 30 22.9	+0.8
HYA				IAmb	IAmb	17 30 25.4	
	comp=Z,60nm,0.8s						
CLF	Chambon-Foret	22.43	88	P	P	17 30 21.0	-1.4
BLS5	Blasjo	22.48	57	eP	P	17 30 21.9	-0.9
BLS5				IAmb	IAmb	17 30 28.2	
	comp=Z,123nm,1.1s						
MORF	Marmelete	22.55	123	P	P	17 30 23.5	-0.3
MORF				IAmb	IAmb	17 30 36.9	
	comp=Z,135nm,1.5s						
MORF	Marmelete	22.55	123	P	P	17 30 23.5	-0.3
MORF				pmax	pmax		
	comp=Z,135nm,1.5s						
MORF	Marmelete	22.55	123	eP	P	17 30 23.3	-0.5
MORF				A	A	17 30 37.8	
	comp=Z,135nm,1.7s						
MORF				A	A	17 37 22.7	
	comp=Z,3µm,18.0s						
MORF	Marmelete	22.55	123	eP	P	17 30 24.5	+0.7
MORF				IAMs_20	IAMs_20	17 35 27.4	
	comp=E,6µm,22.3s						
ODD1	Odda	22.57	56	eP	P	17 30 23.0	-0.8
PFVI	Vila Bisbo	22.60	124	eP	P	17 30 21.0	-3.2
PFVI				A	A	17 37 13.3	
	comp=E,3µm,18.0s						
PMOZ	Porto Moniz, M	22.60	145	eP	P	17 30 23.9	-0.5
PMOZ				A	A	17 36 58.2	
	comp=E,3µm,20.0s						
PCVE	Castro Verde	22.62	122	eP	P	17 30 24.6	+0.2
PCVE				A	A	17 30 36.9	
	comp=E,117nm,1.3s						
PCVE				A	A	17 37 15.5	
	comp=E,3µm,20.0s						
UPNV	Upernavik	22.67	342	i P	P	17 30 24.0	-0.7
UPNV				IAmb	IAmb	17 30 25.6	
	comp=Z,284nm,1.4s						
SNF	Seneffe	22.73	81	dP	P	17 30 24.6	-0.9
PBAR	Barrancos	22.74	119	eP	P	17 30 26.8	+1.1
PBAR				A	A	17 30 37.2	
	comp=Z,128nm,1.5s						
PBAR				A	A	17 37 32.1	
	comp=Z,5µm,20.0s						
SNART	Snartemo	22.89	60	eP	P	17 30 26.2	-0.9
AKN	Aaknes	22.91	50	eP	P	17 30 26.9	-0.5
AKN				IAmb	IAmb	17 30 28.4	
	comp=Z,75nm,0.8s						
PVAQ	Vaqueiros	22.96	122	eP	P	17 30 30.6	+2.6
PVAQ				A	A	17 30 37.5	
	comp=Z,68nm,2.1s						
PVAQ				eLR	LR	17 34 45.8	
PVAQ				A	A	17 37 25.5	
	comp=Z,3µm,22.0s						
PBDV	Barranco-do-Ve	22.97	122	eP	P	17 30 30.1	+1.9
PBDV				A	A	17 30 40.4	
	comp=Z,120nm,1.5s						
PBDV				A	A	17 37 34.9	
	comp=Z,3µm,20.0s						
DOU	Dourbes	23.05	81	dPKP	P	17 30 27.2	-1.7
DOU				dPP	PnPn	17 30 54.6	+0.7
BMRD	Maredsous	23.09	81	dP	P	17 30 28.3	-0.9
MOL	Molde	23.21	49	eP	P	17 30 28.9	-1.5
MOL	Molde	23.21	49	eP	P	17 30 30.4	+0.1
PAB	San Pablo	23.24	113	P	P	17 30 29.7	-1.2
PAB	San Pablo	23.24	113	IAMs_20	IAMs_20	17 37 35.5	
	comp=Z,6µm,19.0s						
PAB	San Pablo	23.24	113	P	P	17 30 29.7	-1.2
PAB				pmax	pmax		
	comp=Z,41nm,1.2s						
PAB				MLR	MLR		
	comp=Z,6µm,19.0s						
BGES	Gesves	23.25	80	dP	P	17 30 29.6	-1.3
ESBB	Sonseca Array	23.36	112	P	P	17 30 32.0	-0.2
ESDC	Sonseca Array	23.36	112	P	P	17 30 32.0	-0.2
	comp=Z,3.9nm,0.7s,baz=314,slow=9.0,SNR=22						
ESDC				LR	LR	17 37 59.8	
	comp=Z,6µm,18.2s,baz=311,slow=32						
	comp=Z,3.9nm,0.7s						
ESDC	Sonseca Array	23.36	112	P	P	17 30 31.6	-0.6
BCLA	Clavier	23.37	80	dP	P	17 30 31.1	-1.0
RCHB	Rochefort	23.41	81	dP	P	17 30 31.8	-0.7
SKAR	Skarslia	23.43	54	eP	P	17 30 32.9	+0.2
SKAR				IAmb	IAmb	17 30 34.1	
	comp=Z,26nm,0.8s						
BSTI	Sart Tilman	23.47	80	dP	P	17 30 31.5	-1.6
HOMB	Homborsund	23.58	60	eP	P	17 30 33.8	-0.2
HOMB				IAmb	IAmb	17 30 35.1	
	comp=Z,34nm,1.0s						
PQI	Presque Isle	23.67	270	P	P	17 30 34.3	-0.7
PQI				IAmb	IAmb	17 30 44.1	
	comp=Z,137nm,1.1s						
PQI				IAMs_20	IAMs_20	17 39 14.5	
	comp=Z,4µm,19.0s						
MEM	Membach	23.73	79	dP	P	17 30 33.6	-1.9
BTNL	Ternell	23.81	79	dP	P	17 30 35.0	-1.3
BHOU	Houvegnez	23.81	80	dP	P	17 30 35.2	-1.2
DOMB	Dombas	23.87	50	eP	P	17 30 36.4	-0.5
DOMB				IAmb	IAmb	17 30 38.5	
	comp=Z,35nm,0.8s						
E63A	Oxbow	24.03	270	P	P	17 30 38.1	-0.3
	baz=62,SNR=19						
E63A				P	P	17 30 38.1	-0.3
	baz=62,SNR=19						
KONO	Kongsberg	24.07	56	P	P	17 30 36.3	-2.4
KONO	Kongsberg	24.07	56⇑	eP	P	17 30 38.4	-0.4
KONO				pmax	pmax		
	comp=Z,11nm,0.8s						
KONO	Kongsberg	24.07	56	eP	P	17 30 38.1	-0.7
GOET	G??ttrup	24.08	63	i P	P	17 30 36.6	-2.2
GOET				IAmb	IAmb	17 30 42.6	
	comp=Z,645nm,1.9s						
G65A	Princeton	24.11	266	P	P	17 30 37.7	-1.5
G65A				IAmb	IAmb	17 30 55.2	
	comp=Z,140nm,1.0s						
G65A	Princeton	24.11	266	P	P	17 30 38.1	-1.1
	baz=59,SNR=7.6						
G65A				P	P	17 30 38.1	-1.1
	baz=59,SNR=7.6						
D62A	Allapoint, All	24.11	272	P	P	17 30 37.8	-1.4
D62A				IAmb	IAmb	17 30 47.7	
	comp=Z,78nm,0.8s						
D62A	Allapoint, All	24.11	272	P	P	17 30 38.7	-0.5
	baz=63						
D62A				P	P	17 30 38.7	-0.5
	baz=63						
MUD	Monsted U'grnd	24.13	64	i P	P	17 30 38.4	-0.9
MUD				IAmb	IAmb	17 30 42.5	
	comp=Z,174nm,1.3s						
WLF	Walferdange	24.15	81	P	P	17 30 37.2	-2.3
WLF	Walferdange	24.15	81	P	P	17 30 37.3	-2.3
WLF				pmax	pmax		
	comp=Z,76nm,1.3s						
WLF				MLR	MLR		
	comp=Z,3µm,20.0s						
WLF	Walferdange	24.15	81	dP	P	17 30 38.5	-1.1
WLF	Walferdange	24.15	81	eP	P	17 30 38.4	-1.2
	comp=Z,36nm,0.9s,baz=292,slow=9.0						
BUG	Bochum--Univer	24.21	77	eP	P	17 30 38.9	-1.1
	comp=Z,91nm,1.6s,baz=292,slow=9.0						
F64A	Sherman	24.26	268	P	P	17 30 38.6	-1.9
F64A				IAmb	IAmb	17 30 47.9	
	comp=Z,68nm,0.8s						
F64A	Sherman	24.26	268	P	P	17 30 39.7	-0.9
	baz=60						
F64A				P	P	17 30 39.7	-0.9
	baz=60						
KULLO	Kullorsuaq	24.27	344	i P	P	17 30 39.7	-0.7
KULLO				IAmb	IAmb	17 30 41.3	
	comp=Z,566nm,1.4s						
EMMW	East Machias	24.30	265	P	P	17 30 38.9	-2.0
EMMW				IAmb	IAmb	17 30 52.2	
	comp=Z,144nm,0.9s						
EMMW				IAMs_20	IAMs_20	17 39 33.3	
	comp=Z,4µm,18.0s						
EMMW	East Machias	24.30	265	P	P	17 30 39.7	-1.2
	baz=58						
AHRW	Bad Neuenahr-A	24.39	79	eP	P	17 30 40.5	-1.3
	comp=Z,28nm,0.8s,baz=292,slow=9.0						
TBLU	Trondheim	24.52	48	eP	P	17 30 43.5	+0.7
SSRD	Sdr. Stenderup	24.55	66	i P	P	17 30 40.6	-2.5
SSRD				IAmb	IAmb	17 30 45.0	
	comp=Z,166nm,0.9s						
OVD	Ostervraa, Den	24.58	62	i P	P	17 30 42.8	-0.5
OVD				IAmb	IAmb	17 31 11.7	
	comp=Z,276nm,1.5s						
E62A	Clayton Lake	24.61	271	P	P	17 30 42.6	-1.2
E62A	Clayton Lake	24.61	271	P	P	17 30 43.3	-0.5
	baz=62,SNR=13						
E62A				P	P	17 30 43.3	-0.5
	baz=62,SNR=13						
OSL	Oslo	24.63	56	eP	P	17 30 45.9	+2.1
NC204	NORSAR Array S	24.64	52	P	P	17 30 40.7	-3.3
NC204				IAmb	IAmb	17 30 45.8	
	comp=Z,54nm,0.8s						
NBO00	NORSAR Array S	24.65	53	P	P	17 30 41.2	-2.8
NAO01	NORSAR Array S	24.70	53	P	P	17 30 42.1	-2.4
NAO01				IAmb	IAmb	17 30 47.2	
	comp=Z,153nm,1.2s						
NAO01	NORSAR Array S	24.70	53	eP	P	17 30 45.0	+0.5
NB2	NORSAR Subarra	24.86	53	P	P	17 30 44.9	-1.1
	comp=Z,152nm,1.4s,baz=273,slow=11						
NB2	NORSAR Subarra	24.86	53	P	P	17 30 44.9	-1.1
	baz=273,slow=11						
NOA	NORSAR Array B	24.86	53	P	P	17 30 44.8	-1.1
	comp=Z,34nm,1.0s,baz=273,slow=10.0,SNR=35						
NOA				LR	LR	17 39 24.0	
	comp=Z,2µm,19.9s,baz=270,slow=34						
	comp=Z,34nm,1.0s						
NB201	NORSAR Array S	24.90	53	P	P	17 30 44.7	-1.6
NB201				IAmb	IAmb	17 30 49.1	
	comp=Z,175nm,1.4s						
NC303	NORSAR Array S	24.93	52	P	P	17 30 44.3	-2.3
NC303				IAmb	IAmb	17 30 49.0	
	comp=Z,51nm,0.8s						
KASTN	Kahler Asten	24.96	77	eP	P	17 30 45.9	-1.1
	comp=Z,58nm,1.2s,baz=292,slow=9.0						
NC602	NORSAR Array S	25.02	54	P	P	17 30 46.1	-1.3
NC602	NORSAR Array S	25.02	54	eP	P	17 30 47.5	+0.1
NC602				IAmb	IAmb	17 30 49.8	
	comp=Z,22nm,1.0s						
RETH	Rethem/Aller,	25.05	73	eP	P	17 30 46.5	-1.2
	comp=Z,72nm,1.0s,baz=292,slow=9.0						
SSB	Saint Sauveur	25.10	92	P	P	17 30 46.5	-1.8
SSB	Saint Sauveur	25.10	92	P	P	17 30 46.5	-1.8
SSB				pmax	pmax		
	comp=Z,13nm,0.9s						
SSB				MLR	MLR		
	comp=Z,1µm,18.0s						
NC405	NORSAR Array S	25.10	53	P	P	17 30 47.1	-1.0
NC405				IAmb	IAmb	17 30 50.3	
	comp=Z,143nm,1.1s						
PKME	Peaks-Kenny Pk	25.13	268	P	P	17 30 47.3	-1.2
PKME				IAmb	IAmb	17 31 09.3	
	comp=Z,155nm,1.2s						
PKME	Peaks-Kenny Pk	25.13	268	P	P	17 30 48.8	+0.4
	baz=59						
PKME	Peaks-Kenny Pk	25.13	268	P	P	17 30 48.4	0.0
	baz=59						
F62A	Pittston Farm,	25.23	270	P	P	17 30 48.1	-1.2
F62A	Pittston Farm,	25.23	270	P	P	17 30 49.0	-0.3

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      baz=61,SNR=12
F62A                            P        P        17 30 49.0 -0.3
      baz=61,SNR=12
BSEG  Bad Segeberg     25.28  70 eP       P        17 30 48.6 -1.2
      comp=Z,100nm,0.9s,baz=292,slow=9.0
TNS   Taunus Mts       25.32  79 eP       P        17 30 50.1 -0.2
      comp=Z,85nm,0.9s,baz=292,slow=9.0
ECH   Echery           25.33  84  P       P        17 30 48.8 -1.6
ECH   Echery           25.33  84  P       P        17 30 48.8 -1.6
ECH                               pmax    pmax
      comp=Z,42nm,1.0s
ECH                               MLR     MLR
      comp=Z,3µm,19.0s
NSS   Namsos           25.41  45 eP       P        17 30 51.6 +0.7
NSS                               IAmb    IAmb     17 30 53.2
      comp=Z,33nm,0.8s
NRDL  Niedersach Rie   25.55  73 eP       P        17 30 51.4 -0.8
      comp=Z,129nm,1.5s,baz=292,slow=9.0
WVL   Waterville       25.71 267  P       P        17 30 53.0 -0.8
WVL                               IAmb    IAmb     17 31 04.0
      comp=Z,76nm,0.9s
NEEM  North Greenlan   25.89 351 i P      P        17 30 53.1 -2.3
NEEM                              IAmb    IAmb     17 30 58.3
      comp=Z,436nm,1.7s
G62A  West of Eustis   25.91 269  P       P        17 30 54.8 -0.8
G62A                              IAmb    IAmb     17 31 12.7
      comp=Z,70nm,1.0s
G62A  West of Eustis   25.91 269  P       P        17 30 55.5  0.0
      baz=59,SNR=11
G62A                              P       P        17 30 55.5  0.0
      baz=59,SNR=11
CLZ   Clausthal        25.91  74 eP       P        17 30 55.0 -0.6
      comp=Z,72nm,1.2s,baz=292,slow=9.0
BFO   Black Forest     26.00  83  P       P        17 30 54.6 -1.8
BFO                               IAMs_20 IAMs_20  17 40 27.0
      comp=Z,4µm,21.0s
BFO   Black Forest     26.00  83  P       P        17 30 54.6 -1.8
BFO                               pmax    pmax
      comp=Z,28nm,1.0s
BFO                               MLR     MLR
      comp=Z,4µm,21.0s
BFO   Black Forest     26.00  83 eP       P        17 30 55.2 -1.2
      comp=Z,22nm,0.9s,baz=292,slow=9.0
LLD   Lille Linde      26.02  66 i P      P        17 30 52.2 -4.2
UBBA  Unterbreizbach   26.04  77 eP       P        17 30 55.6 -1.0
      comp=Z,8.5nm,0.9s,baz=292,slow=9.0
COP   Copenhagen       26.07  65 i P      P        17 30 52.2 -4.6
COP                               IAmb    IAmb     17 31 40.2
      comp=Z,75nm,1.0s
HFS   Hagfors          26.11  55  P       P        17 30 56.9 -0.4
      comp=Z,6.7nm,0.8s,baz=266,slow=8.7,SNR=18
HFS                               LR      LR       17 39 54.0
      comp=Z,3µm,21.8s,baz=283,slow=33
      comp=Z,6.7nm,0.8s
KONS  Konsvik          26.17  40 eP       P        17 30 57.6 -0.1
LATQ  La Tuque         26.25 275  P       P        17 30 57.4 -1.2
SENIN Lac Senin/Sane   26.25  88  P       P        17 30 57.2 -1.7
FLTG  Flechtingen      26.26  73 eP       P        17 30 56.9 -1.7
      comp=Z,32nm,1.2s,baz=292,slow=9.0
STU   Stuttgart        26.34  82  P       P        17 30 58.2 -1.2
STU   Stuttgart        26.34  82  P       P        17 30 58.2 -1.2
STU                               pmax    pmax
      comp=Z,42nm,0.9s
STU                               MLR     MLR
      comp=Z,2µm,20.0s
CART  Cartagena        26.48 112  IAMs_20 IAMs_20  17 40 01.4
      comp=Z,4µm,19.0s
BNI   Bardonecchia     26.52  91  P       P        17 30 59.9 -1.4
BNI   Bardonecchia     26.52  91  P       P        17 30 59.9 -1.4
BNI                               pmax    pmax
      comp=Z,32nm,1.3s
BNI                               MLR     MLR
      comp=Z,2µm,21.0s
I63A  Otisfield        26.55 267  P       P        17 31 00.5 -0.8
I63A                              IAmb    IAmb     17 31 38.7
      comp=Z,66nm,1.1s
I63A  Otisfield        26.55 267  P       P        17 31 01.3  0.0
      baz=57
I63A                              P       P        17 31 01.3  0.0
      baz=57
H62A  Milan            26.62 268  P       P        17 31 00.5 -1.5
H62A                              IAmb    IAmb     17 31 19.1
      comp=Z,118nm,1.3s
H62A  Milan            26.62 268  P       P        17 31 02.1 +0.1
      baz=58
H62A                              P       P        17 31 02.1 +0.1
      baz=58
LOF   Lofoten          26.65  37 eP       P        17 31 01.2 -0.7
MOR8  Moi Rana         26.65  41 eP       P        17 31 04.8 +2.7
NEUB  Neuenburg        26.95  75 eP       P        17 31 04.2 -0.7
      comp=Z,19nm,1.0s,baz=292,slow=9.0
MOX   Moxa             27.06  76 eP       P        17 31 05.1 -0.8
      comp=Z,22nm,1.3s,baz=292,slow=9.0
MOX                              eL       L        17 41 10.1
      comp=Z,3µm,18.3s
I62A  Tamworth         27.10 267  P       P        17 31 05.8 -0.5
I62A                              IAmb    IAmb     17 31 15.3
      comp=Z,87nm,1.1s
I62A  Tamworth         27.10 267  P       P        17 31 06.7 +0.4
      baz=57
I62A                              P       P        17 31 06.7 +0.4
      baz=57
FAUS  Fauske           27.16  39 eP       P        17 31 10.4 +3.8
GRFO  Grafenberg       27.18  79  P       P        17 31 05.7 -1.3
GRFO                              IAmb    IAmb     17 31 44.4
      comp=Z,110nm,1.6s
GRFO  Grafenberg       27.18  79  P       P        17 31 05.7 -1.3
GRFO                              pmax    pmax
      comp=Z,110nm,1.6s
GRFO                              MLR     MLR
      comp=Z,3µm,18.0s
GRA1  Grafenberg Arr   27.18  79  P       P        17 31 05.4 -1.6
GRA1                              IAmb    IAmb     17 31 41.8
      comp=Z,70nm,1.3s
GRF   Grafenberg Arr   27.18  79  P       P        17 31 05.4 -1.6
GRF                               pmax    pmax
      comp=Z,70nm,1.3s
GRF                               MLR     MLR
      comp=Z,2µm,18.0s
GRF   Grafenberg Arr   27.18  79 eP       P        17 31 06.5 -0.6
      comp=Z,30nm,1.0s,baz=292,slow=9.0
GRF                              eL       L        17 40 46.1
      comp=Z,2µm,19.1s
UNH   University of    27.24 265  P       P        17 31 07.7 +0.1
      baz=56
LBNH  Lisbon           27.26 268  P       P        17 31 07.5 -0.3
LBNH                              IAMs_20 IAMs_20  17 41 16.7
      comp=Z,4µm,20.0s
LBNH  Lisbon           27.26 268  P       P        17 31 07.5 -0.3
LBNH                              pmax    pmax
      comp=Z,47nm,1.1s
LBNH                              MLR     MLR
      comp=Z,4µm,20.0s
LBNH  Lisbon           27.26 268  P       P        17 31 08.5 +0.7
      baz=58
LBNH  Lisbon           27.26 268  P       P        17 31 08.1 +0.3
      baz=58
DAVA  Damuels          27.39  84 eP       P        17 31 09.9 +0.8
      comp=Z,24nm,1.1s
PLN   Plauen           27.44  76 eP       P        17 31 07.7 -1.7
      comp=Z,28nm,1.3s,baz=292,slow=9.0
TUE   Stuetta          27.45  86  IAMs_20 IAMs_20  17 41 00.5
      comp=Z,4µm,18.0s
WERD  Werda            27.54  76 eP       P        17 31 09.1 -1.1
      comp=Z,75nm,2.1s,baz=292,slow=9.0
BSD   Bornholm Skovb   27.58  66 i P      P        17 31 08.4 -2.1
BSD                               IAmb    IAmb     17 31 12.6
      comp=Z,22nm,1.0s
GUNZ  Gunzen           27.59  77 eP       P        17 31 09.8 -0.9
      comp=Z,17nm,1.3s,baz=292,slow=9.0
MANZ  Manzenberg       27.60  77 eP       P        17 31 09.4 -1.4
      comp=Z,3.0nm,1.1s,baz=292,slow=9.0
DAVOX Davos/Dischmat   27.62  85  P       P        17 31 11.3 +0.1
      comp=Z,13nm,0.6s,baz=310,slow=11,SNR=26
DAVOX                             LR      LR       17 40 39.4
      comp=Z,2µm,19.4s,baz=303,slow=33
      comp=Z,13nm,0.6s
CLL   Collm            27.64  74  P       P        17 31 10.0 -1.0
CLL   Collm            27.64  74 i P      P        17 31 11.4 +0.3
      comp=Z,24nm,0.7s
CLL                              ePP      PnPn     17 31 52.0 -4.4
CLL                              eS       S        17 36 01.0 +9.2
CLL   Collm            27.64  74  P       P        17 31 10.0 -1.0
CLL                               pmax    pmax
      comp=Z,22nm,0.8s
CLL                               MLR     MLR
      comp=Z,2µm,22.0s
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CLL   Collm            27.64  74 eP       P        17 31 09.6 -1.5
      comp=Z,24nm,0.7s,baz=292,slow=9.0
WERN  Wernitzgruen     27.64  77 eP       P        17 31 10.2 -1.0
      comp=Z,31nm,1.6s,baz=292,slow=9.0
TANN  Tannenbergstha   27.64  76 eP       P        17 31 10.4 -0.9
      comp=Z,20nm,0.9s,baz=292,slow=9.0
MNTQ  Montreal, Queb   27.65 272  P       P        17 31 10.3 -0.9
NKC   Novy Kostel      27.70  77  AMS     AMS      17 42 10.0
      comp=Z,4µm,12.7s
TULEG Thule            27.71 343  P       P        17 31 09.9 -1.5
TULEG                             IAmb    IAmb     17 31 53.8
      comp=Z,82nm,1.1s
TULEG                             IAMs_20 IAMs_20  17 40 56.4
      comp=Z,6µm,20.0s
TULEG Thule            27.71 343 i P      P        17 31 09.7 -1.7
TULEG                             IAmb    IAmb     17 31 53.2
      comp=Z,82nm,1.1s
ROTZ  Rotzenmuhle      27.74  78 eP       P        17 31 11.2 -0.8
      comp=Z,2.6nm,1.0s,baz=292,slow=9.0
HNH   Hanover          27.77 267  P       P        17 31 12.2 -0.1
RETA  Reutte           27.84  83 i P      P        17 31 12.6 -0.4
      comp=Z,29nm,1.1s,SNR=8.6
FUR   Furstenfeldbru   27.85  81 eP       P        17 31 12.7 -0.3
      comp=Z,49nm,0.8s,baz=292,slow=9.0
BCX   Boston College   27.86 264  P       P        17 31 12.5 -0.6
TRQ   Mont Tremblant   27.86 274  P       P        17 31 12.2 -1.0
TRQ                               IAmb    IAmb     17 31 46.7
      comp=Z,52nm,1.0s
L64A  Middleborough    27.89 263  P       P        17 31 12.7 -0.7
L64A                              IAmb    IAmb     17 31 55.6
      comp=Z,60nm,1.1s
WES   Weston           27.92 264  IAMs_20 IAMs_20  17 41 39.3
      comp=Z,4µm,19.0s
FUORN Ofenpass-Fuorn   27.93  85  P       P        17 31 12.4 -1.7
FRNY  Flat Rock        27.97 271  P       P        17 31 13.2 -0.9
FRNY                              IAmb    IAmb     17 31 35.5
      comp=Z,54nm,1.2s
FRNY  Flat Rock        27.97 271  P       P        17 31 13.7 -0.3
      baz=59
FBE   Freiberg         27.98  75 eP       P        17 31 13.3 -0.8
      comp=Z,32nm,1.2s,baz=292,slow=9.0
M65A  Busby, Falmout   27.99 262  IAMs_20 IAMs_20  17 41 41.2
      comp=Z,6µm,19.0s
HRV   Adam Dziewonsk   27.99 265  P       P        17 31 14.1 -0.2
      baz=55
FETA  Feichten         28.03  84 eP       P        17 31 14.8  0.0
      comp=Z,11nm,0.7s,SNR=7.4
MCVT  Middlebury Col   28.07 268  P       P        17 31 14.7 -0.3
      baz=57
MOTA  Moosalm          28.11  83 eP       P        17 31 15.3 -0.2
      comp=Z,34nm,1.3s,SNR=13
MDT   Midelt           28.12 124  P       P        17 31 15.8 +0.2
      comp=Z,3.2nm,0.9s,baz=315,slow=8.6,SNR=6.7
MDT                               LR      LR       17 39 47.0
      comp=Z,1µm,21.4s,baz=354,slow=31
      comp=Z,3.2nm,0.9s
J61A  Chester          28.13 267  P       P        17 31 15.3 -0.3
J61A                              IAmb    IAmb     17 31 28.7
      comp=Z,78nm,1.4s
J61A  Chester          28.13 267  P       P        17 31 15.9 +0.4
      baz=56
J61A                              P       P        17 31 15.9 +0.4
      baz=56
SQTA  Sankt Quirin     28.23  83 eP       P        17 31 16.4 -0.1
      comp=Z,32nm,1.0s,SNR=16
K62A  Royalston        28.32 266  P       P        17 31 16.9 -0.3
K62A                              IAmb    IAmb     17 31 52.6
      comp=Z,68nm,1.0s
K62A  Royalston        28.32 266  P       P        17 31 17.8 +0.6
      baz=55
K62A                              P       P        17 31 17.8 +0.6
      baz=55
BRYW  Bryant College   28.32 264  P       P        17 31 18.1 +0.8
BRYW                              IAmb    IAmb     17 31 32.5
      comp=Z,58nm,1.2s
BRYW                              IAMs_20 IAMs_20  17 42 01.9
      comp=Z,5µm,18.0s
BRG   Berggiesshubel   28.35  75 i P      P        17 31 17.6 +0.2
BRG                               Amp              17 31 18.3
      comp=Z,12nm,0.9s
BRG   Berggiesshubel   28.35  75  P       P        17 31 22.1 +4.7
BRG                               Amp              17 31 22.5
      comp=Z,18nm,0.8s
BRG   Berggiesshubel   28.35  75  S       S        17 36 03.0  0.0
BRG                               Amp              17 42 00.0
      comp=Z,3.1nm,15.1s
BRG                               Amp              17 42 03.0
      comp=N,2.4nm,12.7s
BRG                               Amp              17 42 04.0
      comp=E,3.0nm,15.8s
BRG   Berggiesshubel   28.35  75 i P      P        17 31 17.6 +0.2
BRG                              e                 17 31 22.1
BRG                               S       S        17 36 03.0  0.0
BRG                               pmax    pmax
      comp=Z,12nm,0.9s
BRG                               pmax    pmax
      comp=Z,18nm,0.8s
BRG                               MLR     MLR
      comp=Z,3µm,15.1s
BRG                               MLR     MLR
      comp=N,2µm,12.7s
BRG                               MLR     MLR
      comp=E,3µm,15.8s
BRG   Berggiesshubel   28.35  75 eP       P        17 31 16.2 -1.2
      comp=E,12nm,0.9s,baz=292,slow=9.0
WATA  Walderalm        28.40  83 i P      P        17 31 17.5 -0.6
      comp=E,21nm,1.0s,SNR=7.3
WTTA  Wattenberg       28.47  83 i P      P        17 31 18.5 -0.2
      comp=E,18nm,0.8s,SNR=10
BMNY  Brushton-Moira   28.52 271  P       P        17 31 20.6 +1.5
      baz=59
MSSA  Maissana         28.63  90  P       P        17 31 19.3 -0.8
L61B  Northampton      28.71 266  P       P        17 31 20.8 +0.1
L61B                              IAMs_20 IAMs_20  17 42 40.0
      comp=Z,4µm,18.0s
L61B  Northampton      28.71 266  P       P        17 31 19.4 -1.3
      baz=55
ACCN  Adirondack Com   28.79 268  P       P        17 31 20.9 -0.5
NCB   Newcomb          28.81 270  P       P        17 31 21.5 -0.1
NCB                               IAmb    IAmb     17 31 35.5
      comp=Z,99nm,1.4s
NCB   Newcomb          28.81 270  P       P        17 31 22.8 +1.2
      baz=57,SNR=16
KHC   Kasperske Hory   28.82  78  P       P        17 31 20.4 -1.3
KHC   Kasperske Hory   28.82  78 eP       P        17 31 21.9 +0.2
KHC                               AMS     AMS      17 43 30.0
      comp=Z,2µm,10.8s
KHC   Kasperske Hory   28.82  78⇑iP       P        17 31 22.6 +0.9
KHC                               pmax    pmax
      comp=Z,19nm,1.1s
PVCC  Panska Ves       28.85  75  AMS     AMS      17 42 10.0
      comp=Z,3µm,15.8s
TRO   Tromso           28.85  34 eP       P        17 31 21.7 +0.1
RJOB  Jochberg         28.95  81 eP       P        17 31 22.4 -0.5
      comp=Z,12nm,1.0s,baz=292,slow=9.0
GEC2  GERESS Array S   29.01  79  P       P        17 31 21.4 -2.0
GEC2  GERESS Array S   29.01  79 eP       P        17 31 22.8 -0.6
      comp=Z,17nm,1.0s,baz=292,slow=9.0
GERES GERESS Array B   29.01  79  P       P        17 31 22.7 -0.8
      comp=Z,6.9nm,0.8s,baz=305,slow=7.1,SNR=41
GERES                             LR      LR       17 41 52.5
      comp=Z,2µm,18.3s,baz=294,slow=34
      comp=Z,6.9nm,0.8s
GERES GERESS Array B   29.01  79  P       P        17 31 21.8 -1.7
GERES GERESS Array B   29.01  79  P       P        17 31 21.8 -1.7
PRU   Pruhonice        29.04  76 eP       P        17 31 23.2 -0.4
PRU                              eS       S        17 36 14.7 +0.8
PRU                               AMS     AMS      17 43 20.0
      comp=Z,3µm,13.9s
PRU   Pruhonice        29.04  76 eP       P        17 31 23.2 -0.4
PRU                              eS       S        17 36 14.7 +0.8
PRU                               MLR     MLR
      comp=Z,3µm,13.9s
CTI   Castel Tesino    29.05  85  P       P        17 31 22.7 -1.2
CTI   Castel Tesino    29.05  85  P       P        17 31 22.7 -1.2
CTI                               pmax    pmax
      comp=Z,20nm,0.8s
GOPC  GO Pecny, Ondr   29.22  76  AMS     AMS      17 43 10.0
      comp=Z,3µm,13.2s
ABTA  Abfaltersbach    29.24  83 i P      P        17 31 25.1 -0.3
      comp=Z,3.8nm,0.7s
J59A  Piesco           29.25 269  P       P        17 31 25.1 -0.5
J59A                              IAmb    IAmb     17 31 31.3
      comp=Z,65nm,1.1s
J59A  Piesco           29.25 269  P       P        17 31 26.6 +1.1
      baz=57
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J59A                              P       P        17 31 26.6 +1.1
      baz=57
JETT  Jettan, Norway   29.35  35 eP       P        17 31 26.5 +0.3
CKRC  Cesky Krumlov    29.39  78 eP       P        17 31 26.1 -0.6
CKRC                              AMS     AMS      17 44 10.0
      comp=Z,2µm,10.9s
CKRC  Cesky Krumlov    29.39  78 eP       P        17 31 26.1 -0.6
CKRC                              MLR     MLR
      comp=Z,2µm,10.9s
CIMO  Cimolais         29.40  84  P       P        17 31 25.6 -1.3
CIMO                              IAmb    IAmb     17 32 00.7
      comp=Z,16nm,1.1s
TEOL  Teolo            29.41  86  P       P        17 31 25.6 -1.2
TEOL                              IAmb    IAmb     17 31 47.6
      comp=Z,37nm,0.8s
GKP   Gorka Klasztor   29.42  69 i P      P        17 31 26.8 -0.1
GKP                              eL       L        17 45 19.4
      comp=Z,6µm,14.2s
BIOA  Bad Ischl, Aus   29.48  81 i P      P        17 31 27.1 -0.4
      comp=Z,22nm,0.9s,SNR=9.7
ZCCA  Zocca            29.50  89  P       P        17 31 27.6 -0.2
ZCCA                              IAmb    IAmb     17 32 05.9
      comp=Z,56nm,1.2s
YLE   Yale             29.52 264  IAMs_20 IAMs_20  17 42 37.4
      comp=Z,4µm,20.0s
KBA   Koelnbreinsper   29.59  82 eP       P        17 31 28.4 -0.2
      comp=Z,15nm,1.1s,SNR=8.2
STAL  STALIGIAL        29.59  84  P       P        17 31 27.2 -1.3
CLUD  Cludinico        29.60  84  P       P        17 31 27.4 -1.2
CLUD                              IAmb    IAmb     17 31 30.2
      comp=Z,31nm,0.7s
HCNY  Howe Caverns     29.61 267  P       P        17 31 29.4 +0.7
      baz=56
KSCT  Kent School, K   29.61 265  P       P        17 31 28.3 -0.5
CHVC  Chvalec          29.70  74 eP       P        17 31 29.6 +0.2
CHVC                              AMS     AMS      17 43 50.0
      comp=Z,2µm,12.3s
CHVC  Chvalec          29.70  74 eP       P        17 31 29.6 +0.2
CHVC                              MLR     MLR
      comp=Z,2µm,12.3s
UPC   Upice            29.70  74 eP       P        17 31 30.2 +0.7
UPC                               AMS     AMS      17 43 50.0
      comp=Z,3µm,12.6s
UPC   Upice            29.70  74 eP       P        17 31 30.2 +0.7
UPC                               MLR     MLR
      comp=Z,3µm,12.6s
KSP   Ksiaz            29.74  74 i P      P        17 31 29.2 -0.6
KSP                              eS       S        17 36 26.4 +1.5
KSP                              eL       L        17 46 46.2
      comp=Z,2µm,13.9s
J58A  Remsen           29.79 269  P       P        17 31 30.2 -0.1
J58A                              IAmb    IAmb     17 31 35.8
      comp=Z,50nm,1.1s
J58A  Remsen           29.79 269  P       P        17 31 30.9 +0.6
      baz=56,SNR=6.4
J58A                              P       P        17 31 30.9 +0.6
      baz=56,SNR=6.4
MOA   Molln            29.79  80 i P      P        17 31 29.5 -0.7
      comp=Z,32nm,1.6s,SNR=7.4
OSTC  Ostas            29.80  74  AMS     AMS      17 43 50.0
      comp=Z,3µm,12.4s
WSPT  Westport, CT     29.85 264  IAMs_20 IAMs_20  17 42 56.2
      comp=Z,5µm,18.0s
TREC  Trest            29.89  77  AMS     AMS      17 43 20.0
      comp=Z,4µm,12.9s
DPC   Dobruska-Polom   29.95  75 eP       P        17 31 30.6 -1.1
DPC                              eS       S        17 36 26.4 -1.9
DPC                               AMS     AMS      17 43 50.0
      comp=Z,2µm,14.0s
DPC   Dobruska-Polom   29.95  75 eP       P        17 31 30.6 -1.1
DPC                              eS       S        17 36 26.4 -1.9
DPC                               MLR     MLR
      comp=Z,2µm,14.0s
RAF   Rauma            29.98  52 eP       P        17 31 32.3 +0.6
MYKA  Terra Mystica    29.98  83 i P      P        17 31 31.6 -0.5
      comp=Z,43nm,0.8s,SNR=16
PRED  Cave del Predi   30.02  83  P       P        17 31 30.8 -1.6
BRNY  Black Rk. Fore   30.12 265  P       P        17 31 33.9 +0.7
      baz=54
J57A  Williamstown     30.19 270  P       P        17 31 33.6 -0.2
CADS  Cadrg            30.23  83 eP       P        17 31 33.1 -1.1
SABO  M.te Sabotino    30.27  84  P       P        17 31 33.6 -0.9
SABO                              IAmb    IAmb     17 31 35.8
      comp=Z,37nm,0.7s
L59A  Walton           30.29 267  P       P        17 31 35.2 +0.4
L59A                              IAmb    IAmb     17 32 06.3
      comp=Z,126nm,1.6s
L59A  Walton           30.29 267  P       P        17 31 35.5 +0.7
      baz=55
L59A                              P       P        17 31 35.5 +0.7
      baz=55
PAL   Palisades        30.30 264  IAMs_20 IAMs_20  17 43 01.2
      comp=Z,3µm,19.0s
KTK1  Kautokeino       30.30  36 eP       P        17 31 34.4 -0.1
KRLC  Kraliky          30.33  75 eP       P        17 31 35.7 +0.6
KRLC                             eS       S        17 36 31.3 -3.0
KRLC                              AMS     AMS      17 43 00.0
      comp=Z,3µm,15.9s
KRLC  Kraliky          30.33  75 eP       P        17 31 35.7 +0.6
KRLC                             eS       S        17 36 31.3 -3.0
KRLC                              MLR     MLR
      comp=Z,3µm,15.9s
TRNY  Table Rock, Ra   30.41 265  P       P        17 31 35.9 +0.1
TRI   Trieste          30.50  84  P       P        17 31 35.6 -0.9
TRI                               IAmb    IAmb     17 31 52.2
      comp=Z,89nm,1.6s
TRI   Trieste          30.50  84  P       P        17 31 35.6 -0.9
TRI                               pmax    pmax
      comp=Z,89nm,1.6s
KRUC  Moravsky         30.52  77 eP       P        17 31 35.7 -1.0
VRAC  Vranov           30.54  76  LR      LR       17 43 19.1
      comp=Z,3µm,18.3s,baz=291,slow=35
VRAC  Vranov           30.54  76 eP       P        17 31 36.0 -0.9
OBKA  Obir             30.59  82 eP       P        17 31 36.5 -0.9
      comp=Z,34nm,0.8s,SNR=24
OBKA  Obir             30.59  82 eP       P        17 31 34.8 -2.6
DELO  Deloro Mine      30.59 273  P       P        17 31 36.4 -0.9
DELO                              IAmb    IAmb     17 31 46.4
      comp=Z,64nm,1.2s
KLNR  Kaliningrad      30.66  65⇑eP       P        17 31 38.1 +0.3
KLNR                              pmax    pmax
      comp=Z,15nm,0.7s
CONA  Conrad Observa   30.71  79 eP       P        17 31 37.7 -0.7
      comp=Z,9.7nm,1.1s
SKDS  Skadanscina      30.74  84 eP       P        17 31 37.7 -1.0
J56A  Wolcott          30.79 270  P       P        17 31 40.0 +0.9
      baz=56
J56A                              P       P        17 31 40.0 +0.9
      baz=56
SOKA  Soboth           30.80  82 i P      P        17 31 38.0 -1.2
      comp=Z,24nm,1.3s,SNR=13
ARSA  Arzberg          30.82  81 i P      P        17 31 38.9 -0.5
      comp=Z,18nm,1.1s,SNR=6.4
SPITS Spitsbergen Ar   30.86  18  P       P        17 31 38.2 -1.3
      comp=Z,12nm,1.0s,baz=262,slow=16,SNR=2.6
SPITS                             LR      LR       17 40 43.9
      comp=Z,2µm,20.2s,baz=208,slow=30
      comp=Z,12nm,1.0s
BINY  Binghamton       30.86 268  P       P        17 31 40.0 +0.1
BINY                              IAMs_20 IAMs_20  17 43 39.0
      comp=Z,3µm,18.0s
BINY  Binghamton       30.86 268  P       P        17 31 38.0 -1.8
      baz=55
K57A  Scipio Center    30.89 269  P       P        17 31 39.9 -0.1
K57A                              IAmb    IAmb     17 31 45.5
      comp=Z,82nm,1.1s
K57A  Scipio Center    30.89 269  P       P        17 31 40.4 +0.4
      baz=56,SNR=5.2
CEY   Cerknica         30.89  84 eP       P        17 31 39.4 -0.6
MORC  Moravsky Berou   30.90  75 ⇑P       P        17 31 40.2 +0.1
MORC  Moravsky Berou   30.90  75  P       P        17 31 38.8 -1.3
MORC  Moravsky Berou   30.90  75 eP       P        17 31 39.0 -1.1
MORC  Moravsky Berou   30.90  75  P       P        17 31 38.8 -1.3
MORC                              pmax    pmax
      comp=Z,41nm,1.6s
RONA  Rosalia, Austr   31.07  79 i P      P        17 31 41.3 -0.3
      comp=Z,33nm,1.6s,SNR=12
VISS  Visnje           31.11  83 eP       P        17 31 41.1 -0.8
SET   Setif            31.13 107  P       P        17 31 44.0 +1.7
ARA0  ARCESS Array S   31.14  35 eP       P        17 31 41.5 -0.4
ARCES ARCESS Array B   31.14  35  P       P        17 31 41.4 -0.5
      comp=Z,13nm,1.0s,baz=277,slow=7.2,SNR=25
ARCES                             LR      LR       17 41 21.4
      comp=Z,1µm,18.7s,baz=272,slow=31
      comp=Z,13nm,1.0s
PANJ  Princeton        31.16 264  P       P        17 31 43.2 +0.9
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	baz=52						
PBUR	Paburge	31.17	62	*e*P	P	17 31 42.0	-0.3
GROS	Grobnik	31.18	82	*e*P	P	17 31 41.1	-1.6
OKC	Ostrava-Krasne	31.23	75	AMS	AMS	17 44 40.0	
	comp=Z,2µm,12.4s						
ALE	Alert	31.24	353	IAMs_20	IAMs_20	17 42 50.6	
	comp=Z,5µm,19.0s						
MAUC	Maruska	31.24	76	*e*P	P	17 31 42.8	-0.3
MAUC				AMS	AMS	17 44 30.0	
	comp=Z,6µm,11.8s						
ZST	Bratislava	31.33	78	*e*P	P	17 31 44.4	+0.6
ZST	Bratislava	31.33	78	*e*P	P	17 31 44.4	+0.6
MODS	Modra-Piesok	31.35	78	*e*P	P	17 31 44.7	+0.6
MODS	Modra-Piesok	31.35	78	*e*P	P	17 31 44.7	+0.6
SMOL	Smolenice	31.38	77	*e*P	P	17 31 44.7	+0.4
SMOL				pmax	pmax		
	comp=Z,19nm,1.9s						
SADO	Sadowa	31.38	275	LR	LR	17 43 59.0	
	comp=Z,3µm,19.1s,baz=80,slow=36						
SADO	Sadowa	31.38	275	P	P	17 31 44.2	-0.1
SADO				IAmb	IAmb	17 31 54.0	
	comp=Z,83nm,1.1s						
MEF	Metsahovi	31.40	53	*e*P	P	17 31 43.8	-0.4
LUPA	Lehigh Univers	31.43	265	P	P	17 31 43.9	-0.8
LUPA				IAmb	IAmb	17 31 49.6	
	comp=Z,36nm,1.0s						
MTSE	Matsula	31.44	56	*e*P	P	17 31 43.8	-0.8
CRES	Cresnjev	31.47	83	*e*P	P	17 31 43.4	-1.7
FDMO	Fiordimonte	31.50	89	P	P	17 31 44.9	-0.6
BOJS	Bojanci	31.51	84	*e*P	P	17 31 44.5	-0.9
TUPA	Temple Univers	31.58	264	P	P	17 31 46.5	+0.4
	baz=52						
NRCA	Norcia	31.63	90	P	P	17 31 44.5	-2.1
GUMA	Gualdo di Mace	31.64	89	P	P	17 31 44.5	-2.1
GUMA				IAmb	IAmb	17 32 56.3	
	comp=Z,236nm,0.6s						
MMNY	Mt. Morris Dam	31.73	270	P	P	17 31 46.3	-1.1
MMNY				IAmb	IAmb	17 31 53.6	
	comp=Z,58nm,1.0s						
L56A	Greenwood	31.86	269	P	P	17 31 48.0	-0.6
L56A				IAmb	IAmb	17 32 01.9	
	comp=Z,46nm,1.1s						
L56A	Greenwood	31.86	269	P	P	17 31 48.9	+0.3
	baz=55						
L56A				P	P	17 31 48.9	+0.3
	baz=55						
BEL	Belsk	31.96	70	*e*P	P	17 31 48.9	-0.4
BEL				*e*L	L	17 46 40.5	
	comp=Z,6µm,15.2s						
FINES	FINESS Array B	31.96	51	P	P	17 31 48.5	-0.7
	comp=Z,13nm,0.7s,baz=289,slow=8.5,SNR=78						
FINES				LR	LR	17 43 26.2	
	comp=Z,2µm,20.6s,baz=274,slow=34						
	comp=Z,13nm,0.7s						
FINES	FINESS Array B	31.96	51	P	P	17 31 47.7	-1.5
WUPA	West Chester U	31.98	264	P	P	17 31 49.1	-0.5
OJC	Ojcow	32.04	73	*i* P	P	17 31 49.2	-0.8
OJC				*e*S	S	17 37 05.6	+4.8
OJC				*e*L	L	17 44 27.1	
	comp=Z,3µm,18.5s						
OJC	Ojcow	32.04	73	P	P	17 31 48.6	-1.4
OJC	Ojcow	32.04	73	P	P	17 31 48.6	-1.4
OJC				pmax	pmax		
	comp=Z,18nm,0.8s						
AQU	L'Aquila	32.08	90	IAMs_20	IAMs_20	17 43 12.3	
	comp=Z,3µm,20.0s						
N58A	Sunbury	32.10	266	P	P	17 31 50.3	-0.4
N58A				IAmb	IAmb	17 31 55.3	
	comp=Z,31nm,1.0s						
N58A	Sunbury	32.10	266	P	P	17 31 50.9	+0.2
	baz=53						
N58A				P	P	17 31 50.9	+0.2
	baz=53						
VYHS	Vyhne	32.23	76	*e*P	P	17 31 50.8	-0.9
VYHS				pmax	pmax		
	comp=Z,43nm,1.8s						
VYHS	Vyhne	32.23	76	*e*P	P	17 31 50.8	-0.9
VYHS				*e*		17 32 01.8	
VSVD	Vaisvydziai	32.25	61	*e*P	P	17 31 51.7	-0.1
LANS	Liptovska Anna	32.30	75	*e*P	P	17 31 53.2	+0.8
LANS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LANS	Liptovska Anna	32.30	75	*e*P	P	17 31 53.2	+0.8
WVNY	West Valley, N	32.34	270	P	P	17 31 52.8	0.0
WVNY				IAmb	IAmb	17 32 15.1	
	comp=Z,53nm,1.1s						
WVNY	West Valley, N	32.34	270	P	P	17 31 52.8	0.0
	baz=55						
PABE	Paberze	32.42	62	P	P	17 31 52.2	-1.1
PABE	Paberze	32.42	62	*e*P	P	17 31 52.7	-0.6
PAGS	Pennsylvania G	32.47	266	P	P	17 31 53.2	-0.7
PAGS				IAmb	IAmb	17 31 58.7	
	comp=Z,40nm,0.9s						
VADS	Vadso	32.49	34	*e*P	P	17 31 54.2	+0.4
EUNU	Eureka	32.58	345	P	P	17 31 53.6	-0.9
INTR	Introdacqua	32.58	90	P	P	17 31 53.3	-1.7
NIE	Niedzica	32.67	74	*i* P	P	17 31 56.2	+0.5
NIE				*e*S	S	17 37 10.1	-0.8
NIE				*e*L	L	17 44 30.8	
	comp=Z,2µm,16.2s						
A051A	Mrakovica	32.76	83	*e*P	P	17 31 56.1	-0.4
A050A	Klekovaca	32.81	84	*e*P	P	17 31 56.2	-0.8
SSPA	Standing Stone	32.94	267	P	P	17 31 57.8	-0.2
SSPA				IAmb	IAmb	17 32 08.1	
	comp=Z,95nm,1.8s						
SSPA	Standing Stone	32.94	267	P	P	17 31 57.2	-0.8
	baz=53						
SSPA	Standing Stone	32.94	267	P	P	17 31 58.2	+0.2
	baz=53						
M55A	Ridgway	32.98	269	P	P	17 31 58.2	-0.2
M55A	Ridgway	32.98	269	P	P	17 31 58.2	-0.2
	baz=54						
M55A				P	P	17 31 58.2	-0.2
	baz=54						
VSU	Vasula	32.98	56	⇓*e*P	P	17 31 57.1	-1.1
VSU				pmax	pmax		
	comp=Z,62nm,1.1s						
VSU	Vasula	32.98	56	*e*P	P	17 31 58.5	+0.4
RES	Resolute Bay	32.99	334	P	P	17 31 58.5	+0.4
	comp=Z,18nm,0.9s,baz=98,slow=10,SNR=40						
RES				LR	LR	17 45 03.9	
	comp=Z,2µm,18.1s,baz=89,slow=36						
	comp=Z,18nm,0.9s						
RES	Resolute Bay	32.99	334	P	P	17 31 56.9	-1.2
RES	Resolute Bay	32.99	334	P	P	17 31 56.9	-1.2
RES				pmax	pmax		
	comp=Z,179nm,1.8s						
SDMD	Soldier’s Deli	33.05	264	P	P	17 31 58.5	-0.5
SDMD	Soldier’s Deli	33.05	264	P	P	17 31 58.8	-0.2
	baz=51						
BLY	Banja Luka	33.07	84	*e*P	P	17 31 58.2	-0.9
PSDB	Penn State Uni	33.17	269	P	P	17 32 00.2	+0.1
	baz=54						
MORH	Mrgy, Hungar	33.20	80	⇑P	P	17 31 60.0	-0.2
STHS	Stebnicka Huta	33.23	74	*e*P	P	17 32 00.5	0.0
STHS	Stebnicka Huta	33.23	74	*e*P	P	17 32 00.5	0.0
ERPA	Erie	33.35	271	P	P	17 32 01.1	-0.5
	baz=55						
PABK	Blue Knob Stat	33.58	267	P	P	17 32 04.1	+0.4
	baz=52						
E46A	Sault Ste Mari	33.69	281	P	P	17 32 03.2	-1.3
E46A	Sault Ste Mari	33.69	281	P	P	17 32 03.4	-1.1
	baz=60						
P57A	Homestead Farm	33.72	266	P	P	17 32 05.1	+0.3
	baz=52						
P57A				P	P	17 32 05.1	+0.3
	baz=52						
ALLY	Alegheny Colle	33.72	270	P	P	17 32 04.8	-0.1
	baz=54						
KEST	Kesra	33.77	103	P	P	17 32 05.2	-0.3
	comp=Z,25nm,0.9s,baz=294,slow=3.5,SNR=26						
KEST				LR	LR	17 44 11.8	
	comp=Z,2µm,18.9s,baz=292,slow=33						
	comp=Z,25nm,0.9s						
KEST	Kesra	33.77	103	P	P	17 32 04.3	-1.1
KEST				IAmb	IAmb	17 32 22.7	
	comp=Z,84nm,1.2s						
PAMR	Moraine State	34.10	269	P	P	17 32 08.7	+0.5
	baz=53						
APA	Apatity	34.12	39	⇓*i*P	P	17 32 06.4	-1.6
APA				*i*		17 33 17.2	
APA				*i*		17 34 41.0	
APA				*i* S	S	17 37 31.0	-1.8
APA				*i* SS	SS	17 40 03.0	+2.9
APA				pmax	pmax		
	comp=Z,30nm,0.9s						
CBN	Corbin Frederi	34.13	263	IAMs_20	IAMs_20	17 45 44.7	
	comp=Z,5µm,18.0s						
CBN	Corbin Frederi	34.13	263	P	P	17 32 08.4	0.0
	baz=50						
NACGM	Naroch	34.15	62	*e*P	P	17 32 08.6	+0.3
	comp=E,1µm,1.4s						
M53A	WI Miller and	34.16	271	P	P	17 32 08.4	-0.3
M53A				IAmb	IAmb	17 32 18.1	
	comp=Z,49nm,1.1s						
M53A				IAMs_20	IAMs_20	17 45 47.1	
	comp=Z,2µm,19.0s						
M53A	WI Miller and	34.16	271	P	P	17 32 07.3	-1.4
	baz=54						
FCC	Fort Churchill	34.22	305	P	P	17 32 08.6	-0.3
FCC	Fort Churchill	34.22	305	P	P	17 32 08.6	-0.3
FCC				pmax	pmax		
	comp=Z,102nm,1.0s						
STON	Ston	34.40	86	*e*P	P	17 32 09.1	-1.6
T60A	Surry	34.43	261	P	P	17 32 11.3	+0.3
	baz=49						
T60A				P	P	17 32 11.3	+0.3
	baz=49						
FRGS	Fruska Gora	34.44	81	⇓P	P	17 32 11.2	+0.1
FRGS	Fruska Gora	34.44	81	*e*P	P	17 32 09.9	-1.2
HAPS	Han Pijesak,BI	34.49	83	*e*P	P	17 32 08.5	-3.1
M52A	Chesterland	34.52	271	P	P	17 32 10.9	-0.8
TRPA	Tarpa	34.58	75	⇑P	P	17 32 12.6	+0.4
R58B	Mineral	34.59	263	P	P	17 32 12.3	-0.1
R58B				IAmb	IAmb	17 32 48.8	
	comp=Z,68nm,1.6s						
R58B	Mineral	34.59	263	P	P	17 32 12.3	-0.1
	baz=50						
R58B				P	P	17 32 12.3	-0.1
	baz=50						
N53A	Lisbon	34.63	270	P	P	17 32 12.6	-0.2
N53A				IAmb	IAmb	17 32 17.6	
	comp=Z,61nm,1.1s						
N53A	Lisbon	34.63	270	P	P	17 32 14.2	+1.4
	baz=53,SNR=7.5						
N53A				P	P	17 32 14.2	+1.4
	baz=53,SNR=7.5						
LVV	L'vov	34.67	71	*i* P	P	17 32 12.9	-0.1
LVV				*e*S	S	17 37 38.0	-3.7
LVV				pmax	pmax		
	comp=Z,60nm,1.2s						
GLMI	Grayling	34.67	278	IAMs_20	IAMs_20	17 45 10.1	
	comp=Z,3µm,19.0s						
GLMI	Grayling	34.67	278	P	P	17 32 12.3	-0.7
	baz=58						
Q56A	Snyder Ridge,	34.70	266	P	P	17 32 13.4	0.0
	baz=51						
Q56A				P	P	17 32 13.4	0.0
	baz=51						
MCWV	Mont Chateau	34.72	267	P	P	17 32 13.4	-0.1
MCWV				IAmb	IAmb	17 32 23.7	
	comp=Z,101nm,1.6s						
MCWV				IAMs_20	IAMs_20	17 48 20.1	
	comp=Z,2µm,18.0s						
MCWV	Mont Chateau	34.72	267	P	P	17 32 13.5	-0.1
	baz=52						
MCWV	Mont Chateau	34.72	267	P	P	17 32 13.8	+0.3
	baz=52						
O54A	Avella	34.73	269	P	P	17 32 13.0	-0.6
O54A				IAmb	IAmb	17 32 18.2	
	comp=Z,44nm,1.3s						
O54A	Avella	34.73	269	P	P	17 32 13.8	+0.2
	baz=52						
O54A				P	P	17 32 13.8	+0.2
	baz=52						
CLTB	Caltabellotta	34.87	97	IAMs_20	IAMs_20	17 45 11.7	
	comp=Z,5µm,20.0s						
MNK	Minsk	34.89	62	*i* P	P	17 32 14.1	-0.6
	comp=E,6.0nm,0.9s						
MNK				*i* P	P	17 32 14.1	-0.6
	comp=N,38nm,0.9s						
MNK				*i* P	P	17 32 14.1	-0.6
	comp=Z,41nm,0.9s,baz=292						
MNK				*i* PP	PnPn	17 33 07.5	-24
MNK				*i* S	S	17 37 46.6	+1.8
MNK				*i* SS	SnSn	17 39 40.5	-19
MNK				*i* LQ	LQ	17 43 39.0	
MNK				*i* LR	LR	17 46 21.5	
MNK				*i* LRM	MLR	17 47 33.1	
	comp=N,1µm,14.9s						
MNK				*i* LRM	MLR	17 47 37.8	
	comp=E,203nm,14.9s						
MNK				*i* LRM	MLR	17 47 38.5	
	comp=Z,1µm,14.9s						
MNK	Minsk	34.89	62	*i* P	P	17 32 14.1	-0.6
MNK				*i*		17 34 46.2	
MNK				*i* S	S	17 37 46.6	+1.8
MNK				pmax	pmax		
	comp=N,38nm,0.9s						
MNK				pmax	pmax		
	comp=E,6.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,41nm,0.9s						
MNK				MLR	MLR		
	comp=N,1µm,15.0s						
MNK				MLR	MLR		
	comp=E,203nm,15.0s						
MNK				MLR	MLR		
	comp=Z,1µm,15.0s						
BBLS	Lazići	34.89	83	*e*P	P	17 32 14.6	-0.4
BRY	Bratogost	34.90	85	*e*P	P	17 32 13.7	-1.5
CUC	Castrocucco	34.94	92	P	P	17 32 14.2	-1.2
UPM	Unac-Piva	34.95	85	*e*P	P	17 32 14.9	-0.8
SIRR	Siria	34.98	78	⇑P	P	17 32 16.7	+1.0
RUDO	Rudo	35.00	84	*e*P	P	17 32 14.6	-1.3
T59A	Double "B" Far	35.04	262	P	P	17 32 16.5	+0.3
	baz=49						
T59A				P	P	17 32 16.5	+0.3
	baz=49						
MATE	Matera	35.09	90	⇑P	P	17 32 16.4	-0.2
DIVS	Divibare	35.12	83	P	P	17 32 15.4	-1.6
DIVS	Divibare	35.12	83	*e*P	P	17 32 16.2	-0.8
G45A	Suttons Bay	35.18	279	P	P	17 32 17.0	-0.5
	baz=58						
G45A				P	P	17 32 17.0	-0.5
	baz=58						
O53A	New Philadelph	35.20	269	P	P	17 32 17.8	+0.2
O53A				IAmb	IAmb	17 32 28.1	
	comp=Z,94nm,1.3s						
O53A				IAMs_20	IAMs_20	17 46 22.6	
	comp=Z,3µm,18.0s						
O53A	New Philadelph	35.20	269	P	P	17 32 17.5	-0.2
	baz=53,SNR=5.7						
BZS	Buzias	35.29	79	⇑P	P	17 32 18.5	+0.1
BZS	Buzias	35.29	79	P	P	17 32 18.4	+0.1
E43A	Lone Tree Farm	35.29	282	P	P	17 32 18.3	-0.2
E43A				IAmb	IAmb	17 32 28.2	
	comp=Z,105nm,1.7s						
E43A	Lone Tree Farm	35.29	282	P	P	17 32 18.2	-0.2
	baz=59						
DRGR		35.34	77	⇑P	P	17 32 19.2	+0.3
DRGR		35.34	77	P	P	17 32 19.1	+0.3
AAM	Ann Arbor	35.48	274	IAMs_20	IAMs_20	17 45 40.8	
	comp=Z,4µm,21.0s						
N51A	Ashland	35.51	271	P	P	17 32 19.8	-0.5
N51A				IAmb	IAmb	17 32 25.4	
	comp=Z,39nm,0.8s						
N51A	Ashland	35.51	271	P	P	17 32 20.3	+0.1
	baz=53						
N51A				P	P	17 32 20.3	+0.1
	baz=53						
SURR	Surduc	35.52	79	⇓P	P	17 32 20.5	+0.2
SJES	Sjenica	35.57	84	*e*P	P	17 32 20.2	-0.7
U59A	Littleton	35.59	261	P	P	17 32 21.2	+0.2
U59A				IAmb	IAmb	17 32 31.8	
	comp=Z,99nm,1.7s						
U59A	Littleton	35.59	261	P	P	17 32 21.3	+0.3
	baz=48						
U59A				P	P	17 32 21.3	+0.3
	baz=48						
PDG	Podgorica	35.60	86	*e*P	P	17 32 19.9	-1.1
M50A	Fremont	35.63	272	P	P	17 32 20.9	-0.3
M50A				IAmb	IAmb	17 32 31.5	
	comp=Z,63nm,0.8s						
M50A	Fremont	35.63	272	P	P	17 32 21.9	+0.6
	baz=54						
M50A				P	P	17 32 21.9	+0.6
	baz=54						
MARR	Marisel-Cluj	35.64	77	⇑P	P	17 32 21.1	-0.4
O52A	Adamsville	35.66	270	P	P	17 32 21.6	0.0
O52A				IAmb	IAmb	17 32 41.2	
	comp=Z,103nm,1.4s						
O52A	Adamsville	35.66	270	P	P	17 32 22.2	+0.6
	baz=52,SNR=5.7						
O52A				P	P	17 32 22.2	+0.6
	baz=52,SNR=5.7						
DRME	Dracevica, Mon	35.70	86	*e*P	P	17 32 20.8	-1.1
Q54A	Coxs Mills	35.74	267	P	P	17 32 22.9	+0.6
Q54A	Coxs Mills	35.74	267	P	P	17 32 22.9	+0.6
	baz=51						
Q54A				P	P	17 32 22.9	+0.6
	baz=51						
R55A	Marlinton	35.75	266	P	P	17 32 21.9	-0.6
R55A	Marlinton	35.75	266	P	P	17 32 23.0	+0.5
	baz=50						
R55A				P	P	17 32 23.0	+0.5
	baz=50						
P53A	Whipple	35.77	268	P	P	17 32 22.7	+0.2
P53A				IAmb	IAmb	17 32 36.6	
	comp=Z,99nm,1.3s						
P53A	Whipple	35.77	268	P	P	17 32 22.8	+0.3
	baz=52,SNR=9.2						
P53A				P	P	17 32 22.8	+0.3
	baz=52,SNR=9.2						
MDVR	Moldovita	35.79	80	⇑P	P	17 32 22.5	-0.2
D41A	Chassel	35.88	284	P	P	17 32 22.9	-0.5
D41A				IAmb	IAmb	17 32 33.6	
	comp=Z,109nm,1.4s						
D41A	Chassel	35.88	284	P	P	17 32 23.1	-0.3
	baz=60						
TIP	Timpagrande	36.01	92	IAMs_20	IAMs_20	17 46 14.5	
	comp=Z,2µm,19.0s						
GZR	Gura Zlata	36.10	79	⇑P	P	17 32 25.3	-0.1
P52A	Corning	36.13	269	P	P	17 32 25.4	-0.2
P52A				IAmb	IAmb	17 32 35.3	
	comp=Z,74nm,1.1s						
P52A				IAMs_20	IAMs_20	17 47 02.3	
	comp=Z,3µm,19.0s						
P52A	Corning	36.13	269	P	P	17 32 24.8	-0.8
	baz=52,SNR=6.5						
HERR	Herculane	36.16	80	⇑P	P	17 32 25.5	-0.3
L48A	N Adams	36.16	274	P	P	17 32 26.0	+0.1
	baz=54						
L48A				P	P	17 32 26.0	+0.1
	baz=54						
ARCR	ARCALIA	36.16	75	⇑P	P	17 32 26.7	+0.8
ACSO	Alum Creek Sta	36.29	271	P	P	17 32 26.6	-0.3
ACSO				IAmb	IAmb	17 32 41.3	
	comp=Z,60nm,0.9s						
ACSO				IAMs_20	IAMs_20	17 47 01.3	
	comp=Z,2µm,19.0s						
ACSO	Alum Creek Sta	36.29	271	P	P	17 32 26.9	-0.1
	baz=53,SNR=13						
ACSO	Alum Creek Sta	36.29	271	P	P	17 32 27.7	+0.7
	baz=53,SNR=13						
DJES	Djerdap	36.33	80	⇑P	P	17 32 27.6	+0.3
DJES	Djerdap	36.33	80	P	P	17 32 26.6	-0.7
BUR08	Bucovina Ar. S	36.38	74	P	P	17 32 27.2	-0.7
CNNC	Cliffs of the	36.40	260	IAMs_20	IAMs_20	17 46 04.9	
	comp=Z,4µm,20.0s						
BOVS	Bovan	36.41	82	⇑P	P	17 32 28.1	+0.2
BURAR	Bucovina Array	36.41	74	⇓P	P	17 32 28.4	+0.4
BURAR	Bucovina Array	36.41	74	P	P	17 32 27.1	-1.0
BURAR	Bucovina Array	36.41	74	P	P	17 32 28.4	+0.4
N49A	Columbus Grove	36.60	273	P	P	17 32 29.3	-0.3
N49A				IAmb	IAmb	17 32 39.4	
	comp=Z,89nm,1.2s						
N49A	Columbus Grove	36.60	273	P	P	17 32 30.1	+0.4
	baz=53						
N49A				P	P	17 32 30.1	+0.4
	baz=53						
BLA	Blacksburg	36.62	265	P	P	17 32 30.0	+0.1
BLA				IAMs_20	IAMs_20	17 46 56.4	
	comp=Z,5µm,19.0s						
BLA	Blacksburg	36.62	265	P	P	17 32 30.0	+0.1
BLA				pmax	pmax		
	comp=Z,38nm,1.0s						
BLA				MLR	MLR		
	comp=Z,5µm,19.0s						
BLA	Blacksburg	36.62	265	P	P	17 32 29.2	-0.7
	baz=49						
Q52A	Bidwell	36.63	268	P	P	17 32 29.7	-0.2
Q52A				IAmb	IAmb	17 32 39.6	
	comp=Z,102nm,1.2s						
Q52A	Bidwell	36.63	268	P	P	17 32 31.1	+1.2
	baz=51,SNR=13						
Q52A				P	P	17 32 31.1	+1.2
	baz=51,SNR=13						
LOT	Lotru	36.66	78	⇓P	P	17 32 30.7	+0.4
COWI	Conover	36.71	283	P	P	17 32 29.3	-1.2
COWI				IAmb	IAmb	17 32 40.4	
	comp=Z,100nm,1.6s						
COWI				IAMs_20	IAMs_20	17 45 50.7	
	comp=Z,4µm,20.0s						
V58A	Windy Hill, Pi	36.76	262	P	P	17 32 30.4	-0.6
P51A	Williamsport	36.79	270	P	P	17 32 30.6	-0.7
P51A				IAmb	IAmb	17 32 40.8	
	comp=Z,67nm,1.0s						
P51A	Williamsport	36.79	270	P	P	17 32 30.9	-0.4
	baz=52,SNR=6.0						
P51A				P	P	17 32 30.9	-0.4
	baz=52,SNR=6.0						
R53A	Hurricane	36.83	267	P	P	17 32 31.9	+0.3
R53A	Hurricane	36.83	267	P	P	17 32 31.8	+0.2
	baz=50						
R53A				P	P	17 32 31.8	+0.2
	baz=50						
O49A	Covington	37.14	272	P	P	17 32 33.6	-0.6
O49A				IAmb	IAmb	17 32 47.8	
	comp=Z,53nm,1.0s						
O49A	Covington	37.14	272	P	P	17 32 34.3	+0.1
	baz=52						
O49A				P	P	17 32 34.3	+0.1
	baz=52						
EYMN	Ely	37.16	287	P	P	17 32 33.5	-0.8
EYMN				IAmb	IAmb	17 32 44.8	
	comp=Z,84nm,1.2s						
EYMN	Ely	37.16	287	IAMs_20	IAMs_20	17 46 09.2	
	comp=Z,3µm,20.0s						
EYMN	Ely	37.16	287	P	P	17 32 33.5	-0.8
	baz=60,SNR=13						
EYMN	Ely	37.16	287	P	P	17 32 34.1	-0.2
	baz=60,SNR=13						
U56A	King	37.16	264	P	P	17 32 34.0	-0.4
U56A				IAmb	IAmb	17 32 40.5	
	comp=Z,90nm,1.2s						
U56A	King	37.16	264	P	P	17 32 35.3	+0.9
	baz=48						
U56A				P	P	17 32 35.3	+0.9
	baz=48						
SKO	Skopje	37.19	85	*i* P	P	17 32 35.2	+0.6
ARR	Arges	37.22	78	⇑P	P	17 32 35.1	+0.2
AKASG	Malin Array Be	37.23	68	P	P	17 32 33.4	-1.5
	comp=Z,9.8nm,0.6s,baz=295,slow=7.8,SNR=50						
AKASG				PP	PnPn	17 34 03.1	+2.9
	comp=Z,3.6nm,0.8s,baz=293,slow=11,SNR=4.1						
AKASG				LR	LR	17 48 44.9	
	comp=Z,1µm,19.1s,baz=296,slow=38						
	comp=Z,9.8nm,0.6s						
AKASG	Malin Array Be	37.23	68	P	P	17 32 32.8	-2.1
AKASG	Malin Array Be	37.23	68	P	P	17 32 32.8	-2.1
AKASG				pmax	pmax		
	comp=Z,51nm,1.2s						
AKBB	Malin Array Si	37.23	68	P	P	17 32 33.0	-1.9
AKBB				IAmb	IAmb	17 32 35.3	
	comp=Z,32nm,0.7s						
AKBB	Malin Array Si	37.23	68*c*	*i*P	P	17 32 33.4	-1.5
OHR	Ohrid	37.30	86	*i* P	P	17 32 50.3	+15
VOIR		37.43	77	⇑P	P	17 32 37.0	+0.2
VOIR		37.43	77	P	P	17 32 36.9	+0.2
OZUR		37.52	76	⇑P	P	17 32 37.0	-0.5
N47A	Urbana	37.55	274	P	P	17 32 37.6	-0.1
N47A				IAmb	IAmb	17 32 53.1	
	comp=Z,77nm,1.4s						
N47A	Urbana	37.55	274	P	P	17 32 37.9	+0.2
	baz=53						
N47A				P	P	17 32 37.9	+0.2
	baz=53						
KBN	Korca	37.59	87	P	P	17 32 36.9	-1.2
KBN				IAmb	IAmb	17 33 02.2	
	comp=Z,106nm,1.5s						
KBN	Korca	37.59	87	P	P	17 32 36.9	-1.2
KBN				pmax	pmax		
	comp=Z,106nm,1.5s						
O48B	Farmland	37.60	272	P	P	17 32 37.5	-0.6
	baz=52						
O48B	Farmland	37.60	272	P	P	17 32 37.9	-0.2

	baz=52						
W57A	**Gilead**	37.72	262	P	P	17 32 39.2	0.0
W57A	**Gilead**	37.72	262	P	P	17 32 39.7	+0.5
	baz=47						
W57A				P	P	17 32 39.7	+0.5
	baz=47						
I42A	**Draeger Farm,**	37.77	280	P	P	17 32 39.2	-0.3
	baz=56						
P49A	**Miami Univ. Ec**	37.77	271	P	P	17 32 39.0	-0.6
P49A				IAmb	IAmb	17 32 50.9	
	comp=Z,83nm,1.4s						
P49A				IAMs_20	IAMs_20	17 47 26.5	
	comp=Z,4µm,19.0s						
P49A	**Miami Univ. Ec**	37.77	271	P	P	17 32 39.0	-0.6
	baz=52						
P49A	**Miami Univ. Ec**	37.77	271	P	P	17 32 40.1	+0.6
	baz=52						
G40A	**Rib Lake**	37.78	283	P	P	17 32 39.0	-0.6
G40A	**Rib Lake**	37.78	283	P	P	17 32 39.7	0.0
	baz=57,SNR=7.6						
STIP	**Stip**	37.80	84	*i* P	P	17 32 41.0	+1.2
TESR	**Tescani**	37.81	75	⇑P	P	17 32 40.0	+0.1
VLAD	**Vladila**	37.83	80	⇑P	P	17 32 39.7	-0.3
FNA	**Florina**	37.85	86	P	P	17 32 39.0	-1.3
FNA	**Florina**	37.85	86	P	P	17 32 39.0	-1.3
FNA				pmax	pmax		
	comp=Z,15nm,1.3s						
E38A	**The Farm, Brul**	37.87	285	P	P	17 32 39.2	-1.2
E38A				IAmb	IAmb	17 32 51.0	
	comp=Z,33nm,0.8s						
E38A	**The Farm, Brul**	37.87	285	P	P	17 32 39.9	-0.5
	baz=58,SNR=8.0						
U54A	**Nelsons Funny**	37.92	265	P	P	17 32 40.2	-0.7
U54A	**Nelsons Funny**	37.92	265	P	P	17 32 41.3	+0.4
	baz=49						
U54A				P	P	17 32 41.3	+0.4
	baz=49						
MLR	**Muntele Rosu**	37.94	77	⇓P	P	17 32 41.9	+0.8
MLR	**Muntele Rosu**	37.94	77	LR	LR	17 47 37.2	
	comp=Z,2µm,18.8s,baz=292,slow=35						
MLR	**Muntele Rosu**	37.94	77	P	P	17 32 39.0	-2.1
MLR	**Muntele Rosu**	37.94	77	P	P	17 32 39.0	-2.1
MLR				pmax	pmax		
	comp=Z,21nm,1.1s						
SORM	**Soroca**	37.98	72	⇑P	P	17 32 40.3	-0.9
SORM	**Soroca**	37.98	72	P	P	17 32 40.3	-0.9
V55A	**Taylorsville**	37.99	264	P	P	17 32 40.5	-1.0
V55A	**Taylorsville**	37.99	264	P	P	17 32 42.1	+0.6
	baz=48						
V55A				P	P	17 32 42.1	+0.6
	baz=48						
L44A	**Lake County Fo**	38.13	277	P	P	17 32 42.2	-0.4
	baz=54						
PLOR	**Plostina**	38.16	76	⇑P	P	17 32 43.2	+0.4
PLOR	**Plostina**	38.16	76	P	P	17 32 43.2	+0.4
NEHR	**Nehoiu**	38.18	77	⇑P	P	17 32 43.5	+0.5
VRI	**Vrincioaia**	38.20	76	⇓P	P	17 32 43.8	+0.6
VRI	**Vrincioaia**	38.20	76	P	P	17 32 43.7	+0.6
B35A	**Bob, Littlefor**	38.24	289	P	P	17 32 41.9	-1.6
B35A				IAmb	IAmb	17 32 53.6	
	comp=Z,54nm,1.0s						
B35A	**Bob, Littlefor**	38.24	289	P	P	17 32 43.0	-0.5
	baz=60,SNR=14						
P48A	**Milroy**	38.25	272	P	P	17 32 42.1	-1.5
P48A	**Milroy**	38.25	272	P	P	17 32 43.1	-0.5
	baz=52						
P48A				P	P	17 32 43.1	-0.5
	baz=52						
VAY	**Valandovo**	38.26	85	*i* P	P	17 32 43.8	+0.1
S51A	**Beattyville**	38.27	268	P	P	17 32 43.5	-0.3
S51A				IAmb	IAmb	17 32 56.8	
	comp=Z,46nm,0.9s						
S51A	**Beattyville**	38.27	268	P	P	17 32 44.6	+0.8
	baz=50,SNR=5.7						
S51A				P	P	17 32 44.6	+0.8
	baz=50,SNR=5.7						
R50A	**Paris**	38.31	269	P	P	17 32 43.7	-0.4
R50A				IAmb	IAmb	17 32 49.5	
	comp=Z,56nm,0.9s						
R50A	**Paris**	38.31	269	P	P	17 32 44.6	+0.4
	baz=51,SNR=17						
R50A				P	P	17 32 44.6	+0.4
	baz=51,SNR=17						
BIRD	**Birdtown, Kers**	38.35	262	P	P	17 32 43.5	-0.9
BIRD	**Birdtown, Kers**	38.35	262	P	P	17 32 44.9	+0.4
	baz=47						
BISRR	**Bisoca**	38.36	76	⇑P	P	17 32 44.3	-0.3
Y58A	**Scranton**	38.38	260	P	P	17 32 45.2	+0.5
	baz=46						
Y58A				P	P	17 32 45.2	+0.5
	baz=46						
KLMR	**Klimovskoe**	38.38	49	*e*P	P	17 32 42.2	-2.2
KLMR				AMP		17 32 54.3	
	comp=Z,65nm,1.0s						
KLMR				*e*PP	PP	17 34 08.7	-3.4
KLMR				LQ	LQ	17 41 16.9	
KLMR				LQ	LQ	17 41 16.9	
KLMR				LR	LR	17 44 09.6	
KLMR				AMP		17 46 09.7	
	comp=Z,985nm,16.0s						
KLMR	**Klimovskoe**	38.38	49	*e*P	P	17 32 42.1	-2.3
KLMR				*e*		17 34 08.7	
KLMR				pmax	pmax		
	comp=Z,65nm,1.0s						
ULM	**Lac du Bonnet**	38.54	293	P	P	17 32 44.9	-1.0
	comp=Z,15nm,0.8s,baz=57,slow=10,SNR=21						
ULM				LR	LR	17 47 09.6	
	comp=Z,4µm,18.5s,baz=61,slow=34						
	comp=Z,15nm,0.8s						
ULM	**Lac du Bonnet**	38.54	293	P	P	17 32 44.4	-1.5
ULM				IAmb	IAmb	17 32 54.4	
	comp=Z,57nm,1.0s						
ULM	**Lac du Bonnet**	38.54	293	P	P	17 32 44.4	-1.5
ULM				pmax	pmax		
	comp=Z,57nm,1.0s						
KMSC	**Kings Mountain**	38.54	263	P	P	17 32 46.2	+0.1
	baz=47						
SFIN	**Lafayette**	38.70	274	P	P	17 32 46.6	-0.8
SFIN				IAmb	IAmb	17 32 56.0	
	comp=Z,267nm,2.0s						
SFIN	**Lafayette**	38.70	274	P	P	17 32 46.8	-0.7
	baz=53						
SFIN	**Lafayette**	38.70	274	P	P	17 32 47.3	-0.1
	baz=53						
Y57A	**Sumter**	38.73	261	P	P	17 32 47.0	-0.7
Y57A				IAmb	IAmb	17 32 52.9	
	comp=Z,60nm,0.9s						
Y57A	**Sumter**	38.73	261	P	P	17 32 47.3	-0.4
	baz=46						
Y57A				P	P	17 32 47.3	-0.4
	baz=46						
I40A	**Norwalk**	38.79	281	P	P	17 32 47.6	-0.5
I40A				IAmb	IAmb	17 32 59.4	
	comp=Z,61nm,1.1s						
I40A	**Norwalk**	38.79	281	P	P	17 32 48.9	+0.8
	baz=56						
R49A	**Shelbyville**	38.82	270	P	P	17 32 48.3	-0.1
R49A				IAmb	IAmb	17 32 58.5	
	comp=Z,148nm,1.8s						
R49A	**Shelbyville**	38.82	270	P	P	17 32 48.6	+0.2
	baz=51						
R49A				P	P	17 32 48.6	+0.2
	baz=51						
TZTN	**Tazewell**	38.95	266	P	P	17 32 49.4	-0.2
TZTN				IAmb	IAmb	17 32 54.6	
	comp=Z,93nm,1.1s						
TZTN				IAMs_20	IAMs_20	17 48 13.2	
	comp=Z,4µm,20.0s						
TZTN	**Tazewell**	38.95	266	P	P	17 32 49.2	-0.4
	baz=49,SNR=6.0						
TZTN	**Tazewell**	38.95	266	P	P	17 32 50.9	+1.3
	baz=49,SNR=6.0						
PAULI	**Pauline**	39.05	263	P	P	17 32 49.4	-1.0
PAULI	**Pauline**	39.05	263	P	P	17 32 50.4	0.0
	baz=47						
V53A	**Saluda**	39.08	265	P	P	17 32 50.5	-0.2
V53A	**Saluda**	39.08	265	P	P	17 32 51.2	+0.5
	baz=48						
V53A				P	P	17 32 51.2	+0.5
	baz=48						
BLO	**Bloomington**	39.09	272	P	P	17 32 50.4	-0.3
BLO	**Bloomington**	39.09	272	P	P	17 32 50.4	-0.3
BLO				pmax	pmax		
	comp=Z,50nm,1.1s						
JFWS	**Jewell Farm**	39.12	280	P	P	17 32 50.6	-0.3
JFWS	**Jewell Farm**	39.12	280	IAMs_20	IAMs_20	17 48 16.7	
	comp=Z,3µm,18.0s						
JFWS	**Jewell Farm**	39.12	280	P	P	17 32 50.6	-0.3
JFWS				pmax	pmax		
	comp=Z,32nm,1.0s						
JFWS				MLR	MLR		
	comp=Z,3µm,18.0s						
JFWS	**Jewell Farm**	39.12	280	P	P	17 32 50.1	-0.8
	baz=55						
JFWS	**Jewell Farm**	39.12	280	P	P	17 32 50.7	-0.2
	baz=55						
OBN	**Obninsk**	39.23	58	LR	LR	17 48 13.0	
	comp=Z,449nm,19.7s,baz=292,slow=35						
OBN	**Obninsk**	39.23	58	P	P	17 32 50.5	-1.1
OBN				IAmb	IAmb	17 32 53.0	
	comp=Z,95nm,0.7s						
OBN				IAMs_20	IAMs_20	17 47 59.6	
	comp=Z,2µm,20.0s						
OBN	**Obninsk**	39.23	58*c*	*i*P	P	17 32 51.0	-0.6
OBN				*i*		17 32 59.4	
OBN				pmax	pmax		
	comp=Z,168nm,1.3s						
OBN				MLR	MLR		
	comp=Z,1µm,15.0s						
NHSC	**New Hope**	39.24	260	P	P	17 32 52.1	+0.1
NHSC				IAMs_20	IAMs_20	17 46 50.1	
	comp=Z,4µm,22.0s						
NHSC	**New Hope**	39.24	260	P	P	17 32 52.3	+0.4
	baz=45						
NHSC	**New Hope**	39.24	260	P	P	17 32 53.0	+1.0
	baz=45						
P46A	**Rosedale**	39.24	273	P	P	17 32 51.2	-0.7
P46A	**Rosedale**	39.24	273	P	P	17 32 51.8	-0.1
	baz=52						
L42A	**Oliver, Polo**	39.30	278	P	P	17 32 51.9	-0.4
L42A	**Oliver, Polo**	39.30	278	P	P	17 32 52.4	0.0
	baz=54						
RAZG	**Razgrad**	39.34	79	⇑P	P	17 32 52.1	-0.6
SPMN	**Marine on St.**	39.35	284	P	P	17 32 52.0	-0.8
SPMN				IAmb	IAmb	17 33 03.0	
	comp=Z,121nm,1.4s						
SPMN	**Marine on St.**	39.35	284	P	P	17 32 52.4	-0.4
	baz=57,SNR=8.0						
SPMN	**Marine on St.**	39.35	284	P	P	17 32 53.0	+0.2
	baz=57,SNR=8.0						
CFR	**Carcaliu**	39.41	76	⇑P	P	17 32 52.0	-1.3
CFR	**Carcaliu**	39.41	76	P	P	17 32 51.9	-1.3
F36A	**Milaca**	39.43	285	P	P	17 32 52.8	-0.6
F36A	**Milaca**	39.43	285	P	P	17 32 53.3	-0.1
	baz=57,SNR=12						
T50A	**Nancy**	39.43	268	P	P	17 32 53.5	-0.1
T50A	**Nancy**	39.43	268	P	P	17 32 54.0	+0.5
	baz=49						
T50A				P	P	17 32 54.0	+0.5
	baz=49						
V52A	**Sevierville**	39.44	266	P	P	17 32 53.1	-0.5
V52A	**Sevierville**	39.44	266	P	P	17 32 54.7	+1.0
	baz=48						
LOZB	**Loznitsa**	39.50	79	⇑P	P	17 32 53.7	-0.4
MOS	**Moscow**	39.50	57	*e*P	P	17 32 52.9	-1.0
MOS				*e*		17 34 24.2	
MOS				*e*S	S	17 38 52.7	-2.2
MOS				pmax	pmax		
	comp=Z,51nm,0.8s						
MOS				MLR	MLR		
	comp=Z,1µm,14.0s						
AGMN	**Agassiz Nation**	39.50	290	P	P	17 32 53.1	-0.9
AGMN	**Agassiz Nation**	39.50	290	P	P	17 32 53.9	-0.1
	baz=59,SNR=11						
AGG	**Agios Georgios**	39.51	88	P	P	17 32 53.5	-0.7
AGG	**Agios Georgios**	39.51	88	P	P	17 32 53.5	-0.7
AGG				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WCI	**Wyandotte Cave**	39.55	271	P	P	17 32 54.6	+0.1
WCI				IAmb	IAmb	17 33 07.0	
	comp=Z,155nm,1.6s						
WCI	**Wyandotte Cave**	39.55	271	IAMs_20	IAMs_20	17 48 40.5	
	comp=Z,4µm,18.0s						
WCI	**Wyandotte Cave**	39.55	271	P	P	17 32 54.6	+0.1
WCI				pmax	pmax		
	comp=Z,155nm,1.6s						
WCI				MLR	MLR		
	comp=Z,4µm,18.0s						
WCI	**Wyandotte Cave**	39.55	271	P	P	17 32 53.7	-0.8
	baz=50						
WCI	**Wyandotte Cave**	39.55	271	P	P	17 32 55.0	+0.6
	baz=50						
BG3	**Lake Jocassee**	39.61	264	P	P	17 32 55.1	+0.1
CASEE	**Lake Jocassee**	39.61	264	P	P	17 32 55.5	+0.5
	baz=47						
TKL	**Tuckaleechee C**	39.67	266	LR	LR	17 48 53.1	
	comp=Z,5µm,19.0s,baz=60,slow=36						
TKL	**Tuckaleechee C**	39.67	266	P	P	17 32 55.8	+0.2
TKL	**Tuckaleechee C**	39.67	266	P	P	17 32 55.8	+0.2
TKL				pmax	pmax		
	comp=Z,57nm,1.3s						
O44A	**Mansfield**	39.67	275	P	P	17 32 55.4	-0.1
TLBR	**Topalu**	39.70	77	⇓P	P	17 32 54.9	-0.8
HODGE	**Hodges**	39.71	263	P	P	17 32 55.9	0.0
HODGE	**Hodges**	39.71	263	P	P	17 32 56.8	+0.9
	baz=47						
TPGR	**Topolog**	39.75	76	⇓P	P	17 32 55.7	-0.4
FFC	**Flin Flon**	39.76	302	P	P	17 32 55.4	-0.7
FFC				IAmb	IAmb	17 33 06.8	
	comp=Z,61nm,1.1s						
FFC	**Flin Flon**	39.76	302	IAMs_20	IAMs_20	17 47 22.1	
	comp=Z,3µm,19.0s						
FFC	**Flin Flon**	39.76	302	P	P	17 32 55.4	-0.7
FFC				pmax	pmax		
	comp=Z,61nm,1.1s						
FFC				MLR	MLR		
	comp=Z,3µm,19.0s						
ICOR	**Ion Corvin**	39.80	77	⇑P	P	17 32 56.3	-0.2
BBTS	**Babate**	39.89	156	LR	LR	17 45 59.4	
	comp=Z,2µm,20.4s,baz=4.0,slow=31						
HAW	**Hawthorne Fire**	39.92	261	P	P	17 32 58.0	+0.3
	baz=46						
V51A	**Loudon**	39.93	266	P	P	17 32 57.2	-0.5
V51A	**Loudon**	39.93	266	P	P	17 32 57.6	-0.1
	baz=48						
HDIL	**Hopedale**	39.93	276	P	P	17 32 57.4	-0.3
HDIL				IAmb	IAmb	17 33 05.2	
	comp=Z,99nm,1.4s						
HDIL				IAMs_20	IAMs_20	17 49 09.5	
	comp=Z,4µm,19.0s						
HDIL	**Hopedale**	39.93	276	P	P	17 32 56.9	-0.7
	baz=53						
W52A	**Murphy**	40.14	265	P	P	17 32 58.9	-0.7
W52A				IAmb	IAmb	17 33 13.6	
	comp=Z,219nm,1.9s						
W52A	**Murphy**	40.14	265	P	P	17 33 00.1	+0.5
	baz=48						
RDO	**Rodhopi**	40.16	83	P	P	17 32 58.5	-1.0
L40A	**Anamosa**	40.20	279	P	P	17 32 59.3	-0.5
L40A				IAmb	IAmb	17 33 11.0	
	comp=Z,62nm,1.1s						
L40A	**Anamosa**	40.20	279	P	P	17 33 00.2	+0.3
	baz=54						
CPCT	**Cooper Cave**	40.27	266	P	P	17 33 00.2	-0.3
U49A	**Red Boiling Sp**	40.33	268	P	P	17 33 00.8	-0.2
U49A	**Red Boiling Sp**	40.33	268	P	P	17 33 01.0	-0.1
	baz=49,SNR=15						
I37A	**Lemond, Waseca**	40.38	283	P	P	17 33 01.1	-0.2
I37A				IAmb	IAmb	17 33 11.2	
	comp=Z,178nm,1.9s						
I37B	**Waseca**	40.38	283	P	P	17 33 01.5	+0.1
	baz=55						
USIN	**University of**	40.55	272	P	P	17 33 02.7	-0.1
USIN				IAmb	IAmb	17 33 16.3	
	comp=Z,156nm,1.4s						
ALN	**Alexandroupoli**	40.62	83	P	P	17 33 02.9	-0.4
ALN	**Alexandroupoli**	40.62	83	P	P	17 33 02.9	-0.4
ALN				pmax	pmax		
	comp=Z,17nm,0.7s						
P43A	**Skaggs, Pawnee**	40.63	275	P	P	17 33 03.0	-0.5
P43A				IAmb	IAmb	17 33 16.5	
	comp=Z,62nm,1.1s						
P43A	**Skaggs, Pawnee**	40.63	275	P	P	17 33 03.5	0.0
	baz=52						
D32A	**Dogwood Acres,**	40.77	289	P	P	17 33 03.6	-1.0
D32B	**Dogwood Acres,**	40.77	289	P	P	17 33 04.6	+0.1
	baz=57						
Q44A	**Meyer Farm, Va**	40.78	274	P	P	17 33 03.9	-0.8
Q44A				IAmb	IAmb	17 33 18.3	
	comp=Z,65nm,1.0s						
Q44A	**Meyer Farm, Va**	40.78	274	P	P	17 33 04.5	-0.2
	baz=51						
N41A	**Harden Midland**	40.79	277	P	P	17 33 04.2	-0.5
N41A				IAmb	IAmb	17 33 13.7	
	comp=Z,154nm,1.5s						
N41A	**Harden Midland**	40.79	277	P	P	17 33 04.8	0.0
	baz=52						
K38A	**Parkersburg**	40.79	281	P	P	17 33 03.7	-1.0
K38A				IAmb	IAmb	17 33 15.8	
	comp=Z,97nm,1.1s						
K38A	**Parkersburg**	40.79	281	P	P	17 33 05.5	+0.8
	baz=54,SNR=7.3						
T47A	**Sharon Grove**	40.83	270	P	P	17 33 05.2	0.0
T47A	**Sharon Grove**	40.83	270	P	P	17 33 04.7	-0.4
	baz=49,SNR=5.3						
W50A	**Signal Mountai**	40.91	266	P	P	17 33 06.0	+0.1
W50A				IAmb	IAmb	17 33 18.6	
	comp=Z,46nm,0.9s						
W50A	**Signal Mountai**	40.91	266	P	P	17 33 07.2	+1.3
	baz=48,SNR=5.9						
CLTN	**Cedars of Leba**	40.95	268	P	P	17 33 05.4	-0.7
Y52A	**Lilburn**	41.06	264	P	P	17 33 06.9	-0.2
Y52A	**Lilburn**	41.06	264	P	P	17 33 07.6	+0.5
	baz=46,SNR=9.4						
Y52A				P	P	17 33 07.6	+0.5
	baz=46,SNR=9.4						
F33A	**5 Mile Ranch,**	41.06	287	P	P	17 33 06.3	-0.6
F33A	**5 Mile Ranch,**	41.06	287	P	P	17 33 06.7	-0.2
	baz=56						
X51A	**Calhoun**	41.06	265	P	P	17 33 07.2	+0.1
X51A	**Calhoun**	41.06	265	P	P	17 33 07.6	+0.5
	baz=47						
X51A				P	P	17 33 07.6	+0.5
	baz=47						
SWET	**Sewanee**	41.28	267	P	P	17 33 08.7	-0.2
SWET				IAmb	IAmb	17 33 21.1	
	comp=Z,50nm,0.9s						
255A	**Hazlehurst**	41.44	260	P	P	17 33 10.5	+0.2
255A	**Hazlehurst**	41.44	260	P	P	17 33 11.0	+0.7
	baz=45						
TAM	**Tamanrasset**	41.45	121	P	P	17 33 09.8	-0.8
TAM	**Tamanrasset**	41.45	121	P	P	17 33 09.8	-0.8
TAM				pmax	pmax		
	comp=Z,28nm,1.4s						
TAM				MLR	MLR		
	comp=Z,700nm,20.0s						
V48A	**Smith Brothers**	41.48	268	P	P	17 33 10.1	-0.3
V48A				IAmb	IAmb	17 33 15.9	
	comp=Z,53nm,0.9s						
V48A	**Smith Brothers**	41.48	268	P	P	17 33 10.4	-0.1
	baz=48,SNR=7.1						
SCIA	**State Center**	41.49	280	P	P	17 33 10.2	-0.3
SCIA				IAmb	IAmb	17 33 21.6	
	comp=Z,52nm,1.1s						
SCIA				IAMs_20	IAMs_20	17 49 02.4	
	comp=Z,3µm,20.0s						
SCIA	**State Center**	41.49	280	P	P	17 33 10.6	0.0
	baz=53						
SCIA	**State Center**	41.49	280	P	P	17 33 10.4	-0.2
	baz=53						
FPAL	**Fort Paine**	41.54	266	P	P	17 33 11.0	0.0
LPSR	**Galich'ya Gora**	41.64	60	*e*P	P	17 33 10.5	-1.1
LPSR				*e*S	S	17 39 23.2	-3.7
LPSR				pmax	pmax		
	comp=Z,70nm,0.8s						
LPSR				smax	smax		
	comp=E,790nm,9.8s						
LPSR				MLR	MLR		
	comp=Z,960nm,11.0s						
SIUC	**Southern Illin**	41.65	272	P	P	17 33 11.4	-0.4
SIUC				IAmb	IAmb	17 33 25.5	
	comp=Z,94nm,1.0s						
S44A	**Carbondale**	41.69	272	P	P	17 33 11.9	-0.2
S44A				IAmb	IAmb	17 33 25.7	
	comp=Z,77nm,0.8s						
S44A	**Carbondale**	41.69	272	P	P	17 33 12.2	0.0
	baz=50,SNR=16						
WVT	**Waverly**	41.83	270	IAMs_20	IAMs_20	17 49 54.8	
	comp=Z,4µm,18.0s						
A36M	**Sachs Harbour**	41.96	332	P	P	17 33 13.5	-0.5
A36M				IAmb	IAmb	17 33 24.2	
	comp=Z,50nm,0.8s						
A36M				IAMs_20	IAMs_20	17 49 56.5	
	comp=Z,3µm,19.0s						
A36M	**Sachs Harbour**	41.96	332	P	P	17 33 13.5	-0.5
	baz=66,SNR=11						
SMRT	**St. Maarten**	42.02	227	P	P	17 33 14.9	-0.1
SMRT				IAmb	IAmb	17 33 20.9	
	comp=Z,96nm,1.3s						
Z51A	**Franklin**	42.11	264	P	P	17 33 15.1	-0.5
Z51A				IAmb	IAmb	17 33 20.5	
	comp=Z,70nm,1.4s						
Z51A	**Franklin**	42.11	264	P	P	17 33 16.6	+0.9
	baz=46						
N38A	**Joes South For**	42.17	279	P	P	17 33 15.2	-0.9
N38A	**Joes South For**	42.17	279	P	P	17 33 16.5	+0.4
	baz=52						
CGM3	**Cape Girardeau**	42.19	272	P	P	17 33 15.4	-0.8
FVM	**French Village**	42.22	274	P	P	17 33 15.6	-0.9
FVM				IAmb	IAmb	17 34 13.1	
	comp=Z,69nm,0.8s						
FVM	**French Village**	42.22	274	P	P	17 33 15.6	-0.9
FVM				pmax	pmax		
	comp=Z,69nm,0.8s						
FVM	**French Village**	42.22	274	P	P	17 33 16.6	+0.1
	baz=50,SNR=8.3						
P40A	**Paris**	42.23	277	P	P	17 33 15.8	-0.8
P40A	**Paris**	42.23	277	P	P	17 33 17.2	+0.6
	baz=51						
VORR	**Voronezh**	42.26	61	P	P	17 33 15.8	-0.8
VORR				S	S	17 39 38.4	+2.4
VORR				pmax	pmax		
	comp=Z,61nm,1.2s						
VORR				MLR	MLR		
	comp=Z,873nm,14.0s						
YKA	**Yellowknife Ar**	42.26	317	P	P	17 33 16.3	-0.2
	comp=Z,30nm,1.1s,baz=63,slow=8.5,SNR=150						
YKA				PP	PP	17 34 54.4	+0.2
	comp=Z,26nm,1.3s,baz=60,slow=10,SNR=6.0						
YKA				PcP	PcP	17 35 09.8	-0.2
	comp=Z,5.9nm,0.9s,baz=66,slow=4.5,SNR=4.9						
YKA				LR	LR	17 49 15.6	
	comp=Z,1µm,20.1s,baz=78,slow=34						
	comp=Z,30nm,1.1s						
152A	**Waverly Hall**	42.28	263	P	P	17 33 16.8	-0.3
152A	**Waverly Hall**	42.28	263	P	P	17 33 17.3	+0.3
	baz=46						
UTMT	**University of**	42.33	271	P	P	17 33 17.5	+0.1
ECSD	**EROS Data Cent**	42.44	285	P	P	17 33 17.8	-0.5
ECSD				IAmb	IAmb	17 33 28.1	
	comp=Z,80nm,1.1s						
ECSD	**EROS Data Cent**	42.44	285	P	P	17 33 18.7	+0.4
	baz=54,SNR=27						
TIGA	**Tifton**	42.46	261	P	P	17 33 19.7	+1.2
	baz=44						
VSR	**Storozhevoye**	42.47	62	*e*P	P	17 33 17.4	-1.0
VSR				*e*S	S	17 39 36.5	-2.7
VSR				pmax	pmax		
	comp=Z,60nm,1.4s						
VSR				smax	smax		
	comp=N,610nm,9.9s						
VSR				MLR	MLR		
	comp=Z,1µm,15.0s						
X48A	**Hartselle**	42.47	267	P	P	17 33 18.6	0.0
X48A	**Hartselle**	42.47	267	P	P	17 33 18.7	0.0
	baz=47						
Y49A	**Blount Mountai**	42.49	266	P	P	17 33 18.4	-0.3
Y49A	**Blount Mountai**	42.49	266	P	P	17 33 19.8	+1.0
	baz=47,SNR=5.8						
BALB	**Balikesir**	42.50	83	P	P	17 33 17.5	-1.2
BALB				IAmb	IAmb	17 33 55.1	
	comp=Z,52nm,1.1s						
VORD	**Divnogorie**	42.66	62	*e*P	P	17 33 18.8	-1.2
VORD				*e*S	S	17 39 41.7	-0.4
VORD				pmax	pmax		
	comp=Z,60nm,0.7s						
VORD				smax	smax		
	comp=E,100nm,5.4s						
VORD				MLR	MLR		
	comp=Z,590nm,11.0s						
CCM	**Cathedral Cave**	42.67	274	P	P	17 33 19.4	-0.8
CCM	**Cathedral Cave**	42.67	274	IAMs_20	IAMs_20	17 49 59.0	
	comp=Z,3µm,18.0s						
CCM	**Cathedral Cave**	42.67	274	P	P	17 33 19.4	-0.8
CCM				pmax	pmax		
	comp=Z,49nm,1.1s						
CCM				MLR	MLR		
	comp=Z,3µm,18.0s						

CCM	Cathedral Cave	42.67	274	P	P	17 33 19.6	-0.6
	baz=50						
CCM	Cathedral Cave	42.67	274	P	P	17 33 20.0	-0.2
	baz=50,SNR=17						
H05N1	Guadeloupe/Mar	42.70	223	T	T	18 18 58.4	
	SNR=24						
C36M	Paulatuk	42.74	328	P	P	17 33 19.4	-0.9
C36M	Paulatuk	42.74	328	P	P	17 33 19.1	-1.2
	baz=64						
PLAL	Pickwick Lake	42.74	268	P	P	17 33 20.5	-0.3
PLAL				IAMs_20	IAMs_20	17 51 17.4	
	comp=Z,3µm,18.0s						
GDHS	Morne Mazeau,	43.03	224	P	P	17 33 22.9	-0.4
SIM	Simferopol'	43.04	73	*e*P	P	17 33 22.5	-0.6
SIM				*e*S	S	17 39 53.0	+5.2
SIM				pmax	pmax		
	comp=Z,200nm,7.2s						
SIM				MLR	MLR		
	comp=Z,2µm,15.0s						
P38A	Dawn	43.07	278	P	P	17 33 23.1	-0.3
P38A	Dawn	43.07	278	P	P	17 33 23.0	-0.3
	baz=51						
CBYP	Canovanas	43.09	230	P	P	17 33 23.7	-0.1
CBYP				IAmb	IAmb	17 33 28.3	
	comp=Z,44nm,0.9s						
MAGL	Barre de l'ile	43.12	223	IAMs_20	IAMs_20	17 46 31.4	
	comp=Z,2µm,22.0s						
R40A	Maddies Statio	43.14	275	P	P	17 33 23.0	-1.0
R40A	Maddies Statio	43.14	275	P	P	17 33 23.4	-0.6
	baz=50,SNR=9.9						
E28A	Huff	43.19	291	P	P	17 33 23.5	-0.8
E28A	Huff	43.19	291	P	P	17 33 24.4	+0.1
	baz=56,SNR=14						
HUMP	Col San Antoni	43.20	230	P	P	17 33 25.2	+0.6
HUMP				IAmb	IAmb	17 33 30.5	
	comp=Z,162nm,1.9s						
T42A	Van Buren	43.24	273	P	P	17 33 24.2	-0.6
T42A	Van Buren	43.24	273	P	P	17 33 24.5	-0.2
	baz=49						
GNAR	Gosnell	43.28	271	P	P	17 33 25.7	+0.6
W45A	Hickory Valley	43.30	270	P	P	17 33 26.3	+0.9
L34A	Svendsen Farm,	43.35	282	P	P	17 33 24.4	-1.2
L34A				IAmb	IAmb	17 33 34.6	
	comp=Z,139nm,1.4s						
L34A	Svendsen Farm,	43.35	282	P	P	17 33 25.6	-0.1
	baz=53,SNR=5.4						
SJG	San Juan	43.37	230	LR	LR	17 47 37.2	
	comp=Z,788nm,21.6s,baz=39,slow=31						
SJG	San Juan	43.37	230	P	P	17 33 25.5	-0.5
SJG	San Juan	43.37	230	P	P	17 33 25.5	-0.5
SJG				pmax	pmax		
	comp=Z,32nm,1.0s						
SJG				MLR	MLR		
	comp=Z,1µm,22.0s						
SUSD	Miller	43.41	287	P	P	17 33 25.9	-0.2
SUSD				IAmb	IAmb	17 33 37.4	
	comp=Z,70nm,0.9s						
SUSD	Miller	43.41	287	P	P	17 33 25.8	-0.3
	baz=54,SNR=6.2						
SUSD	Miller	43.41	287	P	P	17 33 26.4	+0.3
	baz=54,SNR=6.2						
LRAL	Lakeview Retre	43.41	265	P	P	17 33 26.0	-0.2
LRAL	Lakeview Retre	43.41	265	P	P	17 33 26.4	+0.2
	baz=46,SNR=13						
LRAL	Lakeview Retre	43.41	265	P	P	17 33 27.1	+0.9
	baz=46,SNR=13						
AOPR	Arecibo Observ	43.45	231	P	P	17 33 26.5	-0.2
AOPR				IAmb	IAmb	17 33 31.3	
	comp=Z,49nm,0.9s						
IDI	Anoyia	43.47	90	LR	LR	17 49 55.2	
	comp=Z,524nm,21.7s,baz=284,slow=34						
N35A	Tabor	43.58	281	P	P	17 33 26.7	-0.8
N35A				IAmb	IAmb	17 33 37.9	
	comp=Z,61nm,0.9s						
N35A	Tabor	43.58	281	P	P	17 33 27.1	-0.5
	baz=52,SNR=5.2						
DWPF	Disney Wildern	43.58	255	IAMs_20	IAMs_20	17 51 04.6	
	comp=Z,2µm,19.0s						
CELP	Cerrillos	43.60	231	P	P	17 33 27.9	0.0
MANT	Manisa	43.63	84	P	P	17 33 26.9	-1.3
250A	Grady	43.70	264	P	P	17 33 28.3	-0.3
250A				IAmb	IAmb	17 33 34.1	
	comp=Z,86nm,0.9s						
250A	Grady	43.70	264	P	P	17 33 29.0	+0.4
	baz=45						
PRSN	Puerto Rico Se	43.75	232	P	P	17 33 28.6	-0.5
PRSN				IAmb	IAmb	17 33 34.6	
	comp=Z,88nm,1.1s						
VRH	Novokhopyorsk	43.84	61	*e*P	P	17 33 29.0	-0.5
VRH				*e*S	S	17 39 56.3	-3.0
VRH				pmax	pmax		
	comp=Z,51nm,0.7s						
VRH				MLR	MLR		
	comp=Z,2µm,16.0s						
OXF	Oxford	43.87	269	P	P	17 33 30.5	+0.6
OXF				IAmb	IAmb	17 33 35.9	
	comp=Z,94nm,1.1s						
OXF				IAMs_20	IAMs_20	17 51 07.2	
	comp=Z,3µm,19.0s						
OXF	Oxford	43.87	269	P	P	17 33 30.5	+0.6
OXF				pmax	pmax		
	comp=Z,94nm,1.1s						
OXF				MLR	MLR		
	comp=Z,2µm,19.0s						
OXF	Oxford	43.87	269	P	P	17 33 28.7	-1.2
	baz=47,SNR=6.5						
OXF	Oxford	43.87	269	P	P	17 33 32.0	+2.0
	baz=47,SNR=6.5						
KIRV	Kirov	43.88	48	LR	LR	17 51 05.0	
	comp=Z,1µm,18.7s,baz=307,slow=35						
KIRV	Kirov	43.88	48	*ce*P	P	17 33 28.7	-1.0
BORA	Eskisehir	43.90	81	P	P	17 33 29.5	-0.7
LCAR	Lake Charles	43.90	272	P	P	17 33 28.5	-1.7
LCAR	Lake Charles	43.90	272	P	P	17 33 29.4	-0.7
	baz=49,SNR=11						
CRPR	Cabo Rojo, PR	43.91	231	P	P	17 33 30.0	-0.4
CRPR				IAmb	IAmb	17 33 36.0	
	comp=Z,46nm,0.8s						
MLPR	Magueyes Islan	43.92	231	P	P	17 33 30.5	+0.1
MLPR				IAmb	IAmb	17 33 35.7	
	comp=Z,82nm,0.9s						
Z47A	Carrollton	43.95	267	P	P	17 33 29.6	-0.9
Z47A				IAmb	IAmb	17 33 39.8	
	comp=Z,78nm,0.9s						
Z47A	Carrollton	43.95	267	P	P	17 33 30.4	-0.1
	baz=46						
MDUB	Mudurnu	43.98	80	P	P	17 33 31.0	+0.1
SVN	Savane Anatole	44.07	222	IAMs_20	IAMs_20	17 48 14.5	
	comp=Z,2µm,19.0s						
DGMT	Dagmar	44.11	295	P	P	17 33 30.7	-1.0
DGMT				IAmb	IAmb	17 33 43.1	
	comp=Z,82nm,0.9s						
DGMT	Dagmar	44.11	295	P	P	17 33 30.6	-1.1
	baz=56,SNR=7.6						
DGMT	Dagmar	44.11	295	P	P	17 33 32.5	+0.8
	baz=56,SNR=7.6						
FDF	Fort de France	44.16	222	P	P	17 33 31.7	-0.7
FDF				IAMs_20	IAMs_20	17 48 15.8	
	comp=Z,2µm,20.0s						
FDF	Fort de France	44.16	222	P	P	17 33 31.7	-0.7
FDF				pmax	pmax		
	comp=Z,112nm,1.0s						
FDF				MLR	MLR		
	comp=Z,2µm,20.0s						
S39A	Bolivar	44.17	275	P	P	17 33 31.0	-1.2
S39A	Bolivar	44.17	275	P	P	17 33 31.9	-0.4
	baz=50,SNR=15						
H05S1	Guadeloupe/Mar	44.31	221	T	T	18 20 44.0	
	SNR=5.6						
BIM	Bigot	44.32	222	IAMs_20	IAMs_20	17 48 10.2	
	comp=Z,2µm,21.0s						
K31A	O'Neill	44.36	285	P	P	17 33 32.6	-1.2
K31A	O'Neill	44.36	285	P	P	17 33 33.8	0.0
	baz=53						
Y45A	Yeager Farm, C	44.39	268	P	P	17 33 33.5	-0.6
Y45A				IAmb	IAmb	17 33 47.1	
	comp=Z,78nm,1.1s						
Y45A	Yeager Farm, C	44.39	268	P	P	17 33 34.2	+0.1
	baz=47						
FCAR	Ozark Folk Cen	44.61	273	P	P	17 33 34.7	-1.1
FCAR				IAmb	IAmb	17 33 50.8	
	comp=Z,103nm,1.9s						
BGNE	Belgrade	44.74	283	P	P	17 33 35.7	-1.1
BGNE	Belgrade	44.74	283	P	P	17 33 35.6	-1.3
	baz=52,SNR=6.1						
BGNE	Belgrade	44.74	283	P	P	17 33 36.9	0.0
	baz=52,SNR=6.1						
U40A	Yellville	44.75	274	P	P	17 33 36.7	-0.3
	baz=49,SNR=14						
U40A				P	P	17 33 36.7	-0.3
	baz=49,SNR=14						
146A	Union	44.94	267	P	P	17 33 37.3	-1.1
146A				IAmb	IAmb	17 34 08.6	
	comp=Z,55nm,0.9s						
BBGH	Gun Hill	44.97	219	IAMs_20	IAMs_20	17 48 41.5	
	comp=Z,3µm,19.0s						
ANN	Anapa	45.05	71	*e*P	P	17 33 38.0	-1.2
ANN				*e**PP	pP	17 33 41.3	-2.2
ANN				*e*		17 35 23.6	
ANN				*e*S	S	17 40 17.8	+0.8
ANN				pmax	pmax		
	comp=Z,60nm,1.4s						
ANN				MLR	MLR		
	comp=Z,2µm,16.0s						
ANN				MLR	MLR		
	comp=N,899nm,12.0s						
ANN				MLR	MLR		
	comp=E,1µm,16.0s						
WHAR	Wooly Hollow	45.11	272	P	P	17 33 38.8	-1.0
WHAR				IAmb	IAmb	17 33 52.3	
	comp=Z,86nm,1.3s						
ILGA	Ilgaz	45.13	77	P	P	17 33 38.5	-1.7
ILGA				IAmb	IAmb	17 33 42.9	
	comp=Z,48nm,0.9s						
SDDR	Presa de Saban	45.15	237	P	P	17 33 40.3	0.0
SDDR				IAmb	IAmb	17 33 46.3	
	comp=Z,52nm,0.9s						
SDDR				IAMs_20	IAMs_20	17 48 18.0	
	comp=Z,2µm,22.0s						
HILA	High Level	45.20	313	P	P	17 33 39.2	-1.1
HILA				PcP	PcP	17 35 19.9	-0.1
ISP	Isparta	45.24	83	IAMs_20	IAMs_20	17 53 28.8	
	comp=Z,2µm,19.0s						
KSU1	Kansas State U	45.26	279	IAMs_20	IAMs_20	17 51 21.1	
	comp=Z,2µm,20.0s						
KSU1	Kansas State U	45.26	279	P	P	17 33 40.2	-0.8
	baz=50						
KSU1	Kansas State U	45.26	279	P	P	17 33 40.9	-0.1
	baz=50						
ANTO	Ankara	45.31	79	P	P	17 33 40.5	-1.0
ANTO	Ankara	45.31	79	P	P	17 33 40.5	-1.0
ANTO				pmax	pmax		
	comp=Z,23nm,0.9s						
ANTO				MLR	MLR		
	comp=Z,1µm,18.0s						
BR231	Keskin MP Arra	45.32	79	P	P	17 33 39.9	-1.7
BR231				IAmb	IAmb	17 33 44.2	
	comp=Z,26nm,0.8s						
HHAR	Hobbs	45.46	274	P	P	17 33 41.2	-1.4
HHAR				IAmb	IAmb	17 33 51.4	
	comp=Z,68nm,1.5s						
HHAR					PcP	17 35 23.9	+2.6
WRGLY	Wrigley	45.47	321	P	P	17 33 42.3	0.0
	baz=59,SNR=25						
UALR	University of	45.48	272	P	P	17 33 41.6	-1.2
UALR				IAmb	IAmb	17 33 51.6	
	comp=Z,111nm,1.6s						
U38A	Gravette	45.62	275		P	17 33 42.6	-1.3
U38A				IAmb	IAmb	17 33 52.6	
	comp=Z,116nm,1.9s						
U38A	Gravette	45.62	275	P	P	17 33 43.1	-0.8
	baz=49						
BR131	Keskin Array S	45.91	79	P	P	17 33 45.9	-0.4
BR131				IAmb	IAmb	17 33 57.7	
	comp=Z,48nm,0.9s						
BR131	Keskin Array S	45.91	79	*c i*P	P	17 33 46.2	-0.1
BRTR	Keskin Array B	45.91	79	P	P	17 33 46.7	+0.4
	comp=Z,23nm,0.7s,baz=301,slow=6.1,SNR=72						
BRTR				LR	LR	17 54 29.4	
	comp=Z,2µm,18.4s,baz=315,slow=38						
	comp=Z,23nm,0.7s						
BRTR	Keskin Array B	45.91	79	P	P	17 33 45.9	-0.4
BRTR	Keskin Array B	45.91	79	P	P	17 33 45.9	-0.4
X40A	Basin Creek Fa	45.98	272	P	P	17 33 45.5	-1.2
X40A	Basin Creek Fa	45.98	272	P	P	17 33 46.0	-0.6
	baz=47,SNR=8.6						
X40A				P	P	17 33 46.0	-0.6
	baz=47,SNR=8.6						
VBMS	Vicksburg	46.12	268	P	P	17 33 46.6	-1.1
VBMS	Vicksburg	46.12	268	P	P	17 33 48.0	+0.2
	baz=46						
RLO	Rose Lookout	46.19	275		P	17 33 46.5	-1.8
RLO				IAmb	IAmb	17 33 54.6	
	comp=Z,30nm,0.8s						
INK	Inuvik	46.23	330	LR	LR	17 52 26.5	
	comp=Z,5µm,18.9s,baz=42,slow=35						
INK	Inuvik	46.23	330	P	P	17 33 46.7	-1.5
INK				IAmb	IAmb	17 33 59.0	
	comp=Z,30nm,1.1s						
INK	Inuvik	46.23	330	P	P	17 33 46.7	-1.5
INK				pmax	pmax		
	comp=Z,30nm,1.1s						
INK	Inuvik	46.23	330	P	P	17 33 47.2	-1.0
	baz=56						
LAO	LASA Array	46.25	294	P	P	17 33 48.4	-0.4
LAO	LASA Array	46.25	294	P	P	17 33 49.0	+0.2
	baz=54,SNR=7.0						
LAO	LASA Array	46.25	294	P	P	17 33 49.0	+0.2
	baz=54,SNR=7.0						
BELG	Belogornoye	46.27	57	LR	LR	17 52 12.8	
	comp=Z,1µm,19.2s,baz=318,slow=35						
BELG	Belogornoye	46.27	57	*c i*P	P	17 33 47.6	-1.1
BELG				pmax	pmax		
	comp=Z,12nm,1.0s						
143A	Socs Landing,	46.32	269	P	P	17 33 48.1	-1.3
143A	Socs Landing,	46.32	269	P	P	17 33 49.4	0.0
	baz=46						
GTBY	Guantanamo Bay	46.38	242	P	P	17 33 50.2	+0.2
MIAR	Mount Ida	46.39	272	P	P	17 33 49.2	-0.7
MIAR				IAmb	IAmb	17 34 05.2	
	comp=Z,55nm,1.2s						
MIAR	Mount Ida	46.39	272	P	P	17 33 49.2	-0.7
MIAR				pmax	pmax		
	comp=Z,55nm,1.3s						
MIAR				MLR	MLR		
	comp=Z,5µm,18.0s						
MIAR	Mount Ida	46.39	272	P	P	17 33 48.6	-1.3
	baz=47,SNR=5.6						
MIAR	Mount Ida	46.39	272	P	P	17 33 49.6	-0.4
	baz=47,SNR=5.6						
RSSD	Black Hills	46.54	290	P	P	17 33 49.6	-1.7
RSSD	Black Hills	46.54	290	P	P	17 33 49.6	-1.7
RSSD				pmax	pmax		
	comp=Z,15nm,1.1s						
RSSD				MLR	MLR		
	comp=Z,4µm,19.0s						
RSSD	Black Hills	46.54	290	P	P	17 33 50.5	-0.8
	baz=53						
RSSD	Black Hills	46.54	290	P	P	17 33 50.8	-0.5
	baz=53						
T35B	Sooner Cattle	46.60	277	P	P	17 33 50.7	-0.9
	baz=49						
T35A	Sooner Cattle	46.60	277		P	17 33 50.2	-1.4
T35A				IAmb	IAmb	17 34 04.4	
	comp=Z,40nm,1.1s						
WLAR	White Oak Lake	46.69	271	P	P	17 33 50.8	-1.4
344A	Westbrook Farm	46.78	267	P	P	17 33 53.4	+0.4
	baz=45						
F31M	Tsiigehtchic	46.79	329	P	P	17 33 52.1	-0.5
	baz=55,SNR=26						
Z41A	Richland Creek	46.79	270	P	P	17 33 50.8	-2.2
TUL1	Leonard	46.83	275	P	P	17 33 51.5	-1.8
TUL1				IAmb	IAmb	17 33 59.5	
	comp=Z,49nm,1.1s						
TUL1				IAMs_20	IAMs_20	17 55 57.0	
	comp=Z,2µm,18.0s						
TUL1	Leonard	46.83	275	P	P	17 33 51.8	-1.6
	baz=48						
R32A	Long Quarter,	46.95	280	P	P	17 33 52.5	-1.8
R32A	Long Quarter,	46.95	280	P	P	17 33 53.8	-0.5
	baz=50						
KS20	Mayfield South	47.03	278	P	P	17 33 53.2	-1.8
TOSP	Speyside	47.03	219	P	P	17 33 54.0	-1.0
OK051	E0350 and S346	47.07	277	P	P	17 33 54.2	-1.0
OK051				IAmb	IAmb	17 34 01.7	
	comp=Z,65nm,1.4s						
OK051				IAMs_20	IAMs_20	17 55 54.3	
	comp=Z,2µm,18.0s						
KAN13	South Haven SW	47.12	278	P	P	17 33 54.0	-1.6
KAN09	Caldwell North	47.13	278	P	P	17 33 53.9	-1.8
BLOK	Blackwell	47.13	277	P	P	17 33 54.3	-1.4
OK048	Pawnee Station	47.19	277		P	17 33 54.6	-1.6
KAN06	Argonia West S	47.20	278	P	P	17 33 54.7	-1.5
KAN06				IAmb	IAmb	17 34 02.1	
	comp=Z,52nm,1.1s						
KAN01	Argonia South	47.20	278	P	P	17 33 54.6	-1.6
QUOK	Quay	47.21	276		P	17 33 54.6	-1.7
KAN12	Harper NE Stat	47.25	278	P	P	17 33 55.1	-1.5
KAN17	Caldwell West	47.28	278	P	P	17 33 55.1	-1.8
KAN08	Anthony NE Sta	47.28	278	P	P	17 33 55.4	-1.5
DEOK	Depew	47.30	276		P	17 33 55.3	-1.7
CBKS	Cedar Bluff	47.31	281	P	P	17 33 55.6	-1.6
CBKS				IAMs_20	IAMs_20	17 52 35.5	
	comp=Z,3µm,21.0s						
CBKS	Cedar Bluff	47.31	281	P	P	17 33 55.6	-1.6
CBKS				pmax	pmax		
	comp=Z,84nm,1.2s						
CBKS				MLR	MLR		
	comp=Z,3µm,21.0s						
CBKS	Cedar Bluff	47.31	281	P	P	17 33 55.9	-1.3
	baz=50						
CBKS	Cedar Bluff	47.31	281	P	P	17 33 56.4	-0.8
	baz=50						
OGNE	Ogallala	47.33	285	P	P	17 33 55.9	-1.5
OGNE				IAmb	IAmb	17 34 06.4	
	comp=Z,37nm,1.0s						
OGNE				IAMs_20	IAMs_20	17 52 22.5	
	comp=Z,3µm,20.0s						
OGNE	Ogallala	47.33	285	P	P	17 33 56.4	-0.9
	baz=51						
OGNE	Ogallala	47.33	285	P	P	17 33 56.8	-0.5
	baz=51						
OK052	Battle Ridge R	47.39	276	P	P	17 33 56.7	-1.0
OK052				IAMs_20	IAMs_20	17 55 48.7	
	comp=Z,2µm,19.0s						
KOTAN	Kotaneelee Air	47.39	317	P	P	17 33 58.1	+0.7
	baz=56,SNR=6.9						
EGMT	Eagleton	47.41	297	P	P	17 33 56.6	-1.3
EGMT	Eagleton	47.41	297	P	P	17 33 58.3	+0.4
	baz=54,SNR=28						
OK030	Cody Creek RV	47.42	276	P	P	17 33 56.5	-1.5
OK030				IAMs_20	IAMs_20	17 55 58.6	
	comp=Z,2µm,22.0s						
OK031	S. Brethren Rd	47.44	276	P	P	17 33 56.2	-1.9
OK031				IAMs_20	IAMs_20	17 56 14.0	
	comp=Z,2µm,19.0s						
OK033	Mehan	47.44	276		P	17 33 55.9	-2.2
OK033				IAMs_20	IAMs_20	17 56 20.0	
	comp=Z,2µm,19.0s						
KAN14	Manchester OK	47.45	278	P	P	17 33 56.2	-2.0
X37A	Clayton	47.45	274		P	17 33 56.3	-1.9
X37A				IAmb	IAmb	17 34 43.3	
	comp=Z,66nm,1.7s						
X37A	Clayton	47.45	274	P	P	17 33 57.5	-0.8
	baz=47						
OK032	Salt Plains WL	47.70	278	P	P	17 33 57.7	-2.5
OK032				IAmb	IAmb	17 34 10.4	
	comp=Z,52nm,1.2s						
OK032				IAMs_20	IAMs_20	17 52 36.0	
	comp=Z,2µm,20.0s						
CROK	Carrier	47.76	278		P	17 33 59.0	-1.7
CROK				IAmb	IAmb	17 34 15.6	
	comp=Z,39nm,0.9s						
BNN	Bunyan	47.78	78	P	P	17 33 58.9	-2.0
BRLDA	Berland Lookou	47.82	308	P	P	17 33 59.2	-1.8
TOA0	Torodi Ar. Sit	47.83	133	P	P	17 33 59.3	-2.0
TOA0				IAmb	IAmb	17 34 11.6	
	comp=Z,50nm,1.1s						
TORD	Torodi Ar. Bea	47.83	133	P	P	17 34 00.2	-1.1
	comp=Z,72nm,0.4s,baz=344,slow=7.6,SNR=5.0						
TORD				LR	LR	17 51 07.6	
	comp=Z,1µm,20.8s,baz=334,slow=32						
G30M	tAoh Zraii Nji	47.84	329	P	P	17 34 00.6	-0.4
	baz=53,SNR=5.9						
W35A	Tecumseh	47.99	275		P	17 34 00.6	-1.9
OK035	E0210 Rd and N	48.07	278		P	17 34 01.1	-1.9
OK035				IAMs_20	IAMs_20	17 53 31.6	
	comp=Z,2µm,19.0s						
WAPA	Wapiti River	48.08	310	P	P	17 34 01.7	-1.2
OK038	West end E0370	48.24	278	P	P	17 34 02.7	-1.7
OK038				IAmb	IAmb	17 34 10.2	
	comp=Z,45nm,1.0s						
NOKA	Waynoka	48.25	278		P	17 34 03.2	-1.2
C27K	Jago River	48.35	334	P	P	17 34 03.2	-1.6
	baz=49,SNR=10						
EPYK	Eagle Plains	48.37	329	P	P	17 34 03.9	-1.1
EPYK	Eagle Plains	48.37	329	P	P	17 34 04.6	-0.4
	baz=52,SNR=16						
U32A	Winter Ranch,	48.46	278		P	17 34 05.1	-1.0
U32A	Winter Ranch,	48.46	278	P	P	17 34 05.6	-0.4
	baz=48						
C26K	Camden Bay	48.48	335	P	P	17 34 05.8	+0.1
	baz=49,SNR=10						
KIV	Kislovodsk	48.56	69	P	P	17 34 05.0	-1.8
KIV	Kislovodsk	48.56	69	*e*P	P	17 34 06.6	-0.2
KIV				*e*		17 35 59.7	
KIV				*e*S	S	17 41 08.7	+1.3
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,719nm,16.0s						
LIRD	Liard River Hi	48.65	317	P	P	17 34 07.4	+0.2
	baz=54,SNR=5.3						
SHA1	Shidzhatmaz	48.68	69	*de*P	P	17 34 08.7	+0.8
E27K	Coleen River	48.70	332	P	P	17 34 07.5	0.0
	baz=50,SNR=19						
GCMT	Greycliff	48.70	295	P	P	17 34 07.0	-1.0
MMPY	Sheldon Lake,	48.77	323	P	P	17 34 09.8	+1.7
	baz=53,SNR=36						
KBZ	Khabaz	48.82	69	P	P	17 34 09.6	+0.9
	comp=Z,9.0nm,1.1s,baz=303,slow=9.3,SNR=10						
KBZ				LR	LR	17 54 14.1	
	comp=Z,926nm,21.1s,baz=306,slow=36						
	comp=Z,9.0nm,1.1s						
KBZ	Khabaz	48.82	69	*c i*P	P	17 34 09.5	+0.9
KBZ				pmax	pmax		
	comp=Z,61nm,3.5s						
CSS	Mathiatis	48.83	84	P	P	17 34 08.1	-0.8
K22A	Casper	48.87	290	P	P	17 34 08.4	-0.9
K22A	Casper	48.87	290	P	P	17 34 08.2	-1.2
	baz=51,SNR=11						
K22A	Casper	48.87	290	P	P	17 34 09.1	-0.2
	baz=51,SNR=11						
RLMT	Red Lodge	48.89	294	P	P	17 34 08.9	-0.6
RLMT	Red Lodge	48.89	294	P	P	17 34 09.9	+0.4
	baz=52,SNR=26						
BRIGG	Briggsdale	48.90	286	P	P	17 34 08.6	-0.9
BRIGG				IAMs_20	IAMs_20	17 54 16.0	
	comp=Z,1µm,19.0s						
KSCO	Kaye Shedlock'	48.91	283	P	P	17 34 08.5	-1.2
KSCO	Kaye Shedlock'	48.91	283	P	P	17 34 08.8	-0.8
	baz=49						
KSCO	Kaye Shedlock'	48.91	283	P	P	17 34 09.3	-0.3
	baz=49						
ELIS	Ellis County	48.92	278	P	P	17 34 08.4	-1.2
ELIS				IAmb	IAmb	17 34 16.0	
	comp=Z,43nm,0.9s						
X34A	Smith Ranch, M	48.94	276		P	17 34 08.9	-0.8
X34A				IAmb	IAmb	17 34 23.3	
	comp=Z,22nm,0.8s						
NATX	Nacogdoches	48.96	270	P	P	17 34 08.9	-0.9
NATX				IAmb	IAmb	17 34 18.9	
	comp=Z,45nm,1.1s						
NATX	Nacogdoches	48.96	270	P	P	17 34 09.0	-0.9
	baz=46						
NATX	Nacogdoches	48.96	270	P	P	17 34 10.1	+0.1
	baz=46						
WALA	Waterton Lakes	49.02	300	P	P	17 34 08.6	-1.7
NEY	Neytrino	49.02	69	⇑*e*P	P	17 34 11.2	+0.7
NEY				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MTDJ	Mount Denham	49.08	243	P	P	17 34 11.5	+0.4
PHWY	Pilot Hill	49.11	288	P	P	17 34 09.7	-1.6
PHWY				IAmb	IAmb	17 34 22.9	
	comp=Z,44nm,0.9s						
ARU	Arti	49.19	47	LR	LR	17 54 20.7	
	comp=Z,1µm,18.6s,baz=298,slow=35						
ARU	Arti	49.19	47	P	P	17 34 10.4	-1.0
ARU				IAmb	IAmb	17 34 24.6	
	comp=Z,39nm,0.9s						
ARU	Arti	49.19	47	*c i*P	P	17 34 11.0	-0.4
ARU						17 35 32.6	
ARU						17 36 01.6	
ARU				PPP	PPP	17 36 53.0	
ARU				S	S	17 41 17.9	+2.1
ARU				SSS	SSS	17 46 10.9	
ARU				pmax	pmax		

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           comp=Z,46nm,0.9s
D25K  Kavik River      49.26 335  P        P        17 34 09.9  -1.9
           baz=47
HRY   Holter Researc   49.33 297  P        P        17 34 12.4  -0.3
HRY                                        S        17 41 18.8  +0.6
WTLY  Watson Lake, Y   49.33 319  P        P        17 34 11.5  -0.9
WTLY  Watson Lake, Y   49.33 319  P        P        17 34 12.0  -0.4
           baz=53,SNR=10.0
WMOK  Wichita Mounta   49.43 276           P        17 34 12.5  -1.0
WMOK  Wichita Mounta   49.43 276  IAMs_20  IAMs_20  17 54 52.7
           comp=Z,3µm,21.0s
WMOK  Wichita Mounta   49.43 276  P        P        17 34 12.5  -1.0
WMOK                              pmax     pmax
           comp=Z,18nm,1.1s
WMOK                              MLR      MLR
           comp=Z,3µm,21.0s
WMOK  Wichita Mounta   49.43 276  P        P        17 34 11.9  -1.6
           baz=47,SNR=5.6
WMOK  Wichita Mounta   49.43 276  P        P        17 34 12.8  -0.7
           baz=47,SNR=5.6
237A  Washetta, Mont   49.49 272  P        P        17 34 13.8  -0.2
237A                              IAmb     IAmb     17 34 23.4
           comp=Z,34nm,0.9s
I29M  Ogilvie Camp,    49.52 328  P        P        17 34 12.8  -0.9
I29M                              IAmb     IAmb     17 34 23.5
           comp=Z,45nm,0.9s
I29M                              IAMs_20  IAMs_20  17 54 13.4
           comp=Z,3µm,19.0s
I29M  Ogilvie Camp,    49.52 328  P        P        17 34 14.1  +0.3
           baz=50,SNR=18
C24K  Franklin Bluff   49.58 336  P        P        17 34 14.1  -0.1
           baz=46
G27K  Doyon Strip      49.62 331  P        P        17 34 14.1  -0.4
           baz=49
YMP   Mirror Lake Pl   49.62 294  P        P        17 34 14.5  -0.7
N23A  Red Feather La   49.65 287  P        P        17 34 15.6  +0.2
N23A  Red Feather La   49.65 287  P        P        17 34 16.0  +0.6
           baz=50,SNR=73
GAZ   Gaziantep        49.70  79  P        P        17 34 15.3  -0.3
GAZ                               IAmb     IAmb     17 34 36.0
           comp=Z,37nm,1.0s
PCRV  Puerto La Cruz   49.70 224  LR       LR       17 50 59.2
           comp=Z,1µm,21.5s,slow=31
F26K  Sheenjek River   49.76 332  P        P        17 34 15.1  -0.5
           baz=48
FARO  Faro, Yukon      49.78 323  P        P        17 34 16.4  +0.6
FARO  Faro, Yukon      49.78 323  P        P        17 34 17.2  +1.4
           baz=52,SNR=25
KOPT  Kop Dagi         49.79  74  P        P        17 34 16.0  -0.5
MAYO  Mayo, Yukon      49.83 325  P        P        17 34 16.5  +0.3
           baz=51
ONI   Oni              49.85  69  P        P        17 34 16.6  -0.1
ONI   Oni              49.85  69  P        P        17 34 16.6  -0.1
ONI                               pmax     pmax
           comp=Z,20nm,1.1s
E25K  Arctic Village   49.86 333  P        P        17 34 16.8  +0.4
           baz=47,SNR=22
LKWY  Lake             49.87 294  P        P        17 34 16.5  -0.6
LKWY                              IAmb     IAmb     17 34 41.8
           comp=Z,33nm,1.1s
LKWY  Lake             49.87 294  P        P        17 34 16.5  -0.6
LKWY                              pmax     pmax
           comp=Z,33nm,1.1s
LKWY                              MLR      MLR
           comp=Z,6µm,18.0s
RWWY  Rawlins          49.88 289  P        P        17 34 15.3  -1.8
SVE   Sverdlovsk       49.88  46 eP        P        17 34 16.4  -0.2
SVE                              eS        S        17 41 27.3  +2.0
SVE                              e                  17 44 52.2
SVE                               pmax     pmax
           comp=Z,40nm,1.4s
SVE                               MLR      MLR
           comp=Z,883nm,13.0s
FW06  Azle             49.88 274  P        P        17 34 15.5  -1.5
FW06                              IAmb     IAmb     17 34 25.7
           comp=Z,58nm,1.2s
WTFS  Witchita Falls   49.89 275           P        17 34 16.3  -0.7
WTFS                              IAmb     IAmb     17 34 32.1
           comp=Z,37nm,1.1s
BOZ   Bozeman (W)      49.91 296  P        P        17 34 16.1  -1.1
BOZ                               IAmb     IAmb     17 34 28.2
           comp=Z,59nm,1.1s
BOZ   Bozeman (W)      49.91 296  P        P        17 34 16.1  -1.1
BOZ                               pmax     pmax
           comp=Z,59nm,1.1s
BOZ                               MLR      MLR
           comp=Z,3µm,18.0s
BOZ   Bozeman (W)      49.91 296  P        P        17 34 17.4  +0.2
           baz=51,SNR=36
YNR   Norris Junctio   49.93 294  P        P        17 34 17.4  -0.1
H27K  Steamboat Moun   49.96 330  P        P        17 34 17.3  +0.1
           baz=49
ZEI   Tsey             49.98  69 eP        P        17 34 11.6  -6.2
ZEI                               pmax     pmax
           comp=Z,20nm,1.2s
BMAR  Burnt Mountain   50.06 332  P        P        17 34 17.4  -0.5
J29M  Klondike Camp    50.07 327  P        P        17 34 17.9  -0.2
J29M                              IAmb     IAmb     17 34 39.1
           comp=Z,37nm,0.8s
J29M  Klondike Camp    50.07 327  P        P        17 34 17.3  -0.8
           baz=50
H17A  Grant Village    50.07 294  P        P        17 34 19.0  +0.4
H17A                              IAmb     IAmb     17 34 31.6
           comp=Z,33nm,0.9s
H17A  Grant Village    50.07 294  P        P        17 34 18.9  +0.4
           baz=51,SNR=6.2
YMR   Madison River    50.12 294  P        P        17 34 18.5  -0.4
YMR                               IAmb     IAmb     17 34 33.2
           comp=Z,31nm,1.0s
G26K  Porcupine Rive   50.15 331  P        P        17 34 18.9  +0.4
           baz=48
ISCO  Idaho Springs    50.16 286  P        P        17 34 18.5  -0.9
ISCO                              IAmb     IAmb     17 34 29.6
           comp=Z,37nm,1.0s
ISCO  Idaho Springs    50.16 286  P        P        17 34 18.5  -0.9
ISCO                              pmax     pmax
           comp=Z,37nm,1.0s
ISCO                              MLR      MLR
           comp=Z,1µm,22.0s
ISCO  Idaho Springs    50.16 286  P        P        17 34 19.4   0.0
           baz=49,SNR=24
ISCO  Idaho Springs    50.16 286  P        P        17 34 19.9  +0.6
           baz=49,SNR=24
M31M  Drury Creek, Y   50.18 323  P        P        17 34 18.4  -0.4
M31M  Drury Creek, Y   50.18 323  P        P        17 34 20.0  +1.1
           baz=51,SNR=19
LRM   Limekiln Ridge   50.22 296  P        P        17 34 19.1  -0.6
MDP   Montagnes des    50.22 207  LR       LR       17 50 19.3
           comp=Z,947nm,21.8s,baz=28,slow=30
K29M  Barlow Dome      50.23 326  P        P        17 34 19.6  +0.3
           baz=50
A21K  Barrow           50.24 340  P        P        17 34 18.5  -0.6
A21K                              IAmb     IAmb     17 34 30.0
           comp=Z,34nm,0.8s
A21K                              IAMs_20  IAMs_20  17 55 56.8
           comp=Z,2µm,19.0s
A21K  Barrow           50.24 340  P        P        17 34 19.1   0.0
           baz=41
FW13  Cleburne         50.24 273  P        P        17 34 19.0  -0.7
FW13                              IAmb     IAmb     17 34 28.9
           comp=Z,46nm,0.8s
F25K  Christian Rive   50.24 333  P        P        17 34 19.3   0.0
           baz=47
FLWY  Flagg Ranch      50.34 294  P        P        17 34 19.7  -0.9
FLWY                              IAmb     IAmb     17 34 47.3
           comp=Z,43nm,1.1s
FLWY                              IAMs_20  IAMs_20  17 54 09.6
           comp=Z,3µm,19.0s
N32M  Quiet Lake       50.36 322  P        P        17 34 20.8  +0.5
           baz=51
MSO   Missoula         50.40 298  P        P        17 34 19.6  -1.2
MSO                               IAmb     IAmb     17 34 31.2
           comp=Z,45nm,1.2s
MSO   Missoula         50.40 298  P        P        17 34 20.5  -0.3
           baz=51,SNR=9.3
I27K  Kandik River     50.41 329  P        P        17 34 20.8  +0.2
           baz=48
Q24A  Divide           50.43 285  P        P        17 34 20.2  -1.3
Q24A  Divide           50.43 285  P        P        17 34 21.3  -0.1
           baz=49,SNR=8.0
WHTX  Lake Whitney,    50.50 273  P        P        17 34 19.9  -1.7
WHTX                              IAmb     IAmb     17 34 31.7
           comp=Z,36nm,0.8s
WHTX  Lake Whitney,    50.50 273  P        P        17 34 20.7  -1.0
           baz=46
WHTX  Lake Whitney,    50.50 273  P        P        17 34 20.9  -0.7
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           baz=46
BW06  Boulder Array    50.53 292  P        P        17 34 20.6  -1.5
BW06                              IAmb     IAmb     17 34 31.3
           comp=Z,89nm,1.4s
BW06  Boulder Array    50.53 292  P        P        17 34 20.5  -1.5
           baz=50,SNR=18
PD31  Pinedale Array   50.53 292  P        P        17 34 20.3  -1.7
PD31                              IAmb     IAmb     17 34 31.9
           comp=Z,56nm,1.1s
PDAR  Pinedale Array   50.53 292  P        P        17 34 21.1  -1.0
           comp=Z,25nm,1.0s,baz=60,slow=7.5,SNR=56
PDAR                              LR       LR       17 54 35.9
           comp=Z,3µm,18.7s,baz=52,slow=35
           comp=Z,25nm,1.0s
PDAR  Pinedale Array   50.53 292  P        P        17 34 20.8  -1.2
MOOW  Moose Ponds      50.58 293  P        P        17 34 21.6  -0.8
MOOW                              IAmb     IAmb     17 34 33.2
           comp=Z,38nm,1.1s
MOOW                              IAMs_20  IAMs_20  17 54 07.8
           comp=Z,3µm,21.0s
DLMT  Dillon           50.59 296  P        P        17 34 21.6  -0.7
DLMT                              IAmb     IAmb     17 34 33.1
           comp=Z,35nm,0.9s
IMW   Indian Meadow    50.59 293  P        P        17 34 21.9  -0.7
D23K  Nanushuk River   50.61 336  P        P        17 34 23.0  +1.0
           baz=44,SNR=21
AKH   Akhalkalaki      50.63  71  P        P        17 34 20.8  -1.9
AKH                               IAmb     IAmb     17 34 41.3
           comp=Z,59nm,1.1s
AKH   Akhalkalaki      50.63  71  P        P        17 34 20.8  -1.9
AKH                               pmax     pmax
           comp=Z,59nm,1.1s
E24K  Your Creek       50.68 334  P        P        17 34 22.8  +0.2
           baz=45,SNR=32
DAWY  Dawson           50.71 327  P        P        17 34 22.4  -0.5
DAWY  Dawson           50.71 327  P        P        17 34 23.4  +0.5
           baz=49,SNR=18
NRIK  Noril'sk         50.73  23  P        P        17 34 23.8  +0.9
           comp=Z,1.9nm,0.4s,baz=320,slow=10,SNR=6.8
NRIK                              LR       LR       17 56 43.8
           comp=Z,1µm,18.2s,baz=328,slow=37
           comp=Z,1.9nm,0.4s
NRIK  Noril'sk         50.73  23  P        P        17 34 23.2  +0.3
NRIK  Noril'sk         50.73  23⇓eP        P        17 34 24.0  +1.1
NRIK                              pmax     pmax
           comp=Z,29nm,1.9s
SNOW  Snow King Moun   50.76 293  P        P        17 34 23.0  -0.8
SNOW                              IAmb     IAmb     17 34 34.2
           comp=Z,47nm,1.0s
M30M  Minto, Yukon     50.80 325  P        P        17 34 23.0  -0.6
M30M                              IAmb     IAmb     17 34 26.2
           comp=Z,98nm,1.4s
M30M                              IAMs_20  IAMs_20  17 54 28.5
           comp=Z,2µm,21.0s
M30M  Minto, Yukon     50.80 325  P        P        17 34 24.2  +0.6
           baz=50,SNR=18
FXWY  Fox Creek        50.80 293  P        P        17 34 23.6  -0.5
FXWY                              IAmb     IAmb     17 34 34.8
           comp=Z,54nm,1.1s
FXWY                              IAMs_20  IAMs_20  17 54 15.9
           comp=Z,3µm,20.0s
EGAK  Eagle            50.81 328  P        P        17 34 22.6  -1.0
EGAK                              IAmb     IAmb     17 34 35.0
           comp=Z,40nm,1.1s
EGAK  Eagle            50.81 328  P        P        17 34 22.8  -0.7
           baz=48,SNR=8.0
FYU   Fort Yukon       50.84 332  P        P        17 34 23.6  -0.1
FYU                               IAMs_20  IAMs_20  17 54 58.1
           comp=Z,2µm,21.0s
P33M  Teslin, Yukon    50.85 321  P        P        17 34 23.8  -0.3
P33M                              IAMs_20  IAMs_20  17 54 36.1
           comp=Z,2µm,19.0s
P33M  Teslin, Yukon    50.85 321  P        P        17 34 24.1  +0.1
           baz=50,SNR=15
TPAW  Teton Pass       50.86 293  P        P        17 34 24.2  -0.3
TPAW                              IAmb     IAmb     17 34 34.7
           comp=Z,60nm,1.1s
DLBC  Dease Lake       50.86 318  LR       LR       17 54 45.9
           comp=Z,2µm,18.9s,baz=75,slow=35
DLBC  Dease Lake       50.86 318  P        P        17 34 24.0  -0.1
DLBC                              IAmb     IAmb     17 34 26.9
           comp=Z,111nm,1.4s
DLBC  Dease Lake       50.86 318  P        P        17 34 25.0  +0.9
           baz=51,SNR=12
F24K  Squaw Lake       50.92 333  P        P        17 34 25.1  +0.8
           baz=45
L29M  L29M             50.92 326  P        P        17 34 24.4  -0.1
           baz=49
HKT   Hockley          50.95 270  P        P        17 34 24.1  -0.8
HKT   Hockley          50.95 270  IAMs_20  IAMs_20  17 54 21.4
           comp=Z,2µm,22.0s
HKT   Hockley          50.95 270⇓eP        P        17 34 24.4  -0.5
HKT                               pmax     pmax
           comp=Z,16nm,1.3s
HKT   Hockley          50.95 270  P        P        17 34 24.5  -0.4
           baz=44
G25K  Bearman Lake     50.95 332  P        P        17 34 24.7  +0.2
           baz=46
E23K  Chandalar        50.99 335  P        P        17 34 25.1  +0.1
           baz=44
TIC   Toumodi          51.00 144⇑iP        P        17 34 30.0  +4.5
           comp=Z,14nm,0.6s
DBIC  Dimbokro         51.04 144  P        P        17 34 25.4  -0.3
           comp=Z,17nm,0.8s,baz=337,slow=8.6,SNR=14
DBIC                              LR       LR       17 53 57.2
           comp=Z,3µm,19.0s,baz=350,slow=34
           comp=Z,17nm,0.8s
DBIC  Dimbokro         51.04 144  P        P        17 34 25.3  -0.5
DBIC                              IAmb     IAmb     17 34 47.4
           comp=Z,32nm,0.9s
DBIC  Dimbokro         51.04 144  P        P        17 34 25.3  -0.5
DBIC                              pmax     pmax
           comp=Z,32nm,1.0s
MCMT  McKenzie Canyo   51.06 296  P        P        17 34 25.0  -1.0
MCMT                                       S        17 41 43.8  +1.1
AMTX  Amarillo         51.08 279  P        P        17 34 25.7  -0.4
AMTX                              IAMs_20  IAMs_20  17 55 36.3
           comp=Z,2µm,20.0s
AMTX  Amarillo         51.08 279  P        P        17 34 26.2  +0.1
           baz=47
AMTX  Amarillo         51.08 279  P        P        17 34 26.5  +0.4
           baz=47,SNR=12
I26K  Coal Creek Min   51.08 330  P        P        17 34 24.7  -0.9
I26K                              IAmb     IAmb     17 34 38.5
           comp=Z,62nm,1.3s
I26K  Coal Creek Min   51.08 330  P        P        17 34 25.4  -0.2
           baz=47
N31M  Braeburn, Yuko   51.15 323  P        P        17 34 26.2   0.0
N31M                              IAMs_20  IAMs_20  17 56 15.7
           comp=Z,2µm,18.0s
N31M  Braeburn, Yuko   51.15 323  P        P        17 34 26.6  +0.4
           baz=50,SNR=13
NEW   Newport          51.19 301  LR       LR       17 54 42.1
           comp=Z,2µm,18.2s,baz=52,slow=34
NEW   Newport          51.19 301  P        P        17 34 25.4  -1.3
NEW                               IAmb     IAmb     17 34 29.0
           comp=Z,43nm,1.2s
NEW   Newport          51.19 301  IAMs_20  IAMs_20  17 54 22.4
           comp=Z,2µm,20.0s
NEW   Newport          51.19 301  P        P        17 34 25.4  -1.3
NEW                               pmax     pmax
           comp=Z,43nm,1.3s
NEW                               MLR      MLR
           comp=Z,2µm,20.0s
NEW   Newport          51.19 301  P        P        17 34 26.4  -0.3
           baz=51,SNR=10
T25A  Trinidad         51.20 283  P        P        17 34 27.0  -0.1
T25A  Trinidad         51.20 283  P        P        17 34 27.7  +0.6
           baz=48,SNR=29
SMCO  Snowmass         51.36 286  P        P        17 34 26.9  -1.6
KIC   Kosan Boka       51.37 144⇑eP        P        17 34 28.2  -0.1
           comp=Z,26nm,0.7s
G24K  Hadweenzic Riv   51.38 333  P        P        17 34 28.6  +0.8
           baz=45
LIC   Lamto            51.39 144⇑eP        P        17 34 28.3  -0.1
           comp=Z,36nm,0.6s
ABTX  Abilene, Hawle   51.40 275  P        P        17 34 27.1  -1.3
ABTX  Abilene, Hawle   51.40 275  P        P        17 34 28.4   0.0
           baz=46
ABTX  Abilene, Hawle   51.40 275  P        P        17 34 27.9  -0.5
           baz=46
AHID  Auburn Hatcher   51.40 292  P        P        17 34 27.4  -1.1
AHID                              IAmb     IAmb     17 34 43.6
           comp=Z,43nm,1.1s
MMAI  Mount Meron Ar   51.41  84  LR       LR       17 57 43.2
           comp=Z,406nm,18.1s,baz=20,slow=38
Q32M  Nakina River     51.44 319  P        P        17 34 28.4  -0.2
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           baz=50
SDCO  Great Sand Dun   51.44 284  P        P        17 34 28.1  -0.9
SDCO  Great Sand Dun   51.44 284  P        P        17 34 28.2  -0.8
           baz=48,SNR=5.5
SDCO  Great Sand Dun   51.44 284  P        P        17 34 29.3  +0.2
           baz=48,SNR=5.5
M29M  Somme Creek      51.47 325  P        P        17 34 29.1  +0.4
           baz=48
O20A  White River Ci   51.48 288  P        P        17 34 28.7  -0.5
O20A                              IAmb     IAmb     17 34 39.8
           comp=Z,53nm,0.9s
O20A  White River Ci   51.48 288  P        P        17 34 29.1   0.0
           baz=49,SNR=16
E22K  Anaktuvuk Pass   51.51 335  P        P        17 34 28.1  -0.6
           baz=43
P32M  Atlin            51.60 320  P        P        17 34 29.4  -0.1
           baz=50
K27K  Chicken          51.62 328  P        P        17 34 28.9  -0.7
K27K                              IAMs_20  IAMs_20  17 55 10.9
           comp=Z,2µm,20.0s
K27K  Chicken          51.62 328  P        P        17 34 30.0  +0.4
           baz=47
N30M  Aishikik Lake    51.64 324  P        P        17 34 29.1  -0.8
           baz=49
GURO  Guroymak-BITLI   51.65  74  P        P        17 34 29.7  -0.7
S34M  Telegraph Cree   51.65 318  P        P        17 34 30.7  +0.8
           baz=50,SNR=8.4
PRP   Porcupine Dome   51.65 331  P        P        17 34 29.9  -0.1
PRP                               IAMs_20  IAMs_20  17 55 29.7
           comp=Z,3µm,20.0s
PRP   Porcupine Dome   51.65 331  P        P        17 34 30.8  +0.7
           baz=46,SNR=8.5
URIC  Uribia, Colomb   51.70 233  P        P        17 34 31.9  +1.2
URIC                              IAmb     IAmb     17 34 37.0
           comp=Z,70nm,1.1s
O30N  Mendenhall       51.73 323  P        P        17 34 30.8  +0.3
           baz=49,SNR=31
COLD  Coldfoot         51.75 334  P        P        17 34 30.8  +0.3
COLD  Coldfoot         51.75 334  P        P        17 34 30.2  -0.3
           baz=43,SNR=6.5
T35M  Bob Quinn        51.88 316  P        P        17 34 33.0  +1.4
           baz=50,SNR=7.3
MAK   Makhachkala      51.91  67 eP        P        17 34 30.9  -1.1
MAK                              e                  17 36 27.8
MAK                              ePPP      PPP      17 37 29.9
MAK                              eS        S        17 41 53.4  -0.4
MAK                              eSS       SS       17 45 29.1  -1.0
MAK                              eSSS      SSS      17 47 09.9
MAK                               pmax     pmax
           comp=Z,119nm,0.9s
MAK                               MLR      MLR
           comp=Z,1µm,13.0s
RDMU  Red Mountain     51.96 289  P        P        17 34 32.5  -0.3
F22K  John River       52.06 335  P        P        17 34 33.1  +0.2
           baz=42
C09A  Chrisman Ranch   52.08 302  P        P        17 34 32.1  -1.1
C09A                              IAmb     IAmb     17 34 46.7
           comp=Z,44nm,1.1s
G23K  Bananza Creek    52.08 333  P        P        17 34 33.6  +0.5
           baz=43
H24K  Noodor Dome      52.12 332  P        P        17 34 33.0  -0.4
H24K                              IAmb     IAmb     17 34 46.7
           comp=Z,119nm,1.8s
H24K                              IAMs_20  IAMs_20  17 55 37.8
           comp=Z,3µm,22.0s
H24K  Noodor Dome      52.12 332  P        P        17 34 33.7  +0.3
           baz=44
LLLB  Lillooet         52.12 306  P        P        17 34 32.9  -0.7
LLLB                              IAmb     IAmb     17 34 34.6
           comp=Z,45nm,1.2s
GNI   Garni            52.17  71  LR       LR       17 57 58.1
           comp=Z,758nm,18.2s,baz=317,slow=38
GNI   Garni            52.17  71  P        P        17 34 33.7  -0.6
GNI   Garni            52.17  71deP        P        17 34 36.0  +1.8
GNI                               pmax     pmax
           comp=Z,26nm,1.7s
BCAR  Beaver Creek A   52.18 327  P        P        17 34 33.8  -0.1
L27K  Beaver Creek,    52.20 327  P        P        17 34 34.7  +0.7
L27K  Beaver Creek,    52.20 327  P        P        17 34 35.0  +1.0
           baz=47
HYT   Haines Junctio   52.21 323  P        P        17 34 33.9  -0.3
HYT   Haines Junctio   52.21 323  P        P        17 34 34.2   0.0
           baz=48,SNR=16
POST  Post             52.22 277  P        P        17 34 33.6  -0.9
POST                              IAmb     IAmb     17 34 44.9
           comp=Z,36nm,0.9s
S22A  4UR Ranch, Cre   52.23 285  P        P        17 34 34.2  -0.7
S22A  4UR Ranch, Cre   52.23 285  P        P        17 34 35.5  +0.6
           baz=48,SNR=12
SCRK  Sand Creek       52.26 329  P        P        17 34 33.9  -0.7
SCRK                              IAmb     IAmb     17 34 46.9
           comp=Z,54nm,1.0s
SCRK                              IAMs_20  IAMs_20  17 55 51.9
           comp=Z,3µm,20.0s
SCRK  Sand Creek       52.26 329  P        P        17 34 35.6  +1.1
           baz=46,SNR=16
B08A  Colville Reser   52.27 303  P        P        17 34 33.6  -1.2
B08A                              IAmb     IAmb     17 34 35.6
           comp=Z,76nm,1.2s
YUK4  Talbot Arm       52.27 324  P        P        17 34 35.2  +0.4
           baz=48,SNR=10
BAUV  El Baul          52.28 227  P        P        17 34 35.0  -0.1
SKAG  Skagway          52.31 321  P        P        17 34 34.5  -0.3
SKAG  Skagway          52.31 321  P        P        17 34 34.5  -0.3
           baz=49,SNR=5.6
BVCY  Beaver Creek     52.32 326  P        P        17 34 34.4  -0.5
           baz=47,SNR=12
G22K  Bettles          52.32 334  P        P        17 34 35.3  +0.5
           baz=42
MSTX  Muleshoe         52.36 279  P        P        17 34 34.9  -0.8
MSTX  Muleshoe         52.36 279  P        P        17 34 35.5  -0.1
           baz=46,SNR=16
GEVA  Gevas            52.41  74  P        P        17 34 35.2  -0.8
HWUT  Hardware Ranch   52.42 292  P        P        17 34 35.2  -0.9
YUK6  Outpost Mounta   52.44 324  P        P        17 34 36.5  +0.4
           baz=48,SNR=12
P30M  Million Dollar   52.48 322  P        P        17 34 36.5  +0.4
           baz=48
POKR  Poker Plat Res   52.51 331  P        P        17 34 35.8  -0.5
POKR  Poker Plat Res   52.51 331  P        P        17 34 37.0  +0.8
           baz=44,SNR=9.3
DOT   Dot Lake         52.52 328  P        P        17 34 35.6  -0.7
IL31                   52.59 331  P        P        17 34 35.8  -1.0
IL31                              IAmb     IAmb     17 34 49.8
           comp=Z,100nm,1.7s
ILAR  Eielson Array    52.59 331  P        P        17 34 37.1  +0.3
           comp=Z,16nm,1.1s,baz=43,slow=5.8,SNR=45
ILAR                              PcP      PcP      17 35 45.7  -1.0
           comp=Z,5.5nm,0.9s,baz=3.7,slow=3.3,SNR=6.5
ILAR                              LR       LR       17 56 37.0
           comp=Z,3µm,18.4s,baz=41,slow=36
ILAR                              PKP2bc            18 05 15.2
           comp=Z,0.7nm,0.9s,baz=234,slow=3.1,SNR=4.8
           comp=Z,16nm,1.1s
ILAR  Eielson Array    52.59 331  P        P        17 34 35.9  -0.9
H23K  Yukon River      52.60 333  P        P        17 34 35.8  -1.1
H23K                              IAmb     IAmb     17 34 50.9
           comp=Z,38nm,0.8s
H23K                              IAMs_20  IAMs_20  17 56 14.5
           comp=Z,2µm,21.0s
H23K  Yukon River      52.60 333  P        P        17 34 37.7  +0.8
           baz=43
PLID  Pearl Lake       52.61 298  P        P        17 34 36.4  -1.2
PLID                              IAmb     IAmb     17 34 48.2
           comp=Z,35nm,0.9s
F21K  Alatna River     52.61 335  P        P        17 34 37.6  +0.6
           baz=41
YUK3  Moose Creek      52.62 325  P        P        17 34 38.1  +0.7
           baz=47,SNR=10
AKTO  Aktyubinsk       52.65  54  LR       LR       17 56 05.3
           comp=Z,2µm,21.0s,baz=333,slow=35
BSUT  Blindstream Ca   52.66 290  P        P        17 34 37.6  -0.6
BSUT                              IAmb     IAmb     17 34 48.2
           comp=Z,37nm,1.2s
RIDG  Independent Ri   52.70 329  P        P        17 34 37.2  -0.5
RIDG  Independent Ri   52.70 329  P        P        17 34 38.5  +0.8
           baz=45,SNR=5.5
M27K  Edge Creek, AK   52.70 326  P        P        17 34 37.3  -0.6
M27K                              IAMs_20  IAMs_20  17 55 45.7
           comp=Z,3µm,21.0s
M27K  Edge Creek, AK   52.70 326  P        P        17 34 38.0  +0.1
           baz=46
PLBC  Pleasant Camp    52.70 321  P        P        17 34 38.0  +0.3
           baz=48,SNR=7.4
GHAJ  Ghor Haditha     52.70  86  P        P        17 34 37.0  -1.1
GHAJ                              IAmb     IAmb     17 35 01.9
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      comp=Z,61nm,1.2s
BESE  Bessie Mountai  52.71 320  P        P        17 34 37.3 -0.6
BESE                             IAmb     IAmb     17 34 39.8
      comp=Z,84nm,1.2s
YUK8  Steele Glacier  52.71 325  P        P        17 34 39.1 +1.0
      baz=47
JIS   Juneau Island   52.72 319  P        P        17 34 35.9 -2.0
L26K  Log Cabin Wild  52.72 328  P        P        17 34 38.0 +0.1
L26K                             IAmb     IAmb     17 34 40.6
      comp=Z,120nm,1.9s
L26K                             IAMs_20  IAMs_20  17 56 15.2
      comp=Z,2µm,18.0s
L26K  Log Cabin Wild  52.72 328  P        P        17 34 38.2 +0.4
      baz=46,SNR=5.8
HLID  Hailey          52.74 295  P        P        17 34 38.2 -0.3
HLID                             IAmb     IAmb     17 34 49.5
      comp=Z,42nm,1.0s
HLID  Hailey          52.74 295  P        P        17 34 39.1 +0.7
      baz=49,SNR=21
PV15  Paradox Valley  52.80 287  P        P        17 34 38.1 -1.0
PV15                             IAmb     IAmb     17 34 49.2
      comp=Z,52nm,1.0s
COLA  College         52.80 331  IAMs_20  IAMs_20  17 56 25.2
      comp=Z,3µm,20.0s
COLA  College         52.80 331ceP        P        17 34 39.5 +1.1
COLA                             pmax     pmax
      comp=Z,16nm,1.1s
COLA  College         52.80 331  P        P        17 34 38.9 +0.6
      baz=44
TCOL  CIGO, UAF Yank  52.81 331  P        P        17 34 37.9 -0.5
TCOL                             IAmb     IAmb     17 34 50.5
      comp=Z,33nm,1.0s
TCOL                             IAMs_20  IAMs_20  17 56 25.2
      comp=Z,3µm,20.0s
TCOL  CIGO, UAF Yank  52.81 331  P        P        17 34 38.6 +0.2
      baz=44
PV07  Paradox Valley  52.83 287  P        P        17 34 38.3 -1.0
PV07                             IAmb     IAmb     17 34 49.5
      comp=Z,80nm,1.1s
MDM   Murphy Dome     52.85 331  P        P        17 34 38.5 -0.4
HDA   Harding Lake    52.87 330  P        P        17 34 38.0 -0.9
HDA                              IAmb     IAmb     17 34 50.8
      comp=Z,47nm,1.2s
HDA                              IAMs_20  IAMs_20  17 56 03.9
      comp=Z,3µm,20.0s
HDA   Harding Lake    52.87 330  P        P        17 34 39.5 +0.6
      baz=44,SNR=8.1
MENT  Mentasta        52.91 328  P        P        17 34 38.5 -0.7
MENT                             IAmb     IAmb     17 34 51.5
      comp=Z,43nm,1.3s
735A  Kenedy          52.93 270  P        P        17 34 39.9 +0.1
      baz=44
K24K  Donnelly Dome   52.95 329  P        P        17 34 39.4 -0.1
      baz=44,SNR=10
CCB   Clear Creek Bu  52.95 331  P        P        17 34 37.8 -1.7
CCB                              IAmb     IAmb     17 34 41.5
      comp=Z,60nm,1.6s
O29M  Mount Kennedy   52.95 323  P        P        17 34 40.5 +0.7
      baz=47,SNR=10
P18A  Preston Nutter  52.97 289  P        P        17 34 39.5 -0.8
P18A                             IAmb     IAmb     17 34 50.6
      comp=Z,70nm,1.3s
HVU   Hansel Valley   52.99 293  P        P        17 34 39.0 -1.3
HVU                              IAmb     IAmb     17 34 50.0
      comp=Z,43nm,1.1s
HVU   Hansel Valley   52.99 293  P        P        17 34 39.0 -1.3
HVU                              pmax     pmax
      comp=Z,43nm,1.1s
JCT   Junction City   52.99 273  P        P        17 34 38.9 -1.4
JCT                              IAmb     IAmb     17 34 48.9
      comp=Z,70nm,1.3s
JCT                              IAMs_20  IAMs_20  17 56 15.4
      comp=Z,2µm,20.0s
JCT   Junction City   52.99 273  P        P        17 34 38.9 -1.4
JCT                              pmax     pmax
      comp=Z,70nm,1.3s
JCT                              MLR      MLR
      comp=Z,2µm,20.0s
JCT   Junction City   52.99 273  P        P        17 34 39.1 -1.3
      baz=45
JCT   Junction City   52.99 273  P        P        17 34 39.3 -1.0
      baz=45
JLU   Jordanelle      53.01 291  P        P        17 34 39.0 -1.6
PV23  Carpenter Ridg  53.03 287  P        P        17 34 40.4 -0.4
PV23                             IAmb     IAmb     17 34 52.1
      comp=Z,68nm,1.1s
I23K  Minto, Yukon-K  53.04 332  P        P        17 34 39.6 -0.5
I23K                             IAmb     IAmb     17 34 53.3
      comp=Z,104nm,1.4s
I23K                             IAMs_20  IAMs_20  17 56 16.4
      comp=Z,3µm,21.0s
I23K  Minto, Yukon-K  53.04 332  P        P        17 34 41.0 +0.9
      baz=43,SNR=25
M26K  Nabesna, AK     53.05 327  P        P        17 34 41.0 +0.7
M26K                             IAmb     IAmb     17 34 43.0
      comp=Z,84nm,1.6s
M26K  Nabesna, AK     53.05 327  P        P        17 34 40.5 +0.2
      baz=46
PV11  David Mesa, Pa  53.06 287  P        P        17 34 40.7 -0.2
PV10  Paradox Valley  53.10 287  P        P        17 34 40.9 -0.4
PV13  Radium Mtn., P  53.12 287  P        P        17 34 41.0 -0.4
CTU   Camp Tracy      53.12 291  P        P        17 34 40.4 -0.9
CTU                              IAmb     IAmb     17 35 06.2
      comp=Z,33nm,1.1s
WRAK  Wrangell Islan  53.12 317  P        P        17 34 40.7 -0.1
      baz=48
G21K  Allakaket       53.16 335  P        P        17 34 41.0  0.0
      baz=41
WRH   Wood River Hil  53.17 331  P        P        17 34 40.2 -0.9
WRH                              IAmb     IAmb     17 34 53.0
      comp=Z,40nm,1.1s
WRH                              IAMs_20  IAMs_20  17 56 24.7
      comp=Z,3µm,20.0s
O28M  Mount Upton     53.22 324  P        P        17 34 42.8 +1.0
      baz=46
SMRC  Santa Marta, M  53.26 235 eP        P        17 34 45.3 +3.0
S32K  Killisnoo       53.34 319  P        P        17 34 43.5 +1.1
      baz=48
P17A  Butcher Ranch,  53.36 289  P        P        17 34 41.9 -1.1
P17A                             IAmb     IAmb     17 34 53.9
      comp=Z,69nm,1.4s
NEA2  Nenana          53.37 331  P        P        17 34 42.1 -0.5
NEA2                             IAMs_20  IAMs_20  17 57 01.0
      comp=Z,2µm,19.0s
NEA2  Nenana          53.37 331  P        P        17 34 42.5 -0.1
      baz=43,SNR=8.3
PAX   Paxson          53.45 328  P        P        17 34 42.5 -0.8
PAX                              IAmb     IAmb     17 34 58.1
      comp=Z,78nm,1.6s
PAX   Paxson          53.45 328  P        P        17 34 42.5 -0.8
PAX                              pmax     pmax
      comp=Z,78nm,1.6s
PAX   Paxson          53.45 328  P        P        17 34 43.7 +0.4
      baz=44,SNR=8.6
BMO   Blue Mountains  53.47 298  P        P        17 34 42.5 -1.2
BMO   Blue Mountains  53.47 298  P        P        17 34 42.5 -1.2
BMO                              pmax     pmax
      comp=Z,20nm,1.0s
BMO                              MLR      MLR
      comp=Z,3µm,18.0s
SRU   San Rafael Swe  53.47 289  P        P        17 34 42.9 -1.0
SRU                              IAmb     IAmb     17 34 53.9
      comp=Z,53nm,1.1s
SRU   San Rafael Swe  53.47 289  P        P        17 34 42.9 -1.0
SRU                              pmax     pmax
      comp=Z,53nm,1.1s
EIL   Elat            53.48  88  LR       LR       17 59 36.9
      comp=Z,393nm,20.5s,baz=16,slow=38
SDV   Santo Domingo   53.51 230  LR       LR       17 53 24.8
      comp=Z,554nm,21.9s,baz=36,slow=31
SDV   Santo Domingo   53.51 230  P        P        17 34 43.6 -0.8
SDV   Santo Domingo   53.51 230 eP        P        17 34 44.5 +0.1
MPU   Maple Canyon    53.51 290  P        P        17 34 43.6 -0.6
MPU                              IAmb     IAmb     17 34 54.9
      comp=Z,55nm,1.2s
MLY   Manley          53.52 332  P        P        17 34 42.9 -0.8
MLY                              IAmb     IAmb     17 34 56.6
      comp=Z,66nm,1.6s
MLY                              IAMs_20  IAMs_20  17 57 04.1
      comp=Z,3µm,20.0s
MLY   Manley          53.52 332  P        P        17 34 43.9 +0.2
      baz=42,SNR=14
BARN  Barnard Glacie  53.53 325  P        P        17 34 43.6 -0.4
BARN                             IAMs_20  IAMs_20  17 56 26.7
      comp=Z,3µm,21.0s
V35K  Ketchikan       53.54 315  P        P        17 34 43.8 -0.1
      baz=48
MVCO  Mesa Verde      53.57 286  P        P        17 34 43.9 -0.8
MVCO                             IAmb     IAmb     17 35 06.0
      comp=Z,50nm,1.1s
MVCO  Mesa Verde      53.57 286  P        P        17 34 45.4 +0.6
      baz=47,SNR=14
TEIG  Tepich          53.61 255  IAMs_20  IAMs_20  17 56 45.2
      comp=Z,2µm,19.0s
MFID  Camas Ranch     53.61 296  P        P        17 34 44.0 -0.8
H21K  Melozitna Rive  53.62 334  P        P        17 34 43.9 -0.6
H21K                             IAmb     IAmb     17 34 56.6
      comp=Z,37nm,1.1s
H21K                             IAMs_20  IAMs_20  17 57 33.6
      comp=Z,1µm,19.0s
H21K  Melozitna Rive  53.62 334  P        P        17 34 45.4 +1.0
      baz=41
IMAR  Indian Mountai  53.63 334  P        P        17 34 44.1 -0.3
U33K  Whale Pass      53.65 317  P        P        17 34 44.9 +0.3
      baz=48
S31K  Pelican         53.66 320  P        P        17 34 45.5 +0.8
      baz=47
LTY   Liberty         53.67 302  P        P        17 34 43.5 -1.6
PNL   Peninsula       53.69 323  P        P        17 34 44.7 -0.3
      baz=46
TMUT  Trail Mountain  53.74 289  P        P        17 34 44.7 -1.3
TMUT                             IAmb     IAmb     17 35 16.9
      comp=Z,38nm,1.3s
HARP  HAARP           53.76 328  P        P        17 34 46.1 +0.6
      baz=44
I21K  Tanana          53.76 333  P        P        17 34 44.8 -0.7
I21K                             IAmb     IAmb     17 34 57.5
      comp=Z,39nm,1.1s
I21K                             IAMs_20  IAMs_20  17 57 33.2
      comp=Z,2µm,20.0s
I21K  Tanana          53.76 333  P        P        17 34 45.1 -0.3
      baz=41
MCARA McCarthy VSAT   53.77 326  P        P        17 34 44.7 -0.9
MCARA                            IAmb     IAmb     17 35 06.0
      comp=Z,62nm,1.2s
MCARA                            IAMs_20  IAMs_20  17 56 22.0
      comp=Z,2µm,20.0s
MCARA McCarthy VSAT   53.77 326  P        P        17 34 45.3 -0.3
      baz=45
BWN   Browne          53.80 331  P        P        17 34 44.8 -0.9
BWN                              IAMs_20  IAMs_20  17 57 03.0
      comp=Z,3µm,20.0s
NLU   North Lily Min  53.80 290  P        P        17 34 45.6 -0.7
NLU                              IAmb     IAmb     17 34 56.8
      comp=Z,49nm,1.0s
ANMO  Albuquerque     53.90 282  LR       LR       17 56 56.1
      comp=Z,4µm,19.7s,baz=140,slow=35
ANMO  Albuquerque     53.90 282  P        P        17 34 46.7 -0.4
ANMO                             IAmb     IAmb     17 34 57.8
      comp=Z,31nm,1.1s
ANMO  Albuquerque     53.90 282deP        P        17 34 47.9 +0.8
ANMO                             pmax     pmax
      comp=Z,39nm,1.7s
ANMO  Albuquerque     53.90 282  P        P        17 34 48.0 +0.9
      baz=46
ANMO  Albuquerque     53.90 282  P        P        17 34 48.0 +0.9
      baz=46,SNR=26
MCK   McKinley        53.96 331  P        P        17 34 47.0  0.0
MCK   McKinley        53.96 331  P        P        17 34 47.0  0.0
MCK                              pmax     pmax
      comp=Z,148nm,1.4s
MCK   McKinley        53.96 331  P        P        17 34 46.6 -0.3
      baz=42,SNR=12
Q16A  Castle Valley   53.98 289  P        P        17 34 46.6 -1.1
Q16A                             IAmb     IAmb     17 35 12.8
      comp=Z,34nm,1.2s
DUG   Dugway, Tooele  54.06 291  P        P        17 34 46.7 -1.5
DUG                              IAMs_20  IAMs_20  17 56 52.2
      comp=Z,2µm,18.0s
DUG   Dugway, Tooele  54.06 291  P        P        17 34 46.7 -1.5
DUG                              pmax     pmax
      comp=Z,64nm,1.0s
DUG                              MLR      MLR
      comp=Z,2µm,18.0s
DUG   Dugway, Tooele  54.06 291  P        P        17 34 48.4 +0.2
      baz=48,SNR=18
G08A  Pilot Rock      54.07 300  P        P        17 34 46.2 -1.9
BBB   Bella Bella     54.07 311  LR       LR       17 56 34.8
      comp=Z,1µm,19.7s,baz=44,slow=35
N25K  Chitina, Valde  54.15 327  P        P        17 34 47.9 -0.5
N25K                             IAmb     IAmb     17 35 01.1
      comp=Z,54nm,1.2s
N25K  Chitina, Valde  54.15 327  P        P        17 34 49.0 +0.6
      baz=44,SNR=8.1
RDOG  Red Dog Mine    54.17 339  P        P        17 34 47.8 -0.6
RDOG                             IAmb     IAmb     17 35 01.3
      comp=Z,56nm,1.2s
RDOG                             IAMs_20  IAMs_20  17 57 37.9
      comp=Z,2µm,20.0s
RDOG  Red Dog Mine    54.17 339  P        P        17 34 48.2 -0.2
      baz=35
RND   Reindeer        54.18 330  P        P        17 34 47.4 -1.2
RND                              IAmb     IAmb     17 34 57.9
      comp=Z,41nm,1.1s
RND                              IAMs_20  IAMs_20  17 57 22.6
      comp=Z,2µm,18.0s
RND   Reindeer        54.18 330  P        P        17 34 47.4 -1.2
RND                              pmax     pmax
      comp=Z,41nm,1.1s
RND                              MLR      MLR
      comp=Z,2µm,18.0s
833A  Chaparral WMA,  54.28 271  P        P        17 34 48.6 -1.1
833A                             IAmb     IAmb     17 34 58.4
      comp=Z,38nm,1.1s
833A  Chaparral WMA,  54.28 271  P        P        17 34 48.6 -1.1
      baz=44
833A  Chaparral WMA,  54.28 271  P        P        17 34 49.7  0.0
      baz=44
BPAW  Bear Paw Mtn.   54.29 332  P        P        17 34 48.4 -0.9
BPAW                             IAMs_20  IAMs_20  17 56 52.4
      comp=Z,3µm,22.0s
BPAW  Bear Paw Mtn.   54.29 332  P        P        17 34 49.0 -0.4
      baz=41,SNR=11
M24K  Tolsona, Glenn  54.30 328  P        P        17 34 48.3 -1.2
M24K  Tolsona, Glenn  54.30 328  P        P        17 34 49.6 +0.1
      baz=43,SNR=5.2
ABKAR Akbulak array   54.36  54  P        P        17 34 49.1 -0.9
ABKAR Akbulak array   54.36  54  P        P        17 34 48.9 -1.2
ABKAR                            IAmb     IAmb     17 35 04.3
      comp=Z,17nm,0.9s
ARGC  Ariguani, Magd  54.39 234 eP        P        17 34 55.1 +4.4
GDL2  Guadalupe Moun  54.55 278  P        P        17 34 50.5 -1.3
BNM   Barren Site     54.55 282  P        P        17 34 51.2 -0.7
TRF   Thorofare Moun  54.58 331  P        P        17 34 50.3 -1.3
TRF   Thorofare Moun  54.58 331  P        P        17 34 51.8 +0.2
      baz=41,SNR=9.1
LON   Longmire        54.59 302  P        P        17 34 50.3 -1.5
LON   Longmire        54.59 302  P        P        17 34 50.3 -1.5
LON                              pmax     pmax
      comp=Z,28nm,1.3s
KLU   Klutina         54.66 327  P        P        17 34 52.4 +0.2
KLU                              IAmb     IAmb     17 35 06.0
      comp=Z,39nm,1.1s
KLU                              IAMs_20  IAMs_20  17 57 12.5
      comp=Z,2µm,20.0s
KLU   Klutina         54.66 327  P        P        17 34 52.3 +0.2
      baz=43
KTH   Kantishna Hill  54.69 331  P        P        17 34 51.4 -0.9
KTH                              IAmb     IAmb     17 35 04.1
      comp=Z,61nm,1.0s
SJCC  San Jacinto, C  54.82 235 eP        P        17 34 53.3 -0.6
MSU   Marysvale       54.83 289  P        P        17 34 53.2 -0.7
MSU   Marysvale       54.83 289  P        P        17 34 53.2 -0.7
CHUM  Lake Minchumin  54.84 332  P        P        17 34 52.6 -0.7
      baz=40,SNR=7.0
MVU   Marysvale       54.86 289  P        P        17 34 53.2 -0.9
SCM   Sheep Creek Mo  54.87 328  IAMs_20  IAMs_20  17 57 43.9
      comp=Z,2µm,18.0s
Y22A  Socorro         54.90 282  P        P        17 34 54.4  0.0
      baz=46,SNR=12
TCRU  Three Creeks R  54.92 289  P        P        17 34 53.9 -0.7
TCRU                             IAmb     IAmb     17 35 04.8
      comp=Z,26nm,1.0s
OZB   Mount Ozzard    54.97 307  P        P        17 34 54.1 -0.4
G06A  Carlson Farm,   54.99 300  P        P        17 34 54.3 -0.4
G06A                             IAmb     IAmb     17 36 56.4
      comp=Z,69nm,1.6s
M23K  Glacier View    55.03 328  P        P        17 34 53.9 -0.8
      baz=42
ELK   Elko            55.06 293  LR       LR       17 57 23.1
      comp=Z,3µm,18.3s,baz=54,slow=35
ELK   Elko            55.06 293  P        P        17 34 55.1 -0.5
ELK                              IAmb     IAmb     17 35 06.5
      comp=Z,47nm,1.1s
ELK   Elko            55.06 293  P        P        17 34 55.1 -0.5
ELK                              pmax     pmax
      comp=Z,47nm,1.1s
ELK                              MLR      MLR
      comp=Z,3µm,18.0s
J08A  Circle Bar Ran  55.09 297  P        P        17 34 54.2 -1.4
CAST  Castle Rocks    55.13 332  P        P        17 34 55.1 -0.4
CAST                             IAMs_20  IAMs_20  17 57 05.6
      comp=Z,2µm,22.0s
CAST  Castle Rocks    55.13 332  P        P        17 34 54.7 -0.7
      baz=40,SNR=22
MTPU  Mount Pierson   55.15 289  P        P        17 34 55.6 -0.8
MTPU                             IAmb     IAmb     17 35 07.0
      comp=Z,71nm,1.1s
I07A  Izee            55.16 299  P        P        17 34 55.3 -0.8
SML   Sawmill         55.21 329  P        P        17 34 55.7 -0.4
SML   Sawmill         55.21 329  P        P        17 34 56.5 +0.4
      baz=42,SNR=7.9
NLWA  Neilton Lookou  55.21 304  P        P        17 34 56.0 -0.2
BOAV  Boa Vista       55.24 215  P        P        17 34 56.4 -0.4
BOAV                             IAmb     IAmb     17 35 02.2
      comp=Z,30nm,1.2s
BOAV  Boa Vista       55.24 215 eP        P        17 34 56.4 -0.4
BOAV  Boa Vista       55.24 215 eP        P        17 34 57.1 +0.4
EYAK  Cordova Ski Ar  55.30 327  P        P        17 34 56.7 +0.1
      baz=43
MCPB  Macapa, AP      55.30 204 eP        P        17 34 57.8 +0.7
TIXI  Tiksi           55.34   7  LR       LR       17 55 54.2
      comp=Z,455nm,21.6s,baz=181,slow=33
TIXI  Tiksi           55.34   7  P        P        17 34 57.0 +0.3
TIXI                             IAmb     IAmb     17 35 08.2
      comp=Z,35nm,0.8s
TIXI  Tiksi           55.34   7deP        P        17 34 57.8 +1.1
TIXI                             pmax     pmax
      comp=Z,46nm,1.7s
TIXI                             MLR      MLR
      comp=Z,557nm,17.0s
WISH  Wishkah         55.35 304  P        P        17 34 57.7 +0.6
CUT   Chulitna        55.36 330  P        P        17 34 56.2 -0.9
      baz=41
GCSA  Galena City Sc  55.42 335  P        P        17 34 57.5 +0.1
      baz=38
GHO   Glory Hole Cre  55.42 329  P        P        17 34 57.6  0.0
MNTX  Cornudas Mount  55.52 278  P        P        17 34 58.1 -0.6
      baz=45
MNTX  Cornudas Mount  55.52 278  P        P        17 34 58.1 -0.6
      baz=45
KNK   Knik Glacier    55.55 328  P        P        17 34 58.8 +0.4
KNK                              IAmb     IAmb     17 35 11.5
      comp=Z,54nm,0.9s
KNK                              IAMs_20  IAMs_20  17 57 54.7
      comp=Z,2µm,18.0s
KNK   Knik Glacier    55.55 328  P        P        17 34 57.7 -0.8
      baz=42,SNR=6.1
PPLA  Purkeypile      55.56 331  P        P        17 34 57.8 -1.0
PPLA                             IAmb     IAmb     17 35 13.6
      comp=Z,81nm,1.4s
PPLA  Purkeypile      55.56 331  P        P        17 34 56.9 -1.8
      baz=40
E03A  Lebam           55.62 303  P        P        17 34 59.0 -0.2
PMR   Palmer          55.62 329  P        P        17 34 58.6 -0.4
PMR   Palmer          55.62 329  P        P        17 34 58.6 -0.4
PMR                              pmax     pmax
      comp=Z,228nm,1.9s
PMR   Palmer          55.62 329  P        P        17 34 58.6 -0.4
      baz=41,SNR=6.2
PKCU  Pink Cliffs     55.63 288  P        P        17 34 59.3 -0.5
W18A  Petrified Fore  55.73 285  P        P        17 34 59.2 -1.1
W18A  Petrified Fore  55.73 285  P        P        17 35 00.7 +0.3
      baz=46,SNR=20
SPR3  Spring Creek 3  55.73 291  P        P        17 35 00.2 -0.3
SPR3                             IAmb     IAmb     17 35 12.0
      comp=Z,48nm,1.2s
K20K  Telida          55.75 332  P        P        17 35 00.2 +0.4
K20K                             IAmb     IAmb     17 35 12.3
      comp=Z,38nm,1.0s
K20K  Telida          55.75 332  P        P        17 34 59.3 -0.6
      baz=39,SNR=9.5
WVOR  Wild Horse Val  55.80 297  P        P        17 34 59.8 -0.9
WVOR                             IAmb     IAmb     17 35 11.7
      comp=Z,46nm,0.9s
WVOR  Wild Horse Val  55.80 297  P        P        17 34 59.8 -0.9
WVOR                             pmax     pmax
      comp=Z,46nm,1.0s
WVOR                             MLR      MLR
      comp=Z,3µm,18.0s
M22K  Willow          55.81 329  P        P        17 34 59.8 -0.5
M22K                             IAMs_20  IAMs_20  17 58 22.7
      comp=Z,2µm,18.0s
M22K  Willow          55.81 329  P        P        17 35 00.4 +0.1
      baz=41
PWL   Port Wells      55.92 328  P        P        17 35 00.4 -0.8
PWL                              IAMs_20  IAMs_20  17 58 00.7
      comp=Z,2µm,20.0s
PWL   Port Wells      55.92 328  P        P        17 34 59.9 -1.2
      baz=41,SNR=6.7
I05D  Terrebonne, OR  55.96 300  P        P        17 35 01.1 -0.6
I05D                             IAmb     IAmb     17 35 12.3
      comp=Z,44nm,1.2s
SZCU  Shurtz Canyon   55.98 289  P        P        17 35 01.3 -0.9
SZCU                             IAmb     IAmb     17 35 12.3
      comp=Z,58nm,1.2s
Q12A  Willow Creek R  55.99 291  P        P        17 35 01.9 -0.2
Q12A                             IAmb     IAmb     17 35 33.3
      comp=Z,48nm,1.2s
F03A  Seaside         56.04 303  P        P        17 35 01.9 -0.3
SKT   Skwentna        56.07 330  P        P        17 35 01.6 -0.6
SKT                              IAmb     IAmb     17 35 14.4
      comp=Z,56nm,0.9s
SKT   Skwentna        56.07 330  P        P        17 35 02.2  0.0
      baz=40,SNR=11
PINE  Pine Mountain   56.12 299  P        P        17 35 02.3 -0.8
PINE                             IAmb     IAmb     17 35 14.6
      comp=Z,61nm,1.0s
EPT   El Paso         56.14 279  IAMs_20  IAMs_20  17 57 56.3
      comp=Z,2µm,20.0s
TX31  Lajitas Ar. Si  56.16 275  P        P        17 35 02.5 -0.9
TX31  Lajitas Ar. Si  56.16 275  P        P        17 35 02.9 -0.5
      baz=44,SNR=10
TX32  Lajitas Array   56.16 275  P        P        17 35 02.4 -1.0
TX32                             IAmb     IAmb     17 35 26.6
      comp=Z,77nm,1.9s
TXAR  Lajitas Array   56.16 275  P        P        17 35 02.9 -0.4
      comp=Z,3.4nm,0.8s,baz=60,slow=7.4,SNR=23
TXAR                             LR       LR       17 59 29.0
      comp=Z,2µm,18.9s,baz=48,slow=36
      comp=Z,3.4nm,0.8s
TXAR  Lajitas Array   56.16 275  P        P        17 35 02.0 -1.4
TXAR  Lajitas Array   56.16 275  P        P        17 35 02.0 -1.4
CCUT  Cedar City      56.17 289  P        P        17 35 02.6 -0.9
CCUT                             IAmb     IAmb     17 35 14.3
      comp=Z,59nm,1.2s
H04A  Detroit Lake    56.17 301  P        P        17 35 01.4 -1.8
H04A                             IAmb     IAmb     17 35 03.6
      comp=Z,39nm,1.4s
RC01  Rabbit Creek A  56.20 329  P        P        17 35 03.0 -0.1
RC01  Rabbit Creek A  56.20 329  P        P        17 35 02.7 -0.4
      baz=41
KNB   Kanab           56.22 288  P        P        17 35 02.8 -1.1
KNB   Kanab           56.22 288  P        P        17 35 02.8 -1.1
KNB                              pmax     pmax
      comp=Z,90nm,1.0s
SUA   Susitna One     56.23 329  P        P        17 35 03.1 -0.3
SUA   Susitna One     56.23 329  P        P        17 35 02.3 -1.1
      baz=40
P23K  Montague Islan  56.26 327  P        P        17 35 03.9 +0.3
      baz=42
X18A  Snowflake       56.27 284  P        P        17 35 03.5 -0.7
X18A                             IAmb     IAmb     17 35 13.9
      comp=Z,34nm,1.0s
TMAB  Tom-Au,PA,Br    56.36 199 eP        P        17 35 06.5 +1.7
121A  Cookes Peak, D  56.37 281  P        P        17 35 03.9 -1.1
121A                             IAmb     IAmb     17 35 30.9
      comp=Z,32nm,1.1s
121A  Cookes Peak, D  56.37 281  P        P        17 35 04.2 -0.7
      baz=45,SNR=7.2
121A  Cookes Peak, D  56.37 281  P        P        17 35 05.5 +0.6
      baz=45,SNR=7.2
L20K  Farewell, AK    56.38 332  P        P        17 35 03.4 -1.1
      baz=38
BMN   Battle Mountai  56.38 294  P        P        17 35 04.3 -0.6
BMN                              IAmb     IAmb     17 35 15.8
      comp=Z,41nm,1.1s
BMN   Battle Mountai  56.38 294  P        P        17 35 04.3 -0.6
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BMN				pmax	pmax		
	comp=Z,41nm,1.1s						
WUAZ	Wupatki	56.42	286	P	P	17 35 04.7	-0.6
WUAZ				IAmb	IAmb	17 35 34.5	
	comp=Z,53nm,1.2s						
WUAZ				IAMs_20	IAMs_20	17 56 32.0	
	comp=Z,1µm,20.0s						
WUAZ	Wupatki	56.42	286	P	P	17 35 05.9	+0.7
	baz=46,SNR=16						
LCMT	Little Creek M	56.47	289	P	P	17 35 04.5	-1.1
BRVK	Borovoye	56.55	45	P	P	17 35 04.8	-0.9
BRVK				IAmb	IAmb	17 35 23.1	
	comp=Z,100nm,1.8s						
BRVK	Borovoye	56.55	45	IAMs_20	IAMs_20	17 58 22.9	
	comp=Z,2µm,20.0s						
BRVK	Borovoye	56.55	45c	iP	P	17 35 05.8	+0.1
BRVK				pmax	pmax		
	comp=Z,24nm,1.3s						
BVAR	Borovoye Array	56.61	45	LR	LR	17 58 28.6	
	comp=Z,2µm,20.4s,baz=307,slow=35						
J05D	Fort Rock, OR	56.62	299	P	P	17 35 06.6	0.0
HEBO	Mount Hebo	56.63	302	P	P	17 35 06.2	-0.3
M20K	Styx River	56.63	331	P	P	17 35 05.4	-0.9
M20K	Styx River	56.63	331	P	P	17 35 06.0	-0.2
	baz=39						
O22K	Cooper Landing	56.66	328	P	P	17 35 06.4	+0.1
	baz=40						
ZARC	Zaragoza, Cauc	56.73	233	eP	P	17 35 07.7	+0.2
COR	Corvallis	56.82	301	P	P	17 35 07.5	-0.3
COR	Corvallis	56.82	301	IAMs_20	IAMs_20	17 57 16.5	
	comp=Z,2µm,20.0s						
COR	Corvallis	56.82	301	P	P	17 35 07.5	-0.3
COR				pmax	pmax		
	comp=Z,213nm,1.7s						
COR				MLR	MLR		
	comp=Z,2µm,20.0s						
K05A	Summer Lake	56.82	298	P	P	17 35 06.9	-1.1
SPU	Mount Spurr	56.85	330	P	P	17 35 06.6	-1.2
SPCR	Spurr Chakacha	56.88	330	P	P	17 35 07.7	-0.3
	baz=39						
L19K	White Mountain	56.90	332	P	P	17 35 06.8	-1.3
L19K				IAMs_20	IAMs_20	17 58 45.2	
	comp=Z,2µm,21.0s						
L19K	White Mountain	56.90	332	P	P	17 35 07.8	-0.3
	baz=38						
BUCK	Buck Mountain	56.92	301	P	P	17 35 07.9	-0.8
BUCK				IAmb	IAmb	17 35 22.0	
	comp=Z,50nm,1.1s						
M19K	Big River Lodg	56.98	331	P	P	17 35 07.5	-1.2
M19K				IAmb	IAmb	17 35 20.3	
	comp=Z,25nm,0.9s						
M19K	Big River Lodg	56.98	331	P	P	17 35 08.2	-0.5
	baz=38						
MOD	Modoc Plateau	57.07	297	P	P	17 35 08.8	-1.0
MOD				IAmb	IAmb	17 35 20.4	
	comp=Z,44nm,1.1s						
MOD				IAMs_20	IAMs_20	17 58 29.3	
	comp=Z,2µm,18.0s						
J04A	Umpqua Nationa	57.12	300	P	P	17 35 09.0	-1.1
J04A				IAmb	IAmb	17 35 20.4	
	comp=Z,43nm,0.9s						
DUN6	Lazy B Ranch	57.14	282	P	P	17 35 09.6	-0.7
X16A	Lo Mia Camp, P	57.22	285	P	P	17 35 10.3	-0.7
PRN	Pahroc Range	57.24	290	P	P	17 35 10.6	-0.4
PRN				IAmb	IAmb	17 35 22.0	
	comp=Z,64nm,1.0s						
RUSC	La Rusia	57.27	230	P	P	17 35 10.8	-1.1
RUSC	La Rusia	57.27	230	eP	P	17 35 11.2	-0.6
MALB	Monte Alegre	57.31	206	eP	P	17 35 11.8	+0.4
K04D	Chiloquin, OR	57.35	299	P	P	17 35 10.4	-1.3
TNA	Tin City	57.35	340	P	P	17 35 10.6	-0.6
TNA				IAmb	IAmb	17 35 26.2	
	comp=Z,51nm,1.2s						
TNA	Tin City	57.35	340	P	P	17 35 11.4	+0.2
	baz=30,SNR=15						
PTBC	PUERTO BERRIO,	57.36	232	eP	P	17 35 11.2	-0.7
I03D	Drain, OR	57.46	301	P	P	17 35 11.6	-0.6
I03D				IAmb	IAmb	17 35 26.4	
	comp=Z,76nm,1.4s						
BRSE	Bradley Lake S	57.55	328	P	P	17 35 12.4	-0.3
	baz=39						
ANM	Nome	57.65	338	P	P	17 35 12.7	-0.6
ANM	Nome	57.65	338	P	P	17 35 12.7	-0.6
ANM				pmax	pmax		
	comp=Z,28nm,1.2s						
ANM				MLR	MLR		
	comp=Z,3µm,20.0s						
ANM	Nome	57.65	338	P	P	17 35 13.3	-0.1
	baz=32,SNR=7.7						
DBO	Dodson Butte	57.80	300	P	P	17 35 13.4	-1.5
DBO				IAmb	IAmb	17 35 24.0	
	comp=Z,63nm,1.5s						
KVN	Kaiserville	57.82	293	P	P	17 35 14.3	-0.9
KVN	Kaiserville	57.82	293	P	P	17 35 14.3	-0.9
KVN				pmax	pmax		
	comp=Z,73nm,1.0s						
N19K	Bonanza Creek	57.87	331	P	P	17 35 13.9	-1.1
N19K	Bonanza Creek	57.87	331	P	P	17 35 14.3	-0.8
	baz=38						
L04D	Klamath Falls	57.93	299	P	P	17 35 14.8	-1.0
SHPR	Sheep Range	57.93	289	P	P	17 35 14.7	-1.2
SPBC	San Pablo de B	57.95	231	eP	P	17 35 15.4	-0.8
HUMO	Hull Mountain	58.01	299	P	P	17 35 13.9	-2.3
HUMO				IAMs_20	IAMs_20	17 58 57.0	
	comp=Z,2µm,19.0s						
TPH	Tonopah	58.01	292	P	P	17 35 16.1	-0.4
TPH	Tonopah	58.01	292	P	P	17 35 16.1	-0.4
TPH				pmax	pmax		
	comp=Z,394nm,1.1s						
MATN	Matagalpa	58.04	248	P	P	17 35 16.0	-0.8
PAHR	Pah Rah Range	58.08	295	P	P	17 35 16.7	-0.3
319A	Douglas	58.09	281	P	P	17 35 17.1	+0.1
319A				IAmb	IAmb	17 35 18.8	
	comp=Z,53nm,1.3s						
ILSW	Iliamna Southw	58.12	329	P	P	17 35 16.4	-0.4
J01E	Myrtle Point	58.13	301	P	P	17 35 16.3	-0.8
J01E				IAmb	IAmb	17 35 27.6	
	comp=Z,36nm,0.9s						
W13A	Hualapai Mount	58.18	287	P	P	17 35 15.8	-1.9
W13A				IAmb	IAmb	17 35 27.9	
	comp=Z,25nm,1.0s						
HELC	Santa Helena	58.19	233	eP	P	17 35 17.9	-0.2
TPNV	Topopah Spring	58.24	290	IAMs_20	IAMs_20	17 59 28.0	
	comp=Z,2µm,19.0s						
TPNV	Topopah Spring	58.24	290	P	P	17 35 17.1	-1.0
	baz=45						
NV11	Mina Array Sit	58.29	293	P	P	17 35 15.0	-3.4
NV11				IAmb	IAmb	17 35 25.9	
	comp=Z,41nm,0.9s						
V12A	Nelson	58.30	289	P	P	17 35 17.1	-1.3
V12A				IAmb	IAmb	17 35 28.8	
	comp=Z,35nm,1.1s						
K02D	Willamette Mer	58.32	300	P	P	17 35 16.1	-2.4
TUC	Tucson	58.32	283	P	P	17 35 16.5	-2.1
TUC	Tucson	58.32	283	P	P	17 35 16.5	-2.1
TUC				pmax	pmax		
	comp=Z,19nm,1.1s						
TUC				MLR	MLR		
	comp=Z,4µm,20.0s						
TUC	Tucson	58.32	283	P	P	17 35 18.8	+0.1
	baz=44						
PTGC	Puerto Gaitan,	58.32	229	eP	P	17 35 18.5	-0.2
NVAR	Mina Array Bea	58.37	293	P	P	17 35 18.6	-0.4
	comp=Z,4.4nm,0.8s,baz=57,slow=6.7,SNR=14						
NVAR				LR	LR	17 59 24.6	
	comp=Z,3µm,18.2s,baz=51,slow=35						
	comp=Z,4.4nm,0.8s						
NVAR	Mina Array Bea	58.37	293	P	P	17 35 17.6	-1.5
ACON	Acoyapa	58.40	246	P	P	17 35 18.9	-0.3
ACON				IAmb	IAmb	17 35 33.2	
	comp=Z,40nm,1.0s						
NORC	Norcasia	58.41	232	eP	P	17 35 19.6	+0.2
Y14A	Wickenburg	58.48	286	P	P	17 35 19.7	0.0
YBH	Yreka Blue Hor	58.48	299	LR	LR	17 59 27.1	
	comp=Z,2µm,19.0s,baz=39,slow=35						
YBH	Yreka Blue Hor	58.48	299	P	P	17 35 17.4	-2.2
YBH	Yreka Blue Hor	58.48	299	P	P	17 35 17.5	-2.2
YBH				pmax	pmax		
	comp=Z,19nm,1.1s						
YBH				MLR	MLR		
	comp=Z,2µm,18.0s						
YERR	Yerington	58.51	294	P	P	17 35 19.2	-0.8
WCT	Wildcat Mounta	58.57	291	P	P	17 35 19.2	-1.1
WCT				IAmb	IAmb	17 35 30.9	
	comp=Z,55nm,1.1s						
LHV	Little Huntoon	58.61	293	P	P	17 35 20.0	-0.3
LHV				IAmb	IAmb	17 35 31.5	
	comp=Z,59nm,1.2s						
L02F	Cave Junction	58.67	299	P	P	17 35 19.9	-0.9
L02F				IAmb	IAmb	17 35 30.4	
	comp=Z,53nm,1.1s						
CBOC	Ciudad Bolivar	58.71	233	eP	P	17 35 22.0	+0.5
MPK	Martis Peak	58.73	295	P	P	17 35 21.7	+0.1
ROSC	El Rosal	58.78	231	P	P	17 35 23.3	+1.0
	comp=Z,222nm,1.0s,baz=31,slow=3.9,SNR=18						
ROSC				LR	LR	17 56 51.6	
	comp=Z,850nm,21.6s,baz=36,slow=32						
ROSC	El Rosal	58.78	231	P	P	17 35 22.1	-0.2
ROSC	El Rosal	58.78	231	P	P	17 35 22.1	-0.2
ROSC				pmax	pmax		
	comp=Z,193nm,0.9s						
ROSC	El Rosal	58.78	231	eP	P	17 35 23.2	+1.0
LCH	Last Change Ra	58.84	292	P	P	17 35 21.4	-0.8
LCH				IAmb	IAmb	17 35 32.7	
	comp=Z,36nm,1.0s						
GRAC	Grapevine Rang	58.85	291	P	P	17 35 22.3	+0.2
	baz=45						
O18K	Koktuh Hills	58.86	330	P	P	17 35 20.8	-1.0
O18K	Koktuh Hills	58.86	330	P	P	17 35 20.9	-0.9
	baz=37						
BILL	Bilibino	58.88	352	P	P	17 35 20.6	-1.2
BILL				IAMs_20	IAMs_20	18 00 15.6	
	comp=Z,1µm,20.0s						
BILL	Bilibino	58.88	352c	iP	P	17 35 21.8	0.0
BILL				i		17 36 13.6	
BILL				iS	S	17 43 31.2	+4.9
BILL				iSS	SS	17 47 27.4	+8.7
BILL				pmax	pmax		
	comp=Z,9.0nm,1.3s						
PDMCI	Parker Dam,Lak	58.89	287	P	P	17 35 22.8	+0.4
	baz=45,SNR=12						
DSP	Deep Springs	58.93	292	P	P	17 35 21.6	-1.0
DSP				IAmb	IAmb	17 35 33.3	
	comp=Z,30nm,1.0s						
FURC	Furnace Creek,	58.93	290	P	P	17 35 22.7	+0.1
	baz=45						
CCIG	Comitan	58.96	256	P	P	17 35 22.9	-0.3
COVE	Coope Vega, Sa	58.99	245	P	P	17 35 23.1	-0.3
GWY	Greenwater Val	59.02	290	P	P	17 35 23.2	-0.4
GWY				IAmb	IAmb	17 35 37.9	
	comp=Z,54nm,1.1s						
MLAC	Mammoth, Mammo	59.23	293	P	P	17 35 25.4	+0.3
	baz=45						
P18K	Big Mountain,	59.24	330	P	P	17 35 22.6	-2.0
	baz=36						
QSM	Queen of Sheba	59.29	290	P	P	17 35 24.9	-0.3
TIN	Tinemaha, Big	59.30	292	P	P	17 35 25.8	+0.4
	baz=45						
SNET	Serv Nac Est T	59.32	251	IAMs_20	IAMs_20	17 56 38.7	
	comp=Z,1µm,22.0s						
OMMB	Old Mammoth Mi	59.34	293	P	P	17 35 25.0	-0.9
OMMB				IAmb	IAmb	17 35 37.6	
	comp=Z,36nm,1.1s						
ORV	Oroville	59.36	296	IAMs_20	IAMs_20	17 59 49.0	
	comp=Z,2µm,19.0s						
N16K	Nishlik Lake	59.40	332	P	P	17 35 24.5	-1.1
	baz=35						
GMRC	Granite Mounta	59.43	288	P	P	17 35 26.7	+0.4
	baz=44,SNR=7.9						
O17K	Koliganek Bris	59.49	331	P	P	17 35 26.2	0.0
	baz=36						
BLYC	Blythe	59.50	287	P	P	17 35 26.2	-0.5
IRM	Iron Mountain	59.58	287	P	P	17 35 27.9	+0.7
	baz=44,SNR=6.0						
MPMC	Manual Prospec	59.58	291	P	P	17 35 28.0	+0.6
	baz=45,SNR=16						
KHMM	Horse Mountain	59.63	299	P	P	17 35 27.1	-0.6
CWC	Cottonwood Cre	59.65	291	P	P	17 35 27.9	0.0
	baz=45						
JTS	Las Juntas de	59.65	245	LR	LR	17 58 33.0	
	comp=Z,490nm,21.7s,baz=14,slow=33						
JTS	Las Juntas de	59.65	245	P	P	17 35 28.2	+0.3
JTS				IAmb	IAmb	17 35 36.9	
	comp=Z,57nm,1.6s						
JTS	Las Juntas de	59.65	245⇑	eP	P	17 35 27.2	-0.7
JTS				pmax	pmax		
	comp=Z,13nm,1.4s						
SRBA	San Rafael, Bu	59.65	243	P	P	17 35 27.6	-0.4
SRBA				IAmb	IAmb	17 35 42.2	
	comp=Z,34nm,1.3s						
PLMC	San Jos del P	59.67	233	eP	P	17 35 27.9	-0.1
KDAK	Kodiak Island	59.69	328	LR	LR	18 00 34.6	
	comp=Z,1µm,19.7s,baz=72,slow=35						
GSC	Goldstone, Bar	59.72	289	P	P	17 35 27.9	-0.4
GSC				IAmb	IAmb	17 35 39.3	
	comp=Z,47nm,1.1s						
GSC	Goldstone, Bar	59.72	289	P	P	17 35 27.9	-0.4
GSC				pmax	pmax		
	comp=Z,47nm,1.1s						
GSC	Goldstone, Bar	59.72	289	P	P	17 35 28.8	+0.5
	baz=44,SNR=6.0						
113A	Mohawk Valley,	59.76	285	P	P	17 35 28.3	-0.1
113A				IAmb	IAmb	17 35 38.8	
	comp=Z,35nm,1.0s						
214A	Organ Pipe Nat	59.77	284	P	P	17 35 28.2	-0.4
214A				IAmb	IAmb	17 35 30.3	
	comp=Z,38nm,1.1s						
214A	Organ Pipe Nat	59.77	284	P	P	17 35 28.7	+0.1
	baz=44,SNR=8.9						
HEC	Hector,Ludlow	59.79	289	P	P	17 35 28.8	+0.1
	baz=44,SNR=6.0						
BRZS	Berezniki	59.80	46⇑	iP	P	17 35 28.4	-0.2
	comp=Z,17nm,1.4s,baz=46						
BRZS	Berezniki	59.80	46c	iP	P	17 35 28.3	-0.2
BRZS				pmax	pmax		
	comp=Z,17nm,1.4s						
CMB	Columbia Colle	59.81	294	P	P	17 35 27.7	-1.2
CMB				IAmb	IAmb	17 35 44.5	
	comp=Z,38nm,1.5s						
CMB				IAMs_20	IAMs_20	17 59 56.3	
	comp=Z,2µm,20.0s						
CMB	Columbia Colle	59.81	294	P	P	17 35 27.7	-1.2
CMB				pmax	pmax		
	comp=Z,38nm,1.5s						
CMB				MLR	MLR		
	comp=Z,2µm,20.0s						
O16K	Kokwok River B	59.93	332	P	P	17 35 29.2	0.0
	baz=35						
CMIG	Matias Romero	59.96	259	LR	LR	18 02 34.8	
	comp=Z,2µm,18.9s,baz=41,slow=37						
SGCB	S£o Gabriel d	60.01	221	eP	P	17 35 30.8	+0.5
PRAC	Prado	60.03	231	eP	P	17 35 30.3	-0.2
ORTC	Ortega, Tolima	60.03	232	eP	P	17 35 32.3	+1.7
KMRM	Mail Ridge	60.08	298	P	P	17 35 30.0	-0.7
LRMC	Laurel Mtn Rad	60.10	290	P	P	17 35 31.2	+0.2
	baz=44						
BC3	Big Chuckawall	60.11	287	P	P	17 35 31.1	+0.1
	baz=44,SNR=14						
ITTB	Itaituba	60.11	207	eP	P	17 35 31.4	+0.4
GLA	Glamis	60.18	286	P	P	17 35 31.5	+0.1
	baz=44						
BELC	Belle Mtn. Jos	60.18	288	P	P	17 35 32.2	+0.6
	baz=44,SNR=9.4						
Q16K	King Salmon	60.25	330	P	P	17 35 30.4	-0.9
	baz=35						
ZAIG	Zacatecas	60.29	269	P	P	17 35 31.6	-1.0
OHAK	Old Harbor	60.37	328	P	P	17 35 30.5	-1.7
	baz=37						
PRPB	Parauapebas	60.41	200	eP	P	17 35 33.8	+0.8
ISA	Isabella, Lake	60.42	291	P	P	17 35 32.8	-0.3
ISA	Isabella, Lake	60.42	291	P	P	17 35 32.8	-0.3
ISA				pmax	pmax		
	comp=Z,52nm,1.0s						
ISA	Isabella, Lake	60.42	291	P	P	17 35 33.5	+0.4
	baz=44,SNR=7.9						
VOG	Valley Oaks Go	60.47	292	P	P	17 35 32.9	-0.3
	baz=44						
MACA	Manacapuru-AM	60.48	213	eP	P	17 35 34.4	+0.9
YOTC	Yotoco, Valle	60.50	233	eP	P	17 35 28.6	-5.2
CCAC	Calif City Air	60.52	290	P	P	17 35 34.0	+0.2
BBRC	Big Bear Solar	60.53	289	P	P	17 35 34.2	+0.1
	baz=44						
HOPS	Hopland Field	60.61	297	P	P	17 35 34.6	+0.4
VES	Vestal, Richgr	60.64	291	P	P	17 35 34.3	-0.2
	baz=44						
PMD	Palm Desert	60.66	288	P	P	17 35 34.3	-0.3
EDW2	Edwards Air Fo	60.70	290	P	P	17 35 35.8	+0.8
	baz=44,SNR=12						
PFO	Pinyon Flats O	60.73	288	LR	LR	18 02 40.6	
	comp=Z,718nm,18.3s,baz=45,slow=37						
PFO	Pinyon Flats O	60.73	288	P	P	17 35 35.4	+0.2
PFO	Pinyon Flats O	60.73	288c	iP	P	17 35 36.5	+1.2
PFO				pmax	pmax		
	comp=Z,56nm,1.1s						
PFO	Pinyon Flats O	60.73	288	P	P	17 35 36.2	+1.0
	baz=44,SNR=9.8						
TPFO	Pinon Flats	60.73	288	P	P	17 35 35.9	+0.6
	baz=44,SNR=9.7						
SWSC	Sam W. Stewart	60.82	287	P	P	17 35 35.2	-0.5
	baz=44						
BFSC	Mount Baldy Ra	60.97	289	P	P	17 35 36.8	-0.1
	baz=44						
ARVC	Arvin	61.01	291	P	P	17 35 37.1	+0.2
	baz=44						
YUH	Yuha Desert	61.11	287	P	P	17 35 37.5	-0.1
YUH				IAmb	IAmb	17 35 48.3	
	comp=Z,35nm,1.0s						
MURC	Murrieta	61.16	288	P	P	17 35 38.6	+0.5
	baz=44						
IKP	In-Ko-Pah, Jac	61.22	287	P	P	17 35 39.2	+0.6
	baz=44,SNR=6.0						
MONP2	Monument Peak	61.22	287	P	P	17 35 39.5	+0.8
	baz=44						
GEYT	Alibeck	61.24	64	P	P	17 35 38.8	+0.2
	comp=Z,3.5nm,0.7s,baz=316,slow=8.2,SNR=9.6						
GEYT				LR	LR	18 05 39.1	
	comp=Z,484nm,18.3s,baz=331,slow=40						
	comp=Z,3.5nm,0.7s						
GEYT	Alibeck	61.24	64	P	P	17 35 37.7	-0.9
GEYT				IAmb	IAmb	17 35 56.3	
	comp=Z,28nm,1.4s						
GEYT	Alibeck	61.24	64	P	P	17 35 37.7	-0.9
GEYT				pmax	pmax		
	comp=Z,28nm,1.4s						
GYA0B	ALIBECK ARRAY	61.24	64	P	P	17 35 37.5	-1.1
ELS	Elsinore Mount	61.26	289	P	P	17 35 38.0	-0.9
ELS				IAmb	IAmb	17 35 49.1	
	comp=Z,35nm,1.2s						
JAMC	Jamundi, Valle	61.32	233	eP	P	17 35 39.0	-0.5
BAR	Barrett	61.52	287	P	P	17 35 40.7	+0.2
ZAA0	Zalesovo Array	61.67	37	P	P	17 35 39.9	-1.2
ZAA0				IAmb	IAmb	17 35 58.0	
	comp=Z,62nm,1.8s						
ZALV	Zalesovo Beam	61.67	37	P	P	17 35 41.5	+0.4
	comp=Z,2.7nm,0.6s,baz=318,slow=7.4,SNR=13						
ZALV				LR	LR	18 02 34.9	
	comp=Z,541nm,19.4s,baz=315,slow=36						
	comp=Z,2.7nm,0.6s						
ZALV	Zalesovo Beam	61.67	37	P	P	17 35 40.3	-0.9
KURK	Kurchatov	61.78	42	P	P	17 35 40.8	-1.1
KURK				IAmb	IAmb	17 35 55.8	
	comp=Z,37nm,1.2s						
KURK	Kurchatov	61.78	42	IAMs_20	IAMs_20	18 01 00.1	
	comp=Z,1µm,21.0s						
KURK	Kurchatov	61.78	42c	eP	P	17 35 42.0	+0.1
KURK				pmax	pmax		
	comp=Z,15nm,1.2s						
KURBB	Kurchatov Arra	61.81	42	LR	LR	18 02 31.0	
	comp=Z,742nm,18.3s,baz=322,slow=36						
TLIG	Tlapa	61.81	262	P	P	17 35 41.9	-0.8
TLIG				IAmb	IAmb	17 35 49.7	
	comp=Z,49nm,1.4s						
TEFE	Tefe	62.19	217	eP	P	17 35 45.4	+0.3
SMTB	Santa Maria do	62.60	197	eP	P	17 35 48.6	+0.9
KK31	Karatay Array	63.89	53	P	P	17 35 55.4	-0.8
KK31	Karatay Array	63.89	53	P	P	17 35 55.4	-0.8
KK31				pmax	pmax		
	comp=Z,11nm,1.0s						
KKAR	Karatay Array	63.89	53	P	P	17 35 55.5	-0.7
KKAR	Karatay Array	63.89	53	P	P	17 35 55.5	-0.7
LPIG	La Paz	64.01	276	LR	LR	18 03 42.0	
	comp=Z,2µm,18.4s,baz=42,slow=36						
TULM	Tulcn-Chalpat	64.03	232	P	P	17 35 57.3	-0.6
TULM	Tulcn-Chalpat	64.03	232	eP	P	17 35 53.6	-4.3
BTLS	Baital	64.10	49	eP	P	17 35 57.7	+0.1
	baz=49						
BTLS	Baital	64.10	49	eP	P	17 35 57.6	+0.1
IUG	Iuzhnay	64.37	54	eP	P	17 35 59.6	+0.1
	baz=54						
IUG	Iuzhnay	64.37	54	eP	P	17 35 59.6	+0.1
RAYN	Ar Rayn	64.39	84	P	P	17 35 58.3	-1.5
RAYN	Ar Rayn	64.39	84	P	P	17 35 58.3	-1.5
RAYN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RAYN				MLR	MLR		
	comp=Z,400nm,19.0s						
SEY	Seymchan	64.75	358	LR	LR	18 02 16.4	
	comp=Z,458nm,21.3s,baz=6.0,slow=34						
SEY	Seymchan	64.75	358⇓	eP	P	17 36 01.9	+0.5
SEY				pmax	pmax		
	comp=Z,22nm,1.7s						
OTAV	Otavalo	64.77	233	P	P	17 36 02.5	-0.2
OTAV				IAmb	IAmb	17 36 09.4	
	comp=Z,40nm,1.2s						
OTAV	Otavalo	64.77	233	P	P	17 36 02.5	-0.2
OTAV				pmax	pmax		
	comp=Z,40nm,1.3s						
OTAV				MLR	MLR		
	comp=Z,700nm,21.0s						
OTAV	Otavalo	64.77	233	eP	P	17 36 02.6	-0.1
OTAV	Otavalo	64.77	233	eP	P	17 36 03.5	+0.8
YAK	Yakutsk	64.83	9	LR	LR	18 02 27.6	
	comp=Z,642nm,20.2s,baz=351,slow=34						
YAK	Yakutsk	64.83	9	P	P	17 36 00.7	-1.2
YAK				IAmb	IAmb	17 36 17.5	
	comp=Z,24nm,0.9s						
YAK	Yakutsk	64.83	9d	iP	P	17 36 01.1	-0.8
YAK				e		17 36 32.4	
YAK				e		17 38 22.8	
YAK				ePPP	PPP	17 39 57.0	
YAK				eS	S	17 44 39.1	-2.5
YAK				e*SS	sS	17 44 59.3	+10
YAK				e		17 45 54.4	
YAK				pmax	pmax		
	comp=Z,23nm,1.6s						
YAK				pmax	pmax		
	comp=N,17nm,1.5s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,77nm,3.7s						
YAK				pmax	pmax		
	comp=N,27nm,3.3s						
YAK				pmax	pmax		
	comp=E,70nm,4.8s						
YAK				smax	smax		
	comp=E,361nm,5.3s						
YAK				smax	smax		
	comp=N,124nm,3.5s						
TBTG	Tabatinga, AM	64.86	222	eP	P	17 36 03.4	+0.7
SGDS	Sogindy	65.59	50	eP	P	17 36 07.3	0.0
	baz=50						
SGDS	Sogindy	65.59	50	eP	P	17 36 07.3	0.0
SLOR	San Lorenzo -	65.64	232	P	P	17 36 07.4	-1.0
SLOR				IAmb	IAmb	17 36 24.1	
	comp=Z,37nm,1.2s						
KUU	Kurty	66.04	49⇑	iP	P	17 36 10.3	+0.2
	comp=Z,28nm,1.7s,baz=49						
KUU	Kurty	66.04	49c	iP	P	17 36 10.3	+0.2
KUU				pmax	pmax		
	comp=Z,28nm,1.7s						
DGZ	Jazzator, Alta	66.05	38c	eP	P	17 36 11.2	+0.9
DGZ				pmax	pmax		
	comp=Z,12nm,1.0s						
DGZ				MLR	MLR		
	comp=Z,760nm,15.0s						
AAK	Ala-Archa	66.15	51	LR	LR	18 04 10.7	
	comp=Z,1µm,21.6s,baz=319,slow=35						
AAK	Ala-Archa	66.15	51	P	P	17 36 09.3	-1.8
AAK				IAmb	IAmb	17 36 26.9	
	comp=Z,21nm,1.2s						
AAK	Ala-Archa	66.15	51	IAMs_20	IAMs_20	18 03 58.3	
	comp=Z,1µm,21.0s						
AAK	Ala-Archa	66.15	51d	iP	P	17 36 12.2	+1.2
AAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MAKZ	Makanchi	66.22	43	P	P	17 36 10.0	-1.2
MAKZ				IAmb	IAmb	17 36 27.4	
	comp=Z,39nm,1.2s						
MAKZ				IAMs_20	IAMs_20	18 03 43.6	
	comp=Z,1µm,21.0s						
MAKZ	Makanchi	66.22	43	P	P	17 36 10.0	-1.2
MAKZ				pmax	pmax		
	comp=Z,39nm,1.2s						
MAKZ				MLR	MLR		
	comp=Z,1µm,21.0s						
BTK	Batken	66.34	55	P	P	17 36 10.8	-1.4

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BTK                                       IAmb     IAmb      17 36 28.1
          comp=Z,48nm,1.2s
BTK    Batken                66.34  55    P        P         17 36 10.8  -1.4
BTK                                       pmax     pmax
          comp=Z,48nm,1.3s
CLDB   Colider               66.35 205   ePP       P         17 36 13.3  +1.0
SNDB   Serra Nova Dou        66.35 200   eP        P         17 36 15.1  +2.8
MK31   Makanchi Array        66.36  43    P        P         17 36 11.3  -0.8
MK31                                      IAmb     IAmb      17 36 32.4
          comp=Z,15nm,0.9s
MK31   Makanchi Array        66.36  43c iP         P         17 36 12.0  -0.1
MKAR   Makanchi Array        66.36  43    P        P         17 36 12.1  -0.1
          comp=Z,10.0nm,0.5s,baz=332,slow=5.1,SNR=132
MKAR                                      LR       LR        18 03 58.9
          comp=Z,1µm,21.9s,baz=332,slow=35
MKAR                                      PKP2bc             18 04 53.9
          comp=Z,0.8nm,1.0s,baz=116,slow=3.4,SNR=3.6
          comp=Z,10.0nm,0.5s
MKAR   Makanchi Array        66.36  43    P        P         17 36 10.7  -1.4
BOD    Bodaibo               66.56  19   eP        P         17 36 12.6  -0.6
BOD                                       pmax     pmax
          comp=Z,21nm,1.9s
CHGR   Chuyangaron           66.57  57    P        P         17 36 12.8  -0.9
CHGR                                      IAmb     IAmb      17 36 49.6
          comp=Z,36nm,1.0s
CHGR   Chuyangaron           66.57  57    P        P         17 36 12.8  -0.9
CHGR                                      pmax     pmax
          comp=Z,36nm,1.0s
ZSN    Zaisan                66.88  41   eP        P         17 36 15.6  +0.2
          baz=41
ZSN    Zaisan                66.88  41   eP        P         17 36 15.6  +0.2
GAR    Garm                  66.89  56    P        P         17 36 14.9  -0.9
MDOK   Medeo                 66.93  49   i P       P         17 36 16.7  +0.7
          baz=49
MDOK   Medeo                 66.93  49   i P       P         17 36 16.7  +0.7
BOOM   Boomskoye usch        66.94  50    P        P         17 36 15.2  -0.9
BOOM   Boomskoye usch        66.94  50    P        P         17 36 15.2  -0.9
TNSS   Tian-Shan             66.98  49   eP        P         17 36 18.4  +1.7
          baz=49
TNSS   Tian-Shan             66.98  49   eP        P         17 36 18.3  +1.7
PDRB   Porto dos Gac         67.30 206   eP        P         17 36 18.8  +0.4
KPKS   Kokpek                67.43  47   eP        P         17 36 19.6  +0.4
          baz=47
KPKS   Kokpek                67.43  47   eP        P         17 36 19.5  +0.4
ZHN    Zhinishke             67.55  48   eP        P         17 36 19.7  -0.2
          baz=48
ZHN    Zhinishke             67.55  48   eP        P         17 36 19.7  -0.2
SATY   Saty                  67.63  48   eP        P         17 36 20.6  +0.2
          comp=Z,16nm,1.5s,baz=48
SATY   Saty                  67.63  48   eP        P         17 36 20.6  +0.2
SATY                                      pmax     pmax
          comp=Z,16nm,1.5s
KDJ    Kajisay               67.80  49    P        P         17 36 20.6  -0.9
KDJ    Kajisay               67.80  49    P        P         17 36 20.6  -0.9
KDJ                                       pmax     pmax
          comp=Z,15nm,1.1s
UZB    Uzynbulak             67.83  47   eP        P         17 36 21.9  +0.2
          baz=47
UZB    Uzynbulak             67.83  47   eP        P         17 36 21.9  +0.2
SHLS   Shalkode              68.02  47   eP        P         17 36 24.9  +2.0
          comp=Z,25nm,1.4s,baz=47
SHLS   Shalkode              68.02  47   eP        P         17 36 24.9  +2.0
SHLS                                      pmax     pmax
          comp=Z,25nm,1.4s
MA2    Magadan               68.15 358    LR       LR        18 04 03.5
          comp=Z,487nm,21.3s,baz=12,slow=34
MA2    Magadan               68.15 358⇑eP          P         17 36 23.8  +0.6
MA2                                       pmax     pmax
          comp=Z,17nm,1.0s
MA2                                       MLR      MLR
          comp=Z,505nm,17.0s
JANB   Januaria              68.17 192   eP        P         17 36 25.4  +1.5
TARG   Taragay, Kyrgy        68.40  49    P        P         17 36 25.8  +0.2
TARG                                      IAmb     IAmb      17 36 40.0
          comp=Z,17nm,0.7s
TARG   Taragay, Kyrgy        68.40  49    P        P         17 36 25.8  +0.2
TARG                                      pmax     pmax
          comp=Z,17nm,0.7s
ETMB   Extrema               68.60 216    P        P         17 36 24.0  -2.5
ETMB                                      IAmb     IAmb      17 36 30.9
          comp=Z,33nm,1.2s
MOY    Mondy                 68.94  29   eP        P         17 36 29.1  +0.6
MOY                                       pmax     pmax
          comp=Z,36nm,3.3s
GUA01  Guaratinga, BA        69.20 188   eP        P         17 36 32.9  +2.8
CZSB   Cruzeiro do Su        69.22 223    P        P         17 36 28.7  -1.8
CZSB   Cruzeiro do Su        69.22 223   eP        P         17 36 31.4  +1.0
KSH    Kashi                 69.28  52    P        P         17 36 32.0  +1.2
KSH                                       pP       pwP       17 36 40.0  -0.1
KSH                                       PcP      PcP       17 36 58.3  +4.0
KSH                                       PP       PP        17 39 08.0  +4.7
KSH                                       S        S         17 45 35.8  -0.4
KSH                                       ScS      ScS       17 46 31.5  +0.6
KSH                                       SS       SS        17 50 05.0  +3.0
KSH                                       pmax     pmax
          comp=Z,10.0nm,1.4s
KSH                                       pmax     pmax
          comp=Z,130nm,3.9s
KSH                                       LR       LR
          comp=Z,810nm,20.6s
KSH                                       LR       LR
          comp=Z,1µm,21.3s
KSH                                       LR       LR
          comp=Z,910nm,24.0s
BDFB   Brasilia              69.30 196    P        P         17 36 31.6  +0.7
          comp=Z,5.7nm,0.7s,baz=11,slow=11,SNR=7.9
BDFB                                      LR       LR        18 02 49.7
          comp=Z,261nm,18.3s,baz=337,slow=32
          comp=Z,5.7nm,0.7s
BDFB   Brasilia              69.30 196    P        P         17 36 30.1  -0.8
BDFB                                      IAmb     IAmb      17 36 51.4
          comp=Z,22nm,1.0s
BDFB   Brasilia              69.30 196    P        P         17 36 30.2  -0.8
BDFB                                      pmax     pmax
          comp=Z,22nm,1.0s
IRK    Irkutsk               69.37  27   eP        P         17 36 33.2  +2.2
IRK                                       pmax     pmax
          comp=Z,48nm,2.2s
VILB   Vilhena               69.56 209    P        P         17 36 31.5  -1.0
VILB                                      IAmb     IAmb      17 36 38.5
          comp=Z,51nm,1.1s
VILB   Vilhena               69.56 209   eP        P         17 36 32.9  +0.4
UOSS   Minazif               69.74  75    P        P         17 36 31.9  -1.8
UOSS                                      IAmb     IAmb      17 36 54.3
          comp=Z,22nm,0.9s
ARAG   Araguaiana, MT        70.08 200   eP        P         17 36 36.0  +0.4
ZAK    Zakamensk             70.75  28   eP        P         17 36 40.4  +0.8
ZAK                                       pmax     pmax
          comp=Z,11nm,1.7s
WMQ    Urumqi                70.99  42  ⇓P         P         17 36 42.5  +1.4
WMQ                                       sP       pwP       17 36 51.3  +0.8
WMQ                                       PcP      PcP       17 37 01.8  +0.4
WMQ                                       S        S         17 46 01.8  +5.8
WMQ                                       SS       SS        17 50 26.5  -1.5
WMQ                                       pmax     pmax
          comp=Z,12nm,1.1s
WMQ                                       pmax     pmax
          comp=Z,290nm,4.3s
WMQ                                       LR       LR
          comp=Z,2µm,14.9s
WMQ                                       LR       LR
          comp=Z,1µm,18.7s
WMQ                                       LR       LR
          comp=Z,730nm,21.1s
SALV   Santo Antonio         71.15 204   eP        P         17 36 42.3  +0.2
ATAH   Atahualpa             71.19 229    LR       LR        18 07 13.2
          comp=Z,272nm,21.1s,baz=10,slow=35
DIAM   Diamantina, MG        71.28 191   eP        P         17 36 45.9  +2.8
SJMB   Sao Joao De Ma        71.42 189   eP        P         17 36 45.0  +1.3
PTLB   Pontes e Lacer        71.62 207    P        P         17 36 44.4  -0.5
PTLB   Pontes e Lacer        71.62 207   eP        P         17 36 45.3  +0.3
PAYG   Puerto Ayora          71.67 243    P        P         17 36 44.1  -1.4
CIT    Chita                 71.88  21   eP        P         17 36 50.4  +4.1
CIT                                       pmax     pmax
          comp=Z,55nm,2.4s
PMNB   Patos De Minas        71.89 194   eP        P         17 36 48.7  +2.0
ATD    Arta Tunnel           71.94  95    LR       LR        18 09 29.8
          comp=Z,18nm,18.2s,baz=342,slow=37
NIL    Nilore                72.53  57    P        P         17 36 49.4  -1.1
NIL                                       IAmb     IAmb      17 37 05.9
          comp=Z,23nm,0.9s
NIL                                       IAMs_20  IAMs_20   18 10 59.0
          comp=Z,736nm,20.0s
NIL    Nilore                72.53  57    P        P         17 36 49.4  -1.1
NIL                                       pmax     pmax
          comp=Z,23nm,0.9s
NIL                                       MLR      MLR
          comp=Z,700nm,20.0s
PP1B   Ponte de Pedra        72.59 203   eP        P         17 36 53.4  +2.6
ZEA    Zeya                  72.67  13   eP        P         17 36 52.0  +1.1
ZEA                                      eS        SKiKP     17 46 19.8  -3.9
ZEA                                       pmax     pmax
          comp=Z,10.0nm,0.9s
ZEA                                       smax     smax
          comp=E,100nm,16.2s
ZEA                                       MLR      MLR
          comp=N,200nm,21.0s
ZEA                                       MLR      MLR
          comp=Z,300nm,18.0s
SIV    San Ignacio           72.69 209    LR       LR        18 04 36.0
          comp=Z,1µm,20.9s,baz=44,slow=32
SHEM   Shemya Is, Ala        72.72 344    LR       LR        18 09 05.1
          comp=Z,586nm,20.8s,baz=60,slow=36
C2SB   Chapadao do Su        73.27 200   eP        P         17 36 56.8  +2.0
ITRB   Iturama               73.69 198   eP        P         17 36 58.9  +1.6
BBSD   Serra de San D        73.69 208   eP        P         17 36 57.7  +0.4
LODK   Lodwar                73.87 106    P        P         17 36 58.3  -0.3
SONM   Songino Array         73.94  28    P        P         17 36 58.5  -0.2
          comp=Z,6.8nm,1.0s,baz=326,slow=6.1,SNR=23
SONM                                      LR       LR        18 11 23.9
          comp=Z,411nm,18.6s,baz=348,slow=37
          comp=Z,6.8nm,1.0s
SONM   Songino Array         73.94  28    P        P         17 36 57.6  -1.1
SONM                                      IAmb     IAmb      17 37 26.6
          comp=Z,29nm,1.2s
SONM   Songino Array         73.94  28    P        P         17 36 57.6  -1.1
SONM                                      pmax     pmax
          comp=Z,29nm,1.2s
ULN    Ulaanbaatar           74.10  27    P        P         17 36 59.2  -0.5
ULN                                       IAmb     IAmb      17 37 12.4
          comp=Z,67nm,1.4s
ULN    Ulaanbaatar           74.10  27c iP         P         17 37 00.2  +0.5
ULN                                       pmax     pmax
          comp=Z,39nm,2.5s
PEA0B  Petropavlovsk-        74.32 354    P        P         17 37 00.6  -0.1
PEA0B                                     IAmb     IAmb      17 37 20.0
          comp=Z,33nm,1.2s
PEA0B  Petropavlovsk-        74.32 354    P        P         17 37 00.6  -0.1
PEA0B                                     pmax     pmax
          comp=Z,33nm,1.2s
PETK   Petropavlovsk-        74.32 354    P        P         17 37 00.3  -0.4
          comp=Z,5.5nm,1.2s,baz=23,slow=4.8,SNR=5.2
PETK                                      LR       LR        18 09 44.5
          comp=Z,923nm,19.5s,baz=5.6,slow=36
          comp=Z,5.5nm,1.2s
PETK   Petropavlovsk-        74.32 354    P        P         17 37 00.1  -0.6
PETK   Petropavlovsk-        74.32 354    P        P         17 37 00.1  -0.6
PET    Petropavlovsk         74.34 353    P        P         17 36 59.9  -0.8
PET                                       IAmb     IAmb      17 37 13.3
          comp=Z,42nm,1.2s
PET                                       IAMs_20  IAMs_20   18 06 41.5
          comp=Z,874nm,22.0s
PET    Petropavlovsk         74.34 353   eP        P         17 37 00.3  -0.4
PET                                      eS        SKiKP     17 46 29.9  +3.7
PET                                       pmax     pmax
          comp=Z,32nm,1.1s
PET                                       pmax     pmax
          comp=Z,200nm,5.3s
PET                                       MLR      MLR
          comp=Z,700nm,15.0s
PET                                       MLR      MLR
          comp=Z,800nm,15.0s
PANT   Pantanal (Braz        74.34 204   eP        P         17 37 03.3  +2.2
MBAR   Mbarara               74.47 112    LR       LR        18 09 41.6
          comp=Z,870nm,19.3s,baz=317,slow=36
MBAR   Mbarara               74.47 112    IAMs_20  IAMs_20   18 08 27.8
          comp=Z,971nm,19.0s
MBAR   Mbarara               74.47 112⇑eP          P         17 37 02.3   0.0
MBAR                                      pmax     pmax
          comp=Z,4.0nm,1.0s
BB19B  Bebedouro             74.70 196   eP        P         17 37 06.3  +3.2
NNA    Nana                  74.80 225    LR       LR        18 09 00.5
          comp=Z,473nm,20.4s,baz=356,slow=35
NNA    Nana                  74.80 225⇓eP          P         17 37 06.8  +2.9
NNA                                       pmax     pmax
          comp=Z,44nm,1.3s
DUB01  Friburgo-RJ           74.88 190   eP        P         17 37 05.5  +1.3
LPAZ   La Paz                75.27 215    P        P         17 37 07.2   0.0
          comp=Z,5.7nm,1.0s,baz=14,slow=11,SNR=11
LPAZ                                      LR       LR        18 08 22.4
          comp=Z,317nm,18.8s,baz=3.0,slow=34
          comp=Z,5.7nm,1.0s
LPAZ   La Paz                75.27 215    P        P         17 37 06.0  -1.2
LPAZ                                      IAmb     IAmb      17 37 14.3
          comp=Z,34nm,1.1s
LPAZ   La Paz                75.27 215    P        P         17 37 06.0  -1.2
LPAZ                                      pmax     pmax
          comp=Z,34nm,1.2s
LPAZ   La Paz                75.27 215   eP        P         17 37 07.5  +0.3
AQDB   Aquidauana            75.56 203    P        P         17 37 07.8  -0.3
AQDB                                      IAmb     IAmb      17 37 20.6
          comp=Z,29nm,1.0s
AQDB   Aquidauana            75.56 203   eP        P         17 37 09.5  +1.5
PCMB   Pacaembu              75.71 198   eP        P         17 37 10.1  +1.2
BDQN   Bodoquena, MS         75.78 204   eP        P         17 37 09.8  +0.5
HEH    HeiHe                 76.10  13    P        P         17 37 10.8  -0.1
HEH                                       S        S         17 46 53.0  -0.3
HEH                                       SKS      SKSac     17 47 16.5  -4.1
HEH                                       pmax     pmax
          comp=Z,12nm,0.9s
HEH                                       pmax     pmax
          comp=Z,220nm,6.2s
HEH                                       LR       LR
          comp=Z,460nm,21.2s
HEH                                       LR       LR
          comp=Z,320nm,20.8s
HEH                                       LR       LR
          comp=Z,650nm,20.5s
VAO    Valinhos              76.36 194   eP        P         17 37 14.8  +2.2
PB18   Visviri               76.95 216    P        P         17 37 15.5  -1.1
PB18                                      IAmb     IAmb      17 37 27.8
          comp=Z,30nm,1.0s
SPB    Sao Paulo             77.00 194    P        P         17 37 15.8  -0.3
SPB                                       IAmb     IAmb      17 37 26.8
          comp=Z,26nm,1.1s
FRTB   Fartura               77.10 196   eP        P         17 37 17.1  +0.3
MURT   Porto Murtinho        77.15 204   eP        P         17 37 18.1  +1.0
PB16   IPOC Station P        77.64 216    P        P         17 37 19.2  -1.4
PB16                                      IAmb     IAmb      17 37 26.3
          comp=Z,55nm,1.1s
KLR    Kul'dur               77.65  11    LR       LR        18 10 09.6
          comp=Z,560nm,20.7s,baz=354,slow=35
KLR    Kul'dur               77.65  11⇑eP          P         17 37 20.1  +0.4
KLR                                       pmax     pmax
          comp=Z,18nm,1.7s
AMBA   Amambai (Brazi        77.76 201   eP        P         17 37 20.9  +0.5
MNMC   Minye Minye           78.41 216    P        P         17 37 24.2  -0.2
MNMC                                      IAmb     IAmb      17 37 29.9
          comp=Z,35nm,1.1s
KMBO   Kilima Mbogo          78.64 107    LR       LR        18 13 21.5
          comp=Z,5.7nm,18.3s,baz=290,slow=37
KMBO   Kilima Mbogo          78.64 107    IAMs_20  IAMs_20   18 11 54.0
          comp=Z,659nm,20.0s
GO01   Chusmiza              78.76 215    P        P         17 37 26.0  -0.7
GO01                                      IAmb     IAmb      17 37 32.3
          comp=Z,34nm,0.9s
PTGB   Pitanga               78.89 198   eP        P         17 37 27.3  +0.5
PB11   IPOC Station P        79.01 216    P        P         17 37 27.0  -0.6
PB11                                      IAmb     IAmb      17 37 32.9
          comp=Z,57nm,1.0s
PB08   IPOC Station P        79.19 215    P        P         17 37 28.1  -0.8
PB08                                      IAmb     IAmb      17 37 34.7
          comp=Z,38nm,1.0s
GTA    Gaotai                79.40  36  ⇑P         P         17 37 29.5  -0.2
GTA                                       pP       pwP       17 37 39.3  +0.2
GTA                                       sP       PcP       17 37 43.0  +5.2
GTA                                       S        S         17 47 29.0  -0.7
GTA                                       sS       SKSac     17 47 44.5  -0.7
GTA                                       pmax     pmax
          comp=Z,5.0nm,1.3s
GTA                                       LR       LR
          comp=Z,480nm,21.1s
GTA                                       LR       LR
          comp=Z,460nm,18.9s
GTA                                       LR       LR
          comp=Z,730nm,22.5s
TA02   Huaiquique            79.65 216    P        P         17 37 30.1  -0.8
KIBK   Kibwezi               80.08 107    P        P         17 37 32.8  -0.8
KIBK                                      IAMs_20  IAMs_20   18 14 21.5
          comp=Z,846nm,18.0s
XLT    XiLinHaoTe            80.10  23   eP        P         17 37 32.0  -1.4
XLT                                       S        S         17 47 40.8  +3.9
XLT                                       sS       SKKSac    17 47 52.3  +0.6
XLT                                       pmax     pmax
          comp=Z,9.0nm,1.2s
XLT                                       pmax     pmax
          comp=Z,250nm,4.2s
XLT                                       LR       LR
          comp=Z,920nm,23.8s
XLT                                       LR       LR
          comp=Z,380nm,21.7s
PB01   IPOC Station P        80.14 215    P        P         17 37 33.7   0.0
FRBT   Francisco Belt        80.31 199   eP        P         17 37 36.1  +1.7
BNX    BinXian               80.51  14  ⇑P         P         17 37 36.0  +0.6
BNX                                       pP       pwP       17 37 45.5  +0.5
BNX                                       sP       PcP       17 37 49.0  +6.7
BNX                                       S        S         17 47 39.8  -1.0
BNX                                       sS       SKSac     17 47 53.3  +0.9
BNX                                       pmax     pmax
          comp=Z,8.0nm,0.7s
BNX                                       pmax     pmax
          comp=Z,160nm,4.8s
BNX                                       LR       LR
          comp=Z,470nm,15.7s
BNX                                       LR       LR
          comp=Z,390nm,21.1s
BNX                                       LR       LR
          comp=Z,390nm,21.1s
PB02   IPOC Station P        80.53 215    P        P         17 37 35.5  -0.3
PB02                                      IAmb     IAmb      17 37 41.6
          comp=Z,26nm,0.9s
YSS    Yuzh-Sakhalins        80.73   3    P        P         17 37 35.6  -1.0
YSS                                       IAmb     IAmb      17 37 49.5
          comp=Z,70nm,1.5s
YSS                                       IAMs_20  IAMs_20   18 15 38.2
          comp=Z,968nm,19.0s
YSS    Yuzh-Sakhalins        80.73   3deP          P         17 37 36.5   0.0
YSS                                      eS        S         17 47 44.2  +1.1
YSS                                      e                   17 47 57.3
YSS                                      eSS       SS        17 53 01.2  +6.5
YSS                                       pmax     pmax
          comp=Z,200nm,4.5s
YSS                                       pmax     pmax
          comp=Z,20nm,0.9s
YSS                                       smax     smax
          comp=E,400nm,5.7s
YSS                                       MLR      MLR
          comp=Z,900nm,19.0s
YSS                                       MLR      MLR
          comp=E,500nm,20.0s
PB09   IPOC Station P        80.75 214    P        P         17 37 37.0   0.0
PB09                                      IAmb     IAmb      17 37 48.9
          comp=Z,72nm,1.6s
PB07   IPOC Station P        80.91 215    P        P         17 37 37.6  -0.3
PB07                                      IAmb     IAmb      17 37 49.9
          comp=Z,45nm,1.2s
PB03   IPOC Station P        81.16 215    P        P         17 37 39.0  -0.2
PB03                                      IAmb     IAmb      17 37 45.2
          comp=Z,31nm,1.2s
ITAB   Concordia             81.36 198    P        P         17 37 40.8  +0.9
ITAB   Concordia             81.36 198   eP        P         17 37 42.8  +2.9
LVC    Limon Verde           81.38 214    LR       LR        18 11 23.1
          comp=Z,473nm,20.0s,baz=8.5,slow=34
LVC    Limon Verde           81.38 214    P        P         17 37 40.1  -0.5
LVC                                       IAmb     IAmb      17 37 47.0
          comp=Z,37nm,1.1s
LVC    Limon Verde           81.38 214    P        P         17 37 40.1  -0.5
LVC                                       pmax     pmax
          comp=Z,37nm,1.1s
LVC    Limon Verde           81.38 214   eP        P         17 37 41.6  +0.9
CPUP   Villa Florida         81.57 203    P        P         17 37 40.8  -0.2
          comp=Z,7.9nm,1.0s,baz=12,slow=7.7,SNR=8.8
CPUP                                      LR       LR        18 10 27.8
          comp=Z,241nm,20.4s,baz=28,slow=33
          comp=Z,7.9nm,1.0s
CPUP   Villa Florida         81.57 203    P        P         17 37 40.6  -0.4
CPUP   Villa Florida         81.57 203    P        P         17 37 40.6  -0.4
CPUP                                      pmax     pmax
          comp=Z,19nm,1.2s
CPUP   Villa Florida         81.57 203   eP        P         17 37 40.8  -0.2
BTO    Baotou                81.61  28   eP        P         17 37 39.0  -2.5
BTO                                       pP       pwP       17 37 53.0  +2.1
BTO                                       sP       sP        17 37 58.5   +11
BTO                                       S        S         17 47 45.0  -7.7
BTO                                       SS       SS        17 53 16.3  +7.9
BTO                                       pmax     pmax
          comp=Z,23nm,1.0s
BTO                                       pmax     pmax
          comp=Z,420nm,3.7s
BTO                                       LR       LR
          comp=Z,1µm,20.6s
BTO                                       LR       LR
          comp=Z,2µm,18.2s
BTO                                       LR       LR
          comp=Z,2µm,17.6s
HHC    Hu-ho-hao-te          81.81  27   eP        P         17 37 40.8  -1.8
HHC                                       S        S         17 47 54.3  -0.6
HHC                                       SS       SS        17 53 13.5  +2.0
HHC                                       pmax     pmax
          comp=Z,36nm,0.9s
HHC                                       pmax     pmax
          comp=Z,220nm,4.8s
HHC                                       LR       LR
          comp=Z,990nm,17.8s
HHC                                       LR       LR
          comp=Z,810nm,17.1s
HHC                                       LR       LR
          comp=Z,1µm,18.4s
PYUN   Piuthan               81.92  54   eP        P         17 37 43.3  -0.2
          comp=Z,28nm,1.0s
MDJ    Mudanjiang            81.92  13    P        P         17 37 43.5  +0.6
MDJ                                       PP       PP        17 40 55.3  +5.8
MDJ                                       S        S         17 47 54.0  -1.6
MDJ                                       SS       SS        17 53 12.8  +0.3
MDJ                                       pmax     pmax
          comp=Z,11nm,1.1s
MDJ                                       pmax     pmax
          comp=Z,140nm,6.6s
MDJ    Mudanjiang            81.92  13    P        P         17 37 41.5  -1.4
MDJ                                       IAmb     IAmb      17 37 55.0
          comp=Z,22nm,1.0s
MDJ                                       IAMs_20  IAMs_20   18 15 07.8
          comp=Z,559nm,20.0s
CN2    Changchun             82.08  16   eP        P         17 37 42.8  -1.0
CN2                                      epP       pwP       17 37 55.0  +1.6
CN2                                      eS        S         17 47 50.0  -7.3
CN2                                       pmax     pmax
          comp=Z,10.0nm,0.6s
CN2                                       pmax     pmax
          comp=Z,200nm,5.0s
CN2                                       LR       LR
          comp=Z,600nm,16.0s
CN2                                       LR       LR
          comp=Z,300nm,16.0s
CN2                                       LR       LR
          comp=Z,400nm,15.0s
DANN   Dangsing              82.08  53   eP        P         17 37 44.6  +0.2
          comp=Z,117nm,1.0s
PB15   IPOC Station P        82.13 214    P        P         17 37 43.8  -0.6
PB15                                      IAmb     IAmb      17 37 58.1
          comp=Z,40nm,1.3s
TEY    Ternei                82.28   8   eP        P         17 37 38.4  -6.3
KOLN   Koldanda              82.49  53   eP        P         17 37 45.7  -0.8
          comp=Z,93nm,1.4s
USA0B  Ussuriysk Arra        82.64  11⇑eP          P         17 37 47.2  +0.5
USRK   Ussuriysk Ar.         82.64  11    P        P         17 37 46.3  -0.4
          comp=Z,1.7nm,0.8s,baz=336,slow=4.2,SNR=6.7
USRK                                      LR       LR        18 14 13.8
          comp=Z,425nm,19.3s,baz=349,slow=36
          comp=Z,1.7nm,0.8s
USRK   Ussuriysk Ar.         82.64  11    P        P         17 37 46.1  -0.5
GKN    Gorkha                82.80  53   eP        P         17 37 47.7  -0.3
          comp=Z,104nm,1.0s
AZCA   Azaras, Argent        82.95 201   eP        P         17 37 49.6  +1.3
ALGR   Alto Alegre (B        83.05 198   eP        P         17 37 49.6  +0.8
KKN    Kakani                83.29  52   eP        P         17 37 50.2  -0.4
DMN    Daman                 83.36  52   eP        P         17 37 51.2  +0.2
GUN    Gumba                 83.47  52   eP        P         17 37 51.7   0.0
          comp=Z,66nm,0.9s
PKIN   Phulchoki             83.52  52   eP        P         17 37 51.7  -0.2
          comp=Z,44nm,0.9s
PKI    Pulchoki              83.53  52   eP        P         17 37 51.9  -0.1
ASAJ   Asahikawa             83.56   4    LR       LR        18 15 38.9
          comp=Z,424nm,18.7s,baz=9.5,slow=36
ASAJ   Asahikawa             83.56   4    P        P         17 37 50.1  -1.3
ASAJ                                      pmax     pmax
          comp=Z,99nm,1.8s
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JKA	Kamikawa-asahi	83.56	4	P	P	17 37 50.1	-1.4
TSUM	Tsumeb	83.58	133	LR	LR	18 13 23.0	
	comp=Z,648nm,18.3s,baz=336,slow=34						
VLA	Vladivostok	83.69	12	⇑eP	P	17 37 50.1	-2.0
VLA				pmax	pmax		
	comp=Z,22nm,1.2s						
LZH	Lanzhou	83.79	34	⇑P	P	17 38 01.3	+8.3
LZH				pP	pwP	17 38 06.8	+4.3
LZH				sP	sP	17 38 11.0	+12
LZH	Lanzhou	83.79	34	S	S	17 48 14.0	-1.3
LZH	Lanzhou	83.79	34	sS	sS	17 48 26.5	+3.6
LZH	Lanzhou	83.79	34	SS	SS	17 53 43.5	+2.4
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
LZH				pmax	pmax		
	comp=Z,250nm,7.6s						
LZH				LR	LR		
	comp=N,630nm,14.1s						
LZH				LR	LR		
	comp=E,520nm,15.8s						
LZH				LR	LR		
	comp=Z,1μm,15.5s						
BJT	Baijiatuau	83.79	24	IAMs_20	IAMs_20	18 15 25.7	
	comp=Z,1μm,21.0s						
JIRN	Jiri	83.83	52	eP	P	17 37 53.9	+0.3
	comp=Z,87nm,0.9s						
LSA	Lhasa	84.39	47	IAMs_20	IAMs_20	18 18 34.7	
	comp=Z,623nm,22.0s						
MECA	Mercedes	84.62	202	eP	P	17 37 59.5	+2.7
ITQB	Itaqui	84.63	201	P	P	17 37 57.6	+0.8
ITQB				IAmb	IAmb	17 38 21.1	
	comp=Z,40nm,1.1s						
CPSB	Cacapava Do Su	84.69	198	eP	P	17 37 57.8	+0.7
RODS	Rosario do Sul	84.98	200	eP	P	17 37 59.4	+0.8
LSZ	Lusaka	85.30	123	LR	LR	18 15 43.6	
	comp=Z,638nm,19.9s,baz=338,slow=35						
LSZ	Lusaka	85.30	123	IAMs_20	IAMs_20	18 12 59.3	
	comp=Z,801nm,21.0s						
AC02	Maricunga	85.37	212	P	P	17 38 01.2	0.0
AC02				IAmb	IAmb	17 38 16.1	
	comp=Z,39nm,1.4s						
ERM	Erimo	85.68	3	P	P	17 38 01.6	-0.5
ERM	Erimo	85.68	3	⇓eP	P	17 38 03.8	+1.6
ERM				pmax	pmax		
	comp=Z,31nm,1.0s						
HNS	HongShan	85.89	26	⇓P	P	17 38 04.5	+1.2
HNS				SKS	S	17 48 27.8	-7.9
HNS				S	SKKSac	17 48 33.0	-2.3
HNS				SS	SS	17 54 20.0	+8.5
HNS				pmax	pmax		
	comp=Z,40nm,1.1s						
HNS				pmax	pmax		
	comp=Z,250nm,4.2s						
HNS				LR	LR		
	comp=Z,670nm,15.1s						
HNS				LR	LR		
	comp=Z,510nm,15.1s						
HNS				LR	LR		
	comp=Z,520nm,23.5s						
DL2	Dalian	86.10	20	P	P	17 38 01.8	-2.5
DL2				SS	SS	17 54 15.5	+1.1
DL2				pmax	pmax		
	comp=Z,31nm,1.0s						
DL2				pmax	pmax		
	comp=Z,280nm,4.3s						
DL2				LR	LR		
	comp=Z,480nm,15.5s						
DL2				LR	LR		
	comp=Z,200nm,15.6s						
DL2				LR	LR		
	comp=Z,660nm,30.2s						
XAN	Xi'an	87.34	31	P	P	17 38 12.0	+1.4
XAN				pP	sP	17 38 17.8	+1.0
XAN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
XAN				LR	LR		
	comp=Z,660nm,18.1s						
XAN				LR	LR		
	comp=Z,810nm,16.8s						
XAN				LR	LR		
	comp=Z,670nm,16.2s						
TIA	Tai'an	87.64	24	P	P	17 38 15.5	+3.6
TIA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LYN	LuoYang	87.94	28	⇓P	P	17 38 14.5	+1.1
LYN				pP	pwP	17 38 28.0	+5.2
LYN				S	S	17 48 52.3	-3.3
LYN				SS	SS	17 54 45.0	+3.3
LYN				LR	LR		
	comp=Z,510nm,15.0s						
LYN				LR	LR		
	comp=Z,540nm,12.9s						
LYN				LR	LR		
	comp=Z,460nm,17.0s						
CD2	Chengdu	88.44	37	eP	P	17 38 14.5	-1.3
CO01	Juntas del Tor	88.59	212	P	P	17 38 16.7	+0.2
KSRS	Korea Array	88.68	16	P	P	17 38 16.4	-0.3
	comp=Z,1.1nm,0.8s,baz=351,slow=4.9,SNR=2.9						
KSRS				LR	LR	18 19 31.8	
	comp=Z,416nm,18.2s,baz=320,slow=37						
	comp=Z,1.1nm,0.8s						
TJN	Taejon	89.64	16	⇑eP	P	17 38 18.9	-2.4
BRDH	Bariadhala	90.64	50	LR	LR	18 20 33.9	
	comp=Z,954nm,21.9s,baz=205,slow=36						
MJAR	Matsushiro Arr	90.84	8	P	P	17 38 26.2	-0.7
	comp=Z,1.4nm,0.9s,baz=1.1,slow=6.1,SNR=1.4						
MJAR				LR	LR	18 20 24.0	
	comp=Z,297nm,18.4s,baz=11,slow=36						
	comp=Z,1.4nm,0.9s						
ENH	Enshi	91.00	32	IAMs_20	IAMs_20	18 21 15.8	
	comp=Z,538nm,21.0s						
PZH	PanZhiHua	91.64	40	P	P	17 38 30.8	-0.2
PZH				S	S	17 49 26.3	-4.2
PZH				SS	SS	17 55 40.5	+4.6
PZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PZH				pmax	pmax		
	comp=Z,190nm,5.2s						
PZH				LR	LR		
	comp=Z,420nm,18.1s						
PZH				LR	LR		
	comp=Z,380nm,18.6s						
PZH				LR	LR		
	comp=Z,380nm,27.4s						
TNCH	TengChong	91.64	43	P	P	17 38 33.8	+2.7
TNCH				pP	sP	17 38 37.0	-0.3
TNCH				PP	PP	17 42 13.3	+4.6
TNCH				SKS	SKSac	17 49 04.0	+0.9
TNCH				S	S	17 49 30.0	-0.7
TNCH				SS	SS	17 55 38.8	+2.6
TNCH				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TNCH				pmax	pmax		
	comp=Z,140nm,5.4s						
TNCH				LR	LR		
	comp=Z,420nm,19.1s						
TNCH				LR	LR		
	comp=Z,250nm,15.8s						
TNCH				LR	LR		
	comp=Z,640nm,21.0s						
NJ2	Nanjing	92.03	24	eP	P	17 38 31.0	-1.5
NJ2				pmax	pmax		
	comp=Z,11nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,350nm,3.8s						
NJ2				LR	LR		
	comp=Z,770nm,13.7s						
NJ2				LR	LR		
	comp=Z,620nm,16.6s						
NJ2				LR	LR		
	comp=Z,590nm,14.2s						
WHN	Wuhan	92.24	28	P	P	17 38 33.3	-0.2
LBTB	Lobatse	92.27	130	LR	LR	18 17 52.9	
	comp=Z,508nm,18.9s,baz=324,slow=34						
PCHI	Peechi	92.78	69	eP	P	17 38 40.0	+3.8
PCHI				eS	S	17 49 40.2	-0.5
BO02	Sierra Bellavi	93.26	211	P	P	17 38 37.6	-0.3
KMI	Kunming	93.27	40	⇑P	P	17 38 37.8	-0.8
KMI				S	S	17 49 47.5	+2.2
KMI				SS	SS	17 56 06.3	+6.8
KMI				LR	LR		
	comp=Z,360nm,10.4s						
KMI				LR	LR		
	comp=Z,370nm,17.4s						
KMI				LR	LR		
	comp=Z,460nm,19.2s						
SSE	Sheshan	93.50	23	P	P	17 38 36.3	-3.0
SSE				S	S	17 49 39.3	-7.4
SSE				pmax	pmax		
	comp=Z,12nm,0.7s						
SSE				pmax	pmax		
	comp=Z,230nm,3.6s						
SSE				LR	LR		
	comp=Z,400nm,18.2s						
SSE				LR	LR		
	comp=Z,290nm,21.9s						
GYA	Guiyang	93.53	36	P	P	17 38 40.8	+1.1
GYA				S	S	17 49 48.0	+0.6
GYA				pmax	pmax		
	comp=Z,22nm,0.6s						
GYA				LR	LR		
	comp=Z,650nm,25.9s						
BOSA	Boshof	95.18	132	LR	LR	18 20 14.5	
	comp=Z,1μm,18.9s,baz=342,slow=35						
SUR	Sutherland	96.49	137	LR	LR	18 17 42.1	
	comp=Z,332nm,21.4s,baz=330,slow=32						
CMAR	Chiang Mai Arr	97.63	46	P	P	17 38 57.5	-0.8
	comp=Z,0.3nm,0.4s,baz=325,slow=7.7,SNR=4.6						
CMAR				PP	PP	17 42 53.9	-1.4
	comp=Z,1.2nm,1.0s,baz=315,slow=7.2,SNR=4.2						
CMAR				LR	LR	18 26 19.1	
	comp=Z,214nm,21.4s,baz=320,slow=38						
	comp=Z,0.3nm,0.4s						
CMAR	Chiang Mai Arr	97.63	46	i P	Pdif	17 38 59.5	+1.1
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
PALK	Pallekele	97.89	67	LR	LR	18 27 41.0	
	comp=Z,322nm,19.5s,baz=86,slow=38						
OPO	Ambohidratompo	98.39	109	LR	LR	18 23 57.3	
	comp=Z,212nm,18.9s,baz=178,slow=36						
KULM	Kulim	109.98	51	IAMs_20	IAMs_20	18 34 11.3	
	comp=Z,416nm,19.0s						
MYKOM	Kota Tinggi	114.55	50	IAMs_20	IAMs_20	18 36 50.2	
	comp=Z,346nm,19.0s						
KKM	Kota Kinabalu	115.77	35	IAMs_20	IAMs_20	18 43 43.3	
	comp=Z,327nm,19.0s						
PPT2	Papeete2	120.27	281	eLR	LR	18 21 07.6	
	comp=Z,575nm,32.5s						
PPT2				eLR	LR	18 21 08.5	
	comp=Z,774nm,25.2s						
TBI	Tubuai	124.59	276	eLR	LR	18 23 08.0	
	comp=Z,17μm,22.0s						
TBI				eLR	LR	18 23 08.5	
	comp=Z,3μm,22.0s						
SNAA	Sanae	125.72	169	PKPdf	PKPdf	17 44 22.8	-0.8
SNAA	Sanae	125.72	169	PKIKP	PKPdf	17 44 22.8	-0.8
ELIB	Princess Elisa	130.23	160	dPKPdf	PKPdf	17 44 31.2	-1.1
ELIB				dPKP	sPKPdf	17 44 42.6	+4.0
QSPA	South Pole Qui	142.49	180	PKhKP	PKPpre	17 44 51.3	
	comp=Z,7.8nm,1.1s,baz=198,slow=0.6,SNR=12						
QSPA	South Pole Qui	142.49	180		PKPdf	17 44 54.1	-1.0
WB0	Warramunga Arr	145.64	22	PKPdf	PKPdf	17 44 59.4	-2.5
WRA	Warramunga Arr	145.80	23	PKPbc	PKPbc	17 45 02.6	0.0
	comp=Z,9.7nm,0.8s,baz=344,slow=2.7,SNR=26						
WRA	Warramunga Arr	145.80	23		PKPdf	17 45 00.3	-1.9
WB2	Warramunga Arr	145.80	23		PKPdf	17 45 00.2	-2.0
DZM	Mont Dzumac	146.26	327	eLR	LR	18 33 08.4	
	comp=Z,847nm,28.8s						
CTA	Charters Tower	147.53	2	PKPbc	PKPbc	17 45 07.2	-0.5
	comp=Z,5.5nm,1.0s,baz=30,slow=4.3,SNR=2.7						
AS31	Alice Springs	149.26	25	PKPdf	PKPdf	17 45 05.7	-2.2
AS31				PKPbc	PKPbc	17 45 11.9	-0.3
ASAR	Alice Springs	149.26	25	PKPbc	PKPbc	17 45 11.9	-0.3
	comp=Z,2.6nm,0.4s,baz=347,slow=2.1,SNR=43						
ASAR	Alice Springs	149.26	25		PKPbc	17 45 11.0	-1.2
NWAO	Narrogin (SRO)	150.59	60	PKPbc	PKiKP	17 45 17.2	+1.4
	comp=Z,16nm,0.7s,baz=329,slow=5.9,SNR=7.6						
VNDA	Vanda	154.44	187	PKPbc	PKiKP	17 45 23.9	+1.5
	comp=Z,3.8nm,1.1s,baz=212,slow=0.9,SNR=5.8						
VNDA	Vanda	154.44	187	PKPdf	PKPdf	17 45 14.9	+0.9
VNDA					PKiKP	17 45 22.8	+0.4
VNDA	Vanda	154.44	187	PKIKP	PKiKP	17 45 22.8	+0.4
RTZ	Ruatahuna	155.38	293	PKPdf	PKPdf	17 45 16.0	-0.5
RTZ					sPKPdf	17 45 24.2	+1.3

ANF 31 17:32:18.1±1.2,70°.56N×133°.81W,h0^{km},ML3.2/6,Error ellipse: s-maj=12.4km s-min=5.2km az=22.0,Beaufort Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INK	Inuvik	2.27	177	P	Pn	17 32 56.7	0.0
	baz=358,SNR=15						
F31M	Tsiigehtchic	3.13	179	P	Pn	17 33 07.7	-1.0
	baz=360,SNR=11						
C27K	Jago River	3.51	259	S	Sn	17 33 56.3	+0.2
	baz=70						
E27K	Coleen River	3.64	233	S	Sn	17 34 00.7	+1.4
	baz=46						
G30M	tAoh Zraii Nji	3.70	195	P	Pn	17 33 16.9	+0.4
	baz=13						
C26K	Camden Bay	3.82	266	P	Pn	17 33 19.1	+0.9
	baz=75,SNR=24						
EPYK	Eagle Plains	4.34	196	P	Pn	17 33 25.9	+0.5
	baz=13						
EPYK				S	Sn	17 34 17.5	+0.8
	baz=13						
D25K	Kavik River	4.50	260	S	Sn	17 34 20.7	+0.2
	baz=68						

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*IDC **31** 17:41:10.8±1.4,17°.98S×178°.27W,h631^{km}±12^{km},mb3.2/8, mbtmp4.1/9,Error ellipse: s-maj=24.9km s-min=17.9km az=95.0*

*NOU **31** 17:41:14.3,18°.50S×178°.67W,h582^{km},mb4.1/14,Fiji Islands Region*

*NEIC **31** 17:41:19.9±1.5,18°.7S±0°.1×179°.1W±0°.1,h664^{km}±13^{km}, mb4.3/23,Error ellipse: s-maj=22.0km s-min=8.6km az=143.0*

ISC 31 17:41:11.0±0.9,**17°.9S**±0°.1×**178°.4W**±0°.1,**h633**^{km}±8^{km},**n58, σ1^{s}.16**/63,**mb4.2**/19,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	Tubou, Lakemba	0.53	229	P	P	17 42 23.3	-1.4
TAVE	Taveuni	1.86	309	P	P	17 42 27.3	-0.7
MSVF	Nonsavu	3.39	272	P	P	17 42 35.0	-0.2
	48nm,0.6s,baz=125,slow=3.3,SNR=43						
MSVF				S	S	17 43 45.8	+1.9
	5.1nm,0.9s,baz=147,slow=22,SNR=0.8						
NIUE	Niue	8.12	100	P	P	17 43 27.2	+15
LIFNC	LIFOU	13.86	256		P	17 44 05.3	-2.1
LIFNC	LIFOU	13.86	256	P	P	17 44 06.3	-1.1
PINNC	Pines Island,	14.09	248		P	17 44 07.3	-2.2
PINNC	Pines Island,	14.09	248	P	P	17 44 10.1	+0.6
YATNC	Mamie plateau,	14.44	251	P	P	17 44 13.4	+0.6
OUENC	Ouen Island, N	14.58	250	P	P	17 44 13.3	-0.7
OUENC	Ouen Island, N	14.58	250	P	P	17 44 14.8	+0.8
DZM	Mont Dzumac	14.85	251	P	P	17 44 16.6	0.0
DZM	Mont Dzumac	14.85	251	P	P	17 44 17.3	+0.7
ONTNC	Ouen Toro	14.90	250	P	P	17 44 17.6	+0.7
NOUC	Port Laguerre	14.98	251	P	P	17 44 19.2	+1.5
KOUNC	Koumac, New Ca	16.57	258	P	P	17 44 31.7	-0.5
KOUNC				IAmb	IAmb	17 45 12.3	
	comp=Z,17nm,0.8s						
KOUNC	Koumac, New Ca	16.57	258	P	P	17 44 35.1	+2.9
URZ	Urewera	20.68	190	P	P	17 45 07.0	-2.2
	comp=Z,1.5nm,0.3s,baz=29,slow=18,SNR=2.7						
	comp=Z,1.5nm,0.3s						
BFZ	Birch Farm	23.19	190	P	P	17 45 31.2	-0.2
QRZ	Quartz Range	24.16	197	P	P	17 45 39.9	-0.2
QRZ	Quartz Range	24.16	197	P	P	17 45 40.1	+0.1
NNZ	Nelson	24.31	195	P	P	17 45 40.1	-1.2
THZ	Tophouse	24.94	196	P	P	17 45 45.4	-1.5
THZ				IAmb	IAmb	17 46 11.2	
	comp=Z,18nm,1.2s						
AMCZ	Amberley	26.33	195	P	P	17 45 57.9	-1.2
JCZ	Jackson Bay	28.26	200	P	P	17 46 15.2	-0.7
MLZ	Mavora Lakes	29.62	199	P	P	17 46 27.5	0.0
WHZ	Wether Hill Ro	30.15	199	P	P	17 46 30.6	-1.4
TOO	Toolangi	37.20	231	P	P	17 47 31.7	+0.8
TOO				IAmb	IAmb	17 47 56.0	
	comp=Z,30nm,1.4s						
STKA	Stephens Creek	38.65	241	P	P	17 47 43.7	+0.9
	comp=Z,1.2nm,0.3s,baz=81,slow=16,SNR=3.0						
	comp=Z,1.2nm,0.3s						
BBOO	Buckleboo	43.43	241	P	P	17 48 20.7	+0.4
BBOO				IAmb	IAmb	17 48 26.1	
	comp=Z,34nm,1.4s						
WB0	Warramunga Arr	44.62	260	P	P	17 48 29.4	-0.2
WB0				IAmb	IAmb	17 49 09.6	
	comp=Z,14nm,1.5s						
WB0				PcP	PcP	17 49 58.3	+0.1
WB2	Warramunga Arr	44.64	260	P	P	17 48 29.8	+0.1
WB2				IAmb	IAmb	17 48 49.5	
	comp=Z,15nm,1.5s						
WRA	Warramunga Arr	44.65	260	P	P	17 48 30.0	+0.2
	comp=Z,1.4nm,0.3s,baz=95,slow=7.4,SNR=27						
WRA				PcP	PcP	17 49 58.9	+0.6
	comp=Z,0.3nm,0.3s,baz=92,slow=3.5,SNR=5.1						
WRA				S	S	17 54 17.7	-4.3
	comp=Z,0.4nm,1.1s,baz=97,slow=13,SNR=1.6						
	comp=Z,1.4nm,0.3s						
AS31	Alice Springs	44.81	254	P	P	17 48 31.1	+0.1
AS31				PcP	PcP	17 49 58.6	-0.2
ASAR	Alice Springs	44.81	254	P	P	17 48 31.6	+0.6
	comp=Z,6.3nm,0.5s,baz=86,slow=8.3,SNR=58						
ASAR				PcP	PcP	17 49 57.9	-0.9
	comp=Z,1.2nm,0.5s,baz=104,slow=3.9,SNR=9.5						
ASAR				S	S	17 54 23.5	-0.8
	comp=Z,1.3nm,0.8s,baz=89,slow=15,SNR=12						
	comp=Z,6.3nm,0.5s						
ASAR	Alice Springs	44.81	254	P	P	17 48 30.9	-0.1
ASAR				PcP	PcP	17 49 58.9	+0.1
MTN	Manton Dam	48.81	268	P	P	17 49 01.1	+0.1
MTN				IAmb	IAmb	17 49 01.7	
	comp=Z,15nm,1.1s						
FORT	Forrest	50.03	245	P	P	17 49 09.7	0.0
FORT				IAmb	IAmb	17 49 46.3	
	comp=Z,14nm,0.9s						
KNRA	Kununurra	50.51	264	P	P	17 49 14.3	+1.0
KNRA				IAmb	IAmb	17 49 35.4	
	comp=Z,17nm,1.2s						
FITZ	Fitzroy Crossi	53.05	261	P	P	17 49 32.0	+0.6
SOEI	Soe	56.08	270	P	P	17 49 53.7	+0.9
SOEI				IAmb	IAmb	17 50 14.6	
	comp=Z,27nm,1.2s						
PSA00	Pilbara Seismi	57.93	255	P	P	17 50 05.1	0.0
PSA00	Pilbara Seismi	57.93	255	P	P	17 50 05.3	+0.2
PSA00				IAmb	IAmb	17 50 19.2	
	comp=Z,13nm,1.1s						
MBWA	Marble Bar	58.09	256	P	P	17 50 06.0	-0.2
MBWA				IAmb	IAmb	17 50 30.4	
	comp=Z,22nm,1.2s						
SBA	Scott Base	60.45	184	P	P	17 50 22.2	+1.5
SBA				IAmb	IAmb	17 50 43.6	
	comp=Z,17nm,1.4s						
MJB9	Matsu-Tunnel	67.90	323	P	P	17 51 15.8	+7.4
QSPA	South Pole Qui	72.17	180	P	P	17 51 33.5	+0.3
	comp=Z,3.5nm,0.7s,baz=43,slow=19,SNR=19						
	comp=Z,3.5nm,0.7s						
QSPA	South Pole Qui	72.17	180	P	P	17 51 34.2	+1.0
FALS	False Pass	73.57	9	P	P	17 51 55.1	+14
PETK	Petropavlovsk-	73.66	345	P	P	17 51 42.1	+0.5
	comp=Z,1.6nm,1.0s,baz=116,slow=6.6,SNR=6.1						
	comp=Z,1.6nm,1.0s						
ILAR	Eielson Array	85.86	13	P	P	17 52 44.2	-0.6
	comp=Z,0.3nm,0.7s,baz=224,slow=4.5,SNR=4.4						
	comp=Z,0.3nm,0.7s						
CMAR	Chiang Mai Arr	88.89	290	P	P	17 53 02.1	+2.1
	comp=Z,0.4nm,0.7s,baz=127,slow=5.8,SNR=4.3						
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	109.13	314	PKiKP	PKiKP	17 58 29.9	-0.4
	comp=Z,0.3nm,0.5s,baz=112,slow=0.4,SNR=5.1						
KURBB	Kurchatov Arra	111.87	318	PKiKP	PKiKP	17 58 34.4	-0.9
	comp=Z,0.3nm,0.7s,baz=90,slow=1.6,SNR=4.7						
BVAR	Borovoye Array	116.83	321	PKP	PKiKP	17 58 44.7	-0.1
	comp=Z,0.7nm,0.4s,baz=107,slow=2.3,SNR=5.1						
BRTR	Keskin Array B	144.77	315	PKP	PKPab	17 59 38.9	-0.5
	comp=Z,1.6nm,0.8s,baz=44,slow=1.3,SNR=7.4						
CLL	Collm	145.44	347	i PKPbc	PKPab	17 59 40.3	-1.0
	comp=Z,6.0nm,1.1s						
GERES	GERESS Array B	147.59	345	PKPbc	PKiKP	17 59 46.1	-1.1
	comp=Z,0.9nm,0.5s,baz=0.0,slow=2.9,SNR=8.8						

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*IDC **31** 17:47:52.2±2.0,21°.68N×143°.36E,h289^{km}±20^{km}, mb3.0/10,mbtmp3.7/12,Error ellipse: s-maj=40.1km s-min=13.6km az=82.0*

ISC 31 17:47:53.2±1.2,**21°.7N**±0°.1×**143°.4E**±0°.3,**h300**^{km},**n15, σ0^{s}.84**/13,**mb3.1**/9,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	5.44	349	P	Pn	17 49 16.5	+0.6
	22nm,0.3s,baz=326,slow=23,SNR=6.4						
JCJ				S	S	17 50 20.5	-1.8
	33nm,0.5s,baz=257,slow=15,SNR=1.4						
MJAR	Matsushiro Arr	15.42	344	P	Pn	17 51 15.6	-0.9
	0.5nm,0.3s,baz=171,slow=13,SNR=1.6						
KSRS	Korea Array	20.58	323	P	P	17 52 10.6	+0.7
	0.8nm,0.7s,baz=148,slow=8.6,SNR=4.1						
	0.8nm,0.7s						
KLR	Kul'dur	28.95	344	P	P	17 53 26.1	+0.9
	2.9nm,0.7s,baz=151,slow=5.9,SNR=11						
	2.9nm,0.7s						
SONM	Songino Array	39.41	320	P	P	17 54 54.6	-0.1
	0.2nm,0.5s,baz=104,slow=6.1,SNR=2.5						
	0.2nm,0.5s						
WRA	Warramunga Arr	42.35	193	P	P	17 55 18.1	-0.5
	0.7nm,0.6s,baz=15,slow=9.7,SNR=10						
	0.7nm,0.6s						
ASAR	Alice Springs	46.05	192	P	P	17 55 47.0	-0.8
	0.2nm,0.5s,baz=11,slow=7.1,SNR=5.9						
	0.2nm,0.5s						
MKAR	Makanchi Array	54.79	313	P	P	17 56 52.9	+0.4
	0.2nm,0.6s,baz=86,slow=9.2,SNR=2.6						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	57.60	317	P	P	17 57 12.3	+0.1
	0.4nm,0.4s,baz=94,slow=7.8,SNR=8.6						
	0.4nm,0.4s						
BVAR	Borovoye Array	62.74	319	P	P	17 57 47.2	+0.4
	0.8nm,0.3s,baz=96,slow=7.6,SNR=9.3						
	0.8nm,0.3s						
YKA	Yellowknife Ar	76.35	28	P	P	17 59 09.6	+0.2
	0.1nm,0.6s,baz=297,slow=5.5,SNR=2.4						
	0.1nm,0.6s						
FINES	FINESS Array B	83.21	335	P	P	17 59 45.7	-0.3
	0.7nm,0.6s,baz=79,slow=7.2,SNR=2.2						
	0.7nm,0.6s						
H03N2	Juan Fernandez	141.00	117	T	T	20 43 23.0	
	baz=271,slow=74,SNR=4.0						
H03N3	Juan Fernandez	141.00	117	T	T	20 43 24.2	
	baz=271,slow=74,SNR=4.9						
H03N1	Juan Fernandez	141.01	117	T	T	20 43 23.9	
	baz=271,slow=74,SNR=5.3						

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*IDC **31** 17:47:59.0±5.8,24°.16S×176°.83W,h0^{km},mb4.0/4, mbtmp4.0/4,Error ellipse: s-maj=233.6km s-min=39.2km az=150.0*

*NEIC **31** 17:48:13.8±0.9,23°.5S±0°.6×176°.8W±0°.4,h133^{km}±23^{km}, mb4.4/10,Error ellipse: s-maj=93.1km s-min=10.0km az=148.0*

ISC 31 17:48:14.3±2.0,**23°.6S**±0°.7×**176°.7W**±0°.3,**h150**^{km},**n16, σ0^{s}.59**/15,**mb4.1**/9,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	7.73	56	Pn	Pn	17 50 04.1	0.0
CTA	Charters Tower	34.51	268	P	P	17 54 49.3	+1.0
	3.4nm,0.6s,baz=91,slow=11,SNR=6.4						
	3.4nm,0.6s						
CTAO	Charters Tower	34.51	268	P	P	17 54 48.7	+0.4
CTAO				IAmb	IAmb	17 54 51.2	
	comp=Z,14nm,1.2s						
BBOO	Buckleboo	42.36	247	P	P	17 55 53.7	0.0
BBOO				IAmb	IAmb	17 56 07.1	
	comp=Z,18nm,1.4s						
AS31	Alice Springs	45.07	260	P	P	17 56 15.4	-0.2
AS31				IAmb	IAmb	17 56 38.7	
	comp=Z,0.7nm,1.0s						
ASAR	Alice Springs	45.07	260	P	P	17 56 15.2	-0.4
	comp=Z,1.0nm,0.8s,baz=95,slow=7.5,SNR=22						
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	45.07	260	P	P	17 56 15.4	-0.2
WB2	Warramunga Arr	45.44	265	P	P	17 56 17.9	-0.6
WB2				IAmb	IAmb	17 56 32.0	
	comp=Z,13nm,1.4s						
WB0	Warramunga Arr	45.44	265	P	P	17 56 17.8	-0.8
WB0				IAmb	IAmb	17 56 40.9	
	comp=Z,7.1nm,1.4s						
WRA	Warramunga Arr	45.45	265	P	P	17 56 17.7	-0.8
	comp=Z,1.1nm,0.4s,baz=103,slow=8.3,SNR=38						
	comp=Z,1.1nm,0.4s						
WRA	Warramunga Arr	45.45	265	P	P	17 56 17.8	-0.8
FORT	Forrest	49.26	249	P	P	17 56 47.6	-0.3

MTN	Manton Dam	50.45	273	P	P	17 56 56.4	-0.6
MTN				IAmb	IAmb	17 57 39.5	
	comp=Z,16nm,1.4s						
KNRA	Kununurra	51.72	268	P	P	17 57 06.3	-0.1
FITZ	Fitzroy Crossi	53.87	264	P	P	17 57 22.6	+0.3
ILAR	Eielson Array	91.03	12	P	P	18 01 07.5	+6.6
	comp=Z,0.2nm,0.4s,baz=212,slow=6.5,SNR=5.3						
	comp=Z,0.2nm,0.4s						

WEL 31 18:12:37.4±1.0,**34˚S**±23˚×**17˚8W**±3˚0,**h33**km,**M3.8**/10, **mB4.5**/4,**ML4.0**/15,**MLv3.9**/10,**Mw(mB)3.7**/4,**Error ellipse: s-maj=0.0km s-min=0.0km az=127.1,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.25	219	P	Pn	18 13 38.5	-1.3
MXZ				S	Sn	18 14 29.9	+1.6
WMGZ	Waiomatatini S	4.39	216	P	Pn	18 13 42.4	+0.6
WMGZ				S	Sn	18 14 34.1	+2.3
PKGZ	Pakihiroa	4.62	218	P	Pn	18 13 44.2	-0.7
PKGZ				S	Sn	18 14 38.1	+0.7
PUZ	Puketiti	4.67	216	P	Pn	18 13 44.9	-0.7
PUZ				S	Sn	18 14 39.5	+0.8
HAZ	Te Kaha	4.68	222	P	Pn	18 13 46.6	+0.9
HAZ				S	Sn	18 14 41.4	+2.6
RUGZ	Raukumara Rang	4.88	221	P	Pn	18 13 48.4	-0.3
RUGZ				S	Sn	18 14 46.5	+2.4
TWGZ	Tauwhareparae	4.89	217	P	Pn	18 13 50.8	+2.2
TWGZ				S	Sn	18 14 46.4	+2.4
CNGZ	Carnagh Statio	5.02	213	P	Pn	18 13 51.2	+0.7
MWZ	Matawai	5.24	219	P	Pn	18 13 53.6	+0.2
MWZ				S	Sn	18 14 50.9	-1.7
URZ	Urewera	5.41	222	P	Pn	18 13 55.2	-0.5
URZ				S	Sn	18 14 56.5	-0.2
RIGZ	Rimuhau	5.41	215	P	Pn	18 13 56.0	+0.3
RIGZ				S	Sn	18 14 57.6	+0.7
SNGZ	Shannon Statio	5.67	217	P	Pn	18 13 59.9	+0.5
SNGZ				S	Sn	18 15 04.3	+0.9
RTZ	Ruatahuna	5.73	220	P	Pn	18 13 59.6	-0.7
MUGZ	Murupara	5.75	222	P	Pn	18 14 00.3	-0.2
BKZ	Black Stump Fm	6.40	219	P	Pn	18 14 08.9	-0.4
BKZ				S	Sn	18 15 19.2	-2.0
KAHZ	Kahuranaki	6.69	214	P	Pn	18 14 13.1	-0.3
KAHZ				S	Sn	18 15 27.4	-1.1
OTVZ	Oturere	6.85	223	P	Pn	18 14 15.1	-0.5
BHHZ	Black Hill Sta	6.86	220	P	Pn	18 14 15.6	-0.1
WNVZ	Wahianoa	7.00	223	P	Pn	18 14 17.8	+0.1

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*MAN **31** 18:13:11.4,6˚01N×126˚17E,h136km,mb4.9,ML3.8, MS3.8*

*NEIC **31** 18:13:11.3±1.6,6˚12N±0˚07×126˚27E±0˚05,h128km±7km, mb4.5/18,Error ellipse: s-maj=10.5km s-min=5.3km az=205.0*

*IDC **31** 18:13:13.1±0.8,6˚09N×125˚97E,h147km±5km,mb3.4/10, mbtmp3.8/10,Error ellipse: s-maj=44.5km s-min=12.7km az=77.0*

ISC 31 18:13:11.5±0.8,**6˚03N**±0˚04×**126˚22E**±0˚07,**h135**km±7km, **n45,**σ1ˢ**37**/60,**mb4.3**/19,**2C-5D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.22	329	P	Pn	18 13 38.3	+1.3
	199nm,0.3s,baz=100,slow=1.7,SNR=8.6						
DAV				S	Sn	18 13 57.3	+0.9
	490nm,0.4s,baz=122,slow=14,SNR=17						
DAV	Davao City (W)	1.22	329	Pn	Pn	18 13 35.3	-1.7
DAV				Sn	Sn	18 13 53.6	-2.8
GSPH	General Santos	1.26	273	⇓*i*P	Pn	18 13 37.2	-0.4
GSPH				*i* S	Sn	18 13 56.2	-1.2
BIPH	Bislig	2.15	4	⇓*i*P	Pn	18 13 48.1	+0.5
BIPH				*e*S	Sn	18 14 16.3	+1.0
CTBH	Cotabato--PC H	2.29	301	⇓*i*P	Pn	18 13 49.4	+0.1
CGP	Cagayan de Oro	2.85	328	⇓*e*P	Pn	18 13 57.1	+0.8
CGP				*e*S	Sn	18 14 33.5	+2.6
BUTP	Butuan	2.98	349	⇓*e*P	Pn	18 13 59.4	+1.3
BUTP				*e*S	Sn	18 14 38.3	+4.2
SCPH	Surigao	3.80	349	*e*P	Pn	18 14 08.7	-0.1
SCPH				*e*S	Sn	18 14 55.2	+2.0
IPIL	Ipil	4.02	296	⇑*e*P	Pn	18 14 12.9	+1.3
IPIL				*e*S	Sn	18 14 59.2	+0.8
MSLP	Maasin	4.30	342	⇑*e*P	Pn	18 14 13.6	-1.7
MSLP				*e*S	Sn	18 15 06.5	+1.5
TNTI	Ternate	5.34	168		Pn	18 14 30.5	+1.1
TNTI				Sn	Sn	18 15 28.4	-1.6
TOLI2	Tolitoli	7.30	228	Pn	Pn	18 14 56.4	+0.8
TOLI2				Sn	Sn	18 16 15.2	-1.9
MYLDM	Lahad Datu	7.73	264	Pn	Pn	18 15 03.8	+2.5
FAKI	Fak Fak	10.73	146	Pn	Pn	18 15 43.1	+1.5
MTN	Manton Dam	19.37	165	P	P	18 17 26.7	-0.3
MTN				IAmb	IAmb	18 17 39.3	
	comp=Z,16nm,1.1s						
KNRA	Kununurra	21.71	173	P	P	18 17 52.4	+0.4
KNRA				IAmb	IAmb	18 18 07.6	
	comp=Z,24nm,1.5s						
FITZ	Fitzroy Crossi	23.98	181	P	P	18 18 15.2	+1.5
WB0	Warramunga Arr	26.86	163	P	P	18 18 40.2	+0.4
WB0				IAmb	IAmb	18 19 04.7	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	27.01	163	P	P	18 18 41.9	+0.8
	comp=Z,0.3nm,0.4s,baz=329,slow=11,SNR=9.5						
WRA				PcP	PcP	18 22 00.0	+0.7
	comp=Z,0.2nm,0.4s,baz=330,slow=2.8,SNR=1.6						
	comp=Z,0.3nm,0.4s						
WRA	Warramunga Arr	27.01	163	P	P	18 18 40.5	-0.6
WB2	Warramunga Arr	27.02	163	P	P	18 18 41.3	+0.1
WB2				IAmb	IAmb	18 18 46.1	
	comp=Z,12nm,1.4s						
MBWA	Marble Bar	27.75	193	P	P	18 18 48.4	+0.7
MBWA				IAmb	IAmb	18 18 58.7	
	comp=Z,26nm,1.5s						
PSA00	Pilbara Seismi	28.13	193	P	P	18 18 51.6	+0.6
PSA00				IAmb	IAmb	18 19 05.3	
	comp=Z,18nm,1.4s						
AS31	Alice Springs	30.45	166	P	P	18 19 11.7	+0.1
ASAR	Alice Springs	30.45	166	P	P	18 19 13.1	+1.5
	comp=Z,0.5nm,0.3s,baz=341,slow=7.2,SNR=45						
ASAR				PcP	PcP	18 22 08.7	+0.7
	comp=Z,0.4nm,0.5s,baz=351,slow=2.2,SNR=8.5						
	comp=Z,0.5nm,0.3s						
ASAR	Alice Springs	30.45	166	P	P	18 19 11.9	+0.4
KSRS	Korea Array	31.32	3	P	P	18 19 20.5	+1.5
	comp=Z,0.3nm,0.4s,baz=189,slow=9.2,SNR=1.6						
	comp=Z,0.3nm,0.4s						
MORW	Morawa	36.24	195	P	P	18 20 02.5	+0.8
MORW				IAmb	IAmb	18 20 46.0	
	comp=Z,18nm,1.3s						
FORT	Forrest	36.64	177	P	P	18 20 06.2	+1.2
NWAO	Narrogin (SRO)	39.67	192	P	P	18 20 31.4	+1.0
	comp=Z,4.9nm,0.5s,baz=15,slow=14,SNR=7.5						
	comp=Z,4.9nm,0.5s						
NWAO	Narrogin (SRO)	39.67	192	P	P	18 20 31.4	+1.0
NWAO	Narrogin (SRO)	39.67	192	P	P	18 20 31.2	+0.8
NWAO				IAmb	IAmb	18 20 48.9	
	comp=Z,47nm,1.4s						
BBOO	Buckleboo	39.74	167	P	P	18 20 32.6	+1.6
BBOO				IAmb	IAmb	18 21 08.8	
	comp=Z,21nm,1.4s						
SONM	Songino Array	44.97	341	P	P	18 21 11.9	-1.4
	comp=Z,0.4nm,0.9s,baz=156,slow=7.4,SNR=2.6						
SONM				PcP	PcP	18 22 50.2	-2.0
	comp=Z,0.1nm,0.3s,baz=157,slow=4.1,SNR=1.8						
	comp=Z,0.4nm,0.9s						
MKAR	Makanchi Array	55.40	325	P	P	18 22 30.8	-1.0
	comp=Z,0.3nm,0.4s,baz=113,slow=8.4,SNR=7.3						
MKAR				PcP	PcP	18 23 30.1	-0.4
	comp=Z,0.5nm,0.6s,baz=112,slow=3.9,SNR=6.5						
	comp=Z,0.3nm,0.4s						
KDJ	Kajisay	56.31	318	P	P	18 22 38.1	-0.5
MIDW	Midway	57.69	60	P	P	18 22 46.9	-1.3
KURK	Kurchatov	59.55	327	P	P	18 22 60.0	-0.7
KURK				IAmb	IAmb	18 23 07.6	
	comp=Z,3.5nm,1.5s						
GAR	Garm	60.01	312	P	P	18 23 03.1	-1.2
GAR				IAmb	IAmb	18 23 04.2	
	comp=Z,3.0nm,0.7s						
ABKAR	Akbulak array	70.06	320	P	P	18 24 07.9	-1.0
IMAR	Indian Mountai	80.47	24	P	P	18 25 07.2	-0.9
ILAR	Eielson Array	83.26	26	P	P	18 25 23.1	+0.3
	comp=Z,0.2nm,0.5s,baz=260,slow=5.4,SNR=4.7						
	comp=Z,0.2nm,0.5s						
ARCES	ARCESS Array B	88.13	340	P	P	18 25 46.2	-0.5
	comp=Z,2.9nm,0.8s,baz=92,slow=5.8,SNR=5.0						
	comp=Z,2.9nm,0.8s						
BRTR	Keskin Array B	88.17	310	P	P	18 25 46.4	-1.3
	comp=Z,0.5nm,0.8s,baz=124,slow=6.5,SNR=2.1						
	comp=Z,0.5nm,0.8s						
FINES	FINESS Array B	89.58	332	P	P	18 25 52.4	-1.2
	comp=Z,1.0nm,0.6s,baz=90,slow=5.6,SNR=5.4						
	comp=Z,1.0nm,0.6s						

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*NEIC **31** 18:28:50.6±1.4,4˚6S±0˚1×125˚8E±0˚1,h432km±17km, mb4.1/7,Error ellipse: s-maj=21.1km s-min=13.7km az=69.0*

*DJA **31** 18:28:50.5±0.5,5˚S±5˚×12˚6E±˚,h412km±8km,M4.1/8, mb4.3/6,mB4.5/4,MLv4.1/8,Mw(mB)3.6/4*

*IDC **31** 18:28:52.2±7.4,4˚37S×126˚28E,h473km±106km,mb3.1/3, mbtmp4.1/4,Error ellipse: s-maj=190.4km s-min=35.1km az=65.0*

ISC 31 18:28:49.9±0.7,**4˚48S**±0˚07×**125˚88E**±0˚08,**h450**km,**n44,** σ1ˢ**60**/47,**mb3.9**/4,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANI	Sanana	2.42	3	P	P	18 29 51.8	-1.2
SANI	Sanana	2.42	3	P	P	18 29 51.4	-1.6
SANI				S	S	18 30 39.8	-4.3
MSAI	Masohi	3.24	70	P	P	18 29 57.2	-1.7
MSAI				S	S	18 30 50.0	-4.8
BNDI	Bandanaira	4.01	91	P	P	18 30 04.1	-1.1
LUWI	Luwuk	4.62	318	P	P	18 30 10.0	-0.7
TNTI	Ternate	5.42	16	P	P	18 30 19.6	+1.1
SOEI	Soe	5.48	197	P	P	18 30 18.0	-1.2
SOEI				S	S	18 31 27.5	-4.5
SOEI	Soe	5.48	197	P	P	18 30 18.0	-1.2
MMRI	Maumere	5.49	221	P	P	18 30 17.9	-1.2
MRSI	Marisa	6.30	321	P	P	18 30 27.2	-0.2
	75nm,0.6s,0.3nm						
SAUI	Saumlaki	6.41	123	P	P	18 30 28.1	-0.5
FAKI	Fak Fak	6.54	77	P	P	18 30 29.5	-0.5
FAKI	Fak Fak	6.54	77	P	P	18 30 29.7	-0.2
FAKI	Fak Fak	6.54	77	P	P	18 30 29.6	-0.3
	65nm,0.7s,2µm0.4nm						
TOLI2	Tolitoli	7.54	317	P	P	18 30 40.1	-0.3
TOLI2	Tolitoli	7.54	317	P	P	18 30 40.5	0.0
MTN	Manton Dam	9.80	148	P	P	18 31 04.8	-0.2
MTN	Manton Dam	9.80	148	P	P	18 31 04.7	-0.2
KDU	Kakadu	10.44	142	P	P	18 31 11.8	-0.1
KNRA	Kununurra	11.48	166	P	P	18 31 23.1	-0.1
KNRA	Kununurra	11.48	166	P	P	18 31 23.3	+0.1
JAGI	Jajag, Banyuwa	12.31	251	P	P	18 31 30.9	-1.3
FITZ	Fitzroy Crossi	13.54	181	P	P	18 31 44.9	-0.6
KKM	Kota Kinabalu	14.23	317	P	P	18 31 56.0	+2.9
WB0	Warramunga Arr	17.31	152	P	P	18 32 24.6	-1.0
WB0				IAmb	IAmb	18 32 27.4	
	comp=Z,8.2nm,0.6s						
WRAB	Tennant Creek	17.44	152	P	P	18 32 26.6	-0.4
WRA	Warramunga Arr	17.44	152	P	P	18 32 25.9	-1.1
	comp=Z,7.3nm,0.6s,baz=334,slow=10.0,SNR=77						
WRA	Warramunga Arr	17.44	152	P	P	18 32 25.1	-1.9
BBJI	Bungbulang	18.37	260	P	P	18 32 35.0	-1.5
COEN	Coen	19.48	120	P	P	18 32 48.1	+1.3
WRKA	Warakurna	20.57	174	P	P	18 32 57.7	+1.1
AS31	Alice Springs	20.59	159	P	P	18 32 58.3	+1.5
AS31				IAmb	IAmb	18 32 59.8	
	comp=Z,3.3nm,0.8s						
ASAR	Alice Springs	20.59	159	P	P	18 32 57.5	+0.7
	comp=Z,3.5nm,0.3s,baz=332,slow=7.8,SNR=99						
	comp=Z,3.5nm,0.3s						
ASAR	Alice Springs	20.59	159	P	P	18 32 58.5	+1.7
QIS	Mount Isa	20.82	141	P	P	18 33 00.0	+1.0
MTSU	Mount Surprise	22.57	128	P	P	18 33 16.0	+1.2
OOD	Oodnadatta	25.00	159	P	P	18 33 37.5	+1.1
FORT	Forrest	26.24	176	P	P	18 33 48.0	+0.7
FORT				IAmb	IAmb	18 34 26.1	
	comp=Z,19nm,1.1s						
FORT	Forrest	26.24	176	P	P	18 33 48.1	+0.7
BBOO	Buckleboo	29.75	163	P	P	18 34 18.6	+0.4
BBOO				IAmb	IAmb	18 35 00.3	
	comp=Z,19nm,1.2s						
STKA	Stephens Creek	30.99	153	P	P	18 34 30.1	+1.2
	comp=Z,3.3nm,0.8s,baz=328,slow=9.5,SNR=4.0						
	comp=Z,3.3nm,0.8s						
STKA	Stephens Creek	30.99	153	P	P	18 34 30.1	+1.2
STKA				IAmb	IAmb	18 34 32.0	
	comp=Z,0.9nm,1.0s						
MKAR	Makanchi Array	63.91	328	P	P	18 38 38.5	+1.1
	comp=Z,0.2nm,0.5s,baz=115,slow=7.3,SNR=4.0						
	comp=Z,0.2nm,0.5s						
MKAR	Makanchi Array	63.91	328	P	P	18 38 38.3	+0.9

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*SJA **31** 18:44:36.8±1.0,30˚74S×71˚61W,h26km±3km,ML5.1, MW5.0,Hypocentre not reviewed by the ISC*

*MOS **31** 18:44:38.2±1.4,30˚71S×71˚30W,h42km,mb5.4/16,Error ellipse: s-maj=14.4km s-min=6.6km az=95.0*

*GUC **31** 18:44:39.5±0.7,30˚74S×71˚35W,h40km±2km,ML5.0*

*NEIC **31** 18:44:39.6±1.8,30˚76S±0˚03×71˚49W±0˚06,h42km±3km, mb5.2/249,Mwr5.3/71,Mww5.2/18,ML5.1(GUC),Error ellipse: s-maj=7.8km s-min=4.9km az=93.0,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}7.16; $M_{\theta\theta}$1.39; $M_{\phi\phi}$-8.55; $M_{r\theta}$0.94; $M_{\theta\phi}$-0.01; $M_{\phi r}$-4.99; Fault plane solution: $M_0$9.43000×10^{16} NP1:ϕ_s8.27000°, δ29.28000°,λ103.10000°. NP2:ϕ_s173.33000°,δ61.56000°, λ82.76000°. Principal axes: T 8.7196, Plg72.0000°, Azm66.0000°; N 1.2846, Plg6.0000°, Azm177.0000°; P -10.0042, Plg16.0000°, Azm269.0000°;*

*NEIC **31** 18:44:40.7,30˚86S×71˚53W,h46km,Moment Tensor Solution. Duration: 1ˢ9 Moment tensor: Scale 10^{16}Nm; M_{rr}8.14; $M_{\theta\theta}$0.08; $M_{\phi\phi}$-8.21; $M_{r\theta}$0.78; $M_{\theta\phi}$0.70; $M_{\phi r}$-3.33; Fault plane solution: $M_0$8.89000×10^{16} NP1: ϕ_s171.95000°,δ56.28000°,λ86.36000°. NP2: ϕ_s358.48000°,δ33.89000°,λ95.43000°. Principal axes: T 8.8328, Plg78.0000°, Azm69.0000°; N 0.1106, Plg3.0000°, Azm174.0000°; P -8.9434, Plg11.0000°, Azm265.0000°;*

*VAO **31** 18:44:40.6±0.3,30˚80S×71˚35W,h46km,mb5.0*

*NEIC **31** 18:44:40.3,30˚76S×71˚51W,h42km*

*NEIC **31** 18:44:40.7,30˚76S×71˚41W,h46km*

*IDC **31** 18:44:41.3±2.5,30˚74S×71˚28W,h57km±22km,mb4.6/23, mbtmp4.8/27,ML4.8/4,MS4.4/45,Error ellipse: s-maj=15.4km s-min=10.4km az=78.0*

*GCMT **31** 18:44:43.6±0.2,30˚83S±0˚01×71˚61W±0˚01,h42km, MW5.3/120,Moment Tensor Solution. s88,c122; s120,c173; Duration: 1ˢ0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.86±.02; $M_{\theta\theta}$-0.04±.02; $M_{\phi\phi}$-0.82±.02; $M_{r\theta}$0.12±.01; $M_{\theta\phi}$0.07±.01; $M_{\phi r}$-0.49±.02; Best double couple: $M_0$0.98500×10^{17} NP1:ϕ_s171.00000°,δ60.00000°, λ86.00000°. NP2:ϕ_s358.00000°,δ30.00000°,λ97.00000°. Principal axes: T 1.0030, Plg74.0000°, Azm71.0000°; N -0.0350, Plg3.0000°, Azm173.0000°; P -0.9680, Plg15.0000°, Azm263.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 18:44:39.1±0.5,**30˚74S**±0˚03×**71˚47W**±0˚03,**h41**km±3km, **n806,**σ1ˢ**62**/806,**mb5.2**/147,**MS4.6**/48,**13C-8D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.15	295		Pn	18 44 47.5	+1.3
CO06				Sn	Sn	18 44 53.4	+2.2
CO06	Fray Jorge	0.15	295	⇓*i*P	Pn	18 44 47.5	+1.3
CO06				*e*S	Sn	18 44 54.0	+2.8
CO06				IAML		18 44 55.2	
	comp=N,283µm,0.2s						
CO02	Combarbal	0.62	139	Pn	Pn	18 44 51.6	-0.1
CO02				Sn	Sn	18 45 00.6	+0.1
CO02	Combarbal	0.62	139	*e*P	Pn	18 44 51.7	0.0
CO02				*e*S	Sn	18 45 00.8	+0.3
CO02	Combarbal	0.62	139	*i* P		18 44 51.7	
CO02				*i* S		18 45 01.0	
CO02				IAML		18 45 02.4	
	comp=Z,28nm,0.6s						
CO03	El Pedregal	0.68	99	Pn	Pn	18 44 52.5	0.0
CO03				Sn	Sn	18 45 01.7	-0.3
CO03	El Pedregal	0.68	99	*e*P	Pn	18 44 52.6	+0.1
CO03				*e*S	Sn	18 45 02.2	+0.2
CO03				IAML		18 45 04.0	
	comp=E,128µm,0.7s						
CO03	El Pedregal	0.68	99	*i* P		18 44 52.6	
CO03				*i* S		18 45 02.2	
CO03				IAML		18 45 02.7	
	comp=Z,73µm,0.9s						
GO04	Tololo Observa	0.81	46	Pn	Pn	18 44 54.9	+0.5
GO04				Sn	Sn	18 45 06.2	+0.8
GO04	Tololo Observa	0.81	46	*e*P	Pn	18 44 55.0	+0.5
GO04				*e*S	Sn	18 45 06.6	+1.2
GO04				IAML		18 45 08.9	
	comp=E,238µm,0.5s						
GO04	Tololo Observa	0.81	46	*i* P		18 44 55.0	
GO04				*i* S		18 45 07.5	
CO01	Juntas del Tor	1.41	58		Pn	18 45 03.8	+1.2
CO01				Sn	Sn	18 45 19.9	-0.3
CO01	Juntas del Tor	1.41	58	⇓*i*P	Pn	18 45 04.1	+1.5
CO01				*e*S	Sn	18 45 20.3	+0.2
CO01				IAML		18 45 23.9	
	comp=E,20µm,0.5s						
CO01	Juntas del Tor	1.41	58	*i* P		18 45 04.2	
CO01				*i* S		18 45 22.9	
CO01				IAML		18 45 23.9	
	comp=Z,14µm,0.2s						
VA06	Catapilco	1.82	175	Pn	Pn	18 45 08.6	+0.6
VA06				Sn	Sn	18 45 29.3	-0.6
VA06	Catapilco	1.82	175	*e*P	Pn	18 45 08.6	+0.6
LCO	Las Campanas	1.85	21	Pn	Pn	18 45 09.9	+1.3
LCO	Las Campanas	1.85	21	⇓*i*P	Pn	18 45 09.9	+1.3
LCO				*e*S	Sn	18 45 32.5	+1.6
LCO	Las Campanas	1.85	21	P	Pn	18 45 09.9	+1.3
LCO	Las Campanas	1.85	21	*i* P		18 45 09.9	
LCO				IAML		18 45 45.1	
	comp=Z,16µm,1.1s						
DOCA	Reserva Natura	2.07	96	*i* P		18 45 14.4	
DOCA				*i* S		18 45 42.1	
RTLS	Leoncito	2.14	120	*i* P		18 45 16.1	
RTLS				*i* S		18 45 44.0	
RTLS				IAML		18 45 47.8	
	comp=Z,34µm,0.9s						
AC05	El Transito	2.16	29	Pn	Pn	18 45 14.8	+2.0
AC05	El Transito	2.16	29	⇓*i*P	Pn	18 45 15.1	+2.2
AC05				*e*S	Sn	18 45 41.9	+3.4
AC05				IAML		18 45 51.4	
	comp=N,14µm,0.8s						
AC05	El Transito	2.16	29	*i* P		18 45 15.1	
AC05				IAML		18 46 04.0	
	comp=Z,10µm,1.1s						
VA03	San Esteban	2.17	159		Pn	18 45 13.9	+1.1
VA03	San Esteban	2.17	159	*e*P	Pn	18 45 14.6	+1.7
VA03				*e*S	Sn	18 45 41.7	+3.2
VA03	San Esteban	2.17	159	*i* P		18 45 14.6	
VA03				*i* S		18 45 42.0	
VA03				IAML		18 45 52.9	
	comp=Z,38µm,0.7s						
ROCH	El Roble	2.26	170	*e*P	Pn	18 45 15.4	+1.1
ROCH				*e*P		18 45 15.4	
ROCH				*e*S	Sn	18 45 43.6	+2.5
ROCH				*e*S		18 45 45.9	
ROC1	El Roble	2.26	170		Pn	18 45 14.9	+0.6
ROC1	El Roble	2.26	170	*i* P		18 45 15.3	
VA01	Torpederas	2.28	184	Pn	Pn	18 45 14.4	+0.1
VA01	Torpederas	2.28	184	*e*P	Pn	18 45 14.5	+0.1
VA01				*e*S	Sn	18 45 41.3	+0.2
VA01				IAML		18 45 50.4	
	comp=E,24µm,0.3s						
VA01	Torpederas	2.28	184	*i* P		18 45 14.3	
VA01				IAML		18 45 53.2	
	comp=Z,13µm,1.1s						
PEL	Peldehue	2.49	165		Pn	18 45 18.4	+1.2
PEL	Peldehue	2.49	165	*e*P	Pn	18 45 18.8	+1.5
PEL				*e*S	Sn	18 45 48.8	+2.4
PEL	Peldehue	2.49	165	P	Pn	18 45 18.4	+1.2
PEL	Peldehue	2.49	165	*i* P		18 45 18.8	
ZON	Zonda	2.53	109		Pn	18 45 20.2	+2.5
ZON	Zonda	2.53	109	P	Pn	18 45 20.3	+2.5
ZON	Zonda	2.53	109	*i* P		18 45 21.0	
ZON				IAML		18 46 14.7	
	comp=Z,15µm,0.6s						
MT02	Curacav	2.53	174		Pn	18 45 18.1	+0.3
MT02	Curacav	2.53	174	*e*P	Pn	18 45 18.6	+0.9
MT02				*e*S	Sn	18 45 50.8	+3.4
MT02	Curacav	2.53	174	*i* P		18 45 18.8	
MT02				IAML		18 46 02.3	
	comp=Z,26µm,0.6s						
AC04	Llanos de Chal	2.55	8	Pn	Pn	18 45 19.4	+1.4
AC04	Llanos de Chal	2.55	8	*i* P		18 45 19.3	
AC04				IAML		18 46 06.1	
	comp=Z,5µm,0.9s						
RTLL	Cerro Villicun	2.64	104	*i* P		18 45 22.0	
RTLL				IAML		18 46 25.7	
	comp=Z,7µm,0.7s						
MT10	Hacienda Santa	2.65	163	*e*P	Pn	18 45 21.2	+1.7
MT10				*e*S	Sn	18 45 55.9	+5.4
MT05	Renca	2.72	167	Pn	Pn	18 45 20.9	+0.5
MT05	Renca	2.72	167	*e*P	Pn	18 45 22.3	+1.9
MT05				*e*S	Sn	18 45 55.2	+3.1
MT05	Renca	2.72	167	*i* P		18 45 22.0	
MT05				IAML		18 46 07.2	
	comp=Z,27µm,1.1s						
FCH	Farellones	2.77	159	*e*P	Pn	18 45 24.4	+3.0
FCH				*e*S	Sn	18 46 00.8	+7.1
MT03	Universidad Ad	2.87	164		Pn	18 45 23.5	+1.0
MT03	Universidad Ad	2.87	164	*e*P	Pn	18 45 24.8	+2.3
MT03				*e*S	Sn	18 46 01.0	+5.3
MT03	Universidad Ad	2.87	164	*i* P		18 45 24.5	
MT03				IAML		18 46 14.5	
	comp=Z,31µm,0.7s						
MT04	Ro Olivares	2.89	157	*e*P	Pn	18 45 26.0	+3.1
MT04				*e*S	Sn	18 46 01.2	+4.7
CFA	Coronel Fontan	2.91	108	P	Pn	18 45 25.8	+2.8
	comp=Z,3µm,0.6s,baz=293,slow=12,SNR=1050						
CFA				S	Sn	18 46 02.7	+6.1
	comp=Z,8µm,0.4s,baz=55,slow=22,SNR=12						
CFA	Coronel Fontan	2.91	108	*i* P		18 45 25.8	
CFA				IAML		18 46 21.7	
	comp=Z,8µm,0.6s						
ASAL	Salagasta	2.91	130	*i* P		18 45 26.7	
ASAL				IAML		18 46 23.7	
	comp=Z,2µm,1.5s						
VA05	Santo Domingo	2.91	182	Pn	Pn	18 45 22.8	-0.2
VA05	Santo Domingo	2.91	182	*e*P	Pn	18 45 23.0	0.0
VA05				*e*S	Sn	18 46 04.7	+7.9
MT08	Bocatoma Ro	2.97	156		Pn	18 45 24.9	+0.9
MT08	Bocatoma Ro	2.97	156	*e*P	Pn	18 45 27.6	+3.6
MT08				*e*S	Sn	18 46 04.7	+6.2
ARCO	CERRO ARCO	3.01	135	*i* P		18 45 29.0	
ARCO				IAML		18 46 16.8	
	comp=Z,711nm,0.9s						
MT09	Talagante	3.06	172		Pn	18 45 25.9	+0.8
MT09	Talagante	3.06	172	*e*P	Pn	18 45 26.3	+1.2
MT09				*e*S	Sn	18 46 01.6	+1.1
MT12	Pirque	3.09	166	*e*P	Pn	18 45 26.9	+1.5
MT12				*e*S	Sn	18 46 05.8	+4.7
MT01	Popeta	3.12	177		Pn	18 45 26.4	+0.6
MT01	Popeta	3.12	177	*e*P	Pn	18 45 27.3	+1.4
MT01				*e*S	Sn	18 46 03.7	+1.8
MT01	Popeta	3.12	177	*i* P		18 45 27.2	
MT01				IAML		18 46 18.8	
	comp=Z,13µm,0.7s						
MT13	San Alfonso	3.16	162		Pn	18 45 27.6	+1.1
MT13	San Alfonso	3.16	162	*e*P	Pn	18 45 29.5	+3.0
MT13				*e*S	Sn	18 46 06.7	+3.7
AAGR	Agrelo	3.25	137	*i* P		18 45 31.4	
AAGR				IAML		18 46 52.7	
	comp=Z,2µm,1.4s						
LMEL	Las Melosas	3.28	161	Pn	Pn	18 45 29.6	+1.4
LMEL	Las Melosas	3.28	161	*e*P	Pn	18 45 30.9	+2.7
LMEL				*e*S	Sn	18 46 08.2	+2.2
GO03	Copiap	3.32	19		Pn	18 45 30.1	+1.4
GO03	Copiap	3.32	19	*i* P		18 45 30.6	
AC06	Mina Casimiro	3.51	16	Pn	Pn	18 45 32.7	+1.4
BO01	Tunca	3.66	175	*i* P		18 45 33.5	
BO01				IAML		18 46 38.7	
	comp=Z,8µm,0.6s						
BO01	Tunca	3.66	175	Pn	Pn	18 45 33.7	+0.5
BO02	Sierra Bellavi	4.08	172		Pn	18 45 39.3	+0.2
BO02	Sierra Bellavi	4.08	172	*e*P	Pn	18 45 40.6	+1.4
BO02				*e*S	Sn	18 46 32.2	+6.5
BO02	Sierra Bellavi	4.08	172	*i* P		18 45 39.8	
BO02				IAML		18 46 47.2	
	comp=Z,11µm,0.9s						

GO05	Huala	4.28	185		Pn	18 45 41.0	-0.8
GO05	Huala	4.28	185	⇑iP	Pn	18 45 41.0	-0.8
GO05				eS	Sn	18 46 28.8	-1.6
GO05	Huala	4.28	185	i P		18 45 41.0	
TINO	Tinogasta	4.33	53	i P		18 45 46.1	
AC02	Maricunga	4.40	28	Pn	Pn	18 45 45.6	+1.7
AC02	Maricunga	4.40	28	i P		18 45 46.3	
AC02				IAML		18 46 56.6	
	comp=Z,2µm,1.0s						
AC01	Pan de Azucar	4.64	10		Pn	18 45 46.3	-0.4
ML02	Panimavida	5.01	179		Pn	18 45 51.6	-0.2
GO02	Mina Guanaco	5.80	17		Pn	18 46 02.7	-0.3
BI05	Punta Hualpn	6.16	193	Pn	Pn	18 46 05.7	-1.9
PB14	IPOC Station P	6.16	9		Pn	18 46 07.5	-0.5
H03N1	Juan Fernandez	6.86	245	P	Pn	18 46 17.4	+0.5
	baz=114,slow=19,SNR=8927						
H03N1				T	T	18 53 09.5	
	baz=73,slow=72,SNR=2778						
VA04	Juan Fernndez	6.87	243	Pn	Pn	18 46 16.2	-1.2
VA04	Juan Fernndez	6.87	243	eP	Pn	18 46 16.6	-0.8
H03N3	Juan Fernandez	6.88	245	P	Pn	18 46 17.5	+0.3
	baz=114,slow=19,SNR=6283						
H03N3				T	T	18 53 08.9	
	baz=73,slow=72,SNR=3590						
H03N2	Juan Fernandez	6.88	245	P	Pn	18 46 17.5	+0.4
	baz=114,slow=19,SNR=3965						
H03N2				T	T	18 53 11.1	
	baz=73,slow=72,SNR=3858						
H03S3	Juan Fernandez	7.01	242	P	Pn	18 46 18.3	-0.7
	baz=42,slow=74,SNR=91						
H03S3				T	T	18 53 32.1	
	baz=84,slow=74,SNR=114						
H03S1	Juan Fernandez	7.01	242	P	Pn	18 46 17.9	-1.1
	baz=138,slow=74						
H03S1				T	T	18 53 30.8	
	baz=84,slow=74,SNR=99						
H03S2	Juan Fernandez	7.03	242	P	Pn	18 46 18.1	-1.1
H03S2				T	T	18 53 40.1	
	baz=84,slow=74,SNR=174						
PB10	IPOC Station P	7.24	7	Pn	Pn	18 46 20.9	-1.6
PB15	IPOC Station P	7.71	14		Pn	18 46 27.6	-1.5
LVC	Limon Verde	8.41	16	P	Pn	18 46 37.2	-1.7
	comp=Z,7.5nm,0.3s,baz=194,slow=9.4,SNR=14						
LVC				S	Sn	18 48 20.8	+8.0
	comp=Z,110nm,0.7s,baz=228,slow=19,SNR=3.5						
LVC				LR	LR	18 50 10.9	
	comp=Z,3µm,21.0s,baz=212,slow=39						
LVC	Limon Verde	8.41	16	Pn	Pn	18 46 37.1	-1.8
LVC	Limon Verde	8.41	16	eP	Pn	18 46 40.0	+1.1
PB04	IPOC Station P	8.46	8	Pn	Pn	18 46 38.2	-1.1
PB03	IPOC Station P	8.79	11		Pn	18 46 41.4	-2.5
GO06	Curarrehue	8.82	180	Pn	Pn	18 46 43.2	-1.1
LR03	Panguipulli	8.90	184	Pn	Pn	18 46 43.9	-1.3
PB07	IPOC Station P	9.09	9		Pn	18 46 45.8	-2.1
PB09	IPOC Station P	9.13	13		Pn	18 46 47.3	-1.2
PB02	IPOC Station P	9.49	9		Pn	18 46 51.1	-2.3
PB01	IPOC Station P	9.82	11		Pn	18 46 55.0	-2.9
VACA	Villa Angela C	9.91	75	eP	Pn	18 46 59.1	+0.1
PLCA	Paso Flores	10.00	176	P	Pn	18 47 00.4	+0.1
	comp=Z,1.5nm,0.3s,baz=343,slow=10,SNR=38						
PLCA				S	Sn	18 48 56.7	+5.5
	comp=Z,43nm,1.1s,baz=359,slow=18,SNR=1.8						
PLCA				LR	LR	18 51 23.7	
	comp=Z,2µm,21.8s,baz=346,slow=40						
	comp=Z,5.1nm,0.4s						
PLCA	Paso Flores	10.00	176	Pn	Pn	18 47 00.2	-0.1
PLCA	Paso Flores	10.00	176	eP	Pn	18 47 00.7	+0.4
LL04	Puerto Octay	10.18	184	Pn	Pn	18 47 00.8	-1.8
TA01	Diego Aracena	10.20	7	Pn	Pn	18 47 02.8	-0.2
LL03	Petrohue	10.40	184		Pn	18 47 03.0	-2.7
TRQA	Tornquist	10.71	136	Pn	Pn	18 47 09.1	-0.9
TRQA	Tornquist	10.71	136	P	Pn	18 47 09.1	-0.9
LL06	Loncomilla	11.58	188	Pn	Pn	18 47 19.7	-2.2
MECA	Mercedes	11.62	86	eP	Pn	18 47 20.8	-1.6
MNMC	Minye Minye	11.68	9		Pn	18 47 21.1	-2.4
PB12	IPOC Station P	12.12	5	Pn	Pn	18 47 27.5	-1.8
LPA	La Plata	12.12	114	i P	P	18 47 41.0	-0.1
LPA				S	Sn	18 49 49.4	+6.3
LPA				SS	S	18 50 06.5	-4.0
LPA				PCP	PcP	18 53 10.8	-0.6
LPA				SCS	ScS	19 00 13.7	-3.3
LPA				PKIKP	PKiKP	19 01 10.5	+1.3
LPA				SKIKP		19 04 23.7	
LPA				PKIKS		19 04 29.7	
LPA				SKIKS		19 08 12.4	
AP01	Chacalluta	12.36	5	Pn	Pn	18 47 29.7	-2.8
LL02	Futaleuf	12.43	181	Pn	Pn	18 47 30.2	-3.3
GO07	Milladeo Hill,	12.47	187		Pn	18 47 30.3	-3.7
ESFA	Espinillo Form	12.85	67	eP	Pn	18 47 38.9	-0.3
ITQB	Itaqui	12.89	89	Pn	Pn	18 47 37.6	-2.2
ITQB	Itaqui	12.89	89	eP	Pn	18 47 37.6	-2.2
CPUP	Villa Florida	13.19	74	P	Pn	18 47 42.3	-1.5
	comp=Z,2.2nm,0.3s,baz=253,slow=13,SNR=11						
CPUP				S	Sn	18 50 11.6	+2.5
	comp=Z,71nm,0.9s,baz=281,slow=12,SNR=2.8						
CPUP				LR	LR	18 53 19.3	
	comp=Z,4µm,18.2s,baz=254,slow=40						
	comp=Z,4.5nm,0.4s						
CPUP	Villa Florida	13.19	74	Pn	Pn	18 47 41.6	-2.2
AZCA	Azaras, Argent	13.76	83	eP	Pn	18 47 49.6	-2.1
RODS	Rosario do Sul	14.04	93	eP	Pn	18 47 54.0	-1.4
LPAZ	La Paz	14.71	13	P	Pn	18 48 06.6	+1.5
	comp=Z,0.9nm,0.3s,baz=179,slow=7.8,SNR=22						
	comp=Z,28nm,0.9s						
LPAZ	La Paz	14.71	13	eP	Pn	18 48 06.4	+1.3
COYC	Coyhaique	14.82	182		Pn	18 48 07.2	+1.5
PLTB	Pedras Altas	15.32	98	eP	Pn	18 48 09.3	-3.2
MURT	Porto Murtinho	15.37	57	eP	Pn	18 48 12.1	-1.1
CPSB	Cacapava Do Su	15.54	93	eP	Pn	18 48 13.7	-1.7
CRSM	Crissiumal (Br	15.57	82	eP	Pn	18 48 15.8	0.0
AY02	Valle Explorad	15.78	184		Pn	18 48 19.0	+0.7
ALGR	Alto Alegre (B	16.14	88	eP	Pn	18 48 21.8	-1.3
AMBA	Amambai (Brazi	16.63	66	eP	Pn	18 48 27.3	-2.0
MCR1	Marechal Candi	16.67	72	eP	Pn	18 48 28.5	-1.3
BBSD	Serra de San D	16.73	39	eP	Pn	18 48 30.6	-0.1
FRBT	Francisco Belt	16.88	78	eP	Pn	18 48 32.4	-0.1
ITAB	Concordia	17.28	83	P	Pn	18 48 35.8	-1.6
ITAB	Concordia	17.28	83	eP	Pn	18 48 35.1	-2.3
SIV	San Ignacio	17.49	35	P	Pn	18 48 39.5	-0.6
	comp=Z,0.4nm,0.3s,baz=217,slow=9.0,SNR=59						
SIV				LR	LR	18 56 46.0	
	comp=Z,1µm,21.0s,baz=222,slow=42						
	comp=Z,27nm,0.6s						
AQDB	Aquidauana	17.50	58		Pn	18 48 37.9	-2.2
AQDB	Aquidauana	17.50	58	eP	Pn	18 48 38.4	-1.7
GO08	Villa O'Higgin	17.72	182	P	Pn	18 48 42.8	+0.1
PTGB	Pitanga	18.19	75	eP	P	18 48 48.2	-0.4
PTLB	Pontes e Lacer	18.96	39	P	P	18 48 56.6	-0.3
PTLB	Pontes e Lacer	18.96	39	eP	P	18 48 56.8	-0.1
NNA	Nana	19.31	344	LR	LR	18 55 01.4	
	comp=Z,701nm,19.8s,baz=166,slow=32						
PP1B	Ponte de Pedra	19.97	53	eP	P	18 49 08.4	+0.3
PCMB	Pacaembu	20.27	68	eP	P	18 49 11.3	0.0
GO09	Cerro Castillo	20.52	182		P	18 49 12.3	-1.4
GO09				IAmb	IAmb	18 49 17.0	
	comp=Z,134nm,1.1s						
VILB	Vilhena	20.54	33	P	P	18 49 13.8	-0.3
VILB				IAmb	IAmb	18 49 31.7	
	comp=Z,93nm,0.9s						
VILB	Vilhena	20.54	33	eP	P	18 49 14.1	0.0
TIJ01	Guaruva-PR	20.54	80	eP	P	18 49 12.1	-2.2
SALV	Santo Antonio	20.65	48	eP	P	18 49 15.6	+0.1
C2SB	Chapadao do Su	20.66	59	eP	P	18 49 16.4	+0.9
FRTB	Fartura	20.84	75	eP	P	18 49 17.4	0.0
MG05	Puerto Natales	20.93	182		P	18 49 17.0	-1.1
MG05				IAmb	IAmb	18 49 34.8	
	comp=Z,108nm,1.1s						
ETMB	Extrema	21.39	14	P	P	18 49 23.8	+0.5
ETMB	Extrema	21.39	14	eP	P	18 49 24.6	+1.3
ITRB	Iturama	22.00	65	eP	P	18 49 29.5	-0.4
MG02	Cerro Sombrero	22.09	176	P	P	18 49 30.4	-0.2
MG02				IAmb	IAmb	18 49 34.0	
	comp=Z,114nm,0.9s						
MG04	Isla Riesco	22.10	180	P	P	18 49 29.1	-1.6
MG04				IAmb	IAmb	18 49 44.4	
	comp=Z,92nm,0.9s						
PET01	Itanhaem-SP	22.38	79	eP	P	18 49 33.2	-0.7
GO10	Punta Arenas	22.40	179	P	P	18 49 33.2	-0.8
GO10				IAmb	IAmb	18 49 52.7	
	comp=Z,164nm,1.1s						
SPB	Sao Paulo	22.52	77	P	P	18 49 34.3	-1.1
SPB				IAmb	IAmb	18 49 38.1	
	comp=Z,85nm,1.1s						
SPB	Sao Paulo	22.52	77	eP	P	18 49 35.7	+0.3
BB19B	Bebedouro	22.74	70	eP	P	18 49 36.1	-1.8
CZSB	Cruzeiro do Su	22.92	357	P	P	18 49 40.0	+0.3
CZSB				IAmb	IAmb	18 50 01.3	
	comp=Z,66nm,0.9s						
CZSB	Cruzeiro do Su	22.92	357	eP	P	18 49 41.0	+1.3
RCLB	Rio Claro- Sao	22.93	75	eP	P	18 49 38.8	-1.0
MG03	Isla Dawson	23.11	178	P	P	18 49 39.9	-1.3
MG03				IAmb	IAmb	18 50 00.7	
	comp=Z,96nm,0.8s						
VAO	Valinhos	23.15	76	eP	P	18 49 41.6	-0.4
EFI	East Falkland	23.15	158	P	P	18 49 40.7	-1.0
EFI				IAmb	IAmb	18 50 02.2	
	comp=Z,114nm,0.8s						
EFI	East Falkland	23.15	158	ceP	P	18 49 41.6	-0.1
EFI				pmax	pmax		
	comp=Z,108nm,1.3s						
ARAG	Araguaiana, MT	23.40	55	eP	P	18 49 42.5	-1.9
PDRB	Porto dos Gac	23.43	39	eP	P	18 49 44.7	-0.1
PARB	Paraibuna	24.14	79	eP	P	18 49 50.9	-0.6
USHA	Ushuaia	24.18	176	P	P	18 49 51.9	+0.5
	comp=Z,65nm,0.7s,baz=351,slow=8.8,SNR=12						
USHA				LR	LR	18 59 44.5	
	comp=Z,2µm,22.0s,baz=2.0,slow=37						
	comp=Z,65nm,0.7s						
MG01	Puerto William	24.34	175	P	P	18 49 52.4	-0.5
ATAH	Atahualpa	24.36	343	P	P	18 49 56.0	+2.1
	comp=Z,3.9nm,0.3s,baz=316,slow=22,SNR=3.5						
ATAH				LR	LR	18 58 34.1	
	comp=Z,588nm,18.3s,baz=168,slow=34						
	comp=Z,3.9nm,0.3s						
CLDB	Colider	24.55	40	eP	P	18 49 55.7	+0.5
IPMB	Ipameri, GO	24.64	64	eP	P	18 49 55.2	-0.9
PMNB	Patos De Minas	25.73	68	eP	P	18 50 05.8	-0.1
BDFB	Brasilia	26.20	60	P	P	18 50 09.6	-0.7
	comp=Z,41nm,0.8s,baz=232,slow=7.3,SNR=37						
BDFB				LR	LR	19 01 55.5	
	comp=Z,2µm,18.4s,baz=233,slow=40						
	comp=Z,41nm,0.8s						
BDFB	Brasilia	26.20	60	P	P	18 50 09.0	-1.3
BDFB	Brasilia	26.20	60	eP	P	18 50 10.1	-0.1
VAS01	Vassouras-RJ	26.41	78	eP	P	18 50 12.2	+0.2
SNDB	Serra Nova Dou	26.41	49	eP	P	18 50 13.0	+1.0
TBTG	Tabatinga, AM	26.45	4	P	P	18 50 12.2	-0.2
TBTG				IAmb	IAmb	18 50 15.6	
	comp=Z,122nm,1.0s						
TBTG	Tabatinga, AM	26.45	4	eP	P	18 50 13.8	+1.5
DUB01	Friburgo-RJ	27.39	79	eP	P	18 50 20.8	-0.1
TEFE	Tefe	27.84	15	eP	P	18 50 26.6	+1.7
NPGB	Novo Progresso	28.00	36	eP	P	18 50 25.5	-0.7
DIAM	Diamantina, MG	28.08	70	eP	P	18 50 27.0	-0.2
MACA	Manacapuru-AM	29.26	22	eP	P	18 50 38.0	+0.5
JANB	Januaria	29.38	64	eP	P	18 50 38.2	-0.4
ALF01	Guarapari-ES	29.40	77	eP	P	18 50 38.5	-0.3
SALI	Salinas	29.79	341	P	P	18 50 41.9	-0.3
SALI				IAmb	IAmb	18 50 44.3	
	comp=Z,45nm,1.0s						
SJMB	Sao Joao De Ma	29.91	73	eP	P	18 50 42.8	-0.5
ITTB	Itaituba	30.14	33	eP	P	18 50 44.6	-0.7
RIB01	Linhares ES	30.27	75	eP	P	18 50 45.6	-0.8
SDBA	SAO DESIDERIO	30.58	59	eP	P	18 50 49.3	0.0
SGCB	S£o Gabriel d	30.74	9	eP	P	18 50 50.3	-0.2
SMTB	Santa Maria do	31.15	51	eP	P	18 50 54.9	+0.7
PRPB	Parauapebas	31.79	44	eP	P	18 50 59.8	-0.1
GUA01	Guaratinga, BA	32.12	71	eP	P	18 51 03.4	+0.7
CRUC	La Cruz	32.55	350	eP	P	18 51 07.0	+0.2
MALB	Monte Alegre	33.03	33	eP	P	18 51 09.6	-1.0
RPN	Rapa Nui	33.23	267	LR	LR	19 00 51.6	
	comp=Z,1µm,21.9s,baz=113,slow=29						
PMSA	Palmer Station	34.37	174	LR	LR	19 05 20.5	
	comp=Z,1µm,19.2s,baz=338,slow=36						
PRAC	Prado	34.41	354	eP	P	18 51 25.1	+2.4
BOAV	Boa Vista	34.56	20	P	P	18 51 23.1	-0.9
BOAV				IAmb	IAmb	18 51 25.5	
	comp=Z,50nm,1.4s						
BOAV	Boa Vista	34.56	20	eP	P	18 51 24.3	+0.3
BOAV	Boa Vista	34.56	20	eP	P	18 51 24.8	+0.8
ORTC	Ortega, Tolima	34.64	353	eP	P	18 51 27.0	+2.3
PAYG	Puerto Ayora	34.83	326	P	P	18 51 25.9	-0.4
PAYG				IAmb	IAmb	18 51 42.9	
	comp=Z,37nm,1.1s						
MCPB	Macapa, AP	35.39	35	eP	P	18 51 30.1	-1.0
ROSC	El Rosal	35.48	355	P	P	18 51 32.9	+0.6
ROSC	El Rosal	35.48	355	P	P	18 51 32.9	+0.6
ROSC				pmax	pmax		
	comp=Z,23nm,1.1s						
PLMC	San Jos del P	35.74	352	eP	P	18 51 35.0	+0.8
NORC	Norcasia	36.24	354	eP	P	18 51 42.1	+3.7
RUSC	La Rusia	36.46	357	P	P	18 51 38.8	-1.9
RUSC	La Rusia	36.46	357	eP	P	18 51 42.4	+1.6
ZARC	Zaragoza, Cauc	38.15	355	eP	P	18 51 56.0	+1.4
SDV	Santo Domingo	39.41	1	LR	LR	19 10 05.9	
	comp=Z,430nm,18.2s,baz=179,slow=39						
SDV	Santo Domingo	39.41	1	P	P	18 52 04.5	-0.9
SDV	Santo Domingo	39.41	1	eP	P	18 52 06.2	+0.9
BAUV	El Baul	39.59	5	P	P	18 52 06.1	-0.6
MDP	Montagnes des	39.93	30	LR	LR	19 10 56.2	
	comp=Z,874nm,20.1s,baz=207,slow=40						
BCIP	Isla Barro Col	40.48	347	P	P	18 52 12.3	-1.7
BCIP	Isla Barro Col	40.48	347	P	P	18 52 12.3	-1.7
BCIP				pmax	pmax		
	comp=Z,24nm,1.0s						
SJCC	San Jacinto, C	40.56	354	eP	P	18 52 15.5	+0.7
PCRV	Puerto La Cruz	41.21	10	LR	LR	19 11 19.1	
	comp=Z,1µm,20.6s,slow=39						
RIMA	Rio Macho	41.99	342	P	P	18 52 25.4	-1.3
JTS	Las Juntas de	42.80	340	P	P	18 52 32.2	-0.9
JTS	Las Juntas de	42.80	340	⇑eP	P	18 52 34.1	+1.1
JTS				pmax	pmax		
	comp=Z,24nm,1.9s						
ORTG	Ortega, Santa	43.02	340	P	P	18 52 33.3	-1.5
HZTE	Horizontes, Gu	43.39	340	P	P	18 52 35.6	-2.1
HZTE				IAmb	IAmb	18 52 54.9	
	comp=Z,92nm,1.2s						
MCLT	Moule a Chique	45.34	14	P	P	18 52 53.4	0.0
MPOM	Morne Pois Mar	46.07	14	P	P	18 52 58.8	-0.3
BIM	Bigot	46.09	14	P	P	18 52 57.9	-1.4
FDF	Fort de France	46.29	14	P	P	18 52 59.2	-1.7
FDF	Fort de France	46.29	14	P	P	18 52 59.2	-1.7
FDF				pmax	pmax		
	comp=Z,68nm,1.1s						
FDF	Fort de France	46.29	14	P	P	18 53 00.4	-0.4
ICMP	Isla Caja de M	48.58	6	P	P	18 53 18.1	-0.4
MLPR	Magueyes Islan	48.61	6	P	P	18 53 18.3	-0.5
CRPR	Cabo Rojo, PR	48.65	6	P	P	18 53 18.8	-0.3
OBIP	Obispado Ponce	48.73	6	P	P	18 53 18.5	-1.2
SABA	Saba	48.73	10	P	P	18 53 18.3	-1.4
CELP	Cerrillos	48.76	6	P	P	18 53 19.0	-1.0
TRIS	Tristan da Cun	48.83	114	P	P	18 53 20.2	-0.2
TRIS	Tristan da Cun	48.83	114	pP	pP	18 53 33.4	+1.2
SJG	San Juan	48.84	7	P	P	18 53 19.8	-0.8
SJG	San Juan	48.84	7	P	P	18 53 19.8	-0.8
SJG				pmax	pmax		
	comp=Z,47nm,1.0s						
SJG	San Juan	48.84	7	P	P	18 53 19.5	-1.0
PRSN	Puerto Rico Se	48.85	5	P	P	18 53 20.2	-0.4
MTP	Monte Pirata	48.89	7	P	P	18 53 19.8	-1.1
MTP				IAmb	IAmb	18 53 22.9	
	comp=Z,40nm,1.2s						
UUPR	Utuado, UPR, P	48.92	6	P	P	18 53 20.3	-0.9
AOPR	Arecibo Observ	49.01	6	P	P	18 53 20.8	-1.2
GCPR	Guaynabo City	49.04	7	P	P	18 53 21.1	-1.0
GCPR				IAmb	IAmb	18 53 40.7	
	comp=Z,32nm,0.9s						
BELA	Belgrano 2	50.00	170	P	P	18 53 28.8	-0.1
BELA				IAmb	IAmb	18 53 30.9	
	comp=Z,46nm,1.4s						
VNA3	Neumayer Olymp	52.20	159	P	P	18 53 45.8	+0.3
CMIG	Matias Romero	52.62	331	P	P	18 53 49.4	+0.3
	comp=Z,4.4nm,0.9s,baz=160,slow=4.0,SNR=6.9						
CMIG				LR	LR	19 11 17.3	
	comp=Z,242nm,21.3s,baz=164,slow=30						
	comp=Z,4.4nm,0.9s						
VNA2	Neumayer--Watz	52.84	158	P	P	18 53 50.2	+0.1
	baz=281,slow=8.0						
SNAA	Sanae	54.43	159	P	P	18 54 01.6	-0.2
SNAA	Sanae	54.43	159	P	P	18 54 01.7	-0.2
	comp=Z,30nm,0.7s,baz=278,slow=8.0,SNR=67						
SNAA				LR	LR	19 17 21.8	
	comp=Z,277nm,18.7s,baz=275,slow=36						
	comp=Z,30nm,0.7s						
SNAA	Sanae	54.43	159	P	P	18 54 01.5	-0.3
SNAA	Sanae	54.43	159	c iP	P	18 54 02.0	+0.1
SNAA				pmax	pmax		
	comp=Z,64nm,1.3s						
TROLL	Troll, Antarti	56.14	159	P	P	18 54 14.5	+0.3
DWPF	Disney Wildern	59.29	350	P	P	18 54 37.3	+0.7
	baz=170						
QSPA	South Pole Qui	59.49	180	LR	LR	19 19 47.1	
	comp=Z,215nm,20.2s,baz=165,slow=35						
QSPA	South Pole Qui	59.49	180	P	P	18 54 36.9	-0.9
QSPA	South Pole Qui	59.49	180	P	P	18 54 37.5	-0.4
QSPA				pP	pP	18 54 51.6	+1.6
TIGA	Tifton	62.90	348	P	P	18 55 02.4	+1.4
	baz=168						
BRAL	Brewton	63.32	345	P	P	18 55 05.7	+1.9
	baz=165						
NHSC	New Hope	64.03	352	P	P	18 55 10.6	+2.1
	baz=172						
833A	Chaparral WMA,	64.49	333	P	P	18 55 13.4	+1.8
	baz=154						
833A	Chaparral WMA,	64.49	333	P	P	18 55 14.0	+2.4
	baz=154,SNR=11						
HKT	Hockley	64.65	337	⇓eP	P	18 55 13.5	+1.0
HKT				pmax	pmax		
	comp=Z,18nm,1.2s						
LRAL	Lakeview Retre	65.11	346	P	P	18 55 17.6	+2.1
	baz=165						
VBMS	Vicksburg	65.16	342	P	P	18 55 17.9	+2.0
	baz=162						
Y52A	Lilburn	65.35	348	IAmb	IAmb	18 55 19.2	
	comp=Z,32nm,1.1s						
Y52A	Lilburn	65.35	348	P	P	18 55 18.0	+0.9
	baz=168						
Y52A				P	P	18 55 18.0	+0.9
	baz=168						
SLBS	Sierra La Lagu	65.49	321	P	P	18 55 19.6	+1.3
Y49A	Blount Mountai	65.78	346	P	P	18 55 20.9	+1.0
	baz=166						
143A	Socs Landing,	65.86	342	P	P	18 55 22.4	+2.1
	baz=161						
NATX	Nacogdoches	65.93	338	P	P	18 55 22.9	+2.0
	baz=158						
NATX	Nacogdoches	65.93	338	P	P	18 55 22.6	+1.7
	baz=158						
435B	Jarrell	66.02	336	P	P	18 55 23.2	+1.7
	baz=156						
LPIG	La Paz	66.02	321	LR	LR	19 18 00.6	
	comp=Z,110nm,21.8s,baz=182,slow=30						
W57A	Gilead	66.03	352	P	P	18 55 23.3	+1.9
	baz=172						
W57A				P	P	18 55 23.3	+1.9
	baz=172						
X51A	Calhoun	66.17	348	P	P	18 55 23.5	+1.1
	baz=168,SNR=5.9						
X51A				P	P	18 55 23.5	+1.1
	baz=168,SNR=5.9						
KMSC	Kings Mountain	66.19	351	P	P	18 55 24.3	+1.8
	baz=171						
KMSC	Kings Mountain	66.19	351	P	P	18 55 24.2	+1.8
	baz=171						
CASEE	Lake Jocassee	66.27	350	P	P	18 55 24.8	+1.8
	baz=169						
X48A	Hartselle	66.48	346	IAmb	IAmb	18 55 27.3	
	comp=Z,22nm,0.9s						
X48A	Hartselle	66.48	346	P	P	18 55 25.5	+1.2
	baz=166,SNR=7.7						
Y45A	Yeager Farm, C	66.48	344	P	P	18 55 24.1	-0.3
Y45A	Yeager Farm, C	66.48	344	P	P	18 55 26.4	+2.0
	baz=163,SNR=6.7						
W52A	Murphy	66.52	349	IAmb	IAmb	18 55 26.6	
	comp=Z,32nm,1.2s						
W52A	Murphy	66.52	349	P	P	18 55 26.0	+1.4
	baz=168						
237A	Washetta, Mont	66.53	338	P	P	18 55 26.6	+1.9
	baz=157						
JCT	Junction City	66.57	333	P	P	18 55 24.5	-0.6
JCT				IAmb	IAmb	18 55 27.9	
	comp=Z,50nm,1.3s						
JCT	Junction City	66.57	333	P	P	18 55 24.5	-0.6
JCT				pmax	pmax		
	comp=Z,50nm,1.3s						
JCT	Junction City	66.57	333	P	P	18 55 26.7	+1.6
	baz=154						
JCT	Junction City	66.57	333	P	P	18 55 27.0	+1.9
	baz=154,SNR=7.8						
V55A	Taylorsville	66.87	351	P	P	18 55 28.1	+1.3
	baz=171						
V55A				P	P	18 55 28.1	+1.3
	baz=171						
W50A	Signal Mountai	66.87	348	P	P	18 55 26.2	-0.7
W50A				IAmb	IAmb	18 55 29.4	
	comp=Z,26nm,1.0s						
W50A	Signal Mountai	66.87	348	P	P	18 55 27.9	+1.0
	baz=167,SNR=6.4						
V53A	Saluda	66.91	350	IAmb	IAmb	18 55 28.4	
	comp=Z,17nm,0.8s						
V53A	Saluda	66.91	350	P	P	18 55 28.2	+1.1
	baz=170,SNR=5.7						
V53A				P	P	18 55 28.2	+1.1
	baz=170,SNR=5.7						
CPCT	Cooper Cave	66.97	348	IAmb	IAmb	18 55 29.9	
	comp=Z,24nm,0.9s						
SWET	Sewanee	67.00	347	P	P	18 55 26.4	-1.3
SWET				IAmb	IAmb	18 55 29.6	
	comp=Z,30nm,1.1s						
U59A	Littleton	67.00	354	P	P	18 55 29.7	+2.1
	baz=174						
U59A				P	P	18 55 29.7	+2.1
	baz=174						
TKL	Tuckaleechee C	67.05	349	P	P	18 55 27.7	-0.2
	comp=Z,22nm,1.0s,baz=160,slow=7.8,SNR=11						
	comp=Z,22nm,1.0s						
TKL	Tuckaleechee C	67.05	349	P	P	18 55 29.1	+1.2
	baz=169						
OXF	Oxford	67.07	344	P	P	18 55 27.9	-0.1
OXF	Oxford	67.07	344	P	P	18 55 28.0	-0.1
OXF				pmax	pmax		
	comp=Z,65nm,1.0s						
OXF	Oxford	67.07	344	P	P	18 55 28.8	+0.7
	baz=163						
OXF	Oxford	67.07	344	P	P	18 55 29.1	+1.1
	baz=163,SNR=7.2						
WHTX	Lake Whitney,	67.08	336	P	P	18 55 29.0	+0.9
	baz=156						
WHTX	Lake Whitney,	67.08	336	P	P	18 55 29.9	+1.7
	baz=156						
TXAR	Lajitas Array	67.15	330	P	P	18 55 30.3	+1.5
	comp=Z,3.0nm,0.5s,baz=154,slow=8.5,SNR=23						
TXAR				LR	LR	19 20 48.7	
	comp=Z,245nm,18.8s,baz=142,slow=32						
	comp=Z,3.0nm,0.5s						
TX31	Lajitas Ar. Si	67.15	330	IAmb	IAmb	18 55 31.1	
	comp=Z,13nm,0.7s						
TX31	Lajitas Ar. Si	67.15	330	P	P	18 55 31.0	+2.1
	baz=150,SNR=10						
V52A	Sevierville	67.20	349	P	P	18 55 29.8	+0.9
	baz=169,SNR=5.7						
PLAL	Pickwick Lake	67.22	345	IAmb	IAmb	18 55 30.6	
	comp=Z,25nm,1.2s						
TAOE	Nuku Hiva Isla	67.22	273	eP	P	18 55 32.0	+2.3
	comp=Z,67nm,23.0s						
TAOE				eS	S	19 04 22.4	+0.5
	comp=Z,210nm,29.1s						
TAOE	Nuku Hiva Isla	67.22	273	eLR	LR	19 15 50.6	
	comp=Z,559nm,31.0s						
U56A	King	67.26	352	P	P	18 55 30.7	+1.4
	baz=172						
U56A				P	P	18 55 30.7	+1.4
	baz=172						
V51A	Loudon	67.29	349	IAmb	IAmb	18 55 32.0	
	comp=Z,25nm,0.9s						
V51A	Loudon	67.29	349	P	P	18 55 30.5	+1.0
	baz=168,SNR=5.5						
VNDA	Vanda	67.39	191	P	P	18 55 30.6	+0.9
	comp=Z,4.1nm,0.9s,baz=133,slow=4.6,SNR=9.9						
	comp=Z,4.1nm,0.9s						
T59A	Double "B" Far	67.60	355	IAmb	IAmb	18 55 33.8	
	comp=Z,27nm,0.9s						
T59A	Double "B" Far	67.60	355	P	P	18 55 32.6	+1.3
	baz=174						
T59A				P	P	18 55 32.6	+1.3
	baz=174						
U54A	Nelsons Funny	67.61	351	P	P	18 55 31.1	-0.5
U54A	Nelsons Funny	67.61	351	P	P	18 55 32.4	+0.9
	baz=170						
U54A				P	P	18 55 32.4	+0.9
	baz=170						
V48A	Smith Brothers	67.68	347	P	P	18 55 33.2	+1.2
	baz=166,SNR=7.7						
T60A	Surry	67.70	355	P	P	18 55 34.1	+2.1

	baz=175						
T60A				P	P	18 55 34.1	+2.1
	baz=175						
T57A	Hurt	67.78	353	P	P	18 55 34.7	+2.2
	baz=173						
T57A				P	P	18 55 34.7	+2.2
	baz=173						
TZTN	Tazewell	67.88	350	P	P	18 55 34.1	+0.9
	baz=169						
CLTN	Cedars of Leba	67.93	347	IAmb	IAmb	18 55 35.3	
	comp=Z,33nm,1.2s						
BLA	Blacksburg	68.11	352	P	P	18 55 36.2	+1.5
	baz=172						
BLA	Blacksburg	68.11	352	P	P	18 55 36.7	+2.0
	baz=172						
MIAR	Mount Ida	68.20	340	P	P	18 55 36.3	+1.0
	baz=160,SNR=7.6						
MIAR	Mount Ida	68.20	340	P	P	18 55 36.7	+1.5
	baz=160,SNR=7.6						
Z35A	Perchaven, San	68.23	337	P	P	18 55 37.5	+2.0
	baz=156,SNR=5.1						
U49A	Red Boiling Sp	68.23	348	P	P	18 55 36.4	+1.0
	baz=167,SNR=5.8						
FW03	Perrin-Whitt E	68.24	336	P	P	18 55 35.3	-0.2
FW03				IAmb	IAmb	18 55 38.0	
	comp=Z,26nm,1.1s						
WVT	Waverly	68.27	346	P	P	18 55 35.4	-0.2
WVT				pP	PcP	18 55 59.5	-1.5
ABTX	Abilene, Hawle	68.43	335	IAmb	IAmb	18 55 39.3	
	comp=Z,42nm,1.2s						
ABTX	Abilene, Hawle	68.43	335	P	P	18 55 38.0	+1.2
	baz=154						
ABTX	Abilene, Hawle	68.43	335	P	P	18 55 38.5	+1.7
	baz=154						
WHAR	Wooly Hollow	68.54	342	P	P	18 55 36.8	-0.5
WHAR				IAmb	IAmb	18 55 52.4	
	comp=Z,67nm,1.9s						
T50A	Nancy	68.56	349	P	P	18 55 37.9	+0.4
	baz=168						
T50A				P	P	18 55 37.9	+0.4
	baz=168						
TBI	Tubuai	68.58	255	*e*S	S	19 04 38.3	+0.5
	comp=Z,779nm,30.2s						
TBI	Tubuai	68.58	255	*e*LR	LR	19 16 27.9	
	comp=Z,3µm,27.8s						
TBI				*e*LR	LR	19 16 27.9	
	comp=Z,10µm,25.5s						
TBI	Tubuai	68.58	255	*e*T	T	20 10 14.3	
	comp=Z,28nm,0.3s						
R58B	Mineral	68.61	355	IAmb	IAmb	18 55 40.5	
	comp=Z,46nm,1.2s						
R58B	Mineral	68.61	355	P	P	18 55 39.8	+2.2
	baz=174						
R58B				P	P	18 55 39.8	+2.2
	baz=174						
X37A	Clayton	68.77	339	P	P	18 55 41.0	+2.2
	baz=158						
T47A	Sharon Grove	68.95	347	IAmb	IAmb	18 55 41.6	
	comp=Z,41nm,1.2s						
T47A	Sharon Grove	68.95	347	P	P	18 55 40.9	+1.1
	baz=166,SNR=8.1						
S51A	Beattyville	68.96	350	IAmb	IAmb	18 55 41.3	
	comp=Z,55nm,1.4s						
LCAR	Lake Charles	68.98	343	IAmb	IAmb	18 55 42.0	
	comp=Z,38nm,1.2s						
LCAR	Lake Charles	68.98	343	P	P	18 55 40.9	+0.9
	baz=162,SNR=16						
WTFS	Witchita Falls	69.04	336		P	18 55 40.8	+0.3
WTFS				IAmb	IAmb	18 55 42.8	
	comp=Z,21nm,0.9s						
ODSA	Odessa	69.11	332	IAmb	IAmb	18 55 43.4	
	comp=Z,75nm,1.2s						
R55A	Marlinton	69.14	353	P	P	18 55 42.9	+1.8
	baz=172						
R55A				P	P	18 55 42.9	+1.8
	baz=172						
BBTS	Babate	69.47	58	LR	LR	19 25 55.1	
	comp=Z,356nm,18.7s,baz=230,slow=36						
POST	Post	69.53	333	IAmb	IAmb	18 55 49.7	
	comp=Z,8.4nm,0.8s						
X34A	Smith Ranch, M	69.58	337	IAmb	IAmb	18 55 46.8	
	comp=Z,33nm,1.0s						
U40A	Yellville	69.69	342	P	P	18 55 45.5	+1.0
	baz=161,SNR=15						
U40A				P	P	18 55 45.5	+1.0
	baz=161,SNR=15						
R50A	Paris	69.70	349	IAmb	IAmb	18 55 48.2	
	comp=Z,29nm,1.4s						
R50A	Paris	69.70	349	P	P	18 55 45.3	+0.8
	baz=168						
R50A				P	P	18 55 45.3	+0.8
	baz=168						
CGM3	Cape Girardeau	69.79	345	IAmb	IAmb	18 55 46.9	
	comp=Z,33nm,1.3s						
Q56A	Snyder Ridge,	69.79	354	P	P	18 55 46.7	+1.6
	baz=173						
Q56A				P	P	18 55 46.7	+1.6
	baz=173						
MEH	Mehetia	69.80	261	*e*T	T	20 11 50.7	
	comp=Z,62nm,0.2s						
R49A	Shelbyville	69.86	349	P	P	18 55 46.5	+1.0
	baz=168						
R49A				P	P	18 55 46.5	+1.0
	baz=168						
Q54A	Coxs Mills	69.91	352	P	P	18 55 46.4	+0.6
	baz=172						
Q54A				P	P	18 55 46.4	+0.6
	baz=172						
HHAR	Hobbs	69.92	341	IAmb	IAmb	18 55 48.4	
	comp=Z,28nm,1.0s						
MNTX	Cornudas Mount	69.93	330	P	P	18 55 46.4	+0.3
	baz=149						
MNTX	Cornudas Mount	69.93	330	P	P	18 55 46.9	+0.9
	baz=149,SNR=8.3						
SDMD	Soldier’s Deli	69.97	356	P	P	18 55 48.3	+2.2
	baz=175						
WCI	Wyandotte Cave	69.99	348	P	P	18 55 46.2	-0.1
WCI	Wyandotte Cave	69.99	348	P	P	18 55 46.2	-0.1
WCI				pmax	pmax		
	comp=Z,15nm,0.8s						
WCI	Wyandotte Cave	69.99	348	P	P	18 55 46.6	+0.3
	baz=167						
WCI	Wyandotte Cave	69.99	348	P	P	18 55 46.8	+0.5
	baz=167						
WMOK	Wichita Mounta	70.03	336	P	P	18 55 47.2	+0.6
	baz=155						
Q52A	Bidwell	70.07	351	IAmb	IAmb	18 55 49.2	
	comp=Z,18nm,0.8s						
Q52A	Bidwell	70.07	351	P	P	18 55 47.9	+1.2
	baz=170						
Q52A				P	P	18 55 47.9	+1.2
	baz=170						
S44A	Carbondale	70.08	345	IAmb	IAmb	18 55 48.6	
	comp=Z,43nm,1.2s						
S44A	Carbondale	70.08	345	P	P	18 55 48.0	+1.2
	baz=164,SNR=6.7						
SIUC	Southern Illin	70.09	345	IAmb	IAmb	18 55 50.1	
	comp=Z,32nm,0.9s						
TUL1	Leonard	70.12	339	IAmb	IAmb	18 55 50.0	
	comp=Z,34nm,0.8s						
TUL1	Leonard	70.12	339	P	P	18 55 47.9	+0.8
	baz=158,SNR=5.6						
TUL1	Leonard	70.12	339	P	P	18 55 48.5	+1.4
	baz=158,SNR=5.6						
P57A	Homestead Farm	70.13	355	IAmb	IAmb	18 55 50.0	
	comp=Z,34nm,1.1s						
P57A	Homestead Farm	70.13	355	P	P	18 55 49.1	+2.1
	baz=174						
P57A				P	P	18 55 49.1	+2.1
	baz=174						
RLO	Rose Lookout	70.13	340	IAmb	IAmb	18 55 49.7	
	comp=Z,17nm,0.9s						
U38A	Gravette	70.20	341	P	P	18 55 47.8	+0.2
U38A	Gravette	70.20	341	P	P	18 55 48.9	+1.3
	baz=159						
DEOK	Depew	70.28	339	IAmb	IAmb	18 55 50.0	
	comp=Z,24nm,1.0s						
GEDE	Greenville	70.30	357	P	P	18 55 50.3	+2.2
	baz=176						
PSUB	Penn St. - Bra	70.41	357	P	P	18 55 50.4	+1.6
	baz=176						
MCWV	Mont Chateau	70.47	353	P	P	18 55 49.9	+0.8
	baz=172						
MCWV	Mont Chateau	70.47	353	P	P	18 55 51.3	+2.1
	baz=172						
P53A	Whipple	70.47	352	P	P	18 55 51.0	+1.8
	baz=171						
P53A				P	P	18 55 51.0	+1.8
	baz=171						
OK031	S. Brethren Rd	70.49	338	IAmb	IAmb	18 55 51.2	
	comp=Z,47nm,1.2s						
OK052	Battle Ridge R	70.52	338	IAmb	IAmb	18 55 52.0	
	comp=Z,36nm,1.1s						
OK033	Mehan	70.61	338	IAmb	IAmb	18 55 52.1	
	comp=Z,48nm,1.3s						
FVM	French Village	70.62	344	P	P	18 55 50.1	0.0
FVM				IAmb	IAmb	18 55 52.2	
	comp=Z,30nm,0.9s						
FVM	French Village	70.62	344	P	P	18 55 50.1	0.0
FVM				pmax	pmax		
	comp=Z,30nm,1.0s						
FVM	French Village	70.62	344	P	P	18 55 51.5	+1.3
	baz=163,SNR=8.0						
TUPA	Temple Univers	70.63	357	P	P	18 55 52.6	+2.5
	baz=177						
QUOK	Quay	70.65	339	IAmb	IAmb	18 55 52.5	
	comp=Z,32nm,1.2s						
P52A	Corning	70.71	351	IAmb	IAmb	18 55 52.6	
	comp=Z,22nm,0.8s						
P52A	Corning	70.71	351	P	P	18 55 51.0	+0.3
	baz=170						
MSTX	Muleshoe	70.82	333	IAmb	IAmb	18 55 54.3	
	comp=Z,32nm,1.1s						
MSTX	Muleshoe	70.82	333	P	P	18 55 52.6	+1.0
	baz=152						
MSTX	Muleshoe	70.82	333	P	P	18 55 53.0	+1.4
	baz=152,SNR=9.6						
CCM	Cathedral Cave	70.89	344	P	P	18 55 52.1	+0.4
CCM				IAmb	IAmb	18 55 53.8	
	comp=Z,55nm,1.2s						
CCM	Cathedral Cave	70.89	344	P	P	18 55 52.1	+0.4
CCM				pmax	pmax		
	comp=Z,55nm,1.2s						
CCM	Cathedral Cave	70.89	344	P	P	18 55 52.6	+0.8
	baz=162						
CCM	Cathedral Cave	70.89	344	P	P	18 55 53.0	+1.2
	baz=162,SNR=19						
CCM	Cathedral Cave	70.89	344	P	P	18 55 51.8	+0.1
CCM				pP	PcP	18 56 14.9	+2.8
OK048	Pawnee Station	70.95	338		P	18 55 52.7	+0.6
OK048				IAmb	IAmb	18 55 54.3	
	comp=Z,38nm,1.1s						
BLO	Bloomington	70.95	348	IAmb	IAmb	18 55 54.7	
	comp=Z,20nm,0.9s						
P49A	Miami Univ. Ec	70.99	349	P	P	18 55 52.5	+0.1
	baz=168						
OK051	E0350 and S346	71.00	339	IAmb	IAmb	18 55 54.6	
	comp=Z,47nm,1.2s						
TIAR	Tiarei	71.03	260	*e*T	T	20 13 20.7	
	comp=Z,6.4nm,0.3s						
P48A	Milroy	71.04	349	P	P	18 55 52.4	-0.2
P48A				IAmb	IAmb	18 55 54.1	
	comp=Z,17nm,0.6s						
P48A	Milroy	71.04	349	P	P	18 55 53.1	+0.5
	baz=167,SNR=6.9						
P48A				P	P	18 55 53.1	+0.5
	baz=167,SNR=6.9						
S39A	Bolivar	71.08	342	P	P	18 55 53.0	+0.1
S39A				IAmb	IAmb	18 55 55.5	
	comp=Z,29nm,1.1s						
S39A	Bolivar	71.08	342	P	P	18 55 54.1	+1.2
	baz=160,SNR=15						
O52A	Adamsville	71.15	352	IAmb	IAmb	18 55 54.7	
	comp=Z,23nm,1.1s						
O52A	Adamsville	71.15	352	P	P	18 55 54.3	+1.0
	baz=171						
O52A				P	P	18 55 54.3	+1.0
	baz=171						
AMTX	Amarillo	71.20	334	P	P	18 55 54.9	+1.0
	baz=153						
O53A	New Philadelph	71.20	352	P	P	18 55 53.8	+0.2
	baz=171						
PPT2	Papeete2	71.21	260	*e*S	S	19 05 08.7	-0.2
	comp=Z,287nm,29.0s						
PPT2	Papeete2	71.21	260	*e*LR	LR	19 17 40.6	
	comp=Z,490nm,26.0s						
PPT2				*e*LR	LR	19 17 40.7	
	comp=Z,652nm,25.0s						
SSPA	Standing Stone	71.26	355	P	P	18 55 54.9	+1.0
	baz=174						
SSPA	Standing Stone	71.26	355	P	P	18 55 54.0	0.0
SSPA				pP	PcP	18 56 13.6	0.0
SSPA				sP	sP	18 56 26.6	+16
T35A	Sooner Cattle	71.27	339	P	P	18 55 54.8	+0.7
T35A				IAmb	IAmb	18 55 56.4	
	comp=Z,27nm,1.1s						
T35B	Sooner Cattle	71.27	339	P	P	18 55 55.3	+1.1
	baz=158,SNR=6.7						
UPAO	U. Pittsburgh	71.30	353	P	P	18 55 55.5	+1.3
	baz=172						
R40A	Maddies Statio	71.36	343	P	P	18 55 55.5	+0.9
	baz=161,SNR=28						
ACSO	Alum Creek Sta	71.42	351	IAmb	IAmb	18 55 56.5	
	comp=Z,34nm,1.1s						
ACSO	Alum Creek Sta	71.42	351	P	P	18 55 55.4	+0.5
	baz=170						
ACSO	Alum Creek Sta	71.42	351	P	P	18 55 55.5	+0.6
	baz=170,SNR=6.1						
P46A	Rosedale	71.51	347	IAmb	IAmb	18 55 57.1	
	comp=Z,25nm,0.9s						
P46A	Rosedale	71.51	347	P	P	18 55 55.7	+0.2
	baz=166						
ODNJ	Ogdensburg	71.52	358	P	P	18 55 58.1	+2.6
	baz=177						
O49A	Covington	71.57	350	IAmb	IAmb	18 55 57.3	
	comp=Z,60nm,1.3s						
O49A	Covington	71.57	350	P	P	18 55 56.4	+0.6
	baz=168,SNR=5.8						
O49A				P	P	18 55 56.4	+0.6
	baz=168,SNR=5.8						
U32A	Winter Ranch,	71.59	337	IAmb	IAmb	18 55 58.4	
	comp=Z,48nm,1.1s						
U32A	Winter Ranch,	71.59	337	P	P	18 55 57.8	+1.8
	baz=155						
OK038	West end E0370	71.59	337	IAmb	IAmb	18 55 58.3	
	comp=Z,32nm,1.0s						
KAN13	South Haven SW	71.67	338	IAmb	IAmb	18 55 58.8	
	comp=Z,65nm,1.3s						
121A	Cookes Peak, D	71.71	328	P	P	18 55 58.5	+1.5
	baz=148						
121A	Cookes Peak, D	71.71	328	P	P	18 56 00.1	+3.0
	baz=148,SNR=9.4						
OK032	Salt Plains WL	71.71	338	IAmb	IAmb	18 56 00.6	
	comp=Z,26nm,1.2s						
PAMR	Moraine State	71.77	353	P	P	18 55 58.0	+1.1
	baz=172						
O48B	Farmland	71.77	349	P	P	18 55 57.4	+0.4
	baz=168,SNR=6.3						
OK035	E0210 Rd and N	71.79	337		P	18 55 57.7	+0.4
OK035				IAmb	IAmb	18 55 59.6	
	comp=Z,22nm,0.9s						
KAN01	Argonia South	71.88	338	IAmb	IAmb	18 56 00.3	
	comp=Z,53nm,1.3s						
P43A	Skaggs, Pawnee	72.00	345	IAmb	IAmb	18 56 00.0	
	comp=Z,37nm,1.2s						
P43A	Skaggs, Pawnee	72.00	345	P	P	18 55 59.3	+0.8
	baz=164						
N51A	Ashland	72.01	351	P	P	18 55 59.1	+0.6
	baz=170						
N51A				P	P	18 55 59.1	+0.6
	baz=170						
KSPA	Keystone Colle	72.05	357	P	P	18 56 00.4	+1.8
	baz=176						
M55A	Ridgway	72.16	354	IAmb	IAmb	18 56 01.9	
	comp=Z,26nm,1.1s						
M55A	Ridgway	72.16	354	P	P	18 56 00.6	+1.2
	baz=174						
M55A				P	P	18 56 00.6	+1.2
	baz=174						
NPNY	Mohonk Preserv	72.17	358	P	P	18 56 01.4	+2.0
	baz=178						
SFIN	Lafayette	72.23	348	P	P	18 56 01.7	+2.0
	baz=166						
N49A	Columbus Grove	72.27	350	P	P	18 56 00.7	+0.8
	baz=169,SNR=8.1						
N49A				P	P	18 56 00.7	+0.8
	baz=169,SNR=8.1						
L64A	Middleborough	72.32	0	P	P	18 56 01.7	+1.5
	baz=181						
L64A				P	P	18 56 01.7	+1.5
	baz=181						
M53A	WI Miller and	72.32	353	P	P	18 56 01.1	+0.8
	baz=172						
N47A	Urbana	72.47	349	P	P	18 56 00.3	-0.8
N47A	Urbana	72.47	349	P	P	18 56 01.3	+0.2
	baz=167,SNR=5.6						
N47A				P	P	18 56 01.3	+0.2
	baz=167,SNR=5.6						
P40A	Paris	72.48	343	P	P	18 56 02.5	+1.2
	baz=162,SNR=20						
M50A	Fremont	72.57	351	P	P	18 56 02.6	+0.8
	baz=170						
M50A				P	P	18 56 02.6	+0.8
	baz=170						
L59A	Walton	72.64	357	P	P	18 56 04.1	+1.8
	baz=177						
L59A				P	P	18 56 04.1	+1.8
	baz=177						
BINY	Binghamton	72.70	356	P	P	18 56 04.3	+1.8
	baz=176						
L56A	Greenwood	72.73	355	IAmb	IAmb	18 56 05.2	
	comp=Z,32nm,1.1s						
L56A	Greenwood	72.73	355	P	P	18 56 04.3	+1.5
	baz=175,SNR=5.5						
L56A				P	P	18 56 04.3	+1.5
	baz=175,SNR=5.5						
HDIL	Hopedale	72.83	346	P	P	18 56 03.5	+0.2
	baz=164						
HDIL	Hopedale	72.83	346	P	P	18 56 04.3	+0.9
	baz=164						
L61B	Northampton	72.84	359	P	P	18 56 05.0	+1.7
	baz=179						
L61B	Northampton	72.84	359	P	P	18 56 05.5	+2.1
	baz=179						
HRV	Adam Dziewonsk	72.89	360	P	P	18 56 05.1	+1.5
	baz=180						
ERPA	Erie	72.92	353	P	P	18 56 04.5	+0.6
	baz=172						
ERPA	Erie	72.92	353	P	P	18 56 05.6	+1.7
	baz=172						
TUC	Tucson	72.93	326	P	P	18 56 06.0	+1.8
	baz=145						
P38A	Dawn	72.95	342	IAmb	IAmb	18 56 06.3	
	comp=Z,39nm,1.1s						
P38A	Dawn	72.95	342	P	P	18 56 05.5	+1.5
	baz=160,SNR=11						
WVNY	West Valley, N	73.08	354	IAmb	IAmb	18 56 25.1	
	comp=Z,42nm,1.1s						
WVNY	West Valley, N	73.08	354	P	P	18 56 06.6	+1.8
	baz=174						
HCNY	Howe Caverns	73.12	358	P	P	18 56 07.3	+2.3
	baz=177						
ANMO	Albuquerque	73.17	331	P	P	18 56 07.4	+1.6
	comp=Z,4.4nm,1.0s,baz=214,slow=15,SNR=11						
ANMO				LR	LR	19 23 47.5	
	comp=Z,322nm,20.5s,baz=259,slow=32						
	comp=Z,4.4nm,1.0s						
ANMO	Albuquerque	73.17	331	P	P	18 56 07.1	+1.3
ANMO	Albuquerque	73.17	331⇓	*e*P	P	18 56 08.1	+2.3
ANMO				pmax	pmax		
	comp=Z,13nm,1.4s						
ANMO	Albuquerque	73.17	331	P	P	18 56 07.3	+1.6
	baz=149						
ANMO	Albuquerque	73.17	331	P	P	18 56 08.3	+2.5
	baz=149,SNR=5.9						
L48A	N Adams	73.30	350	IAmb	IAmb	18 56 07.3	
	comp=Z,57nm,1.3s						
LIC	Lamto	73.30	72⇑	*e*P	P	18 56 06.3	-0.5
	comp=Z,49nm,0.7s						
KSU1	Kansas State U	73.32	340	IAmb	IAmb	18 56 29.0	
	comp=Z,15nm,0.5s						
KSU1	Kansas State U	73.32	340	P	P	18 56 07.2	+1.0
	baz=158						
N41A	Harden Midland	73.32	345	IAmb	IAmb	18 56 07.8	
	comp=Z,61nm,1.2s						
N41A	Harden Midland	73.32	345	P	P	18 56 07.1	+0.9
	baz=163						
R32A	Long Quarter,	73.35	338	IAmb	IAmb	18 56 09.0	
	comp=Z,24nm,1.0s						
R32A	Long Quarter,	73.35	338	P	P	18 56 08.1	+1.6
	baz=156						
TIC	Toumodi	73.55	72⇑	*e*P	P	18 56 08.3	+0.1
	comp=Z,26nm,0.5s						
KIC	Kosan Boka	73.62	72⇑	*e*P	P	18 56 08.3	-0.3
	comp=Z,117nm,1.0s						
214A	Organ Pipe Nat	73.64	324	P	P	18 56 09.6	+1.2
	baz=144						
DBIC	Dimbokro	73.70	72	P	P	18 56 08.8	-0.3
	comp=Z,25nm,0.5s,baz=236,slow=7.4,SNR=74						
DBIC				LR	LR	19 25 50.8	
	comp=Z,486nm,20.0s,baz=230,slow=34						
	comp=Z,25nm,0.5s						
DBIC	Dimbokro	73.70	72	P	P	18 56 08.8	-0.3
K50A	Casco	73.87	351	P	P	18 56 09.8	+0.4
	baz=170						
K50A				P	P	18 56 09.8	+0.4
	baz=170						
J59A	Piesco	73.89	358	P	P	18 56 11.0	+1.4
	baz=177						
J59A				P	P	18 56 11.0	+1.4
	baz=177						
J57A	Williamstown	73.90	357	P	P	18 56 11.7	+2.1
	baz=176						
J57A				P	P	18 56 11.7	+2.1
	baz=176						
N38A	Joes South For	73.97	343	P	P	18 56 10.3	+0.3
N38A				IAmb	IAmb	18 56 12.4	
	comp=Z,35nm,0.9s						
N38A	Joes South For	73.97	343	P	P	18 56 11.0	+0.9
	baz=161						
CBKS	Cedar Bluff	74.04	337	P	P	18 56 10.8	+0.2
CBKS				IAmb	IAmb	18 56 13.2	
	comp=Z,32nm,0.9s						
CBKS	Cedar Bluff	74.04	337	P	P	18 56 10.8	+0.2
CBKS				pmax	pmax		
	comp=Z,32nm,1.0s						
CBKS	Cedar Bluff	74.04	337	P	P	18 56 11.8	+1.2
	baz=155						
CBKS	Cedar Bluff	74.04	337	P	P	18 56 12.5	+1.9
	baz=155						
T25A	Trinidad	74.23	333	IAmb	IAmb	18 56 15.4	
	comp=Z,33nm,1.1s						
T25A	Trinidad	74.23	333	P	P	18 56 13.7	+1.8
	baz=151,SNR=10						
L42A	Oliver, Polo	74.30	346	P	P	18 56 13.0	+1.1
	baz=164						
I63A	Otisfield	74.43	1	IAmb	IAmb	18 56 29.5	
	comp=Z,40nm,1.2s						
I63A	Otisfield	74.43	1	P	P	18 56 15.5	+2.8
	baz=181						
I63A				P	P	18 56 15.5	+2.8
	baz=181						
WCNY	West Carthage	74.46	357	P	P	18 56 14.2	+1.4
	baz=176						
LBNH	Lisbon	74.62	360	P	P	18 56 16.5	+2.8
	baz=180						
LBNH	Lisbon	74.62	360	P	P	18 56 16.4	+2.6
	baz=180						
N35A	Tabor	74.67	341	P	P	18 56 15.1	+1.0
	baz=159						
L40A	Anamosa	74.69	345	P	P	18 56 15.0	+0.8
	baz=163,SNR=9.7						
W18A	Petrified Fore	74.75	328	IAmb	IAmb	18 56 18.4	
	comp=Z,25nm,1.1s						
W18A	Petrified Fore	74.75	328	P	P	18 56 16.9	+1.9
	baz=147,SNR=5.9						
H62A	Milan	74.95	0	P	P	18 56 18.6	+2.9
	baz=180						
H62A				P	P	18 56 18.6	+2.9
	baz=180						
X16A	Lo Mia Camp, P	74.97	327	P	P	18 56 16.6	+0.3
SCIA	State Center	75.02	343	IAmb	IAmb	18 56 18.2	
	comp=Z,21nm,0.8s						
SCIA	State Center	75.02	343	P	P	18 56 17.0	+0.9
	baz=161						
SCIA	State Center	75.02	343	P	P	18 56 17.4	+1.3
	baz=161,SNR=5.7						
N33B	J Bar K, Exete	75.08	340	P	P	18 56 18.2	+1.7
	baz=157						
SDCO	Great Sand Dun	75.19	333	P	P	18 56 19.1	+1.5
	baz=150						
SDCO	Great Sand Dun	75.19	333	P	P	18 56 19.9	+2.4
	baz=150						
KSCO	Kaye Shedlock’	75.21	335	P	P	18 56 18.9	+1.4
	baz=153						
KSCO	Kaye Shedlock’	75.21	335	P	P	18 56 20.0	+2.5
	baz=153						
FRNY	Flat Rock	75.24	358	P	P	18 56 18.9	+1.6
	baz=178						
BMNY	Brushton-Moira	75.27	358	P	P	18 56 19.1	+1.7
	baz=177						
JFWS	Jewell Farm	75.30	346	IAmb	IAmb	18 56 19.6	
	comp=Z,21nm,0.8s						
JFWS	Jewell Farm	75.30	346	P	P	18 56 18.3	+0.6

	baz=164						
JFWS	Jewell Farm	75.30	346	P	P	18 56 19.1	+1.4
	baz=164						
SADO	Sadowa	75.47	354	P	P	18 56 18.3	-0.4
	comp=Z,6.7nm,0.5s,baz=187,slow=6.7,SNR=7.5						
	comp=Z,6.7nm,0.5s						
SADO	Sadowa	75.47	354	IAmb	IAmb	18 56 20.2	
	comp=Z,44nm,1.4s						
GLA	Glamis	75.54	323	P	P	18 56 20.8	+1.5
	baz=143						
G62A	West of Eustis	75.60	1	P	P	18 56 19.8	+0.4
G62A				IAmb	IAmb	18 56 40.4	
	comp=Z,26nm,0.9s						
G62A	West of Eustis	75.60	1	P	P	18 56 21.5	+2.1
	baz=181						
G62A				P	P	18 56 21.5	+2.1
	baz=181						
K38A	Parkersburg	75.61	344	IAmb	IAmb	18 56 21.0	
	comp=Z,20nm,0.9s						
K38A	Parkersburg	75.61	344	P	P	18 56 20.0	+0.6
	baz=161						
PKME	Peaks-Kenny Pk	75.67	2	P	P	18 56 22.2	+2.5
	baz=182						
S22A	4UR Ranch, Cre	75.72	332	P	P	18 56 22.6	+2.0
	baz=149,SNR=5.1						
WUAZ	Wupatki	75.83	327	IAmb	IAmb	18 56 24.7	
	comp=Z,23nm,1.1s						
WUAZ	Wupatki	75.83	327	P	P	18 56 23.4	+2.2
	baz=146,SNR=12						
IKP	In-Ko-Pah, Jac	75.89	322	P	P	18 56 23.5	+2.1
	baz=142						
BGNE	Belgrade	75.90	340	P	P	18 56 22.3	+1.1
	baz=157						
BGNE	Belgrade	75.90	340	P	P	18 56 22.8	+1.5
	baz=157						
L34A	Svendsen Farm,	75.90	341	IAmb	IAmb	18 56 23.3	
	comp=Z,30nm,0.8s						
L34A	Svendsen Farm,	75.90	341	P	P	18 56 22.2	+1.0
	baz=158						
SWSC	Sam W. Stewart	75.96	323	P	P	18 56 23.6	+1.9
	baz=142						
MVCO	Mesa Verde	75.96	330	P	P	18 56 24.1	+2.2
	baz=148,SNR=7.6						
SUR	Sutherland	76.00	119	LR	LR	19 27 43.3	
	comp=Z,202nm,18.1s,baz=220,slow=34						
Q24A	Divide	76.11	334	IAmb	IAmb	18 56 26.0	
	comp=Z,32nm,1.1s						
Q24A	Divide	76.11	334	P	P	18 56 24.8	+2.0
	baz=151,SNR=9.5						
GLMI	Grayling	76.15	350	P	P	18 56 25.6	+3.1
	baz=168						
MAW	Mawson	76.16	164	P	P	18 56 22.9	+0.4
	comp=Z,20nm,0.6s,baz=219,slow=5.2,SNR=7.8						
MAW				LR	LR	19 33 07.3	
	comp=Z,430nm,18.1s,baz=198,slow=38						
	comp=Z,20nm,0.6s						
PDMCI	Parker Dam,Lak	76.19	325	P	P	18 56 25.2	+2.2
	baz=143						
MONP2	Monument Peak	76.24	322	P	P	18 56 25.5	+1.9
	baz=141						
F62A	Pittston Farm,	76.29	1	P	P	18 56 25.2	+1.9
	baz=181						
F62A				P	P	18 56 25.2	+1.9
	baz=181						
F64A	Sherman	76.29	2	P	P	18 56 25.8	+2.5
	baz=183						
F64A				P	P	18 56 25.8	+2.5
	baz=183						
I40A	Norwalk	76.31	346	IAmb	IAmb	18 56 38.9	
	comp=Z,66nm,1.6s						
BC3	Big Chuckawall	76.33	323	P	P	18 56 26.1	+2.1
	baz=142,SNR=5.7						
IRM	Iron Mountain	76.57	324	P	P	18 56 27.2	+2.0
	baz=142,SNR=5.3						
TRQ	Mont Tremblant	76.65	358	P	P	18 56 26.0	+0.6
TRQ				IAmb	IAmb	18 56 27.3	
	comp=Z,32nm,1.3s						
OGNE	Ogallala	76.73	337	P	P	18 56 27.5	+1.5
	baz=153						
NEE2	Needles Airpor	76.79	325	P	P	18 56 28.2	+1.8
	baz=143						
TPFO	Pinon Flats	76.81	323	P	P	18 56 28.7	+2.0
	baz=142						
PFO	Pinyon Flats O	76.82	323	P	P	18 56 28.4	+1.6
	comp=Z,8.6nm,0.9s,baz=123,slow=3.4,SNR=5.6						
PFO				LR	LR	19 24 03.7	
	comp=Z,208nm,21.6s,baz=145,slow=31						
	comp=Z,8.6nm,0.9s						
PFO	Pinyon Flats O	76.82	323⇓	eP	P	18 56 29.3	+2.5
PFO				pmax	pmax		
	comp=Z,23nm,1.1s						
E63A	Oxbow	76.85	2	P	P	18 56 29.1	+2.7
	baz=183						
E63A				P	P	18 56 29.1	+2.7
	baz=183						
ISCO	Idaho Springs	77.01	334	P	P	18 56 28.8	+0.9
	baz=150						
E62A	Clayton Lake	77.02	1	P	P	18 56 28.2	+0.8
E62A				IAmb	IAmb	18 56 43.8	
	comp=Z,22nm,0.8s						
E62A	Clayton Lake	77.02	1	P	P	18 56 29.6	+2.2
	baz=182,SNR=5.7						
E62A				P	P	18 56 29.6	+2.2
	baz=182,SNR=5.7						
I37B	Waseca	77.05	344	P	P	18 56 28.6	+1.0
	baz=161,SNR=10						
K31A	O'Neill	77.19	340	P	P	18 56 30.3	+1.8
	baz=156,SNR=8.8						
MURC	Murrieta	77.20	322	P	P	18 56 30.0	+1.3
	baz=141						
GMRC	Granite Mounta	77.33	324	P	P	18 56 31.6	+2.0
	baz=142,SNR=8.4						
ELS	Elsinore Mount	77.36	322	IAmb	IAmb	18 56 33.1	
	comp=Z,23nm,1.1s						
D62A	Allapoint, All	77.49	2	P	P	18 56 30.7	+0.7
D62A				IAmb	IAmb	18 56 32.6	
	comp=Z,30nm,1.1s						
D62A	Allapoint, All	77.49	2	P	P	18 56 31.9	+1.9
	baz=182,SNR=5.8						
D62A				P	P	18 56 31.9	+1.9
	baz=182,SNR=5.8						
G40A	Rib Lake	77.54	347	P	P	18 56 32.0	+1.6
	baz=164						
ECSD	EROS Data Cent	77.61	342	P	P	18 56 31.5	+0.7
	baz=158						
ECSD	EROS Data Cent	77.61	342	P	P	18 56 31.8	+1.1
	baz=158,SNR=21						
E46A	Sault Ste Mari	77.62	351	P	P	18 56 32.2	+1.5
	baz=169						
WIN	Windhoek	77.65	109	P	P	18 56 31.4	-0.5
WIN				IAmb	IAmb	18 56 33.8	
	comp=Z,29nm,1.2s						
WIN	Windhoek	77.65	109	P	P	18 56 31.4	-0.5
WIN				pmax	pmax		
	comp=Z,29nm,1.2s						
HEC	Hector,Ludlow	77.71	324	P	P	18 56 33.7	+2.0
	baz=142,SNR=7.1						
LATQ	La Tuque	77.77	359	IAmb	IAmb	18 56 51.6	
	comp=Z,30nm,1.2s						
BFSC	Mount Baldy Ra	77.94	322	P	P	18 56 34.8	+1.8
	baz=141						
E43A	Lone Tree Farm	78.03	349	P	P	18 56 34.2	+1.2
	baz=166						
SPMN	Marine on St.	78.06	345	P	P	18 56 33.2	0.0
SPMN				IAmb	IAmb	18 56 34.4	
	comp=Z,22nm,1.1s						
SPMN	Marine on St.	78.06	345	P	P	18 56 33.8	+0.6
	baz=162						
SPMN	Marine on St.	78.06	345	P	P	18 56 33.7	+0.5
	baz=162						
RAR	Rarotonga	78.06	252	LR	LR	19 21 55.3	
	comp=Z,338nm,19.3s,baz=159,slow=29						
N23A	Red Feather La	78.09	334	P	P	18 56 33.5	-0.3
	baz=150						
COWI	Conover	78.14	348	P	P	18 56 34.8	+1.2
	baz=165						
SNCC	San Nicolas Is	78.18	320	P	P	18 56 34.9	+0.7
	baz=139						
GSC	Goldstone, Bar	78.32	324	P	P	18 56 37.1	+2.1
	baz=142						
O20A	White River Ci	78.33	332	P	P	18 56 35.7	+0.5
	baz=148						
Q16A	Castle Valley	78.54	329	IAmb	IAmb	18 56 39.6	
	comp=Z,22nm,1.1s						
EDW2	Edwards Air Fo	78.61	323	P	P	18 56 37.6	+1.0
	baz=141						
MVU	Marysvale	78.67	329	P	P	18 56 38.0	+0.9
P18A	Preston Nutter	78.73	330	IAmb	IAmb	18 56 54.9	
	comp=Z,34nm,1.2s						
F36A	Milaca	78.82	344	IAmb	IAmb	18 56 38.9	
	comp=Z,37nm,1.2s						
F36A	Milaca	78.82	344	P	P	18 56 37.9	+0.4
	baz=161,SNR=12						
LRMC	Laurel Mtn Rad	78.91	323	P	P	18 56 40.1	+1.8
	baz=141						
D41A	Chassel	78.96	348	P	P	18 56 39.6	+1.4
	baz=165,SNR=8.7						
E38A	The Farm, Brul	79.10	346	P	P	18 56 39.7	+0.8
	baz=163						
SBC	Santa Barbara	79.19	321	P	P	18 56 41.3	+1.6
	baz=139						
MPMC	Manual Prospec	79.25	324	P	P	18 56 41.9	+1.6
	baz=141						
FURC	Furnace Creek,	79.25	324	P	P	18 56 41.9	+1.9
	baz=142						
TPNV	Topopah Spring	79.33	325	P	P	18 56 42.6	+1.9
	baz=142						
SOE	Somerset East	79.36	122	P	P	18 56 40.9	-0.1
ISA	Isabella, Lake	79.46	323	P	P	18 56 43.1	+1.8
	baz=140						
F33A	5 Mile Ranch,	79.48	343	P	P	18 56 42.0	+1.0
	baz=159						
PKM	Mcpherson Peak	79.58	321	P	P	18 56 43.6	+1.5
	baz=139						
TSUM	Tsumeb	79.65	106	LR	LR	19 27 42.8	
	comp=Z,393nm,20.2s,baz=223,slow=32						
TSUM	Tsumeb	79.65	106	P	P	18 56 42.8	-0.1
TSUM				IAmb	IAmb	18 56 44.6	
	comp=Z,29nm,1.0s						
K22A	Casper	79.82	335	P	P	18 56 45.0	+1.8
	baz=150						
K22A	Casper	79.82	335	P	P	18 56 45.4	+2.2
	baz=150						
CWC	Cottonwood Cre	79.85	323	P	P	18 56 45.2	+1.7
	baz=141						
VES	Vestal, Richgr	79.91	322	P	P	18 56 45.7	+2.1
	baz=140						
GRAC	Grapevine Rang	79.92	324	P	P	18 56 46.2	+2.5
	baz=141						
SMMC	Simmler	80.00	322	P	P	18 56 46.9	+2.8
	baz=139						
JLU	Jordanelle	80.06	330	IAmb	IAmb	18 57 00.3	
	comp=Z,59nm,1.9s						
R11B	Troy Canyon, C	80.11	326	P	P	18 56 46.9	+2.1
	baz=143						
RSSD	Black Hills	80.22	337	P	P	18 56 46.1	+0.7
	baz=152						
DUG	Dugway, Tooele	80.31	329	P	P	18 56 47.6	+1.7
	baz=145						
EYMN	Ely	80.36	346	P	P	18 56 46.0	+0.3
	baz=163						
EYMN	Ely	80.36	346	P	P	18 56 47.1	+1.4
	baz=163,SNR=7.1						
D32B	Dogwood Acres,	80.86	343	P	P	18 56 49.8	+1.3
	baz=158						
HWUT	Hardware Ranch	80.94	331	P	P	18 56 49.5	+0.3
PDAR	Pinedale Array	81.08	333	P	P	18 56 50.9	+0.9
	comp=Z,1.4nm,0.6s,baz=134,slow=6.4,SNR=1.5						
PDAR				LR	LR	19 29 39.3	
	comp=Z,170nm,21.0s,baz=140,slow=33						
	comp=Z,1.4nm,0.6s						
BOSA	Boshof	81.17	118	P	P	18 56 50.6	-0.3
	comp=Z,18nm,0.9s,baz=258,slow=4.1,SNR=25						
BOSA				LR	LR	19 28 24.8	
	comp=Z,302nm,20.8s,baz=216,slow=32						
	comp=Z,18nm,0.9s						
BOSA	Boshof	81.17	118	P	P	18 56 50.4	-0.5
BOSA				IAmb	IAmb	18 56 52.0	
	comp=Z,25nm,1.0s						
B35A	Bob, Littlefor	81.23	345	IAmb	IAmb	18 56 51.9	
	comp=Z,49nm,1.3s						
B35A	Bob, Littlefor	81.23	345	P	P	18 56 50.8	+0.4
	baz=161,SNR=13						
NVAR	Mina Array Bea	81.50	325	P	P	18 56 53.9	+1.6
	comp=Z,2.9nm,0.8s,baz=159,slow=5.6,SNR=11						
NVAR				LR	LR	19 26 51.7	
	comp=Z,134nm,18.7s,baz=162,slow=31						
	comp=Z,2.9nm,0.8s						
AGMN	Agassiz Nation	81.66	344	IAmb	IAmb	18 56 54.5	
	comp=Z,28nm,1.1s						
AGMN	Agassiz Nation	81.66	344	P	P	18 56 53.2	+0.5
	baz=159						
AGMN	Agassiz Nation	81.66	344	P	P	18 56 53.5	+0.9
	baz=159,SNR=9.4						
ELK	Elko	81.85	328	P	P	18 56 55.3	+1.2
	comp=Z,5.5nm,0.8s,baz=122,slow=3.7,SNR=8.2						
ELK				LR	LR	19 28 47.2	
	comp=Z,188nm,21.2s,baz=120,slow=32						
	comp=Z,5.5nm,0.8s						
MDND	Maddock	82.21	341	P	P	18 56 56.3	+0.8
MDND	Maddock	82.21	341	P	P	18 56 56.9	+1.4
	baz=156						
MDND	Maddock	82.21	341	P	P	18 56 57.0	+1.4
	baz=156,SNR=7.0						
TOA0	Torodi Ar. Sit	82.65	70	P	P	18 56 58.4	-0.2
TOA0				IAmb	IAmb	18 56 59.8	
	comp=Z,38nm,1.1s						
TORD	Torodi Ar. Bea	82.65	70	P	P	18 56 58.9	+0.3
	comp=Z,8.9nm,0.4s,baz=273,slow=6.2,SNR=91						
TORD				LR	LR	19 31 25.4	
	comp=Z,499nm,19.8s,baz=237,slow=34						
	comp=Z,8.9nm,0.4s						
LBTB	Lobatse	83.24	115	LR	LR	19 28 41.9	
	comp=Z,614nm,22.0s,baz=244,slow=32						
CASY	Casey	83.28	181	P	P	18 57 01.3	+0.2
ULM	Lac du Bonnet	83.49	345	P	P	18 57 02.4	+0.3
	comp=Z,8.4nm,0.4s,baz=172,slow=4.4,SNR=18						
	comp=Z,8.4nm,0.4s						
ULM	Lac du Bonnet	83.49	345	IAmb	IAmb	18 57 03.5	
	comp=Z,26nm,1.0s						
HLID	Hailey	83.75	330	P	P	18 57 05.3	+1.4
	baz=144						
DGMT	Dagmar	84.12	339	P	P	18 57 06.9	+1.5
	baz=152						
DGMT	Dagmar	84.12	339	P	P	18 57 07.1	+1.7
	baz=152,SNR=5.1						
SCHQ	Schefferville	85.31	3	P	P	18 57 11.4	+0.1
	comp=Z,10nm,0.9s,baz=143,slow=8.3,SNR=6.0						
SCHQ				LR	LR	19 34 17.8	
	comp=Z,98nm,21.9s,baz=204,slow=35						
	comp=Z,10nm,0.9s						
SCHQ	Schefferville	85.31	3	P	P	18 57 11.4	+0.1
J08A	Circle Bar Ran	85.39	328	IAmb	IAmb	18 57 15.0	
	comp=Z,33nm,1.3s						
MSO	Missoula	86.20	332	P	P	18 57 17.1	+1.1
	baz=144						
URZ	Urewera	86.21	227	LR	LR	19 28 46.3	
	comp=Z,247nm,18.6s,baz=255,slow=31						
RPZ	Rata Peaks	86.43	220	P	P	18 57 18.5	+1.1
	comp=Z,23nm,0.8s,baz=157,slow=1.9,SNR=10.0						
RPZ				LR	LR	19 28 52.6	
	comp=Z,219nm,18.3s,baz=158,slow=31						
	comp=Z,23nm,0.8s						
RPZ	Rata Peaks	86.43	220	P	P	18 57 17.9	+0.5
INZ	Inchbonnie	86.85	221	IAmb	IAmb	18 57 22.4	
	comp=Z,20nm,0.8s						
PINE	Pine Mountain	86.88	327	IAmb	IAmb	18 57 35.7	
	comp=Z,15nm,1.0s						
I05D	Terrebonne, OR	87.48	327	P	P	18 57 22.1	-0.1
I05D				IAmb	IAmb	18 57 38.3	
	comp=Z,13nm,0.9s						
TOZ	Tahuroa Road	87.54	227	P	P	18 57 23.0	+0.2
TOZ				IAmb	IAmb	18 57 25.7	
	comp=Z,14nm,1.1s						
WALA	Waterton Lakes	88.00	334	IAmb	IAmb	18 57 39.9	
	comp=Z,40nm,1.6s						
RAO	Raoul Island	88.04	237	LR	LR	19 27 18.5	
	comp=Z,146nm,20.9s,baz=124,slow=29						
H04A	Detroit Lake	88.14	326	IAmb	IAmb	18 57 27.8	
	comp=Z,12nm,1.0s						
NEW	Newport	88.64	331	LR	LR	19 34 34.7	
	comp=Z,216nm,18.2s,baz=148,slow=34						
FFC	Flin Flon	89.08	343	P	P	18 57 29.6	+0.1
FFC				IAmb	IAmb	18 57 30.8	
	comp=Z,15nm,1.2s						
FFC	Flin Flon	89.08	343	P	P	18 57 29.6	+0.1
FFC				pmax	pmax		
	comp=Z,15nm,1.2s						
MDT	Midelt	89.40	51	LR	LR	19 37 15.7	
	comp=Z,167nm,20.4s,baz=198,slow=35						
LSZ	Lusaka	90.36	108	LR	LR	19 35 27.5	
	comp=Z,252nm,18.4s,baz=247,slow=34						
LSZ	Lusaka	90.36	108	P	P	18 57 36.0	-0.7
LSZ				pmax	pmax		
	comp=Z,25nm,1.0s						
EDM	Edmonton	91.20	336	IAmb	IAmb	18 57 41.4	
	comp=Z,7.7nm,0.7s						
AFI	Afiamalu	91.61	253	LR	LR	19 28 31.7	
	comp=Z,276nm,21.4s,baz=108,slow=29						
ESDC	Sonseca Array	93.97	46	P	P	18 57 52.4	-0.3
	comp=Z,1.0nm,0.9s,baz=247,slow=9.6,SNR=4.2						
ESDC				LR	LR	19 36 42.7	
	comp=Z,259nm,21.9s,baz=220,slow=33						
	comp=Z,1.0nm,0.9s						
FRB	Frobisher Bay	94.19	1	LR	LR	19 44 53.8	
	comp=Z,66nm,18.8s,baz=192,slow=38						
BBB	Bella Bella	96.27	329	LR	LR	19 36 40.5	
	comp=Z,77nm,21.3s,baz=178,slow=32						
MSVF	Nonsavu	97.65	244	LR	LR	19 35 02.7	
	comp=Z,82nm,18.7s,baz=161,slow=31						
SFJD	Kangerlussuaq	98.71	8	LR	LR	19 44 32.3	
	comp=Z,60nm,18.7s,baz=198,slow=36						
YKA	Yellowknife Ar	99.13	341	P	Pdif	18 58 14.9	-0.5
	comp=Z,0.8nm,0.8s,baz=143,slow=4.7,SNR=12						
	comp=Z,0.8nm,0.8s						
CRAG	Craig	100.68	329	P	Pdif	18 58 23.1	+0.8
	baz=130						
DZM	Mont Dzumac	103.54	234	eLR	LR	19 32 39.1	
	comp=Z,632nm,23.9s						
CLL	Collm	110.11	42	ePP	PP	19 03 36.0	-4.5
CLL				ePPS	PPS	19 14 18.0	
CLL				ex	x	19 22 30.0	
CLL				AMS	AMS	19 48 00.0	
	comp=N,100nm,20.2s						
CLL				AMS	AMS	19 48 00.0	
	comp=E,200nm,20.7s						
CLL				AMS	AMS	19 48 00.0	
	comp=Z,200nm,19.1s						
NACGM	Naroch	119.12	41	ePP	PP	19 04 48.3	+4.3
AKASG	Malin Array Be	119.61	46	PKP	PKPdf	19 03 22.2	-1.8
	comp=Z,0.2nm,0.3s,baz=261,slow=3.0,SNR=7.2						
MNK	Minsk	119.66	41	i PKP	PKPdf	19 03 23.1	-0.9
	comp=E,1.0nm,1.0s						
MNK				i PKP	PKPdf	19 03 23.1	-0.9
	comp=N,31nm,1.0s						
MNK				i PKP	PKPdf	19 03 23.1	-0.9
	comp=Z,5.0nm,1.0s,baz=258						
MNK				i pPKP	pPKPdf	19 03 38.3	+1.2
MNK				i sPKP		19 03 44.0	
MNK				i PP	PP	19 04 46.5	-1.2
MNK				i SKP		19 07 06.0	
MNK				i PKS	PKSdf	19 07 13.7	+13
MNK				i PPP	PPP	19 07 47.1	
MNK				i SKS	SKSdf	19 10 30.8	-1.7
MNK				i SKKS	SKKSac	19 11 37.2	-6.3
MNK				i SP	SP	19 14 09.5	-22
MNK				i PS	PS	19 14 36.1	-0.7
MNK				i SS	SS	19 21 08.4	-0.4
MNK				i SSS	SSS	19 24 39.4	
MNK				i LQ	LQ	19 44 24.7	
MNK				i LR	LR	19 49 43.4	
MNK				i LRM	MLR	19 54 33.5	
	comp=N,379nm,18.5s						
MNK				i LRM	MLR	19 54 39.2	
	comp=E,18nm,18.5s						
MNK				i LRM	MLR	19 54 49.5	
	comp=Z,141nm,18.5s						
MNK	Minsk	119.66	41	i PKIKP	PKPdf	19 03 23.1	-0.9
MNK				i		19 03 38.2	
MNK				i		19 04 46.4	
MNK				i		19 10 30.7	
MNK				i PS	PS	19 14 36.1	-0.7
MNK				i SS	SS	19 21 08.4	-0.5
MNK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,31nm,1.0s						
MNK				pmax	pmax		
	comp=E,1.0nm,1.0s						
MNK				MLR	MLR		
	comp=N,379nm,19.0s						
MNK				MLR	MLR		
	comp=E,18nm,19.0s						
MNK				MLR	MLR		
	comp=Z,141nm,19.0s						
FINES	FINESS Array B	120.03	33	PKKPbc	PKKPbc	19 13 33.0	-1.5
	comp=Z,1.8nm,1.0s,baz=49,slow=6.4,SNR=3.7						
ASAR	Alice Springs	120.68	207	PKP	PKPdf	19 03 25.5	-1.7
	comp=Z,0.9nm,0.9s,baz=145,slow=2.3,SNR=9.9						
ASAR				PKKPbc	PKKPbc	19 13 31.5	-0.1
	comp=Z,0.4nm,0.5s,baz=337,slow=3.1,SNR=11						
ARCES	ARCESS Array B	120.86	24	PKKPbc	PKKPbc	19 13 30.1	-1.5
	comp=Z,6.4nm,1.0s,baz=78,slow=4.8,SNR=6.0						
WRA	Warramunga Arr	123.83	210	PKP	PKPdf	19 03 32.2	-1.0
	comp=Z,0.8nm,0.4s,baz=157,slow=1.8,SNR=29						
WRA				PKKPbc	PKKPbc	19 13 19.4	0.0
	comp=Z,0.5nm,0.4s,baz=338,slow=4.4,SNR=6.8						
WRA	Warramunga Arr	123.83	210		PKPdf	19 03 31.9	-1.4
WRA	Warramunga Arr	123.83	210	PKIKP	PKPdf	19 03 31.9	-1.4
H11S2	WAKE ISLAND Hy	126.24	271	T	T	21 22 34.6	
	baz=116,slow=75,SNR=633						
H11S1	WAKE ISLAND Hy	126.25	271	T	T	21 22 25.5	
	baz=116,slow=75,SNR=585						
H11S3	WAKE ISLAND Hy	126.26	271	T	T	21 22 25.2	
	baz=116,slow=75,SNR=479						
KIV	Kislovodsk	127.32	56	i PKIKP	PKiKP	19 03 40.2	+0.5
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,66nm,23.0s						
BILL	Bilibino	130.10	335	i PKIKP	PKPdf	19 03 43.9	+0.3
BILL				i		19 03 54.3	
BILL				i		19 05 56.6	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BELG	Belogornoye	131.19	45⇑	iPKIKP	PKiKP	19 03 47.9	+0.9
ARU	Arti	136.94	39	PKP	PKPdf	19 03 56.9	+0.1
	comp=Z,3.0nm,0.7s,baz=337,slow=7.7,SNR=5.5						
ARU	Arti	136.94	39	PKPpre	PKPpre	19 03 46.3	
ARU				PKPdf	PKPdf	19 03 56.4	-0.4
ARU	Arti	136.94	39	i PKIKP	PKiKP	19 03 58.0	-0.6
ARU						19 06 37.2	
SEY	Seymchan	137.41	332⇑	iPKIKP	PKiKP	19 03 59.1	-0.3
SEY				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TIXI	Tiksi	137.57	351⇓	iPKIKP	PKPdf	19 03 58.5	+1.0
TIXI				pmax	pmax		
	comp=Z,7.0nm,2.5s						
AKTO	Aktyubinsk	137.83	47	PKP	PKPdf	19 03 58.7	0.0
	comp=Z,0.5nm,0.3s,baz=252,slow=3.2,SNR=2.8						
ABKAR	Akbulak array	139.24	49	PKPpre	PKPpre	19 03 50.5	
ABKAR					PKPdf	19 04 01.0	-0.3
ABKAR	Akbulak array	139.24	49		PKPdf	19 04 01.3	+0.1
KAPI	Kappang	142.86	199	PKhKP	PKPpre	19 04 05.2	
	comp=Z,6.3nm,0.6s,baz=188,slow=5.4,SNR=4.1						
BRVK	Borovoye	144.46	40	PKPdf	PKPbc	19 04 09.0	-0.1
BRVK	Borovoye	144.46	40	cePKIKP	PKPbc	19 04 09.7	+0.6
BVAR	Borovoye Array	144.53	40	PKP	PKPbc	19 04 10.0	+0.6
	comp=Z,11nm,0.4s,baz=311,slow=1.8,SNR=85						
BVAR	Borovoye Array	144.53	40	PKIKP	PKPbc	19 04 10.0	+0.7
PALK	Pallekele	145.02	126		PKPbc	19 04 11.1	-1.0
PALK	Pallekele	145.02	126	PKIKP	PKPbc	19 04 11.1	-1.0
YAK	Yakutsk	145.80	342	PKPbc	PKPbc	19 04 13.1	+0.1
	comp=Z,44nm,0.8s,baz=6.9,slow=0.5,SNR=47						
YAK	Yakutsk	145.80	342	PKPdf	PKPdf	19 04 12.7	+0.3
YAK	Yakutsk	145.80	342	c iPKP2	PKPdf	19 04 12.5	0.0
BRZS	Berezniki	147.03	44	ePKPbc	PKPbc	19 04 16.4	-0.8
	baz=44						
BRZS	Berezniki	147.03	44	ePKP2	PKPbc	19 04 16.3	-0.8
IUG	Iuzhnay	147.26	59	ePKPbc	PKPbc	19 04 17.4	-0.7
	baz=59						
IUG	Iuzhnay	147.26	59	ePKP2	PKPbc	19 04 17.4	-0.7
DZA	Taraz	148.10	57	ePKiKP	PKPbc	19 04 20.5	+0.1
	baz=57						
DZA	Taraz	148.10	57	i PKP2	PKPbc	19 04 20.4	+0.1
TOLI2	Tolitoli	148.32	204		PKPbc	19 04 20.1	-1.6
DRK	Karamyk	148.89	64		PKPdf	19 04 16.6	-2.2
YSS	Yuzh-Sakhalins	149.11	311		PKPbc	19 04 22.2	-0.5
YSS	Yuzh-Sakhalins	149.11	311	ePKP2	PKPbc	19 04 23.1	+0.4
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
BTLS	Baital	149.53	52	ePKiKP	PKPbc	19 04 23.9	0.0
	baz=52						
BTLS				i PP	PP	19 07 56.9	-0.2
	baz=52						
BTLS	Baital	149.53	52	i PKP2	PKPbc	19 04 23.8	0.0
BTLS				i		19 07 56.9	
HYB	Hyderabad	149.70	109	ePKPbc	PKPbc	19 04 24.8	-0.3
EKS2	Erkin-Say	149.91	57	P	PKiKP	19 04 26.1	+0.2
	SNR=11						
AML	Almayashu	149.95	58	P	PKiKP	19 04 26.3	-0.1

	SNR=5.7						
ASAJ	**Asahikawa**	**150.06**	**306**	PKPbc	**PKPbc**	**19 04 25.0**	**-0.1**
	comp=Z,9.3nm,0.9s,baz=135,slow=2.9,SNR=8.0						
NIL	**Nilore**	**150.09**	**75**		**PKPbc**	**19 04 24.6**	**-1.0**
NIL	**Nilore**	**150.09**	**75**	PKP2	**PKPbc**	**19 04 24.6**	**-1.0**
KURBB	**Kurchatov Arra**	**150.12**	**40**	PKPbc	**PKPbc**	**19 04 24.9**	**-0.2**
	comp=Z,9.1nm,0.8s,baz=300,slow=3.1,SNR=65						
KURK	**Kurchatov**	**150.12**	**40***c*	*i*PKIKP	**PKPbc**	**19 04 24.5**	**-0.5**
KURK				pmax	pmax		
	comp=Z,16nm,1.3s						
USP	**Ospenovka**	**150.29**	**56**	P	**PKiKP**	**19 04 26.7**	**+0.1**
	SNR=7.3						
SGDS	**Sogindy**	**150.34**	**55**	*e*PKPbc	**PKPbc**	**19 04 25.8**	**-0.1**
	baz=55						
SGDS	**Sogindy**	**150.34**	**55**	*e*PKIKP	**PKPbc**	**19 04 25.8**	**-0.1**
AAK	**Ala-Archa**	**150.43**	**57**	P	**PKiKP**	**19 04 27.2**	**+0.2**
	SNR=13						
AAK	**Ala-Archa**	**150.43**	**57**	PKPbc	**PKPbc**	**19 04 26.5**	**+0.2**
	comp=Z,11nm,0.9s,baz=232,slow=3.8,SNR=35						
AAK	**Ala-Archa**	**150.43**	**57**		**PKPbc**	**19 04 25.8**	**-0.5**
AAK	**Ala-Archa**	**150.43**	**57***c*	*i*PKIKP	**PKiKP**	**19 04 26.7**	**-0.3**
AAK				pmax	pmax		
	comp=Z,19nm,1.3s						
UCH	**Uchtor**	**150.53**	**58**	P	**PKiKP**	**19 04 28.2**	**+0.6**
	SNR=16						
CHMS	**Chumysh**	**150.54**	**56**	P	**PKiKP**	**19 04 27.2**	**+0.1**
	SNR=6.5						
KBK	**Karagaybulak**	**150.75**	**57**	P	**PKiKP**	**19 04 28.1**	**+0.4**
	SNR=7.6						
KSM	**Kuching**	**150.84**	**184**	PKPdf	**PKPdf**	**19 04 20.8**	**-1.5**
KSM					**PKPbc**	**19 04 26.5**	**-1.4**
TKM2	**Tokmak 2**	**151.16**	**56**	P	**PKiKP**	**19 04 28.4**	**-0.2**
	SNR=11						
ZALV	**Zalesovo Beam**	**151.19**	**30**	PKPbc	**PKPbc**	**19 04 27.2**	**-0.2**
	comp=Z,23nm,0.5s,baz=304,slow=3.0,SNR=27						
KUU	**Kurty**	**151.43**	**54**	*e*PKiKP	**PKPbc**	**19 04 27.9**	**-0.5**
	baz=54						
KUU	**Kurty**	**151.43**	**54**	*i* PKIKP	**PKPbc**	**19 04 27.9**	**-0.5**
SBUM	**Sibu**	**151.65**	**188**		**PKPbc**	**19 04 29.3**	**-0.5**
SBUM					**PKPab**	**19 04 39.0**	**+0.7**
ULHL	**Ulahol**	**151.78**	**57**	P	**PKiKP**	**19 04 30.7**	**+0.8**
	SNR=7.6						
KSH	**Kashi**	**152.09**	**63**	PKPbc	**PKPdf**	**19 04 24.3**	**+0.7**
KSH				pPKP	PKiKP	19 04 30.5	0.0
KSH				sPKP		19 04 36.8	
KSH				PP	**PP**	**19 08 13.0**	**+0.7**
KSH				SKS	**SKSdf**	**19 11 30.3**	**+2.6**
MDOK	**Medeo**	**152.12**	**55**	*e*PKPbc	**PKPbc**	**19 04 29.2**	**-1.0**
	baz=55						
MDOK	**Medeo**	**152.12**	**55**	*e*PKIKP	**PKPbc**	**19 04 29.2**	**-1.0**
BOD	**Bodaibo**	**152.66**	**354**	*e*PKIKP	**PKPbc**	**19 04 29.9**	**-0.8**
BOD				pmax	pmax		
	comp=Z,20nm,1.0s						
IPM	**Ipoh**	**152.94**	**163**		**PKPbc**	**19 04 30.6**	**-2.1**
SATY	**Saty**	**153.11**	**54**	*e*PKiKP	**PKPbc**	**19 04 31.5**	**-0.8**
	baz=55						
SATY				*e*PKPab	**PKPab**	**19 04 43.8**	**-0.2**
	baz=55						
SATY	**Saty**	**153.11**	**54**	*i* PKIKP	**PKPbc**	**19 04 31.5**	**-0.8**
SATY				*e*		19 04 43.8	
KPKS	**Kokpek**	**153.18**	**53**	*e*PKiKP	**PKPbc**	**19 04 31.7**	**-0.7**
	baz=54						
KPKS				*i* PKPab	**PKPab**	**19 04 44.0**	**-0.3**
	baz=54						
KPKS	**Kokpek**	**153.18**	**53**	*i* PKIKP	**PKPbc**	**19 04 31.7**	**-0.7**
KPKS				*i*		19 04 44.0	
ZEA	**Zeya**	**153.32**	**335**	*e*PKP2	**PKPab**	**19 04 44.8**	**+0.5**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KULM	**Kulim**	**153.62**	**162**	PKPab	**PKPab**	**19 04 46.4**	**-0.2**
SHLS	**Shalkode**	**153.81**	**54**	*e*PKiKP	**PKiKP**	**19 04 34.0**	**+0.1**
	baz=54						
SHLS				*e*PKPab	**PKPab**	**19 04 48.2**	**+1.2**
	baz=54						
SHLS	**Shalkode**	**153.81**	**54**	*i* PKIKP	**PKiKP**	**19 04 34.0**	**+0.1**
SHLS				*e*		19 04 48.1	
MAKZ	**Makanchi**	**153.99**	**44**	PKPdf	**PKPdf**	**19 04 24.4**	**-1.5**
MAKZ				PKPbc	**PKPbc**	**19 04 33.4**	**-0.6**
MAKZ					**PKPab**	**19 04 47.4**	**0.0**
MAKZ	**Makanchi**	**153.99**	**44**	PKIKP	**PKPdf**	**19 04 24.4**	**-1.5**
MAKZ						19 04 33.4	
MAKZ						19 04 47.4	
MK31	**Makanchi Array**	**154.18**	**44**		**PKPbc**	**19 04 33.3**	**-1.1**
MK31				PKPab	**PKPab**	**19 04 48.9**	**+0.6**
MK31	**Makanchi Array**	**154.18**	**44**	PKIKP	**PKPbc**	**19 04 33.3**	**-1.1**
MK31						19 04 48.9	
MKAR	**Makanchi Array**	**154.18**	**44**	PKP	**PKPdf**	**19 04 25.5**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=307,slow=2.9,SNR=5.0						
MKAR				PKPbc	**PKPbc**	**19 04 34.1**	**-0.3**
	comp=Z,3.2nm,0.8s,baz=315,slow=2.4,SNR=25						
MKAR	**Makanchi Array**	**154.18**	**44**		**PKPbc**	**19 04 33.7**	**-0.7**
MKAR				PKPab	**PKPab**	**19 04 49.0**	**+0.7**
KLR	**Kul'dur**	**154.52**	**323**	PKP	**PKPdf**	**19 04 26.6**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=44,slow=5.6,SNR=2.2						
KLR				PKPab	**PKPab**	**19 04 49.4**	**-0.3**
	comp=Z,2.0nm,0.8s,baz=352,slow=3.9,SNR=6.0						
MJAR	**Matsushiro Arr**	**154.68**	**291**	PKPab	**PKPab**	**19 04 52.0**	**+1.2**
	comp=Z,6.6nm,0.9s,baz=103,slow=2.4,SNR=12						
ZSN	**Zaisan**	**155.34**	**41**	*e*PKPab	**PKPab**	**19 04 53.4**	**+0.1**
	baz=41						
ZSN	**Zaisan**	**155.34**	**41**	*e*PKP2	**PKPab**	**19 04 53.3**	**+0.1**
HEH	**HeiHe**	**155.91**	**329**	*e*P	**PKPab**	**19 04 55.5**	**0.0**
HEH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HEH				pmax	pmax		
	comp=Z,170nm,5.7s						
USRK	**Ussuriysk Ar.**	**157.13**	**313**	PKPab	**PKPab**	**19 05 01.9**	**+0.9**
	comp=Z,2.2nm,0.9s,baz=40,slow=4.7,SNR=4.8						
MDJ	**Mudanjiang**	**158.41**	**316**	PKP	**PKPdf**	**19 04 31.0**	**-0.8**
MDJ				PP	**PP**	**19 08 46.8**	**0.0**
MDJ				AMB	AMB		
	comp=Z,170nm,7.5s						
WMQ	**Urumqi**	**158.97**	**46**	*e*P	**PKPdf**	**19 04 33.8**	**+1.2**
WMQ				LR	LR		
	comp=N,170nm,17.7s						
WMQ				LR	LR		
	comp=E,160nm,17.7s						
WMQ				LR	LR		
	comp=Z,150nm,19.3s						
ZAK	**Zakamensk**	**159.99**	**10**	*e*PKP2	**PKPab**	**19 05 13.2**	**0.0**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
CN2	**Changchun**	**161.30**	**319**	*e*P	**PKPdf**	**19 04 35.8**	**+0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSRS	**Korea Array**	**162.61**	**298**	PKPab	**PKPab**	**19 05 26.2**	**+1.1**
	comp=Z,2.1nm,1.0s,baz=68,slow=3.6,SNR=4.2						
SONM	**Songino Array**	**162.85**	**5**	PKPab	**PKPab**	**19 05 26.3**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=338,slow=3.7,SNR=8.2						
SONM				PP	**PP**	**19 09 11.3**	**+1.3**
	comp=Z,1.8nm,1.1s,baz=0.0,slow=1.4,SNR=8.0						
ULN	**Ulaanbaatar**	**162.86**	**3**	PKPdf	**PKPdf**	**19 04 35.0**	**-1.8**
ULN				PKPab	**PKPab**	**19 05 25.2**	**-0.7**
ULN	**Ulaanbaatar**	**162.86**	**3**	PKIKP	**PKPdf**	**19 04 35.0**	**-1.8**
ULN						19 05 25.2	
CMAR	**Chiang Mai Arr**	**165.00**	**142**	PKPab	**PKPab**	**19 05 35.0**	**-0.9**
	comp=Z,6.2nm,1.0s,baz=231,slow=5.5,SNR=22						
CMAR	**Chiang Mai Arr**	**165.00**	**142**	PKPdf	**PKPdf**	**19 04 37.5**	**-1.9**
CMAR				PKPab	**PKPab**	**19 05 34.5**	**-1.4**
CHTO	**Chiang Mai**	**165.29**	**142**	PKPab	**PKPab**	**19 05 35.8**	**-1.4**
CHTO	**Chiang Mai**	**165.29**	**142**	PKP2	**PKPab**	**19 05 35.8**	**-1.4**
XLT	**XiLinHaoTe**	**165.56**	**338**	*e*P	**PKPdf**	**19 04 37.5**	**-1.7**
XLT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,96nm,4.6s						
PHRA	**Phrae**	**165.68**	**146**	PKPdf	**PKPdf**	**19 04 37.7**	**-2.2**
GTA	**Gaotai**	**168.79**	**37**	*e*PKPbc	**PKPdf**	**19 04 42.5**	**+0.7**
GTA				sPKP		19 05 05.0	
GTA				PKPab	**PKPab**	**19 05 53.3**	**+1.0**
GTA				LR	LR		
	comp=N,84nm,21.4s						
GTA				LR	LR		
	comp=E,140nm,20.7s						
GTA				LR	LR		
	comp=Z,150nm,21.4s						
HHC	**Hu-ho-hao-te**	**169.62**	**347**	*e*P	**PKPdf**	**19 04 43.0**	**+0.8**
NJ2	**Nanjing**	**171.07**	**281**	*e*P	**PKPdf**	**19 04 46.5**	**+3.4**
NJ2				pP	**pPKPdf**	**19 04 51.3**	**-4.9**
NJ2				sP	**sPKPdf**	**19 04 52.5**	**-8.3**
NJ2				pmax	pmax		
	comp=Z,14nm,1.4s						
NJ2				pmax	pmax		
	comp=Z,380nm,5.7s						
PZH	**PanZhiHua**	**172.70**	**124**	PKP	**PKPdf**	**19 04 43.3**	**-0.9**
LZH	**Lanzhou**	**173.38**	**35**	*e*P	**PKPdf**	**19 04 43.3**	**-1.0**
LZH				pP	pPKPdf	19 04 52.5	-4.9
LZH				pmax	pmax		
	comp=Z,19nm,1.5s						
CD2	**Chengdu**	**175.90**	**86**	PKP	**PKPdf**	**19 04 44.5**	**-0.6**

*SJA **31** 19:10:11.3±1.3, 30°.69S×71°.85W, h50^{km}, ML4.1, MW4.2,*
Hypocentre not reviewed by the ISC
*NEIC **31** 19:10:13.9±1.8, 30°.77S±0°.03×71°.50W±0°.07, h42^{km}±8^{km},*
mb4.2/3, ML4.2(GUC), Error ellipse: s-maj=9.2km
s-min=4.7km az=92.0
*IDC **31** 19:10:14.3±2.6, 30°.71S×71°.54W, h46^{km}±21^{km}, mb3.8/4,*
mbtmp3.8/9, ML3.8/6, MS3.1/2, Error ellipse: s-maj=26.3km
s-min=16.9km az=60.0
*GUC **31** 19:10:14.8±0.7, 30°.77S×71°.40W, h47^{km}±1^{km}, ML4.2*
ISC 31 19:10:13.9±0.7**, 30°.77S**±0°.03×**71°.51W**±0°.05**, h45**^{km}±7^{km}**,**
n106, σ1^{s}**63**/129**, mb4.0**/4**, 8D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.14**	**310**	Pn	**Pn**	**19 10 22.4**	**+1.1**
CO06				Sn	**Sn**	**19 10 25.7**	**-0.8**
CO06	**Fray Jorge**	**0.14**	**310**	⇓*i*P	**Pn**	**19 10 22.4**	**+1.1**
CO06				*i* S	**Sn**	**19 10 28.5**	**+2.0**
CO06				IAML		19 10 29.5	
	comp=N,28µm,0.4s						
CO02	**Combarbal**	**0.62**	**135**	Pn	**Pn**	**19 10 26.3**	**-0.1**
CO02				Sn	**Sn**	**19 10 34.9**	**-0.6**
CO02	**Combarbal**	**0.62**	**135**	⇓*i*P	**Pn**	**19 10 26.4**	**-0.1**
CO02				*i* S	**Sn**	**19 10 35.1**	**-0.4**
CO02				IAML		19 10 35.8	
	comp=E,69µm,0.1s						
CO02	**Combarbal**	**0.62**	**135**	*e*P		19 10 35.4	
CO03	**El Pedregal**	**0.71**	**96**	Pn	**Pn**	**19 10 26.3**	**-1.4**
CO03				Sn	**Sn**	**19 10 36.6**	**-1.0**
CO03	**El Pedregal**	**0.71**	**96**	⇓*i*P	**Pn**	**19 10 27.4**	**-0.3**
CO03				*i* S	**Sn**	**19 10 36.8**	**-0.8**
CO03				IAML		19 10 37.9	
	comp=N,7µm,0.1s						
CO03	**El Pedregal**	**0.71**	**96**	*e*P		19 10 32.0	
CO03				IAML		19 10 50.6	
	comp=Z,2µm,0.6s						
GO04	**Tololo Observa**	**0.85**	**46**		**Pn**	**19 10 29.1**	**-0.6**
GO04				Sn	**Sn**	**19 10 40.9**	**-0.3**
GO04	**Tololo Observa**	**0.85**	**46**	⇓*i*P	**Pn**	**19 10 29.9**	**+0.2**
GO04				*i* S	**Sn**	**19 10 41.3**	**0.0**
GO04	**Tololo Observa**	**0.85**	**46**	*e*P		19 10 30.0	
GO04				IAML		19 10 45.5	
	comp=Z,7µm,0.5s						
CO01	**Juntas del Tor**	**1.45**	**58**	Pn	**Pn**	**19 10 39.0**	**+1.1**
CO01				Sn	**Sn**	**19 10 56.5**	**+0.5**
CO01	**Juntas del Tor**	**1.45**	**58**	*e*P	**Pn**	**19 10 39.1**	**+1.1**
CO01				*i* S	**Sn**	**19 10 57.0**	**+1.0**
CO01				IAML		19 10 57.8	
	comp=E,9µm,0.3s						
CO01	**Juntas del Tor**	**1.45**	**58**	*e*P		19 10 38.0	
CO01				*e*S		19 10 56.0	
CO01				IAML		19 10 57.6	
	comp=Z,7µm,0.2s						
VA06	**Catapilco**	**1.80**	**174**	Pn	**Pn**	**19 10 43.0**	**+0.6**
VA06					**Sn**	**19 11 04.9**	**+0.8**
VA06	**Catapilco**	**1.80**	**174**	⇓*i*P	**Pn**	**19 10 43.3**	**+0.9**
VA06				*i* S	**Sn**	**19 11 05.6**	**+1.5**
VA06				IAML		19 11 22.8	
	comp=N,2µm,0.4s						
LCO	**Las Campanas**	**1.89**	**22**		**Pn**	**19 10 44.8**	**+0.9**
LCO				Sn	**Sn**	**19 11 07.2**	**+0.6**
LCO	**Las Campanas**	**1.89**	**22**	⇓*i*P	**Pn**	**19 10 44.9**	**+1.1**
LCO				*i* S	**Sn**	**19 11 07.8**	**+1.3**
LCO	**Las Campanas**	**1.89**	**22**	*e*P		19 10 44.0	
LCO				*e*S		19 11 08.4	
DOCA	**Reserva Natura**	**2.10**	**96**	*e*P		19 10 50.1	
DOCA				*e*S		19 11 10.0	
DOCA				IAML		19 11 19.9	
	comp=Z,732nm,0.3s						
VA03	**San Esteban**	**2.15**	**158**		**Pn**	**19 10 48.9**	**+1.5**
VA03	**San Esteban**	**2.15**	**158**	*e*P	**Pn**	**19 10 49.2**	**+1.8**
VA03				*i* S	**Sn**	**19 11 15.4**	**+2.5**
VA03				IAML		19 11 20.7	
	comp=E,2µm,0.3s						
VA03	**San Esteban**	**2.15**	**158**	*e*P		19 10 49.5	
VA03				*e*S		19 11 18.4	
VA03				IAML		19 11 27.2	
	comp=Z,653nm,0.9s						
RTLS	**Leoncito**	**2.16**	**119**	*e*P		19 10 50.0	
RTLS				*e*S		19 11 18.5	
RTLS				IAML		19 11 20.6	
	comp=Z,3µm,0.6s						
AC05	**El Transito**	**2.20**	**29**		**Pn**	**19 10 50.0**	**+1.9**
AC05	**El Transito**	**2.20**	**29**	⇓*i*P	**Pn**	**19 10 50.3**	**+2.2**
AC05				*i* S	**Sn**	**19 11 16.6**	**+2.3**
AC05				IAML		19 11 21.2	
	comp=E,2µm,0.4s						
AC05	**El Transito**	**2.20**	**29**	*e*P		19 10 47.2	
AC05				*e*S		19 11 17.8	
AC05				IAML		19 11 19.8	
	comp=Z,2µm,0.3s						
ROCH	**El Roble**	**2.24**	**169**	*i* P	**Pn**	**19 10 49.8**	**+1.1**
ROCH				*e*P		19 10 49.8	
ROCH				*i* S	**Sn**	**19 11 17.7**	**+2.5**
ROCH				IAML		19 11 26.7	
	comp=N,1µm,0.3s						
ROCH				IAML		19 11 26.8	
ROC1	**El Roble**	**2.24**	**169**	Pn	**Pn**	**19 10 49.2**	**+0.5**
ROC1	**El Roble**	**2.24**	**169**	*e*P		19 10 34.0	
ROC1				*e*S		19 11 19.4	
VA01	**Torpederas**	**2.25**	**183**	Pn	**Pn**	**19 10 48.6**	**0.0**
VA01	**Torpederas**	**2.25**	**183**	*e*P		19 10 50.2	
VA01				*e*S		19 11 21.0	
PEL	**Peldehue**	**2.47**	**164**		**Pn**	**19 10 52.5**	**+0.8**
PEL	**Peldehue**	**2.47**	**164**	*e*P	**Pn**	**19 10 53.0**	**+1.2**
PEL				*i* S	**Sn**	**19 11 22.9**	**+2.1**
PEL				IAML		19 11 36.6	
	comp=N,748nm,0.2s						
PEL	**Peldehue**	**2.47**	**164**	*e*P		19 10 53.9	
PEL				*e*S		19 11 29.8	
PEL				IAML		19 11 41.1	
	comp=Z,550nm,1.4s						
MT02	**Curacav**	**2.51**	**173**		**Pn**	**19 10 52.1**	**-0.1**
MT02	**Curacav**	**2.51**	**173**	*e*P	**Pn**	**19 10 53.0**	**+0.8**
MT02	**Curacav**	**2.51**	**173**	*e*P		19 10 53.5	
MT02				*e*S		19 11 27.5	
MT02				IAML		19 11 33.3	
	comp=Z,387nm,0.6s						
ZON	**Zonda**	**2.55**	**108**	Pn	**Pn**	**19 10 54.7**	**+1.9**
ZON	**Zonda**	**2.55**	**108**	*e*P		19 10 39.6	
ZON				*e*S		19 11 23.0	
ZON				IAML		19 11 38.1	
	comp=Z,341nm,0.3s						
AC04	**Llanos de Chal**	**2.58**	**9**	Pn	**Pn**	**19 10 53.9**	**+0.7**
AC04	**Llanos de Chal**	**2.58**	**9**	*e*P	**Pn**	**19 10 54.2**	**+1.0**
AC04				IAML		19 11 38.5	
	comp=E,1µm,0.6s						
AC04	**Llanos de Chal**	**2.58**	**9**	*e*P		19 10 35.1	
AC04				*e*S		19 11 33.6	
AC04				IAML		19 11 36.4	
	comp=Z,624nm,0.3s						
MT10	**Hacienda Santa**	**2.63**	**162**	*e*P	**Pn**	**19 10 55.8**	**+1.7**
MT10				*i* S	**Sn**	**19 11 26.5**	**+1.7**
MT10				IAML		19 11 38.5	
	comp=N,2µm,0.3s						
SJA	**San Juan**	**2.64**	**107**	*e*P		19 10 57.0	
SJA				*e*S		19 11 32.5	
SJA				IAML		19 11 36.4	
	comp=Z,448nm,0.4s						
MT05	**Renca**	**2.70**	**166**		**Pn**	**19 10 53.5**	**-1.4**
MT05	**Renca**	**2.70**	**166**	*e*P	**Pn**	**19 10 56.8**	**+2.0**
MT05				*i* S	**Sn**	**19 11 28.2**	**+1.9**
MT05				IAML		19 11 45.0	
	comp=E,2µm,0.2s						
MT05	**Renca**	**2.70**	**166**	*e*P		19 10 56.0	
MT05				*e*S		19 11 29.0	
MT05				IAML		19 11 38.6	
	comp=Z,513nm,0.7s						
FCH	**Farellones**	**2.76**	**158**	*e*P	**Pn**	**19 10 58.9**	**+3.0**
FCH				IAML		19 11 35.6	
	comp=E,368nm,0.4s						
MT03	**Universidad Ad**	**2.85**	**163**	Pn	**Pn**	**19 10 57.3**	**+0.4**
MT03	**Universidad Ad**	**2.85**	**163**	*e*P	**Pn**	**19 10 58.4**	**+1.4**
MT03				*i* S	**Sn**	**19 11 31.9**	**+1.8**
MT03				IAML		19 11 46.9	
	comp=N,934nm,0.4s						
MT03	**Universidad Ad**	**2.85**	**163**	*e*P		19 10 58.0	
MT03				*e*S		19 11 34.5	
MT03				IAML		19 11 45.8	
	comp=Z,538nm,0.7s						
MT04	**Ro Olivares**	**2.88**	**156**	⇓*i*P	**Pn**	**19 11 00.6**	**+3.1**
MT04				*i* S	**Sn**	**19 11 34.1**	**+3.2**
MT04				IAML		19 11 41.5	
	comp=E,470nm,0.5s						
VA05	**Santo Domingo**	**2.88**	**182**	Pn	**Pn**	**19 10 57.3**	**0.0**
ASAL	**Salagasta**	**2.92**	**129**	*e*P		19 11 01.3	
ASAL				*e*S		19 11 35.5	
ASAL				IAML		19 11 58.2	
	comp=Z,251nm,0.5s						
CFA	**Coronel Fontan**	**2.93**	**107**	P	**Pn**	**19 11 00.3**	**+2.3**
	comp=Z,86nm,0.3s,baz=302,slow=15,SNR=80						
CFA				S	**Sn**	**19 11 33.6**	**+1.7**
	comp=Z,131nm,0.4s,baz=343,slow=7.7,SNR=4.5						
CFA				LR	LR	19 12 17.4	
	comp=Z,334nm,19.4s,baz=244,slow=41						
CFA	**Coronel Fontan**	**2.93**	**107**	*e*P		19 10 54.5	
CFA				*e*S		19 11 36.1	
CFA				*e*S		19 11 40.0	
MT08	**Bocatoma Ro**	**2.96**	**155**		**Pn**	**19 10 58.1**	**-0.5**
MT08	**Bocatoma Ro**	**2.96**	**155**	*e*P	**Pn**	**19 11 02.4**	**+3.9**
MT08				IAML		19 11 48.4	
	comp=N,377nm,0.3s						
ARCO	**CERRO ARCO**	**3.02**	**134**	*e*P		19 11 02.0	
ARCO				*e*S		19 11 40.0	
MT09	**Talagante**	**3.03**	**172**		**Pn**	**19 10 59.9**	**+0.3**
MT09	**Talagante**	**3.03**	**172**	*e*P	**Pn**	**19 11 00.8**	**+1.3**
MT09				*i* S	**Sn**	**19 11 36.5**	**+1.8**
MT09				IAML		19 11 57.5	
	comp=N,510nm,0.5s						
MT12	**Pirque**	**3.07**	**165**	*e*P	**Pn**	**19 11 01.6**	**+1.6**
MT12				*i* S	**Sn**	**19 11 36.7**	**+1.3**
MT12				IAML		19 11 56.2	
	comp=E,896nm,0.2s						
MT01	**Popeta**	**3.10**	**176**		**Pn**	**19 11 00.7**	**+0.4**
MT01	**Popeta**	**3.10**	**176**	*e*P	**Pn**	**19 11 00.9**	**+0.6**
MT01				*i* S	**Sn**	**19 11 37.0**	**+0.9**
MT01				IAML		19 11 50.9	
	comp=E,394nm,0.5s						
MT01	**Popeta**	**3.10**	**176**	*e*P		19 11 01.2	
MT01				*e*S		19 11 38.0	
MT01				*e*S		19 11 39.2	
MT01				IAML		19 11 50.4	
	comp=Z,269nm,0.7s						
MT13	**San Alfonso**	**3.15**	**161**		**Pn**	**19 11 01.0**	**0.0**
MT13	**San Alfonso**	**3.15**	**161**	*e*P	**Pn**	**19 11 02.7**	**+1.7**
MT13				*i* S	**Sn**	**19 11 39.5**	**+2.1**
MT13				IAML		19 11 53.8	
	comp=E,630nm,0.2s						
AAGR	**Agrelo**	**3.25**	**136**	*e*P		19 11 06.2	
AAGR				IAML		19 12 06.4	
	comp=Z,342nm,1.0s						
LMEL	**Las Melosas**	**3.27**	**161**		**Pn**	**19 11 02.6**	**-0.1**
LMEL	**Las Melosas**	**3.27**	**161**	*e*P	**Pn**	**19 11 04.6**	**+1.8**
LMEL				*i* S	**Sn**	**19 11 42.0**	**+1.6**
LMEL				IAML		19 11 46.8	
	comp=N,405nm,0.1s						
GO03	**Copiap**	**3.35**	**20**		**Pn**	**19 11 03.5**	**-0.3**
GO03	**Copiap**	**3.35**	**20**	*e*P	**Pn**	**19 11 06.0**	**+2.2**
GO03				*i* S	**Sn**	**19 11 43.9**	**+1.4**
GO03				IAML		19 12 01.4	
	comp=E,876nm,0.7s						
GO03	**Copiap**	**3.35**	**20**	*e*P		19 11 02.0	
GO03				*e*S		19 11 44.0	
GO03				*e*S		19 11 52.8	
GO03				IAML		19 11 59.5	
	comp=Z,610nm,0.5s						
AC06	**Mina Casimiro**	**3.54**	**17**	Pn	**Pn**	**19 11 06.2**	**-0.2**
AC06	**Mina Casimiro**	**3.54**	**17**	*e*P	**Pn**	**19 11 08.0**	**+1.5**
AC06				*i* S	**Sn**	**19 11 48.5**	**+1.4**
AC06				IAML		19 12 04.6	
	comp=E,560nm,0.3s						
BO01	**Tunca**	**3.63**	**174**	Pn	**Pn**	**19 11 07.0**	**-0.6**
BO01	**Tunca**	**3.63**	**174**	*e*P	**Pn**	**19 11 08.7**	**+1.1**
BO02	**Sierra Bellavi**	**4.06**	**172**		**Pn**	**19 11 12.3**	**-1.3**
BO02	**Sierra Bellavi**	**4.06**	**172**	*e*P	**Pn**	**19 11 14.5**	**+1.0**
GO05	**Huala**	**4.25**	**185**	Pn	**Pn**	**19 11 15.2**	**-0.8**
AC02	**Maricunga**	**4.44**	**29**		**Pn**	**19 11 16.4**	**-2.7**
AC02	**Maricunga**	**4.44**	**29**	*e*P	**Pn**	**19 11 21.3**	**+2.1**
AC01	**Pan de Azucar**	**4.67**	**10**	Pn	**Pn**	**19 11 21.1**	**-0.8**
ML02	**Panimavida**	**4.98**	**179**		**Pn**	**19 11 26.3**	**+0.1**
GO02	**Mina Guanaco**	**5.83**	**17**	Pn	**Pn**	**19 11 37.8**	**-0.4**
BI05	**Punta Hualpn**	**6.13**	**193**	Pn	**Pn**	**19 11 40.1**	**-1.7**
PB14	**IPOC Station P**	**6.20**	**9**	Pn	**Pn**	**19 11 42.1**	**-1.1**
H03N1	**Juan Fernandez**	**6.82**	**245**	T	T	19 18 48.6	
	baz=72,slow=72,SNR=163						
H03N3	**Juan Fernandez**	**6.84**	**245**	T	T	19 18 43.4	
	baz=72,slow=72,SNR=128						
H03N2	**Juan Fernandez**	**6.84**	**245**	T	T	19 18 47.9	
	baz=72,slow=72,SNR=130						
H03S3	**Juan Fernandez**	**6.97**	**242**	T	T	19 19 12.3	
	baz=60						
H03S1	**Juan Fernandez**	**6.97**	**242**	T	T	19 19 04.3	
	baz=60						
H03S2	**Juan Fernandez**	**6.99**	**242**	T	T	19 19 03.7	
	baz=60						
PB10	**IPOC Station P**	**7.27**	**7**	Pn	**Pn**	**19 11 57.8**	**+0.2**
PB15	**IPOC Station P**	**7.74**	**14**	Pn	**Pn**	**19 12 03.0**	**-1.2**
LVC	**Limon Verde**	**8.45**	**17**	P	**Pn**	**19 12 13.0**	**-1.1**
	comp=E,0.4nm,0.3s,baz=237,slow=14,SNR=1.7						
LVC				S	**Sn**	**19 13 47.4**	**-1.0**
	comp=E,8.5nm,0.6s,baz=215,slow=14,SNR=1.8						
	comp=E,1.1nm,0.3s						
LVC	**Limon Verde**	**8.45**	**17**	Pn	**Pn**	**19 12 13.1**	**-1.1**
GO06	**Curarrehue**	**8.80**	**180**	Pn	**Pn**	**19 12 17.9**	**-0.6**
PB03	**IPOC Station P**	**8.82**	**11**	Pn	**Pn**	**19 12 18.1**	**-0.9**
PB07	**IPOC Station P**	**9.12**	**10**	Pn	**Pn**	**19 12 20.7**	**-2.4**
PB09	**IPOC Station P**	**9.16**	**13**	Pn	**Pn**	**19 12 20.4**	**-3.3**
PB02	**IPOC Station P**	**9.52**	**9**	Pn	**Pn**	**19 12 26.0**	**-2.5**
PB01	**IPOC Station P**	**9.85**	**11**	Pn	**Pn**	**19 12 30.9**	**-2.2**
PLCA	**Paso Flores**	**9.98**	**176**	P	**Pn**	**19 12 35.1**	**+0.5**
	comp=E,0.1nm,0.3s,baz=348,slow=11,SNR=5.0						
	comp=E,0.5nm,0.4s						
PLCA	**Paso Flores**	**9.98**	**176**	Pn	**Pn**	**19 12 34.2**	**-0.5**
TRQA	**Tornquist**	**10.71**	**135**	Pn	**Pn**	**19 12 42.2**	**-2.5**
LL05	**Los Muermos**	**10.73**	**188**	Pn	**Pn**	**19 12 43.0**	**-2.0**
PB08	**IPOC Station P**	**10.79**	**12**	Pn	**Pn**	**19 12 44.4**	**-1.8**
PB11	**IPOC Station P**	**11.09**	**9**	Pn	**Pn**	**19 12 48.8**	**-1.3**
GO01	**Chusmiza**	**11.25**	**11**	Pn	**Pn**	**19 12 51.9**	**-0.7**
PB16	**IPOC Station P**	**12.51**	**9**	Pn	**Pn**	**19 13 10.1**	**+0.3**
ITQB	**Itaqui**	**12.92**	**89**	Pn	**Pn**	**19 13 11.2**	**-3.7**
CPUP	**Villa Florida**	**13.22**	**74**	P	**Pn**	**19 13 19.1**	**0.0**
	comp=E,0.2nm,0.3s,baz=240,slow=8.1,SNR=1.9						
CPUP				S	**Sn**	**19 15 51.7**	**+7.1**
	comp=E,2.1nm,0.7s,baz=144,slow=17,SNR=1.3						
CPUP				LR	LR	19 18 39.6	
	comp=E,80nm,18.4s,baz=158,slow=38						
	comp=E,1.0nm,0.4s						
CPUP	**Villa Florida**	**13.22**	**74**	Pn	**Pn**	**19 13 16.5**	**-2.6**
LPAZ	**La Paz**	**14.74**	**13**	P	**Pn**	**19 13 40.4**	**+0.3**
	comp=E,0.1nm,0.3s,baz=170,slow=5.3,SNR=7.3						
	comp=E,1.6nm,0.7s						
LPAZ	**La Paz**	**14.74**	**13**	P	**Pn**	**19 13 40.9**	**+0.8**
PLTB	**Pedras Altas**	**15.35**	**98**	Pn	**Pn**	**19 13 46.3**	**-1.2**
PLTB				IAmb	IAmb	19 14 14.4	
	comp=Z,16nm,1.4s						
ITAB	**Concordia**	**17.31**	**83**	Pn	**Pn**	**19 14 10.3**	**-2.0**
ITAB				IAmb	IAmb	19 14 13.4	
	comp=Z,39nm,1.5s						
SIV	**San Ignacio**	**17.54**	**35**	P	**P**	**19 14 16.0**	**+0.2**
	baz=221,slow=9.6,SNR=7.8						
	comp=Z,1.6nm,0.7s						
BDFB	**Brasilia**	**26.24**	**60**	P	**P**	**19 15 44.1**	**-0.9**
	comp=Z,3.2nm,0.6s,baz=222,slow=14,SNR=5.3						
	comp=Z,3.2nm,0.6s						
BDFB	**Brasilia**	**26.24**	**60**	P	**P**	**19 15 42.5**	**-2.6**
BDFB				IAmb	IAmb	19 15 46.6	
	comp=Z,3.9nm,0.6s						
TXAR	**Lajitas Array**	**67.16**	**330**	P	**P**	**19 21 03.6**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=150,slow=7.3,SNR=2.4						
	comp=Z,0.3nm,0.6s						
DBIC	**Dimbokro**	**73.73**	**72**	P	**P**	**19 21 44.0**	**+0.3**
	comp=Z,1.3nm,0.4s,baz=250,slow=6.6,SNR=4.6						
	comp=Z,1.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**82.69**	**70**	P	**P**	**19 22 33.4**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=270,slow=5.2,SNR=1.6						
	comp=Z,0.6nm,0.4s						
H11S2	**WAKE ISLAND Hy**	**126.21**	**271**	T	T	21 48 03.6	
	baz=116,slow=75,SNR=18						
H11S1	**WAKE ISLAND Hy**	**126.22**	**271**	T	T	21 47 59.3	
	baz=116,slow=75,SNR=21						

H11S3	WAKE ISLAND Hy	126.23	271	T	T	21 48 03.1	
	baz=116,slow=75,SNR=24						
KURBB	Kurchatov Arra	150.16	40	PKPbc	PKPbc	19 29 59.4	0.0
	comp=Z,0.4nm,1.0s,baz=305,slow=2.4,SNR=2.1						
ZALV	Zalesovo Beam	151.23	30	PKPbc	PKPbc	19 30 02.4	+0.5
	comp=Z,0.8nm,0.6s,baz=338,slow=3.4,SNR=4.0						

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*RSPR **31** 19:11:04.8, 19°.20N×65°.13W, h53km±13km, MD3.6/10*

*NEIC **31** 19:11:06.0±2.2, 19°.08N±0°.07×65°.22W±0°.04, h36km±41km, ML3.3/44, Md3.6/30(RSPR), Error ellipse: s-maj=11.4km s-min=4.8km az=198.0*

ISC 31 19:11:01.9±1.8**, 19°.19N**±0°.07×**65°.18W**±0°.04**, h14**km±12km**,** **n65, σ0s.90**/72**, 11C-4D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUPR	Culebra, Puert	0.88	186	⇑eP	Pn	19 11 20.5	+0.6
CUPR	Culebra, Puert	0.88	186	eS	Sn	19 11 32.3	-0.2
CUPR	Culebra, Puert	0.88	186		Pn	19 11 20.3	+0.4
CUPR					Sb	19 11 31.4	+0.7
CUPR				IAML		19 11 38.7	
	comp=E,631nm,0.6s						
CUPR				IAML		19 11 39.1	
	comp=N,484nm,0.3s						
CBYP	Canovanas	1.11	215	⇑eP	Pb	19 11 23.3	+0.3
CBYP	Canovanas	1.11	215	eS	Sb	19 11 37.7	+0.3
CBYP	Canovanas	1.11	215		Pb	19 11 23.1	+0.1
CBYP					Sb	19 11 35.7	-1.7
CBYP				IAML		19 11 40.1	
	comp=E,2µm,0.2s						
MTP	Monte Pirata	1.14	198	⇓iP	Pg	19 11 24.5	+0.5
MTP	Monte Pirata	1.14	198	eS	Sn	19 11 39.2	+0.3
MTP	Monte Pirata	1.14	198		Pg	19 11 24.4	+0.4
MTP					Sb	19 11 36.1	-2.1
MTP				IAML		19 11 39.6	
	comp=E,1µm,0.3s						
MTP				IAML		19 11 40.4	
	comp=N,736nm,0.3s						
HUMP	Col San Antoni	1.22	211	⇑eP	Pn	19 11 24.9	+0.4
HUMP	Col San Antoni	1.22	211	eS	Sb	19 11 40.6	+0.2
HUMP	Col San Antoni	1.22	211		Pn	19 11 24.7	+0.2
HUMP					Sb	19 11 38.9	-1.4
HUMP				IAML		19 11 45.2	
	comp=N,478nm,0.2s						
HUMP				IAML		19 11 45.6	
	comp=E,556nm,0.2s						
GCPR	Guaynabo City	1.22	224	⇑eP	Pn	19 11 24.6	0.0
GCPR	Guaynabo City	1.22	224	eS	Sb	19 11 40.7	+0.3
GCPR	Guaynabo City	1.22	224		Pn	19 11 24.2	-0.4
GCPR					Sb	19 11 38.2	-2.3
SJG	San Juan	1.41	221		Pn	19 11 26.7	-0.5
SJG				IAML		19 11 49.8	
	comp=E,273nm,0.2s						
EMPR	Esperanza - Ma	1.46	241	⇑eP	Pn	19 11 28.8	+1.0
EMPR	Esperanza - Ma	1.46	241	eS	Sb	19 11 47.9	+0.6
EMPR	Esperanza - Ma	1.46	241		Pn	19 11 28.0	+0.2
EMPR				IAML		19 11 52.6	
	comp=N,330nm,0.6s						
EMPR				IAML		19 11 53.3	
	comp=E,461nm,0.5s						
EMPR	Esperanza - Ma	1.46	241		Sb	19 11 47.9	+0.6
CDVI	St. Croix	1.48	165		Pg	19 11 30.3	-0.2
IGPR	InterUniversit	1.50	216	⇑eP	Pn	19 11 29.1	+0.7
IGPR	InterUniversit	1.50	216	eS	Sn	19 11 47.5	-0.3
IGPR	InterUniversit	1.50	216		Pn	19 11 29.1	+0.7
IGPR					Sn	19 11 47.5	-0.3
AOPR	Arecibo Observ	1.71	241	⇓eP	Pn	19 11 31.9	+0.6
AOPR	Arecibo Observ	1.71	241	eS	Sn	19 11 53.6	+0.6
AOPR	Arecibo Observ	1.71	241		Pn	19 11 31.6	+0.3
AOPR					Sn	19 11 53.0	0.0
AOPR				IAML		19 12 04.7	
	comp=E,742nm,0.3s						
AOPR				IAML		19 12 06.0	
	comp=N,438nm,0.4s						
CELP	Cerrillos	1.73	230	⇓eP	Pn	19 11 32.3	+0.7
CELP	Cerrillos	1.73	230	eS	Sn	19 11 53.6	+0.2
CELP	Cerrillos	1.73	230		Pn	19 11 32.0	+0.5
CELP	Cerrillos	1.73	230		Sn	19 11 53.6	+0.2
UUPR	Utuado, UPR, P	1.73	238	⇓eP	Pn	19 11 32.3	+0.7
UUPR	Utuado, UPR, P	1.73	238	eS	Sn	19 11 52.8	-0.7
UUPR	Utuado, UPR, P	1.73	238		Pn	19 11 32.2	+0.6
UUPR	Utuado, UPR, P	1.73	238		Sn	19 11 52.8	-0.7
OBIP	Obispado Ponce	1.77	230	⇑iP	Pn	19 11 32.0	-0.1
OBIP	Obispado Ponce	1.77	230	eS	Sn	19 11 54.2	-0.1
OBIP	Obispado Ponce	1.77	230		Pn	19 11 31.5	-0.5
OBIP				IAML		19 12 03.4	
	comp=E,159nm,0.3s						
OBIP	Obispado Ponce	1.77	230		Sn	19 11 54.2	-0.1
AGPR	Aguadilla, PR	1.96	249	⇑eP	Pn	19 11 35.4	+0.6
AGPR	Aguadilla, PR	1.96	249	eS	Sn	19 11 59.4	+0.2
AGPR	Aguadilla, PR	1.96	249		Pn	19 11 34.9	+0.1
AGPR	Aguadilla, PR	1.96	249		Sn	19 11 59.4	+0.2
AGPR	Aguadilla, PR	1.96	249	IAML		19 12 04.5	
	comp=E,114nm,0.5s						
AGPR				IAML		19 12 12.7	
	comp=N,136nm,0.6s						
LSP	Las Mesas	2.07	241	⇑eP	Pn	19 11 37.0	+0.8
LSP	Las Mesas	2.07	241		Pn	19 11 37.0	+0.8
MLPR	Magueyes Islan	2.14	236	⇑eP	Pn	19 11 38.3	+1.1
MLPR	Magueyes Islan	2.14	236	eS	Sn	19 12 04.2	+0.6
MLPR	Magueyes Islan	2.14	236		Pn	19 11 38.2	+0.9
MLPR					Sn	19 12 03.0	-0.6
CRPR	Cabo Rojo, PR	2.17	238	⇑eP	Pn	19 11 38.7	+1.0
CRPR	Cabo Rojo, PR	2.17	238	eS	Sn	19 12 05.6	+1.2
CRPR	Cabo Rojo, PR	2.17	238		Pn	19 11 38.4	+0.7
CRPR	Cabo Rojo, PR	2.17	238		Sn	19 12 05.6	+1.2
SMRT	St. Maarten	2.30	119		Pb	19 11 41.8	-1.4
SMRT				IAML		19 12 17.2	
	comp=N,208nm,0.3s						
SMRT				IAML		19 12 27.2	
	comp=E,233nm,0.4s						
IDE	Isla Desecheo	2.31	250	⇑eP	Pb	19 11 42.7	-0.7
IDE	Isla Desecheo	2.31	250		Pb	19 11 42.7	-0.7
SABA	Saba	2.41	130	Pn	Pn	19 11 42.0	+1.0
SABA				IAML		19 12 24.3	
	comp=E,367nm,0.9s						
SABA				IAML		19 12 25.6	
	comp=N,273nm,0.6s						
PCDR	Punta Cana, DR	3.10	258	Pn	Pn	19 11 50.2	-0.2
PCDR				IAML		19 13 32.4	
	comp=N,151nm,1.6s						
PCDR				IAML		19 13 49.3	
	comp=E,78nm,1.4s						
ANWB	Willy Bob	3.56	115	Pn	Pn	19 11 58.9	+2.1
ANWB				IAML		19 12 41.8	
	comp=E,89nm,1.7s						
ANWB				IAML		19 13 26.8	
	comp=E,98nm,1.9s						
GDHS	Morne Mazeau,	4.36	131	Pn	Pn	19 12 07.3	-0.5
CBE	Ff, Capester	4.61	132	Pn	Pn	19 12 12.3	+1.1
MAGL	Barre de l’ile	4.92	130	Pn	Pn	19 12 18.7	+3.2
SDDR	Presa de Saban	5.78	269	Pn	Pn	19 12 28.4	+1.1
FDF	Fort de France	5.88	138	Pn	Pn	19 12 29.1	+0.4
GRTK	Grand Turk	6.04	293	Pn	Pn	19 12 30.2	-0.6

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*IDC **31** 19:11:04.9±2.3, 24°.75N×126°.57E, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=150.1km s-min=29.2km az=66.0*

*NEIC **31** 19:11:06.7±3.0, 24°.87N±0°.09×126°.96E±0°.07, h23km±7km, mb4.2/6, Error ellipse: s-maj=13.4km s-min=9.4km az=170.0*

*JMA **31** 19:11:07.3±0.2, 25°N±1°×12°7E±°, h83km, MV3.0/21, NEAR MIYAKOJIMA ISLAND*

ISC 31 19:11:04.5±3.1**, 24°.84N**±0°.07×**127°.01E**±0°.04**, h8**km±20km**,** **n45, σ1s.35**/53**, mb3.9**/7**, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOGS	Gusukube	1.46	267	eP	Pb	19 11 32.0	+0.2
JOGS				eS	Sb	19 11 50.5	0.0
JJT3	Tamagusuku3	1.48	28	P	Pb	19 11 33.0	+0.8
JJT3				eS	Sb	19 11 51.6	+0.4
JKE	Kume jima 2	1.50	352	P	Pb	19 11 32.7	+0.2
JMJ2	Miyako jima3	1.53	267	P	Pn	19 11 32.9	+0.8
JMJ2				eS	Sn	19 11 52.2	+0.1
JMJ	Miyako jima 2	1.56	270	P	Pn	19 11 33.1	+0.7
JIKM	Ikemajima	1.60	274	eP	Pn	19 11 33.9	+0.9
JIKM				eS	Sb	19 11 54.3	-0.3
JIRB	Irabujima	1.67	270	eP	Pn	19 11 34.4	+0.5
JAGN	Aguni-jima	1.76	7	eP	Pb	19 11 37.0	0.0
JNTH	Nagotoyohara	1.91	28	eP	Pn	19 11 38.5	+1.2
JTJ	Tarama	2.11	265	eP	Pn	19 11 40.5	+0.6
JTJ				eS	Sn	19 12 04.9	-1.4
JOW	Kunigami	2.29	30	Pn	Pn	19 11 44.4	+1.8
JOW	Kunigami	2.29	30	P	Pb	19 11 45.8	-0.3
JOW	Kunigami	2.29	30	eP	Pn	19 11 44.4	+1.8
JIH	Iheya	2.35	21	eP	Pn	19 11 43.8	+0.4
JISG	Ishigakijimahi	2.46	265	eP	Pn	19 11 45.1	+0.2
JISG				eS	Sn	19 12 14.0	-1.2
JYRO	Yoronjima	2.54	30	eS	Sn	19 12 17.4	+0.4
JIJ	Ishigaki jima	2.65	260	eP	Pn	19 11 47.9	+0.5
JOKE	Okinoerabujima	2.88	29	eP	Pn	19 11 52.7	+2.1
JAMN	Amaminishikomi	3.91	29	eS	Sn	19 12 50.6	-0.3
JMZ	Minamidaito 2	3.94	75	Pn	Pn	19 12 05.3	+0.1
JMZ				Sn	Sn	19 12 48.1	-3.4
JMZ	Minamidaito 2	3.94	75	P	Pn	19 12 08.1	+3.0
JMZ	Minamidaito 2	3.94	75	P	Pn	19 12 05.2	+0.1
JMZ				eS	Sn	19 12 48.4	-3.2
NACB	Ninganchiao	4.97	264	Pn	Pn	19 12 18.8	-0.7
YHNB	Yeheng	5.12	269	Pn	Pn	19 12 22.7	+1.2
YULB	Yu-li	5.41	256	Pn	Pn	19 12 23.4	-2.0
YULB	Yu-li	5.41	256	P	Pn	19 12 23.6	-1.9
SSLB	Suanglung	5.62	261	Pn	Pn	19 12 27.2	-1.1
SSLB	Suanglung	5.62	261	P	Pn	19 12 28.5	+0.1
TPUB	Ta-pu	6.03	257	Pn	Pn	19 12 33.3	-0.7
TPUB	Ta-pu	6.03	257	P	Pn	19 12 33.5	-0.4
JSU	Suzuyama	7.31	24	Pn	Pn	19 12 49.2	-2.3
JMN	Monobe	10.70	32	Pn	Pn	19 13 37.4	-0.6
MJB9	Matsu-Tunnel	15.12	37	Pn	Pn	19 14 34.8	-3.6
MJB9				IAmb	IAmb	19 14 37.1	
	comp=Z,17nm,1.4s						
SONM	Songino Array	28.16	330	P	P	19 16 57.8	+0.5
	comp=Z,0.4nm,0.4s,baz=154,slow=11,SNR=4.8						
	comp=Z,0.4nm,0.4s						
COEN	Coen	41.66	156	P	P	19 18 54.6	+1.1
COEN				IAmb	IAmb	19 19 17.2	
	comp=Z,16nm,1.4s						
MK31	Makanchi Array	41.66	313	P	P	19 18 52.3	-1.1
MKAR	Makanchi Array	41.66	313	P	P	19 18 53.5	+0.1
	comp=Z,0.6nm,0.4s,baz=99,slow=10,SNR=12						
	comp=Z,0.6nm,0.4s						
MKAR	Makanchi Array	41.66	313	P	P	19 18 52.1	-1.3
WB0	Warramunga Arr	44.91	170	P	P	19 19 21.1	+1.3
WRA	Warramunga Arr	45.08	170	P	P	19 19 22.6	+1.5
	comp=Z,0.6nm,1.0s,baz=350,slow=8.8,SNR=2.6						
	comp=Z,0.6nm,1.0s						
KURK	Kurchatov	45.09	318	P	P	19 19 20.9	0.0
KURK				IAmb	IAmb	19 19 32.5	
	comp=Z,3.7nm,1.4s						
KKAR	Karatay Array	49.33	306	P	P	19 19 54.5	+0.3
ABKAR	Akbulak array	56.80	314	P	P	19 20 49.0	-0.2
ABKAR	Akbulak array	56.80	314	P	P	19 20 48.9	-0.2
ABKAR				IAmb	IAmb	19 20 51.4	
	comp=Z,1.1nm,0.8s						
FINES	FINESS Array B	73.53	331	P	P	19 22 38.3	+0.8
	comp=Z,3.1nm,1.1s,baz=54,slow=7.1,SNR=6.0						
	comp=Z,3.1nm,1.1s						

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*IDC **31** 19:25:22.6±21.0, 8°.27S×119°.60E, h127km±207km, mb3.4/6, mbtmp3.7/7, ML3.8/1, MS3.6/2, Error ellipse: s-maj=188.0km s-min=39.2km az=65.0*

ISC 31 19:25:30.3±1.6**, 8°.1S**±0°.4×**120°.1E**±0°.6**, h200**km**, n9,** **σ1s.32**/8**, mb3.5**/5**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.10	132	P	Pn	19 29 27.4	-2.2
	0.3nm,0.3s,baz=303,slow=13,SNR=20						
WRA				S	S	19 32 45.7	+1.3
	0.8nm,0.8s,baz=306,slow=24,SNR=4.6						
	0.8nm,0.7s						
ASAR	Alice Springs	20.34	141	P	P	19 29 51.5	+0.1
	1.5nm,0.5s,baz=315,slow=9.0,SNR=34						
	1.5nm,0.5s						
CTA	Charters Tower	27.94	118	LR	LR	19 44 04.4	
	comp=Z,89nm,20.0s,baz=174,slow=40						
STKA	Stephens Creek	30.95	143	P	P	19 31 29.6	+0.8
	1.1nm,0.3s,baz=312,slow=10.0,SNR=8.2						
	1.1nm,0.3s						
ASAJ	Asahikawa	55.81	19	LR	LR	19 57 48.0	
	comp=Z,68nm,21.9s,baz=148,slow=35						
SONM	Songino Array	57.01	349	P	P	19 34 56.1	+0.9
	0.3nm,0.5s,baz=169,slow=8.1,SNR=2.5						
	0.3nm,0.5s						
MKAR	Makanchi Array	64.19	332	P	P	19 35 43.4	-0.3
	0.4nm,0.5s,baz=149,slow=7.8,SNR=9.9						
	0.4nm,0.5s						
ZALV	Zalesovo Beam	68.62	338	P	P	19 36 10.7	-0.8
	0.5nm,0.3s,baz=137,slow=5.5,SNR=2.8						
	0.5nm,0.3s						
KURBB	Kurchatov Arra	68.68	333	P	P	19 36 11.6	-0.4
	0.1nm,0.4s,baz=133,slow=5.9,SNR=4.3						
	0.1nm,0.4s						

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*IDC **31** 19:56:52.9±5.5, 38°.34N×72°.83E, h127km±51km, mbtmp3.5/7, Error ellipse: s-maj=65.0km s-min=26.5km az=145.0*

*SOME **31** 19:56:52.2, 39°.37N×73°.20E, h5km*

*NNC **31** 19:56:56.0±2.9, 38°.79N×72°.77E, h0km, mb3.4, mpv2.9, Error ellipse: s-maj=22.2km s-min=16.4km az=166.0*

ISC 31 19:56:52.0±1.9**, 38°.3N**±0°.1×**72°.84E**±0°.09**, h100**km**, n26,** **σ1s.63**/30**, 5C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	3.88	9	P	Pn	19 57 51.5	+1.6
	SNR=83						
AML	Almayashu	3.88	9	⇑P	Pn	19 57 51.2	+1.4
	0.4nm,0.2s						
AML				⇑S	Sn	19 58 33.5	-1.1
	9.2nm,0.6s						
UCH	Uchtor	4.12	18	P	Pn	19 57 54.9	+1.7
	SNR=74						
IUG	Iuzhnay	4.40	332	ePg	Pn	19 57 59.7	+3.1
	8.9nm,0.1s						
IUG				eLg	Lg	19 58 47.7	
	100nm,0.2s						
EKS2	Erkin-Say	4.41	9	P	Pn	19 57 58.8	+2.0
	SNR=19						
MRKS	Merke	4.45	4	ePg	Pn	19 57 57.3	0.0
	13nm,0.2s						
MRKS				eLg	Lg	19 58 44.1	
	35nm,0.2s						
AAK	Ala-Archa	4.51	16	P	Pn	19 58 00.3	+2.1
	SNR=19						
AAK	Ala-Archa	4.51	16	P	Pn	19 58 00.2	+2.1
	8.3nm,0.3s,baz=177,slow=6.0,SNR=89						
AAK				S	Sn	19 58 50.7	+1.2
	12nm,0.5s,baz=344,slow=23,SNR=25						
KBK	Karagaybulak	4.64	20	P	Pn	19 58 01.7	+1.8
	SNR=17						
ULHL	Ulahol	4.72	32	P	Pn	19 58 01.8	+0.8
	SNR=24						
DZA	Taraz	4.72	346	ePg	Pn	19 58 04.0	+3.0
	27nm,0.1s						
DZA				eLg	Lg	19 58 54.9	
	118nm,0.2s						
CHMS	Chumysh	4.91	17	P	Pn	19 58 05.5	+2.0
	SNR=7.5						
TKM2	Tokmak 2	5.07	24	P	Pn	19 58 06.9	+1.2
	SNR=9.4						
TKM2	Tokmak 2	5.07	24	⇑P	Pn	19 58 06.8	+1.0
	3.7nm,0.7s						
TKM2				⇑S	Sn	19 59 03.2	+0.1
	3.9nm,0.5s						
KK31	Karatay Array	5.11	341	P	Pn	19 58 08.3	+2.1
	0.6nm,0.2s,baz=163,slow=13,SNR=41						
KK31				⇑S	Sn	19 59 03.1	-0.8
	31nm,0.6s,baz=166,slow=28,SNR=3.8						
USP	Ospenovka	5.12	14	P	Pn	19 58 08.1	+1.8
	SNR=17						
KST	Kastek	5.30	26	ePg	Pn	19 58 10.3	+1.6
	10nm,0.3s						
KST				eLg	Lg	19 59 06.1	
	7.2nm,0.2s						
MTBS	Maitube	5.54	28	ePg	Pn	19 58 13.9	+1.8
	7.4nm,0.1s						
MTBS				eLg	Lg	19 59 12.0	
	3.9nm,0.1s						
BTLS	Baital	6.79	7	ePg	Pn	19 58 39.9	+11
	0.8nm,0.2s						
BTLS				eLg	Lg	19 59 57.4	
	5.7nm,0.5s						
MKAR	Makanchi Array	10.97	36	P	Pn	19 59 25.5	-0.3
	0.7nm,1.1s,baz=203,slow=13,SNR=2.3						
GEYT	Alibeck	11.61	273	P	Pn	19 59 34.0	-0.3
	0.9nm,0.3s,baz=110,slow=11,SNR=4.1						
KURBB	Kurchatov Arra	12.96	16	P	Pn	19 59 50.9	-1.3
	0.2nm,0.6s,baz=209,slow=13,SNR=2.6						
AB31	Akbulak array	14.35	324	P	P	20 00 14.3	0.0
	0.4nm,0.4s,baz=132,slow=13,SNR=12						
AB31				⇓S	Sn	20 02 46.9	-1.3
	2.4nm,0.9s,baz=8.6,slow=69,SNR=4.6						
BVAR	Borovoye Array	14.82	354	P	Pn	20 00 15.4	-0.9
	0.1nm,0.4s,baz=153,slow=13,SNR=1.5						
AKTO	Aktyubinsk	16.07	324	P	Pn	20 00 31.0	-0.9
	1.0nm,0.5s,baz=110,slow=12,SNR=2.3						
ZALV	Zalesovo Beam	17.67	24	P	P	20 00 50.2	-0.8
	2.0nm,0.5s,baz=211,slow=9.8,SNR=12						

NOU 31 20:17:41.6, 16°.42S×167°.73E, h24km**, MLv3.9**/10**,** **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	1.37	161	P	Pn	20 18 05.4	+0.2
KOUNC	Koumac, New Ca	5.25	218	P	Pn	20 18 58.1	-0.5
YATNC	Mamie plateau,	5.67	188	P	Pn	20 19 04.6	+0.3
DZM	Mont Dzumac	5.75	192	P	Pn	20 19 05.1	-0.5
OUENC	Ouen Island, N	6.03	188	P	Pn	20 19 10.3	+1.0

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*JMA **31** 20:22:49.5±0.5, 32°N±4°×13°7E±°, h436km, MV3.2/17, FAR S OFF TOKAI DISTRICT*

*IDC **31** 20:22:52.3±1.2, 32°.49N×137°.48E, h409km±15km, mb3.0/9, mbtmp3.8/11, Error ellipse: s-maj=30.5km s-min=13.3km az=75.0*

*NEIC **31** 20:22:52.5±1.3, 32°.5N±0°.1×137°.5E±0°.1, h414km±9km, mb4.0/14, Error ellipse: s-maj=18.3km s-min=15.1km az=84.0*

ISC 31 20:22:51.8±1.1**, 32°.5N**±0°.1×**137°.6E**±0°.1**, h450**km**, n52,** **σ2s.66**/33**, mb3.7**/15**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIE	Ise	2.07	339	P	P	20 23 50.0	-2.5
JTNC	Tanabenakahech	2.15	310	P	P	20 23 49.6	-3.4
JWY	Kouya	2.43	317	P	P	20 23 52.0	-2.9
INU	Inuyama	2.93	351	P	P	20 23 55.3	-2.8
JAI	Aioi	2.95	298	P	P	20 23 55.4	-3.0
JOD2	Odawara 2	3.07	24	P	P	20 23 57.8	-1.4
JOD2				S	S	20 24 50.6	-3.6
JGF	Kuroka	3.15	357	P	P	20 23 57.2	-2.6
JYTA	Yamagatataniai	3.21	347	P	P	20 23 58.3	-2.0
JWT	Wachi	3.36	328	P	P	20 23 59.0	-2.4
JMN	Monobe	3.37	293	P	P	20 23 58.8	-2.8
JMN	Monobe	3.37	293	P	P	20 23 59.0	-2.6
JRY	Ryogami san	3.72	17	P	P	20 24 03.4	-1.0
JRY				eS	S	20 25 00.5	-3.1
MJAR	Matsushiro Arr	4.11	7	P	P	20 24 06.1	-1.7
	36nm,0.6s,baz=181,slow=9.5,SNR=126						
MJAR				S	S	20 25 05.0	-4.8
	3.9nm,0.6s,baz=220,slow=20,SNR=3.6						
MAJO	Matsushiro	4.11	7	P	P	20 24 06.2	-1.6
MAT	Matsushiro	4.11	7	P	P	20 24 06.2	-1.6
MAT				S	S	20 25 05.0	-4.8
MJB9	Matsu-Tunnel	4.11	7	P	P	20 24 06.4	-1.4
JHS	Saijyo	4.51	305	P	P	20 24 09.2	-2.2
JSD	Sado	5.60	5	P	P	20 24 20.4	-1.4
JMM	Marumori	6.00	25	P	P	20 24 25.4	-0.6
JCJ	Chichijima	6.67	142	P	P	20 24 31.5	-1.5
KSRS	Korea Array	9.37	305	P	P	20 25 03.0	+1.1
	1.1nm,0.6s,baz=121,slow=10,SNR=4.2						
ERM	Erimo	10.52	23	P	P	20 25 16.2	+1.9
JKA	Kamikawa-asahi	12.29	17	P	P	20 25 35.3	+1.7
TPUB	Ta-pu	17.53	243	P	P	20 26 26.8	-3.0
SONM	Songino Array	28.13	312	P	P	20 28 08.3	+2.5
	0.4nm,0.5s,baz=112,slow=7.9,SNR=4.3						
	0.4nm,0.5s						
FAKI	Fak Fak	35.54	189	P	P	20 29 12.9	+3.3
PHRA	Phrae	36.28	257	P	P	20 29 18.0	+2.2
CMAR	Chiang Mai Arr	37.36	258	P	P	20 29 27.3	+2.5
	0.2nm,0.4s,baz=52,slow=9.0,SNR=2.2						
	0.2nm,0.4s						
ZALV	Zalesovo Beam	42.85	316	P	P	20 30 11.3	+2.8
	0.6nm,0.4s,baz=93,slow=8.4,SNR=3.1						
	0.6nm,0.4s						
MK31	Makanchi Array	44.05	306	P	P	20 30 20.9	+2.8
MKAR	Makanchi Array	44.05	306	P	P	20 30 20.5	+2.4
	0.9nm,0.5s,baz=87,slow=9.7,SNR=10.0						
	0.9nm,0.5s						
MKAR	Makanchi Array	44.05	306	P	P	20 30 20.7	+2.6
MAKZ	Makanchi	44.27	306	P	P	20 30 21.9	+2.1
MAKZ				IAmb	IAmb	20 30 35.9	
	comp=Z,3.2nm,0.6s						
MTN	Manton Dam	45.46	189	P	P	20 30 32.1	+2.8
KDJ	Kajisay	48.13	300	P	P	20 30 52.2	+2.6
KNRA	Kununurra	48.60	191	P	P	20 30 56.6	+3.5
KNRA				IAmb	IAmb	20 31 15.7	
	comp=Z,25nm,1.4s						
WB0	Warramunga Arr	52.01	184	P	P	20 31 22.1	+3.9
WB0				IAmb	IAmb	20 31 40.7	
	comp=Z,9.6nm,1.4s						
IMAR	Indian Mountai	52.18	29	P	P	20 31 22.1	+3.3
WB2	Warramunga Arr	52.19	184	P	P	20 31 21.4	+1.9
WB2				IAmb	IAmb	20 31 37.2	
	comp=Z,15nm,1.5s						
WRA	Warramunga Arr	52.19	184	P	P	20 31 23.1	+3.6
	comp=Z,0.4nm,0.3s,baz=359,slow=7.6,SNR=13						
	comp=Z,0.4nm,0.3s						
WRA	Warramunga Arr	52.19	184	P	P	20 31 22.5	+3.0
KKAR	Karatay Array	52.79	302	P	P	20 31 25.4	+1.8
ASAR	Alice Springs	55.92	184	P	P	20 31 50.5	+4.6
	comp=Z,0.3nm,0.7s,baz=18,slow=9.8,SNR=8.1						
	comp=Z,0.3nm,0.7s						
ABKAR	Akbulak array	58.54	311	P	P	20 32 06.8	+3.1
ABKAR				IAmb	IAmb	20 32 07.0	
	comp=Z,1.6nm,0.6s						
ABKAR	Akbulak array	58.54	311	P	P	20 32 06.7	+3.1
OUENC	Ouen Island, N	61.31	149	P	P	20 32 27.3	+4.9
ARCES	ARCESS Array B	67.16	339	P	P	20 33 03.4	+4.2
	comp=Z,11nm,1.2s,baz=77,slow=6.5,SNR=3.8						
	comp=Z,11nm,1.2s						
FIA1	FINESS Array S	71.37	332	P	P	20 33 28.1	+3.4
FIA1				IAmb	IAmb	20 33 48.7	
	comp=Z,11nm,1.4s						
FINES	FINESS Array B	71.38	332	P	P	20 33 28.7	+4.0
	comp=Z,1.0nm,0.5s,baz=60,slow=5.7,SNR=24						
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	71.38	332	P	P	20 33 28.5	+3.8
NOA	NORSAR Array B	77.14	336	P	P	20 34 01.3	+3.7
	comp=Z,0.6nm,0.7s,baz=46,slow=5.6,SNR=2.8						
	comp=Z,0.6nm,0.7s						
CLL	Collm	83.43	329	i P	P	20 34 35.8	+5.2

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*IDC **31** 20:38:39.8±0.6, 52°.56N×32°.23W, h0km, mb4.2/28, mbtmp4.2/31, ML4.5/3, MS3.8/72, Error ellipse: s-maj=16.9km s-min=9.1km az=15.0*

*NEIC **31** 20:38:41.1±2.1, 52°.58N±0°.02×32°.1W±0°.1, h10km±1km, mb4.6/96, Error ellipse: s-maj=13.0km s-min=2.9km az=98.0*

*DNK **31** 20:38:42.4±4.5, 52°.20N×31°.94W, h62km±61km, mb4.5*

*BER **31** 20:38:42.3±1.0, 52°.57N×31°.99W, h10km, mb5.3, MW4.5(CSEM)*

*BGR **31** 20:38:42.5, 51°.50N×31°.62W, h10km, mb4.6, Ms3.4*

*GCMT **31** 20:38:44.1±0.3, 52°.55N±0°.02×31°.80W±0°.03, h28km±1km, MW5.0/79, Moment Tensor Solution. s14,c16; s79,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.78±.21; $M_{\theta\theta}$0.63±.17; $M_{\phi\phi}$0.15±.15; $M_{r\theta}$1.20±.25; $M_{\theta\phi}$-3.46±.10; $M_{\phi r}$0.27±.20; Best double couple: $M_0$3.71800×10^{16} NP1:ϕ_s270.00000°, δ81.00000°, λ-159.00000°. NP2: ϕ_s177.00000°, δ69.00000°, λ-9.00000°. Principal axes: T 3.9630, Plg9.0000°, Azm42.0000°; N -0.4900, Plg67.0000°, Azm291.0000°; P -3.4720, Plg21.0000°, Azm135.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 20:38:41.5±0.3**, 52°.61N**±0°.05×**32°.17W**±0°.04**, h13**km**, n297,** **σ1s.21**/256**, mb4.5**/111**, MS3.8**/75**, 1C-11D, Reykjanes Ridge**

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

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NRS   Narsarsuaq       11.20 325   Pn    Pn     20 41 21.1  0.0
NRS   Narsarsuaq       11.20 325  eP     Pn     20 41 26.4 +5.4
NRS                                IAmb  IAmb   20 41 38.9
      comp=Z,47nm,1.1s
IVI   Ivigtut          12.24 321   Pn    Pn     20 41 36.3 +1.1
IVI   Ivigtut          12.24 321  i P    Pn     20 41 38.4 +3.2
IVI                                IAmb  IAmb   20 41 40.4
      comp=Z,17nm,0.9s
ANGG  Ammassalik, Gr   13.34 350   Pn    Pn     20 41 50.5 +0.3
BORG  Borgarnes        13.38  20   Pn    Pn     20 41 52.6 +1.8
      comp=Z,1.1nm,0.3s,baz=197,slow=11,SNR=1.9
BORG                               Sn    Sn     20 44 13.2 -6.1
      comp=Z,0.6nm,0.3s,baz=34,slow=14,SNR=1.1
BORG                               LR    LR     20 45 23.4
      comp=Z,172nm,20.9s,baz=228,slow=30
      comp=Z,5.1nm,0.4s
BORG  Borgarnes        13.38  20   Pn    Pn     20 41 50.6 -0.2
ROSA  Rosais           14.15 167   Pn    Pn     20 42 01.9 +0.4
DSB   Dublin           15.54  77   Pn    Pn     20 42 17.4 -2.7
DY2G  Dye2             15.57 339  i P    P      20 42 24.2 -0.7
DY2G                               IAmb  IAmb   20 42 27.1
      comp=Z,36nm,0.8s
DRLN  Deer Lake        16.29 268   Pn    Pn     20 42 27.8 -1.9
DRLN                               IAmb  IAmb   20 42 46.2
      comp=Z,113nm,1.5s
ICESG Greenland Ices   16.91 351  i P    P      20 42 42.6 +2.8
ICESG                              IAmb  IAmb   20 42 45.9
      comp=Z,12nm,0.9s
SFJD  Kangerlussuaq    17.04 335   P     P      20 42 41.1 +0.3
      comp=Z,0.5nm,0.3s,baz=148,slow=12,SNR=7.0
SFJD                               LR    LR     20 47 58.7
      comp=Z,492nm,21.1s,baz=154,slow=33
      comp=Z,13nm,0.9s
SFJD  Kangerlussuaq    17.04 335         Pn     20 42 38.6 -0.5
SFJD  Kangerlussuaq    17.04 335  i P    Pn     20 42 40.0 +0.9
SFJD                               IAmb  IAmb   20 42 42.7
      comp=Z,24nm,1.1s
ESK   Eskdalemuir      17.20  69   P     Pn     20 42 40.5 -0.7
ESK                                IAmb  IAmb   20 42 45.1
      comp=Z,33nm,0.9s
EKA   Eskdalemuir Ar   17.22  69   P     Pn     20 42 41.3 -0.2
      baz=271,slow=9.5
      comp=Z,16nm,0.7s
SCO   Scoresbysund     18.54  11   P     P      20 42 56.4 -1.0
ILULI Ilulissat        18.88 339   P     P      20 43 00.8 -0.3
ILULI Ilulissat        18.88 339  i P    Pn     20 43 01.7 +0.1
ILULI                              IAmb  IAmb   20 43 06.8
      comp=Z,22nm,1.0s
SUMG  Summit           20.23 355  i P    P      20 43 17.0 +0.7
SUMG                               IAmb  IAmb   20 43 30.6
      comp=Z,20nm,1.2s
PVIS  Viseu            20.36 116  eP     P      20 43 17.9 +0.4
GBN   Guysborough      20.45 261   P     P      20 43 17.5 -0.9
PCAS  Casmilo, Conde   20.50 118  eP     P      20 43 19.9 +0.9
SCHQ  Schefferville    20.51 290   P     P      20 43 18.7 -0.4
      comp=Z,4.6nm,0.7s,baz=86,slow=7.8,SNR=6.7
SCHQ                               S     S      20 47 07.9 -0.2
      comp=Z,3.3nm,0.9s,baz=187,slow=19,SNR=1.9
SCHQ                               LR    LR     20 49 43.8
      comp=Z,314nm,21.2s,baz=86,slow=32
      comp=Z,4.6nm,0.7s
SCHQ  Schefferville    20.51 290   P     P      20 43 19.0 -0.1
SCHQ                               IAmb  IAmb   20 43 24.5
      comp=Z,30nm,1.4s
MVO   Moncorvo         20.53 114  eP     Pn     20 43 20.9 -0.7
MTE   Manteigas        20.77 116   P     P      20 43 20.7 -1.3
MTE                                IAmb  IAmb   20 43 38.3
      comp=Z,22nm,1.0s
PMAFR Mafra            20.88 122  eP     P      20 43 23.4 +0.2
PMAFR                              A     A      20 44 15.3
      comp=Z,196nm,1.6s
NUUG  Nuugaatsiaq      21.16 342  eP     P      20 43 24.8 -1.1
NUUG                               IAmb  IAmb   20 43 29.9
      comp=Z,8.8nm,0.7s
PCBR  Castelo Branco   21.20 117  eP     P      20 43 27.6 +1.1
PCBR                               A     A      20 43 38.1
      comp=Z,37nm,2.3s
PMTG  Montargil        21.35 120  eP     P      20 43 29.5 +1.3
PMTG                               A     A      20 43 40.6
      comp=Z,47nm,1.7s
SUE   Sulen            21.63  52  eP     P      20 43 31.5 +0.5
SUE                                IAmb  IAmb   20 43 32.2
      comp=Z,129nm,1.3s
ASK   Askoy            21.79  54  eP     P      20 43 32.8 +0.1
FOO   Floro            21.83  51  eP     P      20 43 34.1 +0.9
PESTR Estremoz         21.84 119   P     P      20 43 32.5 -1.0
FRB   Frobisher Bay    21.85 315   P     P      20 43 33.8 +0.5
      comp=Z,12nm,1.0s,baz=107,slow=11,SNR=14
FRB                                LR    LR     20 50 25.2
      comp=Z,170nm,18.8s,baz=147,slow=32
      comp=Z,12nm,1.0s
BER   Bergen           21.85  54  eP     P      20 43 33.5 +0.2
BATG  Bathurst New B   22.32 270   P     P      20 43 37.4 -1.2
BATG                               IAmb  IAmb   20 43 47.4
      comp=Z,25nm,1.2s
CLF   Chambon-Foret    22.32  88   P     P      20 43 39.0 +0.5
HYA   Hoyanger         22.33  52  eP     P      20 43 39.9 +1.4
DBG   Daneborg         22.33   9  i P    P      20 43 35.2 -3.3
DBG                                IAmb  IAmb   20 43 51.5
      comp=Z,22nm,1.6s
BLS5  Blasjo           22.38  57  eP     P      20 43 39.5 +0.5
ODD1  Odda             22.47  56  eP     P      20 43 41.2 +1.0
PMOZ  Porto Moniz, M   22.54 145   P     P      20 43 37.9 -3.2
SNF   Seneffe          22.61  81  dP     P      20 43 41.6  0.0
UPNV  Upernavik        22.70 342  i P    P      20 43 44.2 +1.8
UPNV                               IAmb  IAmb   20 43 44.5
      comp=Z,21nm,1.1s
SNART Snartemo         22.79  60  eP     P      20 43 43.8 +0.4
AKN   Aaknes           22.82  50  eP     P      20 43 44.8 +1.1
DOU   Dourbes          22.94  81  dP     P      20 43 44.5 -0.5
BMRD  Maredsous        22.97  81  dP     P      20 43 45.2 -0.1
MOL   Molde            23.12  49  eP     P      20 43 47.7 +0.8
PAB   San Pablo        23.13 113   P     P      20 43 44.5 -2.7
BGES  Gesves           23.13  81  dP     P      20 43 47.6 +0.5
BCLA  Clavier          23.25  80  dP     P      20 43 49.1 +0.8
ESDC  Sonseca Array    23.26 113   P     P      20 43 48.4 -0.2
      comp=Z,2.6nm,1.0s,baz=313,slow=9.2,SNR=8.2
ESDC                               LR    LR     20 51 05.4
      comp=Z,192nm,19.0s,baz=316,slow=32
      comp=Z,2.6nm,1.0s
RCHB  Rochefort        23.30  81  dP     P      20 43 48.4 -0.3
SKAR  Skarslia         23.33  54  eP     P      20 43 50.0 +0.9
BSTI  Sart Tilman      23.35  80  dP     P      20 43 49.1 -0.2
HOMB  Homborsund       23.47  60  eP     P      20 43 50.9 +0.6
MEM   Membach          23.61  79  dP     P      20 43 51.0 -0.9
BTNL  Ternell          23.69  79  dP     P      20 43 51.6 -1.1
BHOU  Houvegnez        23.70  80  dP     P      20 43 51.9 -0.8
DOMB  Dombas           23.77  50  eP     P      20 43 54.3 +0.9
PQI   Presque Isle     23.79 270   P     P      20 43 52.7 -0.9
PQI                                IAmb  IAmb   20 44 33.6
      comp=Z,23nm,1.4s
KONO  Kongsberg        23.98  56   P     P      20 43 53.7 -1.6
KONO                               IAmb  IAmb   20 44 36.6
      comp=Z,23nm,1.2s
KONO  Kongsberg        23.98  56  eP     P      20 43 55.8 +0.5
WLF   Walferdange      24.03  82   P     P      20 43 55.0 -0.9
WLF                                IAmb  IAmb   20 43 58.3
      comp=Z,19nm,1.0s
WLF   Walferdange      24.03  82  dP     P      20 43 56.3 +0.4
WLF   Walferdange      24.03  82  eP     P      20 43 56.6 +0.7
      comp=Z,10.0nm,0.8s,baz=290,slow=9.0
BUG   Bochum--Univer   24.09  77  eP     P      20 43 57.4 +1.0
      comp=Z,18nm,0.8s,baz=290,slow=9.0
IBBN  Ibbenburen       24.12  75  eP     P      20 43 57.3 +0.7
      comp=Z,47nm,0.9s,baz=290,slow=9.0
G65A  Princeton        24.23 266   P     P      20 43 54.2 -3.5
G65A                               IAmb  IAmb   20 44 22.7
      comp=Z,14nm,1.1s
D62A  Allapoint, All   24.23 272   P     P      20 43 55.1 -2.6
D62A                               IAmb  IAmb   20 44 33.0
      comp=Z,26nm,1.3s
AHRW  Bad Neuenahr-A   24.27  79  eP     P      20 43 59.3 +1.2
      comp=Z,12nm,0.6s,baz=290,slow=9.0
KULLO Kullorsuaq       24.30 344  i P    P      20 43 57.6 -0.5
KULLO                              IAmb  IAmb   20 44 00.2
      comp=Z,38nm,1.1s
F64A  Sherman          24.37 269   P     P      20 43 57.1 -2.0
F64A                               IAmb  IAmb   20 44 01.7
      comp=Z,17nm,1.2s
EMMW  East Machias     24.41 265   P     P      20 43 58.1 -1.3
TBLU  Trondheim        24.43  48  eP     P      20 44 01.9 +2.4
SSRD  Sdr. Stenderup   24.44  66  i P    P      20 43 55.2 -4.4
SSRD                               IAmb  IAmb   20 44 01.9
      comp=Z,67nm,1.0s
NC204 NORSAR Array S   24.55  52   P     P      20 44 00.1 -0.5
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NBO00 NORSAR Array S   24.55  53   P     P      20 44 00.2 -0.4
E62A  Clayton Lake     24.73 271   P     P      20 44 01.1 -1.2
E62A                               IAmb  IAmb   20 44 13.0
      comp=Z,22nm,1.2s
NB2   NORSAR Subarra   24.76  53   P     P      20 44 02.8 +0.3
      comp=Z,19nm,1.0s,baz=271,slow=10
NOA   NORSAR Array B   24.76  53   P     P      20 44 03.1 +0.6
      comp=Z,6.9nm,1.0s,baz=271,slow=9.6,SNR=10
NOA                                LR    LR     20 52 47.0
      comp=Z,147nm,18.1s,baz=265,slow=34
      comp=Z,6.9nm,1.0s
LMQ   La Malbaie       24.80 274   P     P      20 44 03.3 +0.4
LMQ                                IAmb  IAmb   20 44 15.0
      comp=Z,23nm,1.2s
DAG   Danmarks Havn    24.80   7  i P    P      20 44 03.7 +1.1
DAG                                IAmb  IAmb   20 44 14.6
      comp=Z,8.8nm,1.5s
NB201 NORSAR Array S   24.80  53   P     P      20 44 02.3 -0.5
NC303 NORSAR Array S   24.84  53   P     P      20 44 02.2 -0.9
NC303                              IAmb  IAmb   20 44 05.5
      comp=Z,19nm,0.9s
KASTN Kahler Asten     24.85  77  eP     P      20 44 03.7 +0.3
      comp=Z,9.9nm,0.9s,baz=290,slow=9.0
NC602 NORSAR Array S   24.92  54   P     P      20 44 05.2 +1.3
NC602 NORSAR Array S   24.92  54  eP     P      20 44 05.6 +1.7
SSB   Saint Sauveur    24.98  92   P     P      20 44 02.9 -1.7
SSB                                IAmb  IAmb   20 44 41.5
      comp=Z,15nm,1.5s
NC405 NORSAR Array S   25.01  53   P     P      20 44 05.0 +0.4
BSEG  Bad Segeberg     25.17  70  eP     P      20 44 08.1 +2.0
      comp=Z,26nm,0.8s,baz=290,slow=9.0
ECH   Echery           25.22  84   P     P      20 44 06.5 -0.2
ECH                                IAmb  IAmb   20 44 09.5
      comp=Z,19nm,1.1s
PKME  Peaks-Kenny Pk   25.25 268   P     P      20 44 06.6 -0.3
PKME                               IAmb  IAmb   20 44 18.3
      comp=Z,18nm,1.2s
GTTG  Gottingen        25.65  75  eP     P      20 44 13.6 +3.0
      comp=Z,43nm,0.9s,baz=290,slow=9.0
BFO   Black Forest     25.88  83   P     P      20 44 12.4 -0.3
BFO                                IAmb  IAmb   20 44 14.7
      comp=Z,11nm,1.0s
BFO   Black Forest     25.88  83  eP     P      20 44 13.1 +0.4
      comp=Z,6.4nm,0.7s,baz=290,slow=9.0
HFS   Hagfors          26.02  55   P     P      20 44 13.4 -0.4
      comp=Z,2.8nm,0.8s,baz=282,slow=7.1,SNR=6.7
HFS                                LR    LR     20 53 08.5
      comp=Z,187nm,21.9s,baz=286,slow=33
      comp=Z,2.8nm,0.8s
KONS  Konsvik          26.09  40  eP     P      20 44 15.6 +1.1
SENIN Lac Senin/Sane   26.13  88   P     P      20 44 15.2 -0.1
BNI   Bardonecchia     26.40  91   P     P      20 44 17.8 +0.2
MOR8  Moi Rana         26.57  41  eP     P      20 44 20.9 +2.1
MOR8                               IAmb  IAmb   20 44 25.3
      comp=Z,22nm,0.8s
MOX   Moxa             26.94  76  eL     L      20 53 09.1
      comp=Z,100nm,21.5s
GRA1  Grafenberg Arr   27.07  79   P     P      20 44 23.1 -0.4
GRA1                               IAmb  IAmb   20 44 26.2
      comp=Z,16nm,1.1s
GRF   Grafenberg Arr   27.07  79  eL     L      20 53 11.7
      comp=Z,123nm,19.0s
GRFO  Grafenberg       27.07  79   P     P      20 44 23.3 -0.1
GRFO                               IAmb  IAmb   20 44 26.2
      comp=Z,17nm,1.2s
FAUS  Fauske           27.08  39  eP     P      20 44 24.6 +1.3
FAUS                               IAmb  IAmb   20 44 28.8
      comp=Z,32nm,1.0s
DAVA  Damuels          27.27  84  epP    P      20 44 26.3 +0.9
      comp=Z,9.3nm,1.2s
DAVOX Davos/Dischmat   27.51  85   P     P      20 44 27.9 +0.3
      comp=Z,7.5nm,0.8s,baz=309,slow=14,SNR=14
DAVOX                              LR    LR     20 54 47.2
      comp=Z,138nm,18.5s,baz=296,slow=35
      comp=Z,7.5nm,0.8s
CLL   Collm            27.52  74   P     P      20 44 25.7 -1.8
CLL                                IAmb  IAmb   20 44 32.1
      comp=Z,8.2nm,0.7s
CLL   Collm            27.52  74⇑iP     P      20 44 28.0 +0.5
      comp=Z,10.0nm,0.7s
CLL                               i pP   sP     20 44 31.3 -0.2
      comp=Z,9.0nm,0.7s
CLL                               i x    x      20 44 36.7
CLL   Collm            27.52  74  eP     P      20 44 27.9 +0.5
      comp=Z,6.0nm,0.6s,baz=290,slow=9.0
TANN  Tannenbergstha   27.53  77  eP     P      20 44 27.9 +0.3
      comp=Z,5.2nm,0.8s,baz=290,slow=9.0
RETA  Reutte           27.72  83  i P    P      20 44 30.2 +0.8
      comp=Z,13nm,1.1s,SNR=5.6
TULEG Thule            27.74 343   P     P      20 44 28.4 -0.8
TULEG                              IAmb  IAmb   20 44 34.1
      comp=Z,12nm,1.1s
TULEG Thule            27.74 343  i P    P      20 44 28.0 -1.1
TULEG                              IAmb  IAmb   20 44 30.4
      comp=Z,13nm,1.1s
FUORN Ofenpass-Fuorn   27.82  85   P     P      20 44 30.0 -0.4
FUORN                              IAmb  IAmb   20 44 33.4
      comp=Z,8.0nm,1.0s
FETA  Feichten         27.91  84  i pP   P      20 44 32.4 +1.3
      comp=Z,5.6nm,0.8s
MOTA  Moosalm          27.99  83  i pP   P      20 44 32.8 +0.9
      comp=Z,17nm,1.1s,SNR=6.2
MDT   Midelt           28.03 124   P     P      20 44 31.9 -0.4
      comp=Z,1.7nm,0.8s,baz=307,slow=10,SNR=2.8
MDT                                LR    LR     20 54 18.1
      comp=Z,57nm,19.1s,baz=336,slow=34
      comp=Z,1.7nm,0.8s
SQTA  Sankt Quirin     28.11  83  i pP   P      20 44 34.2 +1.3
      comp=Z,12nm,0.9s,SNR=7.0
BRG   Berggiesshubel   28.23  75  i P    P      20 44 34.2 +0.4
BRG                                Amp          20 44 34.9
      comp=Z,5.5nm,0.9s
BRG   Berggiesshubel   28.23  75   P     P      20 44 38.5 +4.7
BRG                                Amp          20 44 39.1
      comp=Z,9.4nm,1.1s
BRG   Berggiesshubel   28.23  75   P     P      20 44 44.1  +10
BRG                                Amp          20 44 44.9
      comp=Z,6.9nm,1.1s
BRG                                Amp          20 55 18.0
      comp=E,0.2nm,14.0s
BRG                                Amp          20 55 22.0
      comp=Z,0.2nm,17.5s
BRG                                Amp          20 55 23.0
      comp=N,0.2nm,13.4s
WATA  Walderalm        28.28  83  i pP   P      20 44 35.4 +1.0
      comp=N,11nm,1.0s
WTTA  Wattenberg       28.35  83  i pP   P      20 44 36.2 +1.0
      comp=N,10nm,0.8s,SNR=6.4
MSSA  Maissana         28.51  90   P     P      20 44 36.3 -0.2
KHC   Kasperske Hory   28.70  78   P     P      20 44 37.8 -0.2
KHC   Kasperske Hory   28.70  78  eP     P      20 44 38.6 +0.5
RJOB  Jochberg         28.84  81  eP     P      20 44 40.3 +1.0
      comp=N,2.2nm,0.7s,baz=290,slow=9.0
GEC2  GERESS Array S   28.90  79   P     P      20 44 39.0 -0.8
GEC2                               IAmb  IAmb   20 44 41.6
      comp=Z,9.3nm,1.1s
GEC2  GERESS Array S   28.90  79  eP     P      20 44 40.7 +0.8
      comp=Z,2.4nm,0.7s,baz=290,slow=9.0
GERES GERESS Array B   28.90  79   P     P      20 44 40.4 +0.6
      comp=Z,3.2nm,0.8s,baz=292,slow=8.5,SNR=22
GERES                              LR    LR     20 55 16.6
      comp=Z,98nm,20.8s,baz=294,slow=34
      comp=Z,3.2nm,0.8s
GERES GERESS Array B   28.90  79   P     P      20 44 39.8  0.0
PRU   Pruhonice        28.93  76   AMS   AMS    20 56 00.0
      comp=Z,300nm,9.8s
CTI   Castel Tesino    28.93  85   P     P      20 44 39.1 -1.1
CTI                                IAmb  IAmb   20 44 41.9
      comp=Z,11nm,1.1s
M63A  Gales Ferry      29.05 263   P     P      20 44 41.0 -0.1
CKRC  Cesky Krumlov    29.27  79  eP     P      20 44 43.8 +0.7
JETT  Jettan, Norway   29.28  35  eP     P      20 44 43.6 +0.6
JETT                               IAmb  IAmb   20 44 49.6
      comp=Z,99nm,1.5s
CIMO  Cimolais         29.29  84   P     P      20 44 41.6 -1.7
CIMO                               IAmb  IAmb   20 44 44.9
      comp=Z,3.0nm,0.7s
TEOL  Teolo            29.29  87   P     P      20 44 41.5 -1.8
TEOL                               IAmb  IAmb   20 44 44.9
      comp=Z,11nm,0.8s
BIOA  Bad Ischl, Aus   29.36  81  eP     P      20 44 44.8 +0.9
      comp=Z,14nm,1.3s,SNR=5.5
KBA   Koelnbreinsper   29.47  82  i pP   P      20 44 46.2 +1.1
      comp=Z,4.3nm,0.7s
STAL  STALIGIAL        29.47  84   P     P      20 44 44.5 -0.4
STAL                               IAmb  IAmb   20 44 46.4
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      comp=Z,5.9nm,0.8s
CLUD  Cludinico        29.48  84   P     P      20 44 45.3 +0.3
UPC   Upice            29.59  75  eP     P      20 44 46.6 +0.7
UPC                                AMS   AMS    20 58 20.0
      comp=Z,200nm,15.5s
YLE   Yale             29.64 264   P     P      20 44 45.7 -0.6
MOA   Molln            29.67  80  i P    P      20 44 47.3 +0.6
      comp=Z,10nm,1.6s
OSTC  Ostas            29.69  74  eP     P      20 44 47.4 +0.6
OSTC                              ex     x      20 44 52.5
OSTC                               AMS   AMS    20 57 40.0
      comp=Z,200nm,12.7s
DPC   Dobruska-Polom   29.83  75  eP     P      20 44 48.4 +0.3
DPC                               ex     x      20 44 54.6
DPC                                AMS   AMS    21 01 00.0
      comp=Z,200nm,14.5s
MYKA  Terra Mystica    29.86  83  i pP   P      20 44 49.6 +1.2
      comp=Z,16nm,0.6s,SNR=7.8
PRED  Cave del Predi   29.90  83   P     P      20 44 48.8  0.0
PRED                               IAmb  IAmb   20 44 50.4
      comp=Z,9.1nm,1.0s
WSPT  Westport, CT     29.97 264   P     P      20 44 48.6 -0.7
BJO1  Bjornoya         29.98  25  eP     P      20 44 49.2 +0.1
BJO1                               IAmb  IAmb   20 45 00.9
      comp=Z,996nm,2.3s
SABO  M.te Sabotino    30.15  84   P     P      20 44 51.7 +0.7
SABO                               IAmb  IAmb   20 44 52.7
      comp=Z,21nm,1.0s
KTK1  Kautokeino       30.23  36  eP     P      20 44 51.9 +0.6
VOJS  Vojsko           30.30  84  eP     P      20 44 52.9 +0.6
J57A  Williamstown     30.31 270   P     P      20 44 51.2 -1.0
J57A                               IAmb  IAmb   20 45 26.4
      comp=Z,12nm,0.9s
TRI   Trieste          30.39  84   P     P      20 44 51.8 -1.1
VRAC  Vranov           30.42  76   LR    LR     20 55 38.0
      comp=Z,94nm,18.6s,baz=298,slow=33
OBKA  Obir             30.47  83  i P    P      20 44 54.3 +0.5
      comp=Z,12nm,0.8s,SNR=8.1
MOZS  Mozjanca         30.51  83  eP     P      20 44 54.5 +0.4
CONA  Conrad Observa   30.59  79  i P    P      20 44 55.5 +0.7
      comp=Z,3.7nm,1.2s
SOKA  Soboth           30.68  82  i P    P      20 44 55.7 +0.1
      comp=Z,5.1nm,0.6s,SNR=6.3
ARSA  Arzberg          30.70  81  i P    P      20 44 56.5 +0.7
      comp=Z,5.2nm,0.8s
CEY   Cerknica         30.77  84  eP     P      20 44 57.1 +0.7
MORC  Moravsky Berou   30.79  75   P     P      20 44 56.2 -0.3
MORC                               IAmb  IAmb   20 44 58.4
      comp=Z,13nm,1.5s
RONA  Rosalia, Austr   30.96  79  i pP   P      20 44 59.0 +1.0
      comp=Z,14nm,1.6s
BBSR  BB Station       30.98 242   P     P      20 44 57.5 -0.7
ARA0  ARCESS Array S   31.06  35  eP     P      20 44 59.5 +0.8
ARCES ARCESS Array B   31.06  35   P     P      20 44 58.6 -0.1
      comp=Z,2.6nm,0.7s,baz=256,slow=7.4,SNR=11
ARCES                              LR    LR     20 54 37.6
      comp=Z,121nm,19.4s,baz=252,slow=31
      comp=Z,2.6nm,0.7s
ARCES ARCESS Array B   31.06  35   P     P      20 44 59.3 +0.6
OKC   Ostrava-Krasne   31.12  75   AMS   AMS    20 59 50.0
      comp=Z,200nm,14.1s
MAUC  Maruska          31.13  76  eP     P      20 44 59.4 -0.1
MODS  Modra-Piesok     31.24  78  eP     P      20 45 01.6 +1.1
SADO  Sadowa           31.50 275   LR    LR     20 57 19.0
      comp=Z,161nm,18.1s,baz=105,slow=36
FIA0  FINESS Array S   31.87  51   P     P      20 45 06.4 +0.6
FINES FINESS Array B   31.87  51   P     P      20 45 06.3 +0.6
      comp=Z,5.0nm,0.7s,baz=283,slow=8.4,SNR=30
FINES                              LR    LR     20 56 18.4
      comp=Z,228nm,21.5s,baz=286,slow=33
      comp=Z,5.0nm,0.7s
VYHS  Vyhne            32.11  77  eP     P      20 45 09.4 +1.3
SRO   Srobarova        32.11  78  eP     P      20 45 09.3 +1.2
LANS  Liptovska Anna   32.19  75  eP     P      20 45 10.4 +1.5
PABE  Paberze          32.32  62   P     P      20 45 09.8  0.0
EUNU  Eureka           32.61 345   P     P      20 45 11.4 -0.8
RES   Resolute Bay     33.04 334   P     P      20 45 17.1 +1.1
      comp=Z,2.7nm,0.8s,baz=95,slow=10,SNR=9.4
RES                                LR    LR     20 57 09.6
      comp=Z,101nm,20.4s,baz=4.0,slow=34
      comp=Z,2.7nm,0.8s
RES   Resolute Bay     33.04 334   P     P      20 45 16.5 +0.6
PAOL  Paolisi          33.44  91   P     P      20 45 19.1 -0.8
PAOL                               IAmb  IAmb   20 45 37.2
      comp=Z,9.2nm,1.4s
KEST  Kesra            33.66 103   P     P      20 45 22.6 +0.7
      comp=Z,8.0nm,0.9s,baz=284,slow=2.2,SNR=11
KEST                               LR    LR     20 59 20.8
      comp=Z,92nm,18.1s,baz=250,slow=37
      comp=Z,8.0nm,0.9s
KEST  Kesra            33.66 103   P     P      20 45 20.4 -1.5
KEST                               IAmb  IAmb   20 45 23.4
      comp=Z,11nm,0.9s
NACGM Naroch           34.04  62  eP     P      20 45 25.2 +0.4
      comp=Z,10.0nm,1.0s,baz=291
FCC   Fort Churchill   34.31 305   P     P      20 45 27.7 +0.6
MNK   Minsk            34.78  62  i P    P      20 45 31.3  0.0
      comp=E,2.0nm,1.0s
MNK                               i P    P      20 45 31.3  0.0
      comp=N,10.0nm,1.0s
MNK                               i P    P      20 45 31.3  0.0
      comp=Z,18nm,1.0s,baz=292
MNK                               i PP   PnPn   20 46 48.0 +0.7
MNK                               i S    S      20 51 03.5 +2.4
MNK                               i SS   SS     20 53 36.0 +4.3
MNK                               i LQ   LQ     20 57 08.6
MNK                               i LR   LR     20 59 48.1
MNK                               i LRM  MLR    21 00 60.0
      comp=E,15nm,15.4s
MNK                               i LRM  MLR    21 01 06.0
      comp=N,178nm,15.0s
MNK                               i LRM  MLR    21 01 20.1
      comp=Z,106nm,15.5s
TIP   Timpagrande      35.90  92   P     P      20 45 39.6 -1.5
TIP                                IAmb  IAmb   20 46 23.6
      comp=Z,8.1nm,1.3s
BUR08 Bucovina Ar. S   36.27  74   P     P      20 45 44.1 -0.2
BURAR Bucovina Array   36.29  74   P     P      20 45 44.4 -0.1
AKASG Malin Array Be   37.12  68   P     P      20 45 51.3 -0.1
      comp=Z,3.7nm,0.6s,baz=296,slow=8.1,SNR=18
AKASG                              PP    PP     20 47 15.4 -0.4
      comp=Z,0.6nm,0.5s,baz=295,slow=11,SNR=5.1
AKASG                              LR    LR     21 02 07.0
      comp=Z,124nm,18.0s,baz=308,slow=38
      comp=Z,3.7nm,0.6s
AKASG Malin Array Be   37.12  68   P     P      20 45 50.6 -0.8
AKBB  Malin Array Si   37.12  68   P     P      20 45 51.1 -0.3
AKBB                               IAmb  IAmb   20 45 52.3
      comp=Z,12nm,0.7s
AK05  Malin Array Si   37.15  68   P     P      20 45 50.9 -0.7
AK05                               IAmb  IAmb   20 45 52.1
      comp=Z,8.5nm,0.8s
EYMN  Ely              37.27 287   P     P      20 45 52.3 -0.4
KBN   Korca            37.47  87   P     P      20 45 54.4 -0.1
KBN                                IAmb  IAmb   20 45 57.9
      comp=Z,12nm,0.8s
MLR   Muntele Rosu     37.82  77   LR    LR     21 00 13.8
      comp=Z,92nm,19.9s,baz=284,slow=34
KLMR  Klimovskoe       38.29  49  eP     P      20 46 00.5 -0.6
KLMR                               AMP          20 46 02.9
      comp=Z,41nm,1.5s
B35A  Bob, Littlefor   38.35 289   P     P      20 46 00.6 -1.2
ULM   Lac du Bonnet    38.64 293   LR    LR     21 00 30.2
      comp=Z,146nm,18.2s,baz=59,slow=34
LIT   Litokhoron       38.82  86   P     P      20 46 05.6 -0.3
LIT                                IAmb  IAmb   20 46 07.1
      comp=Z,16nm,1.4s
OBN   Obninsk          39.13  58   LR    LR     21 01 06.7
      comp=Z,29nm,19.1s,baz=330,slow=34
AGG   Agios Georgios   39.39  88   P     P      20 46 11.3 +0.6
TKL   Tuckaleechee C   39.79 266   LR    LR     21 02 14.5
      comp=Z,246nm,18.8s,baz=81,slow=36
BBTS  Babate           39.85 156   LR    LR     20 58 24.9
      comp=Z,199nm,18.9s,baz=344,slow=30
FFC   Flin Flon        39.86 302   P     P      20 46 14.2 -0.2
RDO   Rodhopi          40.04  83   P     P      20 46 15.4 -0.6
RDO                                IAmb  IAmb   20 46 17.9
      comp=Z,13nm,0.9s
ALN   Alexandroupoli   40.50  83   P     P      20 46 20.8 +1.0
ALN                                IAmb  IAmb   20 46 57.1
      comp=Z,23nm,1.3s
S44A  Carbondale       41.81 273   P     P      20 46 29.6 -1.0
S44A                               IAmb  IAmb   20 46 39.4
      comp=Z,14nm,1.2s
A36M  Sachs Harbour    42.01 332   P     P      20 46 32.9 +1.0
YKA   Yellowknife Ar   42.34 317   P     P      20 46 35.0 +0.3
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	comp=Z,3.3nm,1.0s,baz=64,slow=8.4,SNR=26						
YKA				PcP	**PcP**	**20 48 27.6**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=59,slow=3.7,SNR=5.0						
YKA				LR	LR	21 02 13.3	
	comp=Z,85nm,21.8s,baz=345,slow=33						
	comp=Z,3.3nm,1.0s						
P40A	**Paris**	**42.35**	**277**	P	**P**	**20 46 34.6**	**-0.4**
SJG	**San Juan**	**43.46**	**231**	LR	LR	21 00 46.2	
	comp=Z,84nm,21.6s,baz=76,slow=31						
KIRV	**Kirov**	**43.79**	**48**	LR	LR	21 04 28.8	
	comp=Z,94nm,18.3s,baz=290,slow=35						
BR131	**Keskin Array S**	**45.79**	**79**	P	**P**	**20 47 04.0**	**+1.2**
BRTR	**Keskin Array B**	**45.79**	**79**	P	**P**	**20 47 04.2**	**+1.3**
	comp=Z,12nm,0.7s,baz=302,slow=6.1,SNR=52						
BRTR				LR	LR	21 07 43.8	
	comp=Z,109nm,18.8s,baz=310,slow=38						
	comp=Z,12nm,0.7s						
BRTR	**Keskin Array B**	**45.79**	**79**	P	**P**	**20 47 03.5**	**+0.6**
BELG	**Belogornoye**	**46.17**	**57**	LR	LR	21 05 56.2	
	comp=Z,108nm,18.0s,baz=264,slow=35						
INK	**Inuvik**	**46.29**	**330**	P	**P**	**20 47 07.3**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=0.0,slow=3.0,SNR=1.5						
INK				LR	LR	21 05 55.2	
	comp=Z,208nm,18.0s,baz=38,slow=35						
	comp=Z,0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**47.74**	**133**	P	**P**	**20 47 18.4**	**+0.3**
	comp=Z,3.2nm,0.9s,baz=330,slow=8.5,SNR=11						
	comp=Z,3.2nm,0.9s						
TORD	**Torodi Ar. Bea**	**47.74**	**133**	P	**P**	**20 47 18.1**	**0.0**
TORD				IAmb	IAmb	20 47 29.6	
	comp=Z,7.1nm,1.1s						
KBZ	**Khabaz**	**48.71**	**69**	P	**P**	**20 47 26.0**	**+0.7**
	comp=Z,3.0nm,1.0s,baz=301,slow=8.7,SNR=4.6						
KBZ				LR	LR	21 07 38.1	
	comp=Z,80nm,20.8s,baz=292,slow=36						
	comp=Z,3.0nm,1.0s						
ARU	**Arti**	**49.10**	**47**	LR	LR	21 07 44.3	
	comp=Z,132nm,18.2s,baz=288,slow=36						
ARU	**Arti**	**49.10**	**47**	P	**P**	**20 47 28.3**	**+0.1**
BOZ	**Bozeman (W)**	**50.01**	**296**	P	**P**	**20 47 35.2**	**-0.3**
BOZ				IAmb	IAmb	20 47 47.7	
	comp=Z,6.2nm,1.2s						
MDP	**Montagnes des**	**50.28**	**207**	LR	LR	21 03 50.1	
	comp=Z,216nm,18.1s,baz=102,slow=30						
PD31	**Pinedale Array**	**50.64**	**292**	P	**P**	**20 47 39.7**	**-0.6**
PDAR	**Pinedale Array**	**50.64**	**292**	P	**P**	**20 47 40.2**	**-0.1**
	comp=Z,1.7nm,0.5s,baz=72,slow=6.3,SNR=14						
PDAR				LR	LR	21 07 35.8	
	comp=Z,135nm,19.9s,baz=40,slow=34						
	comp=Z,1.7nm,0.5s						
NRIK	**Noril'sk**	**50.68**	**23**	LR	LR	21 10 38.2	
	comp=Z,52nm,18.1s,baz=316,slow=38						
DLBC	**Dease Lake**	**50.94**	**318**	LR	LR	21 06 31.7	
	comp=Z,89nm,19.7s,baz=294,slow=33						
DBIC	**Dimbokro**	**50.97**	**144**	P	**P**	**20 47 43.3**	**+0.6**
	comp=Z,1.6nm,0.5s,baz=351,slow=8.0,SNR=2.1						
DBIC				LR	LR	21 07 22.6	
	comp=Z,176nm,18.2s,baz=354,slow=34						
	comp=Z,1.6nm,0.5s						
NEW	**Newport**	**51.28**	**301**	LR	LR	21 07 54.2	
	comp=Z,94nm,20.0s,baz=11,slow=34						
MMAI	**Mount Meron Ar**	**51.30**	**84**	LR	LR	21 09 51.5	
	comp=Z,31nm,19.9s,baz=5.5,slow=36						
GNI	**Garni**	**52.06**	**71**	LR	LR	21 10 52.1	
	comp=Z,60nm,18.9s,baz=316,slow=37						
BAUV	**El Baul**	**52.37**	**227**	P	**P**	**20 47 53.4**	**+0.3**
AKTO	**Aktyubinsk**	**52.55**	**54**	LR	LR	21 08 57.4	
	comp=Z,130nm,20.2s,baz=287,slow=34						
GHAJ	**Ghor Haditha**	**52.59**	**86**	P	**P**	**20 47 52.7**	**-1.9**
ILAR	**Eielson Array**	**52.65**	**331**	P	**P**	**20 47 56.2**	**+1.5**
	comp=Z,1.6nm,1.0s,baz=36,slow=5.2,SNR=9.3						
ILAR				PcP	**PcP**	**20 49 05.0**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=20,slow=2.9,SNR=4.1						
ILAR				LR	LR	21 09 36.2	
	comp=Z,183nm,19.1s,baz=84,slow=35						
	comp=Z,1.6nm,1.0s						
H23K	**Yukon River**	**52.65**	**333**	P	**P**	**20 47 55.9**	**+1.2**
EIL	**Elat**	**53.37**	**88**	LR	LR	21 16 03.5	
	comp=Z,49nm,18.0s,baz=238,slow=42						
ANMO	**Albuquerque**	**54.02**	**282**	LR	LR	21 10 26.7	
	comp=Z,131nm,18.2s,baz=138,slow=35						
BBB	**Bella Bella**	**54.16**	**311**	LR	LR	21 09 46.7	
	comp=Z,68nm,19.2s,baz=46,slow=34						
ABKAR	**Akbulak array**	**54.27**	**54**	P	**P**	**20 48 07.6**	**+0.8**
ELK	**Elko**	**55.17**	**293**	LR	LR	21 10 35.1	
	comp=Z,134nm,19.2s,baz=65,slow=35						
TIXI	**Tiksi**	**55.32**	**7**	P	**P**	**20 48 15.3**	**+1.3**
TIXI				IAmb	IAmb	20 48 30.0	
	comp=Z,5.2nm,0.8s						
WVOR	**Wild Horse Val**	**55.90**	**297**	P	**P**	**20 48 19.8**	**+0.9**
WVOR				IAmb	IAmb	20 48 29.0	
	comp=Z,7.0nm,1.1s						
TXAR	**Lajitas Array**	**56.27**	**275**	P	**P**	**20 48 22.0**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=58,slow=8.6,SNR=2.6						
TXAR				LR	LR	21 12 40.1	
	comp=Z,111nm,18.4s,baz=16,slow=36						
	comp=Z,0.2nm,0.3s						
BRVK	**Borovoye**	**56.46**	**45**	P	**P**	**20 48 23.4**	**+0.9**
BVAR	**Borovoye Array**	**56.53**	**45**	LR	LR	21 11 43.4	
	comp=Z,130nm,19.6s,baz=297,slow=35						
NVAR	**Mina Array Bea**	**58.48**	**293**	P	**P**	**20 48 37.7**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=50,slow=6.1,SNR=3.6						
NVAR				LR	LR	21 12 37.0	
	comp=Z,111nm,18.5s,baz=100,slow=35						
	comp=Z,0.5nm,0.5s						
YBH	**Yreka Blue Hor**	**58.59**	**299**	LR	LR	21 12 06.5	
	comp=Z,98nm,18.4s,baz=29,slow=34						
ROSC	**El Rosal**	**58.87**	**231**	LR	LR	21 12 29.1	
	comp=Z,108nm,19.3s,baz=69,slow=34						
JTS	**Las Juntas de**	**59.76**	**245**	LR	LR	21 11 07.4	
	comp=Z,44nm,21.8s,baz=100,slow=33						
CMIG	**Matias Romero**	**60.08**	**259**	LR	LR	21 16 14.3	
	comp=Z,110nm,18.3s,baz=22,slow=38						
PFO	**Pinyon Flats O**	**60.84**	**288**	LR	LR	21 14 07.7	
	comp=Z,57nm,18.5s,baz=70,slow=35						
GEYT	**Alibeck**	**61.13**	**65**	P	**P**	**20 48 56.5**	**+1.2**
	comp=Z,1.0nm,0.4s,baz=293,slow=9.5,SNR=4.2						
GEYT				LR	LR	21 17 34.0	
	comp=Z,54nm,18.9s,baz=330,slow=38						
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**61.60**	**37**	P	**P**	**20 48 58.2**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=310,slow=8.0,SNR=6.3						
ZALV				LR	LR	21 15 40.3	
	comp=Z,36nm,19.6s,baz=304,slow=36						
	comp=Z,1.3nm,0.6s						
KURK	**Kurchatov**	**61.69**	**42**	P	**P**	**20 48 59.4**	**+0.6**
KURK				IAmb	IAmb	20 49 00.7	
	comp=Z,7.4nm,1.0s						
LPIG	**La Paz**	**64.13**	**276**	LR	LR	21 17 11.7	
	comp=Z,108nm,18.6s,baz=74,slow=36						
AAK	**Ala-Archa**	**66.06**	**51**	LR	LR	21 17 35.8	
	comp=Z,90nm,20.1s,baz=320,slow=35						
MK31	**Makanchi Array**	**66.27**	**43**	P	**P**	**20 49 29.4**	**+0.4**
MK31				IAmb	IAmb	20 49 31.0	
	comp=Z,4.9nm,0.8s						
MKAR	**Makanchi Array**	**66.27**	**43**	P	**P**	**20 49 30.1**	**+1.0**
	comp=Z,5.5nm,0.7s,baz=329,slow=5.7,SNR=63						
MKAR				LR	LR	21 17 13.9	
	comp=Z,86nm,21.8s,baz=325,slow=35						
	comp=Z,5.5nm,0.7s						
KSH	**Kashi**	**69.18**	**52**	P	**P**	**20 49 48.0**	**+0.4**
KSH				pmax	pmax		
	comp=Z,4.0nm,1.4s						
WMQ	**Urumqi**	**70.91**	**42**	*e*P	**P**	**20 50 00.5**	**+2.4**
WMQ				pP	sP	20 50 03.0	+0.7
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ATAH	**Atahualpa**	**71.28**	**229**	LR	LR	21 20 38.5	
	comp=Z,54nm,20.2s,baz=18,slow=35						
WSAR	**Wadi Sarin**	**72.35**	**75**	LR	LR	21 27 02.2	
	comp=Z,37nm,18.1s,baz=196,slow=40						
SIV	**San Ignacio**	**72.75**	**209**	LR	LR	21 18 35.6	
	comp=Z,112nm,18.6s,baz=100,slow=33						
SONM	**Songino Array**	**73.88**	**28**	P	**P**	**20 50 17.4**	**+1.6**
	comp=Z,2.5nm,0.9s,baz=331,slow=6.8,SNR=19						
SONM				LR	LR	21 22 45.4	
	comp=Z,43nm,21.1s,baz=360,slow=36						
	comp=Z,2.5nm,0.9s						
PETK	**Petropavlovsk-**	**74.33**	**354**	LR	LR	21 23 03.0	
	comp=Z,37nm,19.3s,baz=51,slow=36						
MBAR	**Mbarara**	**74.37**	**112**	LR	LR	21 21 53.8	
	comp=Z,71nm,19.0s,baz=312,slow=35						
NNA	**Nana**	**74.88**	**225**	LR	LR	21 21 26.6	
	comp=Z,32nm,21.9s,baz=18,slow=34						
LPAZ	**La Paz**	**75.34**	**216**	P	**P**	**20 50 25.5**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=337,slow=7.7,SNR=2.2						
	comp=Z,0.6nm,0.6s						
KLR	**Kul'dur**	**77.62**	**11**	LR	LR	21 24 18.7	
	comp=Z,30nm,19.4s,baz=6.5,slow=35						
GTA	**Gaotai**	**79.33**	**36**	*e*P	**P**	**20 50 47.8**	**+1.0**
GTA				pP	PcP	20 50 57.5	+2.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
XLT	**XiLinHaoTe**	**80.05**	**23**	*e*P	P	20 50 45.0	-5.6
XLT				pP	pP	20 50 49.5	-4.2
XLT				sP	sP	20 50 51.5	-3.3
XLT				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,130nm,5.5s						
LVC	**Limon Verde**	**81.45**	**214**	LR	LR	21 26 26.3	
	comp=Z,59nm,18.1s,baz=342,slow=35						
HHC	**Hu-ho-hao-te**	**81.76**	**27**	*e*P	**P**	**20 50 58.5**	**-1.3**
HHC				pmax	pmax		
	comp=Z,24nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,4.4s						
MDJ	**Mudanjiang**	**81.89**	**13**	P	**P**	**20 50 59.8**	**-0.4**
MDJ				PcP	**sP**	**20 51 04.3**	**-0.2**
MDJ	**Mudanjiang**	**81.89**	**13**	S	**S**	**21 01 10.3**	**-2.9**
MDJ	**Mudanjiang**	**81.89**	**13**	pmax	pmax		
	comp=Z,6.0nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,200nm,9.1s						
LSZ	**Lusaka**	**85.20**	**123**	LR	LR	21 29 08.4	
	comp=Z,64nm,19.1s,baz=142,slow=36						
KSRS	**Korea Array**	**88.65**	**16**	LR	LR	21 32 48.7	
	comp=Z,18nm,19.2s,baz=90,slow=37						
BRDH	**Bariadhala**	**90.55**	**50**	LR	LR	21 32 48.8	
	comp=Z,63nm,18.7s,baz=1.0,slow=36						
PZH	**PanZhiHua**	**91.56**	**40**	P	**P**	**20 51 48.0**	**-0.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,140nm,5.9s						
NJ2	**Nanjing**	**91.97**	**24**	*e*P	**P**	**20 51 49.0**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,360nm,4.7s						
SUR	**Sutherland**	**96.41**	**137**	LR	LR	21 33 42.1	
	comp=Z,33nm,18.2s,baz=164,slow=34						
CMAR	**Chiang Mai Arr**	**97.54**	**46**	LR	LR	21 39 57.3	
	comp=Z,23nm,18.5s,baz=330,slow=38						
PALK	**Pallekele**	**97.78**	**67**	LR	LR	21 43 16.4	
	comp=Z,29nm,18.1s,baz=221,slow=40						
WRA	**Warramunga Arr**	**145.75**	**23**	PKPbc	**PKPab**	**20 58 20.4**	**0.0**
	comp=Z,2.0nm,0.8s,baz=343,slow=3.7,SNR=7.3						
ASAR	**Alice Springs**	**149.21**	**26**	PKPbc	**PKPbc**	**20 58 29.1**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=341,slow=3.4,SNR=4.5						

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*IDC **31** 20:45:39.2±0.9, 5°.88S×130°.60E, h0^{km}, mb4.0/7, mbtmp4.0/9, ML4.2/2, Error ellipse: s-maj=50.4km s-min=17.6km az=64.0*

*NEIC **31** 20:45:52.9±2.2, 6°.03S±0°.06×130°.76E±0°.08, h136^{km}±9^{km}, mb4.2/23, Error ellipse: s-maj=11.5km s-min=8.2km az=91.0*

*DJA **31** 20:45:52.7±0.3, 6°S±2°×13°1E±°, h133^{km}±8^{km}, M4.8/8, mb4.8/7, mB5.3/6, MLv4.8/8, Mw(mB)4.7/6*

ISC 31 20:45:51.7±0.5**, 6°.06S**±0°.04×**130°.72E**±0°.06**, h124**^{km}**, n87,** σ**1^{s}76**/91**, mb4.2**/15**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.73**	**332**	P	**Pn**	**20 46 25.1**	**+3.1**
SAUI	**Saumlaki**	**2.00**	**163**		**Pn**	**20 46 28.8**	**+3.5**
SAUI				Sn	**Sn**	**20 46 50.8**	**-0.2**
SAUI	**Saumlaki**	**2.00**	**163**	P	**Pn**	**20 46 29.2**	**+3.9**
SAUI	**Saumlaki**	**2.00**	**163**	P	**Pn**	**20 46 27.8**	**+2.5**
SAUI				S	**Sn**	**20 46 53.4**	**+2.3**
MSAI	**Masohi**	**3.23**	**326**	P	Pn	20 46 56.4	+15
FAKI	**Fak Fak**	**3.47**	**26**	Pn	**Pn**	**20 46 44.8**	**+0.5**
FAKI				Sn	**Sn**	**20 47 22.6**	**-2.3**
FAKI	**Fak Fak**	**3.47**	**26**	P	**Pn**	**20 46 45.0**	**+0.8**
FAKI	**Fak Fak**	**3.47**	**26**	P	**Pn**	**20 46 45.1**	**+0.8**
RKPI	**Ransiki, Papua**	**5.68**	**37**	P	**Pn**	**20 47 15.8**	**+2.0**
	231nm,0.6s,4µm1.8nm						
SANI	**Sanana**	**6.18**	**310**	P	**Pn**	**20 47 22.1**	**+1.6**
SANI	**Sanana**	**6.18**	**310**	P	**Pn**	**20 47 21.1**	**+0.6**
	29nm,0.8s,0.1nm						
LBMI	**Labuha**	**6.27**	**329**	P	**Pn**	**20 47 22.4**	**+0.6**
	88nm,0.9s,1µm0.8nm						
MTN	**Manton Dam**	**6.76**	**177**	Pn	**Pn**	**20 47 29.3**	**+0.9**
MTN				Sn	**Sn**	**20 48 41.6**	**-2.3**
MTN	**Manton Dam**	**6.76**	**177**	P	**Pn**	**20 47 29.7**	**+1.3**
KDU	**Kakadu**	**6.81**	**165**	P	**Pn**	**20 47 29.8**	**+0.7**
SOEI	**Soe**	**7.38**	**240**	Pn	**Pn**	**20 47 39.1**	**+2.3**
SOEI				Sn	**Sn**	**20 48 58.7**	**-0.5**
SOEI	**Soe**	**7.38**	**240**	P	**Pn**	**20 47 39.0**	**+2.1**
TNTI	**Ternate**	**7.56**	**334**	Pn	**Pn**	**20 47 38.3**	**-1.0**
MMRI	**Maumere**	**8.80**	**253**	Pn	**Pn**	**20 47 53.9**	**-2.0**
KNRA	**Kununurra**	**9.75**	**191**	Pn	**Pn**	**20 48 07.9**	**-0.9**
KNRA	**Kununurra**	**9.75**	**191**	P	**Pn**	**20 48 08.3**	**-0.5**
TOLI2	**Tolitoli**	**12.22**	**305**	Pn	**Pn**	**20 48 42.6**	**+0.9**
TOLI2	**Tolitoli**	**12.22**	**305**	P	**Pn**	**20 48 44.7**	**+3.1**
FITZ	**Fitzroy Crossi**	**12.96**	**202**	Pn	**Pn**	**20 48 48.5**	**-2.8**
PLAI	**Plampang**	**13.13**	**257**	P	**Pn**	**20 48 53.9**	**+0.4**
WB0	**Warramunga Arr**	**14.09**	**166**	Pn	**Pn**	**20 49 04.0**	**-1.9**
WRA	**Warramunga Arr**	**14.24**	**166**	Pn	**Pn**	**20 49 05.3**	**-2.5**
	0.9nm,0.3s,baz=341,slow=13,SNR=39						
WRA				Sn	Sn	20 51 33.8	-11
	4.8nm,0.3s,baz=354,slow=22,SNR=14						
	1.3nm,0.3s						
WRA	**Warramunga Arr**	**14.24**	**166**		**Pn**	**20 49 05.7**	**-2.1**
WB2	**Warramunga Arr**	**14.25**	**166**	Pn	**Pn**	**20 49 06.0**	**-1.8**
COEN	**Coen**	**14.55**	**124**		**Pn**	**20 49 11.1**	**-0.7**
COEN	**Coen**	**14.55**	**124**	P	**Pn**	**20 49 13.9**	**+2.1**
JAGI	**Jajag, Banyuwa**	**16.61**	**261**	P	**Pn**	**20 49 34.2**	**-3.2**
JAGI				IAmb	IAmb	20 49 48.5	
	comp=Z,16nm,1.0s						
JAGI	**Jajag, Banyuwa**	**16.61**	**261**	P	**P**	**20 49 38.3**	**+0.6**
QIS	**Mount Isa**	**16.80**	**150**	P	**P**	**20 49 41.3**	**+1.6**
AS31	**Alice Springs**	**17.77**	**170**		**P**	**20 49 50.2**	**-0.3**
AS31				IAmb	IAmb	20 49 55.4	
	comp=Z,3.6nm,0.5s						
ASAR	**Alice Springs**	**17.77**	**170**	P	**Pn**	**20 49 52.0**	**+0.6**
	comp=Z,1.2nm,0.3s,baz=351,slow=9.7,SNR=102						
ASAR				S	**S**	**20 53 00.5**	**-8.3**
	comp=Z,6.9nm,0.7s,baz=354,slow=30,SNR=18						
	comp=Z,3.2nm,0.6s						
ASAR	**Alice Springs**	**17.77**	**170**	P	**P**	**20 49 50.2**	**-0.3**
MTSU	**Mount Surprise**	**17.89**	**133**	P	**Pn**	**20 49 54.9**	**+2.1**
MBWA	**Marble Bar**	**18.41**	**214**	P	**P**	**20 49 57.6**	**+0.2**
MBWA				IAmb	IAmb	20 50 04.3	
	comp=Z,7.4nm,1.1s						
MBWA	**Marble Bar**	**18.41**	**214**	P	**Pn**	**20 50 00.0**	**+1.1**
PSA00	**Pilbara Seismi**	**18.68**	**213**	P	**P**	**20 50 01.2**	**+0.9**
PSA00				IAmb	IAmb	20 50 19.6	
	comp=Z,13nm,1.1s						
PSA00	**Pilbara Seismi**	**18.68**	**213**	P	**P**	**20 50 00.7**	**+0.4**
PSA00				IAmb	IAmb	20 50 05.6	
	comp=Z,1.8nm,0.8s						
PSA00	**Pilbara Seismi**	**18.68**	**213**	P	**Pn**	**20 50 01.8**	**-0.3**
KKM	**Kota Kinabalu**	**18.82**	**309**	P	**P**	**20 50 02.3**	**+0.3**
KKM	**Kota Kinabalu**	**18.82**	**309**	P	**Pn**	**20 50 03.8**	**-0.1**
WRKA	**Warakurna**	**19.02**	**187**	P	**Pn**	**20 50 05.6**	**-0.5**
SBUM	**Sibu**	**20.32**	**294**	P	**P**	**20 50 18.5**	**+0.3**
CTA	**Charters Tower**	**20.55**	**134**	P	Pn	20 50 23.7	-0.3
	comp=Z,1.9nm,0.6s,baz=328,slow=14,SNR=1.6						
	comp=Z,1.9nm,0.6s						
OOD	**Oodnadatta**	**22.13**	**168**	P	**P**	**20 50 38.1**	**+0.8**
BBJI	**Bungbulang**	**22.95**	**265**	P	**P**	**20 50 46.9**	**+1.2**
MULG	**Mulgathing**	**24.30**	**173**	P	**P**	**20 50 59.8**	**+2.1**
FORT	**Forrest**	**24.72**	**185**	P	**P**	**20 51 03.4**	**+1.9**
EIDS	**Eidsvold**	**27.36**	**137**	P	**P**	**20 51 24.1**	**-1.2**
EIDS				IAmb	IAmb	20 51 30.1	
	comp=Z,8.6nm,1.1s						
STKA	**Stephens Creek**	**27.63**	**160**	P	**P**	**20 51 28.8**	**+1.1**
	comp=Z,2.0nm,0.3s,baz=347,slow=6.7,SNR=7.0						
	comp=Z,2.0nm,0.3s						
STKA	**Stephens Creek**	**27.63**	**160**	P	**P**	**20 51 28.6**	**+0.9**
KULM	**Kulim**	**32.07**	**290**	P	**P**	**20 52 05.7**	**-1.4**
KULM				IAmb	IAmb	20 52 11.5	
	comp=Z,3.6nm,0.9s						
GSI	**Gunungsitoli**	**33.89**	**281**	P	**P**	**20 52 21.4**	**-1.6**
GSI				IAmb	IAmb	20 52 25.1	
	comp=Z,9.9nm,1.1s						
OUENC	**Ouen Island, N**	**38.45**	**119**	P	**P**	**20 52 59.4**	**-2.3**
PHRA	**Phrae**	**38.73**	**310**	P	**P**	**20 53 01.6**	**-2.4**
CMAR	**Chiang Mai Arr**	**39.70**	**308**	P	**P**	**20 53 11.9**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=135,slow=7.0,SNR=12						
	comp=Z,1.1nm,0.5s						
PZH	**PanZhiHua**	**42.86**	**320**	P	**P**	**20 53 38.3**	**+0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,150nm,4.9s						
HHC	**Hu-ho-hao-te**	**49.88**	**341**	*e*P	**P**	**20 54 34.3**	**+1.7**
HHC				pmax	pmax		
	comp=Z,25nm,0.9s						
HHC				pmax	pmax		
	comp=Z,220nm,5.1s						
JIRN	**Jiri**	**54.52**	**310**	*e*P	**P**	**20 55 07.3**	**-0.2**
GUN	**Gumba**	**54.88**	**310**	*e*P	**P**	**20 55 10.0**	**-0.1**
	comp=Z,18nm,0.7s						
PKI	**Pulchoki**	**55.07**	**310**	*e*P	**P**	**20 55 10.4**	**-1.0**
PKIN	**Phulchoki**	**55.08**	**310**	*e*P	**P**	**20 55 10.5**	**-0.9**
	comp=Z,7.0nm,0.6s						
DMN	**Daman**	**55.32**	**310**	*e*P	**P**	**20 55 12.7**	**-0.4**
GKN	**Gorkha**	**55.88**	**310**	*e*P	**P**	**20 55 16.6**	**-0.4**
	comp=Z,6.4nm,0.3s						
DANN	**Dangsing**	**56.72**	**310**	*e*P	**P**	**20 55 22.5**	**-0.6**
PYUN	**Piuthan**	**57.19**	**309**	*e*P	**P**	**20 55 26.2**	**-0.1**
	comp=Z,24nm,0.9s						
SONM	**Songino Array**	**57.78**	**341**	P	**P**	**20 55 30.9**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=167,slow=7.1,SNR=5.3						
	comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**57.78**	**341**	P	**P**	**20 55 30.3**	**+0.3**
WMQ	**Urumqi**	**63.01**	**326**	*e*P	**P**	**20 56 07.0**	**+1.5**
WMQ				LR	LR		
	comp=N,62nm,16.1s						
WMQ				LR	LR		
	comp=Z,19nm,18.5s						
PETK	**Petropavlovsk-**	**63.21**	**18**	P	**P**	**20 56 07.7**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=197,slow=8.2,SNR=2.3						
	comp=Z,0.8nm,0.6s						
PETK	**Petropavlovsk-**	**63.21**	**18**	P	**P**	**20 56 06.7**	**+0.1**
MK31	**Makanchi Array**	**67.84**	**326**	P	**P**	**20 56 37.3**	**+0.7**
MK31				IAmb	IAmb	20 56 37.8	
	comp=Z,3.4nm,0.5s						
MKAR	**Makanchi Array**	**67.84**	**326**	P	**P**	**20 56 37.4**	**+0.8**
	comp=Z,3.8nm,0.4s,baz=115,slow=8.1,SNR=114						
	comp=Z,3.8nm,0.4s						
MKAR	**Makanchi Array**	**67.84**	**326**	P	**P**	**20 56 36.8**	**+0.2**
MAKZ	**Makanchi**	**68.02**	**326**	P	**P**	**20 56 38.0**	**+0.4**
KDJ	**Kajisay**	**68.31**	**320**	P	**P**	**20 56 39.2**	**-0.6**
KDJ				IAmb	IAmb	20 56 41.7	
	comp=Z,2.2nm,0.8s						
AAK	**Ala-Archa**	**70.29**	**319**	P	**P**	**20 56 50.9**	**-1.0**
AAK				IAmb	IAmb	20 56 54.1	
	comp=Z,2.2nm,0.9s						
ZALV	**Zalesovo Beam**	**71.06**	**333**	P	**P**	**20 56 59.3**	**+3.2**
	comp=Z,0.3nm,0.4s,baz=134,slow=4.2,SNR=2.0						
	comp=Z,0.3nm,0.4s						
GAR	**Garm**	**71.52**	**314**	P	**P**	**20 56 59.6**	**+0.3**
BTK	**Batken**	**71.61**	**316**	P	**P**	**20 57 00.3**	**+0.4**
BTK				IAmb	IAmb	20 57 02.3	
	comp=Z,3.4nm,0.9s						
KURK	**Kurchatov**	**72.09**	**328**	P	**P**	**20 57 02.2**	**-0.1**
CHGR	**Chuyangaron**	**72.21**	**314**	P	**P**	**20 57 03.0**	**-0.5**
KKAR	**Karatay Array**	**73.11**	**318**	P	**P**	**20 57 07.2**	**-1.4**

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*IDC **31** 21:17:34.2±7.6, 6°.26S×147°.83E, h64^{km}±56^{km}, mb3.9/2, mbtmp4.1/4, ML4.1/1, Error ellipse: s-maj=81.8km s-min=51.8km az=93.0*

*NEIC **31** 21:17:34.3±0.9, 6°.4S±0°.1×147°.8E±0°.1, h35^{km}±2^{km}, mb4.1/11, Error ellipse: s-maj=27.5km s-min=12.5km az=121.0*

ISC 31 21:17:35.6±0.8**, 6°.35S**±0°.10×**147°.8E**±0°.1**, h63**^{km}**, n20,** σ**0^{s}75**/21**, mb4.0**/4**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.09**	**191**	P	**Pn**	**21 18 21.4**	**-0.6**
	54nm,0.4s,baz=52,slow=5.8,SNR=25						
PMG				S	**Sn**	**21 18 60.0**	**+2.1**
	17nm,0.3s,baz=331,slow=19,SNR=1.6						
RABL	**Rabaul**	**4.89**	**64**	Pn	**Pn**	**21 18 46.7**	**0.0**
COEN	**Coen**	**8.80**	**210**	Pn	**Pn**	**21 19 40.1**	**-0.1**
WB0	**Warramunga Arr**	**18.61**	**223**	P	**P**	**21 21 48.0**	**-0.1**
WB0				IAmb	IAmb	21 21 50.5	
	comp=Z,4.6nm,0.8s						
WRAB	**Tennant Creek**	**18.76**	**223**	P	**P**	**21 21 49.7**	**0.0**
WRAB				IAmb	IAmb	21 21 52.1	
	comp=Z,11nm,0.8s						
WB2	**Warramunga Arr**	**18.76**	**223**	P	**P**	**21 21 49.4**	**-0.4**
WB2				IAmb	IAmb	21 22 18.3	
	comp=Z,12nm,1.3s						
WRA	**Warramunga Arr**	**18.77**	**223**	P	**P**	**21 21 49.1**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=152,slow=14,SNR=25						
	comp=Z,1.3nm,0.4s						
WRA	**Warramunga Arr**	**18.77**	**223**	P	**P**	**21 21 48.7**	**-1.2**
EIDS	**Eidsvold**	**19.18**	**171**	P	**P**	**21 21 54.3**	**0.0**
EIDS				IAmb	IAmb	21 22 00.7	
	comp=Z,30nm,1.5s						
KNRA	**Kununurra**	**20.80**	**242**	P	**P**	**21 22 11.9**	**0.0**
KNRA				IAmb	IAmb	21 22 45.7	
	comp=Z,17nm,0.9s						
AS31	**Alice Springs**	**21.77**	**216**	P	**P**	**21 22 22.5**	**+0.2**
AS31				IAmb	IAmb	21 22 24.9	
	comp=Z,2.6nm,0.6s						
ASAR	**Alice Springs**	**21.77**	**216**	P	**P**	**21 22 21.9**	**-0.4**
	comp=Z,4.1nm,0.5s,baz=52,slow=9.1,SNR=98						
	comp=Z,4.1nm,0.5s						
ASAR	**Alice Springs**	**21.77**	**216**	P	**P**	**21 22 22.1**	**-0.2**
ARMA	**Armidale**	**24.22**	**172**	P	**P**	**21 22 45.9**	**-0.8**
ARMA				IAmb	IAmb	21 23 18.5	
	comp=Z,33nm,1.4s						
FITZ	**Fitzroy Crossi**	**24.52**	**240**	P	**P**	**21 22 50.0**	**+0.6**
STKA	**Stephens Creek**	**26.04**	**192**	P	**P**	**21 23 02.3**	**-0.8**
	comp=Z,1.7nm,0.4s,baz=356,slow=9.2,SNR=5.8						
	comp=Z,1.7nm,0.4s						
BBOO	**Buckleboo**	**28.49**	**201**	P	**P**	**21 23 24.6**	**-0.4**
KS19	**Wonju Array Si**	**47.41**	**338**	P	**P**	**21 26 04.4**	**+0.6**
QSPA	**South Pole Qui**	**83.62**	**180**	P	**P**	**21 29 56.9**	**-0.3**
TORD	**Torodi Ar. Bea**	**145.90**	**284**	PKPbc	**PKPdf**	**21 37 07.4**	**-1.0**
	comp=Z,0.1nm,0.4s,baz=77,slow=3.6,SNR=1.6						

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*IDC **31** 21:55:13.2±0.6, 3°.45S×145°.48E, h0^{km}, mb4.1/15, mbtmp4.2/19, ML4.0/3, MS3.7/33, Error ellipse: s-maj=24.2km s-min=13.4km az=83.0*

*NEIC **31** 21:55:18.1±2.0, 3°.39S±0°.08×145°.6E±0°.1, h25^{km}±6^{km}, mb4.7/24, Error ellipse: s-maj=16.6km s-min=10.0km az=121.0*

*DJA **31** 21:55:30.8±3.4, 4°S±24°×14°5E±1°5, h83^{km}±19^{km}, M4.6/9, mB4.4/1, mb4.6/9, Mw(mB)3.6/1*

ISC 31 21:55:17.2±0.5**, 3°.49S**±0°.05×**145°.64E**±0°.08**, h23**^{km}**, n92,** σ**1^{s}51**/73**, mb4.5**/34**, MS3.8**/29**, 2C-2D, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	**Manus Island**	**2.24**	**50**	Pn	**Pn**	**21 55 54.0**	**+1.1**
PMG	**Port Moresby**	**6.07**	**166**	Pn	**Pn**	**21 56 45.1**	**-0.6**
	6.6nm,0.4s,baz=299,slow=10,SNR=2.2						
PMG				Sn	**Sn**	**21 57 52.4**	**-2.1**
	0.6nm,0.3s,baz=252,slow=16,SNR=1.3						
PMG	**Port Moresby**	**6.07**	**166**		**Pn**	**21 56 47.0**	**+1.4**
KRVT	**Keravat (AS076**	**6.42**	**98**	Pn	**Pn**	**21 56 51.0**	**+0.5**
	5.4nm,0.3s,baz=219,slow=8.7,SNR=3.7						
	47nm,0.7s						
RABL	**Rabaul**	**6.54**	**96**	Pn	**Pn**	**21 56 53.7**	**+1.6**
COEN	**Coen**	**10.69**	**193**		**Pn**	**21 57 50.9**	**+1.8**
HNR	**Honiara**	**15.39**	**113**	LR	LR	22 04 51.1	
	comp=Z,2µm,18.8s,baz=286,slow=37						
CTA	**Charters Tower**	**16.51**	**178**	Pn	**Pn**	**21 59 05.5**	**-2.0**
	0.1nm,0.3s,baz=302,slow=15,SNR=1.9						
CTA				LR	LR	22 05 15.4	
	comp=Z,282nm,20.0s,baz=13,slow=36						
	3.9nm,1.1s						
GUMO	**Guam**	**16.98**	**357**	LR	LR	22 05 39.1	
	comp=Z,80nm,19.1s,baz=177,slow=37						
MTN	**Manton Dam**	**17.10**	**236**	Pn	**Pn**	**21 59 14.8**	**-0.1**
MTN				IAmb	IAmb	21 59 19.8	
	comp=Z,38nm,0.8s						
WB0	**Warramunga Arr**	**19.56**	**213**	P	**P**	**21 59 43.1**	**-0.4**
WB0				IAmb	IAmb	21 59 50.7	
	comp=Z,39nm,0.8s						
WRAB	**Tennant Creek**	**19.71**	**213**	P	**P**	**21 59 45.2**	**-0.1**
WRAB				IAmb	IAmb	21 59 49.5	
	comp=Z,42nm,0.8s						
WB2	**Warramunga Arr**	**19.72**	**213**	P	**P**	**21 59 45.5**	**+0.2**
WB2				IAmb	IAmb	21 59 50.2	

	comp=Z,61nm,1.0s						
WRA	**Warramunga Arr**	**19.73**	**213**	P	**P**	**21 59 44.0**	**-1.4**
	comp=Z,0.9nm,0.3s,baz=37,slow=10.0,SNR=38						
WRA				PcP	**PcP**	**22 04 03.1**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=17,slow=2.3,SNR=1.4						
WRA				LR	LR	22 08 09.7	
	comp=Z,348nm,20.1s,baz=1.5,slow=40						
	comp=Z,34nm,0.9s						
WRA	**Warramunga Arr**	**19.73**	**213**	P	**P**	**21 59 45.6**	**+0.2**
KNRA	**Kununurra**	**20.56**	**233**	P	**P**	**21 59 53.3**	**-1.2**
SOEI	**Soe**	**22.12**	**253**	P	**P**	**22 00 11.4**	**-0.1**
SOEI	**Soe**	**22.12**	**253**	P	**P**	**22 00 11.5**	**0.0**
	comp=Z,82nm,0.8s						
DAV	**Davao City (W)**	**22.61**	**298**	LR	LR	22 08 04.8	
	comp=Z,68nm,18.1s,baz=86,slow=34						
AS31	**Alice Springs**	**23.05**	**208**	P	**P**	**22 00 20.7**	**-0.4**
ASAR	**Alice Springs**	**23.05**	**208**	P	**P**	**22 00 20.4**	**-0.8**
	comp=Z,12nm,0.8s,baz=34,slow=9.8,SNR=60						
ASAR				PcP	**PcP**	**22 04 09.1**	**-1.2**
	comp=Z,0.9nm,0.9s,baz=12,slow=3.8,SNR=3.0						
ASAR				LR	LR	22 09 04.4	
	comp=Z,292nm,20.7s,baz=84,slow=36						
	comp=Z,12nm,0.8s						
ASAR	**Alice Springs**	**23.05**	**208**	P	**P**	**22 00 20.2**	**-0.9**
FITZ	**Fitzroy Crossi**	**24.39**	**232**	P	**P**	**22 00 32.9**	**-1.2**
TOLI2	**Tolitoli**	**25.27**	**280**	P	**P**	**22 00 41.7**	**-0.3**
TOLI2				IAmb	IAmb	22 00 52.6	
	comp=Z,9.0nm,0.7s						
KAPI	**Kappang**	**25.86**	**266**	LR	LR	22 12 37.1	
	comp=Z,106nm,19.1s,baz=100,slow=41						
DZM	**Mont Dzumac**	**27.36**	**134**	P	**P**	**22 01 02.7**	**+1.7**
	comp=Z,2.4nm,0.8s,baz=319,slow=20,SNR=1.8						
DZM				LR	LR	22 11 13.5	
	comp=Z,239nm,18.1s,baz=16,slow=35						
	comp=Z,2.4nm,0.8s						
STKA	**Stephens Creek**	**28.50**	**187**	P	**P**	**22 01 10.9**	**0.0**
	comp=Z,2.0nm,0.7s,baz=342,slow=16,SNR=2.2						
	comp=Z,2.0nm,0.7s						
STKA	**Stephens Creek**	**28.50**	**187**	P	**P**	**22 01 12.7**	**+1.8**
TGY	**Tagaytay City**	**30.09**	**306**	LR	LR	22 13 11.6	
	comp=Z,60nm,18.5s,baz=339,slow=36						
BBOO	**Buckleboo**	**30.52**	**196**	P	**P**	**22 01 29.9**	**+1.0**
BBOO				IAmb	IAmb	22 01 38.2	
	comp=Z,23nm,1.2s						
MBWA	**Marble Bar**	**30.72**	**233**	P	**P**	**22 01 32.0**	**+1.2**
MBWA				IAmb	IAmb	22 01 43.3	
	comp=Z,21nm,1.3s						
PSA00	**Pilbara Seismi**	**30.84**	**232**	P	**P**	**22 01 32.4**	**+0.5**
PSA00				IAmb	IAmb	22 01 48.5	
	comp=Z,12nm,1.4s						
FORT	**Forrest**	**31.82**	**210**	P	**P**	**22 01 40.4**	**0.0**
JOW	**Kunigami**	**34.50**	**332**	LR	LR	22 12 49.5	
	comp=Z,199nm,21.9s,baz=282,slow=31						
MORW	**Morawa**	**37.91**	**225**	P	**P**	**22 02 34.7**	**+1.7**
JNU	**Nakatsue**	**39.00**	**340**	LR	LR	22 16 08.8	
	comp=Z,66nm,22.0s,baz=156,slow=32						
NWAO	**Narrogin (SRO)**	**39.55**	**219**	LR	LR	22 18 02.6	
	comp=Z,130nm,20.6s,baz=344,slow=35						
MJAR	**Matsushiro Arr**	**40.42**	**351**	P	**P**	**22 02 51.8**	**-2.0**
	comp=Z,1.7nm,0.9s,baz=191,slow=7.4,SNR=2.3						
MJAR				LR	LR	22 17 46.0	
	comp=Z,72nm,19.8s,baz=150,slow=34						
	comp=Z,1.7nm,0.9s						
AFI	**Afiamalu**	**43.27**	**107**	LR	LR	22 20 32.8	
	comp=Z,27nm,19.2s,baz=300,slow=35						
NJ2	**Nanjing**	**43.55**	**326**	*e*P	**P**	**22 03 21.0**	**+1.6**
NJ2				pP	**pP**	**22 03 26.3**	**+0.4**
NJ2				sP	**sP**	**22 03 29.5**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,250nm,4.7s						
KSRS	**Korea Array**	**43.94**	**340**	P	**P**	**22 03 20.6**	**-1.8**
	comp=Z,3.0nm,0.7s,baz=156,slow=9.1,SNR=11						
KSRS				LR	LR	22 19 08.0	
	comp=Z,91nm,20.7s,baz=150,slow=33						
	comp=Z,3.0nm,0.7s						
URZ	**Urewera**	**44.97**	**144**	LR	LR	22 20 30.0	
	comp=Z,145nm,20.5s,baz=20,slow=34						
RPZ	**Rata Peaks**	**45.95**	**154**	LR	LR	22 20 57.1	
	comp=Z,194nm,19.0s,baz=324,slow=34						
JKA	**Kamikawa-asahi**	**47.46**	**357**	P	**P**	**22 03 49.6**	**-0.7**
TIA	**Tai'an**	**47.64**	**328**	P	**P**	**22 03 56.0**	**+4.2**
TIA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
USRK	**Ussuriysk Ar.**	**49.03**	**347**	P	**P**	**22 04 01.4**	**-0.9**
	comp=Z,5.4nm,0.7s,baz=163,slow=7.6,SNR=5.1						
	comp=Z,5.4nm,0.7s						
PHRA	**Phrae**	**49.77**	**298**	P	**P**	**22 04 07.5**	**-0.9**
MDJ	**Mudanjiang**	**50.00**	**345**	P	**P**	**22 04 13.0**	**+3.3**
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,70nm,4.3s						
CRAI	**Chiangrai**	**50.29**	**300**	P	**P**	**22 04 11.0**	**-1.4**
CRAI				IAmb	IAmb	22 04 26.0	
	comp=Z,7.9nm,1.1s						
KMI	**Kunming**	**50.41**	**307**	⇑P	**P**	**22 04 13.8**	**+0.3**
KMI				pP	pP	22 04 18.5	-1.4
KMI				sP	sP	22 04 22.3	-0.1
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**50.89**	**297**	P	**P**	**22 04 16.4**	**-0.5**
	comp=Z,1.4nm,0.3s,baz=120,slow=5.8,SNR=14						
CMAR				LR	LR	22 29 16.8	
	comp=Z,16nm,18.1s,baz=95,slow=40						
	comp=Z,1.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**50.89**	**297**	P	**P**	**22 04 15.6**	**-1.3**
XAN	**Xi'an**	**50.90**	**320**	⇑P	**P**	**22 04 19.5**	**+2.7**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BNX	**BinXian**	**51.62**	**344**	⇓P	**P**	**22 04 22.5**	**+0.6**
BNX				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BNX				pmax	pmax		
	comp=Z,120nm,4.4s						
PZH	**PanZhiHua**	**51.85**	**308**	P	**P**	**22 04 25.0**	**+0.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,90nm,5.7s						
KLR	**Kul'dur**	**53.87**	**349**	P	**P**	**22 04 39.2**	**+0.7**
	comp=Z,2.8nm,0.8s,baz=150,slow=6.4,SNR=9.2						
KLR				LR	LR	22 27 15.2	
	comp=Z,35nm,18.9s,baz=161,slow=36						
	comp=Z,2.8nm,0.8s						
HHC	**Hu-ho-hao-te**	**54.00**	**328**	*e*P	**P**	**22 04 42.3**	**+2.6**
HHC				pmax	pmax		
	comp=Z,25nm,1.0s						
HHC				pmax	pmax		
	comp=Z,200nm,5.5s						
LZH	**Lanzhou**	**55.44**	**319**	⇓P	**P**	**22 04 54.8**	**+4.5**
LZH				pP	sP	22 05 02.8	+3.4
LZH				sP	pwP	22 05 06.0	+6.2
LZH				pmax	pmax		
	comp=Z,9.0nm,1.5s						
HEH	**HeiHe**	**55.78**	**346**	*e*P	**P**	**22 04 50.3**	**-2.0**
HEH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HEH				pmax	pmax		
	comp=Z,130nm,4.1s						
PETK	**Petropavlovsk-**	**57.29**	**9**	P	**P**	**22 05 03.6**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=165,slow=12,SNR=2.6						
	comp=Z,1.4nm,0.8s						
BRDH	**Bariadhala**	**58.75**	**299**	LR	LR	22 31 53.7	
	comp=Z,42nm,18.1s,baz=145,slow=38						
GTA	**Gaotai**	**59.96**	**320**	*e*P	**P**	**22 05 21.5**	**-0.5**
GTA				pP	pP	22 05 26.5	-2.1
GTA				sP	pwP	22 05 29.0	-2.6
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SHEM	**Shemya Is, Ala**	**60.94**	**19**	LR	LR	22 28 58.7	
	comp=Z,48nm,18.9s,baz=202,slow=33						
ULN	**Ulaanbaatar**	**61.27**	**331**	P	**P**	**22 05 30.5**	**-0.3**
ULN				IAmb	IAmb	22 05 36.0	
	comp=Z,5.3nm,1.1s						
SONM	**Songino Array**	**61.56**	**331**	P	**P**	**22 05 31.6**	**-1.2**
	comp=Z,0.8nm,0.7s,baz=151,slow=7.8,SNR=5.5						
SONM				LR	LR	22 31 37.4	
	comp=Z,84nm,19.7s,baz=165,slow=36						
	comp=Z,0.8nm,0.7s						
SONM	**Songino Array**	**61.56**	**331**	P	**P**	**22 05 31.9**	**-0.9**
SONM				IAmb	IAmb	22 05 42.6	
	comp=Z,4.9nm,1.4s						
GUN	**Gumba**	**65.37**	**303**	*e*P	**P**	**22 05 57.9**	**-0.8**
	comp=Z,12nm,0.6s						
DMN	**Daman**	**65.93**	**302**	*e*P	**P**	**22 06 01.3**	**-0.9**
GKN	**Gorkha**	**66.45**	**302**	*e*P	**P**	**22 06 04.2**	**-1.2**
	comp=Z,16nm,0.7s						
DANN	**Dangsing**	**67.29**	**303**	*e*P	**P**	**22 06 09.5**	**-1.4**
	comp=Z,22nm,0.7s						
PYUN	**Piuthan**	**67.86**	**302**	*e*P	**P**	**22 06 12.9**	**-1.5**
	comp=Z,22nm,0.8s						
WMQ	**Urumqi**	**70.02**	**319**	*e*P	**P**	**22 06 28.8**	**+1.5**
VNDA	**Vanda**	**74.49**	**176**	P	**P**	**22 06 53.0**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=69,slow=10,SNR=3.0						
	comp=Z,0.9nm,0.7s						
MK31	**Makanchi Array**	**74.71**	**320**	P	**P**	**22 06 53.2**	**-2.0**
MKAR	**Makanchi Array**	**74.71**	**320**	P	**P**	**22 06 53.5**	**-1.8**
	comp=Z,0.8nm,0.8s,baz=100,slow=8.3,SNR=8.6						
MKAR				LR	LR	22 38 37.0	
	comp=Z,28nm,20.8s,baz=67,slow=35						
	comp=Z,0.8nm,0.8s						
ZALV	**Zalesovo Beam**	**76.18**	**328**	P	**P**	**22 07 01.1**	**-2.3**
	comp=Z,1.4nm,0.7s,baz=116,slow=6.7,SNR=6.5						
ZALV				LR	LR	22 39 51.8	
	comp=Z,93nm,20.0s,baz=90,slow=35						
	comp=Z,1.4nm,0.7s						
KSH	**Kashi**	**76.70**	**312**	P	**P**	**22 07 09.3**	**+2.4**
KSH				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURK	**Kurchatov**	**78.40**	**323**	P	**P**	**22 07 14.6**	**-1.3**
AAK	**Ala-Archa**	**78.62**	**315**	LR	LR	22 40 31.3	
	comp=Z,45nm,21.8s,baz=121,slow=35						
IL31		**83.72**	**23**	P	**P**	**22 07 45.5**	**+1.5**
IL31				IAmb	IAmb	22 07 47.7	
	comp=Z,5.0nm,0.9s						
ILAR	**Eielson Array**	**83.72**	**23**	P	**P**	**22 07 43.1**	**-0.9**
	comp=Z,2.2nm,0.8s,baz=254,slow=4.8,SNR=14						
	comp=Z,2.2nm,0.8s						
ILAR	**Eielson Array**	**83.72**	**23**	P	**P**	**22 07 43.3**	**-0.8**
BVAR	**Borovoye Array**	**83.95**	**324**	LR	LR	22 47 16.5	
	comp=Z,19nm,19.1s,baz=205,slow=37						
GEYT	**Alibeck**	**90.17**	**308**	LR	LR	22 50 26.0	
	comp=Z,34nm,20.6s,baz=110,slow=37						
ARU	**Arti**	**91.26**	**326**	LR	LR	22 52 00.1	
	comp=Z,47nm,18.0s,baz=92,slow=37						
KIRV	**Kirov**	**96.21**	**328**	LR	LR	22 52 35.3	
	comp=Z,96nm,20.2s,baz=85,slow=36						
NVAR	**Mina Array Bea**	**96.89**	**52**	LR	LR	22 44 57.5	
	comp=Z,49nm,20.4s,baz=222,slow=31						
NEW	**Newport**	**97.41**	**42**	LR	LR	22 47 20.5	
	comp=Z,32nm,18.6s,baz=304,slow=32						
YKA	**Yellowknife Ar**	**97.58**	**27**	P	Pdif	22 08 50.5	+1.0
	comp=Z,0.2nm,0.7s,baz=278,slow=4.6,SNR=2.5						
	comp=Z,0.2nm,0.7s						
PFO	**Pinyon Flats O**	**98.49**	**57**	LR	LR	22 43 55.1	
	comp=Z,45nm,21.5s,baz=171,slow=30						
ELK	**Elko**	**99.17**	**49**	LR	LR	22 47 59.7	
	comp=Z,32nm,19.4s,baz=230,slow=32						
TORD	**Torodi Ar. Bea**	**143.11**	**287**	PKhKP	PKPpre	22 14 46.4	
	comp=Z,0.4nm,0.8s,baz=84,slow=5.4,SNR=3.0						

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*SNET **31** 22:05:56.5±0.5, 12.°63N×88.°28W, h25^{km}±8^{km}, ML3.0*
*INET **31** 22:05:57.4±1.3, 12.°74N×88.°27W, h12^{km}±6^{km}, ML3.3*
ISC 31 22:05:58.7±2.1**, 12.°7N**±0.°1×**88.°27W**±0.°09**, h35**^{km}**, n12,**
σ**1^{s}.11**/15**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.70**	**37**	*i* P	**Pn**	**22 06 11.3**	**-1.0**
CNCH				*e*S	**Sn**	**22 06 22.9**	**+0.8**
CNCH				IAML		22 06 25.4	
	comp=Z,2μm,0.3s						
LCY	**Lacayo**	**0.71**	**358**	*e*P	**Pn**	**22 06 11.6**	**-0.8**
LCY				*e*S	**Sn**	**22 06 23.1**	**+0.9**
VSM	**San Miguel**	**0.71**	**359**	*e*P	**Pn**	**22 06 11.6**	**-1.0**
PACA	**Pacayal**	**0.76**	**356**	*e*P	**Pn**	**22 06 12.4**	**-0.7**
PACA				*e*S	**Sn**	**22 06 24.6**	**+1.2**
PACA	**Pacayal**	**0.76**	**356**	*e*P	**Pn**	**22 06 12.1**	**-0.9**
TECA	**Tecapa**	**0.81**	**344**	*e*P	**Pn**	**22 06 13.5**	**-0.4**
CRIN	**San Cristobal**	**1.19**	**90**	*e*P	**Pn**	**22 06 18.8**	**-0.1**
CRIN				*e*S	**Sn**	**22 06 35.4**	**+1.6**
CRIN				IAML		22 06 39.8	
	comp=E,1μm,0.2s						
LFRS	**El Faro**	**1.19**	**320**	*e*P	**Pn**	**22 06 18.6**	**-0.4**
P5NO	**Presa 5 de nov**	**1.36**	**339**	IAML		22 06 40.5	
	comp=Z,85nm,0.5s						
CNGN	**Cerro Negro**	**1.54**	**98**	*e*P	**Pn**	**22 06 23.3**	**-0.5**
CNGN				IAML		22 06 49.6	
	comp=N,174nm,0.3s						
COPN	**Copaltepe**	**1.72**	**108**	*e*P	**Pn**	**22 06 26.2**	**0.0**
BOAB	**BOACO BROADBAN**	**2.55**	**96**	*e*P	**Pn**	**22 06 35.4**	**-2.2**

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*IDC **31** 22:16:08.1±2.6, 43.°31N×105.°30W, h0^{km}, mbtmp3.1/3, ML2.7/2, Error ellipse: s-maj=52.3km s-min=10.2km az=154.0*
*NEIC **31** 22:16:11.9±1.2, 43.°58N±0.°04×105.°34W±0.°06, h0^{km}±1^{km}, ML3.4/86, Error ellipse: s-maj=9.4km s-min=4.5km az=311.0*
ISC 31 22:16:09.2±0.9**, 43.°44N**±0.°04×**105.°13W**±0.°04**, h0**^{km}**, n35,**
σ**0^{s}.99**/23**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.05**	**49**	Pg	**Pb**	**22 16 31.3**	**+0.9**
K22A	**Casper**	**1.29**	**233**		**Pg**	**22 16 34.1**	**+0.2**
K22A				IAML		22 17 00.7	
	comp=E,506nm,0.7s						
PHWY	**Pilot Hill**	**2.15**	**187**		**Pg**	**22 16 51.2**	**+0.8**
PHWY				IAML		22 17 24.2	
	comp=E,198nm,0.4s						
RWWY	**Rawlins**	**2.33**	**222**		**Pb**	**22 16 51.6**	**-0.7**
RWWY				IAML		22 17 25.3	
	comp=E,238nm,1.0s						
RWWY				IAML		22 17 31.8	
	comp=E,178nm,0.7s						
N23A	**Red Feather La**	**2.62**	**194**		**Pb**	**22 16 57.4**	**+0.2**
N23A				IAML		22 17 41.7	
	comp=N,143nm,0.5s						
N23A				IAML		22 17 43.8	
	comp=E,130nm,0.7s						
BRIGG	**Briggsdale**	**2.92**	**168**		**Pb**	**22 17 02.5**	**+0.2**
BW06	**Boulder Array**	**3.31**	**260**		**Pn**	**22 17 03.5**	**+0.9**
PD31	**Pinedale Array**	**3.31**	**260**	Pn	**Pn**	**22 17 03.5**	**+1.0**
PDAR	**Pinedale Array**	**3.31**	**260**	Pn	**Pn**	**22 17 02.7**	**+0.2**
	comp=E,1.1nm,0.3s,baz=82,slow=18,SNR=29						
PDAR				Lg	Lg	22 17 46.6	
	comp=E,11nm,0.3s,baz=228,slow=13,SNR=12						
PDAR	**Pinedale Array**	**3.31**	**260**	Pn	**Pn**	**22 17 02.9**	**+0.4**
LAO	**LASA Array**	**3.34**	**347**		**Pn**	**22 17 02.1**	**-0.6**
OGNE	**Ogallala**	**3.40**	**136**		**Pb**	**22 17 08.3**	**-2.0**
RLMT	**Red Lodge**	**3.41**	**301**		**Pn**	**22 17 03.2**	**-0.7**
RLMT				IAML		22 18 00.8	
	comp=E,84nm,0.3s						
YMP	**Mirror Lake Pl**	**3.84**	**291**		**Pn**	**22 17 09.4**	**-0.6**
LKWY	**Lake**	**3.96**	**288**		**Pb**	**22 17 20.4**	**+0.2**
LKWY				IAML		22 18 41.2	
	comp=E,51nm,1.7s						
GCMT	**Greycliff**	**4.00**	**308**		**Pn**	**22 17 11.9**	**0.0**
H17A	**Grant Village**	**4.05**	**286**		**Pb**	**22 17 19.1**	**-2.4**
H17A				IAML		22 18 17.7	
	comp=N,41nm,0.4s						
H17A				IAML		22 18 18.0	
	comp=E,40nm,0.4s						
FLWY	**Flagg Ranch**	**4.08**	**281**		**Pb**	**22 17 23.8**	**+1.7**
FLWY				IAML		22 18 30.0	
	comp=E,53nm,3.0s						
FLWY				IAML		22 18 36.1	
	comp=E,51nm,1.4s						
MOOW	**Moose Ponds**	**4.09**	**276**		**Pn**	**22 17 13.5**	**+0.3**
SNOW	**Snow King Moun**	**4.09**	**272**	IAML		22 18 40.9	
	comp=E,66nm,1.7s						
SNOW				IAML		22 18 57.7	
	comp=E,56nm,1.5s						
YNR	**Norris Junctio**	**4.20**	**290**		**Pg**	**22 17 29.7**	**+0.1**
TPAW	**Teton Pass**	**4.24**	**273**	IAML		22 18 41.2	
	comp=E,50nm,1.1s						
IMW	**Indian Meadow**	**4.24**	**278**	IAML		22 18 29.6	
	comp=E,55nm,0.5s						
RDMU	**Red Mountain**	**4.38**	**231**	IAML		22 18 33.7	
	comp=N,41nm,1.6s						
RDMU				IAML		22 18 40.3	
	comp=E,35nm,1.3s						
YMR	**Madison River**	**4.38**	**288**	IAML		22 19 00.2	
	comp=N,49nm,3.0s						
AHID	**Auburn Hatcher**	**4.42**	**263**	IAML		22 18 28.8	
	comp=N,38nm,0.4s						
AHID				IAML		22 18 32.5	
	comp=N,50nm,1.0s						
Q24A	**Divide**	**4.47**	**180**	IAML		22 18 51.6	
	comp=E,29nm,1.0s						
Q24A				IAML		22 19 49.3	
	comp=N,24nm,3.9s						
SMCO	**Snowmass**	**4.48**	**199**	IAML		22 19 16.6	
	comp=N,36nm,4.4s						
DGMT	**Dagmar**	**5.07**	**7**		**Pn**	**22 17 27.4**	**+0.9**
BSUT	**Blindstream Ca**	**5.10**	**237**	IAML		22 19 09.2	
	comp=N,21nm,2.4s						
BSUT				IAML		22 19 14.7	
	comp=E,20nm,2.4s						
BOZ	**Bozeman (W)**	**5.12**	**297**	IAML		22 18 58.9	
	comp=E,19nm,3.7s						
BOZ				IAML		22 20 25.9	
	comp=E,26nm,4.5s						
ELK	**Elko**	**7.98**	**254**	Lg	Lg	22 20 16.8	
	comp=E,0.1nm,0.3s,baz=241,slow=17,SNR=1.2						
I10CA	**LAC DU BONNET**	**9.20**	**40**	I	I	23 06 11.6	
	baz=219,slow=313,SNR=6.1						
ULM	**Lac du Bonnet**	**9.30**	**40**	Pn	**Pn**	**22 18 23.8**	**-0.7**
	comp=E,0.8nm,0.3s,baz=228,slow=14,SNR=2.8						
ULM				Lg	Lg	22 20 59.3	
	comp=E,0.2nm,0.3s,baz=114,slow=21,SNR=1.4						
	comp=E,1.7nm,0.3s						
YKA	**Yellowknife Ar**	**19.88**	**347**	P	**P**	**22 20 41.7**	**-0.1**
	baz=156,slow=13,SNR=3.2						
	comp=E,0.3nm,0.8s						

IDC 31 22:21:27.1±2.2**, 50.°11N**×**114.°91W, h0**^{km}**, mbtmp3.4**/2**,**
ML3.0/2**, Error ellipse: s-maj=41.8km s-min=8.2km**
az=114.0, Alberta

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEW	**Newport**	**2.35**	**219**	Pn	Pb	22 22 09.5	-0.8
	0.5nm,0.3s,baz=37,slow=15,SNR=5.1						
NEW				Lg	Lg	22 22 39.6	
	2.8nm,0.3s,baz=91,slow=22,SNR=11						
	2.4nm,0.3s						
I56US	**NEWPORT INFRAS**	**2.35**	**219**	I	I	22 34 53.8	
	baz=36,slow=324,SNR=1.9						
I10CA	**LAC DU BONNET**	**12.12**	**82**	I	I	23 36 50.0	
	baz=271,slow=316,SNR=3.8						
ULM	**Lac du Bonnet**	**12.21**	**82**	Lg	Lg	22 27 45.9	
	0.1nm,0.3s,baz=205,slow=21,SNR=3.0						
YKA	**Yellowknife Ar**	**12.41**	**1**	Pn	Pn	22 24 20.4	-4.4
	0.2nm,0.3s,baz=180,slow=13,SNR=15						
YKA				Sn	Sn	22 26 34.5	-9.1
	0.1nm,0.3s,baz=175,slow=23,SNR=6.1						
YKA				Lg	Lg	22 27 50.3	
	baz=177,slow=27,SNR=3.2						
	1.3nm,0.6s						

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*IDC **31** 22:29:25.2±3.1, 36.°23N×70.°09E, h210^{km}±28^{km}, mb3.1/5, mbtmp3.8/10, Error ellipse: s-maj=28.1km s-min=19.9km az=162.0*
*SOME **31** 22:29:25.0, 37.°65N×71.°45E, h0^{km}*
*NEIC **31** 22:29:28.6±2.0, 36.°57N±0.°03×70.°06E±0.°08, h229^{km}±6^{km}, mb4.0/11, Error ellipse: s-maj=9.6km s-min=3.6km az=104.0*
*NNC **31** 22:29:30.5±3.2, 36.°98N×70.°13E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=27.7km s-min=23.4km az=87.0*
ISC 31 22:29:27.7±0.6**, 36.°56N**±0.°05×**70.°08E**±0.°06**, h213**^{km}**, n69,**
σ**1^{s}.66**/71**, mb3.4**/9**, 2C-7D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.19**	**203**	Pn	**Pn**	**22 30 10.4**	**+1.1**
KBL				Sn	**S**	**22 30 41.7**	**+0.3**
CHGR	**Chuyangaron**	**2.22**	**341**	Pn	**Pn**	**22 30 11.6**	**+2.2**
CHGR				Sn	**S**	**22 30 43.3**	**+1.4**
GAR	**Garm**	**2.44**	**4**		**Pn**	**22 30 14.3**	**+2.5**
GAR				Sn	**S**	**22 30 48.2**	**+2.1**
DRK	**Karamyk**	**3.21**	**24**		**Pn**	**22 30 18.5**	**-2.2**
DRK				Sn	**S**	**22 30 59.6**	**-2.5**
BTK	**Batken**	**3.54**	**9**	Pn	**Pn**	**22 30 27.8**	**+3.4**
NIL	**Nilore**	**3.89**	**137**	Pn	**Pn**	**22 30 30.5**	**+1.8**
KSH	**Kashi**	**5.51**	**56**	Pn	Pn	22 30 45.8	-3.1
KSH				Sn	S	22 31 42.5	-10
KSH				pmax	pmax		
	comp=Z,39nm,0.5s						
KSH				smax	smax		
	comp=N,62nm,0.5s						
KSH				smax	smax		
	comp=E,55nm,0.7s						
IUG	**Iuzhnay**	**5.58**	**360**	*e*Pg	**Pn**	**22 30 51.8**	**+2.1**
	comp=E,8.5nm,0.1s						
IUG				*e*Lg	Lg	22 31 53.9	
	comp=E,81nm,0.2s						
AML	**Almayashu**	**6.23**	**26**	P	**Pn**	**22 30 59.7**	**+1.4**
	SNR=49						
AML	**Almayashu**	**6.23**	**26**	⇓Pn	**Pn**	**22 30 59.5**	**+1.2**
	comp=E,2.2nm,0.6s						
AML				⇓Sn	**S**	**22 32 08.9**	**-1.2**
	comp=E,4.8nm,0.5s						
DZA	**Taraz**	**6.40**	**8**	*e*Pg	**Pn**	**22 31 03.3**	**+3.2**
	comp=E,11nm,0.2s						
DZA				*e*Lg	Lg	22 32 13.7	
	comp=E,58nm,0.2s						
KK31	**Karatay Array**	**6.54**	**3**		**Pn**	**22 31 03.1**	**+1.1**
KK31	**Karatay Array**	**6.54**	**3**	⇑Pn	**Pn**	**22 31 02.9**	**+0.8**
	comp=E,0.8nm,0.3s,baz=190,slow=14,SNR=18						
KK31				⇓Pg		22 31 22.1	
	comp=E,1.2nm,0.4s,baz=179,slow=14,SNR=4.9						
KK31				⇓Sn	**S**	**22 32 13.8**	**-3.2**
	comp=E,2.1nm,0.4s,baz=193,slow=22,SNR=5.6						
KK31				⇓Lg	Lg	22 32 43.1	
	comp=E,2.7nm,0.5s						
KKAR	**Karatay Array**	**6.54**	**3**		**Pn**	**22 31 03.6**	**+1.6**
UCH	**Uchtor**	**6.62**	**30**	P	**Pn**	**22 31 04.9**	**+1.5**
	SNR=27						
MRKS	**Merke**	**6.64**	**20**	*e*Pg	**Pn**	**22 31 04.6**	**+1.3**
	comp=E,19nm,0.5s						
MRKS				*e*Lg	Lg	22 32 15.9	
	comp=E,16nm,0.2s						
EKS2	**Erkin-Say**	**6.73**	**24**	P	**Pn**	**22 31 06.3**	**+1.8**
	SNR=26						
AAK	**Ala-Archa**	**6.96**	**28**	P	**Pn**	**22 31 09.2**	**+1.7**
	SNR=27						
AAK	**Ala-Archa**	**6.96**	**28**	P	**Pn**	**22 31 09.2**	**+1.7**
	comp=E,19nm,0.3s,baz=186,slow=5.4,SNR=110						
AAK				S	S	22 32 18.9	-8.0
	comp=E,4.6nm,0.5s,baz=199,slow=11,SNR=2.0						
AAK	**Ala-Archa**	**6.96**	**28**	Pn	**Pn**	**22 31 09.0**	**+1.5**
KBK	**Karagaybulak**	**7.15**	**30**	P	**Pn**	**22 31 12.0**	**+2.0**
	SNR=17						
FRU1	**Bishkek**	**7.16**	**28**		**Pn**	**22 31 12.1**	**+2.1**
CHMS	**Chumysh**	**7.37**	**28**	P	**Pn**	**22 31 13.5**	**+0.9**
	SNR=8.3						
ULHL	**Ulahol**	**7.41**	**38**	P	**Pn**	**22 31 14.7**	**+1.3**
	SNR=31						
BOOM	**Boomskoye usch**	**7.45**	**36**	Pn	**Pn**	**22 31 14.0**	**+0.2**
USP	**Ospenovka**	**7.51**	**25**	P	**Pn**	**22 31 16.0**	**+1.5**
	SNR=18						
TKM2	**Tokmak 2**	**7.64**	**32**	P	**Pn**	**22 31 17.3**	**+1.0**
	SNR=20						
TKM2	**Tokmak 2**	**7.64**	**32**	⇑Pn	**Pn**	**22 31 17.4**	**+1.0**
	comp=E,5.8nm,0.6s						
TKM2				⇓Sn	**S**	**22 32 41.5**	**-1.6**
	comp=E,4.8nm,0.8s						
KDJ	**Kajisay**	**7.82**	**42**	Pn	**Pn**	**22 31 19.9**	**+1.2**
KST	**Kastek**	**7.90**	**33**	*e*Pg	**Pn**	**22 31 24.2**	**+4.6**
	comp=E,4.1nm,0.4s						
KST				*e*Lg	Lg	22 32 49.5	
	comp=E,11nm,1.1s						
TARG	**Taragay, Kyrgy**	**7.91**	**47**		**Pn**	**22 31 21.1**	**+1.0**
MDOK	**Medeo**	**8.49**	**37**	⇓Pn	**Pn**	**22 31 28.9**	**+1.6**
	comp=E,6.8nm,0.5s						
KTBS	**Karatobe**	**8.75**	**33**	*e*Pg	Pn	22 31 40.4	+10
	comp=E,0.9nm,0.2s						
KTBS				*e*Lg	Lg	22 33 17.1	
	comp=E,4.4nm,0.3s						
GEYT	**Alibeck**	**9.64**	**282**	P	**Pn**	**22 31 40.5**	**-1.6**
	comp=E,6.1nm,0.6s,baz=122,slow=12,SNR=12						
GEYT	**Alibeck**	**9.64**	**282**		**Pn**	**22 31 41.4**	**-0.6**
GYA0B	**ALIBECK ARRAY**	**9.64**	**282**	Pn	**Pn**	**22 31 41.5**	**-0.6**
MAKZ	**Makanchi**	**13.54**	**37**	P	**Pn**	**22 32 32.6**	**+1.3**
MK31	**Makanchi Array**	**13.69**	**38**	Pn	**Pn**	**22 32 33.4**	**+0.3**
MKAR	**Makanchi Array**	**13.69**	**38**	P	**Pn**	**22 32 33.7**	**+0.6**
	comp=E,3.3nm,0.7s,baz=224,slow=15,SNR=46						
MKAR	**Makanchi Array**	**13.69**	**38**		**Pn**	**22 32 34.0**	**+0.9**
PYUN	**Piuthan**	**13.78**	**124**	*e*P	**Pn**	**22 32 34.4**	**-0.2**
	comp=E,11nm,0.5s						
DANN	**Dangsing**	**14.14**	**121**	*e*P	**Pn**	**22 32 38.1**	**-1.1**

ABKAR	**Akbulak array**	**14.69**	**333**		**P**	**22 32 45.9**	**-0.1**
GKN	**Gorkha**	**14.96**	**121**	*e*P	**Pn**	**22 32 48.8**	**-0.3**
	comp=E,8.6nm,0.3s						
KURBB	**Kurchatov Arra**	**15.31**	**21**	P	**Pn**	**22 32 52.5**	**-0.4**
	comp=E,0.6nm,0.6s,baz=210,slow=11,SNR=8.1						
KURK	**Kurchatov**	**15.42**	**21**	P	**P**	**22 32 53.9**	**-0.2**
KURK				IAmb	IAmb	22 32 56.3	
	comp=Z,2.9nm,1.4s						
PKIN	**Phulchoki**	**15.75**	**120**	*e*P	**P**	**22 32 59.7**	**+1.4**
PKI	**Pulchoki**	**15.77**	**120**	*e*P	**P**	**22 33 00.5**	**+2.0**
GUN	**Gumba**	**15.89**	**118**	*e*P	**P**	**22 33 01.1**	**+1.2**
	comp=Z,9.1nm,0.4s						
JIRN	**Jiri**	**16.26**	**118**	*e*P	**P**	**22 33 06.0**	**+2.0**
	comp=Z,11nm,0.3s						
BVAR	**Borovoye Array**	**16.47**	**1**	P	**Pn**	**22 33 08.4**	**+1.7**
	comp=Z,1.0nm,0.4s,baz=166,slow=9.3,SNR=14						
BRVK	**Borovoye**	**16.50**	**0**		**P**	**22 33 07.3**	**+1.3**
UOSS	**Minazif**	**16.60**	**230**	P	**P**	**22 33 06.5**	**-0.9**
UOSS				IAmb	IAmb	22 33 24.2	
	comp=Z,5.3nm,1.2s						
LSA	**Lhasa**	**18.90**	**105**	P	**P**	**22 33 34.9**	**+2.0**
LSA				IAmb	IAmb	22 33 40.9	
	comp=Z,3.2nm,0.3s						
ZAA0	**Zalesovo Array**	**20.18**	**26**	P	**P**	**22 33 46.5**	**+0.7**
ZALV	**Zalesovo Beam**	**20.18**	**26**	P	**P**	**22 33 46.4**	**+0.6**
	comp=Z,1.0nm,0.4s,baz=214,slow=10,SNR=6.4						
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**20.18**	**26**	P	**P**	**22 33 45.7**	**-0.1**
BNN	**Bunyan**	**27.09**	**285**	P	**P**	**22 34 49.4**	**-1.5**
BNN				IAmb	IAmb	22 35 10.0	
	comp=Z,16nm,1.4s						
IDI	**Anoyia**	**36.37**	**282**	P	**P**	**22 36 14.1**	**+2.6**
FINES	**FINESS Array B**	**37.02**	**326**	P	P	22 36 11.1	-5.5
FDMO	**Fiordimonte**	**43.54**	**297**	P	**P**	**22 37 08.4**	**-1.9**
FDMO				IAmb	IAmb	22 37 09.2	
	comp=Z,2.9nm,0.9s						
NC405	**NORSAR Array S**	**43.66**	**323**	P	**P**	**22 37 09.1**	**-1.8**
NC602	**NORSAR Array S**	**43.70**	**323**	P	**P**	**22 37 11.4**	**+0.2**
NC602				IAmb	IAmb	22 37 49.1	
	comp=Z,15nm,1.1s						
NC303	**NORSAR Array S**	**43.84**	**323**	P	**P**	**22 37 12.1**	**-0.2**
NC303				IAmb	IAmb	22 37 34.2	
	comp=Z,9.1nm,1.4s						
NOA	**NORSAR Array B**	**43.89**	**323**	P	**P**	**22 37 12.4**	**-0.4**
	comp=Z,0.7nm,0.9s,baz=100,slow=7.7,SNR=1.9						
	comp=Z,0.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**64.98**	**268**	P	**P**	**22 39 42.8**	**-2.3**
	comp=Z,0.3nm,0.4s,baz=47,slow=5.8,SNR=2.4						
YKA	**Yellowknife Ar**	**81.22**	**2**	P	**P**	**22 41 19.1**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=351,slow=5.1,SNR=5.7						
	comp=Z,0.2nm,0.5s						
WRA	**Warramunga Arr**	**82.65**	**121**	P	P	22 41 24.3	-3.1
	comp=Z,0.6nm,0.8s,baz=308,slow=8.2,SNR=2.0						
	comp=Z,0.6nm,0.8s						
ASAR	**Alice Springs**	**84.89**	**124**	P	P	22 41 35.8	-2.9
	comp=Z,0.3nm,0.5s,baz=313,slow=5.4,SNR=6.1						
	comp=Z,0.3nm,0.5s						

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*DJA **31** 22:41:45.1±0.9, 8°S±8°×11°8E±°, h17^{km}±10^{km}, M3.9/6, MLv3.9/6*

*IDC **31** 22:42:03.3±7.4, 8°.24S×119°.28E, h97^{km}±70^{km}, mb3.0/2, mbtmp3.4/4, ML3.7/2, Error ellipse: s-maj=106.7km s-min=19.8km az=64.0*

ISC 31 22:41:43.5±1.1**, 8°.32S**±0°.05×**117°.52E**±0°.06**, h10^{km}, n11, σ1^{s}.17**/12**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.56**	**153**	P	**Pb**	**22 41 56.3**	**+0.8**
PLAI				S	**Sb**	**22 42 03.6**	**0.0**
IGBI	**Denpasar**	**2.40**	**258**	P	**Pn**	**22 42 24.5**	**+1.6**
ABJI	**Asem Bagus**	**3.30**	**279**	P	**Pn**	**22 42 35.5**	**+0.3**
JAGI	**Jajag, Banyuwa**	**3.34**	**267**	P	**Pn**	**22 42 35.7**	**-0.1**
BASI	**Baing, Sumba**	**3.56**	**122**	P	**Pn**	**22 42 38.8**	**-0.1**
BSSI	**Bau Bau, Buton**	**3.66**	**54**	P	**Pn**	**22 42 41.8**	**+1.6**
BKSI	**Bulukumba**	**3.94**	**41**	P	**Pn**	**22 42 45.7**	**+1.5**
KAPI	**Kappang**	**3.96**	**34**	P	**Pb**	**22 42 53.3**	**-0.2**
	3.6nm,0.3s,baz=201,slow=8.0,SNR=6.3						
KAPI				S	**Sn**	**22 43 30.1**	**-0.9**
	18nm,0.4s,baz=63,slow=23,SNR=17						
	8.1nm,0.3s						
WRA	**Warramunga Arr**	**19.96**	**127**	P	**P**	**22 46 14.5**	**-1.6**
	0.4nm,0.3s,baz=300,slow=12,SNR=11						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**21.89**	**136**	P	**P**	**22 46 36.1**	**-0.8**
	1.0nm,0.6s,baz=313,slow=8.2,SNR=17						
	1.0nm,0.6s						
MKAR	**Makanchi Array**	**63.20**	**334**	P	P	22 52 26.0	+14
	0.1nm,0.5s,baz=130,slow=5.8,SNR=2.0						
	0.1nm,0.5s						

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*JMA **31** 22:46:46.5±0.2, 36°.6N±0°.5×14°2E±°, h23^{km}, MV3.3/31, FAR E OFF FUKUSHIMA PREF*

*IDC **31** 22:46:51.5±2.1, 37°.19N×141°.73E, h0^{km}, mb3.7/3, mbtmp3.6/5, ML2.7/2, Error ellipse: s-maj=45.4km s-min=29.5km az=80.0*

ISC 31 22:46:47.2±1.7**, 36°.64N**±0°.07×**142°.39E**±0°.10**, h15^{km}, n19, σ0^{s}.78**/23**, mb3.7**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.36**	**290**	P	**Pn**	**22 47 11.3**	**-0.4**
JFK	**Kawauchi**	**1.42**	**301**	P	**Pn**	**22 47 12.2**	**-0.3**
JHO	**Hitachi**	**1.47**	**270**	P	**Pn**	**22 47 12.6**	**-0.5**
JHYU	**Hitachinakayam**	**1.48**	**259**	P	**Pn**	**22 47 13.1**	**-0.2**
JHYU				*e*S	**Sn**	**22 47 32.5**	**0.0**
JFFD	**Fukushimafurud**	**1.54**	**288**	P	**Pn**	**22 47 14.0**	**-0.1**
JFFD				*e*S	**Sb**	**22 47 34.5**	**-0.2**
CHOJ	**Chosi**	**1.55**	**234**	*e*P	**Pn**	**22 47 13.9**	**-0.3**
JMM	**Marumori**	**1.77**	**314**	P	**Pn**	**22 47 17.3**	**0.0**
JOTO	**OTAMA OYAMA**	**1.89**	**300**	*e*P	**Pn**	**22 47 19.7**	**+0.7**
BSO1	**Boso 1**	**2.29**	**211**	P	**Pn**	**22 47 23.8**	**-0.2**
JAG	**Ashikaga**	**2.38**	**266**	P	**Pn**	**22 47 25.9**	**+0.2**
JAG				*e*S	**Sn**	**22 47 54.7**	**+0.1**
JMK	**Ichinoseki**	**2.49**	**338**	P	**Pn**	**22 47 28.0**	**+0.8**
JYK	**Kaneyama**	**2.79**	**325**	P	**Pn**	**22 47 32.3**	**+1.0**
JRY	**Ryogami san**	**2.88**	**259**	P	**Pn**	**22 47 32.5**	**-0.2**
JOM	**Ohasama**	**2.96**	**343**	P	**Pn**	**22 47 34.1**	**+0.5**
MJAR	**Matsushiro Arr**	**3.37**	**270**	Pn	**Pn**	**22 47 38.3**	**-1.0**
	0.7nm,0.3s,baz=89,slow=8.8,SNR=26						
MJAR				Sn	**Sn**	**22 48 19.1**	**+0.1**
	0.2nm,0.3s,baz=84,slow=12,SNR=4.2						
	4.9nm,0.4s						
ASAJ	**Asahikawa**	**7.47**	**1**	Pn	**Pn**	**22 48 33.8**	**-1.9**
	0.2nm,0.3s,baz=301,slow=6.8,SNR=2.3						
ASAJ				Sn	**Sn**	**22 49 58.1**	**-1.9**
	0.5nm,0.3s,baz=246,slow=33,SNR=1.7						
	1.8nm,0.5s						
SONM	**Songino Array**	**28.66**	**304**	P	**P**	**22 52 44.1**	**+0.7**
	1.4nm,0.8s,baz=102,slow=9.3,SNR=6.5						
	1.4nm,0.8s						
MKAR	**Makanchi Array**	**44.99**	**303**	P	**P**	**22 55 02.1**	**+0.2**
	0.6nm,0.8s,baz=90,slow=9.7,SNR=6.6						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**56.78**	**189**	P	P	22 56 40.7	+10
	0.3nm,0.4s,baz=1.4,slow=8.0,SNR=4.8						
	0.3nm,0.4s						

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*IDC **31** 22:49:32.4±2.0, 8°.68S×112°.51E, h0^{km}, mb3.6/4, mbtmp3.7/4, MS3.2/2, Error ellipse: s-maj=122.5km s-min=21.7km az=49.0*

*DJA **31** 22:49:37.8±0.6, 9°S±6°×11°2E±°, h10^{km}, M3.9/10, MLv3.9/10*

ISC 31 22:49:38.6±1.1**, 9°.1S**±0°.1×**112°.23E**±0°.05**, h52^{km}, n16, σ1^{s}.53**/18**, mb3.6**/4**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PWJI	**Pagerwojo**	**1.18**	**339**	P	**Pn**	**22 49 57.9**	**-0.9**
PWJI				S	**Sn**	**22 50 12.6**	**-1.1**
GMJI	**Gumukmas**	**1.47**	**55**	P	**Pn**	**22 50 03.2**	**+0.4**
GMJI				S	**Sn**	**22 50 19.7**	**-1.2**
NGJI	**Ngawi**	**1.91**	**336**	P	**Pn**	**22 50 11.7**	**+3.0**
BLJI	**Banyuglugur**	**1.93**	**45**	P	**Pn**	**22 50 10.7**	**+1.7**
JAGI	**Jajag, Banyuwa**	**2.01**	**71**	P	**Pn**	**22 50 10.1**	**-0.1**
JAGI				S	**Sn**	**22 50 32.2**	**-2.0**
UGM	**Wanagama**	**2.07**	**305**	P	**Pn**	**22 50 11.3**	**+0.2**
YOGI	**Yogyakarta**	**2.31**	**304**	P	**Pn**	**22 50 14.3**	**0.0**
ABJI	**Asem Bagus**	**2.38**	**56**	P	**Pn**	**22 50 17.6**	**+2.3**
SMRI	**Semarang**	**2.72**	**319**	P	**Pn**	**22 50 21.8**	**+1.9**
KPJI	**Karang Pucung**	**3.72**	**298**	P	**Pn**	**22 50 34.6**	**+1.0**
KAPI	**Kappang**	**8.51**	**62**	LR	LR	22 55 19.3	
	comp=Z,75nm,21.7s,baz=173,slow=43						
WRA	**Warramunga Arr**	**23.92**	**119**	P	**P**	**22 54 47.9**	**-0.1**
	0.7nm,0.5s,baz=294,slow=11,SNR=22						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**25.27**	**128**	P	**P**	**22 55 01.4**	**+1.2**
	1.4nm,0.6s,baz=304,slow=9.2,SNR=24						
ASAR				PcP	**PcP**	**22 58 33.8**	**+1.2**
	0.3nm,0.6s,baz=302,slow=1.7,SNR=2.0						
	1.4nm,0.6s						
MKAR	**Makanchi Array**	**61.74**	**337**	P	**P**	**22 59 50.8**	**-0.9**
	0.2nm,0.5s,baz=143,slow=7.8,SNR=9.2						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**66.98**	**343**	P	**P**	**23 00 24.4**	**-1.4**
	0.5nm,0.5s,baz=164,slow=5.8,SNR=3.8						
	0.5nm,0.5s						
KBZ	**Khabaz**	**81.71**	**317**	LR	LR	23 41 44.2	
	comp=Z,28nm,18.3s,baz=142,slow=38						

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*AEIC **31** 22:56:33.5±3.0, 61°.65N±0°.02×150°.23W±0°.05, h15^{km}±6^{km}, ML3.2, ML3.4/52(NEIC), Error ellipse: s-maj=3.5km s-min=2.4km az=89.0*

*IDC **31** 22:56:34.0±6.0, 61°.67N×150°.14W, h70^{km}±47^{km}, mb3.3/4, mbtmp3.3/7, ML2.7/3, Error ellipse: s-maj=48.9km s-min=44.6km az=124.0*

*NEIC **31** 22:56:34.2±1.9, 61°.60N±0°.03×149°.96W±0°.06, h44^{km}±7^{km}, Error ellipse: s-maj=4.8km s-min=3.2km az=140.0*

ISC 31 22:56:32.9±0.8**, 61°.59N**±0°.04×**149°.96W**±0°.04**, h53^{km}**±7^{km}**, n74, σ1^{s}.63**/79**, mb3.7**/4**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
M22K	**Willow**	**0.18**	**336**		**Pn**	**22 56 41.3**	**-0.1**
M22K						22 56 47.9	
SUA	**Susitna One**	**0.40**	**252**		**Pn**	**22 56 43.4**	**+0.1**
SUA						22 56 51.0	
SUA				IAML		22 56 51.8	
	comp=N,4µm,0.6s						
SUA				IAML		22 56 52.0	
	comp=E,4µm,0.7s						
PMR	**Palmer**	**0.40**	**89**		**Pn**	**22 56 43.0**	**-0.1**
PMR					**Sn**	**22 56 50.7**	**+0.1**
PMR				IAML		22 56 51.0	
	comp=E,4µm,0.2s						
FIS	**Fire Island**	**0.46**	**195**		**Pn**	**22 56 44.6**	**+0.8**
FIS					**Sn**	**22 56 53.8**	**+2.0**
FIS				IAML		22 56 55.6	
	comp=N,3µm,0.3s						
FIS				IAML		22 56 59.7	
	comp=E,3µm,0.4s						
RC01	**Rabbit Creek A**	**0.51**	**168**		**Pn**	**22 56 44.2**	**-0.3**
RC01					**Sn**	**22 56 52.9**	**+0.1**
RC01				IAML		22 56 54.2	
	comp=N,3µm,0.3s						
RC01				IAML		22 56 54.8	
	comp=E,2µm,0.3s						
GHO	**Glory Hole Cre**	**0.53**	**69**		**Pn**	**22 56 44.9**	**+0.1**
GHO					**Sn**	**22 56 54.0**	**+0.7**
GHO				IAML		22 56 54.9	
	comp=N,1µm,0.5s						
GHO				IAML		22 56 55.6	
	comp=E,2µm,0.4s						
KNK	**Knik Glacier**	**0.74**	**103**		**Pn**	**22 56 47.8**	**+0.5**
KNK				Sn	**Sn**	**22 56 59.1**	**+1.3**
KNK				IAML		22 57 01.2	
	comp=N,2µm,0.3s						
SML	**Sawmill**	**0.81**	**74**		**Pn**	**22 56 48.4**	**+0.2**
SML				IAML		22 57 02.2	
	comp=E,799nm,0.5s						
CUT	**Chulitna**	**0.83**	**350**		**Pn**	**22 56 48.8**	**+0.4**
CUT				IAML		22 57 02.8	
	comp=E,2µm,0.3s						
CUT				IAML		22 57 03.2	
	comp=N,1µm,0.3s						
SKT	**Skwentna**	**0.84**	**298**		**Pn**	**22 56 48.8**	**+0.2**
SKT				IAML		22 57 01.3	
	comp=E,2µm,0.4s						
SKT				IAML		22 57 01.7	
	comp=N,2µm,0.4s						
CAPN	**Captain Cook N**	**1.00**	**216**		**Pn**	**22 56 52.8**	**+2.1**
PWL	**Port Wells**	**1.08**	**132**		**Pn**	**22 56 52.3**	**+0.6**
SPU	**Mount Spurr**	**1.09**	**249**		**Pn**	**22 56 52.5**	**+0.6**
O22K	**Cooper Landing**	**1.12**	**174**		**Pn**	**22 56 52.6**	**+0.4**
SCM	**Sheep Creek Mo**	**1.28**	**78**		**Pn**	**22 56 55.3**	**+0.8**
SCM				IAML		22 57 19.6	
	comp=N,617nm,0.8s						
PPLA	**Purkeypile**	**1.68**	**323**		**Pn**	**22 57 01.0**	**+1.1**
RSO	**Redoubt South**	**1.77**	**231**		**Pn**	**22 57 02.0**	**+0.8**
M24K	**Tolsona, Glenn**	**1.87**	**72**		**Pn**	**22 57 04.3**	**+1.8**
TRF	**Thorofare Moun**	**1.87**	**356**		**Pn**	**22 57 03.5**	**+0.8**
TRF				IAML		22 57 30.4	
	comp=N,237nm,0.4s						
BRLK	**Bradley Lake**	**1.89**	**194**		**Pn**	**22 57 03.6**	**+0.9**
BRLK				IAML		22 57 30.5	
	comp=E,291nm,0.6s						
BRLK				IAML		22 57 31.9	
	comp=N,214nm,0.5s						
RND	**Reindeer**	**1.90**	**15**		**Pn**	**22 57 04.1**	**+1.2**
KLU	**Klutina**	**1.94**	**91**		**Pn**	**22 57 04.0**	**+0.5**
KLU				IAML		22 57 35.6	
	comp=E,304nm,0.5s						
KLU				IAML		22 57 36.0	
	comp=N,408nm,0.8s						
KTH	**Kantishna Hill**	**2.02**	**348**		**Pn**	**22 57 05.9**	**+1.3**
KTH				IAML		22 57 33.9	
	comp=N,221nm,0.7s						
DIV	**Divide**	**2.07**	**101**		**Pn**	**22 57 05.6**	**+0.4**
CAST	**Castle Rocks**	**2.08**	**333**		**Pn**	**22 57 06.9**	**+1.6**
HOM	**Homer**	**2.11**	**204**	Pn	**Pn**	**22 57 06.4**	**+0.7**
M19K	**Big River Lodg**	**2.13**	**280**		**Pn**	**22 57 06.9**	**+0.9**
CNPM	**China Poot**	**2.16**	**197**		**Pn**	**22 57 07.5**	**+1.0**
CNPM				IAML		22 57 37.2	
	comp=E,216nm,0.8s						
CNPM				IAML		22 57 40.7	
	comp=N,250nm,0.4s						
MCK	**McKinley**	**2.20**	**12**		**Pn**	**22 57 08.7**	**+1.7**
ILSW	**Iliamna Southw**	**2.24**	**225**		**Pn**	**22 57 09.6**	**+1.9**
ILSW				IAML		22 57 42.9	
	comp=E,167nm,0.8s						
EYAK	**Cordova Ski Ar**	**2.30**	**115**		**Pn**	**22 57 09.7**	**+1.4**
L19K	**White Mountain**	**2.39**	**287**		**Pn**	**22 57 10.8**	**+1.3**
PAX	**Paxson**	**2.52**	**55**		**Pn**	**22 57 14.0**	**+2.6**
P19K	**Oil Pt**	**2.52**	**221**		**Pn**	**22 57 14.7**	**+3.3**
O19K	**Port Alsworth**	**2.55**	**239**		**Pn**	**22 57 12.8**	**+1.2**
BPAW	**Bear Paw Mtn.**	**2.56**	**350**		**Pn**	**22 57 12.6**	**+0.7**
BWN	**Browne**	**2.60**	**5**		**Pn**	**22 57 14.2**	**+1.7**
K20K	**Telida**	**2.60**	**315**		**Pn**	**22 57 13.4**	**+1.0**
K20K				IAML		22 57 53.2	
	comp=E,99nm,0.6s						
SVW2	**Sparrevohn**	**2.75**	**262**	Pn	**Pn**	**22 57 15.1**	**+0.6**
GLB	**Gilahina Butte**	**2.95**	**90**		**Pn**	**22 57 19.8**	**+2.5**
WRH	**Wood River Hil**	**3.02**	**16**		**Pn**	**22 57 19.7**	**+1.6**
NEA2	**Nenana**	**3.04**	**7**		**Pn**	**22 57 19.2**	**+0.8**
HDA	**Harding Lake**	**3.15**	**25**		**Pn**	**22 57 21.4**	**+1.6**
VRDI	**Verde Repeater**	**3.15**	**94**		**Pn**	**22 57 22.8**	**+2.7**
RIDG	**Independent Ri**	**3.20**	**45**		**Pn**	**22 57 23.3**	**+2.6**
MENT	**Mentasta**	**3.22**	**62**		**Pn**	**22 57 23.9**	**+3.0**
Q19K	**Cape Douglas,**	**3.24**	**216**	Pn	**Pn**	**22 57 22.5**	**+1.3**
MCARA	**McCarthy VSAT**	**3.33**	**90**		Pn	22 57 27.4	+4.9
P18K	**Big Mountain,**	**3.41**	**232**	Pn	**Pn**	**22 57 24.8**	**+1.2**
DOT	**Dot Lake**	**3.42**	**50**		**Pn**	**22 57 27.7**	**+4.0**
COLA	**College**	**3.43**	**15**		**Pn**	**22 57 25.7**	**+1.9**
ILAR	**Eielson Array**	**3.49**	**22**	P	**Pn**	**22 57 25.4**	**+0.9**
	comp=E,1.0nm,0.3s,baz=208,slow=14,SNR=29						
ILAR				S	**Sn**	**22 58 05.3**	**+0.8**
	comp=E,10nm,0.6s,baz=201,slow=20,SNR=5.6						
	comp=E,3.8nm,0.5s						
ILAR	**Eielson Array**	**3.49**	**22**		**Pn**	**22 57 27.7**	**+3.2**
SCRK	**Sand Creek**	**3.65**	**46**		**Pn**	**22 57 29.5**	**+2.7**
POKR	**Poker Plat Res**	**3.72**	**17**		**Pn**	**22 57 28.8**	**+1.0**
BARN	**Barnard Glacie**	**4.04**	**94**		**Pn**	**22 57 33.8**	**+1.5**
BCAR	**Beaver Creek A**	**4.09**	**65**	Pn	**Pn**	**22 57 34.7**	**+1.8**
PRP	**Porcupine Dome**	**4.41**	**25**		**Pn**	**22 57 40.2**	**+2.8**
PCA	**Pinnacle**	**4.98**	**103**	Pn	**Pn**	**22 57 45.7**	**+0.6**
EGAK	**Eagle**	**5.11**	**47**	Pn	**Pn**	**22 57 48.6**	**+1.9**
FYU	**Fort Yukon**	**5.41**	**20**		**Pn**	**22 57 53.0**	**+2.1**
DAWY	**Dawson**	**5.45**	**58**	Pn	**Pn**	**22 57 53.3**	**+1.9**
M30M	**Minto, Yukon**	**6.27**	**75**	Pn	**Pn**	**22 58 04.8**	**+2.1**
BMAR	**Burnt Mountain**	**6.30**	**19**	Pn	**Pn**	**22 58 05.8**	**+2.7**
I29M	**Ogilvie Camp,**	**6.45**	**49**	Pn	**Pn**	**22 58 06.3**	**+1.3**
ANM	**Nome**	**7.60**	**300**	Pn	**Pn**	**22 58 21.7**	**+0.8**
TNA	**Tin City**	**8.93**	**304**	Pn	**Pn**	**22 58 41.2**	**+2.3**
INK	**Inuvik**	**9.66**	**39**	P	**Pn**	**22 58 48.3**	**-0.7**
	baz=233,slow=14,SNR=1.9						
	comp=E,1.2nm,1.1s						
INK	**Inuvik**	**9.66**	**39**	Pn	**Pn**	**22 58 49.9**	**+0.9**
YKA	**Yellowknife Ar**	**16.48**	**71**	P	**Pn**	**23 00 22.0**	**+1.9**
	baz=284,slow=9.7,SNR=1.7						
	comp=E,0.1nm,0.4s						
SONM	**Songino Array**	**55.04**	**307**	P	**P**	**23 05 57.7**	**-1.1**
	comp=E,0.4nm,0.7s,baz=44,slow=7.7,SNR=3.7						
	comp=E,0.4nm,0.7s						
FINES	**FINESS Array B**	**57.25**	**2**	P	**P**	**23 06 13.5**	**-0.6**
	comp=E,1.6nm,1.0s,baz=295,slow=11,SNR=1.9						
	comp=E,1.6nm,1.0s						
MKAR	**Makanchi Array**	**64.09**	**323**	P	**P**	**23 06 58.9**	**-2.1**
	comp=E,0.1nm,0.5s,baz=37,slow=6.8,SNR=1.6						
	comp=E,0.1nm,0.5s						
AKASG	**Malin Array Be**	**68.06**	**1**	P	**P**	**23 07 24.6**	**-1.7**
	comp=E,0.4nm,0.4s,baz=7.3,slow=6.3,SNR=4.9						
	comp=E,0.4nm,0.4s						

IDC 31 23:15:37.8±9.7**, 6°.78S**×**129°.63E, h139^{km}**±101^{km}**, mb3.3**/1**, mbtmp3.9**/4**, ML3.3**/3**, Error ellipse: s-maj=57.2km s-min=30.9km az=81.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.86**	**161**	P	Pn	23 18 47.5	-0.9
	0.2nm,0.3s,baz=341,slow=12,SNR=5.3						
WRA				S	Sn	23 21 16.8	-5.0
	0.7nm,0.3s,baz=337,slow=22,SNR=9.2						
	1.0nm,0.8s						
ASAR	**Alice Springs**	**17.28**	**167**	P	Pn	23 19 30.9	+0.1
	0.2nm,0.3s,baz=356,slow=12,SNR=7.1						
ASAR				S	S	23 22 43.0	-0.2
	0.3nm,0.4s,baz=355,slow=27,SNR=5.7						
	0.6nm,0.4s						
PMG	**Port Moresby**	**17.55**	**100**	P	Pn	23 19 33.5	-0.5
	1.8nm,0.3s,baz=248,slow=19,SNR=3.1						
	5.2nm,0.3s						
MKAR	**Makanchi Array**	**67.84**	**327**	P	P	23 26 20.9	-0.1
	0.4nm,0.5s,baz=120,slow=7.9,SNR=9.0						
	0.4nm,0.5s						

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*NNC **31** 23:39:10.2±7.8, 36°.56N×75°.97E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=67.0km s-min=59.7km az=57.0*

*IDC **31** 23:39:18.8±7.3, 37°.06N×77°.05E, h136^{km}±48^{km}, mb3.0/3, mbtmp3.4/8, Error ellipse: s-maj=61.9km s-min=29.7km az=6.0*

ISC 31 23:39:06.1±1.9**, 36°.5N**±0°.1×**77°.1E**±0°.1**, h35^{km}, n12, σ3^{s}.05**/16**, mb3.2**/3**, 2C-3D, Kashmir-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.25**	**336**	⇓Pn	**Pn**	**23 40 39.8**	**+3.7**
	0.1nm,0.3s						
AML				⇑Sn	**Sn**	**23 41 45.4**	**-1.1**
	0.7nm,0.7s						
AAK	**Ala-Archa**	**6.49**	**343**	P	**Pn**	**23 40 43.9**	**+4.6**
	2.0nm,0.3s,baz=156,slow=8.4,SNR=22						
AAK				S	**Sn**	**23 41 52.4**	**+0.3**
	3.7nm,0.8s,baz=14,slow=19,SNR=2.0						
TKM2	**Tokmak 2**	**6.56**	**350**	⇓Pn	**Pn**	**23 40 43.9**	**+3.7**
	1.3nm,0.3s						
MDOK	**Medeo**	**6.70**	**360**	⇓Pn	**Pn**	**23 40 46.6**	**+4.5**
	4.9nm,0.6s						
MDOK				Sn	Sn	23 42 09.9	+13
	5.5nm,0.7s						
KK31	**Karatay Array**	**8.35**	**325**	⇑Pn	**Pn**	**23 41 07.1**	**+2.5**
	1.5nm,0.4s,baz=139,slow=12,SNR=28						
KK31				Sn	**Sn**	**23 42 34.5**	**-3.2**
	3.3nm,0.5s,baz=134,slow=21,SNR=8.5						
MKAR	**Makanchi Array**	**11.03**	**19**	P	**Pn**	**23 41 44.5**	**+3.2**
	0.7nm,0.3s,baz=200,slow=13,SNR=28						
MKAR				S	**Sn**	**23 43 40.0**	**-3.4**
	1.2nm,0.4s,baz=188,slow=24,SNR=8.7						
KURBB	**Kurchatov Arra**	**14.20**	**4**	P	**Pn**	**23 42 25.2**	**+0.7**
	0.2nm,0.5s,baz=192,slow=12,SNR=2.9						
BVAR	**Borovoye Array**	**17.22**	**346**	P	**Pn**	**23 43 03.8**	**+0.1**
	0.7nm,0.7s,baz=151,slow=11,SNR=2.0						
ZALV	**Zalesovo Beam**	**18.30**	**15**	P	**P**	**23 43 16.6**	**-0.2**
	0.4nm,0.4s,baz=207,slow=9.2,SNR=2.2						
SONM	**Songino Array**	**24.37**	**53**	P	**P**	**23 44 22.4**	**+1.5**
	0.4nm,0.6s,baz=248,slow=10,SNR=3.8						
	0.4nm,0.6s						
FINES	**FINESS Array B**	**40.31**	**325**	P	**P**	**23 46 38.0**	**-1.7**
	0.9nm,0.8s,baz=110,slow=8.0,SNR=4.7						
	0.9nm,0.8s						
YKA	**Yellowknife Ar**	**80.94**	**5**	P	**P**	**23 51 13.8**	**-2.6**
	0.2nm,0.7s,baz=343,slow=5.9,SNR=4.7						
	0.2nm,0.7s						

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*IDC **31** 23:43:41.8±2.6, 3°.25S×139°.29E, h0^{km}, mb3.7/2, mbtmp3.9/4, ML4.2/2, Error ellipse: s-maj=89.1km s-min=29.9km az=79.0*

*NEIC **31** 23:43:48.6±2.0, 3°.4S±0°.1×139°.7E±0°.1, h35^{km}±2^{km}, mb4.2/12, Error ellipse: s-maj=27.3km s-min=16.8km az=43.0*

*DJA **31** 23:43:50.3±0.8, 3°S±12°×14°0E±1°0, h77^{km}±22^{km}, M4.6/5, mb4.7/5, mB5.4/2, MLv4.5/4, Mw(mB)4.9/2*

ISC 31 23:43:49.9±0.7**, 3°.63S**±0°.06×**139°.75E**±0°.07**, h37^{km}, n35, σ1^{s}.98**/37**, mb4.4**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.11**	**22**	P	**Pn**	**23 44 08.7**	**-0.2**
GENI	**Genyem**	**1.11**	**22**	P	**Pn**	**23 44 08.6**	**-0.3**
GENI				S	**Sn**	**23 44 22.4**	**-0.6**
SMPI	**Sarmi**	**1.93**	**327**	P	**Pn**	**23 44 20.8**	**+0.6**
SMPI				S	**Sn**	**23 44 43.9**	**+0.7**
SRPI	**Serui, Papua**	**3.92**	**296**	P	**Pn**	**23 44 48.5**	**+1.0**
RKPI	**Ransiki, Papua**	**5.95**	**291**	P	**Pn**	**23 45 17.1**	**+1.6**
	65nm,0.7s,9µm0.8nm						
FAKI	**Fak Fak**	**7.52**	**275**		**Pn**	**23 45 36.5**	**-0.6**
FAKI	**Fak Fak**	**7.52**	**275**	P	**Pn**	**23 45 39.3**	**+2.2**
COEN	**Coen**	**10.80**	**162**	Pn	**Pn**	**23 46 24.4**	**+2.3**
KDU	**Kakadu**	**11.52**	**218**	P	**Pn**	**23 46 33.0**	**+1.1**
MTN	**Manton Dam**	**12.50**	**222**	Pn	**Pn**	**23 46 45.8**	**+0.4**
LBMI	**Labuha**	**12.59**	**283**	P	**Pn**	**23 46 48.5**	**+1.9**
	85nm,1.0s						
KNRA	**Kununurra**	**16.13**	**221**	Pn	**Pn**	**23 47 35.0**	**+1.0**
KNRA				IAmb	IAmb	23 47 49.0	
	comp=Z,12nm,1.0s						
KNRA	**Kununurra**	**16.13**	**221**	P	**Pn**	**23 47 35.5**	**+1.5**
SOEI	**Soe**	**16.53**	**248**	P	**P**	**23 47 42.1**	**+0.7**
SOEI	**Soe**	**16.53**	**248**	P	P	23 47 56.9	+15
QIS	**Mount Isa**	**16.83**	**180**	P	**Pn**	**23 47 43.1**	**+0.3**
WB0	**Warramunga Arr**	**16.87**	**198**	Pn	**Pn**	**23 47 42.8**	**-0.5**
WB2	**Warramunga Arr**	**17.05**	**198**	P	**P**	**23 47 47.4**	**+0.4**
WB2				IAmb	IAmb	23 47 49.6	
	comp=Z,7.7nm,0.8s						
WRA	**Warramunga Arr**	**17.05**	**198**	P	**Pn**	**23 47 45.1**	**-0.5**
	comp=Z,1.5nm,0.3s,baz=17,slow=12,SNR=26						
WRA				S	**Sn**	**23 50 47.6**	**-6.6**
	comp=Z,1.3nm,0.5s,baz=16,slow=22,SNR=5.7						
	comp=Z,2.0nm,0.3s						
WRA	**Warramunga Arr**	**17.05**	**198**		**Pn**	**23 47 47.0**	**+1.4**
LUWI	**Luwuk**	**17.16**	**278**	Pn	**Pn**	**23 47 42.1**	**-4.8**
LUWI	**Luwuk**	**17.16**	**278**	P	**P**	**23 47 50.4**	**+2.2**
	comp=Z,79nm,0.9s						
CTA	**Charters Tower**	**17.55**	**159**	P	**P**	**23 47 55.0**	**+2.4**
	comp=Z,0.3nm,0.3s,baz=353,slow=7.4,SNR=5.2						
	comp=Z,2.2nm,0.6s						
CTAO	**Charters Tower**	**17.55**	**159**		**Pn**	**23 47 52.9**	**+1.2**
CTAO				IAmb	IAmb	23 48 00.5	
	comp=Z,15nm,1.4s						
TOLI2	**Tolitoli**	**19.53**	**284**	P	**P**	**23 48 12.7**	**-1.8**
TOLI2				IAmb	IAmb	23 48 15.2	
	comp=Z,12nm,0.9s						
AS31	**Alice Springs**	**20.70**	**195**	P	**P**	**23 48 27.4**	**+0.3**
ASAR	**Alice Springs**	**20.70**	**195**	P	**P**	**23 48 26.1**	**-1.1**
	comp=Z,5.1nm,0.8s,baz=25,slow=9.3,SNR=65						
ASAR				S	**S**	**23 52 13.6**	**-2.9**
	comp=Z,1.5nm,0.7s,baz=20,slow=26,SNR=5.3						
	comp=Z,5.1nm,0.8s						
ASAR	**Alice Springs**	**20.70**	**195**	P	**P**	**23 48 26.8**	**-0.3**
WRKA	**Warakurna**	**23.97**	**206**	P	**P**	**23 49 03.4**	**+2.4**
INKA	**Innaminka**	**24.00**	**178**	P	**P**	**23 49 03.5**	**+2.3**
EIDS	**Eidsvold**	**24.20**	**154**	P	**P**	**23 49 03.5**	**+0.3**
EIDS				IAmb	IAmb	23 49 04.2	
	comp=Z,7.8nm,0.6s						
JAGI	**Jajag, Banyuwa**	**25.90**	**258**	P	**P**	**23 49 16.9**	**-1.7**
ARMA	**Armidale**	**28.91**	**158**	P	**P**	**23 49 45.8**	**+0.1**

ARMA				IAmb	IAmb	23 49 55.0	
	comp=Z,19nm,1.3s						
TOO	**Toolangi**	**34.19**	**172**	P	**P**	**23 50 30.9**	**-1.0**
MKAR	**Makanchi Array**	**71.15**	**322**	P	P	23 54 59.0	-5.8
	comp=Z,0.3nm,0.6s,baz=122,slow=7.1,SNR=2.7						
	comp=Z,0.3nm,0.6s						

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*KRSC **31** 23:54:03.4±2.4, 49°.47N×157°.25E, h40^{km}±26^{km}, Ml4.7*
*MOS **31** 23:54:06.7±1.3, 49°.71N×156°.40E, h60^{km}, mb4.3/1, Error ellipse: s-maj=14.0km s-min=4.2km az=77.2*
*IDC **31** 23:54:08.6±2.8, 49°.88N×156°.41E, h52^{km}±24^{km}, mb3.4/14, mbtmp3.7/16, ML3.4/2, MS3.3/9, Error ellipse: s-maj=24.1km s-min=13.9km az=137.0*
ISC 31 23:54:07.2±1.4, **49°.60N**±0°.09×**156°.59E**±0°.07, **h49**^{km}±12^{km}, **n85**, σ**1^{s}.38**/84, **mb3.7**/15, **MS3.6**/5, **5C-1D**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.12**	**345**	PN	**Pn**	**23 54 26.2**	**-0.4**
SKR				S	**Sn**	**23 54 41.4**	**+0.5**
SKR	**Severo-Kuril's**	**1.12**	**345**	*e*P	**Pn**	**23 54 26.2**	**-0.4**
SKR				*e*S	**Sn**	**23 54 41.4**	**+0.5**
PAU	**Pauzhetka**	**1.87**	**4**	PN	**Pn**	**23 54 38.1**	**+1.3**
PAU				S	**Sn**	**23 55 01.7**	**+2.5**
PAU	**Pauzhetka**	**1.87**	**4**	*e*P	**Pn**	**23 54 38.1**	**+1.3**
PAU				*e*S	**Sn**	**23 55 01.7**	**+2.5**
KDTR	**Khodutka, Kamc**	**2.40**	**23**	PN	**Pn**	**23 54 43.3**	**-0.7**
KDTR				S	**Sn**	**23 55 11.1**	**-1.1**
KDTR	**Khodutka, Kamc**	**2.40**	**23**	*e*P	**Pn**	**23 54 43.3**	**-0.7**
KDTR				*e*S	**Sn**	**23 55 11.1**	**-1.1**
MTVR	**Mutnovka**	**3.06**	**19**	PN	**Pn**	**23 54 53.0**	**-0.1**
MTVR	**Mutnovka**	**3.06**	**19**	*e*P	**Pn**	**23 54 53.0**	**-0.1**
RUS	**Russkaya**	**3.08**	**22**	PN	**Pn**	**23 54 52.0**	**-1.4**
RUS				S	**Sn**	**23 55 28.7**	**-0.2**
RUS	**Russkaya**	**3.08**	**22**	*e*P	**Pn**	**23 54 52.0**	**-1.4**
RUS				*e*S	**Sn**	**23 55 28.7**	**-0.2**
GRL	**Gorelyy**	**3.10**	**17**	PN	**Pn**	**23 54 54.0**	**+0.3**
GRL				S	**Sn**	**23 55 31.7**	**+2.2**
GRL	**Gorelyy**	**3.10**	**17**	*e*P	**Pn**	**23 54 54.0**	**+0.3**
GRL				*e*S	**Sn**	**23 55 31.7**	**+2.2**
APC	**Apacha**	**3.35**	**6**	PN	**Pn**	**23 54 57.5**	**+0.5**
APC	**Apacha**	**3.35**	**6**	*e*P	**Pn**	**23 54 57.5**	**+0.5**
KRMR	**Karymshinskiy**	**3.37**	**16**	PN	**Pn**	**23 54 58.5**	**+1.1**
KRMR	**Karymshinskiy**	**3.37**	**16**	*e*P	**Pn**	**23 54 58.5**	**+1.1**
PEA0B	**Petropavlovsk-**	**3.58**	**11**	*ce*PN	**Pn**	**23 55 01.3**	**+1.1**
PETK	**Petropavlovsk-**	**3.58**	**11**	P	**Pn**	**23 54 58.7**	**-1.5**
	3.1nm,0.3s,baz=177,slow=17,SNR=38						
PETK				S	**Sn**	**23 55 36.9**	**-4.3**
	18nm,0.6s,baz=125,slow=18,SNR=1.9						
PETK				LR	LR	23 56 37.8	
	comp=Z,297nm,19.6s,baz=181,slow=45						
	5.6nm,0.4s						
PET	**Petropavlovsk**	**3.66**	**20**	*e*PN	**Pn**	**23 55 01.4**	**+0.1**
PET				*e*S	**Sn**	**23 55 44.8**	**+1.6**
PET				pmax	pmax		
	comp=Z,54nm,0.5s						
PET				smax	smax		
	comp=E,264nm,0.5s						
PET				smax	smax		
	comp=N,257nm,0.6s						
PET				MLR	MLR		
	comp=Z,100nm,17.0s						
PET	**Petropavlovsk**	**3.66**	**20**	*e*P	**Pn**	**23 55 01.5**	**+0.2**
PET				*e*S	**Sn**	**23 55 45.6**	**+2.4**
DALK	**Dalny**	**3.69**	**21**	PN	**Pn**	**23 55 01.6**	**-0.1**
DALK				S	**Sn**	**23 55 46.5**	**+2.6**
DALK	**Dalny**	**3.69**	**21**	*e*P	**Pn**	**23 55 01.6**	**-0.1**
DALK				*e*S	**Sn**	**23 55 46.5**	**+2.6**
UGLR	**Uglovaya**	**3.87**	**20**	PN	**Pn**	**23 55 04.9**	**+0.6**
UGLR	**Uglovaya**	**3.87**	**20**	*e*P	**Pn**	**23 55 04.9**	**+0.6**
KOK	**Koryaka**	**3.91**	**18**	PN	**Pn**	**23 55 06.2**	**+1.4**
KOK	**Koryaka**	**3.91**	**18**	*e*P	**Pn**	**23 55 06.2**	**+1.4**
SMAR	**Somma**	**3.92**	**20**	PN	**Pn**	**23 55 05.9**	**+0.9**
SMAR	**Somma**	**3.92**	**20**	*e*P	**Pn**	**23 55 05.9**	**+0.9**
KRER	**Koryakskii**	**3.94**	**19**	PN	**Pn**	**23 55 06.4**	**+1.0**
KRER	**Koryakskii**	**3.94**	**19**	*e*P	**Pn**	**23 55 06.4**	**+1.0**
NLC	**Nalytchevo**	**3.97**	**25**	PN	**Pn**	**23 55 05.7**	**+0.2**
NLC	**Nalytchevo**	**3.97**	**25**	*e*P	**Pn**	**23 55 05.7**	**+0.2**
KRX	**Arik**	**3.98**	**18**	PN	**Pn**	**23 55 07.0**	**+1.2**
KRX	**Arik**	**3.98**	**18**	*e*P	**Pn**	**23 55 07.0**	**+1.2**
SPN	**Mys Shipunski**	**4.11**	**30**	PN	**Pn**	**23 55 07.7**	**+0.3**
SPN	**Mys Shipunski**	**4.11**	**30**	*e*P	**Pn**	**23 55 07.7**	**+0.3**
GNL	**Ganaly**	**4.18**	**11**	PN	**Pn**	**23 55 10.1**	**+1.5**
GNL	**Ganaly**	**4.18**	**11**	*e*P	**Pn**	**23 55 10.1**	**+1.5**
KII	**Karymskiy**	**4.78**	**21**	PN	**Pn**	**23 55 18.2**	**+1.5**
KII	**Karymskiy**	**4.78**	**21**	*e*P	**Pn**	**23 55 18.2**	**+1.5**
MKZ	**Mys Kozlova**	**5.89**	**31**	PN	**Pn**	**23 55 30.1**	**-1.7**
MKZ	**Mys Kozlova**	**5.89**	**31**	*e*P	**Pn**	**23 55 30.1**	**-1.7**
TUMD	**Tumrok D**	**6.07**	**21**	*e*P	**Pn**	**23 55 36.5**	**+2.2**
TUMR	**Tumrok**	**6.09**	**20**	PN	**Pn**	**23 55 36.5**	**+1.8**
TUMR	**Tumrok**	**6.09**	**20**	*e*P	**Pn**	**23 55 36.0**	**+1.3**
KBTR	**Krutoberegovo**	**7.61**	**27**	PN	**Pn**	**23 55 54.8**	**-0.6**
KBTR	**Krutoberegovo**	**7.61**	**27**	*e*P	**Pn**	**23 55 54.8**	**-0.6**
SHO	**Shikotan**	**8.81**	**233**	*e*PN	**Pn**	**23 56 10.5**	**-1.4**
YSS	**Yuzh-Sakhalins**	**9.60**	**259**⇑	*e*PN	**Pn**	**23 56 21.7**	**-0.9**
MA2	**Magadan**	**10.54**	**344**	LR	LR	00 00 31.0	
	comp=Z,69nm,21.1s,baz=151,slow=37						
ASAJ	**Asahikawa**	**11.03**	**245**	P	**Pn**	**23 56 43.9**	**+1.6**
	comp=Z,0.9nm,0.3s,baz=62,slow=18,SNR=6.4						
	comp=Z,3.4nm,0.5s						
SEY	**Seymchan**	**13.56**	**352**⇑	*e*PN	**Pn**	**23 57 14.4**	**-2.2**
SEY				pmax	pmax		
	comp=Z,1.0nm,1.2s						
KLR	**Kul'dur**	**16.15**	**278**	LR	LR	00 04 42.1	
	comp=Z,67nm,20.5s,baz=49,slow=40						
KLR	**Kul'dur**	**16.15**	**278**⇑	*e*P	**Pn**	**23 57 49.5**	**-1.2**
KLR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BILL	**Bilibino**	**19.11**	**11**	*i* P	**P**	**23 58 25.6**	**-0.1**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,92nm,17.0s						
YAK	**Yakutsk**	**19.40**	**320**	LR	LR	00 05 41.1	
	comp=Z,45nm,18.3s,baz=90,slow=36						
YAK	**Yakutsk**	**19.40**	**320**⇑	*e*P	**Pn**	**23 58 28.3**	**-2.0**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSRS	**Korea Array**	**23.91**	**250**	P	**P**	**23 59 17.2**	**+0.9**
	comp=Z,1.1nm,0.5s,baz=50,slow=11,SNR=4.5						
	comp=Z,1.1nm,0.5s						
TIXI	**Tiksi**	**25.48**	**340**⇓	*e*P	**P**	**23 59 28.5**	**-1.8**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**30.93**	**161**	T	T	00 33 12.5	
	baz=347,slow=77,SNR=8.6						
H11N1	**WAKE ISLAND Hy**	**30.94**	**161**	T	T	00 33 19.3	
	baz=347,slow=77,SNR=10						
H11N3	**WAKE ISLAND Hy**	**30.94**	**161**	T	T	00 33 20.4	
	baz=347,slow=77,SNR=15						
H11S1	**WAKE ISLAND Hy**	**32.07**	**162**	T	T	00 34 43.1	
	baz=347,slow=76,SNR=102						
H11S3	**WAKE ISLAND Hy**	**32.08**	**162**	T	T	00 34 47.9	
	baz=347,slow=76,SNR=249						
H11S2	**WAKE ISLAND Hy**	**32.09**	**162**	T	T	00 34 44.1	
	baz=347,slow=76,SNR=110						
ILAR	**Eielson Array**	**32.87**	**41**	P	**P**	**00 00 35.4**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=256,slow=6.4,SNR=5.9						
	comp=Z,0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**42.87**	**304**	P	**P**	**00 01 59.2**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=56,slow=8.7,SNR=4.1						
	comp=Z,0.5nm,0.4s						
YKA	**Yellowknife Ar**	**47.24**	**39**	P	**P**	**00 02 35.8**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=296,slow=7.2,SNR=7.3						
	comp=Z,0.5nm,0.7s						
MKAR	**Makanchi Array**	**47.72**	**297**	P	**P**	**00 02 37.5**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=50,slow=6.4,SNR=4.5						
MKAR				LR	LR	00 24 07.8	
	comp=Z,60nm,18.2s,baz=33,slow=38						
	comp=Z,0.4nm,0.4s						
DAV	**Davao City (W)**	**49.74**	**222**	LR	LR	00 22 04.1	
	comp=Z,22nm,21.8s,baz=70,slow=34						
ARU	**Arti**	**54.48**	**317**	LR	LR	00 30 08.1	
	comp=Z,50nm,19.2s,baz=274,slow=40						
AAK	**Ala-Archa**	**54.65**	**296**	LR	LR	00 26 38.5	
	comp=Z,42nm,19.3s,baz=303,slow=36						
CMAR	**Chiang Mai Arr**	**55.29**	**257**	P	**P**	**00 03 37.3**	**+1.6**
	comp=Z,1.0nm,0.3s,baz=37,slow=6.4,SNR=7.6						
	comp=Z,1.0nm,0.3s						
ARCES	**ARCESS Array B**	**55.91**	**341**	P	**P**	**00 03 37.5**	**-2.0**
	comp=Z,3.1nm,0.8s,baz=47,slow=7.4,SNR=8.5						
	comp=Z,3.1nm,0.8s						
KIRV	**Kirov**	**56.89**	**323**	LR	LR	00 30 10.9	
	comp=Z,59nm,18.1s,baz=206,slow=38						
NVAR	**Mina Array Bea**	**59.09**	**66**	P	**P**	**00 04 03.4**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=302,slow=9.9,SNR=3.7						
	comp=Z,0.5nm,0.7s						
FINES	**FINESS Array B**	**62.42**	**336**	P	**P**	**00 04 23.7**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=40,slow=9.6,SNR=5.6						
	comp=Z,0.7nm,0.7s						
NOA	**NORSAR Array B**	**66.24**	**342**	P	**P**	**00 04 49.3**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=25,slow=6.4,SNR=3.0						
	comp=Z,0.7nm,0.7s						
TXAR	**Lajitas Array**	**74.10**	**63**	P	**P**	**00 05 39.1**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=313,slow=6.9,SNR=2.5						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**75.68**	**201**	P	**P**	**00 05 49.1**	**+1.9**
	comp=Z,0.2nm,0.4s,baz=16,slow=6.3,SNR=5.1						
	comp=Z,0.2nm,0.4s						
GERES	**GERESS Array B**	**76.86**	**336**	P	**P**	**00 05 53.5**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=46,slow=7.0,SNR=1.8						
	comp=Z,0.2nm,0.3s						
BRTR	**Keskin Array B**	**77.85**	**319**	P	**P**	**00 05 59.4**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=50,slow=1.8,SNR=2.1						
	comp=Z,0.3nm,0.4s						
H03N2	**Juan Fernandez**	**136.43**	**90**	T	T	02 45 29.8	
	baz=313,slow=77,SNR=3.2						
H03N1	**Juan Fernandez**	**136.44**	**90**	T	T	02 45 30.5	
	baz=313,slow=77,SNR=3.2						
H03N3	**Juan Fernandez**	**136.44**	**90**	T	T	02 45 36.7	
	baz=313,slow=77,SNR=5.0						

ISC Computed Locations for March 2017